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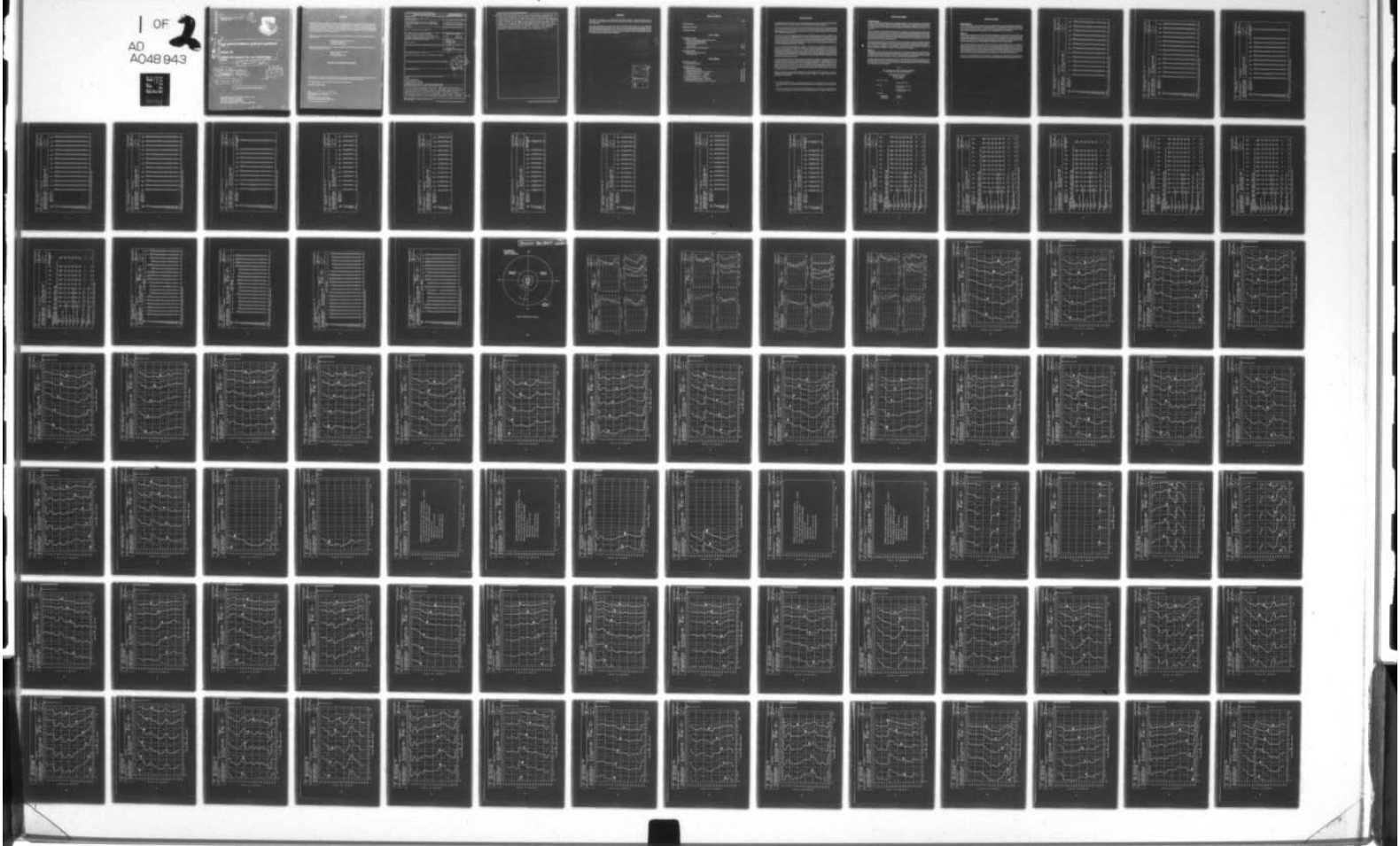

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Volume 105

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USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK

Volume 105,

A/M32A-60A Generator Set, Gas Turbine Engine Driven,

Technical rept.,

Nicko A. J/Farinacci

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FOR THE COMMANDER

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

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

The A/M32A-60A Generator Set is a gas turbine engine driven source of electrical power with pneumatic capability. This report provides measured and extrapolated data defining the bioacoustic environments produced by this unit operating outdoors on a concrete apron at normal rated/loaded conditions. Near-field data are reported for 37 locations in a wide variety of physical and psychoacoustic measures: Overall and band sound pressure levels, C-weighted and A-weighted sound levels, preferred speech interference level, perceived

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noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Far-field data measured at 36 locations are normalized to standard meteorological conditions and extrapolated from 10-1600 meters to derive sets of equal-value contours for these same seven acoustic measures as functions of angle and distance from the source. Refer to Volume 1 of this handbook, "USAF Bioenvironmental Noise Data Handbook, Vol 1: Organization, Content and Application," AMRL-TR-75-50(1) 1975, for discussion of the objective and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc.

PREFACE

This report was prepared by the Biodynamic Environment Branch, Aerospace Medical Research Laboratory, under Project/Task 723104, Measurement and Prediction of Noise Environments of Air Force Operations.

The author acknowledges the efforts of Mr. Robert G. Powell and Mr. Robert A. Lee who assisted in conducting the field measurements, and Mr. John N. Cole who established the data analysis requirements and assisted in the preparation of this report. Mr. Henry Mohlman and Mr. David Eilerman of the University of Dayton assisted in the mechanics of data processing, and Mrs. Norma Peachey and Mr. Mike Patterson typed and prepared the graphics.

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INTRODUCTION

The A/M32A-60A Generator Set is a gas turbine engine-driven source of electric power with pneumatic capability. This unit is manufactured by the HOL-GAR Manufacturing Corporation.

This volume provides measured and extrapolated data defining the bioacoustic environments produced by this unit. Such data are essential to evaluate ear protection requirements, limiting personnel exposure times, voice communication capabilities, and annoyance problems associated with operations of the A/M32A-60A generator set.

This volume is one of a series published by the Aerospace Medical Research Laboratory (AMRL) under the same report number (AMRL-TR-75-50) as a multi-volume handbook that quantifies the noise environments produces 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 described 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 (15C temperature, 70% rel humidity, 0.760 meters Hg barometric pressure) to derive comparable data for other meteorological conditions. *Refer to Volumes 1 and 2* (references 1 and 2) for such information because it is not repeated in other handbook volumes.

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

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

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

NEAR-FIELD NOISE

MEASUREMENTS

A standard A/M32A-60A Generator Set was operated outdoors on a concrete apron at normal rated conditions and electrically loaded, using an M24T-8 load bank with no significant sound-reflective surfces present except the ground plane. The load bank was physically located so as to not interfere with the A/M32A-60A noise field. Table 1 notes the surface meteorological conditions at the time of measurement.

Figure 1 identifies 72 noise measurement locations at a height of 1.5 meters above the concrete apron (nominal ear level of ground crew). The 0 degree reference direction passes through the two bar. The 36 locations on the two inner circles are in the acoustic near-field of the source where the sound wave fronts generally do not spherically diverge and the source appears to be spatially distributed (i.e., not a point source). Consequently, these near-field data cannot be extrapolated to longer distances but do properly define the levels at locations close to the unit.

Near-field measurements were also made at ear level at the operator control panel. Table 1 lists the numeric/alphabetic designators used on the data pages in this report to identify the operator measurement location and test conditions. The designator 1/A means operator location 1 and test condition A. Such a descriptor is essential in many handbook volumes that involve multiple combinations of location/conditions. It is used in this report to maintain format consistency.

RESULTS

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the A/M32A-60A unit at the 37 specified, near-field locations. This table includes the overall, 1/3 octave band, and octave band levels. From these data one can calculate the variety of measures in Table 3 which are widely used to assess the effects of noise on personnel and their performance.

For data at other intermediate near-field locations (i.e., for radial distances less than 10 meters) you can interpolate between the 72 measured data points. All near-field data are for the meteorological conditions at the time of test but are valid for all typical airbase meteorology because of the short distances over which the sound is propagated.

TABLE 1

MEASUREMENT LOCATION AND TEST CONDITIONS
FOR OPERATOR NOISE MEASUREMENTS

A/M32A-60A Generator Set, Power Unit
Edwards AFB, 3 June 1975
FSN 6115-420-8486
Mfr. Part # 69E39110

Measurement Location	
1	Operator Control Panel
Operation	
A	100 AMP, 240 VAC, 3 Phase; No Air Output
B	100 AMP, 240 VAC, 3 Phase; 40 PSI Air Output
Meteorology	
Temperature	28 C
Bar Pressure	0.693 M Hg
Rel Humidity	28 %

FAR-FIELD NOISE

MEASUREMENTS

Noise measurements were also made on the same A/M32A-60A unit under the same test conditions at the outer circle locations on Figure 1. These 36 locations are in the acoustic far-field of the source where the sound wave fronts spherically diverge and the unit may be regarded as a point noise source. Under these far-field conditions, the measured data can be extrapolated to longer distances.

RESULTS

Table 4 lists the overall and 1/3 octave band SPL measured at the 36 far-field locations under the meteorological conditions at the time of test. These data were normalized to 10 meters distance and standard meteorological conditions (15C temperature, 70% rel humidity, 0.760 meter Hg barometric pressure) and used to derive the graphic data in Figure 2 which provides a compact summary of the far-field noise characteristics of the A/M32A-60A generator set in a standard format.

These measured data were also used to derive sets of equal noise contours (Figures 3 through 9) describing seven different measures of noise as functions of angle and distance from the source for standard day meteorology. Note that Figure 8 contours identify limiting exposure time for personnel. Missing data points on any of the contours are the result of eliminating measured data which contained excessive influence of spurious background noise present at the time of measurement. In some cases, contour levels at these missing data points were estimated and indictated with dashed lines.

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

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

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 01
10 OCT 75
PAGE F1

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
NEAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

FREQ (HZ)	DISTANCE (M)-> / ANGLE (DEG)--> / CONDITION---->	4 0 A	4 20 A	4 40 A	4 60 A	4 80 A	4 100 A	4 120 A	4 140 A	4 160 A	4 180 A	4 200 A	4 220 A	4 240 A
25		81<	81<	81<	83<	83<	83<	82<	83<	82<	83<	78<	78<	83<
31.5		78<	78<	78<	81<	81<	82<	79<	80<	80<	81<	77<	78<	82<
40		83<	83<	83<	85<	83<	85<	84<	85<	82<	84<	82<	82<	85<
50		88	87	86	86	87	86	86	85	86	82<	83<	84	85
63		91	91	91	89	90	88	85	85	85	84	82	83	86
80		93	92	91	91	89	87	85	84	85	85	85	83	84
100		88	88	88	87	85	84	83	84	85	84	84	84	83
125		91	89	87	82	84	84	83	82	85	86	84	82	84
160		89	87	82	84	87	83	85	88	90	91	90	91	87
200		86	86	85	85	86	87	89	91	93	93	93	92	89
250		92	91	91	90	92	91	92	93	95	96	96	94	92
315		94	93	93	93	89	90	90	91	93	96	93	92	90
400		88	89	89	88	86	83	84	87	91	92	89	84	82
500		91	88	84	84	82	81	79	85	89	91	87	85	82
630		90	90	89	80	82	81	81	81	87	89	83	86	86
800		87	87	87	81	82	82	82	82	82	86	86	87	86
1000		80	80	80	81	78	80	81	81	79	83	84	81	78
1250		81	79	77	78	76	76	76	78	78	82	79	78	77
1600		82	79	78	77	76	77	76	76	77	76	76	76	76
2000		86	84	83	81	79	80	79	81	79	80	82	79	81
2500		89	86	85	84	85	83	80	83	82	90	82	82	80
3150		91	89	88	88	88	85	86	90	89	96	87	88	85
4000		86	86	87	83	83	81	81	83	86	91	83	85	83
5000		85	85	85	78	77	76	76	78	80	84	79	81	79
6300		85	85	85	81	77	78	79	81	81	87	83	82	81
8000		85	84	83	80	78	78	80	79	79	85	81	81	79
10000		91	90	90	85	85	85	85	86	84	89	85	86	86
OVERALL		103	102	101	100	100	99	99	100	102	104	101	101	99

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 02
10 OCT 75
PAGE F2

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

FREQ (HZ)	DISTANCE (M)-> / ANGLE (DEG)--> / CONDITION---->	4 260 A	4 280 A	4 300 A	4 320 A	4 340 A	2 0 A	2 20 A	2 40 A	2 60 A	2 80 A	2 100 A	2 120 A	2 140 A
25		83<	84<	80<	81<	83<	86<	83<	83<	81<	81<	83<	83<	85<
31.5		82<	84<	81<	80<	80<	86<	83<	84<	83<	83<	83<	84<	86<
40		82<	86<	85<	85<	83<	87	87	87	86<	86<	87	88	88
50		86	88	90	87	89	93	92	89	91	89	90	89	88
63		87	88	92	91	92	94	94	92	92	91	91	88	88
80		86	87	93	92	91	91	92	91	90	88	86	87	88
100		84	87	92	92	90	88	88	86	85	87	87	88	90
125		89	88	85	87	91	91	92	89	91	94	92	92	93
160		84	88	90	83	87	93	92	93	94	94	92	94	96
200		87	83	85	86	85	93	95	93	92	93	92	94	93
250		92	90	91	91	93	96	96	94	92	92	92	95	98
315		88	89	93	93	94	98	97	95	93	93	92	94	95
400		81	83	87	88	89	97	95	96	94	92	90	91	95
500		81	81	82	83	89	93	91	91	90	86	87	85	88
630		85	84	90	90	90	91	91	92	88	88	91	90	85
800		85	81	88	88	88	89	88	91	87	88	91	89	88
1000		78	78	82	84	81	82	83	82	84	84	84	83	84
1250		77	76	78	80	79	83	84	83	81	80	80	80	81
1600		76	76	80	78	81	83	83	81	82	81	81	80	81
2000		79	80	83	84	85	85	88	88	84	82	82	82	82
2500		81	83	84	86	88	88	91	91	86	86	88	87	87
3150		87	87	87	88	90	94	92	93	34	93	93	92	94
4000		82	82	85	85	88	93	90	92	89	86	87	88	88
5000		79	79	82	82	86	88	87	88	83	81	82	82	82
6300		81	80	83	83	85	89	89	89	86	83	84	85	85
8000		80	79	82	82	84	89	89	86	87	83	84	85	85
10000		86	85	88	90	91	93	94	92	92	91	89	91	90
OVERALL		99	99	102	102	103	106	106	105	104	103	103	104	105

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 03
10 OCT 75
PAGE F3

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

FREQ (HZ)	DISTANCE (M)-> 2 / ANGLE (DEG)--> 160 / CONDITION----> A	2 / 180 / A	2 / 200 / A	2 / 220 / A	2 / 240 / A	2 / 260 / A	2 / 280 / A	2 / 300 / A	2 / 320 / A	2 / 340 / A	OPERATOR LOCATION TEST CONDITION 1/A
25	86<	85<	84<	83<	83<	80<	83<	80<	83<	86<	86<
31.5	86<	85<	85<	83<	83<	80<	83<	83<	83<	87	87
40	91	90	88	86<	86<	86<	86<	87	88	90	91
50	90	87	88	88	88	88	90	89	92	92	93
63	90	90	89	88	86	88	91	92	93	93	94
80	90	90	89	88	86	86	88	89	91	92	92
100	90	92	90	89	88	88	86	85	87	89	92
125	96	97	96	95	94	93	94	91	91	90	98
160	97	97	97	97	95	95	94	93	93	93	99
200	96	98	96	94	92	94	93	93	93	92	98
250	101	102	100	99	96	94	92	95	95	95	98
315	99	102	97	94	93	89	90	90	93	97	96
400	99	101	96	91	88	87	89	90	93	96	96
500	93	96	91	87	85	86	89	87	88	96	94
630	90	95	89	91	88	89	94	89	87	90	97
800	85	87	92	92	88	88	94	90	90	90	98
1000	85	85	87	82	82	81	81	85	87	87	90
1250	83	85	81	81	80	80	80	80	84	85	85
1600	82	81	79	82	80	81	79	80	83	84	84
2000	84	84	83	85	82	84	82	86	87	85	90
2500	88	91	87	84	83	85	84	86	88	89	90
3150	99	100	92	91	94	94	91	91	94	95	96
4000	91	98	90	88	89	90	89	89	93	90	91
5000	86	87	85	82	83	84	82	84	86	88	86
6300	88	91	90	86	88	88	85	85	88	89	88
8000	87	88	88	85	87	87	83	84	86	89	88
10000	91	93	92	91	92	93	90	92	93	95	95
OVERALL	108	110	107	105	104	103	104	103	105	106	108

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 04
10 OCT 75
PAGE F4

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

FREQ (HZ)	DISTANCE (M)->	4	4	4	4	4	4	4	4	4	4	4	4	4
	ANGLE (DEG)-->	0	20	40	60	80	100	120	140	160	180	200	220	240
	CONDITION---->	B	B	B	B	B	B	B	B	B	B	B	B	B
25		85<	82<	83<	78<	80<	80<	78<	81<	80<	80<	81<	81<	83<
31.5		82<	82<	80<	79<	80<	79<	79<	79<	81<	81<	79<	80<	82<
40		85<	83<	85<	85<	85<	85<	83<	84<	84<	84<	82<	83<	85<
50		87	85	87	85	87	88	86	85	85	86	84	83<	85
63		92	93	93	92	91	90	87	88	89	87	86	85	85
80		93	93	93	92	91	88	86	87	89	87	87	87	86
100		90	90	90	87	86	84	84	85	86	84	86	83	84
125		91	89	87	84	85	87	83	83	86	87	84	83	85
160		91	87	84	87	90	87	86	91	92	94	93	92	88
200		89	88	87	86	87	88	91	93	95	96	95	91	90
250		95	95	93	91	93	93	93	95	97	100	96	96	93
315		96	96	96	94	92	93	91	95	96	98	96	94	92
400		90	92	92	90	89	85	86	90	94	94	89	85	83
500		93	90	87	85	83	83	84	90	94	95	90	87	85
630		91	92	91	84	84	87	85	86	89	91	89	87	87
800		89	88	90	88	89	88	90	89	87	91	90	90	89
1000		86	87	88	85	87	87	88	87	85	87	87	84	82
1250		85	85	85	83	84	85	84	84	84	86	84	84	79
1600		85	85	84	80	82	82	84	82	82	82	82	82	78
2000		88	88	86	83	85	86	84	84	84	82	84	83	80
2500		87	90	87	84	86	86	86	85	84	89	83	81	80
3150		93	90	90	87	87	88	87	90	88	94	86	85	85
4000		89	90	89	86	87	87	87	87	88	92	84	84	82
5000		87	89	86	81	82	82	82	84	84	86	81	81	80
6300		87	89	85	81	81	82	83	84	85	88	84	82	81
8000		86	85	84	79	81	82	83	82	83	85	82	81	80
10000		92	93	89	84	85	85	86	87	86	87	84	84	84
OVERALL		105	104	103	101	101	101	101	103	104	106	103	102	100

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 05
10 OCT 75
PAGE F5

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

FREQ (HZ)	DISTANCE (M)->	4	4	4	4	4	2	2	2	2	2	2	2	2
	ANGLE (DEG)-->	260	280	300	320	340	0	20	40	60	80	100	120	140
	CONDITION---->	B	B	B	B	B	B	B	B	B	B	B	B	B
25		85<	85<	86<	86<	85<	88<	83<	79<	81<	81<	83<	85<	86<
31.5		84<	83<	83<	82<	82<	86<	84<	81<	83<	83<	81<	83<	86<
40		86<	87	86<	86<	85<	89	88	88	87	89	87	88	91
50		87	87	89	87	87	90	90	90	90	90	90	90	92
63		89	91	92	92	92	96	95	94	94	94	93	93	93
80		90	92	94	94	93	94	94	93	93	89	89	91	91
100		86	89	91	93	91	91	90	88	86	88	89	90	91
125		91	90	87	89	90	93	91	91	92	94	94	94	97
160		88	94	92	86	88	94	94	95	95	96	95	97	99
200		89	85	86	88	88	95	95	95	96	94	96	96	96
250		94	92	92	92	93	98	96	96	94	94	94	97	101
315		92	91	93	96	96	100	97	96	95	94	94	96	97
400		83	84	86	88	89	100	97	97	95	92	91	93	97
500		84	83	83	86	89	97	94	93	91	87	87	87	91
630		87	87	91	90	91	95	93	94	91	91	92	90	88
800		87	87	89	91	89	92	91	91	90	92	93	92	91
1000		82	83	84	88	86	87	86	85	87	88	88	89	89
1250		80	80	81	84	85	86	85	85	83	85	84	86	85
1600		79	77	81	83	84	85	85	83	83	83	83	85	86
2000		80	81	84	86	87	88	89	90	87	90	85	87	85
2500		81	82	82	85	86	87	89	89	89	93	88	87	85
3150		86	86	86	89	90	94	93	92	92	94	93	92	91
4000		84	84	84	87	88	91	92	92	89	91	91	91	90
5000		80	80	81	85	86	89	89	90	88	85	85	86	85
6300		82	81	82	84	85	90	90	90	88	85	86	87	87
8000		81	81	81	83	84	90	89	86	87	85	88	87	87
10000		85	86	86	89	91	94	94	93	92	89	92	90	92
OVERALL		101	102	102	103	104	108	107	106	105	105	105	106	107

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION: OMEGA 3.2 TEST 75-030-002 RUN 06 10 OCT 75 PAGE F6

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

FREQ (HZ)	DISTANCE (M) -> 2	2	2	2	2	2	2	2	2	2	OPERATOR LOCATION TEST CONDITION
	ANGLE (DEG) ---> 160	180	200	220	240	260	280	300	320	340	
	CONDITION----> B	B	B	B	B	B	B	B	B	B	1/B
25	91	87<	92	89	86<	83<	81<	81<	82<	93	88<
31.5	88	85<	88	88	86<	83<	81<	82<	82<	90	85<
40	91	89	92	89	87	86<	88	88	87	90	89
50	90	88	90	90	88	88	88	89	89	90	93
63	92	92	91	90	90	90	93	93	94	96	95
80	92	91	92	89	90	88	91	92	93	95	95
100	93	92	93	91	89	88	88	89	88	90	91
125	98	98	99	97	96	95	95	95	91	91	100
160	100	101	100	99	97	97	98	97	95	95	101
200	98	100	99	97	96	96	97	96	95	93	99
250	103	104	102	98	97	94	96	97	97	96	99
315	101	102	99	96	92	92	93	93	95	98	97
400	100	101	96	92	88	88	90	92	95	96	97
500	96	99	94	90	88	88	91	89	92	98	96
630	93	96	91	93	91	91	95	91	87	92	99
800	89	91	96	94	91	91	94	93	91	92	99
1000	88	89	91	87	83	83	84	87	89	88	92
1250	86	88	85	83	80	80	80	81	85	87	86
1600	84	84	82	82	80	79	80	81	82	85	84
2000	84	85	84	82	80	82	83	86	87	87	90
2500	87	92	87	83	83	84	83	85	85	89	88
3150	96	98	92	91	93	93	91	90	93	95	94
4000	93	96	90	88	89	90	90	88	91	91	91
5000	87	88	87	83	84	83	82	84	85	88	85
6300	88	91	90	87	88	88	86	85	87	89	89
8000	88	88	89	86	87	86	87	86	87	88	88
10000	94	92	91	91	91	91	91	90	93	94	94
OVERALL	110	111	109	106	105	105	106	105	106	107	109

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 01
10 OCT 75
PAGE J1

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

FREQ (HZ)	DISTANCE (M)->	4	4	4	4	4	4	4	4	4	4	4	4	4
	ANGLE (DEG)-->	0	20	40	60	80	100	120	140	160	180	200	220	240
	CONDITION---->	A	A	A	A	A	A	A	A	A	A	A	A	A
31.5		86	86	86	88	87	88	87	88	86	87	84	85	88
63		95	95	95	94	93	92	90	89	90	89	88	88	90
125		94	93	91	89	90	88	88	90	92	93	92	92	90
250		96	96	95	95	95	94	95	97	98	100	99	97	95
500		94	93	93	90	88	86	86	90	94	95	91	90	88
1000		88	88	88	84	84	85	85	85	85	88	88	88	87
2000		91	89	87	86	86	85	84	85	85	90	86	84	84
4000		93	92	91	89	89	87	87	91	91	97	89	90	88
8000		93	92	91	87	86	86	87	87	86	92	88	88	87
OVERALL		103	102	101	100	100	99	99	100	102	104	101	101	99

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

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 02
10 OCT 75
PAGE J2

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN
NEAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

FREQ (HZ)	DISTANCE (M)-> / ANGLE (DEG)---> / CONDITION---->	4 260 A	4 280 A	4 300 A	4 320 A	4 340 A	2 0 A	2 20 A	2 40 A	2 60 A	2 80 A	2 100 A	2 120 A	2 140 A
31.5		87	89	87	88	87	91	89	90	89	88	89	90	91
63		91	92	96	95	95	98	98	96	96	94	94	93	93
125		91	93	94	93	94	96	96	95	96	97	96	97	98
250		94	93	95	96	97	101	100	99	97	97	97	99	100
500		88	88	92	92	94	99	98	98	96	94	94	94	96
1000		86	83	89	90	89	90	90	92	89	90	92	90	90
2000		84	85	87	88	90	91	93	93	89	88	89	88	89
4000		89	89	90	90	93	97	95	96	95	94	94	94	95
8000		87	87	90	91	93	95	96	94	94	92	91	93	92
OVERALL		99	99	102	102	103	106	106	105	104	103	103	104	105

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

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

IDENTIFICATION: OMEGA 3.2 / TEST 75-030-002 / RUN 03 / 10 OCT 75 / PAGE J3

FREQ (HZ)	DISTANCE (M)->	2	2	2	2	2	2	2	2	2	2	OPERATOR LOCATION
	ANGLE (DEG)-->	160	180	200	220	240	260	280	300	320	340	TEST CONDITION
	CONDITION---->	A	A	A	A	A	A	A	A	A	A	1/A
31.5		93	92	91	89	89	88	89	89	90	92	93
63		94	94	93	92	91	92	94	95	97	97	98
125		100	101	100	99	98	97	97	96	96	95	102
250		104	106	103	101	98	97	97	97	98	100	102
500		100	103	97	95	92	92	96	93	95	99	101
1000		89	91	93	93	89	89	94	91	92	92	98
2000		90	92	88	88	87	88	86	89	91	91	93
4000		99	102	94	93	95	95	93	94	97	96	97
8000		94	96	95	93	94	94	91	93	94	97	96
OVERALL		108	110	107	105	104	103	104	103	105	106	108

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

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 04
10 OCT 75
PAGE J4

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

FREQ (HZ)	DISTANCE (M)->	4	4	4	4	4	4	4	4	4	4	4	4	4
	ANGLE (DEG)-->	0	20	40	60	80	100	120	140	160	180	200	220	240
	CONDITION---->	B	B	B	B	B	B	B	B	B	B	B	B	B
31.5		89	87	88	87	87	87	86	86	87	87	86	87	88
63		96	96	96	95	95	93	91	92	93	91	90	90	90
125		96	93	92	91	92	91	89	93	93	95	94	93	91
250		99	99	98	96	96	96	96	99	101	103	100	99	96
500		96	96	95	92	91	90	90	93	97	98	94	91	90
1000		92	92	93	91	92	92	93	92	90	93	92	92	90
2000		92	93	90	87	89	90	89	88	88	90	87	87	84
4000		95	94	93	90	90	91	90	92	92	96	89	88	88
8000		94	94	91	86	87	88	89	89	89	91	88	87	86
OVERALL		105	104	103	101	101	101	101	103	104	106	103	102	100

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

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 05

10 OCT 75

PAGE J5

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

FREQ (HZ)	DISTANCE (M)->	4	4	4	4	4	2	2	2	2	2	2	2	2
	ANGLE (DEG)-->	260	280	300	320	340	0	20	40	60	80	100	120	140
	CONDITION---->	B	B	B	B	B	B	B	B	B	B	B	B	B
31.5		90	90	90	90	89	93	90	89	89	90	89	91	93
63		93	95	97	96	96	99	98	97	97	96	95	96	97
125		93	96	95	95	95	98	97	97	97	98	98	99	101
250		96	95	96	98	98	103	101	100	100	99	99	101	103
500		90	90	92	93	95	103	99	99	98	95	95	95	99
1000		89	89	90	93	92	94	93	92	92	94	94	94	94
2000		85	85	87	89	91	92	93	93	92	95	90	91	90
4000		89	88	89	92	93	97	96	96	95	96	95	95	94
8000		87	88	88	91	92	97	96	95	94	92	94	93	94
OVERALL		101	102	102	103	104	108	107	106	105	105	105	106	107

TABLE: 2 MEASURED SOUND PRESSURE LEVEL (DB) OCTAVE BAND											IDENTIFICATION:
NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS				OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT							OMEGA 3.2 TEST 75-030-002 RUN 06 10 OCT 75 PAGE J6
DISTANCE (M)->	2	2	2	2	2	2	2	2	2	2	OPERATOR LOCATION
FREQ (HZ) ANGLE (DEG)-->	160	180	200	220	240	260	280	300	320	340	TEST CONDITION
CONDITION---->	B	B	B	B	B	B	B	B	B	B	1/B
31.5	95	92	95	93	91	89	89	90	89	96	92
63	96	95	96	94	94	93	95	96	97	99	99
125	103	103	103	101	100	100	100	99	97	97	104
250	106	107	105	102	100	99	100	100	100	101	103
500	102	103	99	96	94	94	97	95	97	100	102
1000	93	94	97	95	92	92	95	94	94	94	100
2000	90	93	89	87	86	86	87	89	90	92	93
4000	98	100	95	93	95	95	93	93	95	97	96
8000	96	95	95	93	94	93	93	92	94	96	96
OVERALL	110	111	109	106	105	105	106	105	106	107	109

TABLE: MEASURES OF HUMAN NOISE EXPOSURE

3

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 01
10 OCT 75
PAGE H1

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

DISTANCE (M)->	4	4	4	4	4	4	4	4	4	4	4	4	4
ANGLE (DEG)-->	0	20	40	60	80	100	120	140	160	180	200	220	240
CONDITION---->	A	A	A	A	A	A	A	A	A	A	A	A	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	102	101	101	99	99	98	98	100	101	104	101	100	99
OASLA	99	98	97	95	95	93	94	96	97	101	96	96	94
T	36	42	50	71	71	101	85	60	50	25	60	60	85
MINIMUM QPL EAR MUFFS													
OASLA*	79	78	77	76	75	74	74	76	78	80	78	77	75
T	960	960	960	960	960	960	960	960	960	960	960	960	960
AMERICAN OPTICAL 1700 EAR MUFFS													
OASLA*	74	73	73	72	71	70	70	72	73	75	73	72	71
T	960	960	960	960	960	960	960	960	960	960	960	960	960
V-51R EAR PLUGS													
OASLA*	74	73	72	70	70	69	69	71	73	75	73	72	70
T	960	960	960	960	960	960	960	960	960	960	960	960	960
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS													
OASLA*	59	59	58	56	55	55	55	56	57	60	58	57	56
T	960	960	960	960	960	960	960	960	960	960	960	960	960
H-133 GROUND COMMUNICATION UNIT													
OASLA*	73	71	70	69	69	67	67	70	70	75	69	69	68
T	960	960	960	960	960	960	960	960	960	960	960	960	960
COMMUNICATION													
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)													
PSIL	91	90	89	87	86	85	85	87	88	91	88	87	86
ANNOYANCE													
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)													
TONE CORRECTION (C IN DB)													
PNLT	116	114	114	112	112	110	111	114	114	119	113	113	111
C	1	1	1	1	1	1	2	3	2	2	1	2	1

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE: 3 MEASURES OF HUMAN NOISE EXPOSURE

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 02
10 OCT 75
PAGE H2

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

DISTANCE (M)->	4	4	4	4	4	2	2	2	2	2	2	2	2
ANGLE (DEG)-->	260	280	300	320	340	0	20	40	60	80	100	120	140
CONDITION---->	A	A	A	A	A	A	A	A	A	A	A	A	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	99	101	101	102	106	105	105	103	103	103	103	104
OASLA	94	94	97	97	99	102	102	102	100	99	99	99	100
T	85	85	50	50	36	21	21	21	30	36	36	36	30
MINIMUM QPL EAR MUFFS													
OASLA*	75	75	78	78	79	82	82	81	80	80	79	80	81
T	960	960	960	960	960	679	679	807	960	960	960	960	807
AMERICAN OPTICAL 1700 EAR MUFFS													
OASLA*	71	71	74	73	74	78	77	76	75	75	74	76	77
T	960	960	960	960	960	960	960	960	960	960	960	960	960
V-51R EAR PLUGS													
OASLA*	69	69	72	73	74	78	77	77	74	74	74	75	76
T	960	960	960	960	960	960	960	960	960	960	960	960	960
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS													
OASLA*	55	55	59	59	60	62	62	62	60	60	60	60	61
T	960	960	960	960	960	960	960	960	960	960	960	960	960
H-133 GROUND COMMUNICATION UNIT													
OASLA*	68	68	70	71	72	75	75	74	74	73	73	73	74
T	960	960	960	960	960	960	960	960	960	960	960	960	960
COMMUNICATION													
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)													
PSIL	86	85	89	90	91	93	94	94	91	91	92	91	91
ANNOYANCE													
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)													
TONE CORRECTION (C IN DB)													
PNLT	112	112	114	114	116	119	117	118	118	117	117	117	119
C	2	1	2	1	1	1	0	2	2	2	2	2	2

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE: MEASURES OF HUMAN NOISE EXPOSURE		IDENTIFICATION:
3		OMEGA 3.2
NOISE SOURCE/SUBJECT:	OPERATION:	TEST 75-030-002
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS	GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT	RUN 03 10 OCT 75 PAGE M3

DISTANCE (M)->	2	2	2	2	2	2	2	2	2	2	OPERATOR LOCATION
ANGLE (DEG)-->	160	180	200	220	240	260	280	300	320	340	TEST CONDITION
CONDITION---->	A	A	A	A	A	A	A	A	A	A	1/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	108	109	106	105	103	103	103	103	104	105	108
OASLA	104	106	101	100	100	100	100	99	101	102	104
T	15	11	25	30	30	30	30	36	25	21	15
MINIMUM QPL EAR MUFFS											
OASLA*	84	86	83	82	80	80	80	79	80	82	84
T	480	339	571	679	960	960	960	960	960	679	480
AMERICAN OPTICAL 1700 EAR MUFFS											
OASLA*	80	81	79	77	76	75	75	75	76	77	80
T	960	807	960	960	960	960	960	960	960	960	960
V-51R EAR PLUGS											
OASLA*	79	81	78	76	74	73	75	74	75	78	80
T	960	807	960	960	960	960	960	960	960	960	960
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS											
OASLA*	64	65	63	61	60	60	61	60	61	63	66
T	960	960	960	960	960	960	960	960	960	960	960
H-133 GROUND COMMUNICATION UNIT											
OASLA*	78	79	74	73	74	74	73	73	75	75	77
T	960	960	960	960	960	960	960	960	960	960	960
COMMUNICATION											
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)											
PSIL	93	95	93	92	89	90	92	91	93	94	97
ANNOYANCE											
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)											
TONE CORRECTION (C IN DB)											
PNLT	123	124	118	117	118	118	116	116	119	120	121
C	3	2	1	2	3	2	2	2	2	2	2

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE: MEASURES OF HUMAN NOISE EXPOSURE

3

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 04
10 OCT 75
PAGE H4

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

DISTANCE (M)-->	4	4	4	4	4	4	4	4	4	4	4	4	4	
ANGLE (DEG)-->	0	20	40	60	80	100	120	140	160	180	200	220	240	
CONDITION---->	B	B	B	B	B	B	B	B	B	B	B	B	B	
HAZARD/PROTECTION														
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR														
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR														
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)														
NO PROTECTION														
OASLC	104	104	103	101	101	101	100	102	104	106	103	102	100	
OASLA	101	101	100	97	97	98	98	99	99	102	98	97	95	
T	25	25	30	50	50	42	42	36	36	21	42	50	71	
MINIMUM QPL EAR MUFFS														
OASLA*	80	80	79	77	77	77	76	78	80	82	79	78	76	
T	960	960	960	960	960	960	960	960	960	679	960	960	960	
AMERICAN OPTICAL 1700 EAR MUFFS														
OASLA*	76	76	75	73	73	72	72	74	76	77	75	73	72	
T	960	960	960	960	960	960	960	960	960	960	960	960	960	
V-51R EAR PLUGS														
OASLA*	76	76	75	73	73	73	73	74	76	78	75	74	72	
T	960	960	960	960	960	960	960	960	960	960	960	960	960	
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS														
OASLA*	61	61	61	58	58	58	59	59	60	62	60	59	57	
T	960	960	960	960	960	960	960	960	960	960	960	960	960	
H-133 GROUND COMMUNICATION UNIT														
OASLA*	74	73	72	70	71	71	71	72	72	75	71	70	68	
T	960	960	960	960	960	960	960	960	960	960	960	960	960	
COMMUNICATION														
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)														
PSIL	93	93	93	90	90	90	91	91	92	94	91	90	88	
ANNOYANCE														
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)														
TONE CORRECTION (C IN DB)														
PNLT	118	117	116	113	113	113	113	115	115	118	113	113	111	
C	2	2	1	1	1	0	1	1	1	1	1	2	1	

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE: 3 MEASURES OF HUMAN NOISE EXPOSURE														IDENTIFICATION: OMEGA 3.2 TEST 75-030-002 RUN 05 10 OCT 75 PAGE H5
NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS	OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT													
DISTANCE (M)->	4	4	4	4	4	2	2	2	2	2	2	2	2	
ANGLE (DEG)-->	260	280	300	320	340	0	20	40	60	80	100	120	140	
CONDITION---->	B	B	B	B	B	B	B	B	B	B	B	B	B	
HAZARD/PROTECTION														
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR														
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR														
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)														
NO PROTECTION														
OASLC	101	101	102	103	103	108	106	106	105	105	105	105	107	
OASLA	96	96	97	99	100	104	103	102	101	102	101	101	102	
T	60	60	50	36	30	15	18	21	25	21	25	25	21	
MINIMUM QPL EAR MUFFS														
OASLA*	77	78	78	79	80	84	82	82	82	81	81	82	84	
T	960	960	960	960	960	480	679	679	679	807	807	679	480	
AMERICAN OPTICAL 1700 EAR MUFFS														
OASLA*	73	74	74	75	75	80	78	78	77	77	77	78	80	
T	960	960	960	960	960	960	960	960	960	960	960	960	960	
V-51R EAR PLUGS														
OASLA*	72	71	73	75	75	80	78	78	76	76	76	77	78	
T	960	960	960	960	960	960	960	960	960	960	960	960	960	
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS														
OASLA*	57	58	59	60	61	65	63	63	62	62	62	62	64	
T	960	960	960	960	960	960	960	960	960	960	960	960	960	
H-133 GROUND COMMUNICATION UNIT														
OASLA*	69	70	70	72	73	76	75	75	74	76	74	74	75	
T	960	960	960	960	960	960	960	960	960	960	960	960	960	
COMMUNICATION														
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)														
PSIL	88	88	90	92	92	96	95	95	94	95	93	93	94	
ANNOYANCE														
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)														
TONE CORRECTION (C IN DB)														
PNLT	112	112	113	115	116	120	119	119	118	118	118	116	118	
C	1	1	2	1	1	2	1	2	1	1	1	0	1	

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE: MEASURES OF HUMAN NOISE EXPOSURE

3

IDENTIFICATION:
OMEGA 3.2
TEST 75-030-002
RUN 06
10 OCT 75
PAGE H6

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN NEAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

DISTANCE (M)->	2	2	2	2	2	2	2	2	2	2	OPERATOR LOCATION
ANGLE (DEG)-->	160	180	200	220	240	260	280	300	320	340	TEST CONDITION
CONDITION---->	B	B	B	B	B	B	B	B	B	B	1/B
HAZARD/PROTECTION											
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR											
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR											
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)											
NO PROTECTION											
OASLC	109	110	108	106	105	104	105	105	105	107	109
OASLA	104	106	103	101	100	100	101	100	101	103	105
T	15	11	18	25	30	30	25	30	25	18	13
MINIMUM QPL EAR MUFFS											
OASLA*	86	87	85	83	82	81	82	82	82	83	86
T	339	285	404	571	679	807	679	679	679	571	339
AMERICAN OPTICAL 1700 EAR MUFFS											
OASLA*	82	82	81	79	77	77	78	77	77	78	81
T	679	679	807	960	960	960	960	960	960	960	807
V-51R EAR PLUGS											
OASLA*	81	82	80	77	75	75	77	76	77	79	81
T	807	679	960	960	960	960	960	960	960	960	807
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS											
OASLA*	65	66	65	63	61	61	63	62	62	64	67
T	960	960	960	960	960	960	960	960	960	960	960
H-133 GROUND COMMUNICATION UNIT											
OASLA*	77	79	76	74	74	74	74	74	74	76	78
T	960	960	960	960	960	960	960	960	960	960	960
COMMUNICATION											
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)											
PSIL	95	97	95	93	91	91	93	93	93	95	98
ANNOYANCE											
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)											
TONE CORRECTION (C IN DB)											
PNLT	121	123	119	118	118	118	117	116	118	120	121
C	2	1	1	2	2	2	1	1	2	2	1

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE 4: MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 10 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 01
15 OCT 75
PAGE 2

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .693 M HG
REL HUMID = 28 %

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

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 4 — MEASURED SOUND PRESSURE LEVEL (DB), 1/3 OCTAVE BAND, DISTANCE = 10 METERS

IDENTIFICATION: OMEGA 1.4 / TEST 75-030-002 / RUN 02 / 15 OCT 75 / PAGE 2

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN, FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

METEOROLOGY: TEMP = 28 C; BAR PRESS = .693 M HG; REL HUMID = 28 %

FREQ (HZ)	ANGLE (DEGREES) 190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350
25														80<	82<	81<	81<
31.5														79<	78<	80<	80<
40	76<					76<			76<	76<	76<			79<	80<	81<	81<
50	77<	76<	77<	77<	78<	78<	76<	74<	79<	80<	77<	78<	78<	80<	79<	80<	81<
63	77<	77<	77<	78<	77<	77<	77<	78<	80<	82<	82<	83	82<	84	84	82<	83
80	79<	78<	78<	79<	78<	77<	77<	79<	79<	80<	82	82	83	84	84	83	83
100	80	79	80	80	79	79	78	77	79	77	80	83	83	84	83	84	83
125	79	80	81	81	83	83	85	82	83	82	79	81	82	84	86	85	87
160	83	83	81	80	79	79	82	83	84	84	83	82	80	82	86	86	85
200	79	78	77	77	77	76	76	76	77	77	80	81	81	80	81	82	80
250	81	77	76	75	75	73	72	74	77	79	82	80	81	80	76	76	78
315	82	80	78	75	73	73	72	70	73	74	76	75	76	75	78	76	77
400	85	82	80	79	75	74	73	72	71	72	72	73	74	77	78	79	78
500	84	81	78	77	74	77	75	73	73	70	75	77	74	77	78	76	80
630	83	80	79	76	77	81	80	79	78	77	79	84	79	78	78	75	78
800	81	78	78	75	76	79	79	78	75	76	79	84	80	80	78	75	76
1000	76	77	75	73	68	69	69	67	67	67	68	71	73	72	71	70	70
1250	72	72	70	69	69	68	68	67	69	69	69	70	70	69	72	70	69
1600	69	69	68	69	68	67	68	67	67	68	67	68	69	69	71	71	69
2000	72	70	72	70	72	72	71	71	70	74	75	76	76	77	76	77	75
2500	81	76	74	75	76	76	75	74	73	75	75	76	77	78	78	80	76
3150	82	82	79	77	78	77	78	78	79	79	77	79	79	78	80	81	84
4000	80	79	77	75	76	75	76	76	76	78	79	79	79	78	80	80	78
5000	73	75	73	73	71	70	70	70	72	72	73	73	74	74	75	73	72
6300	77	76	77	75	73	72	73	72	75	74	75	73	76	73	74	76	75
8000	74	75	75	73	72	72	71	70	71	71	73	72	75	73	75	74	73
10000	78	79	78	77	76	76	75	74	76	76	79	79	82	81	82	81	78
OVERALL	94	92	91	90	90	90	91	90	91	91	92	93	93	94	95	94	94

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 4

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 10 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
15 OCT 75
PAGE 2

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .693 M HG
REL HUMID = 28 %

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

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 4

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 10 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 04
15 OCT 75
PAGE 2

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

METEOROLOGY:
TEMP = 28 C
BAR PRESS = .693 M HG
REL HUMID = 28 %

FREQ (HZ)	ANGLE (DEGREES) 190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350
25	77<	79<	78<				77<	81<		81<	81<	81<	79<	86<	84<	89	87<
31.5		76<	77<					81<		79<	78<		77<	84<	86<	89	82<
40	79<	78<	80<	78<	76<	76<	78<	79<	78<	79<	77<	77<	78<	84<	84<	87	81<
50	79<	79<	79<	79<	81<	78<	78<	79<	78<	79<	78<	78<	78<	82<	83<	87	81<
63	81<	82	82<	79<	82	79<	79<	81<	81<	82<	83	85	84	86	86	86	84
80	85	84	84	81	82	80<	81	81	83	83	84	86	85	86	86	87	85
100	84	84	84	82	83	80	80	80	80	81	83	84	86	86	86	85	84
125	84	86	85	86	87	86	87	87	85	85	83	83	83	86	87	89	89
160	87	86	86	85	85	83	86	88	86	87	86	84	83	84	88	89	89
200	86	82	83	82	82	79	78	79	80	81	83	85	83	80	82	83	82
250	86	84	83	82	81	77	77	78	81	81	85	85	83	81	79	79	79
315	84	81	80	80	78	74	75	76	77	77	80	80	78	79	81	78	79
400	87	84	83	80	76	77	76	75	74	73	73	75	76	76	78	80	80
500	91	87	85	82	81	82	78	78	77	76	79	80	78	79	80	79	82
630	87	82	84	81	83	85	83	83	81	82	82	84	82	80	78	79	81
800	86	84	86	85	85	88	86	86	84	84	84	86	85	85	84	82	83
1000	83	83	84	83	80	87	85	84	83	83	82	81	80	80	81	78	81
1250	80	80	79	80	77	83	83	83	82	80	80	79	77	75	78	75	77
1600	77	74	76	77	76	81	81	80	79	78	79	77	76	75	78	76	75
2000	76	76	76	76	76	84	83	81	80	80	80	80	80	79	80	80	80
2500	81	78	78	76	76	83	83	81	80	80	78	77	79	78	80	81	80
3150	85	82	82	79	80	89	88	86	85	84	82	81	81	82	83	85	84
4000	82	83	80	79	78	87	88	88	87	86	85	83	83	82	84	84	86
5000	79	78	78	76	73	83	83	82	82	81	80	77	78	75	77	80	82
6300	80	78	77	76	75	83	82	80	80	79	79	76	77	76	77	79	83
8000	78	77	76	75	73	78	79	78	77	76	75	74	75	74	75	77	84
10000	80	78	78	77	75	80	80	79	79	77	79	80	80	81	82	84	86
OVERALL	98	96	96	95	95	97	97	97	96	96	96	96	95	96	97	99	98

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

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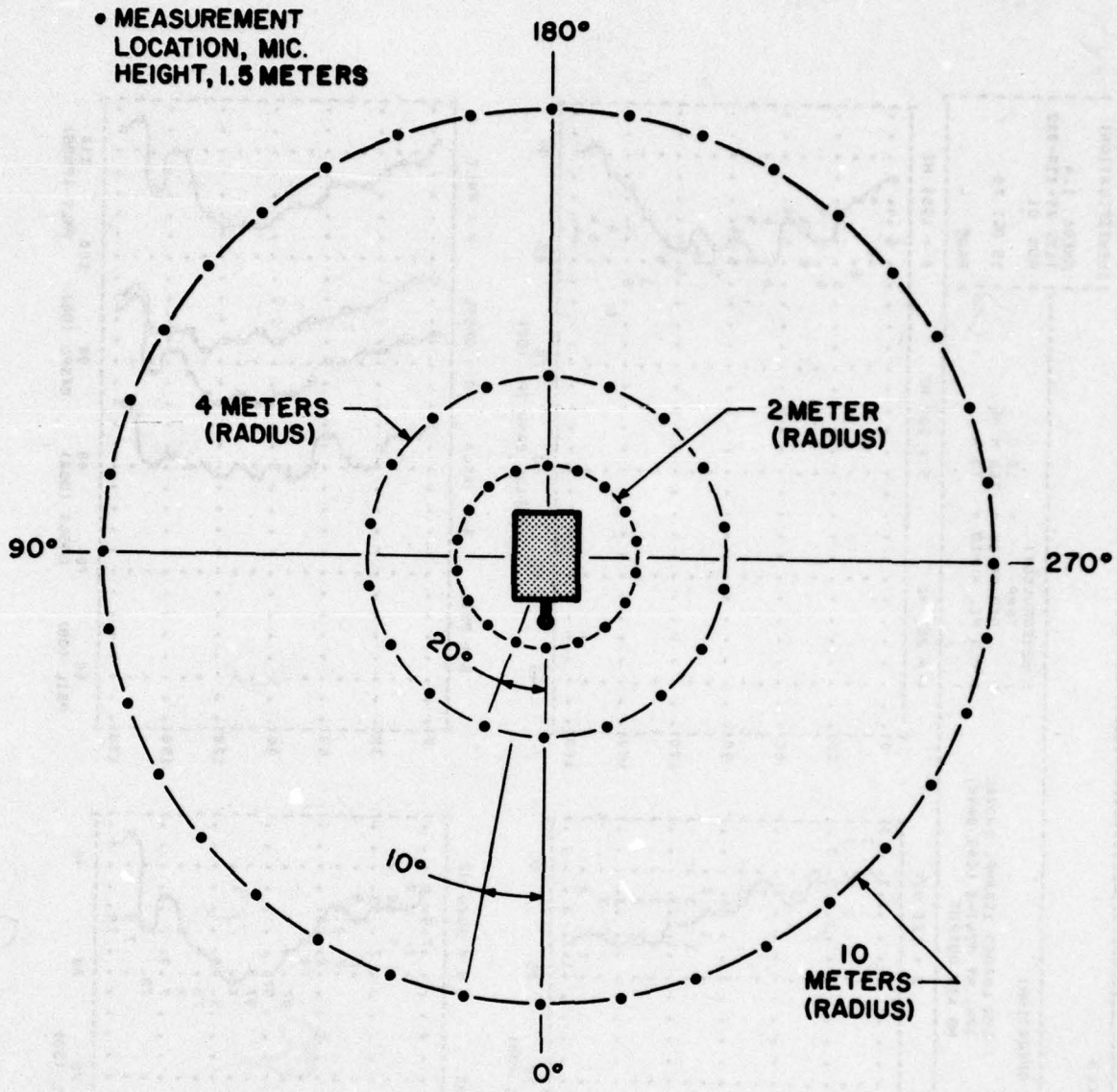


Figure 1. Measurement Locations

FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 10 METERS

NOISE SOURCE/SUBJECT:

A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:

GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

METEOROLOGY:

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

IDENTIFICATION:

OMEGA 1.4
TEST 75-030-002
RUN 01

15 OCT 75

PAGE 4

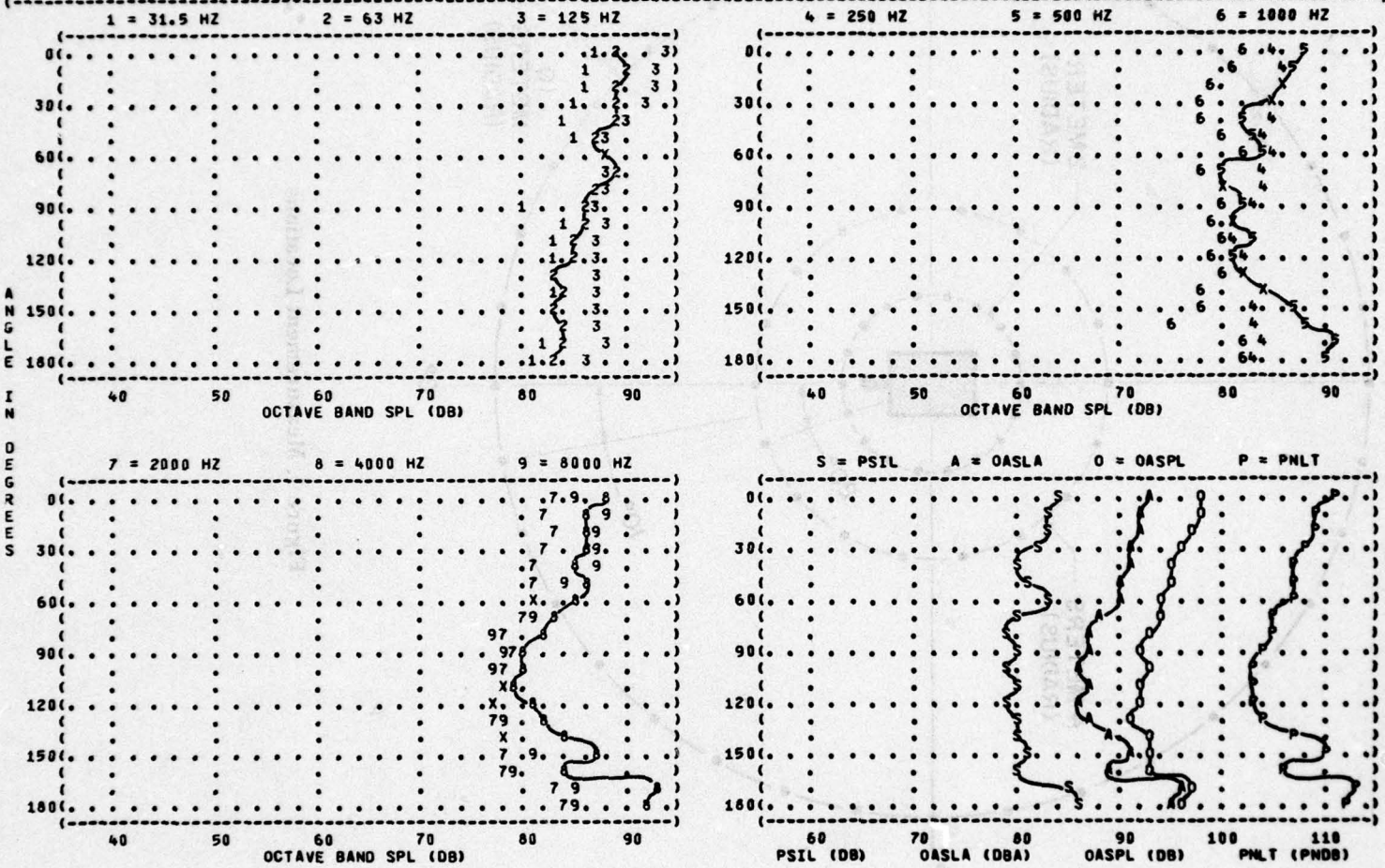


FIGURE: 2 NORMALIZED FARFIELD NOISE LEVELS

DISTANCE = 10 METERS

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 02
15 OCT 75
PAGE 4

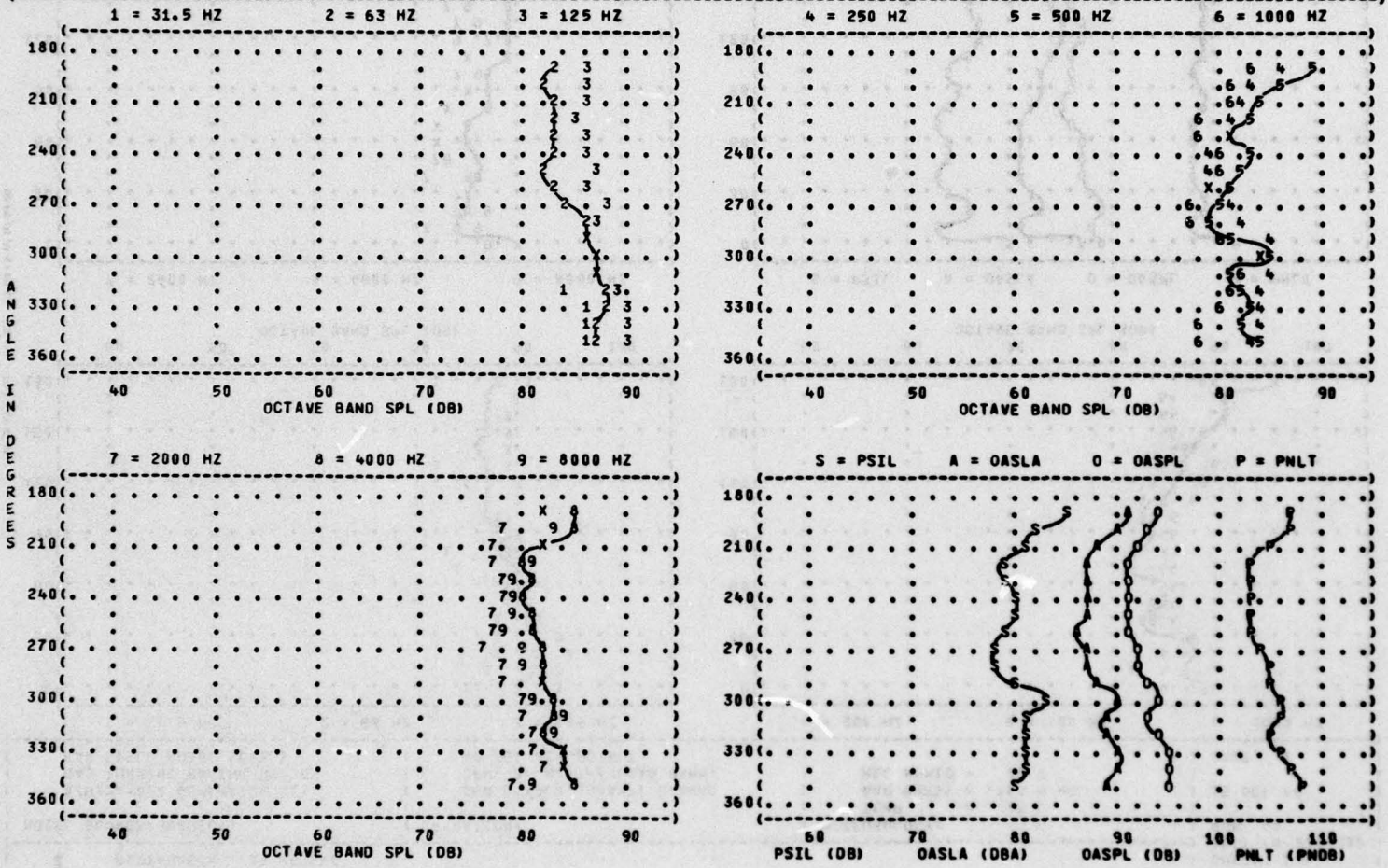


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 10 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
15 OCT 75
PAGE 4

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

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

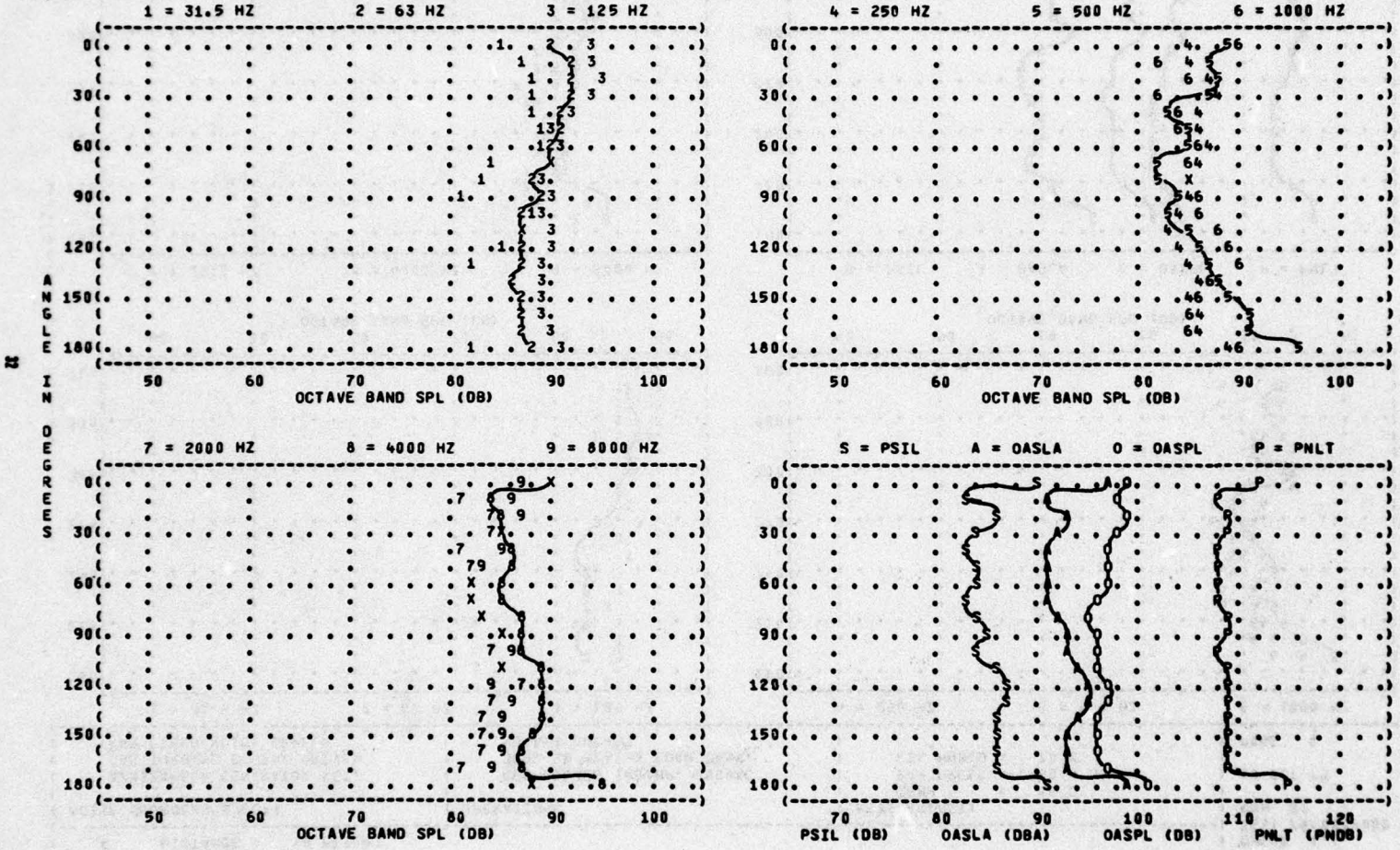


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 10 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 04
15 OCT 75
PAGE 4

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

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

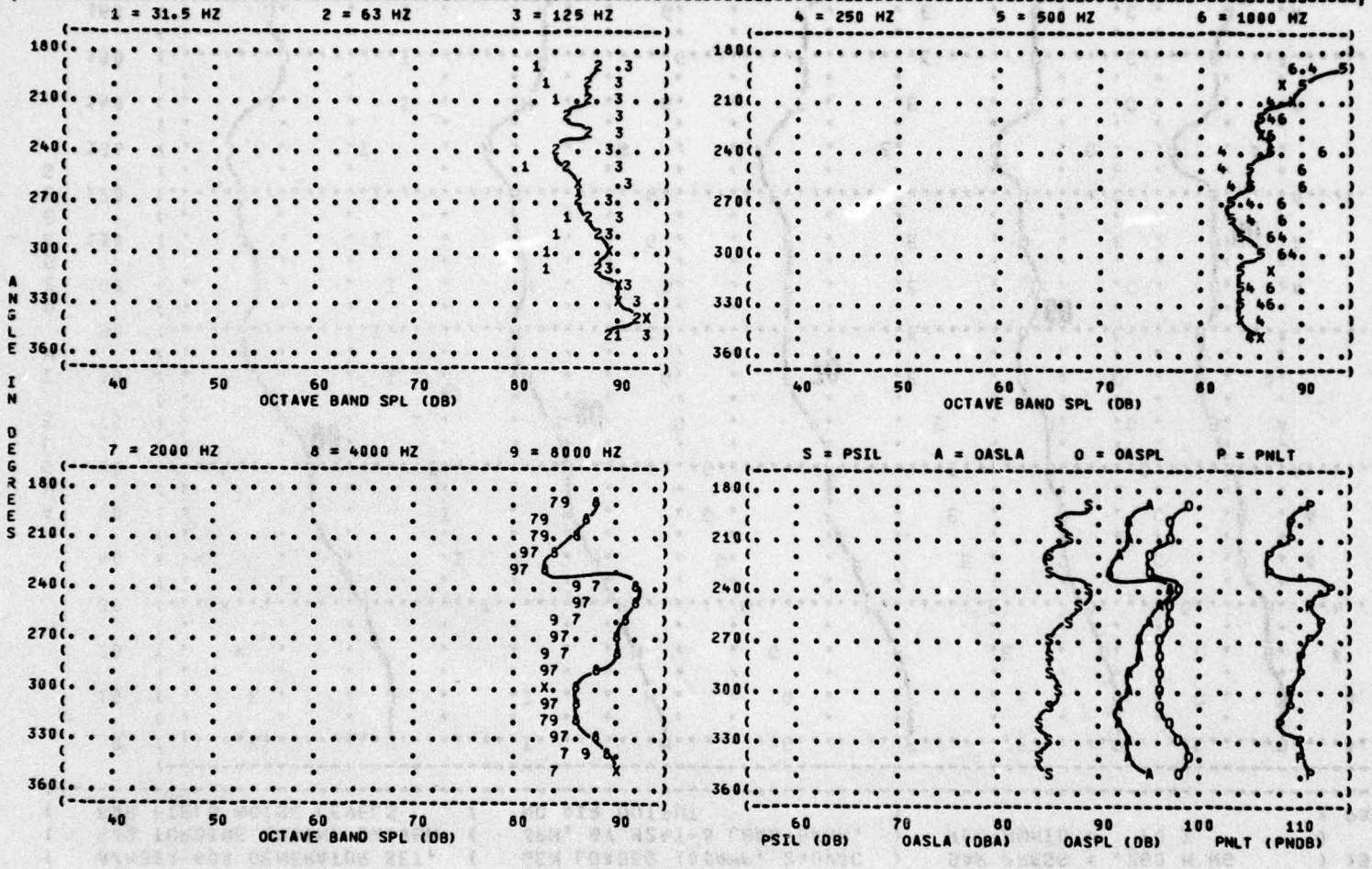


FIGURE: 3 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 01
15 OCT 75
PAGE 11

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

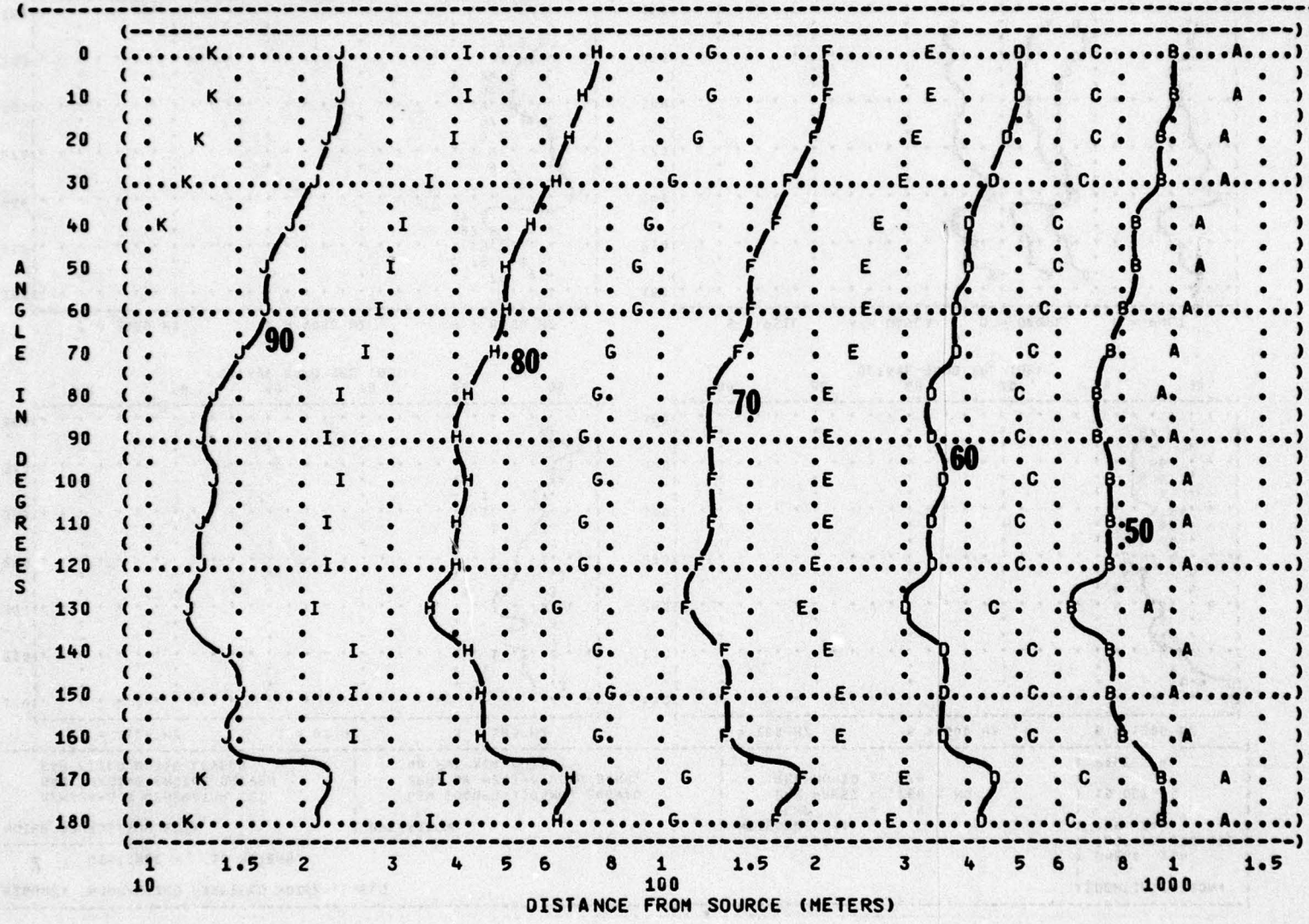


FIGURE 3 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 02
15 OCT 75
PAGE 11

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

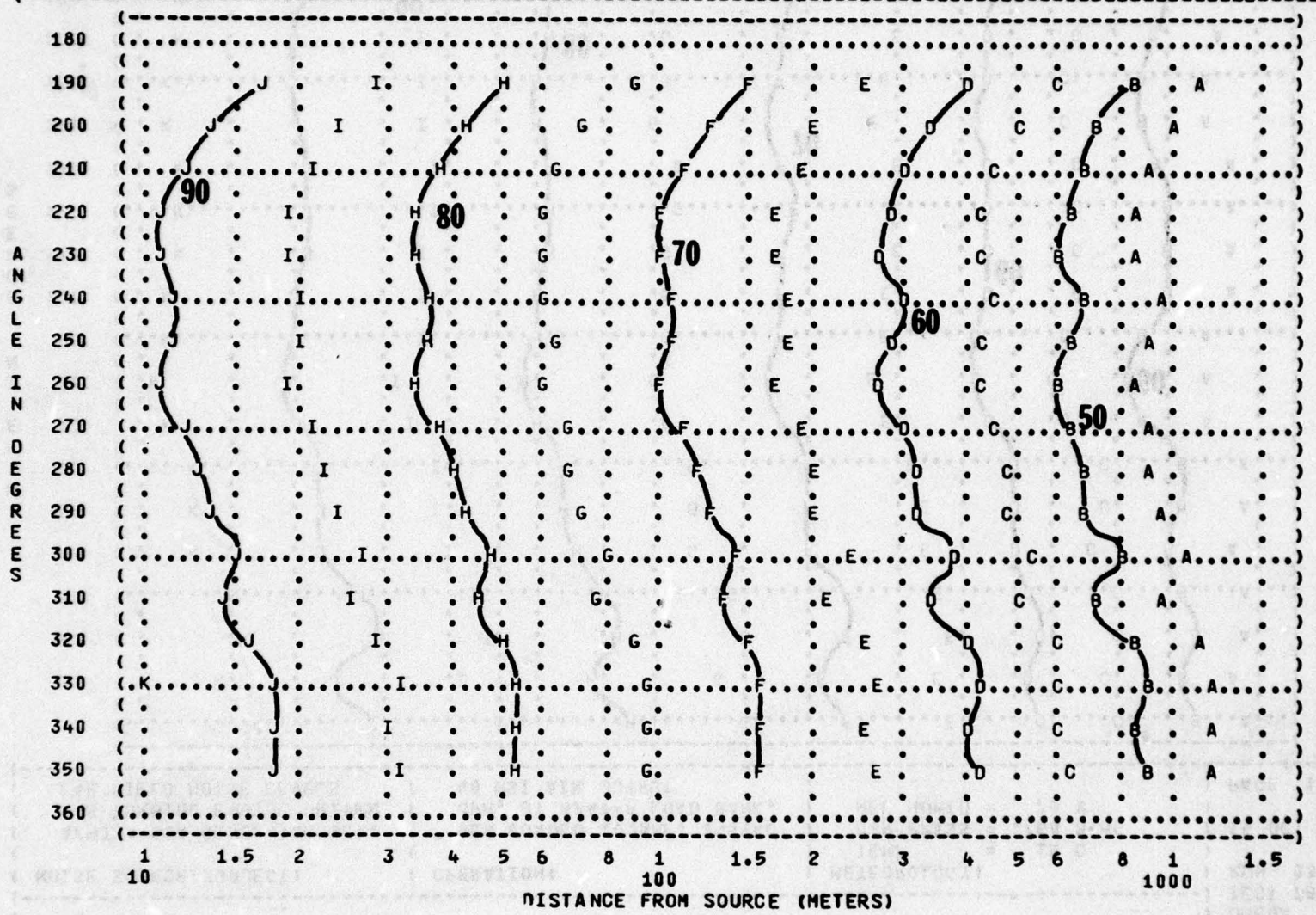


FIGURE 3: OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
15 OCT 75
PAGE 11

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

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

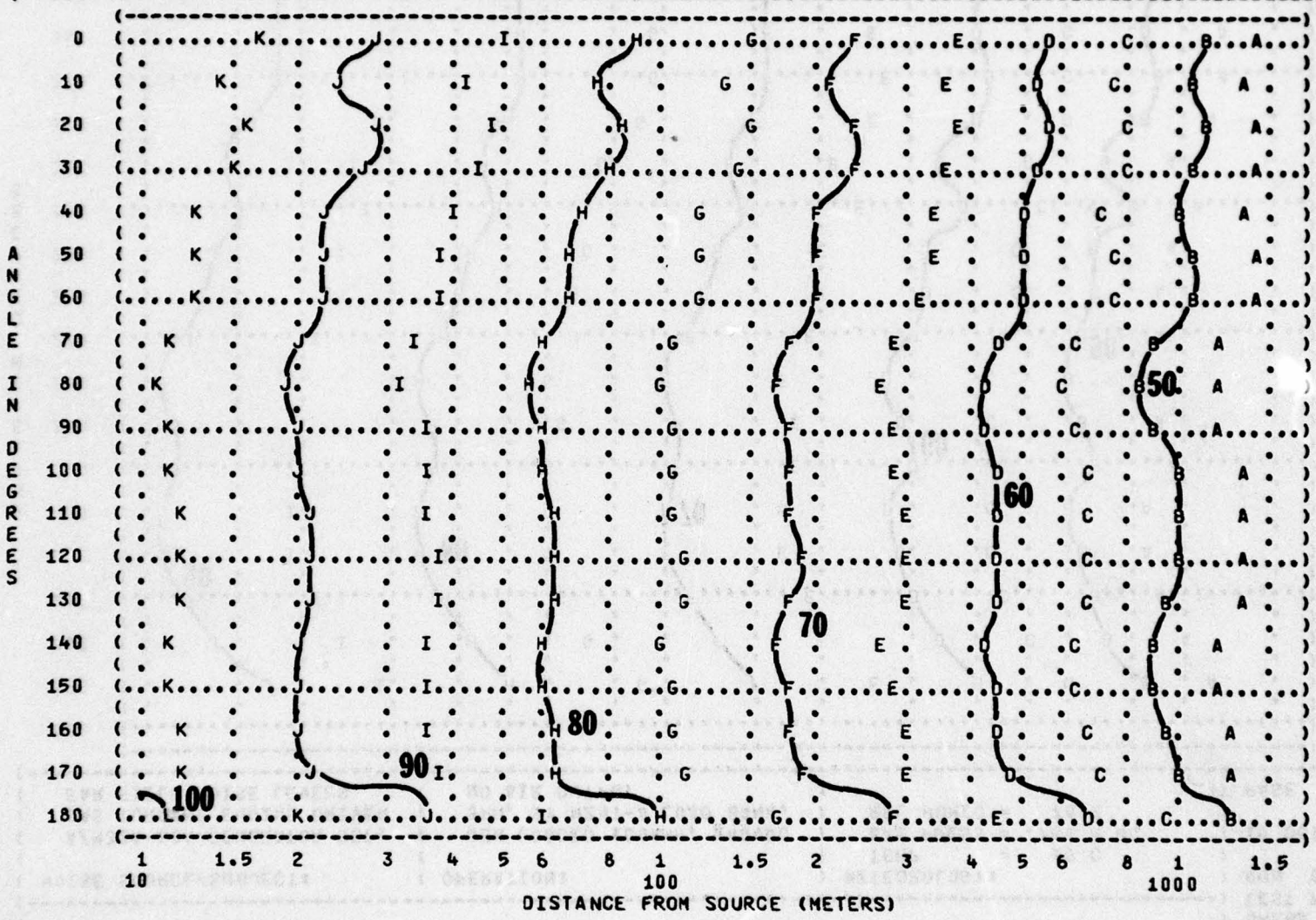


FIGURE: 3 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 04
15 OCT 75
PAGE 11

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

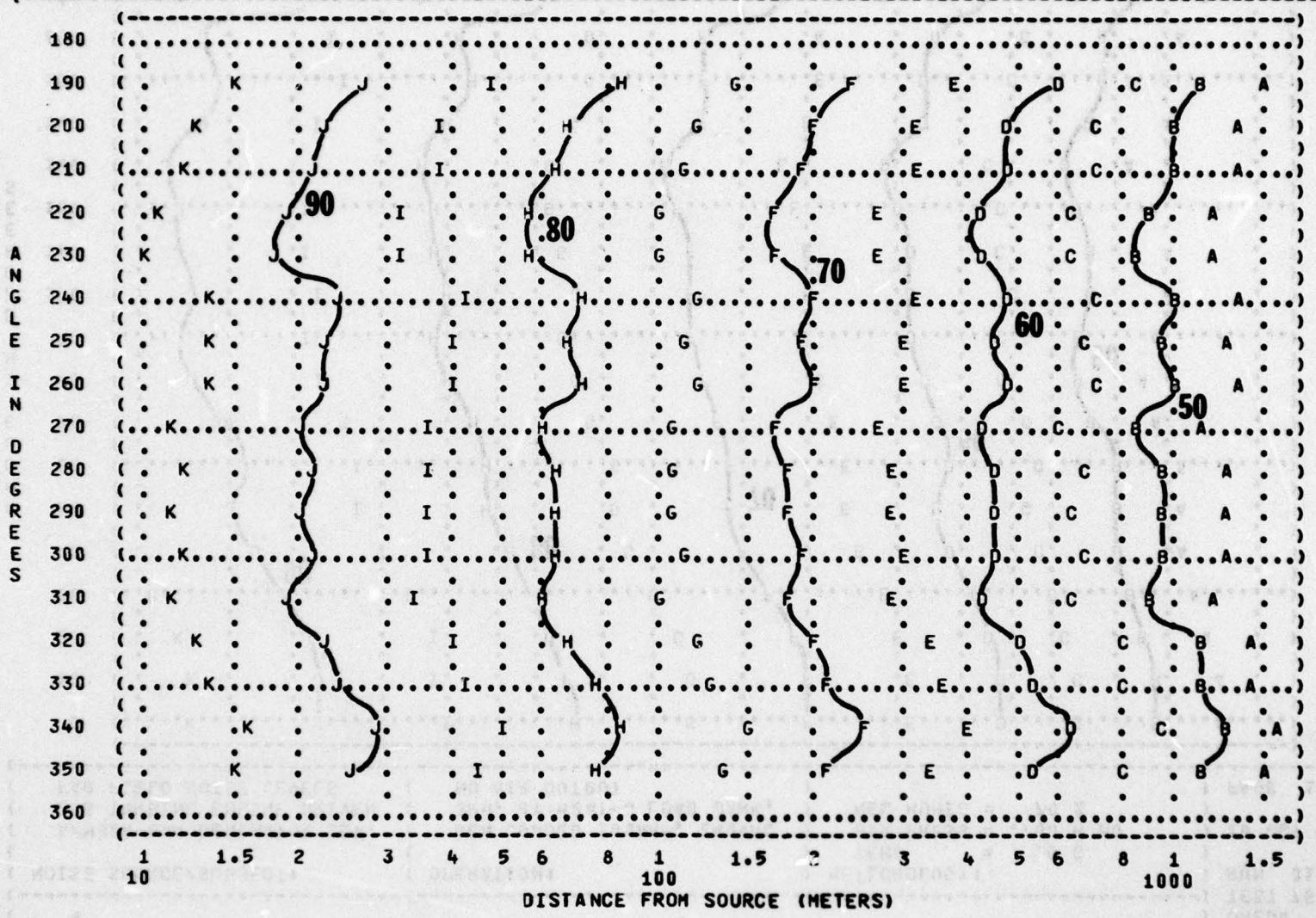


FIGURE: 4 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 01
15 OCT 75
PAGE 12

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

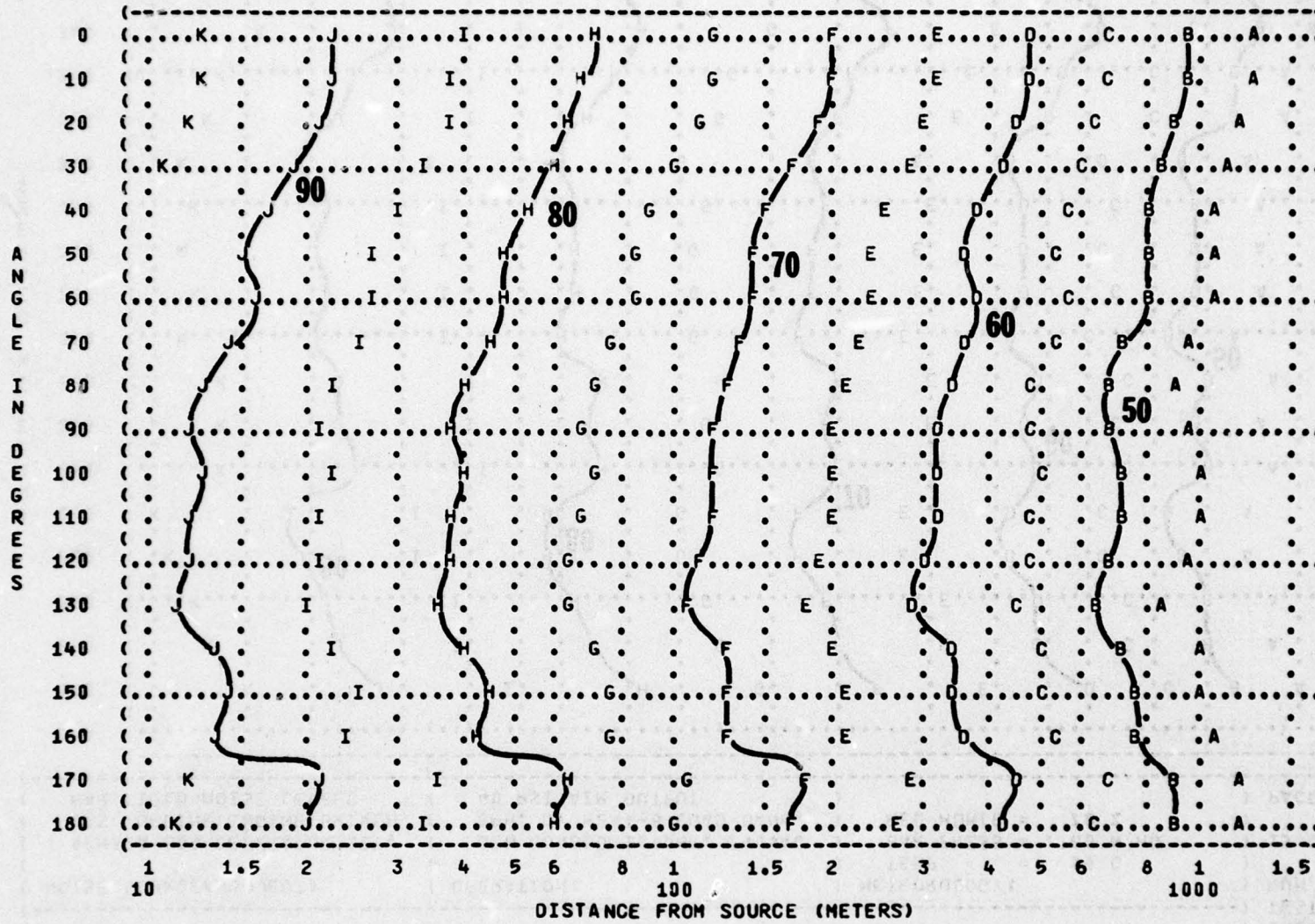


FIGURE: 4 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 02
15 OCT 75
PAGE 12

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

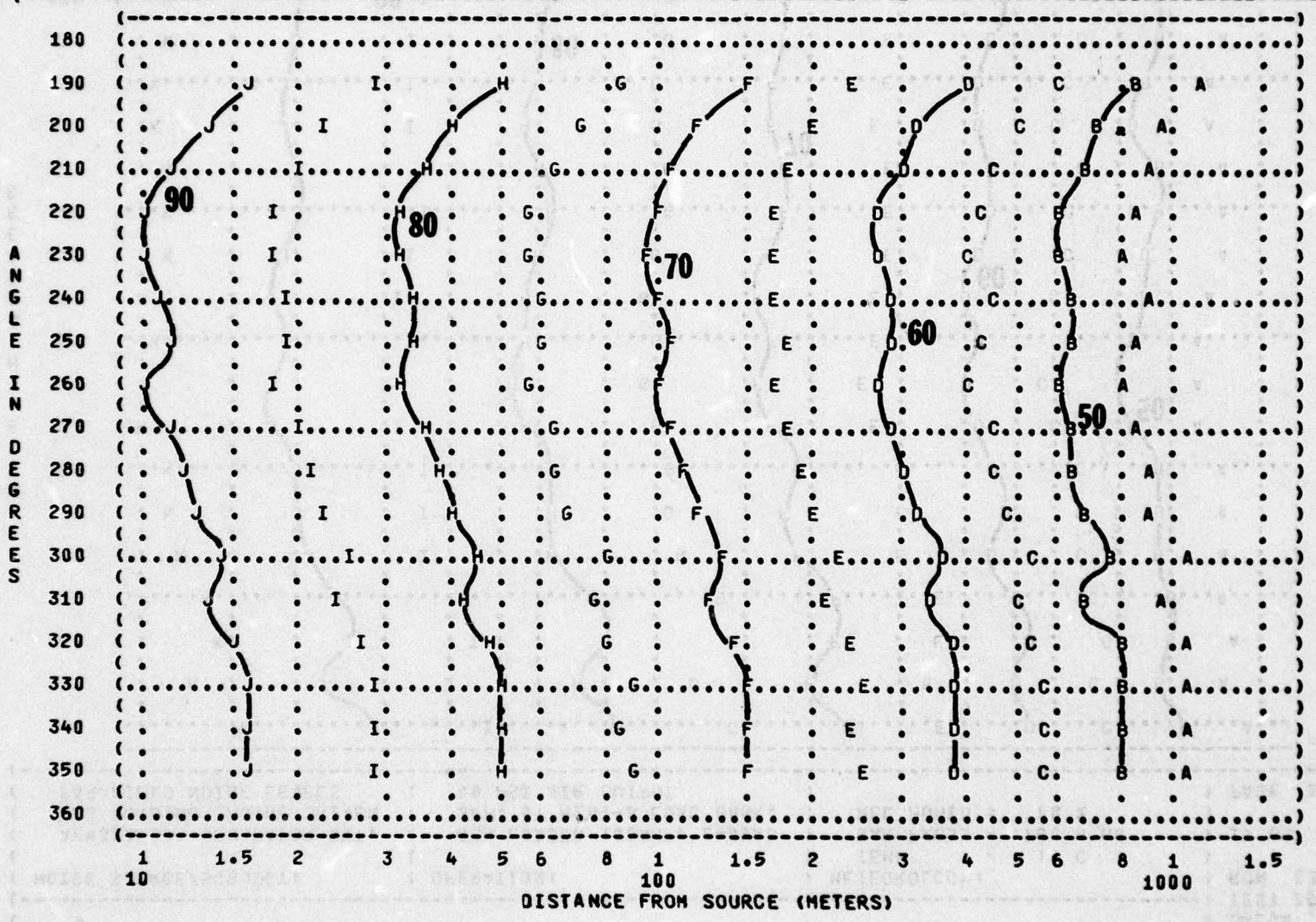


FIGURE 4: C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
15 OCT 75
PAGE 12

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

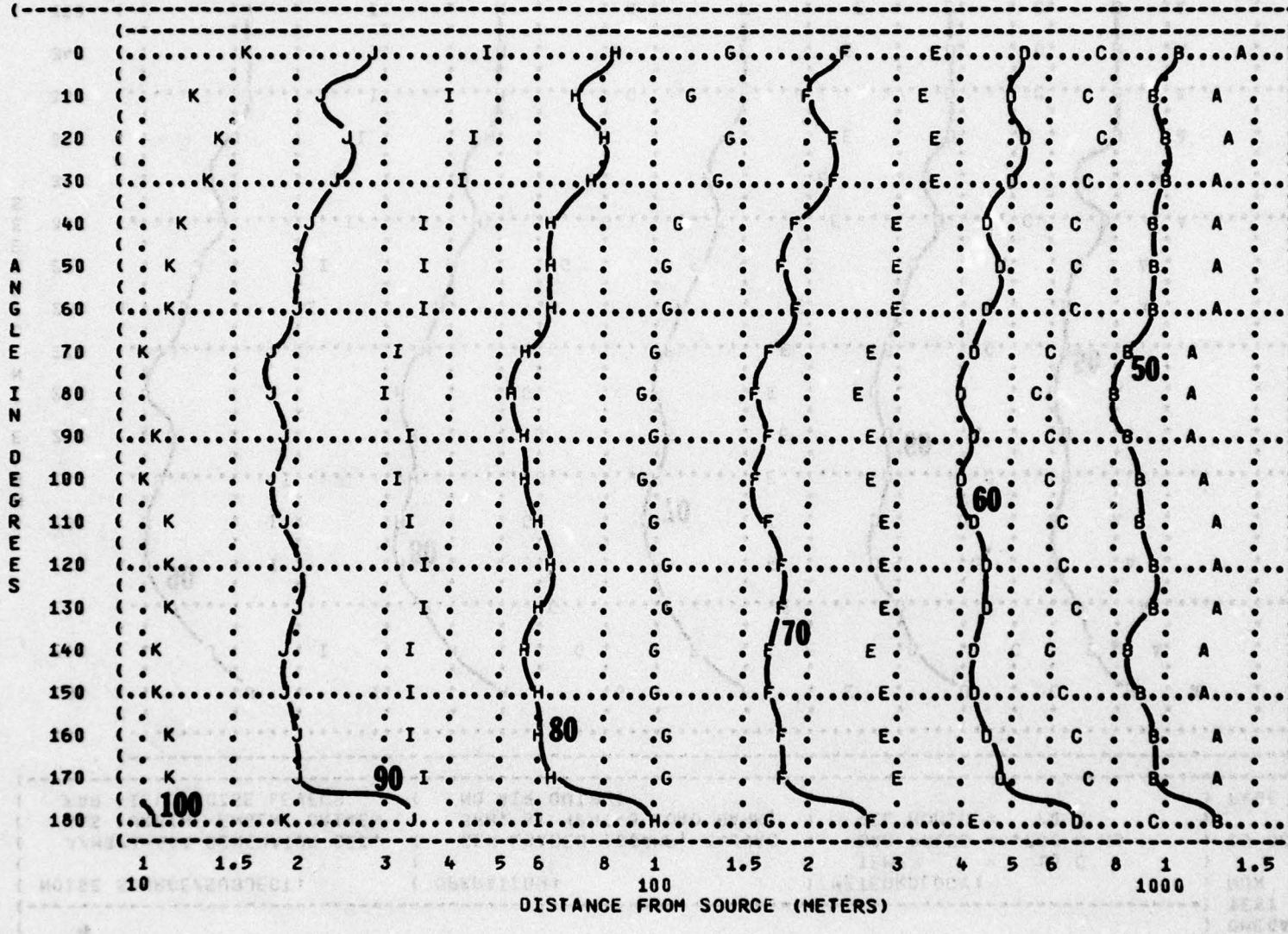


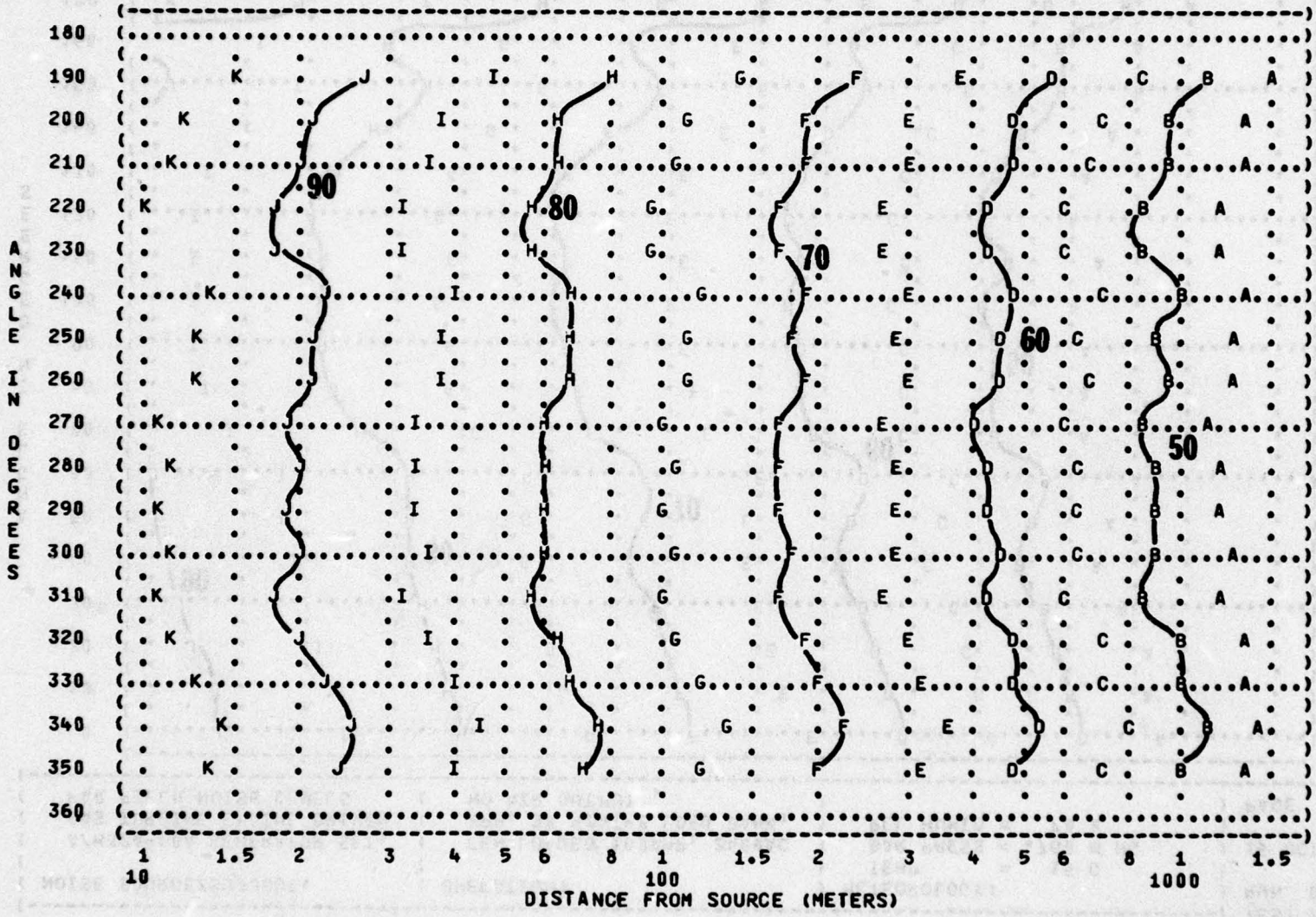
FIGURE: 4 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 04
15 OCT 75
PAGE 12

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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



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

FIGURE: 5

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

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
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PAGE 13

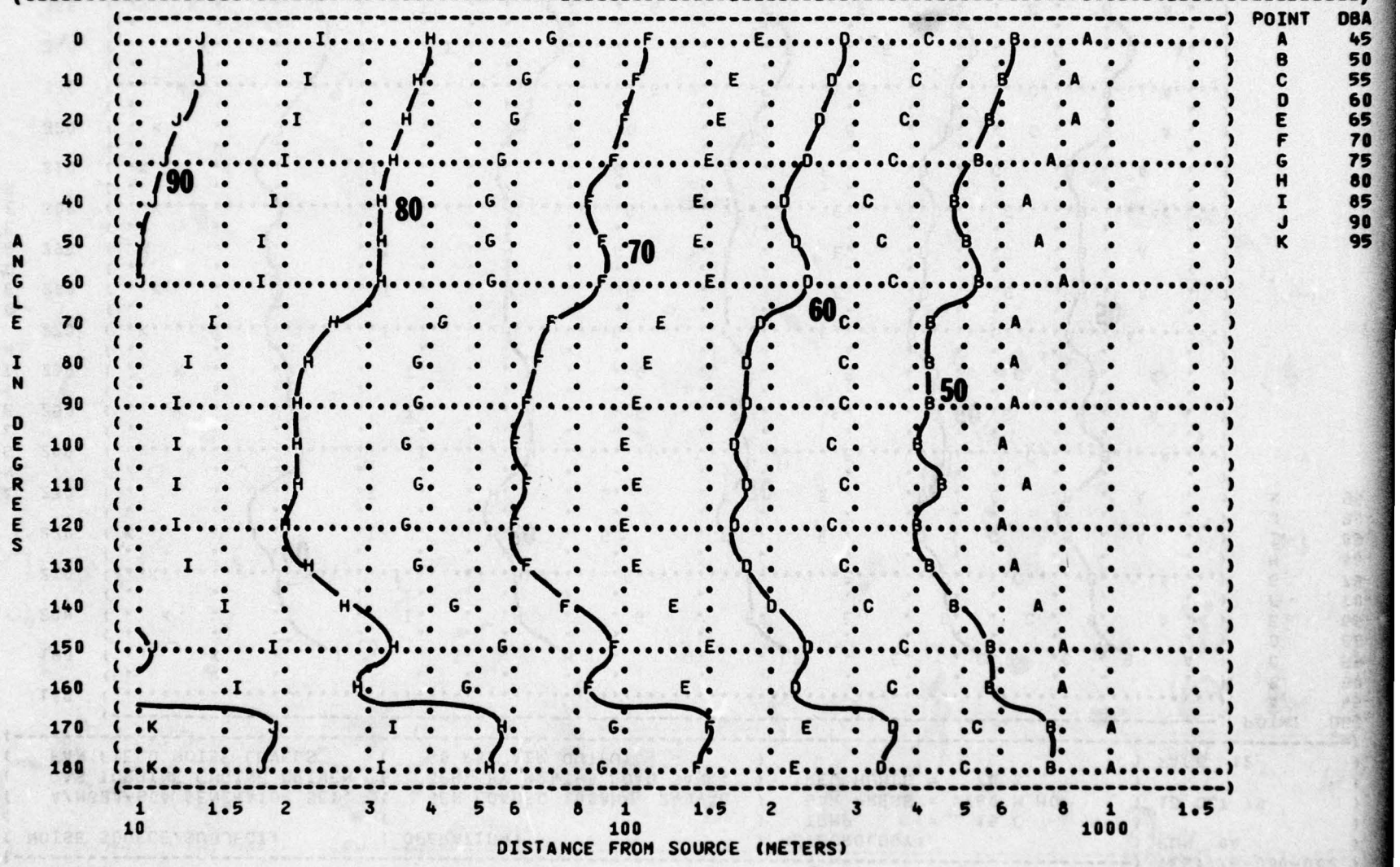

FIGURE: 5 — A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 02
15 OCT 75
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NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

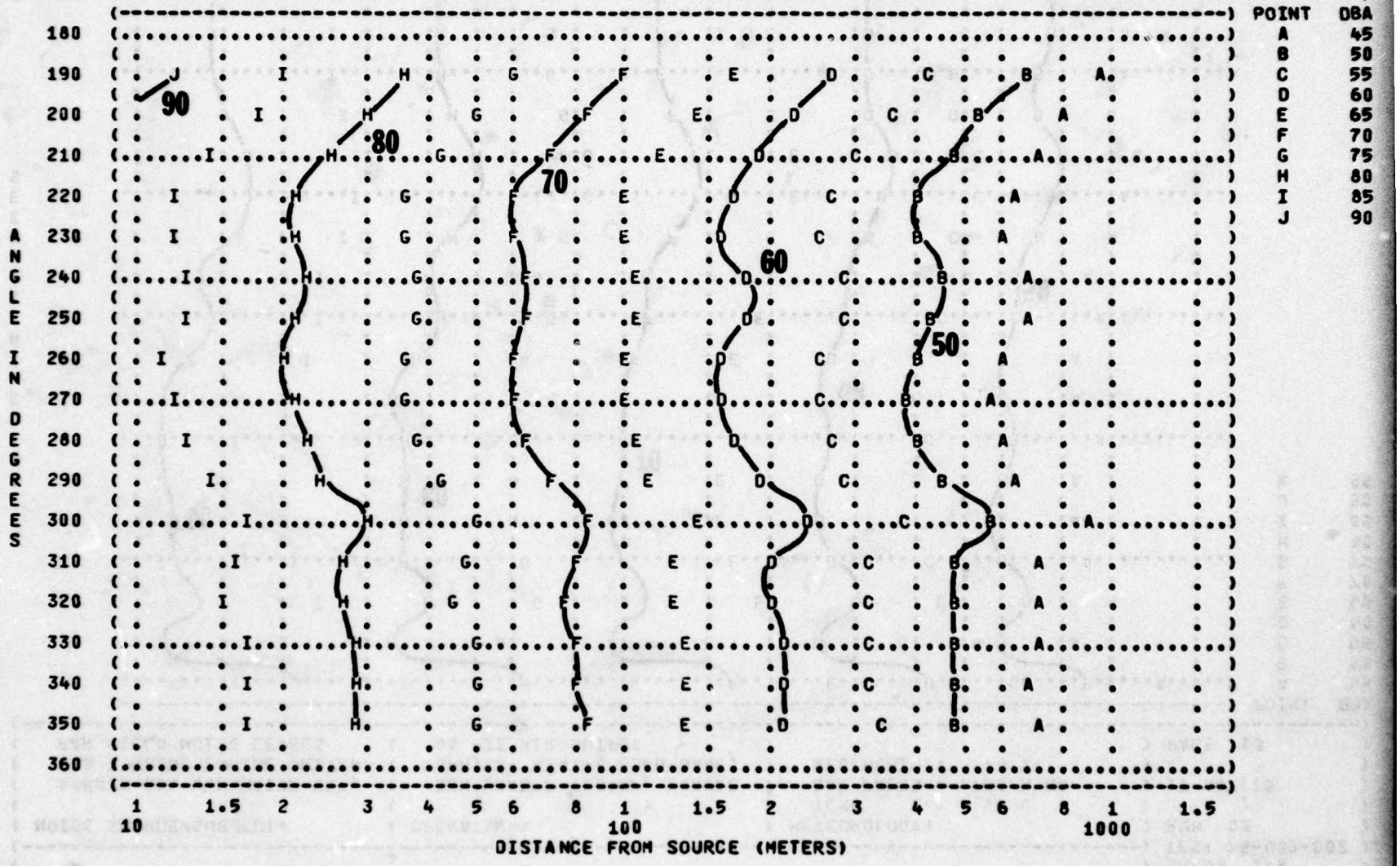

FIGURE: 5 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
15 OCT 75
PAGE 13

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

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

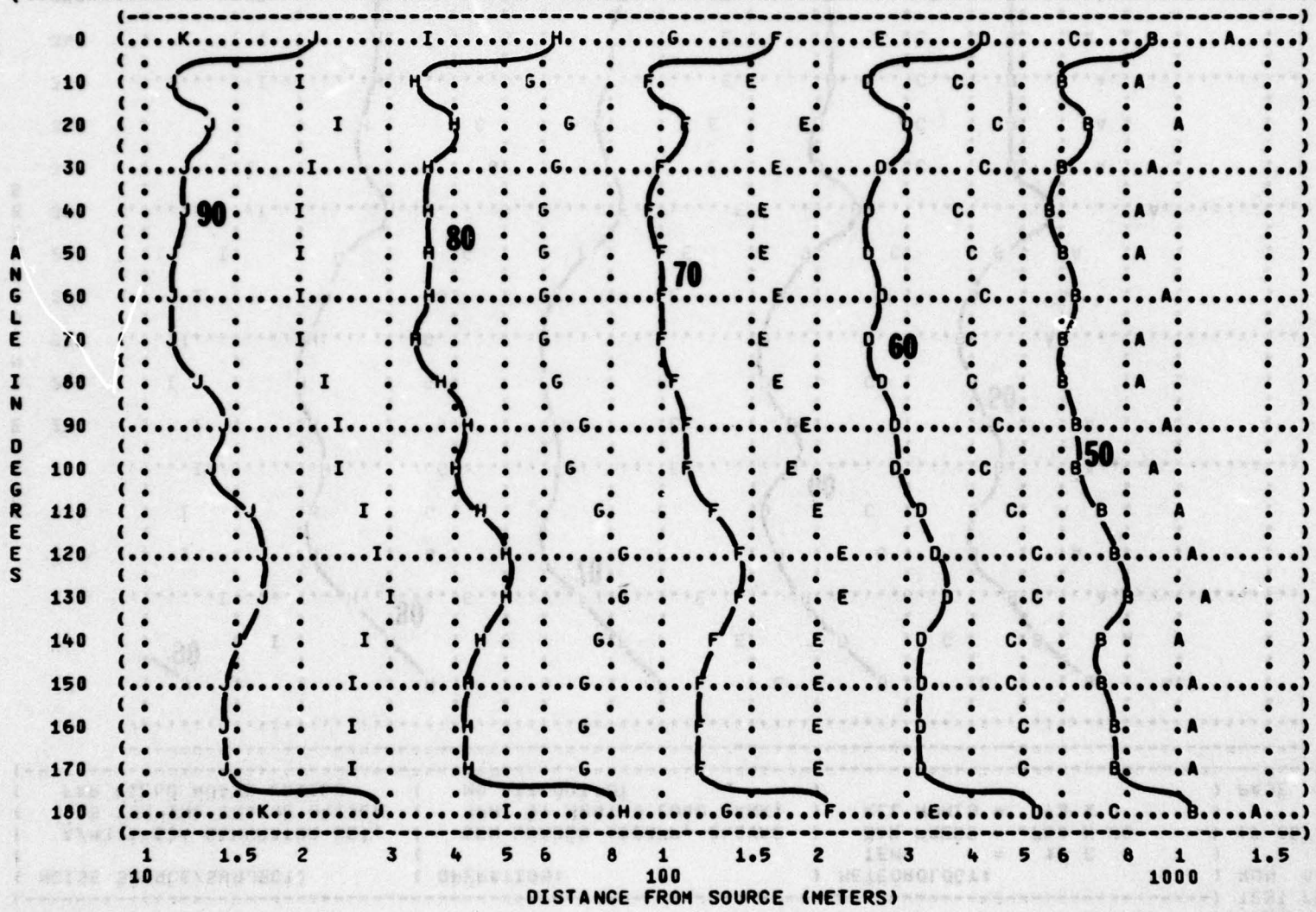

FIGURE: 5 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
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POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95

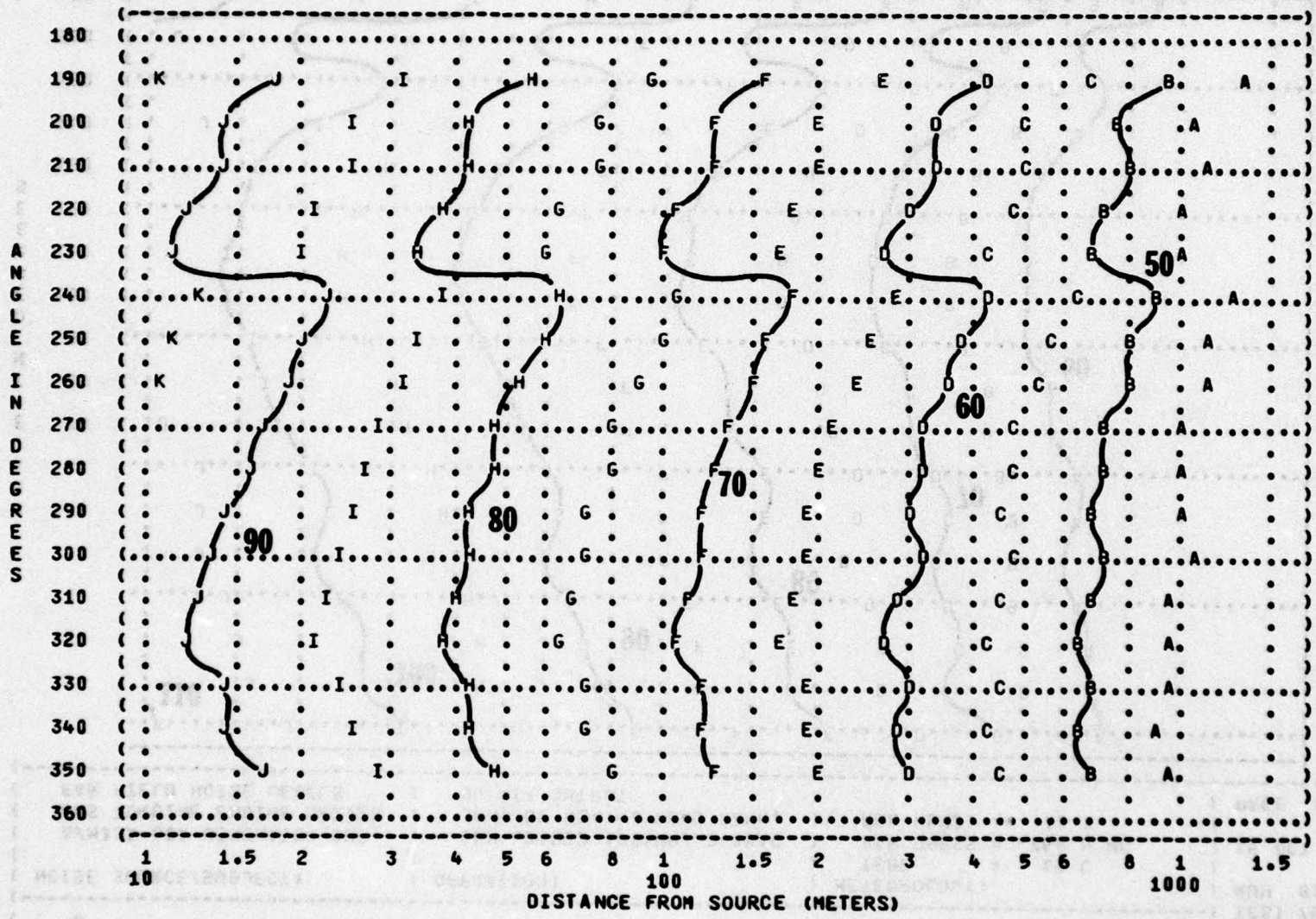

FIGURE: 6 PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
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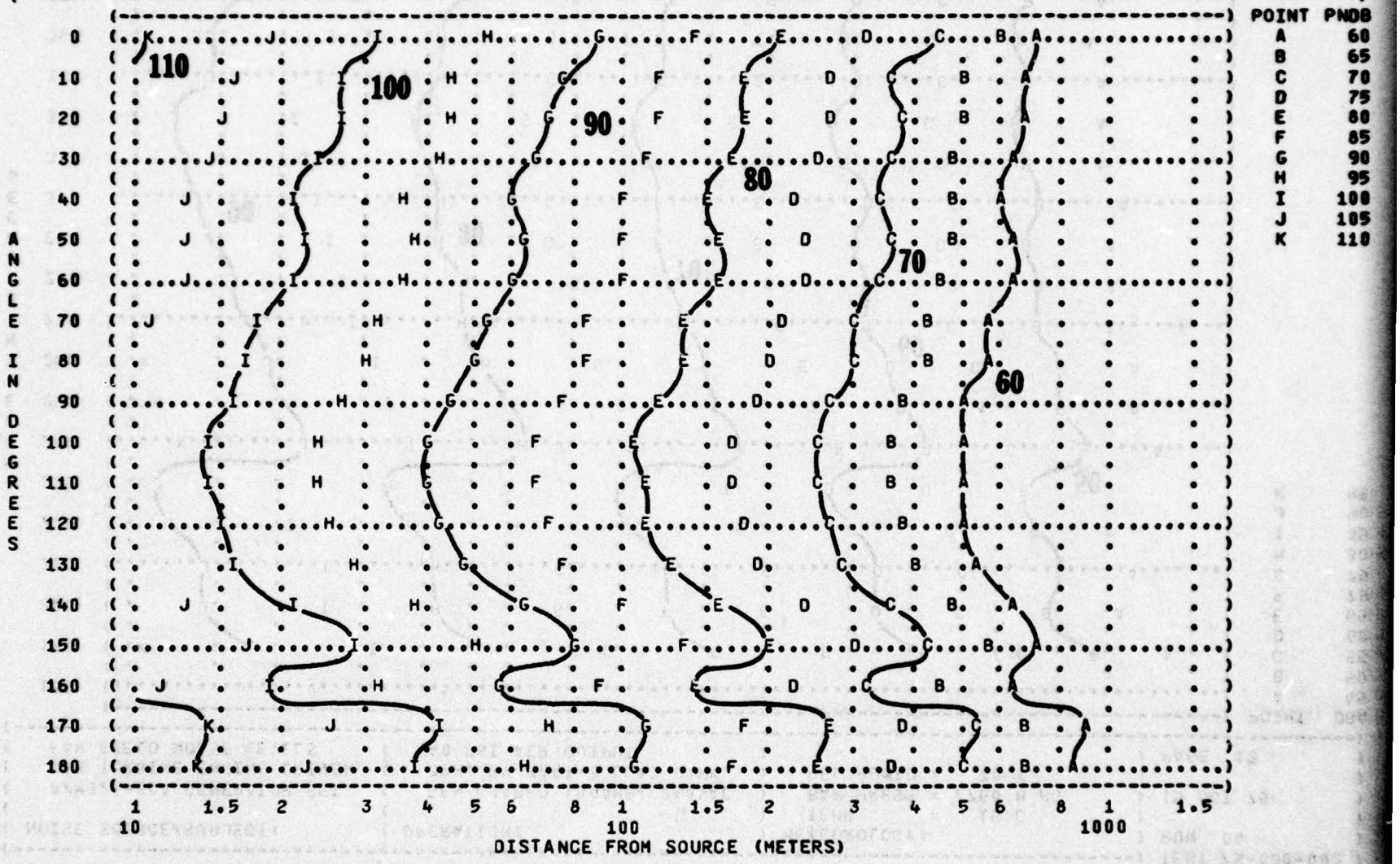
PAGE 14



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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 02
15 OCT 75
PAGE 14

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

POINT	PNDB
A	6
B	6
C	7
D	7
E	8
F	8
G	9
H	9
I	10
J	10

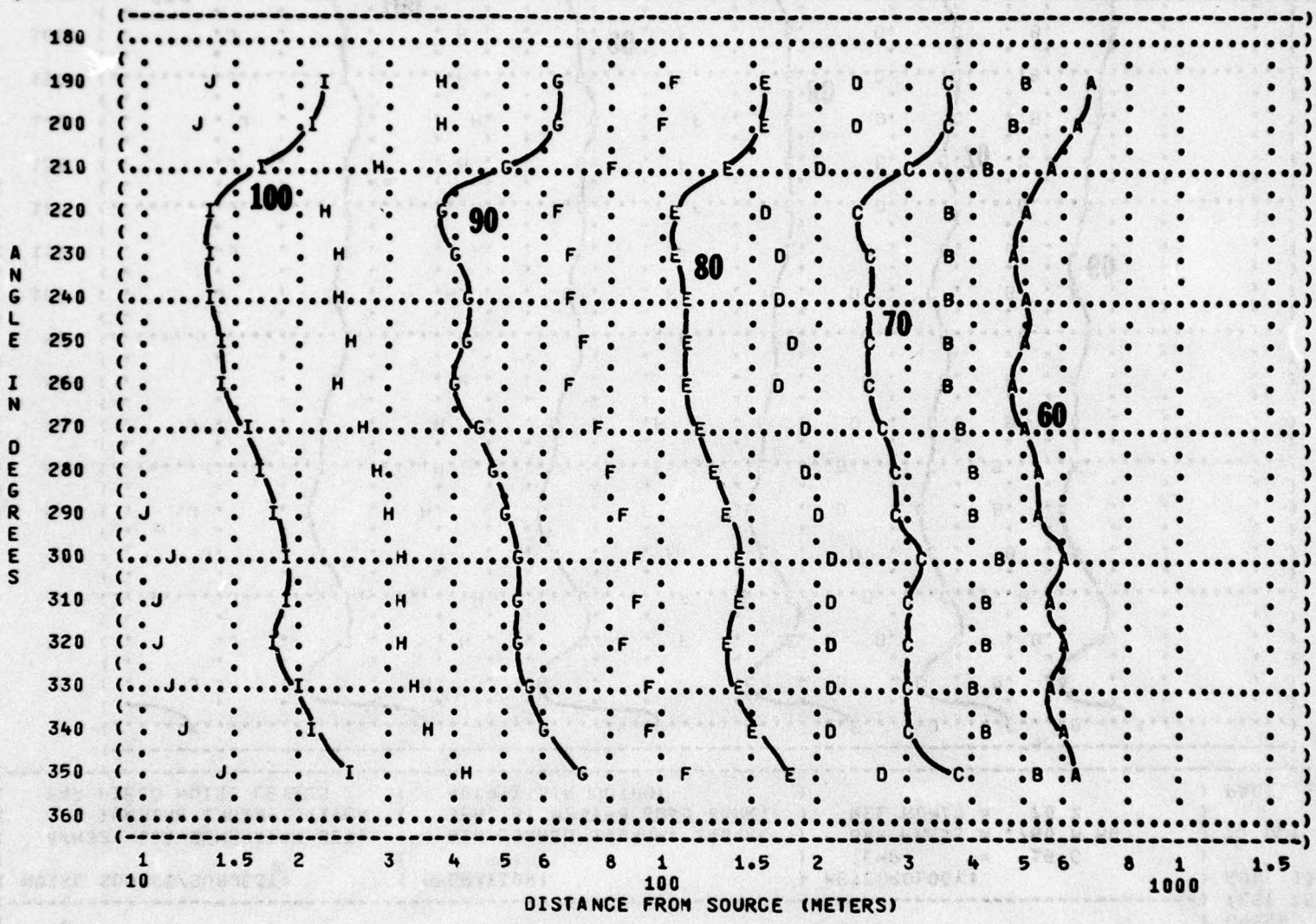


FIGURE: 6

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
15 OCT 75
PAGE 14

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

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

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

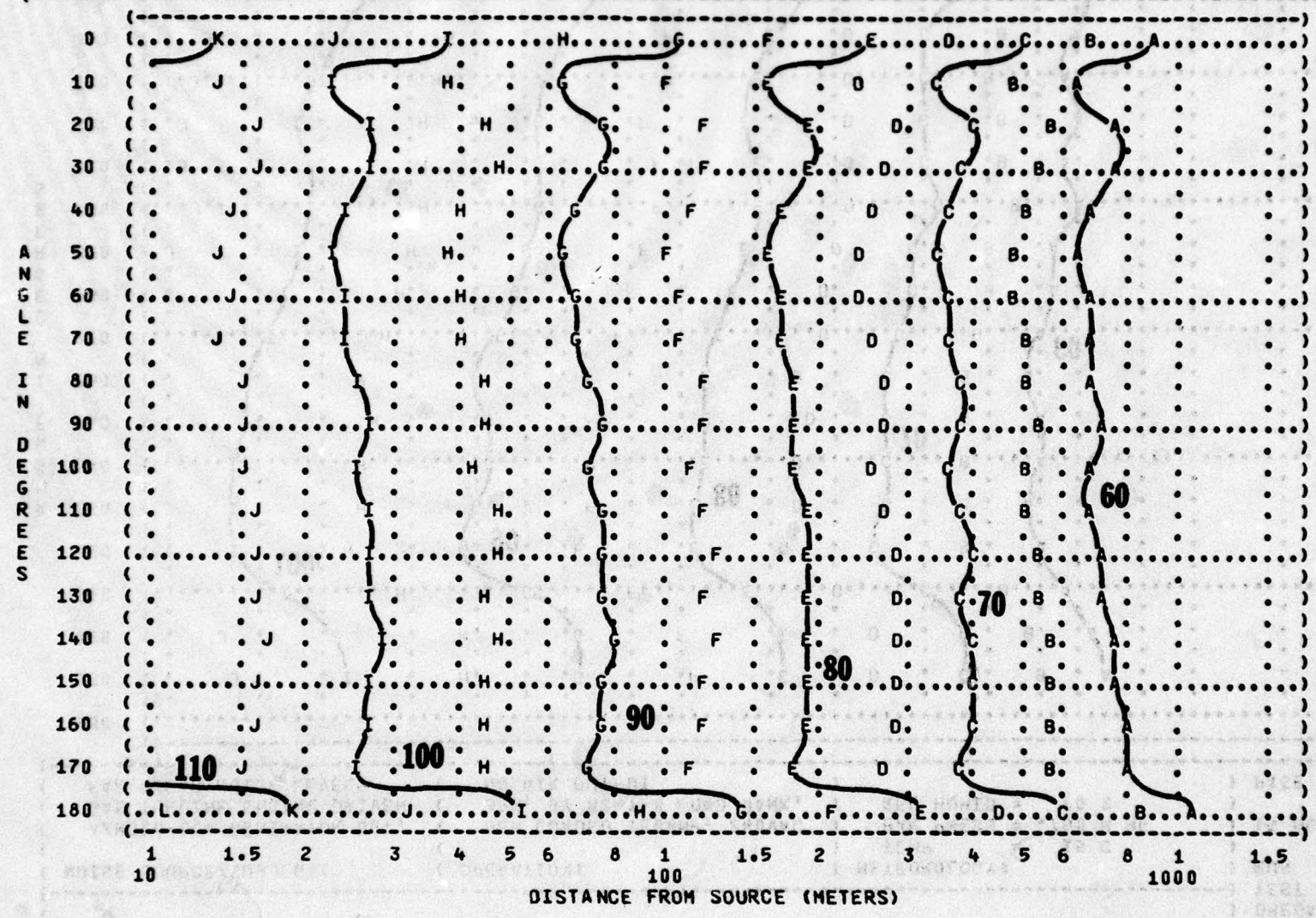


FIGURE 6: PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 04
15 OCT 75
PAGE 14

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

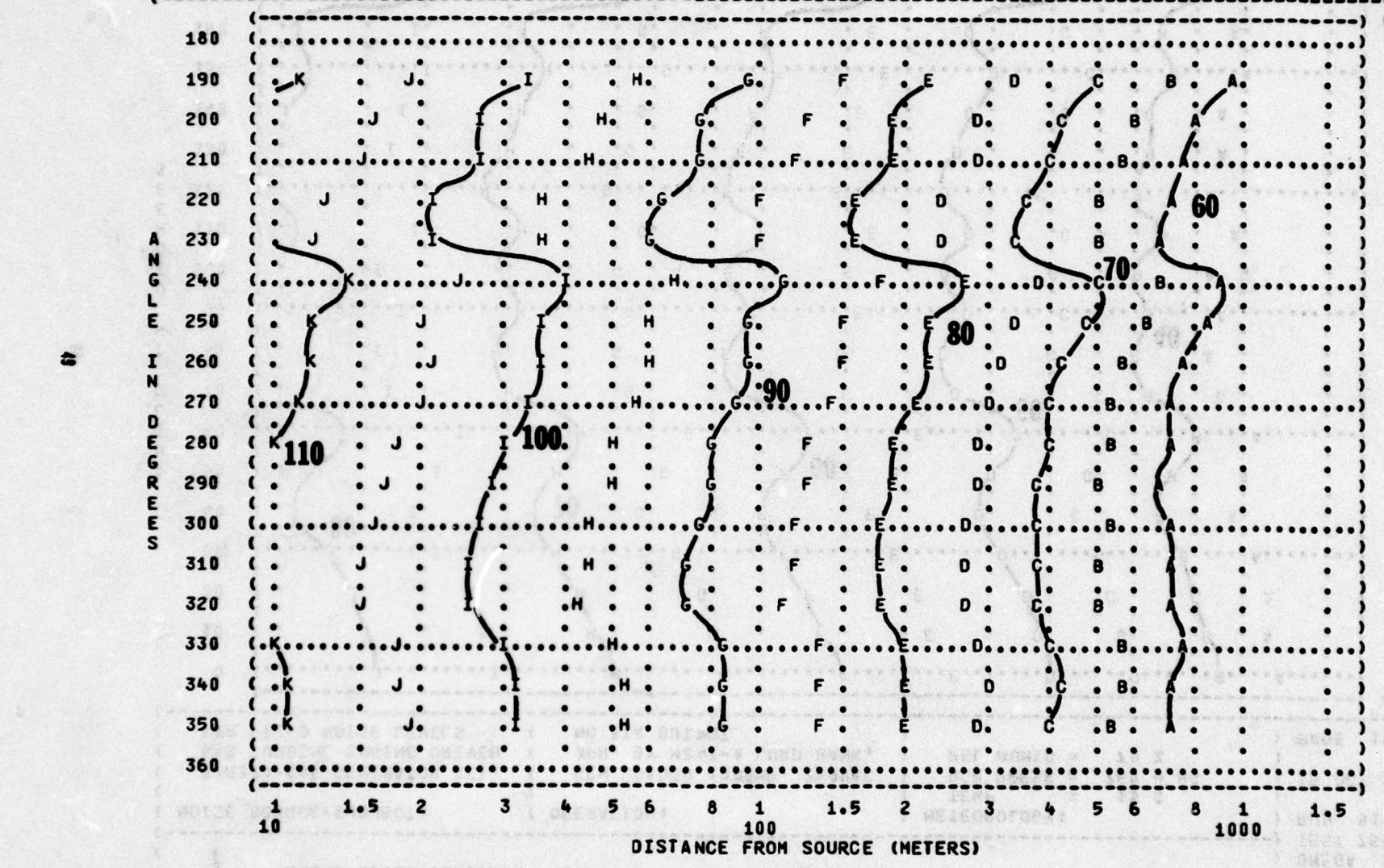


FIGURE 7: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 01
15 OCT 75
PAGE 15

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

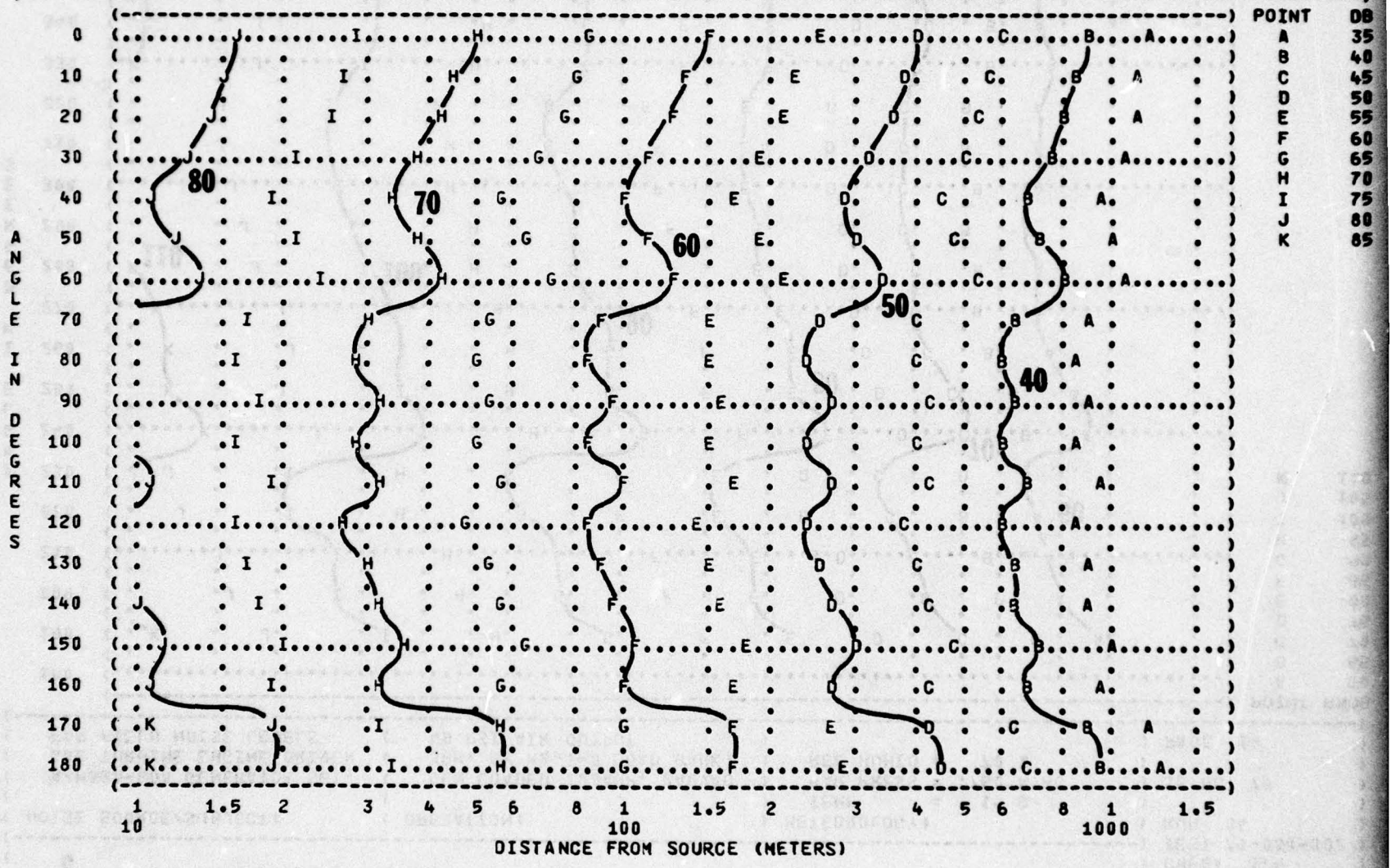


FIGURE: 7 PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 02
15 OCT 75
PAGE 15

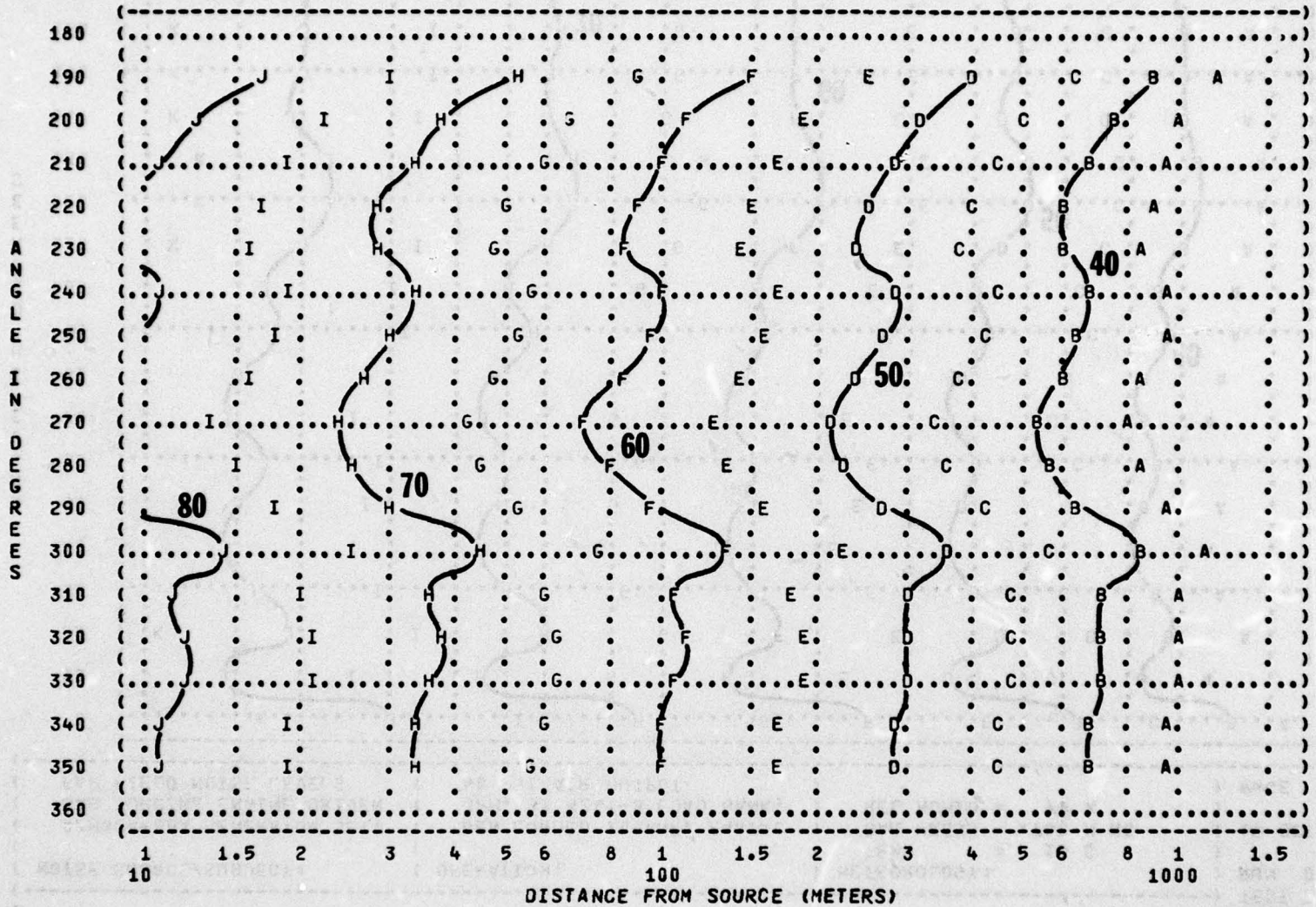


FIGURE 7: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
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NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

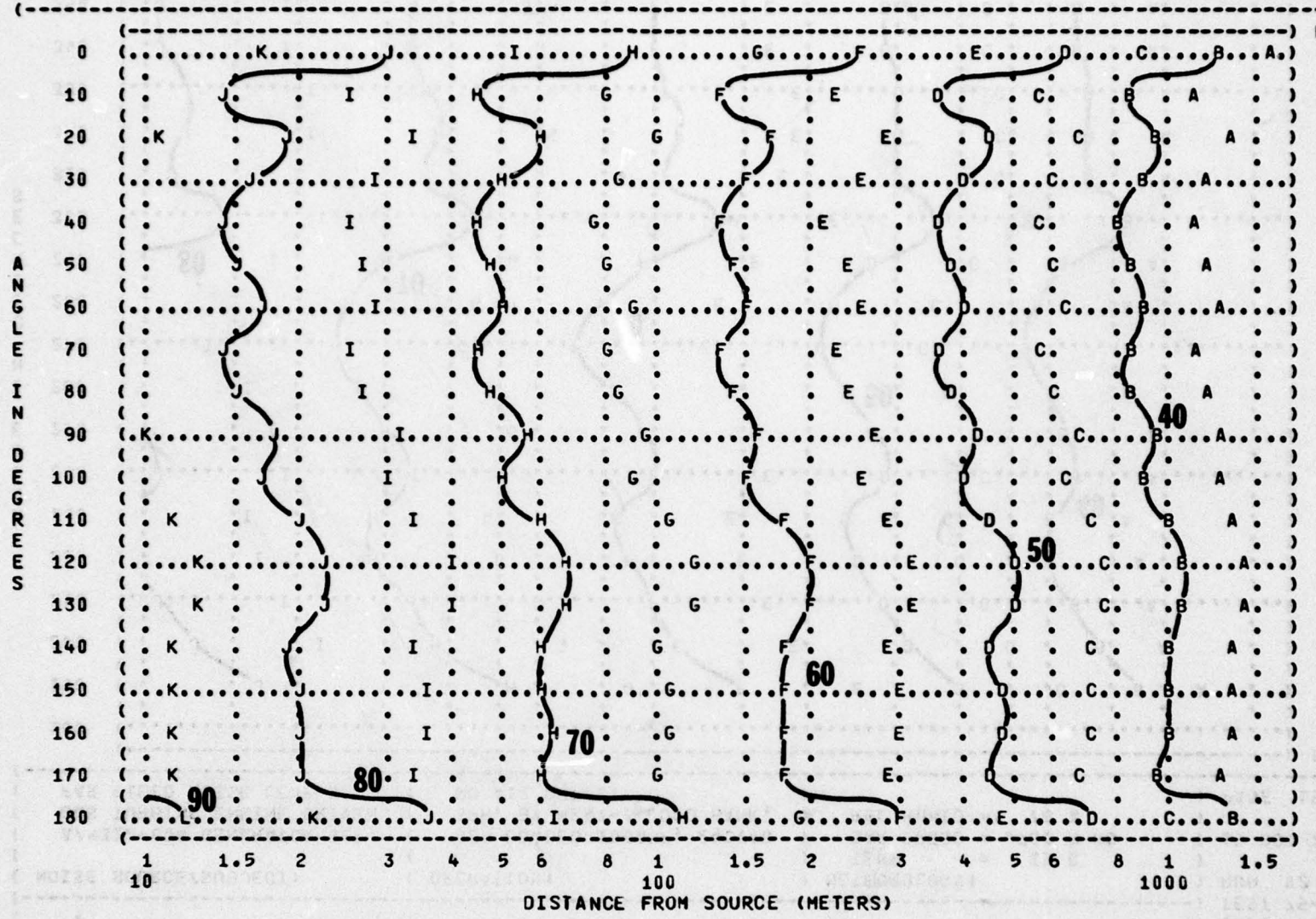

FIGURE 7: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 04
15 OCT 75
PAGE 15

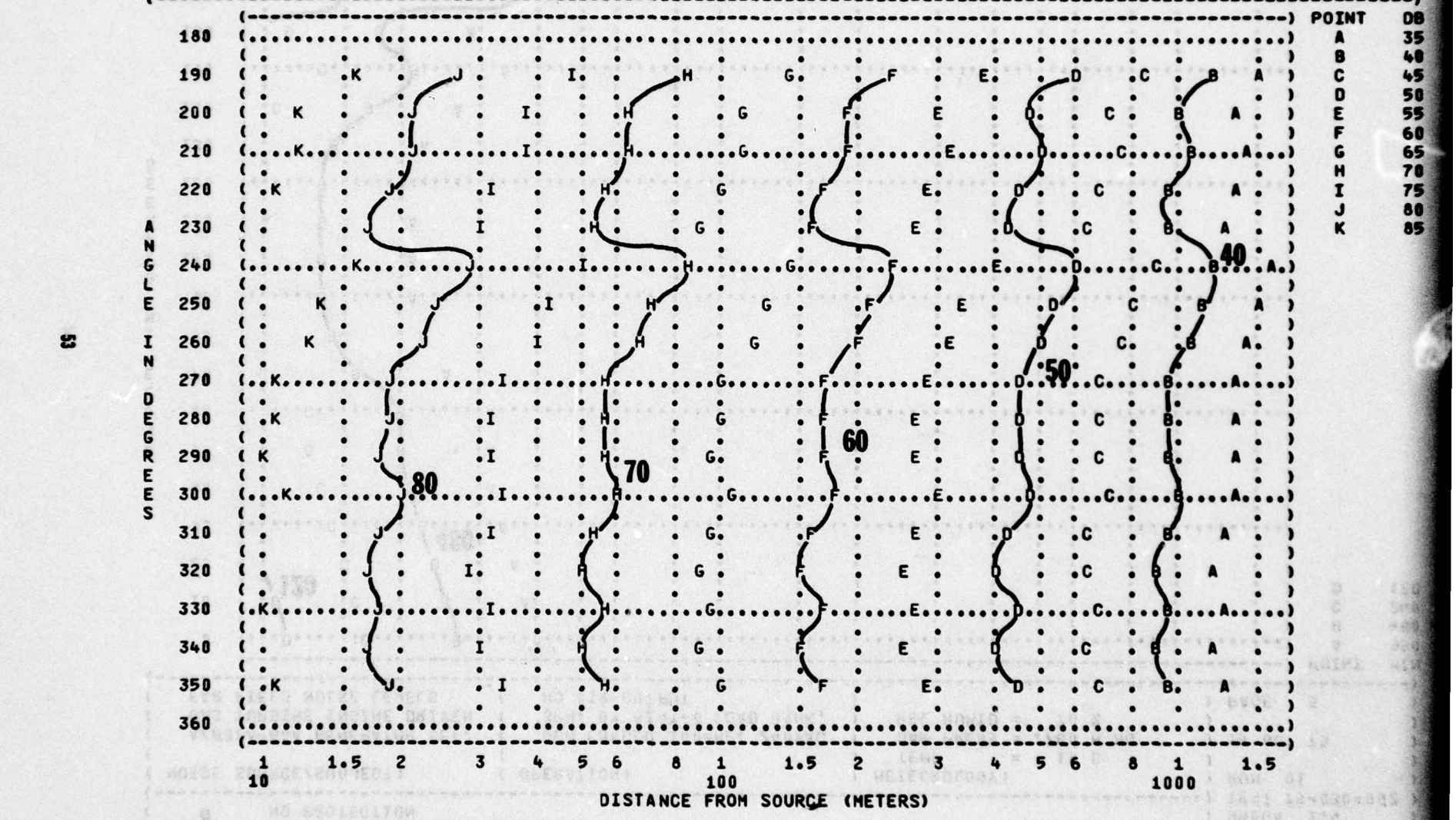

FIGURE: 8

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

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 01
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PAGE 5

POINT	MIN
A	960
B	480
C	240
D	120

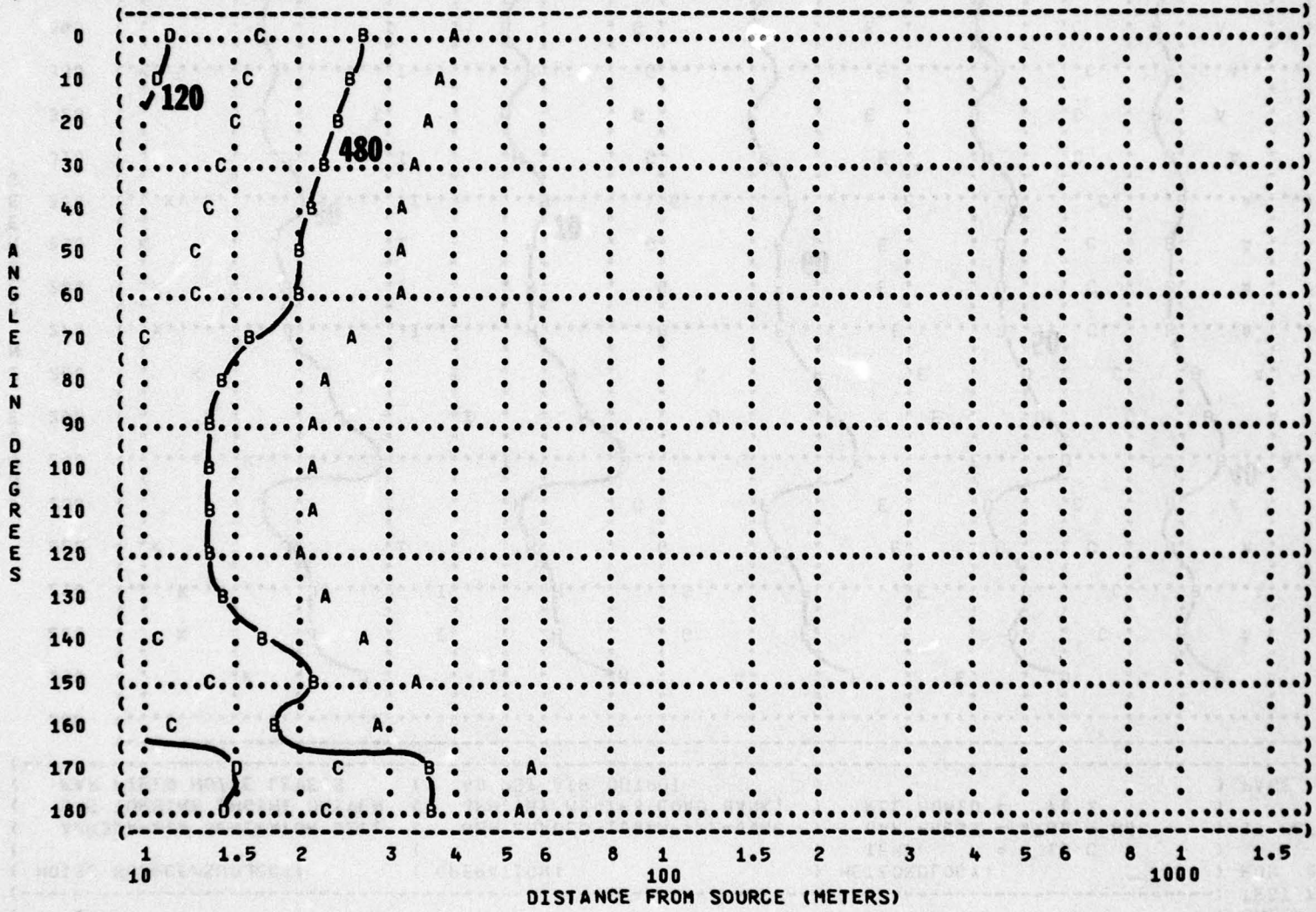

FIGURE 8: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
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NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

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

POINT	MIN
A	960
B	480
C	240

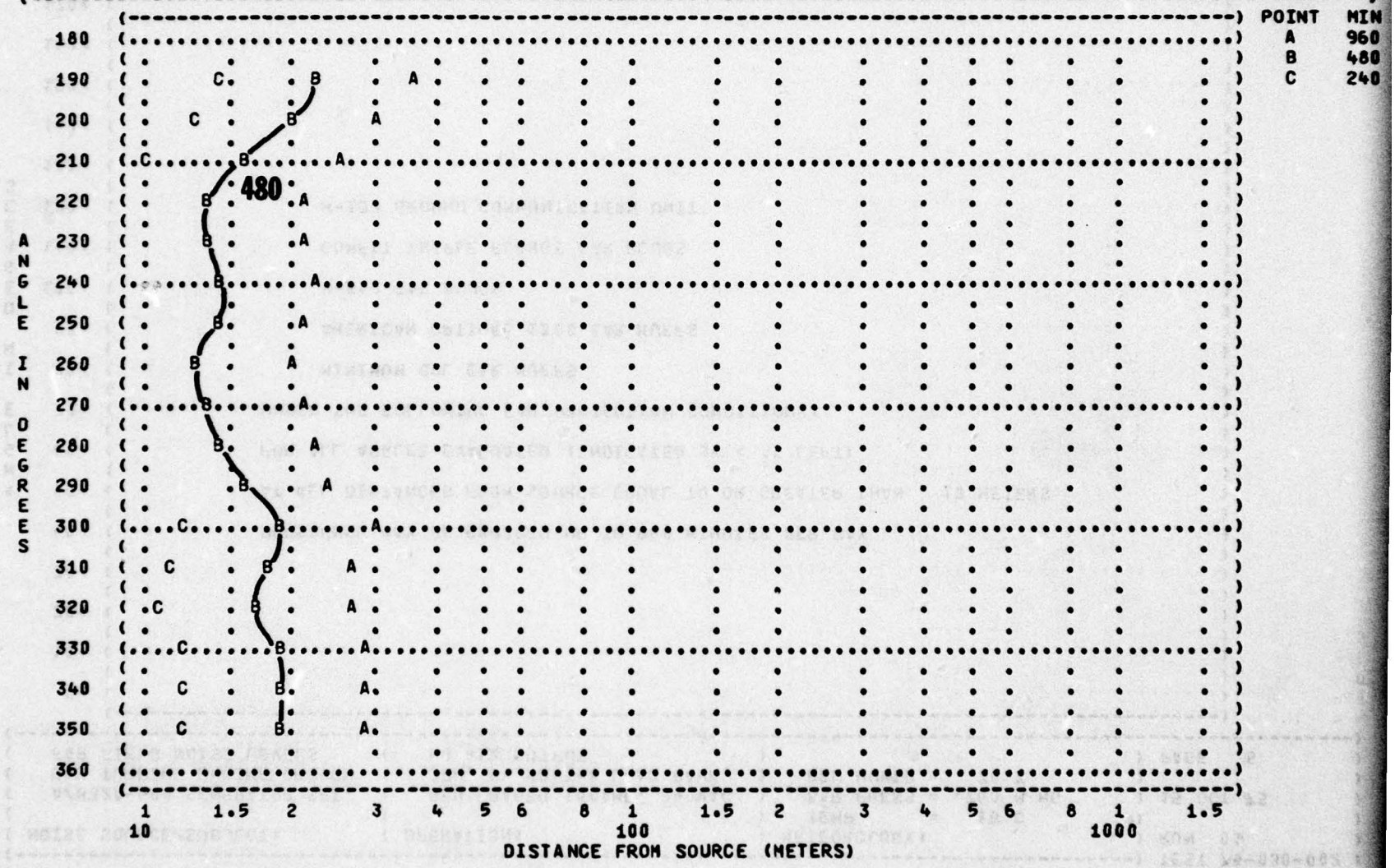

FIGURE: 8	MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) EQUAL TIME CONTOURS (MINUTES)	IDENTIFICATION:
NOISE SOURCE/SUBJECT:	OPERATION:	METEOROLOGY:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS	GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT	TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

OMEGA 1.4
TEST 75-030-002
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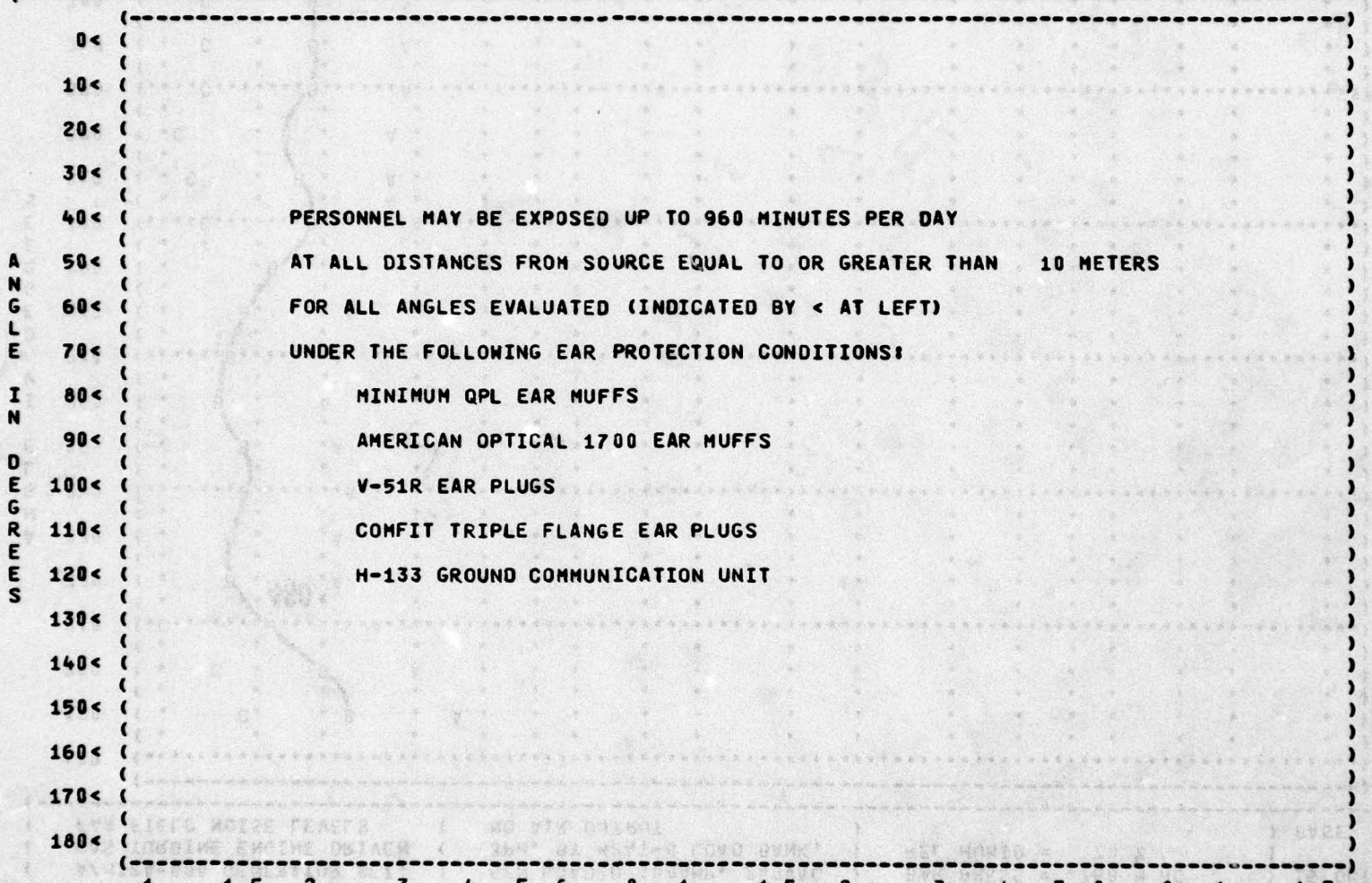

FIGURE 8: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
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NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

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

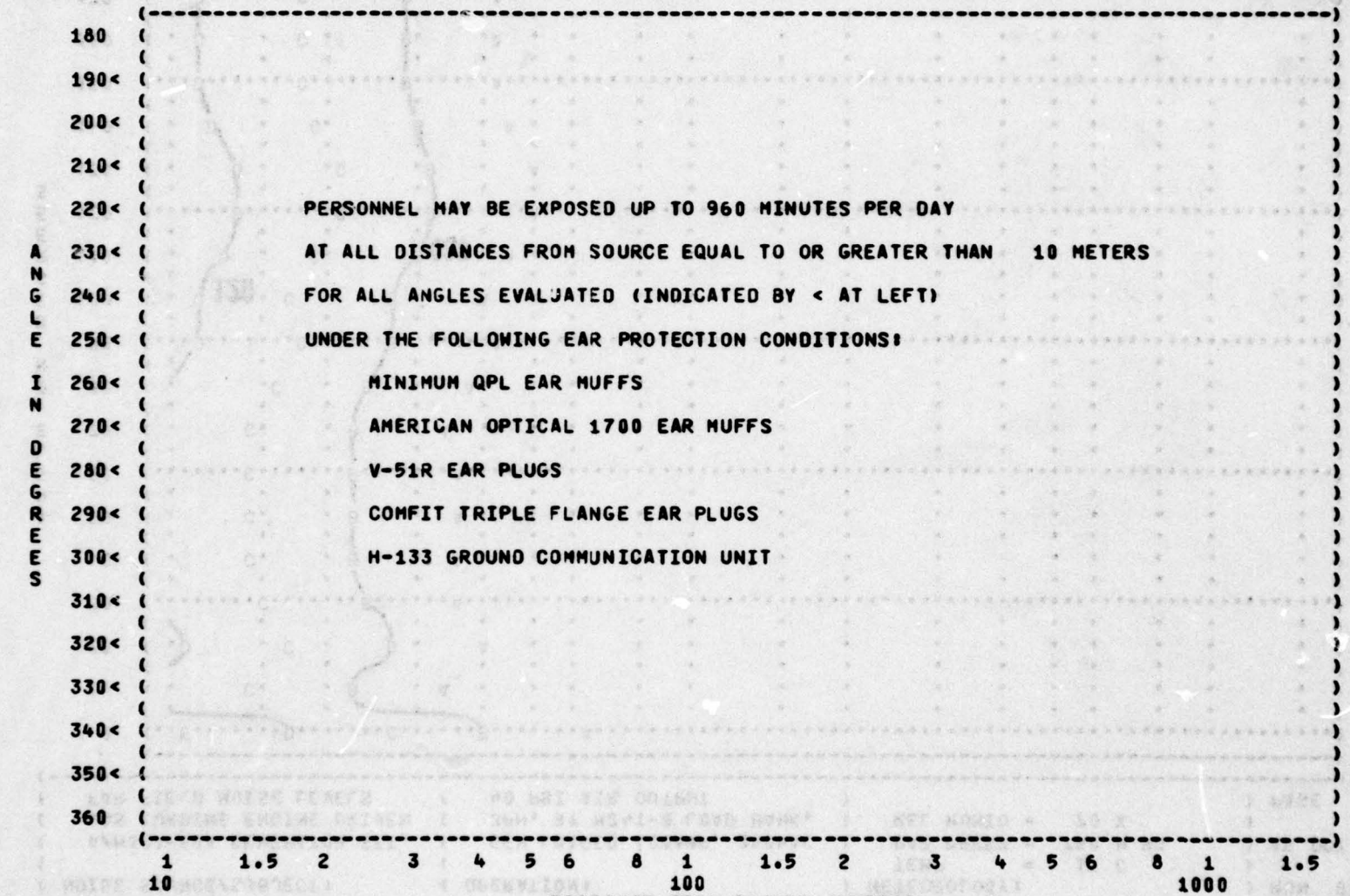

FIGURE 8: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
15 OCT 75
PAGE 5

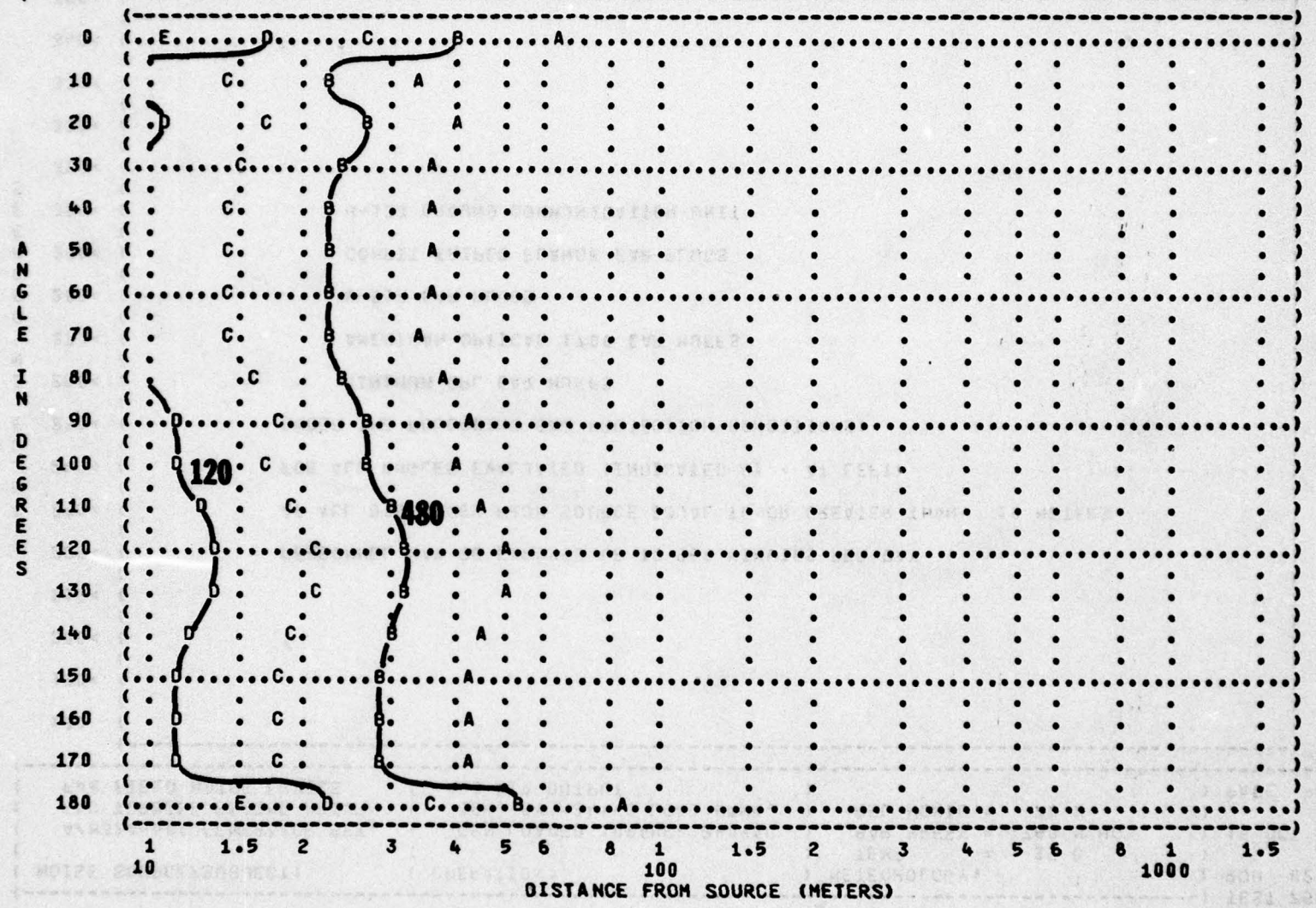

FIGURE 8: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 04
15 OCT 75
PAGE 5

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

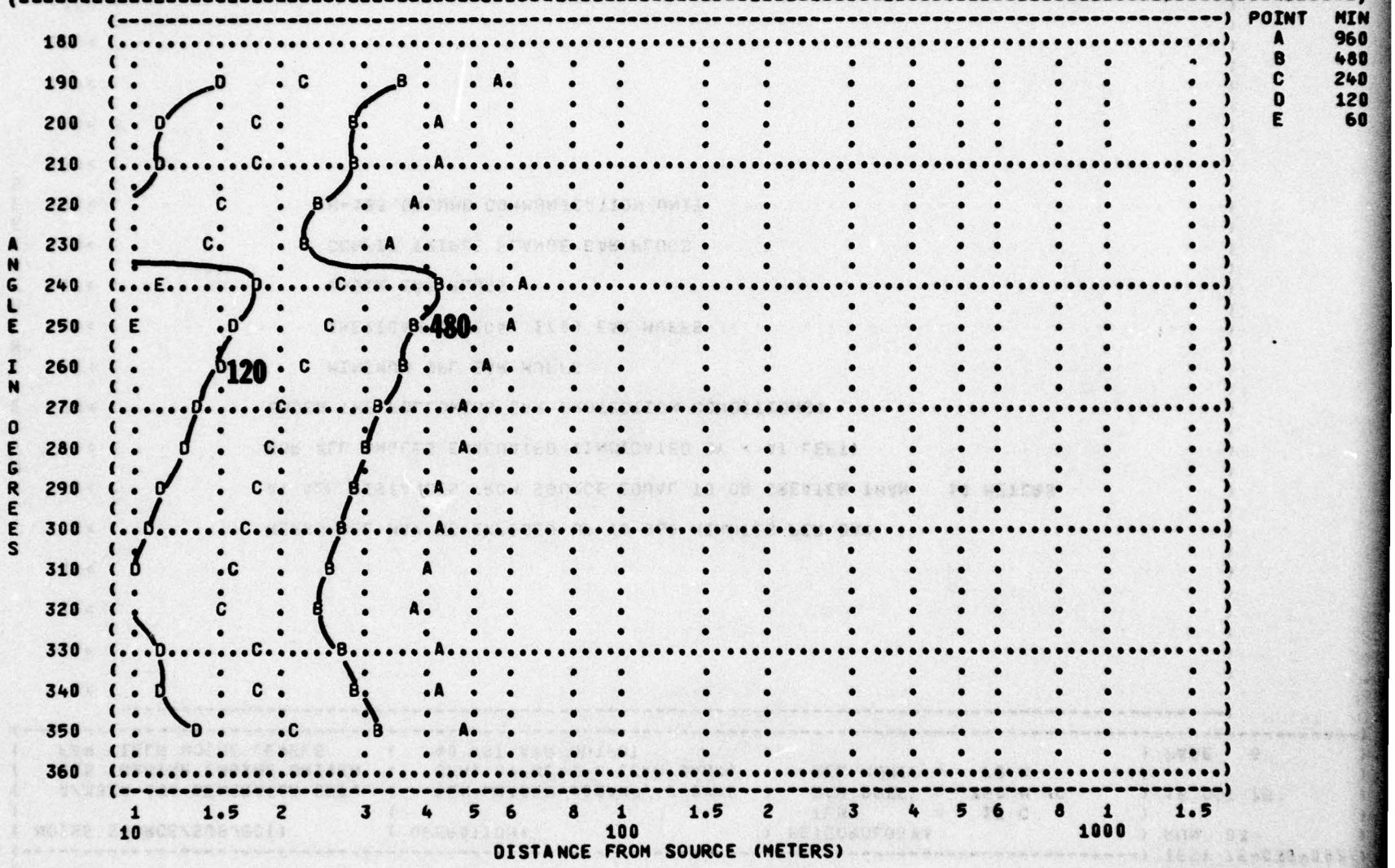

FIGURE 8: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
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PAGE 6

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

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

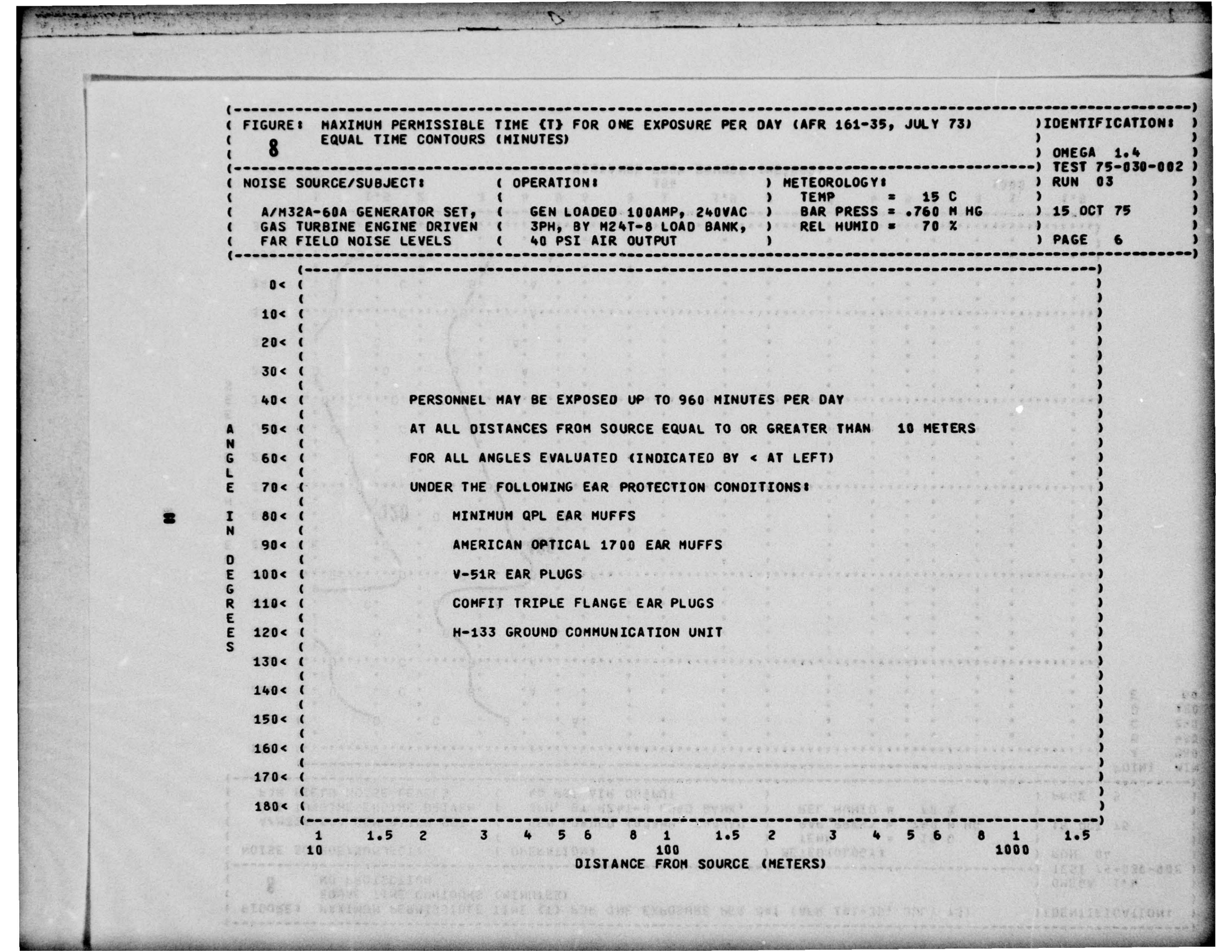

FIGURE 8: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
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NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

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

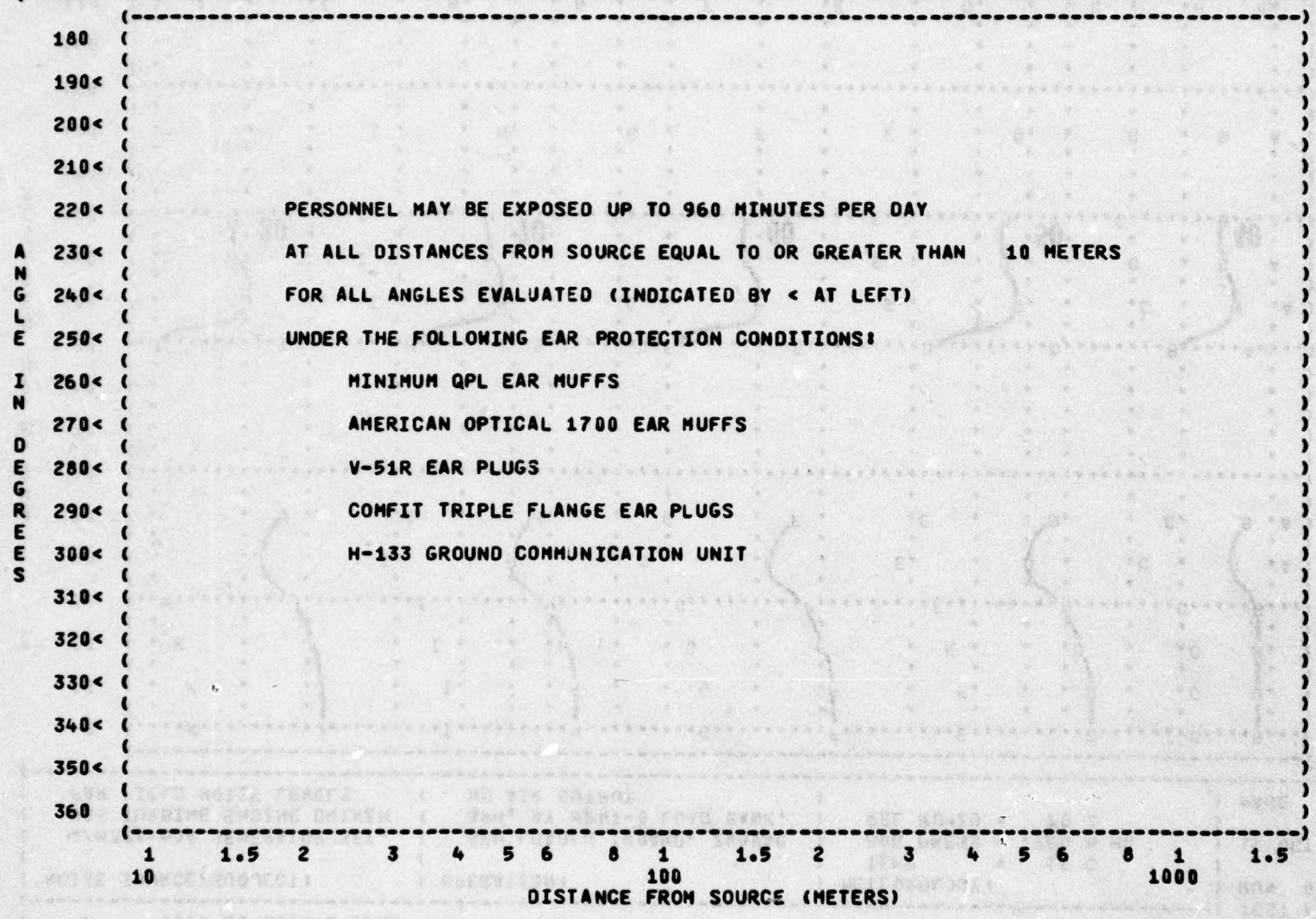

FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-030-002 RUN 01 15 OCT 75 PAGE 16

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

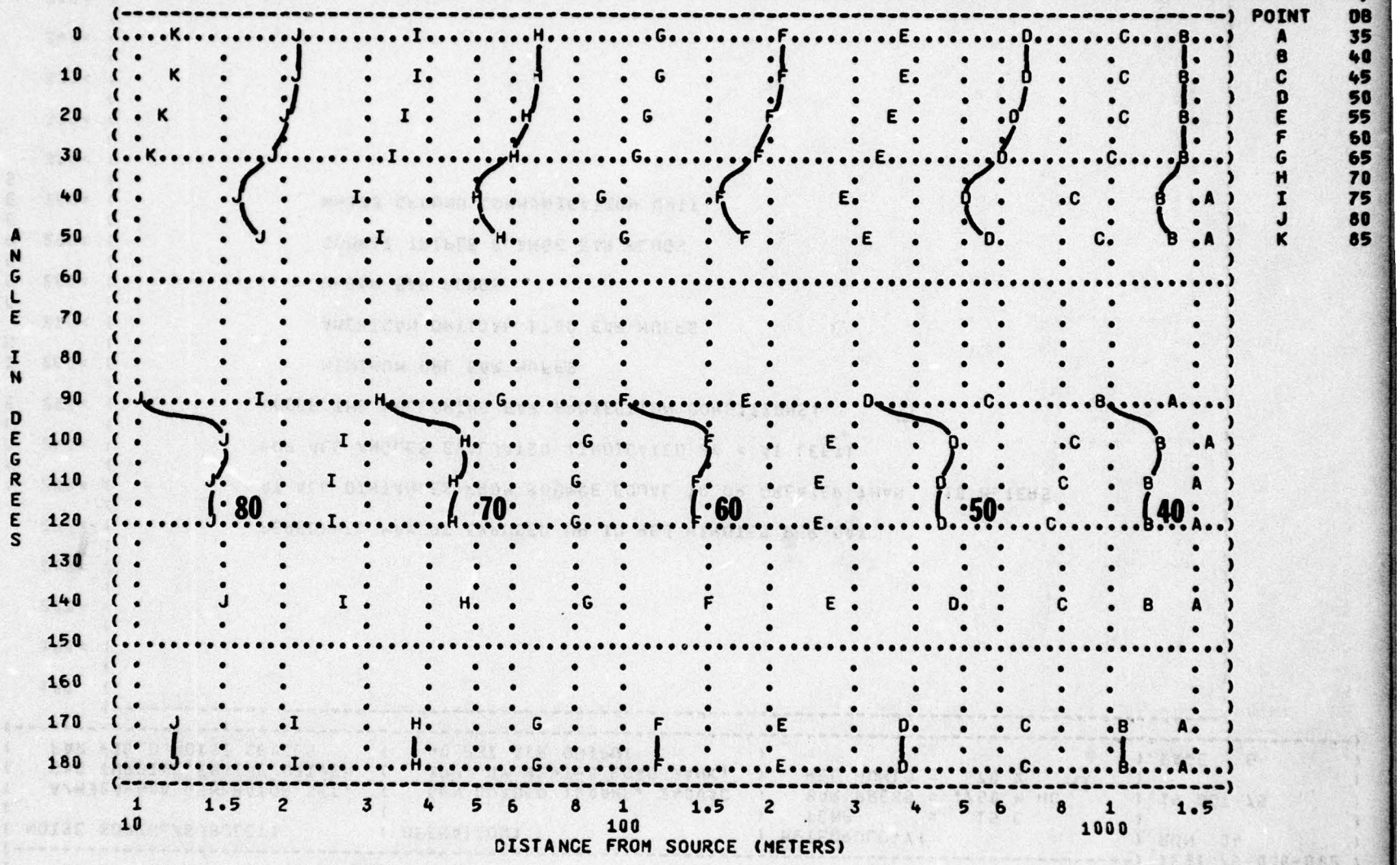

FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

IDENTIFICATION: OMEGA 1.4; TEST 75-030-002; RUN 02; 15 OCT 75; PAGE 16

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

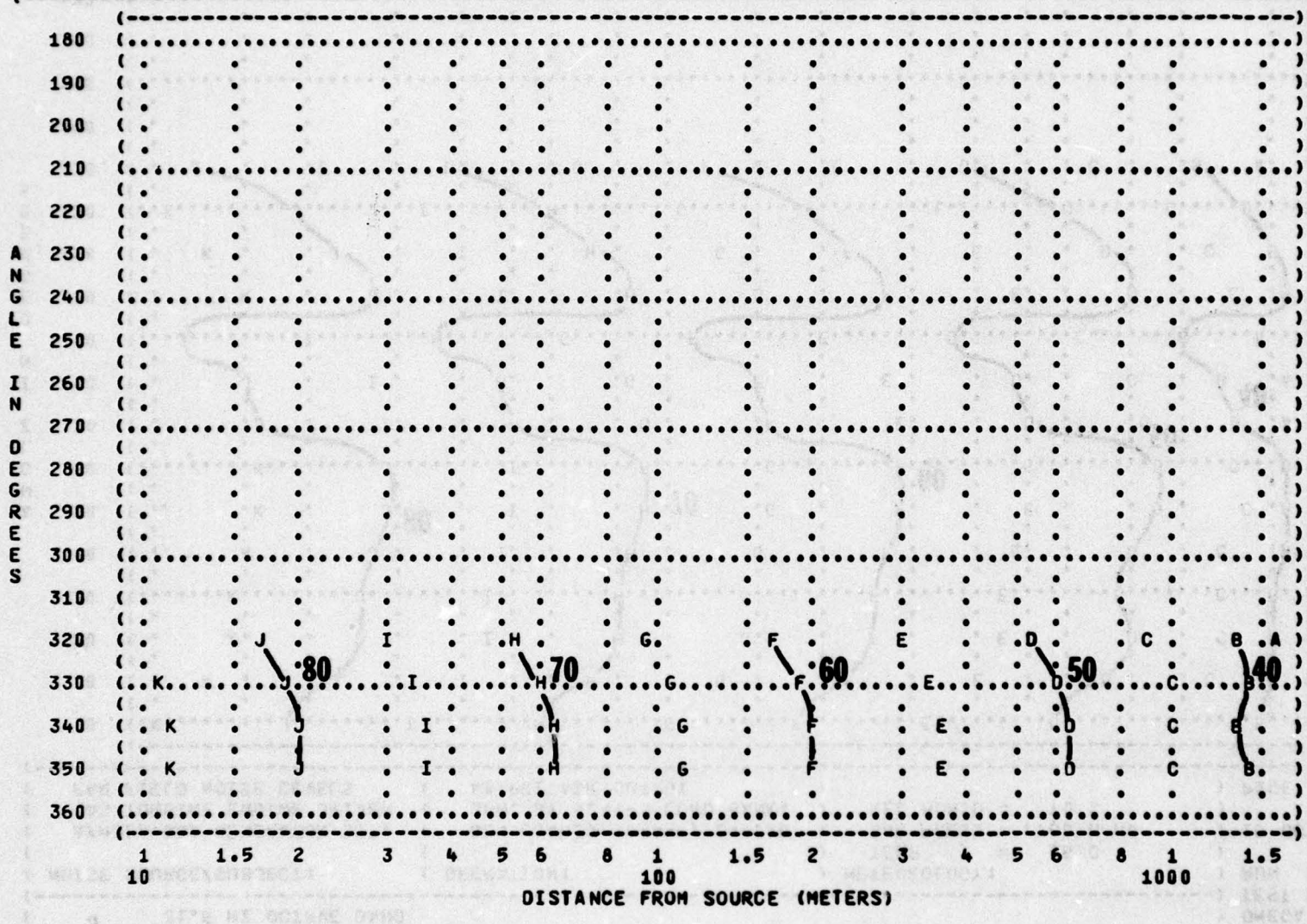

FIGURE: 9

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

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
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PAGE 16

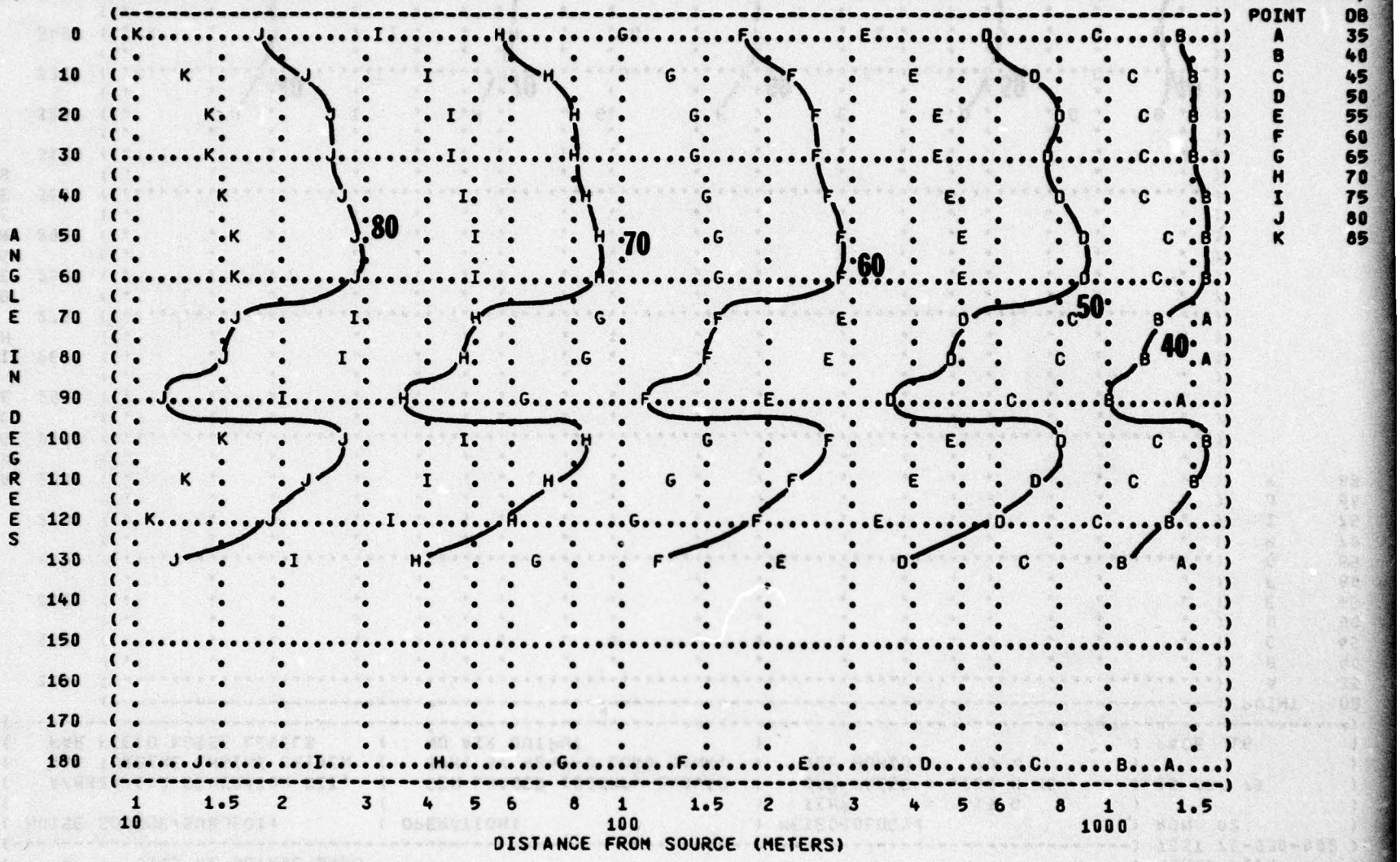

FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
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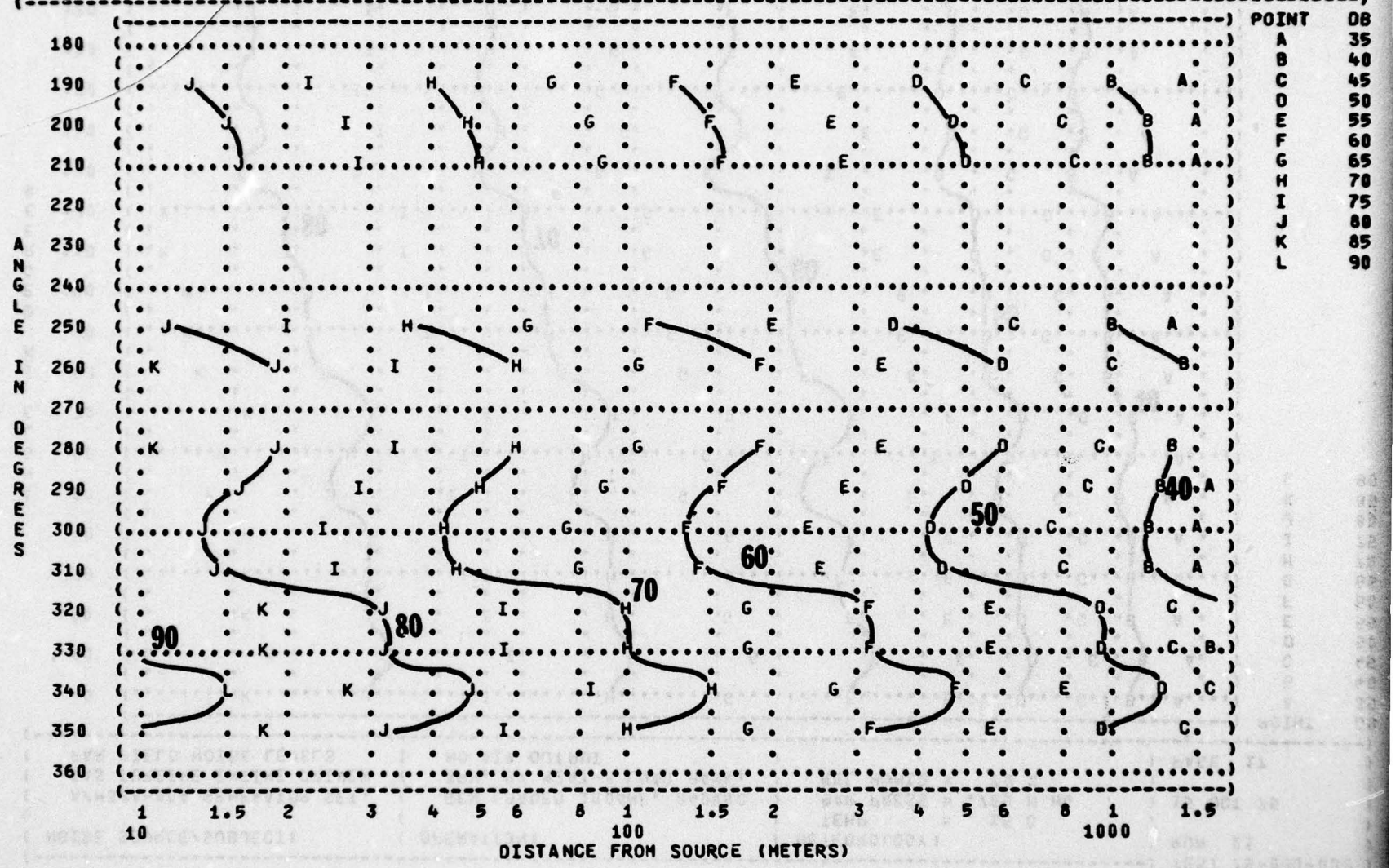
POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90



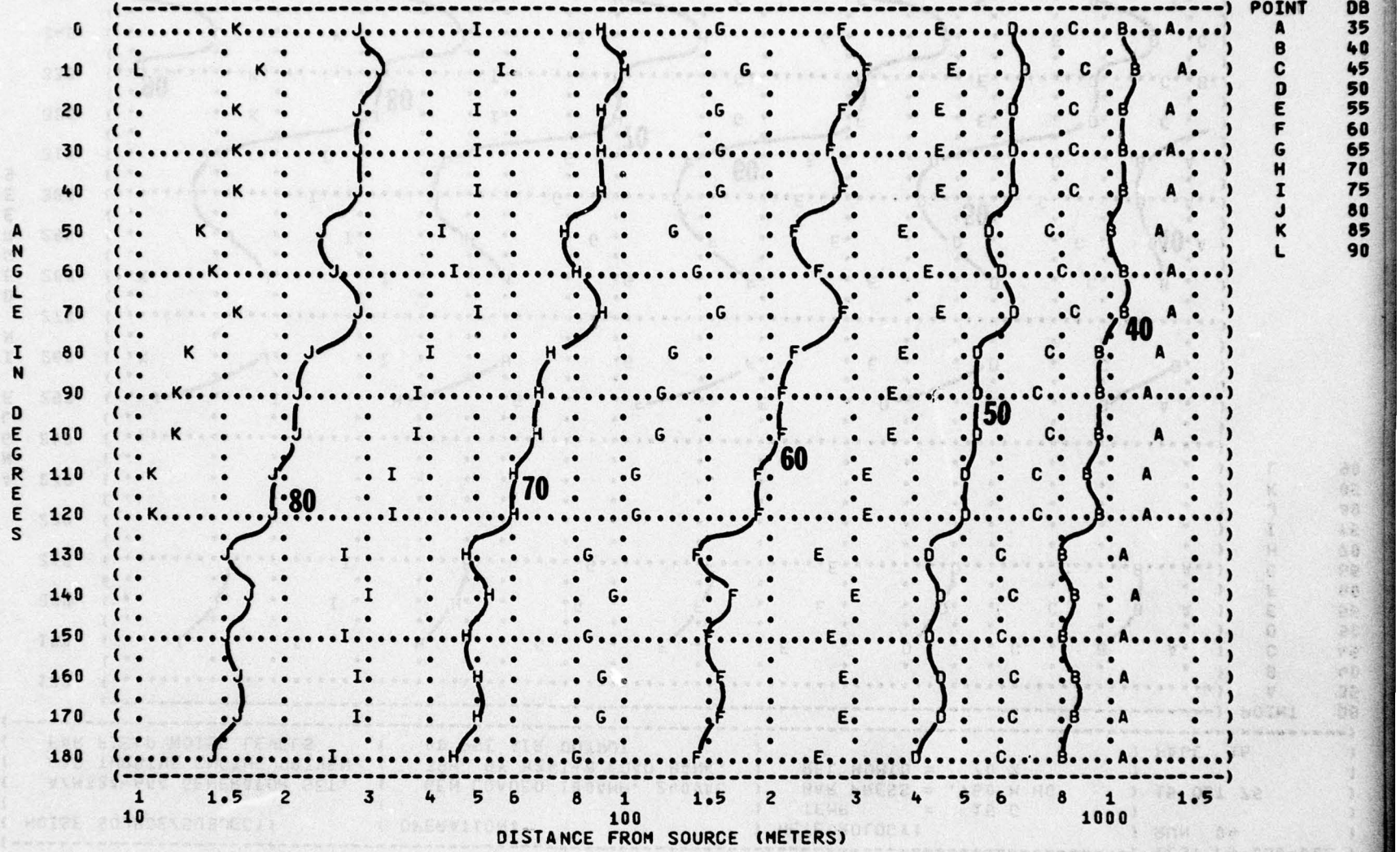
9 EQUAL LEVEL CONTOURS (DB)
63 HZ OCTAVE BAND

OMEGA 1.4
TEST 75-030-002
RUN 01
15 OCT 75
PAGE 17

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

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

IDENTIFICATION: OMEGA 1.4 TEST 75-030-002 RUN 02 15 OCT 75 PAGE 17

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

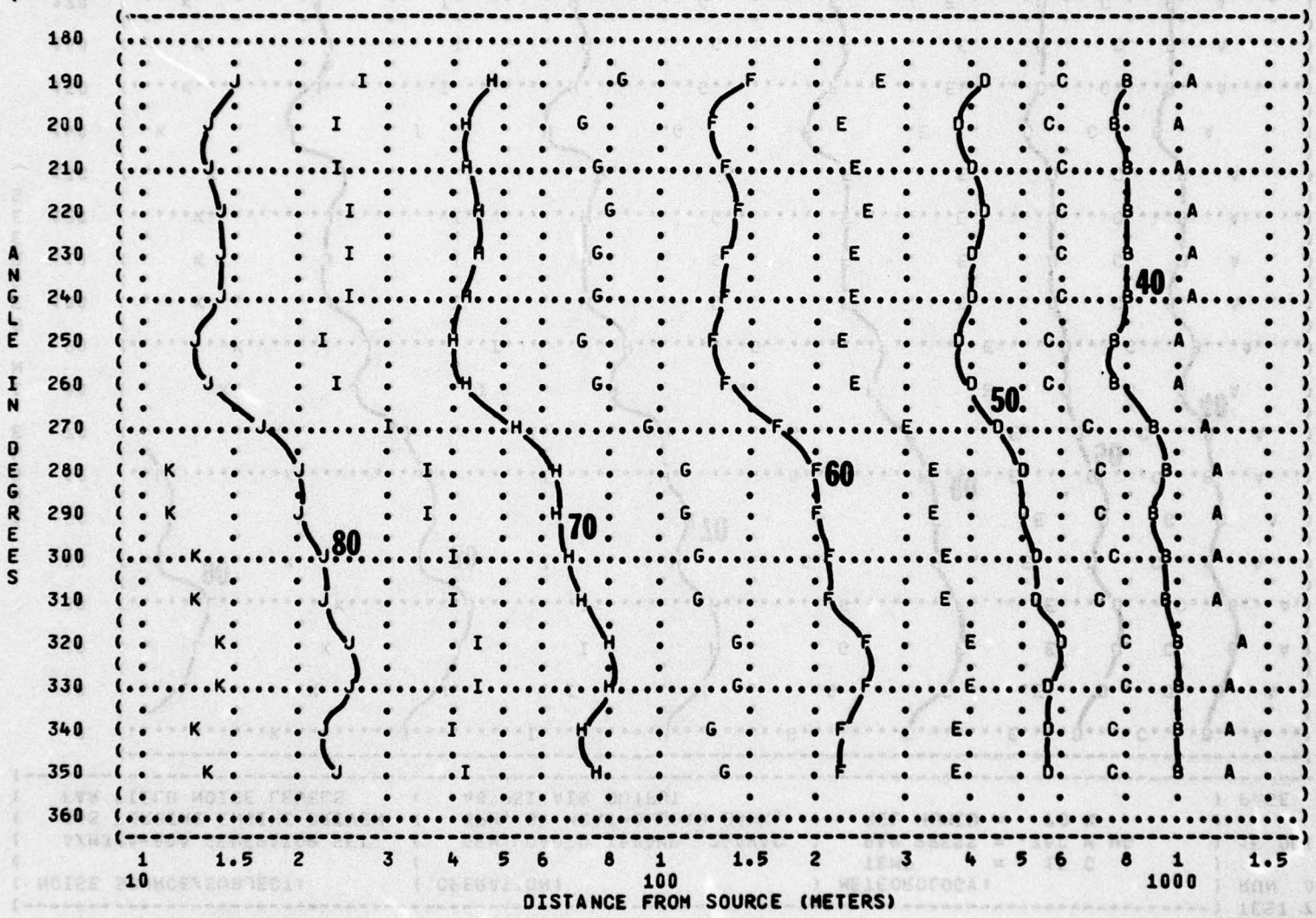


FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-030-002 RUN 03 15 OCT 75 PAGE 17

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

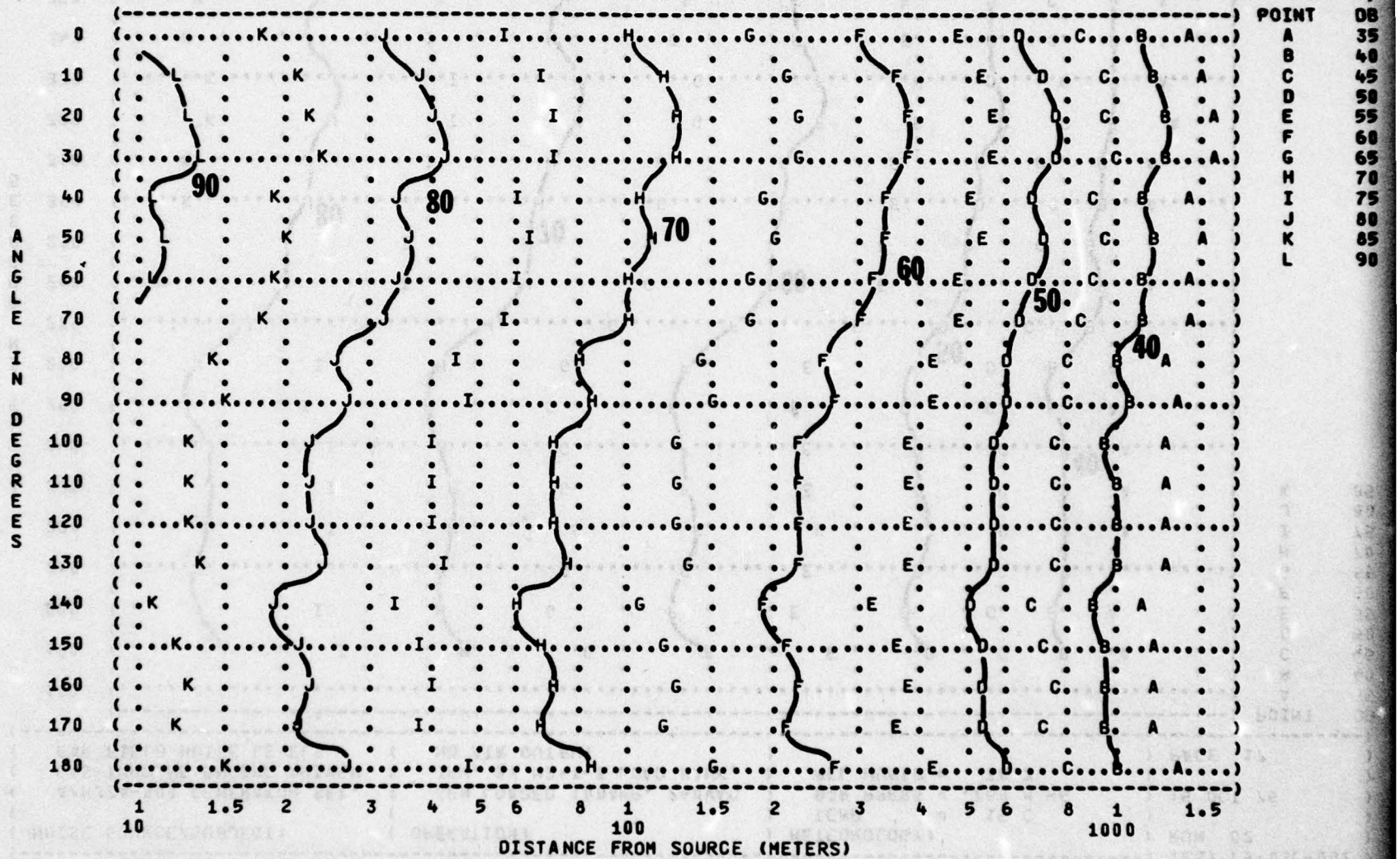


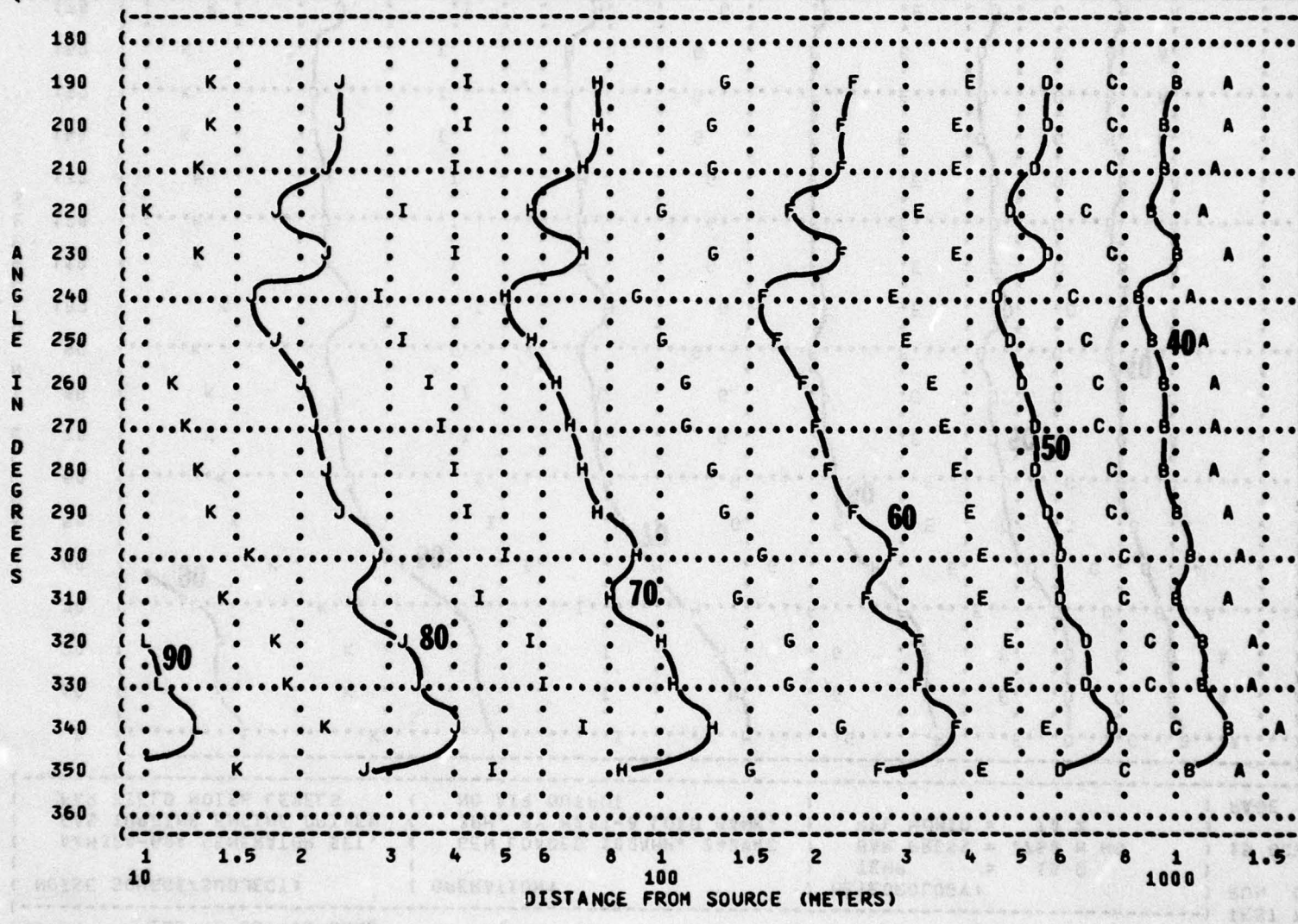
FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

IDENTIFICATION: OMEGA 1.4; TEST 75-030-002; RUN 04; 15 OCT 75; PAGE 17



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

FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
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NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

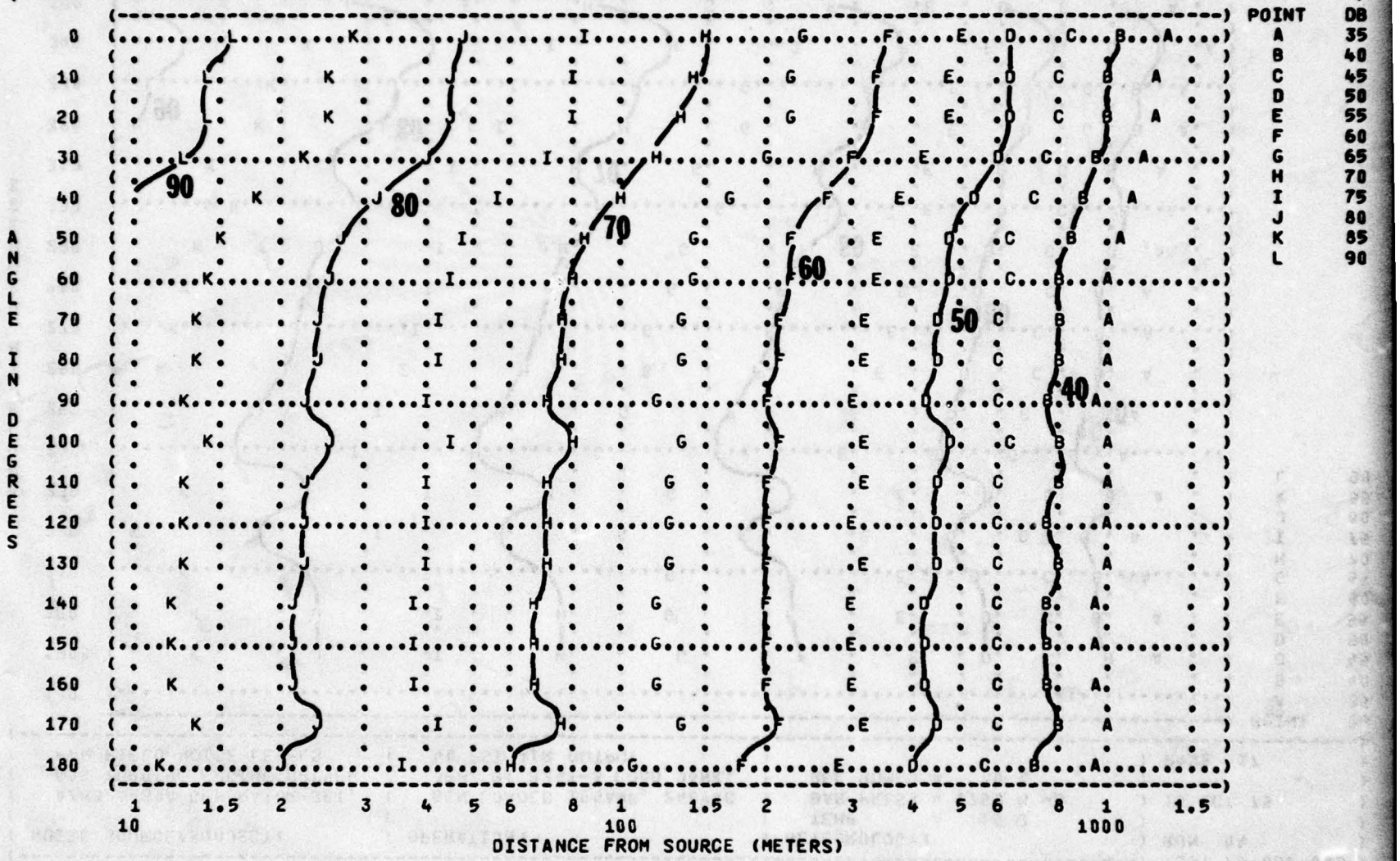

FIGURE: 9

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

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
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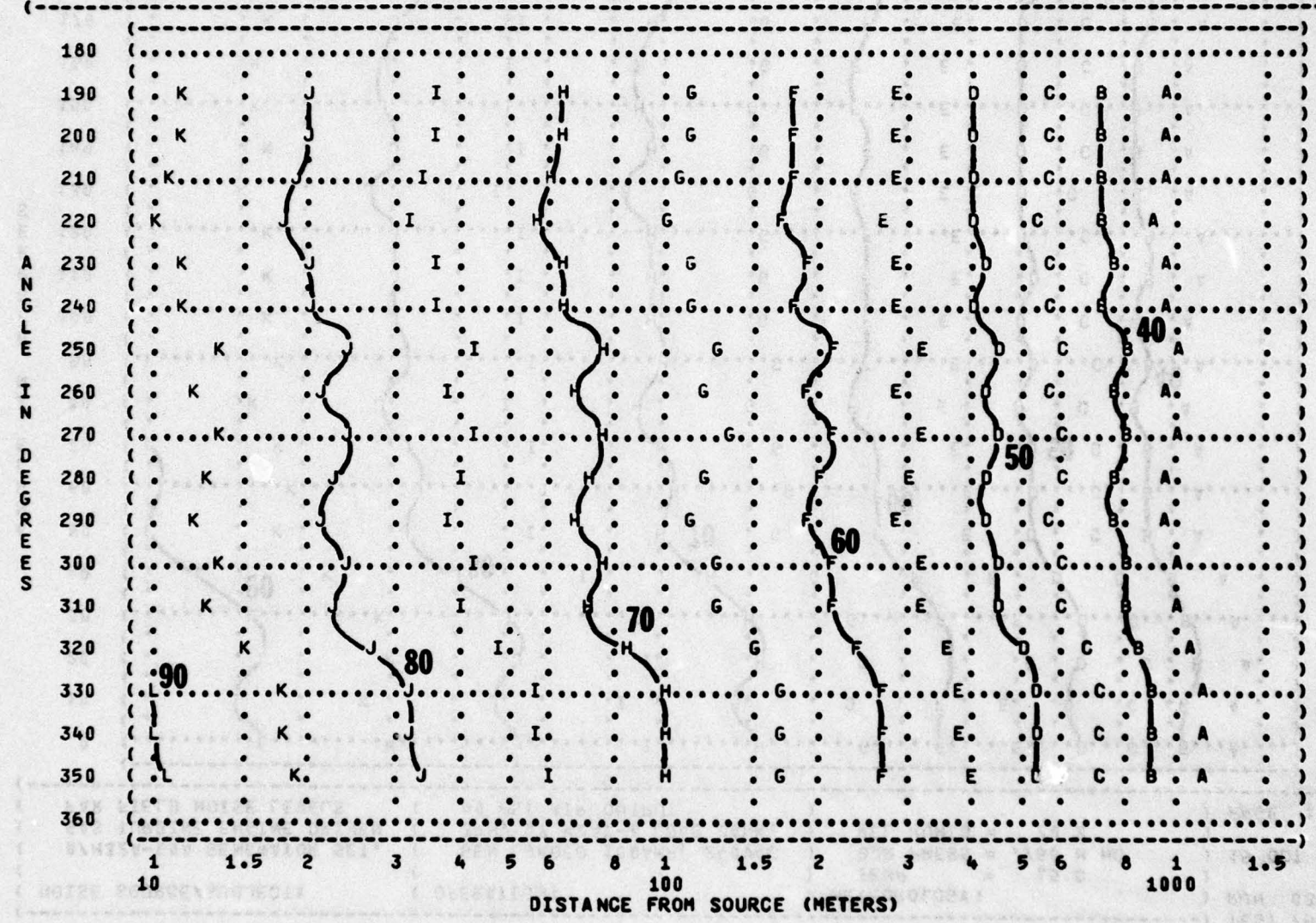

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
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RUN 03
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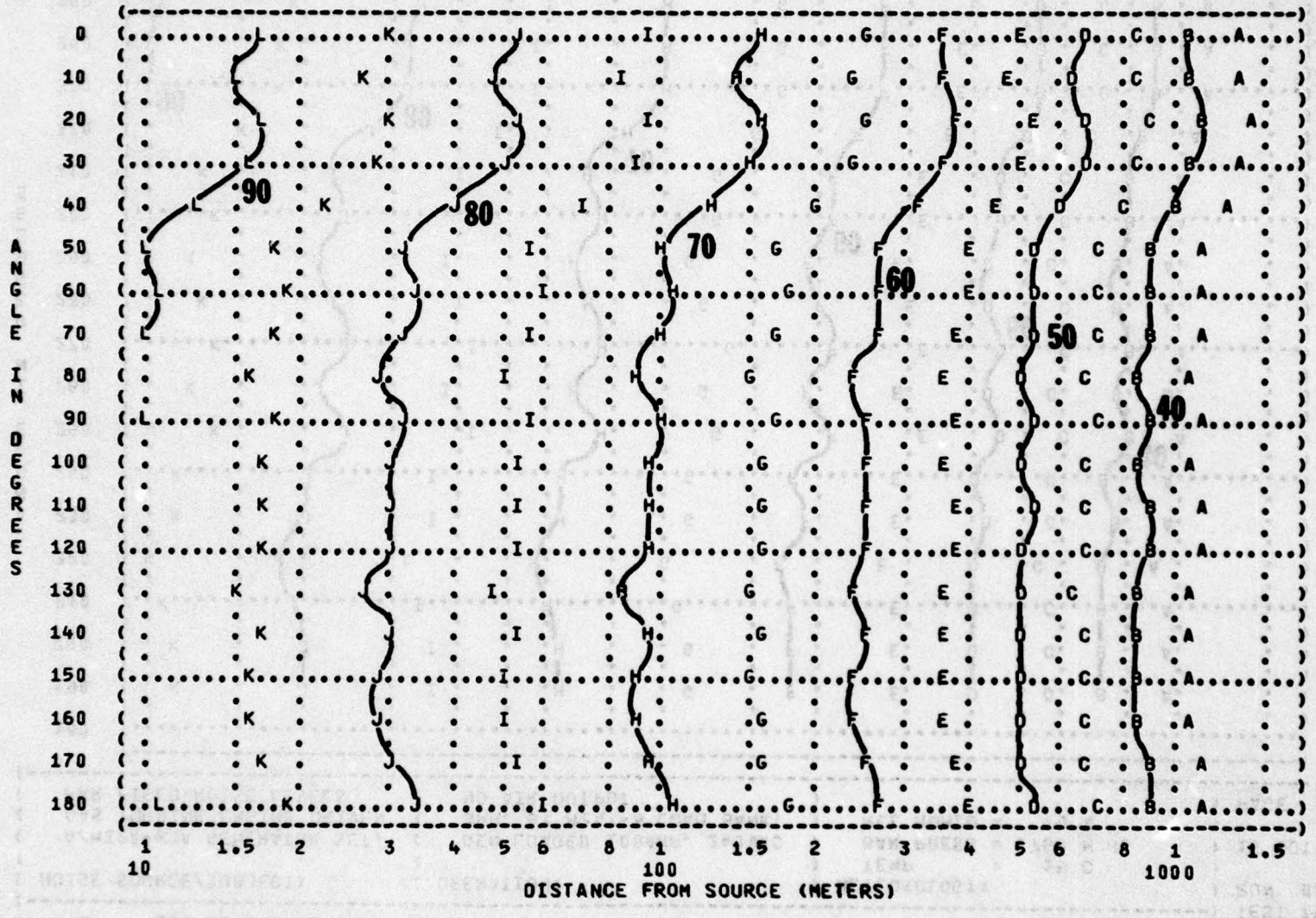
NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

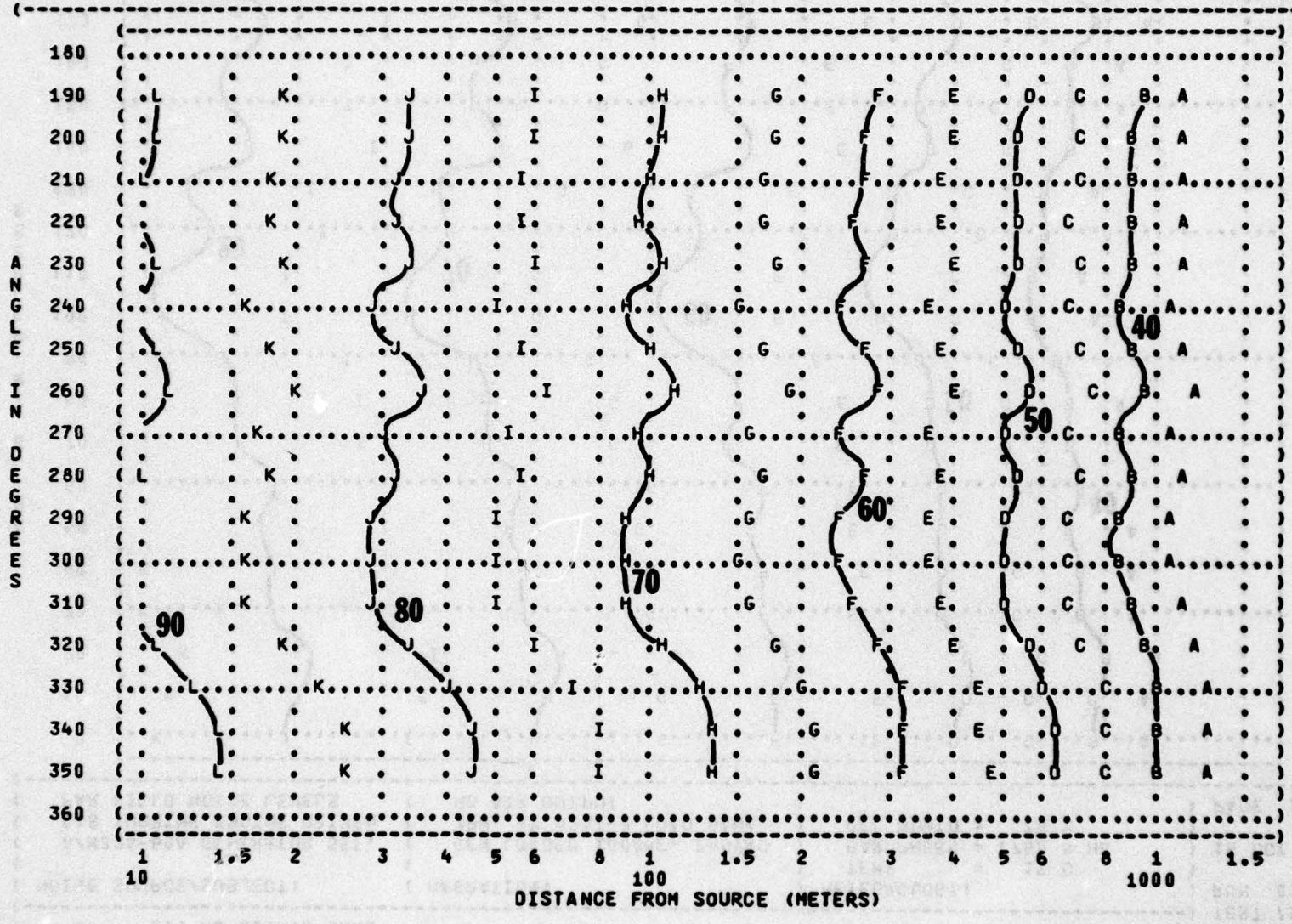
FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

IDENTIFICATION: OMEGA 1.4, TEST 75-030-002, RUN 04, 15 OCT 75, PAGE 18



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

FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 01
15 OCT 75
PAGE 19

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

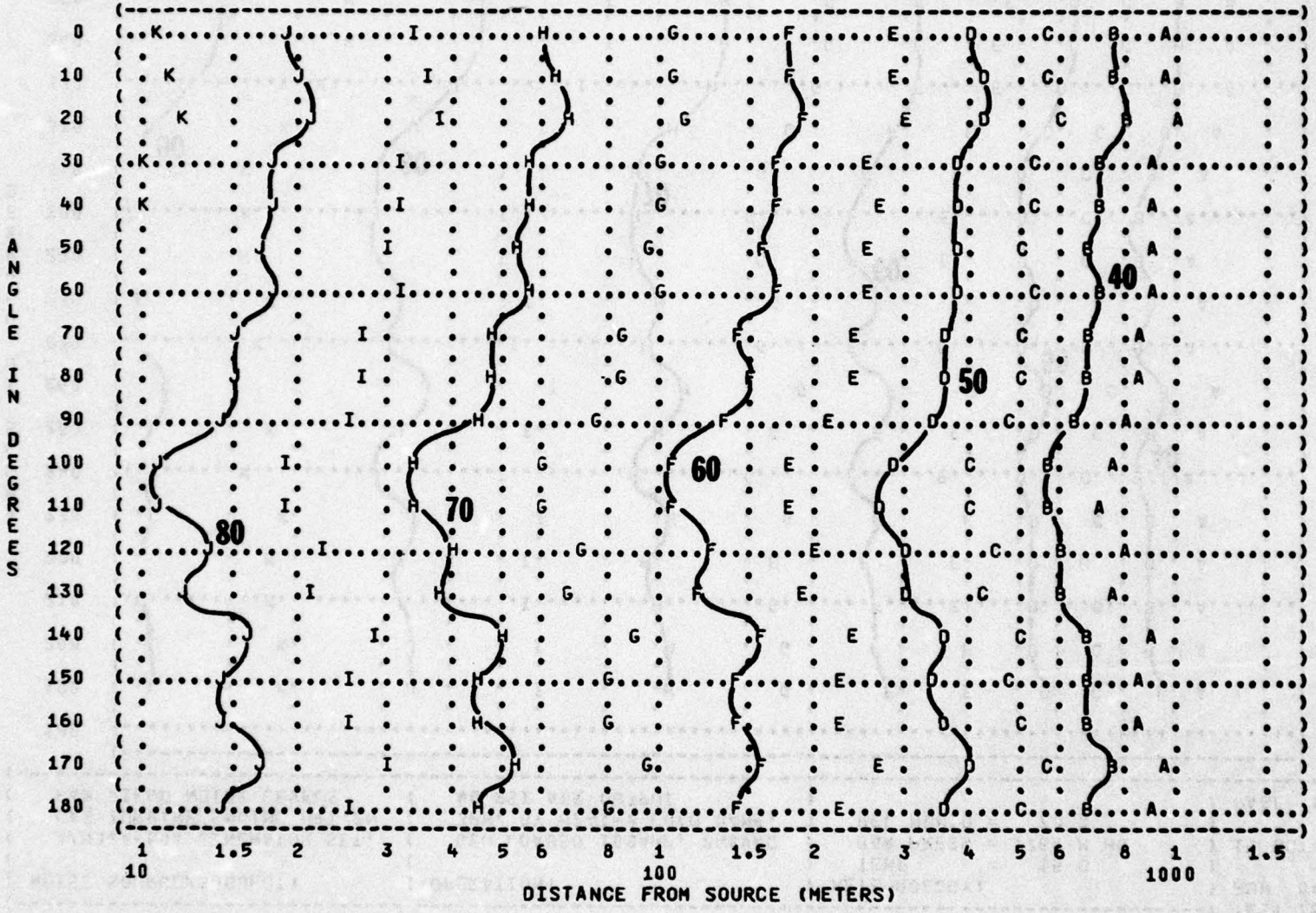


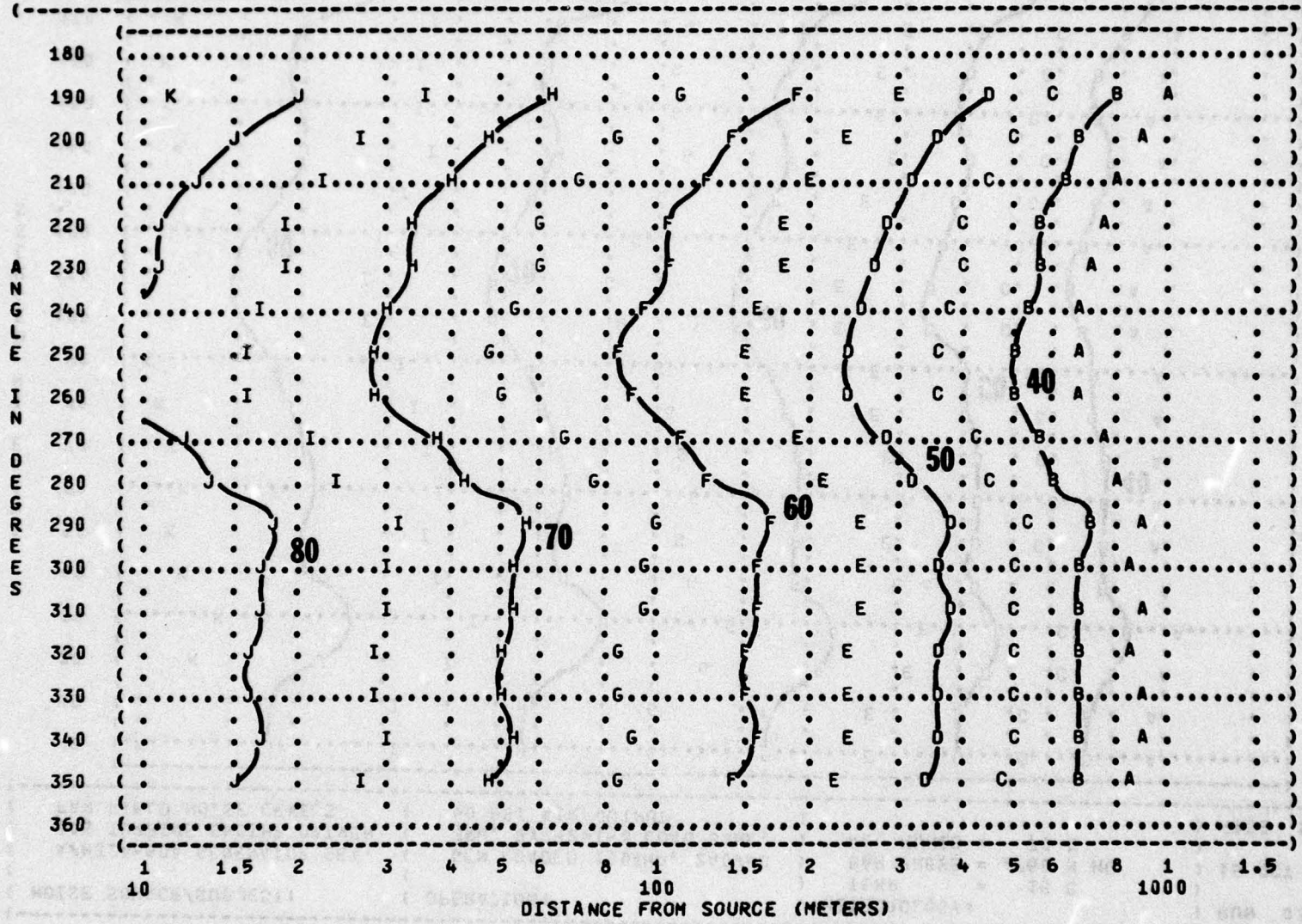
FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 02
15 OCT 75
PAGE 19



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

FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

IDENTIFICATION: OMEGA 1.4; TEST 75-030-002; RUN 03; 15 OCT 75; PAGE 19

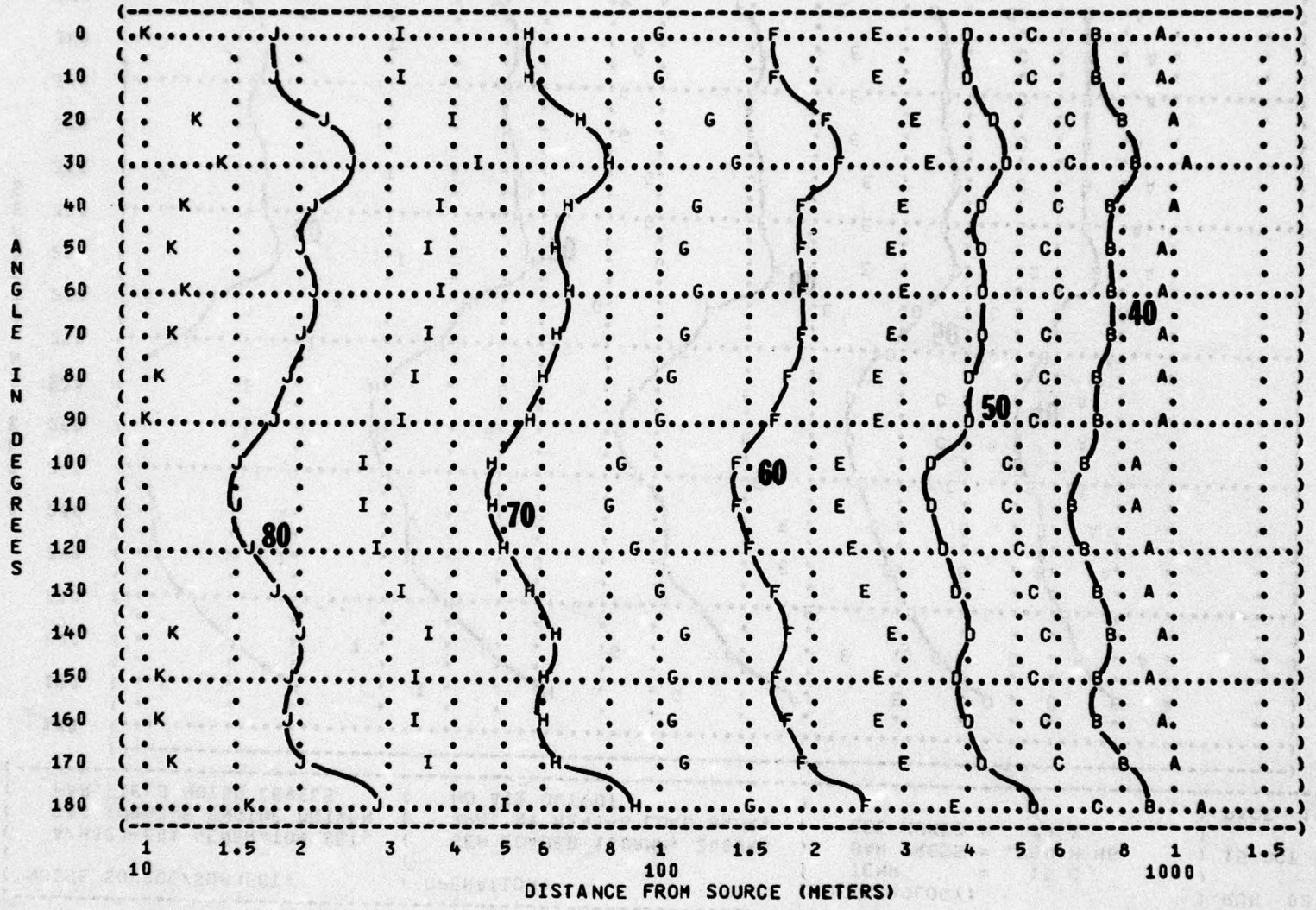


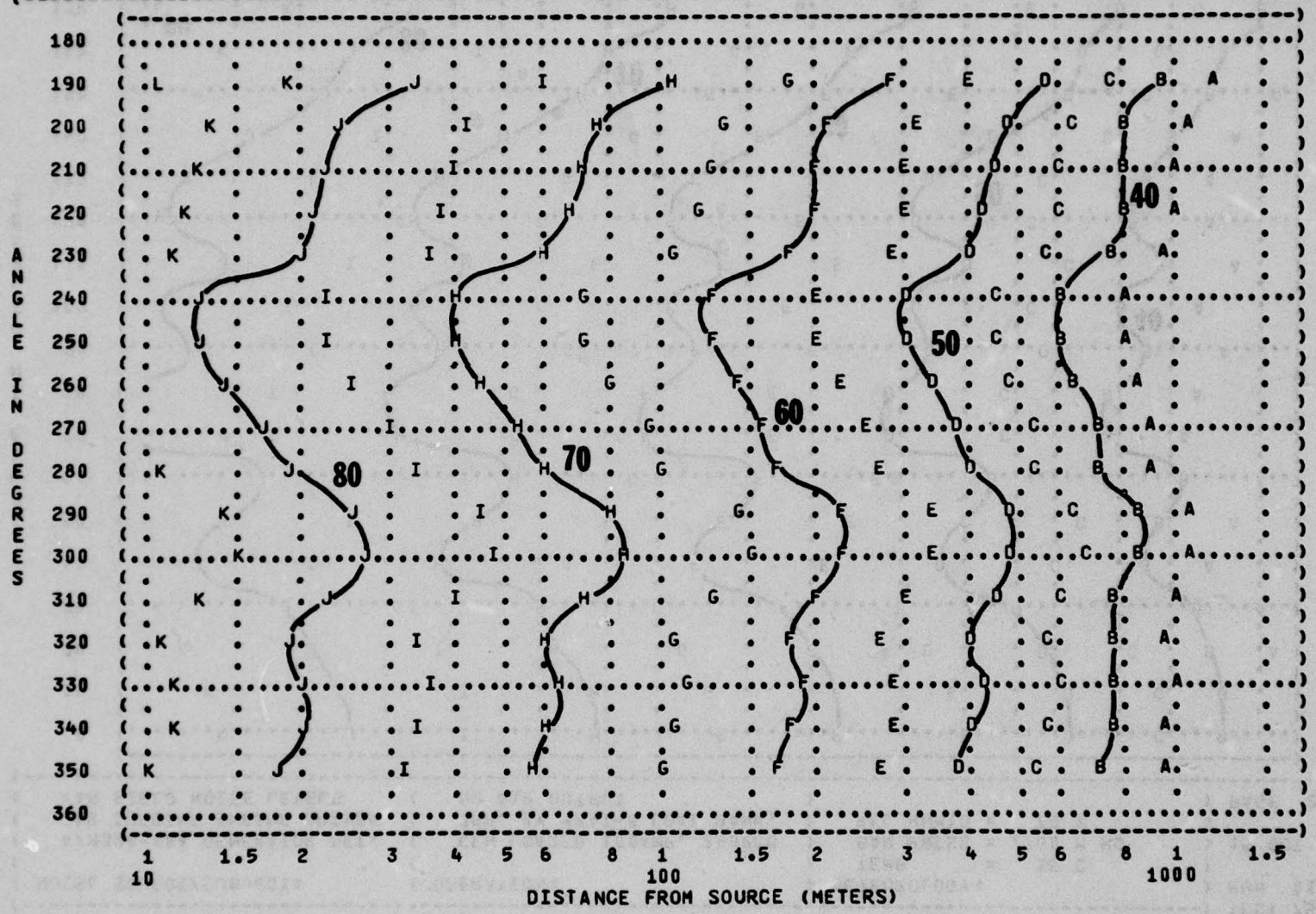
FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 04
15 OCT 75
PAGE 19

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 01
15 OCT 75
PAGE 20

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

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

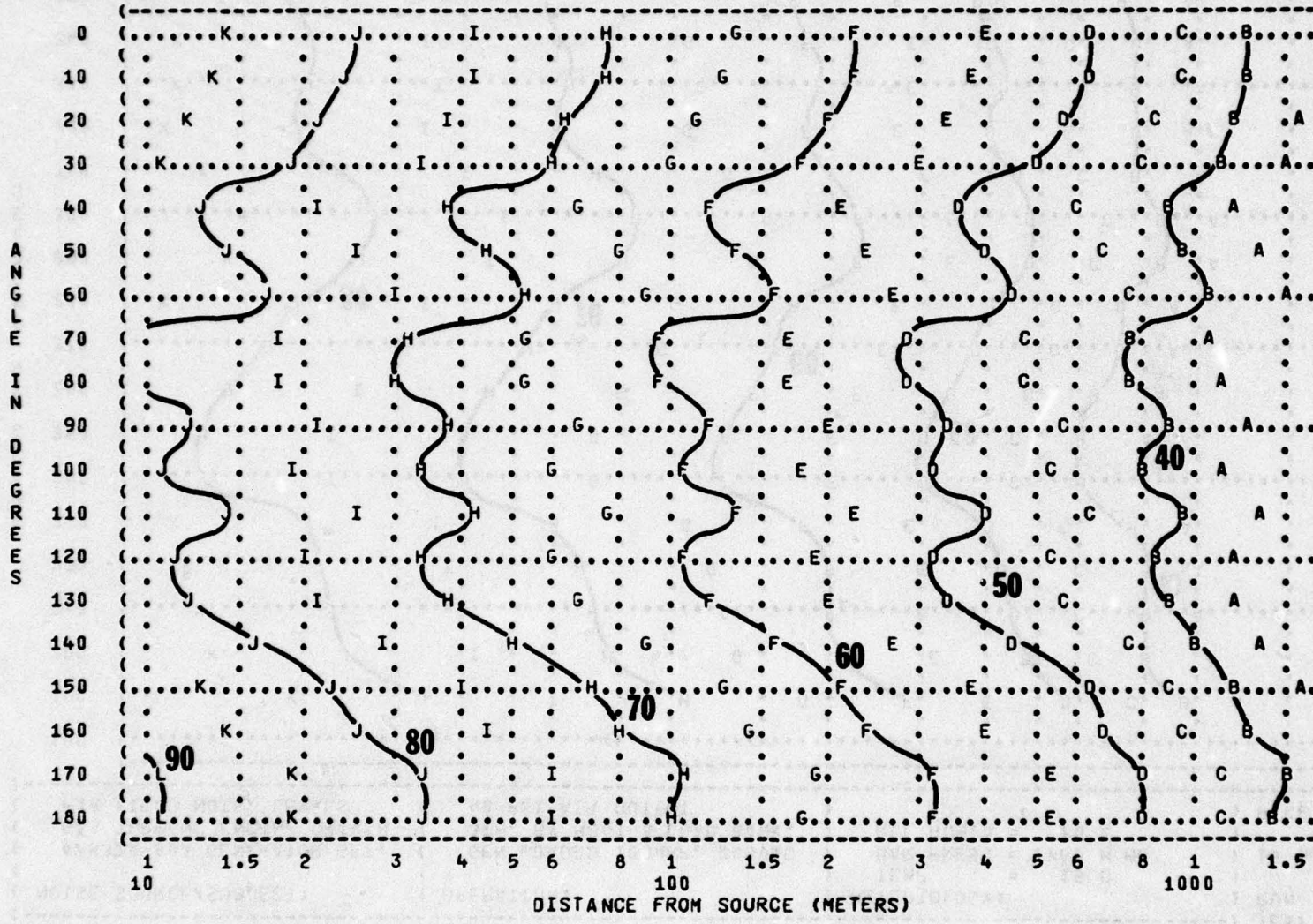


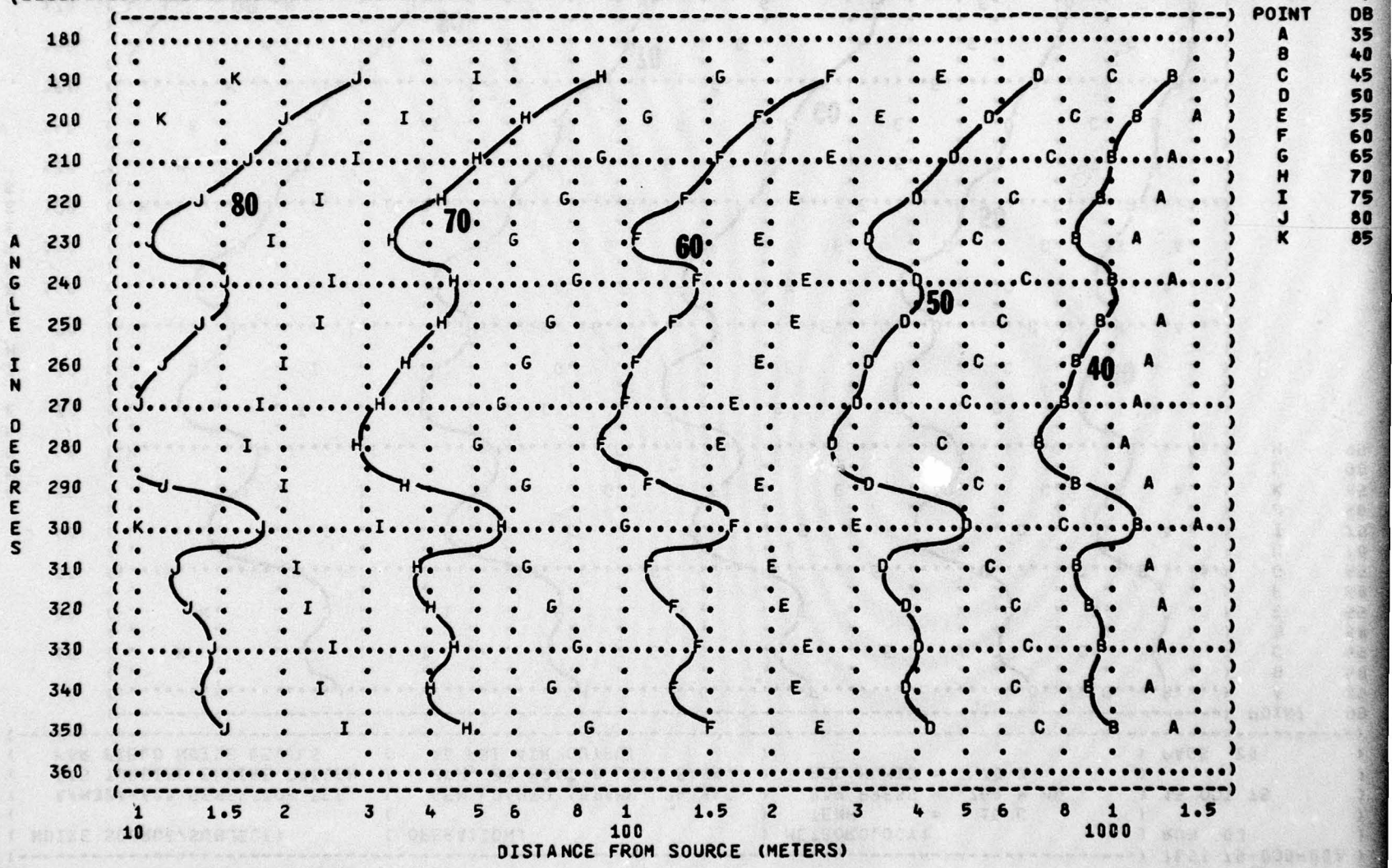
FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 02
15 OCT 75
PAGE 20

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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



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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
15 OCT 75
PAGE 20

NOISE SOURCE/SUBJECT:
SUNDSTRAND-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FOR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

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

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

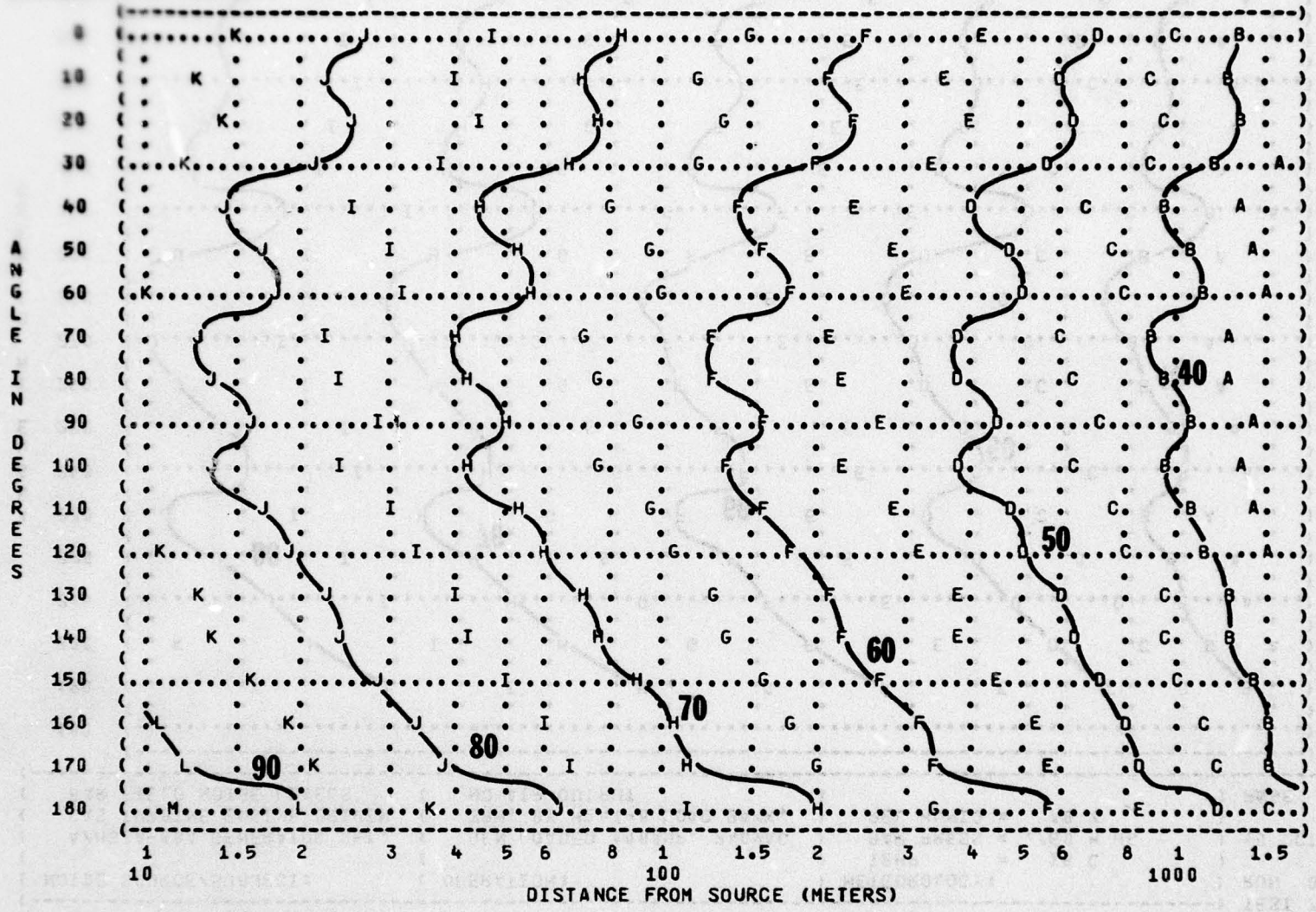


FIGURE: 9 — SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 04
15 OCT 75
PAGE 20

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

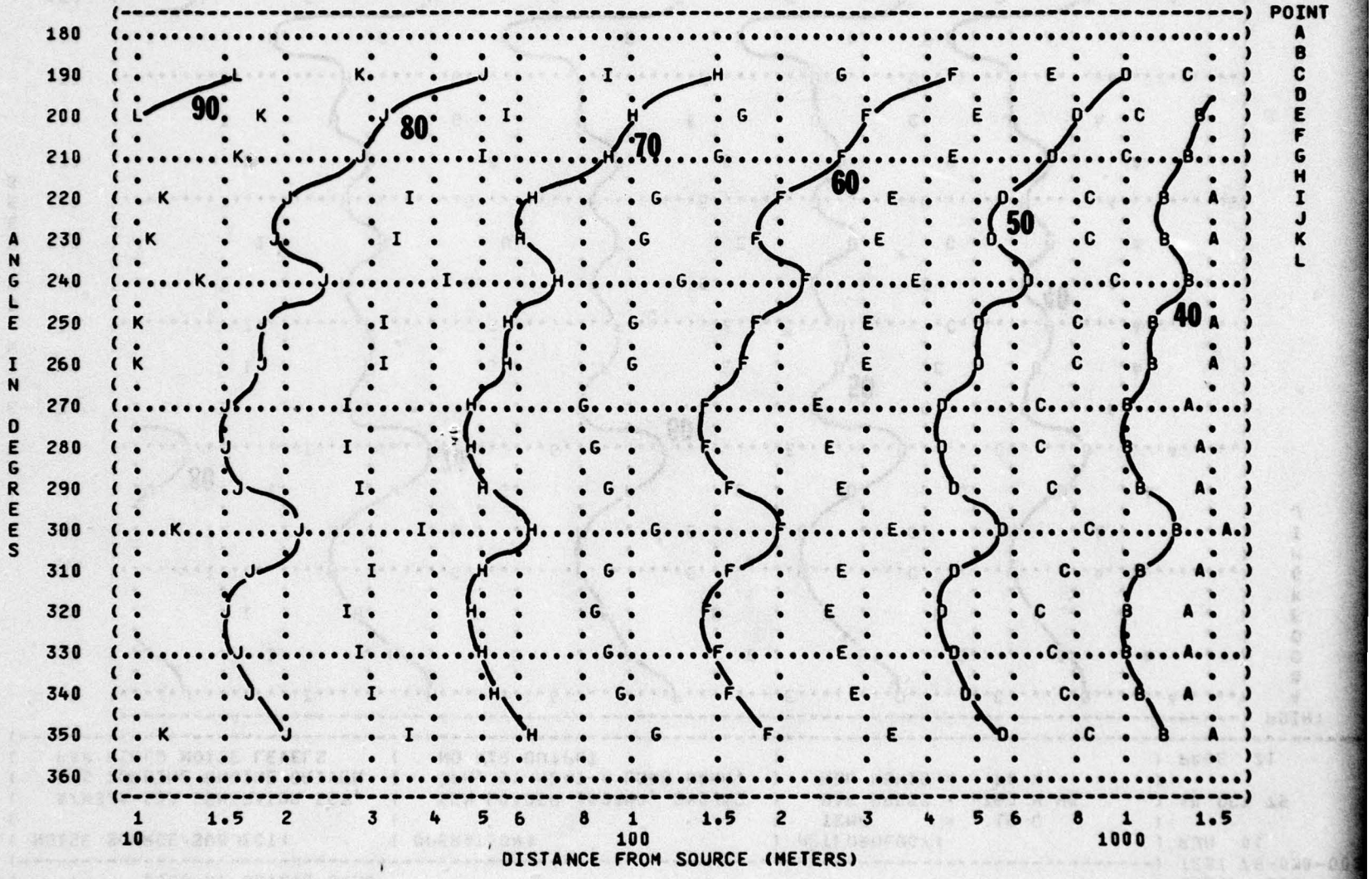


FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-030-002 RUN 01 15 OCT 75 PAGE 21

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

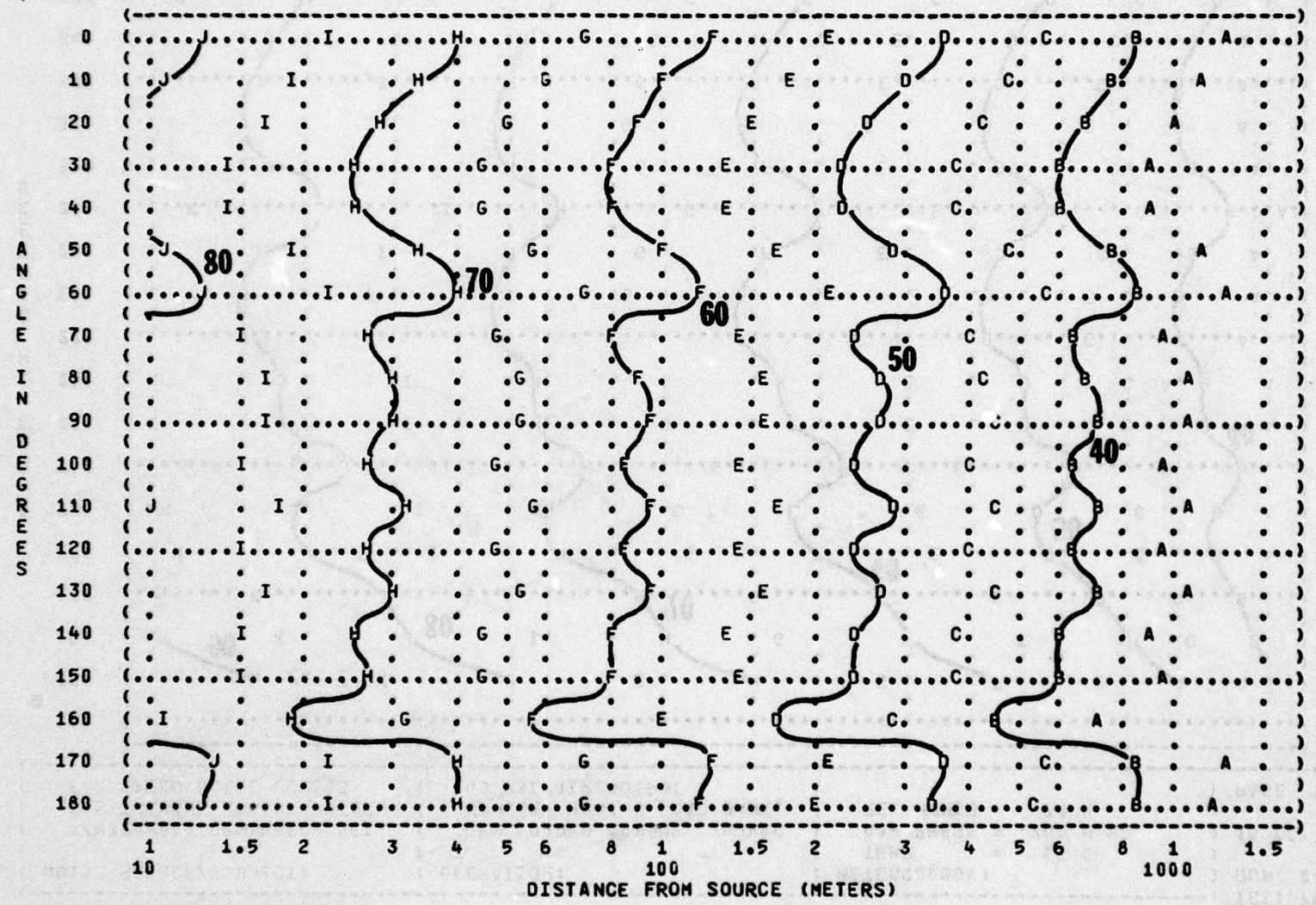


FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 02
15 OCT 75
PAGE 21

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

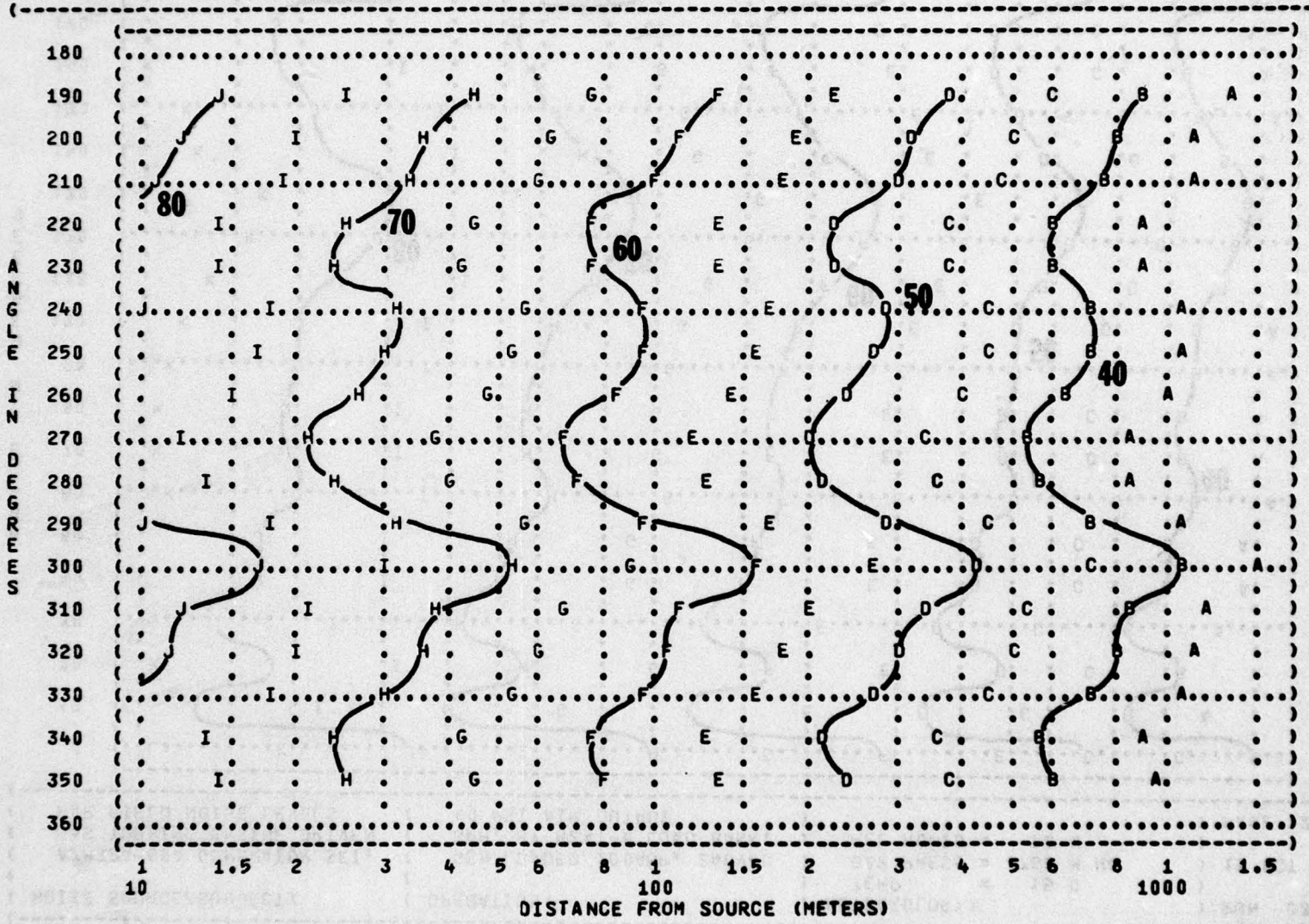


FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

IDENTIFICATION: OMEGA 1.4; TEST 75-030-002; RUN 03; 15 OCT 75; PAGE 21

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

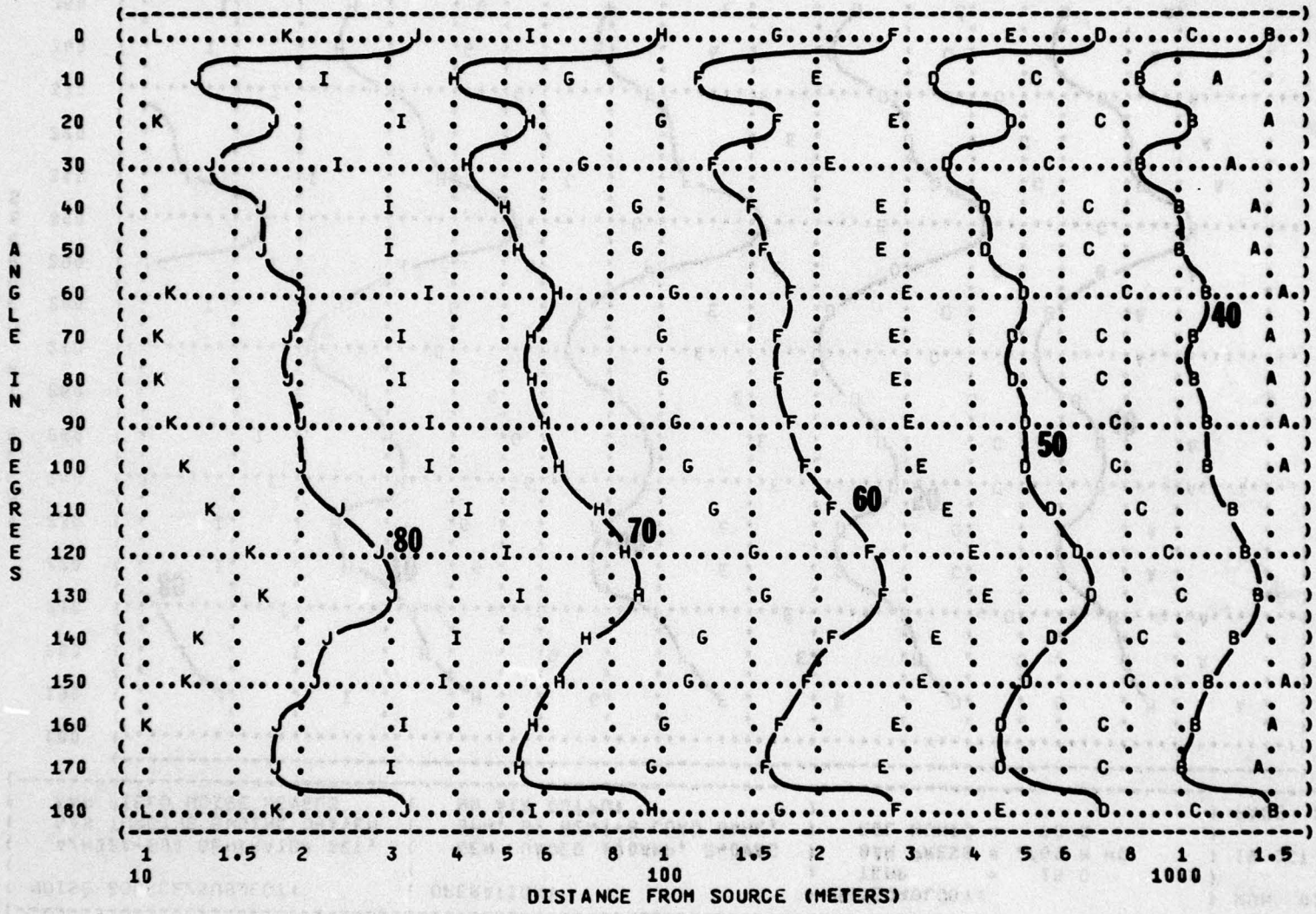


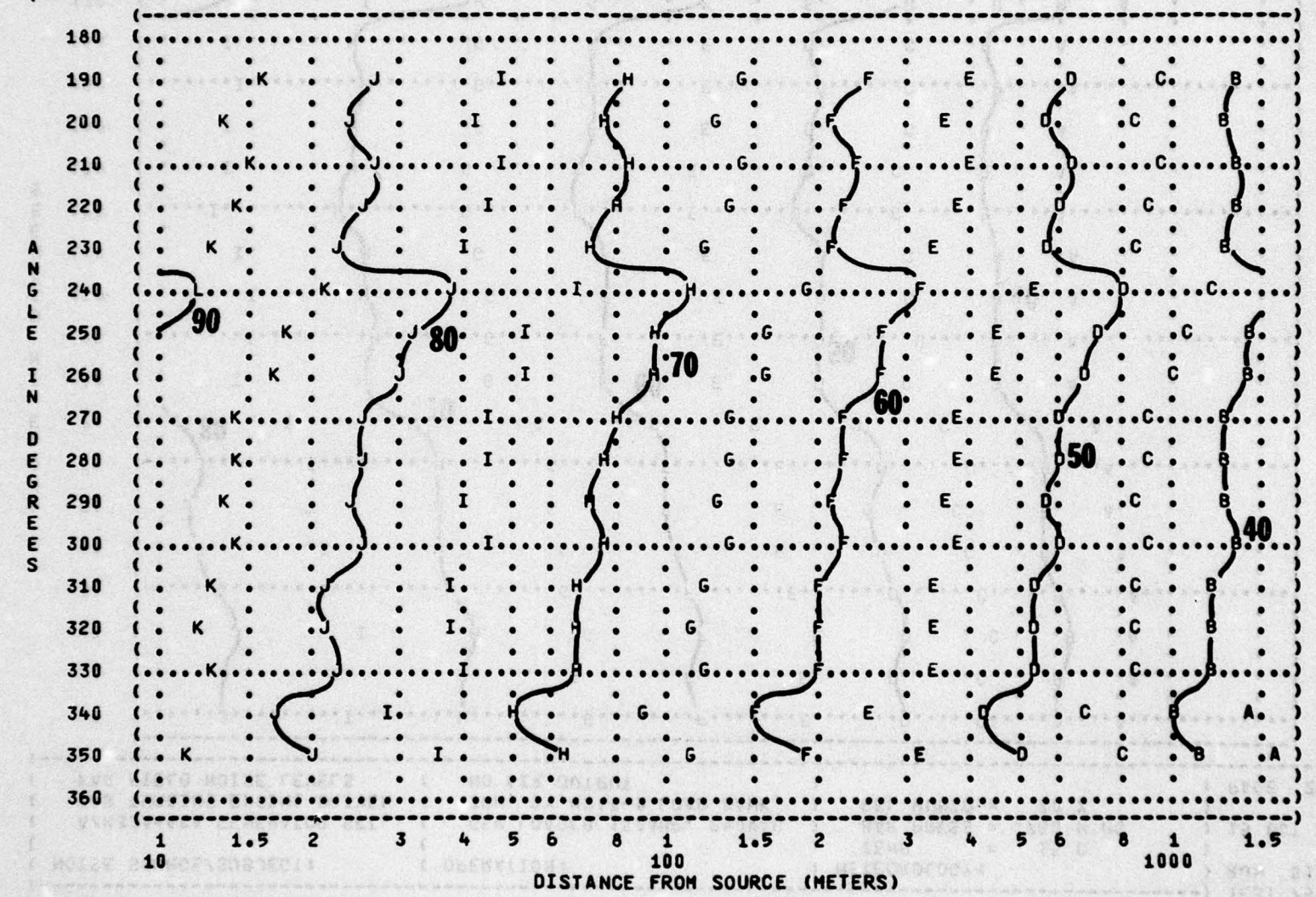
FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

IDENTIFICATION: OMEGA 1.4, TEST 75-030-002, RUN 04, 15 OCT 75, PAGE 21



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

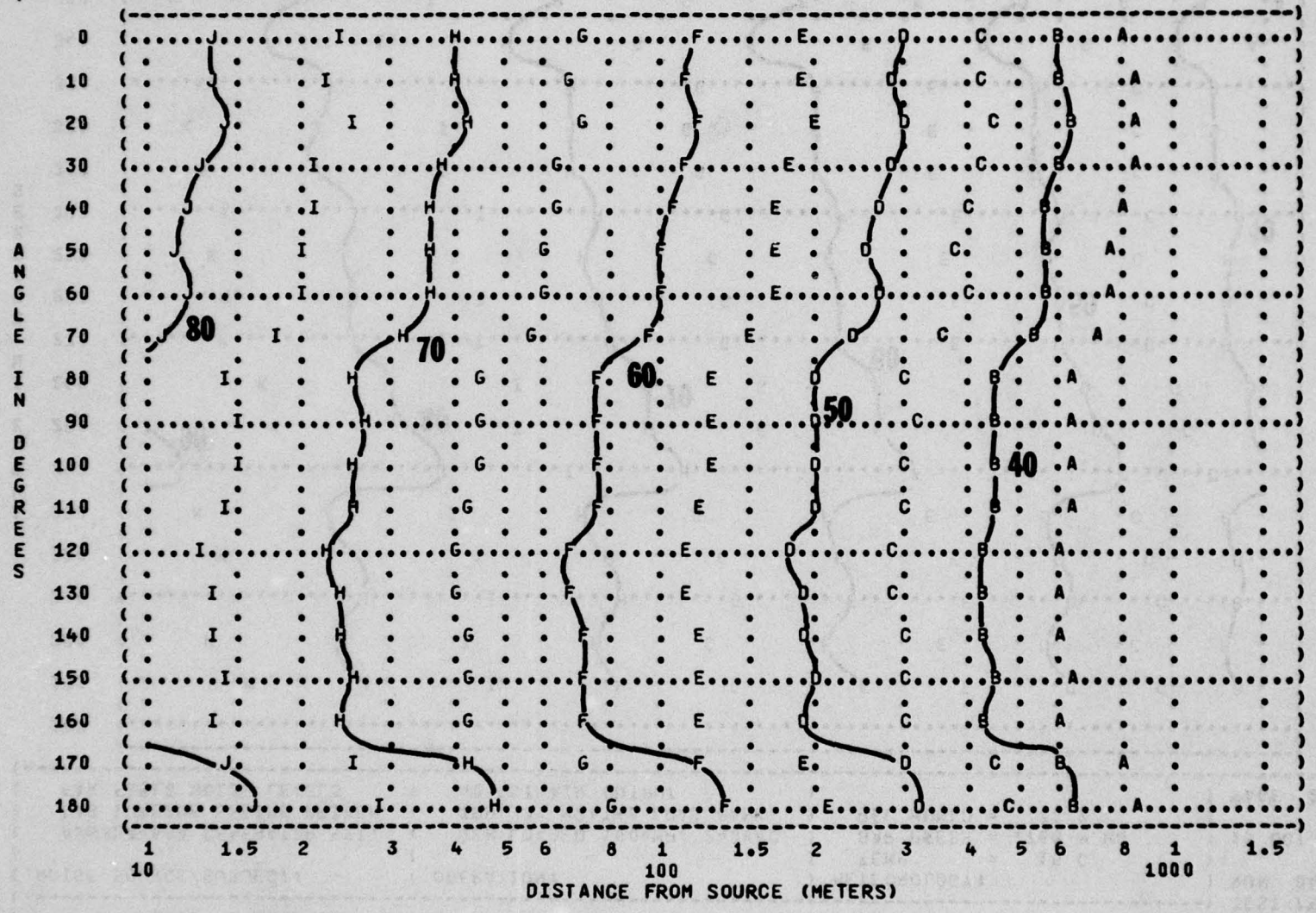
FIGURE: 9 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 01
15 OCT 75
PAGE 22



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

FIGURE 9 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

IDENTIFICATION: OMEGA 1.4, TEST 75-030-002, RUN 02, 15 OCT 75, PAGE 22

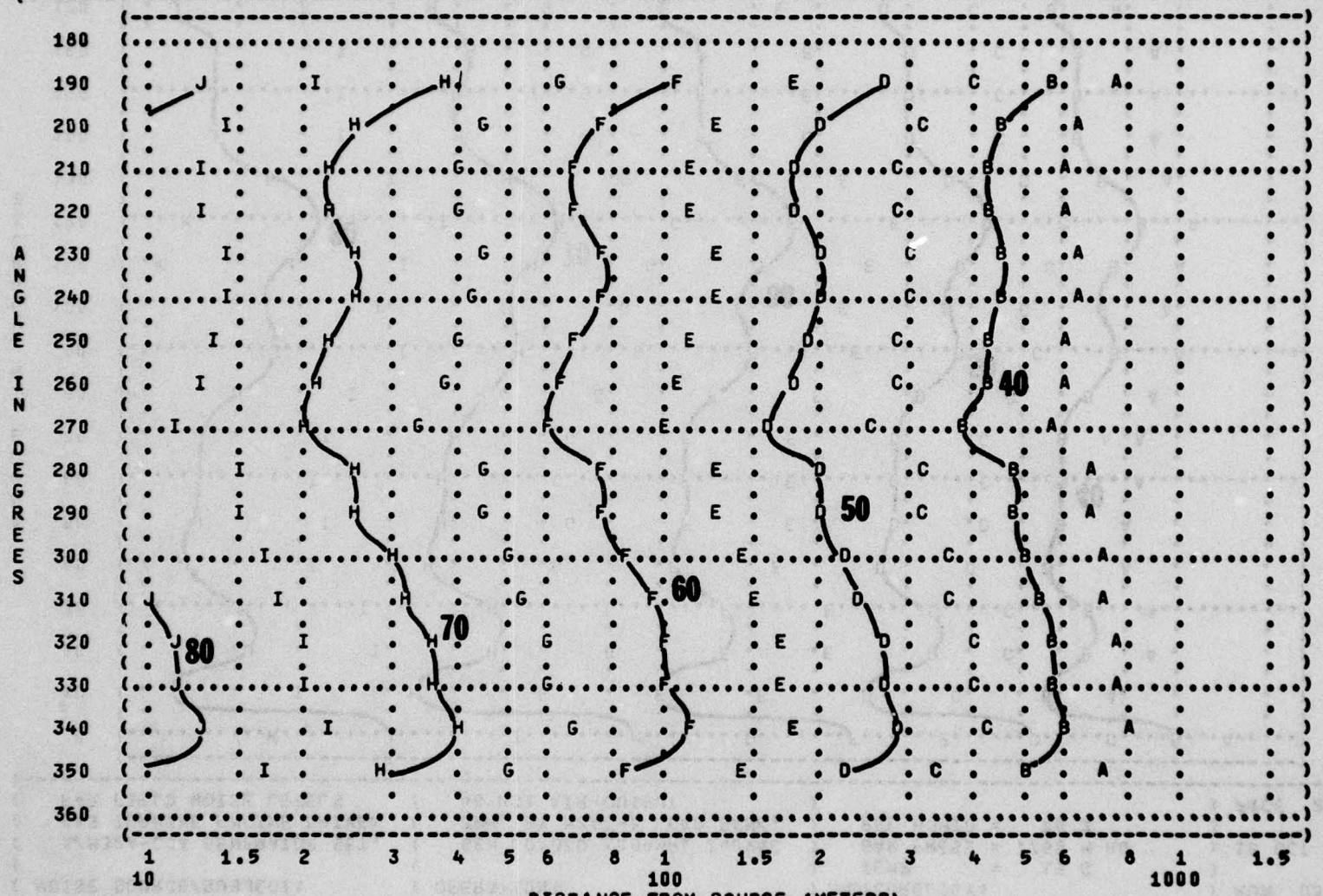


FIGURE: 9

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
15 OCT 75
PAGE 22

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
40 PSI AIR OUTPUT

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

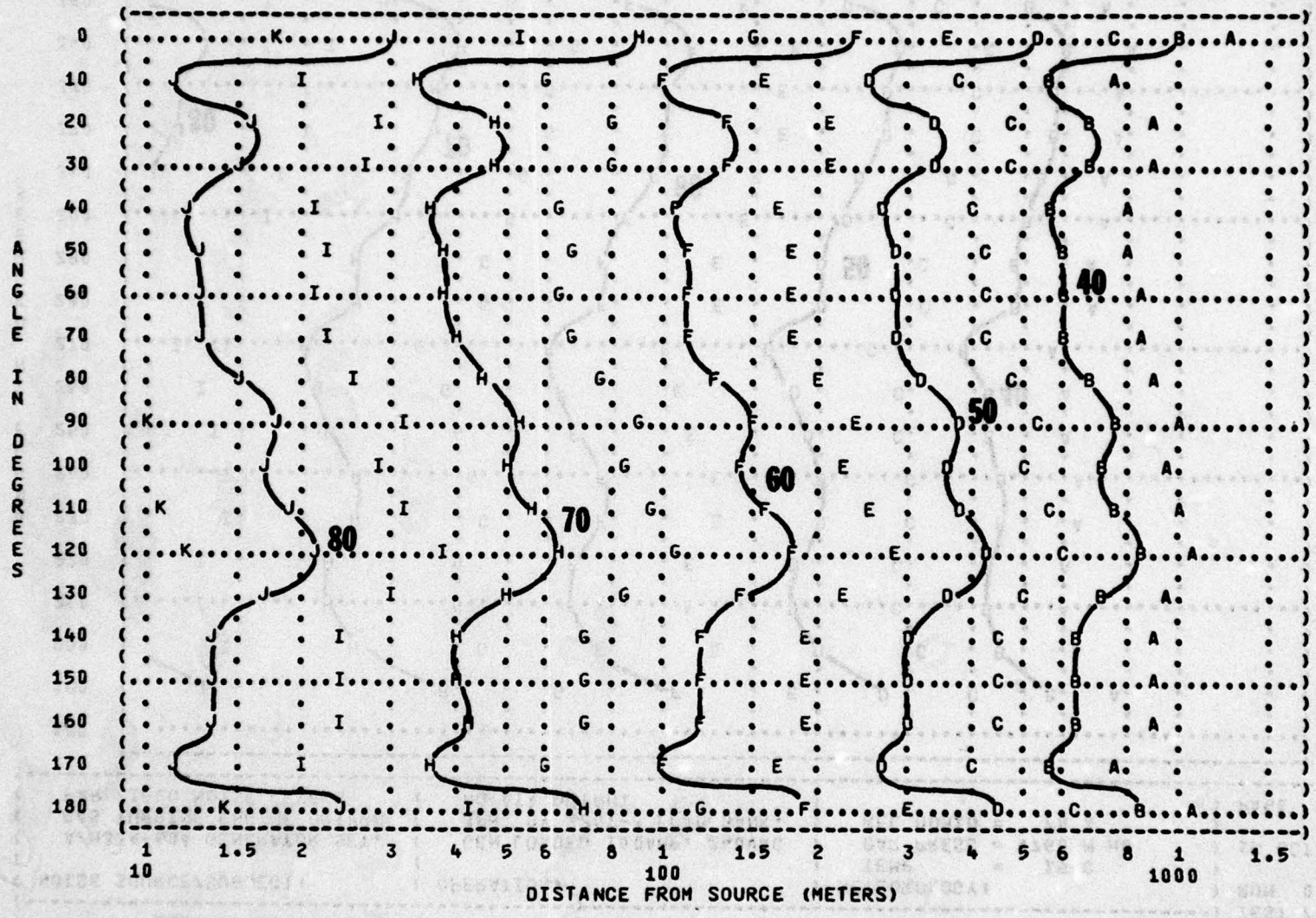


FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

IDENTIFICATION: OMEGA 1.4; TEST 75-030-002; RUN 04; 15 OCT 75; PAGE 22

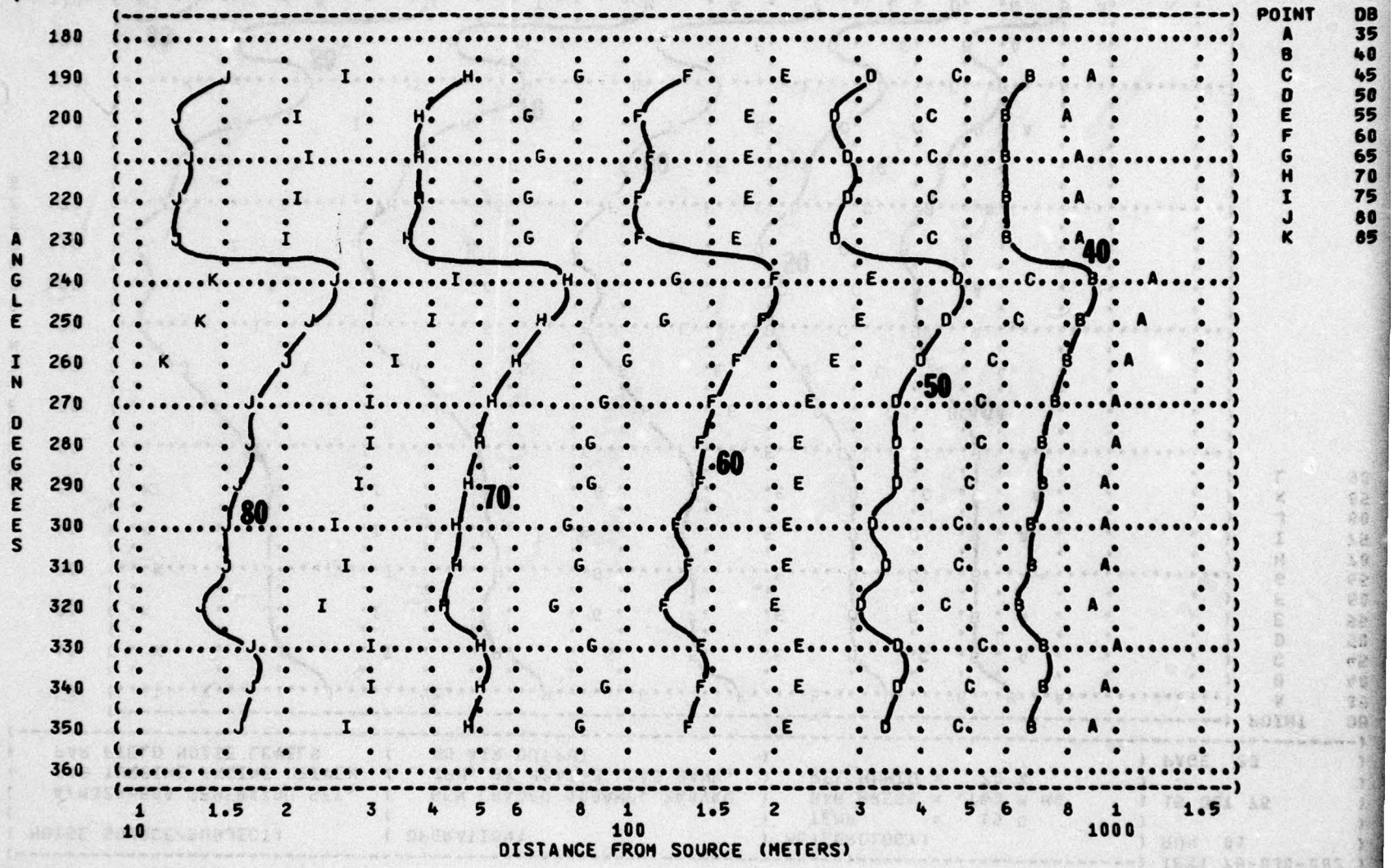


FIGURE: 9

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

IDENTIFICATION:

OMEGA 1.4
TEST 75-030-002
RUN 01

15 OCT 75

PAGE 23

NOISE SOURCE/SUBJECT:

A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:

GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

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

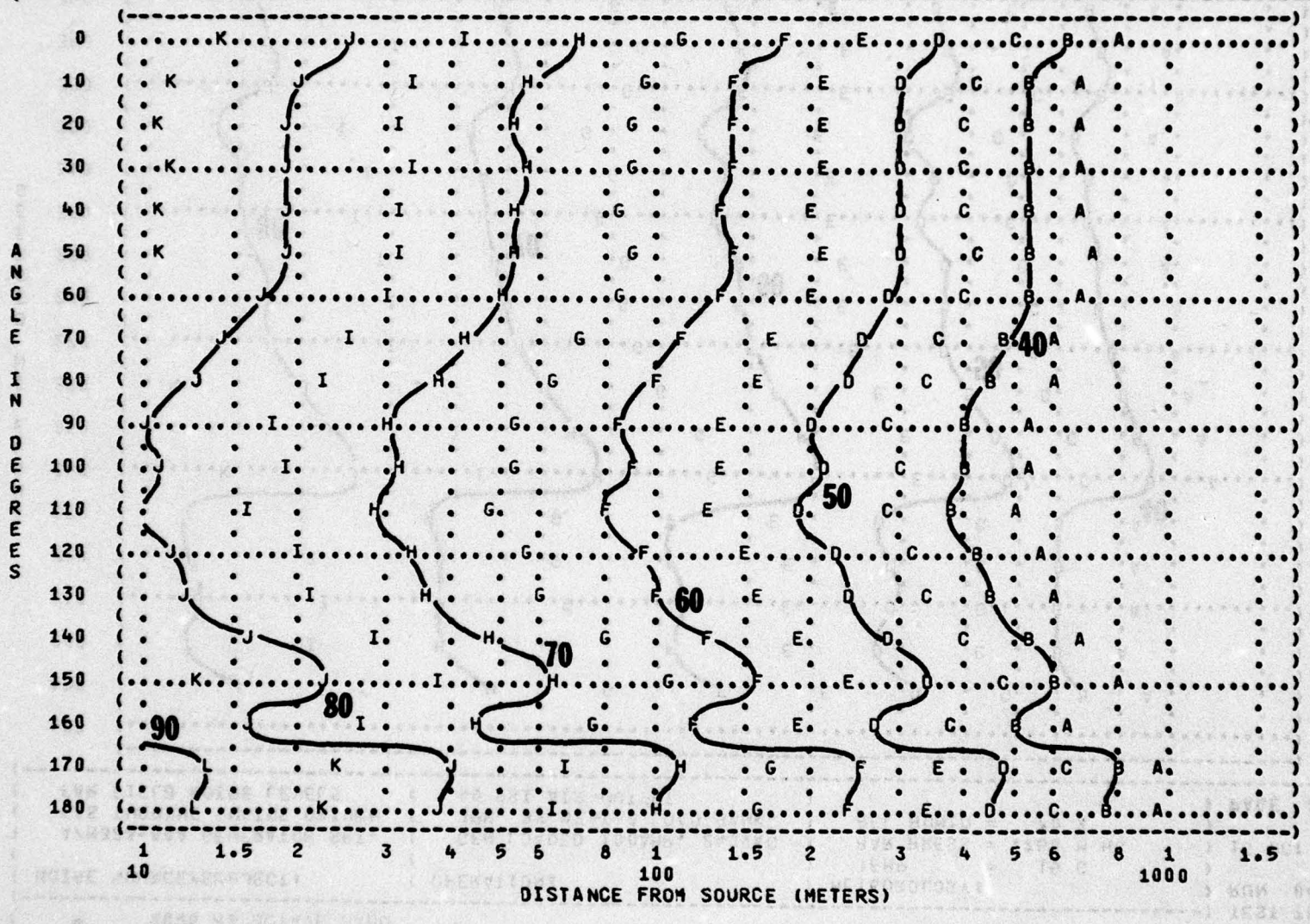


FIGURE: 9

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 02
15 OCT 75
PAGE 23

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET,
GAS TURBINE ENGINE DRIVEN
FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC
3PH, BY M24T-8 LOAD BANK,
NO AIR OUTPUT

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

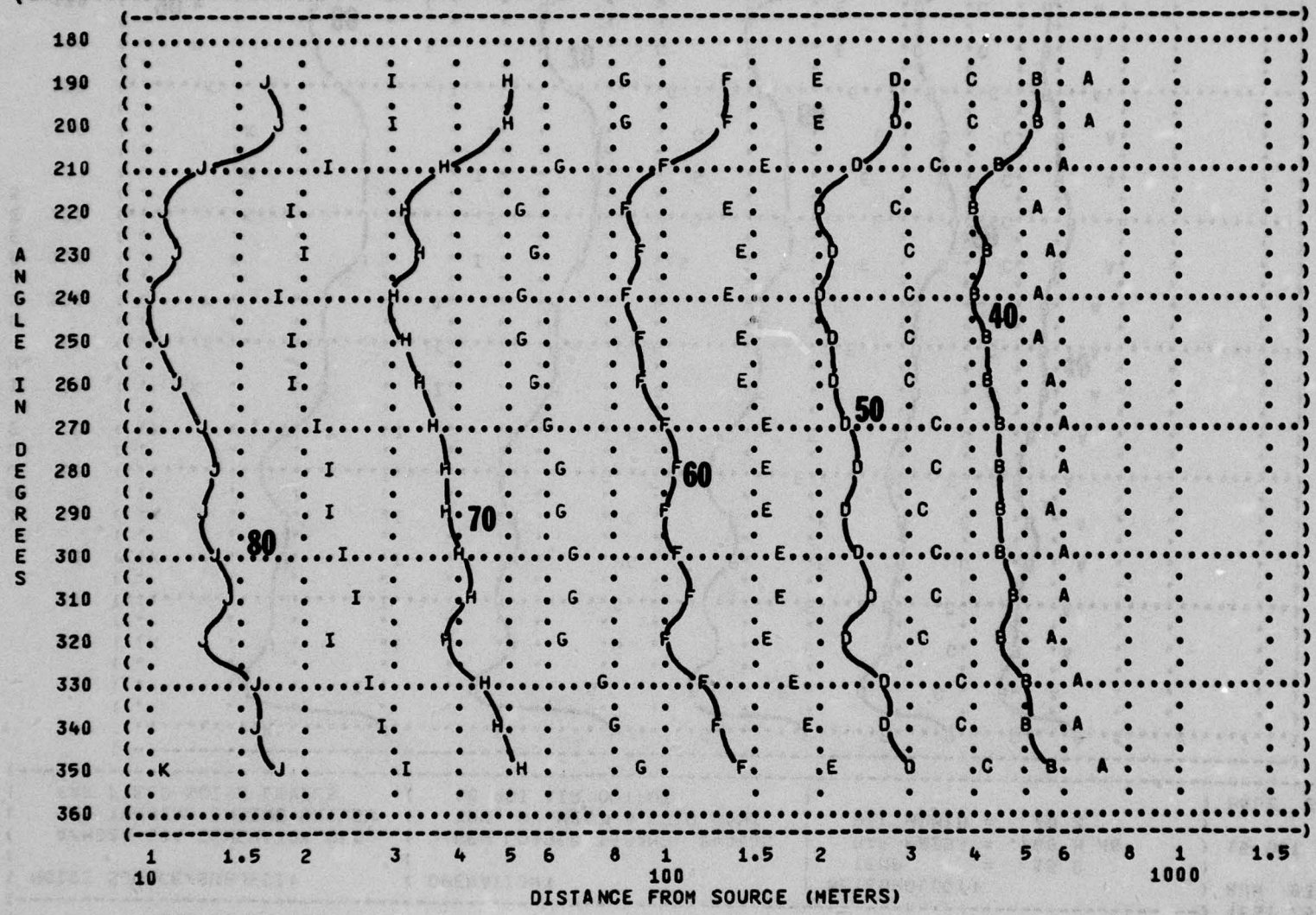


FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

IDENTIFICATION: OMEGA 1.4, TEST 75-030-002, RUN 03, 15 OCT 75, PAGE 23

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

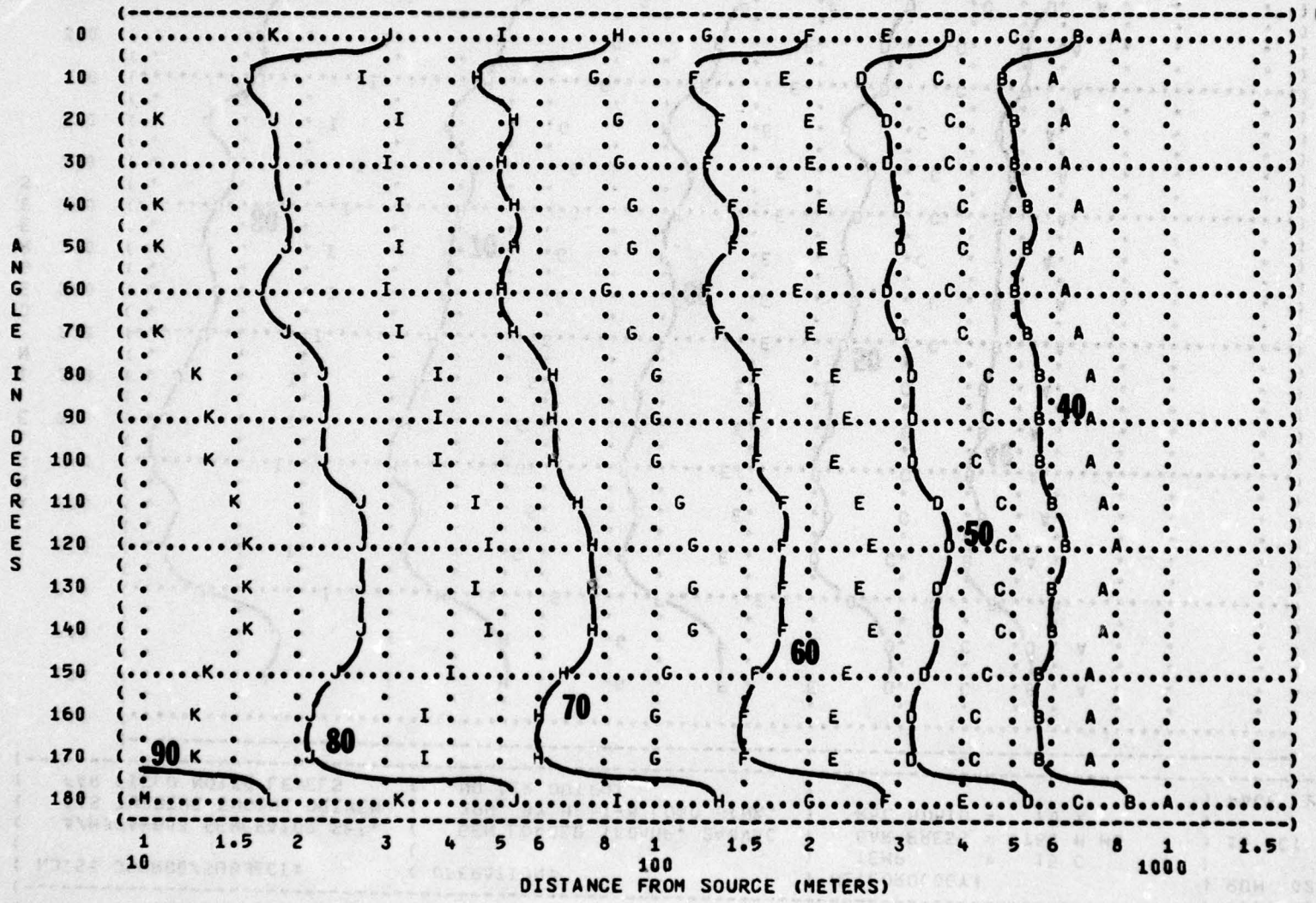


FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

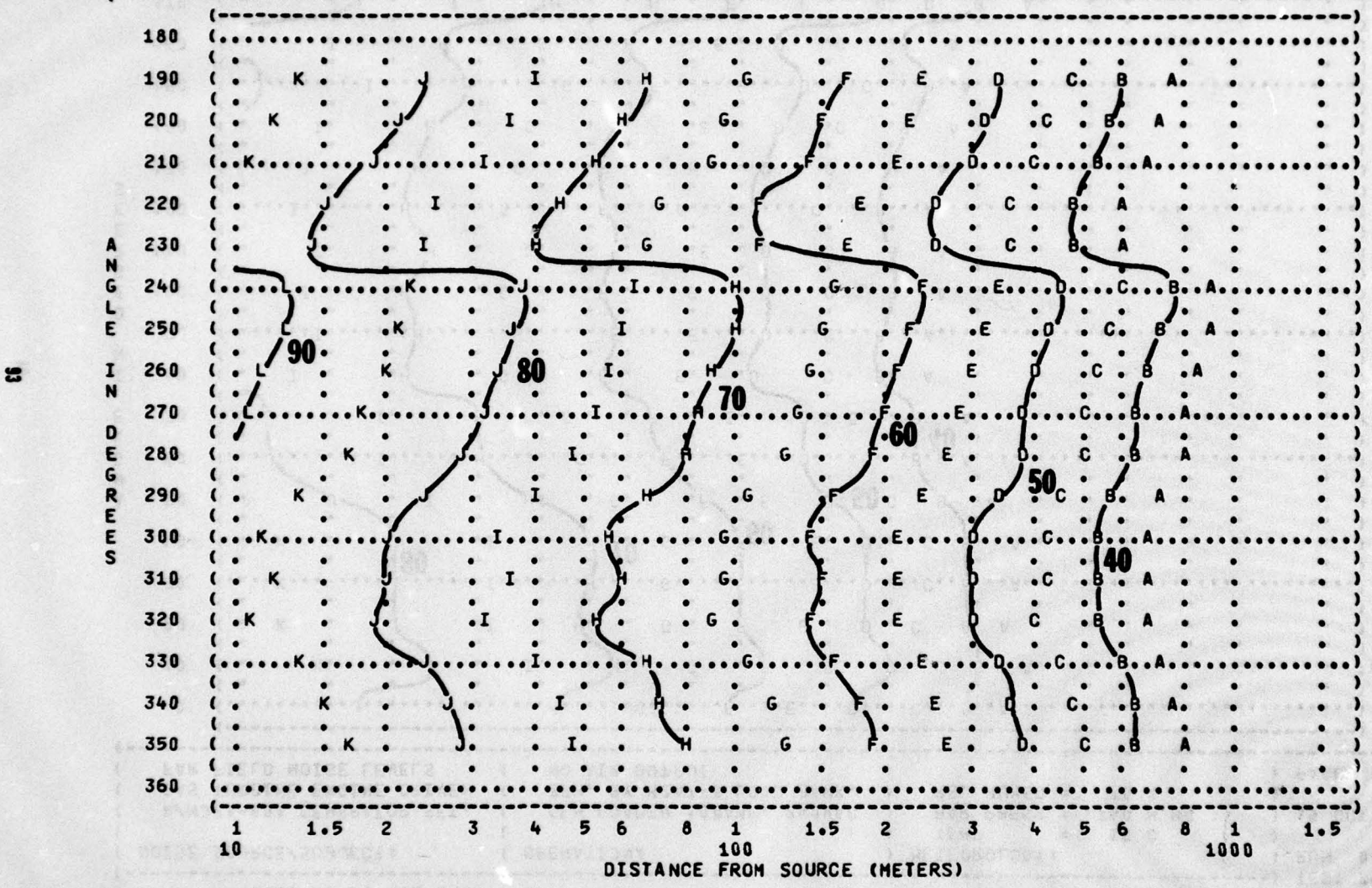
IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 04
15 OCT 75
PAGE 23

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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



AD-A048 943 AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OHIO F/G 20/1
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 105. A/M32A-6--ETC(U)
DEC 76 N A FARINACCI
AMRL-TR-75-50-VOL-105

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2 OF 2
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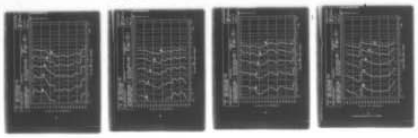

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FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 01
15 OCT 75
PAGE 24

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

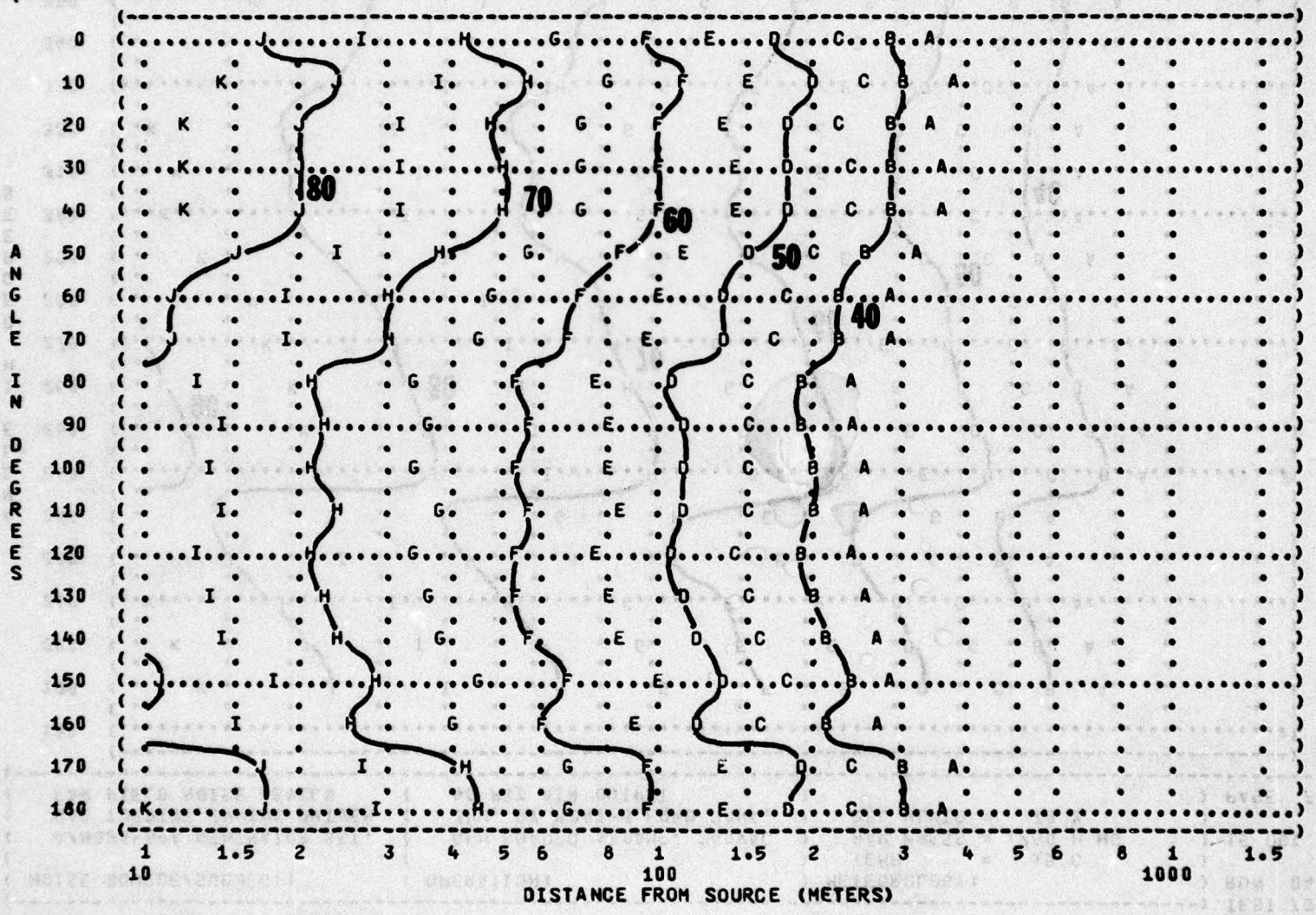

FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION: GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, NO AIR OUTPUT

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

IDENTIFICATION: OMEGA 1.4; TEST 75-030-002; RUN 02; 15 OCT 75; PAGE 24

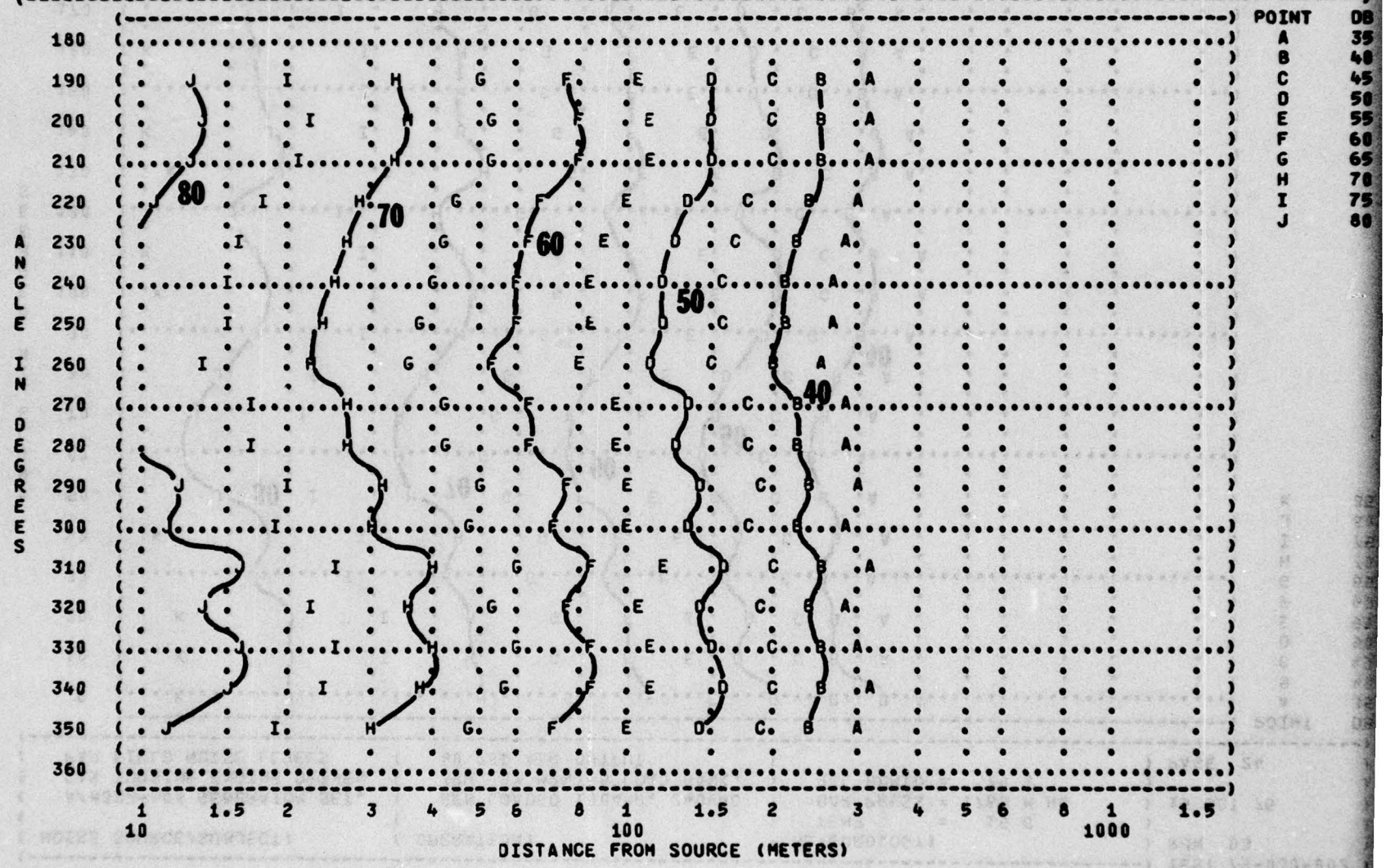

FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-030-002
RUN 03
15 OCT 75
PAGE 24

NOISE SOURCE/SUBJECT:
A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

OPERATION:
GEN LOADED 100AMP, 240VAC 3PH, BY M24T-8 LOAD BANK, 40 PSI AIR OUTPUT

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

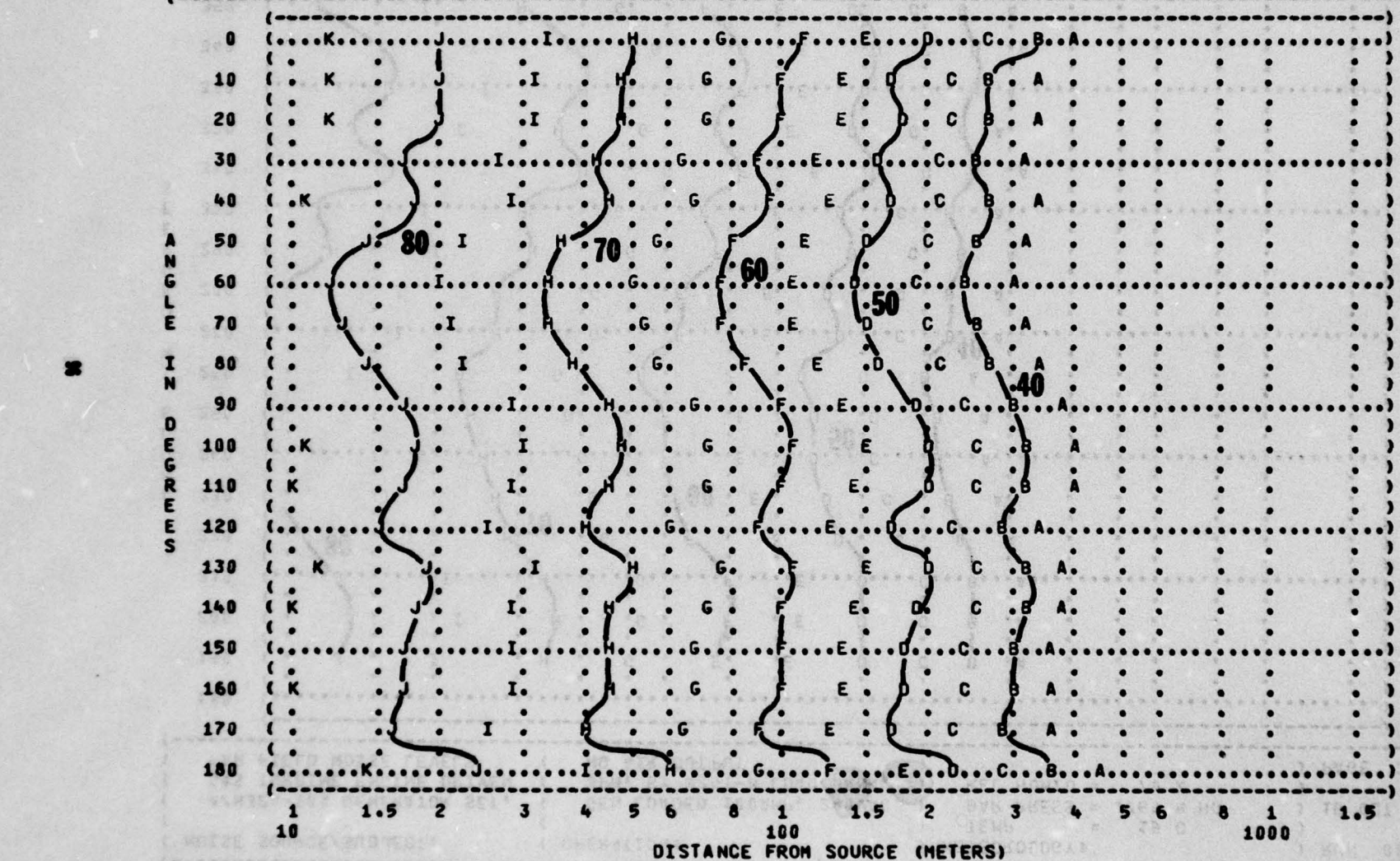

FIGURE 9: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET, GAS TURBINE ENGINE DRIVEN FAR FIELD NOISE LEVELS

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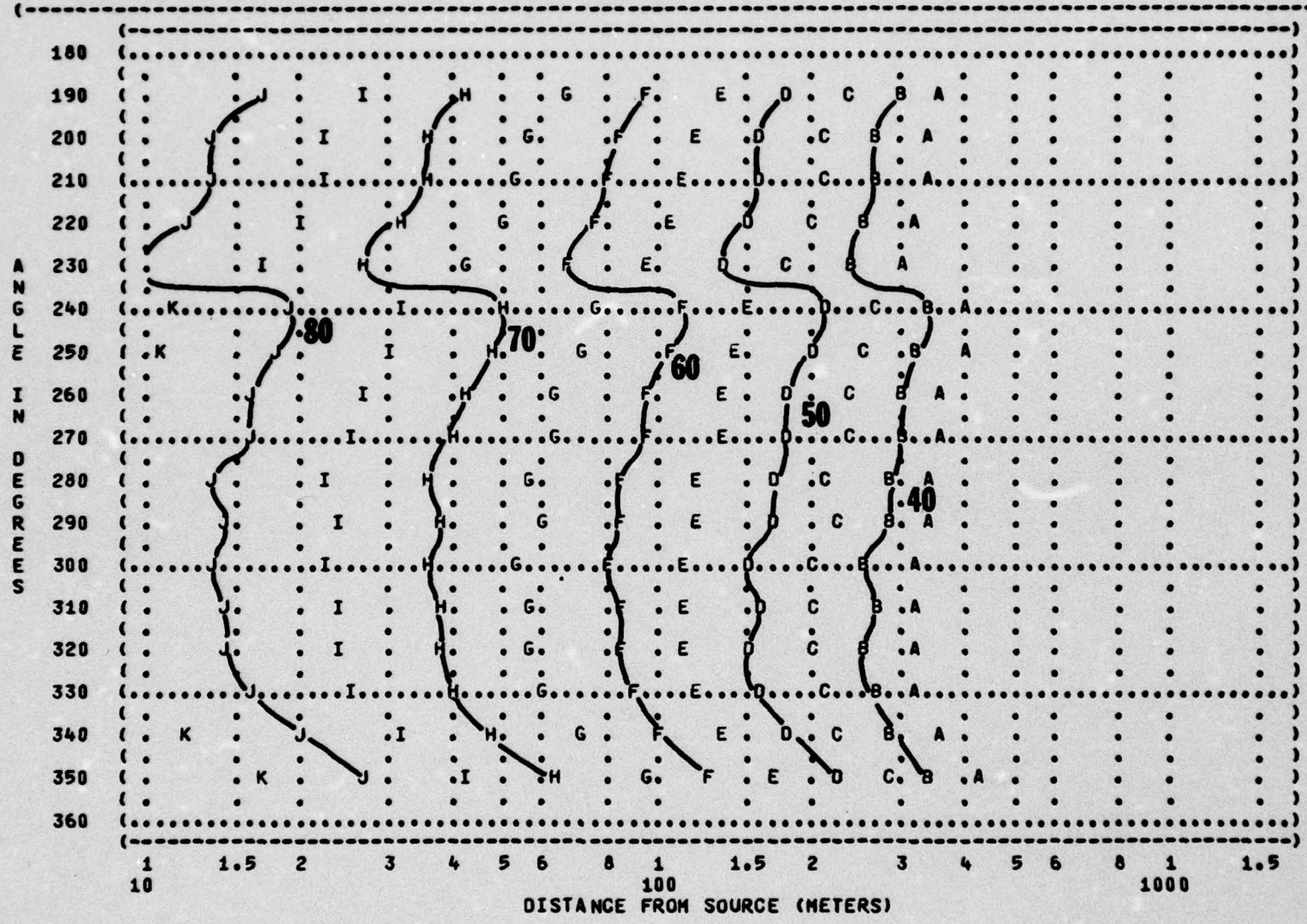
IDENTIFICATION: OMEGA 1.4; TEST 75-030-002; RUN 04; 15 OCT 75; PAGE 24



*U.S.Government Printing Office: 1977 — 757-080/253