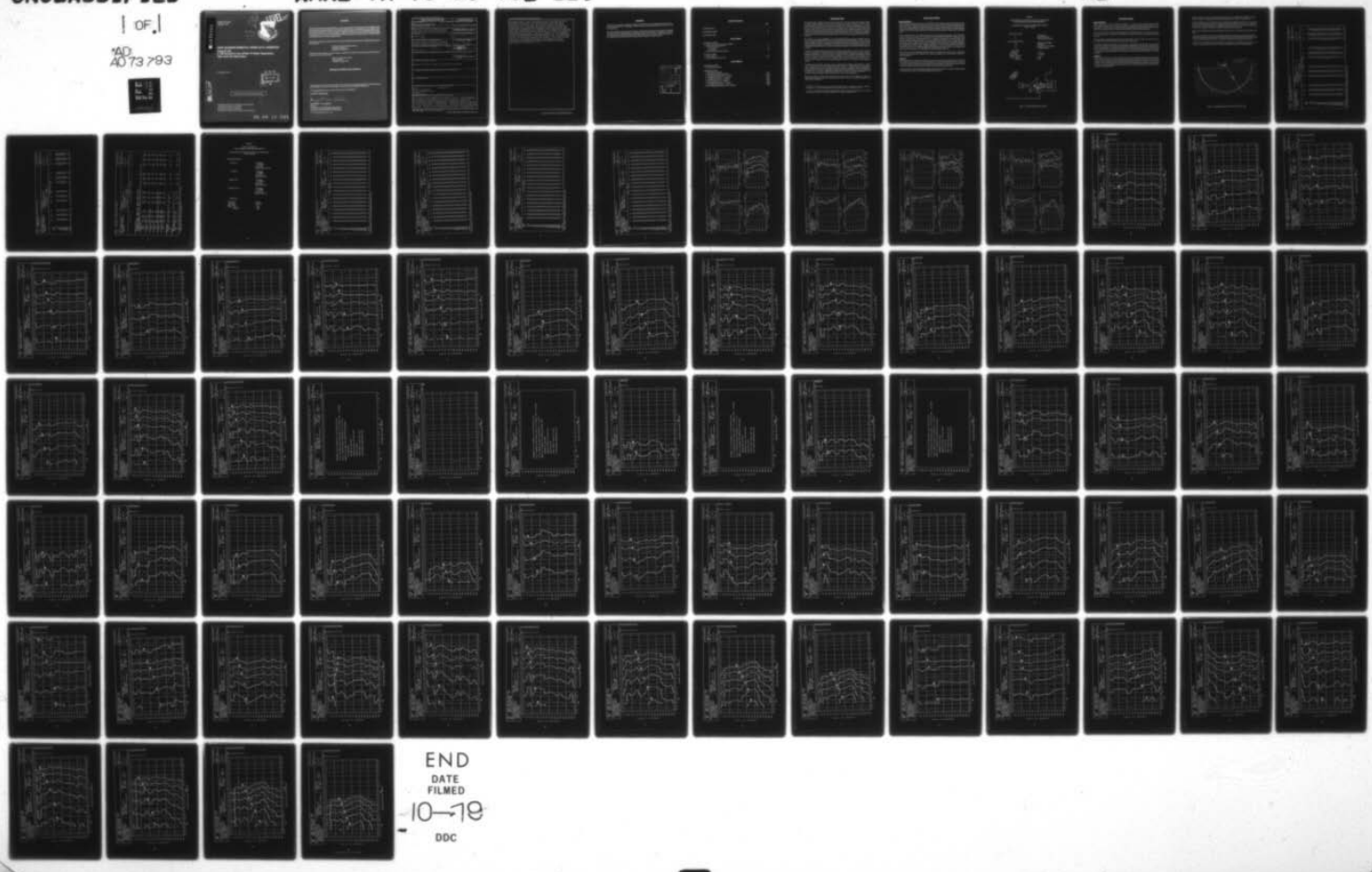
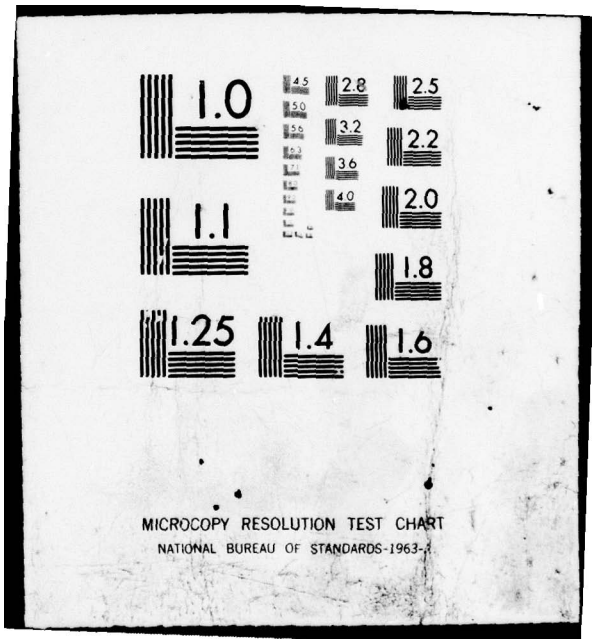
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Volume 129
F-100 Aircraft in the AF32A-16 Noise Suppressor, Near and Far-Field Noise

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FOR THE COMMANDER

HENNING E. VON GIERKE
Director
Biodynamics and Bioengineering Division
Aerospace Medical Research Laboratory

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The AF32A-16 noise suppressor is made by the E.C. DeYoung Company for acoustical suppression of the F-100 aircraft. This report provides measured and extrapolated data defining the bioacoustic environments produced by this aircraft operating in this suppressor for four engine power configurations. Near-field data are reported for three locations in a wide variety of physical and psychoacoustic measures: overall and band sound pressure levels, C-weighted and -

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A-weighted sound levels, preferred speech interference level, perceived noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Far-field data measured at 19 locations are normalized to standard meteorological conditions and extrapolated from 75-8000 meters to derive sets of equal-value contours for these same seven acoustic measures as functions of angle and distance from the source. Refer to Volume 1 of this handbook, "USAF Bioenvironmental Noise Data Handbook, Vol 1: Organization, Content and Application", AMRL-TR-75-50(1) 1975, for discussion of the objective and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc.

PREFACE

This report was prepared by the Biodynamic Environment Branch, Aerospace Medical Research Laboratory, under Project/Task 723107, Technology to Define and Assess Environmental Quality of Noise From Air Force Operations.

The author gratefully acknowledges Mr. John Cole, and Mr. Robert Powell for their assistance in preparing this report, Mr. Jerry Speakman and Capt. Richard Gorman for their assistance in acquiring the raw data, Mr. Keith Kettler, Mr. Henry Mohlman and Mr. Fred Lampley of the University of Dayton for assistance in the mechanics of data processing, and Mrs. Peggy Massie for assistance in typing this report.

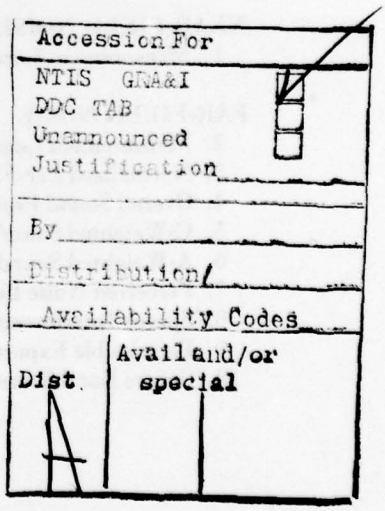


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INTRODUCTION

The F-100D aircraft is a fighter aircraft with mission requirements of the destruction of hostile aircraft in flight and hostile ground installations. This aircraft is powered by one Pratt and Whitney J57-P-21 engine, manufactured by North American and code named Super Sabre. The AF32A-16 noise suppressor was built by the E.C. DeYoung Company to provide noise level reduction for all F-100 aircraft during ground runup operations. This volume provides measured and extrapolated data defining bioacoustic environments produced by this aircraft in this suppressor system during ground runup operations. Such data are essential to evaluate ear protection requirements, limiting personnel exposure times, voice communication capabilities, and annoyance problems associated with ground runups of the F-100 aircraft operating in the AF32A-16 noise suppressor.

This volume is one of a series published by the Aerospace Medical Research Laboratory (AMRL) under the same report number (AMRL-TR-75-50) as a multi-volume handbook that quantifies the noise environments produced at flight/ground crew locations and in surrounding communities by operations of Air Force aircraft and ground support equipment. The far-field, community-type noise data in the handbook describe the noise produced during *ground operations* of aircraft, ground support equipment, and other ground-based equipment or facilities.

Volume 1 of this handbook discusses the objectives and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. Volume 2 provides a method and data for adjusting the handbook's far-field noise data, which are for standard meteorological conditions (15°C temperature, 70% rel humidity, 0.760 meters Hg barometric pressure), to derive comparable data for other meteorological conditions. *Refer to Volumes 1 and 2* (references 1 and 2) for such information because it is not repeated in other handbook volumes.

A cumulative index lists those aerospace systems contained in the handbook, and identifies the specific volumes containing each type of environmental noise data available (i.e., inflight/flight crew and passenger noise, near-field/ground crew noise, far-field/community noise). Volume numbers are assigned sequentially as individual volumes are published. This index is periodically updated as individual volumes are published and is available upon request from AMRL/BBE, Wright-Patterson AFB, OH 45433. Organizations on the distribution list for the handbook will automatically receive a copy of each updated index.

Direct any questions concerning the technical data in this report and other handbook volumes to: AMRL/BBE, Wright-Patterson AFB, OH 45433; AUTOVON 78-53675 or 78-53664; Commercial (513) 255-3675 or (513) 255-3664.

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1. Cole, John N., *USAF Bioenvironmental Noise Data Handbook Volume 1; Organization, Content and Application*, AMRL-TR-75-50 (1), Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, 1975.

2. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 2: Procedure to Evaluate Effects of Non-standard Meteorological Conditions on Far-Field Noise*, AMRL-TR-75-50 (2), AMRL, WPAFB, OH, 1975.

NEAR-FIELD NOISE

MEASUREMENTS

AMRL acquired near-field noise data on the AF32A-16 noise suppressor system during ground runup operations of the F-100 aircraft. For these tests the aircraft was located in the AF32A-16 noise suppressor at Toledo ANG with no significant reflecting surfaces in the vicinity except the ground plane. Table 1 gives the surface meteorological conditions and the four engine power conditions. The ground-crew chief selected power conditions and near-field locations generally used during routine maintenance or engine runup for preflight checks.

At each near-field location a test engineer randomly moved a hand-held microphone in and around each location, probing all areas where a crew member's head would normally be located. He recorded all the noise samples on magnetic tape. During analysis of each sample, he determined the one-third octave band root-mean-square sound pressure using a 4- or 8-second integration time to derive a power-averaged level for each location. Figure 1 shows the three near-field locations where ground crew are usually located for maintenance and/or preflight checkout operations. Estimates of noise levels at other locations are difficult in the near-field since the noise source is spatially distributed, i.e., not a point source. The noise levels at near-field locations can vary widely depending upon relative distances from each noise source (intake noise, exhaust noise, panel resonances, internal engine noise through the engine wall, etc.).

Table 1 lists the numeric/alphabetic designators used on the data pages in this report to identify the measurement locations and test conditions. For example, the designator 1/A means ground crew location 1 and test condition A.

RESULTS

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the F-100 aircraft in the AF32A-16 noise suppressor at the three ground crew locations. This table includes the overall, 1/3 octave band, and octave band levels. From these data one can calculate the variety of measures given in Table 3, which are widely used to assess the effects of noise on personnel and their performance.

All near-field data are the meteorological conditions at the time of test but are valid for all typical airbase meteorology because of the short sound propagation distances involved.

TABLE 1

MEASUREMENT LOCATIONS AND TEST CONDITIONS FOR NEAR-FIELD NOISE MEASUREMENTS

F-100 Suppressor, Ground Runup, Toledo ANG, 19 Jul 1977,
Test #77-730-005

Ground Crew Location	
1	Trim Position
2	Leak Check Position
3	A/B Leak Check Position
Aircraft Engine Operation	
A	Idle Power (53% RPM)
B	70% RPM
C	Takeoff Power (97% RPM)
D	Afterburner Power
Meteorology	
Temperature	30 C
Bar Pressure	0.742 M Hg
Relative Humidity	67 %
Wind — Speed	Calm
— Direction	Calm

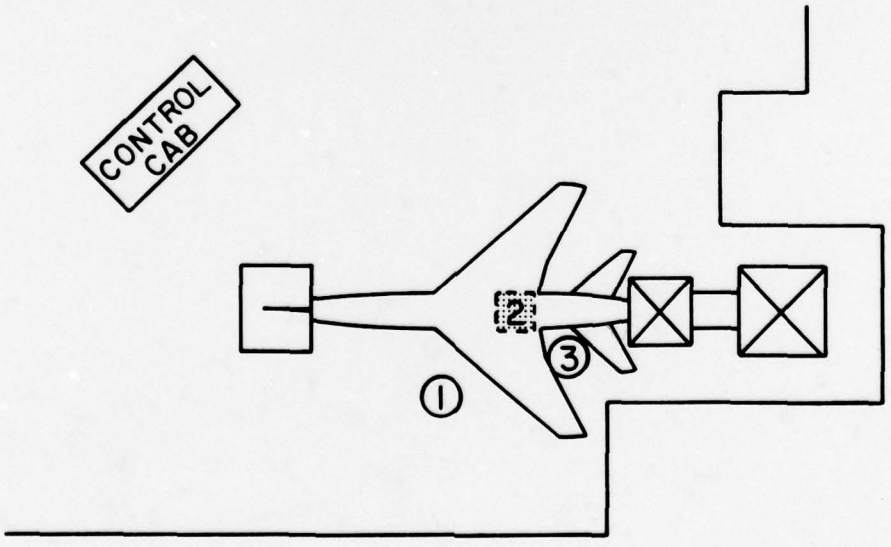


Figure 1. Near-Field Measurement Locations

FAR-FIELD NOISE

MEASUREMENTS

AMRL acquired the near and far-field data during a 1—2-hour test period, thus keeping similar meteorological conditons. Figure 2 shows the aircraft in the suppressor and its orientation relative to 19 microphone measurement sites on a semicircle. The center of the 100 meter radius semicircle used in surveying the AF32A-16 noise suppressor was on the ground directly below the center of the exhause stack.

Table 4 provides cockpit readouts of engine characteristics (% RPM, fuel flow, etc.) for each power setting used in the far-field tests. Also listed in this table are the surface meteorological conditions during data acquisition.

All 19 microphone measurement sites are in the acoustic far-field of the source where the sound wave-fronts spherically diverge and the noise source may be regarded as a point source.

A portable microphone/tape-recorder system was used to sequentially record the noise at each far-field location. The microphone was attached to a hand held pole, pointed at the source (0° angle of incidence) and vertically scanned from 0.5 to 3 meters for a period of 5-10 seconds during data acquisition at each microphone location. These samples were then time-integrated to derive a root-mean-square sound pressure level. Vertical scanning and time-integrating together reduce anomalies frequently present in data acquired by a fixed height microphone.

RESULTS

Table 5 lists the overall and 1/3 octave band SPL measured at the far-field locations under meteorological conditions at the time of the test. Data in all other figures and tables are based on these levels. These data were normalized to 100 meters distance and standard meteorological conditions (15 C temperature, 70% relative humidity, 0.760 meter Hg barometric pressure) and used to derive the graphic data in Figure 3 which provides a compact summary of the far-field noise characteristics of the F-100 aircraft operating in the AF32A-16 noise suppressor in a standard format.

Estimates of the noise levels for intermediate power settings (e.g., 90% RPM) and/or different number of engines operating (e.g., single engine) can be determined as explained in Volume 1 of this handbook.

Figures 4 through 10 are sets of equal noise contours describing seven different measures of noise as a function of angle and distance from the source for standard day meteorology. They are respectively, overall sound pressure level, C-weighted sound level, A-weighted sound level, perceived noise level, speech interference level, permissible exposure times for personnel and octave band sound pressure levels.

Data excessively influenced by spurious background/electronic noise were eliminated from all figures and tables.

Test personnel performed noise surveys during quiet periods when the background noise was minimal, e.g., early in the morning when no other aircraft or engine test stands were operating. Data eliminated because they were near the background/electronic noise were generally not significant because the levels were so low.

Volume 2 of the handbook describes the influence of meteorology on far-field noise environments, and provides, if required, the factors necessary to adjust the handbook's standard meteorological day data.

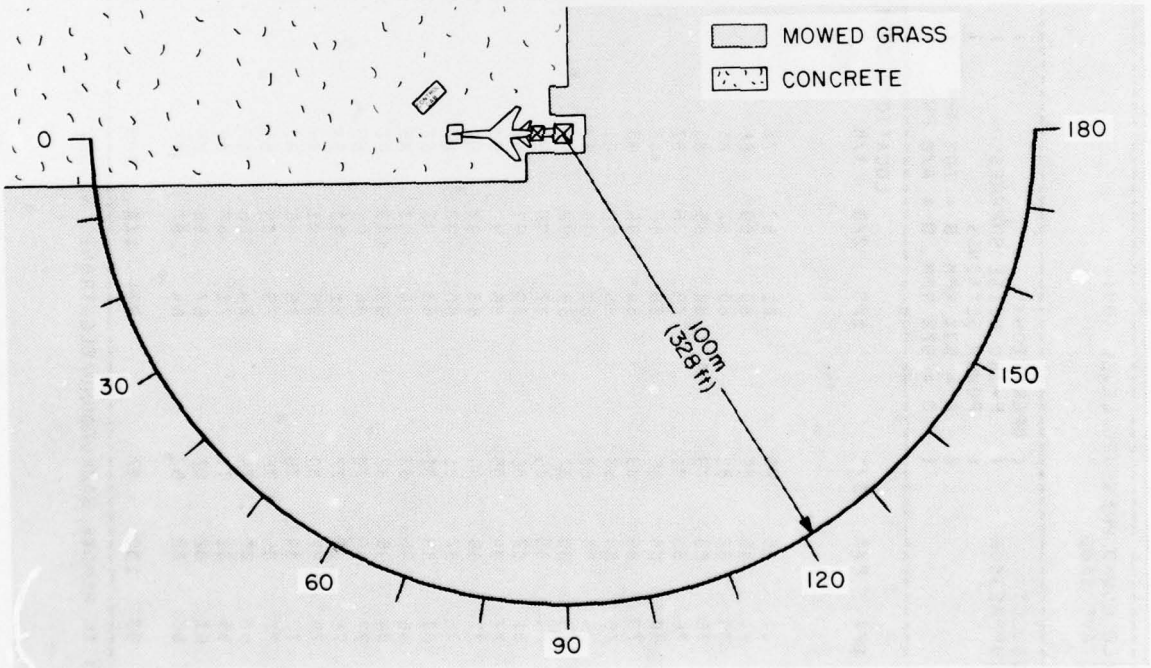


Figure 2. Far-Field Measurement Locations at Toledo ANG, OH

TABLE: 2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND

IDENTIFICATION:
OMEGA 3.2
TEST 77-730-005
RUN 01
27 SEP 78
PAGE F1

NOISE SOURCE/SUBJECT:
F-100 NOISE SUPPRESSOR
AF32A-16

OPERATION:
F-100 NOISE SUPPRESSOR
POWER SETTINGS
A = 53% RPM B = 70% RPM
C = 97% RPM D = A/B PWR

FREQ (HZ)	LOCATION/CONDITION 1/A	2/A	3/A	1/B	2/B	3/B	1/C	2/C	3/C	1/D	2/D	3/D
25	81	85	78	81	87	78	95	100	92	97	103	97
31.5	81	86	80	80	89	81	95	102	94	97	103	96
40	79	82	82	80	87	85	91	100	93	96	100	99
50	76	80	79	80	85	83	94	100	96	101	102	102
63	76	83	81	79	86	87	92	100	99	96	106	104
80	80	88	86	80	88	87	90	100	99	95	103	104
100	79	89	89	84	95	93	90	102	102	94	103	106
125	75	84	83	85	92	91	94	104	104	96	103	105
160	75	83	83	80	90	89	95	107	105	96	106	104
200	79	86	87	85	92	92	100	107	109	98	106	107
250	79	85	86	87	90	92	104	110	114	104	106	112
315	81	87	86	89	92	94	110	116	119	111	114	122
400	77	84	85	86	92	93	112	120	120	113	117	125
500	77	86	84	83	93	91	106	112	115	111	115	118
630	76	87	81	80	93	87	102	114	111	109	120	116
800	80	89	81	83	93	87	104	115	112	109	121	116
1000	86	96	83	84	93	85	105	113	110	109	116	114
1250	84	95	82	93	109	92	101	109	107	107	115	112
1600	77	89	79	84	95	85	99	106	105	104	110	110
2000	76	87	77	81	90	83	97	104	104	102	108	109
2500	79	87	80	85	91	84	98	106	105	102	108	109
3150	72	84	76	76	86	83	93	101	101	97	103	104
4000	72	84	76	79	89	86	89	100	100	94	102	102
5000	68	81	74	74	86	82	87	101	98	92	103	100
6300	65	81	71	71	88	80	85	103	96	91	105	97
8000	61	82	67	67	86	75	81	101	91	87	105	93
10000	60	82	63	64	87	73	76	101	88	84	105	90
OVERALL	93	102	97	98	110	103	117	124	125	119	126	128

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 2 — MEASURED SOUND PRESSURE LEVEL (DB) OCTAVE BAND

NOISE SOURCE/SUBJECT: F-100 NOISE SUPPRESSOR AF32A-16

OPERATION: F-100 NOISE SUPPRESSOR POWER SETTINGS A = 53% RPM B = 70% RPM C = 97% RPM D = A/B PWR

IDENTIFICATION: OMEGA 3.2 TEST 77-730-005 RUN 01 27 SEP 78 PAGE J1

FREQ (HZ)	LOCATION/CONDITION 1/A	2/A	3/A	1/B	2/B	3/B	1/C	2/C	3/C	1/D	2/D	3/D
31.5	85	89	85	85	92	87	99	105	98	101	107	102
63	82	90	88	84	91	91	97	105	103	103	109	108
125	82	91	90	88	97	96	98	109	109	100	109	109
250	84	91	91	92	96	98	111	117	120	112	115	122
500	81	90	88	89	97	96	113	121	121	116	122	126
1000	89	99	87	93	109	94	108	118	115	113	123	119
2000	82	93	84	88	97	89	103	110	109	107	114	114
4000	75	88	80	82	92	89	95	105	105	99	108	107
8000	67	86	73	73	91	82	87	106	97	93	109	99
OVERALL	93	102	97	98	110	103	117	124	125	119	126	128

TABLE: MEASURES OF HUMAN NOISE EXPOSURE

3

IDENTIFICATION:
OMEGA 3.2
TEST 77-730-005
RUN 01
27 SEP 78
PAGE H1

NOISE SOURCE/SUBJECT:
F-100 NOISE SUPPRESSOR
AF32A-16

OPERATION:
F-100 NOISE SUPPRESSOR
POWER SETTINGS
A = 53% RPM B = 70% RPM
C = 97% RPM D = A/B PWR

	LOCATION/CONDITION											
	1/A	2/A	3/A	1/B	2/B	3/B	1/C	2/C	3/C	1/D	2/D	3/D
HAZARD/PROTECTION												
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR												
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR												
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)												
NO PROTECTION												
OASLC	92	102	96	98	110	103	116	124	125	119	126	128
OASLA	90	101	92	96	110	99	113	121	121	117	125	125
T	170	25	120	60	5	36	3.2	P	P	P	P	P
MINIMUM QPL EAR MUFFS												
OASLA*	67	76	73	73	83	79	93	100	101	95	101	105
T	960	960	960	960	571	960	101	30	25	71	25	13
AMERICAN OPTICAL 1700 EAR MUFFS												
OASLA*	62	71	69	68	77	74	87	95	96	89	95	99
T	960	960	960	960	960	960	285	71	60	202	71	36
V-51R EAR PLUGS												
OASLA*	66	75	68	71	84	75	90	99	98	94	101	103
T	960	960	960	960	480	960	170	36	42	85	25	18
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS												
OASLA*	53	63	54	57	72	60	75	83	82	79	87	86
T	960	960	960	960	960	960	960	571	679	960	285	339
H-133 GROUND COMMUNICATION UNIT												
OASLA*	64	74	65	69	83	71	84	93	91	88	96	95
T	960	960	960	960	571	960	480	101	143	240	60	71
COMMUNICATION												
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)												
PSIL	84	94	86	90	101	93	108	116	115	112	119	120
ANNOYANCE												
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)												
TONE CORRECTION (C IN DB)												
PNLT	103	114	106	111	126	114	126	135	133	128	136	138
C	2	2	1	3	5	2	1	1	1	0	1	1

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.
P ADDITIONAL EAR PROTECTION REQUIRED.

TABLE 4

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS

F-100 Aircraft In The AF32A-16 Noise Suppressor, Ground Runup
Toledo ANG OH

Aircraft Engine Operation

Idle, Power	One Engine 53 % RPM 508 F EGT 1000 LBS/HR, Fuel Flow
70% RPM	One Engine 70 % RPM 700 F EGT 3000 LBS/HR, FF
Military Power	One Engine 97 % RPM 1132 F EGT 8500 LBS/HR, FF
Afterburner Power	One Engine 97 % RPM 1158 F EGT 33050 LBS/HR, FF

Meteorology

Temperature	30 C
Bar Pressure	0.742 M Hg
Rel Humidity	67 %
Wind — Speed	Calm
— Direction	Calm

TABLE 5: MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 30 C
BAR PRESS = .742 M HG
REL HUMID = 67 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01

14 SEP 78

PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	68	70	67	67	65	68	66	66	66	66	65	65	67	66	67	67	66	66	65
31.5	66	66	65	66	65	68	69	73	72	71	69	69	69	68	69	69	68	67	66
40	66	65	61	60	60	64	66	68	68	67	64	64	64	64	65	67	67	67	66
50	66	63	61	63	62	61	60	61	62	62	62	62	62	63	63	67	67	66	64
63	66	66	63	64	64	64	63	65	63	63	65	68	67	66	65	66	67	63	63
80	64	62	63	65	63	65	62	63	65	66	65	67	66	65	64	64	62	62	61
100	60	61	63	65	63	65	68	69	69	66	65	63	64	64	64	63	62	64	57
125	56	55	60	58	57	57	56	59	58	57	61	58	60	60	59	61	57	55	54
160	54	54	59	57	54	55	53	55	53	54	55	55	56	55	55	57	55	52	51
200	55	57	61	58	55	54	52	54	53	55	56	55	57	57	54	55	53	51	47
250	55	53	58	55	53	55	50	53	54	53	55	53	57	55	55	57	53	52	51
315	52	49	56	52	52	53	49	53	51	53	51	49	53	51	52	50	50	53	50
400	54	47	54	49	53	51	47	51	48	49	49	48	47	49	47	50	49	55	52
500	55	48	52	50	53	52	47	51	50	51	53	52	50	52	51	54	53	56	52
630	50	45	52	50	52	52	49	53	53	55	56	55	53	55	53	58	55	56	52
800	52	46	54	53	54	55	53	57	57	57	60	60	58	59	57	60	57	58	54
1000	53	45	54	55	55	56	54	58	58	58	60	61	60	61	60	59	58	58	56
1250	55	49	54	57	55	56	56	60	60	60	59	62	60	60	59	62	62	56	58
1600	49	44	55	54	55	57	55	59	59	59	58	58	60	60	59	61	58	54	54
2000	48	42	52	52	53	56	56	59	59	59	59	60	60	60	61	59	58	55	53
2500	49	43	55	54	55	58	56	58	58	59	59	58	61	60	60	60	58	55	53
3150	46	41	52	52	53	54	53	56	56	58	58	58	59	60	60	60	56	54	49
4000	44	41	51	52	54	55	52	57	56	59	57	58	60	62	61	61	58	53	49
5000	40	38	49	52	51	52	48	54	54	56	54	55	57	59	59	59	55	51	46
6300	37	37	49	51	53	52	49	54	54	56	52	52	56	56	56	57	53	48	43
8000	35	34	45	46	48	47	45	50	51	53	49	49	51	52	50	51	47	42	37
10000	32	32	42	42	44	44	42	47	47	48	46	46	49	48	46	46	42	39	33
OVERALL	74	74	73	74	73	75	75	77	77	76	75	76	76	76	75	76	75	75	73

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE 5 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02
14 SEP 78
PAGE 2

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 30 C
BAR PRESS = .742 M HG
REL HUMID = 67 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	71	68	68	68	68	70	69	72	71	69	69	67	69	69	67	69	69	68	69
31.5	68	67	67	69	68	71	71	74	73	73	73	71	72	71	71	72	71	71	69
40	66	65	66	65	65	67	70	72	70	69	68	67	67	67	68	71	71	71	72
50	67	65	64	65	65	65	64	67	66	65	64	65	66	67	67	73	72	73	72
63	69	68	68	69	68	65	64	65	66	67	67	70	67	67	69	72	72	74	71
80	66	63	66	67	65	65	64	64	67	70	69	67	67	67	69	69	67	67	67
100	70	68	73	70	68	65	64	66	66	65	63	66	69	70	68	68	70	73	70
125	70	67	72	70	64	65	63	61	63	65	64	66	66	65	65	66	66	67	66
160	62	63	66	64	62	60	59	57	58	58	61	60	61	58	59	61	61	60	61
200	64	65	67	64	61	59	58	55	58	61	61	59	61	60	59	61	59	58	55
250	62	62	66	62	58	58	57	57	58	60	61	59	60	59	57	59	58	57	53
315	61	59	65	60	58	60	59	59	60	60	61	56	58	55	55	57	55	52	55
400	61	56	62	59	60	59	58	57	57	58	57	54	53	53	52	53	55	53	58
500	61	54	60	60	59	60	59	57	56	56	55	54	56	57	57	57	55	55	58
630	58	55	60	61	59	61	60	59	59	59	59	59	60	60	61	62	61	59	59
800	58	56	60	61	59	60	62	61	61	62	63	63	64	63	63	64	62	61	60
1000	57	56	60	60	61	61	62	62	62	63	64	66	66	65	66	64	62	59	59
1250	58	60	62	62	64	66	68	64	65	67	69	69	69	67	68	69	67	64	63
1600	55	58	60	63	63	62	63	62	64	67	69	69	68	66	67	68	62	62	59
2000	51	55	57	61	62	62	65	62	64	66	68	67	69	68	67	68	64	60	59
2500	55	56	55	62	62	64	66	63	65	67	69	67	69	69	70	70	66	63	62
3150	50	54	55	60	58	61	63	60	63	66	67	66	68	70	70	70	65	60	60
4000	54	58	60	62	61	62	62	63	65	67	67	68	69	72	73	71	66	62	62
5000	49	52	53	59	56	59	59	59	61	63	66	67	66	68	70	68	64	60	58
6300	46	53	52	58	56	57	59	60	62	65	65	66	64	65	66	65	61	57	56
8000	44	54	55	60	60	62	65	60	63	66	66	66	65	64	65	63	59	57	56
10000	40	50	51	57	56	59	61	56	60	63	63	64	64	61	61	61	57	54	53
OVERALL	78	77	80	79	78	78	79	79	80	80	81	80	81	81	81	82	81	81	80

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 30 C
BAR PRESS = .742 M HG
REL HUMID = 67 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
14 SEP 78
PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	79	79	77	78	82	78	78	79	81	82	82	80	80	80	79	81	80	81	80
31.5	82	83	81	81	81	80	80	82	85	84	84	83	83	83	83	84	84	84	84
40	81	82	81	83	83	83	83	81	85	83	84	83	84	84	83	85	85	84	85
50	81	80	81	80	82	82	82	81	83	84	85	86	86	86	84	86	85	86	86
63	82	80	83	80	81	82	81	80	82	82	82	83	84	85	83	88	87	87	86
80	82	81	85	82	82	81	80	79	82	81	81	82	83	84	80	86	85	83	81
100	75	75	79	77	78	76	75	76	78	79	79	80	81	80	78	82	80	78	76
125	77	75	80	81	79	77	75	75	73	74	77	78	80	76	79	79	79	78	79
160	77	77	82	79	78	76	73	71	71	74	75	75	76	73	72	72	77	73	76
200	83	82	85	80	78	76	74	72	75	78	77	77	79	75	74	72	76	72	73
250	83	83	88	79	77	81	77	75	76	77	82	82	81	78	74	77	78	74	77
315	91	88	88	81	82	83	82	79	81	81	82	82	83	83	79	81	80	74	77
400	91	86	87	80	84	84	83	79	80	78	78	82	79	80	79	77	77	75	77
500	83	80	82	79	82	85	83	80	78	75	75	80	78	80	78	75	74	77	74
630	78	77	80	77	80	83	81	81	78	77	77	79	77	80	79	77	76	79	73
800	81	81	84	77	81	85	84	85	80	82	82	80	80	82	80	79	78	81	76
1000	79	80	86	81	82	85	85	85	81	82	83	81	80	79	79	78	78	82	76
1250	72	75	82	78	81	83	82	82	80	81	80	80	78	79	77	76	76	78	72
1600	72	75	81	77	80	84	80	79	81	83	82	82	81	81	77	76	76	76	71
2000	66	72	79	77	78	81	77	76	79	82	85	85	83	82	74	74	72	73	69
2500	65	69	77	76	77	78	76	75	79	81	85	84	85	84	75	74	73	72	68
3150	63	67	75	75	76	77	76	74	79	81	84	85	86	83	75	72	70	70	66
4000	60	66	75	74	76	77	76	76	80	81	84	86	87	83	75	73	69	68	64
5000	58	63	73	71	74	74	73	74	79	81	84	83	84	80	72	71	67	66	63
6300	55	61	70	69	71	72	71	71	79	78	81	83	83	78	71	71	66	65	62
8000	53	60	68	66	70	70	70	71	76	76	78	78	78	72	67	66	61	59	57
10000	48	54	63	62	66	67	66	66	72	73	73	74	74	67	62	62	56	55	52
OVERALL	96	94	97	93	94	95	94	93	94	95	96	96	96	96	93	95	94	94	93

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE 5: MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
14 SEP 78
PAGE 2

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 30 C
BAR PRESS = .742 M HG
REL HUMID = 67 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	81	82	79	82	84	83	81	81	83	84	83	83	83	84	84	83	83	82	83
31.5	84	83	83	83	84	83	84	84	86	85	86	86	85	85	85	87	86	86	86
40	87	85	84	86	85	86	86	85	89	88	88	88	88	87	87	87	88	87	88
50	90	87	88	88	88	86	87	87	88	88	88	88	89	88	88	88	88	91	91
63	89	89	90	90	89	88	88	86	88	88	88	88	88	89	90	92	93	93	93
80	86	86	88	87	87	88	85	83	86	86	85	87	87	86	89	90	90	86	89
100	79	80	82	81	81	80	80	80	84	84	84	85	85	86	86	88	85	80	81
125	81	80	83	83	82	82	80	78	78	79	78	79	84	85	84	85	84	79	83
160	79	77	80	80	81	81	78	77	75	76	76	77	80	80	77	79	81	76	82
200	83	80	81	78	77	77	76	73	74	78	76	76	79	76	76	77	77	76	77
250	85	84	85	81	78	76	76	74	75	78	76	76	79	80	77	78	77	75	79
315	92	87	85	80	78	79	75	75	76	77	76	77	82	86	83	83	82	78	80
400	94	88	84	84	84	82	79	78	80	78	79	80	81	85	83	82	84	80	83
500	85	78	78	82	85	86	82	80	84	81	81	82	83	85	82	81	83	82	83
630	83	76	78	82	84	85	83	81	85	83	83	84	82	84	83	82	84	84	80
800	85	78	84	82	86	88	87	86	89	87	86	86	86	86	84	82	85	84	82
1000	83	77	86	86	85	87	88	86	88	86	85	84	84	83	82	81	83	80	81
1250	79	75	84	84	84	87	86	85	86	85	81	82	82	83	80	81	82	79	78
1600	77	74	85	83	82	87	83	82	86	85	83	83	82	82	81	79	80	79	77
2000	73	71	83	82	79	84	80	79	85	84	83	85	86	82	79	78	77	75	74
2500	72	70	82	81	79	82	79	78	83	84	83	87	86	83	78	77	75	72	73
3150	69	67	79	78	77	80	77	76	82	83	83	87	87	84	77	75	75	71	71
4000	66	66	79	78	77	79	77	77	81	82	83	86	87	83	76	75	72	68	68
5000	62	63	75	74	74	76	74	74	80	83	83	84	84	81	74	74	71	66	67
6300	60	61	74	74	72	74	71	72	78	79	80	82	83	78	74	73	68	64	65
8000	57	59	71	71	70	72	69	70	74	76	76	77	78	73	69	67	63	59	60
10000	52	54	66	68	66	68	64	66	71	73	72	74	75	70	65	64	60	56	57
OVERALL	100	96	98	97	97	98	97	96	98	98	98	98	99	98	98	98	99	98	98

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01

14 SEP 78

PAGE 6

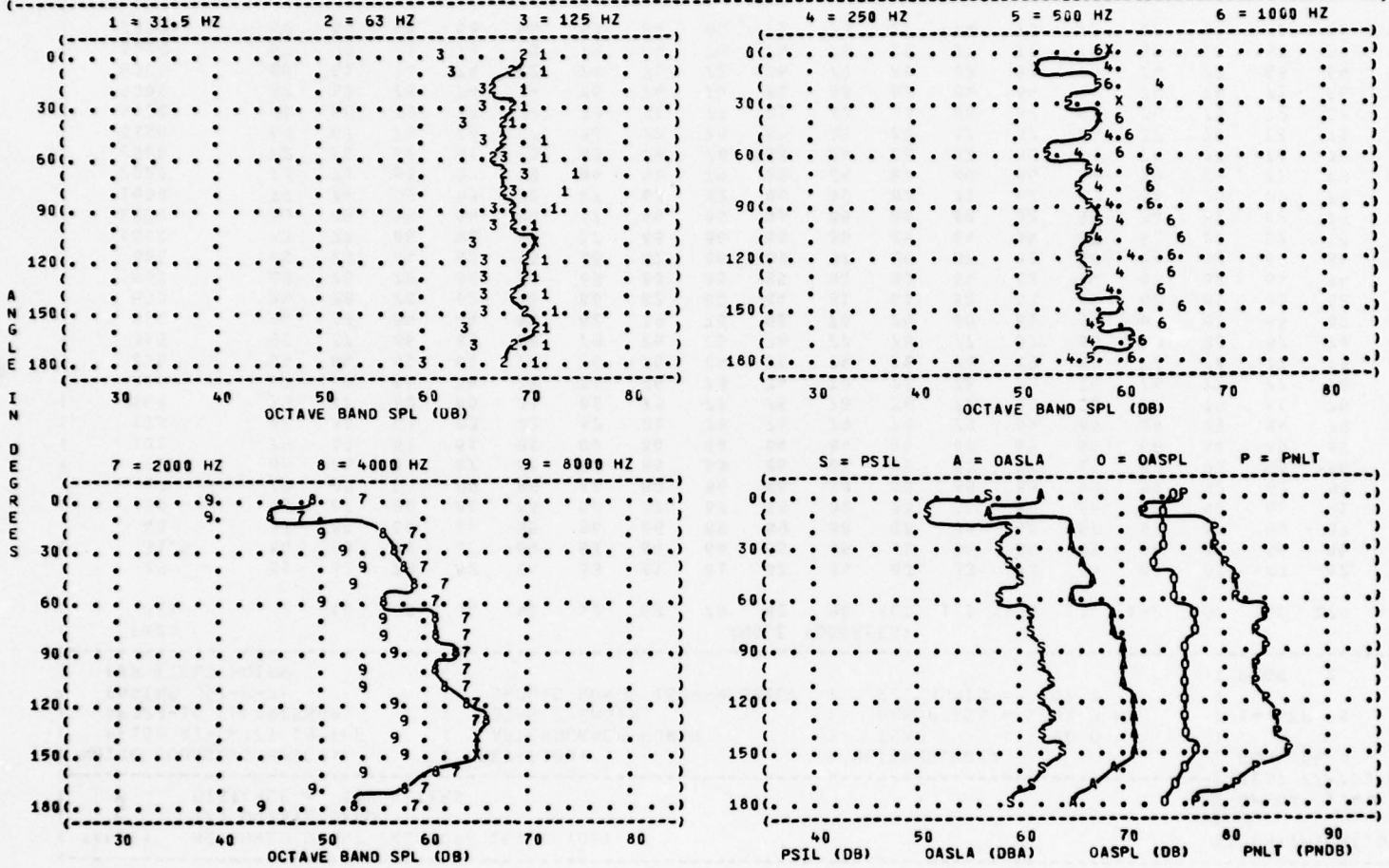


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02

14 SEP 78

PAGE 6

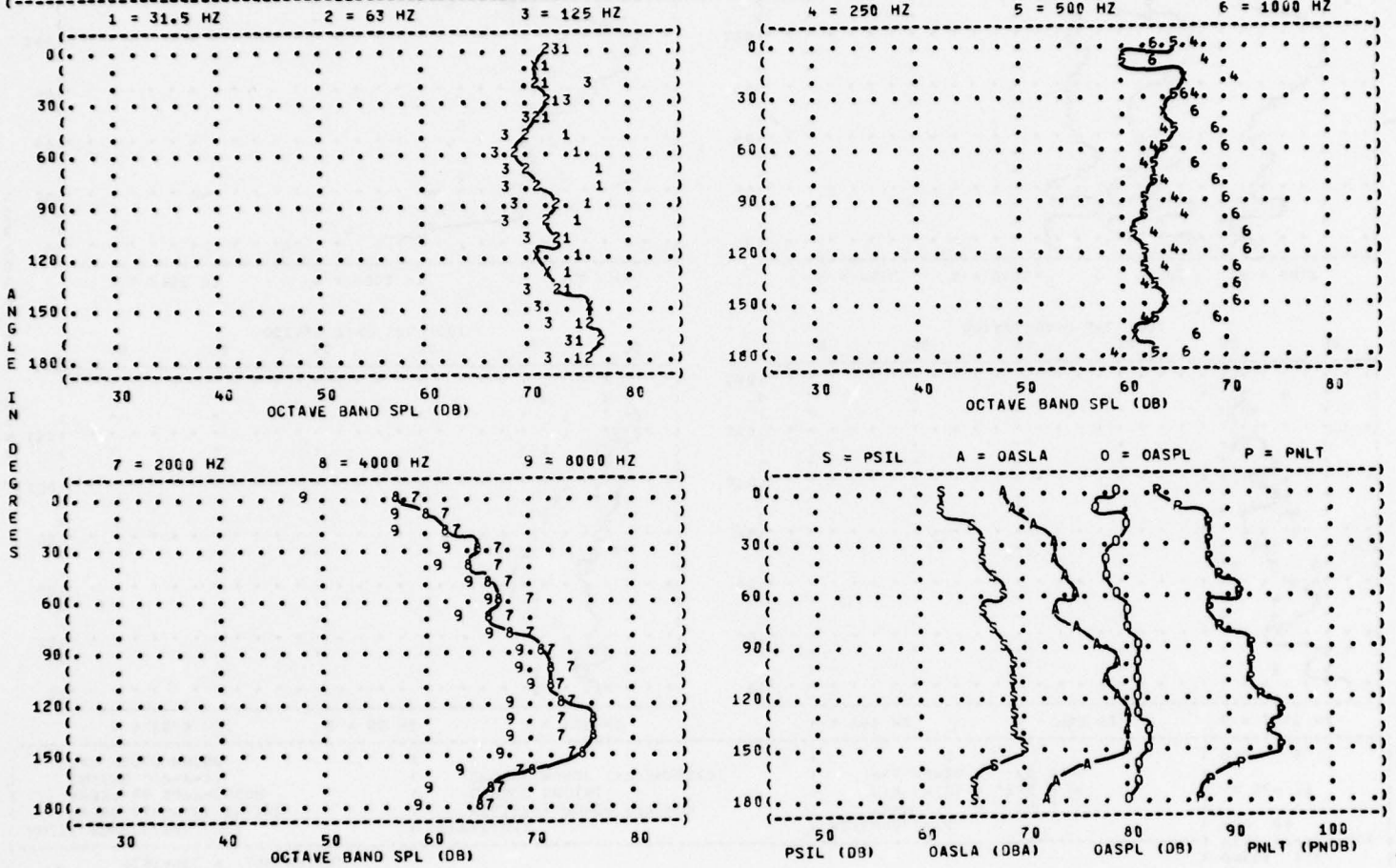


FIGURE: 3 NORMALIZED FARFIELD NOISE LEVELS

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03

14 SEP 78

PAGE 6

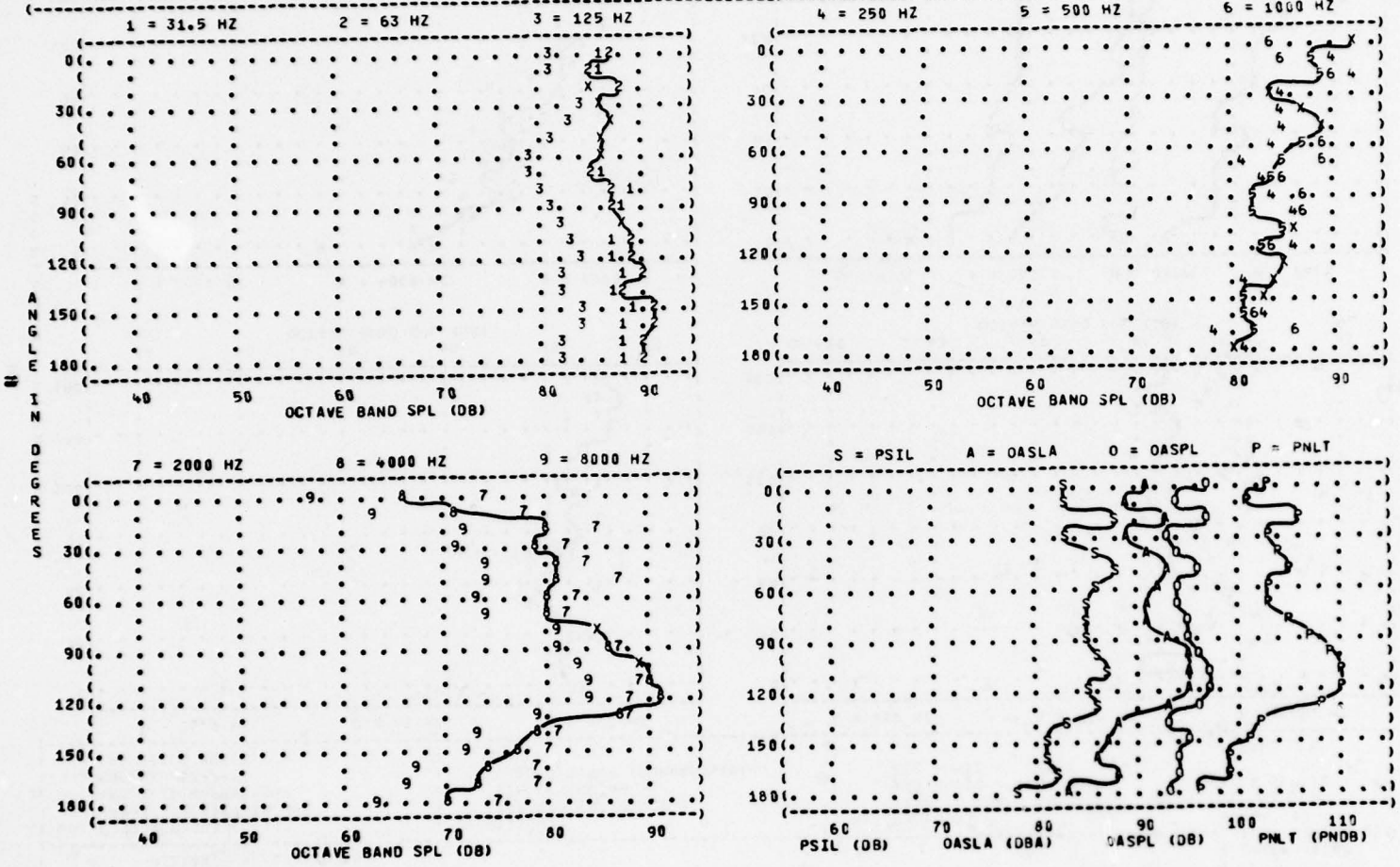


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
14 SEP 78
PAGE 6

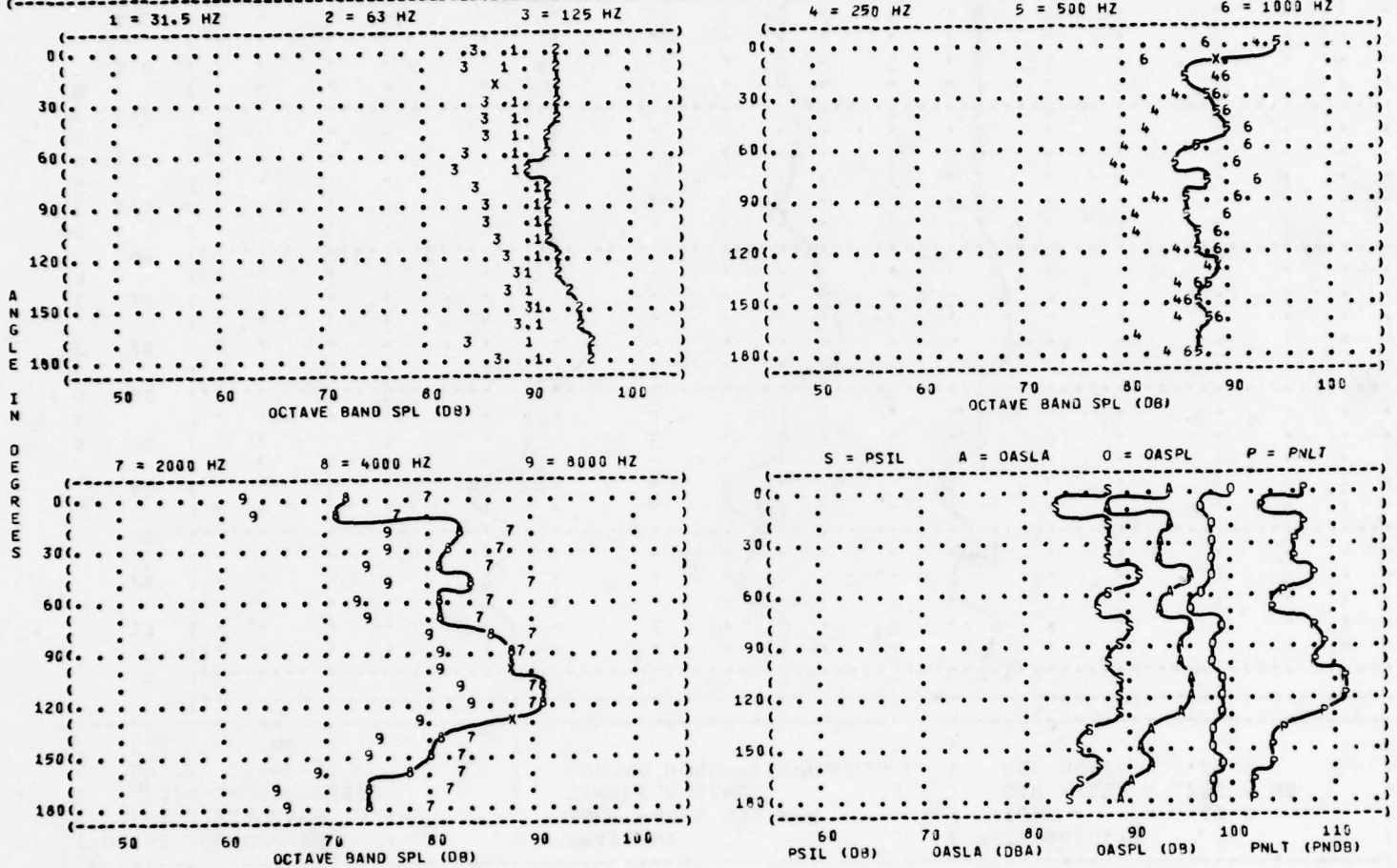


FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
14 SEP 78
PAGE 13

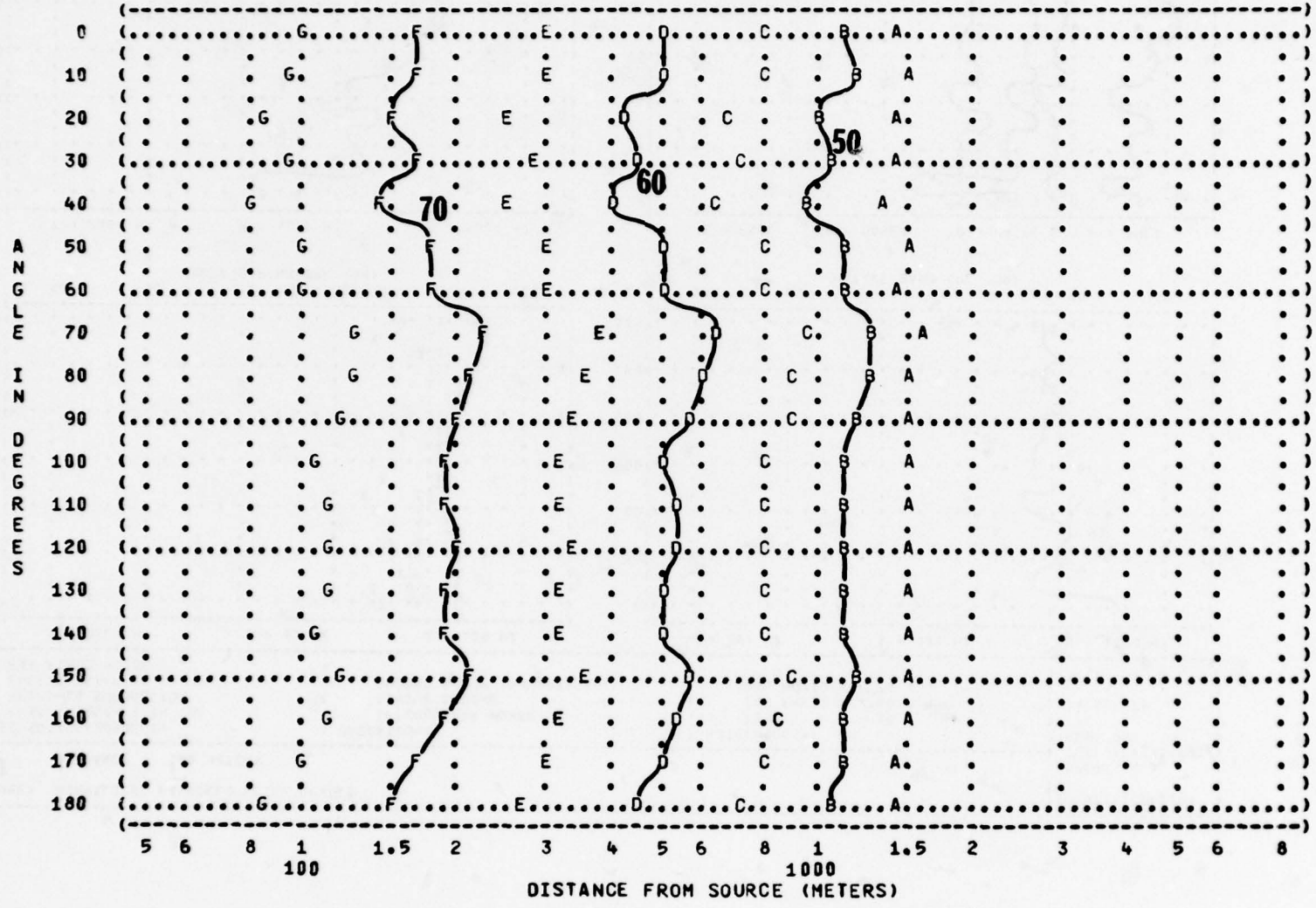


FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02
24 JAN 79
PAGE 13

POINT	DB
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85

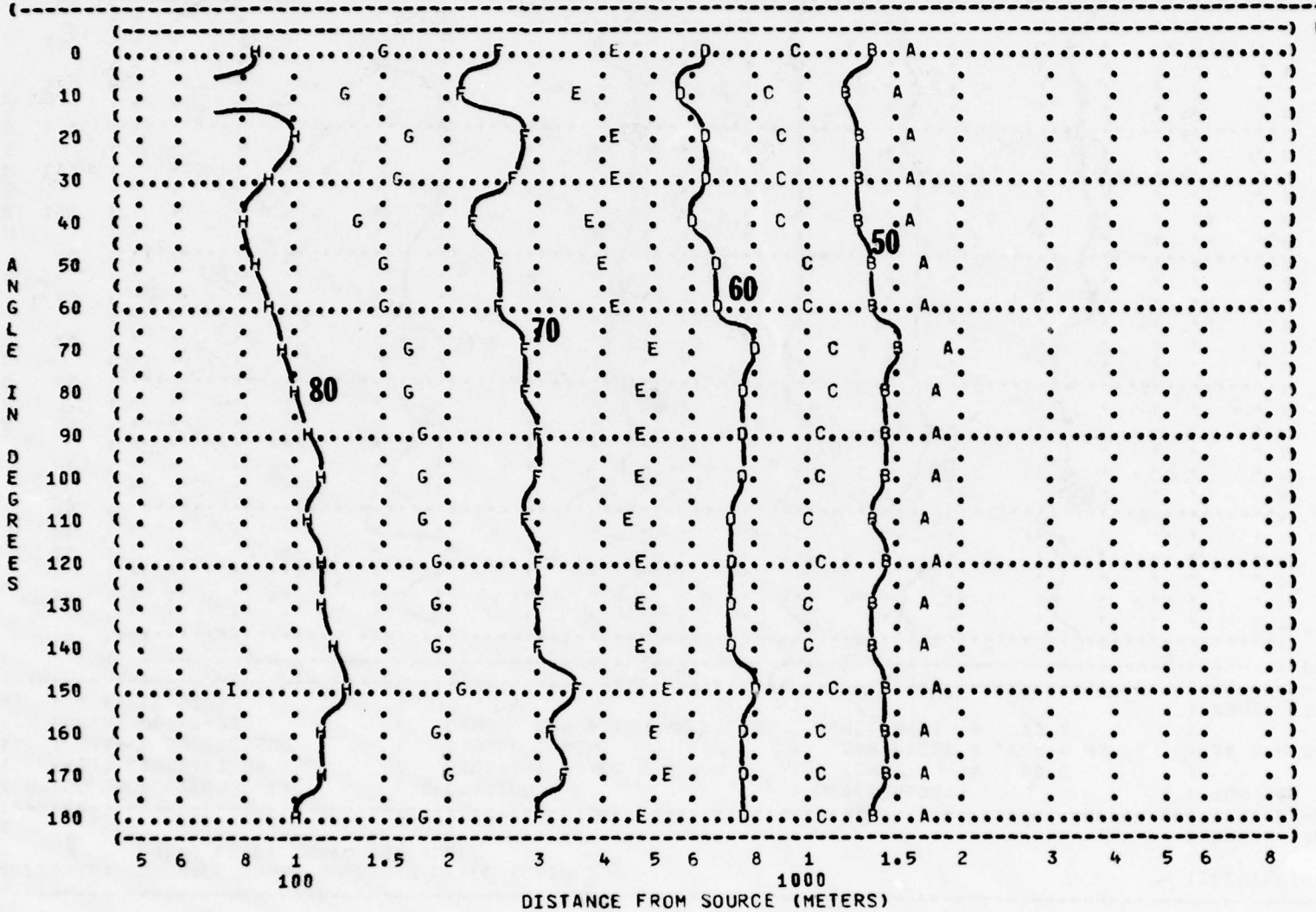


FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
14 SEP 78
PAGE 13

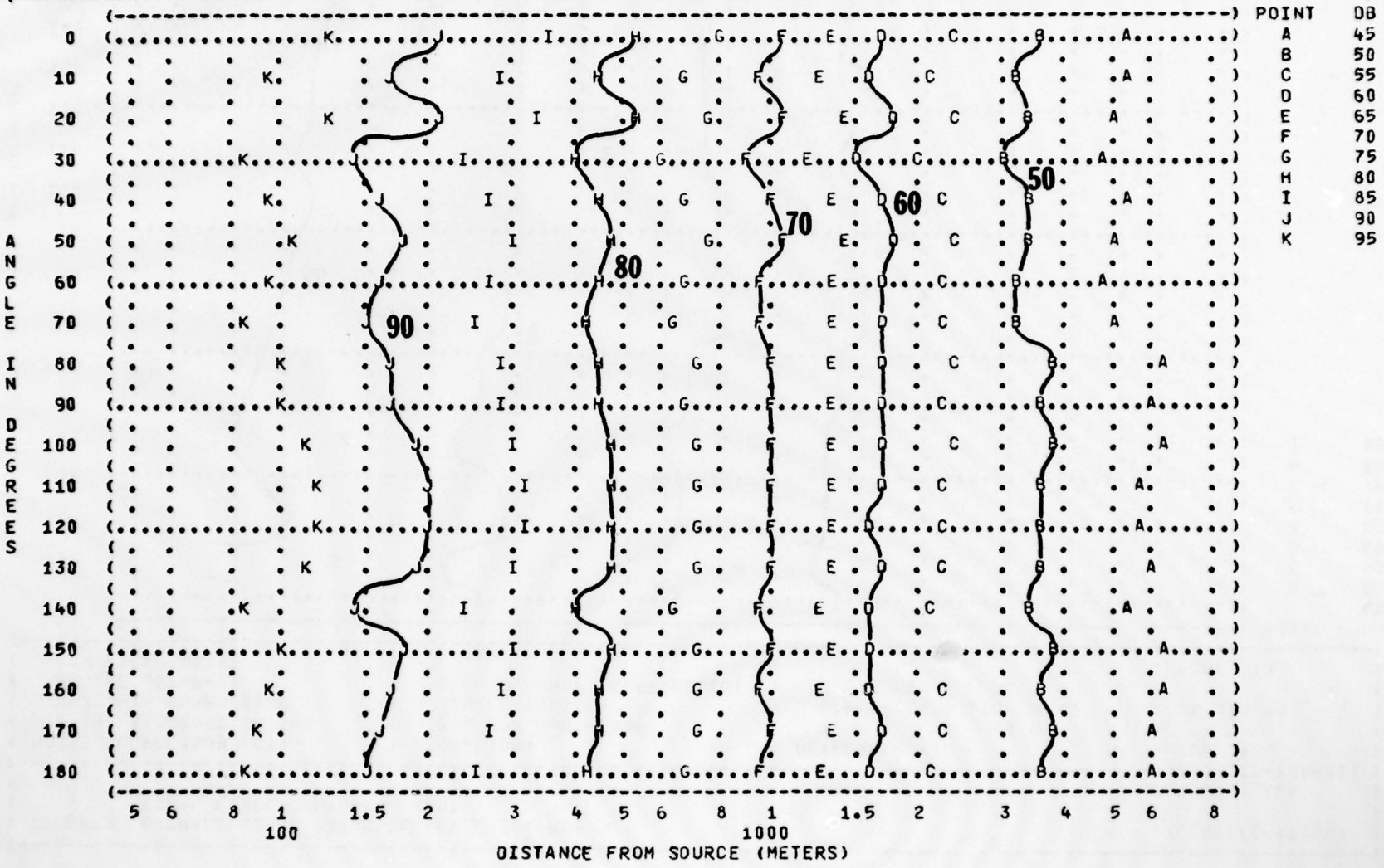


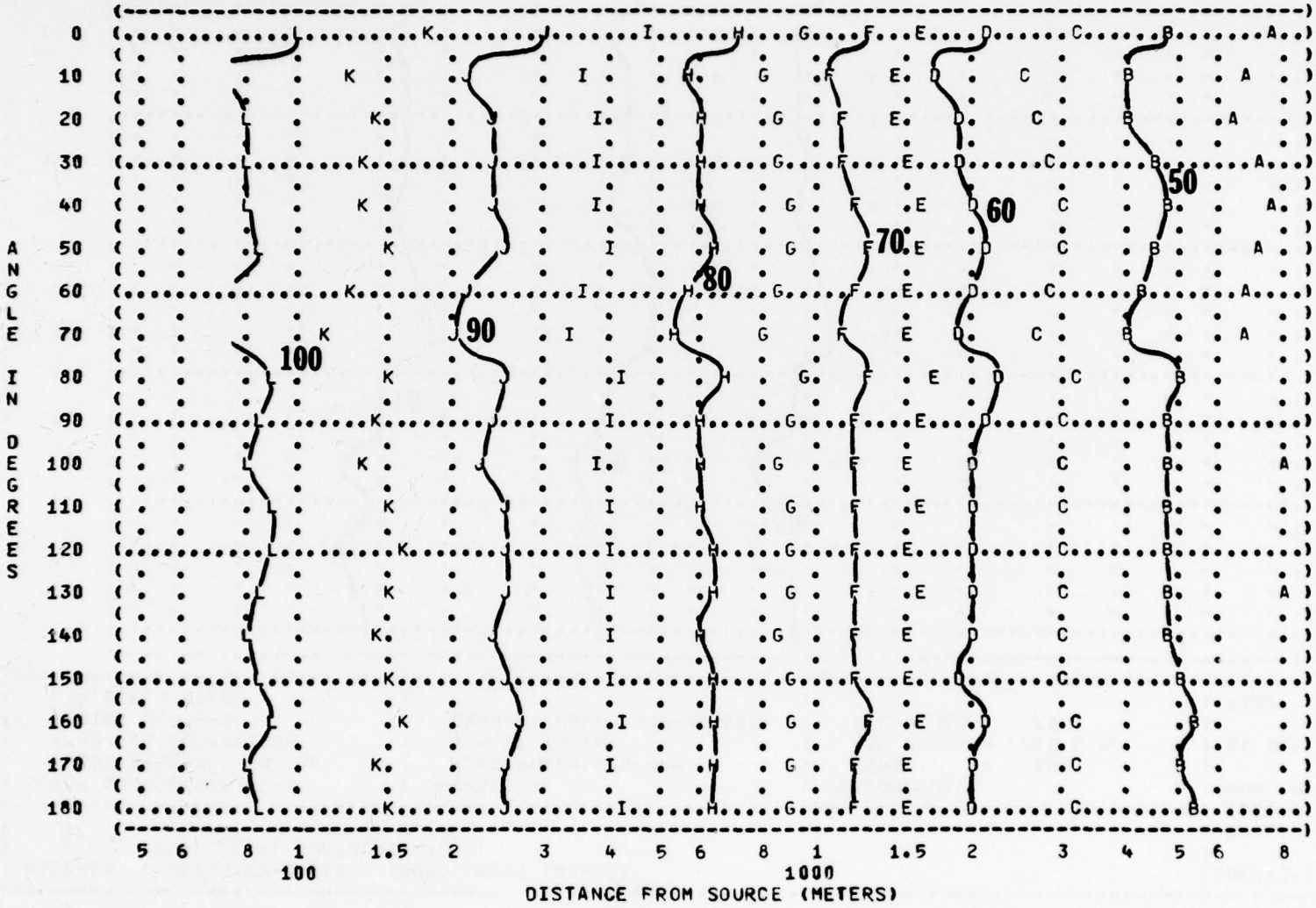
FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
24 JAN 79
PAGE 13

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95
L	100

FIGURE: 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
14 SEP 78
PAGE 14

POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75

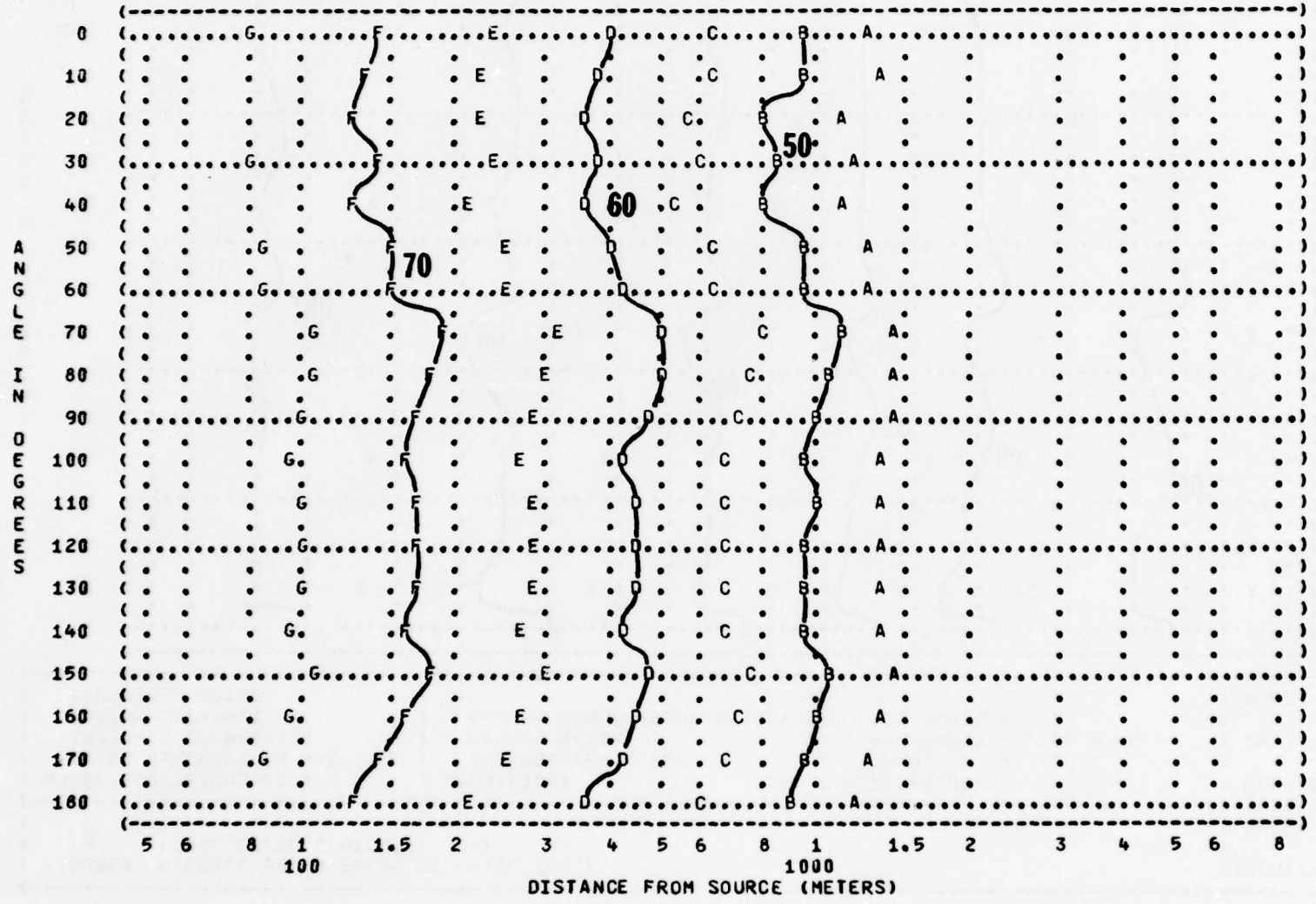


FIGURE 5: C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02
24 JAN 79
PAGE 14

POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80

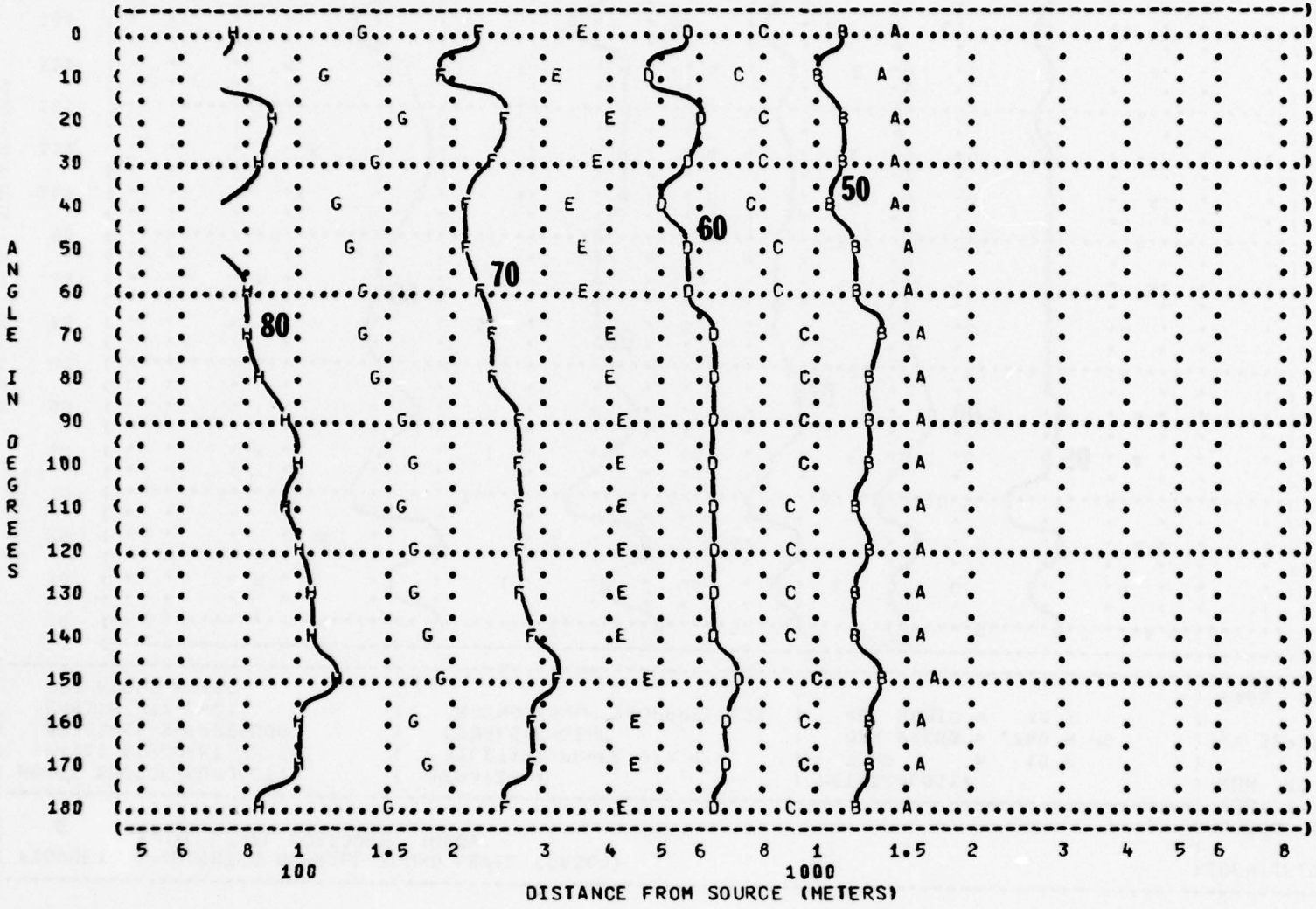


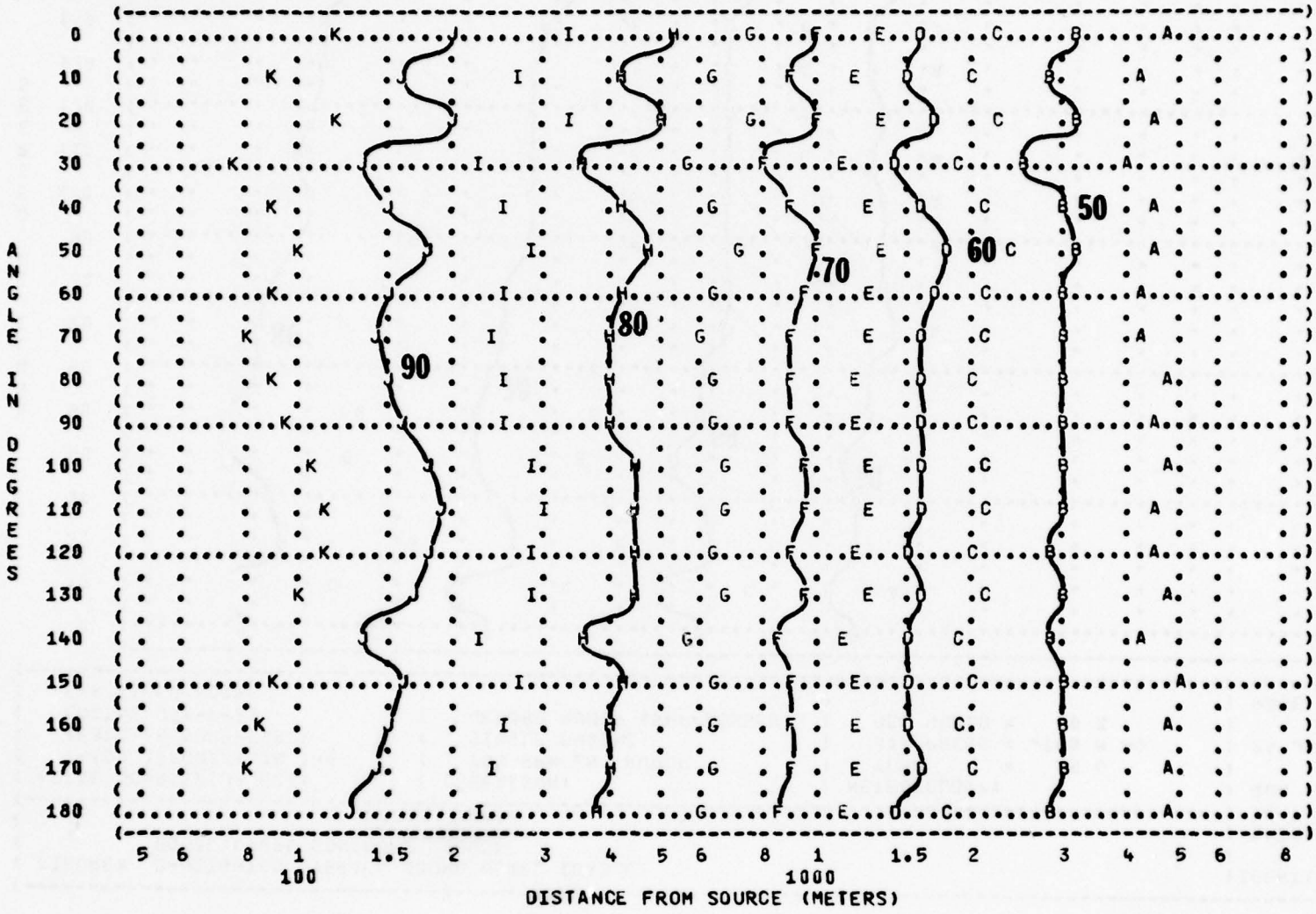
FIGURE: 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
14 SEP 78
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POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95

FIGURE: 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
24 JAN 79
PAGE 14

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95
L	100

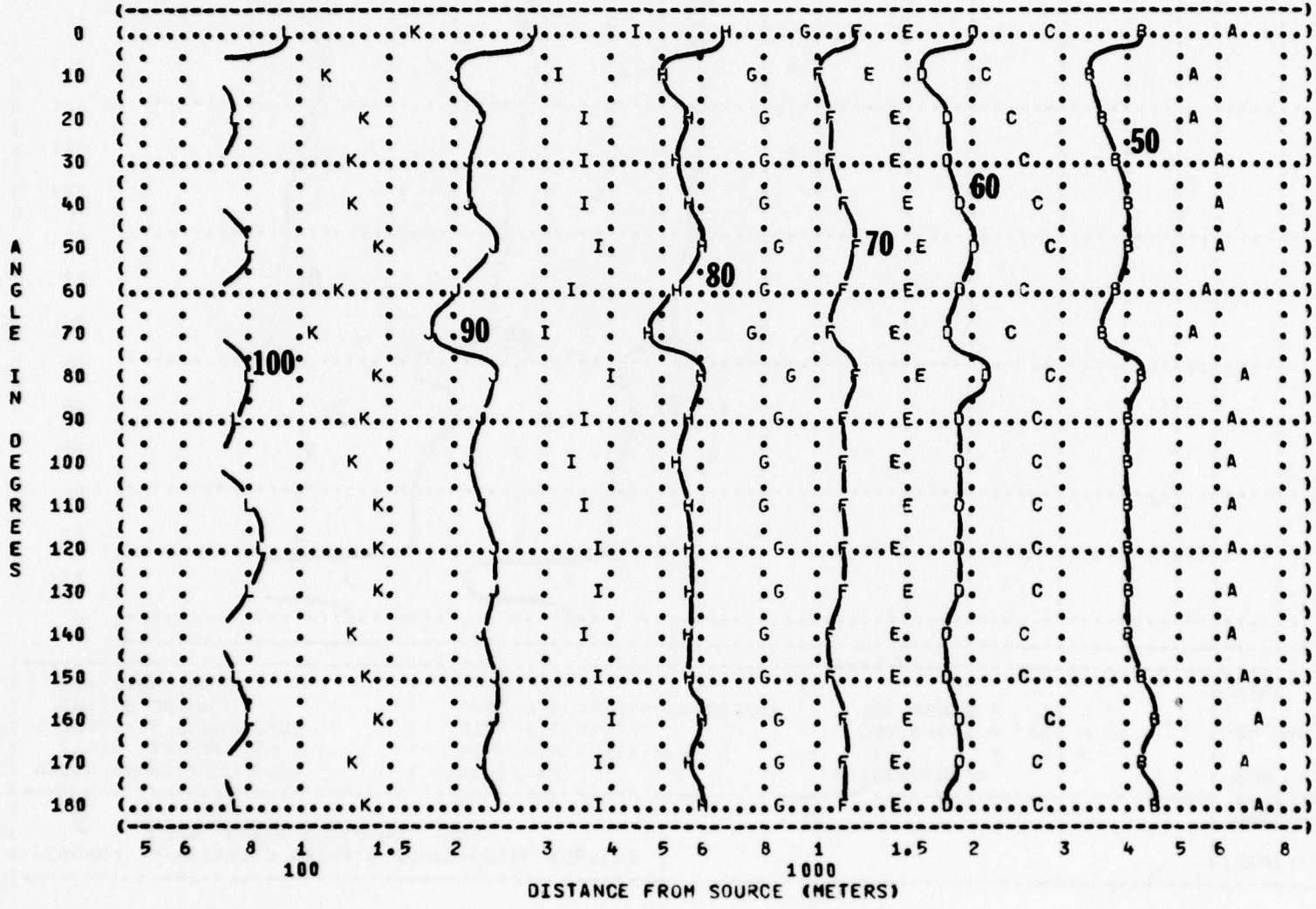


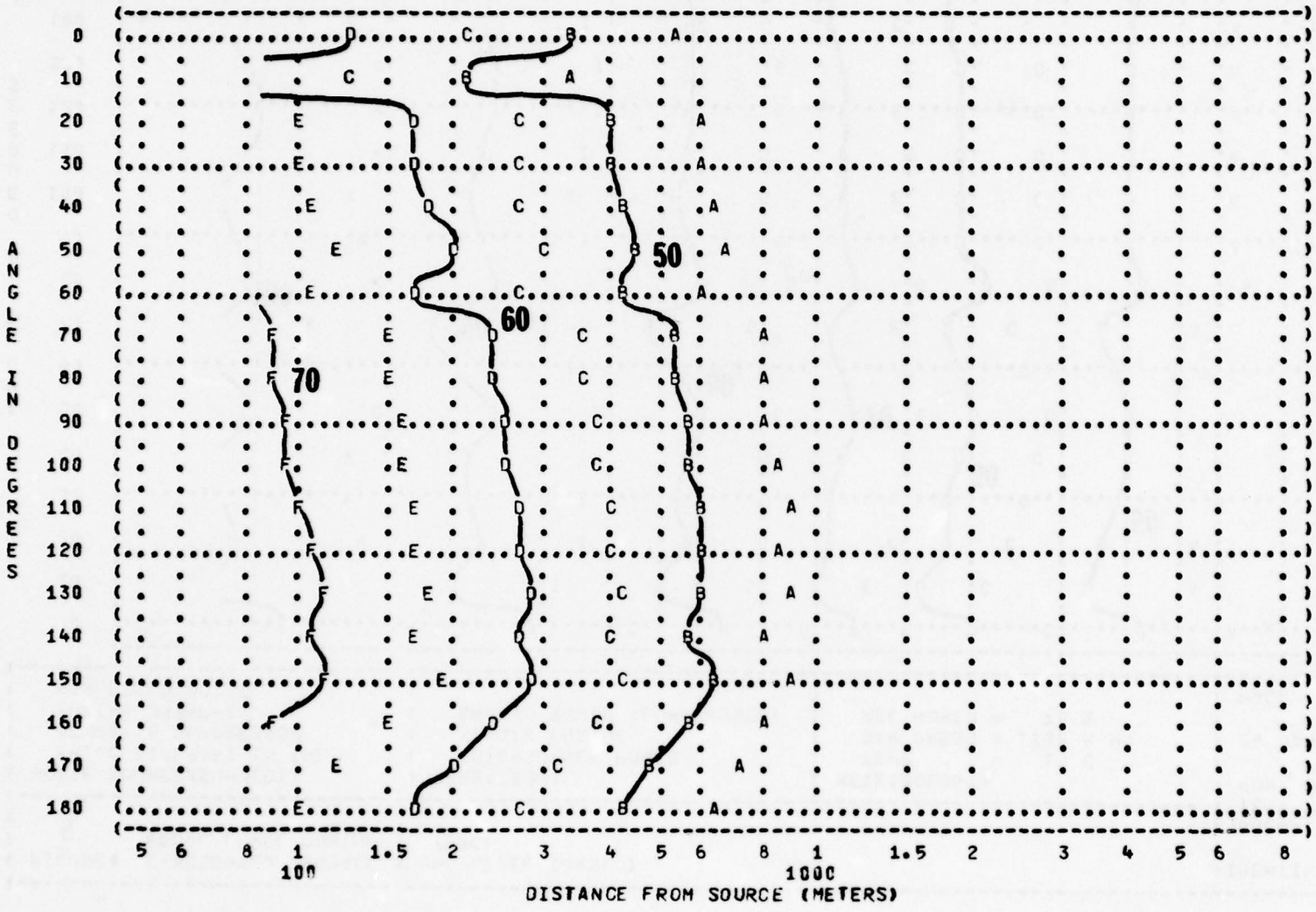
FIGURE: 6 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
24 JAN 79
PAGE 15

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70

FIGURE 6: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02
24 JAN 79
PAGE 15

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80

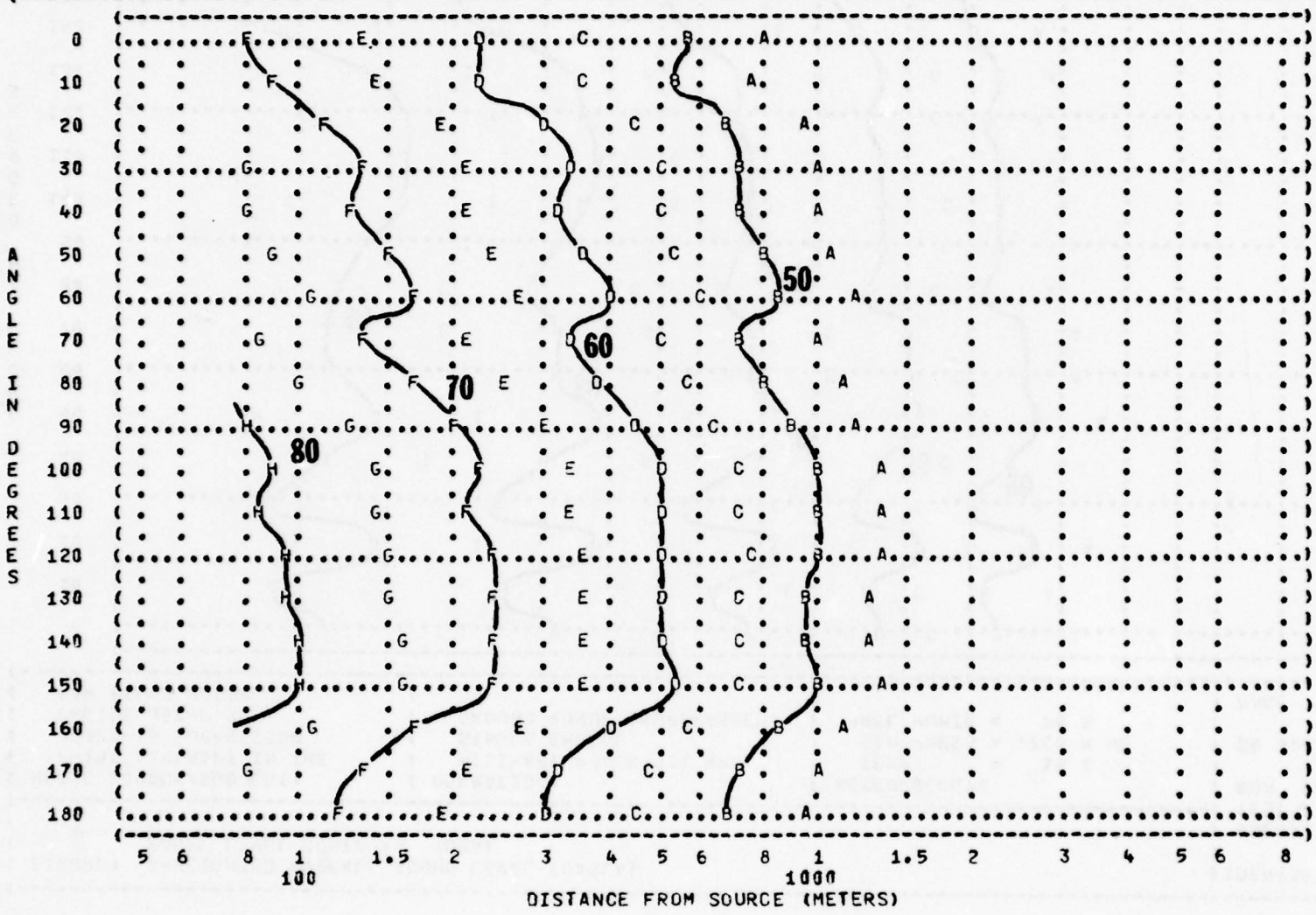


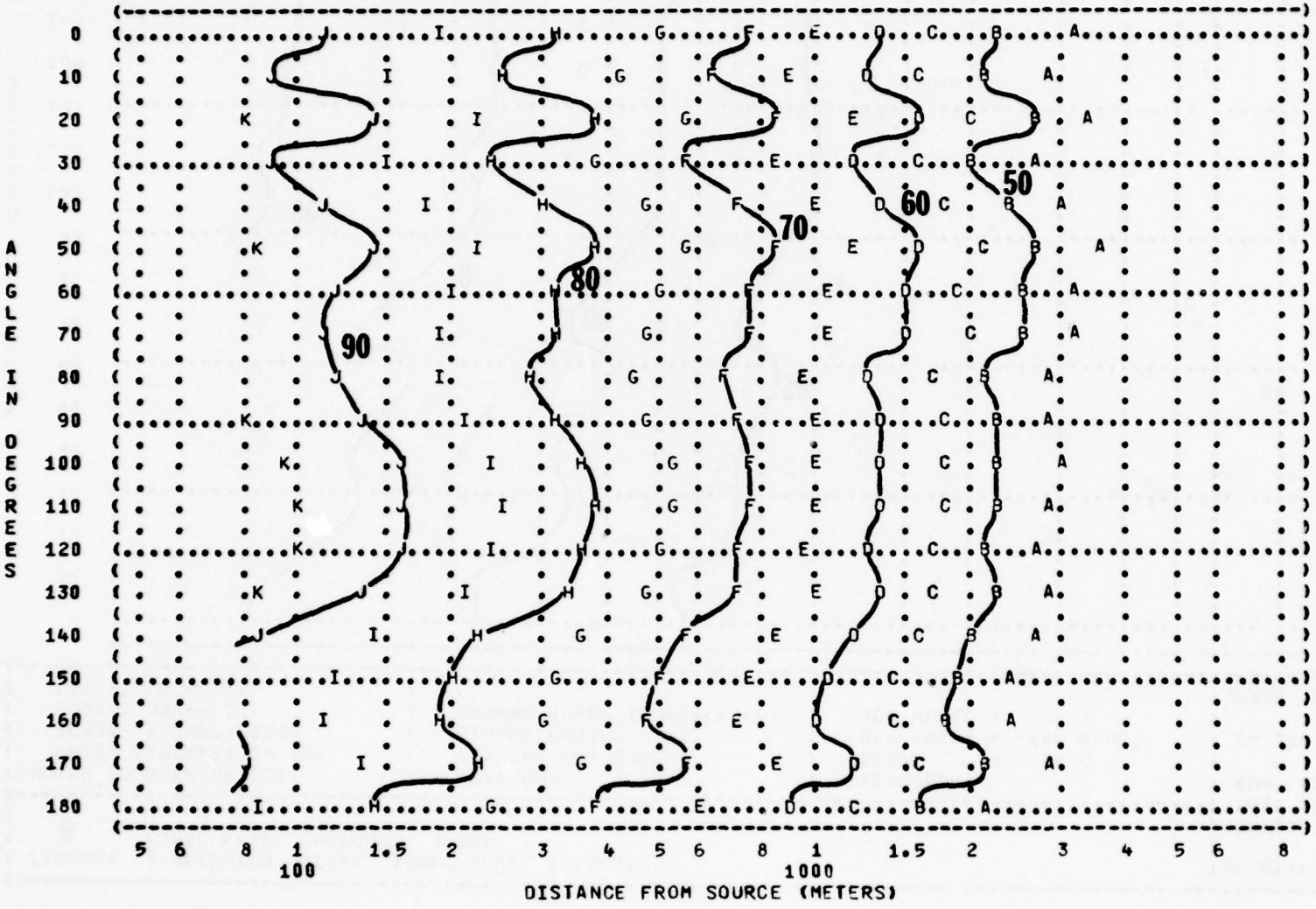
FIGURE: 6 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
24 JAN 79
PAGE 15



POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95

FIGURE: 6 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
14 SEP 78
PAGE 15

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95

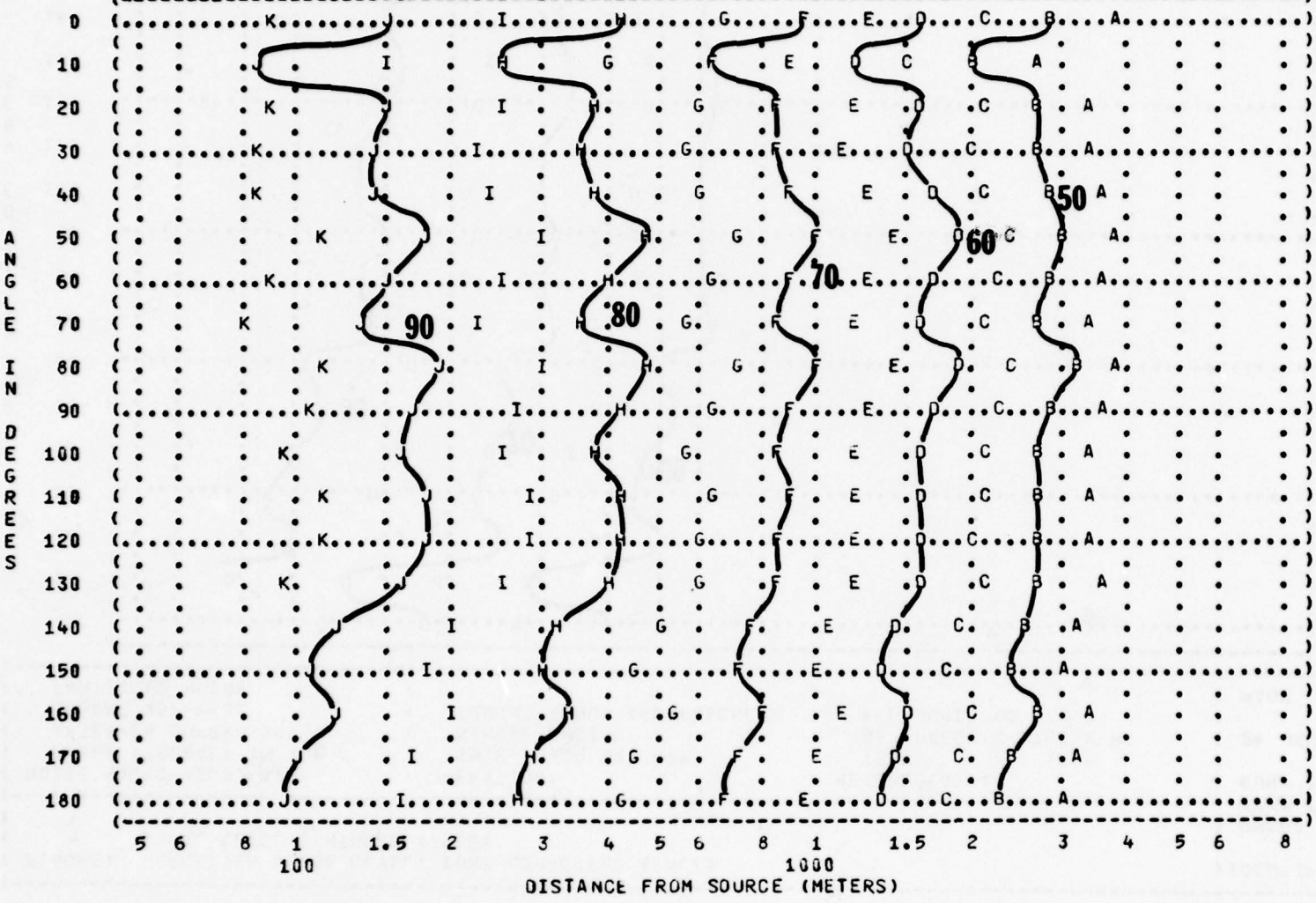


FIGURE 7: PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
24 JAN 79
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NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85

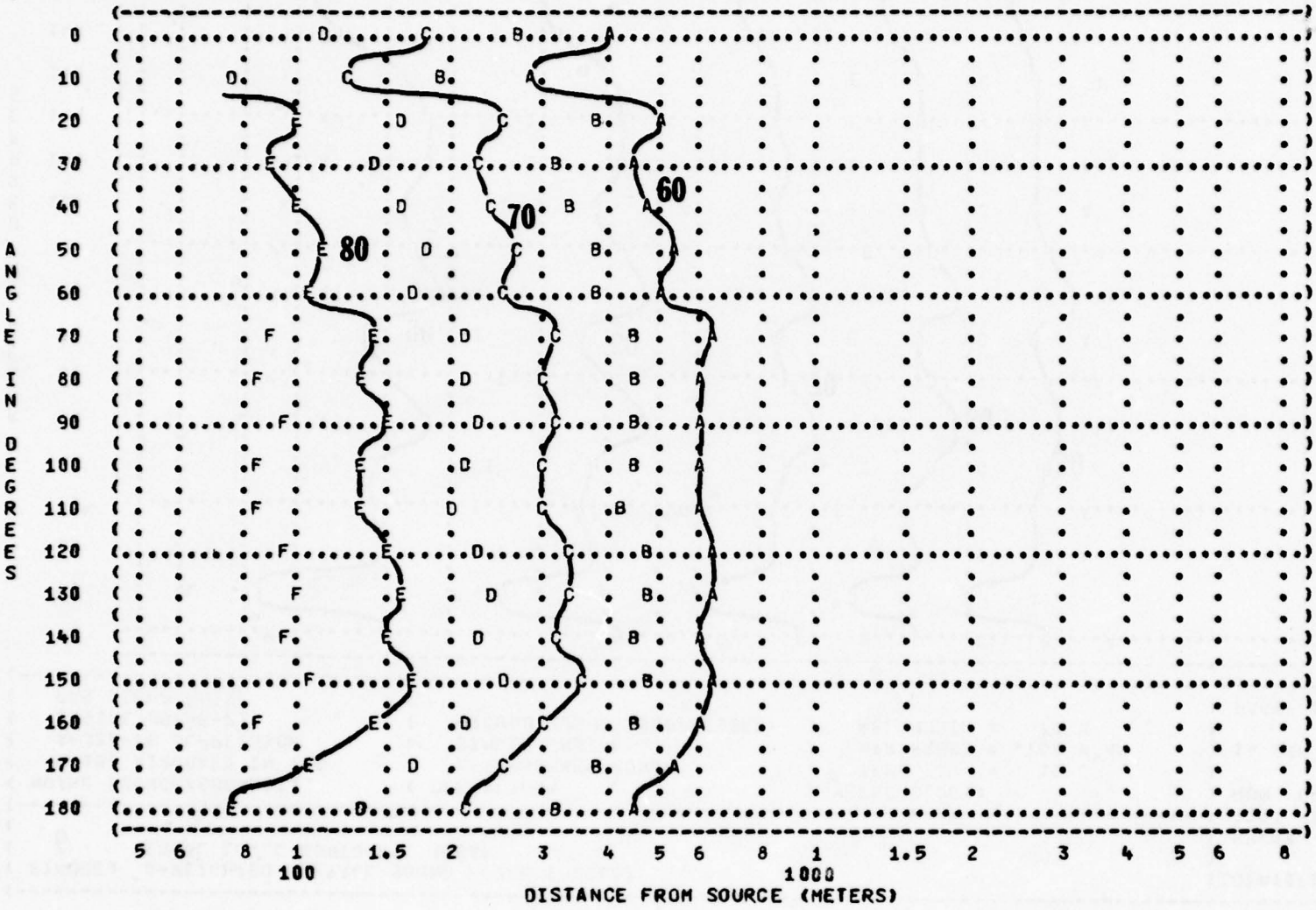


FIGURE: 7 PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: 70% RPM ENG RUNUP SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4 TEST 77-730-001 RUN 02 24 JAN 79 PAGE 16

POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95

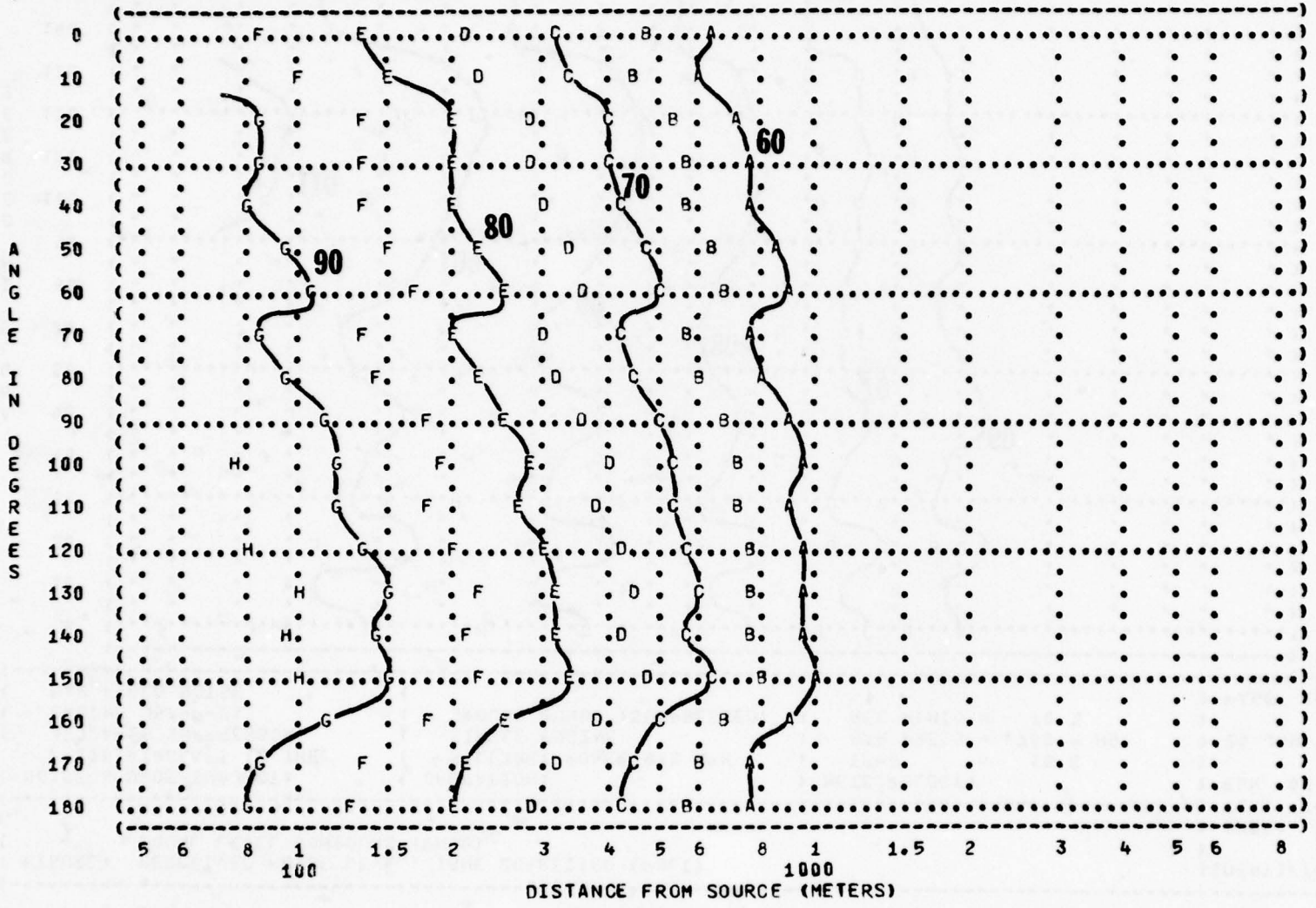


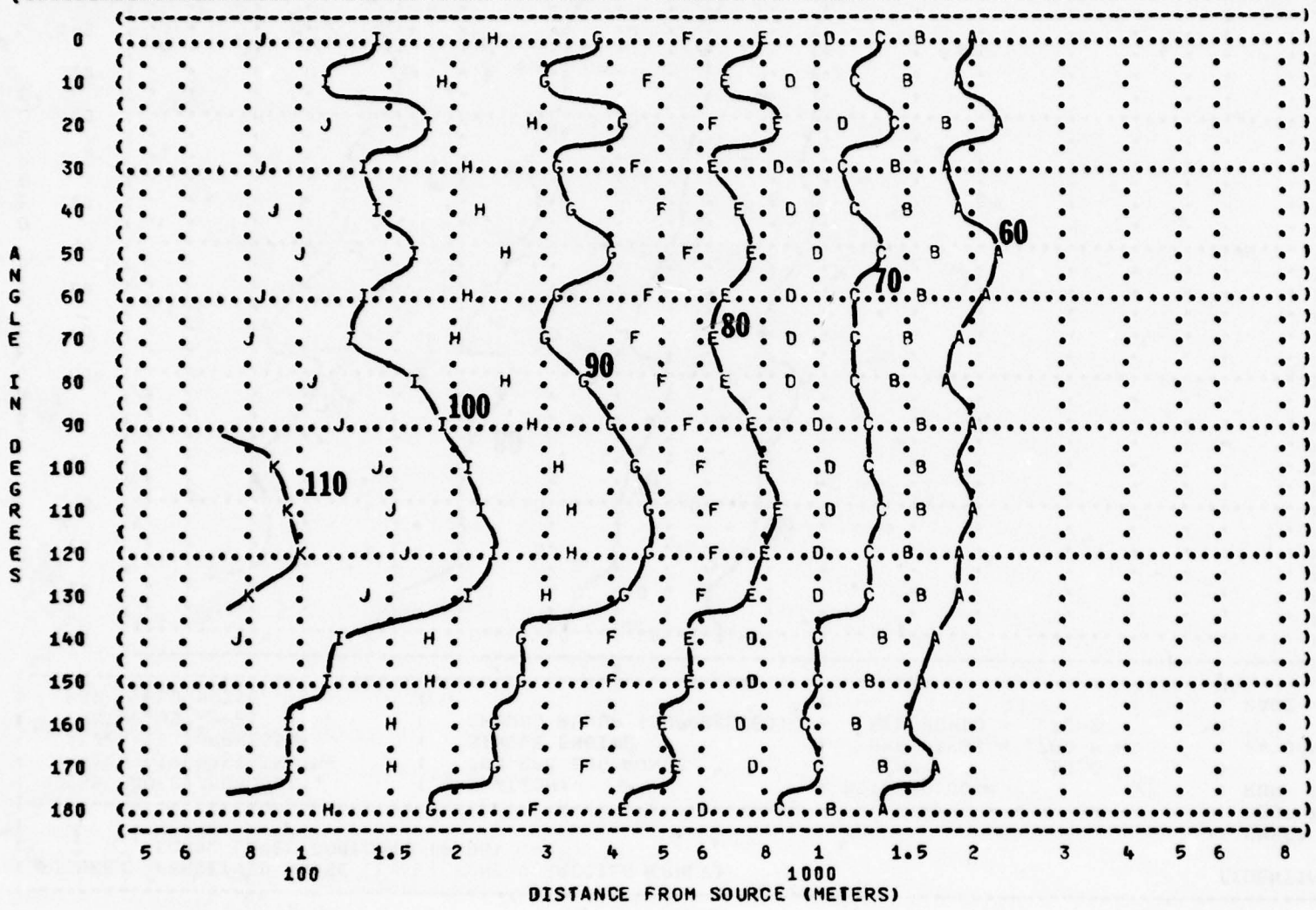
FIGURE 7 PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
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PAGE 16



POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95
I	100
J	105
K	110

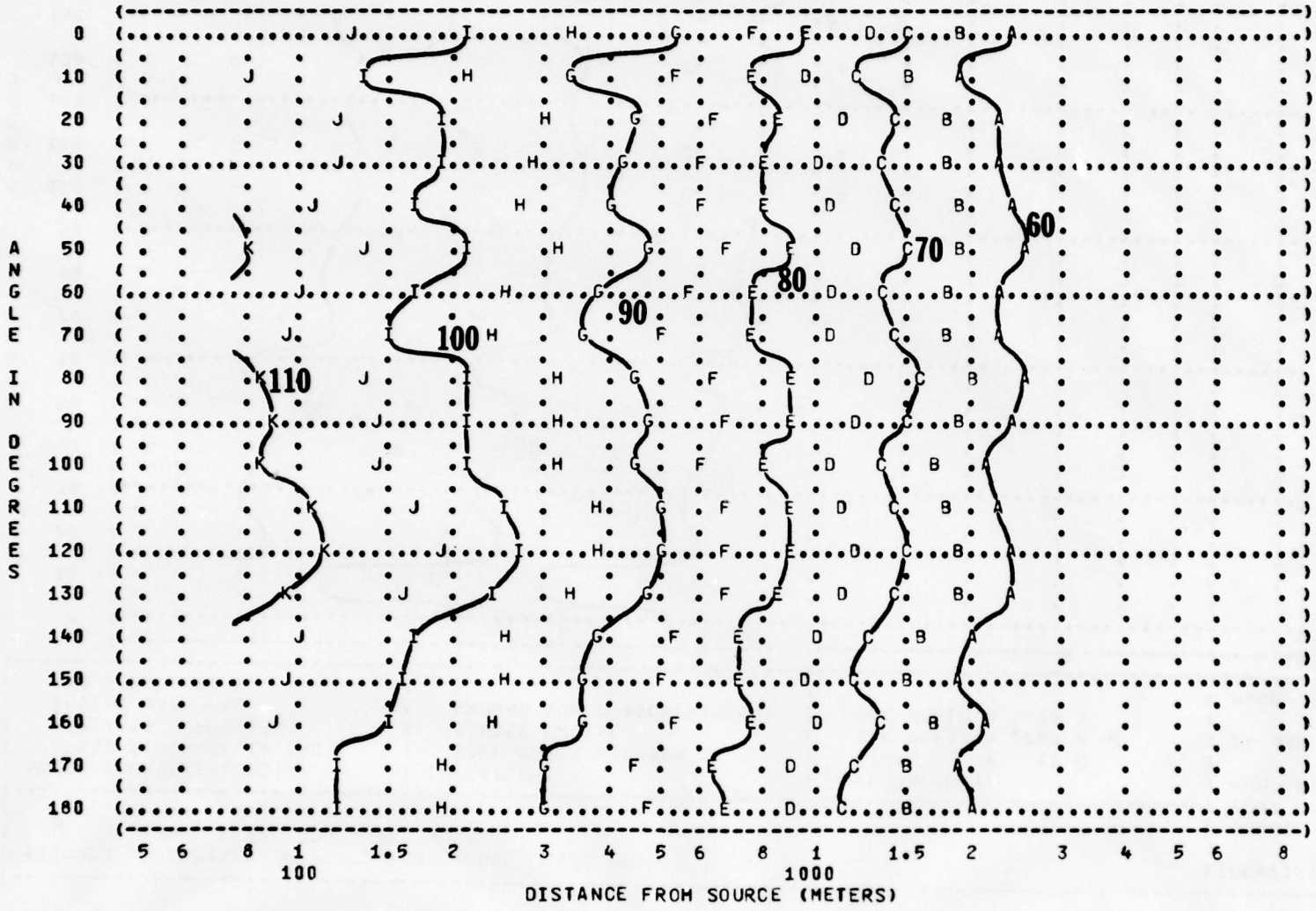
FIGURE 7: PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
24 JAN 79
PAGE 16

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95
I	100
J	105
K	110

FIGURE: 8 PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
24 JAN 79
PAGE 17

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

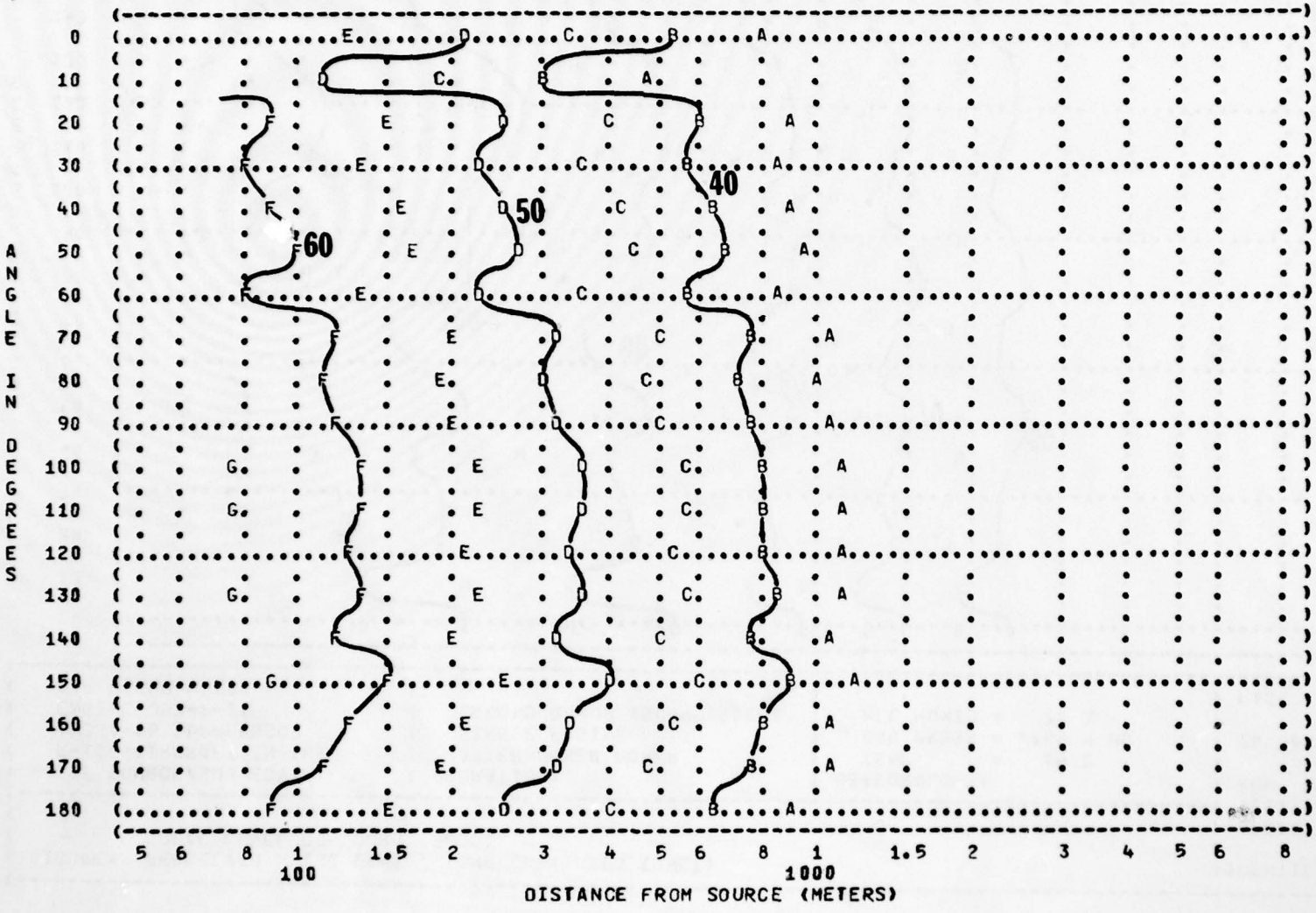


FIGURE: 8

PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)
EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02
24 JAN 79
PAGE 17

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

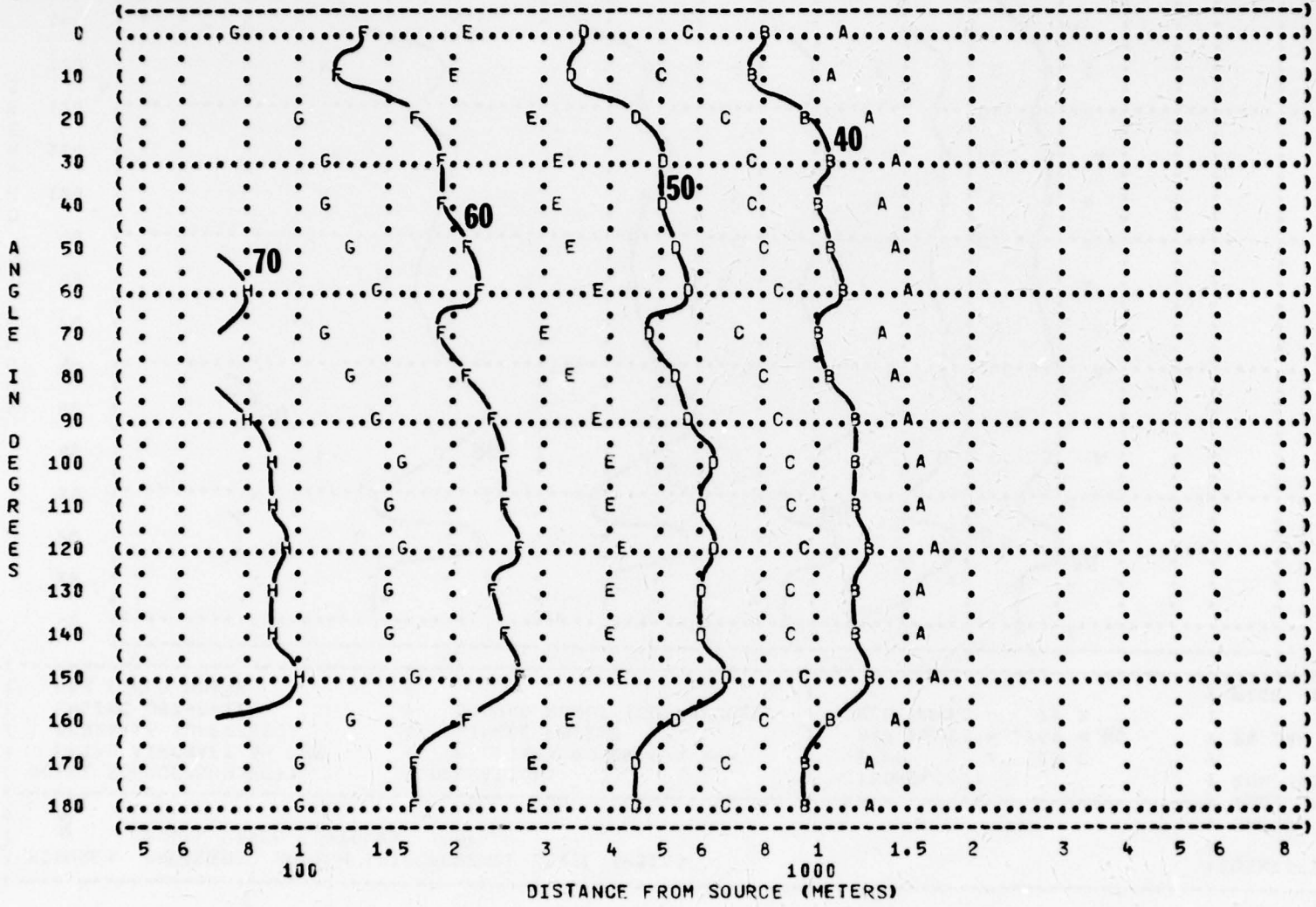


FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
24 JAN 79
PAGE 17

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

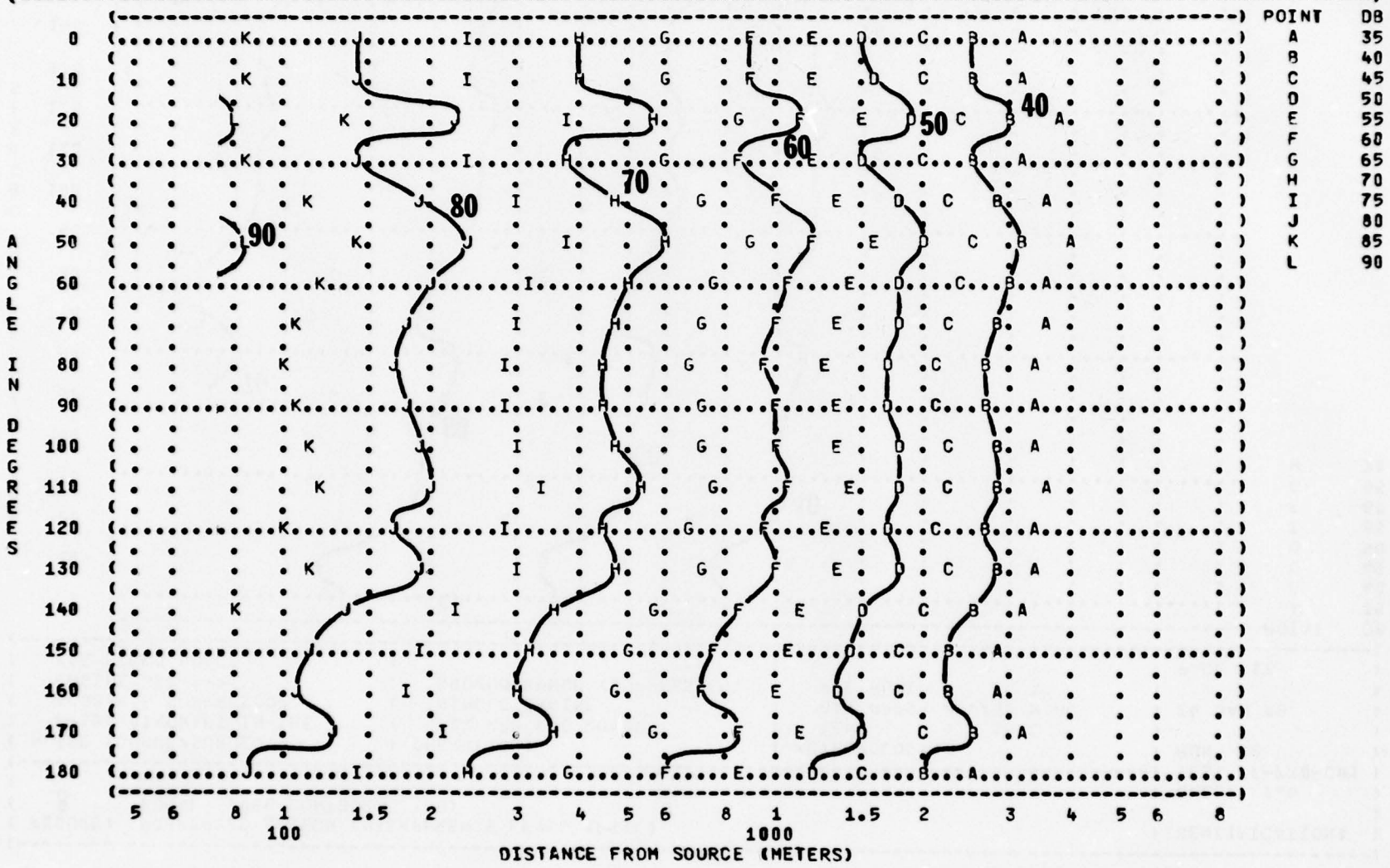


FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
24 JAN 79
PAGE 17

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

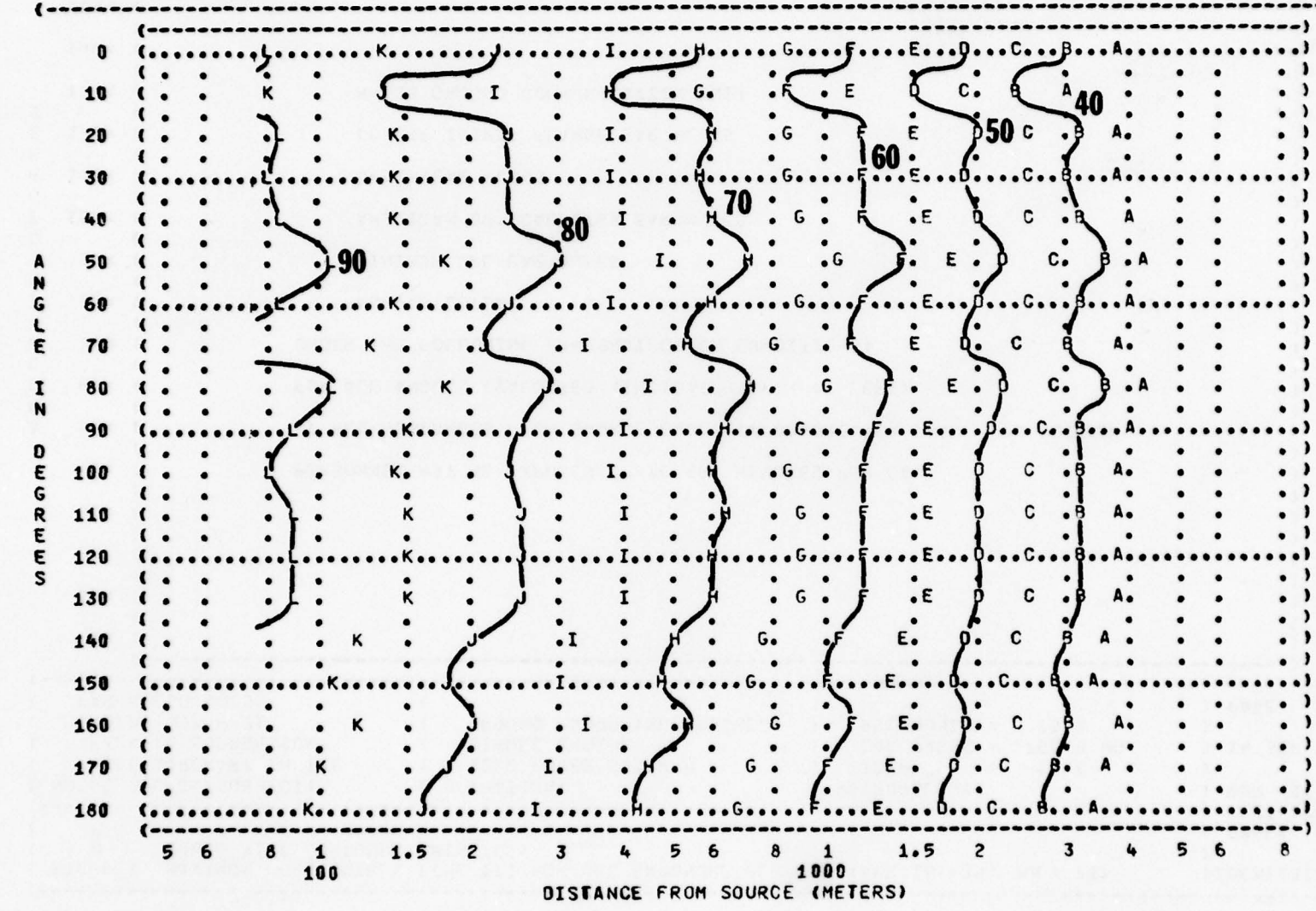


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
14 SEP 78
PAGE 7

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

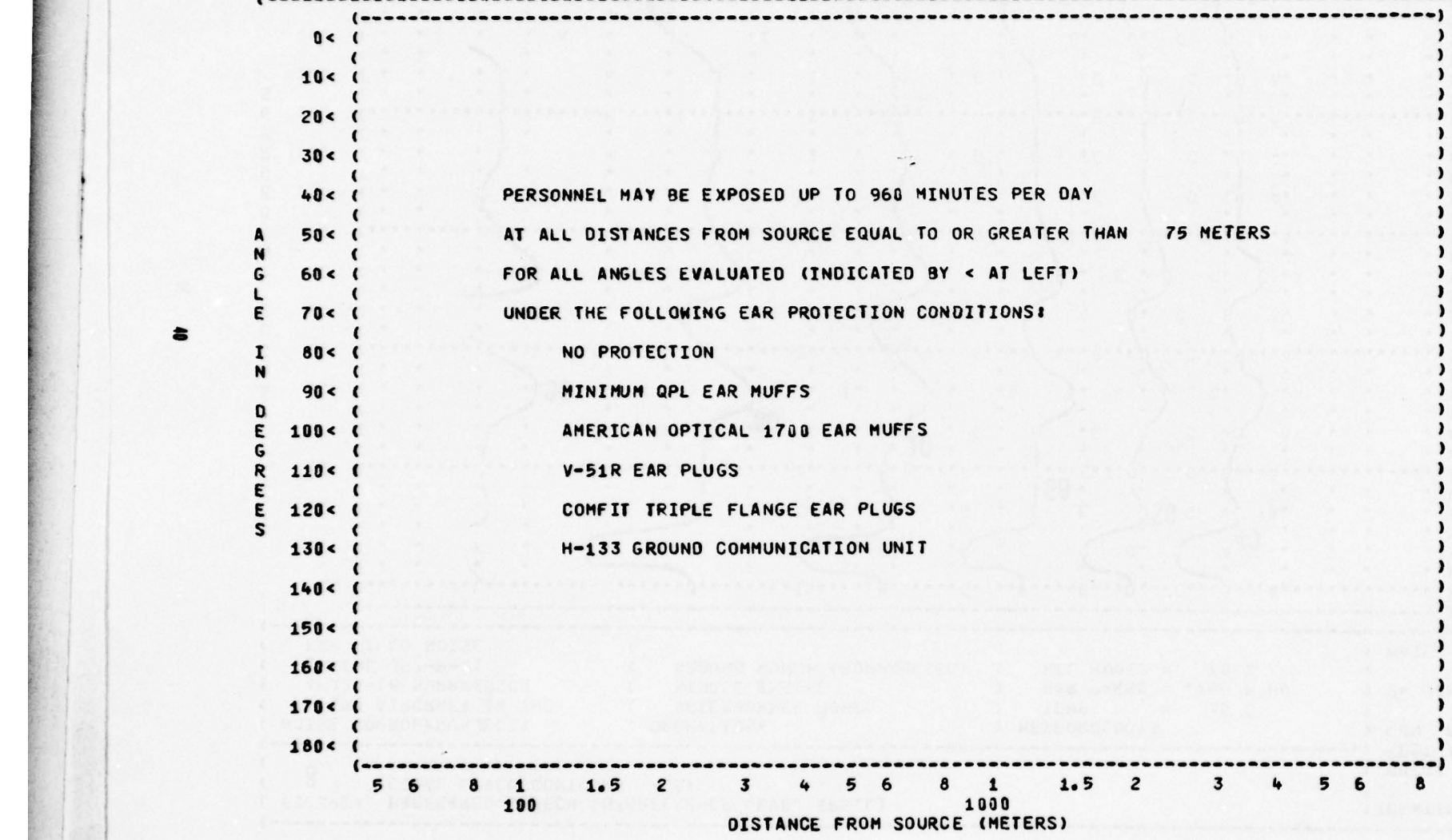


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02

14 SEP 78

PAGE 7

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT A MIN 960

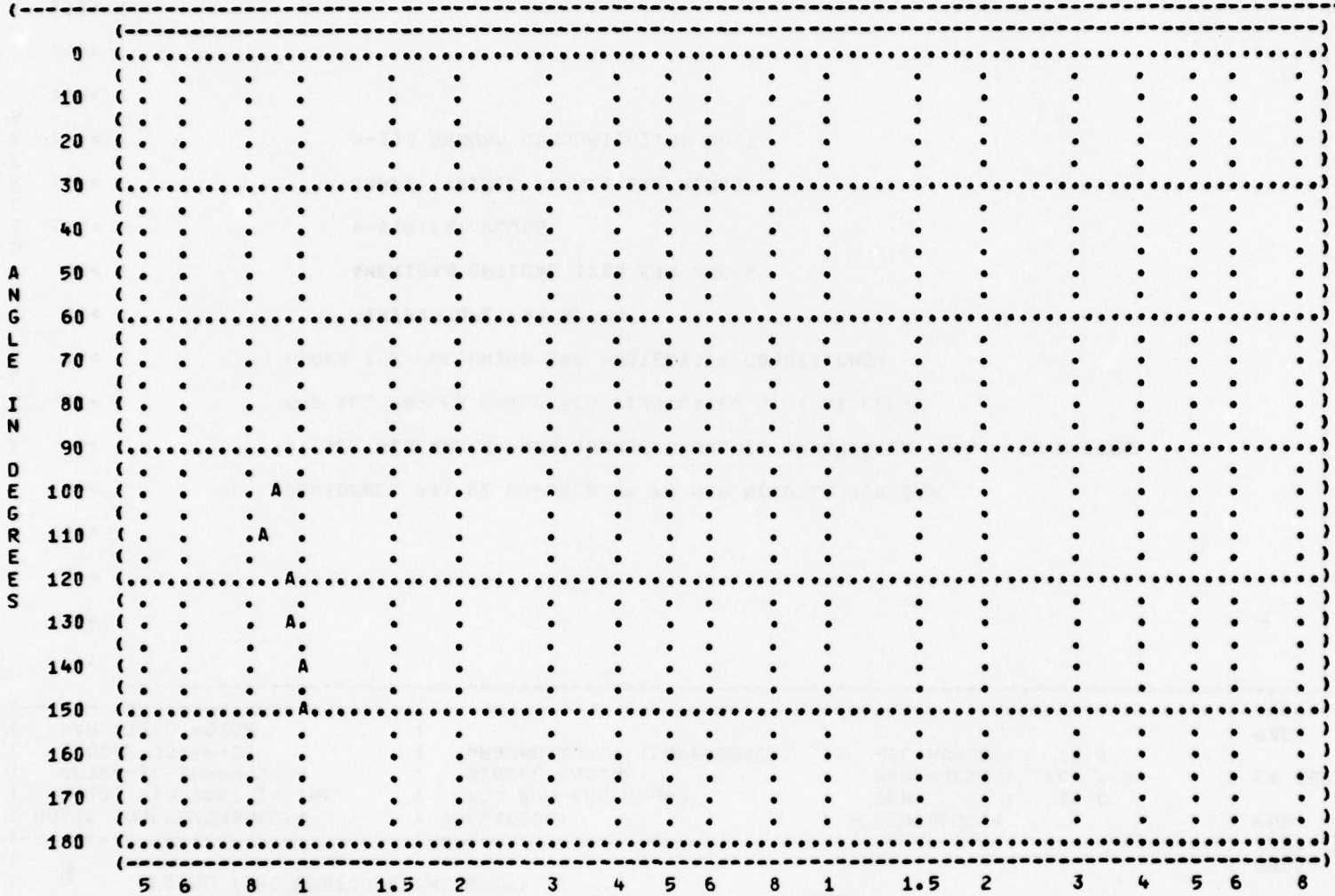


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02
14 SEP 78
PAGE 8

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

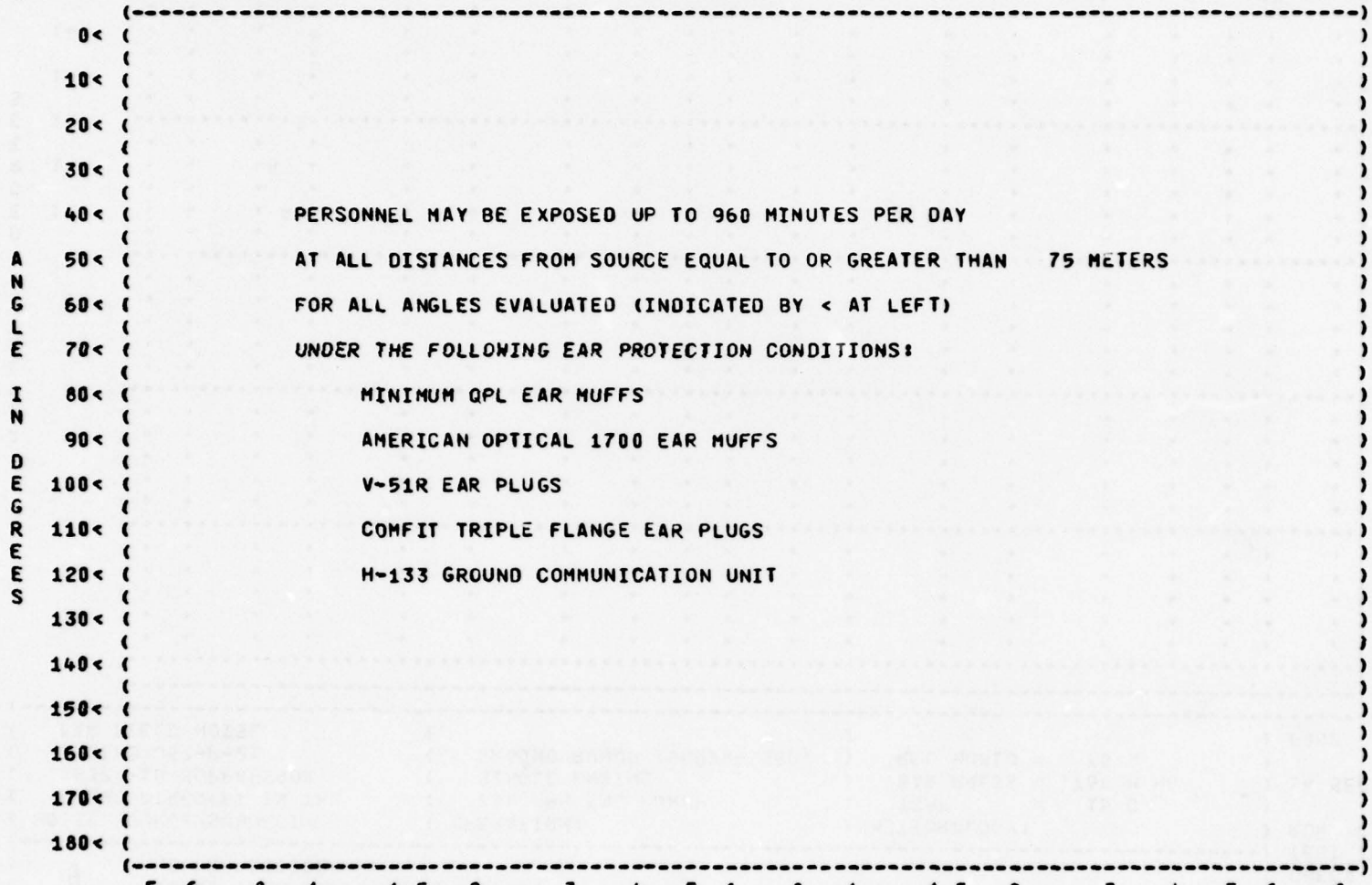


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
24 JAN 79
PAGE 7

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	MIN
A	960
B	480
C	240
D	120
E	60

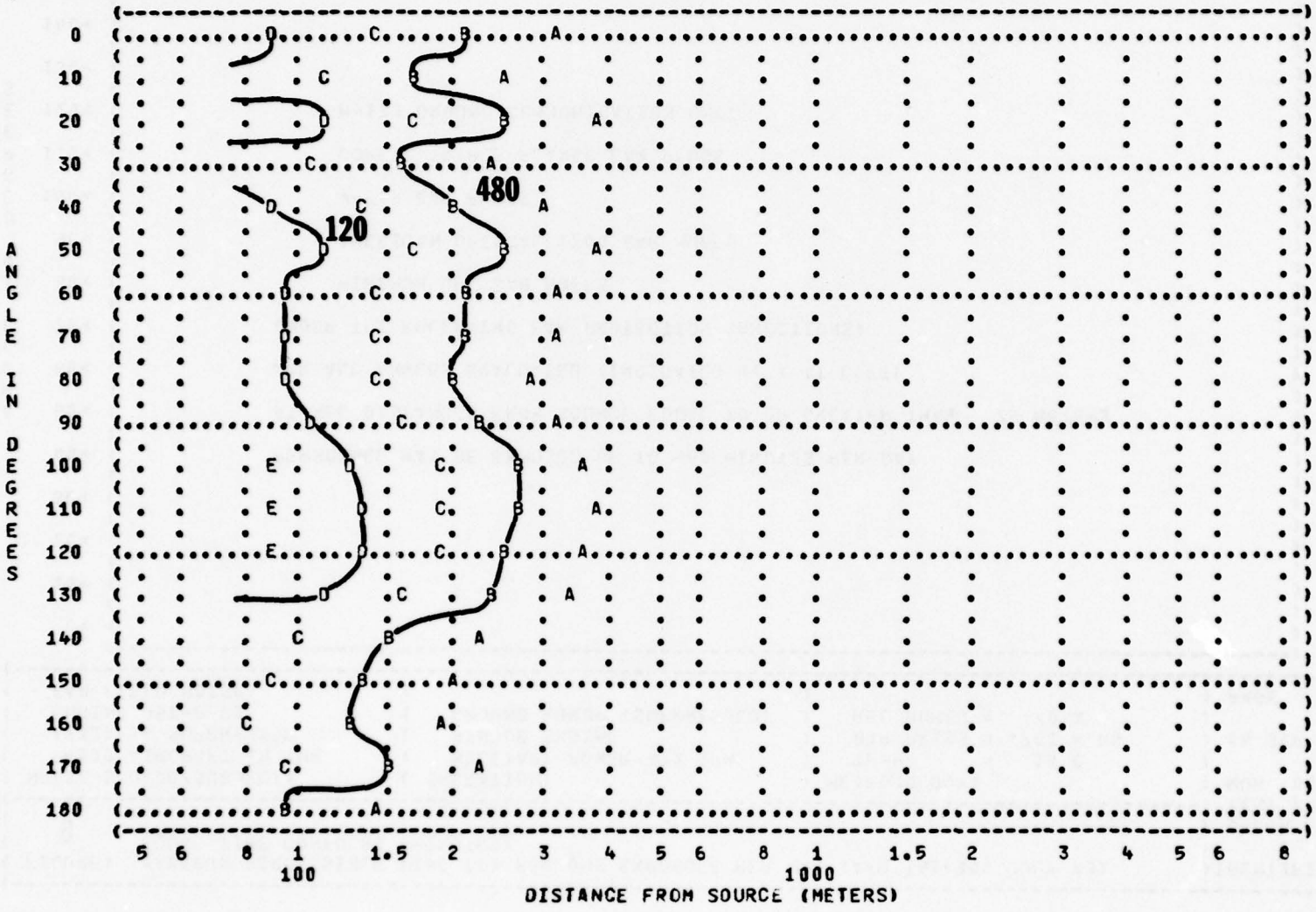


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
14 SEP 78
PAGE 8

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

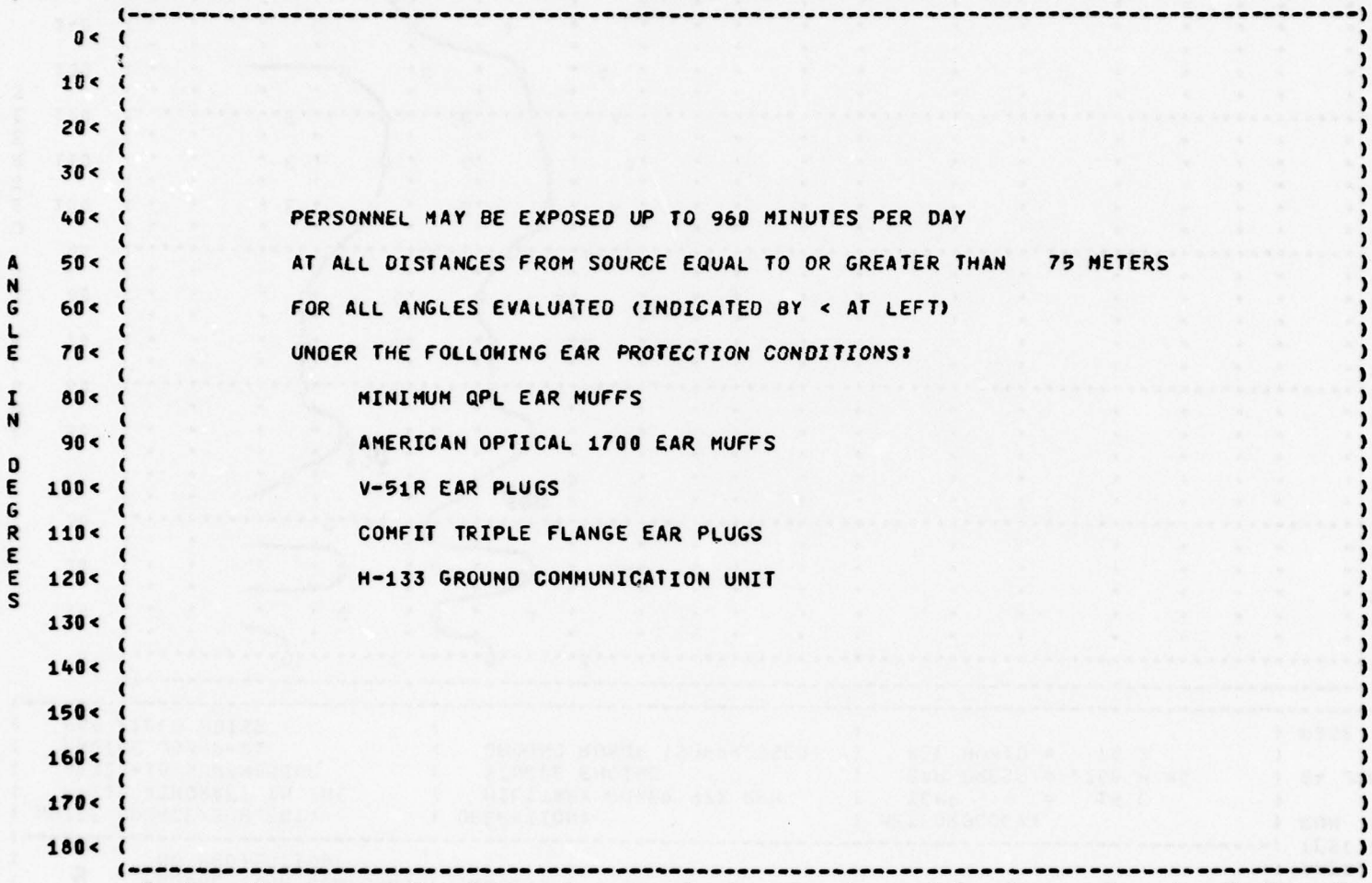


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
24 JAN 79
PAGE 7

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

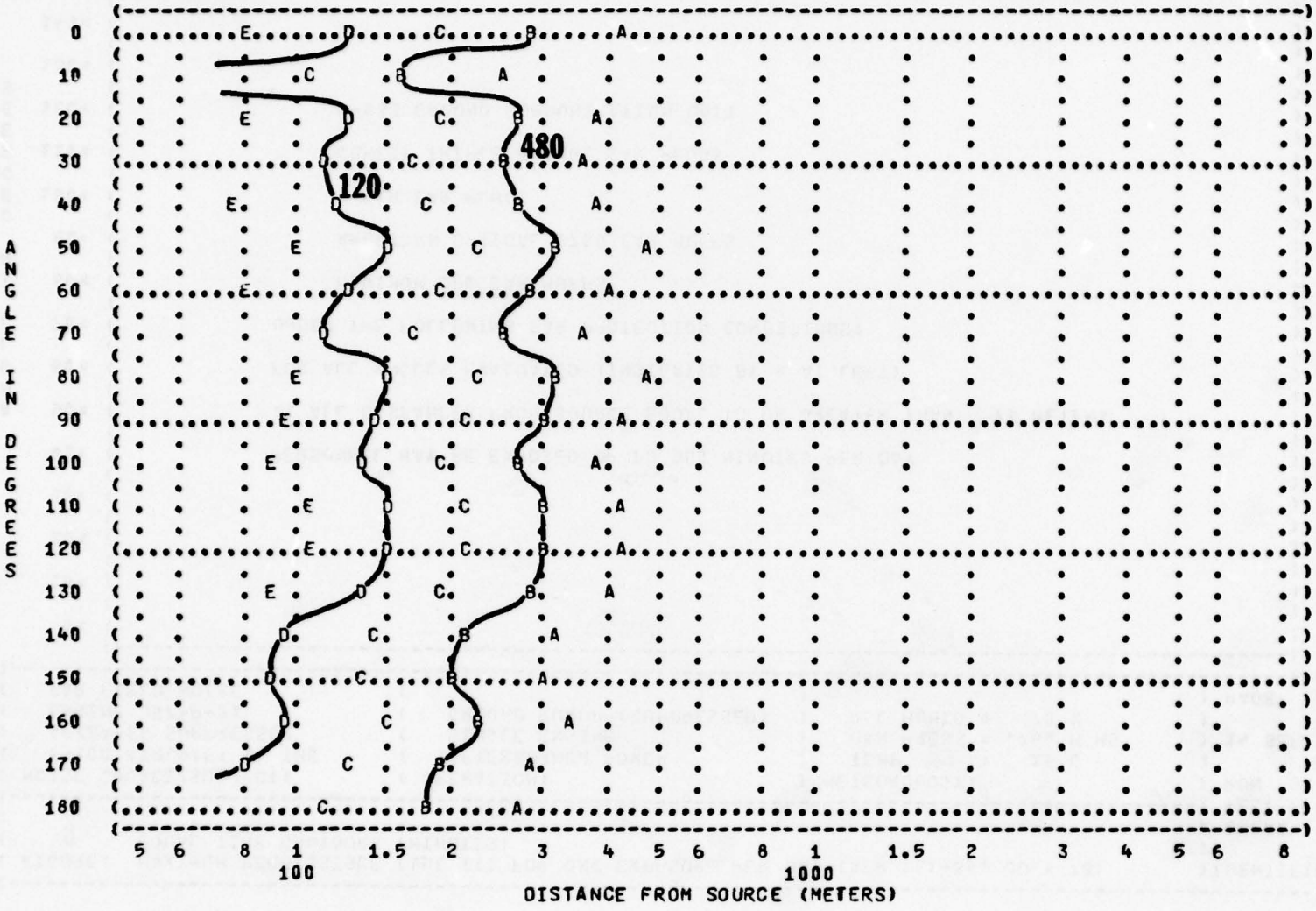


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
14 SEP 78
PAGE 8

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

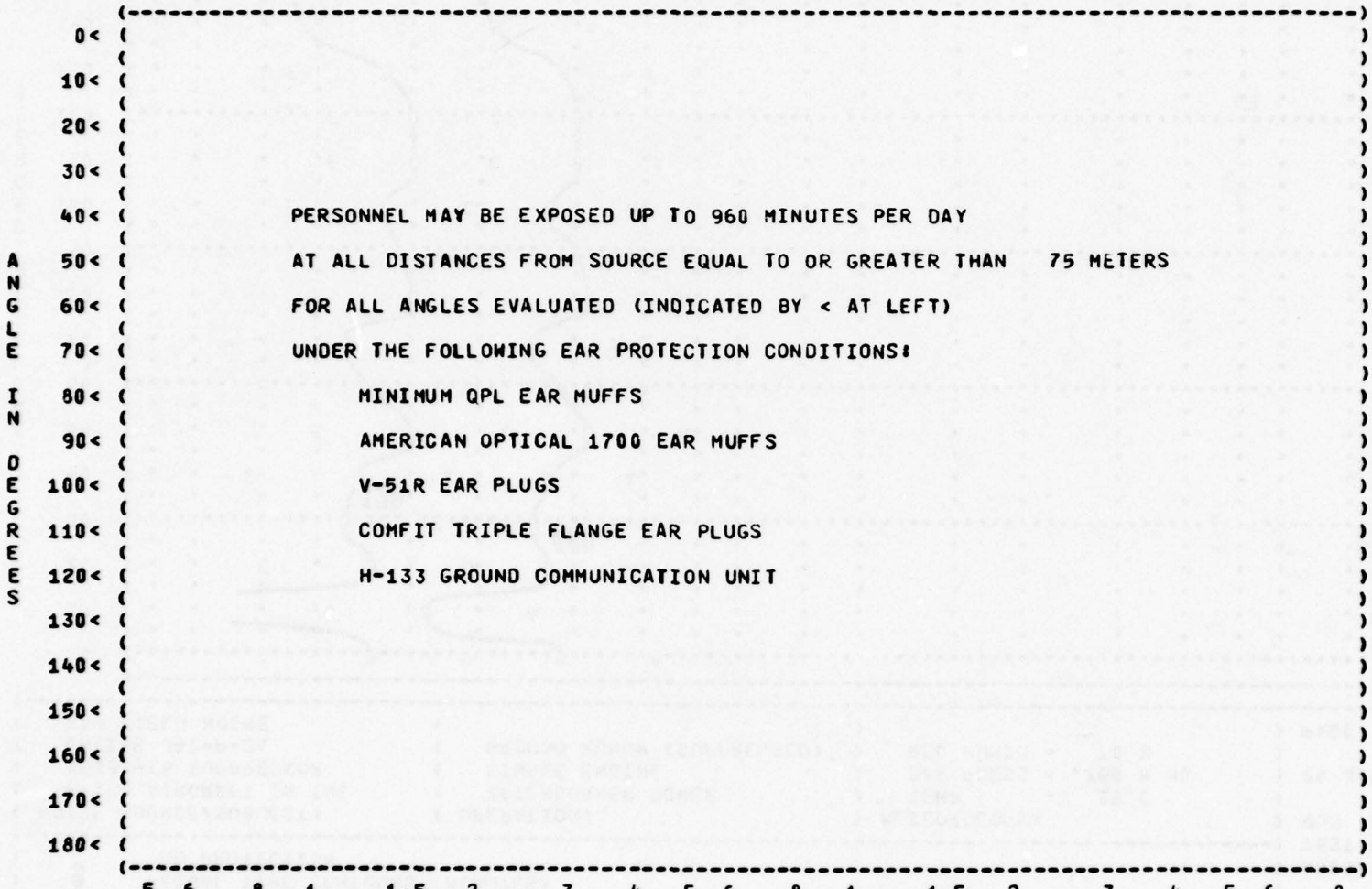


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: IDLE POWER 53% RPM; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4; TEST 77-730-001; RUN 01; 24 JAN 79; PAGE 18

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

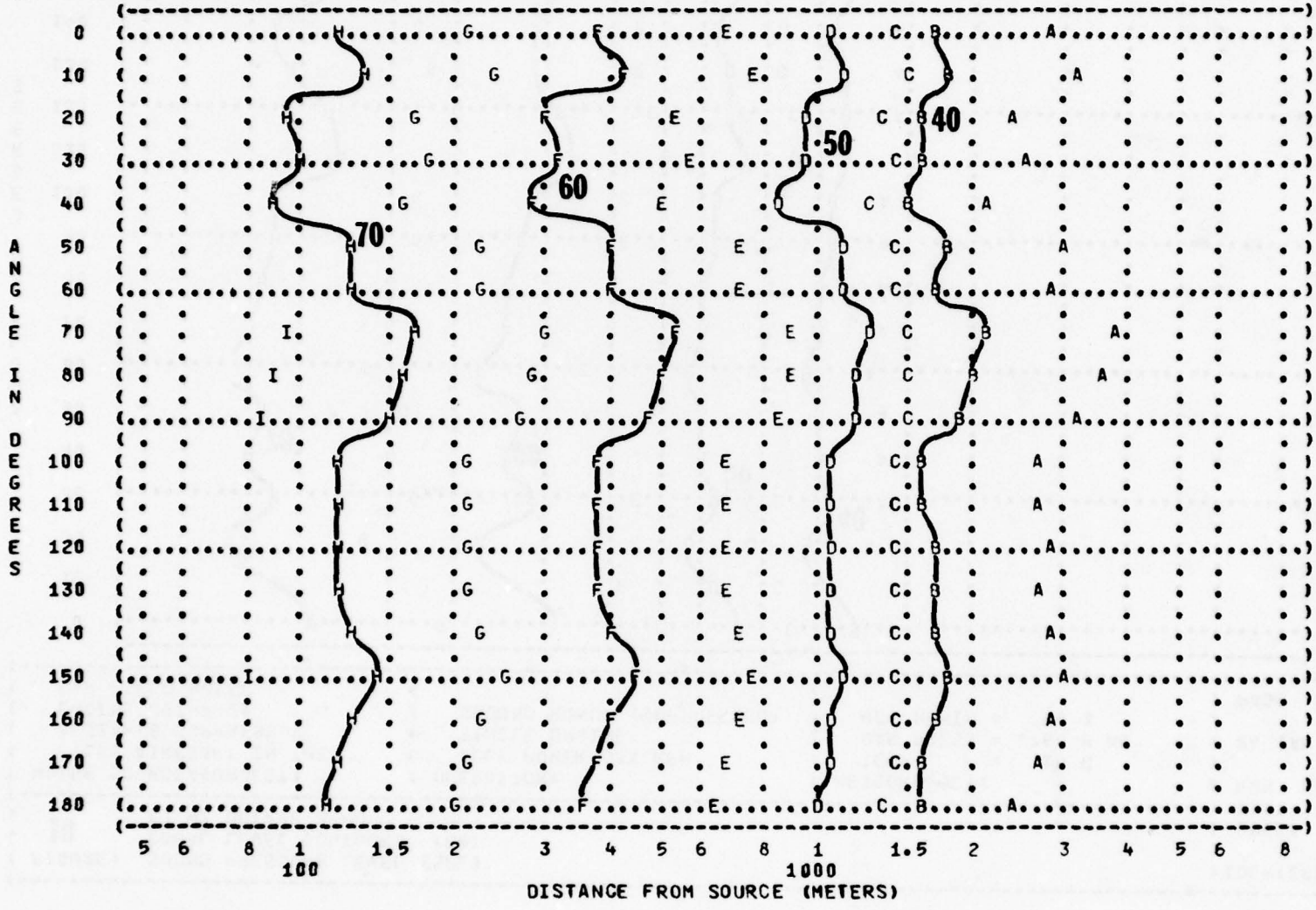


FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
24 JAN 79
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NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

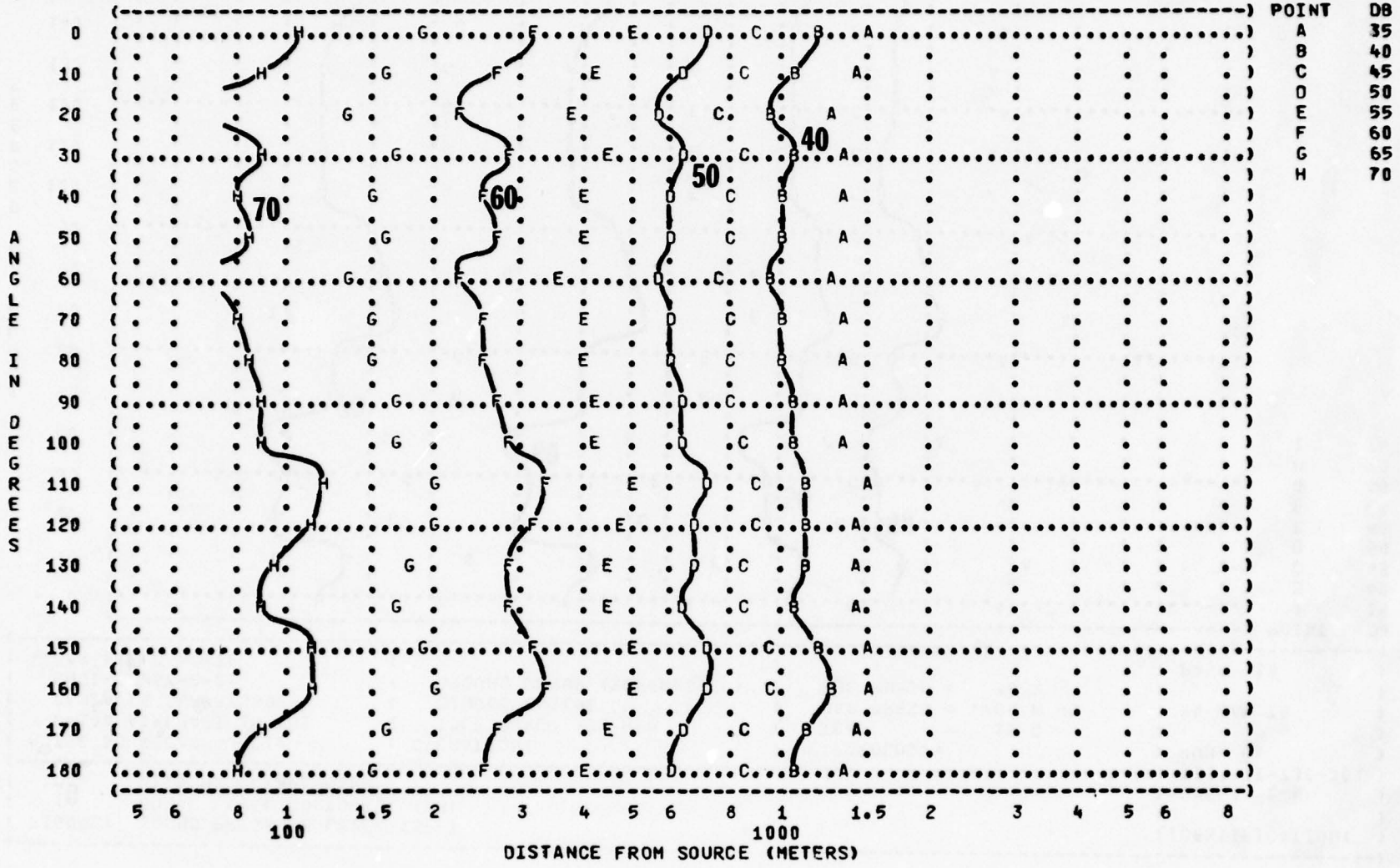


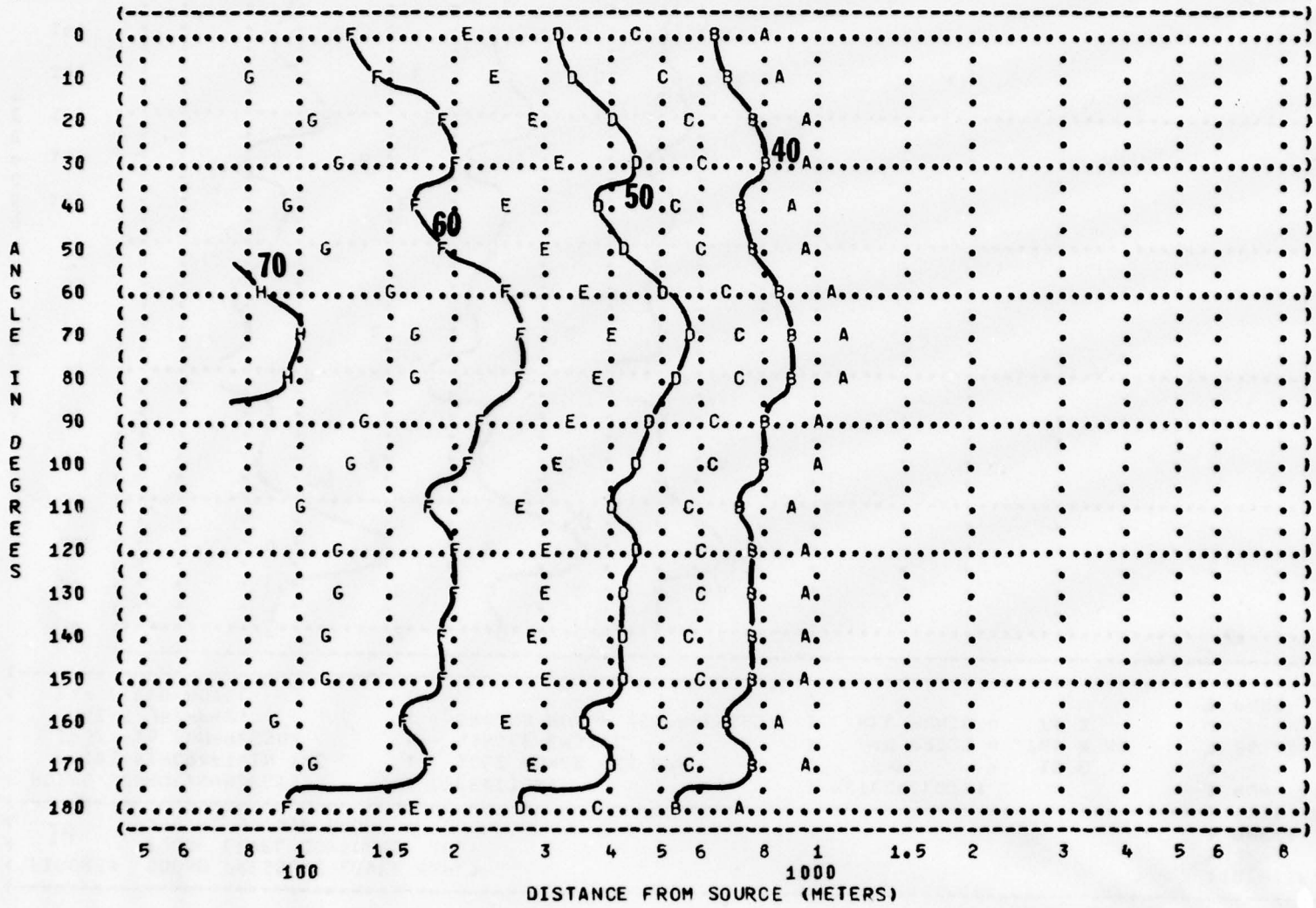
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: IDLE POWER 53% RPM SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4 TEST 77-730-001 RUN 01 24 JAN 79 PAGE 20



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
24 JAN 79
PAGE 21

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

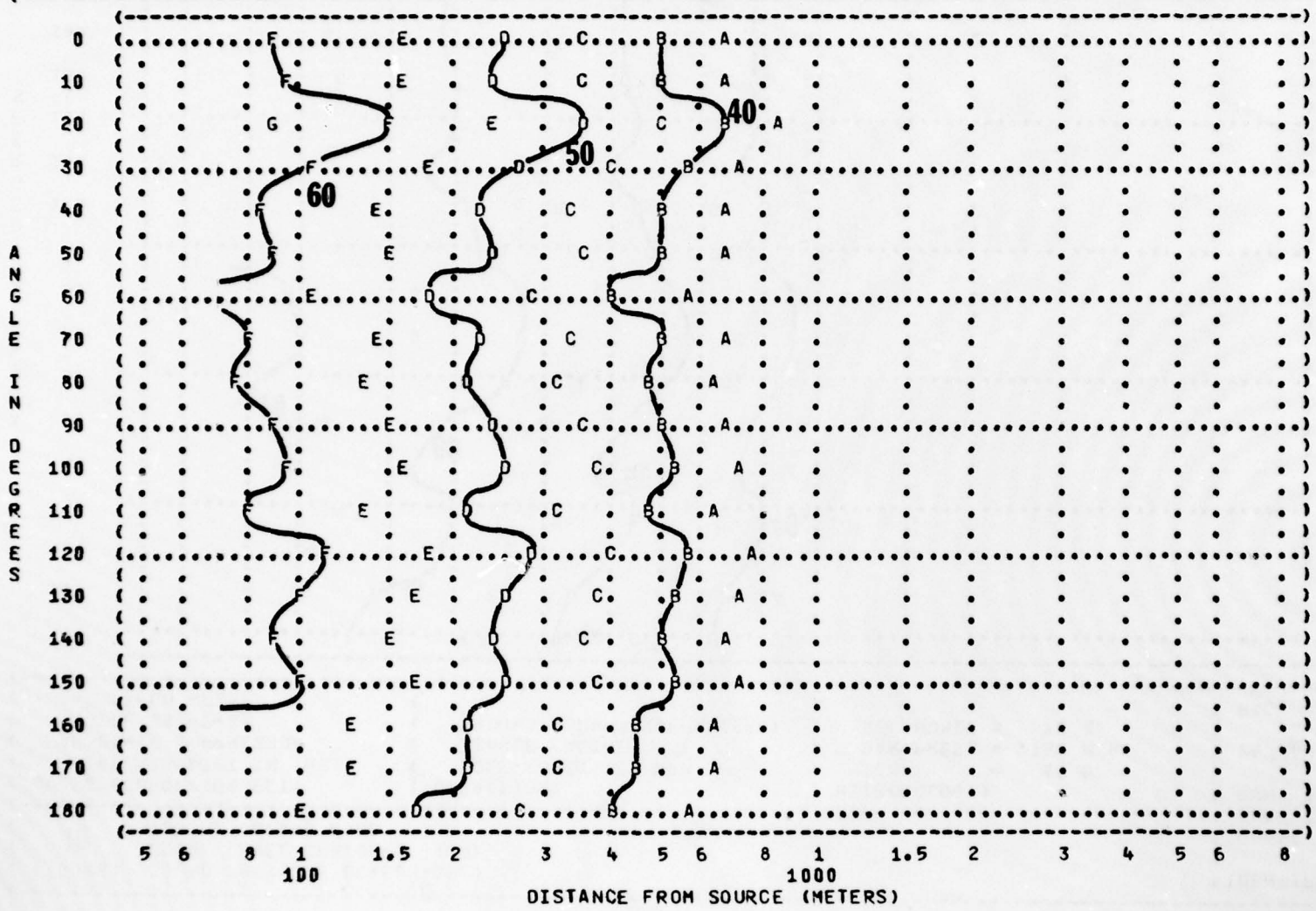


FIGURE: 10 — SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
24 JAN 79
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NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60

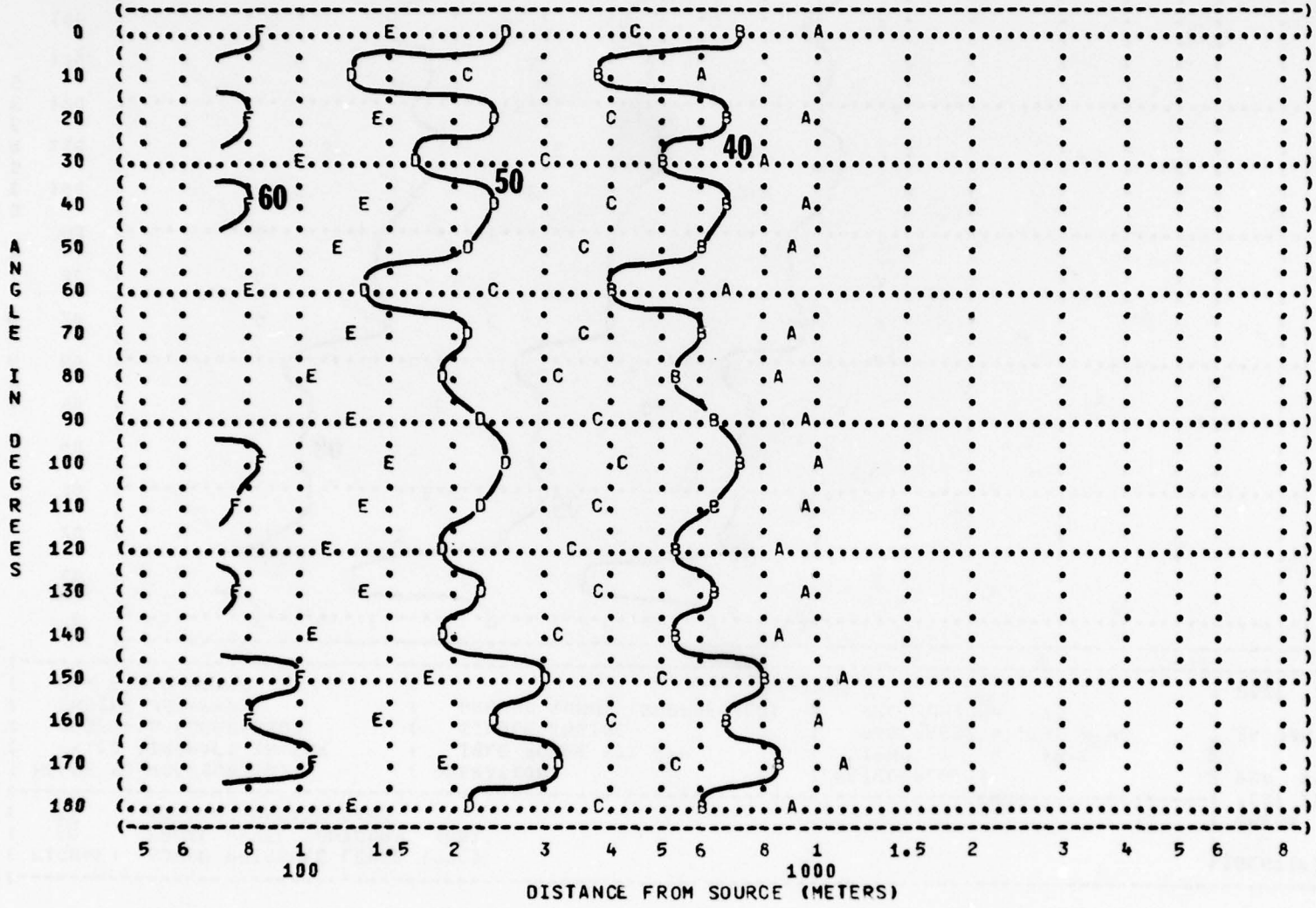


FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
24 JAN 79
PAGE 23

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

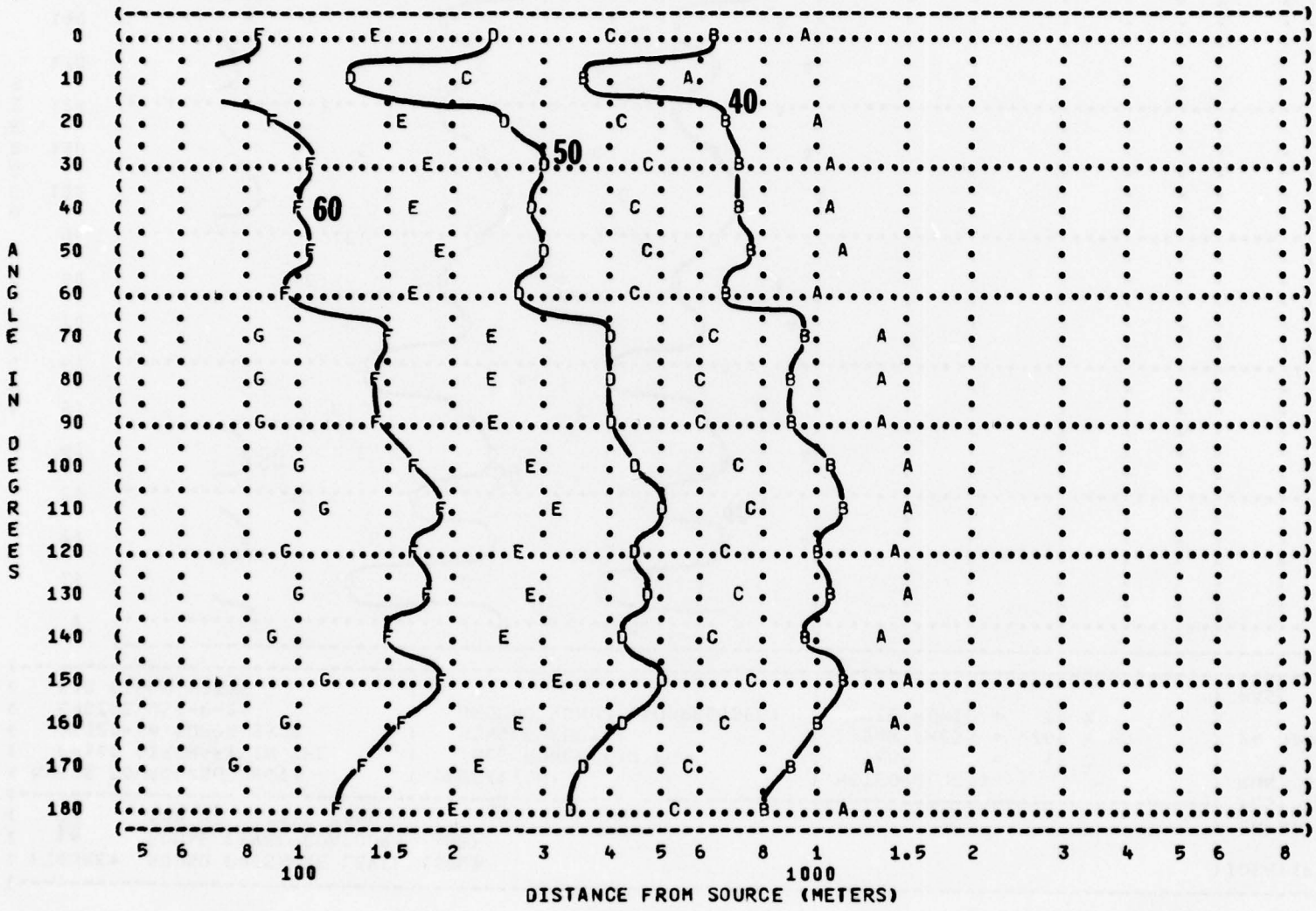


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
24 JAN 79
PAGE 24

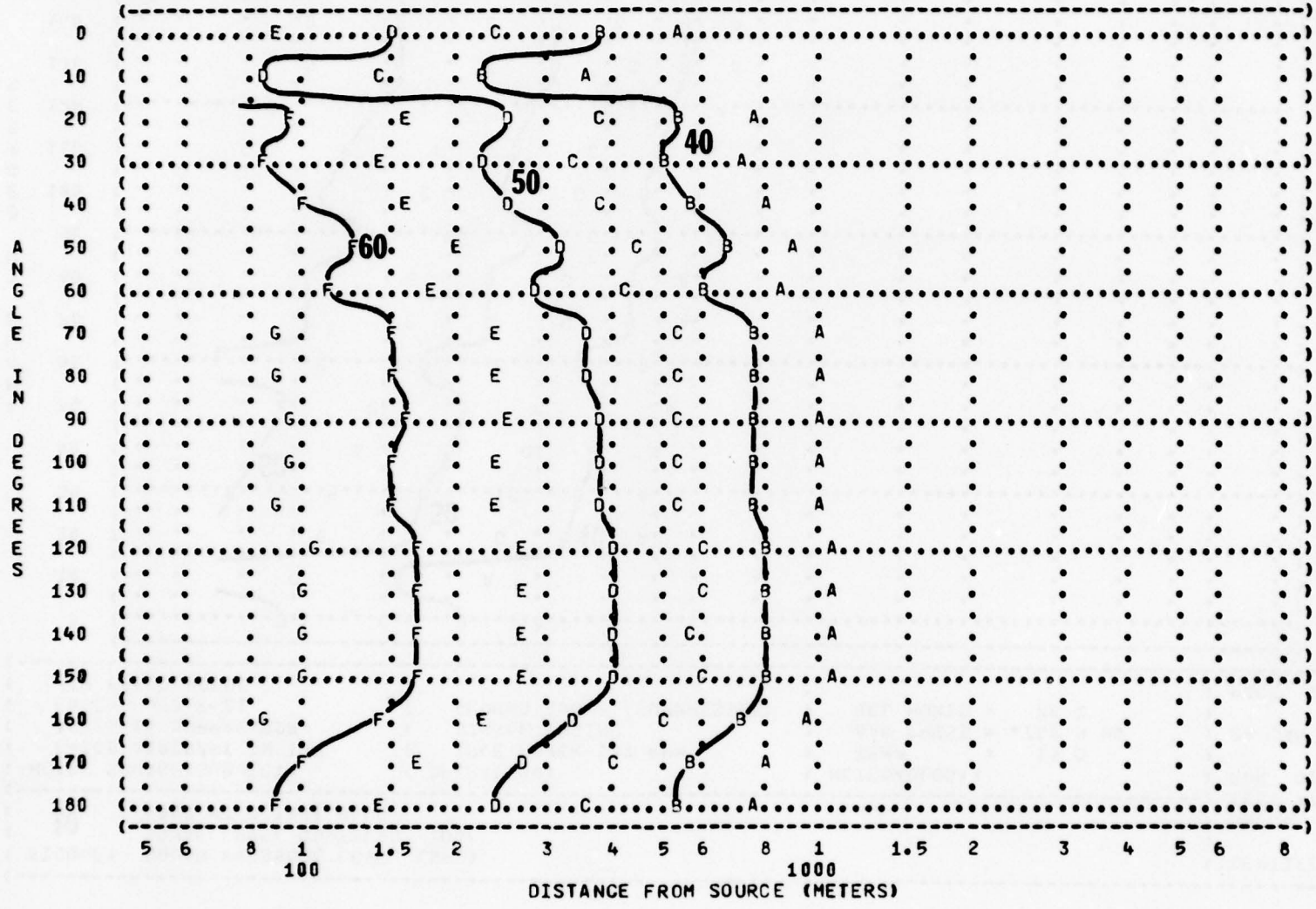


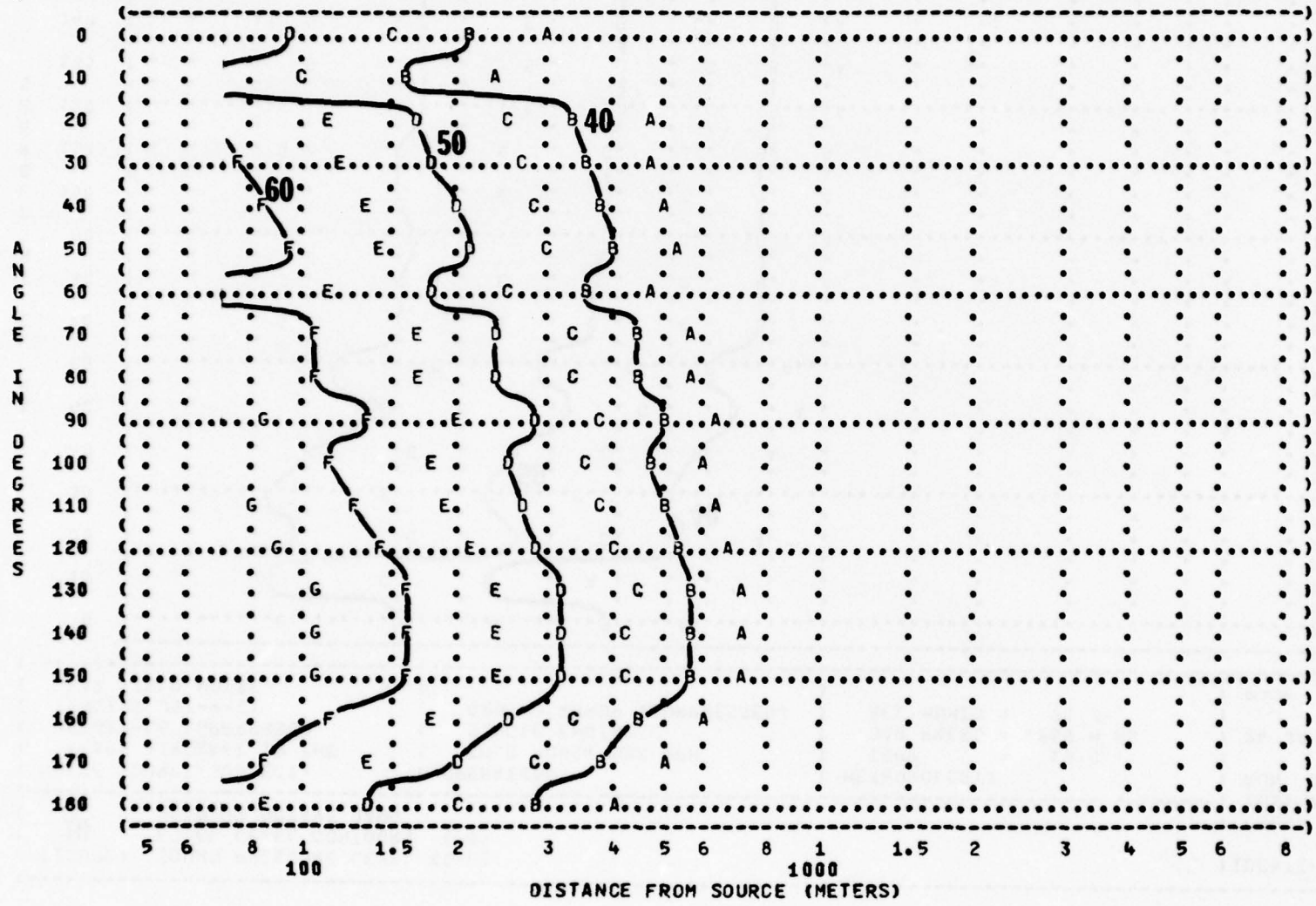
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
24 JAN 79
PAGE 25



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 01
24 JAN 79
PAGE 26

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
IDLE POWER 53% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60

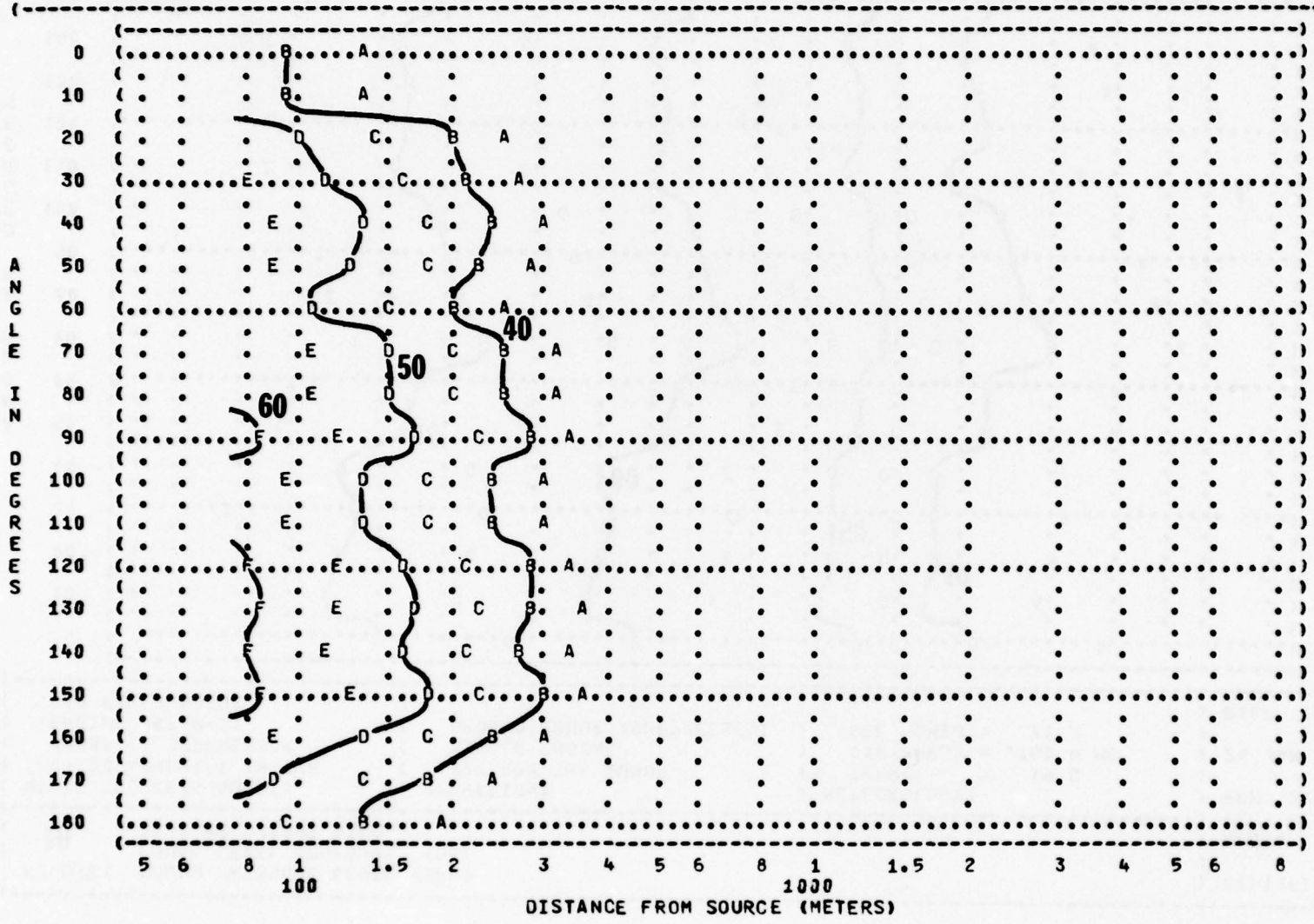


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02
24 JAN 79
PAGE 18

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

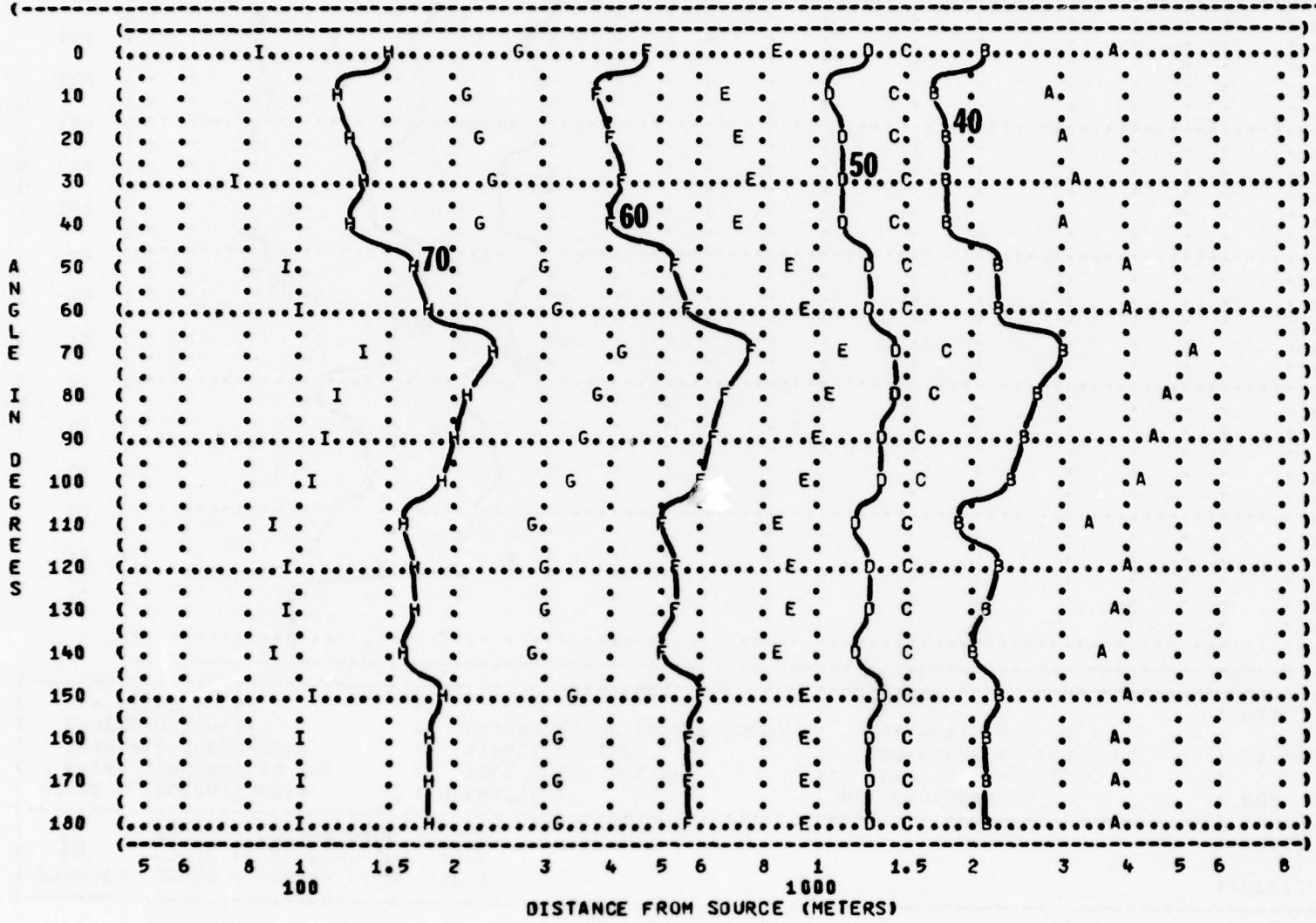


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02
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PAGE 19

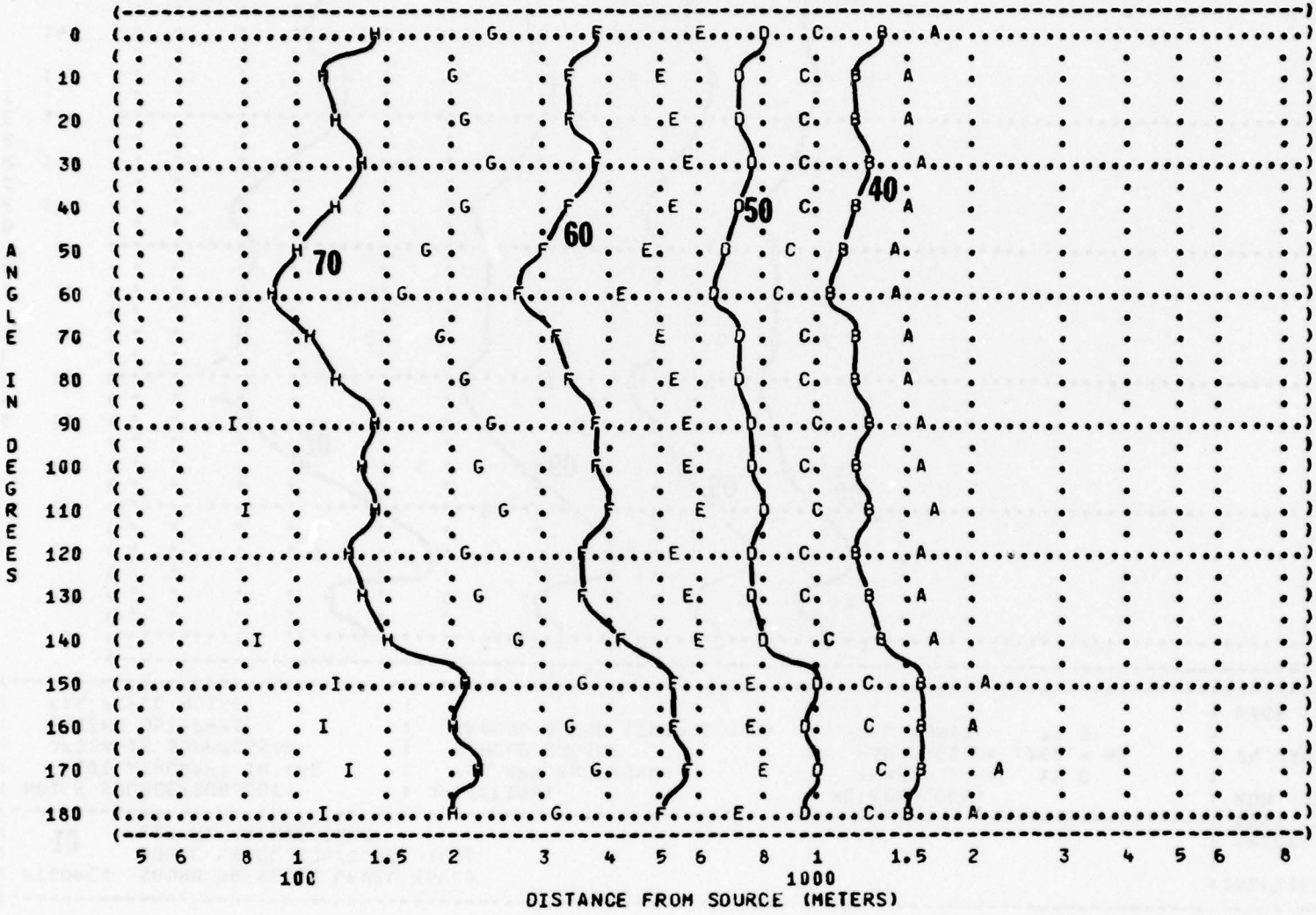


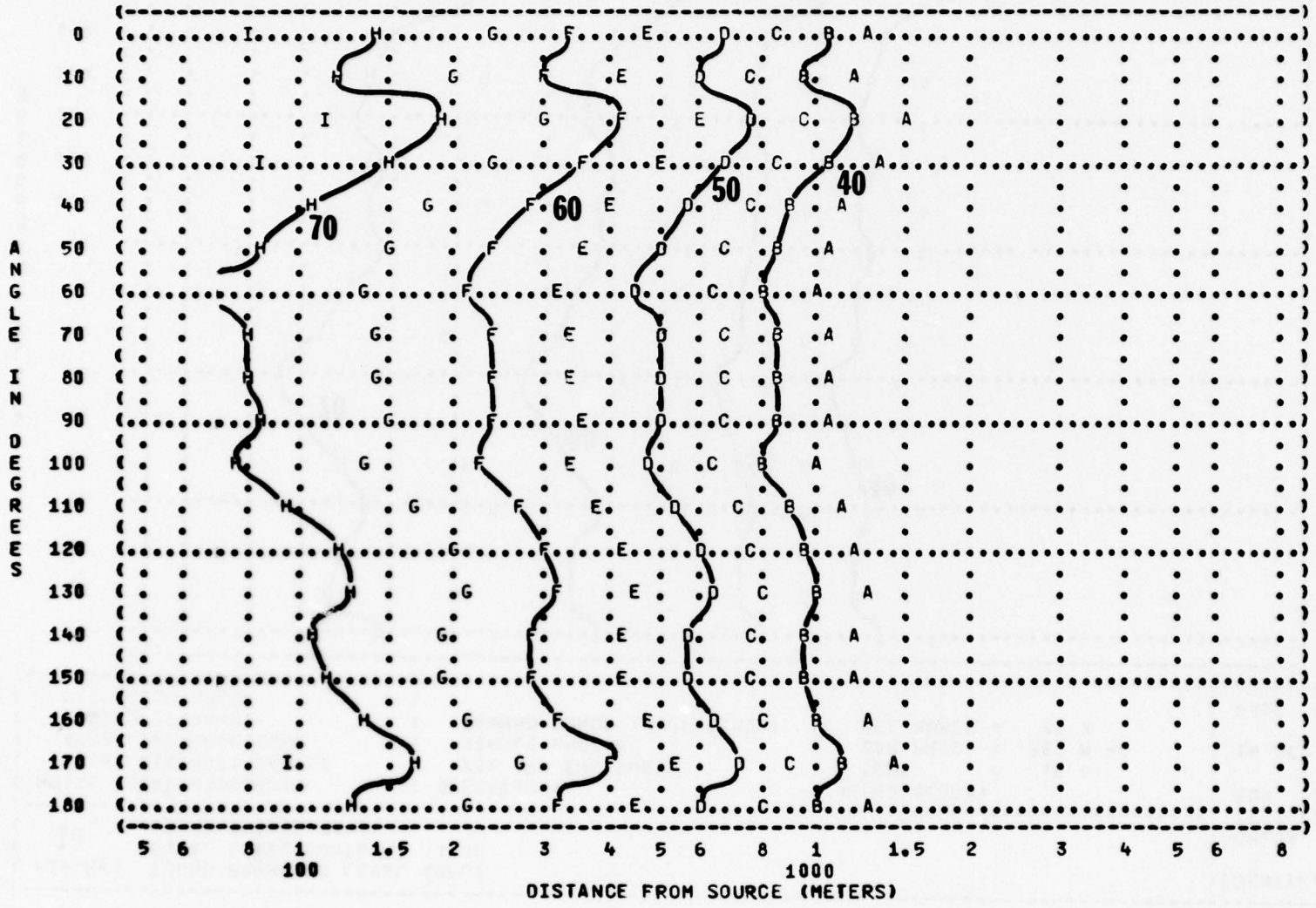
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02
24 JAN 79
PAGE 20

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

FIGURE: 10

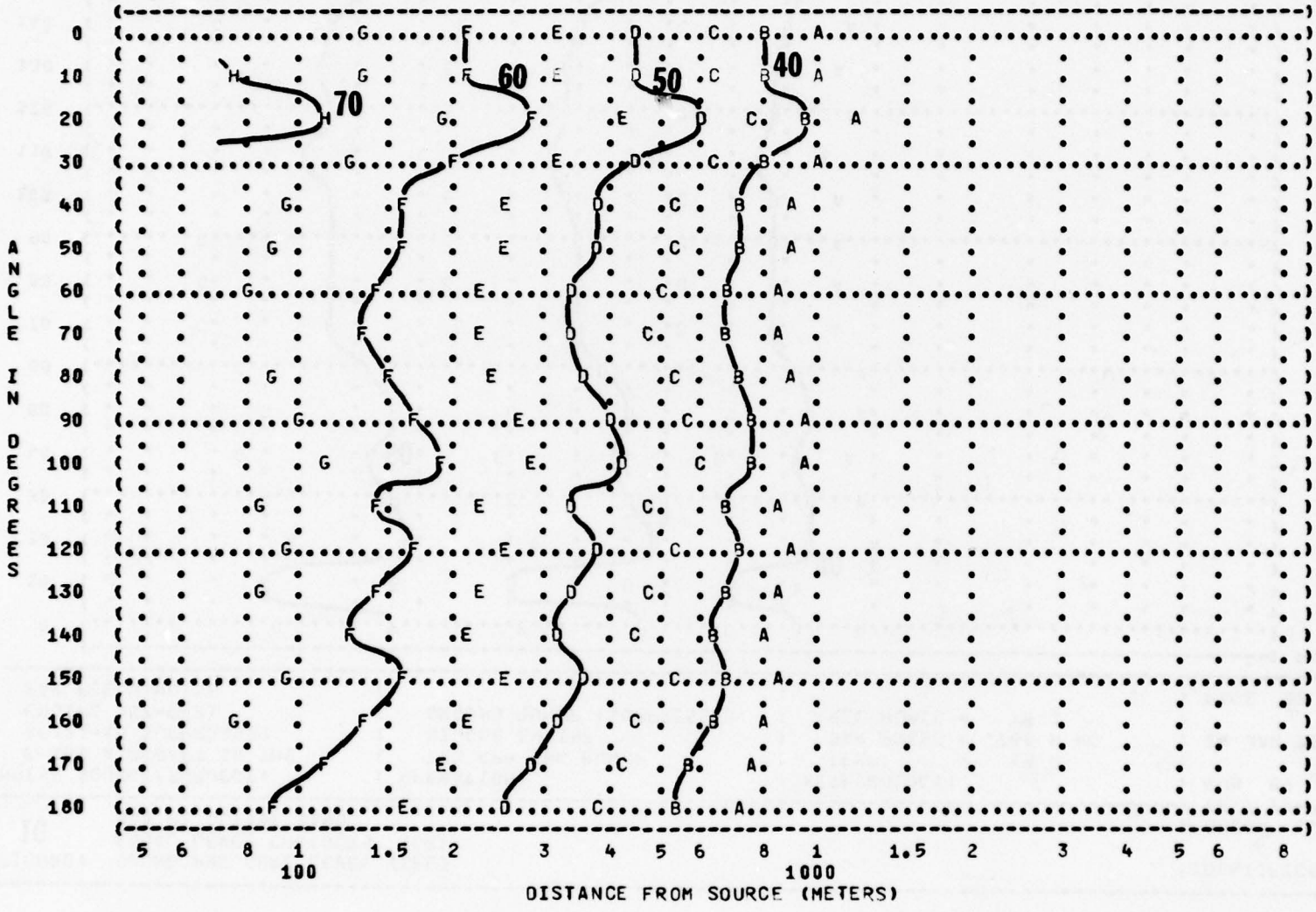
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02
24 JAN 79
PAGE 21

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 02
24 JAN 79
PAGE 22

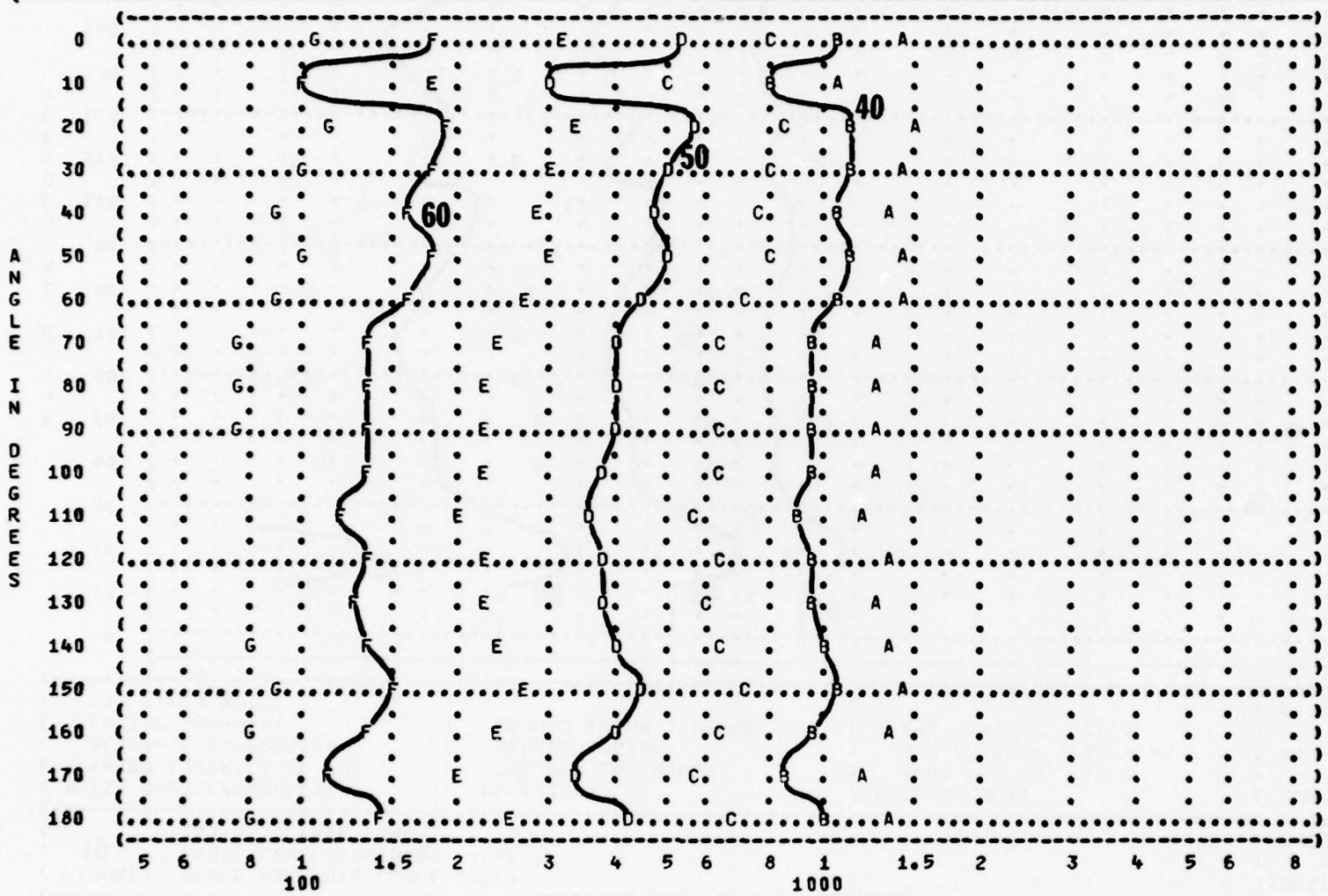


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-730-001 RUN 02 24 JAN 79 PAGE 23

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: 70% RPM ENG RUNUP SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

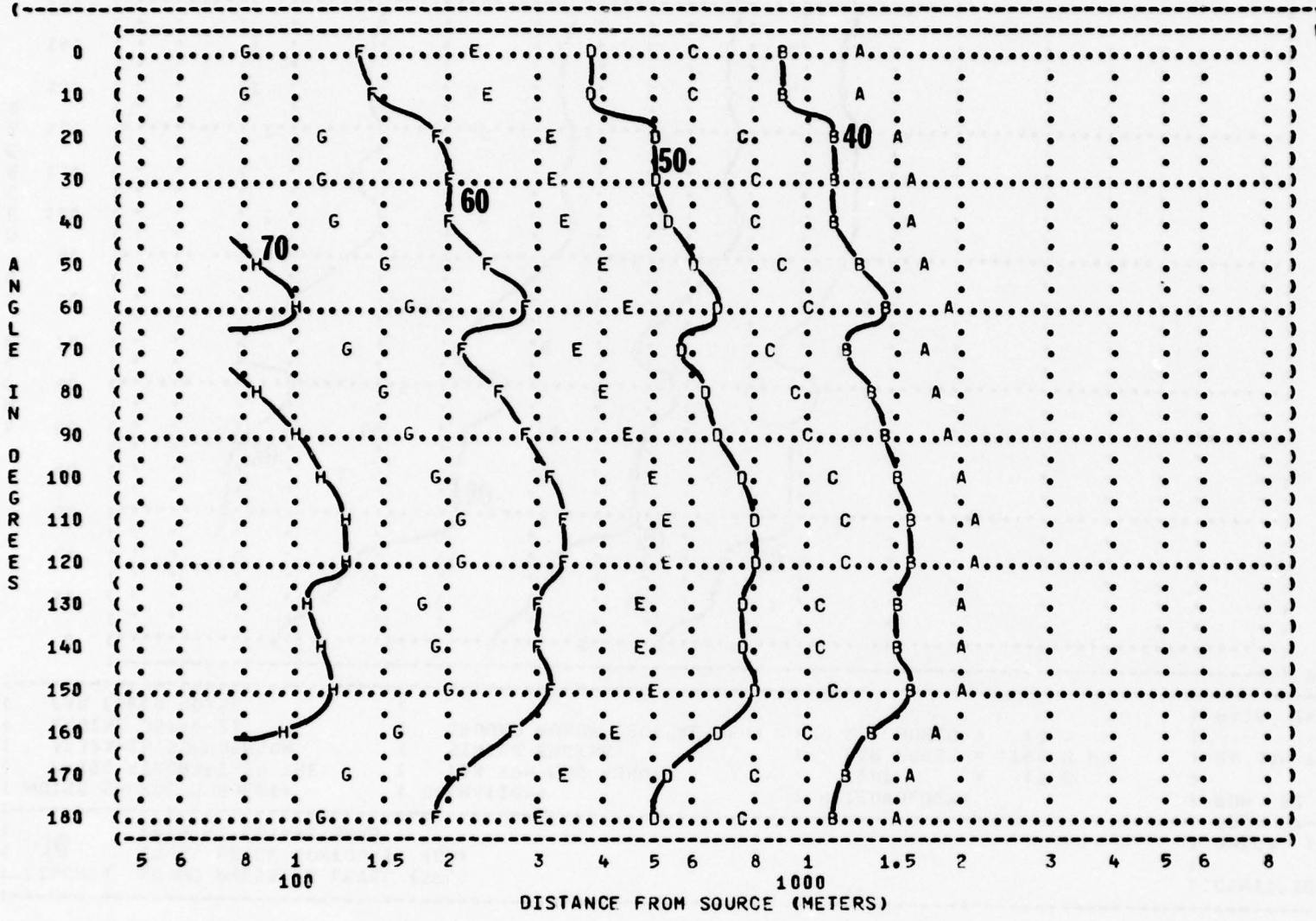


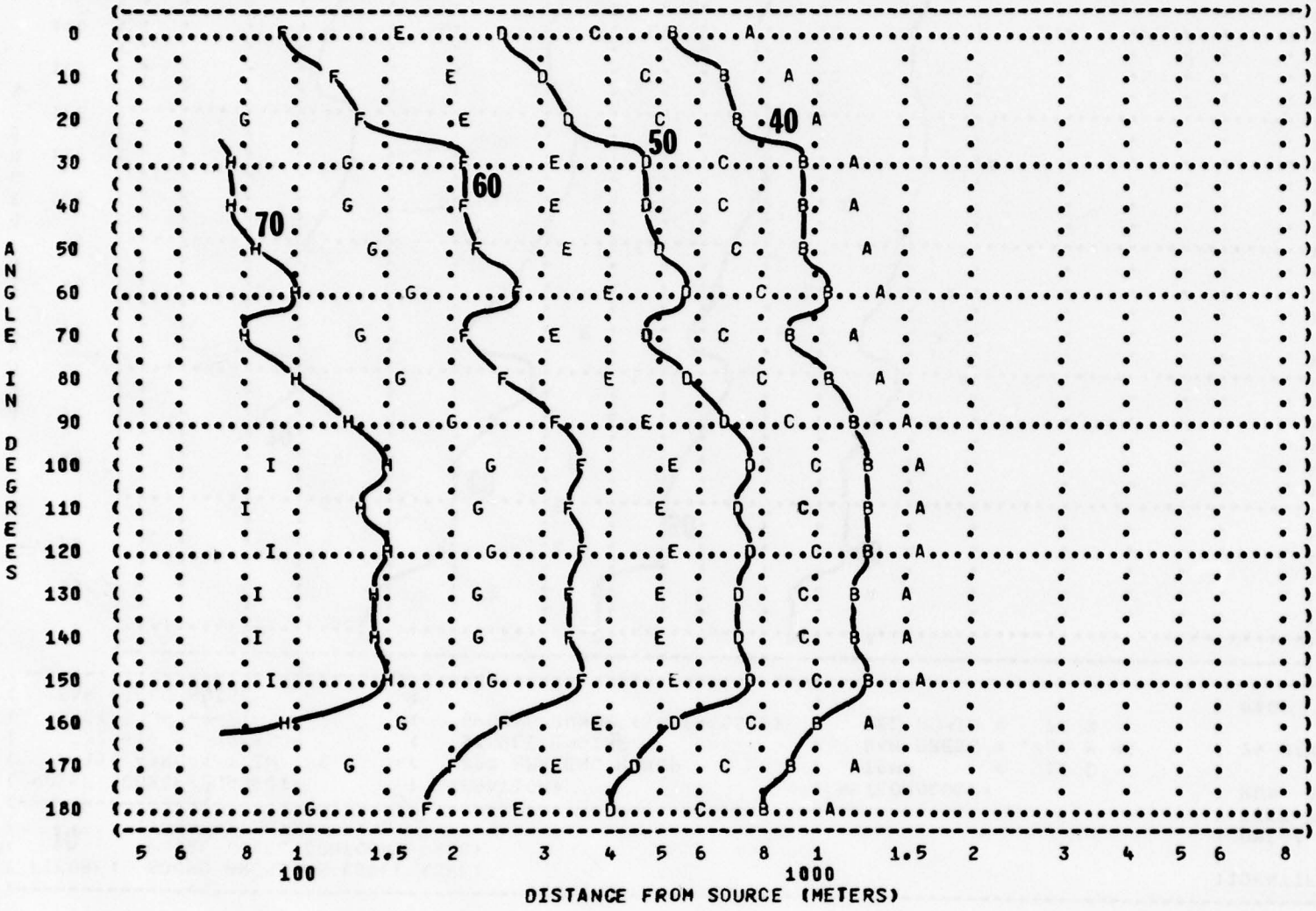
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-730-001 RUN 02 24 JAN 79 PAGE 24

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: 70% RPM ENG RUNUP SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-730-001 RUN 02 24 JAN 79 PAGE 25

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: 70% RPM ENG RUNUP SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

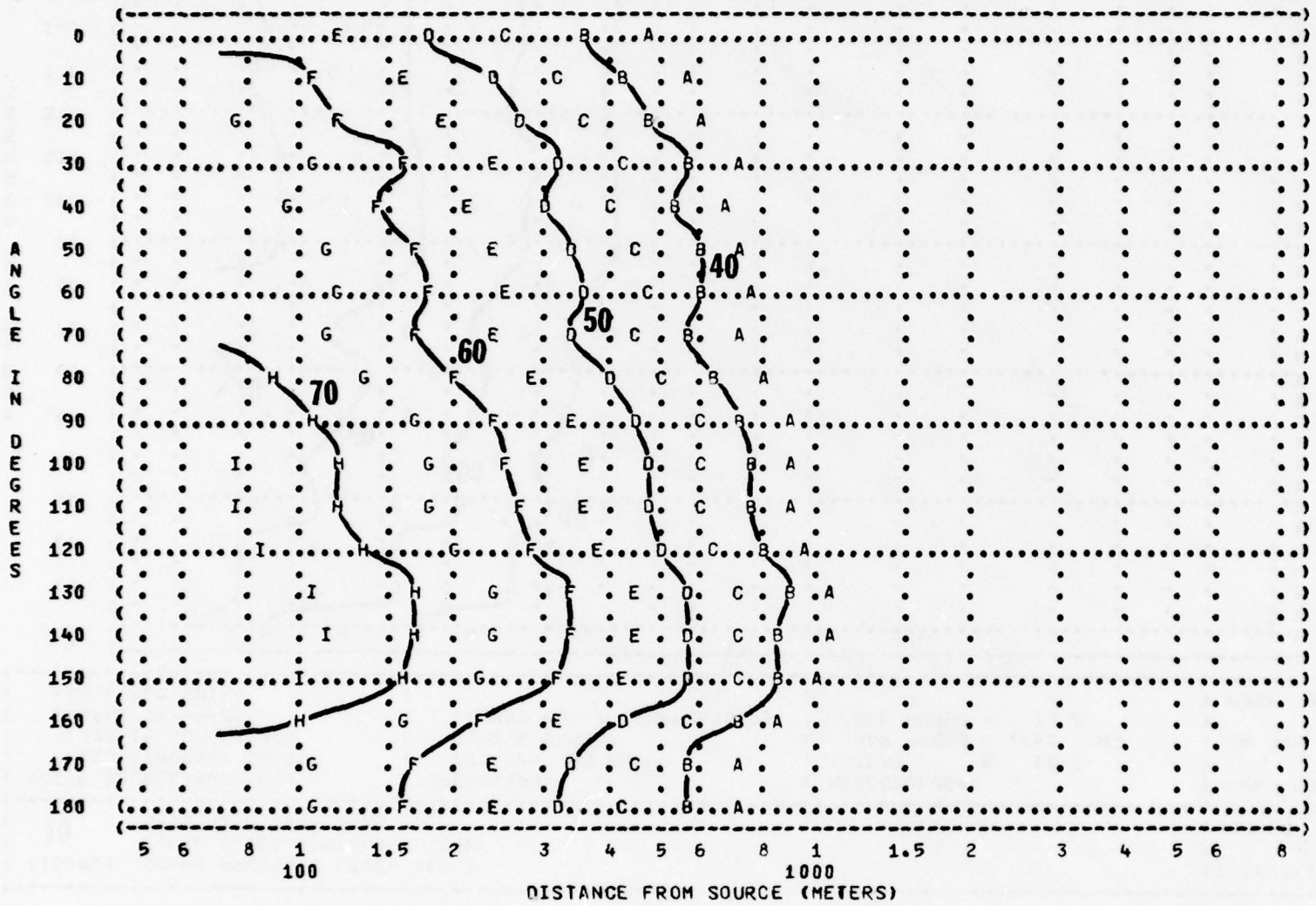


FIGURE: 10

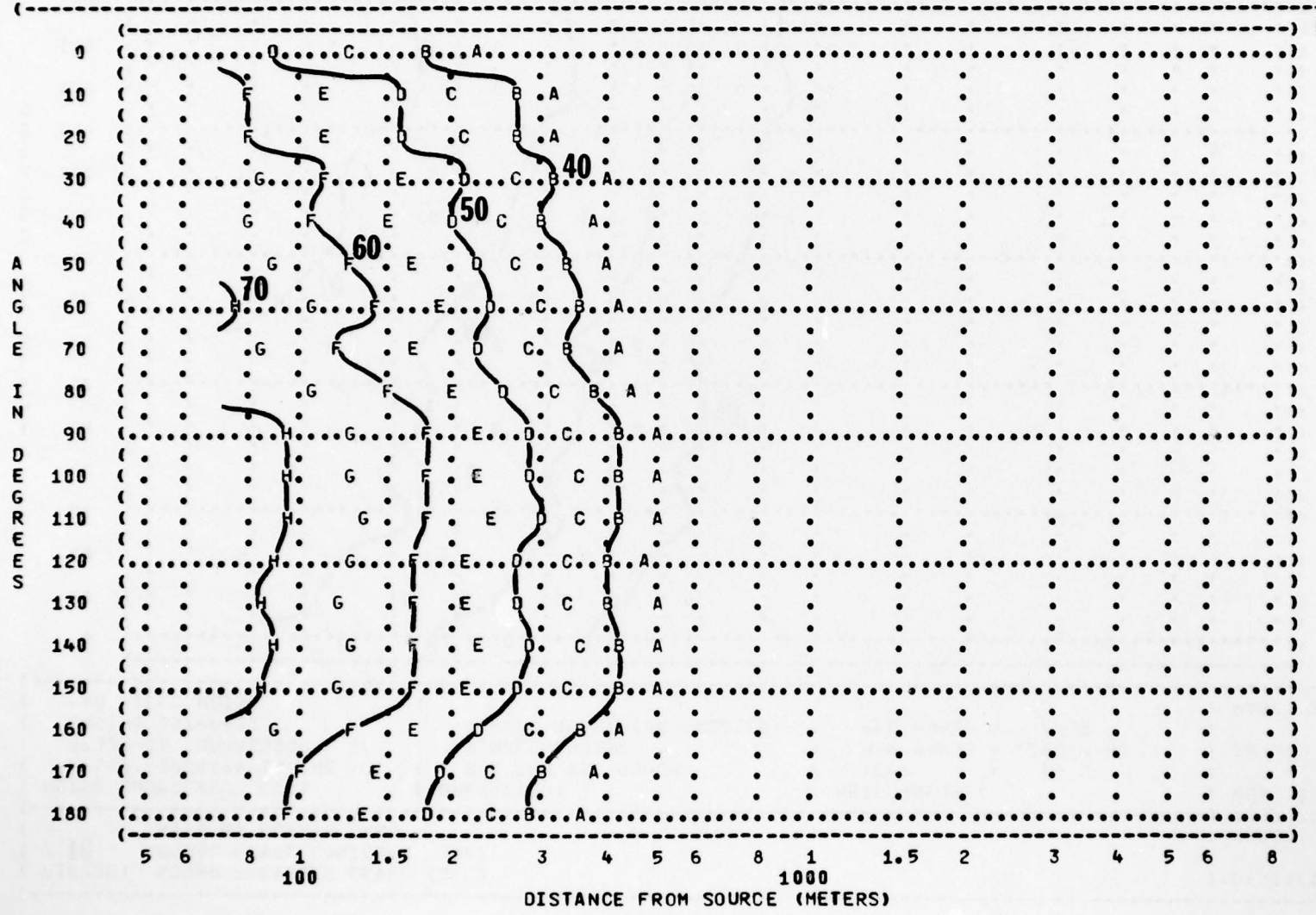
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
70% RPM ENG RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
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POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
24 JAN 79
PAGE 18

POINT	DB
A	40
B	45
C	50
D	55
E	60
F	65
G	70
H	75
I	80
J	85
K	90

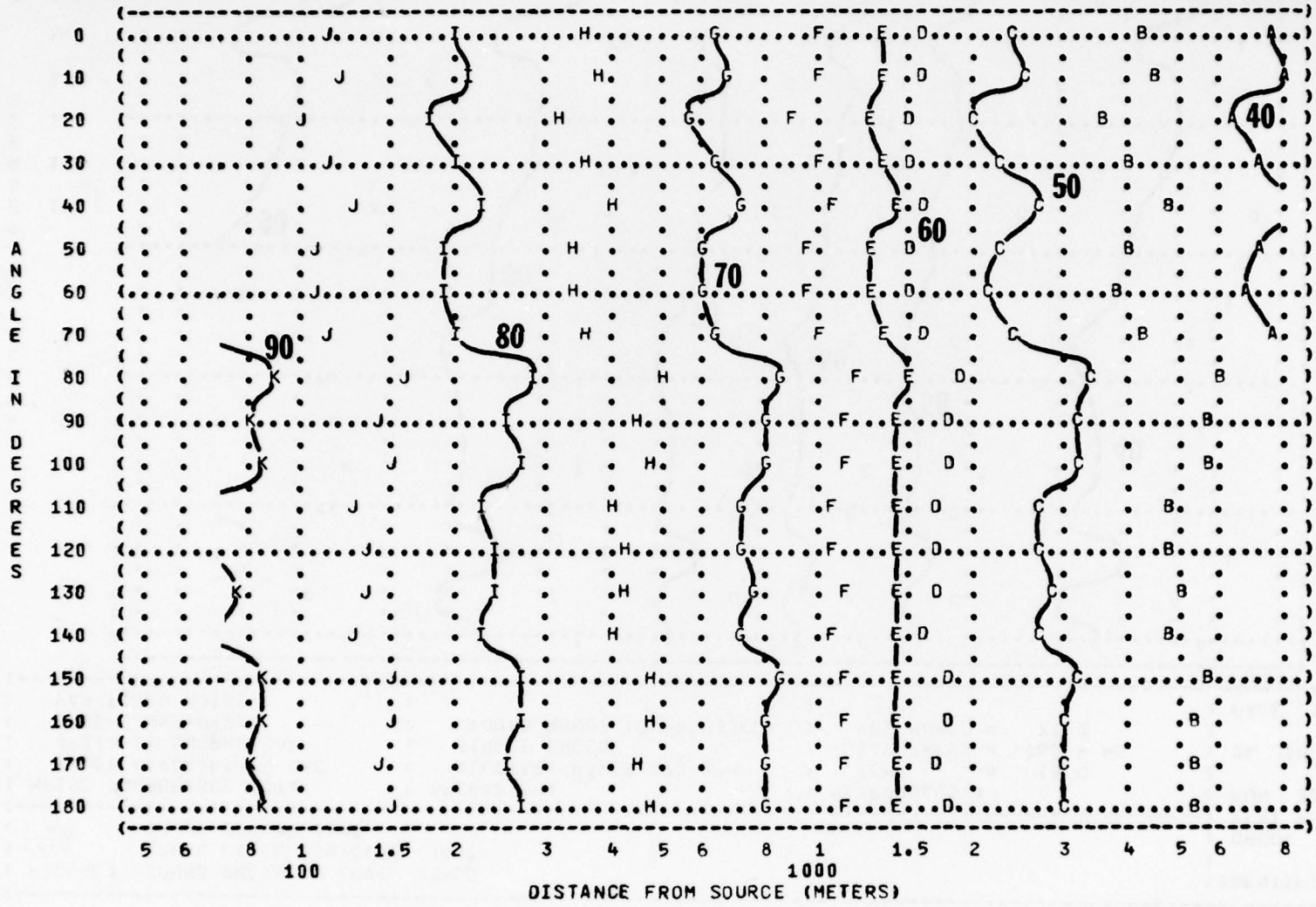


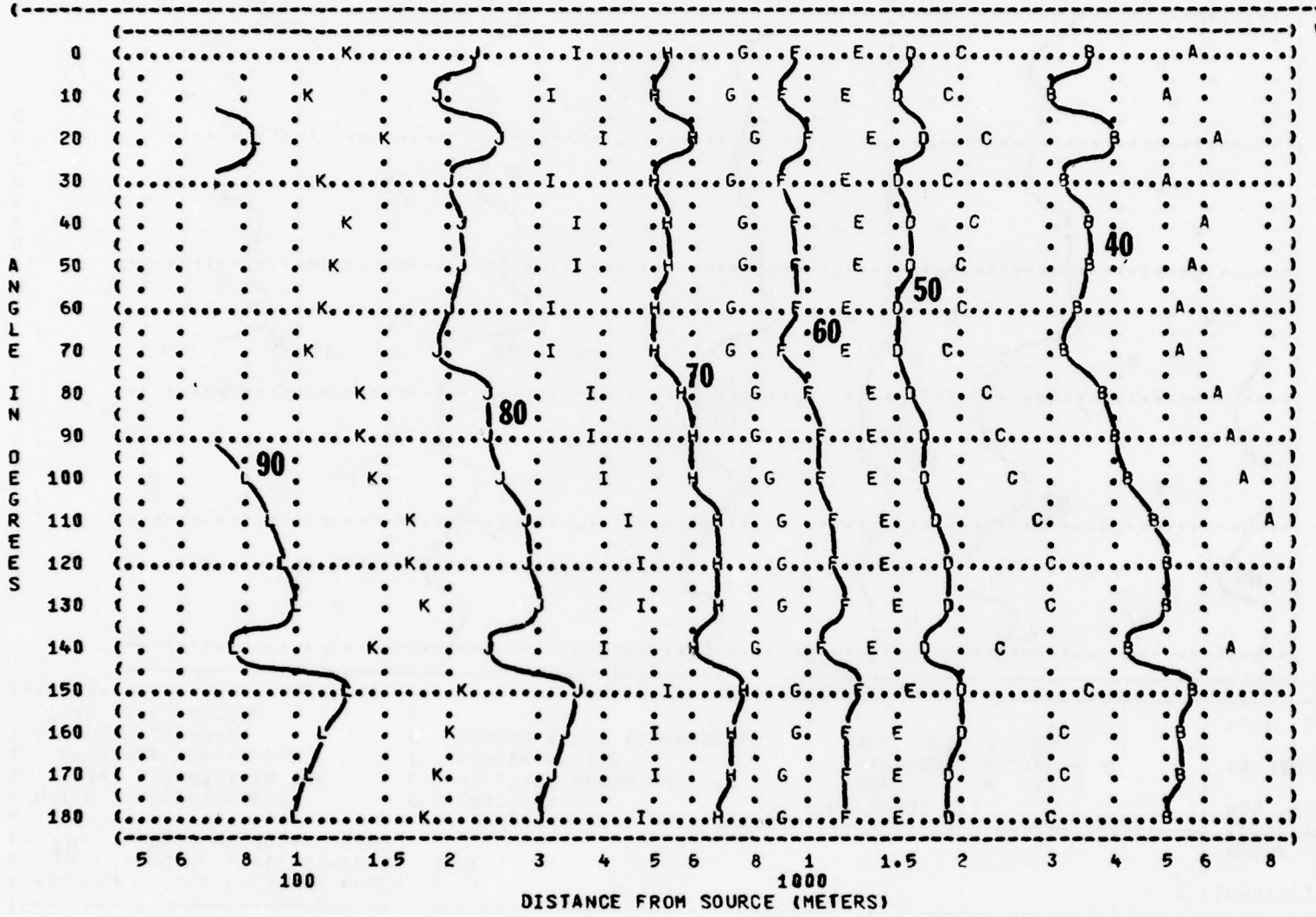
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: MILITARY POWER 97% RPM; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4; TEST 77-730-001; RUN 03; 24 JAN 79; PAGE 19



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

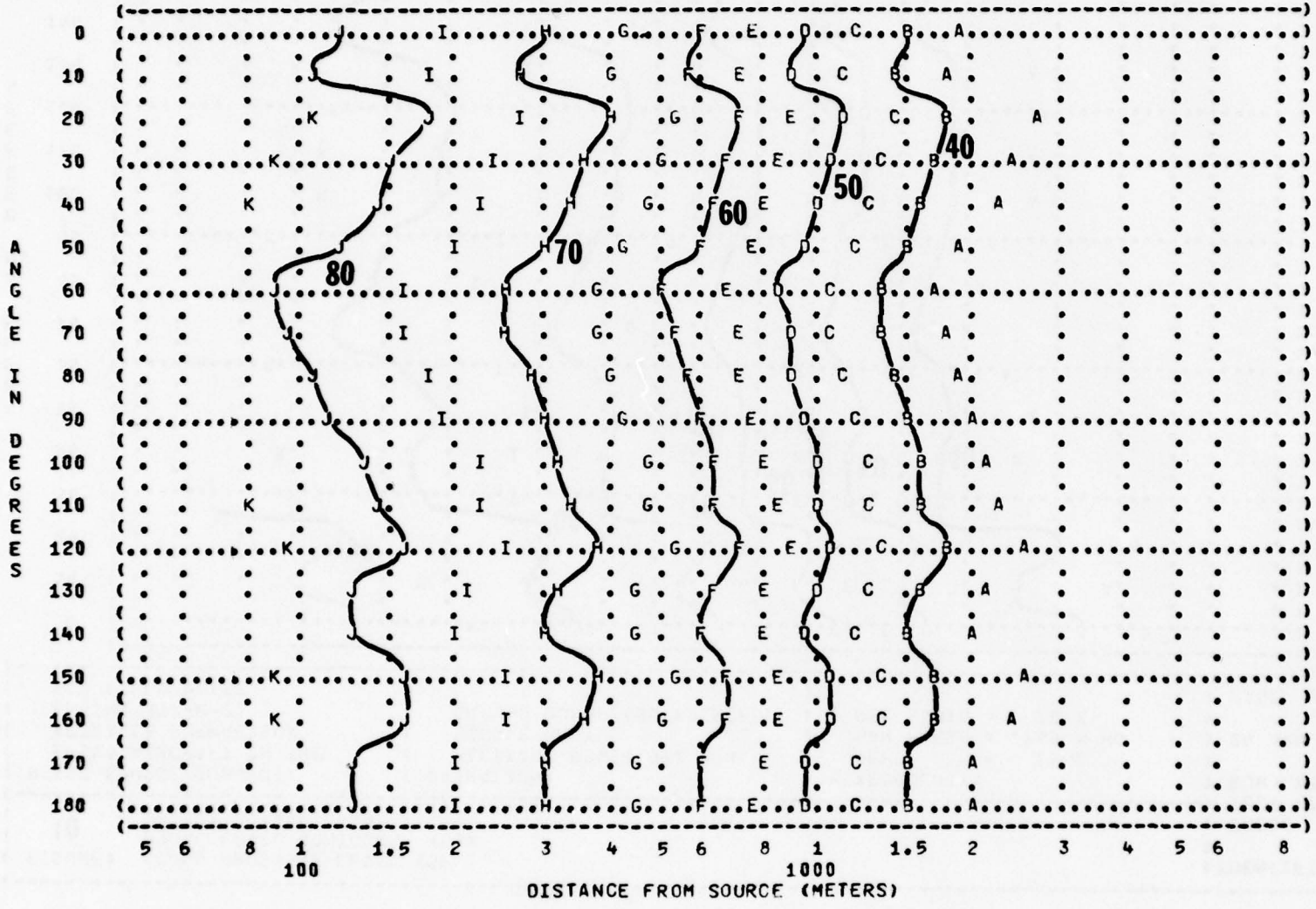
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: MILITARY POWER 97% RPM; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4; TEST 77-730-001; RUN 03; 24 JAN 79; PAGE 20



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
24 JAN 79
PAGE 21

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

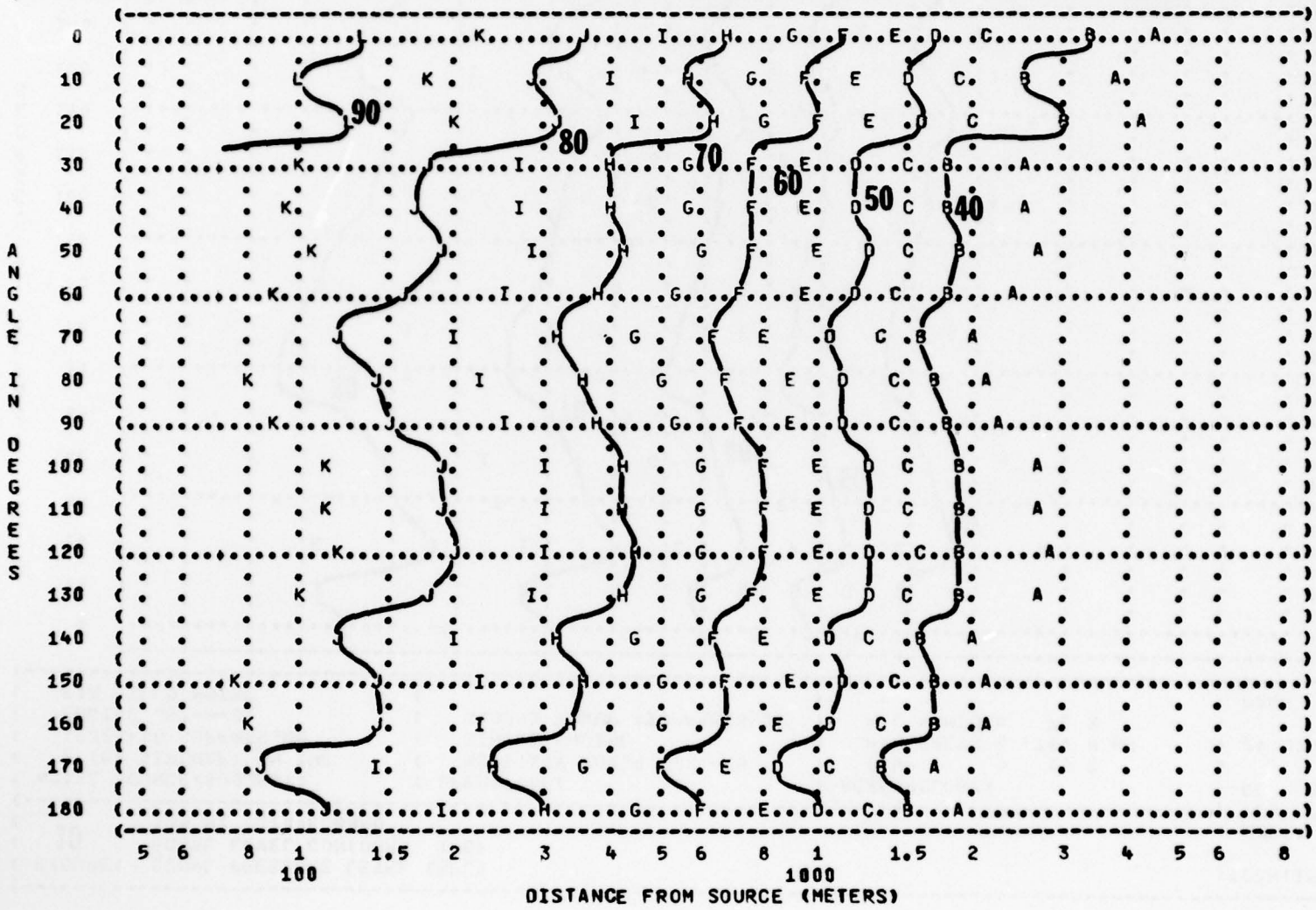


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-730-001 RUN 03 24 JAN 79 PAGE 22

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: MILITARY POWER 97% RPM SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

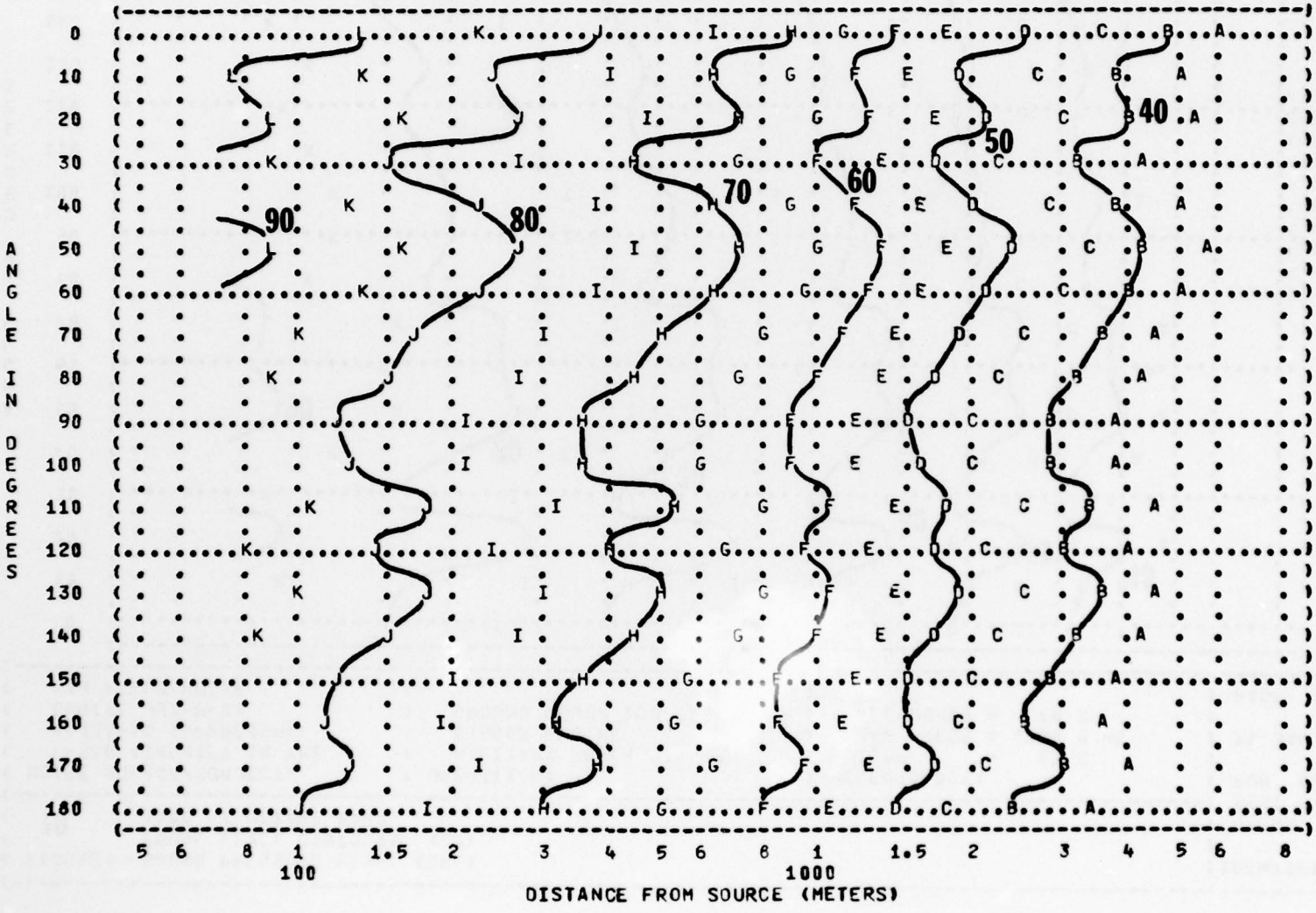


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
24 JAN 79
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NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

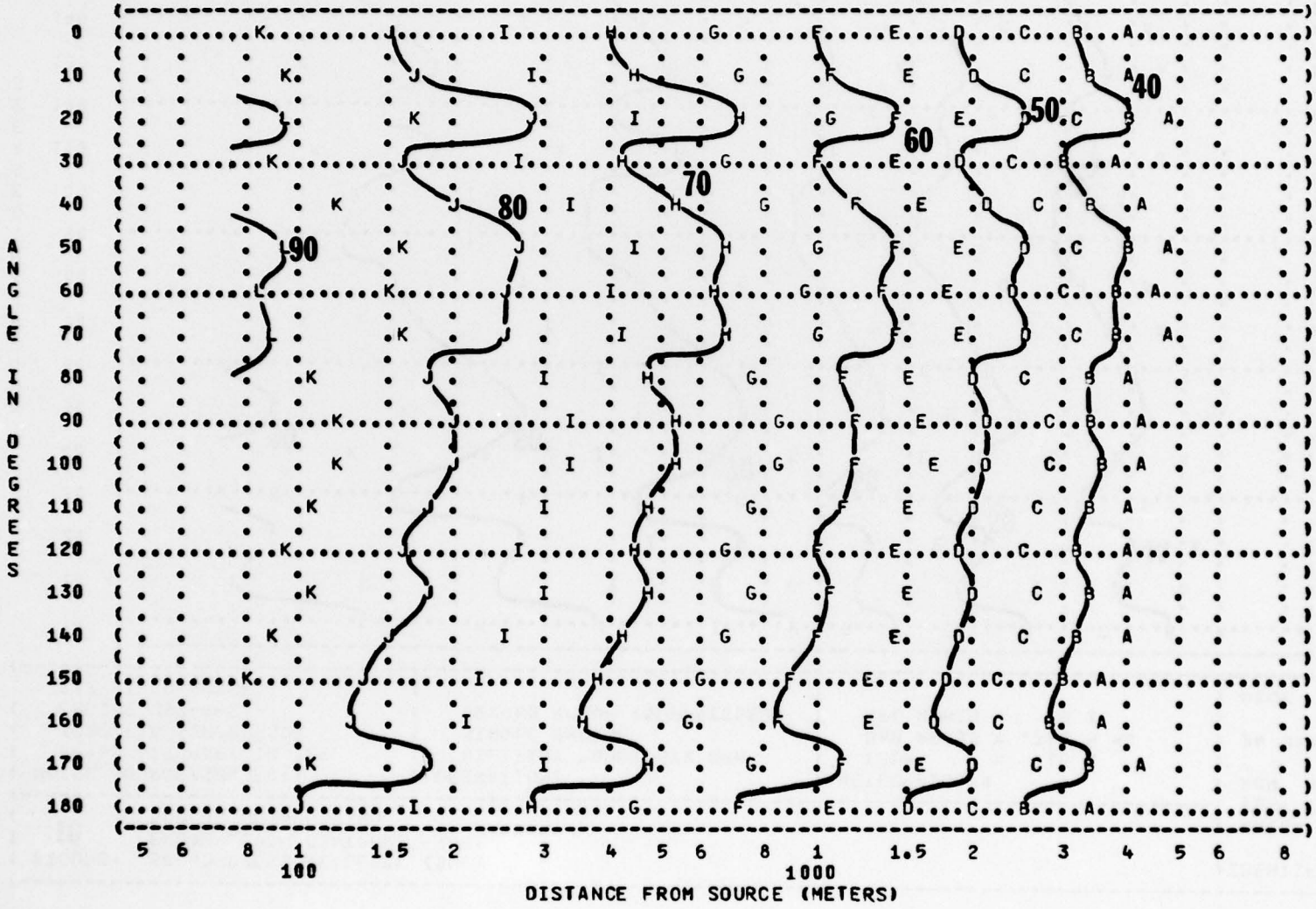


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: MILITARY POWER 97% RPM; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4; TEST 77-730-001; RUN 03; 24 JAN 79

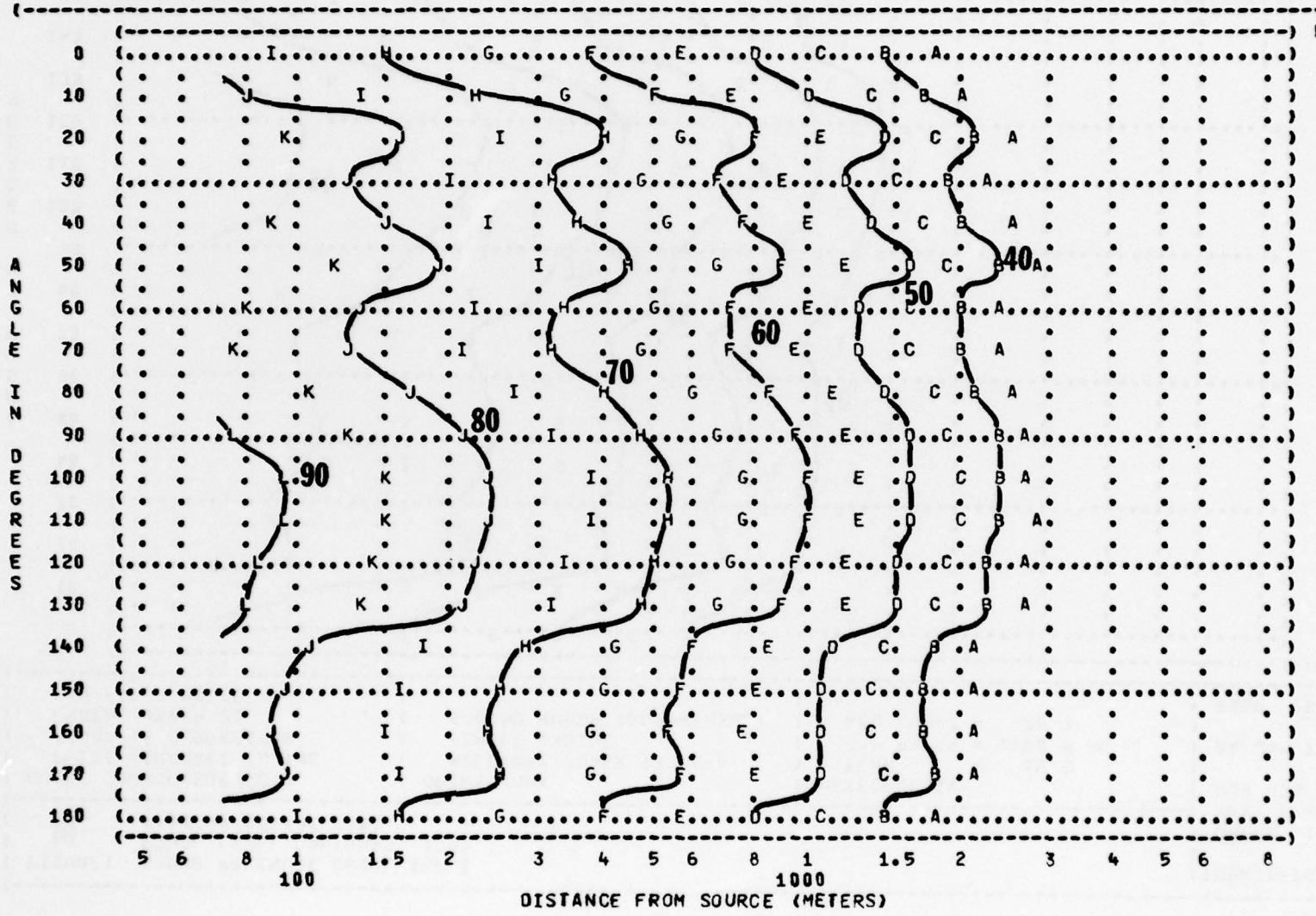


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
24 JAN 79
PAGE 25

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

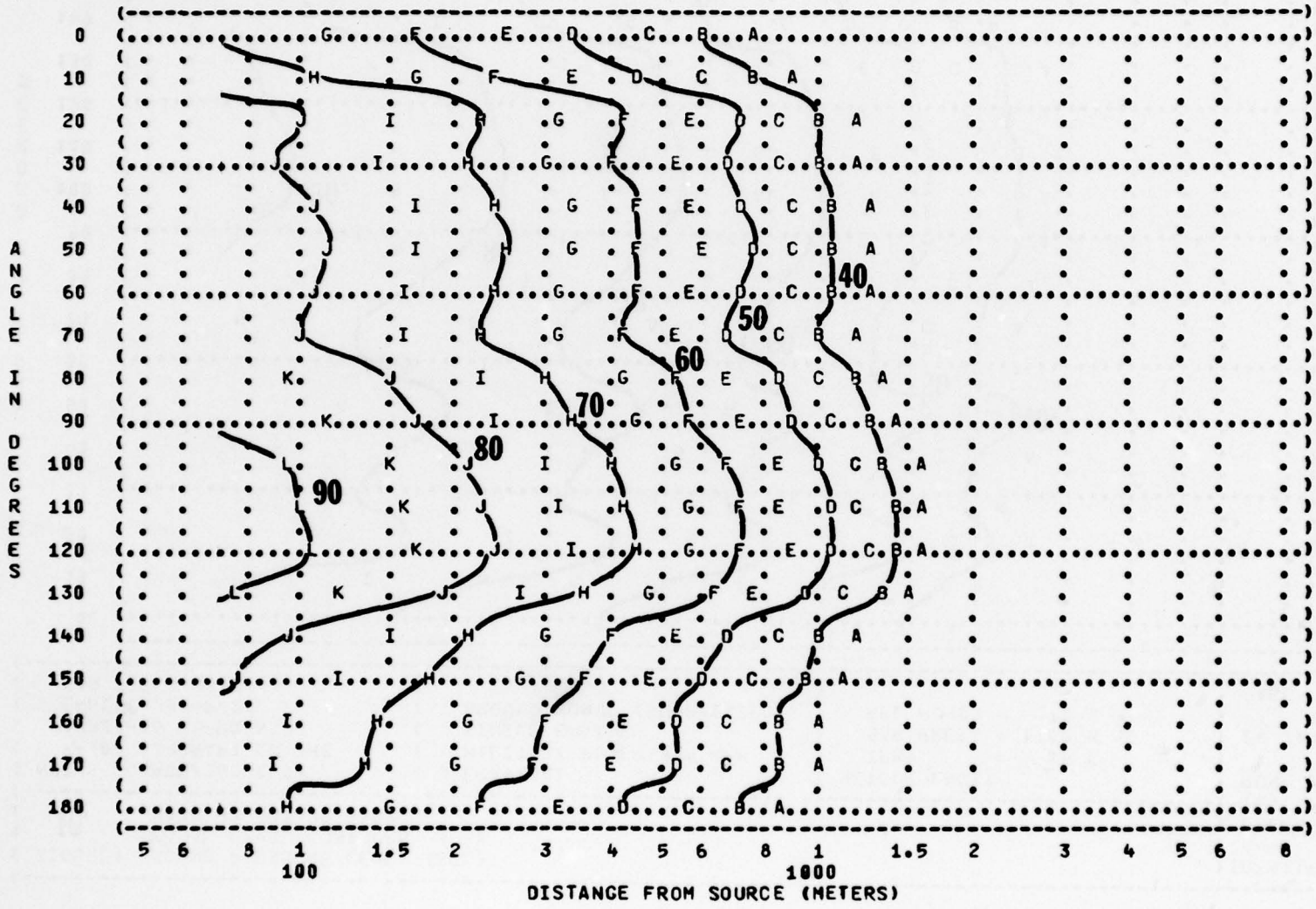


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
MILITARY POWER 97% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 03
24 JAN 79
PAGE 26

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85

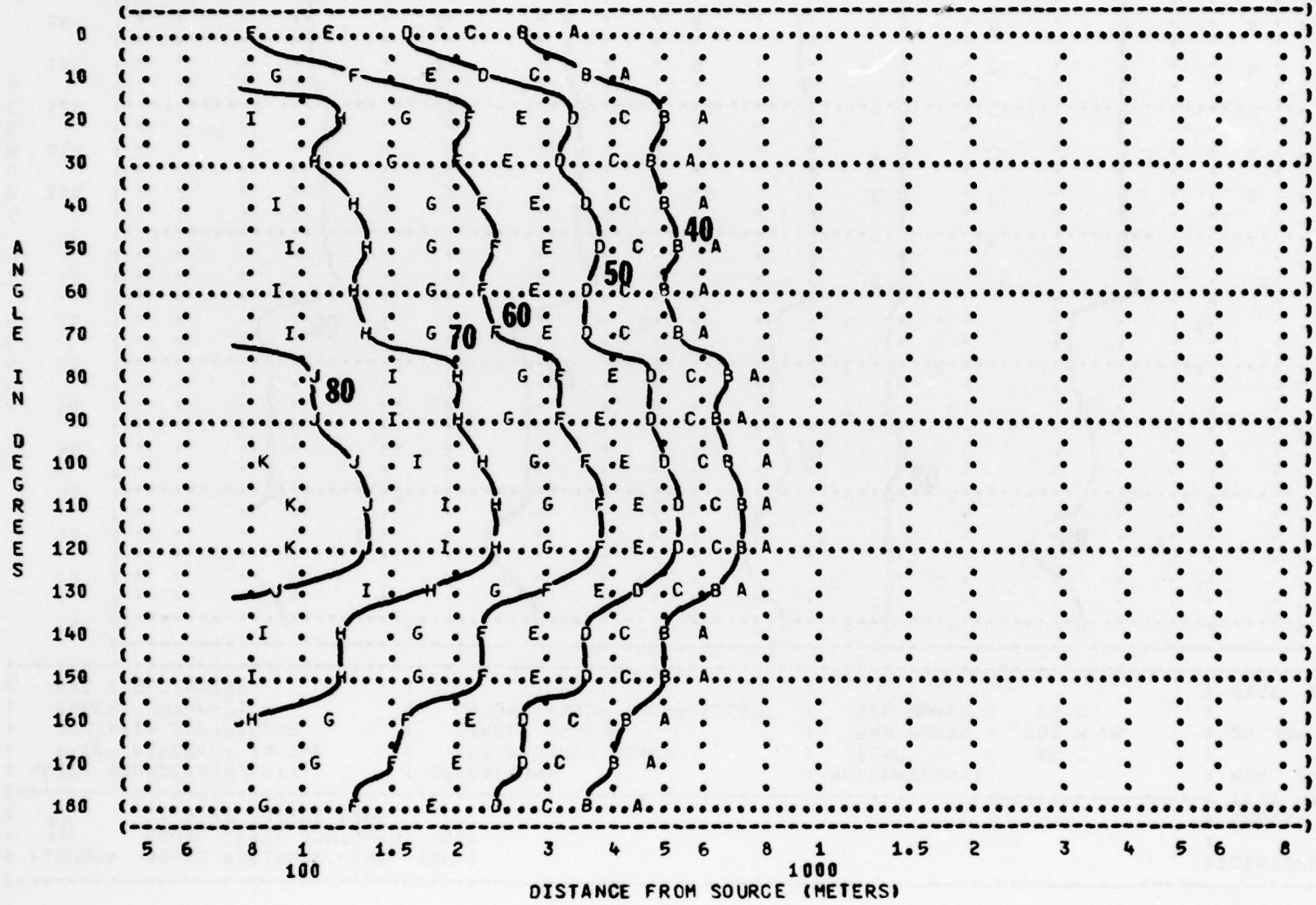


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
31.5 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
24 JAN 79
PAGE 18

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90

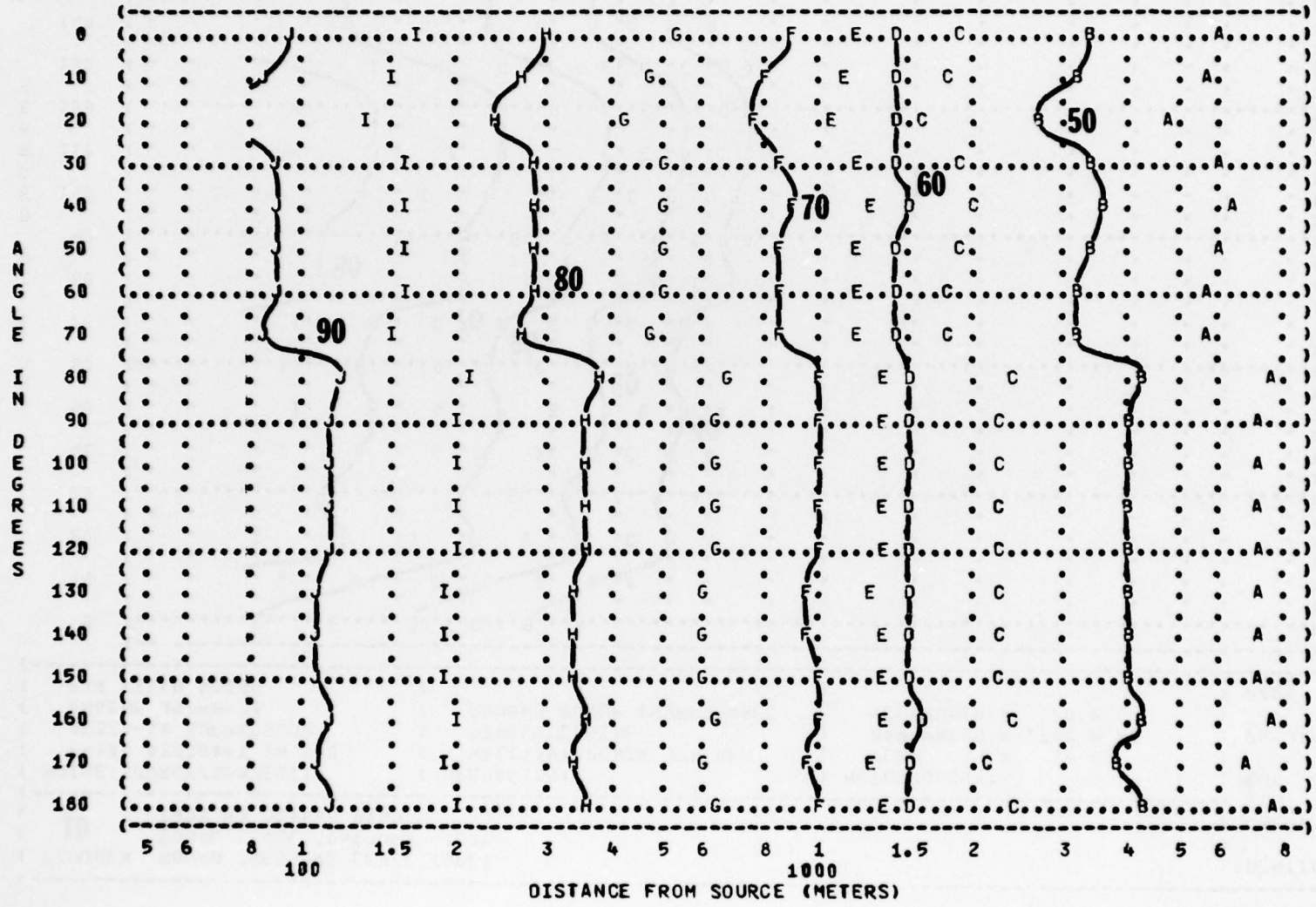


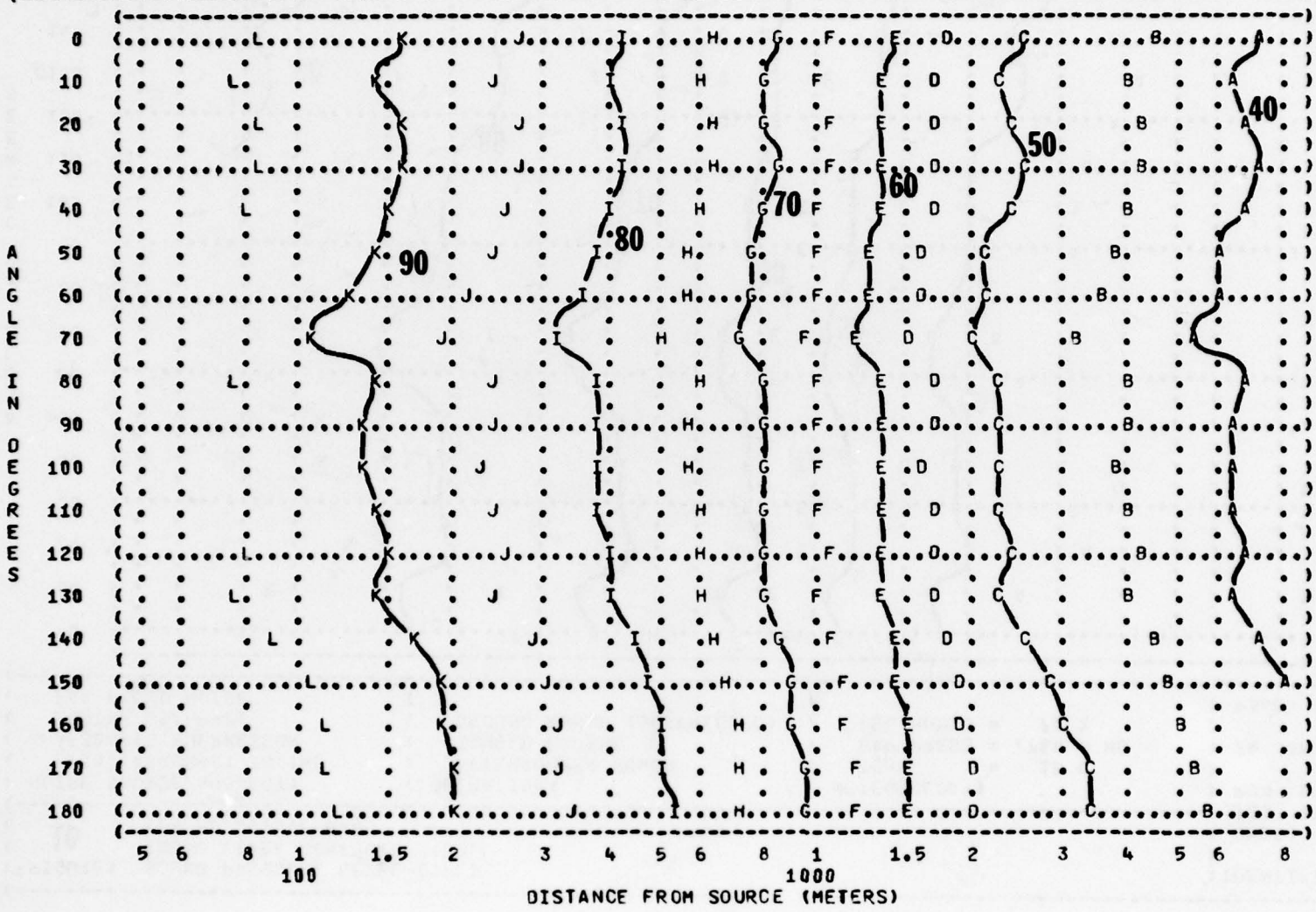
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-730-001 RUN 04 24 JAN 79 PAGE 19

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: AFTERBURNER POWER SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %



POINT	DB
A	40
B	45
C	50
D	55
E	60
F	65
G	70
H	75
I	80
J	85
K	90
L	95

FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
24 JAN 79
PAGE 20

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

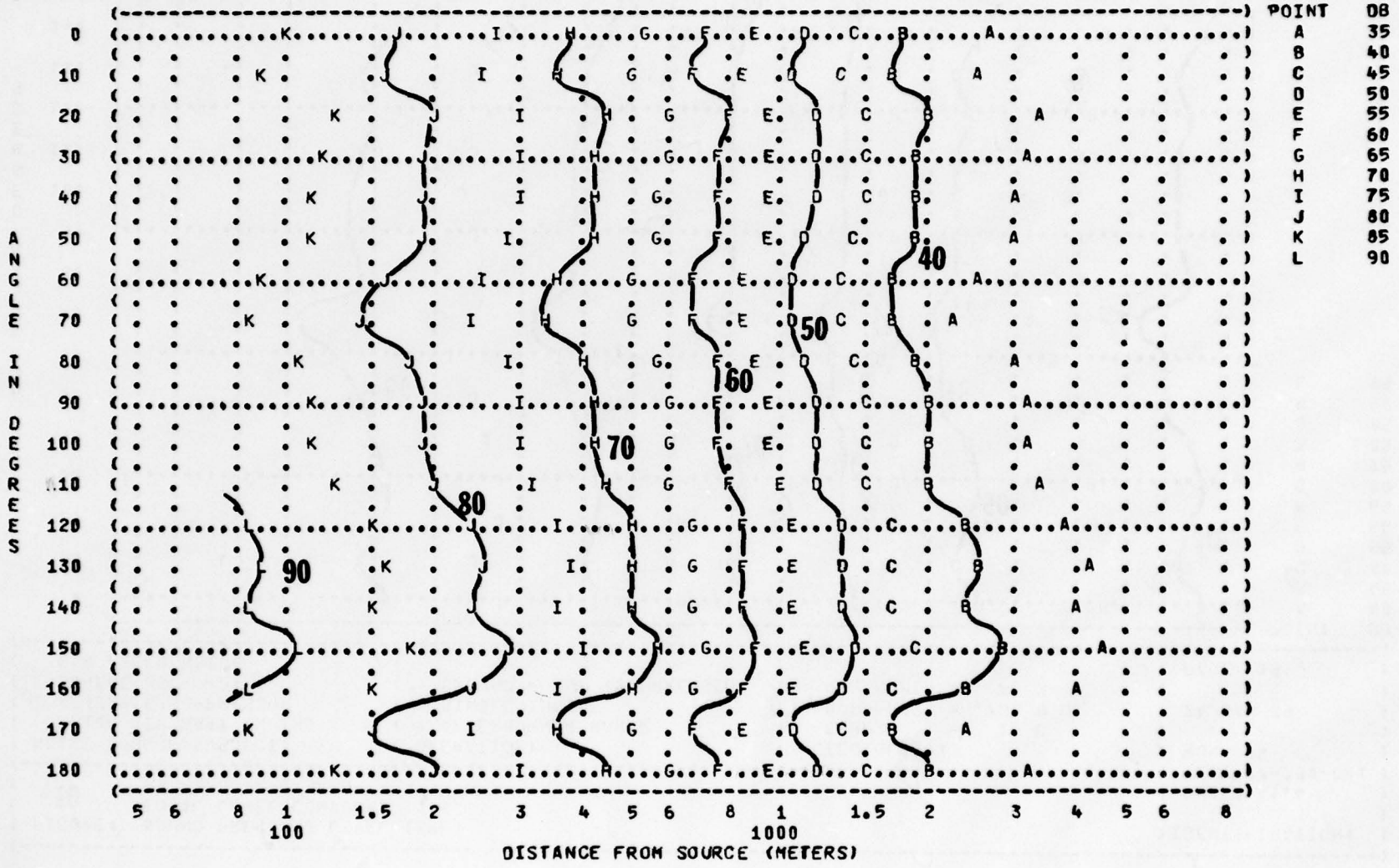


FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: AFTERBURNER POWER SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4 TEST 77-730-001 RUN 04 24 JAN 79 PAGE 21

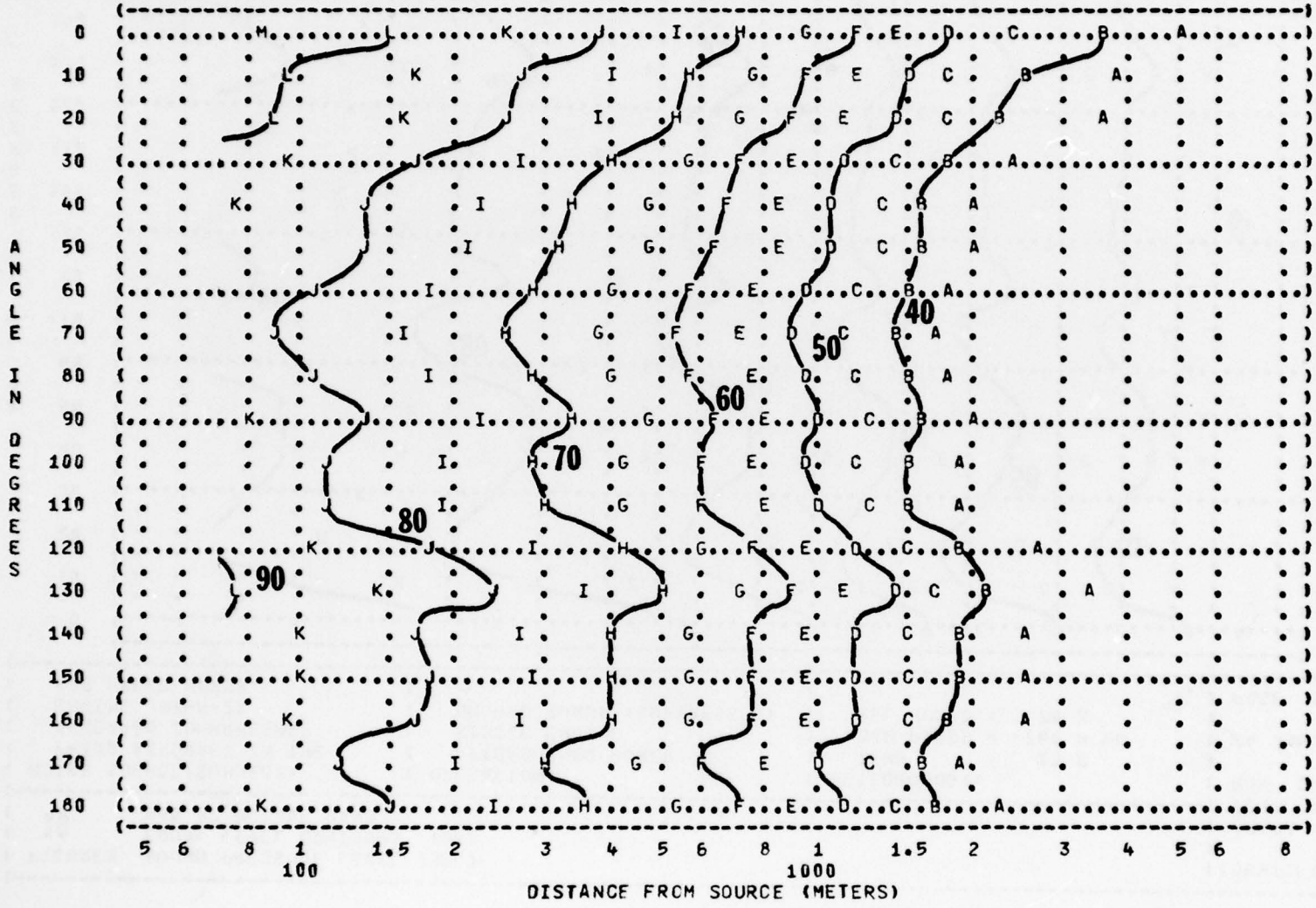


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-730-001 RUN 04 24 JAN 79 PAGE 22

NOISE SOURCE/SUBJECT: F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION: AFTERBURNER POWER SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

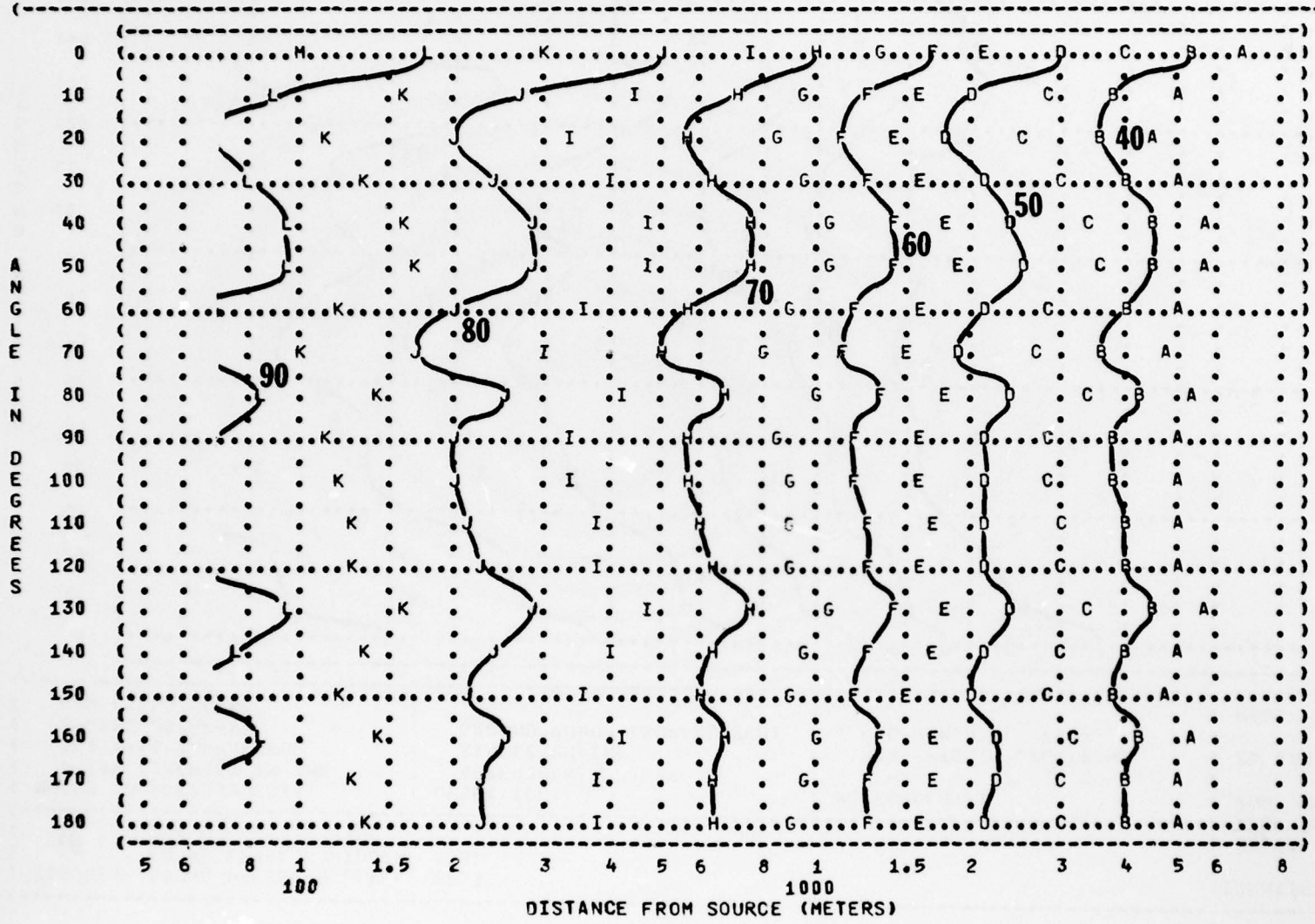


FIGURE 10

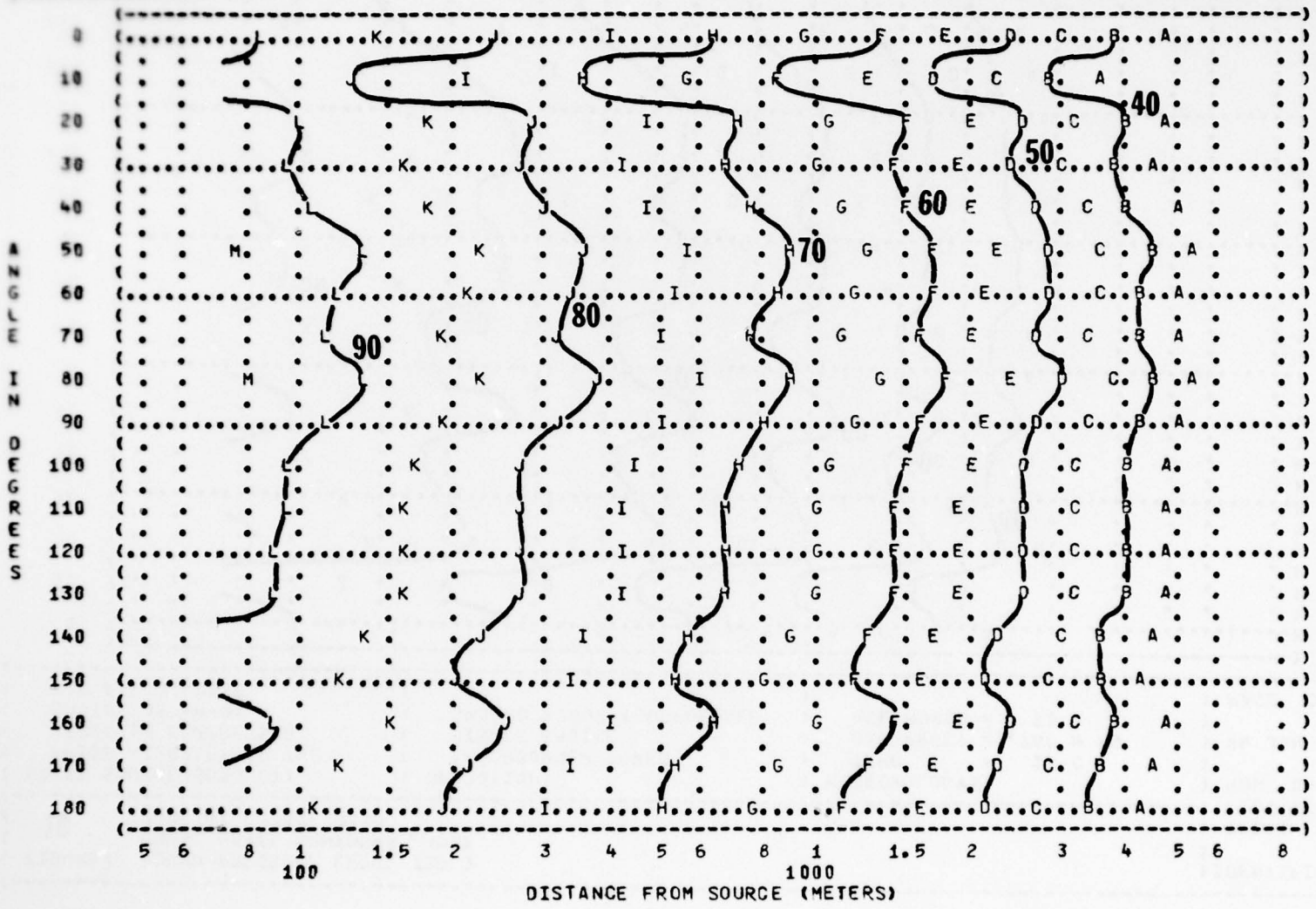
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
24 JAN 79
PAGE 23

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95

FIGURE: 10

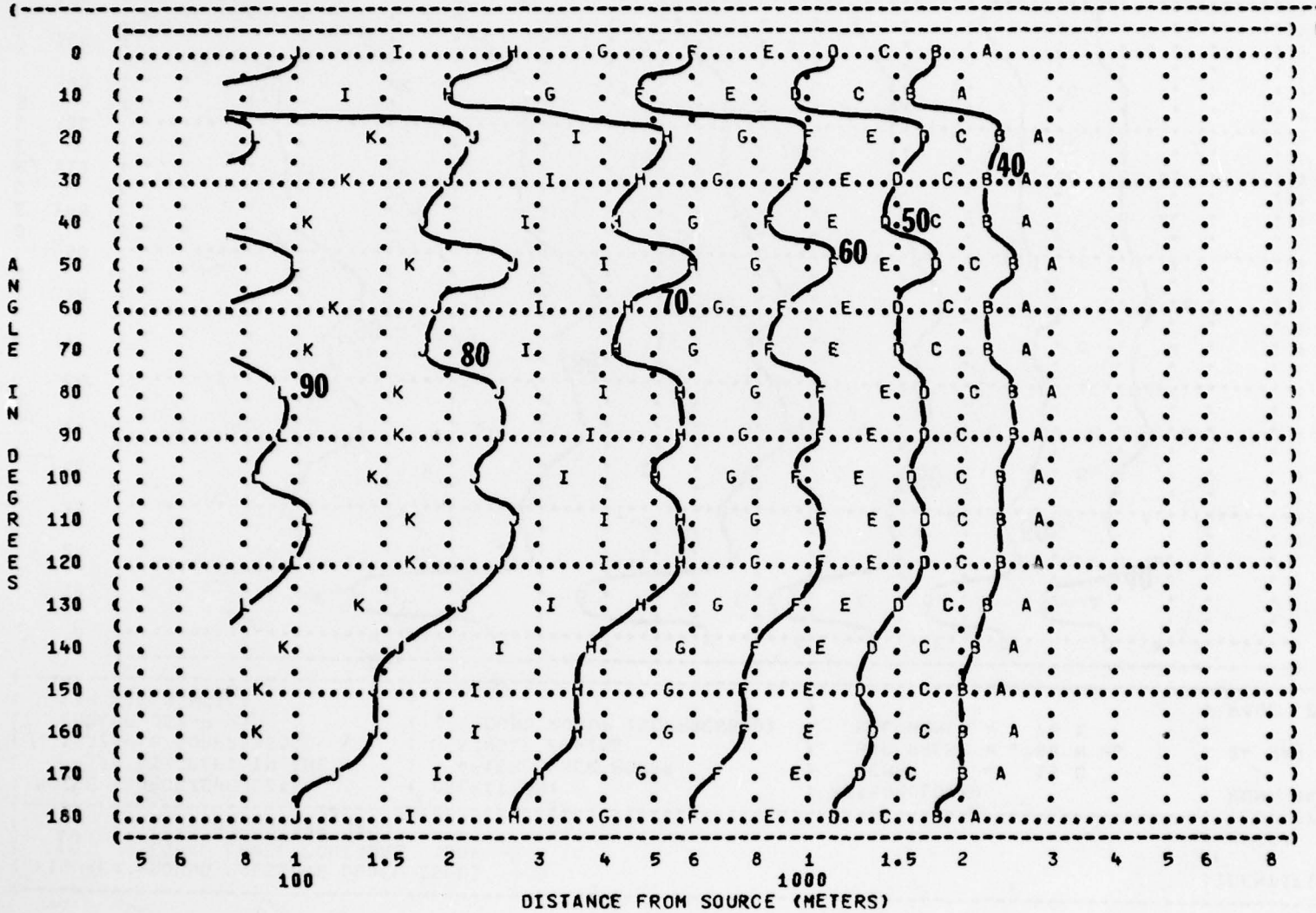
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
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RUN 04
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POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

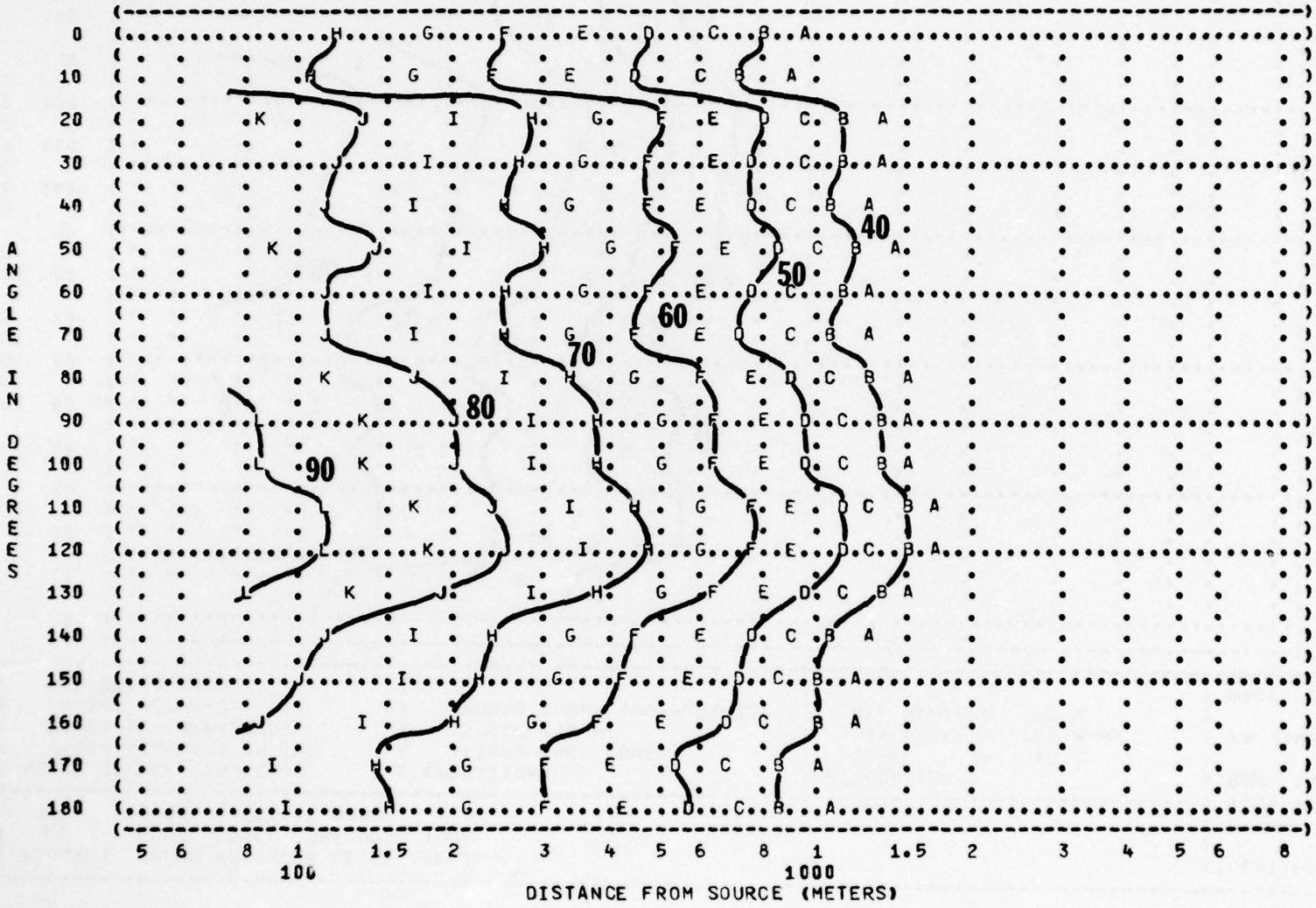
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE AF32A-16 SUPPRESSOR ENGINE J57-P-21 FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04
24 JAN 79
PAGE 25



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-100 AIRCRAFT IN THE
AF32A-16 SUPPRESSOR
ENGINE J57-P-21
FAR FIELD NOISE

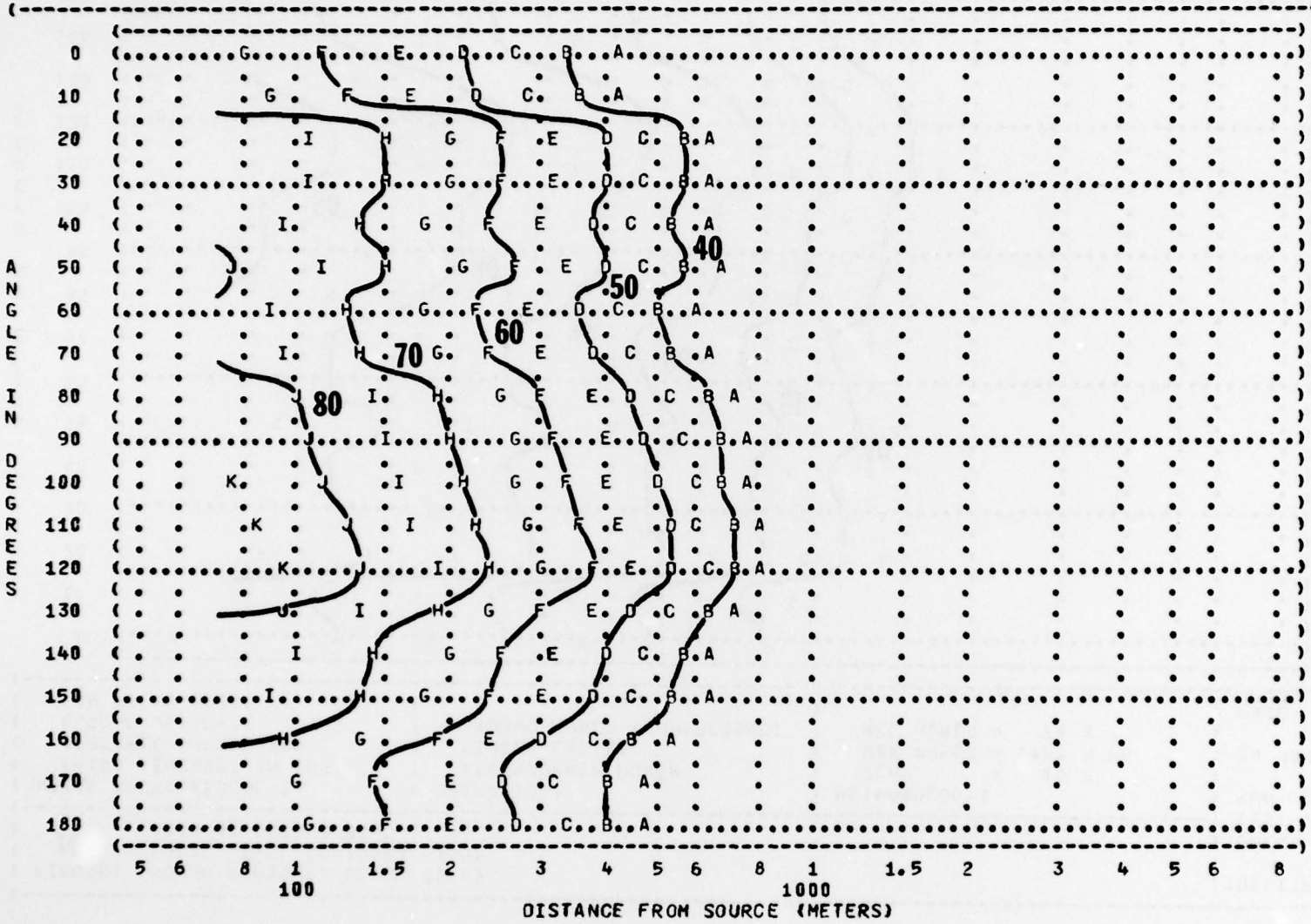
OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-730-001
RUN 04

24 JAN 79

PAGE 26



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85

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