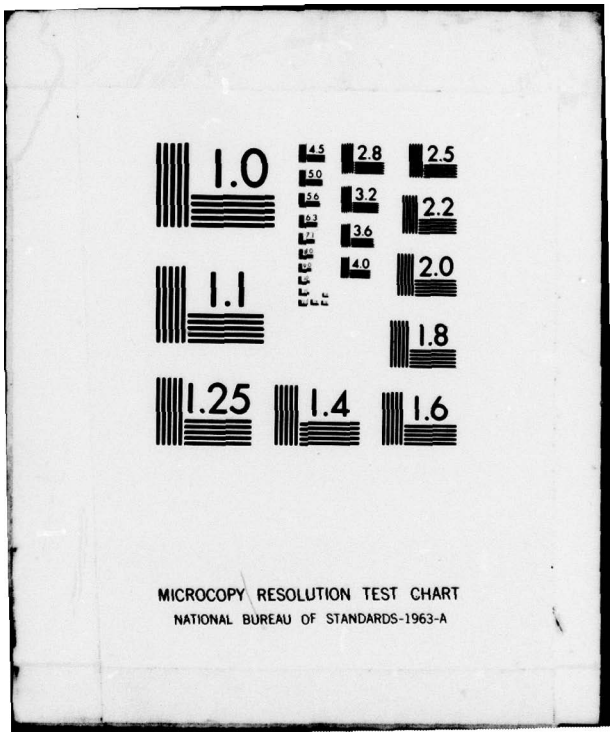
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Volume 137

AD A073617



LEVEL III

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Volume 137
F-101B Aircraft, Near and Far-Field Noise

October 1978

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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 USAF F-101B is a long-range, all-weather supersonic fighter-interceptor aircraft powered by two J57-P55 turbojet engines. This report provides measured and extrapolated data defining the bio-acoustic environments produced by this aircraft operating on a concrete runup pad for five engine-power conditions. Near-field data are reported for ten locations in a wide variety of physical and psychoacoustic measures: overall and band sound

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pressure levels, C-weighted and A-weighted sound levels, preferred speech interference level, perceived noise levels, 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 for his assistance in preparing this report, Mr. Harald Hille for his assistance in acquiring the raw data, Mr. Henry Mohlman, Mr. Keith Kettler and Mr. Fred Lampley of the University of Dayton for assistance in the mechanics of data processing and Mrs. Peggy Massie for typing and assistance in preparation of graphics.

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FAR-FIELD NOISE

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INTRODUCTION

The USAF F-101B is a long-range, all-weather supersonic fighter-interceptor aircraft powered by two J57-P-55 turbojet engines. The aircraft was manufactured by the McDonnell Aircraft Corporation and the engines by United Aircraft, Pratt and Whitney Division.

This volume provides measured and extrapolated data defining bioacoustic environments produced by this aircraft 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-101B aircraft.

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, 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 F-101B aircraft during ground runup operations of its turbojet engines. For these tests, the aircraft was located on a trim pad at Tyndall AFB. Table 1 gives the surface meteorological conditions and the 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 of the noise samples on magnetic tape. During analysis of each sample, he determined the 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 ten numbered near-field locations where ground crews are usually located for maintenance and/or preflight checkout operations. Estimates of noise levels at other locations in the near-field are difficult 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 conditions A.

RESULTS

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the F-101B aircraft at the ten 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 for 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-101B Aircraft, Ground Runup, Tyndall AFB
6 June 1978
Tail #80303

Ground Crew Location

1	Air Hose Removal
2	Engine Observation
3	Marshal
4	Electrical Disconnect
5	Pin Pull FLG
6	Accumulator Check
7	Leak Check
8	Wheel Chock
9	Flap Check
10	Trim Adjustment

Aircraft Engine Operation

A	Idle
B	80% RPM
C	90% RPM
D	Military Power
E	Afterburner Power

Meteorology

Temperature	27.7 C
Bar Pressure	0.762 M Hg
Rel Humidity	82 %
Wind — Speed	2.6 M/Sec (5 Kts)
— Direction	235 Deg

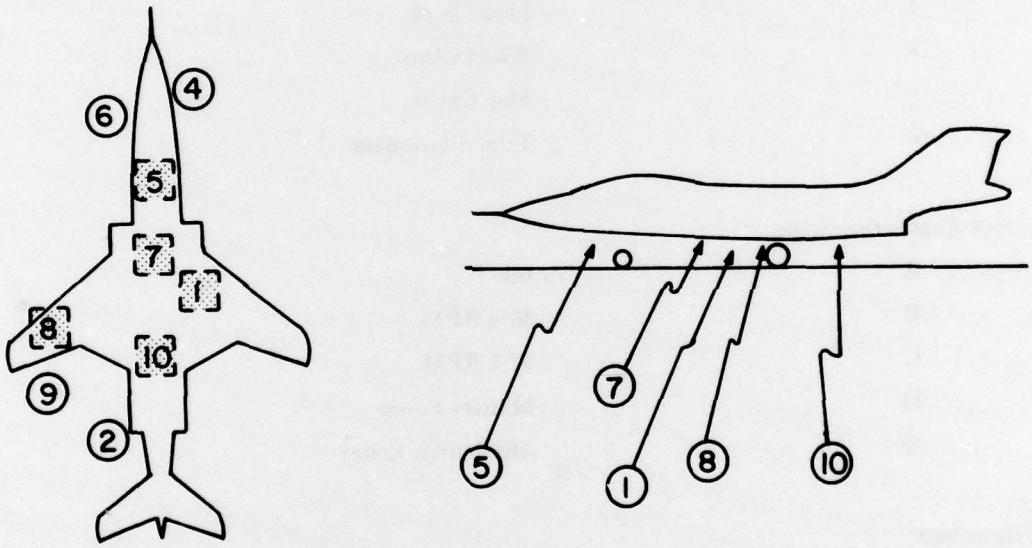


Figure 1. Near-Field Measurement Locations on Remote Trim Pad at Tyndall AFB FL

FAR-FIELD NOISE

MEASUREMENTS

AMRL acquired far-field data during a one hour test period, thus keeping similar meteorological conditions throughout the test. Figure 2 shows the ground runup pad, ground cover aircraft orientation and the 19 microphone measurement sites on a semicircle. The center of the 75 meter radius semicircle used in surveying the J57-P-55 engines was on the ground directly below the intersection of the aircraft's centerline and the plane passing through the engines' exhaust-nozzle exits. The ground runup area did not have a blast deflector; therefore, the engines' exhausts were in a "free-flow" condition.

Table 4 provides cockpit readouts of some 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 microphone measurement sites are in the acoustic far-field of the source where the sound wavefronts 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-101B aircraft in a standard format.

Figure 4 and Table 5 present two basic acoustic measures, the acoustic power level and the directivity index, respectively. The acoustic power level describes the power radiated by the source as a function of frequency. The directivity index is a standard acoustical engineering measure which describes the geometric way in which the source radiates this power as a function of both frequency and angle from source. These basic source measures are primarily of interest for acoustical engineers and noise generation/control specialists.

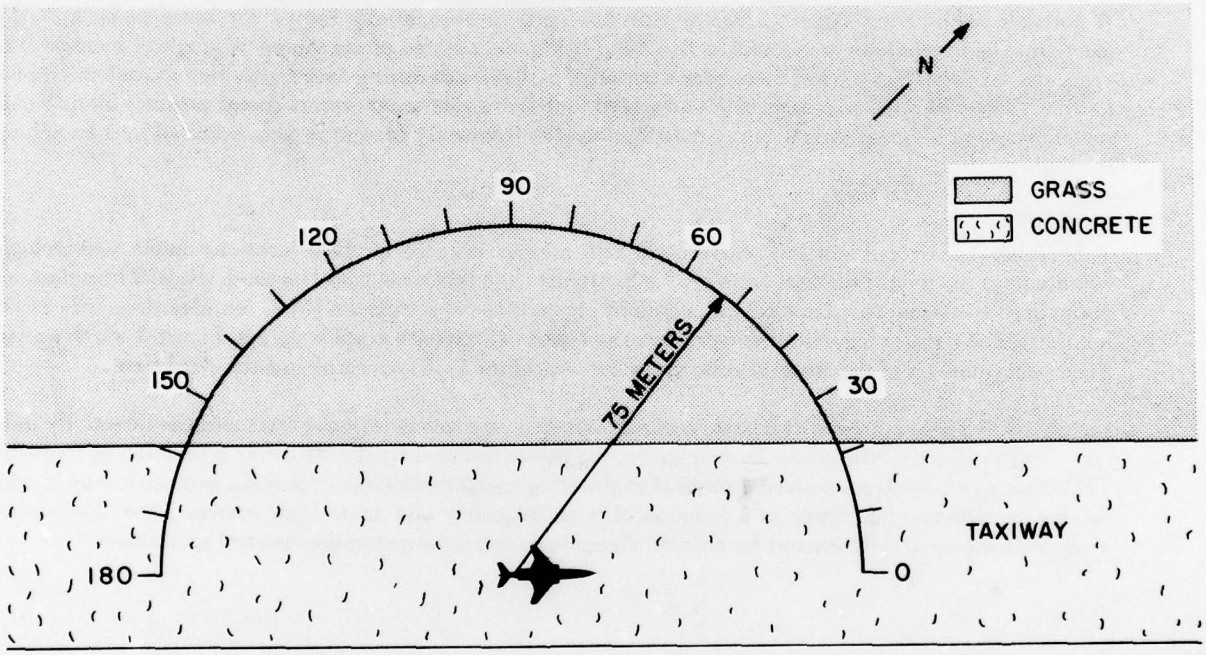


Figure 2. Far-Field Measurement Locations on Remote Trim Pad at Tyndall AFB FL

Estimates of noise characteristics for intermediate power settings (e.g., 88% engine) and/or different number of engines operating (e.g., single engine) can be determined as explained in Volume 1 of this handbook.

Figures 5 through 11 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.

No data are presented at the 170 and/or 180 degree locations at an engine setting above idle power because of turbulent air flow behind the aircraft. Typical A-weighted levels for these angles are 10 to 20 dBA below those at the 160/170 degree location.

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 (e.g., Table 5 at idle power).

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.

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

IDENTIFICATION:
OMEGA 3.2
TEST 78-011-001
RUN 01
18 JAN 79
PAGE F1

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

FREQ (HZ)	LOCATION/CONDITION 3/A	3/B	3/C	3/D	3/E	4/A	4/B	5/A	5/B	6/B	7/A	7/B	7/C	7/D	7/E
25	69<	75	81	84	97	75	77	79	83	81	84	90	92	97	103
31.5	77	77	83	86	97	82	82	82	84	83	89	89	94	97	105
40	72<	77<	84	87	99	76<	79	81	85	84	88	92	99	101	110
50	67<	79	86	89	100	74<	79	79	83	83	87	95	106	102	113
63	70<	80	87	91	102	75<	80	82	82	86	87	95	104	104	111
80	70<	80<	89	93	104	75<	81<	79<	81	84	87	93	103	104	112
100	72<	84	91	96	106	76<	81	80	83	86	89	97	105	109	117
125	74<	85	94	98	106	79	81	84	84	86	86	99	107	110	117
160	78	86	95	101	109	81	83	86	87	90	91	98	107	110	118
200	76	86	95	100	109	82	84	86	86	92	89	99	107	111	117
250	77	88	98	101	112	83	86	88	88	96	93	102	110	114	119
315	83	88	97	102	109	83	84	89	91	100	93	103	111	116	119
400	81	86	94	101	107	88	89	93	96	100	92	99	110	114	118
500	78	84	94	101	105	91	94	97	98	102	93	99	108	112	117
630	80	84	92	99	104	88	90	98	98	103	92	100	109	114	118
800	89	92	95	100	105	94	92	100	103	108	95	100	111	117	120
1000	95	96	95	99	101	98	99	103	106	113	99	102	112	117	121
1250	95	98	96	97	100	95	96	102	104	112	97	103	110	115	120
1600	92	103	97	96	100	94	95	101	104	110	96	112	111	116	119
2000	95	102	107	99	101	97	98	105	108	114	97	107	114	115	118
2500	92	101	108	100	100	94	94	101	103	109	93	104	114	113	117
3150	96	104	101	98	100	100	99	106	109	114	98	108	110	113	117
4000	91	103	102	96	100	93	92	100	103	108	92	107	110	112	116
5000	90	101	102	95	96	91	90	98	101	107	88	103	110	110	113
6300	88	100	100	93	93	89	88	97	99	104	87	102	108	109	112
8000	87	99	98	91	92	89	88	96	98	104	86	100	107	108	111
10000	84	97	95	88	88	85	85	93	94	100	82	98	104	106	108
OVERALL	103	111	114	112	119	106	106	113	115	121	107	117	123	127	131

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 3.2
TEST 78-011-001
RUN 02
18 JAN 79
PAGE F2

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

FREQ (HZ)	LOCATION/CONDITION 8/A	8/B	8/C	8/D	8/E	6/A	9/B	9/C	9/D	9/E
25	85	91	94	96	108	85	89	94	98	108
31.5	94	91	94	99	109	93	89	96	100	109
40	88	91	97	100	109	89	91	98	100	111
50	83	91	101	102	110	84	90	100	101	111
63	82	92	101	103	113	85	93	101	105	113
80	87	93	103	105	114	87	94	101	106	115
100	89	98	105	108	117	86	95	104	107	116
125	89	99	109	111	119	88	99	105	109	116
160	91	97	106	110	118	90	99	107	111	117
200	85	95	107	110	117	87	99	108	112	118
250	87	95	109	111	118	88	101	109	114	121
315	88	97	109	111	118	91	104	112	115	120
400	92	99	110	112	119	93	103	112	117	122
500	92	100	111	113	121	93	102	112	116	122
630	90	100	110	115	122	90	102	113	117	122
800	91	100	112	117	123	91	104	113	118	123
1000	93	99	111	116	122	94	104	112	117	122
1250	92	99	111	115	120	92	105	111	116	121
1600	90	103	111	115	121	91	106	111	116	121
2000	90	100	112	114	121	92	106	111	117	121
2500	86	97	110	113	119	88	104	111	114	119
3150	92	98	109	112	118	92	103	109	114	118
4000	88	98	109	112	117	88	101	108	113	118
5000	83	95	106	110	115	83	98	106	111	116
6300	81	95	105	108	114	82	98	105	110	115
8000	82	92	105	107	113	84	96	104	109	113
10000	79	90	102	105	111	81	95	101	107	111
OVERALL	103	112	122	126	132	104	115	123	128	133

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 3.2
TEST 78-011-001
RUN 03
18 JAN 79
PAGE F3

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

FREQ (HZ)	LOCATION/CONDITION 10/B	10/C	10/D	10/E	1/B	2/A
25	93	97	99	109	83	93
31.5	90	98	99	110	89	100
40	91	98	100	111	88	95
50	92	99	102	110	83	90
63	96	101	105	113	83	86
80	98	105	107	116	85	89
100	99	106	110	118	85	93
125	99	106	109	119	84	97
160	98	107	111	119	83	102
200	100	109	112	120	83	99
250	99	109	112	119	90	97
315	99	107	112	118	87	101
400	100	108	112	119	87	101
500	101	110	112	119	86	103
630	101	111	115	120	84	98
800	102	112	118	121	85	98
1000	101	112	117	121	90	95
1250	101	111	115	120	88	94
1600	104	110	115	120	87	92
2000	102	111	114	120	87	91
2500	100	111	113	118	83	89
3150	101	109	113	118	88	102
4000	100	108	112	117	83	100
5000	98	106	109	114	79	92
6300	97	105	108	114	77	94
8000	94	104	108	112	78	96
10000	92	100	105	110	74	95
OVERALL	114	122	126	132	100	112

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 3.2
TEST 78-011-001
RUN 01
18 JAN 79
PAGE J1

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

FREQ (HZ)	LOCATION/CONDITION 3/A	3/B	3/C	3/D	3/E	4/A	4/B	5/A	5/B	6/B	7/A	7/B	7/C	7/D	7/E
31.5	79	81	88	91	103	84	85	85	89	87	92	95	101	103	112
63	74	84	92	96	107	80	85	85	87	89	92	99	109	108	117
125	80	89	98	103	112	84	87	88	89	92	94	103	111	114	122
250	85	92	102	106	115	87	89	93	93	102	97	106	114	119	123
500	85	90	98	105	110	94	97	101	102	107	97	104	114	118	123
1000	99	101	100	104	107	101	101	107	109	116	102	107	116	121	125
2000	98	107	111	103	105	100	101	107	110	116	100	113	118	120	123
4000	98	107	106	101	104	101	100	107	110	115	99	111	115	117	120
8000	92	104	103	95	96	93	92	100	102	108	90	105	111	112	116
OVERALL	103	111	114	112	119	106	106	113	115	121	107	117	123	127	131

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

IDENTIFICATION: OMEGA 3.2 TEST 78-011-001 RUN 02 18 JAN 79 PAGE J2

NOISE SOURCE/SUBJECT: F-1018 AIRCRAFT GROUND CREW NEAR FIELD NOISE LEVELS

OPERATION:

FREQ (HZ)	LOCATION/CONDITION 8/A	8/B	8/C	8/D	8/E	6/A	9/B	9/C	9/D	9/E
31.5	95	96	100	103	113	95	94	101	104	114
63	89	97	106	108	117	90	97	105	109	118
125	94	103	112	114	123	93	103	110	114	121
250	92	101	113	115	122	94	106	115	118	124
500	96	104	115	118	126	97	107	117	121	127
1000	97	104	116	121	126	97	109	117	122	127
2000	94	105	116	119	125	95	110	116	121	125
4000	94	102	113	116	122	94	106	113	118	122
8000	86	97	109	112	117	87	101	108	113	118
OVERALL	103	112	122	126	132	104	115	123	128	133

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

IDENTIFICATION:
OMEGA 3.2
TEST 78-011-001
RUN 03

18 JAN 79

PAGE J3

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

FREQ (HZ)	LOCATION/CONDITION 10/B	10/C	10/D	10/E	1/B	2/A
31.5	96	102	104	115	92	101
63	101	107	110	119	89	93
125	103	111	115	123	89	104
250	104	113	117	124	92	104
500	105	114	118	124	91	106
1000	106	116	121	125	93	101
2000	107	115	119	124	91	95
4000	104	112	116	121	90	104
8000	100	108	112	117	81	100
OVERALL	114	122	126	132	100	112

TABLE: 3 MEASURES OF HUMAN NOISE EXPOSURE

IDENTIFICATION:
OMEGA 3.2
TEST 78-011-001
RUN 01
18 JAN 79
PAGE H1

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

	LOCATION/CONDITION														
	3/A	3/B	3/C	3/D	3/E	4/A	4/B	5/A	5/B	6/B	7/A	7/B	7/C	7/D	7/E
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	103	111	113	112	119	106	106	112	115	121	107	117	123	126	131
OASLA	104	112	114	110	113	106	107	113	116	122	106	117	123	126	129
T	15	3.8	2.7	5	3.2	11	9	3.2	P	P	11	P	P	P	P
MINIMUM QPL EAR MUFFS															
OASLA*	75	84	87	88	95	78	79	85	87	93	81	90	97	101	106
T	960	480	285	240	71	960	960	404	285	101	807	170	50	25	11
AMERICAN OPTICAL 1700 EAR MUFFS															
OASLA*	69	78	81	83	91	72	73	79	81	87	75	85	92	96	101
T	960	960	807	571	143	960	960	960	807	285	960	404	120	50	25
V-51R EAR PLUGS															
OASLA*	76	82	83	84	90	79	79	85	87	94	80	88	95	100	104
T	960	679	571	480	170	960	960	404	285	85	960	240	71	30	15
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS															
OASLA*	63	69	70	70	75	66	66	72	74	81	67	75	82	86	90
T	960	960	960	960	960	960	960	960	960	807	960	960	679	339	170
H-133 GROUND COMMUNICATION UNIT															
OASLA*	77	85	87	82	86	80	80	86	89	95	80	90	95	98	102
T	960	404	285	679	339	960	960	339	202	71	960	170	71	42	21
COMMUNICATION															
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)															
PSIL	94	99	103	104	108	98	100	105	107	113	100	108	116	120	123
ANNOYANCE															
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)															
TONE CORRECTION (C IN DB)															
PNLT	118	125	130	124	127	122	122	128	131	136	122	133	137	139	142
C	1	0	2	0	0	2	2	2	2	2	2	2	0	0	0

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

TABLE: MEASURES OF HUMAN NOISE EXPOSURE

3

IDENTIFICATION:
OMEGA 3.2
TEST 78-011-001
RUN 02
18 JAN 79
PAGE H2

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

	LOCATION/CONDITION									
	8/A	8/B	8/C	8/D	8/E	6/A	9/B	9/C	9/D	9/E
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	103	111	122	126	132	103	115	123	127	133
OASLA	101	110	121	125	131	102	115	122	127	132
T	25	5	P	P	P	21	2.2	P	P	P
MINIMUM QPL EAR MUFFS										
OASLA*	78	86	97	100	107	78	90	98	102	108
T	960	339	50	30	9	960	170	42	21	8
AMERICAN OPTICAL 1700 EAR MUFFS										
OASLA*	73	81	92	95	102	73	84	92	97	102
T	960	807	120	71	21	960	480	120	50	21
V-51R EAR PLUGS										
OASLA*	76	84	95	99	105	76	88	96	101	106
T	960	480	71	36	13	960	240	60	25	11
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS										
OASLA*	62	70	81	85	92	63	74	82	87	92
T	960	960	807	404	120	960	960	679	285	120
H-133 GROUND COMMUNICATION UNIT										
OASLA*	74	83	94	97	103	75	88	94	99	104
T	960	571	85	50	18	960	240	85	36	15
COMMUNICATION										
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)										
PSIL	95	105	116	119	126	96	109	116	121	126
ANNOYANCE										
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)										
TONE CORRECTION (C IN DB)										
PNLT	117	125	135	138	144	117	126	135	139	144
C	2	1	1	0	0	1	0	0	0	0

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

TABLE: MEASURES OF HUMAN NOISE EXPOSURE

3

IDENTIFICATION:
OMEGA 3.2
TEST 78-011-001
RUN 03
18 JAN 79
PAGE H3

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

	LOCATION/CONDITION					
	10/B	10/C	10/D	10/E	1/B	2/A
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	113	122	126	132	100	111
OASLA	112	121	125	130	98	109
T	3.8	P	P	P	42	6
MINIMUM QPL EAR MUFFS						
OASLA*	88	97	100	107	74	87
T	240	50	30	9	960	285
AMERICAN OPTICAL 1700 EAR MUFFS						
OASLA*	83	91	95	102	70	82
T	571	143	71	21	960	679
V-51R EAR PLUGS						
OASLA*	86	95	100	104	72	84
T	339	71	30	15	960	480
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS						
OASLA*	72	81	86	91	59	69
T	960	807	339	143	960	960
H-133 GROUND COMMUNICATION UNIT						
OASLA*	85	94	98	103	71	82
T	404	85	42	18	960	679
COMMUNICATION						
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)						
PSIL	106	115	119	125	92	101
ANNOYANCE						
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)						
TONE CORRECTION (C IN DB)						
PNLT	126	135	138	144	113	126
C	0	0	0	0	2	2

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

TABLE 4

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS

F-101B Aircraft, Ground Runups, Tyndall AFB FL
6 June 1978
Tail #80303

Aircraft Engine Operation

Idle (#1 Engine Off)	#2 (Right) Engine 62 % RPM, Core Speed N/A Engine Pressure Ratio 280 C, Exhaust Gas Temperature 1150 LBS/HR, Fuel Flow
80% RPM (#1 Engine Off)	#2 (Right) Engine) 80 % RPM, NC 1.25 EPR 320 C, EGT 2450 LBS/HR, FF
90% RPM (#1 Engine Off)	#2 (Right) Engine 90 % RPM, NC 1.58 EPR 420 C, EGT 4350 LBS/HR, FF
Military Power (#1 Engine Off)	#2 (Right) Engine 95.5 % RPM, NC 2.10 EPR 540 C, EGT 7600 LBS/HR, FF
Afterburner Power (#1 Engine Off)	#2 (Right) Engine 96 % RPM, NC 2.04 EPR 530 C, EGT 7600 LBS/HR, FF plus Afterburner

Meteorology

Temperature	27.7 C
Bar Pressure	0.762 M Hg
Rel Humidity	82 %
Wind — Speed	2.6 M/Sec (5 Kts)
— Direction	235 Deg

TABLE 5 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 75 METERS

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 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	65<	65<	63<		63<	64<	64<	65<	65<	67<	64<	62<		64<	63<	62<			
31.5	71<	68<	70<	68<	70<	73	72	75	74	73	73	72	73	72	72	72	70<	69<	68<
40						69<	68<	68<	68<	68<	68<	67<	67<	67<	68<				
50										66<									
63																			
80																			
100			69<			72<	71<	70<	70<	71<		71<	71<	71<	71<	72<	71<		
125	67<	69<	71<	69<	70<	71<	69<	69<	70<	69<	69<	70<	71<	69<	69<	71<	70<	64<	
160	69	73	73	71	71	71	72	73	73	72	74	73	73	73	73	72	70	61<	56<
200	71	74	72	70	69	69	69	69	69	70	69	70	72	72	72	71	69	61<	56<
250	73	75	74	72	70	70	70	67	68	68	68	68	68	68	72	72	69	62<	57<
315	73	75	73	72	67	69	66	68	66	67	67	68	68	67	67	70	70	61<	55<
400	75	77	75	74	69	68	68	68	68	70	70	71	71	70	68	69	69	59	55<
500	77	78	78	76	69	68	68	68	67	69	70	71	70	68	69	67	69	58	53<
630	77	79	77	76	71	68	68	67	65	69	67	68	68	65	68	65	66	56<	49<
800	80	82	79	79	75	71	71	68	65	70	67	69	67	64	65	66	67	57	50<
1000	83	86	80	78	78	75	75	70	67	71	65	66	63	63	65	67	67	60	52<
1250	81	84	76	79	75	73	74	71	66	70	64	67	60	62	66	66	66	57	50<
1600	81	84	76	77	74	73	75	71	67	70	62	66	58	59	64	64	65	54<	47<
2000	86	88	85	81	81	77	79	74	67	70	59	63	55	57	60	62	61	55	47<
2500	81	83	82	80	78	73	73	71	64	67	57	61	54	53	58	59	59	50<	44<
3150	85	87	88	88	84	77	79	77	67	71	64	69	65	61	70	66	65	56	53
4000	82	86	82	84	79	74	74	72	65	67	58	62	57	54	63	61	59	50	46<
5000	79	82	78	78	75	71	70	70	63	66	58	61	56	53	59	59	58	47<	43<
6300	77	80	76	77	73	69	69	69	66	67	61	65	58	55	61	59	59	48<	46<
8000	74	77	74	74	71	66	65	66	64	65	60	63	56	53	59	57	58	47<	48<
10000	70	73	69	70	67	62	62	62	58	58	56	61	52	51	56	54	54	45<	49<
OVERALL	93	95	93	92	89	86	86	84	82	83	81	82	82	81	82	82	81	73	70

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5 — MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 75 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 2

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	66<	66<	68<	68<	69<	62<	65<	69<	66<	65<	66<	66<	68<	73<	75	79	78		
31.5	67<	66<	67<	68<	69<	68<	68<	72	70<	69<	70<	71	72	77	80	81	83		
40	67<		68<	71<	70<	71<	72<	74<	73<	72<	74<	74<	78<	81	84	86	85		
50	68<	69<	69<	72<	72<	71<	72<	76	72<	73<	76	76	78	82	87	88	87		
63	70<	71<	73<	73<	74<	73<	74<	76<	76<	75<	77<	77<	81	86	90	90	87		
80	71<	73<	74<	76<	74<	74<	75<	77<	77<	76<	77<	79<	83	87	92	94	88		
100	73<	75<	78<	78<	78<	76<	77<	78<	78<	79<	79<	82	84	88	94	95	88		
125	76	76	79	79	78	77	79	79	80	81	83	83	85	88	94	95	86		
160	77	78	79	80	78	78	80	81	80	81	83	84	87	88	93	94	84		
200	77	79	80	80	77	77	80	80	81	80	83	84	87	89	90	91	80		
250	79	82	81	79	78	77	79	80	81	82	84	84	86	89	90	89	77		
315	79	80	80	78	76	75	78	78	79	81	84	84	87	88	89	86	73		
400	80	81	80	80	75	74	75	76	79	81	84	84	87	87	88	84	70		
500	80	82	81	79	74	74	73	75	78	80	84	84	85	85	86	83	68		
630	81	83	81	79	76	76	75	74	75	78	82	84	84	83	85	80	65		
800	82	83	83	79	78	78	79	78	76	79	83	84	83	83	85	80	64		
1000	81	84	84	80	79	78	81	79	77	78	82	84	82	82	83	78	62		
1250	83	86	87	82	80	81	83	83	83	82	84	84	83	83	83	77	63		
1600	91	92	93	89	89	86	86	87	83	82	84	85	82	82	82	79	66		
2000	89	90	91	88	87	84	85	82	82	81	82	84	80	80	81	76	62		
2500	88	89	89	87	86	83	83	80	82	80	81	84	79	79	80	75	61		
3150	95	95	96	94	93	87	89	85	83	81	80	83	77	78	80	74	63		
4000	90	91	92	90	89	83	84	82	81	79	78	81	75	77	78	73	60		
5000	89	91	91	88	87	84	83	82	81	80	82	84	81	82	79	76	61		
6300	88	90	90	87	84	81	82	79	79	78	80	82	79	81	79	76	61		
8000	86	88	88	84	83	81	81	78	79	77	77	78	73	74	74	72	58		
10000	82	85	84	81	80	78	78	76	77	75	76	78	72	73	73	70	55		
OVERALL	100	101	102	99	98	94	95	94	94	93	96	97	97	99	102	102	96		

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5 — MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 75 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 2

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	72<	71<	72<	73<	75	76	77	76	77	77	78	79	82	86	89	89	91		
31.5	75	75	74	76	77	77	80	79	80	81	79	82	85	88	91	92	92		
40	75<	75<	76<	76<	79	80	83	81	83	82	81	83	87	92	95	95	94		
50	76	76	78	78	80	81	84	82	84	84	85	87	88	95	98	99	94		
63	77<	78<	79	81	81	81	85	83	83	86	86	87	92	97	102	100	95		
80	80<	81	82	82	82	84	87	85	85	86	88	89	93	100	105	103	98		
100	82	82	85	84	85	86	89	87	88	89	90	92	97	102	106	105	99		
125	85	85	86	85	86	86	88	86	88	89	91	93	98	104	106	105	99		
160	86	88	87	86	85	87	90	89	89	90	93	94	99	104	105	105	100		
200	87	88	87	87	86	88	92	90	90	92	94	96	100	106	103	106	99		
250	88	89	87	87	86	88	92	89	91	92	95	96	101	107	104	107	99		
315	87	89	87	87	85	87	89	88	89	91	95	95	100	104	104	104	97		
400	87	87	87	87	85	85	88	87	88	91	95	96	100	104	103	102	94		
500	86	87	87	86	85	84	86	84	86	90	94	95	99	101	101	101	92		
630	86	87	87	84	85	85	85	83	85	89	95	95	99	100	100	99	91		
800	85	86	87	84	85	86	86	83	84	90	95	95	98	99	98	98	88		
1000	85	84	86	84	85	85	86	84	83	89	95	94	96	98	96	94	85		
1250	85	84	87	85	85	86	87	85	83	89	95	93	95	96	93	91	82		
1600	90	89	89	87	87	87	88	87	85	89	96	93	95	96	93	89	80		
2000	99	98	98	98	93	93	92	88	87	91	97	94	95	95	92	88	79		
2500	96	96	96	96	92	92	90	87	86	90	95	92	94	94	90	86	77		
3150	91	92	92	92	89	89	89	87	86	90	96	91	94	95	91	85	76		
4000	95	94	95	94	90	90	90	88	86	90	95	91	93	94	91	85	76		
5000	92	91	93	92	88	88	88	85	85	88	92	88	92	92	90	86	77		
6300	92	90	92	91	87	86	86	84	84	87	91	87	90	90	88	84	75		
8000	89	88	90	89	86	84	84	83	82	87	90	87	90	89	86	83	74		
10000	86	84	87	85	82	82	82	79	77	83	85	81	84	84		79	71		
OVERALL	104	104	104	104	101	101	102	100	100	103	107	107	110	115	115	115	108		

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 75 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
PAGE 2

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	78	78	79	79	79	79	80	79	80	80	80	82	83	88	93	93	92	89	
31.5	79	77	78	80	79	82	82	81	82	83	83	84	88	94	97	98	97	90	
40	81	81	80	82	83	87	85	84	85	85	88	87	93	97	101	101	99	88	
50	82	83	82	85	85	87	86	87	87	87	88	91	93	101	103	103	99	85	
63	84	84	85	87	88	87	88	88	90	90	92	93	98	104	108	106	99	84	
80	87	87	88	88	90	89	90	91	90	92	93	94	101	108	111	108	101	86	
100	89	88	91	91	91	94	94	92	92	93	95	97	104	111	114	109	100	84	
125	91	90	92	90	92	92	93	93	92	94	96	98	104	112	115	110	98	86	
160	95	96	95	93	94	94	94	95	94	95	98	100	107	110	116	111	99	84	
200	94	95	94	94	94	95	97	96	95	96	99	102	109	113	115	111	97	85	
250	96	96	95	94	93	95	97	96	96	97	100	103	109	115	114	110	95	87	
315	93	95	94	95	94	94	96	96	96	98	101	103	110	113	115	111	94	86	
400	97	94	95	94	92	93	94	94	95	97	101	103	109	112	113	111	91	85	
500	96	94	95	93	92	92	92	93	95	96	100	102	108	110	111	111	91	83	
630	93	94	95	93	92	94	91	92	93	95	100	101	106	108	110	109	89	81	
800	92	94	94	95	94	95	92	94	92	96	100	101	106	106	111	108	89	80	
1000	92	92	93	93	94	94	93	95	93	94	98	99	103	103	108	105	87	79	
1250	90	89	91	92	93	94	92	96	94	93	97	98	103	100	107	103	85	76	
1600	91	89	91	91	92	94	95	97	95	92	96	96	102	99	105	102	84	76	
2000	90	90	91	91	93	94	95	96	94	89	94	95	101	96	104	99	82	74	
2500	89	90	92	89	91	93	93	95	94	88	93	94	99	94	103	97	81	73	
3150	90	89	91	91	91	94	94	95	94	87	92	93	97	94	103	95	79	71	
4000	87	87	89	89	89	92	92	93	92	86	90	92	96	92	100	92	77	70	
5000	84	85	87	87	87	89	91	92	92	86	90	91	96	91	100	91	78	70	
6300	83	83	86	85	86	88	89	91	90	85	89	90	95	90	98	90	76	69	
8000	81	81	83	83	84	86	87	90	90	84	89	90	94	90	97	91	76	69	
10000	77	77	79	78	81	82	84	87	87	81	86	87	92	88	94	88	74	67	
OVERALL	105	105	106	105	105	106	107	108	107	107	111	112	118	122	125	121	109	98	

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 75 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 2

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	90	89	89	90	90	92	90	93	92	89	91	93	96	102	104	106	103		
31.5	90	91	91	92	91	94	95	93	93	93	93	94	102	106	107	109	106		
40	91	92	90	93	94	96	96	95	95	96	96	98	105	111	112	111	105		
50	93	93	94	95	96	96	97	97	96	98	98	100	109	114	116	113	102		
63	96	93	95	96	95	96	98	98	99	100	101	104	111	117	117	113	104		
80	96	97	97	98	99	98	99	100	100	101	102	108	115	120	119	114	104		
100	97	98	99	100	101	101	101	102	101	102	103	109	117	122	120	115	104		
125	99	98	100	100	100	101	100	102	102	103	106	111	118	123	120	114	103		
160	102	102	101	100	100	101	102	104	103	104	107	112	118	122	120	116	104		
200	101	102	101	100	101	102	103	105	104	105	108	114	119	119	119	115	101		
250	103	103	102	101	101	103	105	105	104	106	109	115	121	120	119	115	100		
315	98	100	99	100	99	100	102	104	105	107	110	114	119	120	118	113	98		
400	99	100	100	100	98	99	100	102	104	107	110	115	118	118	117	110	99		
500	98	99	100	98	98	99	99	99	103	107	111	114	116	116	115	108	99		
630	95	98	100	98	101	101	101	99	102	106	111	113	113	114	113	104	96		
800	94	97	98	98	100	101	102	101	102	106	111	112	112	112	112	101	95		
1000	92	95	97	96	99	100	102	102	102	105	109	111	110	110	109	97	92		
1250	90	93	96	94	97	99	101	103	104	104	109	110	107	108	108	95	91		
1600	91	92	95	94	97	99	101	103	105	105	108	108	105	105	107	95	89		
2000	90	92	95	94	98	99	102	104	104	105	107	107	104	104	105	93	86		
2500	89	91	93	93	97	98	100	101	103	104	105	106	101	101	104	89	84		
3150	89	91	93	94	97	98	101	103	102	103	104	104	101	99	102	87	82		
4000	88	93	92	93	96	96	99	101	100	101	101	102	98	97	99	84	79		
5000	87	89	89	91	93	94	97	99	99	101	101	102	97	97	99	83	78		
6300	85	86	88	89	92	92	95	97	98	99	100	100	96	95	98	81	76		
8000	83	85	86	87	89	91	93	96	98	99	100	100	94	94	98	80	76		
10000	79	80	82	83	85	86	89	92	94	96	97	97	92	92	94	76	73		
OVERALL	110	111	111	111	112	113	114	116	116	118	121	124	128	130	129	124	114		

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

FIGURE 3: NORMALIZED FARFIELD NOISE LEVELS

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 6

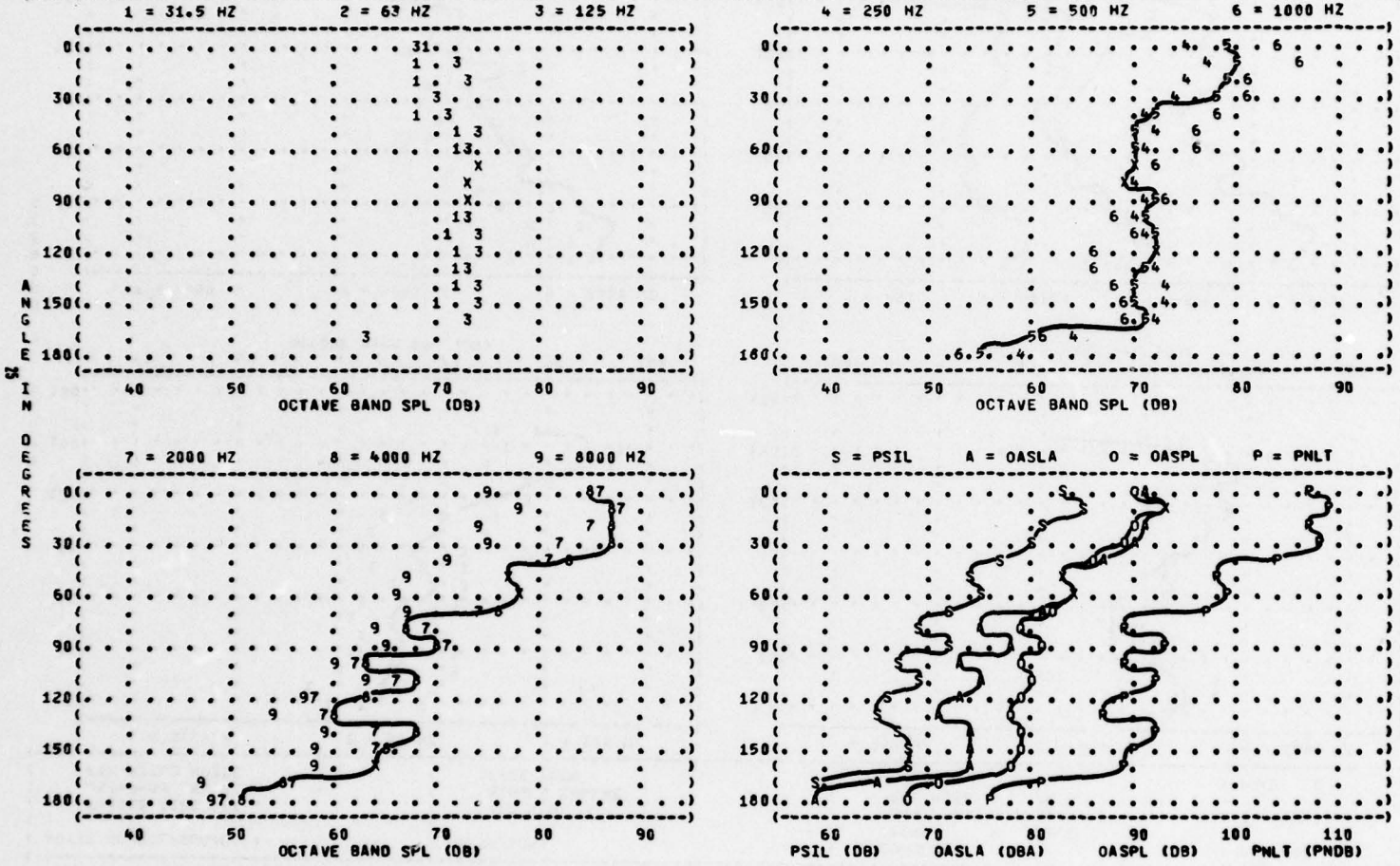


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:

F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:

80% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:

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

IDENTIFICATION:

OMEGA 1.4
TEST 78-011-001
RUN 02

24 JAN 79

PAGE 6

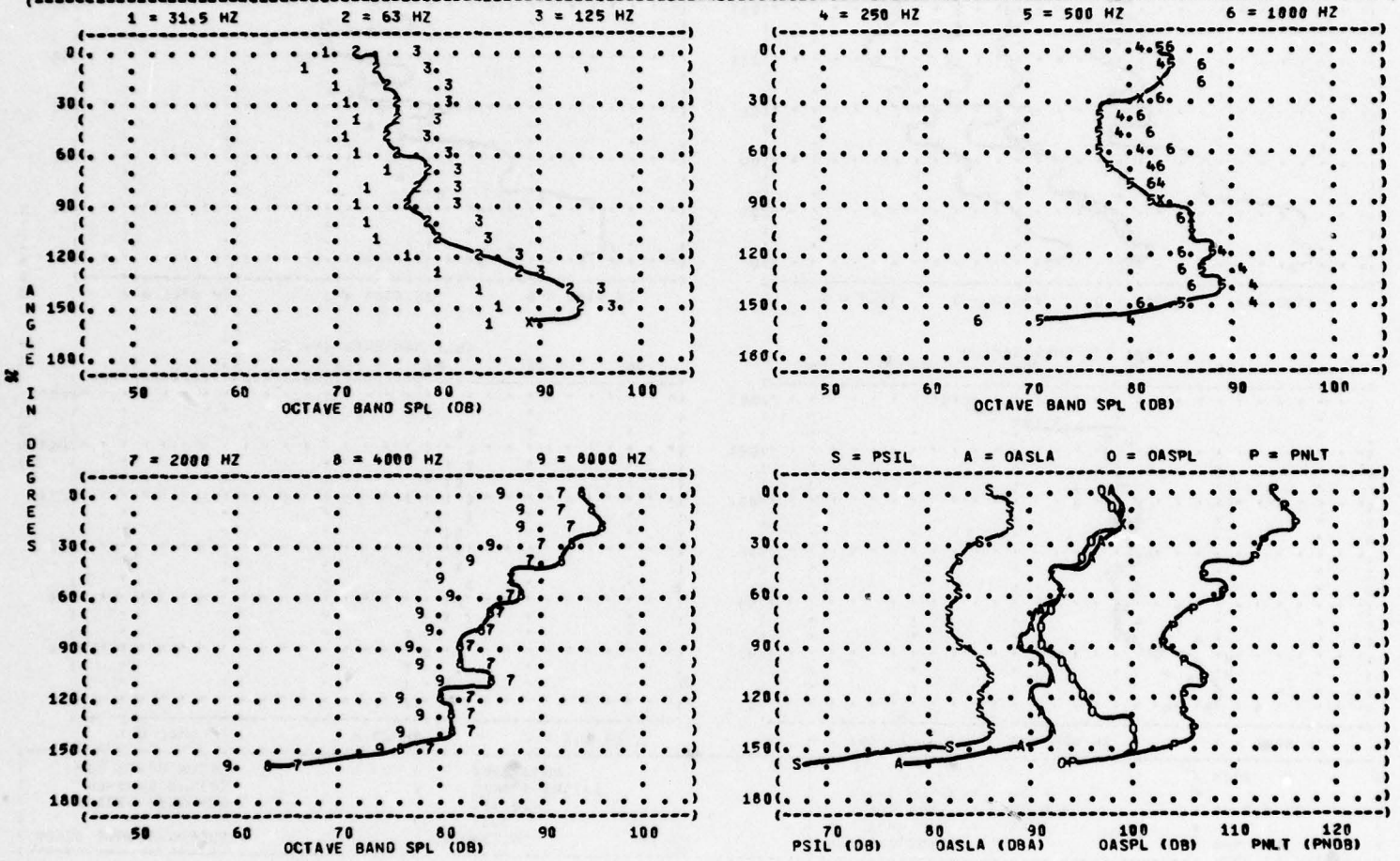


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:

F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:

90% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:

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

IDENTIFICATION:

OMEGA 1.4
TEST 78-011-001
RUN 03

24 JAN 79

PAGE 6

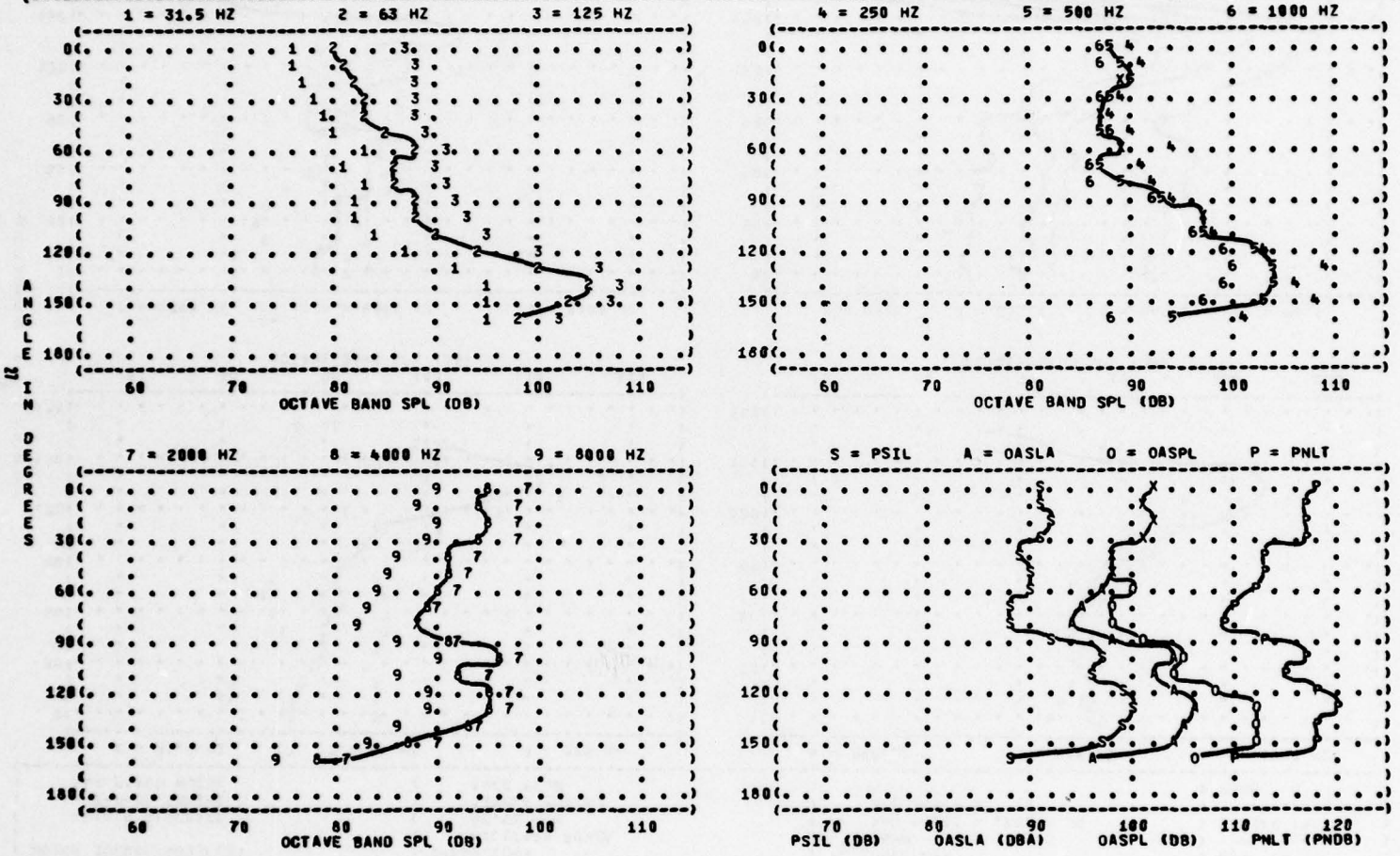


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

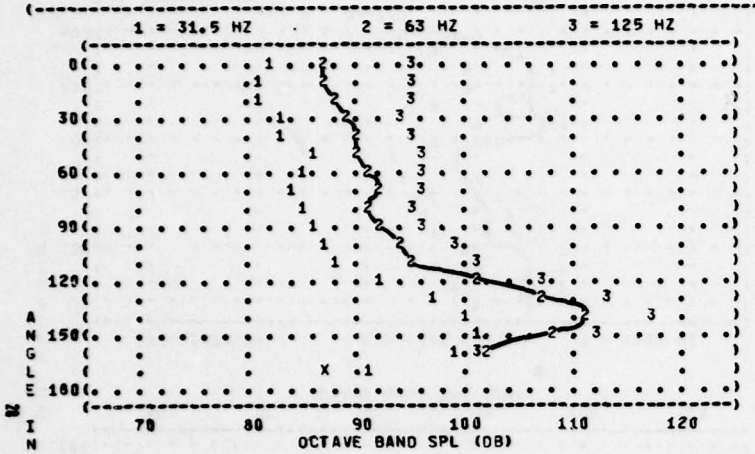
3 DISTANCE = 100 METERS

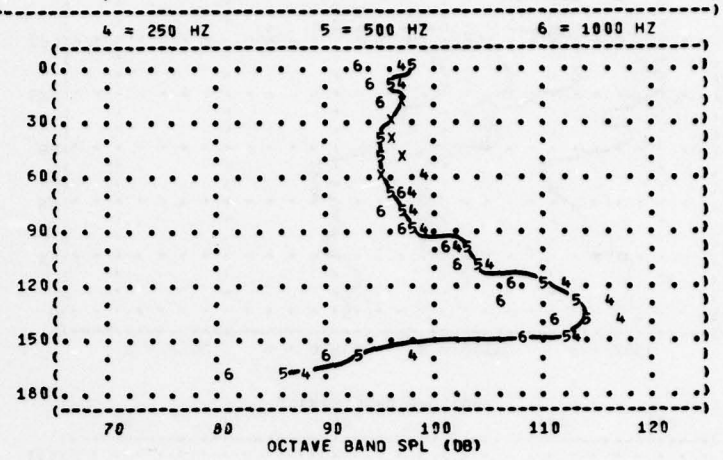
NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

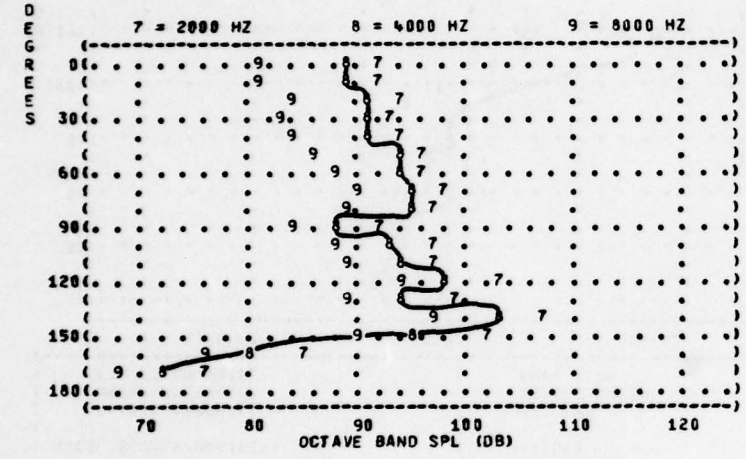
OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
24 JAN 79
PAGE 6







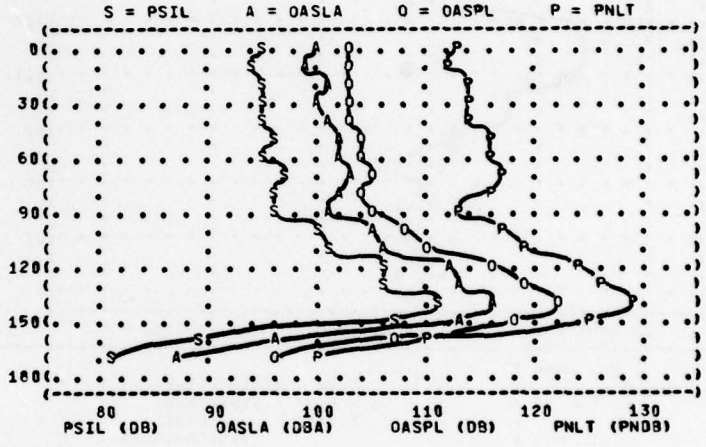


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
24 JAN 79
PAGE 6

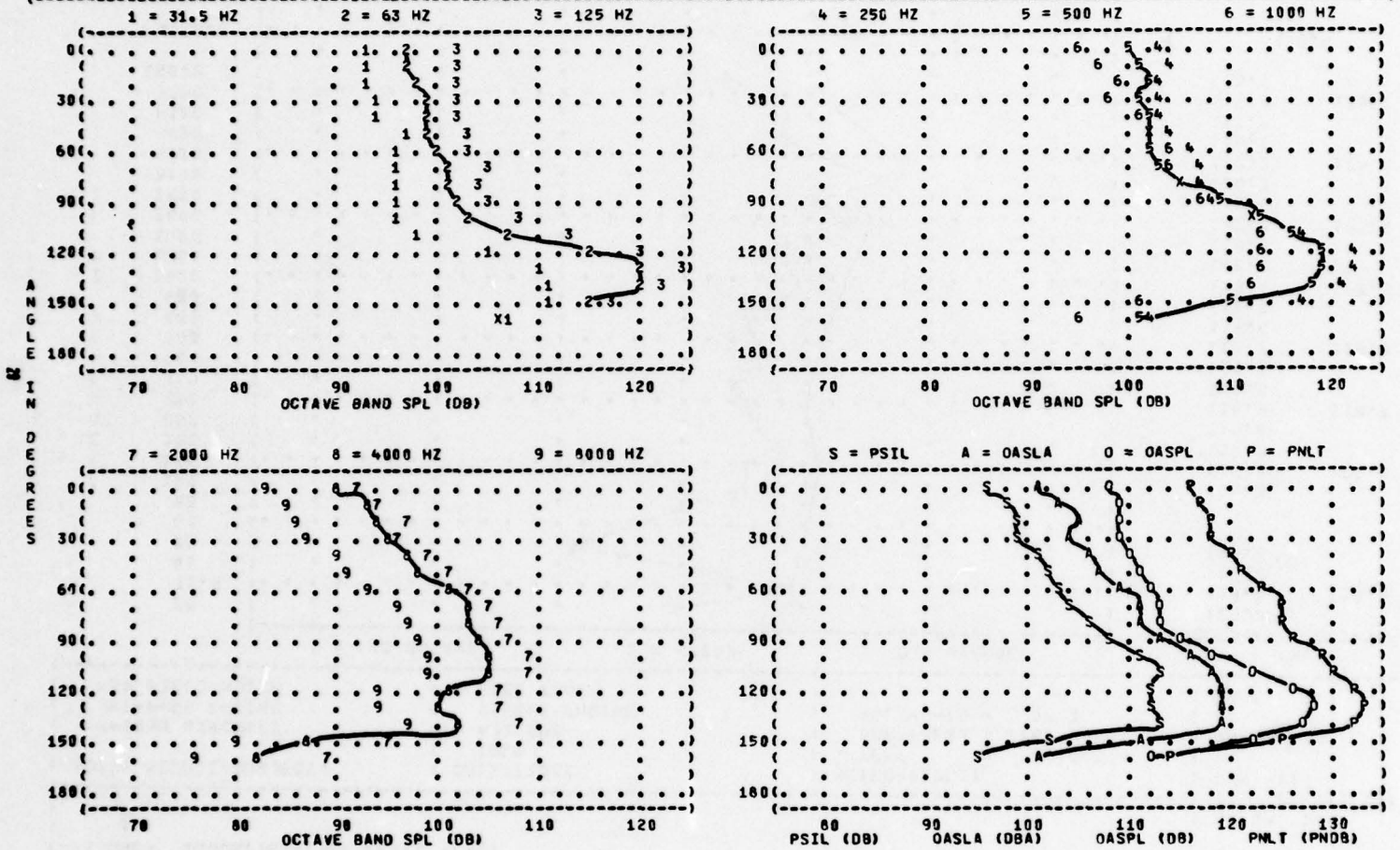


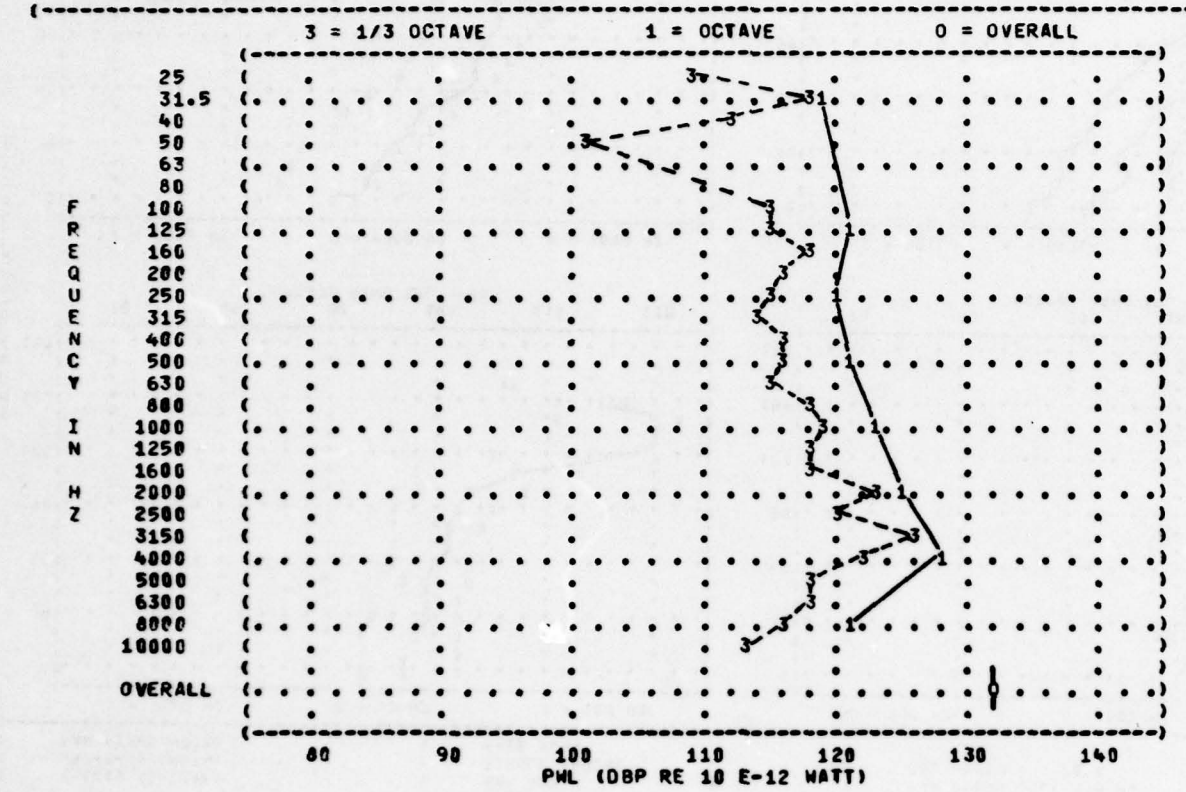
FIGURE: 4 ACOUSTIC POWER LEVEL (PWL)

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
24 JAN 79
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	109.0	
31.5	118.0	119.4
40	112.0	
50	100.6	
63		
80		
100	115.3	
125	115.2	121.0
160	117.7	
200	115.6	
250	114.9	119.7
315	114.0	
400	115.6	
500	116.2	120.5
630	115.4	
800	117.7	
1000	119.4	123.3
1250	118.2	
1600	118.0	
2000	122.8	125.4
2500	119.8	
3150	126.2	
4000	122.2	128.2
5000	118.5	
6300	117.7	
8000	115.9	120.7
10000	113.1	
OVERALL		132.4

FIGURE: ACOUSTIC POWER LEVEL (PWL)

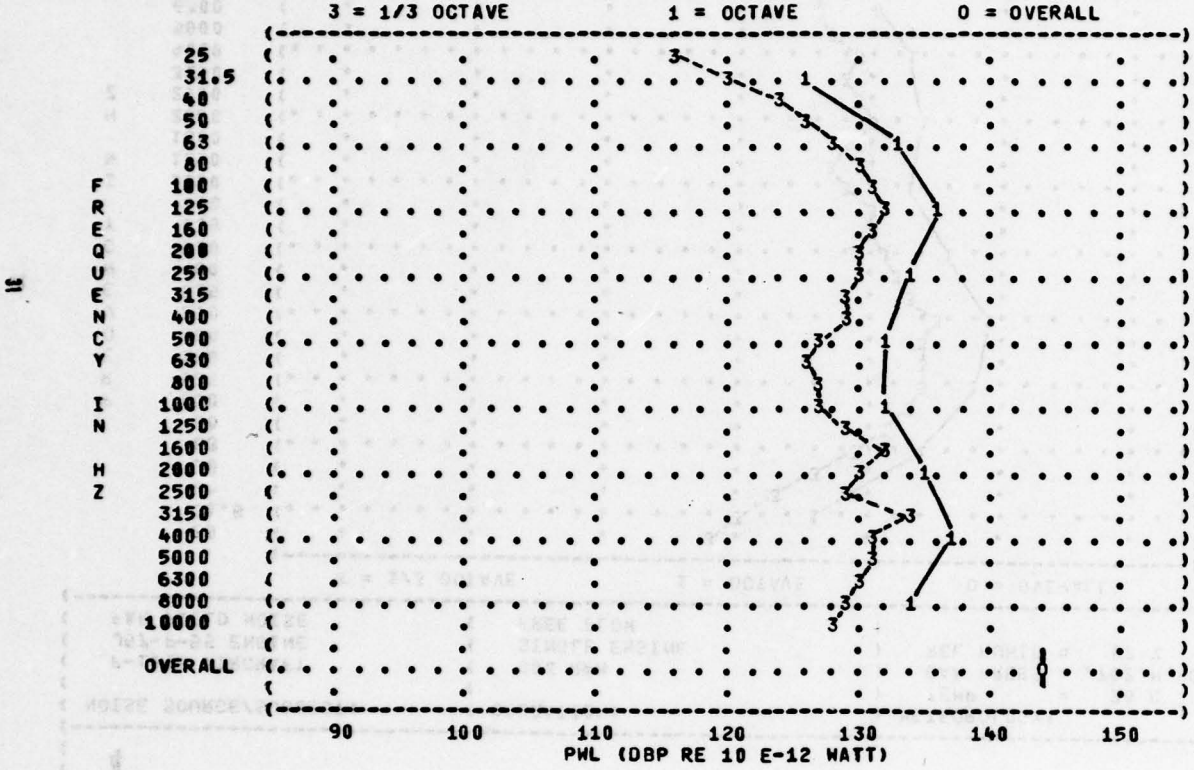
4

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
24 JAN 79
PAGE 3

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %



	PWL	
	1/3 OCTAVE	OCTAVE
25	116.2	
31.5	119.9	125.8
40	123.8	
50	125.6	
63	127.6	132.9
80	130.1	
100	131.5	
125	131.7	136.2
160	131.2	
200	129.9	
250	129.7	134.3
315	128.9	
400	128.5	
500	127.4	132.3
630	126.3	
800	126.8	
1000	126.5	132.2
1250	128.6	
1600	131.7	
2000	130.0	135.2
2500	129.2	
3150	134.3	
4000	131.3	137.3
5000	131.3	
6300	130.3	
8000	129.2	133.9
10000	127.5	
OVERALL		143.8

FIGURE: ACOUSTIC POWER LEVEL (PWL)

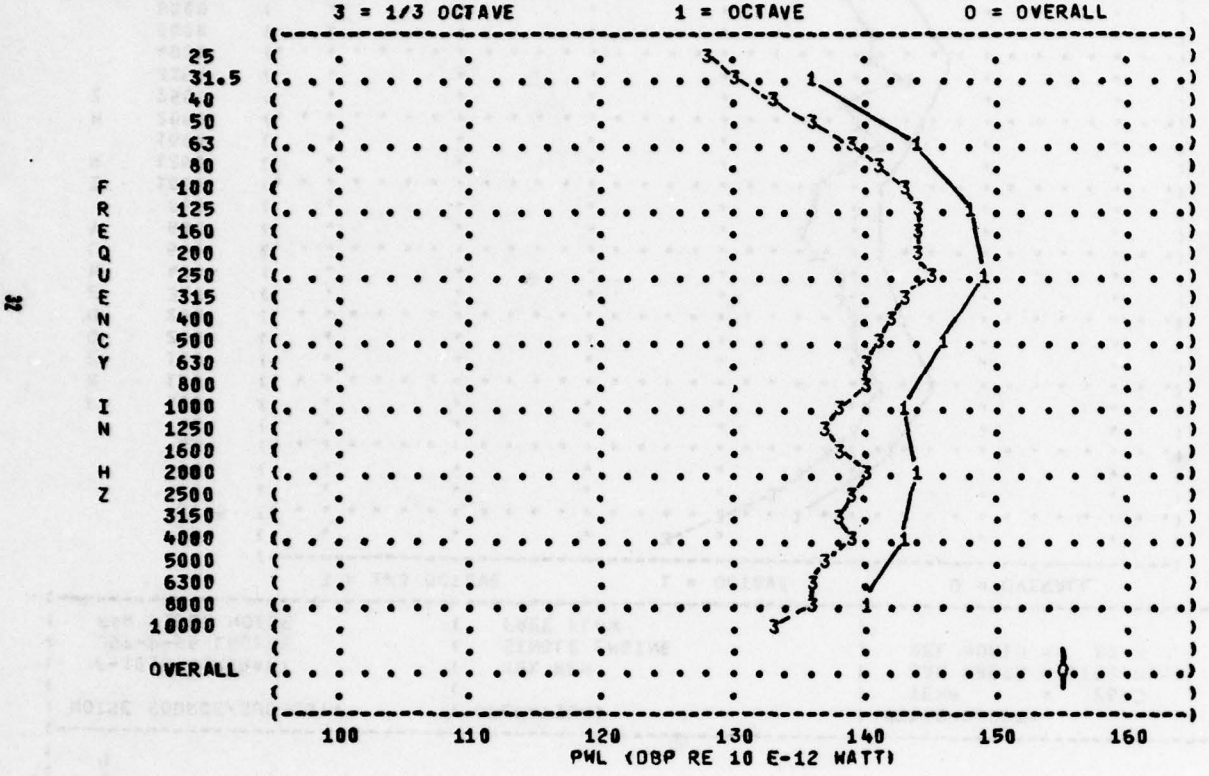
4

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
24 JAN 79
PAGE 3



	1/3 OCTAVE	PWL OCTAVE
25	127.8	
31.5	130.1	135.8
40	133.4	
50	136.1	
63	138.5	143.8
80	141.1	
100	142.6	
125	143.7	148.1
160	143.6	
200	144.4	
250	145.1	149.1
315	143.2	
400	142.4	
500	141.1	146.0
630	139.9	
800	139.5	
1000	138.2	143.2
1250	137.1	
1600	137.5	
2000	139.9	143.5
2500	138.6	
3150	138.2	
4000	138.6	142.7
5000	137.0	
6300	136.1	
8000	135.9	139.9
10000	132.6	
OVERALL		154.6

FIGURE: 4 ACOUSTIC POWER LEVEL (PWL)

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

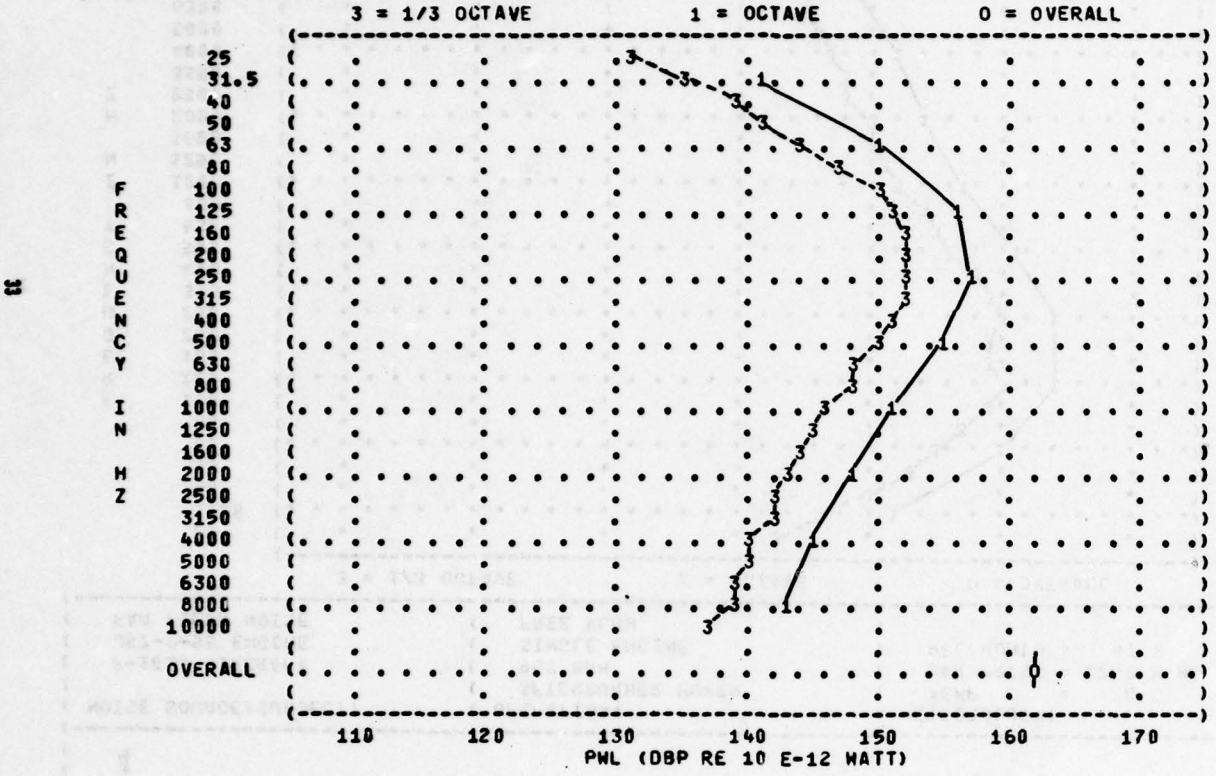
OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04

18 SEP 78

PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	131.0	
31.5	135.4	140.8
40	138.7	
50	140.9	
63	144.4	149.7
80	147.3	
100	150.0	
125	150.9	155.6
160	151.6	
200	152.0	
250	152.3	157.0
315	152.2	
400	151.3	
500	149.8	154.8
630	148.5	
800	148.3	
1000	145.9	151.4
1250	145.0	
1600	144.1	
2000	142.9	147.9
2500	142.0	
3150	141.7	
4000	140.4	145.4
5000	139.7	
6300	139.2	
8000	139.1	143.4
10000	137.4	
OVERALL		161.8

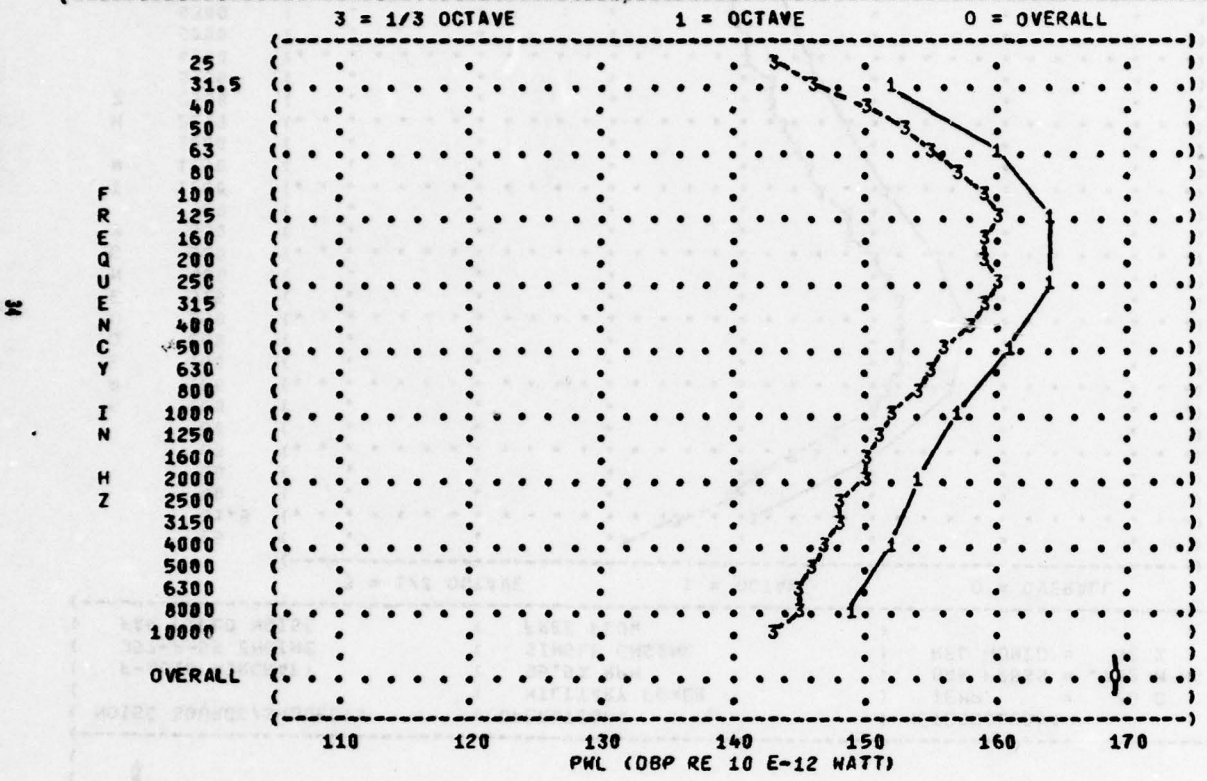
FIGURE: 4 ACOUSTIC POWER LEVEL (PWL)

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
24 JAN 79
PAGE 3



	PWL	
	1/3 OCTAVE	OCTAVE
25	143.0	
31.5	146.5	152.2
40	150.0	
50	152.7	
63	154.6	160.0
80	157.2	
100	158.8	
125	159.6	164.0
160	159.2	
200	158.8	
250	159.9	163.9
315	158.5	
400	158.0	
500	156.2	161.2
630	154.6	
800	153.9	
1000	152.2	157.3
1250	151.2	
1600	150.5	
2000	149.7	154.4
2500	148.4	
3150	148.2	
4000	146.6	151.7
5000	145.8	
6300	145.0	
8000	145.2	149.3
10000	143.2	
OVERALL	169.3	

TABLE: DIRECTIVITY INDEX (DB)

6

IDENTIFICATION:

OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 4

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
1/3 OCTAVE																			
25	1	2	-1		0	0	0	1	2	4	0	-1		1	-1	-1			
31.5	-2	-5	-3	-4	-3	0	0	2	1	1	1	0	0	0	0	-1	-2	-3	-4
40						2	1	2	2	1	1	0	0	1	1				
50										11									
63																			
80																			
100			0			2	1	0	0	1		1	1	1	2	3	1		
125	-3	-1	1	-1	0	1	-1	-1	0	0	0	0	1	0	-1	2	1	-6	
160	-4	1	0	-2	-1	-1	-1	1	0	-1	2	1	1	0	0	0	-3	-11	-16
200	1	4	2	0	-1	-1	-1	-1	-1	0	-1	0	2	1	2	0	-1	-9	-14
250	3	6	4	2	1	0	0	-2	-1	-2	-2	-1	-1	-1	2	2	0	-7	-12
315	5	6	5	4	-2	1	-1	-1	-2	-1	-2	-1	0	-1	-1	2	2	-8	-13
400	5	7	4	3	-1	-2	-3	-2	-2	0	0	1	1	0	-2	-1	-1	-11	-15
500	6	8	7	5	-2	-3	-3	-2	-3	-1	-1	0	0	-2	-2	-3	-2	-13	-18
630	8	9	7	6	1	-2	-2	-3	-4	-1	-2	-1	-1	-4	-2	-5	-3	-14	-20
800	8	10	7	7	3	-1	-1	-4	-7	-2	-5	-3	-5	-8	-7	-6	-5	-15	-22
1000	9	12	6	5	4	2	1	-4	-6	-3	-9	-8	-11	-10	-8	-7	-7	-13	-21
1250	8	12	4	7	3	1	2	-2	-6	-3	-8	-5	-12	-10	-6	-6	-6	-15	-22
1600	9	12	4	5	2	1	3	-1	-5	-2	-10	-6	-14	-13	-8	-8	-7	-17	-24
2000	9	12	9	4	4	1	2	-3	-9	-7	-18	-14	-22	-20	-17	-15	-15	-22	-29
2500	7	10	9	7	5	-1	0	-3	-10	-6	-16	-12	-20	-20	-16	-14	-15	-23	-30
3150	6	8	9	8	5	-2	0	-2	-12	-8	-15	-10	-15	-18	-10	-13	-14	-23	-26
4000	7	11	7	9	4	-1	-1	-3	-10	-8	-17	-13	-17	-20	-12	-14	-16	-25	-29
5000	8	11	7	7	4	0	-1	-1	-8	-5	-13	-10	-15	-18	-12	-12	-13	-24	-28
6300	7	11	6	7	4	0	-1	0	-4	-2	-9	-5	-11	-14	-9	-10	-10	-22	-23
8000	7	10	7	7	4	-1	-2	-1	-3	-2	-7	-4	-10	-13	-8	-9	-9	-20	-19
10000	8	10	7	7	4	-1	-1	0	-5	-4	-7	-2	-11	-12	-7	-9	-9	-17	-14
OCTAVE																			
31.5	-2	-4	-3		-3	1	0	2	1	1	1	0	0	0	0	-2			
63																			
125	-5	-1	0	-3	-2	0	0	0	0	0	0	1	1	0	1	1	0	-10	
250	3	5	3	2	-1	0	-1	-1	-1	-1	-2	-1	0	0	1	1	0	-8	-13
500	6	8	6	5	0	-2	-3	-3	-3	-1	-1	0	0	-2	-2	-3	-2	-12	-17
1000	9	11	6	6	3	1	1	-3	-6	-2	-7	-5	-9	-9	-7	-6	-6	-14	-22
2000	9	11	8	5	4	1	2	-2	-8	-5	-14	-11	-18	-18	-13	-12	-12	-21	-28
4000	6	9	8	8	5	-1	0	-2	-11	-8	-15	-11	-15	-18	-10	-13	-15	-24	-27
8000	7	11	7	7	4	-1	-1	-1	-4	-2	-8	-4	-11	-13	-8	-10	-10	-20	-19
OVERALL	7	9	7	6	3	0	0	-2	-4	-3	-5	-4	-4	-5	-4	-4	-5	-13	-16

TABLE: DIRECTIVITY INDEX (DB)

6

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 4

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
1/3 OCTAVE																			
25	-5	-5	-3	-3	-2	-8	-6	-2	-5	-6	-5	-5	-3	2	4	8	7		
31.5	-8	-8	-8	-6	-5	-7	-7	-2	-4	-5	-5	-3	-2	2	5	7	8		
40	-12		-10	-8	-8	-8	-6	-4	-5	-6	-5	-4	-1	2	6	8	7		
50	-12	-11	-11	-8	-8	-9	-8	-5	-8	-7	-5	-4	-2	2	7	8	6		
63	-12	-11	-10	-9	-8	-9	-8	-6	-6	-7	-5	-6	-1	3	8	8	4		
80	-14	-12	-10	-9	-10	-10	-10	-7	-7	-9	-7	-5	-2	2	7	9	3		
100	-13	-11	-8	-8	-9	-10	-9	-8	-8	-7	-7	-5	-2	2	8	9	2		
125	-10	-10	-7	-7	-8	-9	-8	-7	-7	-6	-3	-3	-1	1	7	9	0		
160	-9	-8	-7	-6	-8	-8	-6	-5	-6	-5	-3	-2	1	2	7	8	-2		
200	-7	-5	-5	-5	-7	-7	-5	-5	-3	-4	-2	-1	2	4	6	7	-4		
250	-5	-3	-3	-5	-6	-7	-5	-4	-3	-3	0	0	2	4	5	5	-8		
315	-4	-3	-3	-5	-7	-8	-5	-5	-4	-3	0	1	3	4	6	2	-10		
400	-3	-2	-3	-3	-8	-9	-8	-7	-4	-2	1	1	4	4	5	1	-13		
500	-1	0	-1	-3	-8	-7	-8	-7	-4	-2	2	2	4	3	5	1	-13		
630	0	2	0	-2	-5	-5	-5	-6	-5	-2	2	3	3	3	4	-1	-16		
800	1	2	2	-2	-3	-3	-2	-3	-5	-2	2	3	2	2	4	-1	-17		
1000	1	3	3	-1	-2	-2	0	-2	-3	-2	1	3	1	1	2	-2	-18		
1250	0	3	4	-1	-2	-2	1	0	0	0	1	2	0	0	0	-6	-20		
1600	6	6	7	3	3	0	1	1	-3	-4	-2	0	-4	-4	-4	-7	-20		
2000	5	6	7	4	3	0	1	-2	-1	-3	-2	0	-4	-3	-3	-8	-22		
2500	5	6	6	5	3	0	1	-2	-1	-3	-1	1	-4	-4	-3	-8	-21		
3150	7	8	9	6	5	-1	1	-3	-5	-7	-8	-5	-11	-10	-8	-13	-25		
4000	6	7	8	6	5	-1	0	-2	-3	-5	-6	-3	-9	-7	-6	-11	-24		
5000	5	7	8	5	3	0	-1	-2	-3	-4	-2	1	-3	-2	-5	-8	-23		
6300	5	8	8	5	2	-1	0	-3	-3	-4	-2	0	-3	-1	-3	-6	-21		
8000	6	8	8	4	3	1	1	-2	-1	-3	-3	-2	-7	-6	-6	-9	-22		
10000	5	8	7	4	3	0	1	-2	-1	-3	-2	0	-6	-5	-4	-8	-22		
OCTAVE																			
31.5	-9	-11	-8	-7	-6	-7	-6	-3	-5	-6	-5	-4	-1	2	6	8	7		
63	-13	-11	-10	-9	-9	-10	-9	-6	-7	-8	-6	-5	-2	3	7	9	4		
125	-11	-10	-7	-7	-8	-9	-7	-7	-7	-6	-4	-3	-1	2	8	9	0		
250	-5	-4	-4	-5	-7	-7	-5	-5	-4	-3	-1	0	3	4	6	5	-7		
500	-2	0	-1	-3	-7	-7	-7	-7	-4	-2	2	2	4	3	5	1	-14		
1000	1	3	3	-1	-2	-2	0	-1	-2	-1	1	3	1	1	2	-3	-18		
2000	5	6	7	4	3	0	1	0	-2	-3	-2	0	-4	-4	-3	-8	-21		
4000	7	7	8	6	5	0	1	-2	-4	-5	-5	-3	-7	-6	-7	-11	-24		
8000	5	8	8	4	3	0	0	-2	-2	-3	-2	-1	-5	-3	-4	-7	-22		
OVERALL	2	3	4	1	0	-3	-2	-3	-4	-4	-2	-1	0	1	4	5	-2		

TABLE: DIRECTIVITY INDEX (DB)

6

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 4

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
1/3 OCTAVE																			
25	-11	-12	-10	-10	-8	-6	-5	-7	-5	-6	-5	-3	-1	3	6	7	8		
31.5	-10	-10	-11	-9	-8	-7	-5	-6	-5	-4	-6	-3	0	3	6	7	7		
40	-13	-13	-12	-12	-9	-8	-5	-7	-6	-7	-7	-5	-2	4	7	7	6		
50	-15	-15	-12	-13	-11	-10	-7	-9	-7	-7	-6	-4	-3	4	8	8	3		
63	-16	-15	-14	-12	-12	-12	-8	-11	-10	-8	-7	-6	-2	4	9	7	2		
80	-16	-15	-14	-14	-14	-12	-9	-10	-11	-10	-8	-7	-2	5	9	7	2		
100	-16	-15	-13	-14	-13	-12	-9	-10	-10	-9	-8	-6	-1	4	8	7	1		
125	-13	-14	-12	-13	-13	-13	-10	-12	-10	-9	-7	-6	-1	6	8	7	1		
160	-12	-10	-11	-12	-13	-11	-8	-10	-9	-8	-6	-4	1	6	7	7	2		
200	-12	-11	-12	-12	-13	-11	-6	-9	-9	-7	-5	-3	1	8	4	7	0		
250	-12	-11	-13	-13	-14	-12	-8	-11	-8	-8	-4	-4	1	8	4	7	-1		
315	-11	-9	-11	-11	-13	-11	-9	-10	-9	-7	-3	-3	2	6	6	6	-1		
400	-10	-10	-10	-10	-12	-12	-9	-10	-9	-6	-2	-1	3	7	6	5	-3		
500	-9	-9	-8	-10	-11	-11	-10	-11	-9	-5	-2	-1	4	6	5	6	-4		
630	-9	-8	-7	-10	-10	-9	-9	-12	-9	-5	0	0	4	5	5	4	-4		
800	-9	-8	-7	-9	-9	-8	-7	-11	-10	-3	1	1	4	5	5	4	-6		
1000	-8	-8	-6	-8	-8	-7	-6	-9	-9	-3	3	2	4	5	4	2	-7		
1250	-6	-7	-4	-6	-6	-5	-4	-6	-8	-3	4	2	4	5	2	-1	-10		
1600	-2	-3	-2	-4	-5	-4	-3	-4	-7	-2	4	2	3	4	1	-2	-12		
2000	6	5	5	5	0	-1	-2	-5	-7	-2	3	0	1	2	-1	-6	-15		
2500	4	4	4	4	0	0	-2	-5	-6	-2	3	0	2	2	-2	-6	-15		
3150	0	0	1	0	-2	-2	-3	-4	-5	-1	4	0	3	3	0	-6	-16		
4000	4	2	4	3	-2	-1	-2	-3	-5	-1	3	-1	2	3	-1	-6	-15		
5000	3	1	4	3	-1	-1	-2	-4	-5	-1	3	-2	3	3	1	-3	-12		
6300	4	2	4	3	-1	-2	-2	-4	-4	-1	3	-1	2	2	0	-4	-13		
8000	2	1	3	2	-1	-3	-3	-4	-5	0	3	0	3	2	-1	-4	-13		
10000	4	2	5	3	0	-1	-1	-3	-5	1	3	-1	2	2		-3	-11		
OCTAVE																			
31.5	-12	-12	-11	-10	-9	-8	-5	-7	-5	-6	-6	-4	-1	4	7	7	7		
63	-16	-15	-14	-13	-13	-11	-8	-10	-10	-8	-8	-6	-2	4	9	7	2		
125	-13	-12	-12	-13	-13	-12	-9	-10	-9	-9	-7	-5	0	6	8	7	1		
250	-12	-11	-12	-12	-13	-11	-7	-10	-9	-7	-4	-3	2	7	5	7	0		
500	-10	-9	-8	-10	-11	-11	-9	-11	-9	-5	-1	-1	3	6	6	5	-4		
1000	-8	-8	-6	-8	-8	-7	-6	-9	-9	-3	3	2	4	5	4	2	-7		
2000	4	3	3	3	-1	-1	-2	-5	-7	-2	3	0	2	2	-1	-5	-14		
4000	2	1	3	2	-2	-2	-2	-4	-5	-1	4	-1	3	3	0	-5	-14		
8000	3	2	4	2	-1	-2	-2	-4	-5	0	3	-1	3	2	-1	-4	-13		
OVERALL	-5	-5	-4	-5	-8	-8	-7	-9	-8	-6	-1	-2	2	6	6	6	0		

TABLE: 6 DIRECTIVITY INDEX (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
PAGE 4

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
1/3 OCTAVE																			
25	-8	-8	-7	-7	-7	-7	-6	-7	-6	-6	-6	-4	-2	3	7	7	6	3	
31.5	-11	-13	-12	-11	-11	-8	-9	-9	-8	-7	-7	-6	-2	4	7	8	7	0	
40	-12	-13	-14	-11	-10	-7	-8	-9	-9	-8	-5	-6	-1	4	8	7	5	-5	
50	-14	-13	-13	-11	-10	-9	-9	-8	-9	-8	-7	-5	-2	5	8	7	3	-11	
63	-15	-15	-14	-13	-11	-12	-11	-11	-10	-9	-8	-7	-1	5	8	7	0	-15	
80	-15	-15	-14	-14	-12	-13	-12	-11	-12	-10	-9	-8	-1	6	9	6	-1	-16	
100	-16	-17	-14	-14	-13	-11	-11	-13	-13	-12	-10	-8	-1	6	9	4	-5	-21	
125	-14	-15	-14	-15	-13	-14	-13	-12	-13	-11	-9	-7	-2	6	10	4	-7	-20	
160	-11	-11	-11	-13	-12	-12	-12	-12	-12	-11	-8	-6	1	4	10	5	-7	-22	
200	-12	-11	-12	-13	-13	-12	-9	-11	-11	-11	-8	-5	2	6	8	4	-10	-22	
250	-11	-11	-12	-13	-14	-12	-10	-11	-11	-10	-7	-4	2	8	7	3	-12	-20	
315	-14	-12	-13	-12	-13	-13	-11	-10	-11	-9	-6	-4	3	6	8	4	-12	-21	
400	-9	-12	-10	-11	-13	-13	-11	-11	-11	-9	-5	-3	3	6	8	5	-15	-21	
500	-8	-10	-9	-11	-12	-12	-12	-12	-10	-8	-4	-2	3	6	7	6	-13	-21	
630	-10	-9	-8	-9	-10	-9	-12	-10	-10	-7	-2	-2	3	5	7	6	-14	-22	
800	-11	-9	-8	-8	-9	-7	-10	-8	-10	-7	-2	-1	3	4	8	5	-13	-22	
1000	-9	-9	-7	-7	-6	-6	-8	-5	-7	-6	-2	-1	3	3	8	5	-13	-21	
1250	-10	-10	-8	-8	-6	-5	-7	-3	-5	-6	-2	-1	4	1	8	4	-14	-23	
1600	-7	-9	-7	-7	-6	-4	-3	-1	-3	-6	-2	-2	4	1	7	4	-14	-22	
2000	-6	-7	-5	-5	-4	-3	-2	-1	-2	-7	-3	-2	4	0	8	2	-15	-23	
2500	-6	-6	-3	-6	-4	-2	-2	0	-1	-8	-3	-1	3	-1	8	1	-15	-23	
3150	-5	-6	-4	-4	-4	-1	-1	0	-1	-7	-3	-1	3	-1	8	0	-15	-23	
4000	-6	-6	-4	-4	-4	-2	-1	0	-1	-7	-3	-1	3	-1	7	-1	-16	-23	
5000	-8	-7	-5	-6	-5	-3	-2	0	0	-7	-2	-1	3	-1	8	-1	-15	-23	
6300	-8	-8	-5	-6	-5	-3	-2	0	-1	-6	-2	-1	4	-1	7	-1	-15	-22	
8000	-10	-9	-7	-8	-6	-5	-3	0	0	-6	-1	0	4	0	7	0	-14	-21	
10000	-10	-10	-8	-9	-7	-5	-3	-1	-1	-6	-1	0	4	0	7	1	-14	-21	
OCTAVE																			
31.5	-11	-12	-12	-10	-10	-7	-8	-9	-8	-7	-6	-6	-1	3	7	7	6	-2	
63	-15	-15	-14	-13	-12	-12	-11	-10	-11	-9	-8	-7	-1	5	9	6	0	-15	
125	-13	-13	-13	-14	-13	-12	-12	-12	-13	-11	-9	-7	-1	5	10	5	-7	-21	
250	-12	-12	-12	-13	-13	-12	-10	-11	-11	-10	-7	-4	3	7	8	4	-11	-21	
500	-9	-11	-10	-11	-12	-11	-12	-11	-10	-8	-4	-2	3	6	7	6	-14	-21	
1000	-10	-9	-8	-8	-7	-6	-9	-6	-8	-7	-2	-1	3	3	8	5	-14	-22	
2000	-7	-8	-6	-6	-5	-3	-3	-1	-2	-7	-2	-2	4	0	8	3	-14	-23	
4000	-6	-6	-4	-4	-4	-2	-1	0	-1	-7	-3	-1	3	-1	8	-1	-15	-23	
8000	-9	-9	-6	-7	-6	-4	-2	0	-1	-6	-1	-1	4	0	7	0	-14	-21	
OVERALL	-11	-11	-10	-11	-11	-10	-9	-9	-9	-9	-6	-4	2	6	8	5	-7	-18	

TABLE: 6 DIRECTIVITY INDEX (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 4

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .762 M HG
REL HUMID = 82 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
1/3 OCTAVE																			
25	-8	-8	-8	-8	-7	-6	-8	-4	-5	-9	-7	-4	-1	4	6	8	5		
31.5	-11	-10	-10	-9	-10	-7	-7	-8	-8	-8	-8	-7	1	5	6	8	5		
40	-13	-13	-15	-11	-11	-9	-9	-10	-10	-9	-8	-6	1	7	8	6	0		
50	-14	-14	-13	-13	-11	-12	-10	-10	-12	-9	-10	-8	1	7	8	5	-6		
63	-14	-16	-14	-14	-15	-13	-11	-11	-11	-10	-9	-5	2	7	8	3	-5		
80	-16	-15	-15	-14	-13	-14	-13	-12	-12	-11	-10	-4	3	8	7	2	-8		
100	-17	-16	-14	-13	-13	-13	-12	-12	-13	-11	-10	-4	4	8	7	1	-10		
125	-15	-16	-14	-14	-14	-13	-14	-12	-13	-11	-8	-3	4	9	6	0	-11		
160	-12	-12	-13	-14	-14	-13	-12	-10	-11	-10	-7	-2	4	8	6	2	-10		
200	-12	-12	-13	-13	-12	-11	-10	-8	-10	-9	-5	1	6	6	6	2	-13		
250	-12	-12	-13	-13	-13	-12	-10	-9	-10	-8	-5	1	7	6	4	0	-14		
315	-16	-13	-14	-13	-14	-13	-11	-9	-8	-6	-3	1	6	7	5	0	-15		
400	-14	-13	-12	-13	-14	-13	-13	-10	-8	-5	-2	2	6	6	5	-3	-13		
500	-12	-12	-10	-12	-12	-12	-11	-12	-8	-3	0	3	5	5	4	-3	-12		
630	-14	-11	-9	-11	-8	-8	-8	-10	-7	-3	2	4	4	5	4	-5	-13		
800	-14	-11	-10	-10	-8	-7	-6	-7	-6	-2	2	4	4	4	4	-7	-13		
1000	-14	-12	-10	-11	-7	-7	-5	-4	-4	-2	2	5	3	4	3	-9	-14		
1250	-15	-13	-10	-11	-9	-6	-5	-3	-1	-1	3	5	2	2	2	-10	-14		
1600	-14	-12	-10	-10	-7	-5	-3	-1	0	0	3	4	1	1	2	-10	-15		
2000	-14	-11	-9	-9	-6	-4	-2	0	0	1	4	3	0	0	2	-11	-17		
2500	-13	-11	-9	-9	-5	-4	-2	-1	1	2	3	4	-1	-1	2	-13	-18		
3150	-13	-10	-8	-7	-4	-3	-1	1	1	2	3	3	-1	-2	1	-15	-20		
4000	-11	-6	-7	-6	-4	-3	0	2	1	2	2	3	-1	-2	0	-15	-20		
5000	-11	-9	-9	-7	-5	-4	-2	1	1	3	3	3	-1	-1	0	-16	-20		
6300	-12	-11	-9	-8	-5	-5	-2	0	2	2	3	3	-1	-2	1	-15	-20		
8000	-13	-11	-10	-9	-7	-6	-3	0	1	2	4	4	-2	-2	1	-16	-20		
10000	-14	-13	-11	-10	-8	-7	-4	-1	1	3	4	4	-1	-1	1	-17	-20		
OCTAVE																			
31.5	-12	-11	-12	-10	-10	-8	-8	-8	-8	-9	-8	-6	1	6	7	7	3		
63	-15	-15	-15	-13	-13	-13	-12	-11	-12	-10	-9	-5	2	7	8	3	-6		
125	-14	-14	-14	-14	-14	-13	-13	-11	-12	-11	-8	-3	4	8	6	1	-10		
250	-13	-12	-13	-13	-13	-12	-10	-9	-9	-8	-4	1	6	6	5	1	-14		
500	-13	-12	-11	-12	-12	-11	-11	-10	-8	-4	0	3	5	5	5	-3	-13		
1000	-14	-12	-10	-11	-8	-7	-5	-5	-4	-2	3	4	3	4	3	-8	-14		
2000	-14	-11	-9	-9	-6	-4	-2	-1	0	1	3	4	0	0	2	-11	-16		
4000	-12	-8	-8	-7	-4	-3	-1	2	1	2	3	3	-1	-2	0	-15	-20		
8000	-13	-11	-10	-9	-6	-5	-3	0	1	2	4	4	-1	-2	1	-16	-20		
OVERALL	-13	-13	-12	-13	-12	-11	-9	-8	-8	-6	-3	1	5	7	6	1	-9		

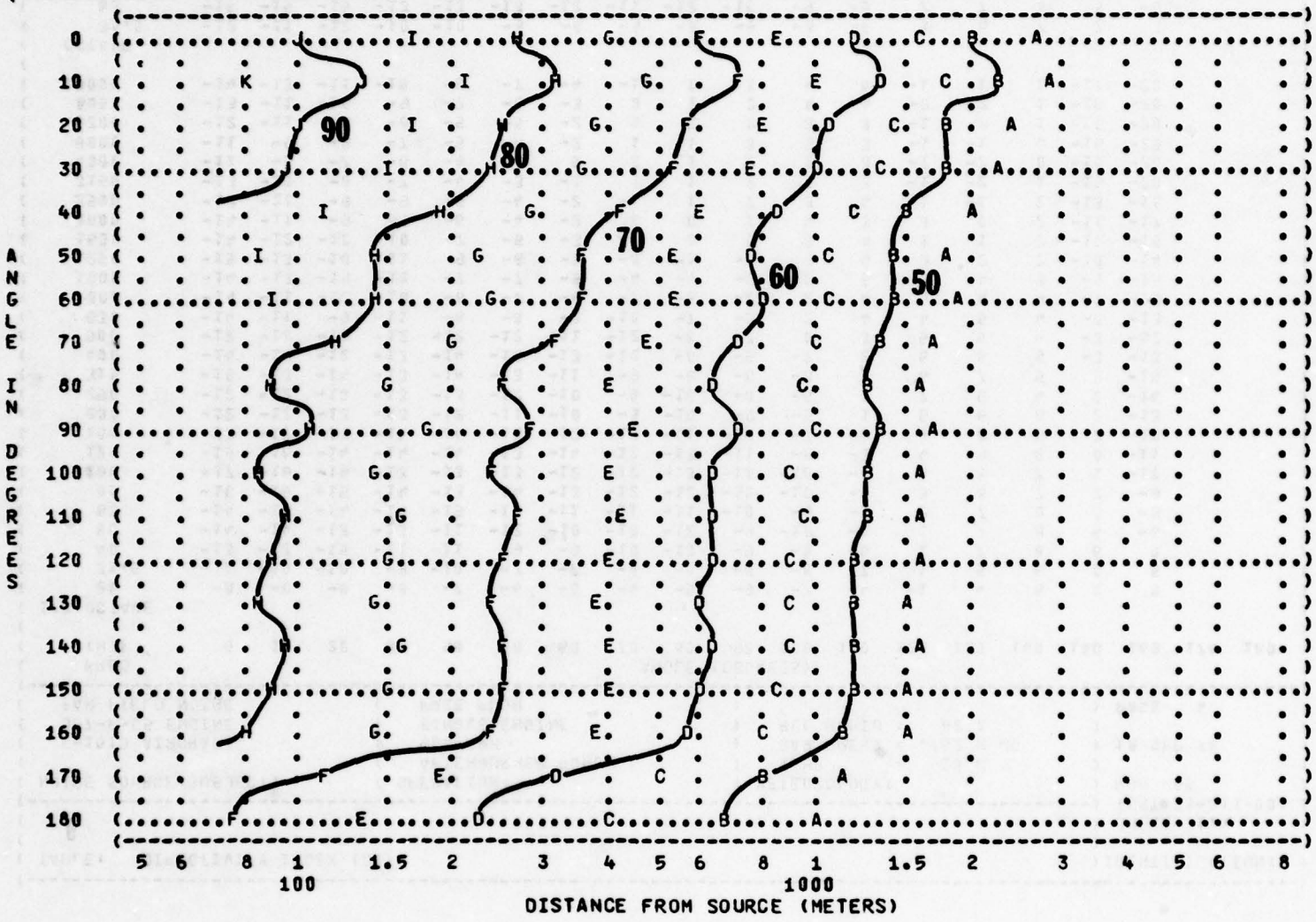
FIGURE: 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 13

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

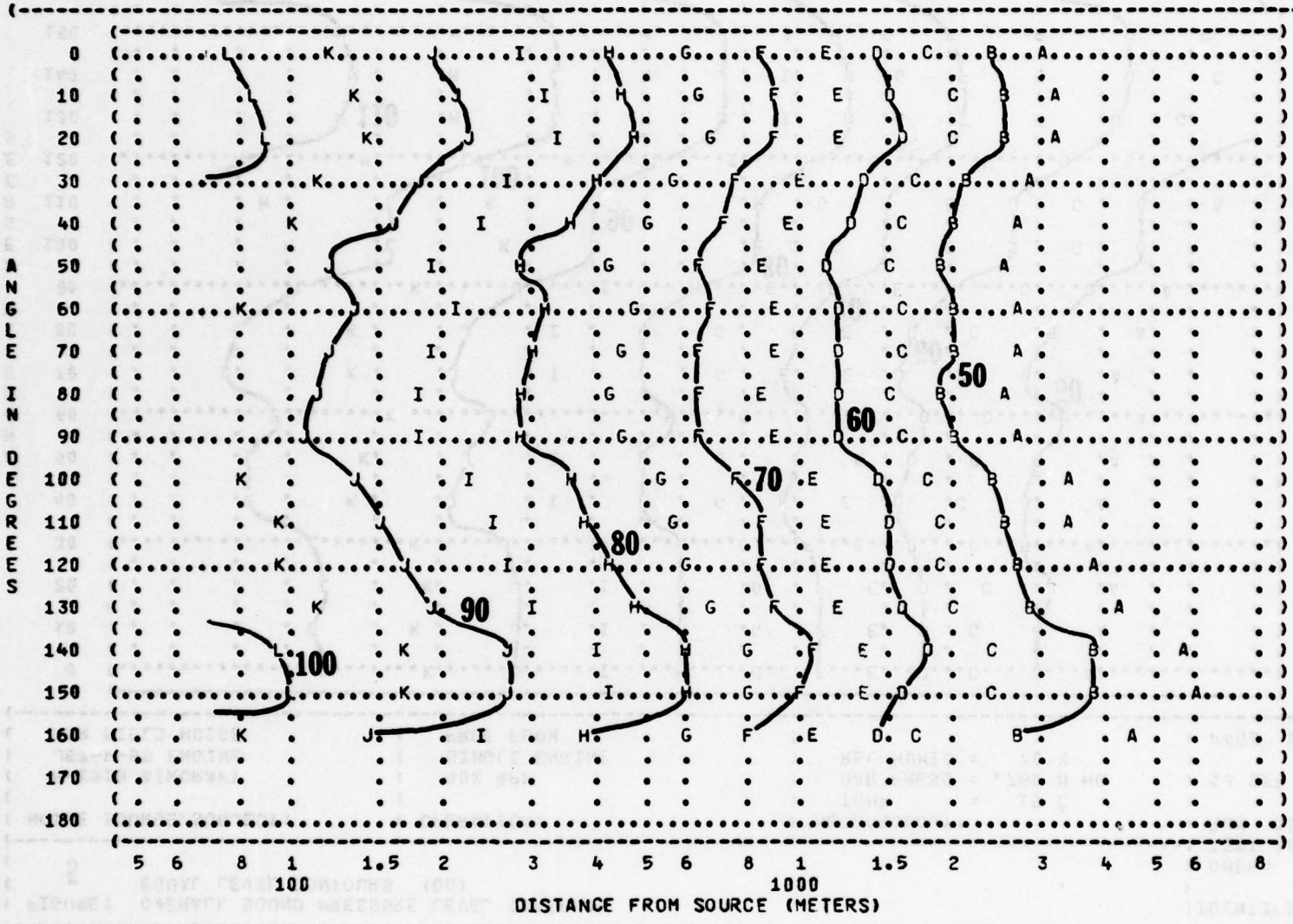
FIGURE 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 13

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

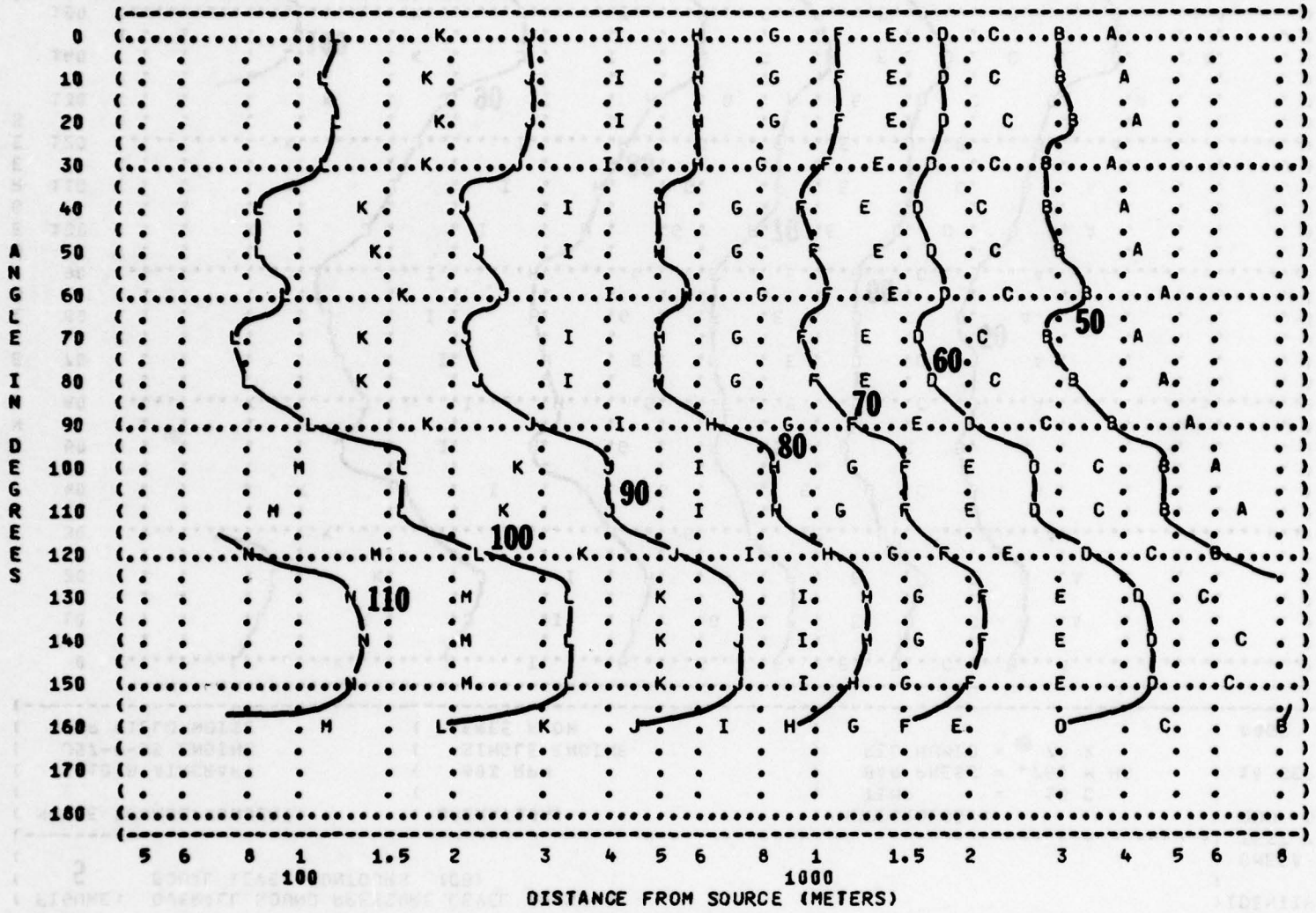
FIGURE: 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 13



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
M	105
N	110

FIGURE 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
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
J	90
K	95
L	100
M	105
N	110
O	115
P	120

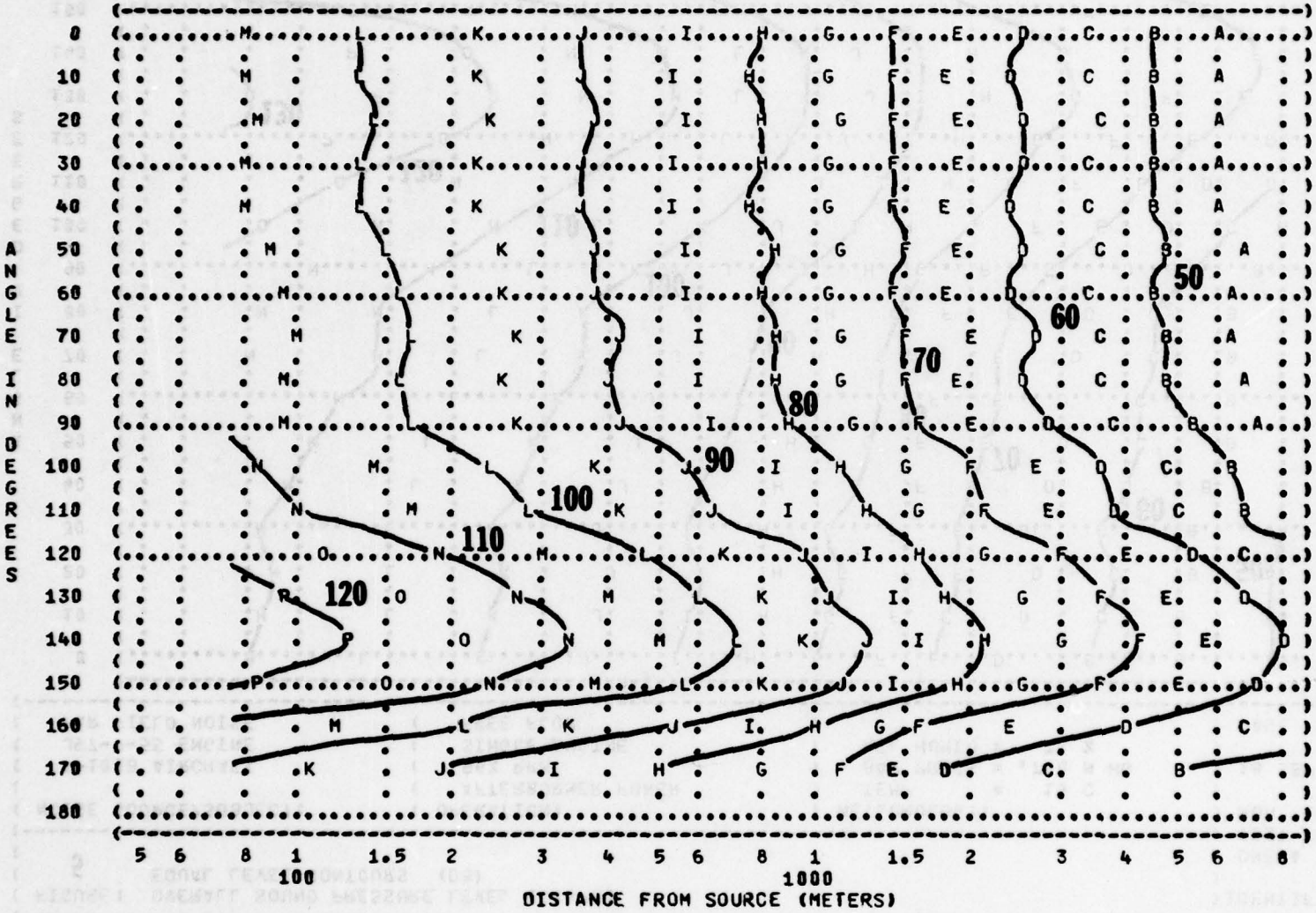


FIGURE: 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 13

POINT	DB
A	50
B	55
C	60
D	65
E	70
F	75
G	80
H	85
I	90
J	95
K	100
L	105
M	110
N	115
O	120
P	125
Q	130

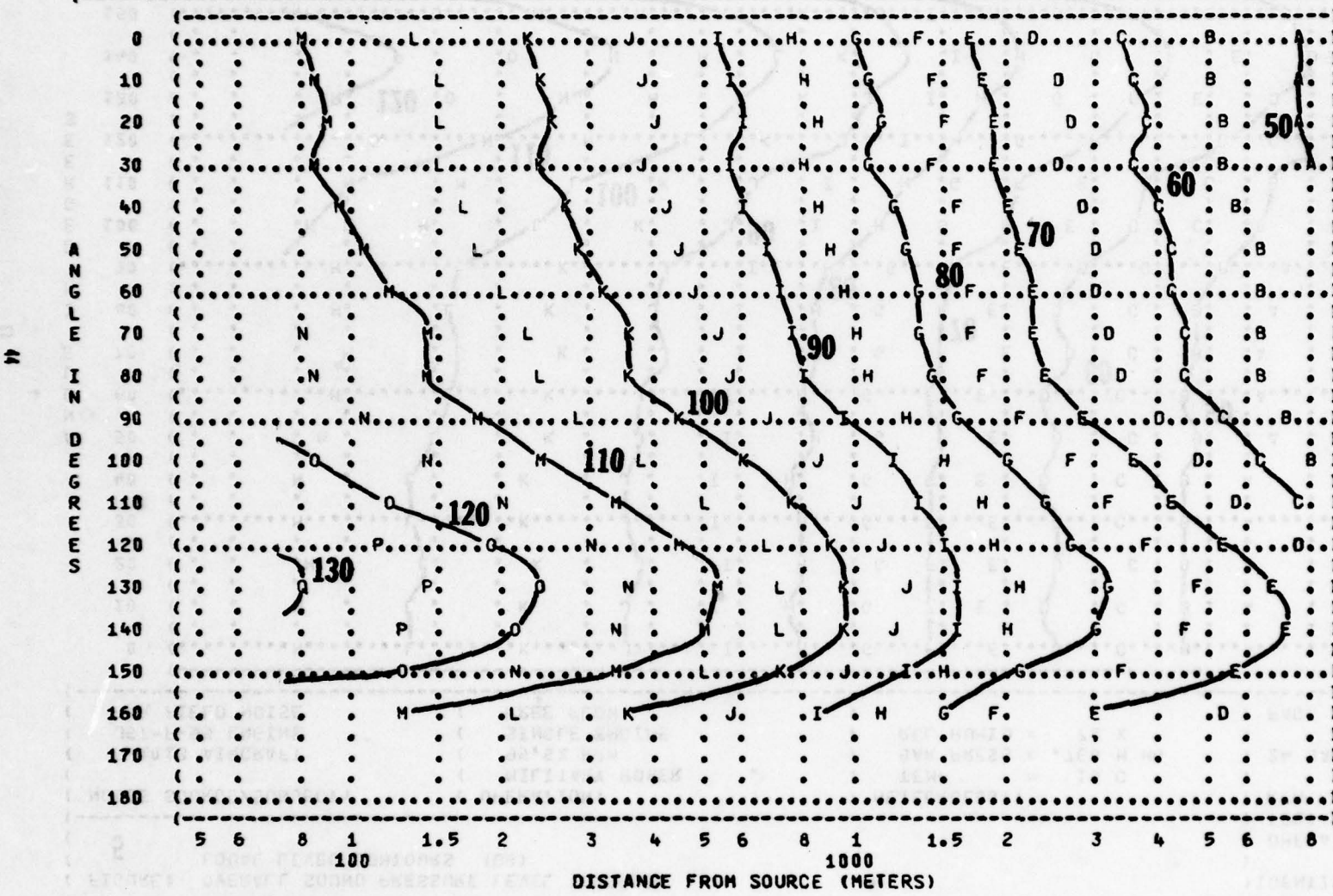


FIGURE 6: C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 14

NOISE SOURCE/SUBJECT:
F-1013 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

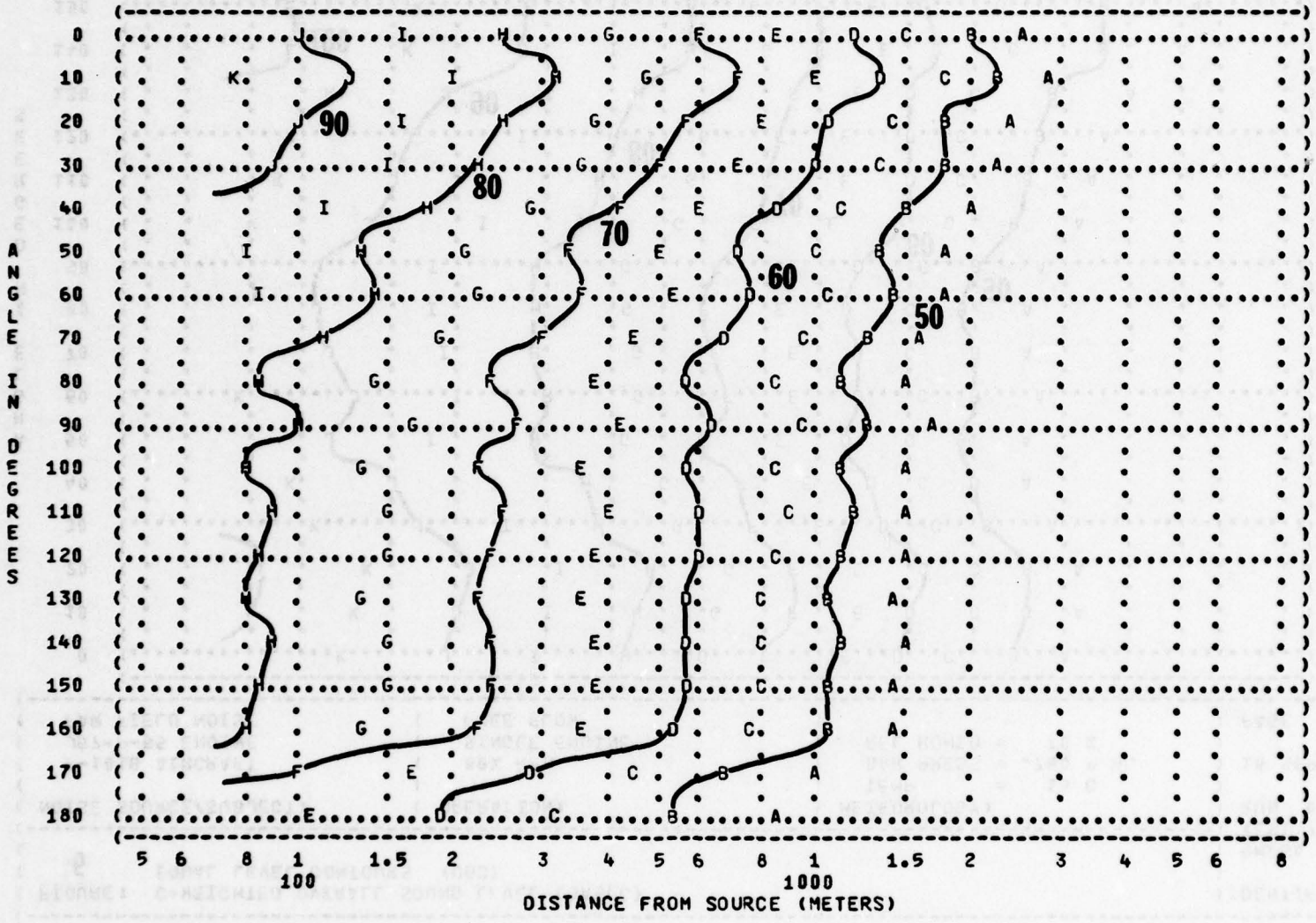


FIGURE: 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 14

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

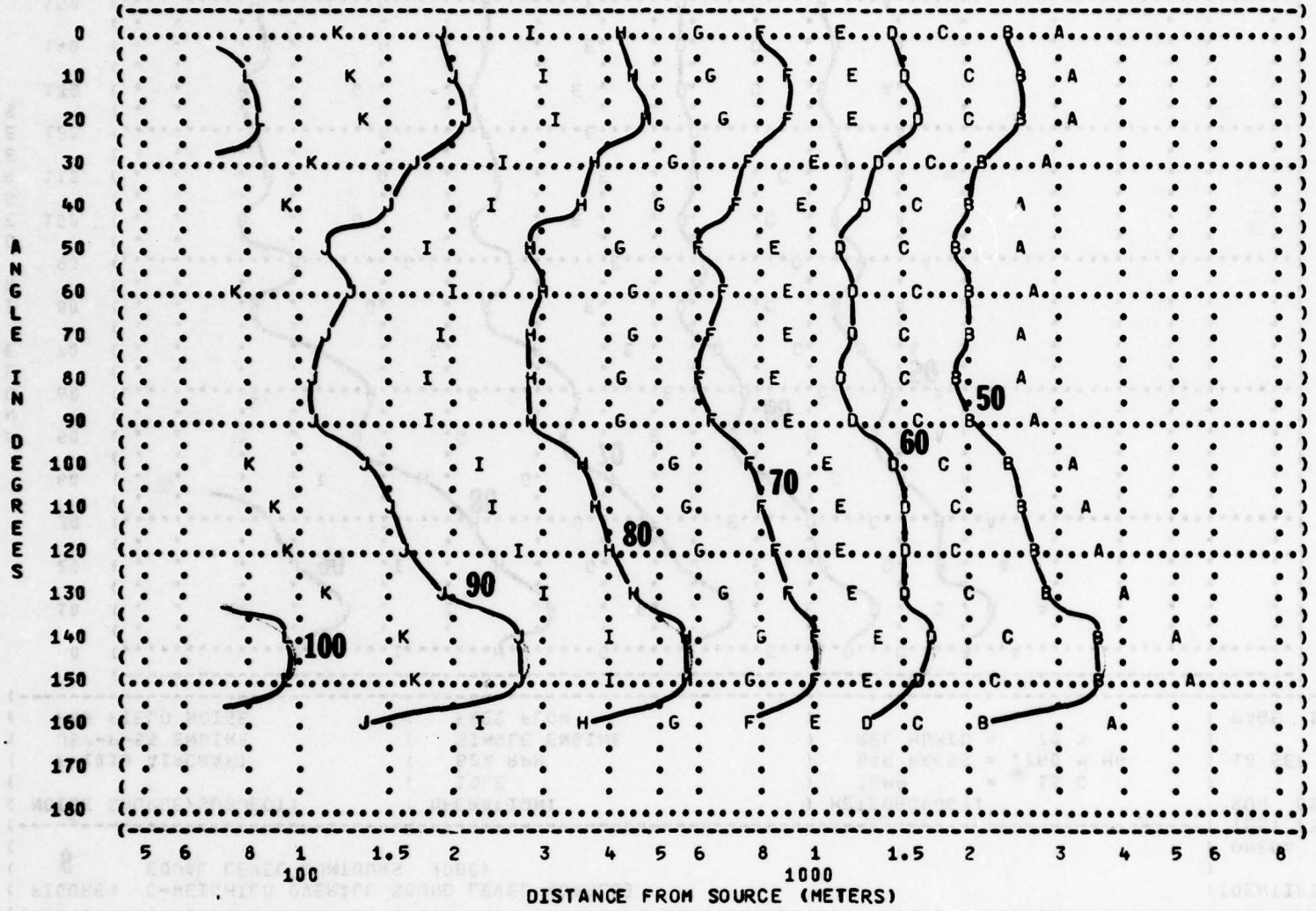


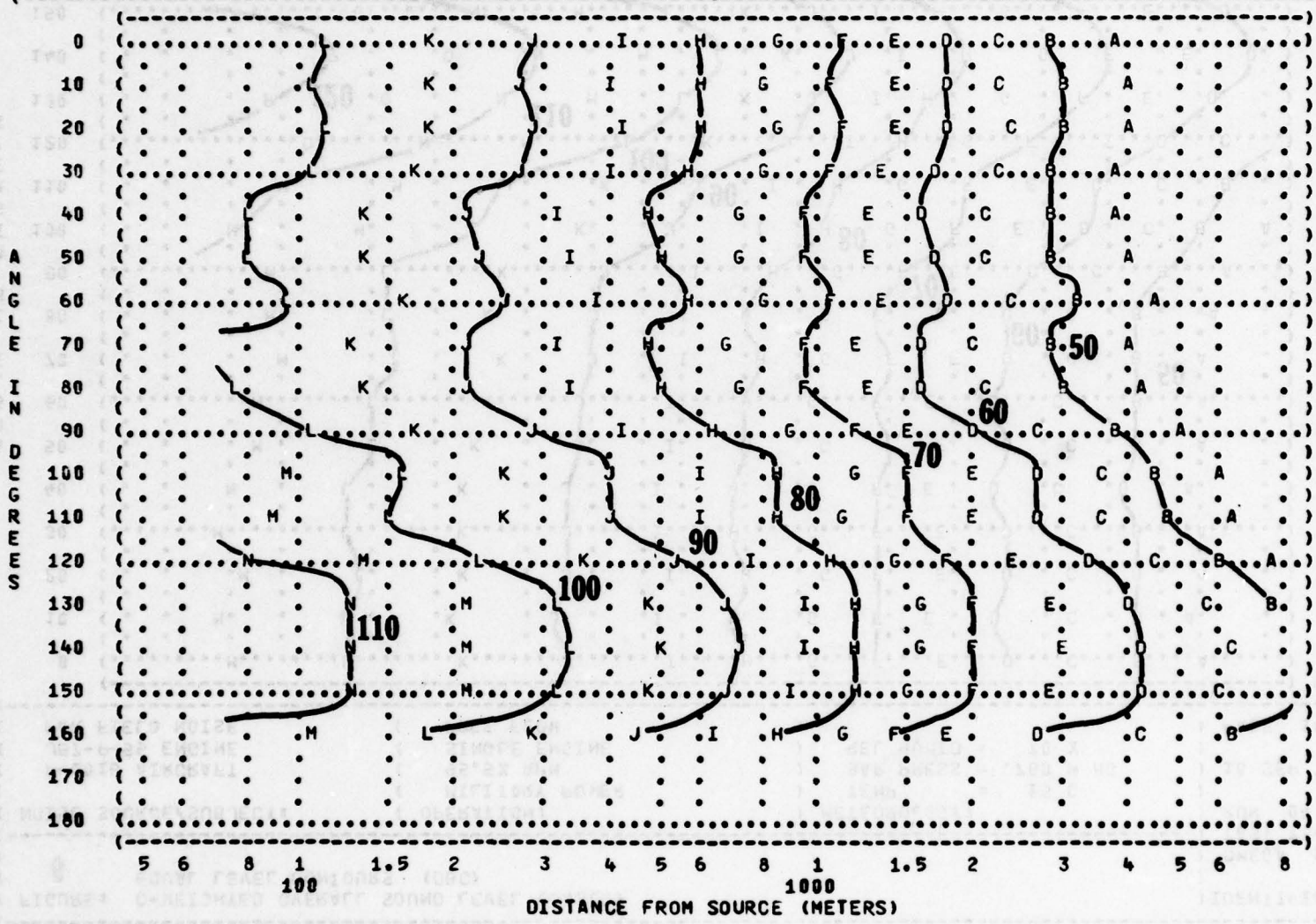
FIGURE 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 14



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
M	105
N	110

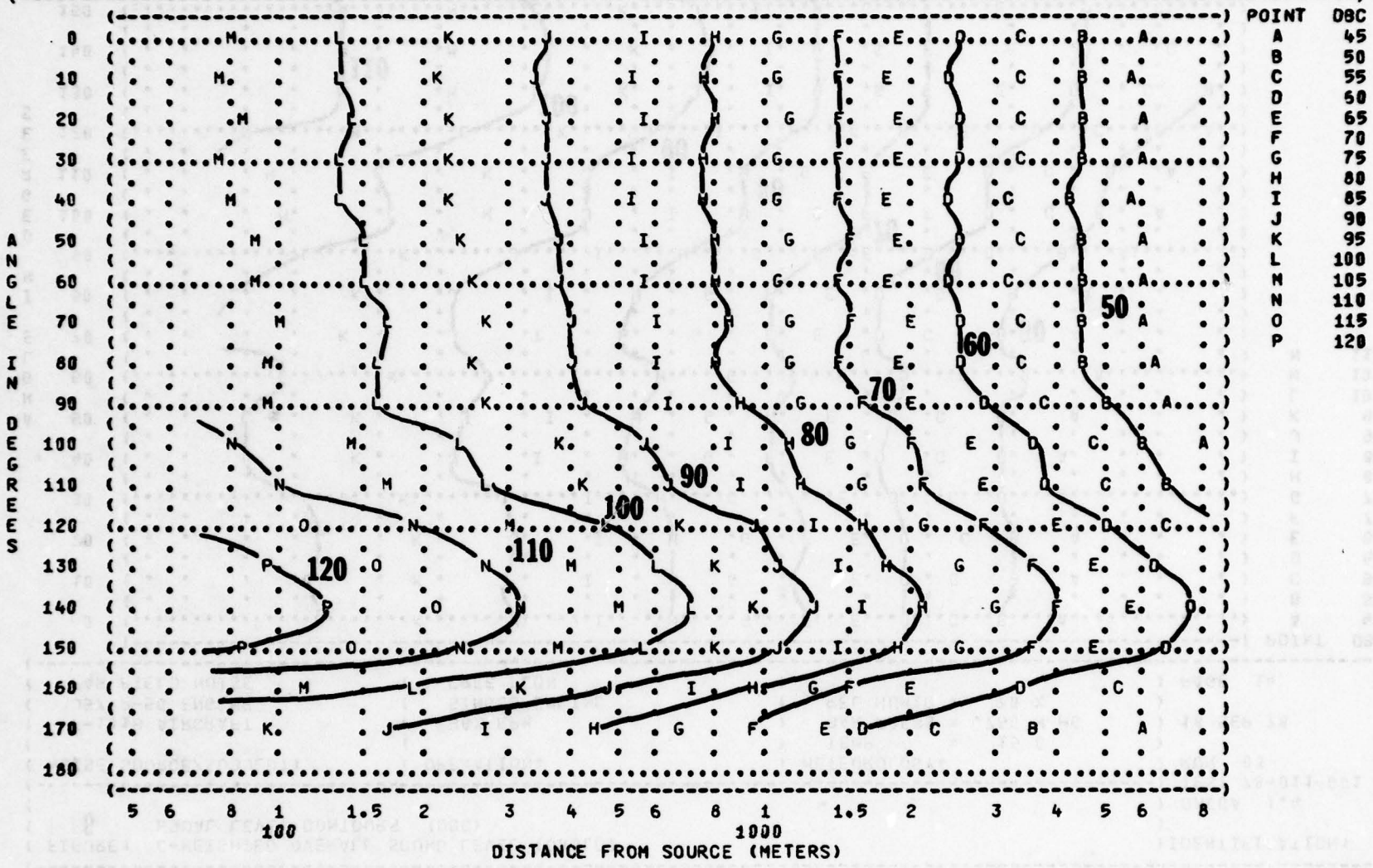
FIGURE 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
PAGE 14

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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
M	105
N	110
O	115
P	120

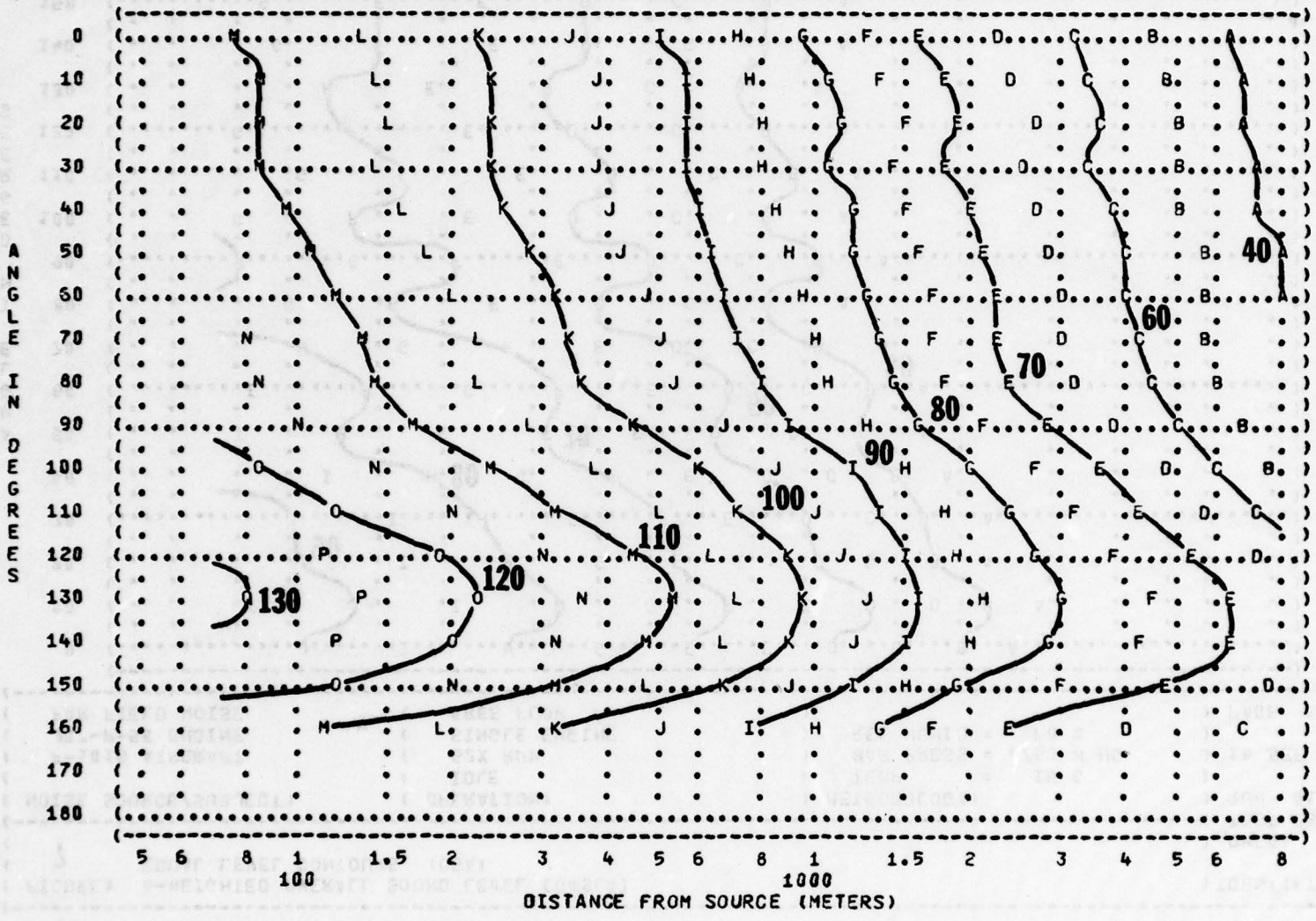
FIGURE: 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 14

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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



POINT	DBC
A	50
B	55
C	60
D	65
E	70
F	75
G	80
H	85
I	90
J	95
K	100
L	105
M	110
N	115
O	120
P	125
Q	130

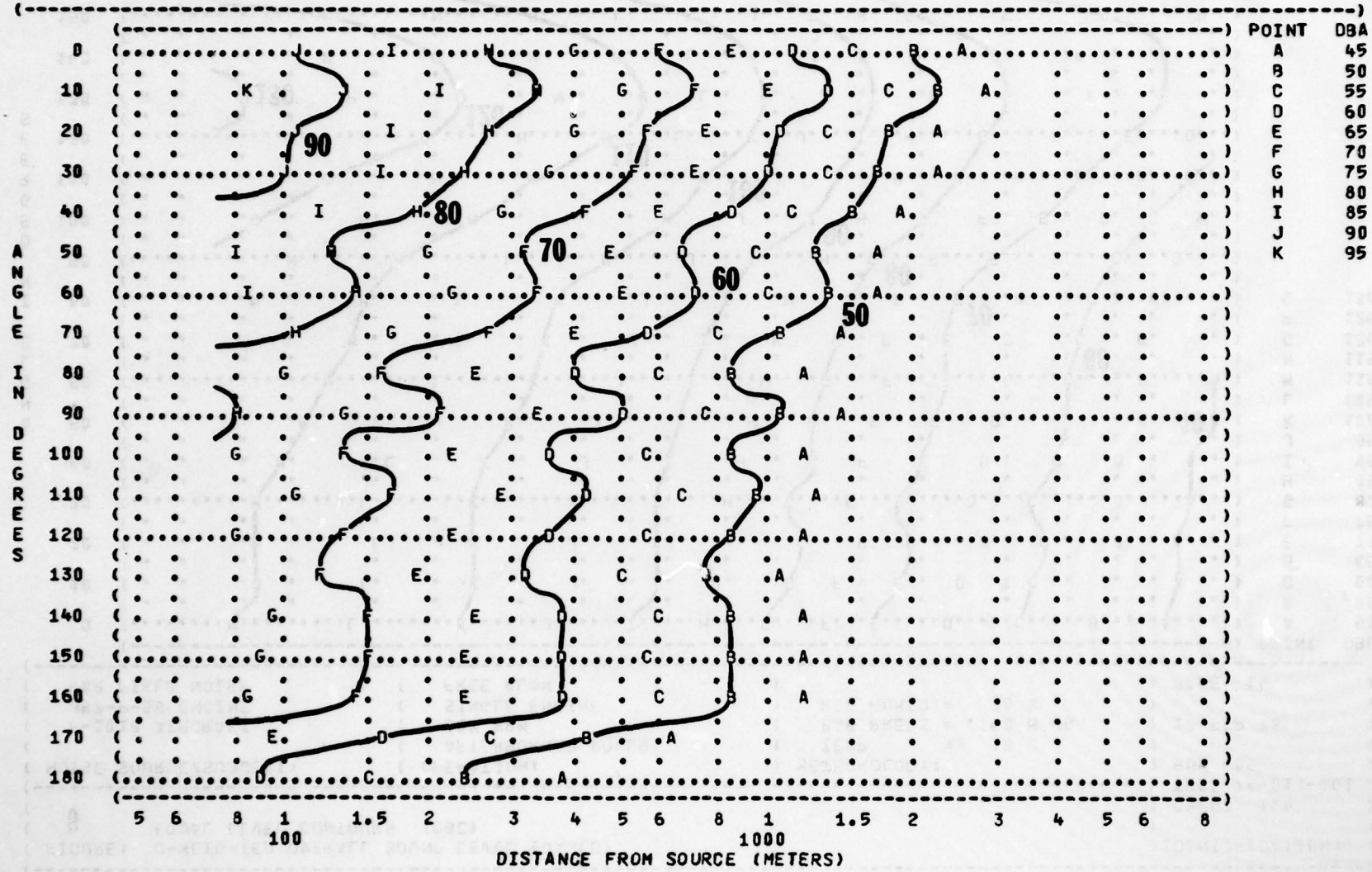
FIGURE: 7 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 15

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

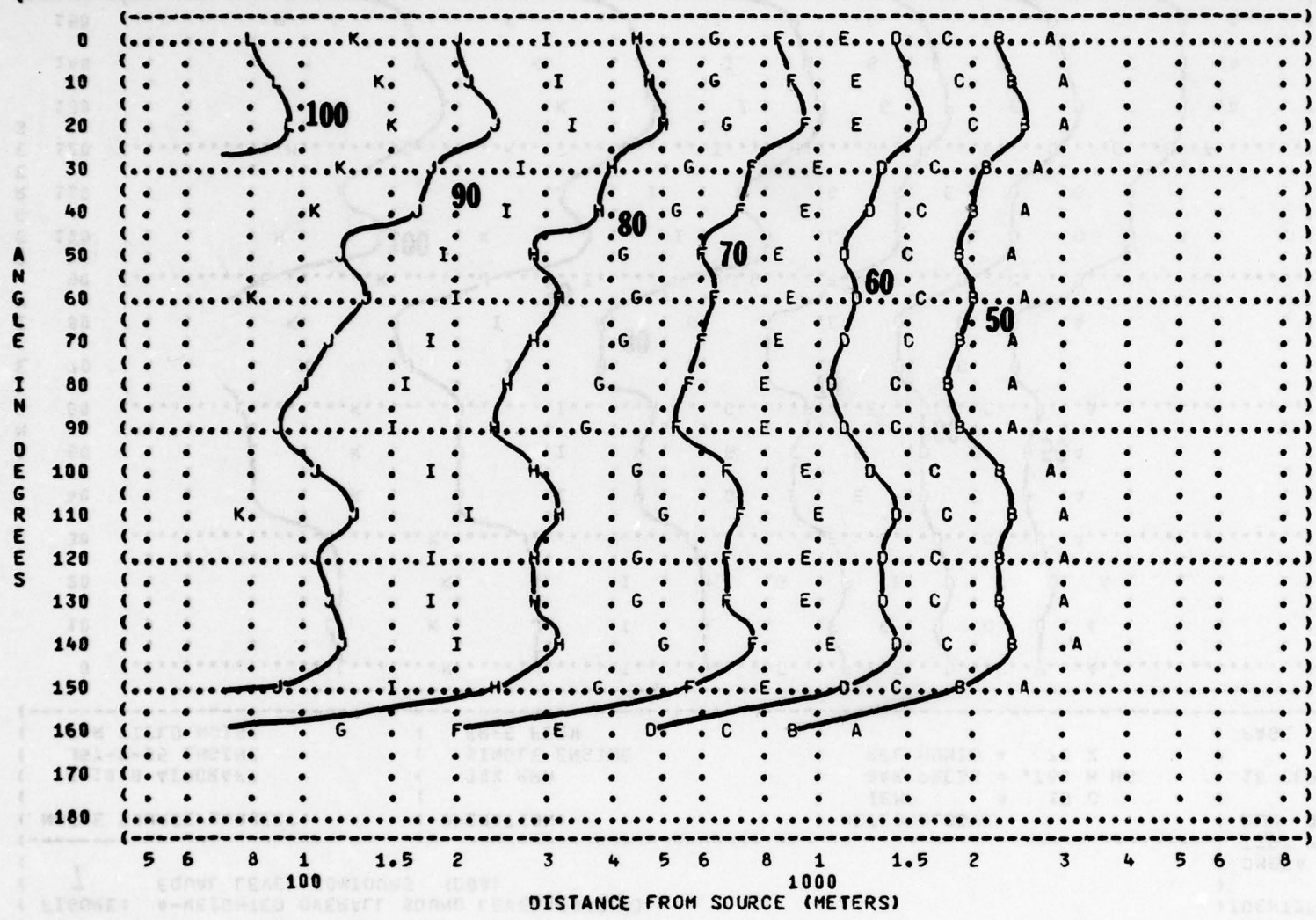
FIGURE: 7 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 15

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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
L	100

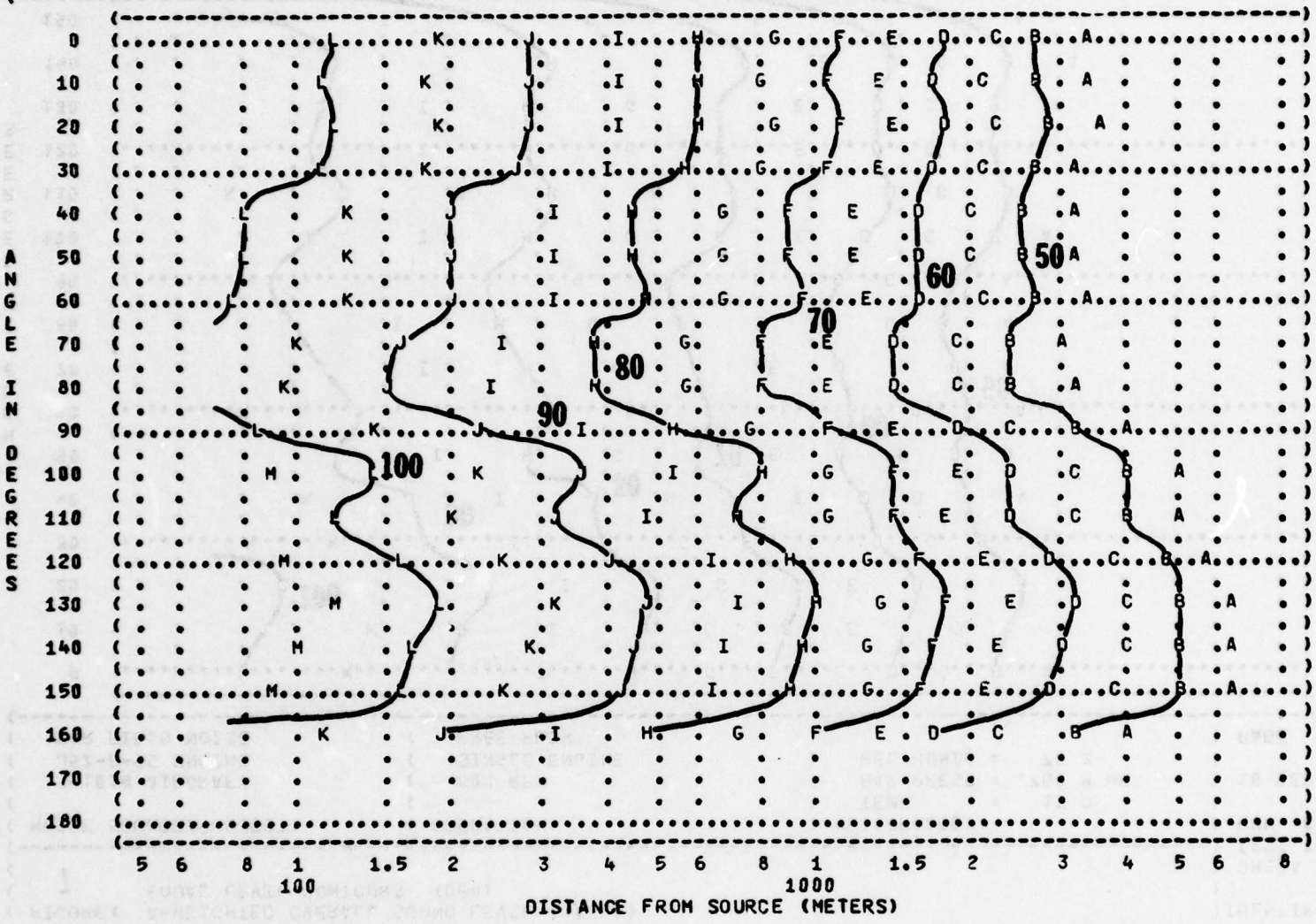
FIGURE 7 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 15

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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
L	100
M	105

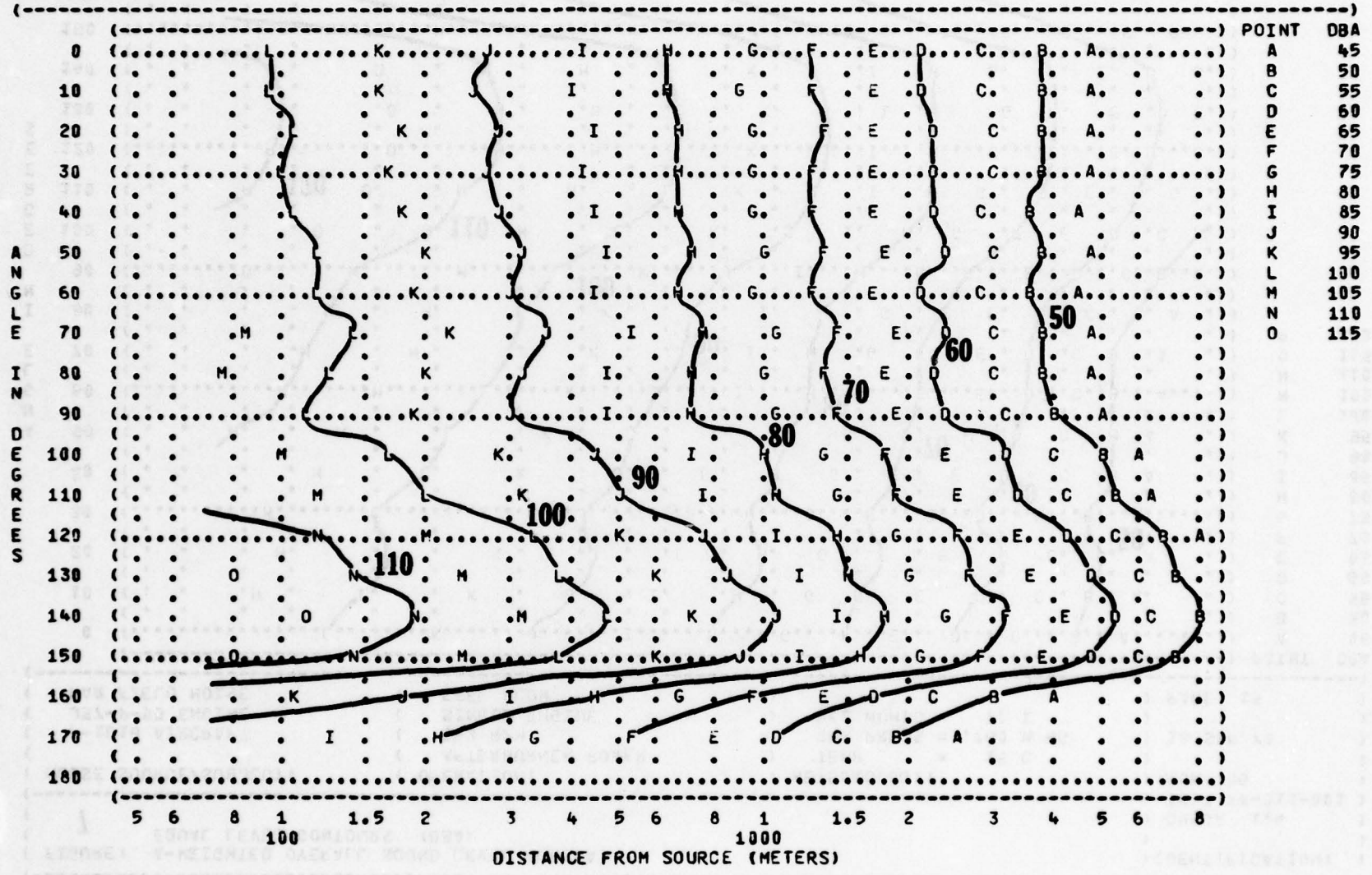
FIGURE 7 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
PAGE 15

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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
L	100
M	105
N	110
O	115

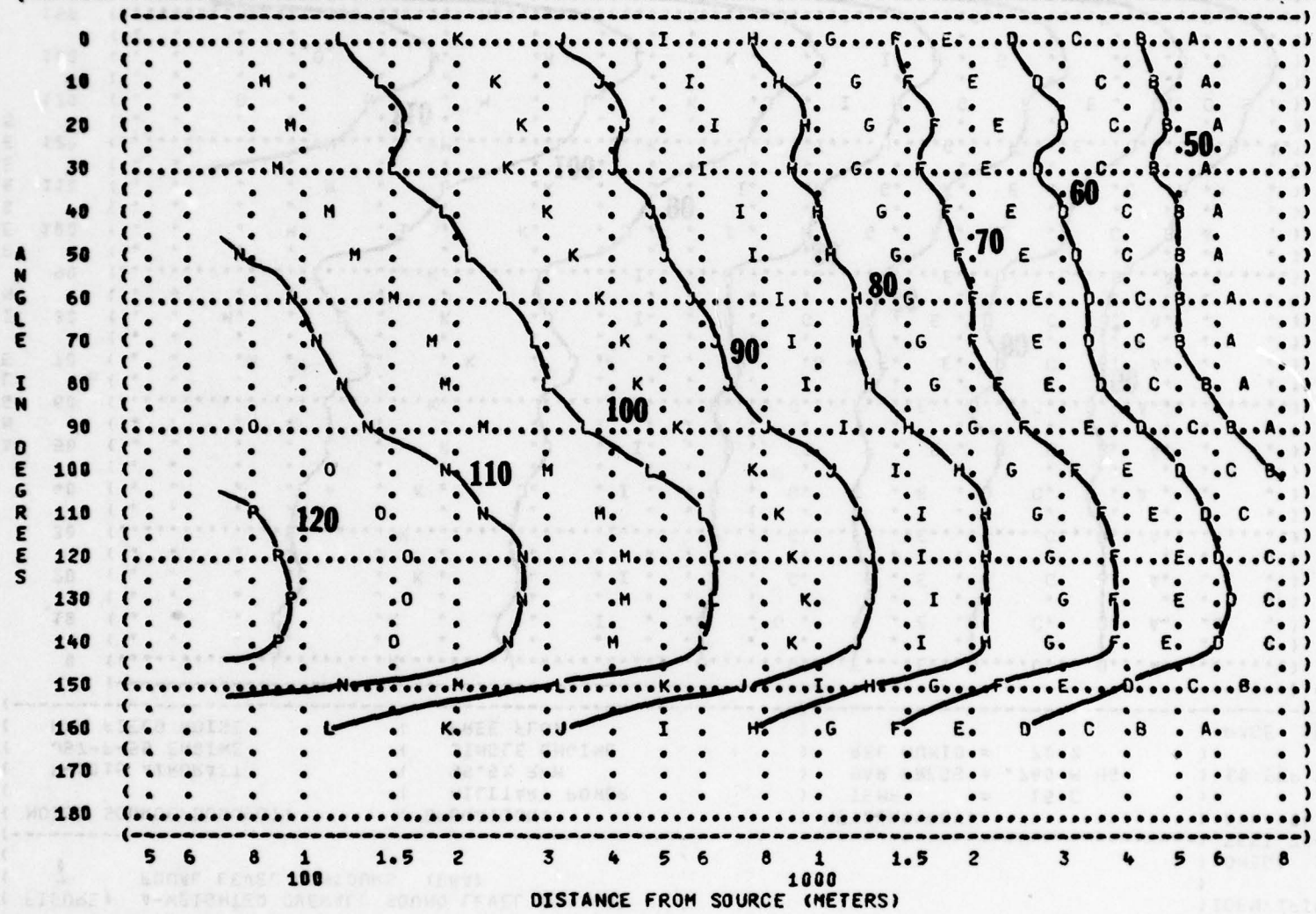
FIGURE: 7 — A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 15

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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
L	100
M	105
N	110
O	115
P	120

FIGURE: 8 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
24 JAN 79
PAGE 16

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

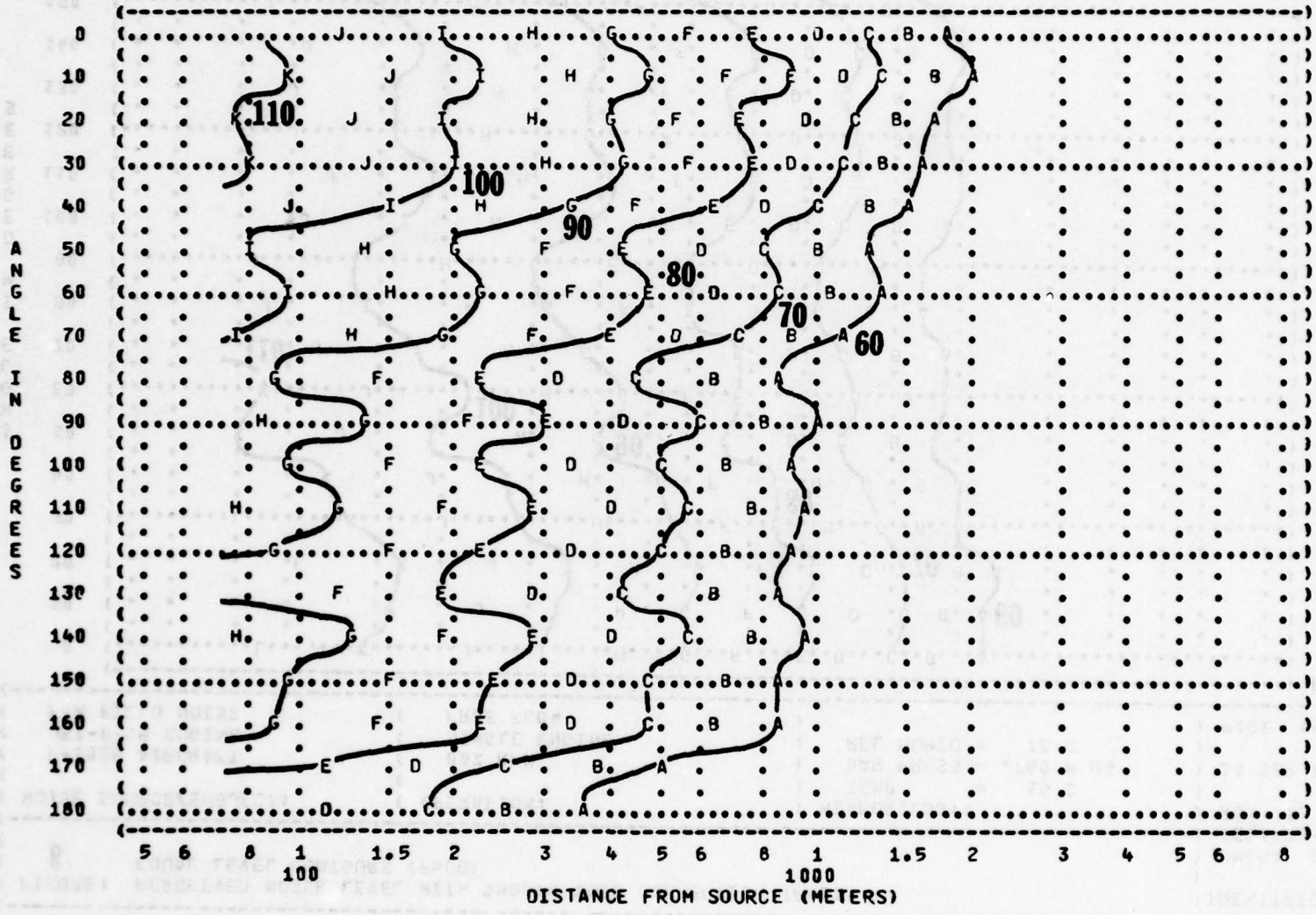


FIGURE 8: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 16

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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
L	115

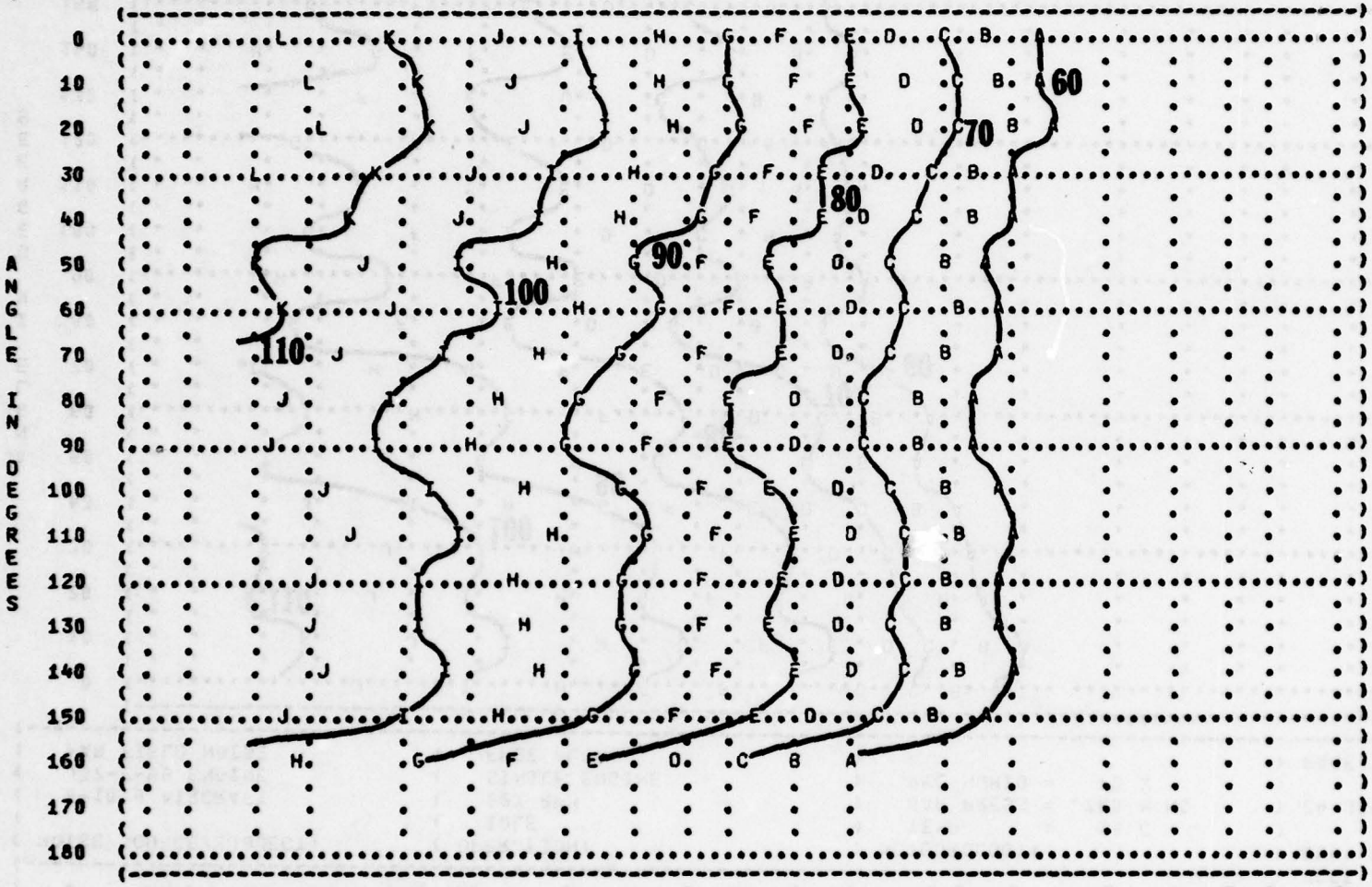


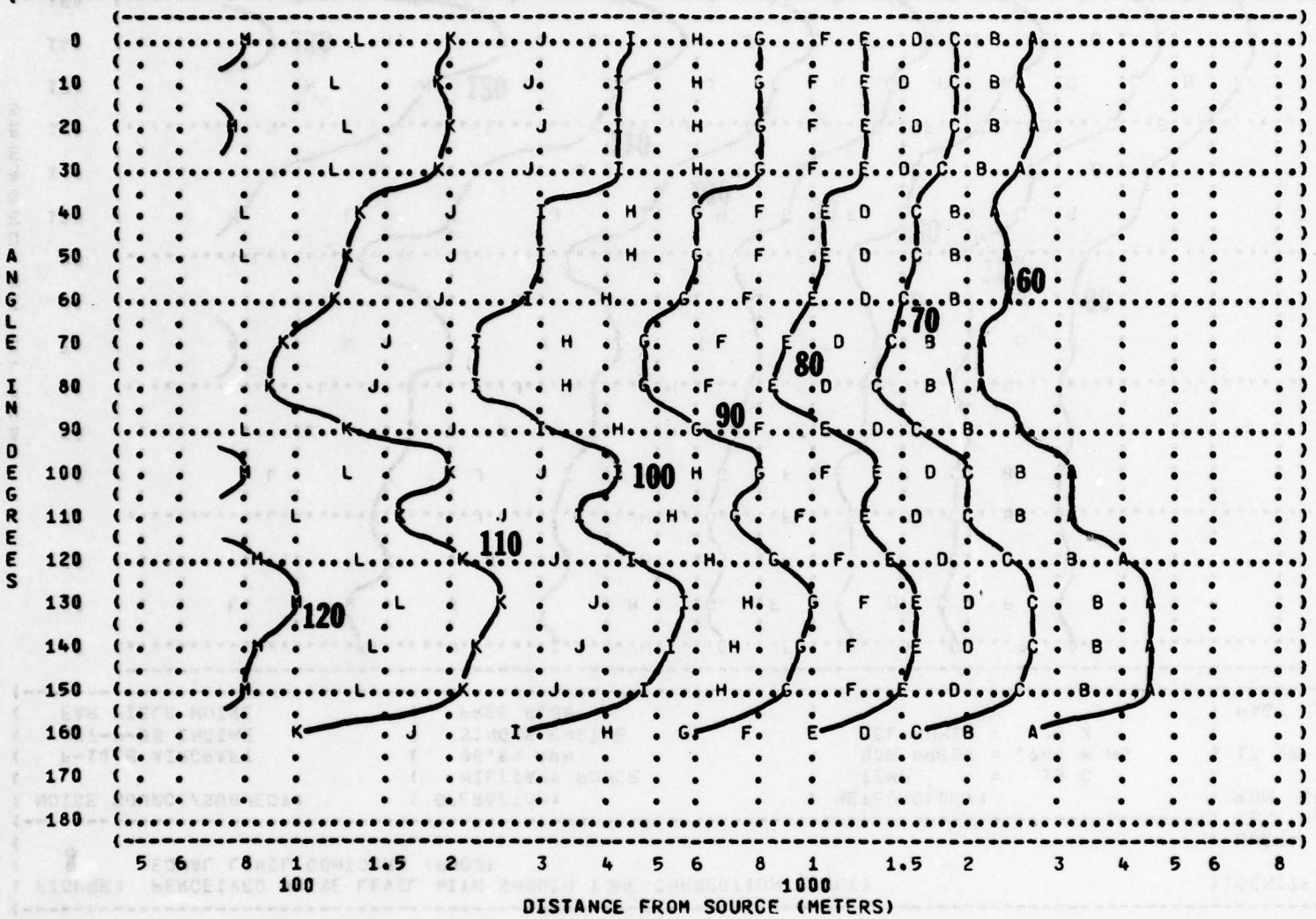
FIGURE 8 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 16

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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
L	115
M	120

FIGURE 8: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
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
L	115
M	120
N	125
O	130

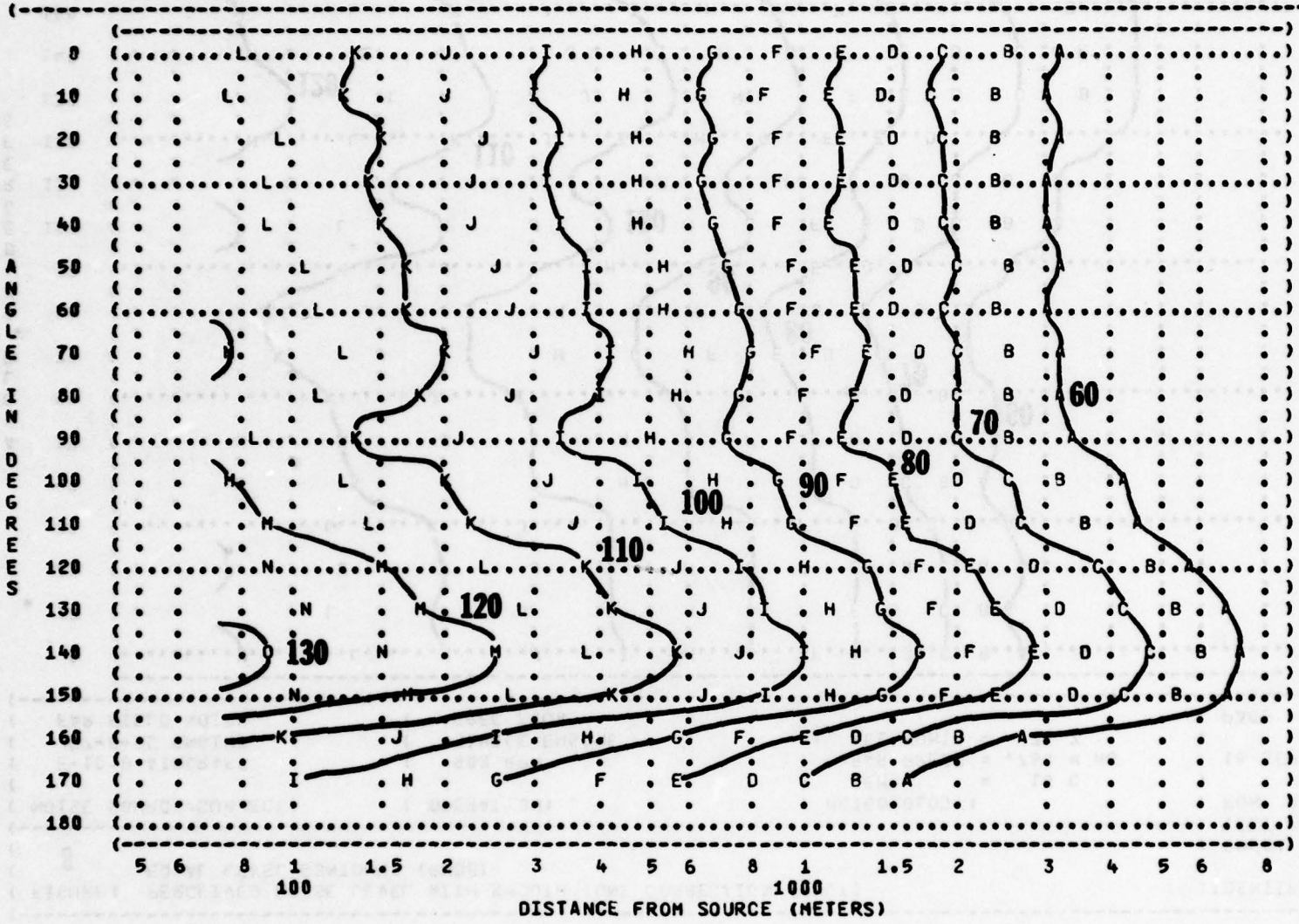


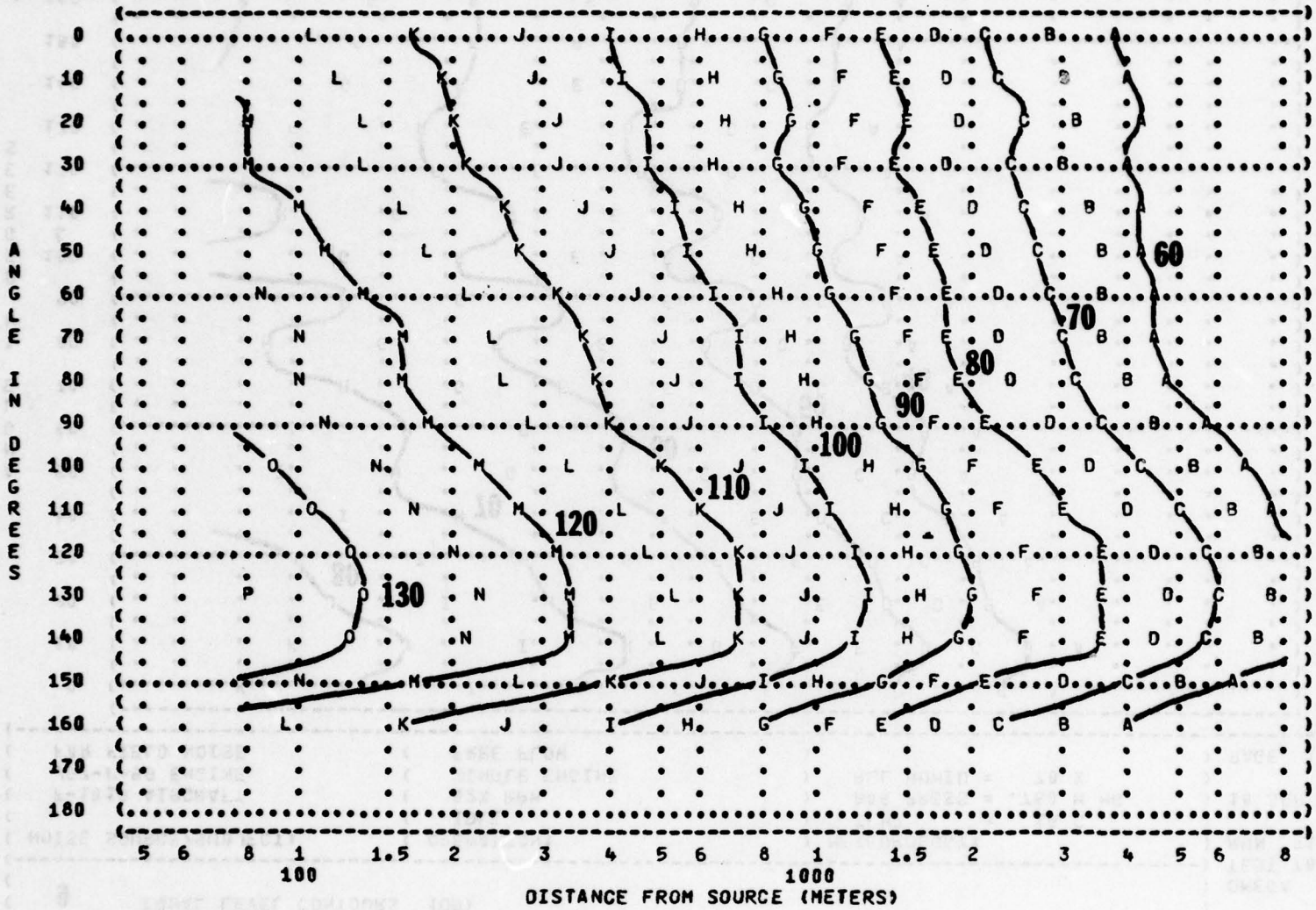
FIGURE 8 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)
EQUAL LEVEL CONTOURS (PND8)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
24 JAN 79
PAGE 16

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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



POINT	PND8
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95
I	100
J	105
K	110
L	115
M	120
N	125
O	130
P	135

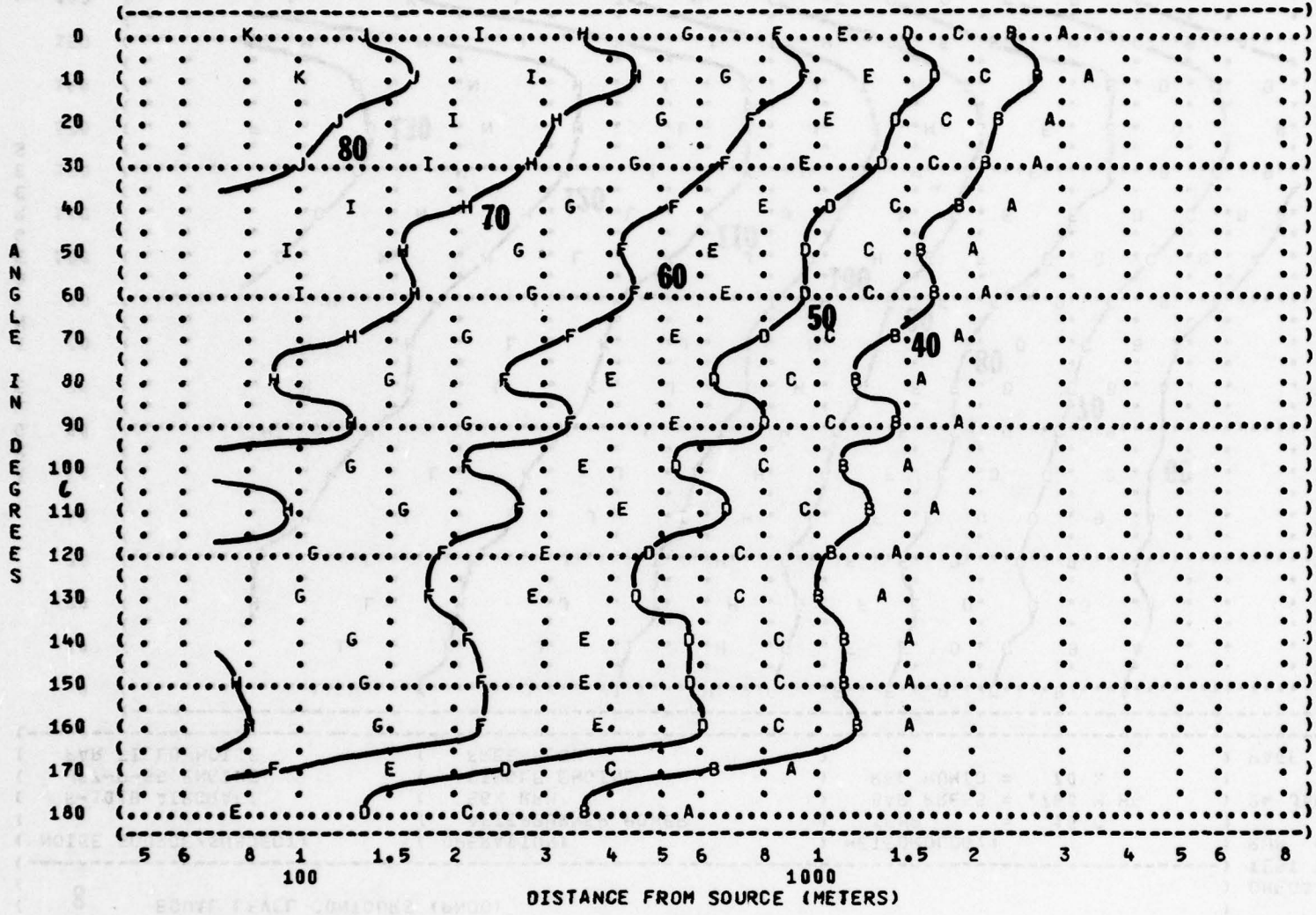
FIGURE 9: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)
EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 17



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

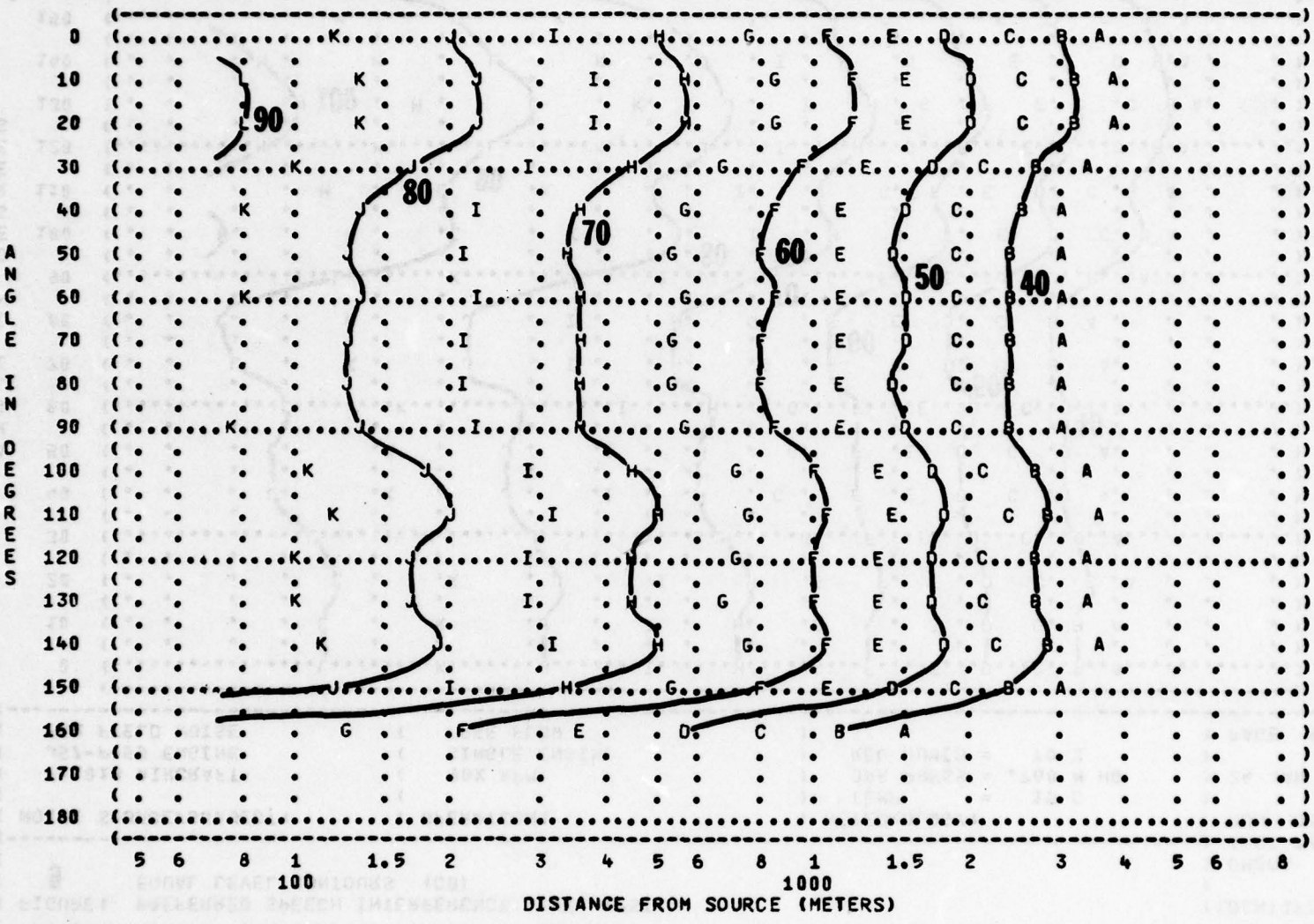
FIGURE 9: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 17

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
24 JAN 79
PAGE 17

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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
N	100

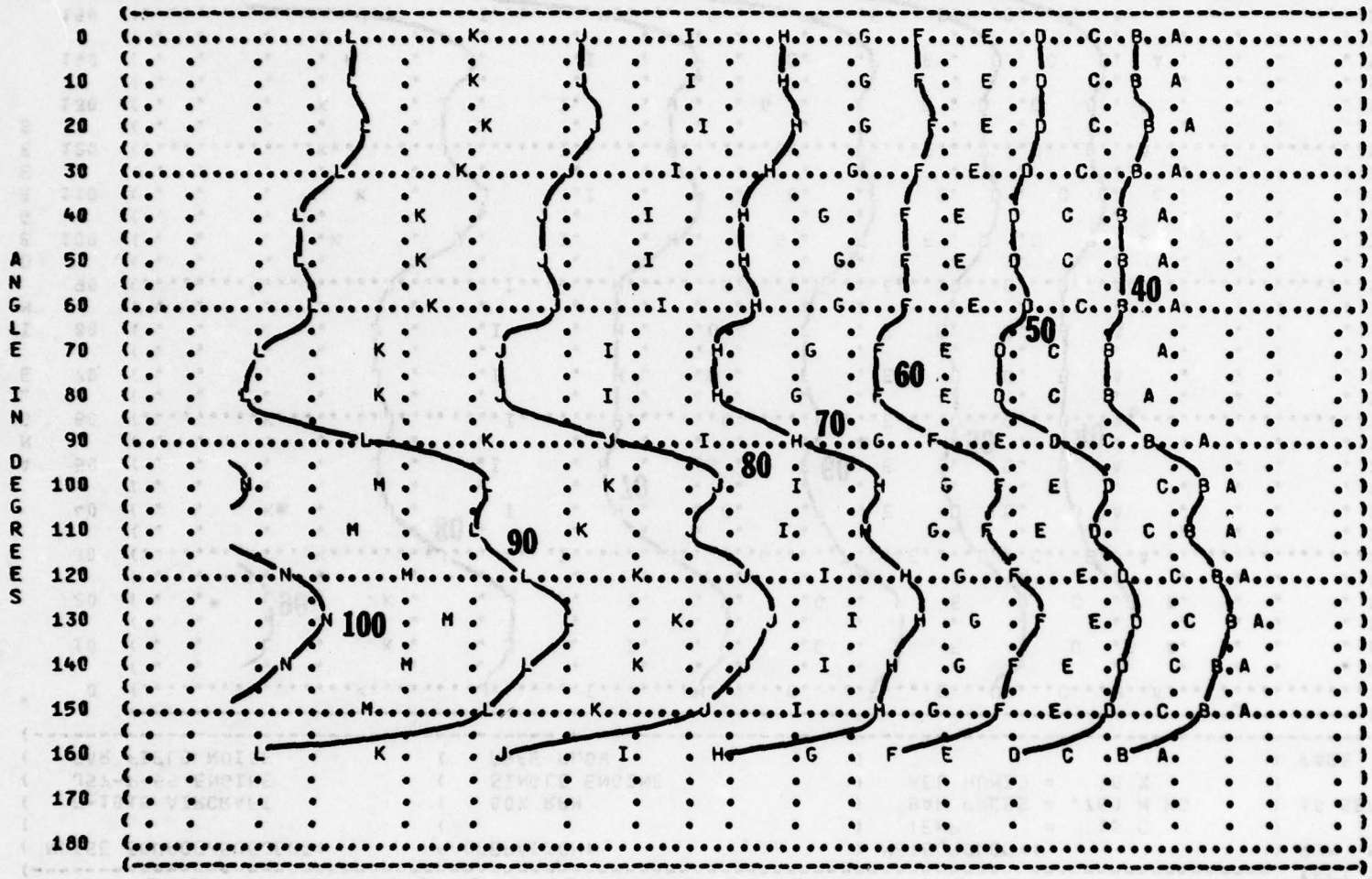


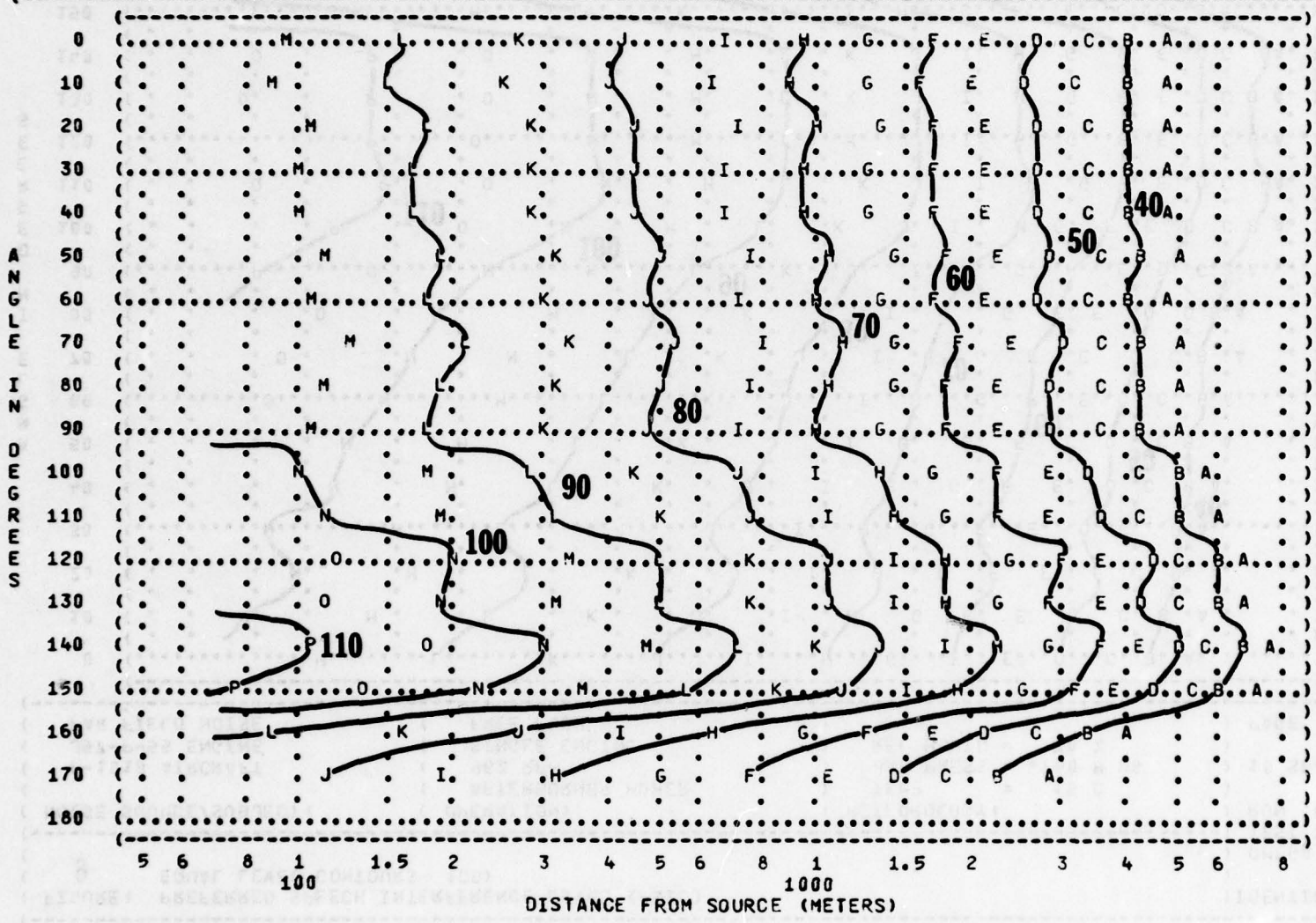
FIGURE 9: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .769 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 78-911-001
RUN 04
18 SEP 78
PAGE 17



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
N	100
O	105
P	110

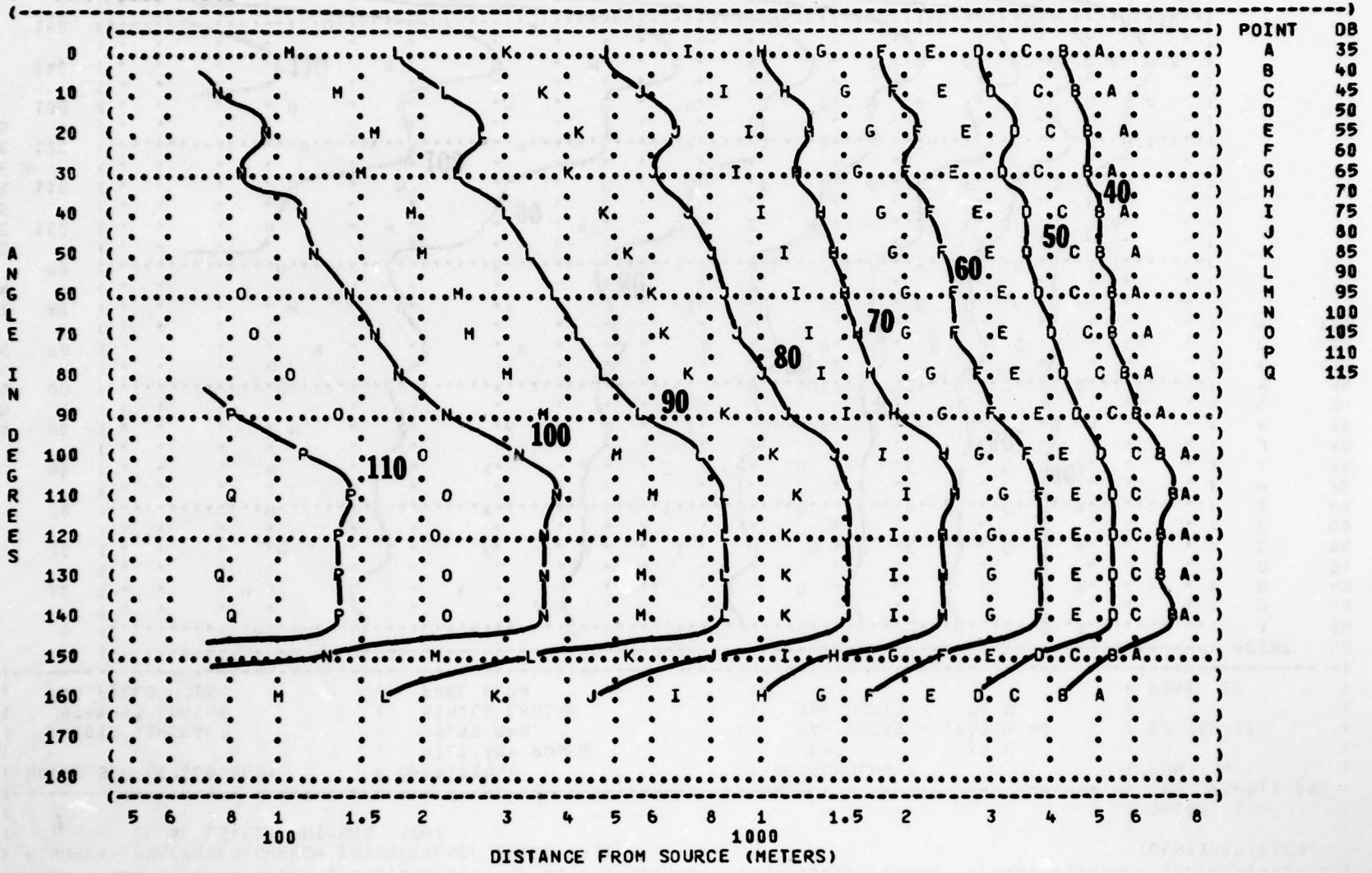
FIGURE 9 PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 17

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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
N	100
O	105
P	110
Q	115

FIGURE: 10

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 78-011-001
RUN 01
18 SEP 78
PAGE 7

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

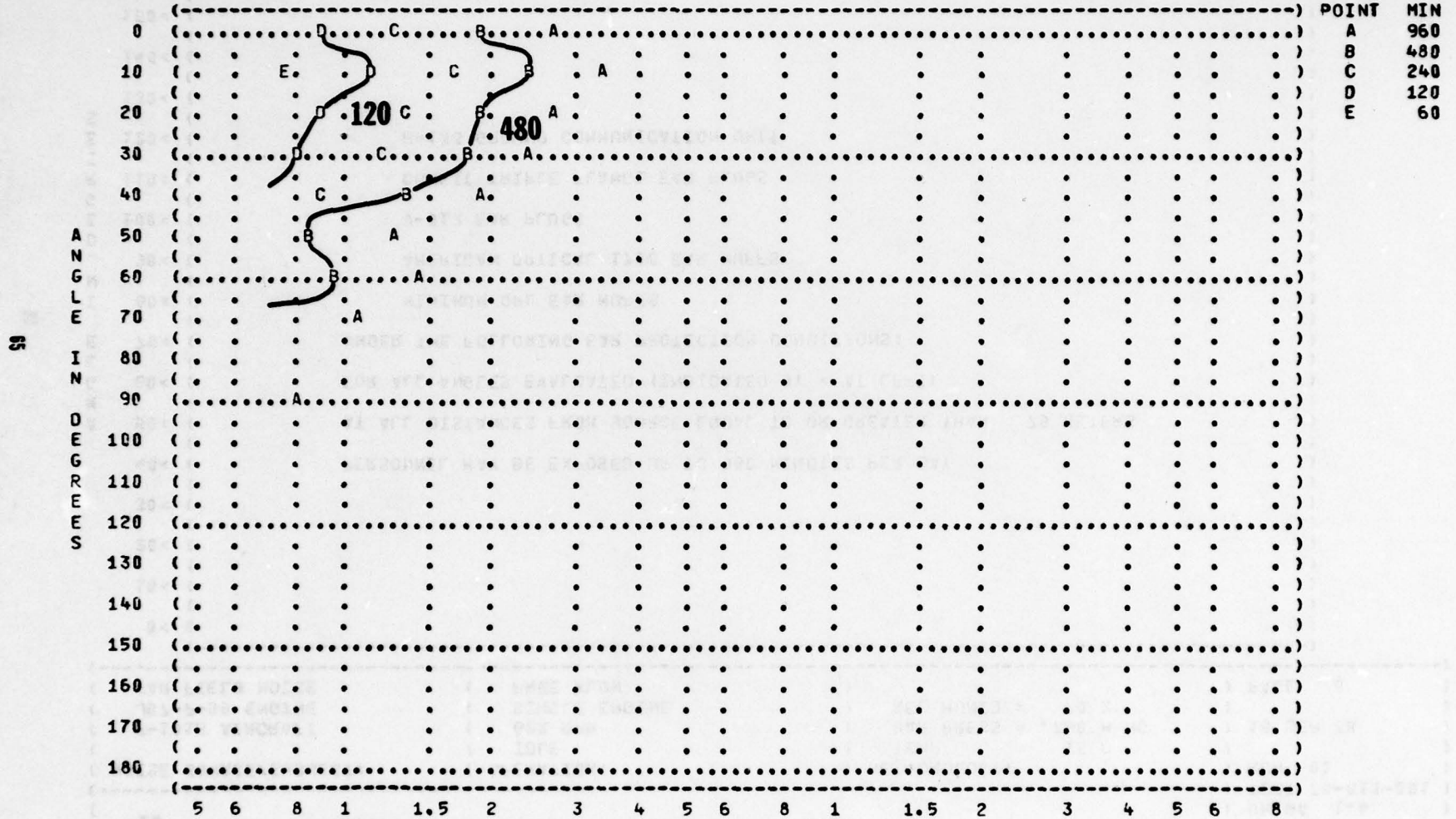


FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 8

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

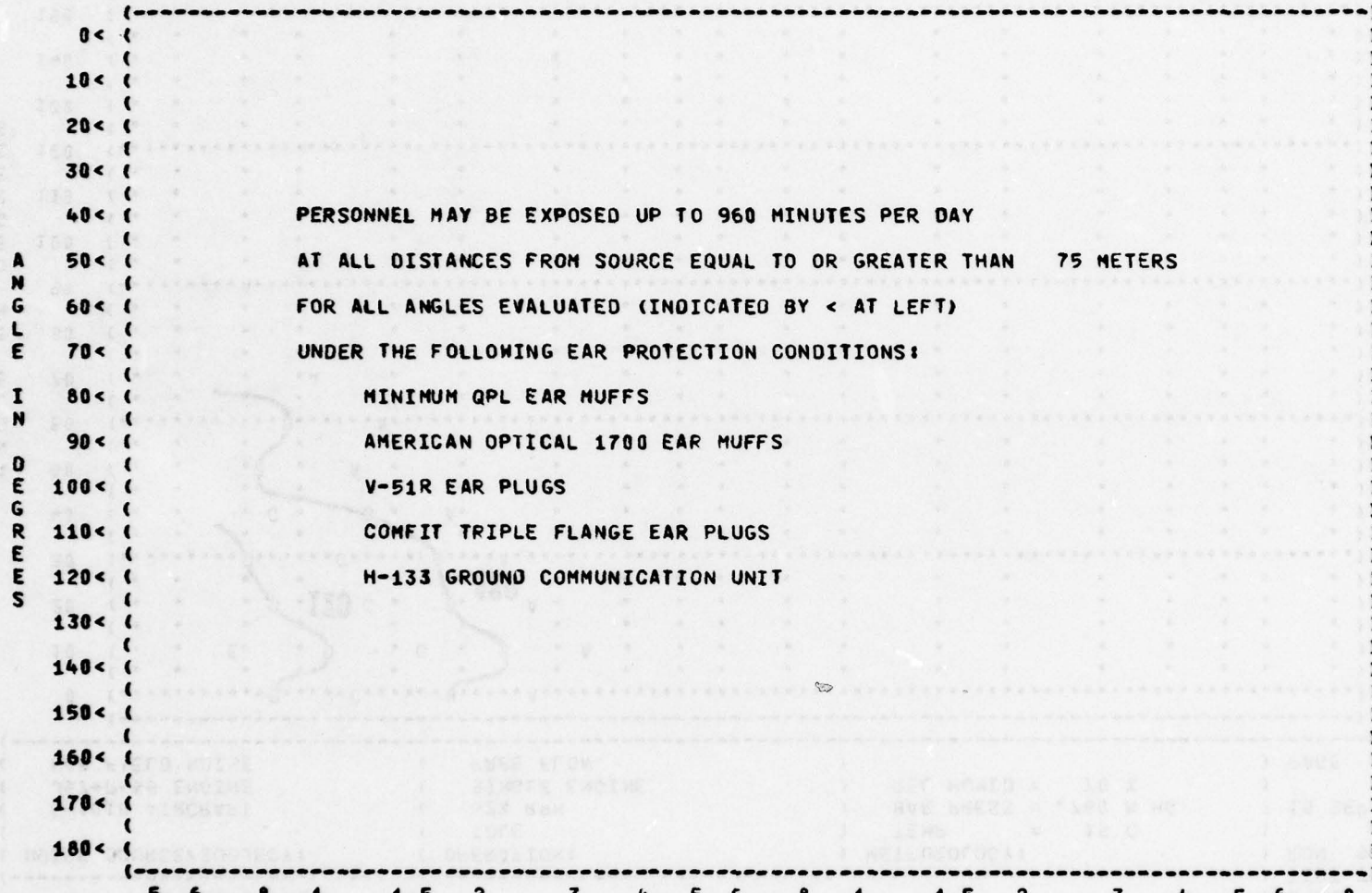


FIGURE: 10

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 78-011-001
RUN 02
18 SEP 78
PAGE 7

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

POINT	MIN
A	960
B	480
C	240
D	120
E	60
F	30

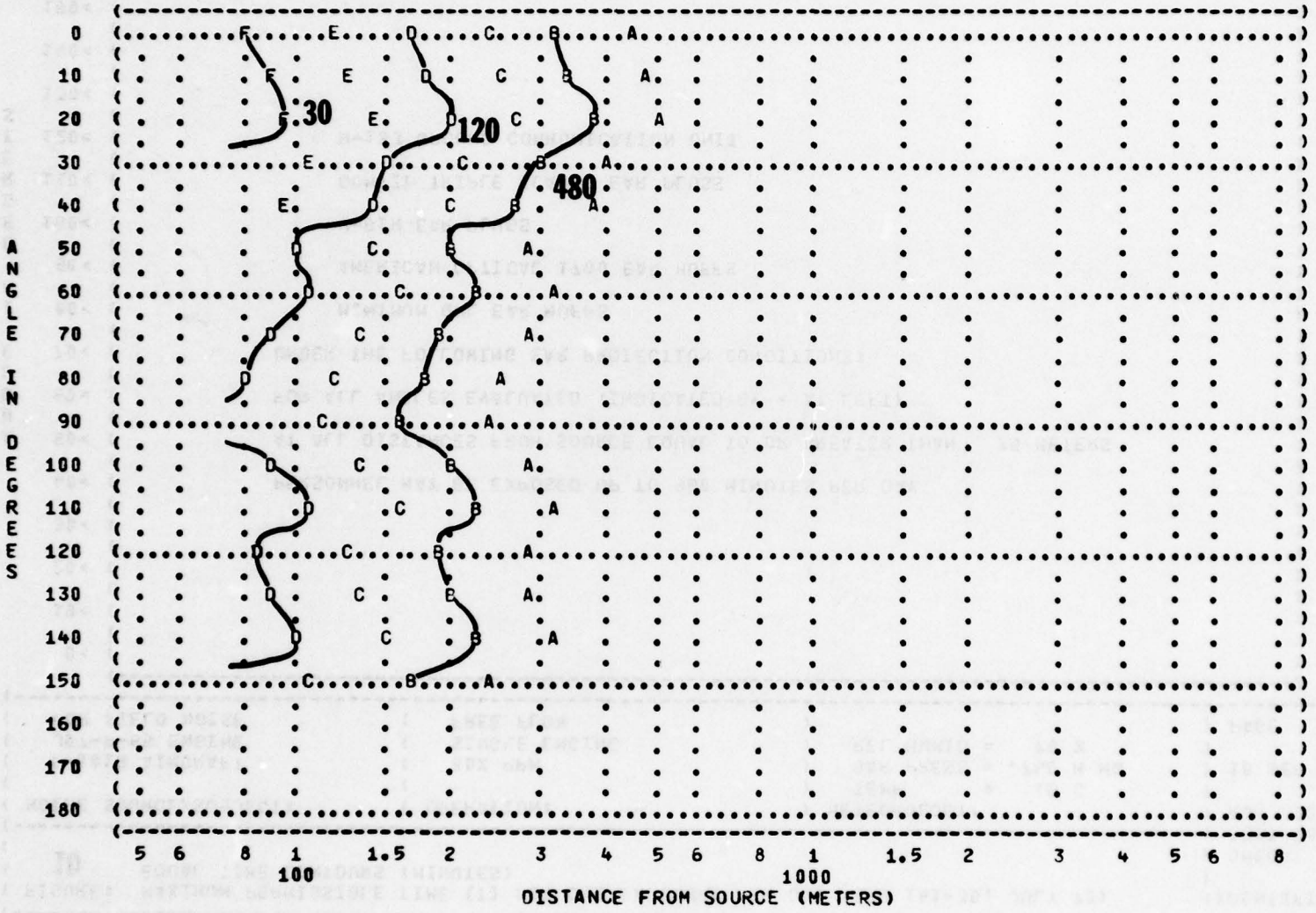


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 8

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

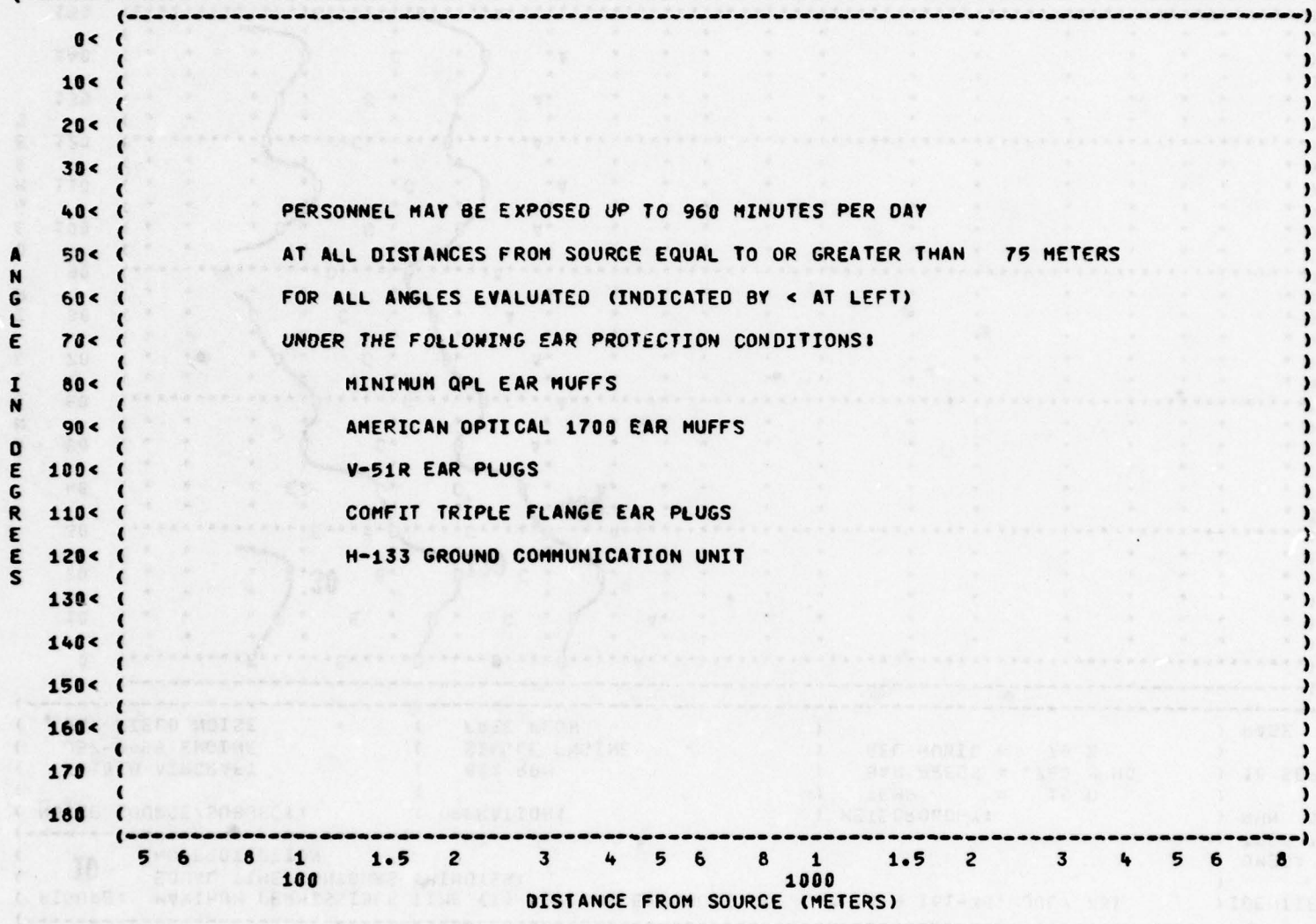


FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 7

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

POINT	MIN
A	960
B	480
C	240
D	120
E	60
F	30
G	15
H	8

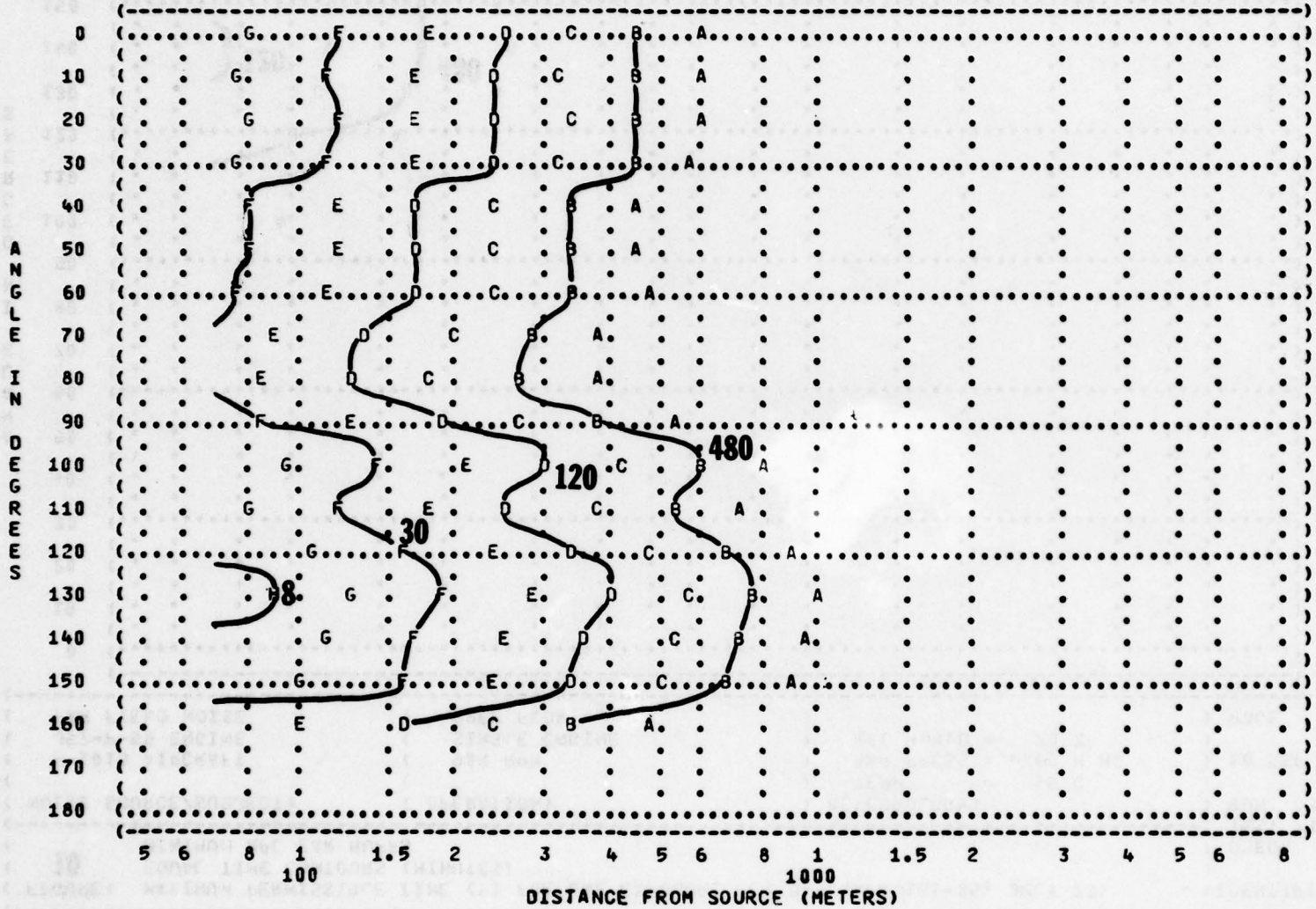


FIGURE: 10

MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
MINIMUM QPL EAR MUFFS

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 8

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

POINT	MIN
A	960
B	480
C	240
D	120

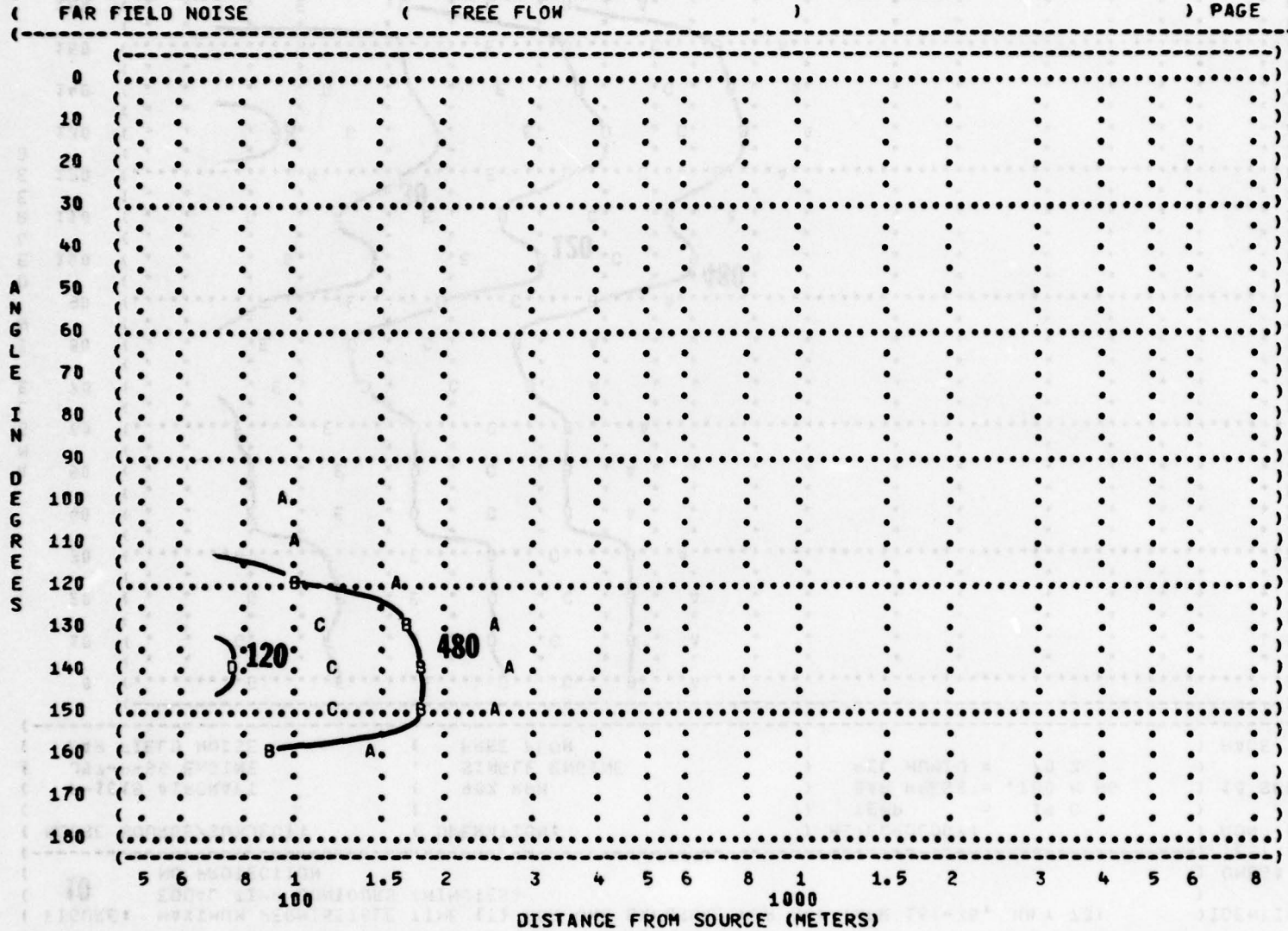


FIGURE: 10

MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
AMERICAN OPTICAL 1700 EAR MUFFS

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 9

POINT	MIN
A	960
B	480

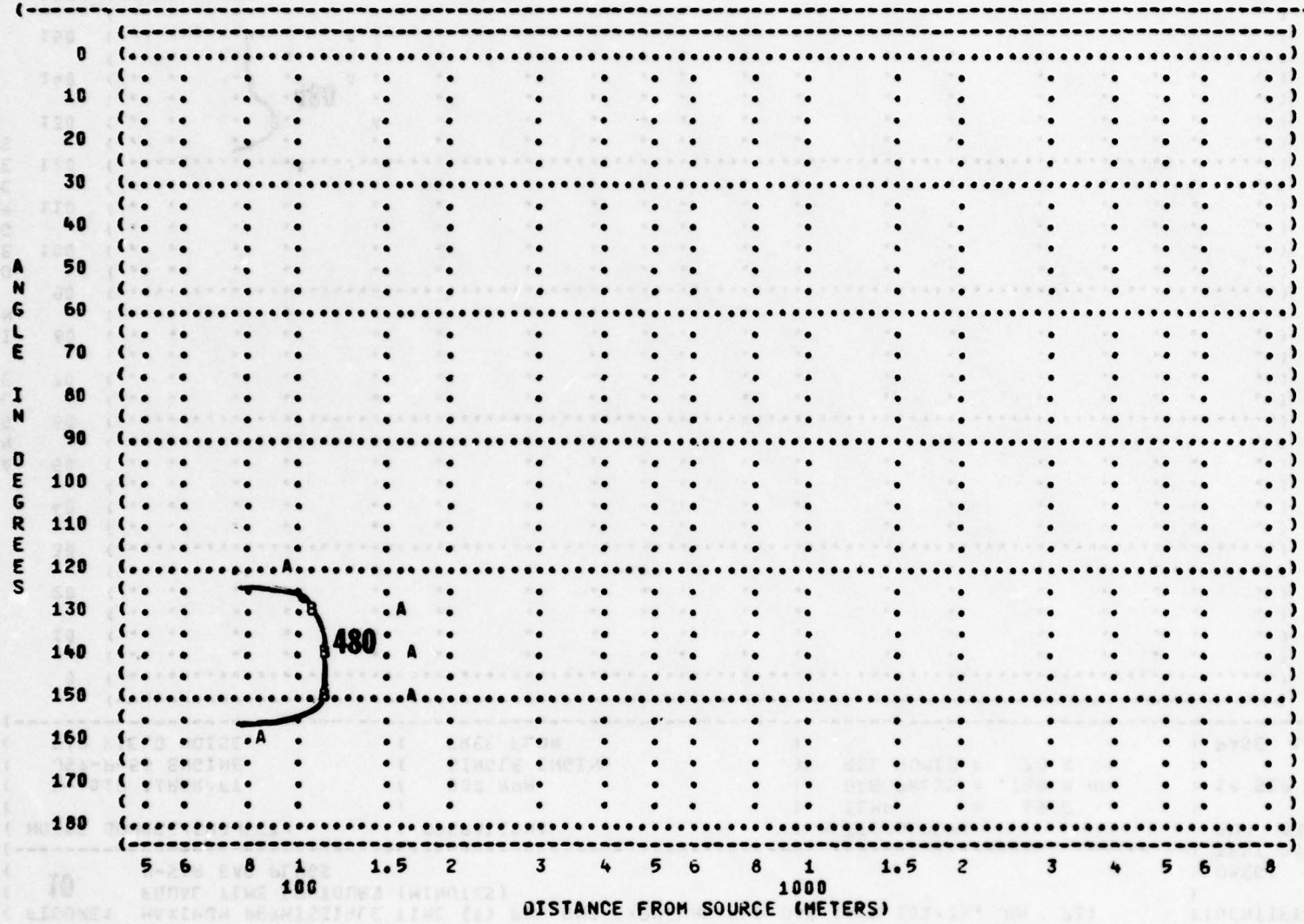


FIGURE: 10

MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
V-51R EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 10

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

POINT	MIN
A	960
B	480

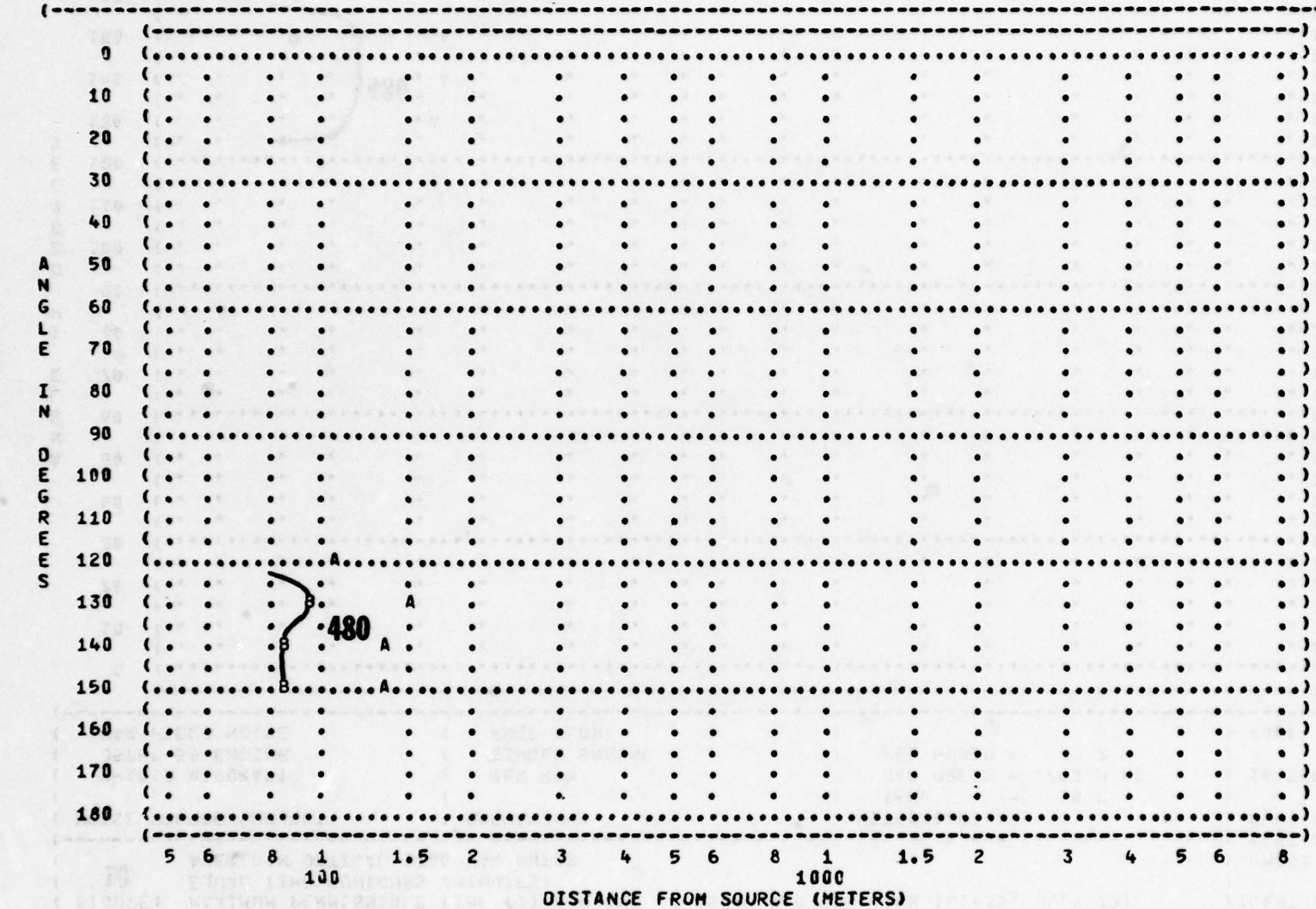


FIGURE: 10

MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
COMFIT TRIPLE FLANGE EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 11

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

POINT	MIN
A	960
B	480

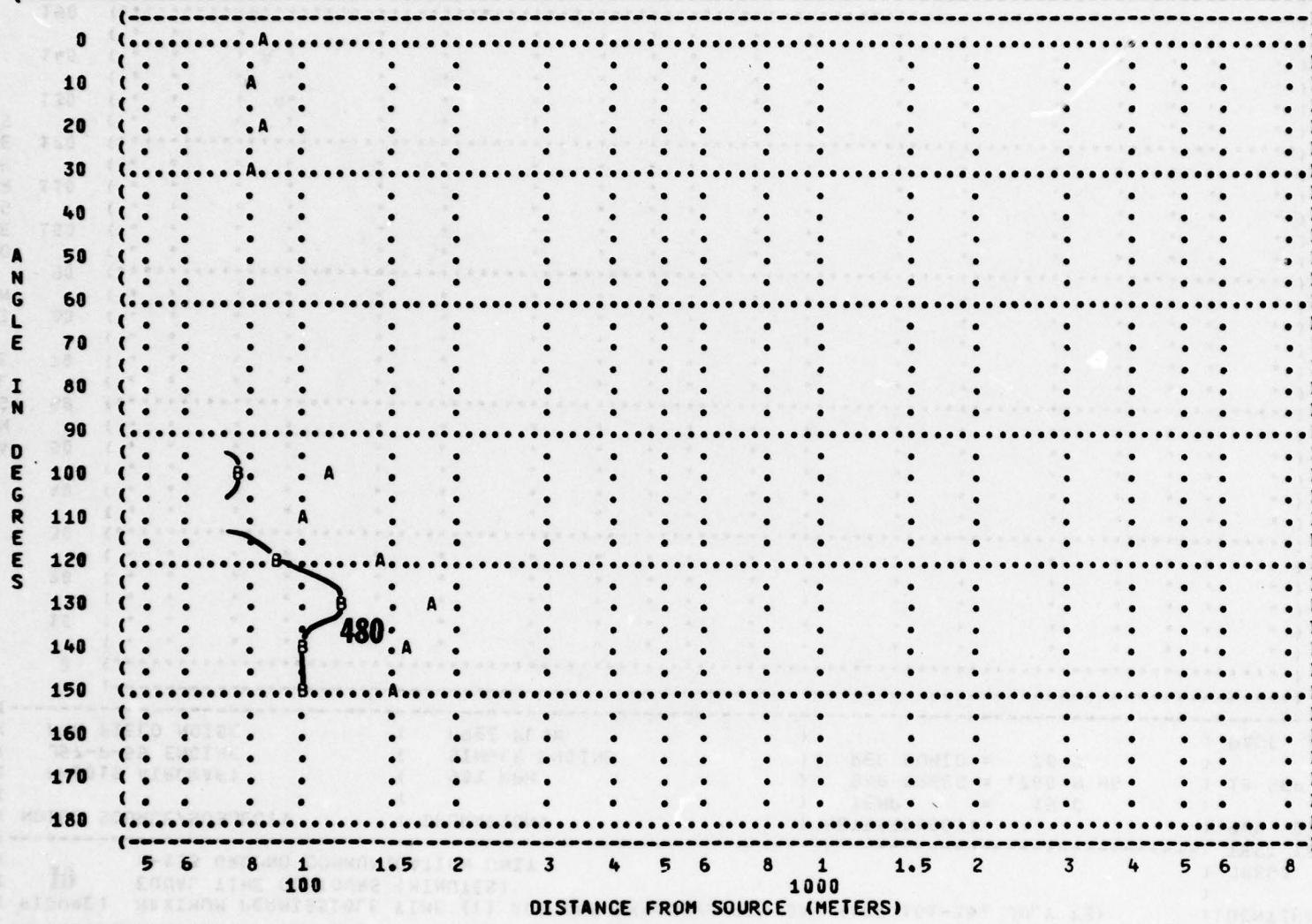


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
H-133 GROUND COMMUNICATION UNIT

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 12

POINT	MIN
A	960

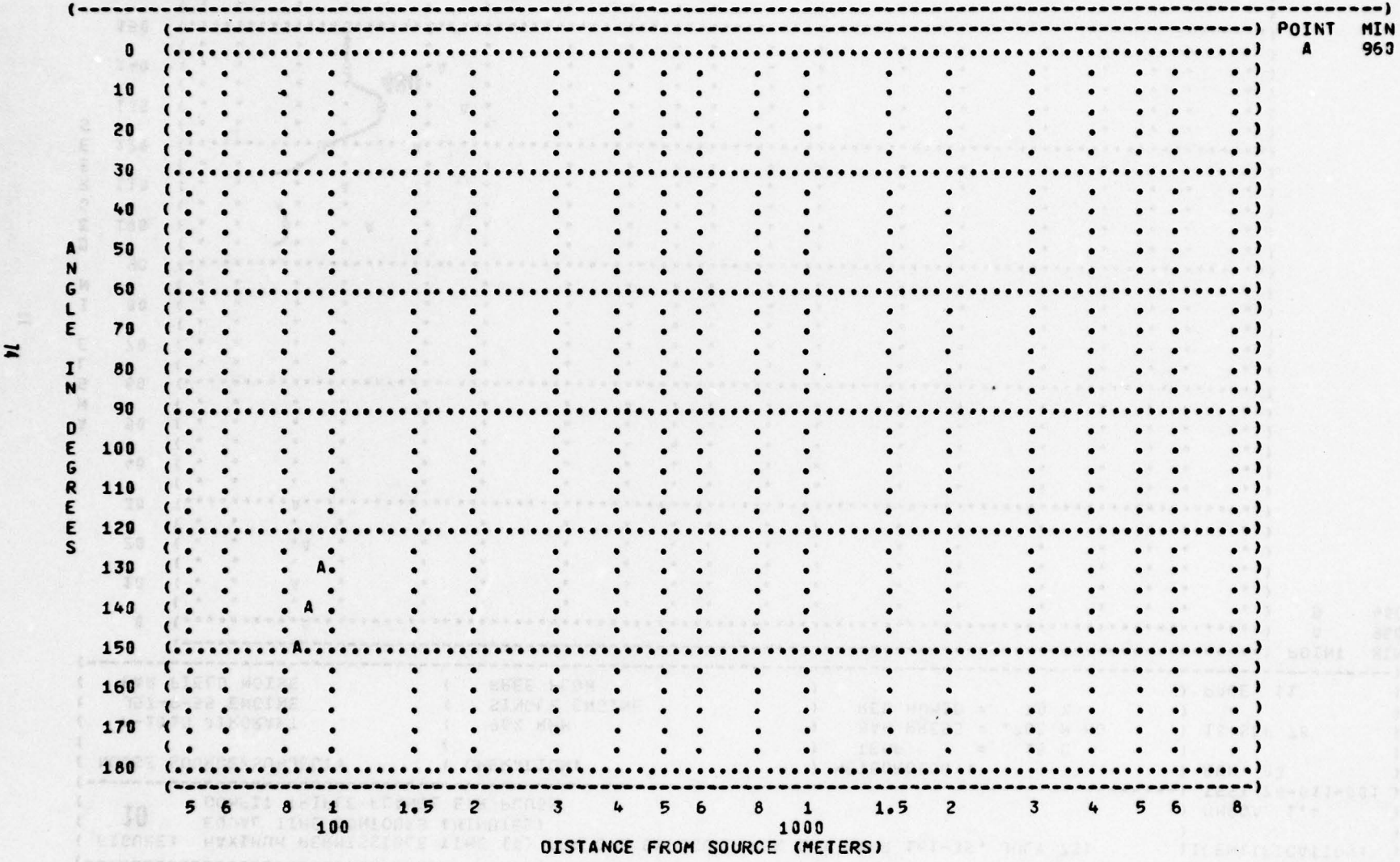


FIGURE: 10

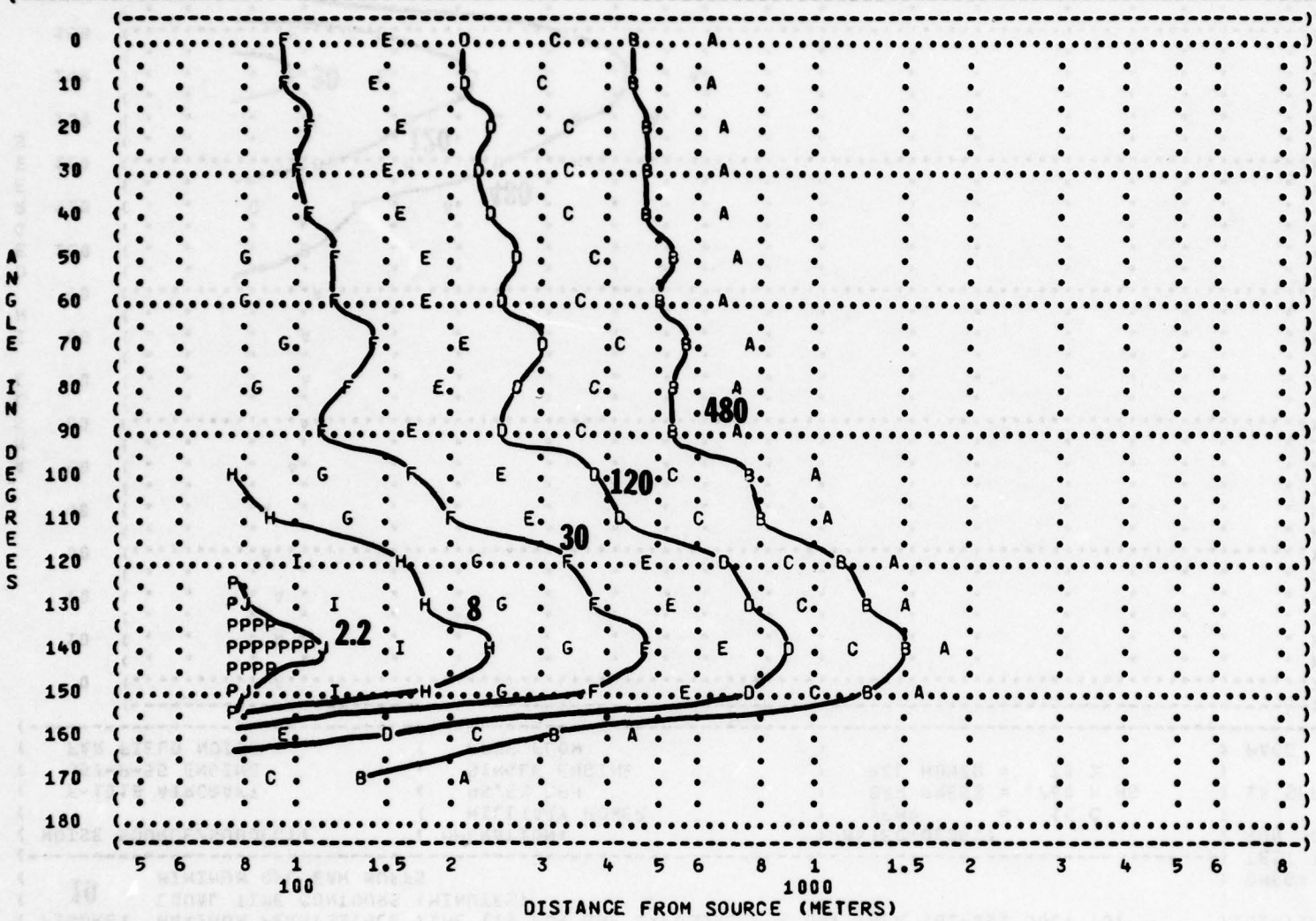
MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-C01
RUN 04
18 SEP 78
PAGE 7

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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



POINT	MIN
A	960
B	480
C	240
D	120
E	60
F	30
G	15
H	8
I	4
J	2.2

P ADDITIONAL EAR PROTECTION REQUIRED.

FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
MINIMUM QPL EAR MUFFS

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
PAGE 8

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

POINT	MIN
A	960
B	480
C	240
D	120
E	60
F	30

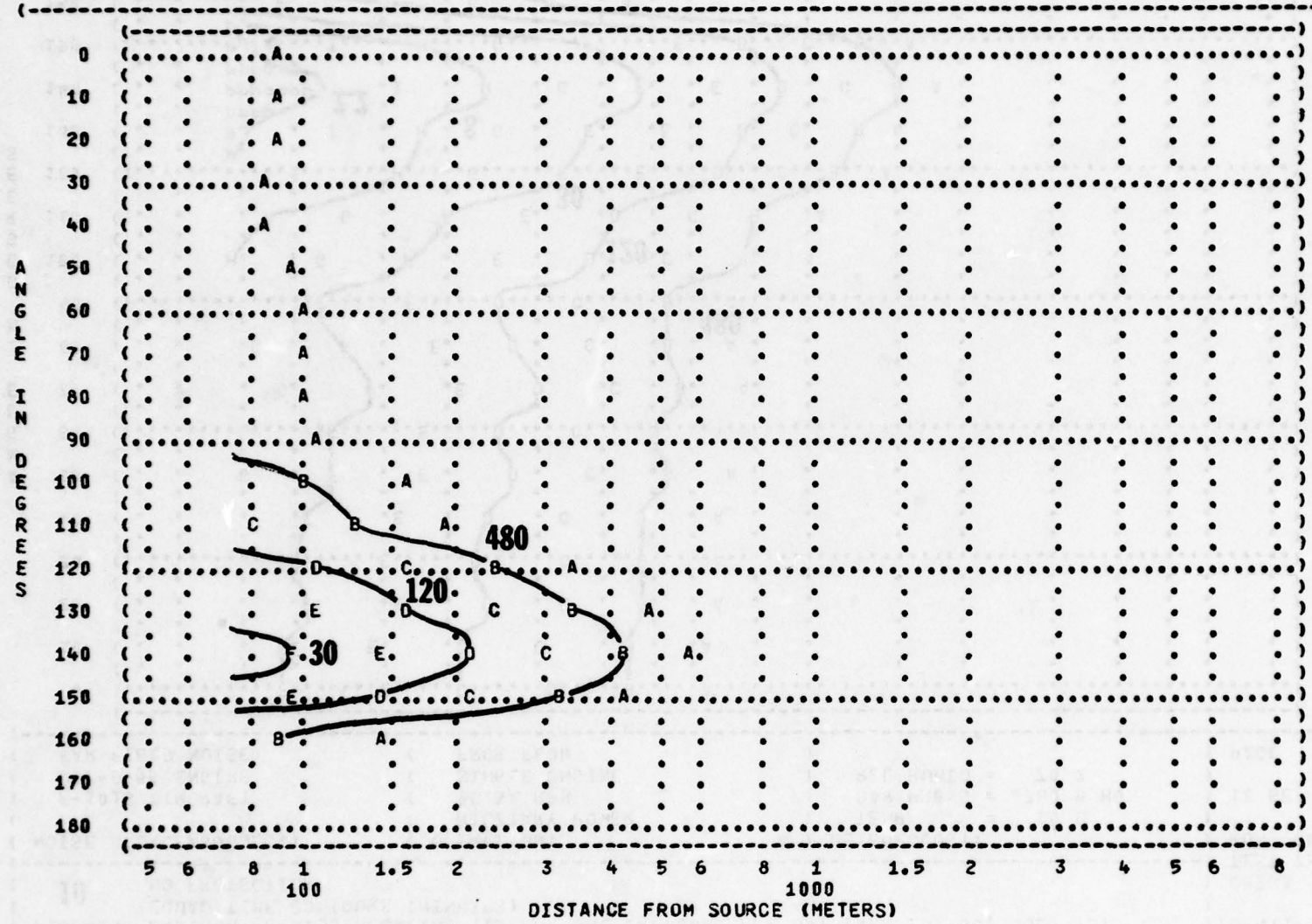


FIGURE: 10

MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
AMERICAN OPTICAL 1700 EAR MUFFS

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
PAGE 9

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

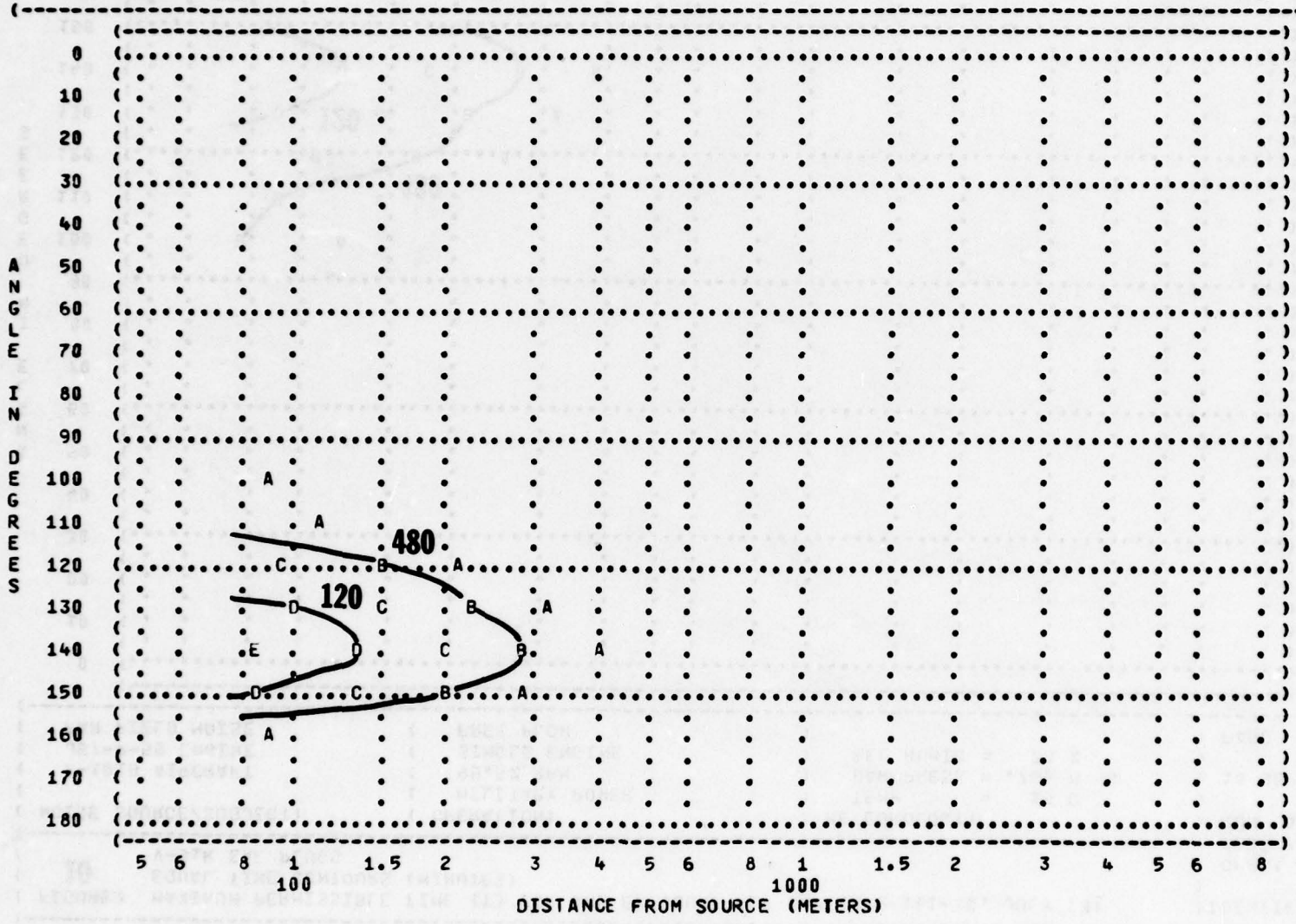


FIGURE: 10

MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
V-51R EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
PAGE 10

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

POINT	MIN
A	960
B	480
C	240
D	120

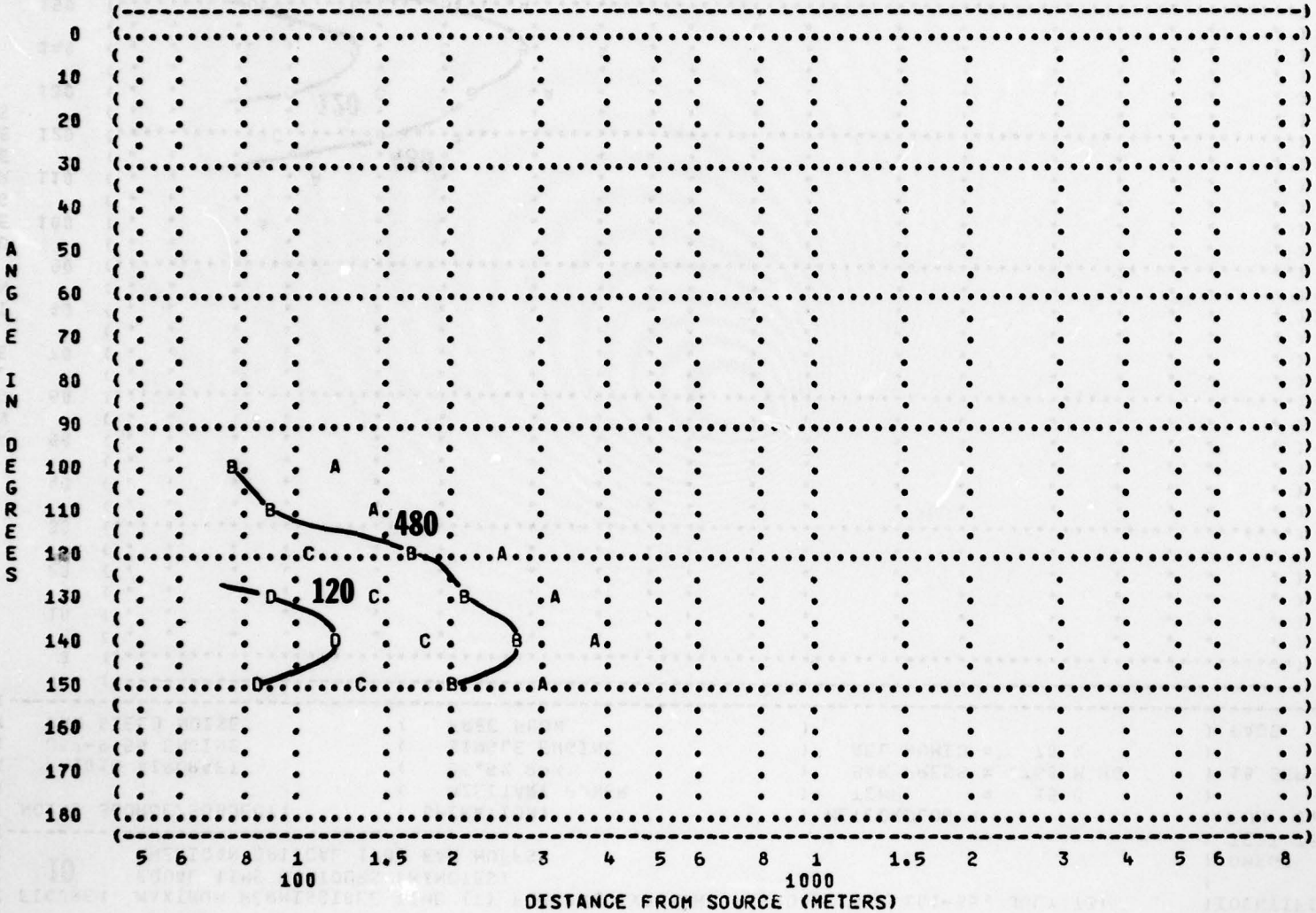


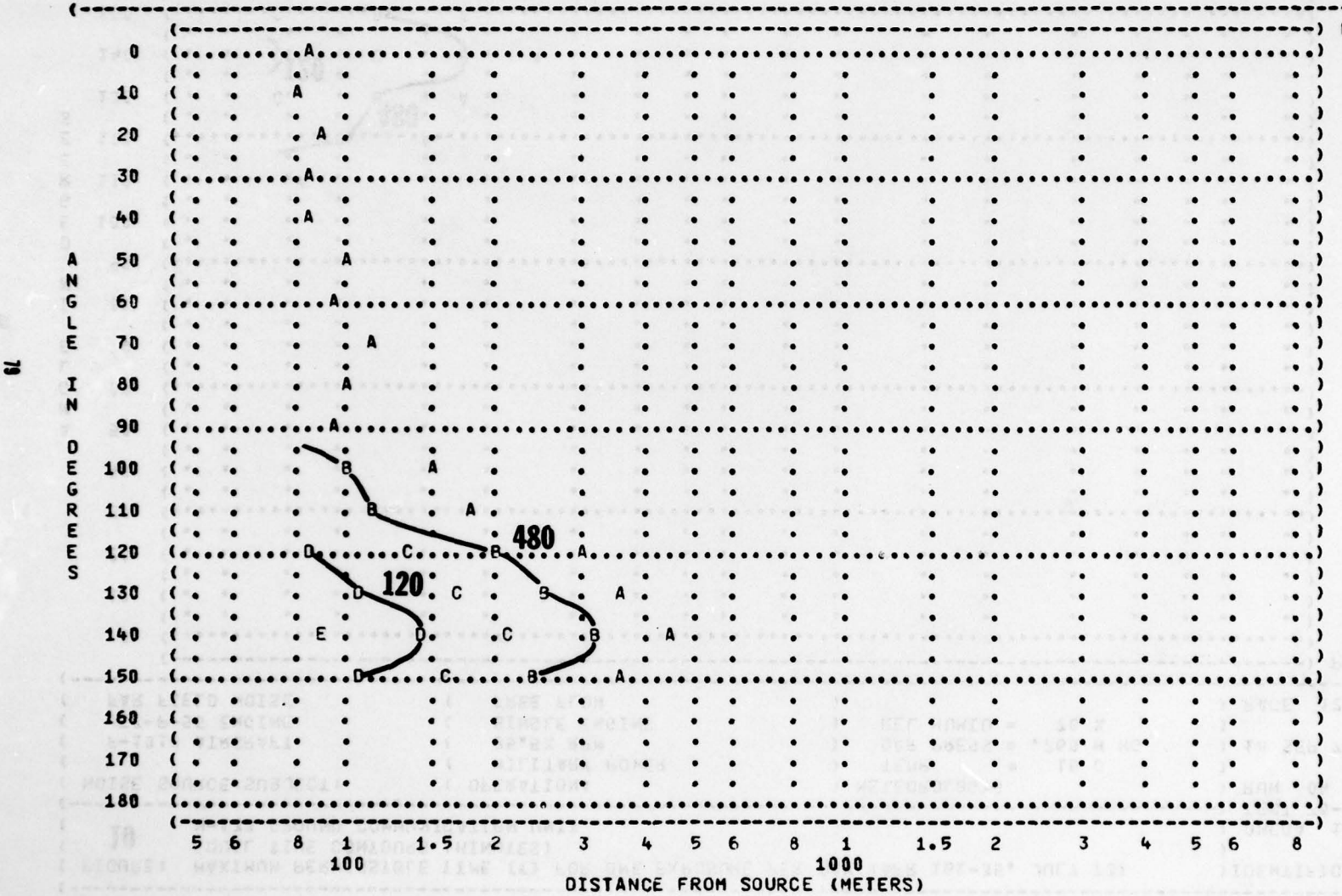
FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
COMFIT TRIPLE FLANGE EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
PAGE 11

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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: 10

MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
H-133 GROUND COMMUNICATION UNIT

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
PAGE 12

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

POINT	MIN
A	960
B	480
C	240
D	120

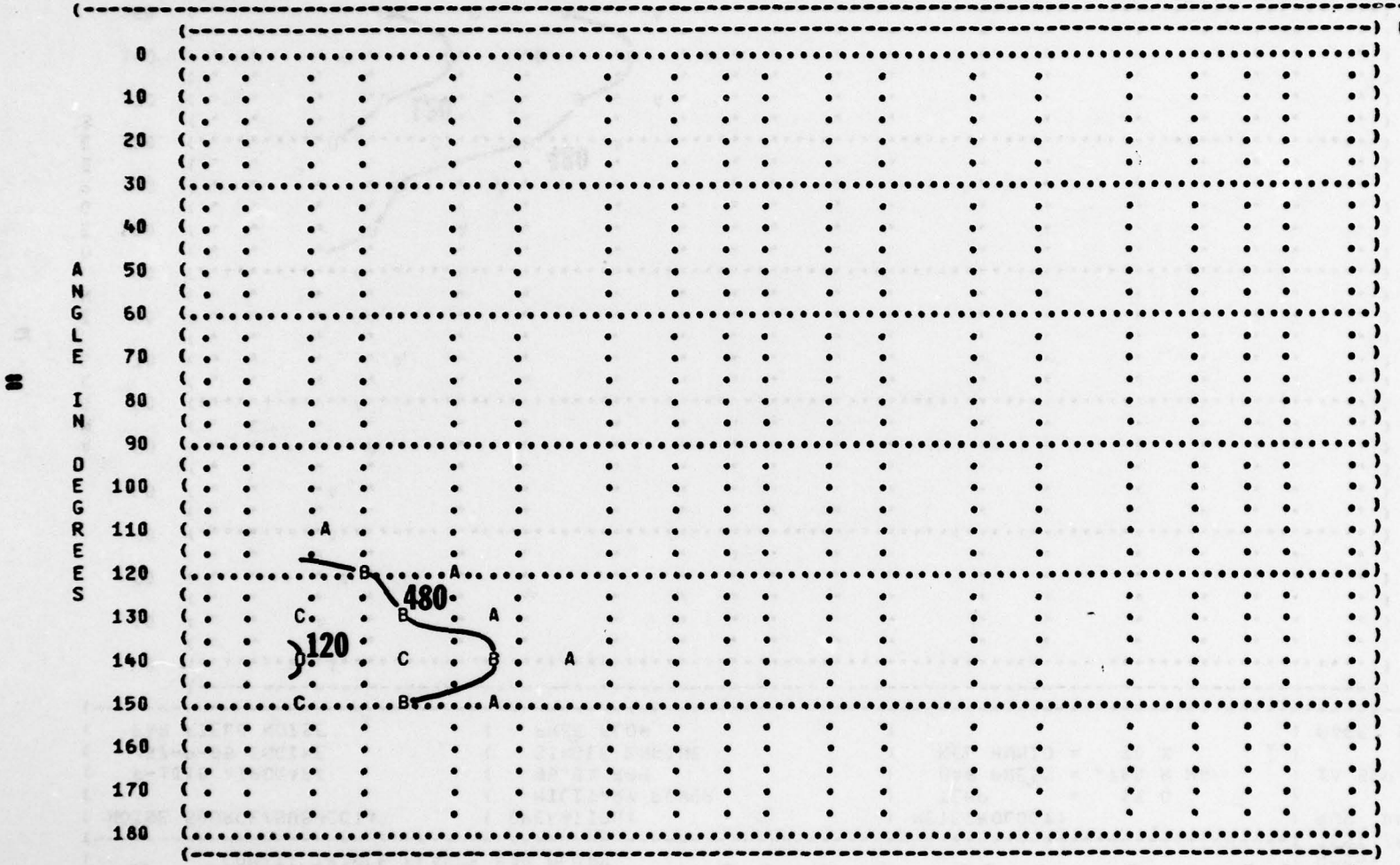


FIGURE: 10

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

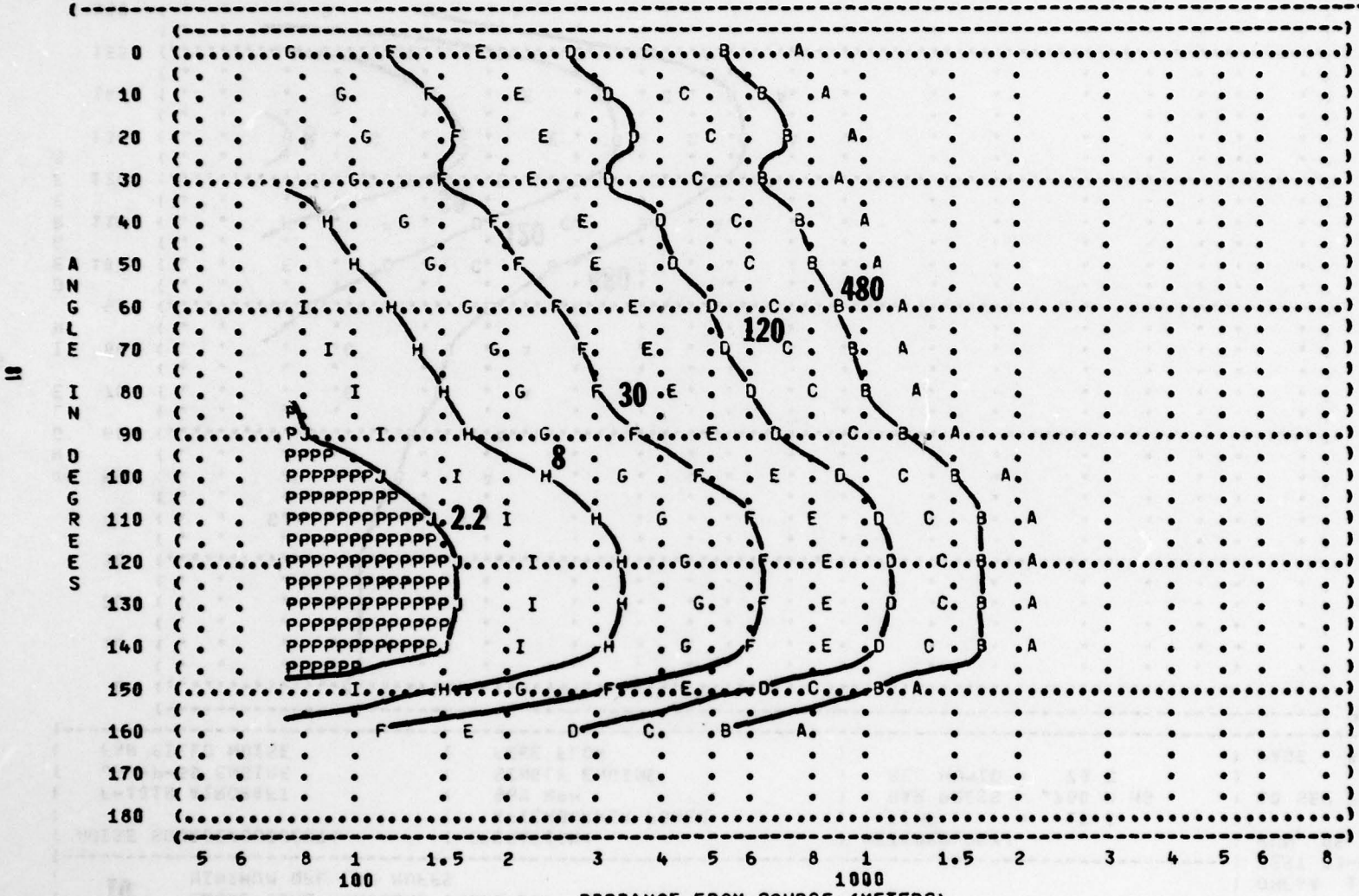
IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
24 JAN 79
PAGE 7

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

POINT	MIN
A	960
B	480
C	240
D	120
E	60
F	30
G	15
H	8
I	4
J	2.2



P ADDITIONAL EAR PROTECTION REQUIRED.

FIGURE: 10

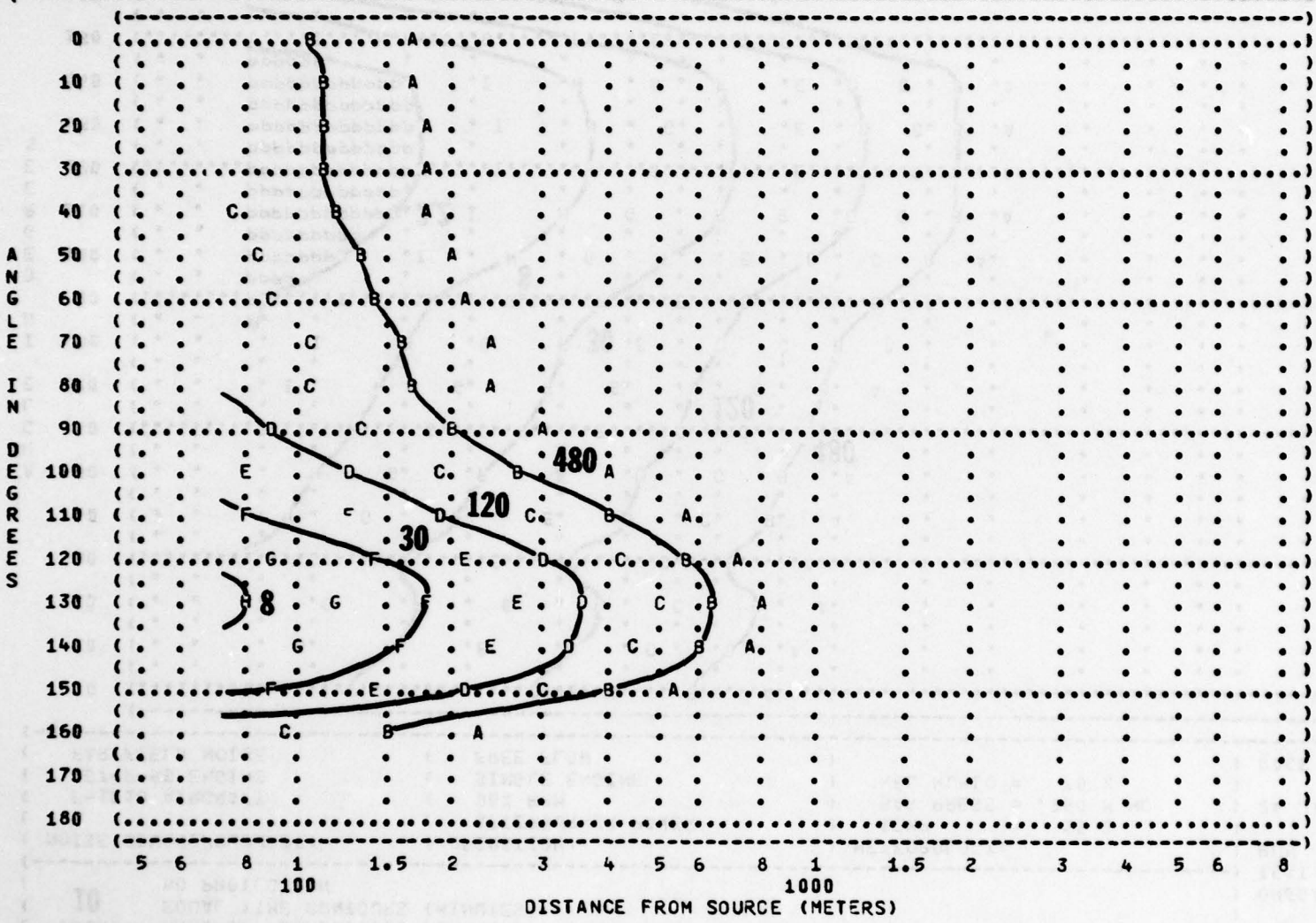
MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
MINIMUM QPL EAR MUFFS

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 8



POINT	MIN
A	960
B	480
C	240
D	120
E	60
F	30
G	15
H	8

FIGURE: 10

MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
AMERICAN OPTICAL 1700 EAR MUFFS

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 9

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

POINT	MIN
A	960
B	480
C	240
D	120
E	60
F	30

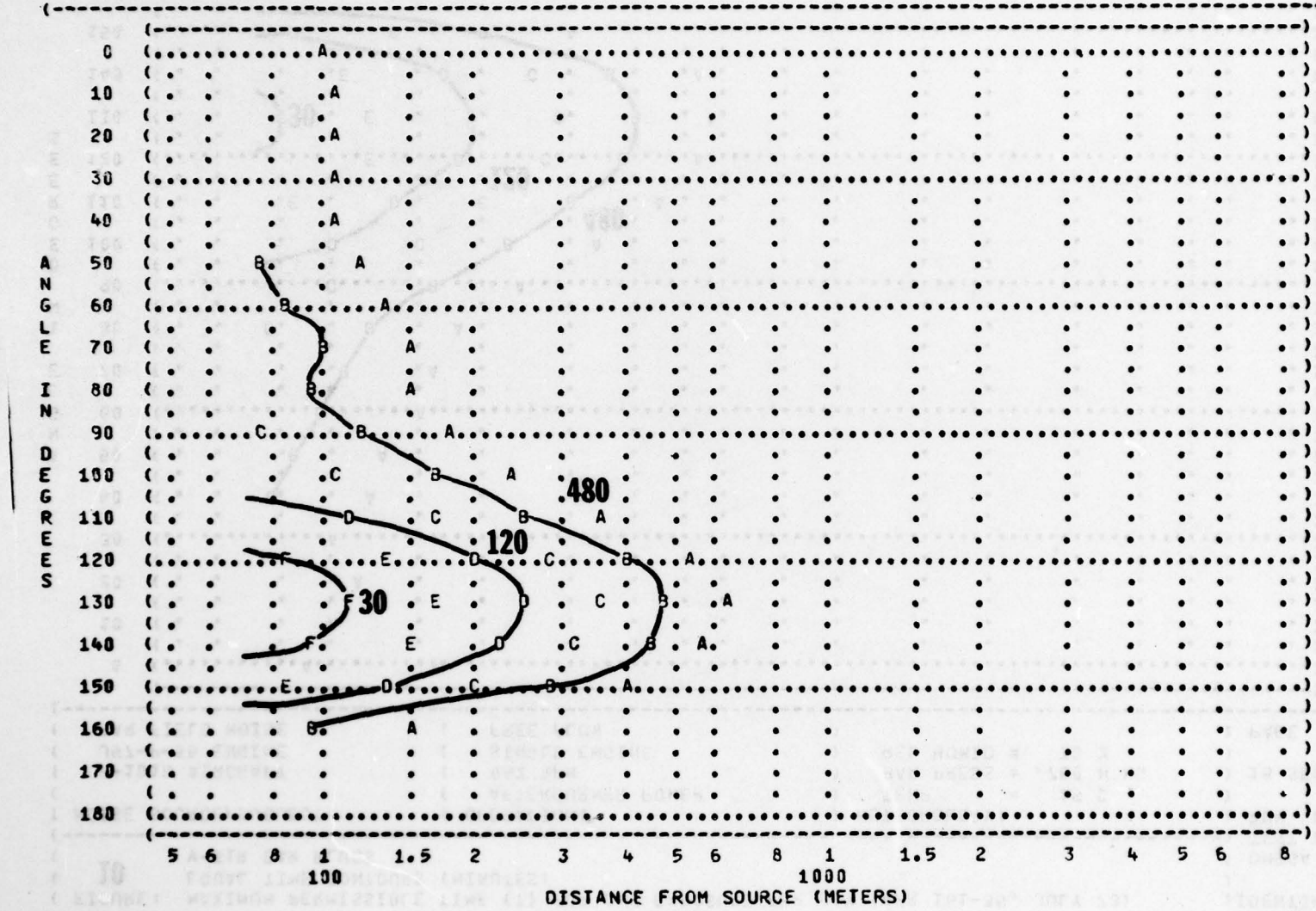


FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
V-51R EAR PLUGS

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 18

POINT	MIN
A	960
B	480
C	240
D	120
E	60
F	30

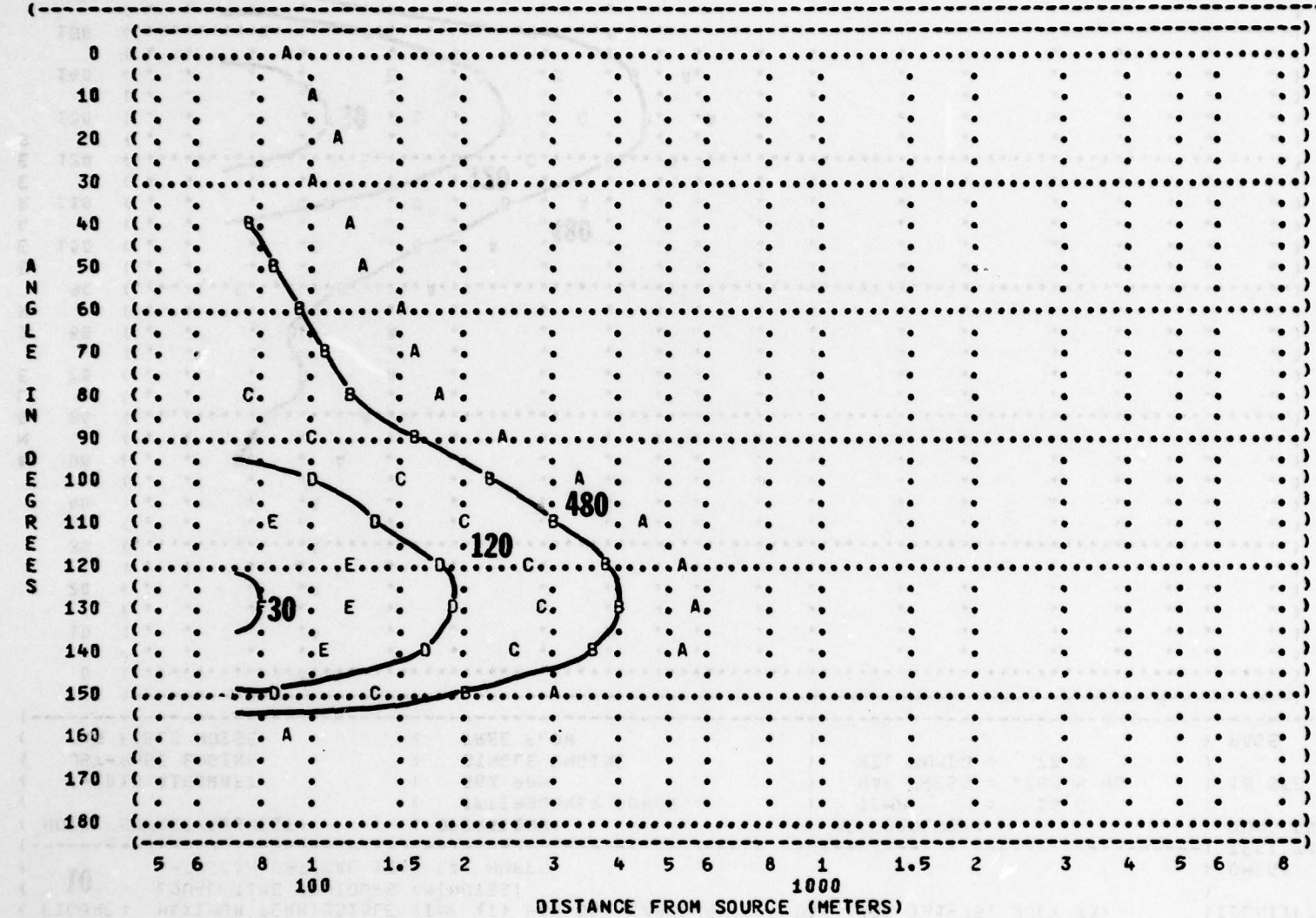


FIGURE: 10

MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
COMFIT TRIPLE FLANGE EAR PLUGS

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 11

POINT	MIN
A	960
B	480
C	240
D	120
E	60
F	30

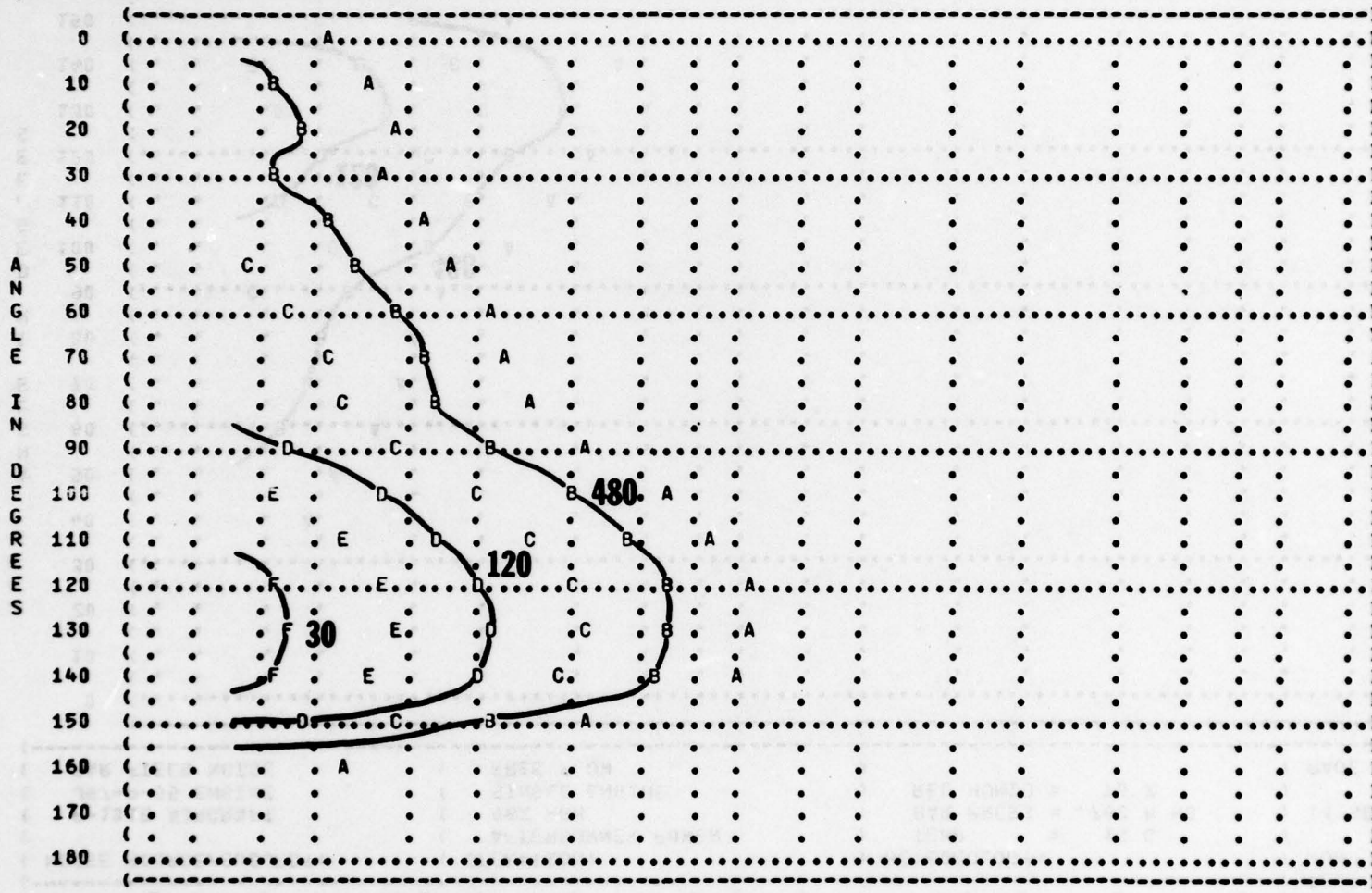


FIGURE: 10

MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
H-133 GROUND COMMUNICATION UNIT

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-C01
RUN 05
18 SEP 78
PAGE 12

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

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

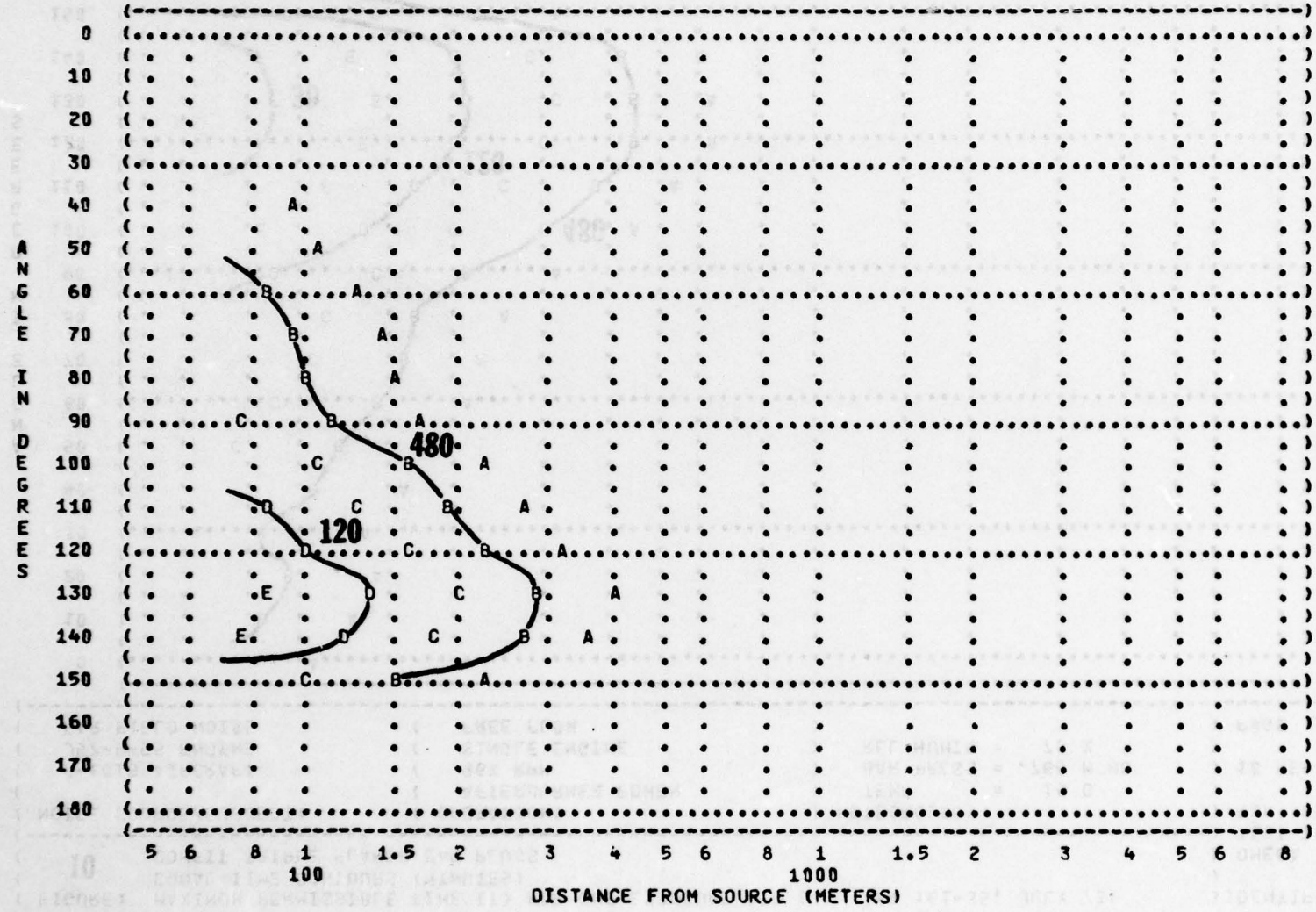


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01

18 SEP 78

PAGE 18

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

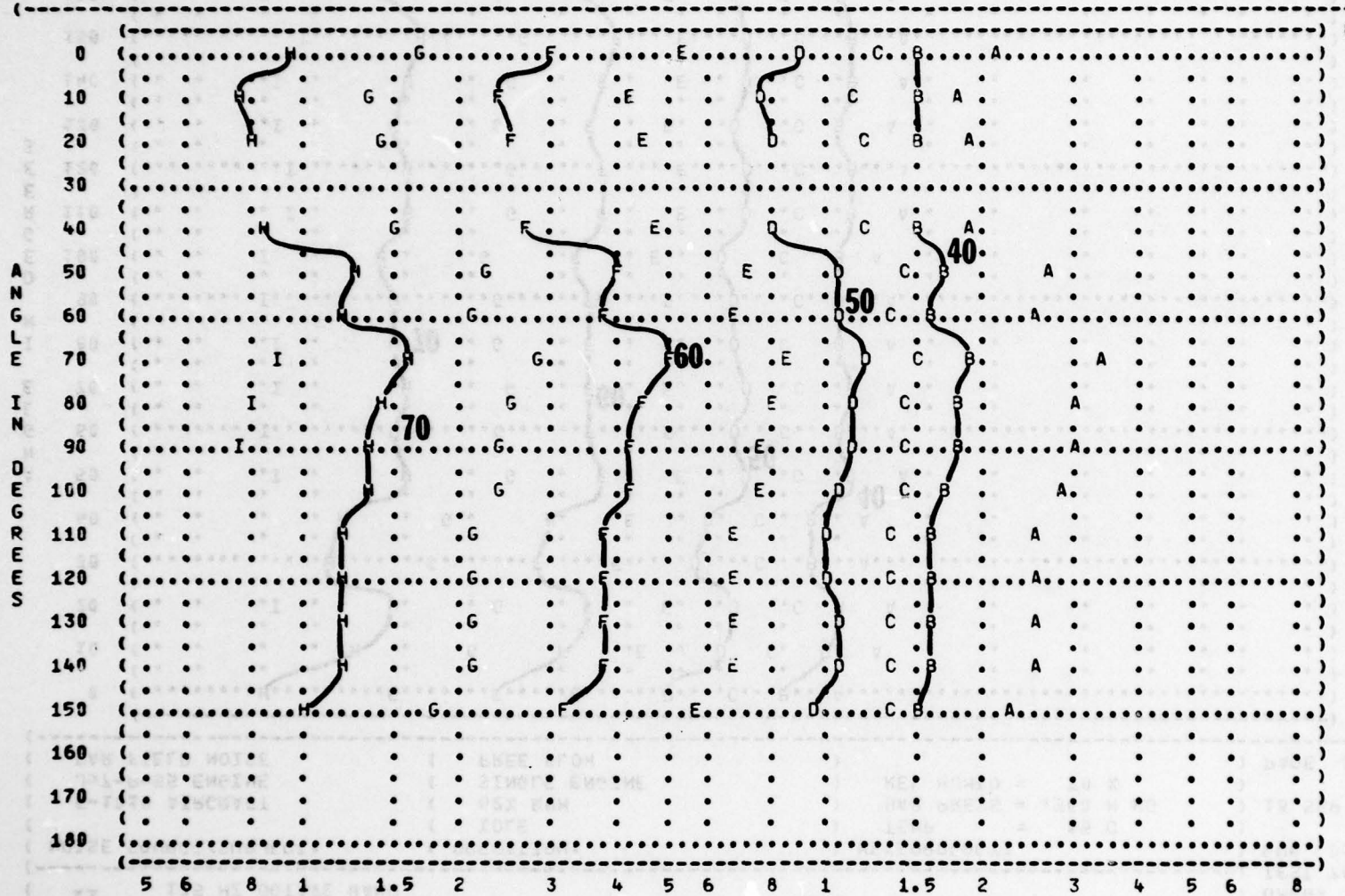


FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 78-011-001 RUN 01 18 SEP 78 PAGE 20

NOISE SOURCE/SUBJECT: F-1018 AIRCRAFT J57-P-55 ENGINE FAR FIELD NOISE

OPERATION: IDLE 62% RPM SINGLE ENGINE FREE FLOW

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

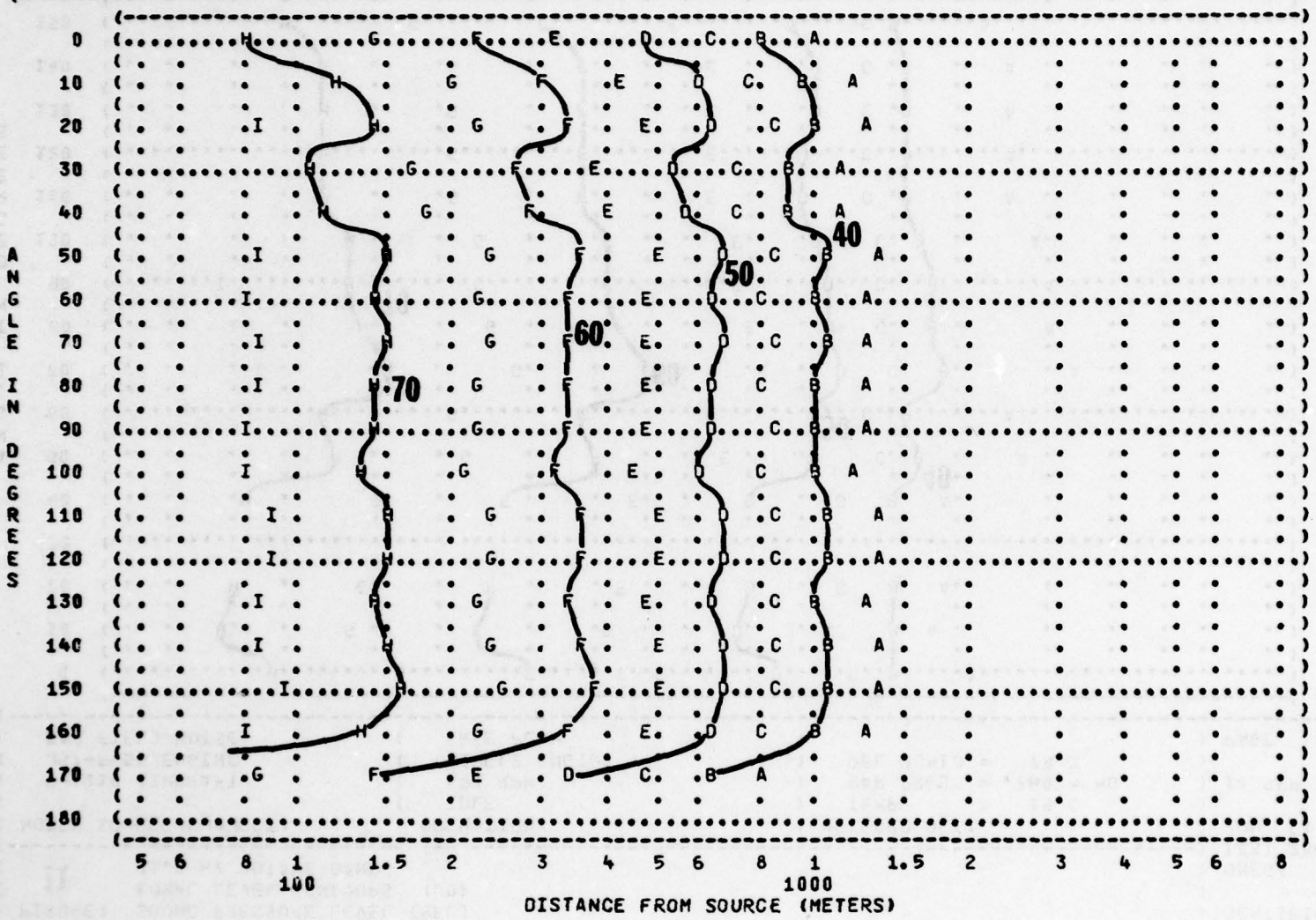


FIGURE: 11

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 21

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

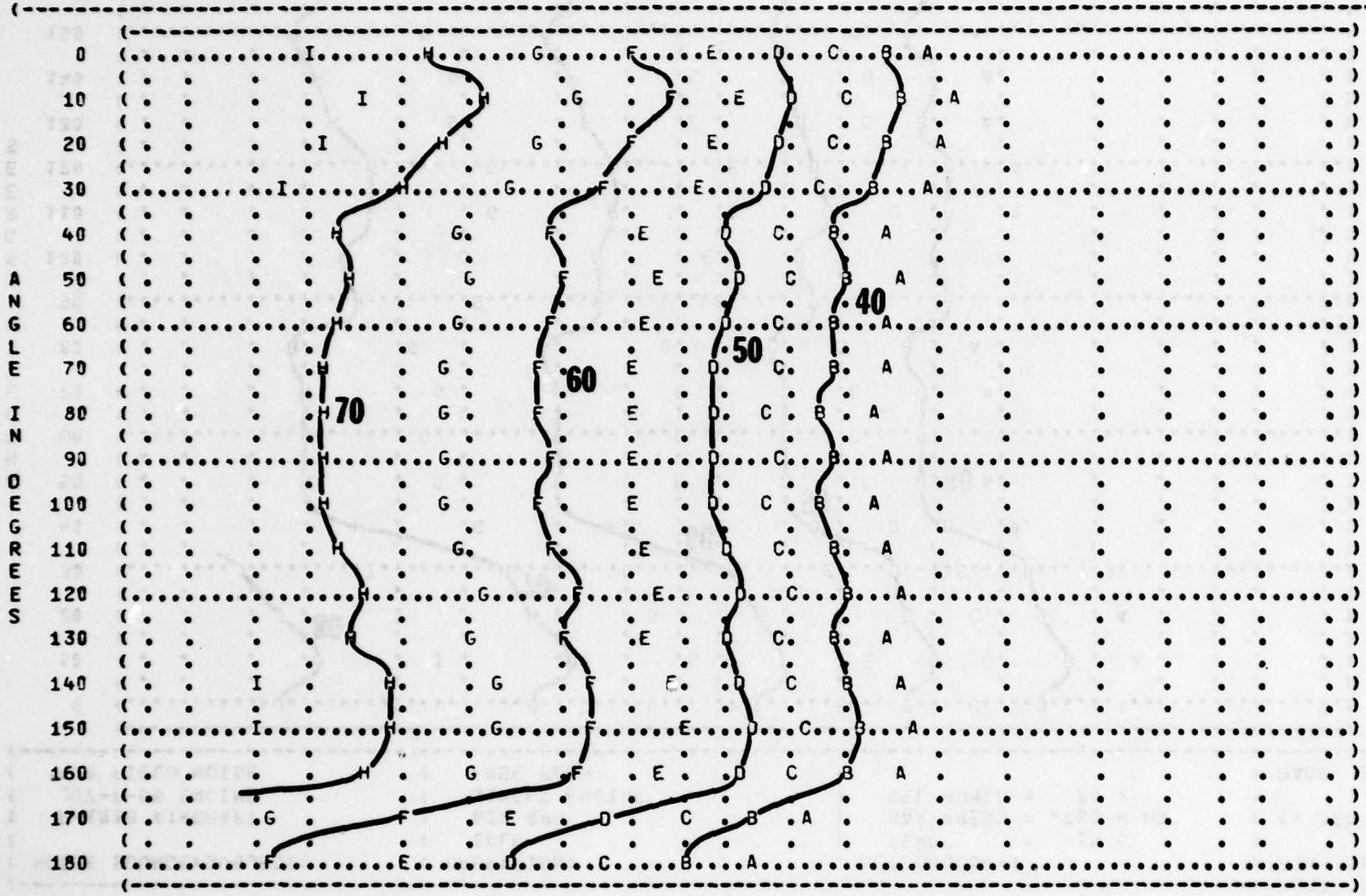


FIGURE: 11

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

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 22

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

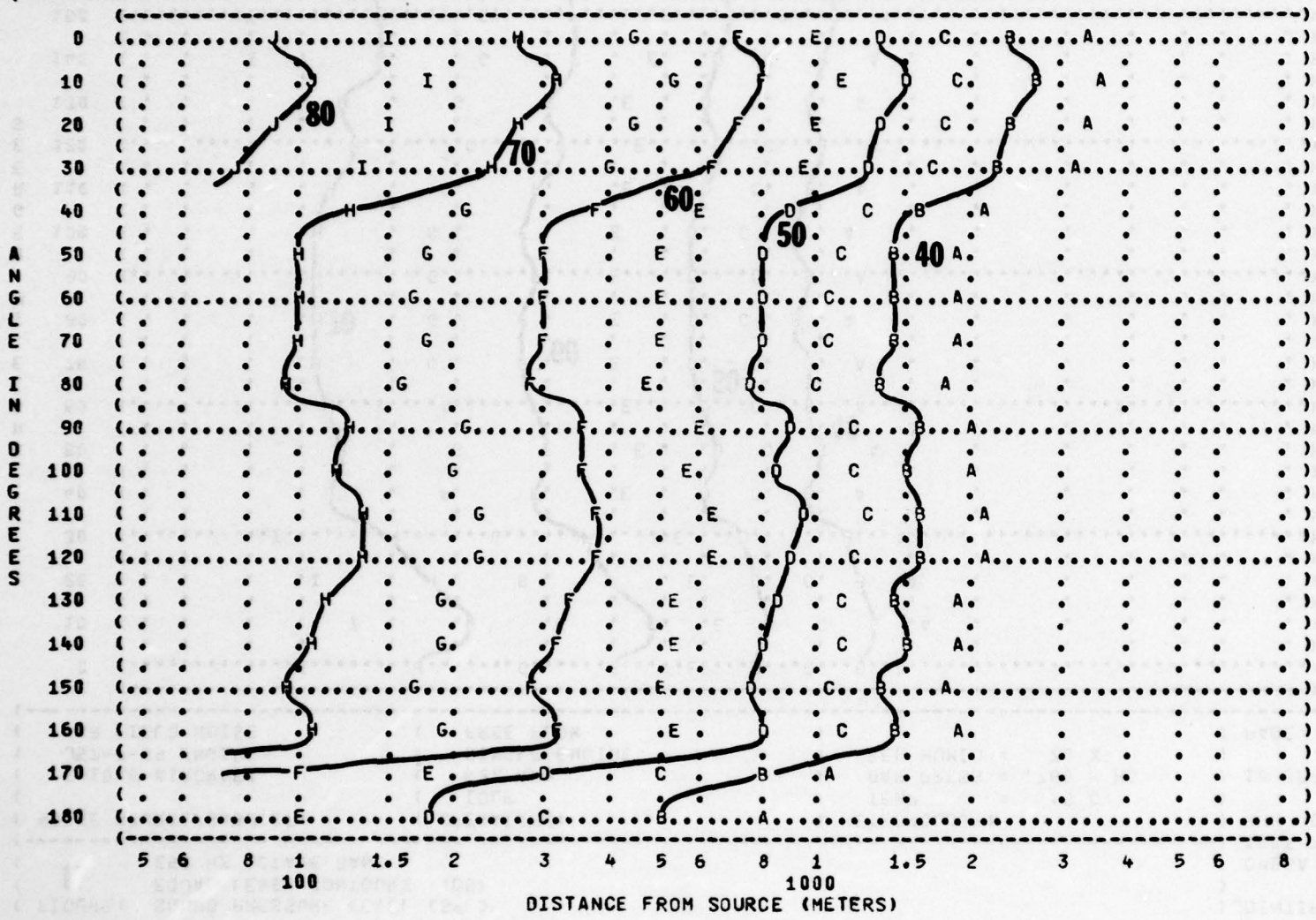


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 23

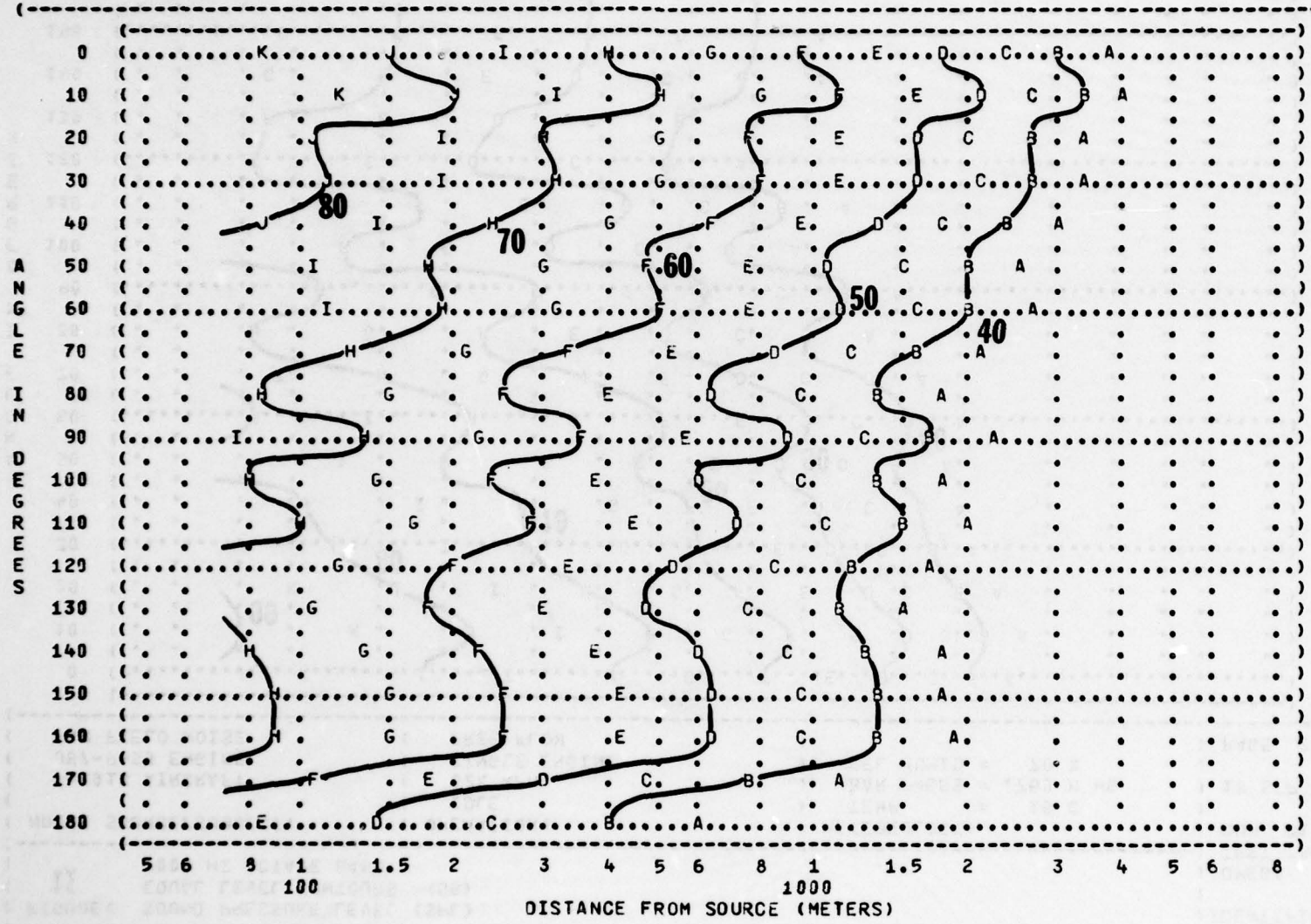


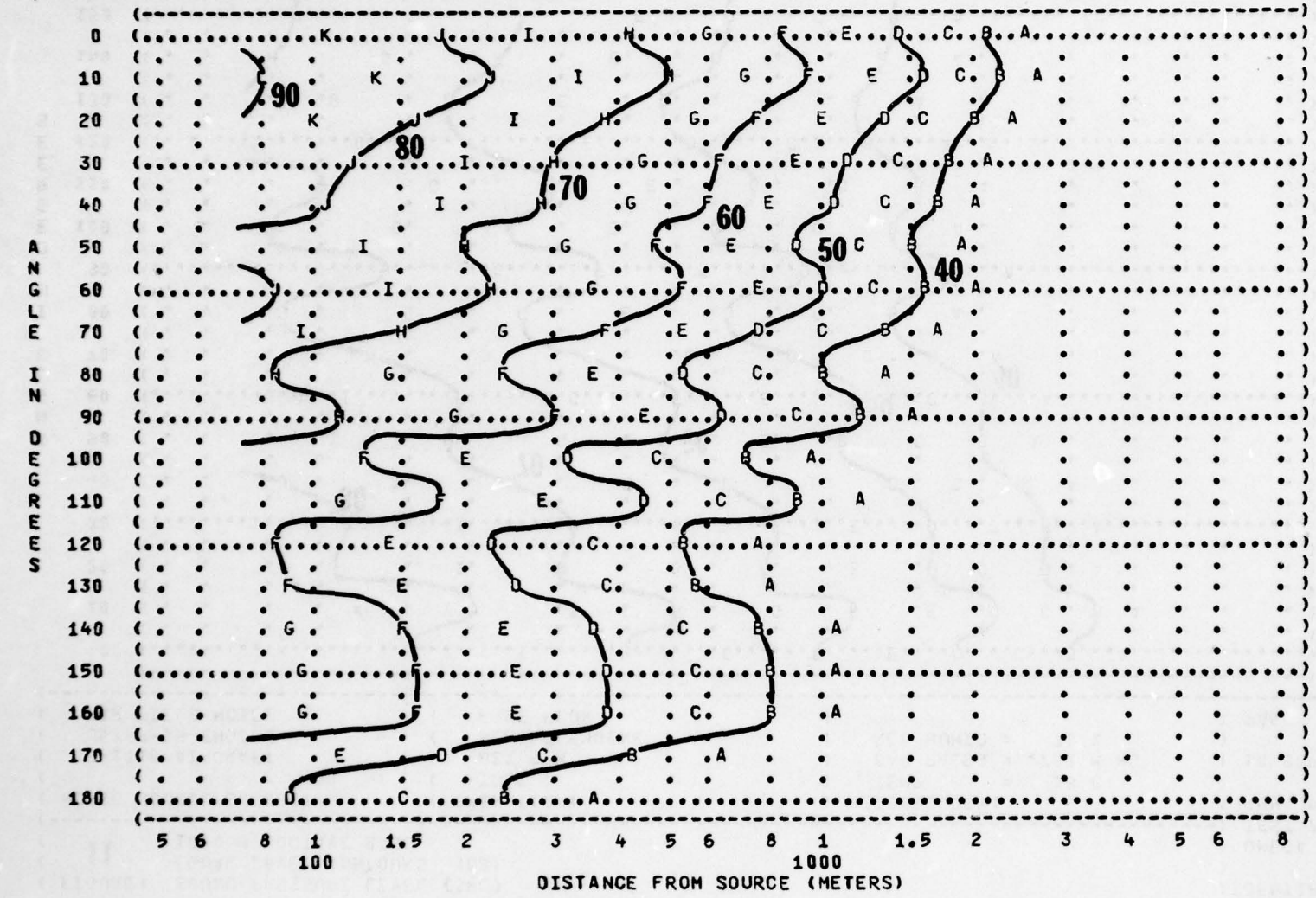
FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

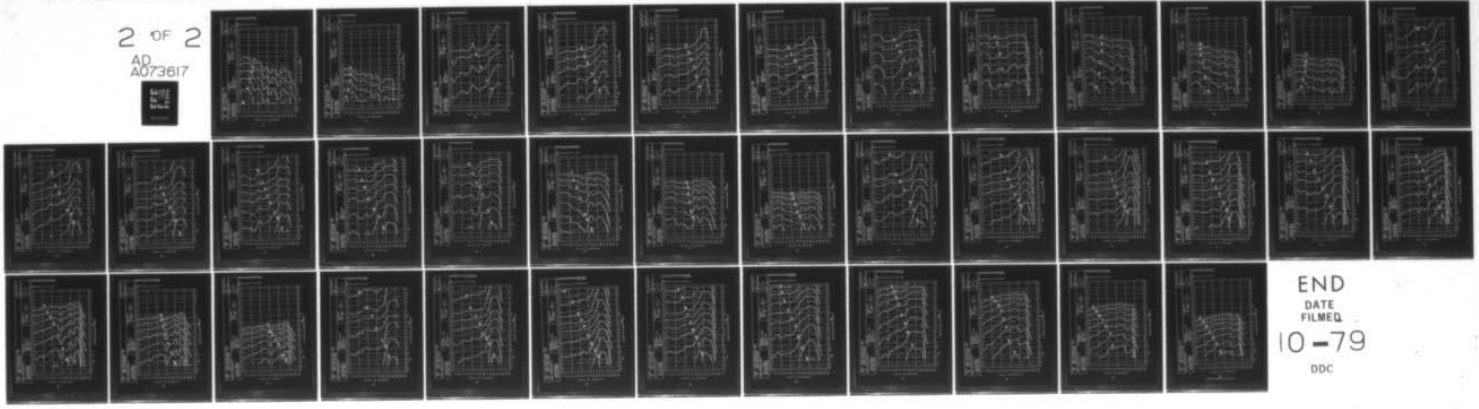
IDENTIFICATION:
OMEGA 1.4
TEST 78-011-0C
RUN 01
18 SEP 78
PAGE 24



AD-A073 617 AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OH F/G 1/3
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 137. F-101B A--ETC(U)
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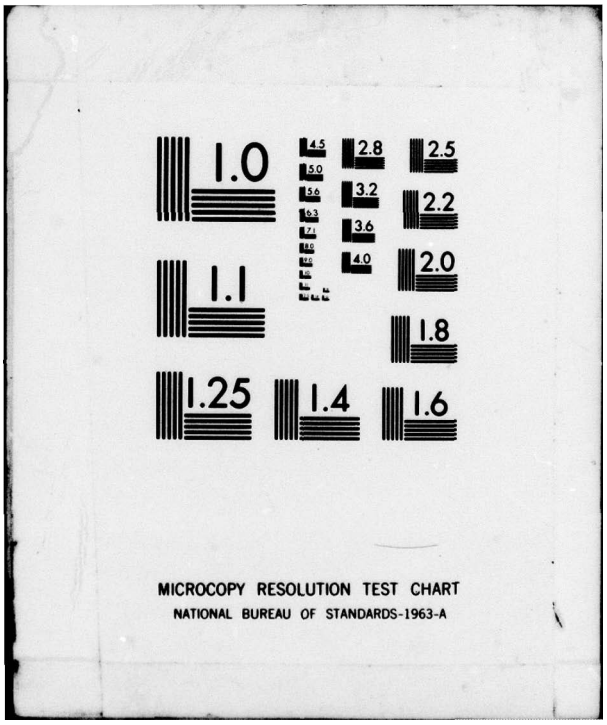

1.0
4.5
5.0
5.6
6.3
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.8
1.1
1.25
1.4
1.6
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

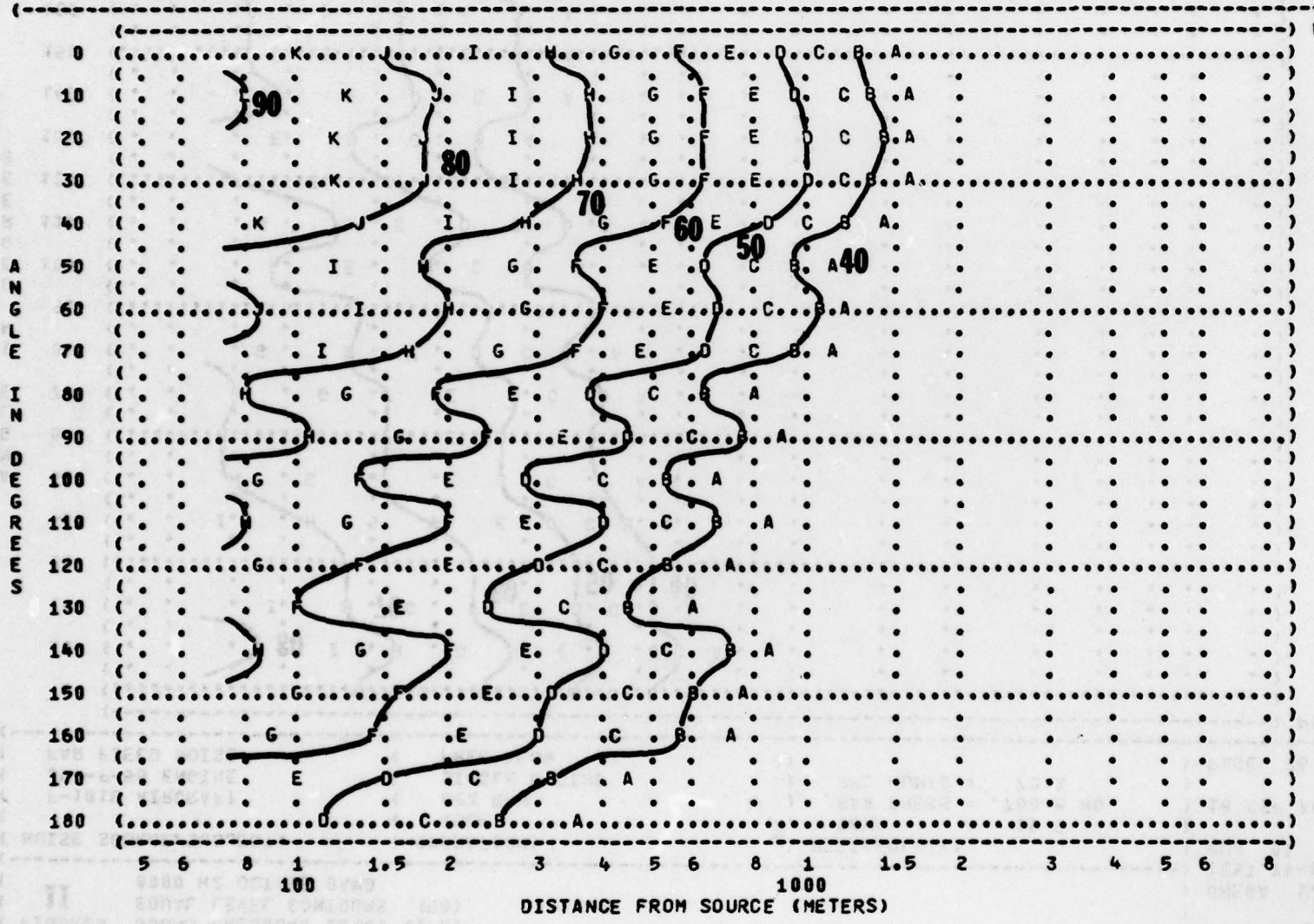
FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 25

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

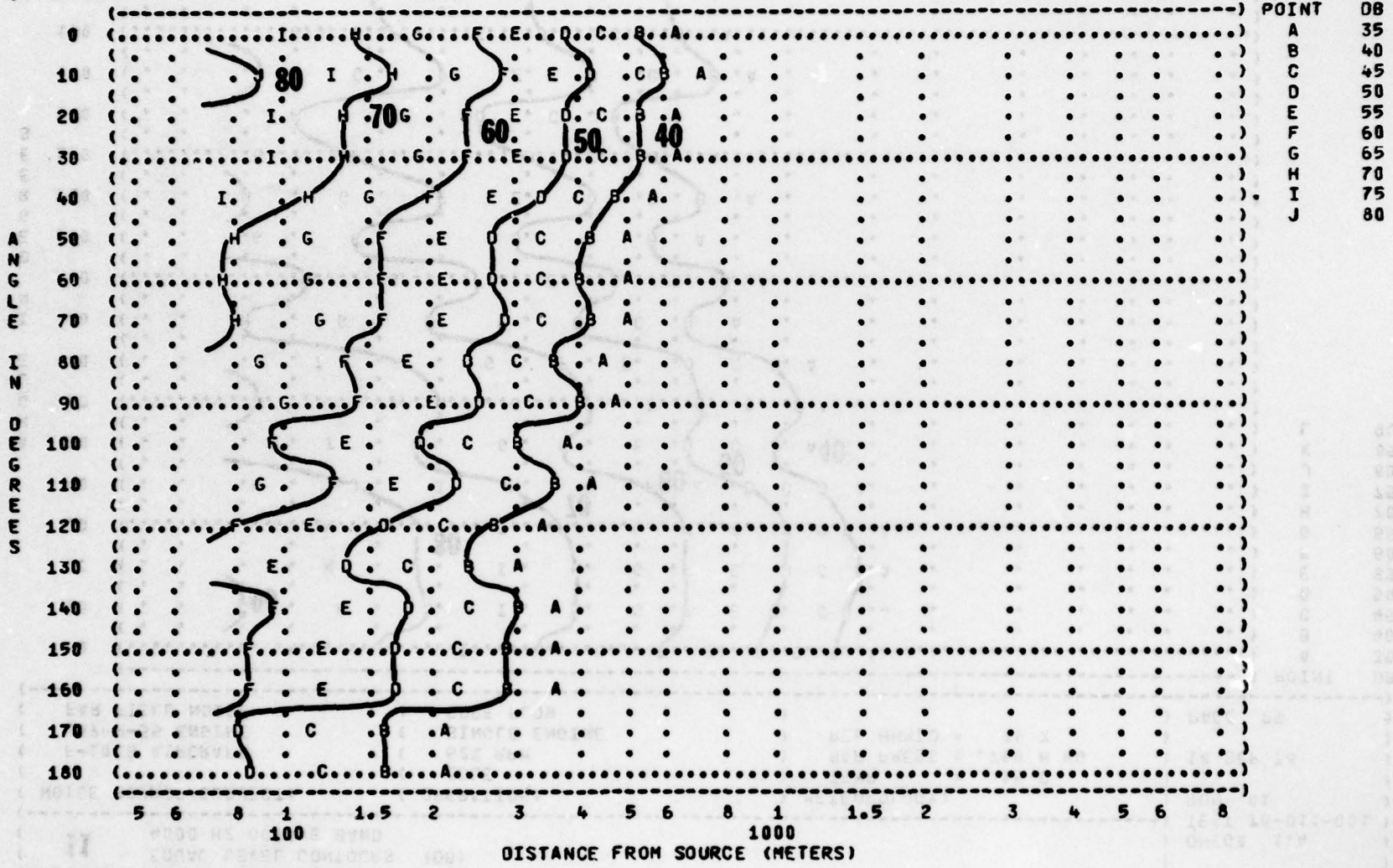
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
62% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 01
18 SEP 78
PAGE 26



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

FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 18

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

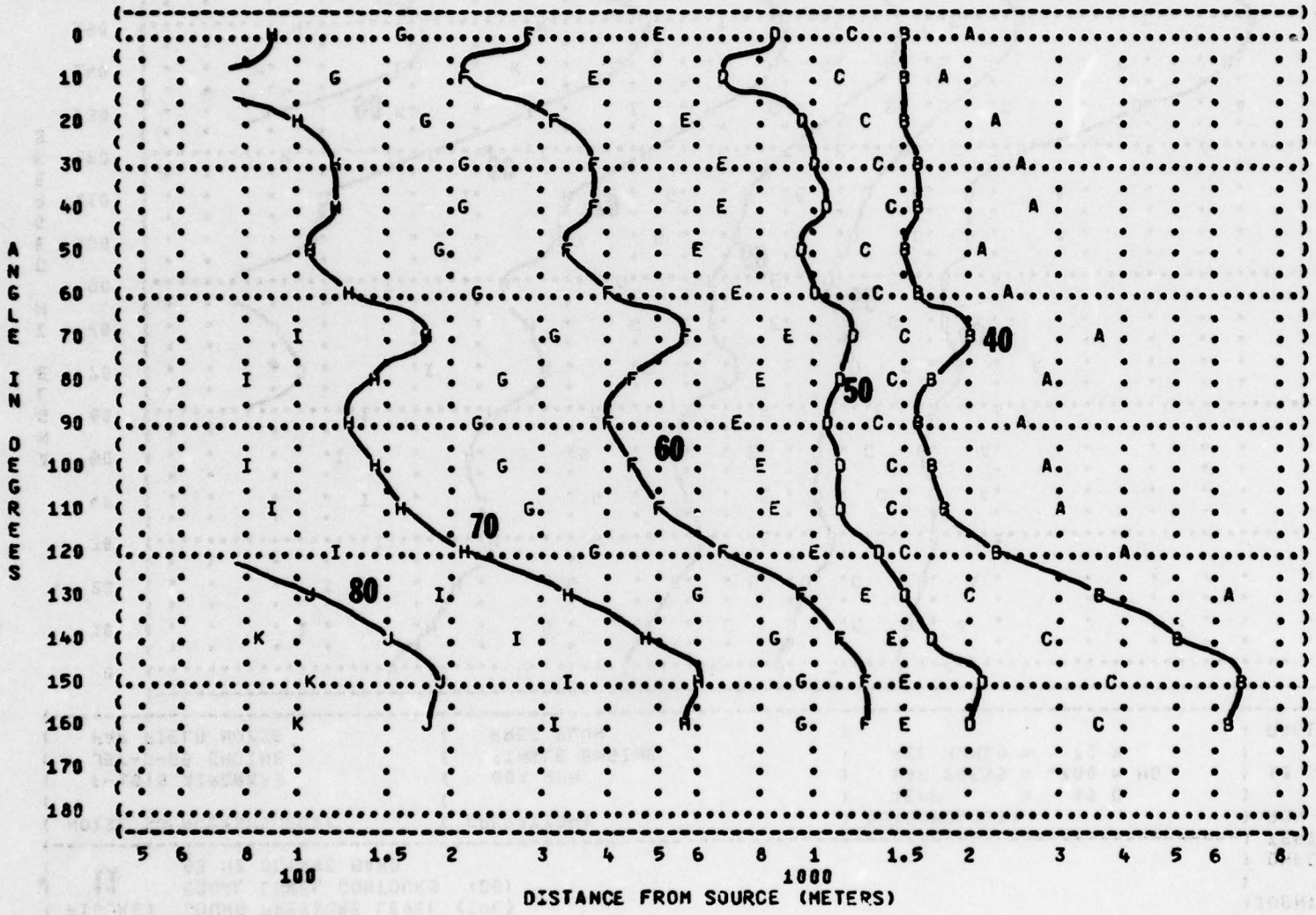


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-811-881
RUN 02
18 SEP 78
PAGE 19

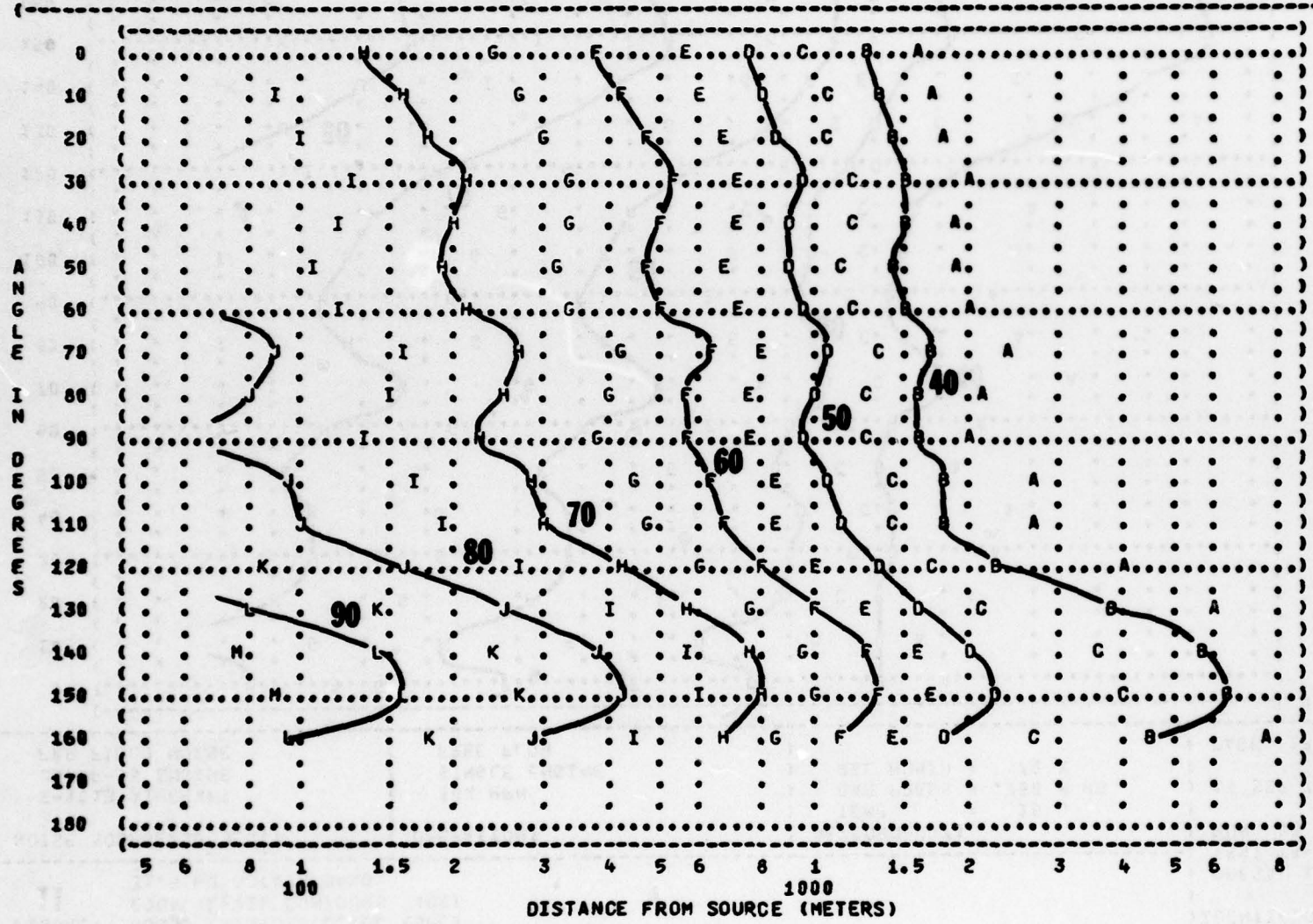


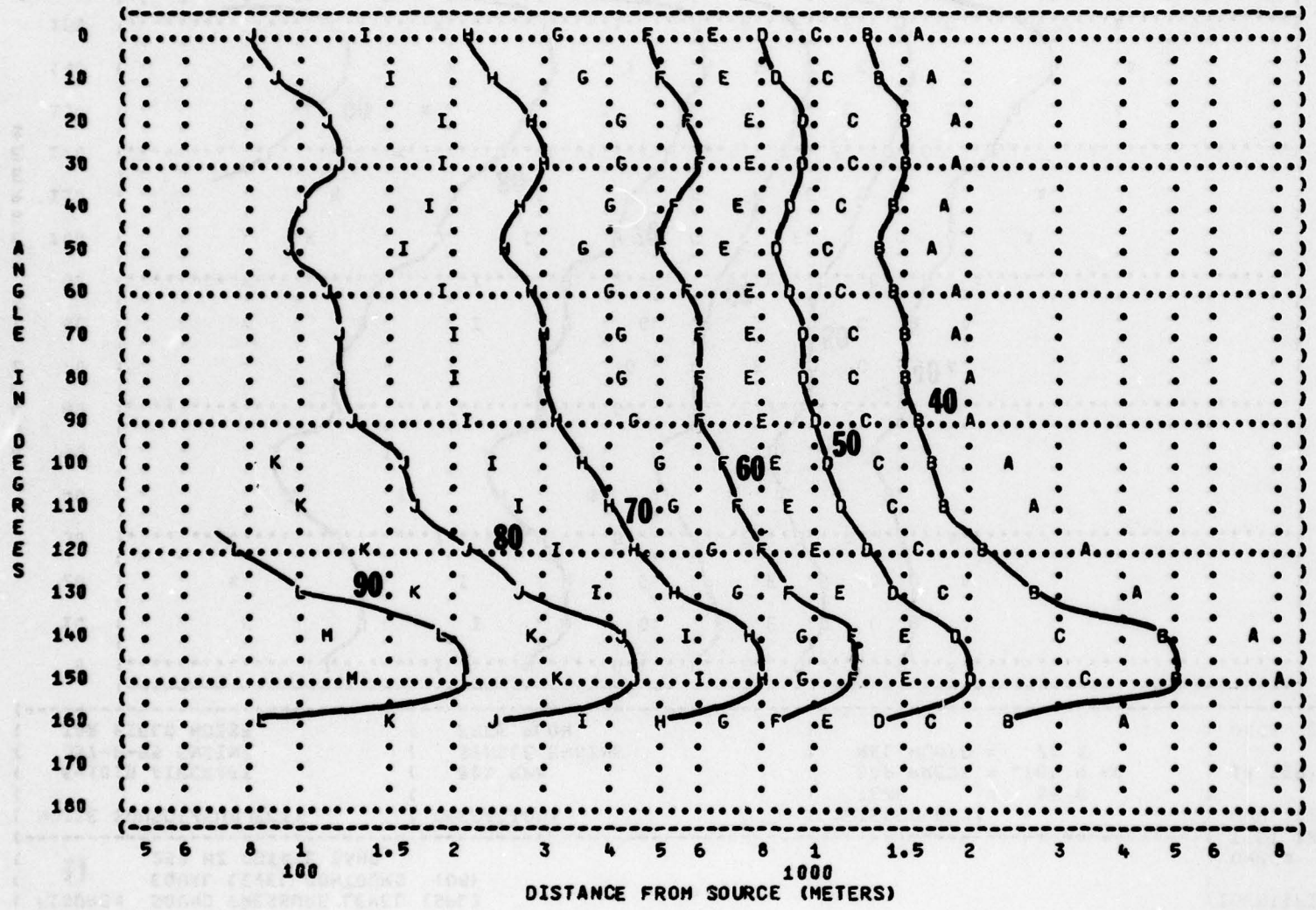
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 78-011-001 RUN 02 18 SEP 78 PAGE 20

NOISE SOURCE/SUBJECT: F-101B AIRCRAFT J57-P-55 ENGINE FAR FIELD NOISE

OPERATION: 80% RPM SINGLE ENGINE FREE FLOW

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: 11

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

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
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

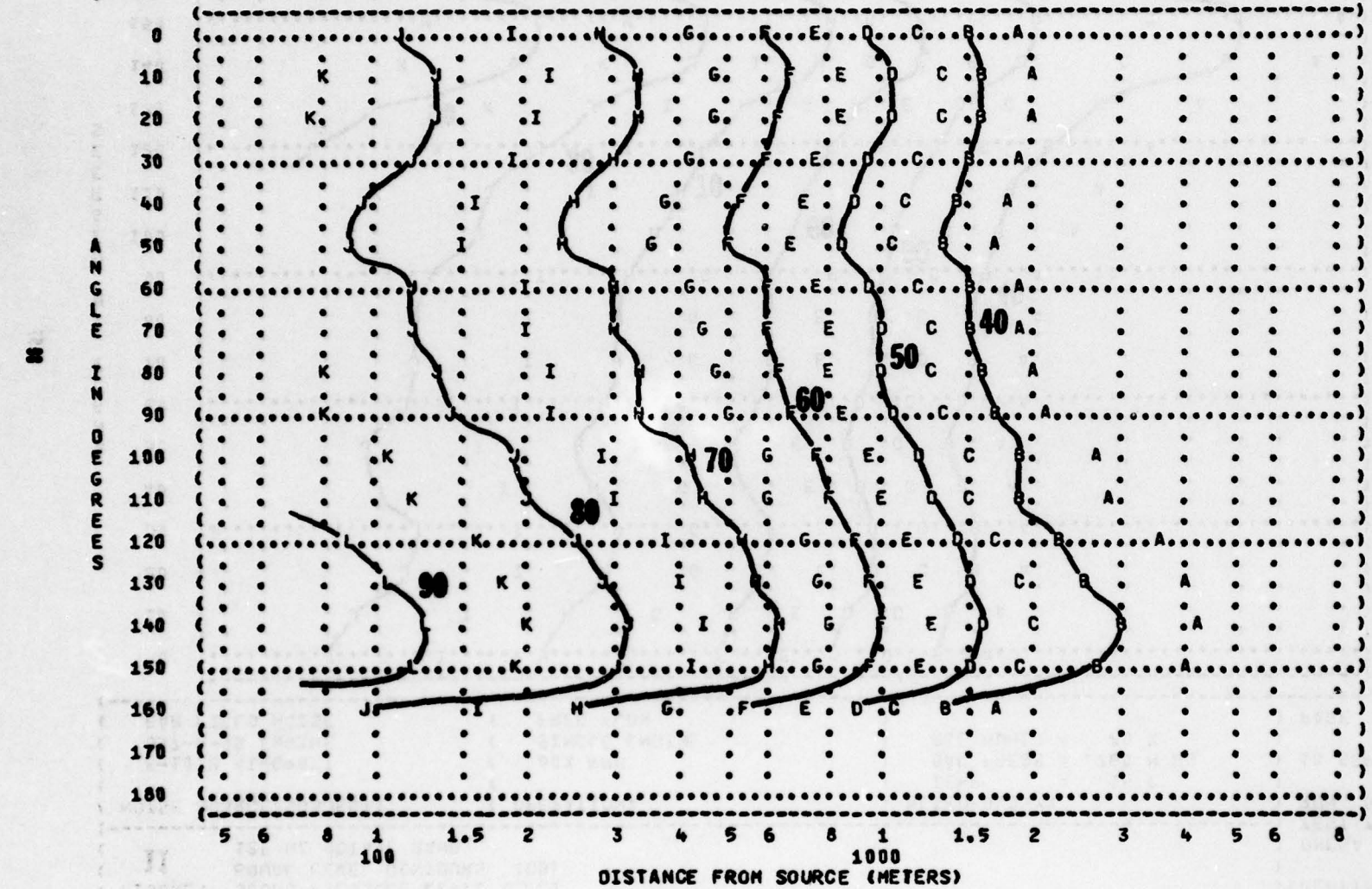


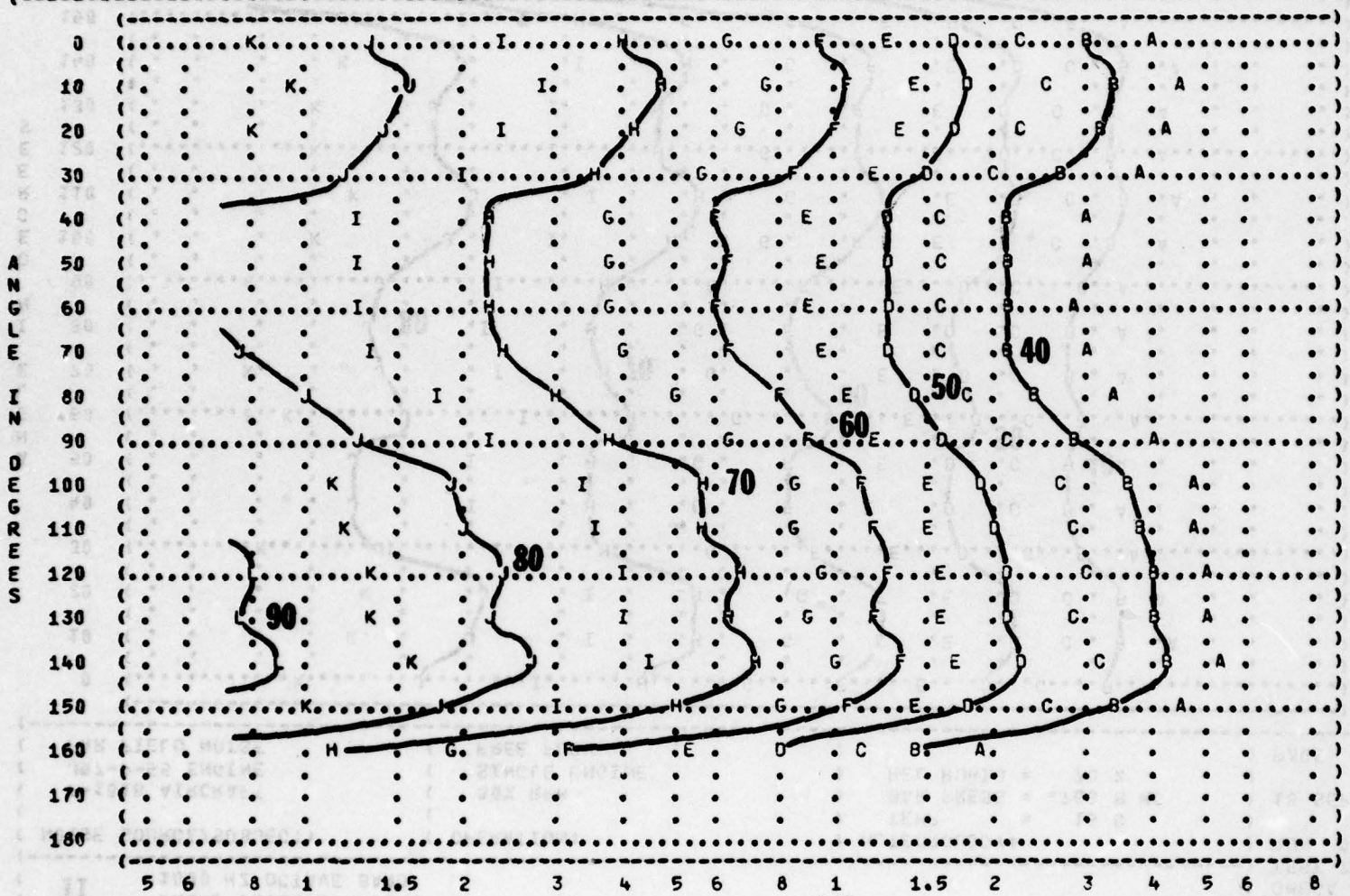
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 22



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

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 23

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

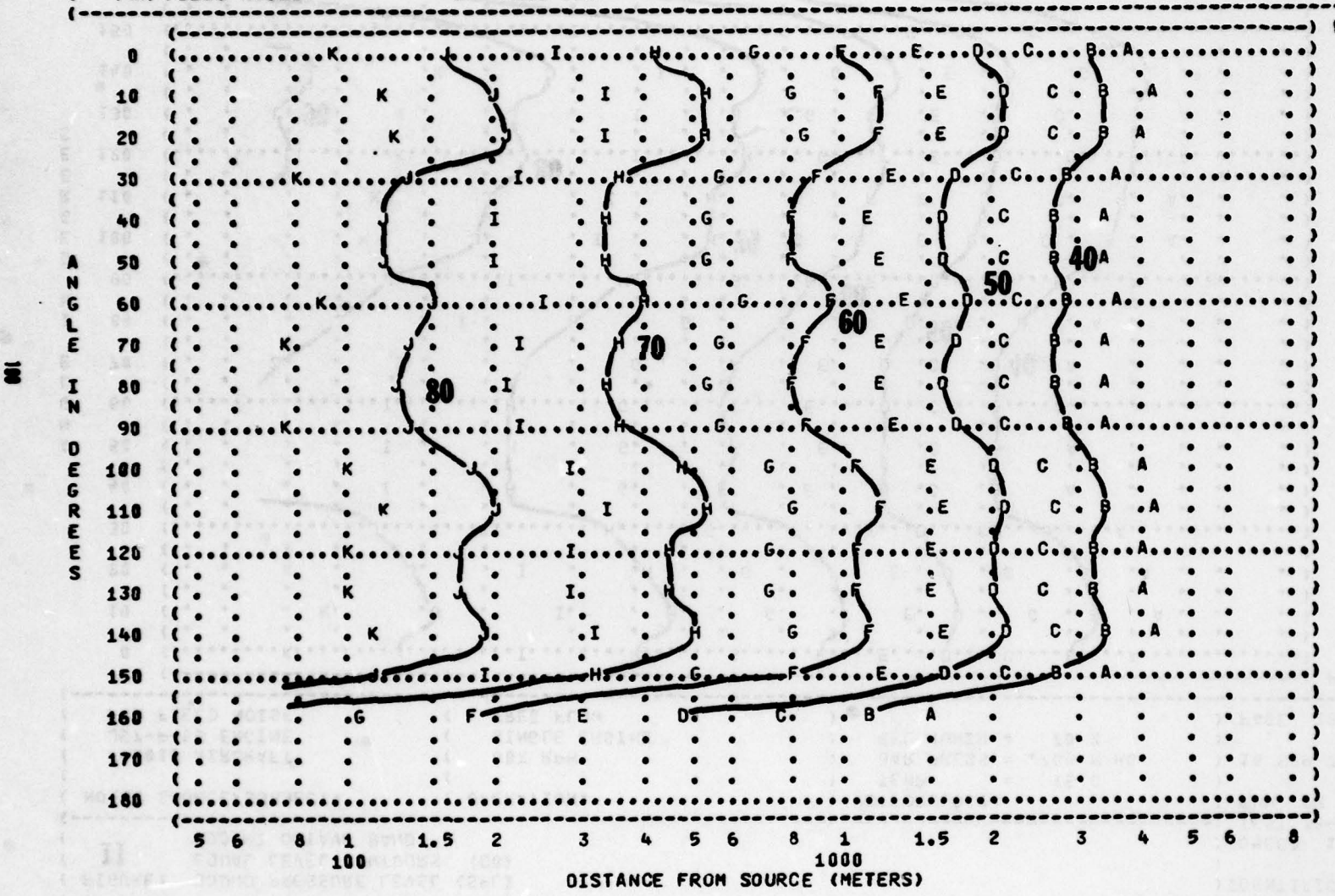


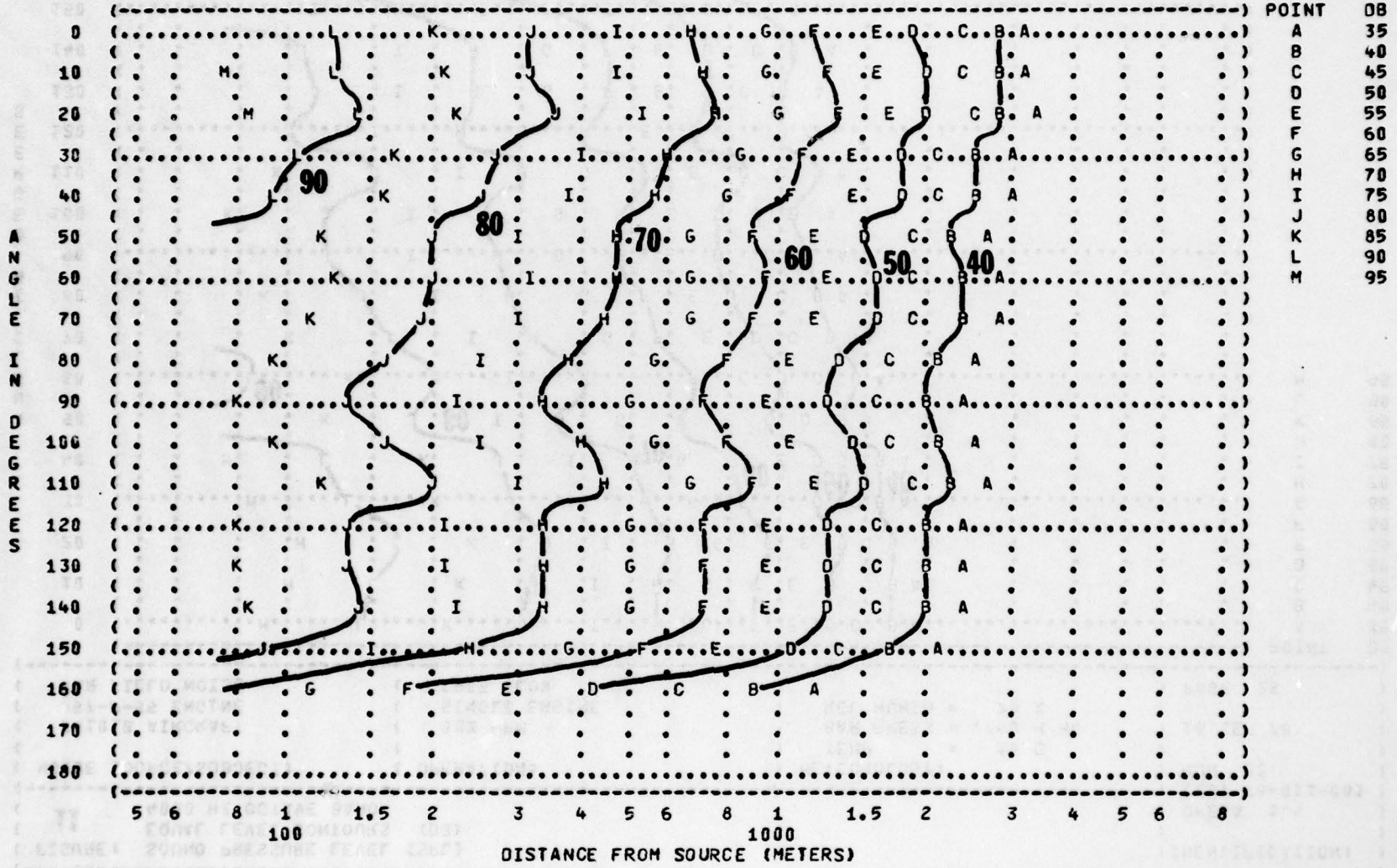
FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 24

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

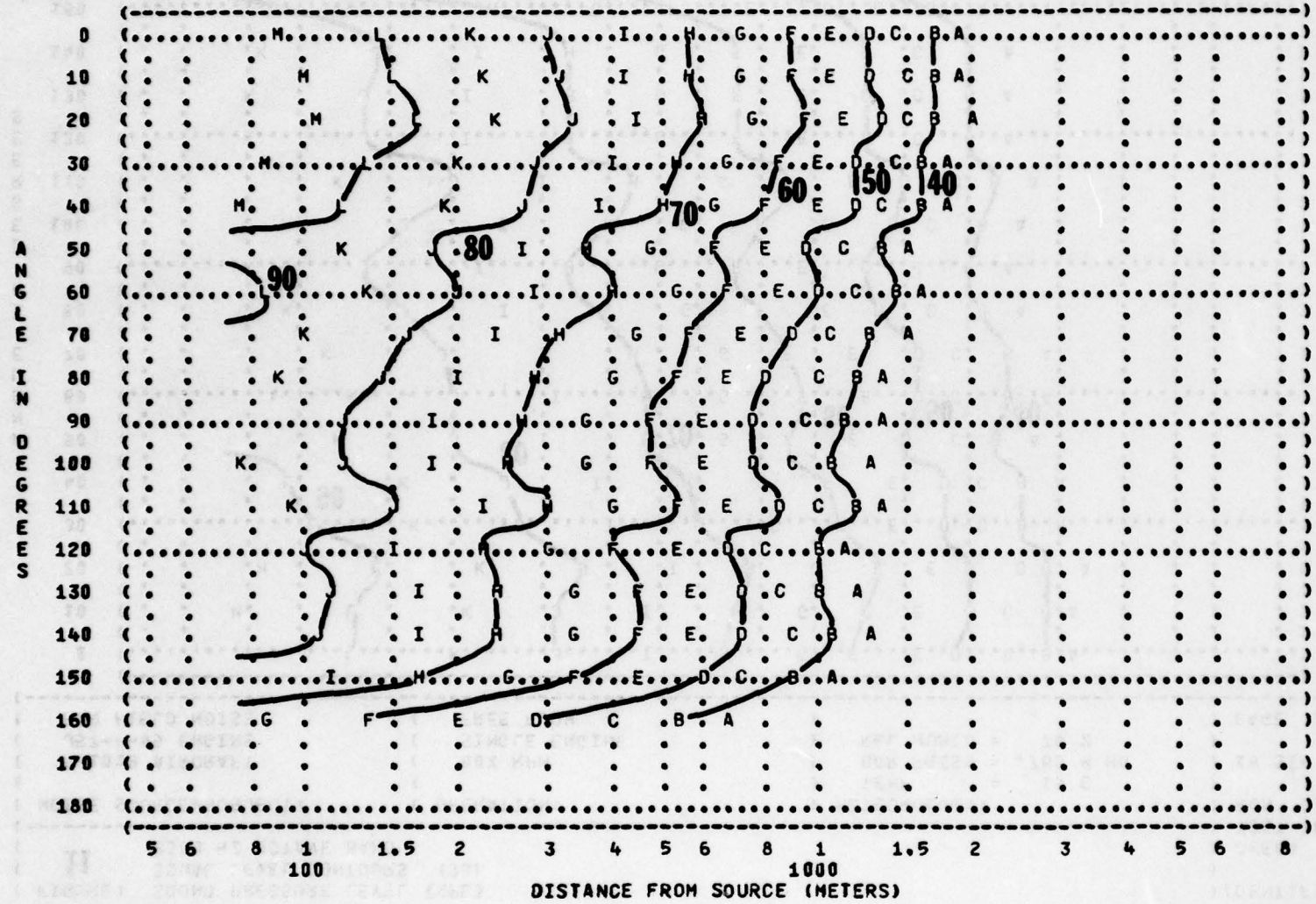
FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 25

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

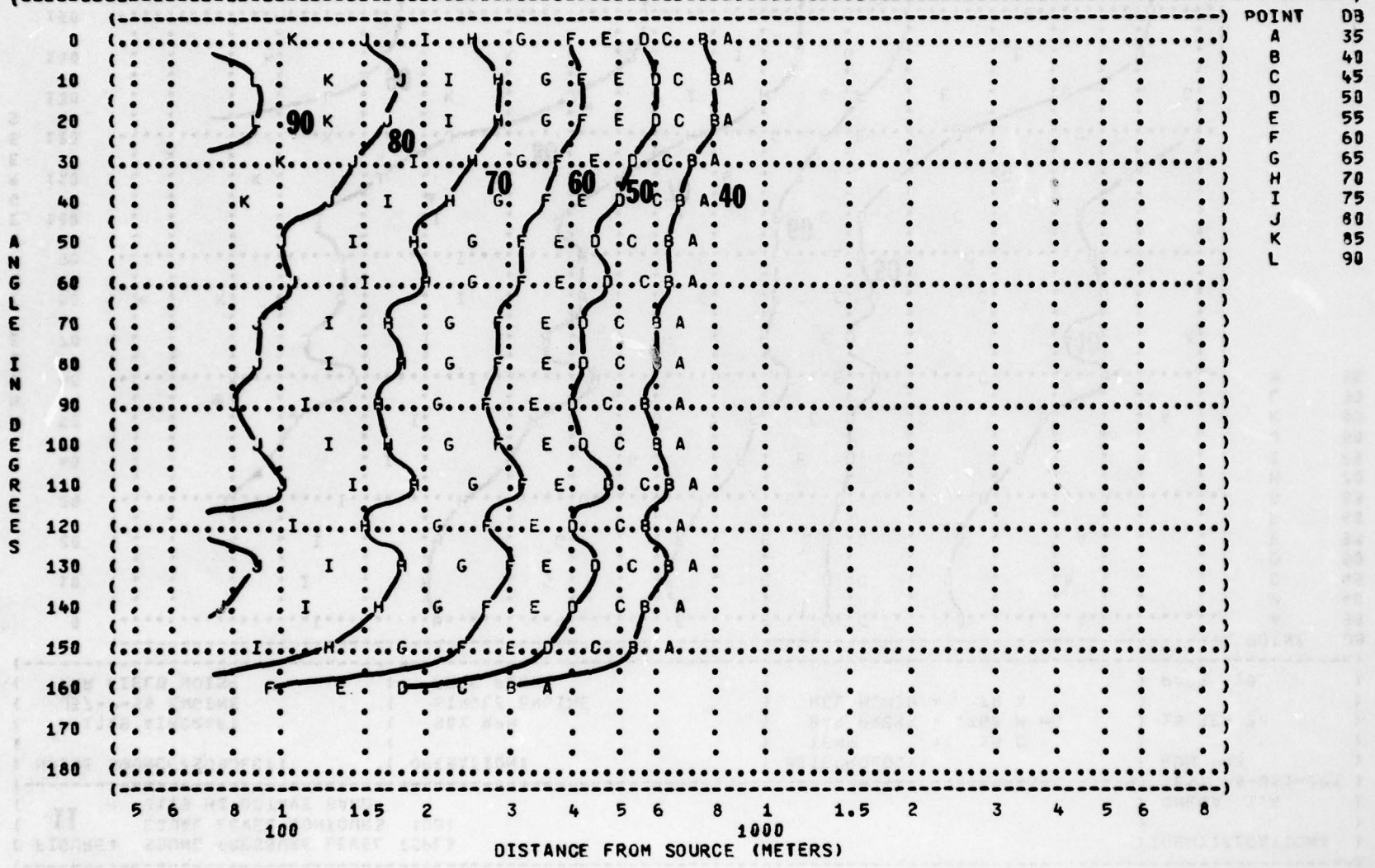
FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 02
18 SEP 78
PAGE 26

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
SINGLE ENGINE
FREE FLOW

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

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 18

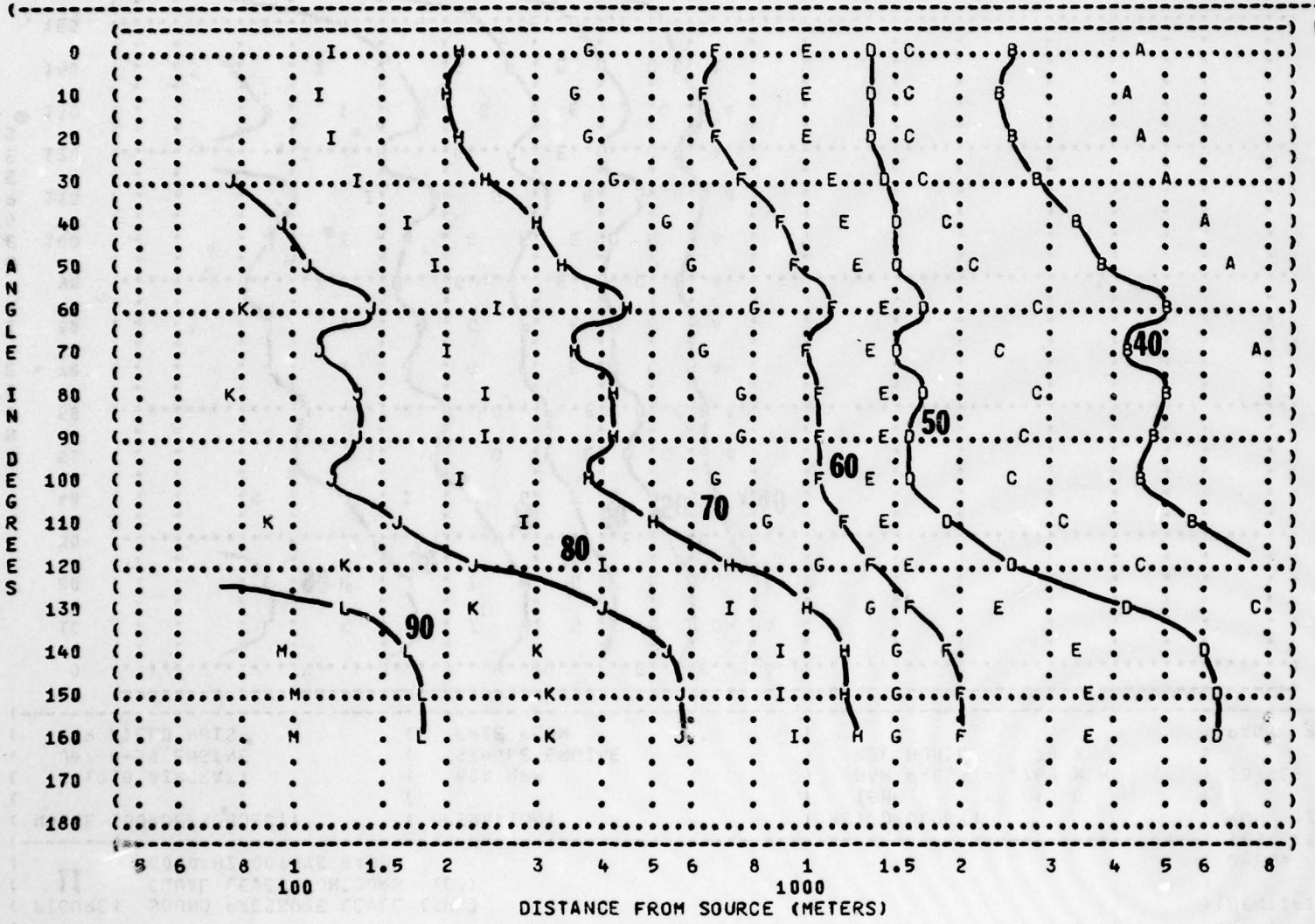


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 19

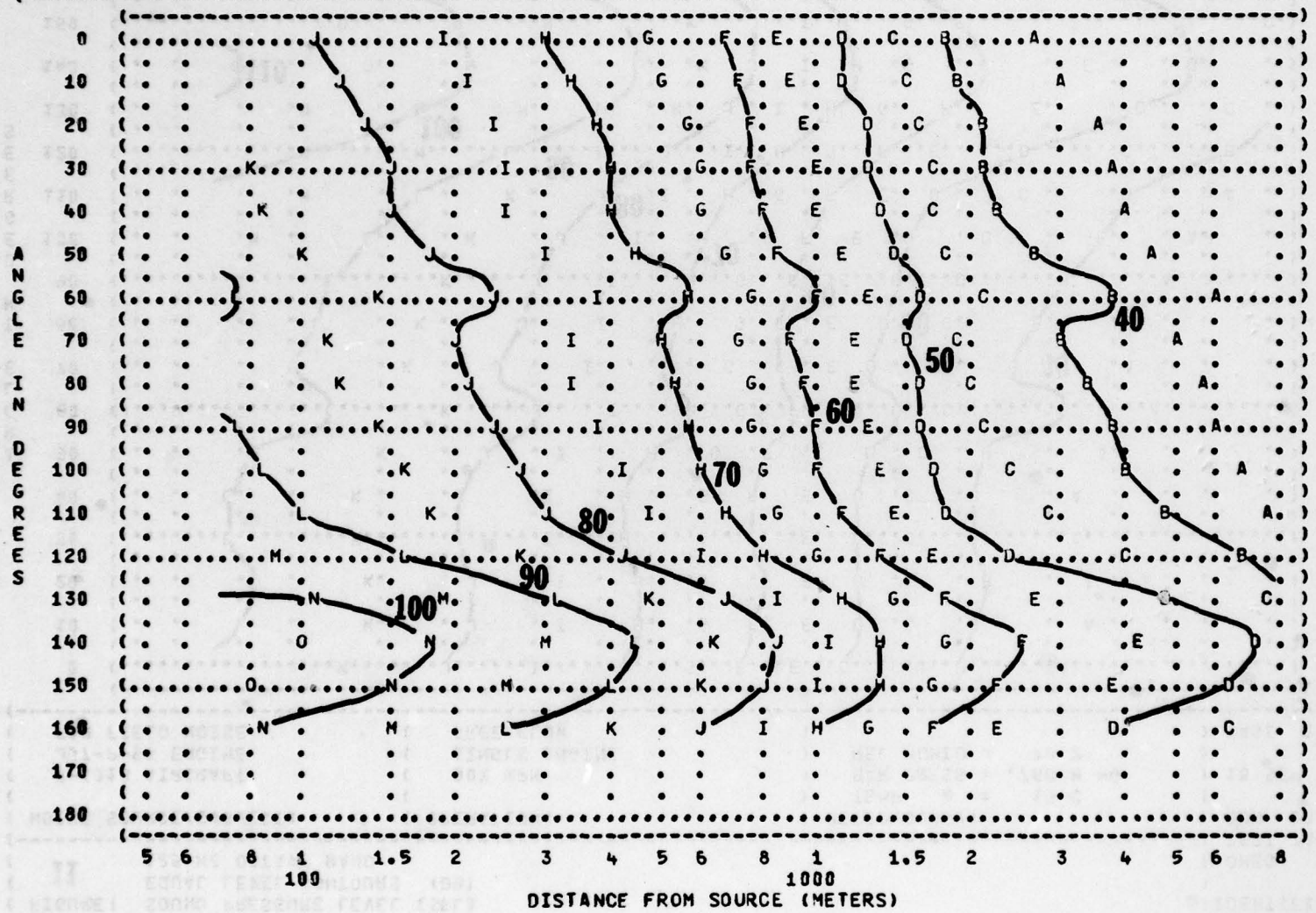


FIGURE: 11

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

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
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
M	95
N	100
O	105
P	110

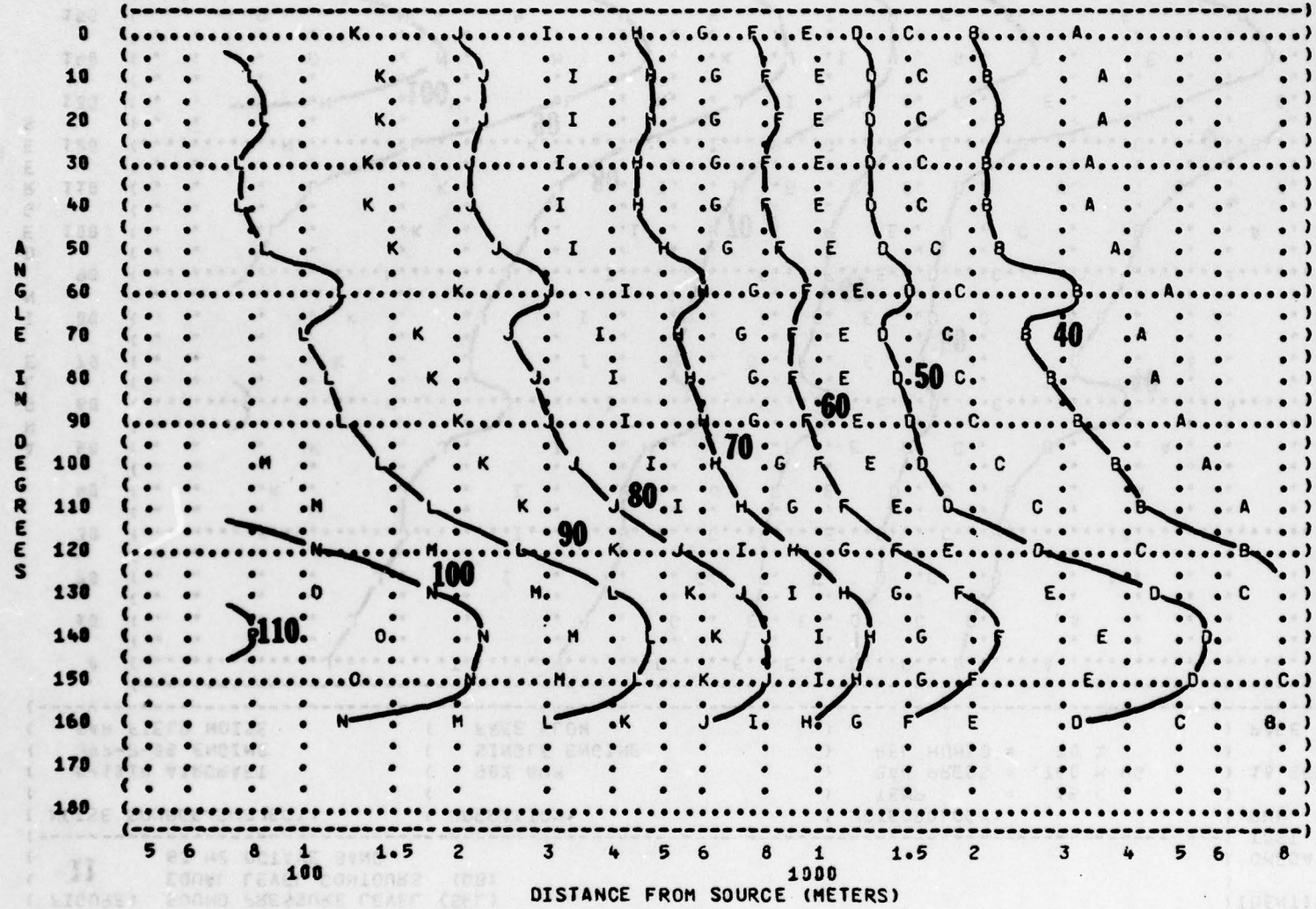


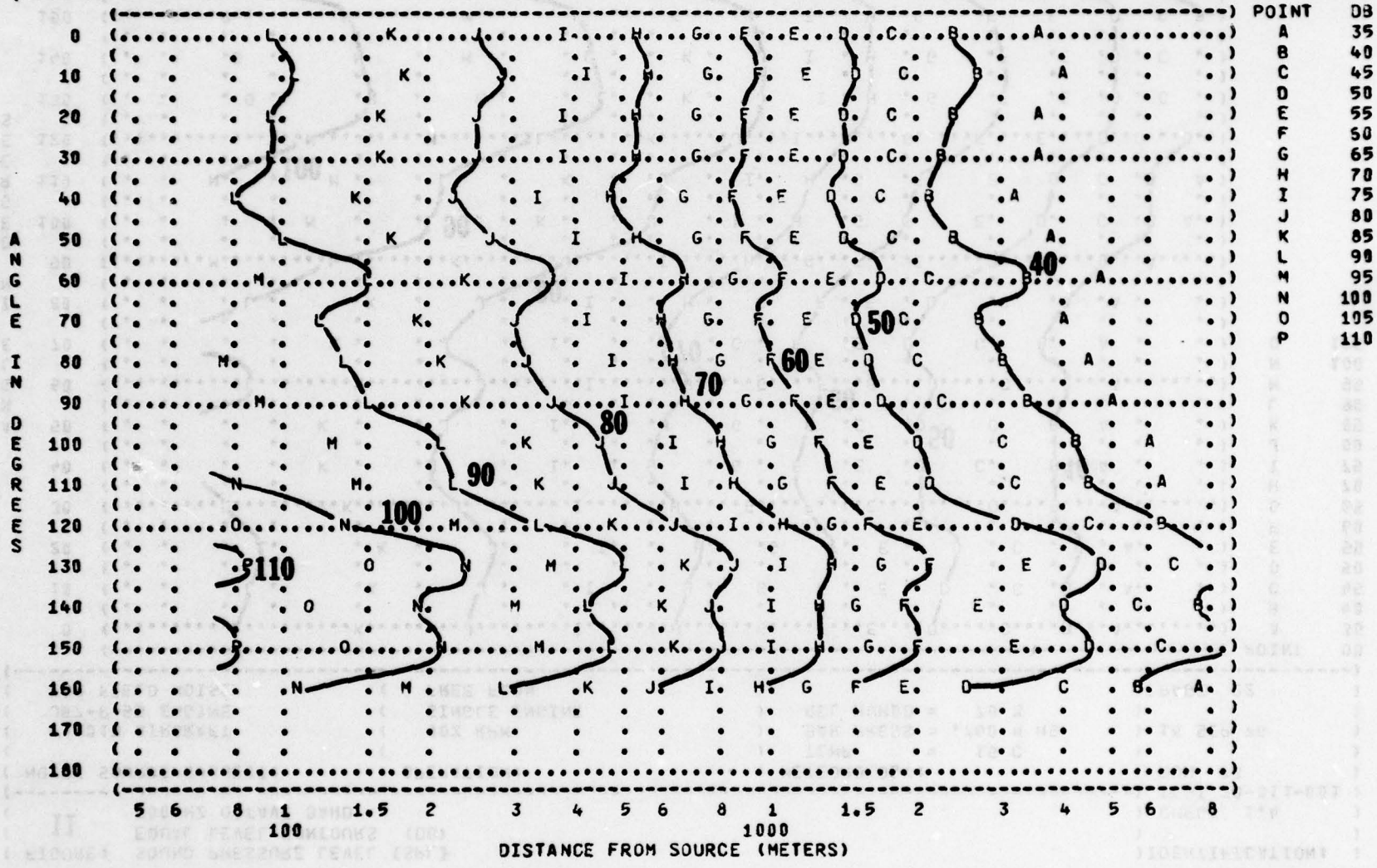
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 21

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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
N	100
O	105
P	110

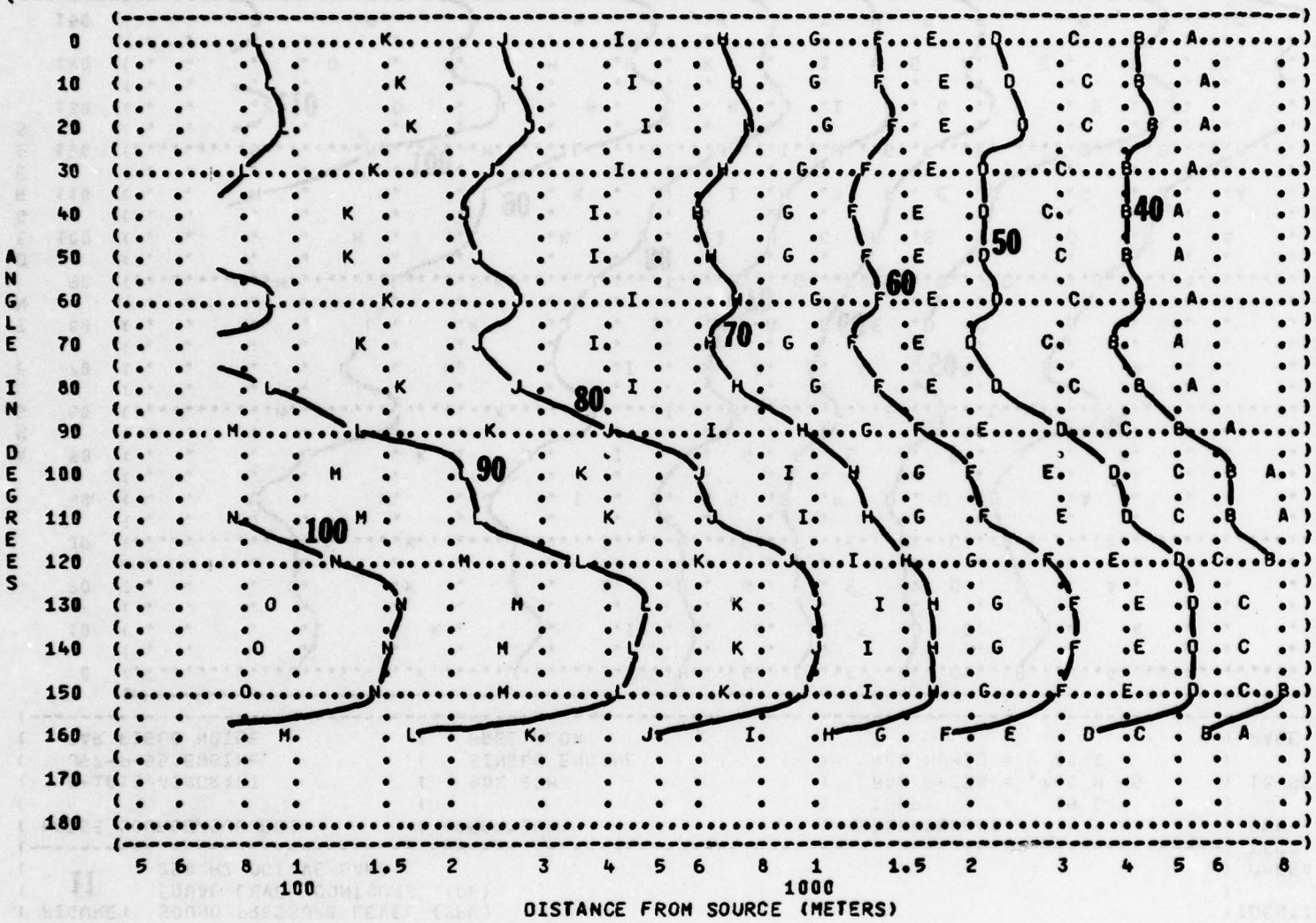
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 22



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
N	100
O	105

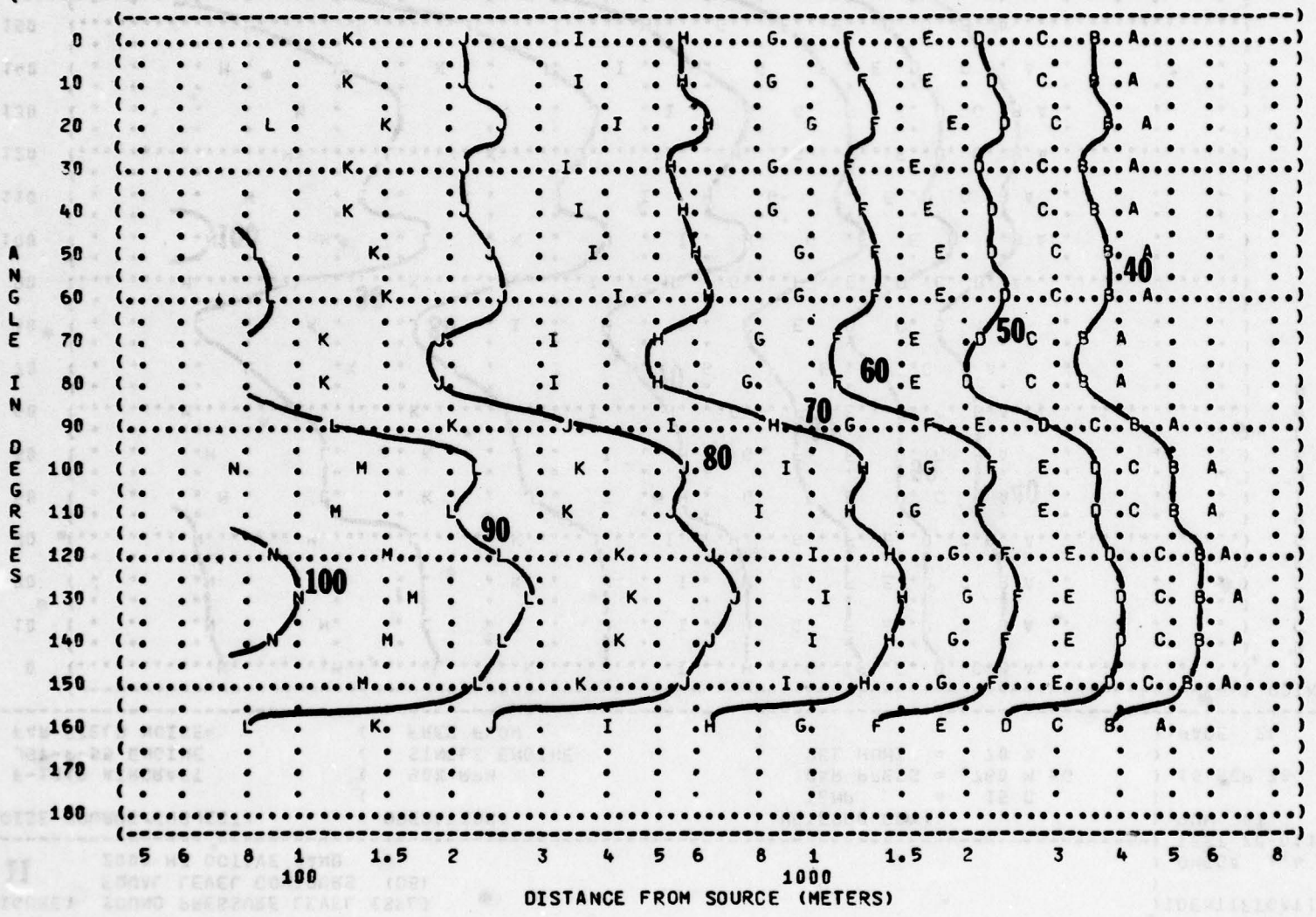
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
24 JAN 79
PAGE 23



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
N	100

FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
PAGE 24

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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
N	100

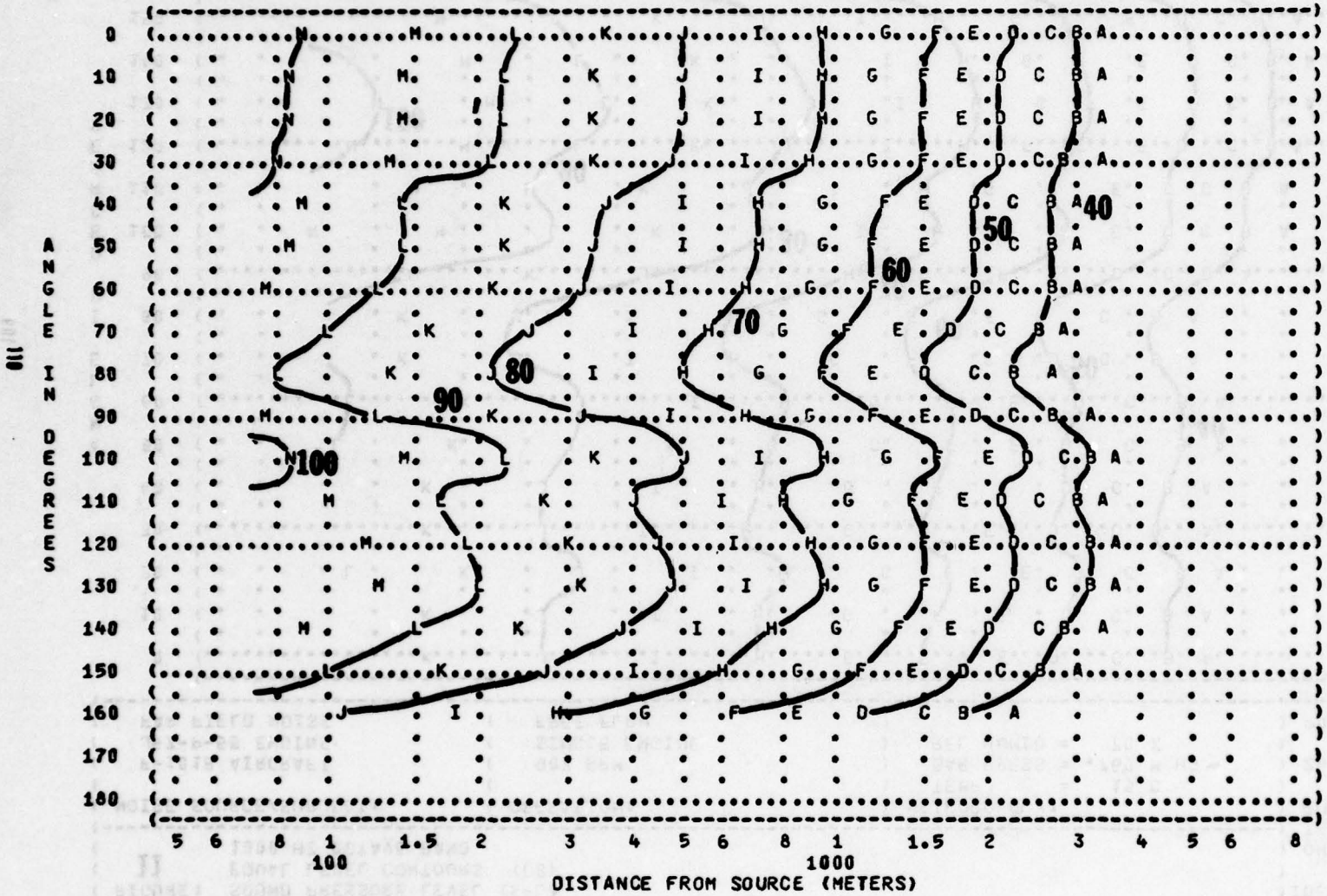


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
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
M	95

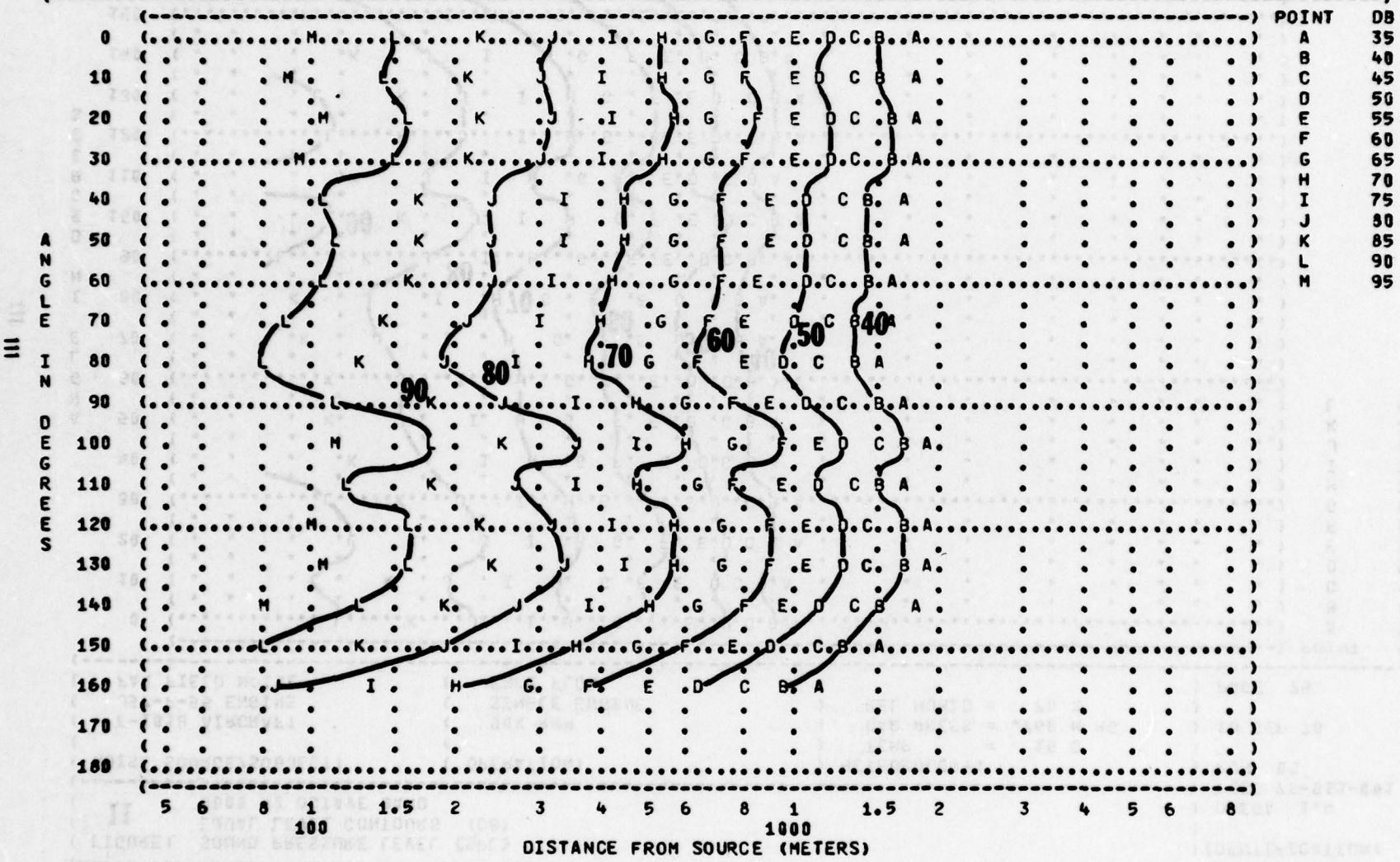


FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
90% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 03
18 SEP 78
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
L	90

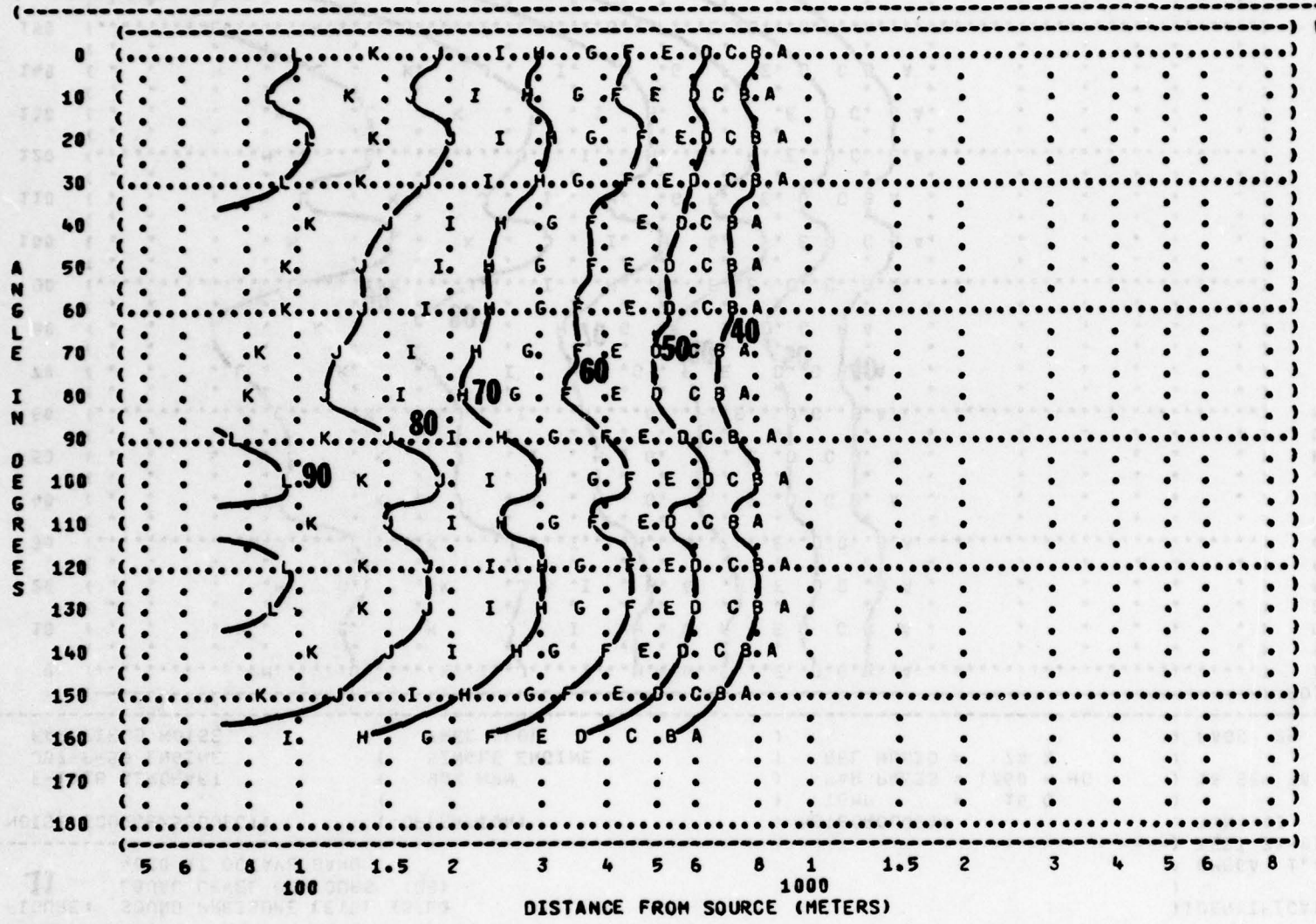


FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
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
J	80
K	85
L	90
M	95
N	100

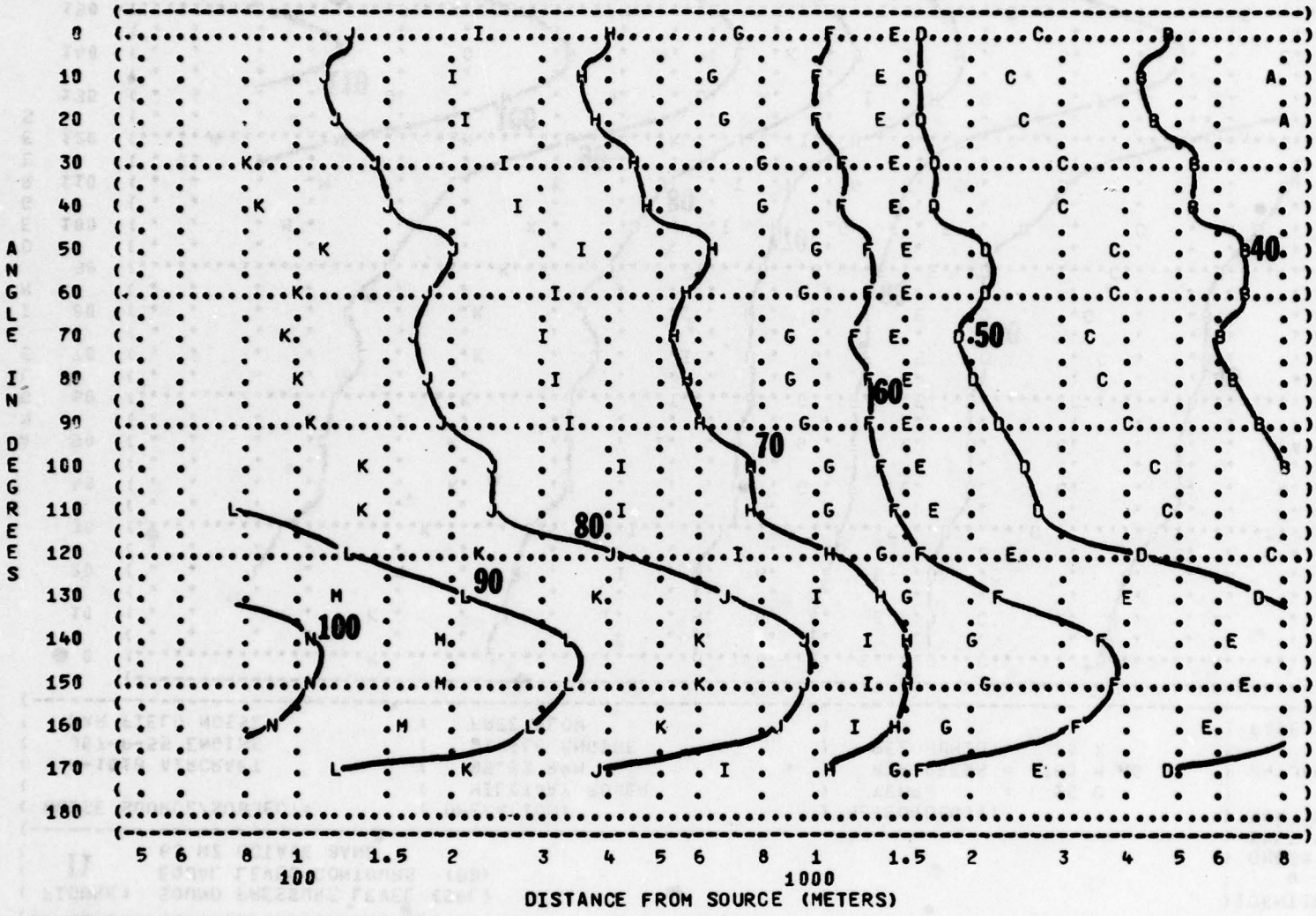


FIGURE: 11

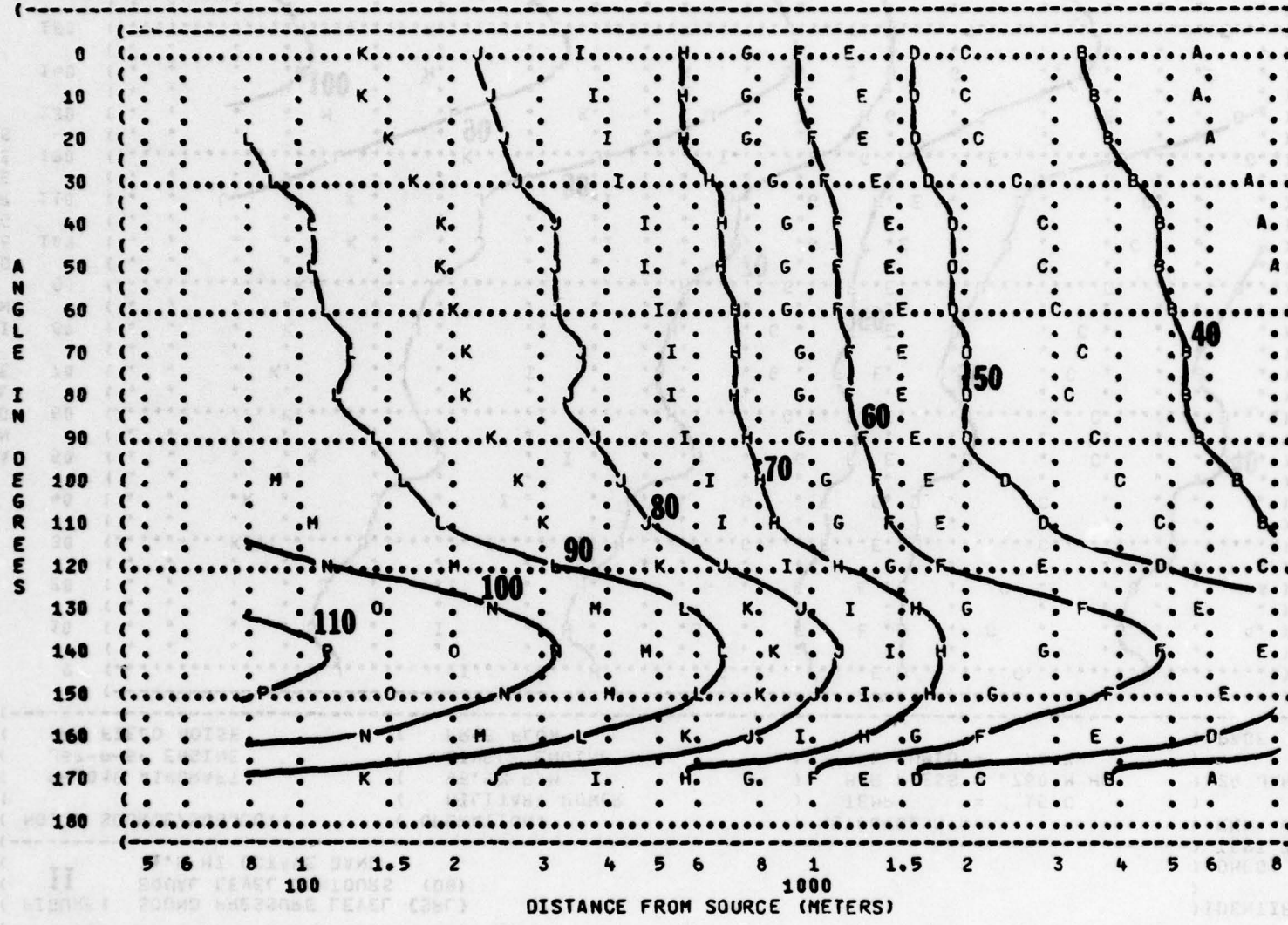
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
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
M	95
N	100
O	105
P	110

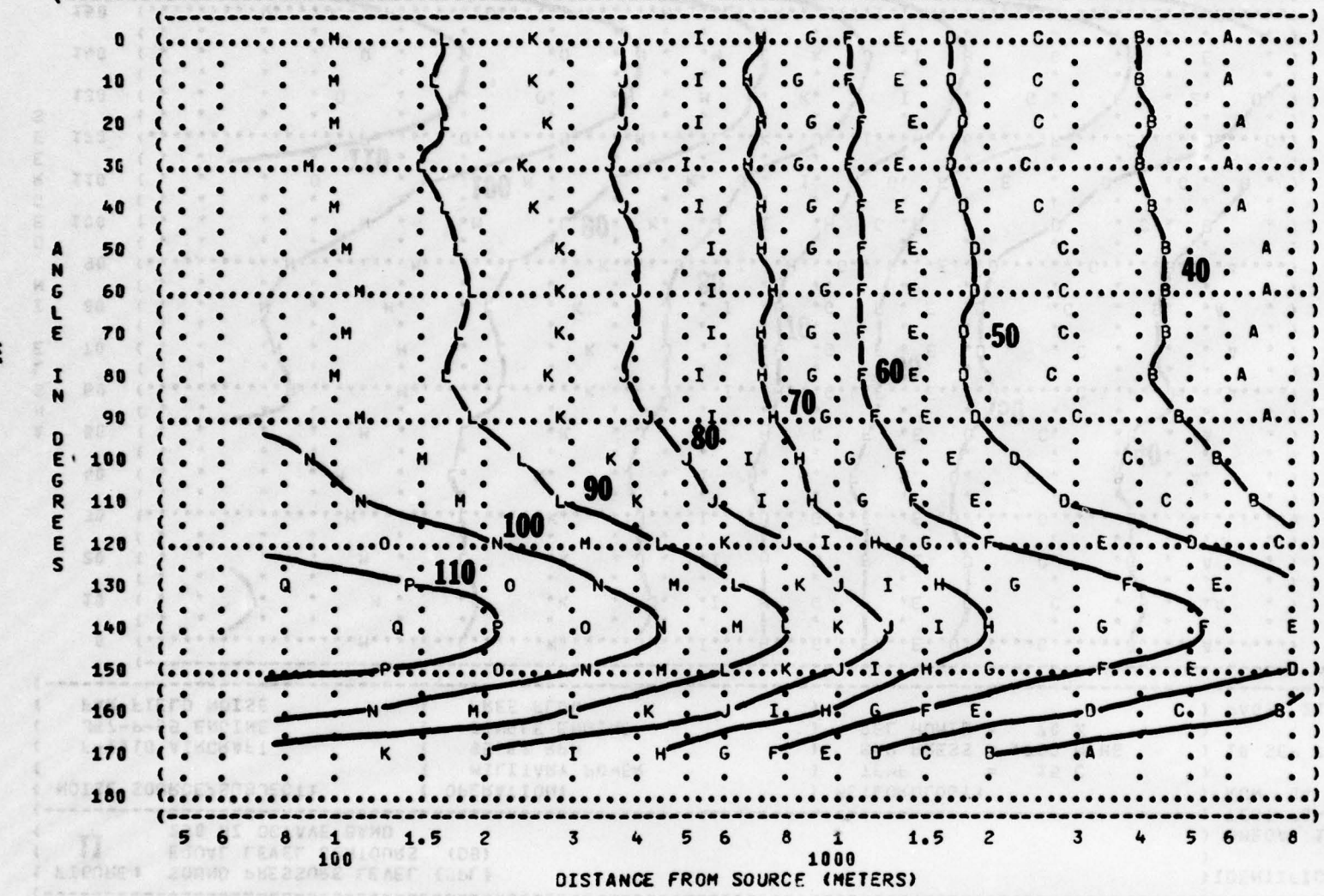
FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
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
M	95
N	100
O	105
P	110
Q	115

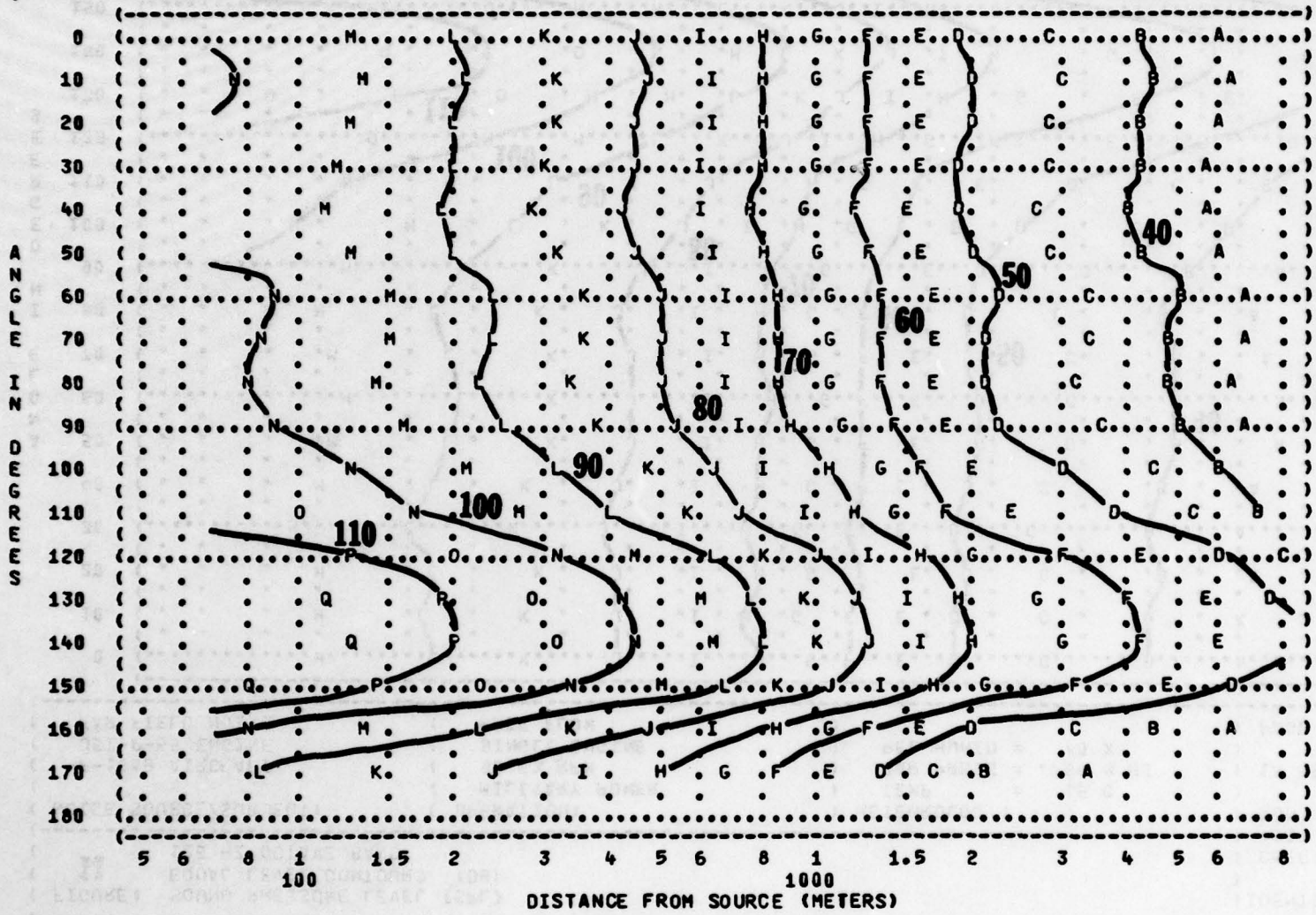
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
16 SEP 78
PAGE 21



POINT	08
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
N	100
O	105
P	110
Q	115

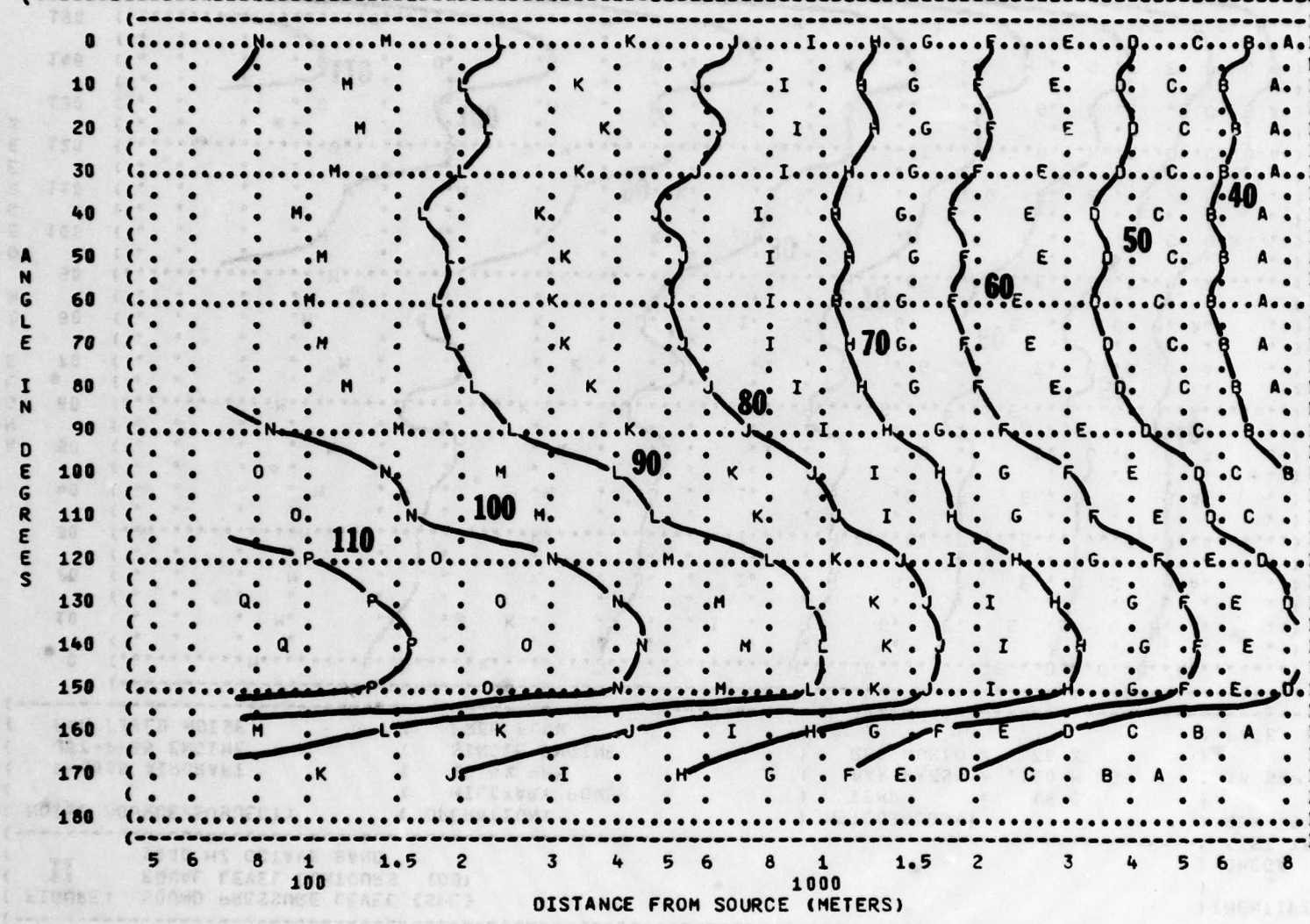
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
PAGE 22

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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
N	100
O	105
P	110
Q	115

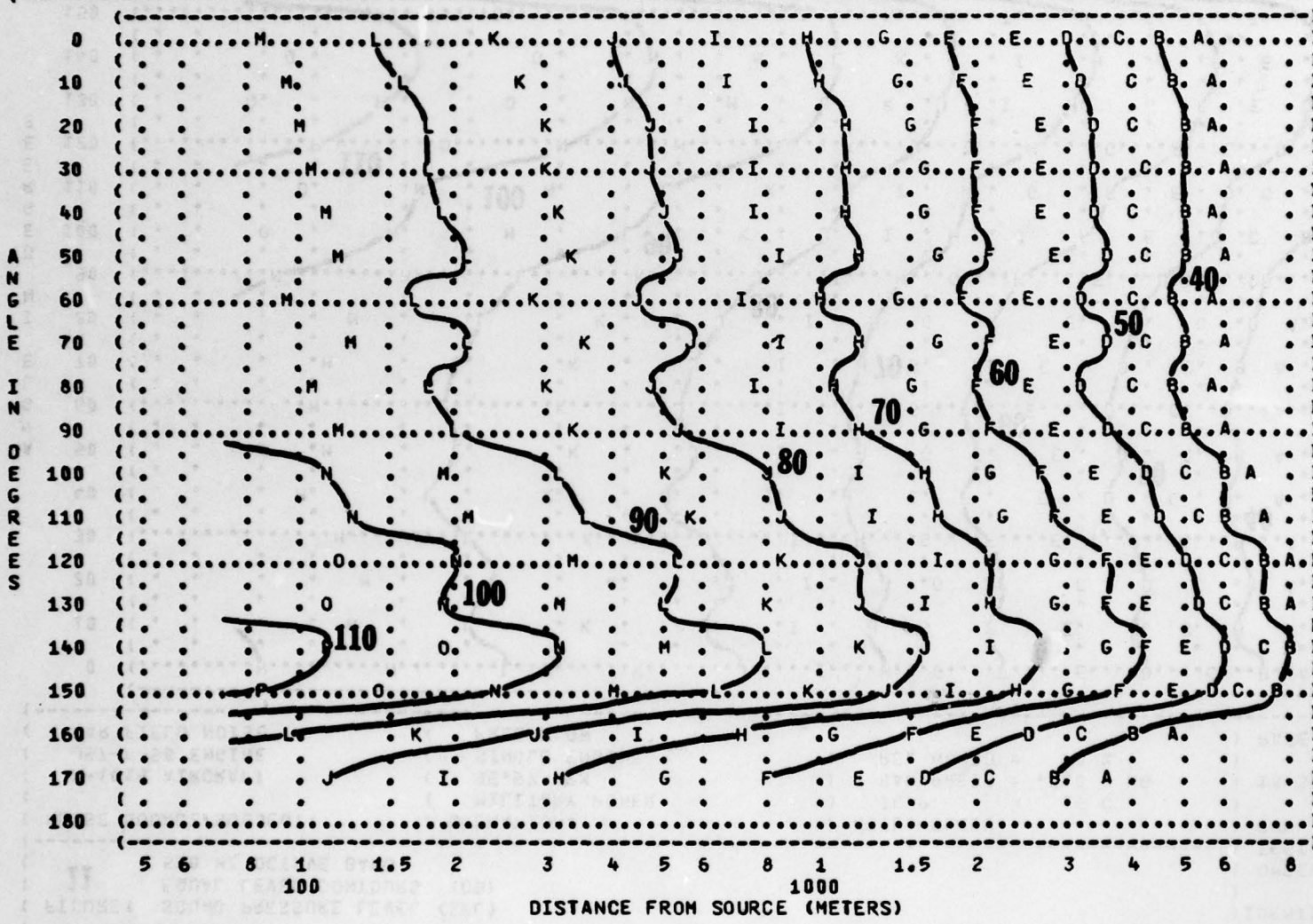
FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
PAGE 23

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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
N	100
O	105
P	110

FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04

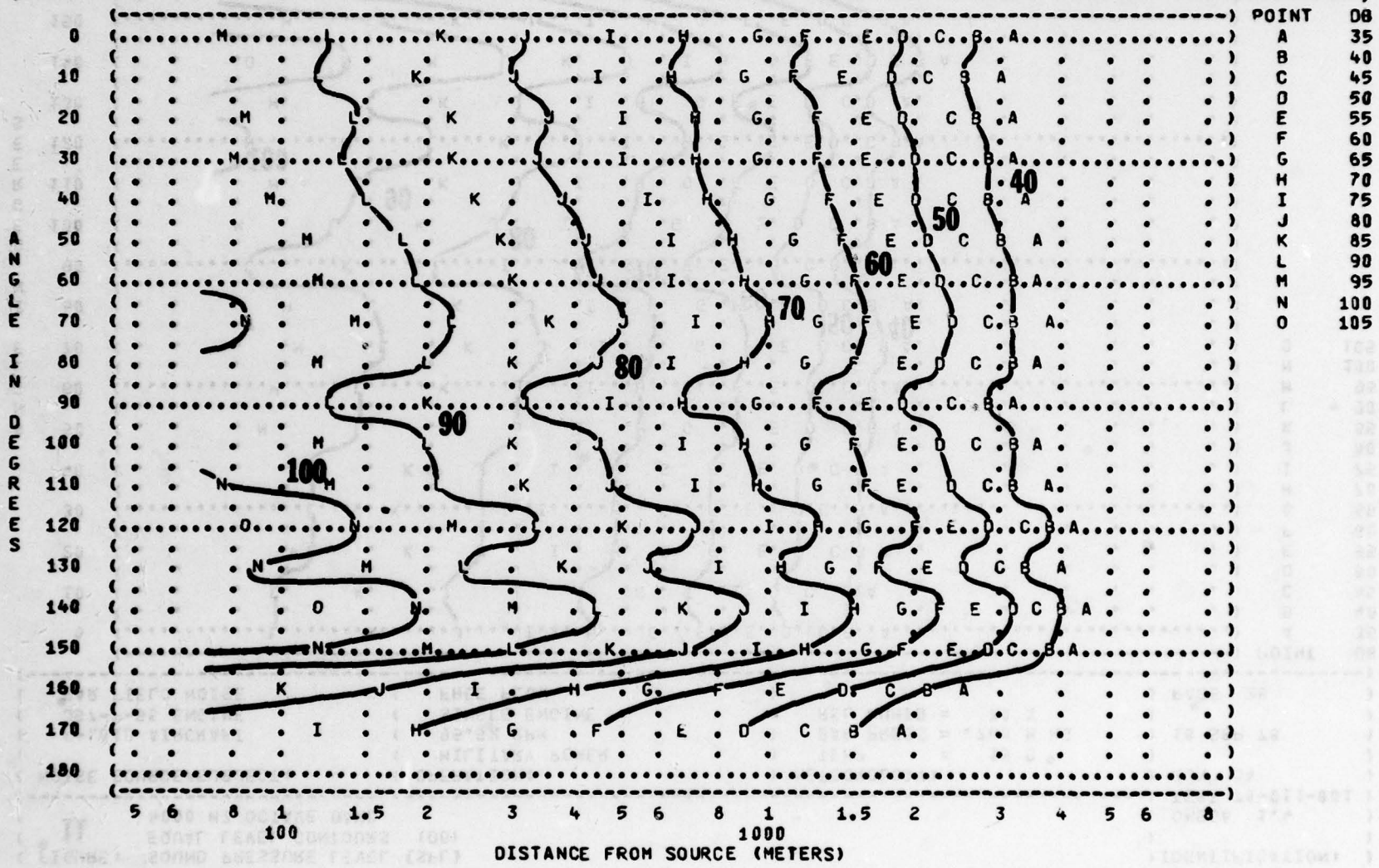
18 SEP 78

PAGE 24

NOISE SOURCE/SUBJECT:
F-1018 AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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
N	100
O	105

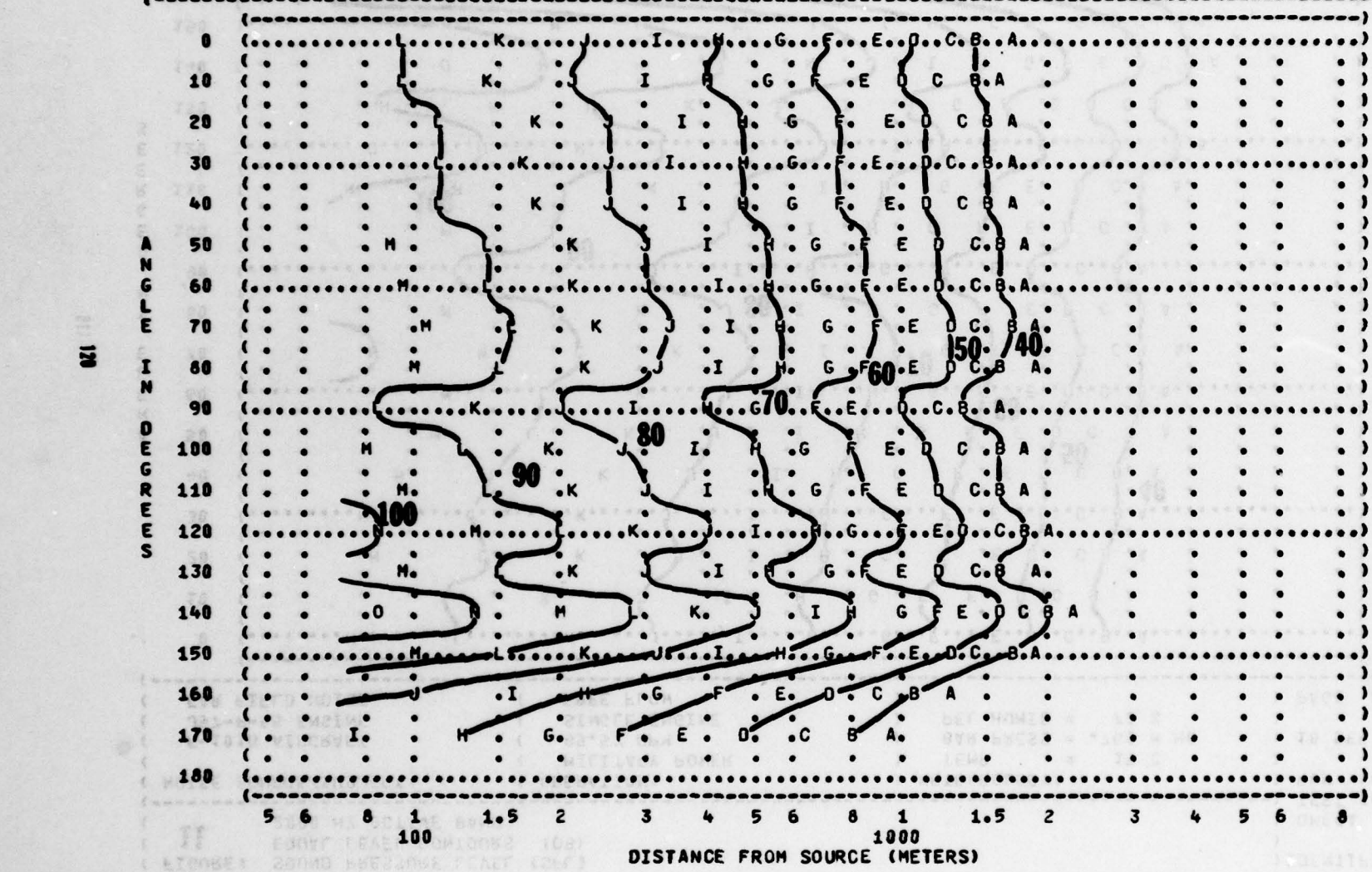
FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
95.5% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 04
18 SEP 78
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
M	95
N	100
O	105

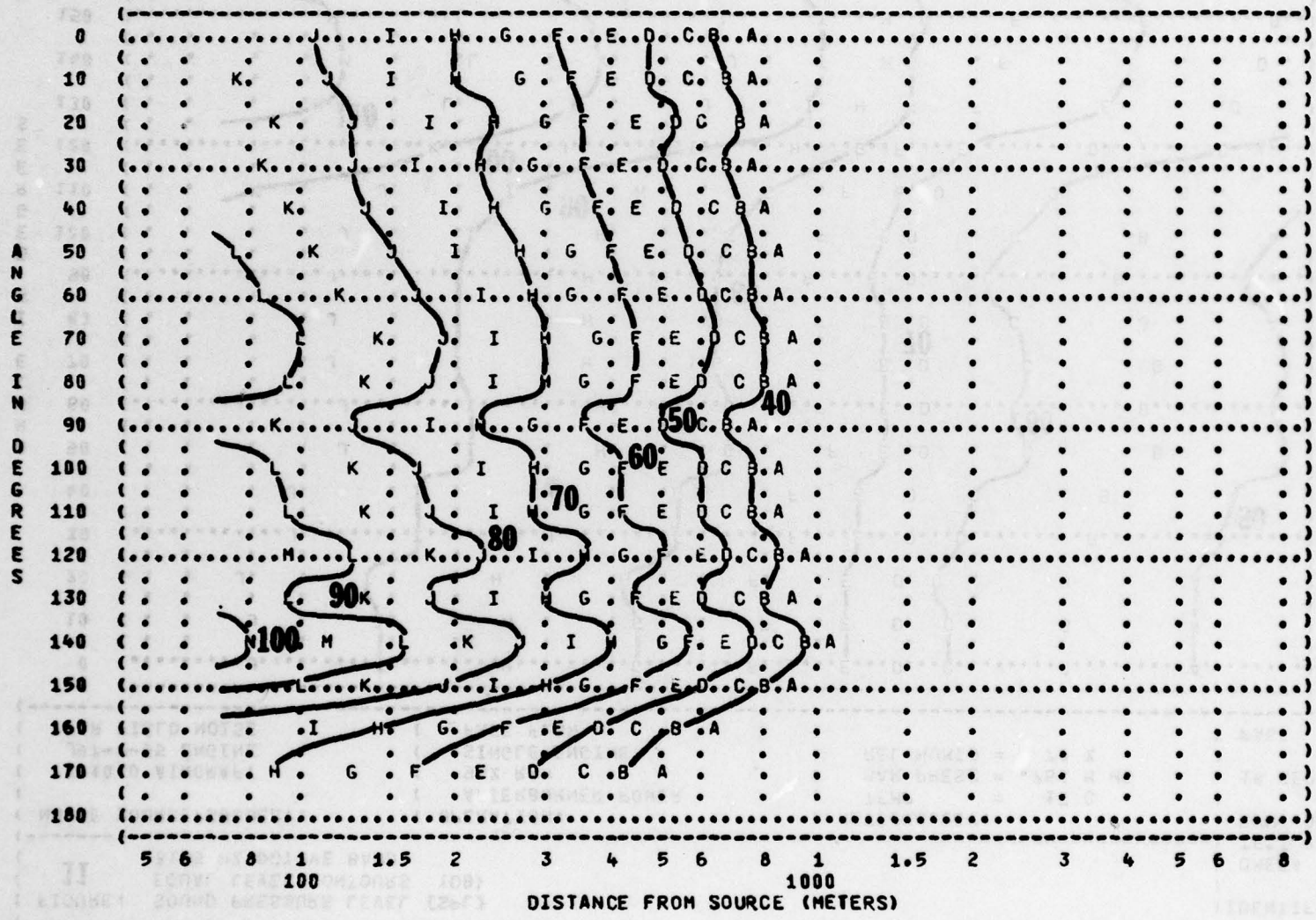
FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 6000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 78-811-001 RUN 04 18 SEP 78 PAGE 26

NOISE SOURCE/SUBJECT: F-101B AIRCRAFT J57-P-55 ENGINE FAR FIELD NOISE

OPERATION: MILITARY POWER 95.5% RPM SINGLE ENGINE FREE FLOW

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
N	100

FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 18

POINT	DB
A	50
B	55
C	60
D	65
E	70
F	75
G	80
H	85
I	90
J	95
K	100
L	105
M	110

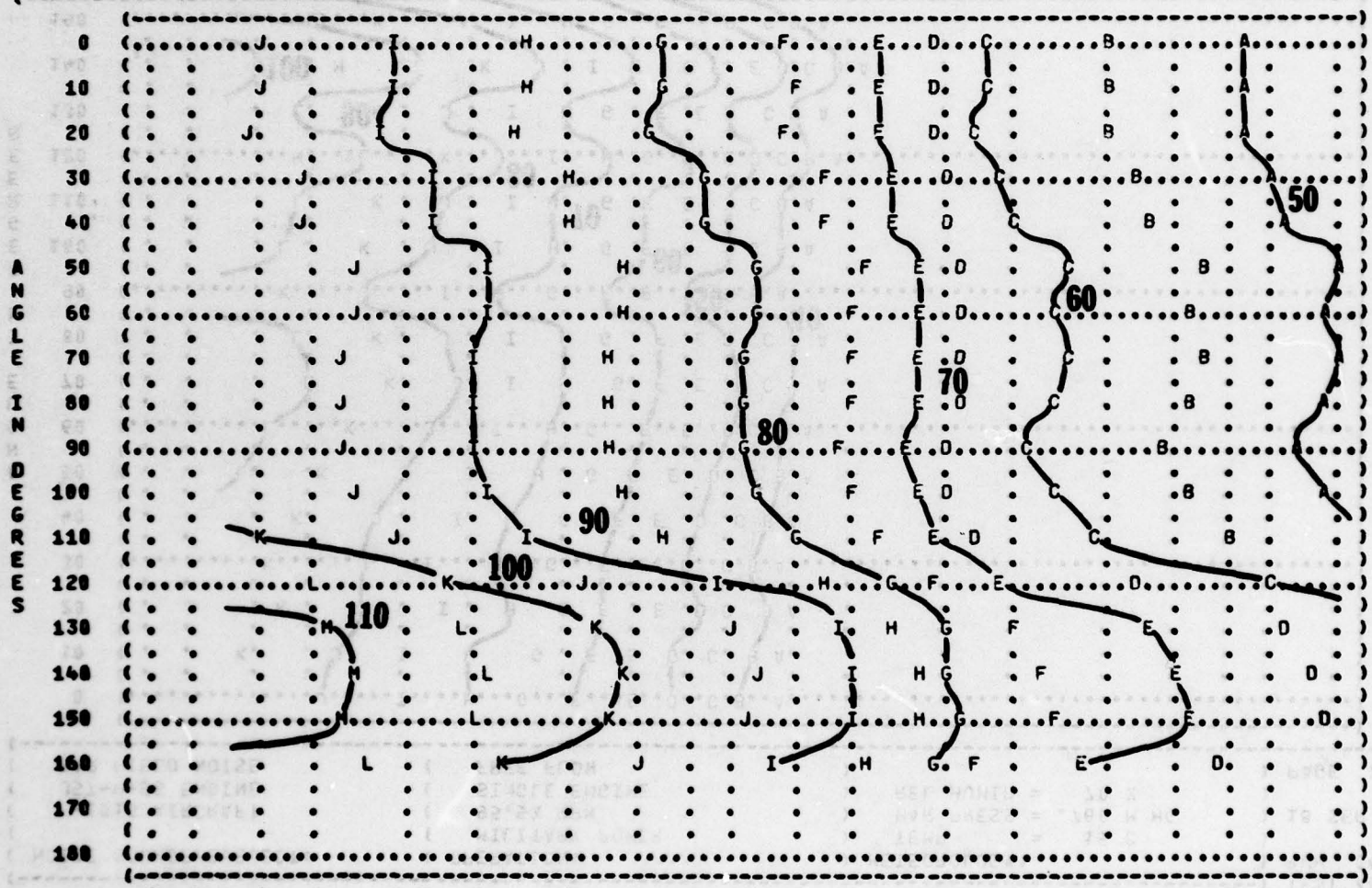


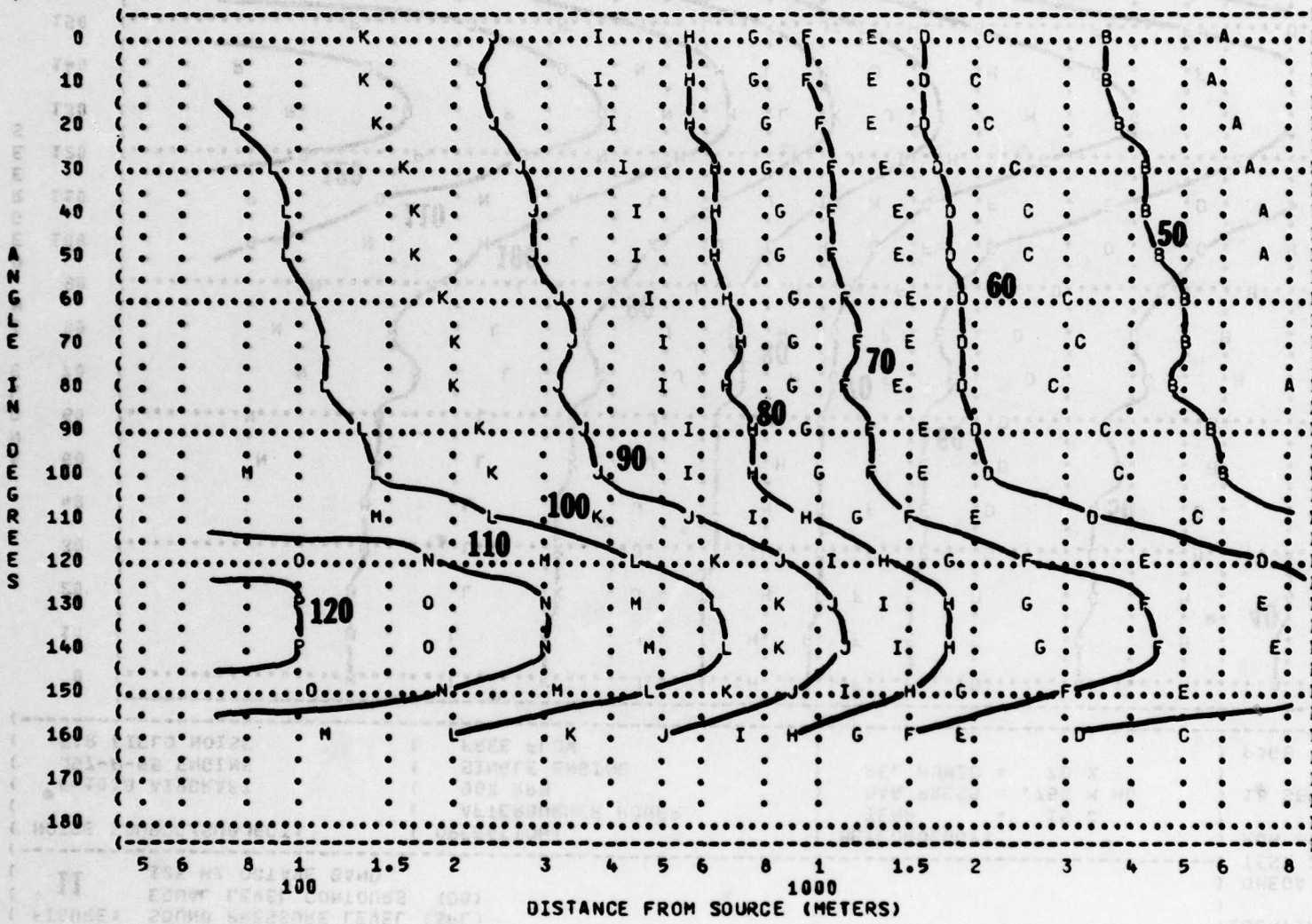
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 78-011-001 RUN 05 18 SEP 78 PAGE 19

NOISE SOURCE/SUBJECT: F-101B AIRCRAFT J57-P-55 ENGINE FAR FIELD NOISE

OPERATION: AFTERBURNER POWER 96% RPM SINGLE ENGINE FREE FLOW

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
M	105
N	110
O	115
P	120

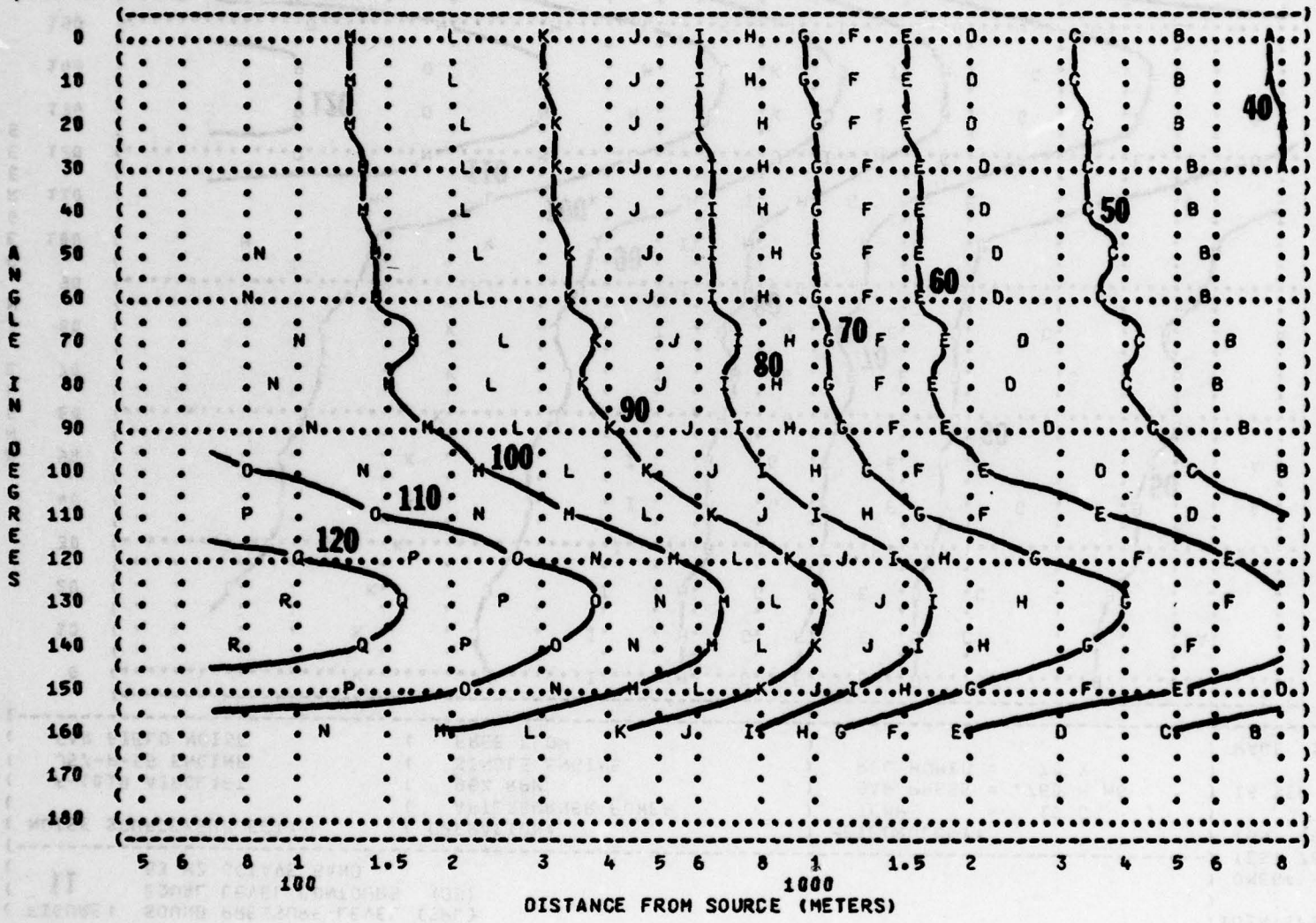
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
18 SEP 78
PAGE 20



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
M	100
N	105
O	110
P	115
Q	120
R	125

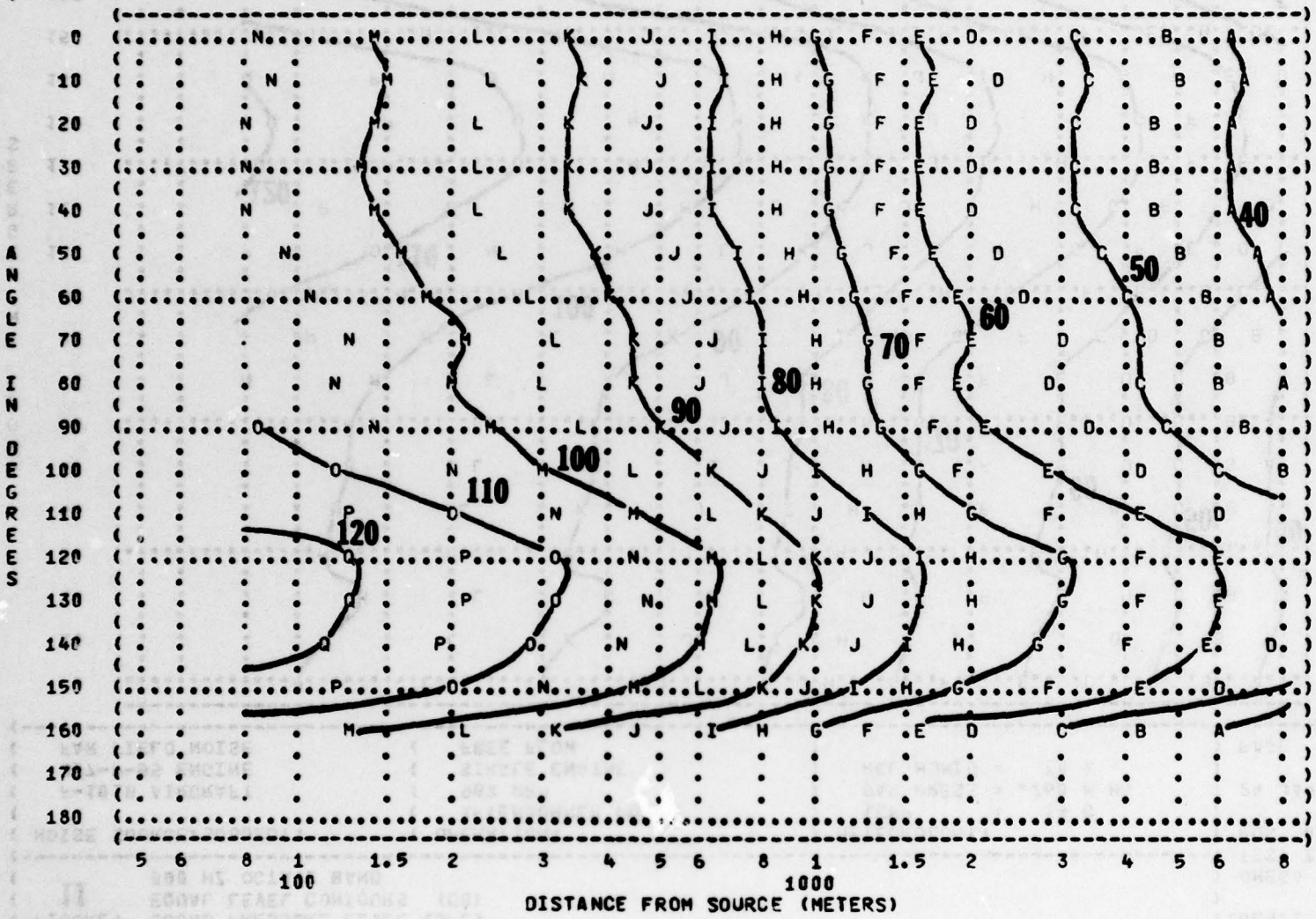
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-111B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
RUN 05
24 JAN 79
PAGE 21



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
M	100
N	105
O	110
P	115
Q	120

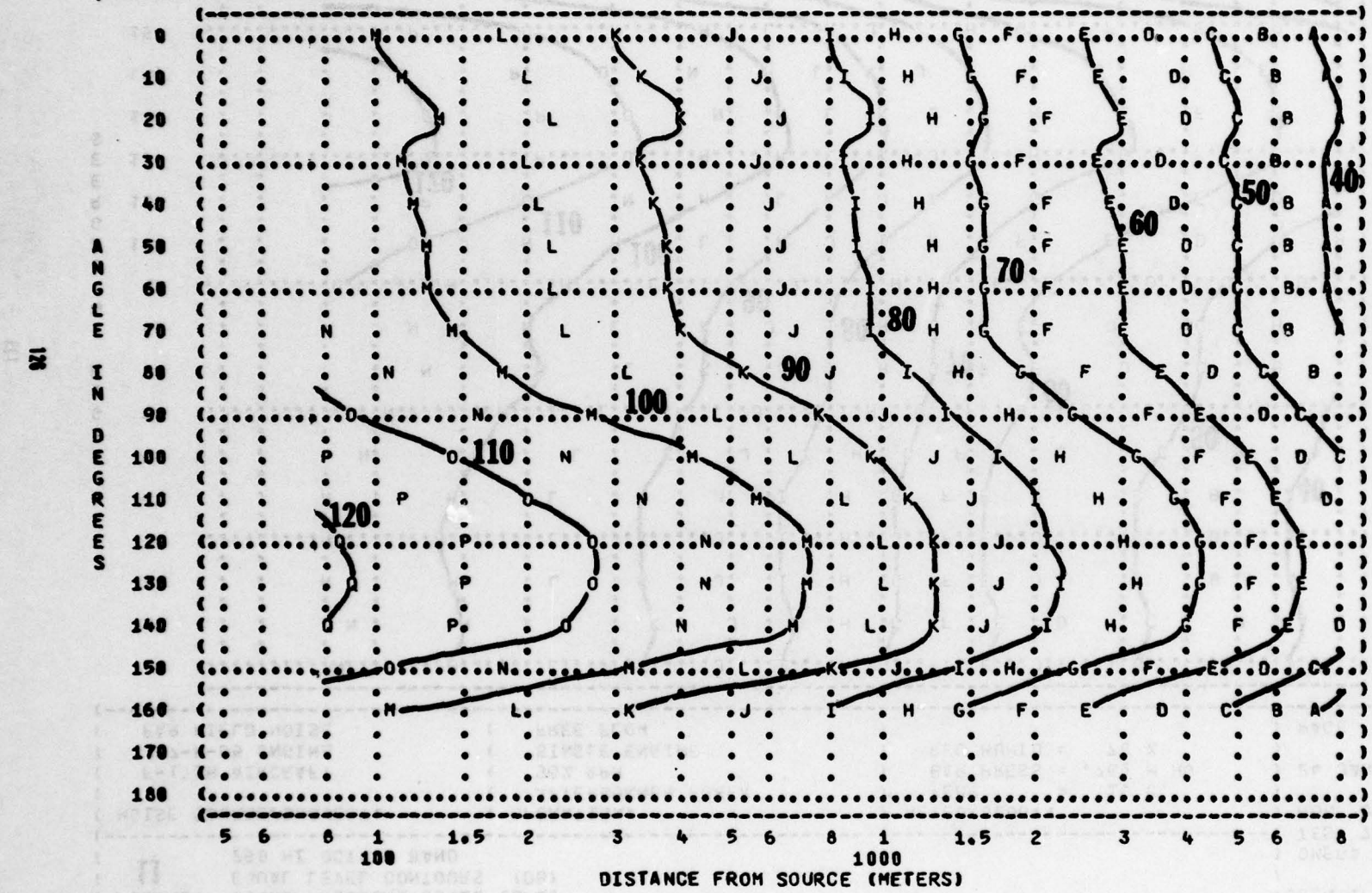
FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
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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
M	100
N	105
O	110
P	115
Q	120

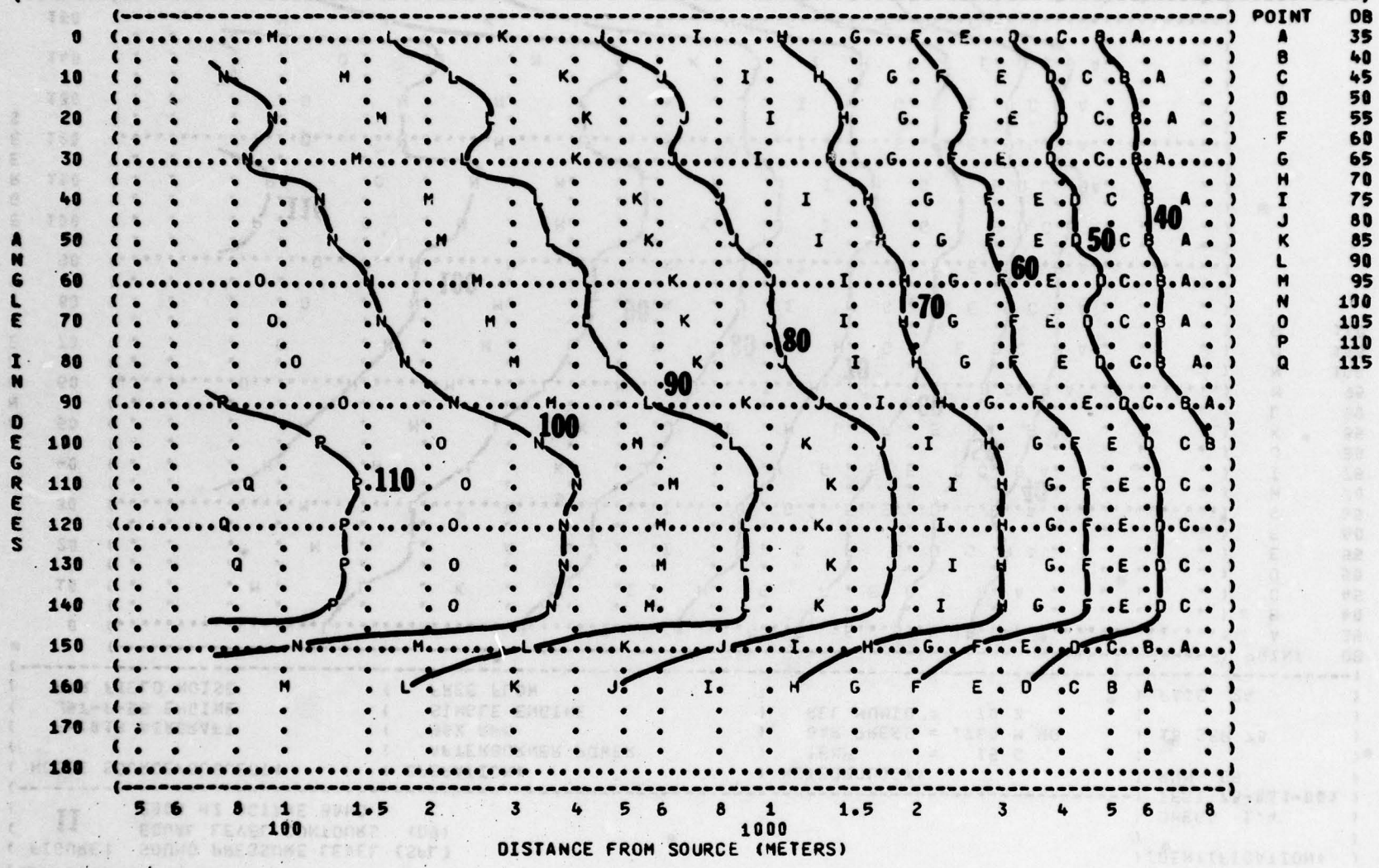
FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 78-011-001
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18 SEP 78
PAGE 23



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
N	100
O	105
P	110
Q	115

FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 78-011-001 RUN 05 18 SEP 78 PAGE 24

NOISE SOURCE/SUBJECT: F-101B AIRCRAFT J57-P-55 ENGINE FAR FIELD NOISE

OPERATION: AFTERBURNER POWER 96% RPM SINGLE ENGINE FREE FLOW

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

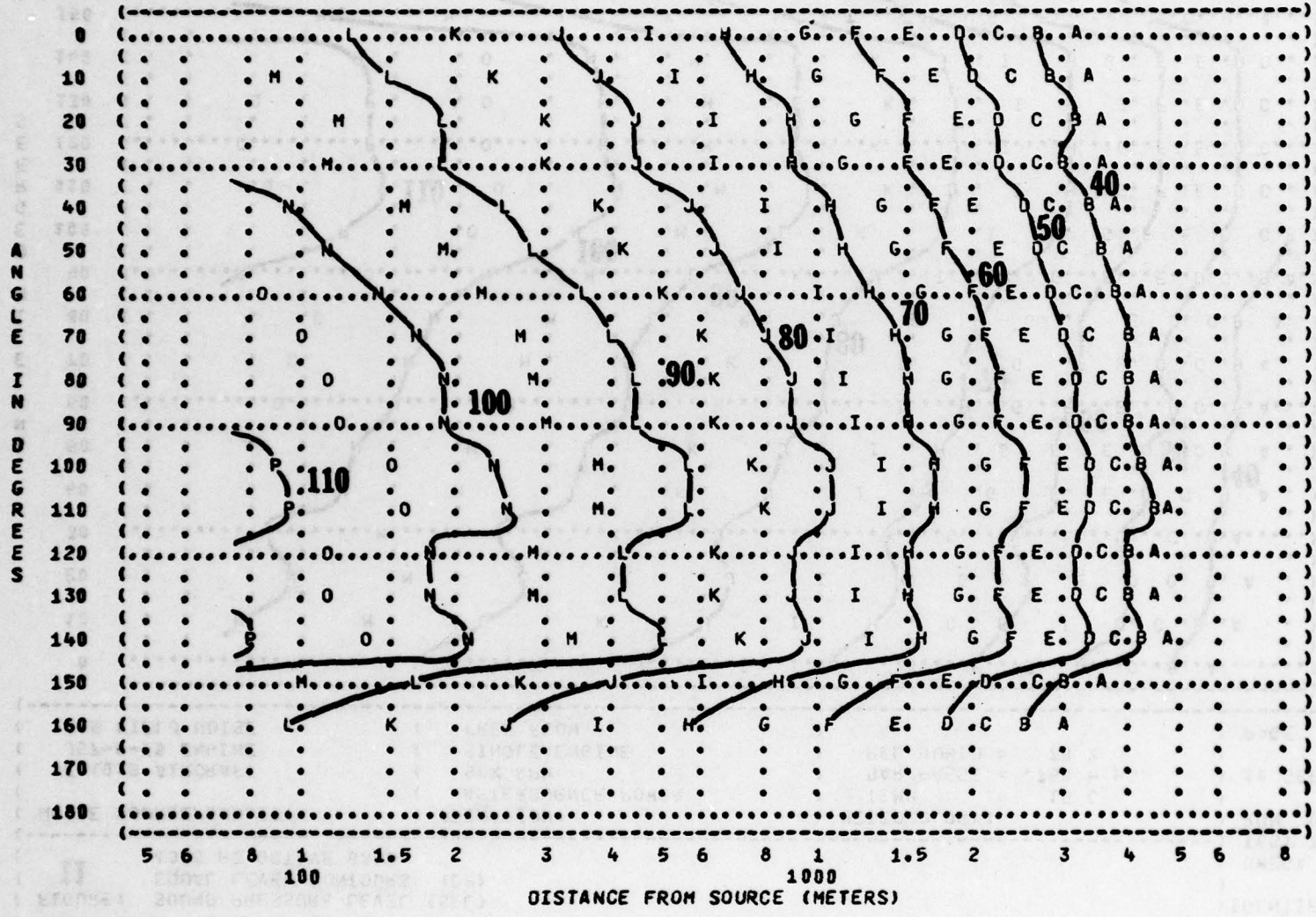


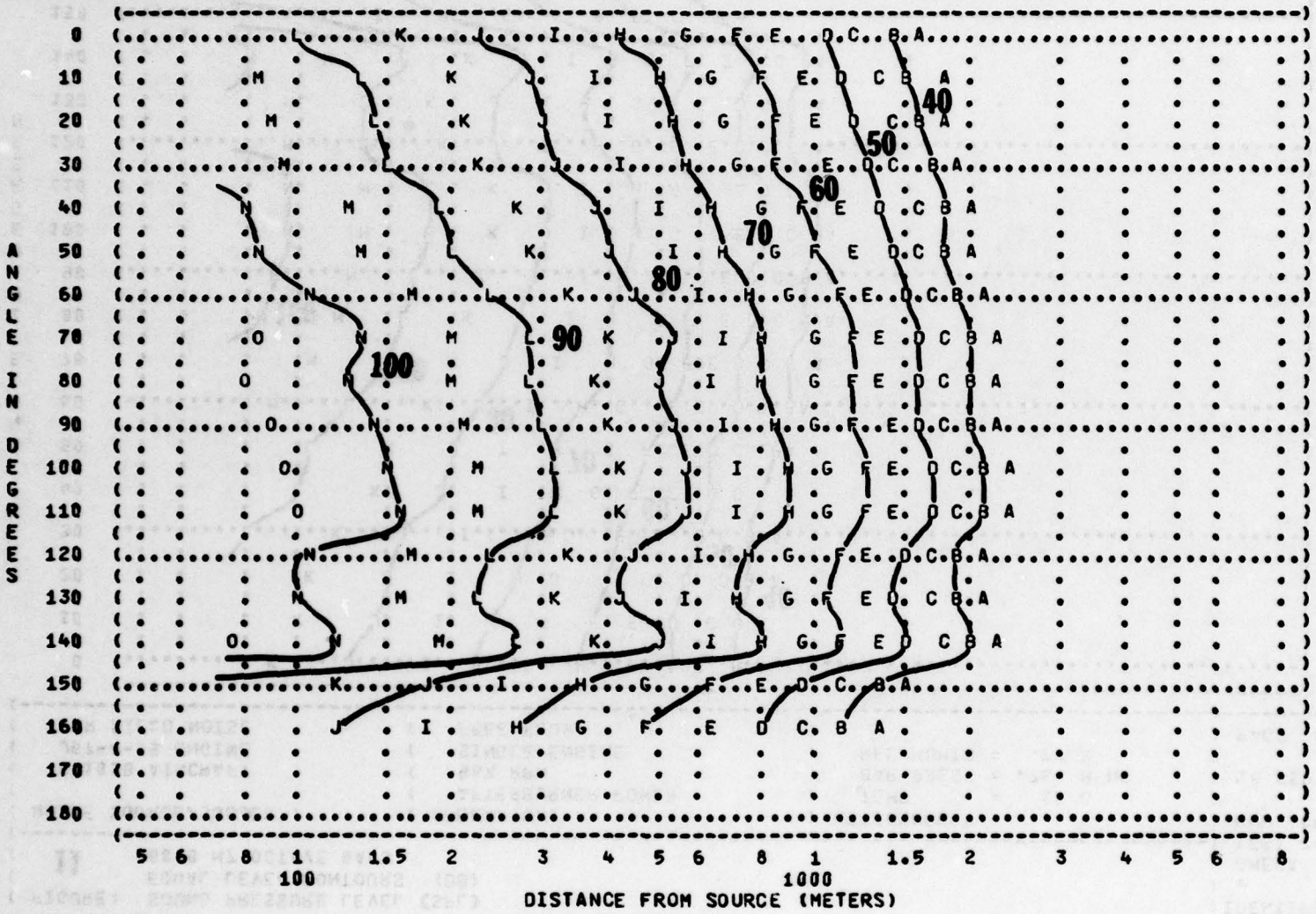
FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 78-011-001 RUN 05 18 SEP 78 PAGE 25

NOISE SOURCE/SUBJECT: F-101B AIRCRAFT J57-P-55 ENGINE FAR FIELD NOISE

OPERATION: AFTERBURNER POWER 96% RPM SINGLE ENGINE FREE FLOW

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
N	100
O	105

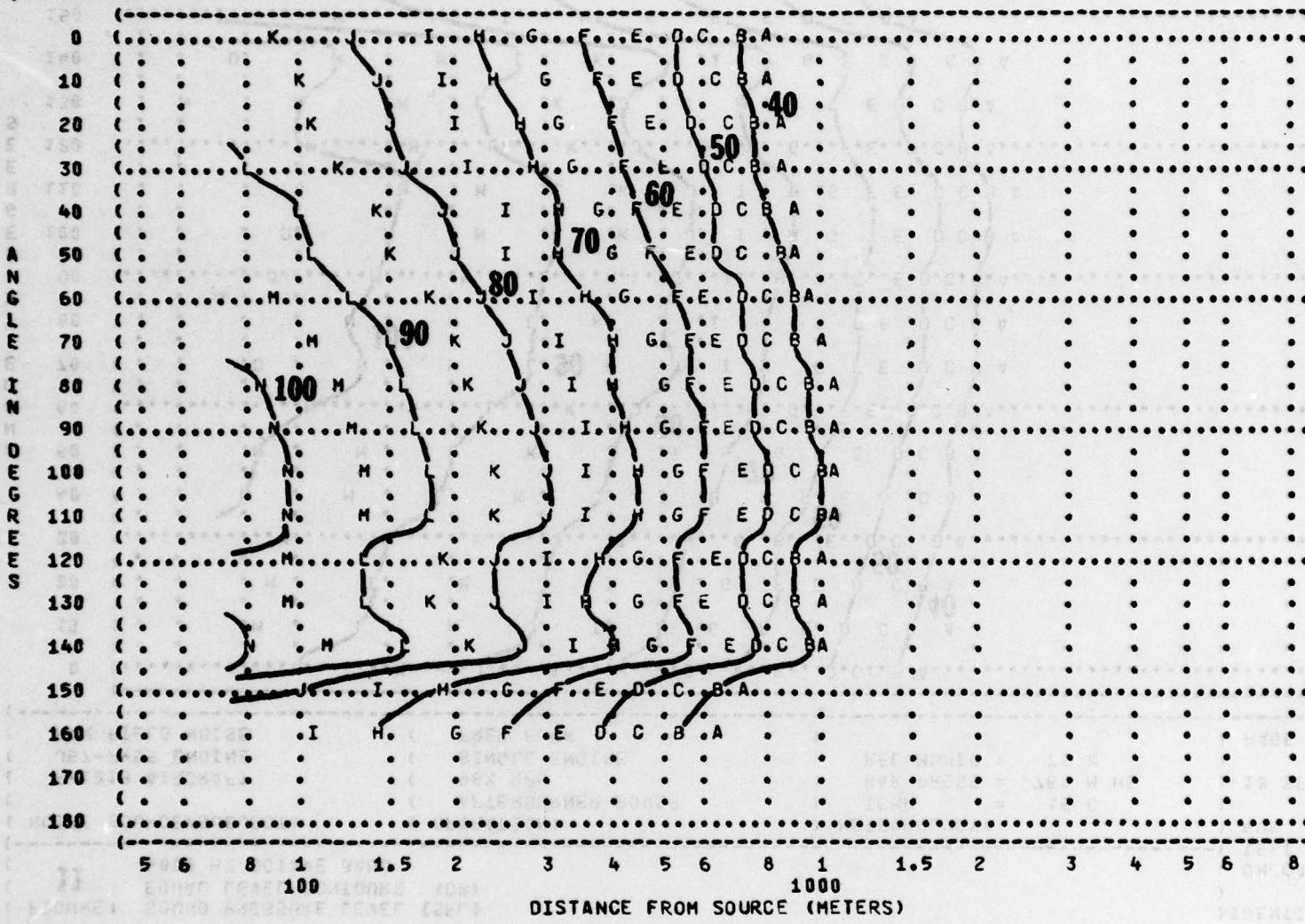
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-101B AIRCRAFT
J57-P-55 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER POWER
96% RPM
SINGLE ENGINE
FREE FLOW

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
I	75
J	80
K	85
L	90
M	95
N	100

*U.S.Government Printing Office: 1979 — 657-002/34