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NO. [redacted]

Cy [redacted]

27 October 1966

TO: [redacted]

THRU: [redacted]

FROM: [redacted]

SUBJECT: MISSION 1029-1 AND 1029-2 FINAL REPORT

Enclosed is the Final Performance Evaluation Report for Mission 1029-1 and 1029-2.

[redacted]
Manager
Advanced Projects

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CORONA J

PERFORMANCE EVALUATION REPORT

MISSION 1029-1 and 1029-2

FTV 1623, J-27

22 September 1966

Approved: [redacted]
Mgr.

Approved [redacted]
Mgr.

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FOREWARD

This report details the performance of the payload system during the operational phase of the [redacted] Flight Test Vehicle 1623.

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

This document is the final payload test and performance evaluation report for Mission 1029-1 and 1029-2 which was launched on 2 February 1966.

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INTRODUCTION

This report presents the final performance evaluation of Missions 1029-1 and 1029-2 of the Corona Program. The purpose of this report is to define the performance characteristics of the J-27 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 [redacted]

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

SECTION 1

SYSTEM PERFORMANCE

A. MISSION OBJECTIVES

The payload section of Mission 1029, placed into orbit by Flight Test Vehicle #1623 and SLV-2A booster #450, 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-27 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 five day photographic periods with no inactive period.

B. MISSION DESCRIPTION

The payload was launched from Vandenberg Air Force Base (VAFB) at 2132:14 Z (1332:14 PST) on 2 February 1966. Ascent and injection were normal and the achieved orbit was within nominal tolerances. Tracking and command support was effected by the Air Force Satellite Control Facility consisting of tracking and command stations at [redacted] under central control of the Satellite Test Center at Sunnyvale, California. Mission 1029-1 consisted of five days operation and was completed by air recovery on 7 February 1966. Mission 1029-2 was completed with an air recovery on 12 February 1966 following five days of photographic operations.

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

ORBITAL PARAMETERS

Parameter	Predicted	Orbit 1 Actuals
Period (Min.)	90.68	90.66
Perigee (N.M.)	99.6	99.49
Apogee (N.M.)	236	235.12
Inclination (Deg.)	75.00	75.05
Perigee Latitude (Deg. N.)	20	22.52
Eccentricity	0.0188	0.0188

C. PANORAMIC CAMERAS

Both instruments operated normally throughout the flight. The film supply was depleted prior to the -2 recovery. The H.O. imagery was veiled on the sun side of the vehicle.

D. STELLAR-INDEX CAMERAS

The Index camera on -1 mission operated satisfactorily but the Stellar operation was erratic.

The "B" S/I unit didn't operate until pass D-134.

E. OTHER SUBSYSTEMS

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

SCHEMATIC INBOARD PROFILE - CORONA J SYSTEM

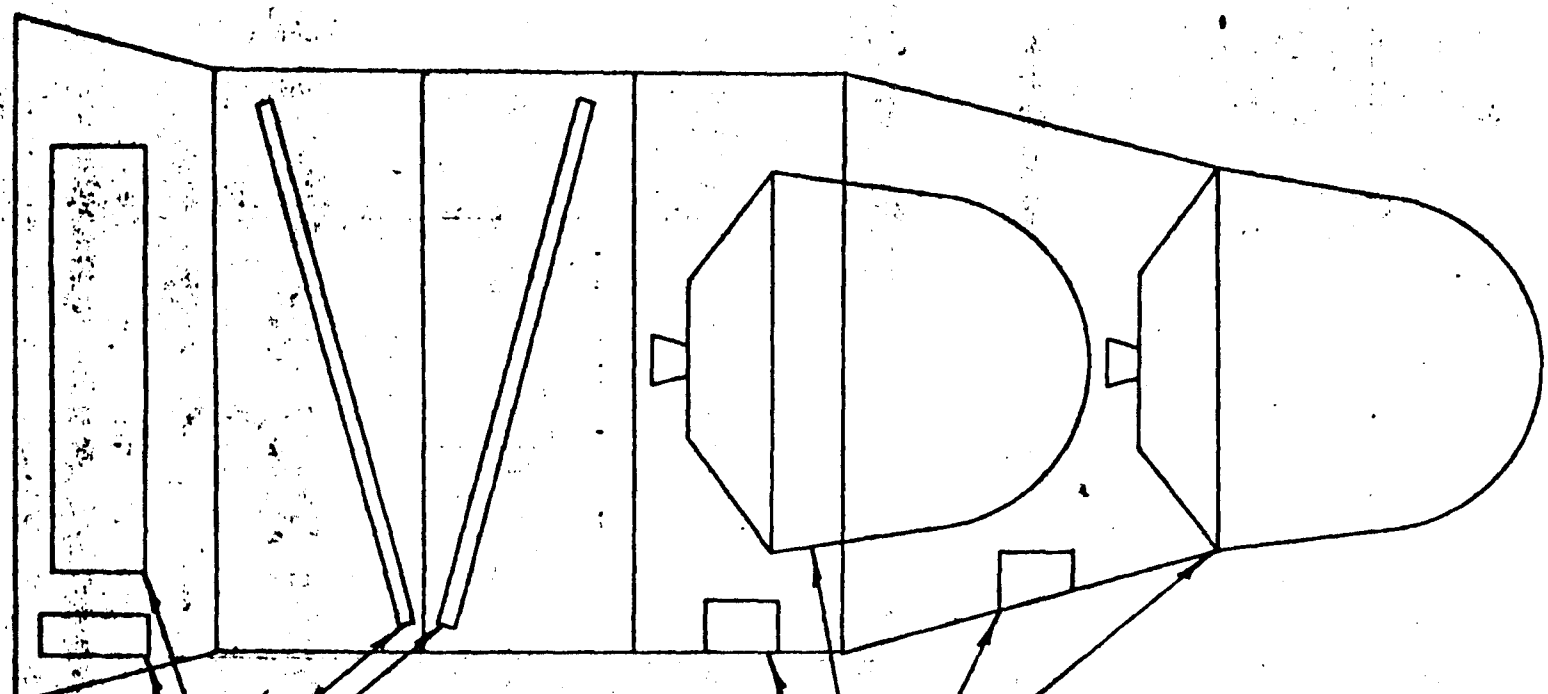


FIGURE 1-1

SECTION 2

PRE-FLIGHT SYSTEMS TEST

A. ENVIRONMENTAL TESTING

1. Test Objective

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

2. Summary

The J-27 payload system, consisting of panoramic instruments 178 and 179, was in the Sunnyvale TASC chamber for environmental testing from August 18 to 25, 1965. Testing consisted of 15 orbits of operations in the "A" mode and 12 orbits in the "B".

The lowest internal camera pressure experienced was 0.3 microns. The corona level was acceptable.

Dynamic operation of both panoramic instruments was satisfactory during both the "A" and "B" operations. Instrument #2 was over 5% slow during some "B" mode operations. Generally, Instrument #1 ran faster than #2. Differences in cycle rates between instruments ran as high as 2.5% near the bottom of the ramp.

Both stellar/index units performed satisfactorily.

Clock performance was satisfactory. The instrumentation system performance was satisfactory with the exception of some noisy idler commutators.

Normal pressure make-up system performance was observed from the internal pressure data. The average gas consumption for both "A" and "B" operations was 7.0 psi/min.

Both SRV "A" and "B" recovery sequences were satisfactory.

A vehicle deactivate sequence was normal with both instruments stowing after 5 cycles.

Two H.O. units failed.

3. Panoramic Camera Performance

The dynamic performance of both panoramic instruments was satisfactory as observed on the TLM monitors for center of format switch, lens rotation, 99/101 clutch, and film transport.

The average 99/101 clutch ratios were 6/6 for Instrument #1 and 7/6 for Instrument #2.

The cycle rate data for all of the stereo operations are listed in Table 2-1. Instrument #2 cycle rates were over 5% slow near the bottom of the R8-A2 ramp during two "B" mode operations. Instrument #2 was over 3% slow for several other "B" operations. Generally, Instrument #1 ran faster than Instrument #2. The difference in rates between the instruments exceeded 2% for some operations near the bottom of the ramp.

The instruments operated for 5 cycles during the vehicle deactivate sequence. The cycle periods were 6.875 seconds for Instrument #1 and 7.060 seconds for Instrument #2.

H.O. Input Unit, Inst. #179, S/N 281G4

This unit started to fail approximately 500' from C&W in the "A" mode. The failure was of a random nature, with the shutter hanging open either on the opening or on the closing portion of the operate cycle, causing a very obvious increase in density growth in the fogging lamp images. Prior to the metering phase the shutter closed, as there was no smearing of the fogging lamp image. This random mode of failure continued through C&W for approximately 1500' into the "B" bucket, at which time the shutter failed open and remained open throughout the entire balance of the operation.

H. O. Output Unit, Inst. #178, S/N 284G3

This unit failed throughout the entire TASC operation in a random manner, similar to the Input unit failure, but with two exceptions:

(1) This unit did not fail continuously, that is the shutter did not remain open for the entire metering cycle anytime during the "A" or "B" operation, but

(2) The shutter did remain open for approximately 25% of the metering cycle and when this anomaly occurred, it was random.

Both units were removed and returned to Boston for failure analysis. Two additional units were shipped from Boston, installed, and a confidence run of 400 main instrument cycles was performed under ambient conditions. The results of this confidence run was satisfactory.

4. Stellar/Index Performance

Normal stellar/index operations were observed for both "A" and "B" units. The shutter and platen events occurred in proper sequence with each S/I metering cycle. Metering ratios were consistently 7/3 and 8/3 throughout the test.

5. Clock Performance

Clock serial readouts were correlated with the IRIG "C" time generator periodically throughout the TASC test. Results are listed on Table 2-2.

The amount of offset was fairly consistent for both "A" and "B" readouts. Results are reasonable with no gross clock discrepancies being observed that would indicate unsatisfactory performance.

6. Instrumentation Performance

TLM instrumentation performance throughout the test was satisfactory.

Good correlation between the film footage pots and cycle counters were obtained for both instruments for the "A" and "B" modes. Results are as follows:

	Instrument #1		Instrument #2	
	Pot	CC	Pot	CC
"A" Operations	2980	2964	2990	2972
"B" Operations	2945	2966	2849	2919

7. Pressure Make-up System Performance

The pressure make-up system performed satisfactorily. The average gas consumption rate was 6.8 psi/min. for the "A" operations and 7.3 psi/min for the "B" operations.

8. Temperature Summary

Average instrument temperature for the start and end of each mode of operations are listed below:

	"A" Mode		"B" Mode	
Orbit	0	15	1	12
Instrument #1	71	78	70	52
Instrument #2	68	75	70	57

B. RESOLUTION TEST

Resolution and theodolite tests of the J-27 system were completed on 13 September 1965. Results of the thru-focus resolution tests of pan instruments 178 and 179 show the following characteristics:

MASTER PAN INSTRUMENT NO. 178

Maximum high contrast resolution 176 lines/mm at .000 focal position.

Maximum low contrast resolution 108 lines/mm at .000 focal position.

SLAVE INSTRUMENT NO. 179

Maximum high contrast resolution 174 lines/mm at .000 focal position.

Maximum low contrast resolution 113 lines/mm at .000 focal position.

The resolution test data for both instruments as shown in Figures 2-1 and 2-2, has been reviewed and appears normal in all respects. The demonstrated resolution performance meets the system requirements specification.

C. LIGHT LEAK TEST

The system was tested for light leaks on 28 October 1965. This was the fourth test and only the procedures aimed at checking the repaired leaks were used.

The processed film indicated that the system was light tight except for the ever present camera drum leak. This small fogged area had a density of only 0.15 density above base density and would cause no significant loss of flight data.

D. FLIGHT LOADING AND CERTIFICATION

The flight readiness test run was performed January 16. Evaluation of the processed film from this test has disclosed a few very minor anomalies.

Camera 178, Master

All H/O fiducials slightly bloomed
Some slight banding at start of scan (output end) in bonus area only
Slight rail scratches on data block edge, outside of the format
All other data excellent

Camera 179, Slave

Slight rail scratches out of the format
Stretch marker on output end was slightly ragged on one side of the notch
All other data excellent

This system was certified for flight on January 21, 1966.

J-27 I78/179 TASC TEST OPERATIONS 8-18 TO 25-65

REV/MODE	RAMP	T.U.R.	INST 178 ACT.	INST 178 CAL.	INST 178 DEV.	INST 179 ACT.	INST 179 CAL.	INST 179 DEV.	178/179 DIFF.
0 A	7 7	0	3.648	3.638	-0.27	3.700	3.615	-2.35	1.43
1 A	7 7	293	3.590	3.572	-0.49	3.640	3.551	-2.51	1.39
2 A	4 1	1878	2.180	2.183	0.12	2.180	2.169	-0.49	-0.00
2 A	4 1	2128	2.170	2.186	0.73	2.164	2.173	0.42	-0.28
2 A	5 8	476	3.030	3.027	-0.11	3.066	3.015	-1.68	1.19
3 A	5 8	1400	2.520	2.528	0.33	2.533	2.522	-0.44	0.52
4 A	7 7	2030	2.495	2.488	-0.27	2.505	2.482	-0.93	0.40
4 A	8 2	275	5.310	5.318	0.15	5.370	5.232	-2.65	1.13
6 A	11 1	1960	2.245	2.271	1.16	2.250	2.266	0.70	0.22
6 A	5 8	830	2.857	2.864	0.25	2.887	2.855	-1.13	1.05
6 A	5 8	1335	2.553	2.566	0.49	2.567	2.559	-0.32	0.55
7 A	7 7	1065	3.000	3.023	0.77	3.028	3.012	-0.53	0.93
7 A	7 7	1357	2.718	2.728	0.36	2.734	2.720	-0.52	0.59
8 A	7 7	2405	2.647	2.663	0.61	2.667	2.656	-0.42	0.76
9 A	4 1	880	2.967	2.987	0.67	2.993	2.976	-0.56	0.88
9 A	4 1	2980	2.990	3.023	1.11	3.033	3.012	-0.69	1.44
9 A	11 1	745	5.140	5.285	2.75	5.250	5.200	-0.95	2.14
10 A	11 1	1745	2.293	2.320	1.18	2.303	2.315	0.51	0.44
11 A	7 7	1400	2.683	2.692	0.32	2.713	2.684	-1.08	1.12

TABLE 2-1

REV/MODE	RAMP	T.U.R.	INST 178 ACT.	INST 178 CAL.	INST 178 DEV.	INST 179 ACT.	INST 179 CAL.	INST 179 DEV.	178/179 DIFF.
11 A	7 7	1925	2.473	2.479	0.23	2.488	2.473	-0.63	0.61
12 A	8 2	990	3.338	3.394	1.64	3.393	3.376	-0.51	1.65
12 A	8 2	570	4.478	4.529	1.12	4.568	4.478	-2.02	2.01
13 A	4 1	2490	2.183	2.205	1.00	2.203	2.204	0.03	0.92
13 A	11 1	1738	2.280	2.325	1.92	2.310	2.319	0.39	1.32
14 A	11 1	2880	4.210	4.249	0.91	4.200	4.208	0.18	-0.24
15 A	5 8	1695	2.395	2.410	0.64	2.420	2.404	-0.65	1.04
1 B	7 7	290	3.560	3.574	0.39	3.625	3.552	-2.05	1.83
2 B	4 1	1880	2.173	2.183	0.44	2.168	2.169	0.06	-0.23
3 B	5 8	1400	2.525	2.528	0.13	2.560	2.522	-1.51	1.39
4 B	7 7	2040	2.518	2.490	-1.13	2.563	2.484	-3.19	1.79
4 B	8 2	275	5.368	5.318	-0.94	5.500	5.232	-5.13	2.46
5 B	8 2	1670	2.245	2.218	-1.24	2.240	2.212	-1.26	-0.22
5 B	8 2	2190	2.268	2.231	-1.68	2.278	2.225	-2.37	0.44
5 B	11 1	1335	2.930	2.923	-0.25	2.970	2.913	-1.97	1.37
6 B	11 1	1860	2.270	2.275	0.21	2.275	2.269	-0.25	0.22
6 B	5 8	1025	2.775	2.765	-0.38	2.820	2.756	-2.31	1.62
6 B	5 8	1335	2.585	2.566	-0.75	2.610	2.559	-2.00	0.97
7 B	7 7	1050	3.033	3.035	0.06	3.080	3.023	-1.87	1.55
7 B	7 7	1340	2.773	2.743	-1.10	2.795	2.735	-2.20	0.79
8 B	7 7	2385	2.708	2.648	-2.25	2.733	2.641	-3.48	0.92
8 B	4 1	885	2.998	2.978	-0.69	3.038	2.967	-2.40	1.33

TABLE 2-1

REV/MODE	RAMP	T.U.R.	INST 178 ACT.	INST 178 CAL.	INST 178 DEV.	INST 179 ACT.	INST 179 CAL.	INST 179 DEV.	178/179 DIFF.
9 8	4 1	2995	3.080	3.053	-0.90	3.120	3.041	-2.60	1.30
9 8	11 1	745	5.265	5.285	0.38	5.395	5.200	-3.74	2.47
10 8	11 1	1745	2.345	2.320	-1.06	2.330	2.315	-0.65	-0.64
10 8	11 1	2760	3.790	3.806	0.41	3.850	3.778	-1.90	1.58
10 8	7 7	0	3.680	3.638	-1.15	3.740	3.615	-3.45	1.63
11 8	7 7	1620	2.585	2.550	-1.38	2.595	2.543	-2.03	0.39
11 8	7 7	2150	2.555	2.520	-1.38	2.585	2.514	-2.83	1.17
11 8	7 7	0	3.675	3.638	-1.01	3.735	3.615	-3.31	1.63
12 8	8 2	950	3.505	3.487	-0.53	3.560	3.467	-2.68	1.57
12 8	8 2	1770	2.240	2.205	-1.60	2.225	2.203	-1.00	-0.67
12 8	8 2	0	5.678	5.632	-0.82	5.820	5.529	-5.27	2.50

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 2-1

CLOCK/IRIG "C" CORRELATION

"A" MODE

REV.	DAY-HOUR-MIN-SEC	CLOCK(Sec)	ERROR 12 (Sec)
0	231 8 6 11.280	4,716.867	--
6	232 9 2 59.095	94,524.645	- .037
8	232 11 38 4.710	103,830.259	- .038
16	234 8 19 50.505	260,019.205	- .020

"D" MODE

1	234 12 15 31.640	278,877.036	
5	235 11 59 53.840	364,339.230	- .056
6	235 13 29 53.820	369,739.205	- .061
7	235 15 10 58.870	375,804.252	- .064

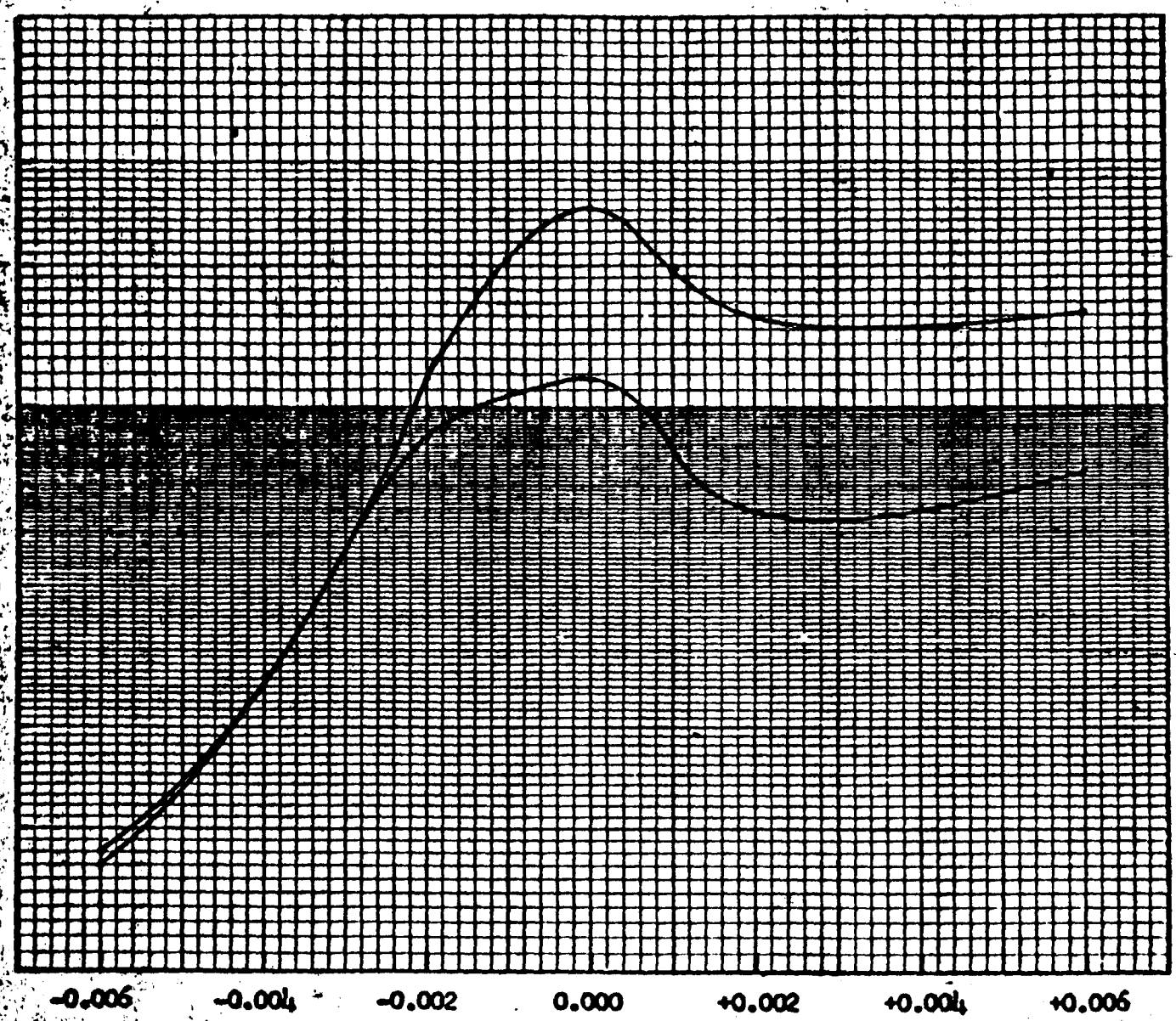
- Sign indicates that clock is reading slow

TABLE 2-2

TOP SECRET [redacted]

No. [redacted]

PRE-FLIGHT DYNAMIC RESOLUTION



Camera No: 178

Payload No: J-27

Resolution (l/mm)

High Contrast: 176

Low Contrast: 108

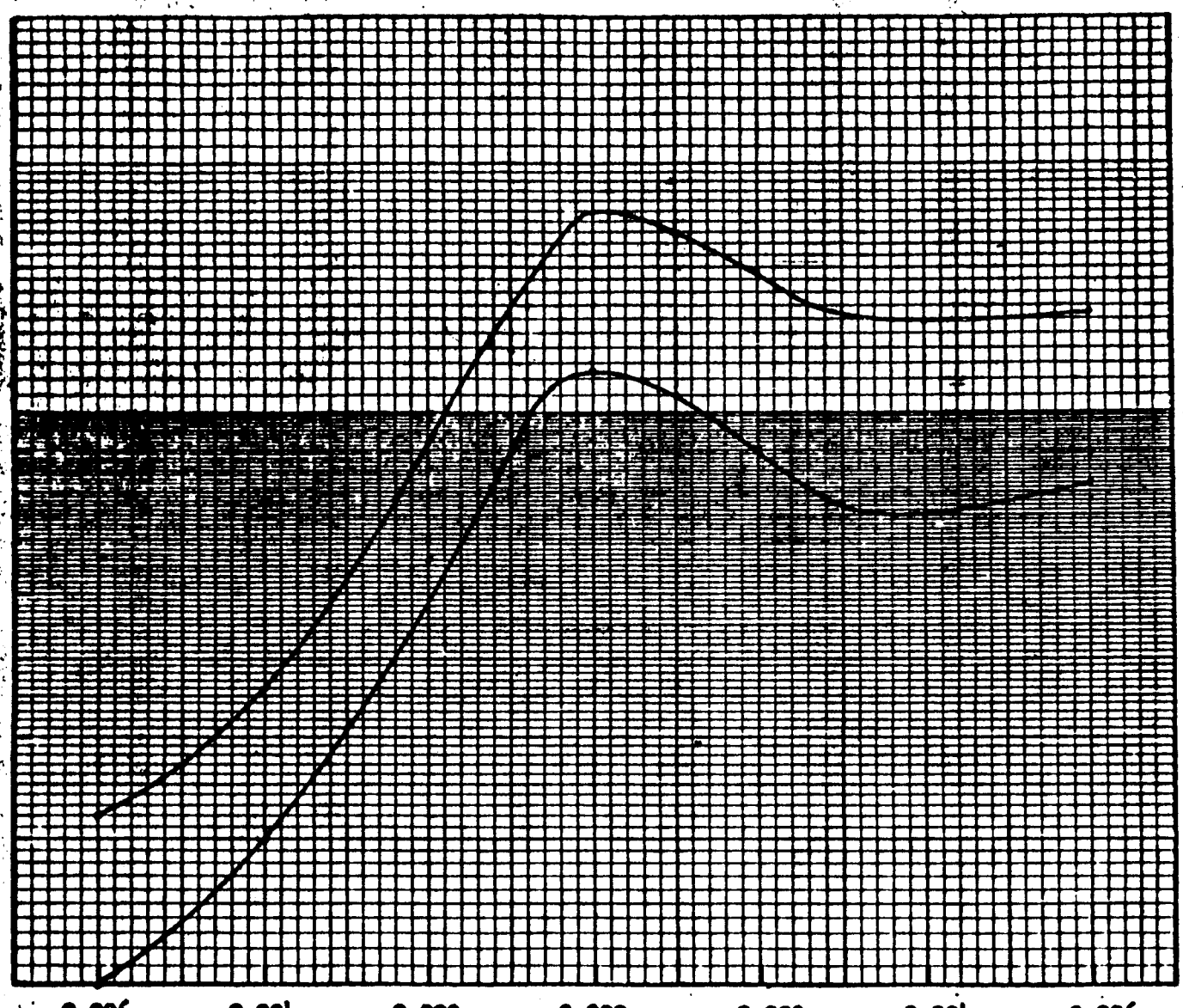
Film Type: 3404

Test Date: 9/13/65

TOP SECRET [redacted]

FIGURE 2-1

PRE-FLIGHT DYNAMIC RESOLUTION



Camera No: 179

Payload No: J-27

Resolution (l/mm)

High Contrast: 174

Low Contrast: 113

Film Type: 3404

Test Date: 9/13/65

FIGURE 2-2

SECTION 3

FLIGHT OPERATIONS

A. SUMMARY

All launch, ascent, and injection events occurred as programmed. All Thor and Agena events were normal which resulted in achieving the desired orbit.

Both panoramic instruments operated satisfactorily throughout the flight. Average cycle rates on both units deviated from pre-flight calibrations. The master was 1% slow and the slave was 3% slow.

Payload analysis indicated the -1 stellar/index camera operation was abnormal. The stellar camera operation was erratic but the index was reported to be normal.

The -2 stellar/index camera operation was also abnormal. The stellar/index camera failed to operate from the start of the second mission until Orbit 134. Camera operation was satisfactory throughout the remainder of the flight.

The clock, instrumentation, command, and the PMU systems functioned normally throughout the flight.

Both the -1 and -2 recovery systems were successfully recovered by air catch on Orbits 81 and 160, respectively.

B. PANORAMIC CAMERA PERFORMANCE

Camera system dynamics were normal throughout the -1 and -2 missions. The film transport of both camera systems was normal. Cycle rate data (Table 3-1) indicates that the master instrument was running approximately 1% slower than the unit pre-flight calibration and the slave instrument was running approximately 3% slower than the unit pre-flight calibration. The master and slave instruments were approximately 2% apart throughout most of the flight. The average 99/101 clutch ratio for the master instrument was 6/7 and for the slave instrument was 6/6.

Panoramic Film Consumption

These data are based on cycle counter readings and nominal film supply.

	Predicted	Actual	
		Master	Slave
Pre-launch	110	120	119
-1 Mission	3000	2931	2924
-2 Mission	2935	2993	3002
Total Frames	6045	6044	6045

FMC Match

Forward Motion Compensation errors of less than 5% were attained for most camera operations. The errors in excess of 5% were a result of the combined effects of relatively wide operational geographic latitudes; the cycle rates of the cameras being 2 to 2 1/2% apart; and the ramp generator design limitations.

C. INSTRUMENTATION AND COMMAND SYSTEM PERFORMANCE

Instrumentation

The instrumentation system performed satisfactorily throughout both missions except for the slave cycle counter. The tens position of of the cycle counter failed to advance properly on two different occasions during the -2 mission. However, the appropriate change was accomplished during the next operation in each instance.

Command System

The payload system responded to all stored and real time commands. No operational problems were encountered during the flight.

D. CLOCK SYSTEM PERFORMANCE

The payload clock performance was satisfactory during both phases of the mission. The clock/system time correlation data obtained from the [redacted] acquisitions are included in Table 3-2.

E. PRESSURE MAKE-UP SYSTEM PERFORMANCE

The Pressure Make-up system operated normally throughout the flight. The average gas consumption was 7.6 psi/min for a total instrument operate time of 252 minutes. The supply pressure dropped from 2580 psig at launch to 665 psig at the end of the -2 mission.

The average gas consumption rate was 6.7 psi/min for the -1 mission and 8.4 psi/min for the -2 mission.

F. THERMAL ENVIRONMENT

The temperature data obtained from the [redacted] acquisition are contained in Table 3-3. Average panoramic camera temperatures for the master camera varied from 92°F to 71°F and the slave camera temperatures varied from 85°F to 65°F during the mission. The actual system temperature versus the predicted system temperatures for the major components are compared in Figures 3-1 to 3-3.

G. STELLAR/INDEX CAMERA PERFORMANCE

The -1 stellar/index camera operation was abnormal. The stellar camera operation was erratic resulting in numerous double exposures and smear.

The -2 stellar/index camera failed to operate until Orbit 134. The stellar/index camera operated properly for the remainder of the flight.

J-27 ENGINEERING FLIGHT RAMP PROFILE WITH INSTRUMENTS 178 AND 179

REV/MODE	RAMP	T.U.R.	INST 178 ACT.	CAL.	DEV.	INST 179 ACT.	CAL.	DEV.	178/179 DIFF.
9 A	8 3	136	5.C05	5.158	2.96F	5.140	5.079	1.20S	2.70
16 A	8 3	1704	2.25C	2.267	0.77F	2.310	2.262	2.13S	2.67
31 A	8 2	1745	2.22C	2.2C5	0.66S	2.250	2.204	2.08S	1.35
47 A	8 2	1717	2.227	2.2C6	0.95S	2.265	2.206	2.69S	1.71
63 A	8 2	1783	2.217	2.2C5	0.56S	2.260	2.203	2.61S	1.94
79 A	8 2	1735	2.220	2.206	0.65S	2.257	2.205	2.37S	1.67
88 B	8 2	323	5.073	5.210	2.62F	5.230	5.129	1.98S	3.09
94 B	8 2	19C0	2.215	2.203	0.53S	2.250	2.200	2.27S	1.58
119 B	8 2	390	4.92C	5.041	2.40F	4.875	4.968	1.87F	-0.91
126 B	8 2	1930	2.240	2.2C3	1.66S	2.275	2.200	3.41S	1.56
142 B	8 2	1975	2.229	2.2C4	1.16S	2.271	2.200	3.21S	1.88

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

TABLE 3-1

1029 CLOCK CORRELATION

ORDER FIT 1

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
0.387985330 05	C.1C871838CC 06	C.3879854270 05	-0.0097	9	
0.784201380 05	C.1483999840 C6	0.7842014400 05	-0.0060	16	
0.394221980 05	C.195742044C C6	0.3942220070 05	-0.0027	25	
0.735858530 05	C.2299C570CC 06	0.7358585440 05	-0.0014	31	
0.345239990 05	C.277243844C C6	0.3452399510 05	0.0039	40	
0.741259910 05	C.316845837C C6	0.7412598540 05	0.0056	47	
0.351080230 05	C.3642278730 C6	0.3510801810 05	0.0049	56	
0.747450050 05	C.4C3864863C 06	C.7474500540 05	-0.0004	63	
0.356661700 05	0.4511860310 06	0.3566617010 05	-0.0001	72	
0.752590230 05	0.490778884C 06	0.7525902040 05	0.0026	79	
0.362080380 05	0.1256989CC0 04	0.3620803410 05	0.0039	88	
0.702806580 05	0.3532960500 05	0.7028064770 05	0.0103	94	
0.366796280 05	0.8812858300 05	C.3667962210 05	0.0059	104	
0.316889480 05	0.1695379120 06	0.3168894550 05	0.0025	119	
0.712840980 05	C.2C9133071C C6	0.7128410180 05	-0.0038	126	
0.322207770 05	C.2564697500 06	0.3222077750 05	-0.0005	135	
0.717556740 05	0.2960046530 06	0.7175567780 05	-0.0038	142	
0.326800700 05	0.343329056C 06	0.3268007750 05	-0.0075	151	
0.721971800 05	0.3828461650 06	0.7219718380 05	-0.0038	158	

A0=-0.69919829750 05 A1= 0.999999930962D 00

SIGMA=0.00489 NO. POINTS= 19

RATIO OF CLOCK TIME TO SYS TIME= 0.1000000069040 01

ORDER FIT 2

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
0.387985330 05	0.1C871838C0 C6	C.3879853500 05	-0.0020	9	
0.784201380 05	0.1483999840 C6	C.7842013860 05	-0.0006	16	
0.394221980 05	C.195742044C C6	C.3942219780 05	0.0002	25	
0.735858530 05	C.2299C5700C C6	C.7358585300 05	0.0000	31	
0.345239990 05	C.277243844C 06	C.3452399560 05	0.0034	40	
0.741259910 05	C.3168458370 06	C.7412598710 05	0.0039	47	
0.351080230 05	C.3642278730 06	C.3510802110 05	0.0019	56	
0.747450050 05	0.403864863C C6	C.7474500920 05	-0.0042	63	
0.356661700 05	0.4511860310 C6	0.3566617450 05	-0.0045	72	
0.752590230 05	C.490778884C 06	0.7525902510 05	-0.0021	79	
0.362080380 05	0.1256989CC0 C4	0.3620803880 05	-0.0008	88	
0.702806580 05	C.3532960500 05	0.7028065230 05	0.0057	94	
0.366796280 05	0.8812858300 05	0.3667962600 05	0.0020	104	
0.316889480 05	C.1695379120 06	C.3168894750 05	0.0005	119	
0.712840980 05	0.2C9133071C 06	0.7128410250 05	-0.0045	126	
0.322207770 05	0.2564697500 06	0.3222077650 05	0.0005	135	
0.717556740 05	C.2960046530 06	0.7175567500 05	-0.0010	142	
0.326800700 05	0.343329056C 06	0.3268007230 05	-0.0023	151	
0.721971800 05	0.3828461650 C6	0.7219717630 05	0.0037	158	

A0=-0.69919845020 05 A1= 0.1C0000000851D 01

A2=-0.751196352789D-13

SIGMA=0.00279 NO. POINTS= 19

TABLE 3-3

J-27 TEMPERATURE SUMMARY

SENSOR	ORBITS ACQUIRED																		
Master Camera	9	16	25	31	40	47	56	63	72	79	88	94	103	119	126	135	142	151	158
3	83	80	81	79	82	79	78	77	79	75	74	68	71	71	67	71	68	71	68
4	88	83	86	83	87	82	83	81	83	78	79	73	76	75	70	75	69	76	70
5	96	92	93	91	94	89	91	88	90	86	85	78	82	81	77	80	75	80	75
6	98	93	94	92	92	91	89	88	88	84	82	76	79	77	73	75	72	75	71
7	89	86	87	86	86	84	83	82	83	79	77	73	75	73	69	73	70	72	69
8	94	90	92	89	93	86	89	86	89	84	84	77	81	80	75	79	74	79	74
9	98	91	94	90	94	89	90	87	90	84	84	78	81	80	74	78	72	78	72
10	-	-	-	-	-	-	-	-	-	-	-	-	-	--	-	-	-	-	-
11	93	85	92	88	91	86	86	83	86	81	78	68	75	73	66	72	65	70	65
12	88	81	86	82	86	80	83	80	84	78	80	72	77	77	70	77	70	78	70
13	93	91	92	92	92	90	88	87	87	84	81	76	78	75	72	74	72	74	72
AVG	92	87	90	87	90	85	86	84	86	81	80	74	78	77	71	75	71	75	71
Slave Camera																			
3	89	83	86	83	86	82	81	79	81	75	74	68	71	68	63	Noise	61	66	60
4	85	79	82	78	82	77	79	74	79	72	74	65	70	68	61	66	61	66	60
5	85	80	82	79	82	78	79	78	80	75	75	68	72	71	67	70	66	70	67
6	84	80	81	81	82	80	79	79	80	76	74	70	72	71	68	71	68	72	68
7	87	83	85	83	85	82	81	80	82	77	76	71	74	73	69	72	68	71	68
8	88	88	87	83	87	82	84	80	84	79	79	73	77	76	69	75	71	75	69
9	84	80	84	80	84	81	82	78	83	78	78	72	76	76	71	75	70	76	71
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	76	74	74	73	75	72	72	71	73	69	67	65	65	64	63	64	61	64	61
12	92	84	89	84	89	82	85	80	85	77	79	71	76	74	68	73	66	71	65
13	80	77	79	78	79	77	76	74	76	74	70	68	68	67	66	66	65	66	65
AVG	85	81	83	80	84	79	80	77	80	75	75	66	73	71	66	70	66	70	65
Supply Spool																			
1	54	53	56	56	58	57	56	56	57	54	54	49	49	49	48	48	47	48	47
2	76	72	76	74	77	74	74	72	75	70	71	64	66	65	61	64	59	63	60

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

TABLE 3-3

J-27 TEMPERATURE SUMMARY

SENSOR	ORBITS ACQUIRED																		
Fair ("A") Barrel #1 ("B")	9	16	25	31	40	47	56	63	72	79	88	94	103	119	126	135	142	151	158
1	42	32	38	32	42	29	29	29	38	22	24	34	24	27	34	27	27	27	31
2	11	-2	8	-2	11	-2	5	-2	11	-10	64	51	67	71	58	74	61	74	64
3	-6		-6	-3	-6	-3	-14	-3	-6	-10	81	98	83	83	92	83	86	81	92
4	55	49	49	45	52	42	39	42	45	36	40	53	37	37	40	30	33	30	26
5	75	65	72	59	68	55	52	52	59	42	36	40	33	33	30	26	23	23	23
6	70	70	64	67	67	58	48	51	58	39	-	-	-	-	-	-	-	-	-
Barrel #2																			
1	56	75	49	65	52	62	39	56	43	43	26	33	26	26	26	23	16	16	16
2	59	90	53	84	53	78	40	72	47	63	37	53	34	34	37	30	27	27	24
3	73	91	73	91	76	88	67	94	76	88	70	88	73	76	85	76	82	73	82
4	66	53	60	56	66	56	56	56	69	53	63	53	66	72	60	72	63	76	69
5	56	59	53	59	56	59	46	62	56	53	43	49	43	46	49	46	43	46	46
Conic Adapter																			
1	52	52	52	52	52	45	35	39	42	32	29	19	22	22	13	16	9	16	6
Clock																			
1	72	66	68	66	70	66	63	63	66	61	59	54	57	57	54	56	52	57	52
2	73	65	66	64	65	61	60	59	61	55	74	71	71	70	54	54	50	56	50
Thrust Cone "A" to "B" SRV																			
1	50	45	47	43	48	42	42	39	45	39	67	63	65	67	62	64	62	63	61
2	73	65	66	64	65	61	60	69	61	55	74	71	71	70	66	67	65	67	64
Stellar/Index "A" to "B"																			
1	64	58	61	58	61	55	49	55	55	49	58	54	54	54	54	54	48	51	51
2	56	56	59	53	56	53	47	50	53	44	59	53	53	53	53	53	46	53	50
Recovery Battery "B" SRV																			
1	75	76	76	78	76	78	73	75	74	72	85	86	81	80	79	83	83	86	85
Master Cassette "A" SRV																			
2	74	70	71	72	73	71	70	69	71	68	-	-	-	-	-	-	-	-	-

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

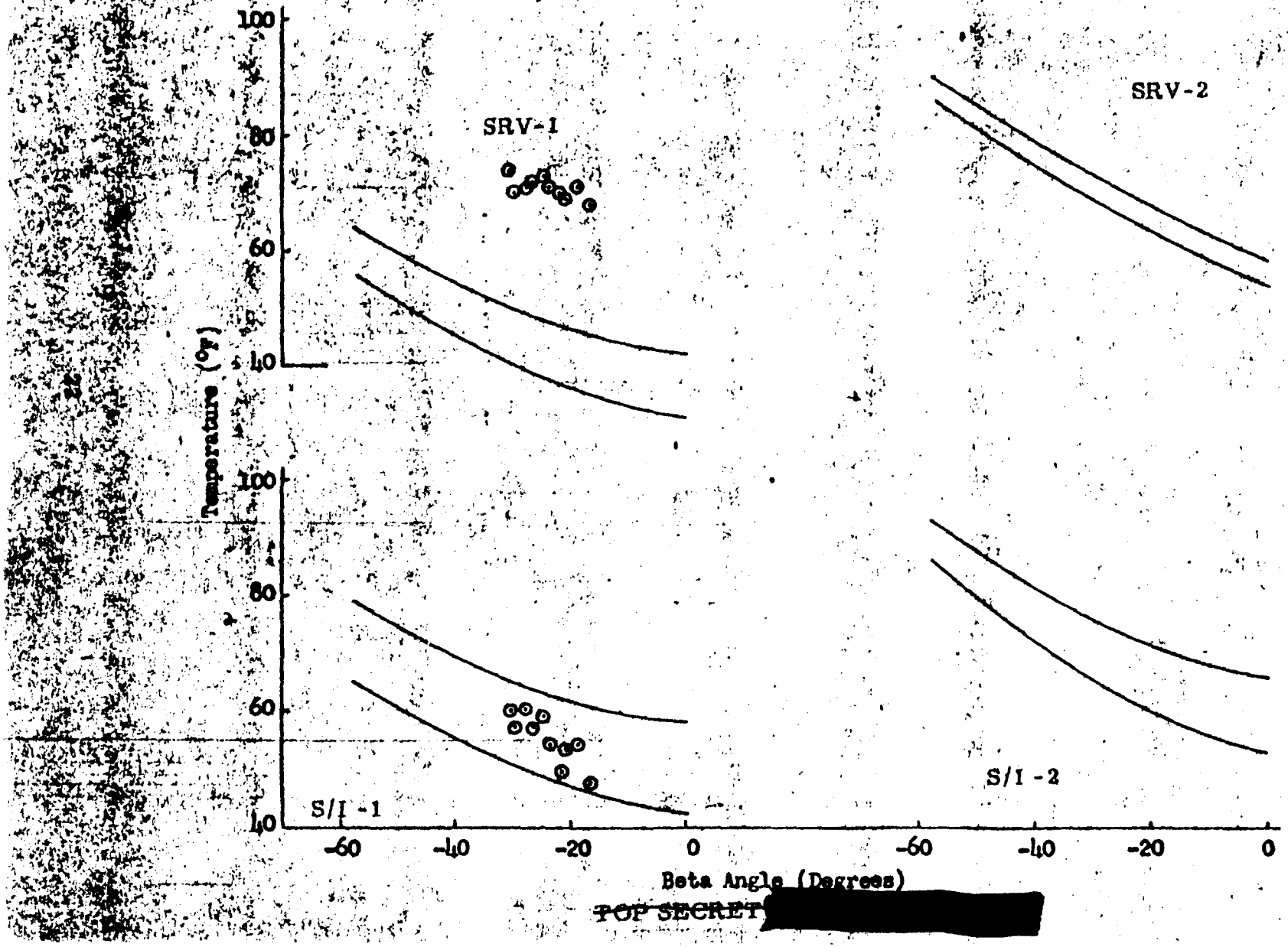

SRV-1
SRV-2
S/I -1
S/I -2
Temperature (°F)
100
80
60
40
-60
-40
-20
0
Beta Angle (Degrees)

FIGURE 3-1

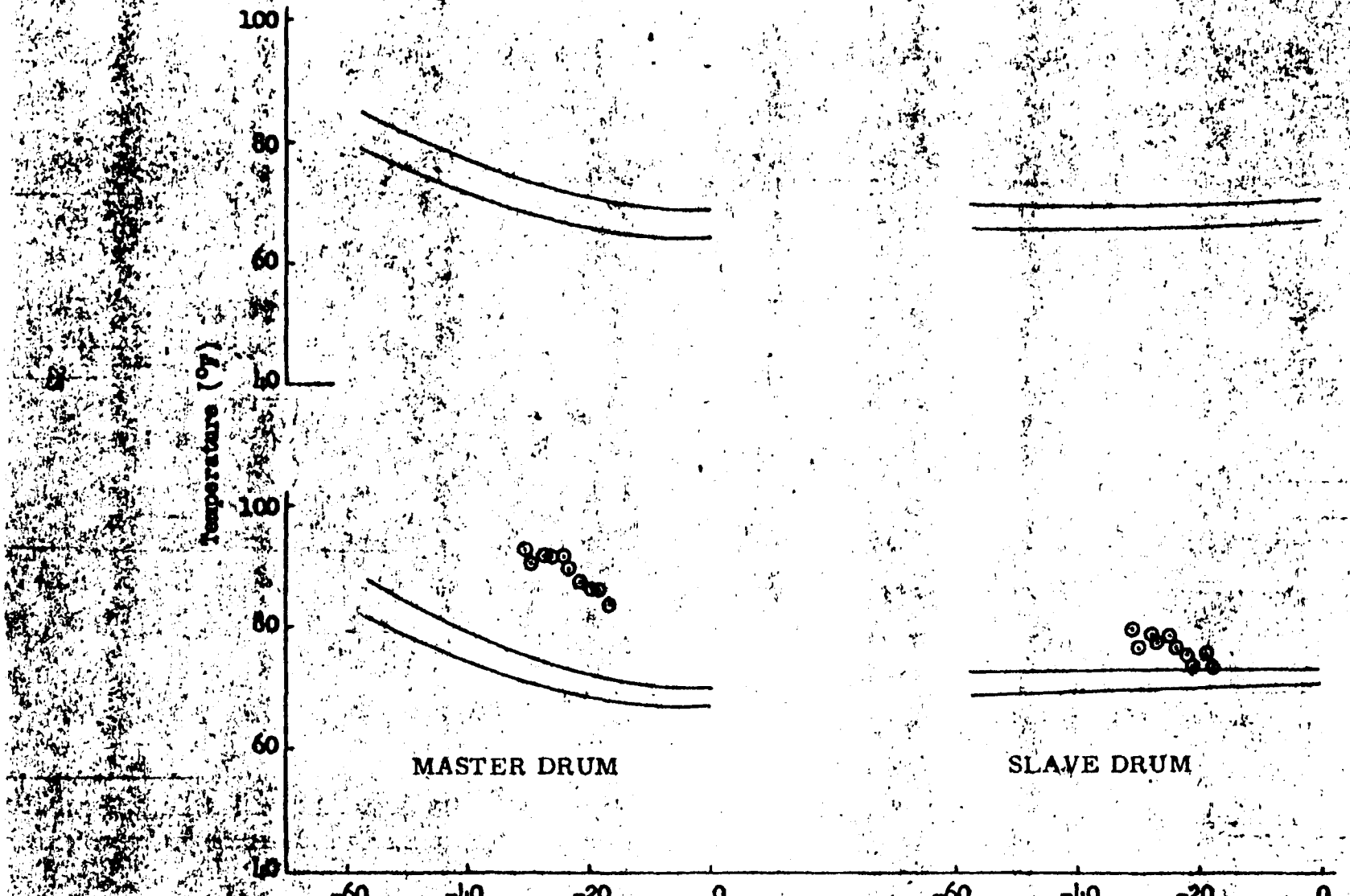

100
80
60
40
Temperature (°F)
100
80
60
40
MASTER DRUM
SLAVE DRUM
-60
-40
-20
0
-60
-40
-20
0
Beta Angle (Degrees)

FIGURE 3-2

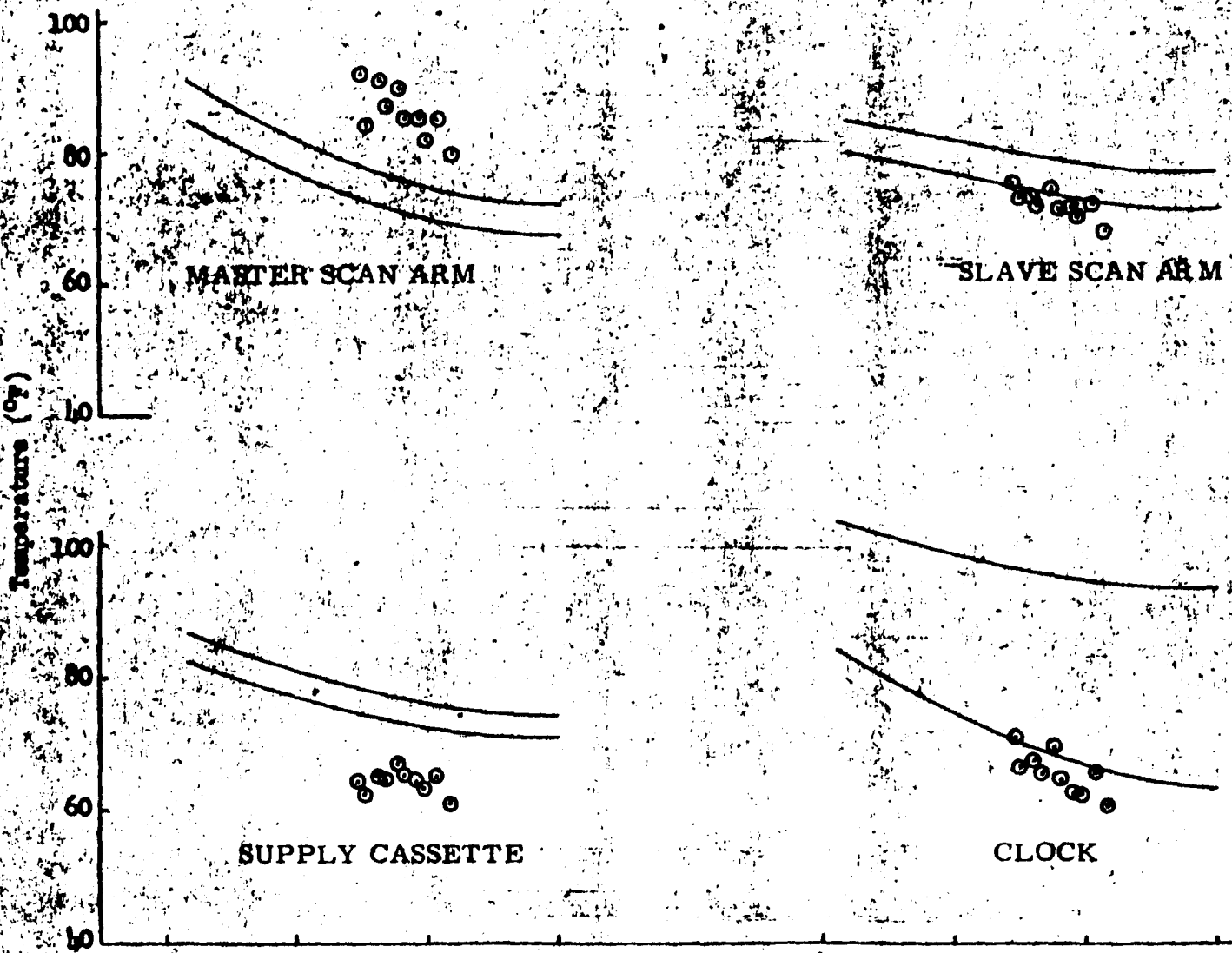

100
80
60
40
Temperature (°F)
MASTER SCAN ARM
SLAVE SCAN ARM
SUPPLY CASSETTE
CLOCK
-60
-40
-20
0
Beta Angle (Degrees)

FIGURE 3-3

SECTION 4

MISSION 1029-1 RECOVERY SYSTEM

SRV # 705 was received at A/P on 8 June 1965. The receiving weight was 149.8 pounds. After modifications and incorporation of outstanding E.O.'s, the SRV was delivered to Systems Test for incorporation into the J-27 system.

The capsule was delivered for shipment to VAFB on 16 December 1965.

The Mission 1029-1 recovery system was successfully recovered by air catch on rev 81, February 7, 1966. All re-entry sequence events monitored were normal and occurred within tolerance. The re-entry sequence of events is contained in Table 4-1. The condition of the recovered capsule was satisfactory with no damage other than normal paint blistering due to the re-entry environment.

MISSION 1029-1

RECOVERY SEQUENCE OF EVENTS

Event	Delta Time Actual	Delta Time Nominal
* Arm	76.80	77.0 ± 1.0
* Transfer	2.00	2.0 ± 0.25
Electrical Disconnect	0.79	.900 + 0.43 − 0.40
Separation	--	--
** Spin	3.41	3.4 ± 0.30
Retro	7.53	7.55 ± 0.45
Despin	10.74	10.75 ± 0.59
T/C Separation	1.49	1.5 ± 0.15
*** "G" Switch Open	492.62	N/A
Parachute Cover Off	33.67	34.0 ± 1.5
Drogue Chute Deployed	0.66	0.63 ± 0.08
Main Chute Bag Separate	9.86	10.25 ± 1.5
Main Chute Deployed	0.51	0.52 ± .13
Main Chute Disreefed	4.77	4.5 ± 0.80

* From Separation
** From Elect. Disc.
*** From Retro

Spin Rate - N/A

Despin Rate - 11.2 RPM

Retro Velocity - 1062.4 Ft/Sec.

TABLE 4-1

SECTION 5

MISSION 1029-2 RECOVERY SYSTEM

SRV # 706 was received at A/P on 8 June 1965 at a receiving weight of 151.1 pounds. After modification and incorporation of outstanding E.O.'s the capsule was delivered to Systems Test for incorporation into the J-27 system.

The capsule was delivered for shipment to VAFB on 16 December 1965.

The Mission 1029-2 recovery system was successfully recovered by air catch on rev 160, February 12, 1966. All re-entry events monitored were normal and occurred within tolerance as listed in Table 5-1.

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

MISSION 1029-2

RECOVERY SEQUENCE OF EVENTS

Event	Delta Time Actual	Delta Time Nominal
* Arm	N/A	77.0 ± 1.0
* Transfer	N/A	2.0 ± 0.25
Electrical Disconnect	N/A	.900 + 0.43 - 0.40
Separation	N/A	
** Spin	N/A	3.4 ± 0.30
Retro	N/A	7.55 ± 0.45
Despin	N/A	10.75 ± 0.59
T/C Separation	N/A	1.50 ± 0.15
*** "G" Switch Open	N/A	N/A
Parachute Cover Off	33.99	34.0 ± 1.5
Drogue Chute Deployed	0.70	0.63 ± .08
Main Chute Bag Separate	9.48	10.25 ± 1.5
Main Chute Deployed	0.47	0.52 ± 0.13
Main Chute Disreefed	4.77	4.50 ± 0.80

* From Separation

** From Elect. Disc.

*** From Retro

Spin Rate - N/A

Despin Rate - N/A

Retro Velocity - N/A

TABLE 5-1

SECTION 6

MASTER (FWD) PANORAMIC CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial Number
Main Camera	178
Main Camera Lens	1802435
Supply Horizon Camera	274-G4
Supply Horizon Camera Lens	12839
Take-up Horizon Camera	285-G5
Take-up Horizon Camera Lens	12848
Supply Cassette	SC-35

B. CAMERA DATA AND FLIGHT SETTINGS

Main Camera:

Lens	24" f/3.5
Slit Width	0.275"
Filter Type	Wratten 25
Film Type	Eastman Type 3404

Supply (Port) Horizon Camera:

Lens	55 mm f/6.3
Aperture Setting	f/6.3
Exposure Time	1/100 second
Filter Type	Wratten 25

Take-up (Starboard) Horizon Camera:

Lens	55 mm f/6.3
Aperture Setting	f/8.0
Exposure Time	1/100 second
Filter Type	Wratten 25

C. POST FLIGHT PERFORMANCE EVALUATION

The forward looking camera produced a total of 5840 frames of panoramic photography; 2896 frames during Mission 1029-1 and 2944 frames during Mission 1029-2. The film supply was depleted prior to the recovery of Mission 1029-2.

The photographic quality of the Master camera film was essentially equal to that of the Slave camera. The overall quality was not as good as acquired during recent missions however the better imagery was equal to the best observed from prior missions. The reduction in overall quality was the result of extensive snow cover, particularly blowing snow; low solar elevations; and the degrading contribution of cloud cover and atmospheric haze.

System light leaks resulted in minor fog patterns in the first and fifth frame from the start of camera operations and in the last frame of most passes. These fog patterns resulted from light leaks at the camera drum felt seal. A fog pattern was present in the sixth from the last frame of most passes of Mission 1029-1 and was traced to the 1029-1 ablative shell. A modified felt seal has been designed by Itek and will be incorporated in future systems. A/P has designed a film chute for the forward ablative shell area and will incorporate this chute on the J-30 and up systems.

Severe dendritic static fogging was present along both film edges. This static was observed during the pre-splicing and pre-processing operations [redacted] The cause of the abnormal discharging is tentatively attributed to the environmental conditions to which the film was subjected. Further investigation is being conducted to define the cause and preclude re-occurrence.

The starboard horizon camera imagery was veiled from pass D-05 to pass D-14. The cause of this anomaly is unknown and is currently under investigation.

SECTION 7

SLAVE (AFT) PANORAMIC CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial Number
Main Camera	179
Main Camera Lens	1812435
Supply Horizon Camera	275-G6H
Supply Horizon Camera Lens	12897
Take-up Horizon Camera	279-G3
Take-up Horizon Camera Lens	12899
Supply Cassette	SC-35

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	55 mm f/6.3
Aperture Setting	f/8.0
Exposure Time	1/100 second
Filter Type	Wratten 25

Take-up (Port) Horizon Camera:

Lens	55 mm f/6.3
Aperture Setting	f/8.3
Exposure Time	1/100 second
Filter Type	Wratten 25

C. POST FLIGHT PERFORMANCE EVALUATION

The aft looking camera exposed a total of 5926 frames of panoramic photography; 2918 frames during Mission 1029-1 and 3008 frames during Mission 1029-2. As was the case with the forward looking camera the film supply was depleted prior to the second recovery.

The quality of the aft looking camera photography was essentially the same as the forward looking camera. It was reported that the exposure balance between the two panoramic cameras was very good.

The light leak and dendritic static fogging was similar to the forward camera and attributed to the same sources. The starboard horizon camera produced poor imagery from pass D-03 to the end of Mission 1029-2.

SECTION 8

PANORAMIC CAMERA EXPOSURE

The Master camera contained a 0.275 inch wide slit and a Wratten 25 filter while the Slave camera had a 0.175 inch wide slit and a Wratten 21 filter. These conditions placed the nominal exposure between the full processing and intermediate curve [redacted] for 3404 emulsion.

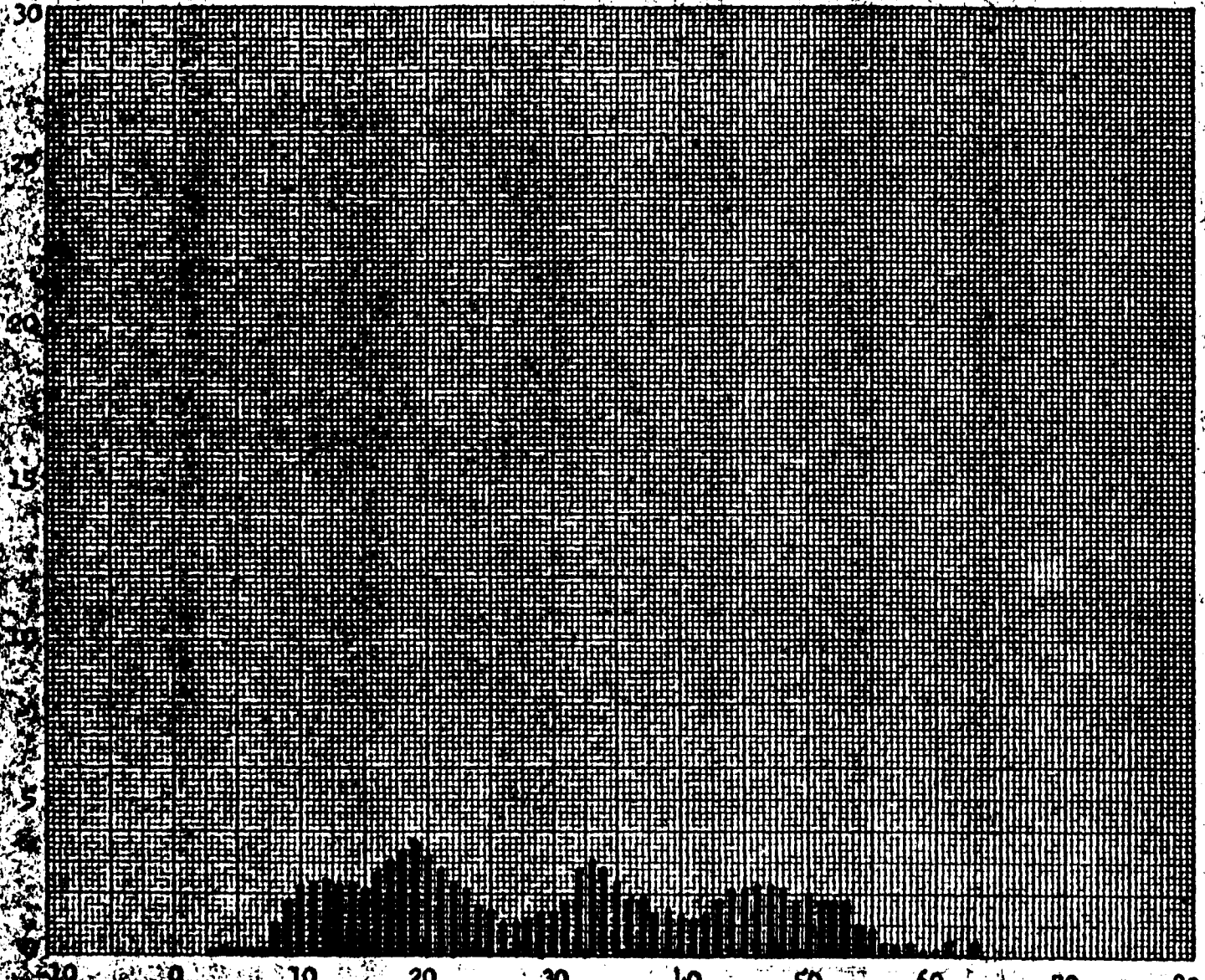
The frequency distributions of the solar elevations and solar azimuths encountered during the photographic operations are shown in Figures 8-1 to 8-4.

The nominal exposure times of the Master and Slave cameras are shown as a function of latitude for passes D-1, D-40, D-80, D-120 and D-160 in Figures 8-5 to 8-14. 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 [redacted]

Mission	Camera		Primary	Intermediate	Full
1029-1	FWD	Predicted	0	8	92
		Reported	1	16	83
1029-1	AFT	Predicted	0	20	80
		Reported	0	21	79
1029-2	FWD	Predicted	0	4	96
		Reported	2	28	70
1029-2	AFT	Predicted	0	10	90
		Reported	2	24	74

[redacted]

SOLAR ELEVATION FREQUENCY DISTRIBUTION



Mission No: 1027-1

Payload No: J-27

Camera No: 178

Launch Date: 2/2/66

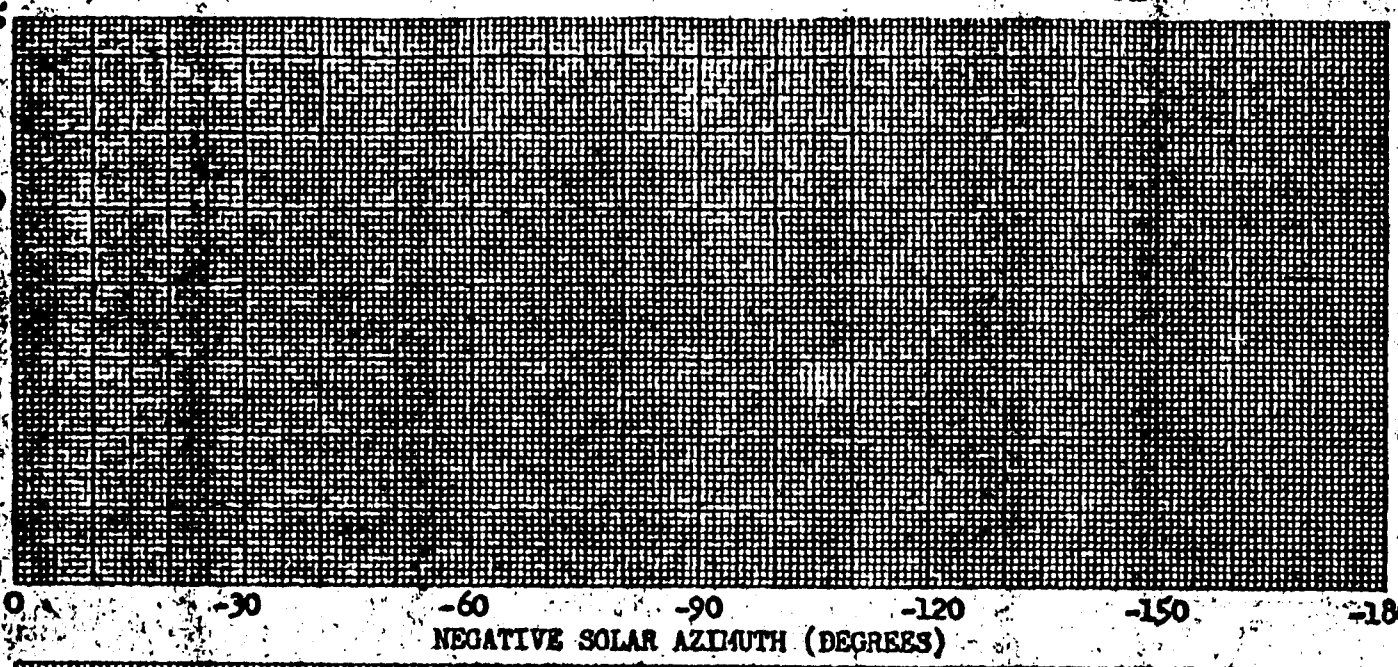
Launch Time: 2132 Z

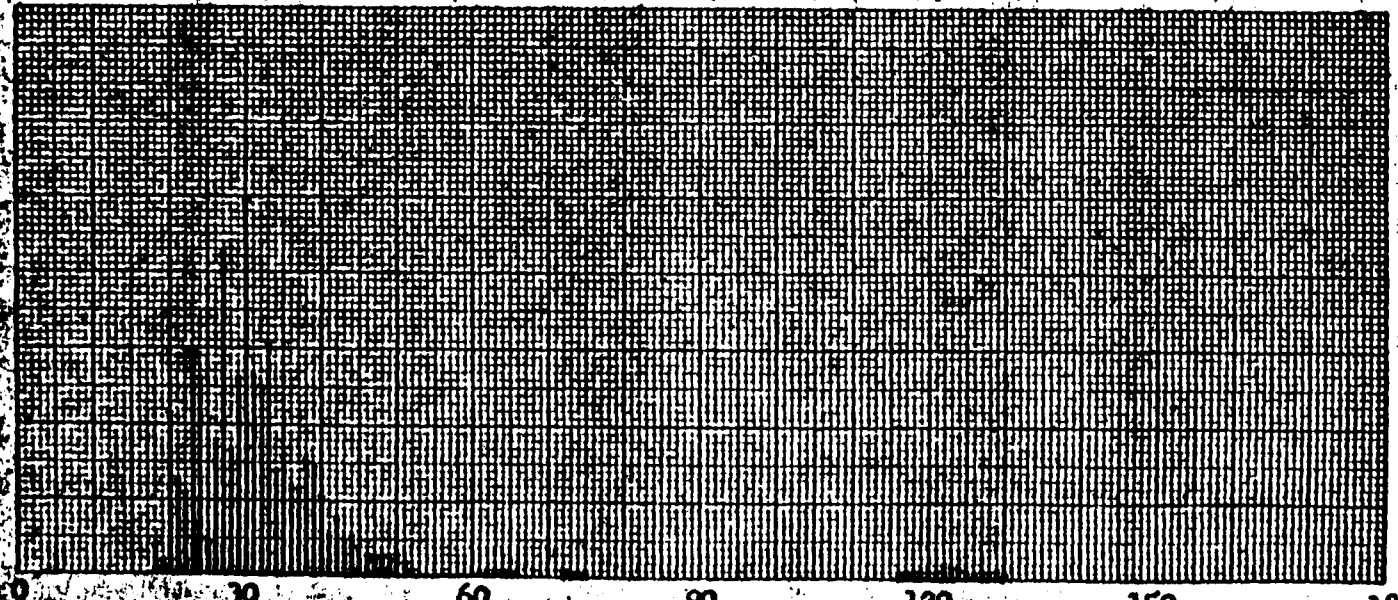
Inclination: 75°

FIGURE 8-1

[redacted]

SOLAR AZIMUTH FREQUENCY DISTRIBUTION





Mission No: 1089-3

Payload No: 1-87

Camera No: 178

Launch Date: 2/3/66

Launch Time: 2132 Z

Inclination: 75°

SIGN NOTATION

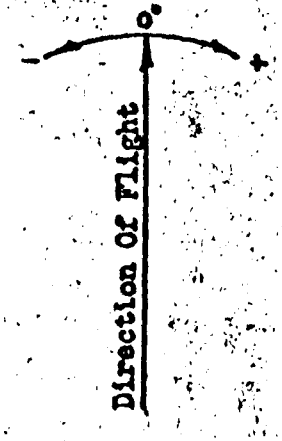
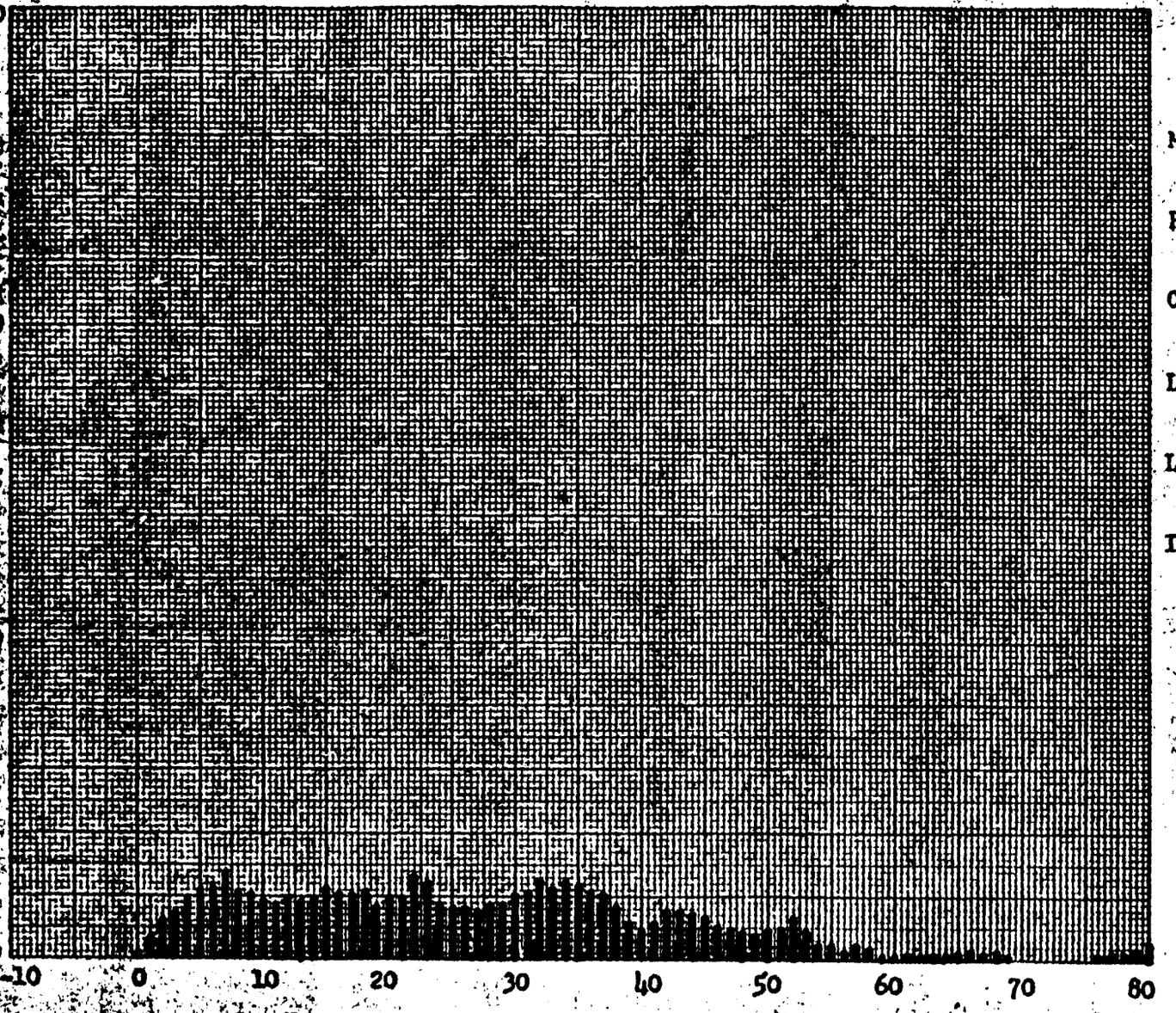


FIGURE 8-2

SOLAR ELEVATION FREQUENCY DISTRIBUTION



Mission No: [redacted]

Payload No: 427

Camera No: 176

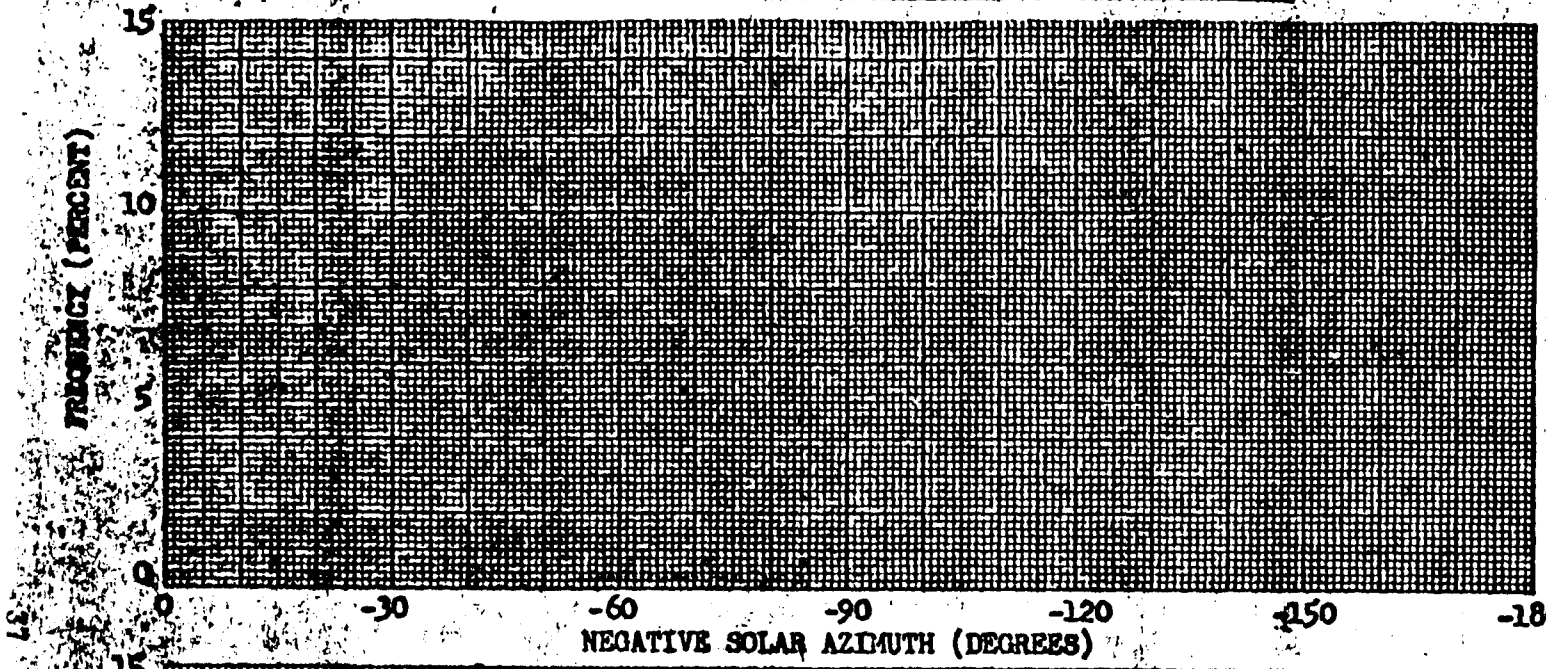
Launch Date: 8/2/66

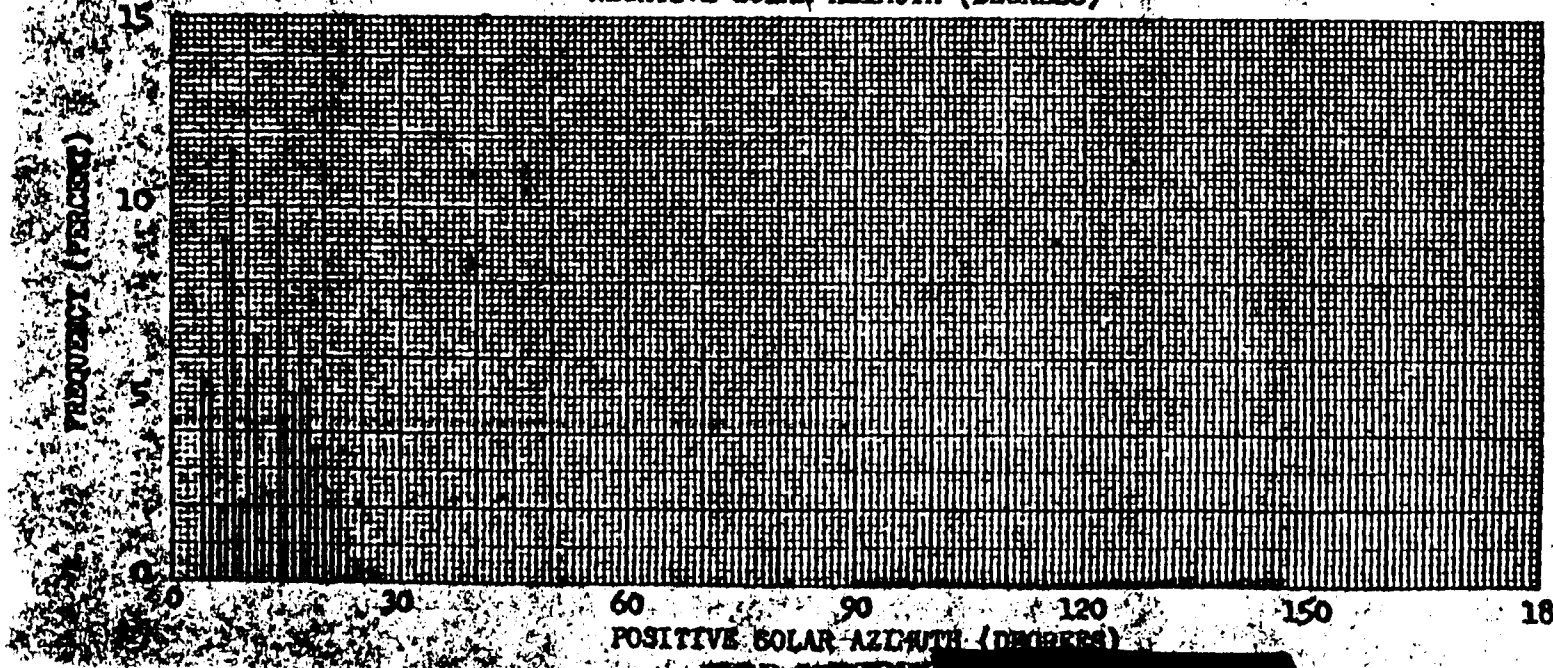
Launch Time: 2132 Z

Inclination: 75°

FIGURE 8-3

SOLAR AZIMUTH FREQUENCY DISTRIBUTION





Mission No: 1029-2

Payload No: 3-27

Camera No: 178

Launch Date: 3/2/66

Launch Time: 21X2 Z

Inclination: 75°

SIGN NOTATION

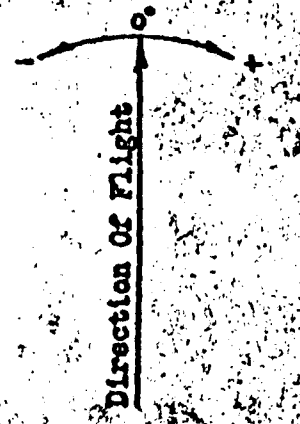
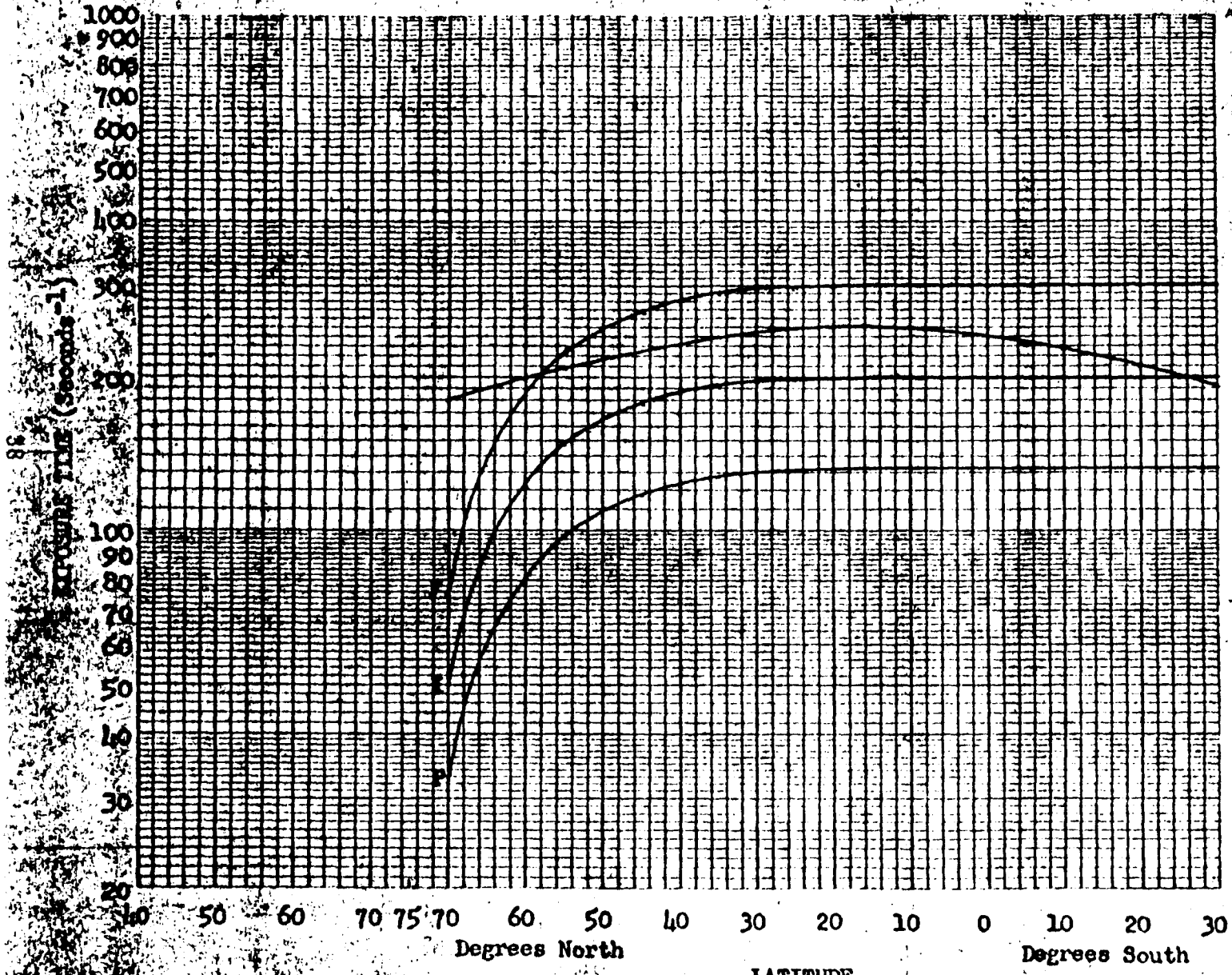


FIGURE 8-4

EXPOSURE POINTS



Mission No: 1029

Payload No: J-27

Camera No: 178

Pass No: 1

Launch Date: 2/2/66

Launch Time: 2132 Z

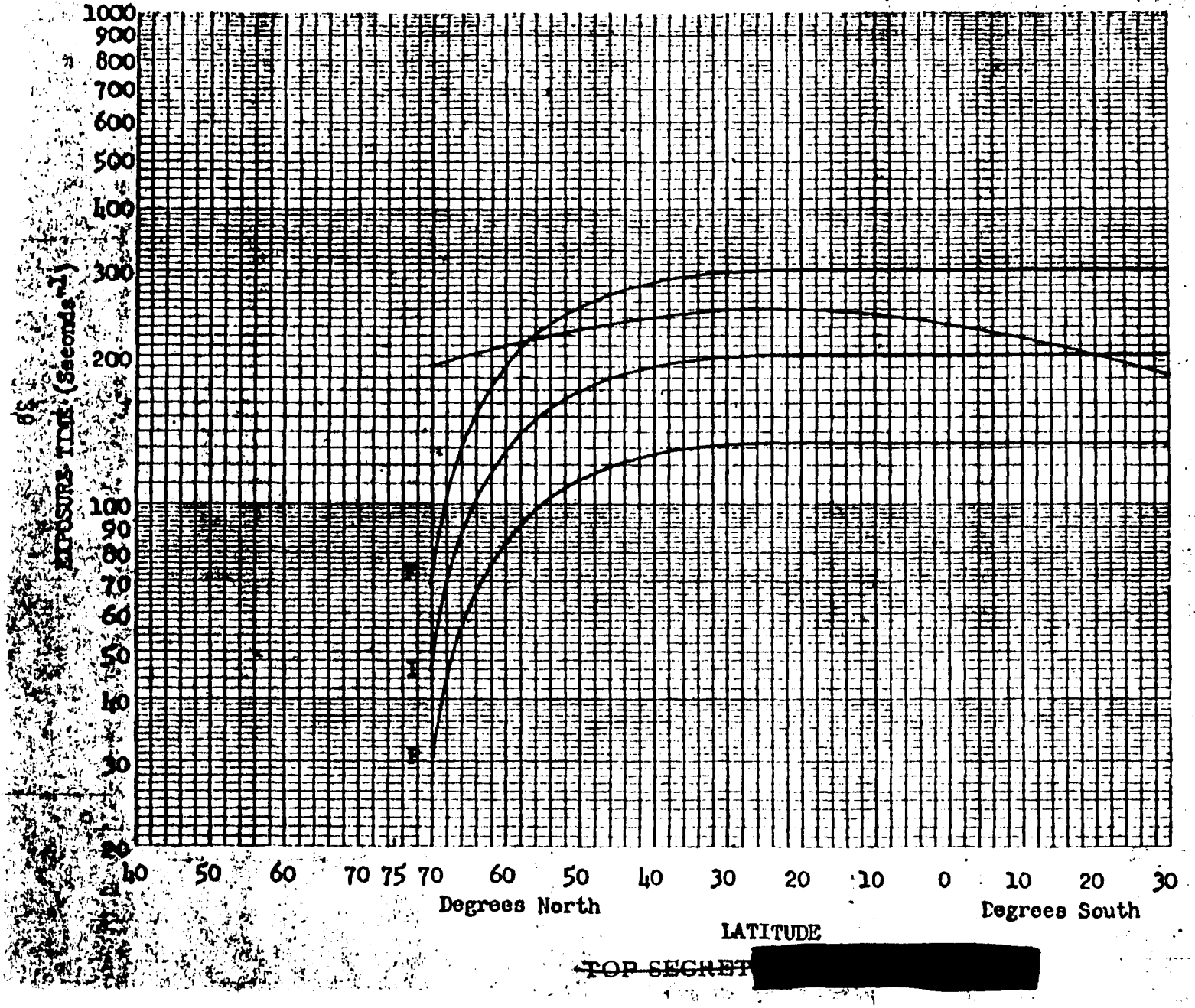
Slit Width: .275

Filter Type: Wratten 25

Film Type: 3404

FIGURE 8-5

EXPOSURE POINTS



Mission No: 1029

Payload No: J-27

Camera No: 178

Pass No: 40

Launch Date: 2/2/66

Launch Time: 2132 Z

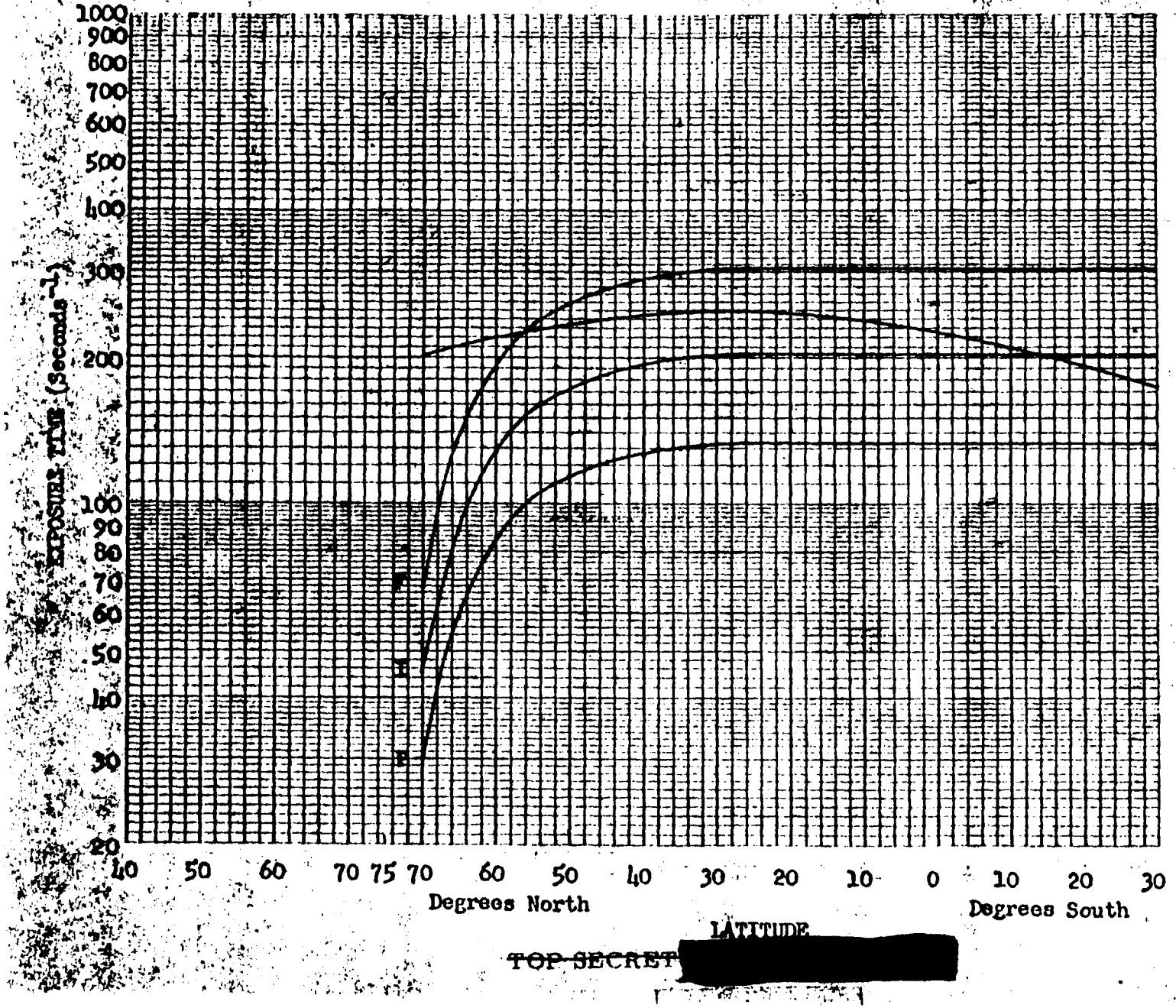
Slit Width: .275

Filter Type: Wratten 25

Film Type: 3404

FIGURE 8-6

EXPOSURE POINTS



Mission No: 1029

Payload No: J-27

Camera No: 178

Pass No: 80

Launch Date: 2/2/66

Launch Time: 2132 Z

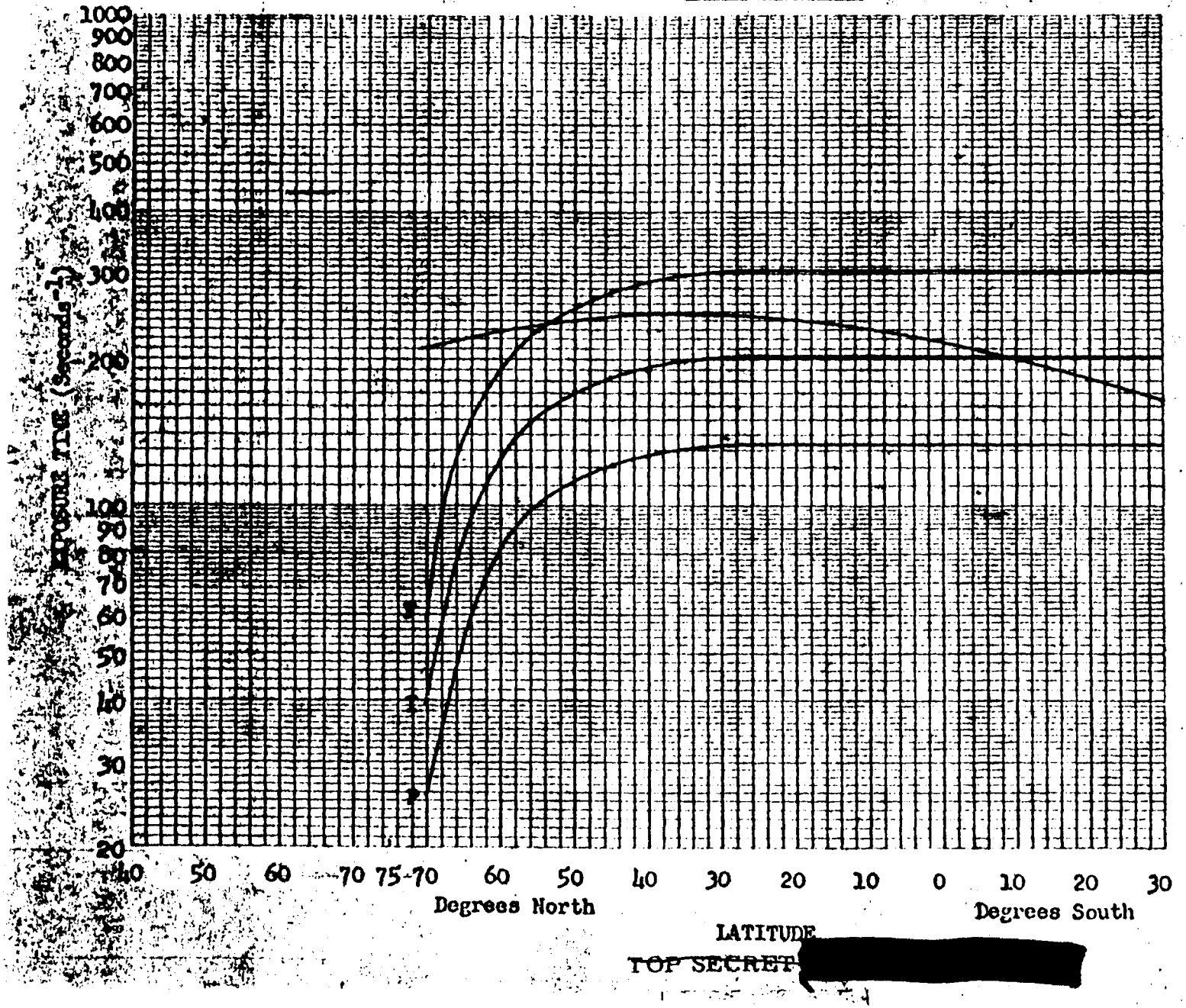
Slit Width: .275

Filter Type: Wratten 25

Film Type: 3404

FIGURE 8-7

EXPOSURE POINTS



Mission No: 1029

Payload No: J-27

Camera No: 178

Pass No: 120

Launch Date: 2/2/68

Launch Time: 2132 Z

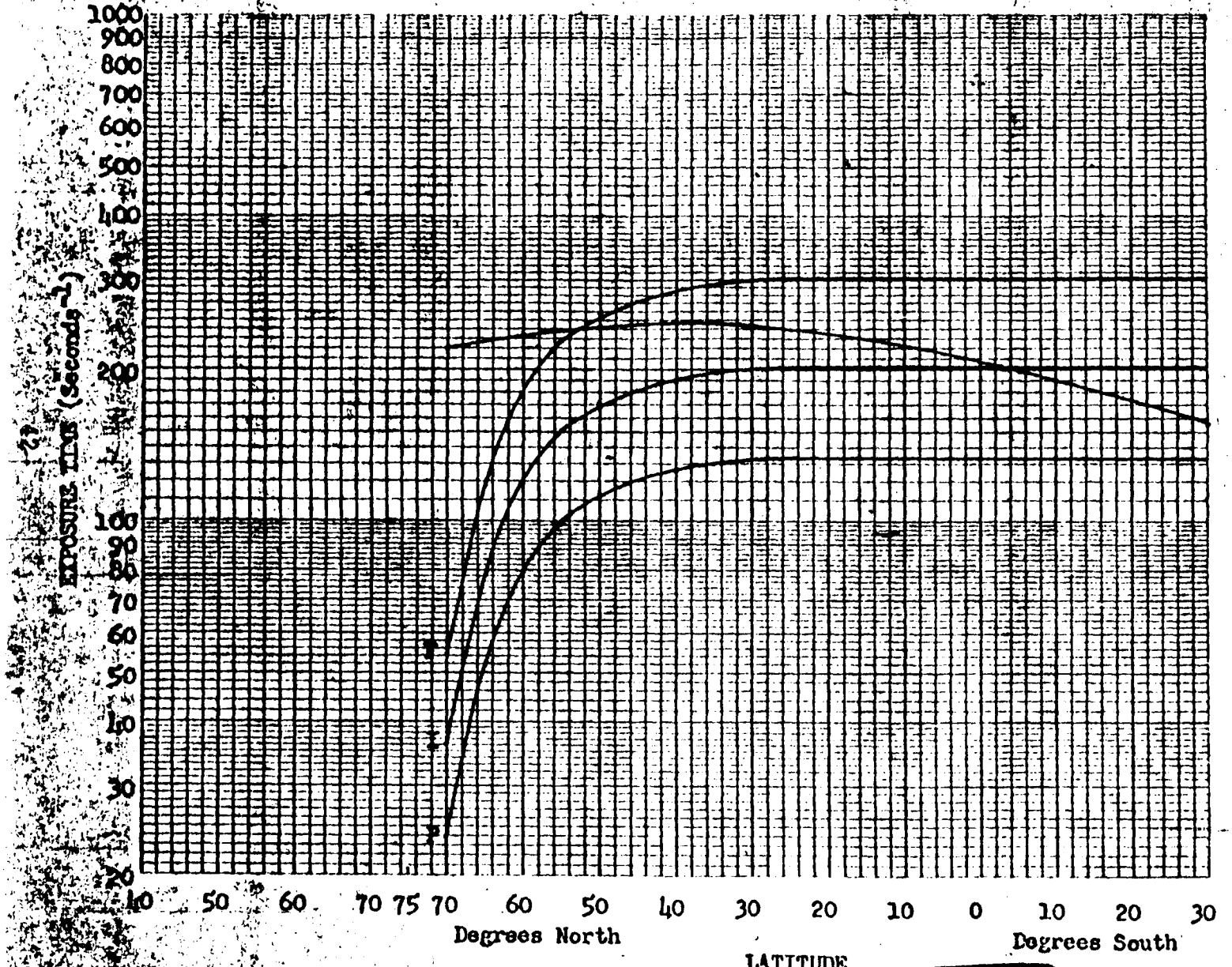
Slit Width: .275

Filter Type: Wratten 25

Film Type: 3404

FIGURE 8-8

EXPOSURE POINTS



Mission No: 1029

Payload No: J-27

Camera No: 178

Pass No: 160

Launch Date: 2/2/66

Launch Time: 2132 Z

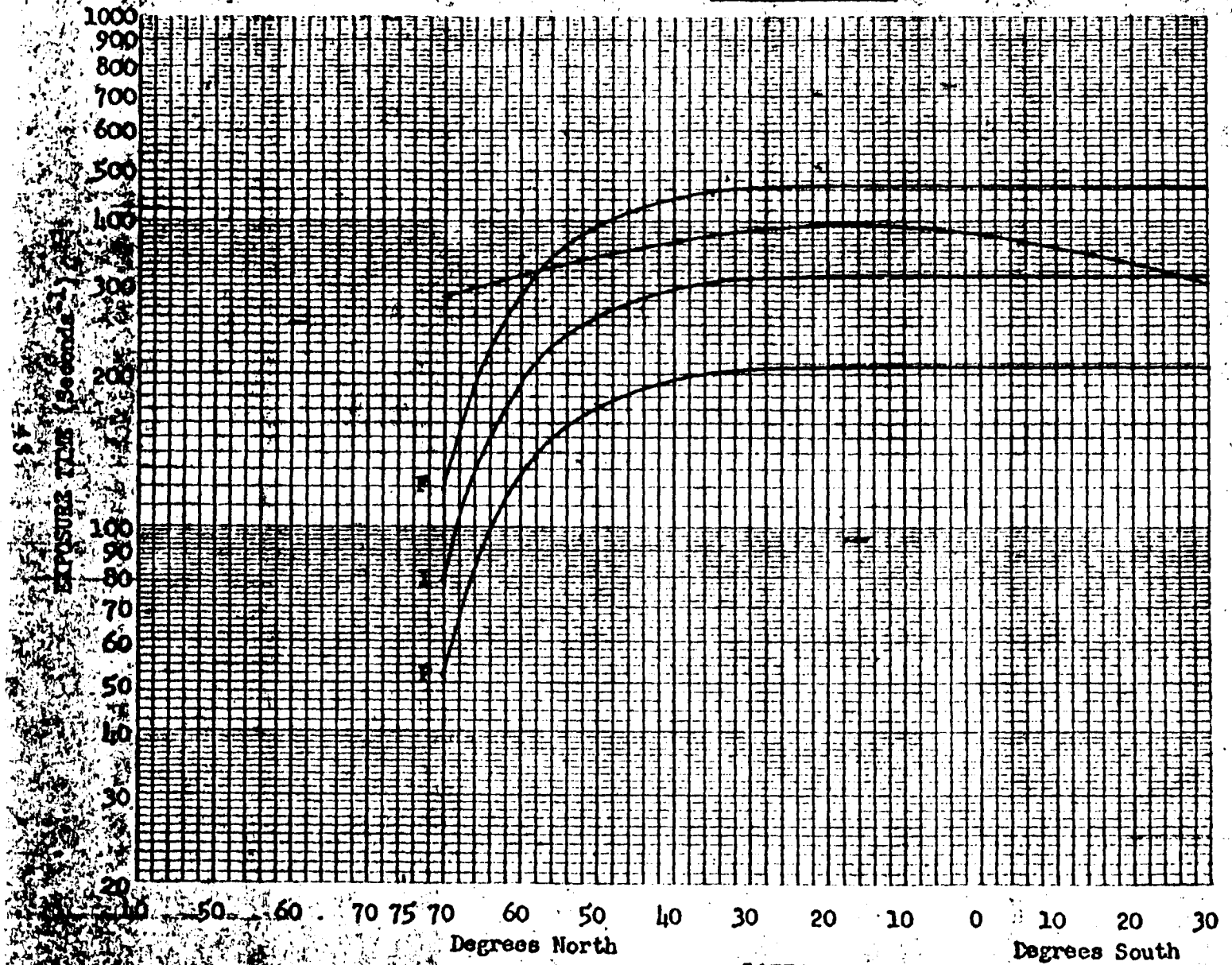
Slit Width: .275

Filter Type: Wratten 25

Film Type: 3404

FIGURE 8-9

EXPOSURE POINTS



Mission No: 1029

Payload No: J-27

Camera No: 179

Pass No: 1

Launch Date: 2/2/66

Launch Time 2132 Z

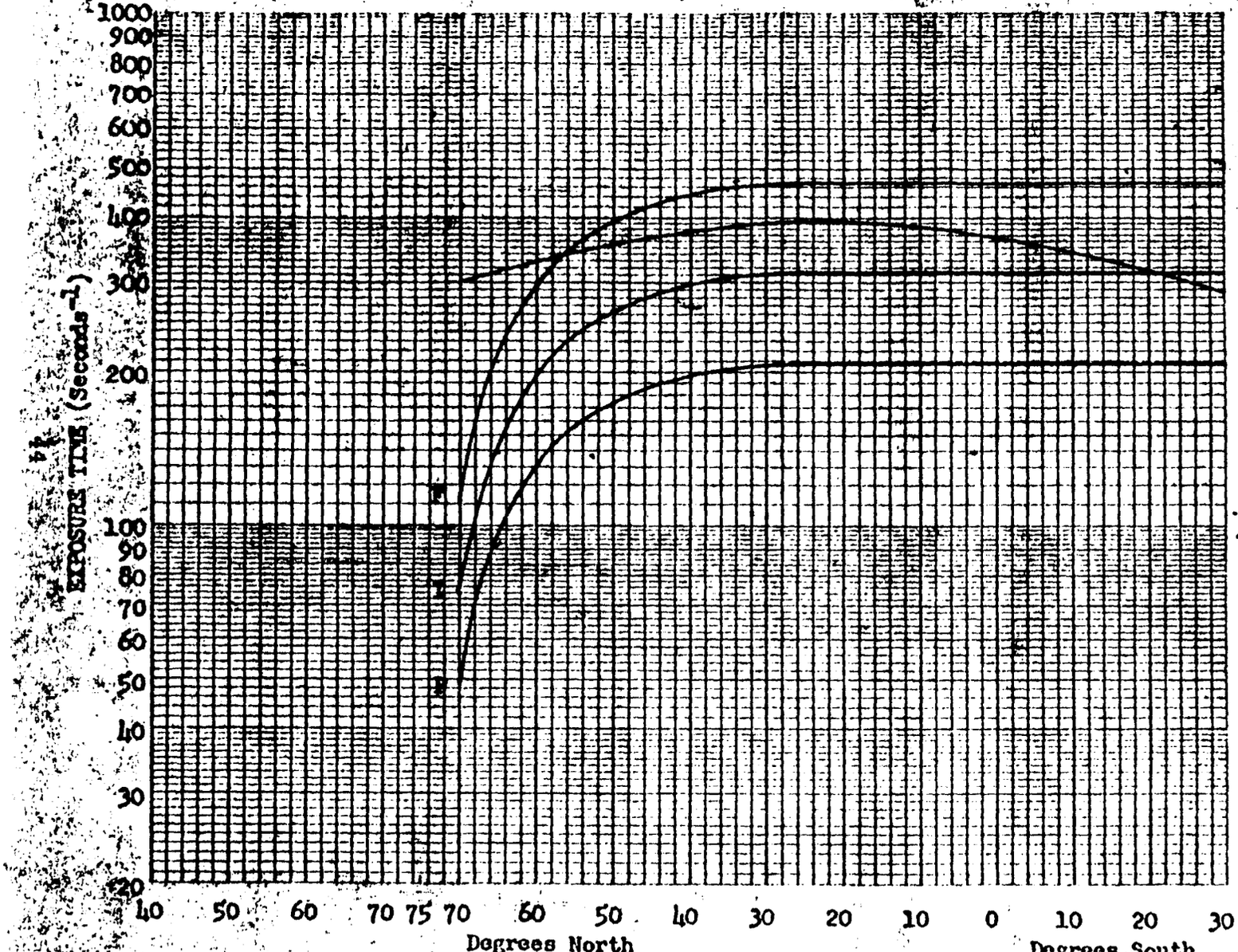
Slit Width: .175

Filter Type: Wratten 21

Film Type: 3404

FIGURE 8-10

EXPOSURE POINTS



Mission No: 1029

Payload No: J-27

Camera No: 179

Pass No: 40

Launch Date: 2/2/66

Launch Time: 2132 Z

Slit Width: .175

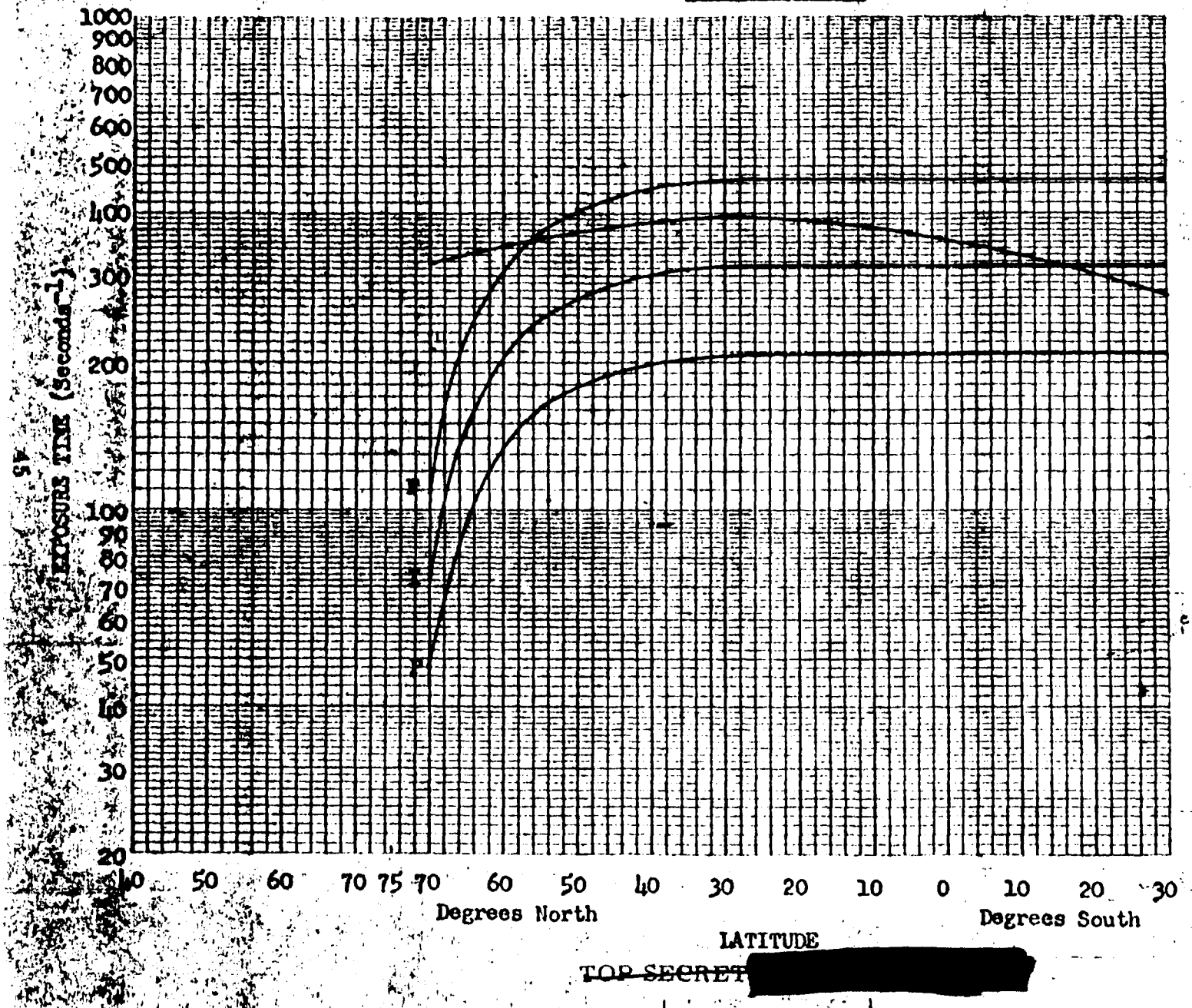
Filter Type: Wratten 21

Film Type: 3404

FIGURE 8-11

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

EXPOSURE POINTS



Mission No: 1029

Payload No: J-27

Camera No: 179

Pass No: 80

Launch Date: 2/2/66

Launch Time: 2132 Z

Slit Width: .175

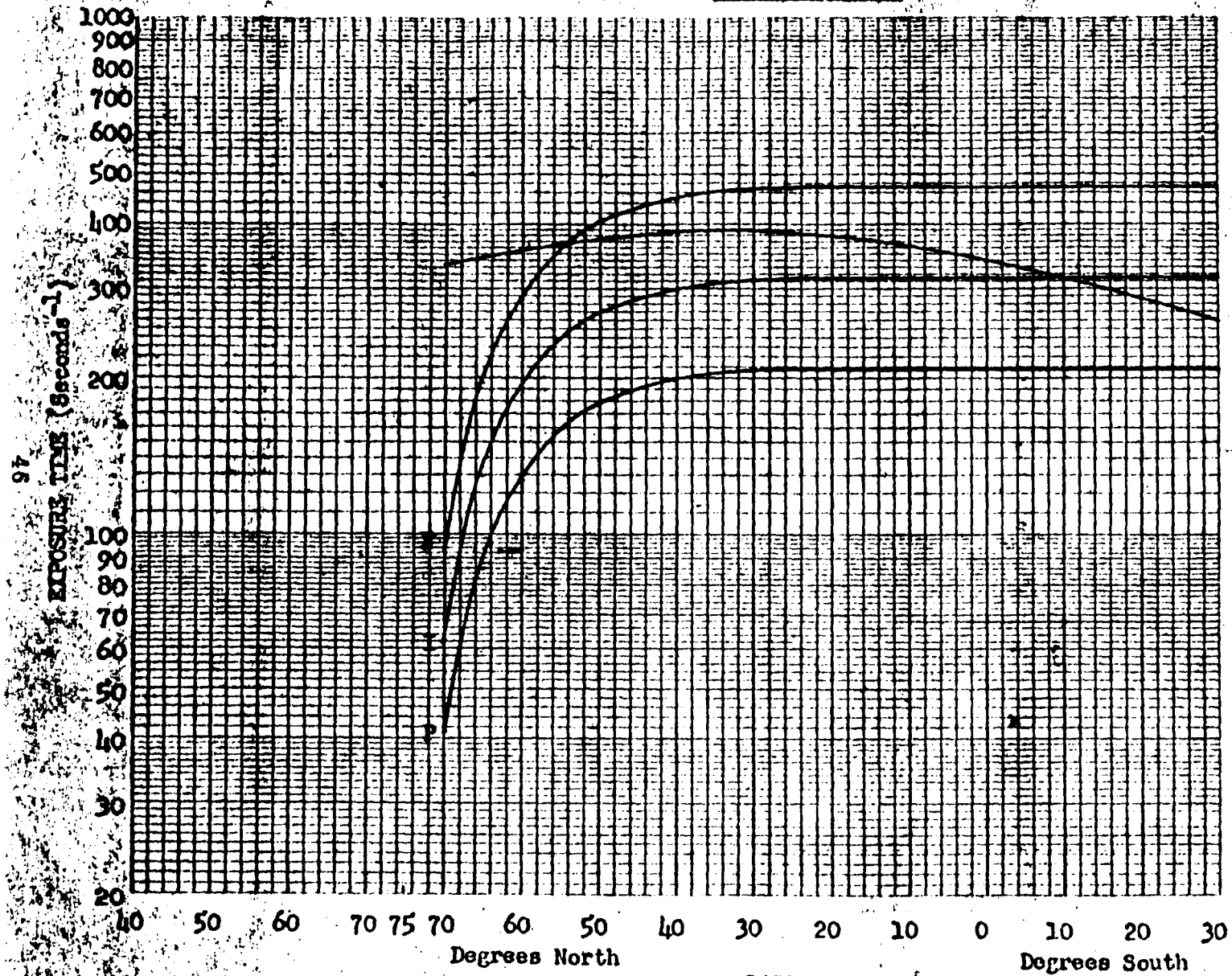
Filter Type: Wratten 21

Film Type: 3404

~~TOP SECRET~~ [redacted]

FIGURE 8-12

EXPOSURE POINTS



Mission No: 1029

Payload No: J-27

Camera No: 179

Pass No: 120

Launch Date: 2/2/66

Launch Time: 2132 Z

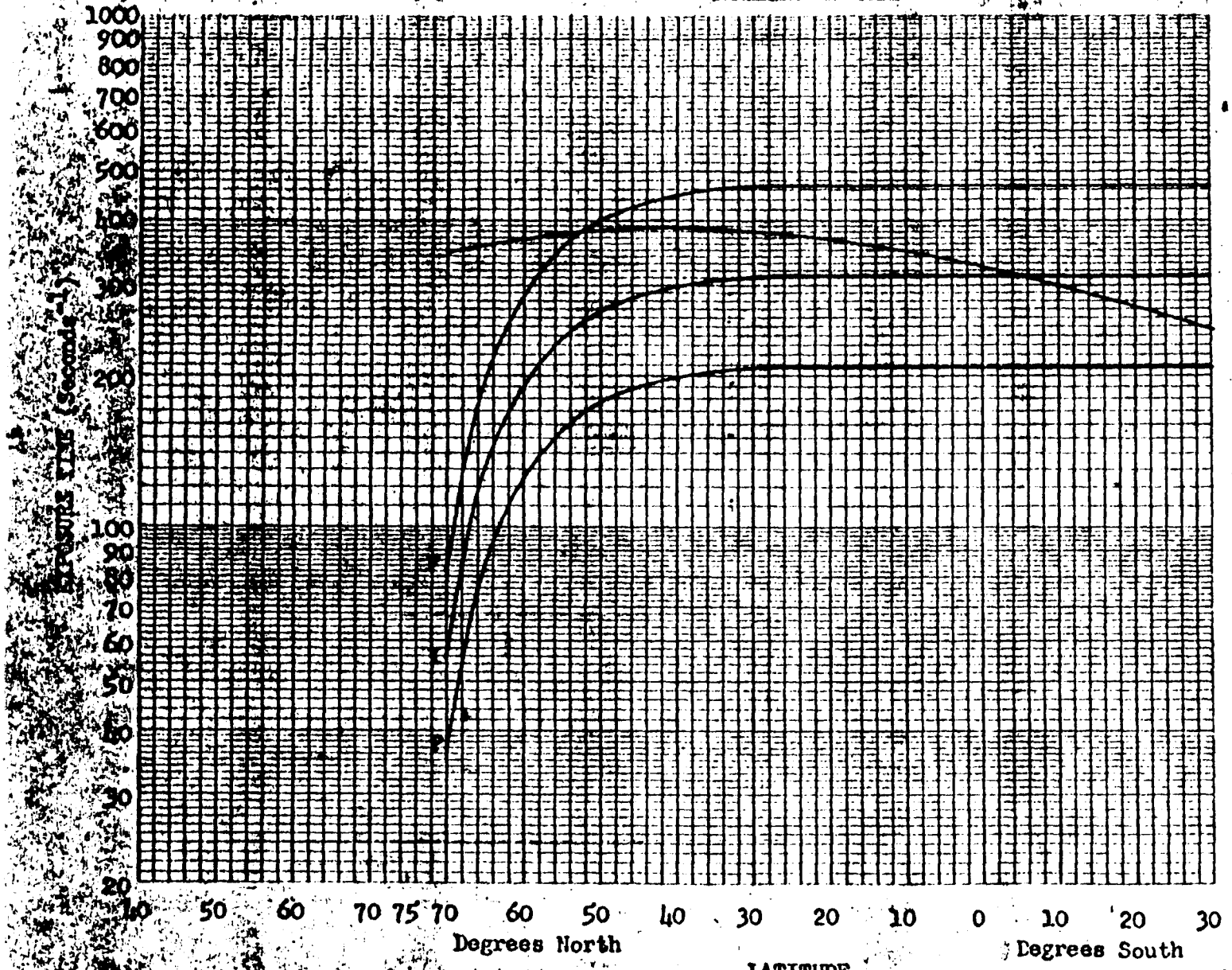
Slit Width: .175

Filter Type: Wratten 21

Film Type: 3404

FIGURE E 8-13

EXPOSURE POINTS



Mission No: 1029

Payload No: J-27

Camera No: 179

Pass No: 160

Launch Date: 2/2/66

Launch Time: 2132 Z

Slit Width: .175

Filter Type: Wratten 21

Film Type: 3404

FIGURE 8-14

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 [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
1029-1	FWD	Predicted	0	8	92
		Reported	1	16	83
		Computed	0	14	86
1029-1	AFT	Predicted	0	20	80
		Reported	0	21	79
		Computed	0	25	75
1029-2	FWD	Predicted	0	4	96
		Reported	2	28	70
		Computed	0	20	80
1029-2	AFT	Predicted	0	10	90
		Reported	2	24	74
		Computed	0	25	75

The tabulations of density frequency distributions for Missions 1029-1 and 1029-2 are included in Appendix A, Table A-1 through A-4. The graphical presentation of the density distribution are computer plotted in Appendix A, Figures A1 through A-36.

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

MISSION 1029-1 INSTR - FRWD 05/06/66 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	35	0 PC	3 PC	54 PC	29 PC	14 PC
FULL	210	23 PC	0 PC	64 PC	12 PC	1 PC
ALL LEVELS	245	20 PC	0 PC	62 PC	14 PC	3 PC

MISSION 1029-1 INSTR - AFT 05/06/66 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	64	5 PC	22 PC	50 PC	19 PC	5 PC
FULL	197	30 PC	0 PC	62 PC	8 PC	0 PC
ALL LEVELS	261	24 PC	5 PC	59 PC	10 PC	1 PC

MISSION 1029-2 INSTR - FRWD 05/06/66 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	51	0 PC	24 PC	47 PC	22 PC	8 PC
FULL	206	41 PC	0 PC	51 PC	8 PC	0 PC
ALL LEVELS	257	33 PC	5 PC	50 PC	11 PC	2 PC

MISSION 1029-2 INSTR - AFT 05/06/66 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	62	3 PC	21 PC	50 PC	19 PC	6 PC
FULL	187	29 PC	0 PC	63 PC	8 PC	0 PC
ALL LEVELS	249	23 PC	5 PC	59 PC	11 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 9-1

SECTION 10

PERFORMANCE MEASUREMENTS

The photography acquired by both panoramic cameras during Missions 1029-1 and 1029-2 received a MIP rating of 85. A summary is tabulated below of the average MTF/AIM resolution values measured by AFSPPF [redacted] The length of the microdensitometer slit used by AFSPPF was 1 x 80 microns.

Mission	Camera	AFSPPF	[redacted]
1029-1	FWD	91	77
1029-1	AFT	95	73
1029-2	FWD	82	77
1029-2	AFT	94	81

The edge scan analysis (MTF/AIM) results from [redacted] are lower than those of AFSPPF. The average ground resolution is reported by AFSPPF as 12 feet and by [redacted] as 14.2 feet. The reason for this difference is not identified, but may be due to microdensitometer calibration.

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 therefore not included in this report.

SECTION 11

OBSERVED DATA

Photographic engineering operations were conducted on 7 passes over Continental United States on Mission 1029. All passes except D31 contained nearly 100% clouds and heavy haze.

Pass D31 was a 20 frame operation over the Arizona-New Mexico Border where there is not sufficient culture to make a valid determination of the system performance capability. However, one area was photographed that has been covered several times on previous missions. This is the Phelps-Dodge Mining-Refining complex at Morenci, Arizona. Here, results compared favorably with those from Mission 1026 which produced ground resolution in the range of 7 to 8 feet.

SECTION 12

MISSION 1029-1 STELLAR-INDEX CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial Number
Camera	D-79
Index Camera Lens	819191
Index Reseau	94
Stellar Camera Lens	10576
Stellar Reseau	91

B. CAMERA DATA AND FLIGHT SETTINGS

Stellar Camera:

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

Index Camera:

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

C. POST FLIGHT EVALUATION

The operation of the Index camera was normal throughout the mission, however the Stellar camera was extremely erratic. The Stellar camera shutter generally remained open for more than the desired two seconds and, at times, was open after the camera platen was raised. The available Stellar imagery did permit the determination of vehicle attitude with somewhat more than normal effort.

The possibility of reducing the Stellar shutter exposure time is under investigation in order to improve reliability. Microdensity measurements show that the exposure time can be reduced by one-half without the loss of sixth magnitude star images.

SECTION 13

MISSION 1029-2 STELLAR-INDEX CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial Number
Camera	D-76
Index Camera Lens	817708
Index Reseau	70
Stellar Camera Lens	10602
Stellar Reseau	94

B. CAMERA DATA AND FLIGHT SETTINGS

Stellar Camera:

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

Index Camera:

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

C. POST FLIGHT EVALUATION

A component failure, relay K702, caused the failure of the Stellar and Index camera to function up to pass D-134. The remaining frames, through pass D-158, are normal in both cameras. The quantity of Stellar data was considered inadequate for the determination of vehicle attitude.

SECTION 14

VEHICLE ATTITUDE

The vehicle attitude errors for both Mission 1029-1 and 1029-2 were derived from the reduction of the Stellar camera photography. This attitude data is supplied to A/P by NPIC.

The attitude errors for each frame and the attitude control rates are calculated at the A/P computer facility. The computer also plots the frequency distribution of the rates and errors. Figures 14-1 through 14-6 show these distributions for Mission 1029-1 and Figures 14-7 through 14-12 for Mission 1029-2.

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

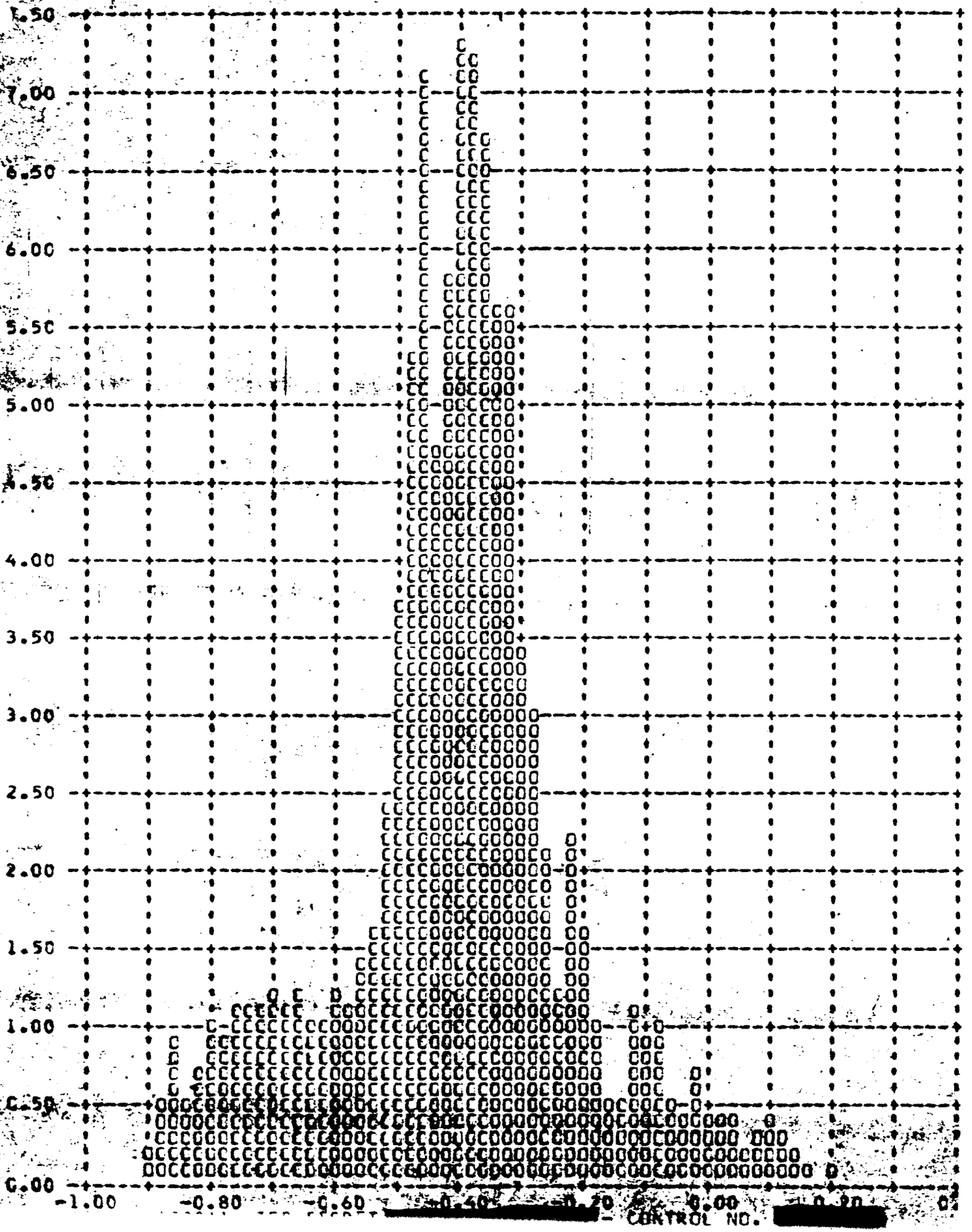
	Mission 1029-1		Mission 1029-2	
Value	90%	Range	90%	Range
Pitch Error (°)	0.67	-0.90 to +0.16	0.64	-0.95 to +1.05
Roll Error (°)	0.34	-0.86 to +0.38	0.48	-0.68 to +0.38
Yaw Error (°)	0.77	-0.60 to +1.55	0.44	-0.50 to +0.56
Pitch Rate (°/hr)	29.07	-60 to +70	38.77	-95 to +90
Roll Rate (°/hr)	31.26	-70 to +80	32.48	-90 to +100
Yaw Rate (°/hr)	34.44	-62 to +52	25.65	-42 to +32

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

MISSION 1029A1 ~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

27 A-BUCKET FORWAD INSTRUME' FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.67

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

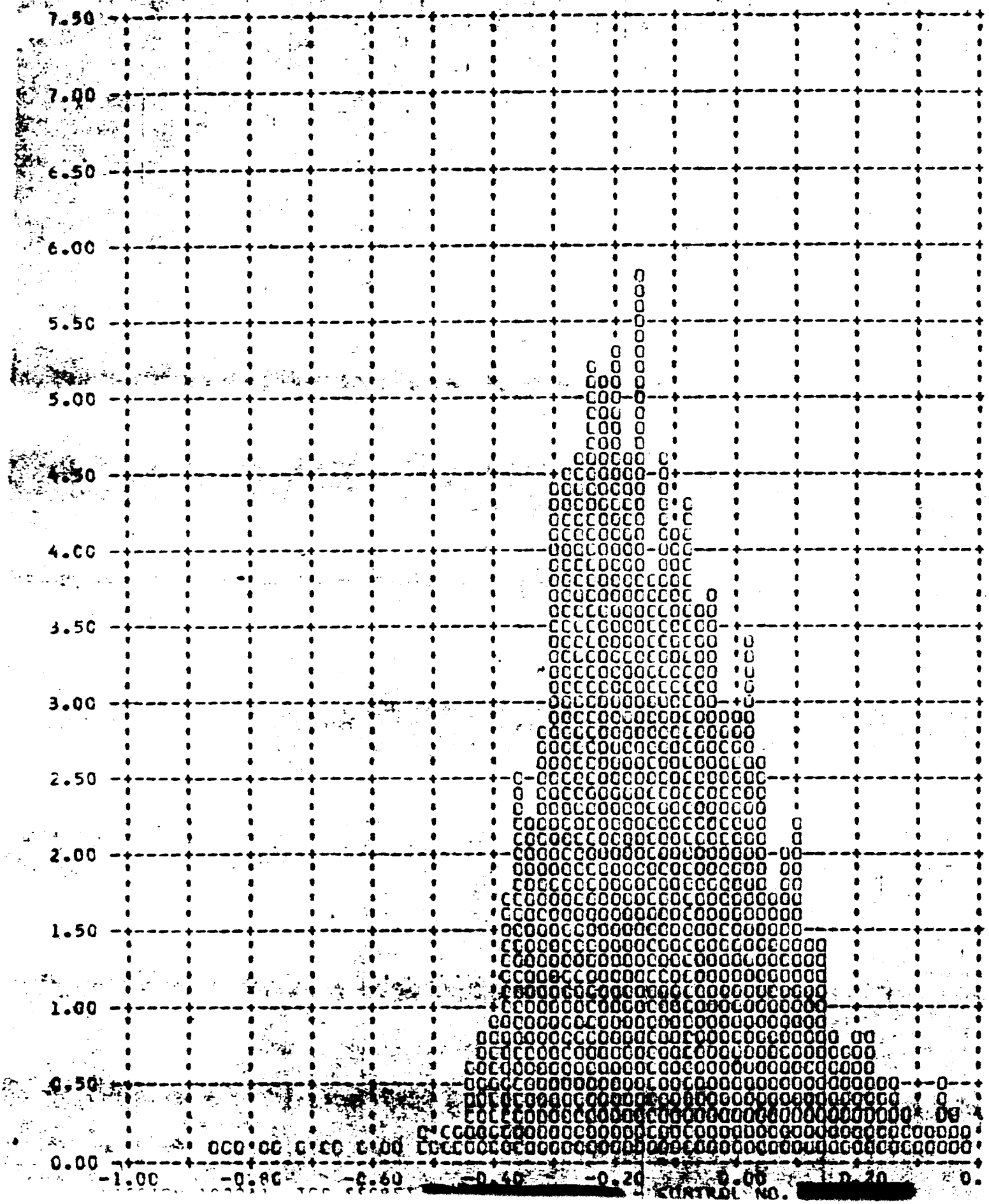


[redacted] - CONTROL NO. [redacted]

MISSION 1029A1 ~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

27 A-BUCKET FORWAC INSTRUME FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.34

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

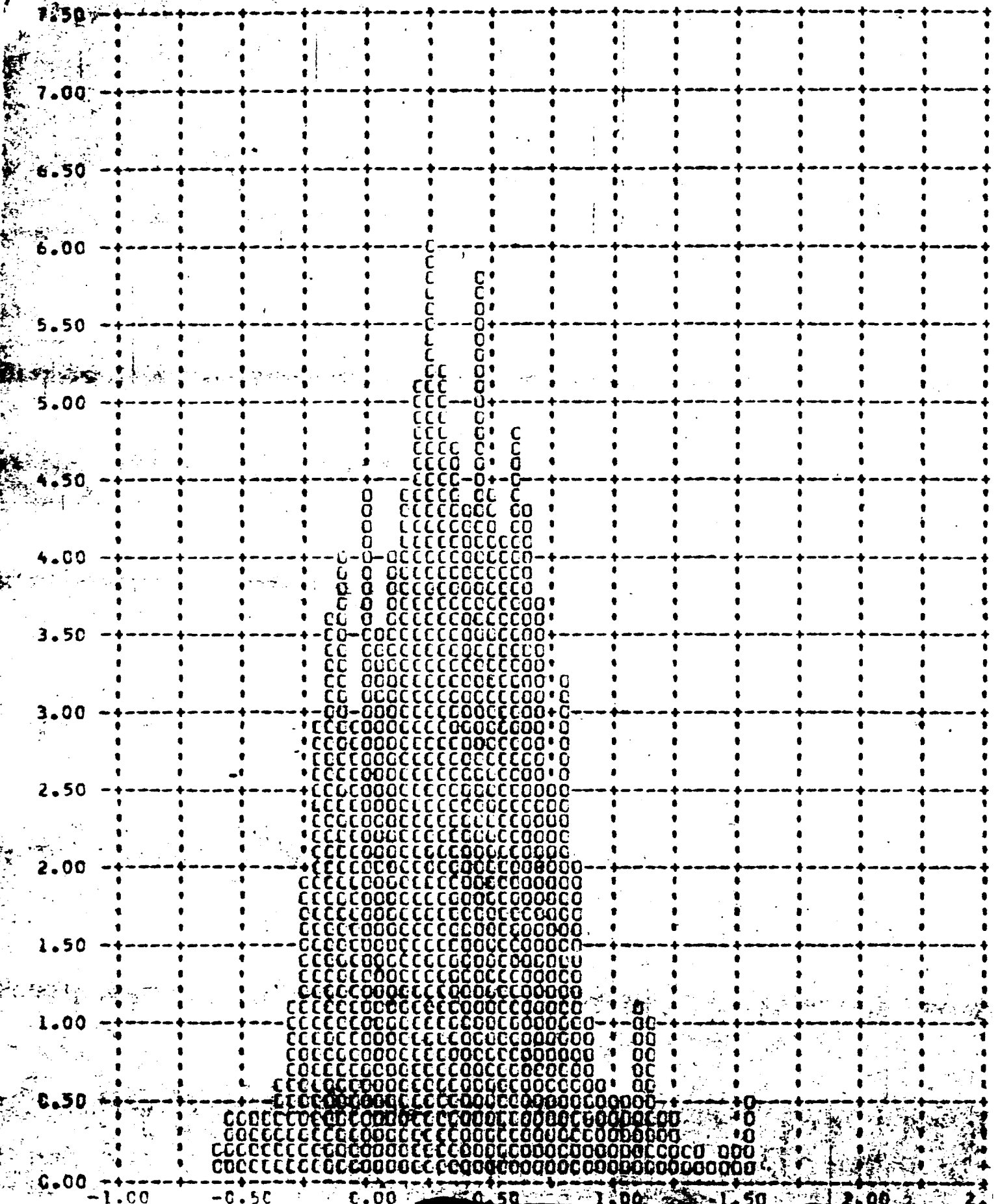


[redacted] CONTROL NO. [redacted]

MISSION 1029A1 ~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

27 A-BUCKET FORWAD INSTRUME FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.77

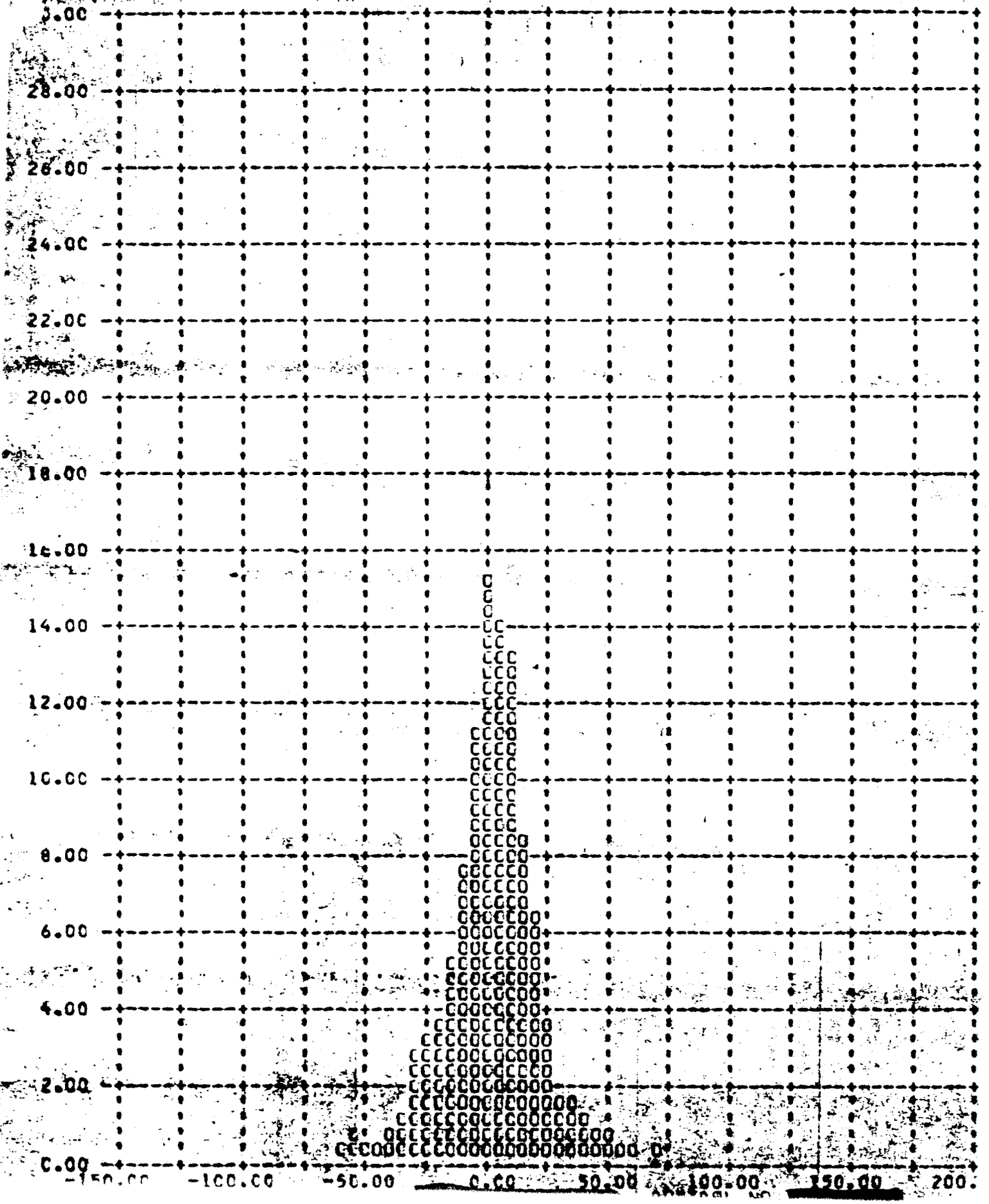
Y YAW ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 1029A1 ~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

27 A-BUCKET FORWAC INSTRUME FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 29.07

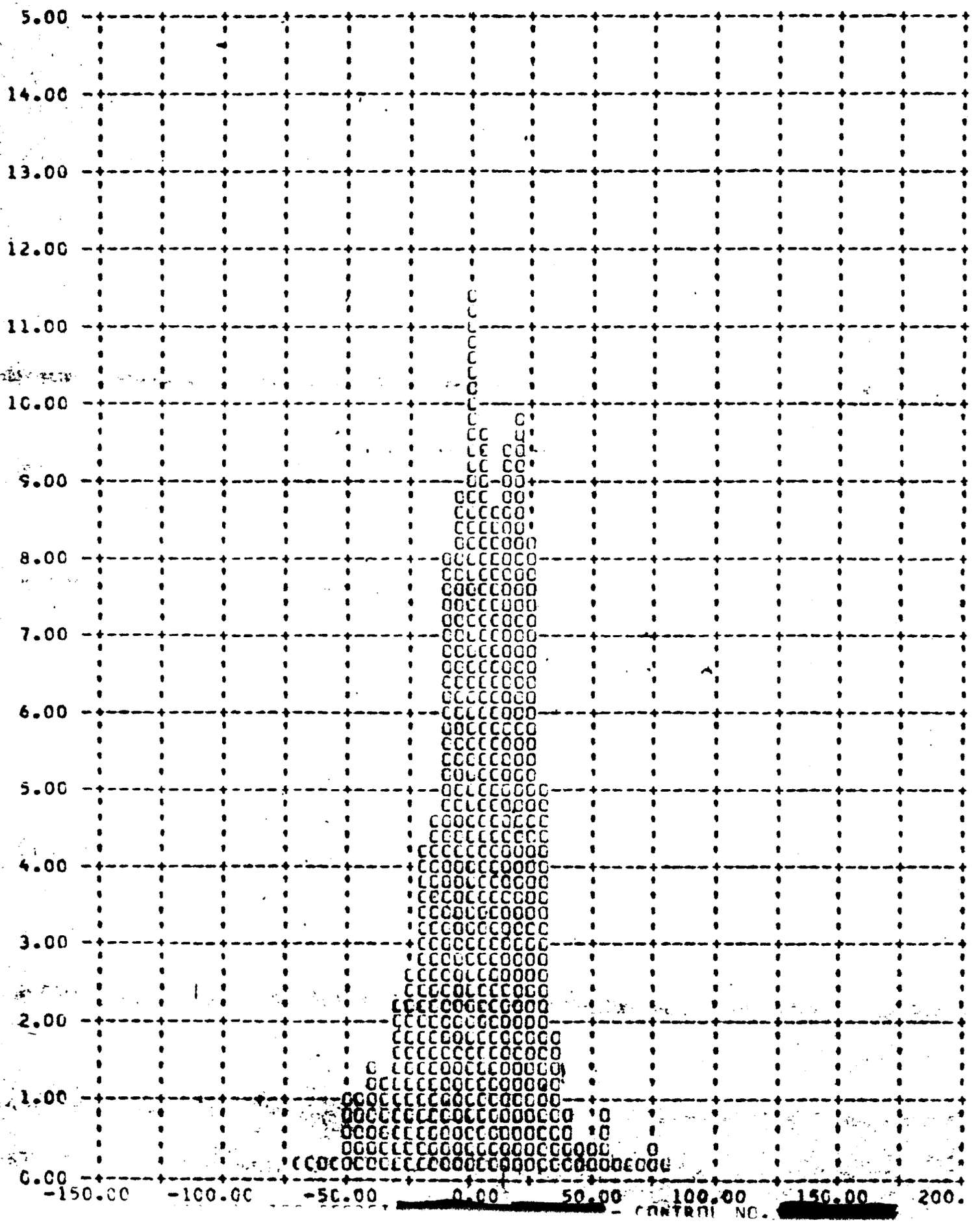
Y PITCH RATE ERROR - DEG/HCOR (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 1029A1 ~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

-27 A-BUCKET FORWAD INSTRUME FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 31.26

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

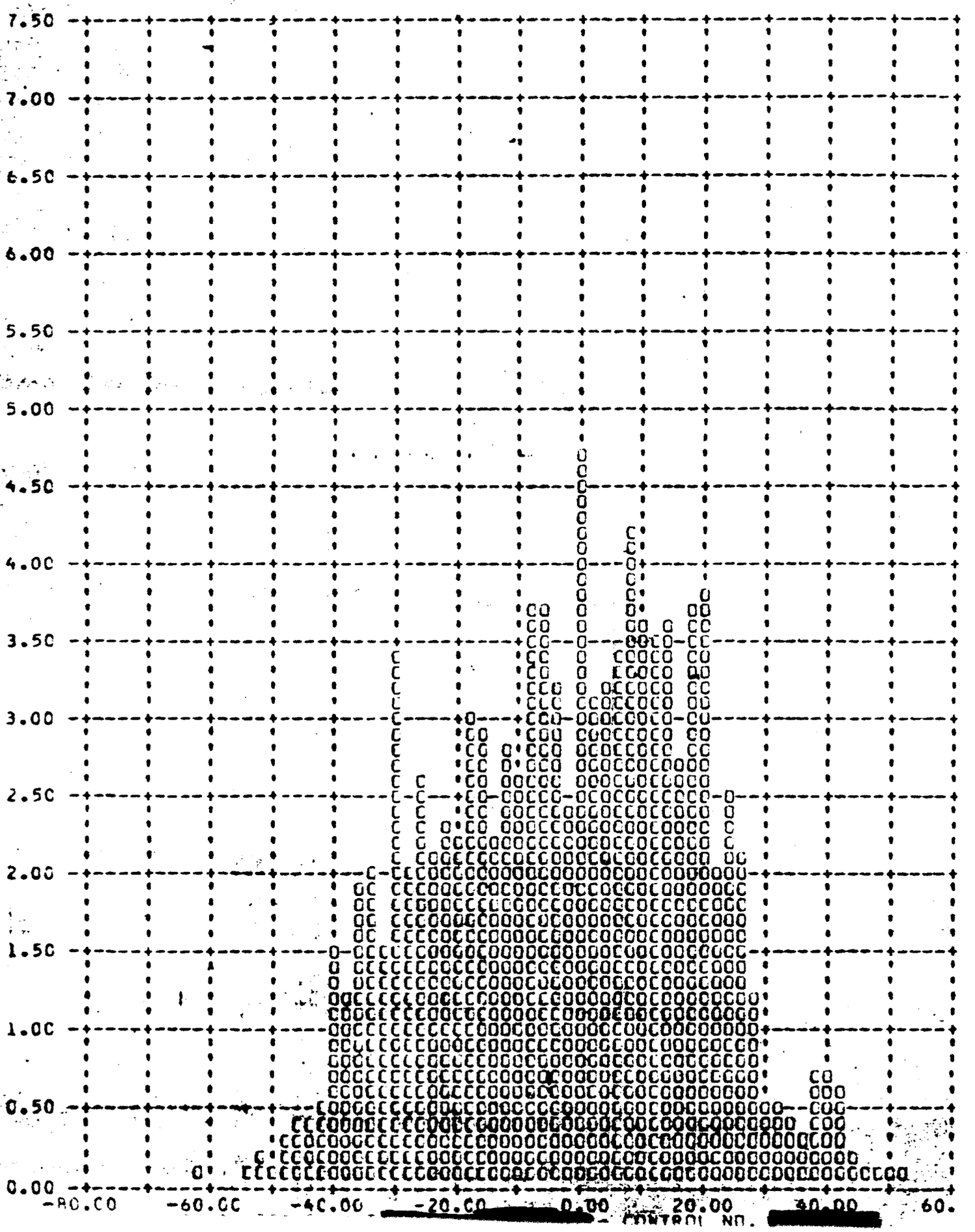


[redacted] - CONTROL NO. [redacted]

MISSION 1029A1 ~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

-27 A-BUCKET FORWAD INSTRUME' FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 34.44

Y YAW RATE ERRCR - DEG/SECR (X) VERSUS FREQUENCY - PERCENT (Y)

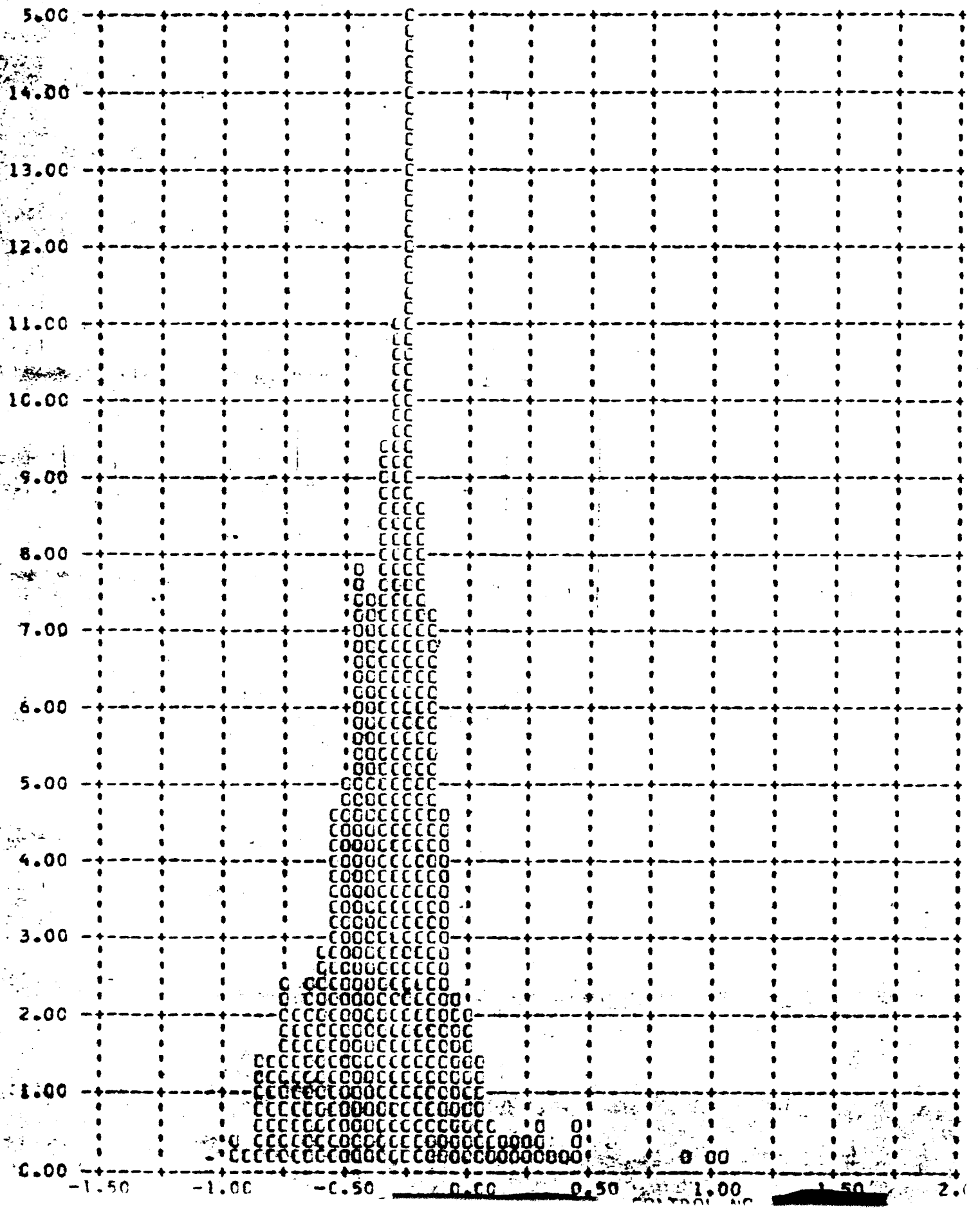


[redacted] CONTROL NO. [redacted]

MISSION 1029B1 ~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

27 B-BUCKET FORWARD INSTRUM FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.64

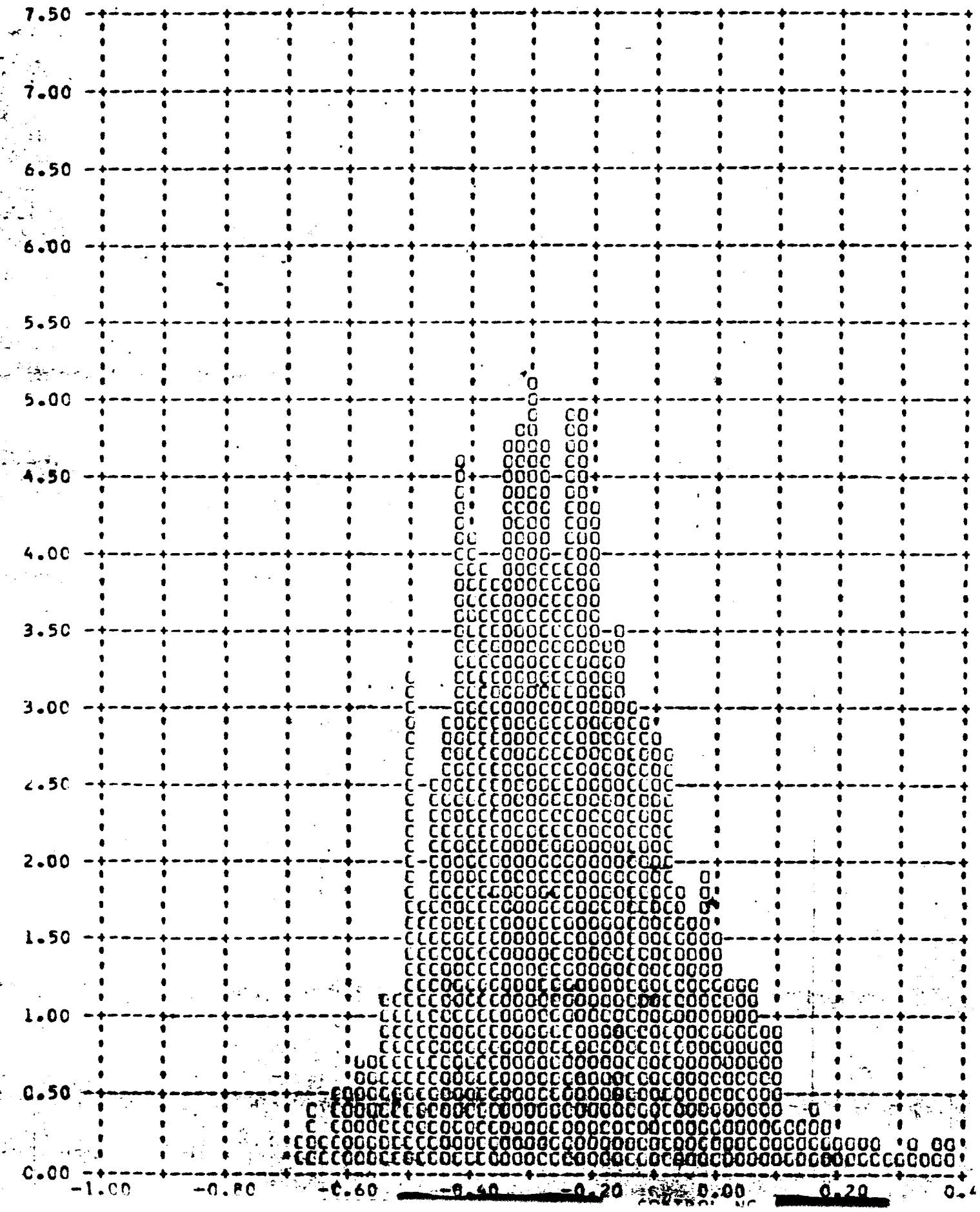
Y PITCH ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 102981 ~~TOP SECRET~~ [redacted] - CONTROL NC. [redacted]

-27 B-BUCKET FORWARD INSTRUM FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.48

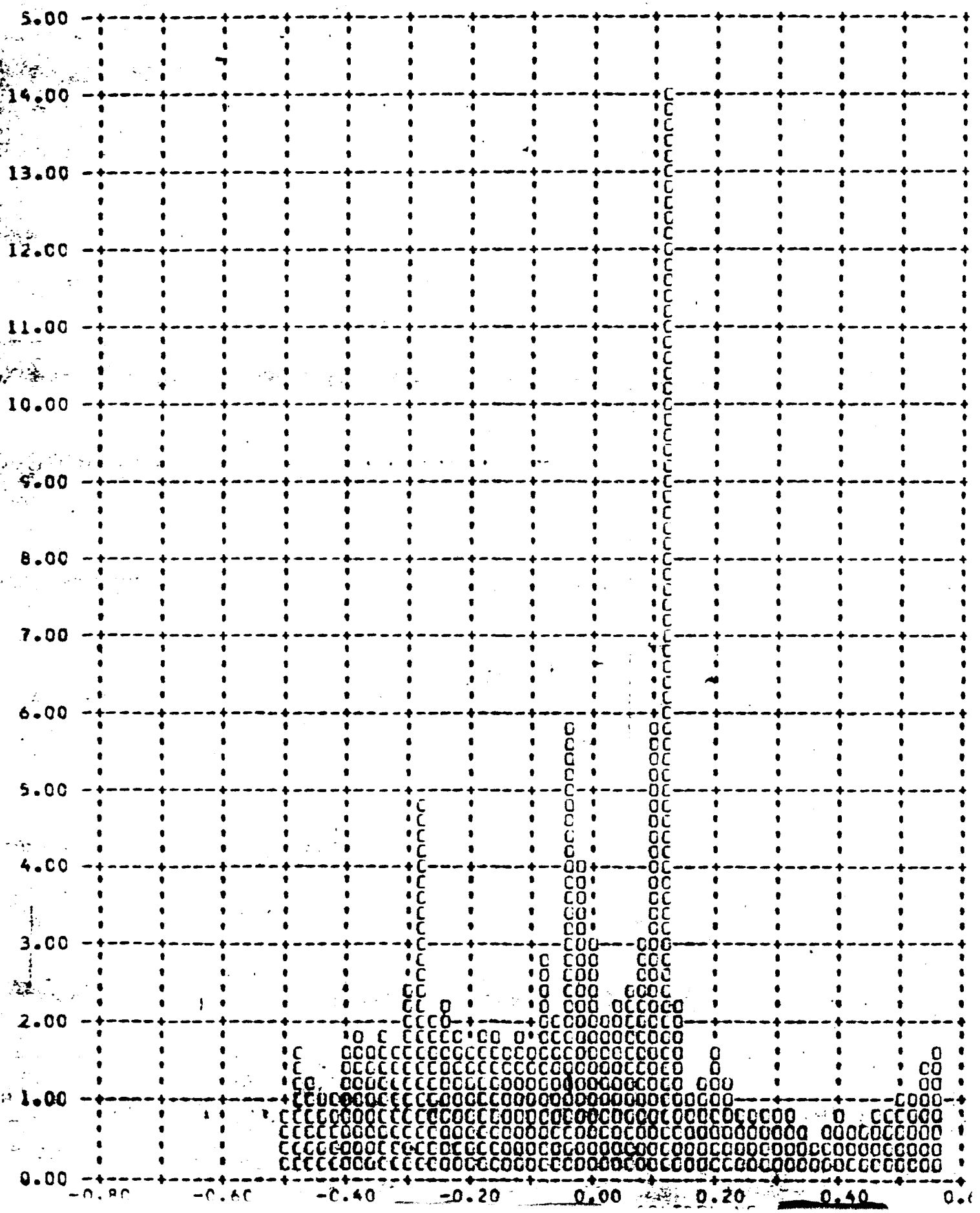
Y ROLL ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 1029B1 ~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

27 B-BUCKET FORWARD INSTRUM FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.44

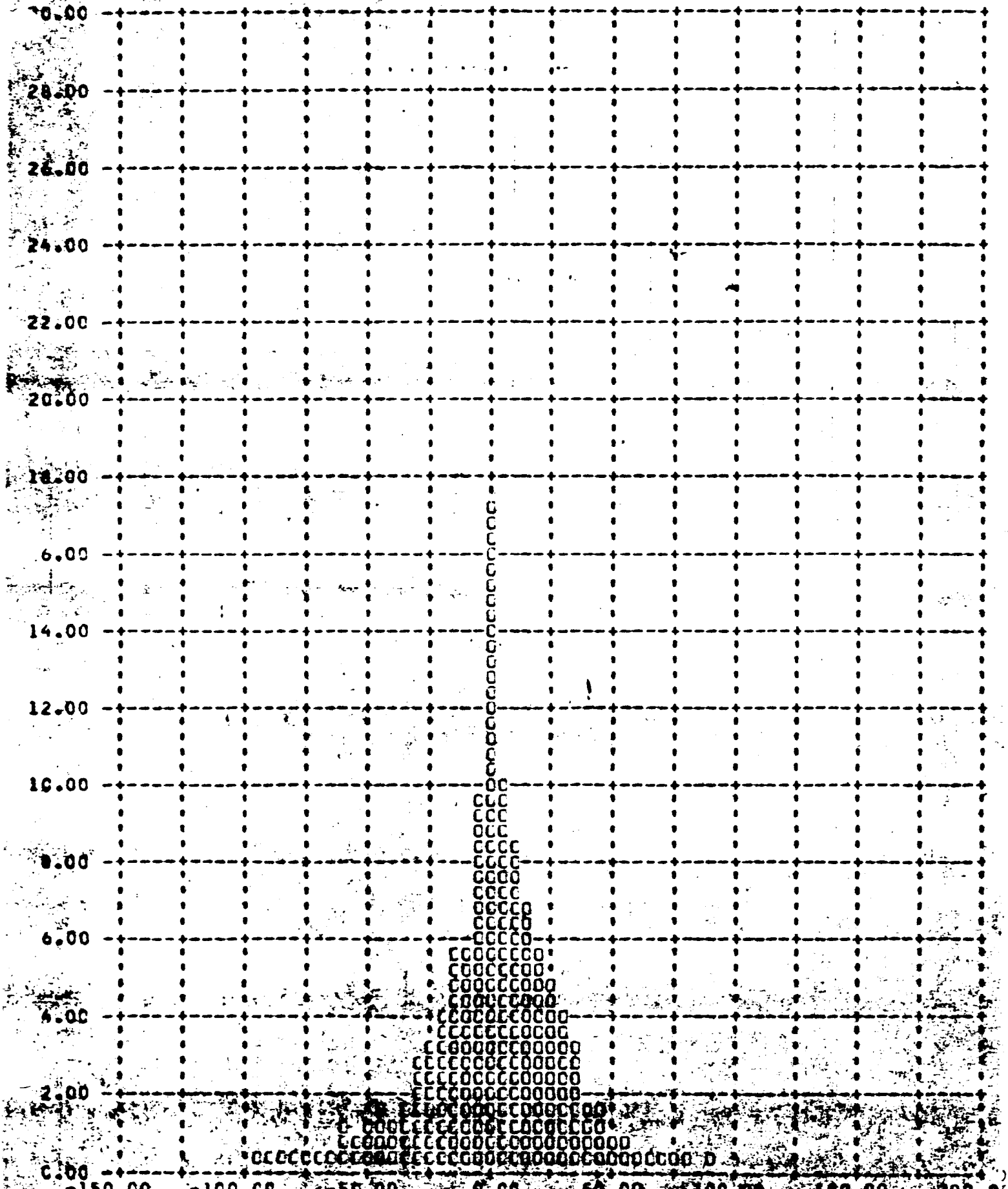
Y YAW ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 10298I ~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

27 8-BUCKET FORWARD INSTRUM FRAMES 1-6 OF EACH CP OMITTED 90 PERCENT = 38.77

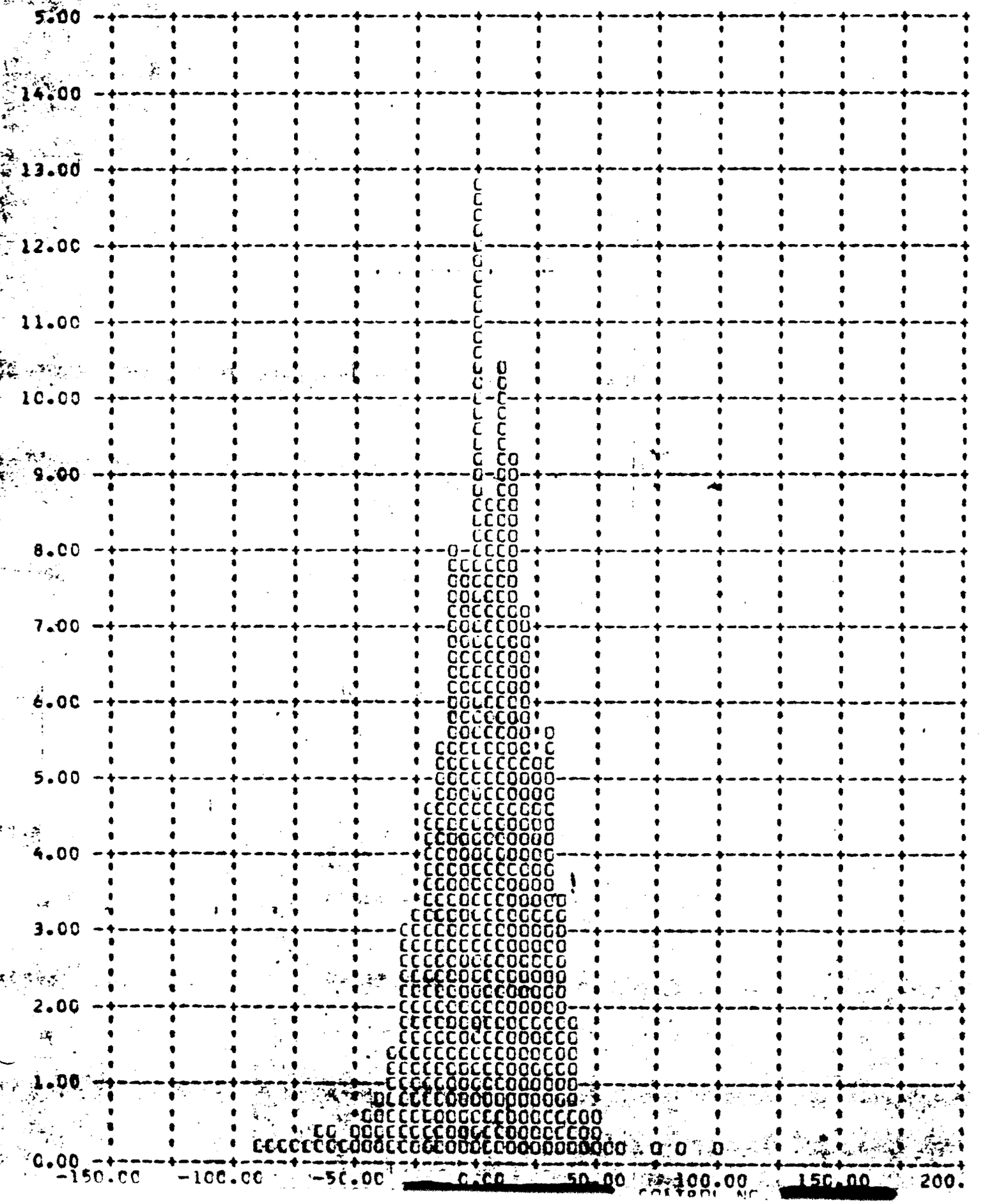
Y PITCH RATE ERROR - DEG/HOUR (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 102981 ~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

27 B-BUCKET FORWARD INSTRUM FRAMES 1-6 OF EACH CP OMITTED 90 PERCENT = 32.48

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

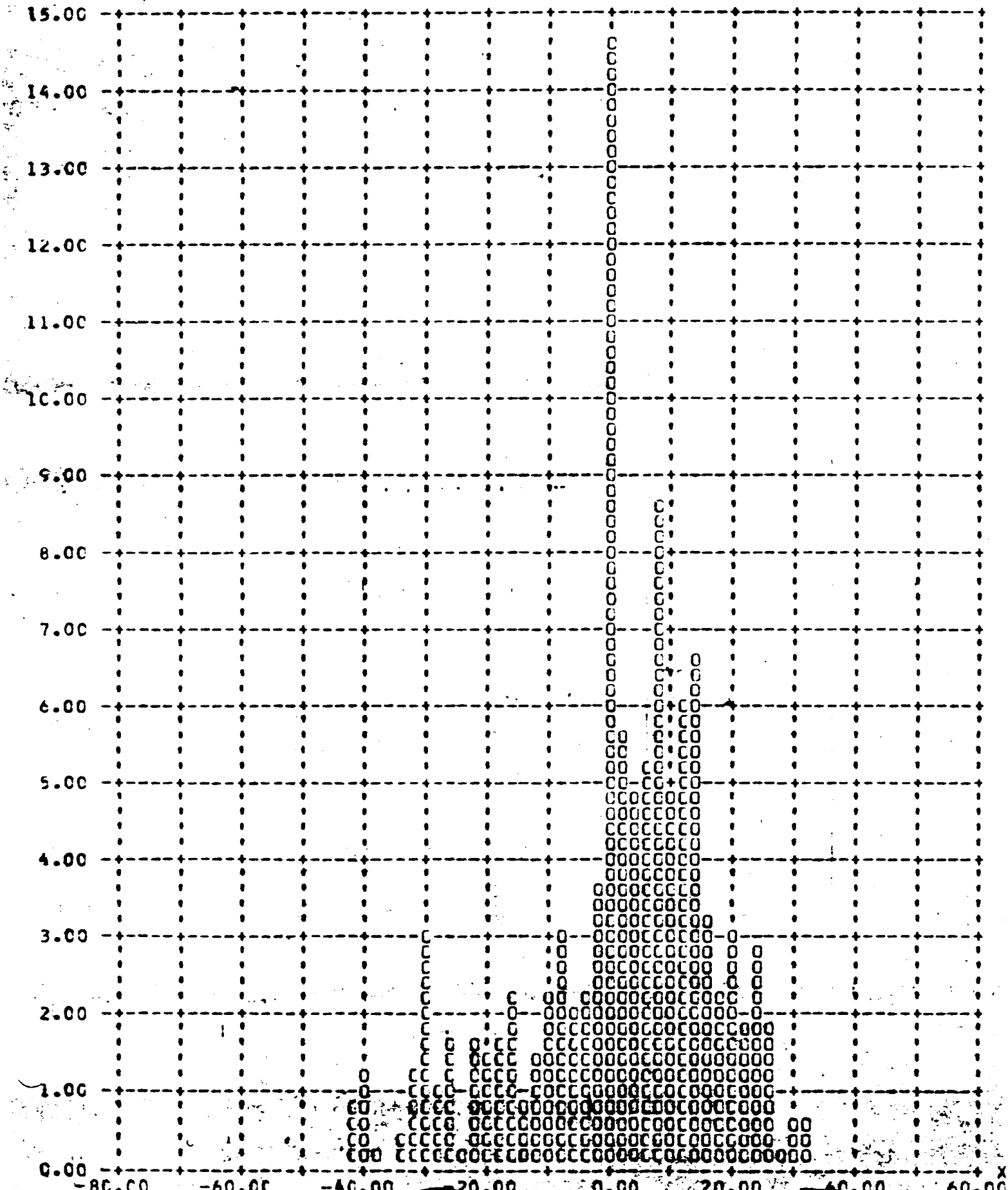


[redacted] CONTROL NO.

MISSION 1029B1 ~~TOP SECRET~~ [redacted] CONTROL N[redacted]

-27 B-BUCKET FORWARD INSTRUM FRAMES 1-6 OF EACH CP OMITTED 90 PERCENT = 25.65

Y YAW RATE ERROR - DEG/HOUR (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 for each panoramic camera have been calculated and plotted in Figures 15-1 through 15-12. The variation in the data for the panoramic cameras is the result of the different slit widths used during the mission and the resulting slower exposure time in the FWD camera.

The summary shown in 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 1029

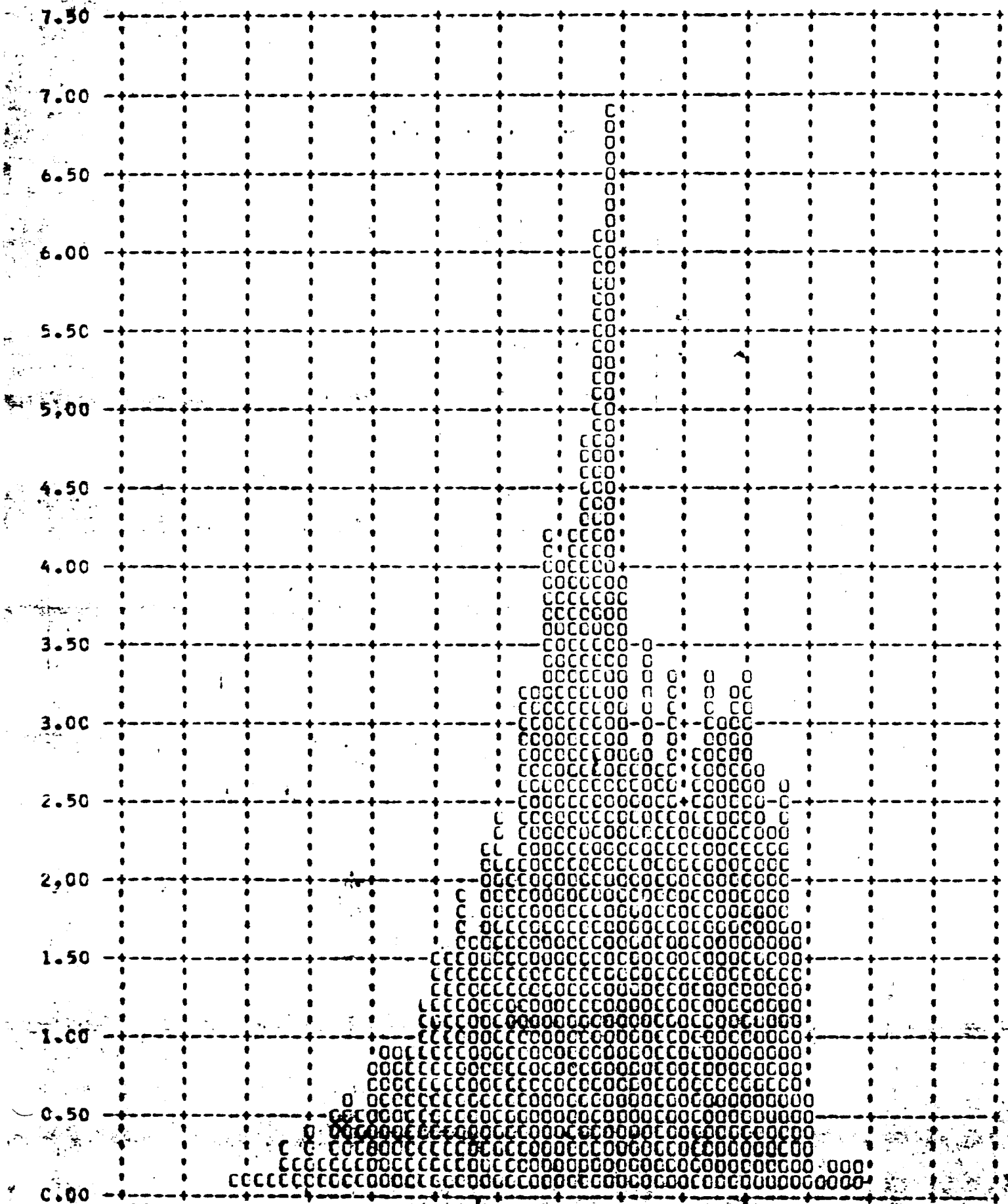
V/h RATIO AND RESOLUTION LIMITS

Value	Units	Camera	Mission 1029-1 90%	Mission 1029-1 Range	Mission 1029-2 90%	Mission 1029-2 Range
V/h Ratio Error	%	FWD	2.89	-6.2 to +3.8	2.25	-5.0 to +3.4
		AFT	4.56	-8.4 to +2.2	3.61	-7.6 to +1.8
Along Track Resolution Limit	Feet	FWD	7.83	0.2 to 10.0	7.54	0.2 to 10.4
		AFT	3.26	0.2 to 6.2	2.92	0.2 to 4.4
Cross Track Resolution Limit	Feet	FWD	7.44	1.0 to 9.4	7.51	1.4 to 9.2
		AFT	4.82	0.8 to 6.2	4.85	1.0 to 6.0

TABLE 15-1

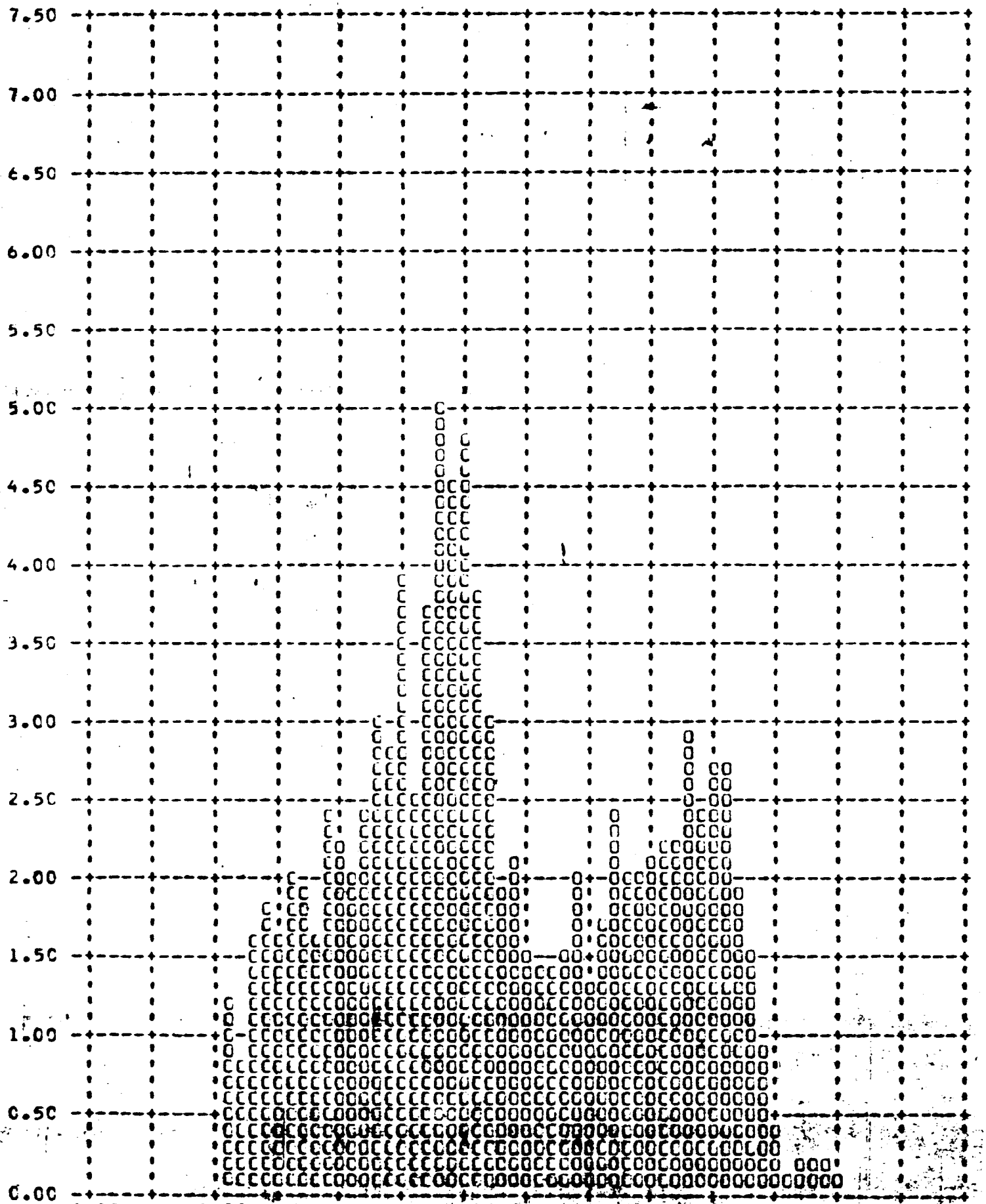
-27 A-BUCKET FORWAD INSTRUME FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 2.89

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



-27 A-BUCKET FORWAD INSTRUME FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 7.83

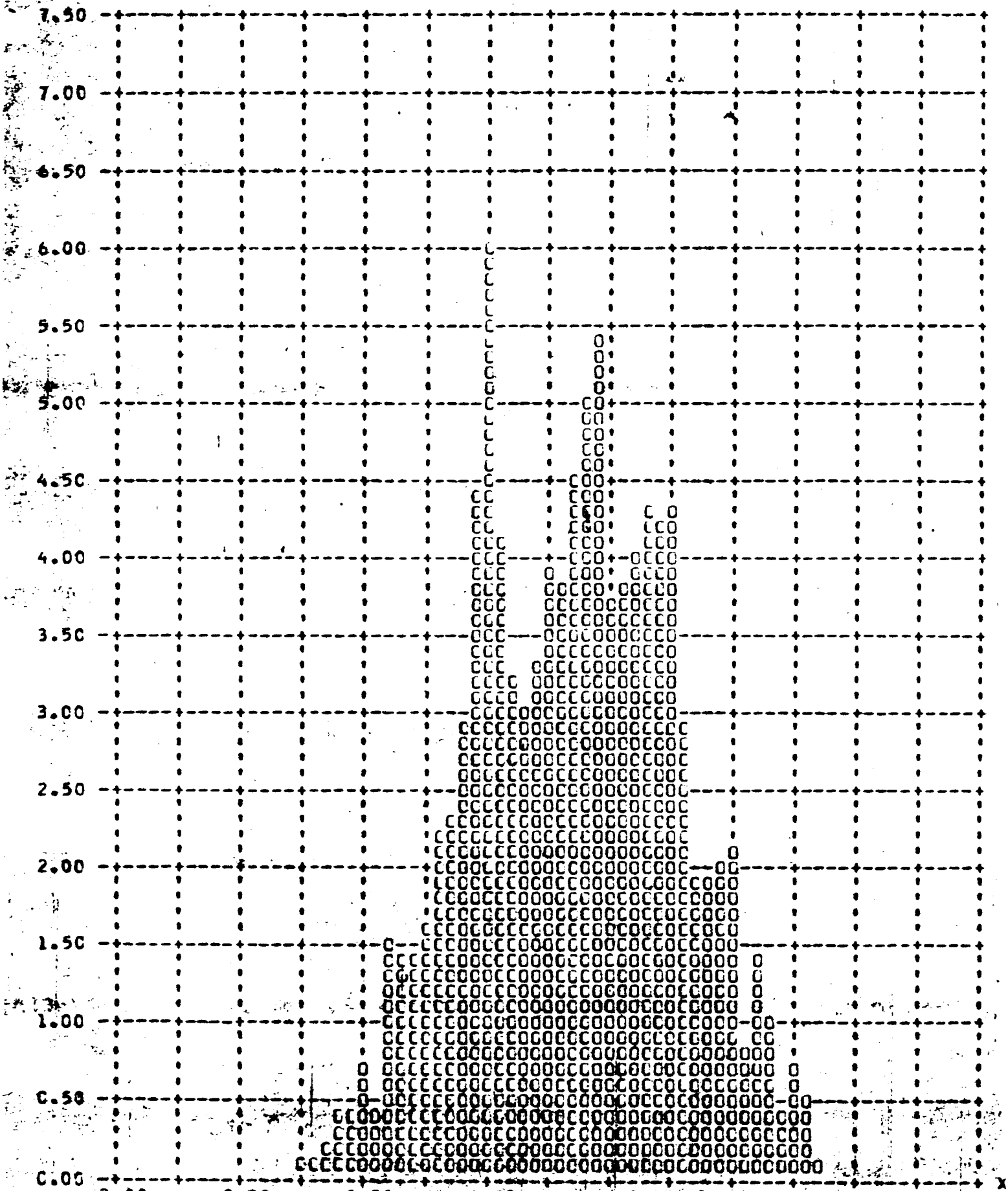
Y ALONG TRACK RESOLUTION LIMIT - FEET (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 1029A1 ~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

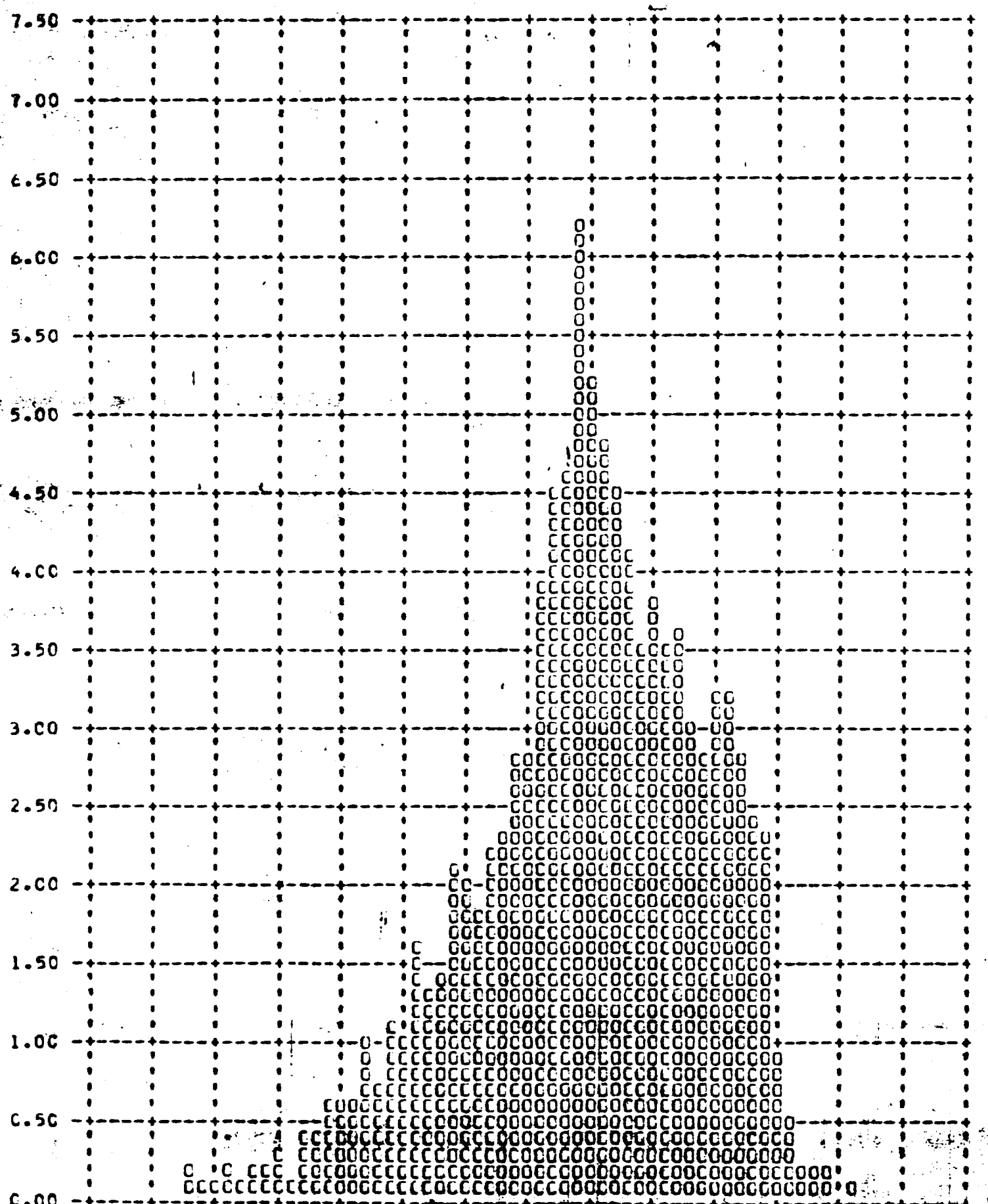
-27 A-BUCKET FORWAC INSTRUME FRAMES 1-6 OF EACH OP UMITTED 90 PERCENT = 7.44

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



-27 A-BUCKET AFT INSTRUMENT FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 4.56

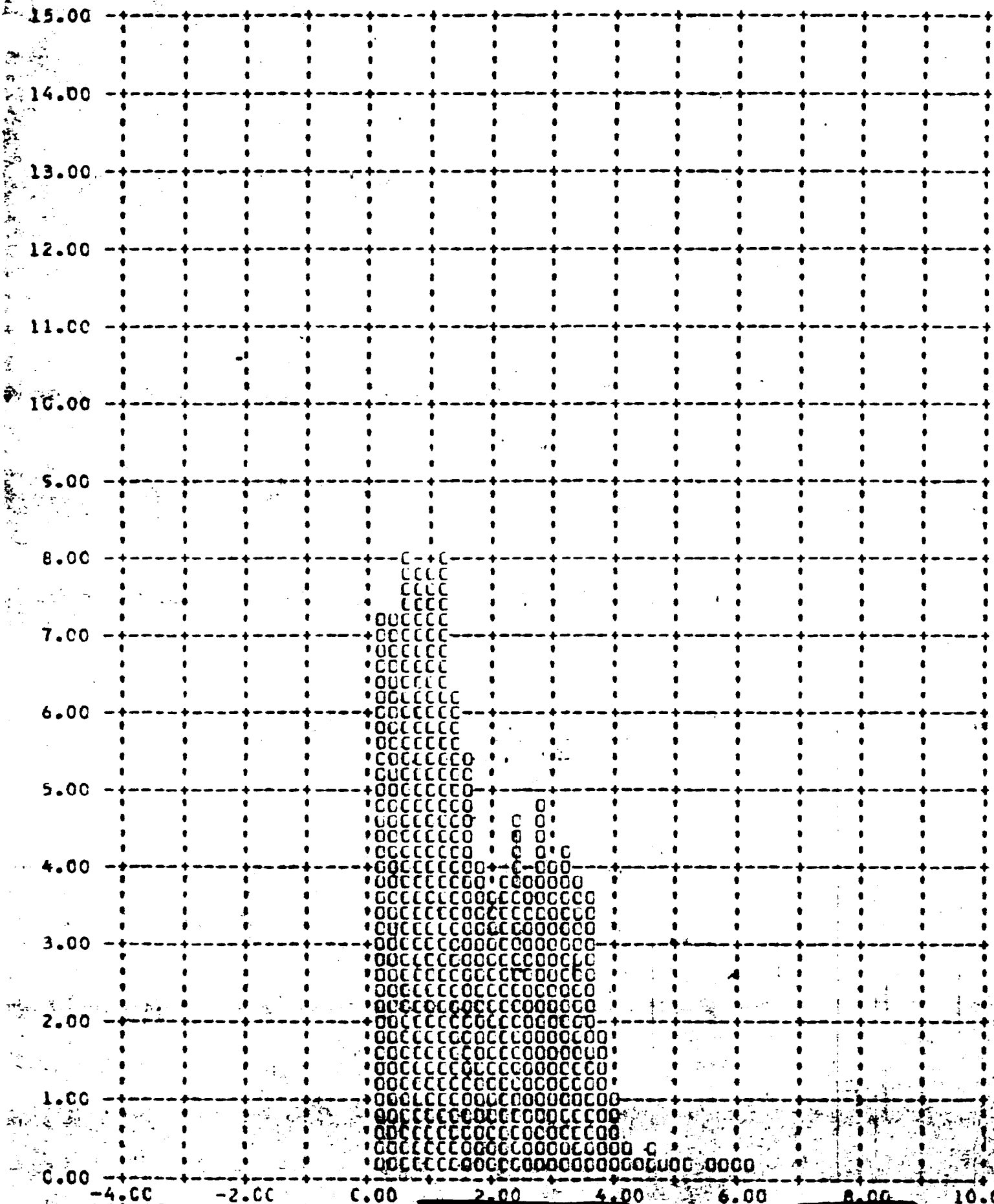
Y V/H RATIC ERROR - PERCENT (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 1029A2 ~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

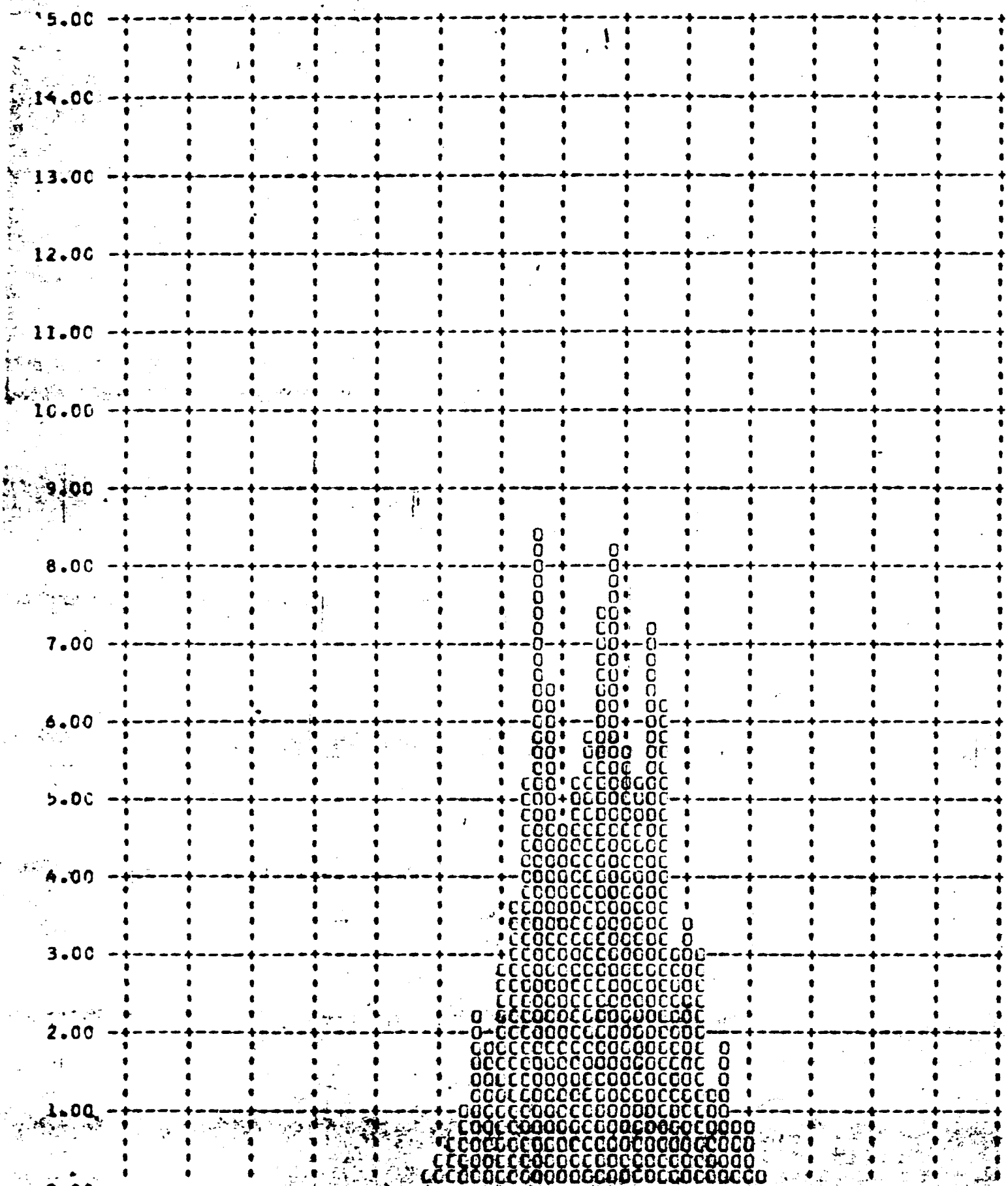
-27 A-BUCKET AFT INSTRUMENT. FRAMES 1-6 OF EACH CP OMITTED 90 PERCENT = 3.26

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



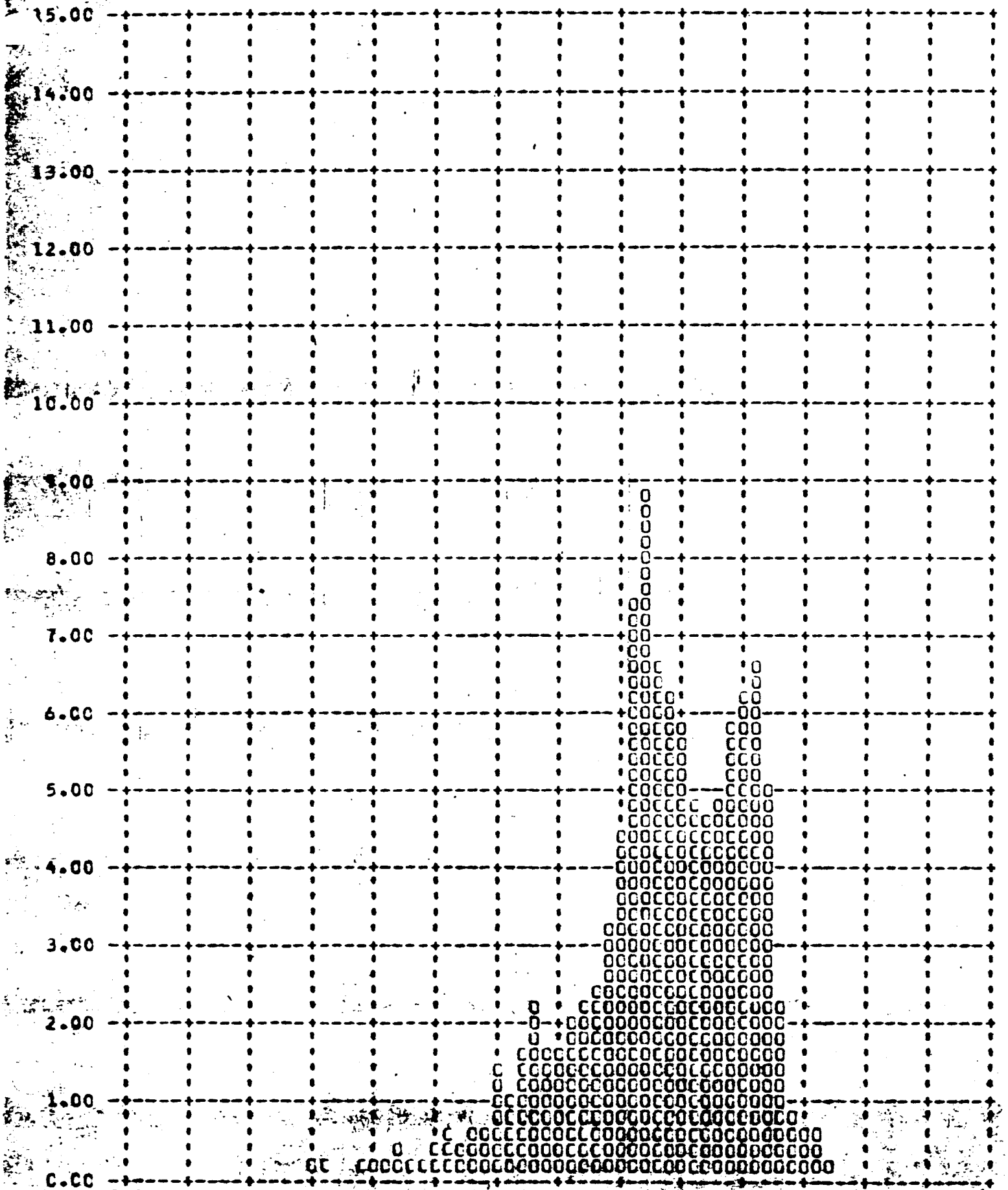
-27 A-BUCKET AFT INSTRUMENT FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 4.82

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



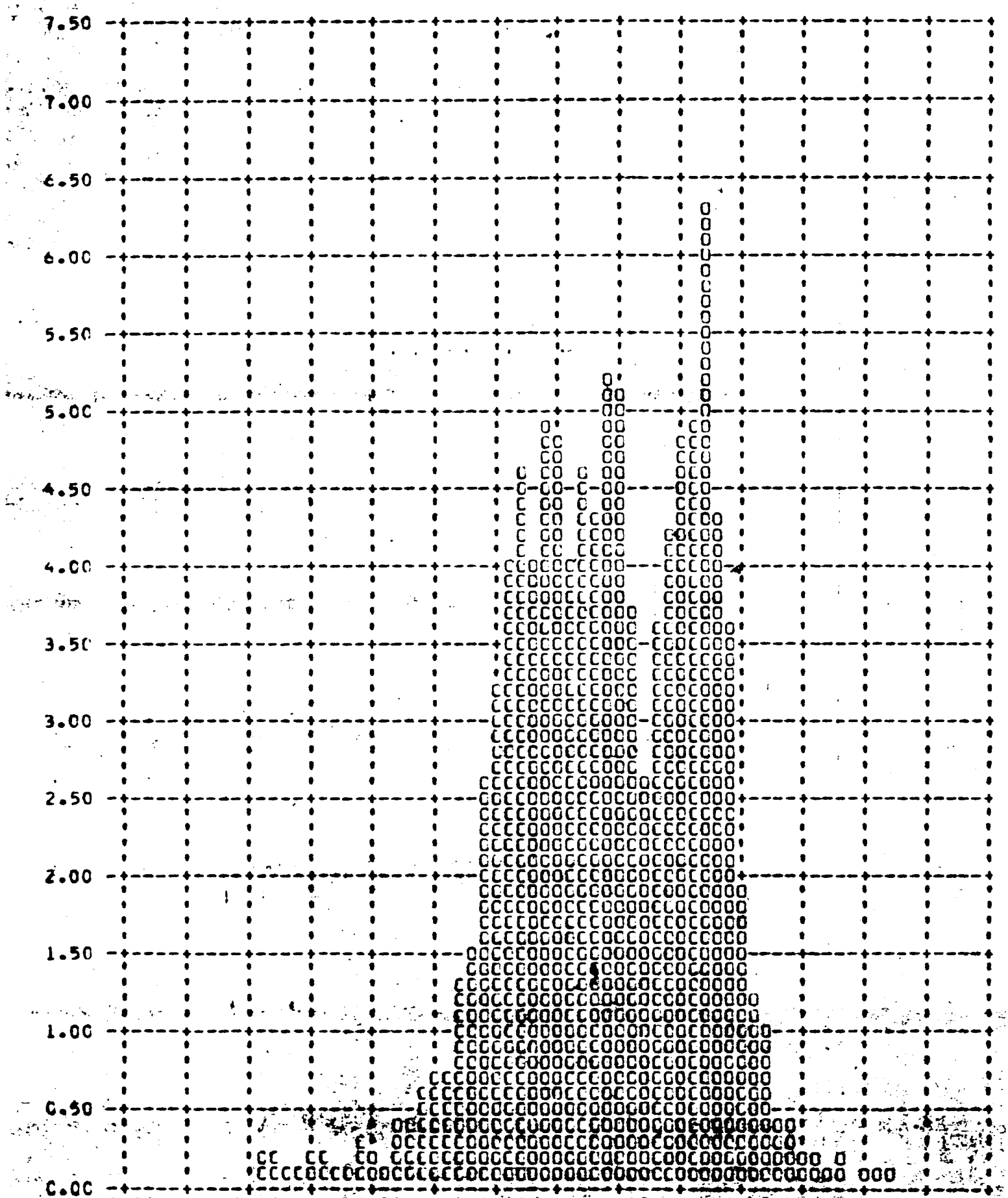
J-27 B-BUCKET FORWARD INSTRUM FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 2.25

Y V/H RATIC ERRCR - PERCENT (X) VERSUS FREQUENCY - PERCENT (Y)



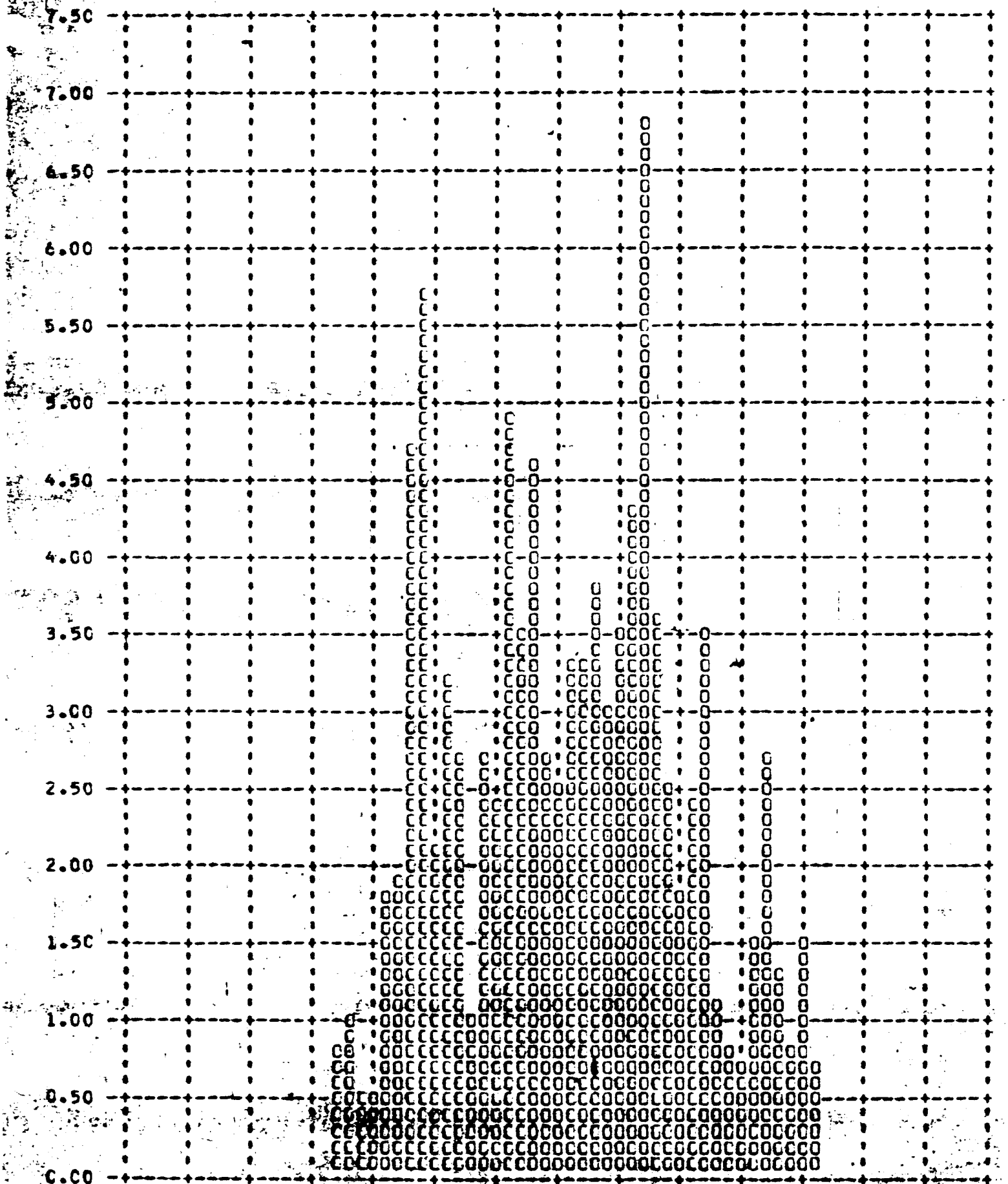
-27 B-BUCKET FORWARD INSTRUM FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 7.54

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



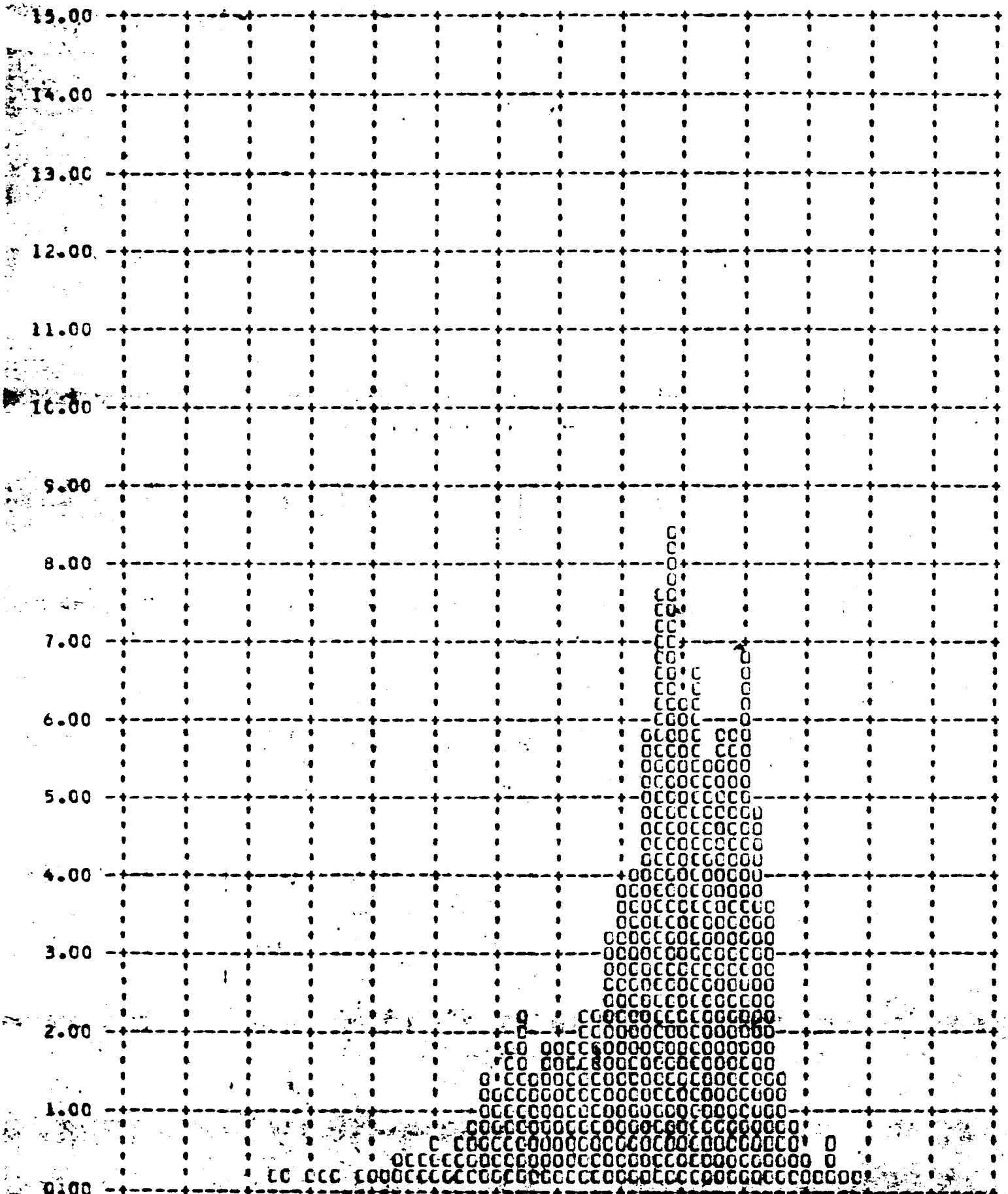
27 B-BUCKET FORWARD INSTRUM FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 7.51

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



-27 B-BUCKET AFT INSTRUMENT. FRAMES 1-6 OF EACH DP OMITTED 90 PERCENT = 3.61

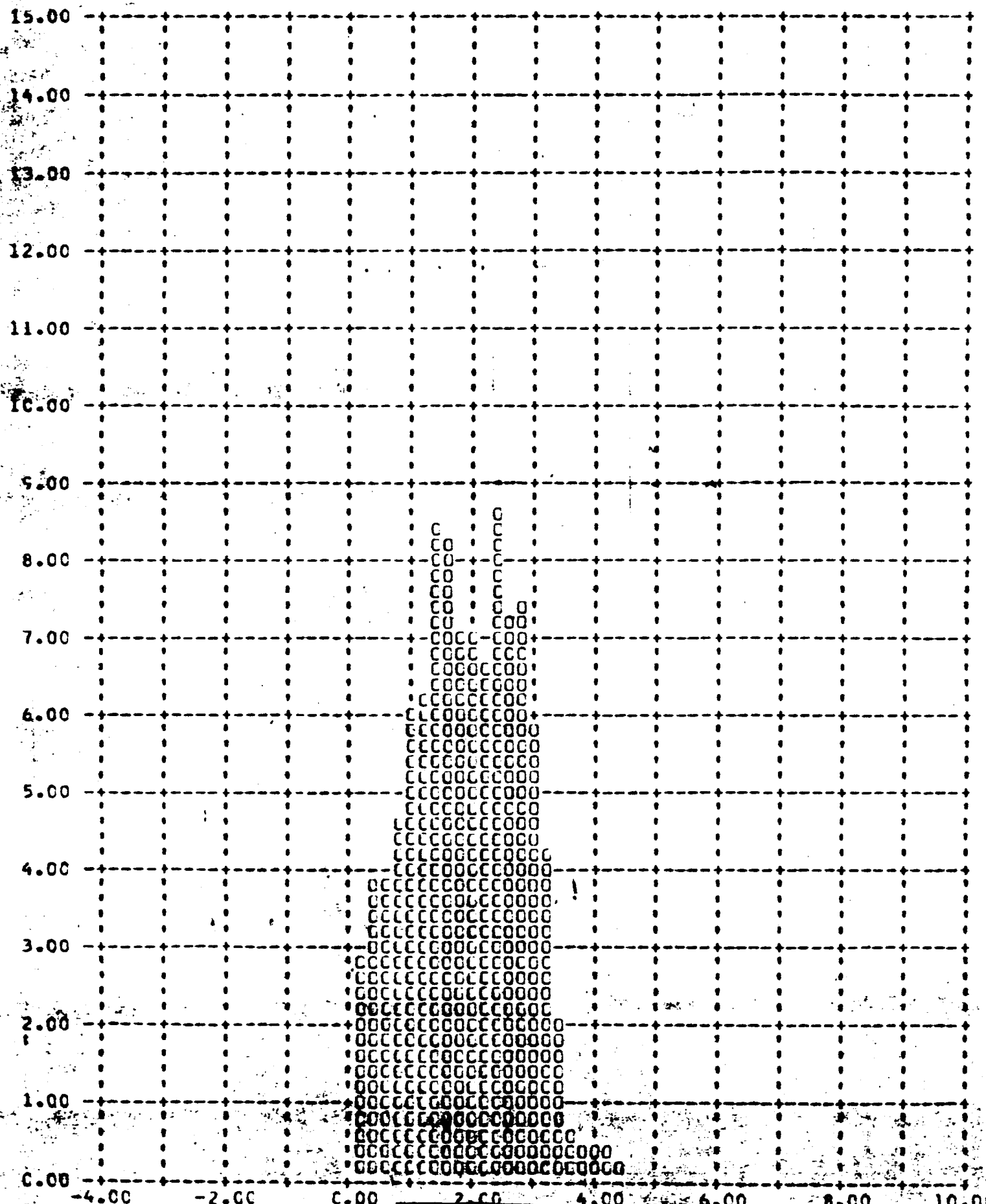
Y V/H RATIC ERRCR - PERCENT (x) VERSUS FREQUENCY - PERCENT (Y)



MISSION 1029B2 ~~TOP SECRET~~ [redacted] CONTROL NO [redacted]

F-27 B-BUCKET AFT INSTRUMENT FRAMES 1-6 OF EACH CP OMITTED 90 PERCENT = 2.92

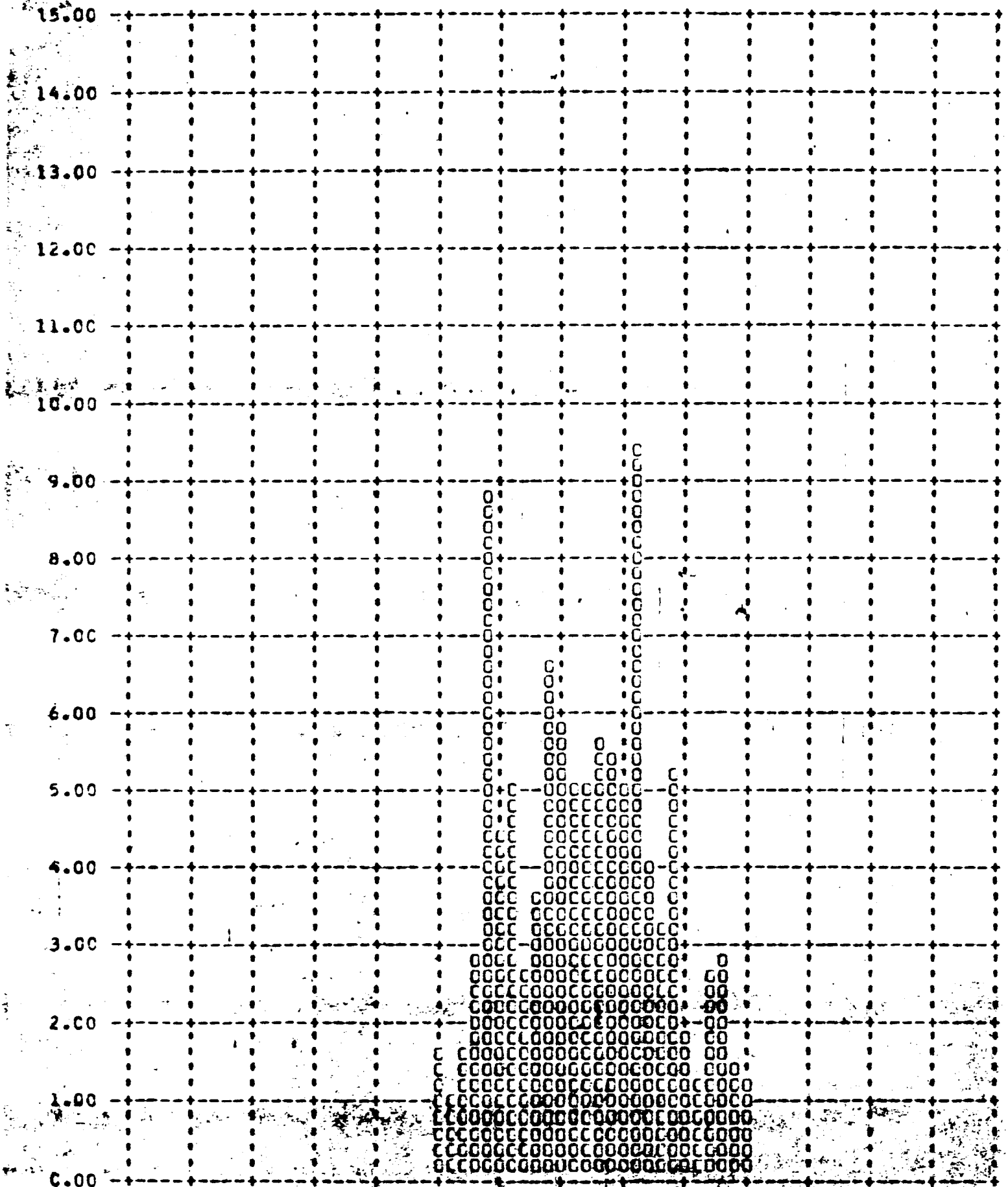
Y ALONG TRACK RESOLUTION LIMIT - FEET (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 102982 ~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

1-27 B-BUCKET AFT INSTRUMENT FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 4.85

Y CROSS 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 1029-1		Mission 1029-2	
Emulsion	B + F Density	Radiation	B + F Density	Radiation
Type 3401	0.16	0.4R	0.20	0.6R
Royal X Pan	0.23	0.4R	0.28	0.5R

The mean total radiation seen by the take-up cassettes during both missions was approximately 0.5 roentgens. This level is well below the level that will degrade the panoramic photography.

SECTION 17

SYSTEM RELIABILITY

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

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

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

Panoramic Camera Reliability

Sample Size - 136 opportunities to operate.
One failure - S/I Programmer on system J-19.
Assume - 3000 cycles per camera per mission.
Estimated Reliability - 98.8% at 50% confidence level.

Main Camera Door Reliability

Sample Size - 47 vehicles x 2 doors = 94 opportunities to operate
Estimated Reliability = 99.3% at 50% confidence level.

Payload Command & Control Reliability

Sample size: 7200 hours operation
Two Failures
Estimated Reliability = 96.5% at 50% confidence level

Payload Clock Reliability

Sample size: 72 hours operation
No failures
Estimated Reliability = 99.1% at 50% confidence level.

Estimated Reliability of Payload Functioning on orbit: 96.8% at 50% confidence level.

Recovery System Reliability

59 opportunities to recover
1 failure - improper separation due to water seal - cutter failure.
Estimated Reliability = 97.1 % at 50% Confidence level.

Stellar-Index Camera Reliability

Sample begins with J-5.
Sample size = 16,580
Number of failures - 4
Estimated Reliability = 88.7% at 50% confidence level.

Horizon Camera Reliability

Sample includes J5 and up
Sample size: 70,500
Estimated Reliability of Single Camera = 98.5% 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 SPECIMEN / FAILURES / RELIABILITY	SAMPLE SIZE / FAILURES / RELIABILITY	SAMPLE HOURS / FAILURES / RELIABILITY	SAMPLE HOURS / FAILURES / RELIABILITY	RELIABILITY	SAMPLE CYCLES / FAILURES / RELIABILITY	SAMPLE CYCLES / FAILURES / RELIABILITY	SAMPLE CYCLES / FAILURES / RELIABILITY
0056 TO 1008	60 / 1 / 97.3	62 / 0 / 98.8	3124 / 0 / 98.0	3124 / 0 / 98.0	96.1	18 / 1 / 90.7	5400 / 3 / 83.1	18,000 / 0 / 91.7
1009	64 / 1 / 97.4	64 / 0 / 98.7	3216 / 0 / 98.0	3216 / 0 / 98.0	96.2	20 / 1 / 91.5	4250 / 3 / 88.3	18,000 / 0 / 93.6
1010	68 / 1 / 97.5	66 / 0 / 98.8	3432 / 0 / 98.1	3432 / 0 / 98.1	96.4	22 / 1 / 92.5	5100 / 3 / 73.7	18,000 / 0 / 94.4
1011	72 / 1 / 97.7	68 / 0 / 98.9	3600 / 0 / 98.1	3600 / 0 / 98.1	96.8	24 / 1 / 93.0	5525 / 0* / 94.7	21,000 / 0 / 96.2
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 / 96.8
1013	78 / 1 / 97.8	62 / 0 / 99.0	3940 / 1 / 96.9	3940 / 0 / 98.3	96.0	28 / 1 / 94.0	5960 / 0 / 95.1	25,800 / 0 / 96.0
1014	82 / 1 / 97.9	64 / 0 / 99.0	4066 / 1 / 96.1	4066 / 0 / 98.5	96.1	30 / 1 / 94.4	6378 / 1 / 88.6	28,800 / 0 / 96.4
1015	86 / 1 / 98.0	66 / 0 / 99.0	4320 / 1 / 96.3	4320 / 0 / 98.4	96.1	32 / 1 / 94.8	7828 / 1 / 90.4	31,800 / 0 / 96.7
1016	90 / 1 / 98.1	68 / 0 / 99.0	4560 / 1 / 96.5	4560 / 0 / 98.5	96.4	34 / 1 / 95.2	7650 / 1 / 91.0	34,800 / 0 / 97.0
1017	94 / 0* / 99.3	70 / 0 / 99.0	4760 / 1 / 96.7	4760 / 0 / 98.6	97.6	36 / 1 / 95.4	8925 / 1 / 92.3	37,500 / 0 / 97.3
1018	98 / 1 / 98.3	72 / 0 / 99.1	4920 / 1 / 96.8	4920 / 0 / 98.7	96.7	38 / 1 / 95.6	8960 / 1 / 92.5	40,500 / 0 / 97.5
1019	102 / 1 / 98.4	74 / 0 / 99.1	5136 / 1 / 96.9	5136 / 0 / 98.7	96.8	39 / 1 / 95.8	8075** / 1 / 91.8	42,800 / 0 / 97.6

* SCREEN FOR NEGATIVE PREVIOUS FAILURE CONSIDERATIONS

** SEND SAMPLE OUT OF SEQUENCE

TABLE 17-1

ESTIMATED RELIABILITY SUMMARY

(AT 50% CONFIDENCE LEVEL)

MISSION NUMBER	PRIMARY FUNCTIONS						SECONDARY FUNCTIONS	
	PANORAMIC CAMERA	PANORAMIC CAMERA DOORS	COMMAND & CONTROL SYSTEM	PAYLOAD CLOCK	ON-ORBIT FUNCTIONS	RECOVERY SYSTEM	STELLAR-INDEX CAMERAS	HORIZON CAMERAS
	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY
1020	108 / 1 / 98.8	78 / 0 / 99.1	5544 / 1 / 97.1	5544 / 0 / 98.9	96.9	43 / 1 / 96.1	10,680 / 2 / 89.9	48,000 / 0 / 97.9
1021	104 / 1 / 98.8	76 / 0 / 99.1	5376 / 1 / 97.0	5376 / 0 / 98.8	96.9	41 / 1 / 96.0	9630 / 2 / 89.1	46,500 / 0 / 97.8
1022	112 / 1 / 98.8	80 / 0 / 99.2	5784 / 1 / 97.3	5784 / 0 / 98.9	96.9	45 / 1 / 96.3	11,650 / 2 / 90.7	51,000 / 0 / 98.0
1023	114 / 1 / 98.6	82 / 0 / 99.2	6000 / 2 / 95.8	6000 / 0 / 98.9	96.2	47 / 1 / 96.5	12,190 / 2 / 91.1	54,000 / 0 / 98.1
1024	118 / 1 / 98.6	84 / 0 / 99.2	6240 / 2 / 96.0	6240 / 0 / 98.9	96.3	49 / 1 / 96.6	13,040 / 2 / 91.6	57,000 / 0 / 98.2
1025	122 / 1 / 98.6	86 / 0 / 99.2	6480 / 2 / 96.1	6480 / 0 / 99.0	96.4	51 / 1 / 96.7	13,890 / 2 / 92.1	60,000 / 0 / 98.3
1026	126 / 1 / 98.7	88 / 0 / 99.2	6720 / 2 / 96.3	6720 / 0 / 99.0	96.5	53 / 1 / 96.8	14,740 / 2 / 92.6	63,000 / 0 / 98.4
1027	128 / 1 / 98.7	90 / 0 / 99.2	6744 / 2 / 96.3	6744 / 0 / 99.0	96.5	55 / 1 / 97.0	15,165 / 3 / 90.0	64,800 / 0 / 98.4
1028	132 / 1 / 98.7	92 / 0 / 99.2	6960 / 2 / 96.4	6960 / 0 / 99.0	96.7	57 / 1 / 97.1	16,015 / 3 / 90.7	67,500 / 0 / 98.5
1029	136 / 1 / 98.8	94 / 0 / 99.3	7200 / 2 / 96.5	7200 / 0 / 99.1	96.8	59 / 1 / 97.1	16,560 / 4 / 88.7	70,500 / 0 / 98.5

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 to 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	2/16/64	2136 Z	74.9	99.9	29.0	49/112	124	0.250	W-21	125	0.250	W-21	029/29/29 042/42/37
1006	J-09	1176	6/4/64	2259 Z	79.9	84.0	63.2	65/128	148	0.200	W-21	149	0.200	W-21	045/47/46 049/53/48
1007	J-07	1609	6/19/64	2318 Z	85.0	99.2	41.5	65/128	144	0.250	W-25	145	0.200	W-21	043/43/43 054/56/51
1008	J-10	1177	7/10/64	2314 Z	85.0	99.4	40.8	49/112	150	0.200	W-21	151	0.200	W-21	048/48/48 033/28/33
1009	J-12	1606	8/5/64	2316 Z	90.1	99.6	39.6	49/128	154	0.200	W-21	155	0.200	W-21	056/54/58 036/36/34
1010	J-11	1178	9/14/64	2254 Z	84.9	97.4	42.5	65/144	152	0.175	W-21	153	0.175	W-21	041/41/41 044/46/44
1011	J-08	1170	10/5/64	2180 Z	79.9	99.3	20.9	65/—	160	0.175	W-21	161	0.175	W-21	030/30/30 067/67/67
1012	J-13	1179	10/17/64	2202 Z	75.0	96.2	32.4	49/81	156	0.200	W-21	157	0.200	W-21	051/51/47 046/52/53
1013	J-15	1173	11/2/64	2130 Z	80.0	100.0	25.0	65/81	158	0.225	W-21	159	0.225	W-21	052/49/56 047/48/54
1014	J-16	1180	11/18/64	2036 Z	70.0	103.2	66.6	81/145	162	0.250	W-25	139	0.175	W-21	053/59/49 060/44/48
1015	J-17	1607	12/10/64	2110 Z	74.9	96.7	31.8	81/175	138	0.250	W-25	141	0.175	W-21	061/61/61 058/58/58
1016	J-18	1608	1/15/65	2101 Z	74.9	99.4	30.2	81/189	132	0.250	W-25	133	0.175	W-21	055/55/60 059/60/59
1017	J-14	1611	2/25/65	2144 Z	75.0	97.2	28.9	81/145	140	0.250	W-25	169	0.175	W-21	021/21/21 060/61/1
1018	J-19	1612	3/23/65	2111 Z	90.0	100.2	40.3	66/99	122	0.250	W-25	123	0.175	W-21	020/20/20 022/22/22
1019	J-04	1614	4/29/65	2144 Z	85.0	99.1	27.1	80/—	118	0.250	W-25	119	0.175	W-21	039/39/38 015/19/19
1020	J-20	1613	6/9/65	2158 Z	75.1	97.1	40.6	97/113	136	0.250	W-25	137	0.175	W-21	067/65/60 062/65/65
1021	J-21	1615	8/18/65	1803 Z	75.0	109.2	24.3	81/161	166	0.175	W-21	167	0.250	W-25	063/69/69 065/27/25
1022	J-22	1617	9/19/65	2201 Z	85.0	99.7	30.3	65/144	168	0.250	W-25	169	0.175	W-21	065/77/70 064/24/24
1023	J-23	1618	8/17/65	2100 Z	70.0	97.8	29.0	81/144	170	0.225	W-25	171	0.150	W-21	017/19/82 066/75/72
1024	J-24	1619	9/22/65	2131 Z	80.0	95.9	18.4	81/161	172	0.225	W-25	173	0.150	W-21	069/72/64 064/62/66
1025	J-26	1616	10/5/65	1746 Z	75.0	112.9	44.3	81/161	142	0.175	W-21	127	0.175	W-21	073/78/68 070/68/81
1026	J-25	1620	10/28/65	2117 Z	75.0	95.0	17.0	81/160	174	0.225	W-25	175	0.150	W-21	075/82/93 072/69/85
1027	J-27	1621	12/9/65	2110 Z	90.0	97.4	17.3	17/33	164	0.250	W-25	165	0.175	W-21	071/67/87 068/74/83
1028	J-28	1610	12/24/65	2106 Z	80.0	97.6	28.4	81/144	176	0.250	W-25	177	0.175	W-21	077/81/97 074/76/85

TABLE 18-1

MISSION SUMMARY

MISSION NUMBER	PAYLOAD NUMBER	VEHICLE NUMBER	LAUNCH DATE	LAUNCH TIME	ORBIT INCLINATION (°)	PERIGEE ALTITUDE (NM)	PERIGEE LOCATION (°N)	RECOVERY PASS	MASTER CAMERA CAMERA NUMBER	MASTER CAMERA SLIT (")	MASTER CAMERA FILTER TYPE	SLAVE CAMERA CAMERA NUMBER	SLAVE CAMERA SLIT (")	SLAVE CAMERA FILTER TYPE	STELLAR-INDEX CAMERA NUMBER
1059	9027	4623	2/12/69	2132 Z	75.1	99.5	22.5	81 / 160	178	0.275	W-25	179	0.175	W-21	D79/84/91 / D78/79/80

TABLE 18-1

PERFORMANCE SUMMARY

MISSION NUMBER	CAMERA	SERIAL NUMBER	E I P VALUE	VISUAL RES.	AF SPPL MTF/AIM SLIT (μ)	AF SPPL MTF/AIM AVERAGE	SLIT (μ)	AVERAGE	[redacted] SLIT (μ)	[redacted] AVERAGE ALL	[redacted] AVERAGE HIGH	90% ATTITUDE ERROR (°) PITCH	90% ATTITUDE ERROR (°) ROLL	90% ATTITUDE ERROR (°) YAW	90% ATTITUDE RATES (MR.) PITCH	90% ATTITUDE RATES (MR.) ROLL	90% ATTITUDE RATES (MR.) YAW	90% V/H ERROR (FT)	90% RESOLUTION LOST (FEET) ALONG TRACK	90% RESOLUTION LOST (FEET) CROSS TRACK
1004-1	FWD	124	88	78	380	97	43	109	320	115	127	0.45	0.42	1.08	30.0	29.0	31.0	5.1	7.7	8.1
	AFT			86		80		96		117	124									
1004-2	FWD	125	88	78		88		113		82	90	0.74	0.60	0.91	44.0	30.0	29.0	4.9	6.6	6.5
	AFT			75		83		106		89	95									
1005-1	FWD	148	90	78	380	68	43	88	320	84	97	0.41	0.42	1.14	26.8	28.5	27.8	15.4	13.8	8.7
	AFT			74		71		90		87	92									
1005-2	FWD	149	90	85		64		81		84	90	0.49	0.40	1.08	31.1	27.9	30.0	11.6	10.1	7.9
	AFT			83		72		90		87	94									
1007-1	FWD	146	88	88	380	60	43	87	320	82	91	0.88	0.48	1.45	37.6	23.9	29.9	3.8	3.1	8.4
	AFT			86		63		89		97	110							4.6	2.1	7.8
1007-2	FWD	148	88	79		72		81		68	74	0.64	0.47	—	43.0	25.8	—	3.2	2.4	—
	AFT			81		77		98		74	81							4.2	1.9	—
1008-1	FWD	150	88	80	380	80	43	98	320	81	89	0.59	0.39	0.94	43.8	23.9	29.6	2.9	4.9	5.9
	AFT			78		73		89		86	95									
1008-2	FWD	151	88	82		84		96		83	92	0.63	0.38	0.71	42.9	24.0	32.5	2.8	4.2	5.4
	AFT			79		91		83		85	91									
1009-1	FWD	154	88	82	380	80	—	—	80	75	88	0.68	0.66	0.71	29.2	22.7	27.8	3.3	5.3	5.8
	AFT			89		85				78	83									
1009-2	FWD	155	88	84		85				76	84	0.48	0.86	0.59	33.6	23.9	27.2	2.6	4.9	5.9
	AFT			87		87				72	79									
1010-1	FWD	158	88	90	380	90	80	88	80	87	96	0.93	0.30	0.87	38.1	23.6	30.8	4.8	2.3	4.4
	AFT			88		86		80		92	103									
1010-2	FWD	159	88	92		81		82		82	93	0.89	0.70	1.21	46.4	23.6	30.7	4.6	7.5	5.8
	AFT			90		82		85		87	98									
1011-1	FWD	160	90	84	380	76	80	96	80	78	87	0.77	0.39	0.97	43.1	28.9	31.1	2.3	5.3	5.6
	AFT	161		84		77		86		83	93									
1012-1	FWD	166	88	98	—	—	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	167	88	91				89		84	91	0.97	0.77	0.81	46.2	30.7	30.4	3.9	3.8	5.9
	AFT			89				96		85	96									
1013-1	FWD	168	88	89	—	—	80	94	60	85	98	0.64	0.32	1.34	36.2	28.0	32.1	3.7	7.8	8.2
	AFT	169		77				97		81	103	0.64	0.32	1.34	36.2	28.0	32.1	3.7	6.8	8.2
1014-1	FWD	182	90	87	—	—	80	78	80	74	88	0.62	0.41	1.46	38.0	36.1	38.8	2.2	6.2	6.8
	AFT			85				80		95	107	0.62	0.41	1.44	34.8	38.0	38.3	3.3	6.8	6.3
1014-2	FWD	139	90	83				75		70	77	1.06	0.55	—	38.4	36.4	—	1.4	6.4	—
	AFT			86				84		80	88	1.06	0.59	—	38.1	36.0	—	3.2	2.2	—
1015-1	FWD	138	88	87	—	—	80	78	80	90		0.65	0.38	0.83	47.0	29.4	38.2	5.0	5.8	7.8
	AFT			87				73		97		0.64	0.39	0.83	46.9	29.2	38.2	6.3	3.4	8.8
1015-2	FWD	141	88	83				72		89	—	0.50	0.61	0.64	39.1	27.1	36.8	3.2	6.6	7.5
	AFT			82				72		90		0.50	0.61	0.64	39.1	27.0	36.3	3.3	4.6	8.3
1016-1	FWD	132	85	88	—	—	80	56	80	81		0.72	0.83	2.01	48.9	30.2	40.4	2.0	8.8	10.8
	AFT			83				61		94		0.72	0.83	2.01	48.4	30.1	40.4	2.8	3.4	7.4
1016-2	FWD	134	85	90				56		82	—	0.83	0.93	2.19	42.2	27.2	39.9	1.5	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	88	72	—	—	80	87	80	78	88	0.49	0.78	2.50	35.8	32.2	38.4	3.3	9.8	11.6
	AFT			75				70		94	107	0.49	0.78	2.49	35.3	32.0	38.8	4.3	8.3	8.1
1017-2	FWD	165	88	88				66		80	94	0.69	0.48	—	36.8	34.0	—	1.8	8.2	—
	AFT			85				69		86	101	0.69	0.45	—	36.3	33.8	—	2.3	8.3	—
1018-1	FWD	122	88	79	—	—	80	70	80	82	92	0.91	0.48	—	47.4	36.7	—	3.4	8.6	—
	AFT			77				74		96	109	0.90	0.47	—	48.2	36.2	—	3.2	3.7	—
1018-2	FWD	123	88	84				78		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	—

TABLE 18-2

TOP SECRET [redacted]

PERFORMANCE SUMMARY

MISSION NUMBER	CAMERA	SERIAL NUMBER	M I P VALUE	VISUAL RES.	AFSPPF MTF/AIM SLIT (μ)	AFSPPF MTF/AIM AVERAGE	[redacted] SLIT (μ)	[redacted] AVERAGE	[redacted] SLIT (μ)	[redacted] AVERAGE ALL	[redacted] AVERAGE HIGH	90% ATTITUDE ERROR (°) PITCH	90% ATTITUDE ERROR (°) ROLL	90% ATTITUDE ERROR (°) YAW	90% ATTITUDE RATES (°/HR) PITCH	90% ATTITUDE RATES (°/HR) ROLL	90% ATTITUDE RATES (°/HR) YAW	90% V/H ERROR (%)	90% RESOLUTION LIMIT (FEET) ALONG TRACK	90% RESOLUTION LIMIT (FEET) CROSS TRACK
1019-1	FWD	118	88	81	—	—	80	76	80	88	104	0.43	0.36	0.97	31.6	34.7	33.0	3.3	9.3	9.1
	AFT	119		99				83		87	101	0.44	0.37	0.96	31.6	34.9	33.1	3.8	9.0	8.6
1020-1	FWD	136	80	88	—	—	80	89	80	78	90	0.46	0.38	0.78	37.4	31.8	26.7	5.4	8.8	8.4
	AFT			89				82		94	105	0.46	0.35	0.78	37.4	31.8	26.7	5.3	4.2	8.9
1020-2	FWD	137	—	—				—		—	—	0.41	0.17	1.06	42.6	23.8	42.5	3.5	6.4	7.6
	AFT			—				—		—	—	0.41	0.17	1.06	42.6	23.8	42.5	3.4	4.5	7.8
1021-1	FWD	166	85	88	—	—	80	77	80	86	99	0.55	0.37	0.81	34.9	32.6	26.2	2.7	8.8	8.0
	AFT			90				90		98	109	0.55	0.38	0.81	34.8	33.0	26.3	5.4	8.6	8.5
1021-2	FWD	167	85	85				74		88	112	0.59	0.65	—	44.7	30.6	—	3.1	9.2	—
	AFT			74				62		—	—	—	—	—	—	—	—	—	—	—
1022-1	FWD	168	85	86	—	—	80	66	80	78	91	0.47	0.51	0.89	28.3	27.1	23.6	3.5	9.8	8.6
	AFT			91				83		101	111	0.47	0.51	0.90	27.9	26.6	23.8	3.0	6.2	8.1
1022-2	FWD	169	85	90				68		74	84	0.40	0.61	0.90	29.4	27.3	34.0	2.6	8.0	8.4
	AFT			92				92		99	110	0.40	0.61	0.90	29.4	27.3	31.1	1.6	4.9	8.9
1023-1	FWD	170	85	94	—	—	80	94	80	97	110	0.49	0.33	0.50	33.0	28.7	23.5	3.4	4.0	6.4
	AFT			87				87		83	101	0.49	0.33	0.50	32.9	28.7	23.5	3.5	2.7	4.3
1023-2	FWD	171	85	71				78		87	104	0.42	0.36	0.83	29.7	21.0	28.6	2.4	3.9	6.3
	AFT			89				68		76	93	0.43	0.37	0.88	29.6	21.3	28.6	2.8	2.7	4.2
1024-1	FWD	172	88	79	—	—	80	79	80	90	102	0.42	0.25	0.68	32.2	24.9	30.5	2.6	5.9	6.8
	AFT			95				95		94	105	0.42	0.25	0.62	32.2	24.9	30.4	2.1	3.8	4.8
1024-2	FWD	173	85	88				88		89	101	0.36	0.31	0.93	30.4	24.5	38.4	3.5	4.7	8.4
	AFT			93				93		100	114	0.36	0.31	0.93	30.6	23.6	38.4	3.1	3.3	8.0
1025-1	FWD	142	88	87	—	—	80	87	80	80	97	0.50	0.41	0.85	28.1	28.7	25.9	2.0	3.9	6.7
	AFT			97				97		101	114	0.51	0.42	0.85	28.6	29.7	25.7	3.2	2.8	6.8
1025-2	FWD	157	85	85				85		96	107	0.52	0.44	0.82	28.0	26.1	29.0	1.7	4.7	6.9
	AFT			91				89		89	103	0.52	0.44	0.82	28.1	26.0	29.0	1.8	6.7	6.9
1026-1	FWD	174	85	78	—	—	80	78	80	80	92	0.65	0.24	0.70	37.9	33.2	28.5	6.1	13.5	8.2
	AFT			88				88		98	113	0.65	0.24	0.70	37.9	33.2	28.5	6.1	9.1	4.1
1026-2	FWD	176	85	85				85		92	104	0.55	0.56	0.87	41.1	46.5	30.8	6.1	6.5	6.7
	AFT			93				93		90	103	0.59	0.65	0.69	43.3	80.0	27.7	6.7	3.3	4.5
1027-1	FWD	164	85	—	—	—	80	69	80	80	—	0.51	0.37	0.74	47.2	28.5	26.4	4.7	10.8	7.2
	AFT	165						79		92		0.51	0.37	0.74	47.3	28.2	26.8	3.8	6.0	8.2
1028-1	FWD	174	85	—	—	—	80	81	80	89	—	0.52	0.37	0.50	36.6	28.0	30.5	3.9	4.8	8.0
	AFT							92		93		0.52	0.37	0.50	36.6	28.0	30.5	3.1	4.0	8.6
1028-2	FWD	177	85					88		87		0.76	0.52	—	42.7	28.7	—	3.2	4.2	—
	AFT							77		84		0.76	0.52	—	42.5	28.6	—	2.9	3.3	—
1029-1	FWD	178	88	—	80	[illegible] 89	80	[illegible] 91	80	77	—	0.67	0.34	0.77	29.1	31.5	34.4	2.9	7.8	7.4
	AFT					91		95		73		0.68	0.33	0.77	28.5	30.8	34.6	4.8	3.3	4.8
1029-2	FWD	179	85			83		82		77		0.64	0.48	0.44	38.8	32.5	25.7	2.3	7.5	7.5
	AFT					91		94		81		0.65	0.48	0.44	37.5	32.1	25.7	3.6	2.9	4.9

EXPOSURE - PROCESSING SUMMARY

MISSION NUMBER	CAMERA	SOLAR ELEVATION RANGE (°) LOW	SOLAR ELEVATION RANGE (°) HIGH	SOLAR AZIMUTH RANGE (°) LOW	SOLAR AZIMUTH RANGE (°) HIGH	PREDICTED PROCESSING (%) P	PREDICTED PROCESSING (%) T	PREDICTED PROCESSING (%) F	REPORTED PROCESSING (%) P	REPORTED PROCESSING (%) T	REPORTED PROCESSING (%) F	COMPUTED PROCESSING (%) P	COMPUTED PROCESSING (%) T	COMPUTED PROCESSING (%) F	TERRAIN D-MIN RANGE LOW	TERRAIN D-MIN RANGE HIGH	TERRAIN D-MIN MEAN	TERRAIN D-MIN MEDIAN	TERRAIN D-MAX RANGE LOW	TERRAIN D-MAX RANGE HIGH	TERRAIN D-MAX MEAN	TERRAIN D-MAX MEDIAN	CLOUD D-MAX RANGE LOW	CLOUD D-MAX RANGE HIGH	CLOUD D-MAX MEAN	CLOUD D-MAX MEDIAN	UNDER EXPOSED (%)	UNDER PROCESSED (%)	NOMINAL EXP. & PRO (%)	OVER PROCESSED (%)	OVER EXPOSED (%)	CLOUD COVER (%)
1004-1	FWD	-3	61	28	124	6	76	18	4	78	17	0	79	21	0.26	1.88	0.83	0.78	0.43	2.43	1.97	2.02	1.00	2.43	2.04	2.08	6	4	80	31	5	88
	AFT	-3	65	28	124	6	74	21	4	79	17	0	80	20	0.22	1.56	0.76	0.70	0.93	2.45	1.92	1.94	1.08	2.43	1.98	2.03	1	4	67	28	3	96
1004-2	FWD	-4	66	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	86
	AFT	-4	66	10	131	7	76	17	37	50	13	4	77	19	0.29	1.91	0.81	0.73	0.36	2.38	1.88	1.99	0.43	2.46	1.89	1.98	0	4	67	20	9	88
1005-1	FWD	38	66	82	140	1	99	0	1	51	48	0	51	49	0.23	1.81	0.71	0.69	0.60	2.31	1.68	1.52	1.31	2.40	2.20	2.24	0	5	72	21	1	80
	AFT	38	66	86	140	1	99	0	0	23	77	0	24	76	0.34	1.66	0.87	0.84	0.96	2.38	1.72	1.72	1.14	2.40	2.24	2.28	0	1	58	40	1	80
1005-2	FWD	38	64	36	147	2	98	0	38	41	29	11	59	30	0.21	1.14	0.63	0.60	0.66	2.28	1.49	1.50	1.30	2.33	2.11	2.16	2	21	72	4	0	48
	AFT	38	64	36	147	2	98	0	38	40	25	21	54	25	0.26	1.34	0.68	0.66	0.65	2.19	1.48	1.47	1.56	2.60	2.12	2.16	0	11	77	8	3	46
1007-1	FWD	12	49	50	103	0	8	92	1	20	79	0	28	72	0.26	1.22	0.82	0.67	0.62	2.20	1.44	1.40	1.22	1.36	2.17	2.21	20	8	67	5	0	68
	AFT	11	48	48	102	0	100	0	10	42	48	6	27	17	0.26	1.76	0.38	0.35	0.78	2.31	1.52	1.52	1.84	2.39	2.20	2.24	1	13	60	5	1	60
1007-2	FWD	38	67	43	116	6	28	72	3	28	69	0	26	74	0.26	1.23	0.61	0.48	0.70	2.32	1.44	1.40	0.90	2.37	2.15	2.20	18	9	71	2	0	68
	AFT	31	67	98	111	0	100	0	19	41	40	3	88	9	0.24	1.86	0.60	0.56	0.44	2.27	1.80	1.82	0.84	2.41	2.17	2.25	1	16	74	9	1	68
1008-1	FWD	30	59	80	102	0	100	0	4	38	64	1	38	66	0.32	1.48	0.66	0.62	0.78	2.24	1.95	1.64	1.46	2.35	2.21	2.24	2	2	86	8	1	48
	AFT	30	57	80	102	0	100	0	4	27	69	0	34	66	0.32	1.57	0.71	0.69	0.81	2.21	1.57	1.58	1.08	2.37	2.21	2.24	1	1	84	13	0	48
1008-2	FWD	28	58	42	108	0	100	0	3	31	66	0	27	73	0.14	1.81	0.76	0.72	0.97	2.10	1.84	1.55	1.09	2.60	2.20	2.25	2	1	73	23	1	68
	AFT	29	58	42	108	0	100	0	3	30	67	0	29	71	0.32	1.64	0.77	0.76	0.73	2.10	1.85	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	8	4	77	14	0	80
	AFT	12	48	42	132	0	100	0	0	40	60	0	45	55	0.26	1.42	0.70	0.64	0.92	2.28	1.58	1.55	0.83	2.51	2.32	2.36	1	5	73	20	0	80
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	2.48	2.25	2.30	4	4	74	17	0	80
	AFT	23	58	36	138	2	98	0	4	47	49	0	56	44	0.26	1.47	0.69	0.64	0.44	2.42	1.81	1.60	1.61	2.50	2.31	2.34	1	4	77	15	0	85
1010-1	FWD	18	47	48	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	78	4	0	48
	AFT	18	47	48	83	0	21	79	0	19	81	0	16	84	0.27	1.25	0.57	0.52	0.78	2.42	1.48	1.41	0.96	2.48	2.20	2.26	9	4	81	6	0	48
1010-2	FWD	18	58	58	78	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	48
	AFT	18	58	58	78	0	50	50	0	23	77	0	25	75	0.20	1.48	0.59	0.58	0.30	2.40	1.47	1.45	1.29	2.48	2.18	2.22	13	3	76	8	0	48
1011-1	FWD	2	58	33	86	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	2.18	17	11	70	2	0	40
	AFT	2	58	33	86	0	67	33	3	47	50	0	37	63	0.24	1.48	0.60	0.58	0.60	2.38	1.67	1.65	0.74	2.37	2.11	2.18	3	7	81	8	0	40
1012-1	FWD	0	48	38	71	0	64	36	7	56	37	0	65	35	0.25	1.30	0.59	0.55	0.54	2.39	1.40	1.42	0.90	2.39	1.93	2.00	6	17	68	10	0	60
	AFT	0	48	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	8	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	1.48	1.42	0.67	2.34	1.91	2.00	4	9	80	7	0	40
	AFT	0	57	34	106	0	77	23	3	19	82	0	10	90	0.30	1.27	0.66	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	58	28	83	0	64	36	0	42	58	0	58	42	0.20	1.66	0.58	0.56	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	28	82	0	64	36	2	7	91	0	33	67	0.28	1.56	0.66	0.46	0.64	2.28	1.59	1.63	1.10	2.36	1.97	2.03	8	8	74	10	0	47
1014-1	FWD	0	59	18	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	2.08	27	33	39	1	0	40
	AFT	0	59	19	69	0	31	69	0	13	87	0	36	64	0.18	1.26	0.81	0.48	0.25	2.38	1.42	1.49	0.42	2.43	1.91	2.00	18	12	64	6	0	40
1014-2	FWD	0	77	0	34	0	21	79	0	26	74	0	61	39	0.17	1.06	0.36	0.31	0.23	2.38	1.30	1.36	0.42	2.36	1.72	1.80	31	40	27	2	0	40
	AFT	0	78	0	34	0	29	71	0	5	95	0	68	32	0.18	1.49	0.44	0.40	0.27	2.28	1.34	1.45	0.26	2.44	1.71	1.84	19	29	50	2	0	40
1015-1	FWD	5	68	19	88	0	8	92	2	2	96	0	2	98	0.25	1.70	0.84	0.47	0.54	2.28	1.44	1.46	0.48	2.41	1.88	1.90	28	0	65	7	0	48
	AFT	4	66	18	87	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	48
1015-2	FWD	0	80	-2	71	0	10	90	0	11	89	0	11	89	0.22	1.10	0.50	0.46	0.34	2.07	1.28	1.30	0.28	2.34	1.69	1.78	28	4	68	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	8	68	13	78	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	48
	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	48
1016-2	FWD	1	84	-4	76	0	8	92	0	31	69	0	48	52	0.18	1.56	0.48	0.44	0.29	2.35	1.45	1.44	0.34	2.50	1.76	1.82	22	18	56	3	0	40
	AFT	0	84	-4	76	0	19	81	1	27	72	0	40	60	0.20	1.88	0.55	0.49	0.26	2.32	1.52	1.60	0.30	2.49	1.75	1.82	23	5	65	6	1	40
1017-1	FWD	-11	60	81	98	0	0	100	15	63	24	0	82	18	0.20	1.85	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	28
	AFT	-11	57	19	98	0	17	83	84	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	28
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	78	7	138	0	7	93	18	62	20	0	89	11	0.20	1.64	0.64	0.62	0.30	2.30	1.62	1.68	0.38	2.34	1.85	1.92	2	13	74	10	1	30
1018-1	FWD	-6	77	13	134	0	0	100	9	63	28	1	83	16	0.19	1.48	0.86	0.52	0.64	2.22	1.66	1.73	1.00	2.32	1.96	1.99	2	19	71	7	0	38
	AFT	6	78	10	128	0	22	78	9	63	28	5	72	23	0.18	1.36	0.62	0.58	0.68	2.20	1.68	1.80	1.03	2.28	1.95	2.00	1	12	77	9	2	36
1018-2	FWD	8	77	14	134	0	0	100	18	74	8	17	79	4	0.16	1.78	0.87	0.49	0.80	2.24	1.80	1.94	0.90	2.28	1.85	1.91	1	31	66	9	4	48
	AFT	8	77	10	138	0	18	82	1	50	49	0	74	26	0.22	1.60	0.81	0.79	0.84	2.26	1.70	1.74	1.09	2.35	1.98	2.04	0	5	69	19	2	49

EXPOSURE - PROCESSING SUMMARY

MISSION NUMBER	CAMERA	SOLAR ELEVATION RANGE (°) LOW	SOLAR ELEVATION RANGE (°) HIGH	SOLAR AZIMUTH RANGE (°) LOW	SOLAR AZIMUTH RANGE (°) HIGH	PREDICTED PROCESSING (%) P	PREDICTED PROCESSING (%) I	PREDICTED PROCESSING (%) F	REPORTED PROCESSING (%) P	REPORTED PROCESSING (%) I	REPORTED PROCESSING (%) F	COMPUTED PROCESSING (%) P	COMPUTED PROCESSING (%) I	COMPUTED PROCESSING (%) F	TERRAIN D-MIN RANGE LOW	TERRAIN D-MIN RANGE HIGH	TERRAIN D-MIN MEAN	TERRAIN D-MIN MEDIAN	TERRAIN D-MAX RANGE LOW	TERRAIN D-MAX RANGE HIGH	TERRAIN D-MAX MEAN	TERRAIN D-MAX MEDIAN	CLOUD D-MAX RANGE LOW	CLOUD D-MAX RANGE HIGH	CLOUD D-MAX MEAN	CLOUD D-MAX MEDIAN	UNDER EXPOSED (%)	UNDER PROCESSED (%)	NOMINAL EXP & PRO (%)	OVER PROCESSED (%)	OVER EXPOSED (%)	CLOUD COVER (%)
1019-1	FWD	24	70	24	152	0	21	79	22	32	46	4	56	40	0.26	1.92	0.71	0.61	0.60	2.15	1.48	1.50	0.84	2.26	1.84	2.00	4	7	64	17	7	45
	AFT	23	70	21	152	0	92	8	26	55	19	3	87	10	0.13	1.70	0.66	0.60	0.39	2.26	1.46	1.45	0.80	2.30	1.96	2.02	1	13	70	14	3	49
1020-1	FWD	30	78	19	156	0	19	81	13	48	39	1	58	41	0.23	1.30	0.55	0.52	0.80	2.28	1.57	1.54	1.40	2.38	2.10	2.16	1	18	78	4	0	42
	AFT	29	75	17	156	0	64	36	15	56	29	0	74	26	0.23	1.20	0.55	0.54	0.70	2.20	1.47	1.46	1.22	2.29	2.04	2.10	0	18	76	5	0	42
1020-2	FWD	47	69	18	35	◄ INSUFFICIENT DATA ►																										
	AFT	46	68	17	33																											
1021-1	FWD	15	66	-148	-23	0	68	32	14	39	47	1	52	47	0.25	1.90	0.64	0.58	0.74	2.18	1.50	1.50	0.97	2.36	1.92	2.00	5	9	72	11	3	38
	AFT	14	66	-147	-25	0	99	1	15	38	47	0	57	43	0.17	1.70	0.65	0.57	0.54	2.24	1.45	1.42	0.88	2.30	1.90	2.00	8	5	75	12	5	38
1021-2	FWD	13	62	-133	+41	0	29	71	13	41	46	0	57	43	0.18	1.52	0.64	0.60	0.60	2.36	1.36	1.34	1.06	2.23	1.82	1.85	14	13	66	6	0	20
	AFT	15	66	-135	-41	0	100	0	53	25	22	0	50	50	0.33	1.38	0.76	0.76	0.70	2.30	1.82	1.80	1.30	2.36	1.94	1.94	6	0	71	21	1	20
1022-1	FWD	20	67	30	150	0	36	64	8	36	56	0	42	58	0.18	1.49	0.48	0.40	0.54	2.42	1.67	1.60	1.32	2.35	2.24	2.29	30	19	47	3	0	35
	AFT	27	67	26	150	0	89	11	7	42	51	0	53	47	0.24	1.48	0.57	0.50	0.52	2.30	1.63	1.68	1.30	2.47	2.21	2.25	4	15	71	9	1	35
1022-2	FWD	29	74	21	152	0	8	92	1	37	62	0	43	57	0.20	0.99	0.39	0.35	0.62	2.65	1.45	1.45	1.16	2.45	2.23	2.28	38	28	35	1	0	48
	AFT	28	74	19	152	0	100	0	10	44	46	0	53	47	0.21	1.40	0.48	0.44	0.50	2.32	1.51	1.52	1.48	2.49	2.25	2.28	10	25	61	4	0	48
1023-1	FWD	22	68	6	164	0	5	95	19	54	27	0	72	28	0.15	1.26	0.39	0.35	0.43	2.41	1.22	1.22	0.87	2.41	2.06	2.11	20	44	34	2	0	35
	AFT	20	61	5	163	0	11	89	0	39	61	0	42	58	0.20	1.40	0.53	0.48	0.41	2.21	1.31	1.37	0.94	2.46	2.15	2.20	13	14	65	7	0	28
1023-2	FWD	29	81	-13	177	0	7	93	0	19	81	0	18	82	0.22	1.38	0.48	0.42	0.41	2.03	1.18	1.22	0.80	2.41	2.03	2.11	35	2	60	2	1	38
	AFT	28	80	-13	178	0	3	97	0	34	66	0	28	72	0.22	1.60	0.52	0.48	0.44	2.31	1.24	1.24	1.08	2.46	2.10	2.17	13	10	73	4	0	35
1024-1	FWD	10	61	24	157	0	0	100	0	57	43	0	72	28	0.17	1.74	0.35	0.32	0.40	2.28	1.22	1.15	0.58	2.34	1.97	2.03	27	49	23	0	0	25
	AFT	9	61	21	156	0	0	100	0	28	72	0	82	18	0.20	1.22	0.40	0.37	0.48	2.32	1.30	1.24	0.94	2.40	1.97	2.06	13	46	39	2	0	25
1024-2	FWD	8	79	11	181	0	0	100	12	19	69	0	25	75	0.24	1.17	0.46	0.42	0.38	2.40	1.30	1.27	1.01	2.48	1.91	1.99	38	3	58	2	0	35
	AFT	8	79	9	181	0	0	100	1	22	77	0	66	34	0.20	1.39	0.47	0.40	0.29	2.26	1.21	1.32	0.90	2.40	1.89	1.96	20	25	50	5	0	35
1025-1	FWD	1	70	-123	-18	0	68	32	10	41	49	0	56	44	0.18	1.42	0.43	0.37	0.29	2.36	1.37	1.39	0.42	2.35	1.81	1.92	33	25	38	4	1	35
	AFT	0	70	-121	-19	0	72	28	8	49	43	0	61	39	0.18	1.69	0.49	0.42	0.26	2.26	1.33	1.38	0.23	2.32	1.75	1.90	25	20	47	7	1	35
1025-2	FWD	0	66	-124	-31	0	71	29	3	42	55	0	56	44	0.18	1.22	0.45	0.39	0.26	2.24	1.32	1.33	0.83	2.29	1.78	1.89	29	21	45	4	0	22
	AFT	0	66	-122	-33	0	73	27	3	45	52	0	51	49	0.21	1.32	0.53	0.48	0.39	2.16	1.31	1.35	0.48	2.23	1.71	1.79	19	12	61	8	0	22
1026-1	FWD	0	67	23	135	0	4	96	0	21	79	0	24	76	0.20	1.26	0.38	0.33	0.31	2.27	1.22	1.22	0.40	2.28	1.77	1.87	57	13	28	2	0	45
	AFT	0	67	21	135	0	5	95	0	4	96	0	38	62	0.20	1.16	0.39	0.34	0.24	2.36	1.29	1.30	0.37	2.40	1.78	1.86	39	27	33	1	0	45
1026-2	FWD	1	72	8	84	0	0	100	1	5	94	0	5	95	0.19	1.32	0.36	0.30	0.23	2.17	1.05	1.02	0.48	2.24	1.63	1.70	78	2	19	1	0	80
	AFT	0	67	13	78	0	0	100	2	5	93	0	15	85	0.21	1.35	0.39	0.32	0.27	2.20	1.08	1.03	0.30	2.26	1.61	1.70	60	12	25	3	0	80
1027-1	FWD	3	63	28	110	0	0	100	0	0	100	0	3	97	0.26	1.54	0.52	0.46	0.50	2.38	1.45	1.52	0.71	2.39	2.03	2.10	36	2	58	4	0	80
	AFT	2	63	26	108	0	0	100	0	21	79	0	20	80	0.26	1.34	0.58	0.53	0.34	2.30	1.46	1.48	0.40	2.40	1.96	2.06	12	3	78	7	0	80
1028-1	FWD	3	73	15	135	0	4	96	0	4	96	0	11	89	0.22	1.08	0.37	0.32	0.40	2.32	1.42	1.42	0.62	2.30	1.77	1.83	65	6	28	1	0	30
	AFT	1	73	14	135	0	5	95	0	16	84	0	11	89	0.20	1.01	0.41	0.36	0.30	2.23	1.35	1.40	0.68	2.26	1.72	1.77	56	5	37	1	0	30
1028-2	FWD	2	81	5	48	0	3	97	1	9	90	0	18	82	0.23	0.98	0.40	0.35	0.37	2.20	1.36	1.38	0.30	2.33	1.72	1.77	59	3	37	1	0	30
	AFT	1	80	5	43	0	10	90	0	6	94	0	6	94	0.22	1.40	0.50	0.40	0.28	2.21	1.40	1.43	0.30	2.35	1.69	1.75	47	1	44	7	1	30
1029-1	FWD	3	65	18	130	0	8	92	1	16	83	0	14	86	0.25	1.80	0.64	0.54	0.50	2.30	1.72	1.76	0.48	2.39	2.03	2.08	20	0	62	14	3	35
	AFT	2	62	16	128	0	20	80	0	21	79	0	25	75	0.16	1.73	0.57	0.48	0.20	2.32	1.62	1.65	0.36	2.40	1.91	1.98	24	5	59	10	1	35
1029-2	FWD	0	80	4	146	0	4	96	2	28	70	0	20	80	0.22	1.68	0.54	0.45	0.31	2.35	1.52	1.59	0.45	2.40	1.88	2.00	33	5	50	11	2	25
	AFT	0	80	3	148	0	10	90	2	24	74	0	25	75	0.20	1.58	0.56	0.49	0.30	2.34	1.62	1.60	0.34	2.40	1.87	1.93	23	9	59	11	2	28

SECTION A

APPENDIX

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

MISSION • 1029-1 • INSTRUMENT • FRWD 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0	0	0	0	0
0.16	0	0	0	0	0	0	0	0	0	0	0	0
0.17	0	0	0	0	0	0	0	0	0	0	0	0
0.18	0	0	0	0	0	0	0	0	0	0	0	0
0.19	0	0	0	0	0	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0	0	0	0	0	0
0.21	0	0	0	0	0	0	0	0	0	0	0	0
0.22	0	0	0	0	0	0	0	0	0	0	0	0
0.23	0	0	0	0	0	0	0	0	0	0	0	0
0.24	0	0	0	0	0	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	1	0	0	1	0	0
0.26	0	0	0	0	0	0	2	0	0	2	0	0
0.27	0	0	0	0	0	0	4	0	0	4	0	0
0.28	0	0	0	0	0	0	0	0	0	0	0	0
0.29	0	0	0	0	0	0	1	0	0	1	0	0
0.30	0	0	0	0	0	0	7	0	0	7	0	0
0.31	0	0	0	0	0	0	3	0	0	3	0	0
0.32	0	0	0	0	0	0	3	0	0	3	0	0
0.33	0	0	0	0	0	0	2	0	0	2	0	0
0.34	0	0	0	0	0	0	6	0	0	6	0	0
0.35	0	0	0	0	0	0	0	0	0	0	0	0
0.36	0	0	0	1	0	0	10	0	0	11	0	0
0.37	0	0	0	0	0	0	0	0	0	0	0	0
0.38	0	0	0	0	0	0	6	0	0	6	0	0
0.39	0	0	0	0	0	0	4	0	0	4	0	0
0.40	0	0	0	1	0	0	10	0	0	11	0	0
0.41	0	0	0	0	0	0	4	0	0	4	0	0
0.42	0	0	0	0	0	0	5	0	0	5	0	0
0.43	0	0	0	0	0	0	0	0	0	0	0	0
0.44	0	0	0	0	0	0	7	0	0	7	0	0
0.45	0	0	0	1	0	0	1	0	0	2	0	0
0.46	0	0	0	0	0	0	8	0	0	8	0	0
0.47	0	0	0	0	0	0	5	0	0	5	0	0
0.48	0	0	0	3	0	0	7	0	1	10	0	1
0.49	0	0	0	0	0	0	2	0	0	2	0	0
0.50	0	0	0	0	0	0	5	1	0	5	1	0
SUBTOTAL	0	0	0	6	0	0	103	1	1	109	1	1

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

TABLE A-1

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

MISSION = 1029-1 * INSTRUMENT * FRWD * 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	0	0	0	1	0	0	1	0	0
0.52	0	0	0	0	0	0	5	0	0	5	0	0
0.53	0	0	0	0	0	0	2	0	0	2	0	0
0.54	0	0	0	0	0	0	7	0	0	7	0	0
0.55	0	0	0	0	0	0	2	0	0	2	0	0
0.56	0	0	0	0	0	0	6	0	0	6	0	0
0.57	0	0	0	0	0	0	1	0	0	1	0	0
0.58	0	0	0	1	0	0	5	0	0	6	0	0
0.59	0	0	0	1	0	0	1	0	0	1	0	0
0.60	0	0	0	1	0	0	6	1	0	7	1	0
0.61	0	0	0	3	0	0	2	0	0	5	0	0
0.62	0	0	0	3	0	0	3	0	0	3	0	0
0.63	0	0	0	0	0	0	2	0	0	2	0	0
0.64	0	0	0	0	0	0	3	0	0	3	0	0
0.65	0	0	0	0	0	0	1	0	0	1	0	0
0.66	0	0	0	1	0	0	2	0	0	3	0	0
0.67	0	0	0	1	0	0	1	0	0	1	0	0
0.68	0	0	0	1	0	0	4	0	0	5	0	0
0.69	0	0	0	1	0	0	1	0	0	1	0	0
0.70	0	0	0	1	0	0	2	0	0	3	0	0
0.71	0	0	0	1	0	0	1	0	0	1	0	0
0.72	0	0	0	0	0	0	4	0	0	4	0	0
0.73	0	0	0	0	0	0	1	0	0	1	0	0
0.74	0	0	0	0	0	0	1	0	0	1	0	0
0.75	0	0	0	0	0	0	1	0	0	1	0	0
0.76	0	0	0	1	0	0	1	0	0	2	0	0
0.77	0	0	0	0	0	0	0	0	0	0	0	0
0.78	0	0	0	0	0	0	6	0	0	6	0	0
0.79	0	0	0	0	0	0	0	0	0	0	0	0
0.80	0	0	0	1	0	0	3	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	0	0	0	0	0	2	0	0
0.83	0	0	0	2	0	0	2	0	0	2	0	0
0.84	0	0	0	1	0	0	1	0	0	2	0	0
0.85	0	0	0	0	0	0	1	0	0	1	0	0
0.86	0	0	0	1	0	0	1	0	0	2	0	0
0.87	0	0	0	0	0	0	0	0	0	0	0	0
0.88	0	0	0	0	0	0	0	0	0	0	0	0
0.89	0	0	0	0	0	0	0	0	0	0	0	0
0.90	0	0	0	0	0	0	0	0	1	0	0	1
0.91	0	0	0	1	0	0	0	0	0	1	0	0
0.92	0	0	0	1	0	0	0	0	0	1	0	0
0.93	0	0	0	0	0	0	1	1	0	1	1	0
0.94	0	0	0	0	0	0	0	0	0	0	0	0
0.95	0	0	0	0	1	0	0	0	0	0	1	0
0.96	0	0	0	0	0	0	2	2	0	2	2	0
0.97	0	0	0	0	0	0	1	0	0	1	0	0
0.98	0	0	0	1	0	0	0	1	0	1	1	0
0.99	0	0	0	0	0	0	0	1	0	0	1	0
1.00	0	0	0	0	0	0	0	2	0	0	2	0
SUBTOTAL	0	0	0	17	1	0	84	8	1	101	9	1

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

TABLE A-1

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

MISSION * 1029-1 * INSTRUMENT * FRWD 05/06/66 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	1	0	0	1	0
1.03	0	0	0	0	0	0	0	0	0	0	0	0
1.04	0	0	0	0	0	0	1	0	0	1	0	0
1.05	0	0	0	0	0	0	0	0	0	0	0	0
1.06	0	0	0	0	0	0	0	0	0	0	0	0
1.07	0	0	0	0	0	0	0	0	0	0	0	0
1.08	0	0	0	0	0	0	1	0	0	1	0	0
1.09	0	0	0	0	0	0	0	2	0	0	2	0
1.10	0	0	0	0	0	0	2	0	0	2	0	0
1.11	0	0	0	1	0	0	0	0	0	1	0	0
1.12	0	0	0	1	0	0	0	0	0	1	0	0
1.13	0	0	0	0	0	0	0	0	0	0	0	0
1.14	0	0	0	0	0	0	2	0	0	2	0	0
1.15	0	0	0	0	0	0	0	1	0	0	1	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	2	0	0	2	0
1.19	0	0	0	1	0	0	1	1	0	2	1	0
1.20	0	0	0	1	1	0	3	5	0	4	6	0
1.21	0	0	0	0	0	0	0	0	0	0	0	0
1.22	0	0	0	2	0	0	1	1	0	3	1	0
1.23	0	0	0	0	0	0	0	2	0	0	2	0
1.24	0	0	0	0	0	0	1	0	0	1	0	0
1.25	0	0	0	1	0	0	1	0	0	2	0	0
1.26	0	0	0	0	0	0	0	3	0	0	3	0
1.27	0	0	0	0	0	0	1	0	0	1	0	0
1.28	0	0	0	0	0	0	1	3	0	1	3	0
1.29	0	0	0	0	0	0	0	2	0	0	2	0
1.30	0	0	0	0	0	0	0	1	0	0	1	0
1.31	0	0	0	0	0	0	0	1	0	0	1	0
1.32	0	0	0	0	0	0	0	1	0	0	1	0
1.33	0	0	0	0	0	0	0	2	0	0	2	0
1.34	0	0	0	0	0	0	0	0	0	0	0	0
1.35	0	0	0	0	0	0	1	0	0	1	0	0
1.36	0	0	0	0	0	0	1	0	0	1	0	0
1.37	0	0	0	0	0	0	0	0	0	0	0	0
1.38	0	0	0	0	0	0	0	0	0	0	0	0
1.39	0	0	0	1	0	0	0	0	0	1	0	0
1.40	0	0	0	1	0	0	1	2	1	1	2	1
1.41	0	0	0	0	0	0	1	1	0	1	1	0
1.42	0	0	0	0	0	0	1	4	0	1	4	0
1.43	0	0	0	0	0	0	0	3	0	0	3	0
1.44	0	0	0	1	0	0	0	4	0	1	4	0
1.45	0	0	0	0	0	0	0	0	0	0	0	0
1.46	0	0	0	0	0	0	0	2	0	0	2	0
1.47	0	0	0	0	0	0	0	1	0	0	1	0
1.48	0	0	0	0	0	0	0	4	0	0	4	0
1.49	0	0	0	0	0	0	0	0	0	0	0	0
1.50	0	0	0	0	1	0	2	1	0	2	2	0
SUBTOTAL	0	0	0	9	2	0	21	51	1	30	53	1

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

TABLE A-1

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

MISSION • 1029-1 • INSTRUMENT • FRWD 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	0	0	0	1	0	0	1	0
1.52	0	0	0	0	0	1	0	3	2	0	3	3
1.53	0	0	0	0	0	0	0	0	2	0	0	2
1.54	0	0	0	0	0	0	0	0	2	0	0	2
1.55	0	0	0	0	0	1	0	1	0	0	1	1
1.56	0	0	0	0	0	0	0	1	0	0	1	0
1.57	0	0	0	0	0	1	0	0	2	0	1	2
1.58	0	0	0	0	0	0	0	0	2	0	0	2
1.59	0	0	0	0	0	0	0	0	2	0	0	2
1.60	0	0	0	0	0	1	0	0	1	0	0	2
1.61	0	0	0	0	0	1	0	0	1	0	0	2
1.62	0	0	0	0	0	0	0	0	5	0	0	5
1.63	0	0	0	0	0	2	0	0	2	0	0	4
1.64	0	0	0	0	0	0	0	0	1	0	0	1
1.65	0	0	0	0	0	1	0	0	1	0	0	2
1.66	0	0	0	0	0	0	0	0	6	1	0	6
1.67	0	0	0	0	0	0	0	0	1	1	0	1
1.68	0	0	0	0	0	0	0	0	1	1	0	1
1.69	0	0	0	0	0	1	0	0	1	1	0	2
1.70	0	0	0	0	0	2	0	0	7	1	0	9
1.71	0	0	0	0	0	0	0	0	3	1	0	3
1.72	0	0	0	0	0	1	0	0	1	1	0	2
1.73	0	0	0	0	0	1	0	0	1	1	0	2
1.74	0	0	0	0	0	1	0	0	4	1	0	5
1.75	0	0	0	0	0	1	0	1	2	0	0	2
1.76	0	0	0	0	0	1	0	0	5	1	0	6
1.77	0	0	0	0	0	1	0	0	1	1	0	1
1.78	0	0	0	0	0	2	0	0	1	1	0	3
1.79	0	0	0	0	0	0	0	0	1	1	0	1
1.80	0	0	0	0	0	0	0	1	5	0	1	5
1.81	0	0	0	0	0	0	0	1	3	0	1	3
1.82	0	0	0	0	0	1	0	0	2	1	0	3
1.83	0	0	0	0	0	1	0	0	1	1	0	2
1.84	0	0	0	0	0	2	0	0	3	1	0	5
1.85	0	0	0	0	0	1	0	0	4	2	0	5
1.86	0	0	0	0	0	0	0	0	2	0	0	2
1.87	0	0	0	0	0	0	0	0	2	0	0	2
1.88	0	0	0	0	0	1	0	0	2	0	0	3
1.89	0	0	0	0	0	1	0	0	2	0	0	3
1.90	0	0	0	0	0	2	0	0	1	0	0	3
1.91	0	0	0	0	0	0	0	0	2	0	0	2
1.92	0	0	0	0	0	2	0	0	4	0	0	6
1.93	0	0	0	0	0	1	0	0	2	0	0	3
1.94	0	0	0	0	0	2	0	0	2	0	0	4
1.95	0	0	0	0	0	0	0	0	3	0	0	3
1.96	0	0	0	0	0	0	0	0	1	0	0	1
1.97	0	0	0	0	0	1	0	0	0	0	0	1
1.98	0	0	0	0	0	1	0	0	3	0	0	4
1.99	0	0	0	0	0	0	0	0	0	0	0	0
2.00	0	0	0	0	0	0	0	0	6	0	0	6
SUBTOTAL	0	0	0	3	30	14	2	100	47	5	130	61

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

TABLE A-1

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

MISSION • 1029-1 • INSTRUMENT • FRWD 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	0	0	0	1	0	0	1
2.02	0	0	0	0	0	1	0	0	3	0	0	4
2.03	0	0	0	0	0	0	0	2	2	0	2	2
2.04	0	0	0	0	0	0	0	3	6	0	3	6
2.05	0	0	0	0	0	0	0	2	4	0	2	4
2.06	0	0	0	0	0	2	0	3	5	0	3	7
2.07	0	0	0	0	1	1	0	3	1	0	4	2
2.08	0	0	0	0	0	6	0	5	6	0	5	12
2.09	0	0	0	0	0	0	0	2	4	0	1	5
2.10	0	0	0	0	0	1	0	5	0	0	5	5
2.11	0	0	0	0	0	0	0	0	4	0	0	4
2.12	0	0	0	0	0	4	0	0	3	0	0	7
2.13	0	0	0	0	1	0	0	2	0	0	3	0
2.14	0	0	0	0	0	1	0	3	1	0	3	2
2.15	0	0	0	0	0	1	0	1	2	0	1	3
2.16	0	0	0	0	0	1	0	3	3	0	3	4
2.17	0	0	0	0	0	0	0	0	3	0	0	3
2.18	0	0	0	0	0	1	0	3	6	0	3	7
2.19	0	0	0	0	0	0	0	0	2	0	0	2
2.20	0	0	0	0	0	1	0	3	7	0	3	8
2.21	0	0	0	0	0	0	0	2	1	0	2	1
2.22	0	0	0	0	0	1	0	0	4	0	0	5
2.23	0	0	0	0	0	0	0	2	0	0	2	0
2.24	0	0	0	0	0	0	0	1	6	0	1	6
2.25	0	0	0	0	0	1	0	0	0	0	0	1
2.26	0	0	0	0	0	0	0	3	4	0	3	4
2.27	0	0	0	0	0	0	0	1	1	0	1	1
2.28	0	0	0	0	0	0	0	1	6	0	1	6
2.29	0	0	0	0	0	0	0	1	3	0	1	3
2.30	0	0	0	0	0	1	0	1	5	0	1	6
2.31	0	0	0	0	0	0	0	0	1	0	0	1
2.32	0	0	0	0	0	0	0	0	2	0	0	2
2.33	0	0	0	0	0	0	0	0	2	0	0	2
2.34	0	0	0	0	0	0	0	0	2	0	0	2
2.35	0	0	0	0	0	0	0	0	0	0	0	0
2.36	0	0	0	0	0	0	0	0	1	0	0	1
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	1	0	0	1
2.40	0	0	0	0	0	0	0	0	0	0	0	0
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	0	0	0	0
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	2	23	0	50	104	0	52	127

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

TABLE A-1

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

MISSION * 1029-1 * INSTRUMENT * FRWD 05/06/66 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	35	35	37	210	210	154	245	245	191

MISSION 1029-1 INSTR - FRWD 05/06/66 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	35	0 PC	3 PC	54 PC	29 PC	14 PC
FULL	210	23 PC	0 PC	64 PC	12 PC	1 PC
ALL LEVELS	245	20 PC	0 PC	62 PC	14 PC	3 PC

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

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

TABLE A-1

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.91 • MEDIAN • 0.82 • STD DEV • 0.38 • RANGE • 0.36 TO 1.74 WITH 35 SAMPLES

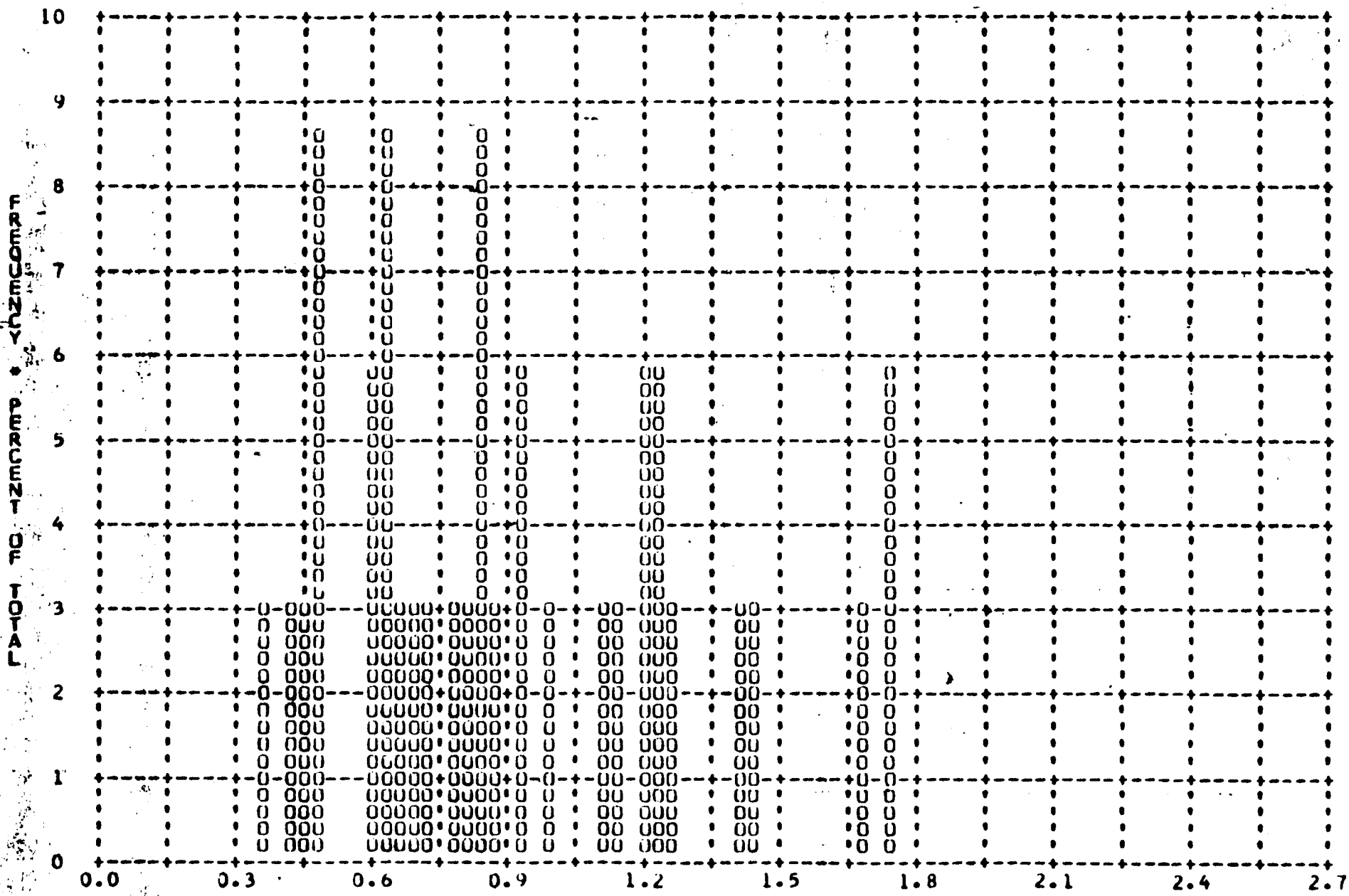


FIGURE A-1

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OR D MAX • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.76 • MEDIAN • 1.82 • STD DEV • 0.23 • RANGE • 0.95 TO 2.13 WITH 35 SAMPLES

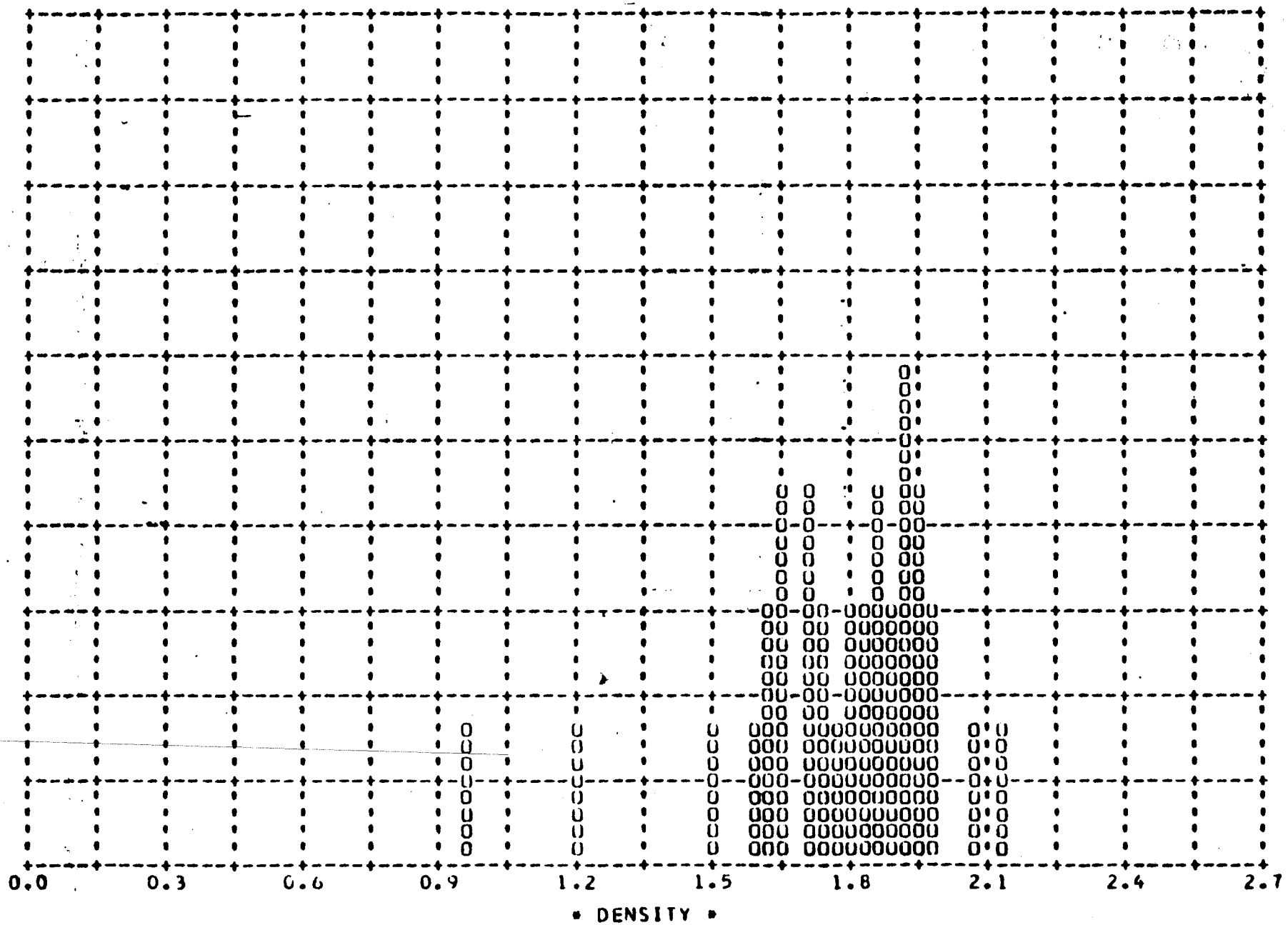


FIGURE A-2

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MAX • CLOUD • PROCESSING • INTERMEDIATE

ARITH MEAN • 2.01 • MEDIAN • 2.08 • STD DEV • 0.18 • RANGE • 1.52 TO 2.30 WITH 37 SAMPLES

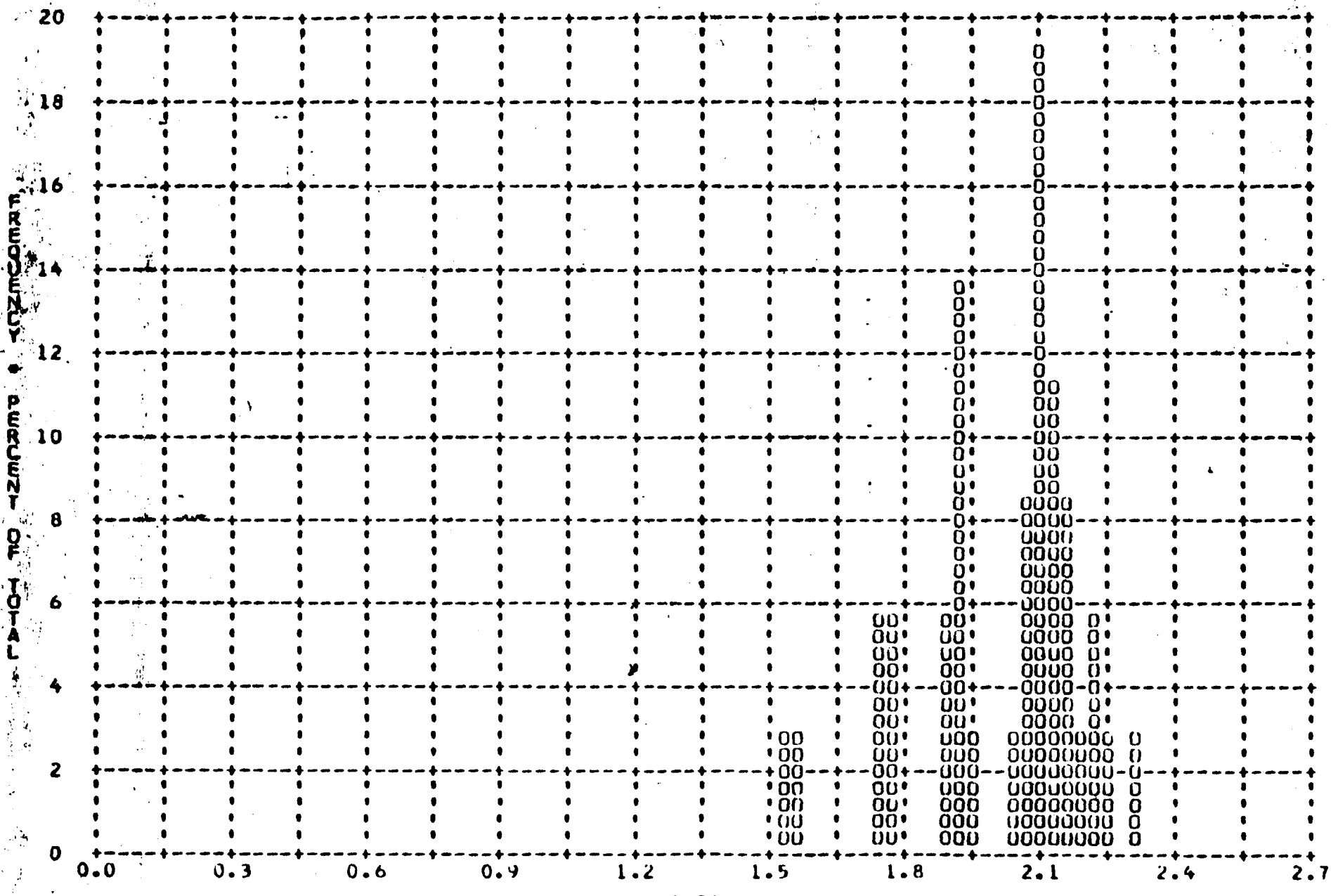


FIGURE A-3

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MIN • TERRAIN • PROCESSING • FULL

ARITH MEAN • 0.60 • MEDIAN • 0.52 • STD DEV • 0.30 • RANGE • 0.25 TO 1.80 WITH 210 SAMPLES

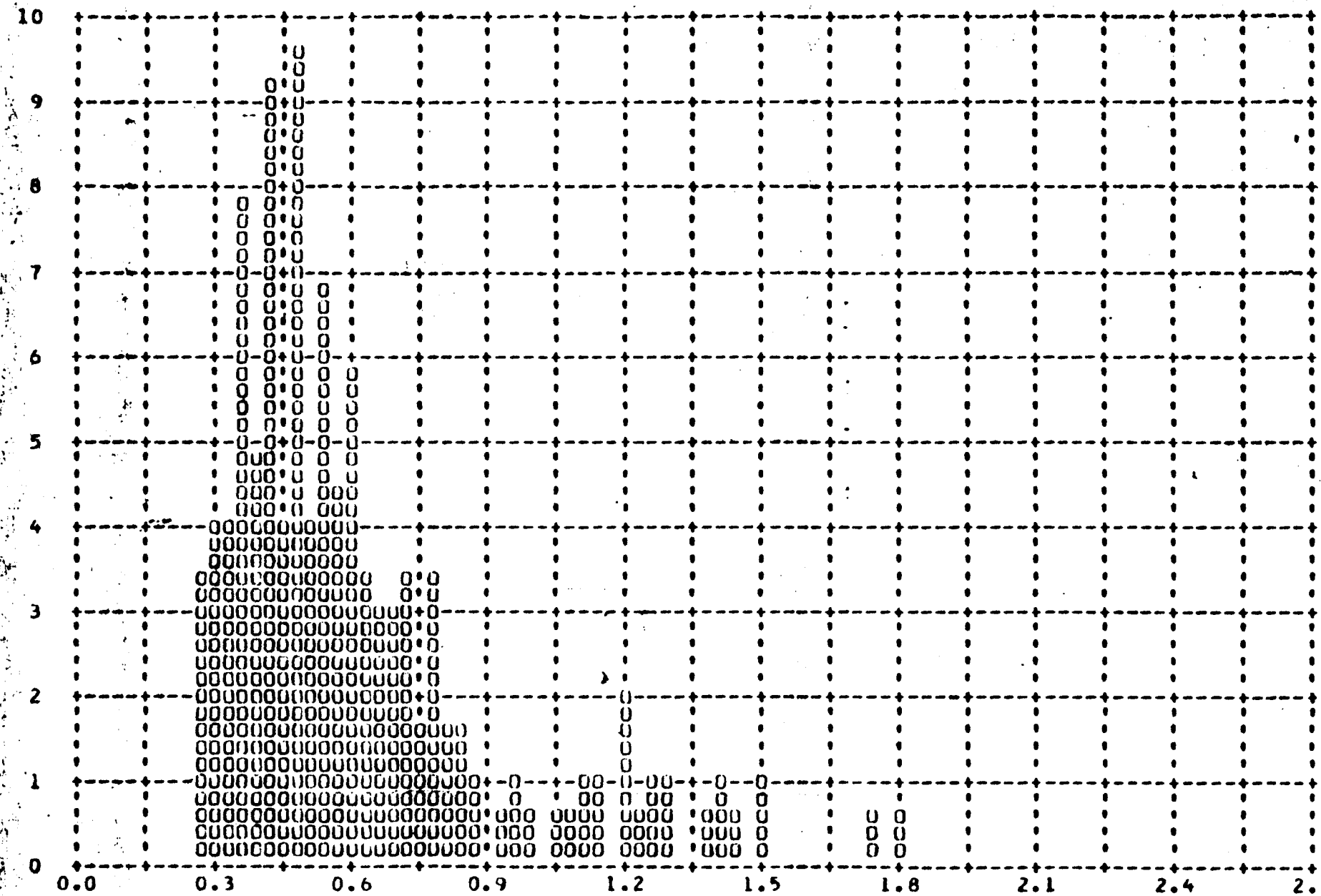


FIGURE A-4

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MAX • TERRAIN • PROCESSING • FULL

ARITH MEAN • 1.72 • MEDIAN • 1.76 • STD DEV • 0.36 • RANGE • 0.50 TO 2.30 WITH 210 SAMPLES

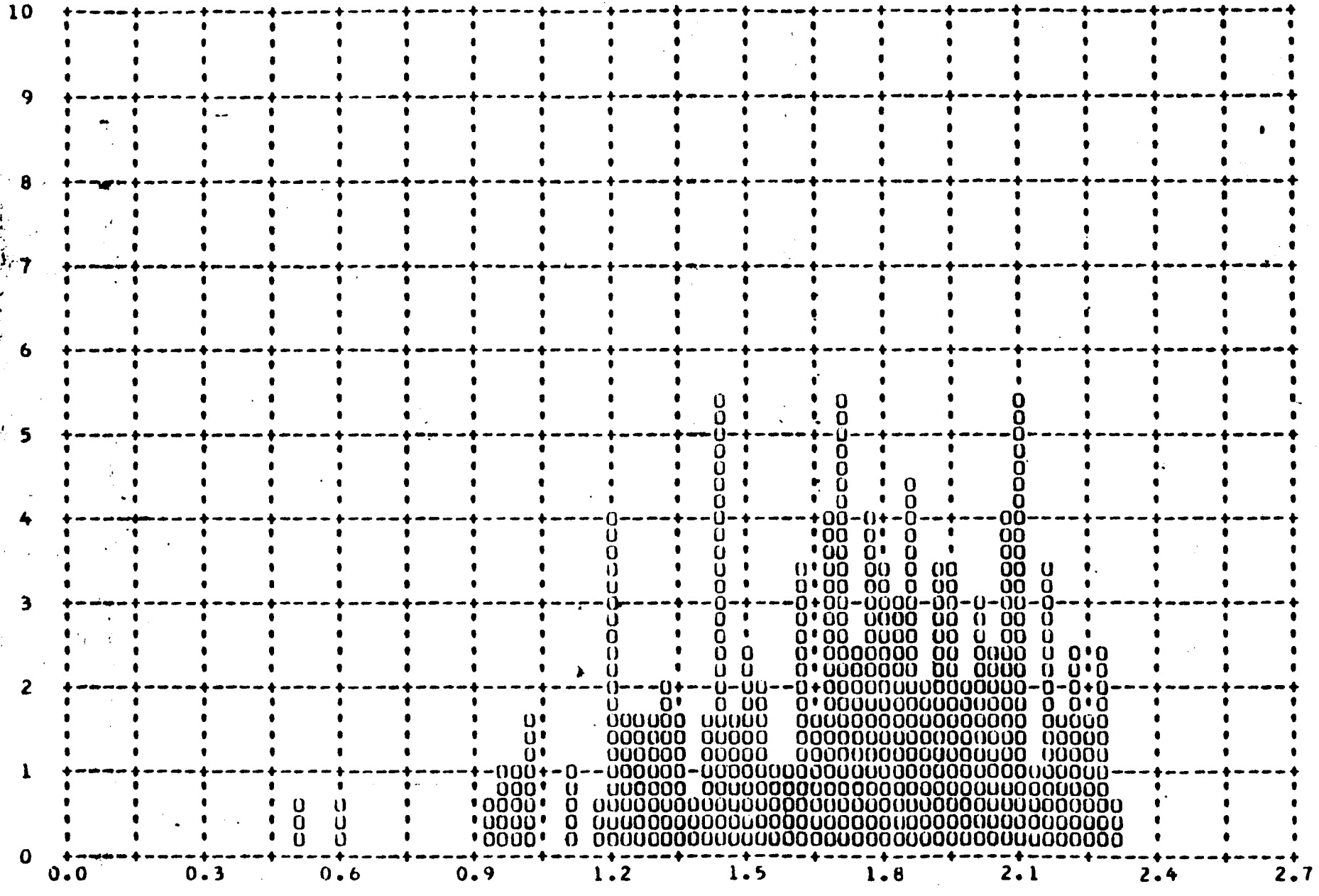


FIGURE A-5

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MAX • CLOUD • PROCESSING • FULL

ARITH MEAN • 2.04 • MEDIAN • 2.08 • STD DEV • 0.26 • RANGE • 0.48 TO 2.39 WITH 154 SAMPLES

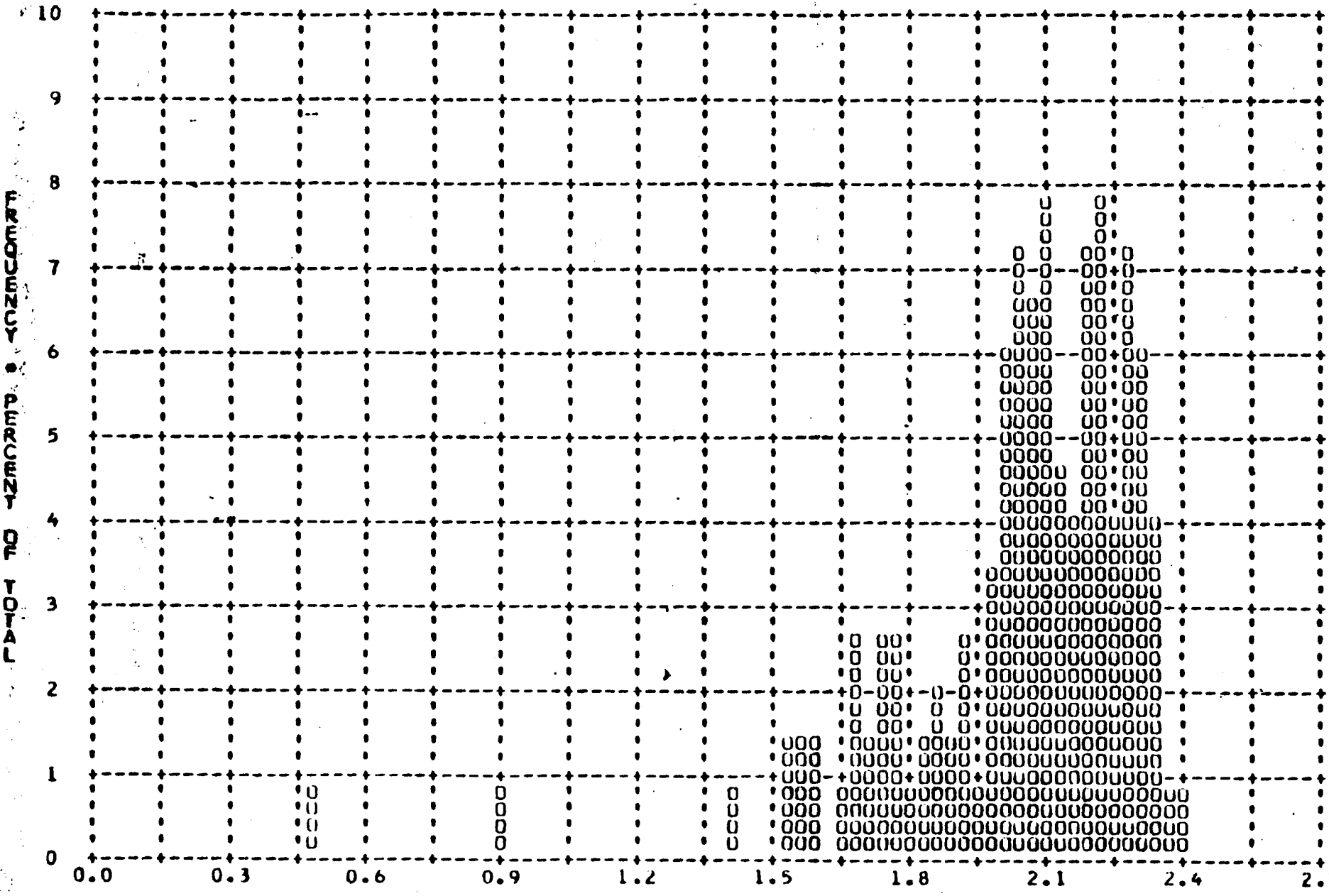


FIGURE A-6

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.64 • MEDIAN • 0.54 • STD DEV • 0.33 • RANGE • 0.25 TO 1.80 WITH 245 SAMPLES

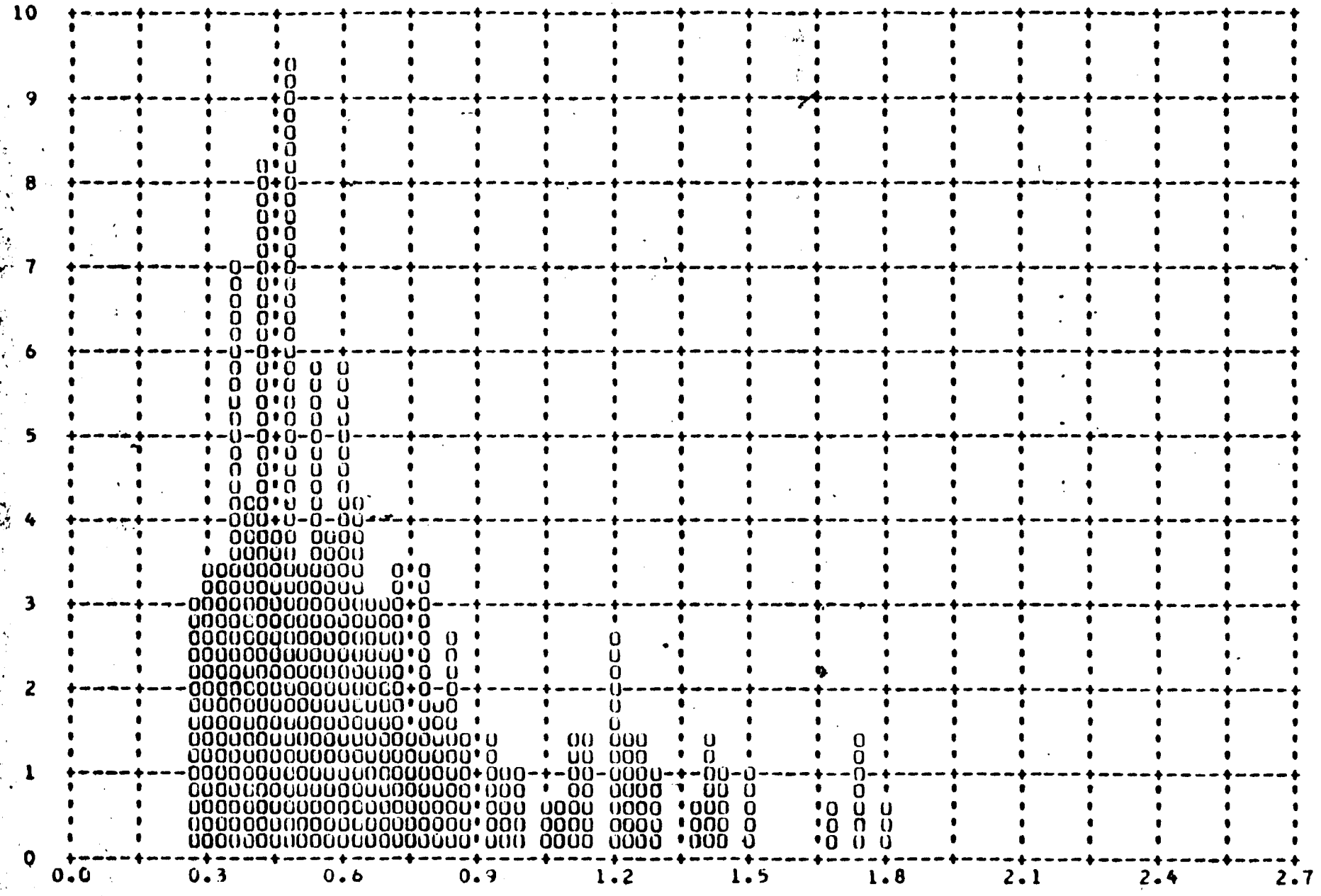


FIGURE A-7

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.72 • MEDIAN • 1.76 • STD DEV • 0.34 • RANGE • 0.50 TO 2.30 WITH 245 SAMPLES

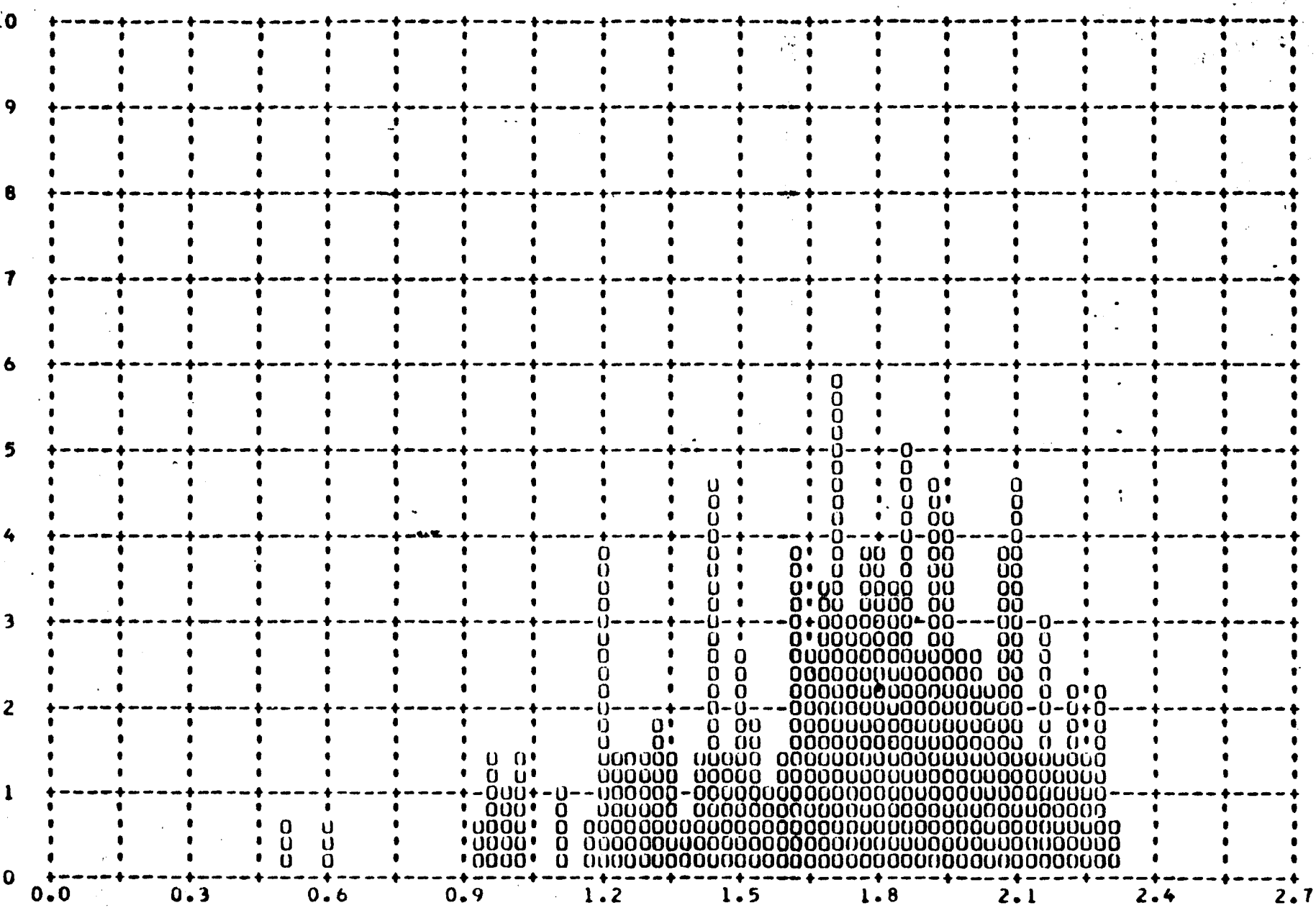


FIGURE A-8

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 2.03 • MEDIAN • 2.08 • STD DEV • 0.25 • RANGE • 0.48 TO 2.39 WITH 191 SAMPLES

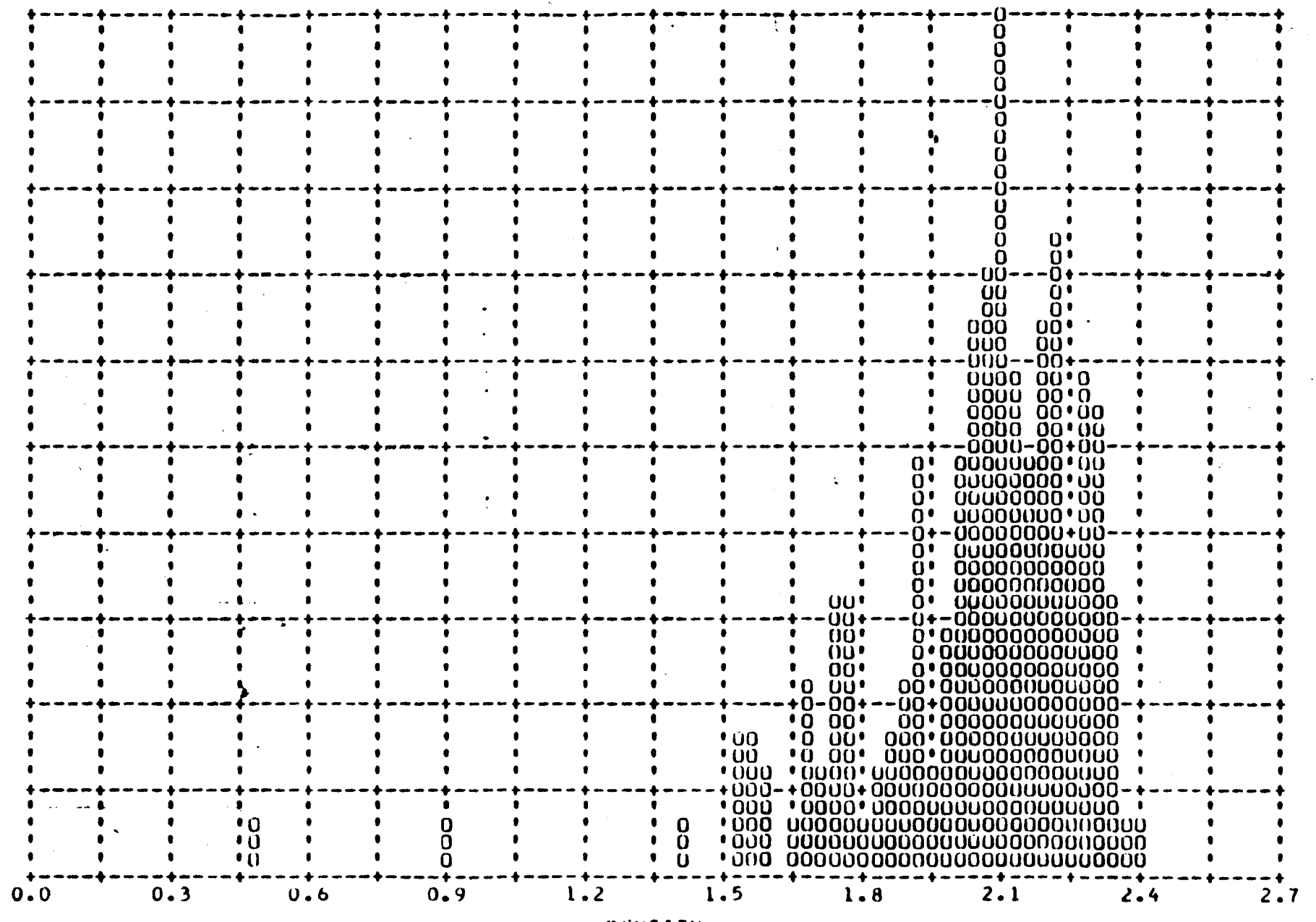


FIGURE A-9

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

MISSION * 1029-1 * INSTRUMENT * AFT 05/06/66 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	1	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	2	0	0	0	0	0	2	0	0
0.19	0	0	0	0	0	0	0	0	0	0	0	0
0.20	0	0	0	0	1	0	0	0	0	0	1	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	1	0	1	0	0	1	1	0
0.25	0	0	0	0	0	0	0	0	0	0	0	0
0.26	0	0	0	1	0	0	1	0	0	2	0	0
0.27	0	0	0	2	0	0	0	0	0	2	0	0
0.28	0	0	0	1	0	0	3	0	0	4	0	0
0.29	0	0	0	0	0	0	0	0	0	0	0	0
0.30	0	0	0	2	0	0	7	0	0	9	0	0
0.31	0	0	0	1	0	0	1	0	0	2	0	0
0.32	0	0	0	1	0	0	6	0	0	7	0	0
0.33	0	0	0	1	0	0	1	0	0	2	0	0
0.34	0	0	0	1	0	0	4	0	0	5	0	0
0.35	0	0	0	0	0	0	6	0	0	6	0	0
0.36	0	0	0	1	0	1	9	0	0	10	0	1
0.37	0	0	0	0	0	0	3	0	0	3	0	0
0.38	0	0	0	2	0	0	13	0	0	15	0	0
0.39	0	0	0	0	0	0	5	0	0	5	0	0
0.40	0	0	0	1	0	0	10	0	0	11	0	0
0.41	0	0	0	0	0	0	2	0	0	2	0	0
0.42	0	0	0	3	0	0	5	0	0	8	0	0
0.43	0	0	0	0	0	0	2	0	0	2	0	0
0.44	0	0	0	2	0	0	5	0	0	7	0	0
0.45	0	0	0	0	0	0	5	0	0	5	0	0
0.46	0	0	0	1	0	0	10	0	0	11	0	0
0.47	0	0	0	0	0	0	4	0	0	4	0	0
0.48	0	0	0	1	0	0	4	0	0	5	0	0
0.49	0	0	0	0	0	0	2	0	0	2	0	0
0.50	0	0	0	0	0	0	3	0	0	3	0	0
SUBTOTAL	0	0	0	25	2	1	112	0	0	137	2	1

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

TABLE A-2

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

MISSION • 1029-1 • INSTRUMENT • AFT 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	0	0	0	4	0	0	4	0	0
0.52	0	0	0	1	0	0	7	0	0	8	0	0
0.53	0	0	0	1	0	0	1	0	0	2	0	0
0.54	0	0	0	2	0	0	2	0	0	4	0	0
0.55	0	0	0	1	0	0	1	0	0	2	0	0
0.56	0	0	0	0	0	0	1	0	0	1	0	0
0.57	0	0	0	0	0	0	1	0	0	1	0	0
0.58	0	0	0	0	0	0	4	0	0	4	0	0
0.59	0	0	0	0	0	0	1	0	0	1	0	0
0.60	0	0	0	0	0	0	10	0	0	10	0	0
0.61	0	0	0	0	0	0	1	0	0	1	0	0
0.62	0	0	0	1	0	0	8	0	0	9	0	0
0.63	0	0	0	0	0	0	1	0	0	1	0	0
0.64	0	0	0	0	0	0	3	0	0	3	0	0
0.65	0	0	0	1	0	0	0	0	0	1	0	0
0.66	0	0	0	0	0	0	3	0	0	3	0	0
0.67	0	0	0	1	0	0	3	0	0	4	0	0
0.68	0	0	0	1	0	0	3	0	0	4	0	0
0.69	0	0	0	1	0	0	0	0	0	1	0	0
0.70	0	0	0	1	0	0	1	0	0	2	0	0
0.71	0	0	0	0	0	0	0	0	0	0	0	0
0.72	0	0	0	2	0	0	1	1	0	3	1	0
0.73	0	0	0	0	0	0	0	0	0	0	0	0
0.74	0	0	0	1	0	0	2	0	0	3	0	0
0.75	0	0	0	1	0	0	0	0	0	1	0	0
0.76	0	0	0	1	0	0	2	0	0	3	0	0
0.77	0	0	0	0	0	0	0	0	0	0	0	0
0.78	0	0	0	0	0	0	1	0	0	1	0	0
0.79	0	0	0	0	0	0	0	0	0	0	0	0
0.80	0	0	0	0	0	0	2	0	0	2	0	0
0.81	0	0	0	1	0	0	1	0	0	2	0	0
0.82	0	0	0	2	0	0	0	0	0	2	0	0
0.83	0	0	0	1	0	0	0	0	0	1	0	0
0.84	0	0	0	1	0	0	2	0	0	3	0	0
0.85	0	0	0	0	0	0	0	1	0	0	1	0
0.86	0	0	0	1	0	0	1	0	0	2	0	0
0.87	0	0	0	0	0	0	0	0	0	0	0	0
0.88	0	0	0	0	0	0	0	1	0	0	1	0
0.89	0	0	0	0	0	0	0	0	0	0	0	0
0.90	0	0	0	2	0	0	3	1	0	5	1	0
0.91	0	0	0	0	0	0	0	0	0	0	0	0
0.92	0	0	0	1	0	0	1	0	0	2	0	0
0.93	0	0	0	0	0	0	0	0	0	0	0	0
0.94	0	0	0	0	0	0	0	1	0	0	1	0
0.95	0	0	0	0	0	0	0	0	0	0	0	0
0.96	0	0	0	0	0	0	2	0	0	2	0	0
0.97	0	0	0	0	0	0	0	0	0	0	0	0
0.98	0	0	0	2	0	0	3	1	0	5	1	0
0.99	0	0	0	1	0	0	0	1	0	1	1	0
1.00	0	0	0	0	0	0	4	1	0	4	1	0
SUBTOTAL	0	0	0	28	0	0	80	8	0	108	8	0

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

TABLE A-2

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

MISSION • 1029-1 • INSTRUMENT • AFT 05/06/66 • DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	1	0	0	0	0	0	1	0
1.02	0	0	0	0	0	0	0	0	0	0	0	0
1.03	0	0	0	0	0	0	0	0	0	0	0	0
1.04	0	0	0	1	0	0	0	0	0	1	0	0
1.05	0	0	0	0	0	0	0	0	0	0	0	0
1.06	0	0	0	2	0	0	0	2	0	2	0	0
1.07	0	0	0	0	0	0	0	0	0	0	0	0
1.08	0	0	0	0	0	0	0	1	0	0	1	0
1.09	0	0	0	0	0	0	0	1	0	0	1	0
1.10	0	0	0	0	1	0	2	5	2	2	6	2
1.11	0	0	0	0	0	0	0	0	0	0	0	0
1.12	0	0	0	0	1	0	0	2	0	0	3	0
1.13	0	0	0	1	0	0	0	1	0	1	0	0
1.14	0	0	0	0	0	0	0	0	0	0	0	0
1.15	0	0	0	0	0	0	0	2	0	0	2	0
1.16	0	0	0	0	0	0	0	2	0	0	2	0
1.17	0	0	0	0	1	0	0	1	0	0	2	0
1.18	0	0	0	1	0	0	0	1	0	1	0	0
1.19	0	0	0	0	1	0	0	1	0	0	1	0
1.20	0	0	0	0	0	0	1	1	0	1	1	0
1.21	0	0	0	0	1	0	1	0	0	1	1	0
1.22	0	0	0	0	1	0	0	2	0	0	3	0
1.23	0	0	0	1	0	0	0	0	0	1	0	0
1.24	0	0	0	0	0	0	0	1	0	0	1	0
1.25	0	0	0	1	0	0	0	0	0	1	0	0
1.26	0	0	0	0	0	0	0	1	0	0	1	0
1.27	0	0	0	0	0	0	0	0	0	0	0	0
1.28	0	0	0	0	0	0	0	5	0	0	5	0
1.29	0	0	0	0	1	0	0	1	0	0	1	0
1.30	0	0	0	1	0	0	0	1	0	1	0	0
1.31	0	0	0	0	1	0	0	1	0	0	1	0
1.32	0	0	0	0	0	0	0	2	0	0	2	0
1.33	0	0	0	0	0	1	0	1	0	0	1	1
1.34	0	0	0	0	1	0	0	1	0	0	1	1
1.35	0	0	0	0	1	0	0	1	0	0	1	1
1.36	0	0	0	0	0	0	1	3	0	1	3	0
1.37	0	0	0	0	0	0	0	1	0	0	1	0
1.38	0	0	0	0	0	0	0	1	0	0	1	0
1.39	0	0	0	0	0	0	0	1	0	0	1	0
1.40	0	0	0	0	2	0	0	5	4	0	7	4
1.41	0	0	0	0	0	0	0	4	0	0	4	0
1.42	0	0	0	0	1	0	0	2	0	0	3	0
1.43	0	0	0	0	0	0	0	1	0	0	1	0
1.44	0	0	0	0	0	0	0	2	0	0	2	0
1.45	0	0	0	0	1	0	0	1	0	0	2	0
1.46	0	0	0	0	0	0	0	1	0	0	1	0
1.47	0	0	0	0	0	0	0	1	0	0	1	0
1.48	0	0	0	0	0	0	0	5	0	0	5	0
1.49	0	0	0	0	0	0	0	2	0	0	2	0
1.50	0	0	0	1	0	1	0	4	0	1	4	1
SUBTOTAL	0	0	0	10	12	4	5	65	15	15	77	19

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

TABLE A-2

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

MISSION • 1029-1 • INSTRUMENT • AFT 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	0	0	0	0	1	0	0	1
1.52	0	0	0	0	3	1	0	4	1	0	7	2
1.53	0	0	0	0	1	0	0	1	0	0	2	0
1.54	0	0	0	0	0	1	0	4	1	0	4	2
1.55	0	0	0	0	1	1	0	5	0	0	6	1
1.56	0	0	0	0	1	0	0	3	2	0	4	2
1.57	0	0	0	0	0	0	0	1	0	0	1	0
1.58	0	0	0	0	0	0	0	2	0	0	2	0
1.59	0	0	0	0	0	0	0	1	0	0	1	0
1.60	0	0	0	0	0	0	0	4	0	0	4	0
1.61	0	0	0	0	1	0	0	1	0	0	2	0
1.62	0	0	0	0	2	0	0	2	1	0	4	1
1.63	0	0	0	0	1	0	0	2	0	0	3	0
1.64	0	0	0	0	0	1	0	2	1	0	2	2
1.65	0	0	0	0	2	1	0	1	0	0	3	1
1.66	0	0	0	0	1	3	0	4	2	0	5	5
1.67	0	0	0	0	0	0	0	1	0	0	1	0
1.68	0	0	0	0	2	0	0	1	1	0	3	1
1.69	0	0	0	0	0	2	0	1	0	0	1	2
1.70	0	0	0	0	3	1	0	5	0	0	8	1
1.71	0	0	0	0	1	0	0	0	0	0	1	0
1.72	0	0	0	0	0	1	0	4	1	0	5	1
1.73	0	0	0	1	0	0	0	2	0	1	2	0
1.74	0	0	0	0	3	0	0	1	2	0	4	2
1.75	0	0	0	0	1	0	0	5	0	0	6	0
1.76	0	0	0	0	4	1	0	7	0	0	11	1
1.77	0	0	0	0	1	0	0	1	1	0	2	1
1.78	0	0	0	0	1	1	0	1	1	0	2	2
1.79	0	0	0	0	0	0	0	0	0	0	0	0
1.80	0	0	0	0	3	2	0	2	7	0	5	9
1.81	0	0	0	0	0	1	0	0	0	0	0	1
1.82	0	0	0	0	3	2	0	2	3	0	5	5
1.83	0	0	0	0	1	0	0	1	2	0	2	2
1.84	0	0	0	0	0	3	0	4	2	0	4	5
1.85	0	0	0	0	1	1	0	0	0	0	1	1
1.86	0	0	0	0	2	1	0	2	0	0	4	1
1.87	0	0	0	0	0	1	0	1	2	0	1	3
1.88	0	0	0	0	0	3	0	1	3	0	1	6
1.89	0	0	0	0	1	0	0	1	0	0	2	0
1.90	0	0	0	0	0	4	0	2	2	0	2	6
1.91	0	0	0	0	0	0	0	0	0	0	0	0
1.92	0	0	0	0	0	1	0	3	3	0	3	4
1.93	0	0	0	0	0	1	0	1	0	0	1	1
1.94	0	0	0	0	1	1	0	2	0	0	3	1
1.95	0	0	0	0	1	2	0	2	4	0	3	6
1.96	0	0	0	0	2	2	0	2	1	0	4	3
1.97	0	0	0	0	0	0	0	2	0	0	2	0
1.98	0	0	0	0	0	0	0	1	0	0	1	0
1.99	0	0	0	0	0	0	0	0	0	0	0	0
2.00	0	0	0	0	0	1	0	4	0	0	4	1
SUBTOTAL	0	0	0	1	45	39	0	99	44	1	144	83

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

TABLE A-2

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

MISSION • 1029-1 • INSTRUMENT • AFT 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	0	0	2	1	0	2	1
2.02	0	0	0	0	0	0	0	1	2	0	1	2
2.03	0	0	0	0	0	0	0	1	1	0	1	1
2.04	0	0	0	0	0	2	0	1	5	0	1	7
2.05	0	0	0	0	0	1	0	1	2	0	1	3
2.06	0	0	0	0	2	2	0	1	4	0	3	6
2.07	0	0	0	0	0	0	0	1	0	0	0	1
2.08	0	0	0	0	0	0	0	0	4	0	0	4
2.09	0	0	0	0	0	0	0	0	0	0	0	0
2.10	0	0	0	0	1	1	0	2	4	0	3	5
2.11	0	0	0	0	0	0	0	2	3	0	3	3
2.12	0	0	0	0	1	0	0	4	4	0	5	4
2.13	0	0	0	0	0	0	0	1	2	0	1	2
2.14	0	0	0	0	0	1	0	2	2	0	2	3
2.15	0	0	0	0	0	0	0	1	2	0	1	2
2.16	0	0	0	0	0	2	0	0	4	0	0	6
2.17	0	0	0	0	0	0	0	0	0	0	0	0
2.18	0	0	0	0	0	1	0	1	4	0	1	5
2.19	0	0	0	0	0	0	0	0	2	0	0	2
2.20	0	0	0	0	0	0	0	2	5	0	2	5
2.21	0	0	0	0	0	0	0	0	0	0	0	0
2.22	0	0	0	0	0	0	0	0	2	0	0	2
2.23	0	0	0	0	0	0	0	0	0	0	0	0
2.24	0	0	0	0	0	0	0	1	2	0	1	2
2.25	0	0	0	0	0	0	0	0	4	0	0	4
2.26	0	0	0	0	0	0	0	1	3	0	1	3
2.27	0	0	0	0	0	0	0	1	2	0	1	2
2.28	0	0	0	0	0	0	0	1	3	0	1	3
2.29	0	0	0	0	0	0	0	0	0	0	0	0
2.30	0	0	0	0	0	1	0	0	7	0	0	7
2.31	0	0	0	0	0	0	0	0	0	0	0	0
2.32	0	0	0	0	0	0	0	0	2	0	0	2
2.33	0	0	0	0	0	0	0	0	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	1	0	0	1
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	0	0	0	0
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	5	10	0	25	79	0	30	89

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

TABLE A-2

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

MISSION • 1029-1 • INSTRUMENT • AFT 05/06/66 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	64	64	54	197	197	138	261	261	192

MISSION 1029-1 INSTR - AFT 05/06/66 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	64	5 PC	22 PC	50 PC	19 PC	5 PC
FULL	197	30 PC	0 PC	62 PC	8 PC	0 PC
ALL LEVELS	261	24 PC	5 PC	59 PC	10 PC	1 PC

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

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

TABLE A-2

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.67 • MEDIAN • 0.67 • STD DEV • 0.36 • RANGE • 0.16 TO 1.73 WITH 64 SAMPLES

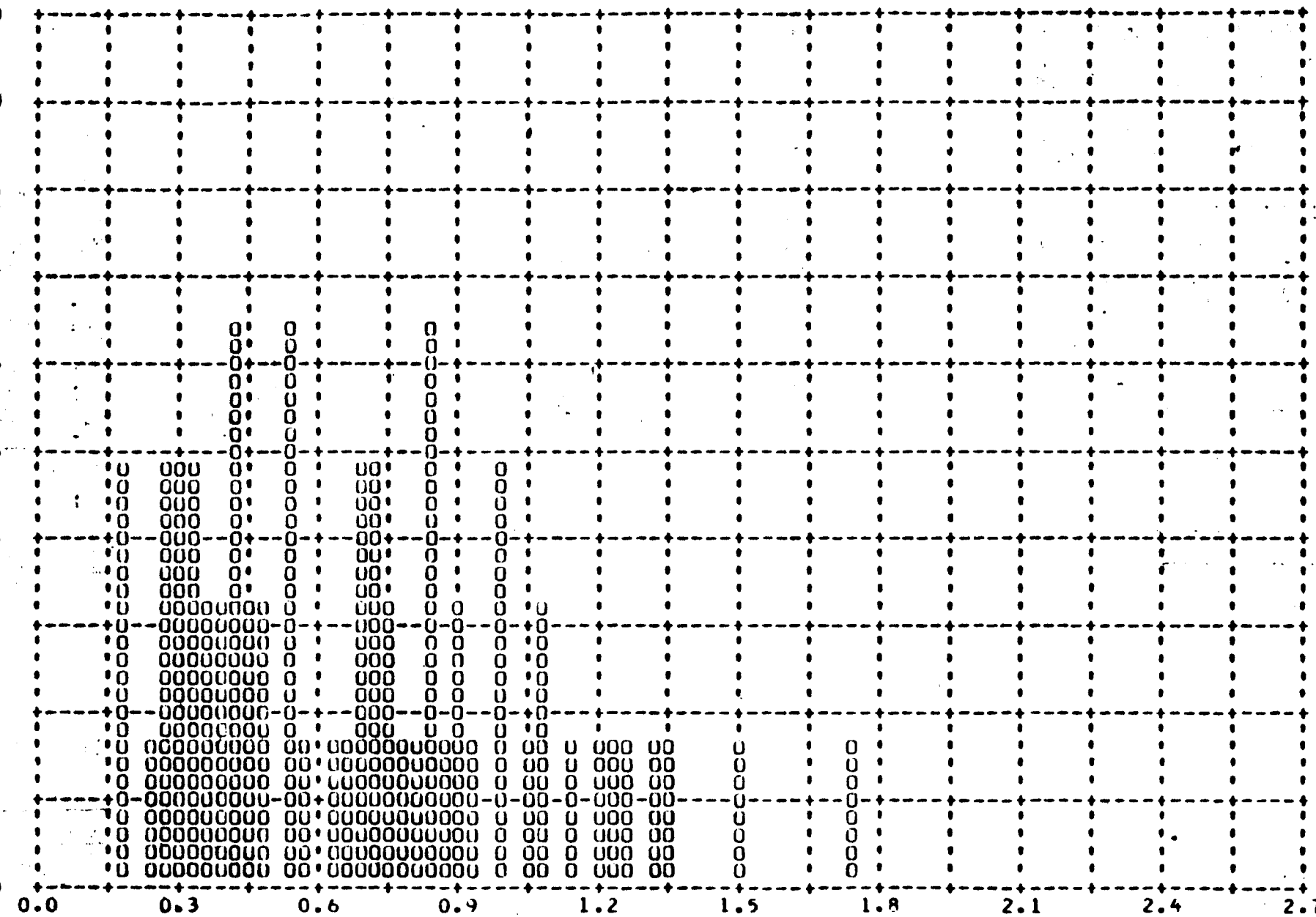


FIGURE A-10

MISSION • 1029-1 • INSTR • AFT • 05/06/68 PLOT OF D MAX • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.63 • MEDIAN • 1.71 • STD DEV • 0.36 • RANGE • 0.20 TO 2.30 WITH 64 SAMPLES

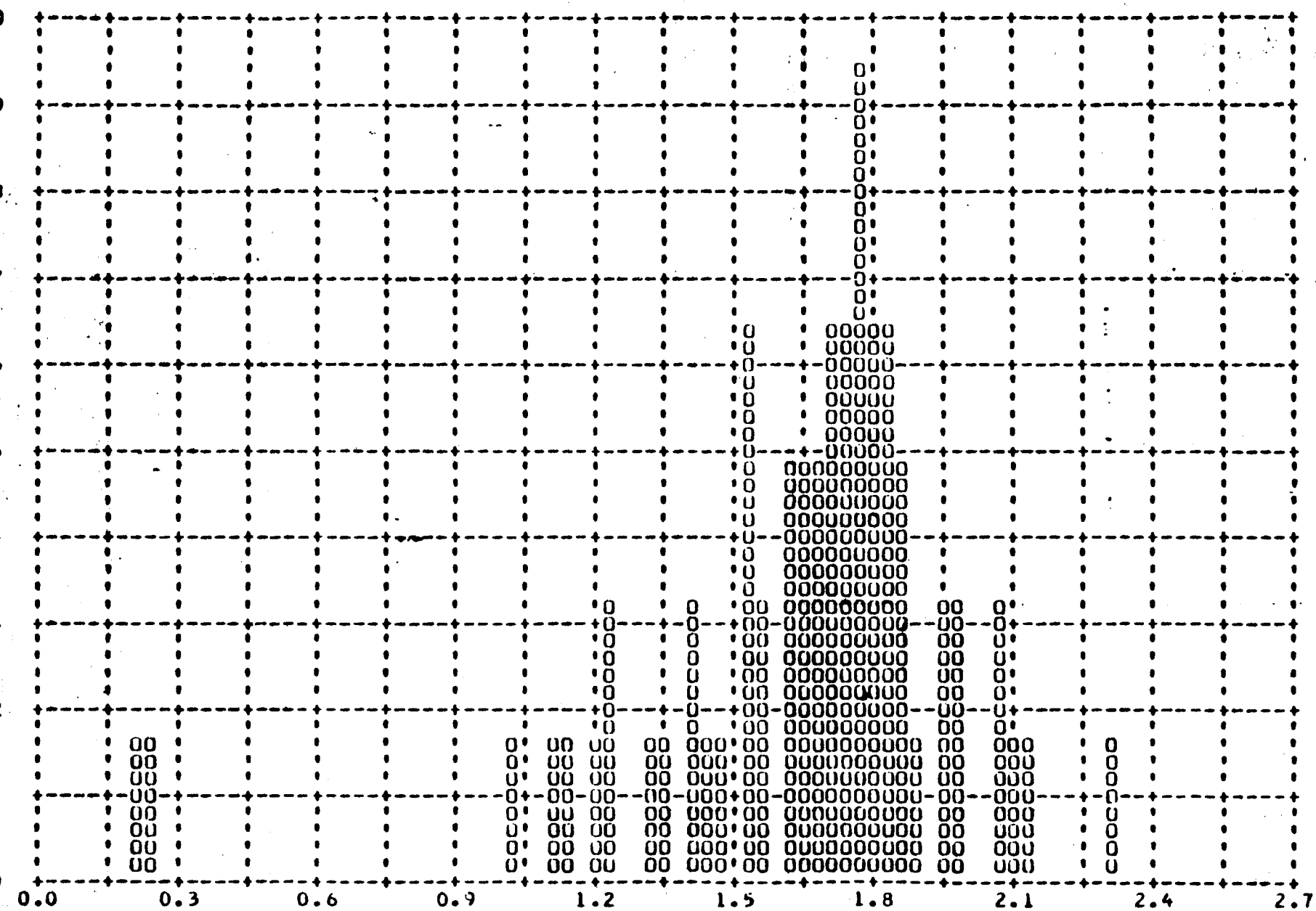


FIGURE A-11

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MAX • CLOUD • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.80 • MEDIAN • 1.86 • STD DEV • 0.30 • RANGE • 0.36 TO 2.18 WITH 54 SAMPLES

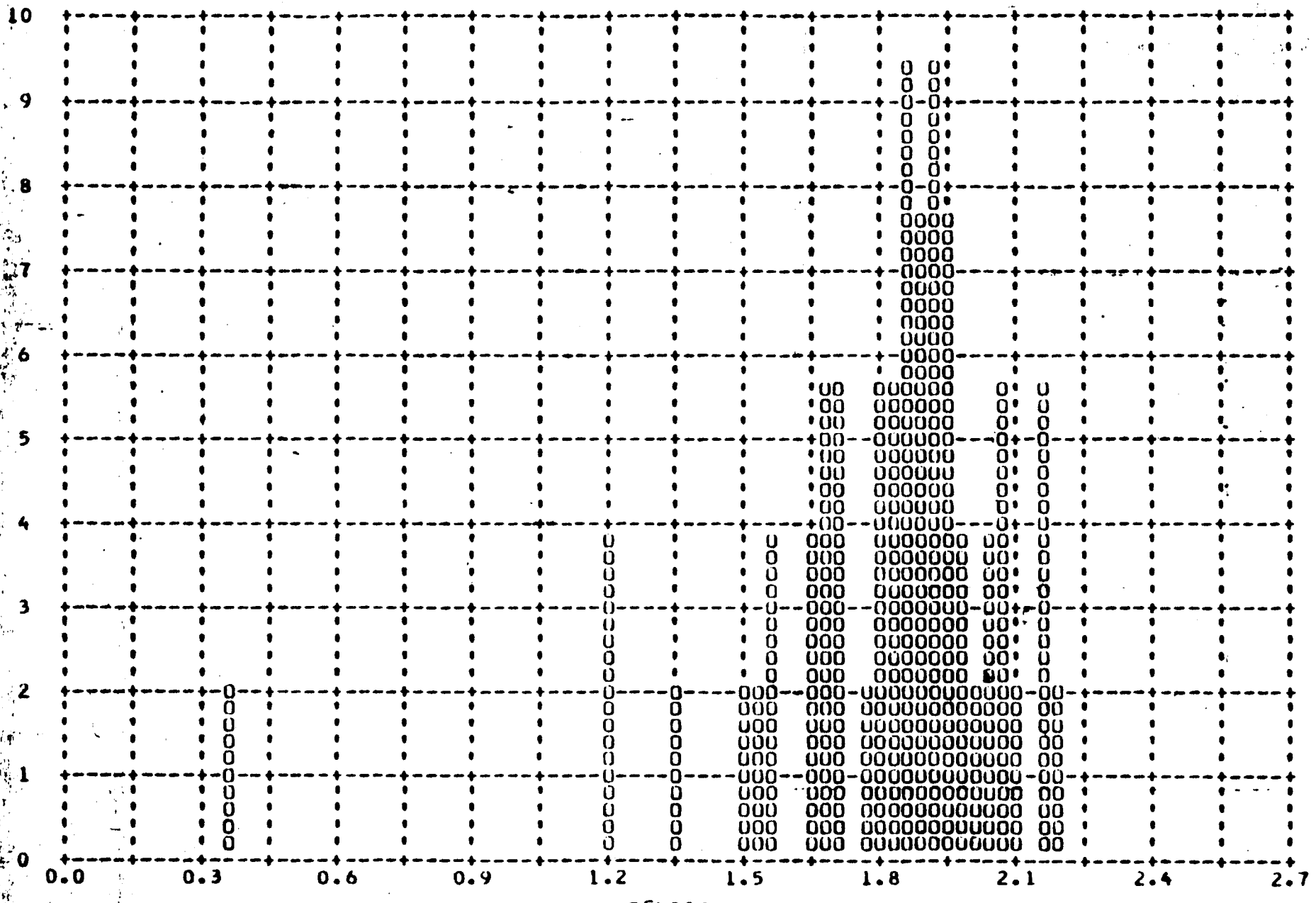


FIGURE A-12

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MIN • TERRAIN • PROCESSING • FULL

ARITH MEAN • 0.53 • MEDIAN • 0.46 • STD DEV • 0.21 • RANGE • 0.24 TO 1.38 WITH 197 SAMPLES

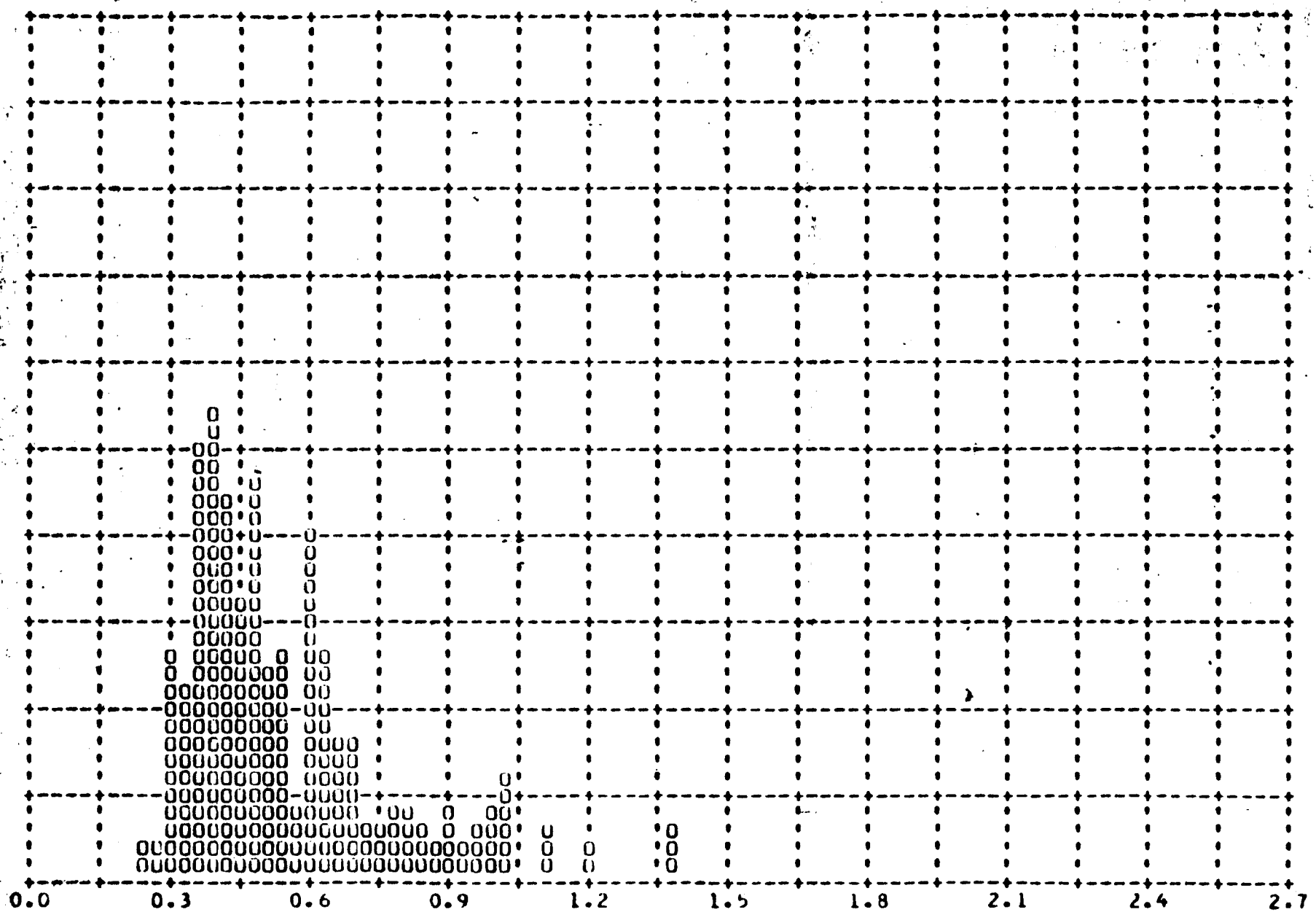


FIGURE A-13

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MAX • TERRAIN • PROCESSING • FULL

ARITH MEAN • 1.62 • MEDIAN • 1.61 • STD DEV • 0.33 • RANGE • 0.72 TO 2.32 WITH 197 SAMPLES

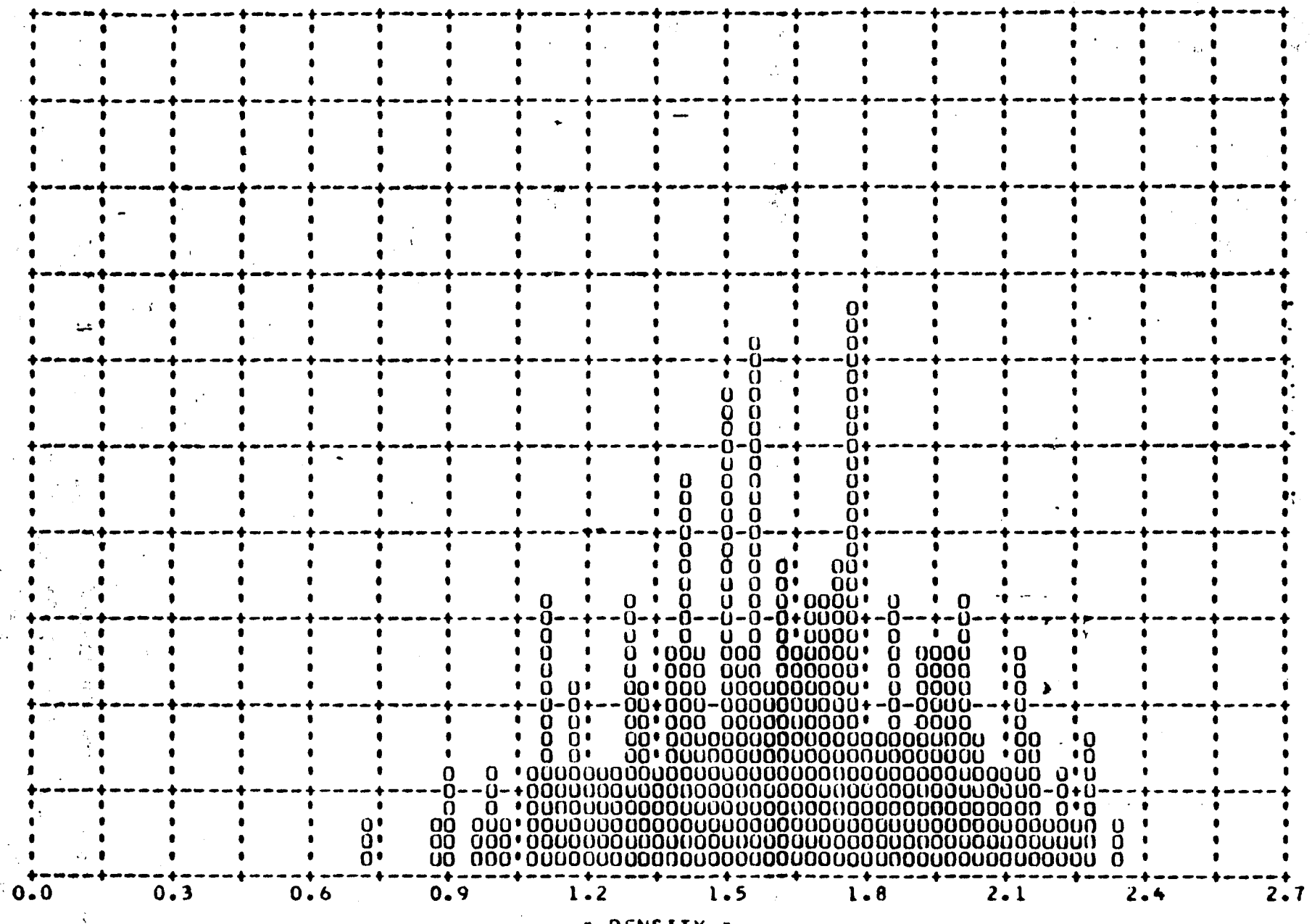


FIGURE A-14

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MAX • CLOUD • PROCESSING • FULL

ARITH MEAN • 1.95 • MEDIAN • 2.05 • STD DEV • 0.31 • RANGE • 1.08 TO 2.40 WITH 138 SAMPLES

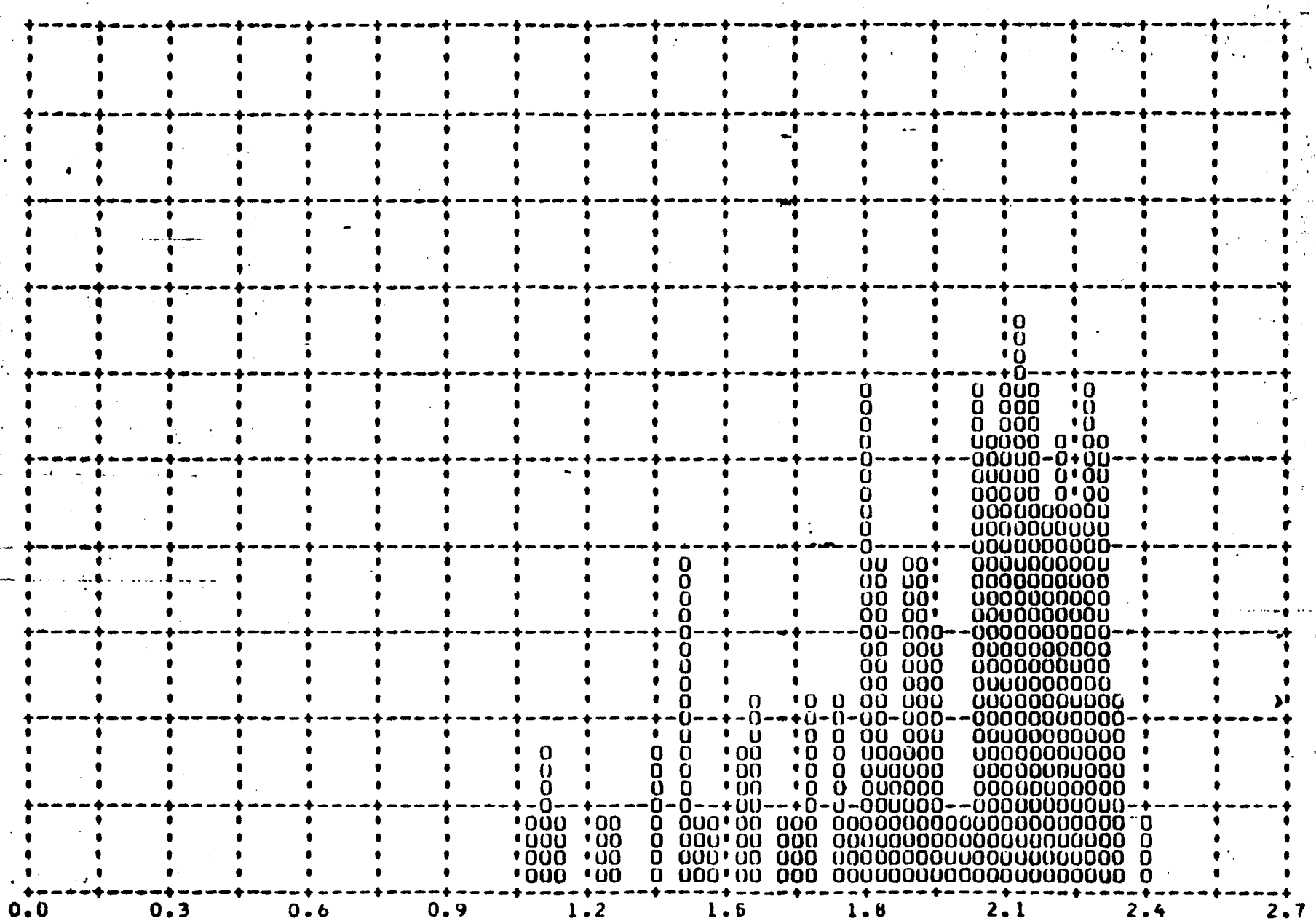


FIGURE A-15

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.57 • MEDIAN • 0.48 • STD DEV • 0.26 • RANGE • 0.16 TO 1.73 WITH 261 SAMPLES

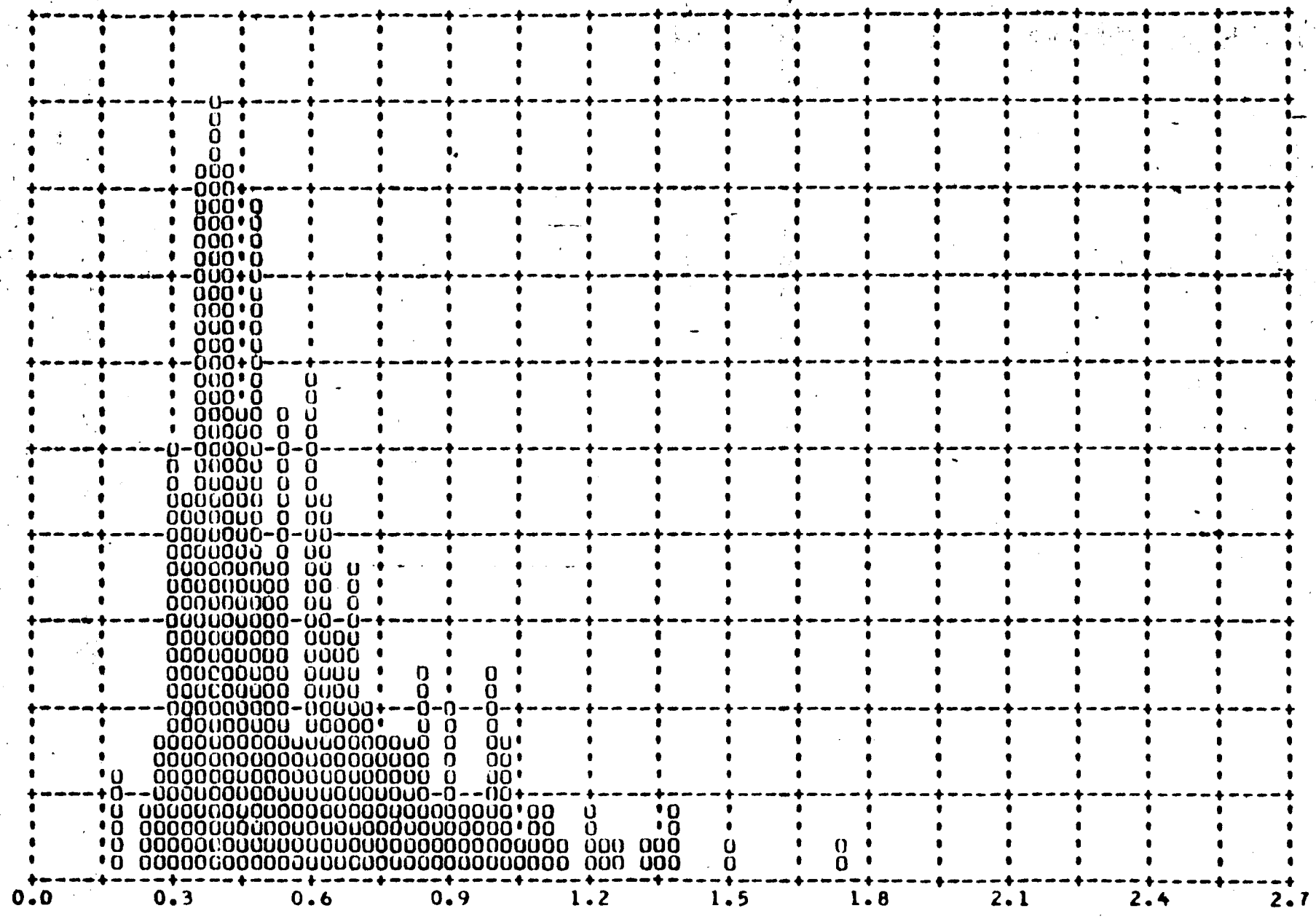


FIGURE A-16

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.62 • MEDIAN • 1.65 • STD DEV • 0.34 • RANGE • 0.20 TO 2.32 WITH 261 SAMPLES

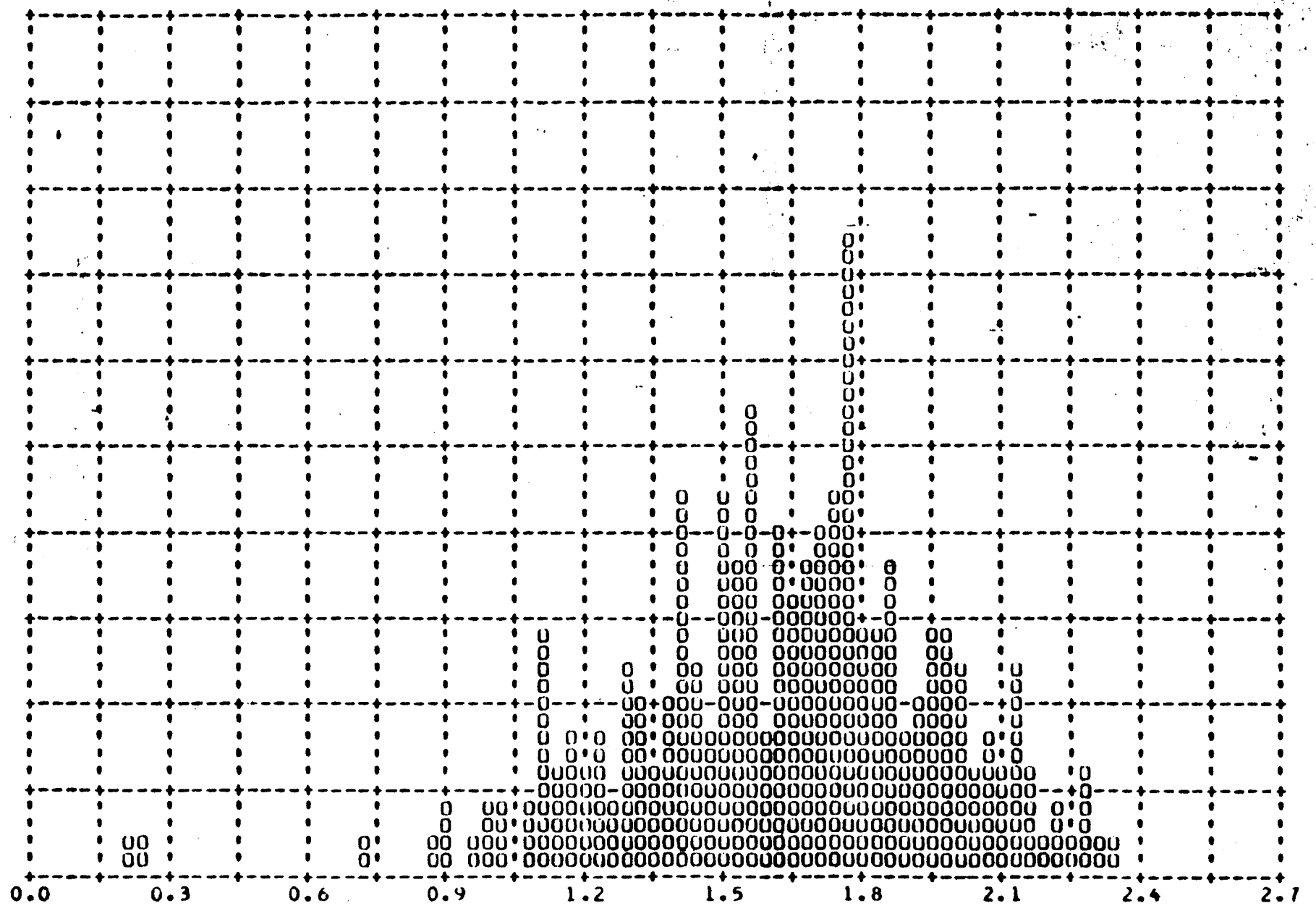


FIGURE A-17

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 1.91 • MEDIAN • 1.95 • STD DEV • 0.31 • RANGE • 0.36 TO 2.40 WITH 192 SAMPLES

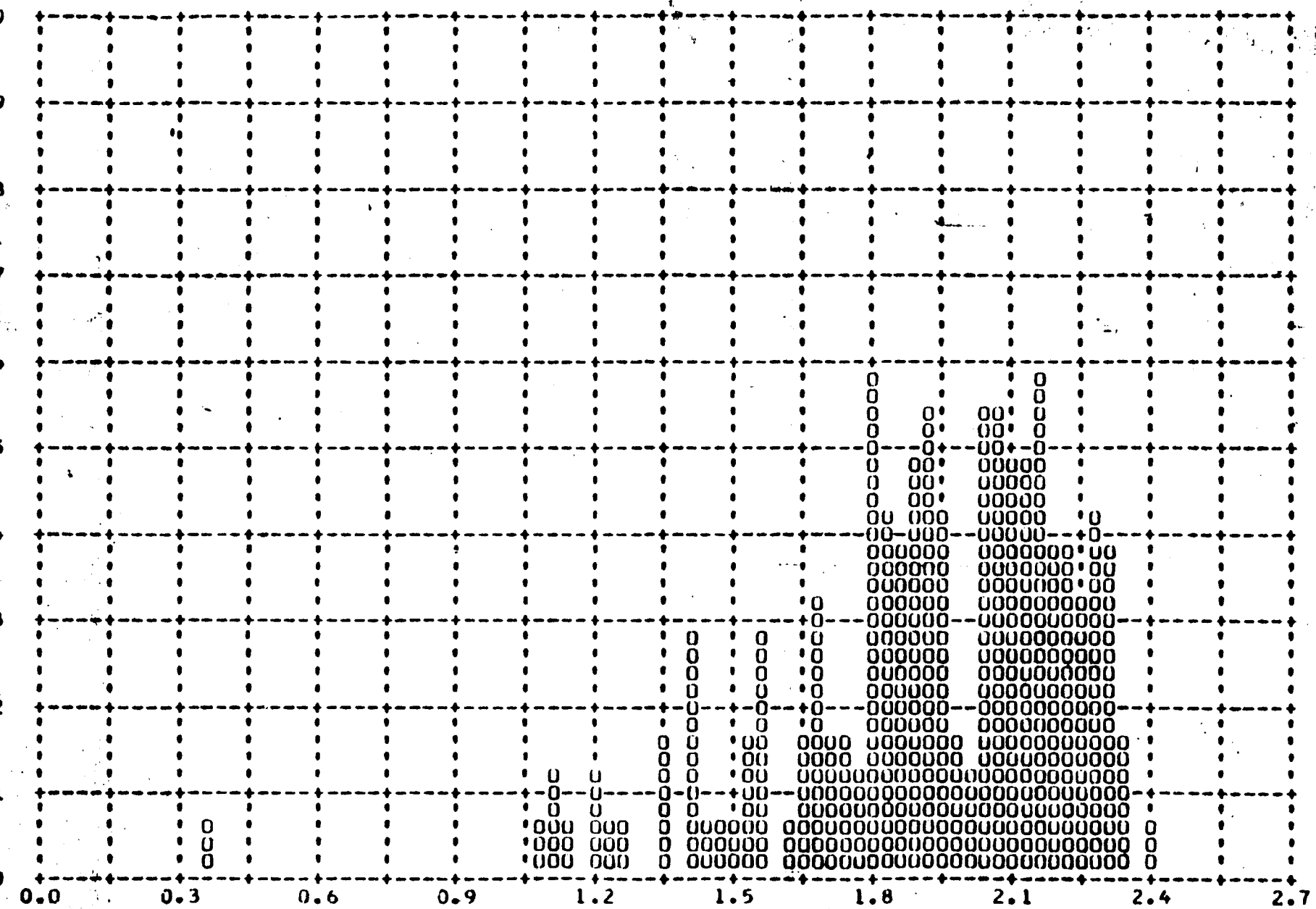


FIGURE A-18

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

MISSION • 1029-1 • INSTRUMENT • FRWD 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0	0	0	0	0
0.16	0	0	0	0	0	0	0	0	0	0	0	0
0.17	0	0	0	0	0	0	0	0	0	0	0	0
0.18	0	0	0	0	0	0	0	0	0	0	0	0
0.19	0	0	0	0	0	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0	0	0	0	0	0
0.21	0	0	0	0	0	0	0	0	0	0	0	0
0.22	0	0	0	0	0	0	4	0	0	4	0	0
0.23	0	0	0	1	0	0	0	0	0	1	0	0
0.24	0	0	0	0	0	0	1	0	0	1	0	0
0.25	0	0	0	1	0	0	2	0	0	3	0	0
0.26	0	0	0	2	0	0	3	0	0	5	0	0
0.27	0	0	0	1	0	0	3	0	0	4	0	0
0.28	0	0	0	0	0	0	3	0	0	3	0	0
0.29	0	0	0	0	0	0	4	0	0	4	0	0
0.30	0	0	0	1	0	0	12	0	0	13	0	0
0.31	0	0	0	1	0	0	1	2	0	2	2	0
0.32	0	0	0	1	0	0	8	0	0	9	0	0
0.33	0	0	0	0	0	0	5	0	0	5	0	0
0.34	0	0	0	0	0	0	5	1	0	5	1	0
0.35	0	0	0	0	0	0	5	0	0	5	0	0
0.36	0	0	0	1	0	0	6	2	0	7	2	0
0.37	0	0	0	0	0	0	6	0	0	6	0	0
0.38	0	0	0	2	0	0	8	1	0	10	1	0
0.39	0	0	0	1	0	0	9	1	0	10	1	0
0.40	0	0	0	2	0	0	6	0	0	8	0	0
0.41	0	0	0	0	0	0	4	0	0	4	0	0
0.42	0	0	0	0	0	0	7	0	0	7	0	0
0.43	0	0	0	0	0	0	2	0	0	2	0	0
0.44	0	0	0	1	0	0	8	0	0	9	0	0
0.45	0	0	0	0	0	0	2	0	1	2	0	1
0.46	0	0	0	1	0	0	5	0	0	6	0	0
0.47	0	0	0	1	0	0	3	0	0	4	0	0
0.48	0	0	0	0	0	0	2	0	0	2	0	0
0.49	0	0	0	1	0	0	2	0	0	3	0	0
0.50	0	0	0	1	0	0	5	0	0	6	0	0
SUBTOTAL	0	0	0	19	0	0	131	7	1	150	7	1

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

Correction: Table A-3 and Figures A-19 to A-27 is Mission 1029-2 FWD Data.

TABLE A-3

MISSION * 1029-1 * INSTRUMENT * FRWD 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	0	0	0	3	0	0	3	0	0
0.52	0	0	0	0	0	0	2	1	0	2	1	0
0.53	0	0	0	0	0	0	4	0	0	4	0	0
0.54	0	0	0	0	0	1	7	0	0	7	0	1
0.55	0	0	0	2	0	0	3	0	0	5	0	0
0.56	0	0	0	2	0	0	2	2	0	4	2	0
0.57	0	0	0	1	0	0	3	1	0	4	1	0
0.58	0	0	0	0	0	0	1	1	1	1	1	1
0.59	0	0	0	0	0	0	2	0	0	2	0	0
0.60	0	0	0	1	1	0	6	1	0	7	2	0
0.61	0	0	0	0	1	0	2	0	0	2	0	0
0.62	0	0	0	1	0	0	2	1	0	3	1	0
0.63	0	0	0	0	0	0	2	2	0	2	2	0
0.64	0	0	0	1	0	0	2	0	0	3	2	0
0.65	0	0	0	1	0	0	0	0	0	1	0	0
0.66	0	0	0	0	0	0	0	0	1	0	0	1
0.67	0	0	0	0	0	0	2	1	0	2	1	0
0.68	0	0	0	0	0	0	1	1	0	2	1	0
0.69	0	0	0	0	0	0	1	0	0	2	0	0
0.70	0	0	0	1	0	0	1	2	1	2	2	1
0.71	0	0	0	0	0	0	1	2	0	1	2	0
0.72	0	0	0	0	0	0	1	0	1	1	0	1
0.73	0	0	0	1	0	0	1	0	1	2	0	1
0.74	0	0	0	1	0	0	0	1	0	1	1	0
0.75	0	0	0	0	0	0	1	0	0	1	0	0
0.76	0	0	0	1	0	0	0	0	0	1	0	0
0.77	0	0	0	0	0	0	0	0	0	0	0	0
0.78	0	0	0	0	0	0	0	0	0	0	0	0
0.79	0	0	0	0	0	0	1	0	0	1	0	0
0.80	0	0	0	0	0	0	2	1	0	2	1	0
0.81	0	0	0	0	0	0	2	0	0	3	1	0
0.82	0	0	0	1	0	0	2	1	0	3	1	0
0.83	0	0	0	0	0	0	2	0	0	3	0	0
0.84	0	0	0	1	0	0	2	0	0	3	0	0
0.85	0	0	0	1	0	0	0	0	0	1	0	0
0.86	0	0	0	0	0	0	0	0	0	0	0	0
0.87	0	0	0	0	0	0	0	0	0	0	0	0
0.88	0	0	0	0	0	1	2	1	0	2	1	1
0.89	0	0	0	0	0	0	1	1	0	1	1	0
0.90	0	0	0	0	1	0	1	1	0	1	2	0
0.91	0	0	0	1	0	0	2	1	0	3	2	0
0.92	0	0	0	3	0	0	2	0	0	5	2	0
0.93	0	0	0	1	0	0	0	0	0	1	0	0
0.94	0	0	0	1	1	0	0	0	0	1	1	0
0.95	0	0	0	1	1	0	2	1	0	3	2	0
0.96	0	0	0	0	0	0	0	1	0	0	1	0
0.97	0	0	0	0	0	0	0	0	0	0	0	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	1	0	0	1
1.00	0	0	0	0	1	0	1	3	0	1	4	0
SUBTOTAL	0	0	0	24	4	2	67	23	5	91	27	7

TABLE A-3

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

MISSION • 1029-1 • INSTRUMENT • FRWD 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	0	0	0	0	0	0	0	0
1.02	0	0	0	0	0	0	0	0	0	0	0	0
1.03	0	0	0	0	0	0	0	0	0	0	0	0
1.04	0	0	0	0	0	0	0	0	0	0	0	0
1.05	0	0	0	1	0	0	0	2	0	1	2	0
1.06	0	0	0	0	0	0	0	1	0	0	1	0
1.07	0	0	0	0	0	0	0	0	0	0	0	0
1.08	0	0	0	0	0	0	1	2	1	1	2	1
1.09	0	0	0	0	0	0	1	0	0	1	0	0
1.10	0	0	0	0	1	0	0	8	0	0	9	0
1.11	0	0	0	0	0	0	1	1	0	0	1	0
1.12	0	0	0	0	0	0	0	2	0	0	2	0
1.13	0	0	0	0	0	0	0	0	1	0	0	1
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	1	0	0	1	0
1.17	0	0	0	0	0	0	0	0	2	0	0	2
1.18	0	0	0	0	0	0	1	0	2	1	0	2
1.19	0	0	0	0	0	0	0	1	2	0	1	2
1.20	0	0	0	1	0	0	0	6	2	1	6	2
1.21	0	0	0	0	0	0	0	0	2	0	0	2
1.22	0	0	0	0	0	0	0	1	0	0	1	0
1.23	0	0	0	0	0	0	0	3	0	0	3	0
1.24	0	0	0	0	0	0	0	1	0	0	1	0
1.25	0	0	0	0	0	0	0	1	0	0	1	0
1.26	0	0	0	0	0	1	0	0	0	0	0	1
1.27	0	0	0	0	0	0	0	0	0	0	0	0
1.28	0	0	0	0	1	0	0	1	0	0	2	0
1.29	0	0	0	0	1	0	0	1	0	0	1	0
1.30	0	0	0	2	1	0	0	3	3	2	4	3
1.31	0	0	0	2	0	0	0	2	0	2	2	0
1.32	0	0	0	0	0	0	1	0	1	1	0	1
1.33	0	0	0	0	0	0	0	1	0	0	1	0
1.34	0	0	0	0	0	1	0	2	1	0	2	1
1.35	0	0	0	0	1	0	0	2	1	0	3	1
1.36	0	0	0	0	0	0	0	4	0	0	4	0
1.37	0	0	0	0	0	0	0	0	0	0	0	0
1.38	0	0	0	0	0	1	0	1	0	0	2	0
1.39	0	0	0	0	1	0	0	1	0	0	2	0
1.40	0	0	0	1	2	0	0	2	0	1	4	0
1.41	0	0	0	0	1	0	0	1	0	0	2	0
1.42	0	0	0	0	0	0	0	2	0	0	2	0
1.43	0	0	0	0	0	0	0	4	0	0	4	0
1.44	0	0	0	0	2	0	0	2	0	0	4	0
1.45	0	0	0	0	1	0	0	1	0	0	2	0
1.46	0	0	0	0	0	0	1	2	0	1	2	0
1.47	0	0	0	0	0	0	0	0	0	0	0	0
1.48	0	0	0	0	0	0	0	1	0	0	1	0
1.49	0	0	0	0	0	0	0	2	1	0	2	1
1.50	0	0	0	2	3	1	1	4	0	3	7	1
SUBTOTAL	0	0	0	7	14	3	7	68	18	14	82	21

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

TABLE A-3

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

MISSION • 1029-1 • INSTRUMENT • FRWD 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	0	0	0	2	0	0	2	0
1.52	0	0	0	0	1	0	0	0	0	0	1	0
1.53	0	0	0	0	0	0	0	1	0	0	1	0
1.54	0	0	0	0	0	0	0	2	0	0	2	0
1.55	0	0	0	0	0	0	0	1	2	0	1	2
1.56	0	0	0	0	1	0	0	2	0	0	3	0
1.57	0	0	0	0	0	0	0	0	1	0	1	1
1.58	0	0	0	0	0	0	0	1	0	0	1	0
1.59	0	0	0	0	0	0	0	1	0	0	1	0
1.60	0	0	0	0	1	0	0	0	1	0	1	1
1.61	0	0	0	0	0	0	0	2	0	0	2	0
1.62	0	0	0	0	1	0	0	4	0	0	5	0
1.63	0	0	0	0	0	0	0	1	0	0	1	0
1.64	0	0	0	0	0	0	0	0	1	0	0	1
1.65	0	0	0	0	0	0	0	3	0	0	3	0
1.66	0	0	0	0	2	0	0	4	0	0	6	0
1.67	0	0	0	0	0	0	0	0	0	0	0	0
1.68	0	0	0	1	0	0	1	3	0	2	3	0
1.69	0	0	0	0	0	0	0	1	0	0	1	0
1.70	0	0	0	0	0	0	0	4	1	0	4	1
1.71	0	0	0	0	0	0	0	1	3	0	1	3
1.72	0	0	0	0	0	0	0	4	0	0	4	0
1.73	0	0	0	0	0	0	0	2	0	0	2	0
1.74	0	0	0	0	0	0	0	2	0	0	2	0
1.75	0	0	0	0	1	1	0	3	3	0	4	4
1.76	0	0	0	0	0	0	0	5	1	0	5	1
1.77	0	0	0	0	1	0	0	0	1	0	1	1
1.78	0	0	0	0	1	0	0	3	1	0	4	1
1.79	0	0	0	0	0	0	0	0	0	0	0	0
1.80	0	0	0	0	2	0	0	6	0	0	8	0
1.81	0	0	0	0	0	0	0	0	1	0	0	1
1.82	0	0	0	0	1	1	0	2	1	0	3	2
1.83	0	0	0	0	0	1	0	2	1	0	2	2
1.84	0	0	0	0	1	1	0	2	1	0	3	2
1.85	0	0	0	0	3	1	0	2	1	0	5	2
1.86	0	0	0	0	0	2	0	0	2	0	0	4
1.87	0	0	0	0	0	2	0	0	1	0	0	3
1.88	0	0	0	0	0	1	0	0	1	0	0	2
1.89	0	0	0	0	0	0	0	3	1	0	3	1
1.90	0	0	0	0	3	0	0	3	1	0	6	1
1.91	0	0	0	0	0	1	0	1	1	0	1	2
1.92	0	0	0	0	0	4	0	2	0	0	2	4
1.93	0	0	0	0	2	1	0	1	1	0	3	2
1.94	0	0	0	0	0	2	0	1	4	0	1	6
1.95	0	0	0	0	1	1	0	2	3	0	3	4
1.96	0	0	0	0	1	1	0	1	0	0	2	1
1.97	0	0	0	0	1	0	0	1	1	0	2	1
1.98	0	0	0	0	2	0	0	2	1	0	4	1
1.99	0	0	0	0	0	0	0	0	0	0	0	0
2.00	0	0	0	0	1	3	0	1	8	0	2	11
SUBTOTAL	0	0	0	1	28	24	1	84	46	2	112	70

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

TABLE A-3

MISSION • 1029-1 • INSTRUMENT • FRWD 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	0	0	1	0	0	1	0
2.02	0	0	0	0	1	0	0	2	2	0	3	2
2.03	0	0	0	0	0	0	0	1	1	0	1	1
2.04	0	0	0	0	1	1	0	1	2	0	2	3
2.05	0	0	0	0	0	0	0	0	1	0	0	1
2.06	0	0	0	0	0	4	0	0	1	0	0	5
2.07	0	0	0	0	1	0	0	1	0	0	2	0
2.08	0	0	0	0	0	0	0	1	3	0	1	3
2.09	0	0	0	0	0	1	0	0	2	0	0	3
2.10	0	0	0	0	1	1	0	1	3	0	2	4
2.11	0	0	0	0	0	0	0	1	2	0	1	2
2.12	0	0	0	0	0	0	0	1	3	0	1	3
2.13	0	0	0	0	0	0	0	2	0	0	2	0
2.14	0	0	0	0	0	0	0	1	4	0	1	4
2.15	0	0	0	0	1	2	0	0	2	0	1	4
2.16	0	0	0	0	0	2	0	1	5	0	1	5
2.17	0	0	0	0	0	2	0	0	4	0	0	5
2.18	0	0	0	0	0	1	0	0	2	0	0	3
2.19	0	0	0	0	0	0	0	0	0	0	0	0
2.20	0	0	0	0	0	0	0	0	5	0	0	5
2.21	0	0	0	0	0	0	0	0	1	0	0	1
2.22	0	0	0	0	0	0	0	1	2	0	1	2
2.23	0	0	0	0	0	1	0	1	2	0	1	3
2.24	0	0	0	0	0	1	0	1	4	0	1	5
2.25	0	0	0	0	0	1	0	0	4	0	0	5
2.26	0	0	0	0	0	1	0	0	2	0	0	3
2.27	0	0	0	0	0	0	0	0	1	0	0	1
2.28	0	0	0	0	0	0	0	1	0	0	1	0
2.29	0	0	0	0	0	0	0	0	0	0	0	0
2.30	0	0	0	0	0	1	0	1	2	0	1	3
2.31	0	0	0	0	0	0	0	0	0	0	0	0
2.32	0	0	0	0	0	0	0	0	1	0	0	1
2.33	0	0	0	0	0	0	0	0	1	0	0	1
2.34	0	0	0	0	0	0	0	0	1	0	0	1
2.35	0	0	0	0	0	0	0	1	0	0	1	0
2.36	0	0	0	0	0	0	0	0	0	0	0	0
2.37	0	0	0	0	0	2	0	0	0	0	0	2
2.38	0	0	0	0	0	1	0	0	1	0	0	1
2.39	0	0	0	0	0	2	0	0	1	0	0	3
2.40	0	0	0	0	0	0	0	0	1	0	0	1
2.41	0	0	0	0	0	0	0	0	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	5	23	0	24	57	0	29	80

TABLE A-3

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

MISSION • 1029-1 • INSTRUMENT • FRWD 05/06/66 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	51	51	52	206	206	127	257	257	179

MISSION 1029-1 INSTR - FRWD 05/06/66 PROCESSING AND EXPOSURE ANALYS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	0 PC	0 PC	0 PC
INTERMEDIATE	51	0 PC	24 PC	47 PC	22 PC	8 PC
FULL	206	41 PC	0 PC	51 PC	8 PC	0 PC
ALL LEVELS	257	33 PC	5 PC	50 PC	11 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 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

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

TABLE A-3

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.70 • MEDIAN • 0.62 • STD DEV • 0.37 • RANGE • 0.23 TO 1.68 WITH 51 SAMPLES

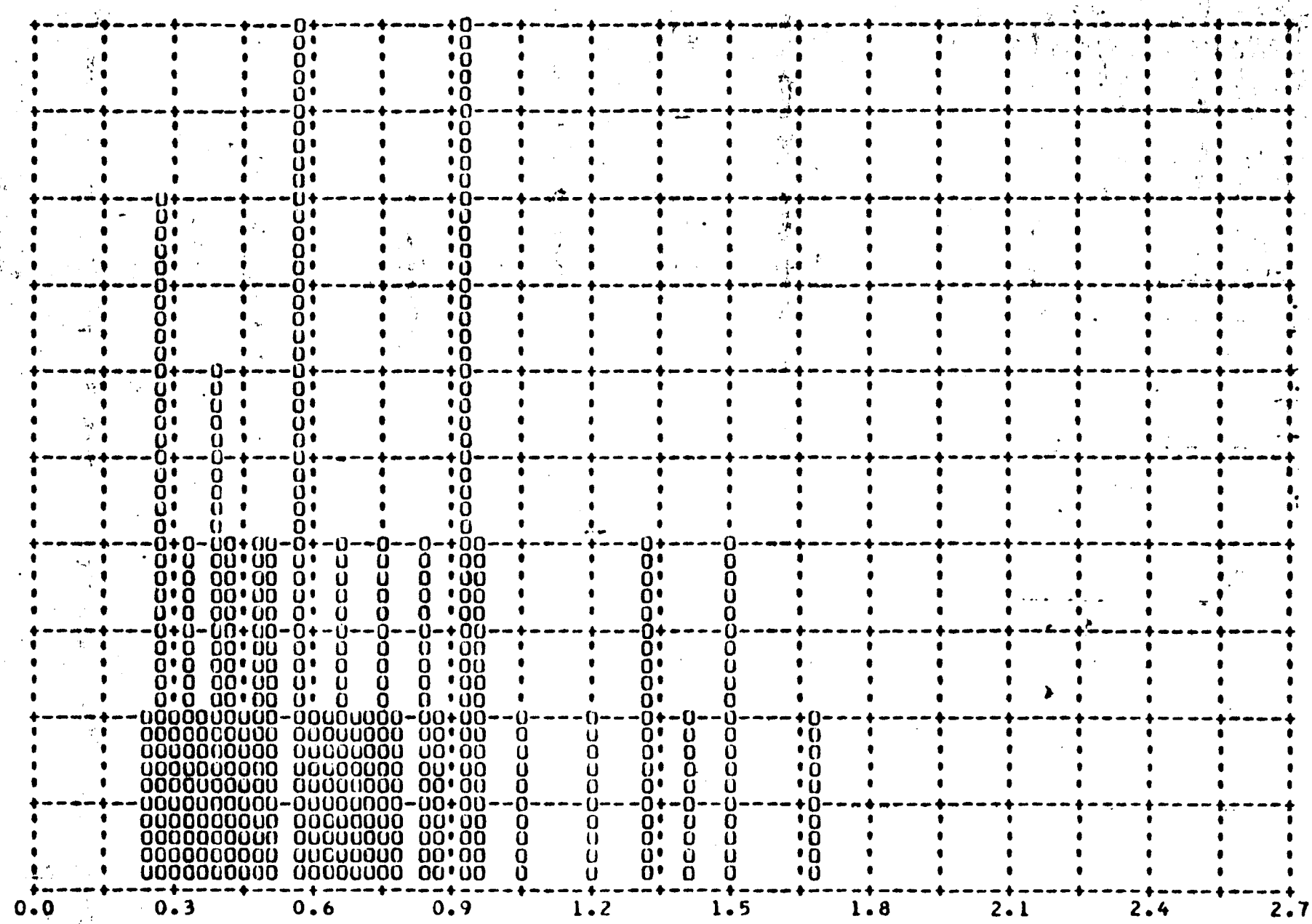


FIGURE A-19

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MAX • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.65 • MEDIAN • 1.75 • STD DEV • 0.34 • RANGE • 0.60 TO 2.15 WITH 51 SAMPLES

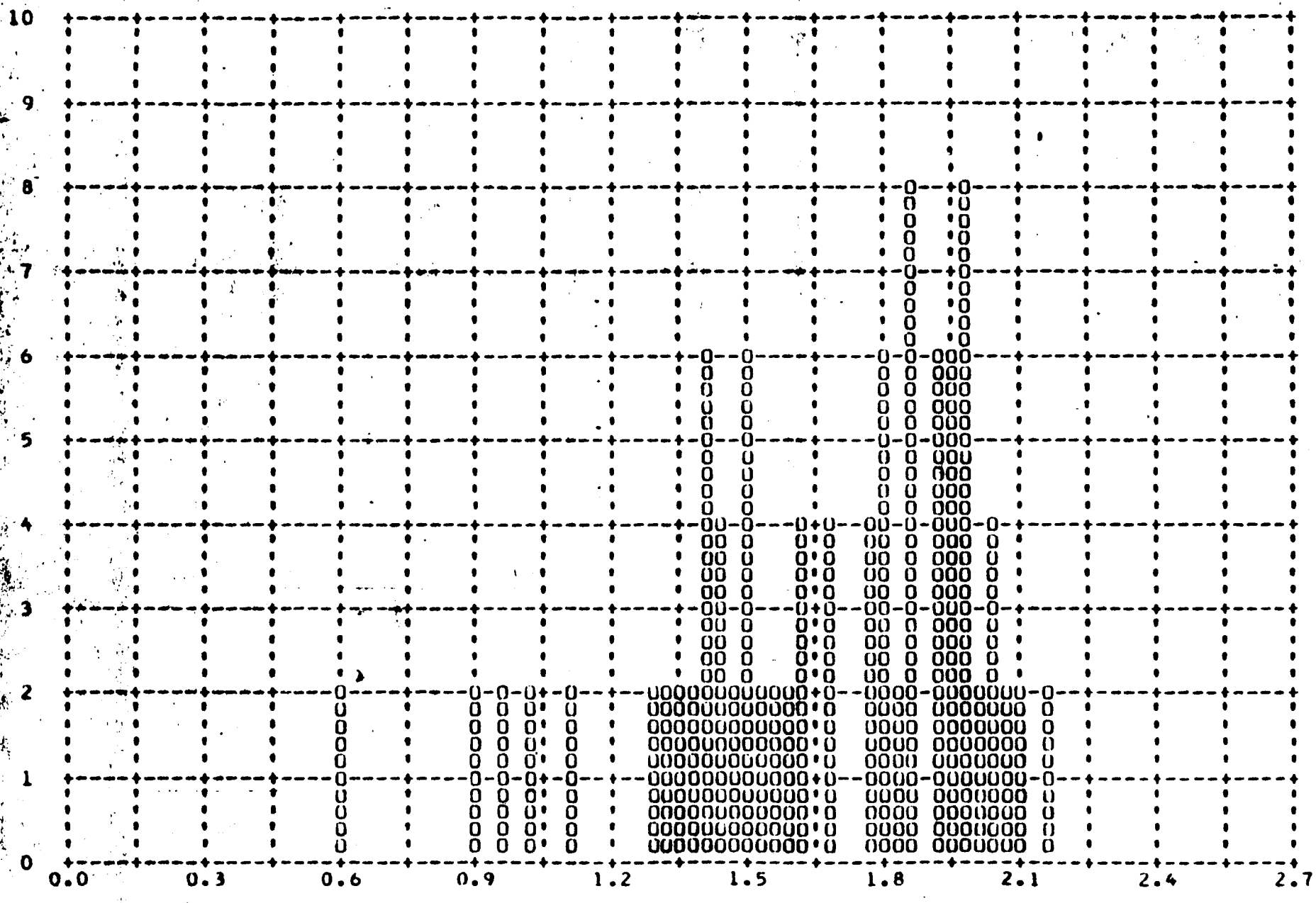


FIGURE A-20

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MAX • CLOUD • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.96 • MEDIAN • 2.00 • STD DEV • 0.35 • RANGE • 0.54 TO 2.39 WITH 52 SAMPLES

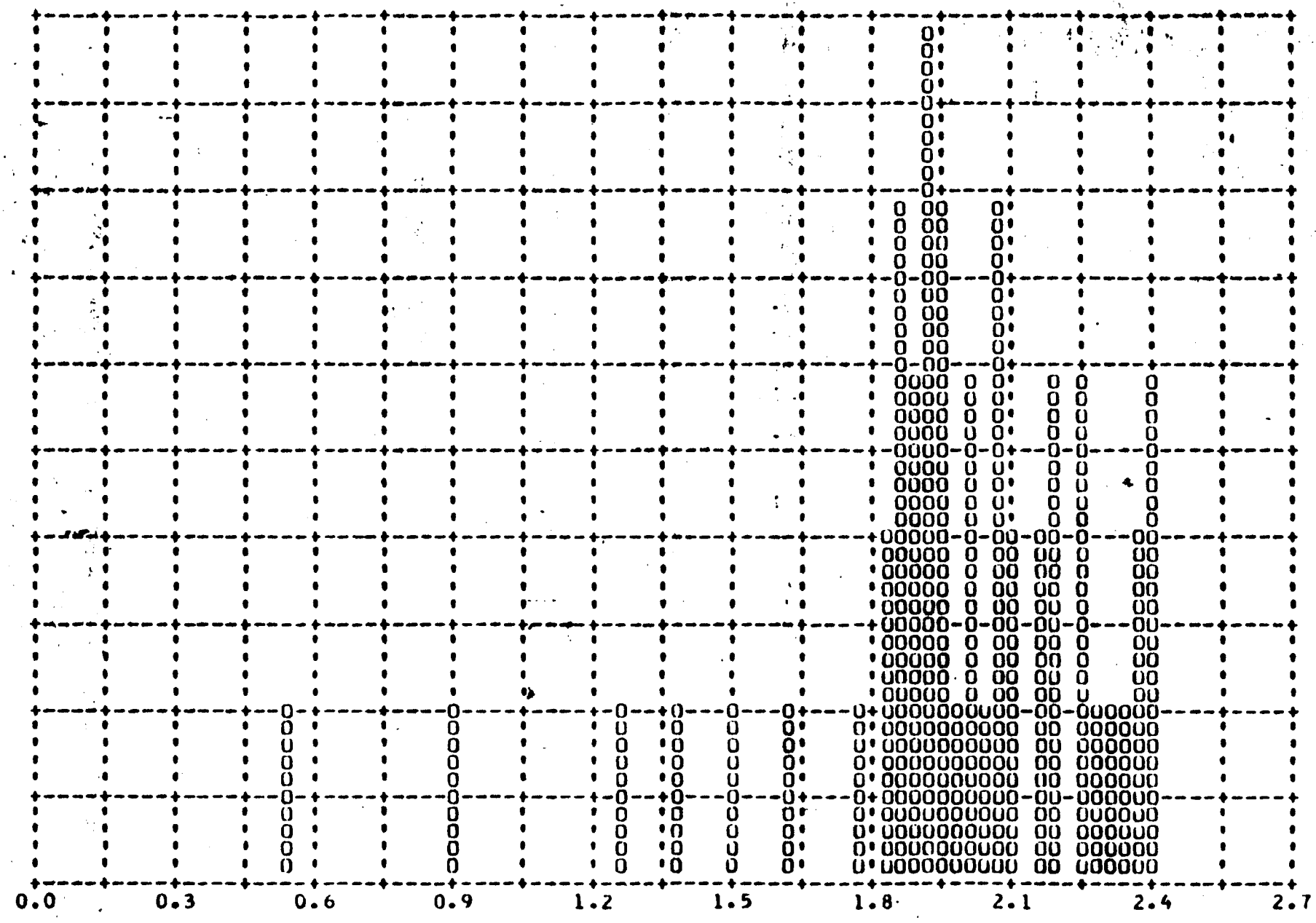


FIGURE A-21

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF 0 MIN • TERRAIN • PROCESSING • FULL

ARITH MEAN • 0.50 • MEDIAN • 0.43 • STD DEV • 0.24 • RANGE • 0.22 TO 1.68 WITH 206 SAMPLES

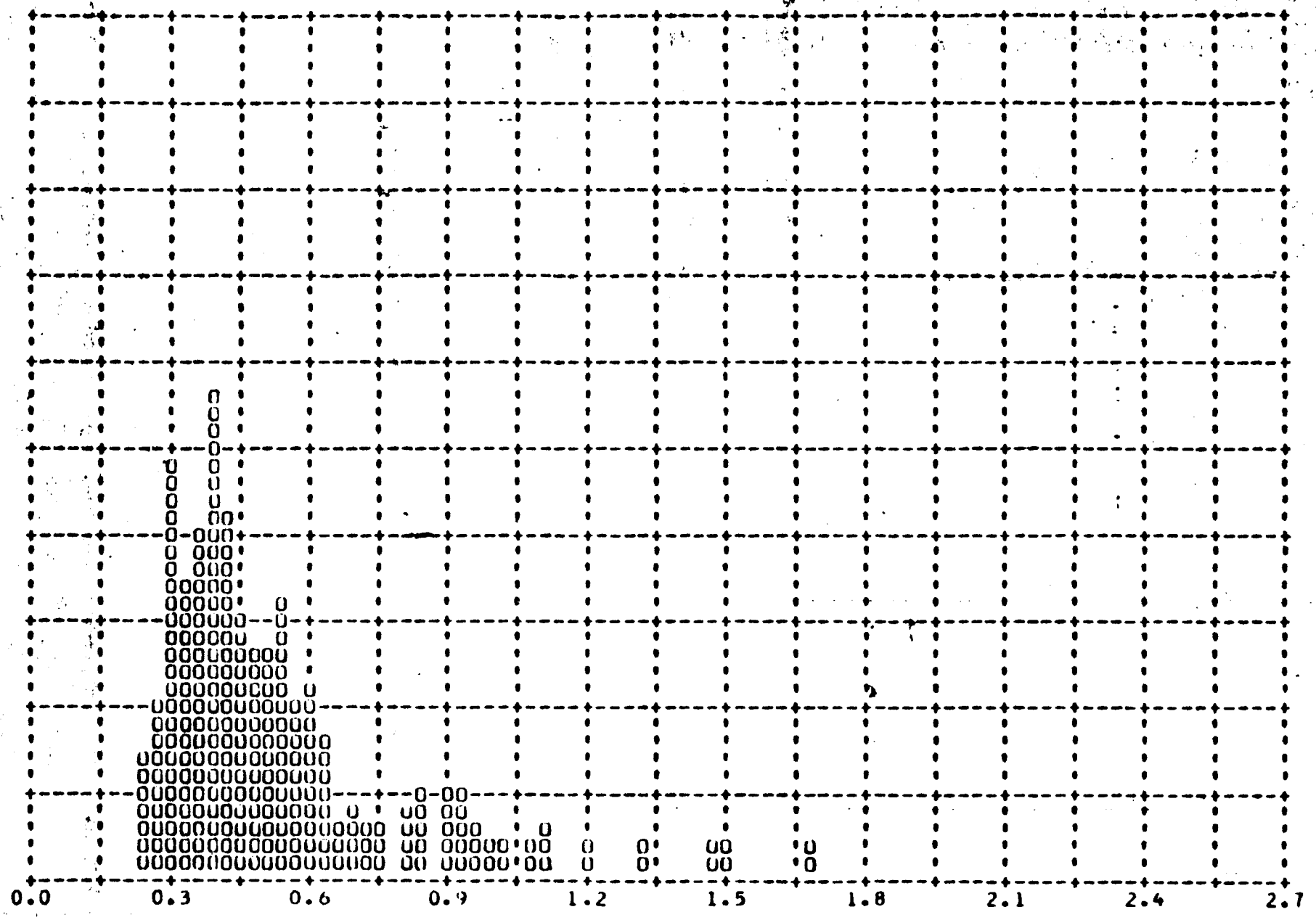


FIGURE A-22

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MAX • TERRAIN • PROCESSING • FULL

ARITH MEAN • 1.48 • MEDIAN • 1.55 • STD DEV • 0.47 • RANGE • 0.31 TO 2.35 WITH 206 SAMPLES

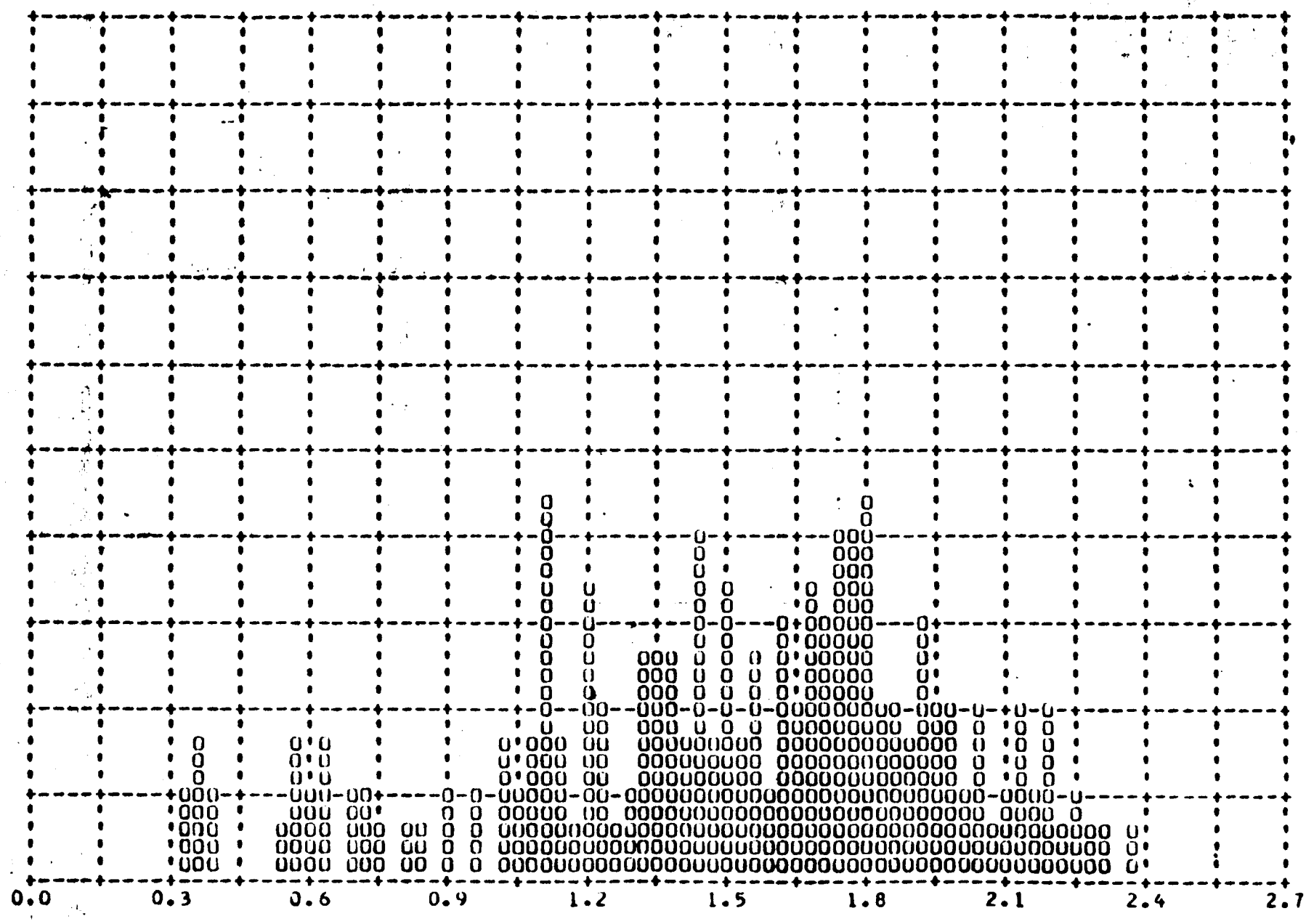


FIGURE A-23

MISSION * 1029-1 * INSTR * FRWD * 05/06/66 PLOT OF D MAX * CLOUD * PROCESSING * FULL

ARITH MEAN * 1.85 * MEDIAN * 2.00 * STD DEV * 0.42 * RANGE * 0.45 TO 2.40 WITH 127 SAMPLES

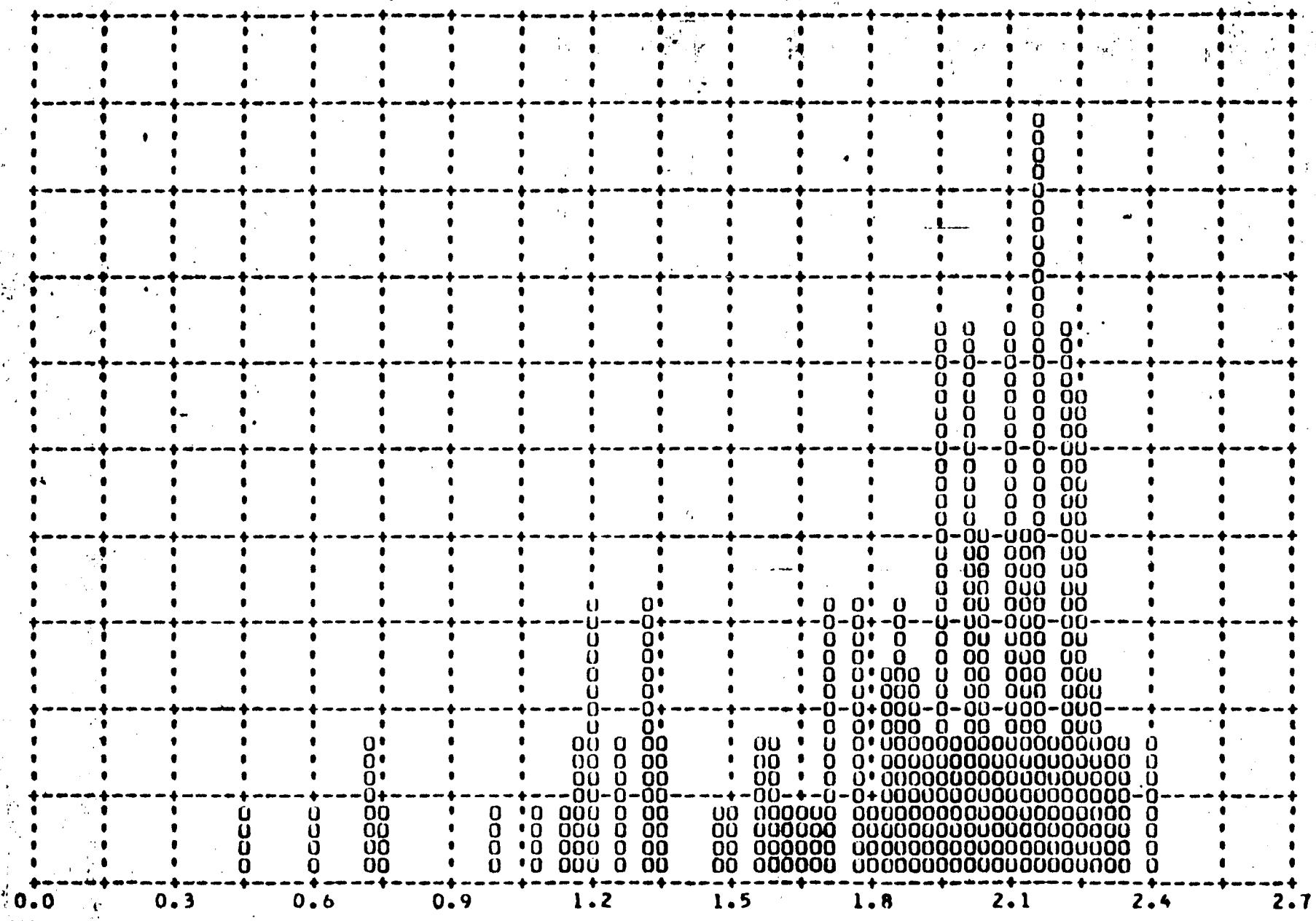


FIGURE A-24

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.54 • MEDIAN • 0.45 • STD DEV • 0.28 • RANGE • 0.22 TO 1.68 WITH 257 SAMPLES

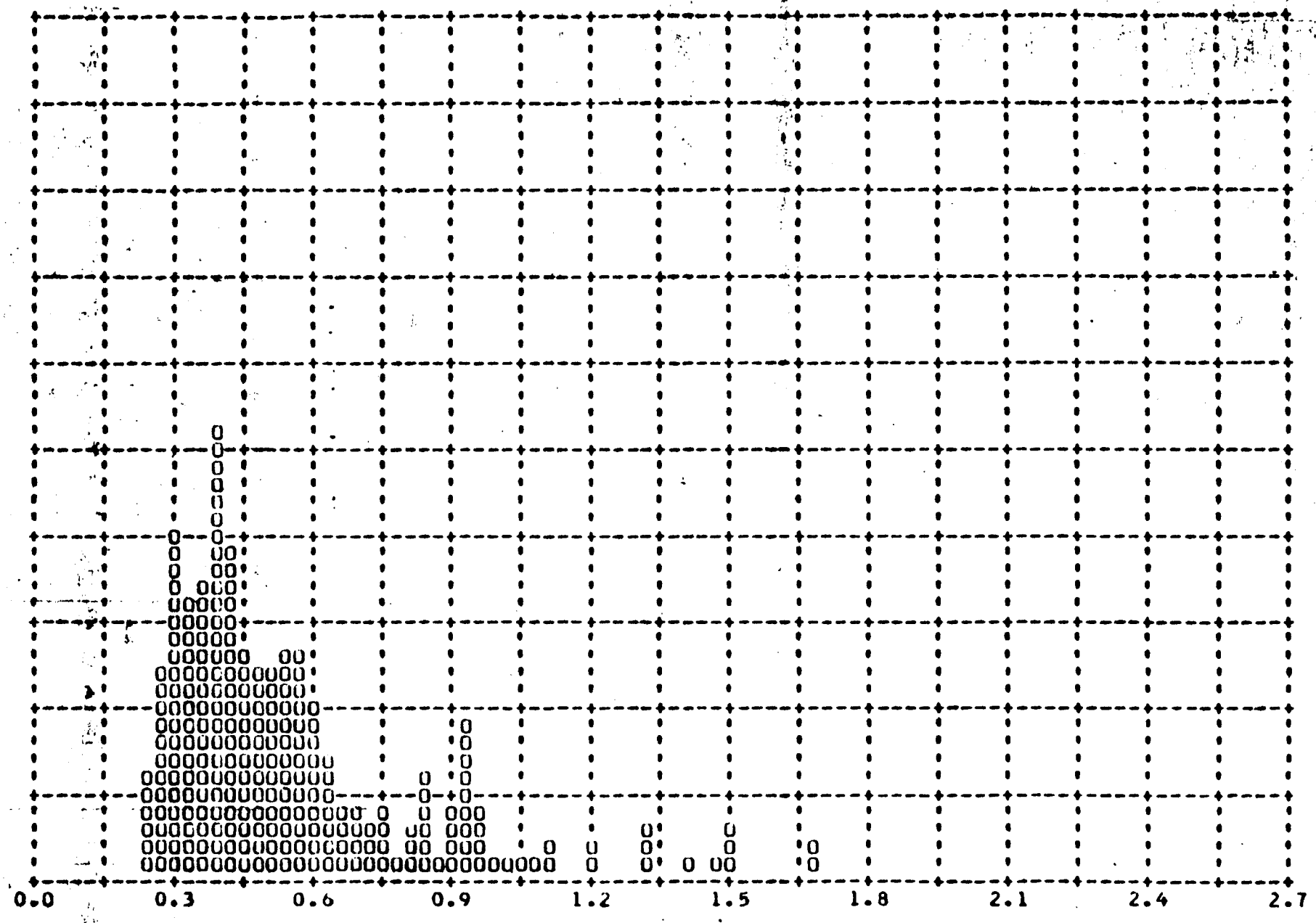


FIGURE A-25

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.52 • MEDIAN • 1.59 • STD DEV • 0.45 • RANGE • 0.31 TO 2.35 WITH 257 SAMPLES

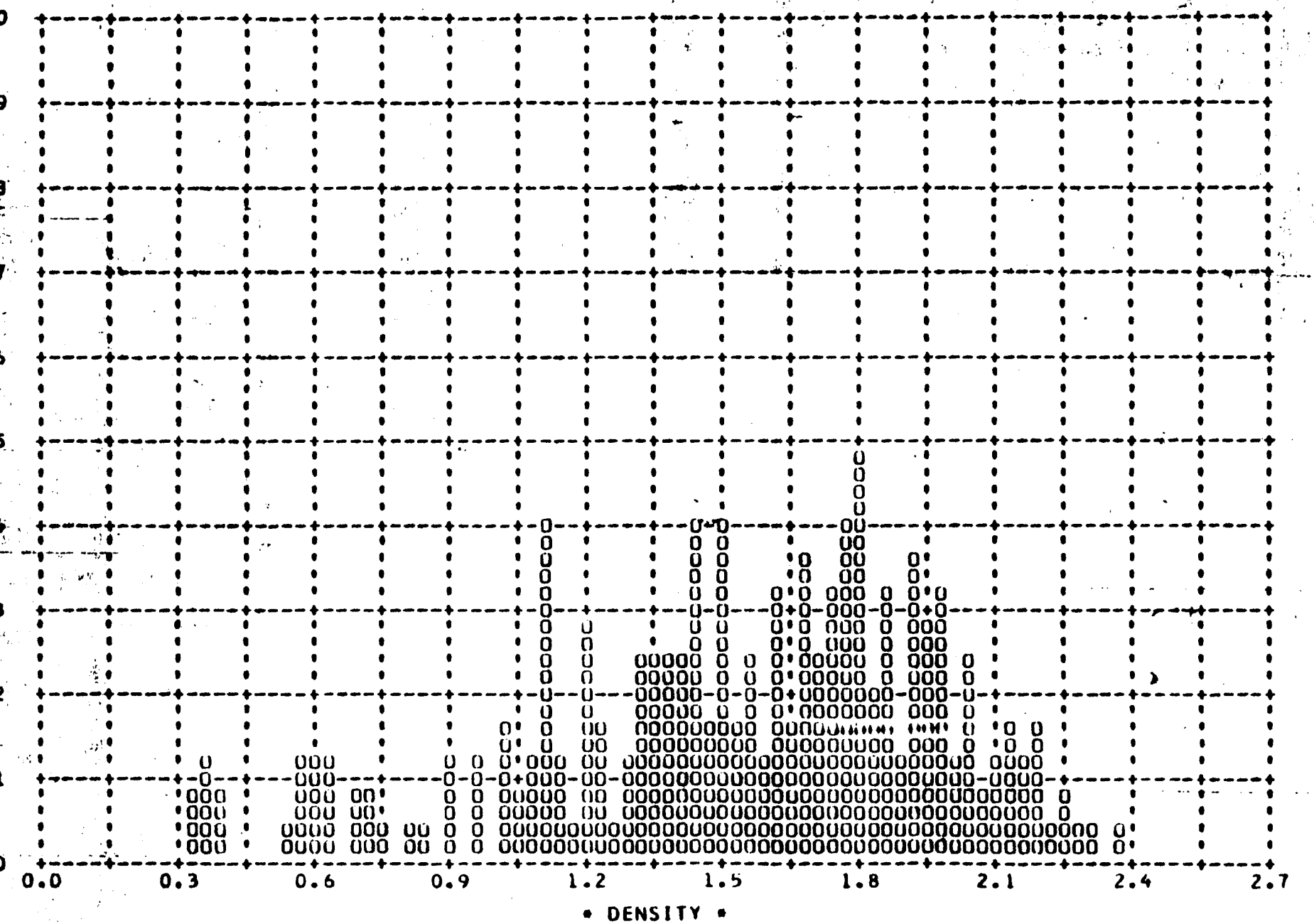


FIGURE A-26

MISSION • 1029-1 • INSTR • FRWD • 05/06/66 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 1.88 • MEDIAN • 2.00 • STD DEV • 0.40 • RANGE • 0.45 TO 2.40 WITH 179 SAMPLES

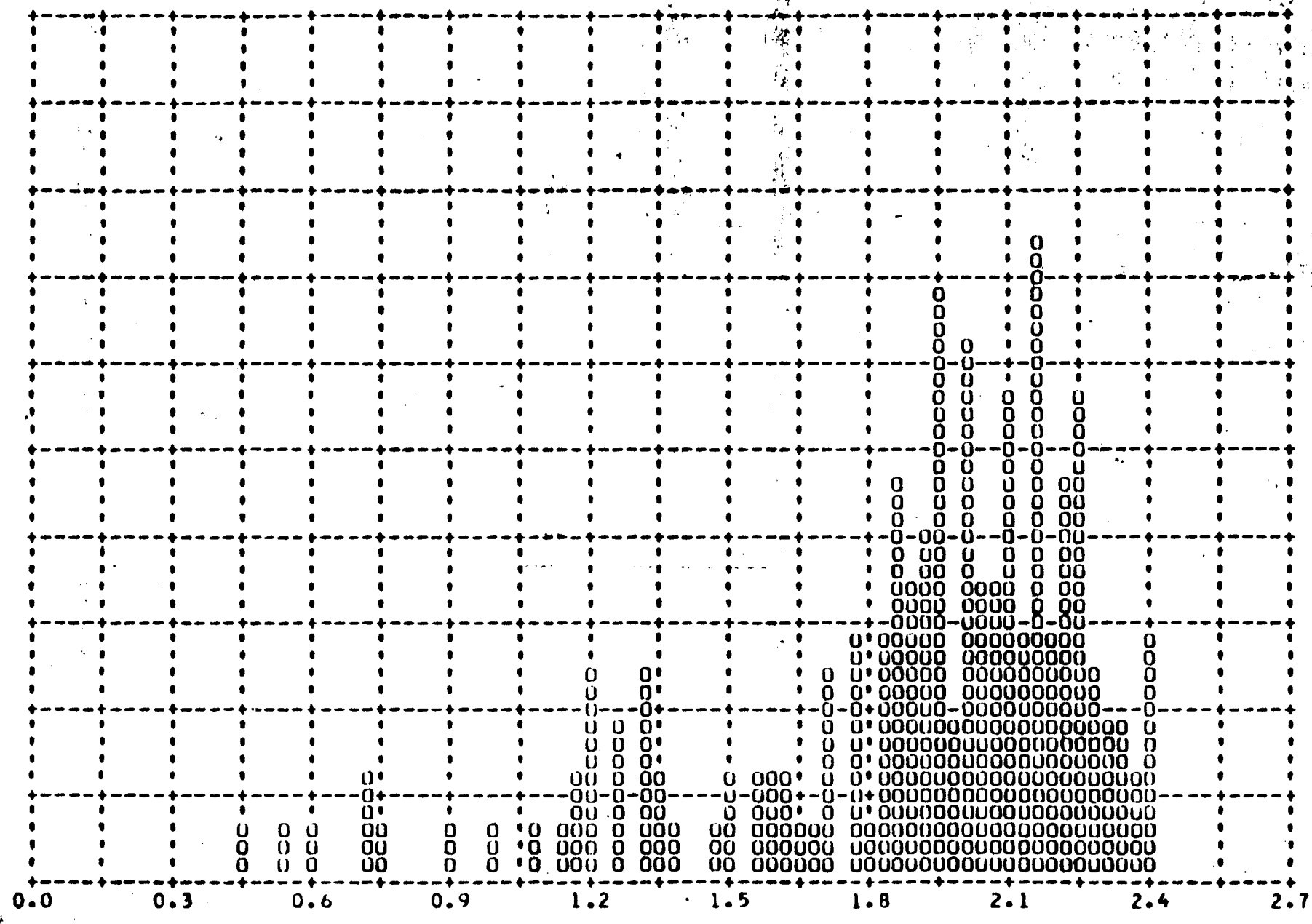


FIGURE A-27

MISSION • 1029-1 • INSTRUMENT • AFT 05/06/66 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	2	0	0	0	0	0	2	0	0
0.21	0	0	0	0	0	0	1	0	0	1	0	0
0.22	0	0	0	0	0	0	0	0	0	0	0	0
0.23	0	0	0	1	0	0	1	0	0	2	0	0
0.24	0	0	0	1	0	0	2	0	0	3	0	0
0.25	0	0	0	1	0	0	4	0	0	5	0	0
0.26	0	0	0	0	0	0	2	0	0	2	0	0
0.27	0	0	0	0	0	0	1	0	0	1	0	0
0.28	0	0	0	0	0	0	1	0	0	1	0	0
0.29	0	0	0	1	0	0	8	1	0	9	1	0
0.30	0	0	0	2	0	0	2	1	0	4	1	0
0.31	0	0	0	2	0	0	5	0	0	5	0	0
0.32	0	0	0	1	0	0	2	0	0	3	0	0
0.33	0	0	0	0	0	0	3	1	1	3	1	1
0.34	0	0	0	2	0	0	3	1	0	5	1	0
0.35	0	0	0	1	0	0	4	0	0	5	0	0
0.36	0	0	0	1	0	0	3	0	0	4	0	0
0.37	0	0	0	1	0	0	9	1	0	10	1	0
0.38	0	0	0	1	0	0	4	0	0	5	0	0
0.39	0	0	0	2	0	0	8	1	0	10	1	0
0.40	0	0	0	0	0	0	4	0	0	4	0	0
0.41	0	0	0	1	0	0	7	0	0	8	0	0
0.42	0	0	0	0	0	0	2	0	1	2	0	1
0.43	0	0	0	0	0	0	10	1	0	10	1	0
0.44	0	0	0	1	0	0	5	1	0	6	1	0
0.45	0	0	0	0	0	0	5	0	0	5	0	0
0.46	0	0	0	1	0	0	2	0	0	3	0	0
0.47	0	0	0	1	0	0	3	0	0	4	0	0
0.48	0	0	0	2	0	0	2	0	0	4	0	0
0.49	0	0	0	3	0	0	8	2	0	11	2	0
0.50	0	0	0	26	0	0	111	8	2	137	8	2
SUBTOTAL												

orrection: Table A-4 and Figures A-28 to A-36 is Mission 1029-2 AFT Data.

TABLE A-4

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

MISSION • 1029-1 • INSTRUMENT • AFT 05/06/66 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	7	0	0	8	0	0
0.53	0	0	0	0	0	0	1	0	0	1	0	0
0.54	0	0	0	0	0	0	1	1	0	1	1	0
0.55	0	0	0	0	0	0	4	0	1	4	0	1
0.56	0	0	0	2	0	0	2	0	0	4	0	0
0.57	0	0	0	2	0	0	2	0	0	4	0	0
0.58	0	0	0	1	0	0	3	2	0	4	2	0
0.59	0	0	0	0	0	0	1	1	0	1	1	0
0.60	0	0	0	3	0	0	4	2	0	7	2	0
0.61	0	0	0	1	0	0	2	0	0	3	0	0
0.62	0	0	0	0	0	0	3	0	0	3	0	0
0.63	0	0	0	0	0	0	3	0	0	3	0	0
0.64	0	0	0	1	0	0	1	0	0	2	0	0
0.65	0	0	0	1	1	0	1	0	0	1	1	0
0.66	0	0	0	1	0	0	2	0	0	3	0	0
0.67	0	0	0	1	0	0	1	4	0	1	5	0
0.68	0	0	0	1	0	0	4	0	0	5	0	0
0.69	0	0	0	0	0	0	2	0	0	2	0	0
0.70	0	0	0	1	0	0	3	0	0	4	0	0
0.71	0	0	0	1	0	0	3	0	0	4	0	0
0.72	0	0	0	1	1	0	1	0	1	2	1	1
0.73	0	0	0	1	0	0	1	0	0	1	0	0
0.74	0	0	0	0	0	0	1	2	0	1	2	0
0.75	0	0	0	0	0	0	0	1	0	0	1	0
0.76	0	0	0	1	0	0	0	2	0	1	2	0
0.77	0	0	0	1	0	0	0	1	0	1	1	0
0.78	0	0	0	0	0	0	1	1	0	1	1	0
0.79	0	0	0	0	0	0	0	2	0	0	2	0
0.80	0	0	0	0	0	0	2	0	0	2	0	0
0.81	0	0	0	1	0	0	0	0	0	1	0	0
0.82	0	0	0	1	0	0	0	0	0	1	0	0
0.83	0	0	0	0	0	0	0	0	0	0	0	0
0.84	0	0	0	0	0	0	0	1	0	0	1	0
0.85	0	0	0	0	0	0	0	1	0	0	1	0
0.86	0	0	0	0	0	0	0	1	0	0	1	0
0.87	0	0	0	0	1	0	1	0	0	1	1	0
0.88	0	0	0	0	0	0	0	0	0	0	0	0
0.89	0	0	0	0	0	0	1	0	0	1	0	0
0.90	0	0	0	1	0	0	1	0	0	1	2	0
0.91	0	0	0	0	0	0	0	2	1	0	2	1
0.92	0	0	0	2	0	0	0	0	0	2	0	0
0.93	0	0	0	0	0	0	0	0	0	0	0	0
0.94	0	0	0	1	0	0	1	0	0	2	0	0
0.95	0	0	0	0	0	0	1	0	0	1	0	0
0.96	0	0	0	0	0	0	0	1	0	0	1	0
0.97	0	0	0	0	0	0	0	0	0	0	0	0
0.98	0	0	0	1	0	0	1	1	0	2	1	0
0.99	0	0	0	1	0	0	0	0	0	1	0	0
1.00	0	0	0	0	0	0	3	0	0	3	0	0
SUBTOTAL	0	0	0	25	3	0	67	22	3	92	25	3

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

TABLE A-4

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

MISSION • 1029-1 • INSTRUMENT • AFT 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	0	0	0	1	0	0	1	0
1.02	0	0	0	1	1	0	0	0	0	1	1	0
1.03	0	0	0	1	0	0	0	0	0	1	0	0
1.04	0	0	0	0	0	0	0	3	0	0	3	0
1.05	0	0	0	2	0	0	0	0	0	2	0	0
1.06	0	0	0	0	0	1	0	2	0	0	2	1
1.07	0	0	0	1	0	0	0	1	0	1	0	0
1.08	0	0	0	0	0	0	0	0	0	0	0	0
1.09	0	0	0	0	0	0	1	1	0	1	1	0
1.10	0	0	0	0	1	0	0	1	0	0	2	0
1.11	0	0	0	0	0	1	0	0	1	0	1	1
1.12	0	0	0	0	0	0	1	0	1	1	1	1
1.13	0	0	0	0	0	0	1	1	0	1	1	0
1.14	0	0	0	0	0	0	1	0	0	1	0	0
1.15	0	0	0	0	0	0	0	0	0	0	0	0
1.16	0	0	0	0	0	0	0	0	0	0	0	0
1.17	0	0	0	0	0	0	0	0	0	0	0	0
1.18	0	0	0	0	0	0	0	0	0	0	0	0
1.19	0	0	0	0	0	0	0	0	0	0	0	0
1.20	0	0	0	0	0	0	0	0	0	0	0	0
1.21	0	0	0	0	0	0	0	0	0	0	0	0
1.22	0	0	0	0	0	0	0	0	0	0	0	0
1.23	0	0	0	0	0	0	0	0	0	0	0	0
1.24	0	0	0	0	0	0	0	0	0	0	0	0
1.25	0	0	0	0	0	0	0	0	0	0	0	0
1.26	0	0	0	0	0	0	0	0	0	0	0	0
1.27	0	0	0	0	0	0	0	0	0	0	0	0
1.28	0	0	0	0	0	0	0	0	0	0	0	0
1.29	0	0	0	0	0	0	0	0	0	0	0	0
1.30	0	0	0	0	0	0	0	0	0	0	0	0
1.31	0	0	0	0	0	0	0	0	0	0	0	0
1.32	0	0	0	0	0	0	0	0	0	0	0	0
1.33	0	0	0	0	0	0	0	0	0	0	0	0
1.34	0	0	0	0	0	0	0	0	0	0	0	0
1.35	0	0	0	0	0	0	0	0	0	0	0	0
1.36	0	0	0	0	0	0	0	0	0	0	0	0
1.37	0	0	0	0	0	0	0	0	0	0	0	0
1.38	0	0	0	0	0	0	0	0	0	0	0	0
1.39	0	0	0	0	0	0	0	0	0	0	0	0
1.40	0	0	0	0	0	0	0	0	0	0	0	0
1.41	0	0	0	0	0	0	0	0	0	0	0	0
1.42	0	0	0	0	0	0	0	0	0	0	0	0
1.43	0	0	0	0	0	0	0	0	0	0	0	0
1.44	0	0	0	0	0	0	0	0	0	0	0	0
1.45	0	0	0	0	0	0	0	0	0	0	0	0
1.46	0	0	0	0	0	0	0	0	0	0	0	0
1.47	0	0	0	0	0	0	0	0	0	0	0	0
1.48	0	0	0	0	0	0	0	0	0	0	0	0
1.49	0	0	0	0	0	0	0	0	0	0	0	0
1.50	0	0	0	0	0	0	0	3	1	0	3	1
SUBTOTAL	0	0	2	11	20	6	8	56	13	19	76	21

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

TABLE A-4

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

MISSION • 1029-1 • INSTRUMENT • AFT 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	0	0	0	0	0	0	0	0
1.52	0	0	0	0	0	0	0	4	0	0	4	0
1.53	0	0	0	0	0	0	0	2	0	0	2	0
1.54	0	0	0	0	0	0	0	1	1	0	1	1
1.55	0	0	0	0	1	0	0	0	0	0	1	0
1.56	0	0	0	0	0	3	0	1	0	0	1	3
1.57	0	0	0	0	1	0	0	1	3	0	2	0
1.58	0	0	0	0	0	0	1	3	0	1	3	0
1.59	0	0	0	0	0	0	1	0	3	1	0	3
1.60	0	0	0	0	1	0	0	3	2	0	4	2
1.61	0	0	0	0	0	0	0	1	0	0	1	0
1.62	0	0	0	0	0	1	0	1	1	0	1	2
1.63	0	0	0	0	1	0	0	1	1	0	2	0
1.64	0	0	0	0	2	0	0	1	0	0	3	0
1.65	0	0	0	0	0	0	0	1	5	0	1	6
1.66	0	0	0	0	1	0	0	0	0	0	0	0
1.67	0	0	0	0	0	2	0	0	2	0	0	4
1.68	0	0	0	0	2	0	0	0	3	0	0	3
1.69	0	0	0	0	0	0	0	3	0	0	3	0
1.70	0	0	0	0	0	2	0	0	4	0	0	4
1.71	0	0	0	0	0	1	0	0	1	0	0	1
1.72	0	0	0	0	0	1	0	0	1	0	0	2
1.73	0	0	0	0	0	0	0	0	3	0	0	3
1.74	0	0	0	0	0	0	0	0	1	0	0	1
1.75	0	0	0	0	0	1	0	0	1	0	0	2
1.76	0	0	0	0	0	1	0	0	3	0	0	4
1.77	0	0	0	0	0	0	0	0	3	0	0	4
1.78	0	0	0	0	0	1	0	0	3	0	0	4
1.79	0	0	0	0	0	1	0	0	3	0	0	4
1.80	0	0	0	0	0	1	0	0	3	0	0	4
1.81	0	0	0	0	0	1	0	0	3	0	0	4
1.82	0	0	0	0	0	2	0	0	3	0	0	5
1.83	0	0	0	0	0	0	0	0	1	0	0	1
1.84	0	0	0	0	0	1	0	0	1	0	0	2
1.85	0	0	0	0	0	0	0	0	3	0	0	3
1.86	0	0	0	0	0	2	0	0	1	0	0	3
1.87	0	0	0	0	0	0	0	0	2	0	0	2
1.88	0	0	0	0	0	1	0	0	3	0	0	4
1.89	0	0	0	0	0	0	0	0	0	0	0	0
1.90	0	0	0	0	0	1	0	0	4	0	0	5
1.91	0	0	0	0	0	1	0	0	0	0	0	1
1.92	0	0	0	0	0	2	0	0	1	0	0	3
1.93	0	0	0	0	0	1	0	0	1	0	0	2
1.94	0	0	0	0	0	2	0	0	1	0	0	3
1.95	0	0	0	0	0	1	0	0	3	0	0	4
1.96	0	0	0	0	0	0	0	0	1	0	0	1
1.97	0	0	0	0	0	3	0	0	0	0	0	3
1.98	0	0	0	0	0	0	0	0	0	0	0	0
1.99	0	0	0	0	0	1	0	0	0	0	0	1
2.00	0	0	0	0	0	0	0	0	1	0	0	1
SUBTOTAL	0	0	0	0	34	32	0	1	78	42	1	112

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

TABLE A-4

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

MISSION • 1029-1 • INSTRUMENT • AFT 05/06/66 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	1	0	0	0	1	0	1	1
2.02	0	0	0	0	0	2	0	1	2	0	1	4
2.03	0	0	0	0	0	0	0	1	0	0	1	0
2.04	0	0	0	0	0	0	0	2	0	0	2	0
2.05	0	0	0	0	0	0	0	1	1	0	1	1
2.06	0	0	0	0	1	0	0	0	1	0	1	1
2.07	0	0	0	0	0	0	0	0	1	0	0	1
2.08	0	0	0	0	1	1	0	1	1	0	2	2
2.09	0	0	0	0	0	0	0	0	1	0	0	1
2.10	0	0	0	0	1	1	0	2	1	0	3	2
2.11	0	0	0	0	0	0	0	2	0	0	0	0
2.12	0	0	0	0	0	0	0	0	4	0	0	4
2.13	0	0	0	0	0	0	0	1	0	0	1	0
2.14	0	0	0	0	0	0	0	2	0	0	2	0
2.15	0	0	0	0	1	2	0	0	1	0	1	3
2.16	0	0	0	0	0	0	0	1	2	0	1	2
2.17	0	0	0	0	0	1	0	0	3	0	0	4
2.18	0	0	0	0	0	0	0	2	3	0	2	3
2.19	0	0	0	0	0	0	0	1	1	0	1	1
2.20	0	0	0	0	0	0	0	0	3	0	0	3
2.21	0	0	0	0	0	0	0	1	0	0	1	0
2.22	0	0	0	0	0	0	0	2	2	0	2	2
2.23	0	0	0	0	0	1	0	0	1	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	2	2	0	2	2
2.26	0	0	0	0	0	1	0	0	1	0	0	2
2.27	0	0	0	0	0	0	0	0	1	0	0	0
2.28	0	0	0	0	0	1	0	1	1	0	1	2
2.29	0	0	0	0	0	1	0	1	1	0	1	2
2.30	0	0	0	0	0	0	0	0	2	0	0	2
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	2	0	0	1	0	0	3
2.34	0	0	0	0	0	0	0	1	0	0	1	0
2.35	0	0	0	0	0	2	0	0	0	0	0	2
2.36	0	0	0	0	0	0	0	0	0	0	0	0
2.37	0	0	0	0	0	2	0	0	1	0	0	3
2.38	0	0	0	0	0	1	0	0	0	0	0	1
2.39	0	0	0	0	0	0	0	0	1	0	0	1
2.40	0	0	0	0	0	3	0	0	0	0	0	3
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	5	21	0	23	41	0	28	62

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

TABLE A-4

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

MISSION * 1029-1 * INSTRUMENT * AFT 05/06/66 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	2	62	62	59	187	187	101	249	249	162

MISSION 1029-1 INSTR - AFT 05/06/66 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	62	3 PC	21 PC	50 PC	19 PC	6 PC
FULL	187	29 PC	0 PC	63 PC	8 PC	0 PC
ALL LEVELS	249	23 PC	5 PC	59 PC	11 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] - CONTROL NO. [redacted]

TABLE A-4

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.66 • MEDIAN • 0.57 • STD DEV • 0.33 • RANGE • 0.20 TO 1.48 WITH 62 SAMPLES

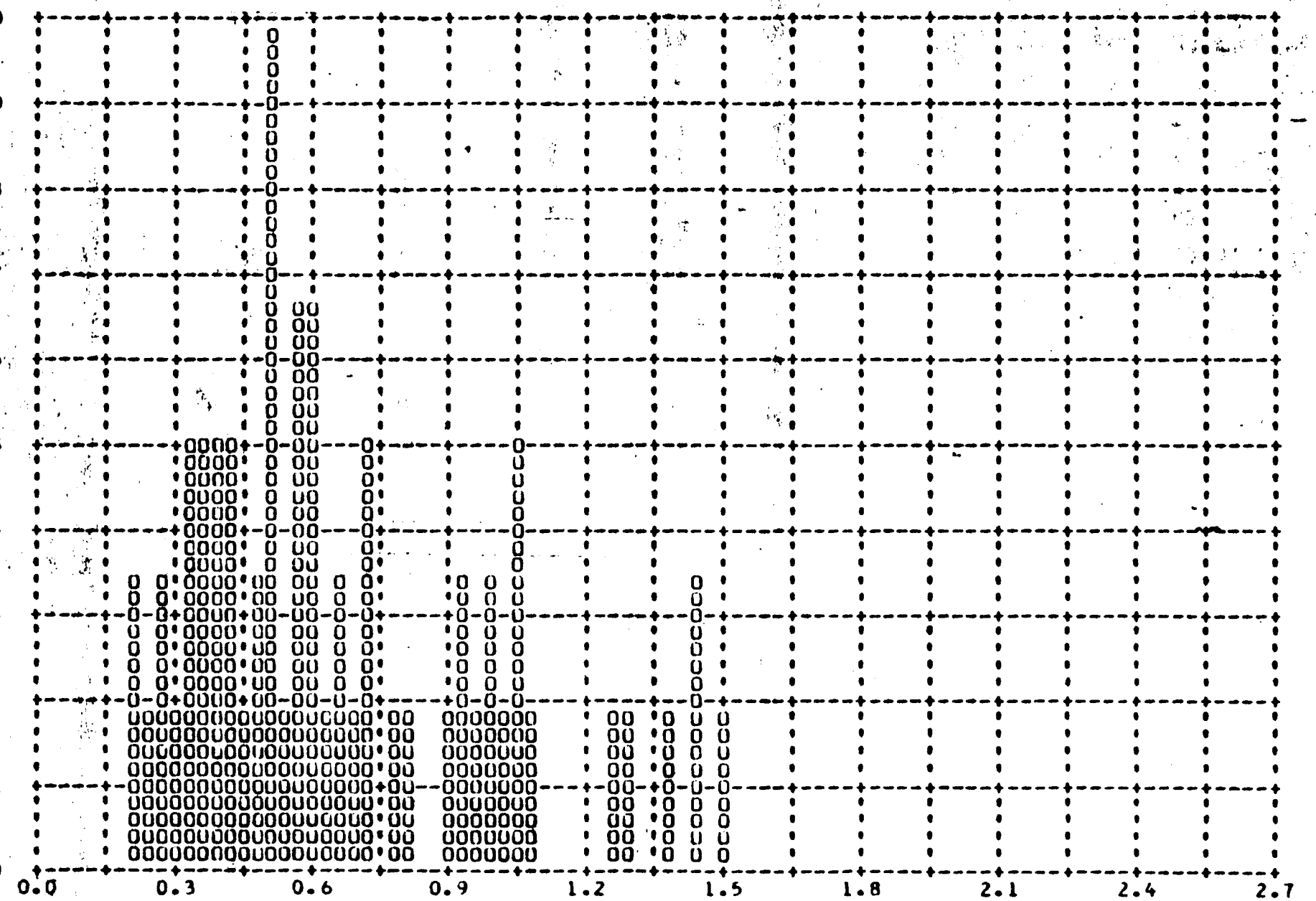


FIGURE A-28

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MAX • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.60 • MEDIAN • 1.68 • STD DEV • 0.36 • RANGE • 0.65 TO 2.15 WITH 62 SAMPLES

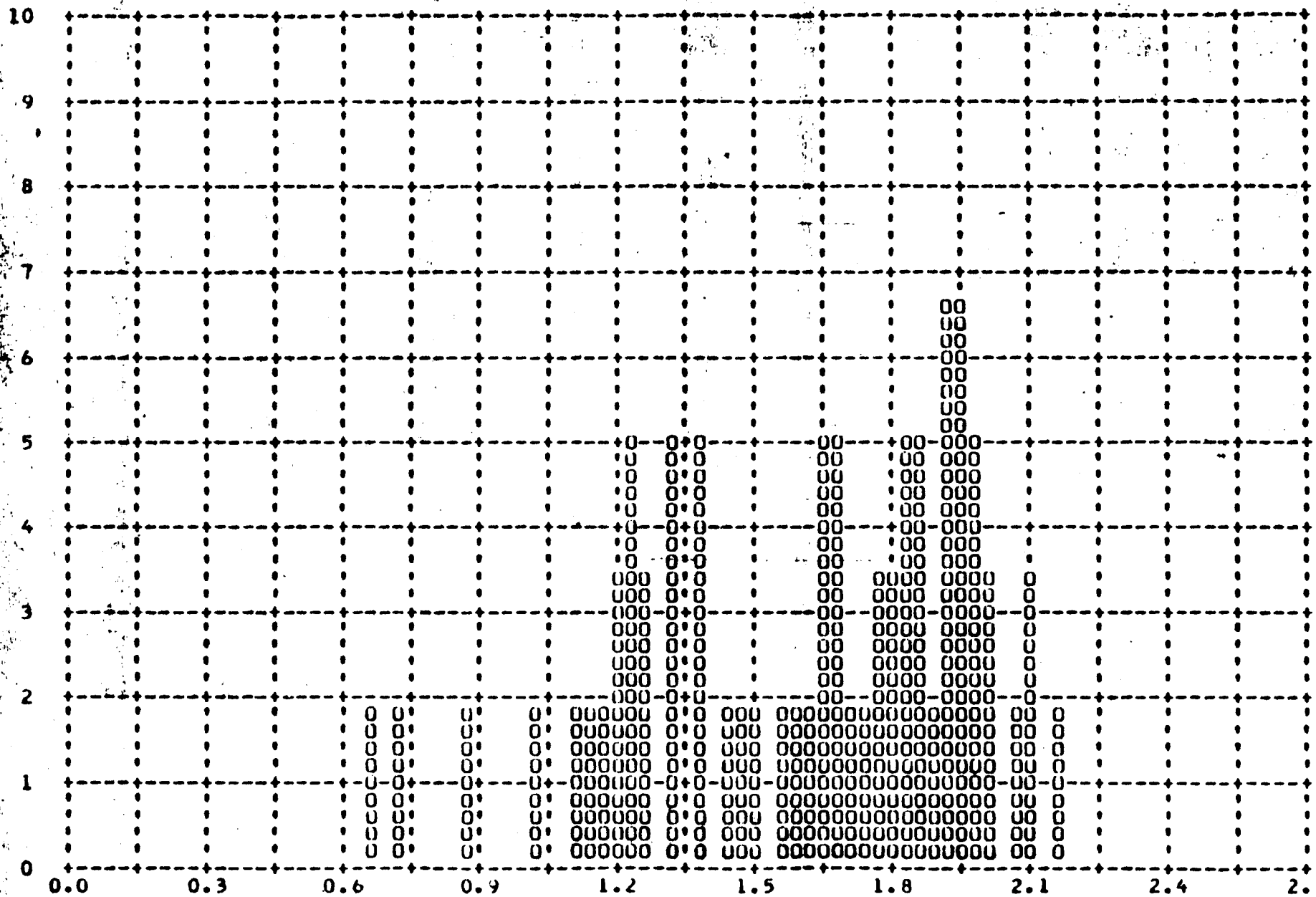


FIGURE A-29

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MAX • CLOUD • PROCESSING • INTERMEDIATE •

ARITH MEAN • 1.92 • MEDIAN • 1.92 • STD DEV • 0.32 • RANGE • 1.06 TO 2.40 WITH 59 SAMPLES

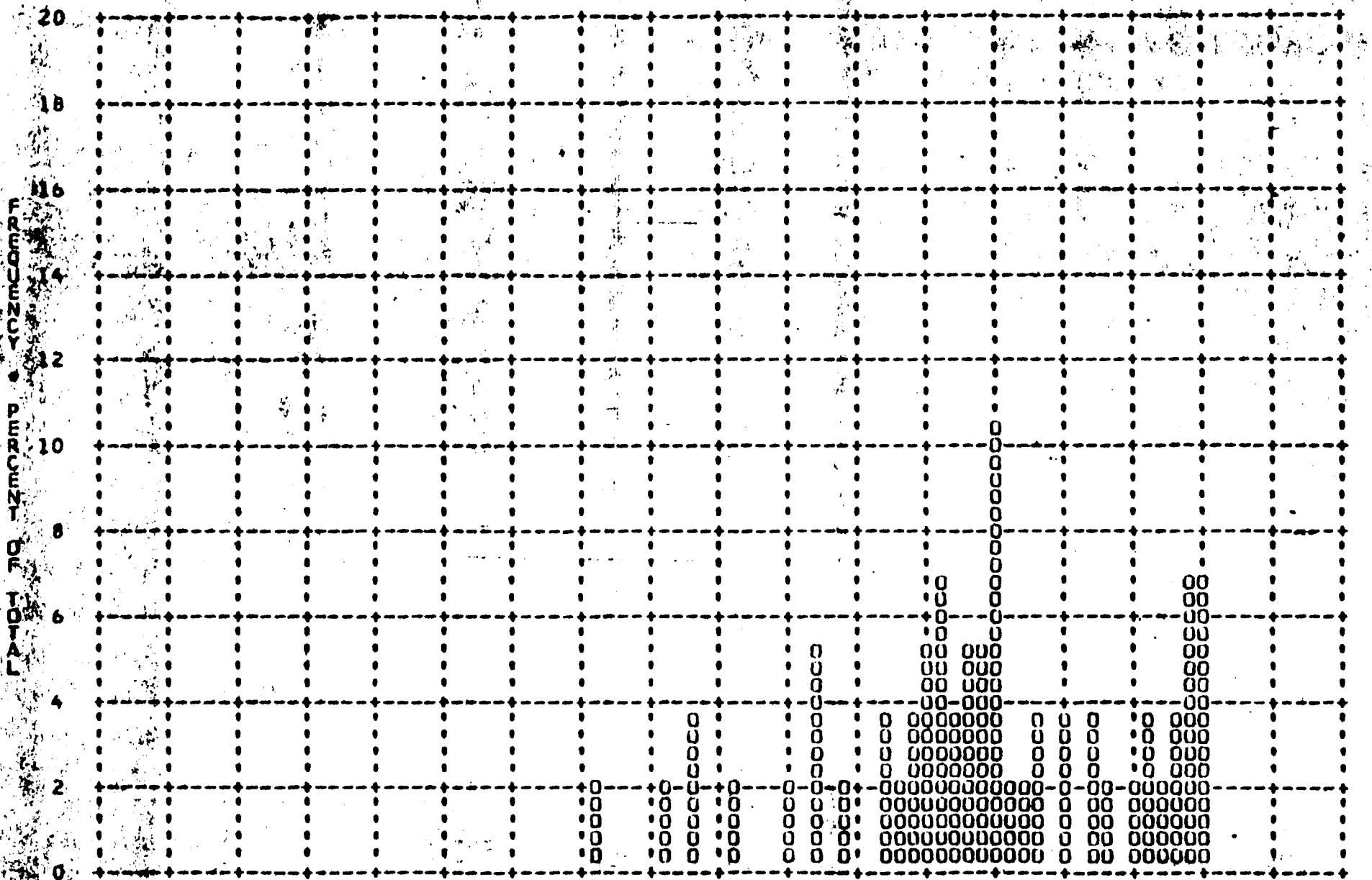


FIGURE A-30

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MIN • TERRAIN • PROCESSING • FULL

ARITH MEAN • 0.53 • MEDIAN • 0.46 • STD DEV • 0.24 • RANGE • 0.22 TO 1.58 WITH 187 SAMPLES

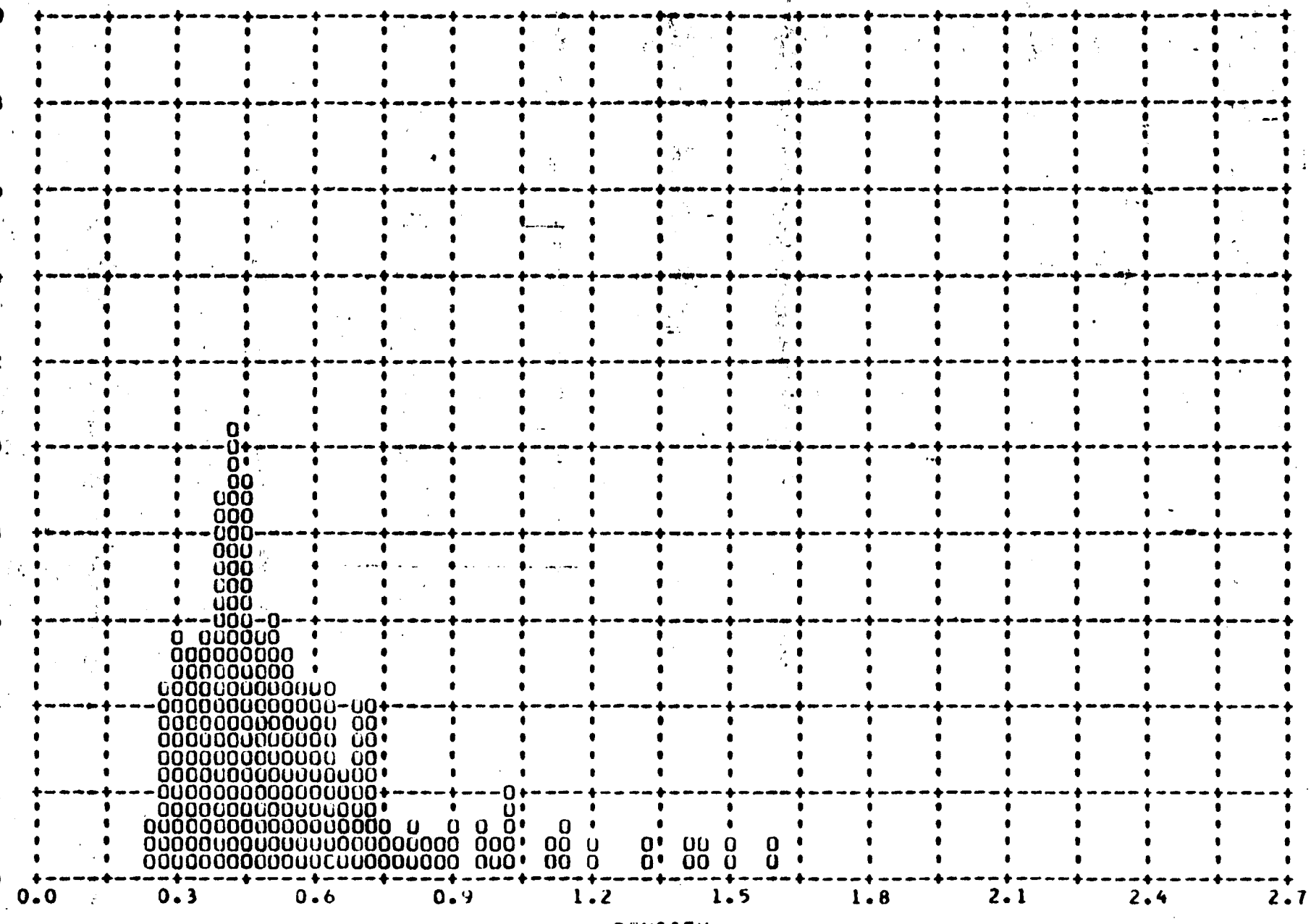


FIGURE A-31

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MAX • TERRAIN • PROCESSING • FULL

ARITH MEAN • 1.49 • MEDIAN • 1.56 • STD DEV • 0.47 • RANGE • 0.30 TO 2.34 WITH 187 SAMPLES

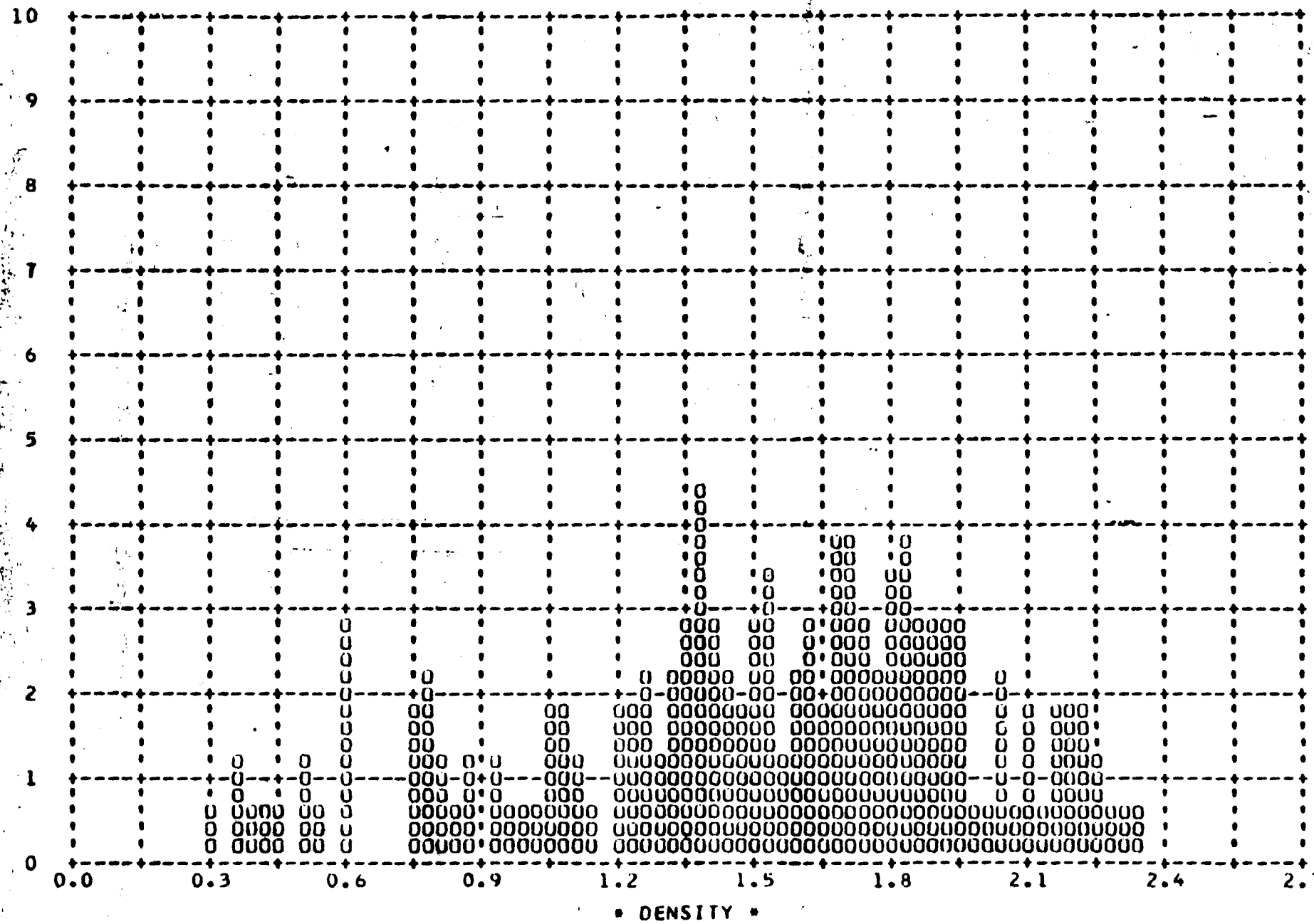


FIGURE A-32

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MAX • CLOUD • PROCESSING • FULL

ARITH MEAN • 1.84 • MEDIAN • 1.94 • STD DEV • 0.42 • RANGE • 0.34 TO 2.39 WITH 101 SAMPLES

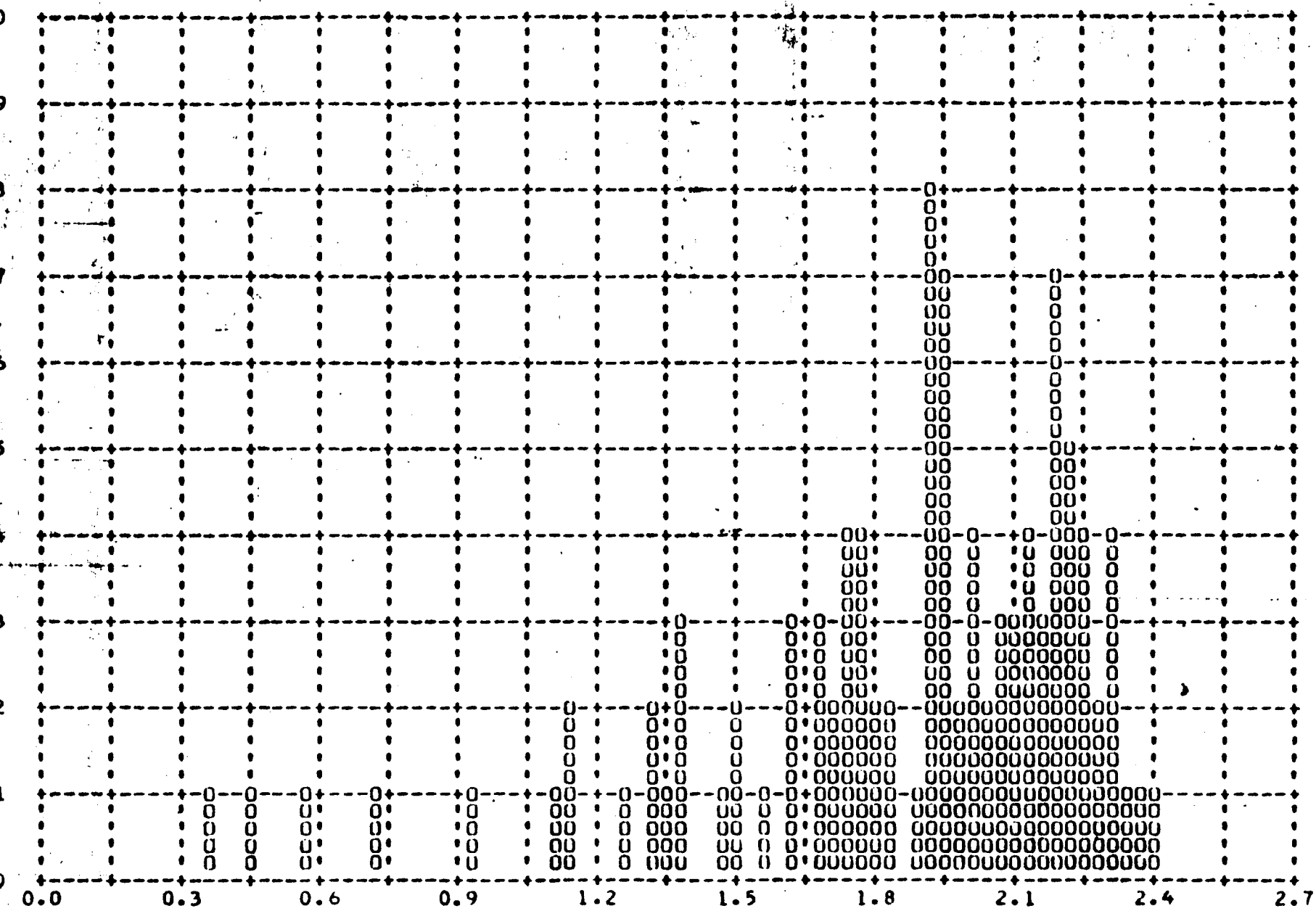


FIGURE A-33

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.56 • MEDIAN • 0.49 • STD DEV • 0.27 • RANGE • 0.20 TO 1.58 WITH 249 SAMPLES

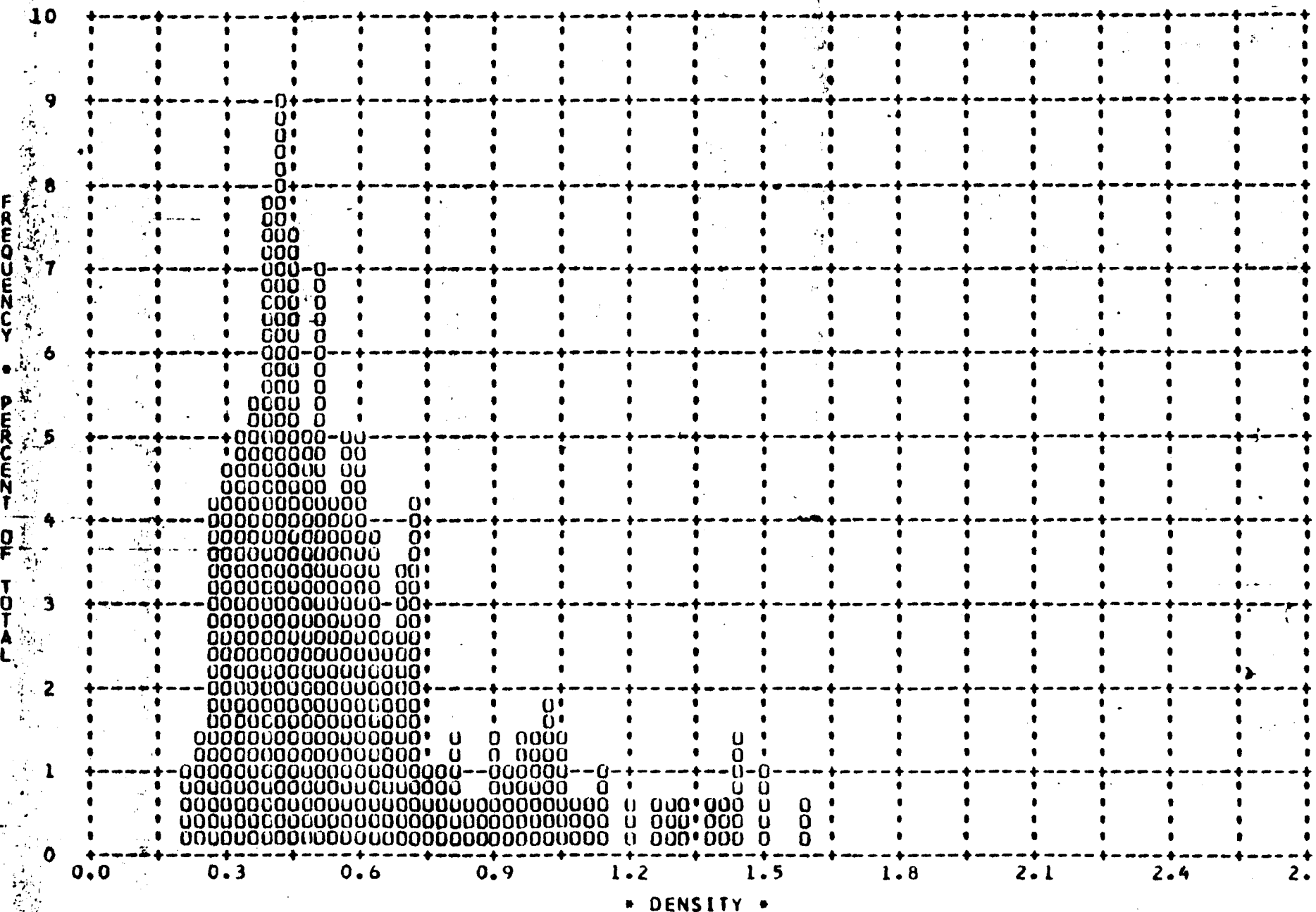


FIGURE A-34

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.52 • MEDIAN • 1.60 • STD DEV • 0.45 • RANGE • 0.30 TO 2.34 WITH 249 SAMPLES

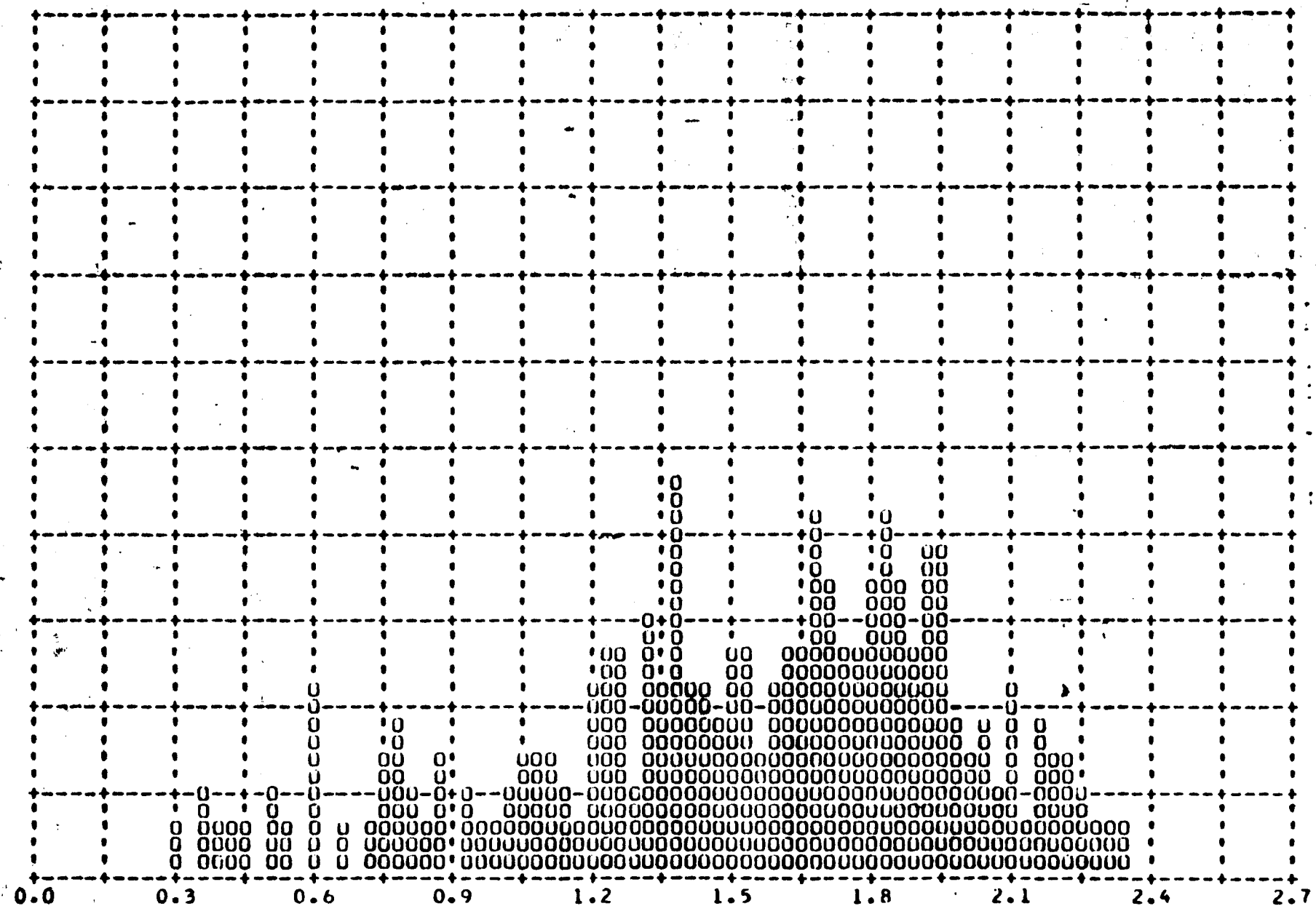


FIGURE A-35

MISSION • 1029-1 • INSTR • AFT • 05/06/66 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 1.87 • MEDIAN • 1.93 • STD DEV • 0.39 • RANGE • 0.34 TO 2.40 WITH 162 SAMPLES

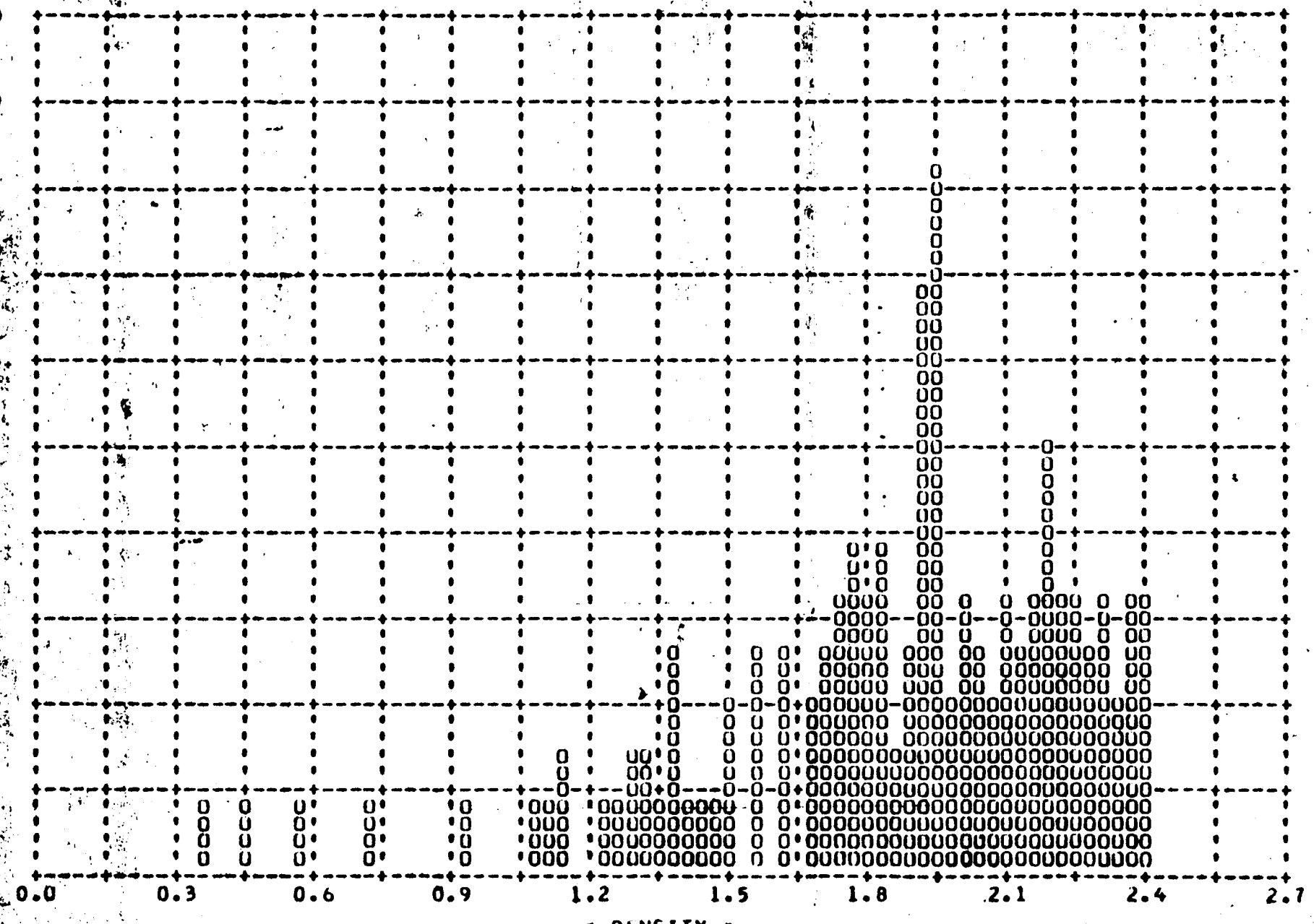


FIGURE A-36

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