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CORONA J

PERFORMANCE EVALUATION REPORT

MISSION 1018-1 and 1018-2

31 OCTOBER 1966

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FOREWORD

This report details the performance of the payload system during the operational phase of the Program [redacted] Flight Test Vehicle 1612.

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

This document is the final payload test and performance evaluation report for Missions 1018-1 and 1018-2 which was launched on 25 March 1965.

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INTRODUCTION

This report presents the final performance evaluation of Missions 1018-1 and 1018-2 of the Corona Program. The purpose of this report is to define the performance characteristics of the J-19 payload system and to identify the source of in-flight anomalies.

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

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

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

SECTION I

SYSTEM PERFORMANCE

A. MISSION OBJECTIVES

The payload section of Mission 1018, placed into orbit by Flight Test Vehicle #1612 and SLV-2A booster #429, consisted of two panoramic cameras, two Stellar-Index Cameras, two Mark 5A recovery capsules and a space structure to enclose the cameras and provide mounting surfaces for all equipments. Figure 1-1 presents an inboard profile of the J-19 payload system. This Corona "J" system is designed to acquire search and reconnaissance photography of selected areas of the earth from orbital altitudes. The planned mission was two, four day photographic periods with no deactive period.

B. MISSION DESCRIPTION

The payload was launched from Vandenberg Air Force Base (VAFB) at 2111:17 Z (1311:17 PST) on 25 March 1965. Ascent and injection were normal and the achieved orbit 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 1018-1 consisted of four days operation and was completed by air recovery on 29 March 1965. Mission 1018-2 followed immediately with no deactivate, and consisted of two days operation concluding with a successful air recovery on 31 March 1965.

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

ORBITAL PARAMETERS

Parameter	Predicted	Orbit 33 Actuals
Period (Min.)	88.98	88.96
Perigee (N. M.)	100.00	100.26
Apogee (N. M.)	144.20	148.60
Inclination (Deg.)	96.00	96.01
Perigee Latitude (Deg. N.)	22.06	40.37
Eccentricity	0.0063	0.0067

SCHEMATIC INBOARD PROFILE - CORONA J SYSTEM

MISSION 1018

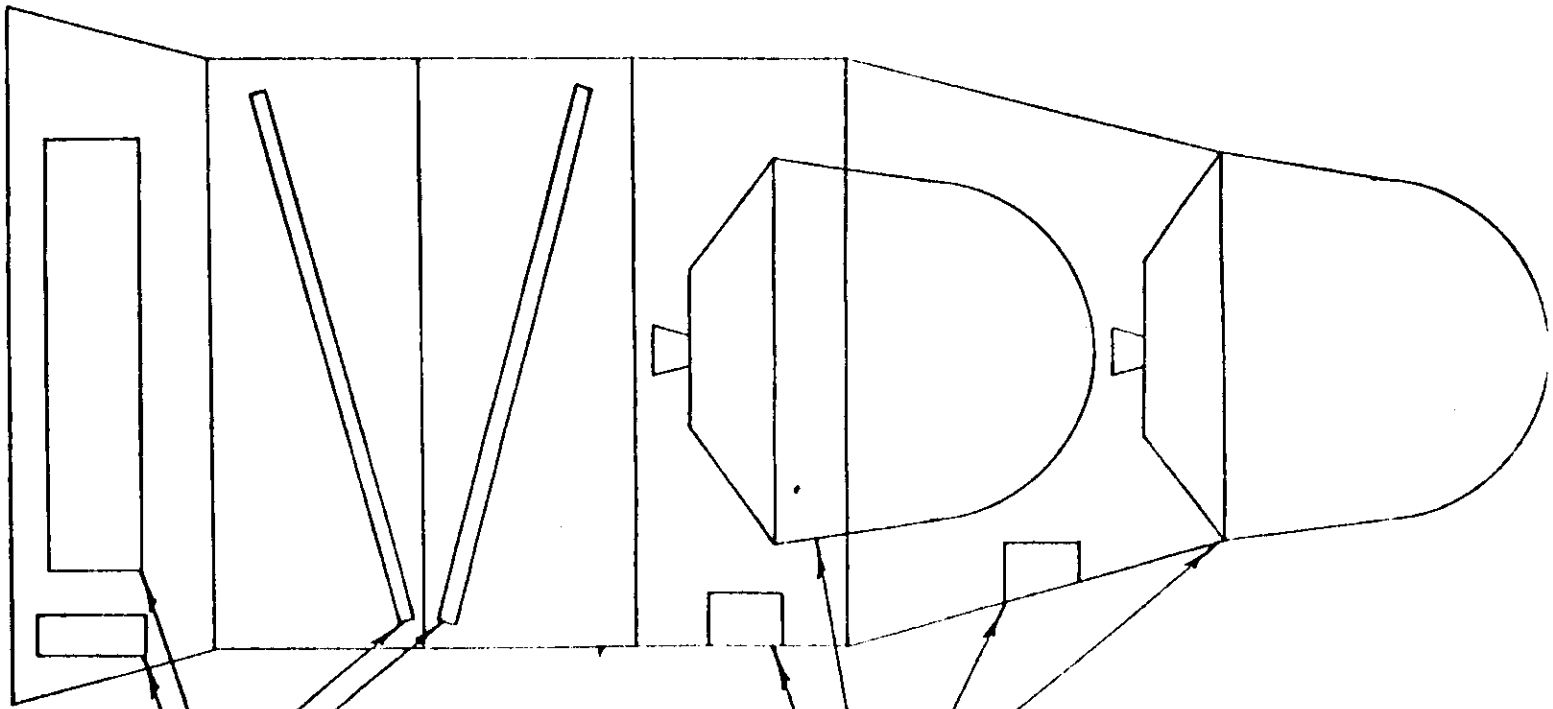


FIGURE 1-1

C. PANORAMIC CAMERAS

The Master and Slave panoramic cameras operated throughout both missions with no significant problems and produced good photographic coverage. The cloud cover and atmospheric haze observed in the photography was nominal. The thermal environment of the instruments were fairly constant throughout the flight due to a constant β angle.

D. STELLAR-INDEX CAMERAS

The S/I Programmer failed during the third operation of Rev. 8 resulting in the loss of command capability to both the -1 and -2 stellar-index cameras.

E. OTHER SUBSYSTEMS

The clock, instrumentation, pressure make-up, command and thermal control subsystems performed satisfactorily through both missions. The yaw programmer was activated at orbit 8 and functioned properly throughout both missions.

F. CONCLUSIONS

Mission 1018 achieved the objective of acquiring high quality search and reconnaissance photography from orbital altitudes.

SECTION 2

PRE-FLIGHT SYSTEMS TEST

A. ENVIRONMENTAL TESTING

1. Test Objective

As a standard procedure, the J payload systems are subject 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 Environmental Test for the J-19 payload system was conducted in the TASC chamber at Sunnyvale from 5 December to 12 December 1964. The test consisted of 3 days of operation in the "A" mode; a 1 day soak; and 3 days of "B" operation. The payload system was only operated during the daytime.

The J-19 payload system consisted of panoramic cameras 122 and 123. There were no Stellar-Index cameras installed.

Panoramic camera operation was satisfactory. Both instruments ran approximately 1.5 to 2% fast in the "A" mode and approximately 1 to 1.5% slow in the "B" mode.

Both "A" and "B" recovery sequences were satisfactory with the exception of the tape recorder data for the master instrument. This channel went to an out of hand voltage during cut and wrap. Transfer to the "B" bucket was normal and both instruments stowed properly.

A deactivate command was given between the "A" and "B" operations. Both instruments operated for 5 cycles and stowed normally.

The lens rotation monitor on the slave instrument became intermittent during the "B" mode. The 1000 count cycle counter on the slave instrument read 0.2 volts high in the 6 position.

The PMU operation appeared normal.

The clock performance was satisfactory. The Corona level on the processed payload met the acceptance criteria and is acceptable for flight.

3. Panoramic Camera Performance

Both instruments operated satisfactorily throughout the test. Film transport and instrument dynamic operation as monitored by the lens rotation, center of format, monitors, and supply and take-up idlers was normal. Instrument start and shut-down appeared normal.

The 99/101 percent clutch ratios were 5/5 to 5/7 for both instruments.

The cycle periods for both instruments were approximately 1.5 to 2% fast for the "A" mission and from 1 to 1.5% slow for the "B" mission. A tabulation of the rates are included as Tables 2-1 and 2-2.

The lens rotation monitor for the slave instrument became intermittent during the "B" mission. Post TASC adjustment and cleaning corrected this condition. The 6 position of the 1000 count cycle counter read 0.2 volts high. No corrective action was taken as the significance of the 1000 count does not constitute a primary flight item.

Corona discharge marking was not present in the master and only an occasional trace amount of start up Corona in the slave photography. The system was altitude tested between 1.8 and 50 microns internal pressure.

Scratches in the master and slave camera photography are attributed to the scan head rollers. A fix was made by Itek.

Heavy intermittent light leak fogging of master and slave photography was traced to a light leak in the silver dollar. A fix and subsequent lighting test verifying the light tight integrity of the system was performed.

Dendritic static spotting was observed at random points throughout the master payload to a density of approximately 0.06 above the base fog level. Some static marks occurred along the film edge. Dendritic marks are attributed to retrieval static and do not represent the expected performance of the flight system.

The horizon camera exposure lamps were inoperative for master and slave. Verification of flight acceptable horizon shutter operation was made prior to generation of the theodolite test film exhibit.

Slave instrument data recording was acceptable except for the 200 PPS timing track. Serial number, binary lamps, index lamps, and horizon camera fiducials were good. The 200 PPS timing track was acceptable for all formats except 17. The timing track became discontinuous exposing in spurts for 17 frames, approximately 2000 feet from the cut and wrap event.

4. Instrumentation

The instrumentation system performance was satisfactory with the exception of the rotation monitor and cycle counter discussed above.

5. Clock Performance

The clock performance was normal with the recorded error being approximately 4 milliseconds in 24 hours.

6. Temperature Environment

Typical instrument temperatures recorded through the test are as follows:

Mission	Orbit	Master Camera	Slave Camera
A	1	85°	81°
A	15	88°	89°
B	5	70°	71°
B	16	72°	73°

The self-heating characteristics of the temperature sensors were determined during the TASC test. Results of these calibrations are included in Tables 2-3 and 2-4.

7. Pressure Environment

The PMU system operated satisfactorily throughout the test. Figure 2-1 is a plot showing the pressure supply as a function of the operate time. This plot indicates no leakage in the system. The pressure increased to 85 microns when the PMU system was operated.

B. RESOLUTION TEST

The dynamic resolution test of the J-19 payload system was performed at the A/P facility on 15 December 1964. Each panoramic camera photographed high and low contrast resolution targets. The resulting through focus resolution data is shown in Figure 2-2 for the Master camera and in Figure 2-3 for the Slave camera.

C. LIGHT LEAK TEST

The examination of the film threaded in the J-19 system during the light leak test determined that no film fogging was present. The light leak integrity of the system was considered acceptable for flight.

J-19 122/123 ENVIRONMENTAL TEST CYCLE RATES 12-06-64 3840

REV/MOD		RAMP		T.U.R.	INST 122 ACT.	INST 122 NOM.	INST 122 DEV.	INST 123 ACT.	INST 123 NOM.	INST 123 DEV.	122/123 DIFF.
4	A	7	7	2280	2.450	2.492	1.70	2.470	2.495	1.02	0.82
4	A	8	2	340	5.400	5.478	1.42	5.480	5.531	0.92	1.48
5	A	8	2	1730	2.200	2.215	0.67				
5	A	8	2	2250				2.270	2.315	1.95	
5	A	11	1	1460	2.620	2.668	1.81	2.630	2.669	1.47	0.38
6	A	11	1	2040	2.290	2.330	1.73	2.290	2.335	1.94	-0.
6	A	5	8	1090	2.850	2.867	0.58	2.860	2.866	0.22	0.35
6	A	5	8	1440	2.440	2.466	1.05	2.460	2.469	0.37	0.82
7	A	7	7	1180	2.930	2.944	0.47	2.950	2.943	-0.24	0.68
8	A	7	7	2530	2.700	2.752	1.90	2.720	2.753	1.19	0.74
8	A	4	1	1015	2.900	2.914	0.50	2.910	2.914	0.13	0.34
8	A	4	1	1750	2.170	2.191	0.94				
9	A	11	1	890	4.350	4.386	0.82	4.380	4.400	0.46	0.69
9	A	4	1	3210	3.710	3.797	2.28	3.750	3.800	1.30	1.08
9	A	4	1	2620				2.460	2.505	1.79	
10	A	11	1	1880	2.270	2.310	1.73	2.270	2.315	1.96	-0.
10	A	11	1	2970	4.360	4.469	2.44	4.410	4.485	1.67	1.15
10	A	7	7	140	4.300	4.376	1.74	4.350	4.390	0.91	1.16
11	A	7	7	1910	2.340	2.358	0.75	2.350	2.362	0.52	0.43
11	A	7	7	2280	2.460	2.492	1.30	2.470	2.495	1.02	0.41
12	A	8	2	1150	3.010	3.068	1.89	3.025	3.067	1.37	0.50
12	A	8	2	1850				2.200	2.218	0.81	
13	A	4	1	2630	2.470	2.521	2.03	2.500	2.524	0.94	1.21

*Time up ramp not verified

REV/AUD		RAMP		T.U.R.	INST 122 ACT.	NOM.	DEV.	INST 123 ACT.	NOM.	DEV.	122/123 DIFF.
13	A	11	1	1975	2.250	2.312	2.69	2.250	2.318	3.91	-0.
14	A	11	1	3080	4.850	4.965	2.32	4.910	4.997	1.74	1.24
1	B	7	7	390	4.140	4.140	0.14	4.160	4.154	-0.14	0.46
2	B	4	1	1430	2.200	2.212	0.53				
2	B	4	1	1610				2.190	2.203	0.61	
4	B	7	7	2280	2.460	2.492	1.30	2.470	2.495	1.02	0.4.
5	B	11	1	1460	2.670	2.668	-0.06	2.670	2.669	-0.02	-0.
6	B	11	1	2040	2.310	2.330	0.87	2.330	2.335	0.23	0.87
6	B	5	8	1090	2.900	2.867	-1.16	2.900	2.866	-1.17	-0.
6	B	5	8	1440	2.490	2.466	-0.97	2.500	2.469	-1.25	0.40
7	B	7	7	1180	3.000	2.944	-1.91	3.000	2.943	-1.94	-0.
7	B	7	7	1590	2.450	2.471	-0.78	2.500	2.474	-1.06	0.40
8	B	7	7	2530	2.760	2.752	-0.28	2.770	2.753	-0.63	0.36
8	B	4	1	1015	2.950	2.914	-1.22	2.960	2.914	-1.59	0.34
9	B	11	1	890	4.410	4.380	-0.54	4.420	4.400	-0.45	0.23
10	B	11	1	1880	2.300	2.310	0.43	2.320	2.315	-0.20	0.87
13	B	11	1	1975	2.330	2.312	-0.77	2.340	2.318	-0.97	0.43
15	B	5	8	1930	2.270	2.263	-0.30	2.300	2.269	-1.35	1.32

DEV. AND DIFF. ARE IN PERCENT
THE (-) SIGN INDICATES THAT THE INST IS SLOWER THAN PREDICTED OR THAT INST 1 IS SLOWER THAN INST 2

*Time up ramp not verified

Table 2-2

VEHICLE 1612 PAYLOAD J-19 SELF HEATING TEST

SUMMARY OF SELF HEATING CORRECTION CURVES

10 106 40 SS2 03 103 43 208 28 113 23 111
39 TC2 20 110 08 105 55 213 50 211
21 SS1 37 TC1 52 212
38 206 46 209
36 205 41 207
31 203 33 204
48 210 05 104
25 112 15 108
18 109 44 CA2
13 107

TIME	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6
0.10	0.6	1.4	2.1	2.9	2.4	4.3
0.13	0.8	1.7	2.6	3.6	3.0	5.4
0.16	1.0	2.2	3.3	4.5	3.8	6.8
0.20	1.1	2.3	3.5	4.8	4.2	7.9
0.25	1.1	2.4	3.7	4.9	4.5	9.1
0.32	1.2	2.5	3.8	5.0	4.9	10.5
0.40	1.3	2.6	4.1	5.2	5.4	12.3
0.50	1.4	2.8	4.3	5.4	6.0	14.6
0.63	1.5	3.0	4.5	5.6	6.4	15.6
0.79	1.6	3.2	4.8	5.8	6.9	16.9
1.00	1.8	3.4	5.1	6.1	7.6	18.6
1.26	1.9	3.6	5.3	6.4	8.0	19.5
1.58	2.1	3.9	5.6	6.7	8.6	20.6
2.00	2.4	4.2	6.0	7.1	9.3	22.1
2.51	2.6	4.5	6.3	7.5	9.8	23.0
3.16	2.8	4.8	6.6	7.9	10.4	24.1
3.98	3.1	5.1	7.0	8.4	11.0	24.9
5.01	3.4	5.5	7.4	8.9	11.6	25.9
6.31	3.6	5.8	7.7	9.3	12.0	26.5
7.94	3.9	6.1	8.2	9.8	12.5	27.2
10.00	4.2	6.5	8.7	10.4	13.2	28.1
12.59	4.4	6.8	9.0	10.8	13.4	28.4
15.85	4.7	7.0	9.4	11.3	13.8	28.8
19.95	5.0	7.4	10.0	11.9	14.2	29.2
25.12	5.4	7.8	10.6	12.6	14.7	29.8
31.62	5.8	8.3	11.3	13.5	15.2	30.3
39.81	6.0	8.6	11.8	14.0	15.4	30.4
50.12	6.4	8.9	12.5	14.7	15.6	30.6
63.10	6.8	9.3	13.2	15.6	15.9	30.7
79.43	7.1	9.7	13.9	16.3	16.0	30.6
100.00	7.5	10.1	14.7	17.1	16.1	30.5

Table 2-3

VEHICLE 1612 PAYLOAD J-19 SELF HEATING TEST

SUMMARY OF SELF HEATING CORRECTION CURVES

37 TC1A
40 SS2 31 203 15 108 55 213 50 211
37 TC1 41 207 33 204 28 113 23 111
39 TC2 38 206 08 105
21 SS1 36 205 44 CA2
39 TC2A 46 209
20 110
48 210
52 212
03 103
18 109
25 112
13 107
05 104
10 106
43 206

TIME	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5
0.10	0.1	0.4	0.7	1.0	3.3
0.13	0.1	0.6	0.8	1.2	4.2
0.16	0.2	0.7	1.1	1.5	5.3
0.20	0.2	0.8	1.2	1.8	6.2
0.25	0.3	1.0	1.4	2.1	7.2
0.32	0.4	1.1	1.6	2.4	8.5
0.40	0.5	1.4	1.9	2.8	10.1
0.50	0.7	1.6	2.3	3.3	12.1
0.63	0.8	1.8	2.5	3.8	13.1
0.79	1.0	2.1	2.9	4.4	14.3
1.00	1.2	2.4	3.3	5.1	15.9
1.26	1.4	2.7	3.6	5.6	16.8
1.58	1.6	3.0	4.1	6.3	17.9
2.00	1.8	3.4	4.6	7.1	19.4
2.51	2.0	3.8	5.0	7.8	20.3
3.16	2.3	4.2	5.5	8.5	21.4
3.98	2.5	4.5	6.0	9.2	22.3
5.01	2.8	5.0	6.5	10.0	23.4
6.31	3.0	5.4	7.0	10.6	24.1
7.94	3.3	5.9	7.5	11.3	24.9
10.00	3.6	6.5	8.2	12.1	26.0
12.59	3.8	6.9	8.5	12.5	26.4
15.85	4.0	7.3	9.0	13.0	26.9
19.95	4.3	7.9	9.6	13.6	27.5
25.12	4.7	8.6	10.3	14.3	28.2
31.62	5.1	9.4	11.1	15.0	29.0
39.81	5.3	10.0	11.6	15.4	29.3
50.12	5.6	10.7	12.2	15.8	29.7
63.10	6.0	11.5	12.9	16.2	30.1
79.43	6.3	12.2	13.5	16.4	30.3
100.00	6.7	13.2	14.3	16.7	30.5

Table 2-4

[redacted]

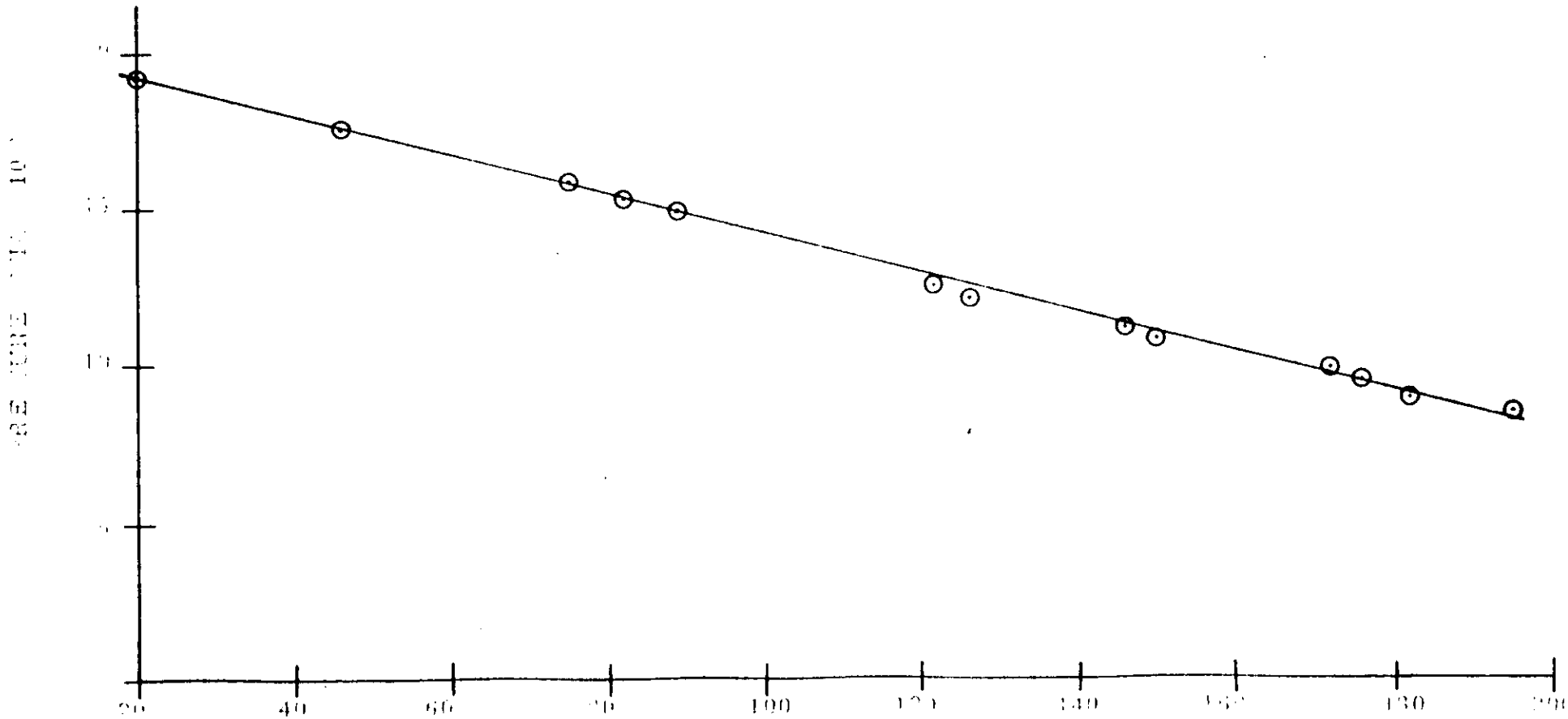
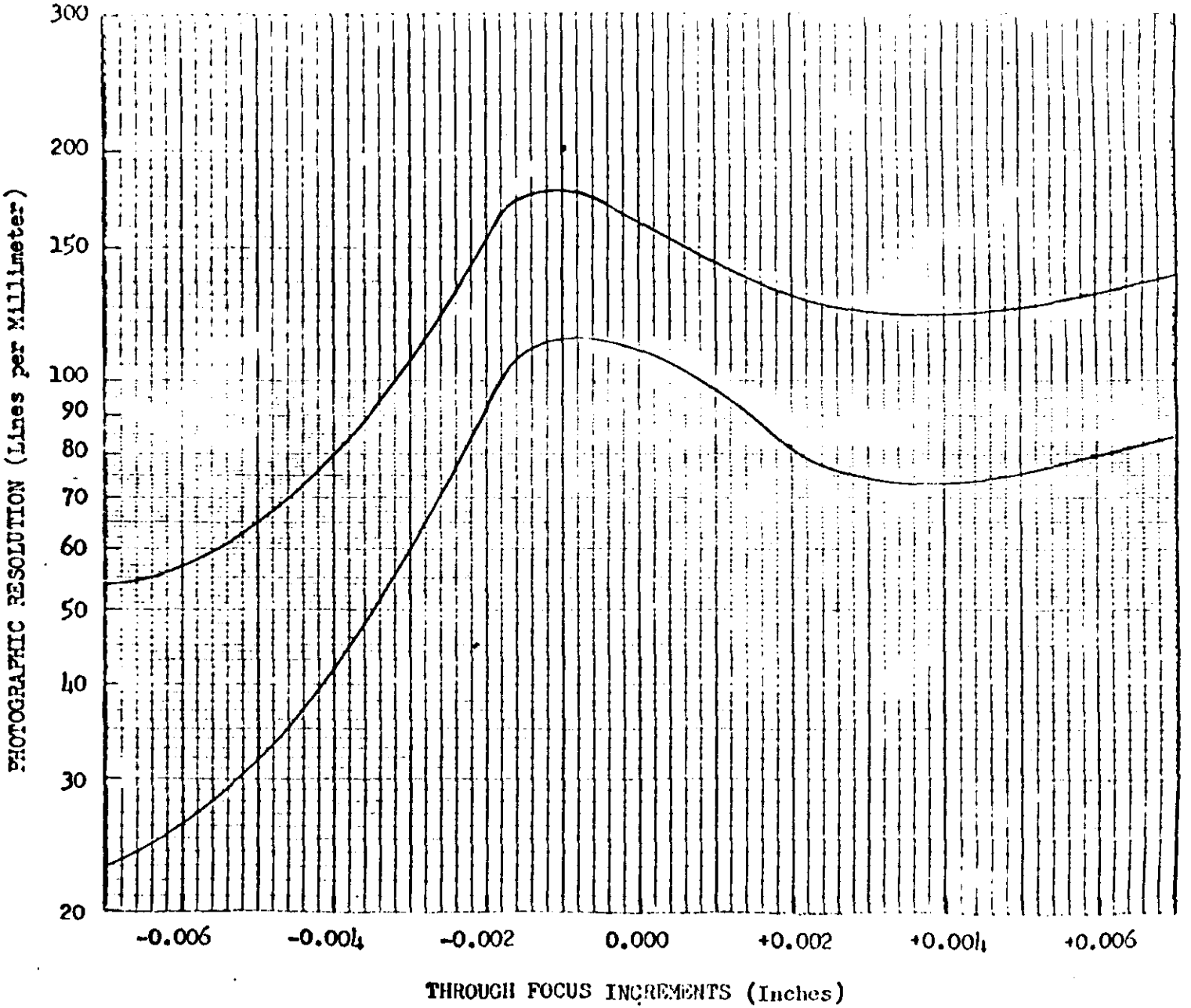


Figure 2-1

PRE-FLIGHT DYNAMIC RESOLUTION



Camera No: 122

Payload No: J-19

Resolution (l/mm)

High Contrast: 178

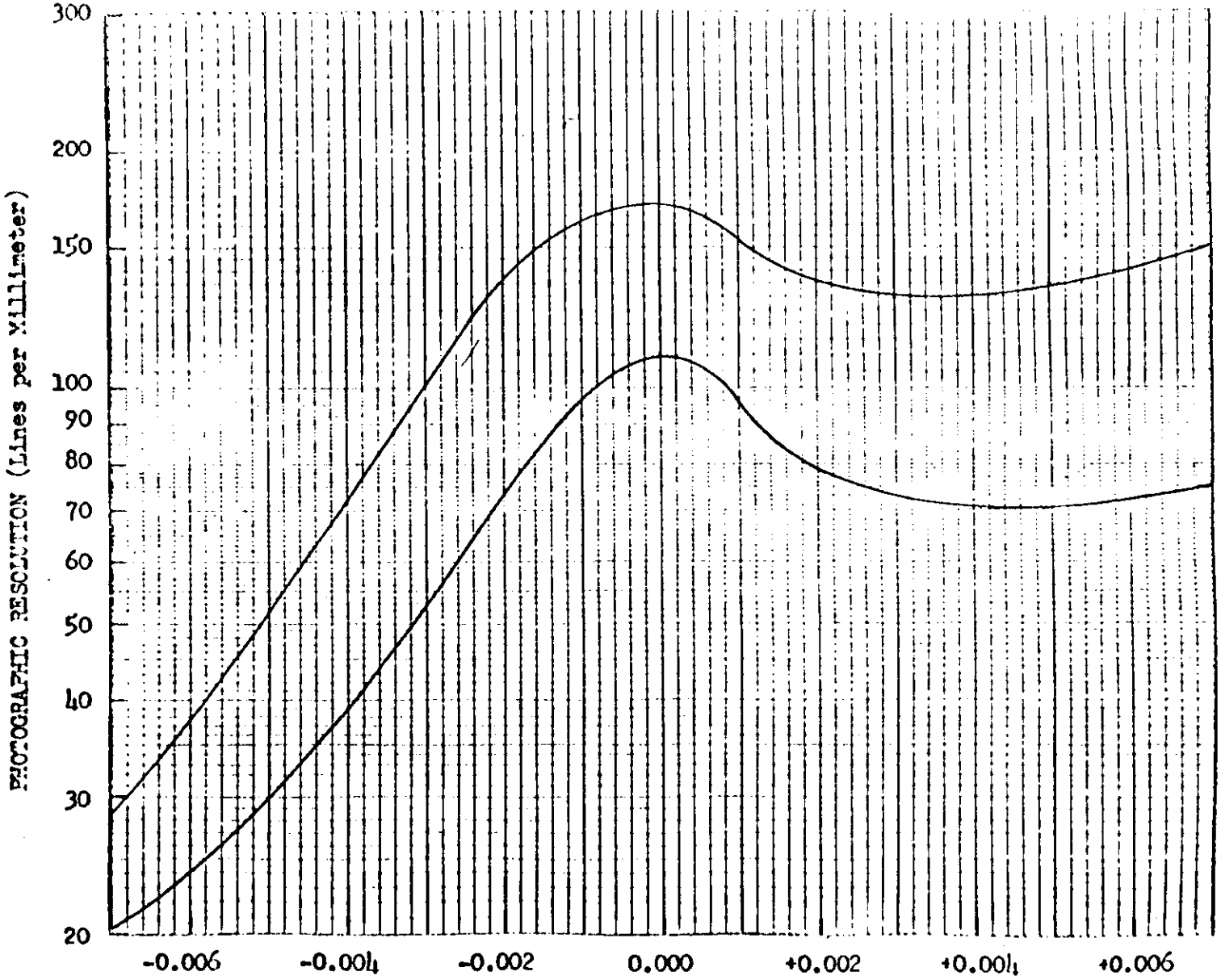
Low Contrast: 114

Film Type: 3404

Test Date: 18 December 1964

Figure 2-2

PRE-FLIGHT DYNAMIC RESOLUTION



Camera No: 123

Payload No: J-19

Resolution (l/mm)

High Contrast: 172

Low Contrast: 110

Film Type: 3404

Test Date: 18 December 1964

Figure 2-3

SECTION 3

FLIGHT OPERATIONS

A. INSTRUMENTATION AND COMMAND PERFORMANCE

The telemetry instrumentation system was satisfactory throughout the flight. The only exceptions being the lens rotation monitor (Ch 10, Lk I, cont.) and the cycle counter units monitor (Ch 13, Lk I, Pt 27) for Instrument #2.

The Instrument #2 lens rotation monitor pulse randomly changed length and at times was missing completely. The trailing edge of the pulse when present was always in the proper position.

The units cycle count for Instrument #2 read a maximum of 3.7V (9 count) on and after orbit 32. Step levels were proper on orbits 16 and 24. Analysis of the cycle counter circuit shown on Figure 3-1 indicates that the most probable cause of failure is a high resistance short from either the wiper or high side of counter resistor divider network to TLM ground. The resistance of the short would be approximately 6K from data observed on orbit 32 and as low as 1K from data observed on orbit 73.

Good correlation was obtained for the cycle counters and film footage potentiometers during the first mission. The potentiometers agreed within plus or minus 50 cycles which is the minimum resolution obtainable from reading the TLM records. During the second mission the readings of both potentiometers were off from the corresponding cycle counters by values up to 150 cycles.

B. PANORAMIC CAMERA PERFORMANCE

Engineering operations were programmed for acquisition over [redacted] Tracking Station during Orbits 8, 16, 24, 32, 48 and 65 of Mission 1018-1, and 3, 81 and 97 of Mission 1018-2.

Instrument operation and payload metering was satisfactory throughout both Missions 1018-1 and 1018-2 as indicated on TLM by the center-of-format, lens rotation, and payload supply and take-up monitors. Start-up and shut-down was normal.

Cycle period data for these operations are contained in Table 3-1. The instruments ran consistently slower than predicted throughout the flight. The predictability error was approximately -1.5% for Instrument #1 and -.75% for Instrument #2. The difference in operating rates between the instruments was generally within ± 1%.

Film consumption for the flight was as follows:

MISSION 1018-1

	Master	Slave
Cycles	2856	2804
Feet	8023*	7887*

MISSION 1018-2

Cycles	2956	2964
Feet	7786	7832

* Includes pre-flight test film footage.

The general instrument response, based upon nominal vs. actual consumption, was approximately 3% slow during the first mission, and 3% decaying to 5% slow during the second mission. The slave camera was slightly faster ($< 1\%$) than the master.

FMC match was within 5% of rates required after the early revs when orbit parameters and camera response were being determined.

Orbit	R-A-D	Approx. Match	Remarks
1 - 5	4-7-7	5 % slow	Settings for nominal orbit and response
6 - 18	4-7-6	4% slow	Change on rev 6 to move perigee northwards; valid settings except for camera response.

Orbit	R-A-D	Approx. Match	Remarks
19 - 66	3-7-6	1% mean	Increase rates for camera response; good actual match for first mission, but errors increasing as orbit decays.
67 - 83	2-8-6	2 1/2% mean	Increase rates to compensate orbit decay; errors increase as orbit decays.
84 - 99	2-7-5	1% mean	(D-5 effective on rev 85) increase rates to compensate slower cameras and to adjust limiter action to desired latitude range.

C. STELLAR-INDEX PERFORMANCE

The Stellar-Index camera for the first mission operated normally for eight and one-half orbits and metered 55 frames. During the third operation of orbit eight the S/I command programmer failed. This failure resulted in loss of all commands to the S/I unit and the loss of the smear pulse on the main panoramic camera film. With the failure of the programmer both the first and second mission S/I units were rendered inoperative. Both units slew during recovery indicating that both units were functional.

D. CLOCK PERFORMANCE

Satisfactory clock correlation was obtained for both missions. Clock/System time correlation data is contained in Table 3-2. The system time is fitted to a best fit curve of clock versus system time which is represented by a second order equation in this case. The table includes the amounts that the recorded values of system time deviate from the corrected values.

The corrected system time values are computed from the equation - $y = a_2x^2 + a_1x + a_o$, where y = corrected system time and x = clock time.

E. PRESSURE MAKE-UP SYSTEM PERFORMANCE

Supply pressure history for the PMU system is shown on Figure 3-2, where the supply pressure decay is plotted as a function of the total instrument operate time. The irregular slope of the curve indicates that gas is passing through the PMU system at times other than when the instruments are operating.

The average consumption rate was 7.0 psi/min. during flight. The value obtained during the environmental test was 6.25 psi/min. with no leakage being indicated.

F. TEMPERATURE ENVIRONMENT

The temperature data obtained on TLM during the [redacted] acquisitions are summarized on Table 3-3.

Average instrument temperatures varied only 5°F on both instruments due to an almost constant β angle for the entire flight. The instruments averaged 79°F for the master and 69° F for the slave.

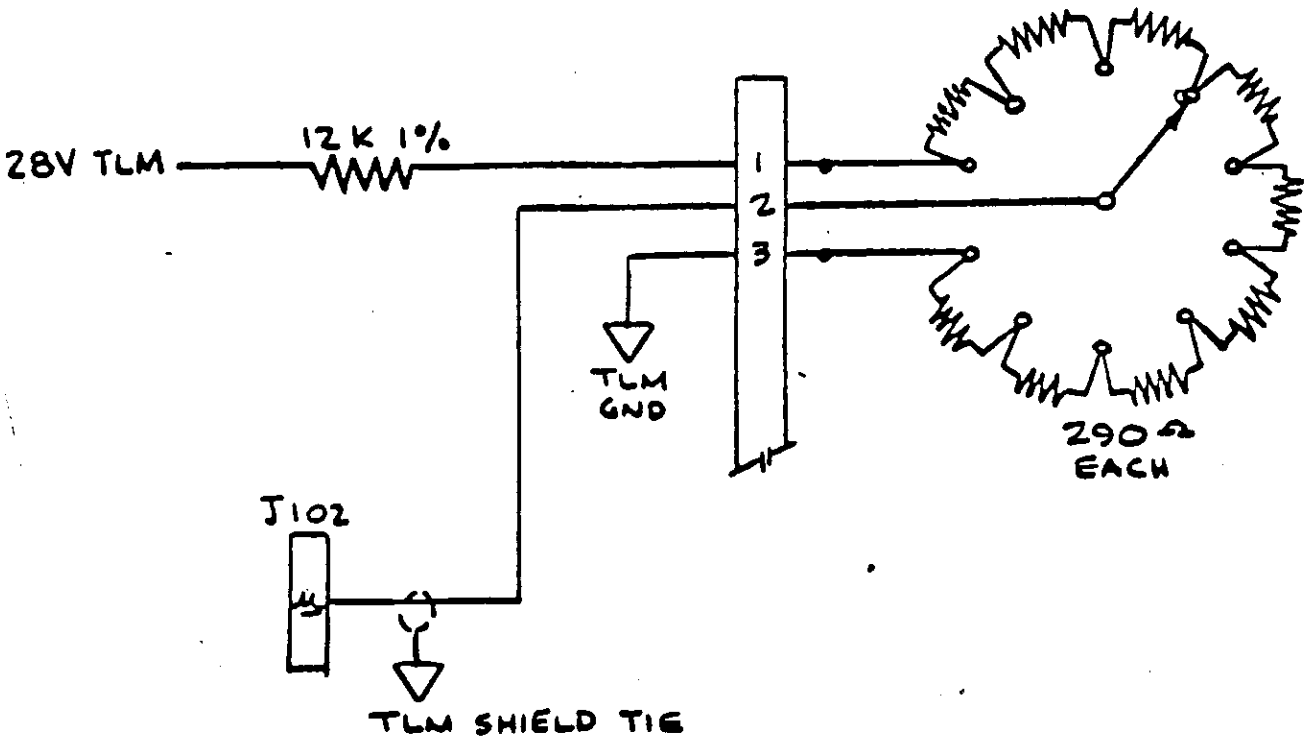
G. RECOVERY SYSTEM PERFORMANCE

The -1 and -2 SRV units were successfully air recovered on orbit 66, 3/29/65 and on orbit 99, 3/31/65, respectively. Impact points were within tolerance for both recoveries.

H. SINE FUNCTION GENERATOR PERFORMANCE

This orbital sine function generator (S/N 269) was the fourth unit to be flown with a Corona J system. The unit was first enabled by real time command on orbit 8. The output to the Agena guidance at this time should have been 7.5 milli-volts. The "enable" transient was not detected by the vehicle response. The telemetry monitor indicated the unit was in the correct phase position throughout both missions. Figure 3-3 shows the telemetry voltage vs. the actual elapsed time.

After second recovery the unit was disabled on orbit 112 and then enabled on orbit 113. At the "enable" the output of the unit should have been 21.5 millivolts. Again the vehicle did not detect the "enable" transient and could indicate that the output of the unit was not being received by the vehicle guidance system.



INST. #2 UNITS CYCLE COUNTER TLM CIRCUIT

Figure 4-1

[redacted]

J-19/1612 FLIGHT CYCLE RATE SUMMARY - MISSION 1018

REV/MODE		RAMP		T.O.R.	INST 122 ACT.	INST 122 NOM.	INST 122 DEV.	INST 123 ACT.	INST 123 NOM.	INST 123 DEV.	122/123 DIFF.
008	A	4	7	182	3.112	3.107	-0.15	3.120	3.106	-0.44	0.26
016	A	4	7	1740	2.275	2.215	-2.73	2.255	2.222	-1.50	-0.88
024	A	3	7	224	2.973	2.961	-0.41	2.974	2.960	-0.48	0.03
032	A	3	7	1830	2.230	2.206	-1.08	2.230	2.213	-0.77	-0.
048	A	3	7	1800	2.237	2.206	-1.39	2.221	2.213	-0.34	-0.72
065	A	3	7	1845	2.238	2.206	-1.45	2.229	2.213	-0.73	-0.40
073	B	2	8	355	2.700	2.699	-0.03	2.700	2.700	-0.00	-0.
081	B	2	8	1940	2.245	2.207	-1.70	2.222	2.214	-0.34	-1.02
097	B	2	7	2056	2.193	2.201	0.35	2.225	2.207	-0.79	1.46

DEV. AND DIFF. ARE IN PERCENT
THE (-) SIGN INDICATES THAT THE INST IS SLOWER THAN PREDICTED OR THAT INST 1 IS SLOWER THAN INST 2

Table 3-1

[redacted]

[redacted]

PRELIMINARY CLOCK CORRELATION

ORDER FIT 1

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
56632.268	395404.54190	56632.27520	-0.00628	0	1
31321.622	456493.08690	31321.61980	0.00314	8	1
75649.309	500821.57590	75649.30850	0.00145	16	1
30360.145	5061.49890	30360.14320	0.00273	24	1
74671.579	49372.93390	74671.57790	0.00203	32	1
29276.552	90377.90990	29276.55360	-0.00069	40	1
73568.432	134669.79290	73568.43630	-0.00338	48	1
28333.667	175835.02690	28333.67010	-0.00210	56	1
77875.992	225377.34590	77875.98870	0.00424	65	1
32594.385	266495.73990	32594.38240	0.00352	73	1
76841.137	310742.49690	76841.13910	-0.00117	81	1
31482.427	351783.78690	31482.42880	-0.00089	89	1
75704.865	396006.22690	75704.86850	-0.00259	97	1

A0=-0.33877226400 06 A1= 0.9999999931370 00
SIGMA=0.00291 NO. POINTS= 13
RATIO OF CLOCK TIME TO SYS TIME= 0.100000000686D 01

ORDER FIT 2

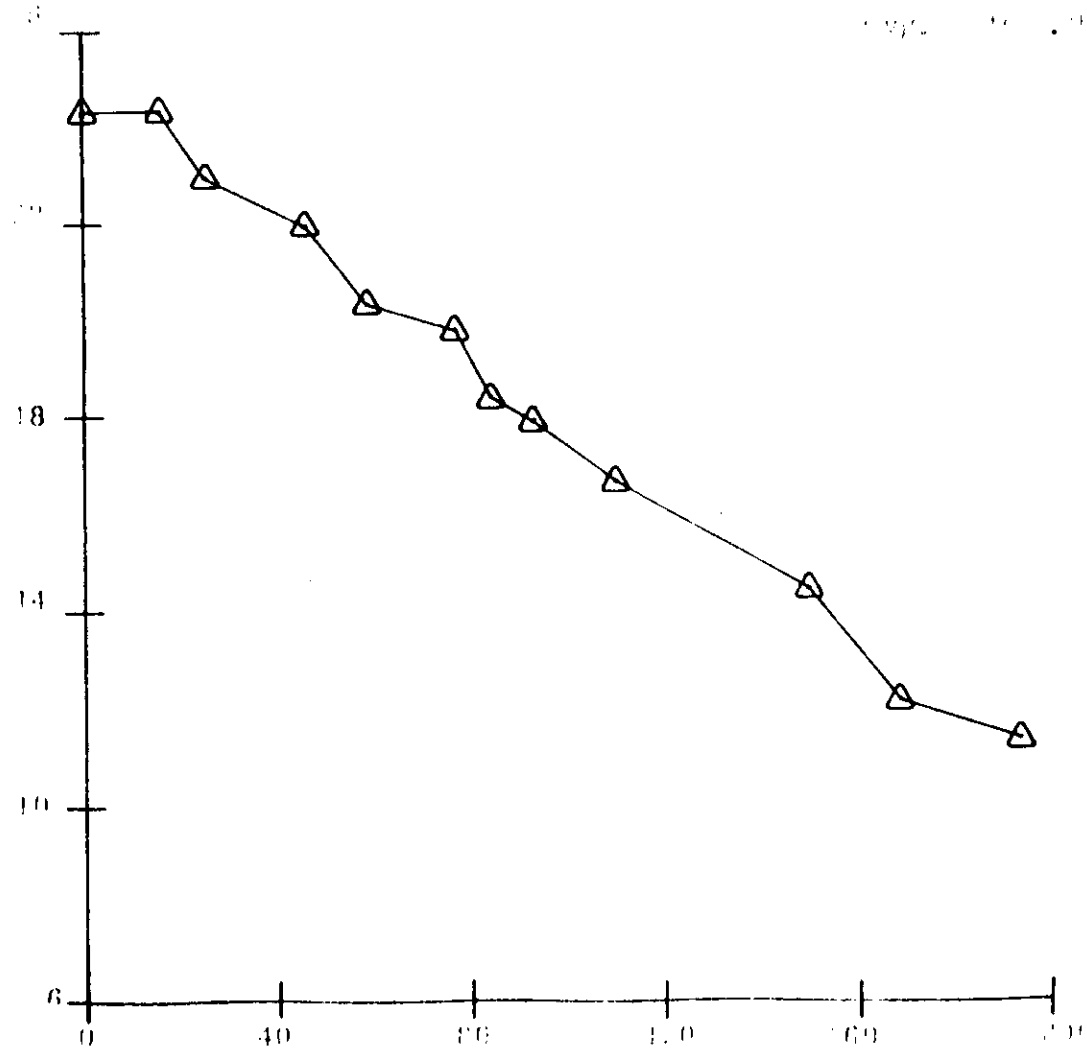
SYS TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
56632.268	395404.54190	56632.27280	-0.00389	0	1
31321.622	456493.88690	31321.61890	0.00404	8	1
75649.309	500821.57590	75649.30850	0.00150	16	1
30360.145	5061.49890	30360.14380	0.00217	24	1
74671.579	49372.93390	74671.57890	0.00101	32	1
29276.552	90377.90990	29276.55490	-0.00196	40	1
73568.432	134669.79290	73568.43770	-0.00474	48	1
28333.667	175835.02690	28333.67130	-0.00336	56	1
77875.992	225377.34590	77875.98960	0.00332	65	1
32594.385	266495.73990	32594.38290	0.00308	73	1
76841.137	310742.49690	76841.13890	-0.00092	81	1
31482.427	351783.78690	31462.42780	0.00019	89	1
75704.865	396006.22690	75704.86640	-0.00043	97	1

A0=-0.33877228510 06 A1= 0.1000000060410 01
A2=-0.50317405674850-13
SIGMA=0.00265 NO. POINTS= 13

Table 3-2

[redacted]

[redacted]



INSTRUMENT ON TIME (MIN.)

Figure 7-8

[redacted]

[redacted]

TABLE 3-3

J-19 TEMPERATURE SUMMARY

SENSOR	ORBITS ACQUIRED												
Master Camera	0	8	16	24	32	40	48	56	65	73	81	89	97
3	73	65	75	72	72	71	71	72	74	71	70	69	67
4	80	75	80	79	77	79	78	79	81	79	75	77	73
5	75	76	69	78	77	78	78	79	80	78	77	78	72
6	77	73	79	78	79	76	79	78	81	78	78	75	73
7	82	78	89	86	86	84	86	85	89	84	85	81	80
8	76	76	68	80	78	78	78	80	81	79	77	77	71
9	75	76	80	79	78	79	78	80	80	79	78	76	73
10	78	78	92	85	88	84	87	85	89	84	86	82	81
11	69	69	74	73	72	74	73	77	76	72	74	73	65
12	68	76	79	79	77	79	77	80	81	75	75	78	72
13	79	74	81	77	79	77	79	78	81	76	77	75	72
AVG	76	74	77	79	79	79	79	79	82	79	78	77	73
Slave Camera													
3	72	68	72	71	70	71	70	71	73	70	70	69	66
4	72	68	67	68	66	68	66	70	70	68	65	67	61
5	68	66	69	68	67	68	67	69	70	66	66	65	62
6	69	68	75	71	73	71	73	71	76	71	71	69	69
7	68	67	73	71	73	71	73	72	76	71	71	69	69
8	71	69	73	72	70	72	71	74	75	71	71	70	68
9	74	70	75	72	73	74	73	74	76	72	72	70	68
10	69	64	75	71	72	69	71	69	75	68	70	66	67
11	71	58	51	60	58	61	60	61	64	60	60	69	54
12	71	62	65	65	62	66	63	66	68	65	63	64	60
13	70	60	66	62	63	62	64	64	67	70	61	60	58
AVG	70	66	69	69	69	69	69	70	73	69	68	67	65
Supply Spool Spool													
1	64	53	55	55	57	56	57	58	60	56	56	55	52
2	66	59	61	61	60	61	60	63	64	61	59	58	55

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

TABLE 3-3

J-19 TEMPERATURE SUMMARY

SENSOR / Fair ("A") Barrel #1 ("B")	0	8	16	24	32	40	48	56	65	73	81	89	97
1	OBH	37	59	43	55	43	40	43	55	33	53	--	--
2	OBH	11	13	17	10	16	2	17	10	67	71	--	--
3	215	2	20	7	20	7	12	10	20	77	131	--	--
4	248	53	68	60	71	58	62	61	68	44	83	--	--
5	OBH	52	57	57	61	57	52	57	61	46	63		
6	OBH	52	61	57	57	57	48	57	61	--	--	--	--
Barrel #2													
1	162	33	51	38	51	38	42	41	51	31	47	31	33
2	162	36	77	45	77	45	66	48	77	45	81	45	69
3	226	53	117	62	114	62	101	65	114	62	117	58	109
4	205	56	74	61	74	64	62	67	71	61	70	61	59
5	178	48	73	56	72	56	67	56	72	47	63	50	54
Conic Adapter													
1	187	37	43	46	42	46	34	46	46	35	35	35	27
Clock													
1	94	64	67	67	67	67	62	70	67	63	59	63	53
2	96	64	67	67	67	70	64	70	70	63	59	63	53
Thrust Cone "A" to "B" SRV													
1	107	32	35	33	31	33	34	28	30	57	57	56	56
2	72	52	44	43	42	41	43	43	43	63	63	62	63
Stellar/Index "A" to "B"													
1	90	56	65	61	64	61	56	61	65	65	62	62	57
2	78	56	62	59	58	59	53	62	59	75	65	68	57
Recovery Battery "B" SRV													
1	70	69	68	66	66	66	64	66	68	87	89	85	86
Master Cassette "A" SRV													
2	92	51	52	45	44	44	48	45	51	--	--	--	--

NOTE: Only Thrust Cone Data corrected for Self-heating.
OBH - Out of Range High

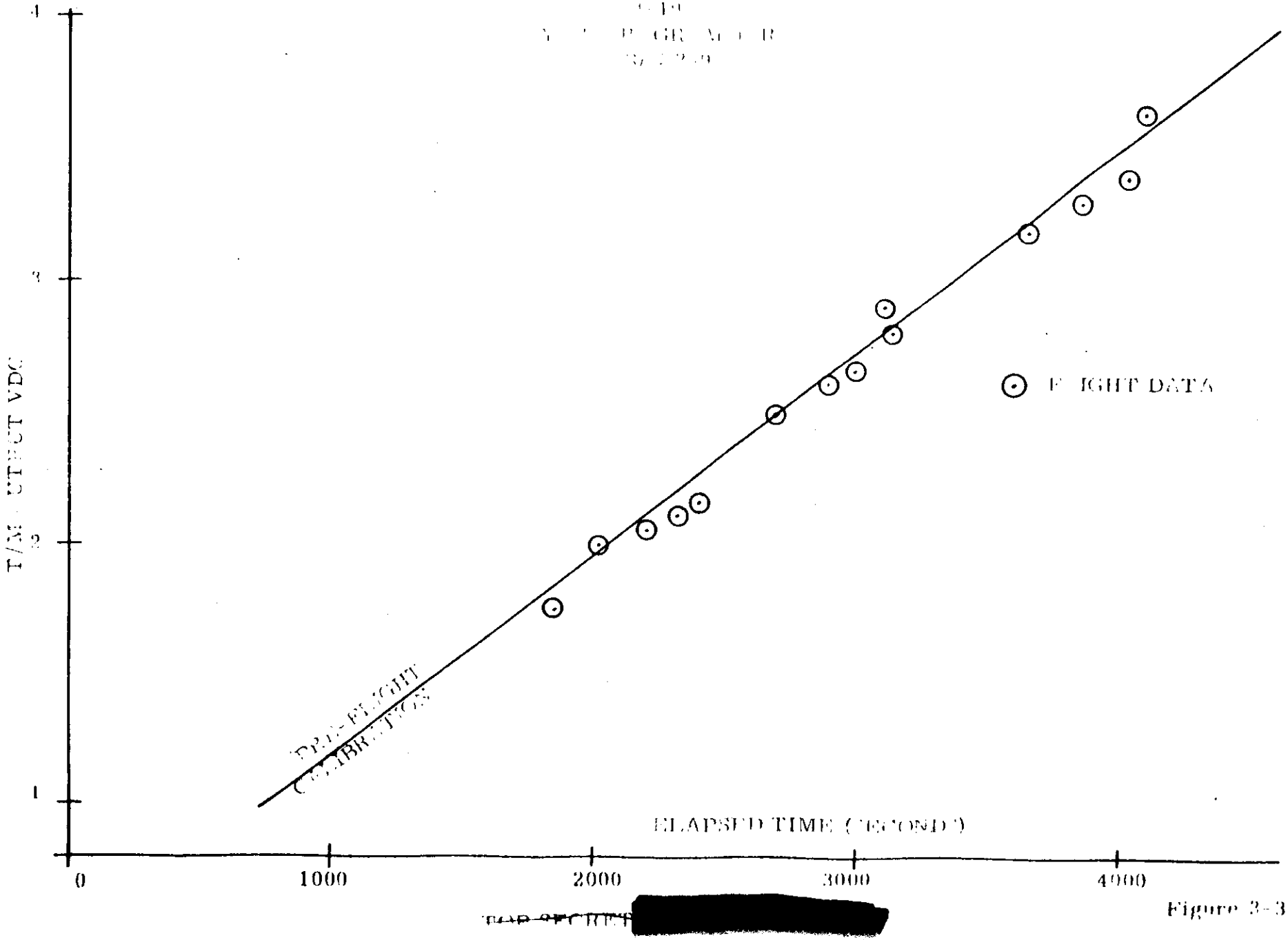

T/M OUTPUT VDC
ELAPSED TIME (SECOND)
0
1000
2000
3000
4000
FLIGHT DATA
PRE-FLIGHT
CALIBRATION

Figure 3-3

SECTION 4

MISSION 1018-1 RECOVERY SYSTEM

SRV #668 was received at A/P on 30 July 1964. The receiving weight was 149.7 pounds. After modifications and incorporation of outstanding E.O.'s, the SRV was delivered to Systems Test for incorporation into the J-19 system.

The capsule was shipped to VAFB on 13 January 1965.

The -1 recovery system was successfully recovered by air catch from orbit 66 at 15:38 PST on 29 March 1965. The impact point was as follows:

Predicted Impact	$22^{\circ}03.2'N/151^{\circ}12.4'W$
Actual Impact	$21^{\circ}58'N/151^{\circ}15'W$

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

Event times are shown in Table 4-1.

MISSION 1018-1

RECOVERY SEQUENCE OF EVENTS

	Event	Delta Time (Seconds) Actual	Nominal
*	Arm	74.66	75.0 ± 1.0
*	Transfer	2.02	2.0 ± 0.25
	Electrical Disconnect	0.92	0.900 $^{+0.430}_{-0.400}$
	Separation	---	---
**	Spin	3.43	3.4 ± 0.30
	Retro	7.57	7.55 ± 0.45
	Despin	10.74	10.75 ± 0.54
	T C Separation	1.49	1.5 ± 0.15
***	"G" Switch Open	467.85	515.0 $^{+65.0}_{-50.0}$
	Parachute Cover Off	33.98	34.0 ± 1.5
	Drogue Chute Deployed	0.74	0.63 ± 0.08
	Main Chute Bag Separate	9.91	10.14 $^{+0.48}_{-0.40}$
	Main Chute Deployed	0.54	0.52 ±0.13
	Main Chute Disreef	4.67	4.46 $^{+0.49}_{-0.29}$

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

Spin Rate 66 RPM
Despin Rate 9.1 RPM
Retro Velocity 1024 ft./sec.

TABLE 4-1

SECTION 5

MISSION 1018-2 RECOVERY SYSTEM

SRV #669 was received at A/P on 30 July 1964. The receiving weight was 151.9 pounds. After modifications and incorporation of outstanding E.O.'s the unit was delivered to Systems Test for mating to the J-19 system.

The capsule was shipped to VAFB on 13 January 1965.

The -2 recovery system was successfully recovered by air catch from orbit 99 at 16:29 PST on 31 March 1965. The impact point was as follows:

Predicted Impact	$20^{\circ}01.1'N/164^{\circ}34'W$
Actual Impact	$20^{\circ}00'N/164^{\circ}24'W$

Event times are shown in Table 5-1.

The condition of the recovered capsule indicated no abnormal re-entry effects.

MISSION 1018-2

RECOVERY SEQUENCE OF EVENTS

Event	Delta Time (Seconds) Actual	Nominal
Arm	74.94	75.0 ± 1.0
Transfer	2.03	2.0 ± 0.25
Electrical Disconnect	0.93	$0.900^{+0.430}_{-0.400}$
Separation	--	--
Spin	3.37	3.4 ± 0.30
Retro	7.83	7.55 ± 0.45
Despin	10.74	10.75 ± 0.54
T/C Separation	1.51	1.5 ± 0.15
"G" Switch Open	468.82	$515.0^{+65.0}_{-50.0}$
Parachute Cover Off	33.30	34.0 ± 1.5
Drogue Chute Deployed	0.69	0.63 ± 0.08
Main Chute Bag Separate	9.66	$10.14^{+0.48}_{-0.40}$
Main Chute Deployed	0.60	0.52 ± 0.13
Main Chute Disreef	4.00	$4.46^{+0.49}_{-0.29}$

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

Spin Rate 66 RPM
Despin Rate 10 RPM
Retro Velocity 1024 ft./sec.

TABLE 5-1

SECTION 6

MASTER (FWD) PANORAMIC CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial Number
Main Camera	122
Main Camera Lens	0652435
Supply Horizon Camera	149B
Supply Horizon Camera Lens	813523
Take-up Horizon Camera	163A
Take-up Horizon Camera Lens	814011
Supply Cassette	SC-27

B. CAMERA DATA AND FLIGHT SETTINGS

Main Camera:

Lens	24" f/3.5
Slit Width	0.250"
Filter Type	Wratten 25
Film Type	Eastman Type 3404

Supply (Port) Horizon Camera:

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

Take-up (Starboard) Horizon Camera:

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

C. POST FLIGHT PERFORMANCE EVALUATION

This camera produced 2857 frames (8023 feet, including preflight test footage) of photography during Mission 1018-1, and 2956 frames (7786 feet) during Mission 1018-2. The overall photographic quality was judged to be about the same for both missions. Compared to past missions, the present ones are considered better than 1014, but not quite as good as 1015, 1016, and 1017.

Image contrast of the master camera was about the same as that of the slave although the filter that was used provided higher wavelength cutoff. Customer personnel using the material expressed no preference between master and slave results in terms of either information content or image contrast. The MIP frames selected for both missions were however produced by the master camera.

The only probable explanation for the slightly less than optimum image quality appears to be unfavorable atmospheric conditions over the areas of interest. The basis for this explanation, which is far from conclusive, is: (1) weather conditions observed on the small number of index images obtained at the beginning of the mission, and (2) the exposure and preliminary processing data tends to suggest atmospheric reflection of solar illumination.

The master panoramic camera and its auxiliary equipment operated in a generally satisfactory manner throughout both missions. The horizon cameras functioned normally and provided imagery of good quality. Lights for the time word, serial number, and index marks, and fiducial marks functioned normally throughout. The 200 cps timing marks appeared normally except that the density was less than desirable.

Emulsion scratches occurred at each edge of the format under the camera number on all frames of both missions. Similar scratches have

been observed on past missions, however the scratches generally are not detected on preflight test materials. These scratches match the ends of the scan rollers. There were also many very small longitudinal scratches in the region within one inch of the timing mark edge throughout both missions. Such marks have been observed occasionally on past missions, but in much smaller regions of the format. Similar scratches appeared on the slave photography and are described in the following section.

Minor light leak fogging during instrument shut down periods is observed at three places on the first or last frames of most passes. The approximate locations of the leaks have been identified and are discussed further in the following section on the slave camera.

SECTION 7

SLAVE (AFT) PANORAMIC CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial
Main Camera	123
Main Camera Lens	0632435
Supply Horizon Camera	129B
Supply Horizon Camera Lens	812270
Take-up Horizon Camera	130A
Take-up Horizon Camera Lens	812277
Supply Cassette	SC-27

B. CAMERA DATA AND FLIGHT SETTINGS

Main Camera:	
Lens	24" f/3.5
Slit Width	0.175"
Filter Type	Wratten 21
Film Type	Eastman Type 3404
Supply (Starboard) Horizon Camera:	
Lens	55mm f/6.8
Aperture Setting	f/8.0
Exposure Time	1/100 second
Filter Type	Wratten 25
Take-up (Port) Horizon Camera:	
Lens	55mm f/6.8
Aperture Setting	f/6.8
Exposure Time	1/100 second
Filter Type	Wratten 25

C. POST FLIGHT PERFORMANCE EVALUATION

This camera produced 2804 frames (7887 feet, including preflight test footage) photography during Mission 1018-1, and 2964 frames (7832 feet) of photography during Mission 1018-2. The overall photographic quality was judged to be about the same as that produced by the master instrument.

Operation of the slave panoramic camera system was normal except for a low intensity mark and fluctuations in the 200 cps timing marks. The horizon cameras functioned normally throughout both missions, and lights for the time word, serial number, and fiducial marks were all normal. The low intensity index mark had been observed in preflight test but could not be corrected by field adjustments. The timing mark fluctuations, previously reported as intermittent operation, were observed only in flight material. In many places where the timing mark appeared to be missing, careful study showed that the marks were very faintly imaged. The cause of the fluctuating timing light intensity is not known.

Emulsion scratches occurred at each edge of the format under the camera number on all frames. Similar scratches occurred with the master camera. Also the small longitudinal scratches appeared on the slave panoramic material under the serial number and at the take-up end of the format, extending into the horizon image.

Minor light leaks were also observed near the end or start of passes. While the light leak fogging occurs at different places on master and slave material with respect to the end of a pass, common light sources are identified by comparison of film paths. One light leak occurring on the first frame of a pass from both instruments results from a leak at the drum of each instrument. Fogging of frames near the end of either master or slave passes can be traced to light leaks at one of two points: the interface between the master instrument barrel and the recovery barrel, or some point near the No. 1 SRV water seal. The latter of course only affects material during the first mission.

SECTION 8

PANORAMIC CAMERA EXPOSURE

The Master camera contained a 0.250 inch slit with a Wratten 25 filter while the Slave camera contained a 0.175 inch slit with a Wratten 21 filter. These conditions place the nominal exposure between the intermediate and full level processing curves, as published by [redacted] for their [redacted]

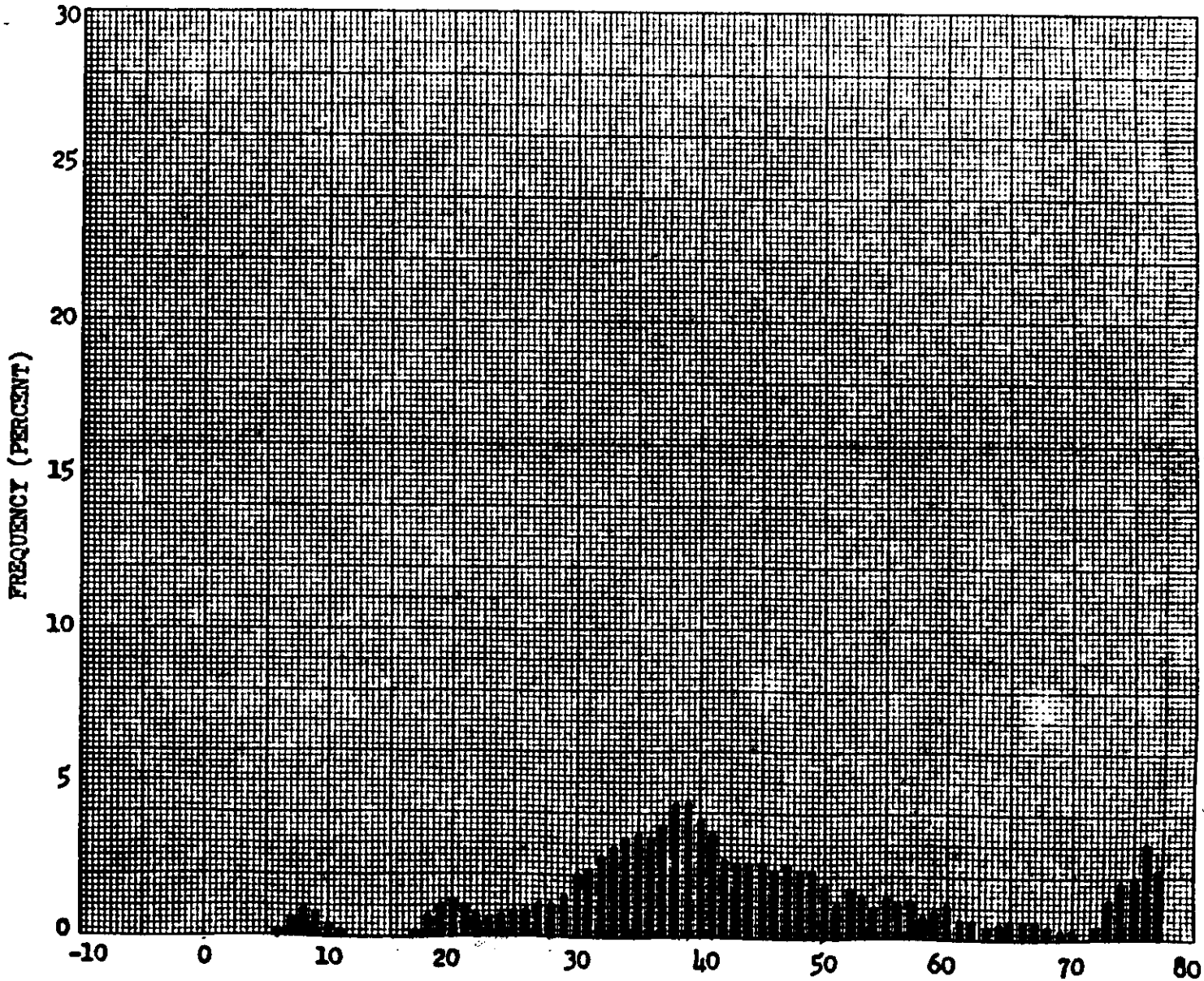
The illumination conditions during the mission were relatively broad as the flight was conducted near the autumnal equinox. The frequency distributions of the solar elevations and solar azimuths encountered during the photographic operations are shown in Figures 8-1 to 8-4.

The nominal exposure times are shown as a function of latitude for passes D-08, D-56 and D-89 in Figures 8-5 through 8-7 for the Master instrument, and Figures 8-8 through 8-10 for the Slave. 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
1018-1	FWD	Predicted	0	0	100
		Reported	9	63	28
1018-1	AFT	Predicted	0	22	78
		Reported	9	53	38
1018-2	FWD	Predicted	0	0	100
		Reported	18	74	8
1018-2	AFT	Predicted	0	15	85
		Reported	1	50	49

The variation in the predicted and reported processing levels is generally consistent with the data observed from recent missions. The use of greater percentages of full processing has been experienced throughout the Corona program. Further analysis and calculations are in process to attempt to ascertain the optimum exposure-processing conditions.

SOLAR ELEVATION FREQUENCY DISTRIBUTION



Mission No: 1018-1

Payload No: J-19

Camera No: 122

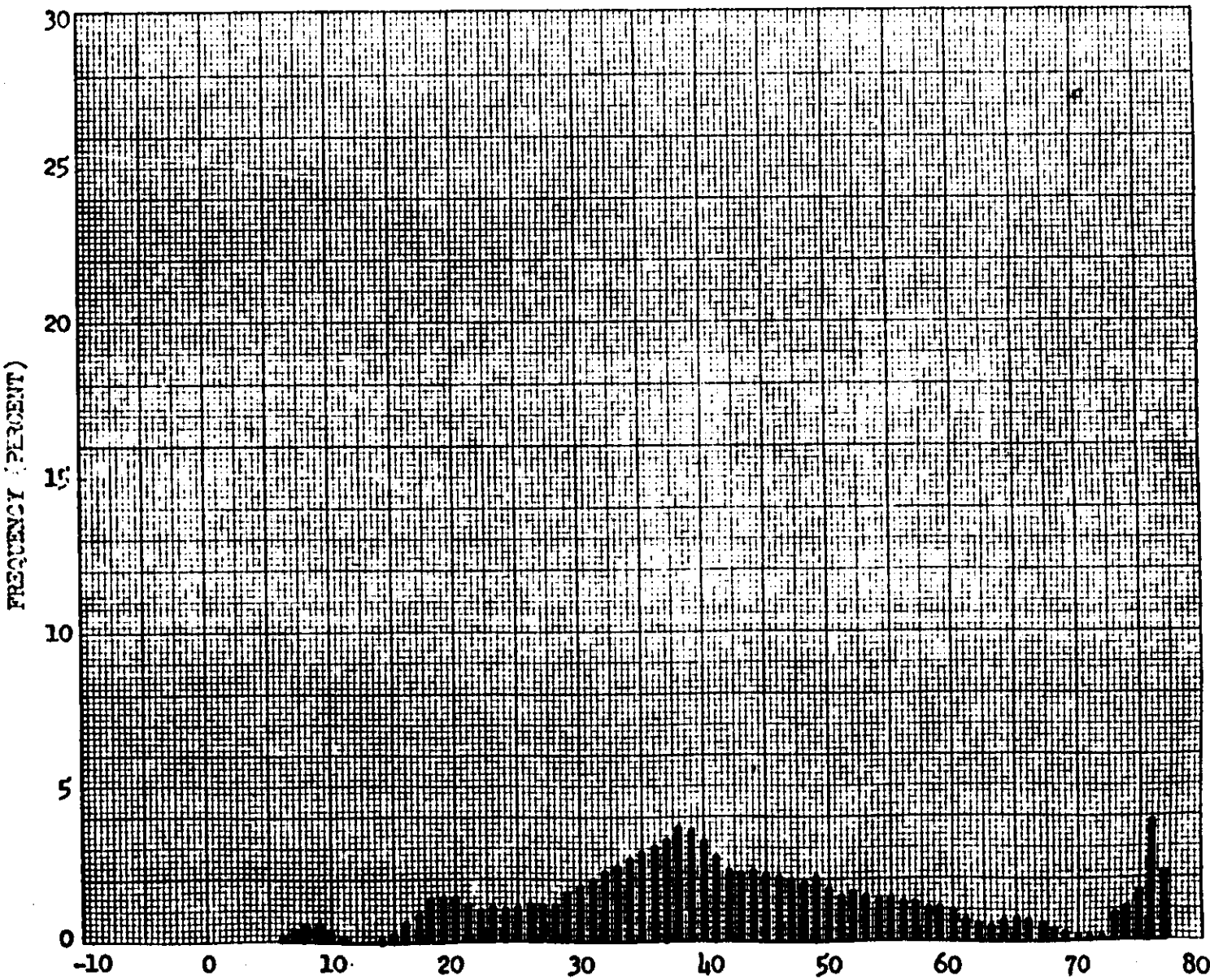
Launch Date: 3/25/65

Launch Time: 2111 Z

Inclination: 96°

Figure 8-1

SOLAR ELEVATION FREQUENCY DISTRIBUTION



Mission No: 1018-2

Payload No: J-19

Camera No: 122

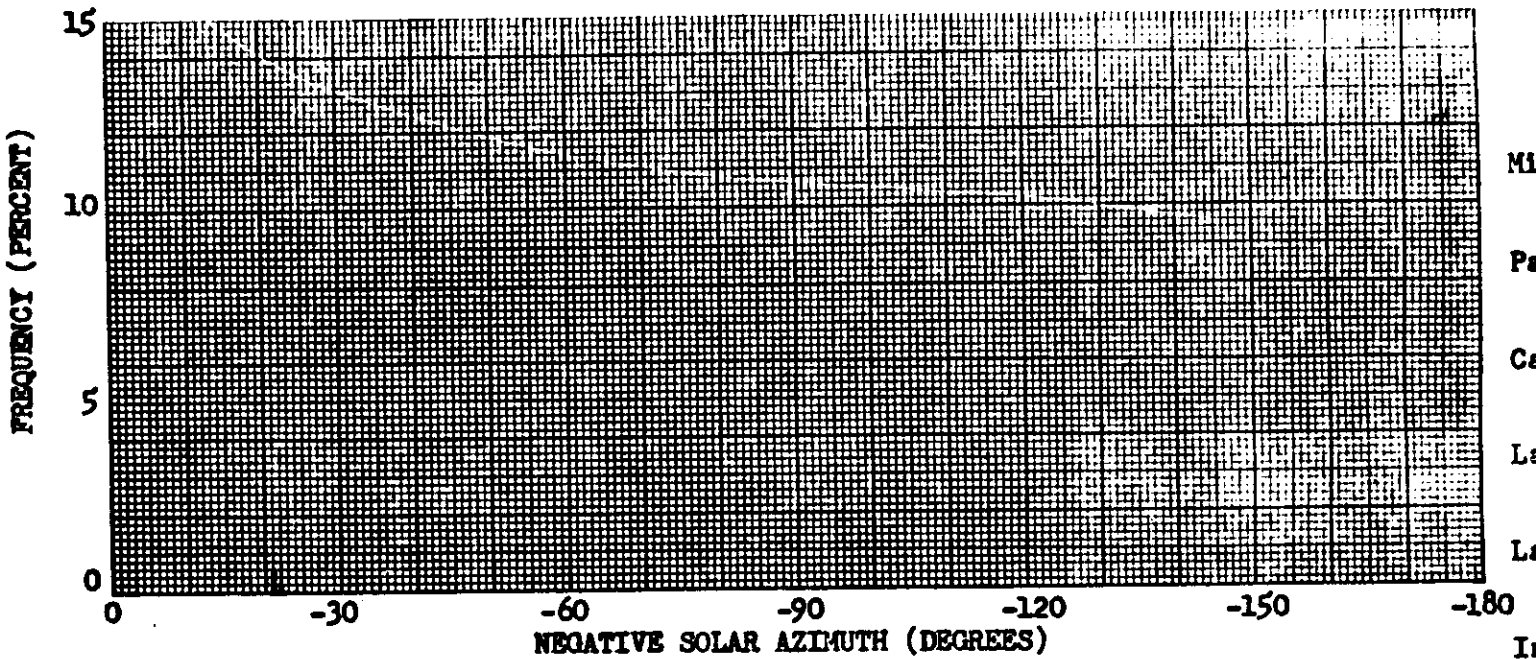
Launch Date: 3/25/65

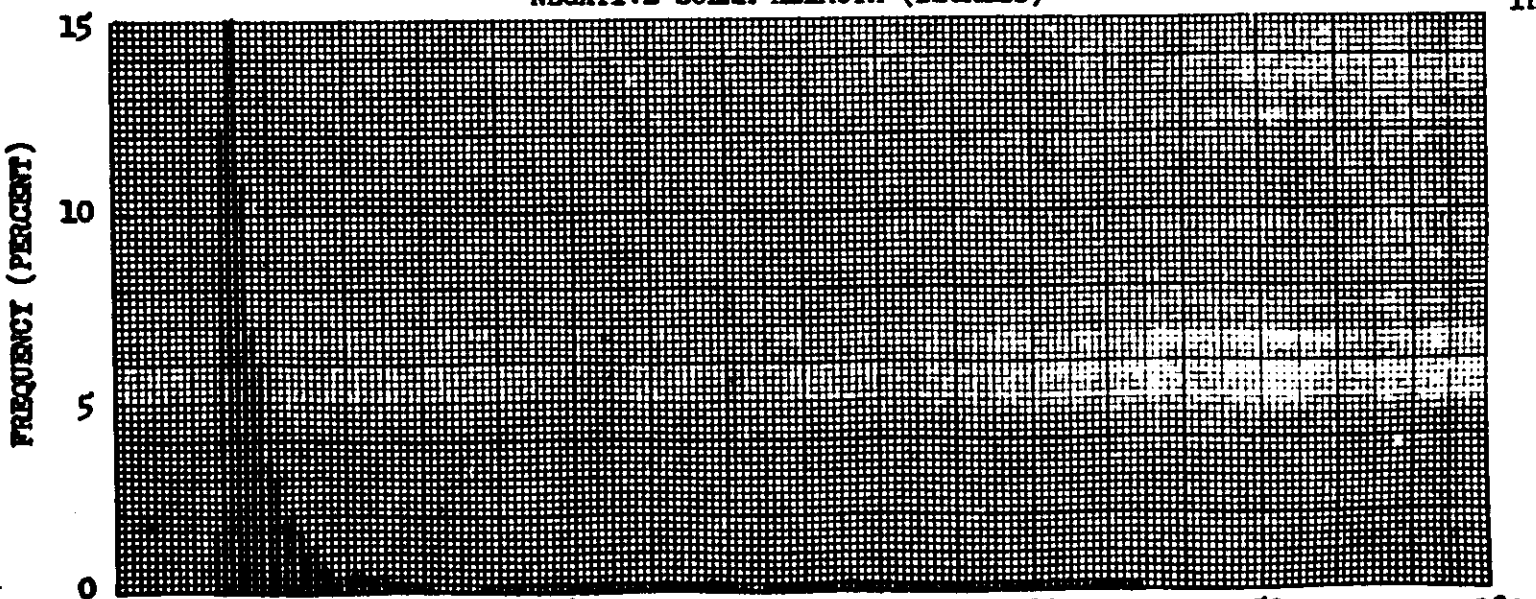
Launch Time: 2111 Z

Inclination: 96°

Figure 8-2

SOLAR AZIMUTH FREQUENCY DISTRIBUTION





Mission No: 1018-1

Payload No: J-19

Camera No: 122

Launch Date: 3/25/65

Launch Time: 2111 Z

Inclination: 96°

SIGN NOTATION

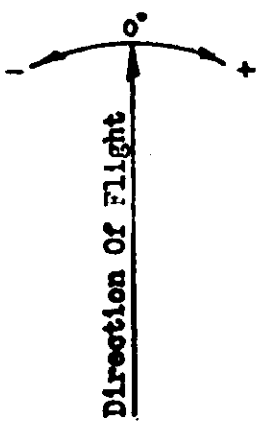
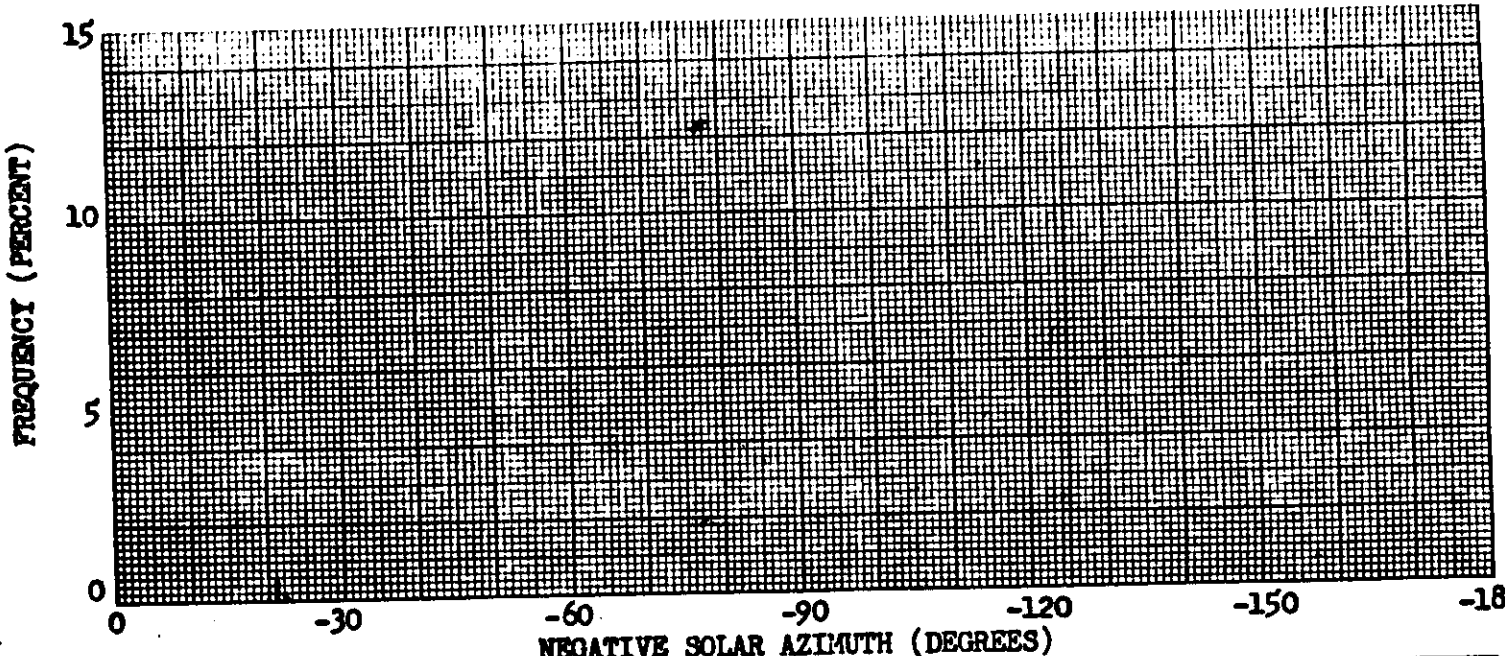
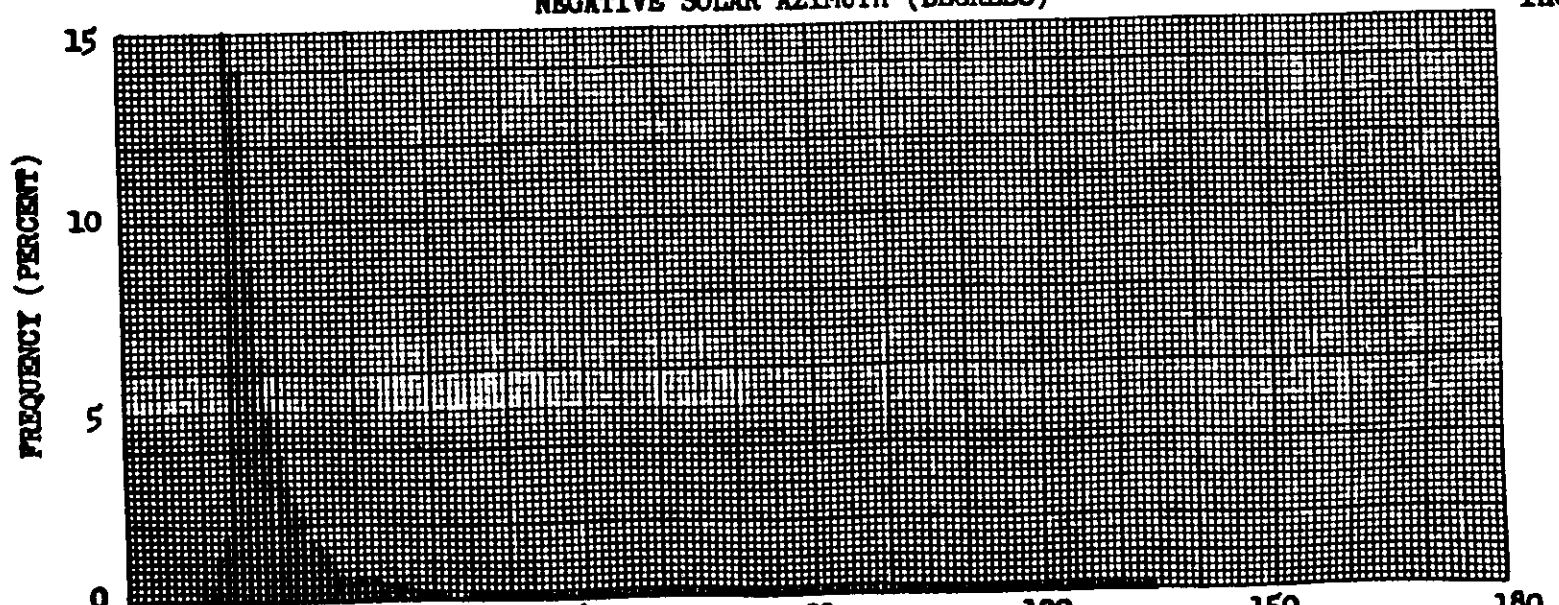


Figure 8-3

[redacted]

SOLAR AZIMUTH FREQUENCY DISTRIBUTION





Mission No: 1018-2

Payload No: J-19

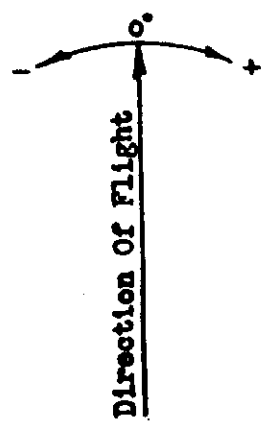
Camera No: 122

Launch Date: 3/25/65

Launch Time: 2111 Z

Inclination: 96°

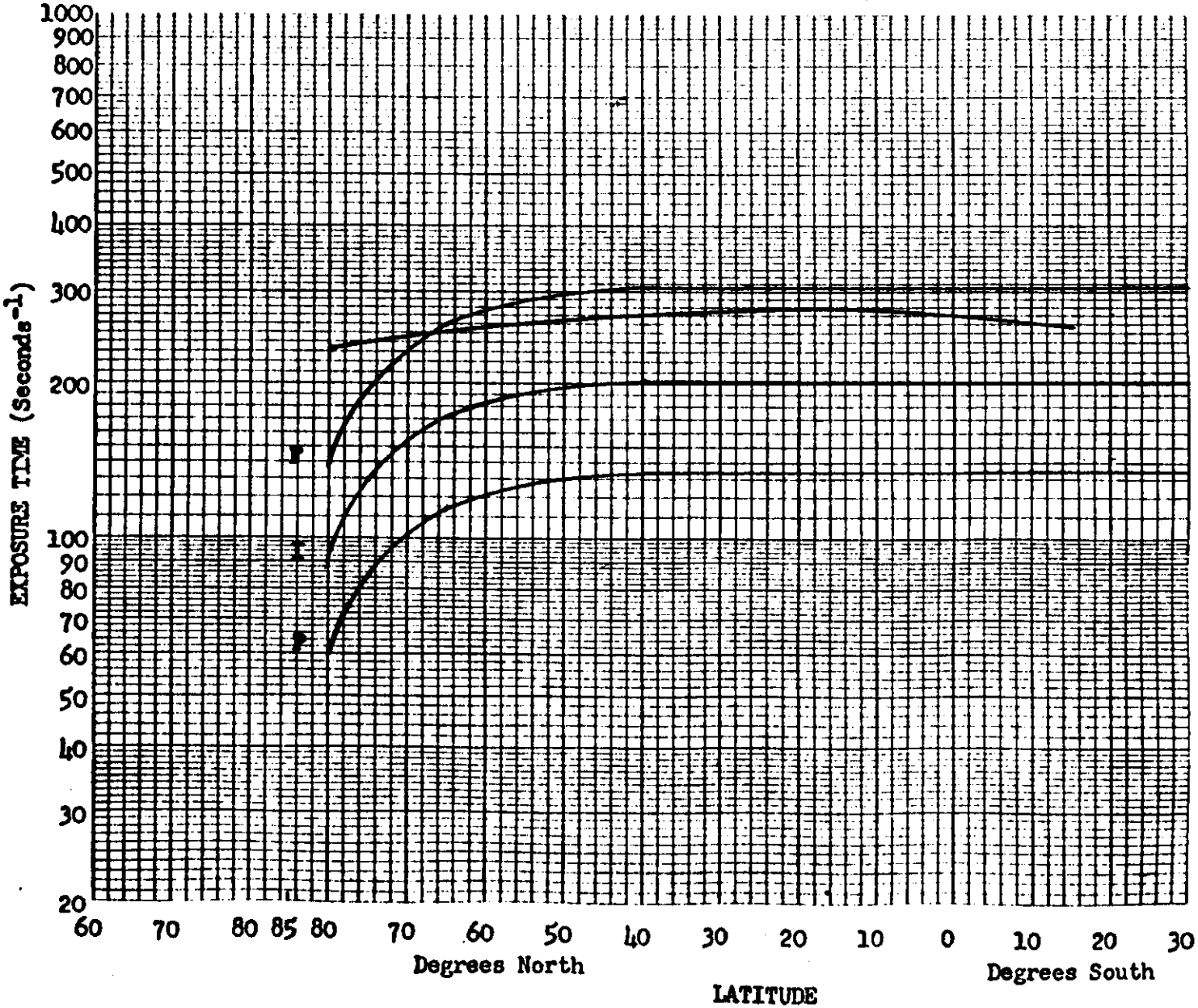
SIGN NOTATION



[redacted]

Figure 8-4

EXPOSURE POINTS



Mission No: 1018

Payload No: J-19

Camera No: FWD

Pass No: 8

Launch Date: 3/25/65

Launch Time: 2111 Z

Slit Width: .250

Filter Type: Wratten 25

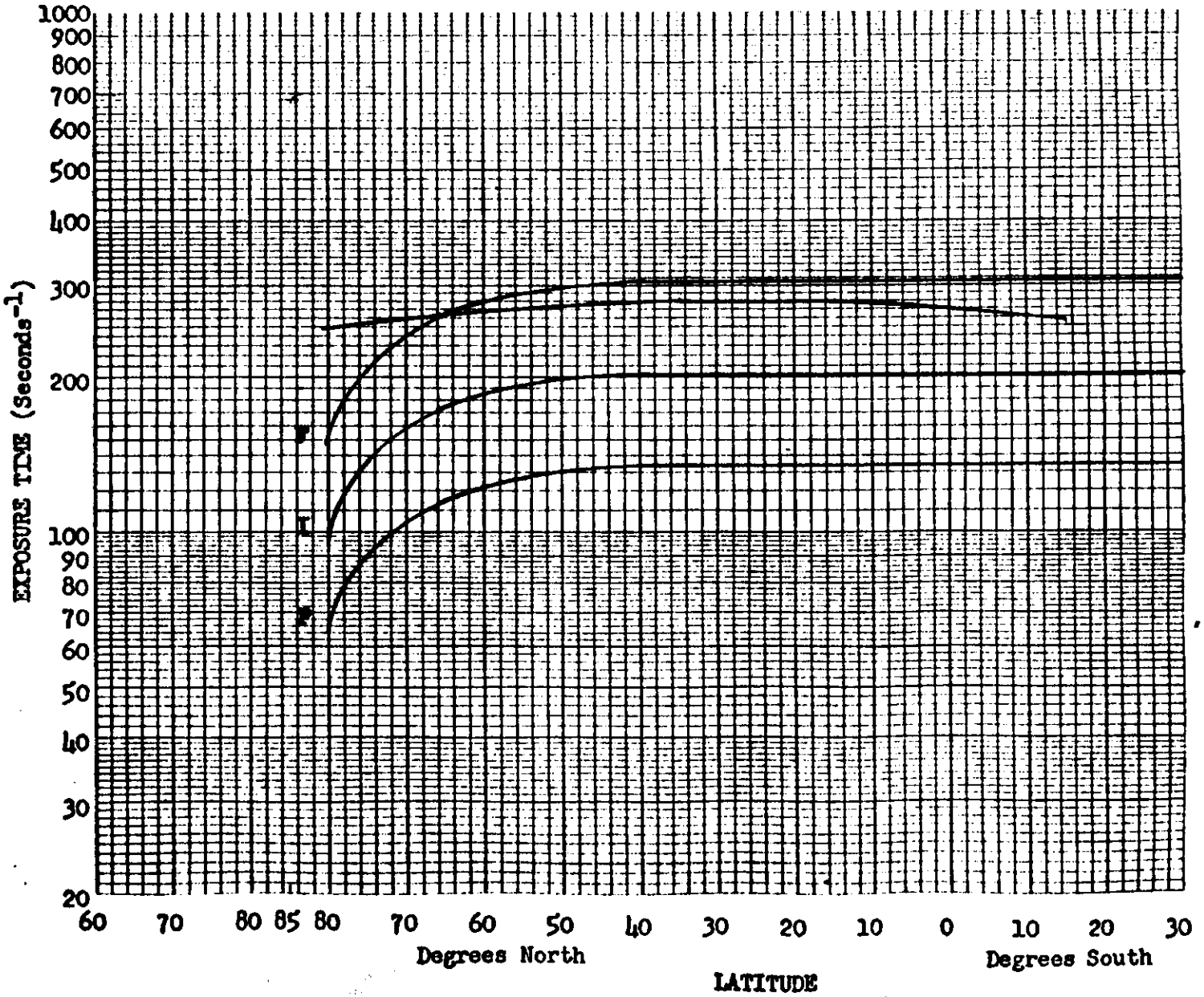
Film Type: 4404

NOTE: Inclination 96°

Figure 8-5

[redacted]

EXPOSURE POINTS



Mission No: 1018

Payload No: J-19

Camera No: FWD

Pass No: 56

Launch Date: 3/25/65

Launch Time: 2111 Z

Slit Width: .250

Filter Type: Wratten 25

Film Type: 4404

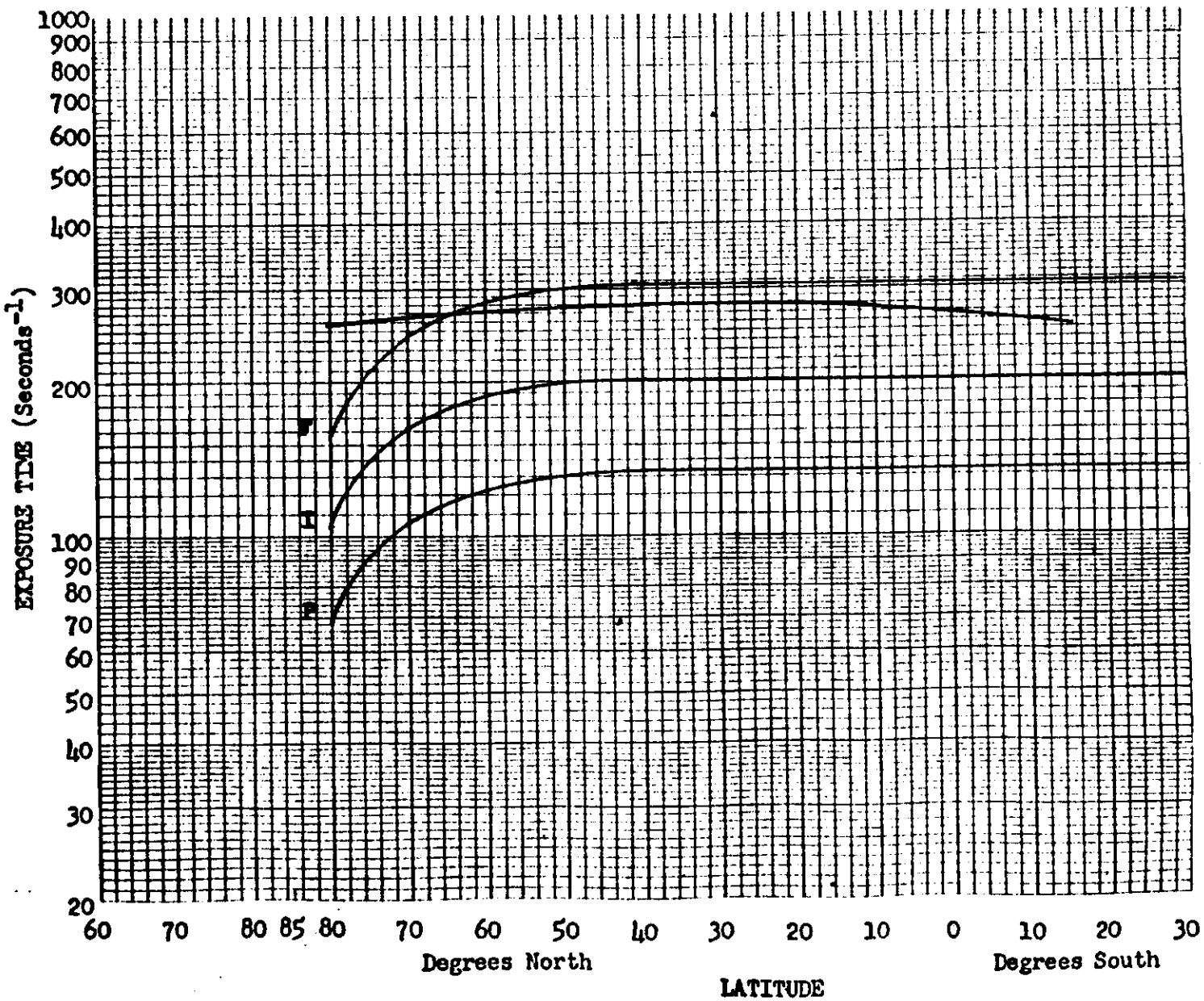
NOTE: Inclination 96°

[redacted]

Figure 8-6

[redacted]

EXPOSURE POINTS



Mission No: 1018

Payload No: J-19

Camera No: FWD

Pass No: 89

Launch Date: 3/25/65

Launch Time: 2111 Z

Slit Width: .250

Filter Type: Wratten 25

Film Type: 4404

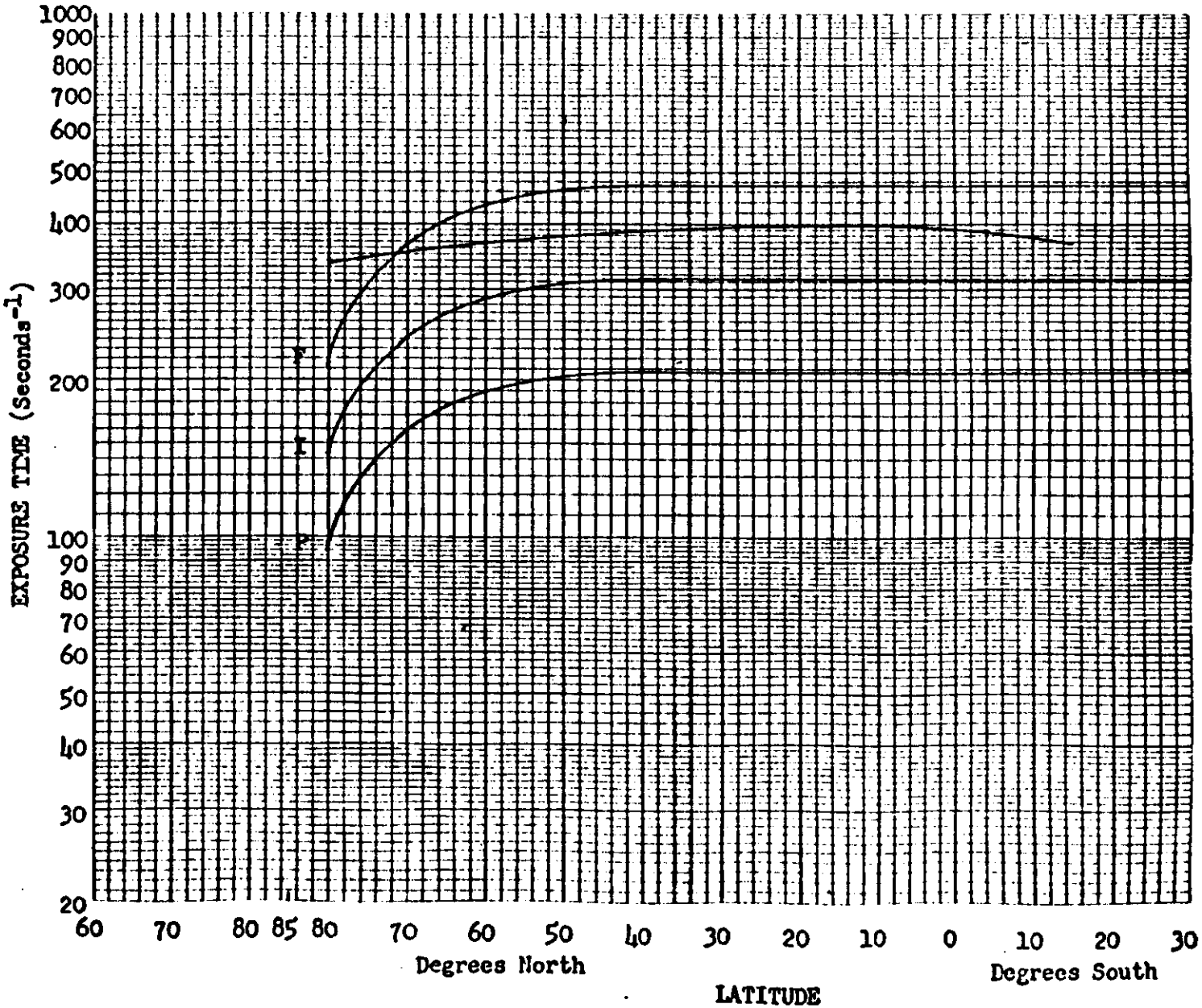
NOTE: Inclination 96°

TOP SECRET [redacted]

Figure 8-7

[redacted]

EXPOSURE POINTS



Mission No: 1018

Payload No: J-19

Camera No: AFT

Pass No: 8

Launch Date: 3/25/65

Launch Time: 2111 Z

Slit Width: .175

Filter Type: Wratten 21

Film Type: 4404

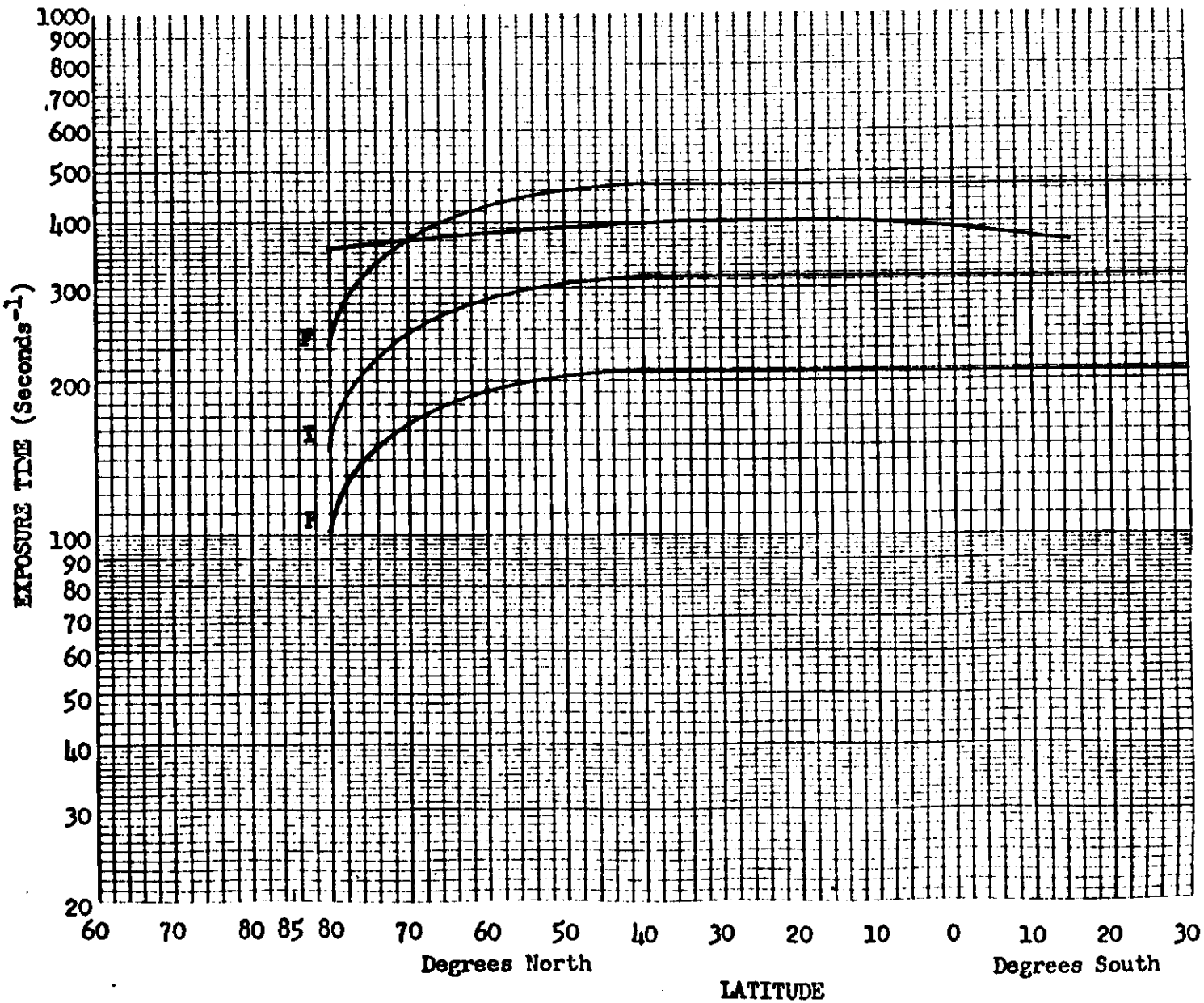
NOTE: Inclination 96°

[redacted]

Figure B-8

[redacted]

EXPOSURE POINTS



Mission No: 1018

Payload No: J-19

Camera No: AFT

Pass No: 56

Launch Date: 3/25/65

Launch Time: 2111 Z

Slit Width: .175

Filter Type: Wratten 21

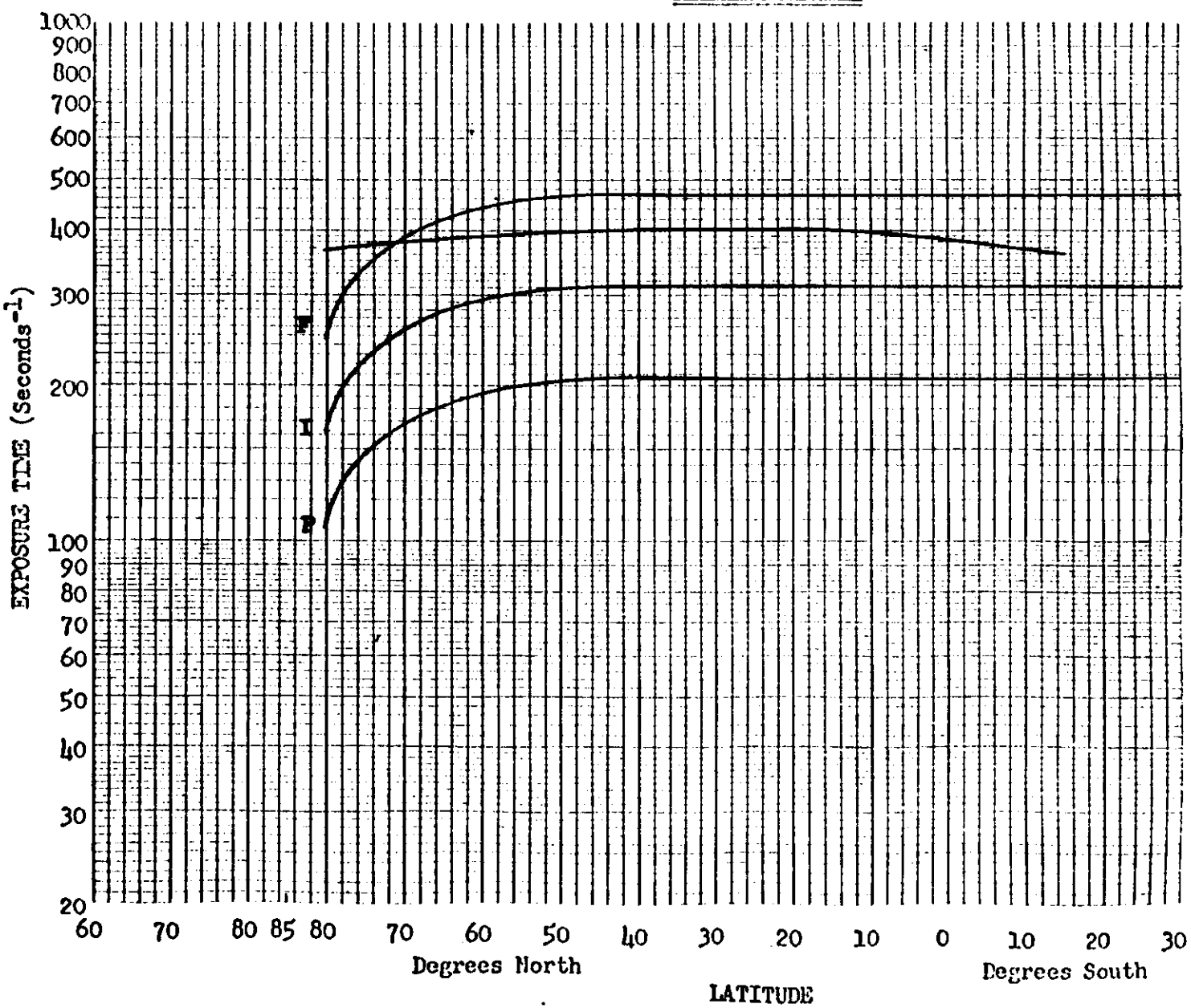
Film Type: 4404

NOTE: Inclination 96°

[redacted]

Figure 8-9

~~TOP SECRET~~ [redacted]



Mission No: 1018

Payload No: J-19

Camera No: AFT

Pass No: 89

Launch Date: 3/25/65

Launch Time: 2111 Z

Slit Width: .175

Filter Type: Wratten 21

Film Type: 4404

NOTE: Inclination 96°

~~TOP SECRET~~ [redacted]

Figure 8-10

SECTION 9

DIFFUSE DENSITY MEASUREMENTS

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

Mission	Camera		Primary	Intermediate	Full
1018-1	FWD	Predicted	0	0	100
		Reported	9	63	28
		Computed	1	84	15
1018-1	AFT	Predicted	0	22	78
		Reported	9	53	38
		Computed	5	72	23
1018-2	FWD	Predicted	0	0	100
		Reported	18	74	8
		Computed	17	80	3
1018-2	AFT	Predicted	0	15	85
		Reported	1	50	49
		Computed	0	74	26

The tabulations of density frequency distributions for Missions 1018-1 and 1018-2 are included in Appendix A, Table A-1 thru A-4. The graphical presentation of the density distribution are computed plotted in Appendix A Figures A-1 thru A-45.

A summary of the processing and exposure analysis is shown in Table 9-1. The terrain D-Min criteria, (range) for proper exposure and processing is 0.40 to 0.90 density units. The area measured for D-Min is selected subjectively and is not necessarily the absolute D-Min in the photography.

[redacted]

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

MISSION 1018-1 INSTR - FWD 06-11-65 PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	3	0 PC	67 PC	33 PC	0 PC	0 PC
INTERMEDIATE	202	0 PC	22 PC	69 PC	8 PC	0 PC
FULL	37	11 PC	0 PC	86 PC	3 PC	0 PC
ALL LEVELS	242	2 PC	19 PC	71 PC	7 PC	0 PC

MISSION 1018-1 INSTR - AFT 06-11-65 PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	11	0 PC	36 PC	36 PC	0 PC	27 PC
INTERMEDIATE	176	1 PC	14 PC	75 PC	10 PC	1 PC
FULL	56	4 PC	0 PC	89 PC	7 PC	0 PC
ALL LEVELS	243	1 PC	12 PC	77 PC	9 PC	2 PC

MISSION 1018-2 INSTR - FWD 06-11-65 PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	44	0 PC	32 PC	61 PC	0 PC	7 PC
INTERMEDIATE	204	0 PC	32 PC	54 PC	11 PC	3 PC
FULL	9	22 PC	0 PC	78 PC	0 PC	0 PC
ALL LEVELS	257	1 PC	31 PC	56 PC	9 PC	4 PC

MISSION 1018-2 INSTR - AFT 06-11-65 PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	0 PC	0 PC	0 PC
INTERMEDIATE	182	0 PC	7 PC	63 PC	28 PC	3 PC
FULL	65	0 PC	0 PC	45 PC	55 PC	0 PC
ALL LEVELS	247	0 PC	5 PC	58 PC	35 PC	2 PC

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

~~TOP SECRET~~ [redacted]

SECTION 10

PERFORMANCE MEASUREMENTS

The photography acquired by both panoramic cameras during Missions 1018-1 and 1018-2 received a MIP rating of 85. A summary is tabulated below of the MTF/AIM resolution values measured by AFSPPF and [redacted] The microdensitometer slit used by AFSPPF and [redacted] was 1 micron by 80 microns.

Mission	Camera	AFSPPF	[redacted]
1018-1	FWD	70	82
1018-1	AFT	74	96
1018-2	FWD	75	77
1018-2	AFT	71	91

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

SECTION 11

OBSERVED DATA

Pass D16 of Mission 1018 contained the only photographs of ground resolution CORN targets. Indian Springs, Nevada, fixed target was not activated for this mission and probably was partially covered by blown sand. It could not be resolved.

At Pahrump, Nevada, both the fixed and mobile targets were resolved to Group 2, indicating a ground resolution performance in the range of 12'.

Pass D31 contained the PI selected MIP frame for Mission 1018-1, forward camera frame 3. At Blytheville AFB, Arkansas, engine nacelles could be detected on some large aircraft but could not be seen in the corresponding aft frame. A few frames later, the X bracing members of 3 steel truss bridges across the Mississippi River at Memphis could be seen about equally in fore and aft formats. Individual cars were clearly discernable in both.

Pass D32 covered Luke AFB near Phoenix, Arizona. Here engine nacelles were clearly seen in the forward photo but not in the aft. The aft print was much lower contrast than the forward and could have been affected by faulty print exposure.

Passes D48, D80 and D81 contained too much cloud, water, snow and haze to be useful.

Pass D95 contained the PI selected MIP frame for Mission 1018-2, forward camera frame #25. This is an unusual choice because it is the third frame of operation 2 of this pass. One of the criteria for selecting an MIP frame is that the first 10 frames of an operation shall be eliminated from consideration to insure optimum camera speed for the selected frame. The calculated IMC error for this frame was -9%. For the corresponding aft frame the IMC error was -3.9%. Discounting vehicle attitude rates, these errors would have produced resolution limits of 4 1/4' for the forward camera and 2' for the aft and would have no discernable effect on the photography produced by this system. A careful examination of these 2 frames at 30X magnification shows this to be the case.

Airport runways painted to FAA standards for all weather runways have threshold markers which are 5' wide bars with 3'spaces and are 50' long. Because this aspect ratio is higher than the 5:1 ratio of MIL STD 150A ground resolution targets, they cannot be used as a measure of ground resolution in the usual way. They do serve the useful purpose of providing an indication of whether or not the system can isolate a 3' dimension.

D95 passed directly over Boston and the orbit inclination was such that the ground track was parallel to the threshold markers of Logan Airport and 90° to those at Hanscom Field a few miles to the northwest. In both the MIP frame and the corresponding aft frame all of the 3' spaces could be seen, along track and cross track.

Although the best measured performance on this mission was approximately 12', under some conditions the system was capable of detecting a dimension as small as 3'.

SECTION 12

MISSION 1018-1 STELLAR-INDEX CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial Number
Camera	D20
Index Reseau	20
Stellar Reseau	20

B. CAMERA DATA AND FLIGHT SETTINGS

Stellar Camera:

Lens	85mm f/1.8
Exposure Time	2 seconds
Filter Type	None
Film Type	Eastman Type 3401

Index Camera:

Lens	38mm f/4.5
Exposure Time	1/500 second
Filter Type	Wratten 21
Film Type	Eastman Type 3400

C. POST FLIGHT EVALUATION

The camera exposed 55 frames of stellar and index photography before a failure of the stellar-index programmer precluded further operation. The stellar formats contained thirty or more star images. Quality was generally good, although some of the elongated images caused by image motion that had been observed during previous missions did occur in a few cases. Quality of the index formats appeared very good, although turbulent weather conditions appeared to generally be present. Minor static marks were noted outside the stellar formats.

SECTION 13

MISSION 1018-2 STELLAR-INDEX CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial Number
Camera	D22
Index Reseau	22
Stellar Reseau	22

B. CAMERA DATA AND FLIGHT SETTINGS

Stellar Camera:

Lens	85mm f/1.8
Exposure Time	2 seconds
Filter Type	None
Film Type	Eastman Type 3401

Index Camera:

Lens	39mm f/4.5
Exposure Time	1/500 second
Filter Type	Wratten 21
Film Type	Eastman Type 3400

C. POST FLIGHT EVALUATION

This instrument did not function in flight due to the stellar-index programmer failure during Mission 1018-1.

SECTION 14

VEHICLE ATTITUDE

The vehicle attitude errors for both Mission 1018-1 and 1018-2 were derived from the reduction of the Stellar camera photography. This attitude data is supplied to A/P by NPIC.

The attitude errors for each frame and the attitude control rates are calculated at the A/P computer facility. The computer also plots the frequency distribution of the rates and errors. Figures 14-1 through 14-4 show these distributions for Mission 1018-1 and Figures 14-5 through 14-8 for Mission 1018-2.

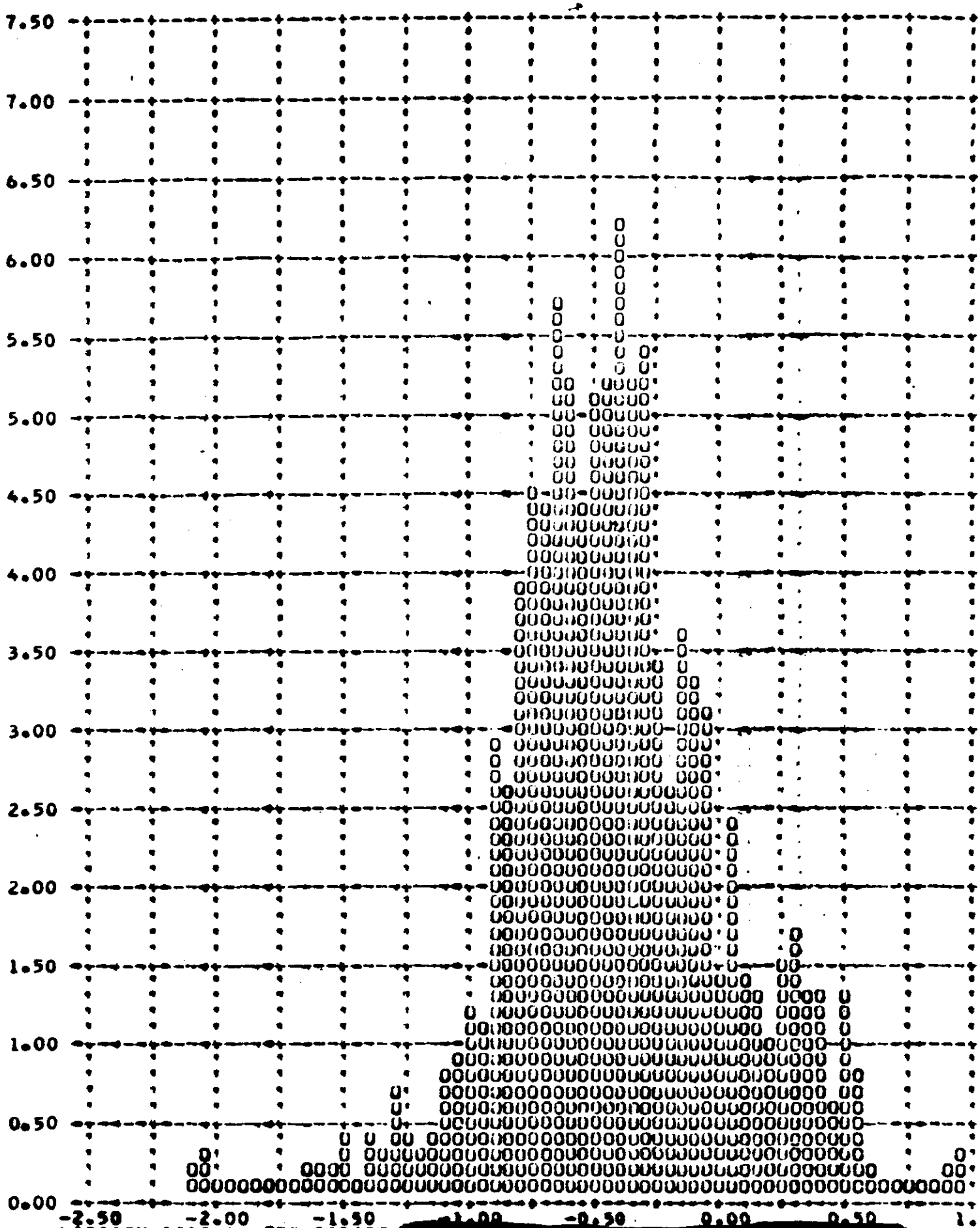
The summary table below lists the maximum attitude errors and rates that were experienced during 90% of the FWD camera photographic operations, excluding the first six frames of each operation, and the total range of the errors and rates.

Value	Mission 1018-1 90%	Mission 1018-1 Range	Mission 1018-2 90%	Mission 1018-2 Range
Pitch Error (^{o})	0.91	-2.1 to +0.95	0.84	-2.1 to +0.40
Roll Error (^{o})	0.48	-0.8 to +0.60	0.63	-1.0 to +0.75
Yaw Error (^{o})	N/A		N/A	
Pitch Rate (^{o}/hr.)	47.37	-95 to +85	34.74	-95 to +100
Roll Rate (^{o}/hr.)	36.73	-50 to +100	30.70	-50 to +100
Yaw Rate (^{o}/hr.)	N/A		N/A	

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.

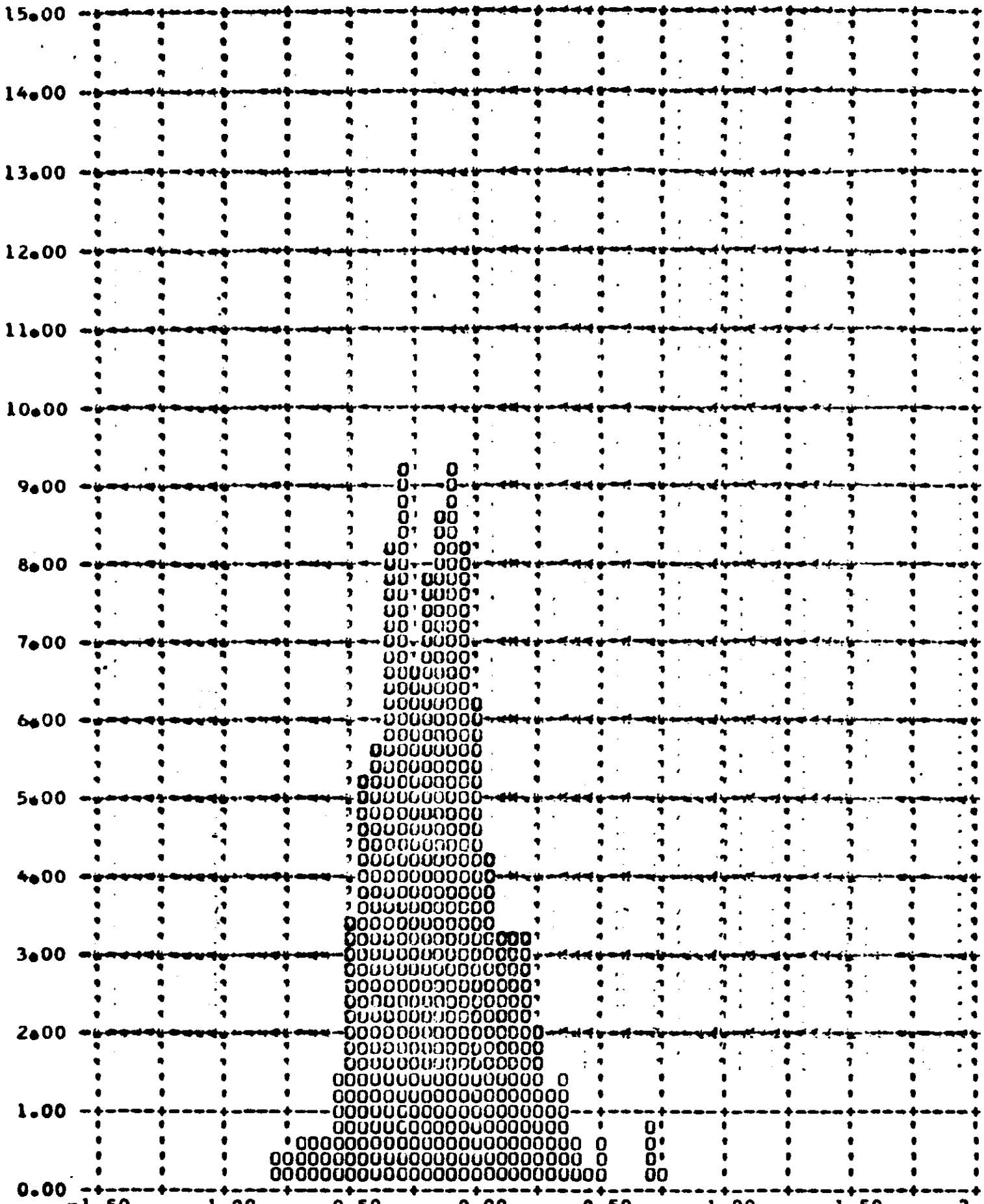
J-19 A BUCKET - FWD INSTR FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.9

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



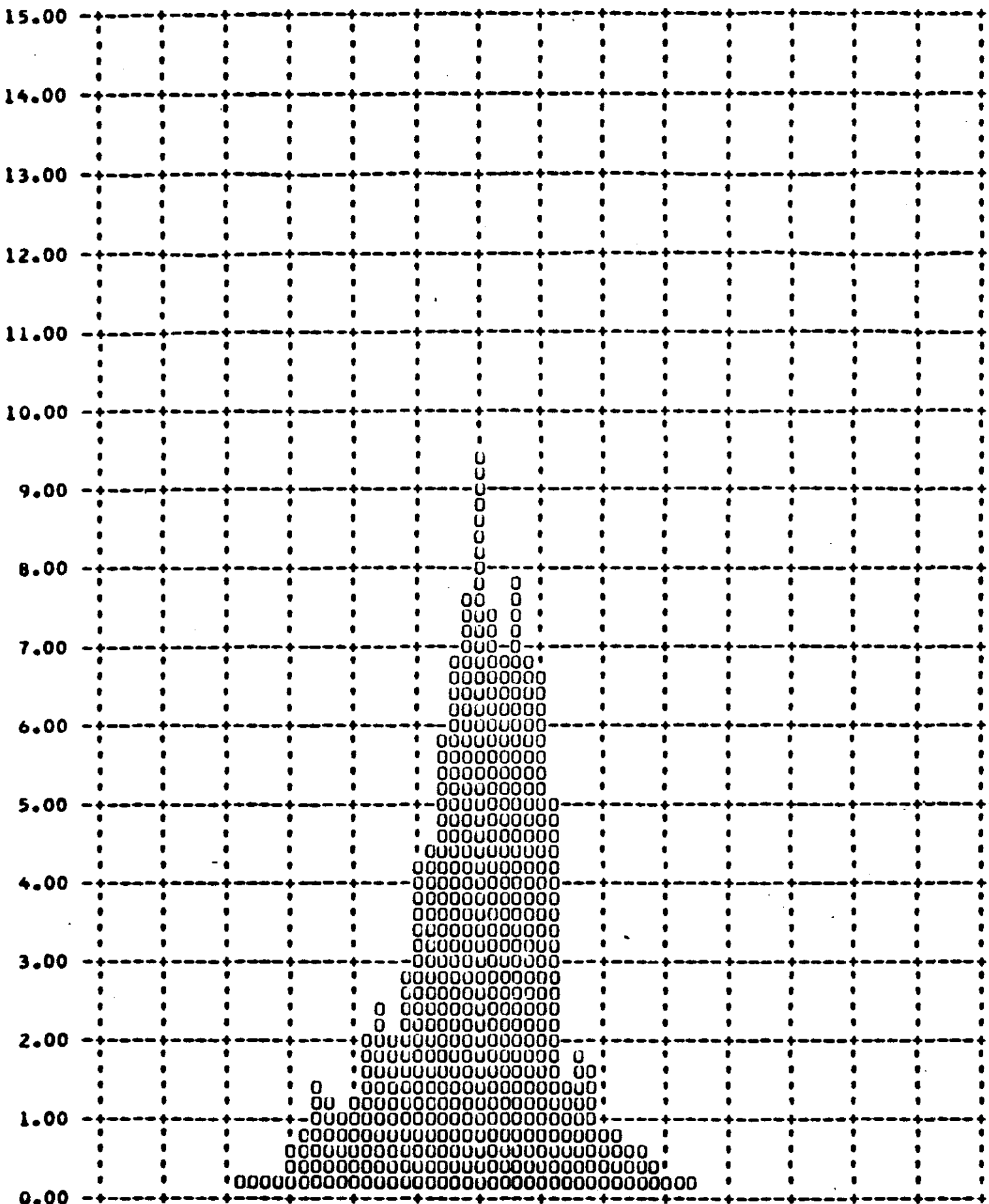
J-19 A BUCKET -- FWD INSTR FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.4

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



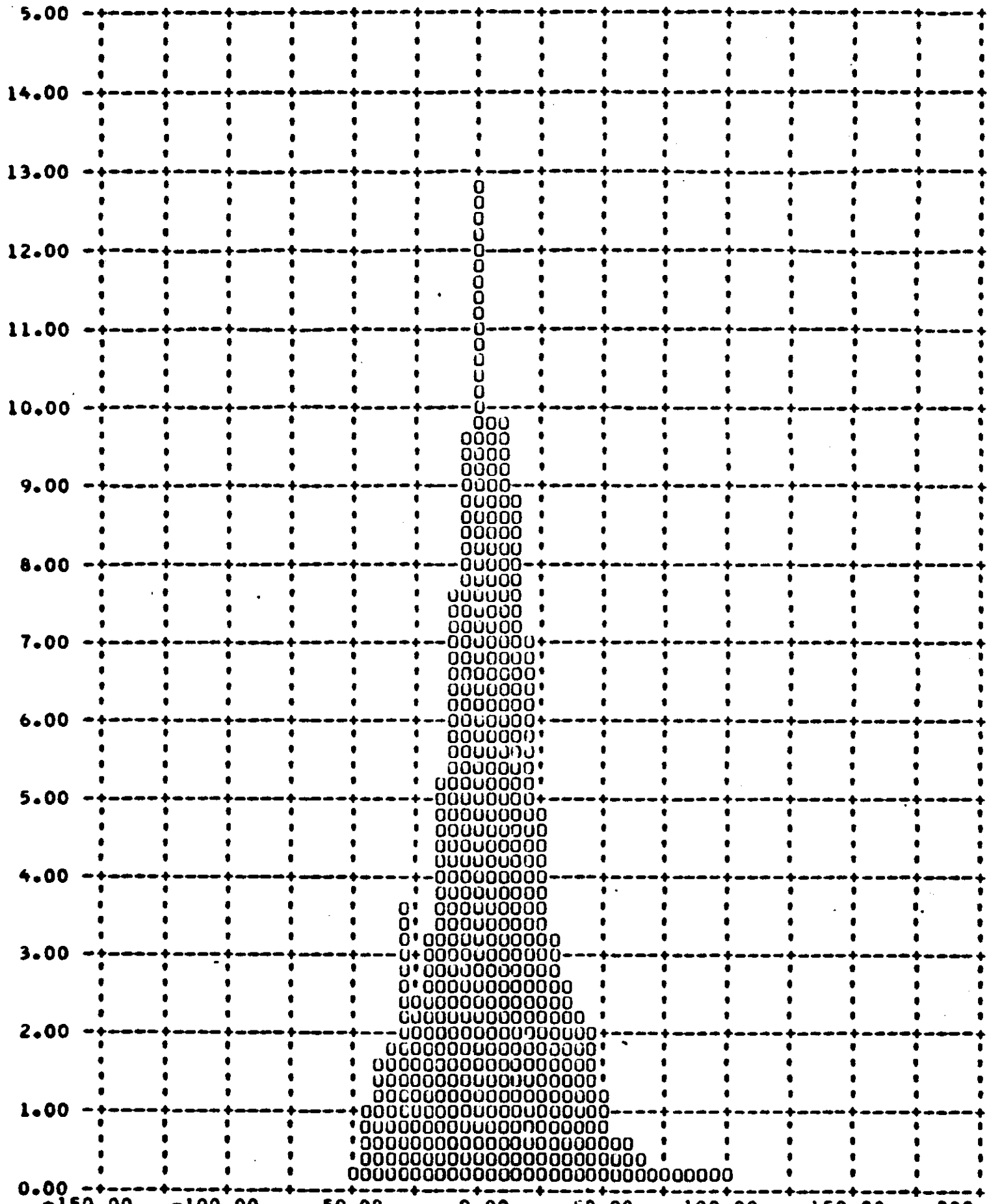
J-19 A BUCKET - FWD INSTR FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 47.37

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



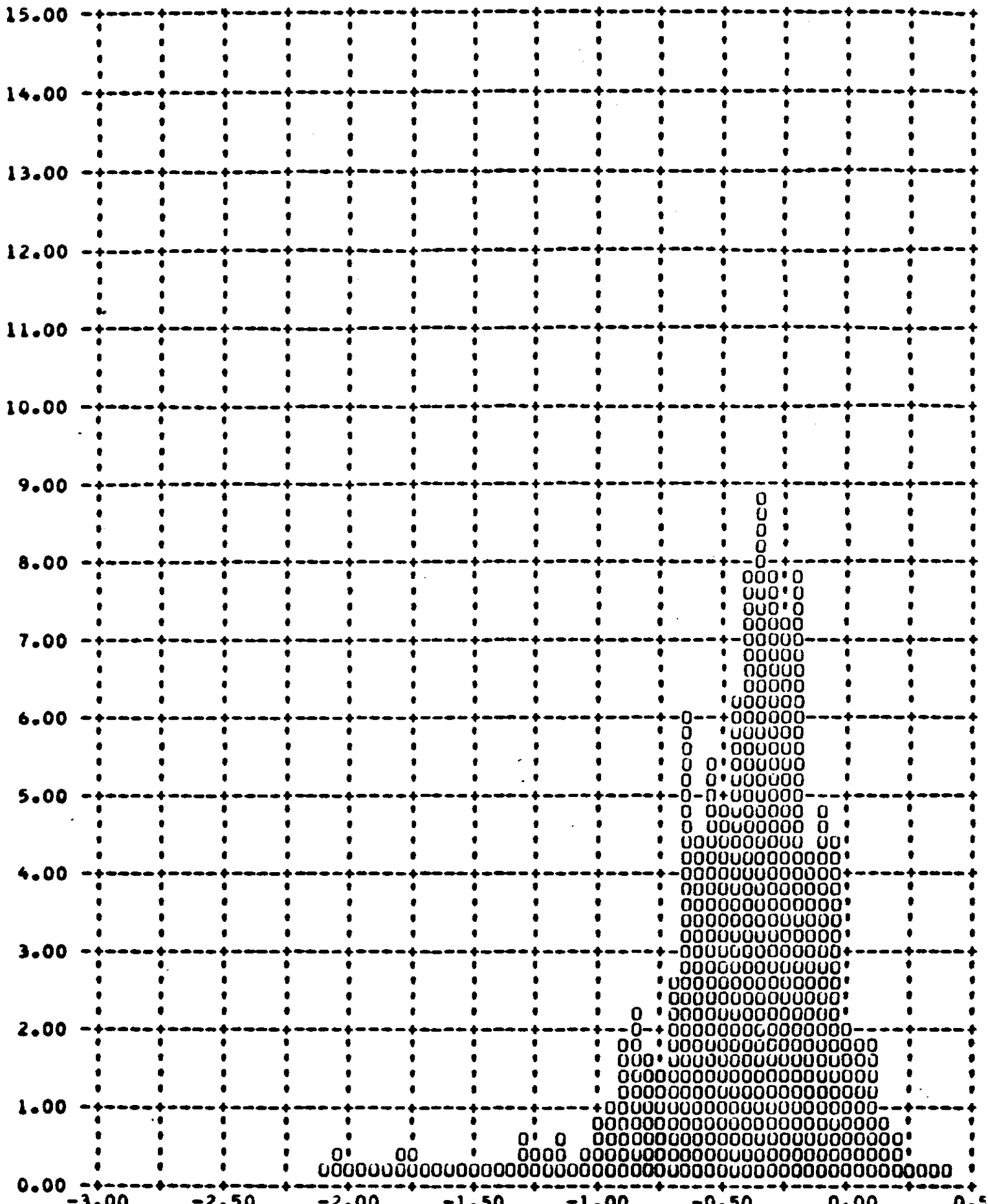
J-19 A BUCKET - FWD INSTR FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 36.73

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



J-19 B BUCKET - FWD INSTR FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.84

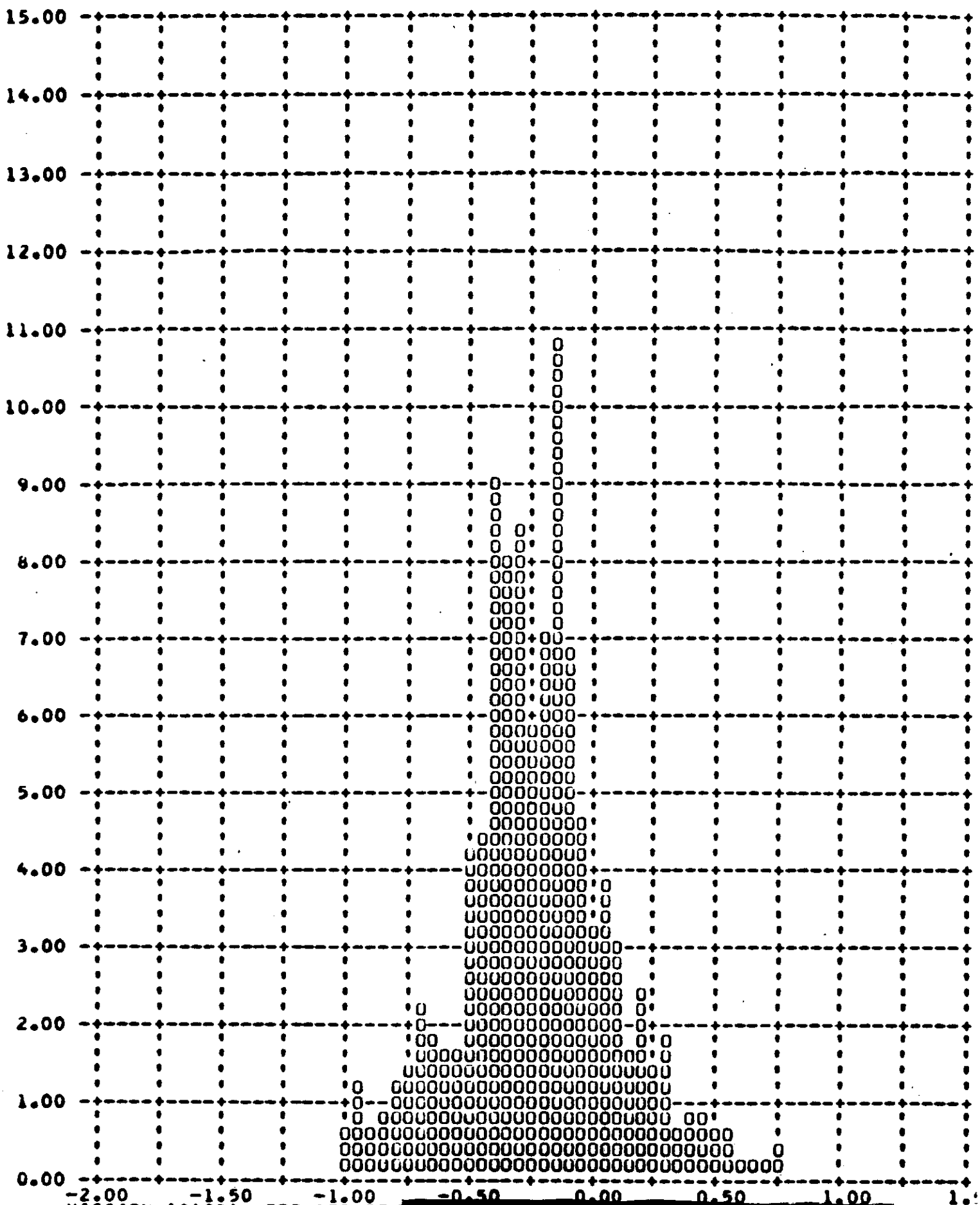
Y PITCH ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 101881 ~~TOP SECRET~~ [redacted]

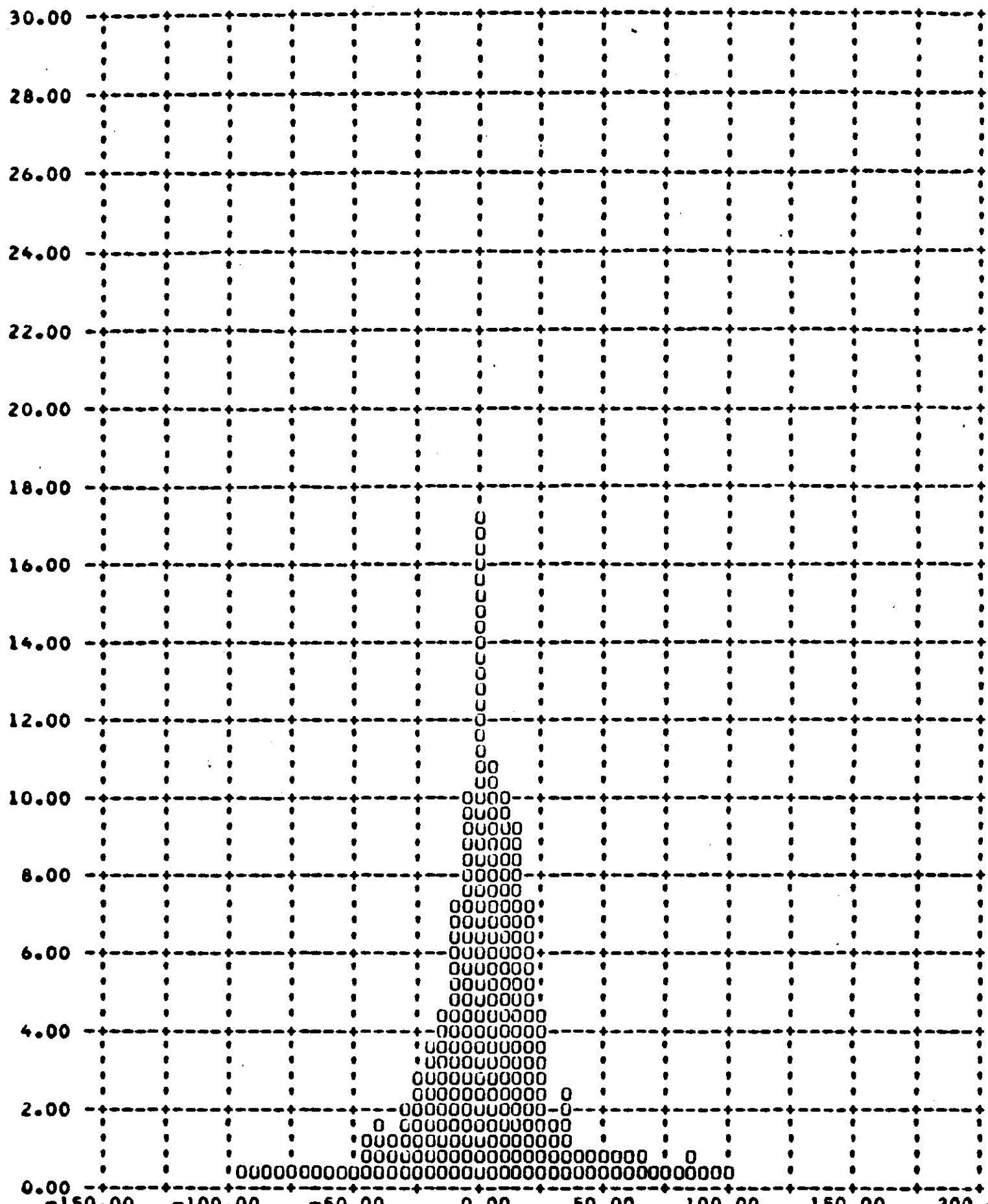
J-19 B BUCKET - FWD INSTR FRAMES 1-6 OF EACH OP UNITTED 90 PERCENT = 0.63

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



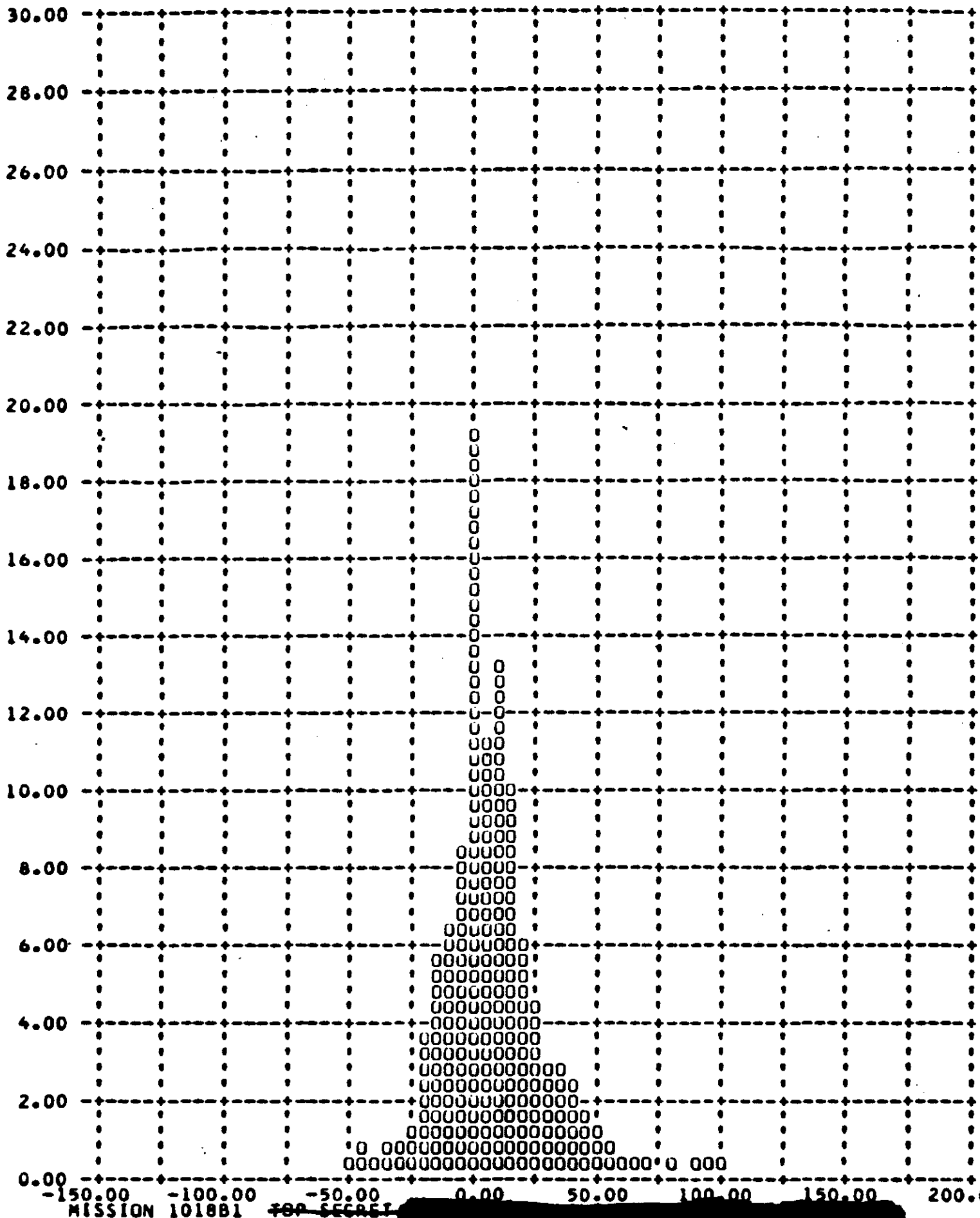
J-19 B BUCKET - FWD INSTR FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 34.74

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



J-19 B BUCKET - FWD INSTR FRAMES 1-6 OF EACH OF OMITTED 90 PERCENT = 30.70

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



SECTION 15

IMAGE SMEAR ANALYSIS

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

The computer rejects the first six frames of all operations as the large V/h error induced by camera start-up is not representative of the overall system operations. The frequency distribution of the V/h errors and resolution limits are computer plotted and are shown in Figures 15-1 through 15-8.

The summary table 15-1 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 1018

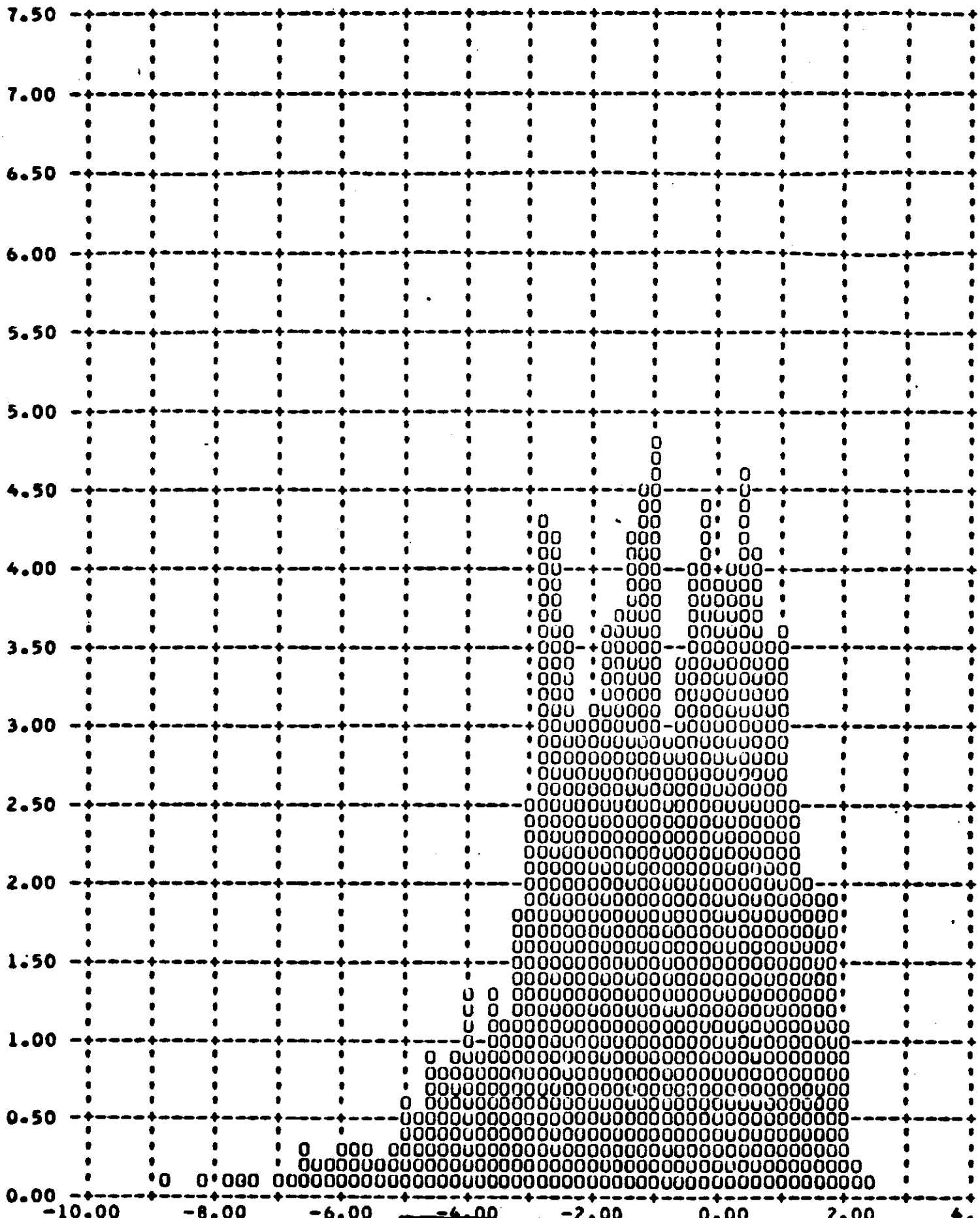
V/h RATIO AND RESOLUTION LIMITS

VALUE	UNITS	CAMERA	MISSION 1018-1 90%	MISSION 1018-1 Range	MISSION 1018-2 90%	MISSION 1018-2 Range
V/h Ratio Error	%	FWD	3.39	-8.8 to +2.4	3.09	-6.2 to +2.6
		AFT	3.16	-7.4 to +2.0	2.79	-4.4 to +3.0
Along Track Resolution Limit	Feet	FWD	5.64	0.2 to 9.0	5.57	0.2 to 7.6
		AFT	3.69	0.2 to 4.8	4.07	0.2 to 5.6
Cross Track Resolution Limit	Feet	FWD	No Data Available			
		AFT				

TABLE 15-1

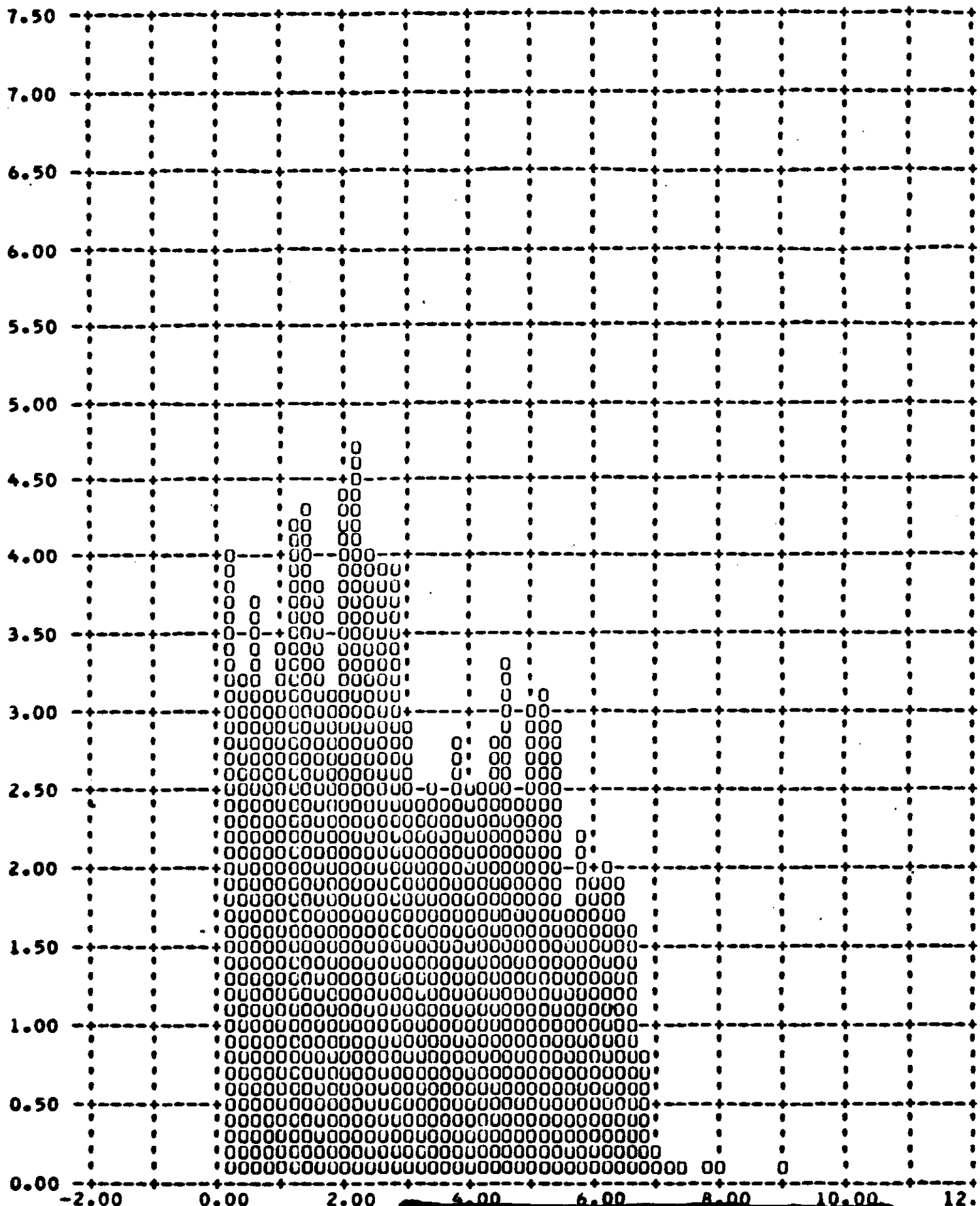
J-19 A BUCKET - FWD INSTR FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 3.39

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



J-19 A BUCKET - FWD INSTR FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 5.64

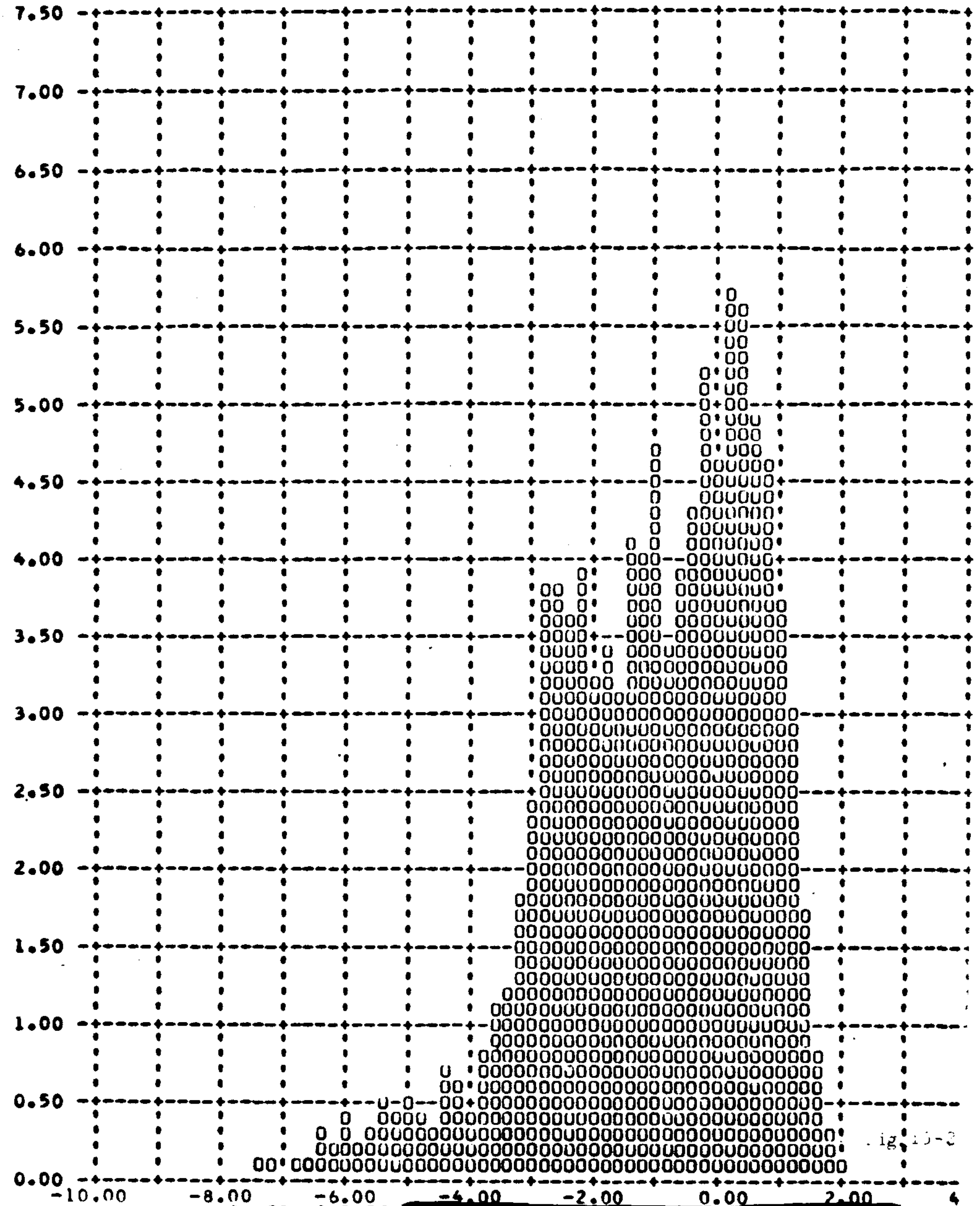
Y ALONG TRACK RESOLUTION LIMIT - FEET (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 1018A2 ~~TOP SECRET~~ [redacted]

J-19 A BUCKET - AFT INSTR   FRAMES 1-6 OF EACH OP OMITTED   90 PERCENT = 3.16

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



J-19 A BUCKET - AFT INSTR FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 3.69

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

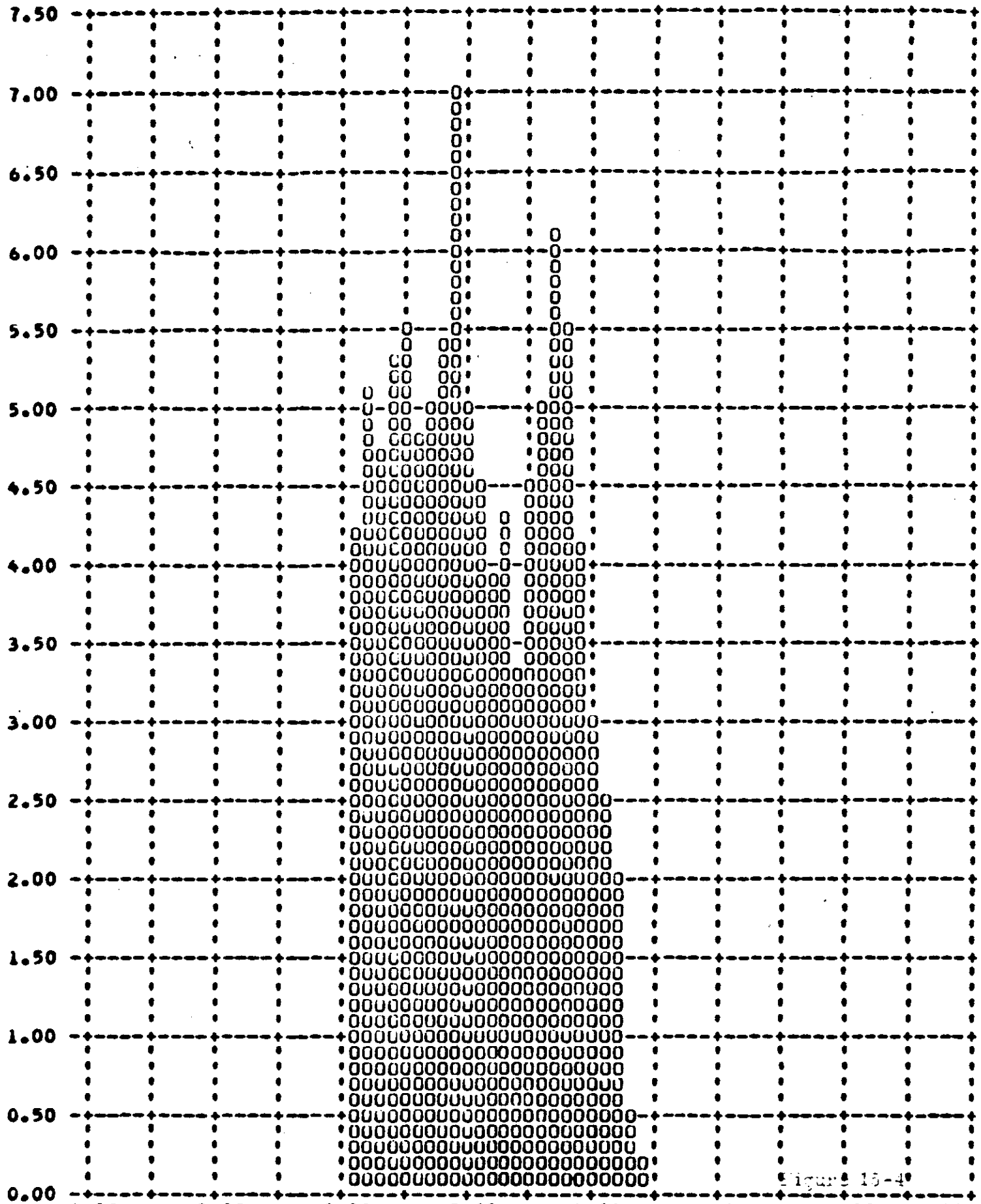
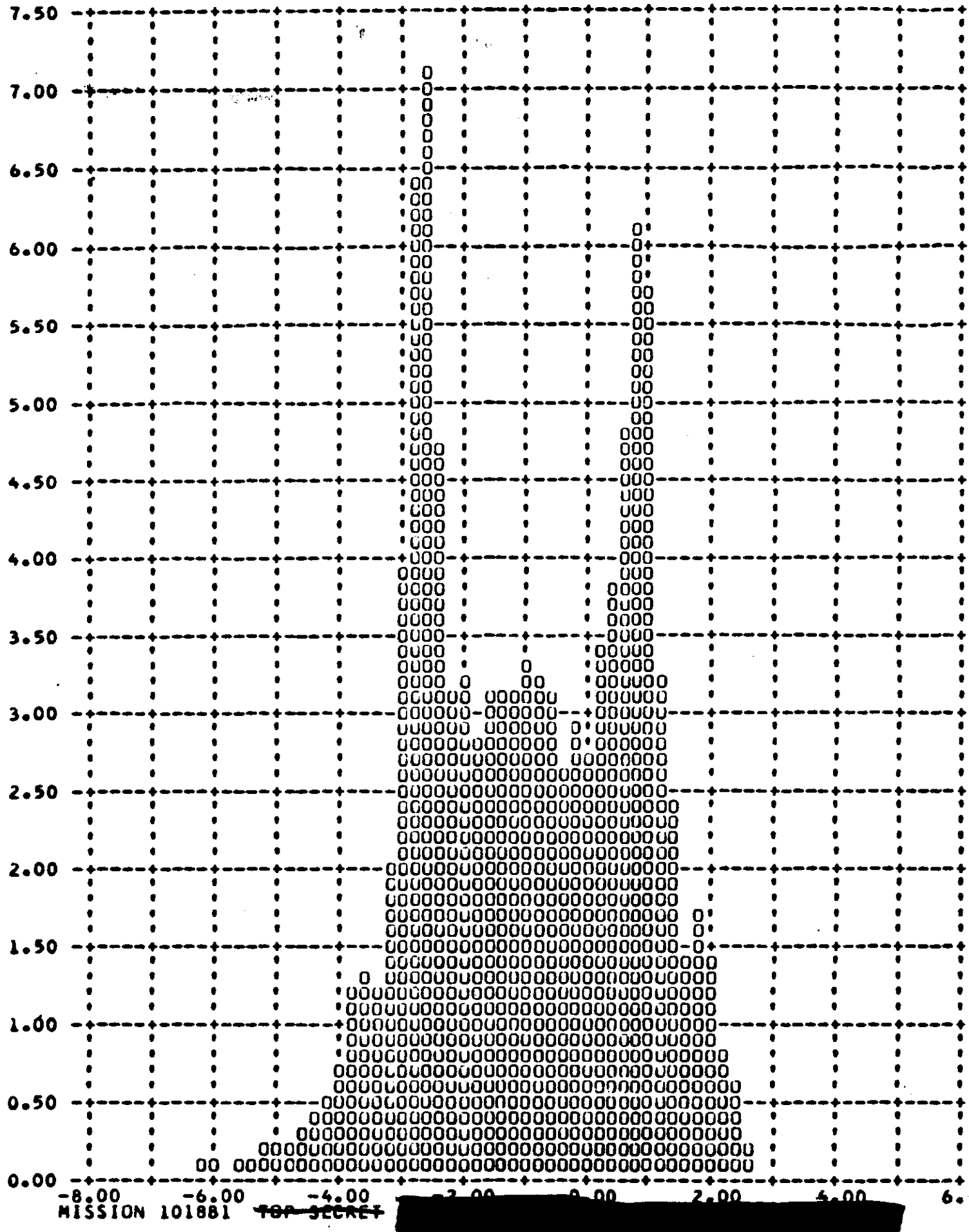


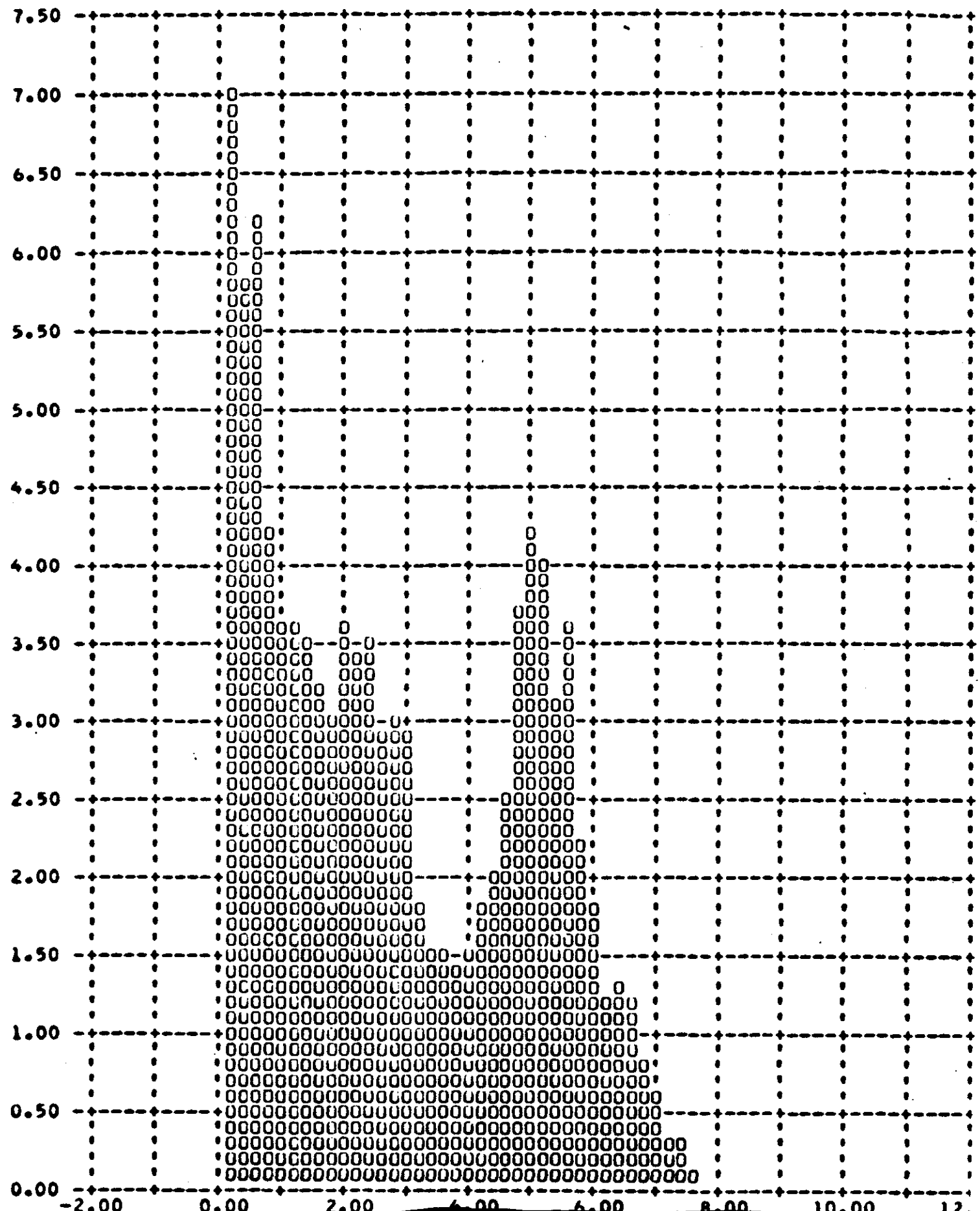
Figure 15-4

J-19 B BUCKET - FWD INSTR FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 3.09



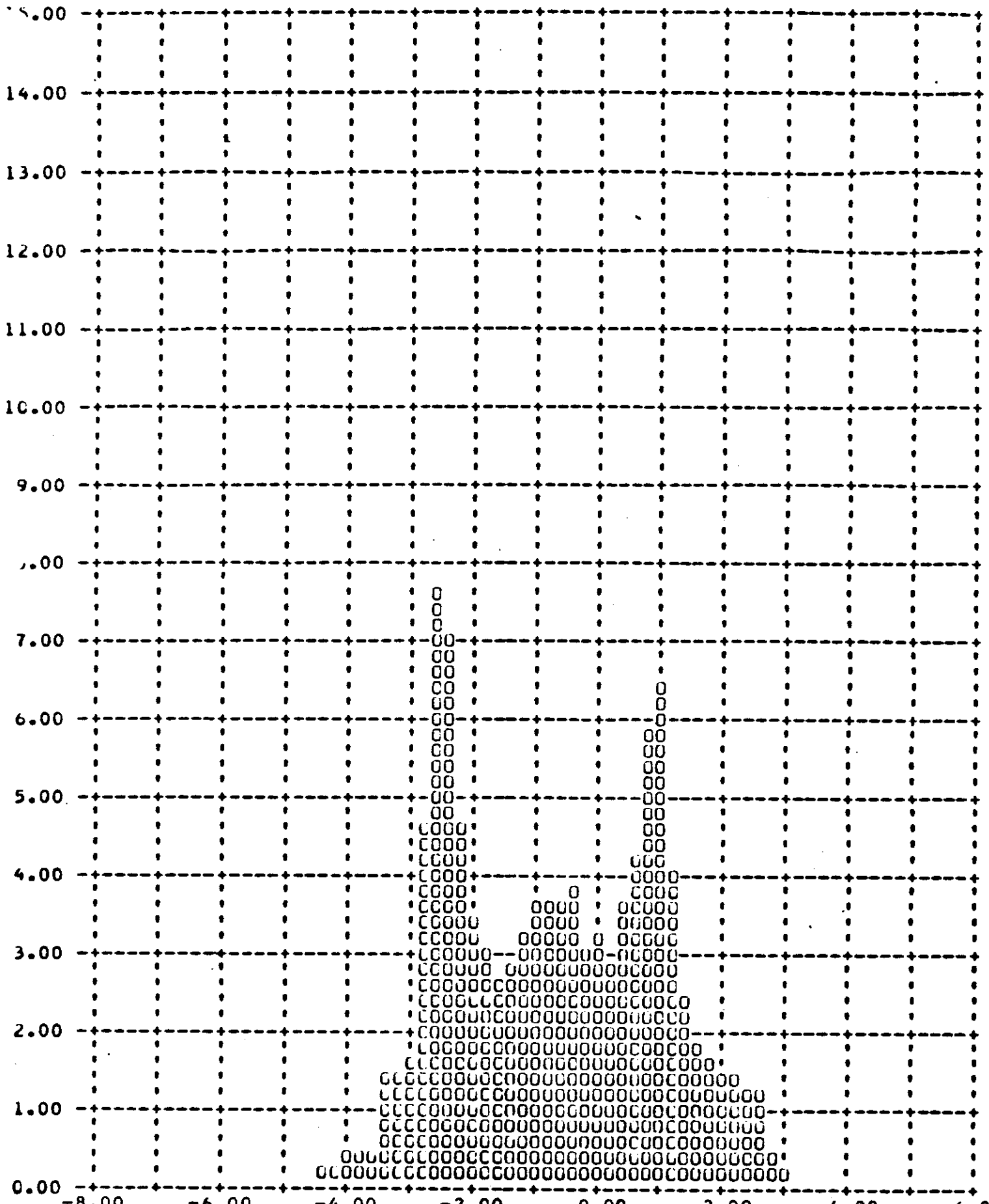
J-19 B BUCKET - FWD INSTR FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 5.57

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



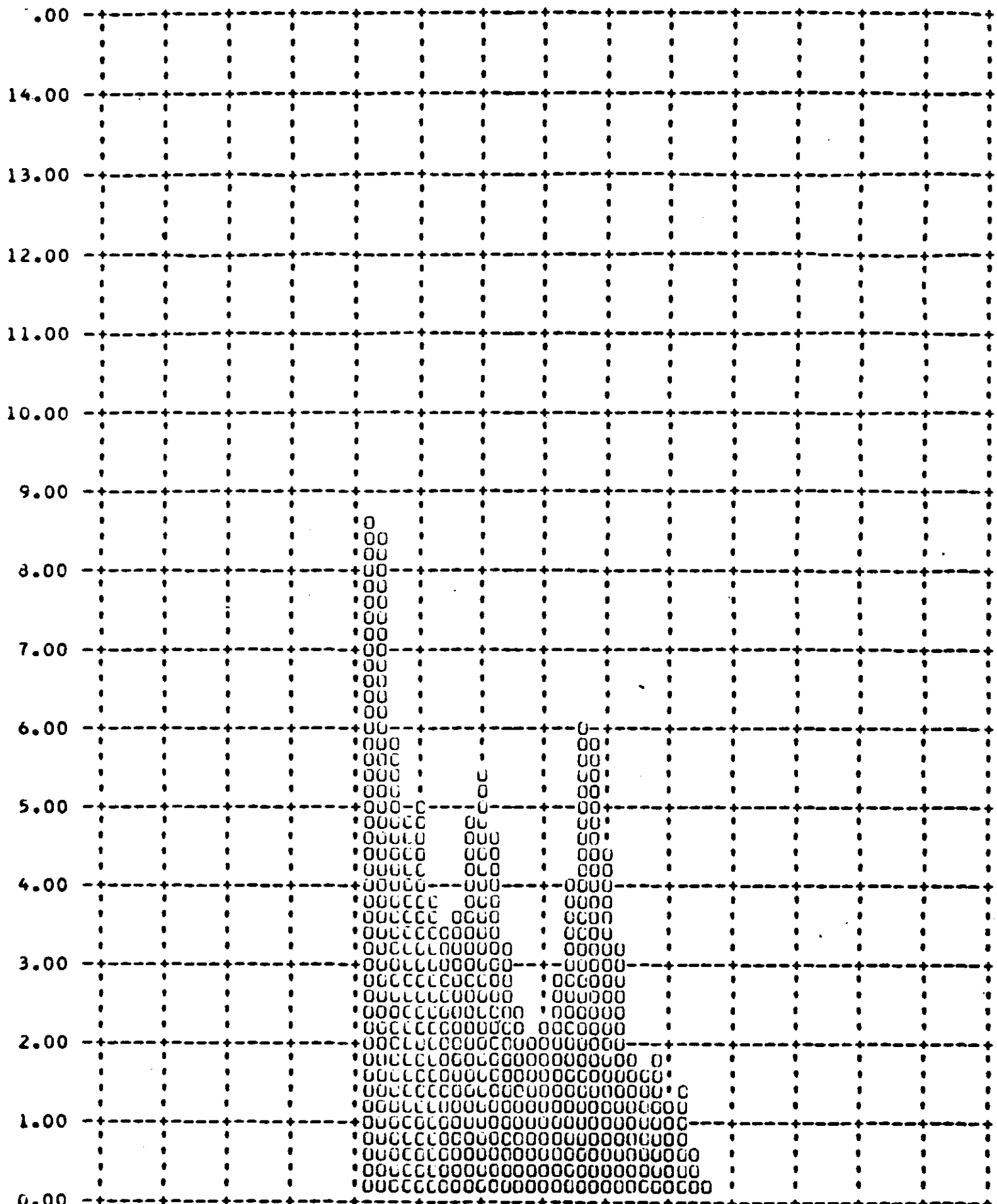
-19 B - BUCKET AFT CAMERA FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 2.79

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



)-19 B - BUCKET AFT CAMERA FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 4.07

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



SECTION 16

RADIATION DOSAGE

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

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

	Mission 1018-1	
Emulsion	B + F Density	Radiation
Type 3401	.15	0.37 R
Royal X Pan	.16	0.13 R
	Mission 1018-2	
Type 3401	0.16	0.43 R
Royal X Pan	0.16	0.13 R

The mean total radiation seen by the take-up cassettes during both missions was approximately 0.2 roentgens. This level is essentially the same as received during recent missions and is below the level that will degrade the panoramic photography.

SECTION 17

SYSTEM RELIABILITY

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

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

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

Panoramic Camera Reliability

Sample Size - 98 opportunities to operate.
One failure - S/I Programmer on System J-19.
Assume - 3000 cycles per camera per mission.
Estimated Reliability = 98.3% at 50% confidence level.

Main Camera Door Reliability

Sample Size - 36 vehicles x 2 doors = 72 opportunities to operate.
Estimated Reliability = 99.1% at 50% confidence level.

Payload Command and Control Reliability

Sample Size: 4920 hours operation
1 Failure
Estimated Reliability - 96.8% at 50% confidence level

Payload Clock Reliability

Sample Size - 4920 hours operation
No failures
Estimated Reliability - 98.7% at 50% confidence level

Estimated Reliability of Payload Functioning on orbit - 96.7% at 50% confidence level.

Recovery System Reliability

38 opportunities to recover
1 Failure - improper separation due to water seal - cutter failure.
Estimated Reliability - 95.6% at 50% confidence level.

Stellar-Index Camera Reliability

Sample begins with J-5
Sample Size - 8980 cycles
Number of failures - 1
Estimated Reliability - 92.3% at 50% confidence level

Horizon Camera Reliability

Sample includes J5A and up
Sample Size: 40,500 cycles
Estimated Reliability of Single Camera - 97.5% 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 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
9038 TO 1008	60 OPERATIONS / 1 / 97.3	52 DOORS / 0 / 98.6	3124 HOURS / 0 / 98.0	3124 HOURS / 0 / 98.0	96.1	18 CAPSULES / 1 / 90.7	3400 CYCLES / 3 / 83.1	12,000 CYCLES / 0 / 91.7
1009	64 / 1 / 97.4	54 / 0 / 98.7	3216 / 0 / 98.0	3216 / 0 / 98.0	96.2	20 / 1 / 91.5	4250 / 3 / 89.3	16,000 / 0 / 93.4
1010	66 / 1 / 97.6	56 / 0 / 98.8	3432 / 0 / 98.1	3432 / 0 / 98.1	96.4	22 / 1 / 92.5	5100 / 3 / 73.7	18,000 / 0 / 94.4
1011	72 / 1 / 97.7	58 / 0 / 98.9	3600 / 0 / 98.1	3600 / 0 / 98.1	96.6	24 / 1 / 93.0	5525 / 0* / 94.7	21,000 / 0 / 98.2
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 / 98.6
1013	78 / 1 / 97.8	62 / 0 / 99.0	3940 / 1 / 96.9	3940 / 0 / 98.3	96.0	28 / 1 / 94.0	5950 / 0 / 95.1	25,500 / 0 / 98.8
1014	82 / 1 / 97.9	64 / 0 / 99.0	4056 / 1 / 96.1	4056 / 0 / 98.3	96.1	30 / 1 / 94.4	6375 / 1 / 89.6	28,500 / 0 / 98.4
1015	86 / 1 / 98.0	66 / 0 / 99.0	4320 / 1 / 96.3	4320 / 0 / 98.4	96.1	32 / 1 / 94.8	7225 / 1 / 90.4	31,500 / 0 / 98.7
1016	90 / 1 / 98.1	68 / 0 / 99.0	4560 / 1 / 96.5	4560 / 0 / 98.5	96.4	34 / 1 / 95.2	7650 / 1 / 91.0	34,500 / 0 / 97.0
1017	94 / 0* / 98.3	70 / 0 / 99.0	4760 / 1 / 96.7	4760 / 0 / 98.6	97.6	36 / 1 / 95.4	8925 / 1 / 92.3	37,500 / 0 / 97.3
1018	96 / 1 / 98.3	72 / 0 / 99.1	4920 / 1 / 96.8	4920 / 0 / 98.7	96.7	38 / 1 / 95.6	8960 / 1 / 92.3	40,500 / 0 / 97.5

*DESIGN FIX NEGATED PREVIOUS FAILURE CONSIDERATIONS

Table 17-1

SECTION 18

SUMMARY DATA

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

The summary data was started with Mission 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 and 1005 are deleted.

MISSION SUMMARY

MISSION NUMBER	PAYLOAD NUMBER	VEHICLE NUMBER	LAUNCH DATE	LAUNCH TIME	ORBIT INCLINATION (°)	PERIGEE ALTITUDE (NM)	PERIGEE LOCATION (°N)	RECOVERY PASS	MASTER CAMERA CAMERA NUMBER	MASTER CAMERA SLIT (°)	MASTER CAMERA FILTER TYPE	SLAVE CAMERA CAMERA NUMBER	SLAVE CAMERA SLIT (°)	SLAVE CAMERA FILTER TYPE	STELLAR-INDEX CAMERA NUMBER
1004	J-05	1174	2/15/64	2138 Z	74.9	99.9	29.0	49 / 112	124	0.250	W-21	125	0.250	W-21	D29/29/29 / D42/42/37
1006	J-09	1176	6/4/64	2259 Z	79.9	84.0	63.2	65 / 128	148	0.200	W-21	149	0.200	W-21	D45/47/45 / 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	39.5	49 / 128	154	0.200	W-21	155	0.200	W-21	D56/54/56 / D38/38/34
1010	J-11	1178	9/14/64	2254 Z	84.9	97.4	42.5	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 / D48/52/53
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	21.5	81 / 175	138	0.250	W-25	141	0.175	W-21	D61/61/61 / D58/58/58
1016	J-18	1608	1/15/65	2101 Z	74.9	99.4	30.2	81 / 159	132	0.250	W-25	133	0.175	W-21	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

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Table 18-1

PERFORMANCE SUMMARY

MISSION NUMBER	CAMERA	SERIAL NUMBER	M I P VALUE	VISUAL RES	AFSPPL MTF/AIM [redacted] SLIT (μ)	AVERAGE	SLIT (μ)	AVERAGE	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
1004-1	FWD	124	85	78	350	97	43	109	320	115	127	0.45	0.42	1.08	30.0	25.0	21.0	5.1	7.7	6.1
	AFT			86		80		96		117	124									
1004-2	FWD	125	85	76		88		113		82	90	0.74	0.50	0.91	44.0	30.0	29.0	4.9	6.8	6.8
	AFT			73		83		106		89	95									
1006-1	FWD	148	90	78	350	68	43	88	320	84	97	0.41	0.42	1.14	26.8	28.5	27.8	15.4	15.8	6.7
	AFT			74		71		90		87	92									
1006-2	FWD	149	90	85		64		81		84	90	0.49	0.40	1.08	31.1	27.9	30.0	11.6	10.1	7.0
	AFT			83		72		90		87	94									
1007-1	FWD	144	85	80	350	60	43	87	320	82	91	0.58	0.46	1.43	37.6	23.9	29.9	3.6	3.1	9.4
	AFT			86		63		83		97	110							4.6	2.1	7.8
1007-2	FWD	145	85	79		72		81		68	74	0.64	0.47	——	43.0	25.8	——	3.2	2.4	——
	AFT			81		77		92		74	81							4.2	1.8	——
1008-1	FWD	150	85	80	350	80	43	95	320	81	89	0.59	0.39	0.94	43.8	23.9	29.6	2.9	4.9	8.9
	AFT			76		73		89		86	95									
1008-2	FWD	151	85	82		84		96		83	92	0.63	0.36	0.71	42.9	24.0	32.5	2.8	4.2	8.4
	AFT			79		91		83		85	91									
1009-1	FWD	154	85	92	350	80	—	——	80	75	88	0.65	0.65	0.71	29.2	22.7	27.6	3.3	5.3	5.8
	AFT			89		85				75	83									
1009-2	FWD	155	85	84		85				78	84	0.46	0.65	0.59	33.6	23.9	27.2	2.6	4.9	5.9
	AFT			87		87				72	79									
1010-1	FWD	152	85	90	350	90	60	88	80	87	96	0.93	0.30	0.87	39.1	23.6	30.8	4.5	2.3	4.4
	AFT			88		86		80		92	103									
1010-2	FWD	153	85	82		81		82		82	93	0.59	0.70	1.21	45.4	23.6	30.7	4.6	7.5	3.8
	AFT			90		82		85		87	96									
1011-1	FWD	160	90	84	350	78	60	96	80	78	87	0.77	0.39	0.97	43.1	28.9	31.1	2.3	3.3	5.6
	AFT	161		84		77		86		83	93									
1012-1	FWD	156	85	92	——	——	80	91	80	84	98	0.65	0.51	——	47.1	33.2	——	1.8	4.8	——
	AFT			91				87		89	100									
1012-2	FWD	157	85	91				89		84	91	0.97	0.77	0.51	48.2	30.7	20.4	5.9	3.3	8.9
	AFT			89				96		85	98									
1013-1	FWD	158	85	89	——	——	80	94	80	85	99	0.64	0.32	1.34	36.9	29.0	32.3	3.7	7.8	8.3
	AFT	159		77				97		81	103	0.64	0.32	1.34	36.9	29.0	32.3	4.6	9.6	8.2
1014-1	FWD	162	80	87	——	——	80	78	80	74	86	0.62	0.41	1.46	35.0	36.1	38.5	2.2	6.2	8.8
	AFT			83				80		95	107	0.62	0.41	1.44	34.8	36.0	38.3	3.3	2.8	6.3
1014-2	FWD	139	80	83				75		70	77	1.06	0.56	——	38.4	36.4	——	1.4	8.4	——
	AFT			86				84		80	88	1.06	0.59	——	38.1	36.0	——	3.2	2.2	——
1015-1	FWD	138	85	87	——	——	80	78	80	90	——	0.65	0.38	0.53	47.0	29.4	38.2	5.0	8.8	7.8
	AFT			87				73		97		0.64	0.39	0.53	46.9	29.2	38.2	6.3	3.4	5.8
1015-2	FWD	141	85	83				72		89		*								
	AFT			82				72		90										
1016-1	FWD	132	85	85	——	——	80	86	80	81	——	0.72	0.83	2.01	48.9	30.8	40.4	2.0	8.8	10.8
	AFT			83				81		94		0.72	0.83	2.01	48.4	30.1	40.4	2.8	3.4	7.4
1016-2	FWD	133	85	90				85		82		0.83	0.93	2.19	42.2	27.2	39.9	1.8	4.9	8.0
	AFT			91				86		91		0.83	0.93	2.19	42.2	27.3	39.9	2.3	3.3	7.1
1017-1	FWD	140	85	72	——	——	80	87	80	78	86	0.49	0.76	2.50	35.5	32.2	38.4	3.3	9.8	11.8
	AFT			75				70		94	107	0.49	0.76	2.49	35.3	32.0	38.5	4.3	8.3	8.1
1017-2	FWD	165	85	85				65		80	94	0.69	0.45	——	36.5	34.0	——	1.8	6.2	——
	AFT			85				69		86	101	0.69	0.45	——	36.3	33.8	——	2.3	8.3	——
1018-1	FWD	122	85	78	——	——	80	70	80	82	92	0.91	0.48	——	47.4	36.7	——	3.4	8.8	——
	AFT			77				74		96	109	0.90	0.47	——	48.2	36.2	——	3.2	3.7	——
1018-2	FWD	123	85	84				75		77	89	0.84	0.63	——	34.7	30.7	——	3.1	8.6	——
	AFT			88				71		91	103	0.85	0.63	——	34.8	30.7	——	2.8	4.1	——

* DATA NOT PRESENTLY AVAILABLE

Table 18-2

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 (%)
															RANGE				RANGE				RANGE									
		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						
1004-1	FWD	-3	61	25	124	5	76	19	4	79	17	0	79	21	0.26	1.89	0.83	0.78	0.43	2.43	1.97	2.02	1.00	2.43	2.04	2.08	0	4	60	31	5	35
	AFT	-3	61	25	124	5	74	21	4	79	17	0	80	20	0.22	1.56	0.76	0.70	0.93	2.45	1.92	1.94	1.08	2.43	1.98	2.03	1	4	67	26	3	35
1004-2	FWD	-4	68	10	131	7	76	17	37	50	13	4	83	13	0.29	1.80	0.83	0.78	0.36	2.30	1.84	1.90	0.41	2.37	1.87	1.93	0	4	59	27	9	35
	AFT	-4	68	10	131	7	76	17	37	50	13	4	77	19	0.29	1.91	0.81	0.73	0.36	2.39	1.89	1.99	0.43	2.46	1.89	1.98	0	4	67	20	9	35
1006-1	FWD	38	56	52	140	1	99	0	1	51	48	0	51	49	0.23	1.81	0.71	0.68	0.80	2.31	1.58	1.52	1.31	2.40	2.20	2.24	0	5	72	21	1	60
	AFT	38	56	52	140	1	99	0	0	23	77	0	24	76	0.36	1.66	0.87	0.84	0.96	2.35	1.72	1.72	1.14	2.40	2.24	2.28	0	1	58	40	1	60
1006-2	FWD	32	64	36	147	2	98	0	30	41	29	11	59	30	0.21	1.14	0.53	0.50	0.56	2.28	1.49	1.50	1.30	2.33	2.11	2.16	2	21	72	4	0	45
	AFT	32	64	36	147	2	98	0	35	40	25	21	54	25	0.26	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	1	20	79	0	25	75	0.26	1.22	0.52	0.47	0.62	2.20	1.44	1.40	1.22	1.36	2.17	2.21	20	8	67	5	0	60
	AFT	11	49	48	102	0	100	0	10	42	48	6	77	17	0.26	1.76	0.58	0.55	0.78	2.31	1.52	1.52	1.54	2.39	2.20	2.24	1	13	80	5	1	60
1007-2	FWD	32	57	43	112	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	65
	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	30	51	50	102	0	100	0	4	32	64	1	35	64	0.32	1.48	0.66	0.62	0.78	2.24	1.55	1.54	1.46	2.35	2.21	2.24	2	2	86	8	1	45
	AFT	30	51	50	102	0	100	0	4	27	69	0	34	66	0.32	1.57	0.71	0.69	0.81	2.21	1.57	1.58	1.08	2.37	2.21	2.24	1	1	84	13	0	45
1008-2	FWD	29	56	42	105	0	100	0	3	31	66	0	27	73	0.14	1.81	0.76	0.72	0.57	2.10	1.54	1.55	1.09	2.40	2.20	2.25	2	1	73	23	1	65
	AFT	29	56	42	105	0	100	0	3	30	67	0	29	71	0.32	1.64	0.77	0.76	0.73	2.10	1.55	1.55	1.10	2.35	2.18	2.22	1	3	69	27	0	65
1009-1	FWD	12	49	42	132	0	100	0	1	26	73	0	34	66	0.32	1.40	0.65	0.62	0.85	2.41	1.53	1.52	0.83	2.51	2.30	2.36	5	4	77	14	0	50
	AFT	12	49	42	132	0	100	0	0	40	60	0	45	55	0.28	1.42	0.70	0.64	0.92	2.28	1.58	1.55	0.63	2.51	2.32	2.36	1	5	73	20	0	50
1009-2	FWD	23	58	35	138	2	98	0	3	21	76	0	40	60	0.29	1.55	0.69	0.64	0.73	2.37	1.53	1.53	1.06	2.45	2.25	2.30	4	4	74	17	0	58
	AFT	23	58	35	138	2	98	0	4	47	49	0	56	44	0.26	1.47	0.69	0.64	0.44	2.42	1.61	1.60	1.61	2.50	2.31	2.34	1	4	77	18	0	55
1010-1	FWD	18	47	45	83	0	21	79	0	13	87	0	9	91	0.28	1.14	0.52	0.47	0.43	2.32	1.38	1.32	1.11	2.42	2.16	2.20	18	3	75	4	0	48
	AFT	18	47	45	83	0	21	79	0	19	81	0	16	84	0.27	1.25	0.57	0.52	0.78	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	0.52	2.36	1.41	1.38	1.00	2.44	2.14	2.20	22	4	67	6	0	45
	AFT	15	52	38	76	0	50	50	0	23	77	0	25	75	0.20	1.48	0.59	0.56	0.30	2.40	1.47	1.45	1.29	2.48	2.18	2.22	13	3	76	8	0	45
1011-1	FWD	2	55	33	66	0	64	36	2	23	75	2	23	75	0.18	0.99	0.50	0.46	0.56	2.36	1.48	1.43	0.78	2.40	2.07	2.16	17	11	70	2	0	40
	AFT	2	55	33	66	0	67	33	3	47	50	0	37	63	0.24	1.48	0.60	0.56	0.50	2.35	1.57	1.55	0.74	2.37	2.11	2.18	3	7	81	8	0	40
1012-1	FWD	0	45	38	71	0	64	36	7	56	37	0	65	35	0.25	1.30	0.59	0.53	0.54	2.39	1.40	1.42	0.90	2.39	1.93	2.00	6	17	68	10	0	60
	AFT	0	45	38	71	0	64	36	0	33	67	0	49	51	0.26	1.40	0.61	0.58	0.47	2.27	1.44	1.40	0.72	2.32	1.89	1.96	5	10	74	11	0	60
1012-2	FWD	0	57	34	106	0	77	23	6	44	50	0	49	51	0.30	1.20	0.58	0.55	0.73	2.32	1.49	1.42	0.67	2.34	1.91	2.00	4	9	80	7	0	40
	AFT	0	57	34	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	0.70	2.38	1.96	2.02	4	0	72	23	0	40
1013-1	FWD	0	56	28	83	0	64	36	0	42	58	0	55	45	0.20	1.66	0.56	0.36	0.52	2.29	1.56	1.59	1.21	2.41	2.03	2.10	7	13	76	4	0	47
	AFT	0	56	26	82	0	64	36	2	7	91	0	33	67	0.28	1.56	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	2.38	1.94	2.05	27	33	39	1	0	40
	AFT	0	59	14	69	0	31	69	0	13	87	0	36	64	0.18	1.26	0.51	0.48	0.25	2.38	1.42	1.49	0.42	2.43	1.91	2.00	19	12	64	5	0	40
1014-2	FWD	0	77	0	36	0	21	79	0	26	74	0	61	39	0.17	1.06	0.36	0.31	0.23	2.32	1.30	1.36	0.42	2.36	1.72	1.80	31	40	27	2	0	40
	AFT	0	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	80	2	0	40
1015-1	FWD	5	68	19	68	0	8	92	2	2	96	0	2	98	0.25	1.70	0.54	0.47	0.54	2.28	1.44	1.46	0.46	2.41	1.86	1.90	28	0	65	7	0	45
	AFT	4	68	18	67	0	30	70	0	5	95	0	4	96	0.29	1.20	0.60	0.56	0.46	2.28	1.49	1.50	0.80	2.36	1.86	1.95	14	0	77	8	0	45
1015-2	FWD	0	80	-2	71	0	10	90	0	10	90	0	11	89	0.22	1.10	0.50	0.46	0.34	2.07	1.29	1.30	0.28	2.34	1.69	1.78	28	4	65	3	0	40
	AFT	0	79	-2	71	0	21	79	0	9	91	0	9	91	0.26	1.21	0.59	0.52	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	26	74	0	42	58	0.22	1.65	0.64	0.58	0.62	2.34	1.69	1.72	0.98	2.46	1.90	1.92	11	9	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	8	1	40
1017-1	FWD	-11	50	21	99	0	0	100	13	63	24	0	82	18	0.20	1.65	0.66	0.61	0.46	2.23	1.74	1.78	0.60	2.32	1.93	2.00	1	8	77	13	1	25
	AFT	-1	57	19	98	0	17	83	24	58	18	4	90	6	0.20	1.62	0.64	0.60	0.60	2.29	1.75	1.75	1.18	2.36	1.89	1.90	1	13	74	11	2	25
1017-2	FWD	1	78	9	139	0	0	100	5	62	33	7	77	16	0.22	1.22	0.58	0.55	0.37	2.30	1.70	1.80	0.86	2.37	1.93	1.94	3	14	74	9	0	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	65	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	1.05	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'D JUN 4/68

SECTION A

APPENDIX

~~TOP SECRET~~ [redacted]

MISSION • 1018-1 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DIST

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	1	0	0	1	0	0	0	0	0	2	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	2	0	0	0	0	0	2	0	0
0.24	1	0	0	1	0	0	0	0	0	2	0	0
0.25	1	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	3	0	0	0	0	0	3	0	0
0.28	0	0	0	2	0	0	0	0	0	2	0	0
0.29	0	0	0	1	0	0	0	0	0	1	0	0
0.30	0	0	0	6	0	0	0	0	0	6	0	0
0.31	0	0	0	2	0	0	0	0	0	2	0	0
0.32	0	0	0	5	0	0	0	0	0	5	0	0
0.33	0	0	0	3	0	0	1	0	0	4	0	0
0.34	0	0	0	6	0	0	0	0	0	6	0	0
0.35	0	0	0	2	0	0	2	0	0	4	0	0
0.36	0	0	0	5	0	0	0	0	0	5	0	0
0.37	0	0	0	1	0	0	0	0	0	1	0	0
0.38	0	0	0	3	0	0	0	0	0	3	0	0
0.39	0	0	0	1	0	0	1	0	0	2	0	0
0.40	0	0	0	6	0	0	3	0	0	9	0	0
0.41	0	0	0	0	0	0	1	0	0	1	0	0
0.42	0	0	0	7	0	0	0	0	0	7	0	0
0.43	0	0	0	2	0	0	0	0	0	2	0	0
0.44	0	0	0	3	0	0	1	0	0	4	0	0
0.45	0	0	0	3	0	0	2	0	0	5	0	0
0.46	0	0	0	3	0	0	2	0	0	5	0	0
0.47	0	0	0	2	0	0	1	0	0	3	0	0
0.48	0	0	0	7	0	0	2	0	0	9	0	0
0.49	0	0	0	2	0	0	0	0	0	2	0	0
0.50	0	0	0	11	0	0	1	0	0	12	0	0
SUBTOTAL	2	0	0	91	0	0	17	0	0	110	0	0

~~TOP SECRET~~ [redacted]

MISSION • 1018-1 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DIST

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	2	0	0	1	0	0	3	0	0
0.52	0	0	0	11	0	0	1	0	0	12	0	0
0.53	0	0	0	0	0	0	1	0	0	1	0	0
0.54	0	0	0	4	0	0	2	0	0	6	0	0
0.55	0	0	0	3	0	0	1	0	0	4	0	0
0.56	0	0	0	10	0	0	0	0	0	10	0	0
0.57	0	0	0	2	0	0	0	0	0	2	0	0
0.58	0	0	0	2	0	0	0	0	0	2	0	0
0.59	0	0	0	1	0	0	0	0	0	1	0	0
0.60	0	0	0	4	0	0	0	0	0	4	0	0
0.61	0	0	0	0	0	0	0	0	0	0	0	0
0.62	0	0	0	6	0	0	3	0	0	9	0	0
0.63	0	0	0	0	1	0	0	0	0	0	1	0
0.64	0	0	0	4	1	0	1	0	0	5	1	0
0.65	0	0	0	2	0	0	0	0	0	2	0	0
0.66	0	0	0	3	0	0	0	0	0	3	0	0
0.67	0	0	0	1	0	0	1	0	0	2	0	0
0.68	0	0	0	2	0	0	0	0	0	2	0	0
0.69	0	0	0	0	0	0	0	0	0	0	0	0
0.70	0	0	0	4	0	0	2	0	0	6	0	0
0.71	0	0	0	0	0	0	0	0	0	0	0	0
0.72	0	0	0	2	0	0	2	0	0	4	0	0
0.73	1	0	0	1	0	0	0	0	0	2	0	0
0.74	0	0	0	4	0	0	0	0	0	4	0	0
0.75	0	0	0	2	1	0	0	0	0	2	1	0
0.76	0	0	0	6	0	0	1	0	0	7	0	0
0.77	0	0	0	0	1	0	0	0	0	0	1	0
0.78	0	0	0	4	0	0	0	0	0	4	0	0
0.79	0	0	0	1	0	0	0	0	0	1	0	0
0.80	0	0	0	4	0	0	0	0	0	4	0	0
0.81	0	0	0	0	0	0	0	0	0	0	0	0
0.82	0	0	0	2	2	0	2	0	0	4	2	0
0.83	0	0	0	0	0	0	0	0	0	0	0	0
0.84	0	0	0	0	0	0	0	0	0	0	0	0
0.85	0	0	0	2	0	0	0	0	0	2	0	0
0.86	0	0	0	1	0	0	0	0	0	1	0	0
0.87	0	0	0	1	0	0	0	0	0	1	0	0
0.88	0	0	0	1	0	0	0	0	0	1	0	0
0.89	0	0	0	0	2	0	1	0	0	1	2	0
0.90	0	0	0	3	1	0	0	0	0	3	1	0
0.91	0	0	0	1	0	0	0	0	0	1	0	0
0.92	0	0	0	1	0	0	1	0	0	2	0	0
0.93	0	0	0	1	0	0	0	0	0	1	0	0
0.94	0	0	0	3	0	0	0	1	0	3	1	0
0.95	0	0	0	0	0	0	0	0	0	0	0	0
0.96	0	0	0	2	0	0	0	1	0	2	1	0
0.97	0	0	0	0	0	0	0	0	0	0	0	0
0.98	0	0	0	2	0	0	0	0	0	2	0	0
0.99	0	0	0	0	0	0	0	1	0	0	1	0
1.00	0	0	0	2	2	0	0	0	1	2	2	1
SUBTOTAL	1	0	0	106	10	0	20	3	1	127	13	1

~~TOP SECRET~~ [redacted]

MISSION • 1018-1 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DIST

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	1	0	0	0	0	0	1	0	0
1.04	0	0	0	0	1	0	0	0	0	0	1	0
1.05	0	0	0	0	0	0	0	0	0	0	0	0
1.06	0	0	0	0	1	0	0	1	0	0	2	0
1.07	0	0	0	0	0	0	0	0	0	0	0	0
1.08	0	0	0	0	4	0	0	1	0	0	5	0
1.09	0	0	0	0	0	0	0	0	0	0	0	0
1.10	0	0	0	0	0	0	0	0	0	0	0	0
1.11	0	0	0	0	0	0	0	0	0	0	0	0
1.12	0	0	0	0	1	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	0	0	0	0	1	0	0	1	0
1.15	0	0	0	0	0	0	0	0	0	0	0	0
1.16	0	0	0	0	0	0	0	0	0	0	0	0
1.17	0	0	0	0	0	0	0	0	0	0	0	0
1.18	0	0	0	0	0	0	0	0	0	0	0	0
1.19	0	0	0	1	0	0	0	0	0	1	0	0
1.20	0	0	0	1	2	0	0	0	0	1	2	0
1.21	0	0	0	0	1	0	0	1	0	0	2	0
1.22	0	0	0	0	1	0	0	0	0	0	1	0
1.23	0	0	0	0	0	0	0	0	0	0	0	0
1.24	0	0	0	0	2	0	0	0	0	0	2	0
1.25	0	0	0	0	0	0	0	0	0	0	0	0
1.26	0	0	0	0	1	0	0	0	0	0	1	0
1.27	0	0	0	0	2	0	0	0	0	0	2	0
1.28	0	0	0	1	0	0	0	0	0	1	0	0
1.29	0	0	0	0	0	0	0	0	0	0	0	0
1.30	0	0	0	0	3	0	0	0	1	0	3	0
1.31	0	0	0	0	0	0	0	0	0	0	0	0
1.32	0	0	0	0	2	0	0	1	0	0	3	0
1.33	0	0	0	0	0	0	0	0	0	0	0	0
1.34	0	0	0	0	0	0	0	2	0	0	2	0
1.35	0	0	0	0	0	0	0	0	0	0	0	0
1.36	0	0	0	0	1	0	0	0	0	0	1	0
1.37	0	0	0	0	0	0	0	0	0	0	0	0
1.38	0	0	0	0	3	0	0	0	0	0	3	0
1.39	0	0	0	0	0	0	0	0	0	0	0	0
1.40	0	0	0	0	4	0	0	1	0	0	5	0
1.41	0	0	0	0	0	0	0	0	0	0	0	0
1.42	0	0	1	0	2	0	0	1	0	0	4	0
1.43	0	0	0	0	0	0	0	0	0	0	0	0
1.44	0	0	0	0	0	0	0	1	0	0	1	0
1.45	0	0	0	0	2	0	0	0	0	0	2	0
1.46	0	0	0	1	2	0	0	0	0	1	2	0
1.47	0	0	0	0	0	0	0	0	0	0	0	0
1.48	0	0	0	0	4	0	0	0	0	0	4	0
1.49	0	0	0	0	1	0	0	0	0	0	1	0
1.50	0	0	0	0	3	0	0	0	0	0	3	0
SUBTOTAL	0	1	0	5	45	4	0	10	1	5	56	5

~~TOP SECRET~~ [redacted]

Table A-1

~~TOP SECRET~~ [redacted]

MISSION • 1018-1 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DIST

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	0	0	0	0	0
1.52	0	0	0	0	5	1	0	1	0	0	6	1
1.53	0	0	0	0	1	0	0	0	0	0	1	0
1.54	0	0	0	0	4	0	0	0	0	0	4	0
1.55	0	0	0	0	1	1	0	0	0	0	1	1
1.56	0	0	0	0	1	0	0	1	0	0	2	0
1.57	0	0	0	0	3	0	0	0	0	0	3	0
1.58	0	0	0	0	1	0	0	0	0	0	1	0
1.59	0	0	0	0	1	1	0	0	0	0	1	1
1.60	0	0	1	0	0	0	0	0	0	0	0	1
1.61	0	0	0	0	0	0	0	0	0	0	0	0
1.62	0	0	0	0	4	0	0	0	0	0	4	0
1.63	0	0	0	0	0	0	0	0	0	0	0	0
1.64	0	0	0	0	4	0	0	0	0	0	4	0
1.65	0	0	0	0	1	0	0	2	0	0	6	0
1.66	0	0	0	0	2	1	0	0	0	0	2	1
1.67	0	0	1	0	0	0	0	0	0	0	0	1
1.68	0	0	0	0	5	1	0	0	0	0	7	1
1.69	0	0	0	0	1	0	0	2	0	0	3	0
1.70	0	0	0	0	5	1	0	0	0	0	5	1
1.71	0	0	0	0	0	0	0	0	0	0	0	0
1.72	0	0	0	0	5	1	0	0	0	0	5	1
1.73	0	0	0	0	1	0	0	0	0	0	1	0
1.74	0	0	0	0	4	1	0	0	0	0	4	1
1.75	0	0	0	0	1	0	0	0	0	0	1	0
1.76	0	0	0	0	2	1	0	0	0	0	2	1
1.77	0	0	1	0	0	0	0	2	0	0	2	1
1.78	0	0	0	0	1	0	0	0	0	0	1	0
1.79	0	0	0	0	2	0	0	0	0	0	2	0
1.80	0	0	0	0	6	2	0	0	1	0	7	2
1.81	0	0	0	0	2	1	0	0	0	0	3	1
1.82	0	0	0	0	4	0	0	0	0	0	4	0
1.83	0	0	0	0	0	0	0	0	0	0	0	0
1.84	0	0	0	0	3	1	0	0	0	0	4	1
1.85	0	0	0	0	1	0	0	0	0	0	1	0
1.86	0	0	0	0	3	1	0	0	0	0	4	1
1.87	0	0	0	0	1	0	0	0	0	0	1	0
1.88	0	0	0	0	4	0	0	0	0	0	4	0
1.89	0	0	0	0	2	0	0	0	0	0	2	0
1.90	0	0	0	1	0	6	0	0	0	1	0	6
1.91	0	0	0	0	0	1	0	0	0	0	0	1
1.92	0	0	0	0	6	1	0	0	0	0	6	1
1.93	0	0	0	0	3	1	0	2	0	0	8	1
1.94	0	0	0	0	6	1	0	2	0	0	8	1
1.95	0	0	0	0	1	0	0	0	0	0	1	0
1.96	0	0	0	0	4	0	0	2	0	0	6	0
1.97	0	0	0	0	2	0	0	0	0	0	2	0
1.98	0	0	0	0	4	0	0	2	0	0	6	0
1.99	0	0	0	0	0	0	0	0	0	0	0	0
2.00	0	0	0	0	3	2	0	0	2	0	3	2
SUBTOTAL	0	2	1	0	123	82	0	21	10	0	146	93

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MISSION • 1018-1 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DIST

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	1	0	0	0	0	0	1	0
2.02	0	0	0	0	2	3	0	0	0	0	2	3
2.03	0	0	0	0	1	1	0	0	0	0	1	1
2.04	0	0	0	0	3	6	0	0	0	0	3	6
2.05	0	0	0	0	2	2	0	0	0	0	2	2
2.06	0	0	0	0	2	7	0	0	1	0	2	8
2.07	0	0	0	0	2	1	0	0	0	0	2	1
2.08	0	0	0	0	1	5	0	0	3	0	1	8
2.09	0	0	0	0	0	0	0	0	0	0	0	0
2.10	0	0	0	0	2	9	0	0	3	0	2	12
2.11	0	0	0	0	2	0	0	0	0	0	2	0
2.12	0	0	0	0	1	5	0	0	1	0	1	6
2.13	0	0	0	0	1	0	0	0	1	0	1	0
2.14	0	0	0	0	3	4	0	0	1	0	3	4
2.15	0	0	0	0	0	1	0	0	0	0	0	1
2.16	0	0	0	0	0	5	0	0	1	0	0	6
2.17	0	0	0	0	1	0	0	0	0	0	1	0
2.18	0	0	0	0	1	4	0	0	0	0	1	4
2.19	0	0	0	0	0	0	0	0	0	0	0	0
2.20	0	0	0	0	0	2	0	0	0	0	0	2
2.21	0	0	0	0	0	1	0	0	0	0	0	1
2.22	0	0	0	0	1	2	0	0	0	0	1	2
2.23	0	0	0	0	1	0	0	0	0	0	1	0
2.24	0	0	0	0	0	1	0	0	1	0	0	2
2.25	0	0	0	0	0	1	0	0	1	0	0	2
2.26	0	0	0	0	0	0	0	0	0	0	0	0
2.27	0	0	0	0	0	1	0	0	0	0	0	1
2.28	0	0	0	0	0	0	0	0	1	0	0	1
2.29	0	0	0	0	0	0	0	0	0	0	0	0
2.30	0	0	0	0	0	0	0	0	1	0	0	1
2.31	0	0	0	0	0	0	0	0	1	0	0	1
2.32	0	0	0	0	0	0	0	0	0	0	0	0
2.33	0	0	0	0	0	0	0	0	1	0	0	1
2.34	0	0	0	0	0	0	0	0	0	0	0	0
2.35	0	0	0	0	0	0	0	0	0	0	0	0
2.36	0	0	0	0	0	0	0	0	0	0	0	0
2.37	0	0	0	0	0	0	0	0	0	0	0	0
2.38	0	0	0	0	0	0	0	0	0	0	0	0
2.39	0	0	0	0	0	0	0	0	0	0	0	0
2.40	0	0	0	0	0	0	0	0	0	0	0	0
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	0	0	0	0
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	24	61	0	3	14	0	27	75

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MISSION • 1018-1 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.51	0	0	0	0	0	0	0	0	0	0	0	0
2.52	0	0	0	0	0	0	0	0	0	0	0	0
2.53	0	0	0	0	0	0	0	0	0	0	0	0
2.54	0	0	0	0	0	0	0	0	0	0	0	0
2.55	0	0	0	0	0	0	0	0	0	0	0	0
2.56	0	0	0	0	0	0	0	0	0	0	0	0
2.57	0	0	0	0	0	0	0	0	0	0	0	0
2.58	0	0	0	0	0	0	0	0	0	0	0	0
2.59	0	0	0	0	0	0	0	0	0	0	0	0
2.60	0	0	0	0	0	0	0	0	0	0	0	0
2.61	0	0	0	0	0	0	0	0	0	0	0	0
2.62	0	0	0	0	0	0	0	0	0	0	0	0
2.63	0	0	0	0	0	0	0	0	0	0	0	0
2.64	0	0	0	0	0	0	0	0	0	0	0	0
2.65	0	0	0	0	0	0	0	0	0	0	0	0
2.66	0	0	0	0	0	0	0	0	0	0	0	0
2.67	0	0	0	0	0	0	0	0	0	0	0	0
2.68	0	0	0	0	0	0	0	0	0	0	0	0
2.69	0	0	0	0	0	0	0	0	0	0	0	0
2.70	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3	3	1	202	202	147	37	37	26	242	242	174

MISSION 1018-1 INSTR - FWD 06-11-65 PROCESSING AND EXPOSURE ANALYSI

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	3	0 PC	67 PC	33 PC	0 PC	0 PC
INTERMEDIATE	202	0 PC	22 PC	69 PC	8 PC	0 PC
FULL	37	11 PC	0 PC	86 PC	3 PC	0 PC
ALL LEVELS	242	2 PC	19 PC	71 PC	7 PC	0 PC

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

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Table A-1

MISSION • 1018-1 • INSTR • FWD • 06-11-65 PLOT OF D MIN • TERRAIN • PROCESSING • PRIMARY

ARITH MEAN • 0.39 • MEDIAN • 0.24 • STD DEV • 0.30 • RANGE • 0.19 TO 0.73 WITH 3 SAMPLES

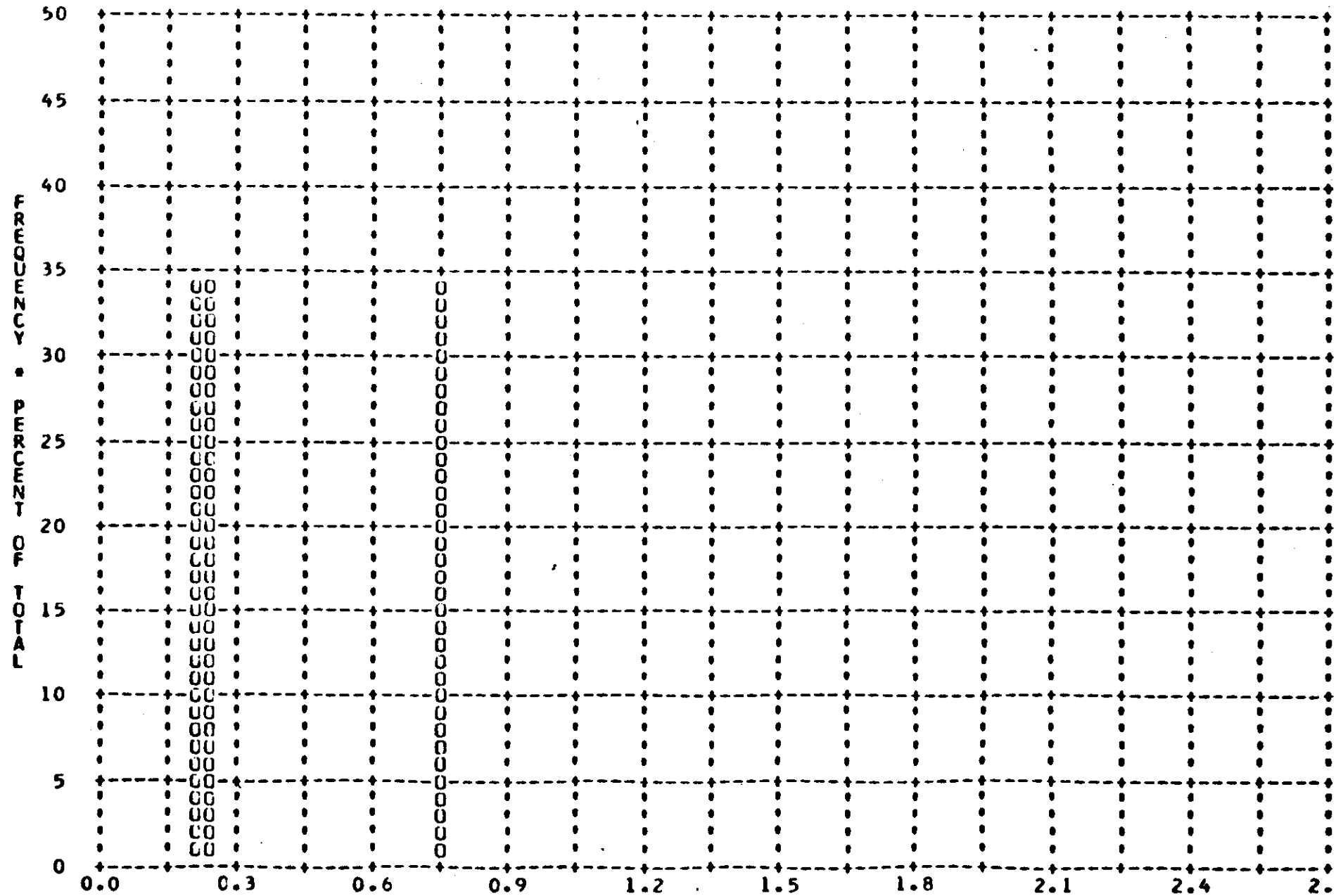


Figure A-1

MISSION * 1018-1 * INSTR * FWD * 06-11-65 PLOT OF D MAX * TERRAIN * PROCESSING * PRIMARY

ARITH MEAN * 1.62 * MEDIAN * 1.67 * STD DEV * 0.18 * RANGE * 1.42 TO 1.76 WITH 3 SAMPLES

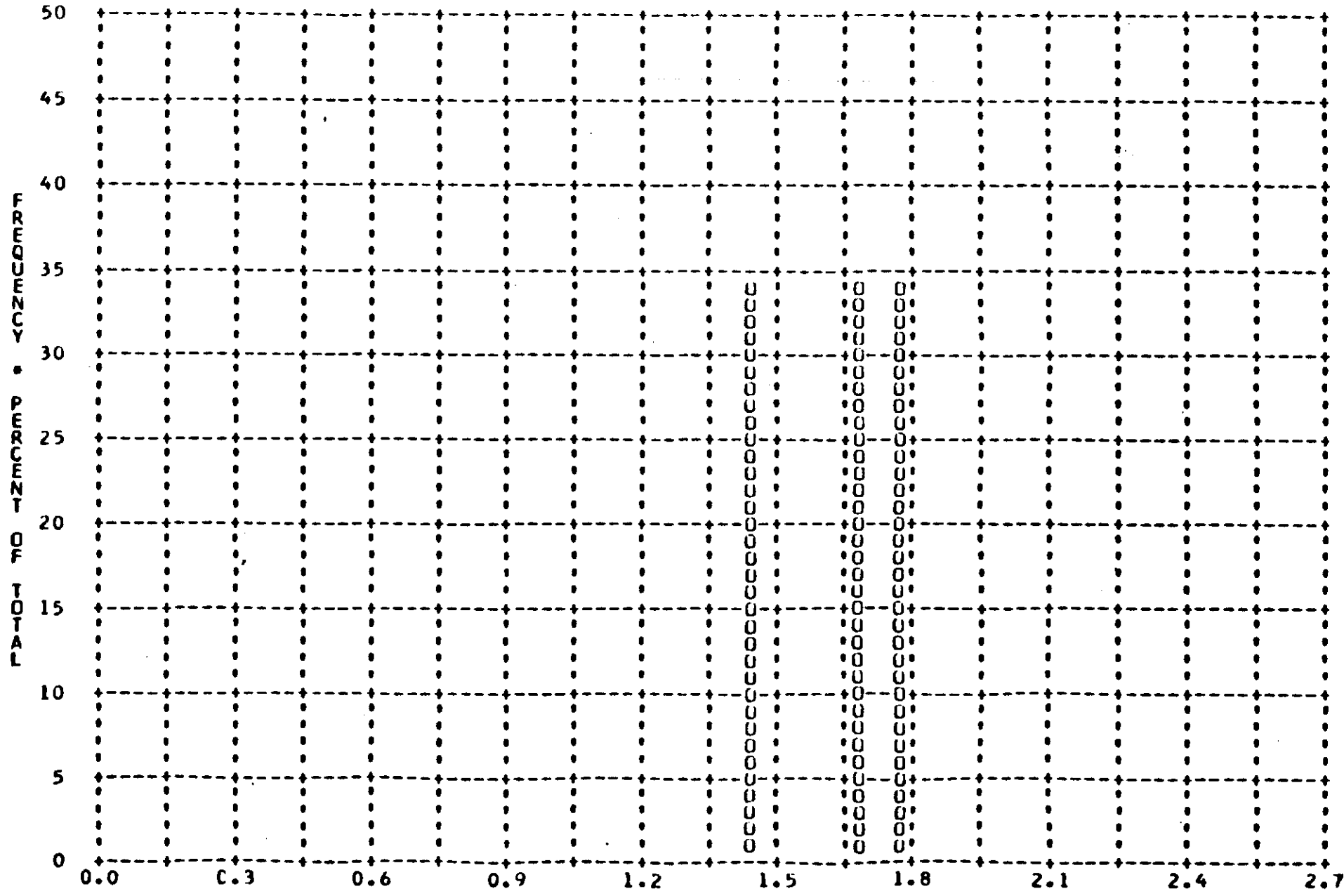


Figure A-2

MISSION • 1018-1 • INSTR • FWD • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • PRIMARY

ARITH MEAN • 1.60 • MEDIAN • 1.60 • STD DEV • 0.00 • RANGE • 1.60 TO 1.60 WITH 1 SAMPLES

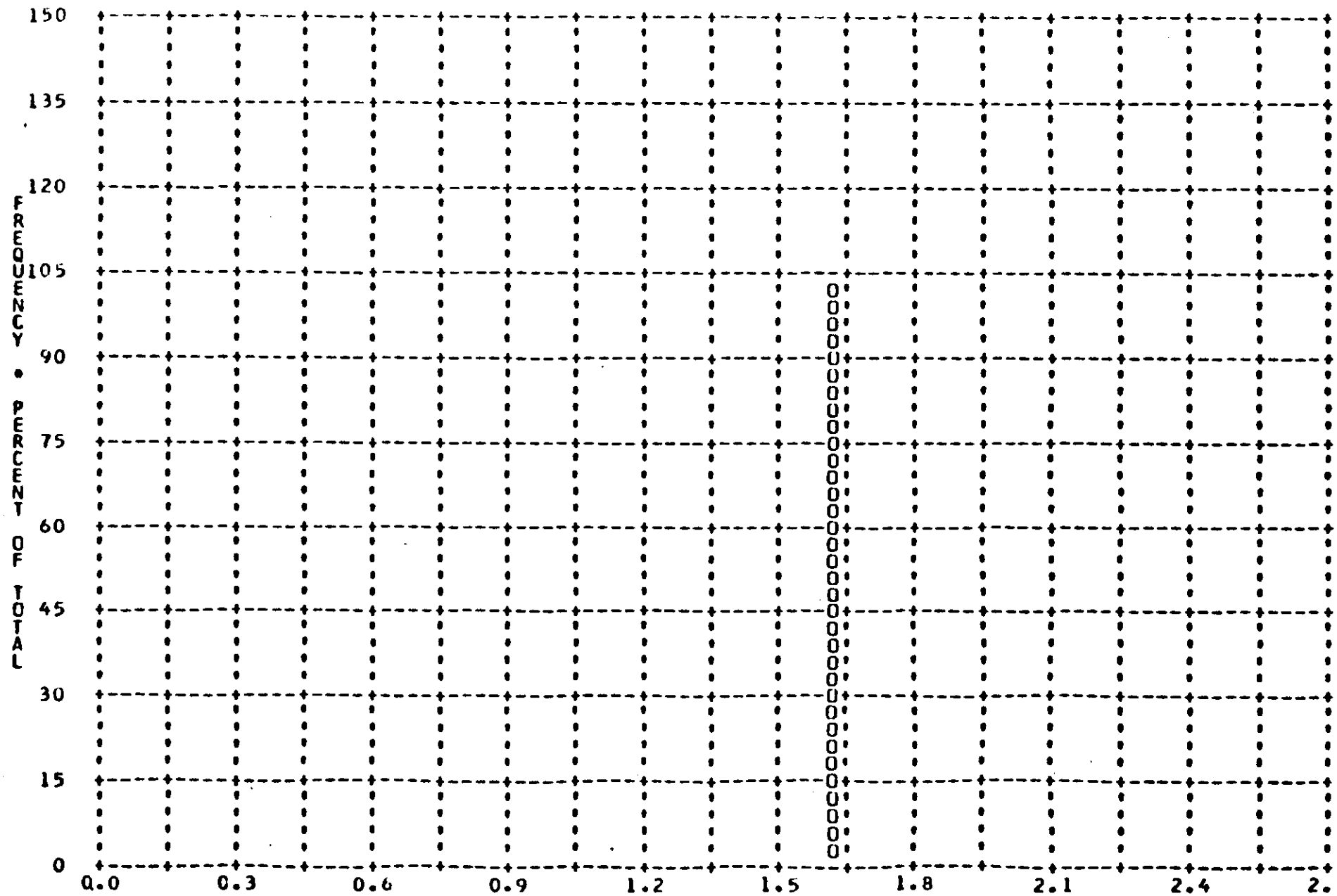


Figure A-3

MISSION • 1018-1 • INSTR • FWD • 06-11-65 PLOT OF D MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.57 • MEDIAN • 0.52 • STD DEV • 0.22 • RANGE • 0.19 TO 1.46 WITH 202 SAMPLES

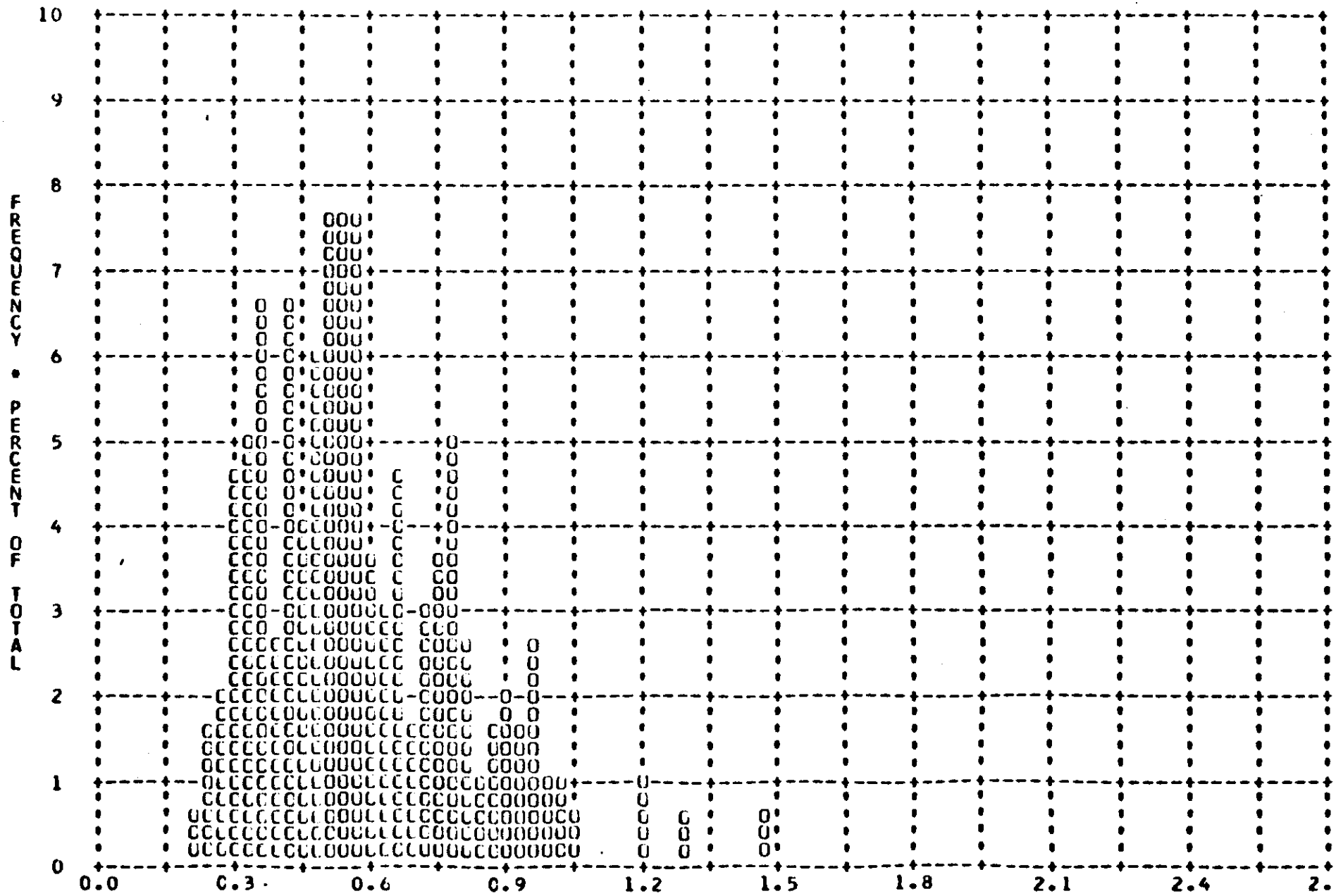


Figure A-4

MISSION • 1019-1 • INSTR • FWD • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.67 • MEDIAN • 1.74 • STD DEV • 0.33 • RANGE • 0.64 TO 2.22 WITH 202 SAMPLES

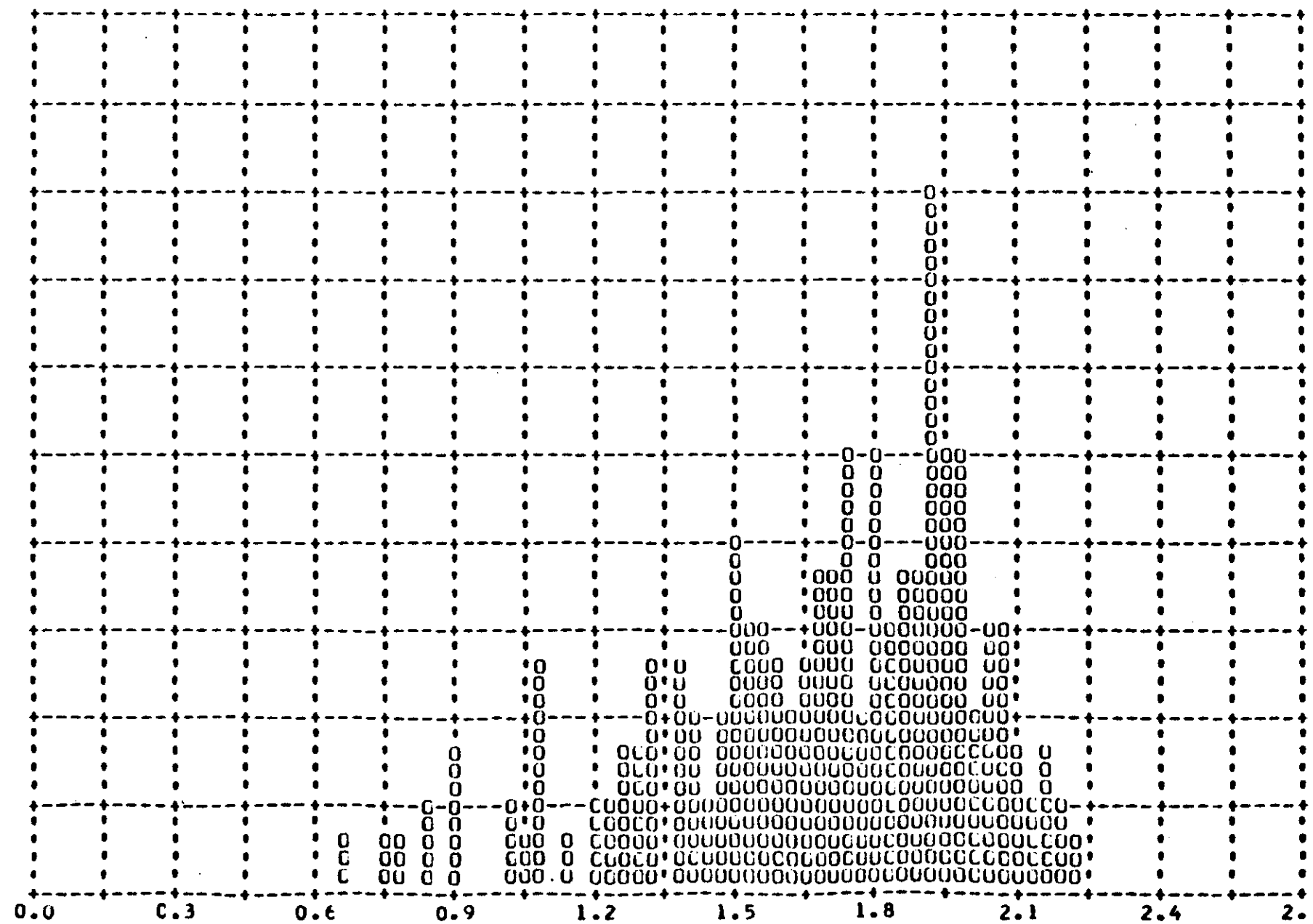


Figure A-5

MISSION • 1018-1 • INSTR • FWD • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.56 • MEDIAN • 1.98 • STD DEV • 0.18 • RANGE • 1.32 TO 2.26 WITH 147 SAMPLES

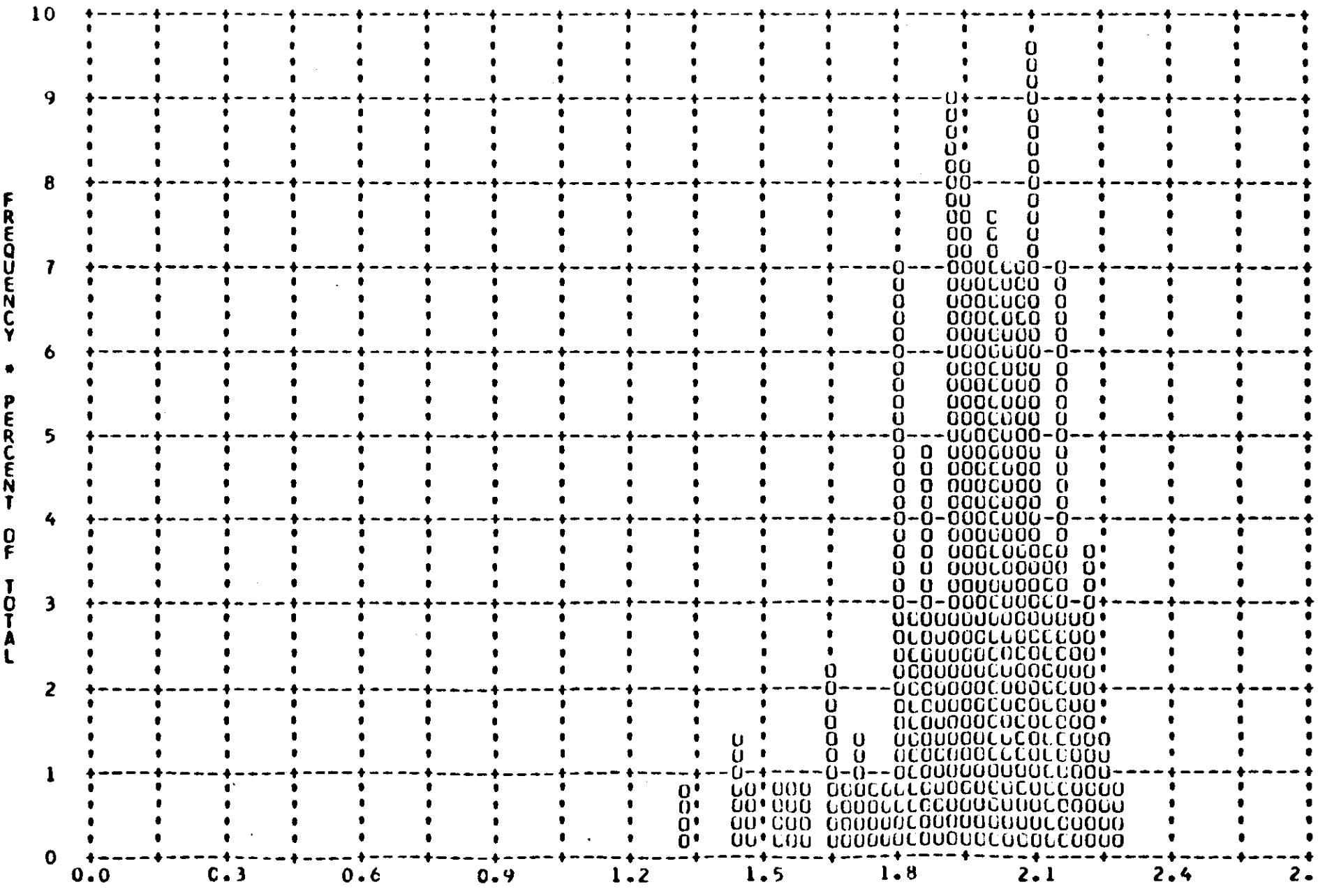
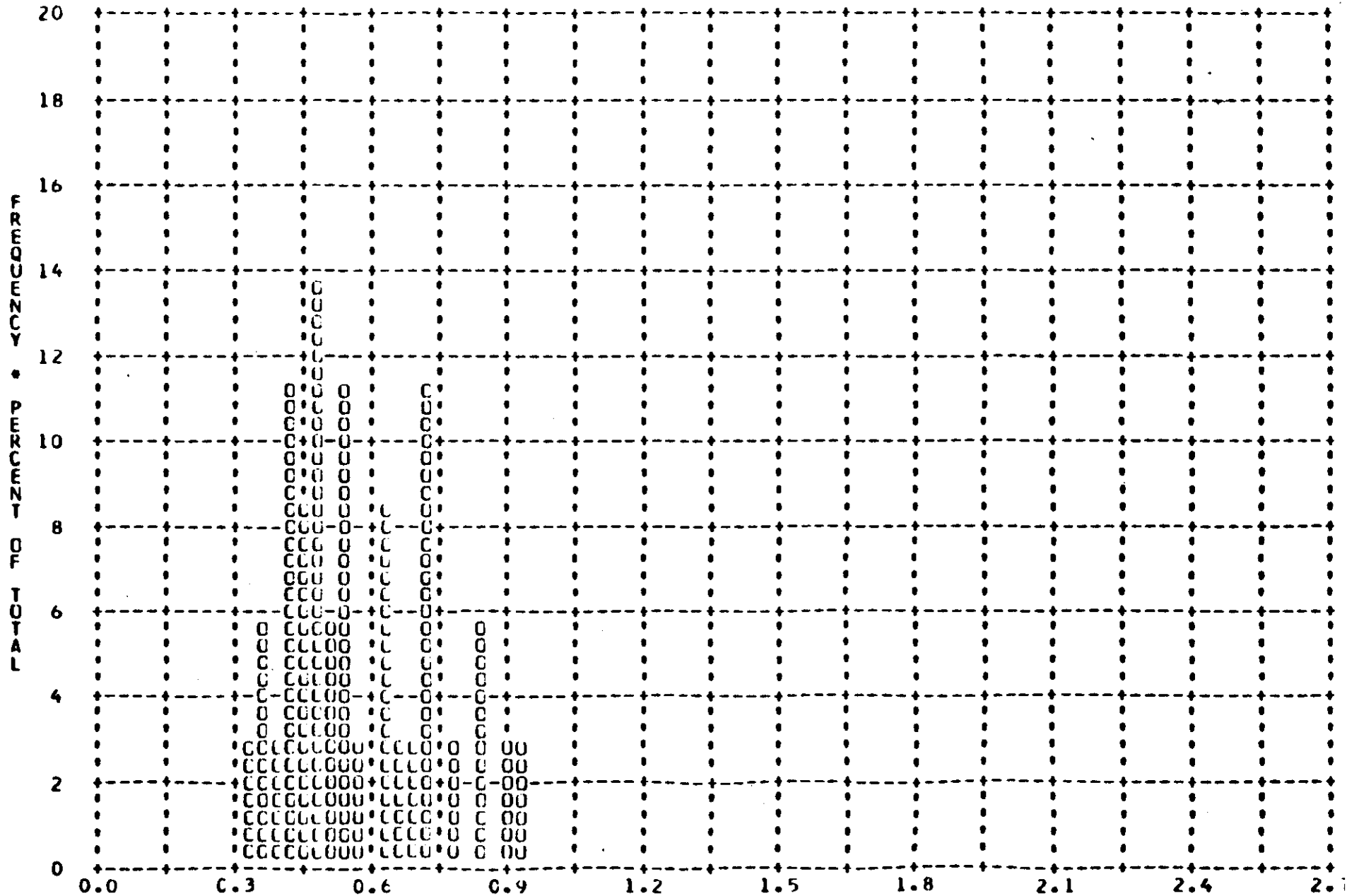


Figure A-3

MISSION * 1018-1 * INSTR * FWD * 06-11-65 PLOT OF D MIN * TERRAIN * PROCESSING * FULL

ARITH MEAN * 0.56 * MEDIAN * 0.52 * STD DEV * 0.16 * RANGE * 0.33 TO 0.92 WITH 37 SAMPLES



MISSION • 1018-1 • INSTR • FWD • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • FULL

ARITH MEAN • 1.62 • MEDIAN • 1.68 • STD DEV • 0.35 • RANGE • 0.94 TO 2.14 WITH 37 SAMPLES

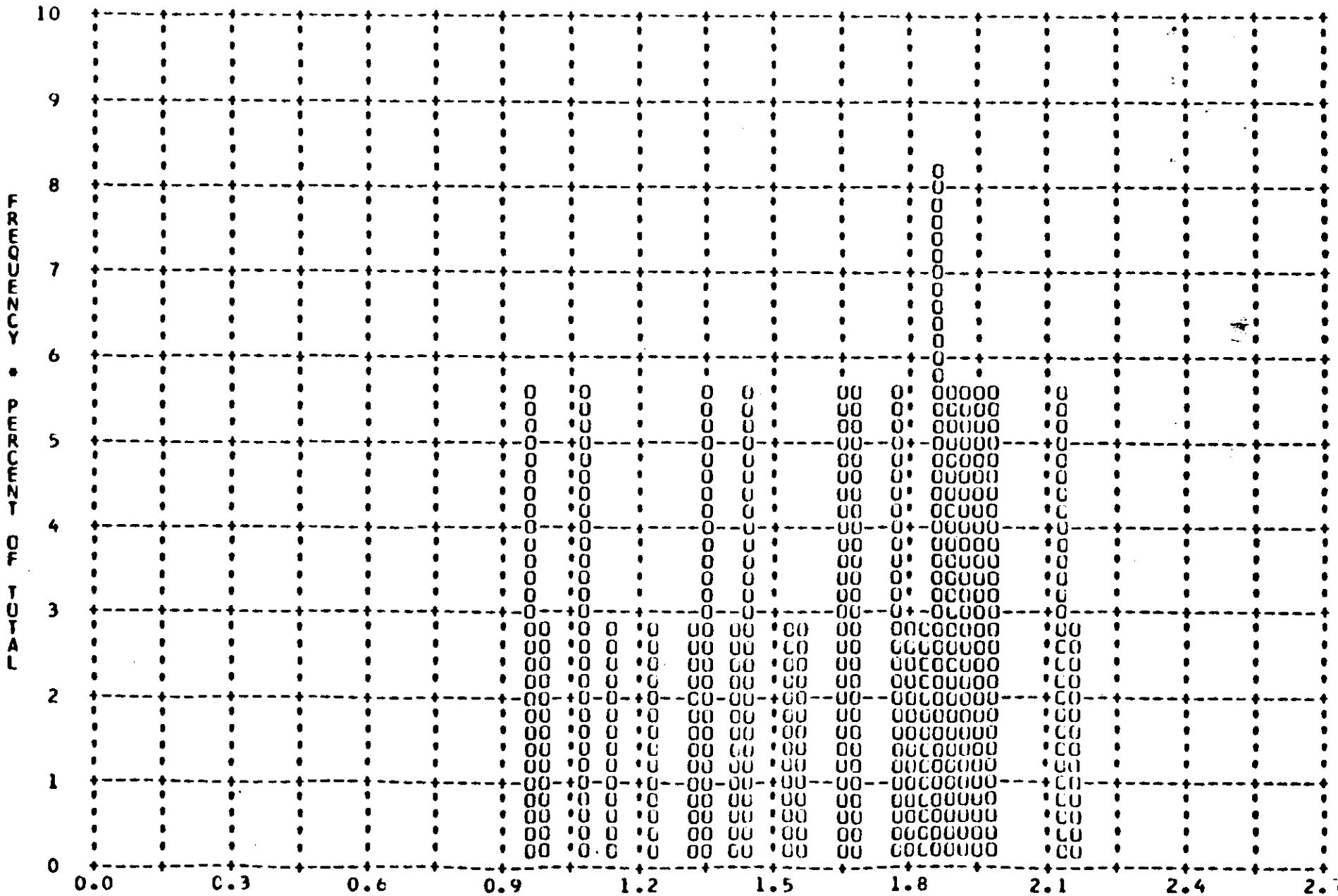
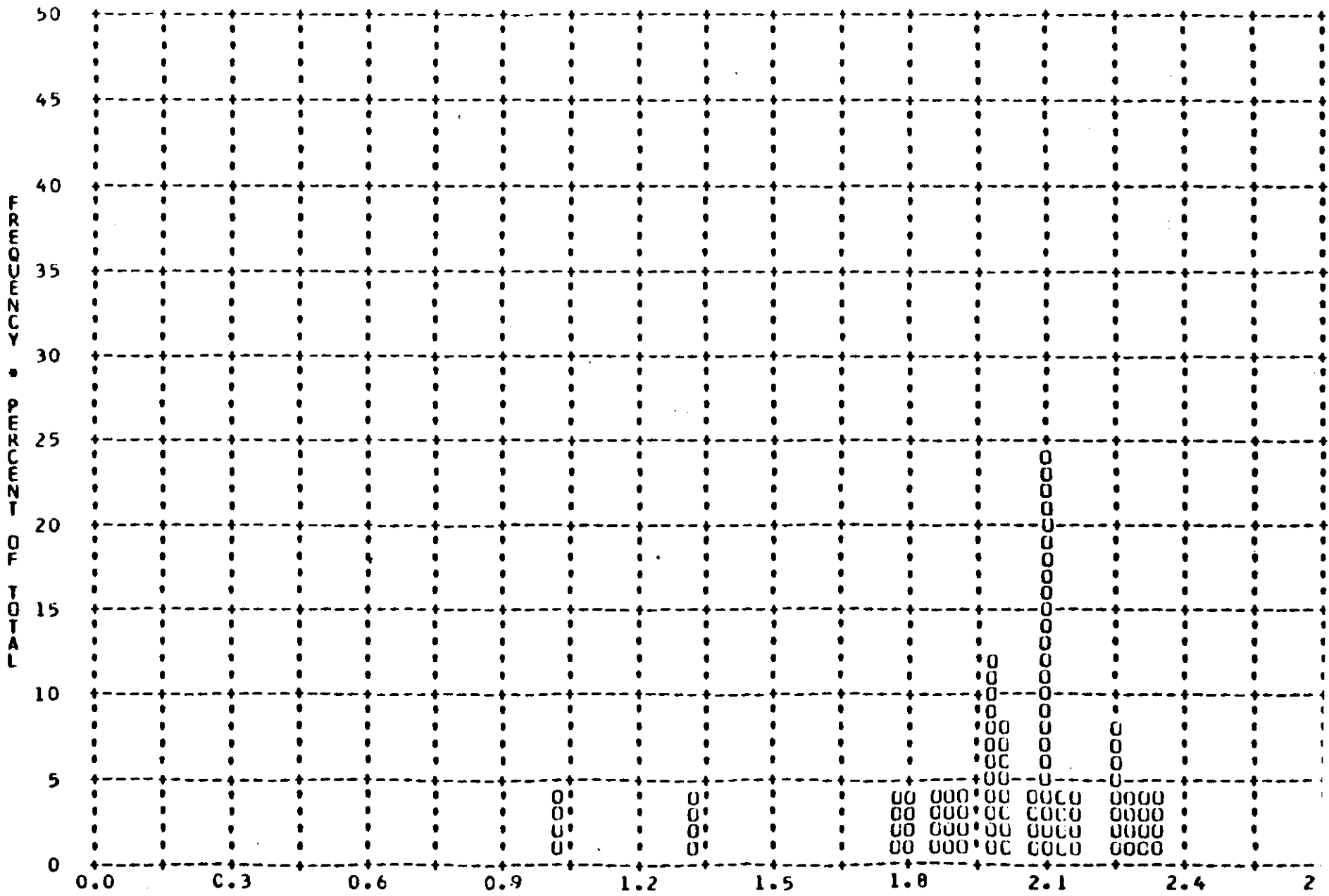


Figure A-8

MISSION • 1018-1 • INSTR • FWD • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • FULL

ARITH MEAN • 1.59 • MEDIAN • 2.08 • STD DEV • 0.29 • RANGE • 1.00 TO 2.32 WITH 26 SAMPLES



MISSION • 1018-1 • INSTR • FRWD • 06-11-65 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.56 • MEDIAN • 0.52 • STD DEV • 0.21 • RANGE • 0.19 TO 1.46 WITH 242 SAMPLES

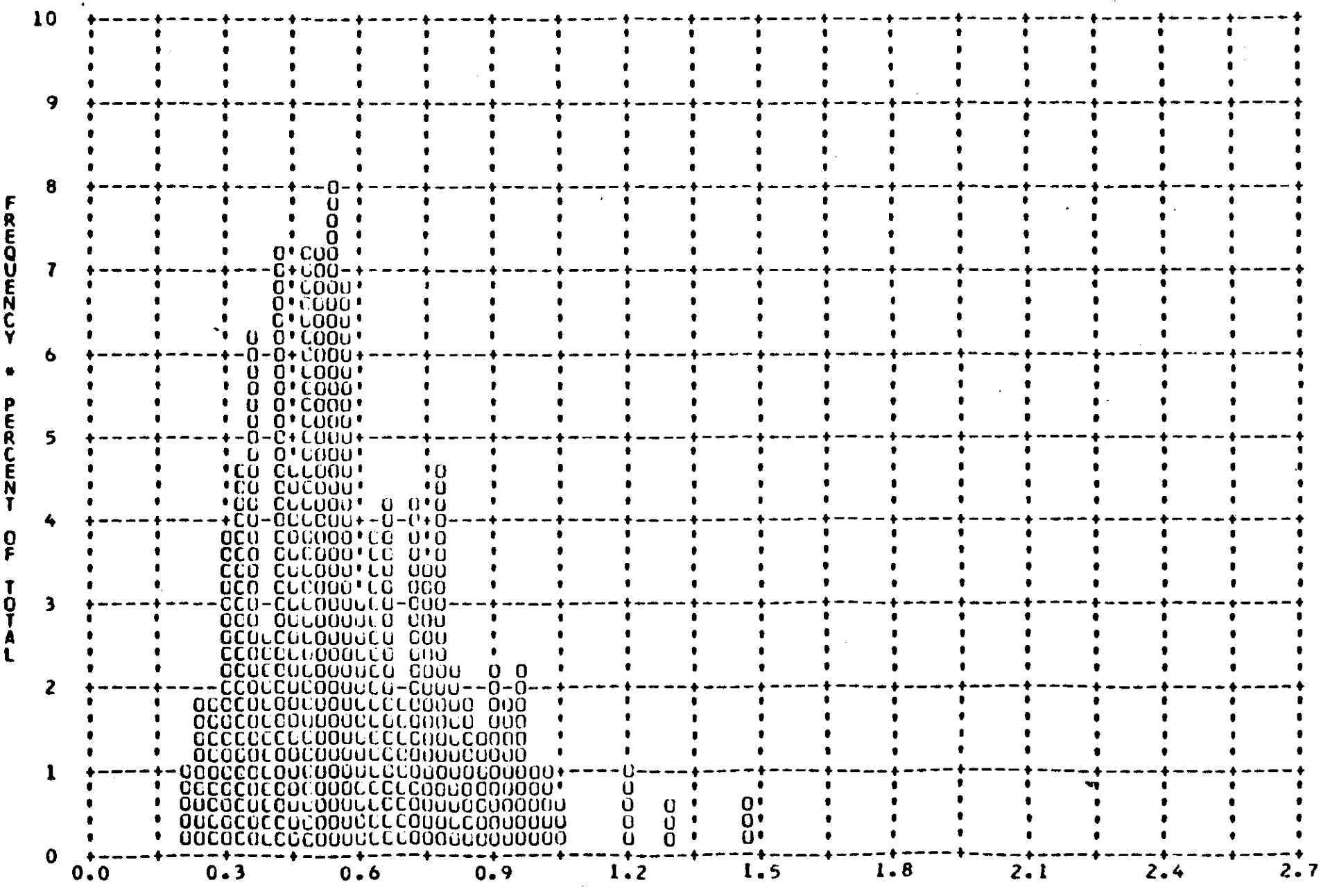


Figure A-10

MISSION • 1018-1 • INSTR • FWD • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.66 • MEDIAN • 1.73 • STD DEV • 0.33 • RANGE • 0.64 TO 2.22 WITH 242 SAMPLES

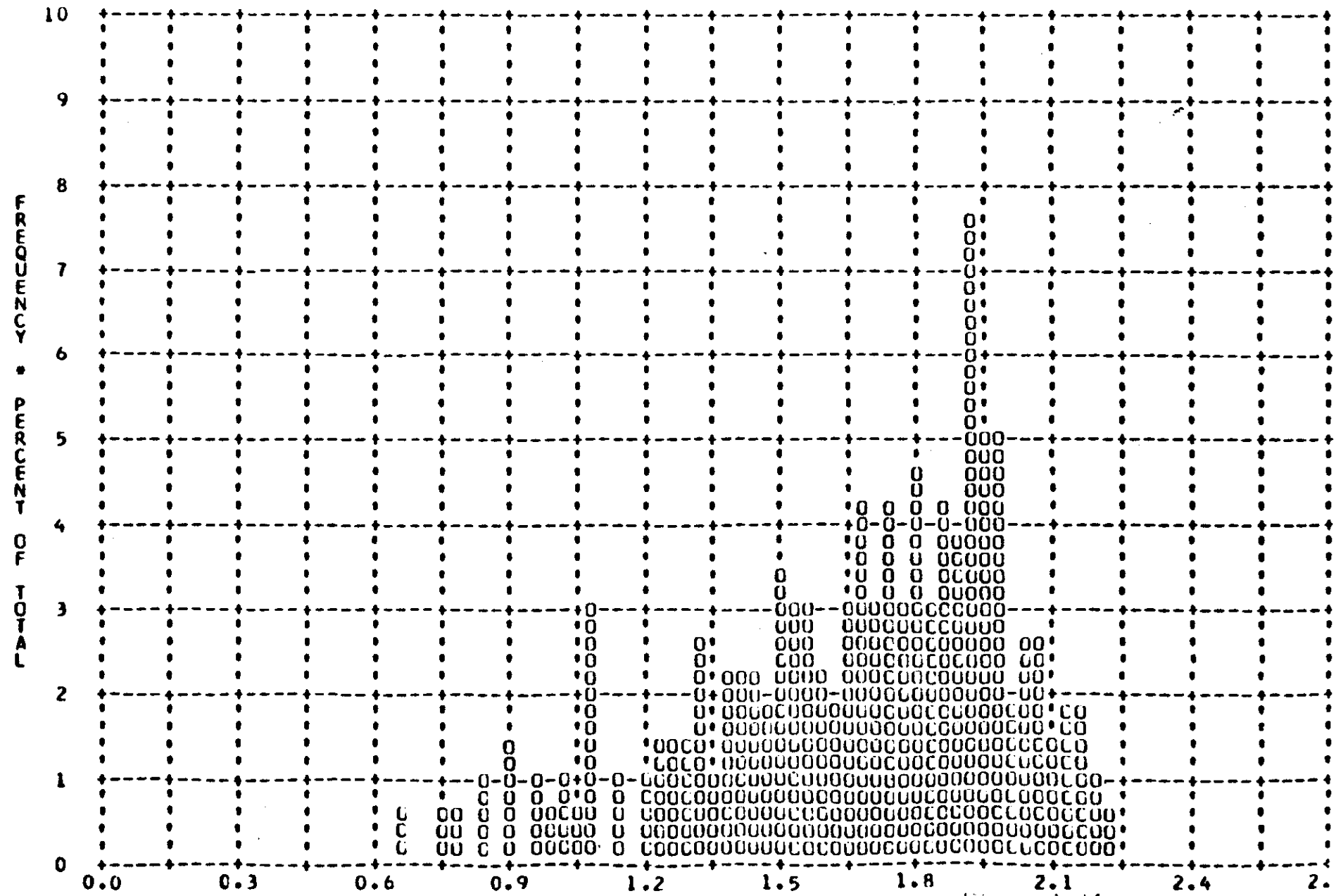


Figure A-11

MISSION • 101H-1 • INSTR • FWD • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 1.96 • MEDIAN • 1.99 • STD DEV • 0.20 • RANGE • 1.00 TO 2.32 WITH 174 SAMPLES

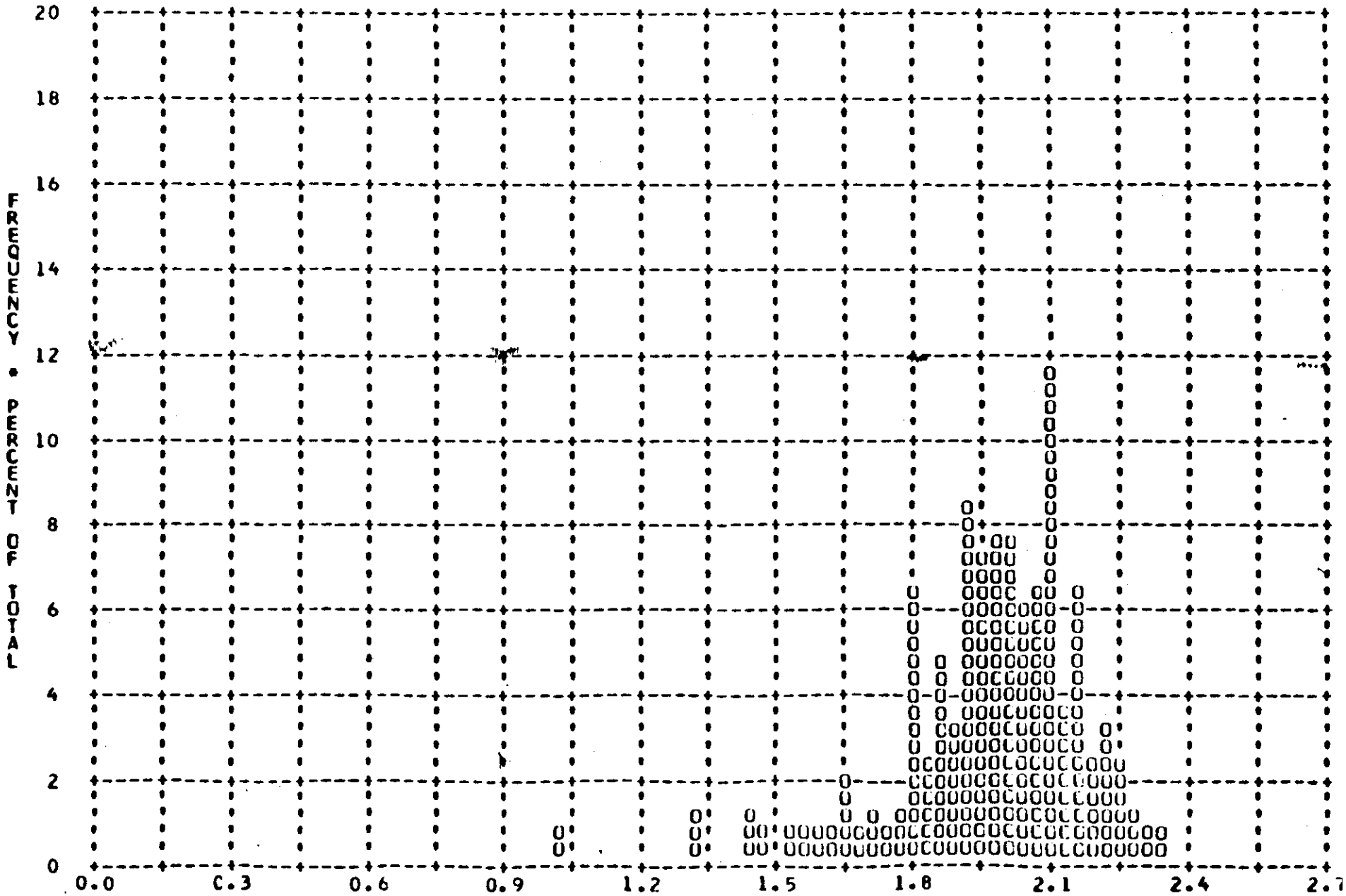


Figure A-12

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MISSION • 1018-1 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0	0	0	0	0
0.16	0	0	0	0	0	0	0	0	0	0	0	0
0.17	0	0	0	0	0	0	0	0	0	0	0	0
0.18	0	0	0	1	0	0	0	0	0	1	0	0
0.19	0	0	0	0	0	0	0	0	0	0	0	0
0.20	0	0	0	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	1	0	0	0	0	0	0	0	0	1	0	0
0.23	0	0	0	2	0	0	1	0	0	3	0	0
0.24	0	0	0	1	0	0	1	0	0	2	0	0
0.25	0	0	0	1	0	0	1	0	0	2	0	0
0.26	0	0	0	1	0	0	0	0	0	1	0	0
0.27	0	0	0	1	0	0	0	0	0	1	0	0
0.28	0	0	0	1	0	0	0	0	0	1	0	0
0.29	0	0	0	1	0	0	0	0	0	1	0	0
0.30	1	0	0	3	0	0	0	0	0	4	0	0
0.31	0	0	0	3	0	0	0	0	0	3	0	0
0.32	0	0	0	1	0	0	0	0	0	1	0	0
0.33	0	0	0	2	0	0	0	0	0	2	0	0
0.34	0	0	0	2	0	0	0	0	0	2	0	0
0.35	0	0	0	0	0	0	0	0	0	0	0	0
0.36	1	0	0	1	0	0	0	0	0	2	0	0
0.37	1	0	0	3	0	0	0	0	0	4	0	0
0.38	1	0	0	5	0	0	0	0	0	5	0	0
0.39	1	0	0	6	0	0	1	0	0	8	0	0
0.40	1	0	0	4	0	0	1	0	0	5	0	0
0.41	0	0	0	3	0	0	1	0	0	4	0	0
0.42	1	0	0	1	0	0	0	0	0	1	0	0
0.43	1	0	0	2	0	0	1	0	0	4	0	0
0.44	1	0	0	4	0	0	0	0	0	5	0	0
0.45	0	0	0	3	0	0	2	0	0	5	0	0
0.46	0	0	0	3	0	0	0	0	0	3	0	0
0.47	0	0	0	6	0	0	1	0	0	7	0	0
0.48	0	0	0	1	0	0	2	0	0	3	0	0
0.49	0	0	0	5	0	0	3	0	0	8	0	0
0.50	0	0	0	63	0	0	14	0	0	83	0	0
SUBTOTAL	6	0	0									

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Table A-2

MISSION • 1018-1 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	4	0	0	1	0	0	5	0	0
0.52	0	0	0	6	0	0	2	0	0	8	0	0
0.53	0	0	0	2	0	0	1	0	0	3	0	0
0.54	0	0	0	3	0	0	3	0	0	6	0	0
0.55	0	0	0	3	0	0	1	0	0	4	0	0
0.56	0	0	0	2	0	0	1	0	0	3	0	0
0.57	0	0	0	2	0	0	1	0	0	3	0	0
0.58	0	0	0	10	0	0	1	0	0	11	0	0
0.59	0	0	0	0	0	0	1	0	0	1	0	0
0.60	0	0	0	5	0	0	2	0	0	7	0	0
0.61	0	0	0	4	0	0	3	0	0	7	0	0
0.62	0	0	0	1	0	0	0	0	0	1	0	0
0.63	0	0	0	8	0	0	2	0	0	10	0	0
0.64	0	0	0	4	0	0	1	0	0	5	0	0
0.65	0	0	0	1	0	0	2	0	0	3	0	0
0.66	0	0	0	0	1	0	0	0	0	1	0	0
0.67	0	0	0	2	1	0	0	0	0	3	0	0
0.68	0	0	0	2	0	0	0	0	0	2	0	0
0.69	0	0	0	5	0	0	2	0	0	7	0	0
0.70	0	0	0	1	0	0	0	1	0	1	1	0
0.71	0	0	0	3	1	0	2	0	0	5	1	0
0.72	0	0	0	0	0	0	0	1	0	0	1	0
0.73	0	0	0	5	0	0	1	0	0	6	0	0
0.74	0	0	0	2	0	0	0	0	0	2	0	0
0.75	0	0	0	1	0	0	0	0	0	1	0	0
0.76	0	0	0	1	0	0	0	0	0	1	0	0
0.77	0	0	0	1	0	0	0	0	0	1	0	0
0.78	1	0	0	1	0	0	0	0	0	2	0	0
0.79	0	0	0	1	0	0	0	0	0	1	0	0
0.80	1	0	0	1	0	0	0	0	0	2	0	0
0.81	0	0	0	1	0	0	1	0	0	2	0	0
0.82	0	0	0	1	0	0	1	0	0	2	0	0
0.83	0	0	0	1	0	0	2	0	0	3	0	0
0.84	0	0	0	1	0	0	2	1	0	3	1	0
0.85	0	0	0	2	0	0	3	0	0	5	0	0
0.86	0	0	0	2	0	0	3	0	0	5	0	0
0.87	0	0	0	4	0	0	0	1	0	4	1	0
0.88	0	0	0	1	0	0	0	1	0	1	1	0
0.89	0	0	0	0	0	0	1	0	0	1	0	0
0.90	0	0	0	0	0	0	0	1	0	0	1	0
0.91	0	0	0	0	0	0	1	0	0	1	0	0
0.92	0	0	0	1	0	0	0	0	0	1	0	0
0.93	0	0	0	2	0	0	0	0	0	2	0	0
0.94	0	0	0	1	0	0	1	0	0	2	0	0
0.95	0	0	0	1	0	0	0	0	0	1	0	0
0.96	1	0	0	1	0	0	0	0	0	2	0	0
0.97	0	0	0	0	1	0	0	0	0	0	1	0
0.98	0	0	0	0	0	0	1	0	0	1	0	0
0.99	0	0	0	0	0	0	0	0	0	0	0	0
1.00	0	0	0	2	0	0	0	0	0	2	0	0
SUBTOTAL	3	1	0	101	4	0	41	4	0	145	9	0

~~TOP SECRET~~ [redacted]

MISSION • 1018-1 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	1	0	0	0	0	0	0	0	0	1	0
1.02	0	0	0	0	0	0	0	0	0	0	1	0
1.03	0	0	0	1	0	0	0	0	0	1	0	0
1.04	0	0	0	1	1	0	0	0	0	1	1	0
1.05	0	0	0	1	0	0	0	1	0	1	1	0
1.06	0	0	0	0	1	0	0	0	0	1	0	0
1.07	0	0	0	1	0	1	0	0	0	1	0	1
1.08	1	0	0	0	1	2	0	0	0	2	0	3
1.09	0	0	0	1	0	1	0	0	0	2	0	1
1.10	1	0	0	0	0	0	0	1	0	1	0	1
1.11	0	0	0	0	0	2	0	0	0	1	0	2
1.12	0	0	0	1	2	0	0	0	0	1	2	0
1.13	0	0	0	1	1	0	0	0	0	1	1	0
1.14	0	0	0	1	0	0	0	0	0	1	1	0
1.15	0	0	0	0	1	0	0	0	0	1	0	0
1.16	0	0	0	0	0	0	0	0	0	0	1	0
1.17	0	0	0	1	0	0	0	0	0	1	0	0
1.18	0	0	0	0	1	0	0	0	0	1	1	0
1.19	0	0	0	0	1	0	0	0	0	1	1	0
1.20	0	2	0	0	0	0	0	0	0	1	3	0
1.21	0	0	0	0	2	0	0	0	0	1	3	0
1.22	0	0	0	0	1	0	0	0	0	1	3	0
1.23	0	0	0	0	1	0	0	0	0	1	3	0
1.24	0	0	0	0	1	0	0	0	0	1	3	0
1.25	0	0	0	1	0	0	0	0	0	1	0	0
1.26	0	0	0	1	2	0	0	0	0	1	2	0
1.27	0	0	0	0	1	0	0	0	0	1	2	0
1.28	0	0	0	0	1	0	0	0	0	1	2	0
1.29	0	0	0	0	1	0	0	0	0	1	2	0
1.30	0	1	0	0	0	0	0	0	0	0	2	0
1.31	0	0	0	0	0	3	0	0	0	0	4	0
1.32	0	1	0	0	0	1	0	0	0	0	1	0
1.33	0	1	0	0	0	0	0	0	0	0	1	0
1.34	0	0	0	0	1	0	0	0	0	0	1	0
1.35	0	0	0	0	0	2	0	0	0	0	2	0
1.36	0	0	0	1	0	0	0	0	0	1	0	0
1.37	0	0	0	0	1	3	0	0	0	1	4	0
1.38	0	0	0	0	0	2	0	0	0	0	3	0
1.39	0	0	0	0	0	1	0	0	0	0	2	0
1.40	0	0	0	0	1	0	0	0	0	0	2	0
1.41	0	0	0	0	0	1	0	0	0	0	2	0
1.42	0	0	0	0	1	0	0	0	0	0	2	0
1.43	0	0	0	1	0	0	0	0	0	1	0	0
1.44	0	0	0	0	0	1	0	0	0	0	1	0
1.45	0	1	0	0	0	1	0	0	0	0	2	0
1.46	0	0	0	0	0	4	0	0	0	0	5	0
1.47	0	1	0	0	0	1	0	0	0	0	1	0
1.48	0	0	0	0	0	3	0	1	0	0	4	0
1.49	0	1	0	0	0	0	0	0	0	0	1	0
1.50	0	0	0	0	3	0	0	1	0	0	4	0
SUBTOTAL	2	10	1	12	45	7	1	13	2	15	68	10

~~TOP SECRET~~ [redacted]

Table A-2

~~TOP SECRET~~ [redacted]

MISSION • 1018-1 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	0	1	0	0	0	0	0	1
1.52	0	0	0	0	1	0	0	1	0	0	2	0
1.53	0	0	0	0	0	1	0	0	0	0	0	1
1.54	0	0	0	0	1	2	0	1	0	0	2	2
1.55	0	0	0	0	1	1	0	1	0	0	2	1
1.56	0	0	0	0	3	1	0	1	0	0	3	1
1.57	0	0	0	0	0	0	0	0	0	0	0	0
1.58	0	0	0	0	1	0	0	1	0	0	2	0
1.59	0	0	0	0	1	2	0	0	0	0	1	2
1.60	0	0	0	0	2	0	0	0	0	0	2	0
1.61	0	0	0	0	1	0	0	0	0	0	1	0
1.62	0	0	0	0	0	1	0	1	0	0	1	1
1.63	0	0	0	0	1	0	0	1	0	0	1	1
1.64	0	0	0	0	1	0	0	0	0	0	1	0
1.65	0	0	0	0	3	0	0	0	0	0	3	0
1.66	0	0	0	0	0	2	0	0	0	0	0	2
1.67	0	0	0	0	1	0	0	0	0	0	1	0
1.68	0	0	1	0	0	2	0	0	0	0	0	3
1.69	0	0	0	0	1	0	0	0	0	0	1	0
1.70	0	0	0	0	0	1	0	3	0	0	3	1
1.71	0	0	0	0	1	0	0	1	0	0	1	1
1.72	0	0	0	0	2	1	0	1	0	0	3	1
1.73	0	0	0	0	2	0	0	1	0	0	3	0
1.74	0	0	0	0	0	1	0	0	0	0	0	1
1.75	0	0	0	0	2	1	0	0	0	0	2	1
1.76	0	0	0	0	4	1	0	0	0	0	4	1
1.77	0	0	0	0	1	0	0	0	0	0	1	0
1.78	0	0	0	0	2	4	0	0	0	0	2	4
1.79	0	0	0	0	2	1	0	0	0	0	2	1
1.80	0	0	0	0	2	4	0	3	0	0	5	4
1.81	0	0	0	0	2	0	0	1	0	0	1	0
1.82	0	0	0	0	10	2	0	1	0	0	11	2
1.83	0	0	1	0	0	4	0	1	0	0	1	4
1.84	0	0	0	0	2	4	0	1	0	0	3	4
1.85	0	0	0	0	5	3	0	1	0	0	5	3
1.86	0	0	0	0	5	3	0	1	0	0	6	3
1.87	0	0	0	0	6	0	0	1	0	0	6	0
1.88	0	0	0	0	2	6	0	1	0	0	3	6
1.89	0	0	0	0	1	4	0	1	0	0	2	4
1.90	0	0	1	0	5	4	0	2	0	0	7	5
1.91	0	0	0	0	0	5	0	2	0	0	0	5
1.92	0	0	0	0	6	5	0	4	0	0	10	5
1.93	0	0	0	0	3	0	0	0	0	0	3	0
1.94	0	0	0	0	7	4	0	3	1	0	10	5
1.95	0	0	0	0	1	3	0	2	1	0	3	4
1.96	0	0	0	0	2	1	0	1	0	0	3	1
1.97	0	0	0	0	2	3	0	1	0	0	3	3
1.98	0	0	0	0	5	4	0	1	0	0	6	4
1.99	0	0	1	0	7	0	0	1	1	0	8	2
2.00	0	0	0	0	3	2	0	1	1	0	4	3
SUBTOTAL	0	0	4	0	100	68	0	35	7	0	135	79

~~TOP SECRET~~ [redacted]

Table A-2

MISSION • 1018-1 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	2	1	0	0	1	0	2	2
2.02	0	0	0	0	2	2	0	0	1	0	2	2
2.03	0	0	0	0	3	1	0	0	1	0	3	2
2.04	0	0	0	0	3	2	0	0	2	0	5	2
2.05	0	0	0	0	2	2	0	0	1	0	2	3
2.06	0	0	0	0	3	6	0	0	0	0	3	6
2.07	0	0	0	0	1	1	0	0	0	0	1	1
2.08	0	0	0	0	0	10	0	0	0	0	0	10
2.09	0	0	0	0	2	1	0	1	1	0	3	2
2.10	0	0	0	0	1	4	0	0	1	0	1	5
2.11	0	0	0	0	1	2	0	0	1	0	1	2
2.12	0	0	1	0	2	5	0	0	1	0	2	7
2.13	0	0	0	0	0	1	0	0	0	0	0	1
2.14	0	0	0	0	1	1	0	0	0	0	1	1
2.15	0	0	0	0	1	1	0	0	0	0	1	2
2.16	0	0	0	0	2	2	0	0	0	0	2	4
2.17	0	0	0	0	0	5	0	0	0	0	0	7
2.18	0	0	0	0	1	3	0	0	1	0	1	3
2.19	0	0	0	0	1	3	0	0	1	0	1	5
2.20	0	0	0	0	1	0	0	0	1	0	1	2
2.21	0	0	0	0	0	1	0	0	0	0	0	3
2.22	0	0	0	0	0	1	0	0	0	0	0	1
2.23	0	0	0	0	0	1	0	0	0	0	0	3
2.24	0	0	0	0	0	1	0	0	0	0	0	1
2.25	0	0	0	0	0	1	0	0	0	0	0	2
2.26	0	0	0	0	0	1	0	0	0	0	0	2
2.27	0	0	0	0	0	1	0	0	0	0	0	1
2.28	0	0	0	0	0	0	0	0	0	0	0	0
2.29	0	0	0	0	0	0	0	0	0	0	0	0
2.30	0	0	0	0	0	0	0	0	0	0	0	0
2.31	0	0	0	0	0	0	0	0	0	0	0	0
2.32	0	0	0	0	0	0	0	0	0	0	0	0
2.33	0	0	0	0	0	0	0	0	0	0	0	0
2.34	0	0	0	0	0	0	0	0	0	0	0	0
2.35	0	0	0	0	0	0	0	0	0	0	0	0
2.36	0	0	0	0	0	0	0	0	0	0	0	0
2.37	0	0	0	0	0	0	0	0	0	0	0	0
2.38	0	0	0	0	0	0	0	0	0	0	0	0
2.39	0	0	0	0	0	0	0	0	0	0	0	0
2.40	0	0	0	0	0	0	0	0	0	0	0	0
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	0	0	0	0
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	1	0	27	59	0	4	25	0	31	85

MISSION • 1018-1 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.51	C	C	0	C	0	0	0	0	0	0	0	0
2.52	C	C	0	C	0	0	0	0	0	0	0	0
2.53	C	C	0	C	0	0	0	0	0	0	0	0
2.54	C	C	0	C	0	0	0	0	0	0	0	0
2.55	C	C	0	C	0	0	0	0	0	0	0	0
2.56	C	C	0	C	0	0	0	0	0	0	0	0
2.57	C	C	0	C	0	0	0	0	0	0	0	0
2.58	C	C	0	C	0	0	0	0	0	0	0	0
2.59	C	C	0	C	0	0	0	0	0	0	0	0
2.60	C	C	0	C	0	0	0	0	0	0	0	0
2.61	C	C	0	C	0	0	0	0	0	0	0	0
2.62	C	C	0	C	0	0	0	0	0	0	0	0
2.63	C	C	0	C	0	0	0	0	0	0	0	0
2.64	C	C	0	C	0	0	0	0	0	0	0	0
2.65	C	C	0	C	0	0	0	0	0	0	0	0
2.66	C	C	0	C	0	0	0	0	0	0	0	0
2.67	C	C	0	C	0	0	0	0	0	0	0	0
2.68	C	C	0	C	0	0	0	0	0	0	0	0
2.69	C	C	0	C	0	0	0	0	0	0	0	0
2.70	C	C	0	C	0	0	0	0	0	0	0	0
SUBTOTAL	C	C	0	C	0	0	0	0	0	0	0	0
TOTAL	11	11	6	176	176	134	56	56	34	243	243	174

MISSION 1018-1 INSTR - AFT 06-11-65 PROCESSING AND EXPOSURE ANALYSI

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	11	0 PC	36 PC	36 PC	0 PC	27 PC
INTERMEDIATE	176	1 PC	14 PC	75 PC	10 PC	1 PC
FULL	56	4 PC	0 PC	89 PC	7 PC	0 PC
ALL LEVELS	243	1 PC	12 PC	77 PC	9 PC	2 PC

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

Table A-2

MISSION • 1018-1 • INSTR • AFT • 06-11-65 PLOT OF D MIN • TERRAIN • PROCESSING • PRIMARY

ARITH MEAN • 0.62 • MEDIAN • C.44 • STD DEV • 0.33 • RANGE • 0.22 TO 1.10 WITH 11 SAMPLES

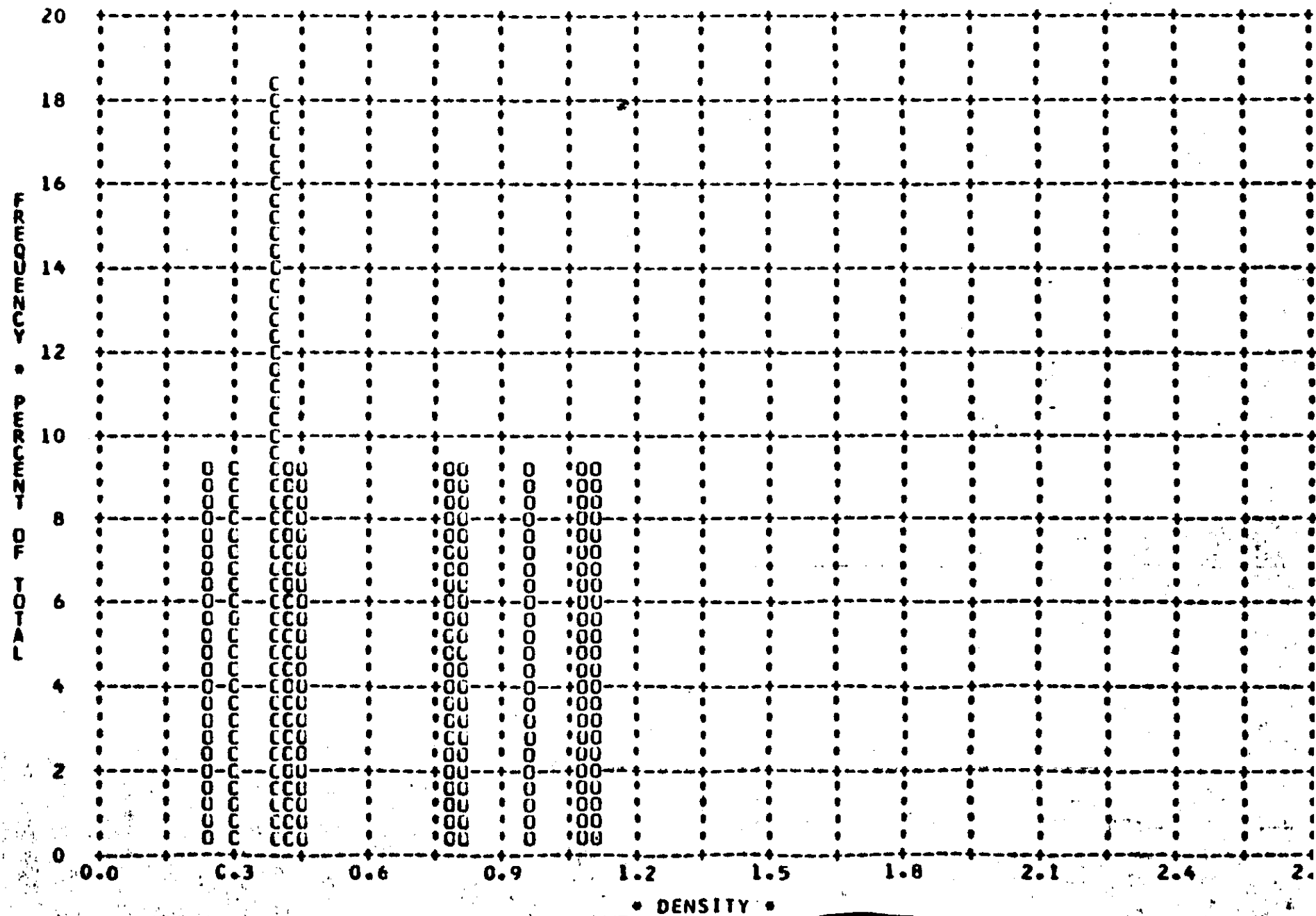


Figure A-13

MISSION • 1018-1 • INSTR • AFT • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • PRIMARY

ARITH MEAN • 1.28 • MEDIAN • 1.32 • STD DEV • 0.18 • RANGE • 0.94 TO 1.48 WITH 11 SAMPLES

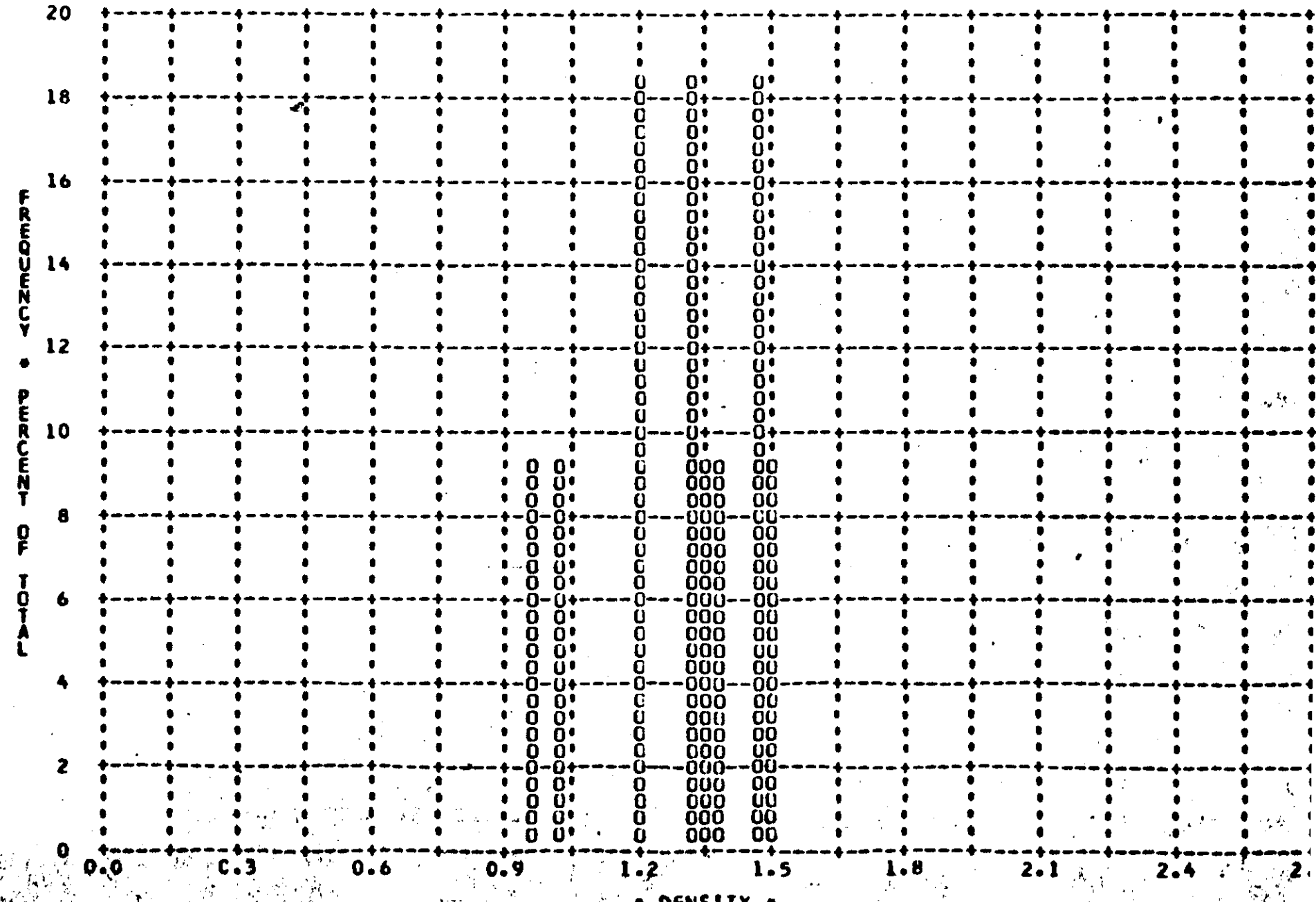
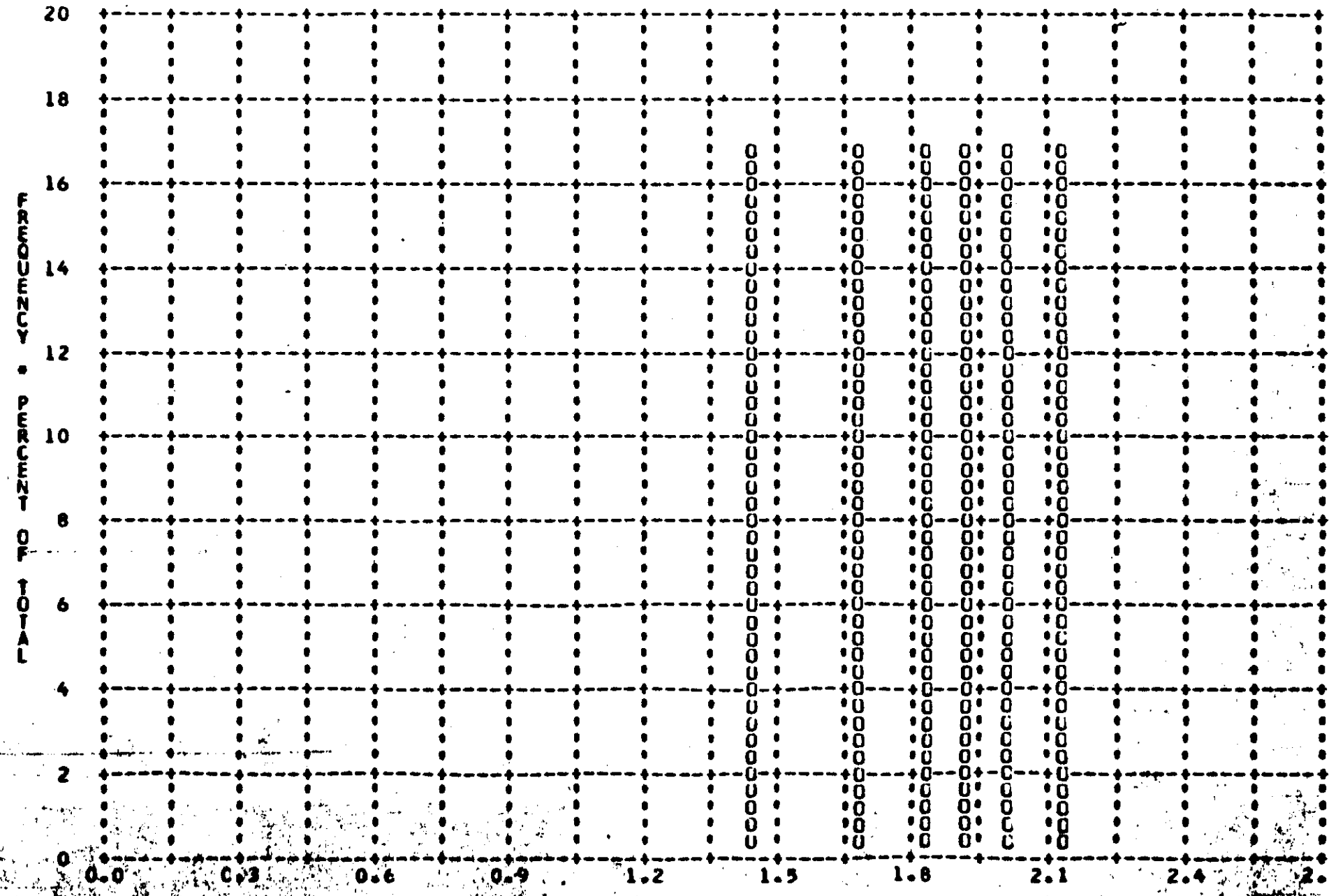


Figure A14

MISSION • 1018-1 • INSTR • AFT • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • PRIMARY

ARITH MEAN • 1.83 • MEDIAN • 1.90 • STD DEV • 0.24 • RANGE • 1.44 TO 2.12 WITH 6 SAMPLES



MISSION • 1018-1 • INSTR • AFT • 06-11-65 PLOT OF D MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.61 • MEDIAN • 0.58 • STD DEV • 0.23 • RANGE • 0.18 TO 1.36 WITH 176 SAMPLES

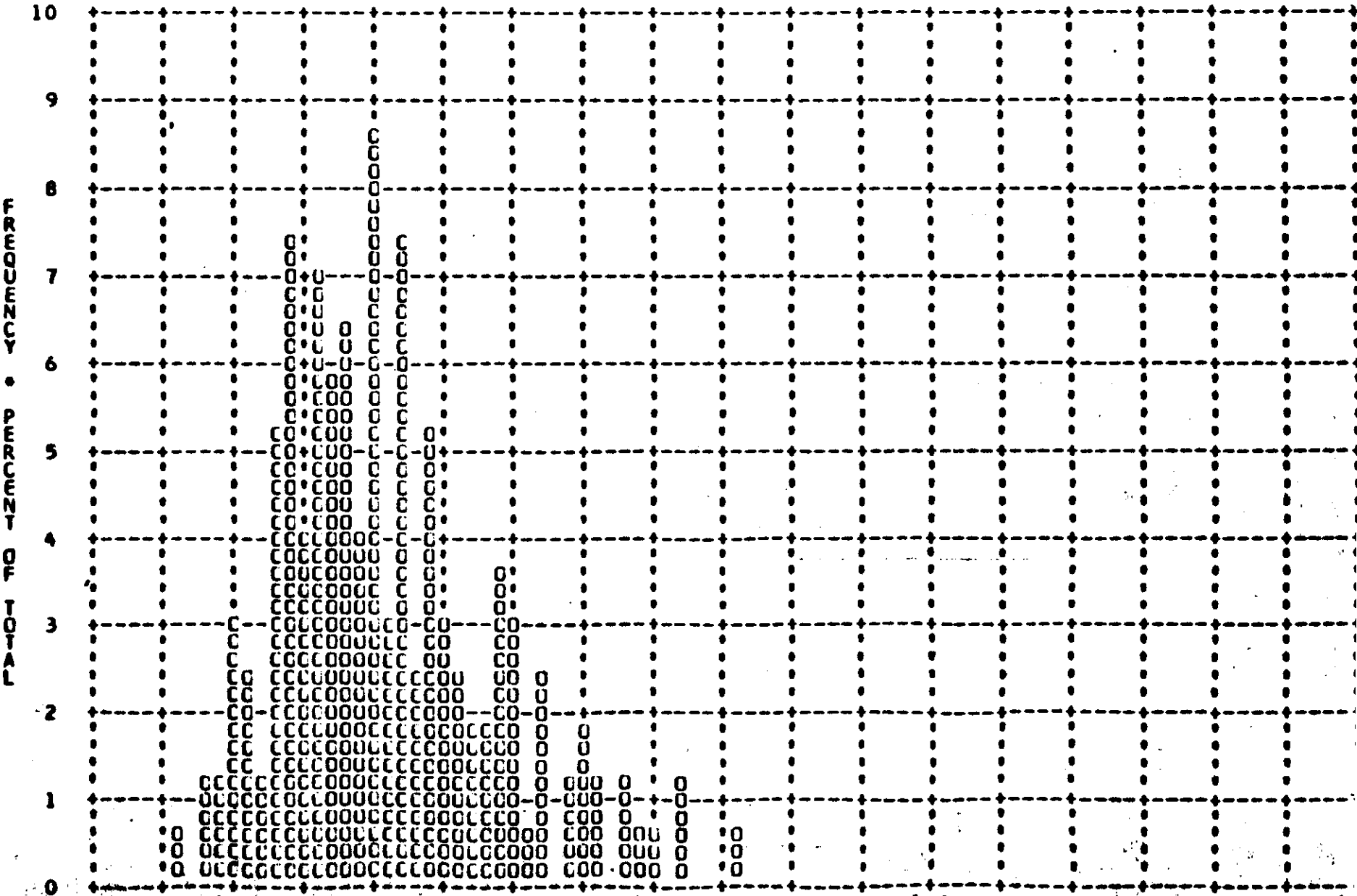


Figure A-16

MISSION • 1018-1 • INSTR • AFT • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.72 • MEDIAN • 1.82 • STD DEV • 0.32 • RANGE • 0.68 TO 2.20 WITH 176 SAMPLES

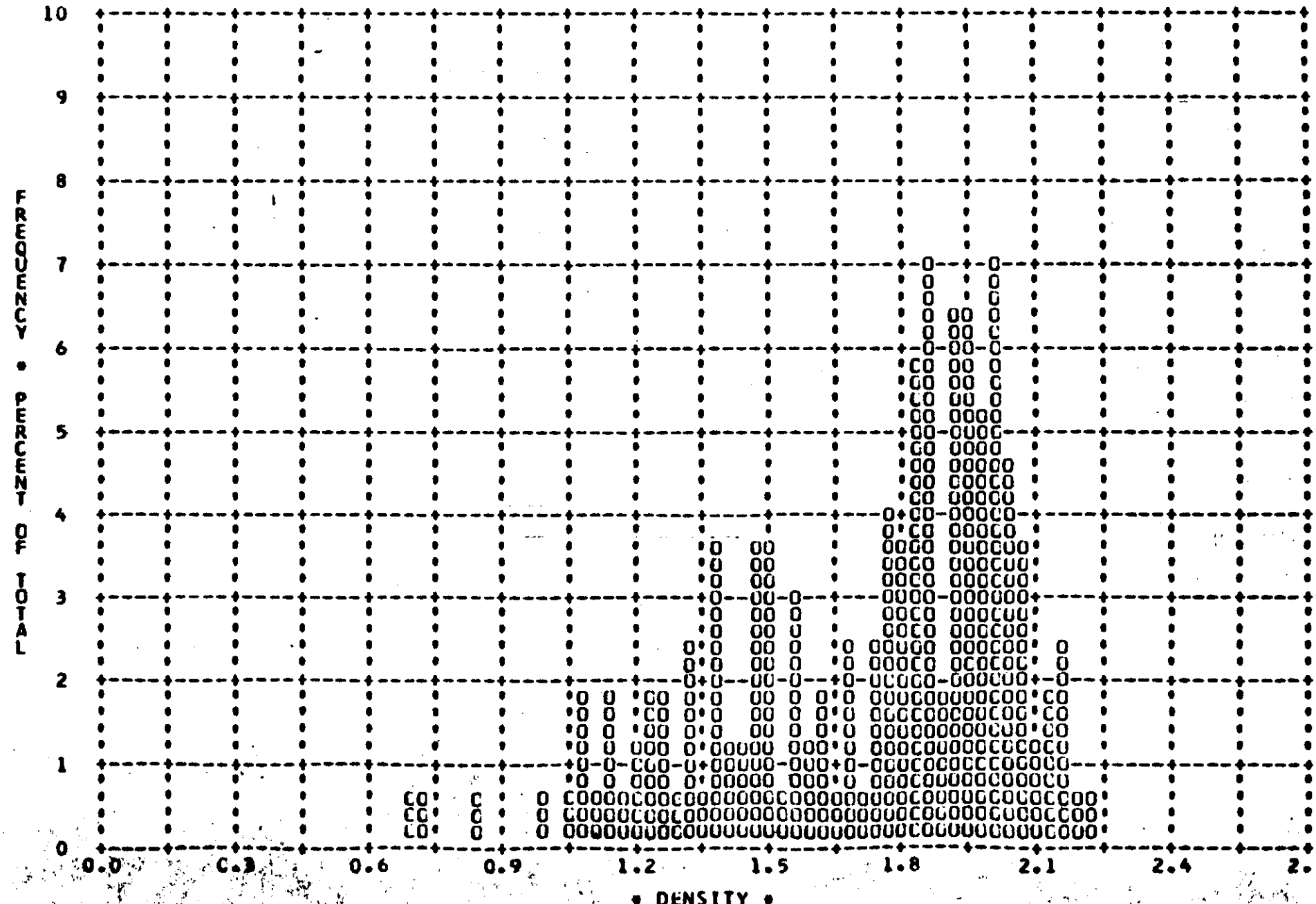


Figure A-17

MISSION • 1018-1 • INSTR • AFT • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.94 • MEDIAN • 1.96 • STD DEV • 0.22 • RANGE • 1.24 TO 2.28 WITH 134 SAMPLES

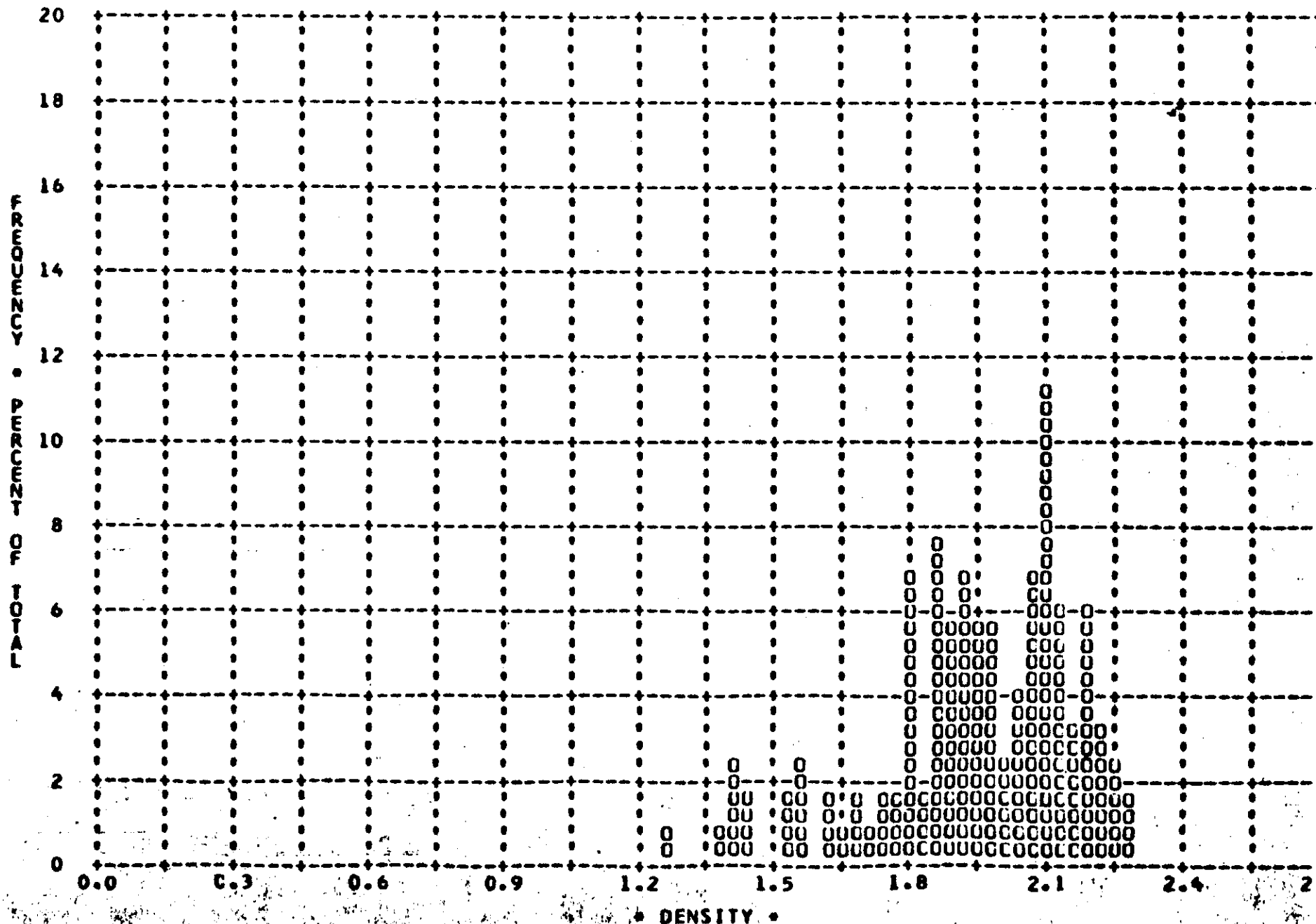


Figure A-18

MISSION • 1018-1 • INSTR • AFT • 06-11-65 PLOT OF D MIN • TERRAIN • PROCESSING • FULL

ARITH MEAN • 0.64 • MEDIAN • 0.62 • STD DEV • 0.19 • RANGE • 0.24 TO 1.20 WITH 56 SAMPLES

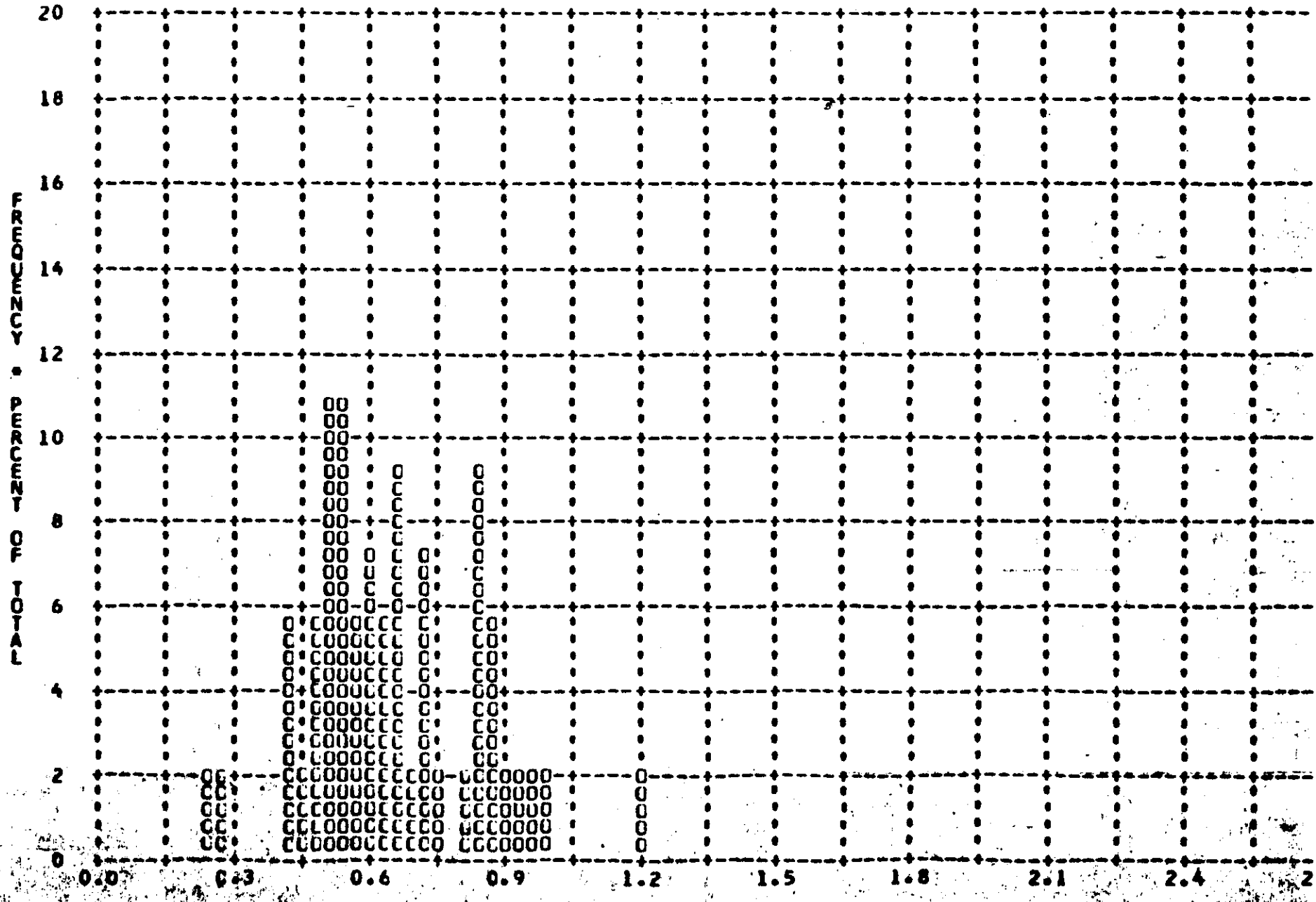


Figure A-19

MISSION * 1018-1 * INSTR * AFT * 06-11-65 PLOT OF D MAX * TERRAIN * PROCESSING * FULL

ARITH MEAN * 1.66 * MEDIAN * 1.80 * STD DEV * 0.36 * RANGE * 0.71 TO 2.19 WITH 56 SAMPLES

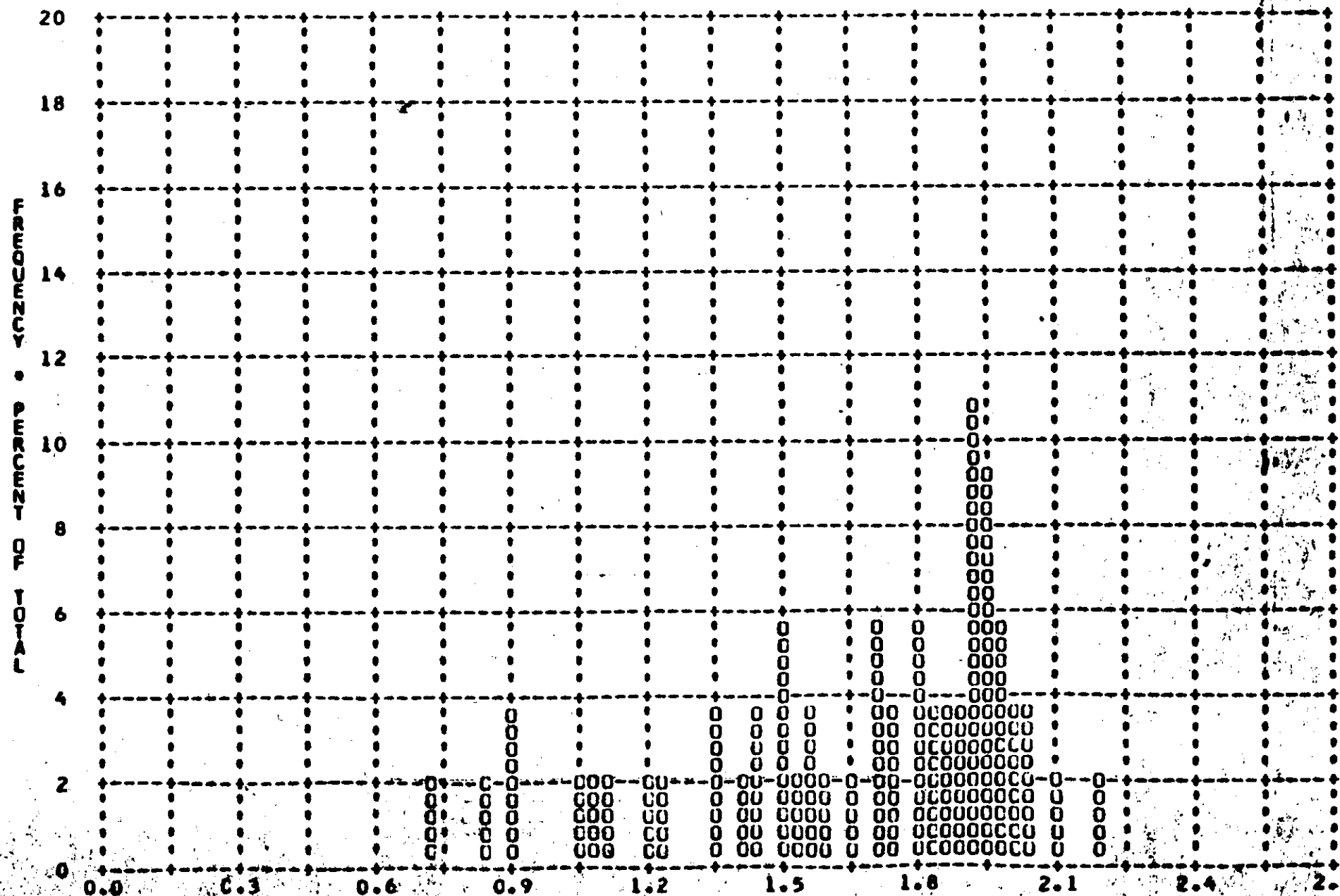


Figure A-20

MISSION • 1018-1 • INSTR • AFT • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • FULL

ARITH MEAN • 2.05 • MEDIAN • 2.14 • STD DEV • 0.27 • RANGE • 1.03 TO 2.27 WITH 34 SAMPLES

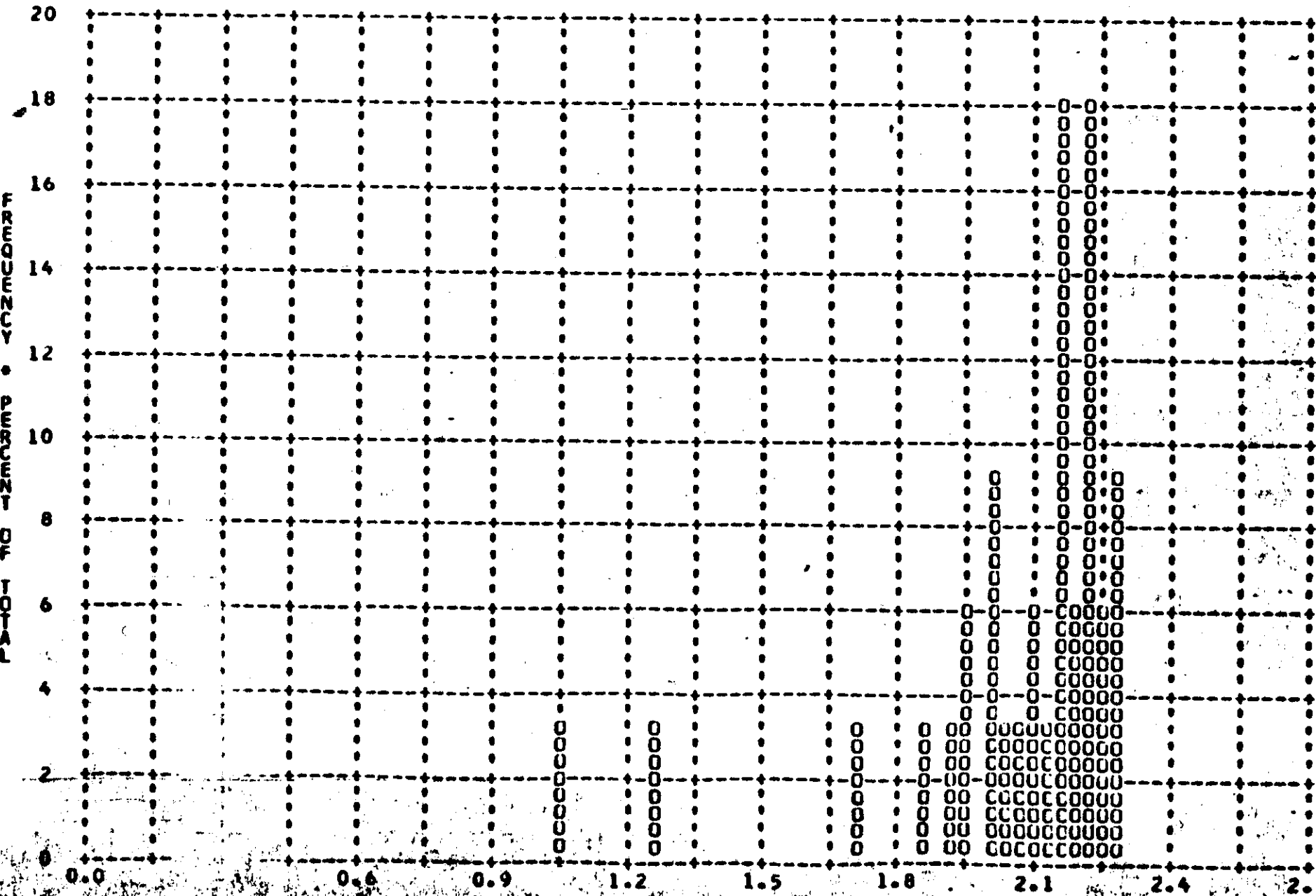


Figure A-21

MISSION • 1018-1 • INSTR • AFT • 06-11-65 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.62 • MEDIAN • 0.58 • STD DEV • 0.22 • RANGE • 0.18 TO 1.36 WITH 243 SAMPLES

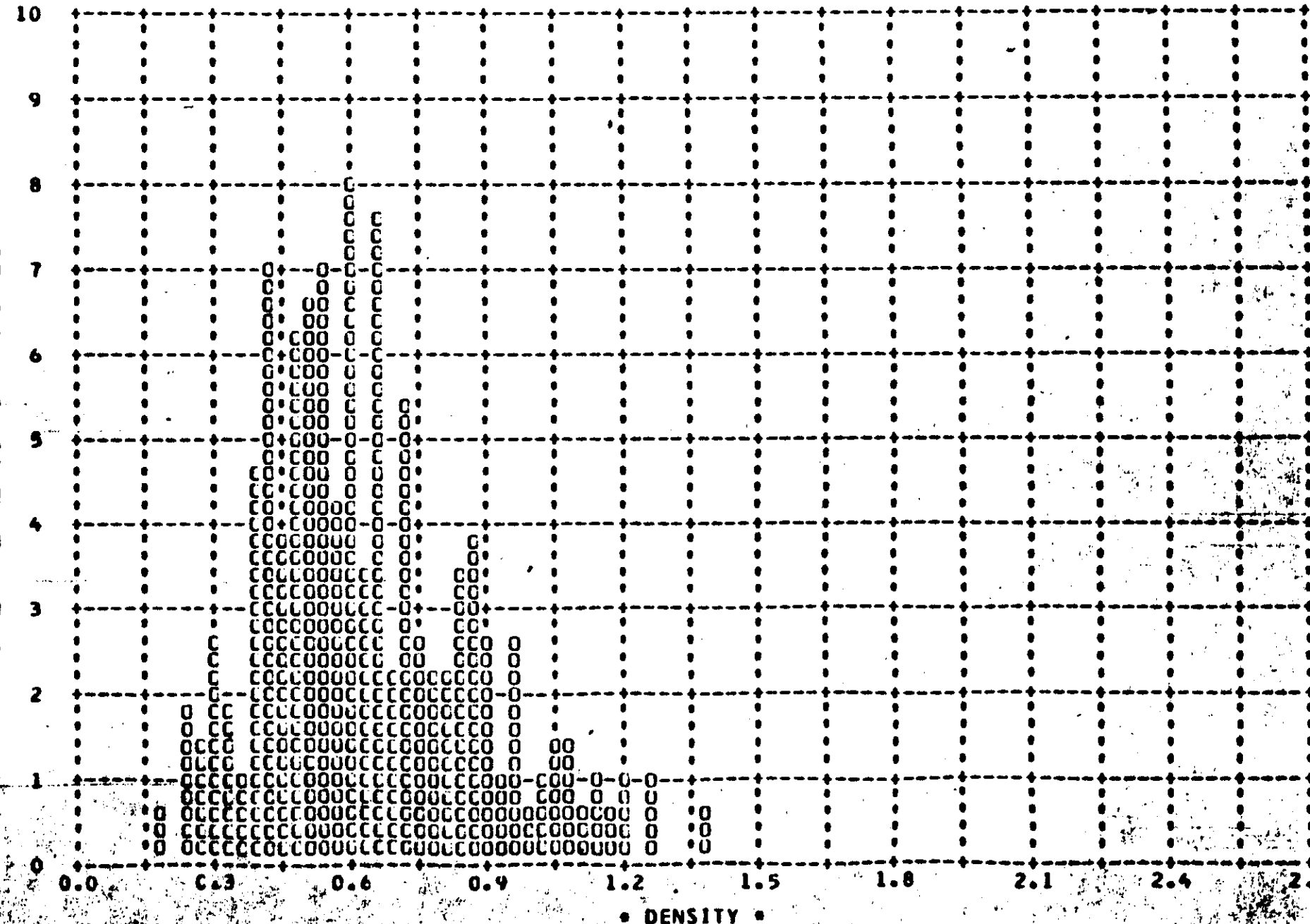


Figure A-22

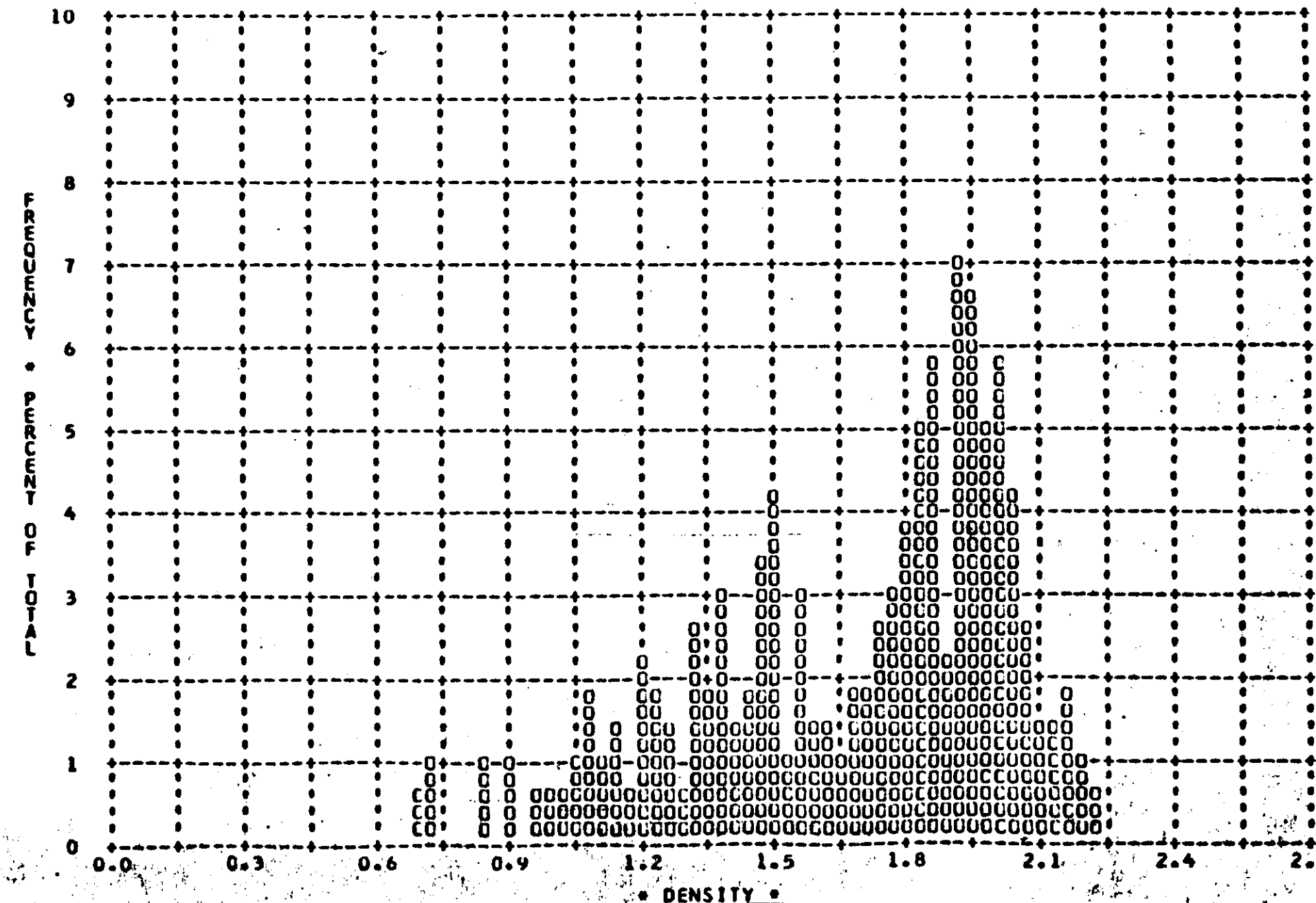

MISSION • 1018-1 • INSTR • AFT • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS
ARITH MEAN • 1.68 • MEDIAN • 1.80 • STD DEV • 0.34 • RANGE • 0.68 TO 2.20 WITH 243 SAMPLES
FREQUENCY • PERCENT OF TOTAL
10
9
8
7
6
5
4
3
2
1
0
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
• DENSITY •

Figure A-23

MISSION • 1018-1 • INSTR • AFT • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 1.95 • MEDIAN • 2.00 • STD DEV • 0.23 • RANGE • 1.03 TO 2.28 WITH 174 SAMPLES

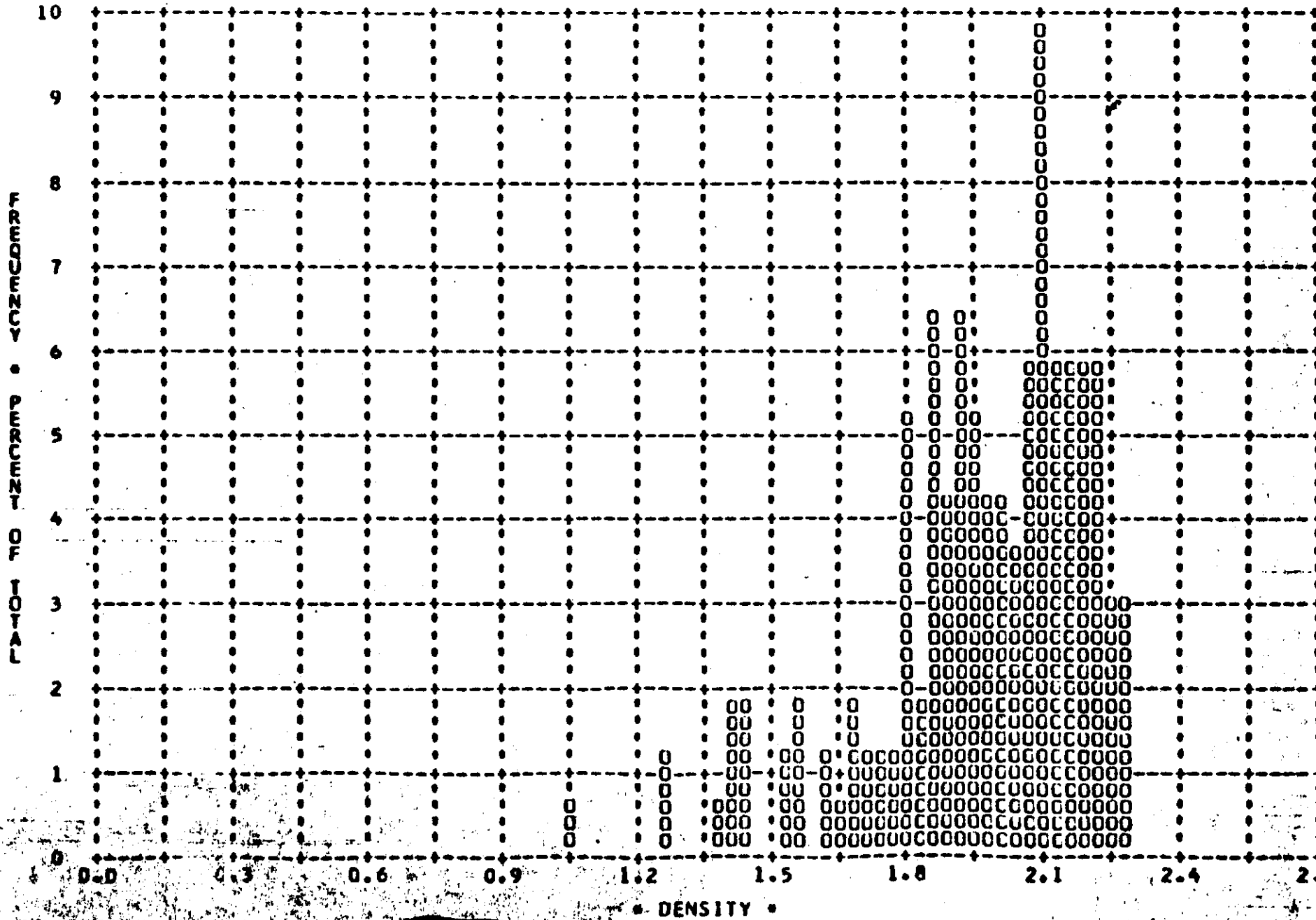


Figure A-24

MISSION • 1018-2 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0	0	0	0	0
0.16	1	0	0	0	0	0	0	0	0	1	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	2	0	0	1	0	0	0	0	0	3	0	0
0.21	0	0	0	1	0	0	0	0	0	1	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	1	0	0	2	0	0	0	0	0	3	0	0
0.25	0	0	0	5	0	0	0	0	0	5	0	0
0.26	2	0	0	2	0	0	0	0	0	4	0	0
0.27	1	0	0	6	0	0	0	0	0	7	0	0
0.28	0	0	0	7	0	0	0	0	0	7	0	0
0.29	1	0	0	3	0	0	0	0	0	4	0	0
0.30	1	0	0	9	0	0	0	0	0	10	0	0
0.31	2	0	0	2	0	0	0	0	0	4	0	0
0.32	0	0	0	6	0	0	0	0	0	6	0	0
0.33	1	0	0	1	0	0	1	0	0	3	0	0
0.34	0	0	0	4	0	0	1	0	0	5	0	0
0.35	0	0	0	1	0	0	0	0	0	1	0	0
0.36	0	0	0	6	0	0	0	0	0	6	0	0
0.37	0	0	0	2	0	0	0	0	0	2	0	0
0.38	0	0	0	4	0	0	0	0	0	4	0	0
0.39	2	0	0	3	0	0	0	0	0	5	0	0
0.40	2	0	0	4	0	0	0	0	0	6	0	0
0.41	0	0	0	1	0	0	1	0	0	2	0	0
0.42	0	0	0	7	0	0	2	0	0	9	0	0
0.43	1	0	0	4	0	0	0	0	0	5	0	0
0.44	1	0	0	3	0	0	1	0	0	5	0	0
0.45	1	0	0	5	0	0	0	0	0	6	0	0
0.46	1	0	0	4	0	0	0	0	0	5	0	0
0.47	0	0	0	1	0	0	0	0	0	1	0	0
0.48	1	0	0	5	0	0	0	0	0	6	0	0
0.49	1	0	0	1	0	0	0	0	0	2	0	0
0.50	1	0	0	3	1	0	0	0	0	4	1	0
SUBTOTAL	23	0	0	104	1	0	6	0	0	133	1	0

~~TOP SECRET~~ [redacted]

MISSION • 1018-2 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	1	0	0	1	0	0	2	0	0
0.52	0	0	0	1	0	0	0	0	0	1	0	0
0.53	0	0	0	2	0	0	0	0	0	5	0	0
0.54	0	0	0	3	0	0	0	0	0	3	0	0
0.55	0	0	0	4	0	0	0	0	0	4	0	0
0.56	0	0	0	4	0	0	0	0	0	4	0	0
0.57	0	1	0	1	0	0	0	0	0	1	0	0
0.58	1	0	0	2	0	0	0	0	0	3	0	0
0.59	2	0	0	3	0	0	0	0	0	5	0	0
0.60	4	0	0	2	1	0	2	0	0	8	1	0
0.61	0	0	0	3	0	0	0	0	0	4	0	0
0.62	1	1	0	3	1	0	0	0	0	4	2	0
0.63	1	0	0	4	0	0	0	0	0	4	0	0
0.64	0	0	0	0	0	0	0	0	0	0	0	0
0.65	0	0	0	0	0	0	0	0	0	0	0	0
0.66	0	0	0	1	0	0	0	0	0	1	0	0
0.67	0	0	0	4	0	0	0	0	0	4	0	0
0.68	0	0	0	1	0	0	0	0	0	1	0	0
0.69	0	0	0	2	0	0	0	0	0	2	0	0
0.70	1	0	0	4	0	0	0	0	0	5	0	0
0.71	1	0	0	2	1	0	0	0	0	2	1	0
0.72	1	0	0	5	0	0	0	0	0	6	0	0
0.73	1	0	0	2	0	0	1	0	0	2	0	0
0.74	0	0	0	2	0	0	0	0	0	2	0	0
0.75	0	0	0	1	0	0	0	0	0	1	0	0
0.76	0	0	0	1	0	0	0	0	0	1	0	0
0.77	0	0	0	1	0	0	0	0	0	1	0	0
0.78	0	0	0	1	0	0	0	0	0	1	0	0
0.79	0	1	0	1	0	0	0	0	0	2	0	0
0.80	2	0	0	4	0	0	0	0	0	6	0	0
0.81	1	0	0	3	0	0	0	0	0	4	0	0
0.82	0	0	0	3	0	0	0	0	0	3	0	0
0.83	0	0	0	0	1	0	0	0	0	0	1	0
0.84	0	0	0	2	0	0	0	0	0	2	0	0
0.85	0	0	0	2	0	0	0	0	0	2	0	0
0.86	0	0	0	1	0	0	0	0	0	1	0	0
0.87	0	0	0	1	0	0	0	0	0	1	0	0
0.88	0	0	0	1	0	0	0	0	0	1	0	0
0.89	0	0	0	1	0	0	0	0	0	1	0	0
0.90	1	0	0	4	0	0	0	0	0	5	0	0
0.91	0	0	0	3	0	0	0	0	0	3	0	0
0.92	0	0	0	3	0	0	0	0	0	3	0	0
0.93	0	0	0	2	0	0	0	0	0	2	0	0
0.94	0	0	0	1	0	0	0	0	0	1	0	0
0.95	0	0	0	3	0	0	0	0	0	3	0	0
0.96	0	0	0	3	0	0	2	0	0	5	0	0
0.97	0	0	0	1	0	0	0	0	0	1	0	0
0.98	0	0	0	1	0	0	0	0	0	1	0	0
0.99	0	0	0	0	0	0	0	0	0	0	0	0
1.00	0	1	0	2	0	0	0	0	0	2	0	0
SUBTOTAL	18	7	1	80	22	0	3	3	0	101	32	1

~~TOP SECRET~~ [redacted]

Table A-3

MISSION • 1018-2 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMECIATE MIN	INTERMECIATE MAX	INTERMECIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	2	0	0	0	0	0	2	0
1.02	1	1	0	0	0	0	0	0	0	2	1	0
1.03	0	1	0	0	1	0	0	1	0	2	2	0
1.04	0	0	0	1	1	0	0	0	0	2	1	0
1.05	0	1	0	1	2	0	0	0	0	2	3	0
1.06	0	0	0	0	0	0	0	0	0	2	0	0
1.07	0	0	0	1	0	0	0	0	0	1	0	0
1.08	0	1	0	0	1	0	0	0	0	1	1	0
1.09	1	1	0	1	2	0	0	0	0	1	2	0
1.10	0	1	1	2	1	0	0	0	0	1	2	1
1.11	0	0	1	1	2	0	0	0	0	2	0	1
1.12	0	0	1	0	1	0	0	0	0	1	2	1
1.13	0	1	0	0	1	0	0	0	0	1	2	0
1.14	0	0	0	1	0	0	0	0	0	1	1	0
1.15	0	0	0	1	1	0	0	0	0	1	1	0
1.16	0	0	1	0	1	0	0	0	0	1	1	0
1.17	0	0	1	0	0	0	0	0	0	1	0	0
1.18	0	1	0	0	1	0	0	0	0	0	2	0
1.19	0	0	0	0	0	0	0	0	0	0	0	0
1.20	0	0	0	0	1	0	0	0	0	0	1	0
1.21	0	0	0	0	0	0	0	0	0	0	0	0
1.22	0	1	0	0	1	0	0	1	0	0	3	0
1.23	0	0	1	0	1	0	0	1	0	0	2	1
1.24	0	1	0	0	1	0	0	0	0	0	2	0
1.25	0	0	1	0	1	0	0	0	0	0	1	0
1.26	0	0	0	1	0	0	0	0	0	1	0	0
1.27	0	0	0	0	0	0	0	0	0	0	0	0
1.28	0	0	0	0	1	0	0	0	0	0	1	0
1.29	0	0	1	0	0	0	0	0	0	0	0	0
1.30	0	1	0	1	1	0	0	0	0	1	1	0
1.31	0	0	0	1	0	0	0	0	0	1	0	0
1.32	0	0	0	0	0	0	0	0	0	0	0	0
1.33	0	0	0	0	1	0	0	0	0	0	1	0
1.34	0	0	0	0	0	0	0	0	0	0	0	0
1.35	0	0	0	0	1	0	0	0	0	0	1	0
1.36	0	1	0	0	1	0	0	1	0	0	2	0
1.37	0	0	1	0	1	0	0	0	0	0	1	0
1.38	0	1	0	0	3	0	0	0	0	0	4	0
1.39	0	1	0	0	2	0	0	0	0	0	3	0
1.40	0	3	0	0	3	0	0	0	0	0	6	0
1.41	0	1	0	0	2	0	0	0	0	0	2	0
1.42	0	1	0	1	3	0	0	0	0	1	4	0
1.43	0	0	0	0	1	0	0	0	0	0	1	0
1.44	0	2	0	2	2	0	0	0	0	2	2	0
1.45	0	2	0	2	2	0	0	0	0	2	4	0
1.46	0	0	0	0	2	0	0	0	0	0	2	0
1.47	0	0	0	0	1	0	0	0	0	0	1	0
1.48	0	0	0	1	3	0	0	0	0	1	3	0
1.49	0	0	1	0	0	0	0	0	0	0	1	1
1.50	0	1	0	0	4	2	0	0	0	0	5	2
SUBTOTAL-	3	22	8	19	61	26	0	4	0	22	87	34

~~TOP SECRET~~ [redacted]

MISSION • 1018-2 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	1	0	0	0	0	0	0	0	0	1	0
1.52	0	1	0	0	0	3	0	0	0	0	1	3
1.53	0	1	0	0	0	1	0	0	0	0	1	1
1.54	0	0	0	0	0	4	0	0	0	0	0	4
1.55	0	0	0	0	0	1	0	0	0	0	0	1
1.56	0	1	0	0	0	4	0	0	0	0	1	4
1.57	0	1	0	0	0	1	0	0	0	0	1	1
1.58	0	0	0	0	0	3	0	0	0	0	0	3
1.59	0	1	0	0	0	2	0	0	0	0	1	2
1.60	0	1	0	0	0	1	0	0	0	0	1	1
1.61	0	1	0	0	0	3	0	0	0	0	1	3
1.62	0	0	0	0	0	0	0	0	0	0	0	0
1.63	0	0	0	0	0	2	0	0	0	0	0	2
1.64	0	1	0	0	0	1	0	0	1	0	1	1
1.65	0	0	0	0	0	2	0	0	0	0	0	2
1.66	0	1	0	0	0	1	0	0	0	0	1	1
1.67	0	1	0	0	0	3	0	0	0	0	1	3
1.68	0	0	0	0	0	2	0	0	0	0	0	2
1.69	0	1	0	0	0	3	0	0	0	0	1	3
1.70	0	1	0	0	0	2	0	0	0	0	1	2
1.71	0	0	0	0	0	3	0	0	0	0	0	3
1.72	0	1	0	0	0	2	0	0	0	0	1	2
1.73	0	1	0	0	0	1	0	0	0	0	1	1
1.74	0	1	0	0	0	4	0	0	0	0	1	4
1.75	0	1	0	0	0	2	0	0	0	0	1	2
1.76	0	0	0	0	0	1	0	0	0	0	0	1
1.77	0	0	0	0	0	3	0	0	0	0	0	3
1.78	0	0	0	0	0	2	0	0	0	0	0	2
1.79	0	0	0	0	0	3	0	0	0	0	0	3
1.80	0	0	0	0	0	1	0	0	0	0	0	1
1.81	0	0	0	0	0	3	0	0	0	0	0	3
1.82	0	0	0	0	0	2	0	0	0	0	0	2
1.83	0	0	0	0	0	5	0	0	0	0	0	5
1.84	0	0	0	0	0	2	0	0	0	0	0	2
1.85	0	0	0	0	0	0	0	0	0	0	0	0
1.86	0	0	0	0	0	3	0	0	0	0	0	3
1.87	0	0	0	0	0	1	0	0	0	0	0	1
1.88	0	0	0	0	0	2	0	0	0	0	0	2
1.89	0	0	0	0	0	3	0	0	0	0	0	3
1.90	0	0	0	0	0	5	0	0	0	0	0	5
1.91	0	0	0	0	0	2	0	0	0	0	0	2
1.92	0	0	0	0	0	7	0	0	0	0	0	7
1.93	0	0	0	0	0	1	0	0	0	0	0	1
1.94	0	0	0	0	0	2	0	0	0	0	0	2
1.95	0	0	0	0	0	1	0	0	0	0	0	1
1.96	0	0	0	0	0	2	0	0	0	0	0	2
1.97	0	0	0	0	0	1	0	0	0	0	0	1
1.98	0	2	0	0	0	3	0	0	0	0	2	3
1.99	0	0	0	0	0	2	0	0	0	0	0	2
2.00	0	0	0	0	2	5	0	0	0	0	2	5
SUBTOTAL	0	15	22	1	103	85	0	0	1	1	118	108

~~TOP SECRET~~ [redacted]

Table A-3

MISSION • 1018-2 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	1	0	0	0	0	0	1
2.02	0	0	0	0	1	5	0	0	0	0	1	5
2.03	0	0	1	0	1	5	0	0	0	0	1	5
2.04	0	0	0	0	2	4	0	0	0	0	2	4
2.05	0	0	0	0	2	7	0	0	0	0	2	7
2.06	0	0	0	0	3	7	0	0	0	0	3	8
2.07	0	0	0	0	1	0	0	0	1	0	1	8
2.08	0	0	0	0	2	6	0	0	0	0	2	6
2.09	0	0	0	0	0	3	0	0	0	0	0	3
2.10	0	0	2	0	2	3	0	0	0	0	2	5
2.11	0	0	1	0	0	3	0	0	0	0	0	4
2.12	0	0	1	0	0	2	0	2	0	0	2	3
2.13	0	0	1	0	0	4	0	0	1	0	0	5
2.14	0	0	0	0	0	3	0	0	1	0	0	3
2.15	0	0	0	0	0	9	0	0	1	0	0	10
2.16	0	0	0	0	0	1	0	0	1	0	0	1
2.17	0	0	0	0	0	4	0	0	0	0	0	6
2.18	0	0	1	0	0	4	0	0	1	0	0	4
2.19	0	0	0	0	0	5	0	0	2	0	0	7
2.20	0	0	0	0	0	1	0	0	0	0	0	2
2.21	0	0	0	0	1	3	0	0	1	0	1	3
2.22	0	0	0	0	0	2	0	0	0	0	0	2
2.23	0	0	0	0	1	2	0	0	1	0	1	2
2.24	0	0	0	0	0	1	0	0	1	0	0	2
2.25	0	0	0	0	0	1	0	0	0	0	0	2
2.26	0	0	0	0	0	0	0	0	0	0	0	0
2.27	0	0	0	0	0	0	0	0	0	0	0	0
2.28	0	0	0	0	0	0	0	0	0	0	0	0
2.29	0	0	0	0	0	0	0	0	0	0	0	0
2.30	0	0	0	0	0	0	0	0	0	0	0	0
2.31	0	0	0	0	0	0	0	0	0	0	0	0
2.32	0	0	0	0	0	0	0	0	0	0	0	0
2.33	0	0	0	0	0	0	0	0	0	0	0	0
2.34	0	0	0	0	0	0	0	0	0	0	0	0
2.35	0	0	0	0	0	0	0	0	0	0	0	0
2.36	0	0	0	0	0	0	0	0	0	0	0	0
2.37	0	0	0	0	0	0	0	0	0	0	0	0
2.38	0	0	0	0	0	0	0	0	0	0	0	0
2.39	0	0	0	0	0	0	0	0	0	0	0	0
2.40	0	0	0	0	0	0	0	0	0	0	0	0
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	0	0	0	0
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	7	0	17	73	0	2	9	0	19	89

~~TOP SECRET~~ [redacted]

MISSION • 1018-2 • INSTRUMENT • FWD 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.51	0	0	0	0	0	0	0	0	0	0	0	0
2.52	0	0	0	0	0	0	0	0	0	0	0	0
2.53	0	0	0	0	0	0	0	0	0	0	0	0
2.54	0	0	0	0	0	0	0	0	0	0	0	0
2.55	0	0	0	0	0	0	0	0	0	0	0	0
2.56	0	0	0	0	0	0	0	0	0	0	0	0
2.57	0	0	0	0	0	0	0	0	0	0	0	0
2.58	0	0	0	0	0	0	0	0	0	0	0	0
2.59	0	0	0	0	0	0	0	0	0	0	0	0
2.60	0	0	0	0	0	0	0	0	0	0	0	0
2.61	0	0	0	0	0	0	0	0	0	0	0	0
2.62	0	0	0	0	0	0	0	0	0	0	0	0
2.63	0	0	0	0	0	0	0	0	0	0	0	0
2.64	0	0	0	0	0	0	0	0	0	0	0	0
2.65	0	0	0	0	0	0	0	0	0	0	0	0
2.66	0	0	0	0	0	0	0	0	0	0	0	0
2.67	0	0	0	0	0	0	0	0	0	0	0	0
2.68	0	0	0	0	0	0	0	0	0	0	0	0
2.69	0	0	0	0	0	0	0	0	0	0	0	0
2.70	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	44	44	38	204	204	184	9	9	10	257	257	232

MISSION 1018-2 INSTR - FWD 06-11-65 PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	44	0 PC	32 PC	61 PC	0 PC	7 PC
INTERMEDIATE	204	0 PC	32 PC	54 PC	11 PC	3 PC
FULL	9	22 PC	0 PC	78 PC	0 PC	0 PC
ALL LEVELS	257	1 PC	31 PC	56 PC	9 PC	4 PC

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

~~TOP SECRET~~ [redacted]

Table A-3

MISSION * 1018-2 * INSTR * FRWD * 06-11-65 PLOT OF L MIN * TERRAIN * PROCESSING * PRIMARY

ARITH MEAN * 0.52 * MEDIAN * 0.50 * STD DEV * 0.23 * RANGE * 0.16 TO 1.09 WITH 44 SAMPLES

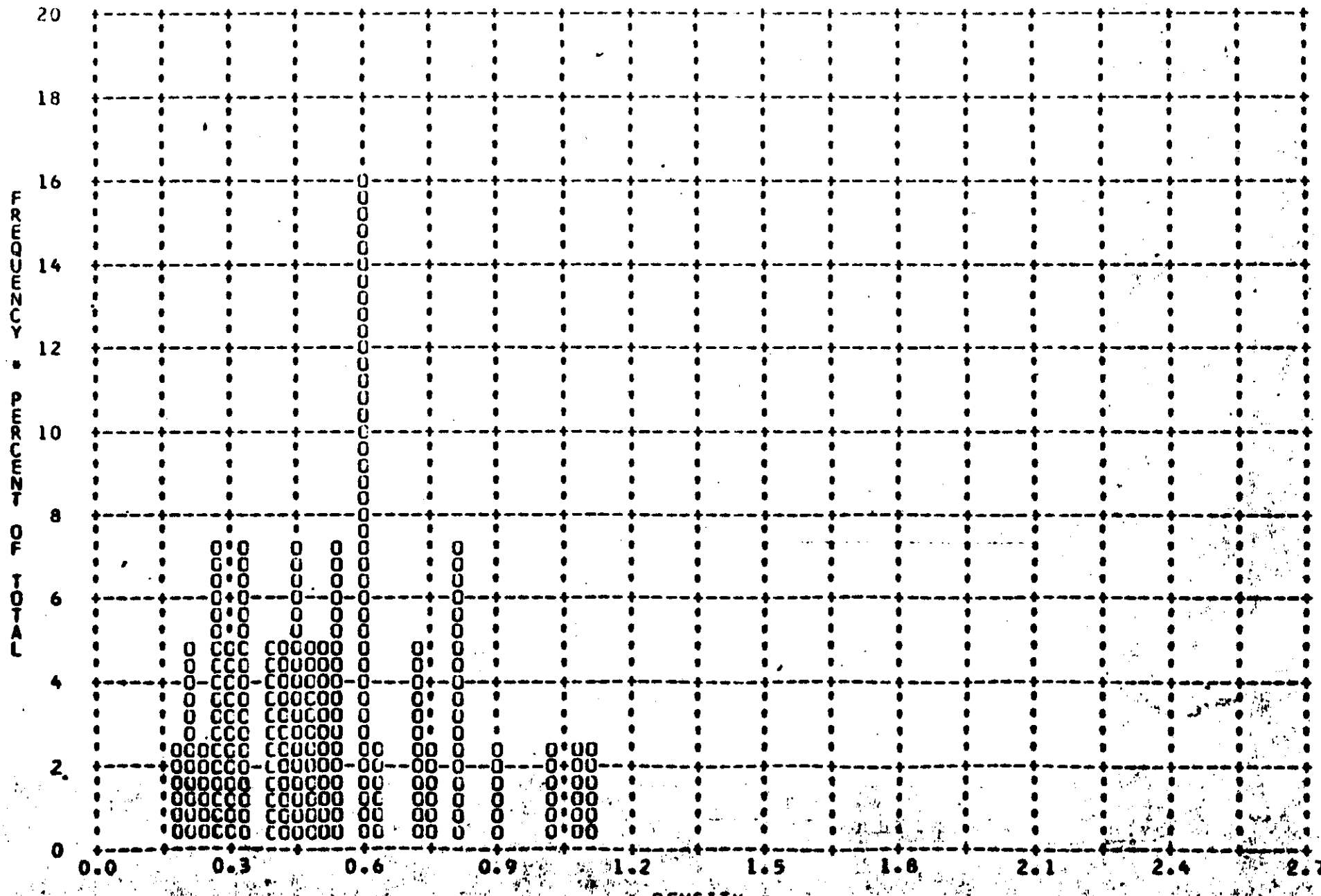


Figure A-25

MISSION • 1018-2 • INSTR • FWD • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • PRIMARY

ARITH MEAN • 1.35 • MEDIAN • 1.40 • STD DEV • 0.33 • RANGE • 0.57 TO 1.98 WITH 44 SAMPLES

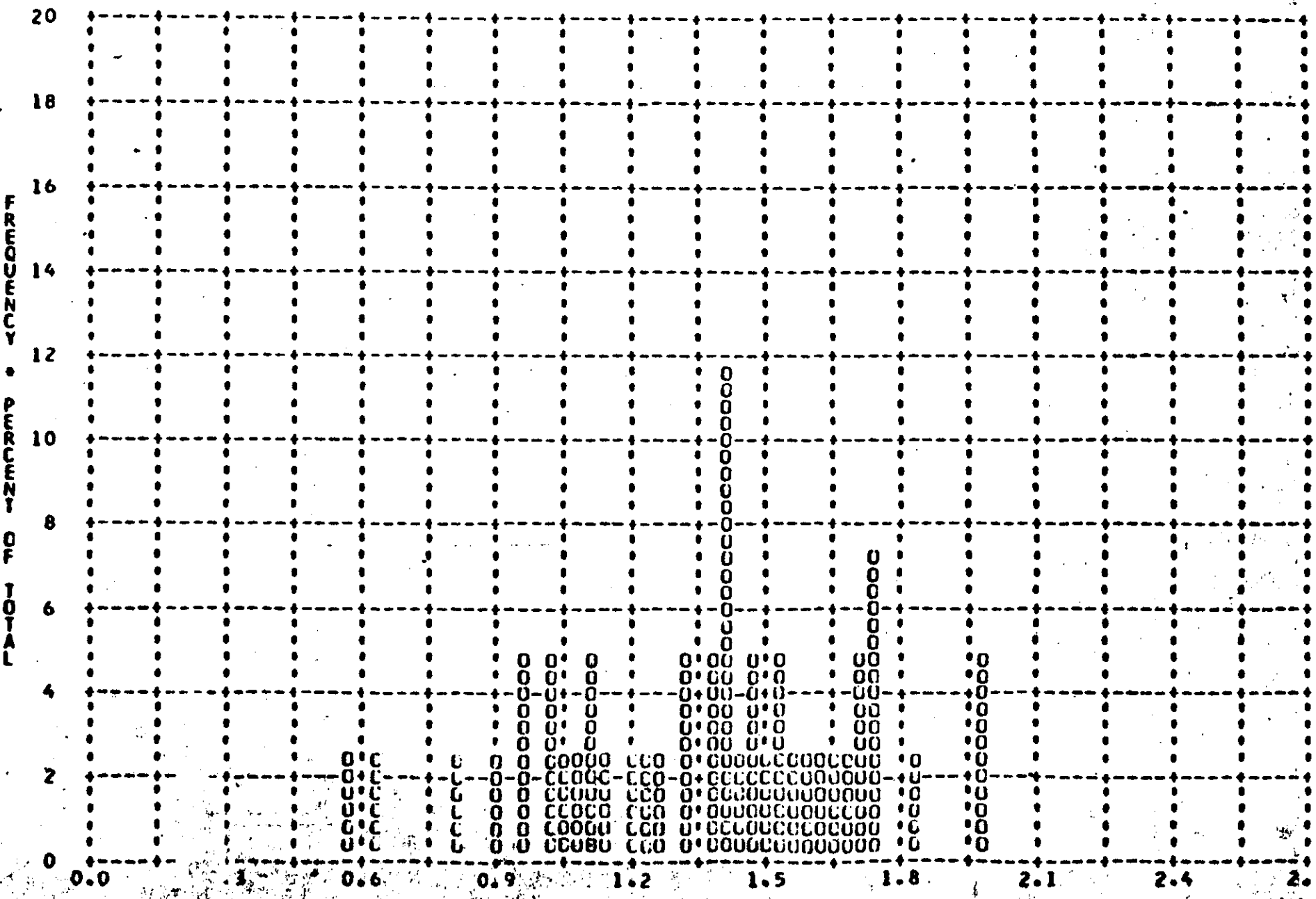


Figure A-26

MISSION • 1018-2 • INSTR • FWD • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • PRIMARY

ARITH MEAN • 1.69 • MEDIAN • 1.69 • STD DEV • 0.33 • RANGE • 0.90 TO 2.18 WITH 38 SAMPLES

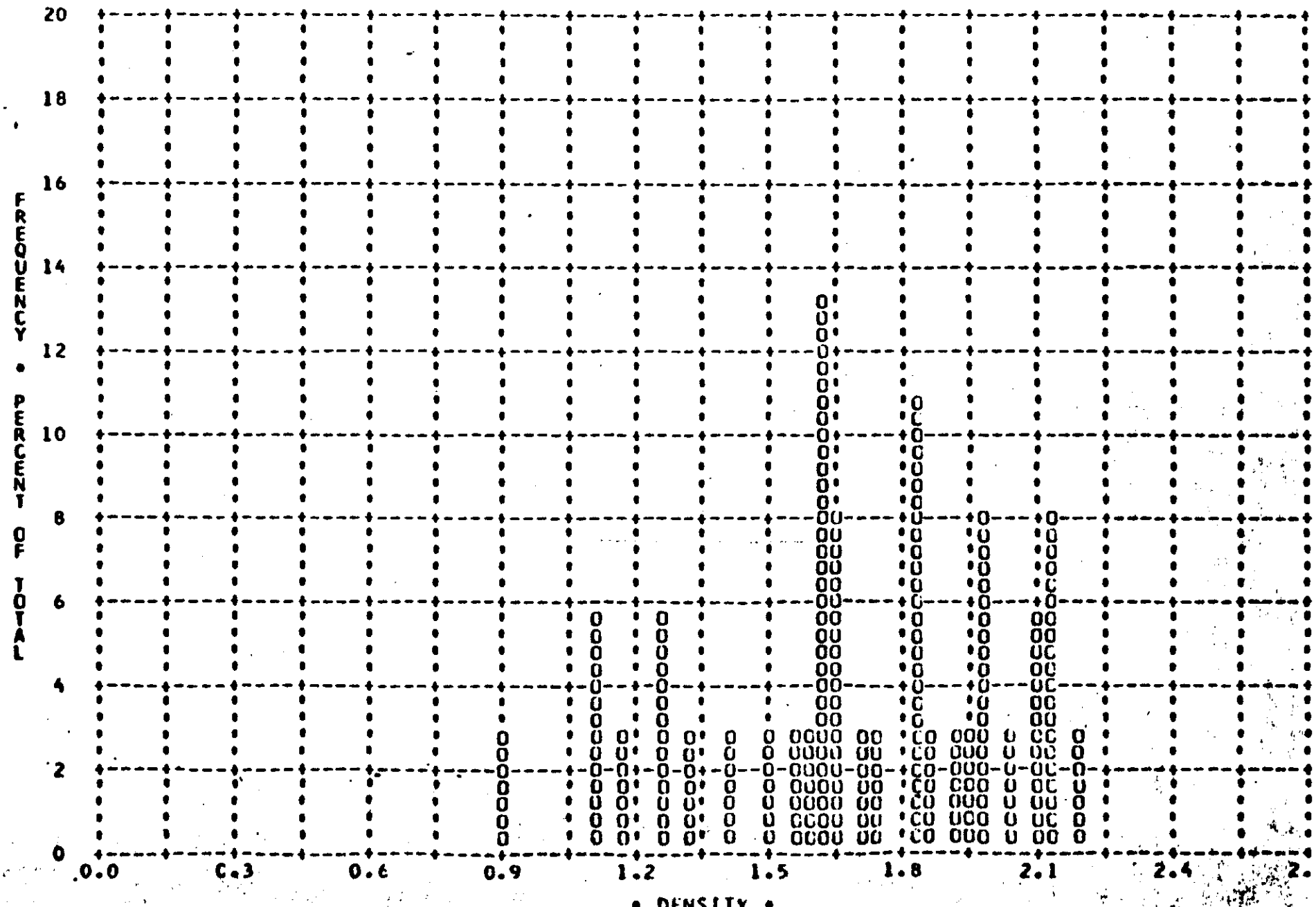


Figure A-27

MISSION • 1018-2 • INSTR • FWD • 06-11-65 PLOT OF D MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.58 • MEDIAN • 0.50 • STD DEV • 0.30 • RANGE • 0.20 TO 1.78 WITH 204 SAMPLES

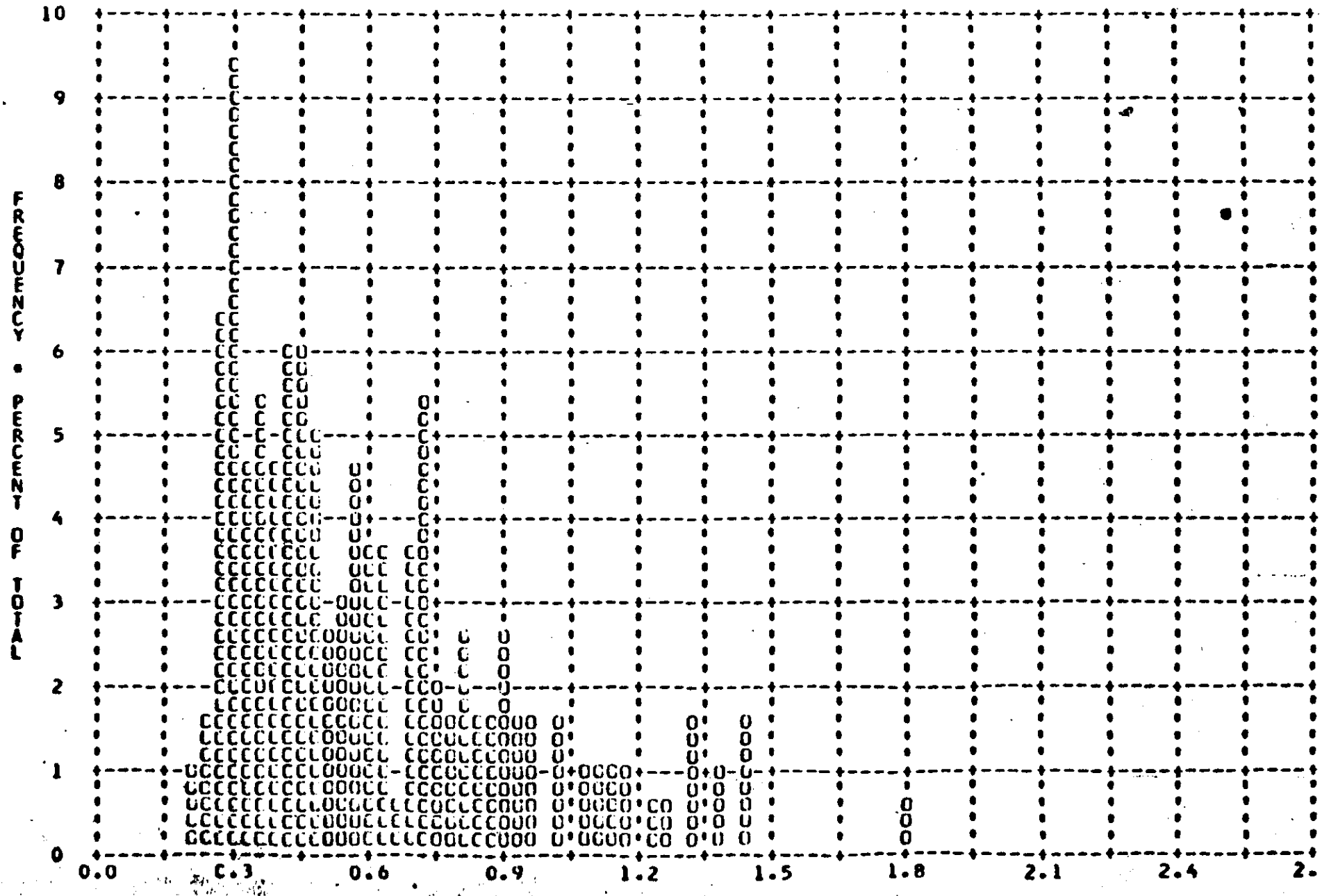


Figure A-28

MISSION • 1018-2 • INSTR • FWD • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.54 • MEDIAN • 1.59 • STD DEV • 0.37 • RANGE • 0.50 TO 2.24 WITH 204 SAMPLES

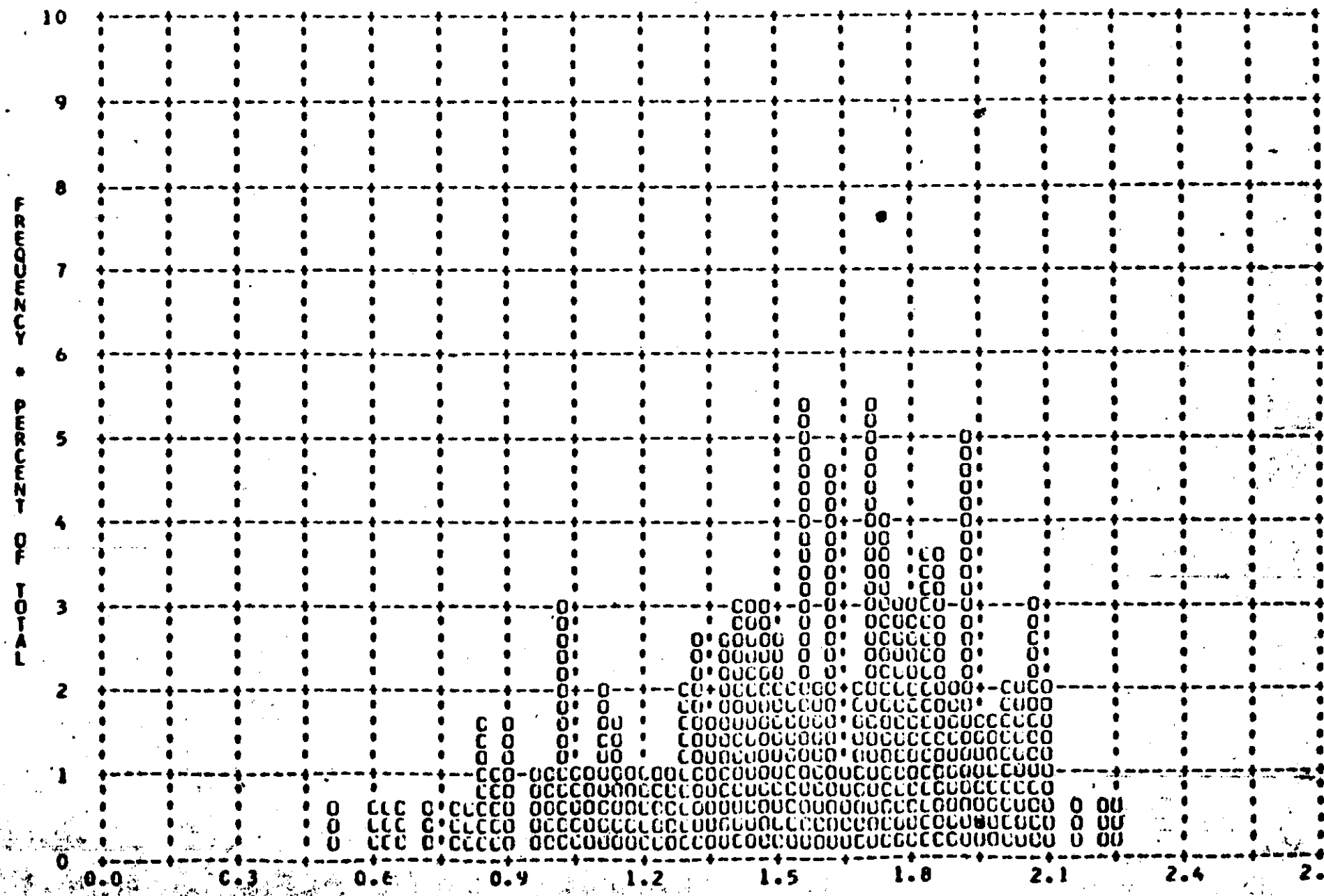


Figure A-29

MISSION • 1019-2 • INSTR • FWD • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.86 • MEDIAN • 1.92 • STD DEV • 0.28 • RANGE • 1.12 TO 2.26 WITH 184 SAMPLES

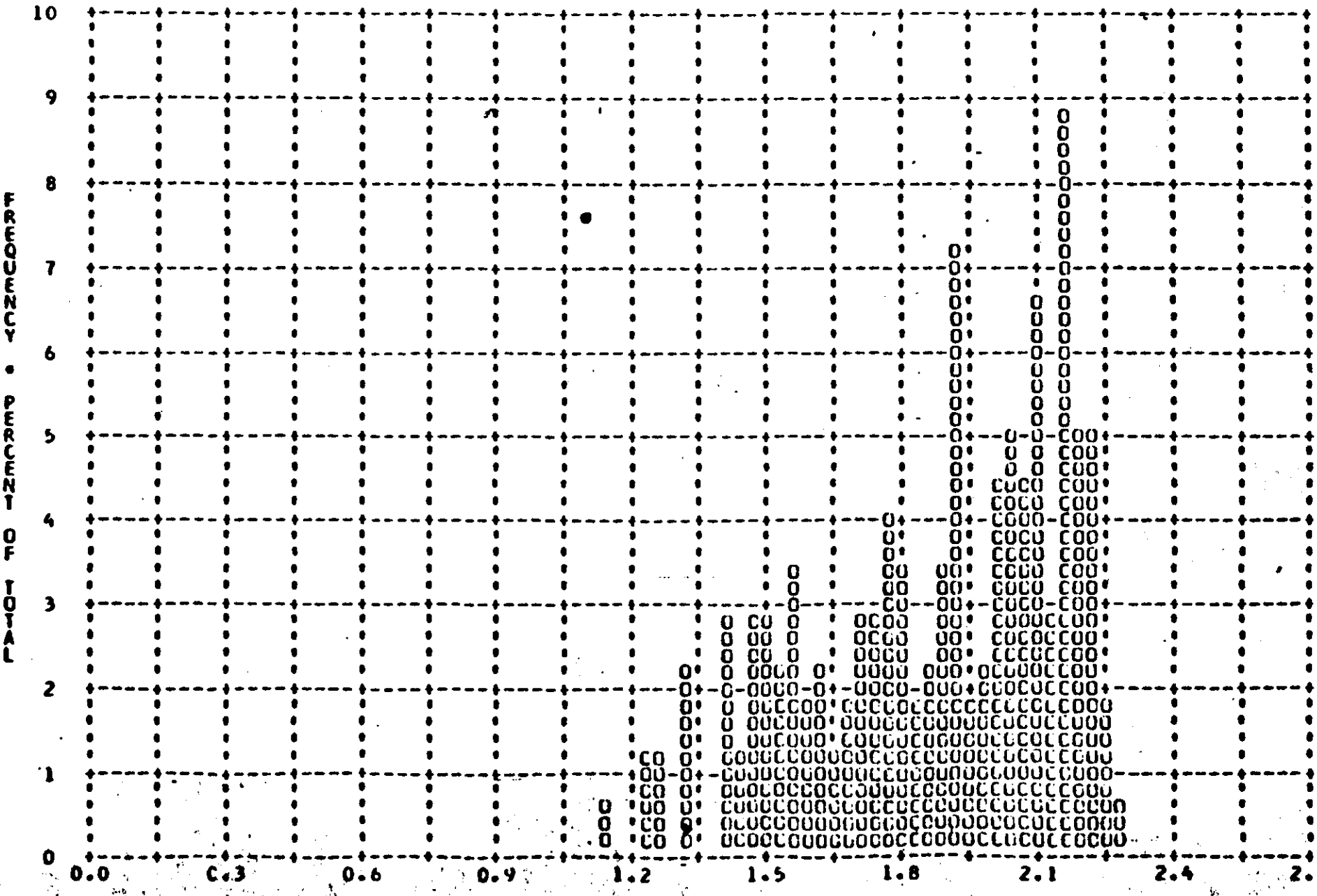


Figure A-30

MISSION • 1C18-2 • INSTR • FWD • 06-11-65 PLOT OF 0 MIN • TERRAIN • PROCESSING • FULL

ARITH MEAN • 0.45 • MEDIAN • 0.42 • STD DEV • 0.10 • RANGE • 0.33 TO 0.60 WITH 9 SAMPLES

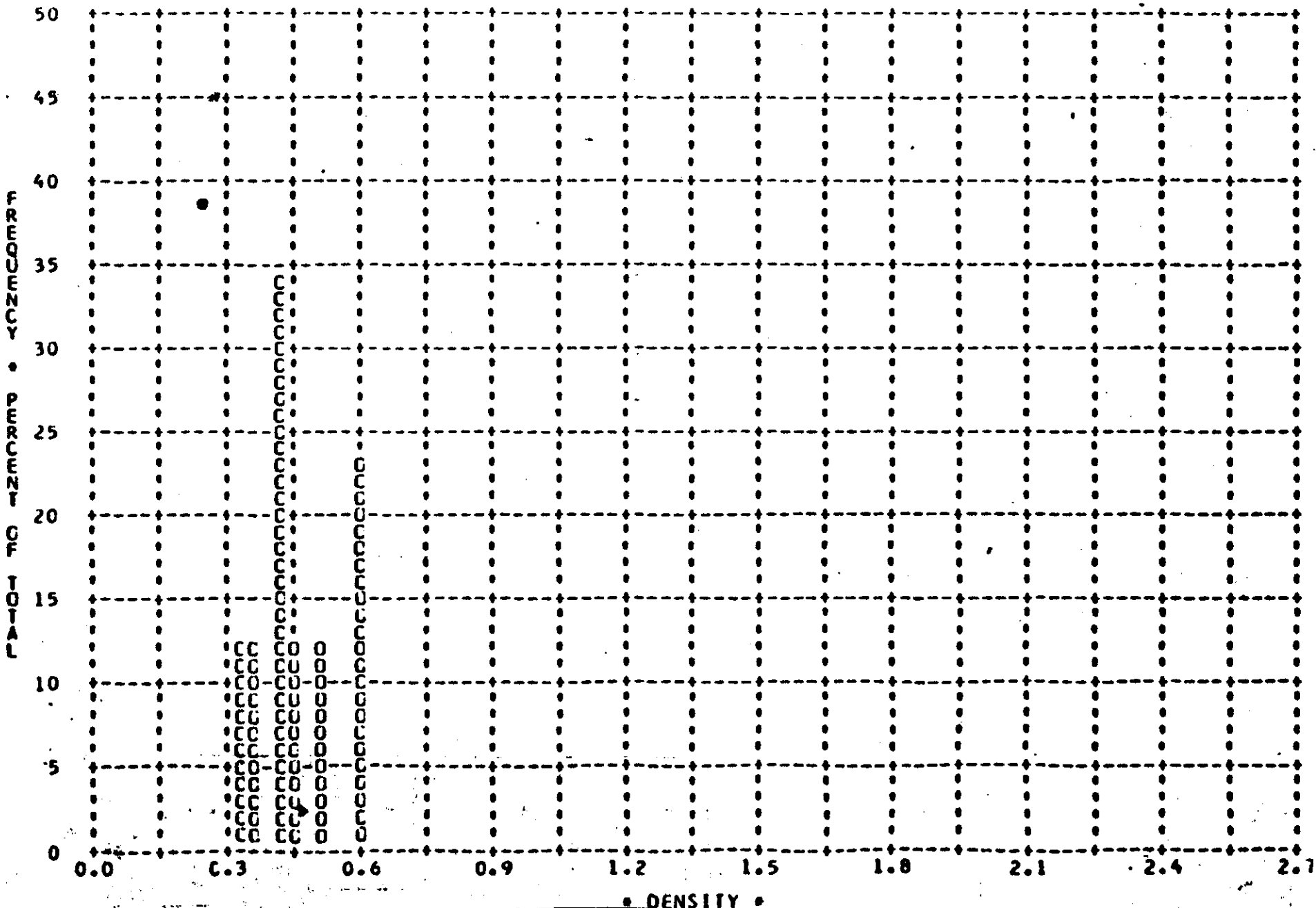


Figure A-31

MISSION • 1018-2 • INSTR • FWD • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • FULL

ARITH MEAN • 1.30 • MEDIAN • 1.22 • STD DEV • 0.50 • RANGE • 0.72 TO 2.12 WITH 9 SAMPLES

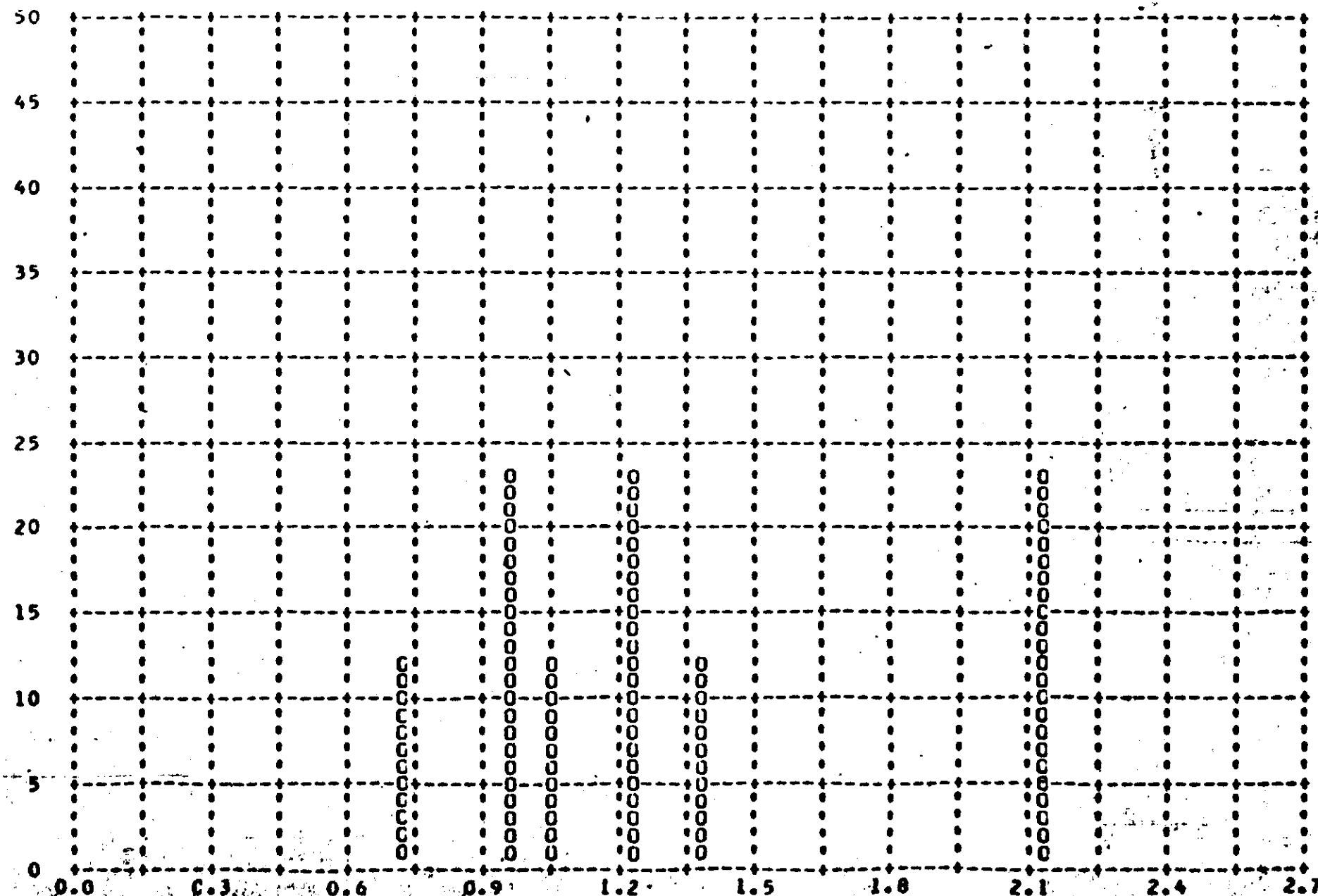


Figure A-32

MISSION • 1018-2 • INSTR • FWD • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • FULL

ARITH MEAN • 2.13 • MEDIAN • 2.20 • STD DEV • 0.18 • RANGE • 1.64 TO 2.26 WITH 10 SAMPLES

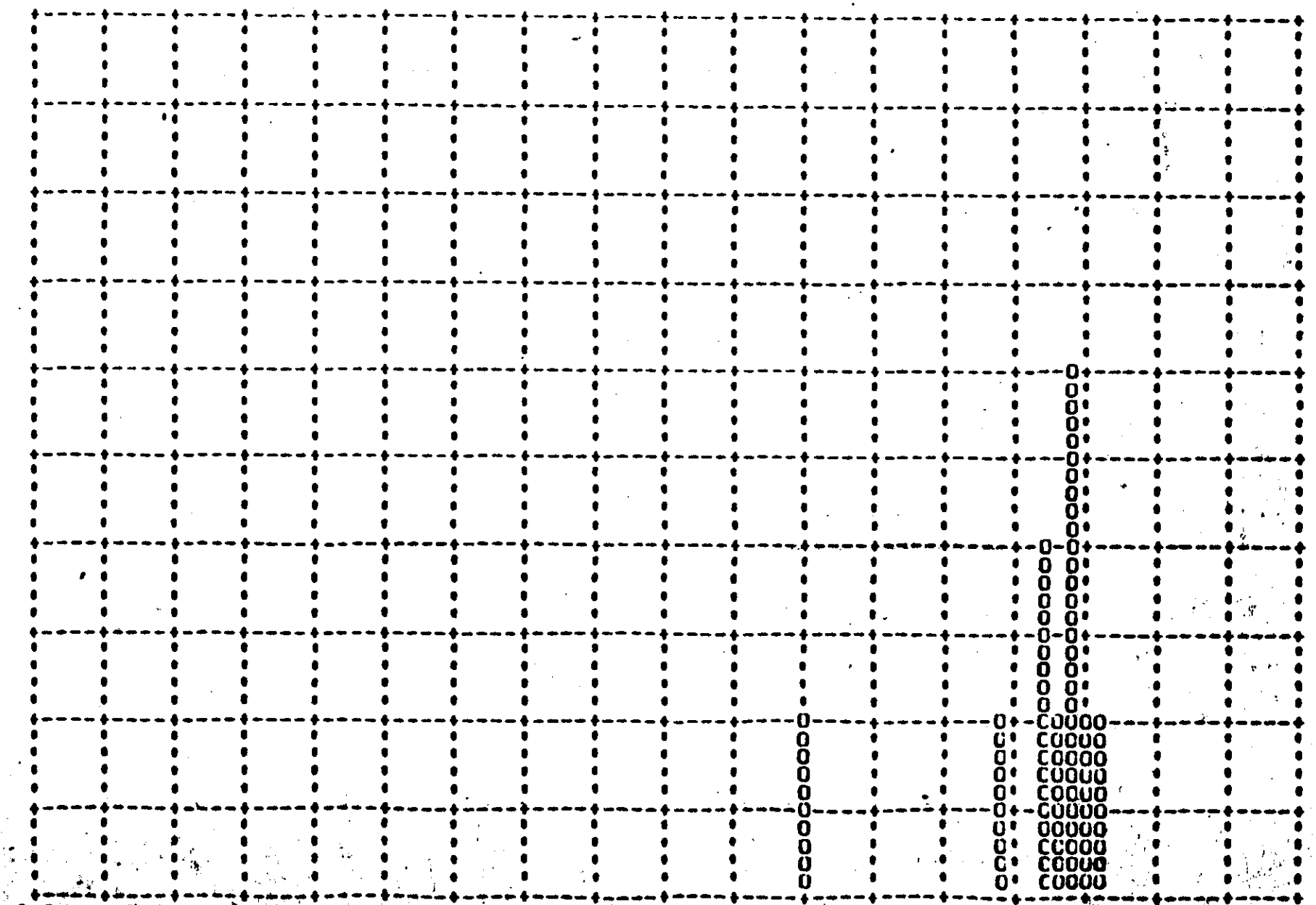


Figure A-38

MISSION • 1018-2 • INSTR • FWD • 06-11-65 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.57 • MEDIAN • 0.49 • STD DEV • 0.29 • RANGE • 0.16 TO 1.78 WITH 257 SAMPLES

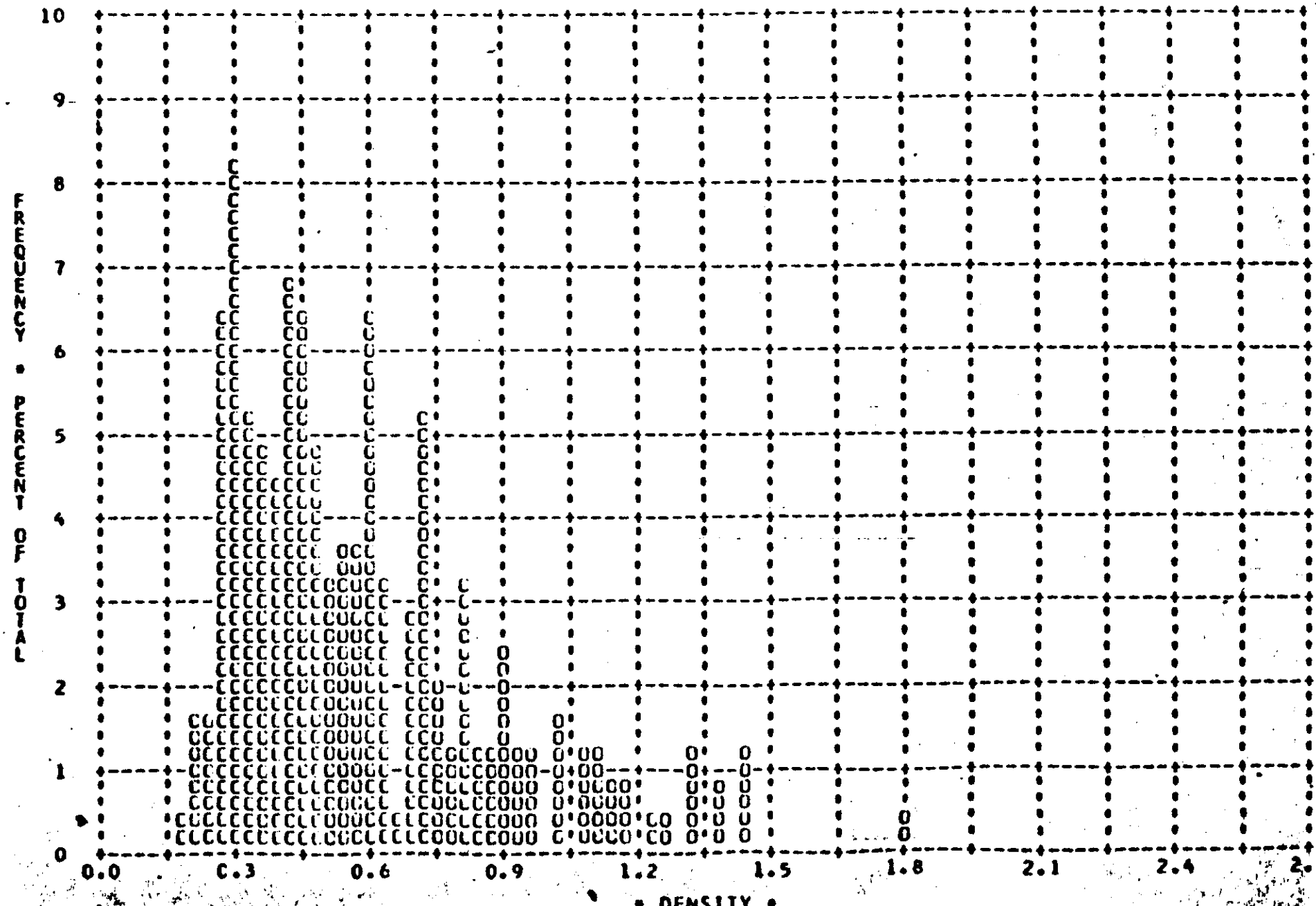


Figure A-34

MISSION • 1018-2 • INSTR • FWD • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.50 • MEDIAN • 1.54 • STD DEV • 0.38 • RANGE • 0.50 TO 2.24 WITH 257 SAMPLES

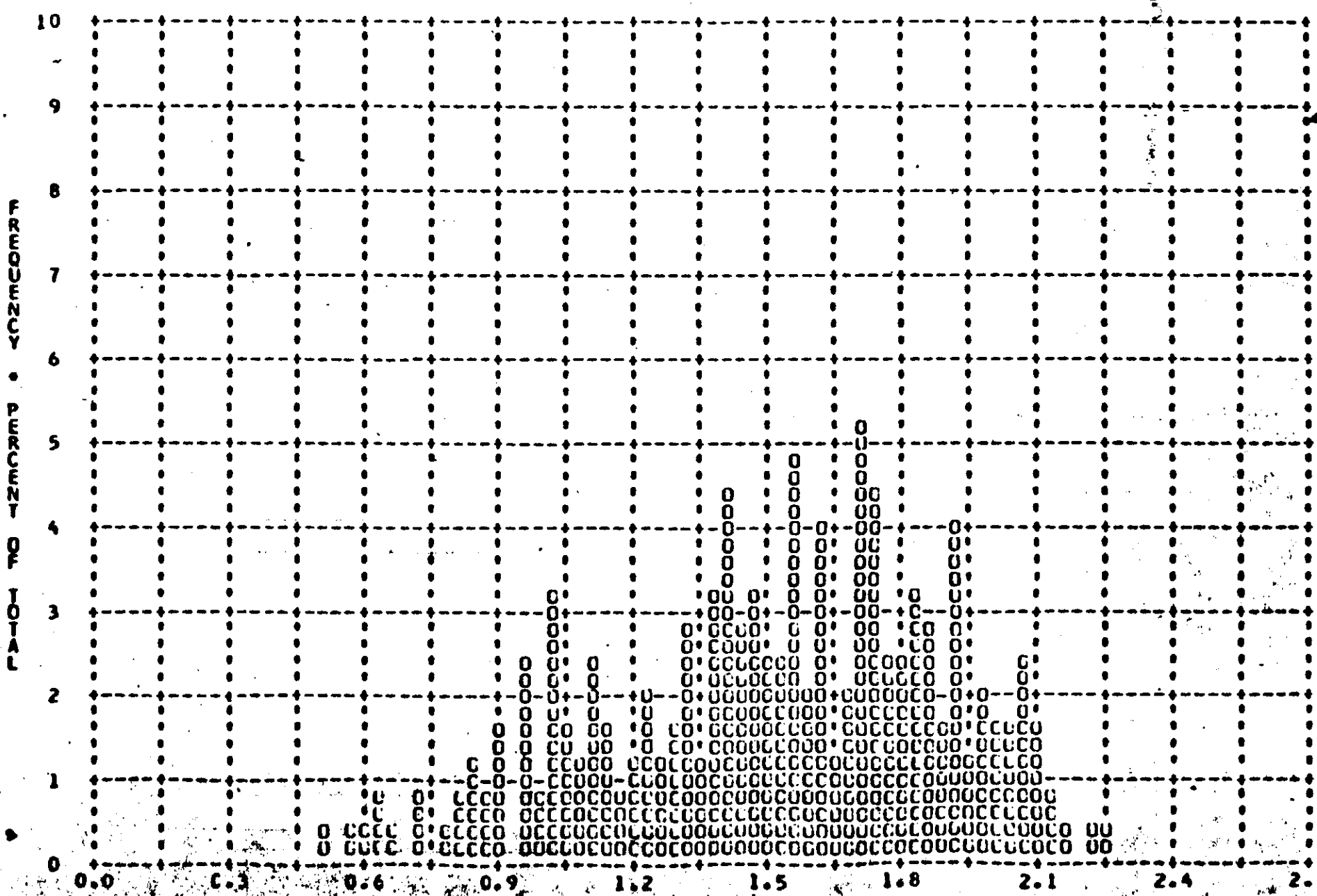


Figure A-35.

MISSION • 1018-2 • INSTR • FAD • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 1.85 • MEDIAN • 1.91 • STD DEV • 0.30 • RANGE • 0.90 TO 2.26 WITH 232 SAMPLES

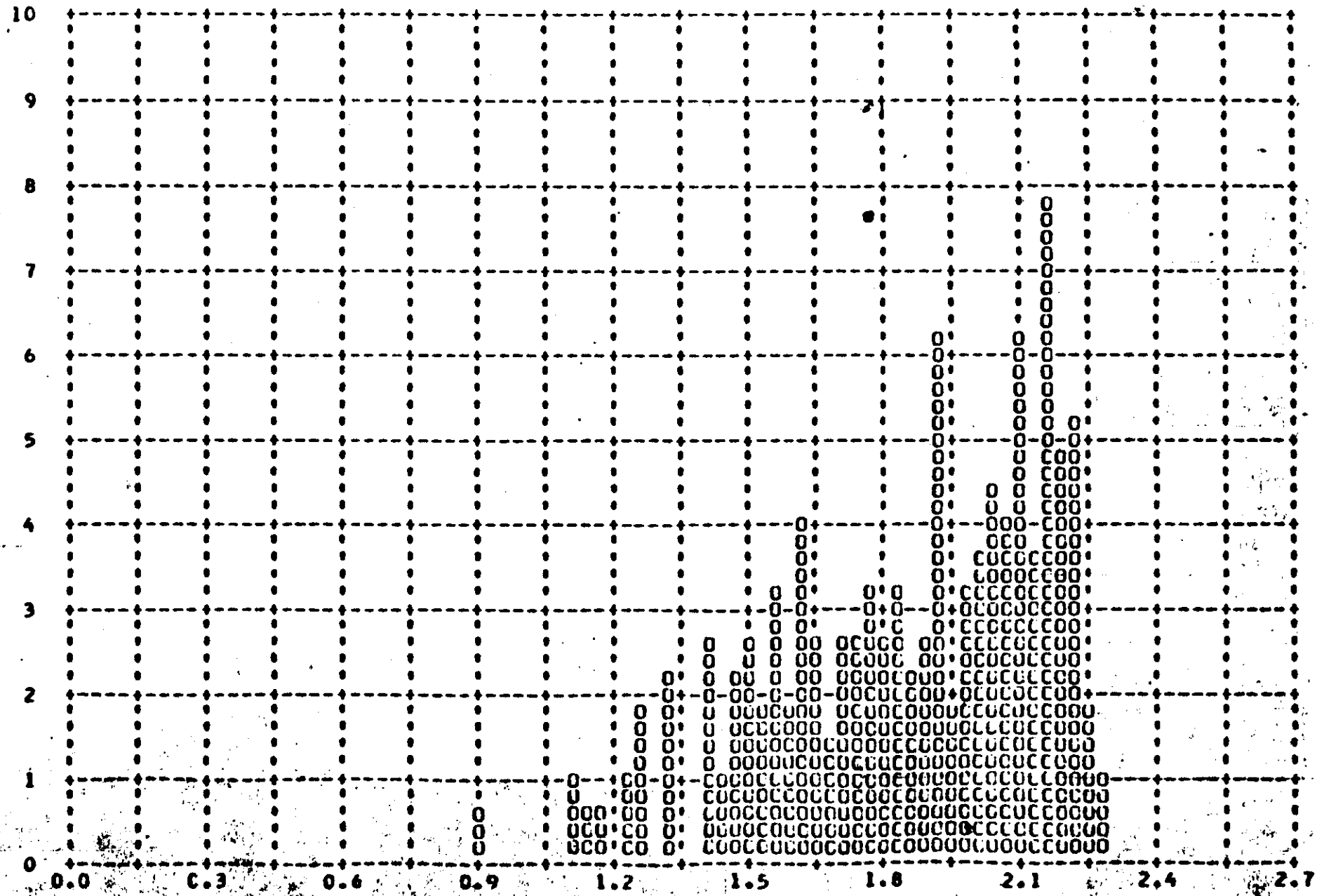


Figure A-36

MISSION • 1018-2 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0	0	0	0	0
0.16	0	0	0	0	0	0	0	0	0	0	0	0
0.17	0	0	0	0	0	0	0	0	0	0	0	0
0.18	0	0	0	0	0	0	0	0	0	0	0	0
0.19	0	0	0	0	0	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0	0	0	0	0	0
0.21	0	0	0	0	0	0	0	0	0	0	0	0
0.22	0	0	0	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	1	0	0	0	0	0	1	0	0
0.29	0	0	0	0	0	0	0	0	0	0	0	0
0.30	0	0	0	1	0	0	0	0	0	1	0	0
0.31	0	0	0	0	0	0	0	0	0	0	0	0
0.32	0	0	0	1	0	0	0	0	0	1	0	0
0.33	0	0	0	0	0	0	0	0	0	0	0	0
0.34	0	0	0	2	0	0	0	0	0	2	0	0
0.35	0	0	0	1	0	0	0	0	0	1	0	0
0.36	0	0	0	1	0	0	0	0	0	1	0	0
0.37	0	0	0	0	0	0	0	0	0	0	0	0
0.38	0	0	0	2	0	0	0	0	0	2	0	0
0.39	0	0	0	1	0	0	0	0	0	1	0	0
0.40	0	0	0	1	0	0	0	0	0	1	0	0
0.41	0	0	0	1	0	0	0	0	0	1	0	0
0.42	0	0	0	5	0	0	3	0	0	8	0	0
0.43	0	0	0	0	0	0	0	0	0	0	0	0
0.44	0	0	0	0	0	0	0	0	0	0	0	0
0.45	0	0	0	1	0	0	0	0	0	1	0	0
0.46	0	0	0	1	0	0	1	0	0	2	0	0
0.47	0	0	0	0	0	0	0	0	0	0	0	0
0.48	0	0	0	6	0	0	1	0	0	7	0	0
0.49	0	0	0	3	0	0	1	0	0	4	0	0
0.50	0	0	0	6	0	0	0	0	0	6	0	0
SUBTOTAL	0	0	0	36	0	0	6	0	0	42	0	0

~~TOP SECRET~~ [redacted]

MISSION • 1018-2 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	1	0	0	0	0	0	1	0	0
0.52	0	0	0	4	0	0	0	0	0	4	0	0
0.53	0	0	0	1	0	0	0	0	0	1	0	0
0.54	0	0	0	4	0	0	1	0	0	5	0	0
0.55	0	0	0	6	0	0	0	0	0	6	0	0
0.56	0	0	0	5	0	0	1	0	0	6	0	0
0.57	0	0	0	1	0	0	0	0	0	1	0	0
0.58	0	0	0	2	0	0	1	0	0	3	0	0
0.59	0	0	0	1	0	0	0	0	0	1	0	0
0.60	0	0	0	4	0	0	3	0	0	7	0	0
0.61	0	0	0	0	0	0	0	0	0	0	0	0
0.62	0	0	0	0	0	0	0	0	0	0	0	0
0.63	0	0	0	5	0	0	0	0	0	5	0	0
0.64	0	0	0	1	0	0	0	0	0	1	0	0
0.65	0	0	0	3	0	0	0	0	0	3	0	0
0.66	0	0	0	1	0	0	0	0	0	1	0	0
0.67	0	0	0	3	0	0	7	0	0	10	0	0
0.68	0	0	0	1	0	0	0	0	0	1	0	0
0.69	0	0	0	2	0	0	3	0	0	5	0	0
0.70	0	0	0	6	0	0	1	0	0	7	0	0
0.72	0	0	0	4	0	0	1	0	0	5	0	0
0.73	0	0	0	2	0	0	1	0	0	3	0	0
0.74	0	0	0	2	0	0	1	0	0	3	0	0
0.75	0	0	0	2	0	0	1	0	0	3	0	0
0.76	0	0	0	2	0	0	1	0	0	3	0	0
0.77	0	0	0	2	0	0	1	0	0	3	0	0
0.78	0	0	0	2	0	0	1	0	0	3	0	0
0.79	0	0	0	2	0	0	0	0	0	2	0	0
0.80	0	0	0	3	0	0	0	0	0	3	0	0
0.81	0	0	0	3	0	0	0	0	0	3	0	0
0.82	0	0	0	8	0	0	2	0	0	10	0	0
0.83	0	0	0	3	0	0	0	0	0	3	0	0
0.84	0	0	0	3	0	0	0	0	0	3	0	0
0.85	0	0	0	3	0	0	0	0	0	3	0	0
0.86	0	0	0	1	0	0	0	0	0	1	0	0
0.87	0	0	0	2	0	0	1	0	0	3	0	0
0.88	0	0	0	7	0	0	0	0	0	7	0	0
0.89	0	0	0	0	0	0	0	0	0	0	0	0
0.90	0	0	0	4	0	0	1	0	0	5	0	0
0.91	0	0	0	3	0	0	1	0	0	4	0	0
0.92	0	0	0	2	1	0	1	0	0	4	1	0
0.93	0	0	0	2	0	0	2	0	0	4	0	0
0.94	0	0	0	3	0	0	1	0	0	4	0	0
0.95	0	0	0	2	0	0	0	0	0	2	0	0
0.96	0	0	0	1	0	0	1	0	0	2	0	0
0.97	0	0	0	4	0	0	2	0	0	6	0	0
0.98	0	0	0	1	0	0	0	0	0	1	0	0
0.99	0	0	0	4	1	0	1	0	0	5	1	0
1.00												
SUBTOTAL	0	0	0	112	2	0	39	2	0	151	4	0

~~TOP SECRET~~ [redacted]

Table A-4

MISSION • 1018-2 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	0	0	0	0	0	0	0	0
1.02	0	0	0	0	0	0	0	0	0	0	0	0
1.03	0	0	0	0	0	0	1	0	0	1	0	0
1.04	0	0	0	0	0	0	1	0	0	1	0	0
1.05	0	0	0	2	0	0	0	0	0	2	0	0
1.06	0	0	0	2	0	0	0	0	0	2	0	0
1.07	0	0	0	1	0	0	2	0	0	3	0	0
1.08	0	0	0	1	0	0	2	0	0	3	0	0
1.09	0	0	0	1	6	0	1	0	0	2	6	0
1.10	0	0	0	6	5	0	1	0	0	7	5	0
1.11	0	0	0	0	2	0	3	0	0	3	2	0
1.12	0	0	0	0	2	0	3	0	0	3	2	0
1.13	0	0	0	0	1	0	1	0	0	1	1	0
1.14	0	0	0	0	1	0	1	0	0	1	1	0
1.15	0	0	0	0	0	0	0	0	0	0	0	0
1.16	0	0	0	0	3	0	0	0	0	0	3	0
1.17	0	0	0	0	3	0	0	0	0	0	3	0
1.18	0	0	0	4	2	0	1	0	0	5	3	0
1.19	0	0	0	3	2	0	0	0	0	3	2	0
1.20	0	0	0	3	0	0	0	2	0	3	2	0
1.21	0	0	0	0	0	0	0	0	0	0	0	0
1.22	0	0	0	0	0	0	0	1	0	0	1	0
1.23	0	0	0	0	1	0	0	0	0	0	1	0
1.24	0	0	0	1	0	0	0	0	0	1	0	0
1.25	0	0	0	0	0	0	0	0	0	0	0	0
1.26	0	0	0	2	0	0	0	0	0	2	0	0
1.27	0	0	0	1	0	0	0	0	0	1	0	0
1.28	0	0	0	5	0	0	0	0	0	5	0	0
1.29	0	0	0	0	0	0	0	0	0	0	0	0
1.30	0	0	0	1	2	0	0	2	0	3	4	0
1.31	0	0	0	0	1	0	0	0	0	0	1	0
1.32	0	0	0	1	1	0	1	0	0	2	1	0
1.33	0	0	0	1	0	0	0	0	0	1	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	1	1	0	0	0	0	1	1	0
1.37	0	0	0	0	0	0	0	0	0	0	0	0
1.38	0	0	0	0	1	0	0	0	0	0	1	0
1.39	0	0	0	0	1	0	0	0	0	0	1	0
1.40	0	0	0	1	1	0	0	0	0	1	1	0
1.41	0	0	0	0	0	0	0	0	0	0	0	0
1.42	0	0	0	0	1	0	0	0	0	0	1	0
1.43	0	0	0	0	0	0	0	0	0	0	0	0
1.44	0	0	0	1	0	0	0	0	0	1	0	0
1.45	0	0	0	0	0	0	0	0	0	0	0	0
1.46	0	0	0	0	3	0	0	3	0	0	6	0
1.47	0	0	0	0	0	0	1	2	0	1	2	0
1.48	0	0	0	0	1	0	2	3	0	2	4	0
1.49	0	0	0	0	0	0	0	0	0	0	0	0
1.50	0	0	0	2	4	0	0	2	1	2	6	1
SUBTOTAL	0	0	0	34	36	9	20	18	2	54	54	11

~~TOP SECRET~~ [redacted]

MISSION • 1018-2 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	C	C	0	C	2	0	0	0	0	0	2	0
1.52	C	C	0	C	3	1	0	0	0	0	5	1
1.53	C	C	0	C	0	0	0	2	0	0	5	0
1.54	C	C	0	C	4	0	0	0	0	0	5	0
1.55	C	C	0	C	0	0	0	1	0	0	5	0
1.56	C	C	0	C	1	0	0	1	0	0	2	0
1.57	C	C	0	C	0	0	0	0	0	0	2	0
1.58	C	C	0	C	2	0	0	0	0	0	0	0
1.59	C	C	0	C	0	0	0	4	0	0	10	1
1.60	C	C	0	C	6	1	0	0	0	0	6	1
1.61	C	C	0	C	6	1	0	0	0	0	6	1
1.62	C	C	0	C	1	0	0	1	0	0	1	0
1.63	C	C	0	C	5	1	0	0	0	0	6	1
1.64	C	C	0	C	1	1	0	2	0	0	3	1
1.65	C	C	0	C	3	1	0	0	0	0	5	1
1.66	C	C	0	C	1	1	0	2	0	0	3	1
1.67	C	C	0	C	3	0	0	0	0	0	5	0
1.68	C	C	0	C	4	1	0	2	0	0	5	1
1.69	C	C	0	C	3	1	0	0	0	0	5	1
1.70	C	C	0	C	1	2	0	2	0	0	3	1
1.71	C	C	0	C	5	0	0	1	0	0	7	0
1.72	C	C	0	C	3	1	0	1	0	0	4	1
1.73	C	C	0	C	0	1	0	0	0	0	4	0
1.74	C	C	0	C	6	1	0	3	0	0	9	1
1.75	C	C	0	C	1	2	0	1	0	0	2	1
1.76	C	C	0	C	4	1	0	0	0	0	4	1
1.77	C	C	0	C	0	3	0	1	0	0	4	1
1.78	C	C	0	C	4	1	0	0	0	0	5	1
1.79	C	C	0	C	0	3	0	1	0	0	5	1
1.80	C	C	0	C	5	0	0	2	0	0	7	0
1.81	C	C	0	C	0	11	0	0	0	0	0	13
1.82	C	C	0	C	2	1	0	2	0	0	7	0
1.83	C	C	0	C	1	0	0	1	0	0	3	0
1.84	C	C	0	C	9	4	0	3	0	0	4	0
1.85	C	C	0	C	6	0	0	4	0	0	13	5
1.86	C	C	0	C	1	1	0	2	0	0	3	1
1.87	C	C	0	C	5	0	0	0	0	0	7	0
1.88	C	C	0	C	1	0	0	0	0	0	1	0
1.89	C	C	0	C	6	1	0	0	0	0	6	1
1.90	C	C	0	C	1	1	0	0	0	0	1	1
1.91	C	C	0	C	7	2	0	2	0	0	9	2
1.92	C	C	0	C	2	0	0	0	0	0	2	0
1.93	C	C	0	C	5	1	0	1	0	0	6	1
1.94	C	C	0	C	1	2	0	0	0	0	3	2
1.95	C	C	0	C	2	1	0	0	0	0	2	1
1.96	C	C	0	C	0	0	0	0	0	0	0	0
1.97	C	C	0	C	4	0	0	0	0	0	4	0
1.98	C	C	0	C	0	0	0	1	0	0	1	0
1.99	C	C	0	C	2	0	0	0	0	0	2	0
2.00	C	C	0	C	3	2	0	1	0	0	5	2
SUBTOTAL	C	C	0	C	119	89	0	39	12	0	158	101

~~TOP SECRET~~ [redacted]

Table A-4

~~TOP SECRET~~ [redacted]

MISSION • 1018-2 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	1	1	0	0	0	0	1	1
2.02	0	0	0	0	2	3	0	1	1	0	3	4
2.03	0	0	0	0	2	1	0	1	0	0	3	1
2.04	0	0	0	0	1	4	0	0	1	0	1	5
2.05	0	0	0	0	4	7	0	0	1	0	5	8
2.06	0	0	0	0	2	1	0	1	0	0	3	1
2.07	0	0	0	0	2	6	0	0	0	0	2	6
2.08	0	0	0	0	1	5	0	0	0	0	1	5
2.09	0	0	0	0	3	5	0	1	5	0	4	10
2.10	0	0	0	0	2	5	0	1	0	0	2	7
2.11	0	0	0	0	2	5	0	0	2	0	2	7
2.12	0	0	0	0	1	3	0	0	2	0	2	5
2.13	0	0	0	0	1	3	0	0	4	0	2	9
2.14	0	0	0	0	3	5	0	0	1	0	3	9
2.15	0	0	0	0	2	5	0	0	3	0	3	8
2.16	0	0	0	0	2	6	0	0	0	0	2	6
2.17	0	0	0	0	1	7	0	0	5	0	1	12
2.18	0	0	0	0	1	2	0	0	4	0	1	6
2.19	0	0	0	0	1	2	0	0	3	0	1	5
2.20	0	0	0	0	1	4	0	0	3	0	1	7
2.21	0	0	0	0	1	5	0	0	3	0	1	8
2.22	0	0	0	0	1	1	0	0	2	0	1	3
2.23	0	0	0	0	0	0	0	0	2	0	0	2
2.24	0	0	0	0	0	0	0	0	1	0	0	1
2.25	0	0	0	0	0	0	0	0	0	0	0	0
2.26	0	0	0	0	0	0	0	0	0	0	0	0
2.27	0	0	0	0	0	0	0	0	0	0	0	0
2.28	0	0	0	0	0	0	0	0	0	0	0	0
2.29	0	0	0	0	0	0	0	0	0	0	0	0
2.30	0	0	0	0	0	0	0	0	0	0	0	0
2.31	0	0	0	0	0	0	0	0	0	0	0	0
2.32	0	0	0	0	0	0	0	0	0	0	0	0
2.33	0	0	0	0	0	0	0	0	0	0	0	0
2.34	0	0	0	0	0	0	0	0	0	0	0	0
2.35	0	0	0	0	0	0	0	0	0	0	0	0
2.36	0	0	0	0	0	0	0	0	0	0	0	0
2.37	0	0	0	0	0	0	0	0	0	0	0	0
2.38	0	0	0	0	0	0	0	0	0	0	0	0
2.39	0	0	0	0	0	0	0	0	0	0	0	0
2.40	0	0	0	0	0	0	0	0	0	0	0	0
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	0	0	0	0
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	25	77	0	6	47	0	31	124

~~TOP SECRET~~ [redacted]

Table A-4

MISSION • 1018-2 • INSTRUMENT • AFT 06-11-65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.51	0	0	0	0	0	0	0	0	0	0	0	0
2.52	0	0	0	0	0	0	0	0	0	0	0	0
2.53	0	0	0	0	0	0	0	0	0	0	0	0
2.54	0	0	0	0	0	0	0	0	0	0	0	0
2.55	0	0	0	0	0	0	0	0	0	0	0	0
2.56	0	0	0	0	0	0	0	0	0	0	0	0
2.57	0	0	0	0	0	0	0	0	0	0	0	0
2.58	0	0	0	0	0	0	0	0	0	0	0	0
2.59	0	0	0	0	0	0	0	0	0	0	0	0
2.60	0	0	0	0	0	0	0	0	0	0	0	0
2.61	0	0	0	0	0	0	0	0	0	0	0	0
2.62	0	0	0	0	0	0	0	0	0	0	0	0
2.63	0	0	0	0	0	0	0	0	0	0	0	0
2.64	0	0	0	0	0	0	0	0	0	0	0	0
2.65	0	0	0	0	0	0	0	0	0	0	0	0
2.66	0	0	0	0	0	0	0	0	0	0	0	0
2.67	0	0	0	0	0	0	0	0	0	0	0	0
2.68	0	0	0	0	0	0	0	0	0	0	0	0
2.69	0	0	0	0	0	0	0	0	0	0	0	0
2.70	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	182	182	175	65	65	61	247	247	236

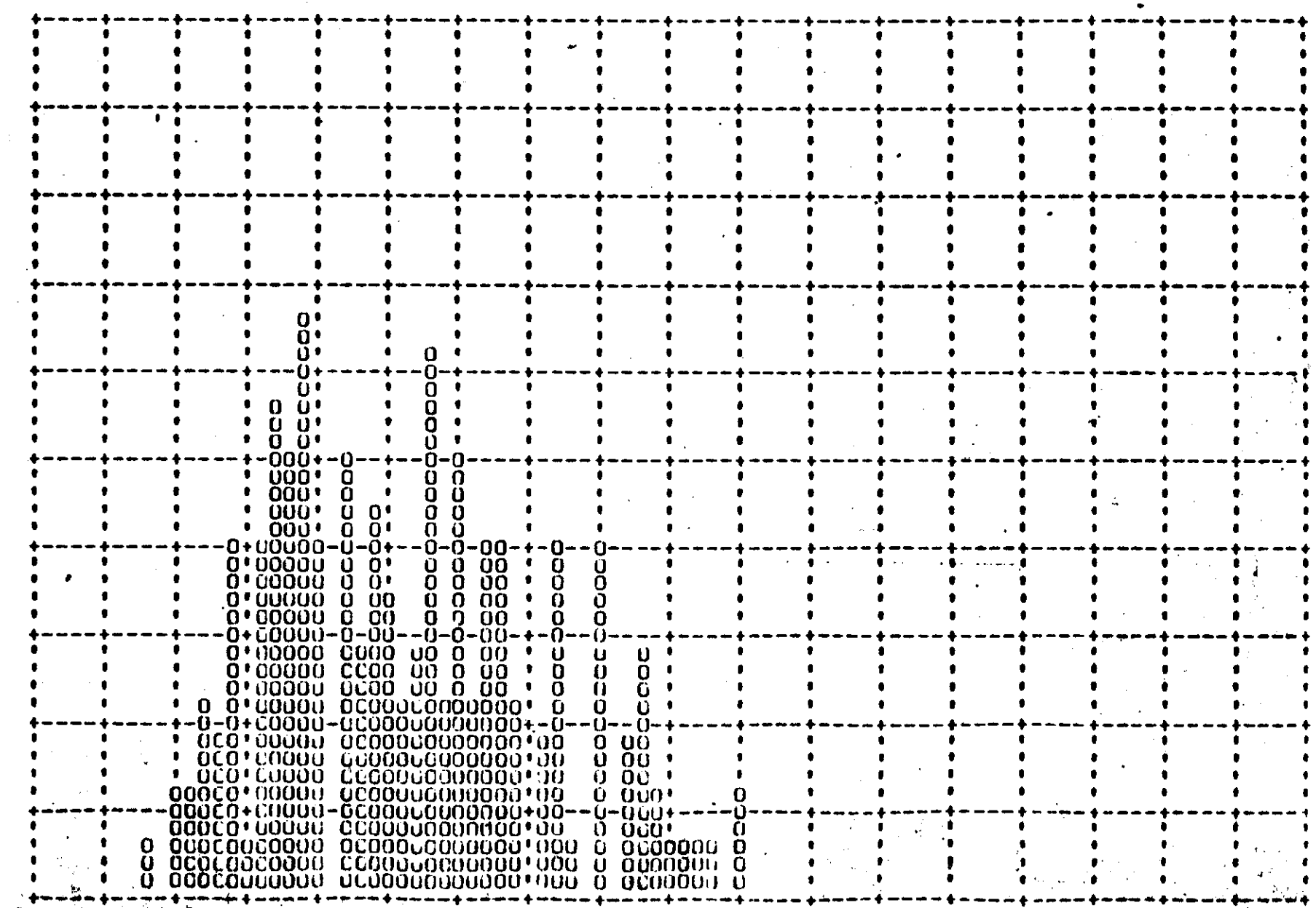
MISSION 1018-2 INSTR - AFT 06-11-65 PROCESSING AND EXPOSURE ANALYSI

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	0 PC	0 PC	0 PC
INTERMEDIATE	182	0 PC	7 PC	63 PC	28 PC	3 PC
FULL	65	0 PC	0 PC	45 PC	55 PC	0 PC
ALL LEVELS	247	0 PC	5 PC	58 PC	35 PC	2 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

MISSION • 1018-2 • INSTR • AFT • 10-07-65 PLOT OF U MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.78 • MEDIAN • 0.74 • STD DEV • 0.29 • RANGE • 0.22 TO 1.50 WITH 182 SAMPLES



[redacted]

Figure A-37

MISSION • 1018-2 • INSTR • AFT • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.72 • MEDIAN • 1.76 • STD DEV • 0.29 • RANGE • 0.94 TO 2.22 WITH 182 SAMPLES

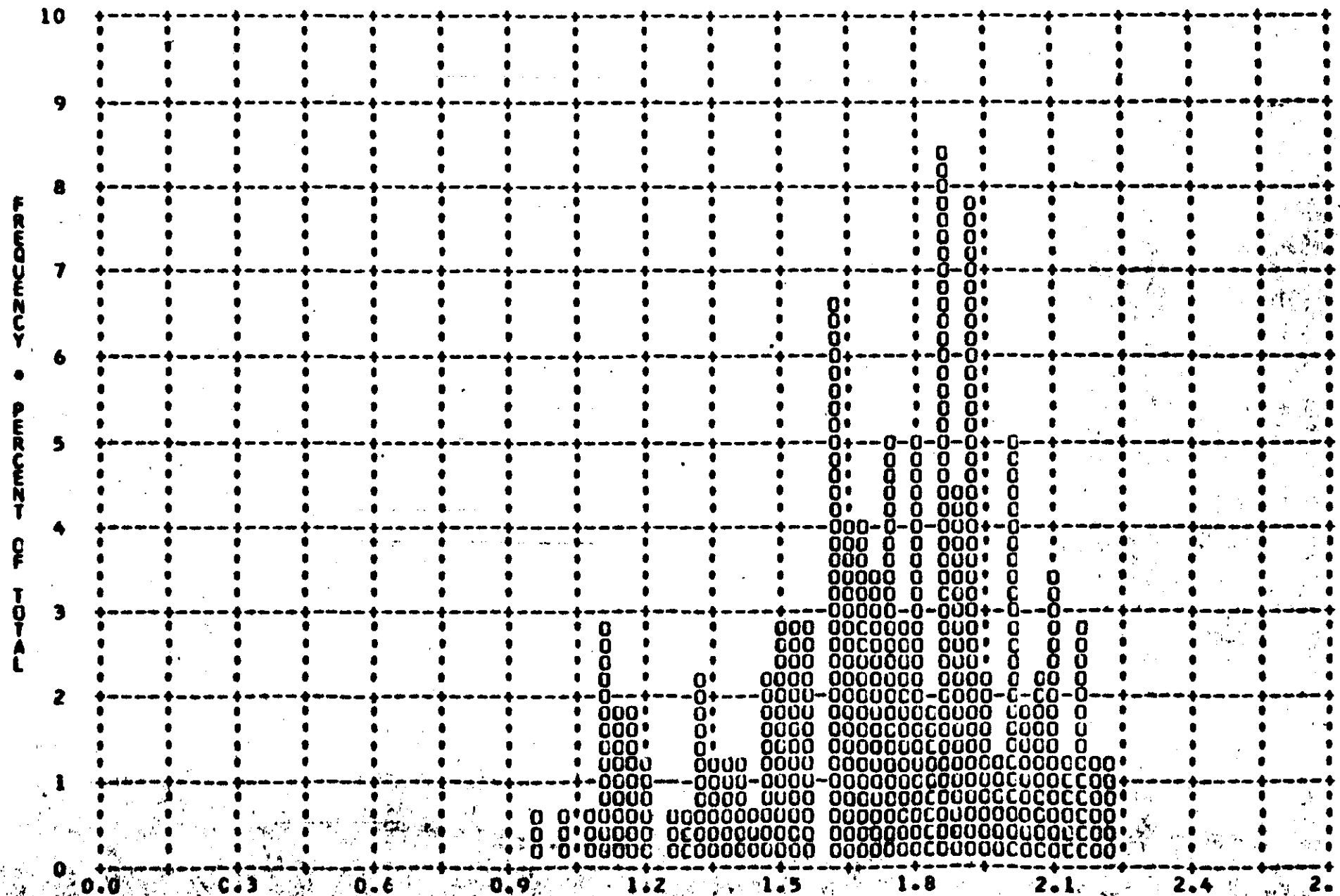


Figure A-38

MISSION • 1018-2 • INSTR • AFT • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.93 • MEDIAN • 1.96 • STD DEV • 0.24 • RANGE • 1.09 TO 2.30 WITH 175 SAMPLES

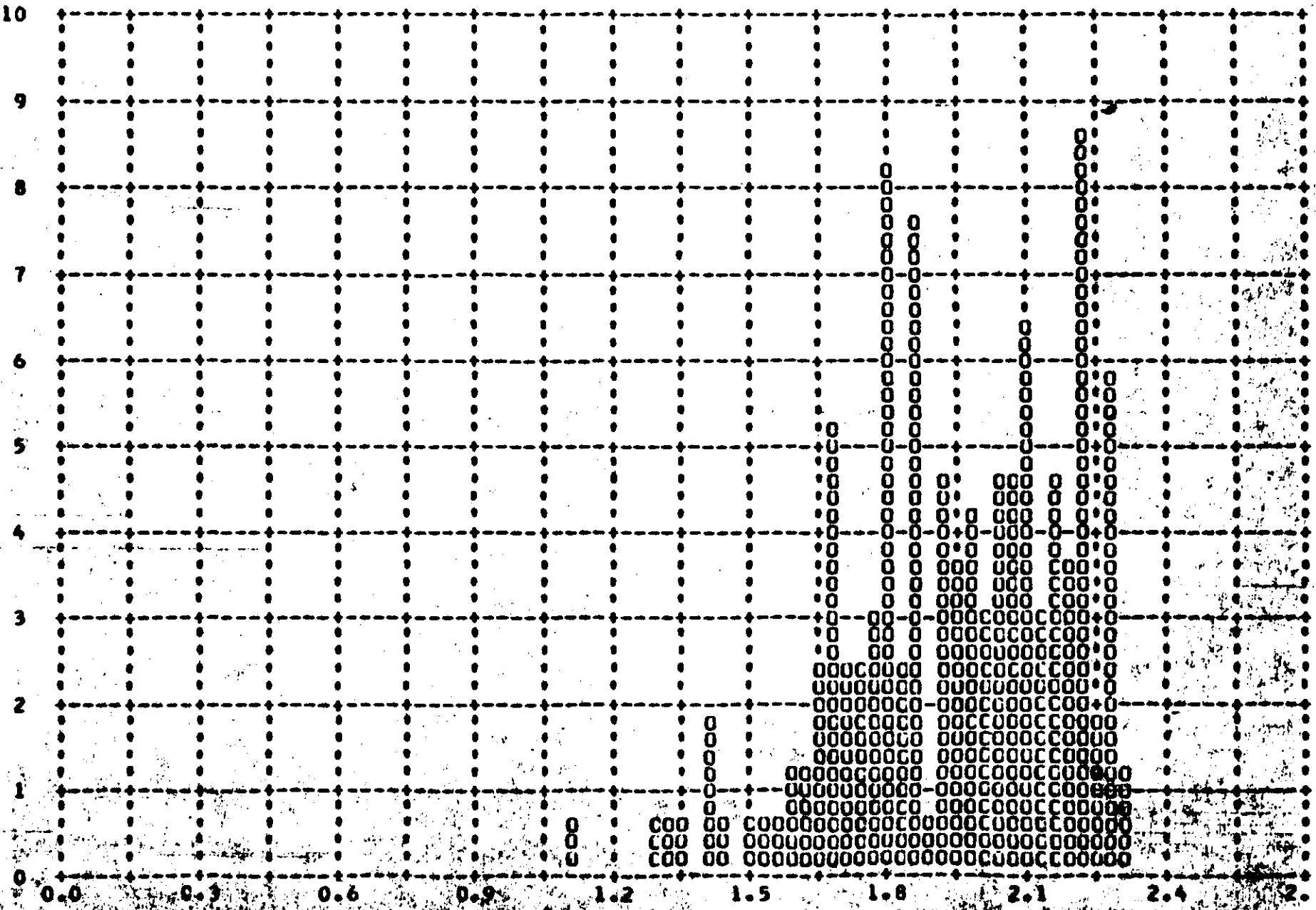


Figure A-39

MISSION • 1018-2 • INSTR • AFT • 06-11-65 PLOT OF D MIN • TERRAIN • PROCESSING • FULL

ARITH MEAN • 0.90 • MEDIAN • 0.94 • STD DEV • 0.29 • RANGE • 0.42 TO 1.48 WITH 65 SAMPLES

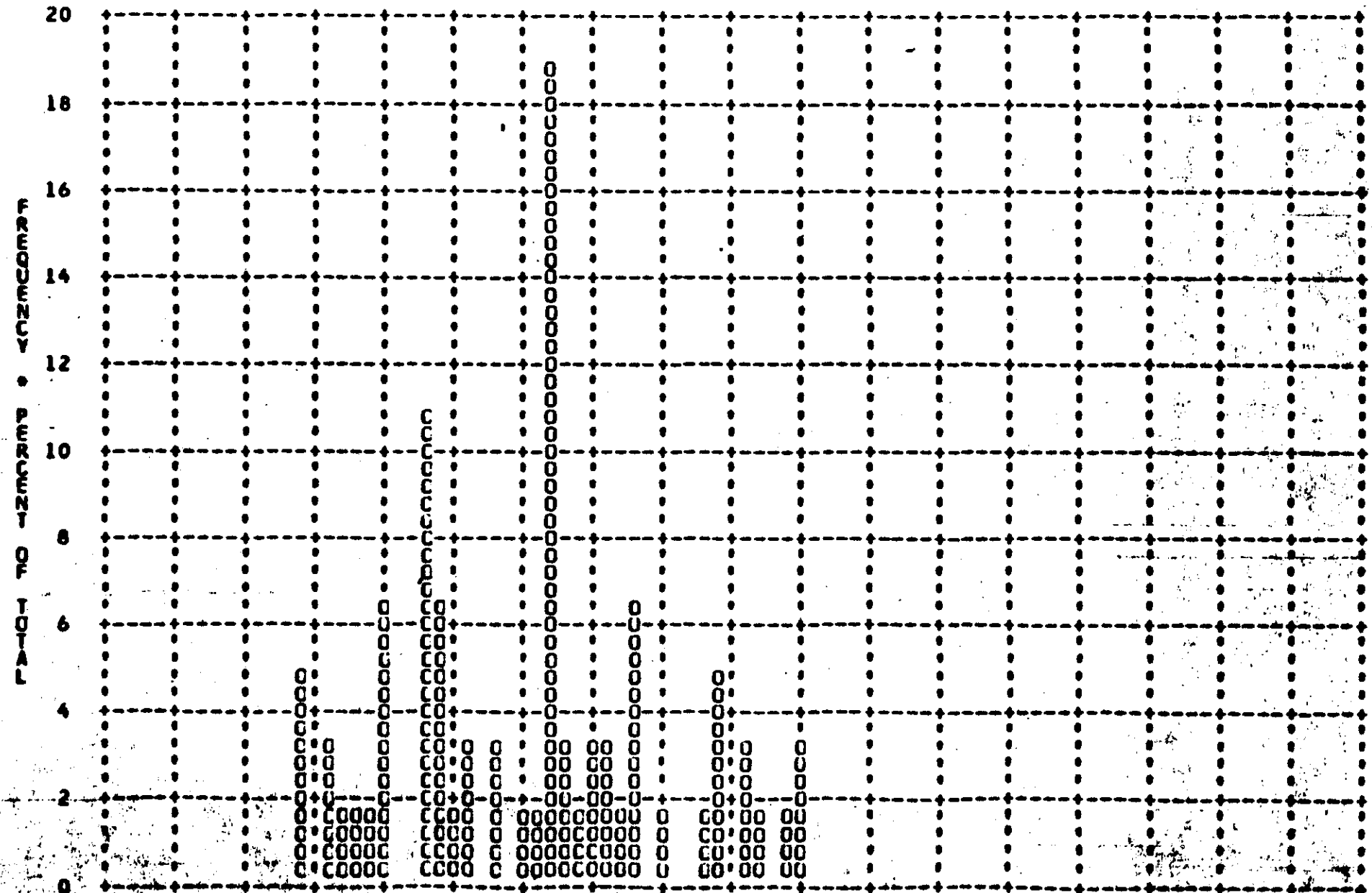


Figure A-40

MISSION • 1018-2 • INSTR • AFT • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • FULL

ARITH MEAN • 1.65 • MEDIAN • 1.68 • STD DEV • 0.28 • RANGE • 0.94 TO 2.26 WITH 65 SAMPLES

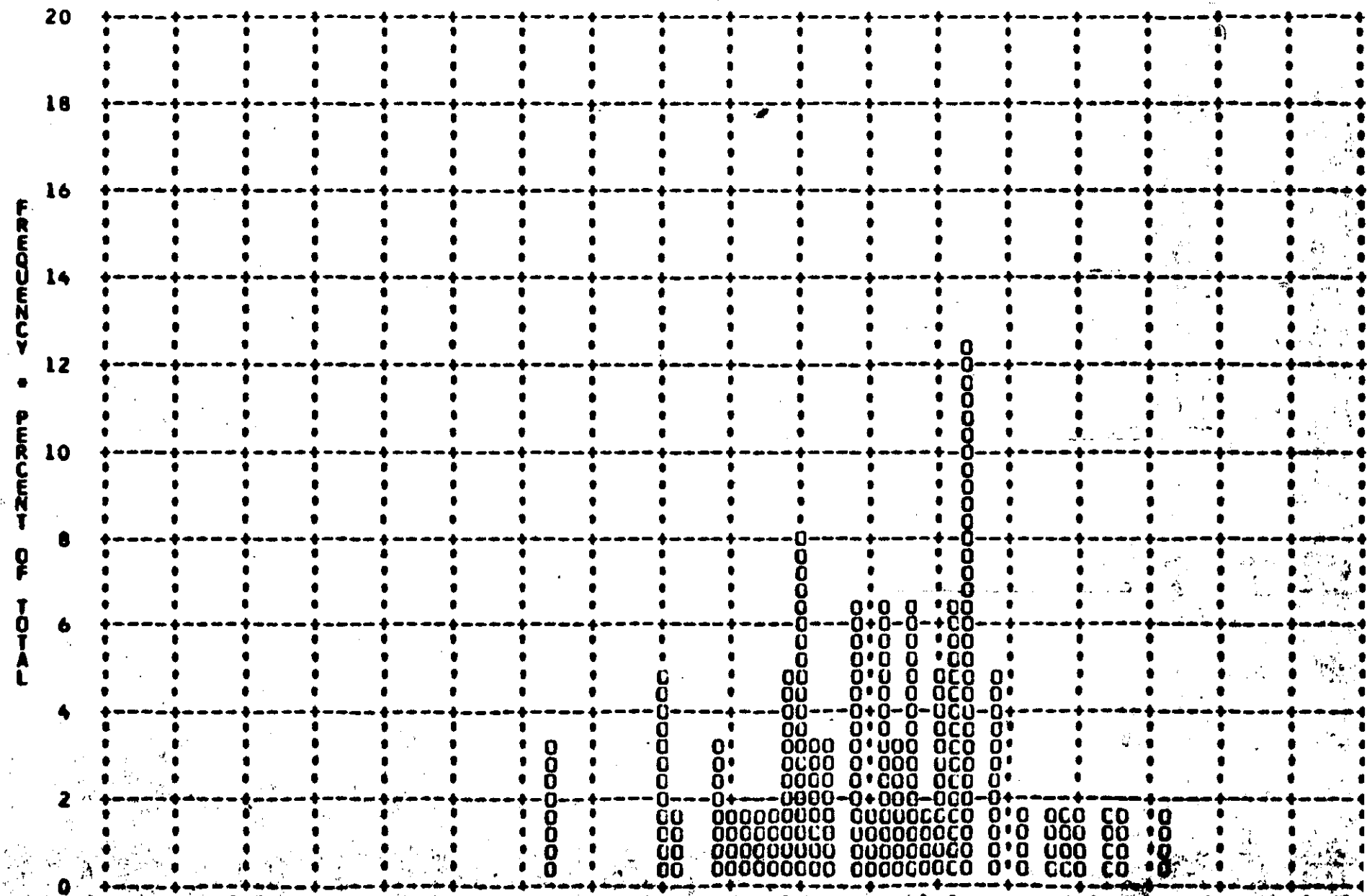


Figure A-41

MISSION • 1018-2 • INSTR • AFT • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • FULL

ARITH MEAN • 2.11 • MEDIAN • 2.17 • STD DEV • 0.22 • RANGE • 1.12 TO 2.35 WITH 61 SAMPLES

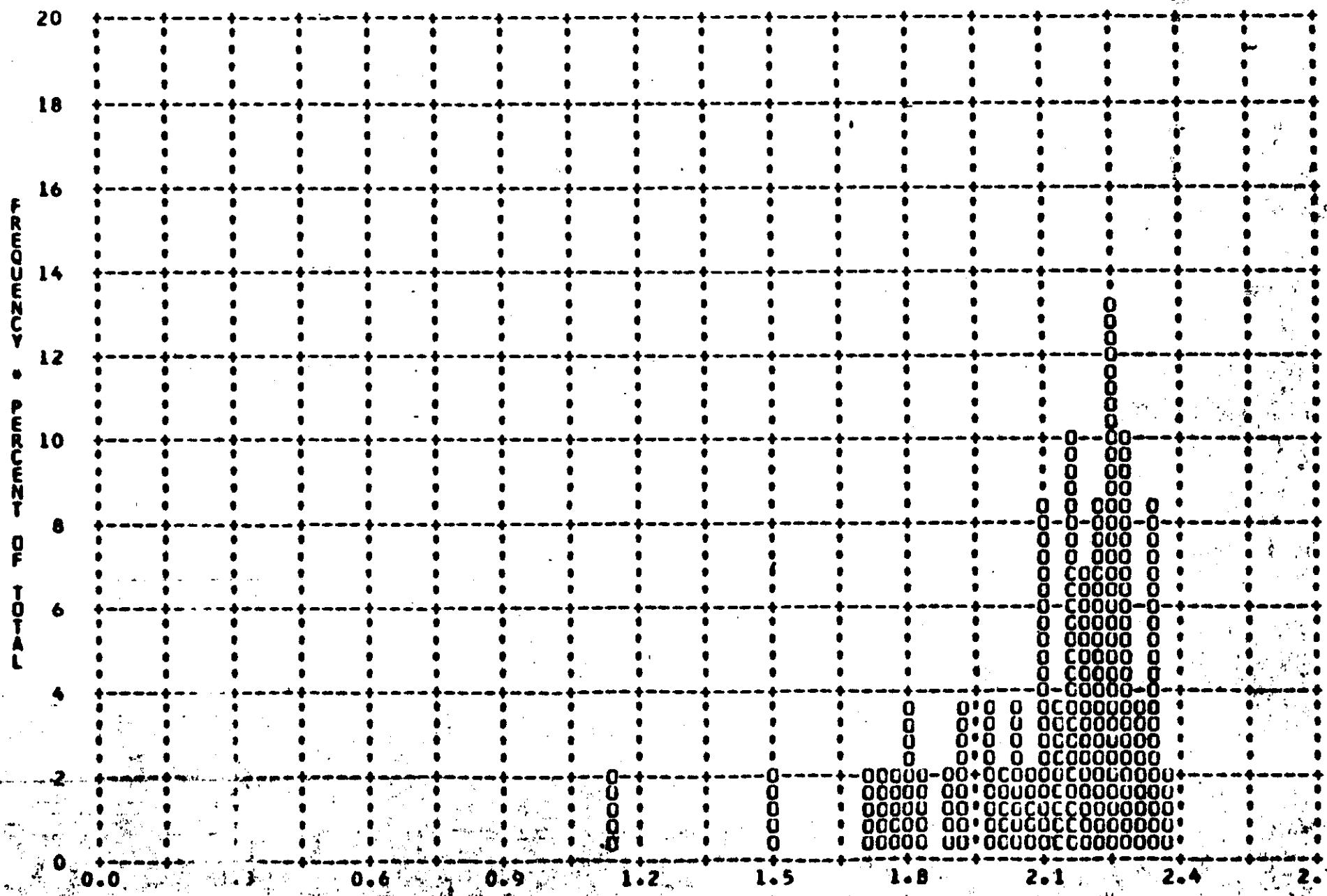


Figure A-42

MISSION • 1018-2 • INSTR • AFT • 06-11-65 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.81 • MEDIAN • 0.79 • STD DEV • 0.29 • RANGE • 0.22 TO 1.50 WITH 247 SAMPLES

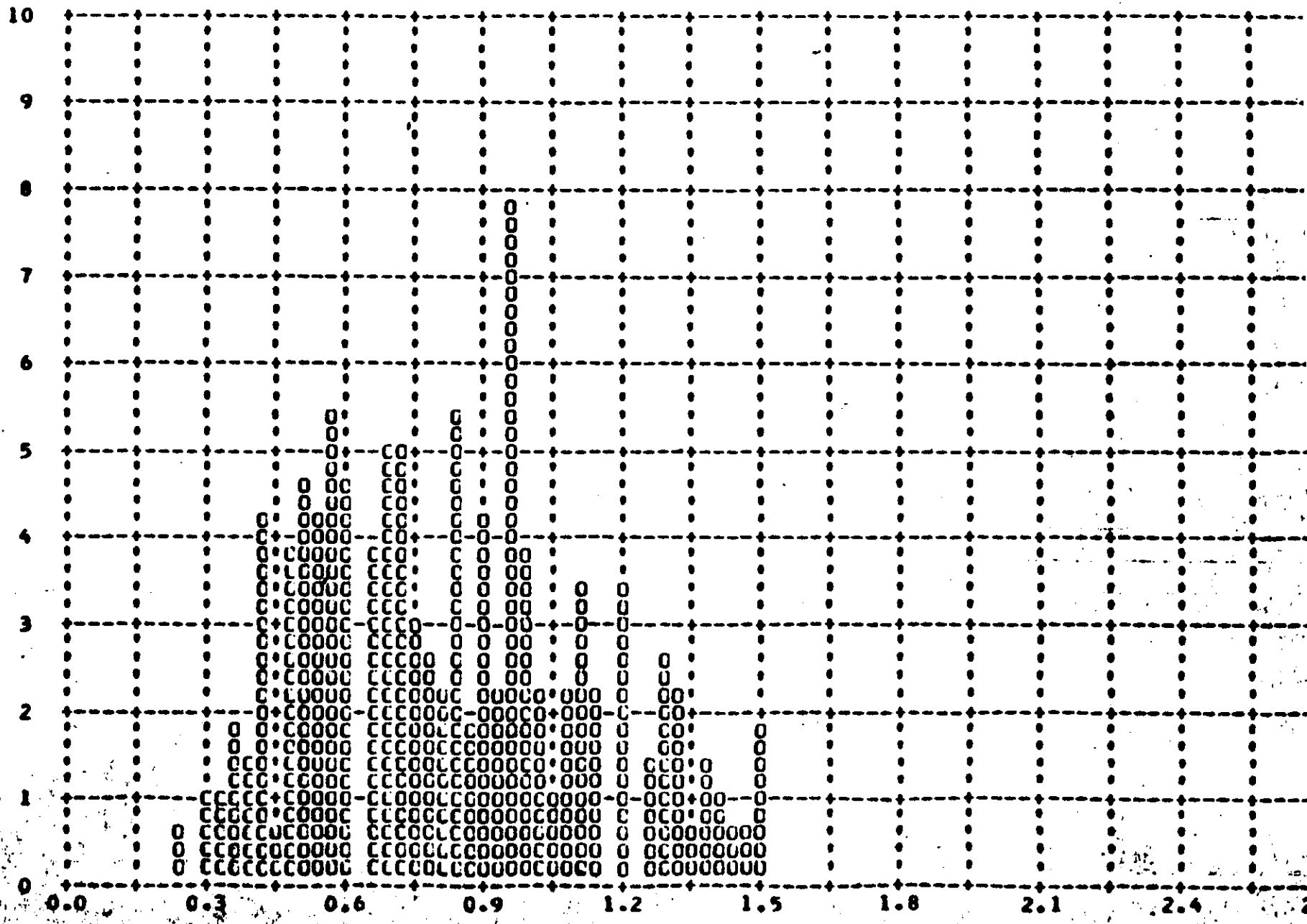


Figure A-43

MISSION • 1018-2 • INSTR • AFT • 06-11-65 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.70 • MEDIAN • 1.74 • STD DEV • 0.28 • RANGE • 0.94 TO 2.26 WITH 247 SAMPLES

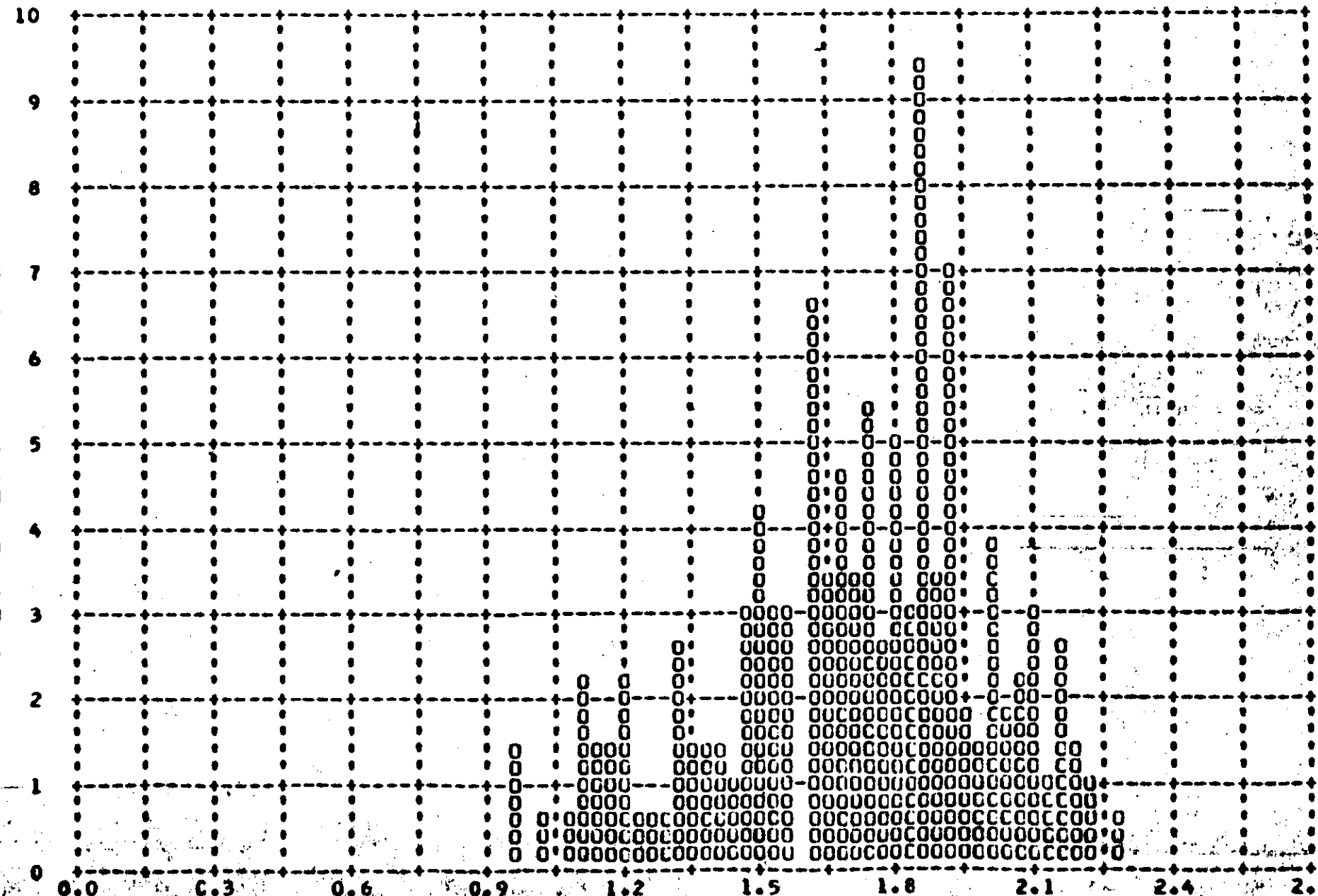


Figure A-44

MISSION • 1018-2 • INSTR • AFT • 06-11-65 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 1.98 • MEDIAN • 2.04 • STD DEV • 0.25 • RANGE • 1.09 TO 2.35 WITH 236 SAMPLES

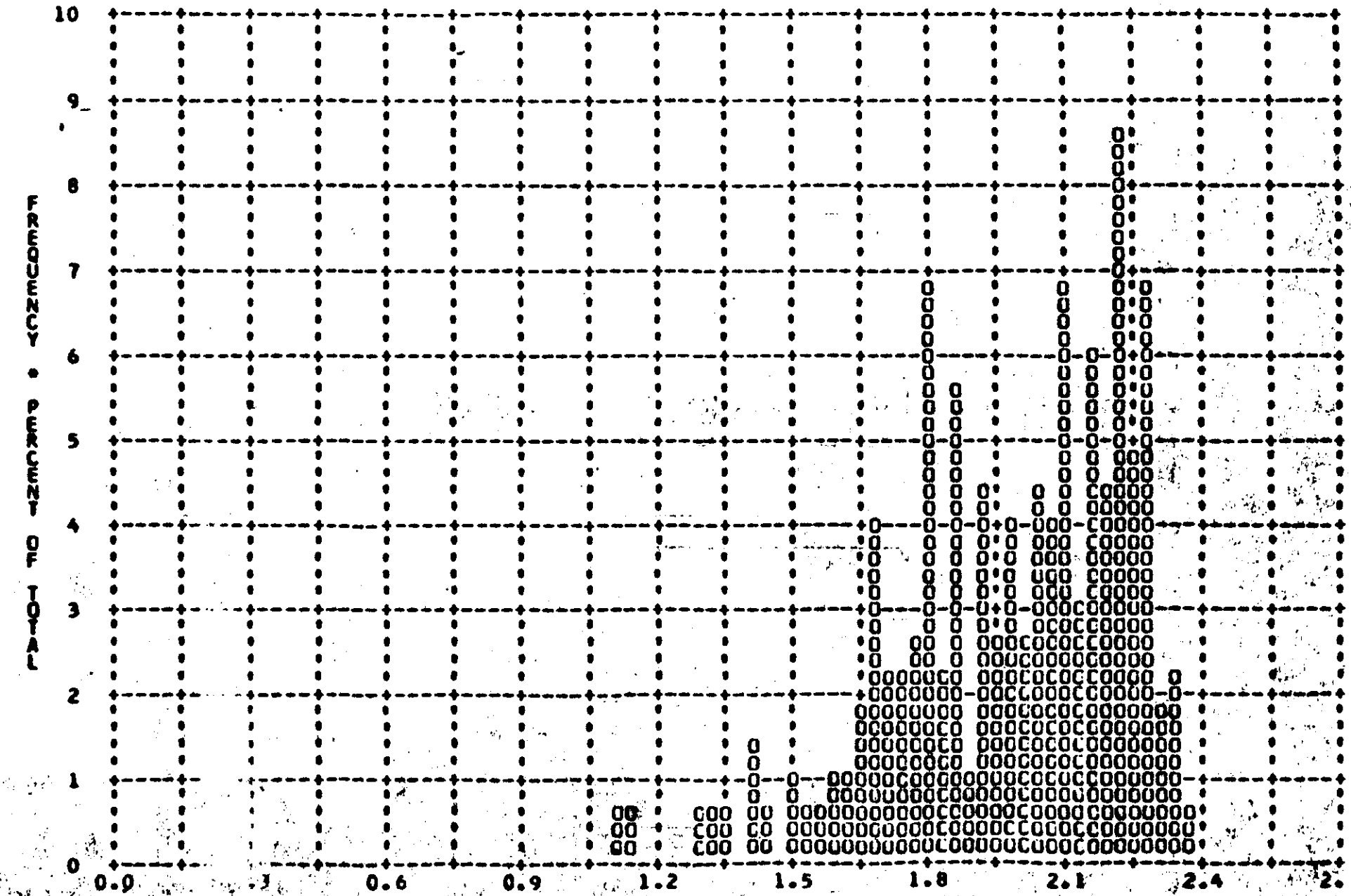


Figure A-45.

Distribution:

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