AD-A053 712 AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OHIO F/G 1/2
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 100. C-121G A--ETC(U)
MAY 77 R G POWELL

UNCLASSIFIED AMRL-TR-75-50-VOL-100 NL

1 OF 2
AD A053712

AMRL-TR-75-50
Volume 100

USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK

Volume 100

C-121G Aircraft, Near and Far-Field Noise

MAY 1977

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

NOTICES

When US Government drawings, specifications, or other data are used for any purpose other than a definitely related Government procurement operation, the Government thereby incurs no responsibility nor any obligation whatsoever, and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data, is not to be regarded by implication or otherwise, as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

Please do not request copies of this report from Aerospace Medical Research Laboratory. Additional copies may be purchased from:

National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161

Federal Government agencies and their contractors registered with Defense Documentation Center should direct requests for copies of this report to:

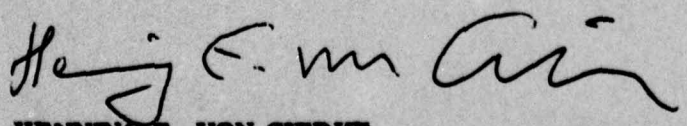
Defense Documentation Center
Cameron Station
Alexandria, Virginia 22314

TECHNICAL REVIEW AND APPROVAL

This report has been reviewed by the Information Office (OI) and is releasable to the National Technical Information Service (NTIS). At NTIS, it will be available to the general public, including foreign nations.

This technical report has been reviewed and is approved for publication.

FOR THE COMMANDER



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

AIR FORCE/56780/10 March 1978 — 300

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: AMRL-TR-75-50-VOL-100	2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER: Technical rept.
4. TITLE (and Subtitle): USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. C-121G Aircraft, Near and Far-Field Noise. Volume 100.	5. TYPE OF REPORT & PERIOD COVERED: Volume 100 of a series
	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s): Robert G. Powell	8. CONTRACT OR GRANT NUMBER(s): 04
9. PERFORMING ORGANIZATION NAME AND ADDRESS: Aerospace Medical Research Laboratory, Aerospace Medical Division, Air Force Systems Command, Wright-Patterson AFB OH 45433	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: 62202F 7231-04-33 7231-04-36
11. CONTROLLING OFFICE NAME AND ADDRESS: Same as above	12. REPORT DATE: May 77
	13. NUMBER OF PAGES: 121
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)	15. SECURITY CLASS. (of this report): Unclassified
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Noise
Noise Environments
Bioenvironmental Noise
Aircraft
C-121G Aircraft

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The USAF C-121G is a cargo aircraft powered by four R-3350-93 engines. This report provides measured and extrapolated data defining the bioacoustic environments produced by this aircraft operating on a taxiway for five engine conditions. Near-field data are reported for seven 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 inter-

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

009 850

ference level, perceived noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Far-field data measured at 19 locations are normalized to standard meteorological conditions and extrapolated from 75-8000 meters to derive sets of equal-value contours for these same seven acoustic measures as functions of angle and 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. Jerry Speakman and Mr. Robert Lee for their 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. Peggy Massie and Mr. Mike Patterson for assistance in typing and preparation of the graphics.

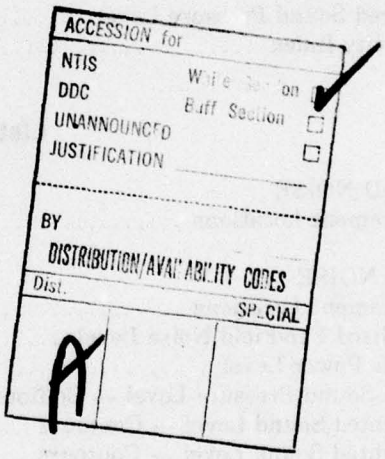


Table of Contents

List of Tables

List of Figures

INTRODUCTION

The USAF C-121G is a cargo aircraft powered by four R-3350-93 reciprocating engines. The aircraft was manufactured by the Lockheed Aircraft Corporation and the engines by Curtiss-Wright.

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-121G aircraft.

This volume is one of a series published by the 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% relative humidity, 0.760 meter Hg barometric pressure), to derive comparable data for other meteorological conditions. *Refer to Volumes 1 and 2* (references 1 and 2) for such information because it is not repeated in other handbook volumes.

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

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

---

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), Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, 1975.

NEAR-FIELD NOISE

MEASUREMENTS

AMRL acquired near-field noise data on the C-121G aircraft during ground runup operations of its reciprocating engines. For these tests the aircraft was located on a taxiway at Wright-Patterson AFB with no significant reflecting surfaces in the vicinity except the ground plane. Table 1 gives the surface meteorological conditions and nomenclature for ground crew locations. The ground-crew chief selected power conditions and near-field locations usually 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 seven near-field locations where ground crew are usually located for maintenance and/or preflight checkout operations. Estimates of noise levels at other locations are difficult in the near-field since the noise source is spatially distributed, i.e., not a point source. The noise levels at near-field locations can vary widely depending upon relative distances from each noise source (intake noise, exhaust noise, panel resonances, internal engine noise through the engine wall, etc.).

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

RESULTS

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the C-121G aircraft at the seven 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 the tests but are valid for all typical airbase meteorology because of the short sound propagation distances involved.

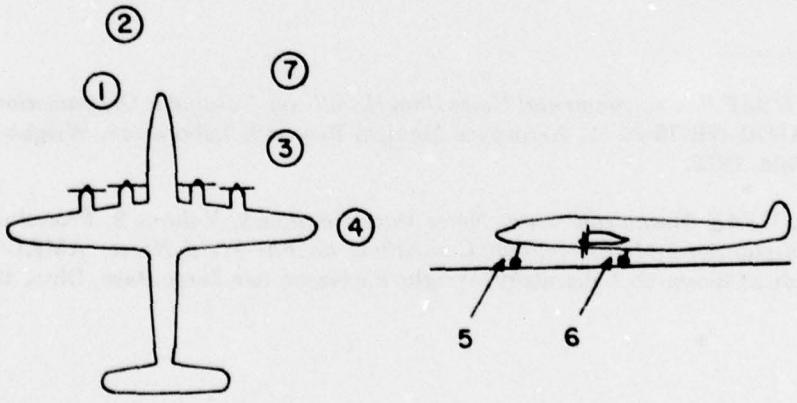


Figure 1. Near-Field Measurement Locations on Taxiway, Wright-Patterson AFB, OH

TABLE 1

MEASUREMENT LOCATIONS AND TEST CONDITIONS FOR NEAR-FIELD NOISE MEASUREMENTS

C-121G Aircraft, Ground Runups, Wright-Patterson AFB, OH
Tail #30548, 23 September 1974

Ground Crew Location

1	Engine Start
2	Marshal
3	Fire Guard
4	Wing Walker
5	Chock Pull
6	Chock Pull
7	Safety Observer

Aircraft Engine Operation

A	All Engines Idle

Meteorology

Temperature	12.2 C
Bar Pressure	0.749 M Hg
Rel Humidity	36 %
Wind — Speed	2 M/Sec (4 Kts)
— Direction	050 Deg

FAR-FIELD NOISE

MEASUREMENTS

AMRL acquired near and far-field data during a 1- 2-hour test period, thus keeping similar meteorological conditions. Figure 2 shows the ground runup area (taxiway), ground cover, aircraft orientation and 19 microphone measurement sites on the semicircle. The center of the 75 meter radius semicircle used in surveying the R-3350-93 engines was on the ground directly below the intersection of the aircraft's centerline and the plane passing through both inboard 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 19 microphone measurement sites are in the acoustic far-field of the source where the sound wave-fronts spherically diverge and the noise source may be regarded as a point source.

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

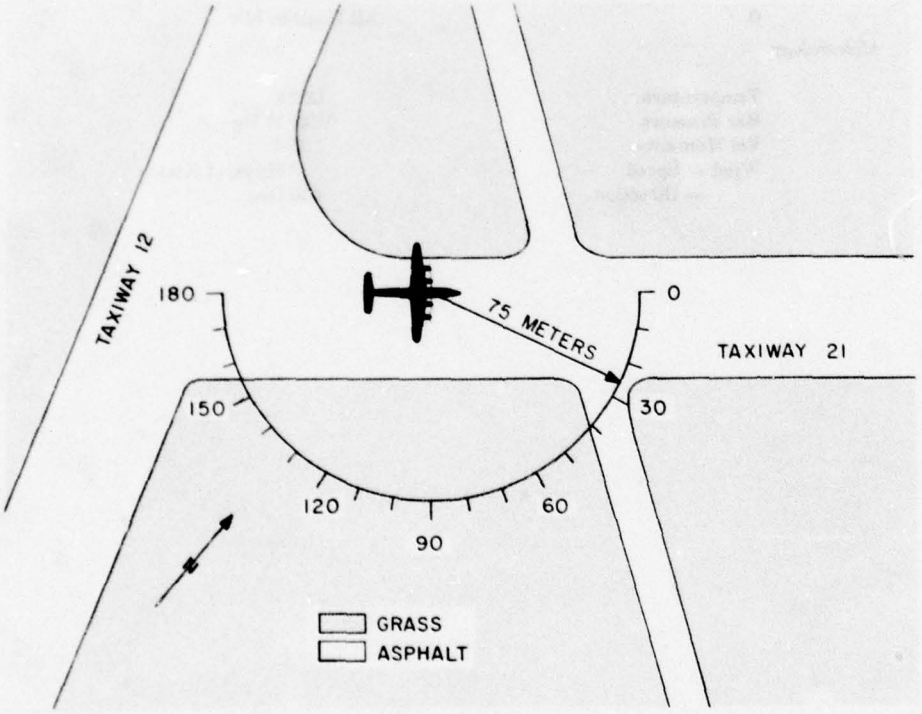


Figure 2. Far-Field Measurement Locations on Taxiway Wright-Patterson AFB, OH

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-121G aircraft in a standard format.

Figure 4 and Table 6 present two basic acoustic measures, the acoustic power level and the directivity index, respectively. The acoustic power level describes the power radiated by the source as a function of frequency. The directivity index is a standard acoustical engineering measure 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 the noise levels for intermediate power settings (e.g., 2300 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 170/180 degree locations for the engine warmup and propeller speed check, nor at the 160/170/180 locations for the magneto check and the takeoff power settings because of turbulent air flow behind the aircraft. Typically, the A-weighted levels for these angles are 5 to 10 dBA below the level measured at the preceding microphone 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, idle power).

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

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

IDENTIFICATION: OMEGA 3.2 / TEST 74-075-001 / RUN 01 / 04 MAR 77 / PAGE F1

NOISE SOURCE/SUBJECT: C-121G AIRCRAFT; GROUND CREW; NEAR FIELD NOISE LEVELS

OPERATION:

FREQ (HZ)	LOCATION/CONDITION 1/A	2/A	3/A	4/A	5/A	6/A	7/A
25	82	77<	87	84	89	98	83
31.5	85	82	87	84	90	94	84
40	90	85	92	91	95	97	88
50	94	92	97	93	100	99	94
63	95	92	97	96	100	98	93
80	89	86	90	86	93	96	86
100	87	83	87	83	89	97	83
125	83	80	81	79	87	95	81
160	82	79	80	81	87	90	81
200	81	79	83	83	85	89	80
250	78	78	78	77	83	83	78
315	75	74	80	75	83	84	75
400	75	71	75	76	80	86	73
500	75	70	78	80	81	85	74
630	73	66	75	73	80	81	72
800	71	65	72	74	75	82	69
1000	70	65	73	72	76	80	70
1250	70	66	73	72	75	81	69
1600	70	66	71	72	75	81	68
2000	71	67	73	75	76	81	70
2500	69	65	72	74	75	81	71
3150	69	64	70	73	74	80	67
4000	69	54	72	75	74	81	68
5000	66	61	69	71	71	77	67
6300	64	58	67	67	69	74	63
8000	64	59<	68	70	70	75	63
10000	62	56	66	69	68	74	61
OVERALL	99	97	102	99	105	106	98

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 3.2
TEST 74-075-001
RUN 01
04 MAR 77
PAGE J1

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

FREQ (HZ)	LOCATION/CONDITION 1/A	2/A	3/A	4/A	5/A	6/A	7/A
31.5	91	87	94	92	97	101	90
63	98	96	100	98	103	103	97
125	89	86	89	86	93	99	85
250	83	82	85	85	88	91	83
500	79	74	81	82	85	89	78
1000	75	70	77	77	80	86	74
2000	75	71	76	79	80	86	74
4000	73	68	75	78	78	84	72
8000	68	62	72	73	74	79	67
OVERALL	99	97	102	99	105	106	98

TABLE: 3 MEASURES OF HUMAN NOISE EXPOSURE

IDENTIFICATION:
OMEGA 3.2
TEST 74-075-001
RUN 01
04 MAR 77
PAGE H1

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
GROUND CREW
NEAR FIELD NOISE LEVELS

OPERATION:

	LOCATION/CONDITION						
	1/A	2/A	3/A	4/A	5/A	6/A	7/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	98	96	100	98	104	105	97
OASLA	83	79	85	86	88	93	82
T	571	960	404	339	240	101	679
MINIMUM QPL EAR MUFFS							
OASLA*	73	70	75	73	78	81	71
T	960	960	960	960	960	807	960
AMERICAN OPTICAL 1700 EAR MUFFS							
OASLA*	71	68	73	71	76	77	69
T	960	960	960	960	960	960	960
V-51R EAR PLUGS							
OASLA*	62	59	64	63	67	70	61
T	960	960	960	960	960	960	960
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS							
OASLA*	53	50	55	53	58	60	52
T	960	960	960	960	960	960	960
H-133 GROUND COMMUNICATION UNIT							
OASLA*	65	62	67	65	70	72	64
T	960	960	960	960	960	960	960
COMMUNICATION							
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)							
PSIL	76	72	78	79	82	87	75
ANNOYANCE							
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)							
TONE CORRECTION (C IN DB)							
PNLT	100	96	102	103	105	109	98
C	0	0	1	2	0	0	0

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE 4

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS

C-121G Aircraft, Ground Runups, Wright-Patterson AFB, OH
Tail #30548, 23 September 1974

Aircraft Engine Operation

Idle	All Engines
	700 RPM
	26.3 Inches Mg, Manifold Pressure
	90 LBS/HR, Fuel Flow
Engine Warmup	All Engines
	1200 RPM
	24 Inches Hg, MAP
	150 LBS/HR, FF
Propeller Speed Check	All Engines
	1700 RPM
	25.2 Inches Hg, MAP
	325 LBS/HR, FF
Power Check	All Engines
	2050 RPM
	28.8 Inches Hg, MAP
	500 LBS/HR, FF
Takeoff Power	All Engines
	2900 RPM
	58 Inches Hg, MAP
	2000 Plus LBS/HR, FF

Meteorology

Temperature	12.2 C
Bar Pressure	0.749 M Hg
Rel Humidity	36 %
Wind — Speed	2 M/Sec (4 Kts)
— Direction	050 Deg

TABLE: 5

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

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
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	72	72	73	72	73	74	73	74	74	76	74	76	73	72	73	70<	70<	70<	76
31.5	74	74	74	72<	72<	73<	73<	76	74	77	76	78	76	74	75	73<	72<	73<	74
40	80	79	80	80	80	81	81	80	81	82	81	82	80	80	80	78	79	79	78
50	84	84	83	82	82	82	83	83	83	84	83	83	82	81	82	82	82	81	79
63	82	82	83	82	82	83	85	85	86	86	87	86	84	82	83	83	81	79	76
80	75	75	76	75	74	74	74	75	76	80	78	77	74	73	71<	73	72	71<	69<
100	75	74<	74<	72<	70<	68<	69<	71<	72<	74<	74<	72<	71<	70<	71<	72<	71<	72<	68<
125	74	72	72	71	70	71	70	68	70	73	70	71	68	69	70	69	68	68	64<
160	74	73	73	73	71	70	70	68	70	73	71	71	70	70	71	70	69	68	63
200	75	74	72	72	70	71	71	68	70	72	70	72	72	71	72	70	71	69	64
250	70	69	69	67	65	66	63	61	62	66	62	67	64	64	66	65	65	64	62
315	66	64	63	62	60	59	58	56	56	63	54	65	57	58	60	63	63	62	59
400	66	66	65	64	61	60	59	57	57	62	56	66	59	59	60	64	65	62	61
500	64	64	64	62	61	58	60	59	57	64	59	64	64	60	62	65	66	60	58
630	60	60	59	59	59	55	57	54	55	62	58	60	63	60	66	61	62	57	55
800	57	58	57	57	57	55	57	54	54	63	59	61	62	60	62	61	60	56	54
1000	56	56	56	56	56	56	56	55	55	57	57	62	59	60	72	59	57	54	53
1250	56	57	56	56	58	57	57	55	56	57	59	60	58	60	61	62	58	54	54
1600	56	57	56	57	57	57	55	55	56	58	58	60	60	59	64	61	57	53	53
2000	56	56	57	58	57	57	55	55	55	58	59	60	63	60	61	61	57	52	53
2500	56	56	58	57	57	57	55	55	54	56	57	59	61	60	59	60	54	52	53
3150	53	54	54	55	54	54	52	52	52	55	56	57	60	59	59	58	53	51	52
4000	52	53	53	53	53	52	51	51	52	56	56	57	59	59	58	57	53	50	50
5000	46	48	51	48	48	48	47	48	47	49	50	52	54	53	53	51	46	45	45
6300	42	44	43	43	43	43	42	44	43	45	46	48	50	49	48	49	44	41	42
8000				45<	50<	49<	49<	52<	47<	47<	49<	49<	53<	53<	54<	54<	48<		
10000	38<	41<	40<	40<	43<	42<	41<	44<	43<	40<	41<	42<	45<	44<	45<	42<	37<		
OVERALL	88	88	88	87	87	88	89	89	89	90	90	90	88	87	88	87	87	86	84

< 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 75-002-019
RUN 02
12 AUG 76
PAGE 2

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M MG
REL HUMID = 36 %

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	79	78	79	78	78	73	77	74	79	79	78	81	79	77	80	78		
31.5	70<	70<	71<	70<	71<	69<	68<	70<	68<	71<	73<	72<	72<	73<	68<	70<	72<		
40	75	75	77	78	81	82	83	81	79	81	84	81	81	81	76	74<	75		
50	83	82	84	83	84	82	83	81	81	83	86	85	83	84	84	79	78		
63	86	88	91	93	93	92	92	90	91	94	95	94	94	92	91	89	77		
80	86	85	88	89	90	90	90	90	90	93	92	92	91	89	87	85	79		
100	85	85	85	85	83	83	84	85	86	88	86	85	83	85	83	78	77		
125	84	83	83	81	83	82	81	83	81	83	79	79	80	80	78	74	71		
160	84	85	85	84	82	81	78	76	75	78	76	77	80	78	78	73	68		
200	84	83	83	80	78	76	77	75	73	75	76	75	75	75	75	71	66		
250	84	83	83	79	76	74	74	72	68	68	70	71	72	73	73	69	66		
315	83	81	80	78	75	71	70	69	67	66	66	66	67	71	70	69	66		
400	81	80	80	78	74	71	70	69	66	67	67	67	68	69	70	69	65		
500	78	78	77	76	72	69	68	67	65	68	68	69	68	69	69	69	64		
630	74	74	74	73	70	67	66	65	62	64	66	67	67	68	67	66	61		
800	72	71	72	70	68	67	66	64	62	64	66	65	68	69	69	67	60		
1000	68	69	69	68	67	65	64	63	61	63	65	64	66	69	67	66	58		
1250	67	67	67	67	66	64	64	63	63	64	65	65	65	70	68	66	57		
1600	67	67	68	67	66	65	63	64	63	64	65	65	66	70	69	66	56		
2000	66	67	67	67	65	65	64	64	63	64	65	66	67	70	67	65	54		
2500	65	66	67	67	66	65	64	64	62	63	63	65	66	69	66	63	52		
3150	65	69	71	72	70	67	65	66	64	66	65	66	67	68	65	62	53		
4000	62	63	64	64	63	63	62	62	61	63	63	63	64	66	63	61	51		
5000	58	59	59	59	60	58	58	59	58	58	59	59	59	61	58	56	46		
6300	54	55	56	56	57	55	55	56	55	56	55	55	56	57	55	52	43		
8000	52<	53<	54<	54<	57	56	55	56	54<	53<	54<	53<	56	56	56	54<	47<		
10000	52	52	53	53	54	53	53	54	50	48	49	48	49	50	49	45<	37<		
OVERALL	94	94	96	96	96	96	96	95	95	97	98	97	96	95	94	92	86		

< 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 75-002-019
RUN 03
12 AUG 76
PAGE 2

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

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	73	75	75	75	78	79	77	75	77	77	77	76	74	76	74	78		
31.5	81	82	83	80	82	83	81	76	80	83	88	91	86	85	82	82	80		
40	89	90	91	89	91	91	89	83	87	89	94	97	93	92	89	89	85		
50	83	87	84	85	87	88	87	81	91	83	86	85	81	86	86	81	79		
63	88	85	84	85	84	86	87	90	85	86	87	88	85	84	84	81	77		
80	92	92	90	89	89	87	88	87	88	86	86	84	84	84	86	83	80		
100	92	95	96	100	98	96	98	100	99	97	96	93	97	95	97	94	88		
125	94	94	90	90	87	84	86	88	87	87	85	83	81	85	80	80	74		
160	93	93	91	92	90	89	84	85	86	83	82	80	84	84	83	78	73		
200	93	93	92	92	86	85	83	83	82	80	81	78	82	81	83	76	73		
250	93	92	92	90	86	85	83	81	81	77	78	79	80	80	79	75	72		
315	93	91	91	89	85	84	79	79	77	75	75	74	76	78	78	75	72		
400	91	90	89	90	85	81	79	76	75	72	72	73	74	76	76	74	71		
500	89	88	88	88	82	79	78	77	72	73	71	74	74	75	75	74	70		
630	85	85	84	85	79	78	75	74	71	71	70	74	73	76	76	74	70		
800	82	83	82	83	79	77	74	73	71	70	72	72	72	74	76	73	69		
1000	79	80	79	80	76	75	72	73	71	69	70	70	71	73	74	72	68		
1250	78	78	78	78	76	74	72	72	71	70	70	70	70	72	74	70	66		
1600	78	77	77	78	76	74	73	74	72	70	72	71	71	72	72	68	64		
2000	76	76	76	77	75	74	74	74	72	70	71	71	72	70	69	65	60		
2500	75	75	75	76	75	74	75	74	74	69	71	70	71	68	67	63	57		
3150	73	73	75	75	73	73	74	73	72	69	70	70	70	67	66	61	55		
4000	72	73	73	74	74	73	74	73	72	68	68	68	69	67	64	59	53		
5000	69	69	70	71	71	70	71	70	68	65	65	65	65	63	61	54	49		
6300	66	66	67	68	69	68	69	67	66	63	62	61	61	60	59	52	46		
8000	65	66	66	67	67	67	67	67	64	61	59	58	58	57	56	53<	44<		
10000	64	65	64	66	67	66	66	65	64	57	55	54	53	52	51	44<	38<		
OVERALL	102	103	102	103	101	100	100	101	101	99	99	100	99	98	99	96	92		

< 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 75-002-019
RUN 04
12 AUG 76
PAGE 2

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	73	72	73	72	72	72	73	72	74	71<	71<	71<	72	69<	69<	70<			
31.5	77	77	81	82	83	88	89	88	89	90	88	90	88	85	82	81			
40	92	93	96	95	95	95	92	92	97	98	101	103	102	98	96	94			
50	88	89	90	90	90	91	88	85	90	92	95	97	96	93	92	88			
63	82	87	90	93	93	94	94	93	91	93	92	92	94	90	90	87			
80	99	97	95	94	91	93	93	93	94	94	95	93	94	90	88	88			
100	100	96	96	94	90	92	92	92	91	92	94	92	94	89	89	90			
125	99	98	99	97	94	95	94	92	91	90	92	93	90	90	94	92			
160	97	97	96	93	91	90	90	88	88	87	87	89	89	87	87	88			
200	98	98	97	95	90	88	88	85	86	83	84	83	85	85	87	86			
250	100	98	97	96	91	90	91	87	90	85	87	88	88	90	89	88			
315	98	97	96	93	88	88	87	81	82	80	81	83	84	84	83	86			
400	97	95	95	94	87	87	85	80	83	78	79	82	80	82	82	87			
500	96	94	94	94	85	85	84	79	83	79	79	82	80	83	82	86			
630	93	92	91	92	85	85	84	77	83	79	80	81	80	83	82	85			
800	91	89	89	90	85	83	83	76	84	79	80	80	79	83	82	85			
1000	87	86	86	87	83	82	83	76	83	78	79	79	78	81	80	85			
1250	85	86	85	85	83	82	84	78	84	78	79	78	77	80	79	84			
1600	85	85	84	85	83	84	85	78	84	78	79	79	78	80	78	83			
2000	84	84	84	85	84	83	85	79	86	77	78	77	77	78	75	79			
2500	84	84	84	84	85	84	85	80	85	77	78	77	76	75	74	76			
3150	82	82	82	83	84	83	84	79	83	78	78	77	75	75	73	75			
4000	81	81	82	83	83	83	84	79	83	77	76	76	74	74	72	74			
5000	78	78	79	80	80	79	81	77	79	73	73	72	70	70	68	70			
6300	75	75	76	77	77	76	78	73	76	72	71	70	68	67	66	67			
8000	73	75	75	76	76	74	76	71	74	69	67	66	65	65	62	64			
10000	72	73	73	74	74	74	74	69	74	64	62	61	60	60	58	58			
OVERALL	108	107	107	106	103	103	103	101	102	103	104	105	105	102	101	101			

< 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 75-002-019
RUN 05
12 AUG 76
PAGE 2

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	96	94	92	94	92	95	96	96	98	97	95	97	96	97	93	93			
31.5	87	89	87	88	88	88	89	91	92	92	92	91	91	90	90	88			
40	91	91	92	93	94	94	94	95	95	96	95	96	97	95	94	90			
50	94	97	98	99	101	101	100	98	105	106	103	107	108	105	102	95			
63	106	106	106	106	108	109	111	107	117	120	117	122	123	120	116	107			
80	96	96	98	98	96	98	99	101	102	102	100	102	103	102	101	95			
100	101	104	103	103	101	99	102	108	108	107	105	104	106	108	106	100			
125	108	111	110	103	107	109	112	114	115	117	120	114	115	111	103	98			
160	107	107	108	106	107	103	103	105	108	109	108	107	108	106	105	96			
200	108	108	106	107	105	106	105	109	113	114	114	108	108	106	102	97			
250	110	107	108	106	103	106	102	105	110	109	109	105	103	102	98	92			
315	106	107	107	103	101	102	98	102	107	109	105	105	98	99	96	91			
400	106	105	106	104	103	101	99	105	110	112	109	106	98	96	93	89			
500	104	104	105	102	99	100	98	105	107	109	105	102	97	97	92	88			
630	102	102	103	102	99	98	99	104	107	106	103	102	97	98	93	88			
800	101	101	101	99	97	98	99	105	106	104	101	101	98	96	93	88			
1000	99	99	100	98	96	98	98	103	105	104	100	98	97	97	92	87			
1250	98	97	98	96	96	97	96	102	105	102	99	97	94	95	92	87			
1600	96	96	97	95	96	97	96	101	105	103	99	96	92	93	90	86			
2000	96	95	96	95	95	97	96	99	102	101	96	94	91	91	88	84			
2500	95	95	96	95	94	96	96	97	100	100	94	92	89	90	87	82			
3150	93	93	93	92	93	94	93	97	99	99	94	92	89	89	87	81			
4000	93	93	93	92	93	94	93	95	99	99	92	89	88	89	86	81			
5000	89	89	90	89	89	90	88	91	95	94	88	86	84	85	82	77			
6300	86	86	86	85	86	87	86	89	93	92	86	83	81	83	80	75			
8000	84	84	85	84	85	86	84	86	92	90	83	80	79	80	77	72			
10000	83	82	83	81	83	84	83	82	90	87	79	75	74	75	73	68			
OVERALL	117	117	117	115	115	116	117	119	122	124	123	123	124	121	117	110			

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

FIGURE: 3 NORMALIZED FARFIELD NOISE LEVELS

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 6

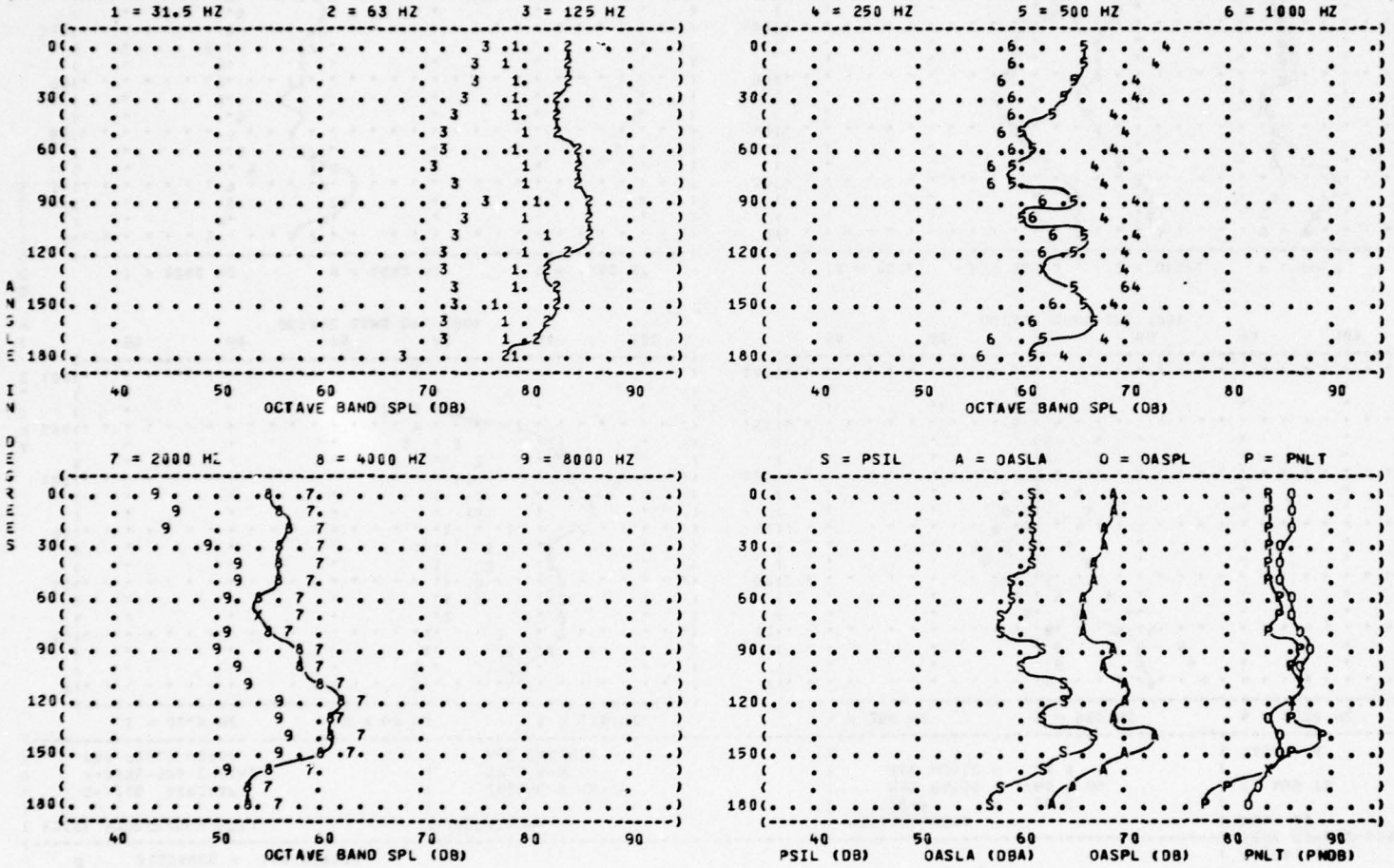


FIGURE 3 NORMALIZED FARFIELD NOISE LEVELS

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 6

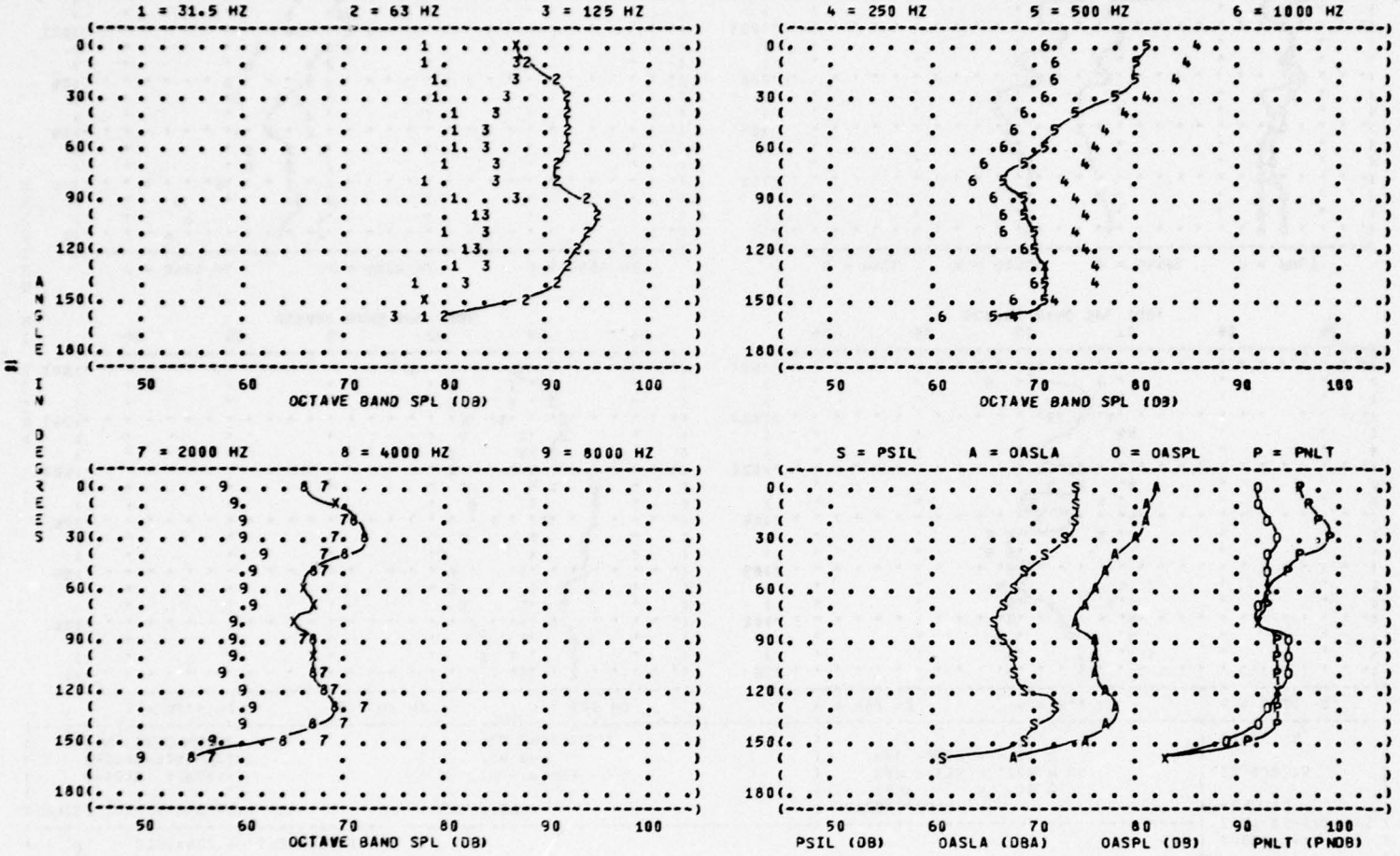


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:

C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:

PROP SPEED CHECK
1700 RPM
ALL ENGINES

METEOROLOGY:

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

IDENTIFICATION:

OMEGA 1.4
TEST 75-002-019
RUN 03

12 AUG 76

PAGE 6

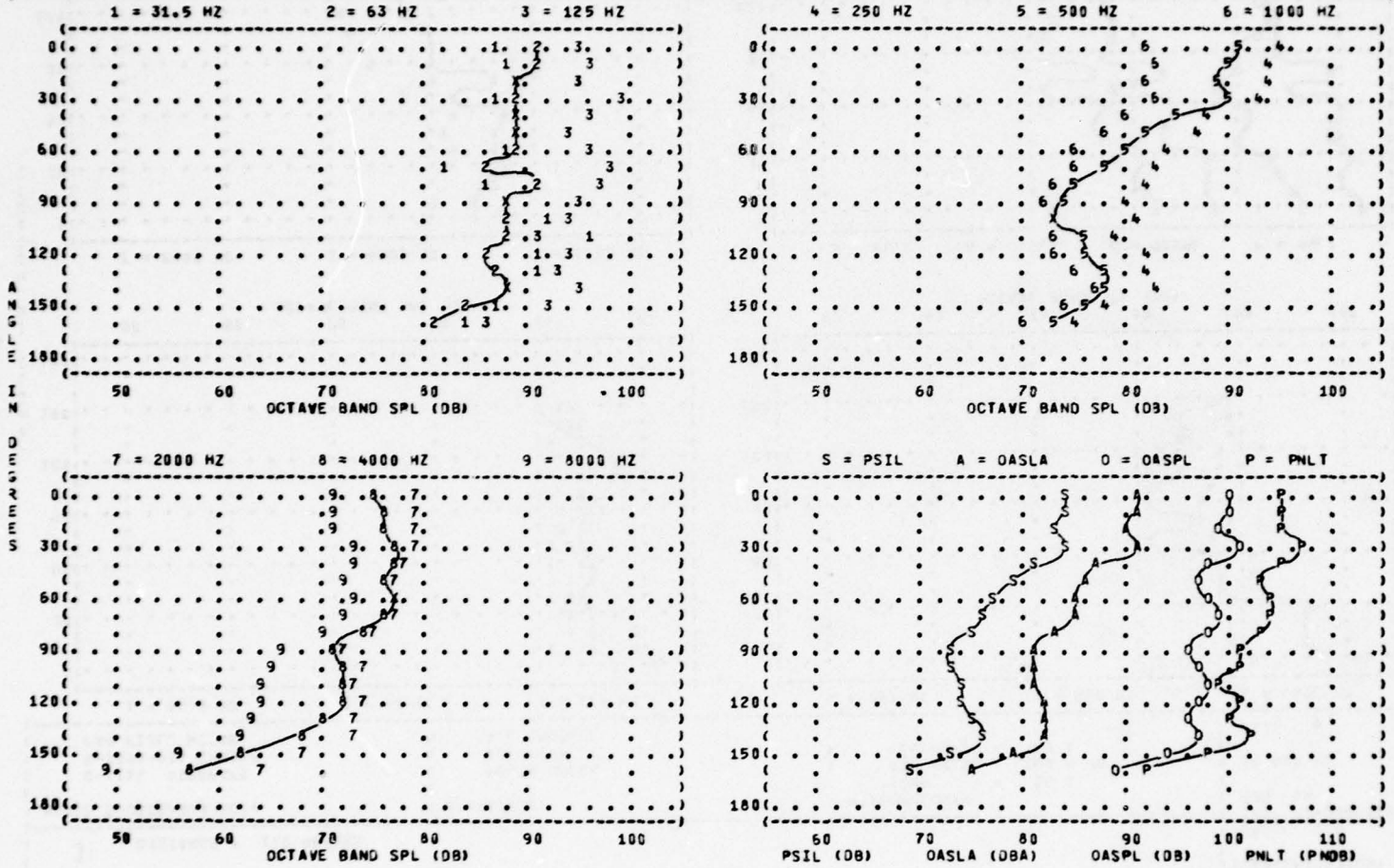


FIGURE: 3 NORMALIZED FARFIELD NOISE LEVELS

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 6

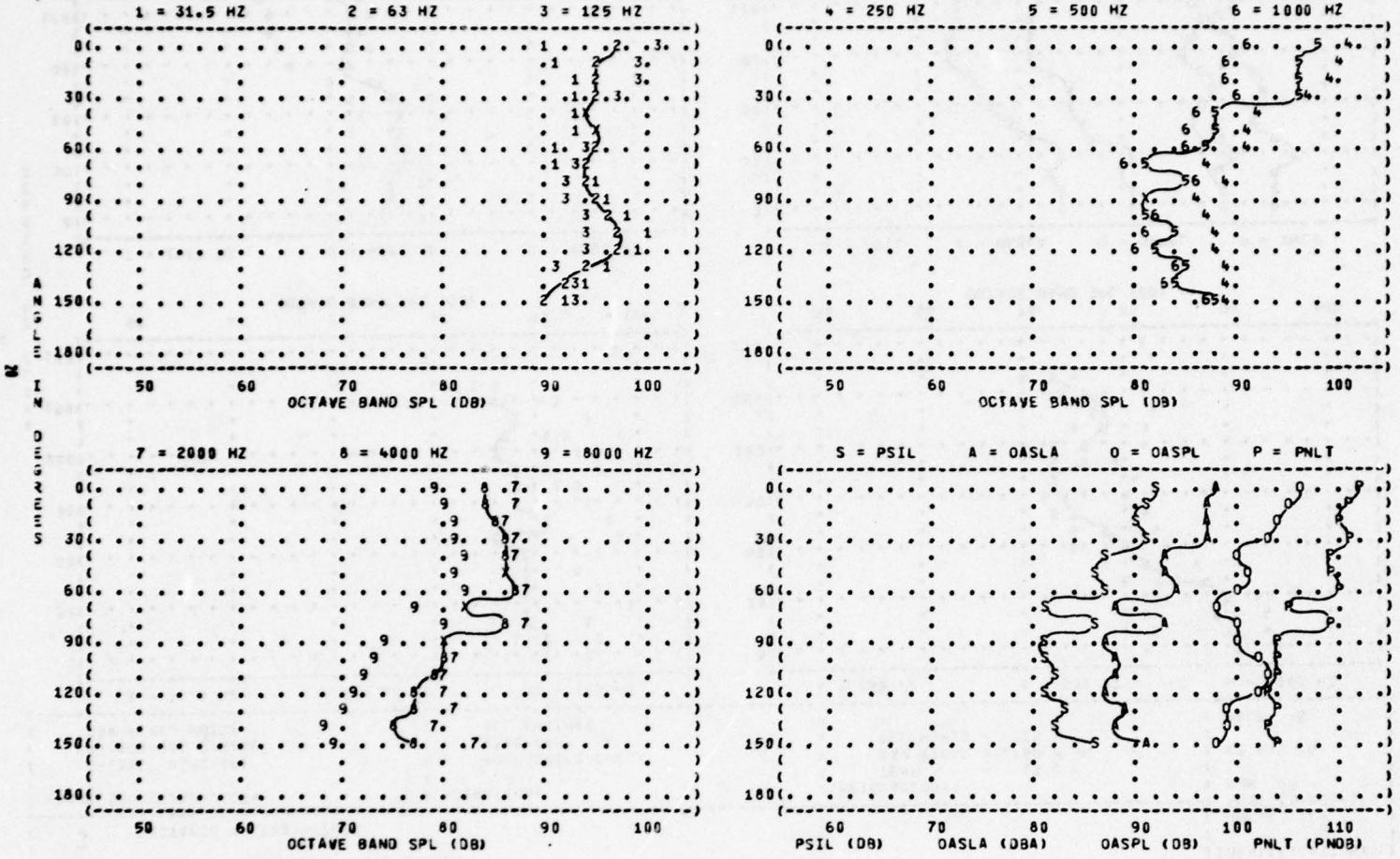


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 6

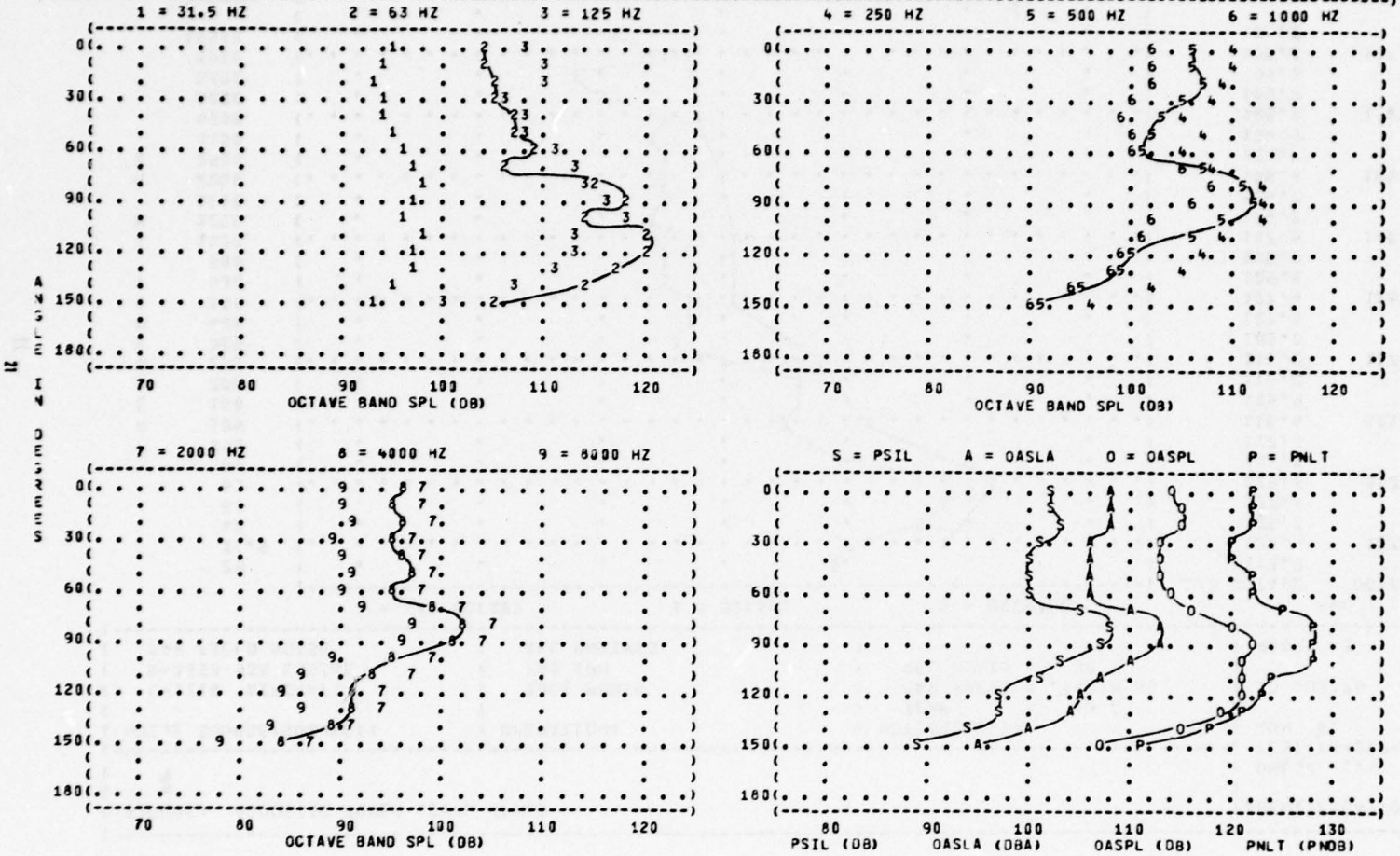


FIGURE: ACOUSTIC POWER LEVEL (PWL)

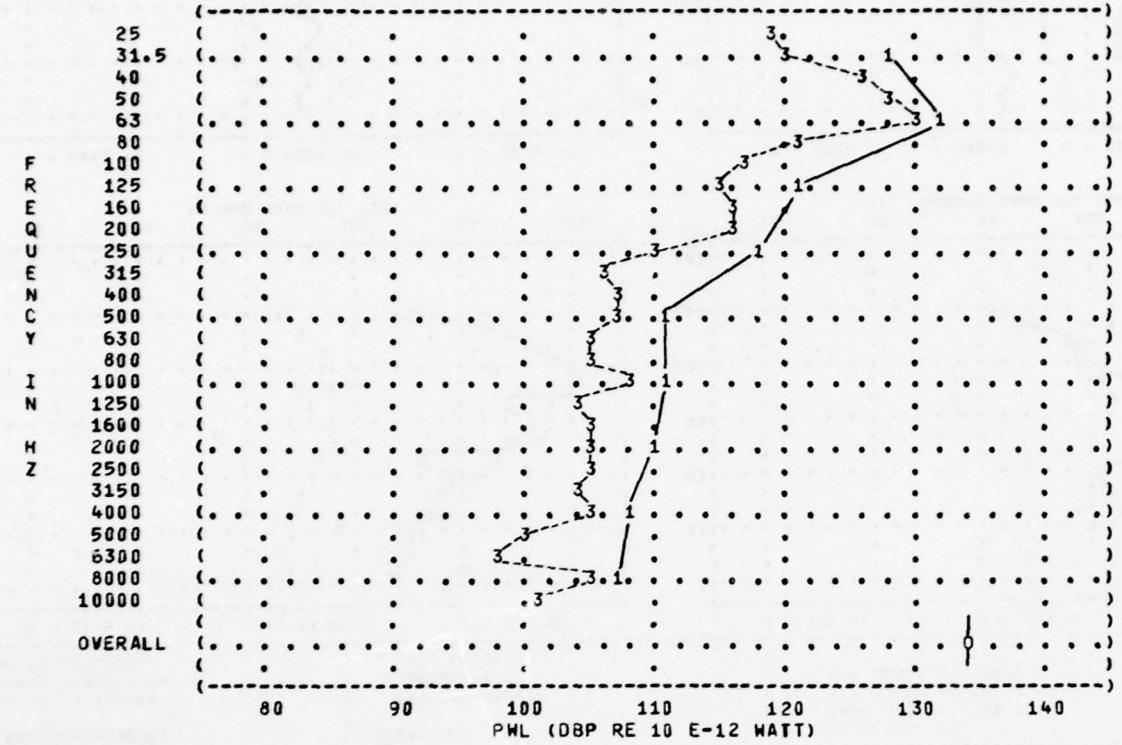
4

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	118.9	
31.5	120.4	127.5
40	125.7	
50	127.8	
63	129.8	132.2
80	121.0	
100	117.3	
125	115.4	121.1
160	115.9	
200	116.2	
250	110.2	117.5
315	106.0	
400	107.0	
500	107.4	111.5
630	105.5	
800	105.0	
1000	107.5	110.6
1250	104.2	
1600	104.7	
2000	105.3	109.7
2500	104.7	
3150	104.0	
4000	105.0	108.3
5000	100.3	
6300	98.3	
8000	105.3	107.3
10000	101.2	
OVERALL		133.9

FIGURE: ACOUSTIC POWER LEVEL (PWL)

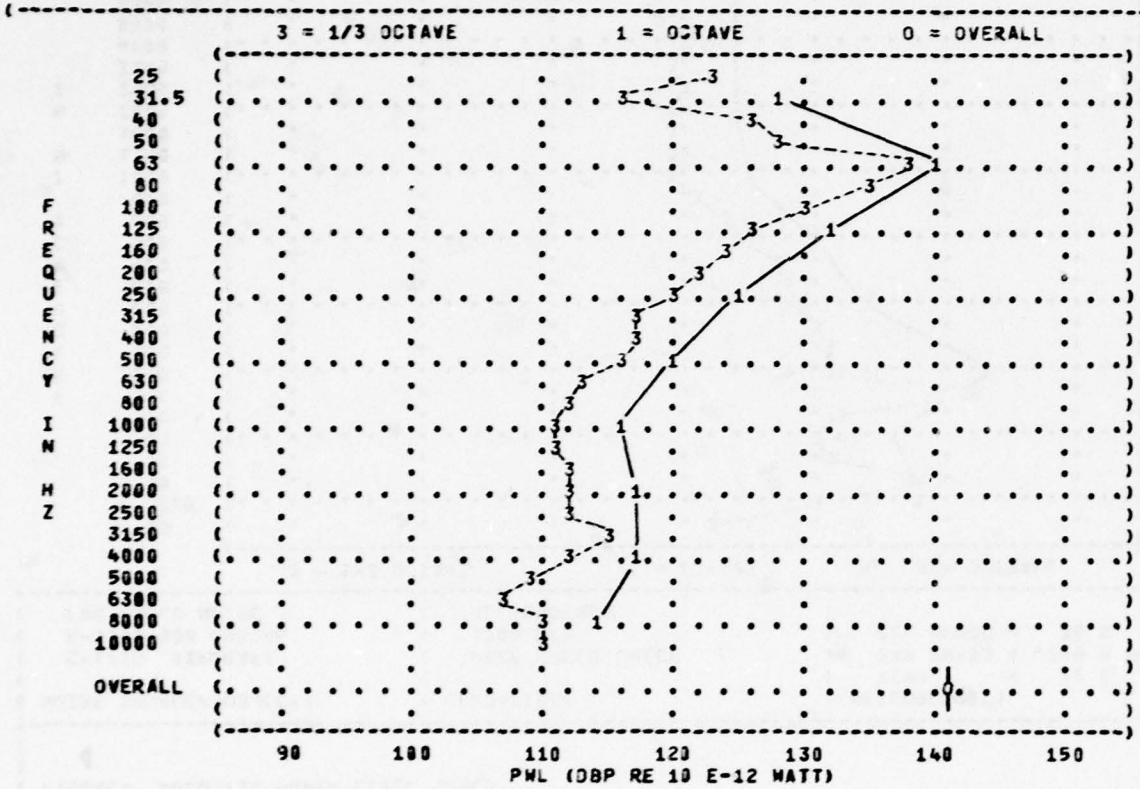
4

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 3



	PWL	
	1/3 OCTAVE	OCTAVE
25	123.3	
31.5	116.0	128.0
40	125.8	
50	128.2	
63	137.7	140.0
80	135.5	
100	129.9	
125	126.1	132.2
160	124.5	
200	121.8	
250	119.6	124.7
315	117.3	
400	117.0	
500	115.5	120.3
630	113.1	
800	112.3	
1000	111.2	116.4
1250	111.4	
1600	111.9	
2000	112.4	116.9
2500	112.1	
3150	114.9	
4000	112.3	117.4
5000	108.6	
6300	107.4	
8000	109.6	113.7
10000	109.5	
OVERALL		141.1

FIGURE: ACOUSTIC POWER LEVEL (PWL)

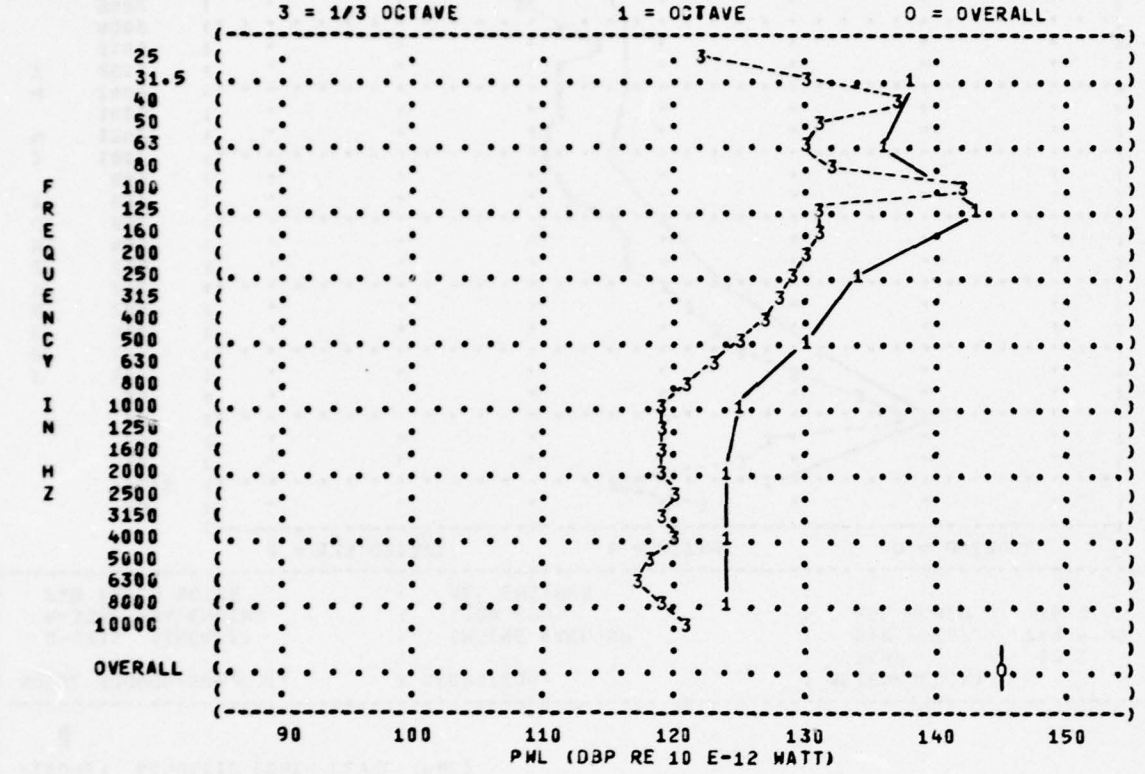
4

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 3



	PWL	
	1/3 OCTAVE	OCTAVE
25	121.6	
31.5	129.9	137.6
40	136.7	
50	131.3	
63	130.4	136.0
80	131.9	
100	142.4	
125	131.4	143.0
160	131.5	
200	129.9	
250	129.0	133.7
315	127.6	
400	126.6	
500	125.2	129.9
630	122.8	
800	121.4	
1000	119.4	124.8
1250	118.8	
1600	119.2	
2000	119.2	124.1
2500	119.7	
3150	119.5	
4000	120.2	124.1
5000	117.9	
6300	117.2	
8000	118.5	123.9
10000	120.8	
OVERALL		145.3

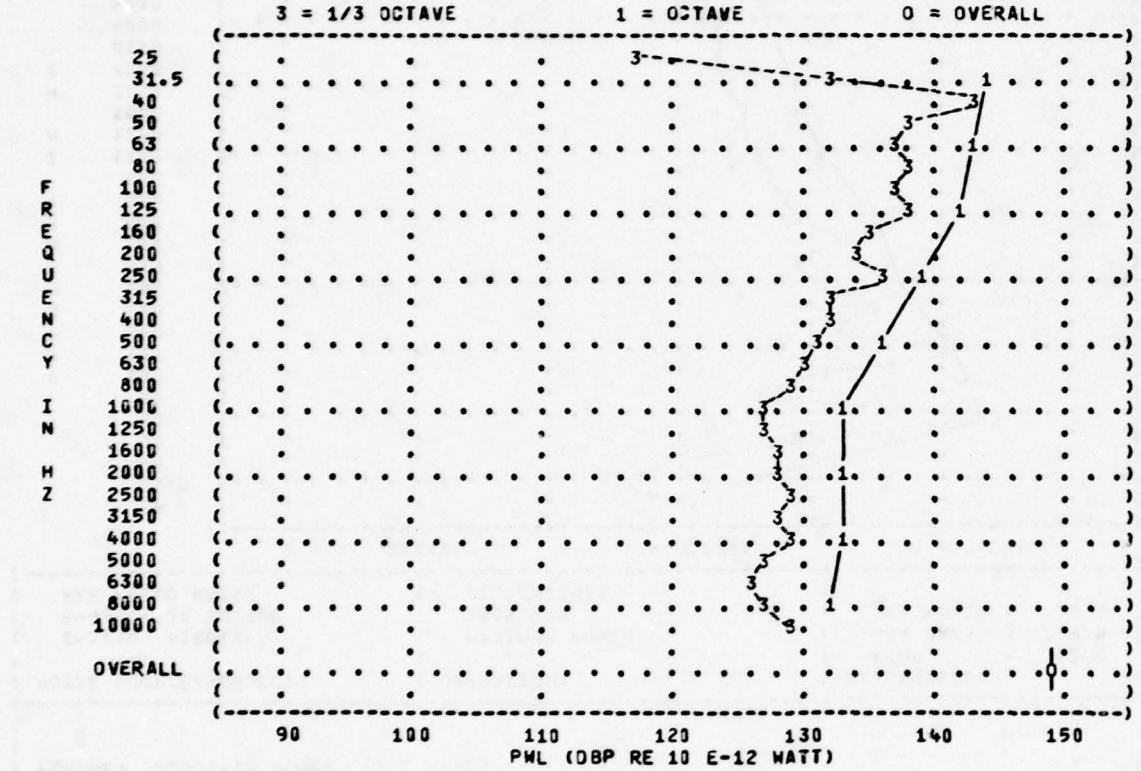
FIGURE: 4 ACOUSTIC POWER LEVEL (PWL)

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	116.8	
31.5	132.5	143.5
40	143.2	
50	137.8	
63	137.4	142.6
80	138.3	
100	137.4	
125	138.4	141.9
160	134.7	
200	134.1	
250	135.6	139.0
315	132.5	
400	132.0	
500	131.2	135.9
630	130.0	
800	128.9	
1000	127.4	132.7
1250	127.2	
1600	127.9	
2000	128.0	133.0
2500	128.6	
3150	128.3	
4000	129.4	133.1
5000	126.7	
6300	125.7	
8000	126.7	132.1
10000	128.9	
OVERALL		148.8

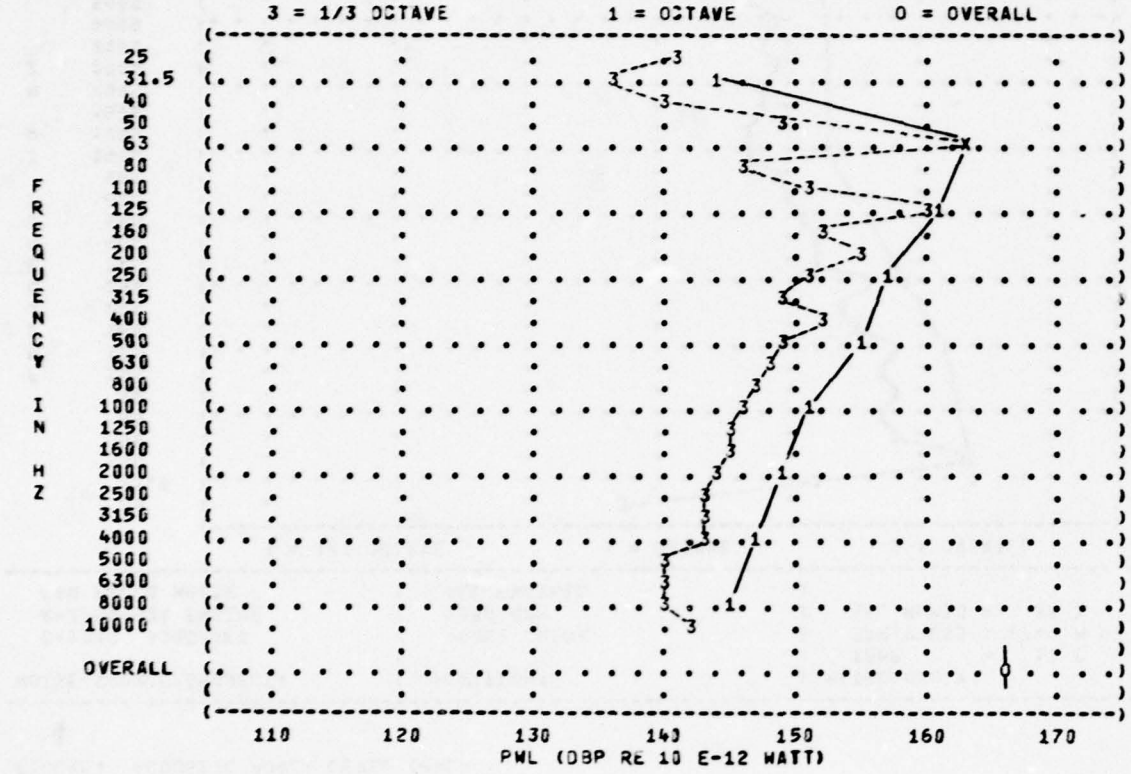
FIGURE: 4 ACOUSTIC POWER LEVEL (PWL)

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	140.8	
31.5	135.5	143.9
40	139.7	
50	149.0	
63	162.7	162.9
80	145.7	
100	150.5	
125	159.5	160.6
160	151.6	
200	154.9	
250	151.2	157.2
315	149.2	
400	151.6	
500	149.0	154.5
630	147.8	
800	146.9	
1000	145.8	150.8
1250	145.1	
1600	145.2	
2000	143.5	148.7
2500	142.6	
3150	142.6	
4000	143.2	146.9
5000	139.7	
6300	139.5	
8000	140.5	145.4
10000	141.7	
OVERALL	156.3	

TABLE: DIRECTIVITY INDEX (DB)

6

IDENTIFICATION:

OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 4

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

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

TABLE: DIRECTIVITY INDEX (DB)

6

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 4

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

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

TABLE: DIRECTIVITY INDEX (DB)

6

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
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	-2	-1	-2	2	3	0	-1	1	1	1	-1	-2	-0	-2	2		
31.5	-4	-3	-2	-4	-3	-2	-3	-8	-4	-2	3	6	2	1	-3	-3	-4		
40	-2	-1	-0	-3	-1	-1	-2	-8	-4	-2	2	6	1	1	-2	-3	-7		
50	-3	1	-2	-1	1	2	1	-5	5	-3	-0	-1	-5	-0	0	-5	-7		
63	2	0	-1	-0	-1	0	2	-6	0	1	2	2	-0	-1	-1	-4	-9		
80	6	6	3	2	2	0	1	1	1	-1	-1	-3	-3	-3	-1	-3	-6		
100	-5	-2	-1	3	1	-1	1	3	2	-0	-1	-4	-0	-2	0	-3	-9		
125	8	7	4	4	1	-2	0	1	1	0	-1	-3	-5	-2	-6	-7	-13		
160	6	7	5	6	4	2	-2	-2	0	-4	-4	-6	-3	-2	-4	-8	-14		
200	8	9	8	7	1	0	-2	-2	-3	-4	-3	-6	-2	-3	-2	-8	-12		
250	9	8	8	6	3	2	-1	-3	-3	-7	-6	-5	-4	-3	-4	-9	-11		
315	11	9	9	7	3	1	-3	-3	-5	-7	-7	-9	-6	-4	-4	-7	-10		
400	9	9	8	8	4	-0	-2	-5	-6	-9	-9	-8	-7	-6	-5	-7	-10		
500	9	8	8	9	3	-1	-2	-3	-8	-7	-8	-6	-5	-4	-4	-6	-10		
630	8	8	7	8	2	1	-2	-4	-6	-6	-7	-3	-5	-2	-1	-4	-8		
800	6	7	6	7	3	2	-2	-3	-5	-5	-4	-4	-4	-2	0	-3	-7		
1000	5	6	5	6	3	1	-2	-1	-3	-4	-3	-4	-3	-1	0	-2	-6		
1250	5	5	5	5	3	1	-1	-1	-2	-3	-3	-3	-3	-1	1	-3	-7		
1600	5	4	4	5	3	1	0	1	-1	-3	-1	-2	-2	-1	-1	-5	-9		
2000	3	4	3	4	2	2	1	1	-0	-3	-2	-2	-1	-3	-3	-7	-13		
2500	3	3	3	3	2	2	3	2	1	-3	-2	-2	-2	-4	-5	-10	-16		
3150	2	2	3	3	2	2	3	2	0	-2	-1	-2	-1	-4	-5	-10	-16		
4000	1	2	2	3	3	2	3	2	1	-3	-3	-3	-2	-4	-7	-12	-18		
5000	1	1	2	3	3	2	3	2	0	-3	-3	-3	-3	-5	-7	-14	-19		
6300	1	1	2	3	3	2	4	2	1	-2	-3	-4	-4	-6	-6	-14	-19		
8000	2	2	2	4	4	3	4	3	1	-3	-5	-6	-6	-6	-8	-11	-20		
10000	2	3	2	4	4	3	3	3	1	-5	-7	-8	-10	-10	-12	-18	-24		
OCTAVE																			
31.5	-2	-2	-1	-3	-1	-1	-2	-8	-4	-2	2	6	1	1	-2	-3	-6		
63	3	3	1	1	1	1	1	-2	3	-1	0	-0	-2	-1	-0	-4	-7		
125	0	1	0	3	1	-1	1	3	2	-1	-1	-1	-2	-2	-0	-4	-10		
250	9	9	8	7	2	1	-2	-2	-3	-6	-5	-6	-4	-4	-3	-8	-11		
500	9	9	8	8	3	-0	-2	-4	-7	-8	-8	-6	-6	-4	-4	-6	-9		
1000	6	7	6	6	3	1	-2	-2	-4	-5	-4	-4	-3	-1	0	-2	-6		
2000	4	4	3	4	3	1	1	1	-0	-3	-2	-2	-1	-2	-3	-7	-11		
4000	2	2	3	3	3	2	3	2	0	-2	-2	-2	-2	-4	-6	-11	-17		
8000	1	2	2	3	4	3	4	3	1	-3	-4	-5	-5	-7	-7	-13	-20		
OVERALL	3	3	2	3	1	-0	0	1	1	-1	-0	0	-1	-1	-1	-4	-8		

TABLE: DIRECTIVITY INDEX (DB)

6

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 4

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

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

TABLE: 6 DIRECTIVITY INDEX (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 4

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .749 M HG
REL HUMID = 36 %

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	-1	-3	-2	-4	-0	0	1	3	1	-0	2	0	1	-3	-2			
31.5	-3	-2	-3	-2	-2	-2	-1	1	2	2	2	1	1	-0	-0	-2			
40	-4	-3	-2	-2	-0	-1	-0	0	1	1	0	1	2	1	-1	-4			
50	-9	-7	-6	-5	-3	-3	-3	-5	1	2	-0	3	4	2	-1	-9			
63	-12	-11	-11	-11	-9	-8	-7	-10	-0	3	-1	5	5	2	-1	-10			
80	-5	-4	-2	-3	-4	-3	-2	1	1	2	-1	2	2	2	1	-6			
100	-5	-1	-3	-2	-5	-6	-3	3	3	2	-0	-1	1	3	1	-5			
125	-6	-4	-4	-11	-7	-5	-2	0	1	3	6	0	0	-3	-11	-16			
160	0	1	2	-0	1	-3	-3	-2	2	3	2	1	1	-1	-2	-10			
200	-2	-1	-3	-2	-5	-3	-4	-1	3	4	5	-1	-2	-3	-7	-13			
250	4	1	2	0	-3	0	-4	-1	4	3	3	-1	-3	-4	-8	-14			
315	2	3	3	-1	-3	-2	-6	-2	3	5	1	1	-6	-5	-8	-13			
400	-1	-1	0	-3	-4	-5	-7	-2	4	6	3	-0	-8	-10	-13	-17			
500	0	0	1	-2	-5	-3	-5	1	4	6	2	-2	-7	-7	-12	-16			
630	-0	0	0	-1	-4	-4	-3	2	5	4	0	0	-5	-5	-9	-14			
800	-0	-0	-0	-2	-4	-3	-2	3	5	3	-0	-0	-3	-5	-9	-13			
1000	-1	-1	-1	-2	-4	-3	-2	2	5	3	-1	-2	-3	-4	-8	-13			
1250	-2	-2	-1	-3	-3	-2	-3	3	6	3	0	-3	-5	-5	-8	-13			
1600	-3	-3	-2	-4	-3	-2	-3	2	6	4	-0	-3	-7	-6	-9	-13			
2000	-1	-2	-1	-2	-2	-0	-1	2	5	4	-1	-3	-6	-6	-9	-13			
2500	-0	-1	0	-1	-1	1	0	1	4	4	-1	-3	-6	-6	-8	-13			
3150	-1	-1	-1	-2	-1	-0	-1	3	5	4	-1	-3	-6	-6	-7	-13			
4000	-1	-1	-1	-2	-1	-0	-1	1	5	5	-2	-5	-6	-5	-8	-13			
5000	-1	-1	-0	-1	-0	-0	-1	1	5	4	-2	-4	-6	-5	-8	-13			
6300	-2	-2	-1	-2	-2	-1	-2	2	5	4	-2	-5	-6	-5	-8	-13			
8000	-2	-2	-1	-2	-1	-0	-2	1	6	4	-3	-6	-7	-6	-9	-14			
10000	-0	-1	0	-2	-0	1	-0	-1	7	4	-4	-8	-9	-8	-10	-15			
OCTAVE																			
31.5	-1	-2	-3	-2	-2	-1	-0	1	2	1	0	1	1	1	-1	-3			
63	-11	-11	-10	-10	-9	-8	-6	-9	-0	3	-1	5	5	2	-1	-10			
125	-4	-2	-3	-6	-5	-5	-2	0	1	3	5	0	1	-2	-6	-12			
250	1	0	-0	-1	-4	-2	-5	-1	3	4	4	-1	-3	-4	-8	-13			
500	-0	-0	1	-2	-4	-4	-5	0	4	5	2	-1	-7	-7	-12	-16			
1000	-1	-1	-1	-2	-4	-3	-2	3	5	3	-0	-1	-4	-4	-8	-13			
2000	-2	-2	-1	-3	-2	1	-2	2	5	4	-1	-3	-6	-6	-9	-13			
4000	-1	-1	-1	-2	-1	-0	-1	2	5	4	-1	-4	-6	-5	-8	-13			
8000	-1	-1	-1	-2	-1	-0	-1	1	6	4	-2	-5	-7	-5	-8	-13			
OVERALL	-4	-4	-4	-6	-6	-5	-4	-2	2	3	3	3	3	0	-3	-11			

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

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 13

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

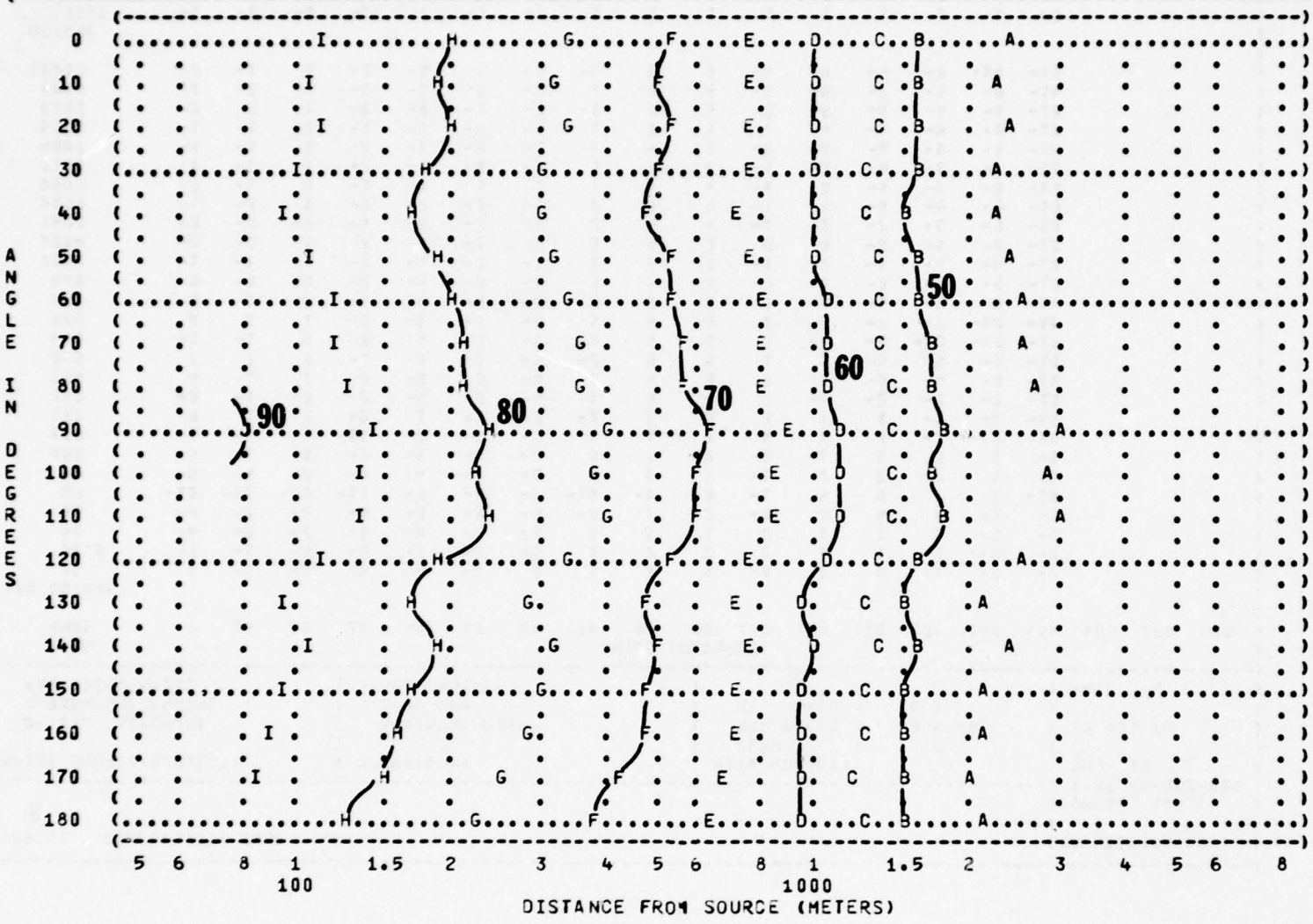


FIGURE 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
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

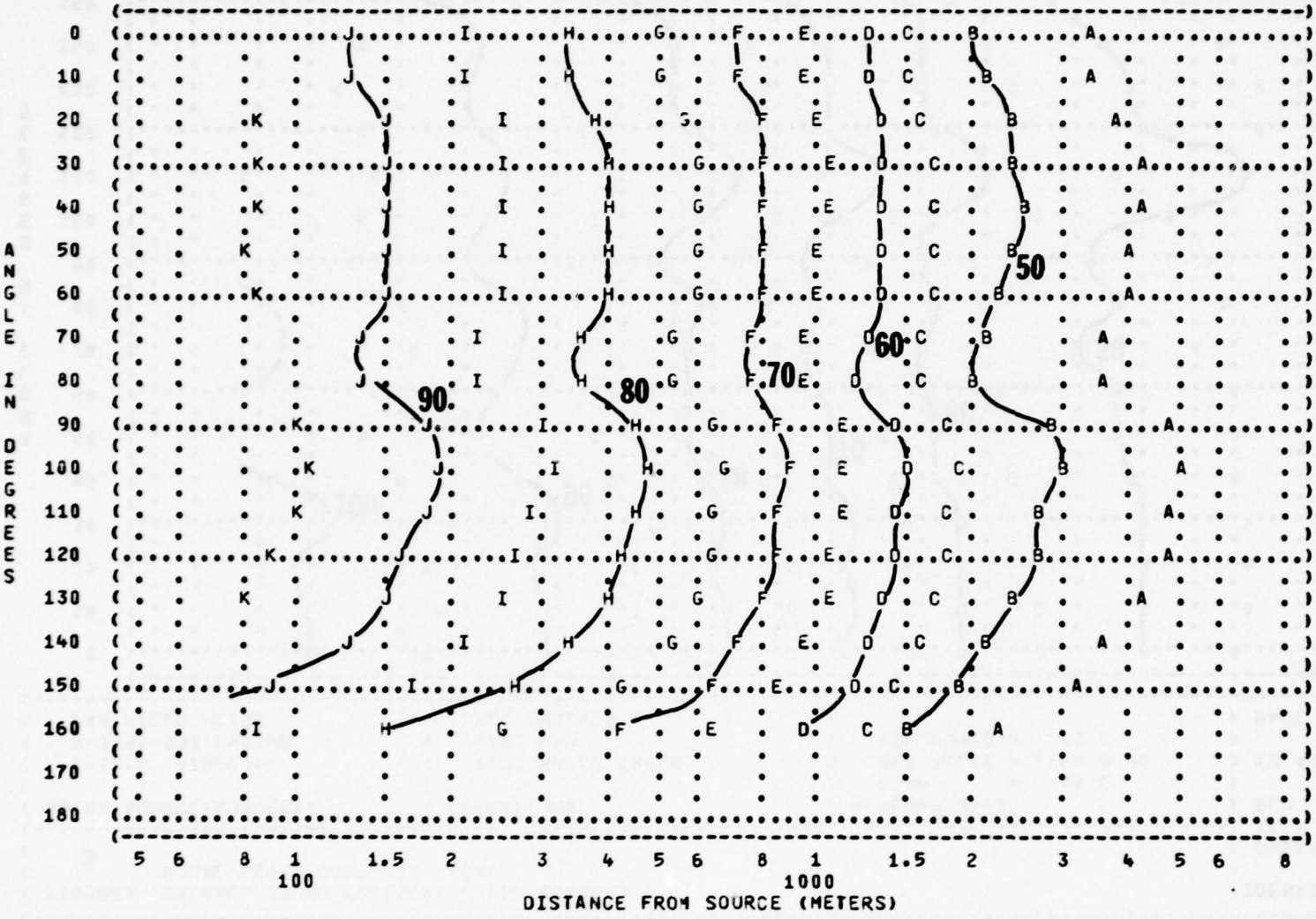


FIGURE 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
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

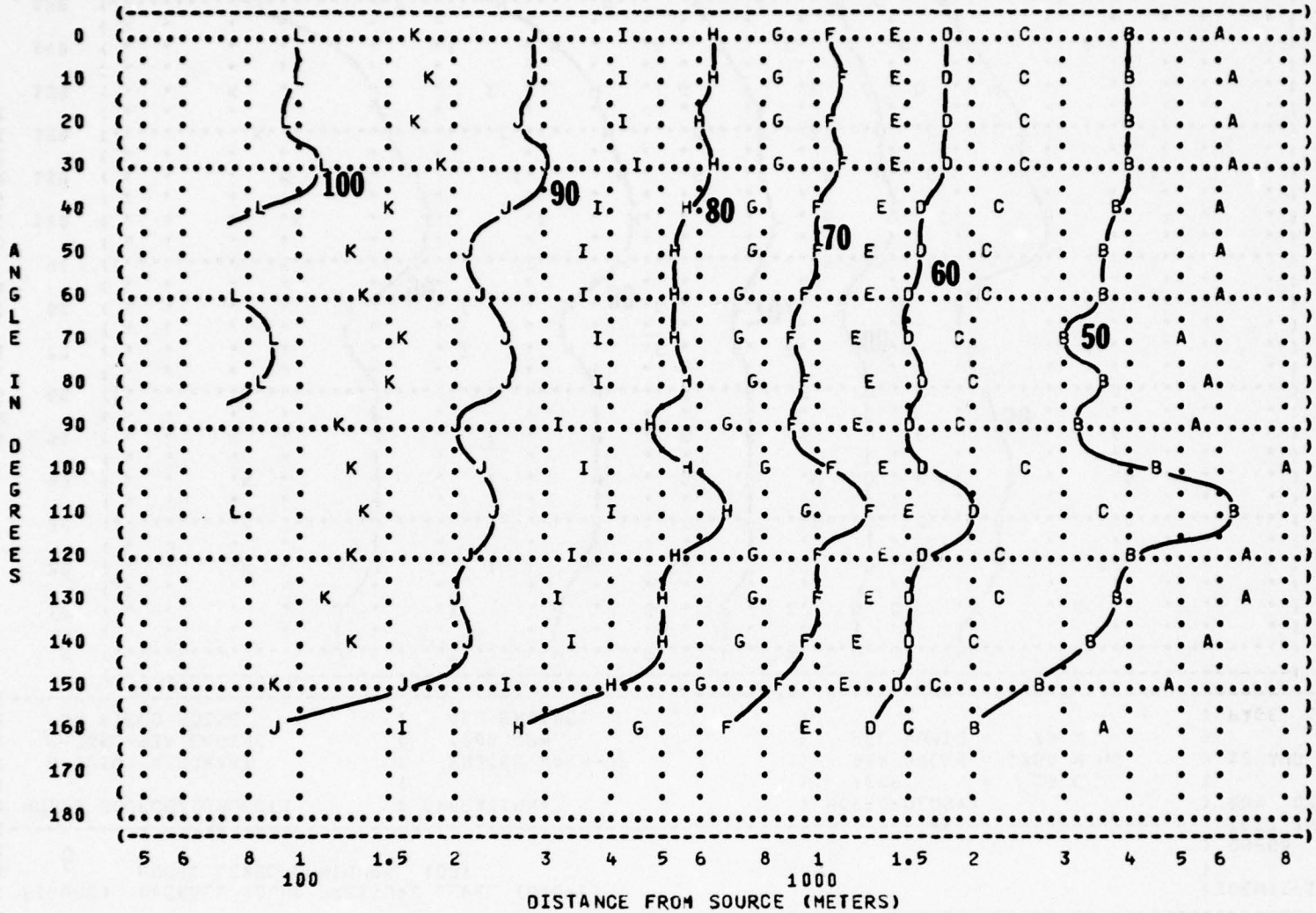


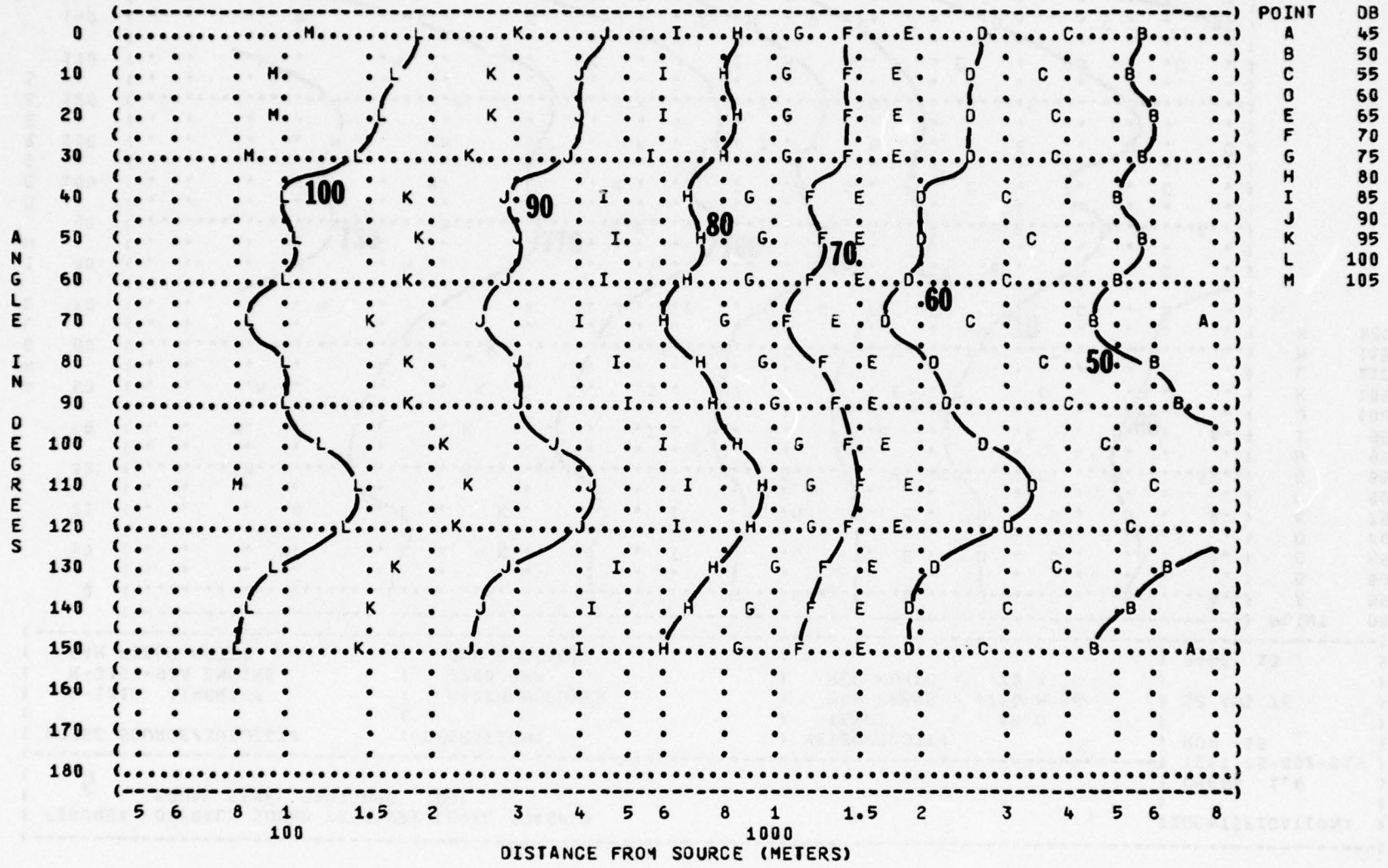
FIGURE 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
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

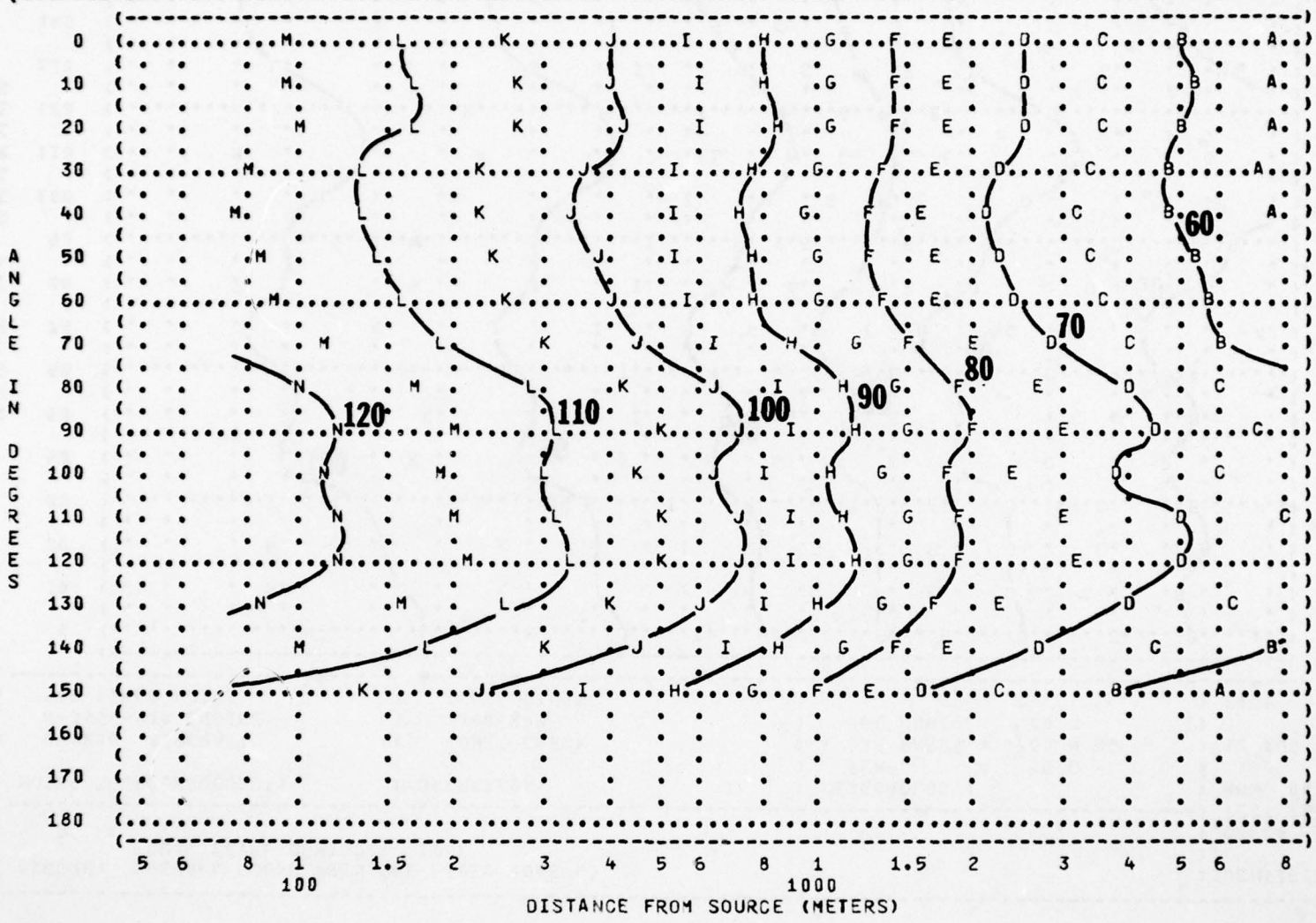
FIGURE 5 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 13



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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 14

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL 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

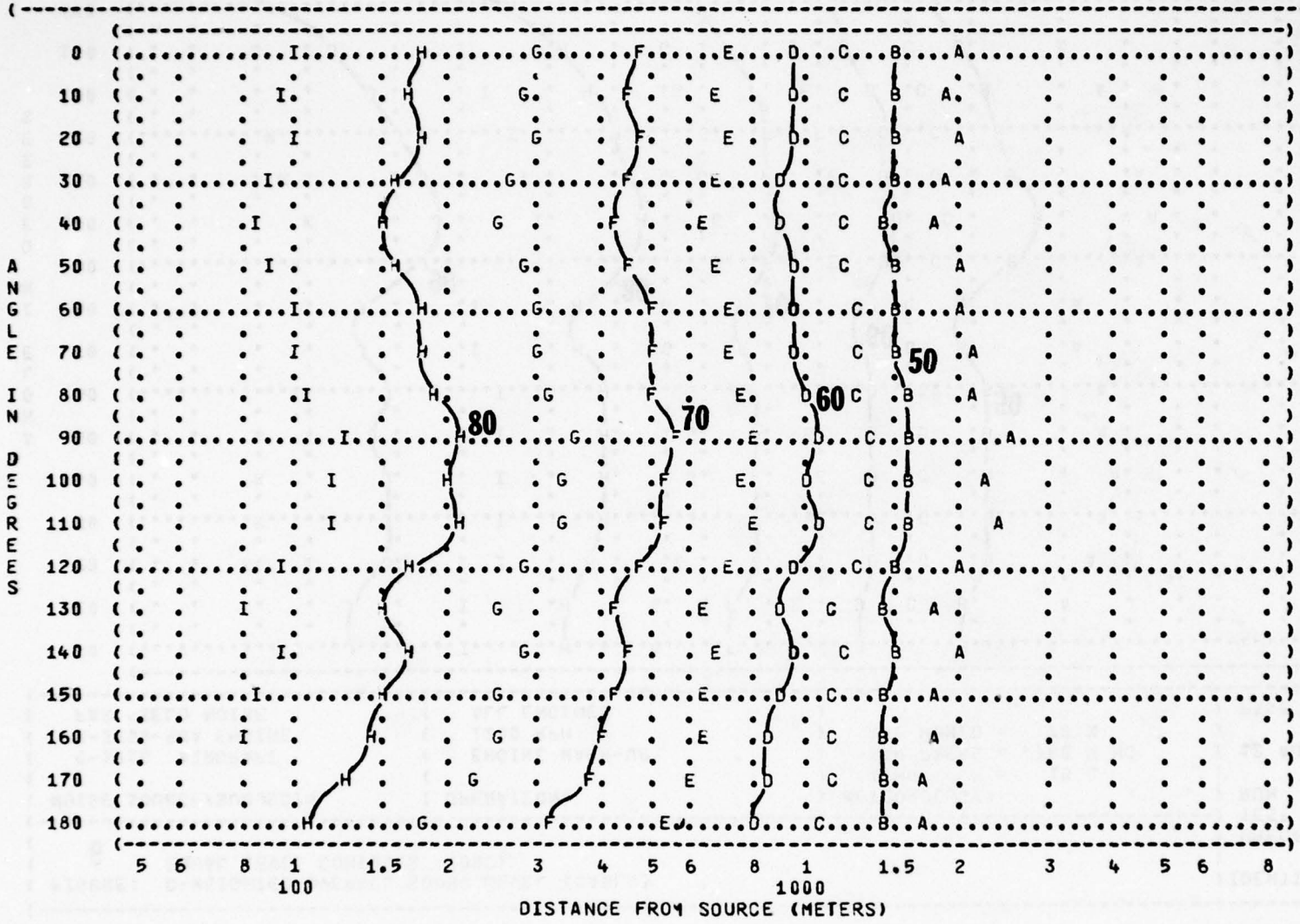


FIGURE: 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 14

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

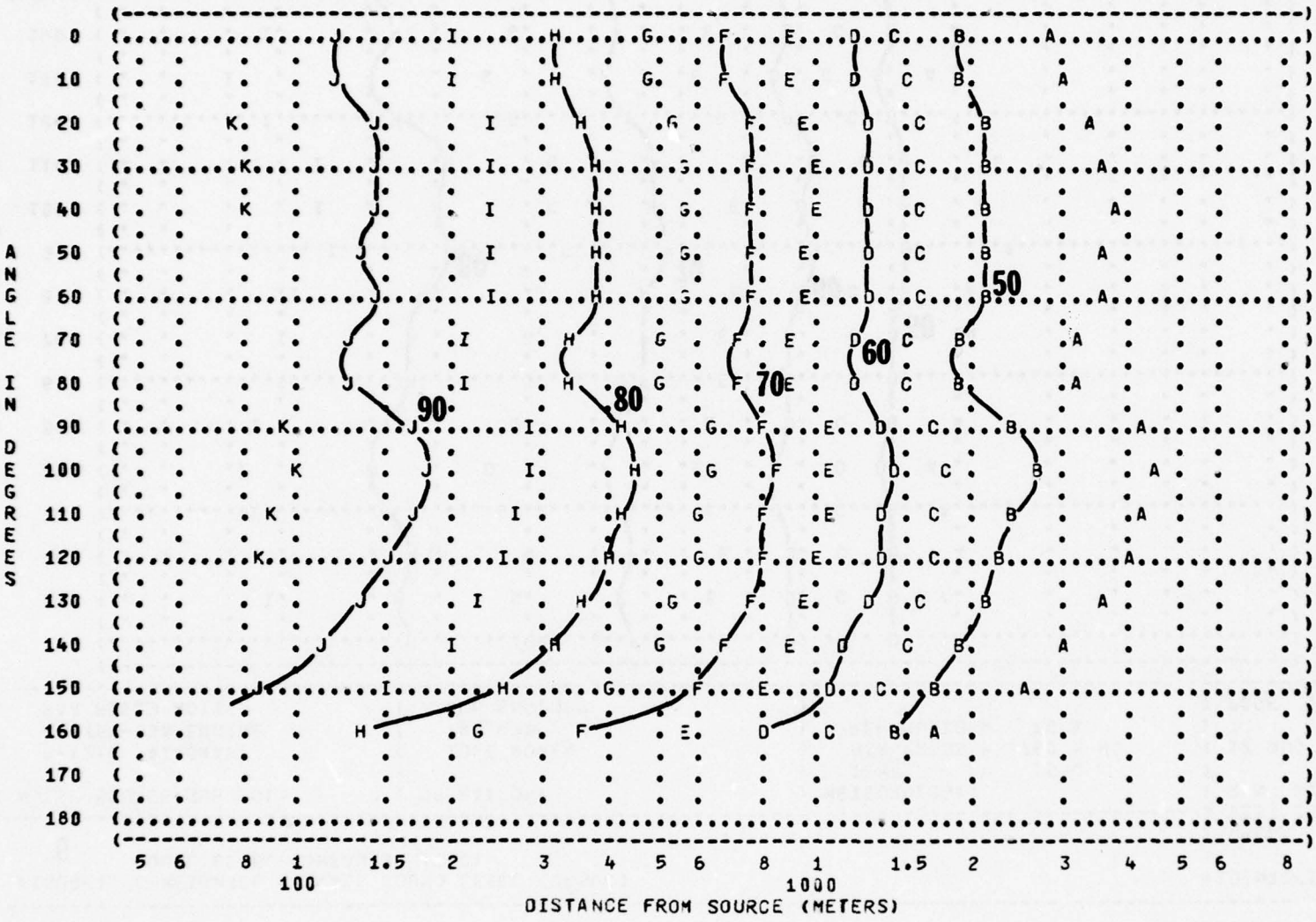


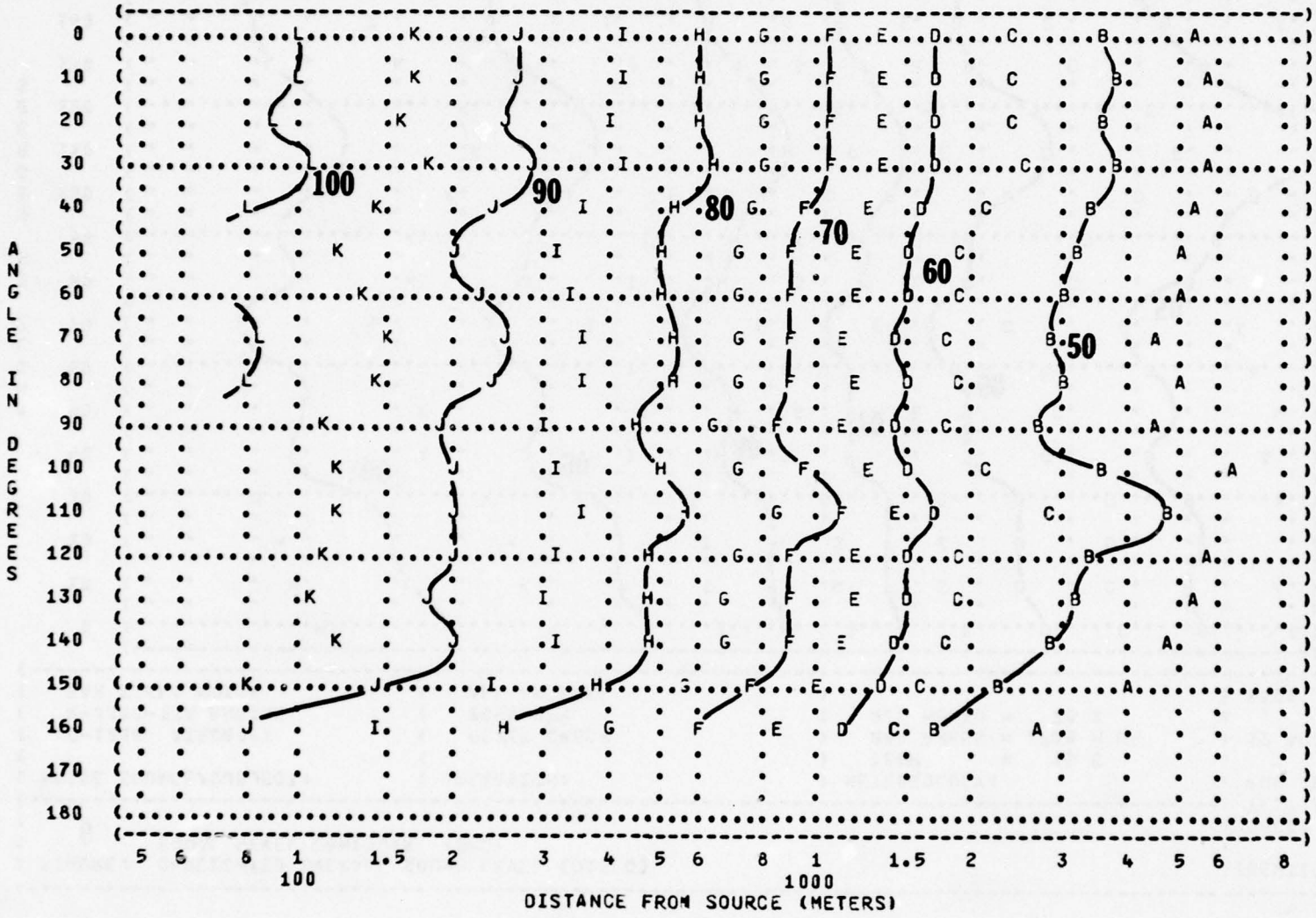
FIGURE: 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 14

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL 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
K	95
L	100

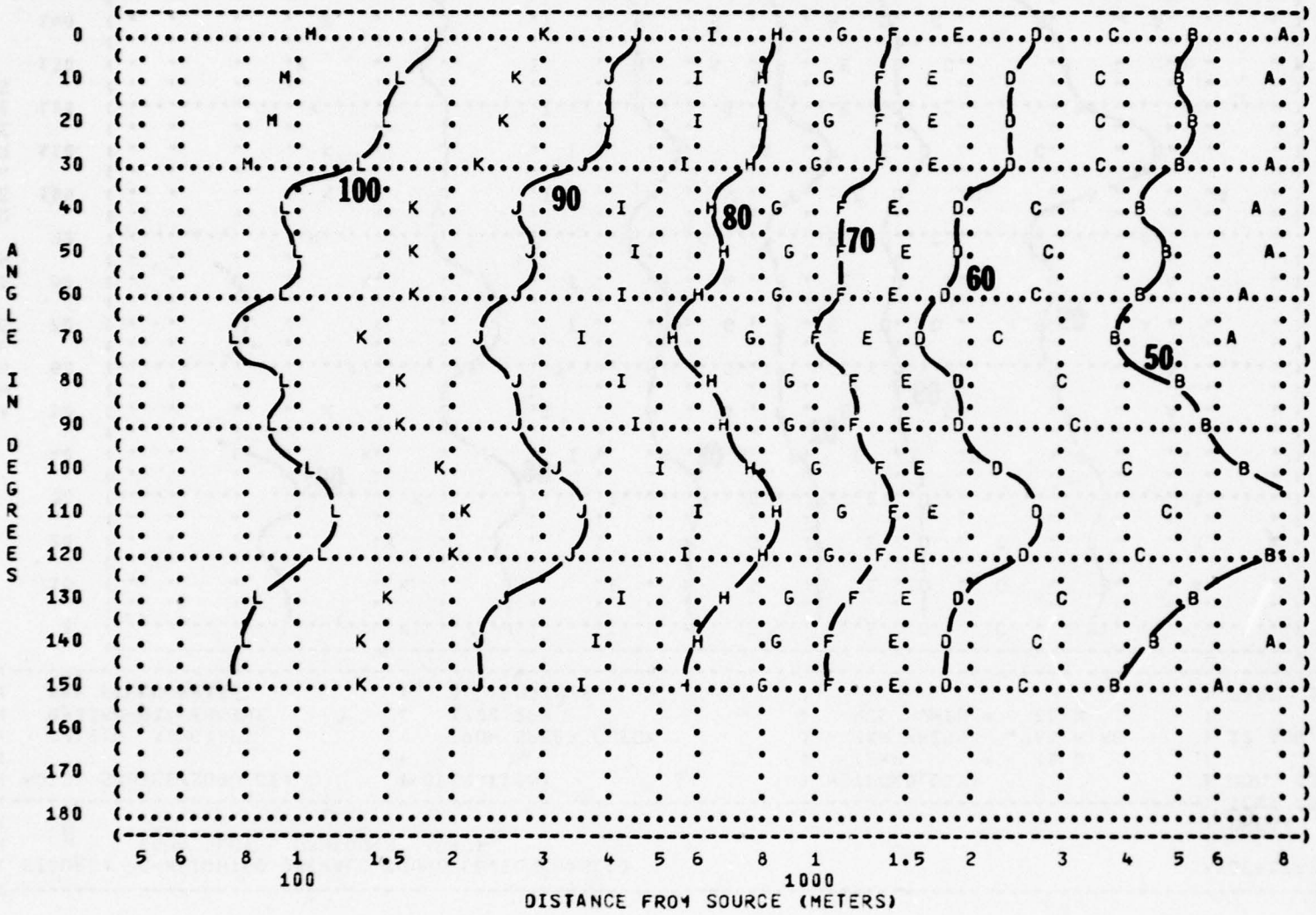
FIGURE: 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 14

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL 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
K	95
L	100
M	105

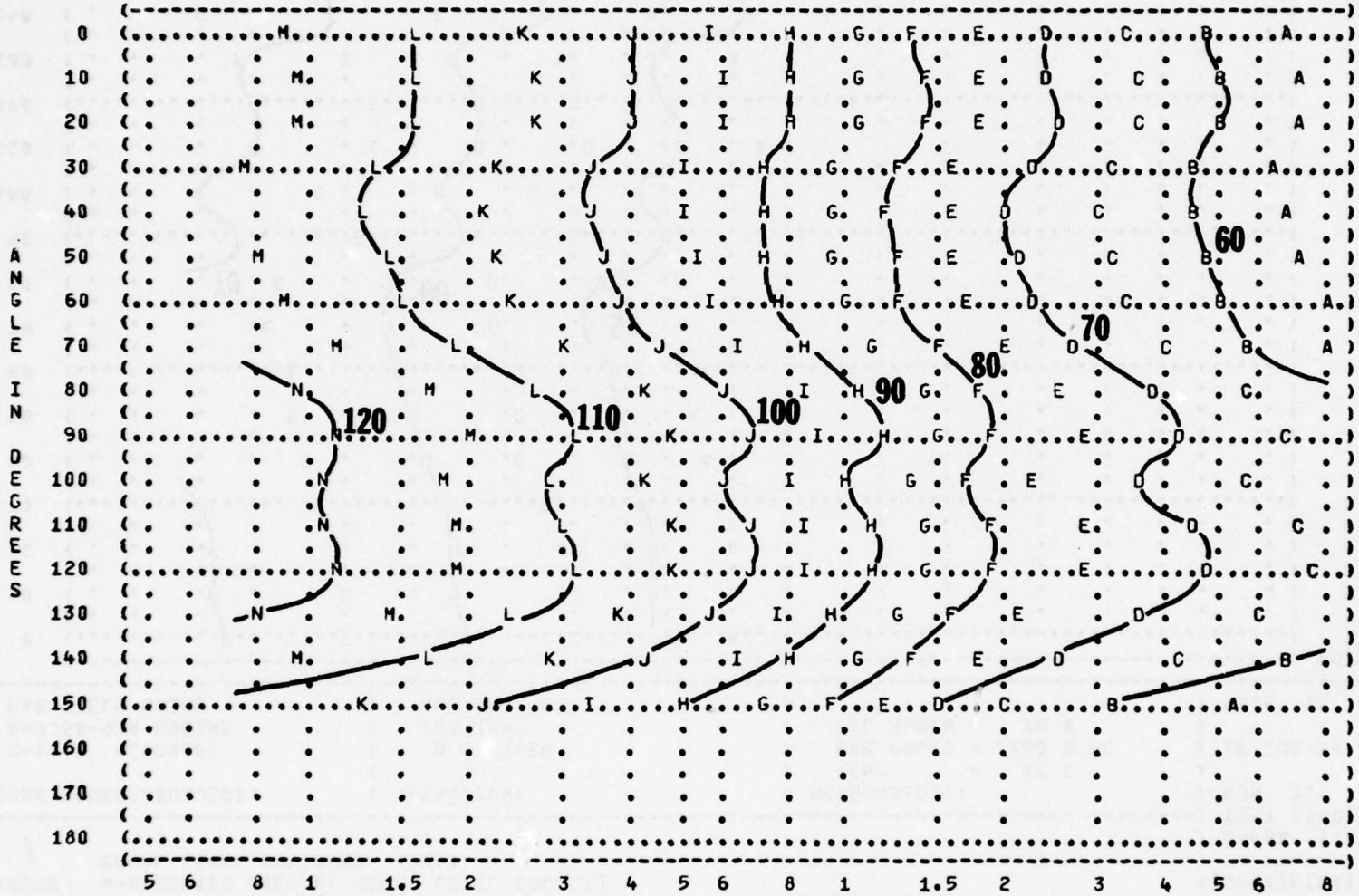
FIGURE 6 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 14

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

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



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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 15

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL 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

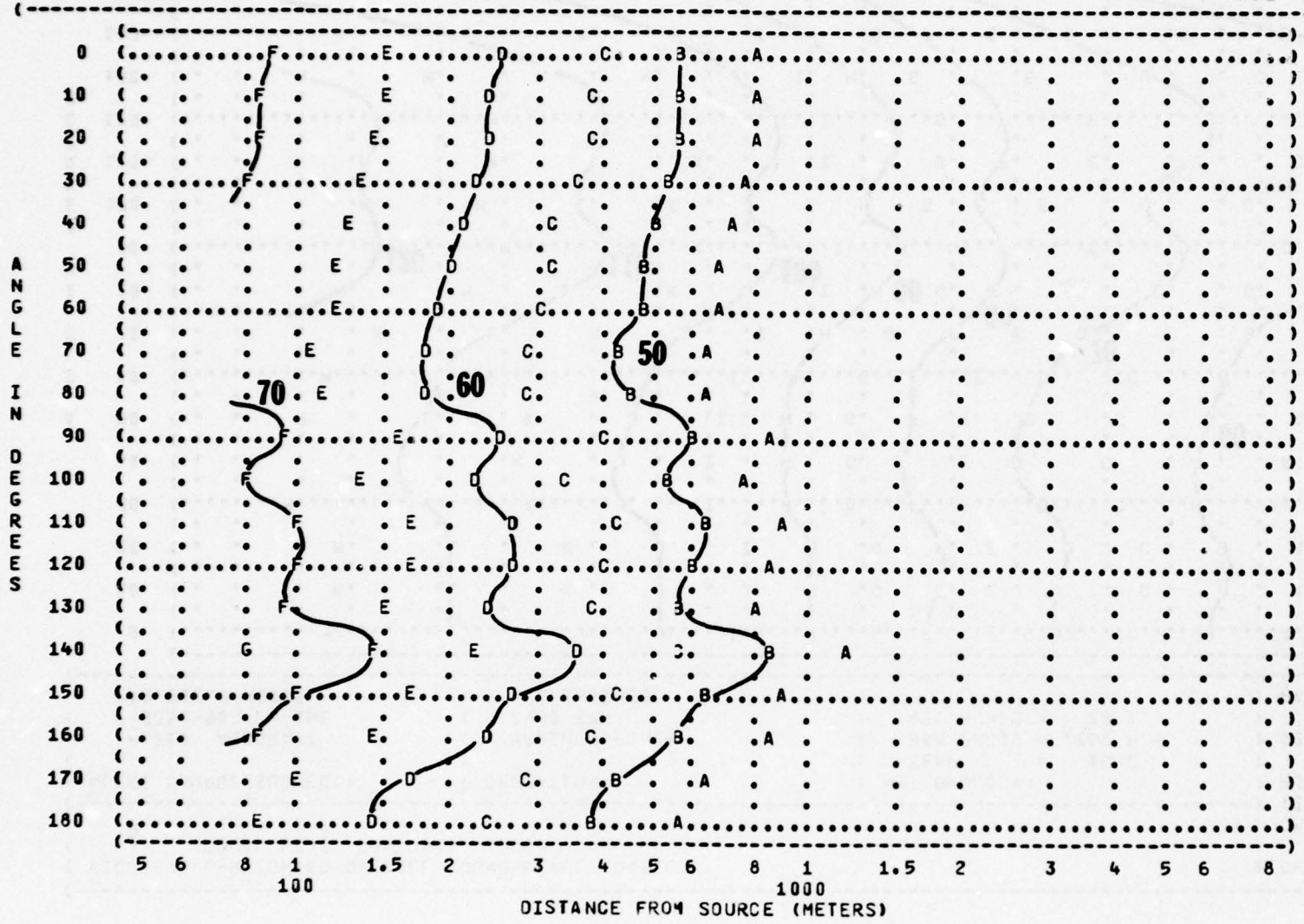


FIGURE 7: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 15

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

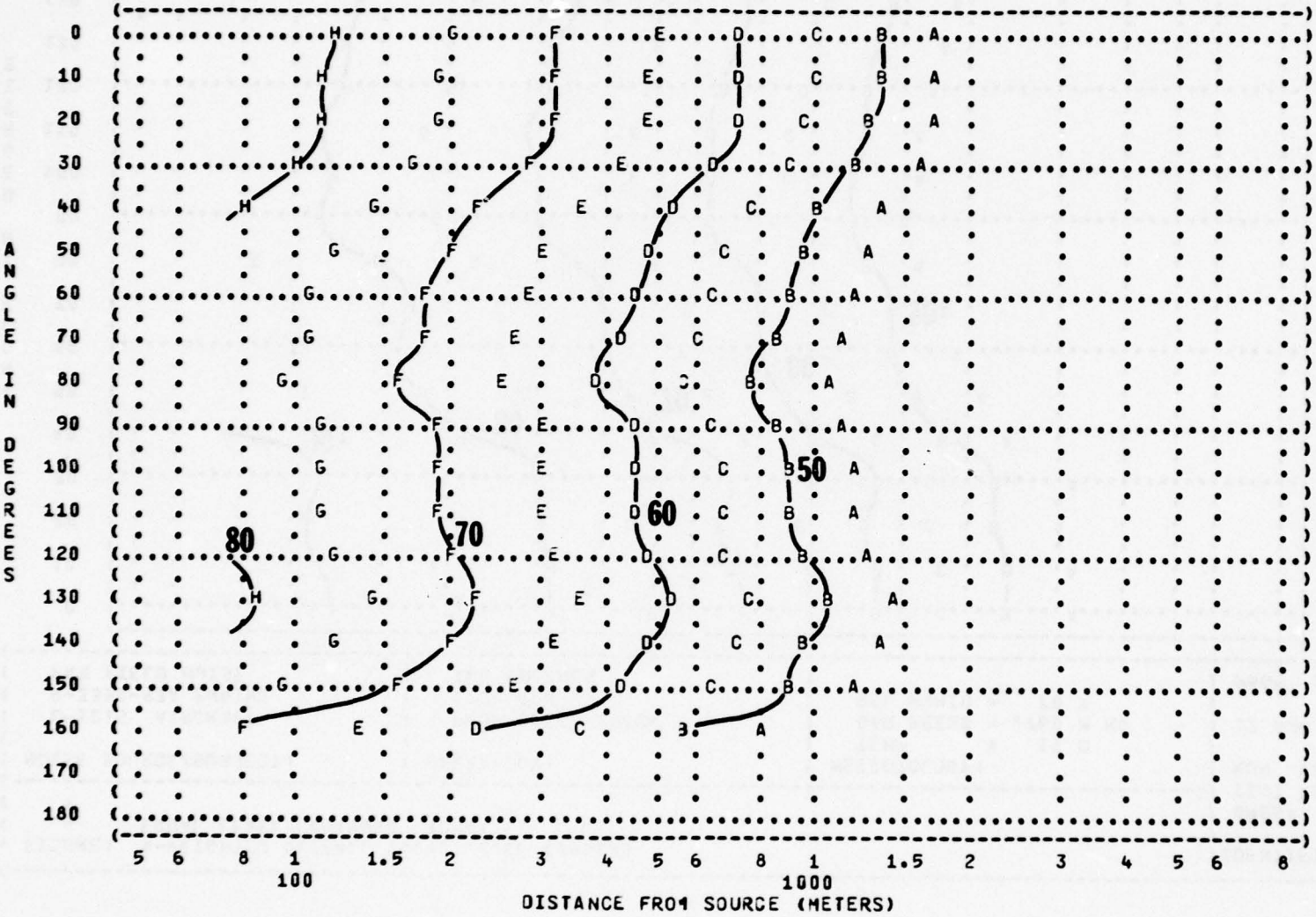


FIGURE 7: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 15

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL 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

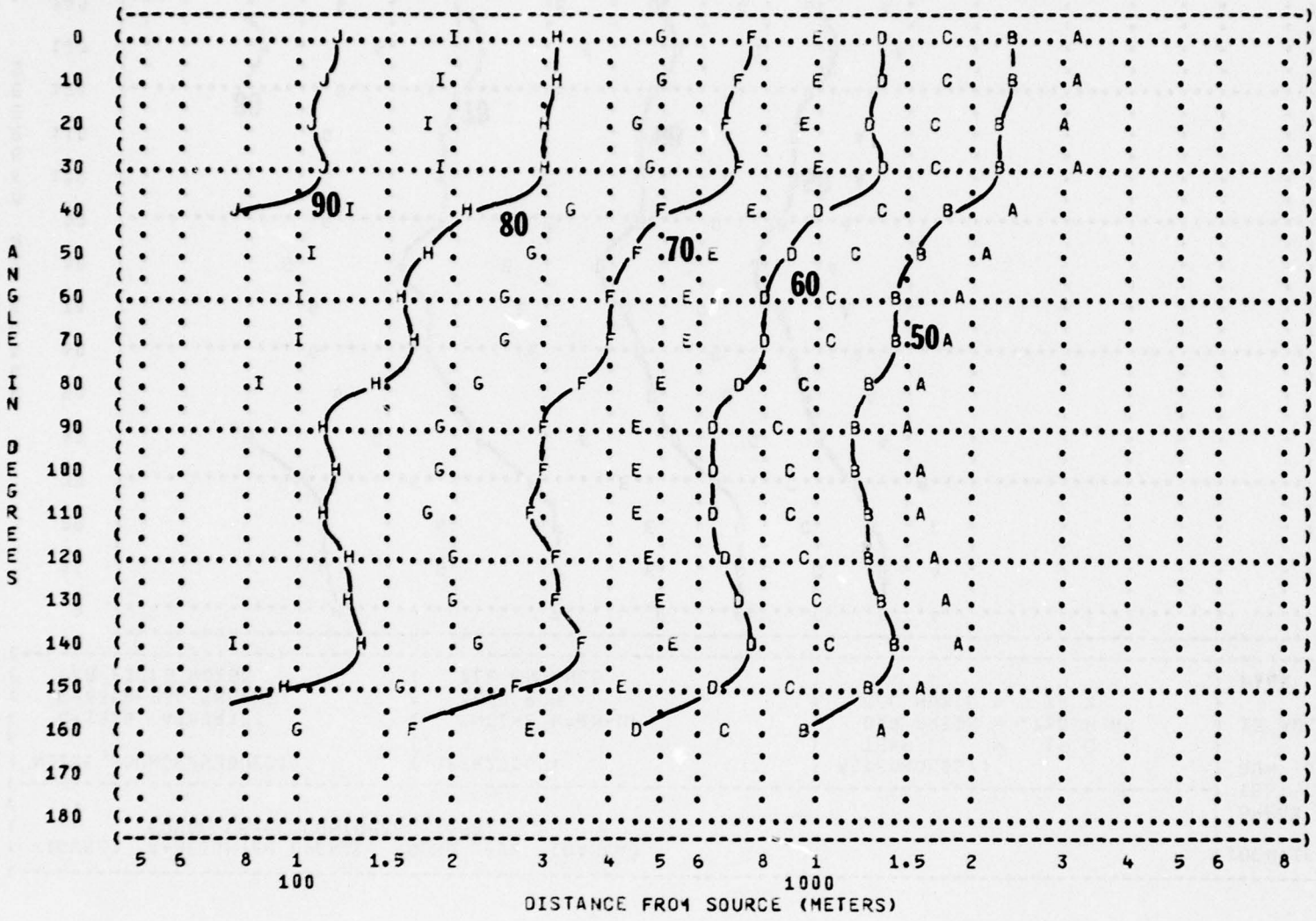


FIGURE 7 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:

OMEGA 1.4
TEST 75-002-019
RUN 04

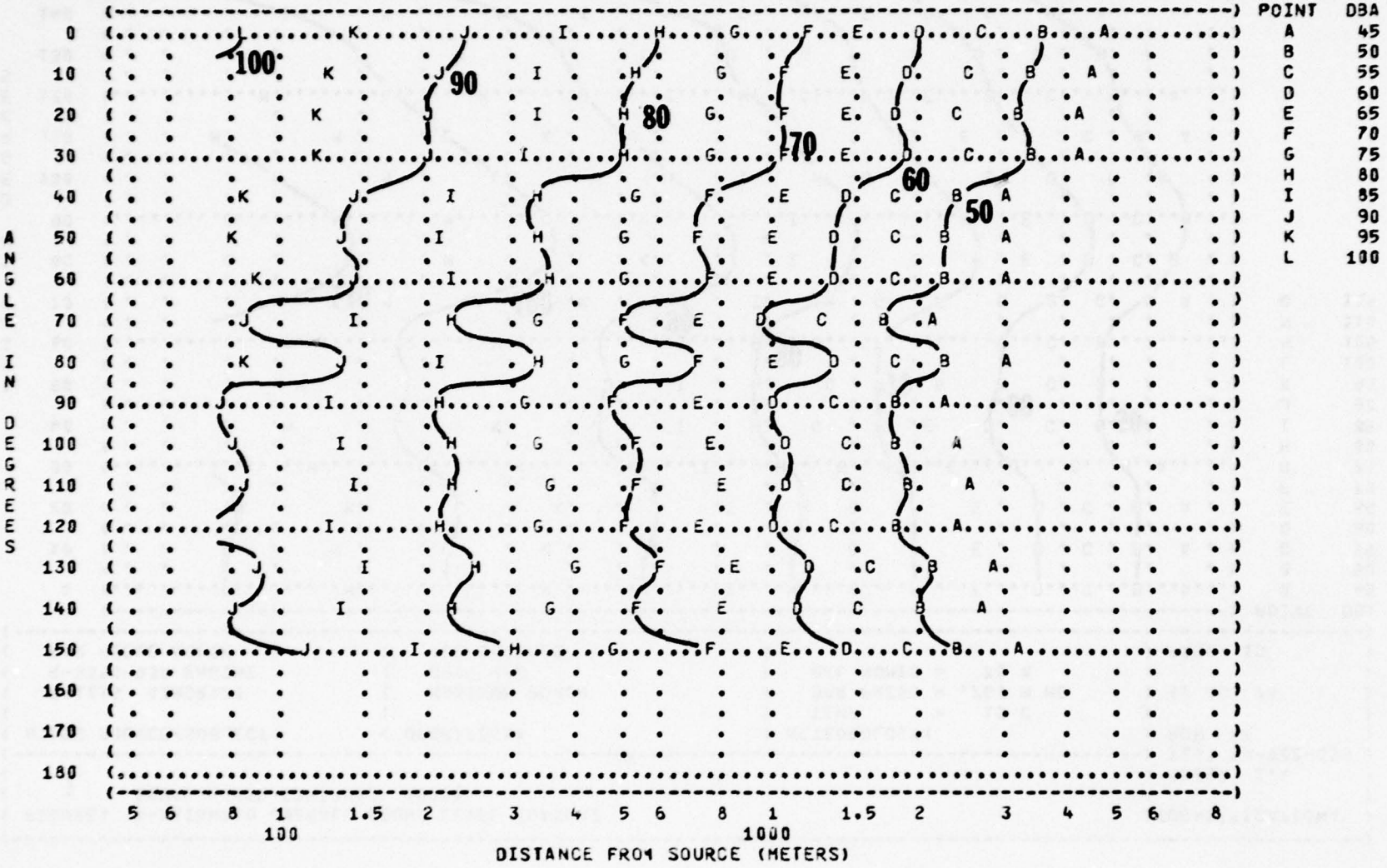
12 AUG 76

PAGE 15

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL 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

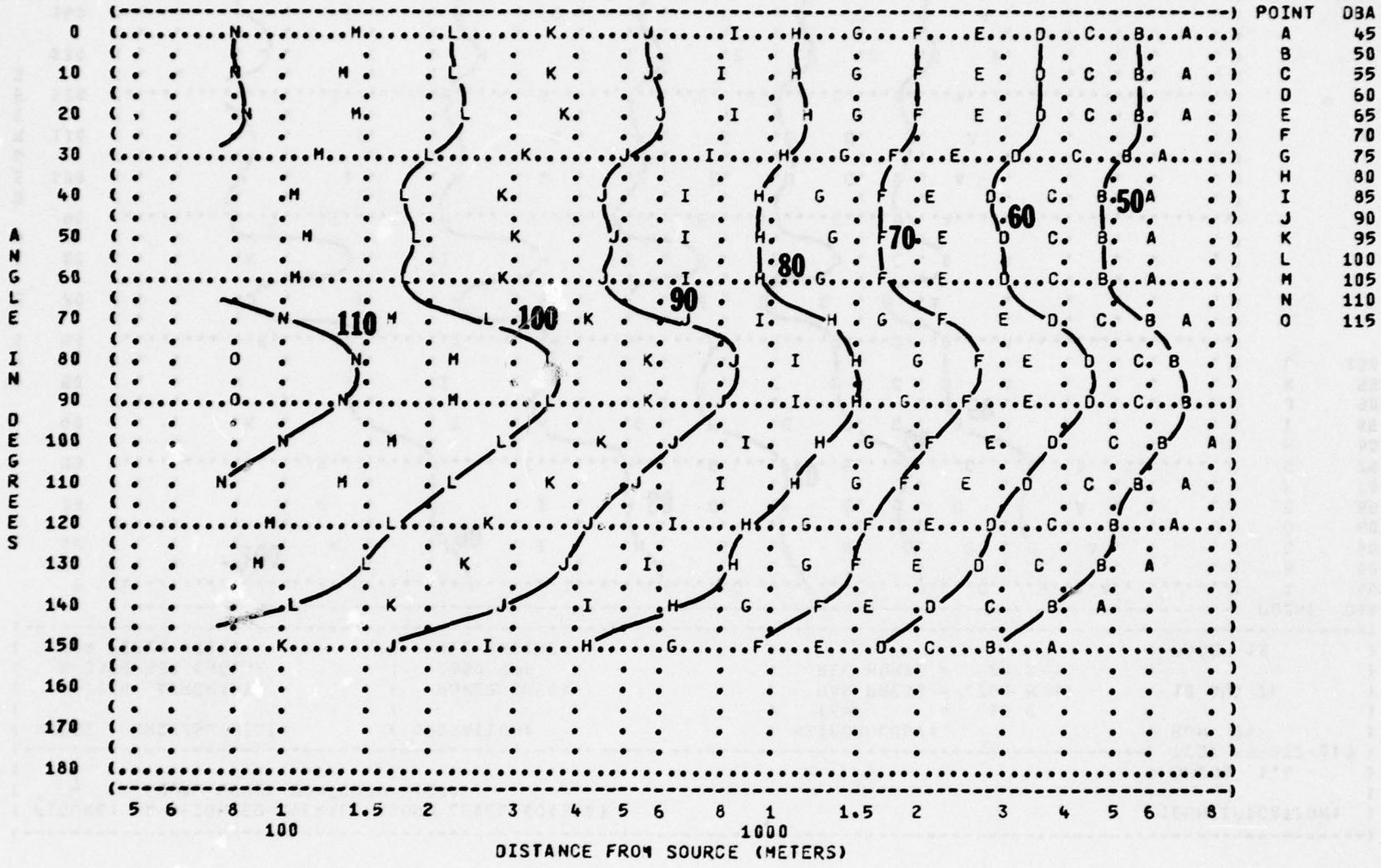
FIGURE 7: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 15

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL 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
O	115

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 16

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL 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

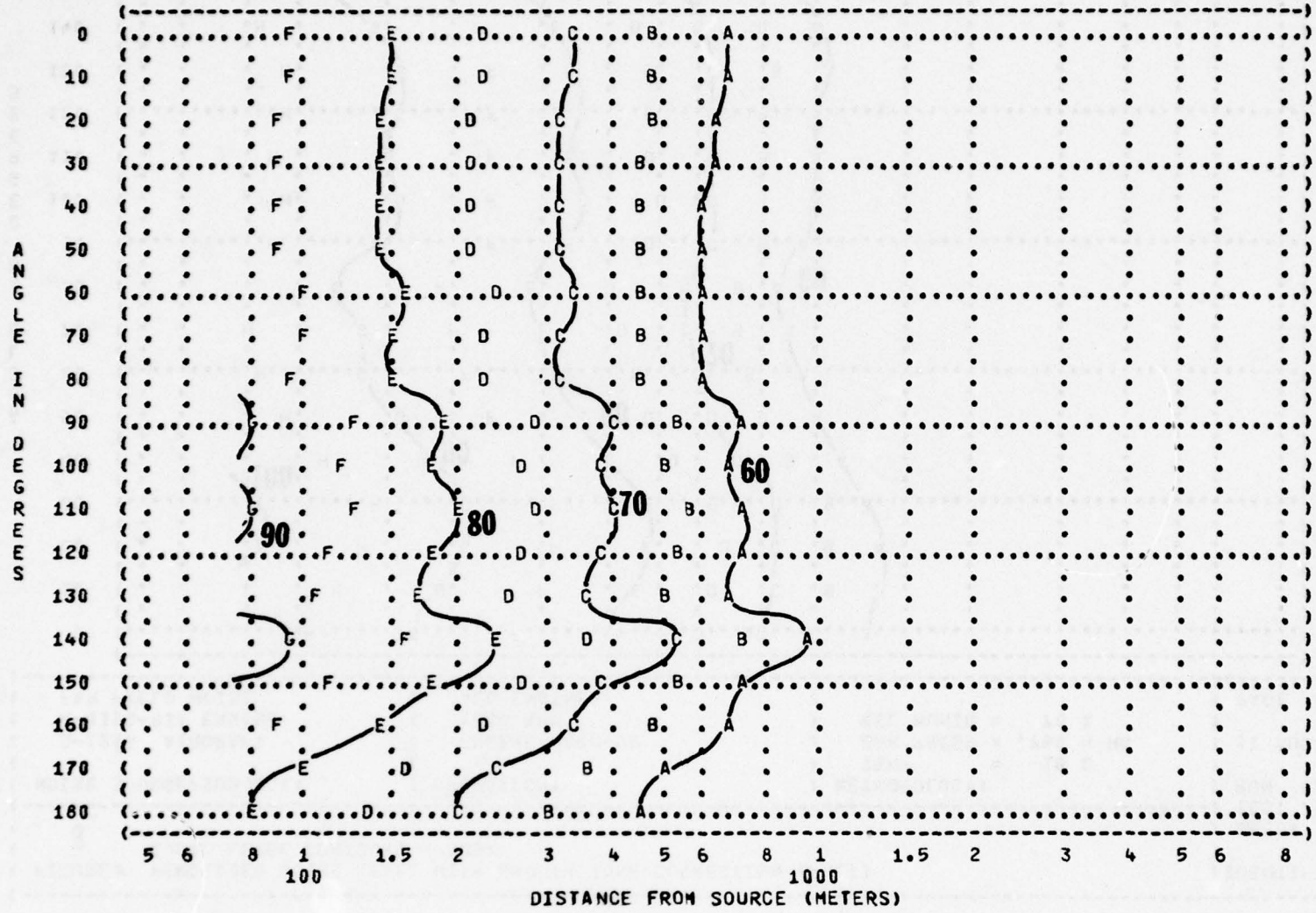


FIGURE: 8 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 16

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL 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
I	100

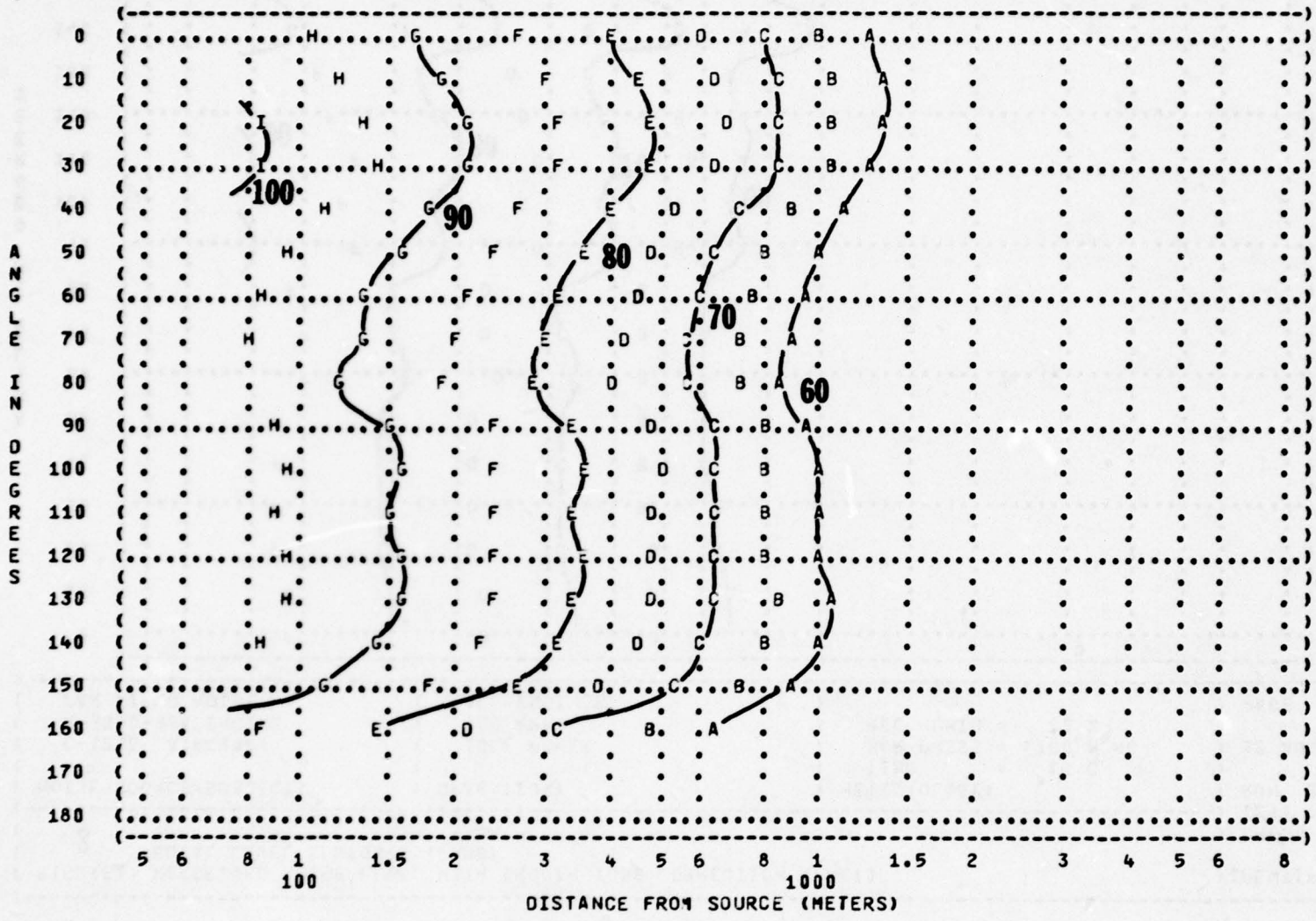


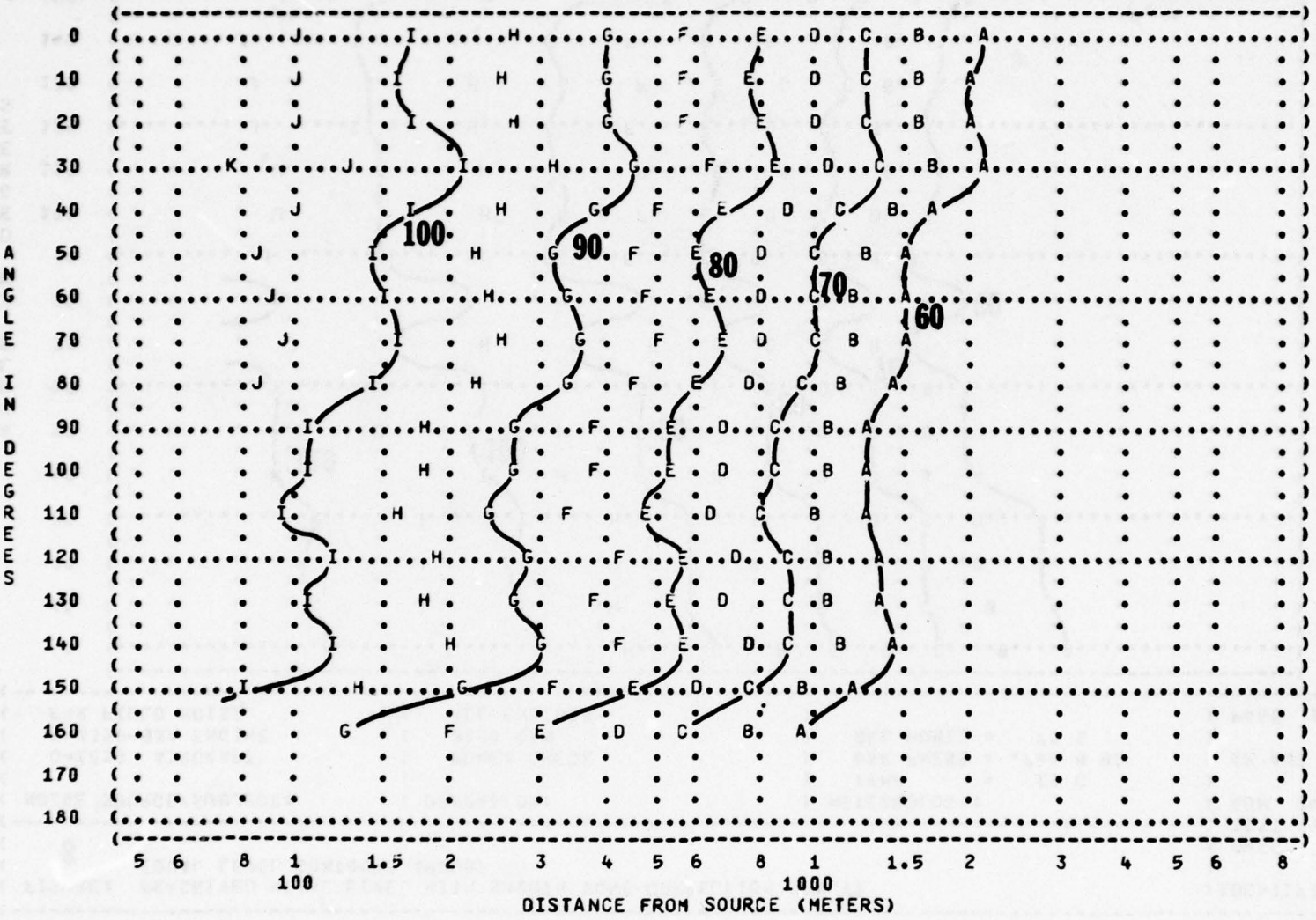
FIGURE 8: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 16

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL 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
I	100
J	105
K	110

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

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 16

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

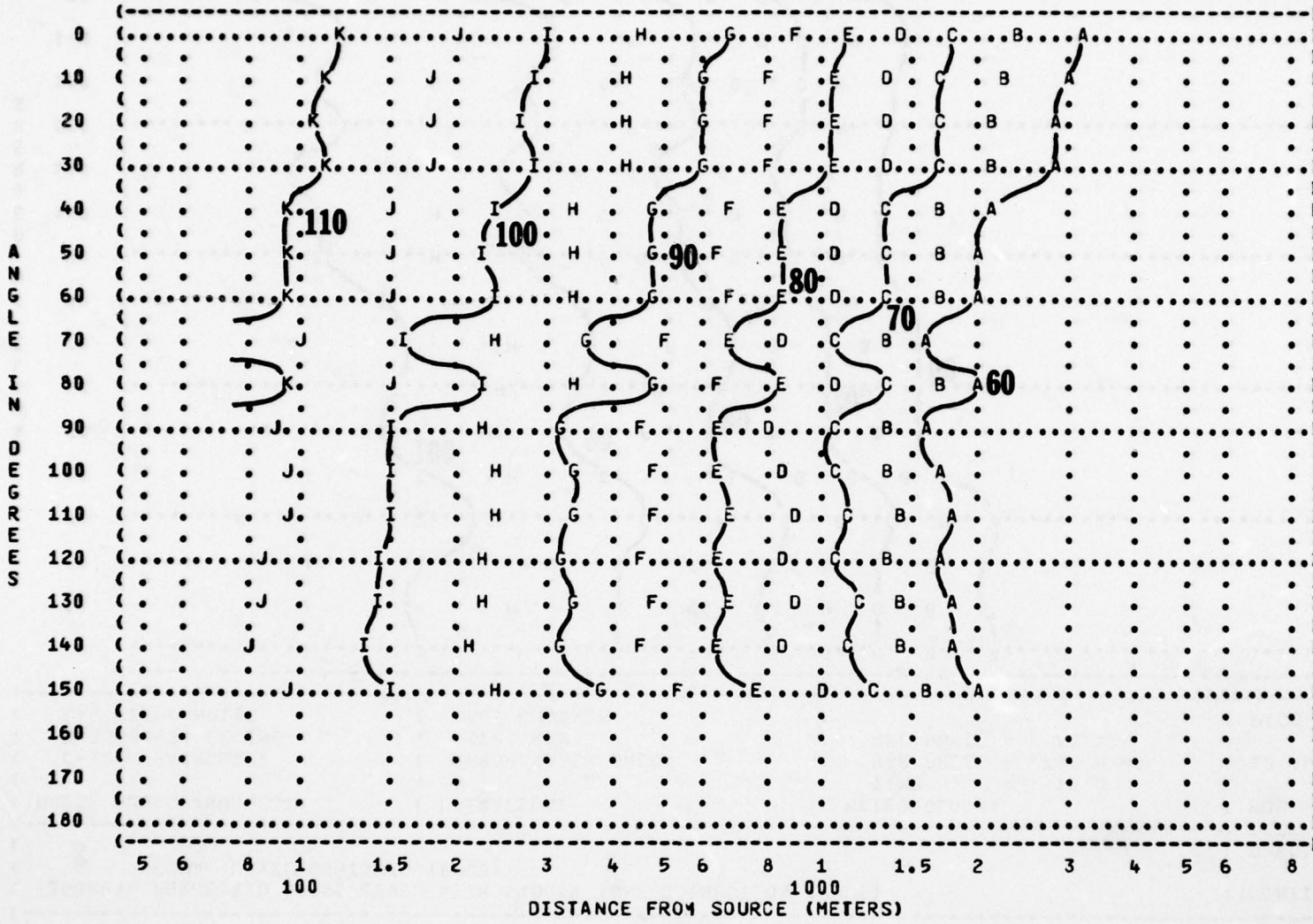


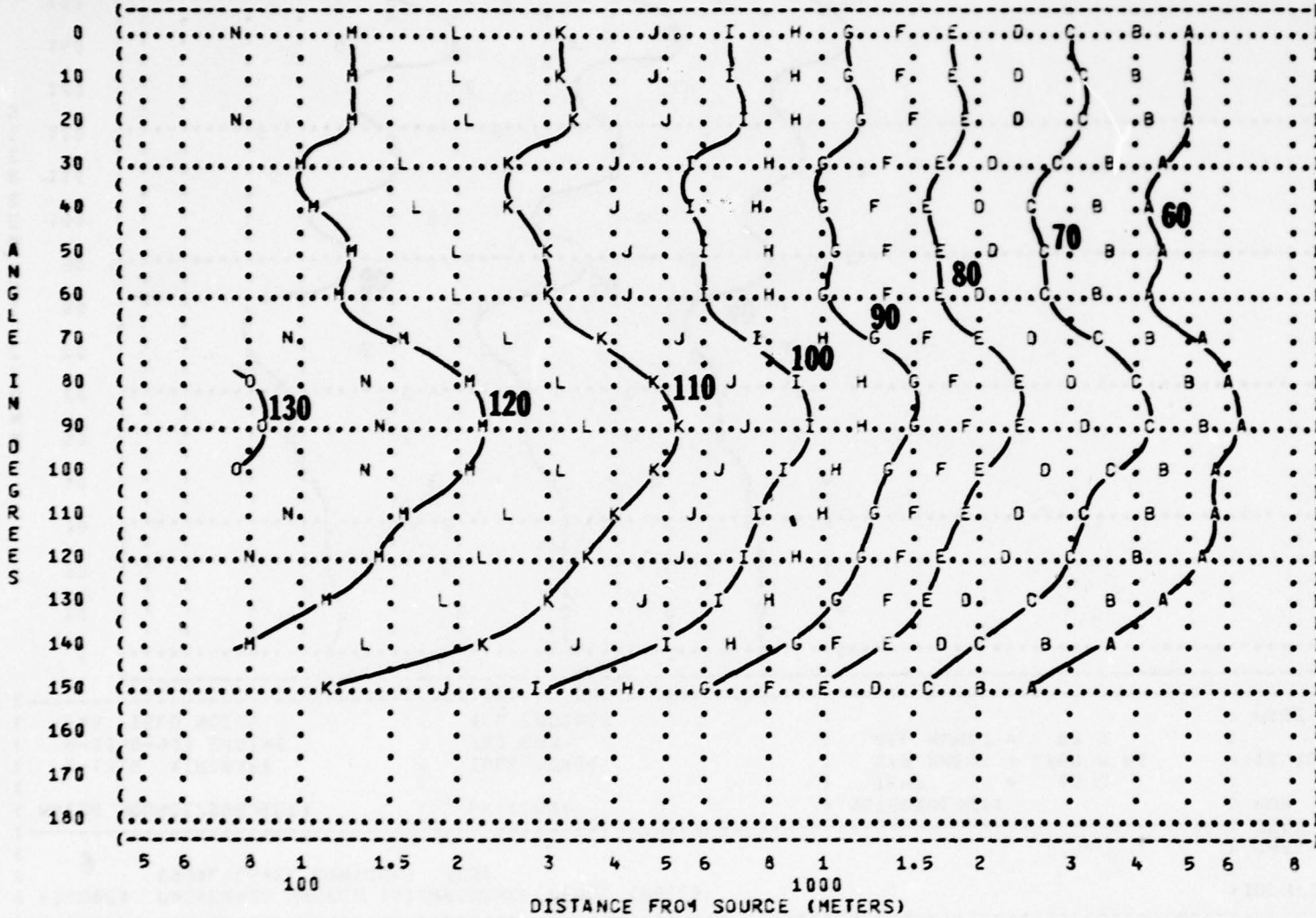
FIGURE 8 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)
EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 16

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL 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
I	100
J	105
K	110
L	115
M	120
N	125
O	130

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

IDENTIFICATION: OMEGA 1.4 TEST 75-002-019 RUN 01 12 AUG 76 PAGE 17

NOISE SOURCE/SUBJECT: C-121G AIRCRAFT, R-3350-93A ENGINE, FAR FIELD NOISE

OPERATION: IDLE POWER, 700 RPM, ALL 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

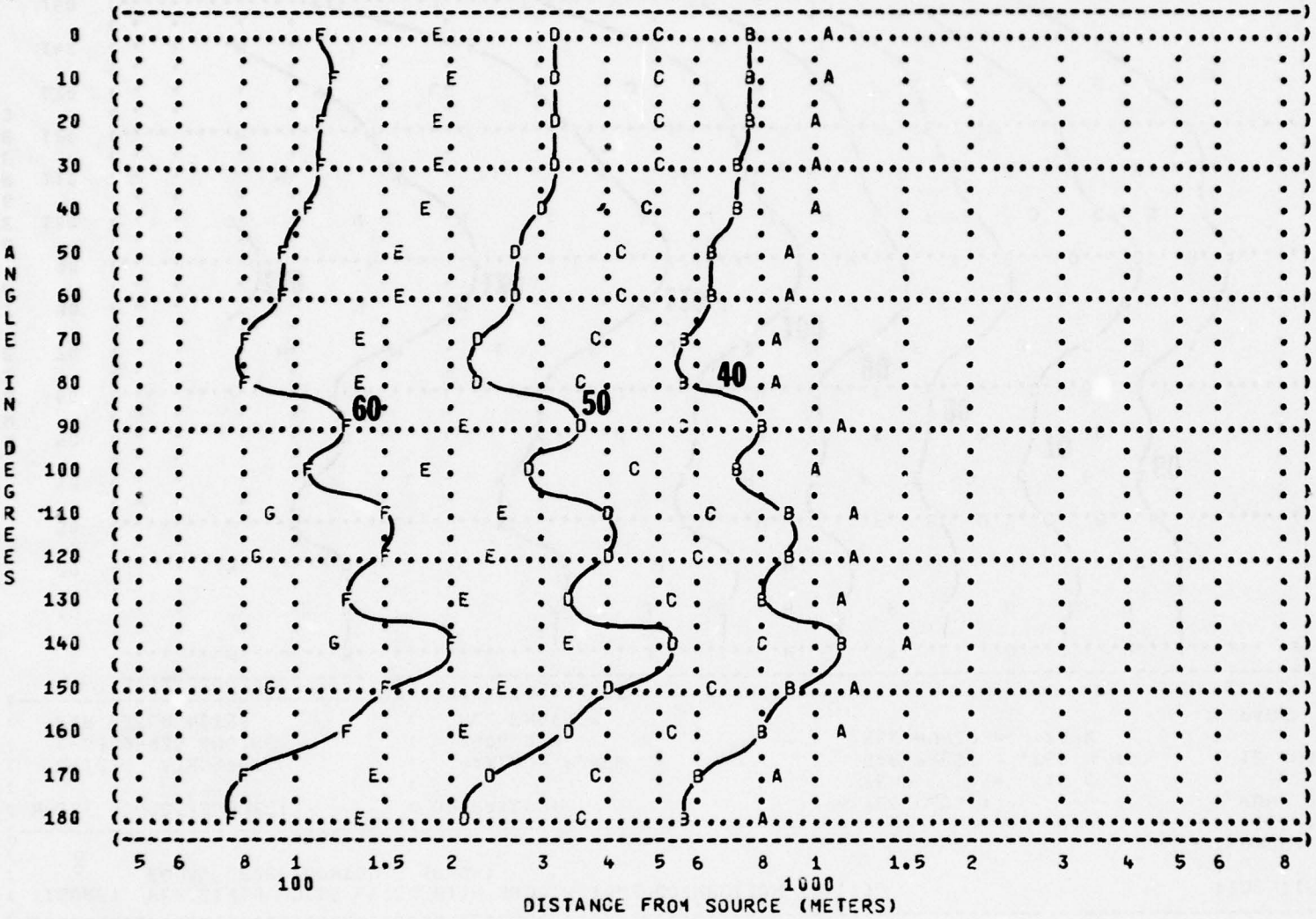


FIGURE 9: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)
EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 17

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL 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

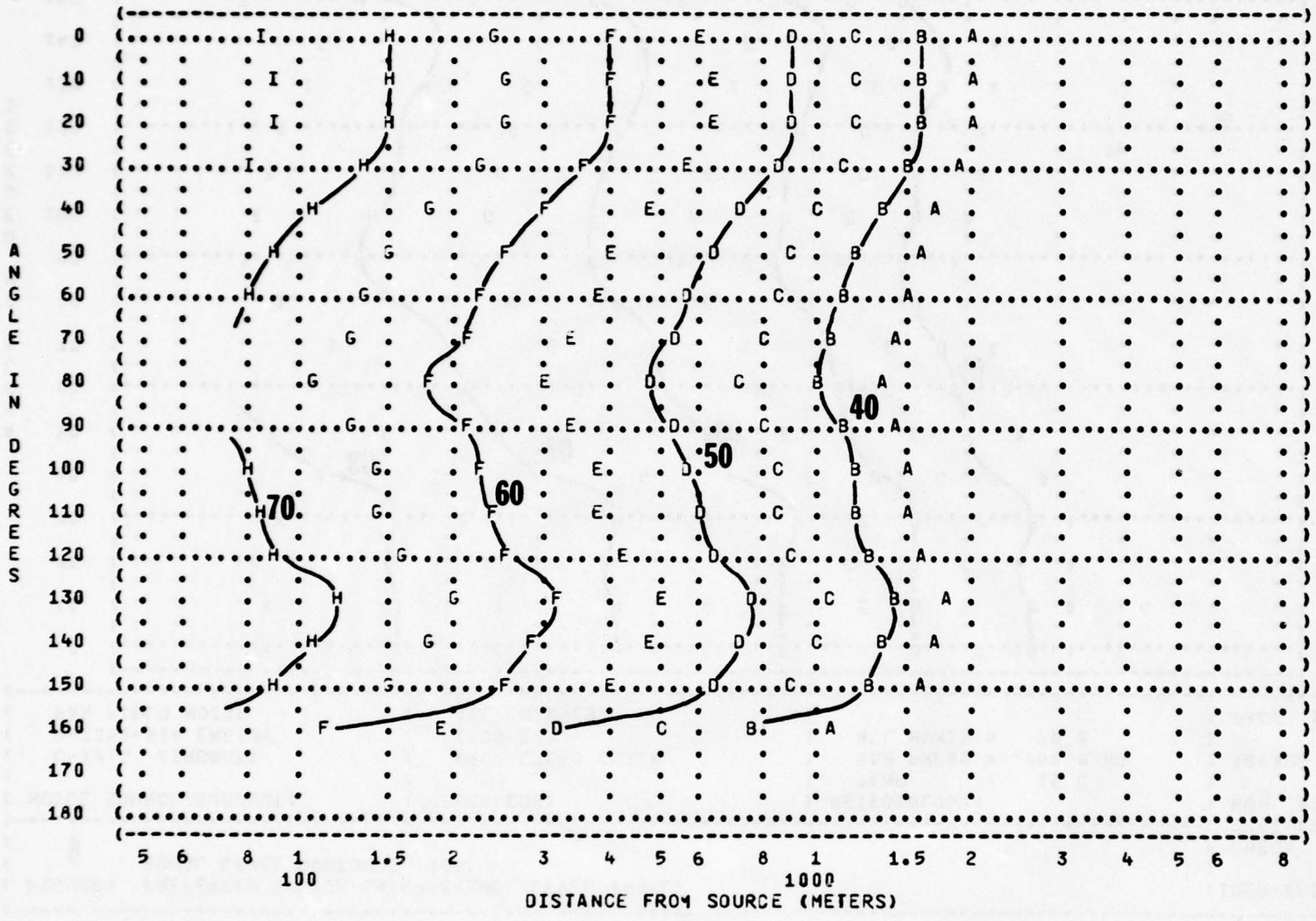


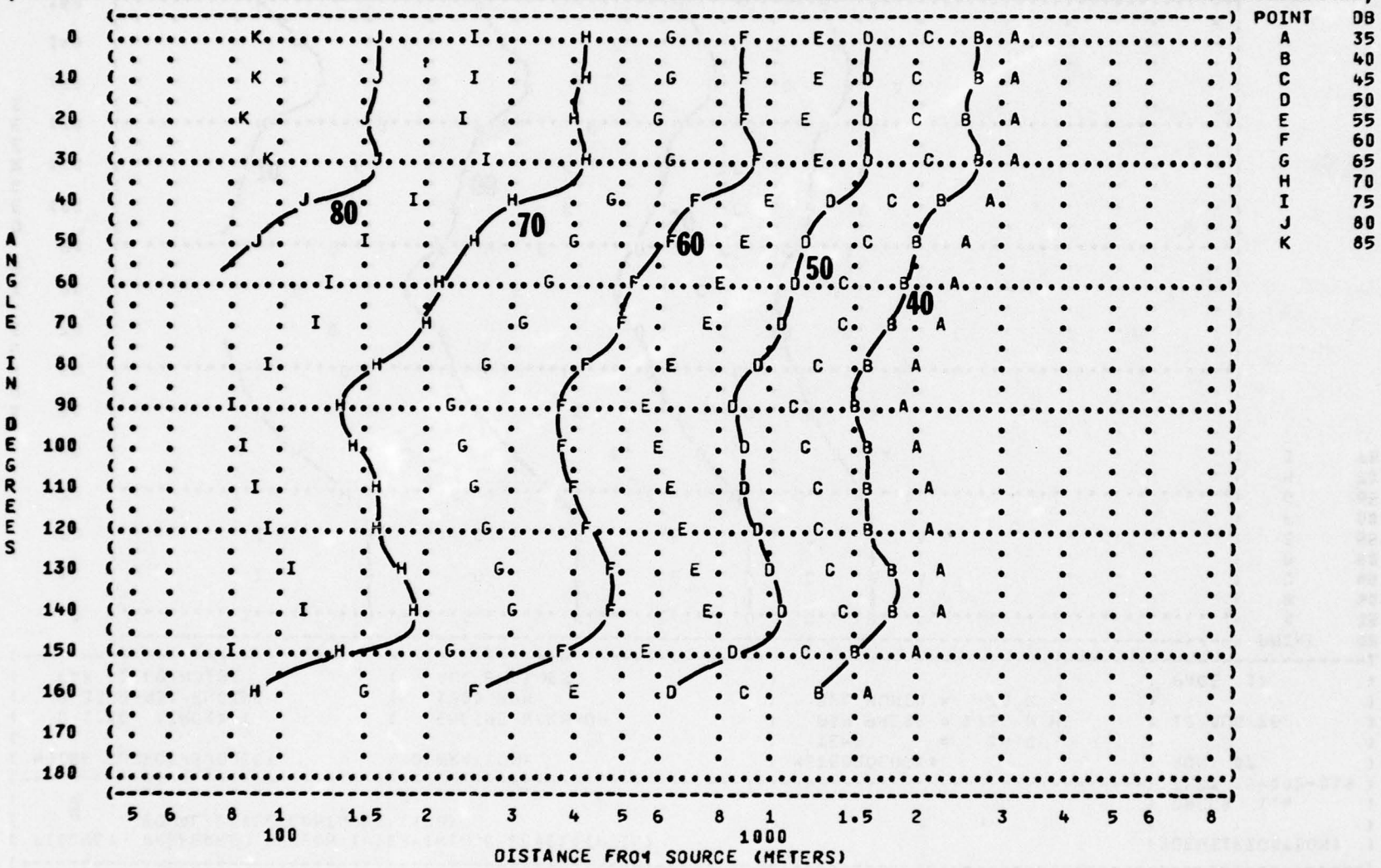
FIGURE 9 PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)
EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 17

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL 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

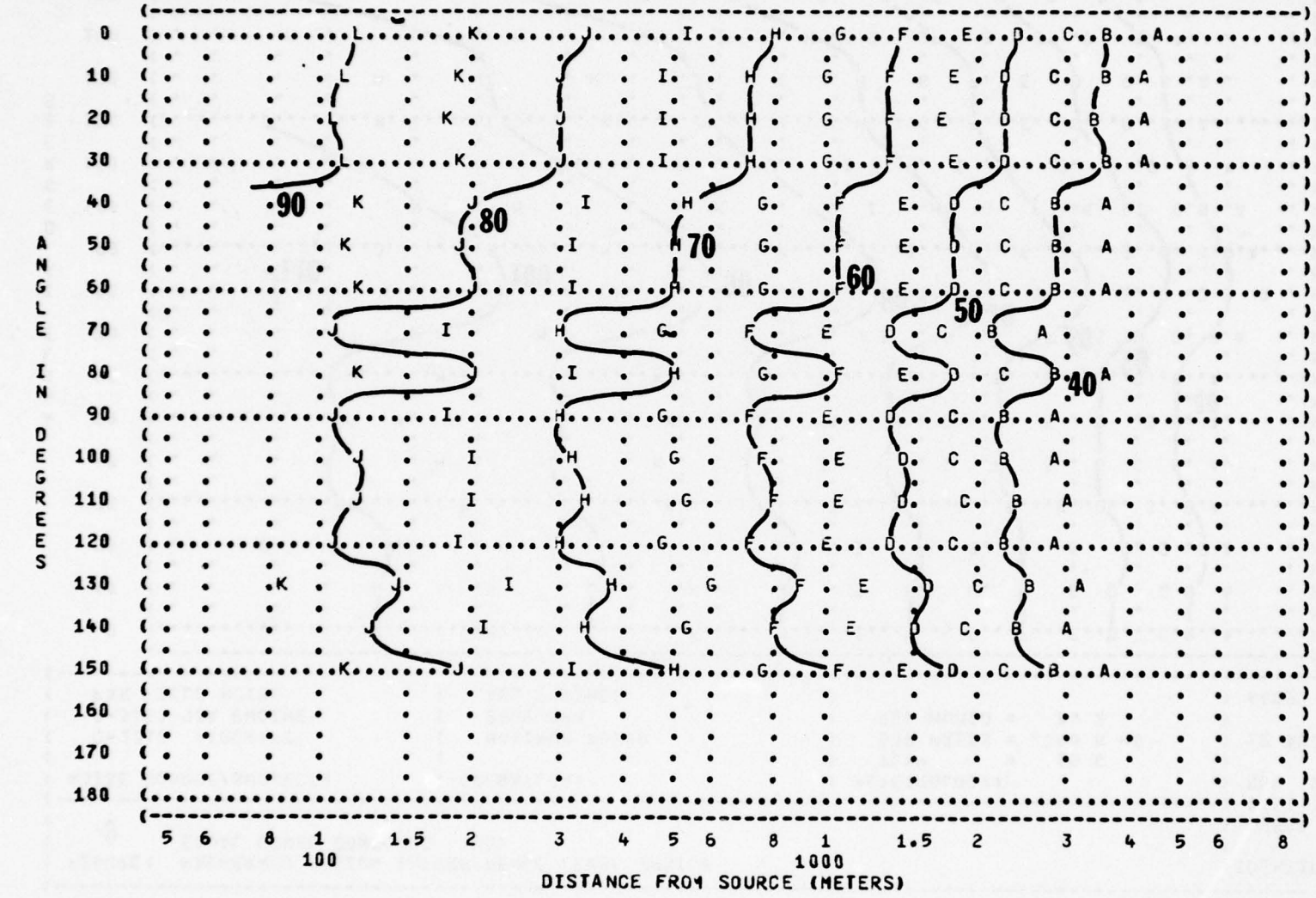
FIGURE 9: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 17

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL 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

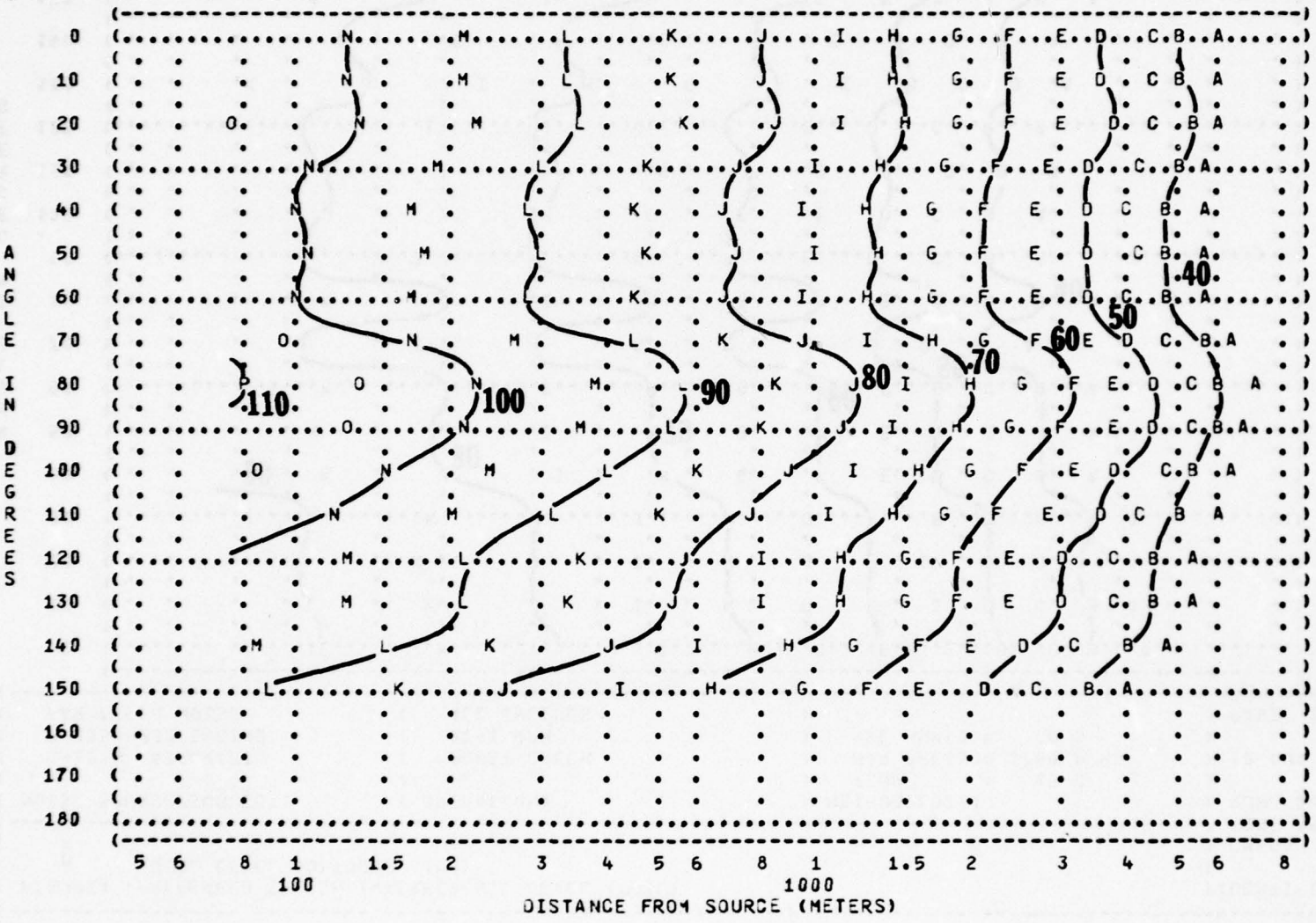
FIGURE 9 PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 17



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

FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) EQUAL TIME CONTOURS (MINUTES)		IDENTIFICATION: OMEGA 1.4 TEST 75-002-019 RUN 01 12 AUG 76 PAGE 7
NOISE SOURCE/SUBJECT: C-121G AIRCRAFT R-3350-93A ENGINE FAR FIELD NOISE	OPERATION: IDLE POWER 700 RPM ALL ENGINES	METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

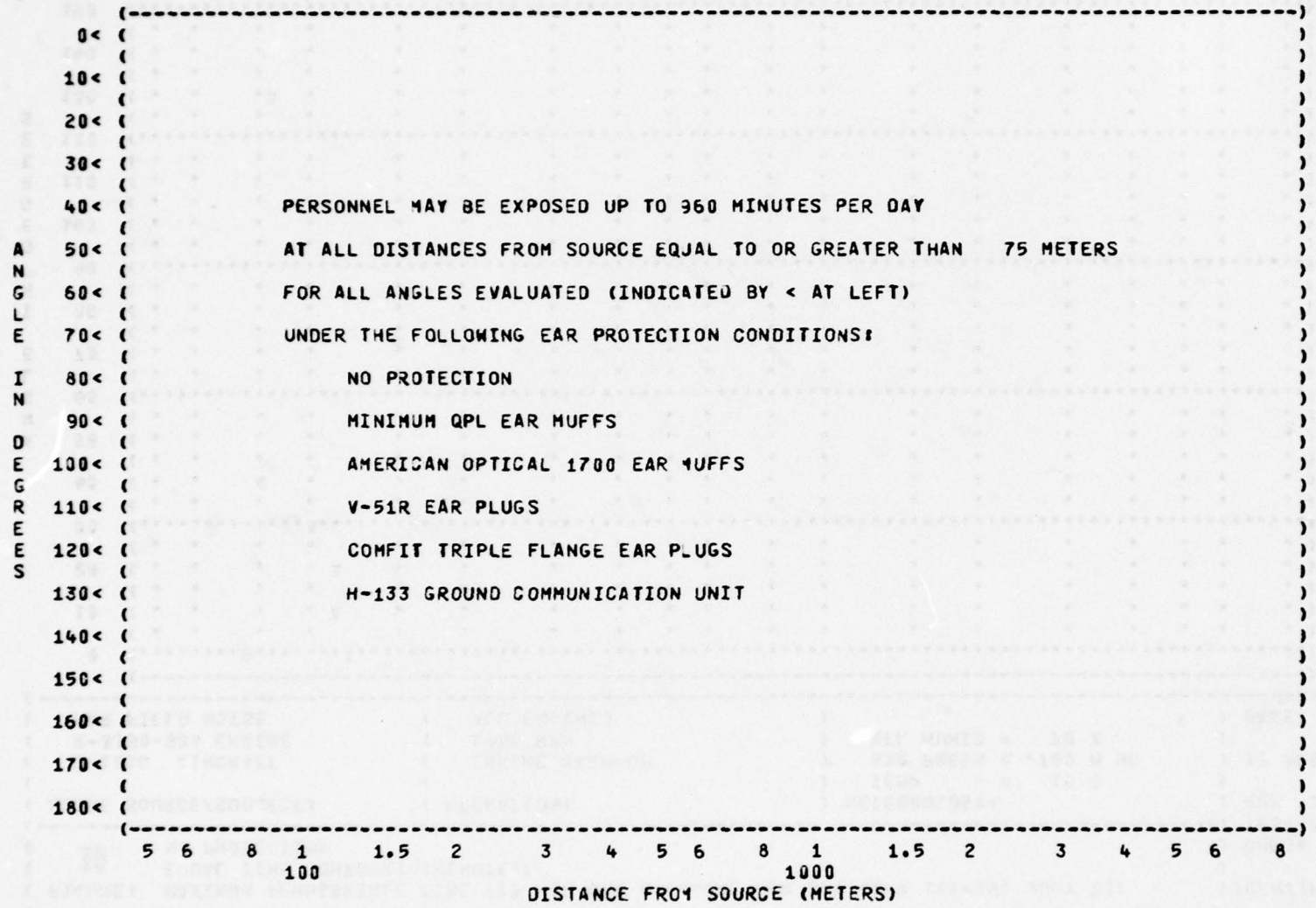


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 7

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

POINT	MIN
A	960
B	480

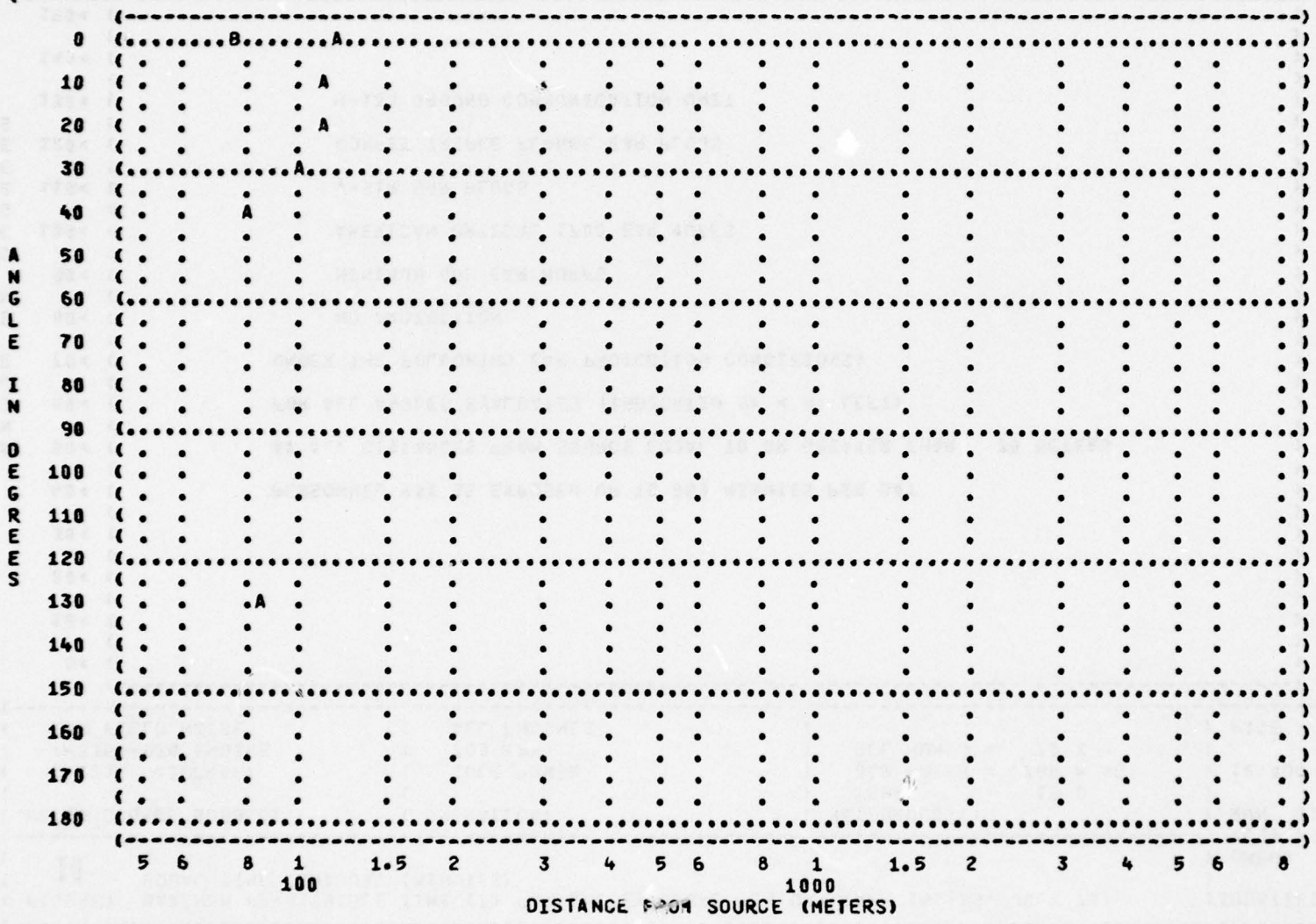


FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 8

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

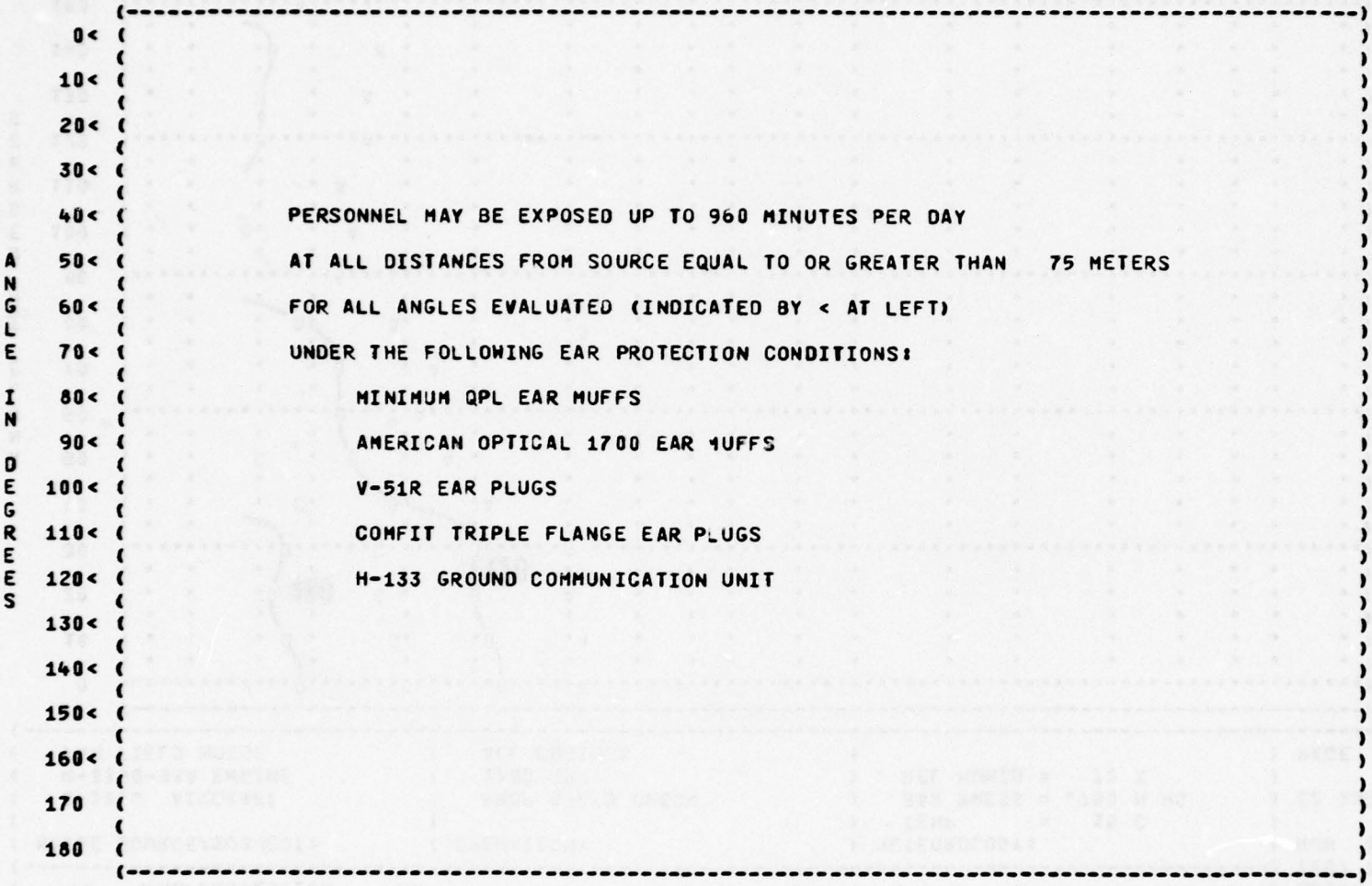


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 7

POINT	MIN
A	960
B	480
C	240
D	120

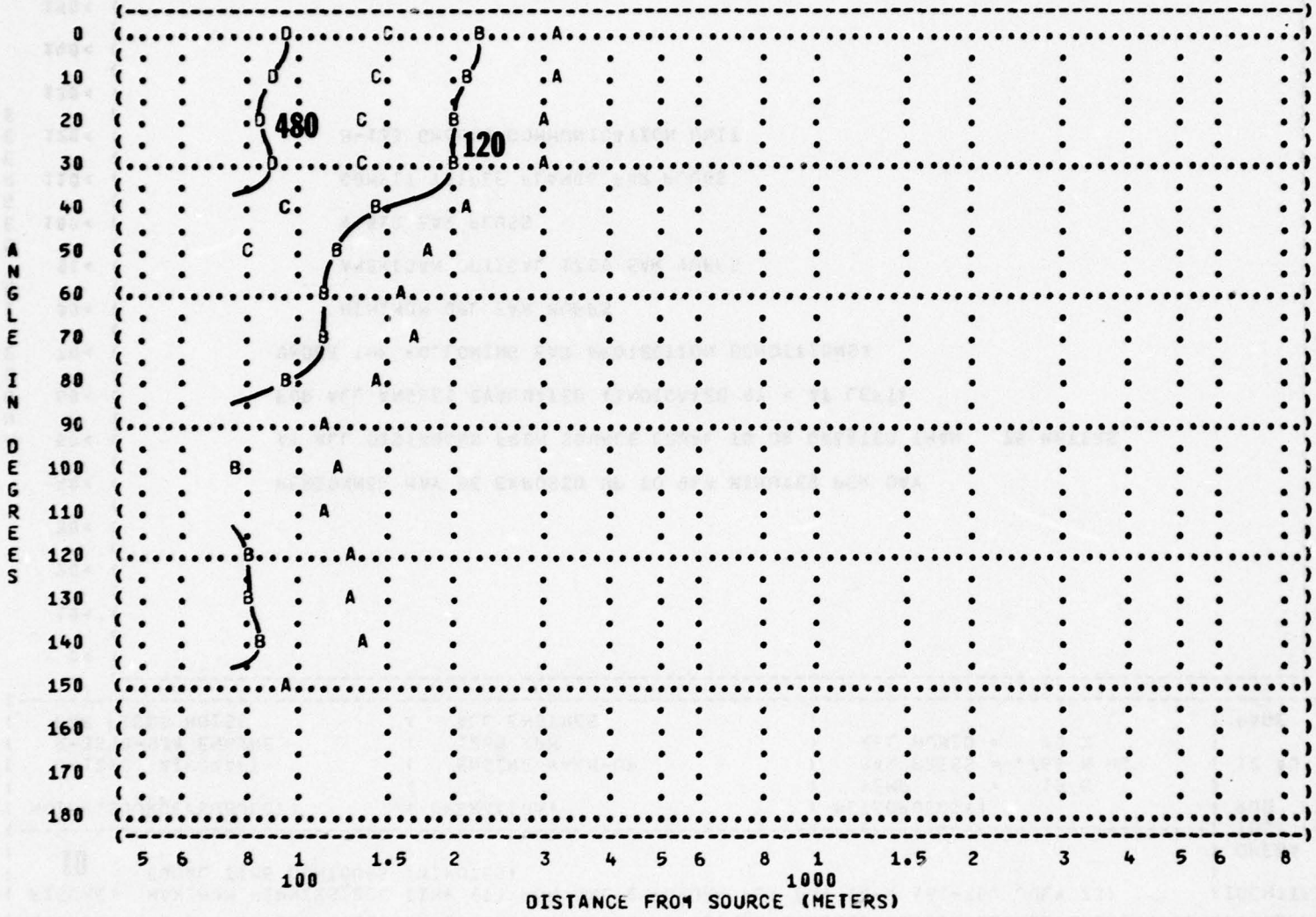


FIGURE 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
MINIMUM QPL EAR MUFFS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 8

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

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

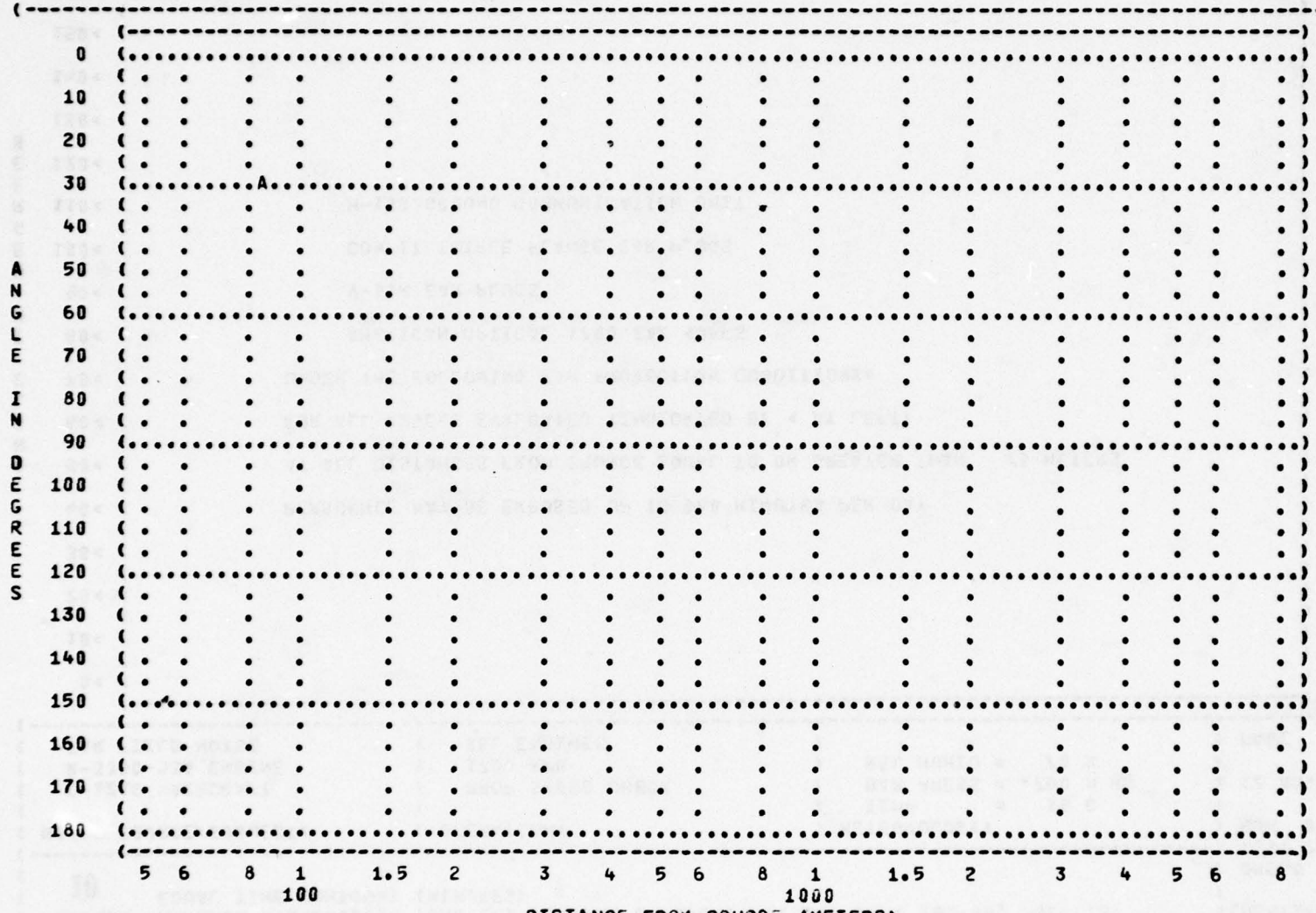


FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 9

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

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

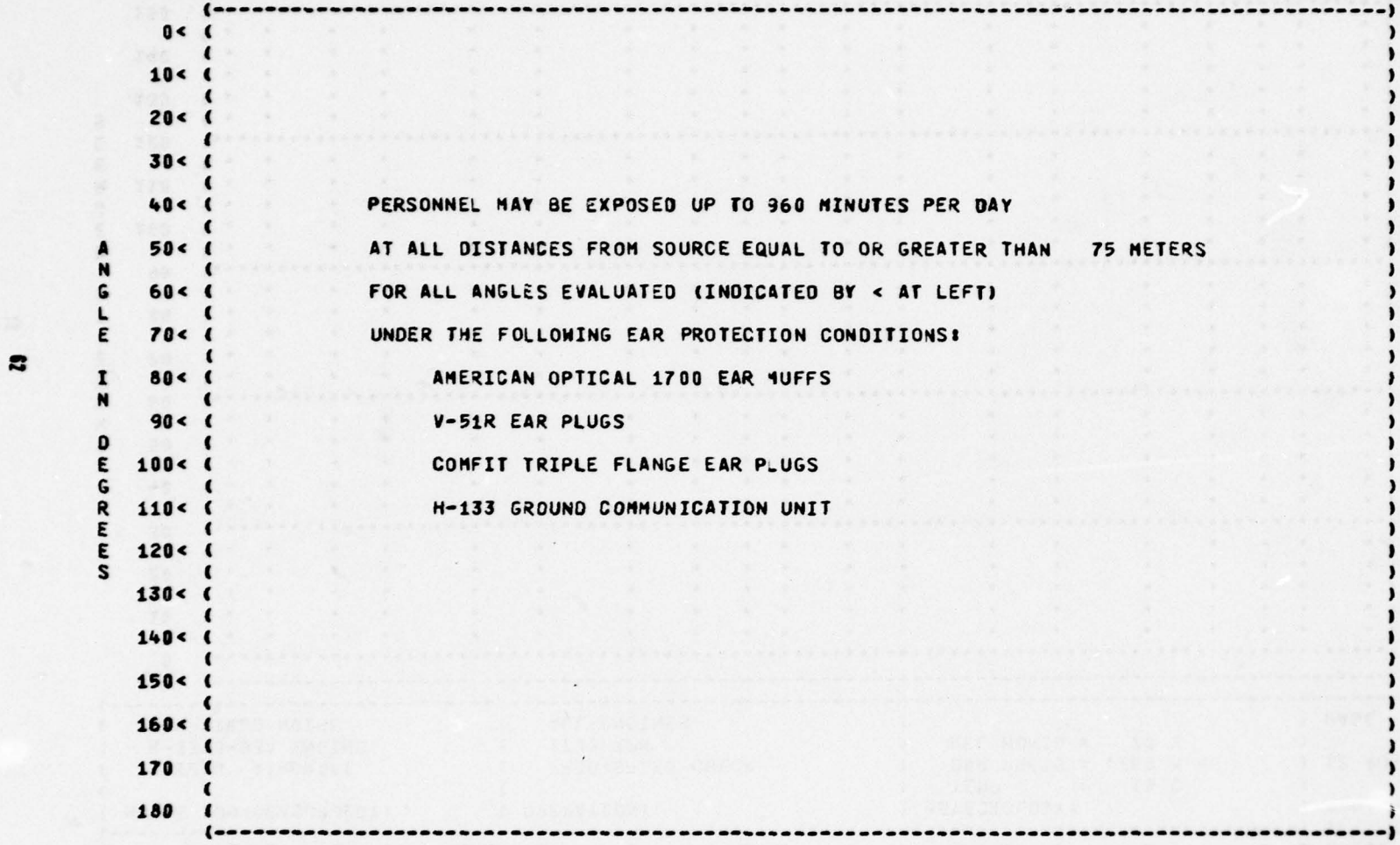


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 7

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL 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

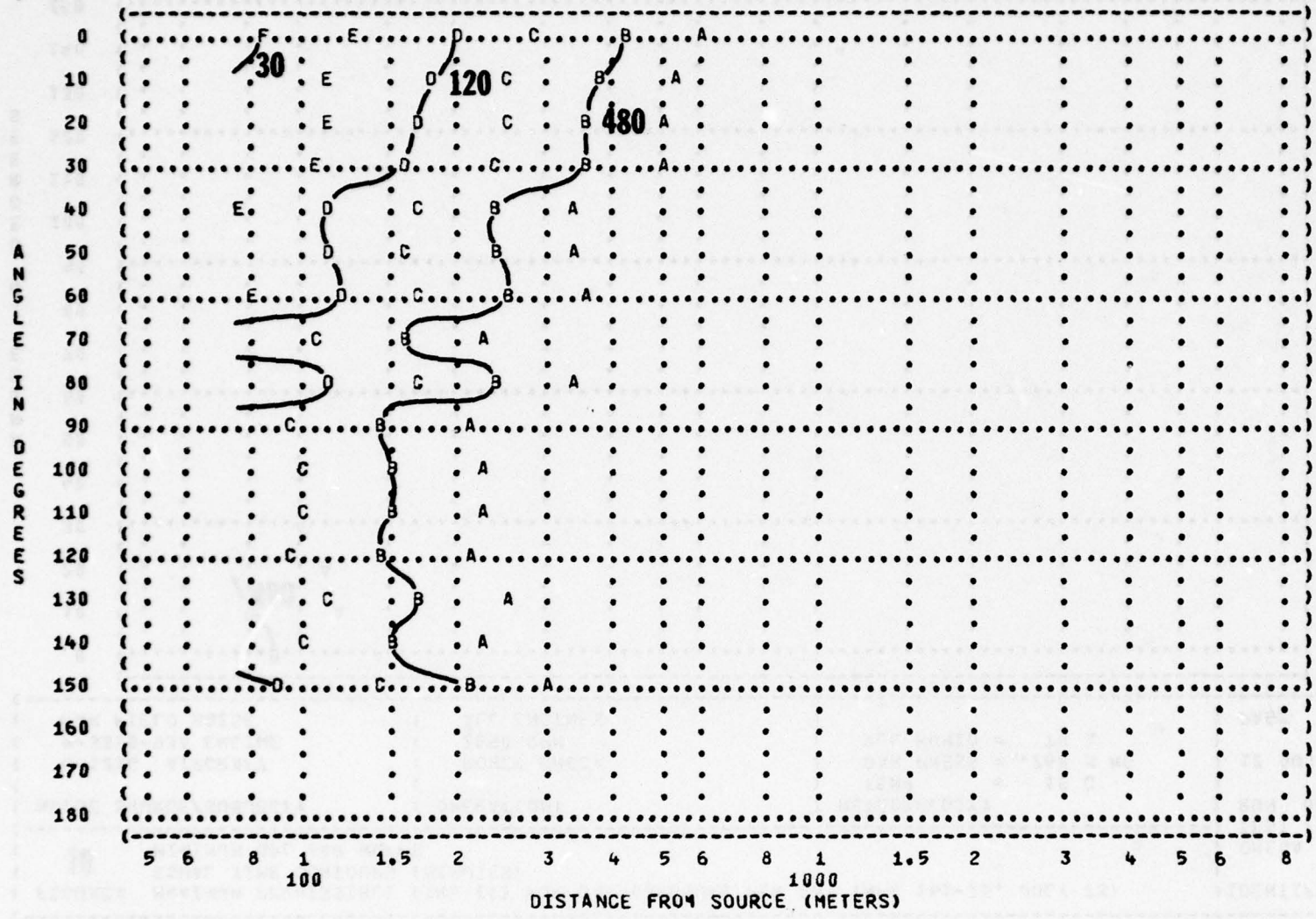


FIGURE: 10

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 8

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

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

POINT	MIN
A	960
B	480

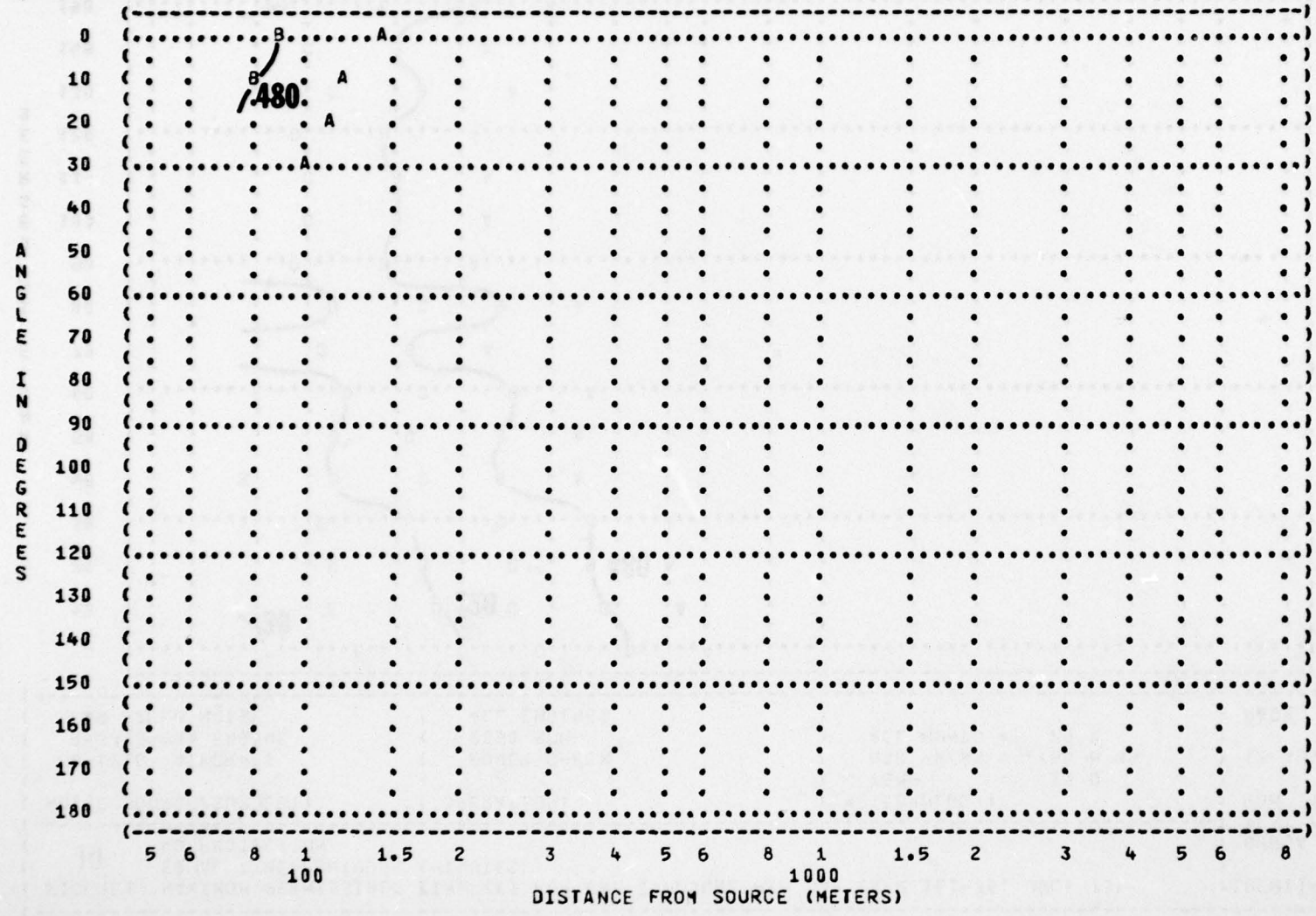


FIGURE: 10

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 9

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

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

POINT MIN
A 960

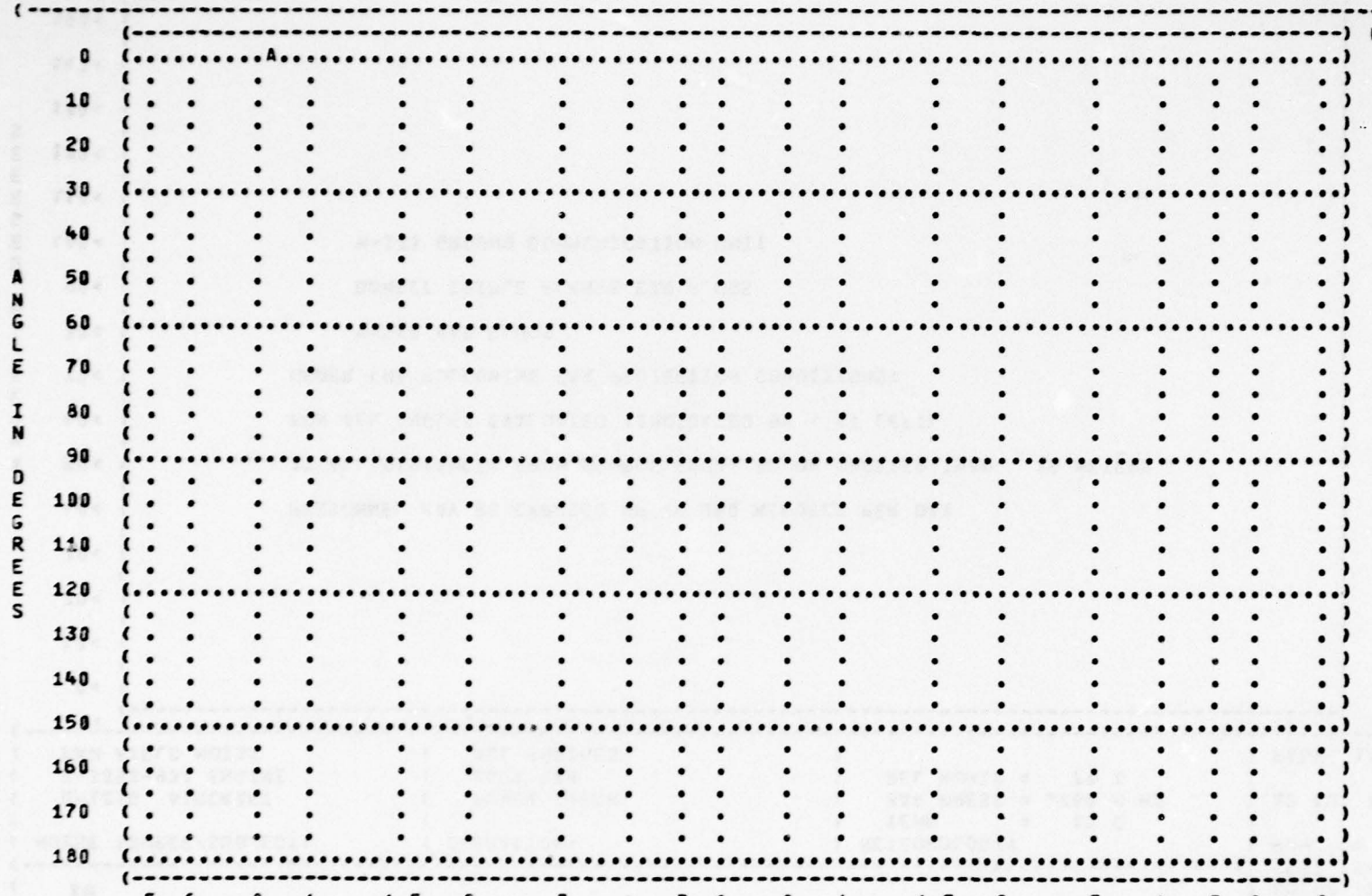


FIGURE: 10 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 10

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

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

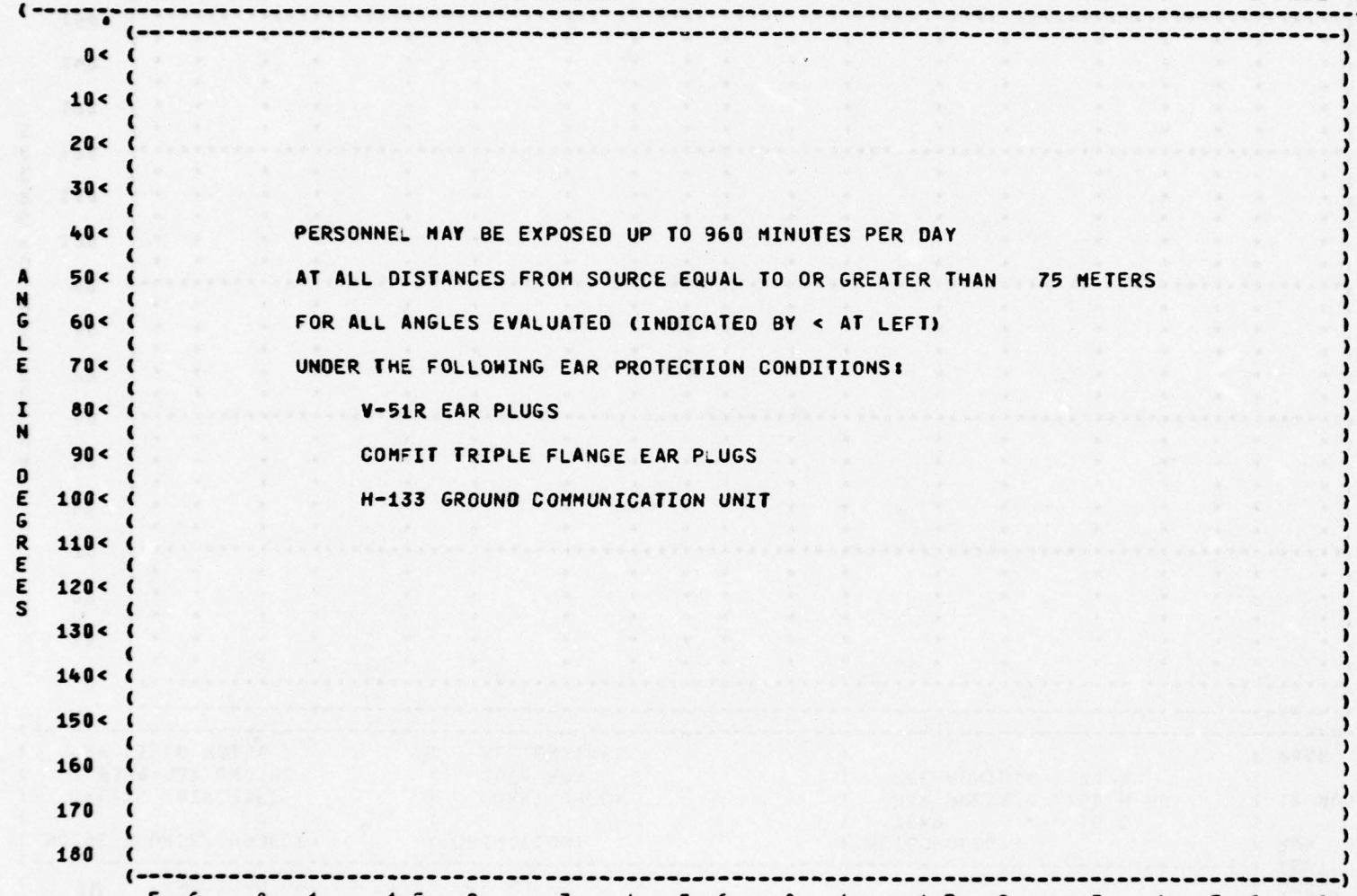


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

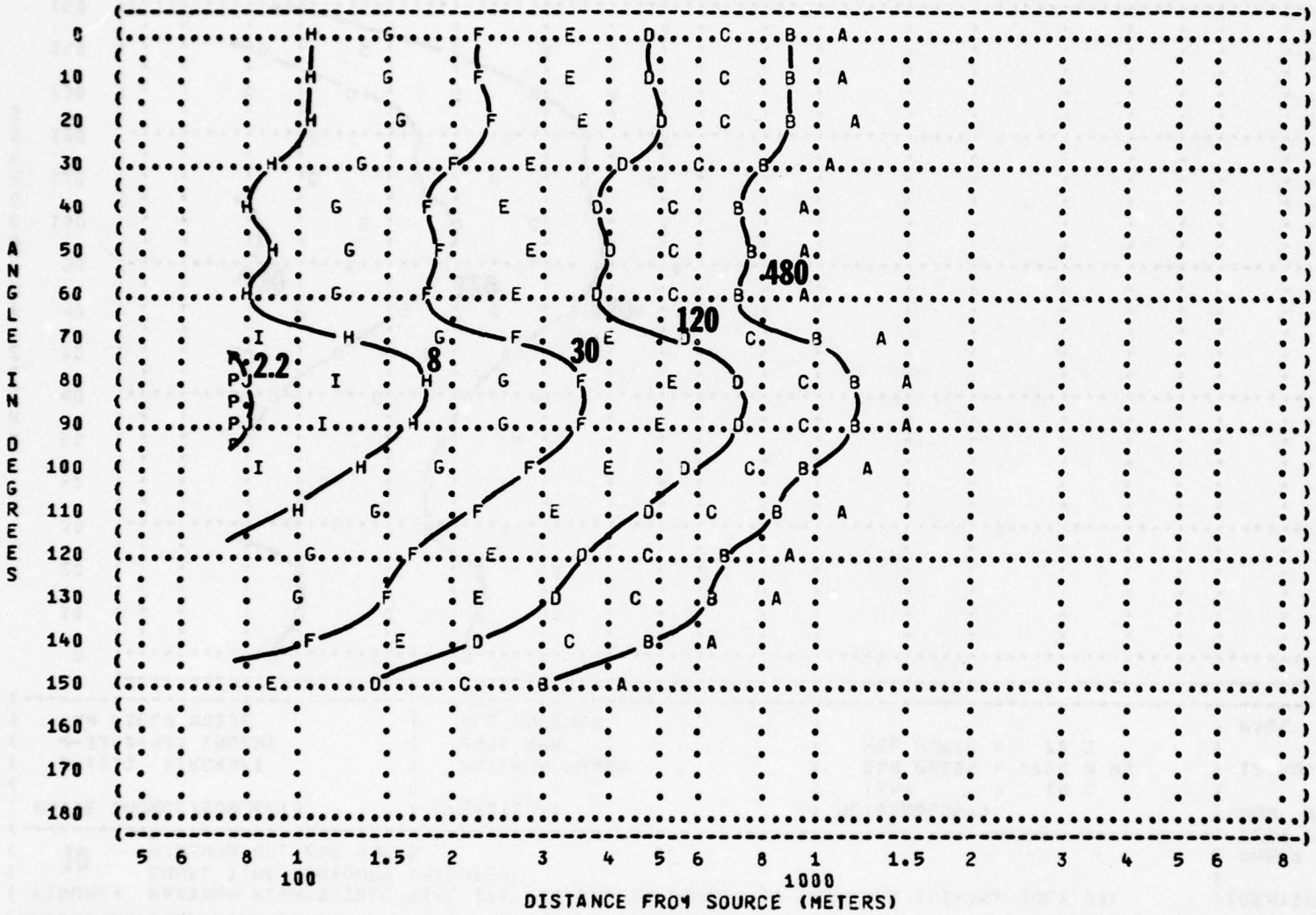
IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 7

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL 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
J	2.2



P ADDITIONAL EAR PROTECTION REQUIRED.

FIGURE: 10

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 8

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL 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

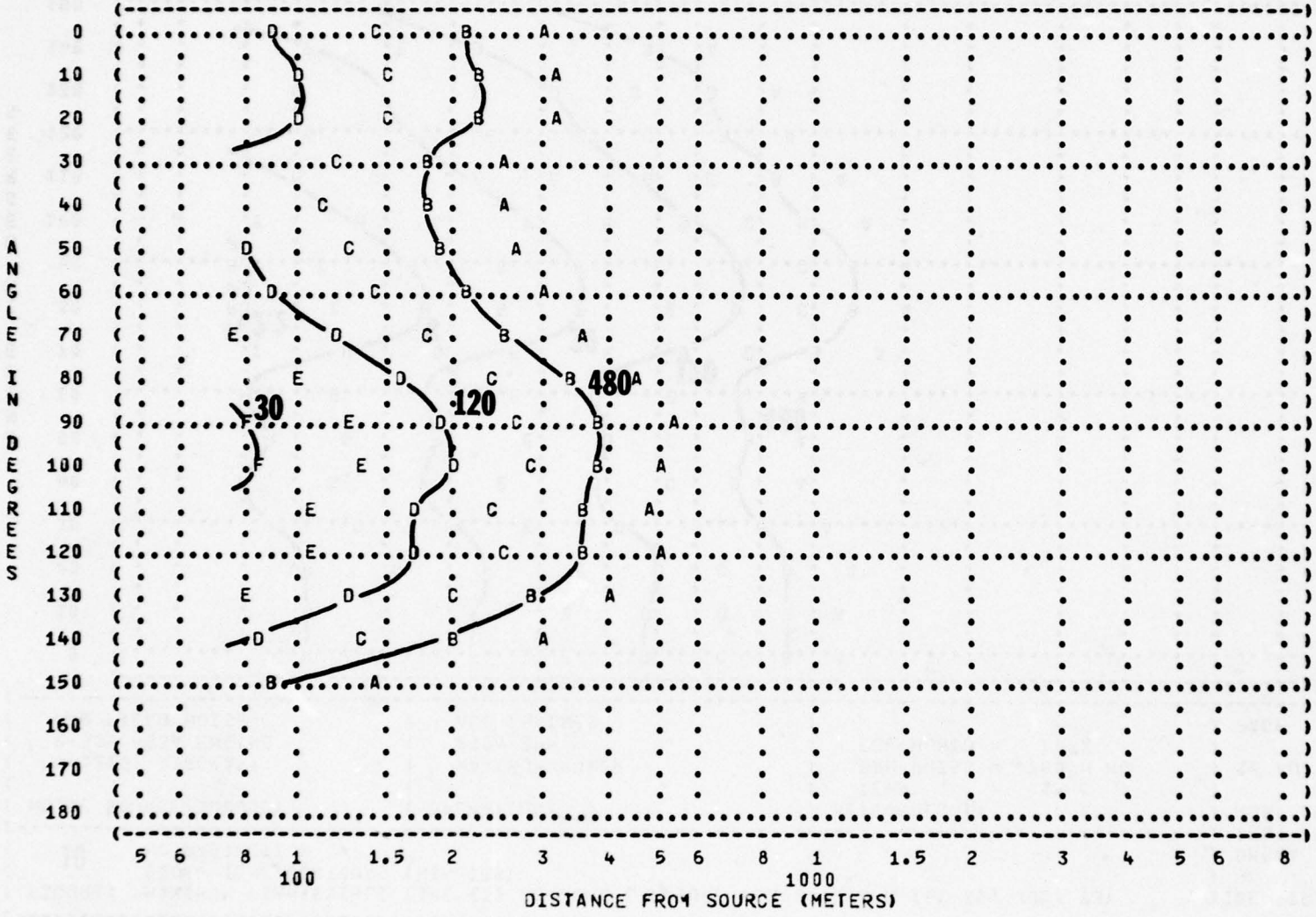


FIGURE: 10

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 75-002-019
RUN 05
12 AUG 76
PAGE 9

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL 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

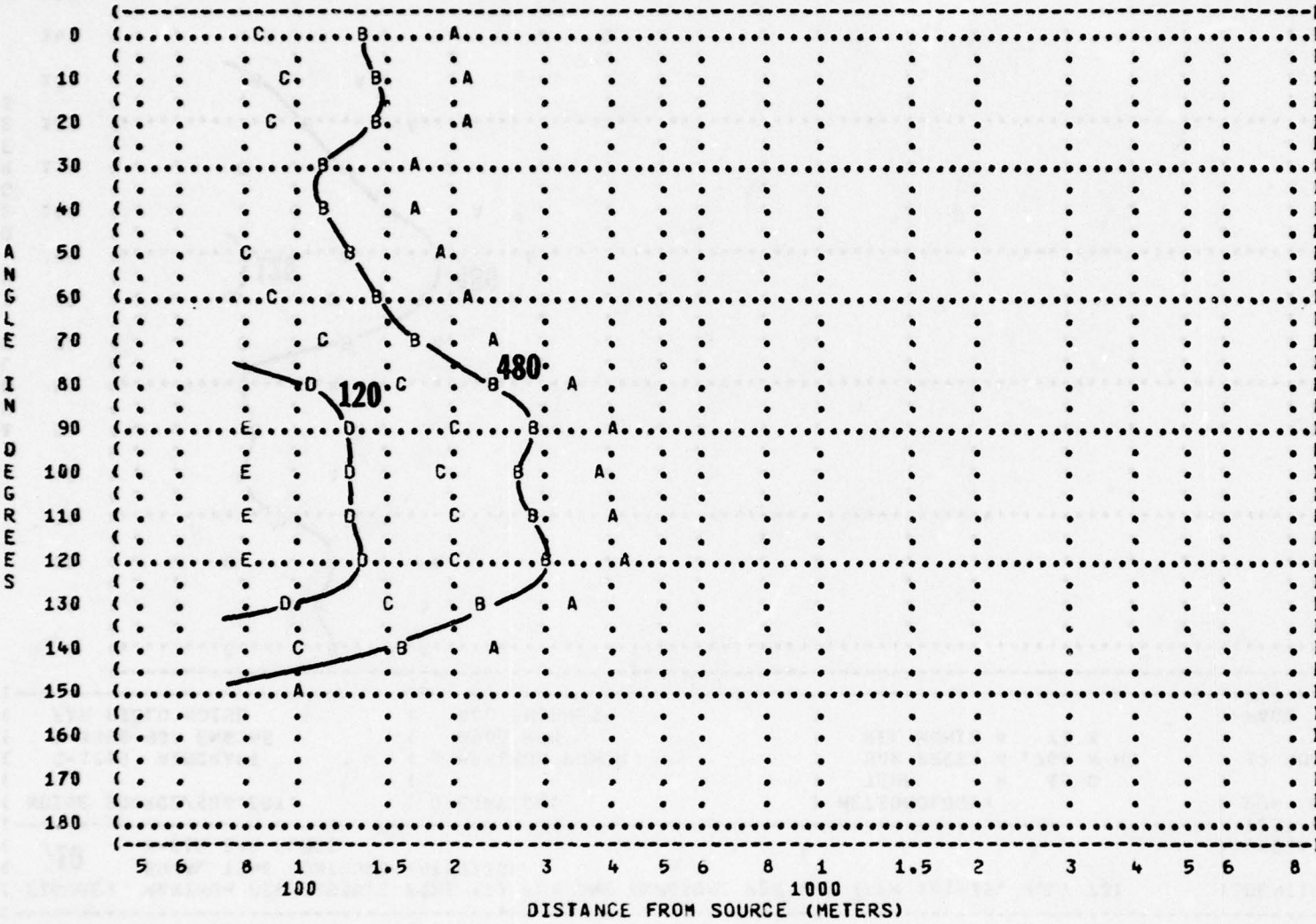


FIGURE: 10

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 75-002-019
RUN 05
12 AUG 76
PAGE 10

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

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

POINT	MIN
A	960
B	480
C	240
D	120

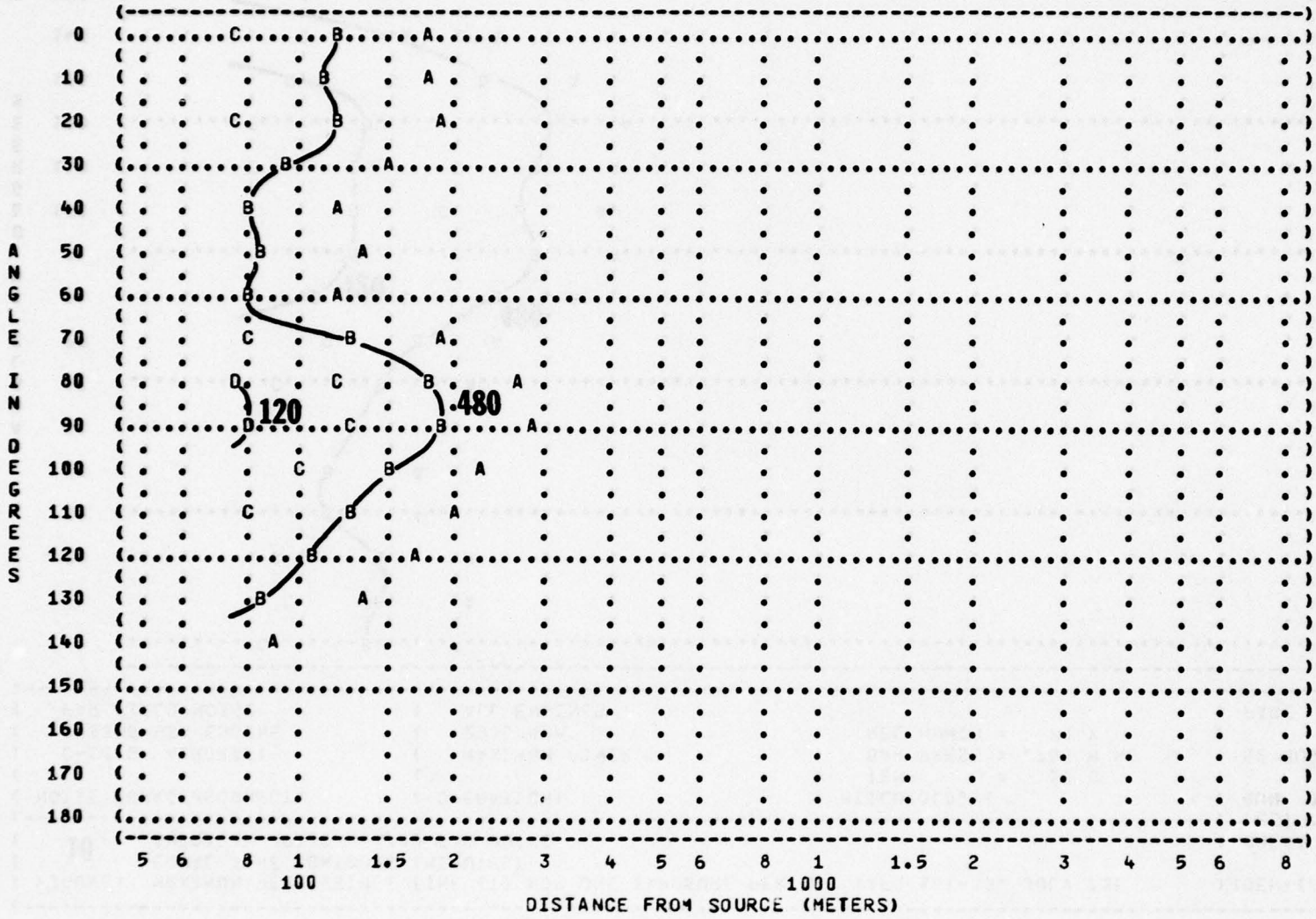


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
COMFIT TRIPLE FLANGE EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 11

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

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

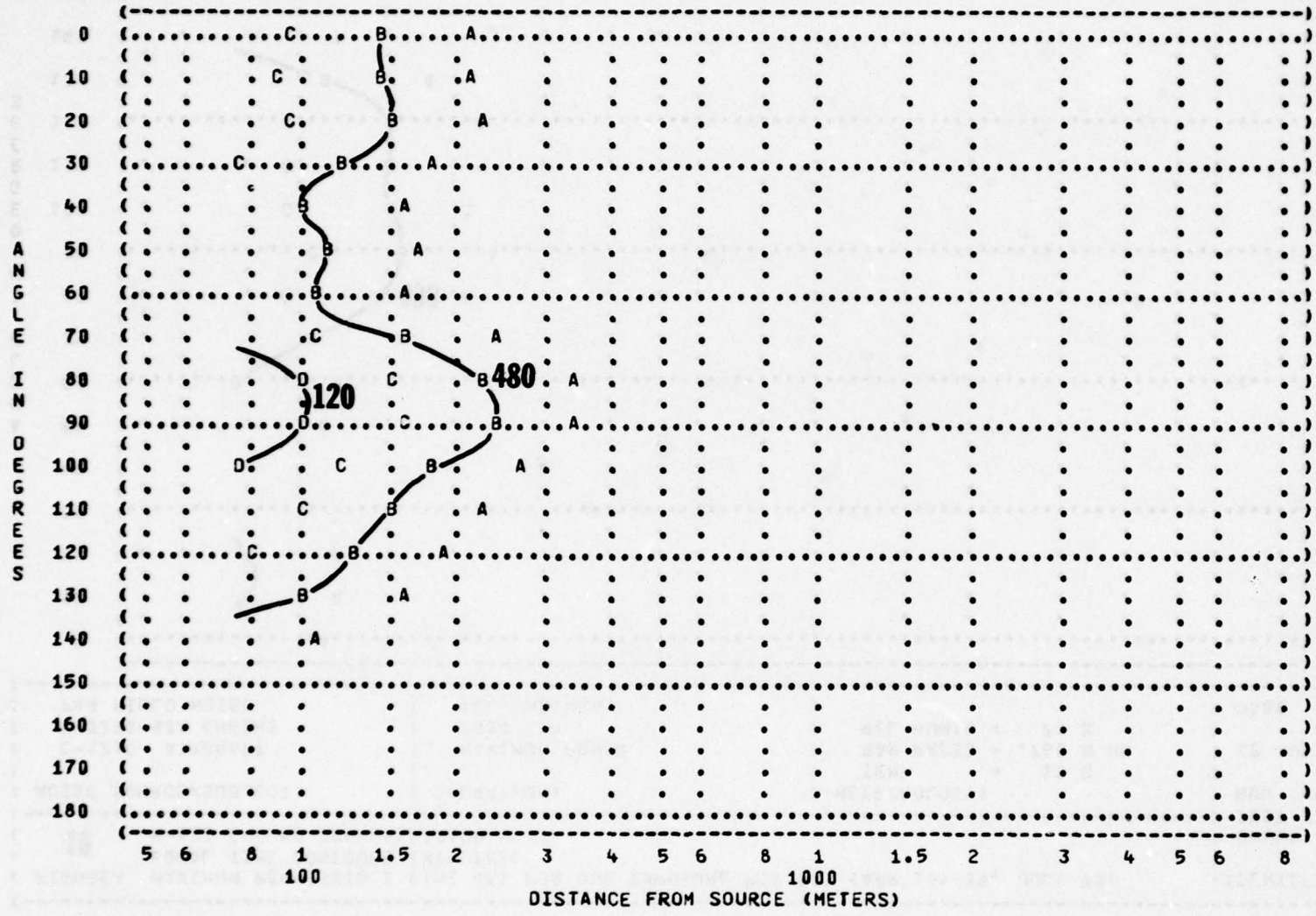


FIGURE 10: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
H-133 GROUND COMMUNICATION UNIT

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 12

POINT	MIN
A	960
B	480
C	240

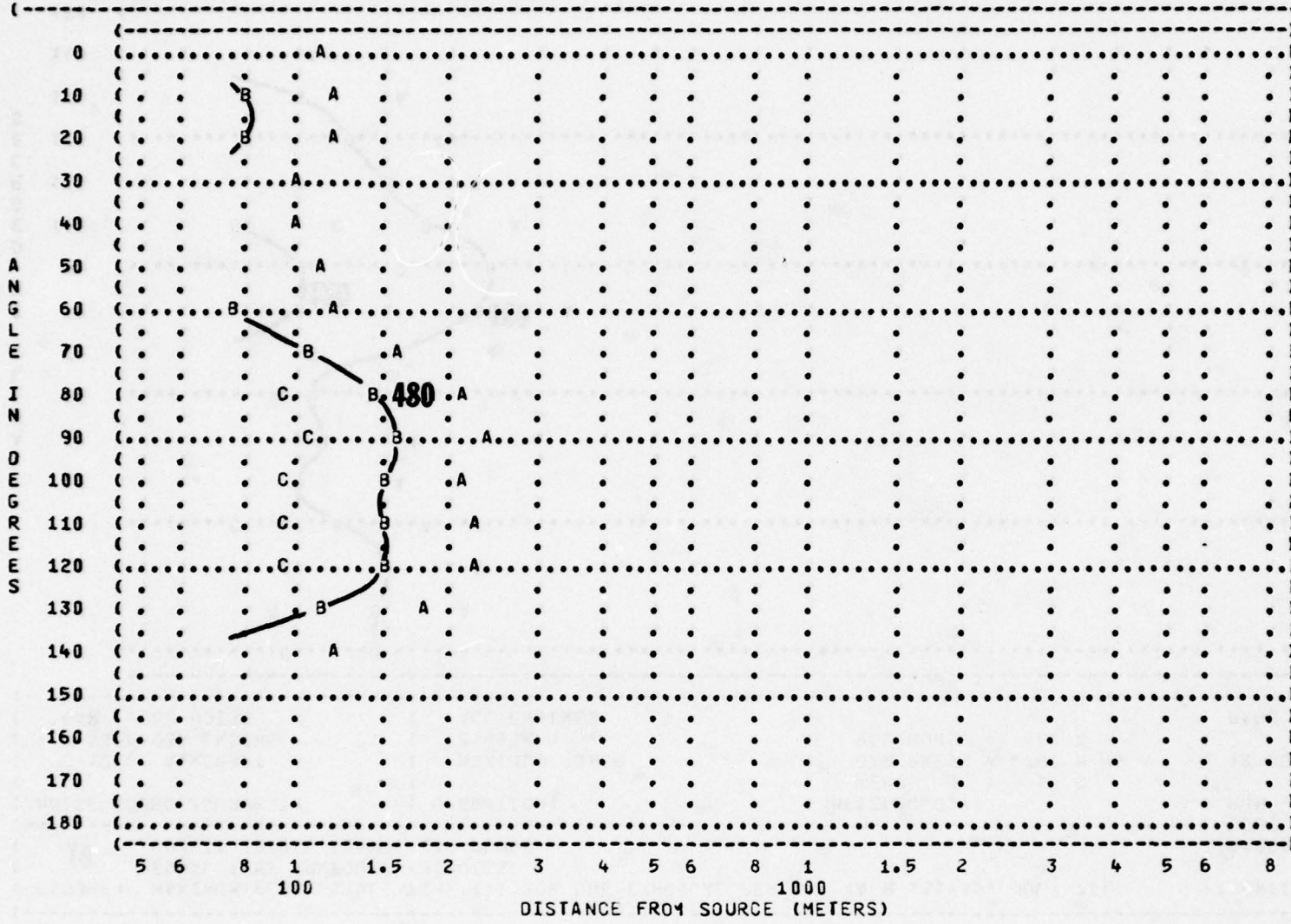


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 18

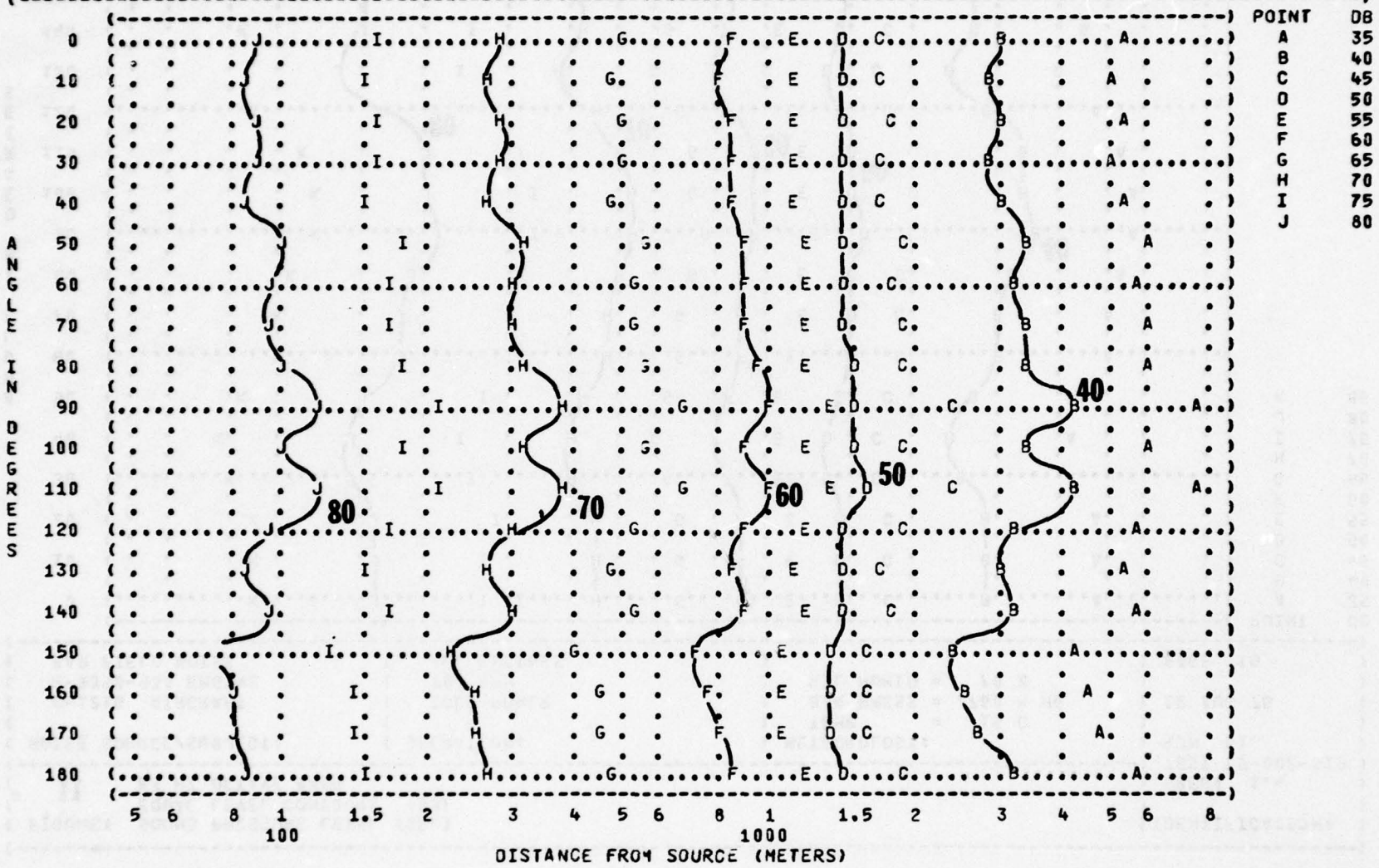


FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 19

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL 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

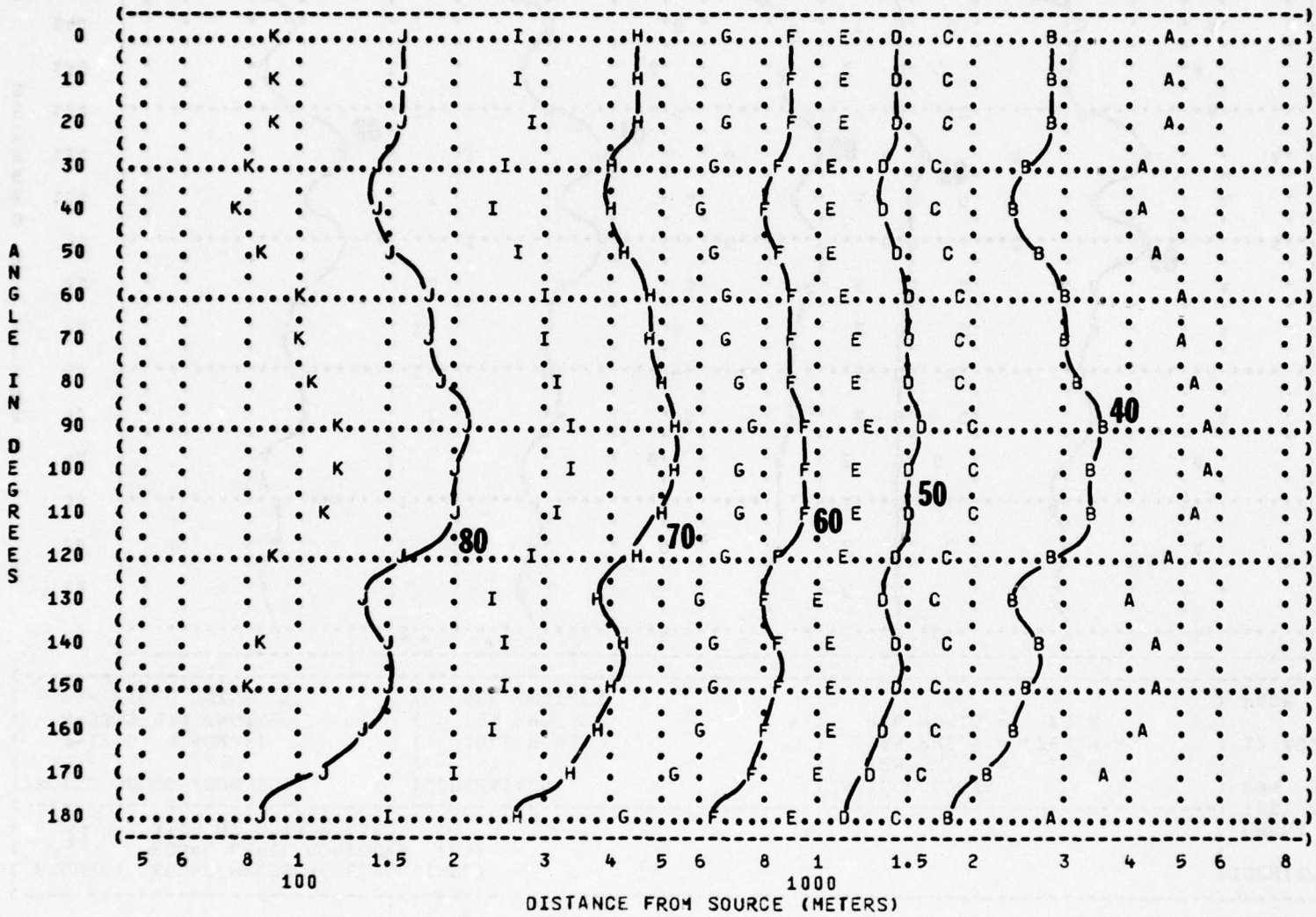


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 20

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL ENGINES

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

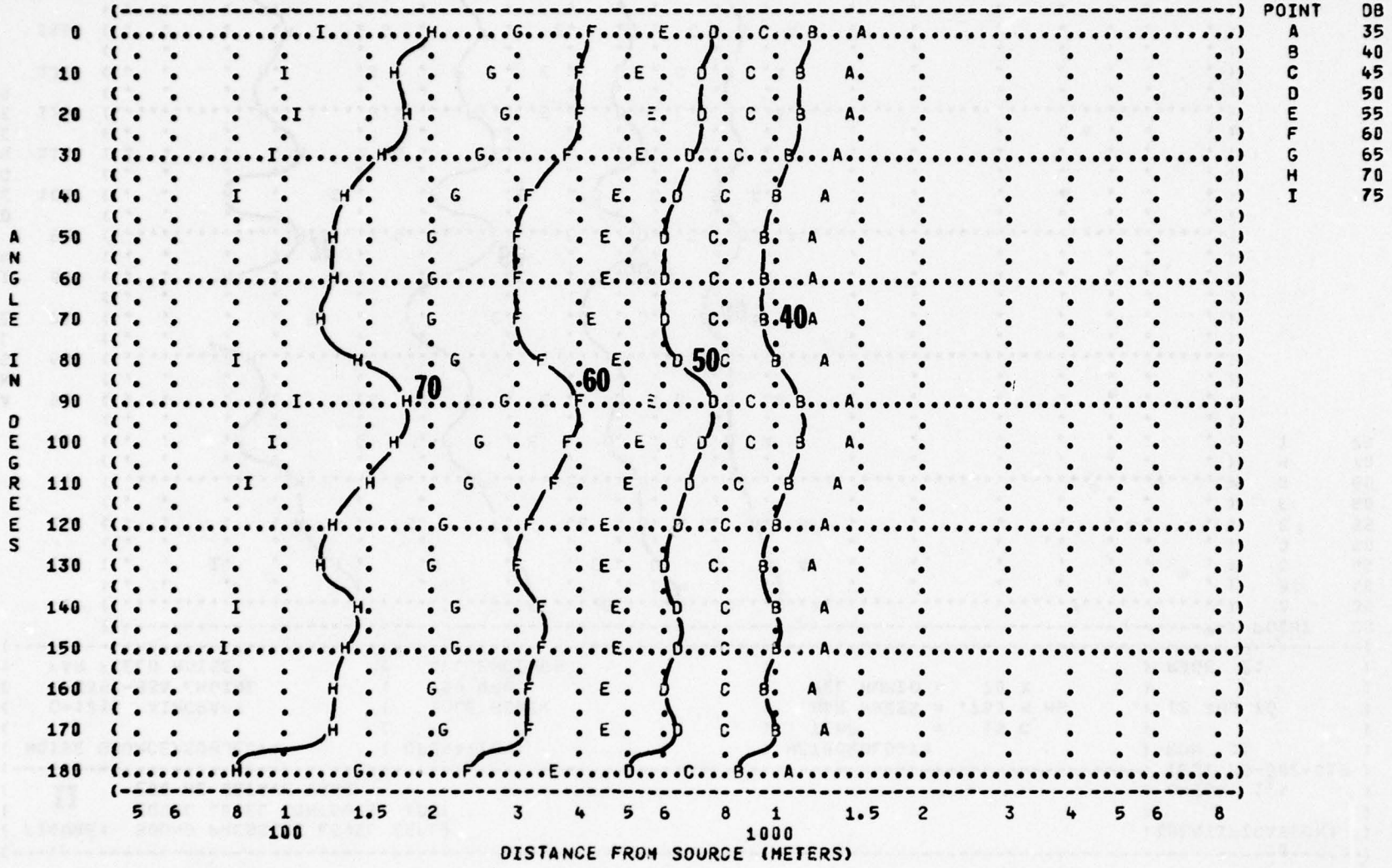


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 21

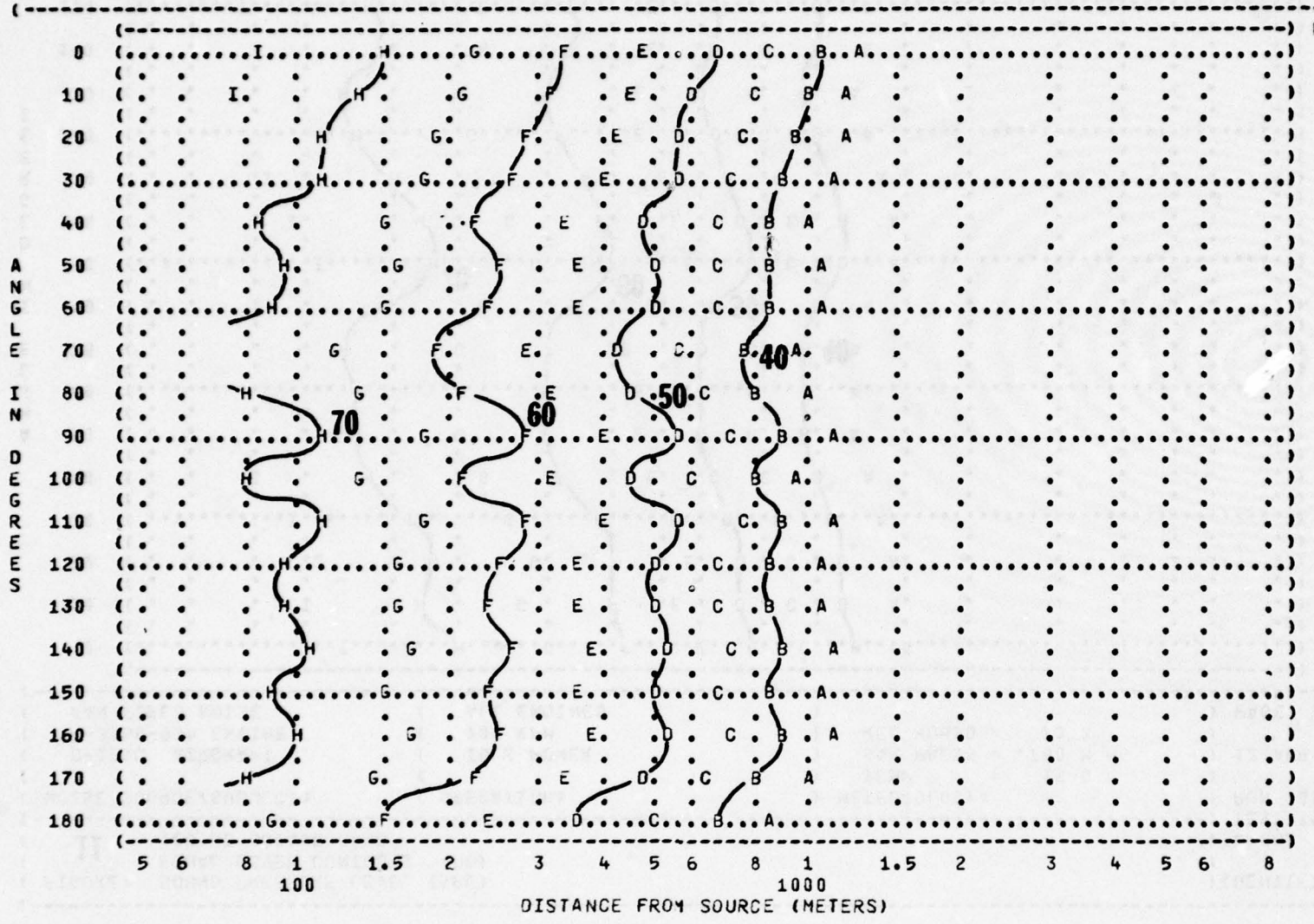


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 22

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

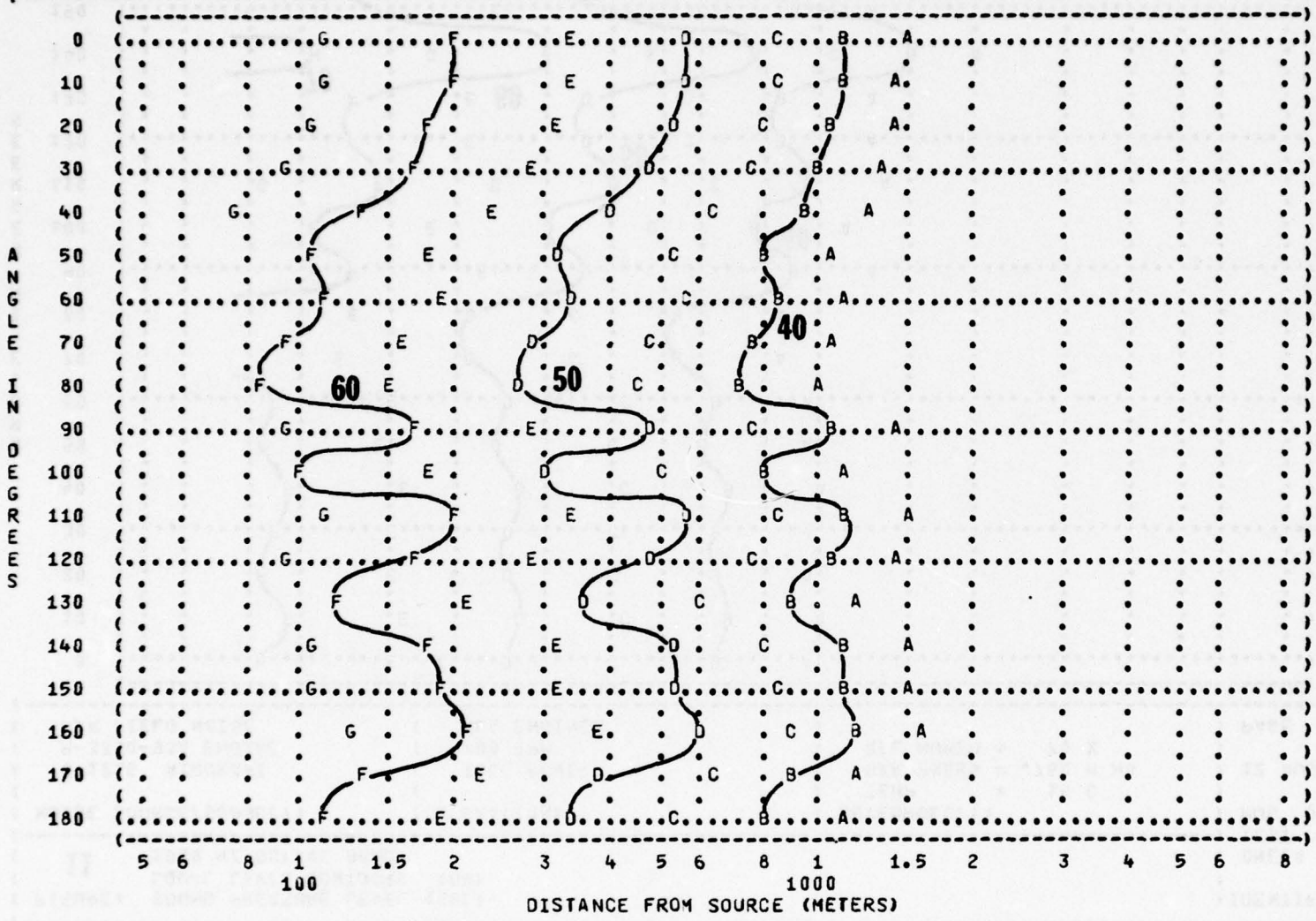


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 23

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

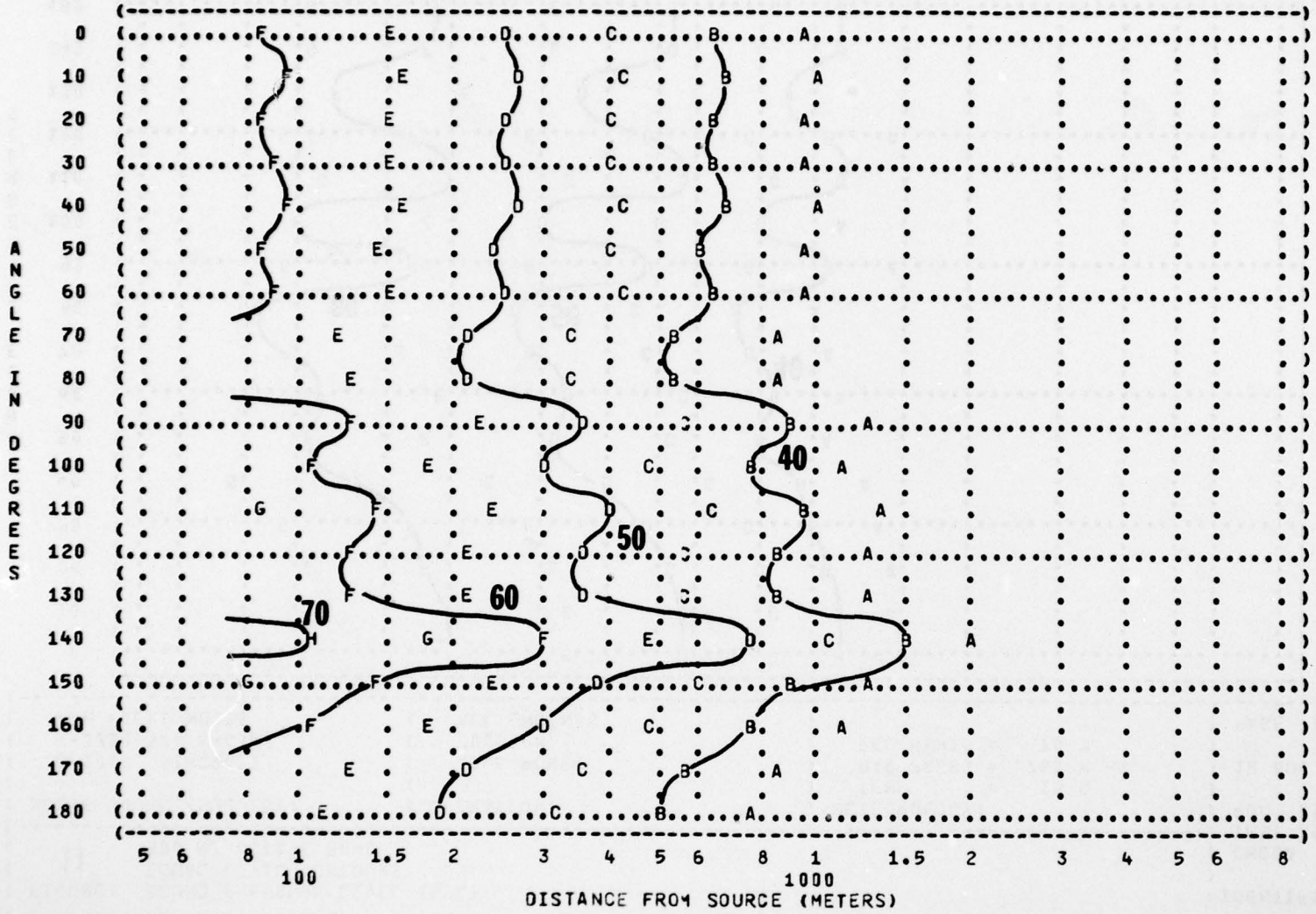


FIGURE 11

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 24

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL 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

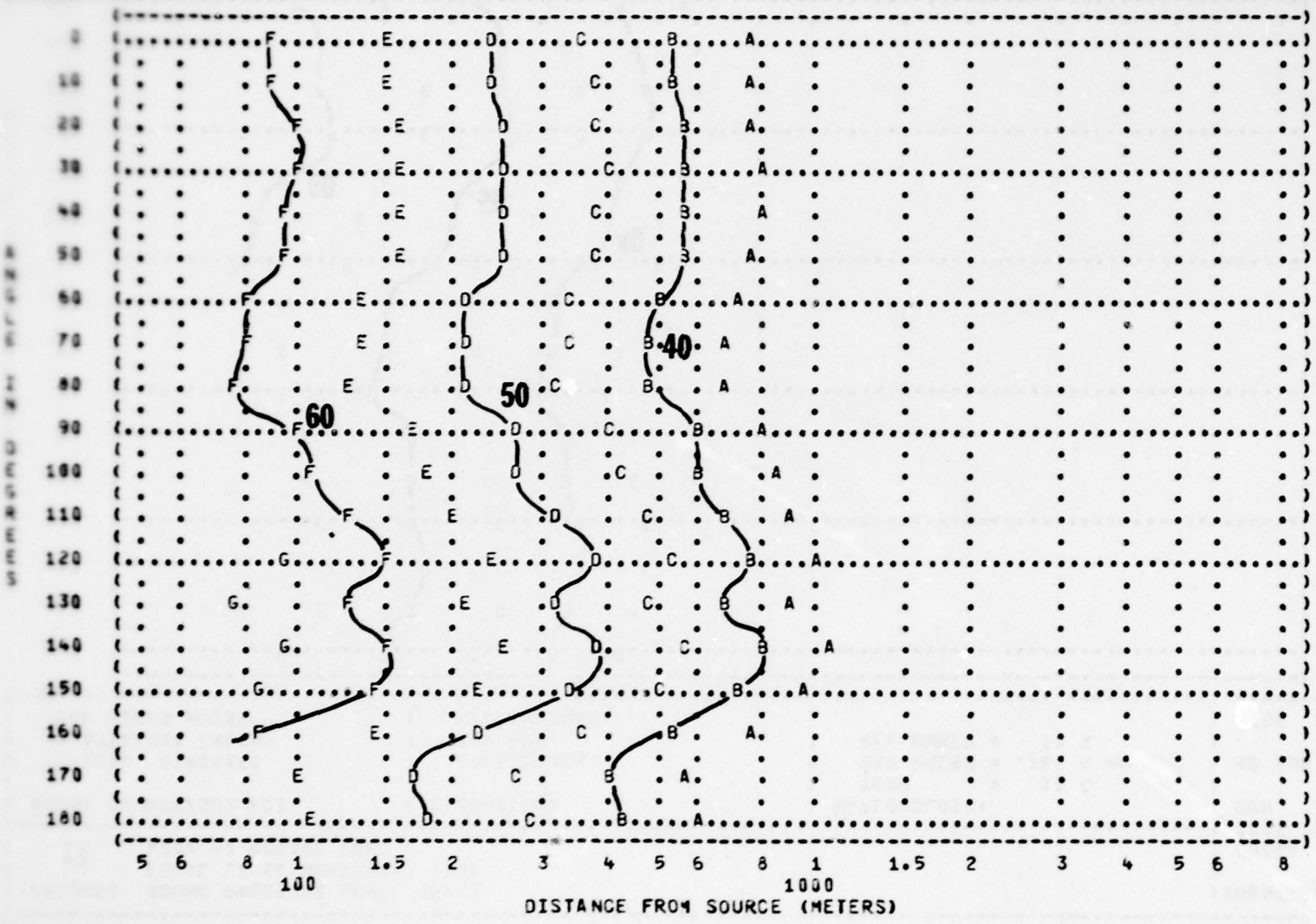


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-002-019 RUN 01 12 AUG 76 PAGE 25

NOISE SOURCE/SUBJECT: C-121G AIRCRAFT R-3350-93A ENGINE FAR FIELD NOISE

OPERATION: IDLE POWER 700 RPM ALL 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

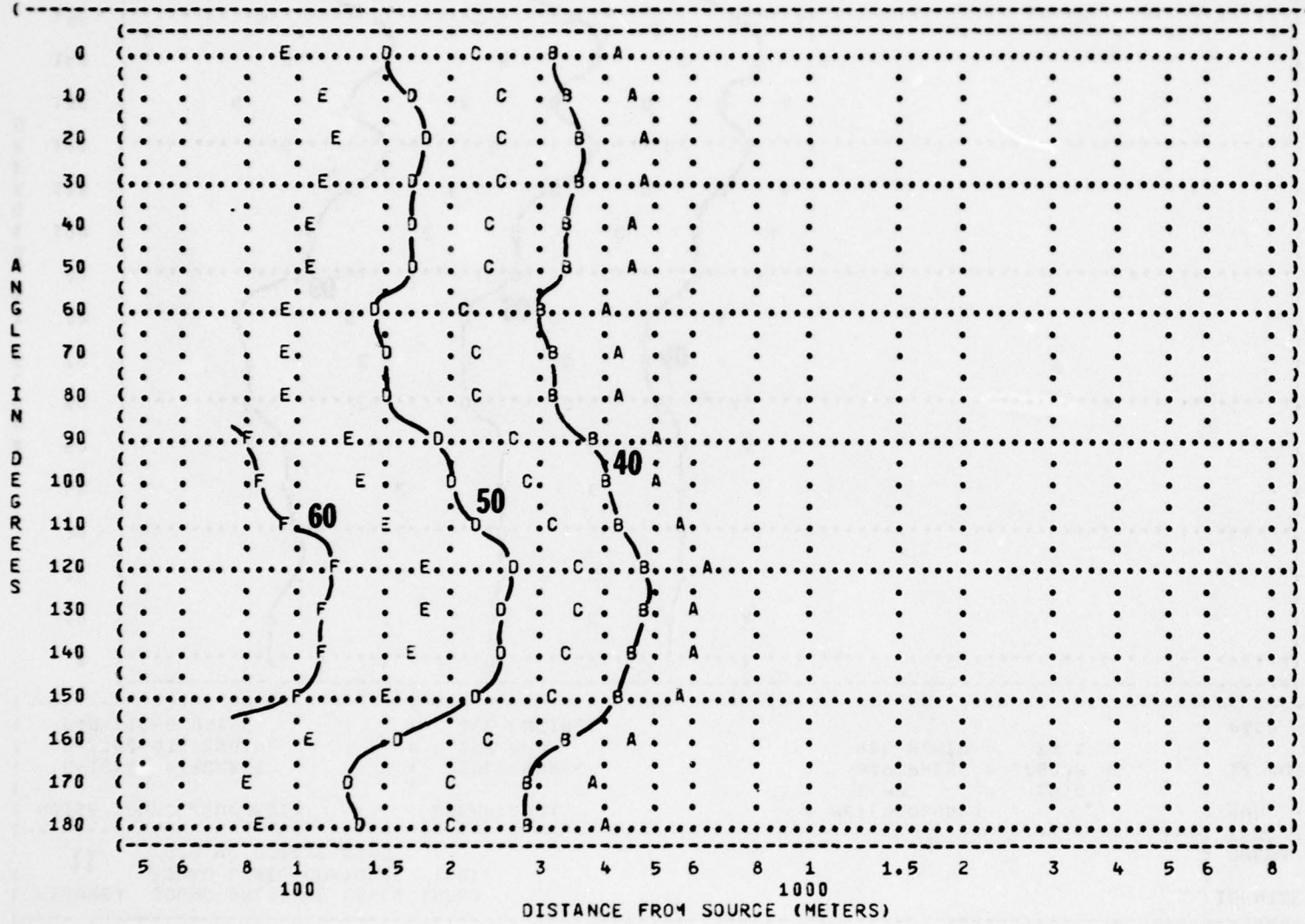


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 01
12 AUG 76
PAGE 26

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

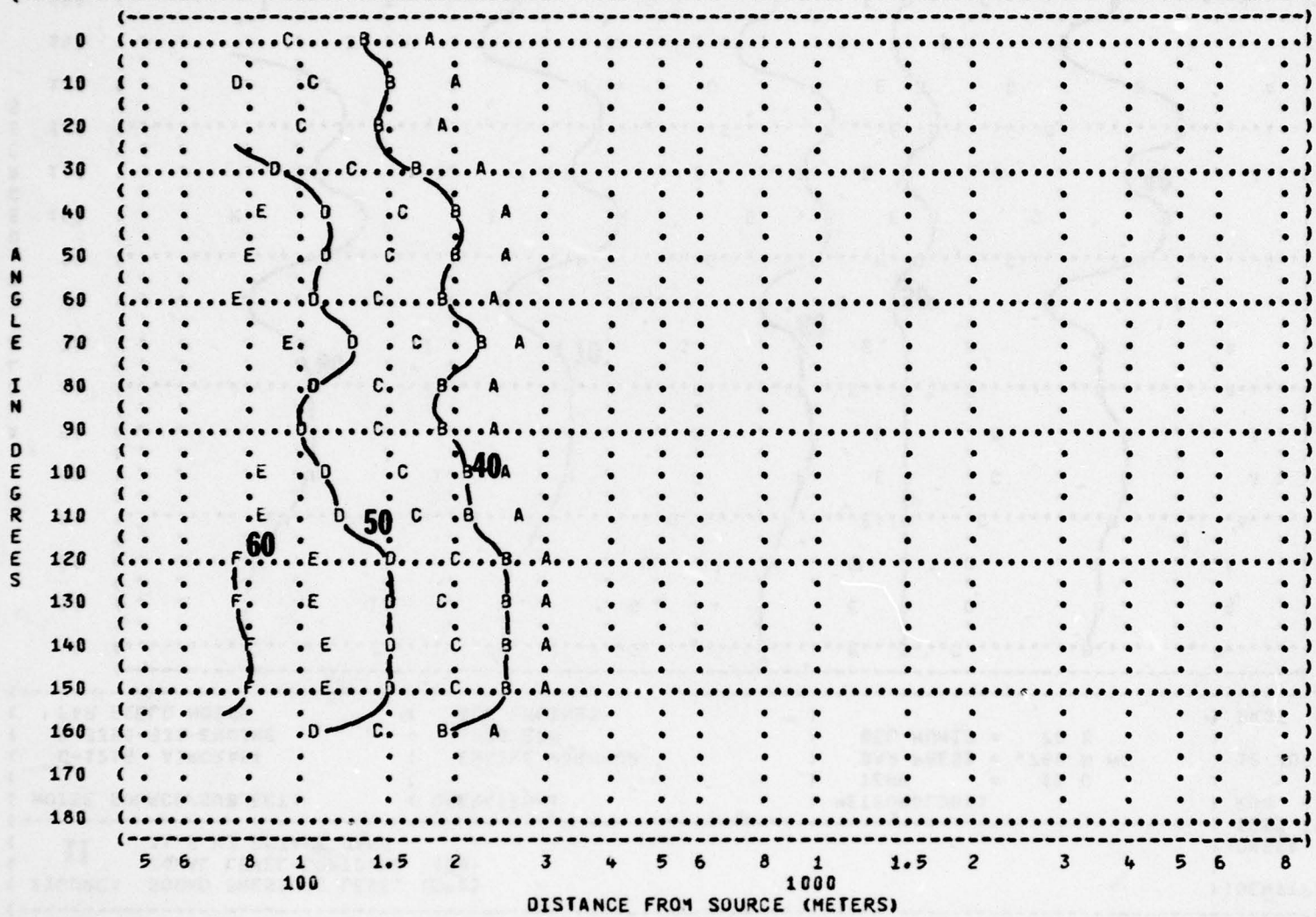


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 18

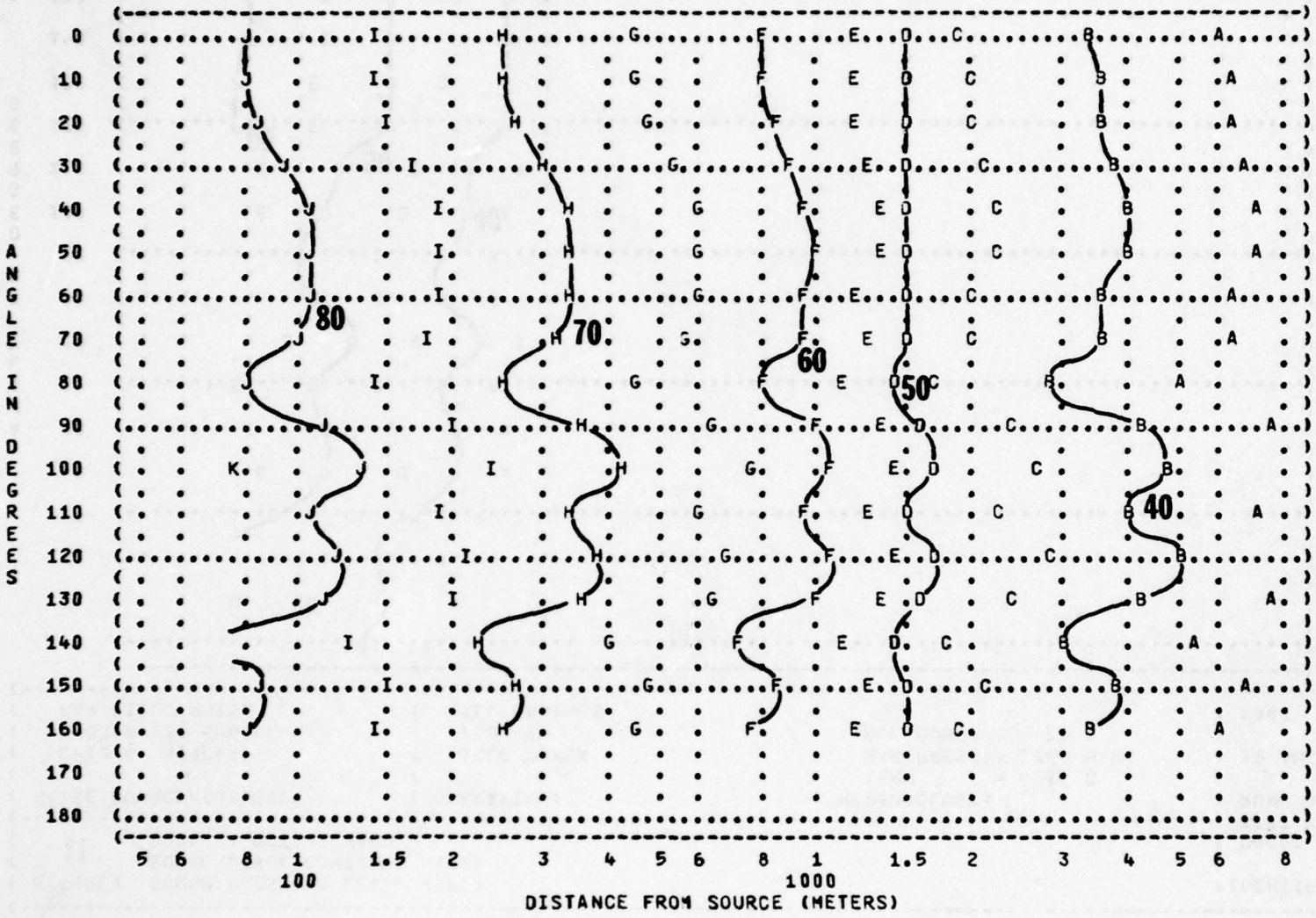


FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 19

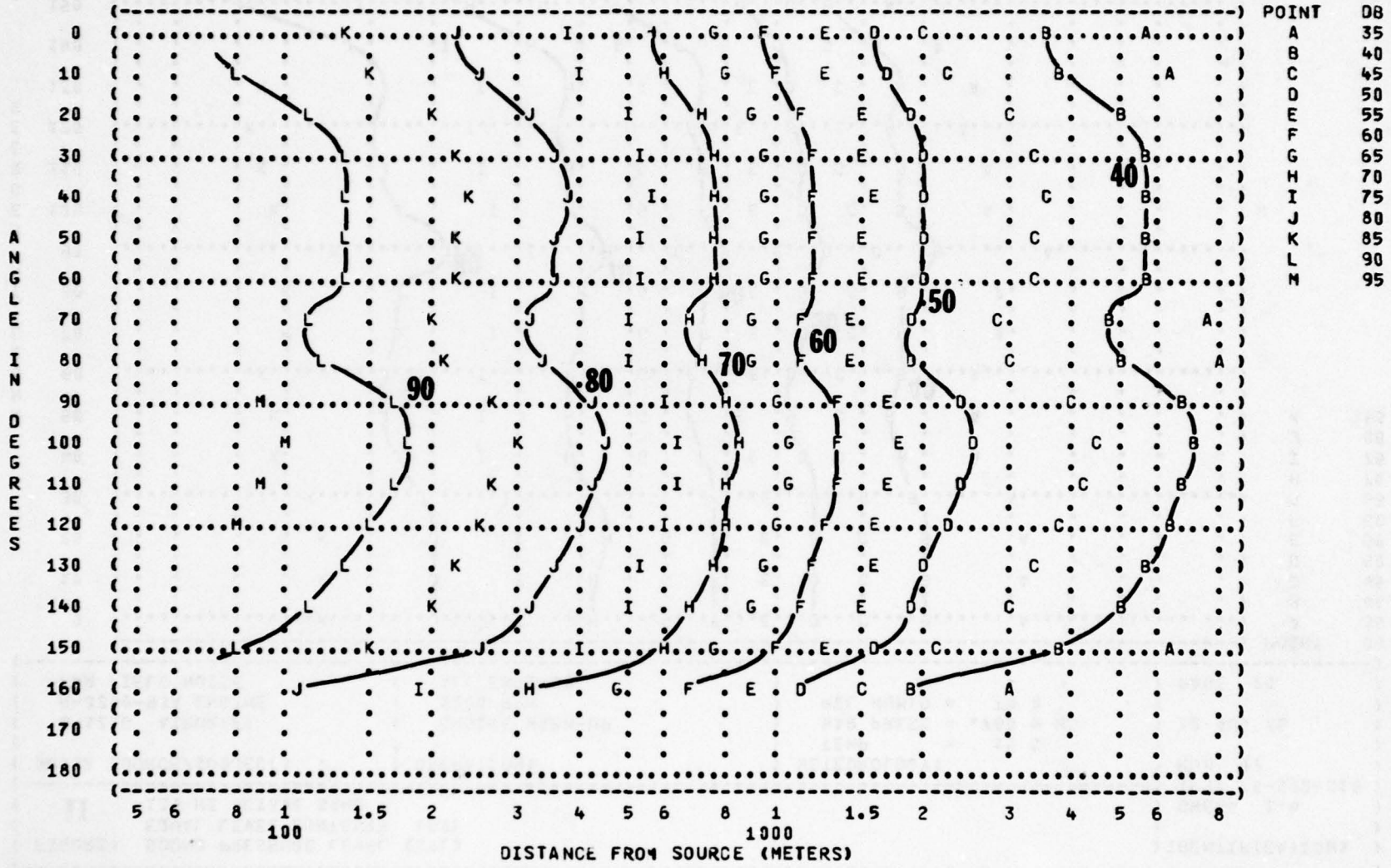


FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 20

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL 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

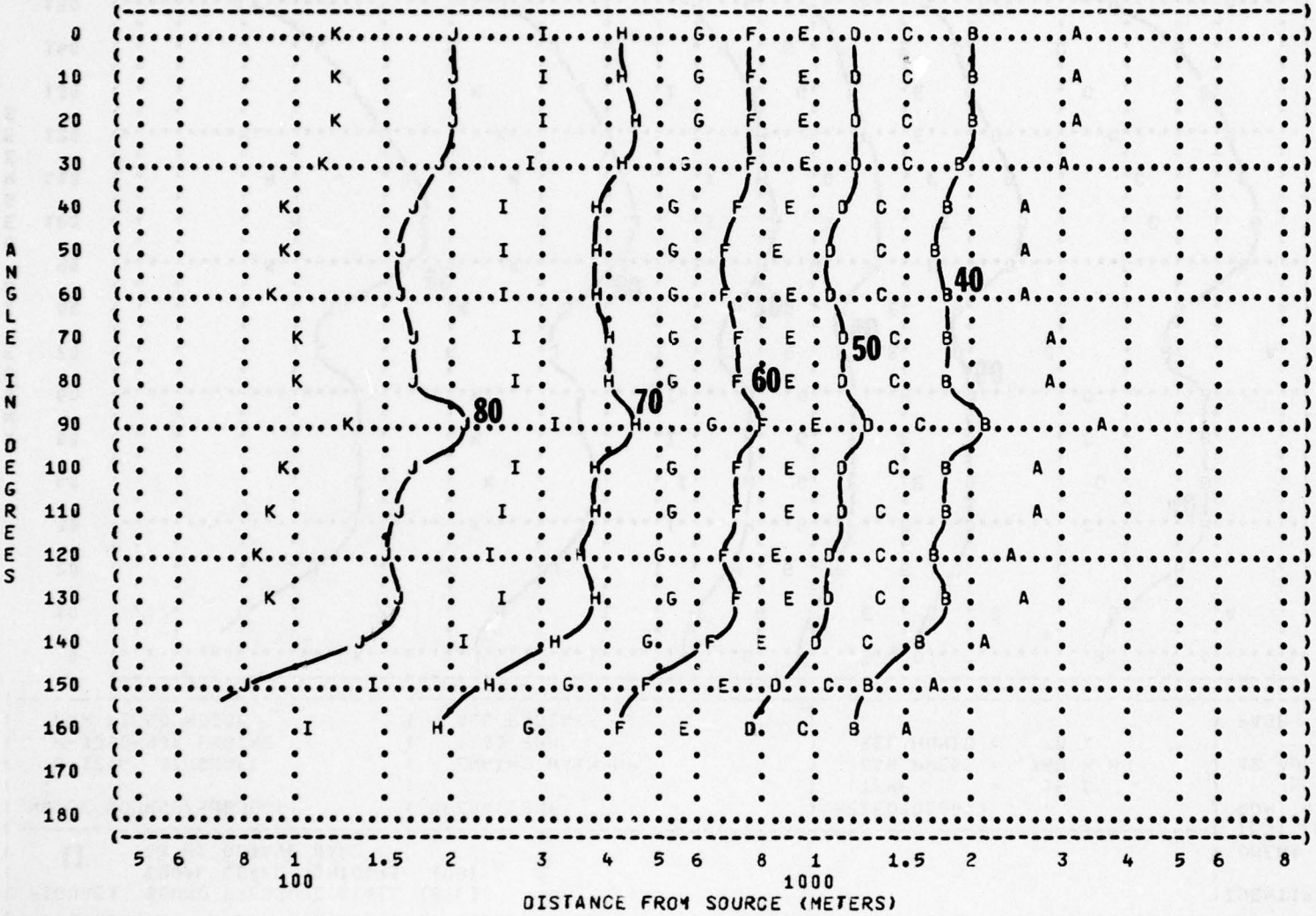


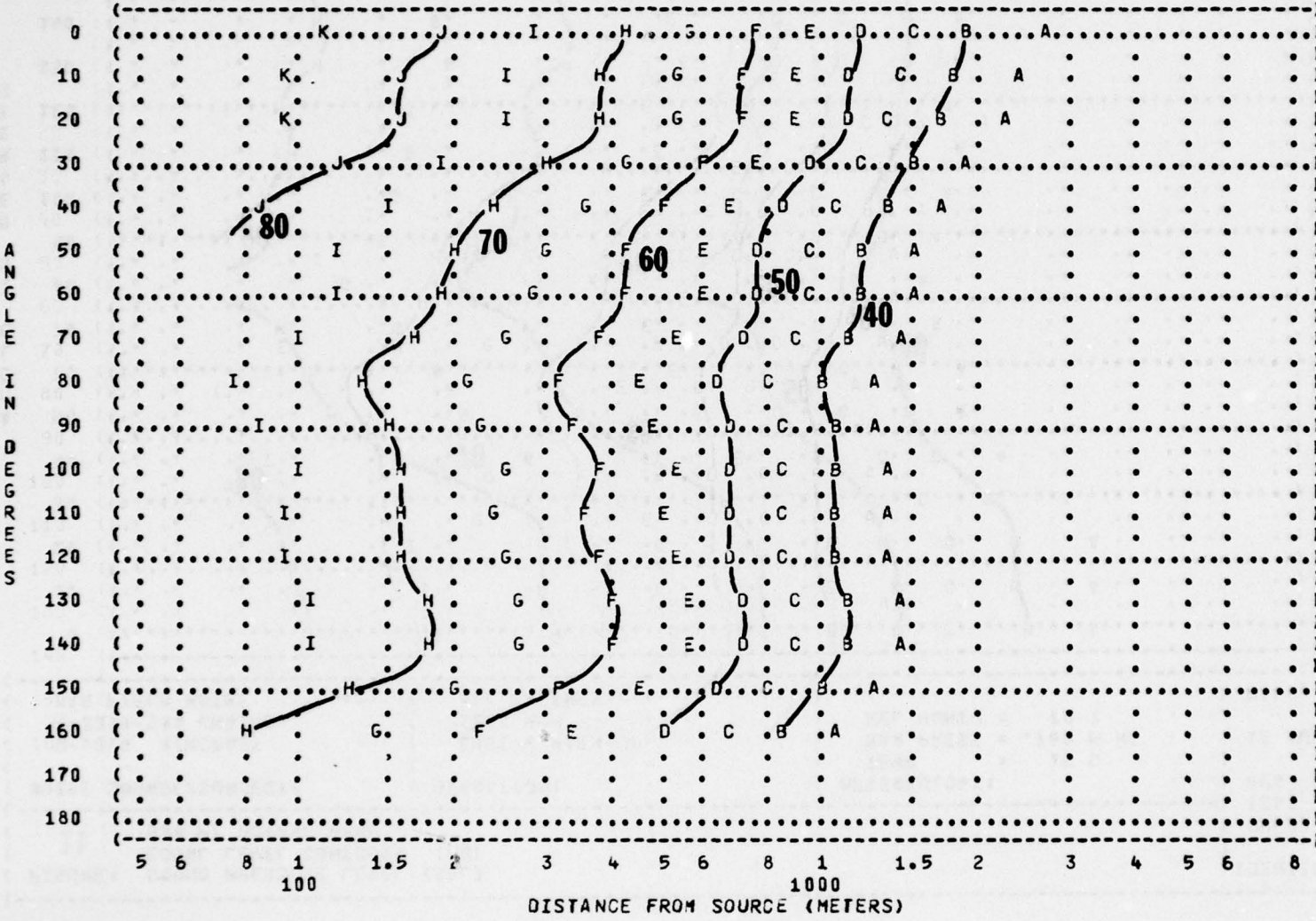
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
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

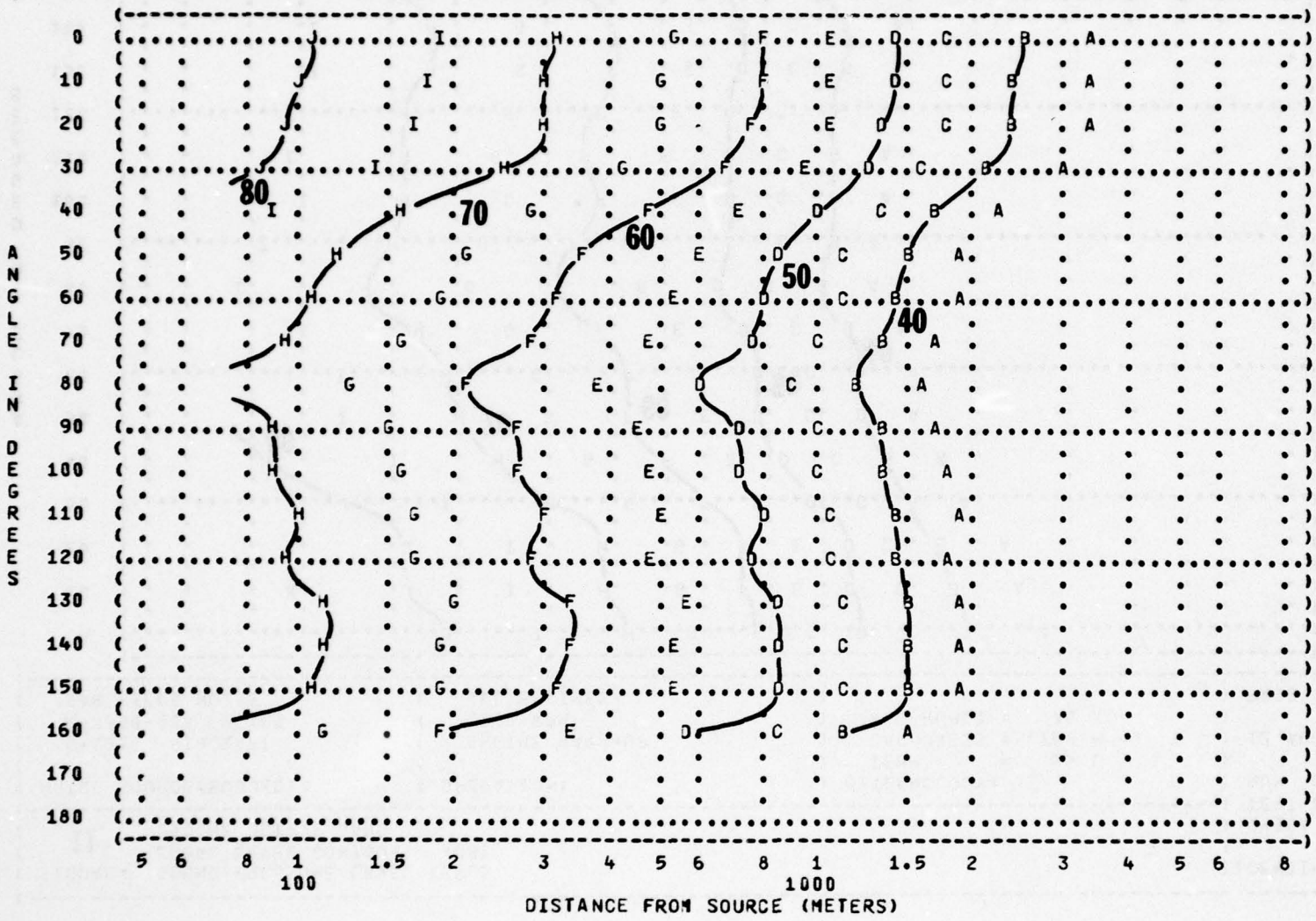
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
500 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 22

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL 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

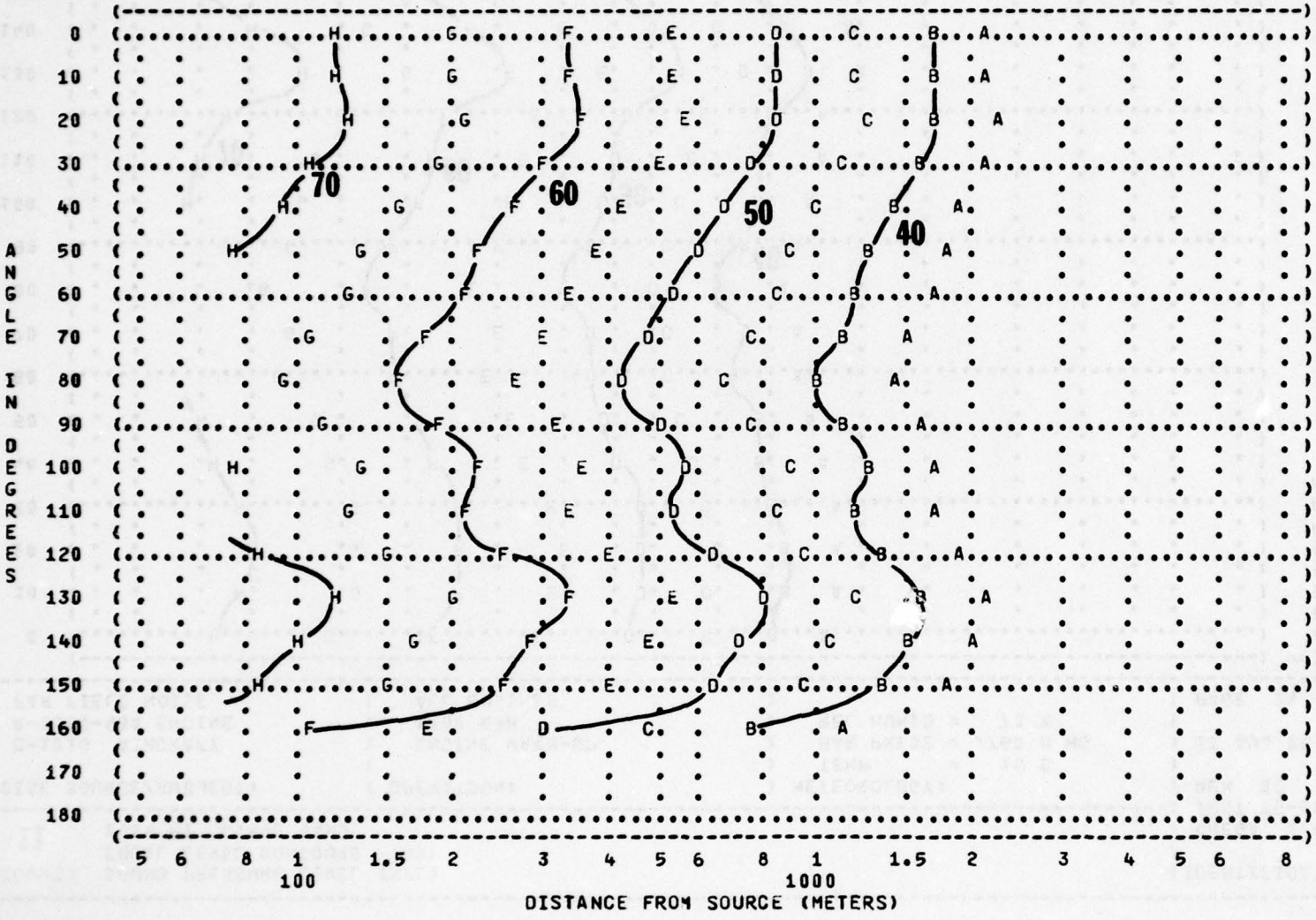
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (D3) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
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-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 24

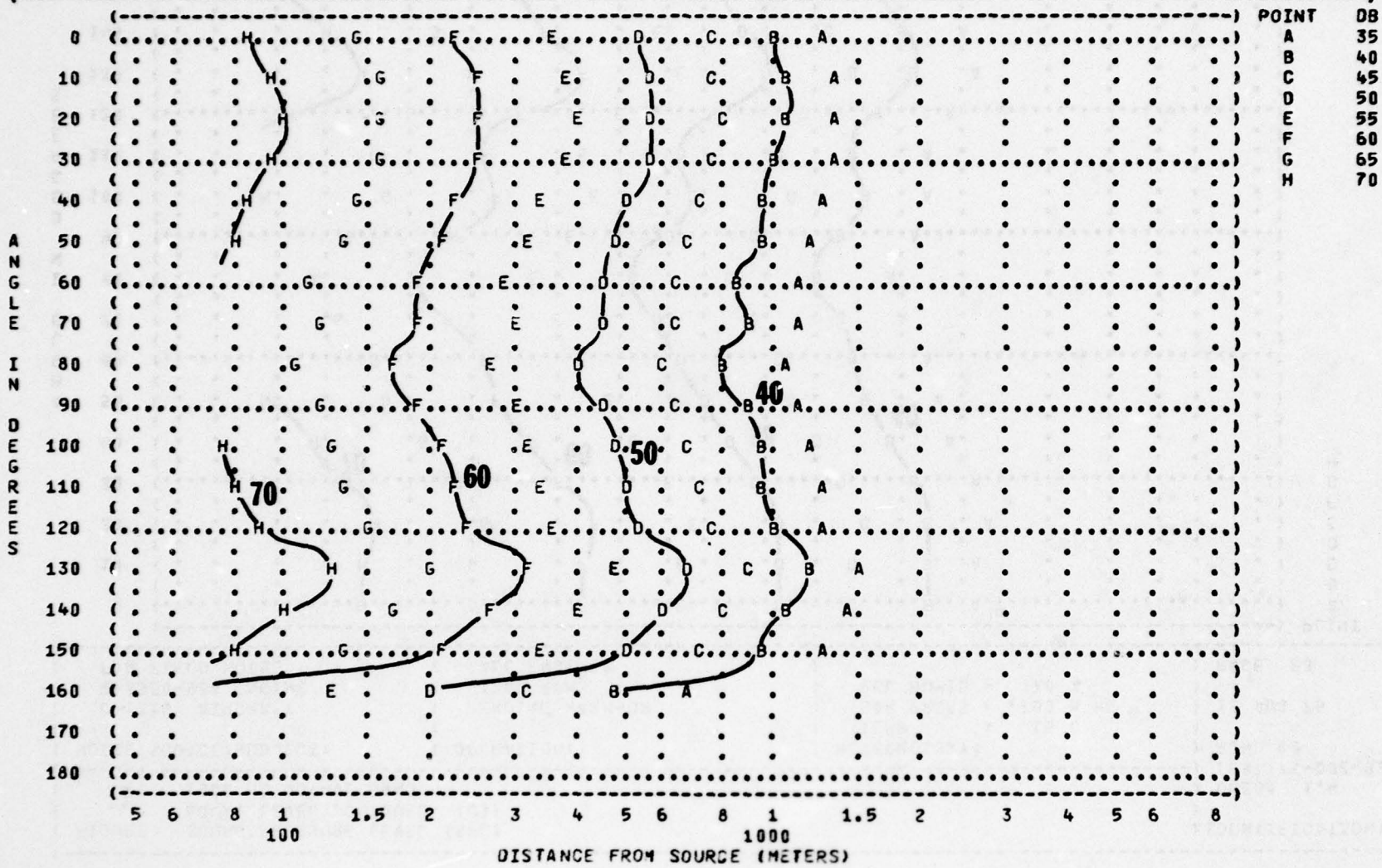


FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
ENGINE WARM-UP
1200 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 02
12 AUG 76
PAGE 25

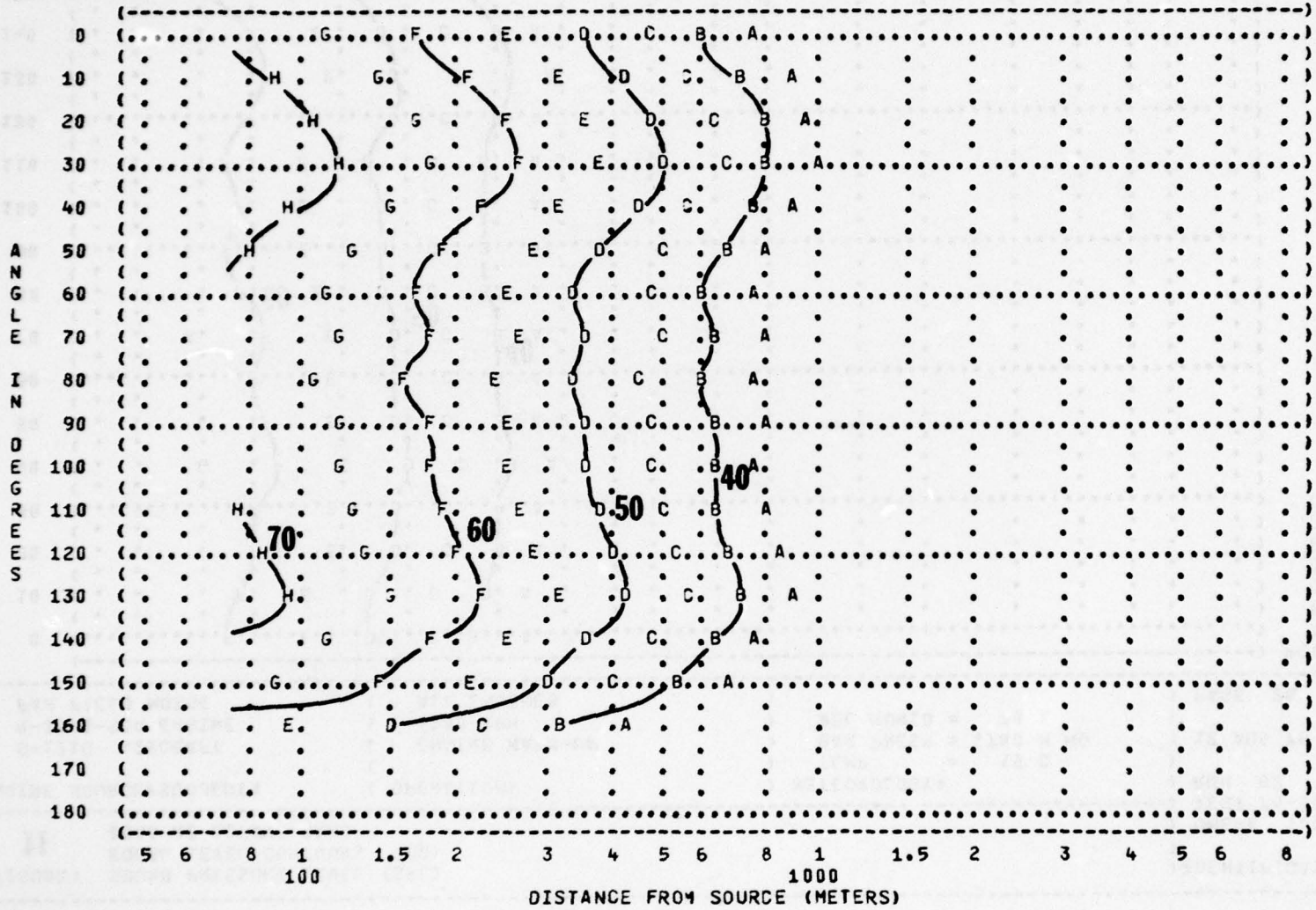


FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-002-019 RUN 02 12 AUG 76 PAGE 26

NOISE SOURCE/SUBJECT: C-121G AIRCRAFT R-3350-93A ENGINE FAR FIELD NOISE

OPERATION: ENGINE WARM-UP 1200 RPM ALL ENGINES

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

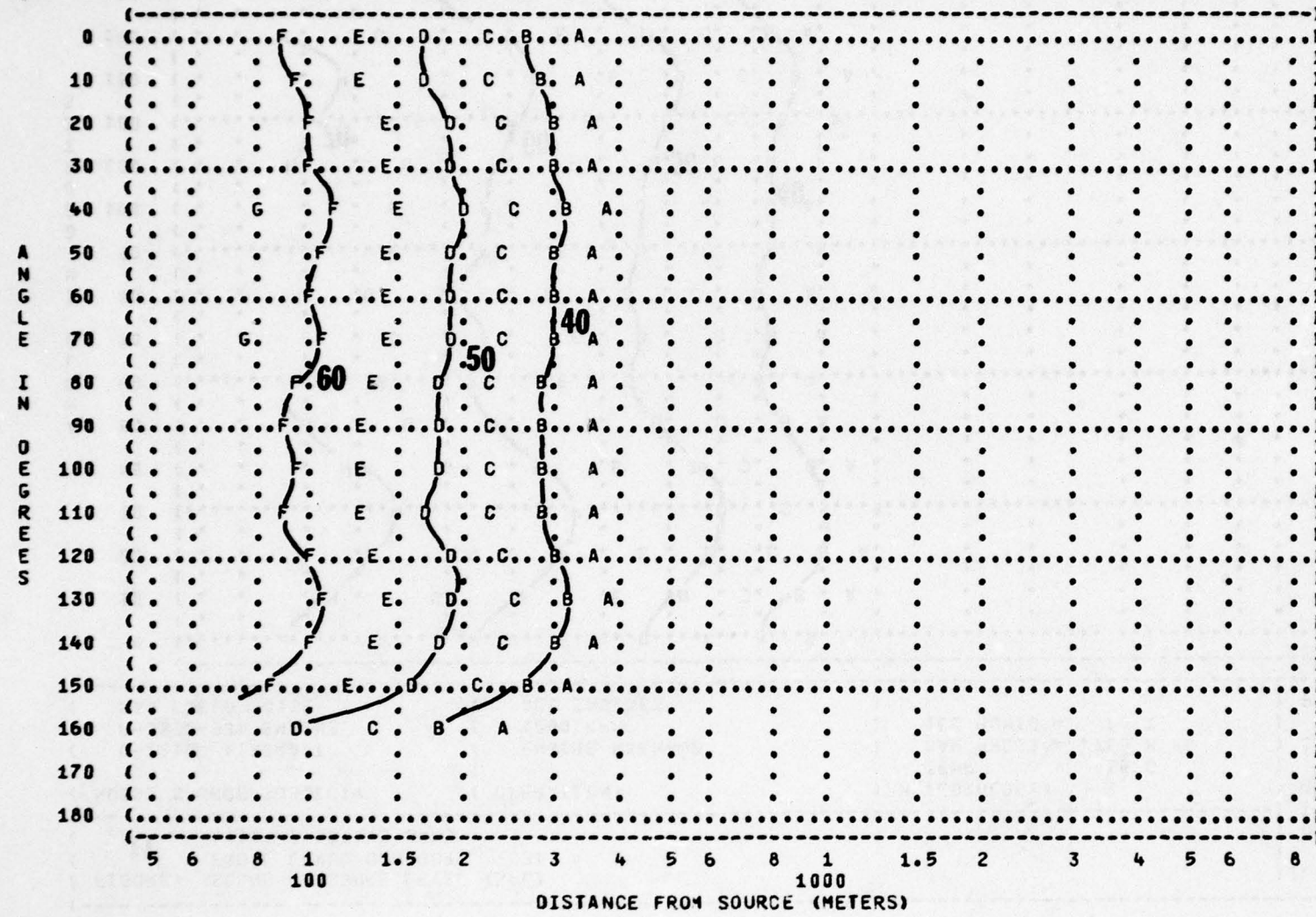


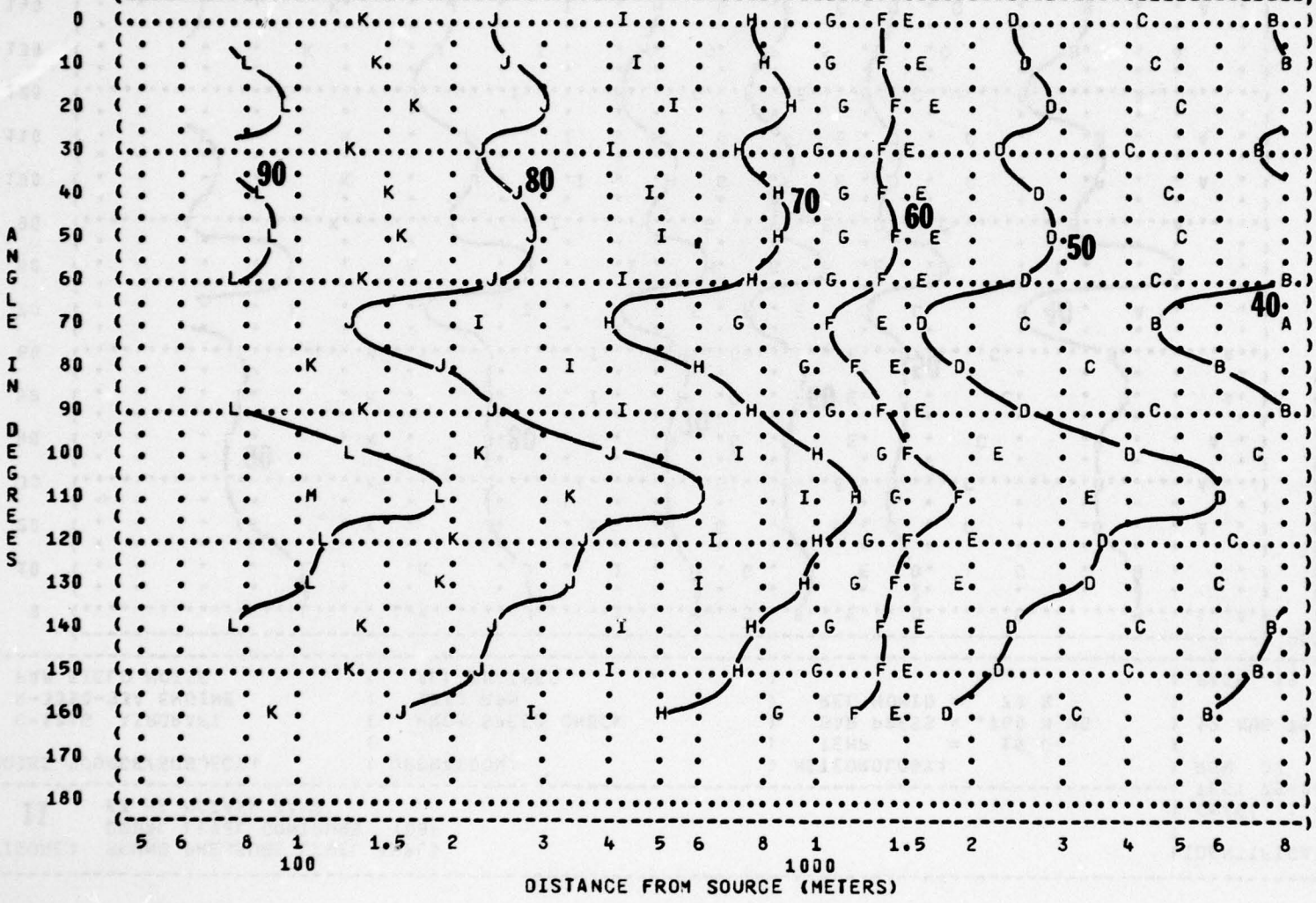
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
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

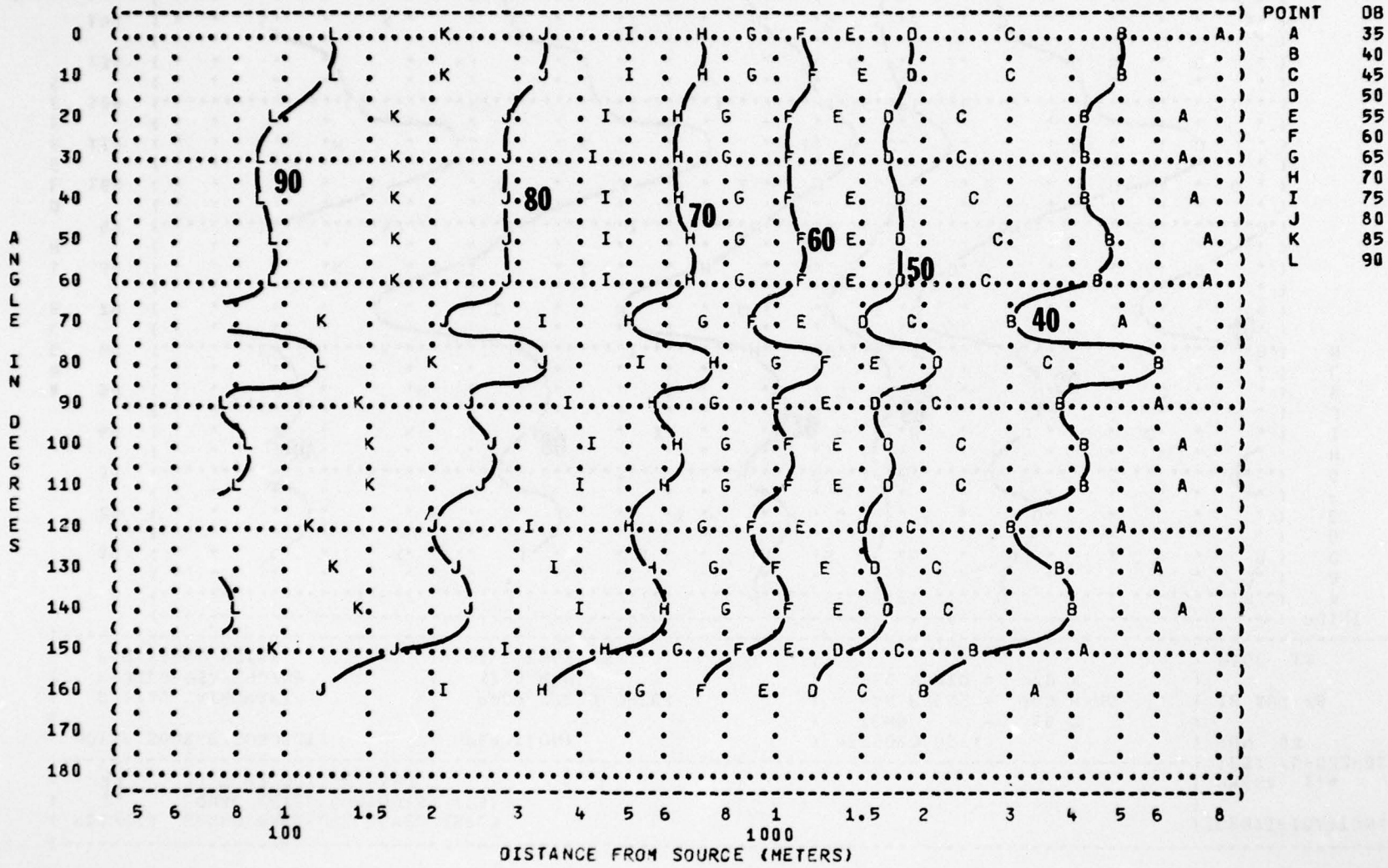
FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-002-019 RUN 03 12 AUG 76 PAGE 19

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

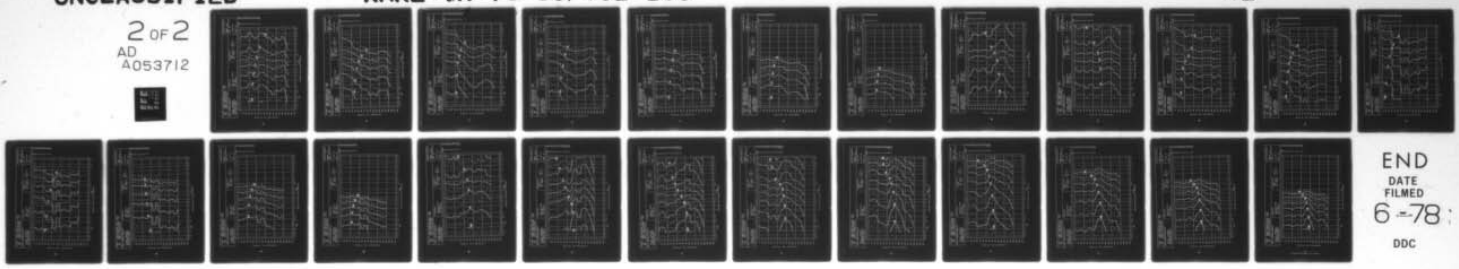
METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



AD-A053 712 AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OHIO F/G 1/2
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 100. C-1216 A--ETC(U)
MAY 77 R G POWELL

UNCLASSIFIED AMRL-TR-75-50-VOL-100 NL

2 OF 2
AD
A053712



END
DATE
FILMED
6-78
DDC

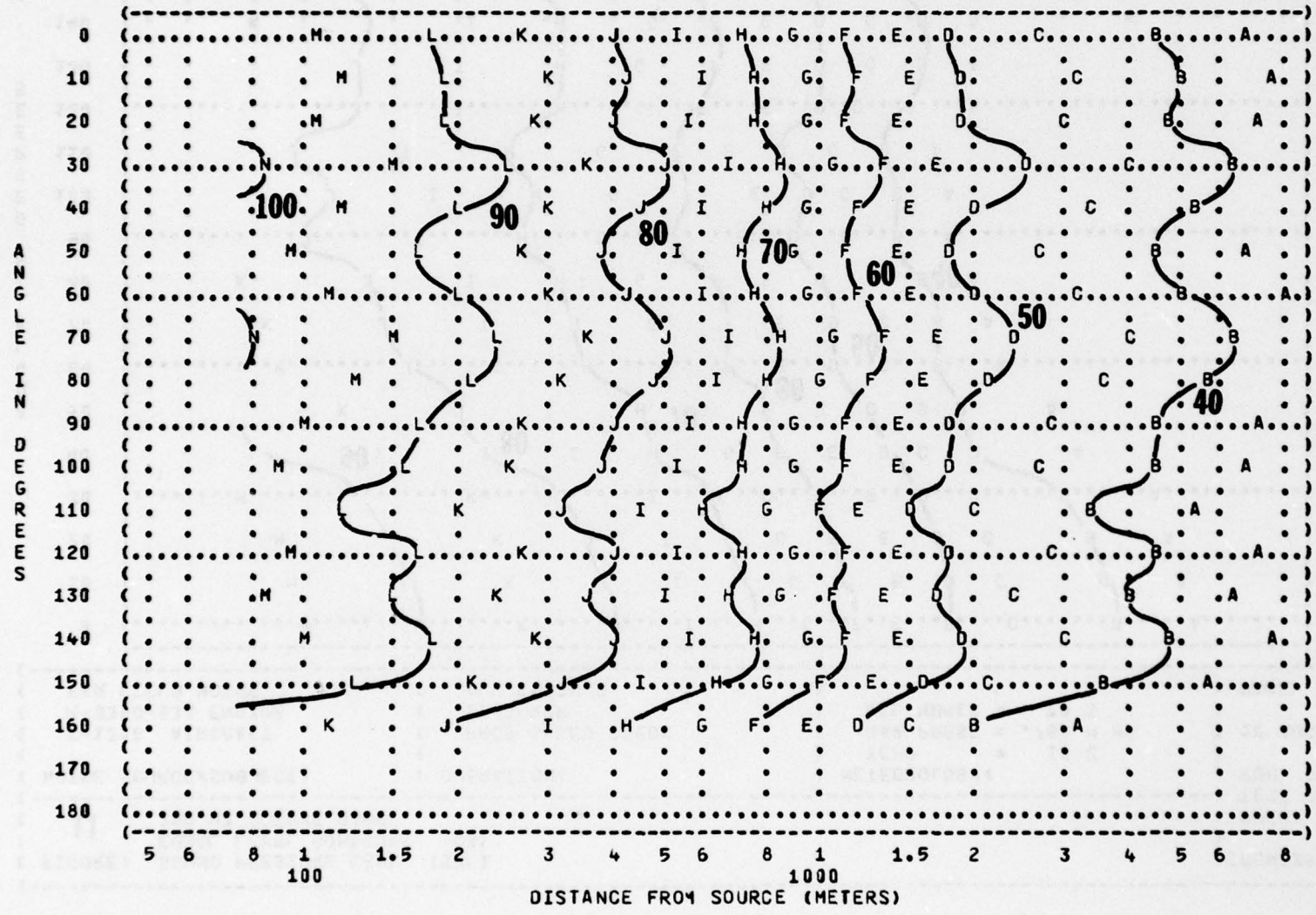
FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 21

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

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

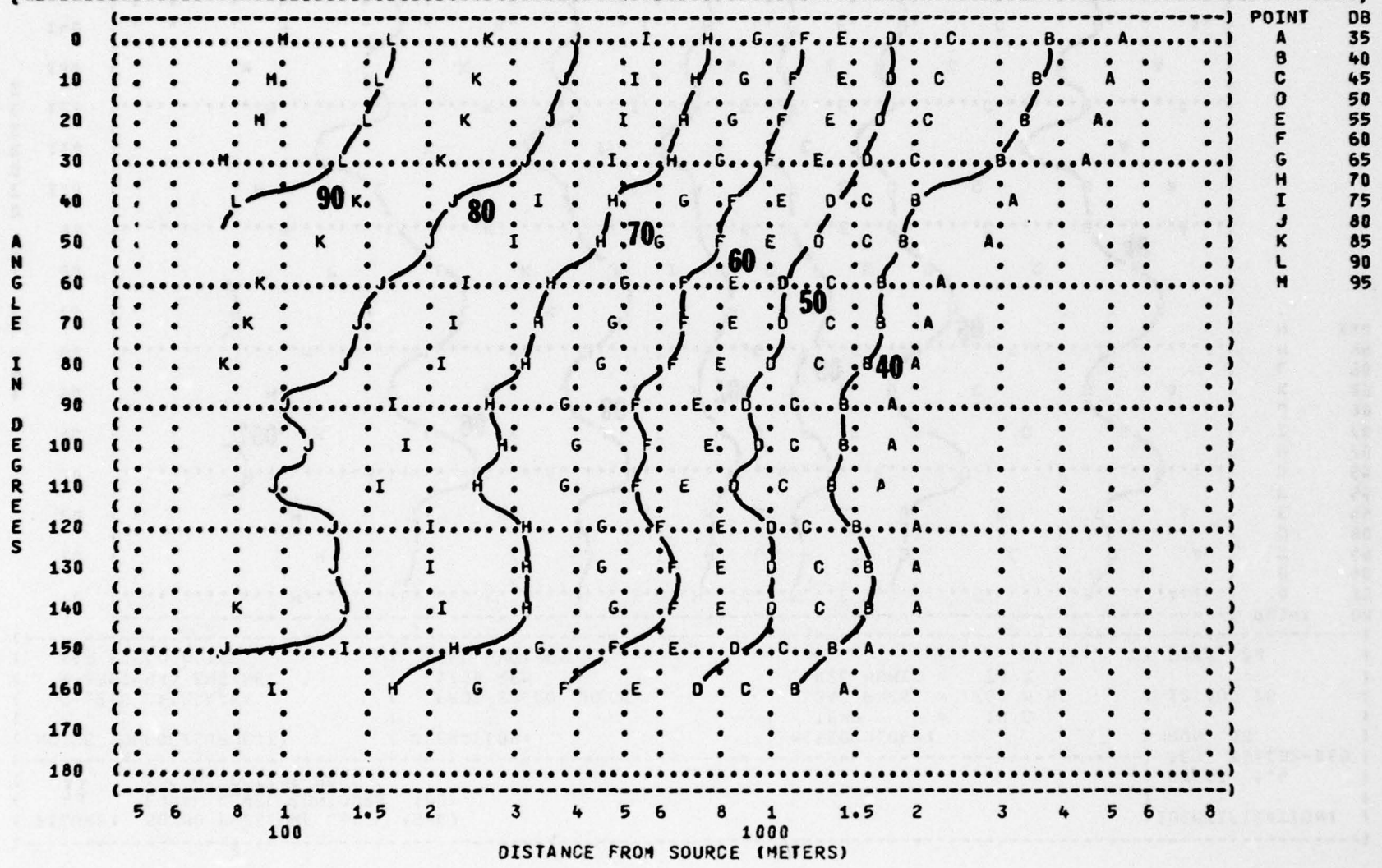


FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 22

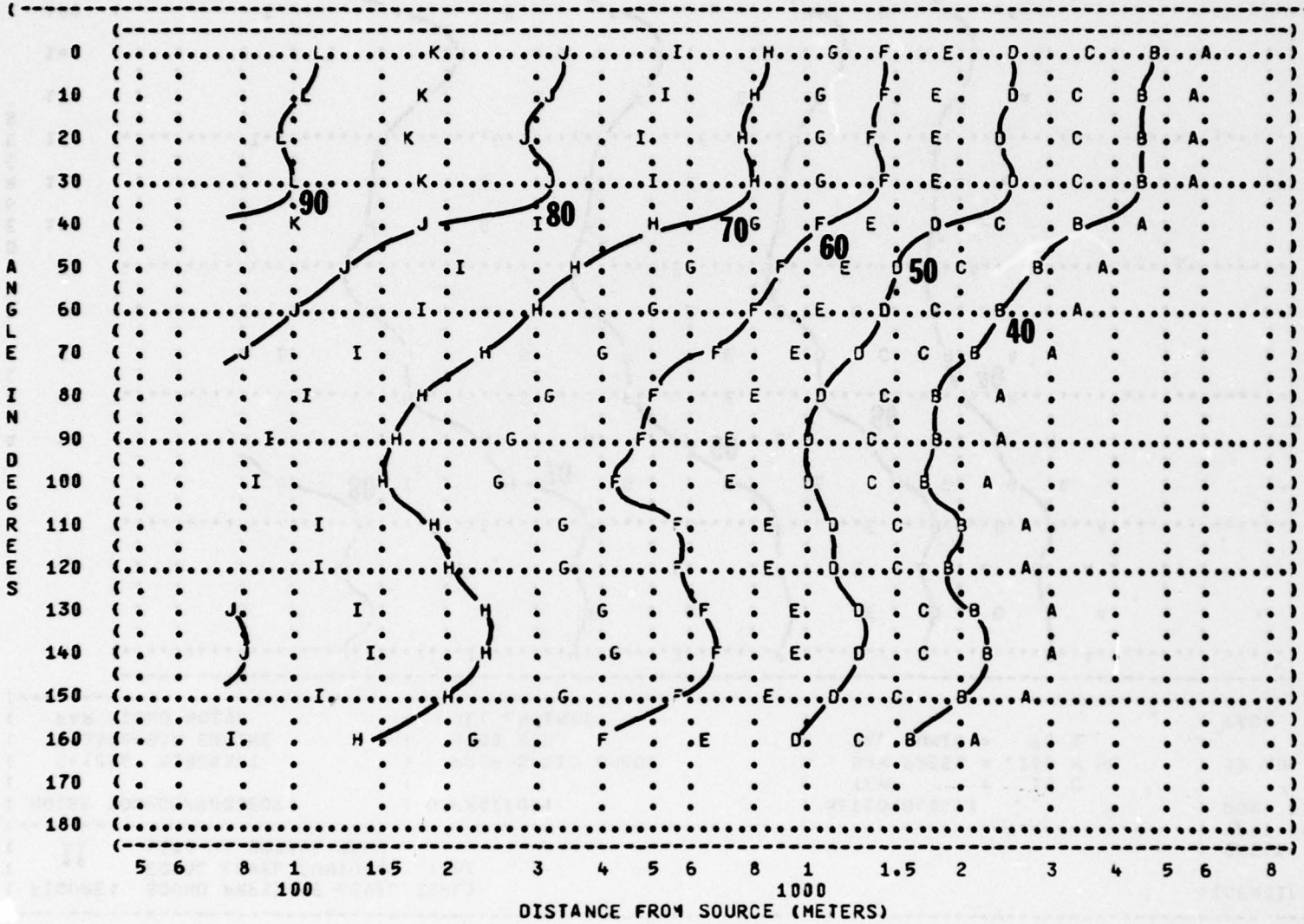


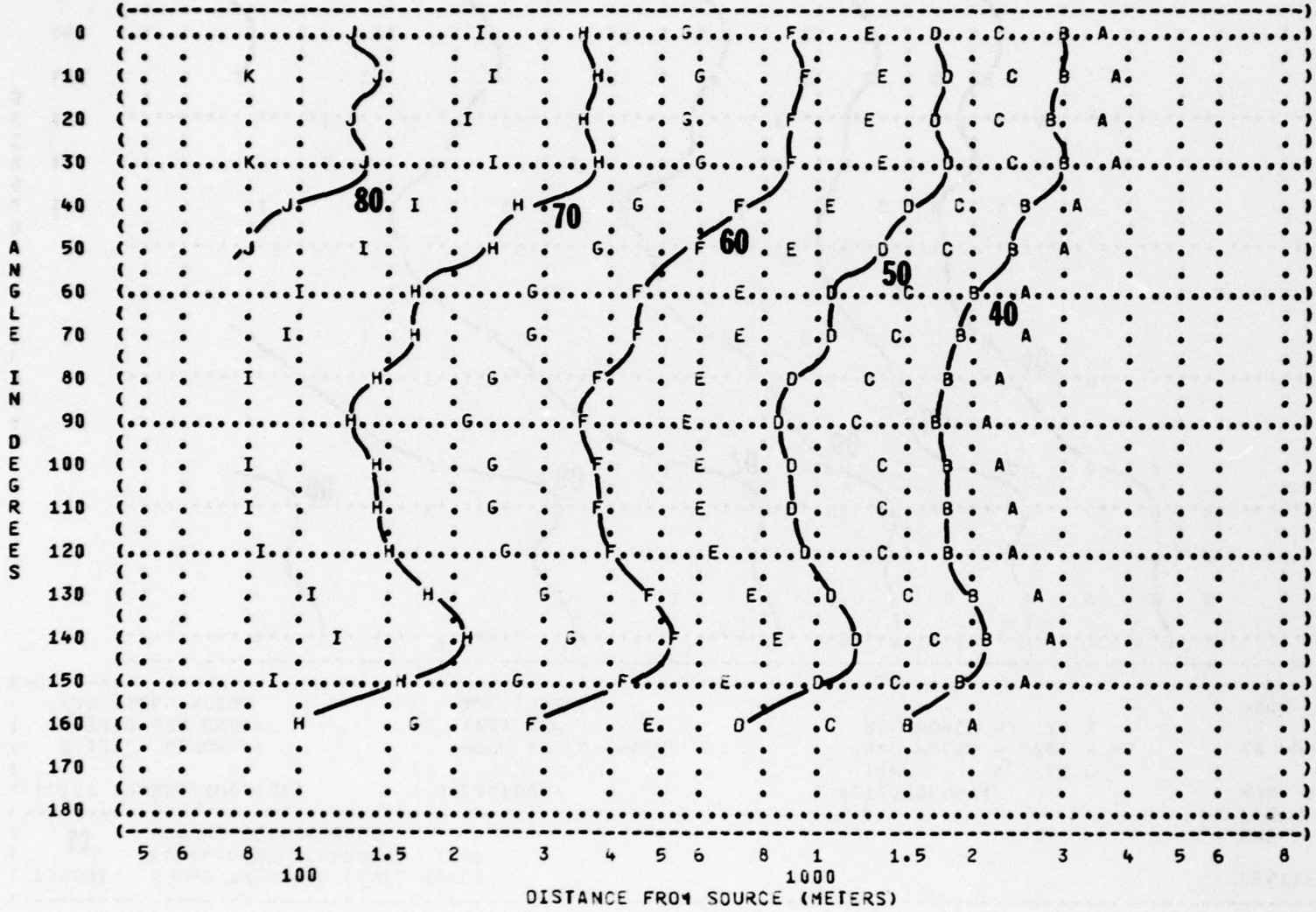
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 23



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

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

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 24

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

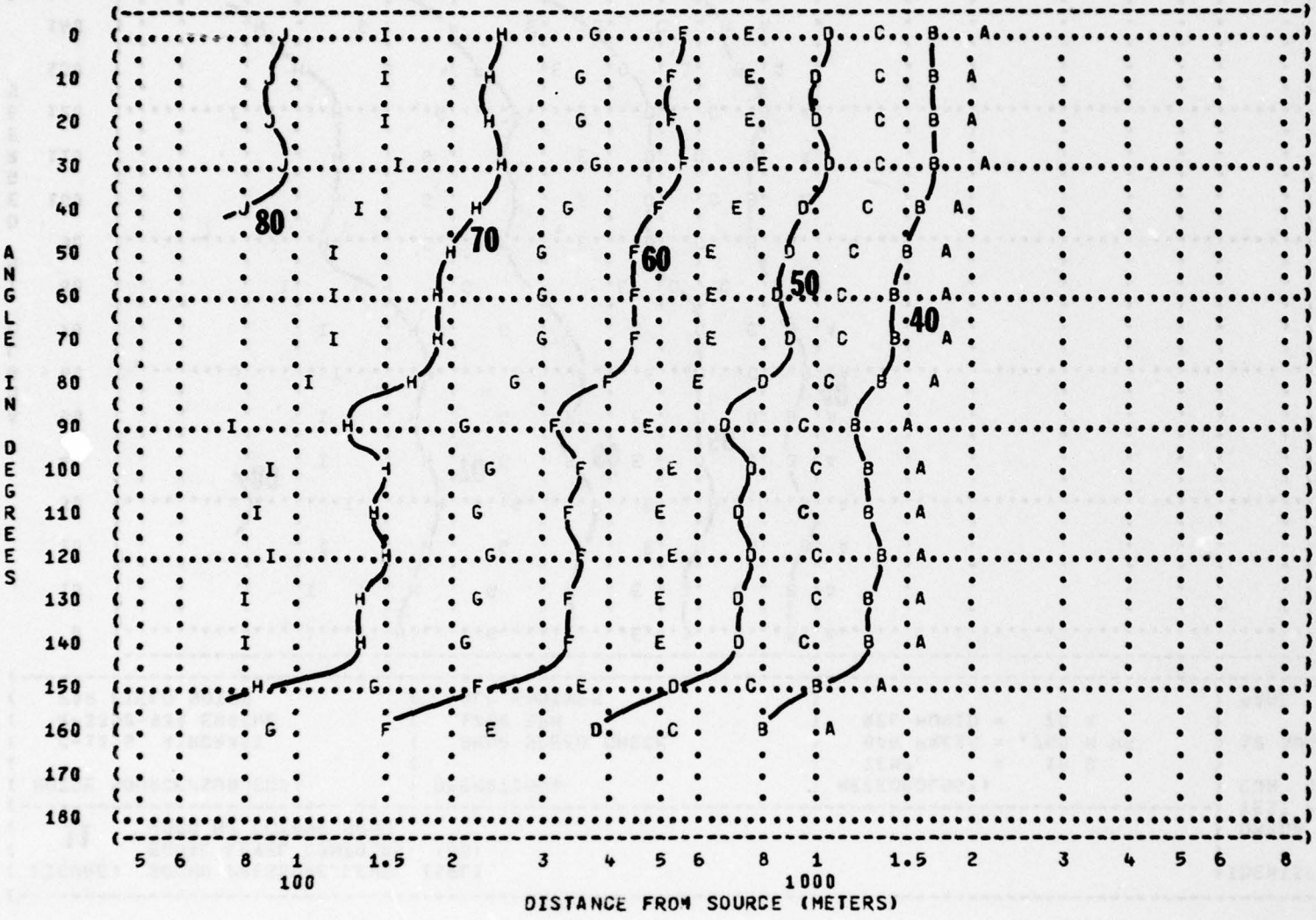


FIGURE: 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 25

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL 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

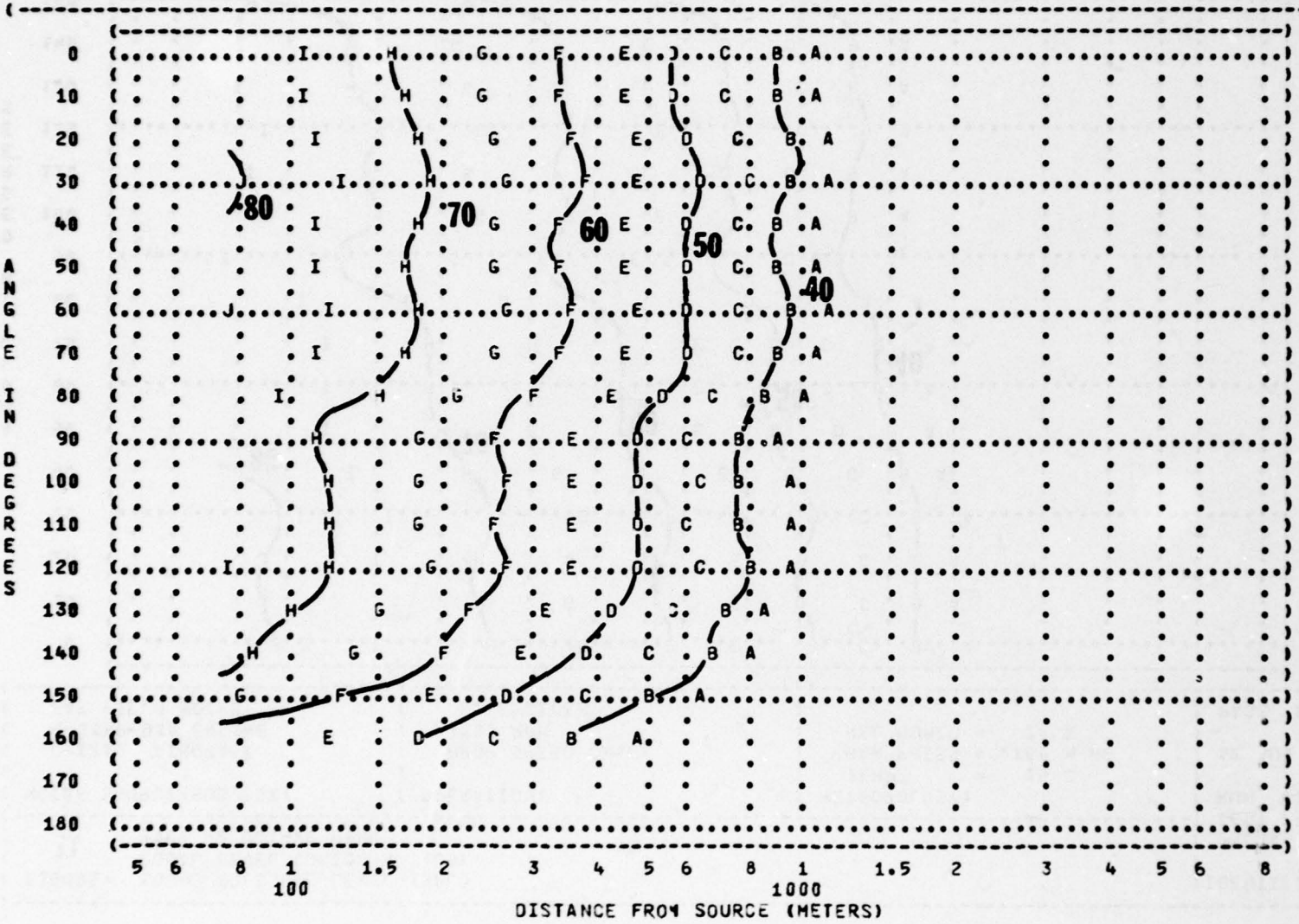


FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 03
12 AUG 76
PAGE 26

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
PROP SPEED CHECK
1700 RPM
ALL 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

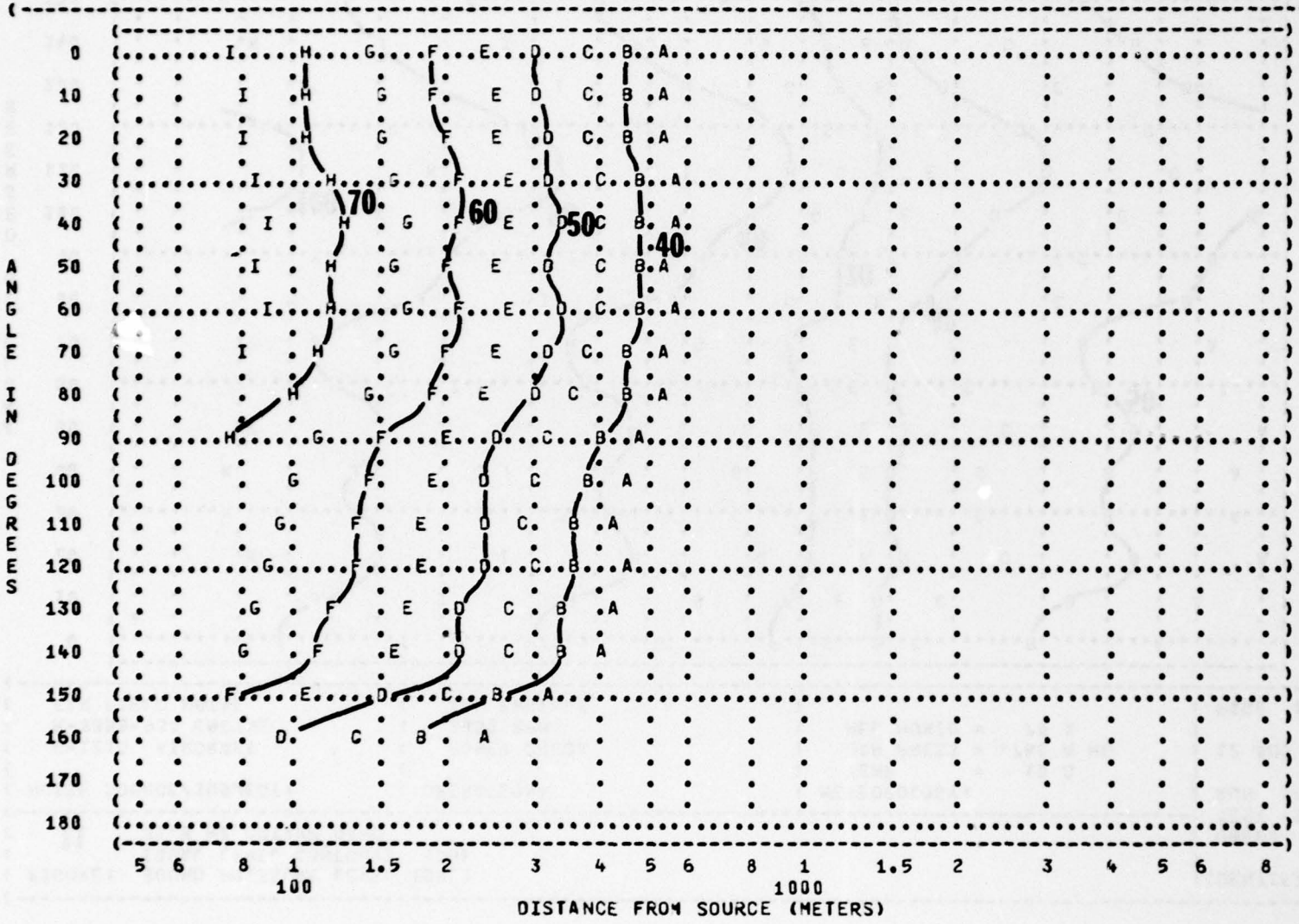


FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-002-019 RUN 04 12 AUG 76 PAGE 18

NOISE SOURCE/SUBJECT: C-121G AIRCRAFT R-3350-93A ENGINE FAR FIELD NOISE

OPERATION: POWER CHECK 2050 RPM ALL ENGINES

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

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

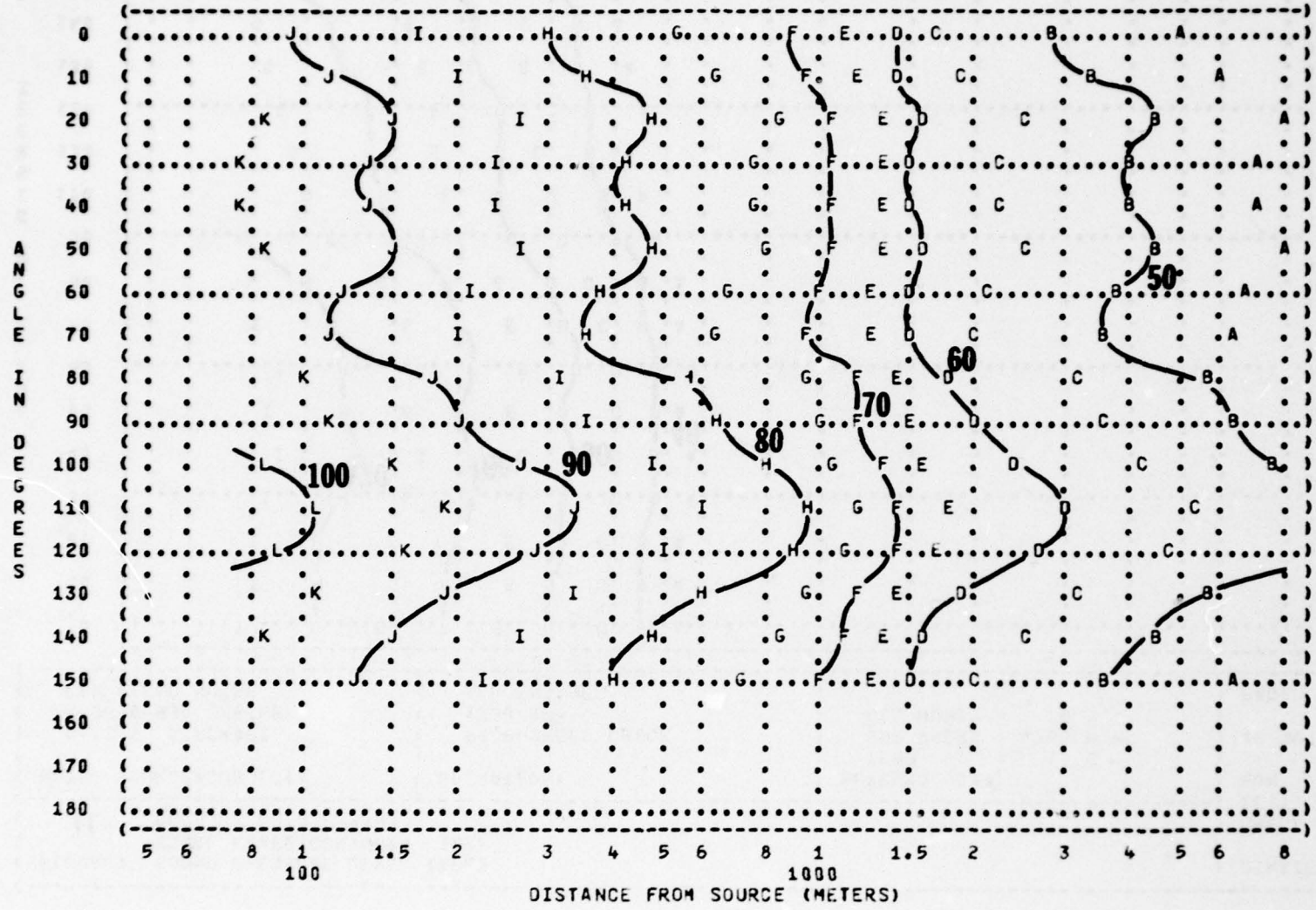


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-002-019 RUN 04 12 AUG 76 PAGE 19

NOISE SOURCE/SUBJECT: C-121G AIRCRAFT; R-3350-93A ENGINE; FAR FIELD NOISE

OPERATION: POWER CHECK; 2050 RPM; ALL ENGINES

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

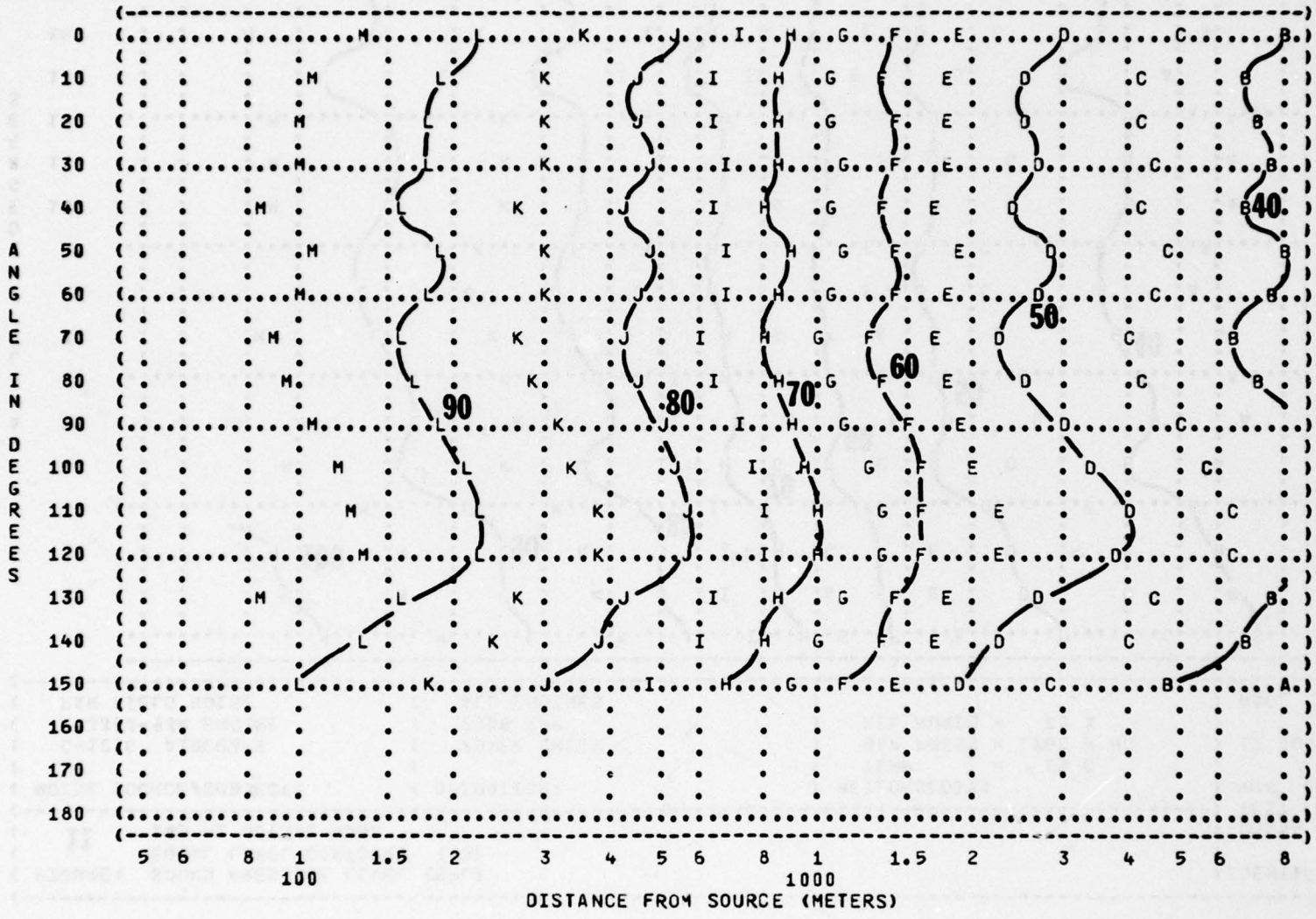


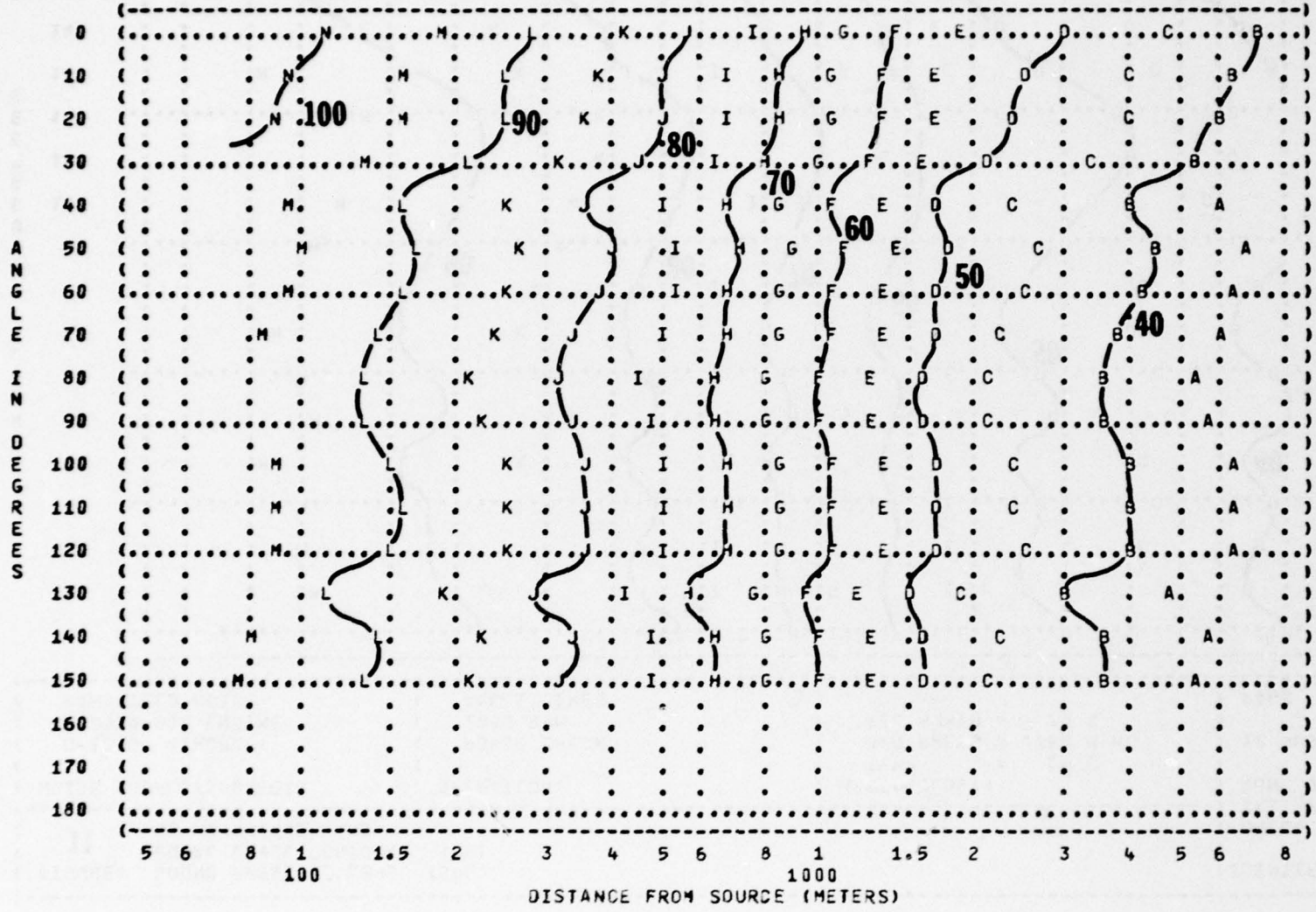
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 20

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL 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

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

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
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

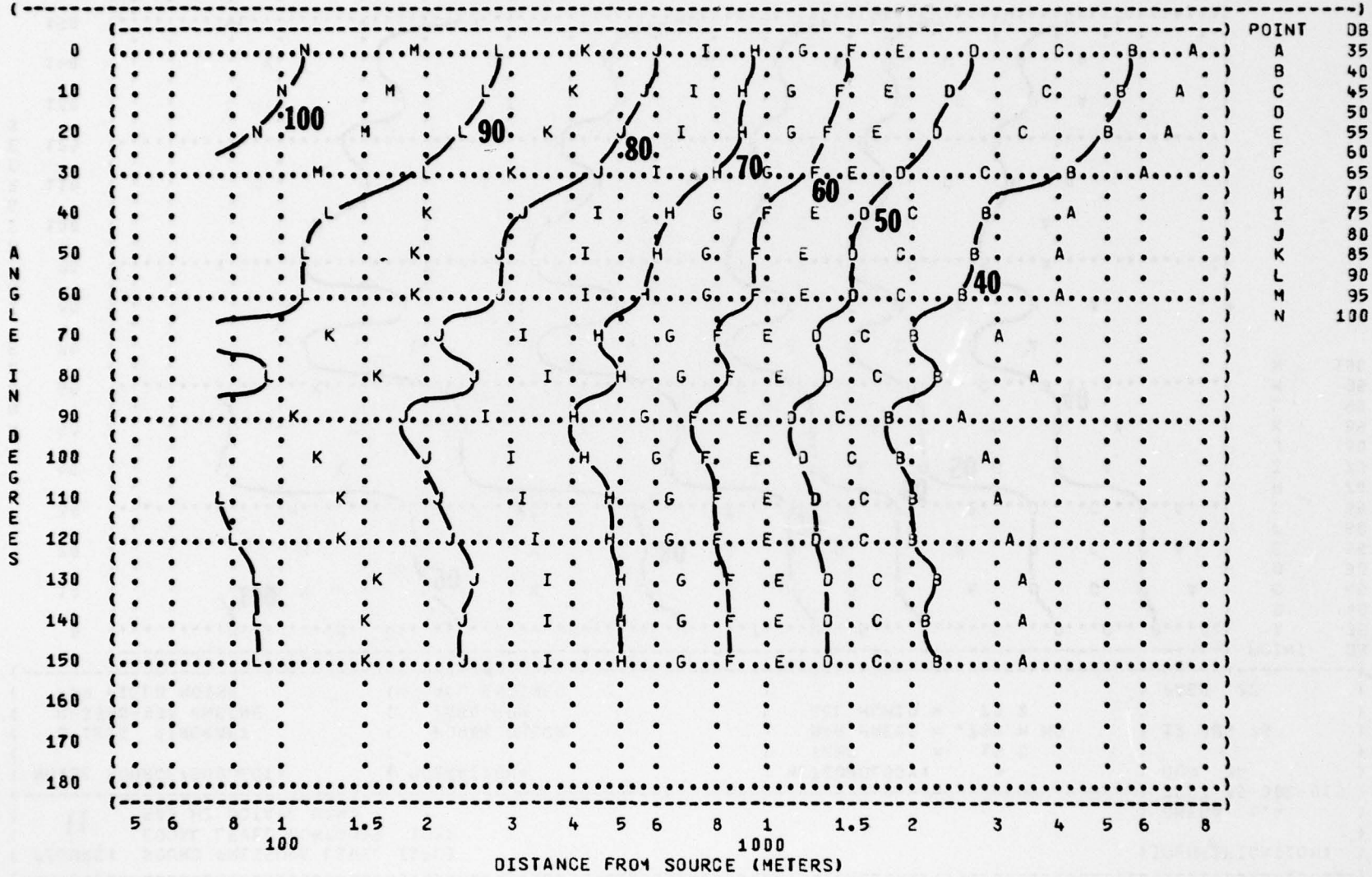


FIGURE: 11

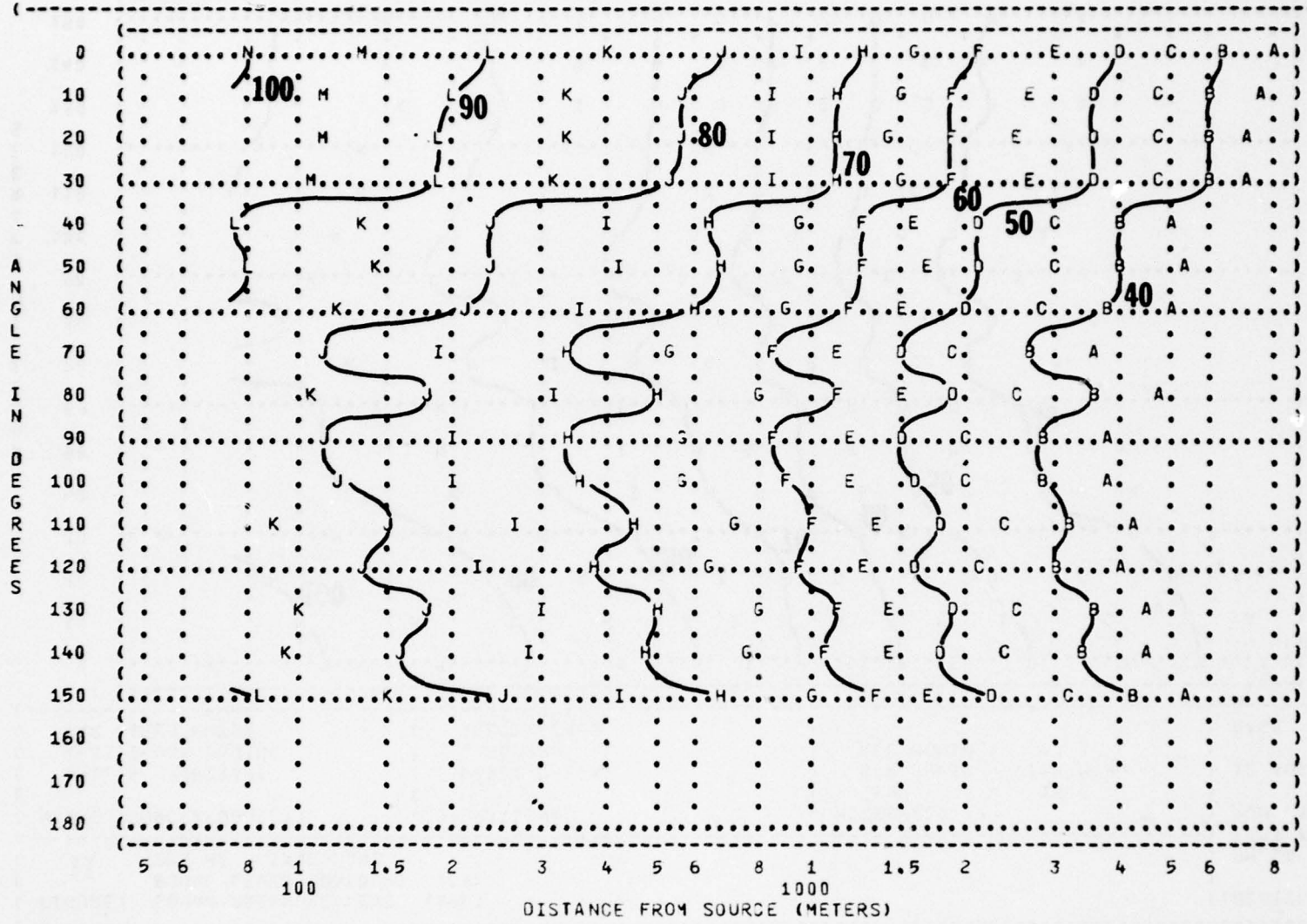
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
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:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 23

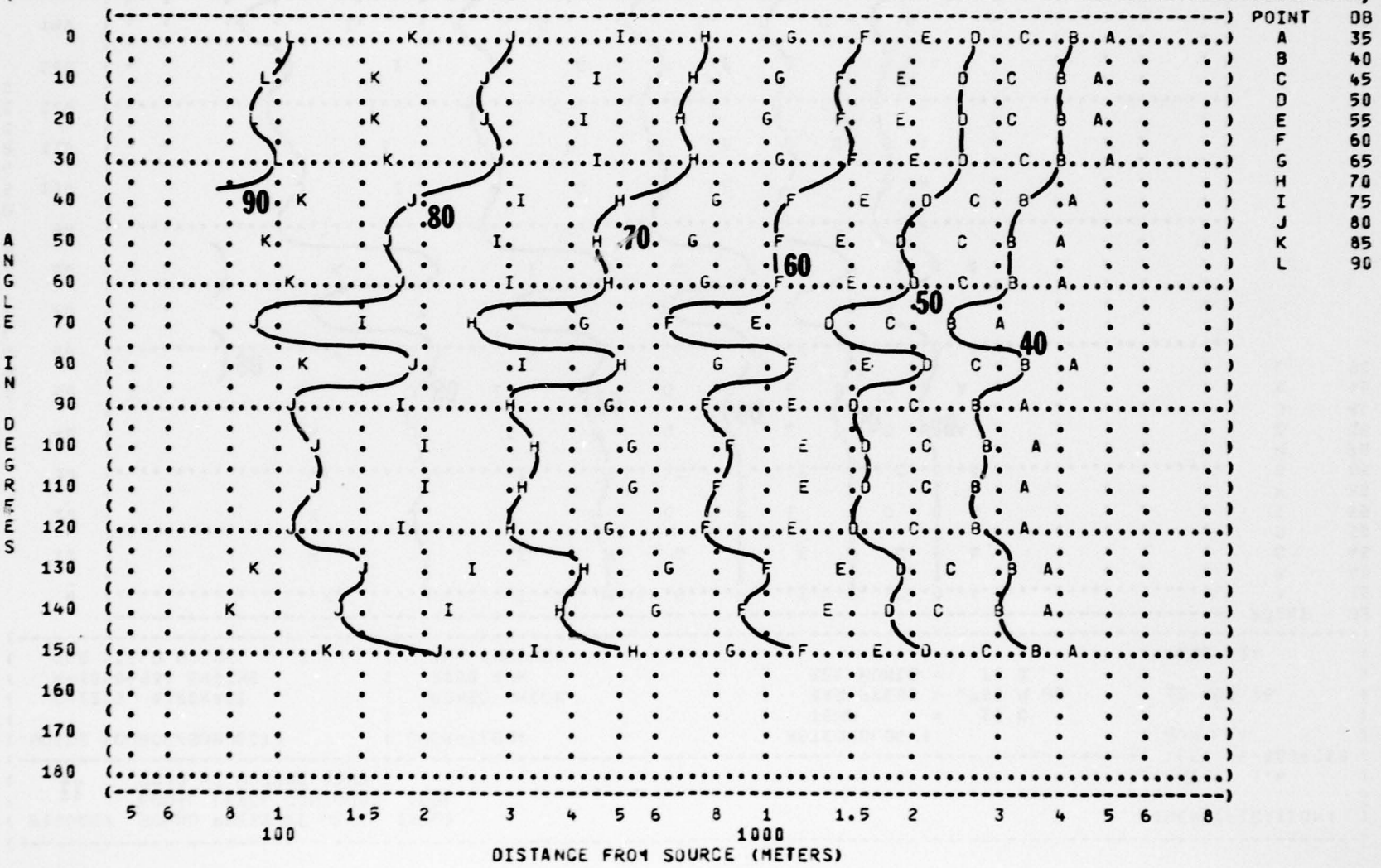


FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
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

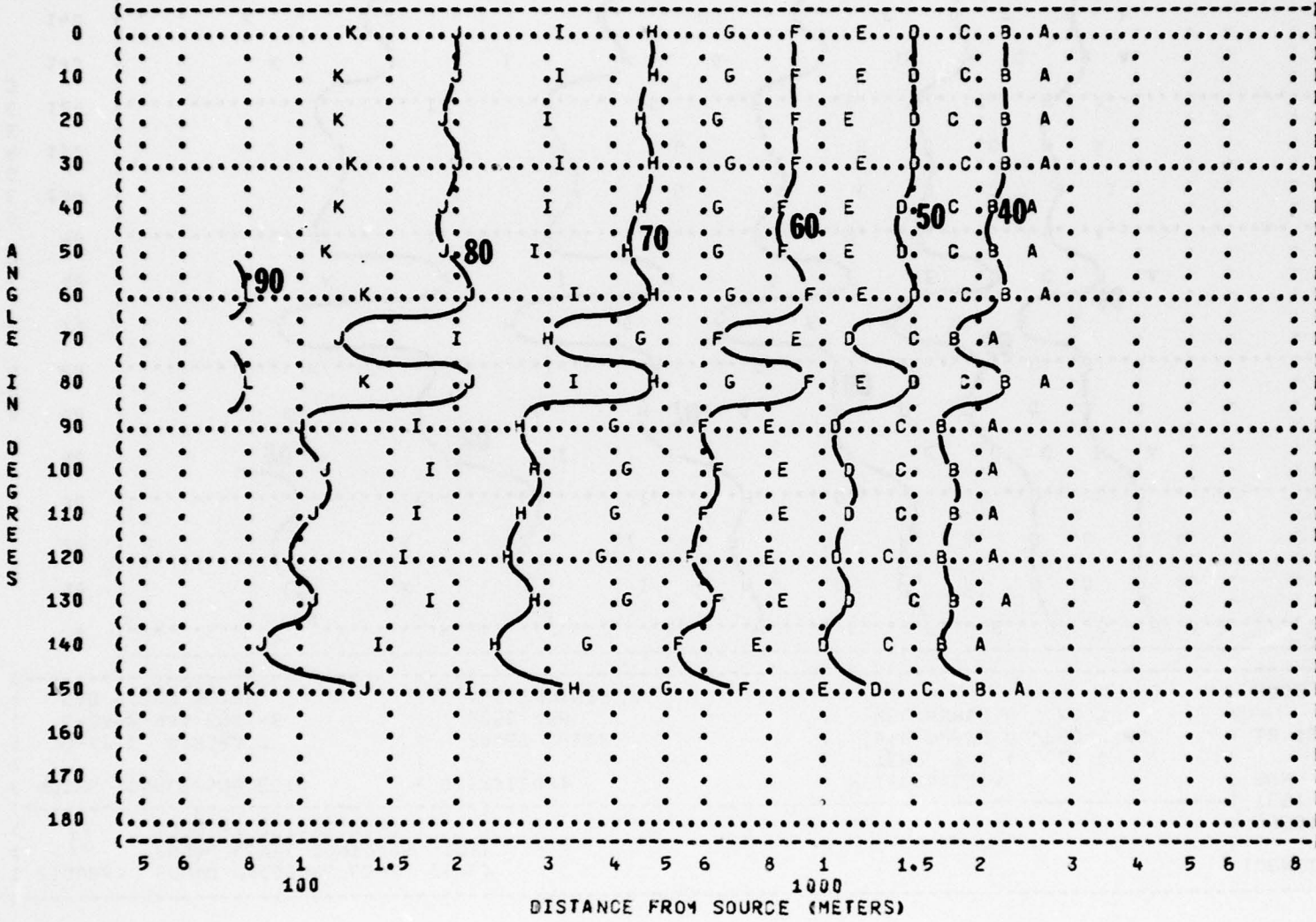


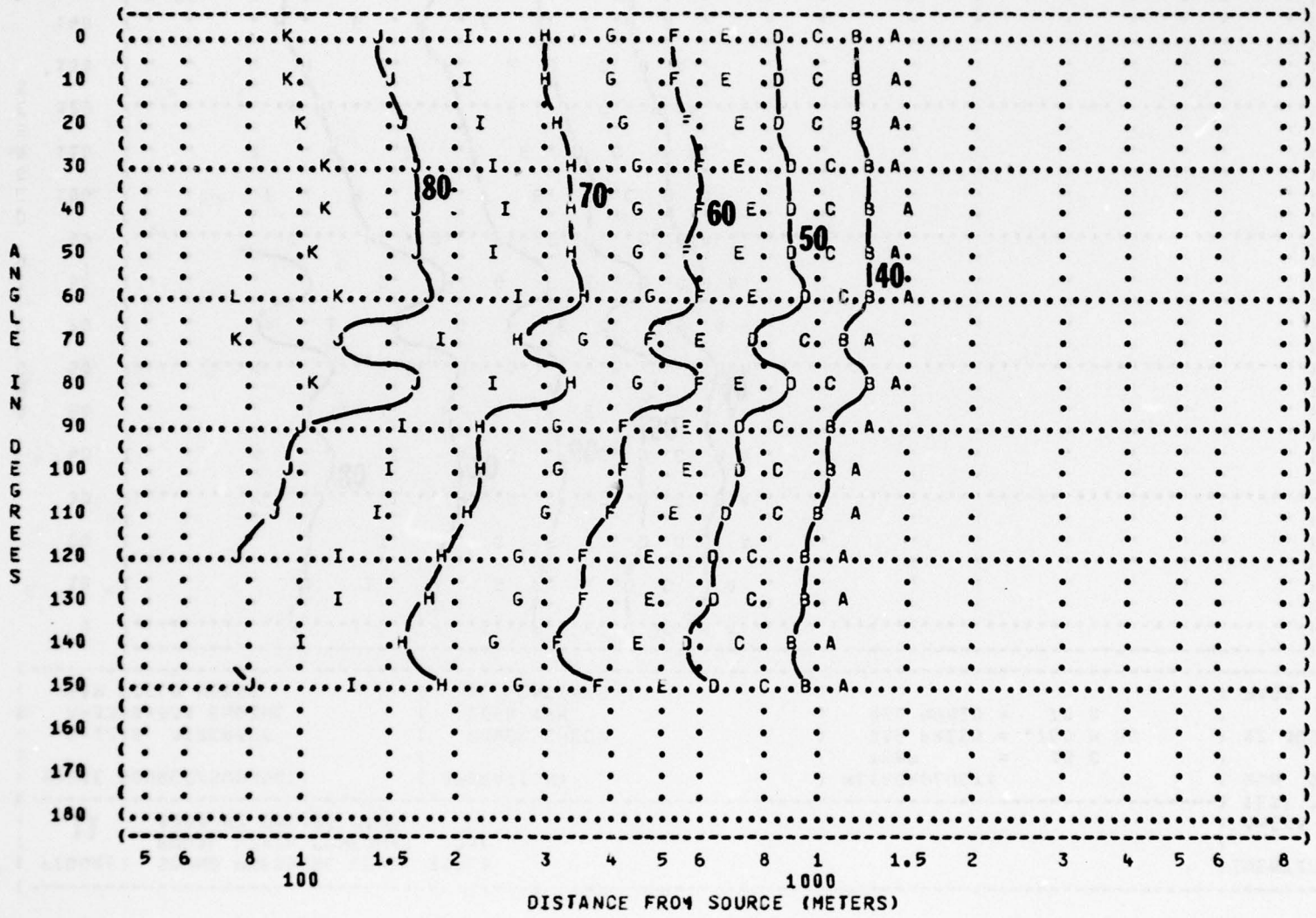
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 25

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL 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) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 04
12 AUG 76
PAGE 26

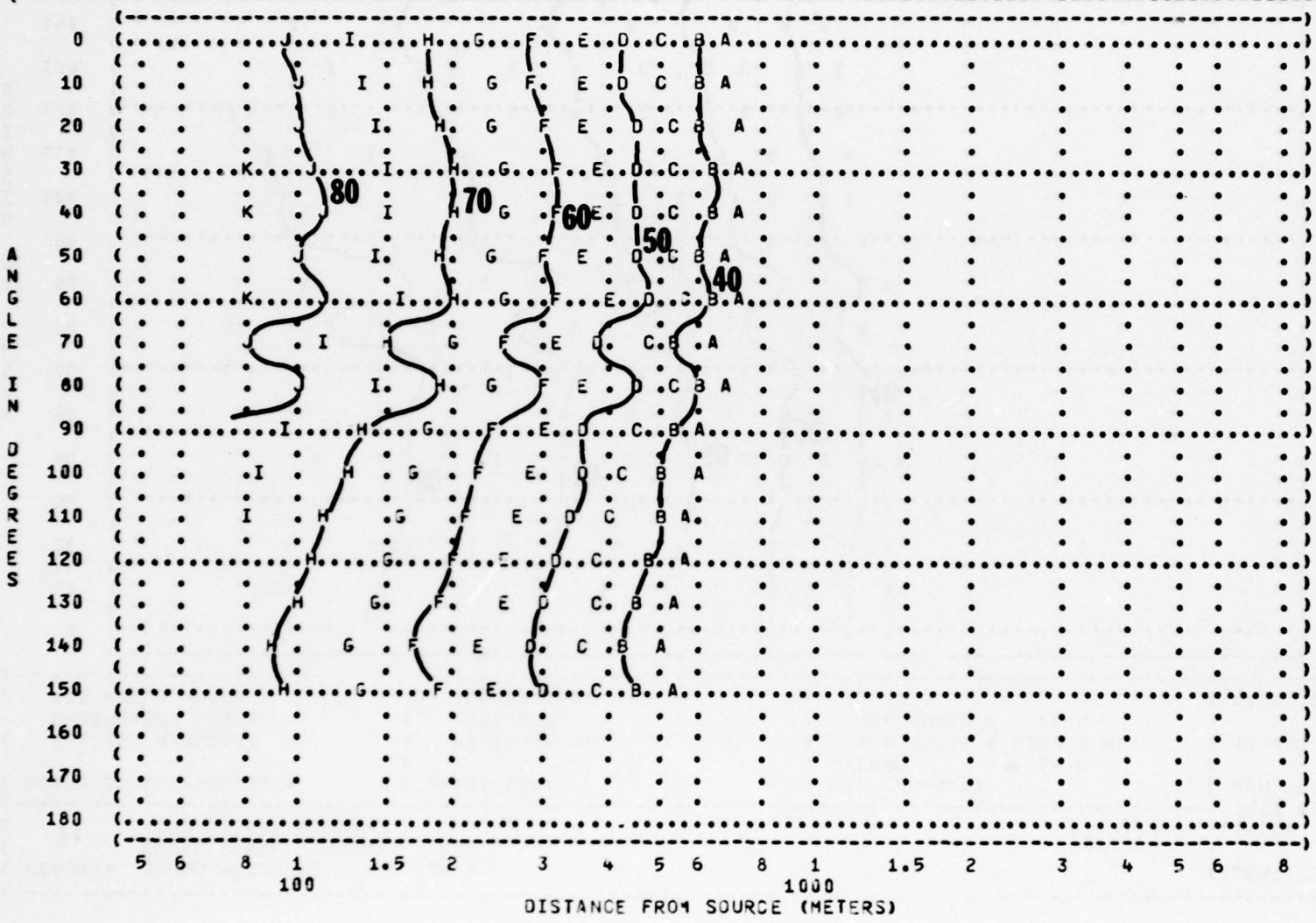


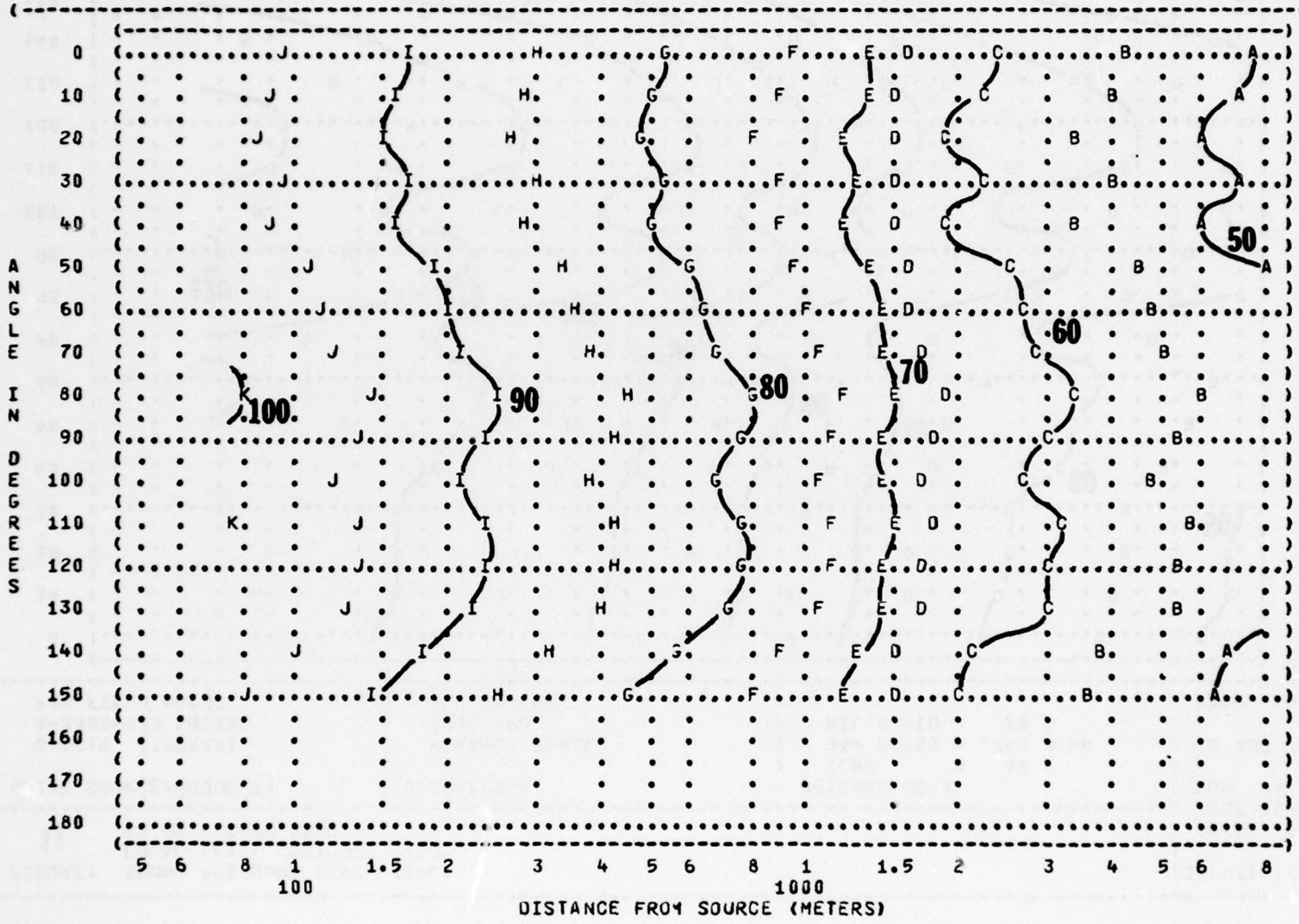
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 18



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

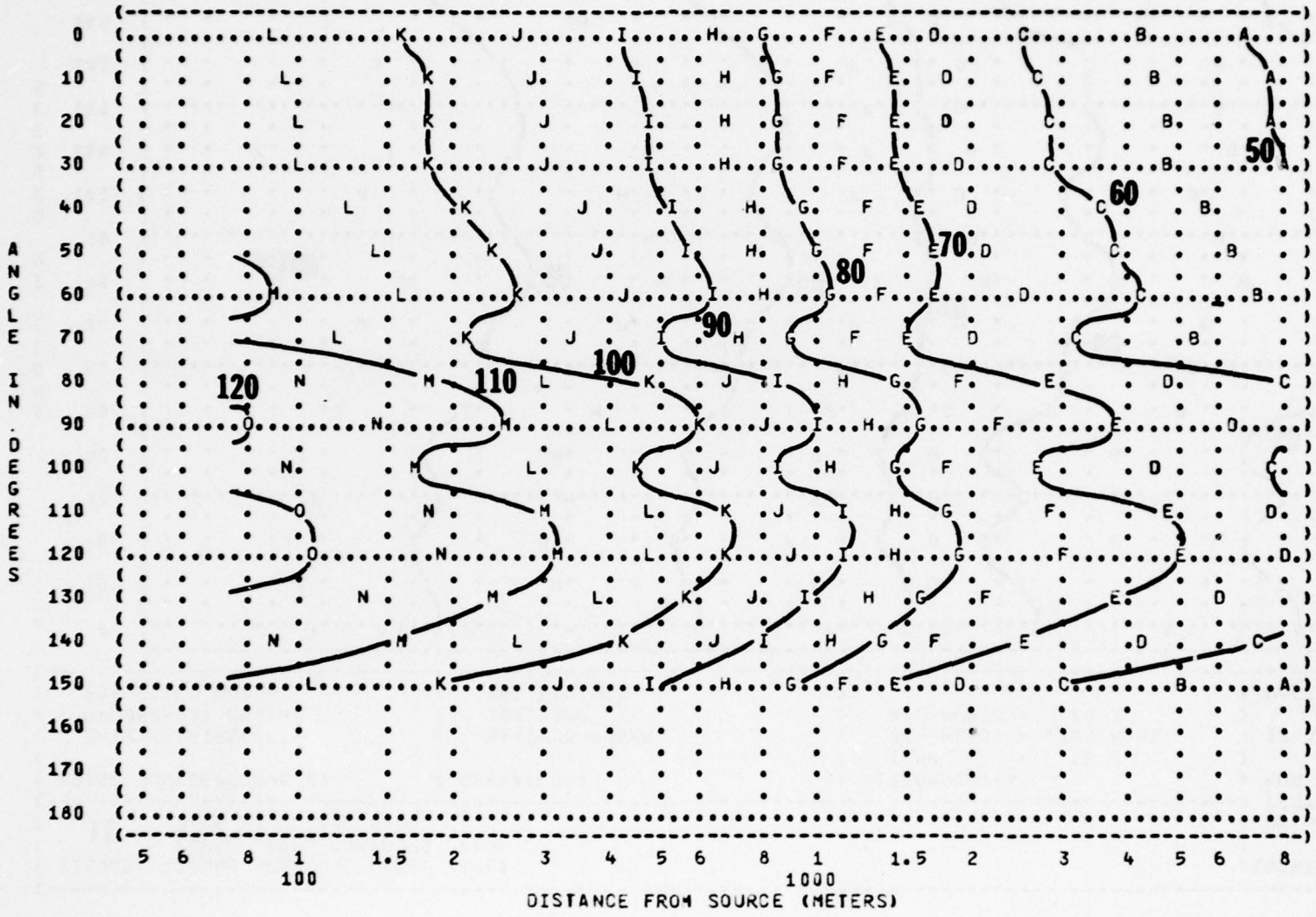
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-002-019 RUN 05 12 AUG 76 PAGE 19

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL 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
O	120

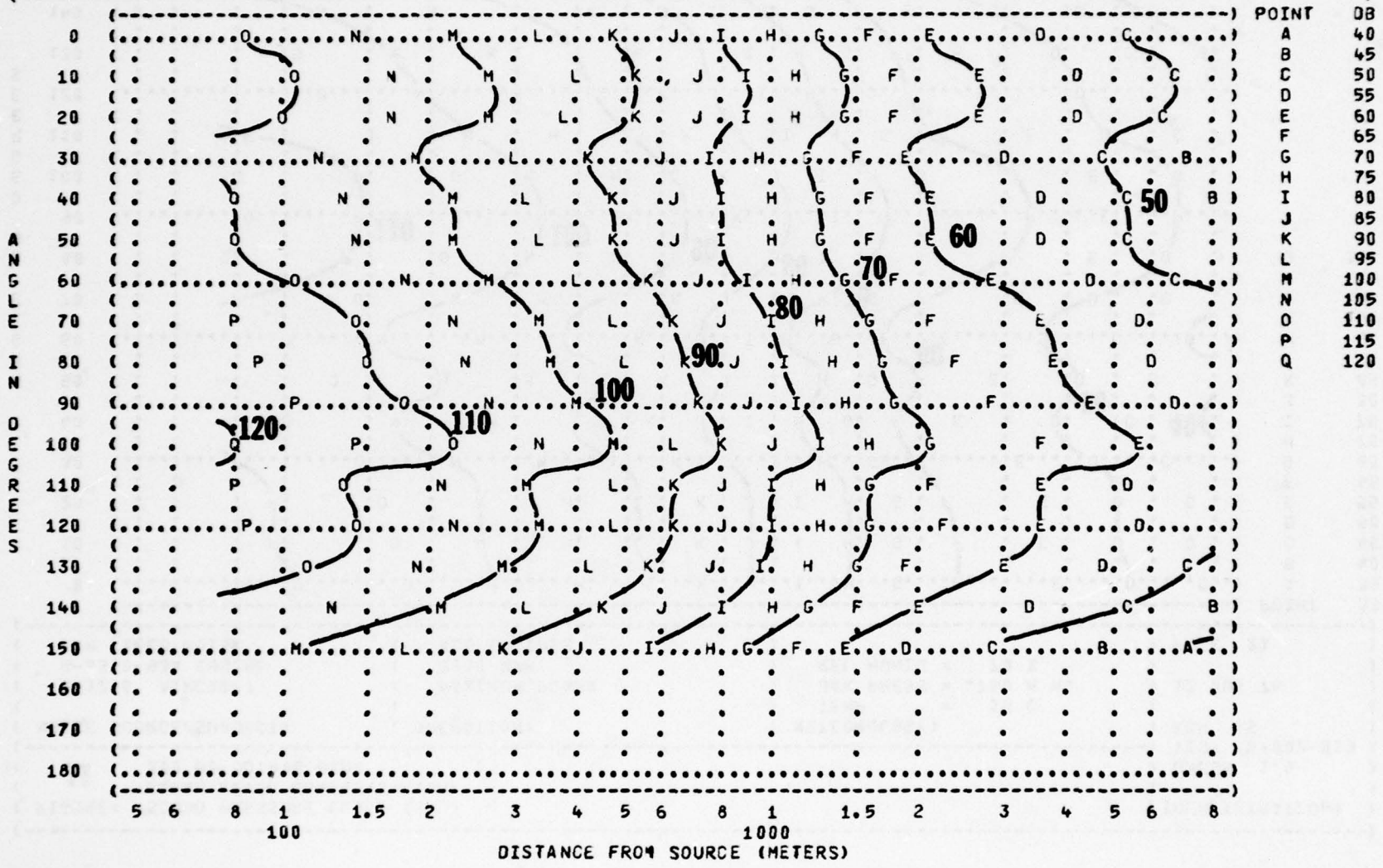
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 20

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL 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
Q	120

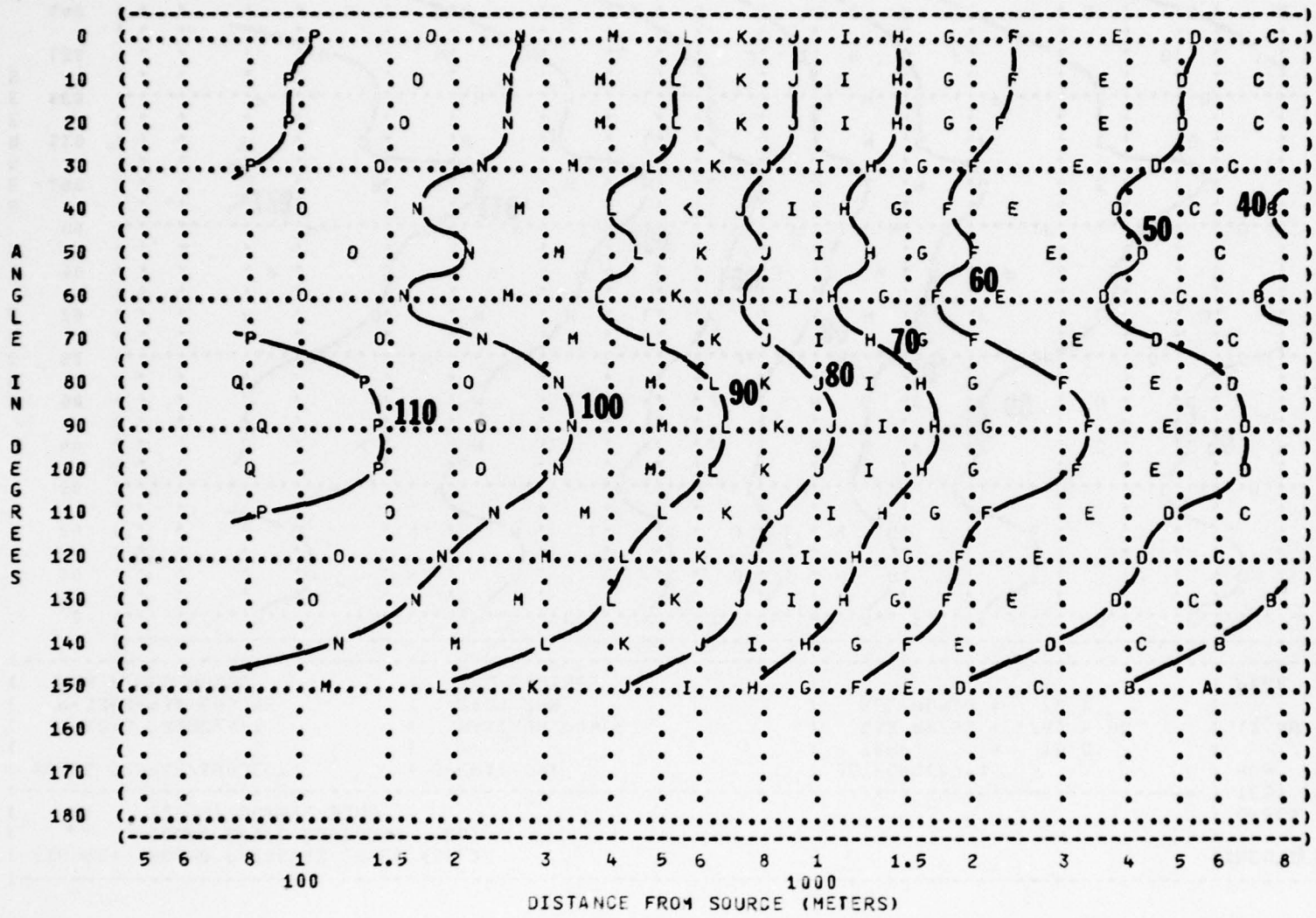
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 21

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL 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
Q	115

FIGURE: 11

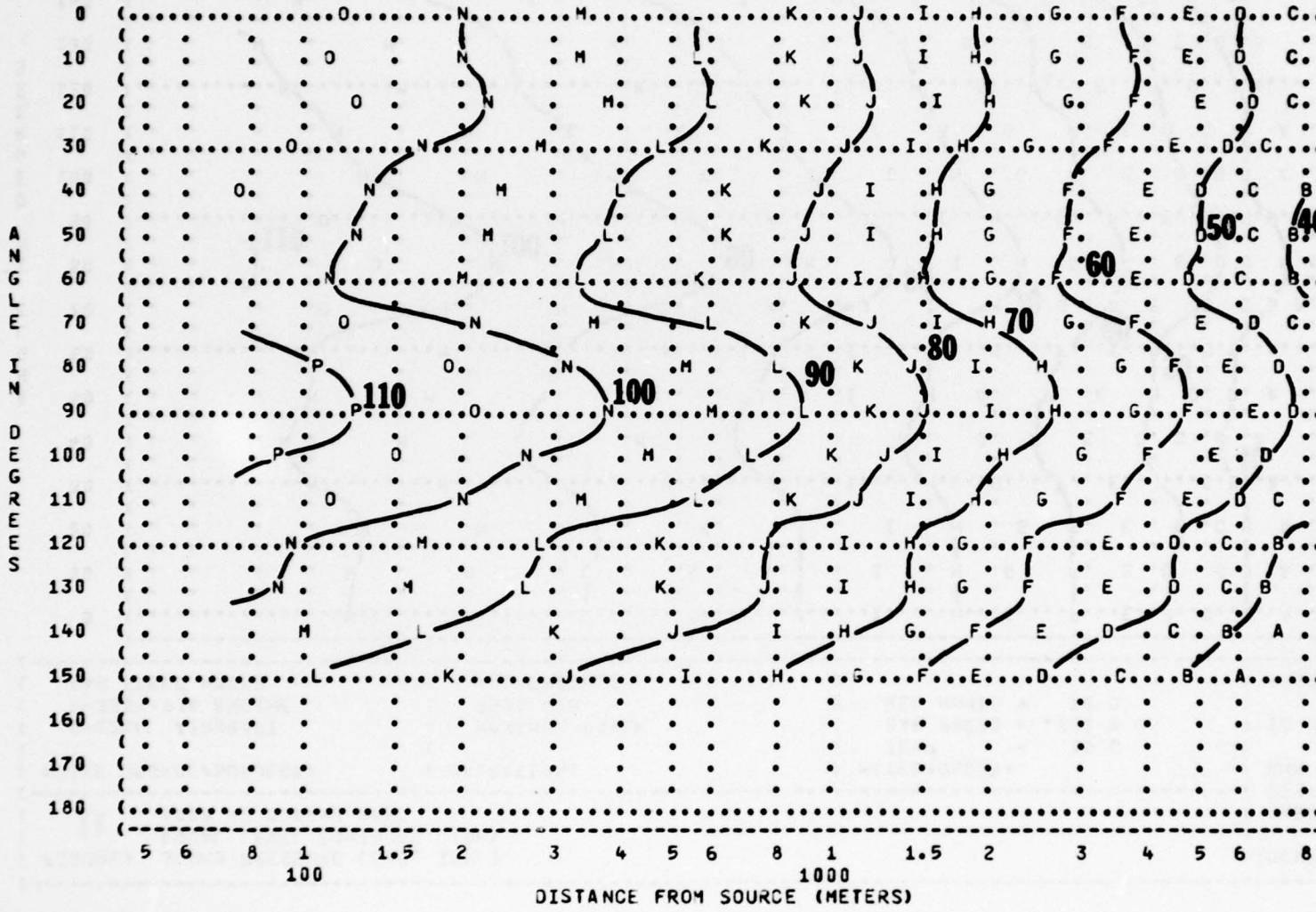
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
500 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 22

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL 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

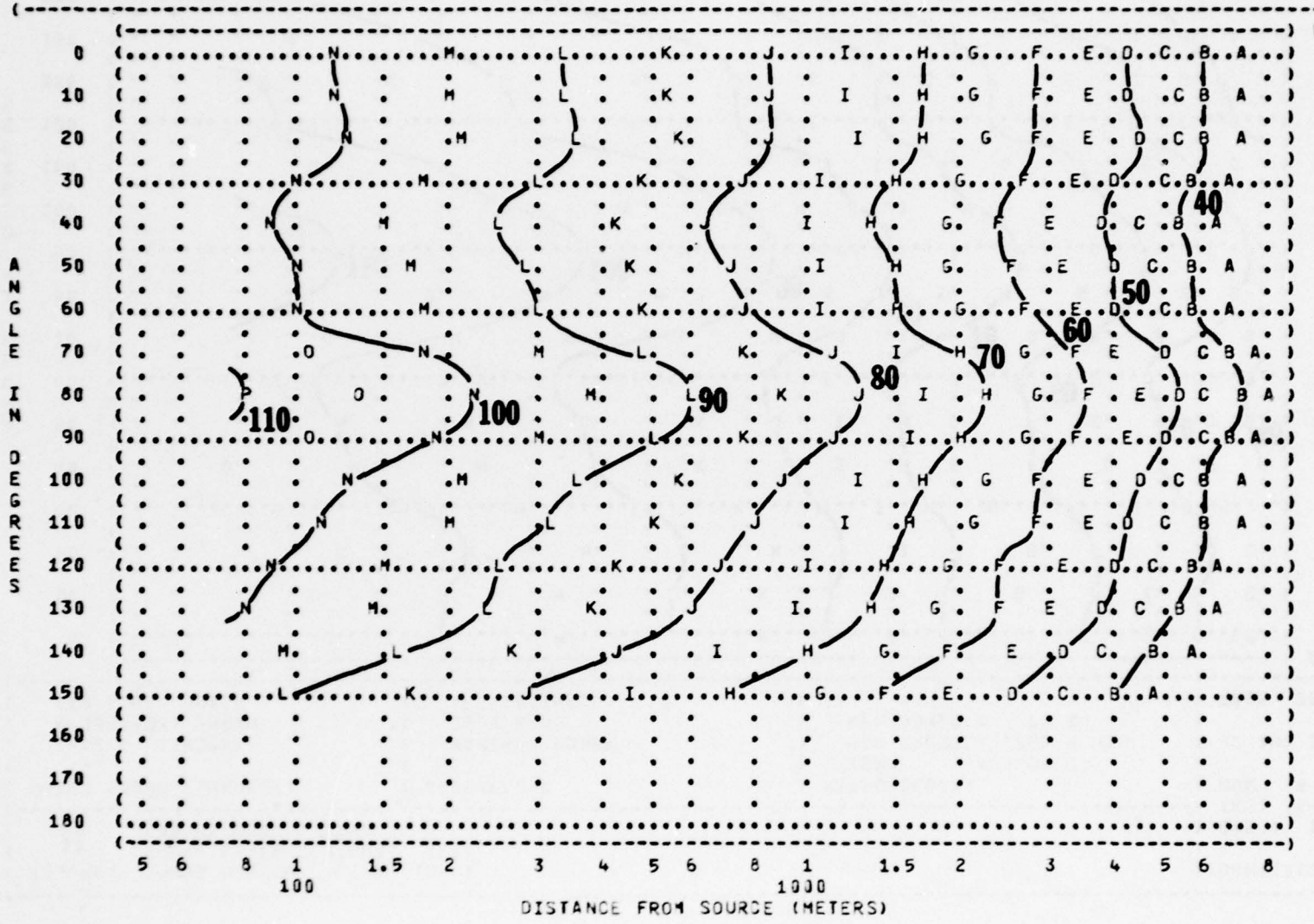
FIGURE 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-002-019 RUN 05 12 AUG 76 PAGE 23

NOISE SOURCE/SUBJECT: C-121G AIRCRAFT R-3350-93A ENGINE FAR FIELD NOISE

OPERATION: MAXIMUM POWER 2900 RPM ALL 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

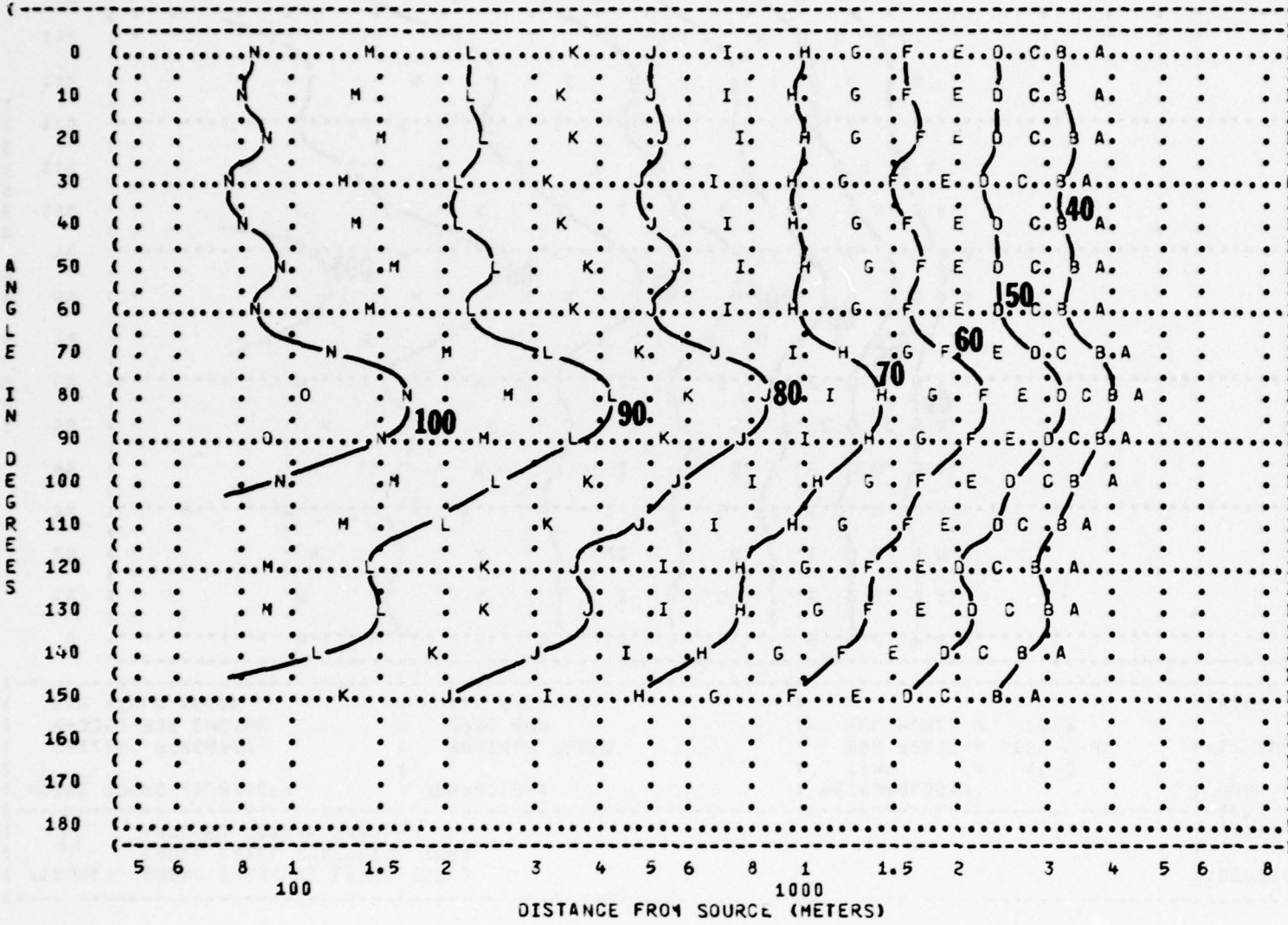
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-002-019 RUN 05 12 AUG 76 PAGE 24

NOISE SOURCE/SUBJECT: C-121G AIRCRAFT; R-3350-93A ENGINE; FAR FIELD NOISE

OPERATION: MAXIMUM POWER; 2900 RPM; ALL 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 11 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 25

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

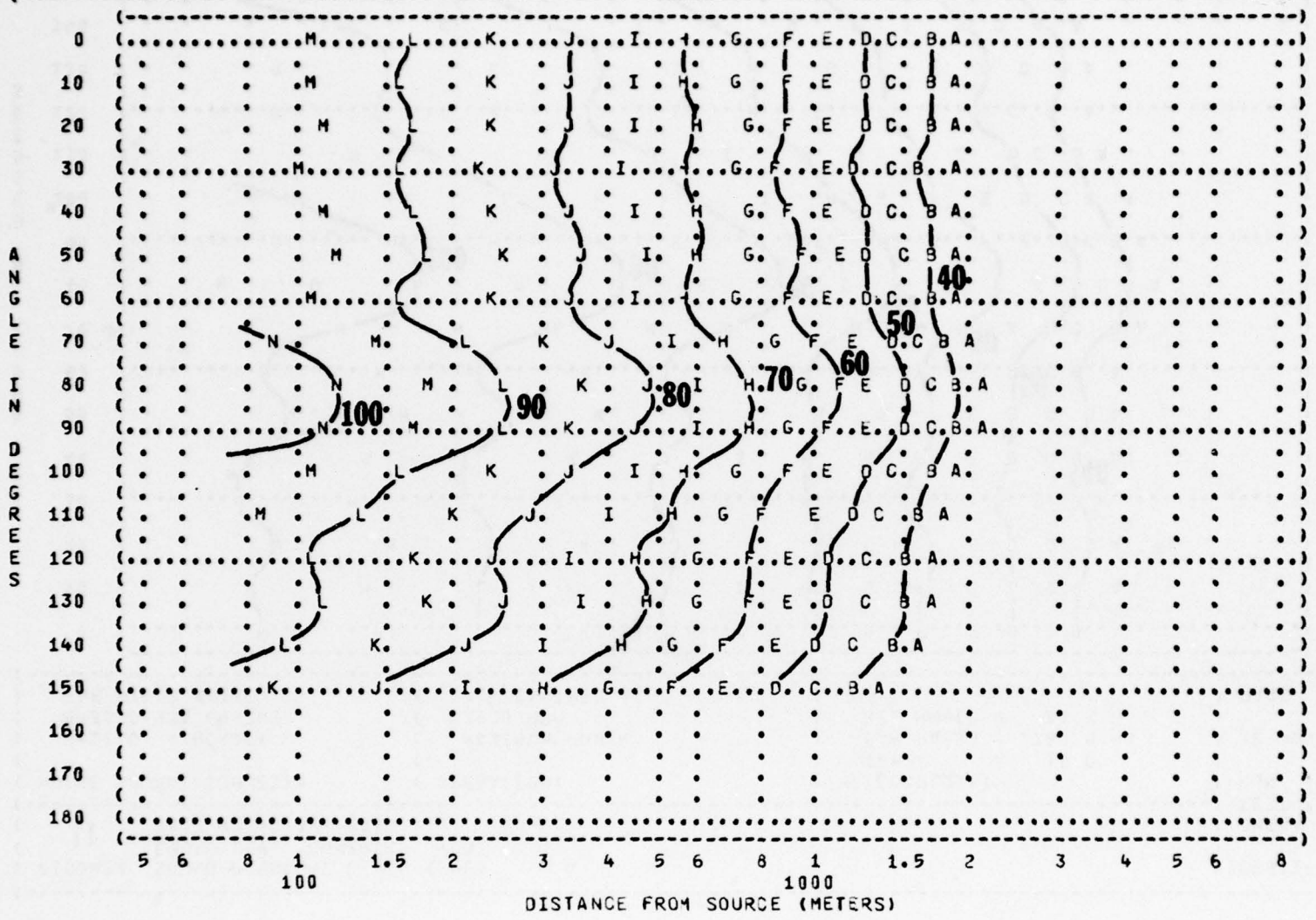


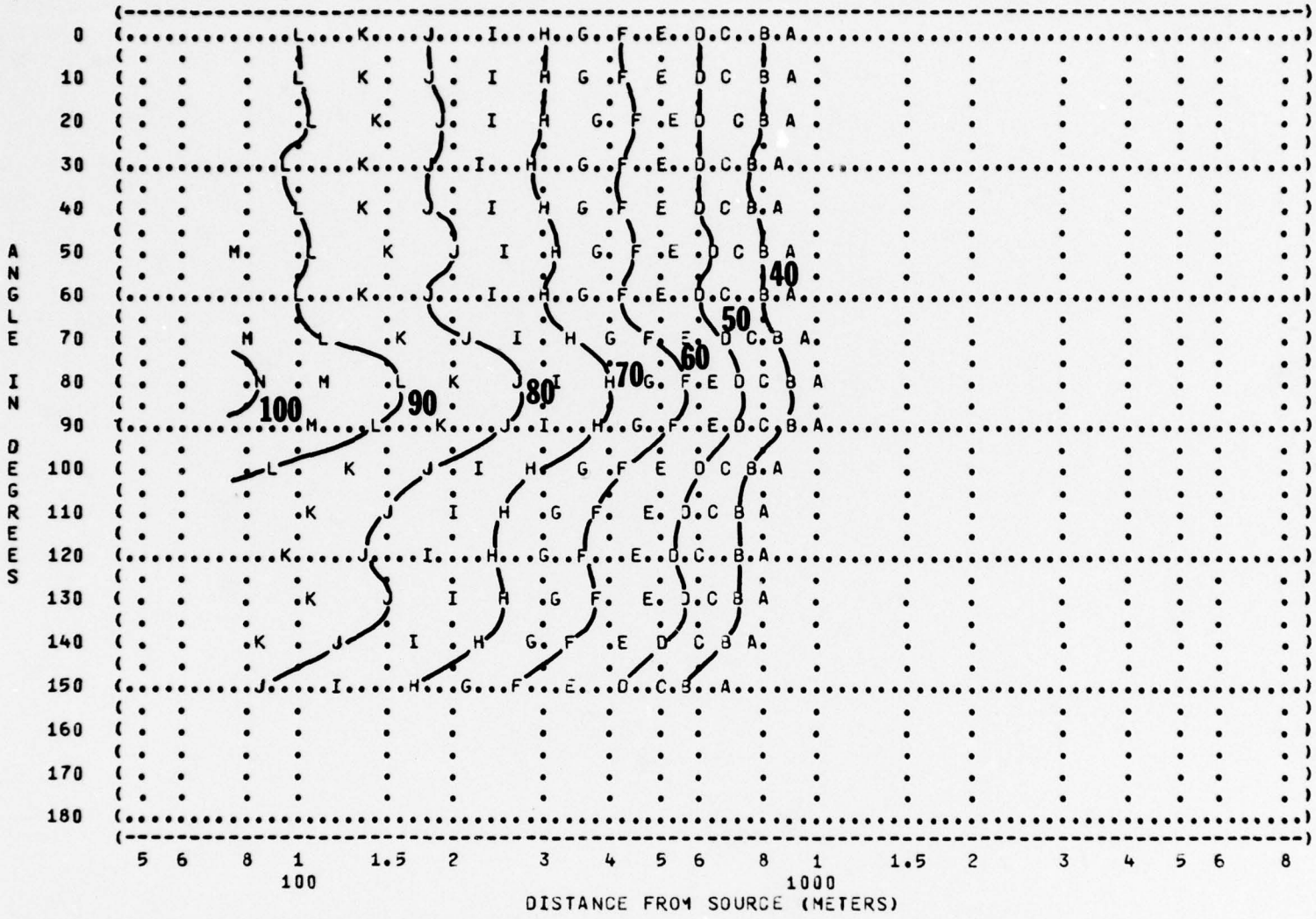
FIGURE 11: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
C-121G AIRCRAFT
R-3350-93A ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER
2900 RPM
ALL ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-019
RUN 05
12 AUG 76
PAGE 26



*U.S.Government Printing Office: 1978 — 757-080/375