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USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 87. C-131B AI--ETC(U)
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UNCLASSIFIED AMRL-TR-75-50-VOL-87 NL

1 OF 2
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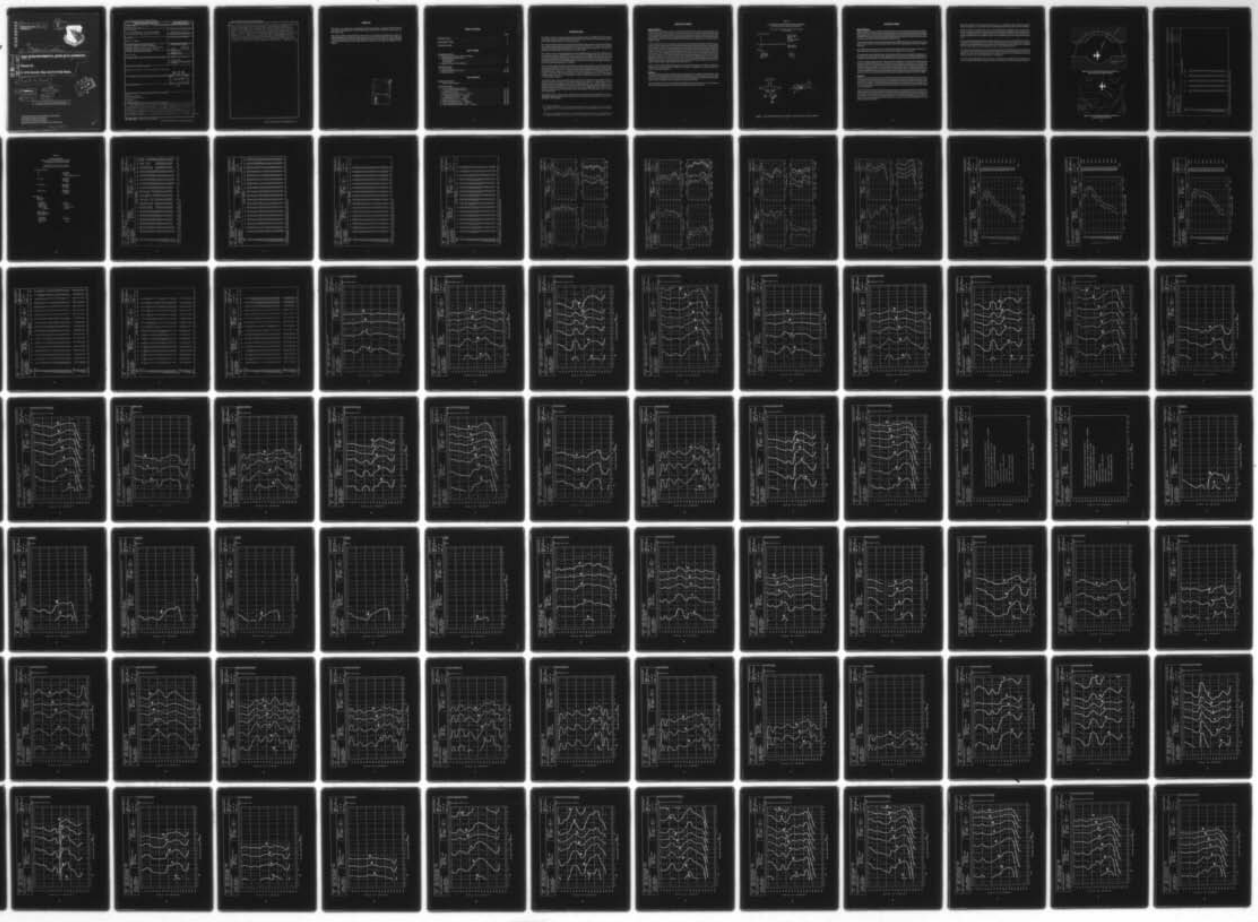

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Volume 87

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Volume 87.

C-131B Aircraft, Near and Far-Field Noise.

Robert G. Powell

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AEROSPACE MEDICAL RESEARCH LABORATORY
AEROSPACE MEDICAL DIVISION
AIR FORCE SYSTEMS COMMAND
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433

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The USAF C-131B is an aircraft for transporting patients and is powered by two R2800-103W reciprocating engines. This report provides measured and extrapolated data defining the bioacoustic environments produced by this aircraft operating on a concrete runup pad for four engine/power configurations. Near-field data are reported for five 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 interference level, perceived

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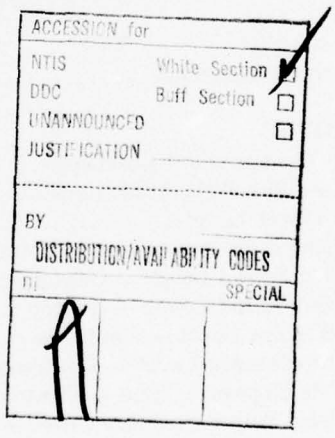
noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Far-field data measured at 19 locations are normalized to standard meteorological conditions and extrapolated from 75-8000 meters to derive sets of equal-value contours for these same seven acoustic measures as functions of angle and distances 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-131B is a transport-of-patients type aircraft powered by two R2800-103W reciprocating engines. The aircraft was manufactured by the Convair Division of General Dynamics and the engines by the Pratt and Whitney Division of United Aircraft.

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-131B aircraft.

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

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

A cumulative index lists those aerospace systems contained in the handbook, and identifies the specific volumes containing each type of environmental noise data available (i.e., inflight/flight crew and passenger noise, near-field/ground crew noise, far-field/community noise). Volume numbers are assigned sequentially as individual volumes are published. This index is periodically updated as individual volumes are published and is available upon request from AMRL/BBE, Wright-Paterson 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-131B aircraft during ground runup operations of its reciprocating engines. For these tests, the aircraft was located on a concrete runup pad at Eglin AFB with no significant reflecting surfaces in the vicinity except the ground plane. Table 1 gives the surface meteorological conditions and the two engine/power conditions. The ground-crew chief selected power conditions and near-field locations generally used during routine maintenance or engine runup for preflight checks.

At each near-field location a test engineer randomly moved a hand-held microphone in and around each location, probing all areas where a crew member's head would normally be located. He recorded all of the noise samples on magnetic tape. During analysis of each sample, he determined the root-mean square sound pressure using a 4- or 8-second integration time to derive a power-averaged level for each location. Figure 1 shows the five numbered near-field locations where ground crew are usually located for maintenance and/or preflight checkout operations. Also shown are seven measurement locations (one every 30°) located on a 6.1 meter radius semicircle where the exhaust of the APU is at the center. Estimates of noise levels at other locations in the near-field are difficult since the noise source is spatially distributed, i.e., not a point source. The noise levels at near-field locations can vary widely depending upon relative distances from each noise source (intake noise, exhaust noise, panel resonances, internal engine noise through the engine wall, etc.).

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

RESULTS

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the C-131B aircraft at the five 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-131B Aircraft, Ground Runup, Edwards AFB, 15 Sep 1972
Tail # 037796

Ground Crew Location

1	Engine #2 Start
2	Engine #1 Start
3	Marshal
4	Crew Chief, Observer
5	Chock Pull

Aircraft Engine (and Support Equipment) Operation

A	Engine #2 Idle
B	Both Engine Idle

Meteorology

Temperature	13.3 C
Bar Pressure	0.701 M Hg
Rel Humidity	38 %
Wind	Calm

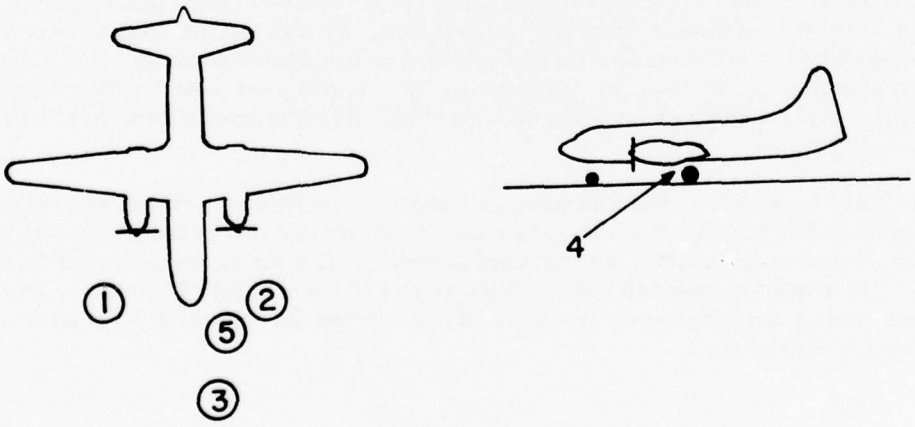


Figure 1. Near-Field Measurement Locations on Hot Cargo Pad at Eglin AFB FL

FAR-FIELD NOISE

MEASUREMENTS

AMRL acquired most near- and all far-field data during a 1-hour test periods at both Edwards and Eglin AF bases. Figure 2 shows the ground runup pad, ground cover, aircraft orientation and 19 microphone measurement sites on each semicircle. The center of the 75 meter radius semicircles used in surveying the R2800-103W engines were on the ground directly below the intersection of the aircraft's centerline and the plane passing through both engines' propeller planes.

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

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

Test personnel acquired far-field noise data at Eglin AFB by using a hand-held microphone (1.7 meters/5-1/2 feet above the ground plane and pointed at the noise source, 0° incidence) and sequentially recording 5 to 10 seconds of data at each far-field loction on a portable microphone/tape recorder system.

A similar microphone/tape-recorder system was used to sequentially record the noise at each far-field location at Edwards AFB. However, at Edward's the microphone was attached to a hand-held pole, pointed at the source (0° angle of incidence) and vertically scaned from 0.5 to 3 meters for a period of 5-10 seconds during data acquisition at each microphone location. Both Eglin and Edward's samples were then time-integrated to derive a root-mean-square sound pressure level. Vertical scanning and time-integrating together reduce anomalies frequently present in data acquired by a fixed height microphone and now constitute the standard far-field data acquisition/reduction technique used by the AMRL.

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-131B 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 the 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., 2500 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 at the 170 and 180 degree locations for two engine operation at power settings above 1000 RPM because of turbulent air flow behind the aircraft. Typical, the A-weighted levels for these angles are 10 to 20 dBA below those 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 and Figure 11 at idle power).

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

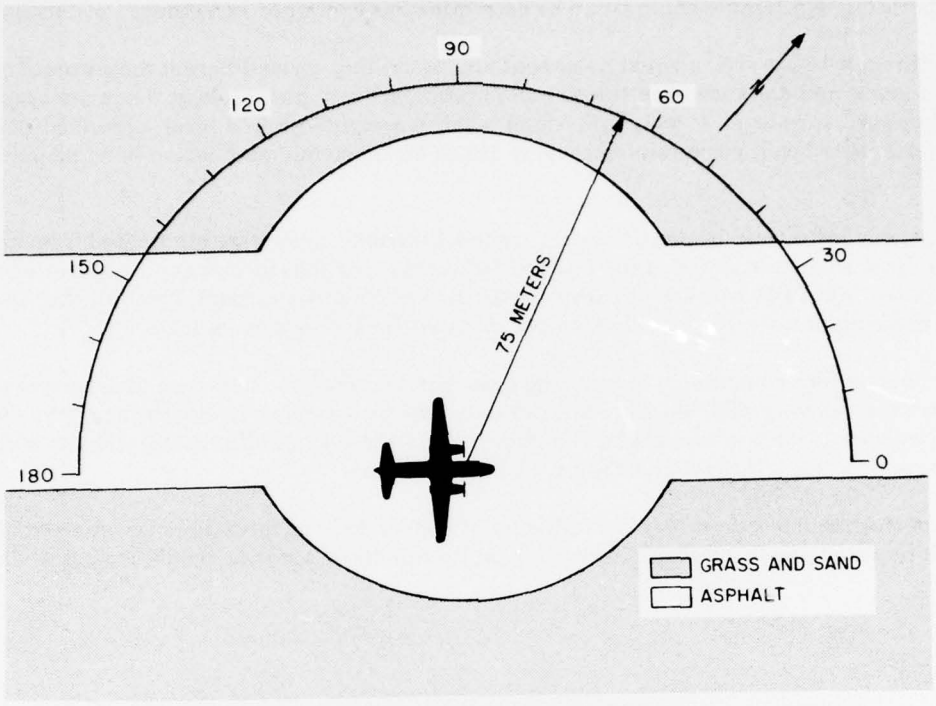


Figure 2a. Far-Field Measurement Locations on Hot Cargo Pad at Elgin AFB FL

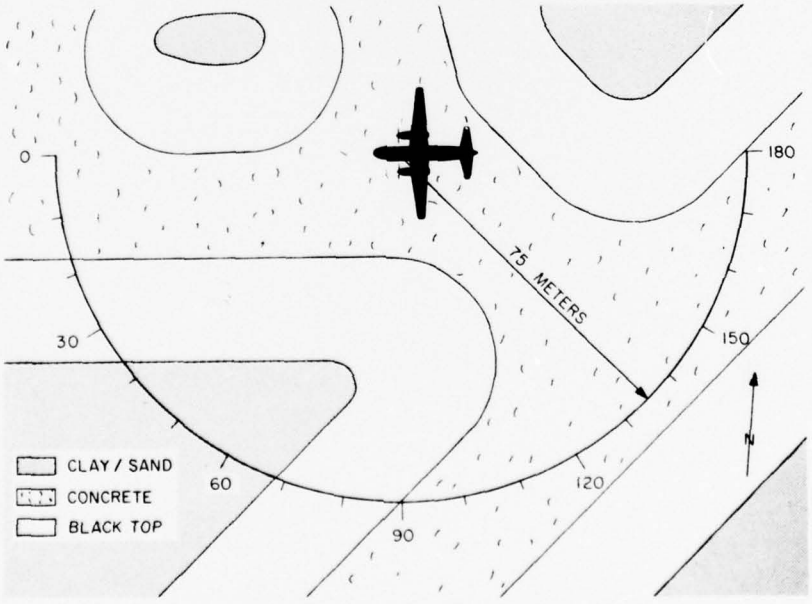


Figure 2b. Far-Field Microphone Locations at Pad 15 Edwards AFB CA

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

IDENTIFICATION:
OMEGA 3.2
TEST 72-046-002
RUN 01
04 DEC 74
PAGE F1

NOISE SOURCE/SUBJECT:
C-131B (T-29B) AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

FREQ (HZ)	LOCATION/CONDITION 1/A	2/B	3/B	4/B	5/B
25	83	92	80	80	93
31.5	92	94	85	89	90
40	89	96	91	95	88
50	90	97	93	93	88
63	94	100	89	96	86
80	95	99	90	95	84
100	93	95	87	93	83
125	91	93	87	92	81
160	87	91	84	93	78
200	89	93	82	90	77
250	90	94	81	88	76
315	89	94	80	88	74
400	89	92	80	85	73
500	85	87	78	81	72
630	80	84	73	81	69
800	80	84	74	81	67
1000	80	85	74	78	66
1250	84	88	79	82	65
1600	83	87	74	79	66
2000	80	85	72	75	67
2500	81	84	73	75	63
3150	79	82	70	73	62
4000	79	81	69	73	61
5000	83	79	68	71	59
6300	79	78	65	71	58
8000	78	78	64	69	57
10000	80	78	63	66	57
OVERALL	103	107	99	103	97

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 3.2
TEST 72-046-002
RUN 01
04 DEC 74
PAGE J1

NOISE SOURCE/SUBJECT:
C-131B (T-29B) AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

FREQ (HZ)	LOCATION/CONDITION 1/A	2/B	3/B	4/B	5/B
31.5	94	99	92	96	95
63	98	103	96	99	91
125	96	98	91	97	86
250	94	98	86	93	80
500	91	93	82	87	76
1000	86	91	81	85	71
2000	86	90	78	81	70
4000	85	86	74	77	65
8000	84	82	69	74	62
OVERALL	103	107	99	103	97

TABLE: 3 MEASURES OF HUMAN NOISE EXPOSURE

IDENTIFICATION:
OMEGA 3.2
TEST 72-046-002
RUN 01
04 DEC 74
PAGE H1

NOISE SOURCE/SUBJECT:
C-131B (T-29B) AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

	LOCATION/CONDITION				
	1/A	2/B	3/B	4/B	5/B
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	102	106	98	102	95
OASLA	94	97	86	91	79
T	85	50	339	143	960
MINIMUM QPL EAR MUFFS					
OASLA*	79	82	73	79	68
T	960	679	960	960	960
AMERICAN OPTICAL 1700 EAR MUFFS					
OASLA*	75	78	70	75	65
T	960	960	960	960	960
V-51R EAR PLUGS					
OASLA*	70	74	64	69	58
T	960	960	960	960	960
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS					
OASLA*	58	61	53	58	49
T	960	960	960	960	960
H-133 GROUND COMMUNICATION UNIT					
OASLA*	69	73	65	69	60
T	960	960	960	960	960
COMMUNICATION					
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)					
PSIL	88	91	80	85	72
ANNOYANCE					
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)					
TONE CORRECTION (C IN DB)					
PNLT	110	112	102	107	94
C	1	0	2	1	0

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE 4

TEST CONDITIONS
FOR FAR-FIELD NOISE MEASUREMENTS
C-131B AIRCRAFT, GROUND RUNUPS

Eglin AFB FL, 28 July 1971, Tail # 37805
Edwards AFB CA, 15 Sept 1972, Tail # 037796

Aircraft Engine Operation

Idle	Both Engines 800 RPM 6 Inches Manifold Pressure
Taxi Power	Both Engines 1000 RPM 24 " MAP
Ground Power	Both Engines 2050 RPM 27.5 " MAP
Military Power	Both Engines 2800 RPM 62 " MAP

Meteorology

Eglin AFB
(Fast Idle)

Temperature	31.1 C
Bar Pressure	0.761 M Hg
Rel Humidity	66 %
Wind — Speed	5.1 M/Sec (10 kt)
— Direction	.181 Deg

Edwards AFB
(Idle, Magneto Check,
Maximum Power)

Temperature	13.3 C
Bar Pressure	0.701 M Hg
Rel Humidity	38 %
Wind	Calm

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

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 13 C
BAR PRESS = .701 M HG
REL HUMID = 38 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	69<	69<	68<	69<	69<	72	71<	73	73	73	70<	74	73	71<	74	73	72	72	69<
31.5	71<	72<	72<	72<	73<	73<	72<	72<	72<	72<	73<	74	73<	74	74	75	73<	73<	70<
40	74<	76	75<	75<	75<	74<	74<	75<	77	77	79	78	78	77	76<	75<	75<	76<	75<
50	76	76	78	78	80	79	79	80	80	77	75	75	79	78	76	79	79	79	79
63	68<	68<	69<	69<	69<	69<	72<	72<	70<	67<	69<	72<	70<	73<	72<	67<	67<		
80	80	78<	79	75<	74<	77<	84	84	80	78<	83	82	81	80	77<	73<	70<	74<	71<
100	77<	74<	75<	74<	75<	77<	79	77<	74<	75<	76<	75<	76<	76<	76<	74<	73<	73<	72<
125	77<	75<	75<	74<	75<	76<	76<	69<		72<	71<	70<	71<	71<	74<	75<	71<	73<	72<
160	69<	69<	70<	70<	69<	70<	67<	67<	67<	68<		69<	67<	71<	69<	70<	67<		66<
200	68<	70<	68<	68<	66<	65<	65<	64<	63<		67<	65<	68<	70<	70<	66<	65<		64<
250	70<	70<	69<	68<	65<	65<				65<	65<	66<	68<	69<	70<	65<			65<
315	71<	70<	70<	68<	66<	65<		62<	62<	64<	62<	63<	65<	68<	68<	66<			65<
400	66	66	65	65	62<	62<	59<	58<	58<	60<	60<	64<	66	68	68	63<	62<	61<	66
500	65	64	63<	62<	60<	59<	58<	57<	57<	59<	58<	61<	62<	65	67	62<	58<	59<	63
630	59<	59<	58<	58<	54<	54<	53<	54<	53<	53<	54<	56<	59<	61<	62	56<	54<	55<	57<
800	59<	58<	59<	59<	56<	55<	54<	55<	54<	54<	53<	56<	57<	58<	60<	55<	52<	54<	55<
1000	60	61	63	62	61	61	59	59	58	59	56<	59	60	61	61	58	54<	54<	55<
1250	60	58	59	60	60	60	58	56	56	61	59	62	62	60	60	55<	53<	53<	54<
1600	59	56	56	54	54<	53<	53<	53<	53<	53<	51<	53<	54	55	58	54<	51<	51<	53<
2000	57	57	59	57	59	59	56	56	56	56	53	54	57	58	60	56	51<	51<	54
2500	55	54	54	54	54	54	55	52	53	56	53	56	59	57	59	54	51	50	54
3150	51	51	51	50	49	48<	48<	48<	49<	47<	47<	49	52	53	56	50	48<	47<	50
4000	49<	49<	49<	47<	46<	46<	46<	45<	46<	44<	45<	47<	49<	52	54	47<	46<	45<	49<
5000	50	48<	47<	44<	44<	44<	44<	44<	45<	42<	43<	45<	47<	49	50	44<	43<	43<	46<
6300	43<	42<	40<	39<	38<	39<	38<	38<	39<	38<	37<	39<	43<	46<	49	40<	40<	39<	42<
8000	39<	37<											38<	40<	44<	37<			37<
10000																			
OVERALL	85	84	85	84	84	85	87	87	85	84	86	86	86	86	85	84	83	83	83

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5

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

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .761 M HG
REL HUMID = 66 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	67<	73<	75<	71<	72<	68<	70<	73<	71<	70<	71<	71<	73<	69<	68<	67<	73<	79	71<
31.5	77	78	79	78	78	77	78	77	78	78	79	80	78	78	78	77	76<	79	71<
40	77	78	77	75<	73<	71<	72<	73<	79	77	79	78	76<	72<	71<	69<	70<	80	75<
50	80	80	79	77	80	79	81	81	78	76	76	79	82	80	79	78	76	77	78
63	79	79	79	80	83	84	85	85	84	80	82	85	86	85	83	81	79	73<	74<
80	83	83	83	82	83	85	87	87	83	85	88	86	84	80	81	80	78	75	79
100	78	78	77	77	80	86	88	84	86	87	84	86	90	87	82	84	85	80	85
125	75	77	74	74	77	78	76	72<	76	74	73	75	77	76	77	75	73	70<	75
160	74	76	75	75	76	78	74	76	73	75	74	77	79	80	77	77	74	69<	75
200	70<	74	70<	70<	72<	71<	71<	72<	74	71<	74	73	77	74	76	69<	72<	66<	74
250	69<	73	68<	68<	69<	65<	68<	68<	65<	65<	66<	69<	74	71	73	71	71	63<	69<
315	69	74	68	69	70	66	67	68	67	65	68	70	74	72	74	71	70	65	68
400	66	71	66	70	70	65	67	67	65	64	68	70	73	72	75	71	70	65	66
500	61	65	62	69	69	64	67	67	62	64	66	69	72	70	75	68	70	61	67
630	55<	61	56<	61	62	58	62	61	57<	56<	59	62	66	65	69	62	64	59	59
800	52<	59	57	60	60	57	61	61	57	58	59	61	66	65	68	59	64	57	58
1000	50<	60	54	58	58	56	59	59	57	56	57	59	62	62	66	57	62	54	55
1250	51	61	56	60	59	59	62	63	60	59	58	60	63	61	64	56	61	50	54
1600	50	59	54	59	58	56	59	59	58	60	62	62	63	61	64	57	60	51	55
2000	48	58	52	56	55	54	56	57	55	55	57	59	62	60	63	56	59	51	53
2500	47	57	51	57	56	55	57	58	57	56	56	58	61	61	63	56	58	51	52
3150	43<	54	48	53	53	51	54	56	55	53	54	56	59	59	61	53	56	50	51
4000	43<	55	48	53	52	51	53	55	54	52	51	54	58	59	60	53	55	50	50
5000	41<	53	46	51	50	50	52	53	53	50	49	51	56	56	58	51	53	48	50
6300	40<	51	45	49	49	50	51	52	51	49	48	50	54	56	57	50	52	46	48
8000	40<	50	45<	49	48	49	50	51	50	50	48	48	53	54	56	49	52	45<	48
10000	37<	47	42<	46	44<	45	46	48	48	46	44<	44<	48	50	52	46	49	42<	46
OVERALL	88	89	88	88	89	91	93	91	90	91	91	92	93	91	90	89	88	87	88

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 2

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 13 C
BAR PRESS = .701 M HG
REL HUMID = 38 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	65<	66<	66<	67<	65<	68<	74	66<	68<	73	75	75	77	78	77	75	78		
31.5	81	83	83	82	81	78	79	78	76	78	81	80	78	76	76	75	78		
40	74<	72<	74<	75<	74<	73<	79	74<	79	86	87	88	89	89	86	86	89		
50	71<	71<	72<	75	76	79	81	86	84	90	94	96	97	96	95	94	98		
63	88	88	87	84	84	84	85	85	82	81	84	86	85	86	85	82	83		
80	94	94	93	91	90	92	98	98	93	83	87	85	80	82	82	80	83		
100	89	89	88	87	83	85	96	93	87	85	84	86	86	89	87	86	91		
125	89	87	86	87	87	84	95	89	88	86	78<	82	84	88	89	85	90		
160	86	86	87	84	83	83	88	84	82	82	80	78	81	84	86	87	92		
200	88	87	84	83	81	81	81	82	78	82	81	82	87	88	91	90	95		
250	90	90	88	85	84	83	82	84	83	83	86	82	91	91	92	87	90		
315	89	87	86	83	83	82	79	81	80	84	85	82	87	90	89	83	92		
400	86	85	84	83	84	82	78	79	78	84	86	89	88	88	87	83	87		
500	83	81	81	81	79	79	76	77	75	81	85	89	87	87	87	83	87		
630	79	78	77	78	75	74	74	77	72	82	86	89	87	83	81	80	82		
800	76	76	75	76	73	72	72	75	70	82	84	87	83	82	79	79	80		
1000	75	75	73	73	71	71	70	73	68	84	85	86	80	80	78	76	80		
1250	73	73	72	72	69	69	68	69	68	81	82	84	80	79	76	74	78		
1600	70	70	70	70	68	69	68	69	69	76	76	77	78	77	73	72	77		
2000	72	73	75	71	70	69	70	69	70	73	73	74	76	74	71	70	75		
2500	69	69	70	72	69	68	68	69	68	70	70	72	72	72	70	67	72		
3150	66	67	65	65	65	65	65	67	67	67	66	68	67	67	66	63	68		
4000	64	65	64	63	64	63	63	64	64	65	63	65	65	64	62	59	64		
5000	61	61	61	60	60	60	60	61	61	62	60	61	60	59	59	55	60		
6300	58	58	58	57	57	57	58	59	58	59	57	57	57	56	55	51	56		
8000	54	54	54	53	53	53	54	55	54	54	52	53	53	52	52	48	52		
10000	51	51	50	50	49	49	51	51	51	50	49	48<	49	48<	48<	46<	49		
OVERALL	99	99	98	96	95	95	102	100	96	96	98	100	100	101	100	98	103		

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 2

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 13 C
BAR PRESS = .701 M HG
REL HUMID = 38 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	78	77	76	81	78	78	78	80	83	81	81	83	82	80	82	81	83		
31.5	79	78	78	81	78	79	81	81	82	81	81	81	81	81	81	78	81		
40	82	81	84	82	83	82	84	85	88	91	91	89	87	86	81	80	86		
50	88	85	88	88	87	90	92	91	94	94	98	98	97	99	94	92	93		
63	101	97	99	99	103	107	108	104	102	106	109	113	113	115	111	108	103		
80	87	86	86	87	87	90	92	92	89	88	90	93	94	96	91	89	83		
100	91	91	90	92	94	95	96	94	94	95	97	96	97	95	92	89	82		
125	103	103	104	107	108	102	98	102	108	111	113	110	106	103	103	94	81<		
160	102	99	100	100	106	102	103	102	105	105	107	104	108	107	106	97	89		
200	104	106	105	100	99	96	99	100	104	106	103	105	106	105	99	91	84		
250	108	107	106	102	101	105	103	104	106	109	108	107	110	113	102	94	87		
315	108	108	104	103	102	105	99	105	108	108	107	110	105	110	100	91	87		
400	106	103	101	102	101	102	101	99	103	103	105	104	106	103	96	85	81		
500	104	105	103	100	102	100	100	99	104	102	104	106	107	106	99	87	84		
630	99	101	98	101	98	95	96	98	97	98	100	101	104	102	93	84	81		
800	98	98	96	99	97	97	97	97	98	99	100	102	102	102	95	85	83		
1000	96	95	95	96	95	94	94	96	95	97	100	99	100	100	91	83	81		
1250	94	93	94	94	93	93	93	94	96	94	99	99	99	99	89	81	79		
1600	92	91	91	92	91	90	93	93	96	94	96	97	98	97	87	80	76		
2000	90	90	90	90	89	88	91	92	93	92	95	96	97	96	86	80	75		
2500	89	89	89	89	89	88	90	91	93	92	95	95	96	96	86	79	74		
3150	87	86	86	86	86	85	88	89	91	89	92	92	94	93	85	77	72		
4000	85	84	85	84	85	84	86	86	90	88	90	91	92	92	84	76	72		
5000	82	81	81	82	81	81	82	83	86	85	86	88	88	87	81	73	68		
6300	79	78	79	79	79	78	80	80	83	82	84	86	85	85	78	71	66		
8000	75	74	74	74	74	74	75	76	79	79	80	81	80	80	74	66	62		
10000	69	69	70	69	69	68	70	71	74	75	78	77	76	74	68	61	56		
OVERALL	114	114	113	112	113	113	112	112	115	116	118	118	118	119	114	109	104		

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 6

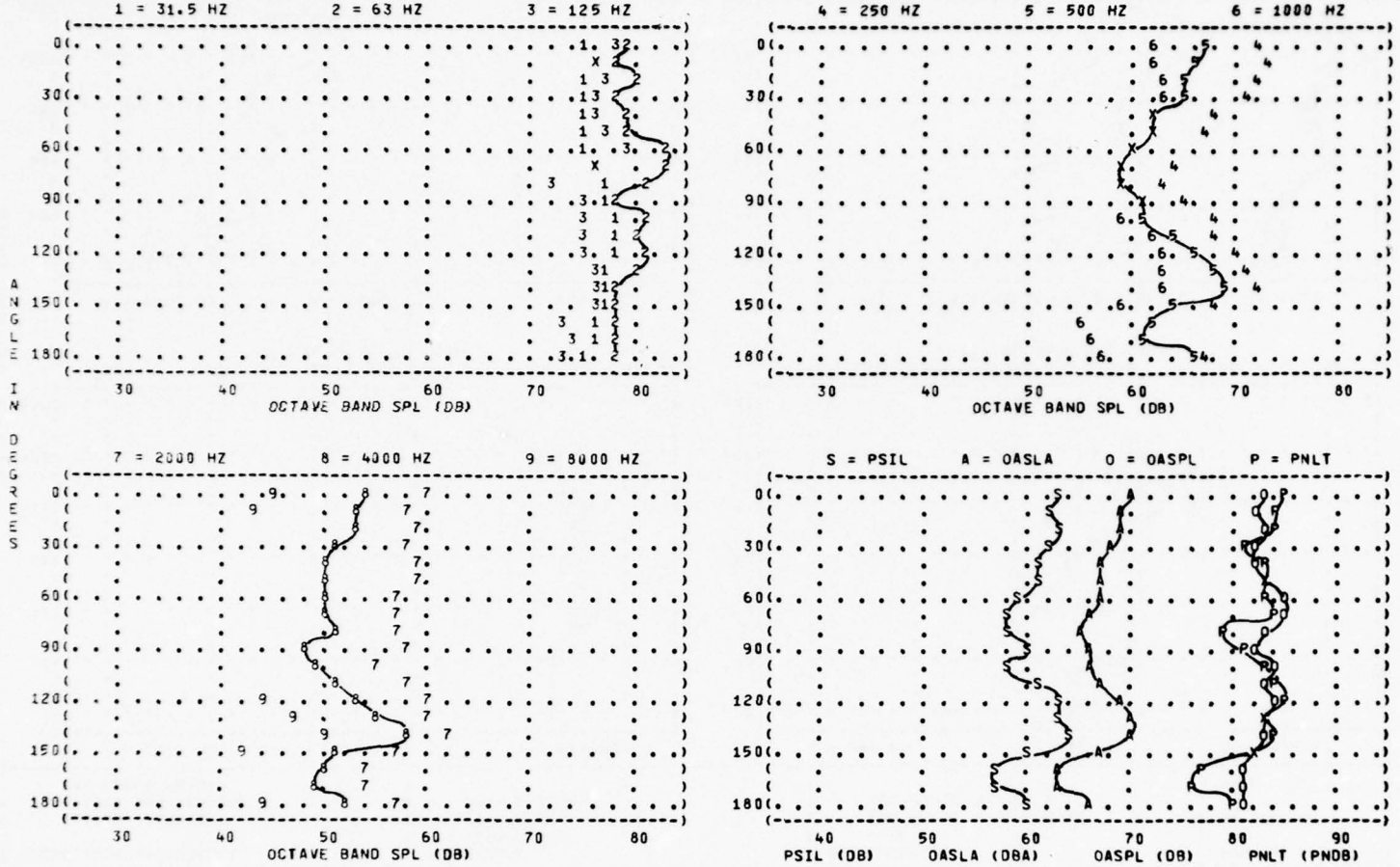


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 6

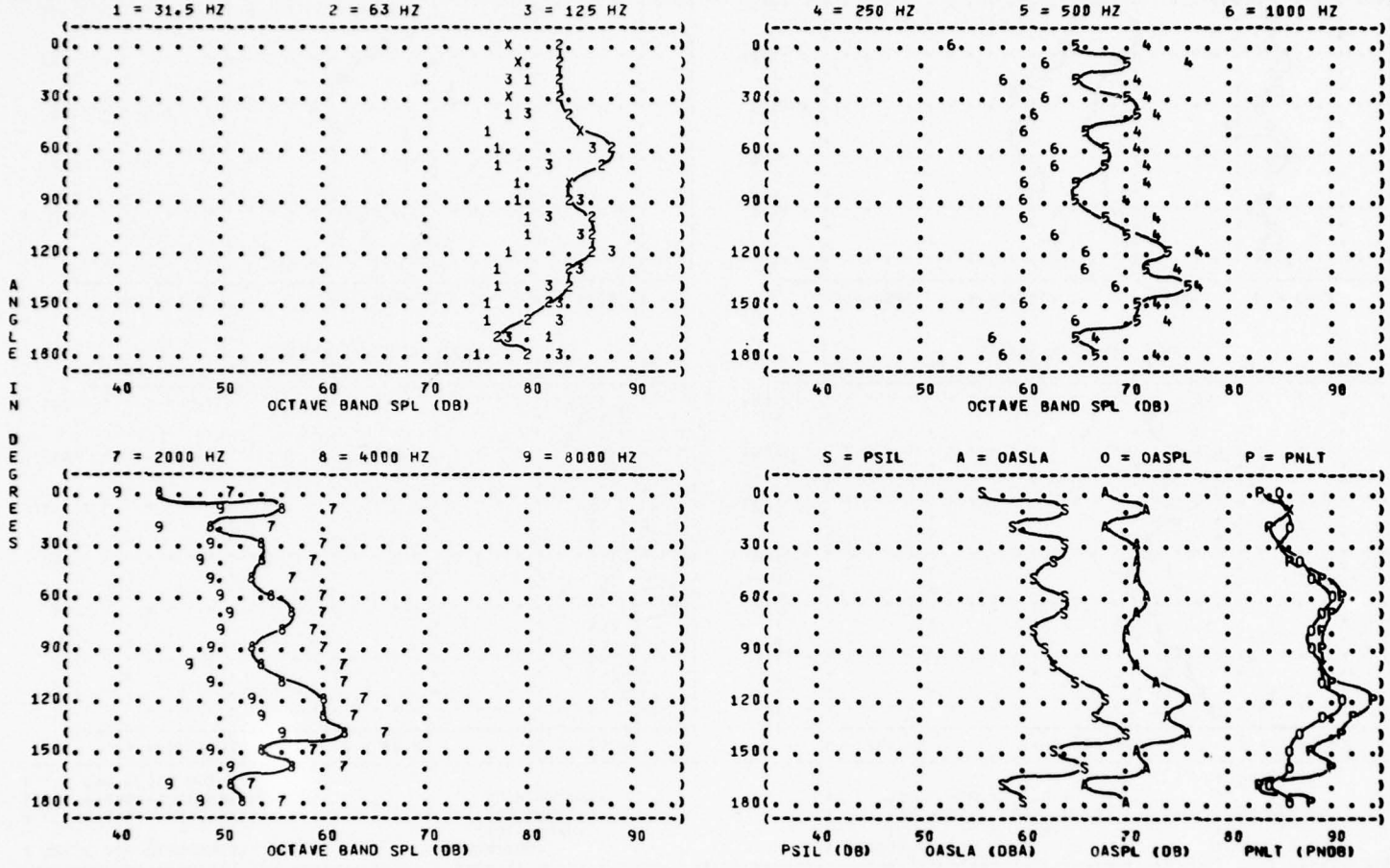


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 5

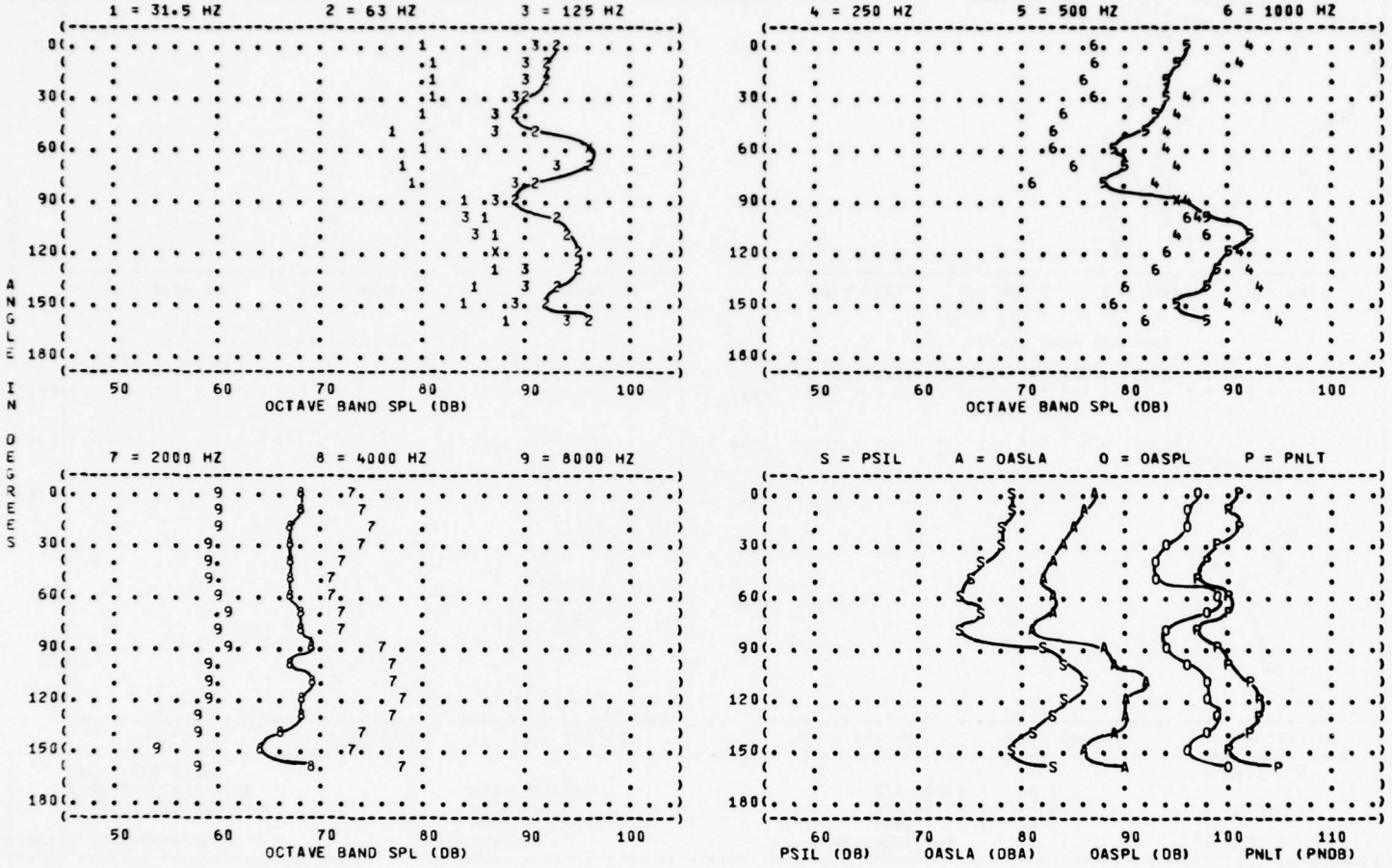


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:

C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 6

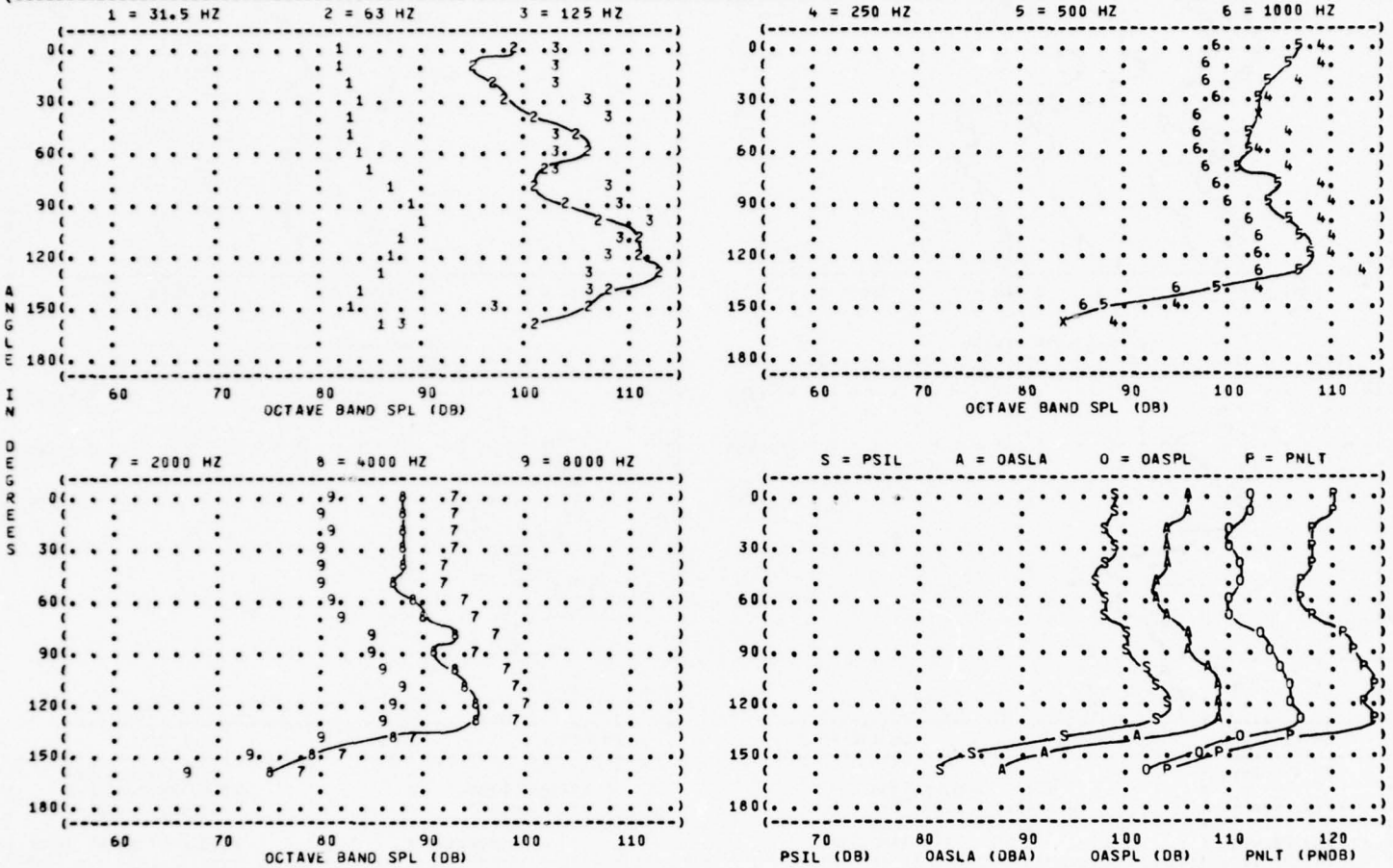


FIGURE: ACOUSTIC POWER LEVEL (PWL)

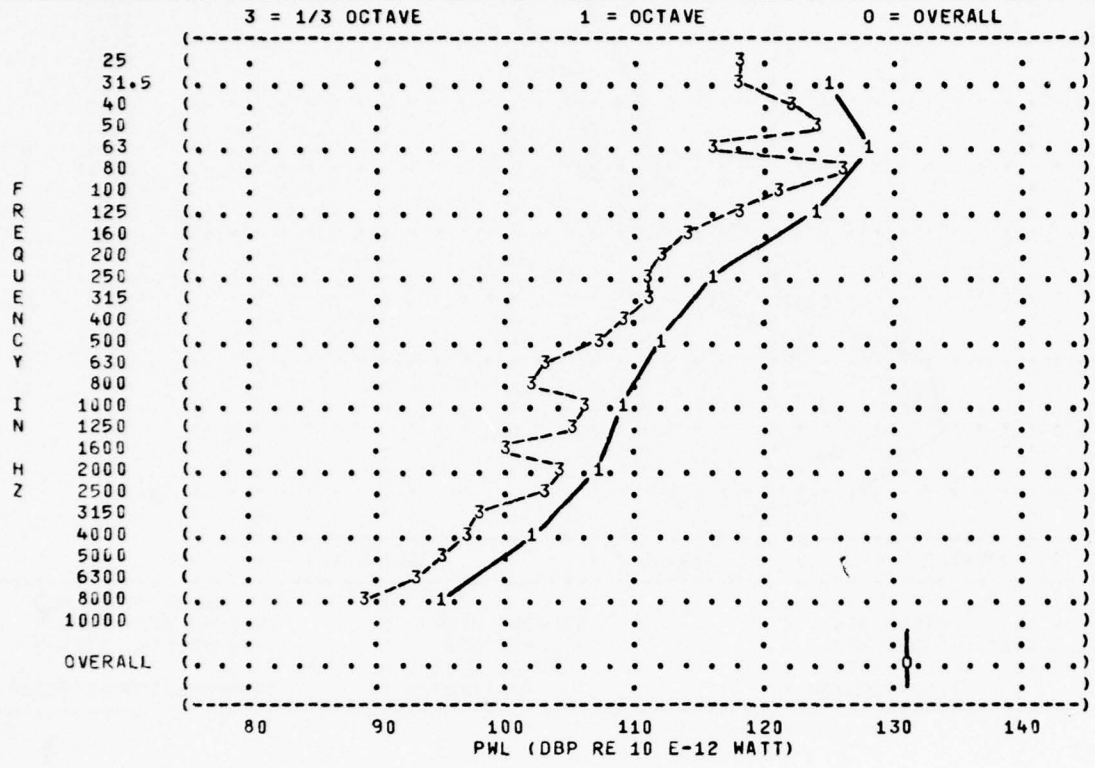
4

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 13 C
BAR PRESS = .701 M HG
REL HUMID = 38 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 3



	PWL	
	1/3 OCTAVE	OCTAVE
25	117.7	
31.5	118.5	124.6
40	122.1	
50	123.8	
63	115.9	128.3
80	126.0	
100	121.4	
125	118.4	123.7
160	113.9	
200	112.0	
250	111.4	116.2
315	110.7	
400	109.3	
500	107.0	111.9
630	102.6	
800	102.1	
1000	105.5	109.4
1250	105.5	
1600	100.3	
2000	103.5	107.2
2500	102.8	
3150	98.3	
4000	97.2	101.9
5000	95.5	
6300	93.3	
8000	89.1	94.7
10000		
OVERALL		131.0

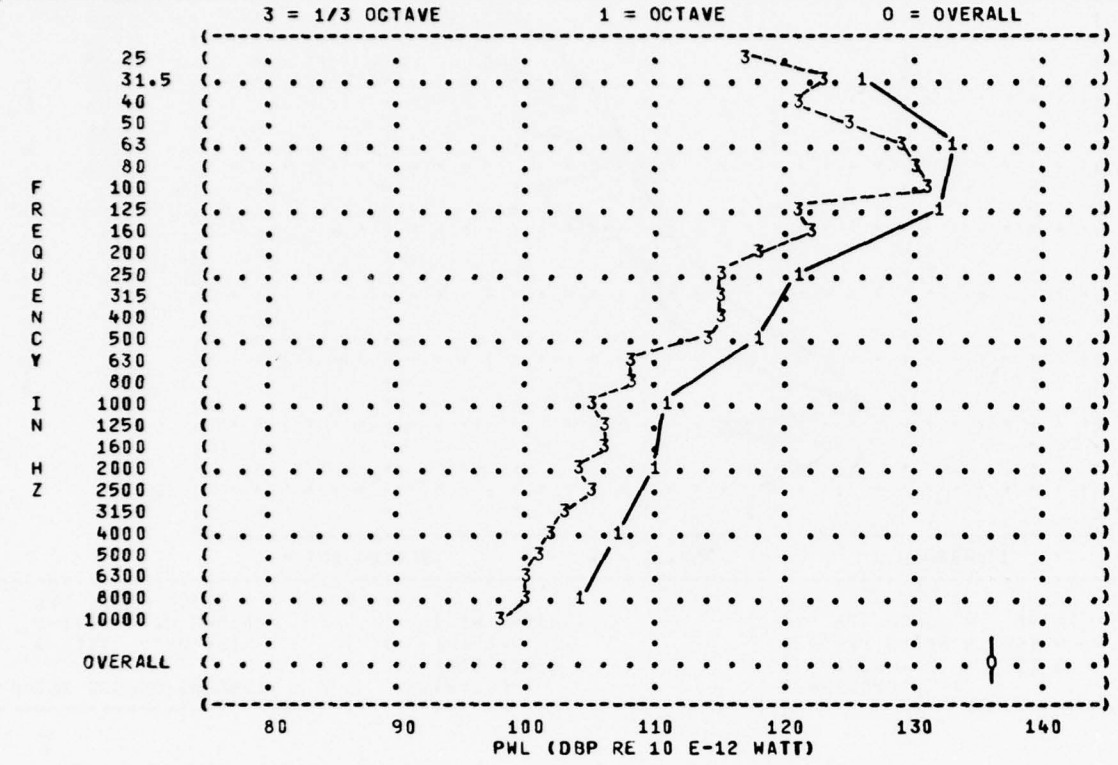
FIGURE: 4 ACOUSTIC POWER LEVEL (PWL)

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .761 M HG
REL HUMID = 66 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 3



	PWL	
	1/3 OCTAVE	OCTAVE
25	116.9	
31.5	123.5	126.1
40	121.3	
50	124.6	
63	128.9	133.1
80	130.0	
100	131.2	
125	120.6	132.0
160	121.6	
200	118.4	
250	114.8	121.3
315	115.3	
400	115.3	
500	114.2	118.2
630	108.1	
800	107.7	
1000	105.5	111.4
1250	106.5	
1600	106.4	
2000	104.4	110.0
2500	104.7	
3150	102.8	
4000	102.3	106.8
5000	100.5	
6300	100.0	
8000	100.2	104.2
10000	97.8	
OVERALL	136.3	

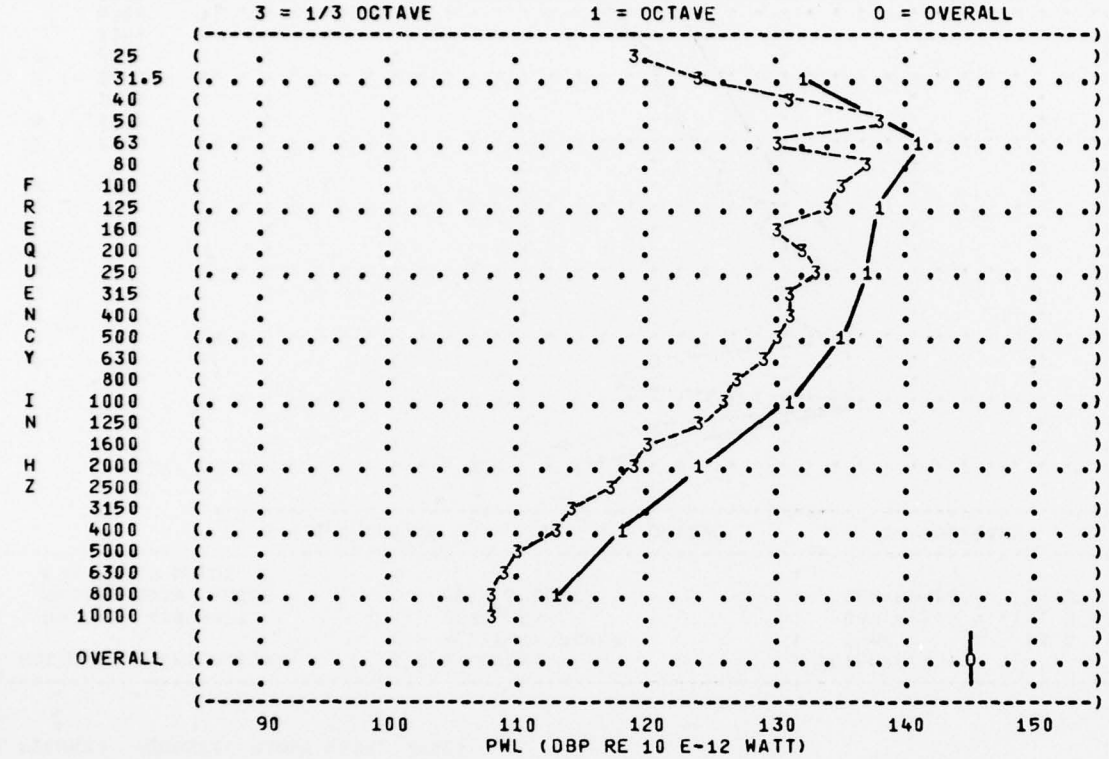
FIGURE: 4 ACOUSTIC POWER LEVEL (PWL)

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 13 C
BAR PRESS = .701 M HG
REL HUMID = 38 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	119.4	
31.5	124.4	131.8
40	130.5	
50	138.0	
63	130.0	141.1
80	137.5	
100	134.7	
125	133.5	137.9
160	130.1	
200	131.6	
250	132.8	136.6
315	131.0	
400	130.7	
500	129.9	134.7
630	128.9	
800	126.6	
1000	126.1	130.5
1250	124.3	
1600	120.4	
2000	119.1	123.9
2500	117.4	
3150	114.4	
4000	113.1	117.6
5000	110.1	
6300	109.0	
8000	107.6	112.9
10000	107.5	
OVERALL		144.7

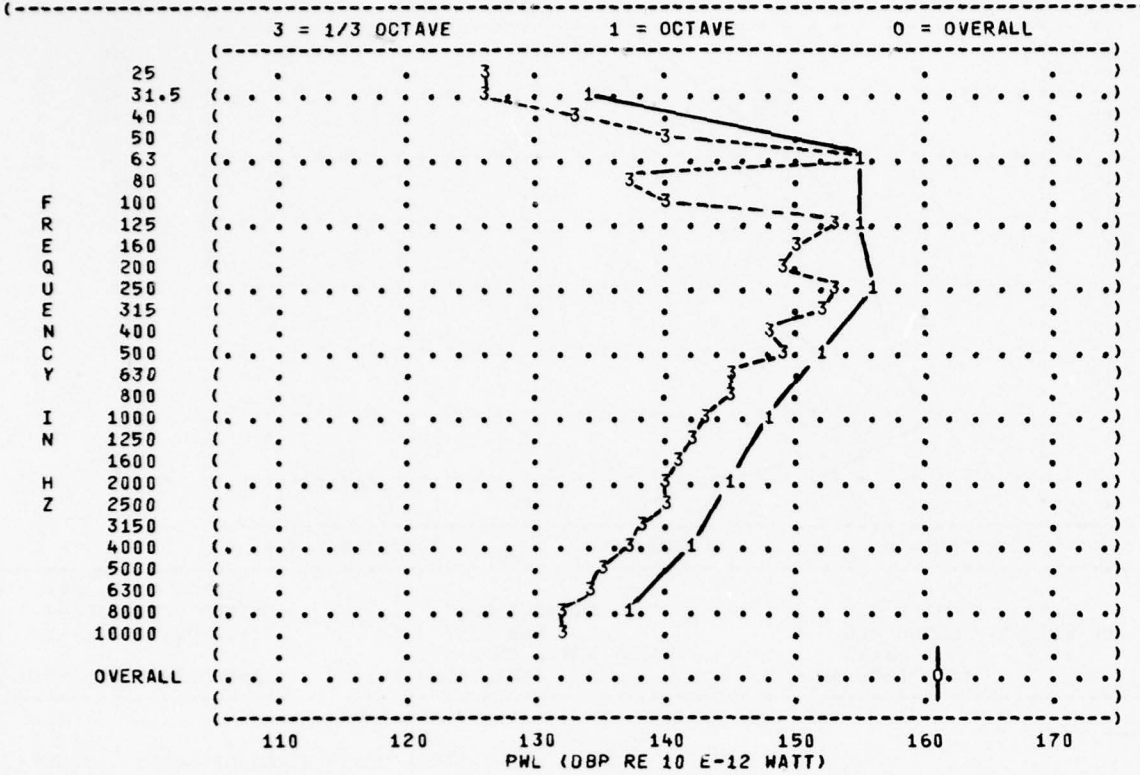
FIGURE: 4 ACOUSTIC POWER LEVEL (PWL)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 3

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 13 C
BAR PRESS = .701 M HG
REL HUMID = 38 %



	PWL 1/3 OCTAVE	PWL OCTAVE
25	126.4	
31.5	126.1	134.2
40	132.6	
50	140.2	
63	155.0	155.2
80	136.7	
100	140.3	
125	153.1	155.0
160	150.2	
200	148.6	
250	152.6	156.1
315	151.8	
400	148.1	
500	148.8	152.3
630	144.9	
800	144.8	
1000	142.8	148.1
1250	141.9	
1600	140.7	
2000	139.8	144.8
2500	139.6	
3150	137.9	
4000	137.4	141.6
5000	134.6	
6300	133.8	
8000	132.0	137.4
10000	131.6	
OVERALL		161.3

TABLE: DIRECTIVITY INDEX (DB)

6

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 13 C
BAR PRESS = .701 M HG
REL HUMID = 38 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 4

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

TABLE: DIRECTIVITY INDEX (DB)

6

IDENTIFICATION:

OMEGA 1.4
TEST 75-002-022
RUN 01

17 APR 75

PAGE 4

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 31 C
BAR PRESS = .761 M HG
REL HUMID = 66 %

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

TABLE: DIRECTIVITY INDEX (DB)

6

IDENTIFICATION:

OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 4

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 13 C
BAR PRESS = .701 M HG
REL HUMID = 38 %

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	-9	-8	-8	-7	-9	-6	0	-7	-6	-1	1	1	3	4	3	1	4		
31.5	2	4	4	3	2	-1	0	-1	-3	-1	2	1	-1	-3	-3	-4	-1		
40	-11	-13	-11	-10	-11	-12	-6	-11	-6	1	2	3	4	4	1	1	4		
50	-21	-22	-20	-18	-16	-14	-12	-6	-9	-2	1	3	4	4	2	2	5		
63	4	4	2	-0	-1	-0	1	1	-2	-3	-1	1	1	2	1	-3	-2		
80	2	2	1	-1	-2	0	6	6	1	-9	-5	-7	-12	-10	-10	-12	-9		
100	-0	-0	-1	-2	-6	-4	7	4	-2	-4	-5	-3	-3	-0	-2	-3	2		
125	1	-1	-2	-1	-1	-4	7	1	0	-2	-10	-6	-4	0	1	-3	2		
160	2	2	3	-1	-2	-1	4	-0	-2	-2	-5	-6	-4	-0	1	2	8		
200	2	1	-2	-3	-5	-5	-5	-4	-8	-4	-5	-4	1	2	5	4	9		
250	2	2	1	-2	-3	-5	-5	-3	-4	-4	-2	-5	4	4	5	-0	3		
315	4	2	0	-2	-2	-3	-6	-4	-6	-1	-0	-3	2	5	4	-2	7		
400	1	0	-1	-2	-1	-3	-7	-6	-7	-1	1	4	3	3	2	-2	2		
500	-2	-3	-4	-4	-5	-5	-9	-7	-9	-3	1	5	3	3	2	-2	3		
630	-4	-5	-6	-6	-8	-9	-9	-6	-11	-1	3	6	4	0	-2	-3	-1		
800	-5	-5	-6	-4	-7	-8	-8	-5	-11	1	3	6	2	1	-2	-2	-1		
1000	-5	-5	-7	-7	-9	-9	-10	-8	-12	3	4	5	-0	0	-3	-4	-0		
1250	-5	-5	-7	-7	-9	-10	-10	-9	-10	2	3	6	2	1	-3	-4	0		
1600	-4	-4	-4	-4	-6	-5	-6	-5	-5	2	2	3	4	3	-1	-2	3		
2000	-0	0	2	-1	-2	-4	-3	-3	-2	1	1	2	3	2	-1	-3	3		
2500	-1	-1	0	2	-1	-2	-2	-1	-2	0	0	2	2	2	-0	-3	2		
3150	-0	0	-1	-1	-1	-1	-1	0	0	1	-1	2	1	1	-1	-3	2		
4000	0	1	0	-1	-0	-1	-1	0	0	1	-1	1	1	0	-2	-5	0		
5000	1	1	0	-0	-0	-0	-1	1	1	2	-0	1	-0	-1	-1	-5	-0		
6300	1	1	0	-0	-0	0	0	1	1	2	-0	0	-0	-1	-2	-6	-1		
8000	1	1	1	-0	-0	0	1	1	1	1	-1	-0	-1	-1	-1	-5	-1		
10000	2	2	0	0	-0	-0	2	2	1	1	-0	-1	-1	-1	-1	-4	-1		
OCTAVE																			
31.5	-4	-3	-2	-3	-4	-7	-4	-6	-5	0	2	3	3	3	1	0	4		
63	-0	-1	-1	-3	-4	-3	3	3	-2	-4	-1	1	1	1	-0	-1	2		
125	1	-0	-0	-2	-3	-3	6	3	-1	-3	-6	-5	-3	-0	-0	-1	4		
250	3	2	0	-2	-3	-4	-5	-4	-5	-3	-2	-4	3	4	5	1	7		
500	-1	-2	-3	-3	-3	-5	-8	-6	-9	-1	2	5	3	3	1	-2	2		
1000	-5	-5	-6	-6	-8	-9	-9	-7	-11	2	4	6	1	1	-2	-3	-0		
2000	-2	-1	-0	-1	-3	-4	-4	-4	-3	1	1	2	3	2	-1	-3	3		
4000	-0	1	-0	-1	-1	-1	-1	0	0	1	-1	2	1	1	-1	-4	1		
8000	1	1	0	-0	-0	0	1	1	1	2	-0	-0	-0	-1	-2	-6	-1		
OVERALL	0	-0	-1	-3	-4	-3	3	1	-3	-3	-1	1	1	2	1	-1	4		

TABLE: 6 DIRECTIVITY INDEX (DB)

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

METEOROLOGY:
TEMP = 13 C
BAR PRESS = .701 M HG
REL HUMID = 38 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 4

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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 13

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

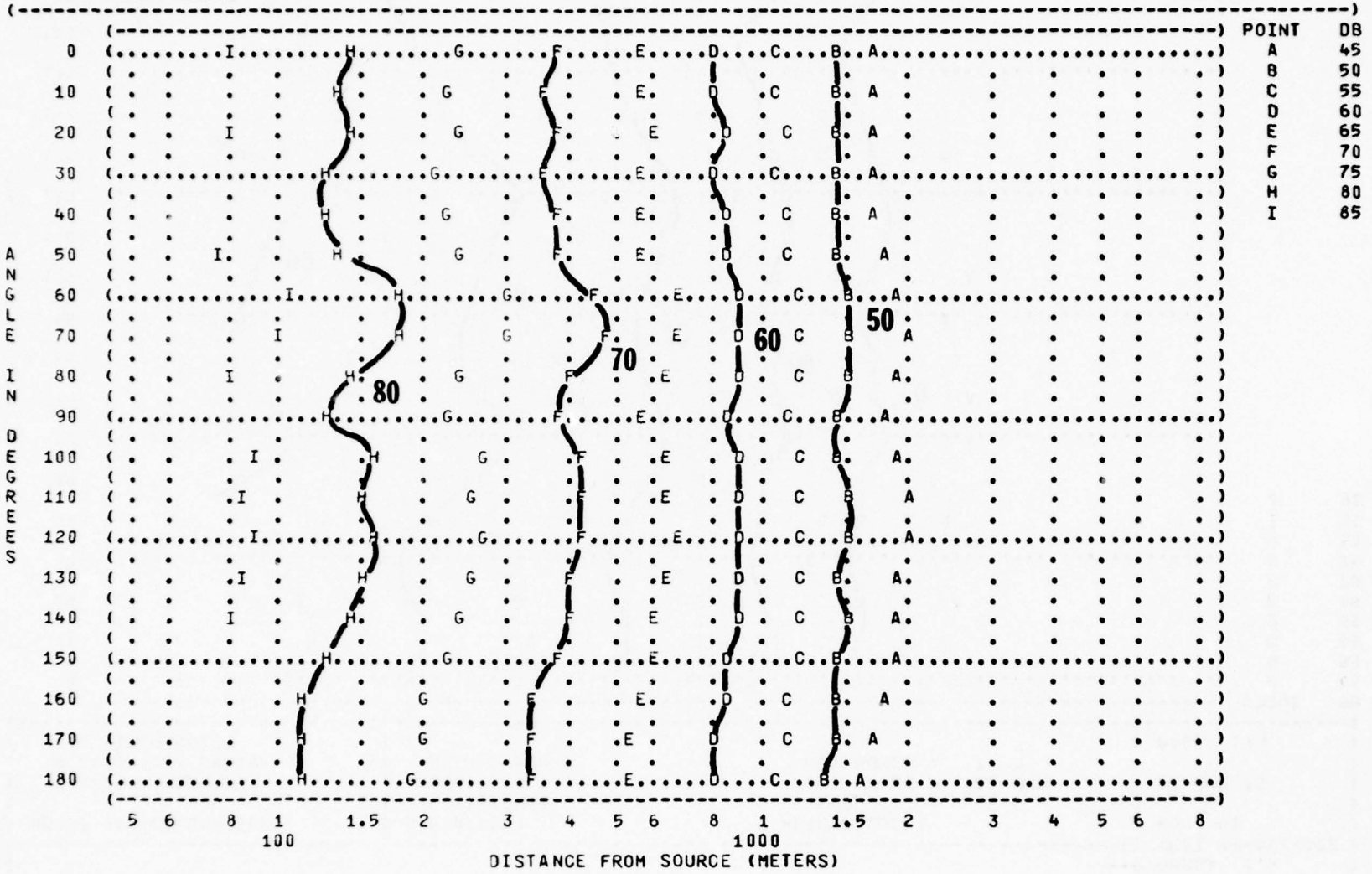


FIGURE 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 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

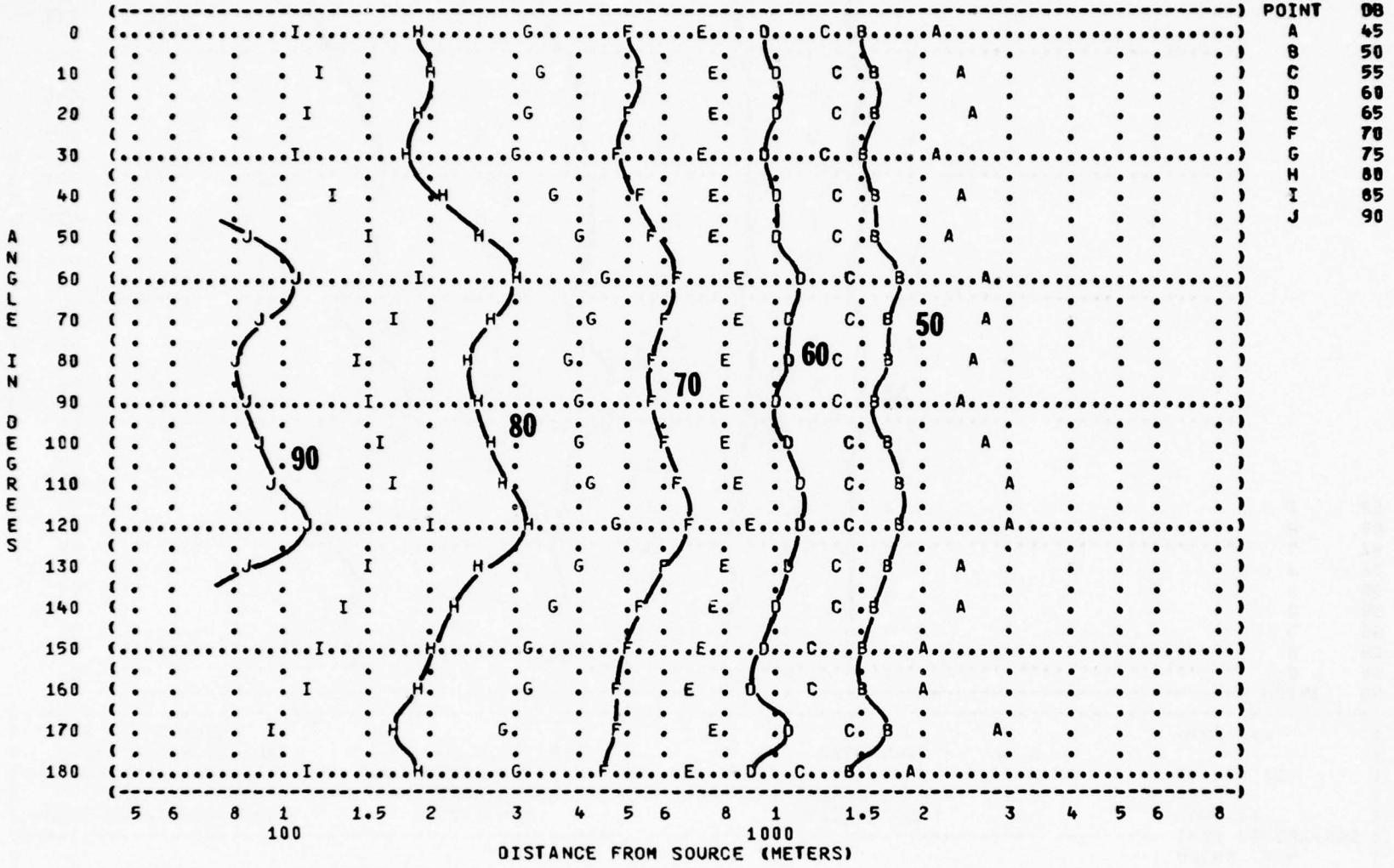


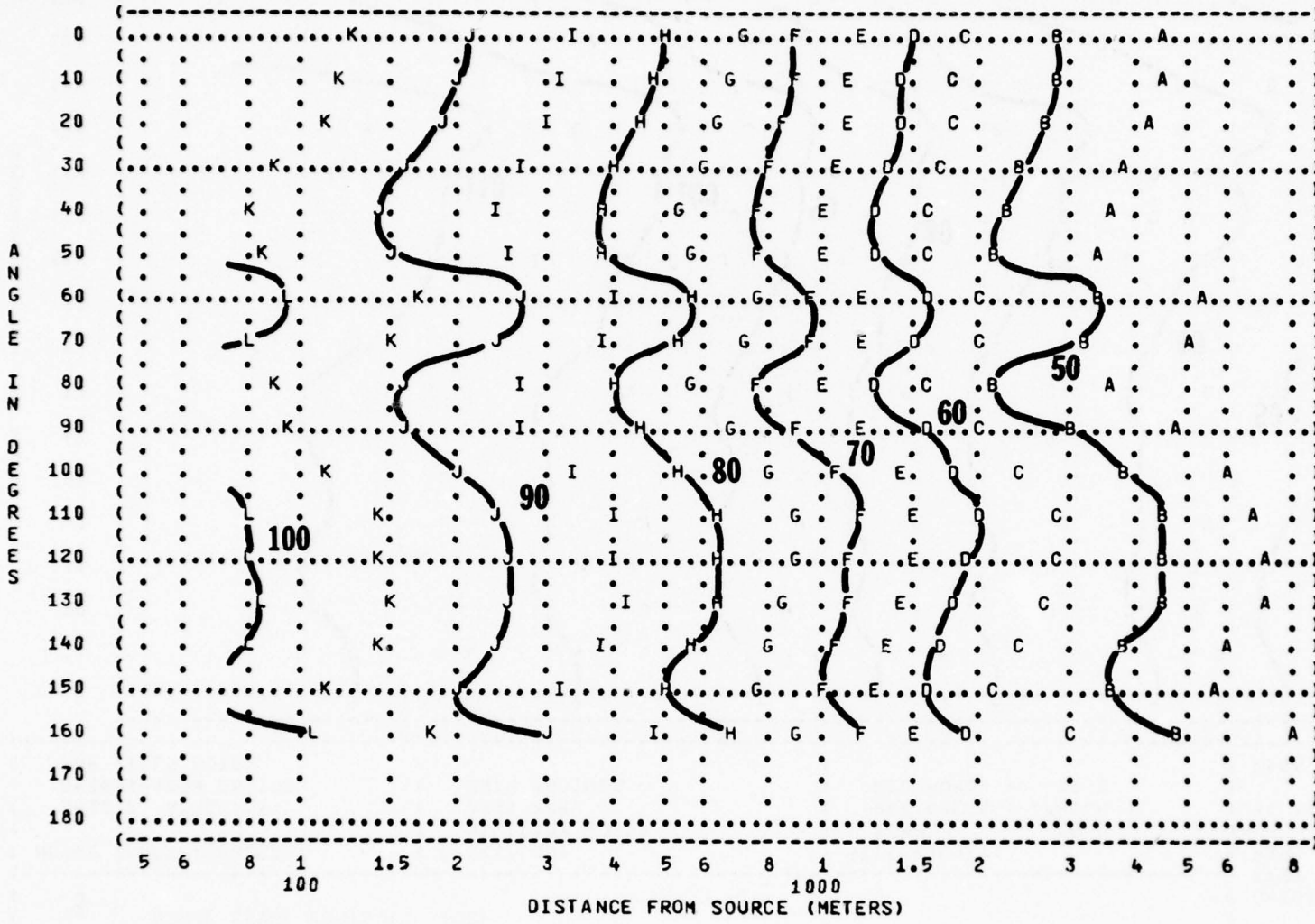
FIGURE 5: OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 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

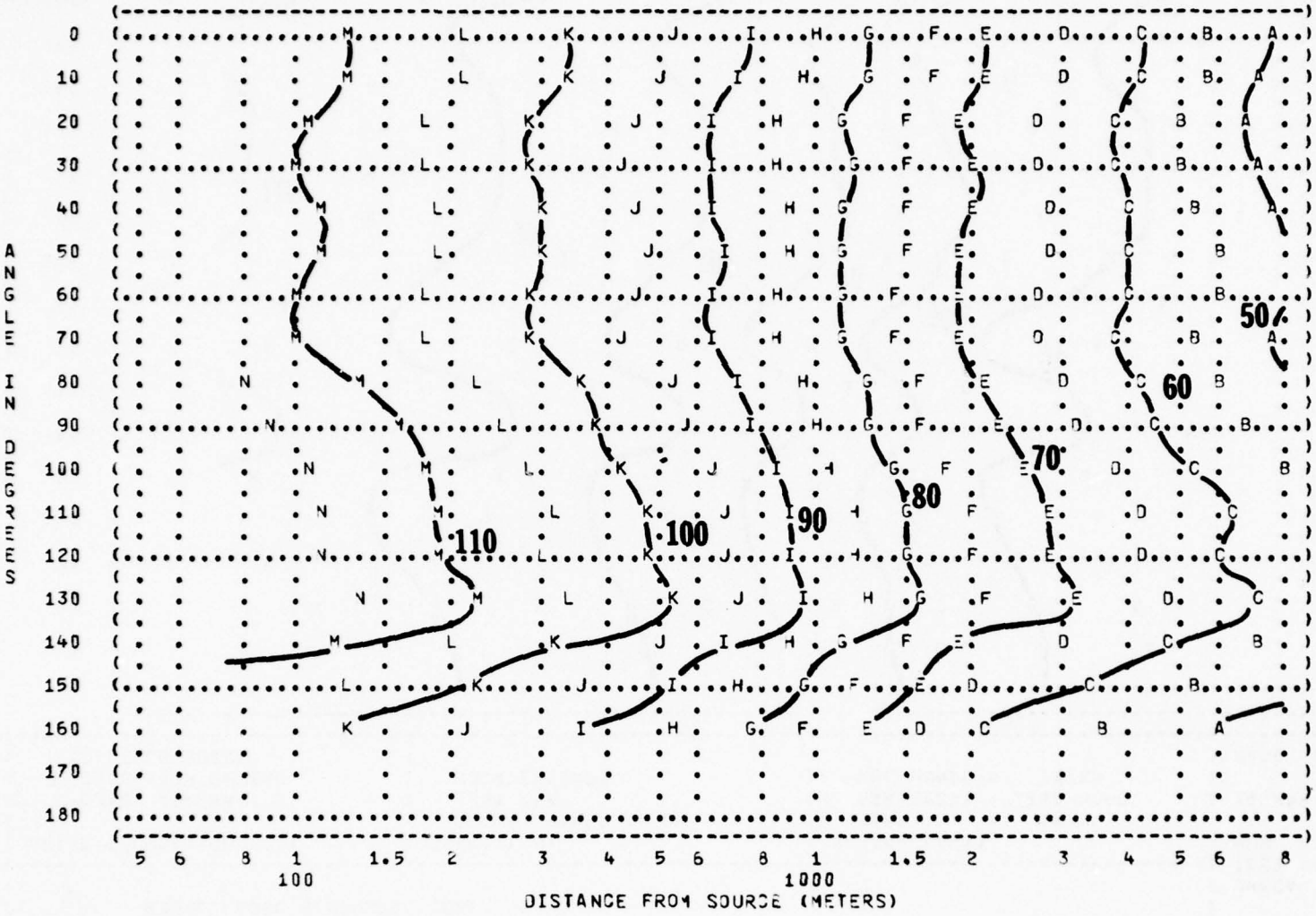
FIGURE 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 13

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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



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

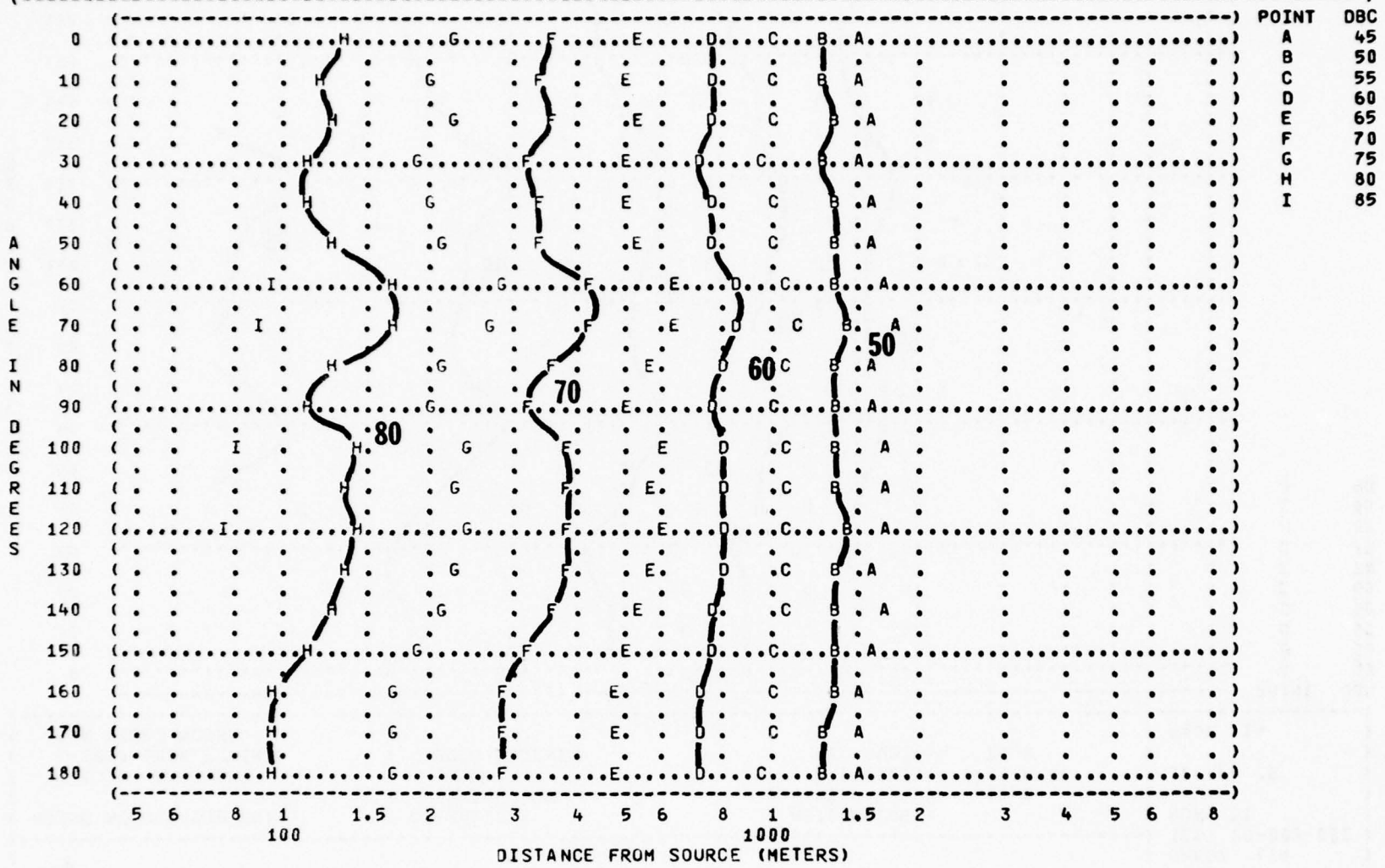
FIGURE: 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 14

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 14

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

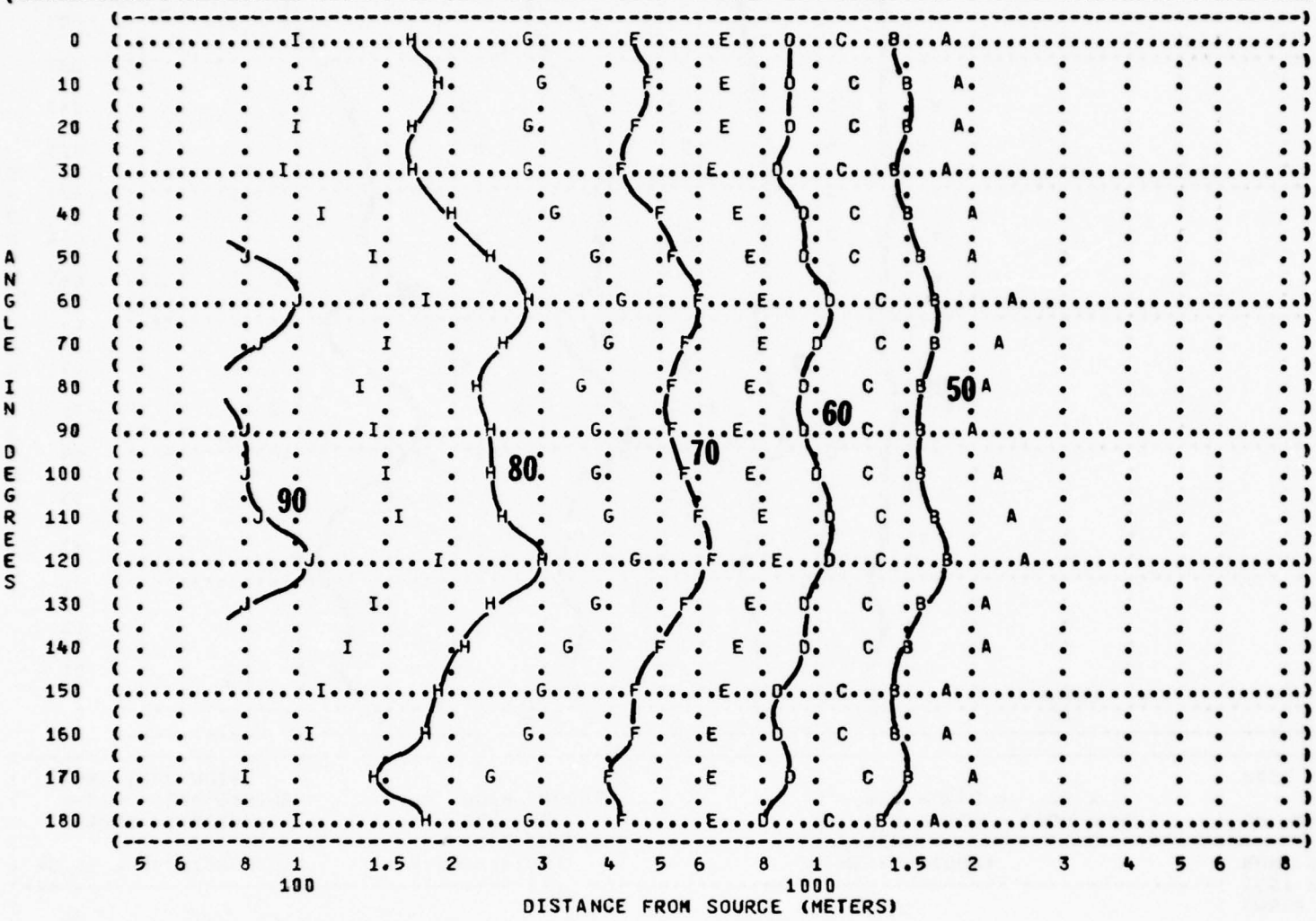


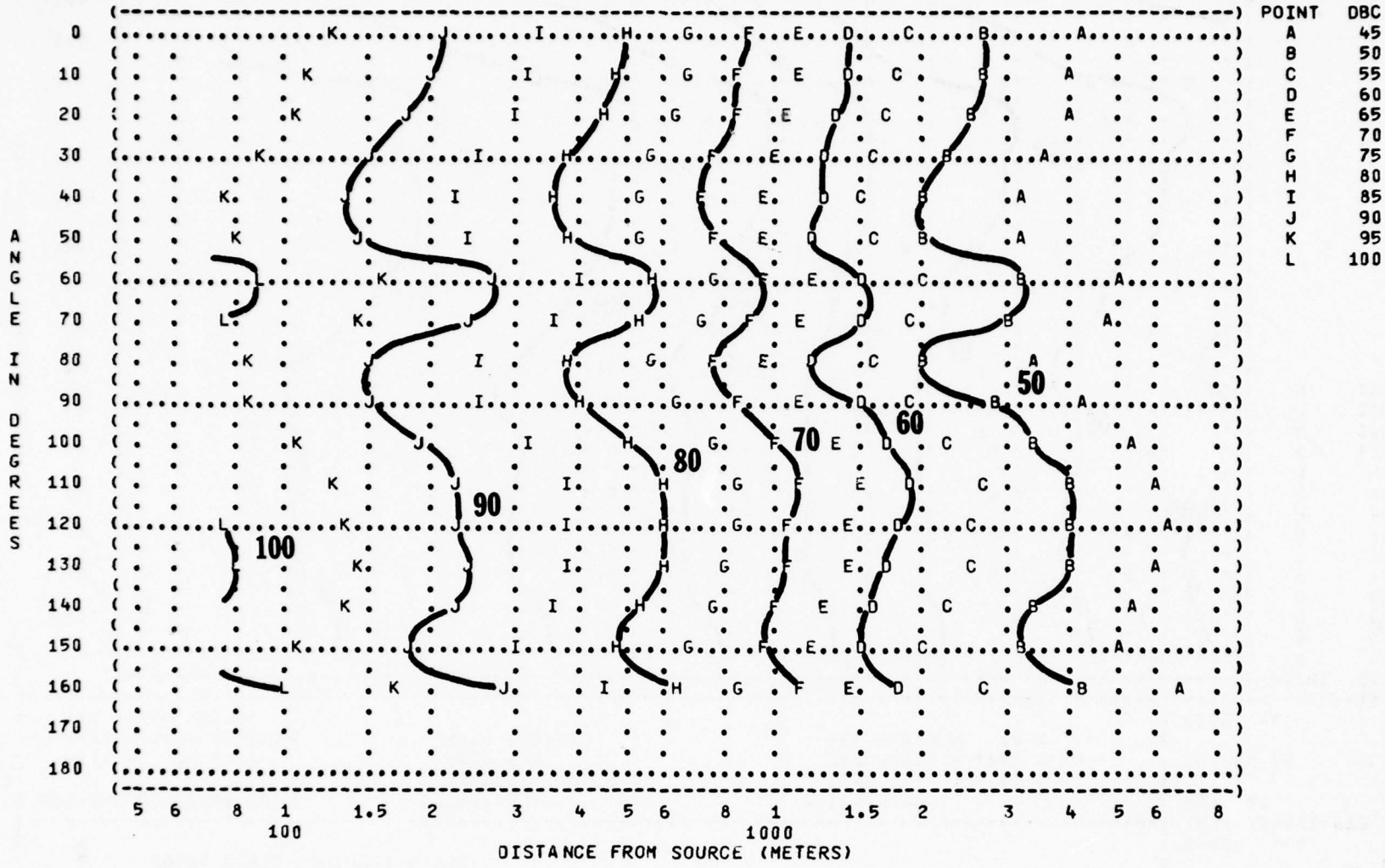
FIGURE 6: C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 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

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

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 14

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

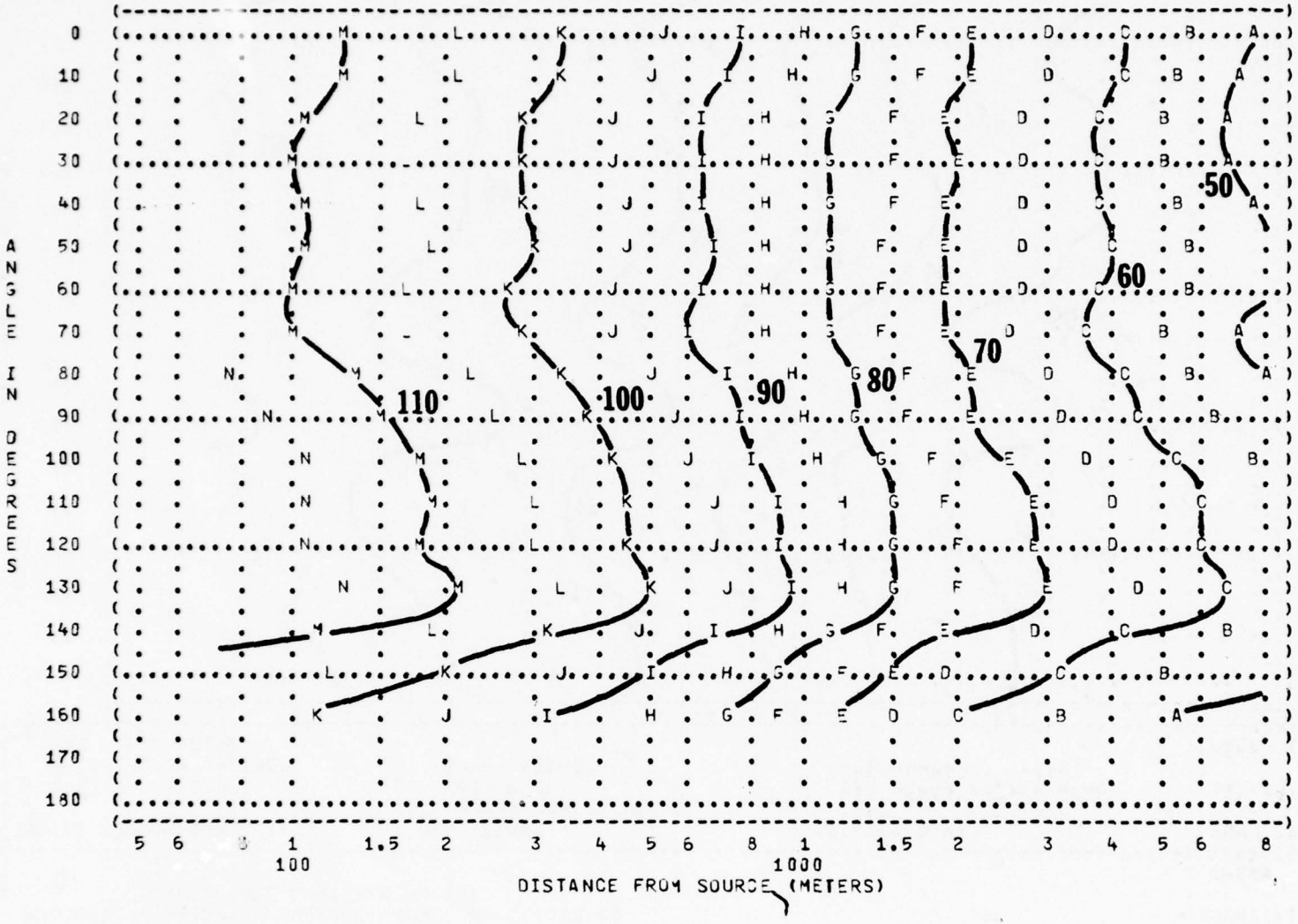


FIGURE: 7 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 15

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH 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

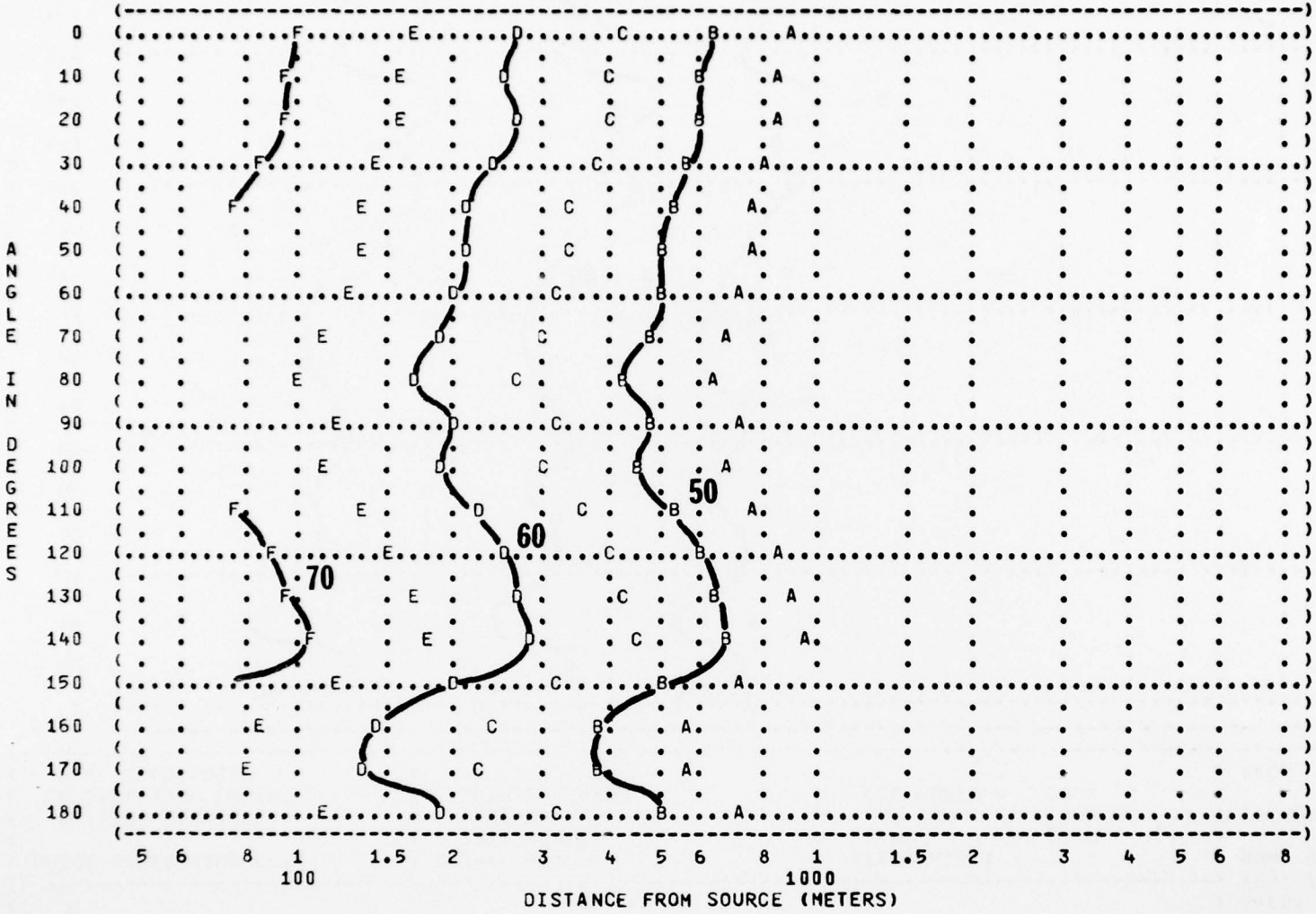


FIGURE 7 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 15

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH 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

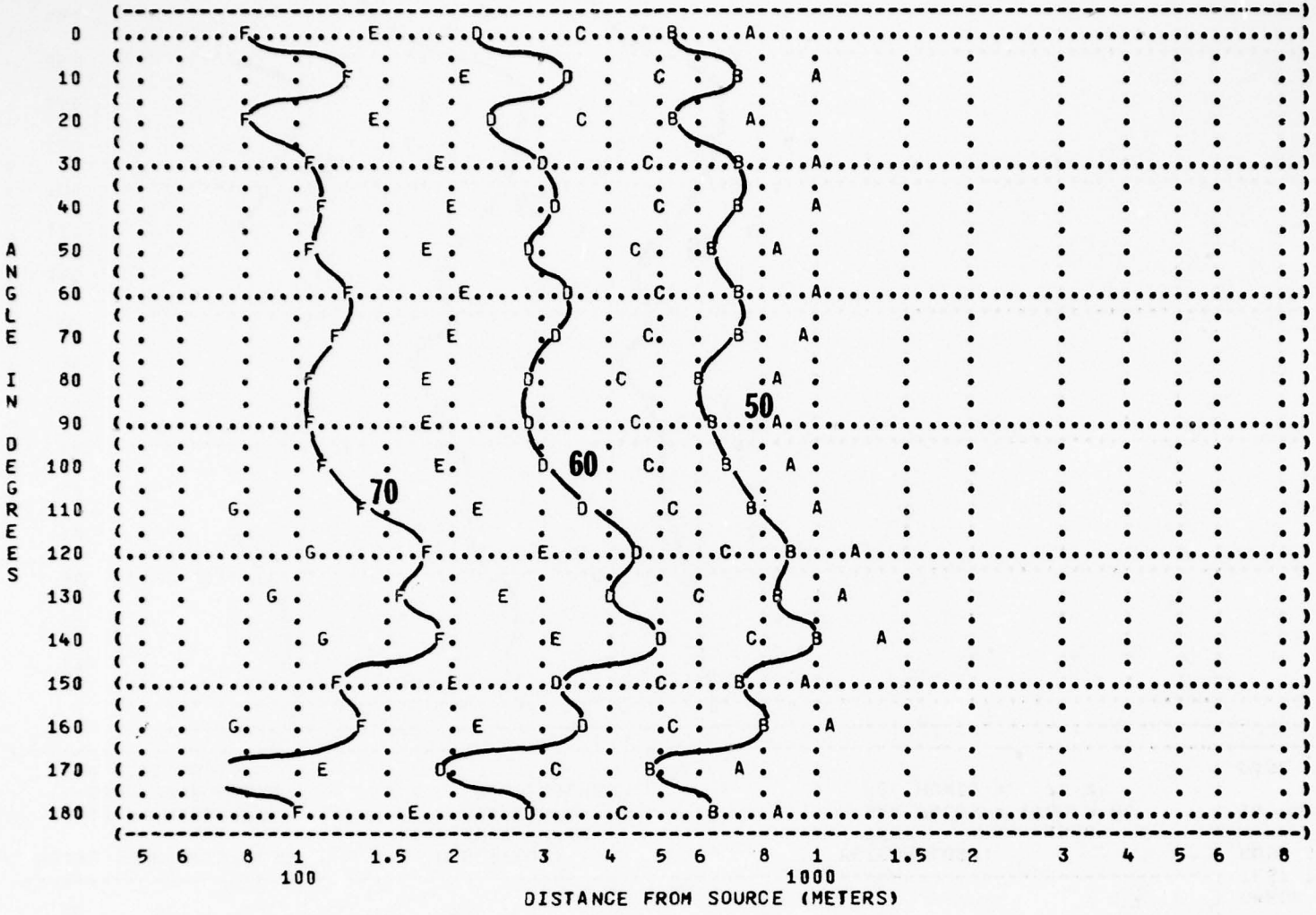


FIGURE: 7 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (OBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 15

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

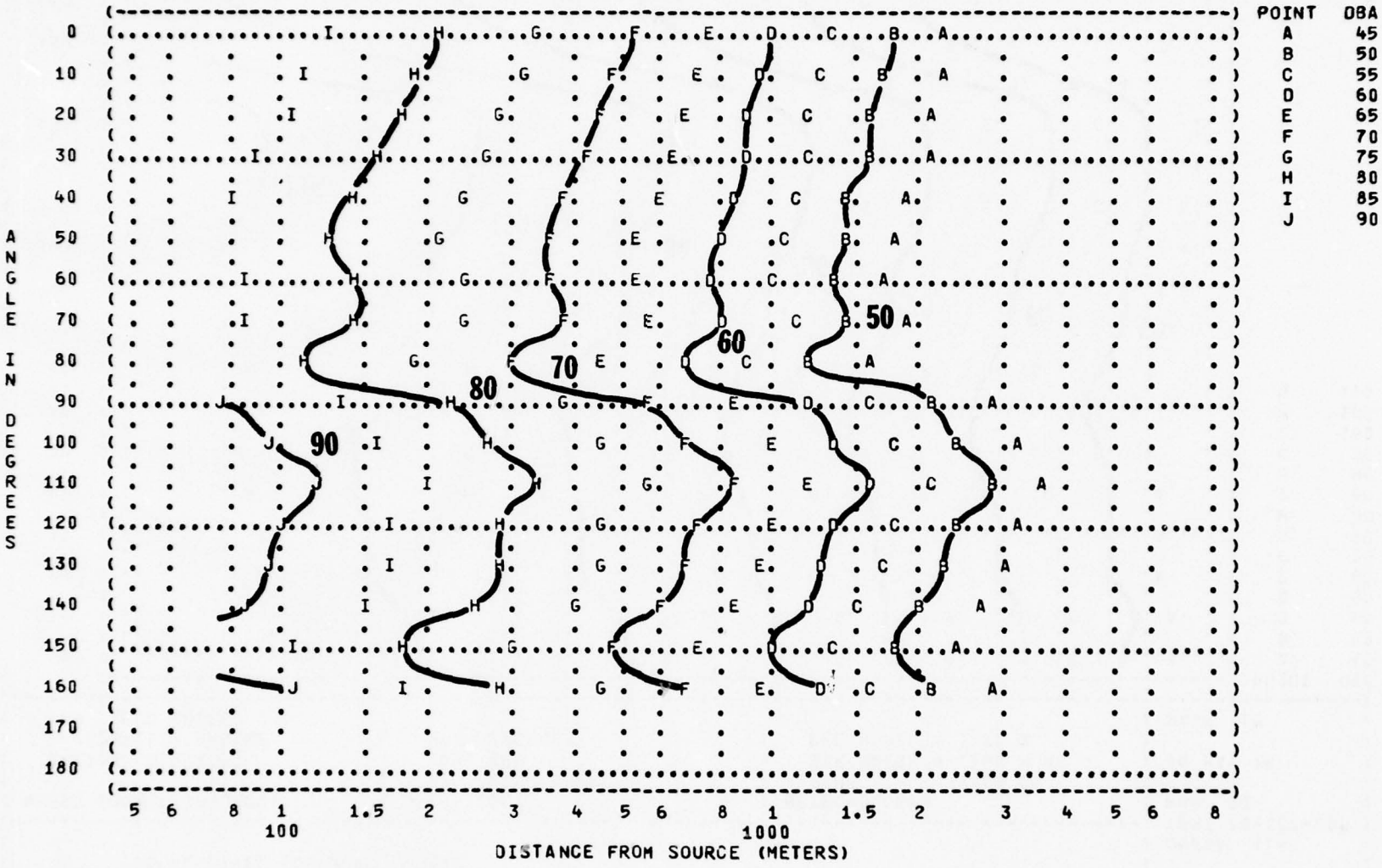


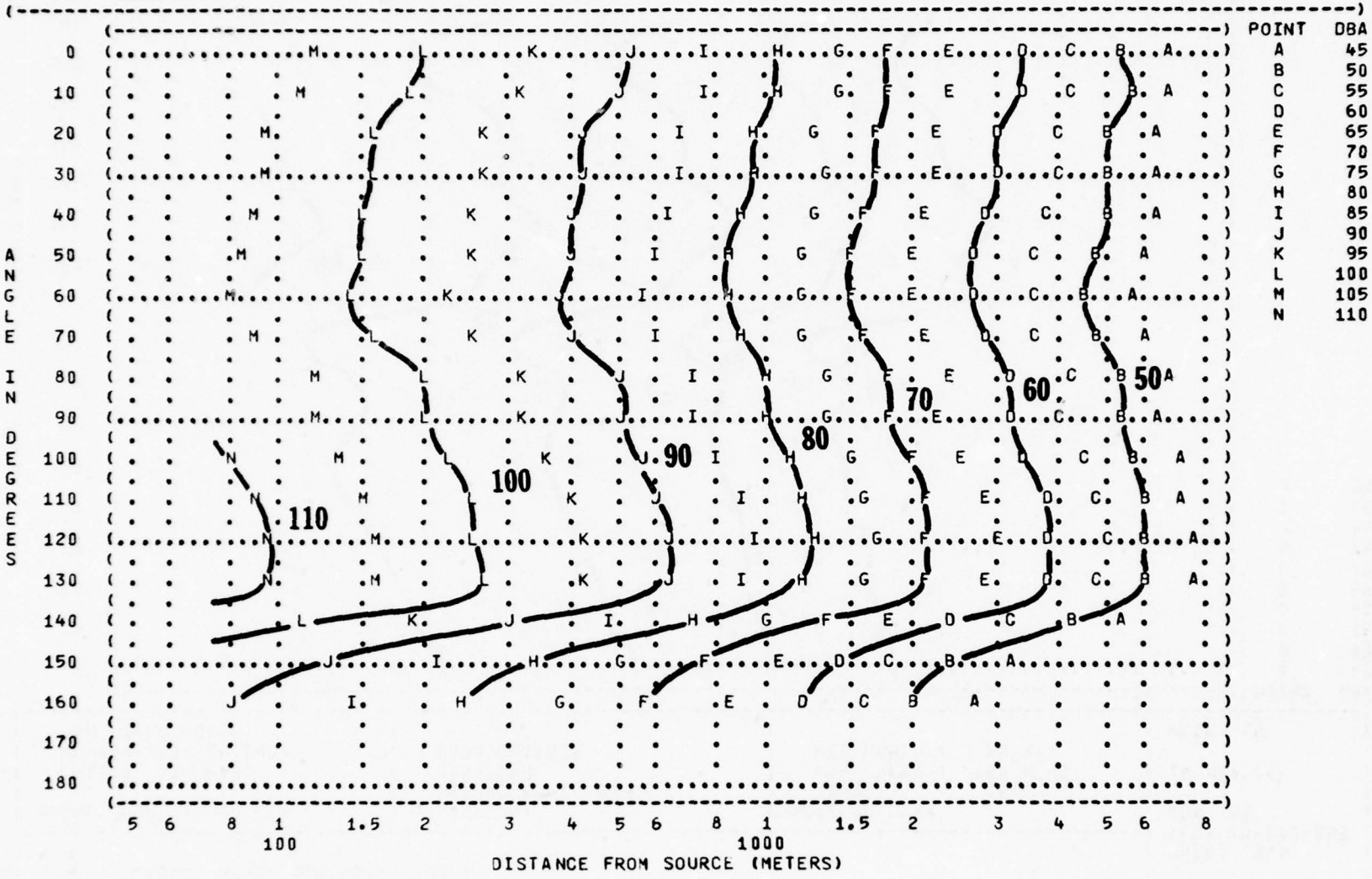
FIGURE 7: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 15

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH 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)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 16

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

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

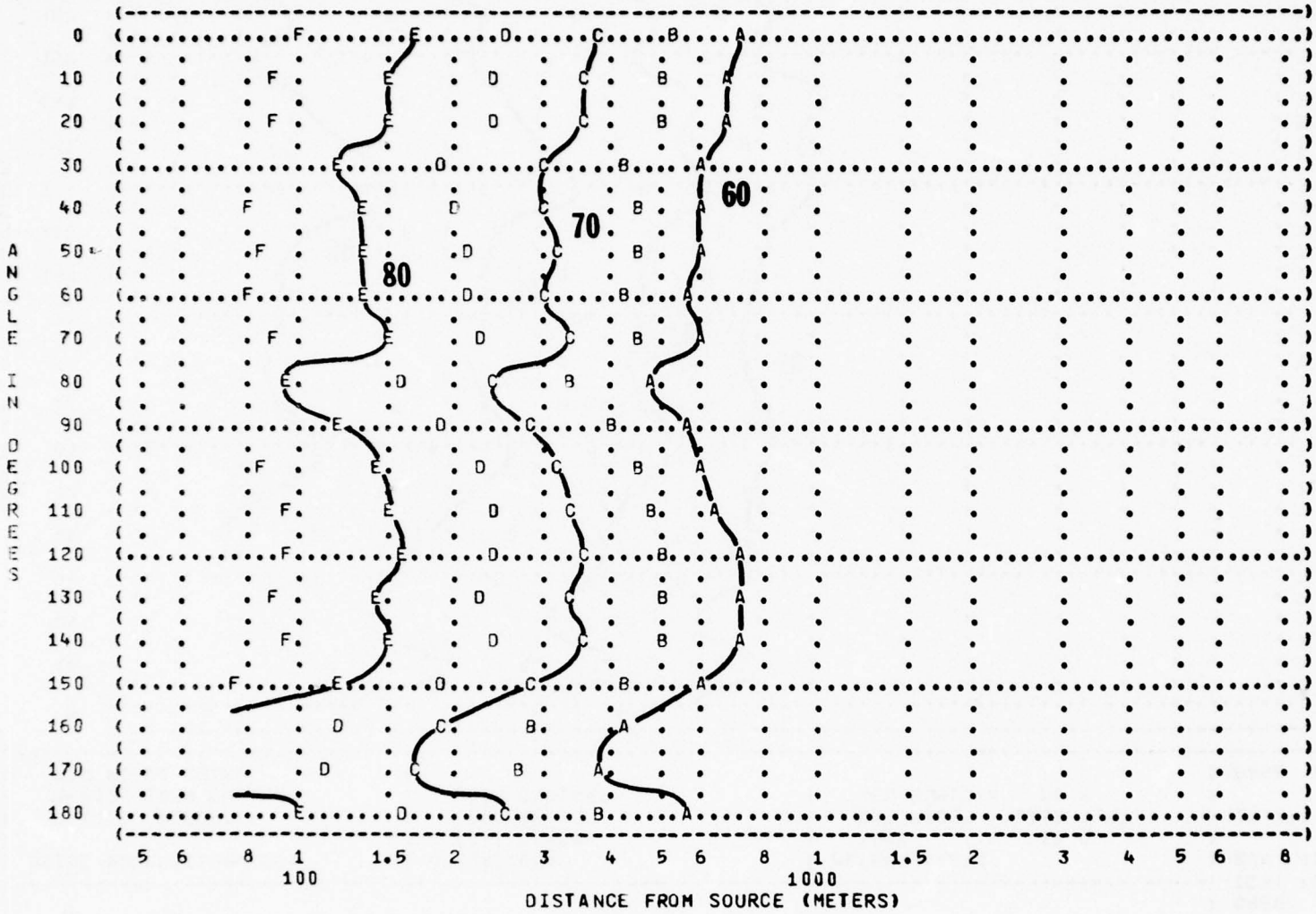


FIGURE 8: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 16

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

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

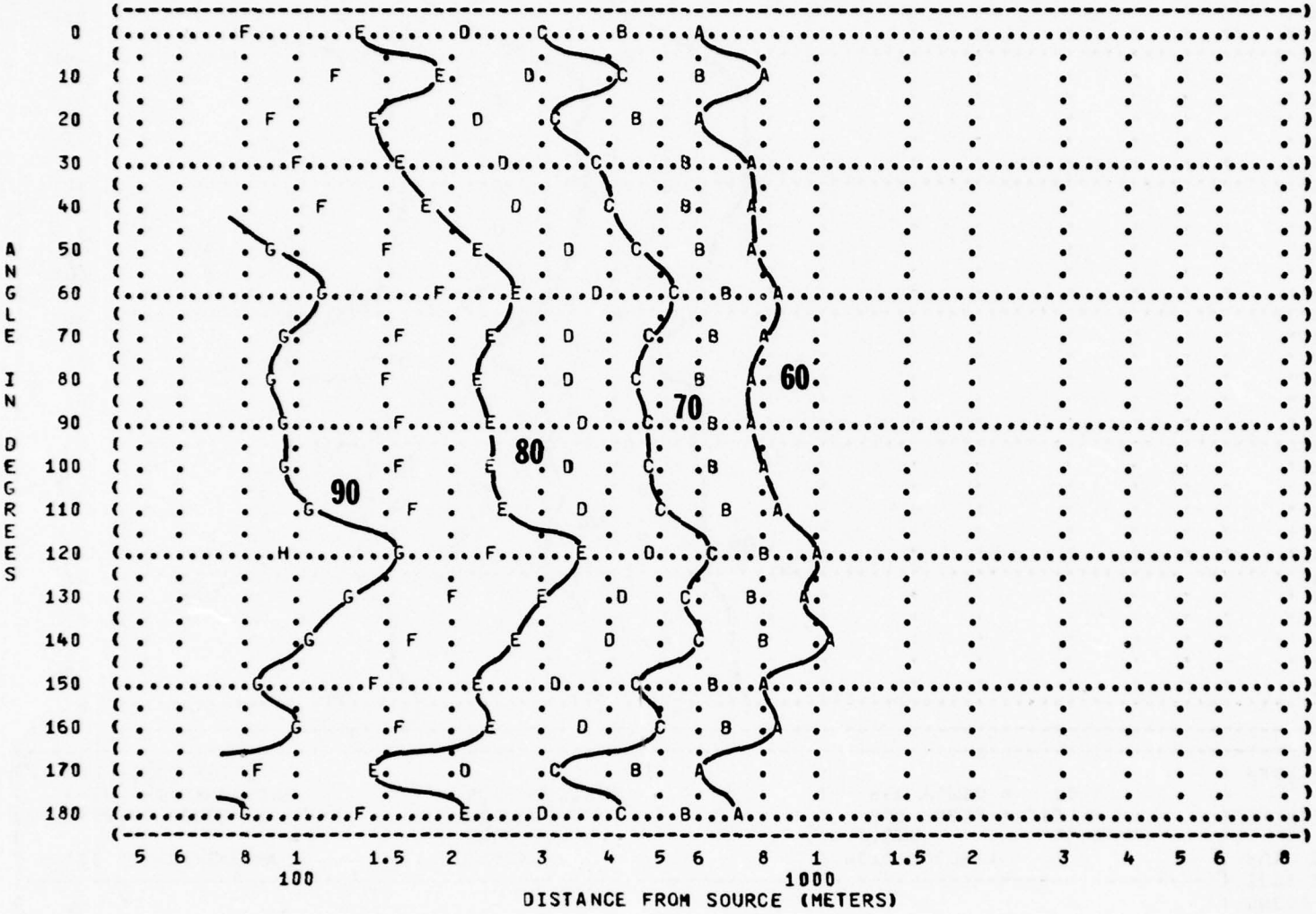


FIGURE 8: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)
EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 15

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

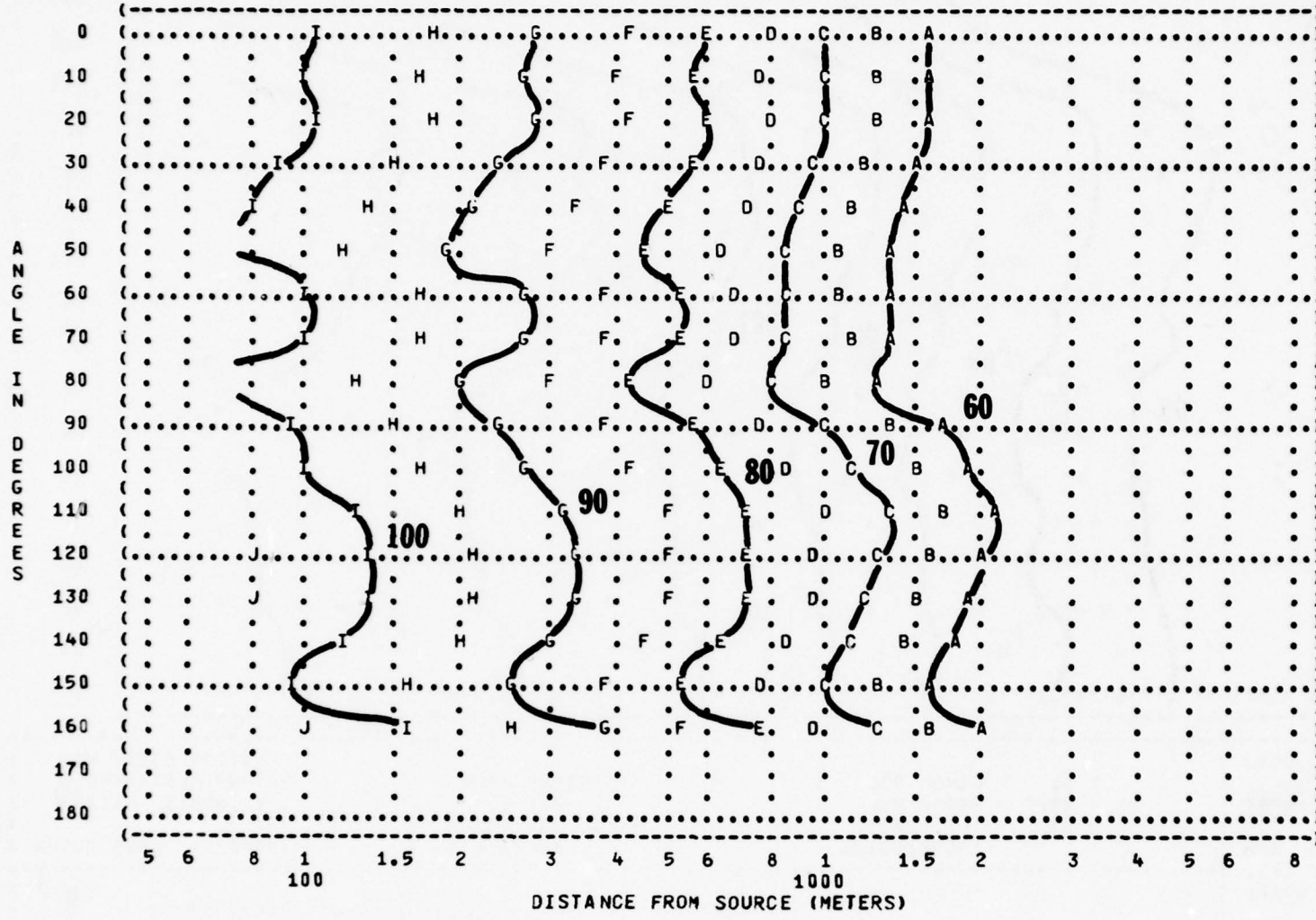


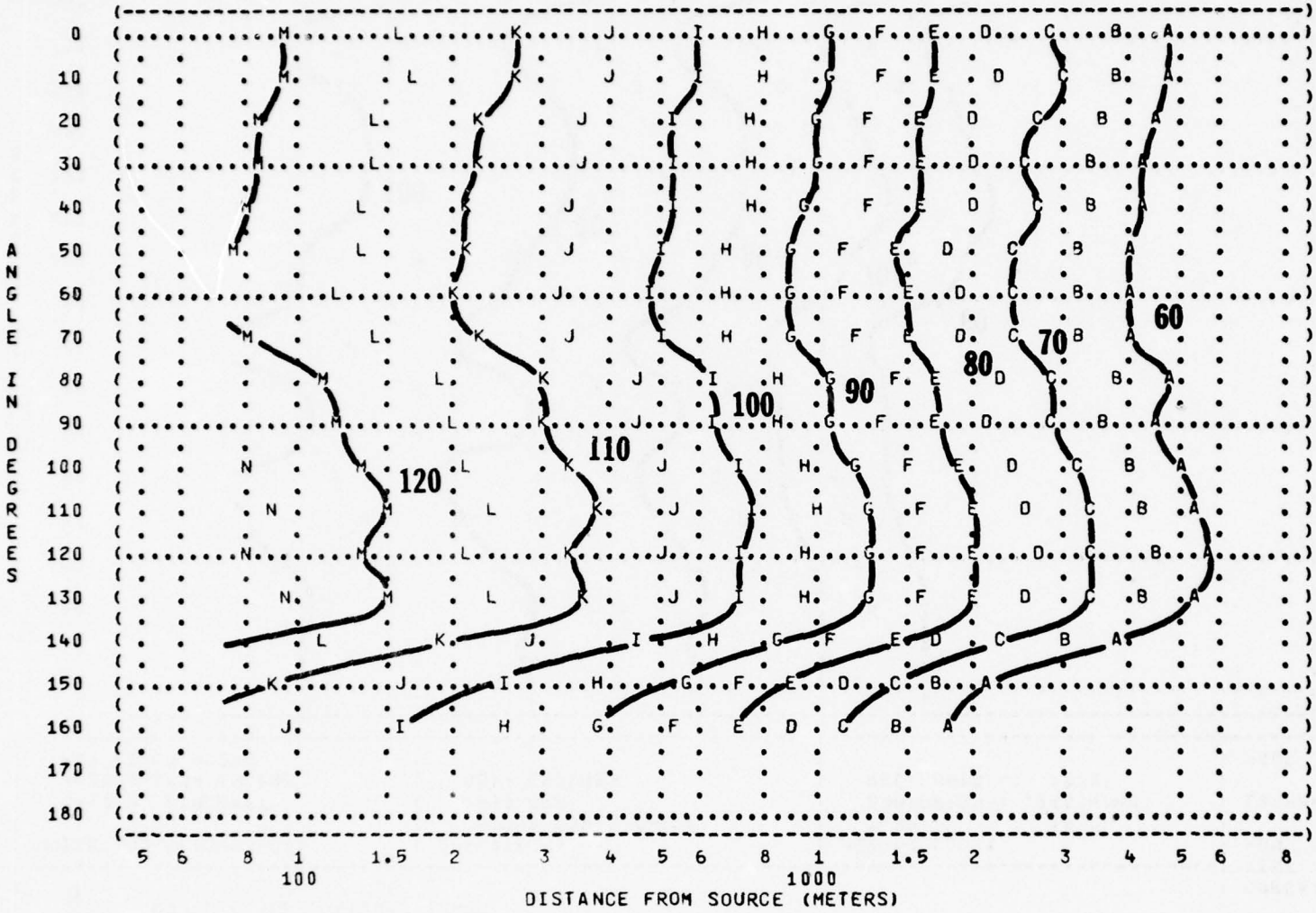
FIGURE: 8 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 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)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 17

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

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

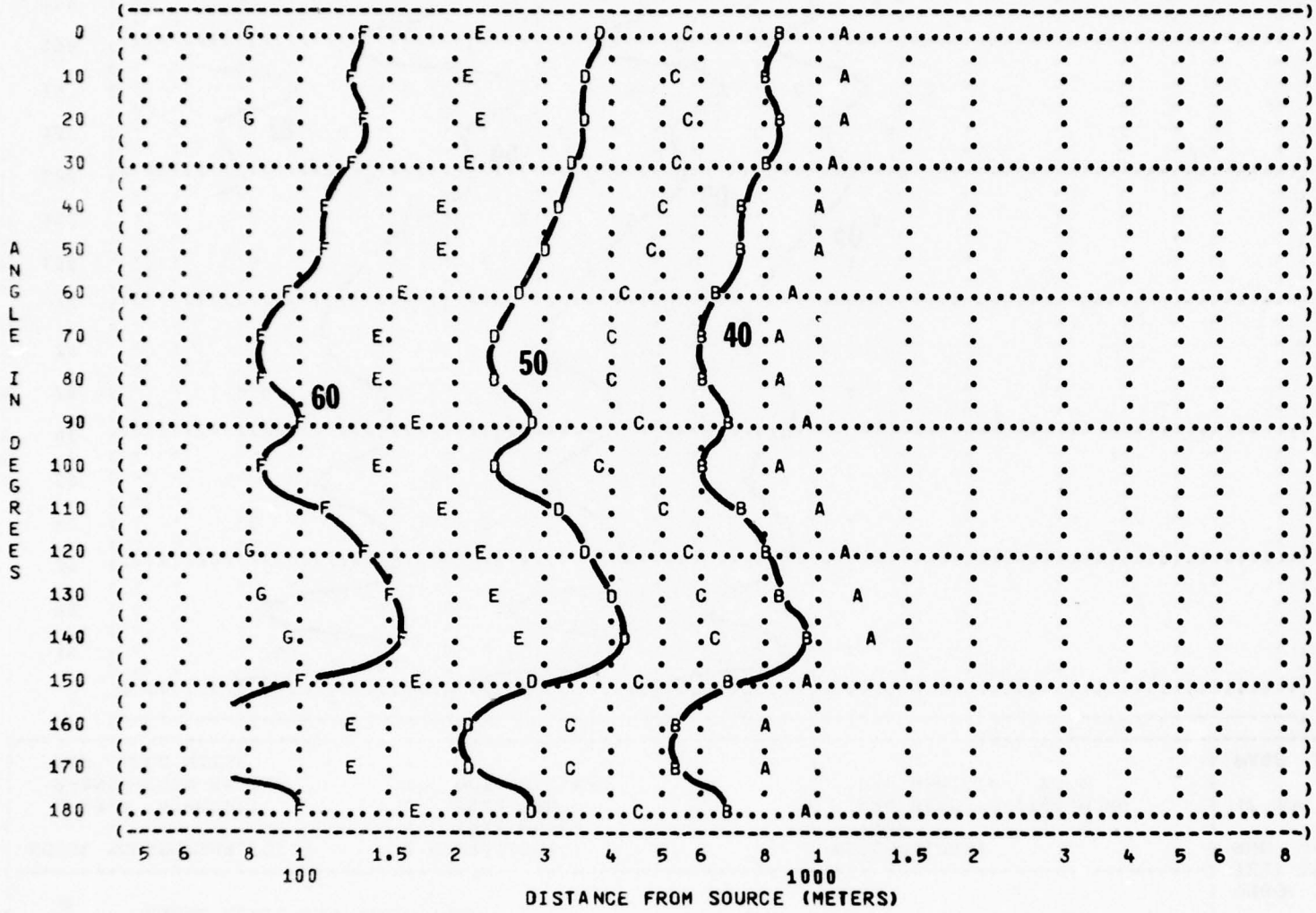


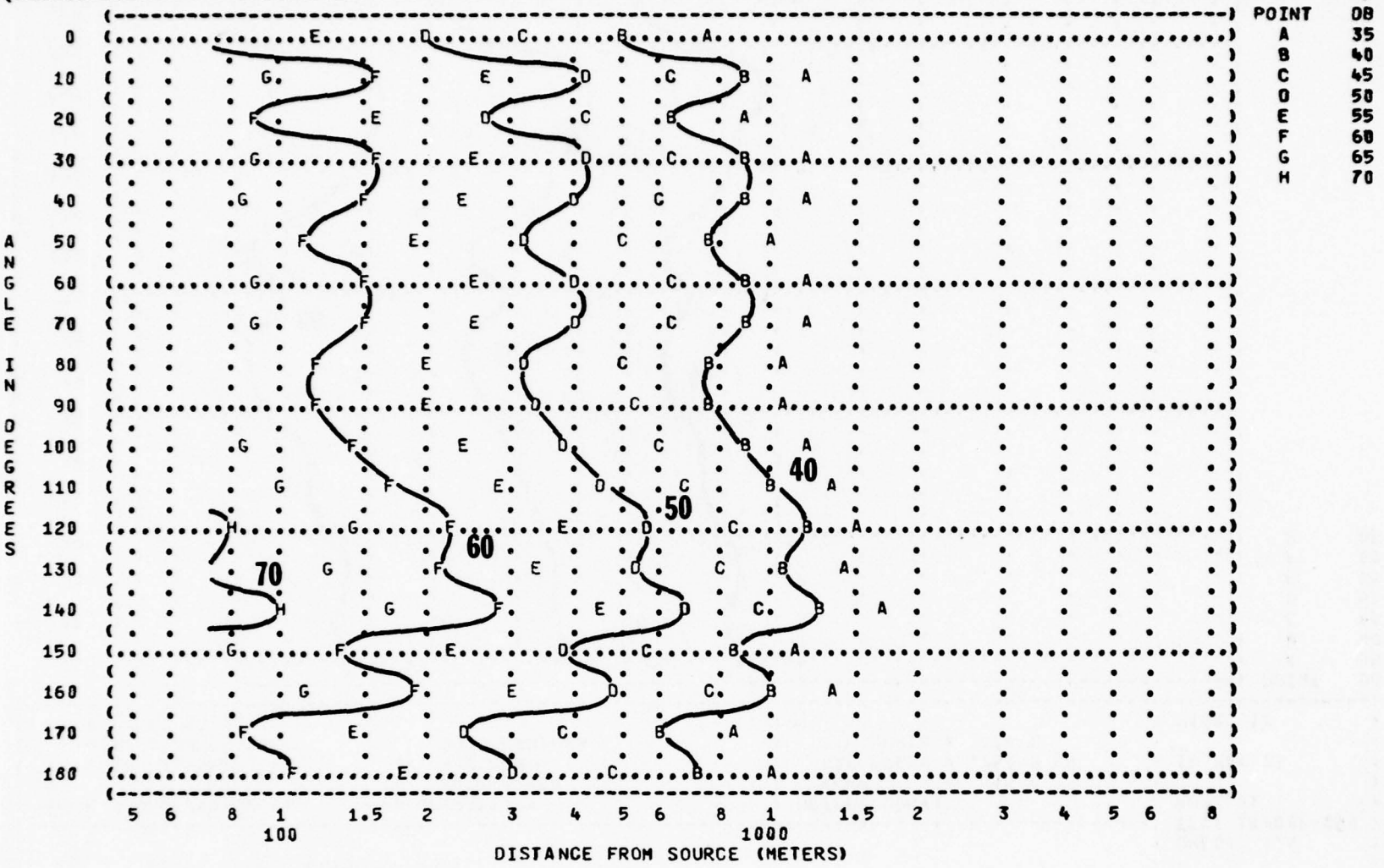
FIGURE 9: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 17

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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



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

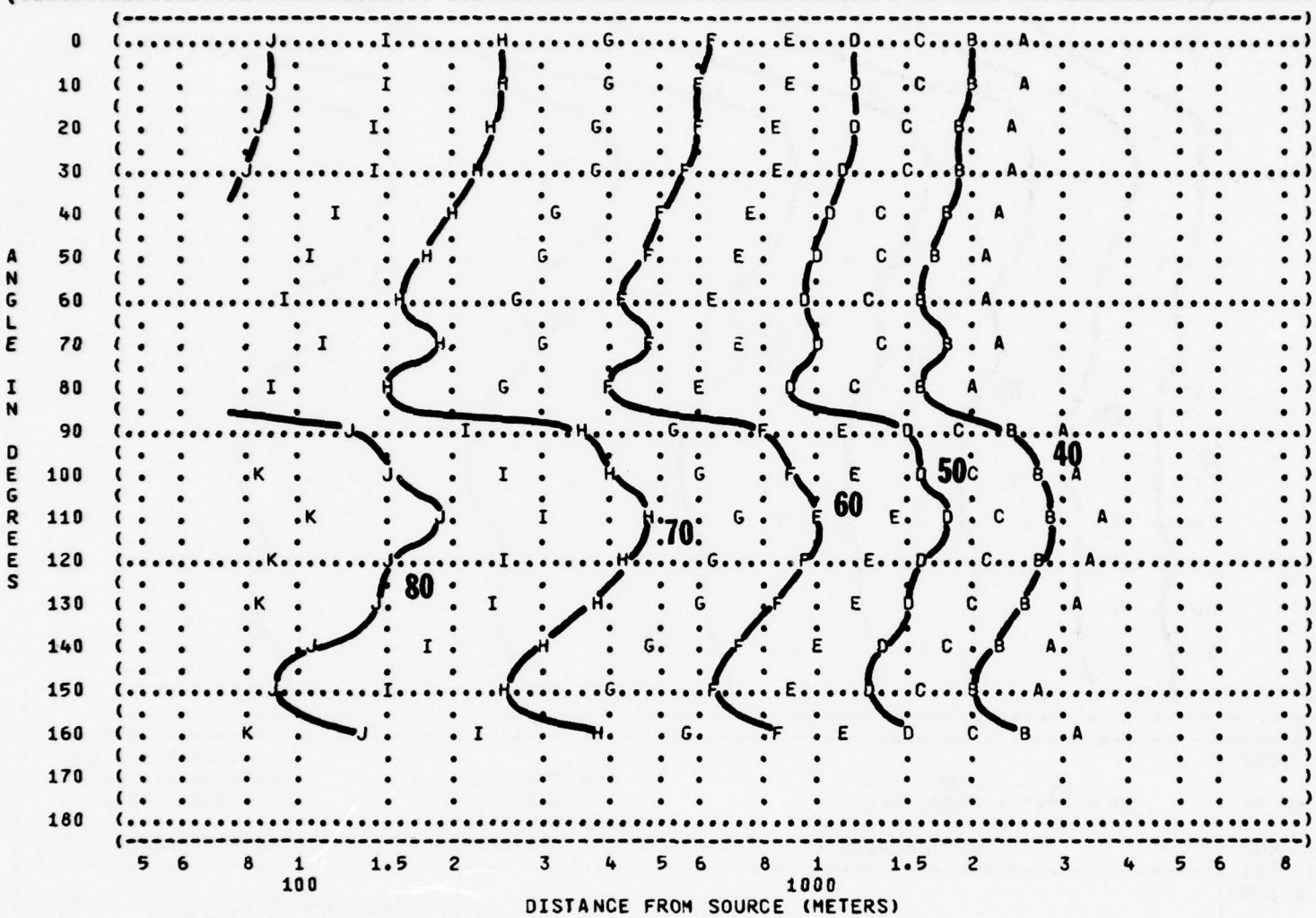
FIGURE: 9 PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 17

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

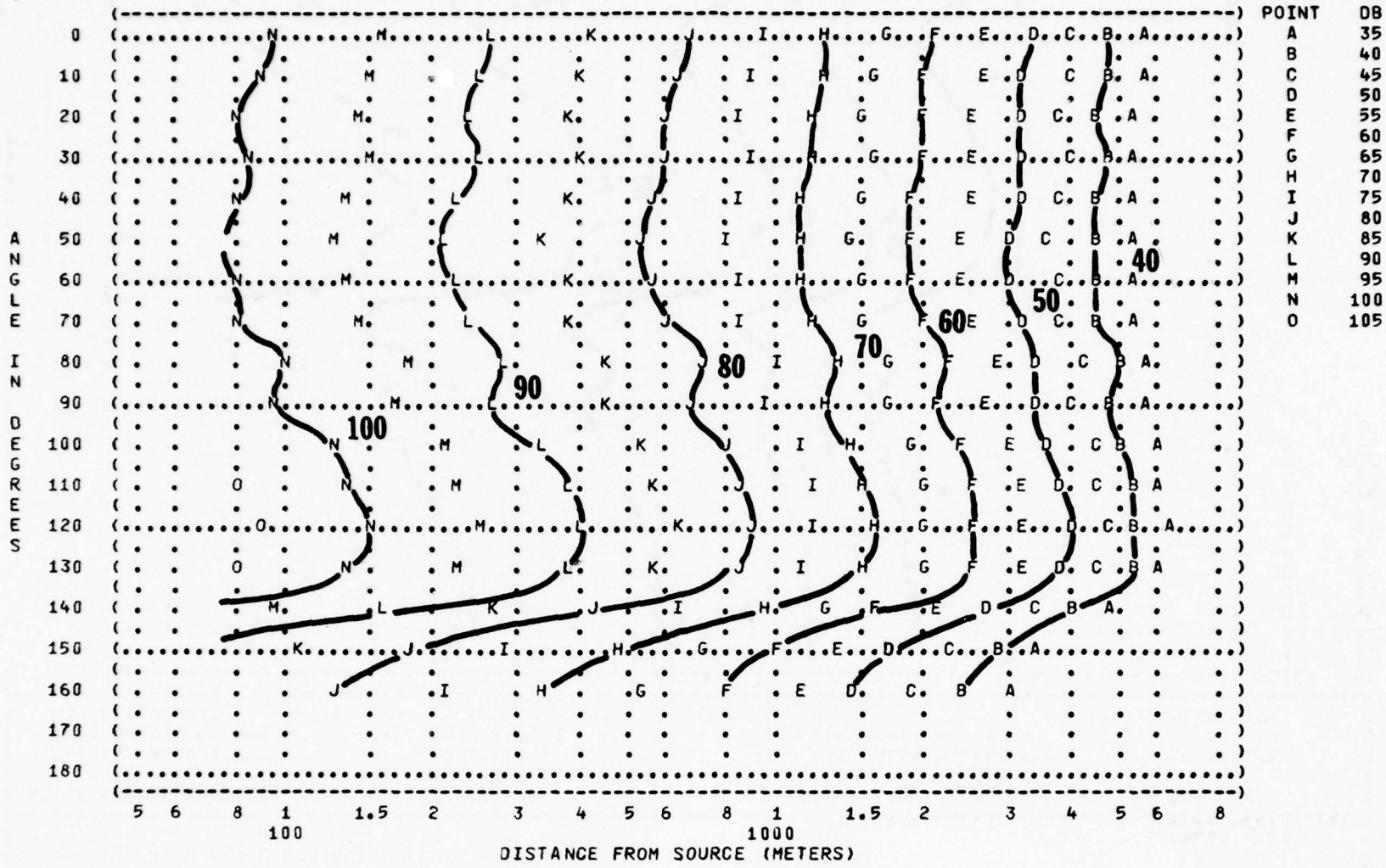
FIGURE 9: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 17

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 7

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

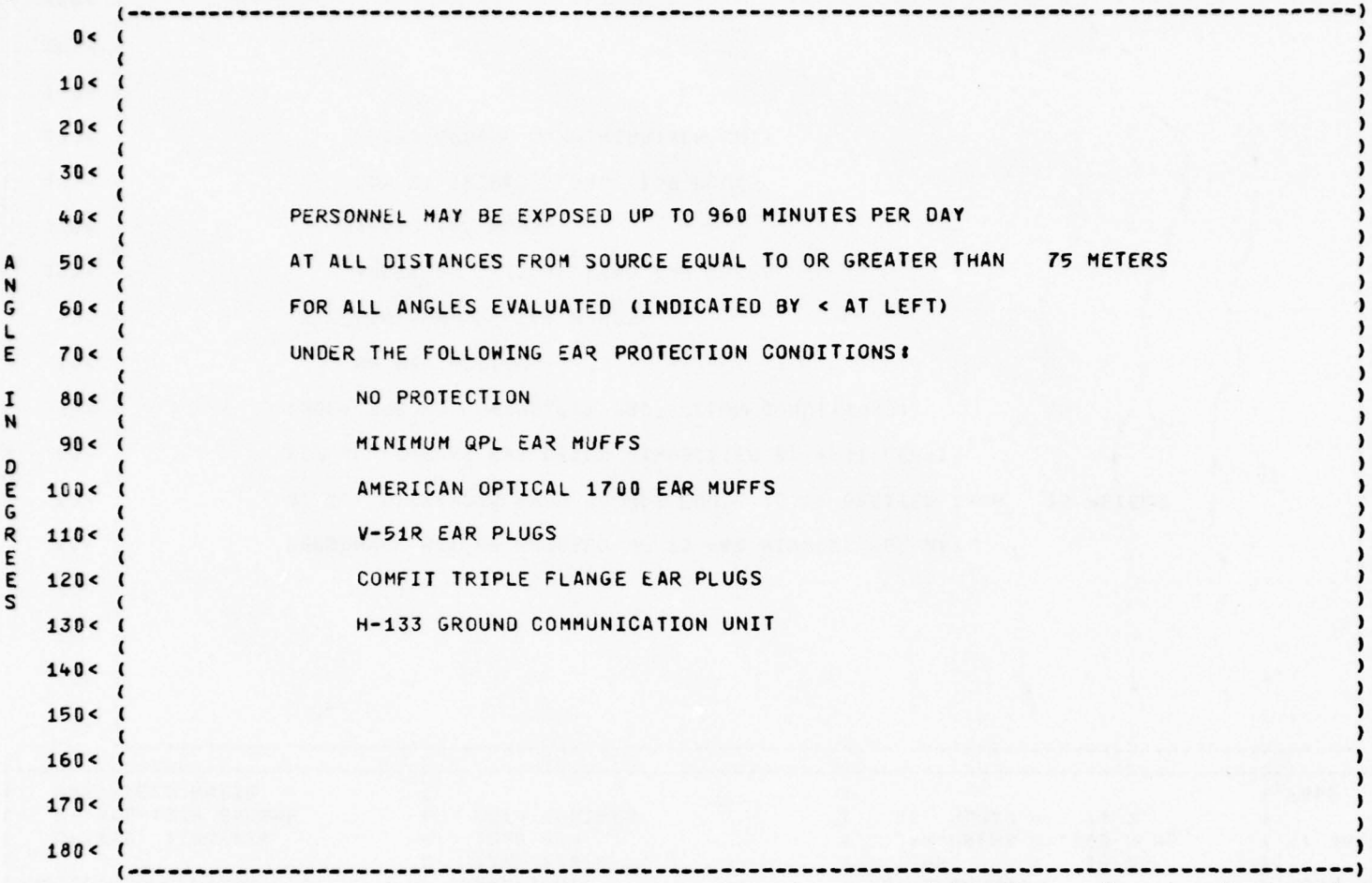


FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 7

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

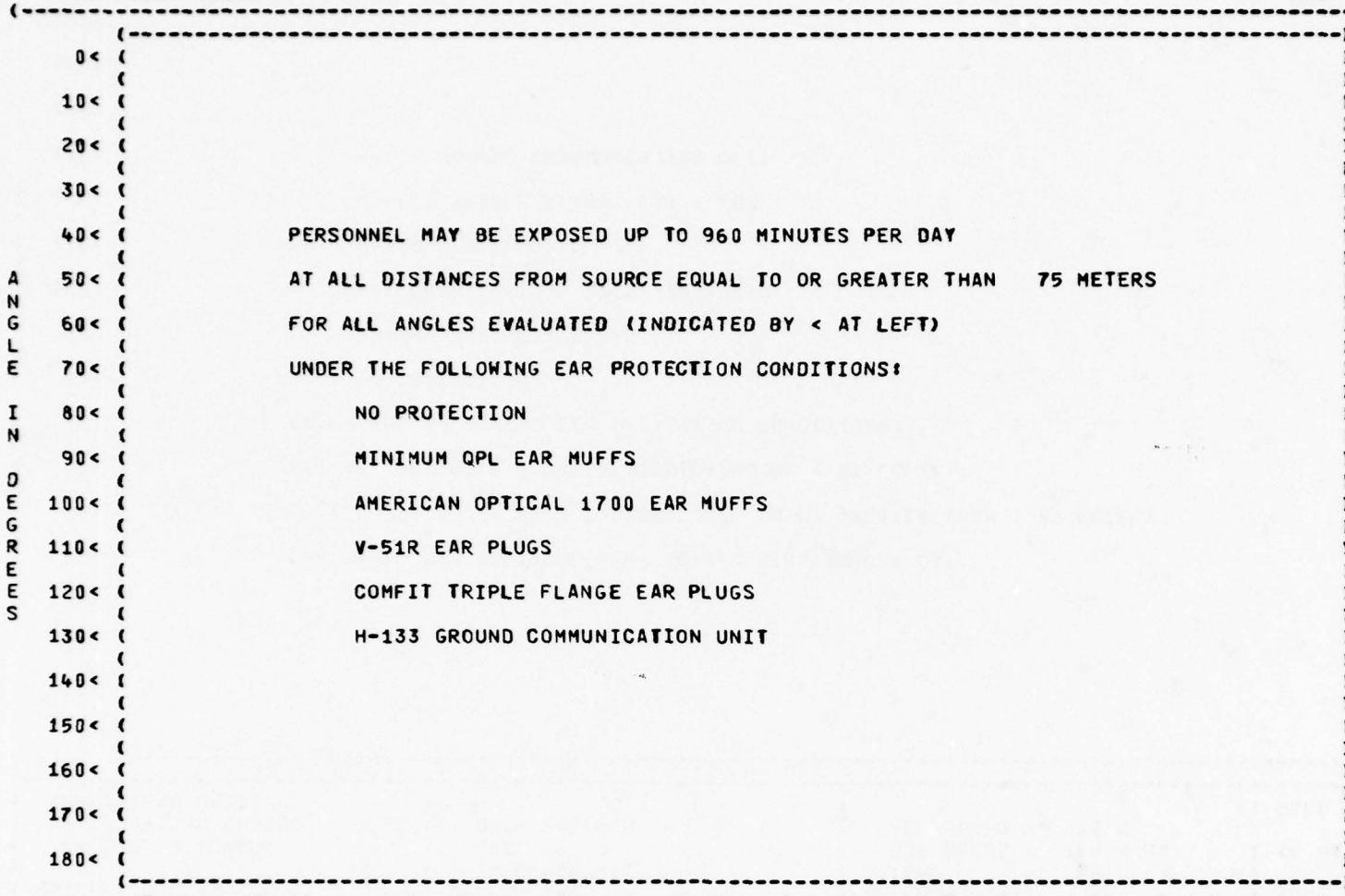


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 7

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

POINT	MIN
A	960
B	480
C	240
D	120

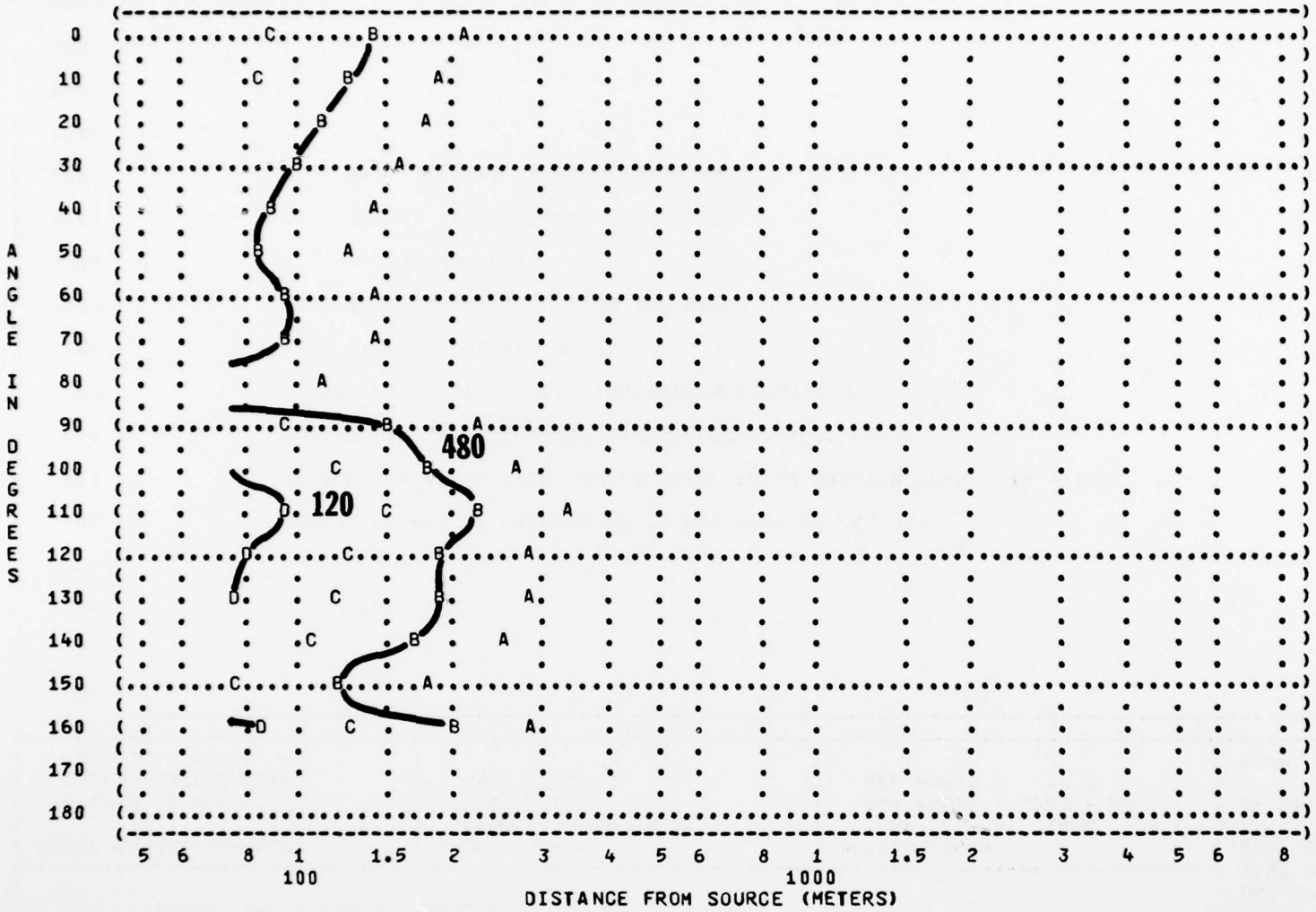


FIGURE 10 EQUAL TIME CONTOURS (MINUTES)

NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:	
C-1318 AIRCRAFT	GROUND POWER CHECK	TEMP = 15 C	OMEGA 1.4
R-2800-103W ENGINE	2050 RPM	BAR PRESS = .760 M HG	TEST 75-002-055
FAR FIELD NOISE	BOTH ENGINES	REL HUMID = 70 %	RUN 02
			14 MAY 75
			PAGE 8

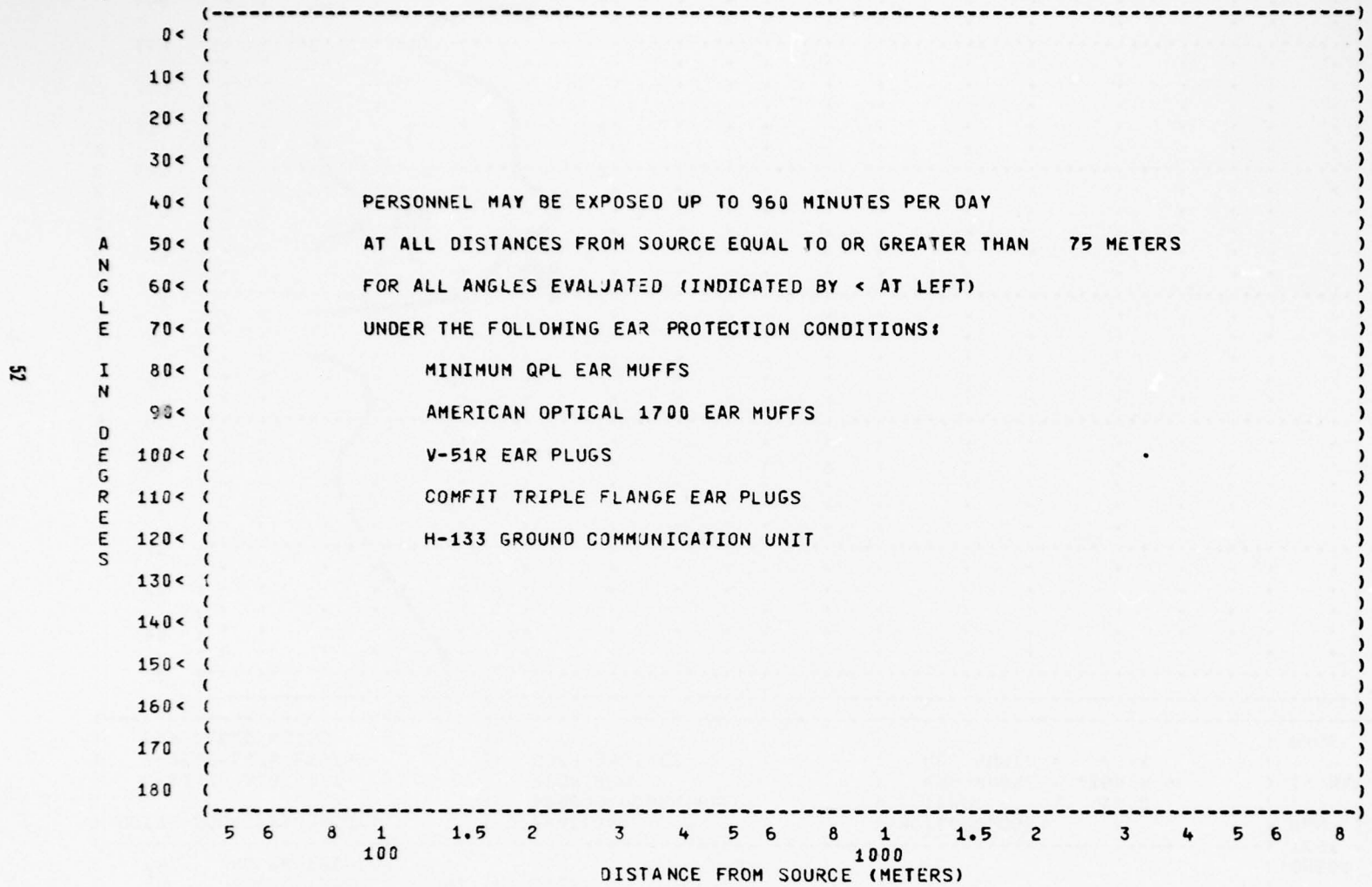


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 7

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

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

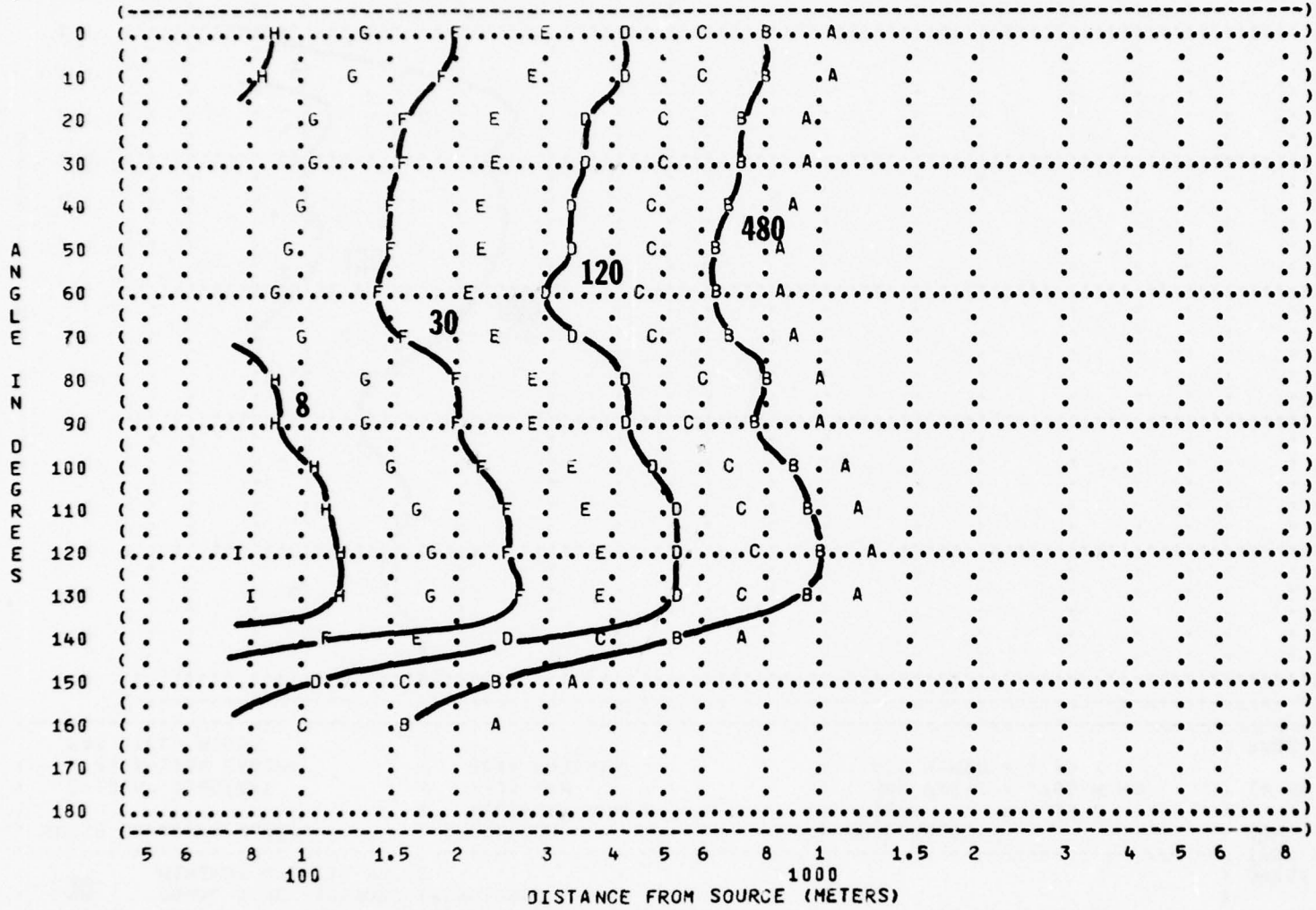


FIGURE: 10

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:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 8

POINT	MIN
A	960
B	480
C	240
D	120

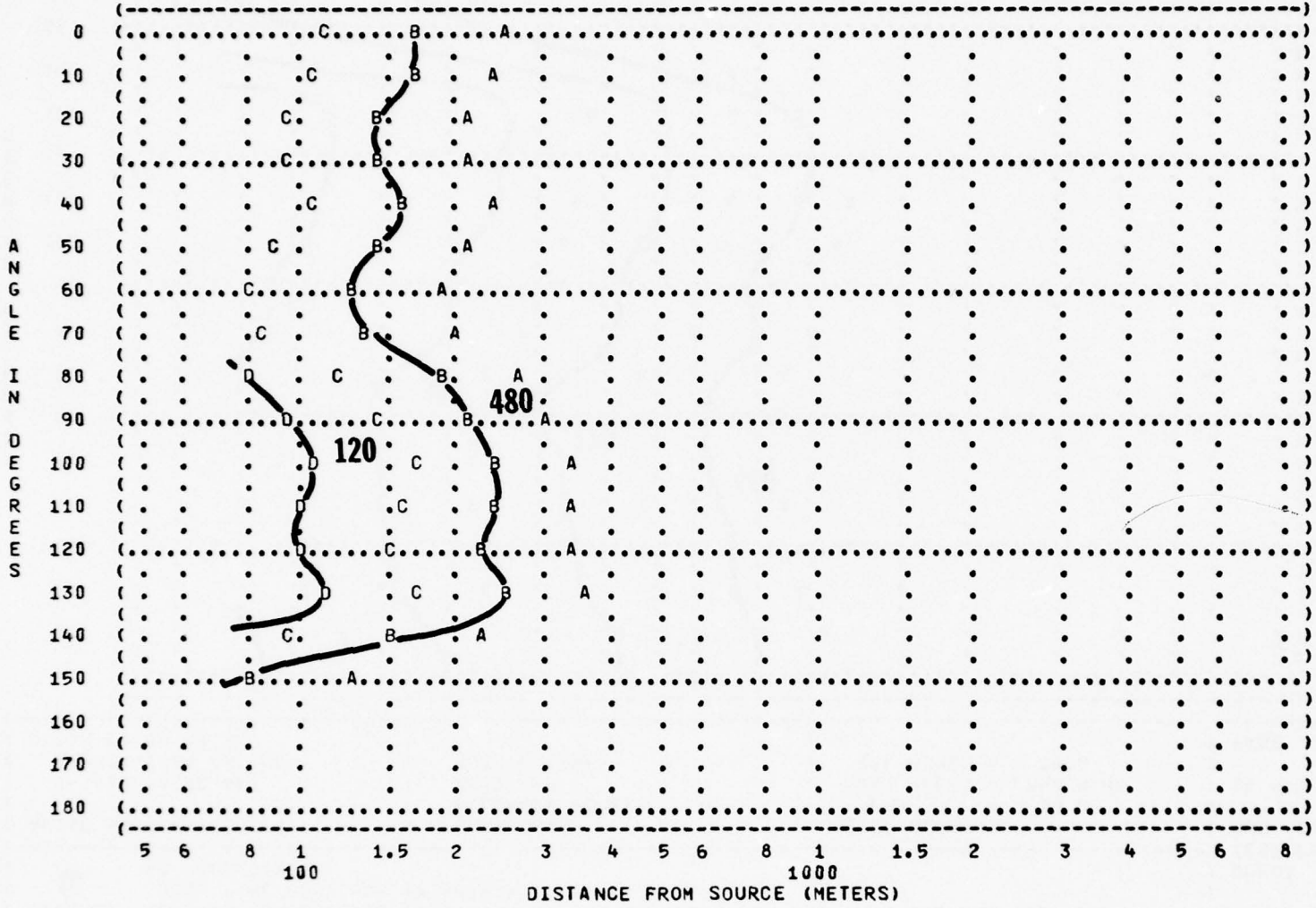


FIGURE: 10

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

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 9

POINT	MIN
A	960
B	480
C	240
D	120

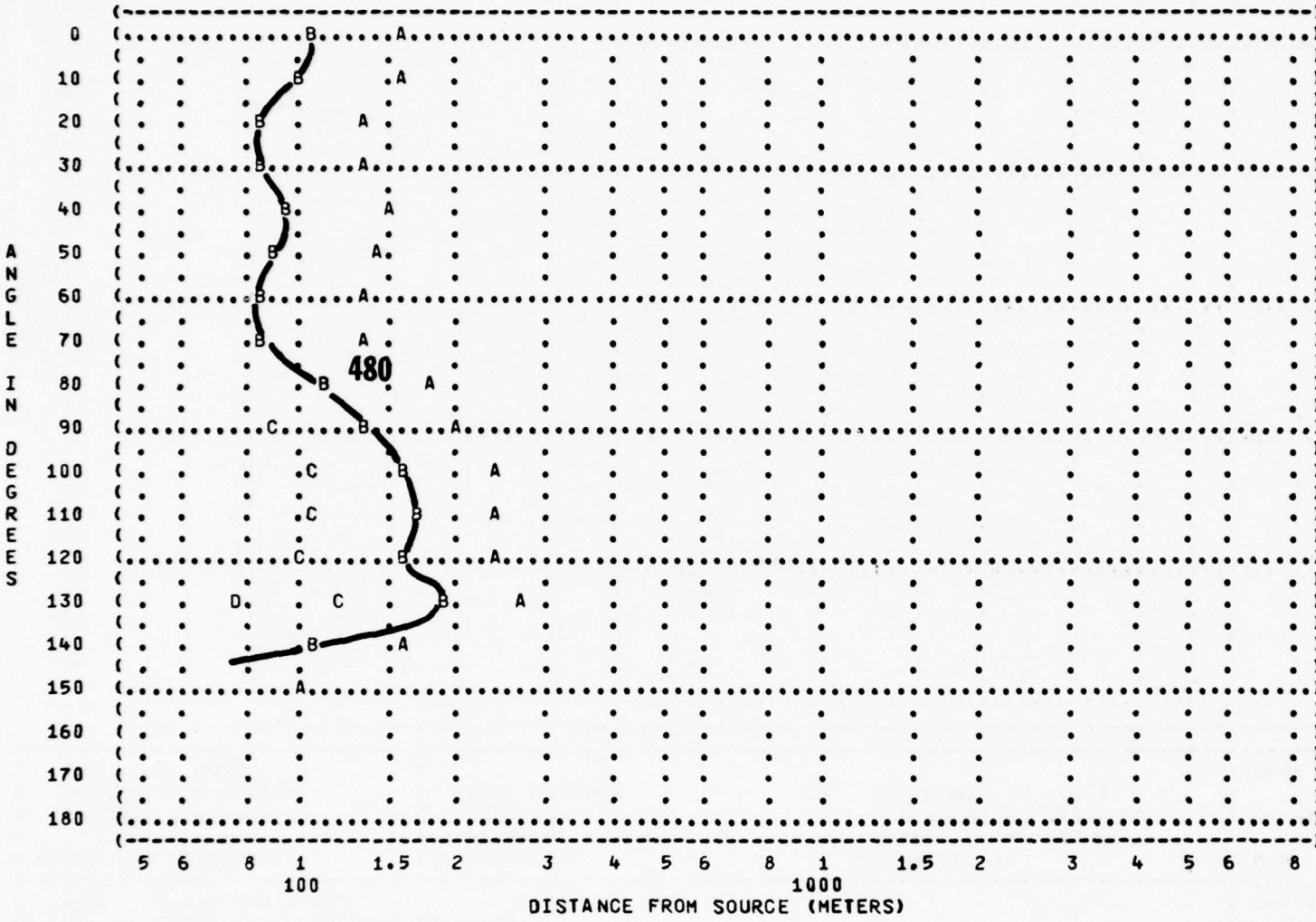


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
V-51R EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 10

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

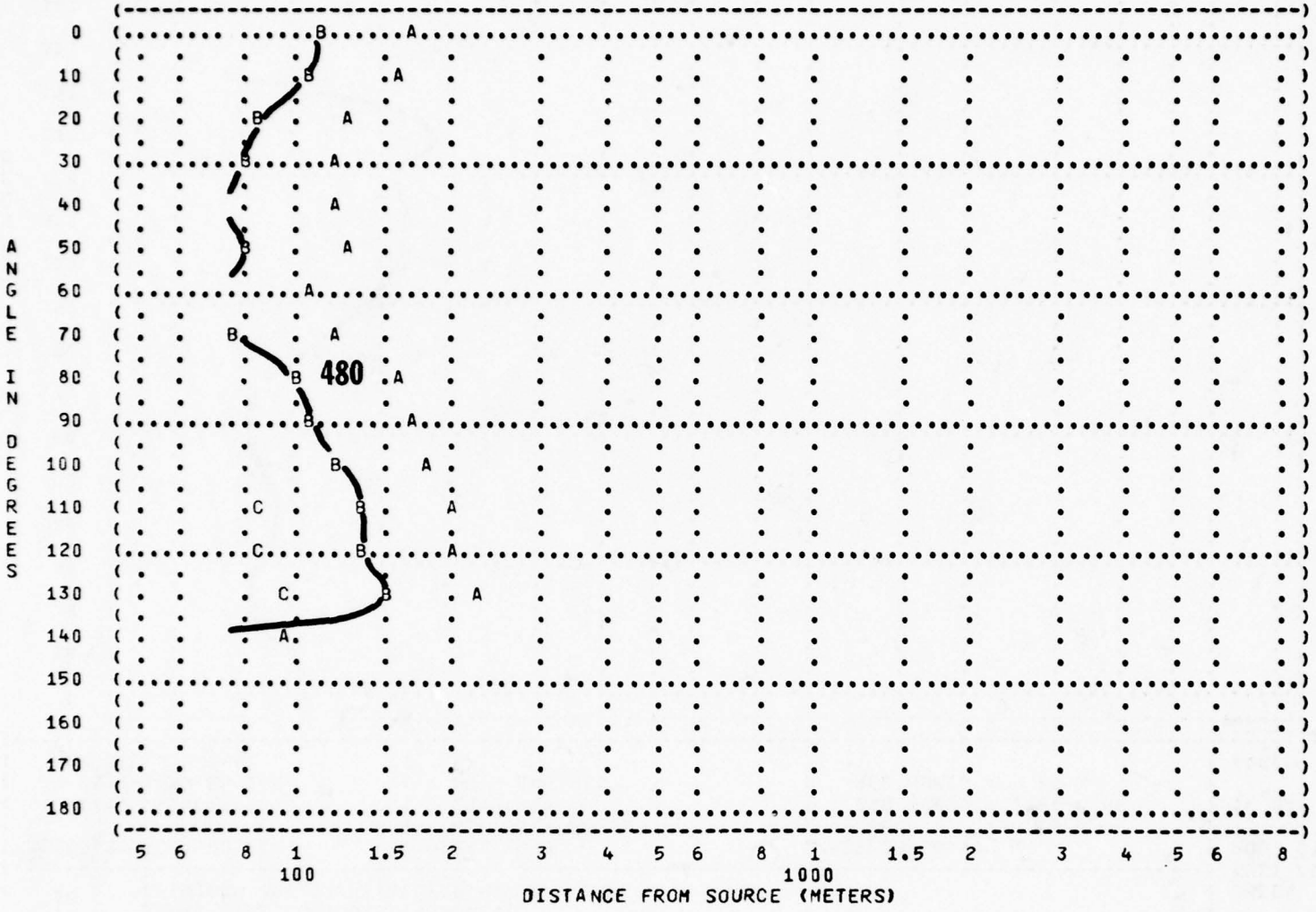


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
COMFIT TRIPLE FLANGE EAR PLUGS

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 11

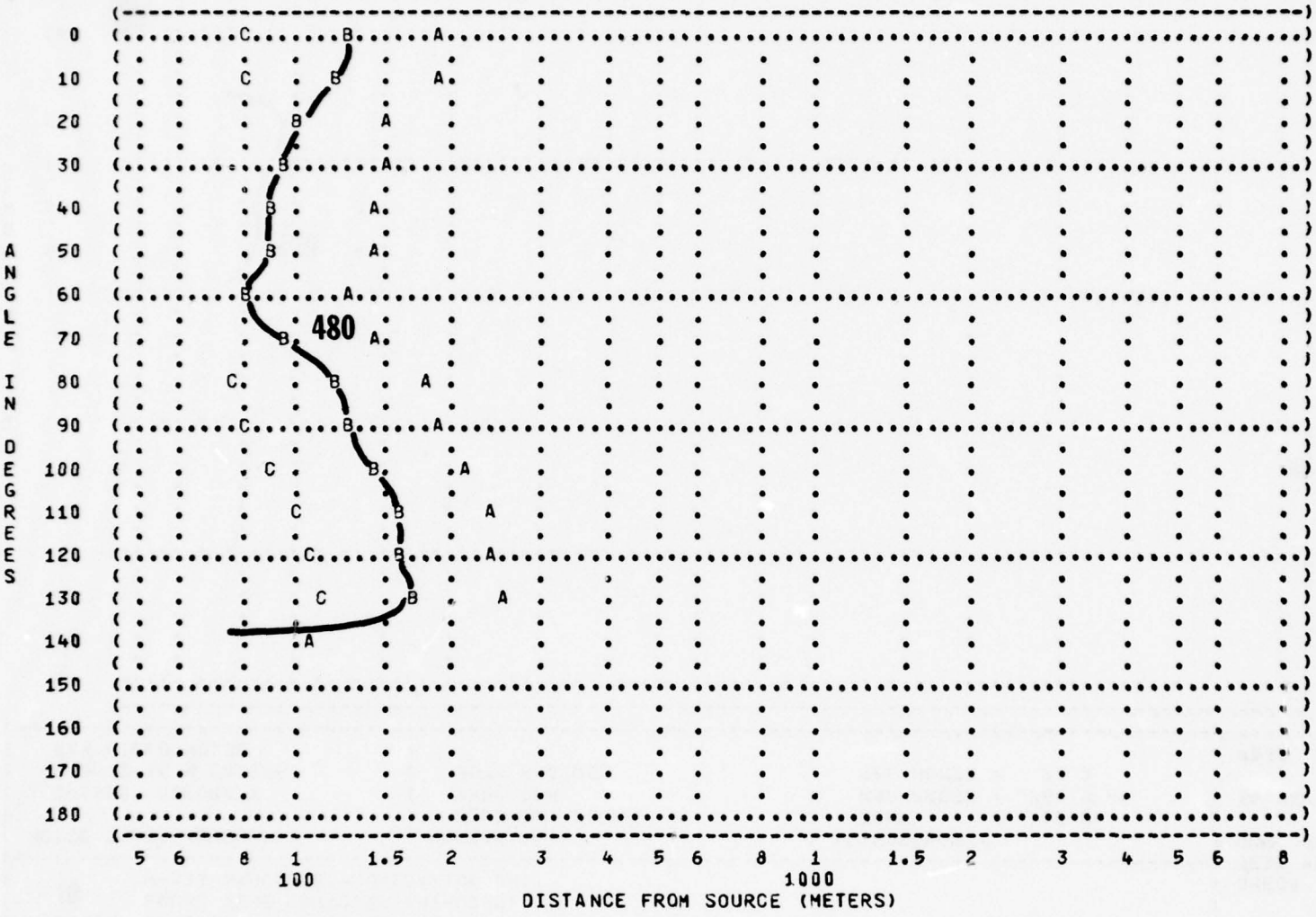


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
H-133 GROUND COMMUNICATION UNIT

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 12

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

POINT	MIN
A	960
B	480

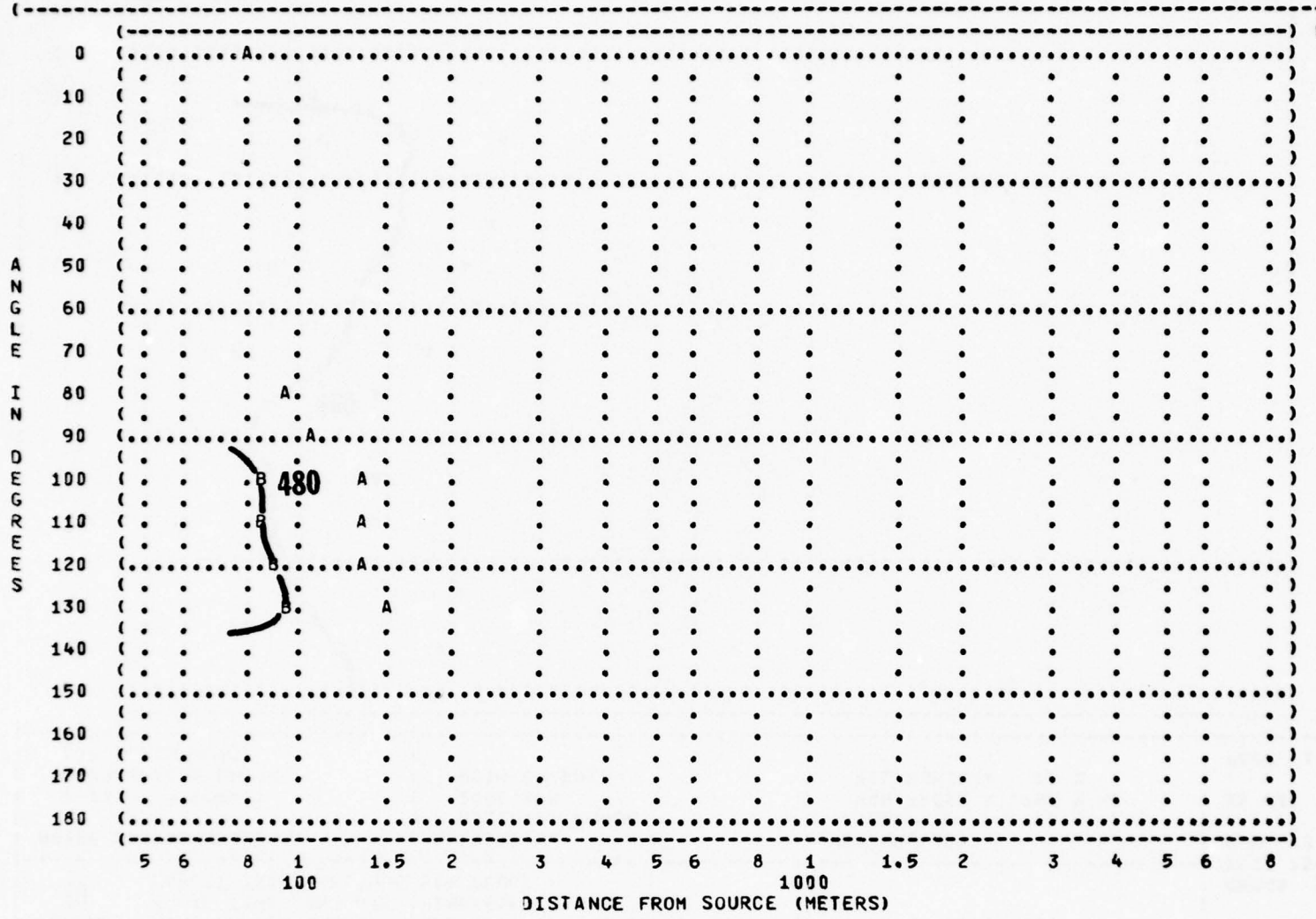


FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 18

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

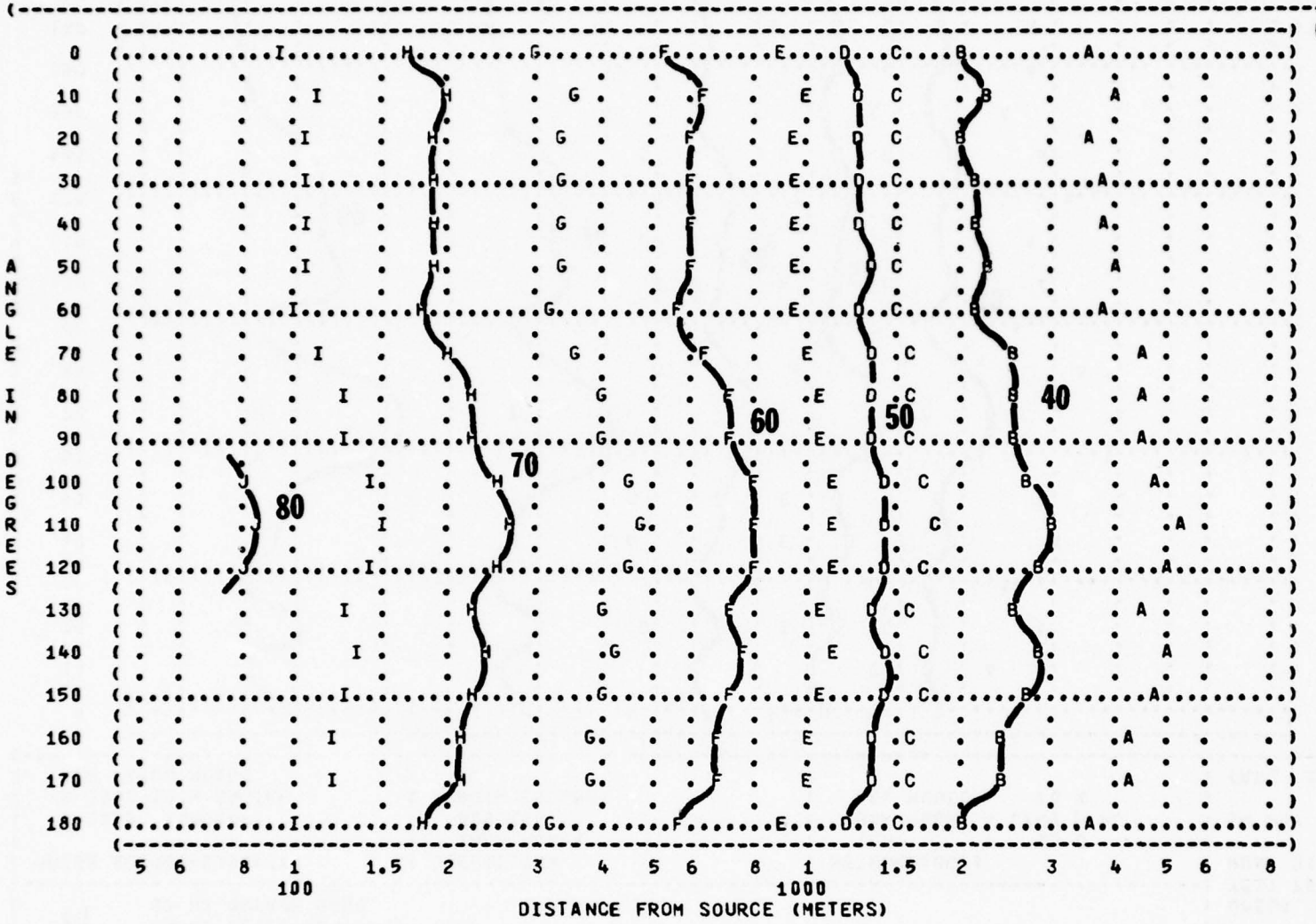


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 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

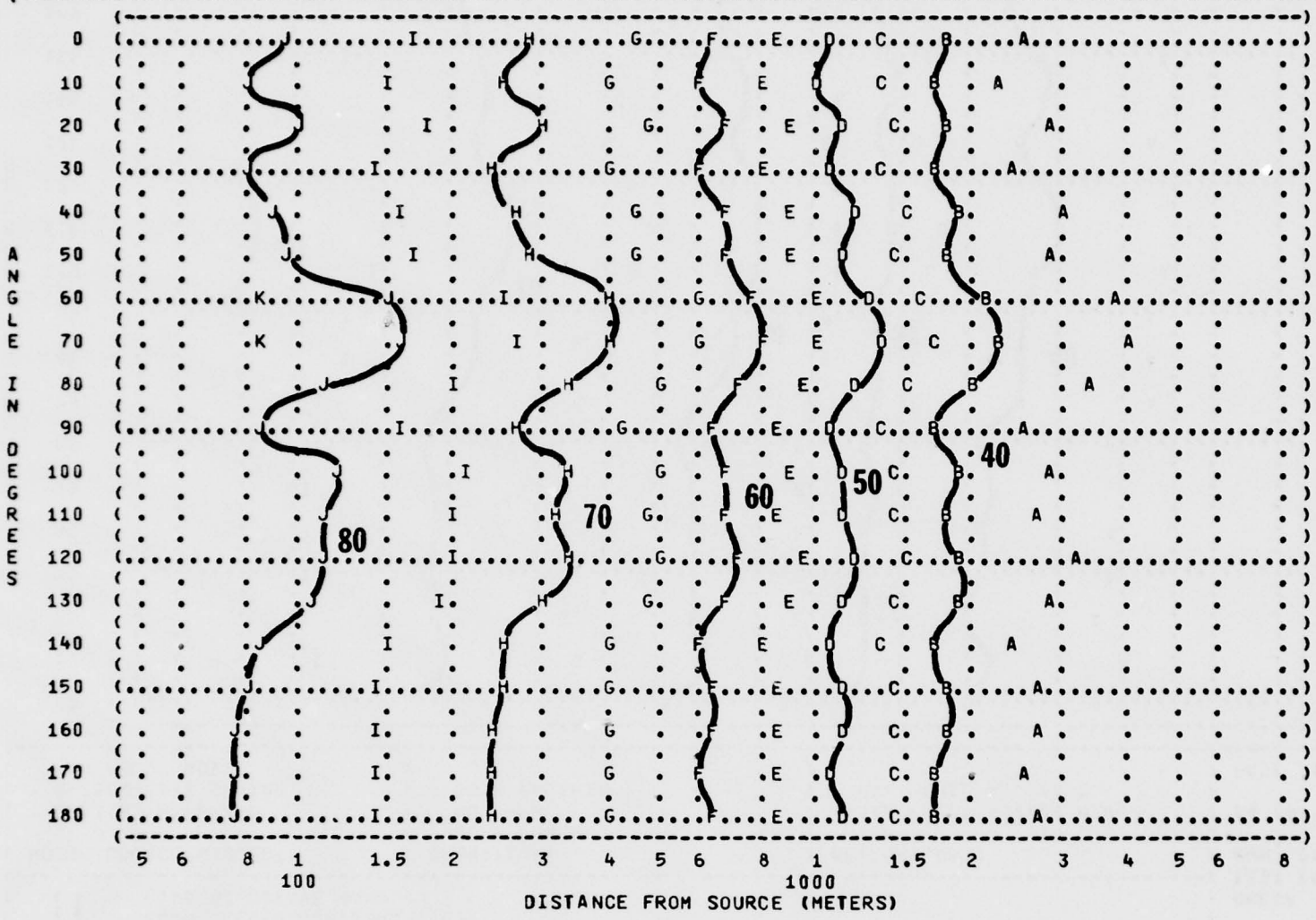


FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 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

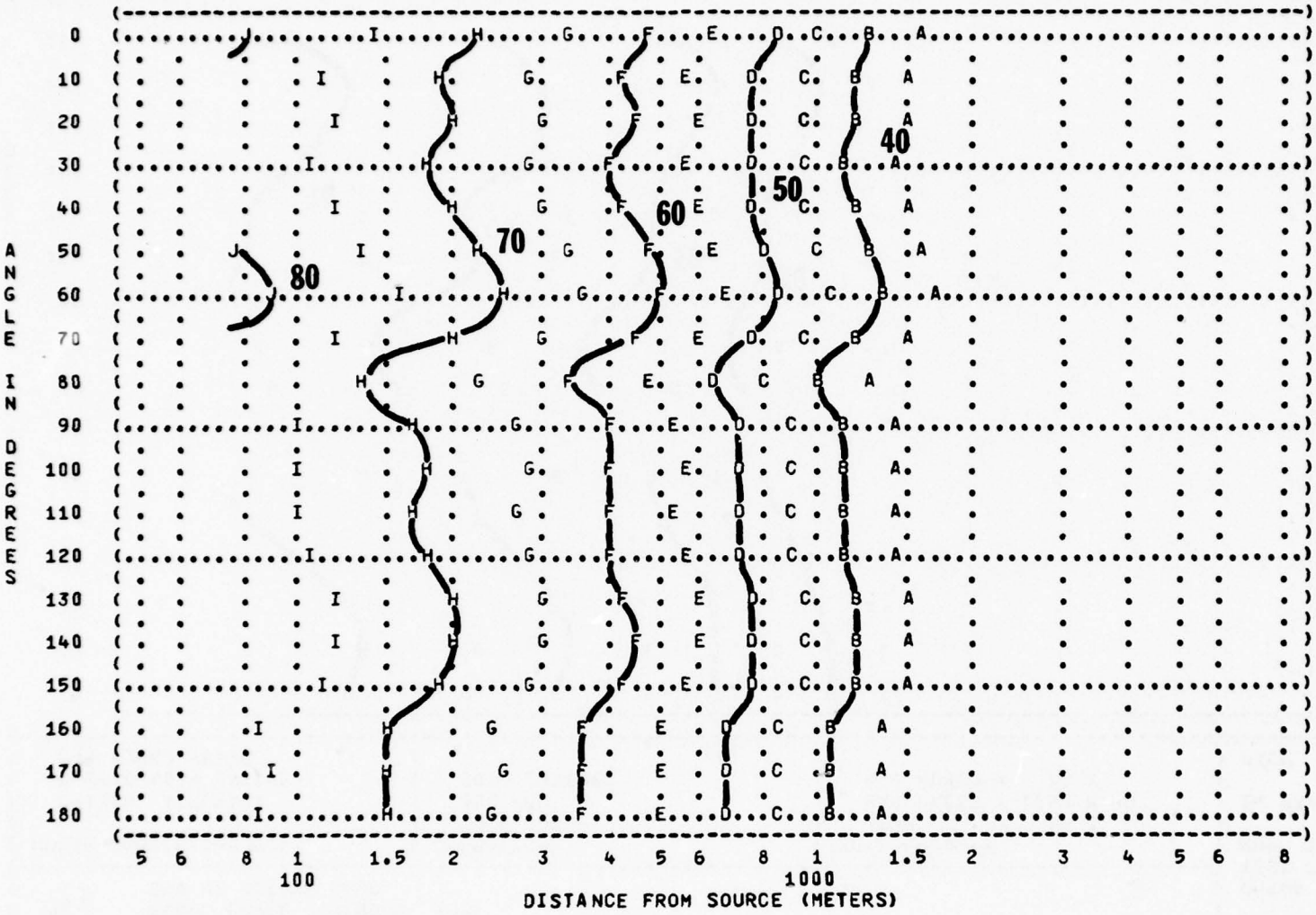


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 21

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

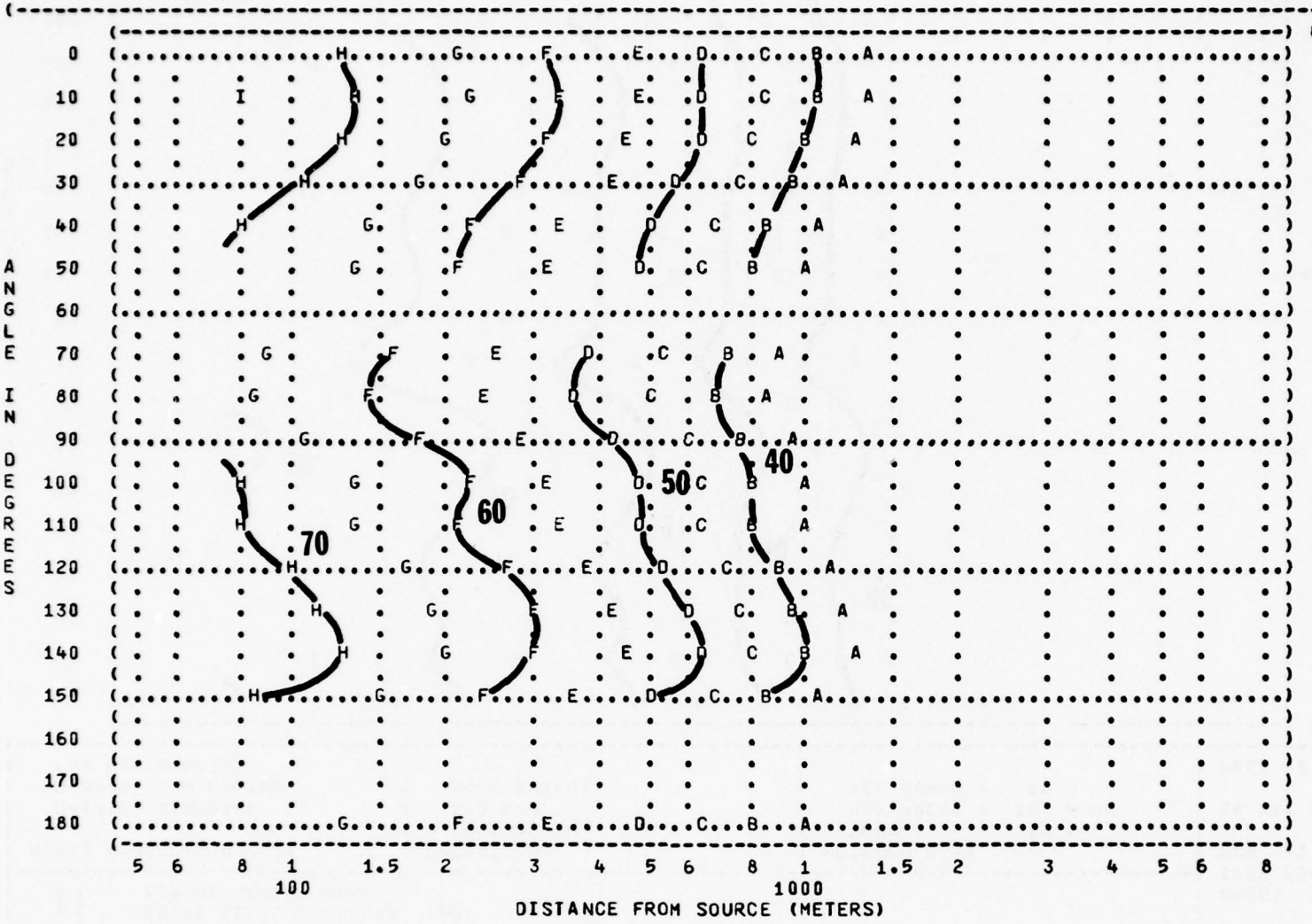


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 22

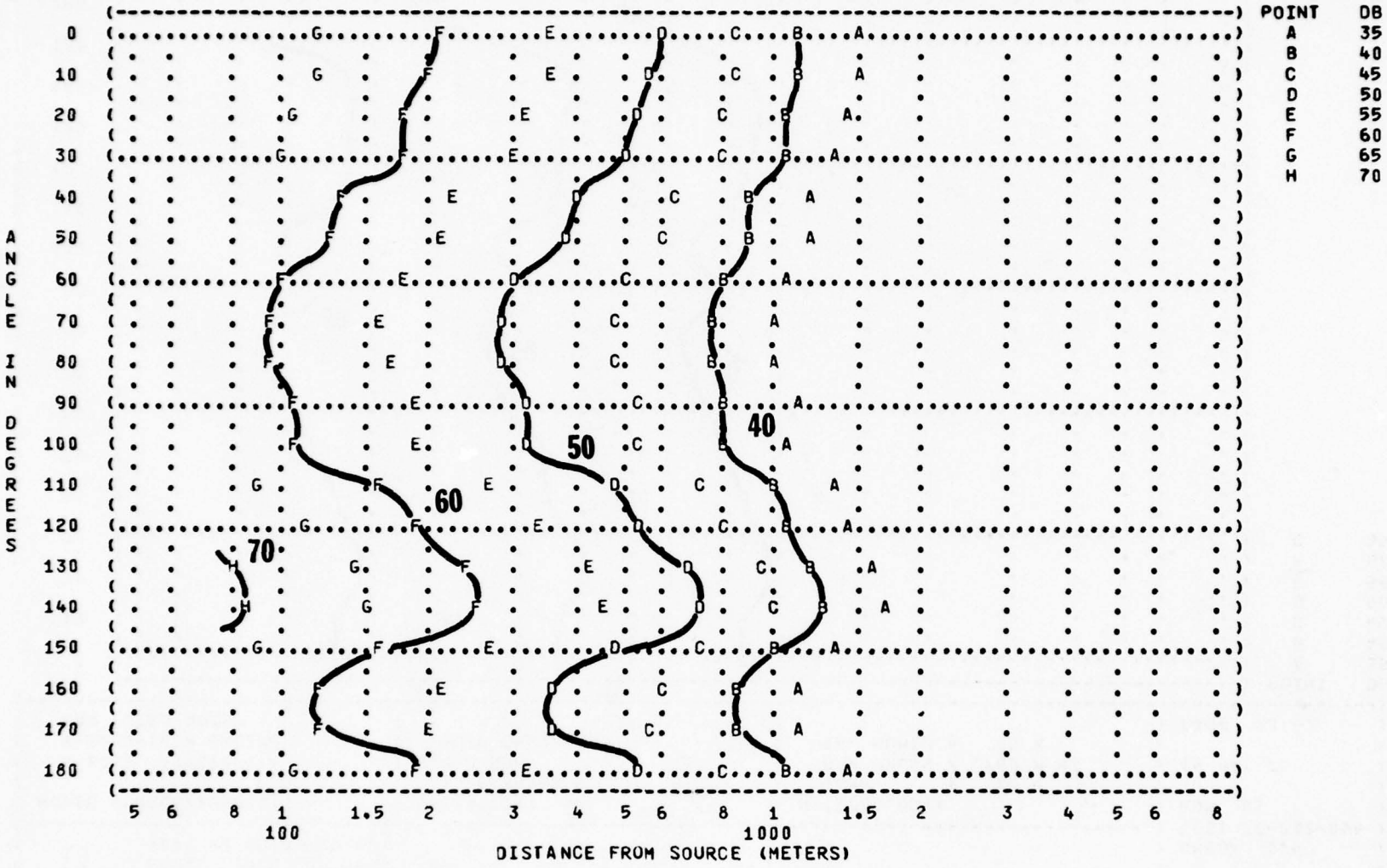


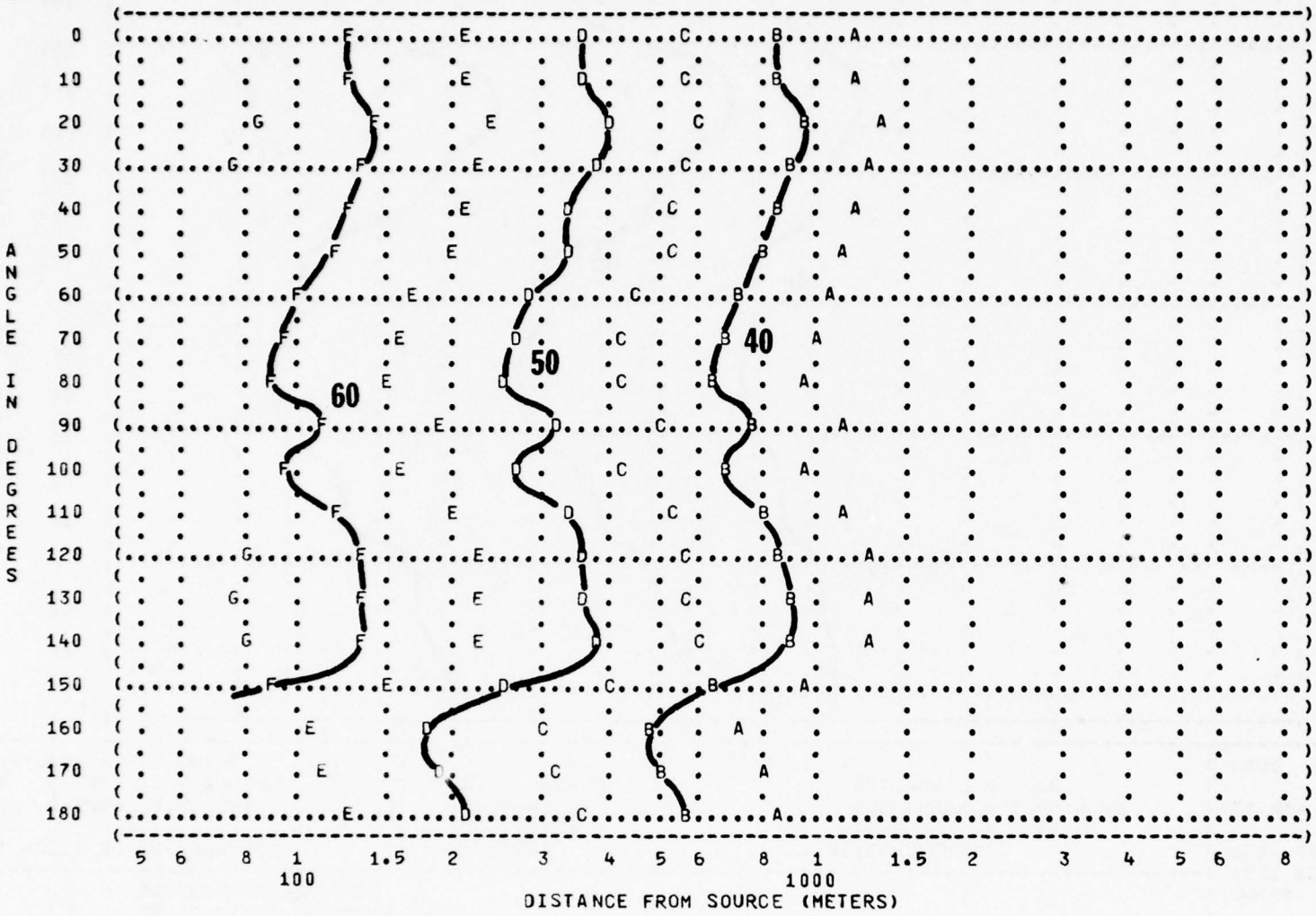
FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 23

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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



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

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

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 24

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

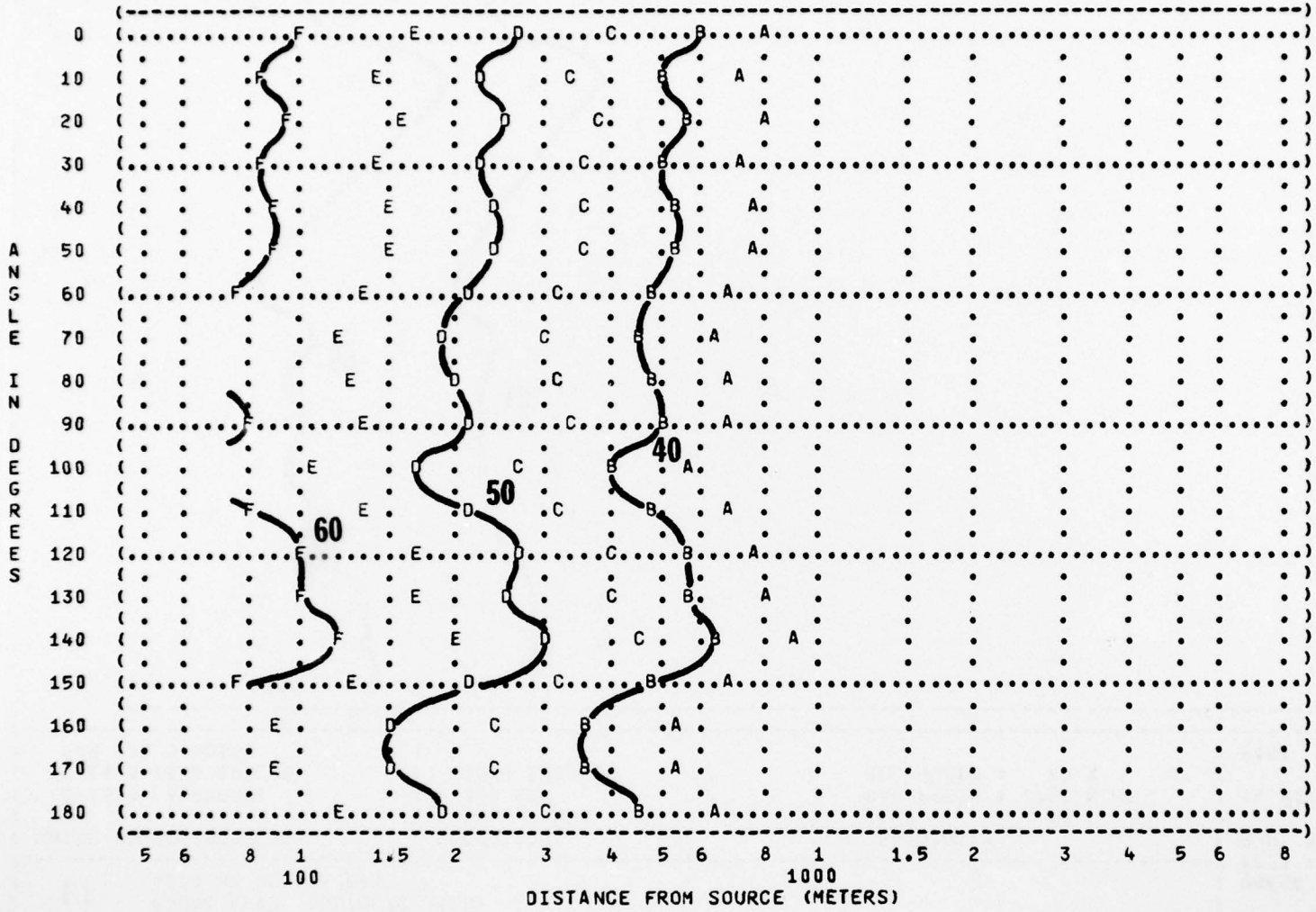


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 25

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

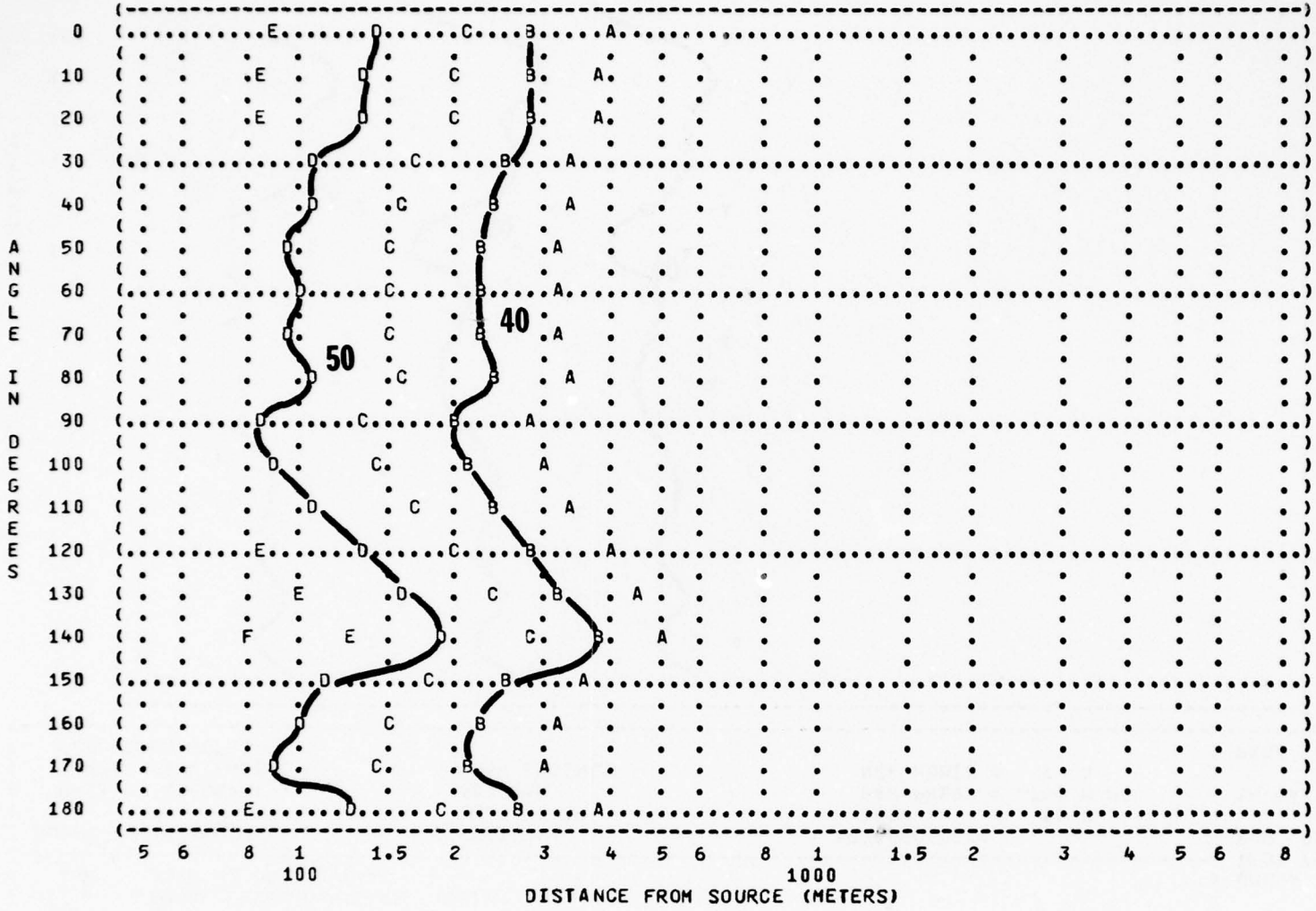


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 01
14 MAY 75
PAGE 26

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
800 RPM
BOTH ENGINES

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

POINT	DB
A	35
B	40
C	45
D	50

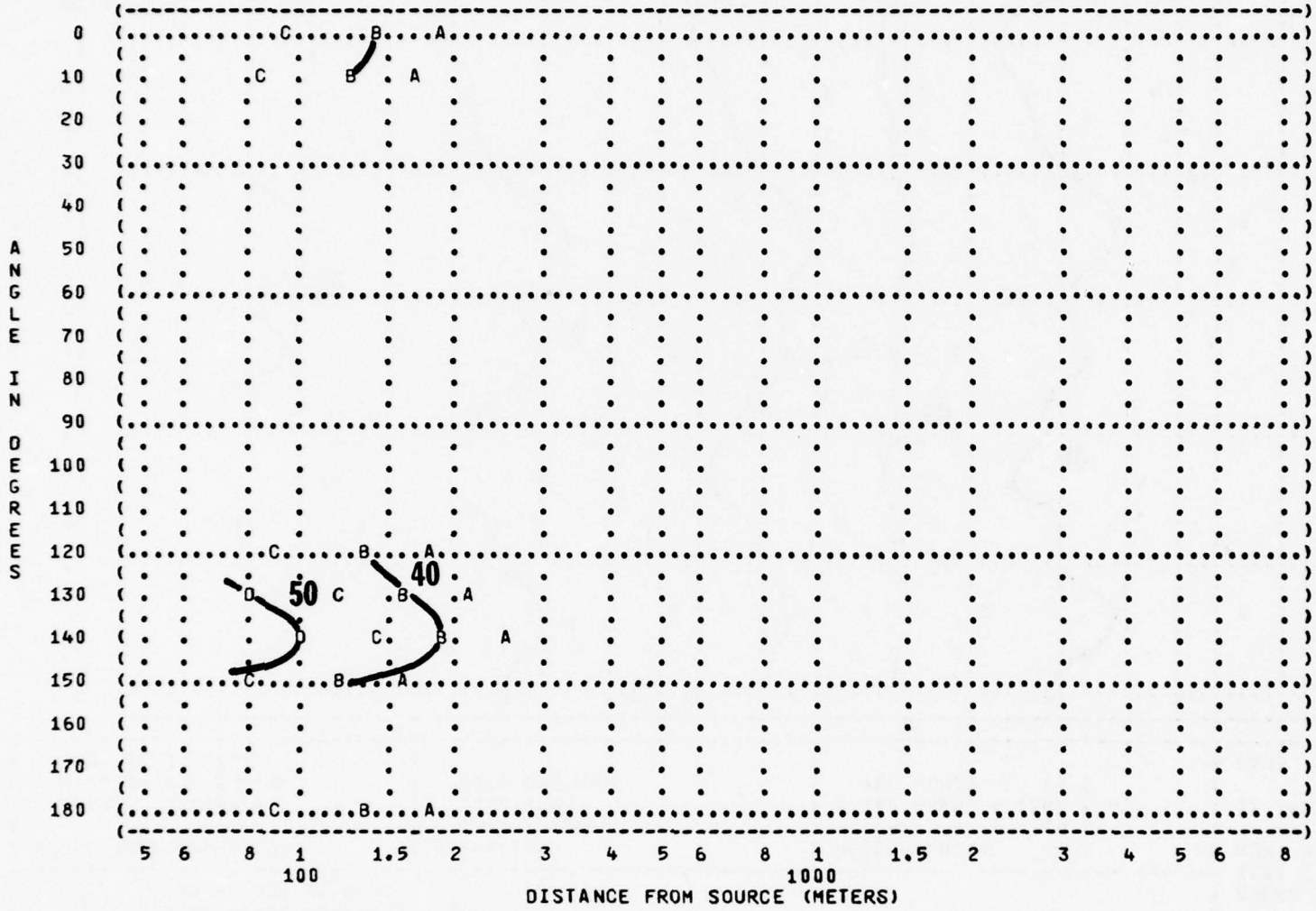


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 18

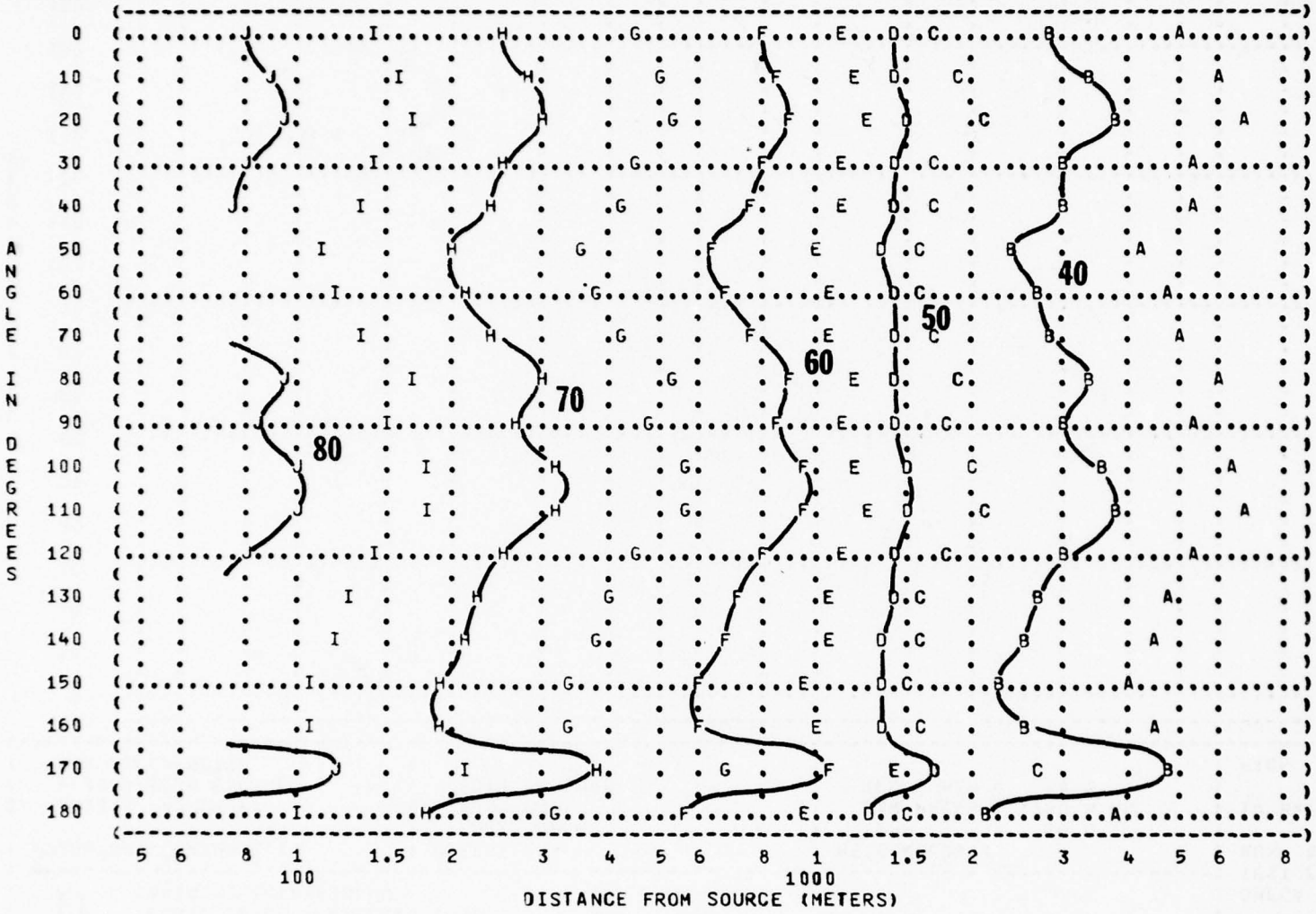


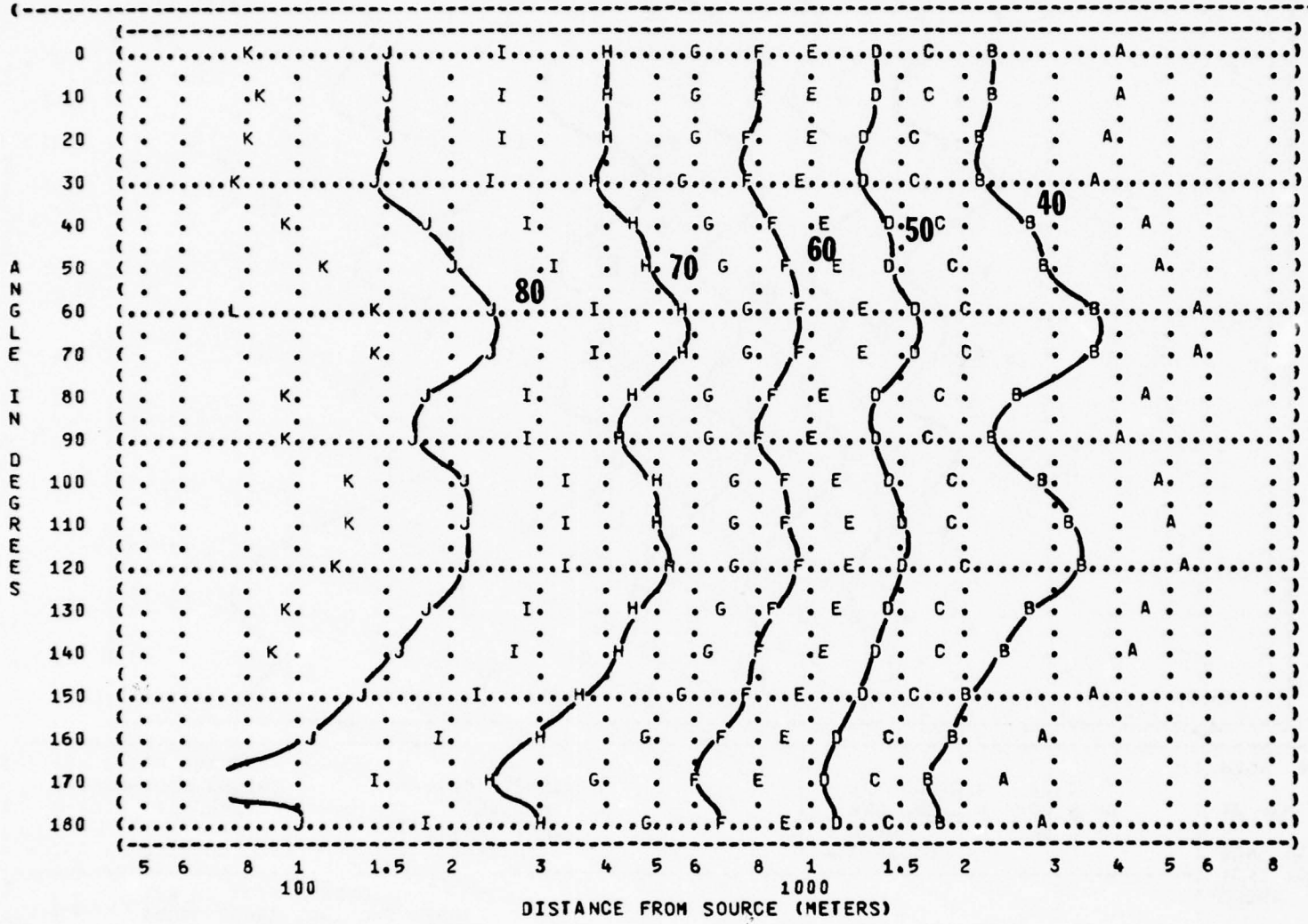
FIGURE 11: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 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
L	90

FIGURE: 11

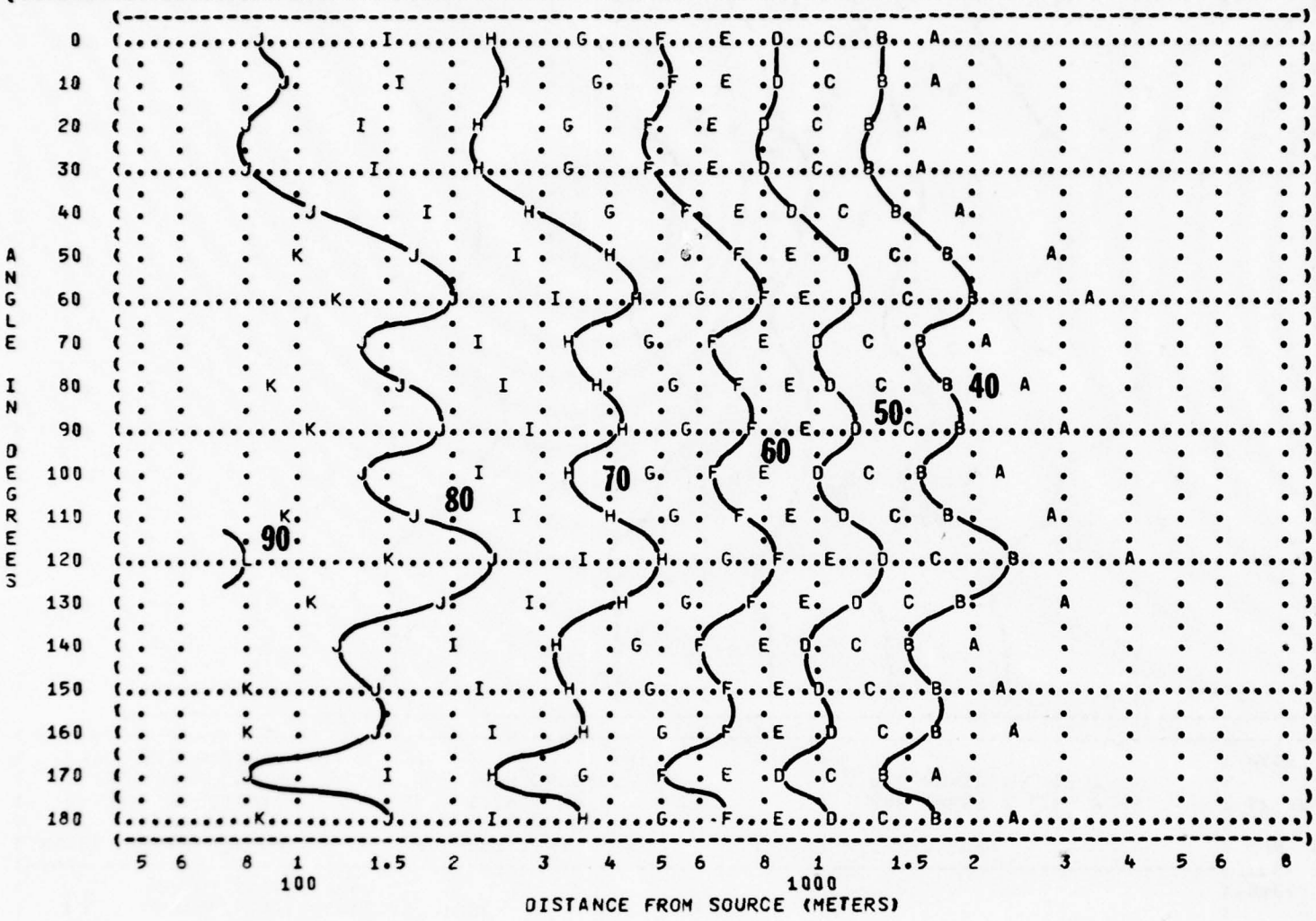
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 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

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

IDENTIFICATION: OMEGA 1.4 TEST 75-002-022 RUN 01 17 APR 75 PAGE 21

NOISE SOURCE/SUBJECT: C-131B AIRCRAFT R-2800-103W ENGINE FAR FIELD NOISE

OPERATION: TAXI POWER 1000 RPM BOTH ENGINES

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

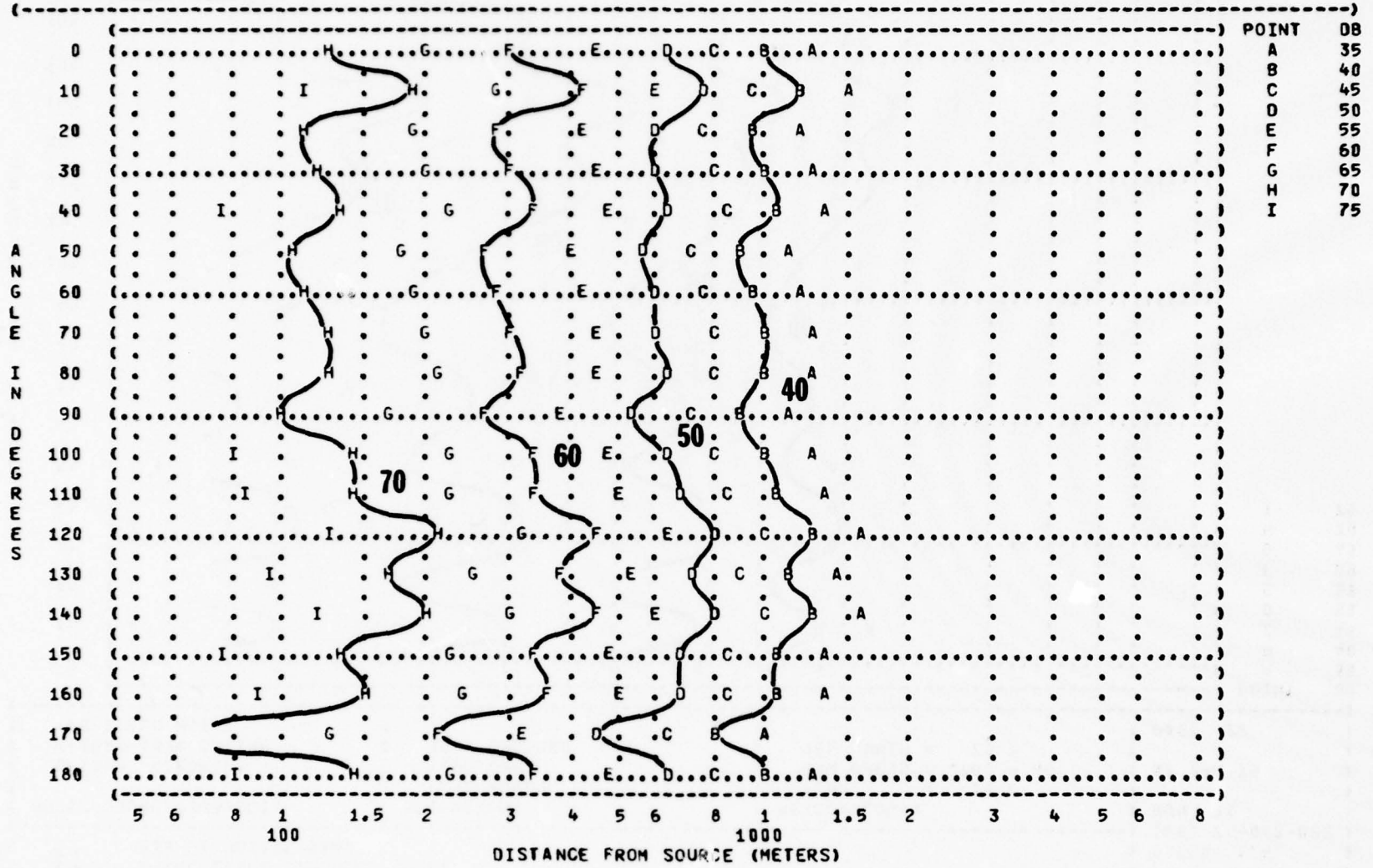


FIGURE: 11

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

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 22

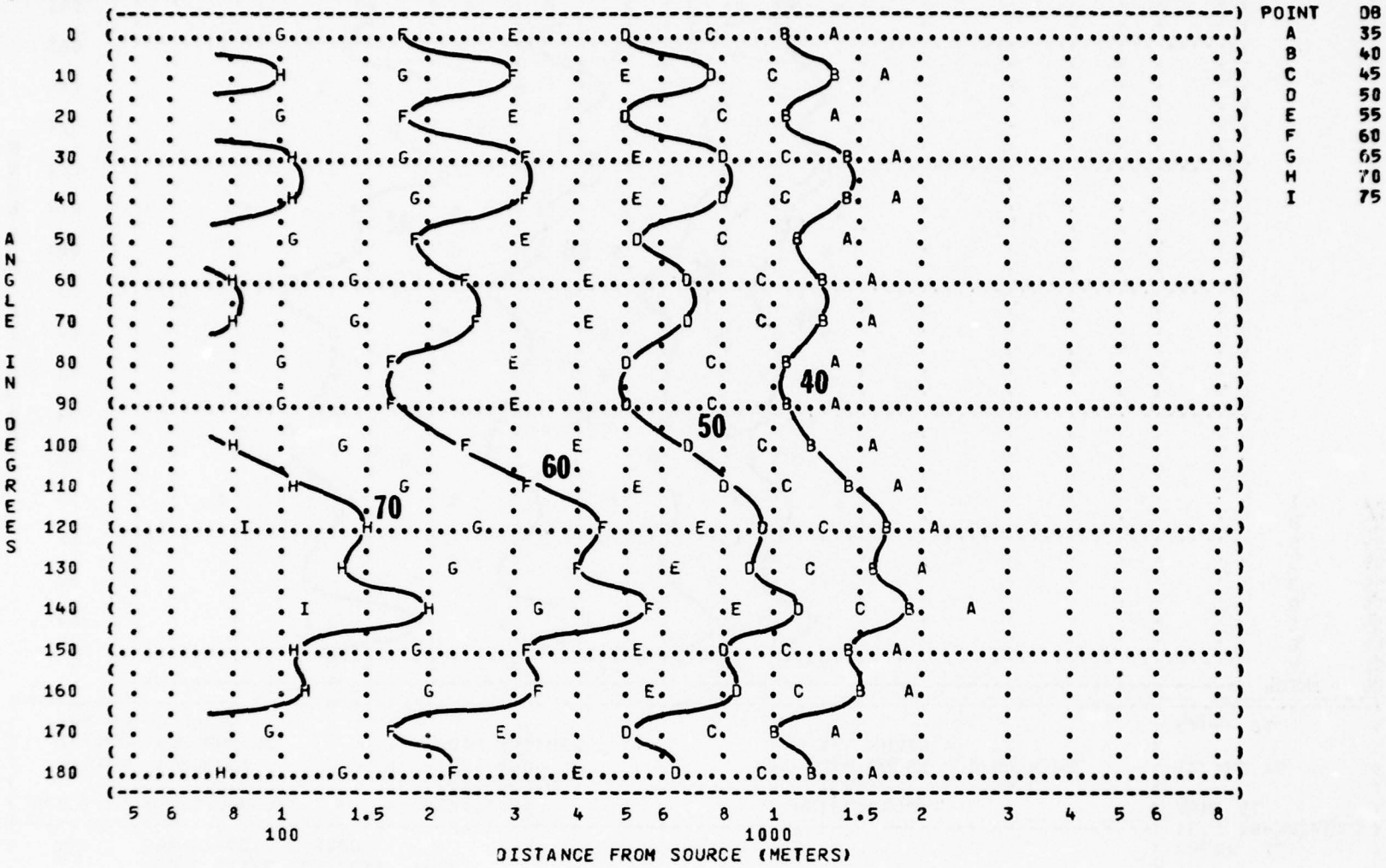


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 23

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

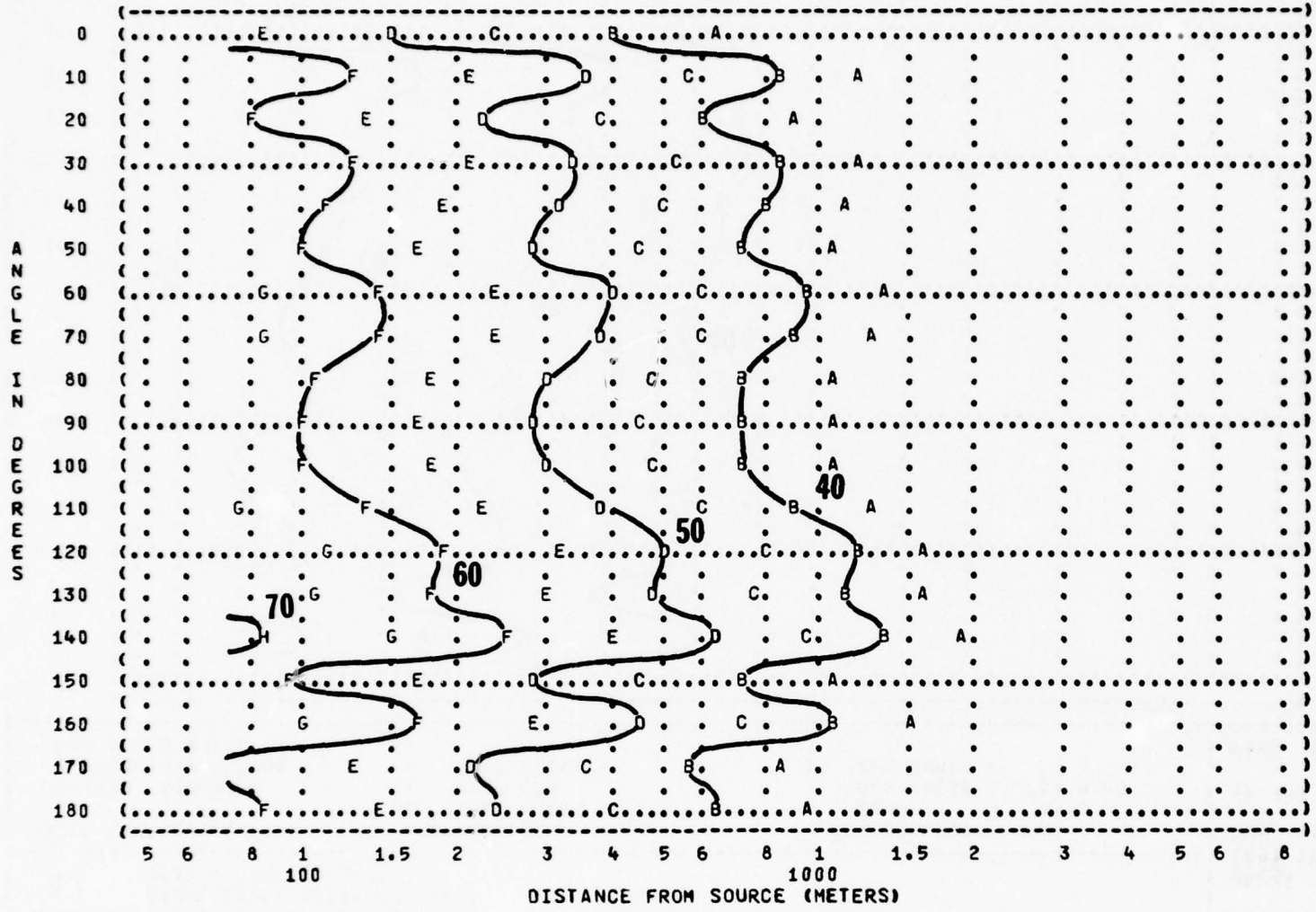


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 24

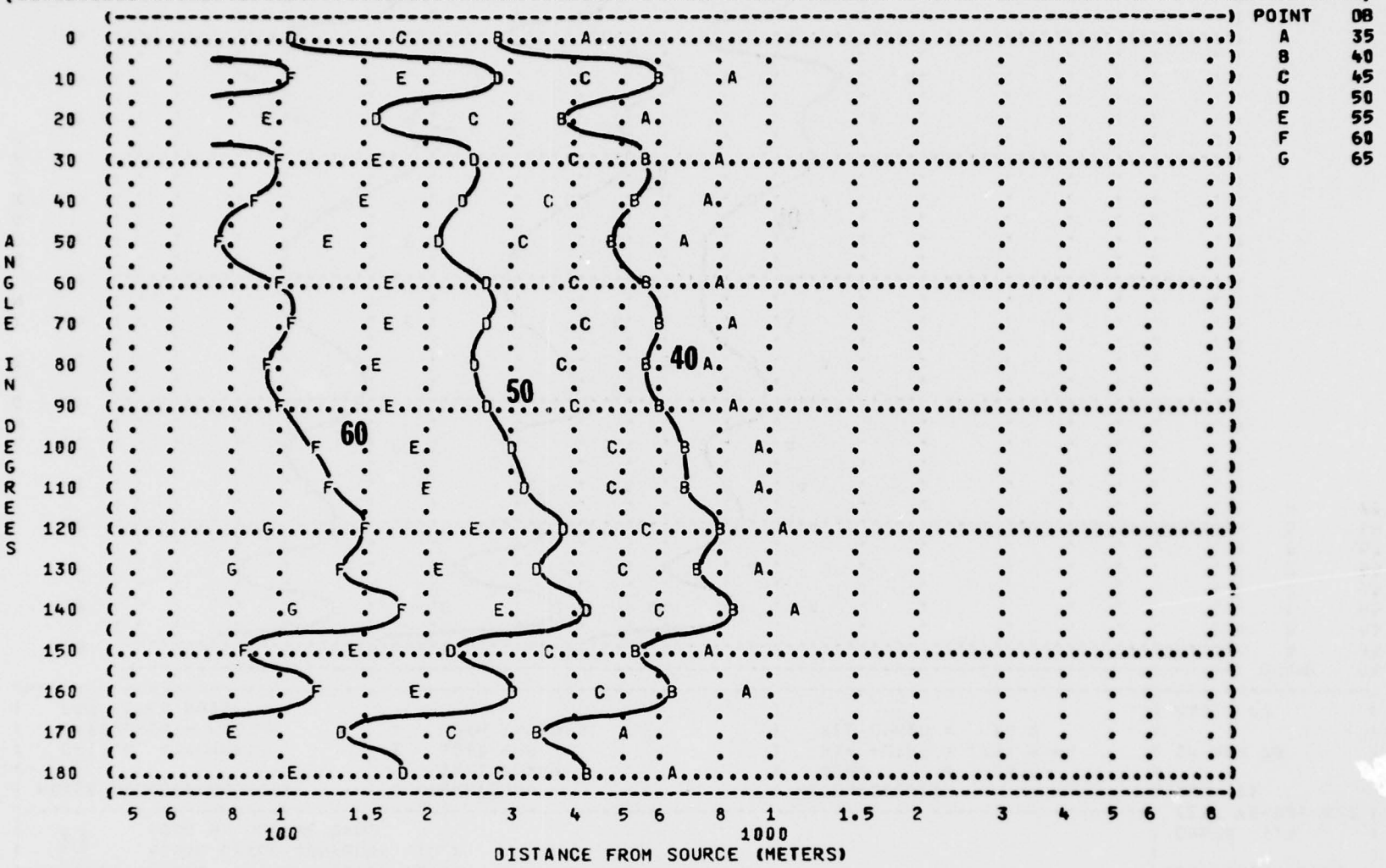


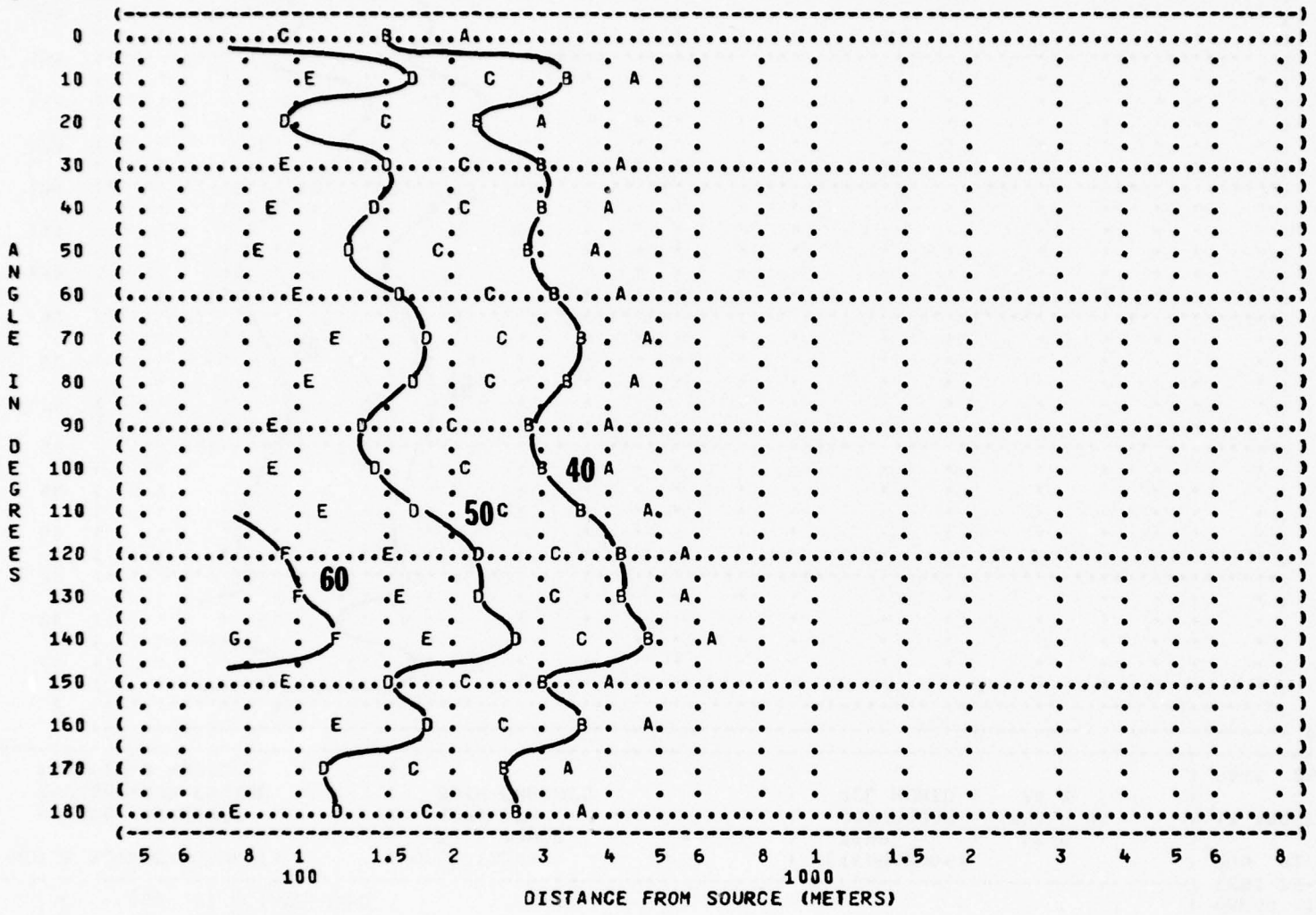
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 25

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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



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

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

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
TAXI POWER
1000 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-022
RUN 01
17 APR 75
PAGE 26

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

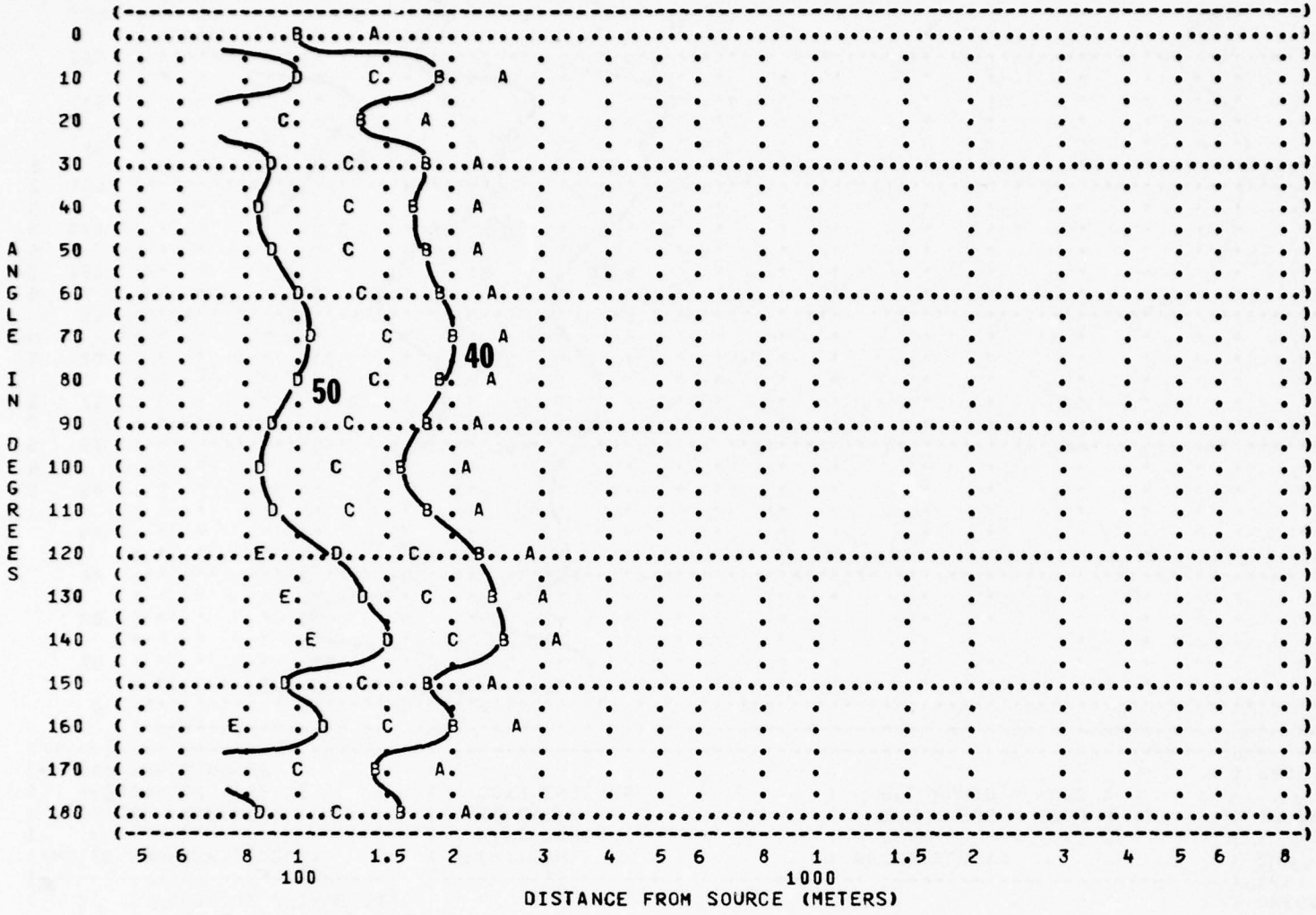


FIGURE: 11

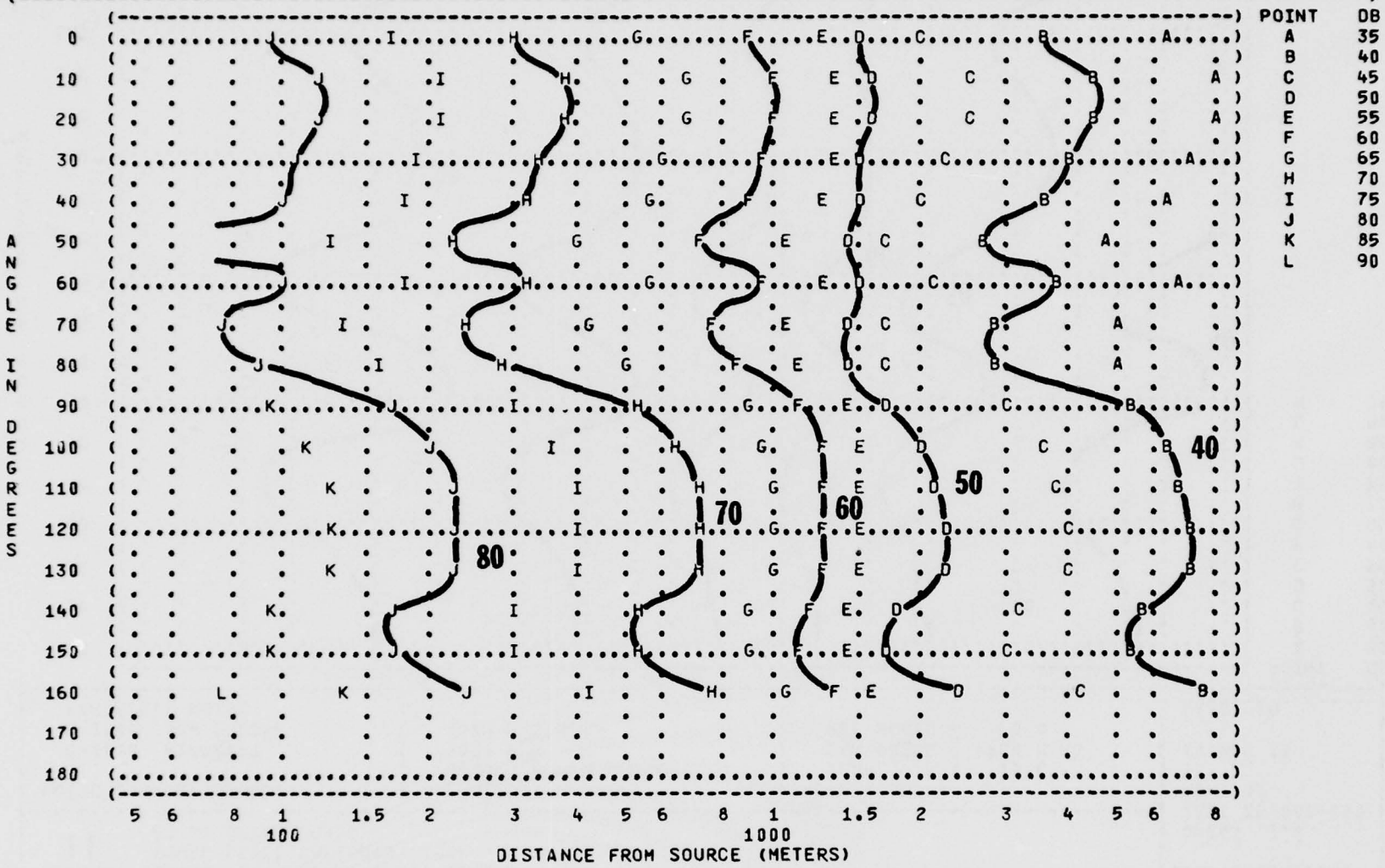
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 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

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

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 19

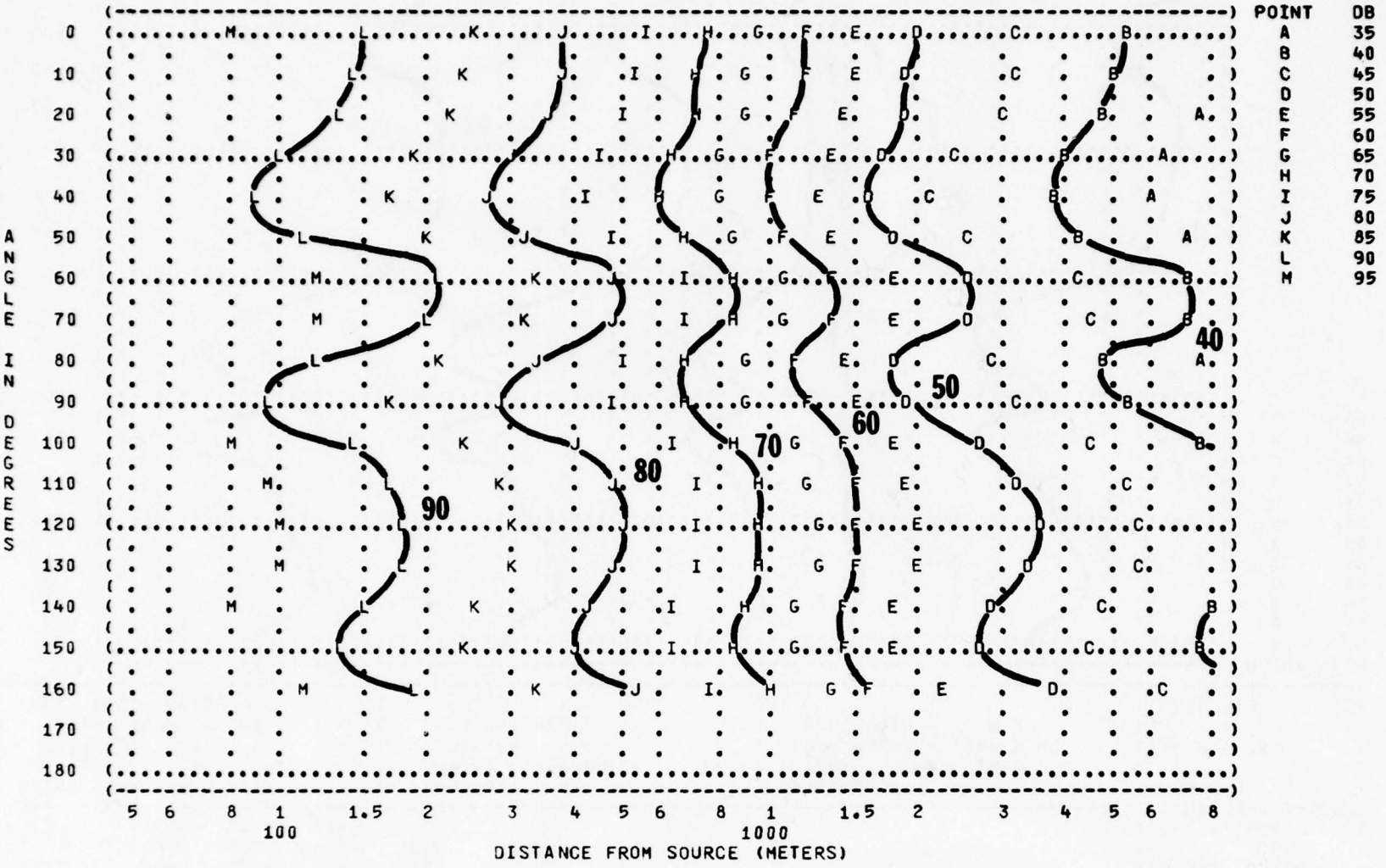


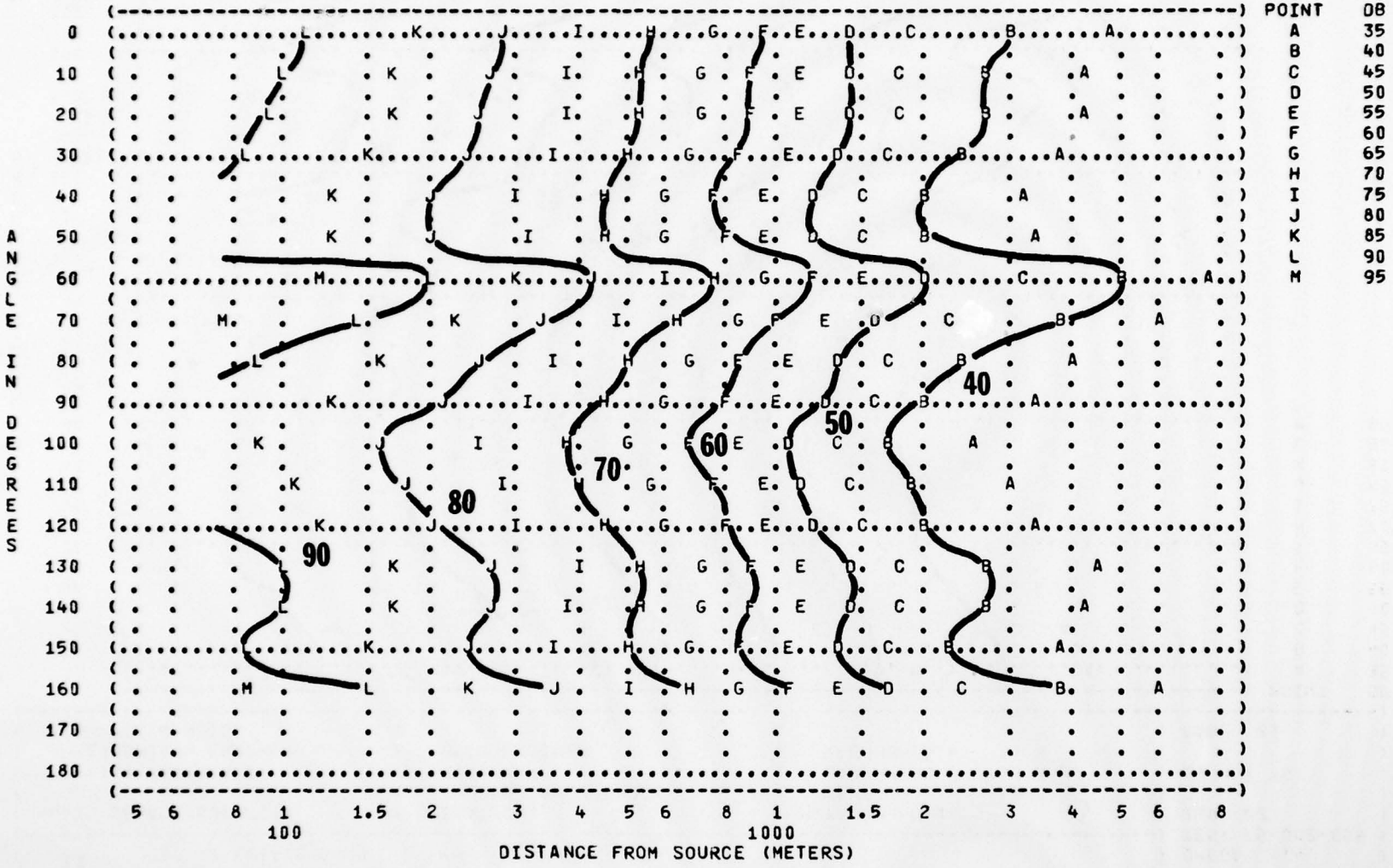
FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 21

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

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

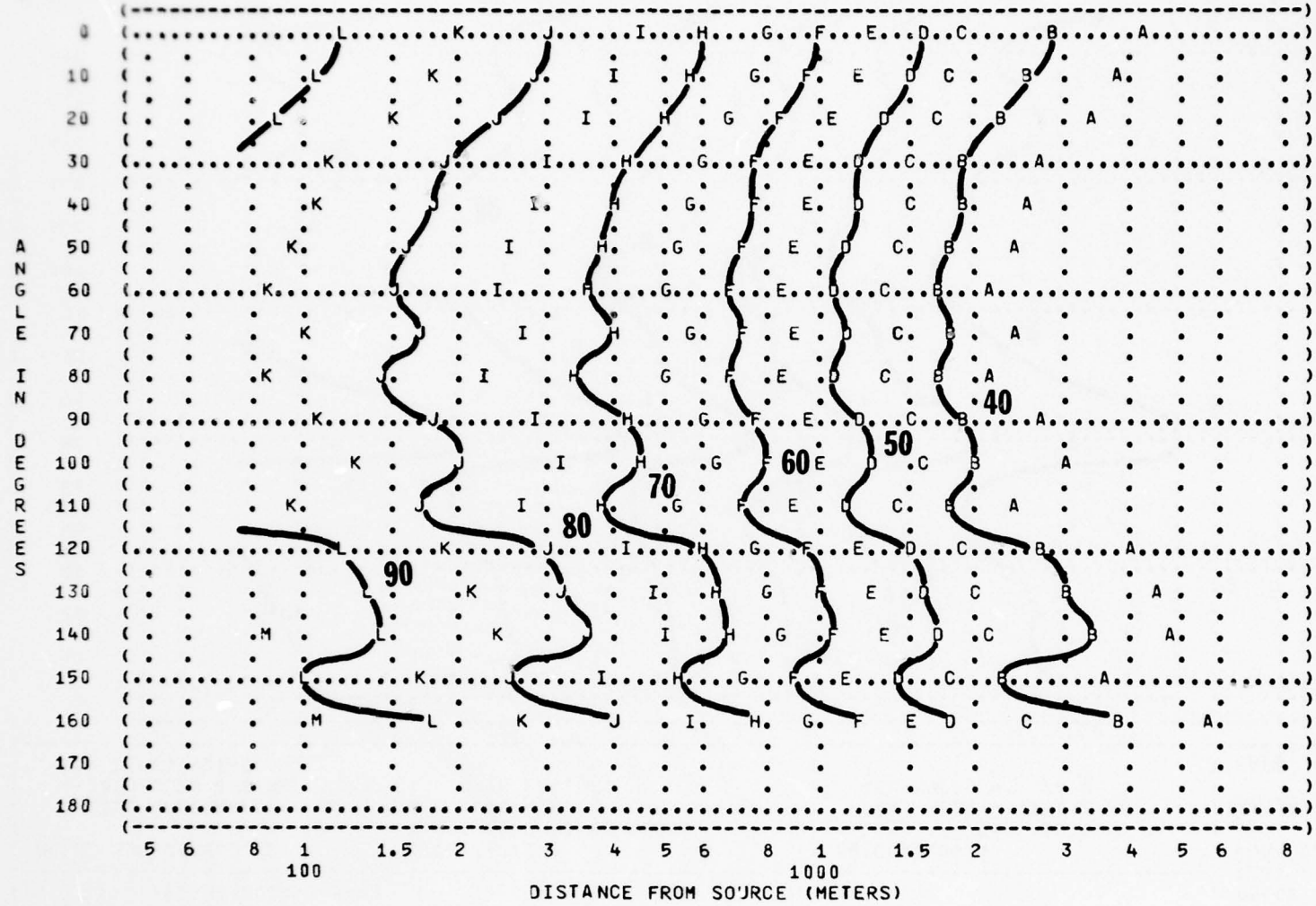


FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 22

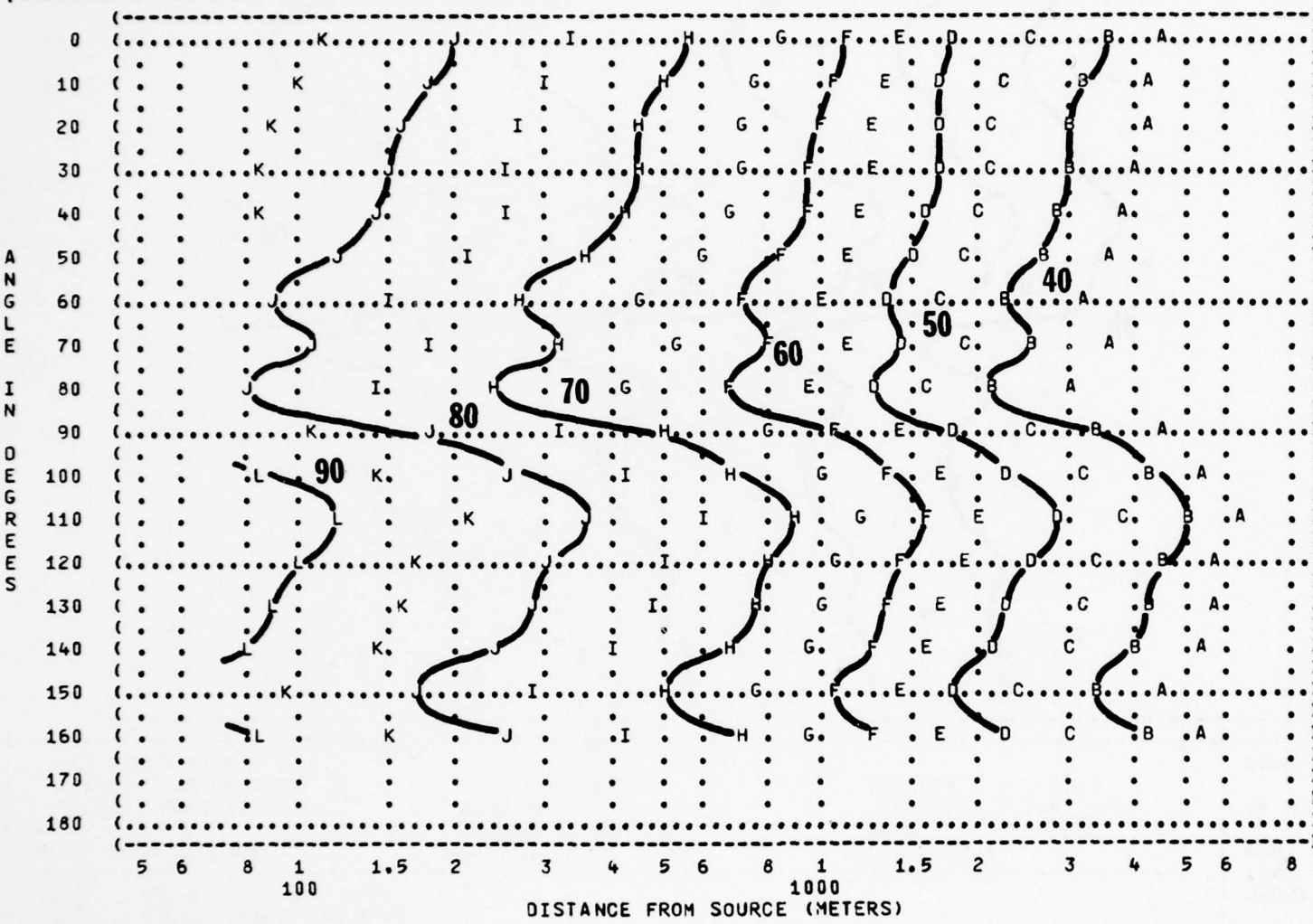


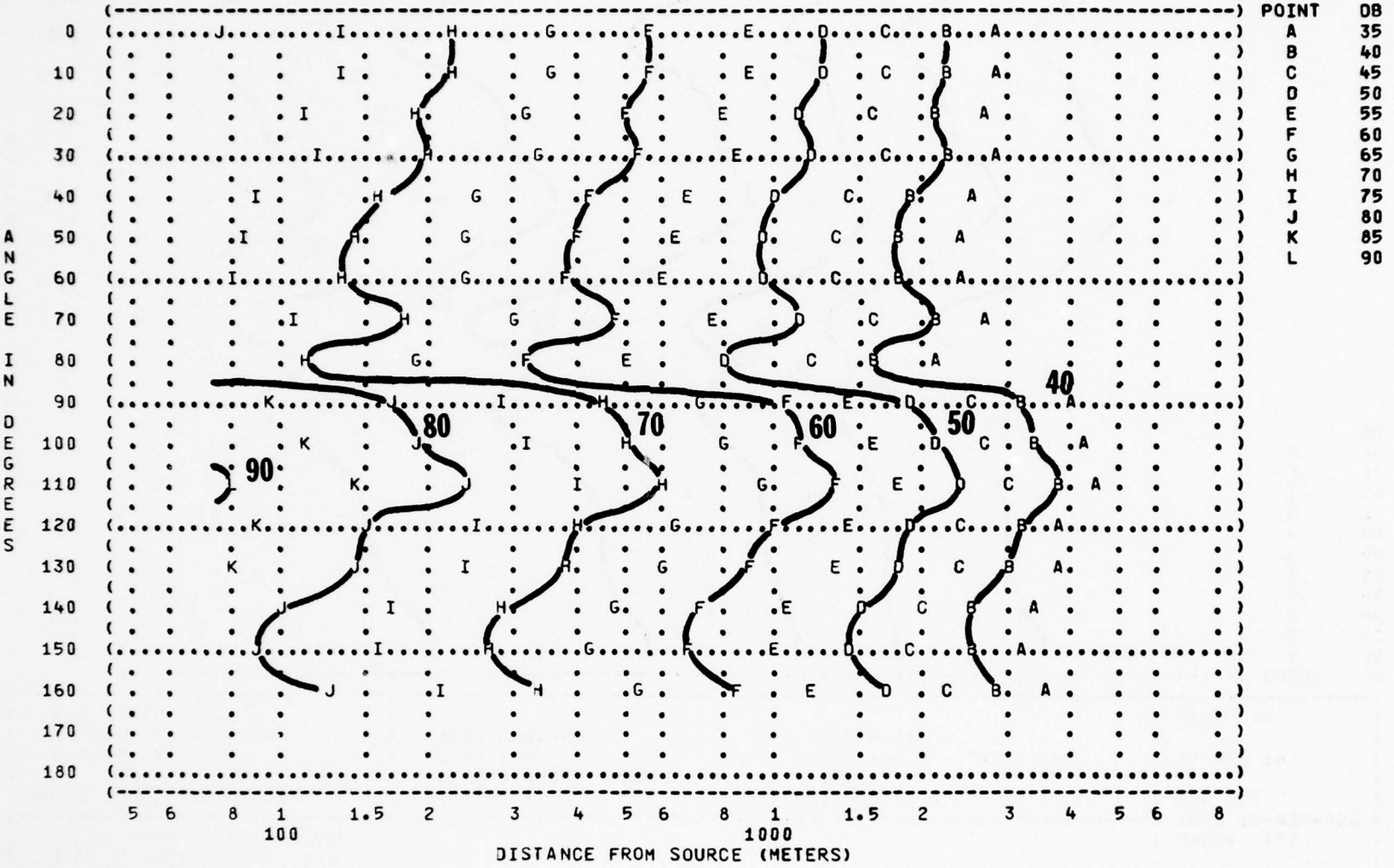
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-002-055 RUN 02 14 MAY 75 PAGE 23

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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



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

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

IDENTIFICATION: OMEGA 1.4 TEST 75-002-055 RUN 02 14 MAY 75 PAGE 24

NOISE SOURCE/SUBJECT: C-1318 AIRCRAFT; R-2800-103W ENGINE; FAR FIELD NOISE

OPERATION: GROUND POWER CHECK; 2050 RPM; BOTH ENGINES

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

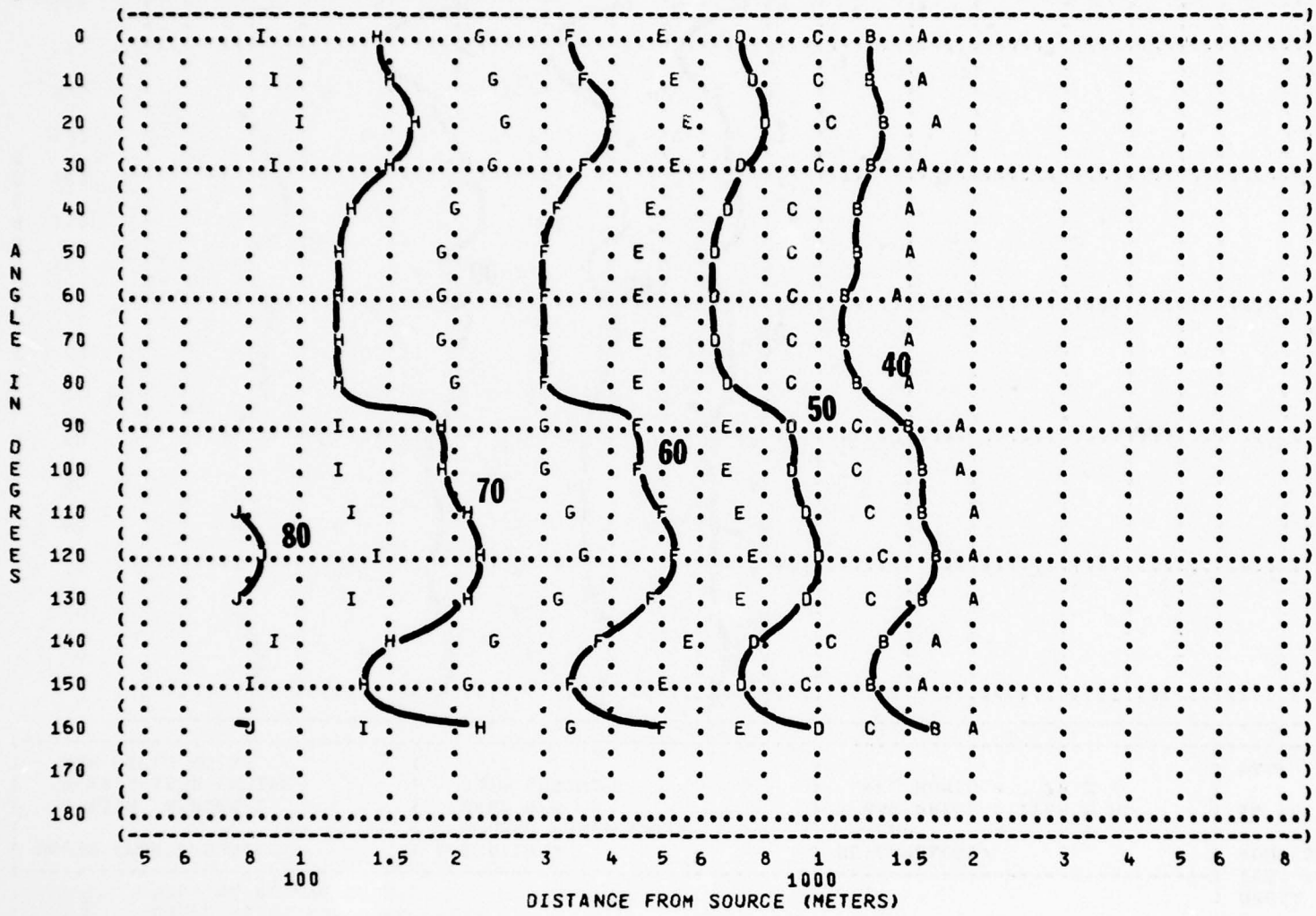


FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 25

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

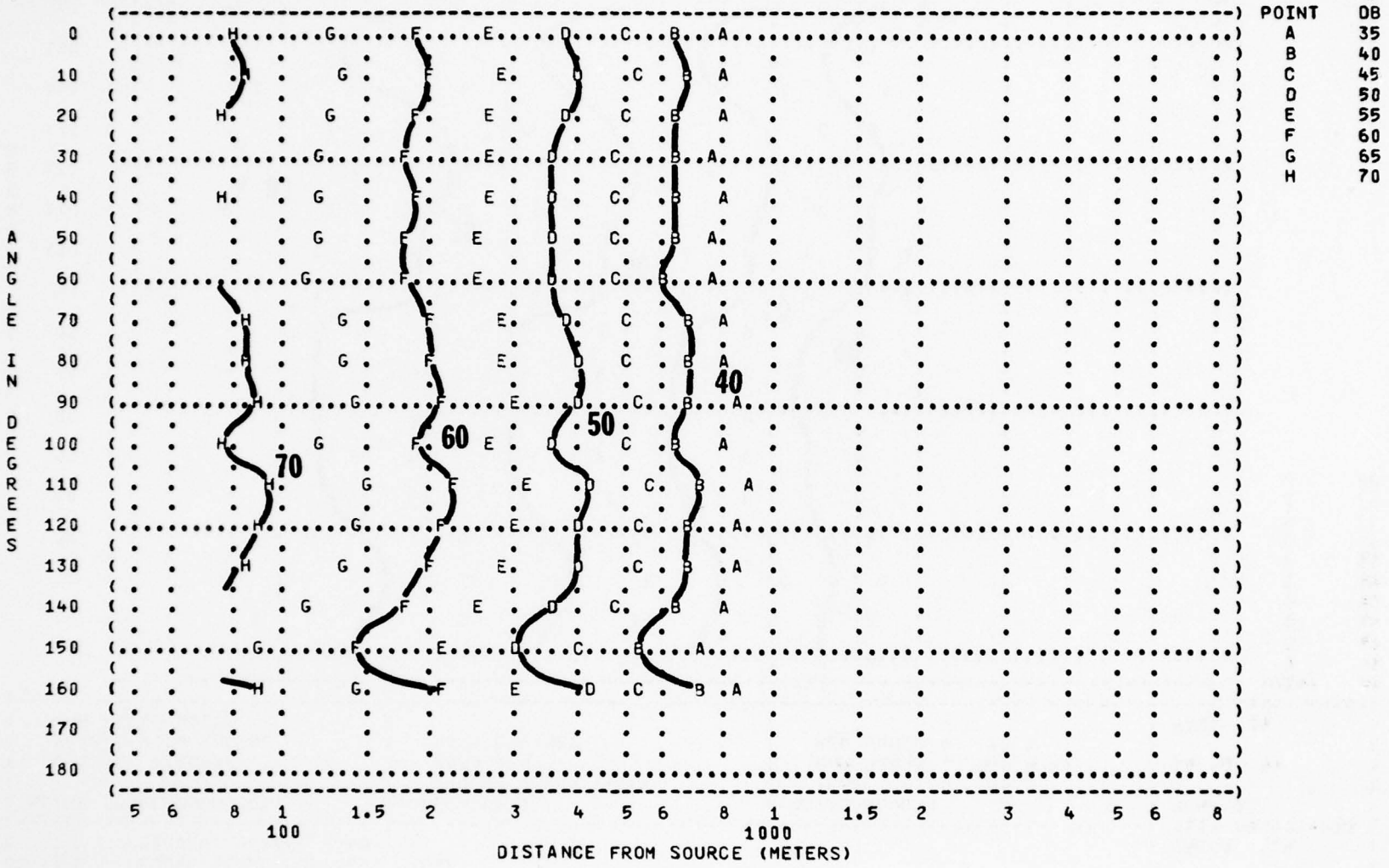


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
GROUND POWER CHECK
2050 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 02
14 MAY 75
PAGE 26

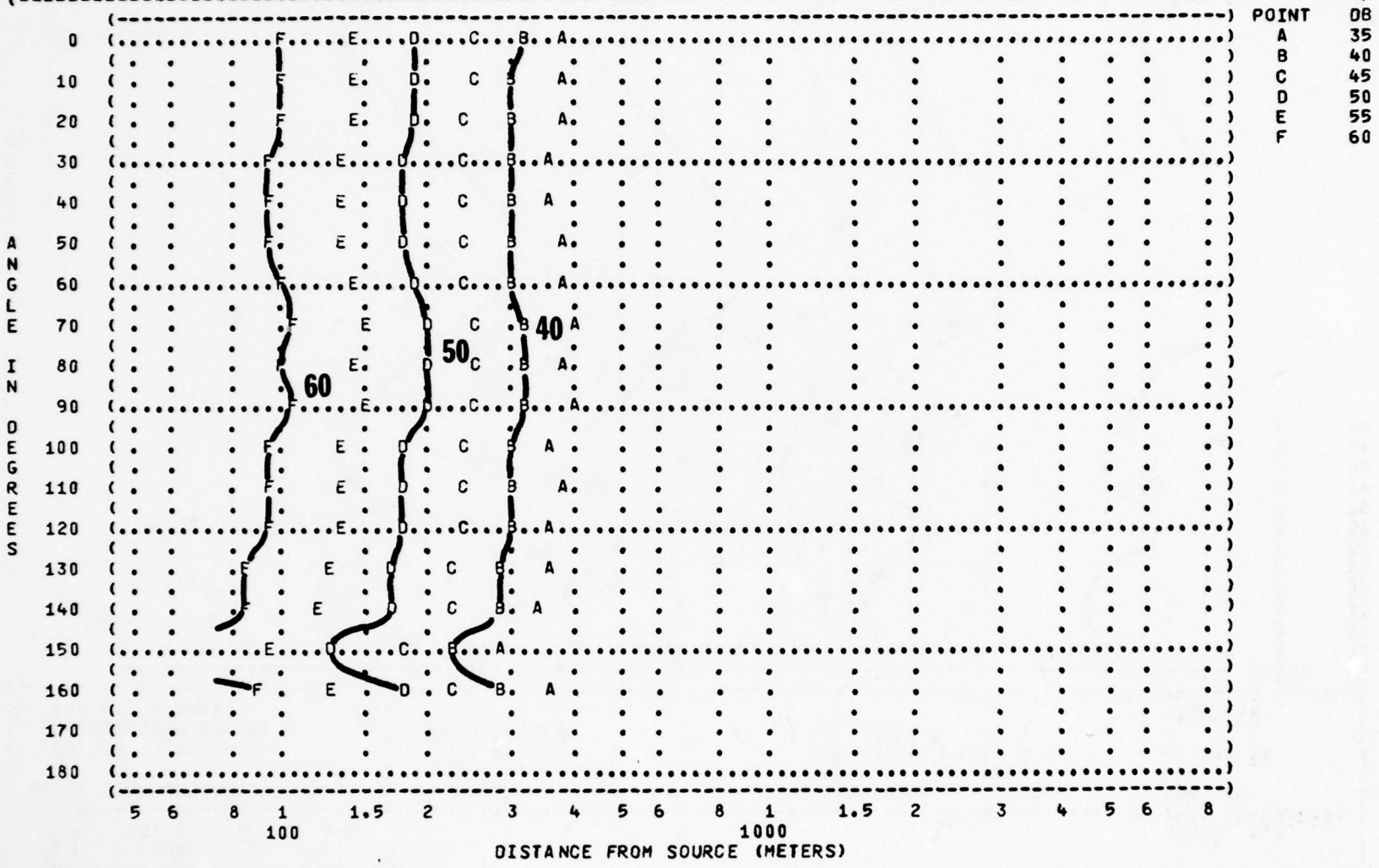


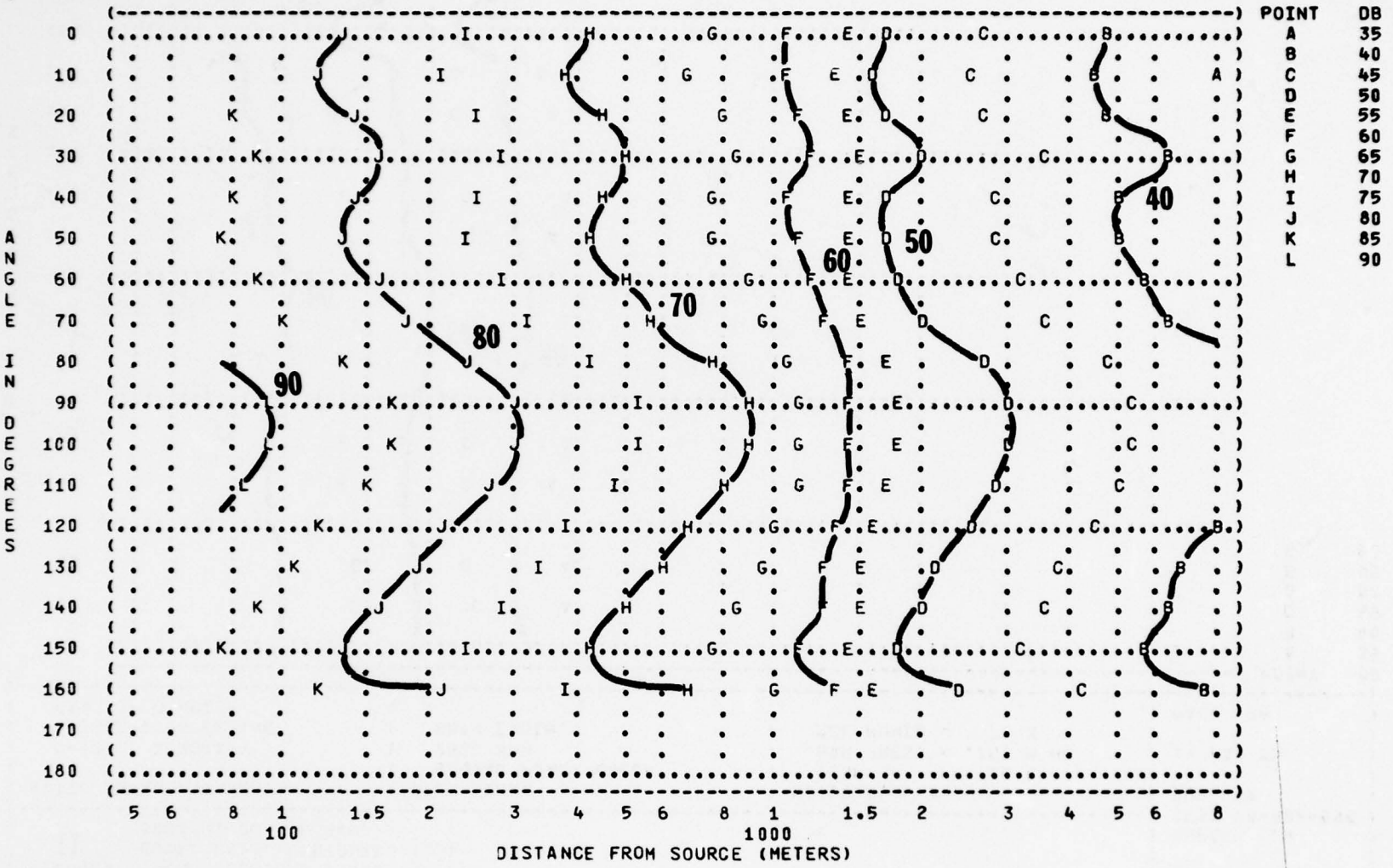
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 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

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

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 19

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

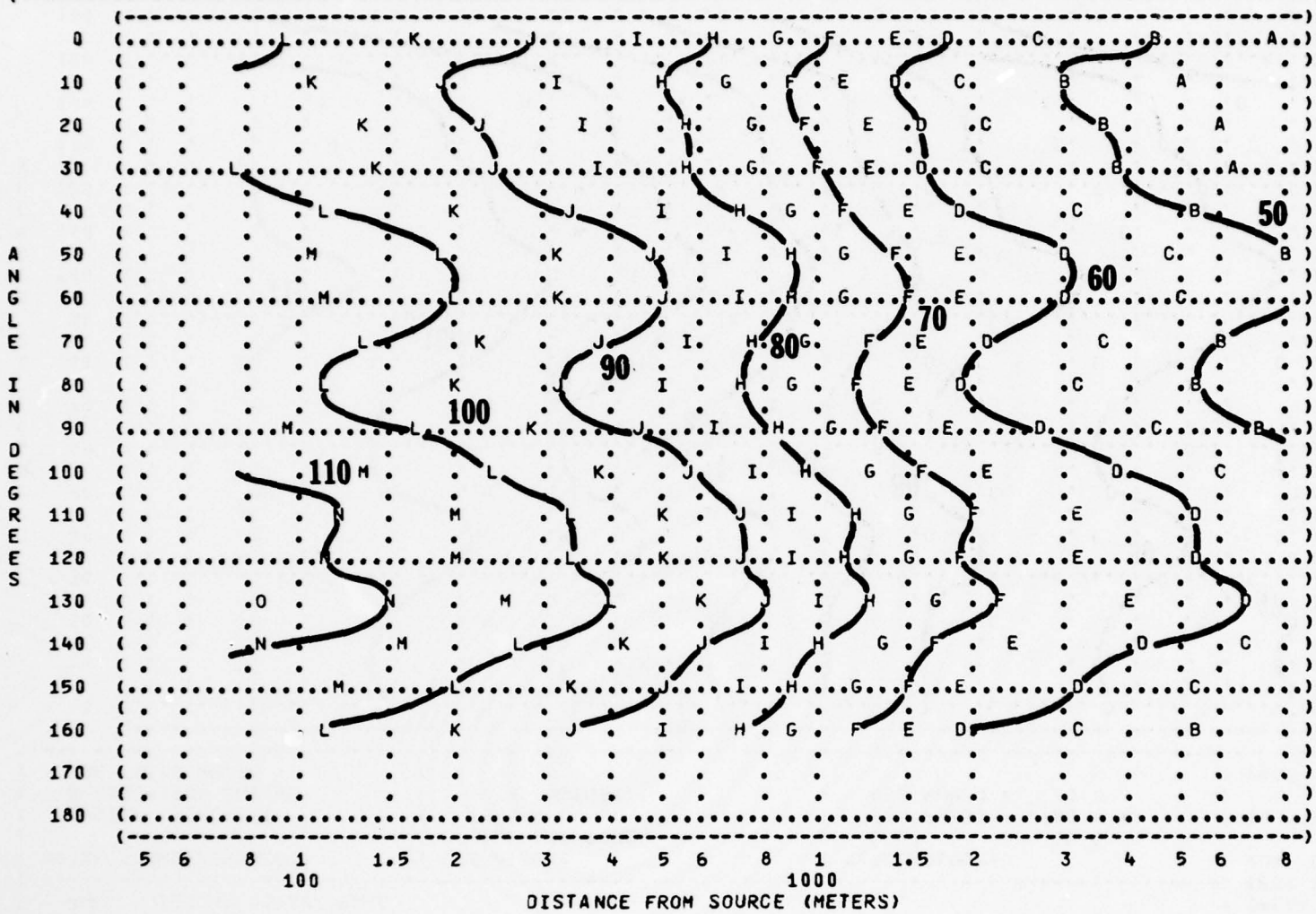


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 20

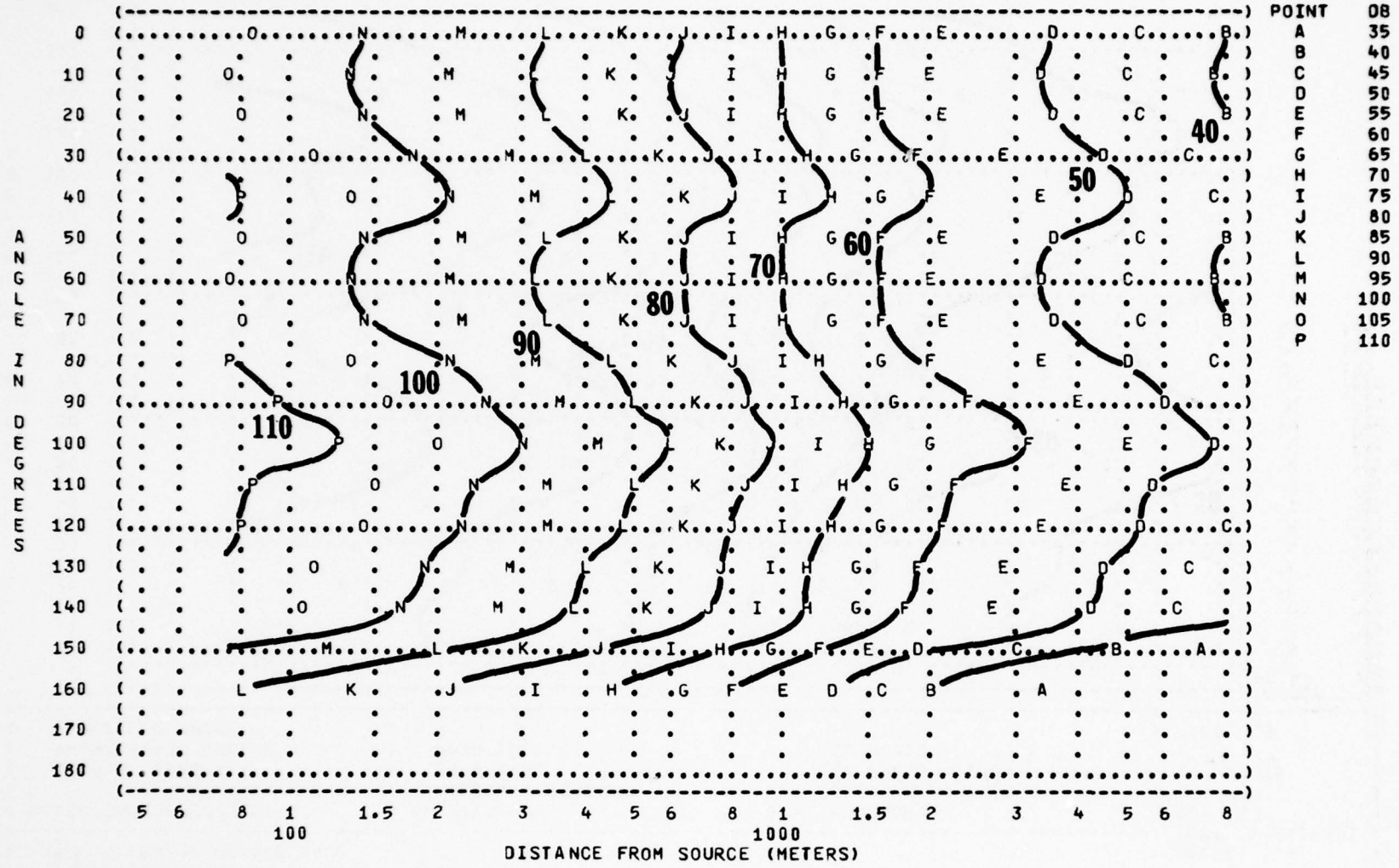


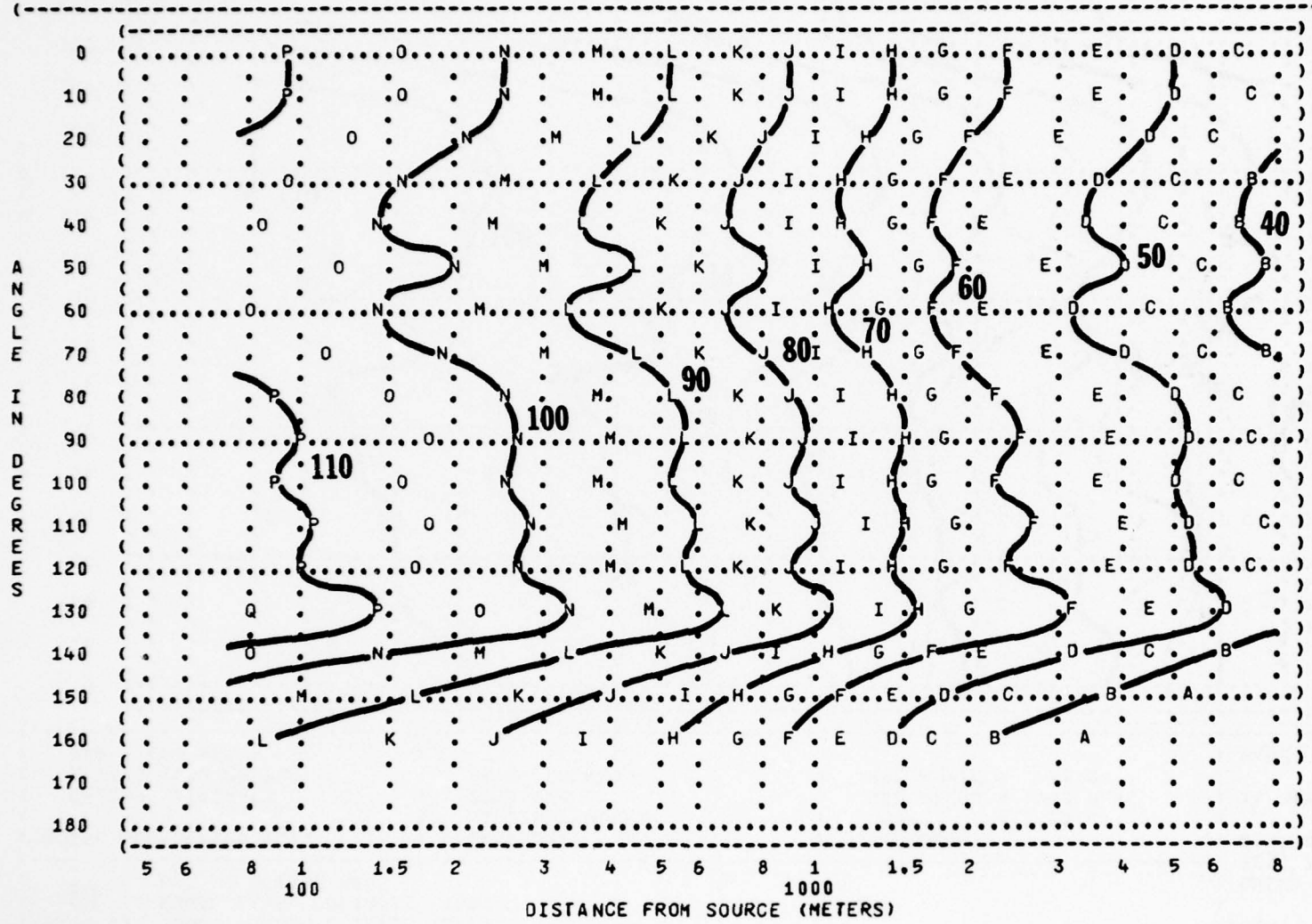
FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 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
Q	115

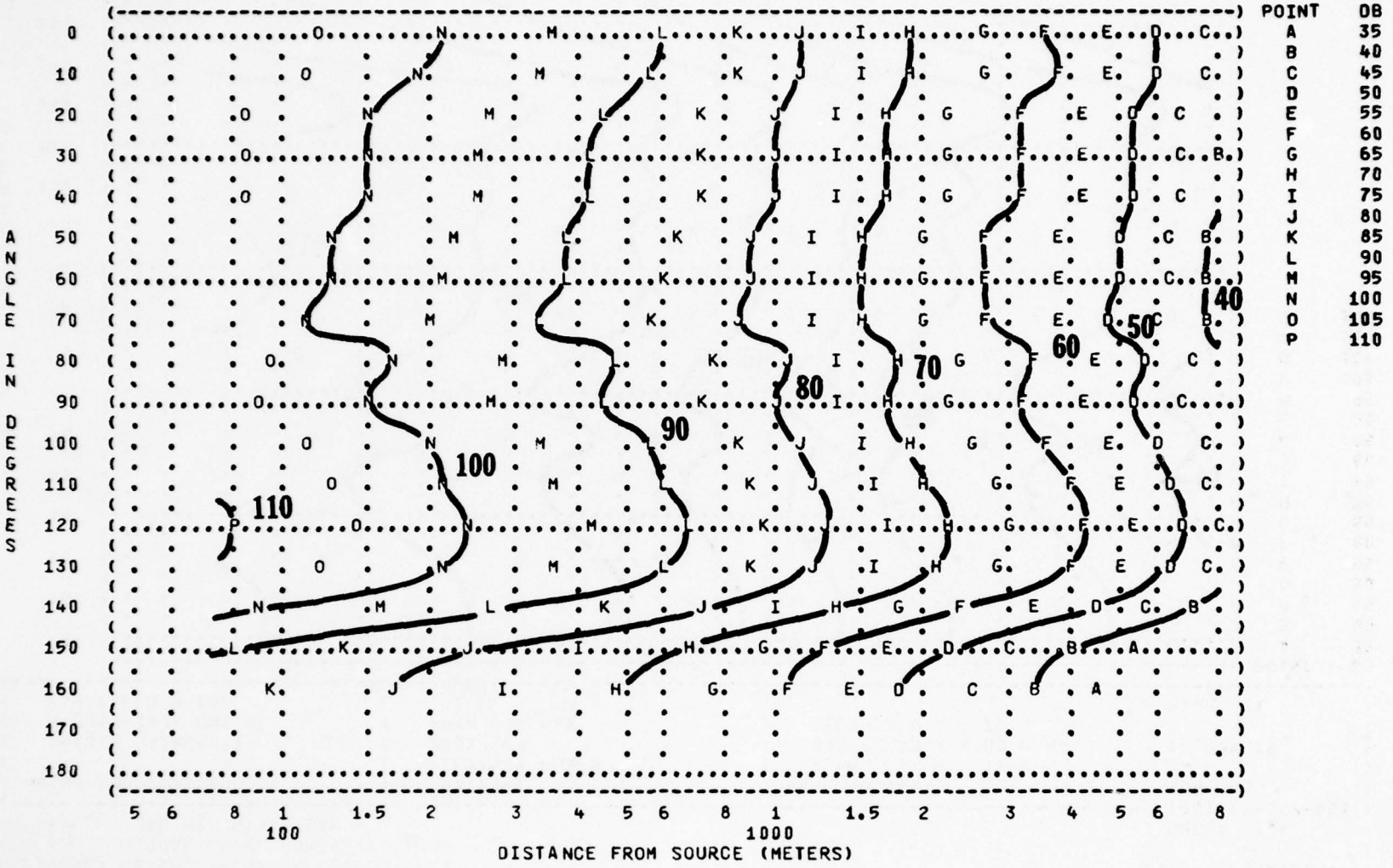
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 22

NOISE SOURCE/SUBJECT:
C-1318 AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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



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

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

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
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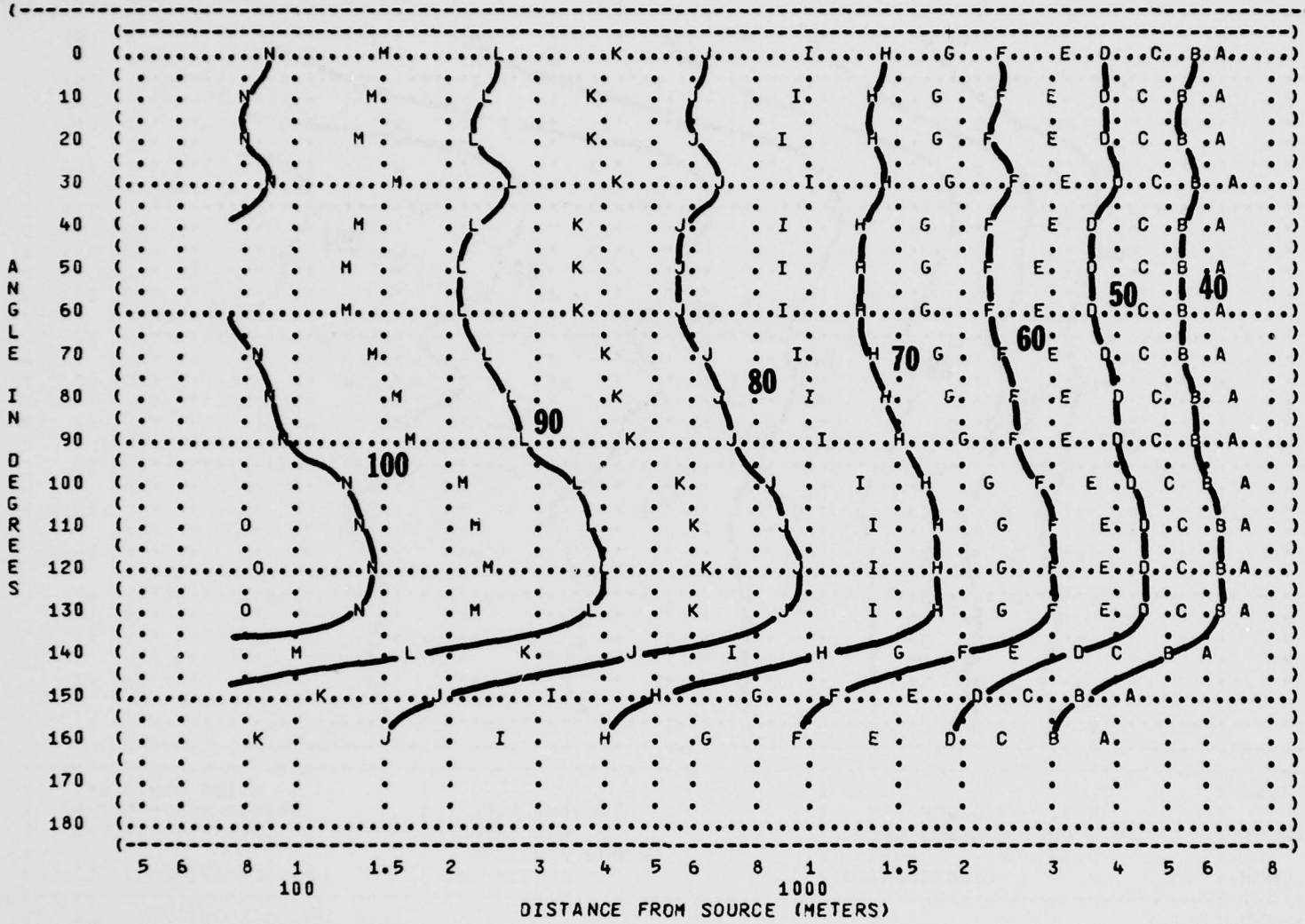
14 MAY 75
PAGE 23



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

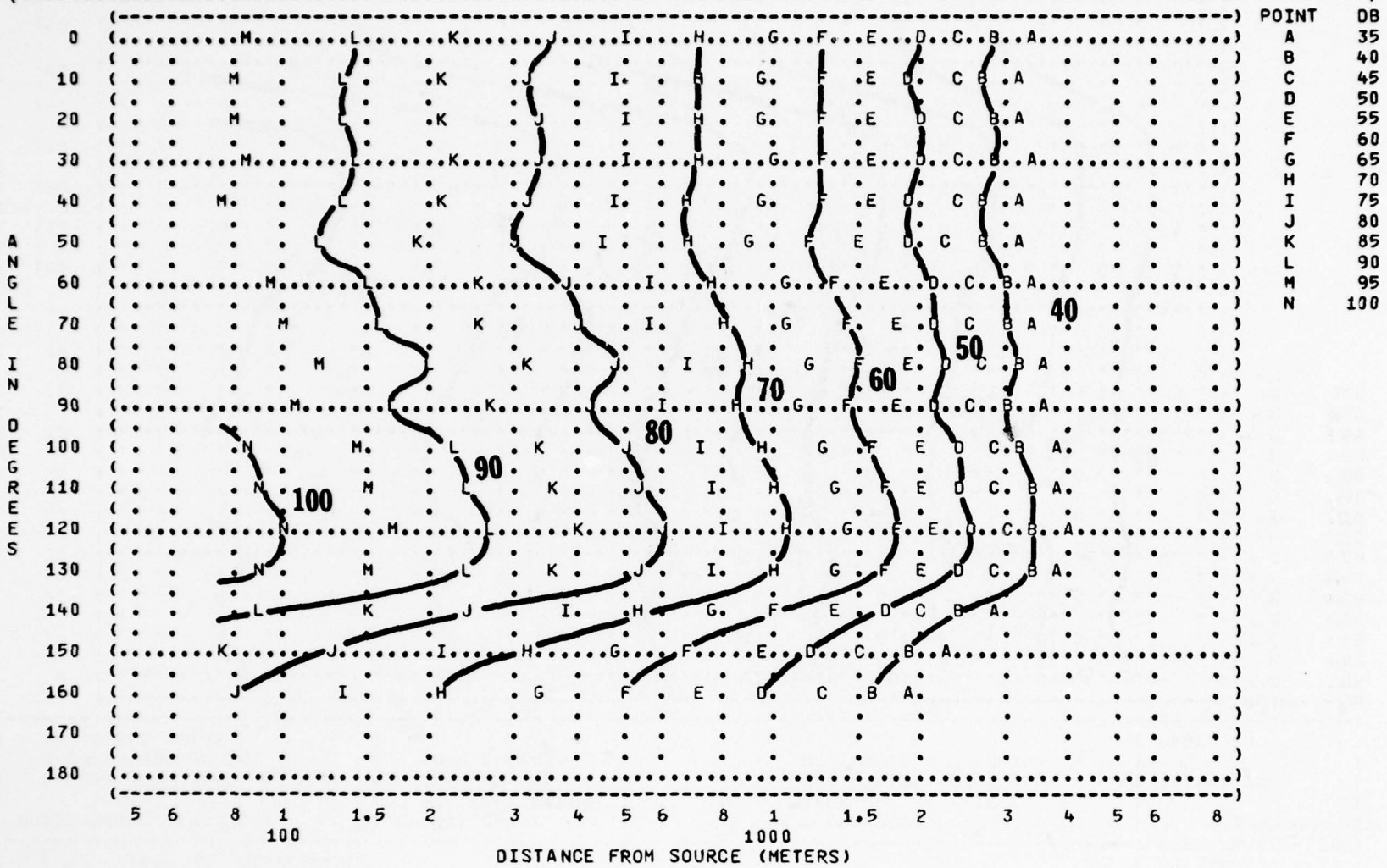
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 24



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

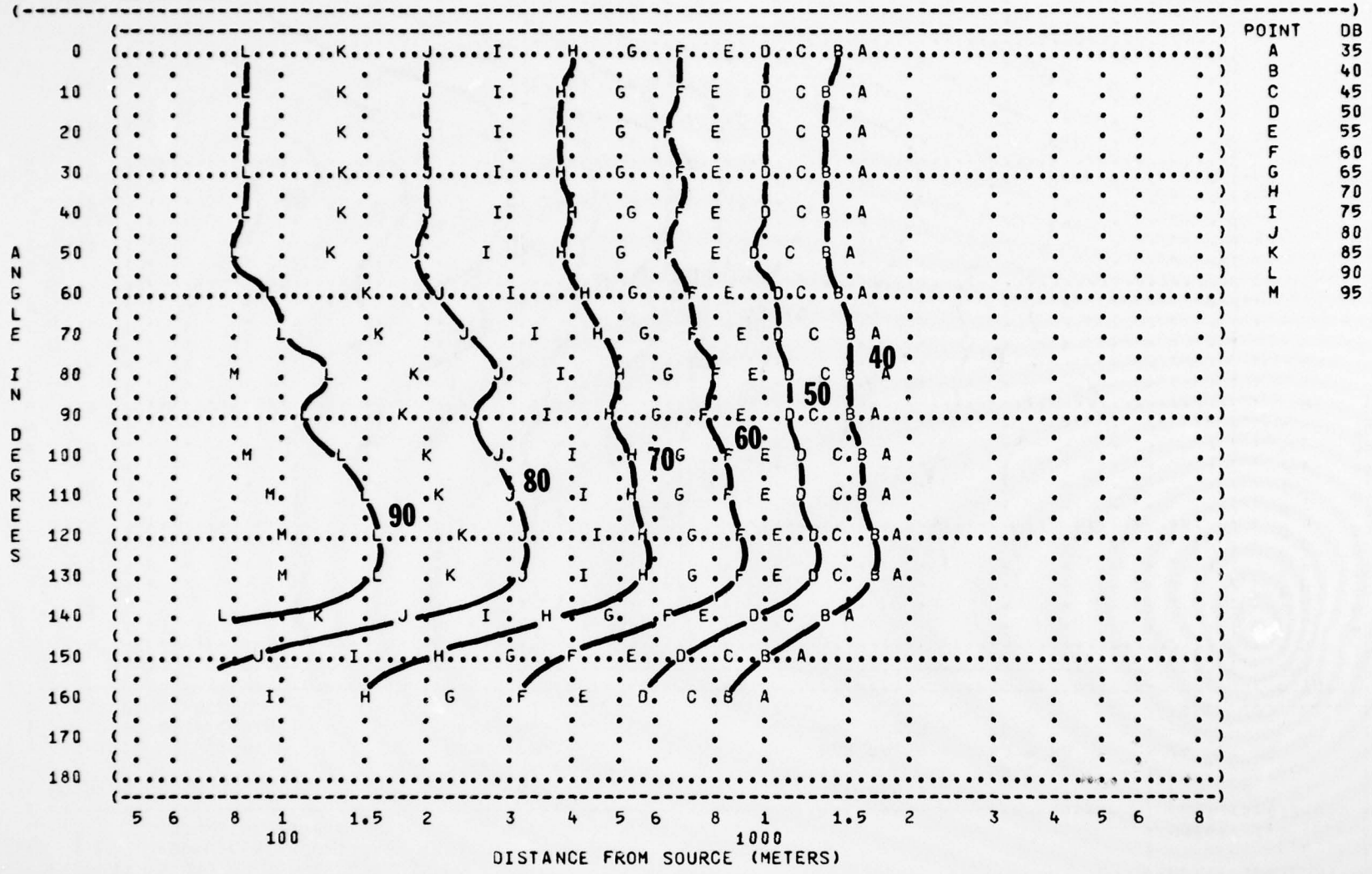
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 75
PAGE 25



AD-A048 932 AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OHIO F/G 20/1
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 87. C-131B AI--ETC(U)
FEB 77 R G POWELL

UNCLASSIFIED AMRL-TR-75-50-VOL-87 NL

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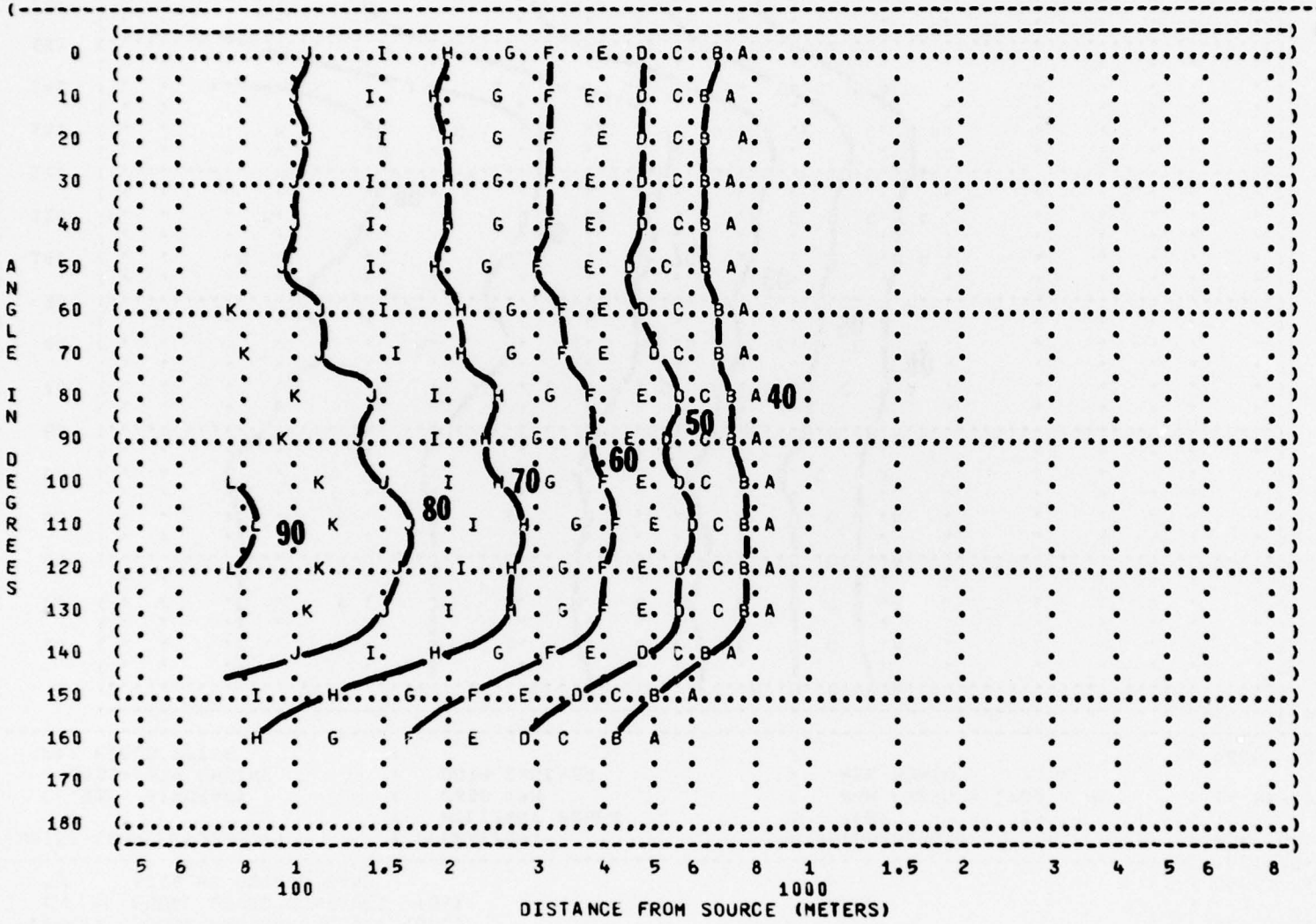
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-131B AIRCRAFT
R-2800-103W ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER
2800 RPM
BOTH ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-055
RUN 03
14 MAY 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

*U.S.Government Printing Office: 1977 — 757-080/245