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USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK: C-123K AIRCRAFT, NEA--ETC(U)
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Volume 78

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USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK

Volume 78

C-123K Aircraft, Near and Far-Field Noise

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AEROSPACE MEDICAL RESEARCH LABORATORY
AEROSPACE MEDICAL DIVISION
AIR FORCE SYSTEMS COMMAND
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FOR THE COMMANDER

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

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The USAF C-123K is an assault troop/equipment transport aircraft powered by two R2800-99W reciprocating and two J85-17t turbojet engines. This report provides measured and extrapolated data defining the bioacoustic environments produced by this aircraft operating on a concrete runup pad for five engine/power conditions. Near-field data are reported for 2 locations in a wide variety of physical and psychoacoustic measures: overall and band sound pressure levels, C-weighted and A-weighted sound levels, preferred speech

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interference level, perceived noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Far-field data measured at 19 locations are normalized to standard meteorological conditions and extrapolated from 50-8000 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 723104, Measurement and Prediction of Noise Environments of Air Force Operations.

The author gratefully acknowledges Mr. John Cole for his assistance in preparing this report, Mr. Robert England for his assistance in acquiring the raw data, Mr. Keith Kettler, Mr. Henry Mohlman and Mr. David Eilerman of the University of Dayton for assistance in the mechanics of data processing, and Mrs. Norma Peachey and Mr. Mike Patterson for assistance in typing and preparation of the graphics.

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INTRODUCTION

The USAF C-123K is an assault troop/equipment transport aircraft powered by two R2800-99W reciprocating and two J85-17T turbojet engines. The aircraft was manufactured by Fairchild Hiller, the reciprocating engines by Pratt and Whitney a Division of United Aircraft, and the turbojet engines by Lynn, a Division of General Electric.

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 C-123K 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, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. Volume 2 provides a method and data for adjusting the handbook's far-field noise data, which are for standard meteorological conditions (15°C temperature, 70% rel humidity, 0.760 meters Hg barometric pressure), *to derive comparable data for other* meteorological conditions. *Refer to Volumes 1 and 2* (references 2 and 3) 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 C-123K aircraft during ground runup operations of its reciprocating engines.For these tests the aircraft was located on a concrete runup pad at Hurlburt Field Eglin AFB, with no significant reflecting surfaces in the vicinity except the ground plane. Table 1 gives the surface meteorological conditions and the engine condition. The ground-crew chief selected power conditions and near-field locations generally used during routine maintenance or engine runup for preflight checks.

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

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

RESULTS

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the C-123K aircraft at the two 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

C-123K Aircraft, Ground Runup, Hurlburt Field, Eglin AFB 9 Aug 1971

Ground Crew Location	
1	Engine Start and Marshal
2	Chock Pull
Aircraft Engine Operation	
A	Taxi Power
Meteorology	
Temperature	30.6 C
Bar Pressure	0.763 M Hg
Rel Humidity	68 %
Wind — Speed	1.5 M/Sec (3 kt)
— Direction	180 Deg

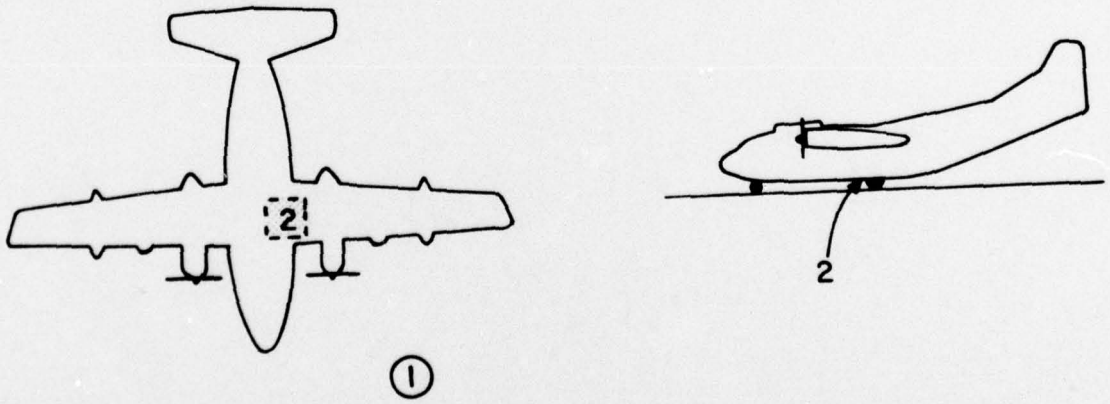


Figure 1. Near-Field Measurement Locations on a Runup Pad at Hurlburt Field, Eglin AFB FL

FAR-FIELD NOISE

MEASUREMENTS

AMRL acquired both near- and far-field data during a 1- 2-hour test period, thus keeping similar meteorological conditions. Figure 2 shows the aircraft on a concrete runup pad and its orientation relative to 19 microphone measurement sites on the semicircle. The center of the 50 meter radius semicircle used in surveying the engine was on the ground directly below the intersection of the aircraft's centerline and the plane passing through the engine's propeller planes.

Table 4 provides cockpit readouts of some engines characteristics (RPM, manifold pressure) for each power setting used in the far-field tests. Also listed in this table are the surface meteorological conditions during data acquisition.

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

A portable microphone/tape recorder system was used to sequentially record the noise at each far-field location. The microphone was hand-held 1.7 meters (5-1/2 feet) above the ground plane and pointed at the source (0° angle of incidence).

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 C-123K aircraft in a standard format.

Figure 4 and Table 6 present two basic acoustic measures, the acoustic power levels 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 that 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.

Estimates of noise levels for intermediate power settings (e.g., 1800 RPM) 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.

Data excessively influenced by spurious background/electronic noise were eliminated from all figures and tables. No data are presented beyond the 160 degree location for the three highest power settings because of turbulent air flow behind the aircraft. Typically, the A-weighted levels for these angles are 10 to 20 dBA below the level at the 160 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 taxi 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.

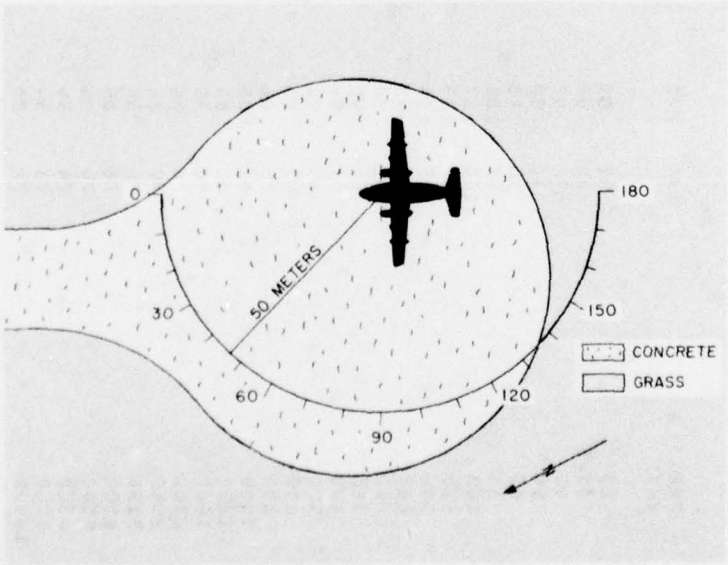


Figure 2. Far-Field Measurement Locations on Runup Pad at Hurlburt Field, Eglin AFB FL

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

IDENTIFICATION:
OMEGA 3.2
TEST 71-019-102
RUN 01
04 DEC 74
PAGE F1

NOISE SOURCE/SUBJECT:
C-123K AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

LOCATION/CONDITION

FREQ (HZ)	1/A	2/A
25	92	95
31.5	80	88
40	92	92
50	90	92
63	96	99
80	97	105
100	100	107
125	97	109
160	95	104
200	92	98
250	91	98
315	91	96
400	91	91
500	89	90
630	87	89
800	85	86
1000	81	85
1250	81	84
1600	80	85
2000	78	84
2500	77	84
3150	76	84
4000	76	85
5000	74	84
6300	74	84
8000	73	84
10000	71	80
OVERALL	106	113

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 3.2
TEST 71-019-102
RUN 01
04 DEC 74
PAGE J1

NOISE SOURCE/SUBJECT: C-123K AIRCRAFT GROUND CREW NEAR FIELD NOISE LEVELS

OPERATION:

LOCATION/CONDITION

FREQ (HZ)	1/A	2/A
31.5	95	97
63	100	106
125	103	112
250	96	102
500	94	95
1000	87	90
2000	83	89
4000	80	89
8000	78	88
OVERALL	106	113

TABLE: MEASURES OF HUMAN NOISE EXPOSURE

3

IDENTIFICATION:
OMEGA 3.2
TEST 71-019-102
RUN 01
04 DEC 74
PAGE H1

NOISE SOURCE/SUBJECT: C-123K AIRCRAFT GROUND CREW NEAR FIELD NOISE LEVELS

OPERATION:

	LOCATION/CONDITION 1/A	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	105	113
OASLA	95	100
T	71	30
MINIMUM QPL EAR MUFFS		
OASLA*	83	92
T	571	120
AMERICAN OPTICAL 1700 EAR MUFFS		
OASLA*	79	87
T	960	285
V-51R EAR PLUGS		
OASLA*	73	78
T	960	960
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS		
OASLA*	61	68
T	960	960
H-133 GROUND COMMUNICATION UNIT		
OASLA*	72	80
T	960	960
COMMUNICATION		
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)		
PSIL	88	91
ANNOYANCE		
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)		
TONE CORRECTION (C IN DB)		
PNLT	110	118
C	1	1

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE 4

TEST CONDITIONS
FOR FAR-FIELD NOISE MEASUREMENTS

C-123K Aircraft, Ground Runup, Auxiliary Field #9, Eglin AFB

Aircraft Engine Operation

Idle (no jets)	Both Engines 18 Inches Manifold Pressure 650 RPM
Taxi (no jets)	Both Engines 17 " MAP 1000 RPM
Runup Power Check (no jets)	Both Engines 22 " MAP 2200 % RPM
Maximum Reciprocating Engine Power (no jets)	Both Engines 55 "MAP 2700 RPM
Maximum Power (with jets)	All Engines 55 "MAP 2700 RPM

Meteorology

Temperature	30.6 C
Bar Pressure	0.763 M Hg
Rel Humidity	68 %
Wind — Speed	1.5 M/Sec (3 kt)
— Direction	180 Deg

TABLE 5: MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 50 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 2

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .763 M HG
REL HUMID = 68 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	69<	71<	72<	69<	68<	68<	72<	71<	69<	68<		67<	69<		69<	69<	68<	71<	68<
31.5	69<	68<	69<	70<	71<	68<	69<	68<	68<	67<	67<	68<	67<	69<	73<	75<	70<	69<	67<
40	77	77	75<	75<	75<	74<	75<	75<	75<	75<	77	76	75<	73<	74<	74<	73<	75<	75<
50	78	79	78	78	80	76	75	76	75	74	74	78	77	79	78	77	79	78	79
63	81	81	80	79	79	78	79	78	78	79	79	79	79	78	77	79	78	77<	75<
80	84	85	84	83	83	82	82	81	81	80	79	81	79	78	80	81	81	80	80
100	81	82	81	82	83	82	81	83	84	84	83	83	80	80	80	80	81	81	79
125	79	81	81	80	81	84	82	80	79	82	83	83	85	83	80	82	77	74	72<
160	76	78	78	80	83	83	80	79	78	78	80	80	80	84	79	79	77	74	72
200	71<	71<	71<	74	75	73	71<	72<	71<	71<	74	73	71<	73	75	74	70<	68<	68<
250	70	69<	73	72	71	73	72	72	71	70	73	72	72	72	75	73	69<	69<	68<
315	66	67	69	70	70	71	71	71	71	72	68	69	69	69	74	75	70	67	65
400	63	66	68	71	70	70	69	68	68	69	67	69	70	70	74	73	71	67	65
500	58<	60	64	64	63	63	63	63	62	62	65	69	66	66	70	71	69	65	62
630	56<	56<	55<	55<	54<	54<	53<	54<	55<	55<	57<	59	58	59	61	64	62	59	56<
800	59	59	58	58	58	57	58	56	55	56	58	58	58	60	61	63	61	60	57
1000	58	57	58	59	59	57	57	54	53	55	58	57	56	59	59	57	56	56	54
1250	57	56	58	60	58	57	59	57	57	56	55	56	56	62	62	59	57	57	55
1600	58	58	61	62	61	62	63	61	62	61	59	58	58	66	65	60	61	59	56
2000	55	56	58	60	61	61	61	64	63	63	63	62	61	64	64	62	61	60	57
2500	57	56	58	59	58	58	60	59	62	62	64	63	60	62	60	59	60	60	57
3150	54	54	57	59	58	60	61	63	65	65	64	65	61	64	61	60	61	60	58
4000	53	53	56	58	57	57	58	60	61	64	66	62	61	62	61	59	60	59	58
5000	52	52	55	56	56	57	60	60	62	62	64	61	60	61	60	58	59	58	56
6300	50	51	54	55	54	55	57	58	60	61	62	60	59	60	59	57	59	57	55
8000	51	51	54	55	54	55	57	58	60	62	62	60	60	61	60	58	58	58	56
10000	47	48	50	51	50	52	54	54	56	58	58	56	57	57	57	55	55	54	53
OVERALL	89	90	89	89	90	90	89	88	88	89	89	89	89	89	88	89	88	87	86

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE 5: MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 50 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 2

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .763 M HG
REL HUMID = 68 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	74<	77	78	73<	72<	73<	71<	67<					67<	73<	78	80	79	76<	71<
31.5	70<	69<	70<	68<		67<	69<							66<	68<	70<	69<	70<	70<
40	75<	75<	76	73<	74<	67<	70<	67<				69<	73<	69<	70<	70<	70<	71<	75<
50	80	81	80	76	77	71<	73<	71<	68<	71<	72<	74	75	74	75	76	76	74	75
63	83	83	81	81	83	81	80	78	75<	80	81	82	82	82	82	79	75<	75<	78
80	85	85	84	83	83	82	81	80	80	81	81	81	78	78	79	82	82	82	82
100	90	91	90	90	89	90	89	90	91	91	91	89	84	83	88	90	88	84	84
125	89	91	90	90	91	93	91	87	84	86	83	88	95	92	85	89	84	78	78
160	87	88	88	88	88	87	86	85	83	85	88	85	86	88	85	88	82	78	76
200	83	82	82	81	85	83	81	79	79	78	79	79	80	81	81	83	80	74	75
250	78	78	81	78	78	77	79	77	78	75	75	75	74	76	81	82	78	73	69<
315	75	76	76	75	77	73	75	74	74	74	71	72	74	75	80	84	80	71	65<
400	72	75	76	77	76	74	73	72	69	71	71	72	74	76	80	81	81	69	64
500	71	73	75	74	74	71	71	68	66	66	68	71	71	75	78	79	80	66	62
630	69	70	68	68	68	65	65	63	63	60	63	66	65	68	72	73	75	62	58<
800	70	71	68	68	66	64	64	62	58	60	62	61	64	68	72	73	74	63	60
1000	67	67	67	68	67	64	64	61	60	59	60	61	62	66	68	68	69	60	57
1250	68	67	69	69	69	67	68	65	64	62	62	62	64	68	67	66	68	60	57
1600	66	66	66	66	65	65	65	64	65	62	62	63	64	69	68	66	67	61	57
2000	64	64	64	65	64	63	64	65	66	66	63	63	63	66	67	65	66	61	56
2500	64	64	64	64	63	61	63	63	65	64	64	64	63	66	65	63	65	59	57
3150	61	62	62	63	62	61	62	62	66	65	65	64	63	65	62	61	63	59	56
4000	61	62	62	62	61	61	62	64	65	67	65	64	64	63	62	61	63	59	56
5000	59	60	60	60	59	59	61	62	64	65	65	62	62	62	60	60	61	57	55
6300	57	58	58	58	58	57	58	61	62	63	62	60	60	60	59	58	59	56	54
8000	57	58	58	58	58	58	59	60	62	64	61	61	61	60	60	58	59	57	55
10000	54	55	54	55	55	54	56	57	59	60	58	57	56	57	56	54	56	52	52
OVERALL	95	96	96	95	96	96	95	93	93	93	94	93	96	95	93	95	93	89	89

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE 5: MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 50 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 2

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .763 M HG
REL HUMID = 68 %

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<	70<	71<	74<	71<	72<	73<	73<	73<	72<	69<	70<	73<	73<	73<	72<	78		
31.5	76<	74<	76<	76<	76<	76<	77	76<	78	77	76<	77<	78	76<	76<	76<	75<		
40	83	84	82	86	85	83	84	84	86	86	86	84	86	88	83	81	82		
50	96	100	95	101	99	97	97	97	100	101	99	97	100	103	99	97	97		
63	86	85	83	85	83	82	83	83	83	83	83	83	84	85	83	83	79		
80	92	91	90	88	86	85	85	85	84	85	87	87	85	87	88	89	84		
100	95	99	100	101	95	96	99	98	94	96	101	100	95	100	97	96	85		
125	97	96	98	99	100	105	104	101	97	101	103	106	106	96	98	95	87		
160	99	98	95	98	96	95	101	97	94	97	101	99	98	96	93	91	88		
200	98	99	97	99	94	92	99	96	94	93	95	97	98	97	95	90	87		
250	95	93	95	95	93	89	92	90	87	85	90	88	89	92	90	86	84		
315	95	94	98	100	98	92	95	92	89	88	92	89	91	94	93	93	85		
400	93	92	98	102	98	93	96	90	93	88	94	92	96	95	94	95	88		
500	92	92	97	100	98	94	97	92	96	90	96	94	96	97	94	93	86		
630	88	88	91	92	91	88	92	87	88	87	94	91	91	93	91	91	84		
800	89	92	90	91	91	87	90	88	87	87	91	90	93	92	93	92	83		
1000	88	88	87	88	87	84	86	85	87	84	89	88	88	89	88	89	81		
1250	88	87	88	88	87	85	86	85	88	86	90	88	89	89	88	88	80		
1600	85	86	87	87	86	85	86	85	86	87	86	86	88	86	85	85	77		
2000	85	85	87	88	87	86	88	89	89	87	86	85	87	86	84	84	78		
2500	83	83	85	85	85	84	86	87	87	86	85	84	84	84	83	81	76		
3150	82	82	84	84	83	82	85	85	87	88	85	81	82	80	80	78	73		
4000	81	82	85	83	83	83	86	86	87	86	85	82	82	81	80	78	73		
5000	79	79	81	81	82	82	84	84	85	85	82	79	80	78	77	75	71		
6300	78	79	80	81	81	81	83	84	84	84	81	78	78	77	76	74	70		
8000	78	78	80	81	81	80	83	83	84	83	81	78	78	77	75	74	69		
10000	76	76	78	79	79	79	81	80	81	81	78	76	75	73	73	72	67		
OVERALL	106	107	107	110	107	107	109	106	105	106	109	109	109	108	106	104	100		

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 50 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 2

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .763 M HG
REL HUMID = 68 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	74<	74<	75<	77	79	79	79	79	80	80	81	81	82	89	77	81	91		
31.5	78	79	80	81	81	79	77	78	80	81	82	81	80	80	80	80	91		
40	83	83	84	84	83	85	88	89	88	89	91	92	93	90	87	87	90		
50	97	95	95	91	87	90	95	94	92	97	102	98	95	96	98	89	88		
63	105	106	108	103	101	104	107	107	106	111	114	111	107	108	108	99	97		
80	98	97	94	93	93	92	91	90	89	90	91	93	96	97	97	96	86		
100	98	97	97	97	99	99	98	97	96	97	99	101	103	101	98	97	89		
125	105	105	106	107	109	109	109	106	104	106	110	113	113	109	105	101	96		
160	109	111	113	112	110	111	112	109	107	109	113	116	117	113	106	105	97		
200	102	102	104	101	99	99	99	99	99	103	107	106	103	100	98	93	87		
250	104	104	104	104	103	102	101	101	102	104	106	101	96	97	99	94	85		
315	105	105	106	105	105	104	103	103	103	105	106	104	102	101	101	100	92		
400	103	104	107	108	107	103	101	100	100	101	104	104	104	103	102	98	90		
500	99	102	106	105	103	102	102	101	101	101	102	102	103	103	103	96	89		
630	94	97	100	99	97	97	98	97	96	98	100	100	100	100	101	95	89		
800	96	97	99	98	97	96	96	97	99	100	101	103	104	103	100	94	88		
1000	95	95	96	95	94	94	96	95	97	98	99	99	99	99	98	93	87		
1250	94	95	97	95	94	94	95	95	95	96	97	97	97	96	95	90	86		
1600	93	96	98	98	97	97	97	97	97	97	96	96	96	94	91	88	84		
2000	93	95	97	97	96	97	98	98	98	97	96	96	95	93	92	87	85		
2500	92	94	96	96	95	96	97	97	97	97	96	95	94	93	91	87	83		
3150	90	93	95	94	94	95	96	96	97	96	96	94	92	90	88	85	81		
4000	89	92	94	94	94	95	96	96	97	96	96	95	93	91	89	85	82		
5000	87	89	91	91	91	92	93	94	95	94	93	92	90	88	86	83	80		
6300	86	88	91	90	90	91	93	93	93	93	92	90	89	87	84	82	78		
8000	85	87	89	89	89	91	92	92	92	91	91	90	88	86	84	81	78		
10000	82	84	86	86	86	87	88	89	89	88	88	86	85	83	80	78	74		
OVERALL	114	115	117	116	115	116	116	114	114	116	119	119	120	117	114	110	104		

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 50 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 2

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .763 M HG
REL HUMID = 68 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	77	77	77	77	78	78	79	80	81	82	83	83	84	85	87	88	89		
31.5	79	79	80	80	81	81	82	82	83	83	83	84	85	87	89	90	91		
40	82	84	85	86	87	88	89	89	89	90	92	93	94	94	94	93	92		
50	86	90	93	92	91	93	94	93	91	98	102	100	98	97	97	95	93		
63	100	103	106	103	102	104	107	106	105	110	114	112	110	109	107	103	99		
80	95	94	94	94	93	92	91	91	91	91	93	95	97	99	101	100	98		
100	98	98	97	97	98	97	97	97	97	97	99	102	104	105	104	102	100		
125	101	102	105	106	107	107	106	104	103	105	109	111	113	110	108	105	103		
160	107	109	113	113	112	112	112	109	107	110	114	116	117	114	110	107	104		
200	101	101	102	100	99	100	102	100	99	104	107	106	106	107	108	105	98		
250	97	100	103	102	101	100	100	100	100	103	105	105	103	106	107	104	98		
315	100	102	104	103	102	102	103	102	102	103	104	105	106	106	107	106	104		
400	98	102	106	105	104	103	102	101	101	102	102	105	107	108	108	105	102		
500	98	102	105	104	102	102	101	101	102	101	101	104	107	108	108	105	101		
630	93	93	99	98	97	98	99	98	98	98	98	100	102	103	104	103	101		
800	98	99	99	99	99	98	98	98	99	99	98	102	105	104	104	101	99		
1000	95	95	95	96	96	96	96	96	97	97	97	98	98	98	98	97	96		
1250	96	96	97	97	98	96	95	96	97	97	98	99	100	99	98	96	95		
1600	97	98	99	99	99	98	97	98	99	99	98	100	103	101	99	97	95		
2000	97	98	99	99	100	99	99	99	99	100	100	102	103	101	99	97	94		
2500	95	96	97	98	98	97	97	97	98	98	98	99	100	99	98	96	93		
3150	95	95	96	97	98	97	96	98	99	99	99	99	98	97	96	93	91		
4000	94	94	95	96	97	96	96	96	97	98	98	98	98	96	95	92	90		
5000	93	94	94	95	95	94	94	95	96	96	97	96	95	93	92	90	88		
6300	92	92	93	94	95	94	93	94	95	95	95	94	94	92	90	88	86		
8000	94	94	94	94	95	95	94	94	94	95	95	94	92	90	88	86	85		
10000	89	89	89	90	91	100	89	90	91	91	92	91	89	87	85	83	81		
OVERALL	112	114	117	116	116	116	115	114	114	116	119	120	120	119	118	115	112		

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 6

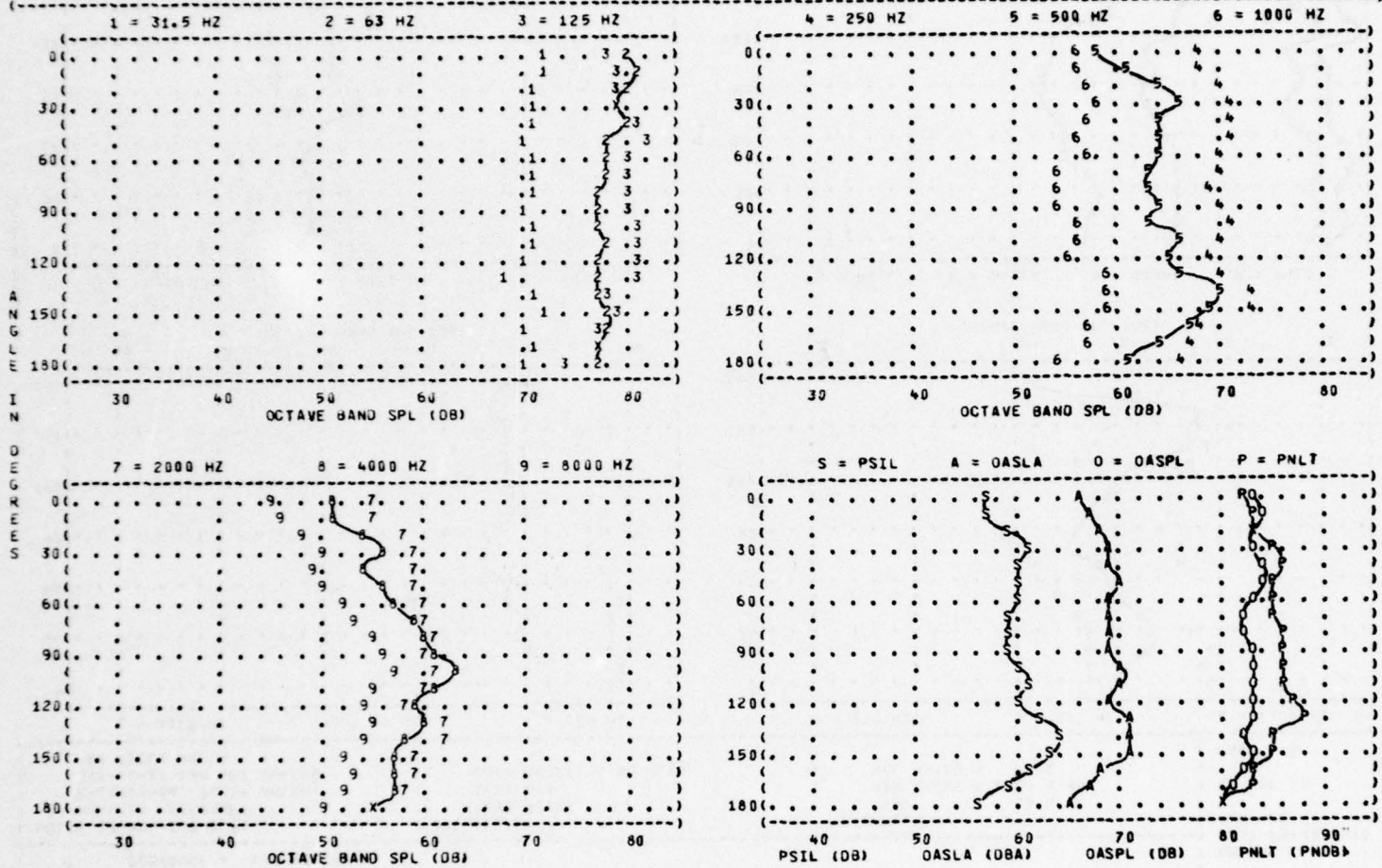


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

METEOROLOGY:
TEMP = 19 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02

16 APR 75

PAGE 6

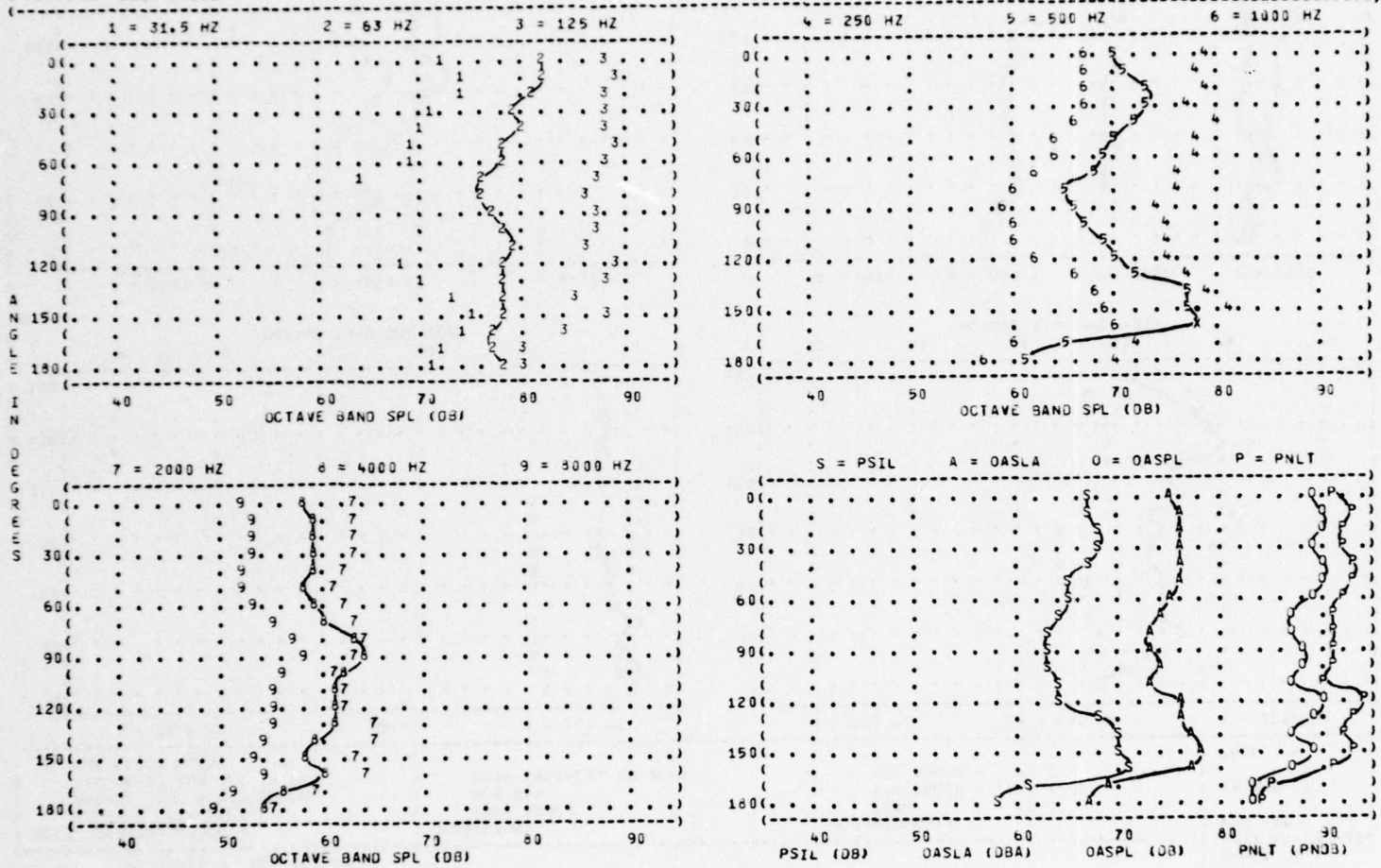


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 6

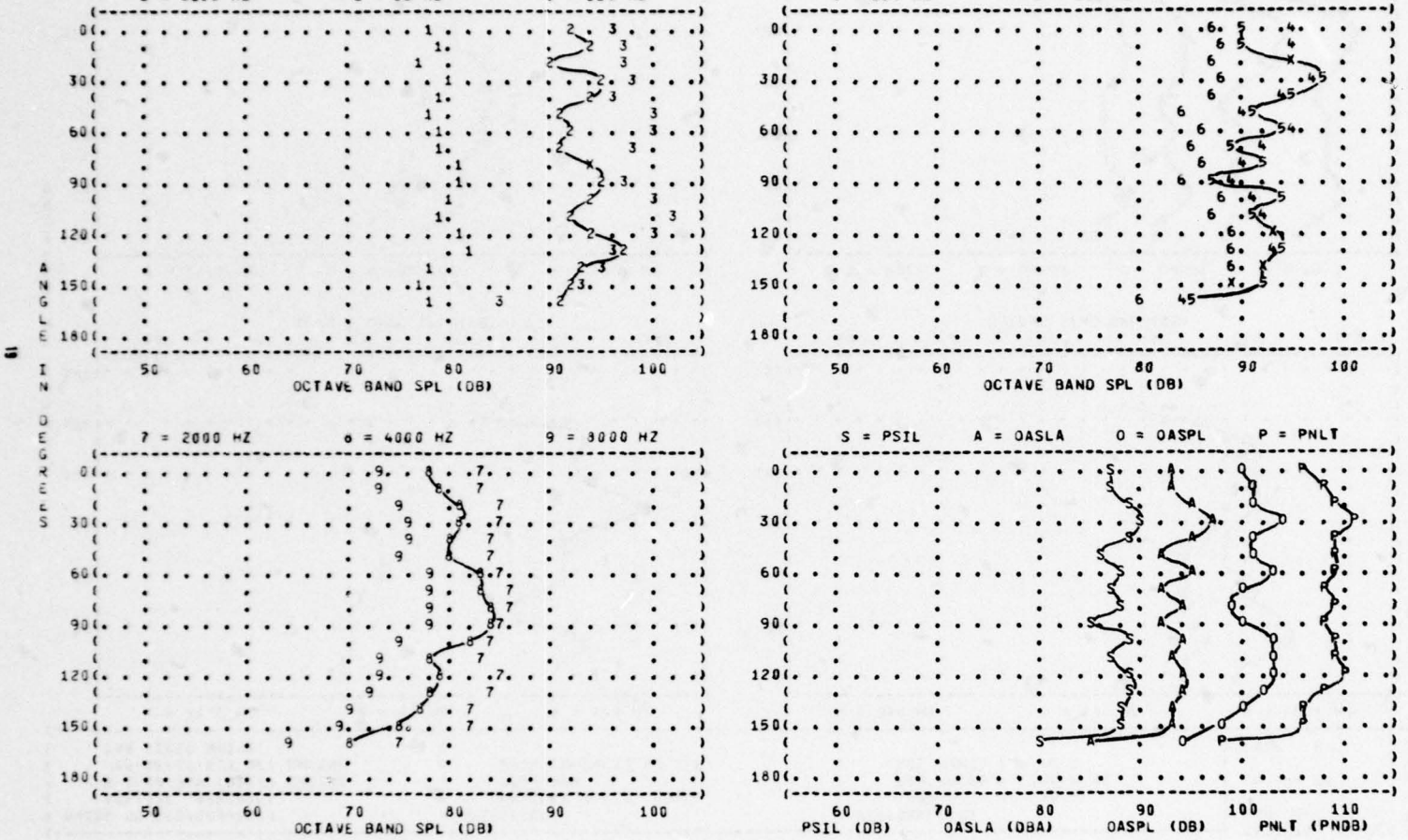


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 6

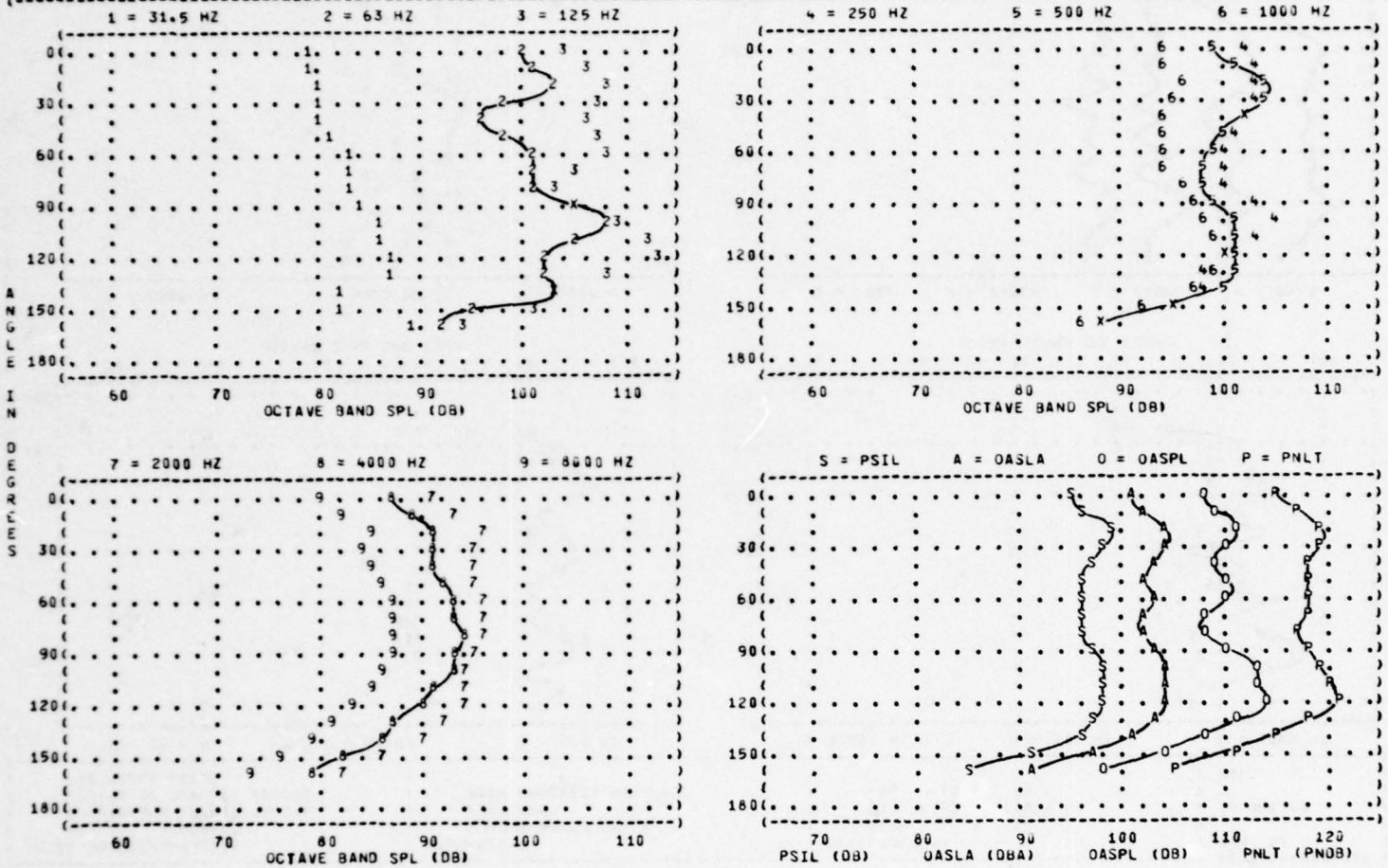


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 6

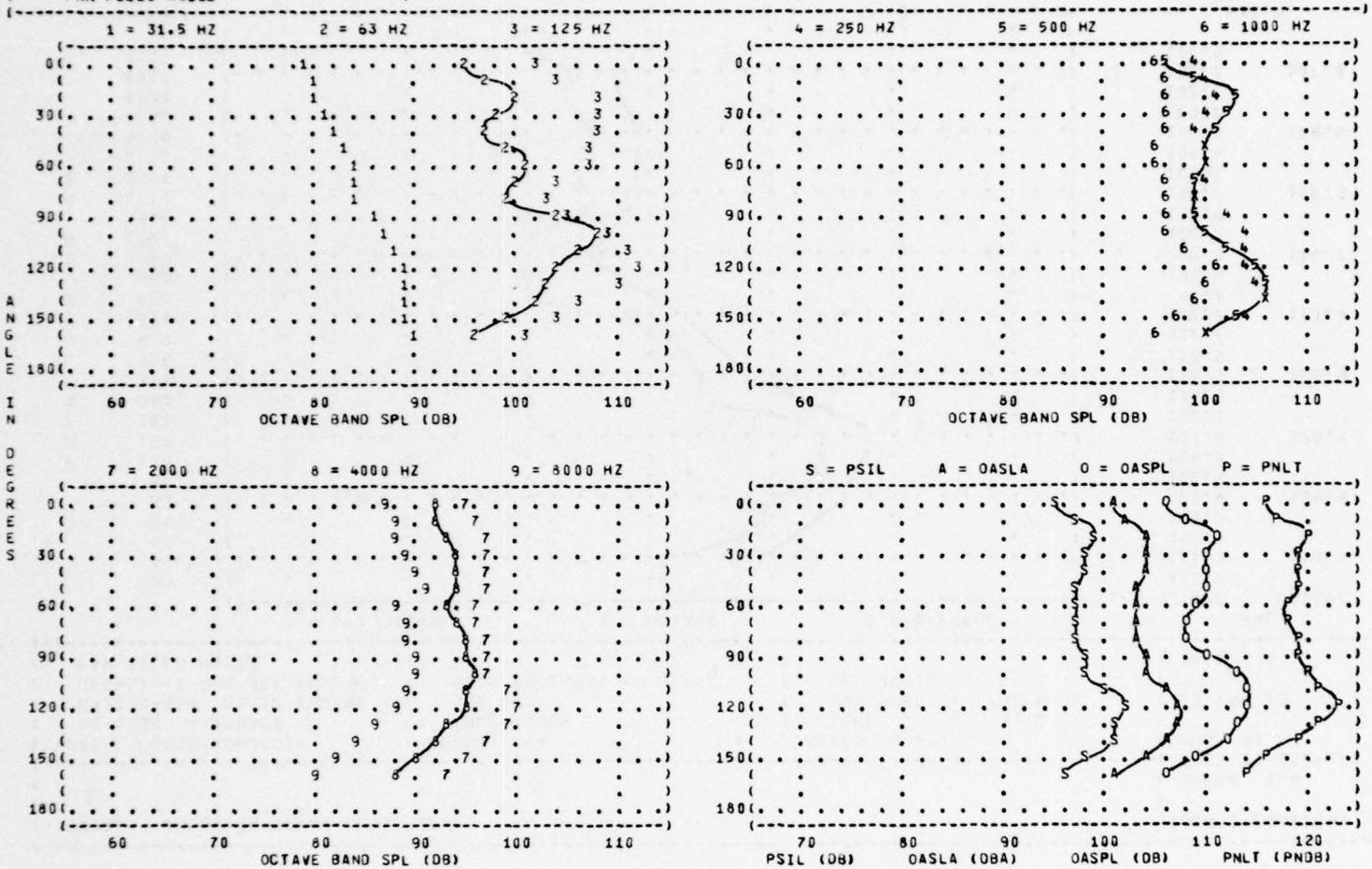
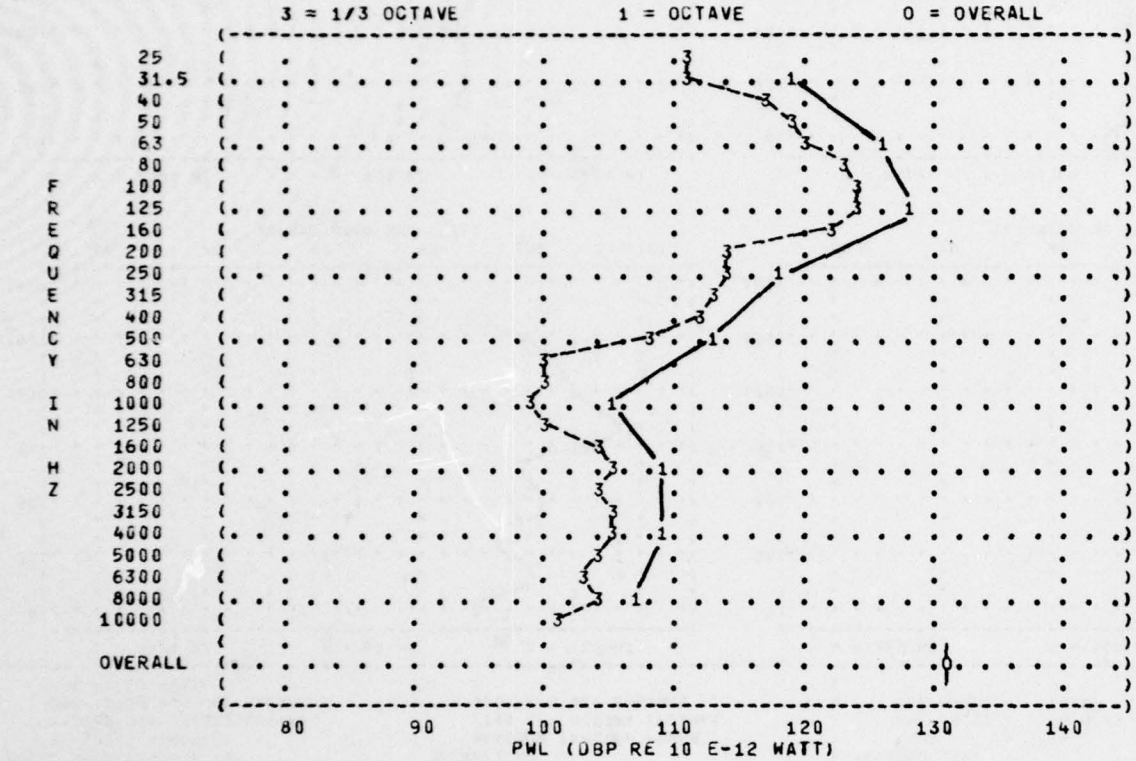


FIGURE: ACOUSTIC POWER LEVEL (PWL)

4

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:	IDENTIFICATION:
AC-123K AIRCRAFT	IDLE POWER	TEMP = 31 C	OMEGA 1.4
R-2800-99W RECIP ENGINE	650 RPM	BAR PRESS = .763 M HG	TEST 75-002-020
J85-GE-17 AUX JET ENGINE	BOTH ENGINES, NO JETS	REL HUMID = 68 %	RUN 01
FAR FIELD NOISE			16 APR 75
			PAGE 3



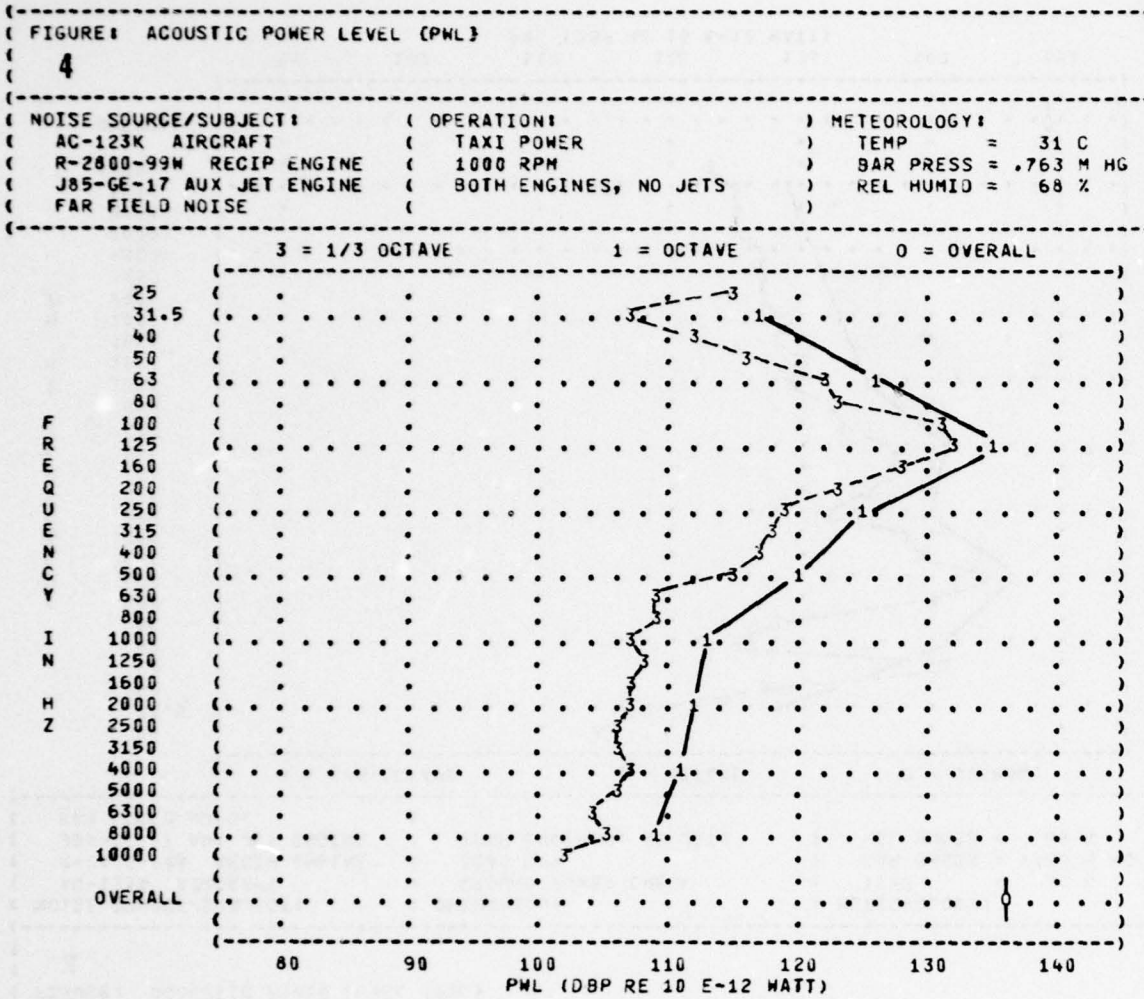
	PWL 1/3 OCTAVE	PWL OCTAVE
25	110.7	
31.5	111.2	116.6
40	116.8	
50	118.7	
63	120.4	125.8
80	122.9	
100	124.0	
125	123.8	128.1
160	122.1	
200	114.5	
250	113.9	118.5
315	112.5	
400	111.7	
500	107.8	113.4
630	99.7	
800	100.5	
1000	99.0	104.7
1250	100.2	
1600	103.9	
2000	104.7	108.9
2500	103.6	
3150	105.4	
4000	104.5	109.4
5000	103.7	
6300	102.7	
8000	103.7	107.3
10000	100.9	
OVERALL		130.9

FIGURE: ACOUSTIC POWER LEVEL (PWL)

4

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
AC-123K AIRCRAFT	TAXI POWER	TEMP = 31 C
R-2800-99W RECIP ENGINE	1000 RPM	BAR PRESS = .763 M HG
J85-GE-17 AUX JET ENGINE	BOTH ENGINES, NO JETS	REL HUMID = 68 %
FAR FIELD NOISE		

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 3

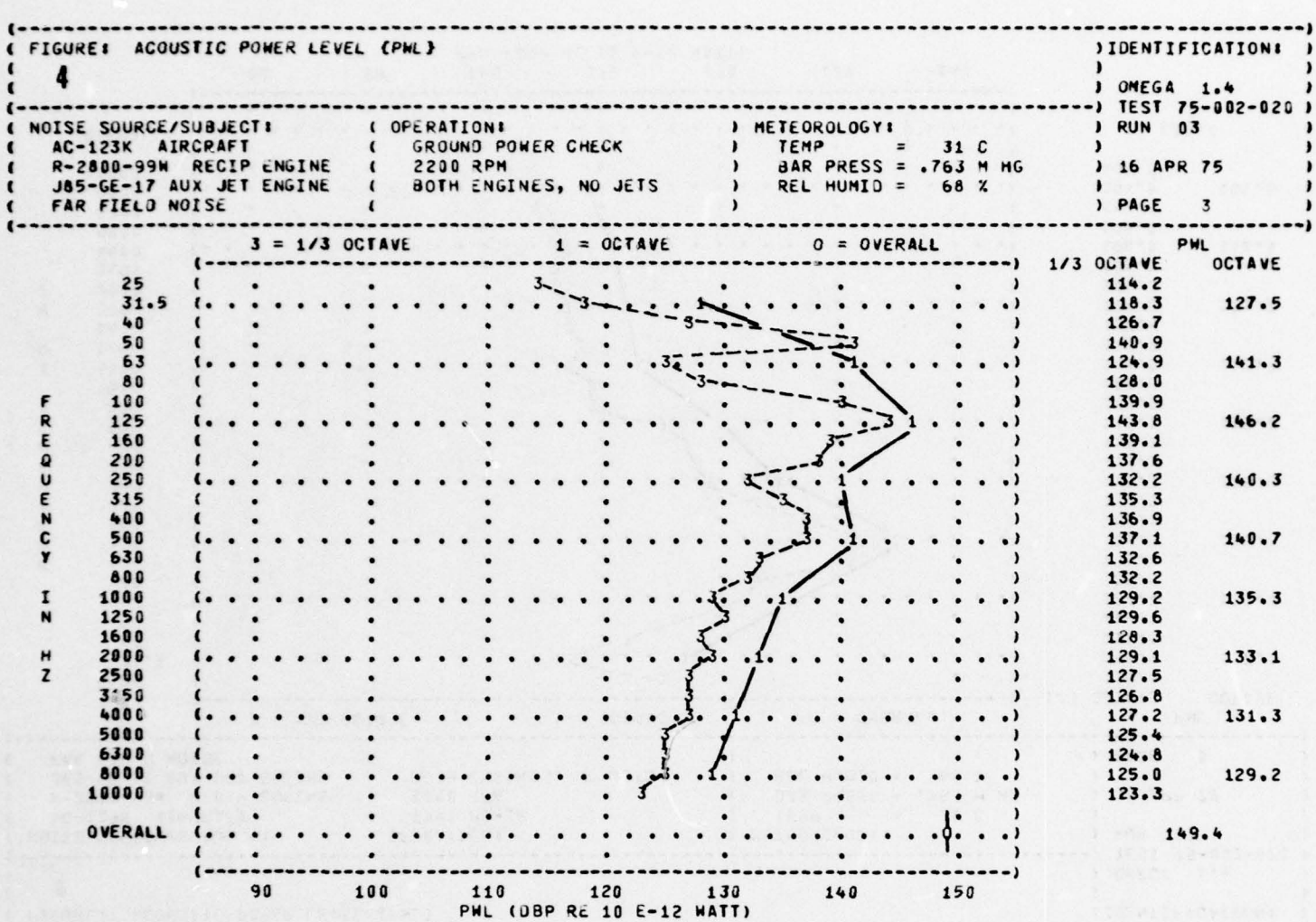


	1/3 OCTAVE	PWL OCTAVE
25	114.8	
31.5	106.9	117.0
40	111.8	
50	116.0	
63	122.4	126.0
80	122.8	
100	131.0	
125	131.5	135.2
160	128.1	
200	122.5	
250	119.3	125.2
315	118.1	
400	117.2	
500	115.1	119.7
630	109.5	
800	108.8	
1000	106.5	112.7
1250	108.2	
1600	107.4	
2000	107.0	111.7
2500	106.3	
3150	106.2	
4000	106.8	111.0
5000	105.5	
6300	104.0	
8000	104.8	108.6
10000	102.0	
OVERALL		136.3

FIGURE: ACOUSTIC POWER LEVEL (PWL)

4

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:	IDENTIFICATION:
AC-123K AIRCRAFT	GROUND POWER CHECK	TEMP = 31 C	OMEGA 1.4
R-2800-99W RECIP ENGINE	2200 RPM	BAR PRESS = .763 M HG	TEST 75-002-020
J85-GE-17 AUX JET ENGINE	BOTH ENGINES, NO JETS	REL HUMID = 68 %	RUN 03
FAR FIELD NOISE			16 APR 75
			PAGE 3



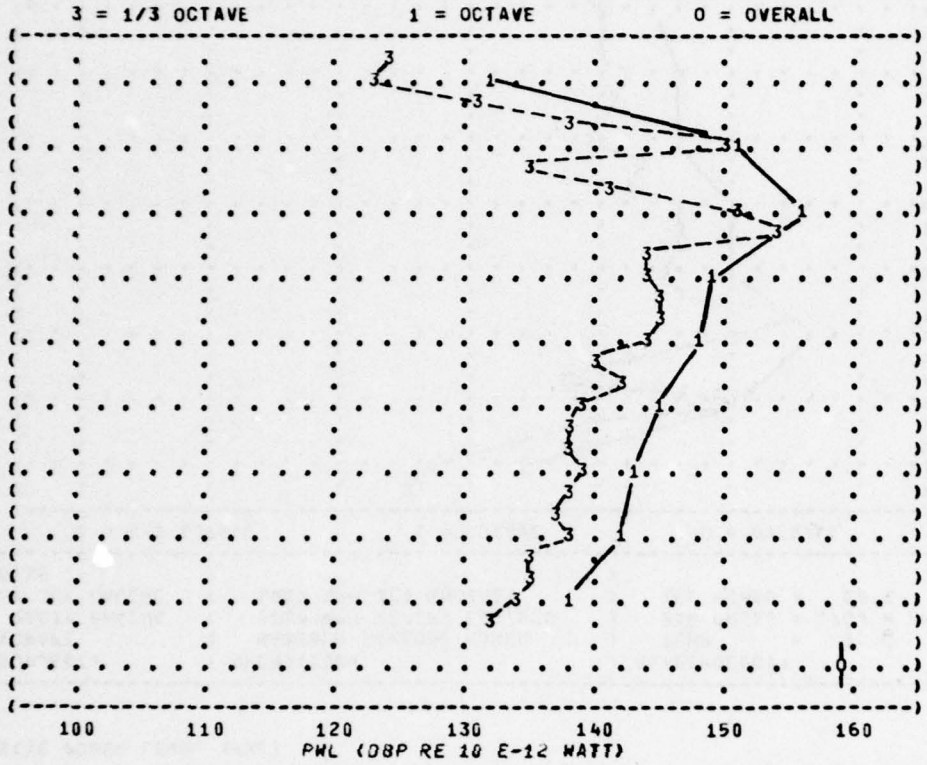
	PWL 1/3 OCTAVE	PWL OCTAVE
25	114.2	
31.5	118.3	127.5
40	126.7	
50	140.9	
63	124.9	141.3
80	128.0	
100	139.9	
125	143.8	146.2
160	139.1	
200	137.6	
250	132.2	140.3
315	135.3	
400	136.9	
500	137.1	140.7
630	132.6	
800	132.2	
1000	129.2	135.3
1250	129.6	
1600	128.3	
2000	129.1	133.1
2500	127.5	
3150	126.8	
4000	127.2	131.3
5000	125.4	
6300	124.8	
8000	125.0	129.2
10000	123.3	
OVERALL		149.4

FIGURE: ACOUSTIC POWER LEVEL (PWL)

4

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
AC-123K AIRCRAFT	MAXIMUM RECIP. POWER	TEMP = 31 C
R-2800-99W RECIP ENGINE	2700 RPM	BAR PRESS = .763 M HG
J85-GE-17 AUX JET ENGINE	BOTH ENGINES, NO JETS	REL HUMID = 68 %
FAR FIELD NOISE		

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 3



1/3 OCTAVE	PWL OCTAVE
124.1	
122.9	132.2
130.8	
137.8	
150.4	150.7
135.1	
140.7	
150.6	155.7
153.9	
144.1	
143.8	149.3
145.5	
145.0	
144.1	148.3
140.4	
142.1	
139.1	144.8
137.7	
138.4	
138.6	143.1
137.9	
137.2	
137.7	141.6
135.3	
134.5	
134.1	138.4
131.7	
	158.6

FIGURE: ACOUSTIC POWER LEVEL (PWL)

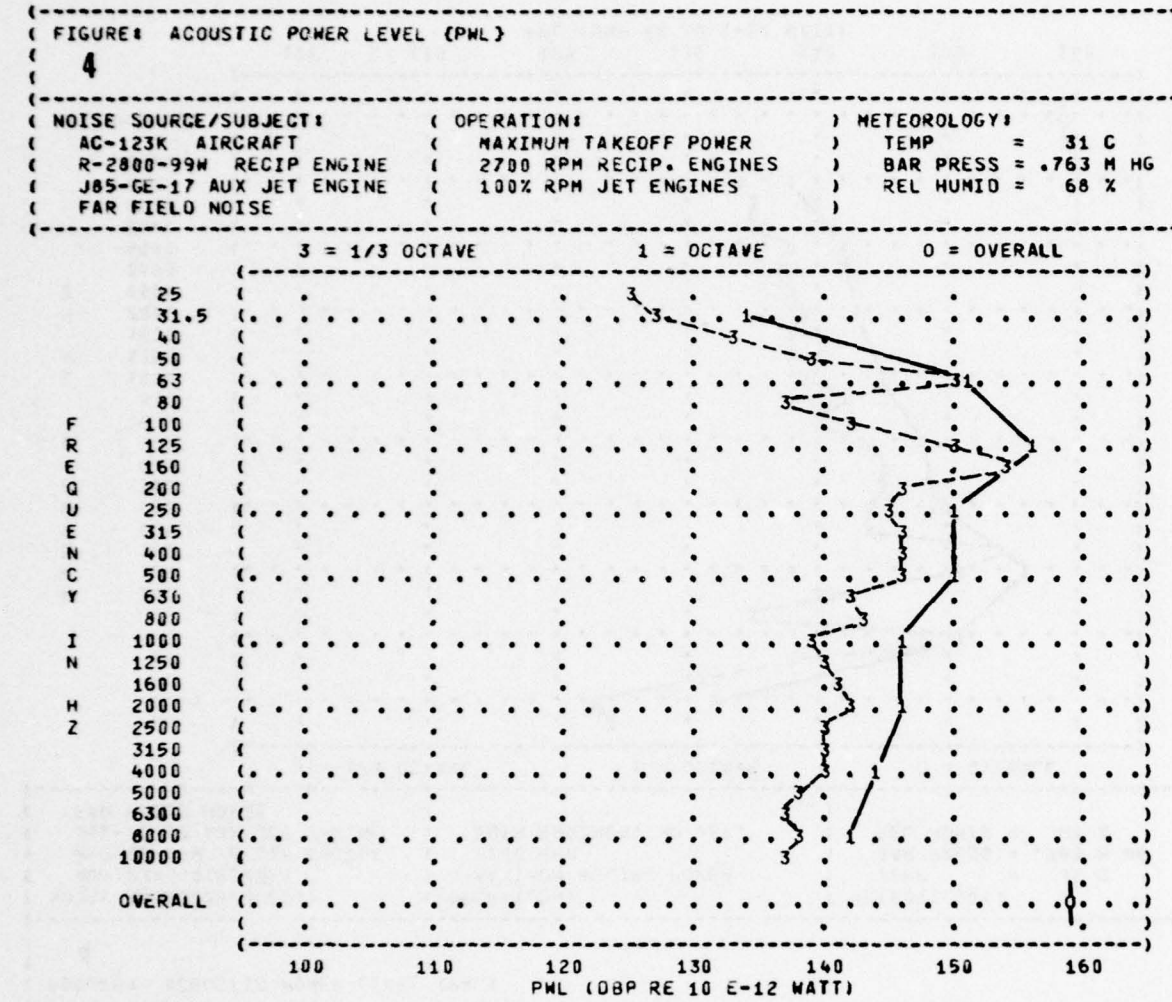
4

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .763 M HG
REL HUMID = 68 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	124.8	
31.5	126.6	134.3
40	132.8	
50	138.6	
63	150.3	150.8
80	137.2	
100	142.3	
125	149.8	155.8
160	154.2	
200	145.9	
250	144.8	150.4
315	145.9	
400	146.3	
500	146.0	149.9
630	142.1	
800	142.8	
1000	139.0	145.6
1250	139.7	
1600	141.4	
2000	142.3	146.2
2500	140.4	
3150	140.2	
4000	139.8	144.2
5000	138.1	
6300	137.4	
8000	137.8	142.2
10000	136.9	
OVERALL		159.2

TABLE: DIRECTIVITY INDEX (DB)

6

IDENTIFICATION:

OMEGA 1.4

TEST 75-002-020

RUN 01

16 APR 75

PAGE 4

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .763 M HG
REL HUMID = 68 %

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	0	2	3	1	-1	-0	3	2	1	-1		-2	0		0	1	-1	2	-1
31.5	-0	-1	-0	0	2	-2	-1	-1	-2	-2	-2	-1	-2	-1	4	5	1	-1	-2
40	2	2	-0	-0	-0	-1	-0	-0	-0	-0	2	1	-0	-2	-1	-1	-2	-0	-0
50	1	2	1	1	3	-1	-2	-1	-2	-3	-3	1	-0	2	1	0	2	1	2
63	2	2	1	1	0	-0	1	-0	-1	1	1	0	0	-0	-1	0	-1	-2	-3
80	3	4	2	2	2	1	1	-0	-0	-1	-2	0	-2	-3	-1	-0	-0	-1	-1
100	-1	-0	-1	-0	0	-0	-1	1	2	2	1	1	-2	-2	-3	-3	-1	-1	-4
125	-3	-1	-1	-2	-1	2	0	-2	-3	-0	1	1	3	1	-2	0	-5	-8	-9
160	-5	-2	-2	-1	3	2	-1	-1	-2	-2	0	0	-0	4	-1	-1	-3	-6	-8
200	-2	-2	-2	1	2	1	-1	-0	-2	-2	1	1	-2	1	2	1	-3	-4	-5
250	-2	-3	1	-0	-1	1	0	0	-1	-2	1	-0	0	-0	3	1	-3	-3	-4
315	-5	-3	-2	-1	-0	0	0	-0	-0	1	-3	-2	-2	-1	3	4	-1	-4	-5
400	-7	-4	-1	1	-0	-0	-1	-2	-2	-1	-3	-0	-0	1	5	4	1	-3	-5
500	-8	-6	-2	-2	-3	-3	-3	-3	-4	-4	-1	3	-0	0	4	5	3	-1	-4
630	-2	-2	-3	-3	-3	-3	-4	-3	-3	-2	-1	1	0	1	3	6	4	1	-1
800	0	1	-0	-0	-1	-1	-1	-3	-3	-2	-1	-0	-0	2	3	5	2	2	-1
1000	1	-0	1	2	2	-0	-0	-3	-4	-2	1	0	-1	2	2	0	-1	-1	-3
1250	-1	-2	0	2	-0	-1	1	-1	-1	-2	-3	-2	-2	4	4	1	-1	-1	-3
1600	-3	-4	-1	0	-0	0	1	-0	1	-1	-3	-3	-4	4	4	-1	-1	-3	-6
2000	-8	-7	-4	-2	-2	-1	-2	1	1	1	1	-0	-1	1	2	-0	-1	-2	-6
2500	-4	-5	-3	-2	-3	-3	-1	-2	1	1	3	2	-1	1	-1	-2	-1	-1	-4
3150	-9	-9	-6	-3	-5	-3	-2	0	2	2	2	3	-1	2	-1	-3	-2	-3	-5
4000	-8	-8	-5	-4	-5	-5	-3	-2	-1	2	5	0	-0	1	-1	-2	-2	-2	-3
5000	-9	-8	-6	-5	-5	-4	-0	-1	1	1	4	1	-0	1	-1	-3	-2	-2	-5
6300	-9	-8	-5	-4	-5	-4	-2	-1	1	2	3	1	0	1	-0	-2	-0	-2	-4
8000	-9	-8	-5	-4	-5	-4	-2	-1	1	3	3	1	1	1	1	-1	-1	-1	-3
10000	-9	-8	-6	-5	-5	-4	-2	-1	1	3	2	1	1	1	1	-1	-1	-1	-3
OCTAVE																			
31.5	1	1	1	0	0	-1	1	-0	-0	-0	0	1	-1	-2	1	1	-1	0	-1
63	3	3	2	1	2	0	0	-0	-1	-1	-1	0	-1	-1	-1	0	0	-1	-1
125	-2	-1	-1	-1	1	1	-1	-1	-0	0	1	1	1	1	-2	-1	-3	-4	-6
250	-3	-3	-1	0	1	1	-0	-0	-1	-1	0	-0	-1	-0	3	2	-2	-4	-5
500	-7	-4	-2	0	-1	-1	-1	-2	-3	-2	-2	1	-0	0	4	4	2	-2	-5
1000	-0	-0	0	1	0	-1	0	-2	-3	-2	-1	-1	-1	3	3	3	1	0	-2
2000	-5	-5	-2	-1	-1	-1	-0	0	1	0	1	0	-2	2	2	-1	-1	-2	-5
4000	-8	-8	-6	-4	-5	-3	-2	-1	1	2	3	1	-1	1	-1	-3	-2	-2	-4
8000	-9	-8	-5	-4	-5	-4	-2	-1	1	2	3	1	1	1	1	-1	-1	-2	-3
OVERALL	-0	1	0	0	1	1	-0	-1	-0	-0	0	0	0	0	-1	-0	-1	-2	-3

TABLE: DIRECTIVITY INDEX (DB)

6

IDENTIFICATION:

OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 4

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .763 M HG
REL HUMID = 68 %

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	4	5	0	-1	-0	-2	-6					-6	1	5	7	6	3	-2
31.5	5	4	5	3		2	4							1	3	5	4	5	5
40	5	5	6	3	4	-3	0	-2				-1	3	-1	-0	0	0	1	5
50	5	6	5	2	3	-3	-2	-3	-6	-3	-3	-0	1	-1	0	2	2	-1	1
63	2	3	1	0	2	0	-1	-2	-5	-1	0	2	1	2	2	-1	-5	-5	-3
80	4	4	3	2	2	1	0	-1	-1	-0	0	-0	-3	-3	-2	1	1	1	1
100	1	2	1	1	0	0	0	1	1	2	1	-1	-5	-6	-2	0	-2	-5	-5
125	-1	2	1	-0	2	3	1	-3	-6	-4	-7	-1	5	2	-5	-1	-6	-11	-12
160	1	2	2	2	2	1	-0	-2	-3	-1	2	-1	-0	2	-1	1	-5	-8	-10
200	2	1	1	0	4	2	1	-1	-2	-3	-2	-2	-1	1	1	2	-1	-6	-6
250	0	0	3	0	1	-1	2	-0	0	-3	-3	-2	-3	-2	3	4	0	-5	-9
315	-1	-1	0	-1	1	-3	-1	-2	-2	-2	-5	-4	-3	-1	4	7	4	-5	-12
400	-3	-1	1	2	1	-1	-3	-3	-6	-4	-4	-3	-1	0	5	6	5	-6	-11
500	-2	-0	2	1	1	-2	-3	-5	-7	-8	-6	-2	-3	1	5	5	7	-8	-11
630	2	2	1	0	1	-2	-2	-4	-5	-7	-5	-2	-3	1	5	6	7	-5	-10
800	3	4	1	1	-1	-3	-3	-5	-9	-7	-5	-6	-3	1	5	6	7	-4	-7
1000	2	2	3	3	2	-0	-0	-3	-5	-6	-5	-4	-3	2	3	3	4	-4	-7
1250	2	1	3	3	3	1	2	-1	-2	-4	-4	-4	-2	2	1	0	2	-6	-9
1600	1	1	1	1	-0	-0	-0	-1	0	-3	-3	-2	-1	4	3	1	2	-4	-8
2000	-1	-0	-0	0	-1	-2	-1	1	1	1	-2	-2	-1	2	2	0	1	-4	-8
2500	0	0	0	0	-1	-3	-1	-1	1	1	0	0	-1	2	1	-1	1	-4	-7
3150	-2	-2	-2	-1	-2	-3	-2	-1	2	2	1	0	-1	2	-1	-2	-1	-5	-7
4000	-2	-2	-2	-2	-2	-2	-2	0	1	4	1	0	1	-0	-1	-2	-0	-5	-7
5000	-4	-2	-3	-2	-3	-3	-1	-1	2	3	2	-0	-1	-0	-2	-3	-1	-5	-7
6300	-3	-2	-2	-2	-2	-3	-2	0	2	3	2	0	0	-0	-1	-2	-1	-5	-6
8000	-4	-2	-3	-2	-3	-2	-1	-0	1	3	1	0	1	-0	-1	-2	-1	-4	-6
10000	-3	-2	-3	-2	-2	-3	-1	0	2	3	1	0	-1	0	-1	-3	-1	-5	-5
OCTAVE																			
31.5	3	5	5	2	1	-1	-0	-5					-1	0	4	6	5	3	2
63	4	4	3	1	2	0	-0	-2	-3	-1	-0	1	-0	-0	-0	0	-1	-1	-0
125	0	2	1	1	1	2	0	-1	-1	-1	-1	-1	2	0	-3	0	-4	-7	-8
250	1	1	1	-0	3	1	1	-1	-1	-3	-2	-2	-2	-0	2	4	1	-6	-7
500	-2	-0	1	2	1	-2	-3	-4	-7	-5	-5	-3	-2	1	5	6	6	-6	-11
1000	3	3	2	2	2	-0	-0	-3	-4	-5	-5	-4	-3	2	4	4	5	-5	-7
2000	0	0	0	0	-1	-1	-1	-0	1	-0	-1	-1	-1	3	2	0	1	-4	-8
4000	-3	-2	-2	-1	-2	-3	-2	-1	2	3	2	0	-0	1	-1	-2	-1	-5	-7
8000	-3	-2	-3	-2	-3	-3	-2	0	2	3	1	0	0	-0	-1	-2	-1	-4	-6
OVERALL	1	2	1	1	1	2	0	-1	-2	-1	-1	-1	2	0	-1	1	-2	-6	-6

TABLE: DIRECTIVITY INDEX (DB)

6

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 4

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .763 M HG
REL HUMID = 68 %

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	0	-3	-2	2	-2	-0	0	1	1	-0	-3	-2	0	0	1	-1	5		
31.5	-0	-2	-1	-0	-1	-0	1	-1	1	1	-1	0	2	-0	-0	-1	-2		
40	-2	-1	-3	1	-0	-2	-1	-1	1	1	1	-1	1	3	-2	-4	-3		
50	-3	0	-4	1	0	-3	-2	-2	0	2	0	-2	1	4	-1	-2	-3		
63	2	1	-0	2	-0	-1	-0	-1	-0	-0	-0	-0	1	2	-0	-1	-4		
80	6	5	4	2	-1	-2	-1	-1	-3	-2	1	0	-1	1	2	2	-3		
100	-3	1	2	3	-3	-2	1	-0	-4	-2	3	2	-3	2	-1	-2	-13		
125	-5	-6	-4	-3	-2	3	2	-1	-5	-1	1	4	4	-6	-4	-7	-15		
160	2	1	-2	1	-1	-3	4	-0	-4	0	3	1	0	-1	-4	-7	-10		
200	2	3	2	4	-2	-4	3	0	-2	-3	-1	1	2	1	-0	-6	-9		
250	5	2	4	5	2	-1	2	-0	-3	-5	-1	-3	-1	1	-0	-5	-7		
315	1	1	4	6	4	-2	2	-2	-4	-6	-2	-4	-2	0	-0	-1	-8		
400	-2	-3	3	7	3	-2	1	-5	-2	-7	-1	-3	1	0	-1	0	-7		
500	-3	-3	2	4	2	-1	1	-3	1	-6	1	-1	0	2	-1	-3	-9		
630	-3	-3	0	2	1	-3	1	-4	-3	-4	4	0	-0	2	-0	0	-7		
800	-1	1	0	1	1	-3	-1	-2	-3	-4	0	-0	3	2	2	2	-7		
1000	1	1	0	1	-0	-3	-1	-2	0	-3	2	1	1	2	1	2	-6		
1250	0	-0	0	1	-1	-3	-1	-2	1	-2	2	1	1	1	0	1	-8		
1600	-1	0	1	1	-0	-1	0	-1	0	1	0	0	2	0	-1	-1	-9		
2000	-1	-1	0	1	-0	-0	1	2	2	0	-1	-2	0	-1	-3	-3	-9		
2500	-2	-2	-0	0	0	-1	1	2	2	1	0	-1	-1	-1	-2	-4	-9		
3150	-2	-2	-0	-0	-1	-2	1	1	3	4	1	-3	-2	-4	-4	-6	-11		
4000	-3	-2	1	-1	-1	-1	2	2	3	2	1	-2	-2	-3	-4	-6	-11		
5000	-3	-3	-1	-1	-0	-0	2	2	3	3	-0	-3	-2	-4	-5	-7	-11		
6300	-3	-2	-1	-0	0	-0	2	3	3	3	-0	-3	-3	-4	-5	-7	-11		
8000	-3	-3	-1	-0	-0	-0	2	2	3	2	-0	-3	-3	-4	-6	-7	-11		
10000	-3	-2	-0	0	0	0	2	2	3	2	-1	-3	-3	-5	-6	-7	-11		
OCTAVE																			
31.5	-1	-1	-3	1	-0	-2	-1	-1	1	1	0	-1	1	2	-1	-3	-2		
63	-2	1	-3	2	0	-2	-2	-2	0	2	0	-2	1	4	-0	-2	-3		
125	-2	-2	-2	-0	-2	1	2	-1	-4	-1	2	3	2	-2	-3	-5	-13		
250	3	2	3	5	2	-3	2	-0	-3	-4	-1	-1	1	1	-0	-3	-8		
500	-3	-3	2	5	2	-2	1	-4	-0	-6	1	-2	1	1	-1	-1	-8		
1000	-0	1	0	1	0	-3	-1	-2	-1	-3	1	0	2	2	2	2	-7		
2000	-1	-1	0	1	-0	-1	1	1	2	1	0	-1	0	-1	-2	-2	-9		
4000	-3	-2	-0	-1	-1	-1	2	2	3	3	1	-3	-2	-3	-4	-6	-11		
8000	-3	-3	-1	0	0	-0	2	2	3	3	-0	-3	-3	-4	-6	-7	-11		
OVERALL	-1	-1	-0	2	-0	-0	1	-1	-2	-1	1	2	2	1	-2	-3	-8		

TABLE: DIRECTIVITY INDEX (DB)

6

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 4

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .763 M HG
REL HUMID = 68 %

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	-5	-3	-3	-4	-3	-3	-2	-2	-1	-1	7	-5	-1	8		
31.5	-4	-2	-1	-1	-0	-2	-4	-3	-1	-1	1	-0	-1	-2	-2	-1	9		
40	-6	-6	-5	-5	-6	-4	-1	-0	-1	0	2	3	4	1	-2	-2	1		
50	1	-1	-1	-5	-9	-6	-1	-2	-4	1	6	2	-1	-0	2	-7	-8		
63	-3	-2	-0	-5	-8	-5	-2	-2	-2	3	6	2	-1	-1	-0	-10	-11		
80	5	3	0	-0	-0	-2	-3	-4	-4	-4	-2	-0	2	4	4	2	-7		
100	-1	-2	-2	-2	-0	-0	-1	-2	-3	-2	0	2	4	2	-1	-2	-10		
125	-4	-4	-3	-2	0	0	-0	-3	-5	-3	1	4	4	0	-4	-8	-13		
160	-3	-1	1	-0	-2	-1	0	-3	-5	-3	1	4	5	1	-6	-7	-15		
200	-1	-1	1	-1	-3	-3	-3	-3	-3	1	5	4	1	-2	-5	-9	-15		
250	2	2	2	2	1	0	-1	-1	-0	2	4	-1	-6	-5	-3	-8	-17		
315	1	2	2	2	1	1	-0	-1	-1	2	3	0	-2	-2	-2	-4	-12		
400	-0	1	4	5	3	0	-2	-3	-4	-3	0	1	1	0	-2	-5	-13		
500	-3	-0	4	3	1	0	-1	-1	-1	-1	0	0	0	1	0	-6	-14		
630	-4	-2	2	0	-1	-1	-1	-2	-2	-0	2	2	1	1	2	-3	-10		
800	-4	-4	-1	-2	-3	-4	-4	-3	-2	-0	1	3	4	3	-0	-6	-12		
1000	-2	-2	-1	-2	-3	-3	-1	-2	0	1	2	2	2	2	1	-4	-10		
1250	-1	-0	1	-0	-1	-1	-1	-0	-0	1	2	2	1	1	-0	-5	-9		
1600	-3	-0	2	2	1	1	1	1	1	1	0	0	0	-2	-5	-8	-12		
2000	-3	-1	1	0	-0	1	2	2	2	1	-0	-1	-1	-3	-5	-9	-12		
2500	-3	-1	1	0	-1	0	2	2	2	1	1	-0	-1	-3	-4	-9	-12		
3150	-4	-2	0	-0	-1	0	2	2	2	2	1	-0	-2	-4	-6	-9	-13		
4000	-6	-3	-0	-0	-1	0	2	2	2	2	2	0	-2	-4	-6	-9	-13		
5000	-5	-3	-1	-1	-1	0	1	2	3	2	1	-0	-2	-4	-6	-9	-12		
6300	-5	-2	-0	-0	-0	1	2	2	2	2	1	-0	-2	-4	-6	-9	-12		
8000	-5	-3	-1	-1	-1	1	2	2	2	1	1	-0	-1	-4	-6	-9	-12		
10000	-5	-3	-1	-1	-0	1	2	2	3	2	1	-0	-2	-4	-6	-9	-12		
OCTAVE																			
31.5	-6	-5	-4	-4	-5	-4	-1	-1	-1	-0	1	2	3	2	-2	-2	5		
63	-2	-2	-0	-5	-7	-5	-2	-2	-2	3	5	2	-1	-1	-0	-8	-11		
125	-4	-2	-0	-1	-1	-0	0	-3	-5	-3	1	4	5	1	-5	-7	-14		
250	1	1	2	1	0	-0	-1	-2	-1	1	4	2	-1	-3	-3	-6	-14		
500	-2	0	4	4	2	-0	-1	-2	-2	-1	1	1	1	1	0	-5	-13		
1000	-3	-2	-1	-2	-3	-3	-2	-2	-1	0	1	3	3	2	-0	-5	-11		
2000	-3	-1	2	1	0	1	2	2	1	1	0	-0	-1	-3	-5	-9	-12		
4000	-5	-2	-0	-0	-1	0	2	2	2	2	2	-0	-2	-4	-6	-9	-13		
8000	-5	-3	-0	-1	-1	1	2	2	2	2	1	-0	-2	-4	-6	-9	-12		
OVERALL	-2	-1	1	-0	-1	-1	-0	-2	-3	-0	3	3	3	0	-3	-7	-12		

TABLE: DIRECTIVITY INDEX (DB)

6

IDENTIFICATION:

OMEGA 1.4
TEST 75-002-020
RUN 05

16 APR 75

PAGE 4

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .763 M HG
REL HUMID = 68 %

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	-6	-6	-6	-6	-5	-5	-4	-3	-2	-1	-0	0	1	2	4	5	6		
31.5	-6	-6	-5	-5	-4	-4	-3	-2	-2	-2	-2	-1	1	2	4	5	6		
40	-9	-7	-6	-5	-4	-3	-2	-2	-2	-1	1	2	3	3	3	2	1		
50	-11	-7	-3	-5	-6	-3	-3	-4	-5	1	5	3	1	1	0	-2	-4		
63	-9	-6	-3	-5	-6	-4	-2	-3	-4	2	5	3	1	0	-1	-5	-10		
80	-1	-1	-1	-2	-3	-4	-4	-5	-5	-4	-2	-1	2	4	5	4	2		
100	-3	-3	-3	-3	-3	-3	-4	-4	-4	-3	-1	1	4	5	4	2	-1		
125	-7	-6	-3	-2	-1	-1	-2	-4	-5	-3	1	3	5	2	-0	-3	-5		
160	-5	-3	1	0	-0	-1	-1	-3	-5	-2	1	3	4	1	-3	-6	-9		
200	-3	-3	-2	-4	-5	-4	-2	-4	-5	-0	3	2	2	3	4	1	-6		
250	-6	-3	-0	-1	-2	-3	-3	-3	-3	-0	2	2	-0	3	4	1	-5		
315	-4	-2	-0	-1	-2	-2	-1	-2	-2	-1	0	1	2	2	3	2	0		
400	-6	-2	2	1	-1	-2	-3	-3	-3	-3	-2	0	3	3	4	1	-3		
500	-6	-2	1	-0	-2	-2	-3	-3	-2	-3	-3	0	3	4	4	1	-3		
630	-7	-7	-1	-2	-3	-2	-1	-2	-2	-2	-2	-0	2	3	4	2	1		
800	-3	-2	-2	-2	-2	-2	-3	-2	-2	-2	-2	1	4	4	3	0	-2		
1000	-2	-2	-2	-1	-1	-1	-1	-1	0	0	0	1	1	1	1	0	-1		
1250	-1	-1	-1	-0	0	-1	-2	-1	-0	-0	0	2	3	2	1	-1	-3		
1600	-2	-1	-0	-0	0	-1	-2	-1	-0	-0	-1	1	4	2	0	-2	-4		
2000	-3	-2	-1	-1	-0	-1	-1	-1	-1	-0	0	2	3	1	-1	-3	-6		
2500	-3	-2	-1	-0	-0	-1	-1	-1	-0	-0	0	1	2	1	0	-2	-5		
3150	-3	-2	-1	-1	0	-1	-1	0	1	1	2	1	0	-1	-2	-4	-6		
4000	-3	-2	-1	-0	0	-0	-1	-0	0	1	2	1	1	-0	-2	-4	-7		
5000	-2	-1	-1	-0	0	-0	-1	0	2	2	2	1	0	-1	-3	-5	-6		
6300	-2	-1	-1	0	1	0	-0	1	2	1	1	1	0	-2	-4	-6	-8		
8000	0	0	0	1	2	1	1	1	1	1	2	0	-1	-3	-5	-7	-9		
10000	-3	-3	-3	-2	-1	8	-3	-2	-1	-1	0	-1	-3	-5	-7	-9	-11		
OCTAVE																			
31.5	-8	-7	-6	-5	-4	-3	-3	-2	-2	-1	0	1	3	3	3	3	3		
63	-8	-6	-3	-5	-6	-4	-2	-3	-4	1	5	3	1	1	-1	-4	-7		
125	-6	-4	-0	-0	-0	-1	-1	-3	-5	-2	1	3	4	2	-1	-4	-7		
250	-4	-3	-1	-2	-3	-3	-2	-3	-3	-1	2	2	1	3	4	1	-3		
500	-6	-3	1	0	-1	-2	-2	-3	-3	-3	-2	0	3	4	4	1	-2		
1000	-2	-2	-1	-1	-1	-2	-2	-2	-1	-1	-1	1	3	3	2	-0	-2		
2000	-3	-2	-1	-0	-0	-1	-1	-1	-0	-0	0	1	3	1	-0	-2	-5		
4000	-3	-2	-1	-0	0	-0	-1	0	1	1	2	1	1	-1	-2	-4	-6		
8000	-1	-1	-1	0	1	4	-0	0	1	1	1	0	-1	-3	-5	-7	-9		
OVERALL	-5	-3	-0	-1	-1	-1	-2	-3	-3	-1	2	2	3	2	1	-2	-5		

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 13

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

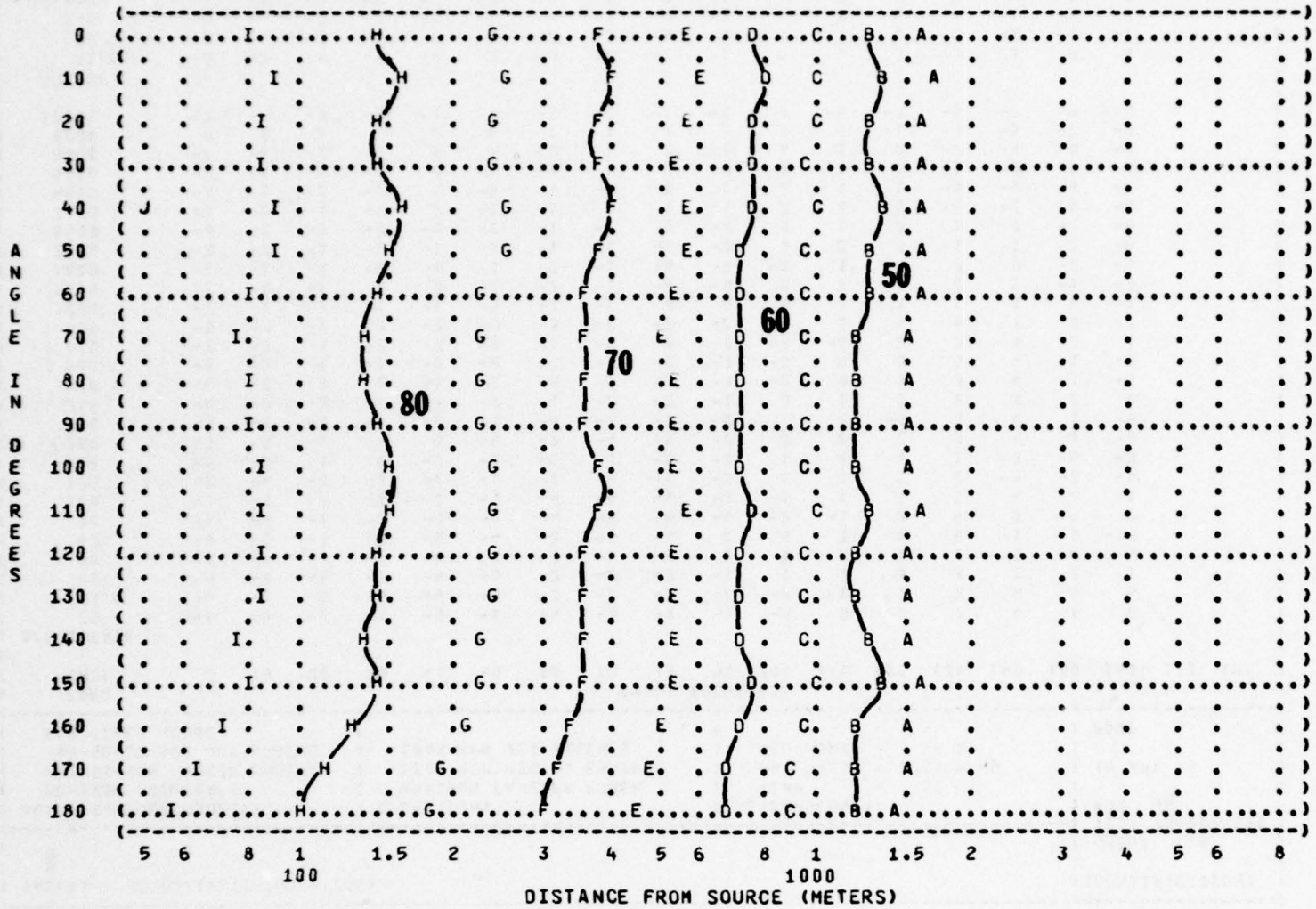


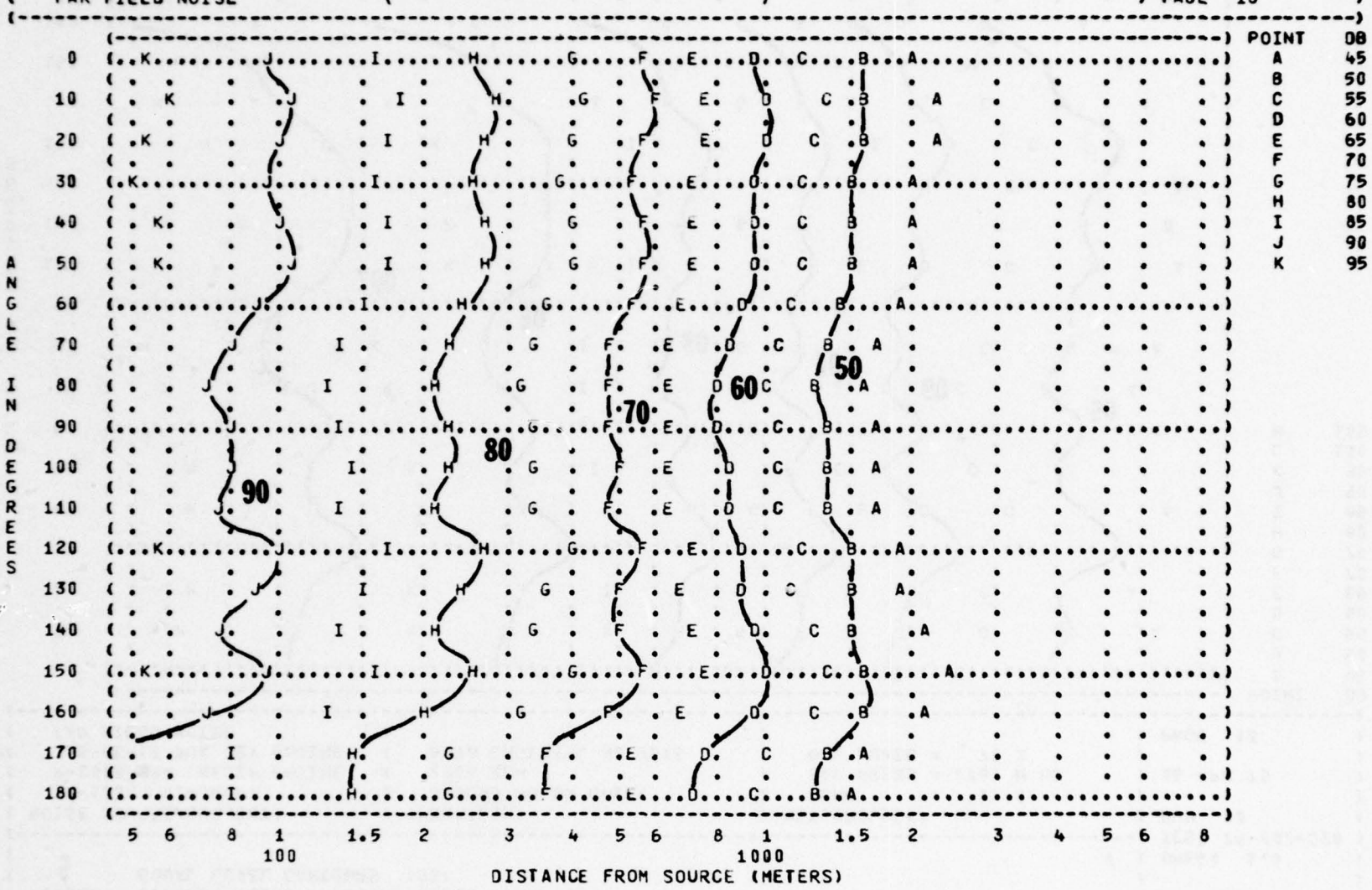
FIGURE: 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 13

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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 75-002-020
RUN 03
16 APR 75
PAGE 13

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

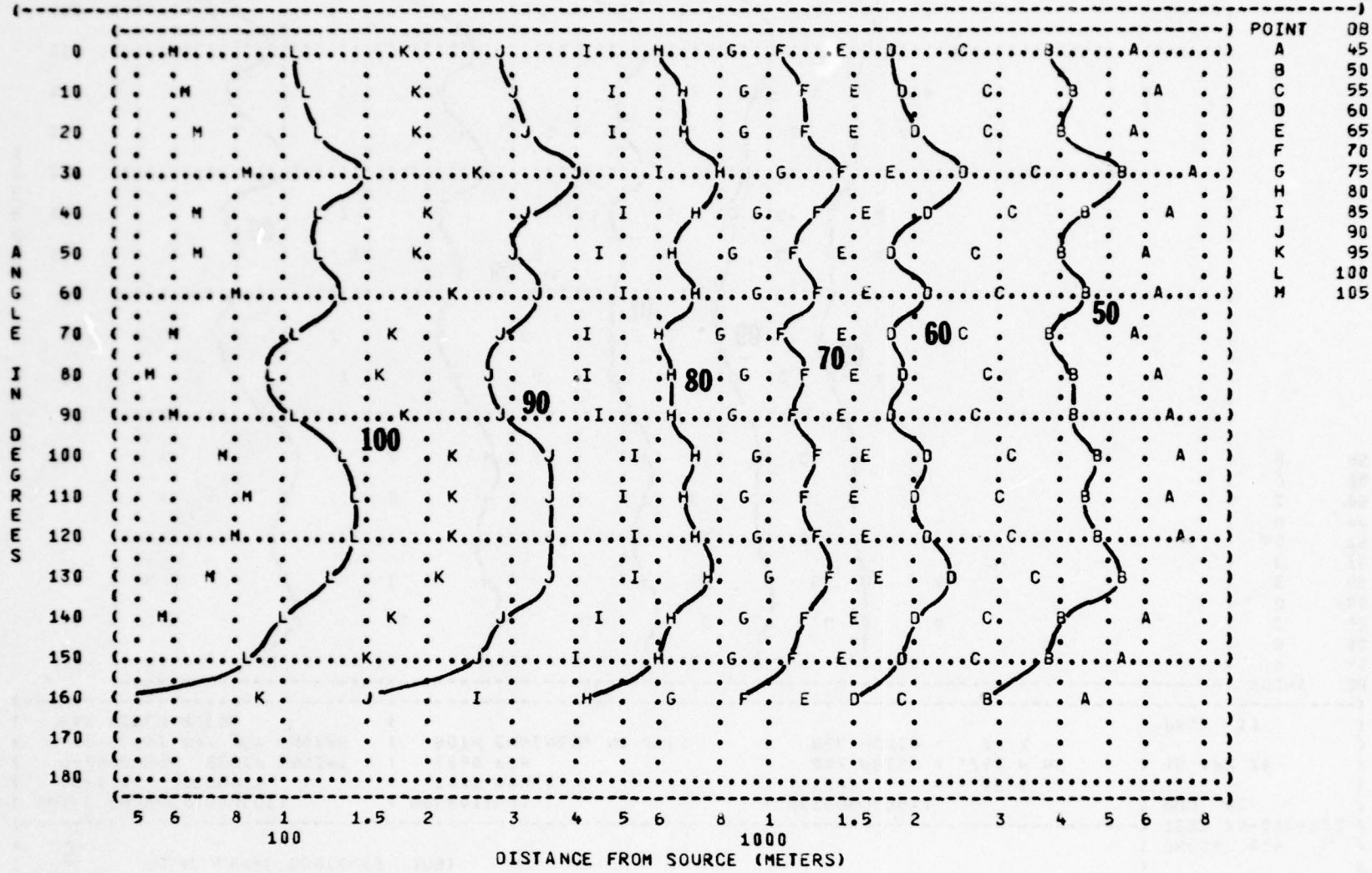


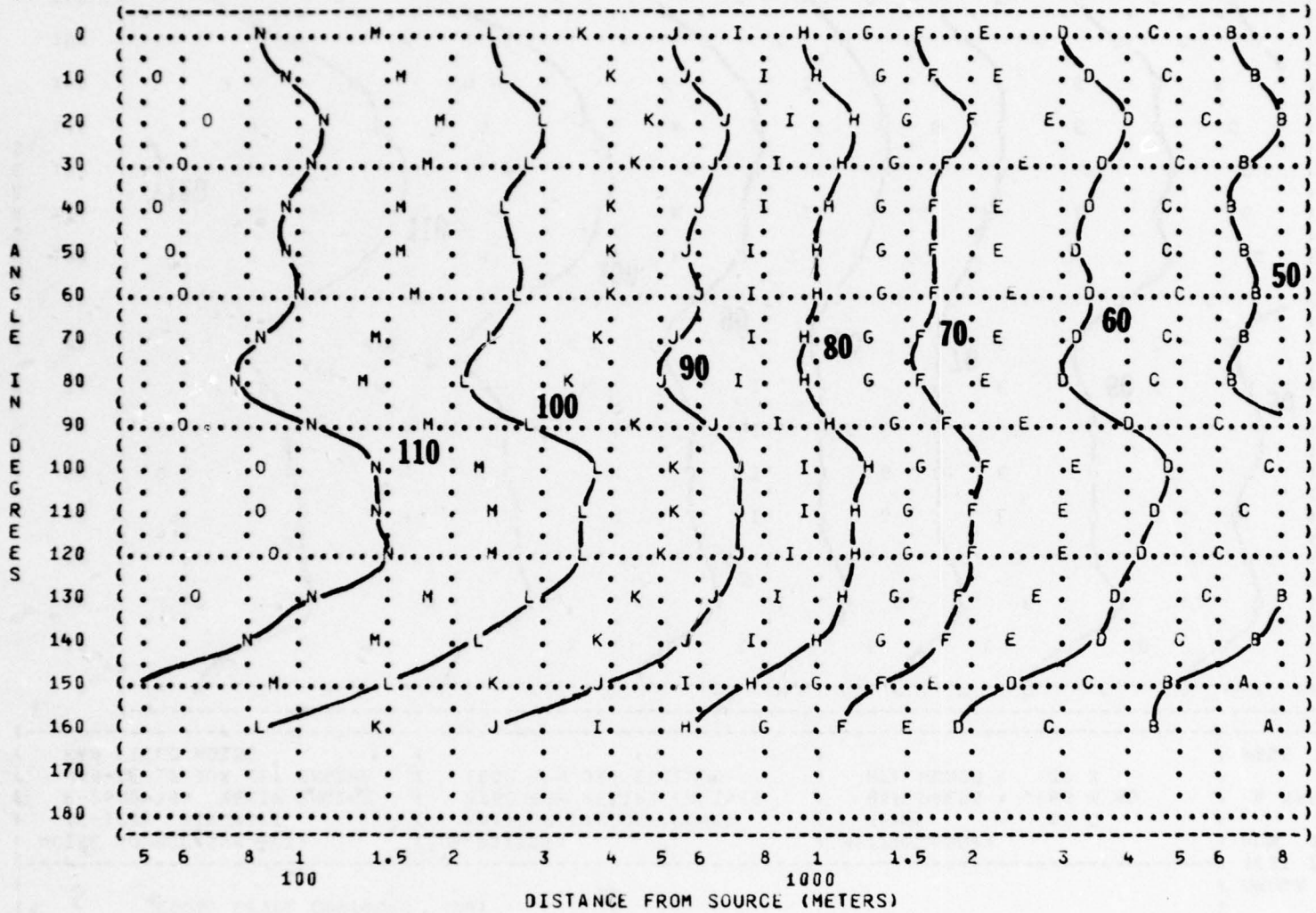
FIGURE: 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
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

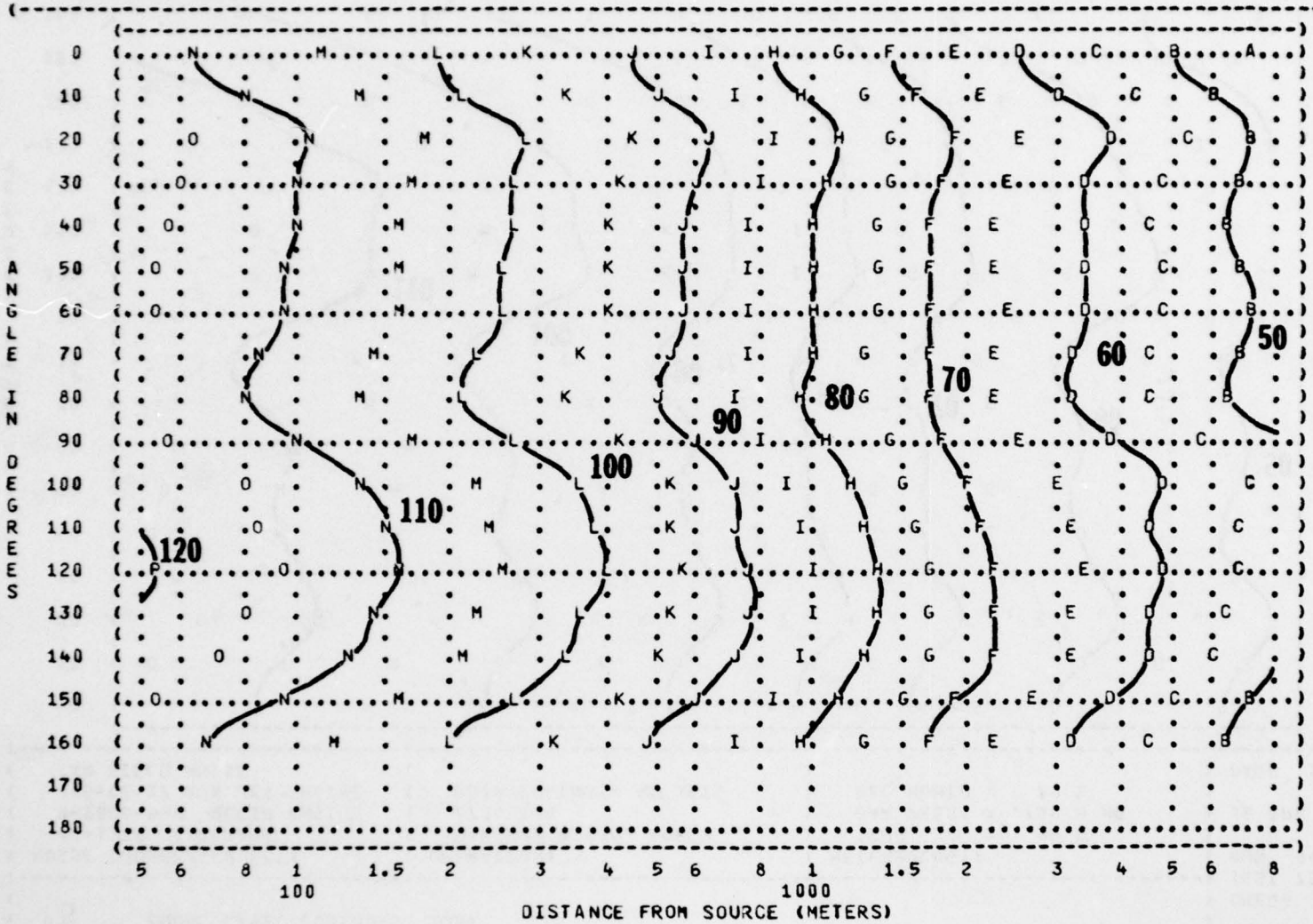
FIGURE: 5 OVERALL SOUND PRESSURE LEVEL (OASPL)
EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
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

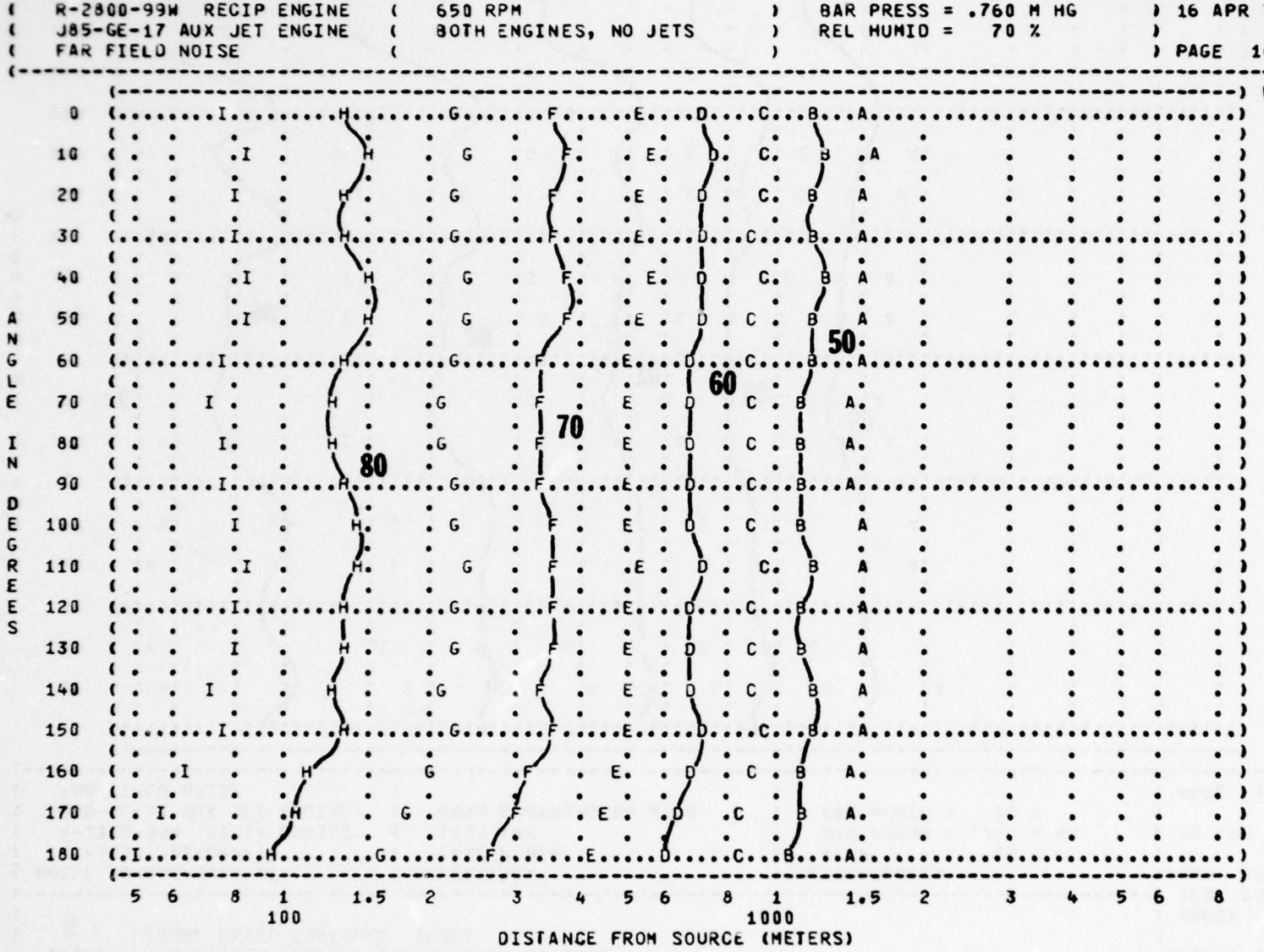
FIGURE: 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 14



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

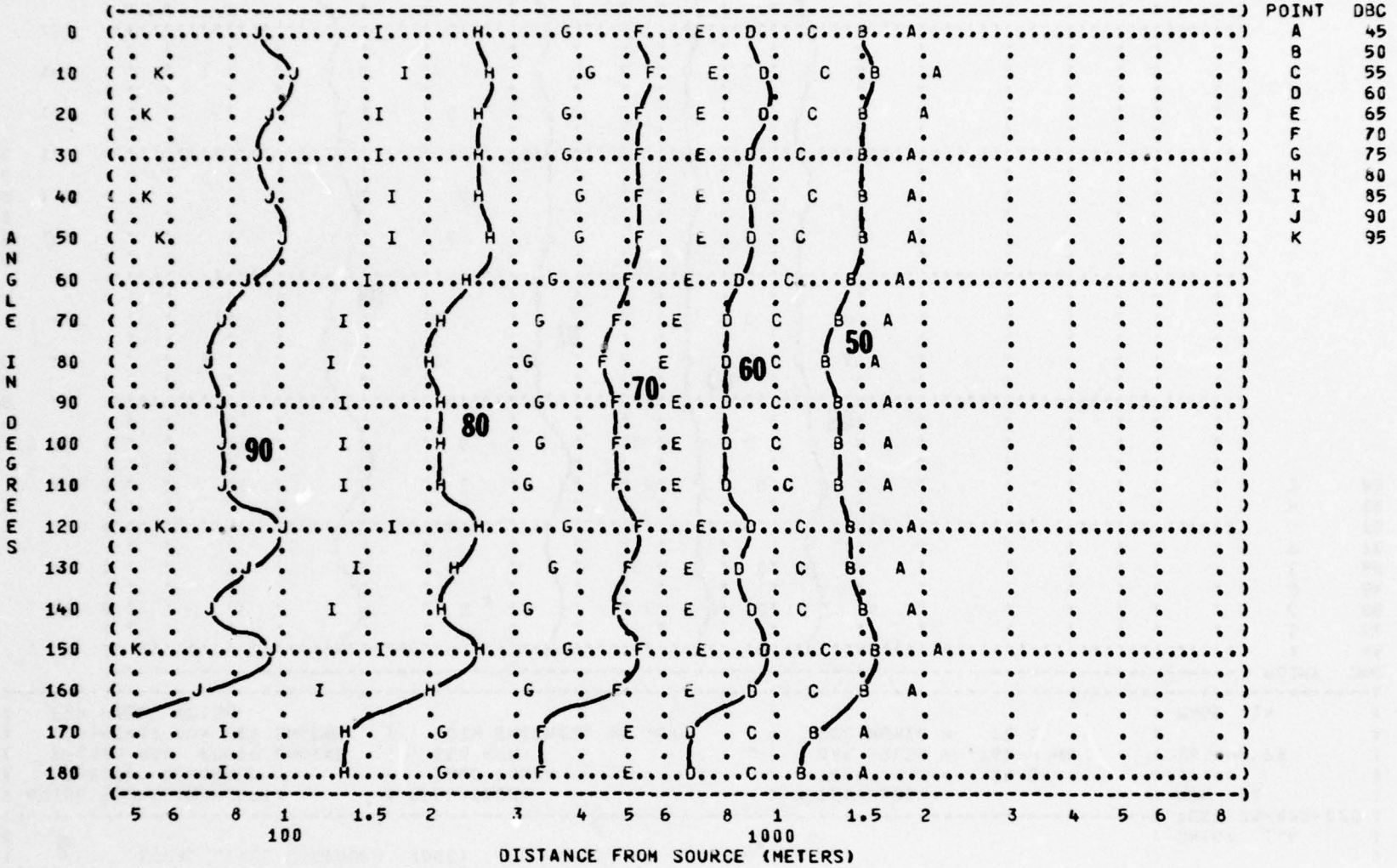
FIGURE: 6 C-WEIGHTED OVERALL SOUND LEVEL (DASLC)
EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 14

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

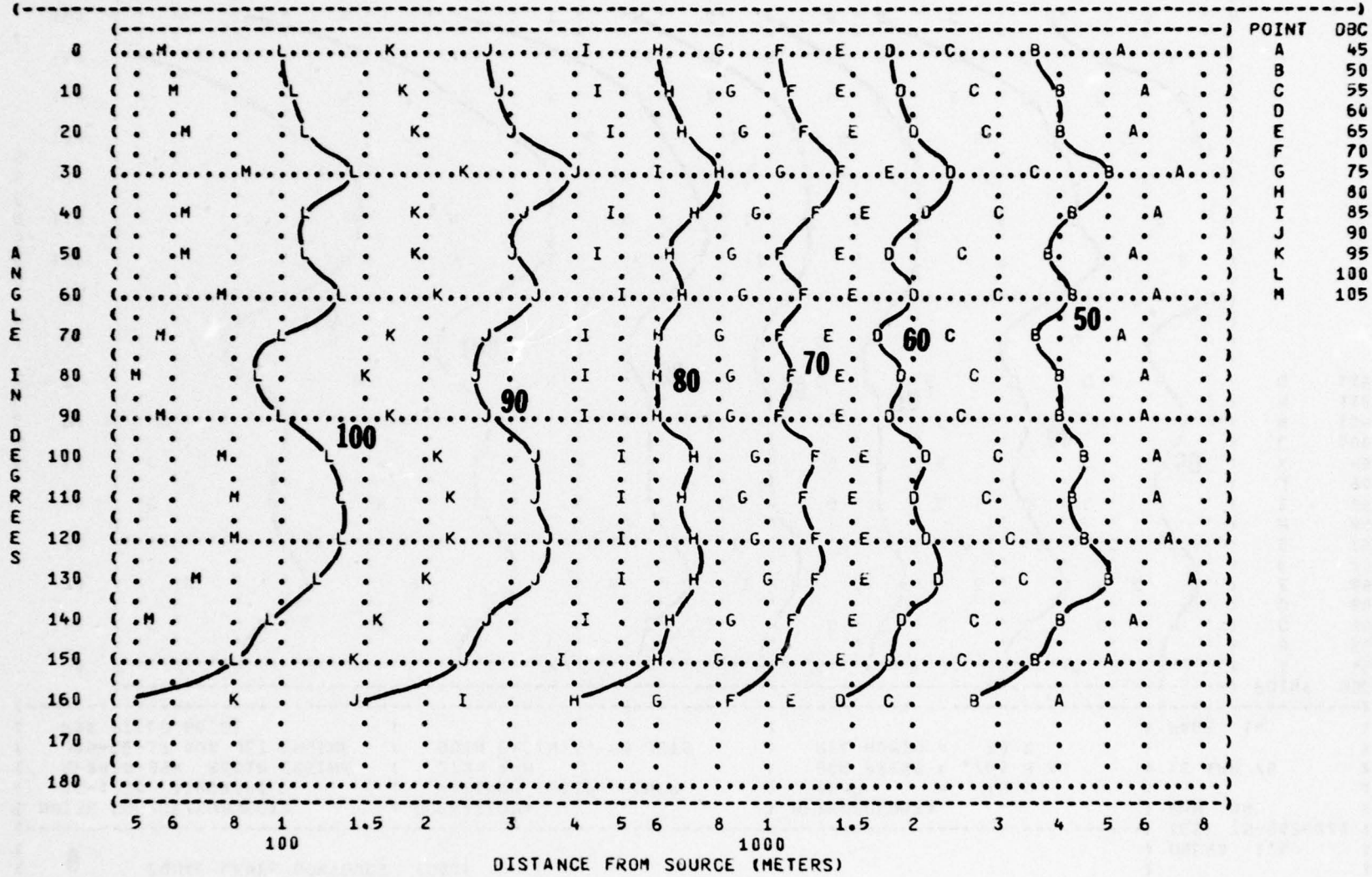
FIGURE 6: C-WEIGHTED OVERALL SOUND LEVEL (OASLC)
EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 14

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

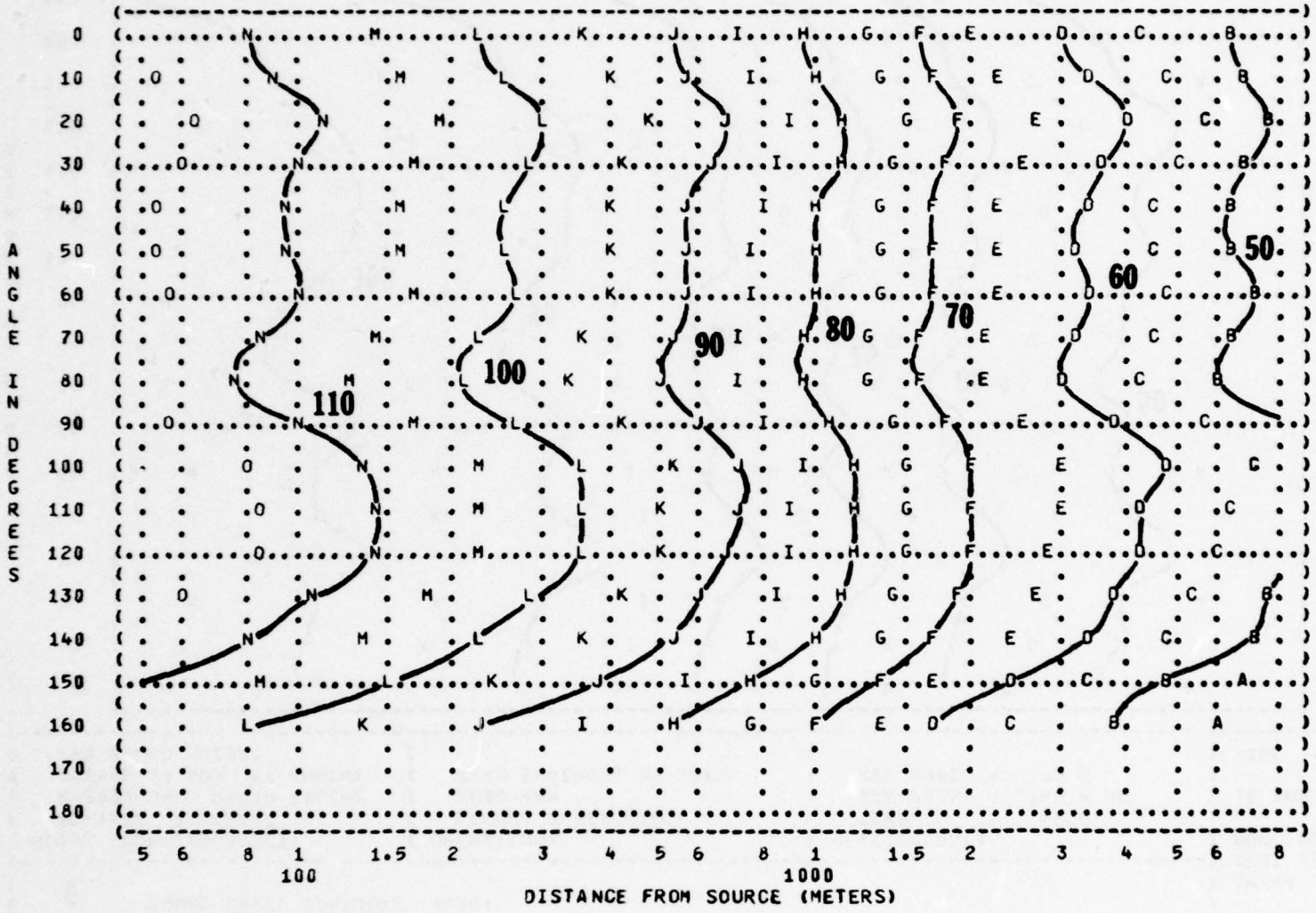
FIGURE: 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC)
EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
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
O	115

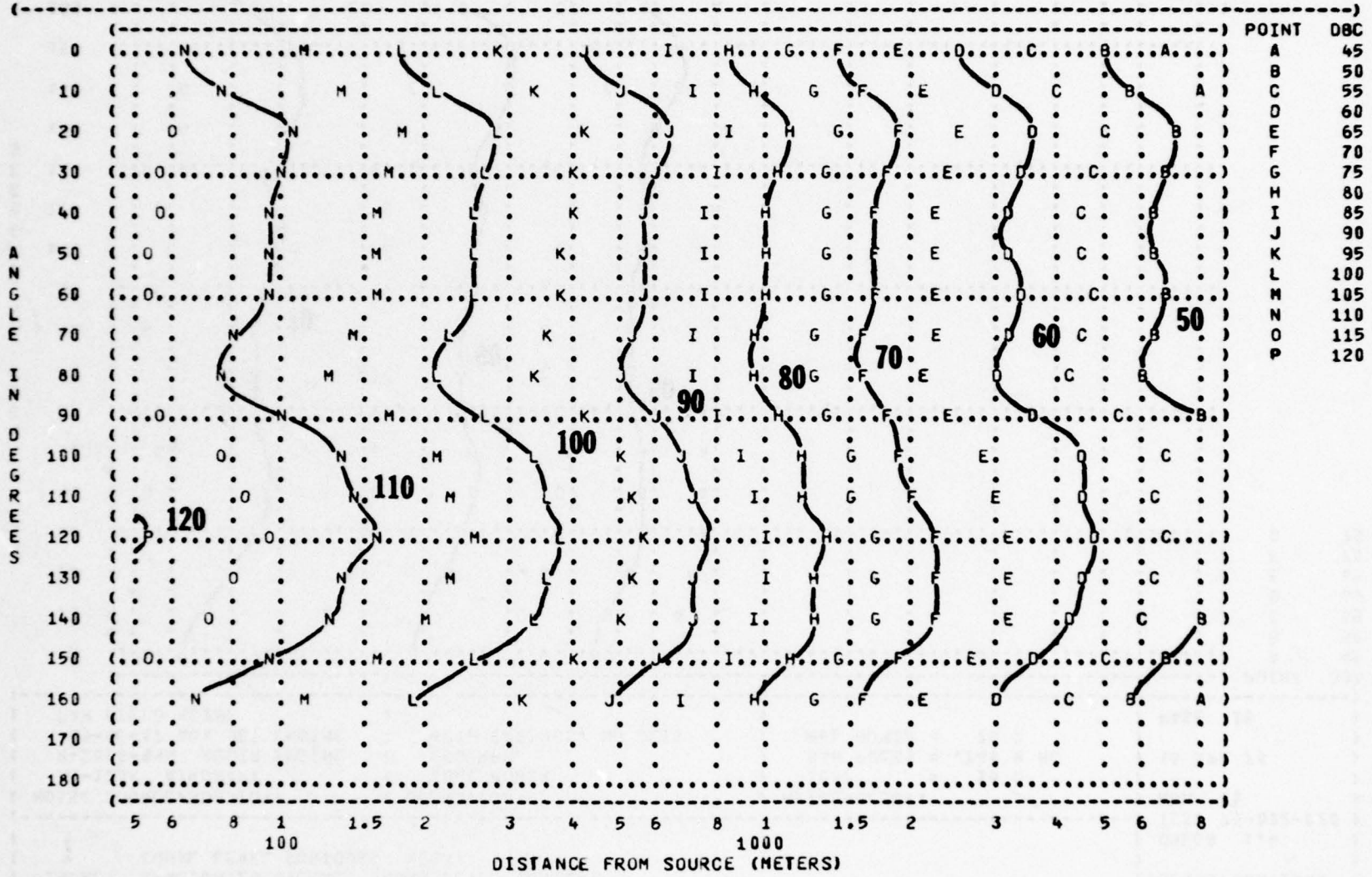
FIGURE: 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC)
EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
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
O	115
P	120

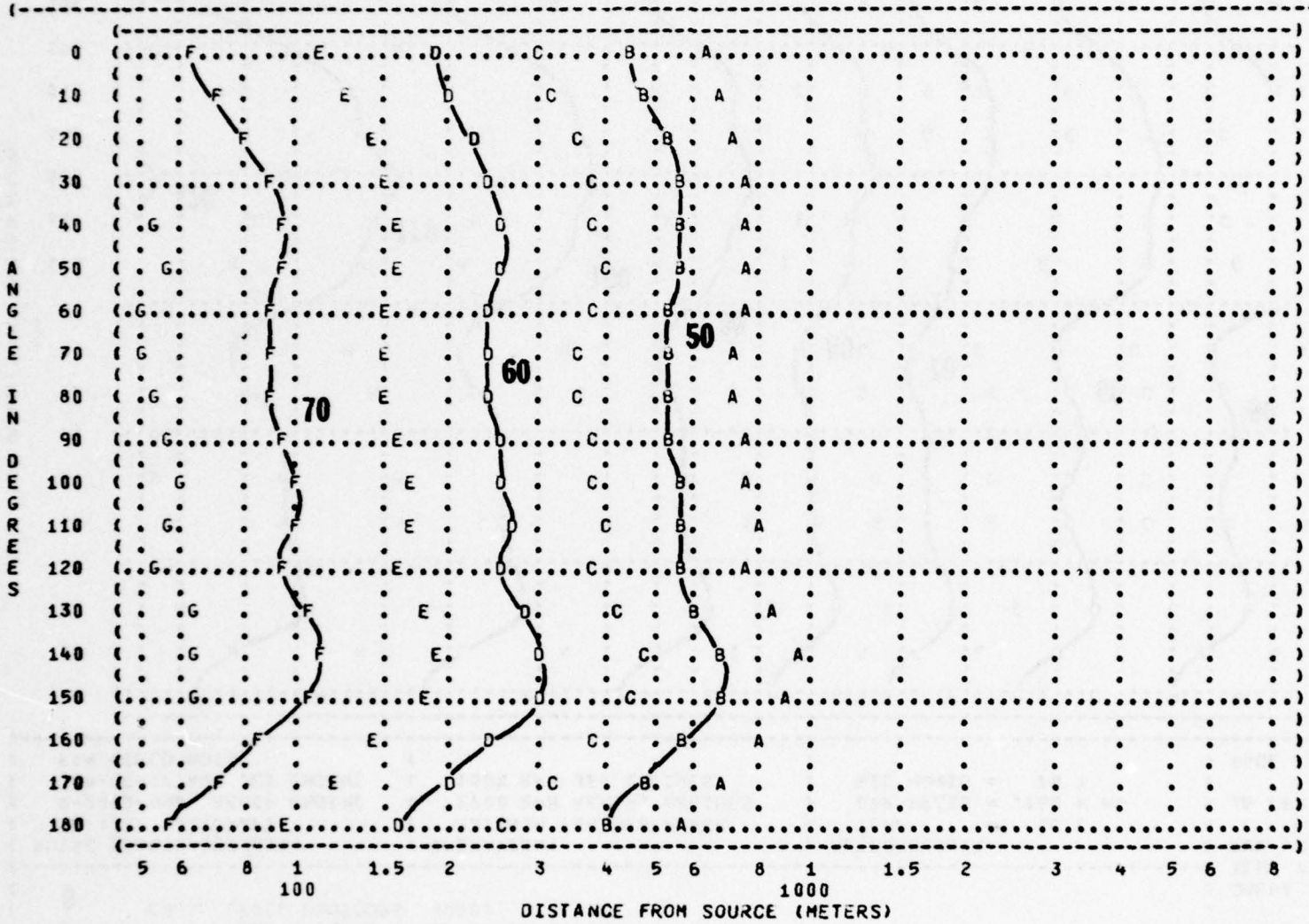
FIGURE: 7 A-WEIGHTED OVERALL SOUND LEVEL (OASLA)
EQUAL LEVEL CONTOURS (DBA)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 15



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

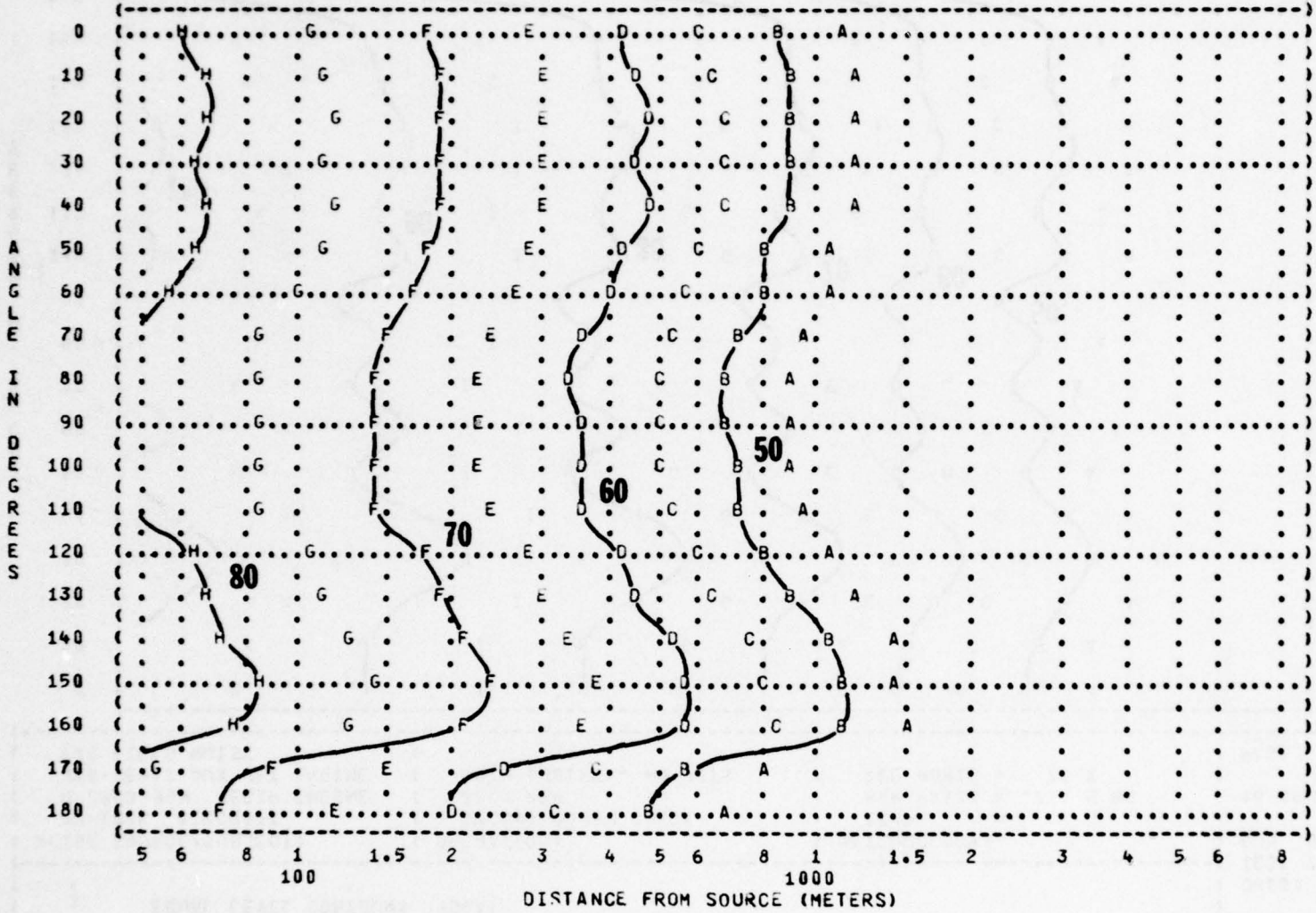
FIGURE 7: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 15



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

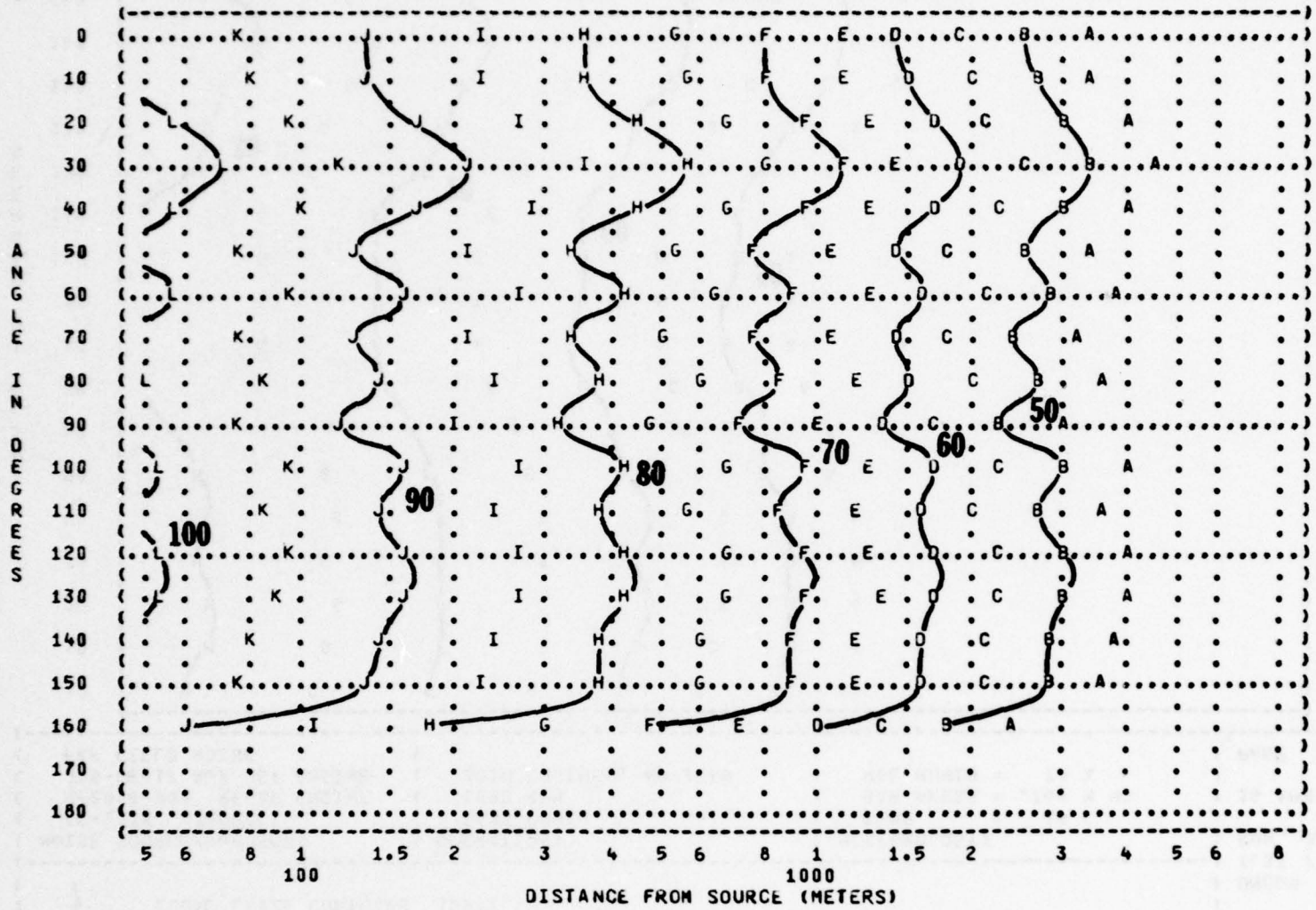
FIGURE: 7 A-WEIGHTED OVERALL SOUND LEVEL (OASLA)
EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 15

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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 75-002-020
RUN 04
16 APR 75
PAGE 15

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

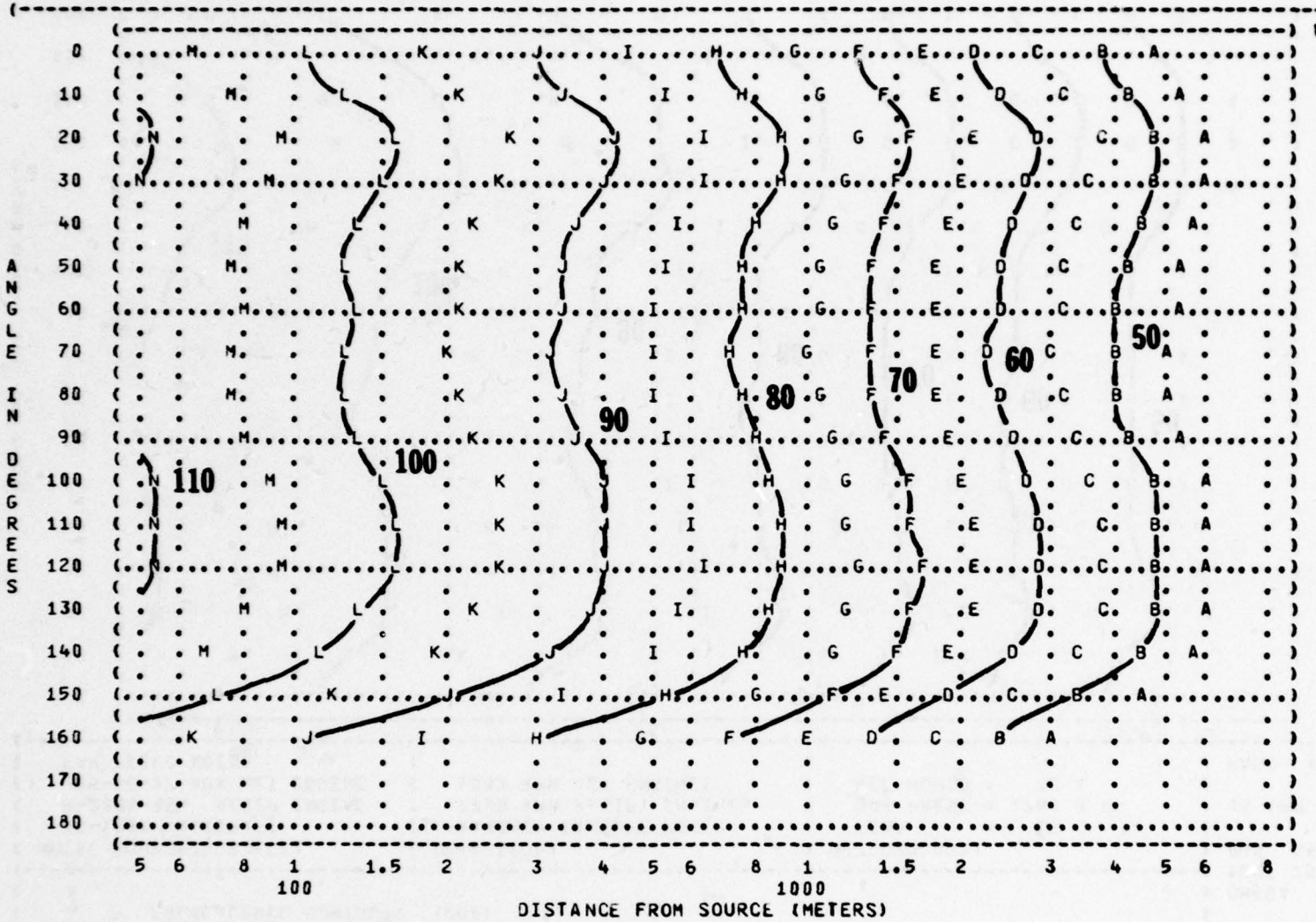


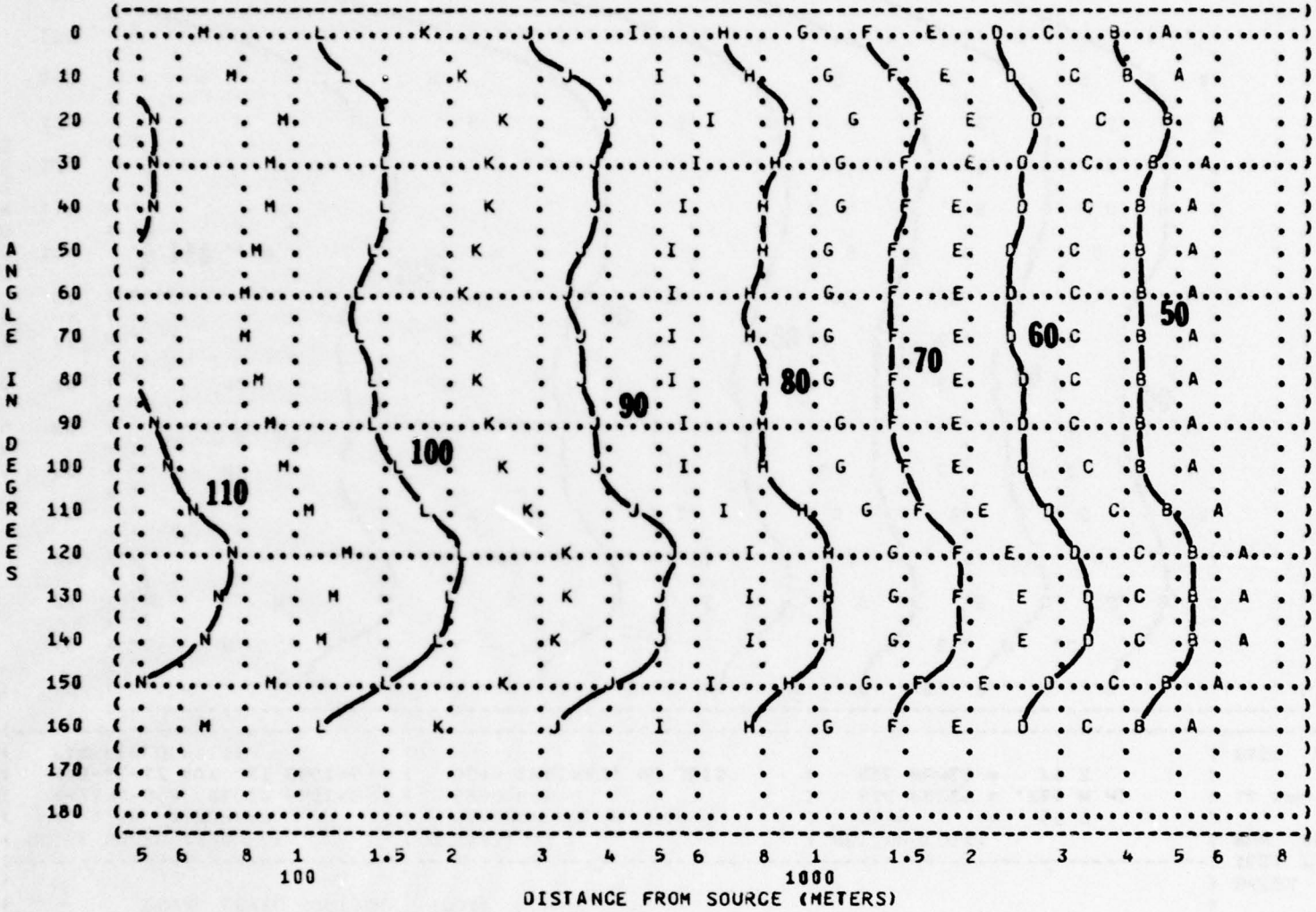
FIGURE: 7 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 15

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01

16 APR 75

PAGE 16

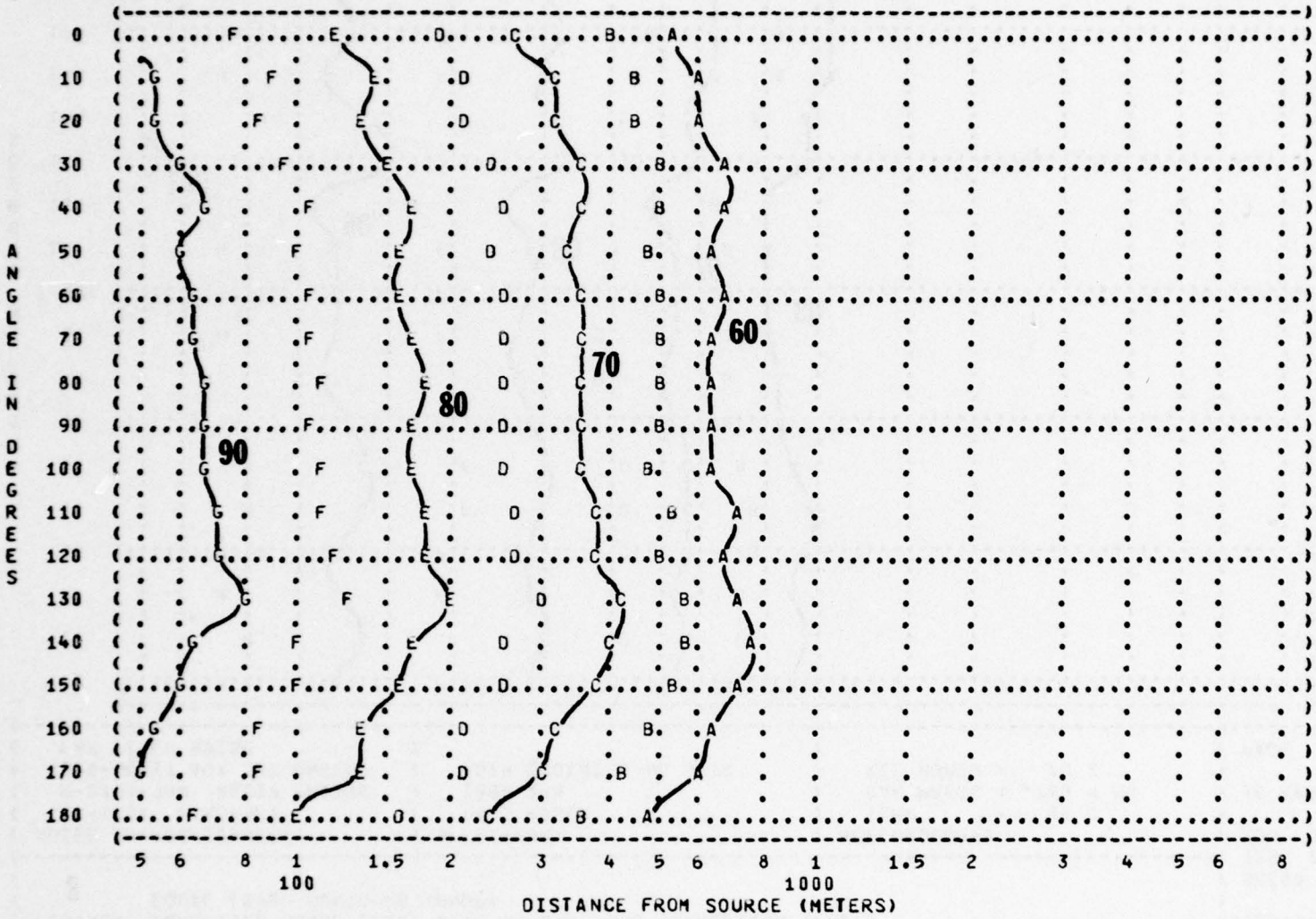


FIGURE: 8 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)
EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 16

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

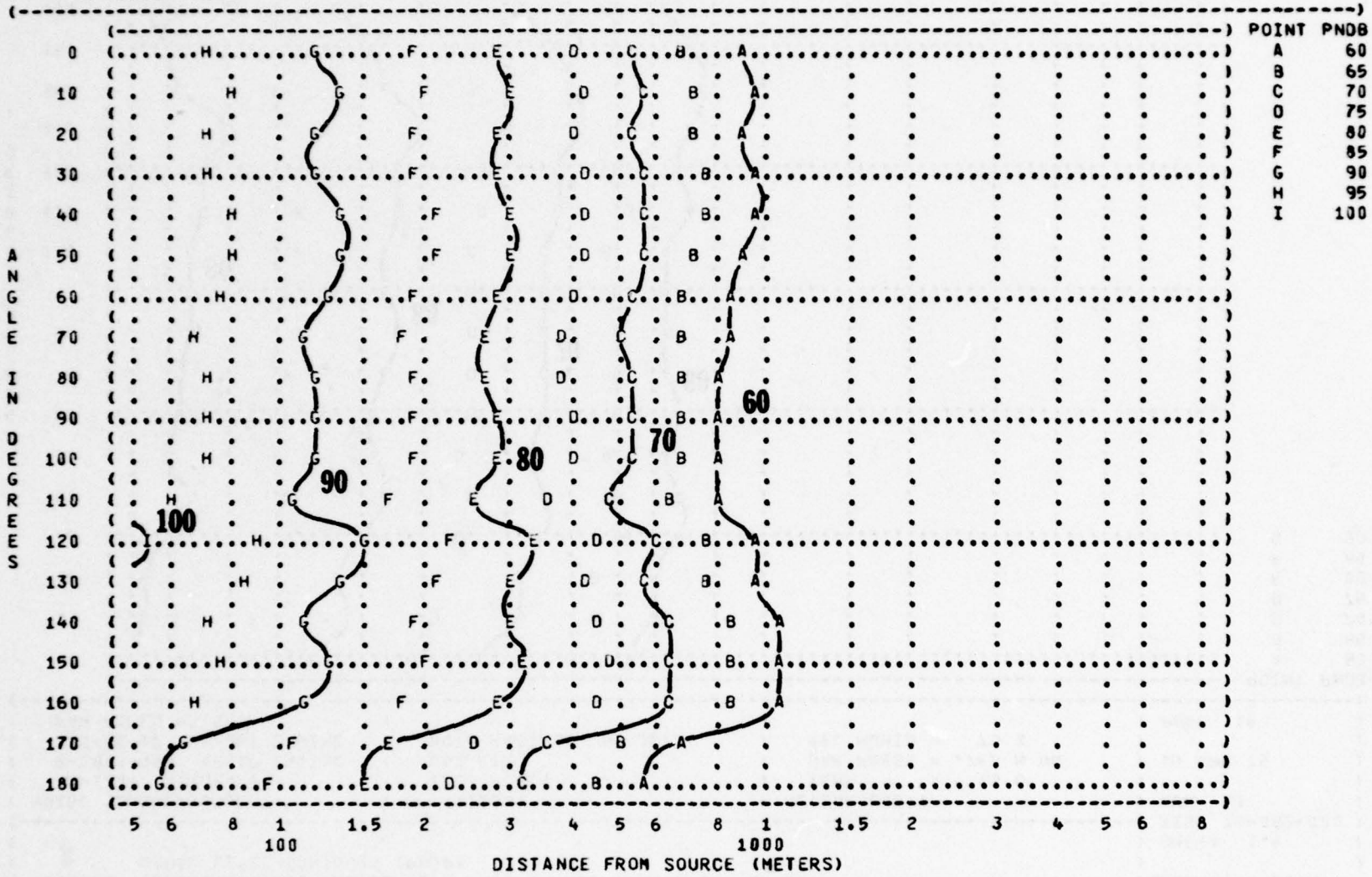


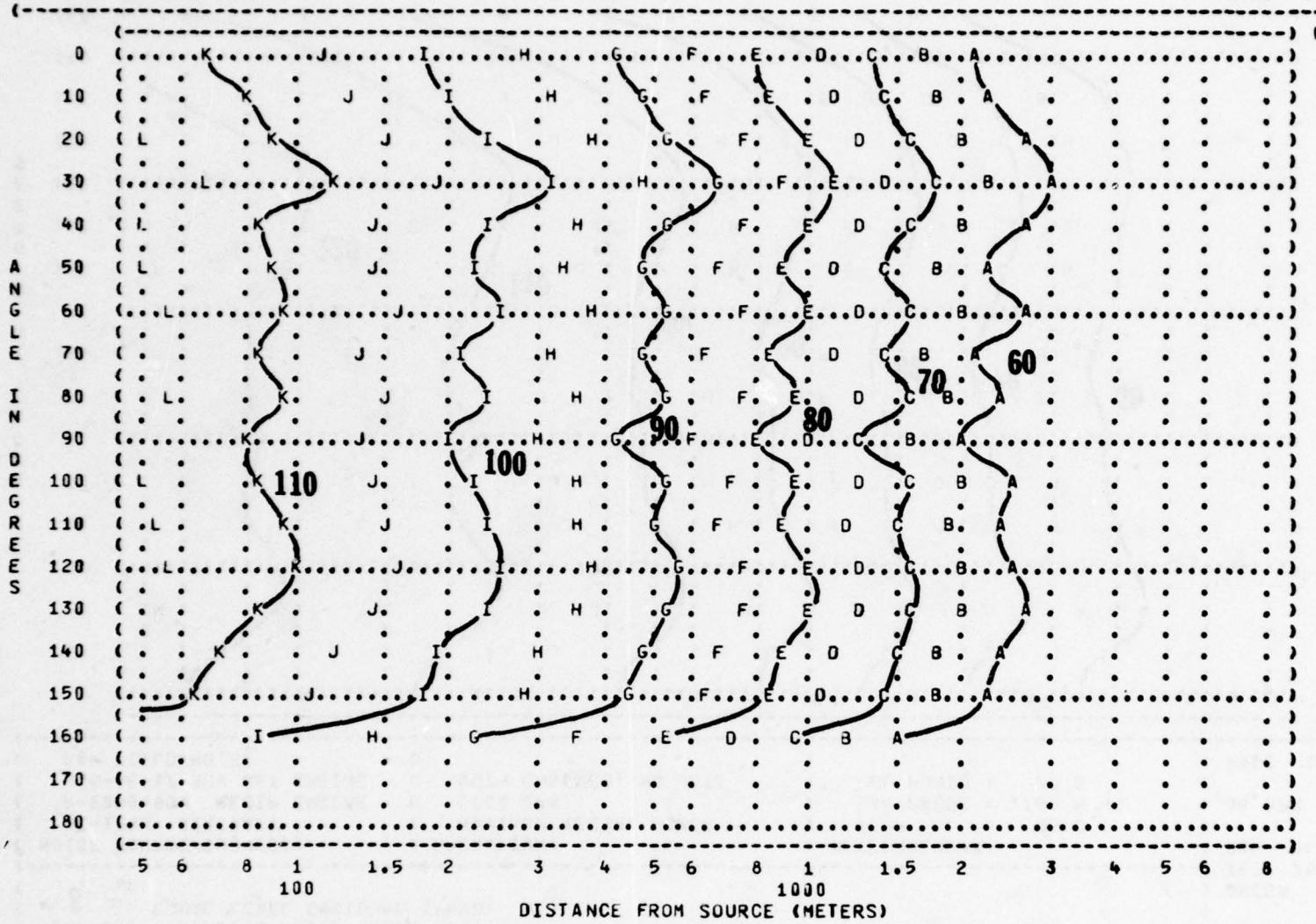
FIGURE: 8 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)
EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
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

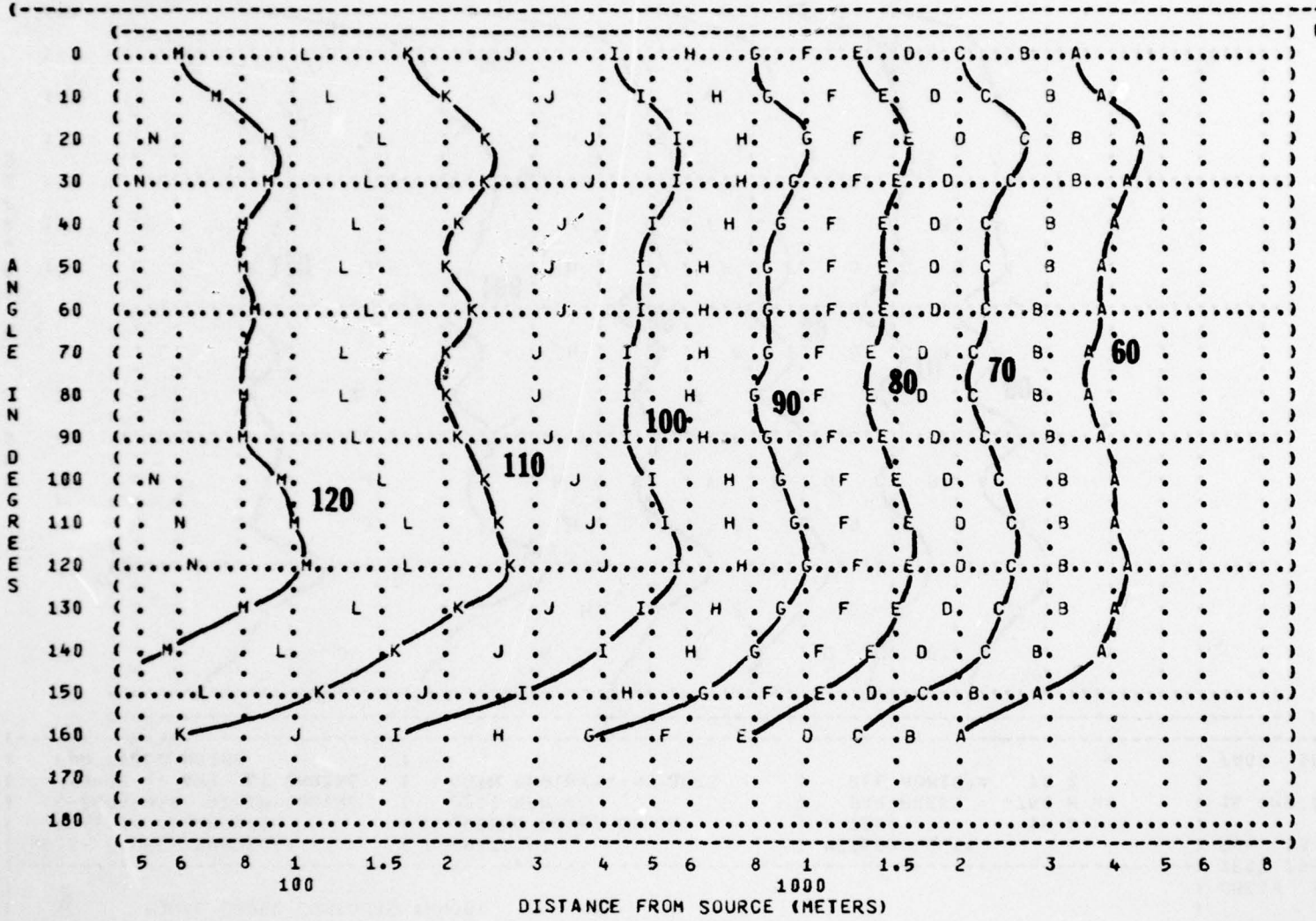
FIGURE: 8 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)
EQUAL LEVEL CONTOURS (PNOB)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 16



POINT	PNOB
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

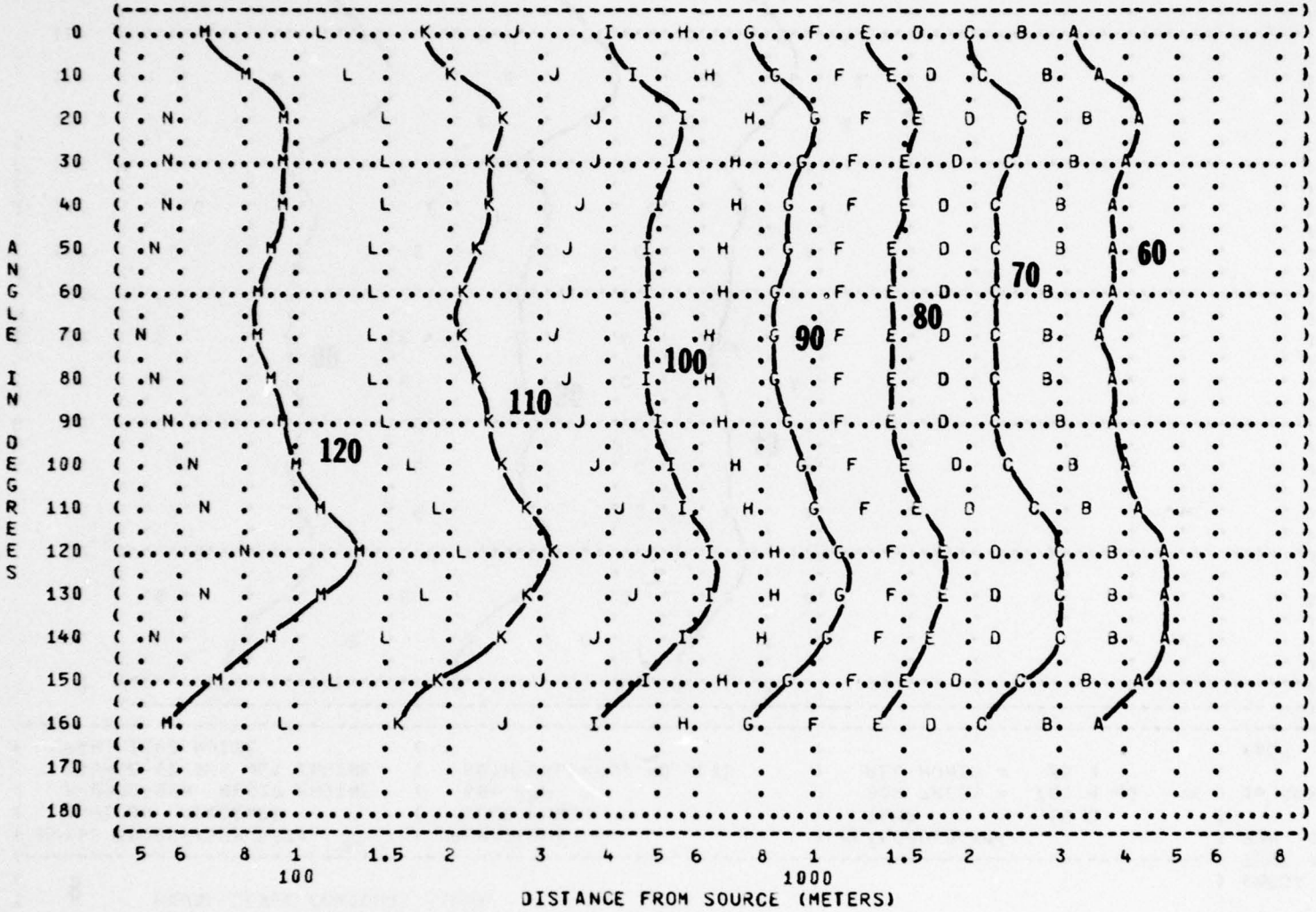
FIGURE 8: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)
EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
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

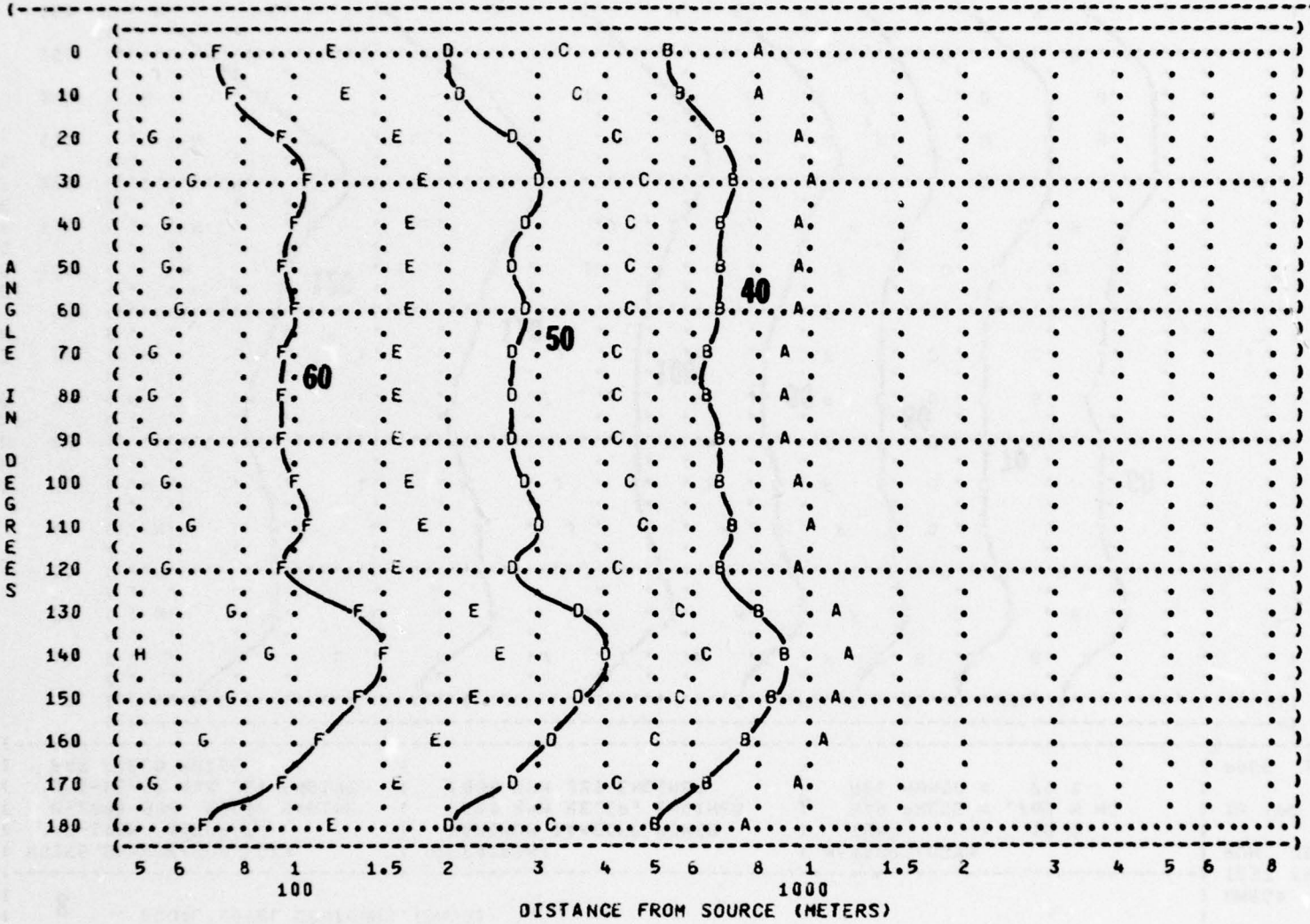
FIGURE 9: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)
EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 17



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

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 17

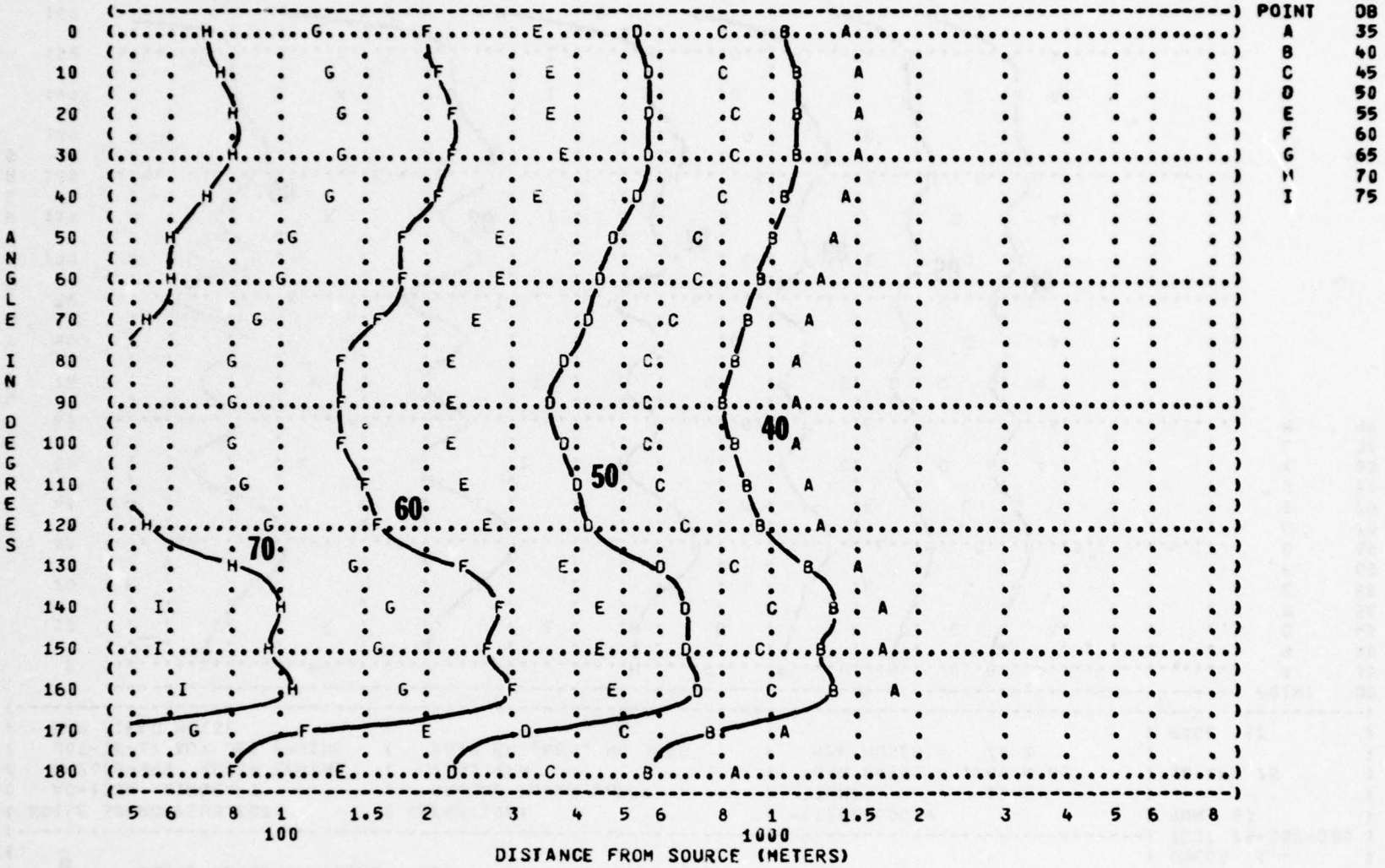


FIGURE 9: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)
EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 17

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

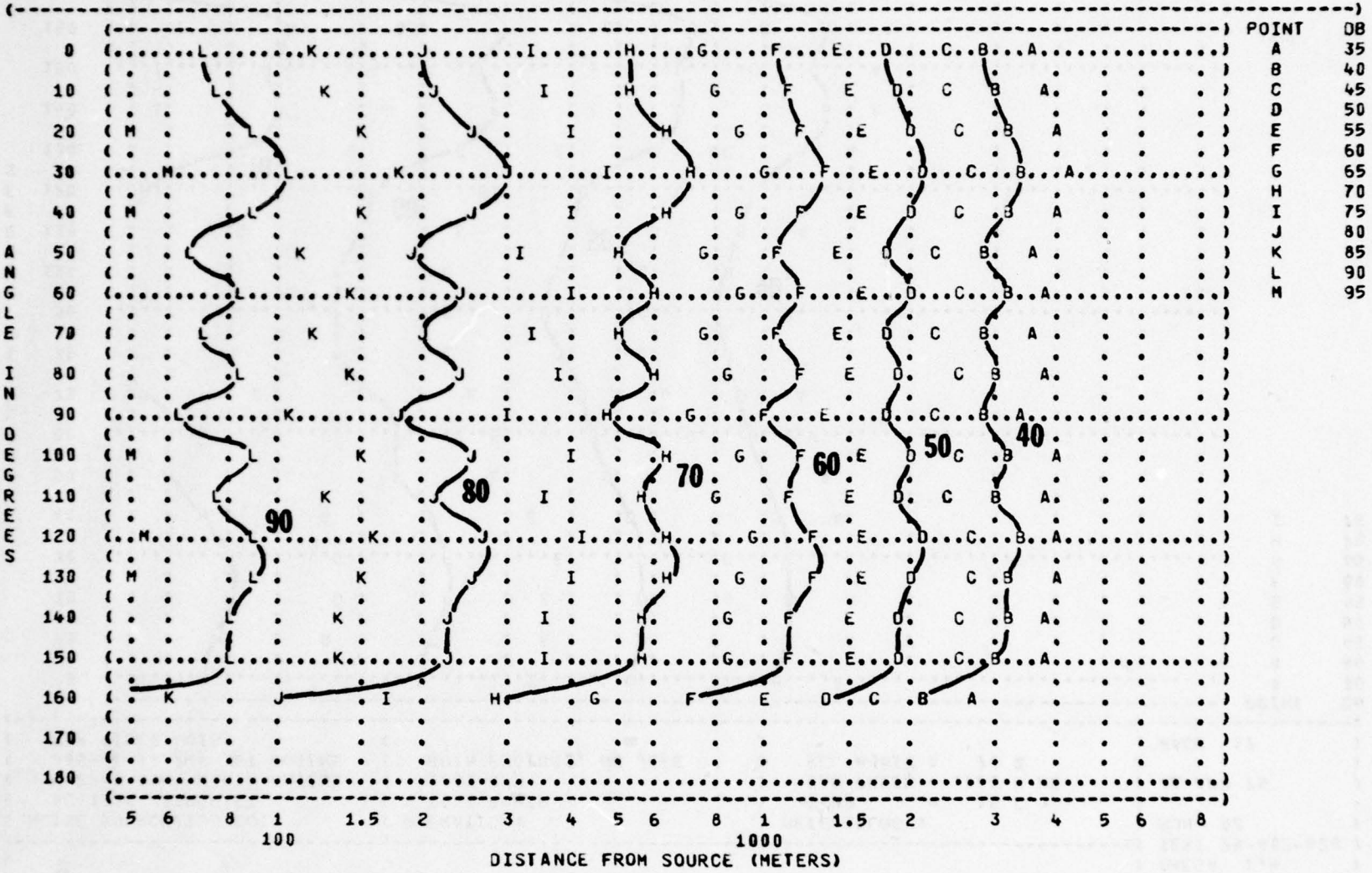


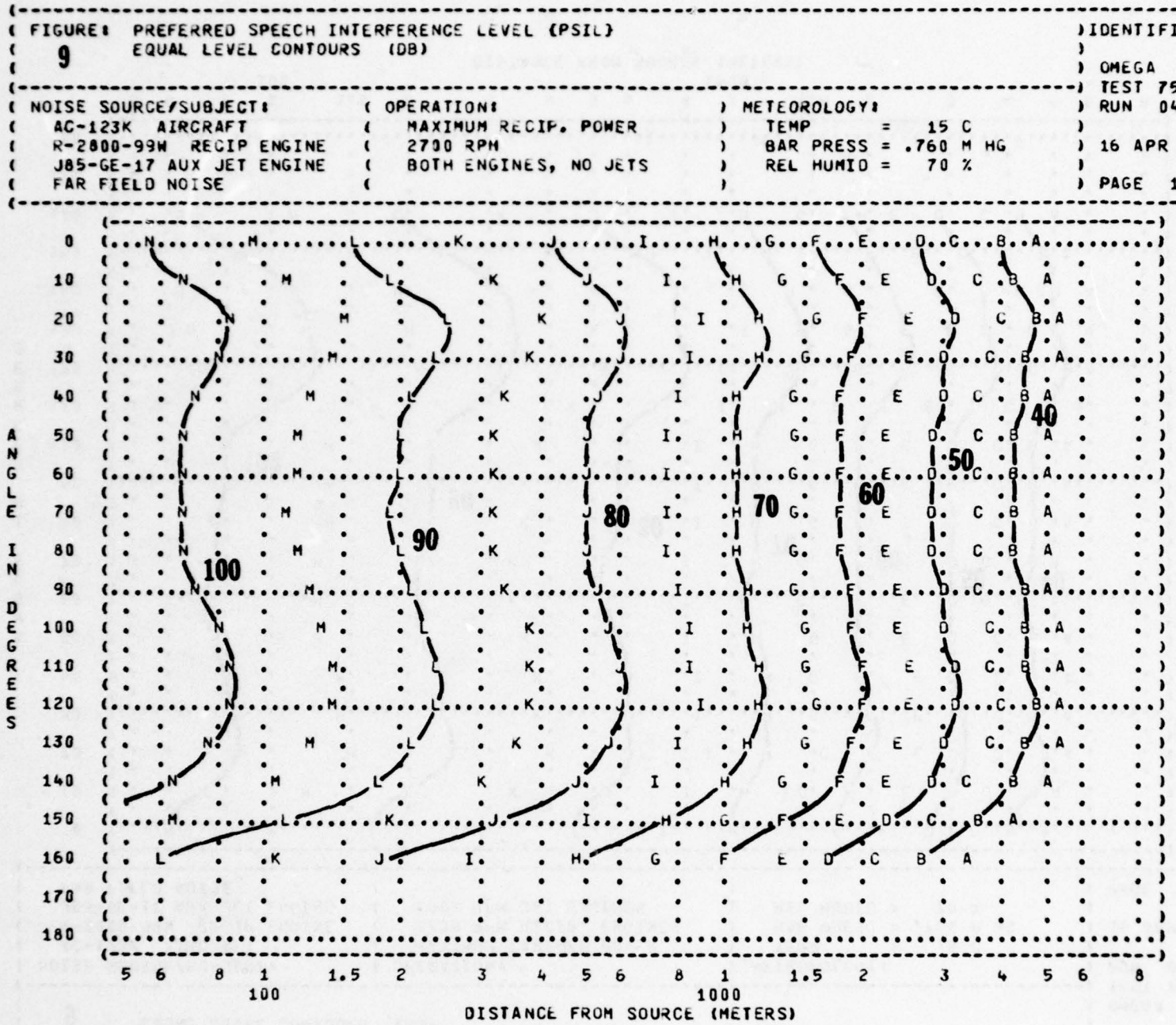
FIGURE 9: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
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

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 17

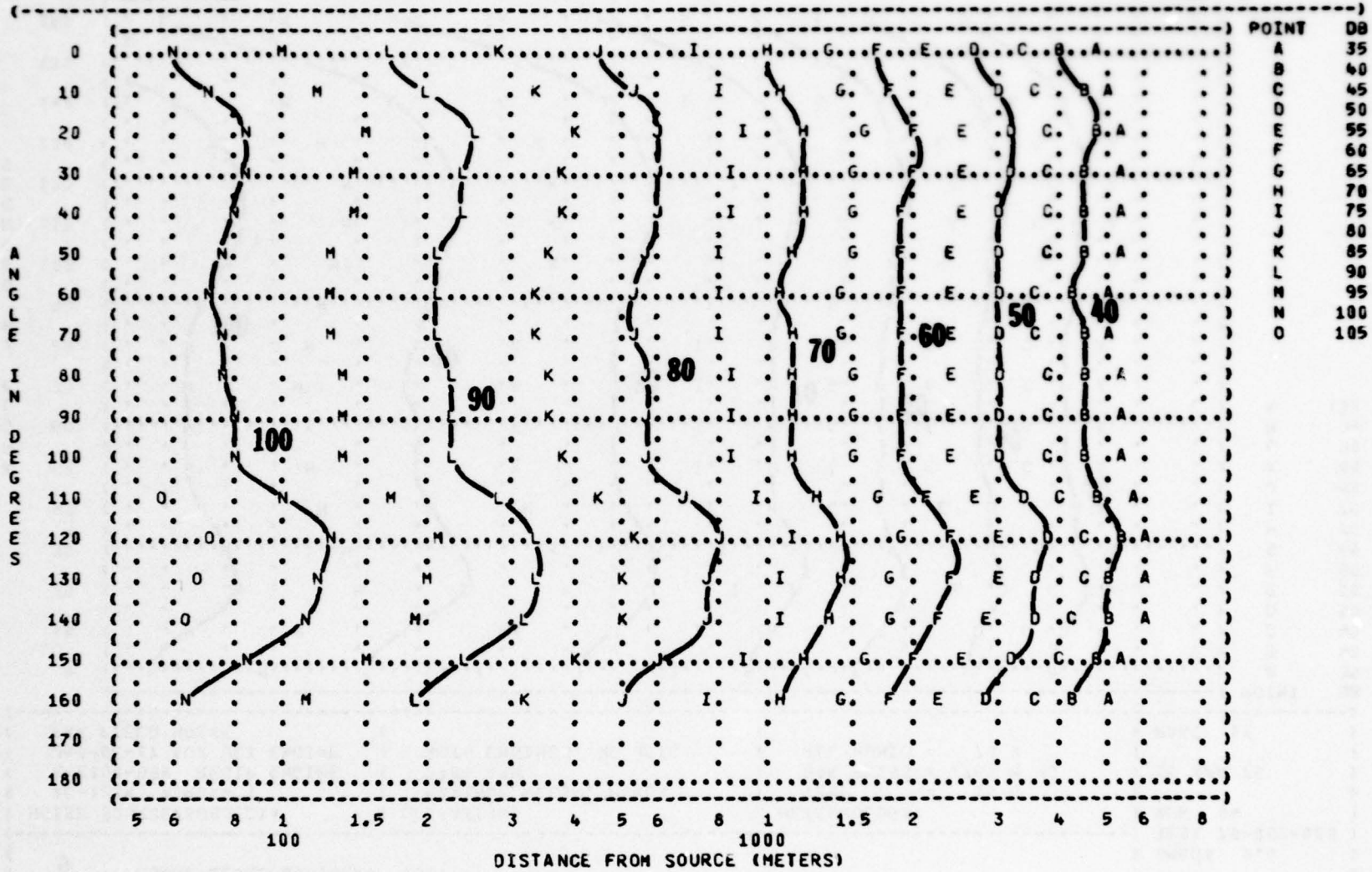


FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 7

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

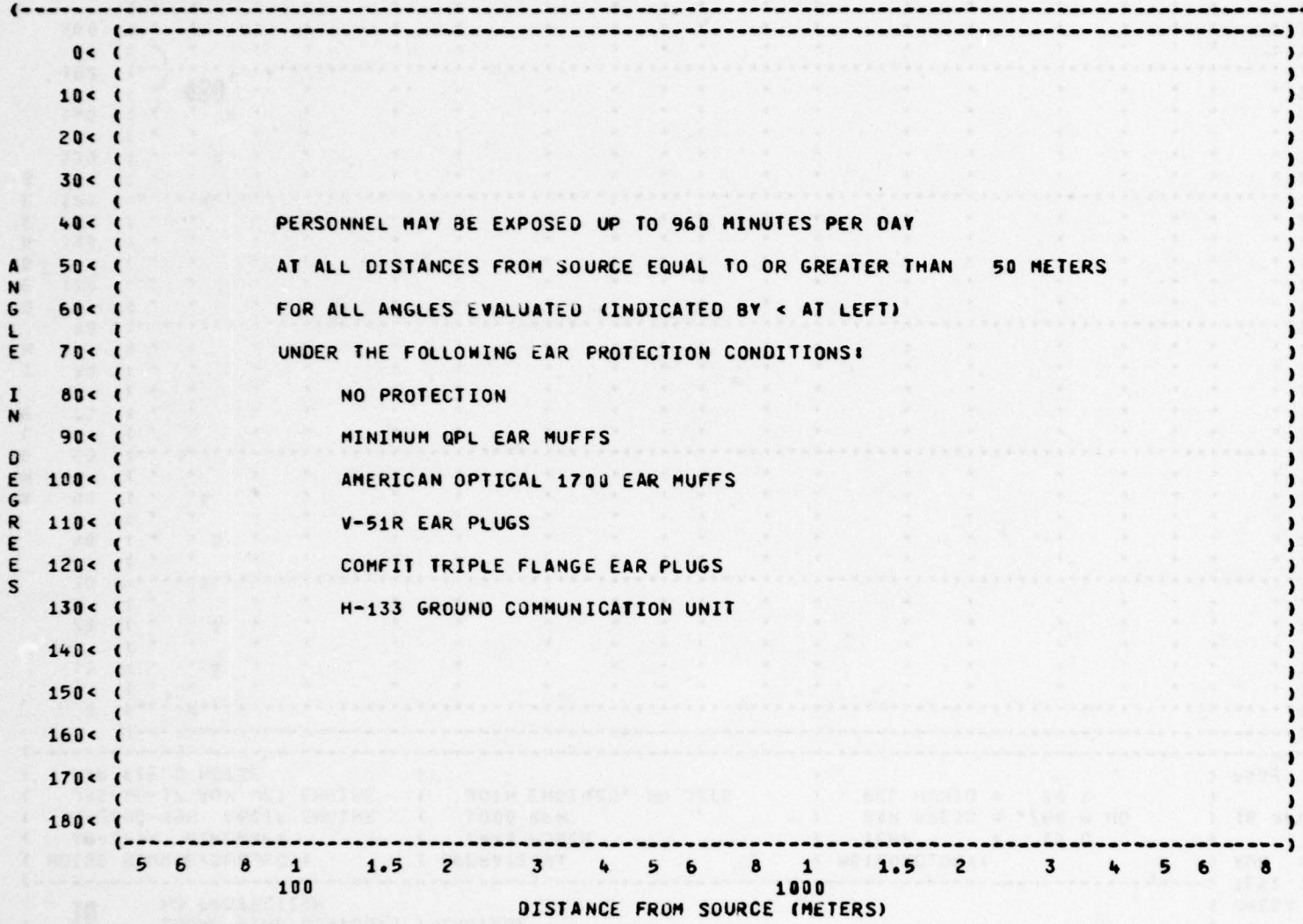


FIGURE: 10

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 75-002-020
RUN 02
16 APR 75
PAGE 7

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

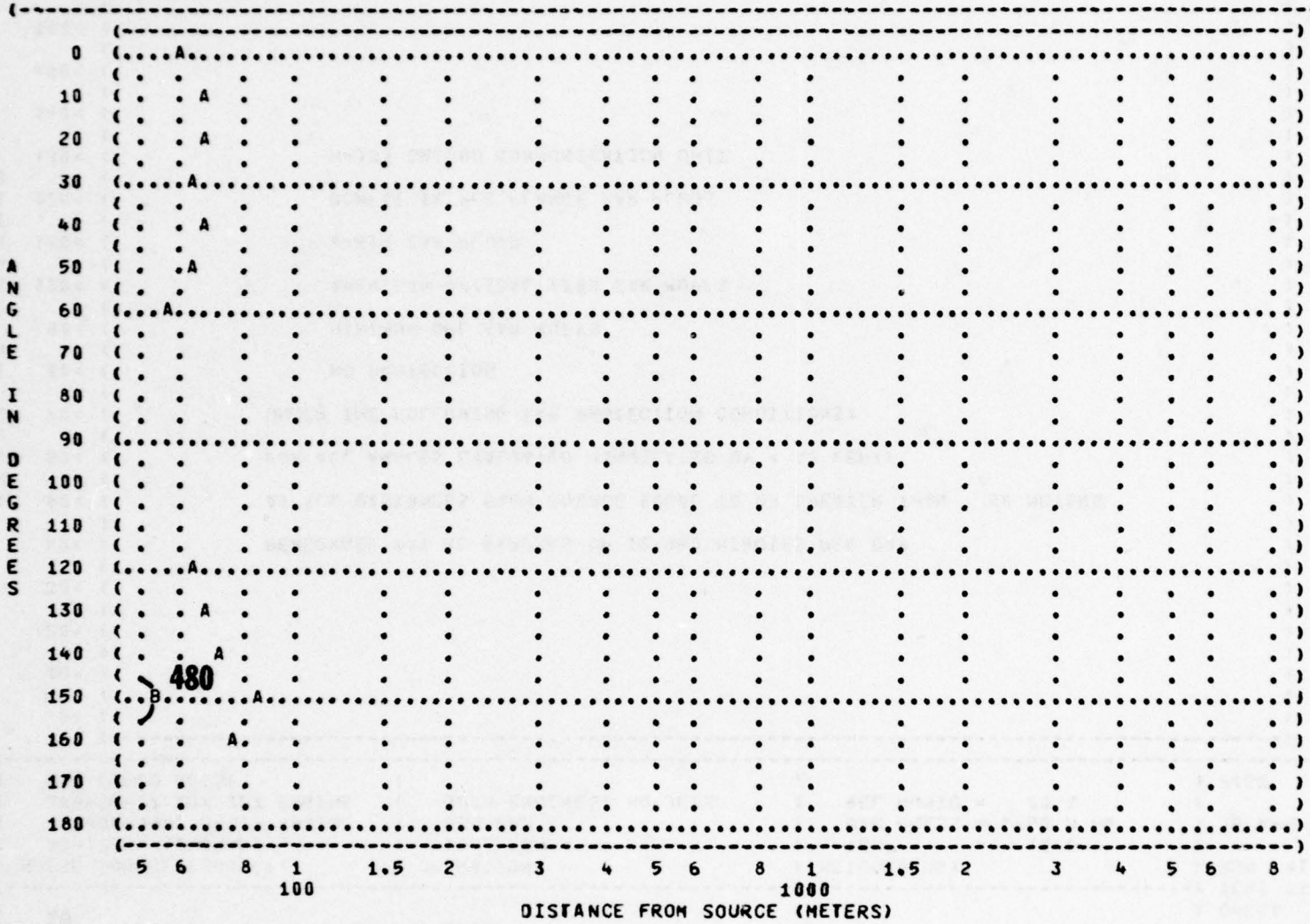


FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 8

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

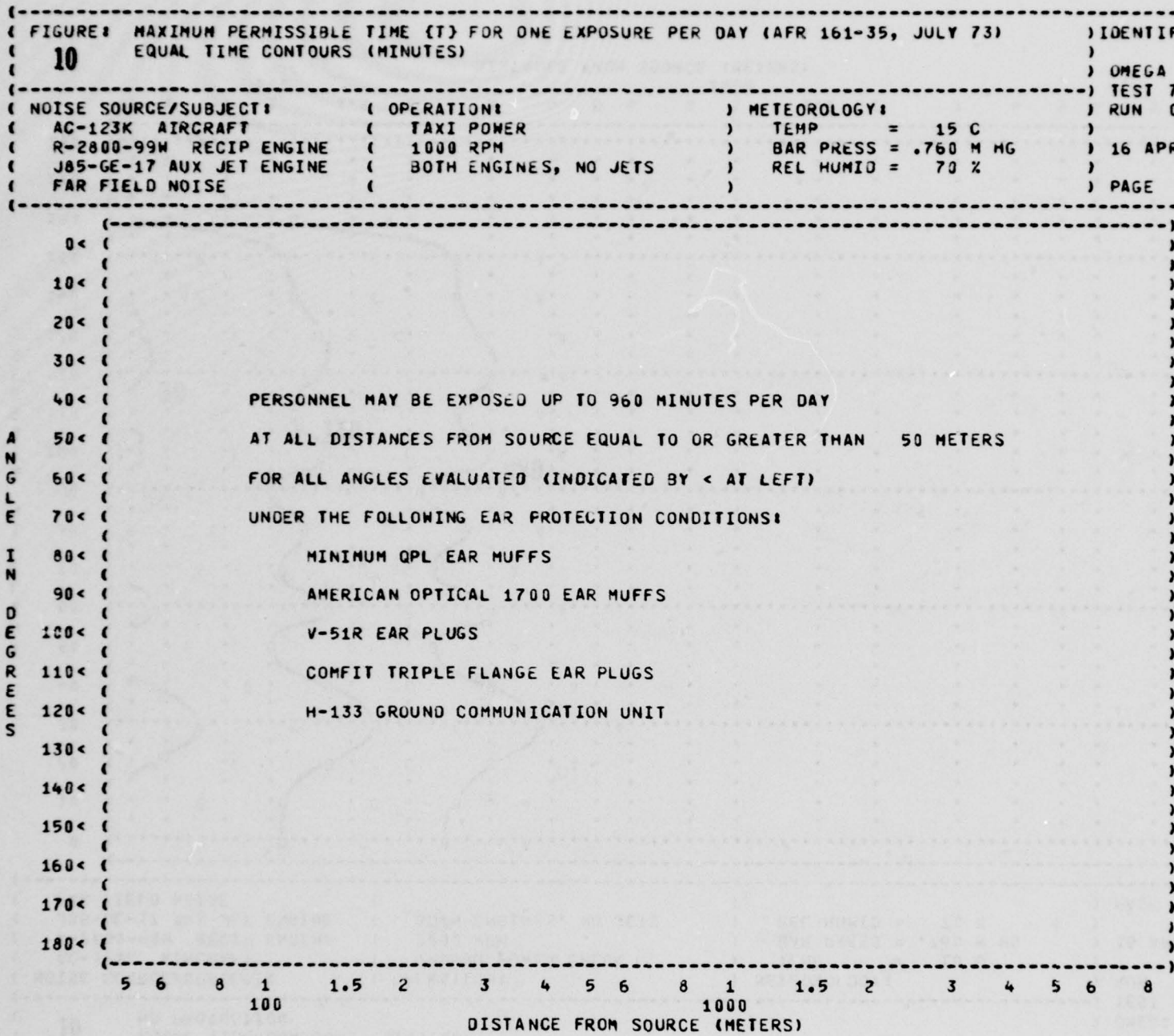


FIGURE: 10

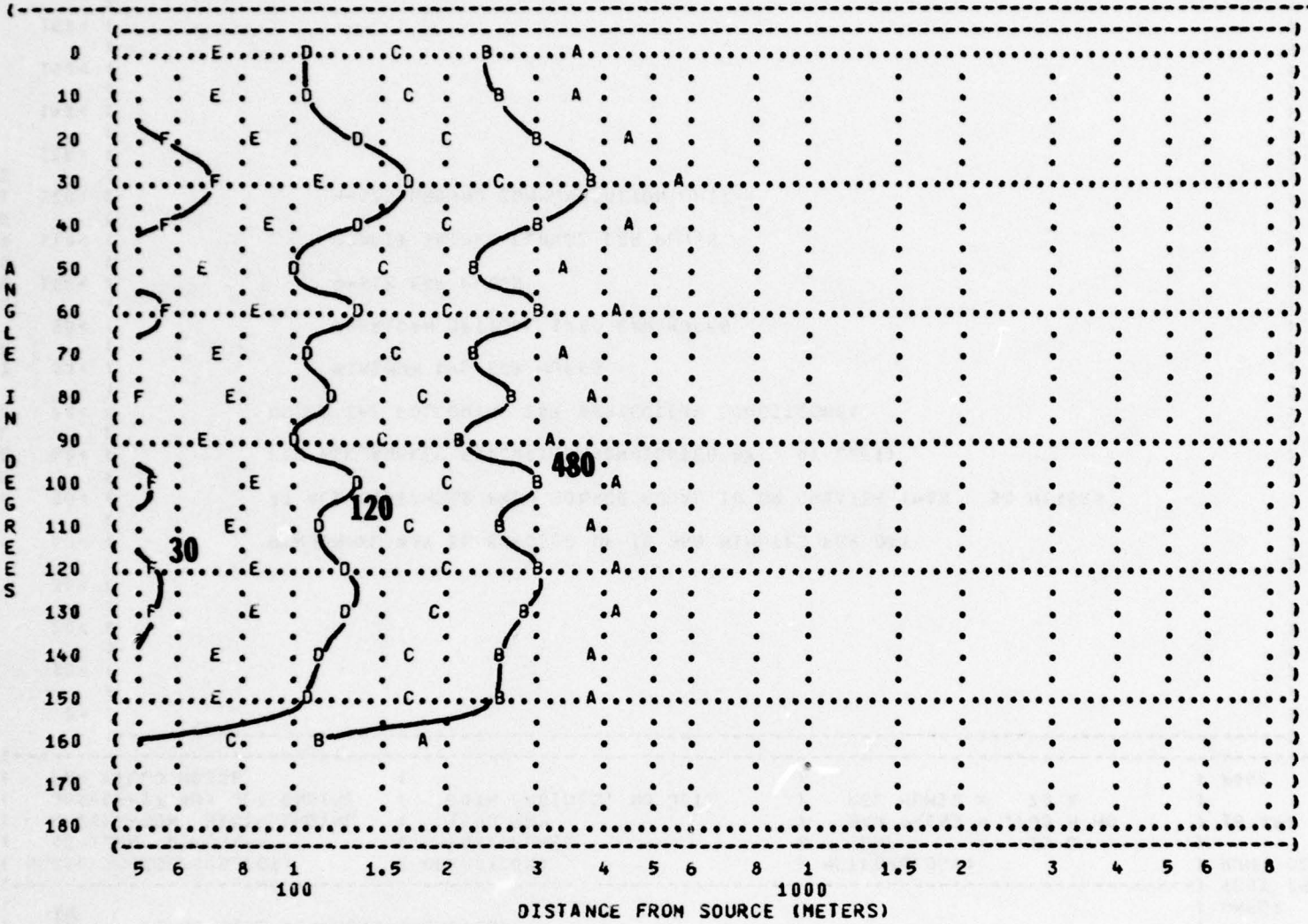
MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 7



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)
MINIMUM GPL EAR MUFFS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 8

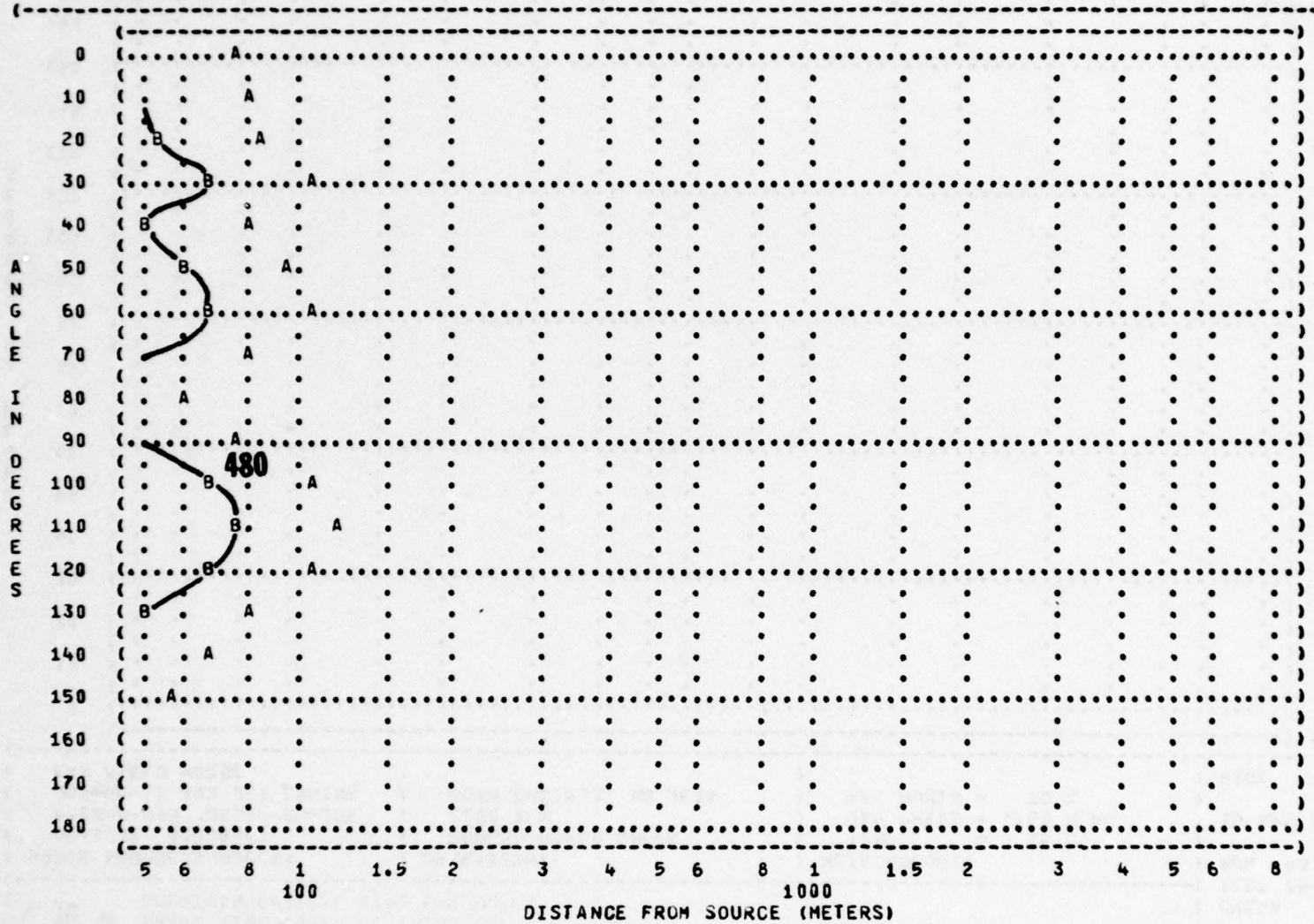


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
AMERICAN OPTICAL 1700 EAR MUFFS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 9

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

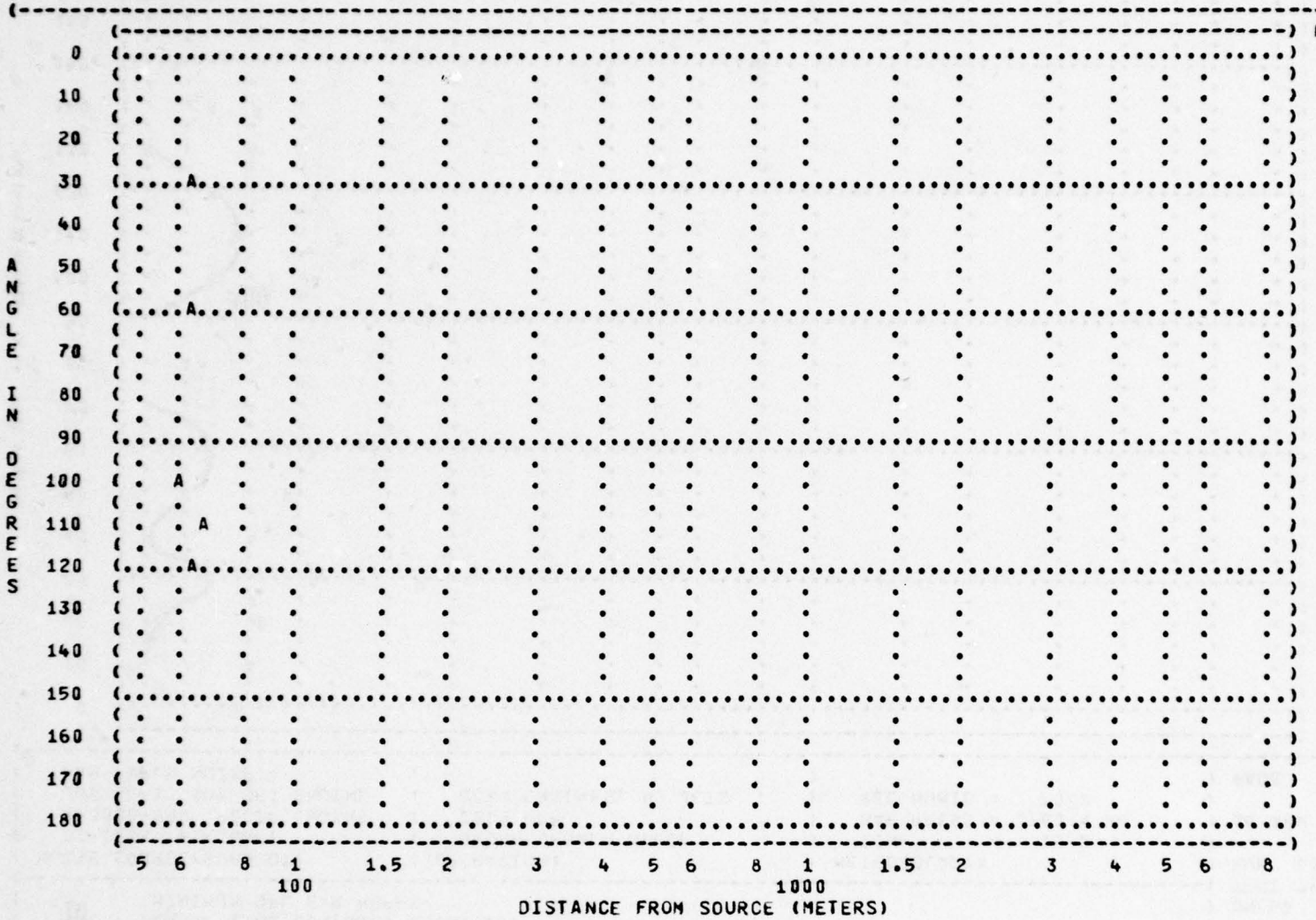


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
V-51R EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 10

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

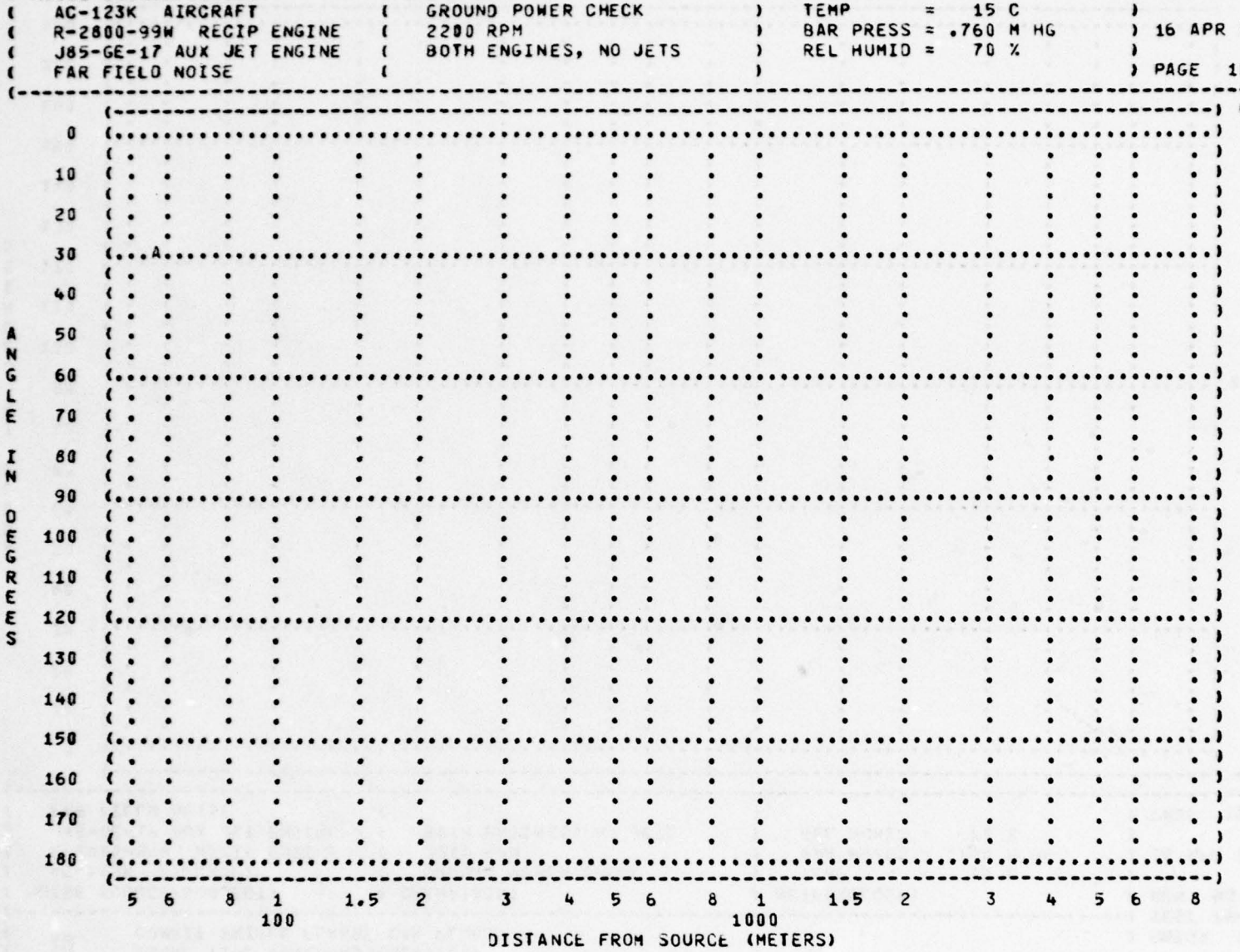


FIGURE: 10

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 11

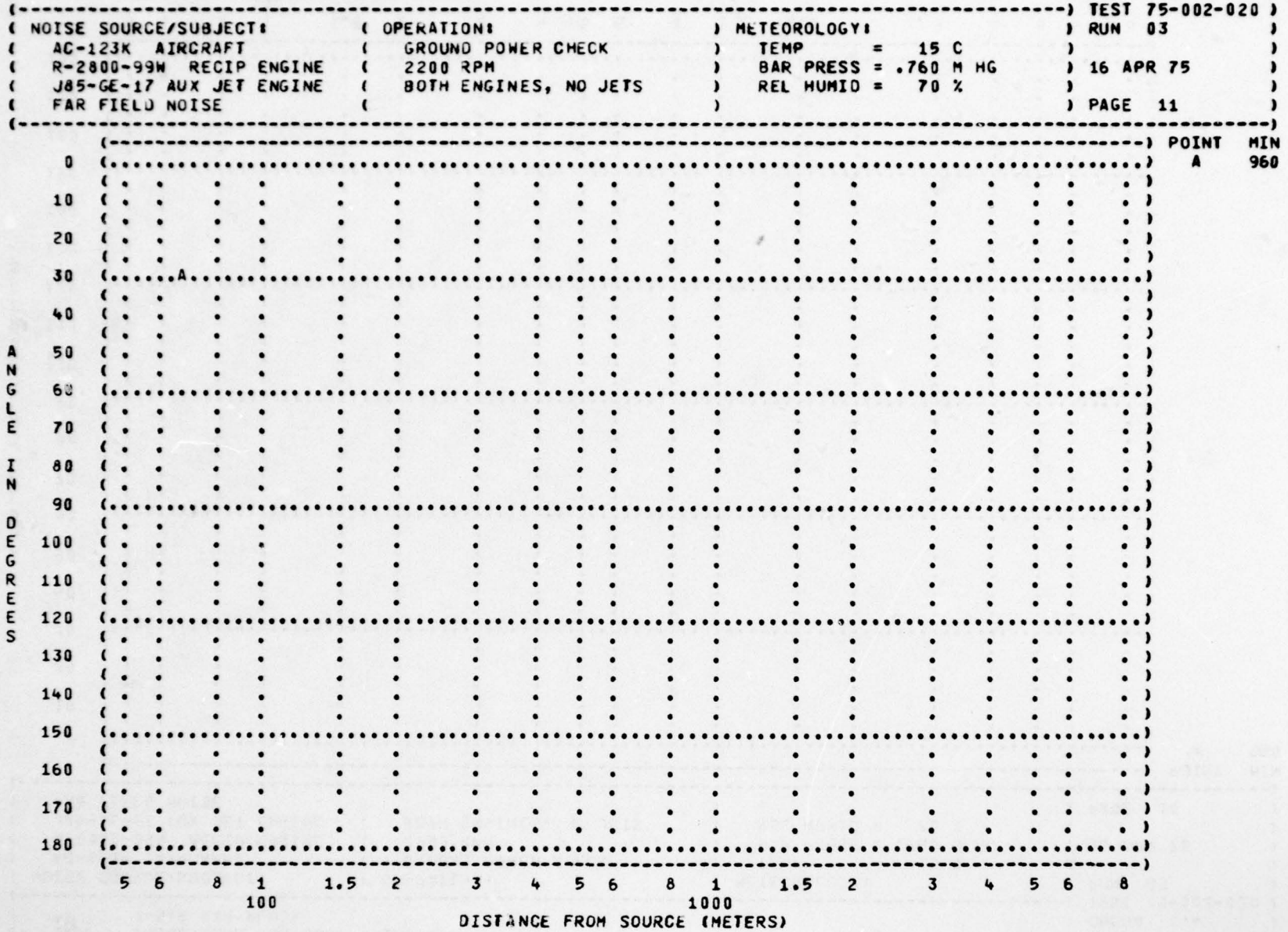


FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 12

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

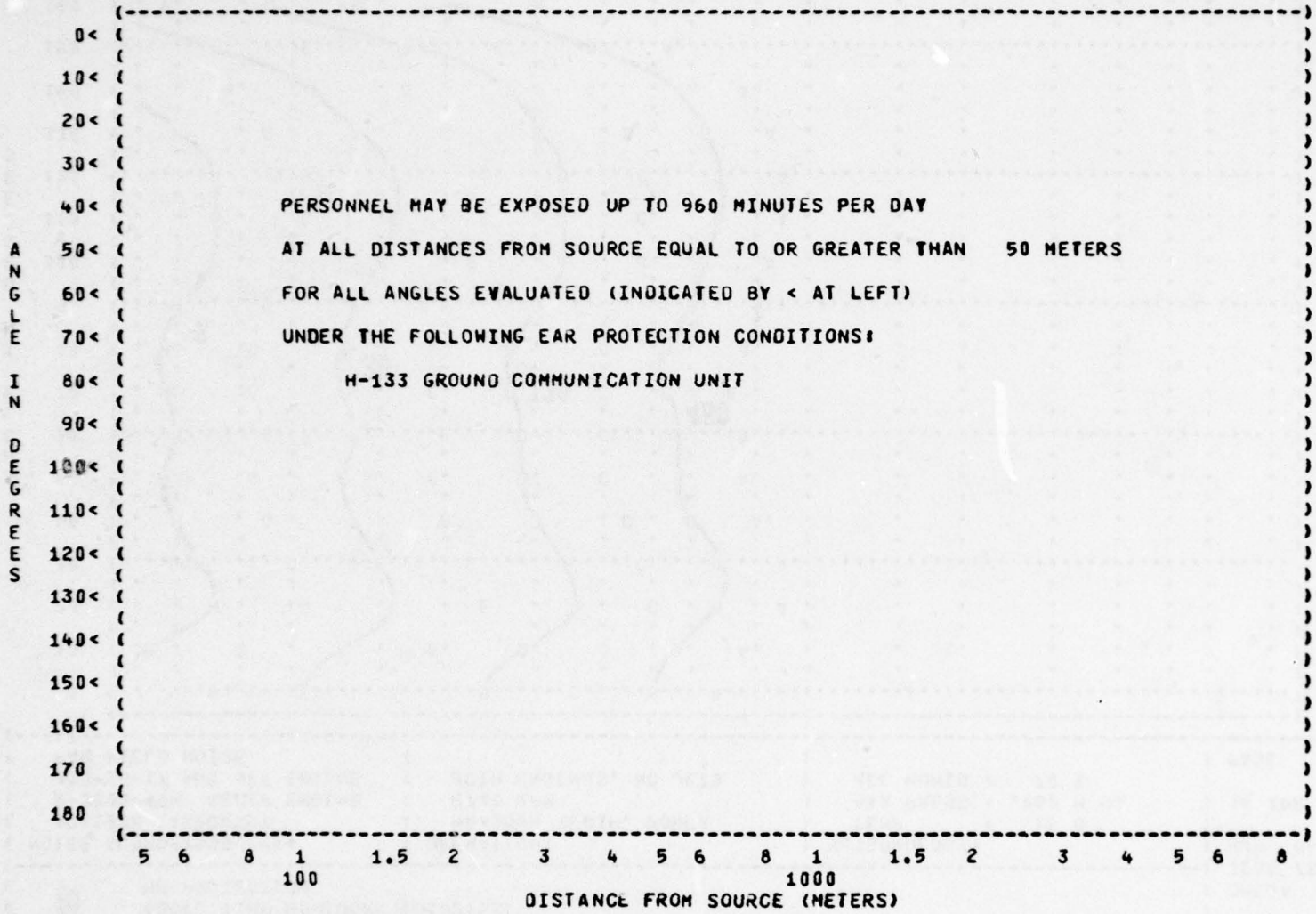


FIGURE: 10

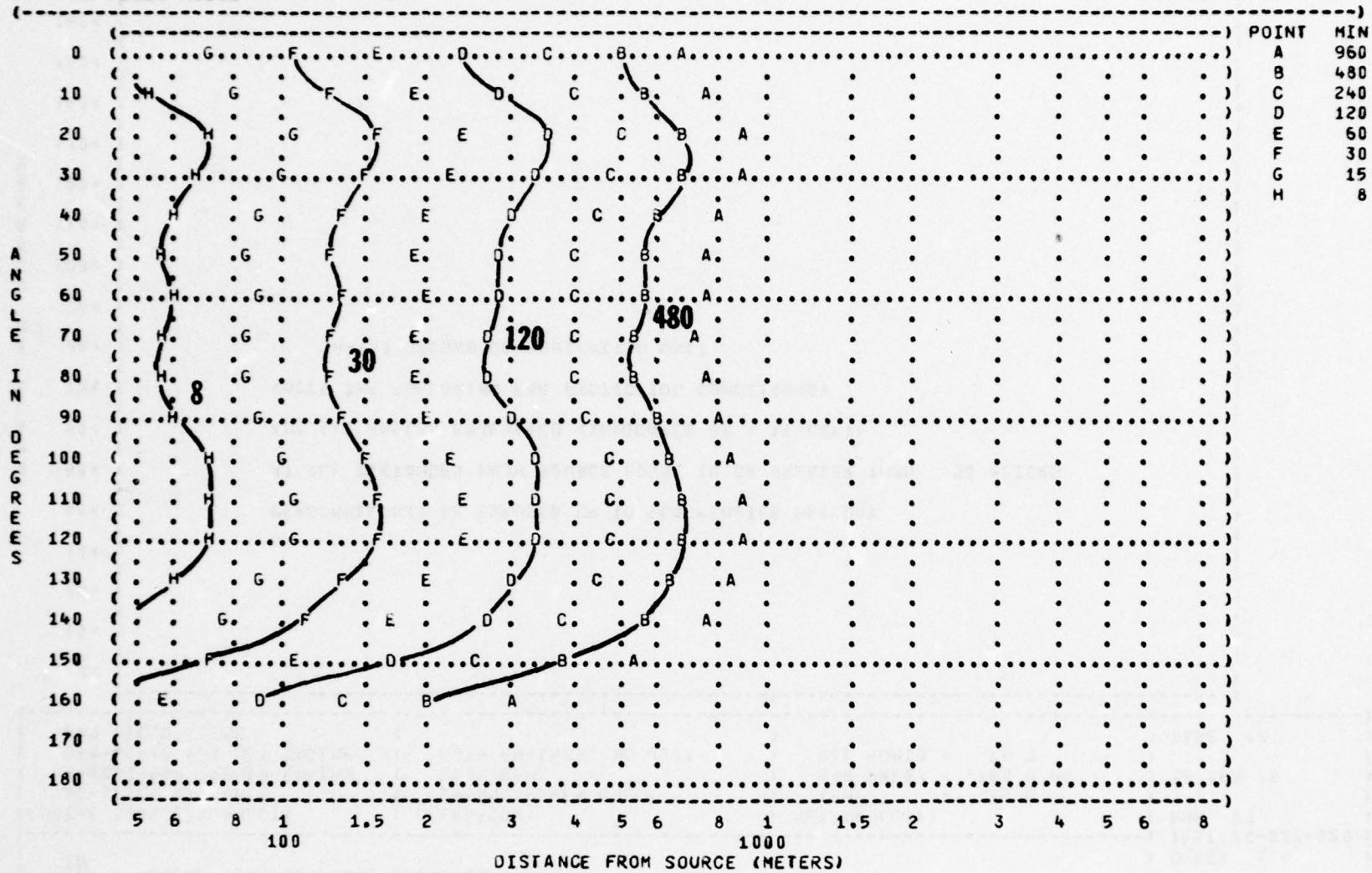
MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 7



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

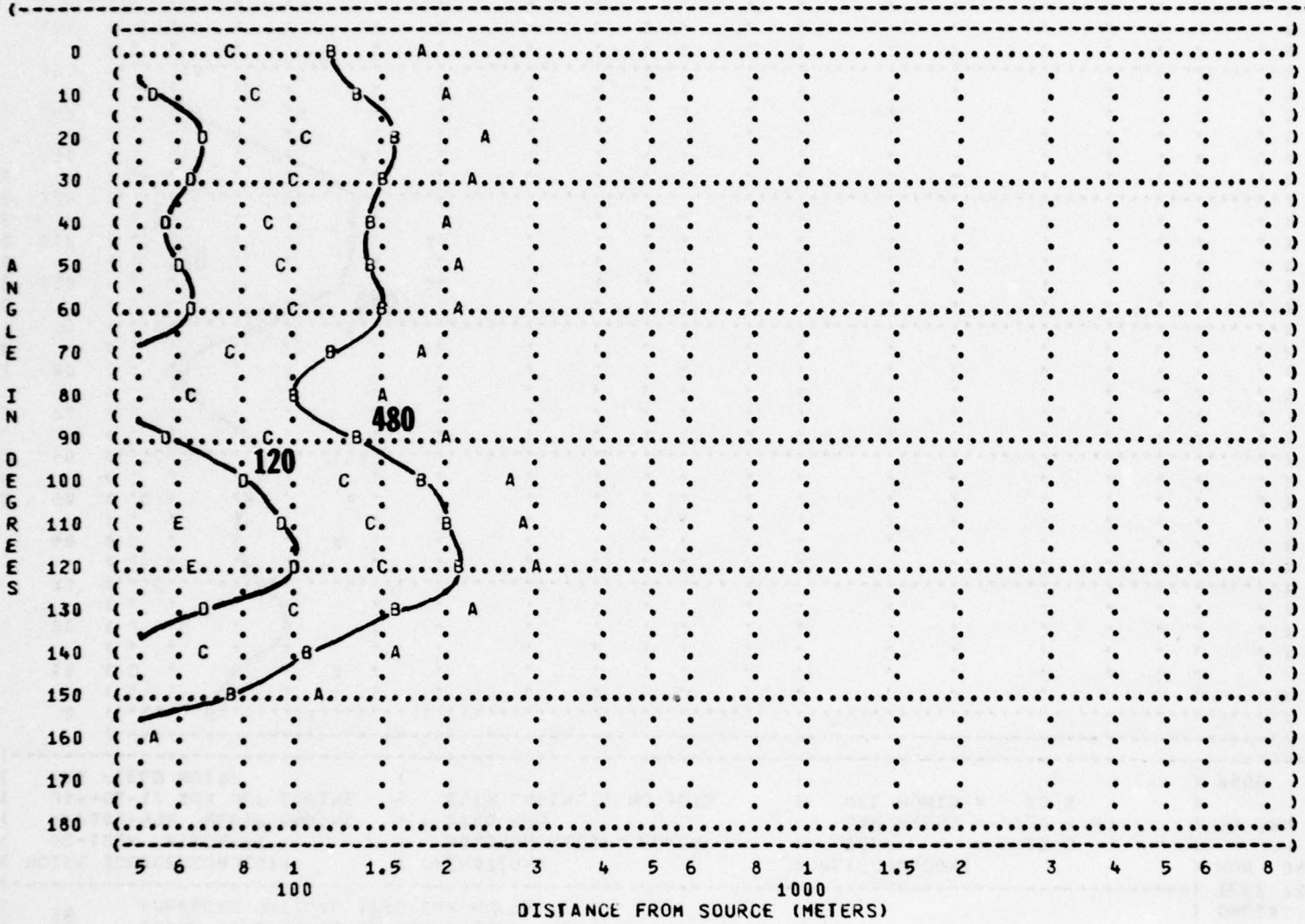
FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
MINIMUM QPL EAR MUFFS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 8



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)
AMERICAN OPTICAL 1700 EAR MUFFS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 9

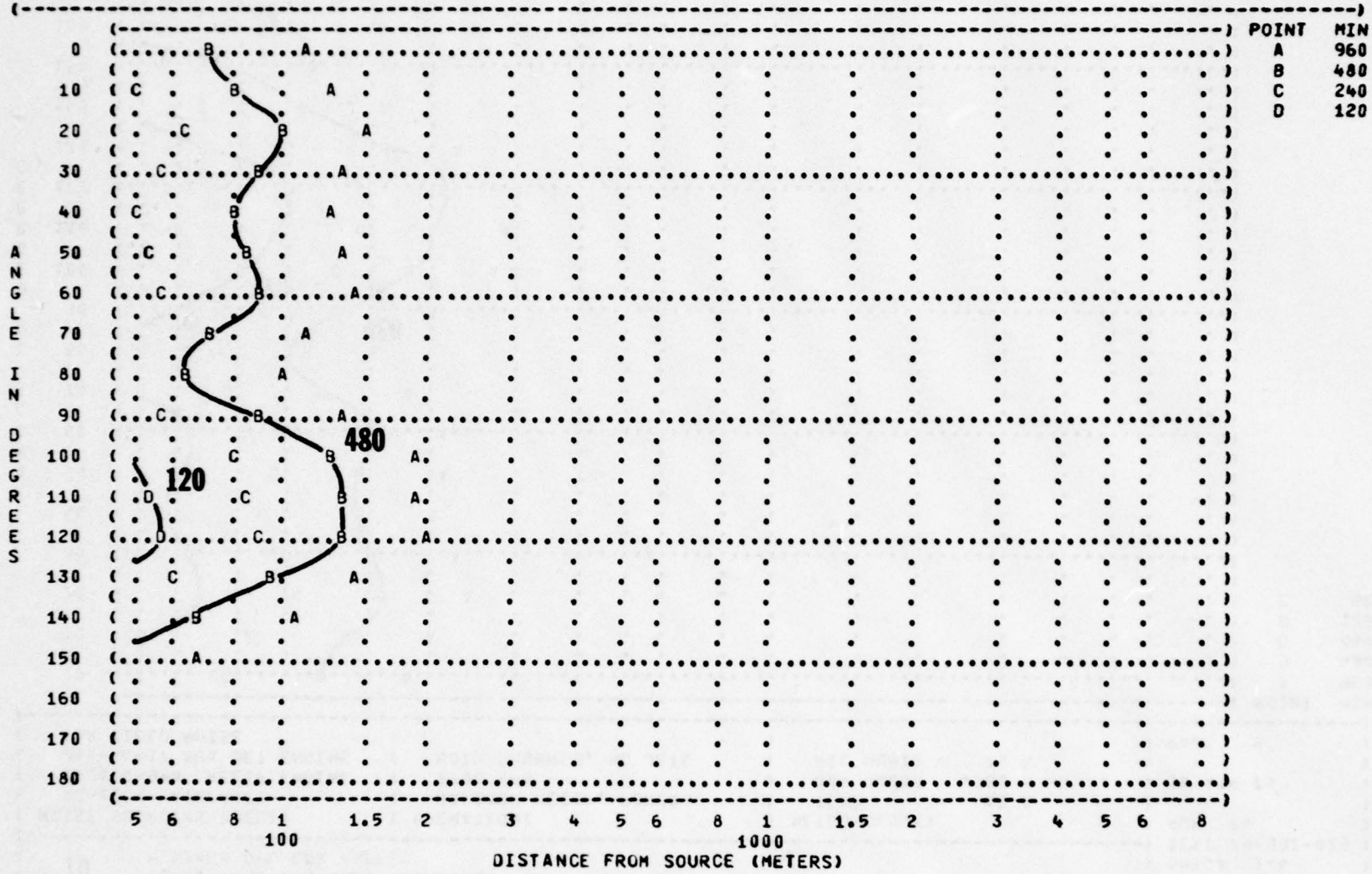


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
V-51R EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 10

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

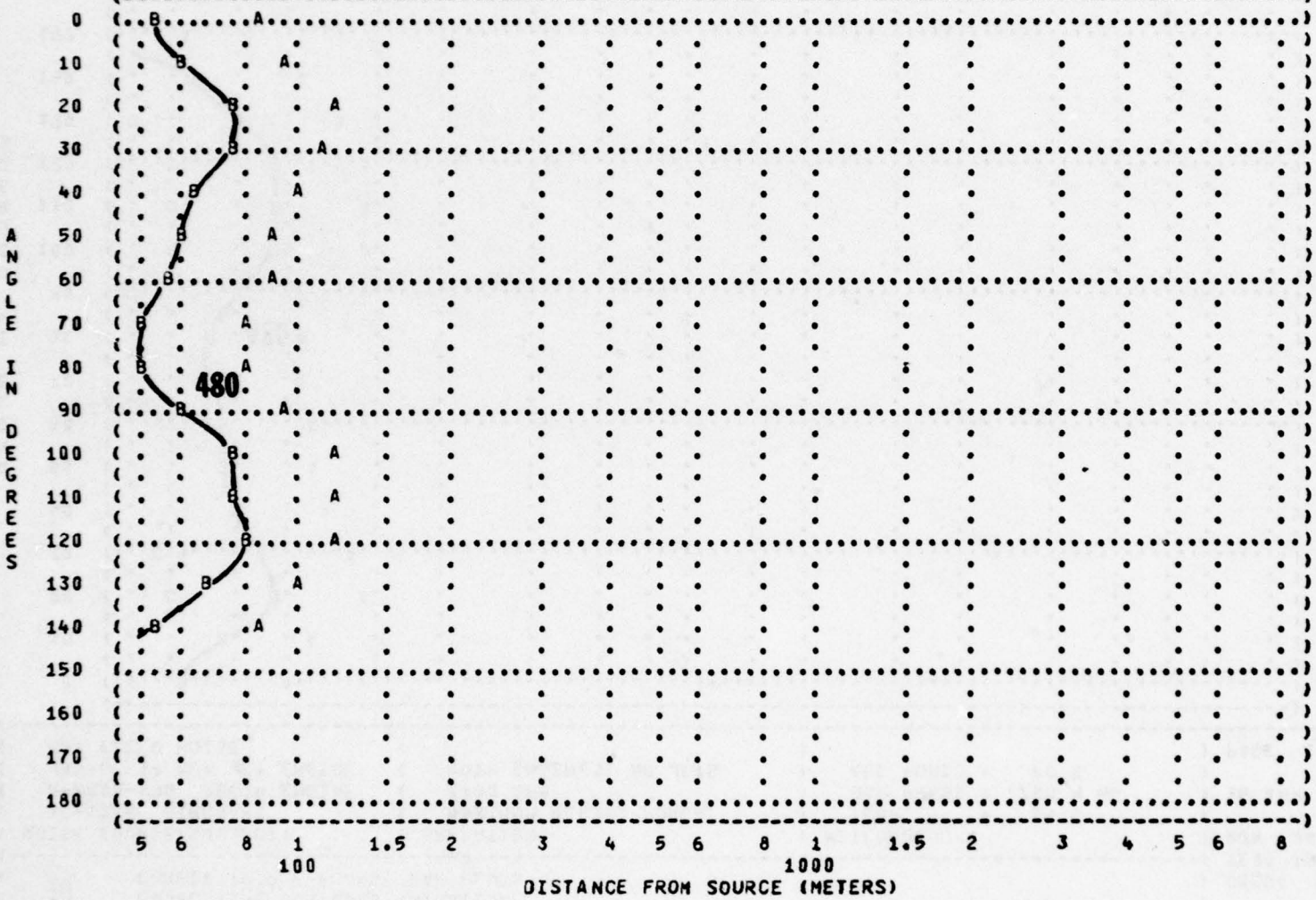


FIGURE: 10

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 11

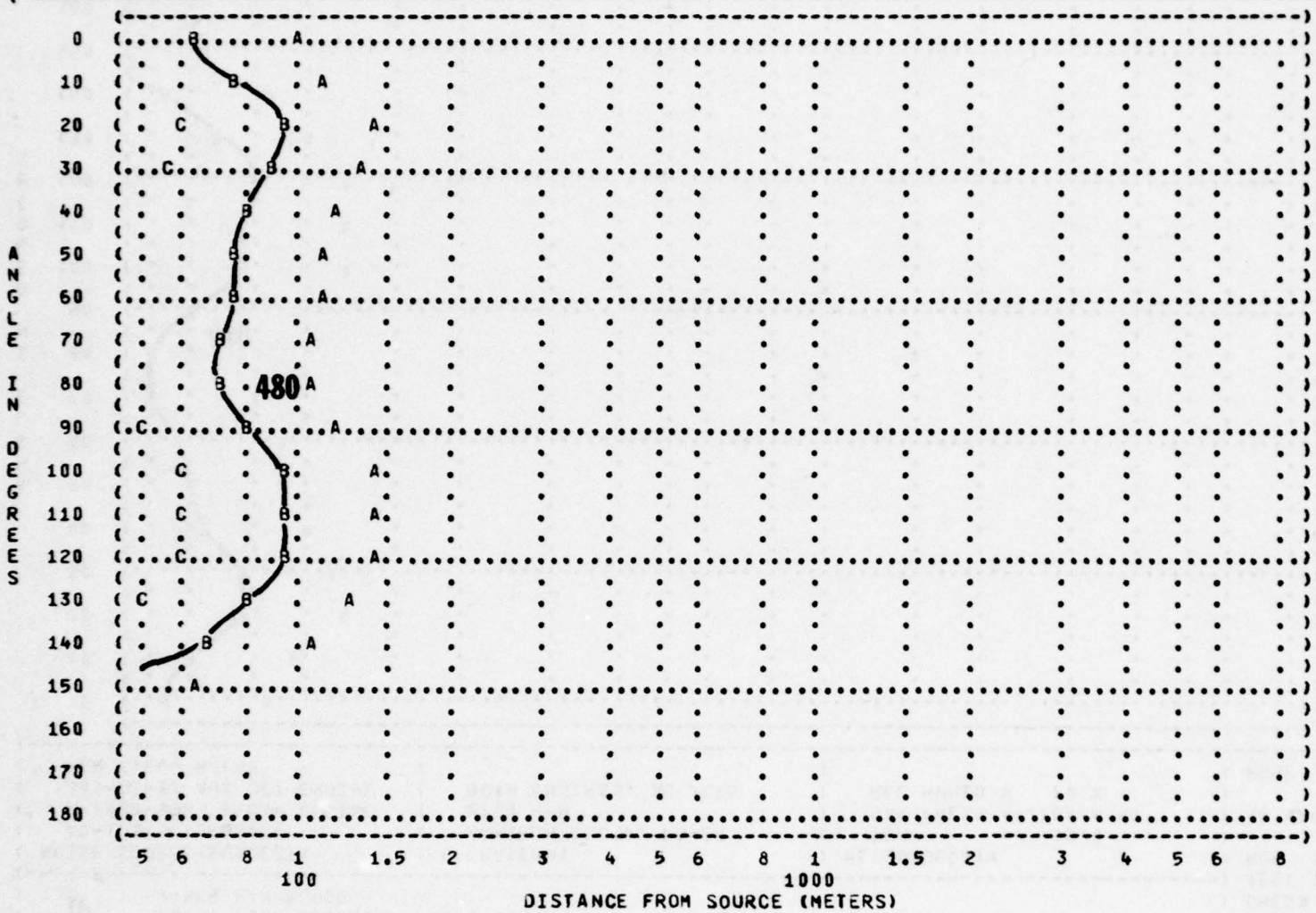


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
H-133 GROUND COMMUNICATION UNIT

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 12

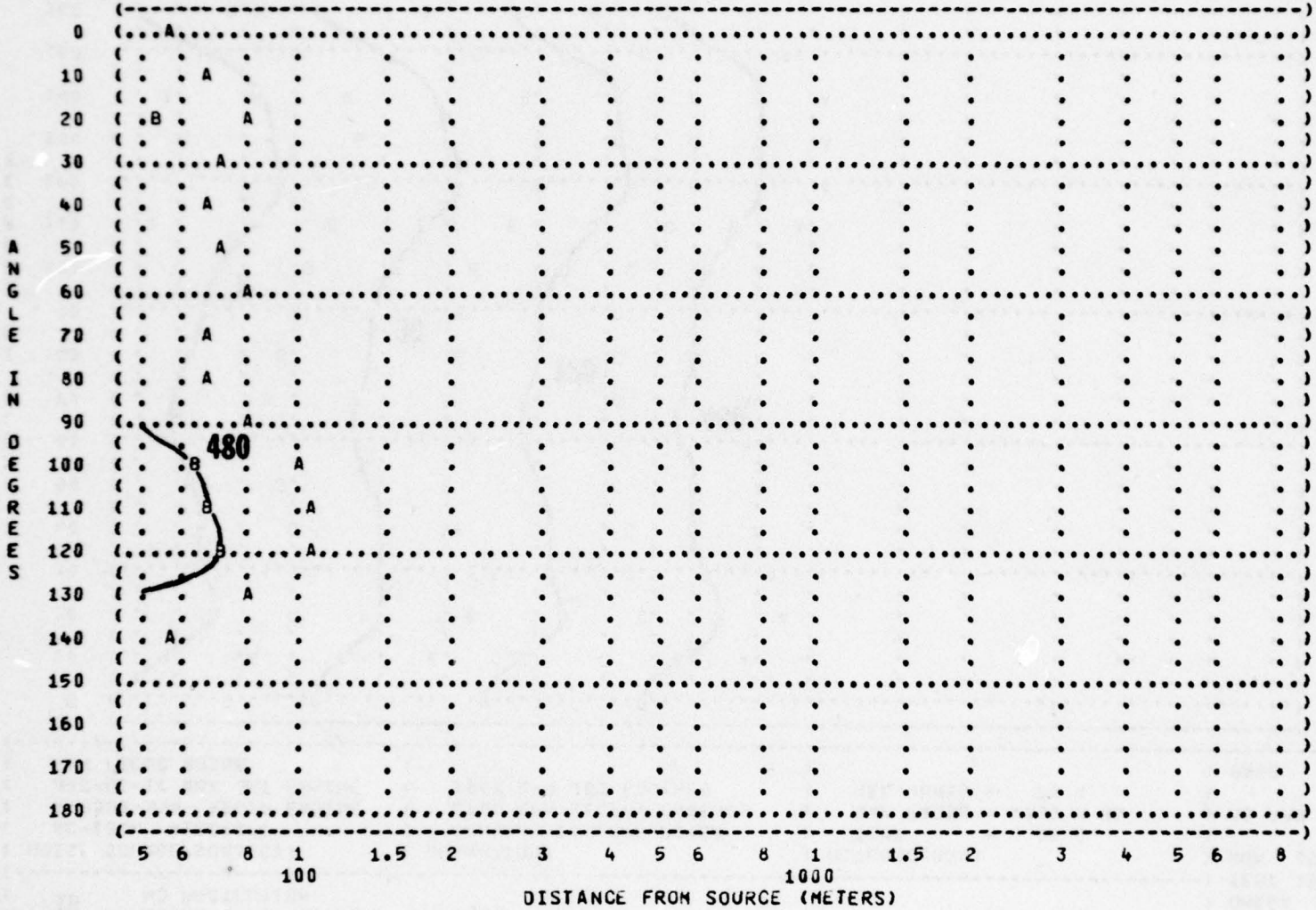


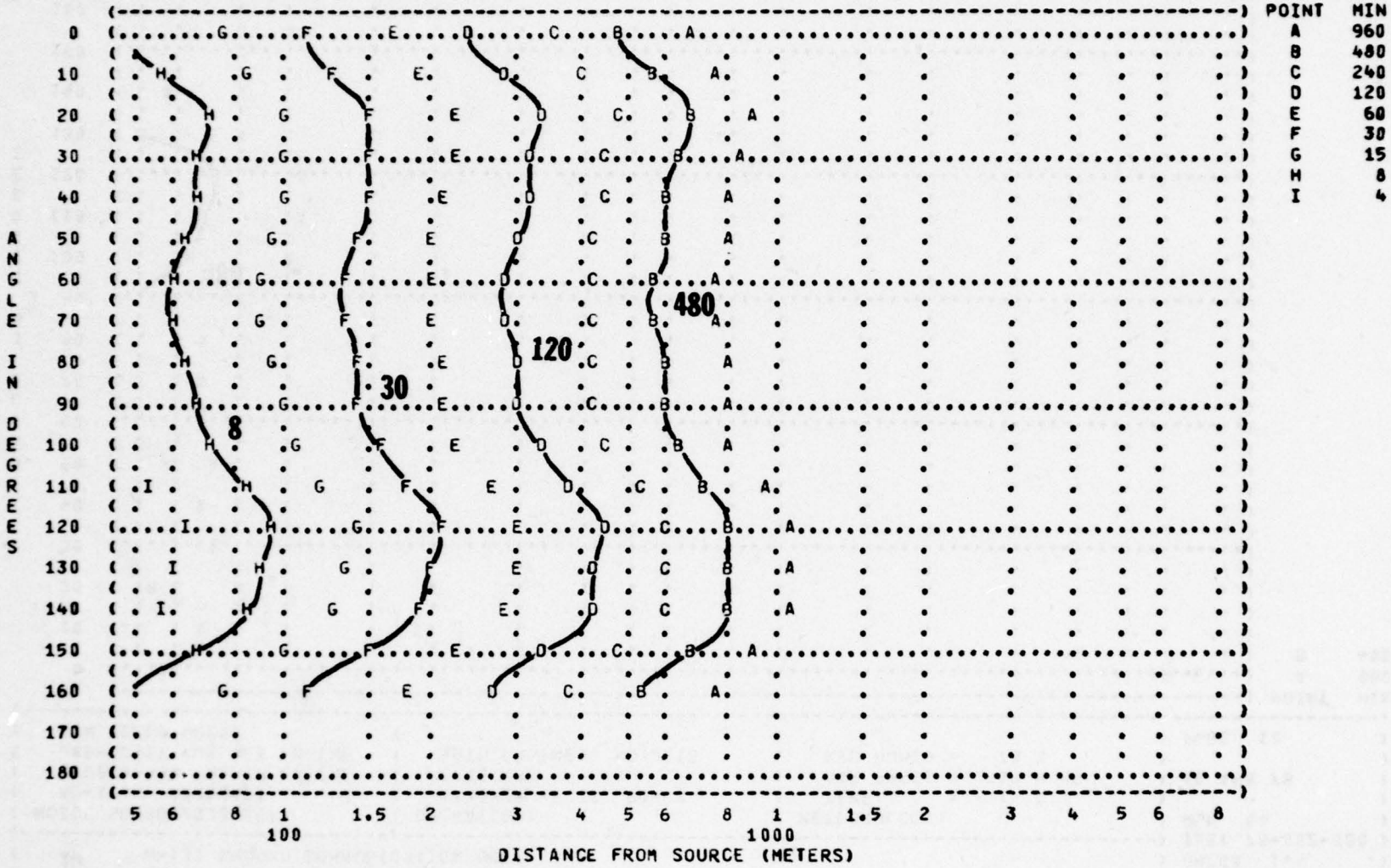
FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 7



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

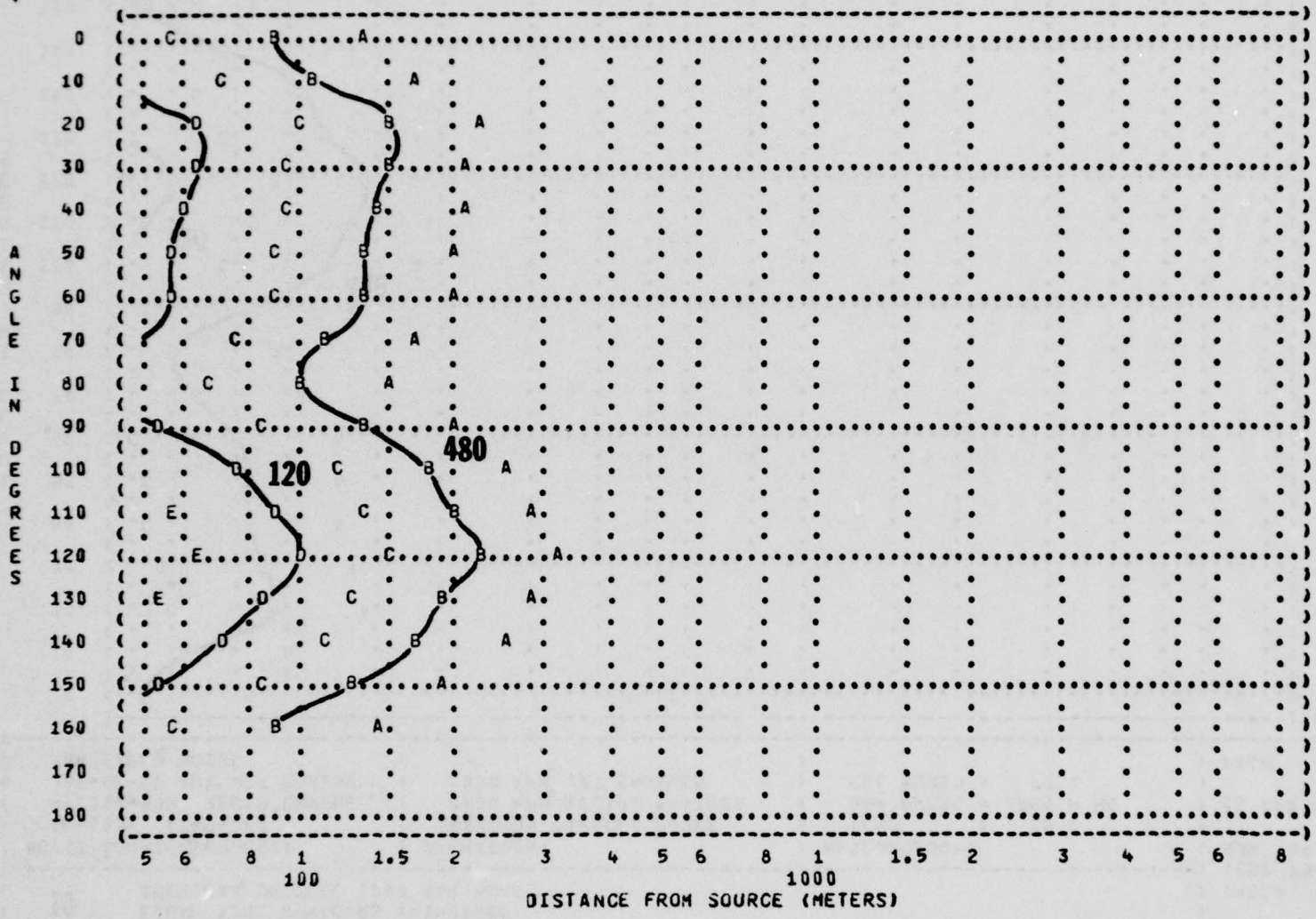
FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
MINIMUM QPL EAR MUFFS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 8



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

FIGURE: 10

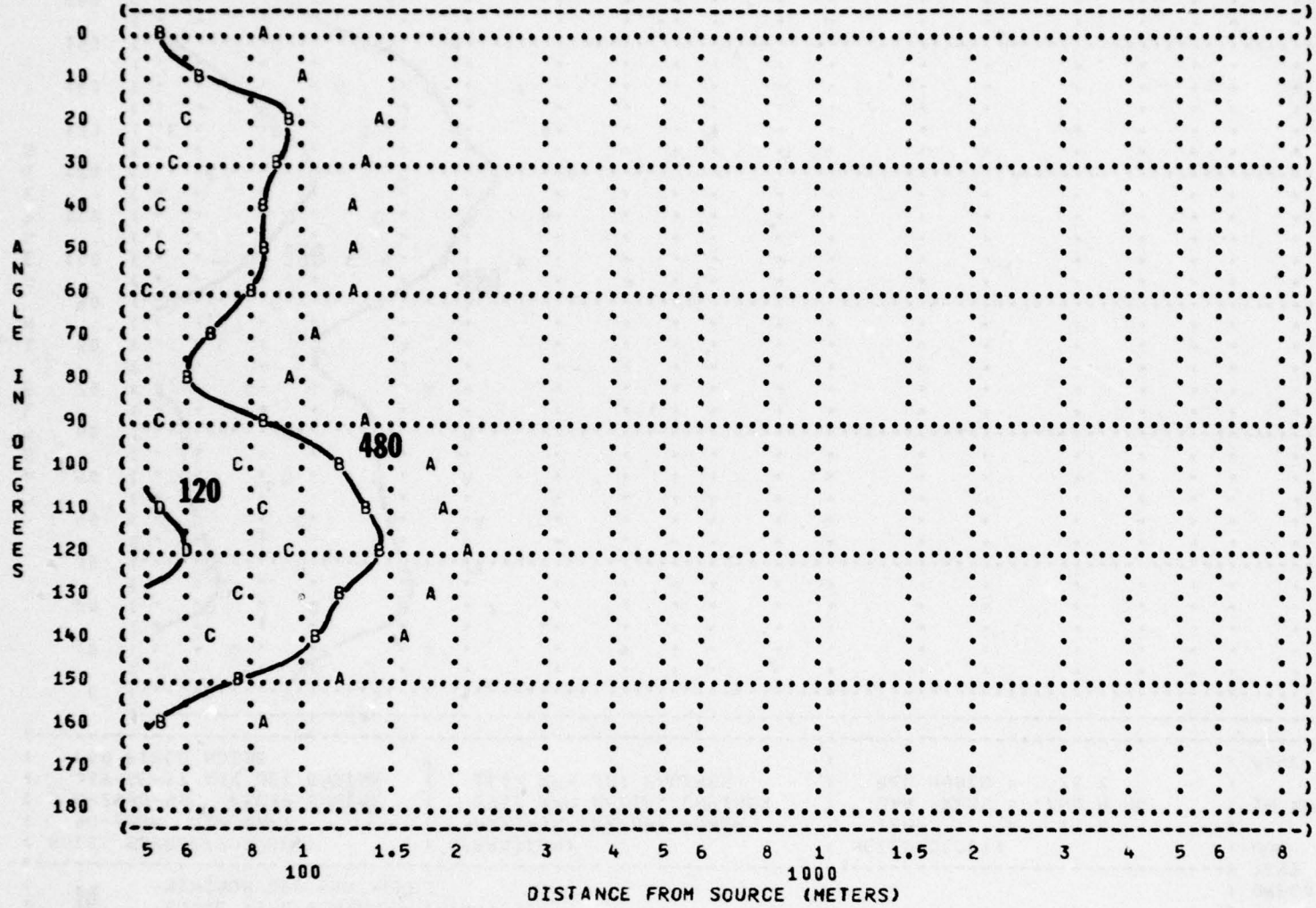
MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
AMERICAN OPTICAL 1700 EAR MUFFS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 9



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)
V-51R EAR PLUGS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 10

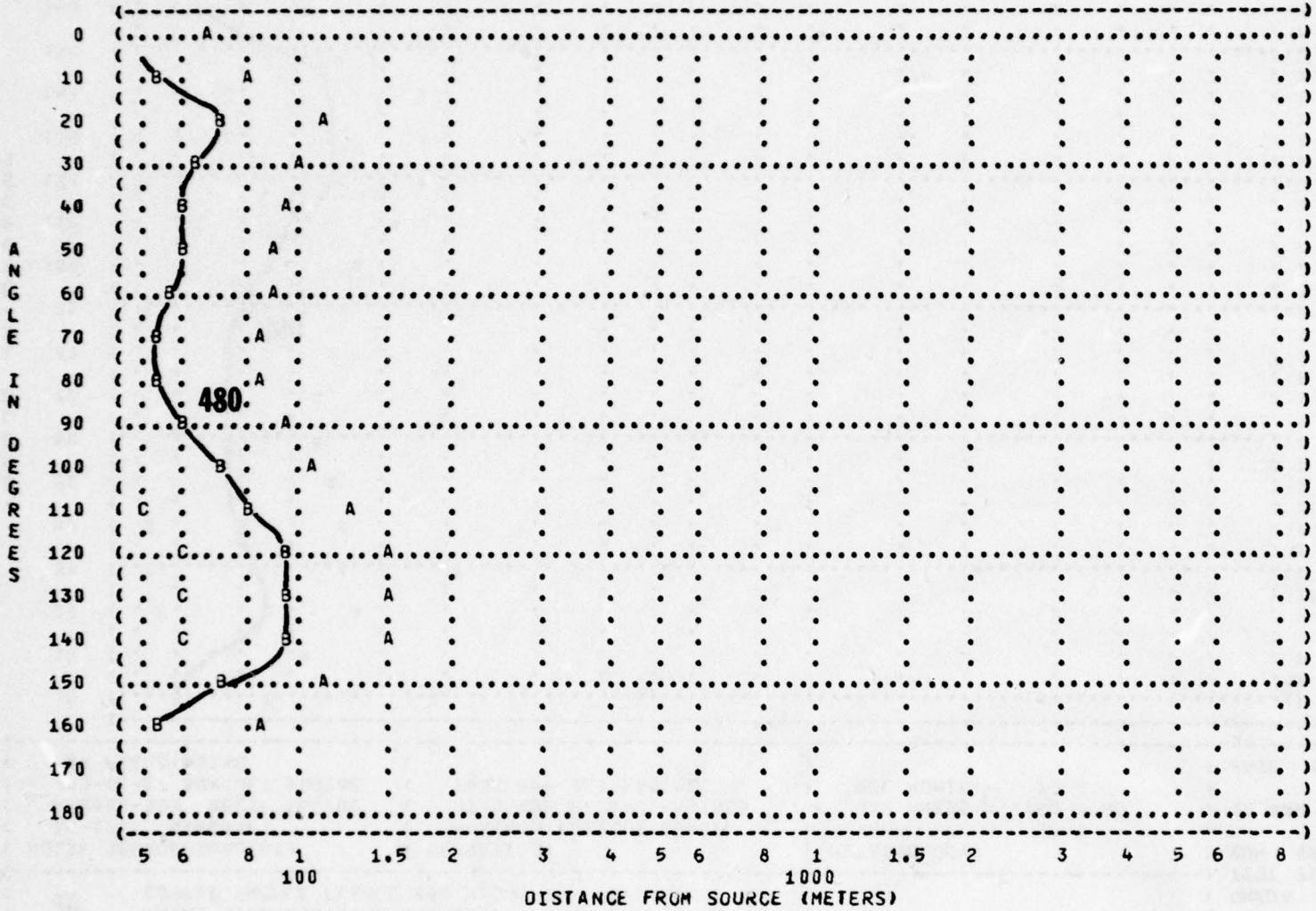


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
COMFIT TRIPLE FLANGE EAR PLUGS

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 11

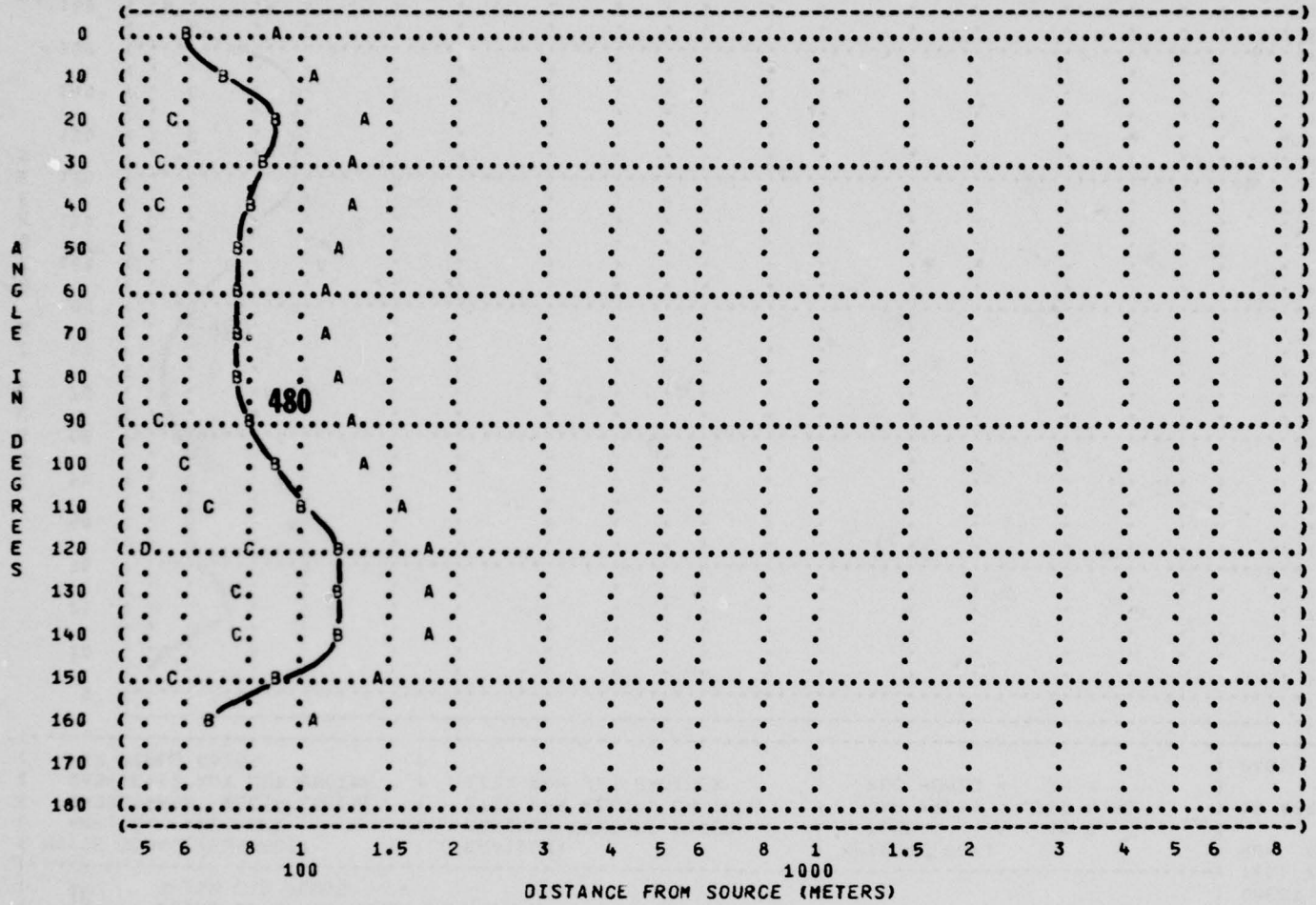


FIGURE: 10

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 75-002-020
RUN 05
16 APR 75
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NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

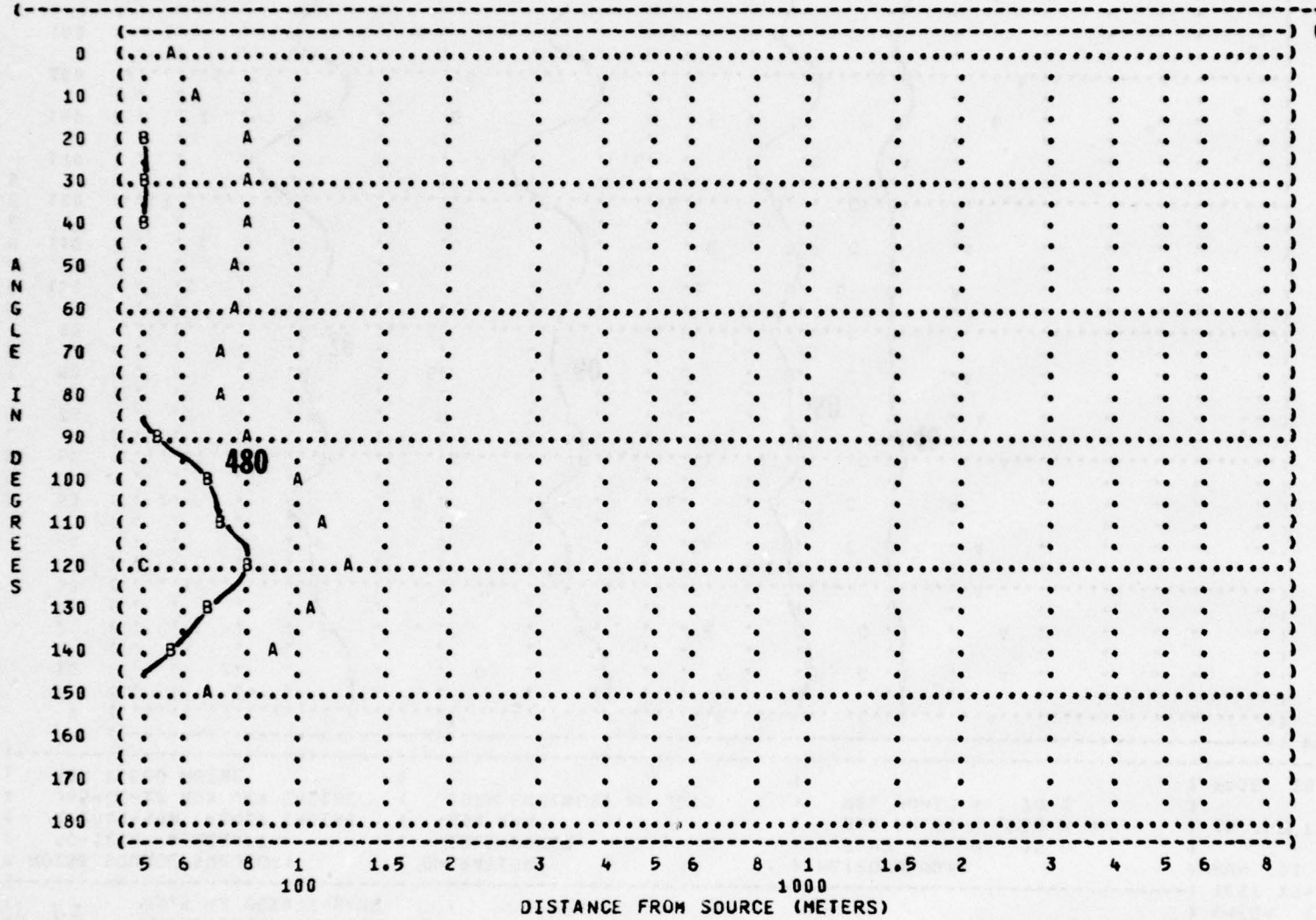


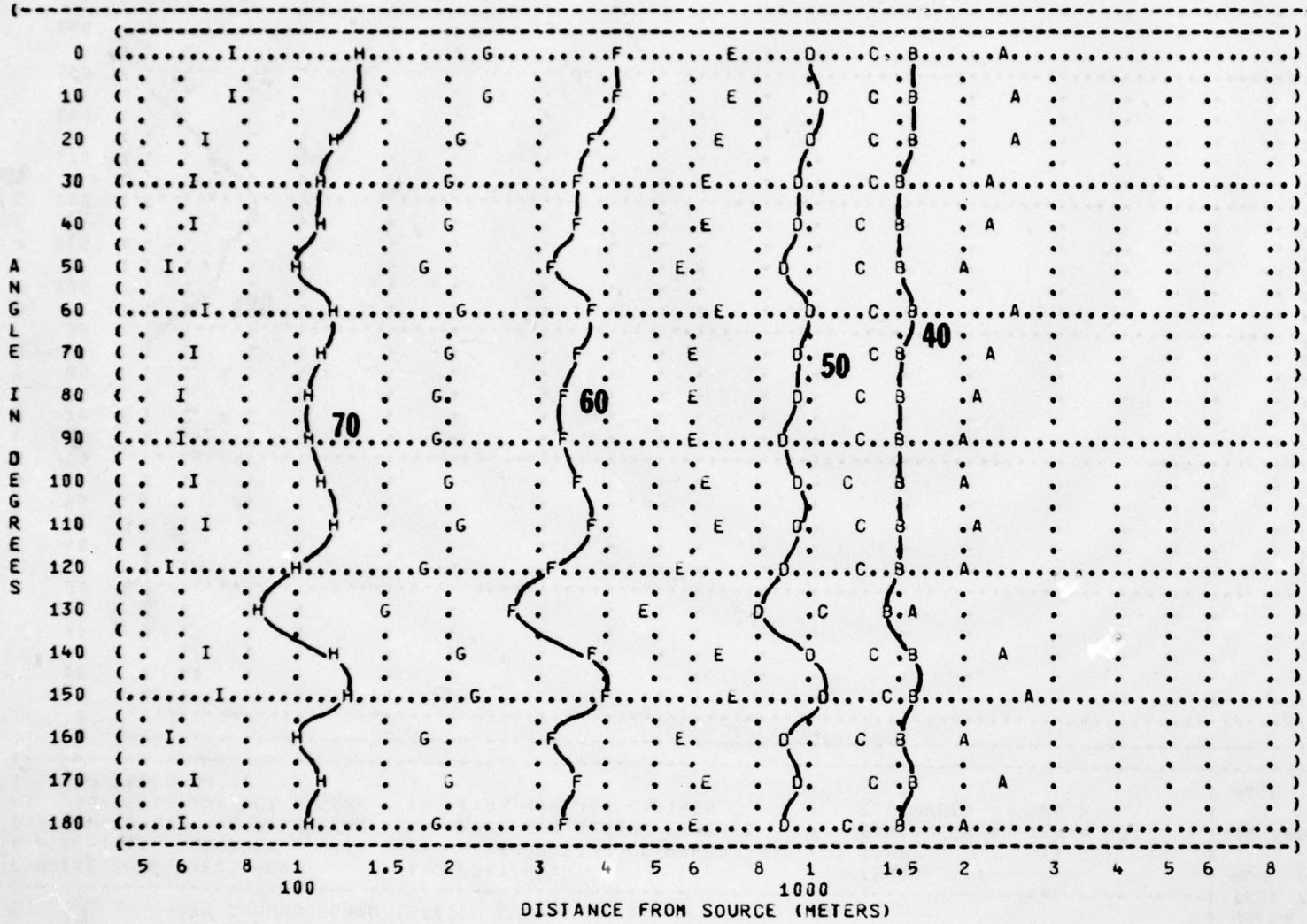
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 18



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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
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NOISE SOURCE/SUBJECT:
OC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

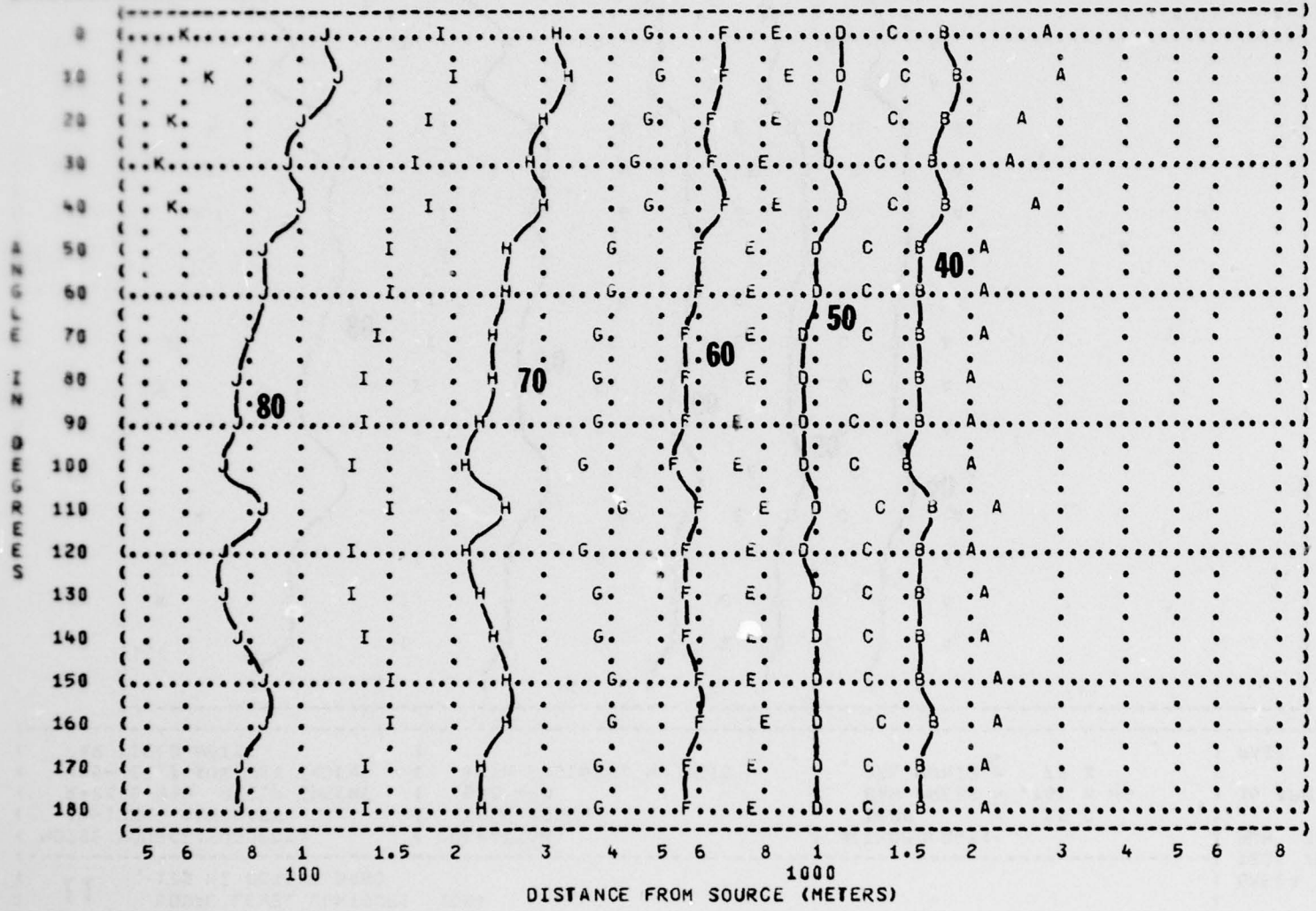


FIGURE 11: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 20

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

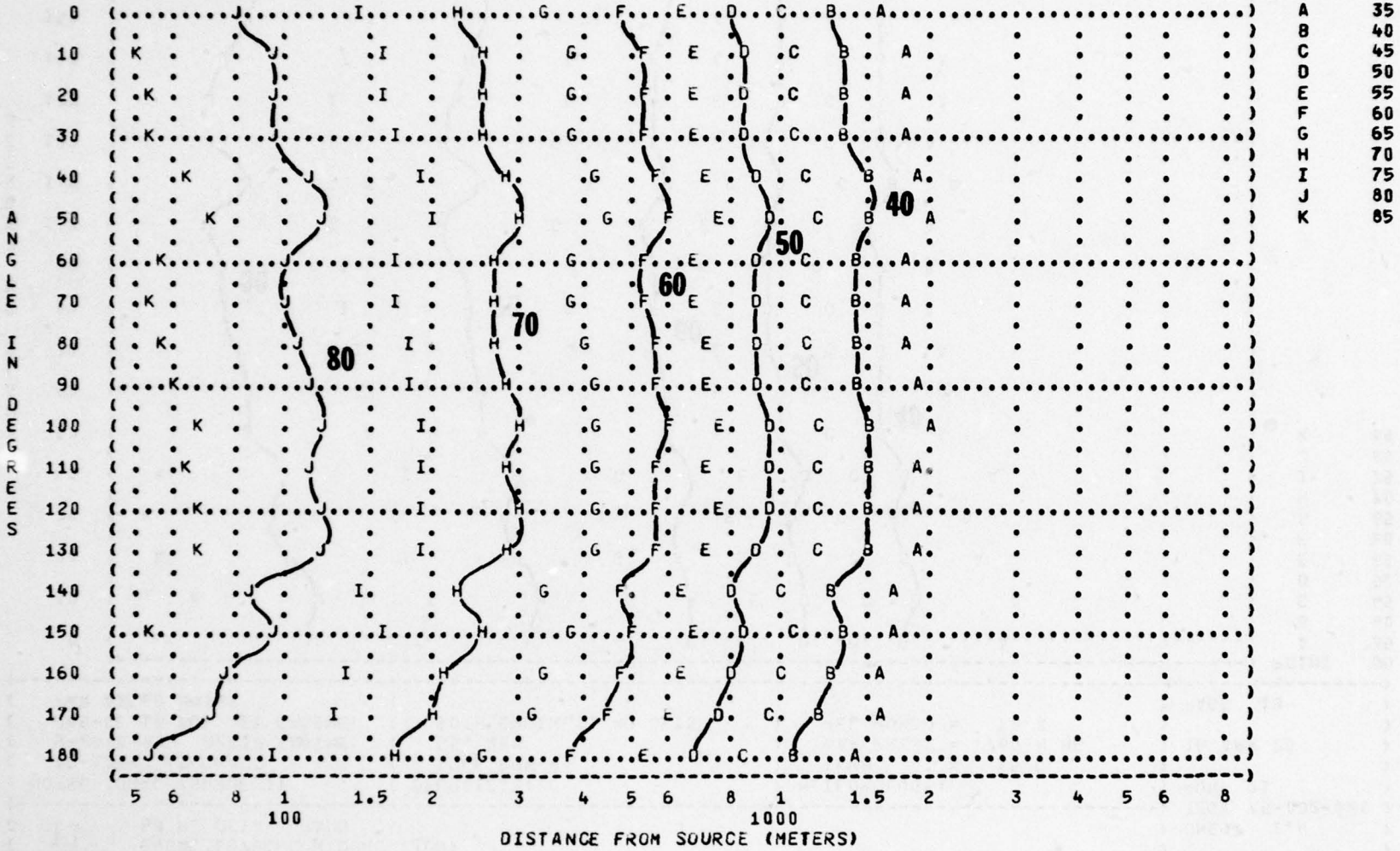


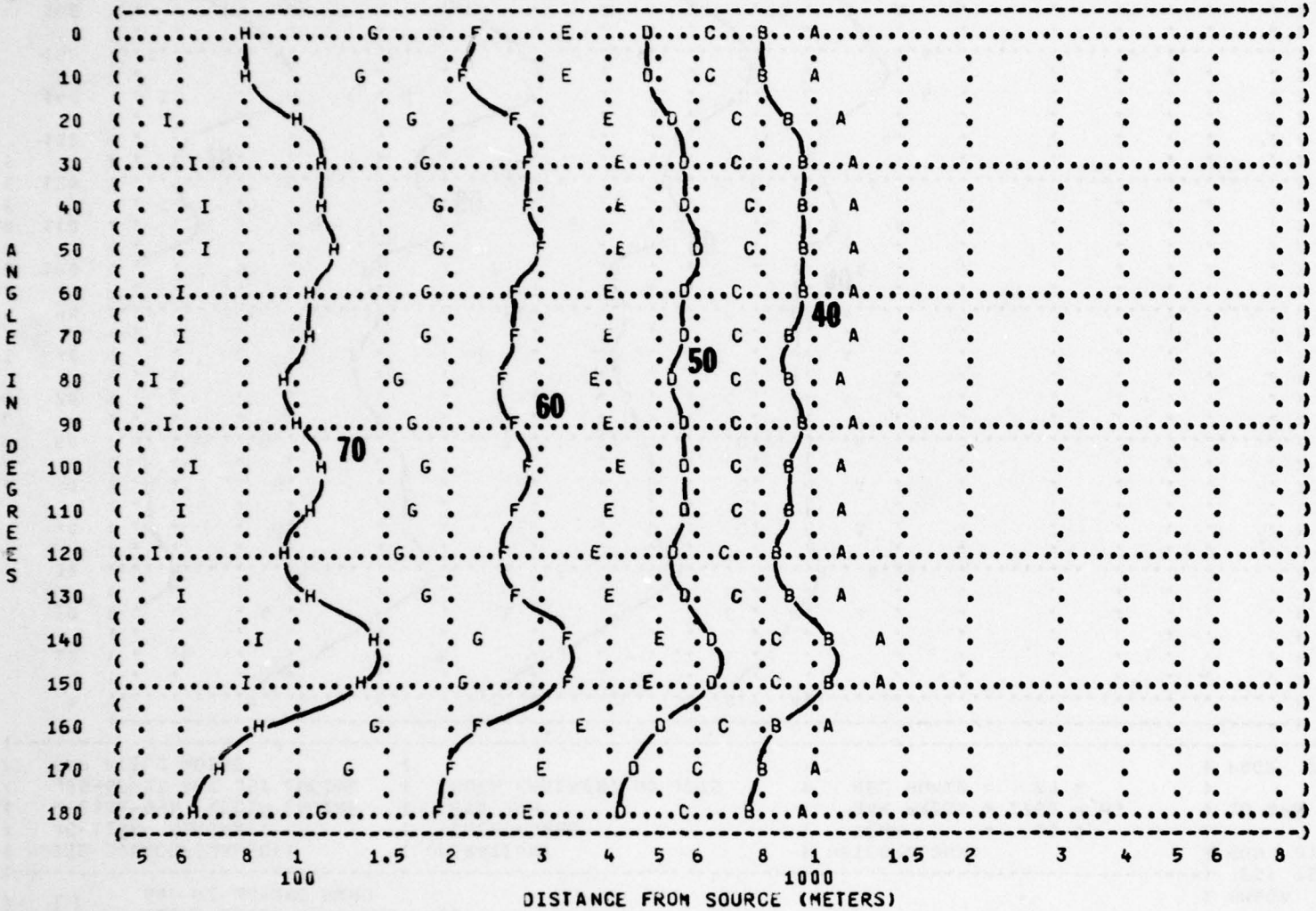
FIGURE 11: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 21

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 22

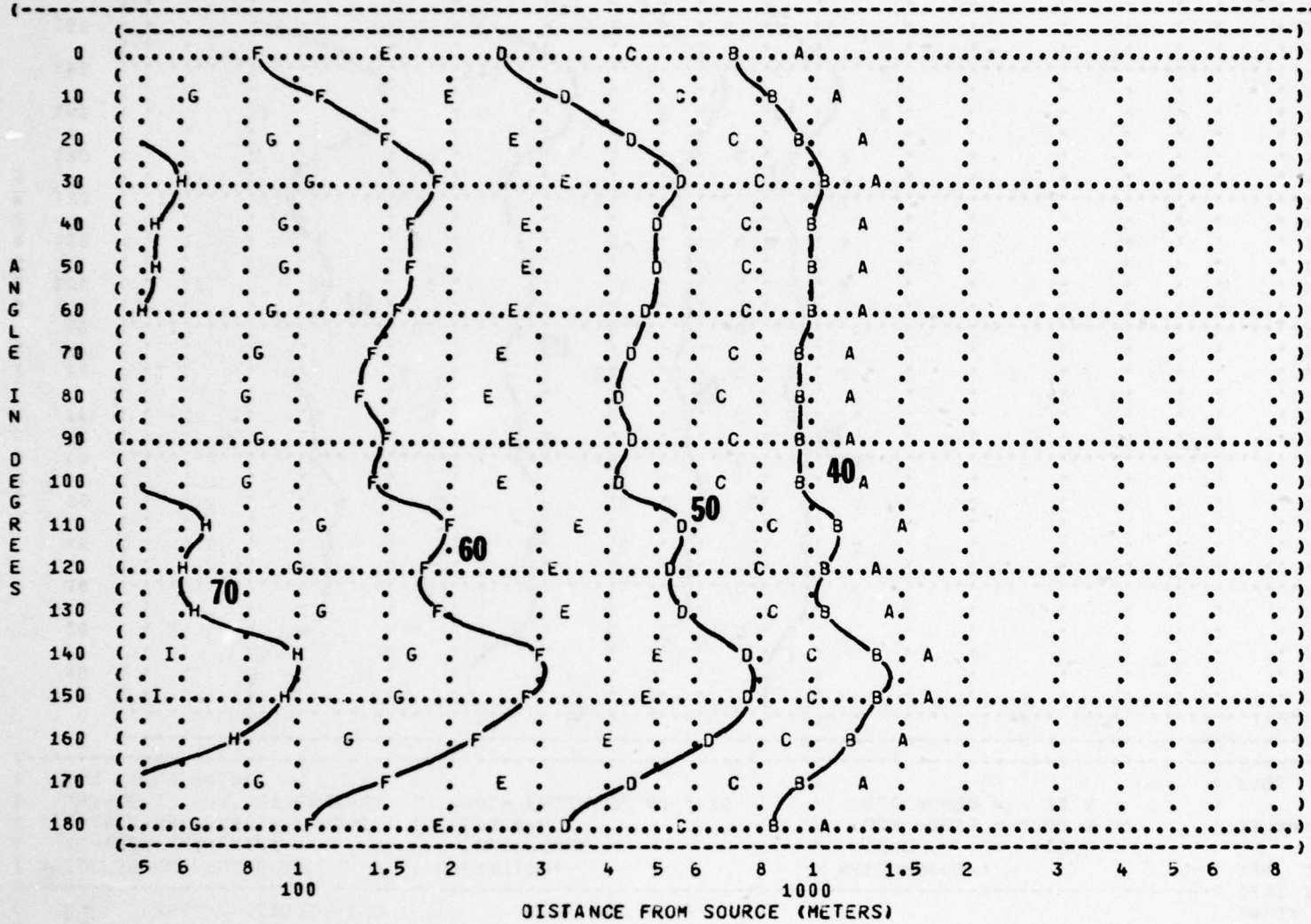


FIGURE: 11

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 23

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

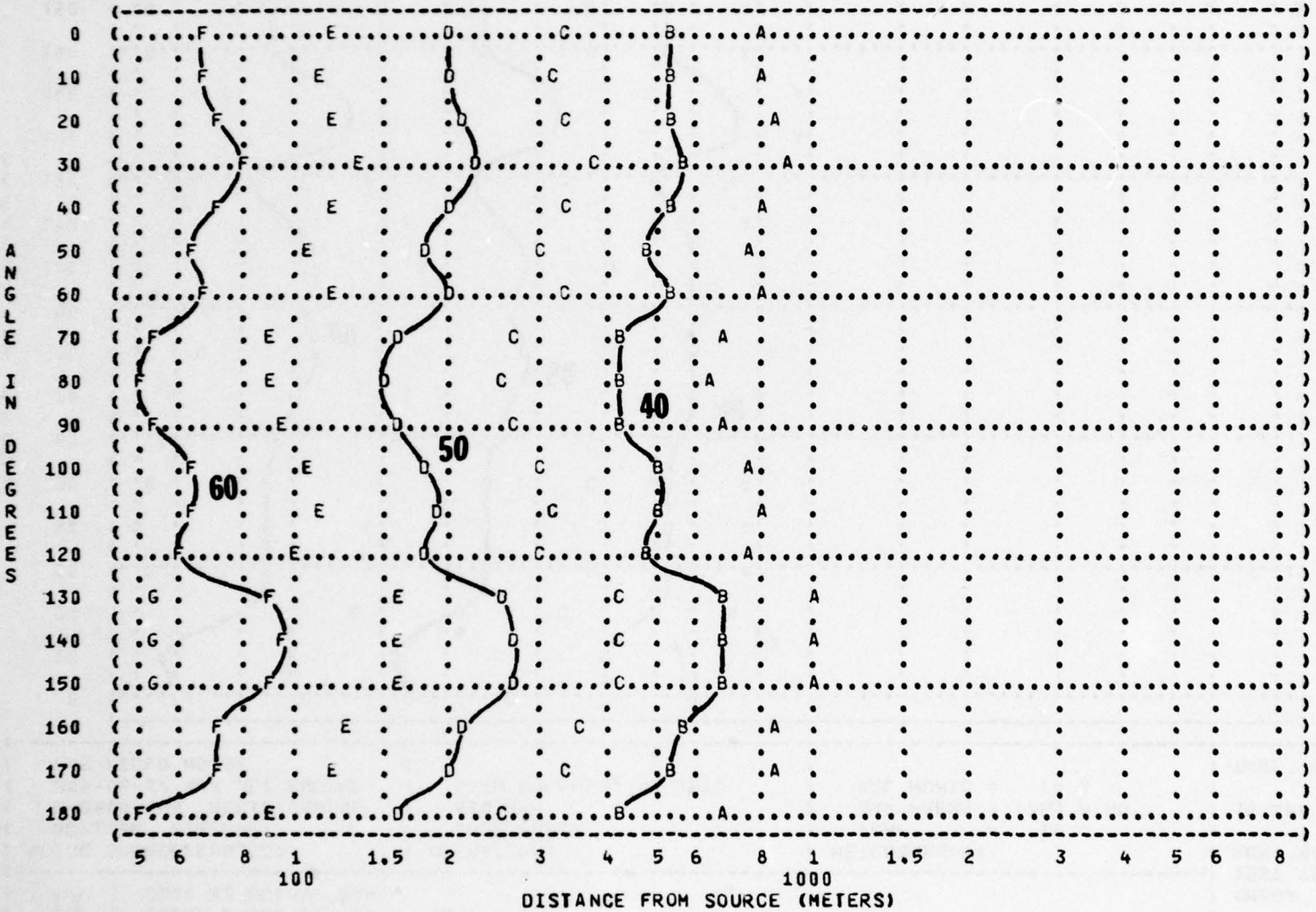


FIGURE 11: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 24

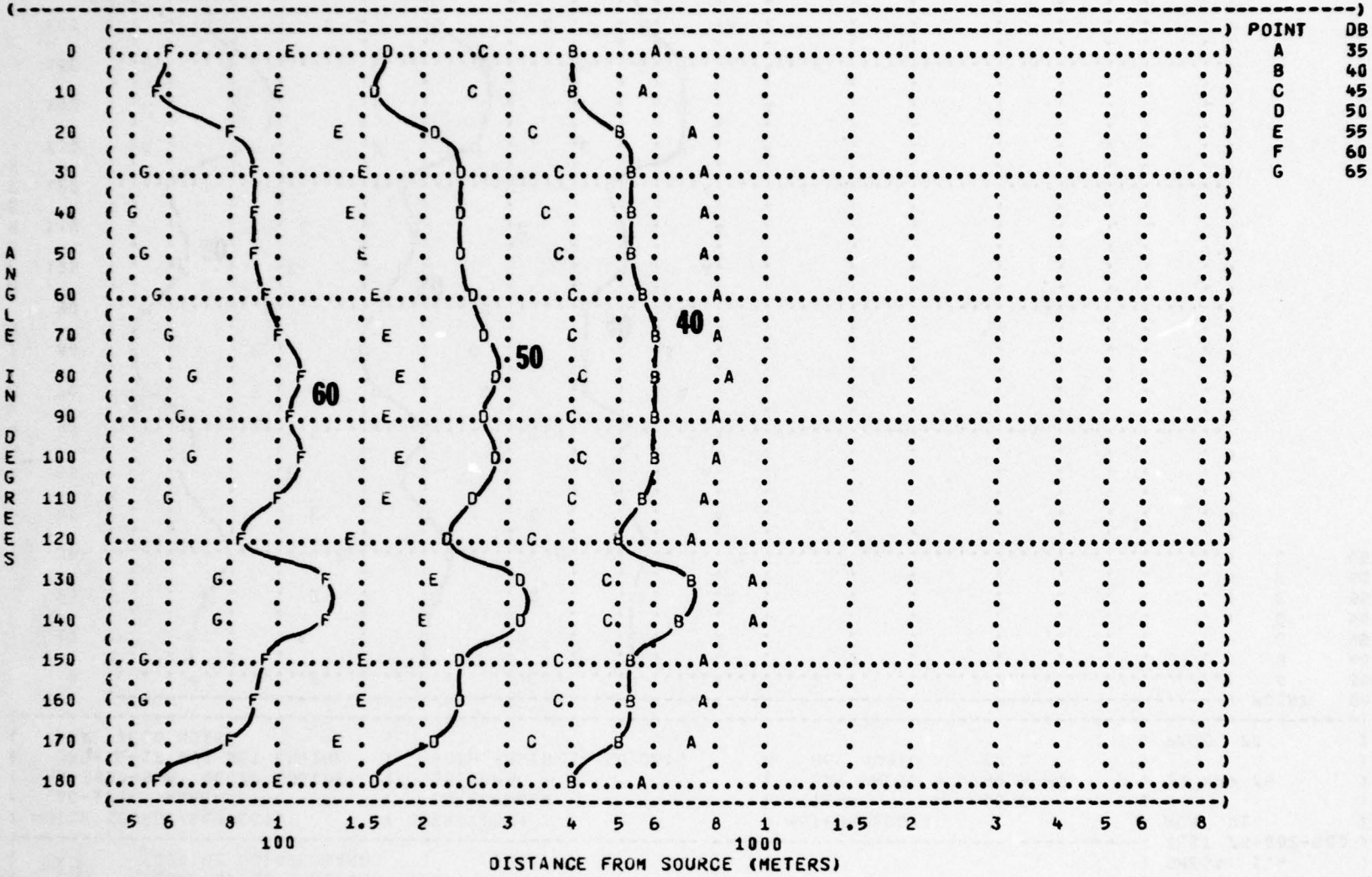


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 25

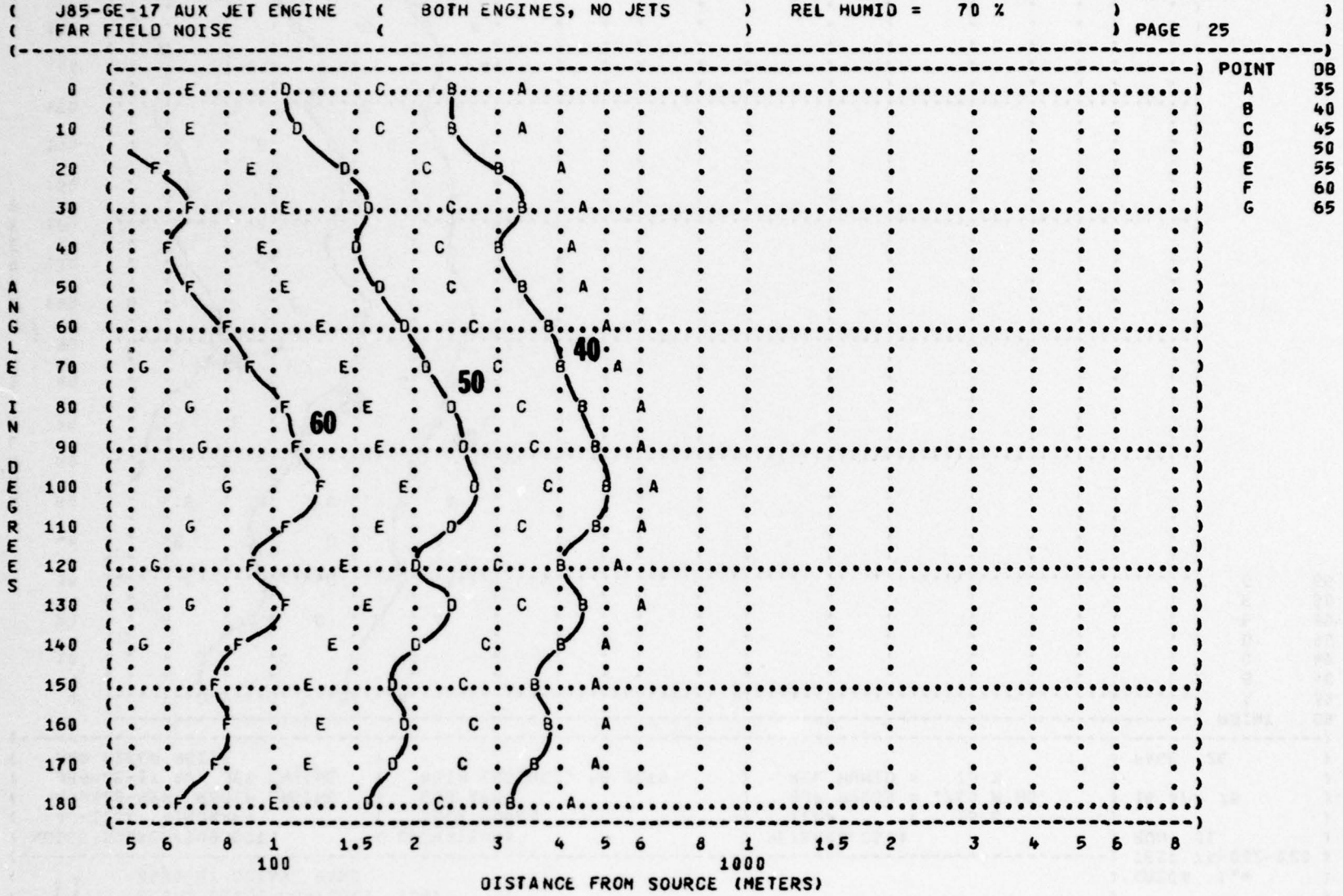


FIGURE: 11

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 01
16 APR 75
PAGE 26

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
650 RPM
BOTH ENGINES, NO JETS

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

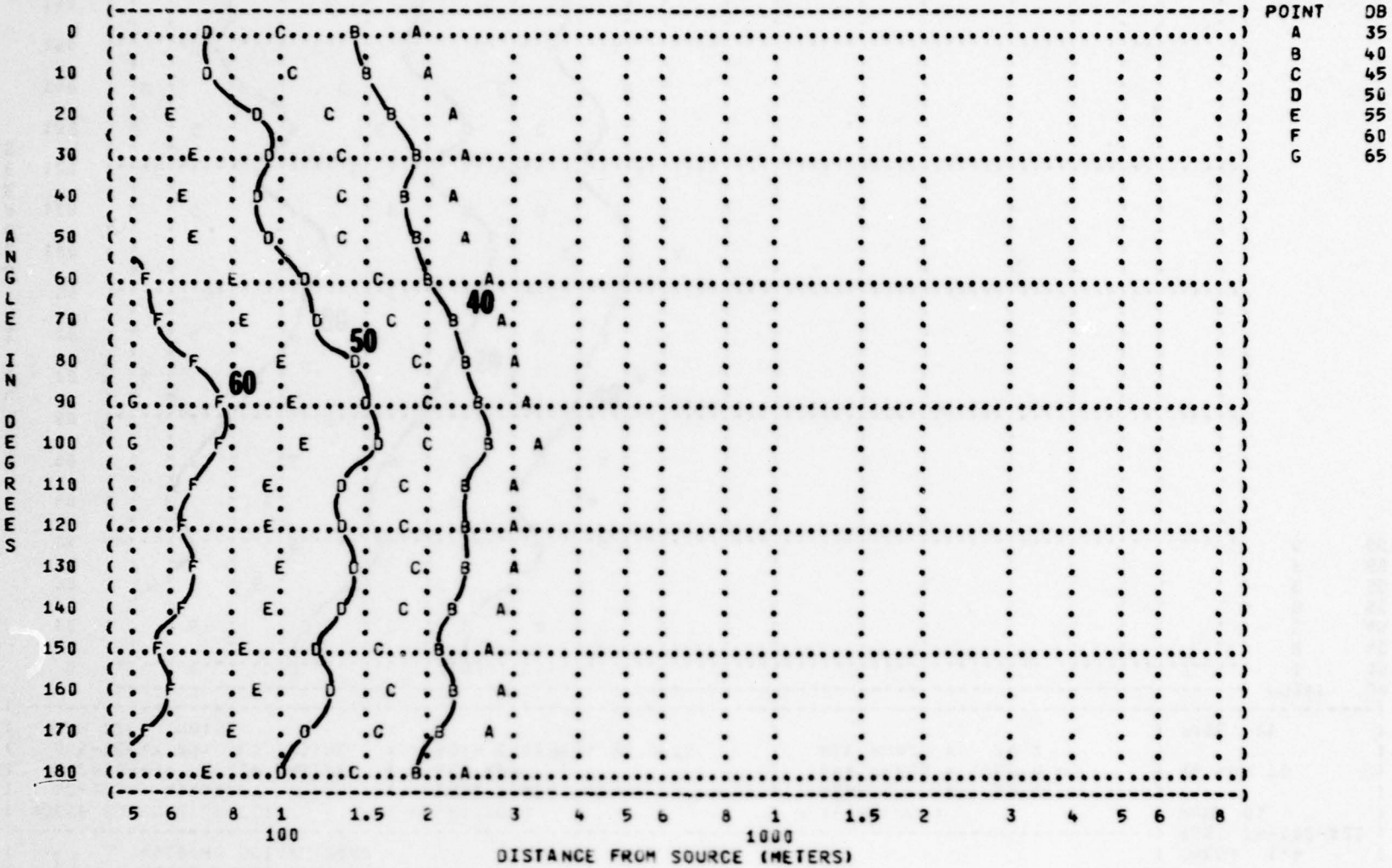


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 18

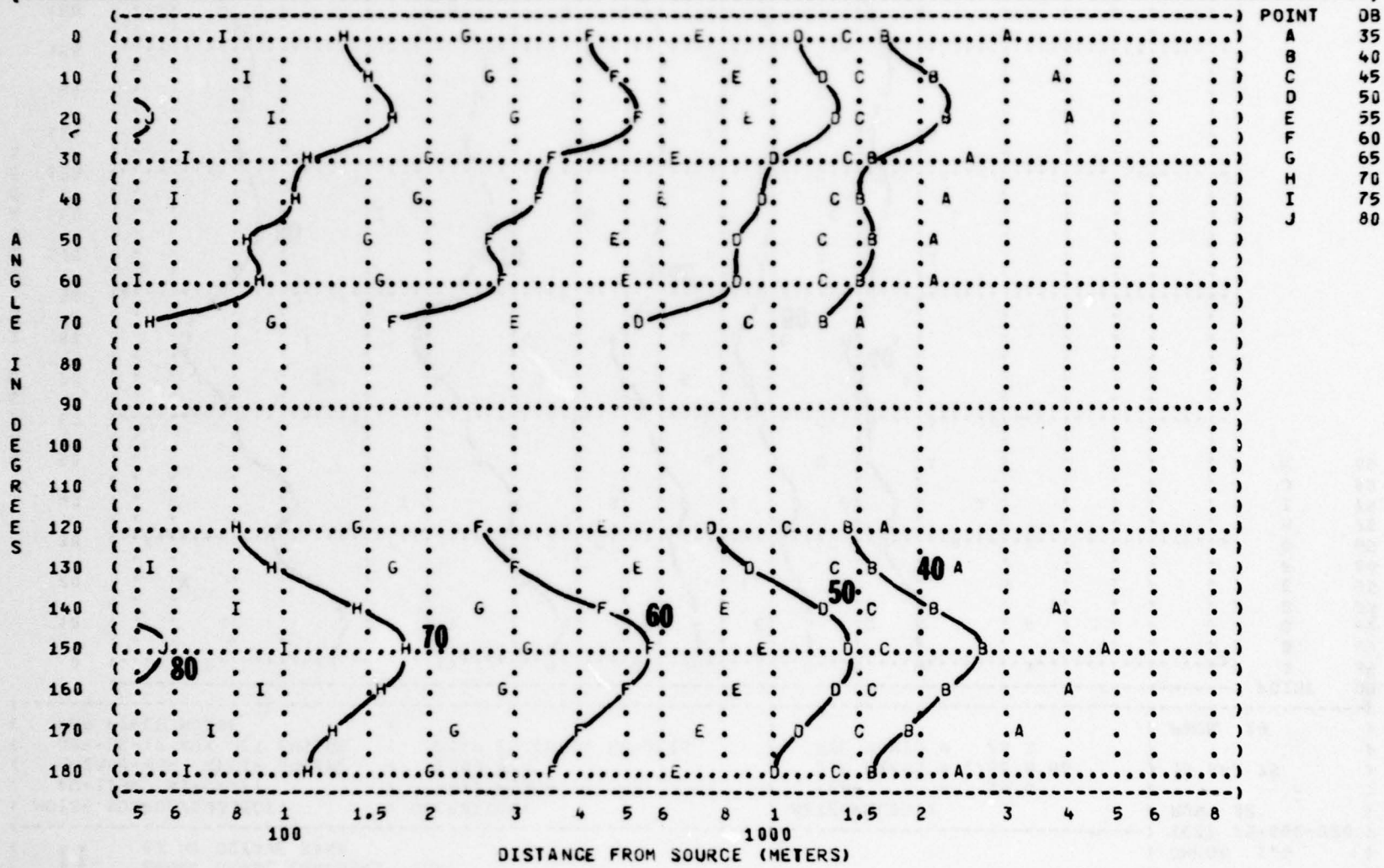


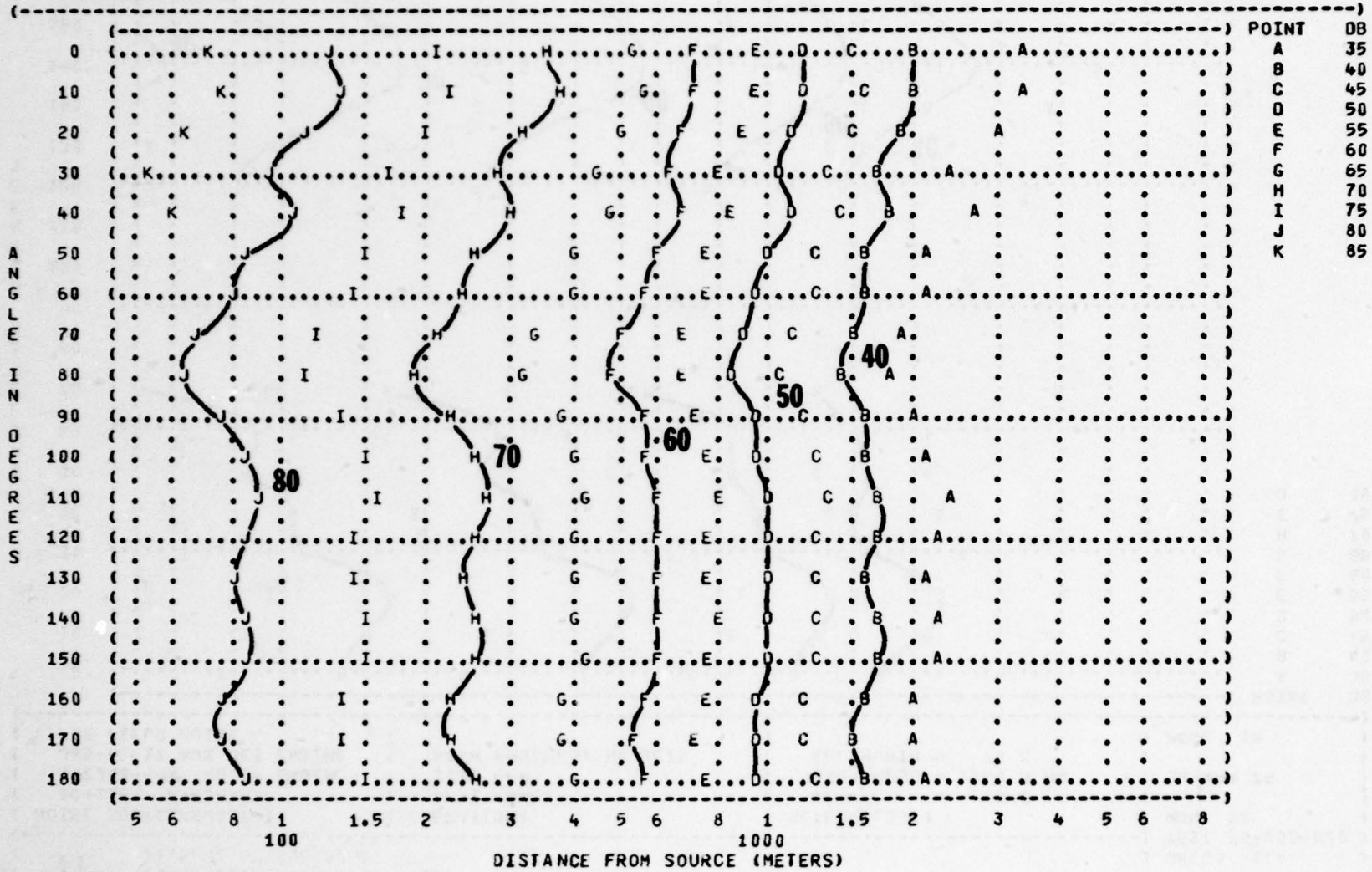
FIGURE 11: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
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

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 20

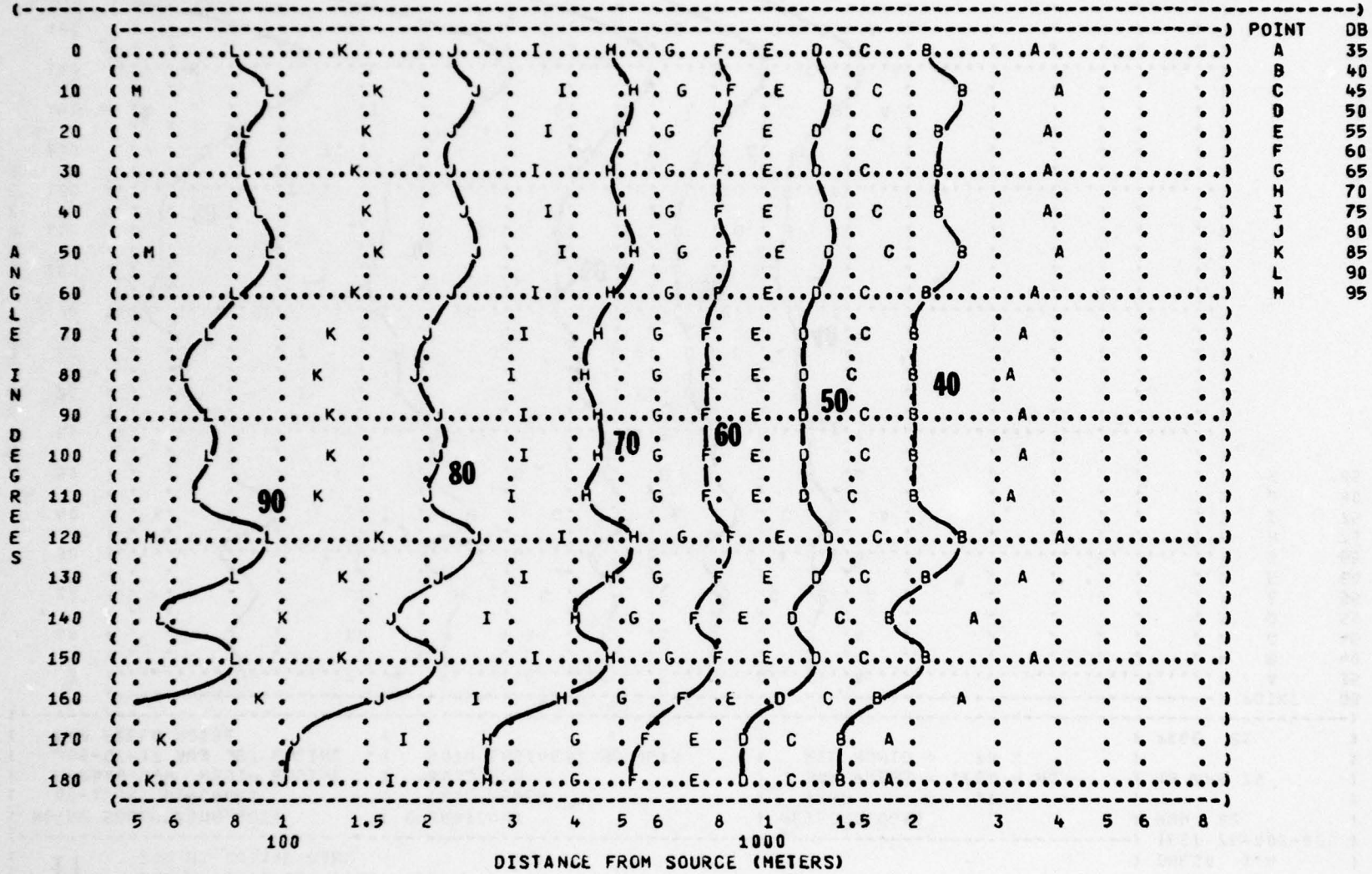


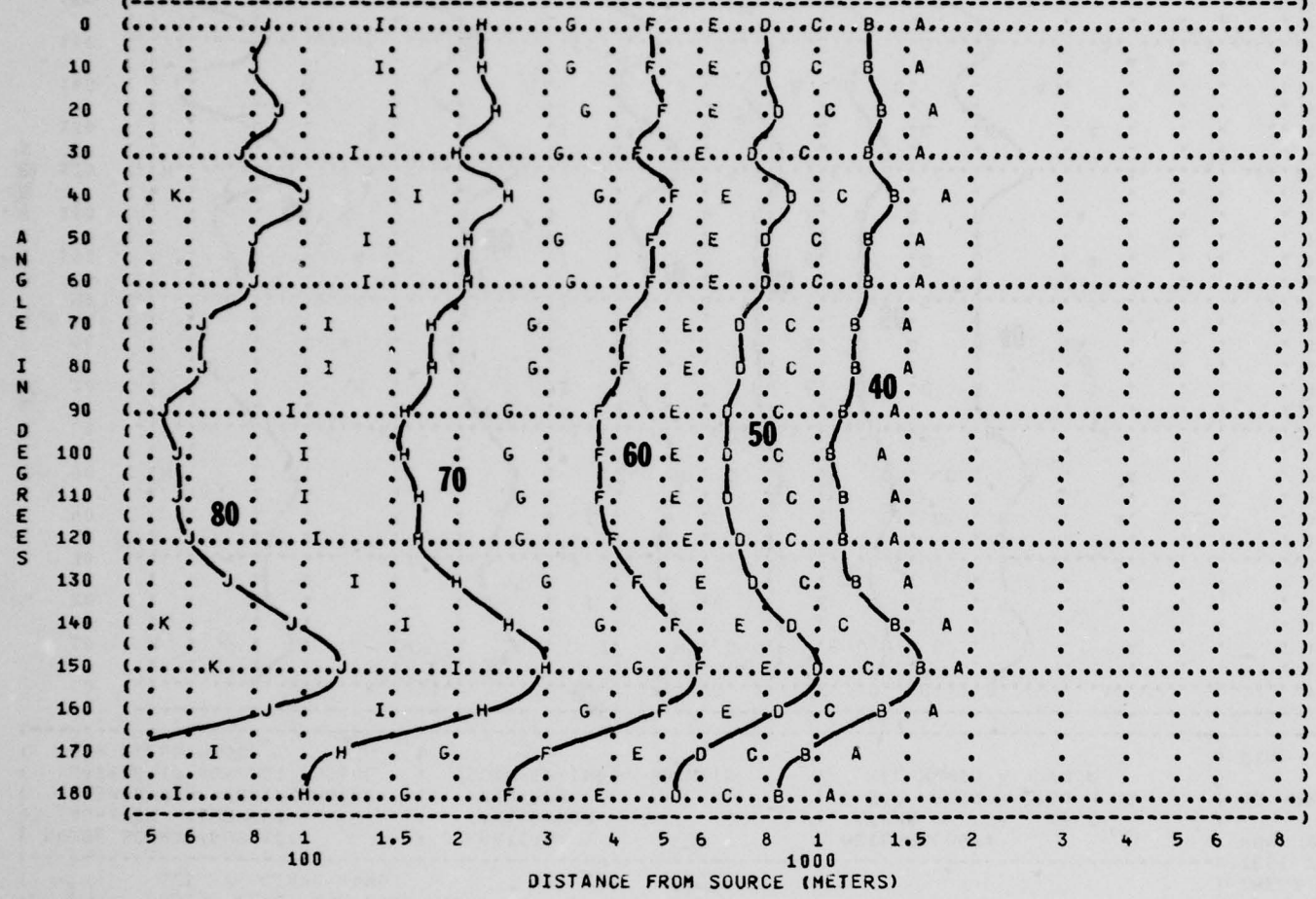
FIGURE 11: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
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

FIGURE: 11

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02

16 APR 75

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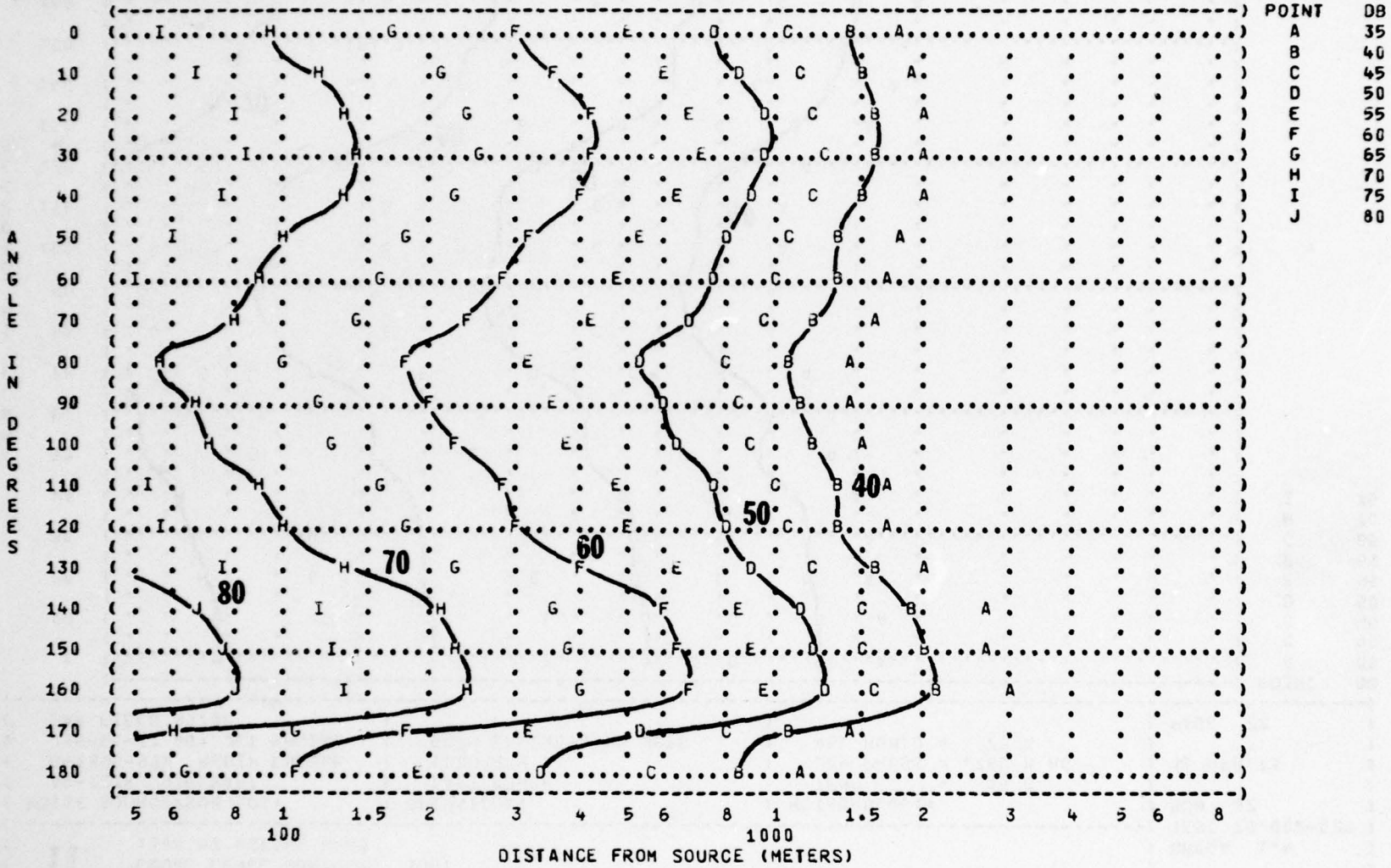

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
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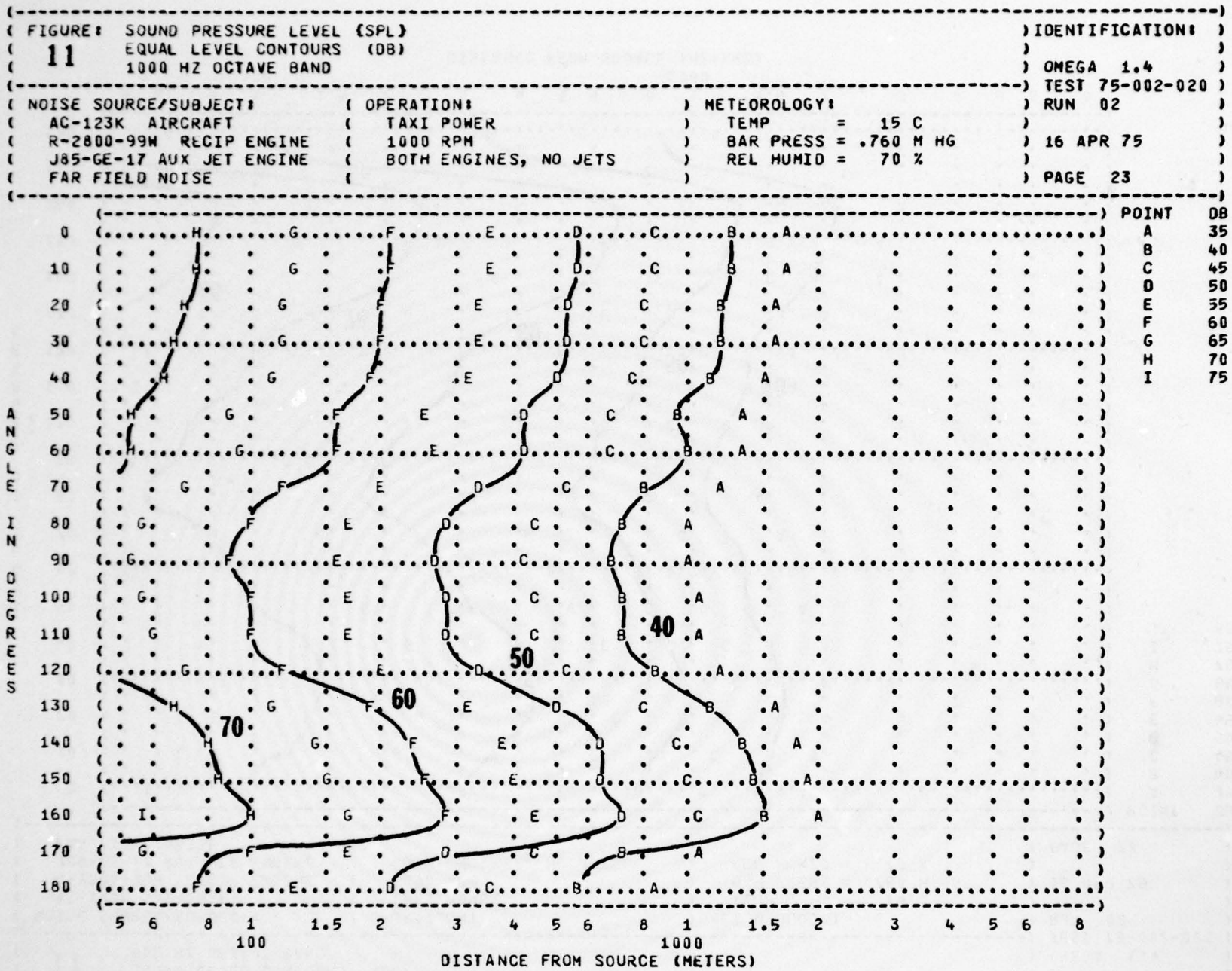
NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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



AD-A048 836 AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OHIO F/G 20/1
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK: C-123K AIRCRAFT, NEA--ETC(U)
FEB 77 R G POWELL
UNCLASSIFIED AMRL-TR-75-50-VOL-78 NL

2 OF 2
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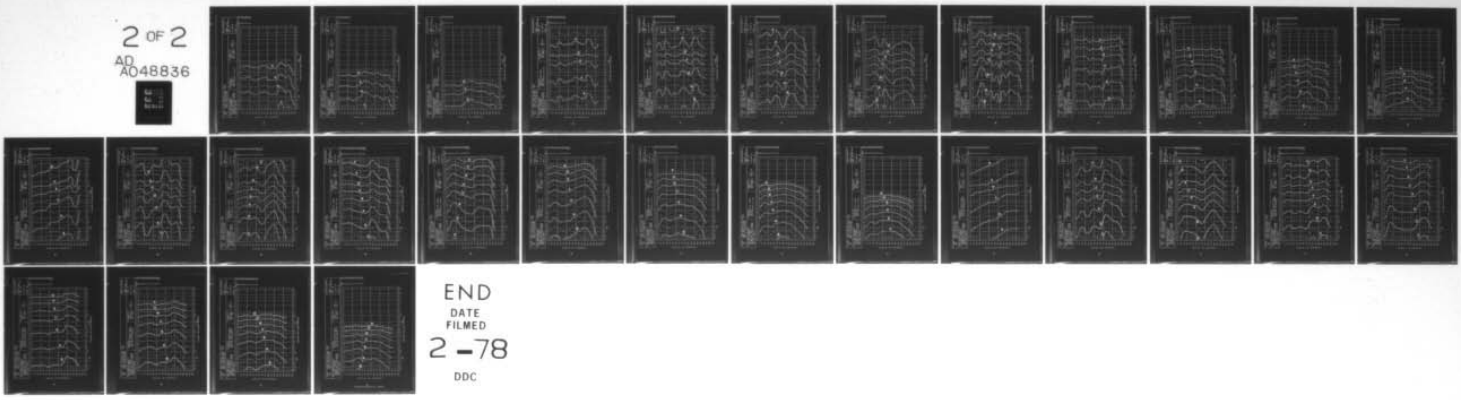

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DATE
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FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
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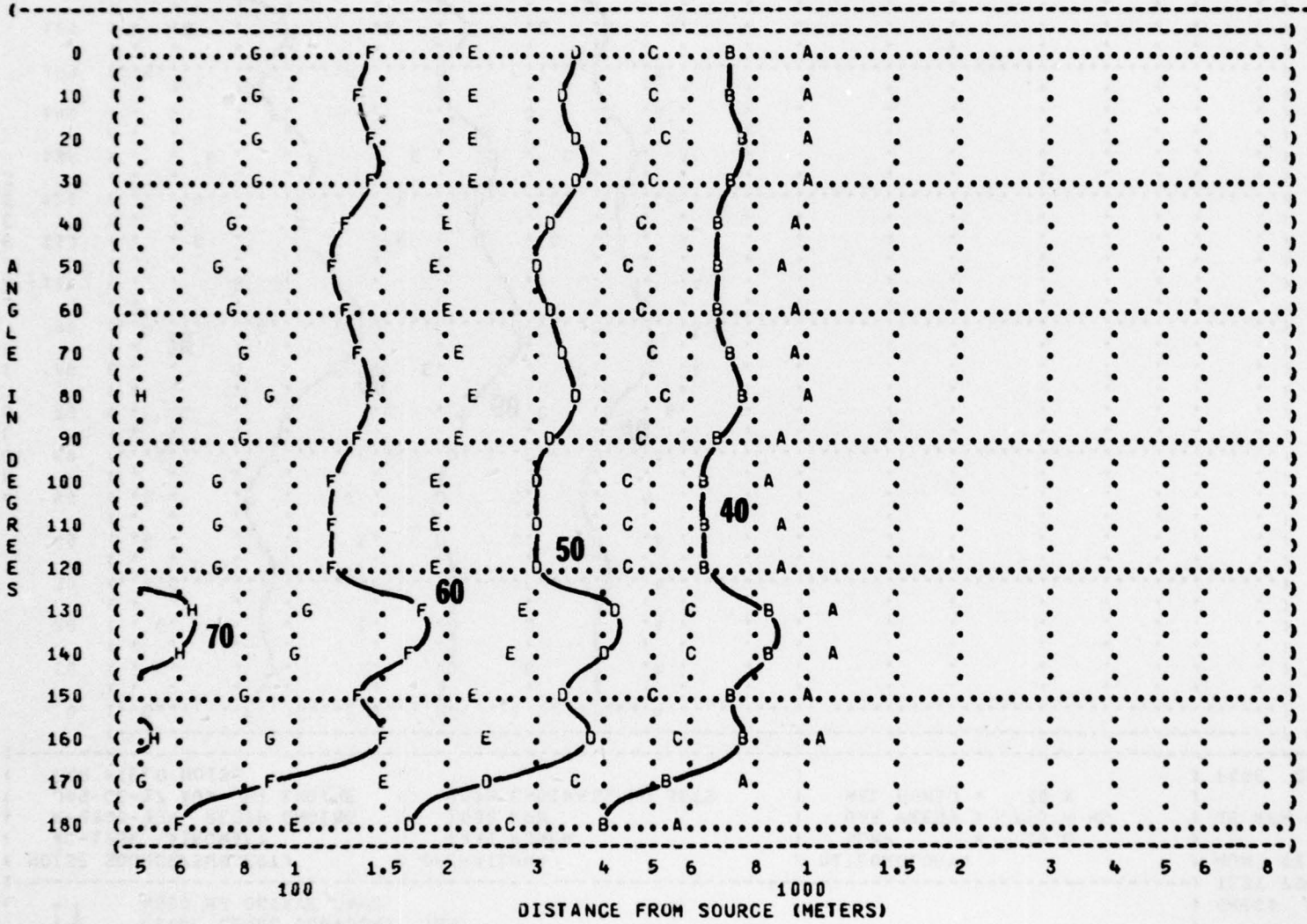


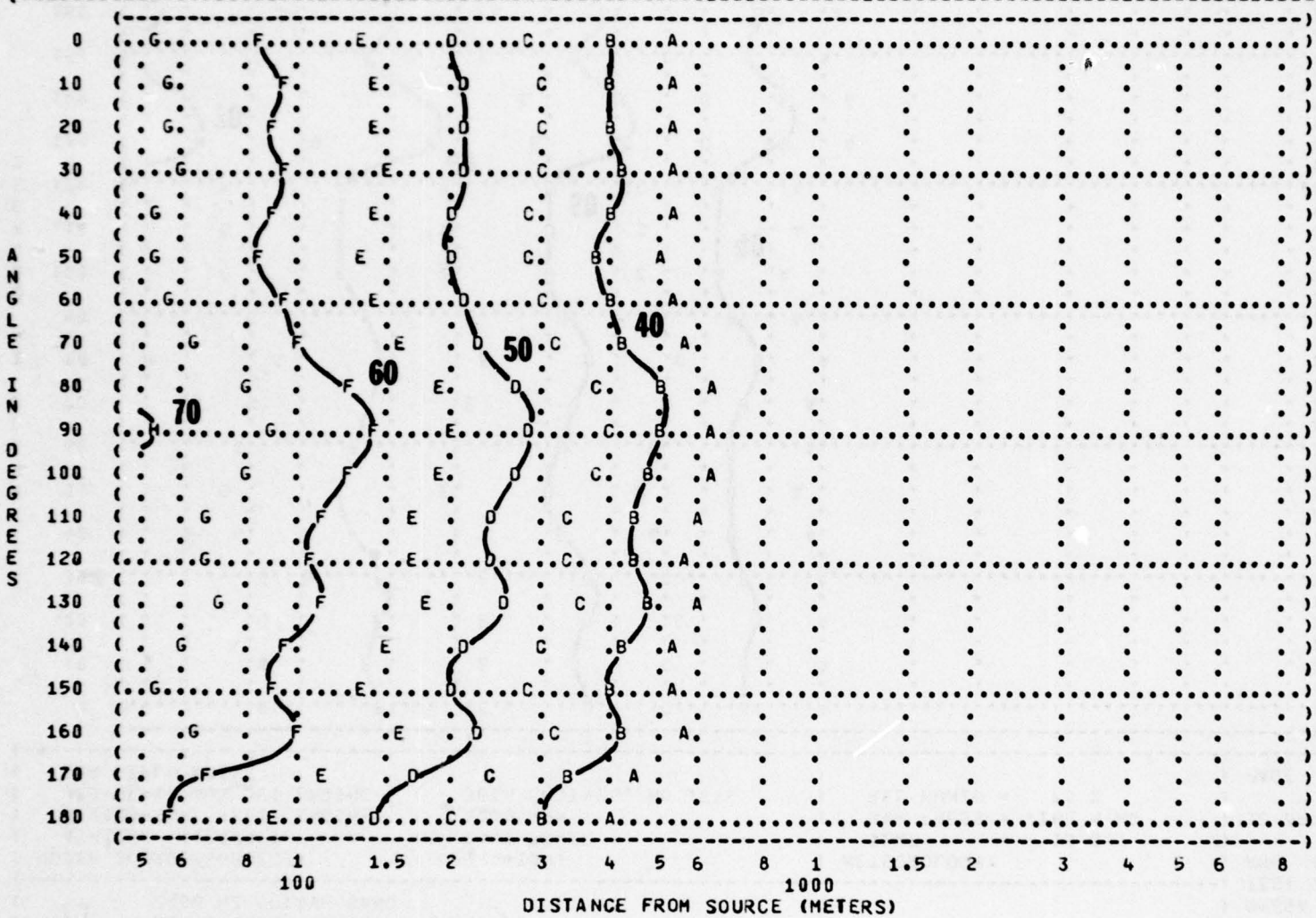
FIGURE 11 SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
PAGE 25



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

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 02
16 APR 75
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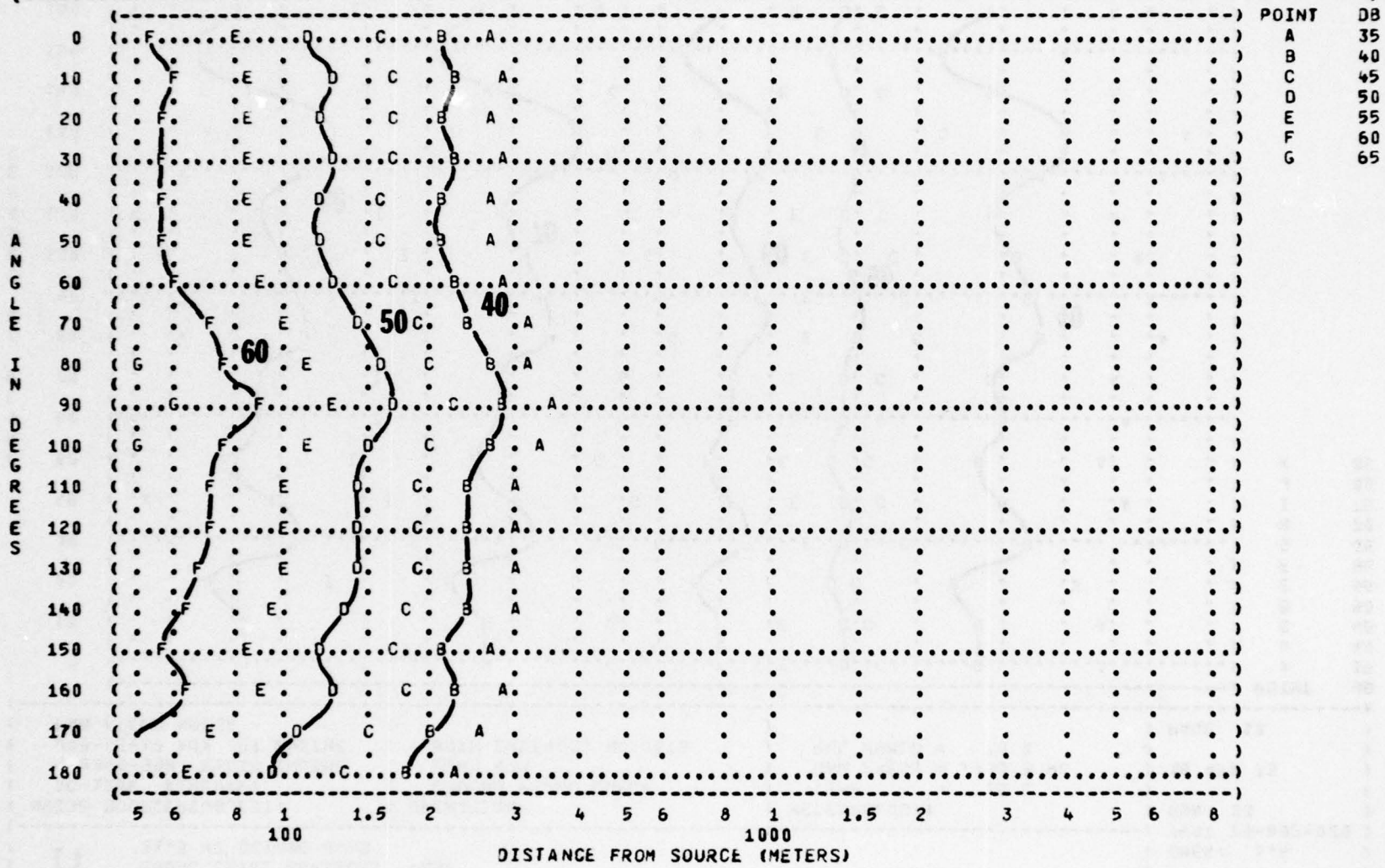


POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

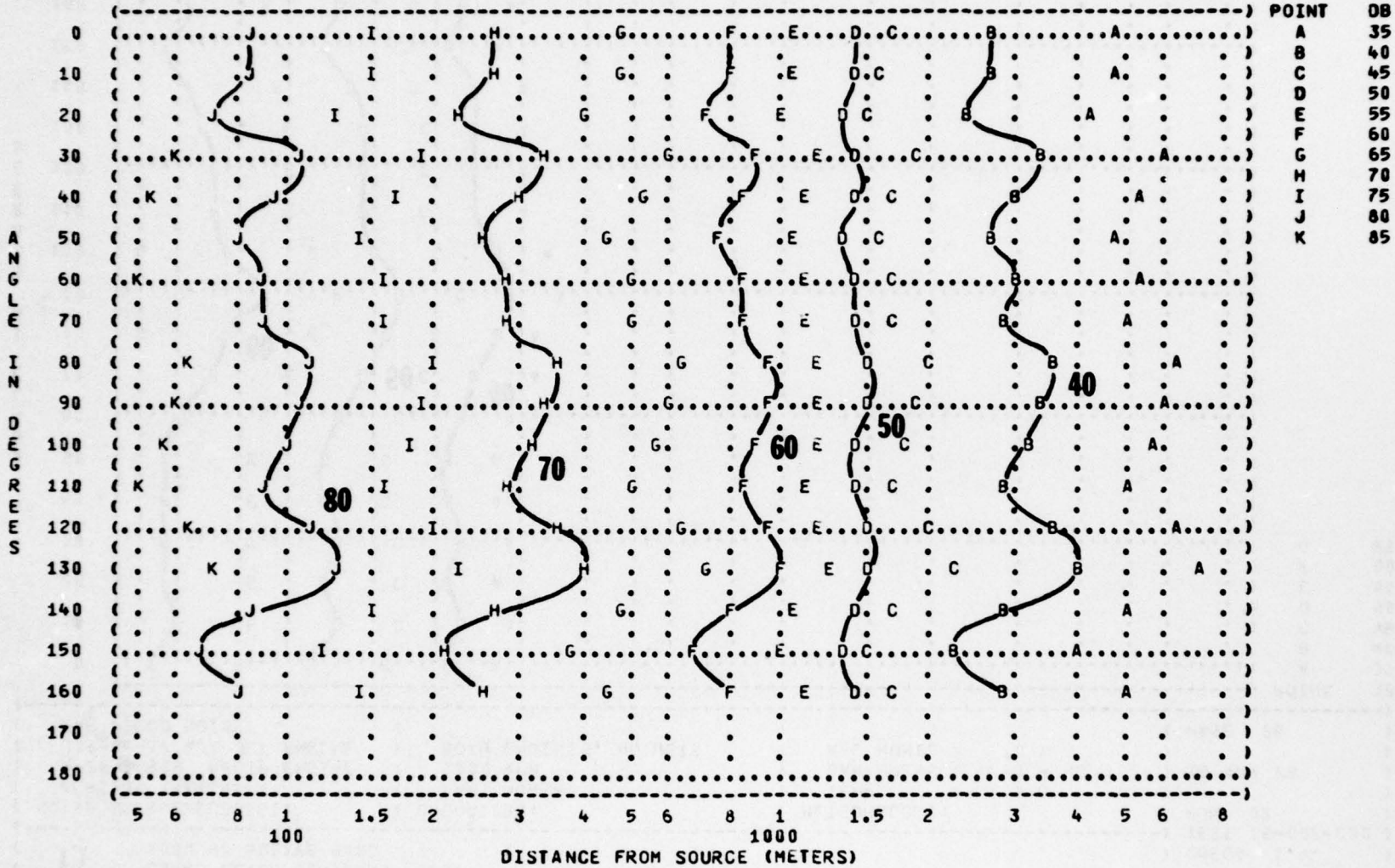
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
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:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
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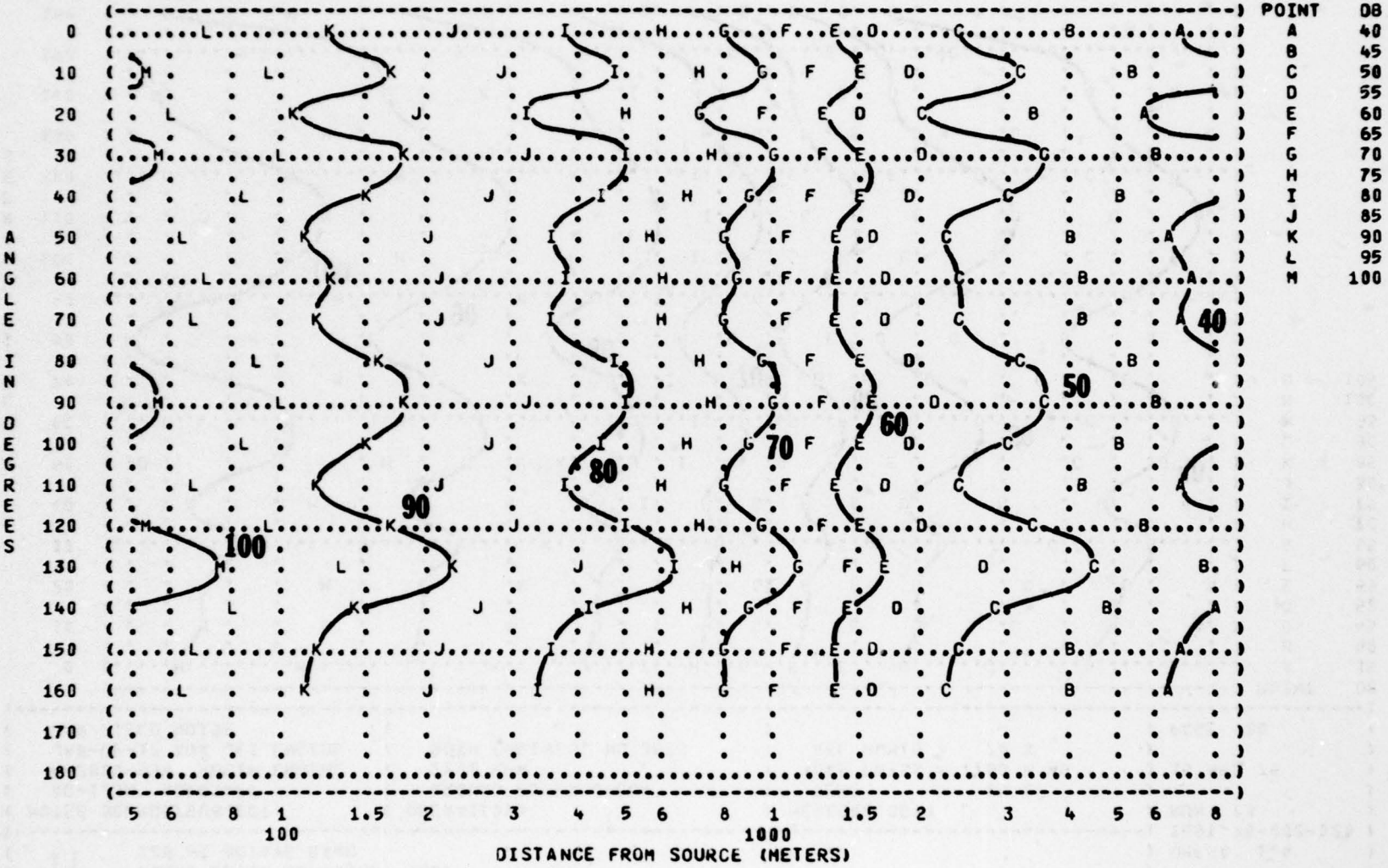


FIGURE: 11

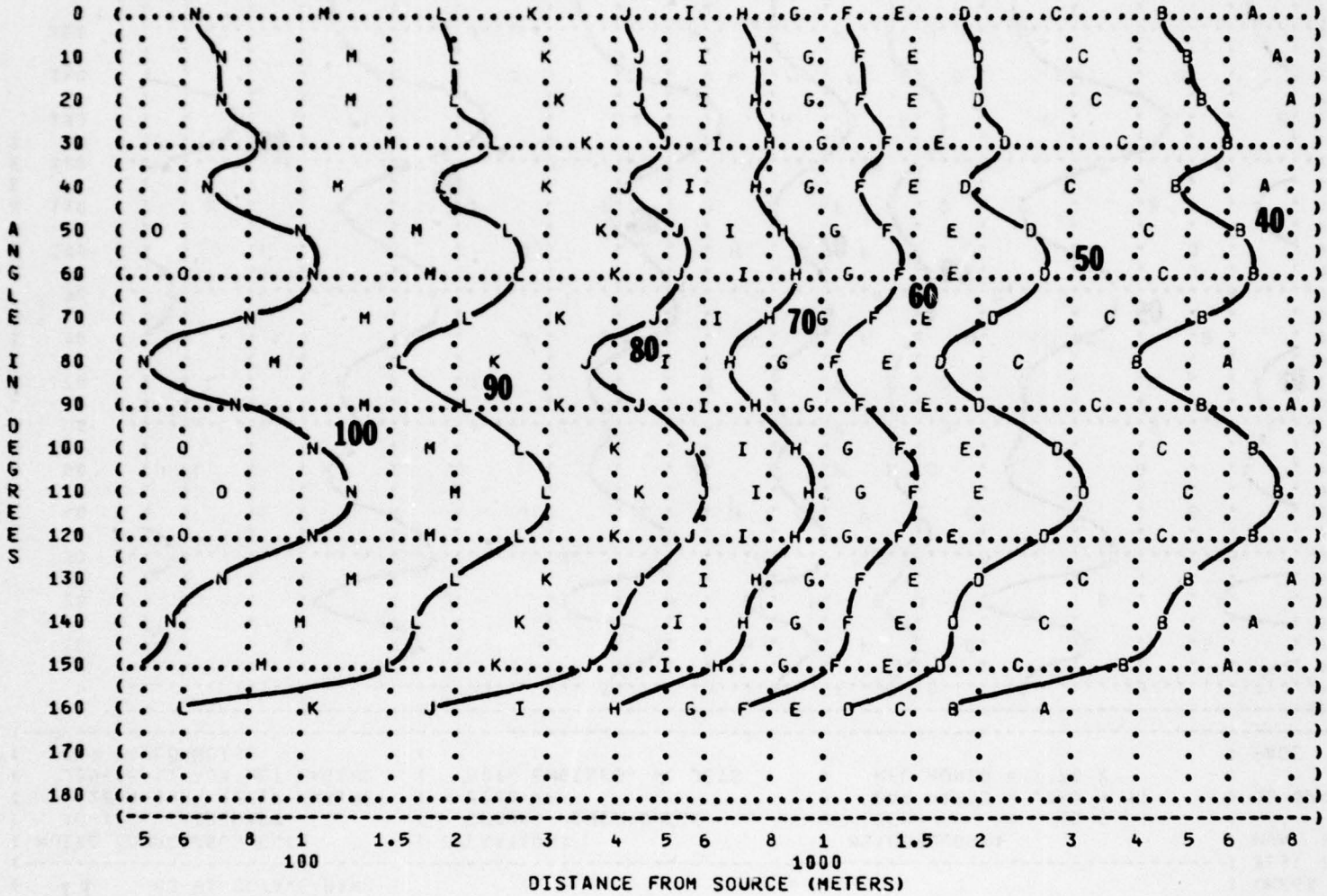
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
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

FIGURE: 11

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 21

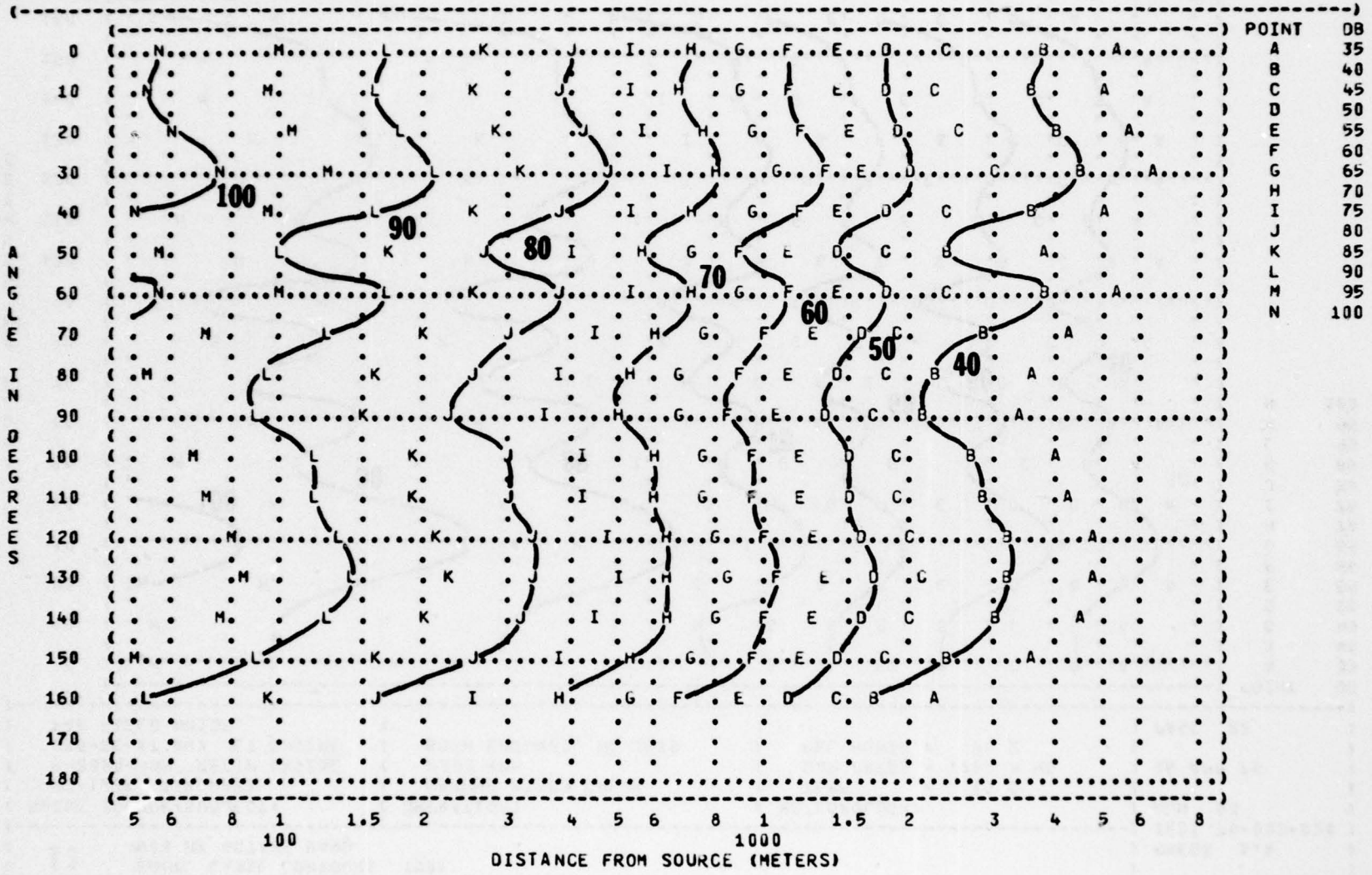


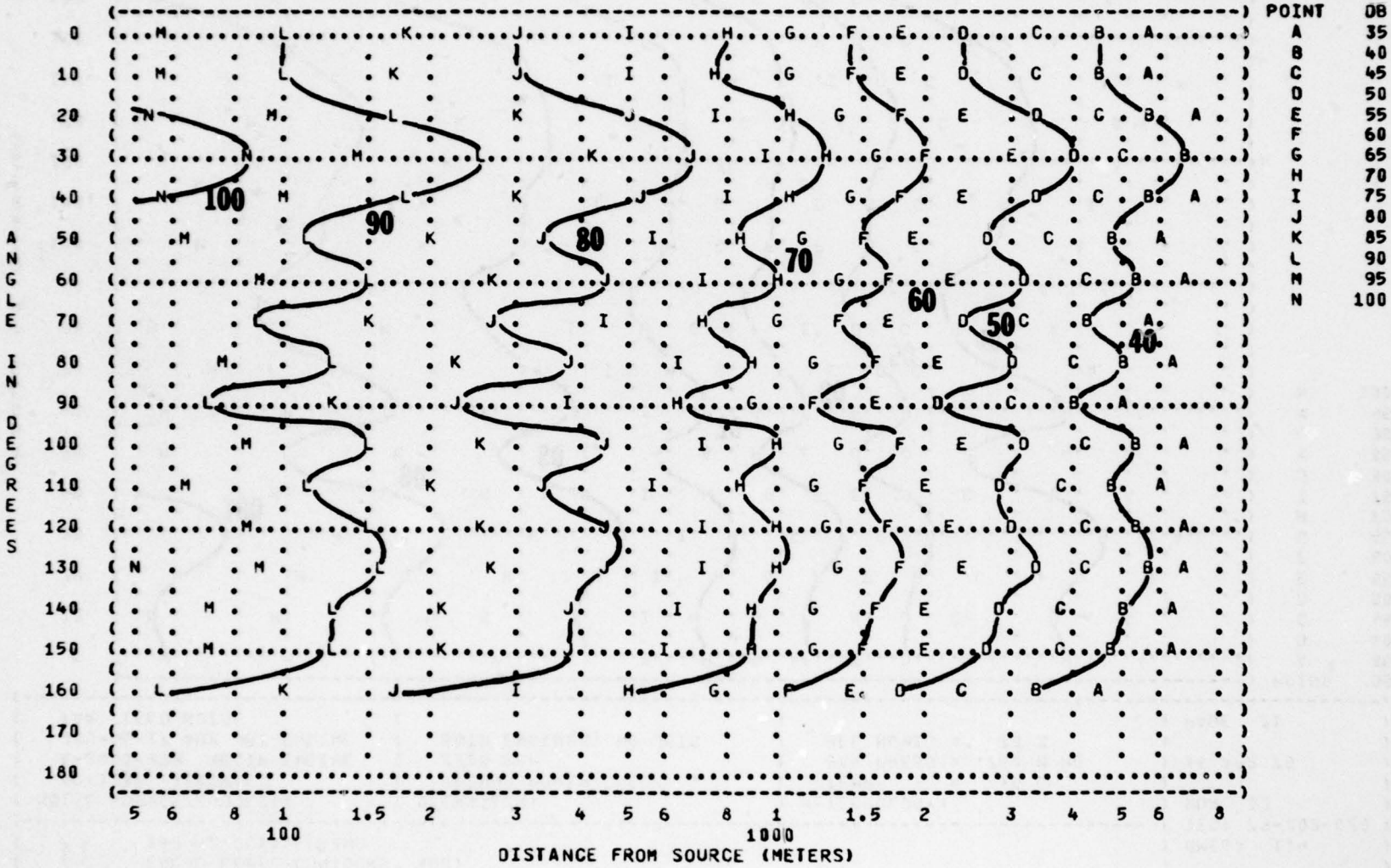
FIGURE 11: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
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

FIGURE: 11

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 23

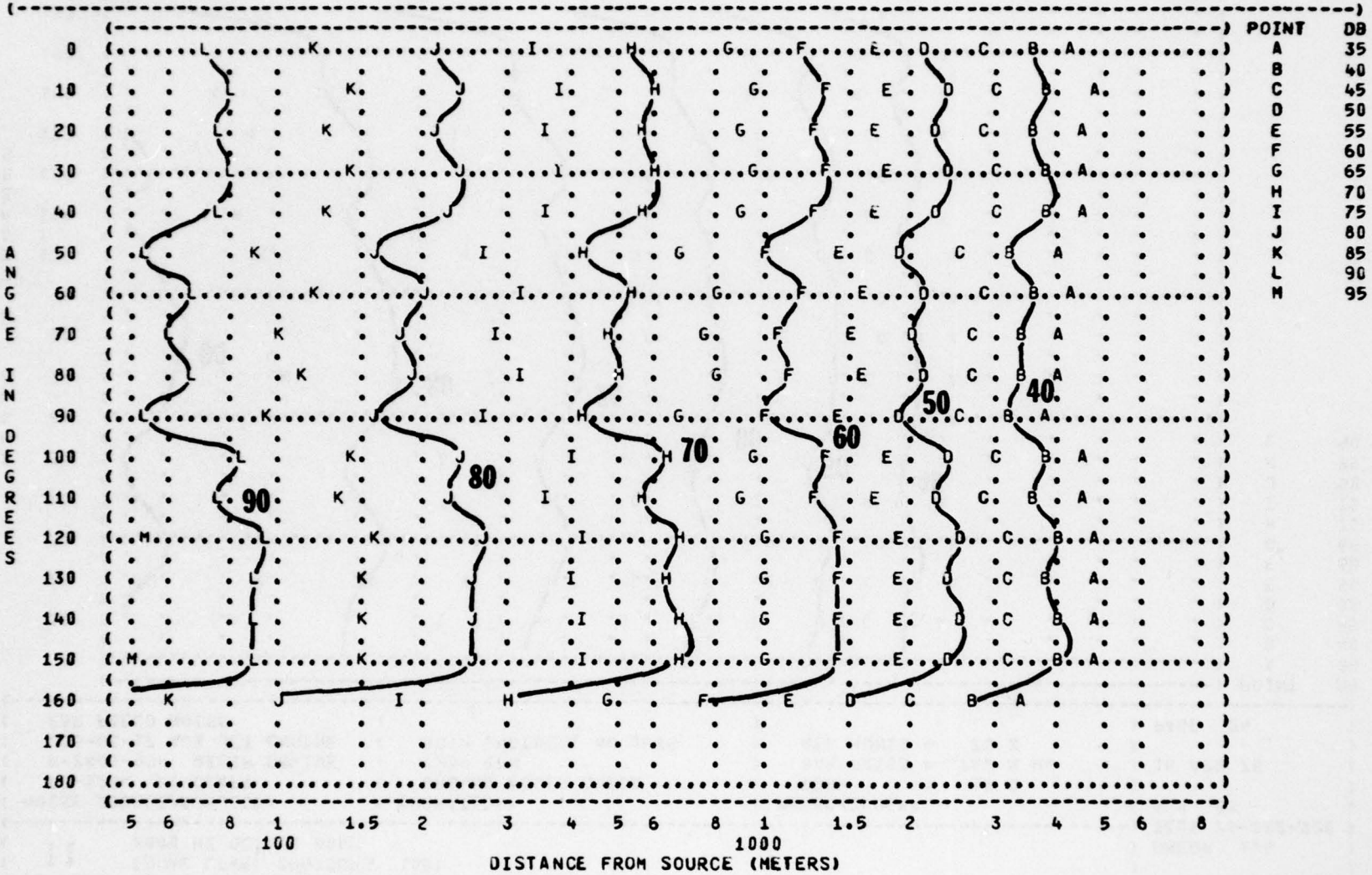


FIGURE: 11

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 24

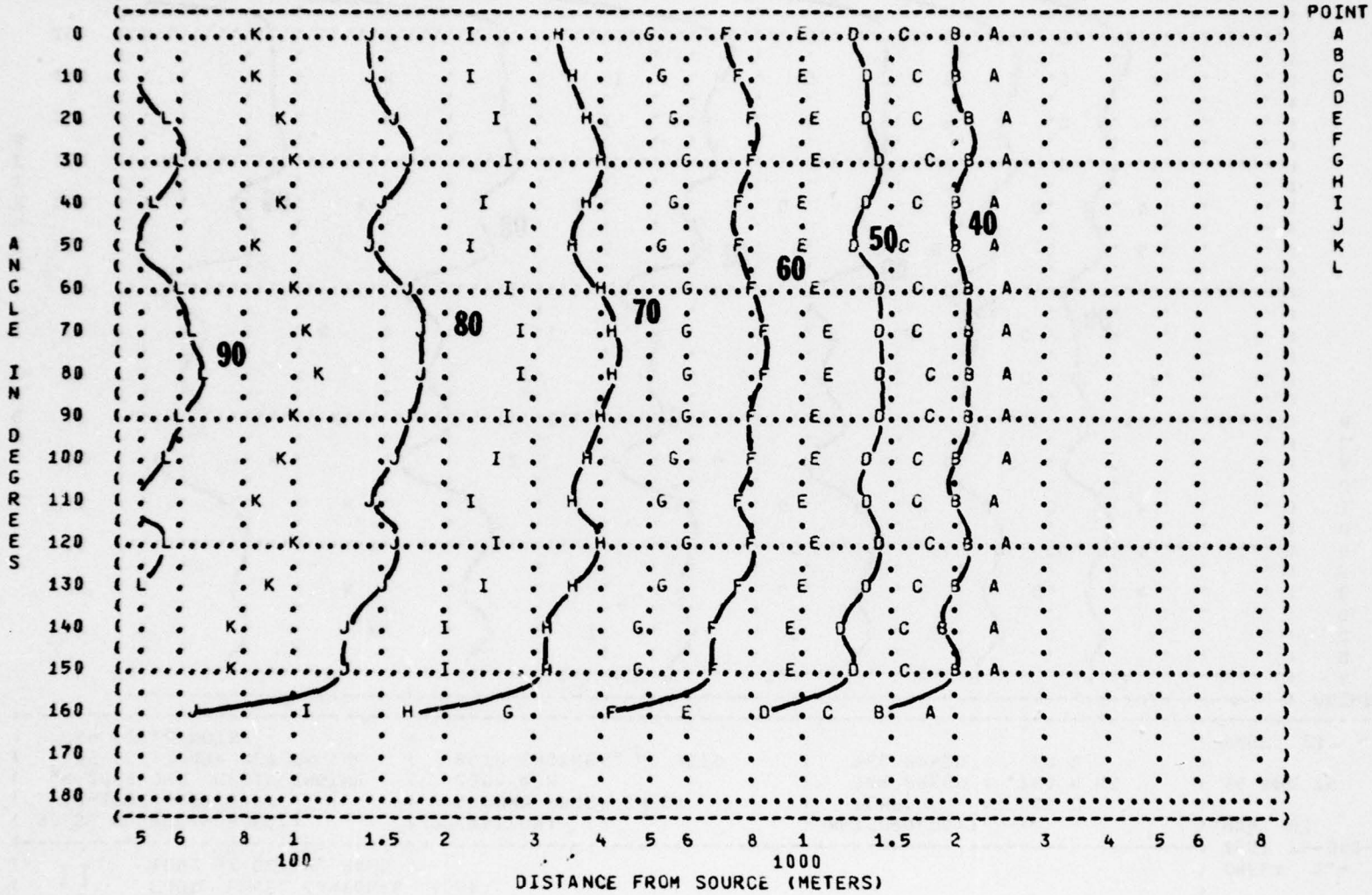


FIGURE: 11

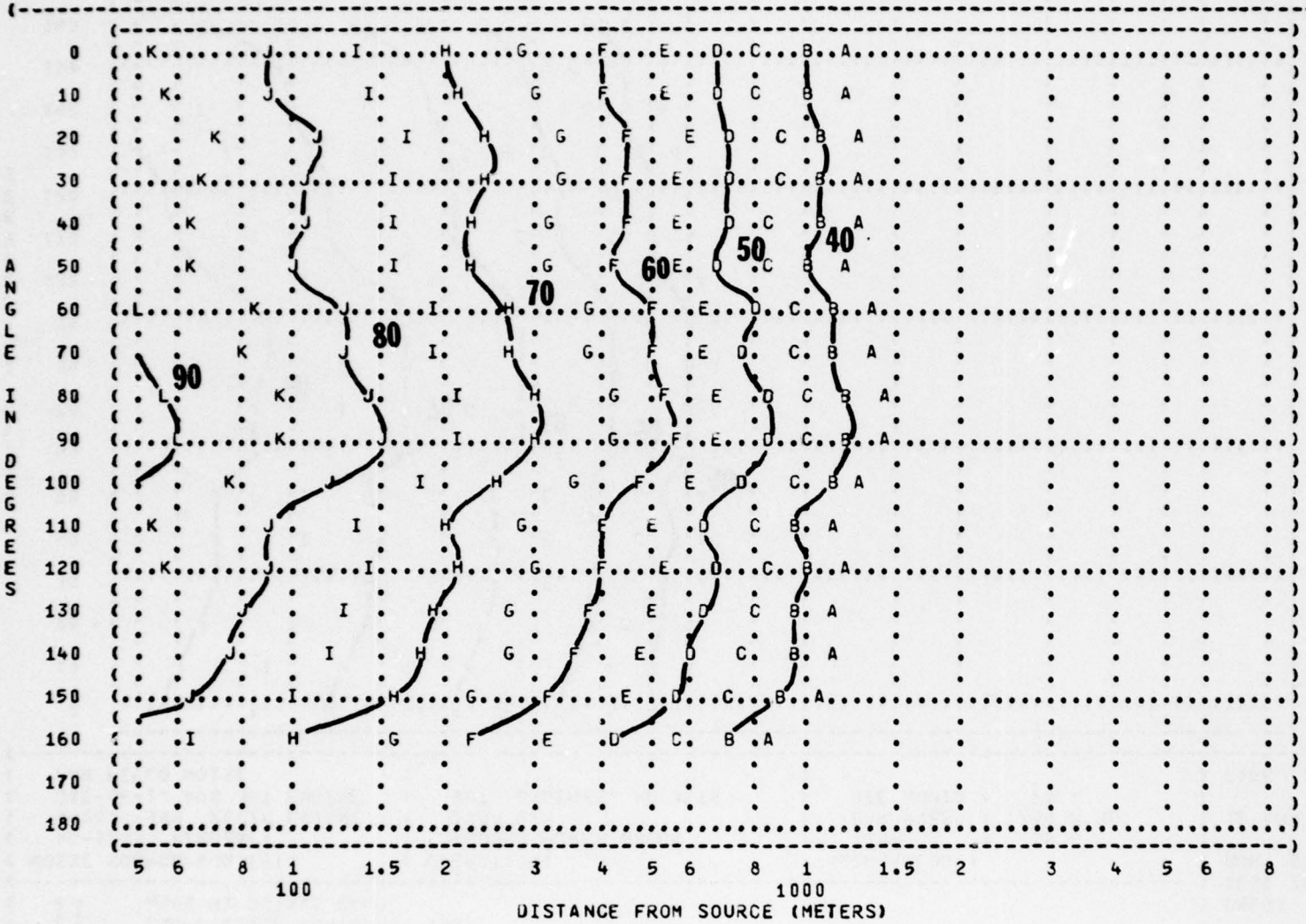
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 25



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

FIGURE: 11

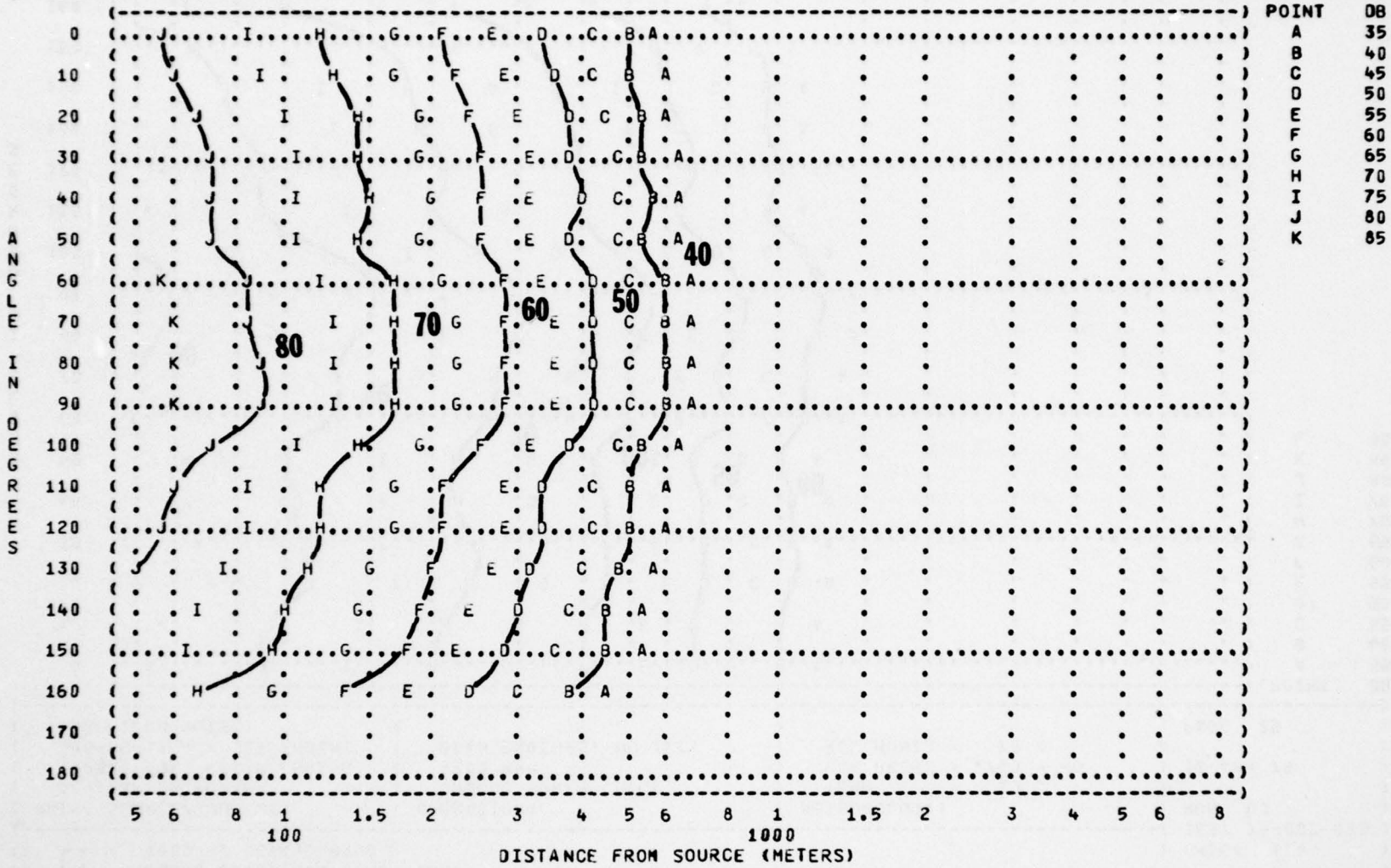
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2200 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 03
16 APR 75
PAGE 26



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

FIGURE: 11

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 18

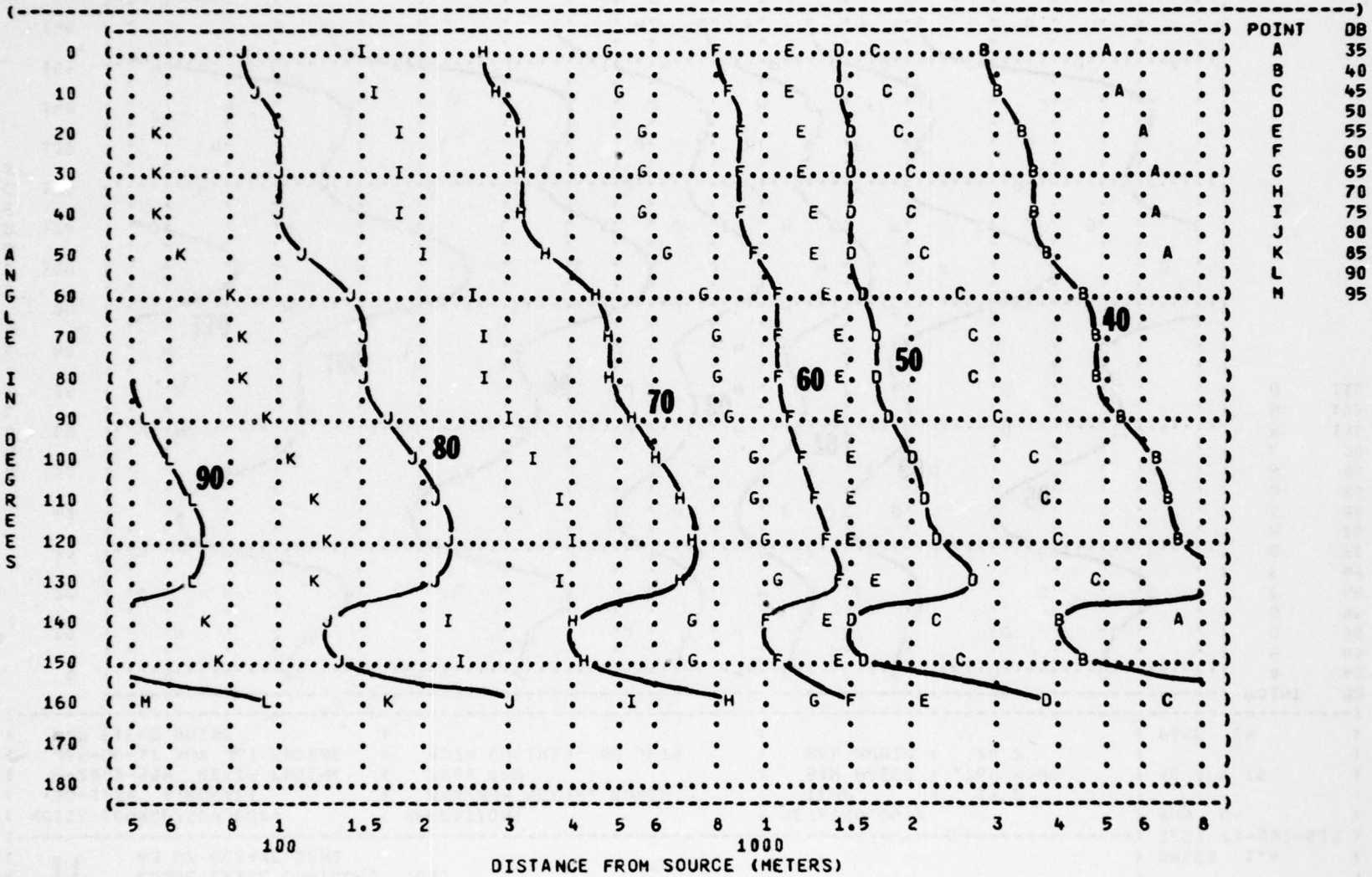


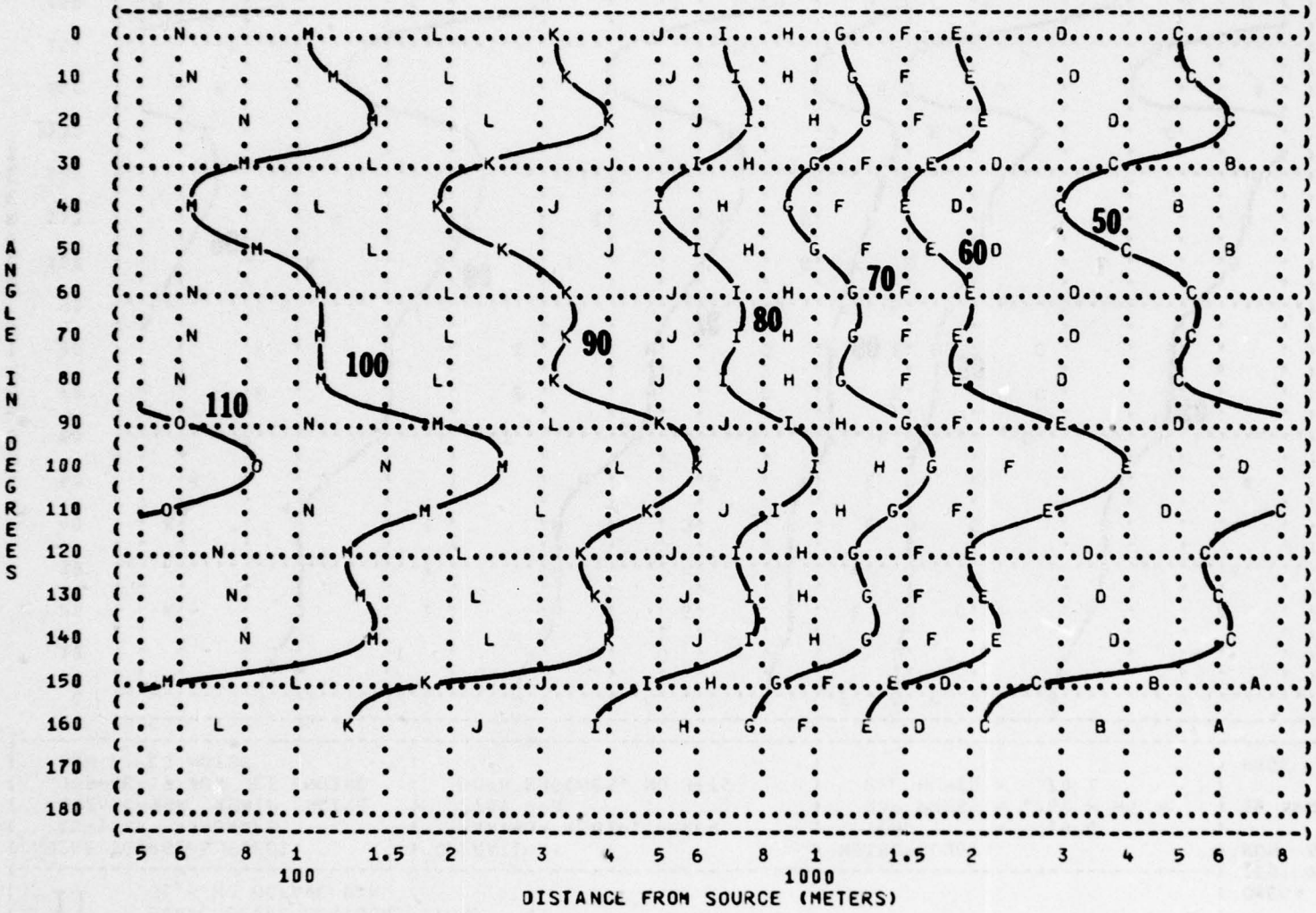
FIGURE 11: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 19



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

FIGURE: 11

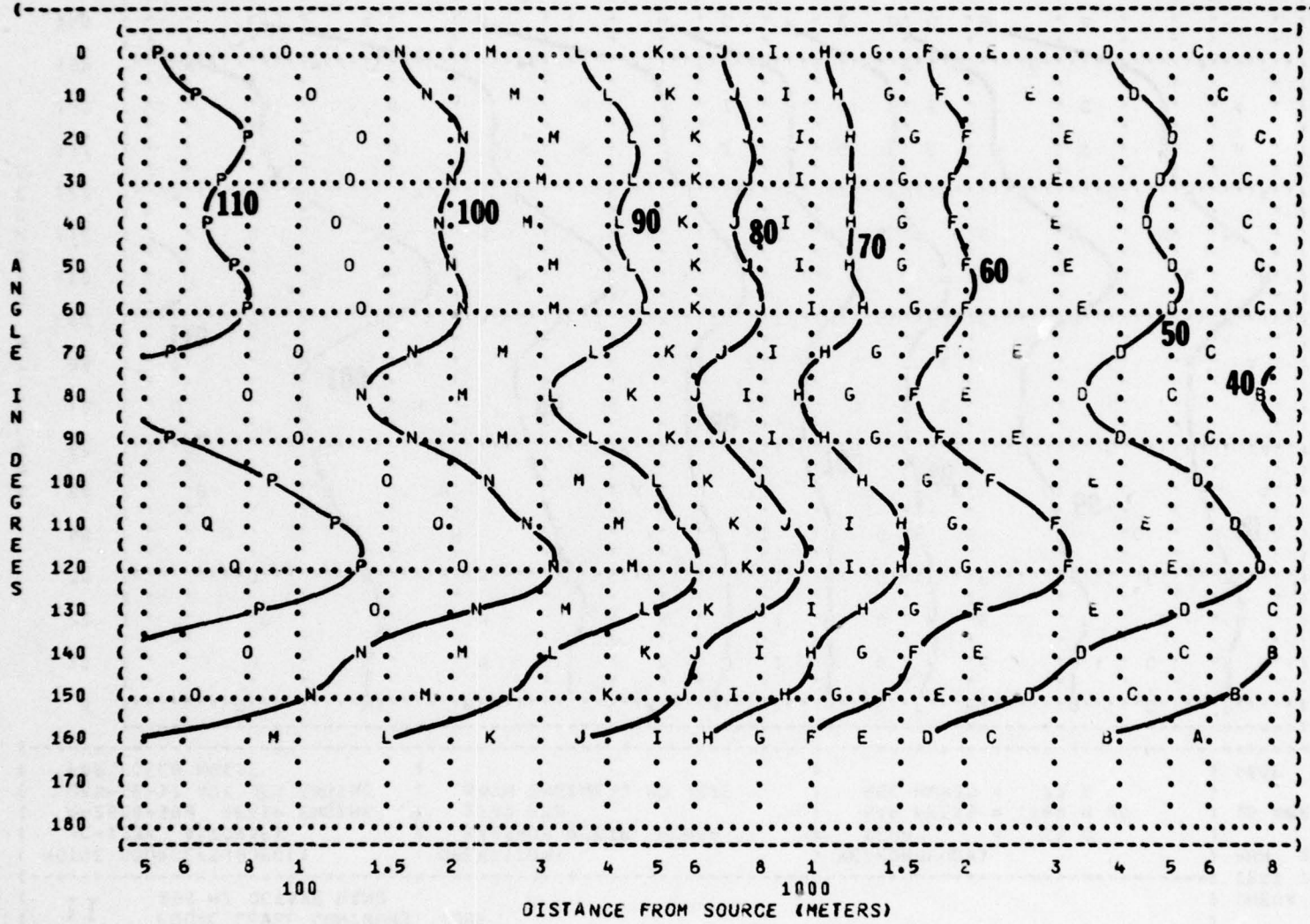
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
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

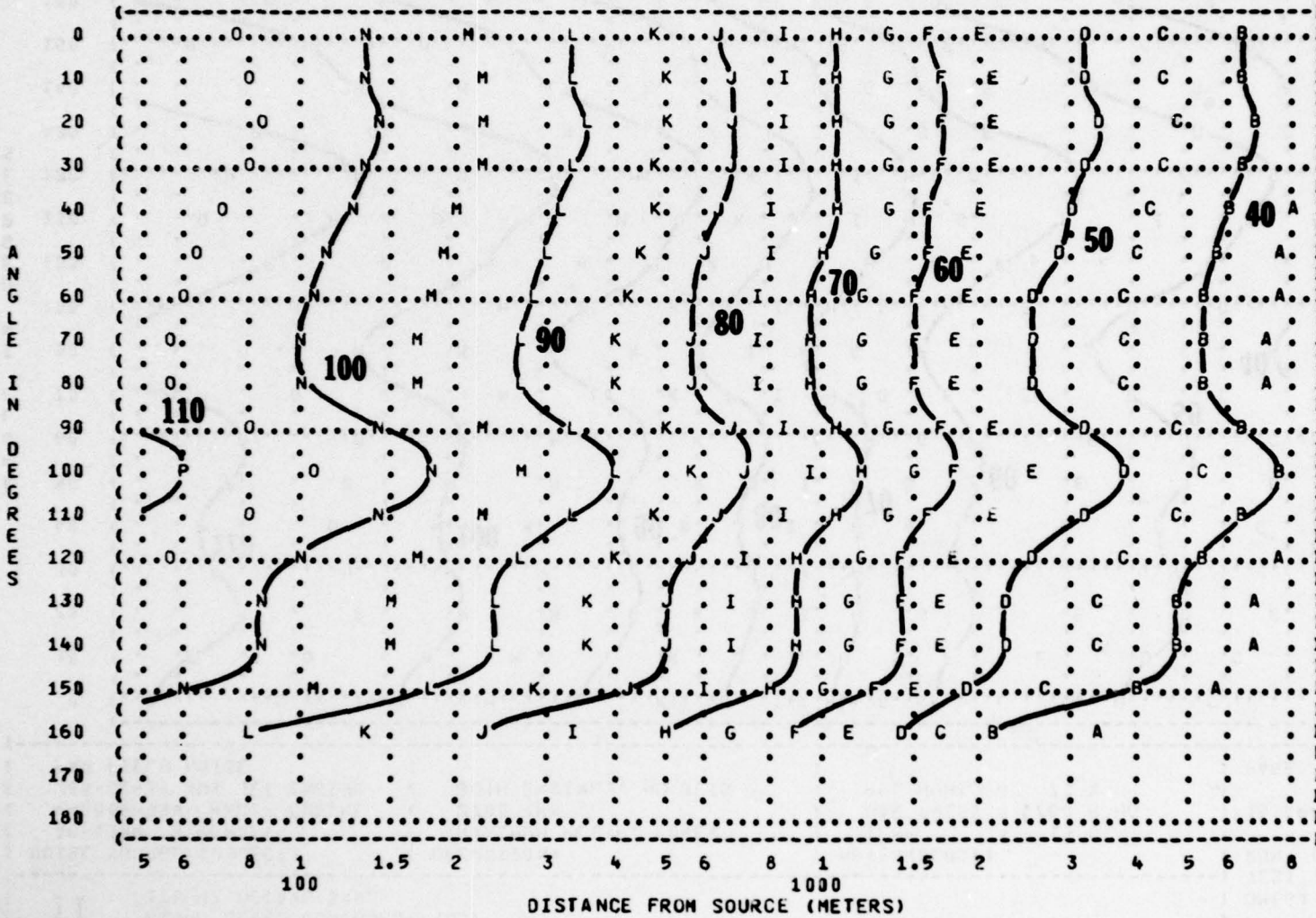
FIGURE: 11 SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
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
M	95
N	100
O	105
P	110

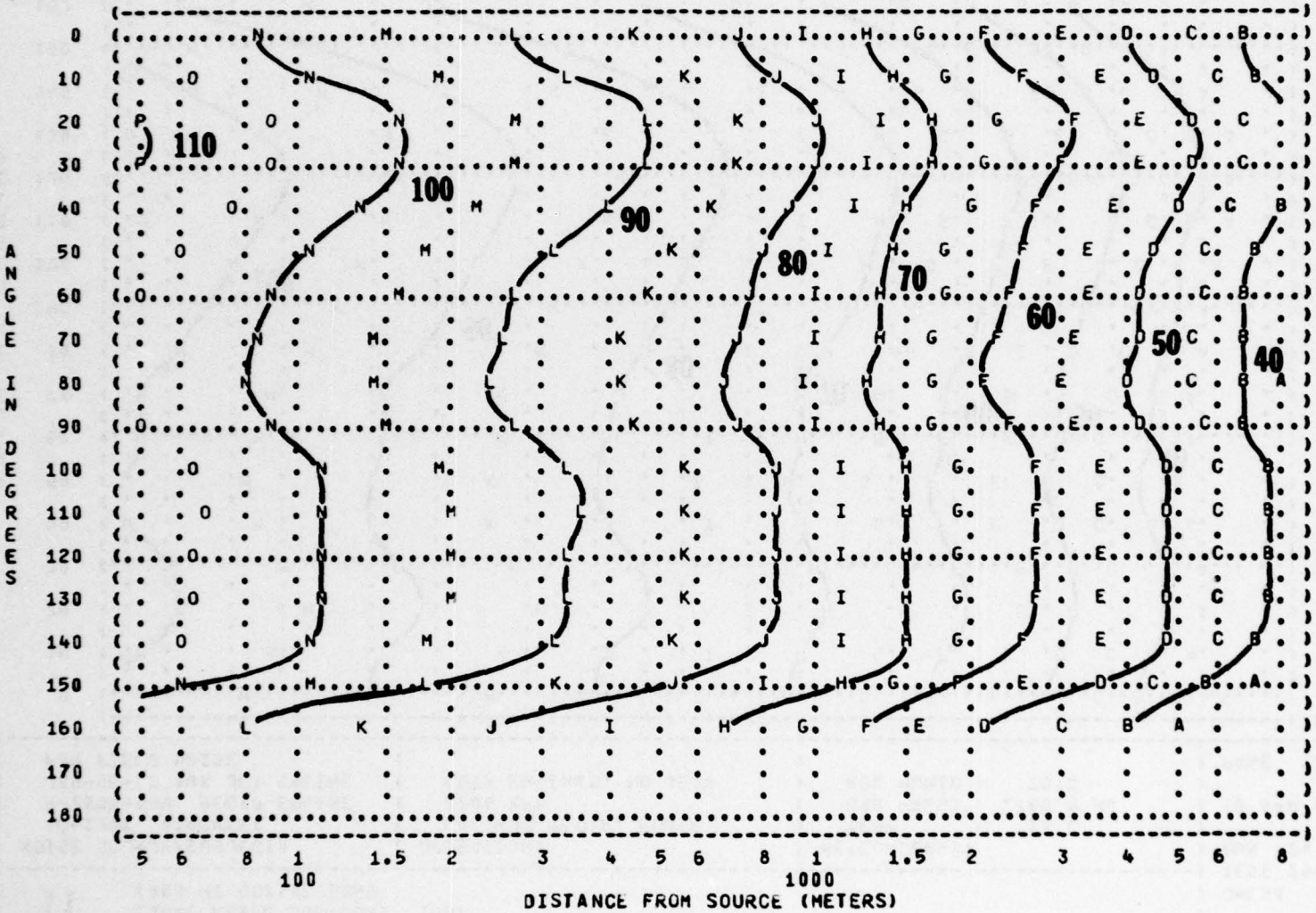
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
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
P	110

FIGURE: 11

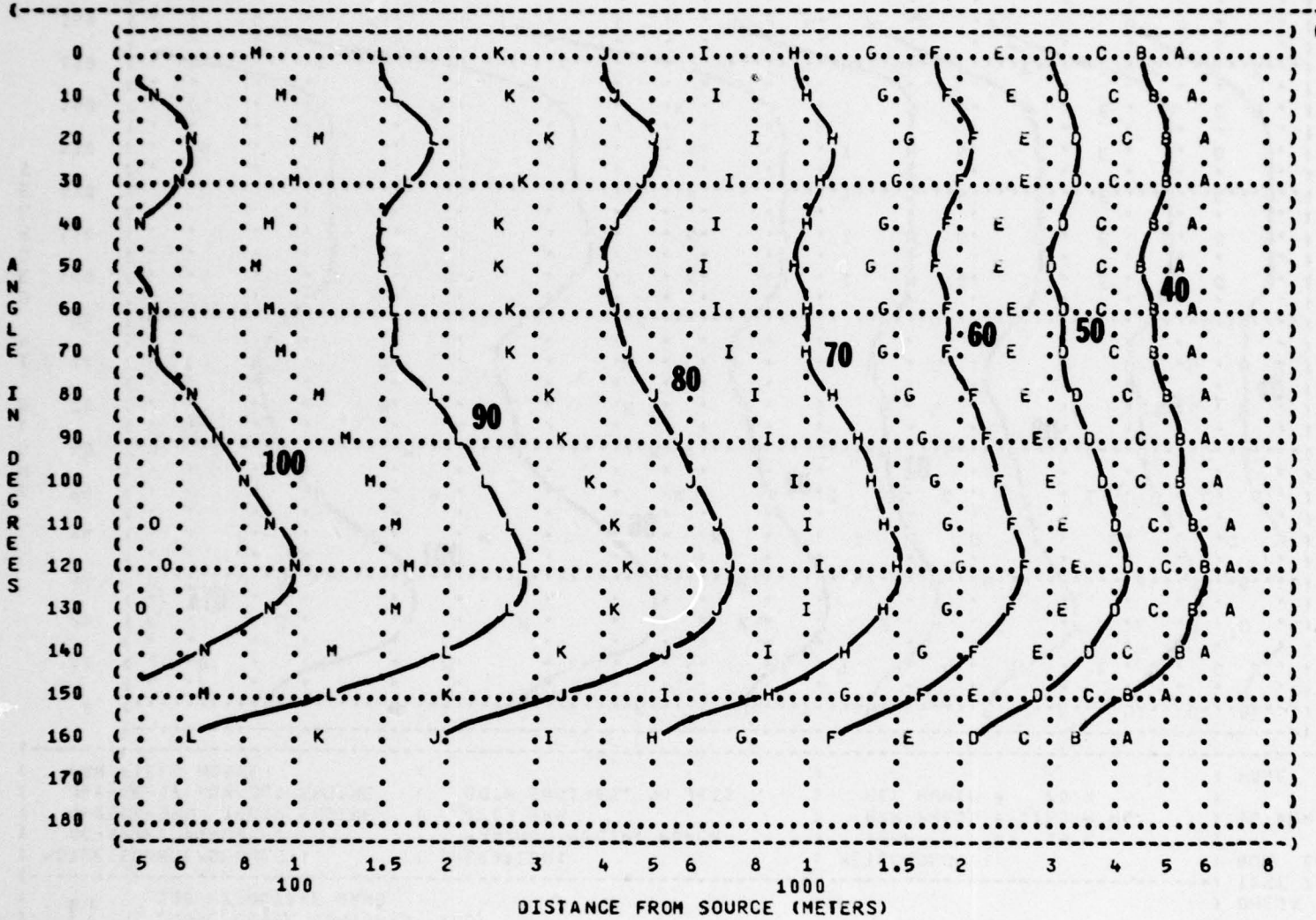
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
PAGE 23

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
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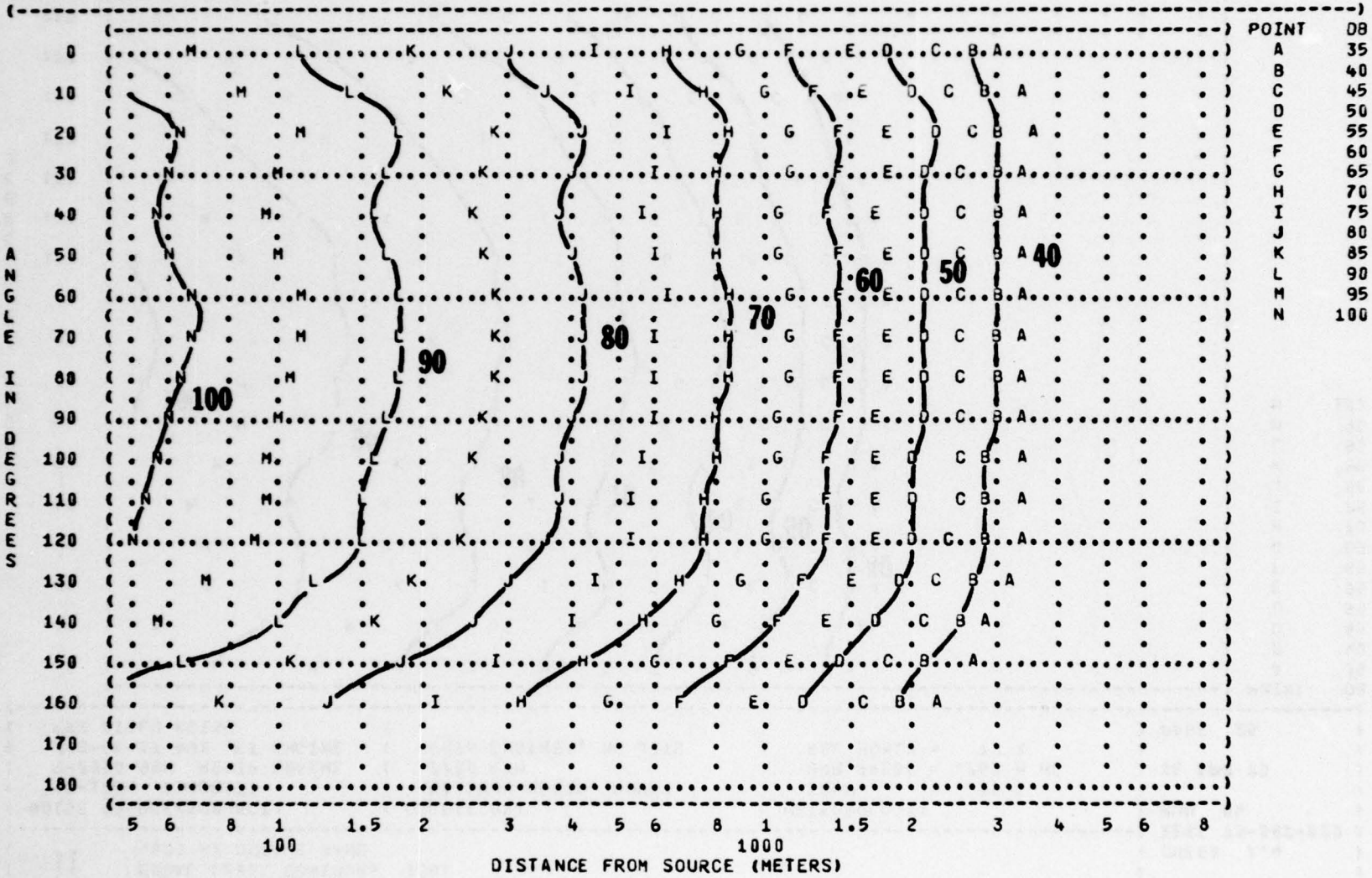

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95
N	100

FIGURE: 11

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
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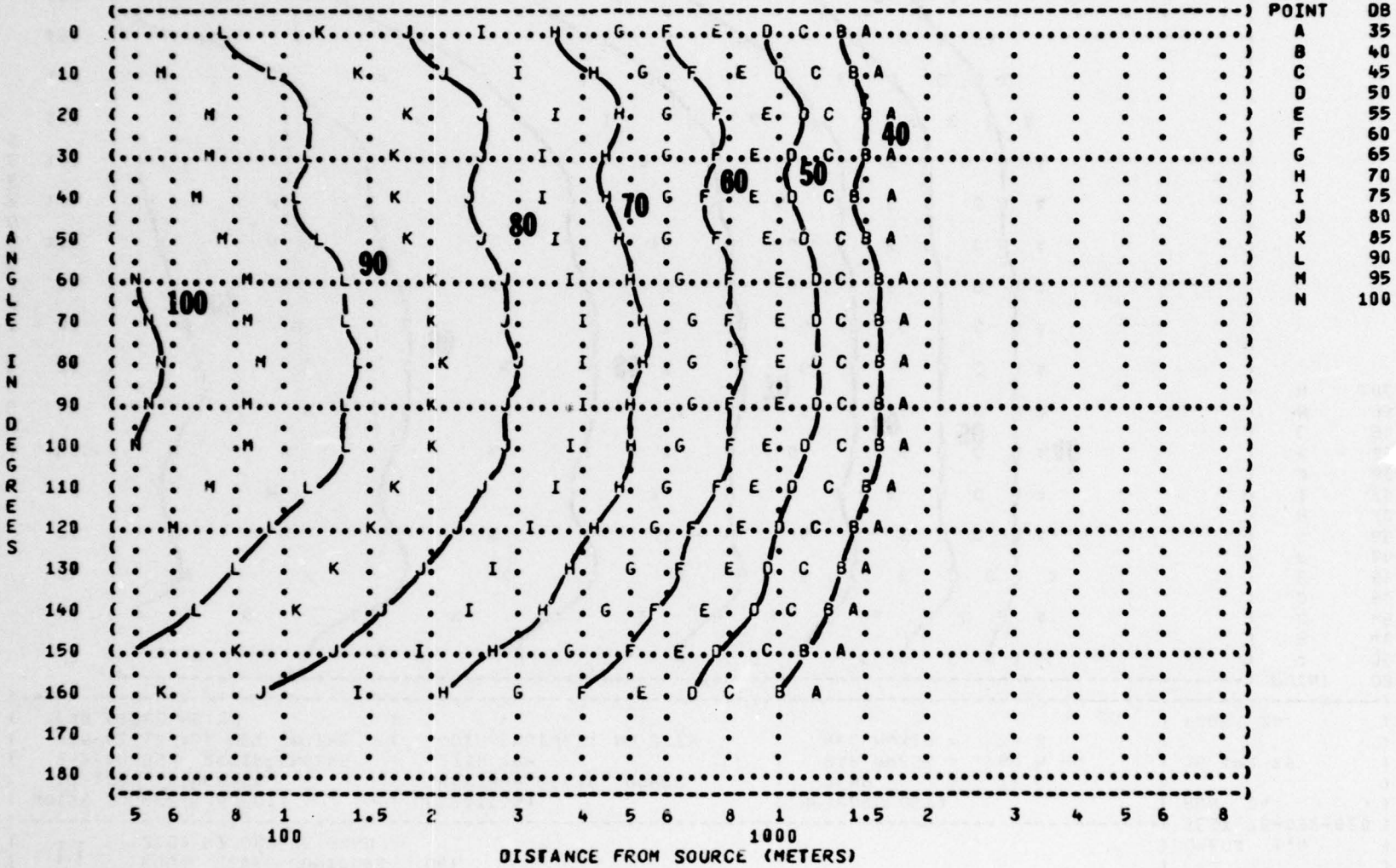
NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

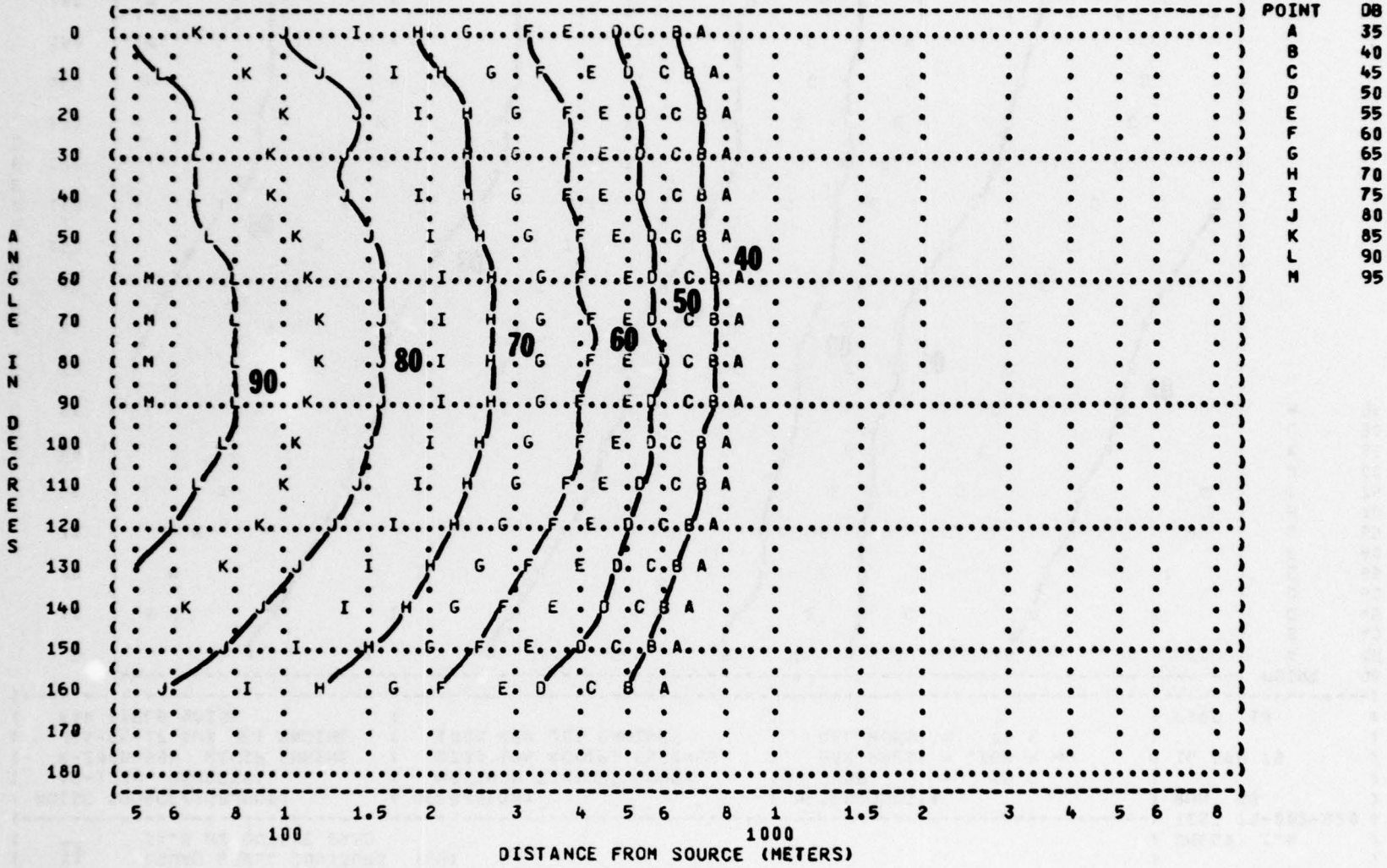
FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP. POWER
2700 RPM
BOTH ENGINES, NO JETS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 04
16 APR 75
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
M	95

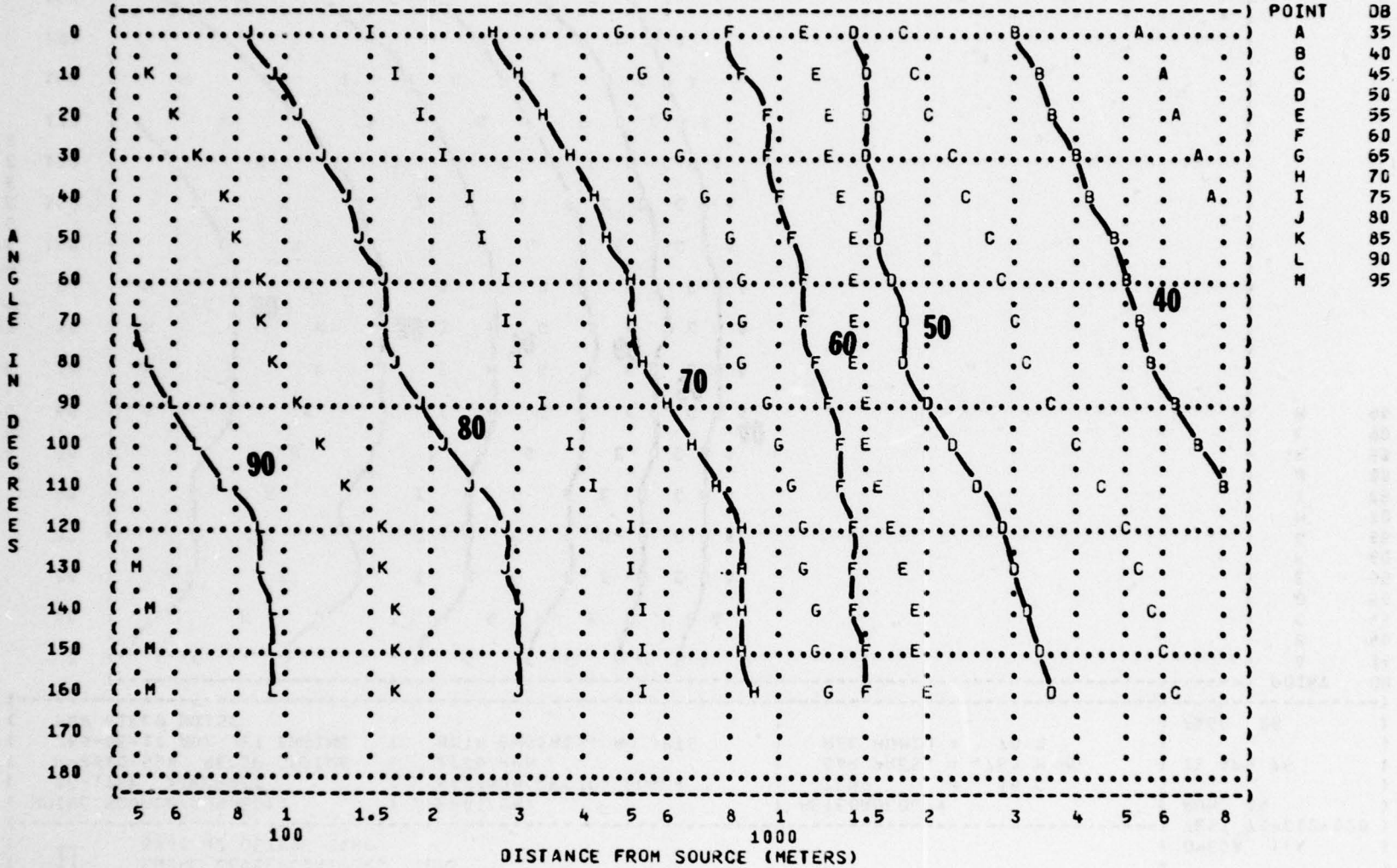
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
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

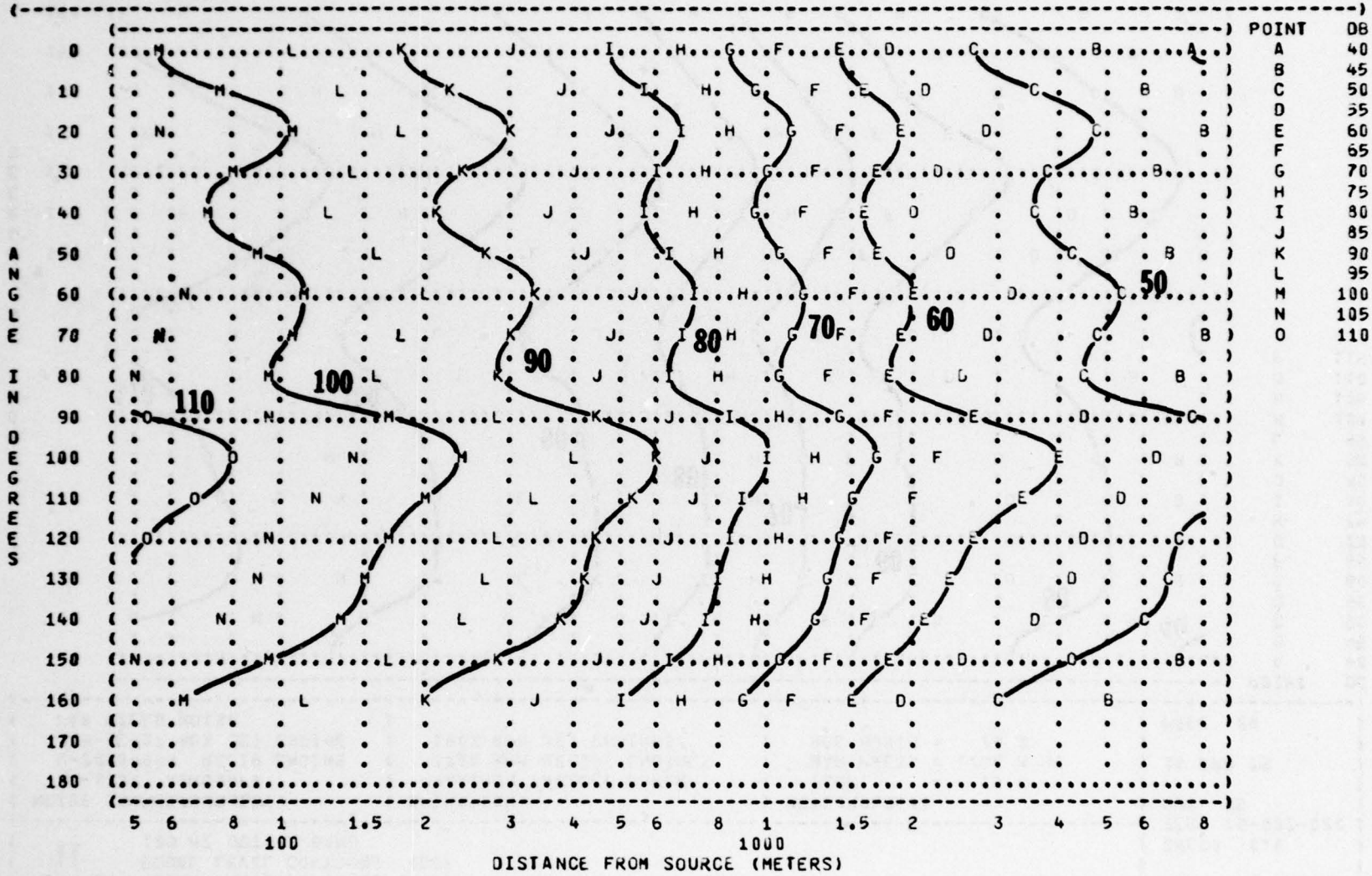
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 19



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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
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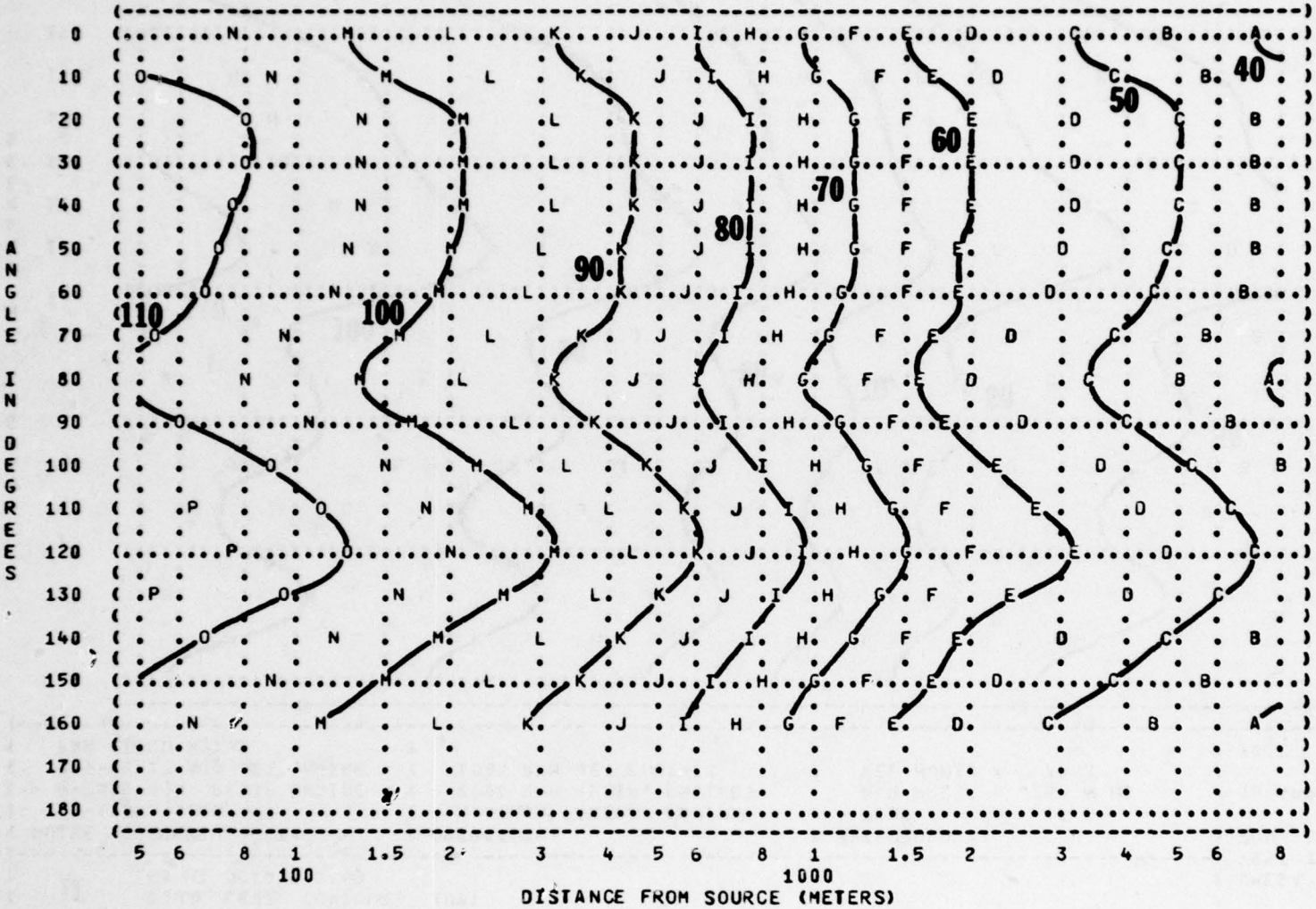
NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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



POINT	DB
A	40
B	45
C	50
D	55
E	60
F	65
G	70
H	75
I	80
J	85
K	90
L	95
M	100
N	105
O	110
P	115

FIGURE: 11

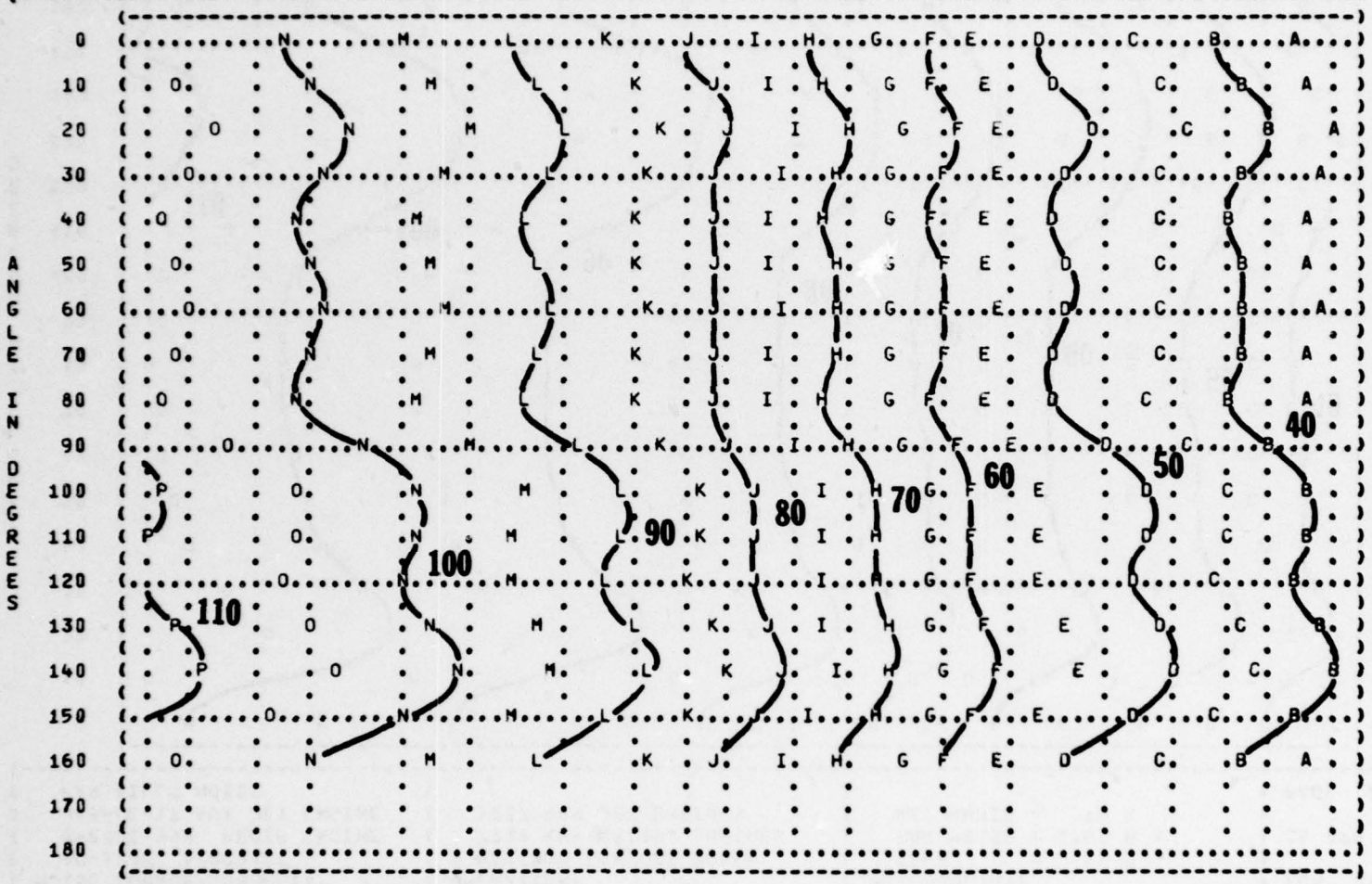
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
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
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:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
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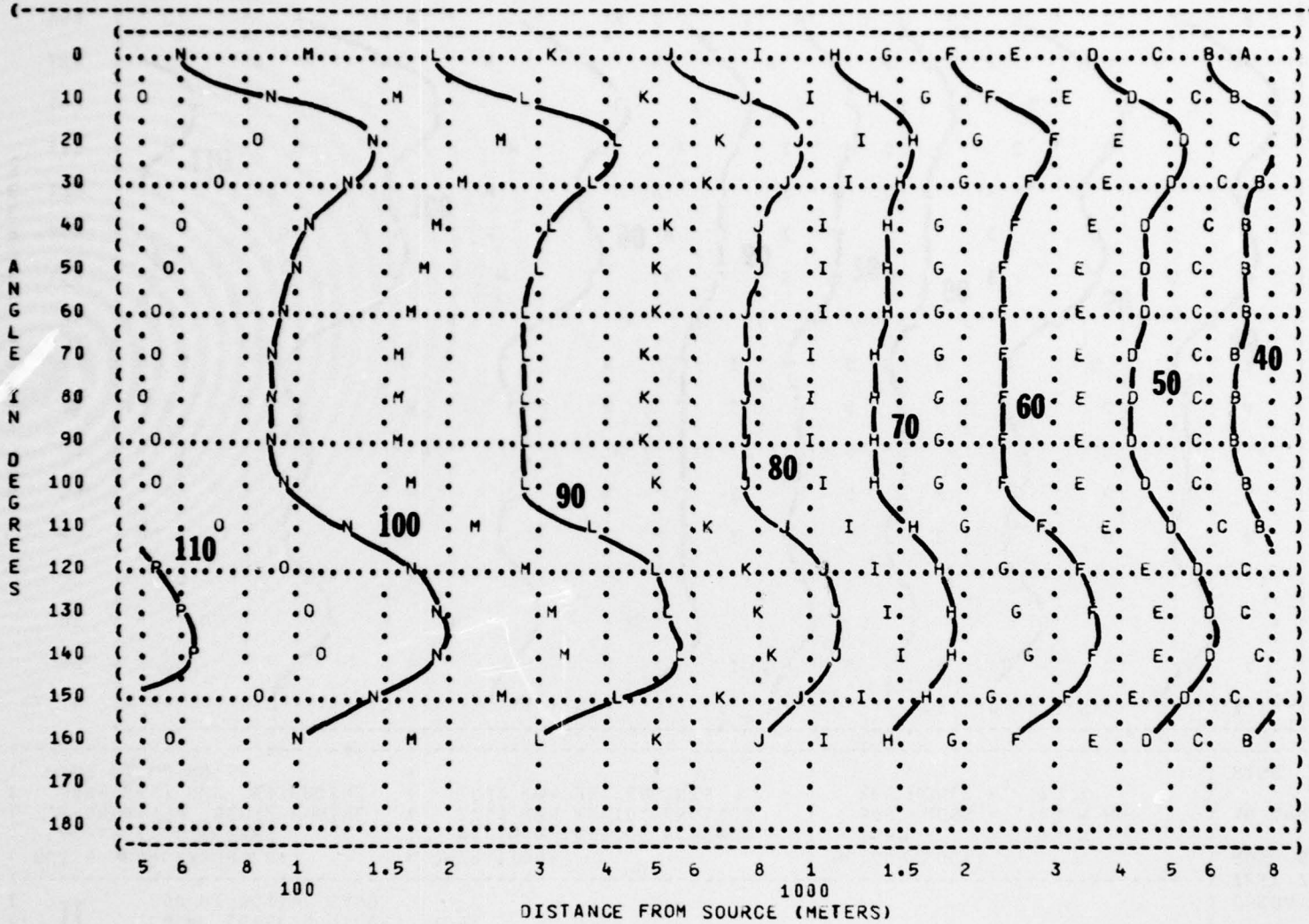


POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95
N	100
O	105
P	110

FIGURE: 11

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

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 23

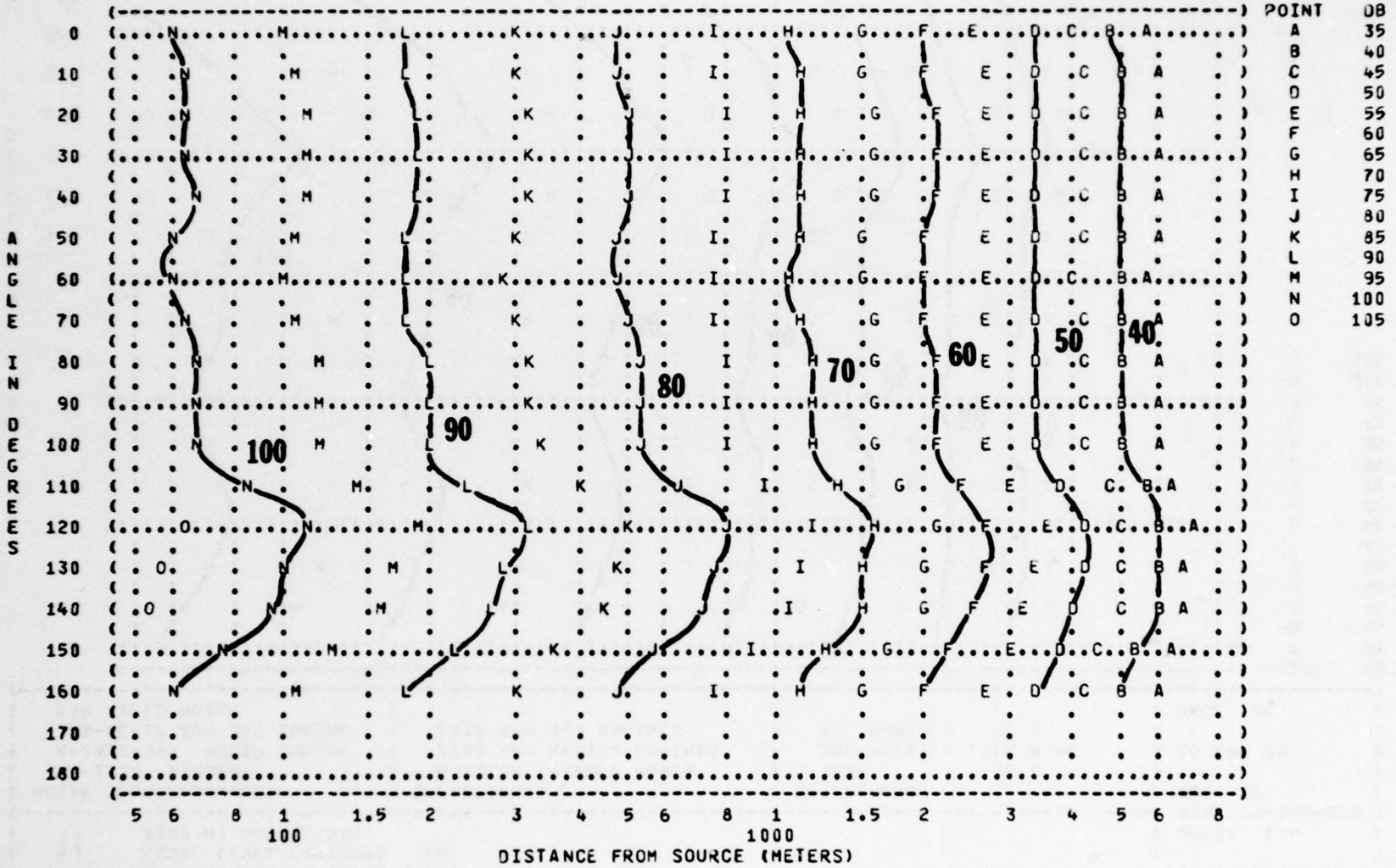


FIGURE: 11

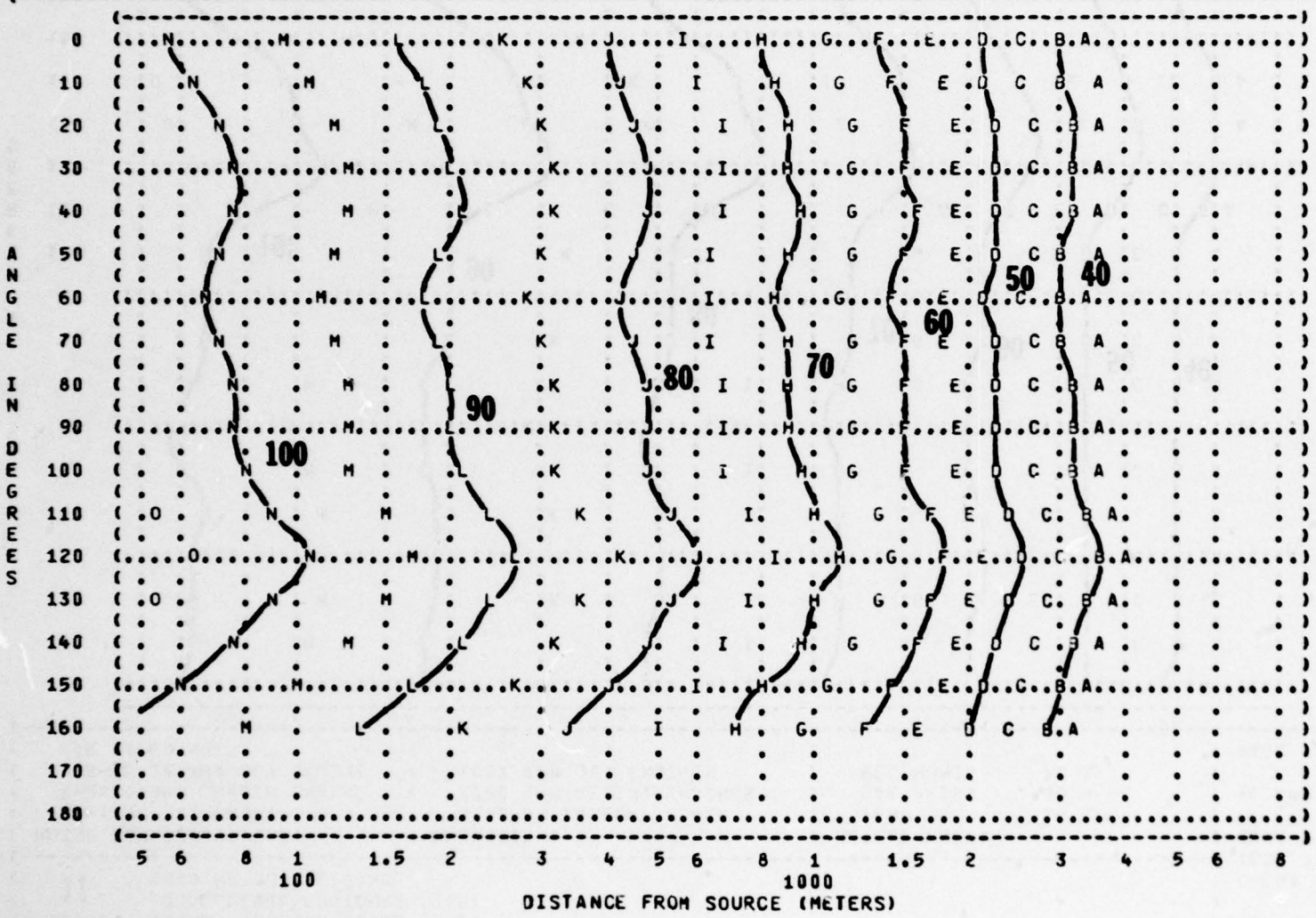
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 24



POINT	DB
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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

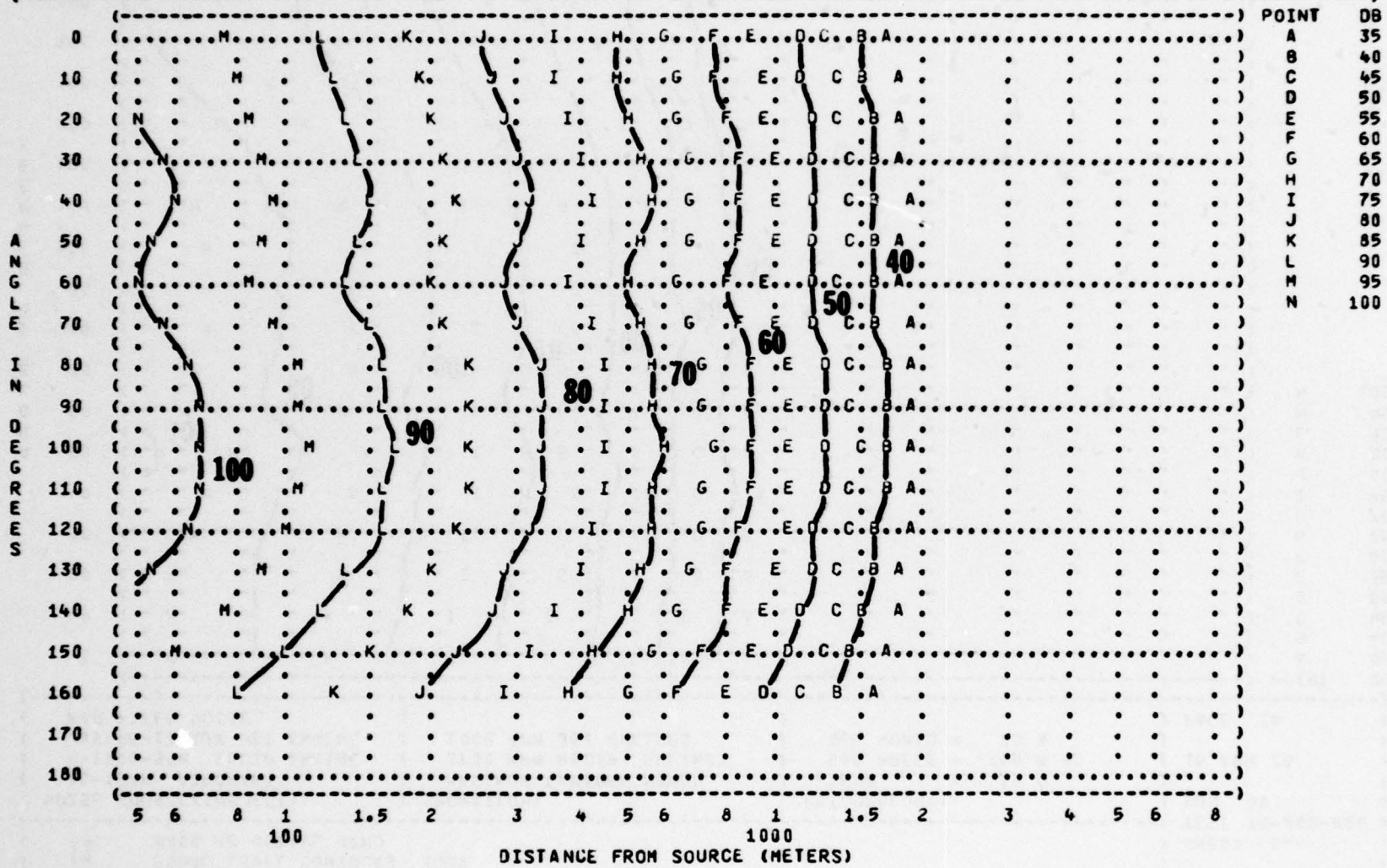
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 25



POINT	DB
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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

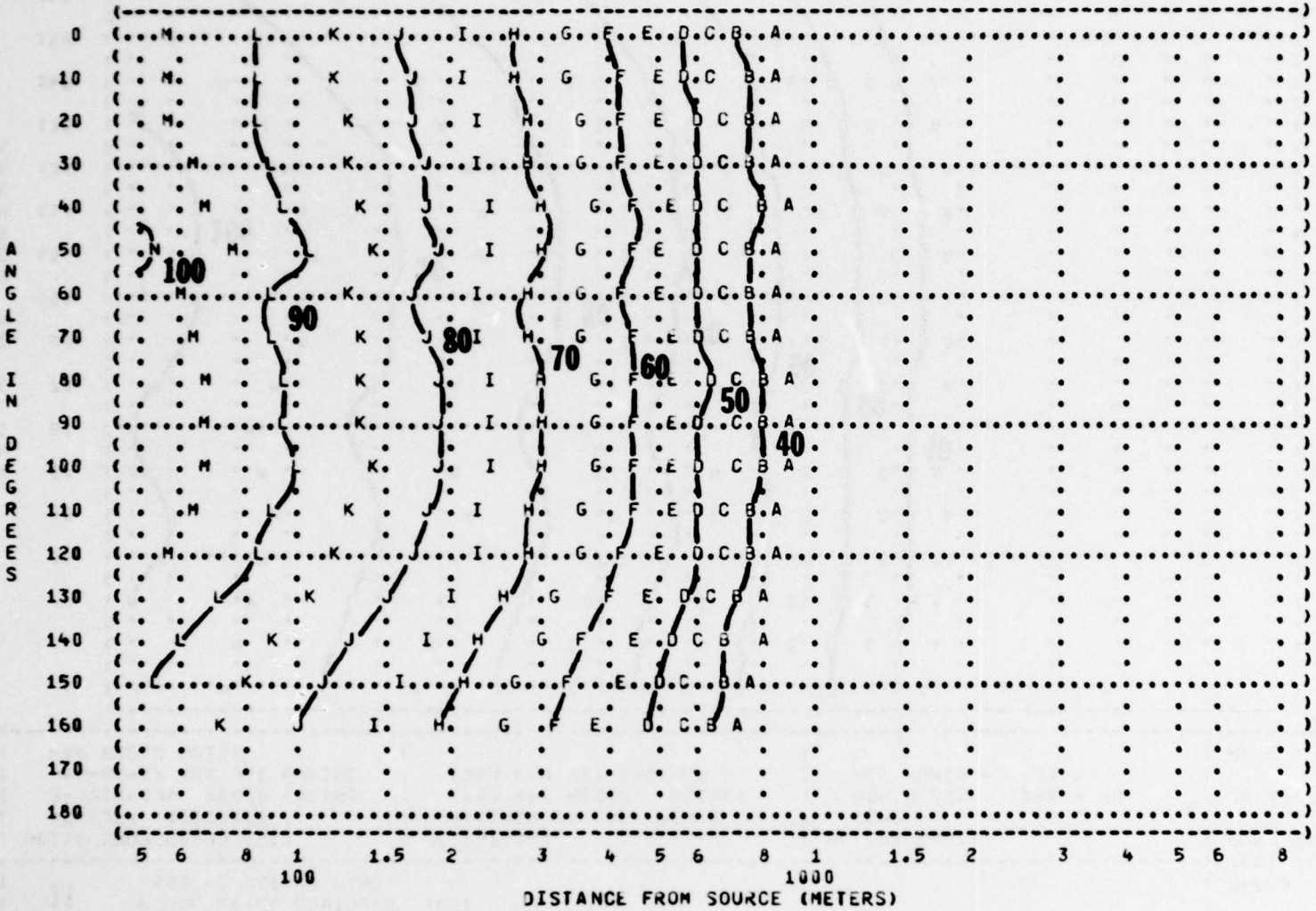
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-020
RUN 05
16 APR 75
PAGE 26

NOISE SOURCE/SUBJECT:
AC-123K AIRCRAFT
R-2800-99W RECIP ENGINE
J85-GE-17 AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM TAKEOFF POWER
2700 RPM RECIP. ENGINES
100% RPM JET ENGINES

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



POINT	DB
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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

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