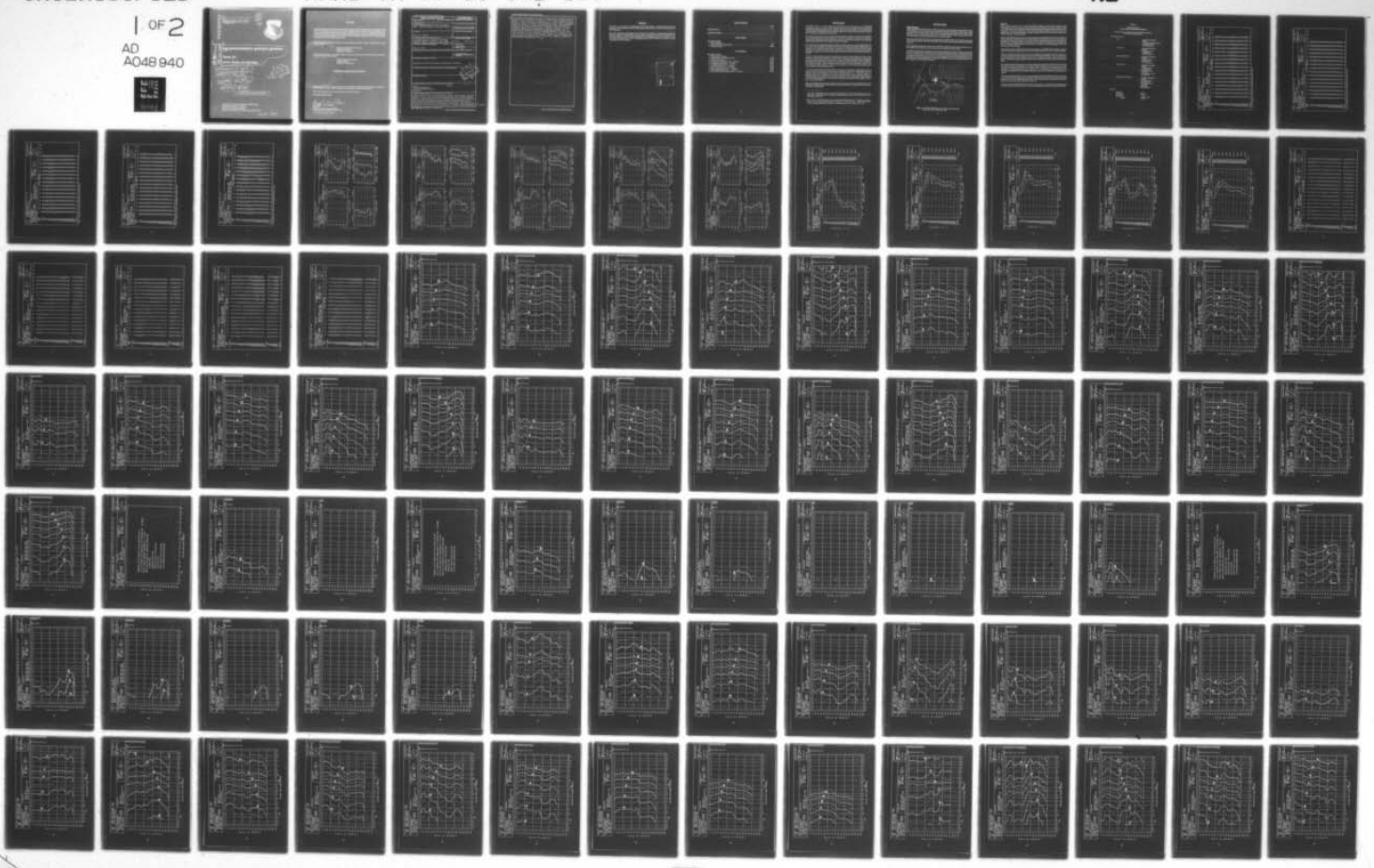
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FOR THE COMMANDER

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

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The USAF KC-97L is a multipurpose cargo (fuel/troops) aircraft powered by four R-4360-59B reciprocating and two J47-25A turbojet engines. This report provides far-field measured and extrapolated data defining both physical and psychoacoustic measures of the bioacoustic environments produced by this aircraft operating on a ground runup pad for five engine/power conditions. Far-field data measured at 17 locations are normalized to standard meteorological

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conditions and extrapolated from 75-8000 meters to derive sets of equal-value contours as a function of angle and distance from the source. These contours are measures of: overall and band sound pressure levels, C-weighted and A-weighted sound levels, preferred speech interference level, perceived noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Refer to Volume 1 of this handbook, "USAF Bioenvironmental Noise Data Handbook, Vol 1: Organization, Content and Application", AMRL-TR-75-50(1) 1975, for discussion of the objective and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc.

PREFACE

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

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

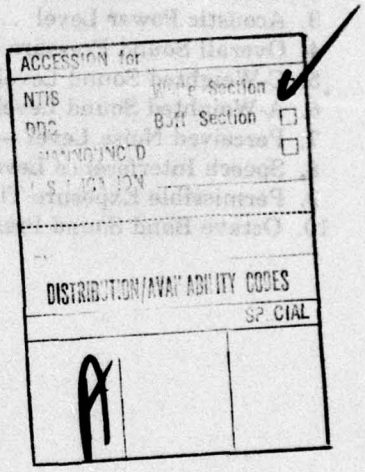


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INTRODUCTION

The USAF KC-97L is a multi-purpose cargo (fuel/troops) aircraft powered by four R-4360-59B reciprocating and two J47-25A turbojet engines. The aircraft was manufactured by the Boeing Company, the reciprocating engines were manufactured by the Pratt and Whitney Aircraft Division of the United Aircraft Corporation, and the turbojet engines by the General Electric Company, Packard Motors Company, and Studebaker Corporation.

This volume provides measured and extrapolated data defining bioacoustic environments produced by this aircraft during ground runup operations. Such data are essential to evaluate ear protection requirements, limiting personnel exposure times, voice communication capabilities, and annoyance problems associated with ground runups of the KC-97L aircraft.

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

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

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

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

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

FAR-FIELD NOISE

MEASUREMENTS

AMRL acquired far-field data during a 1-hour test period, thus keeping similar meteorological conditions throughout the test. Figure 1 shows the ground runup area (taxiway), ground cover, aircraft orientation and microphone measurement sites on the semicircle. The center of the 75 meter radius semicircle used in surveying the engines was on the ground directly below the intersection of the aircraft's centerline and the propeller plane of the inboard engines.

Table 1 provides cockpit readouts of engine characteristics (RPM, fuel flow, etc.) for each power setting used in the far-field tests. Also listed in this table are the surface meteorological conditions during data acquisition.

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

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

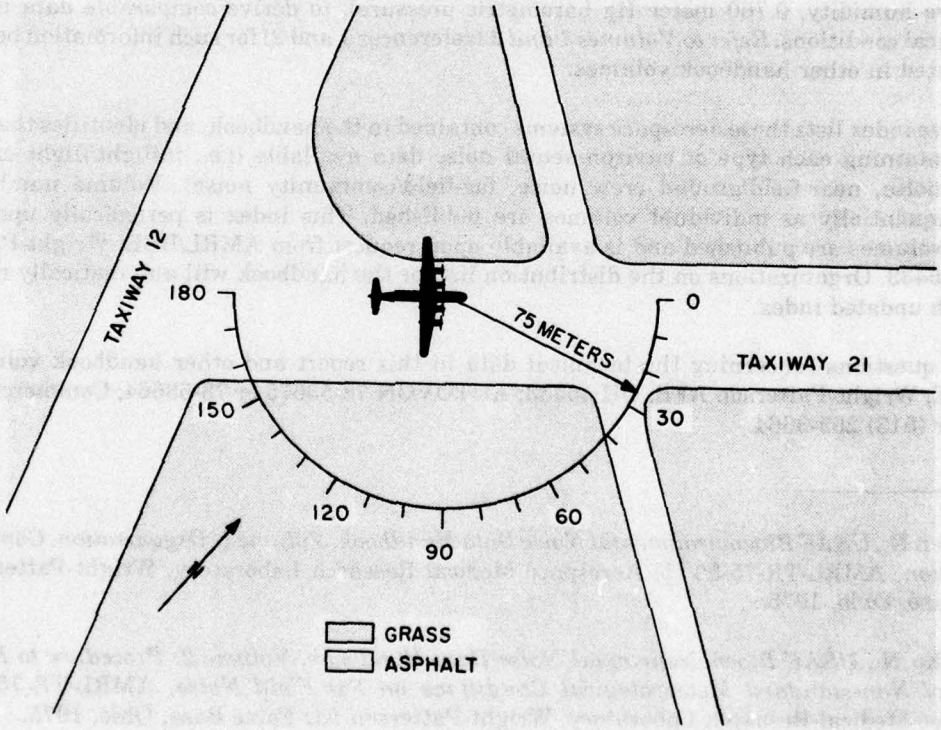


Figure 1. Far-Field Measurement Locations on the Taxiway
Wright-Patterson Air Force Base, Ohio

RESULTS

Table 2 lists the overall and 1/3 octave band SPL measured at the far-field locations under meteorological conditions at the time of the test. Data in all other figures and tables are based on these levels. These data were normalized to 100 meters distance and standard meteorological conditions (15 C temperature, 70% relative humidity, 0.760 meter Hg barometric pressure) and used to derive the graphic data in Figure 2, which provides a compact summary of the far-field noise characteristics of the KC-97L aircraft in a standard format.

Figure 3 and Table 3 present two basic acoustic measures, the acoustic power level and the directivity index, respectively. The acoustic power level describes the power radiated by the source as a function of frequency. The directivity index is a standard acoustical engineering measure that describes the geometric way in which the source radiates this power as a function of both frequency and angle from source. These basic source measures are primarily of interest for acoustical engineers and noise generation/control specialists.

Estimates of the noise levels for intermediate power settings (e.g., 2200 RPM) and/or different number of engines operating (e.g., single engine) can be determined as explained in Volume 1 of this handbook.

Figures 4 through 10 are sets of equal noise contours describing seven different measures of noise as a function of angle and distance from the source for standard day meteorology. They are, respectively, overall sound pressure level, C-weighted sound level, A-weighted sound level, perceived noise level, speech interference level, permissible exposure times for personnel and octave band sound pressure levels.

Data excessively influenced by spurious background/electronic noise were eliminated from all figures and tables. No data are presented at the 170/180 degree locations for the idle power nor at the 160/170/180 locations for the other power settings because of turbulent air flow behind the aircraft. Typically, the A-weighted levels for these angles are 5 to 10 dBA below the level measured at the preceding microphone location for reciprocating engines noise and 10 to 20 dBA for the combination of engines.

Test personnel performed noise surveys during quiet periods when the background noise was minimal, e.g., early in the morning when no other aircraft or engine test stands were operating. Data eliminated because they were near the background/electronic noise were generally not significant because the levels were so low (e.g., Table 2, idle power with jets).

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

TABLE 1

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS

KC-97L Aircraft, Ground Runups, Wright-Patterson AFB, OH
Tail #52918, 4 September 1974

Aircraft Engine Operation

Idle	All Reciprocating Engines 900 RPM 17 Inches Hg, Manifold Pressure 350 LBS/HR, Fuel Flow No Turbojet Engines
Power Check	All Reciprocating Engines 2050 RPM 29 Inches Hg, MAP 750 LBS/HR, FF No Turbojet Engines
Maximum Recip Power	All Reciprocating Engines 2650 RPM 58 Inches Hg, MAP 2400 LBS/HR, FF No Turbojet Engines
Idle (With Jets)	All Reciprocating Engines 900 RPM 18 Inches Hg, MAP 350 LBS/HR, FF Both Turbojet Engines 40 %RPM 540 C, Exhaust Gas Temp 1100 LBS/HR, FF
Maximum Power (With Jets)	All Reciprocating Engines 2650 RPM 58 Inches Hg, MAP 2400 LBS/HR, FF Both Turbojet Engines 100 % RPM 690 C, EGT 6000 LBS/HR, FF

Meteorology

Temperature	17.2 C
Bar Pressure	0.767 M Hg
Rel Humidity	50 %
Wind — Speed	4.1 M/Sec (8 Kts)
— Direction	060 Deg

TABLE: 2

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 2

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	79	78	79	77	78	79	78	79	80	78	78	77<	76<	76<	75<	74<	74<		
31.5	83	81	81	81	80	82	82	85	86	88	85	84	82	80	82	78	79		
40	80	80	80	79	78	78	79	80	81	78	78	80	79	77<	75<	77<	75<		
50	80	80	82	80	80	82	80	78	79	79	79	79	77	77	79	77	77		
63	79	79	78	79	79	79	78	78	79	79	79	77	78	80	78	78	74<		
80	87	87	88	89	89	89	92	91	89	87	88	87	87	89	86	86	82		
100	89	89	90	89	91	90	93	91	90	90	91	91	89	89	88	88	85		
125	84	84	86	85	84	84	86	86	86	83	85	85	86	86	86	84	82		
160	81	80	82	80	80	79	80	80	78	76	77	79	79	79	79	80	75		
200	76	75	76	74	74	73	73	73	72	69	69	70	71	72	74	73	68		
250	74	72	75	72	70	70	70	69	67	63	64	64	68	69	70	70	65		
315	71	69	72	68	68	67	65	64	60	61	58	59	63	66	67	68	64		
400	71	67	70	67	65	64	61	59	56<	56<	55<	57<	60	62	65	68	63		
500	68	65	67	65	61	61	57<	58<	55<	56<	55<	58<	59	62	66	69	63		
630	65	61	64	63	57<	58	56<	57<	54<	55<	52<	54<	55<	55<	57<	62	54<		
800	61	59	63	61	56<	57<	53<	56<	53<	54<	53<	55<	55<	55<	56<	59	53<		
1000	60	58	61	59	55<	55<	52<	55<	52<	52<	52<	52<	53<	54<	56	57	52<		
1250	62	58	63	61	57	56	53<	56	54<	53<	52<	52<	54<	55<	56	56	51<		
1600	70	60	68	65	59	57	54	58	57	55	54	56	57	58	58	57	52		
2000	60	57	59	58	55	54	52	56	54	52	52	53	54	56	57	58	53		
2500	59	56	59	58	55	54	52	55	54	52	52	53	55	56	58	57	51		
3150	60	56	59	58	55	54	53	56	54	53	53	55	56	59	60	58	52		
4000	57	54	57	57	54	53	52	55	53	52	53	54	54	58	59	57	50		
5000	54	51	54	54	51	51	49	52	50	49	50	51	52	56	57	55	48		
6300	50	48	50	50	48	48	47	49	48	47	47	48	49	53	54	52	46		
8000	49<	47<	48<	48<	46<	46<	45<	47<	45<	45<	44<	44<	45<	48<	49<	47<	41<		
10000	46<	45<	46<	47<	45<	45<	45<	46<	45<	42<	41<	41<	41<	42<	44<	42<	40<		
OVERALL	93	93	95	94	94	94	96	95	95	94	95	94	93	94	93	92	90		

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 2

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 2

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	77	77	75<	76<	78	77	76<	75<	77	75<	74<	71<	71<	71<	71<	71<			
31.5	78	77	76	76	76	77	79	81	81	82	81	82	80	80	82	79			
40	78	79	81	79	80	79	79	80	81	81	82	82	82	80	80	76<			
50	93	95	94	95	96	95	95	96	100	99	101	100	100	97	96	90			
63	82	85	84	91	85	85	85	84	86	88	89	88	89	87	87	82			
80	87	90	92	93	94	92	97	94	94	97	95	95	95	94	89	87			
100	95	96	95	95	95	92	94	93	90	94	94	93	93	92	88	89			
125	87	89	87	91	87	85	85	85	85	82	85	85	85	85	87	81			
160	94	96	98	93	93	94	95	92	92	88	93	94	92	93	91	86			
200	96	96	96	93	93	90	94	92	90	88	91	91	91	90	91	86			
250	93	95	94	92	88	87	88	84	83	78	79	80	82	84	85	79			
315	91	94	92	89	88	89	87	82	81	77	76	78	83	83	83	77			
400	93	95	93	93	90	90	86	82	80	78	77	78	82	83	83	80			
500	90	93	90	92	88	86	85	82	81	81	79	79	81	83	82	79			
630	87	91	88	91	85	84	85	82	81	81	78	80	81	83	81	78			
800	86	88	88	88	85	84	85	83	83	80	79	79	80	83	81	79			
1000	84	85	87	86	84	83	83	83	83	79	78	79	80	82	80	77			
1250	83	84	85	85	83	82	83	83	84	79	79	79	80	81	79	75			
1600	83	85	85	85	84	83	83	83	85	79	79	80	80	80	78	74			
2000	81	83	83	84	84	84	83	83	84	79	78	79	79	79	76	73			
2500	81	82	83	83	84	84	84	83	84	79	79	79	79	79	75	72			
3150	81	81	83	83	84	85	84	84	84	81	80	80	80	79	75	72			
4000	81	82	83	84	84	85	84	84	83	80	77	77	78	77	74	72			
5000	78	79	81	81	82	82	82	81	80	77	74	74	74	73	70	68			
6300	76	77	79	79	80	80	79	79	78	76	72	71	72	71	69	67			
8000	74	75	77	78	78	79	77	78	76	72	69	68	69	67	66	64			
10000	72	74	76	77	76	77	76	76	75	68	65	63	63	62	61	59			
OVERALL	103	105	105	104	103	102	103	102	103	103	104	103	103	102	100	96			

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE 2: MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 75 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 2

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

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

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 2

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 2

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	80	83	82	80	82	80	81	80	81	85	79	78	76<	80	76<	80	76<		
31.5	83	84	83	82	82	81	83	84	87	87	86	85	82	81	81	78	77		
40	80	80	79	78	78	78	80	81	82	80	80	80	79	77<	78	75<	75<		
50	81	81	80	79	79	81	80	78	81	80	79	79	78	78	78	75<	72<		
63	78	82	80	80	80	81	89	82	84	81	83	80	89	82	78	76<	70<		
80	85	87	88	88	88	87	89	89	87	90	88	86	88	85	83	80	76		
100	90	92	95	94	93	93	95	93	90	92	92	92	93	92	88	87	84		
125	84	85	86	85	84	84	85	85	86	84	84	84	86	85	84	82	78		
160	81	83	84	83	81	81	80	82	81	78	79	80	80	78	78	78	73		
200	78	80	78	77	75	75	75	76	75	72	72	73	75	75	74	73	68		
250	77	78	78	75	71	72	71	72	72	70	69	69	71	73	71	71	67		
315	74	75	75	71	69	70	69	68	67	66	65	64	67	70	69	69	65		
400	75	75	76	72	69	69	68	66	65	65	64	64	66	68	68	69	64		
500	73	73	75	72	68	68	68	64	65	64	63	65	65	66	68	67	62		
630	74	73	77	72	69	69	69	66	66	65	65	66	65	63	62	63	57<		
800	77	76	80	74	71	70	70	66	67	65	68	68	68	64	63	62	56<		
1000	78	77	82	75	73	71	70	71	69	65	74	73	66	64	62	61	55<		
1250	77	75	81	75	73	71	71	68	69	66	69	68	66	63	62	60	54<		
1600	79	79	84	77	74	73	73	70	70	67	69	68	65	63	62	60	54		
2000	81	82	88	81	84	83	81	81	79	75	71	70	68	67	66	63	56		
2500	86	88	95	87	89	90	88	85	84	80	72	73	71	70	69	66	60		
3150	83	83	91	85	88	81	81	78	77	72	69	71	68	67	68	65	60		
4000	80	79	85	78	80	80	76	75	73	71	68	72	66	65	63	60	54		
5000	75	76	81	74	78	75	73	71	70	66	63	68	63	62	60	57	51		
6300	72	71	77	71	71	71	70	68	68	61	59	62	58	57	56	53	47		
8000	70	69	74	69	71	69	69	66	65	58	54	57	54	52<	52<	49<	42<		
10000	68	67	71	66	68	66	66	64	63	56	48<	51	48<	46<	46<	43<			
OVERALL	95	97	100	97	97	97	98	96	95	96	96	95	96	95	92	91	87		

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 2

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 2

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	84	83	83	82	84	84	85	85	86	86	87	89	91	96	98	98			
31.5	86	84	83	84	84	85	86	85	88	87	88	89	93	97	99	99			
40	85	86	86	86	87	88	88	88	88	92	92	95	98	102	104	102			
50	89	88	87	86	88	87	89	89	91	94	96	97	100	102	106	102			
63	109	107	104	103	106	101	104	105	109	114	118	114	113	109	110	103			
80	96	94	93	91	94	93	95	94	96	100	104	102	105	111	112	105			
100	94	95	94	94	94	94	96	98	99	102	104	103	108	115	116	107			
125	104	105	106	103	106	100	99	104	106	110	111	107	109	115	116	104			
160	97	98	99	97	96	97	97	99	99	100	104	105	110	113	116	103			
200	106	105	104	100	99	97	97	96	98	102	103	104	109	111	114	101			
250	106	104	103	99	96	96	95	97	95	97	99	102	109	113	113	99			
315	102	101	101	97	96	95	95	94	95	97	97	101	107	111	110	96			
400	103	103	101	98	97	96	94	94	96	96	96	102	105	108	108	95			
500	101	100	99	98	96	94	92	96	97	95	97	102	104	107	104	94			
630	99	98	98	96	94	93	93	96	97	96	98	102	103	105	101	93			
800	98	97	97	95	93	94	94	97	97	97	100	102	104	105	102	93			
1000	96	95	96	94	92	93	94	97	97	98	101	103	104	105	101	92			
1250	95	95	95	93	93	94	95	98	97	98	101	104	105	104	100	90			
1600	96	95	96	94	93	95	96	98	98	100	101	104	105	104	100	90			
2000	96	95	96	94	93	96	96	98	98	100	101	103	104	102	99	88			
2500	96	95	96	94	94	96	96	98	98	100	100	102	104	101	99	87			
3150	95	95	95	94	93	95	96	98	98	101	99	101	104	101	98	87			
4000	95	95	96	94	93	95	96	97	97	99	98	100	102	100	97	85			
5000	93	93	93	91	91	92	93	95	94	96	95	97	99	97	94	82			
6300	89	90	90	88	88	89	90	92	92	94	94	96	97	96	91	79			
8000	88	88	88	86	86	88	88	90	90	92	92	93	96	94	90	76			
10000	85	87	87	85	84	86	87	90	86	89	89	90	92	91	86	72			
OVERALL	114	113	113	110	111	109	110	112	113	117	120	118	120	123	123	114			

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

IDENTIFICATION:
ONEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 6

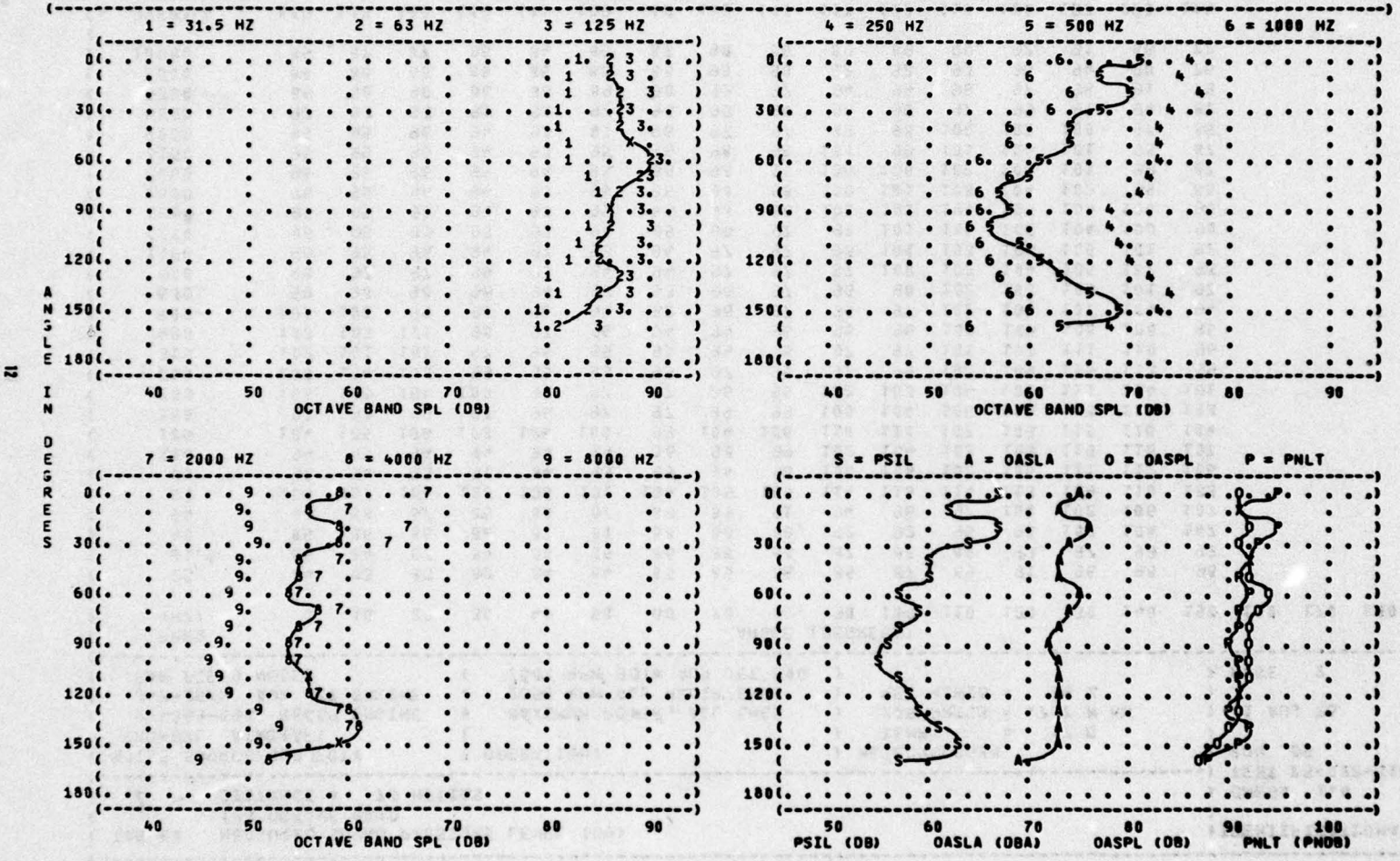


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 6

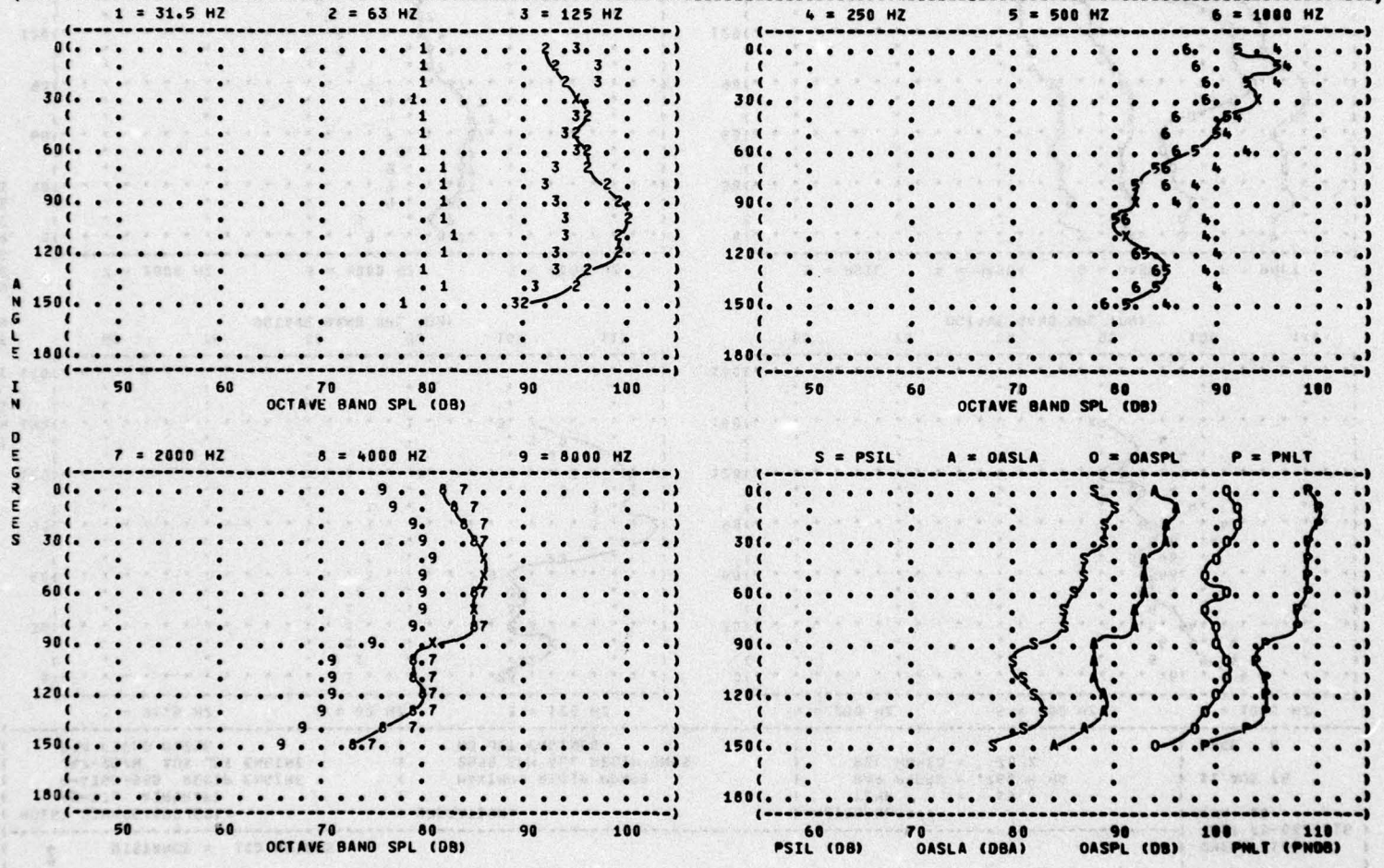


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 6

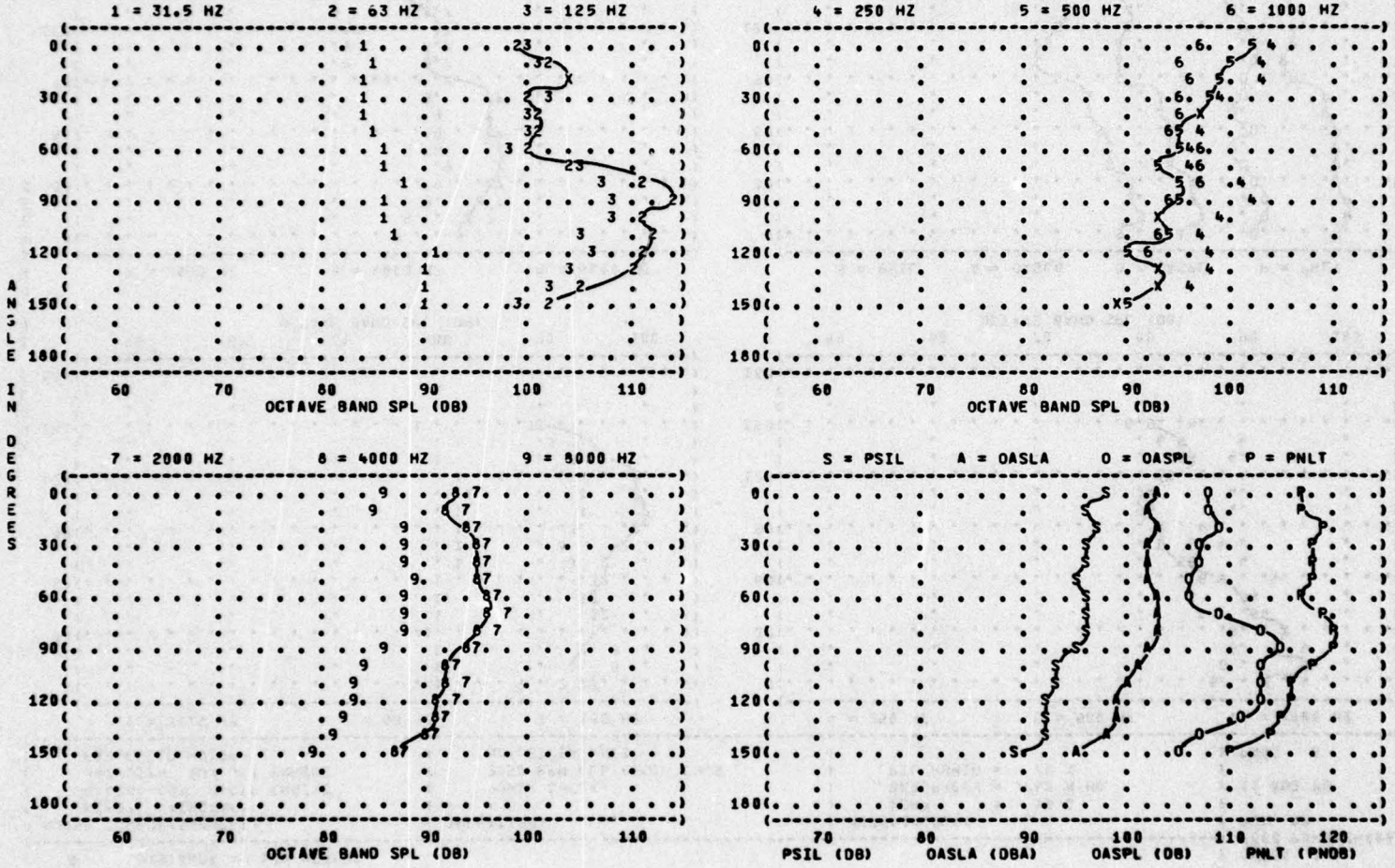


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 6

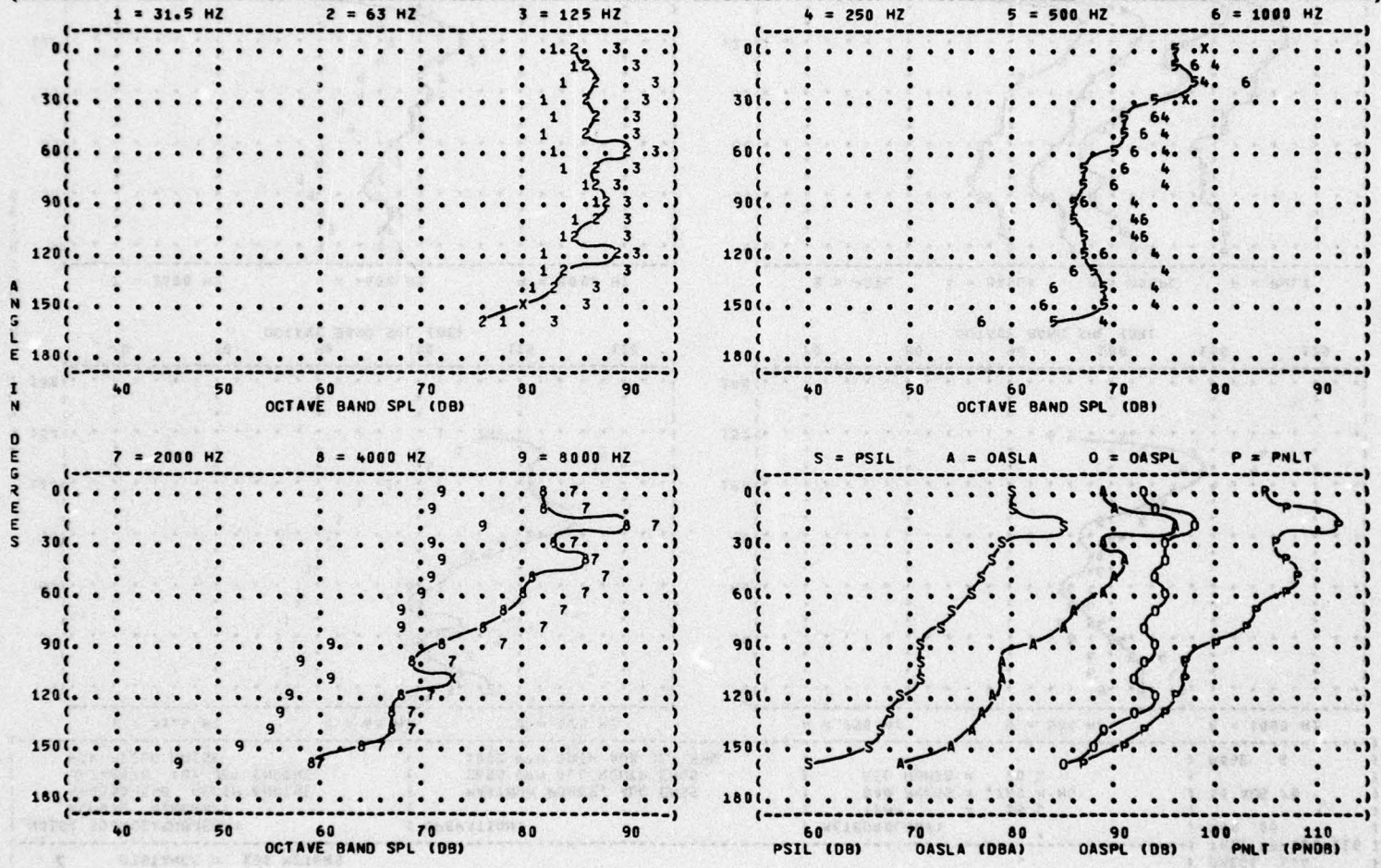


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 6

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

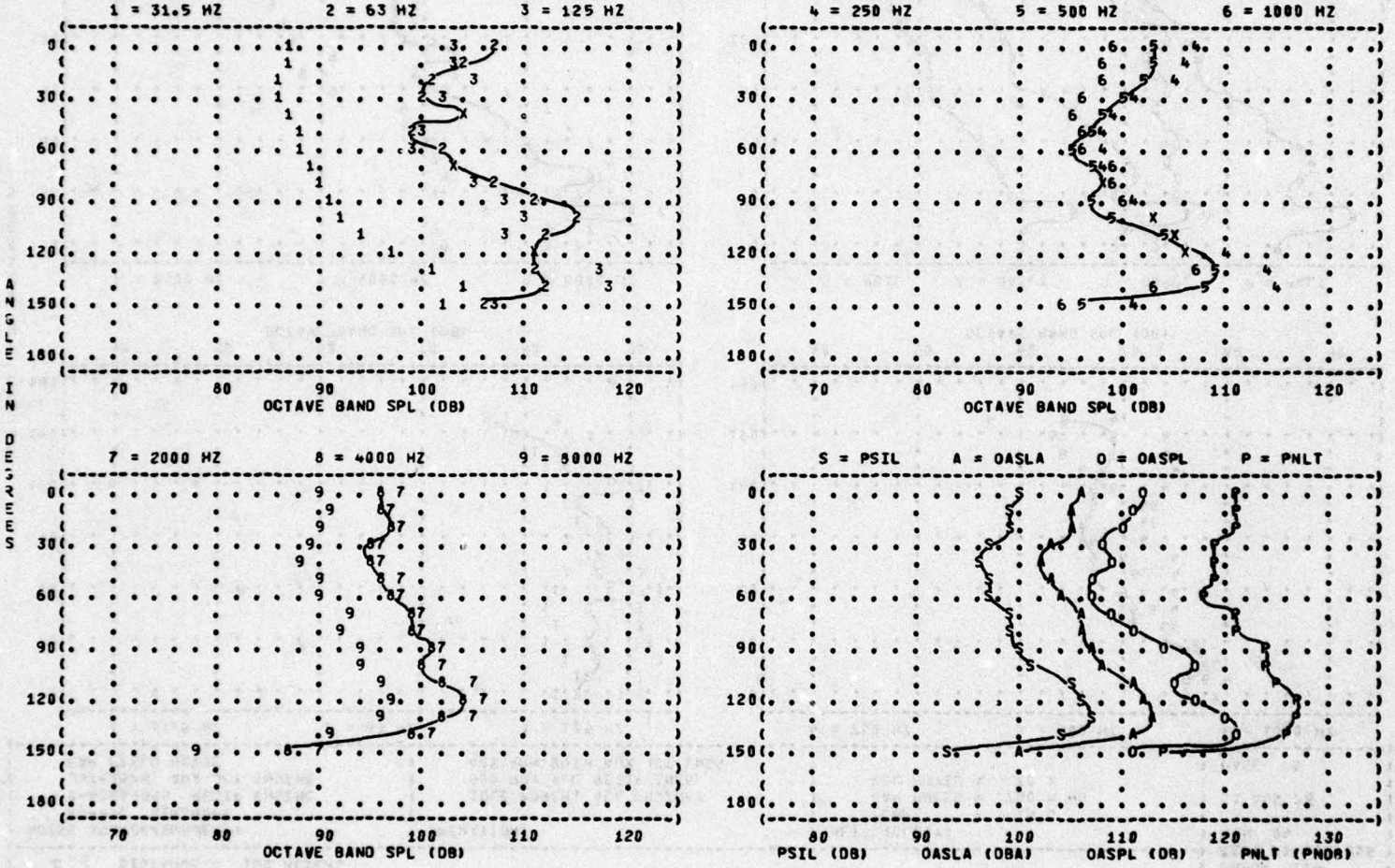


FIGURE: ACOUSTIC POWER LEVEL (PWL)

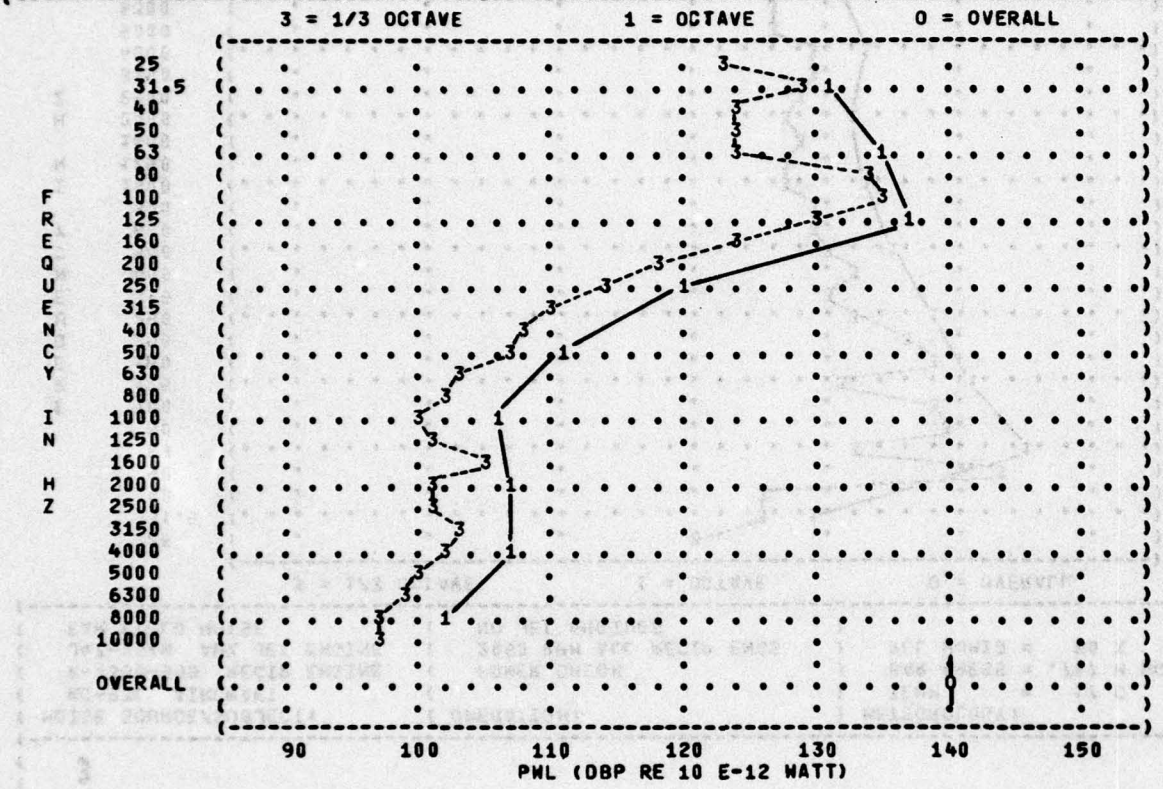
3

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-802-016
RUN 01
11 AUG 76
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	122.9	
31.5	128.7	130.7
40	123.8	
50	124.1	
63	123.7	134.6
80	133.8	
100	135.3	
125	130.3	136.7
160	124.1	
200	117.5	
250	114.1	119.7
315	110.5	
400	108.2	
500	107.2	111.4
630	102.8	
800	101.5	
1000	100.2	105.9
1250	101.4	
1600	104.7	
2000	101.0	107.4
2500	101.2	
3150	102.8	
4000	102.4	106.7
5000	100.2	
6300	98.5	
8000	97.2	102.5
10000	97.3	
OVERALL		139.5

FREQUENCY IN HZ

PWL (DBP RE 10 E-12 WATT)

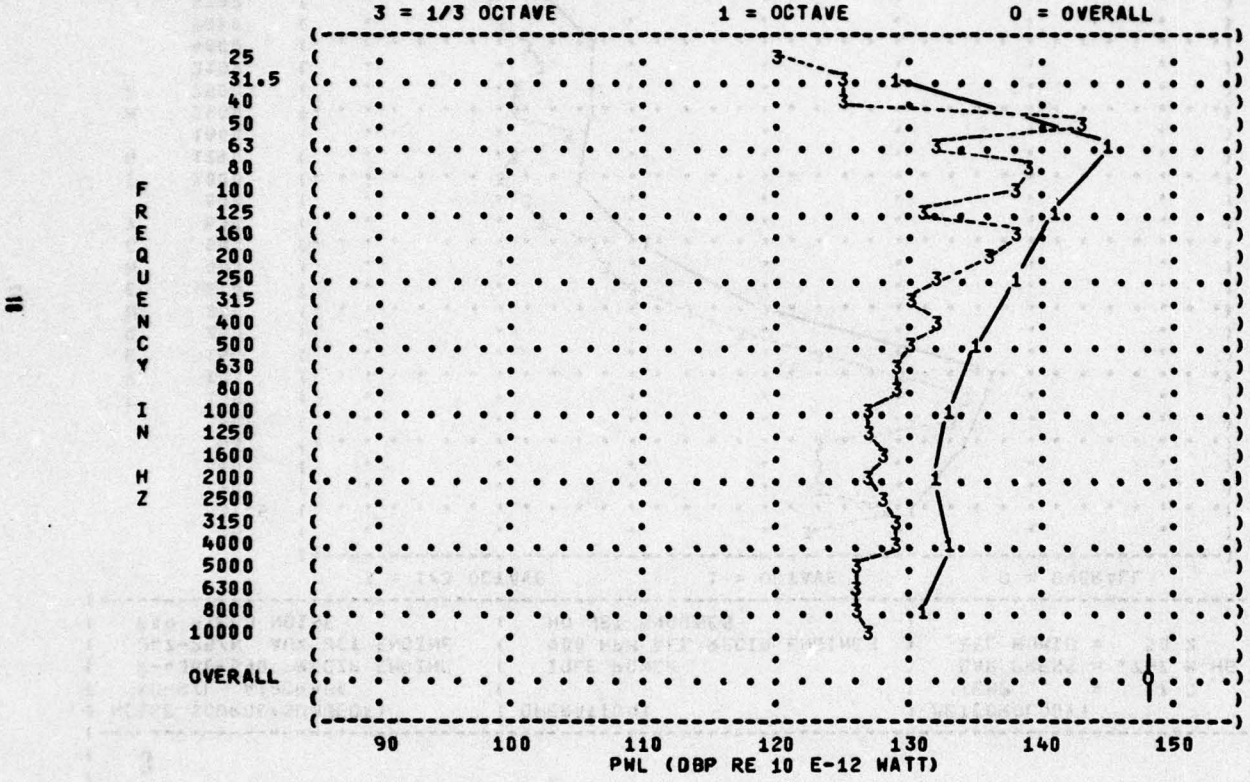
FIGURE: 3 ACOUSTIC POWER LEVEL (PWL)

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	120.0	
31.5	125.3	128.9
40	125.3	
50	143.0	
63	132.0	144.7
80	139.1	
100	136.1	
125	130.6	141.4
160	138.0	
200	136.5	
250	131.6	138.4
315	130.4	
400	131.6	
500	130.1	135.2
630	129.1	
800	128.6	
1000	127.4	132.5
1250	127.1	
1600	127.6	
2000	127.3	132.4
2500	127.9	
3150	128.6	
4000	129.0	132.9
5000	126.4	
6300	125.7	
8000	125.7	130.8
10000	126.6	
OVERALL		147.9

FIGURE: ACOUSTIC POWER LEVEL (PWL)

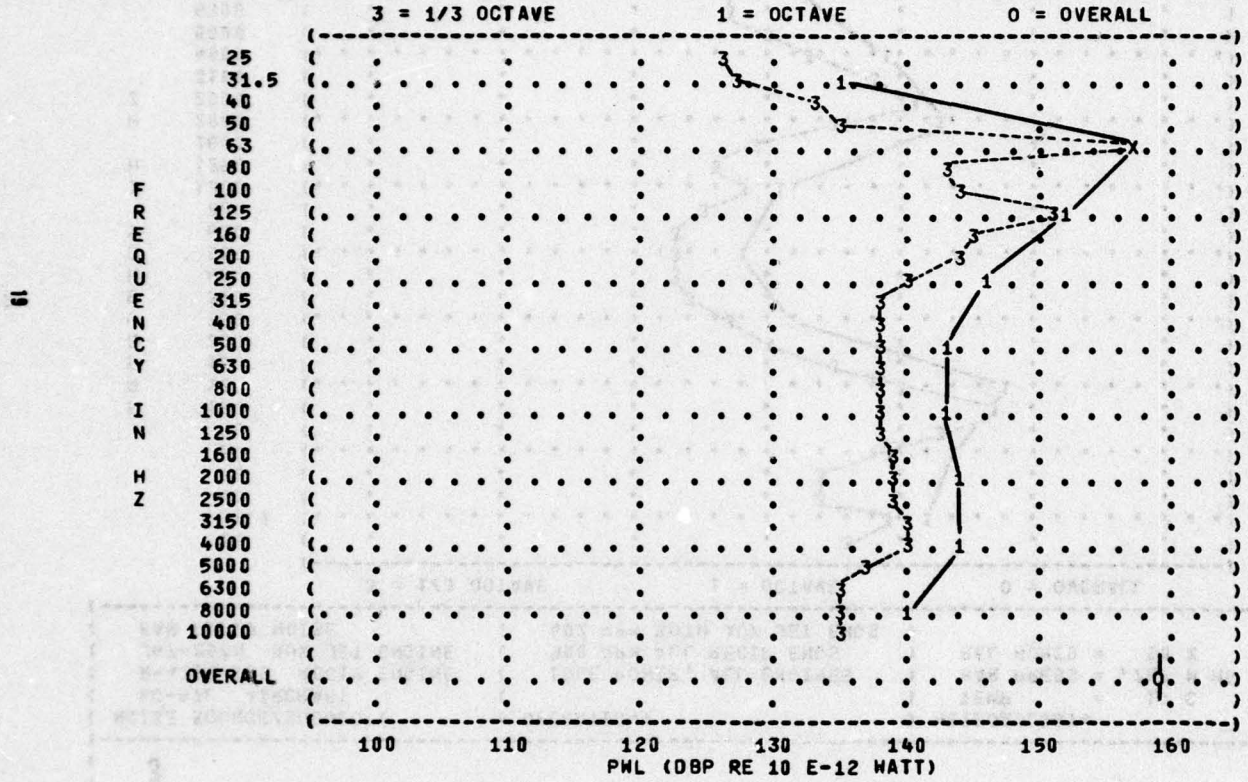
3

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	126.0	
31.5	127.4	135.0
40	133.5	
50	134.9	
63	156.8	157.0
80	143.3	
100	143.9	
125	150.7	152.4
160	145.8	
200	144.4	
250	139.9	146.4
315	138.1	
400	137.9	
500	138.2	142.7
630	137.6	
800	138.1	
1000	137.8	142.8
1250	138.1	
1600	138.8	
2000	136.8	143.8
2500	139.4	
3150	139.7	
4000	139.6	143.6
5000	136.5	
6300	135.1	
8000	134.9	139.7
10000	134.9	
OVERALL		159.1

FIGURE: ACOUSTIC POWER LEVEL (PWL)

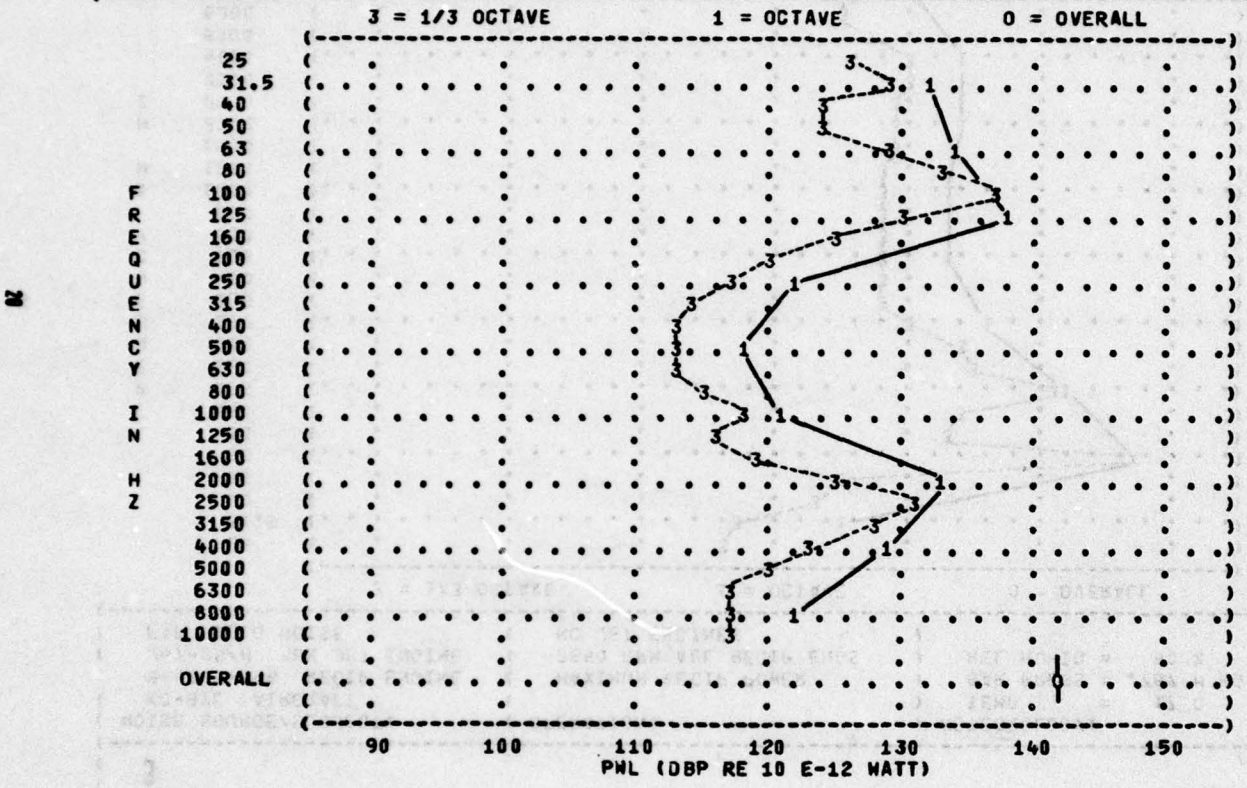
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NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-016
RUN 04
11 AUG 76
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	125.6	
31.5	129.2	131.7
40	124.4	
50	124.3	
63	128.6	134.5
80	132.6	
100	137.3	
125	129.6	138.3
160	125.4	
200	119.9	
250	117.1	122.4
315	114.0	
400	113.4	
500	112.7	117.9
630	113.2	
800	115.5	
1000	117.6	121.4
1250	116.4	
1600	118.7	
2000	125.4	132.6
2500	131.5	
3150	127.7	
4000	123.1	129.5
5000	119.8	
6300	117.0	
8000	116.8	121.5
10000	116.5	
OVERALL		141.5

FIGURE: ACOUSTIC POWER LEVEL (PWL)

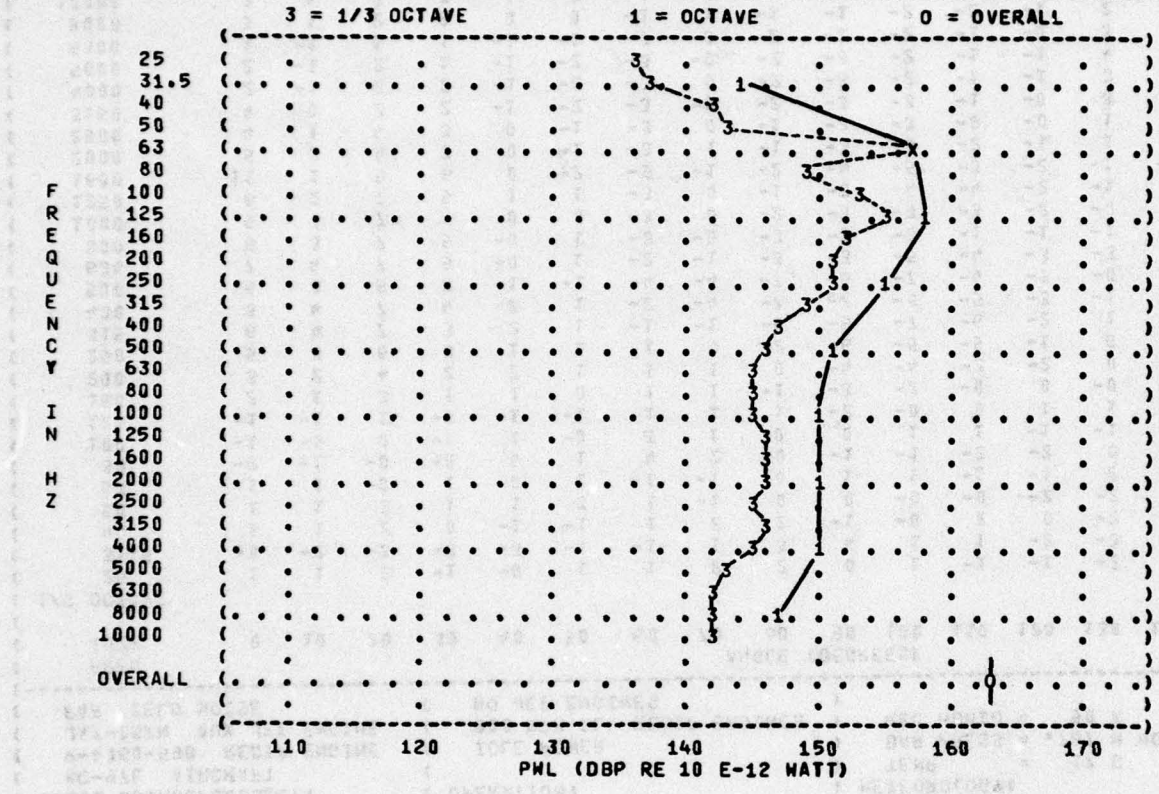
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NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 3



	PWL	
	1/3 OCTAVE	OCTAVE
25	136.1	
31.5	137.2	143.9
40	141.8	
50	142.9	
63	156.5	157.5
80	149.3	
100	152.7	
125	154.5	158.1
160	152.5	
200	150.8	
250	150.8	155.0
315	148.7	
400	147.0	
500	145.7	150.7
630	144.7	
800	145.2	
1000	145.3	150.1
1250	145.5	
1600	146.1	
2000	145.5	150.4
2500	145.4	
3150	145.7	
4000	145.2	149.5
5000	142.8	
6300	142.3	
8000	142.1	146.8
10000	141.8	
OVERALL		163.0

TABLE: DIRECTIVITY INDEX (DB)

3

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 4

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

TABLE: 3 DIRECTIVITY INDEX (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 4

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

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

TABLE: DIRECTIVITY INDEX (DB)

3

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 4

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

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

TABLE: DIRECTIVITY INDEX (DB)

3

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 4

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

TABLE: DIRECTIVITY INDEX (DB)

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NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

METEOROLOGY:
TEMP = 17 C
BAR PRESS = .767 M HG
REL HUMID = 50 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 4

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

FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-882-016
RUN 01
11 AUG 76
PAGE 13

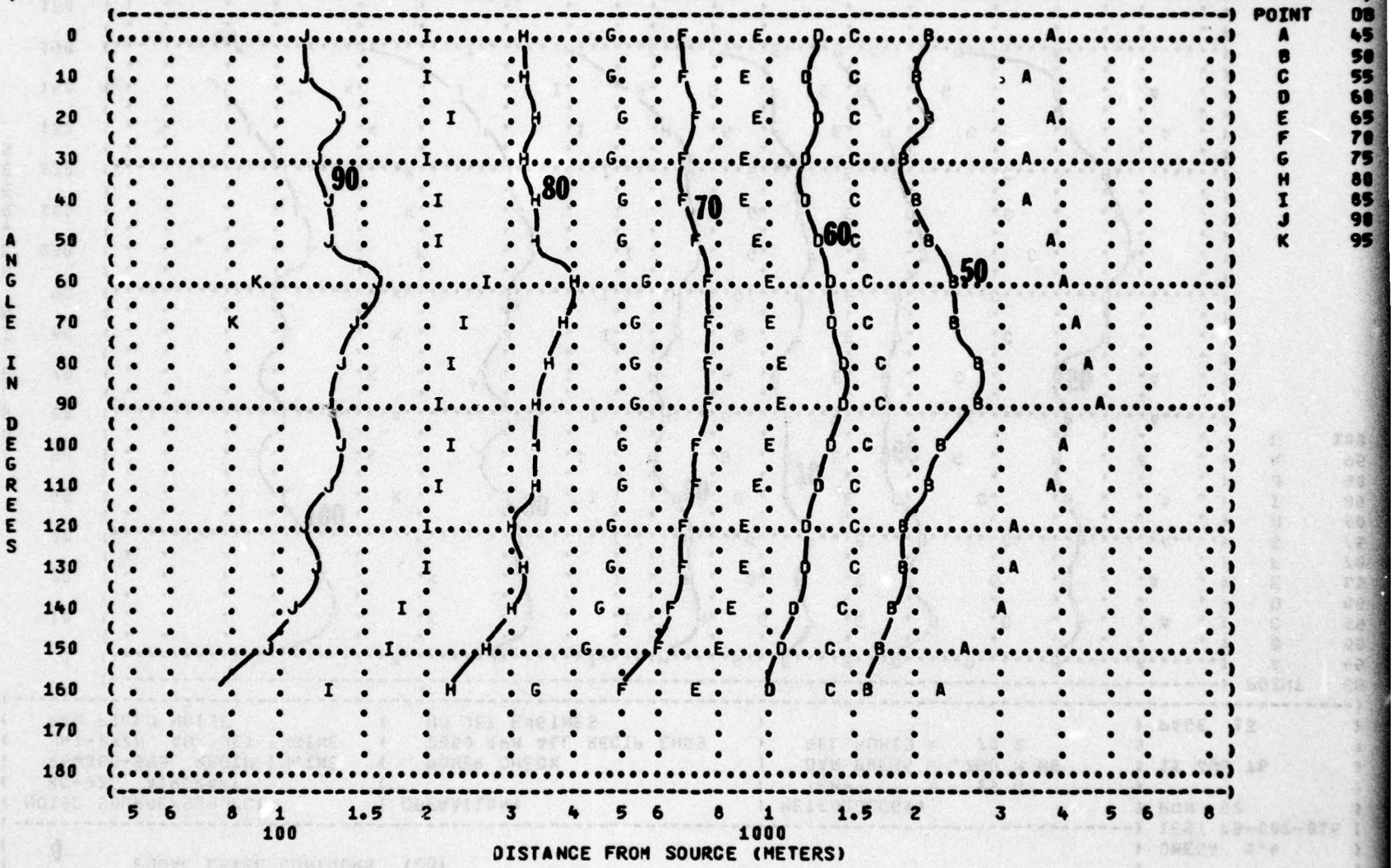


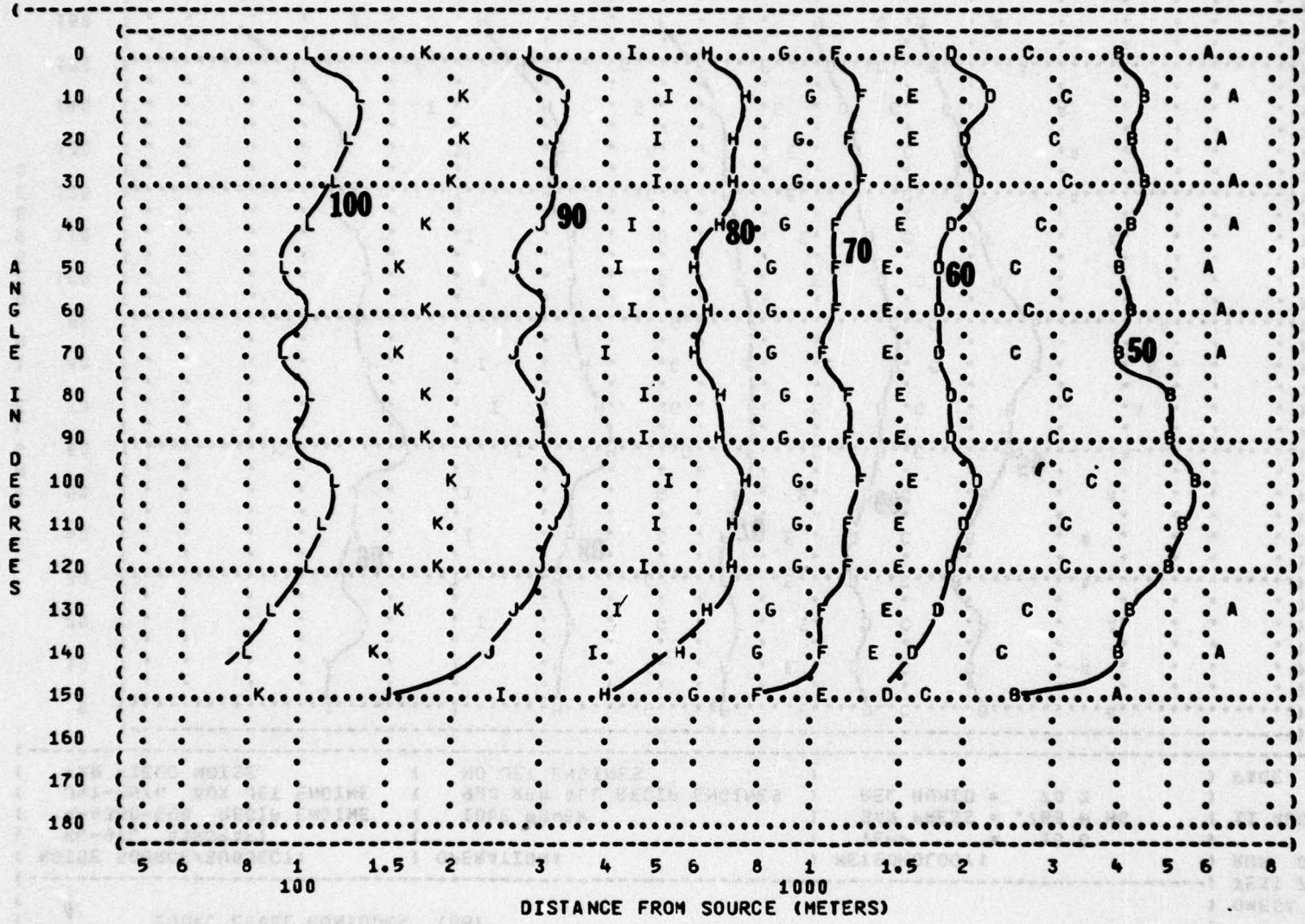
FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 13



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

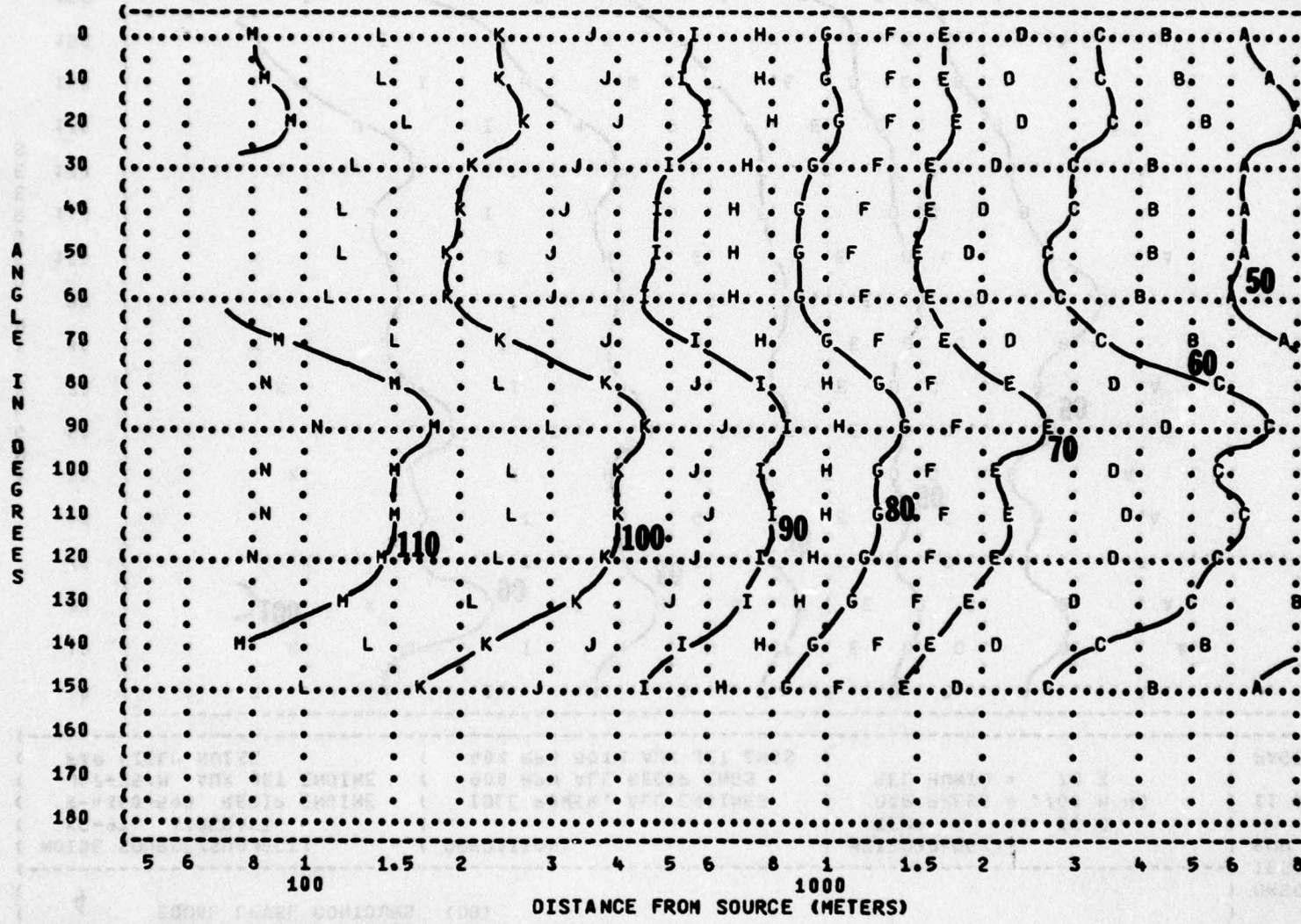
FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 13



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

FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 13

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

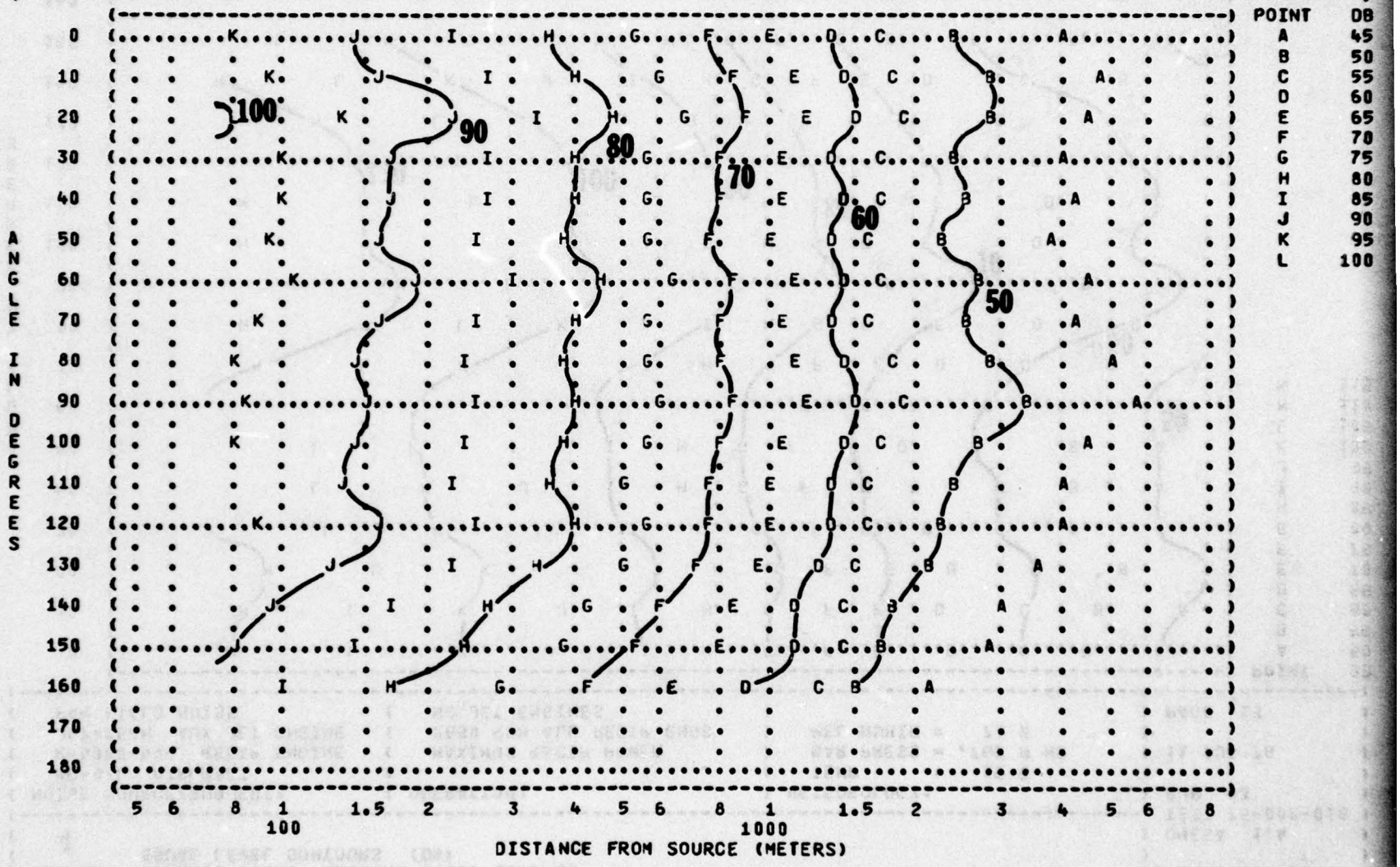


FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-802-016
RUN 05
11 AUG 76
PAGE 13

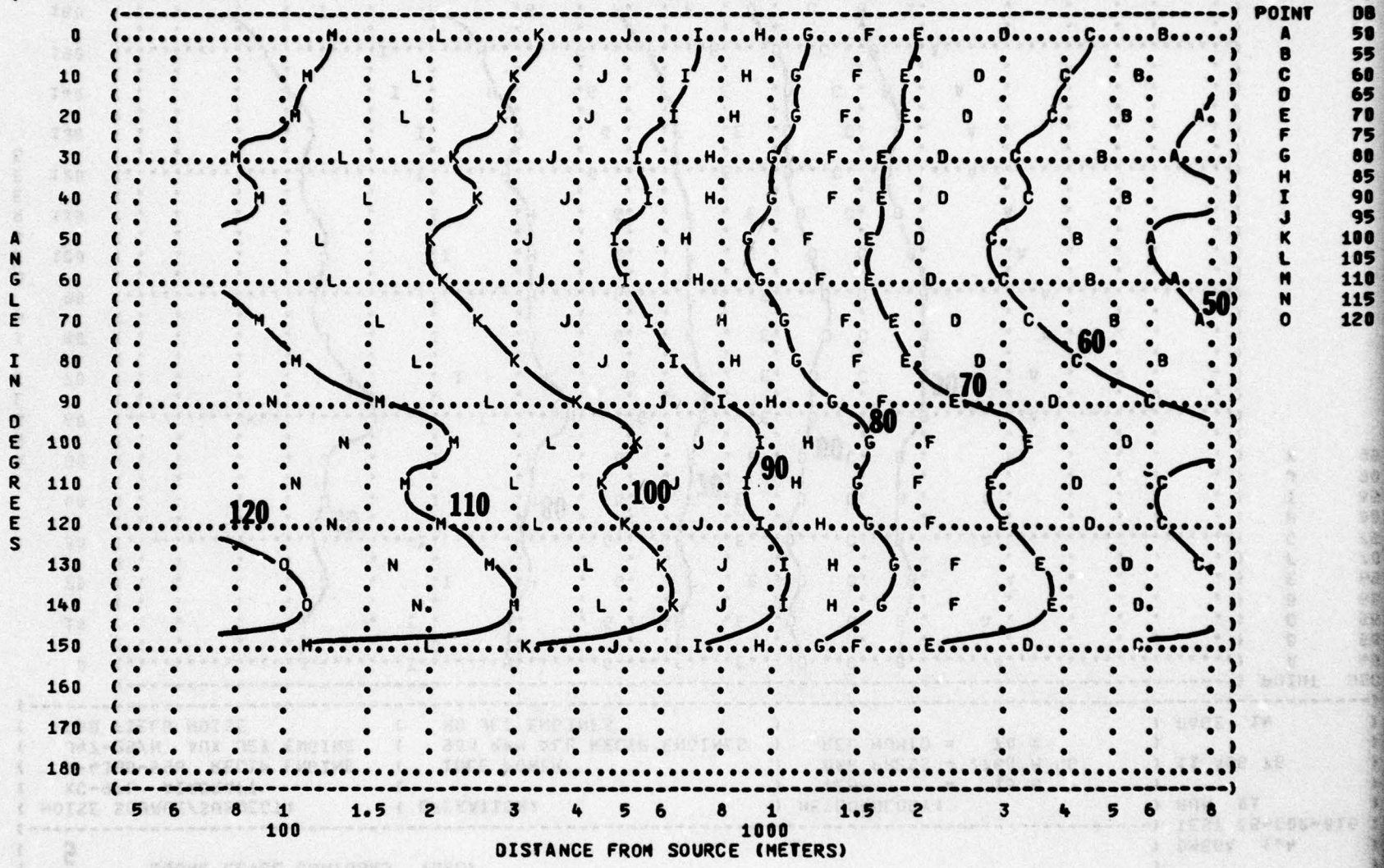


FIGURE: 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 14

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

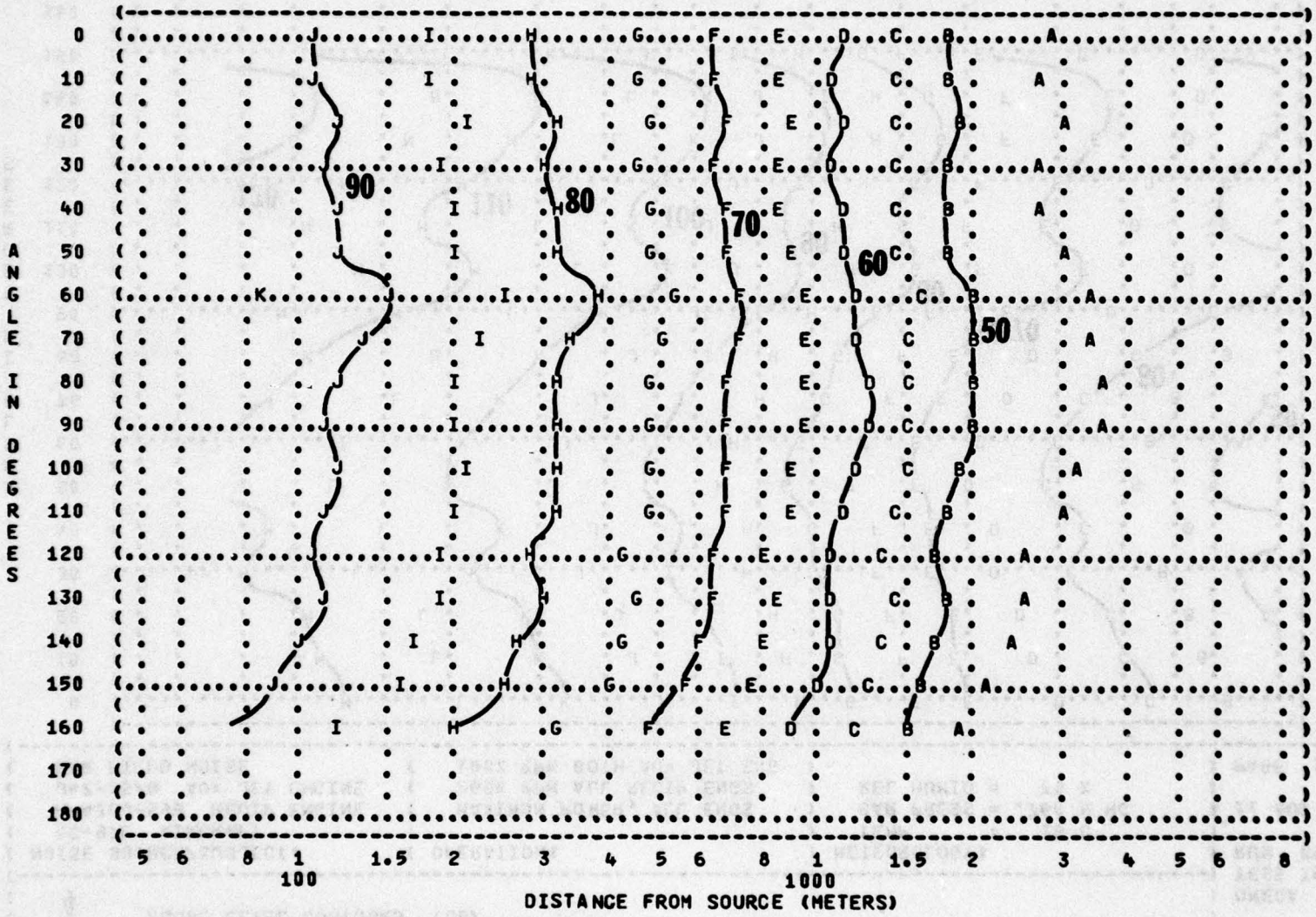


FIGURE 5: C-WEIGHTED OVERALL SOUND LEVEL (OASLC)
EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 14

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

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

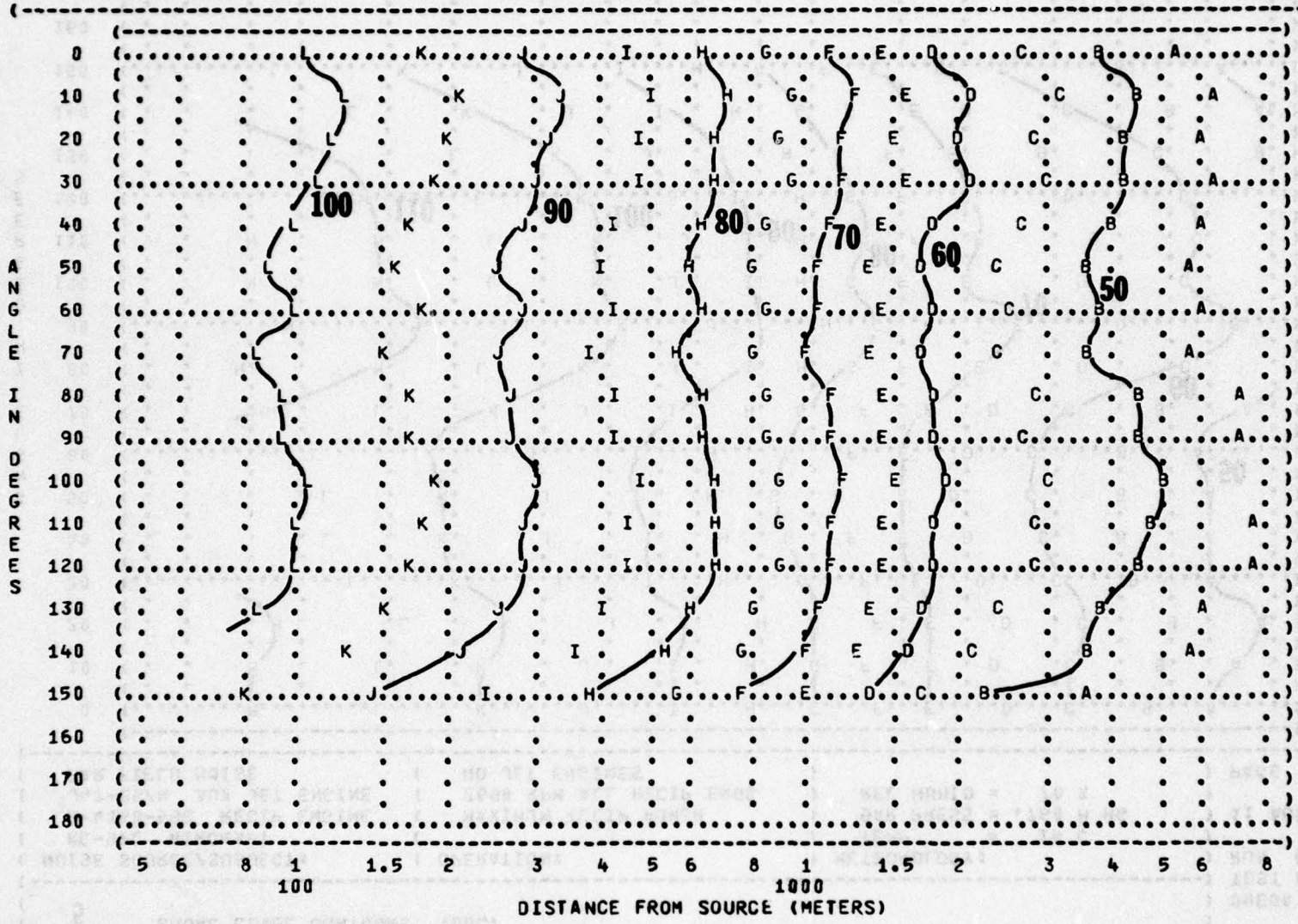


FIGURE: 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 14

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

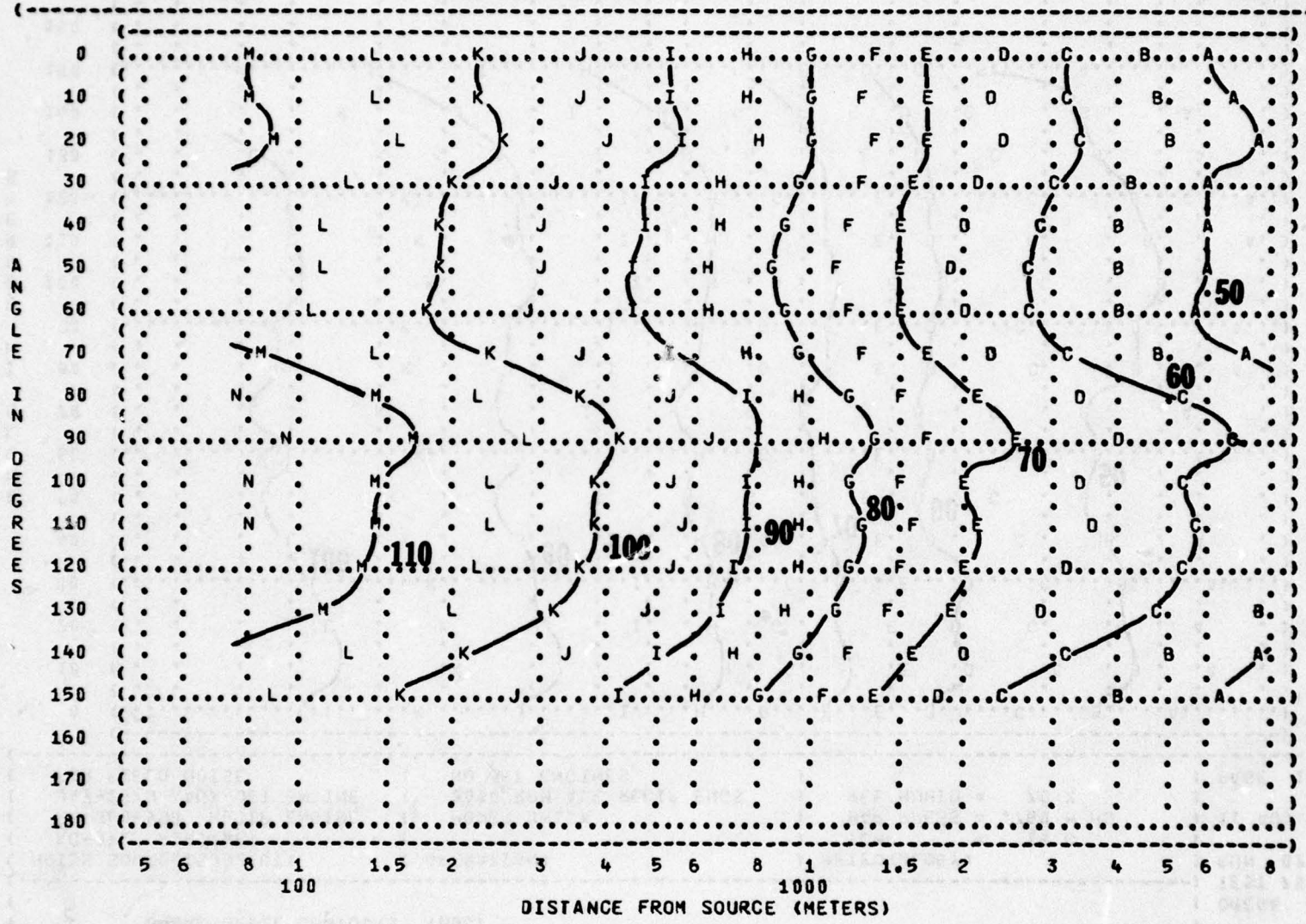


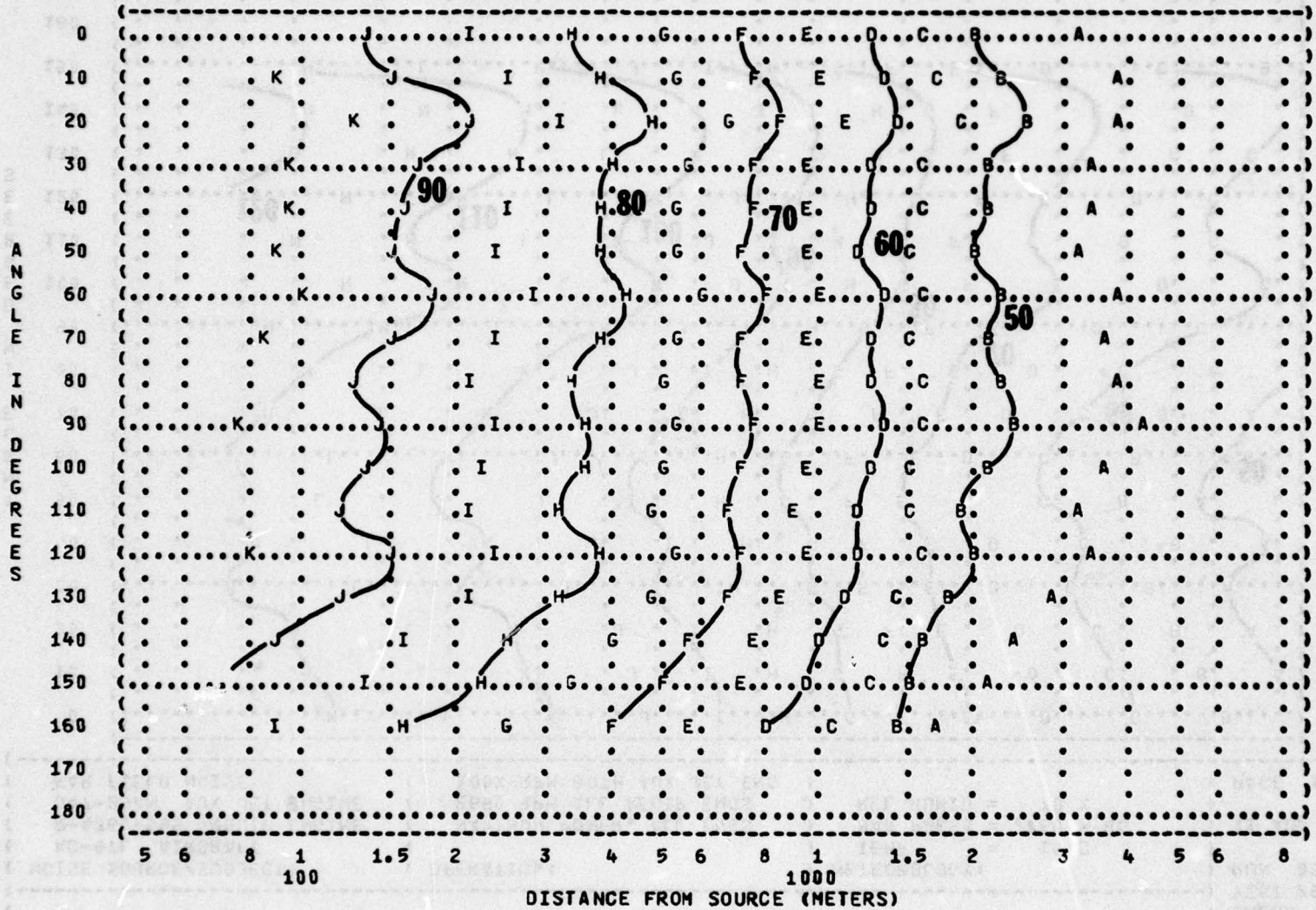
FIGURE: 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 14

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-016
RUN 05
11 AUG 76
PAGE 14

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

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

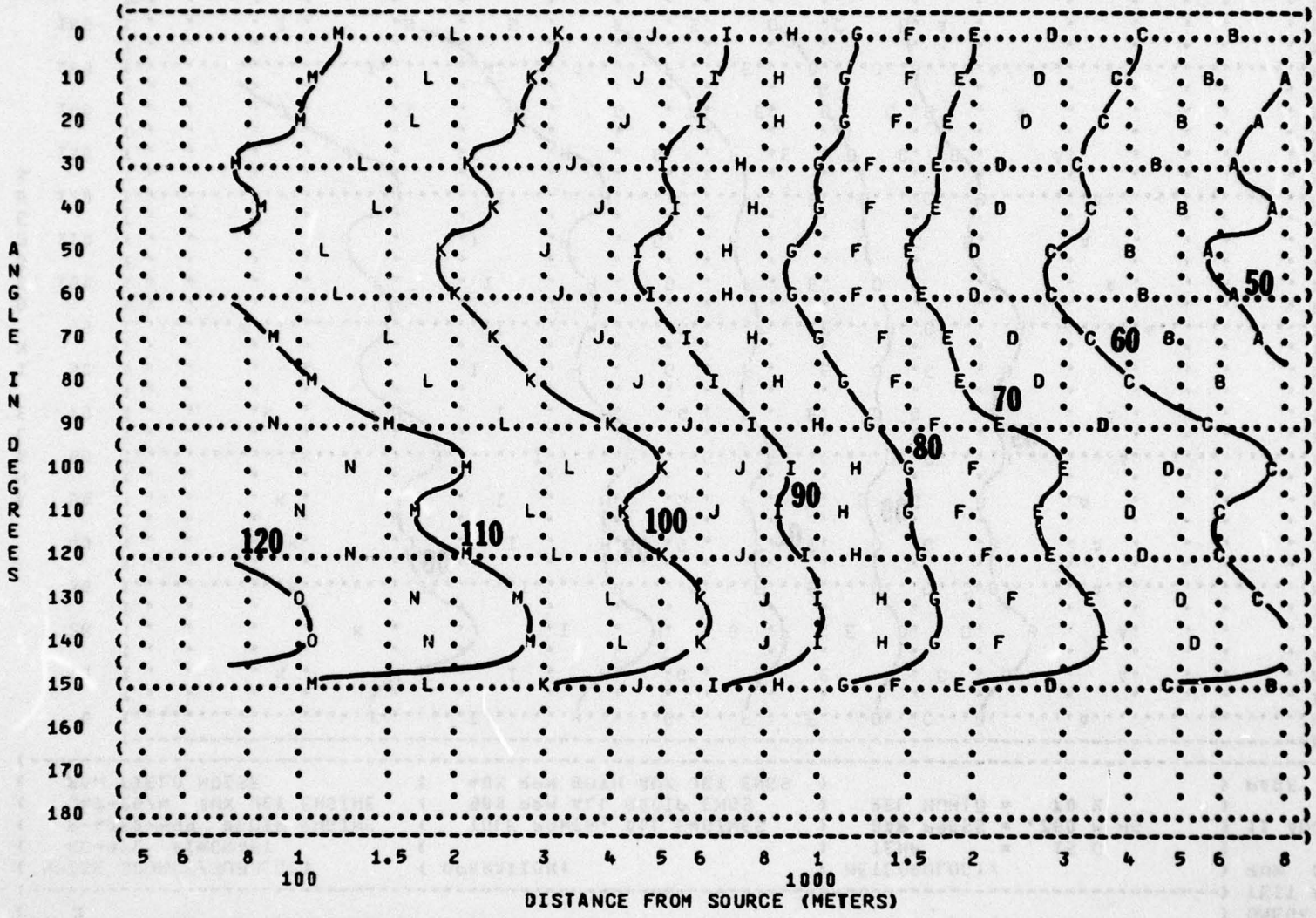


FIGURE: 6 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 15

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

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

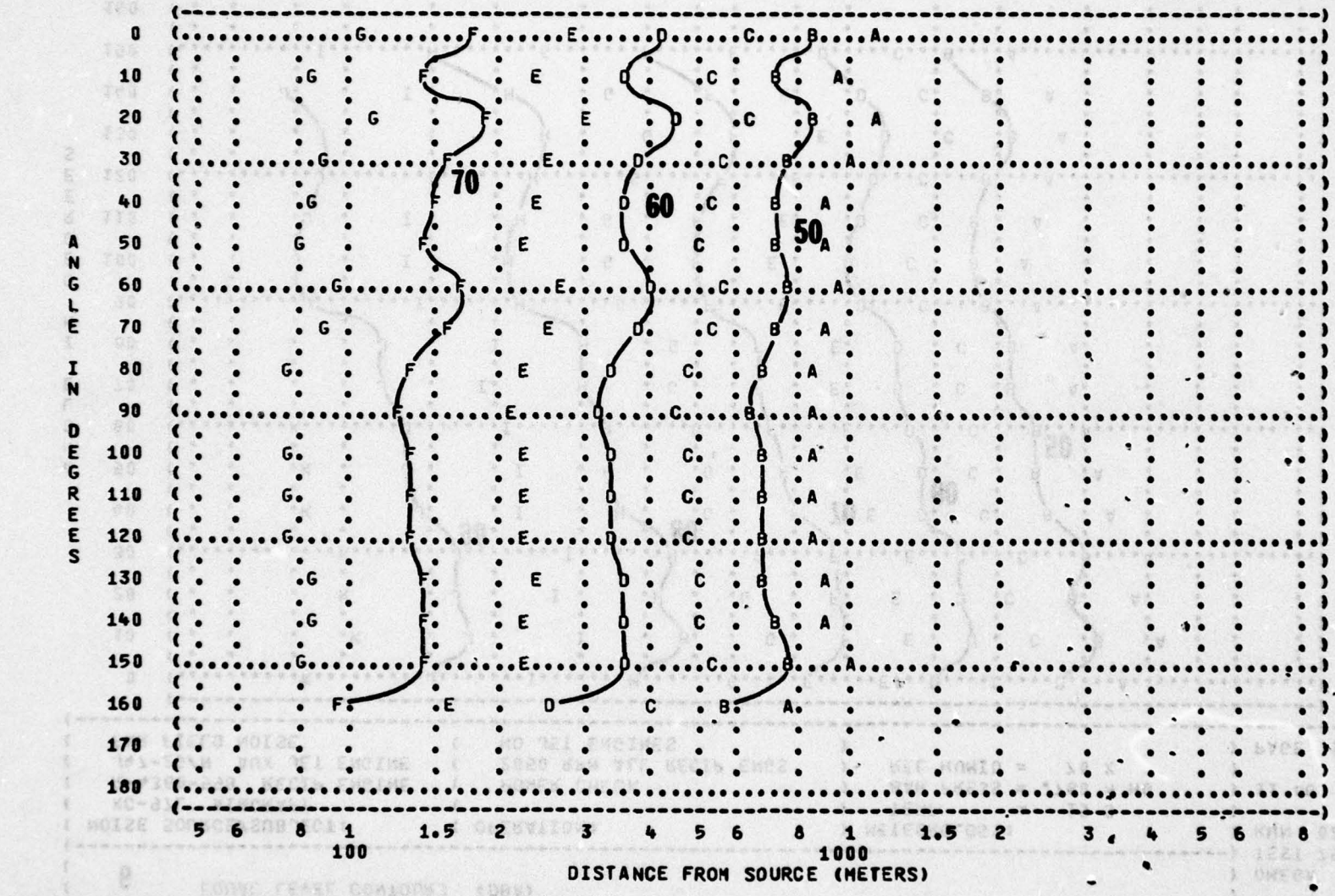


FIGURE: 6 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 15

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

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

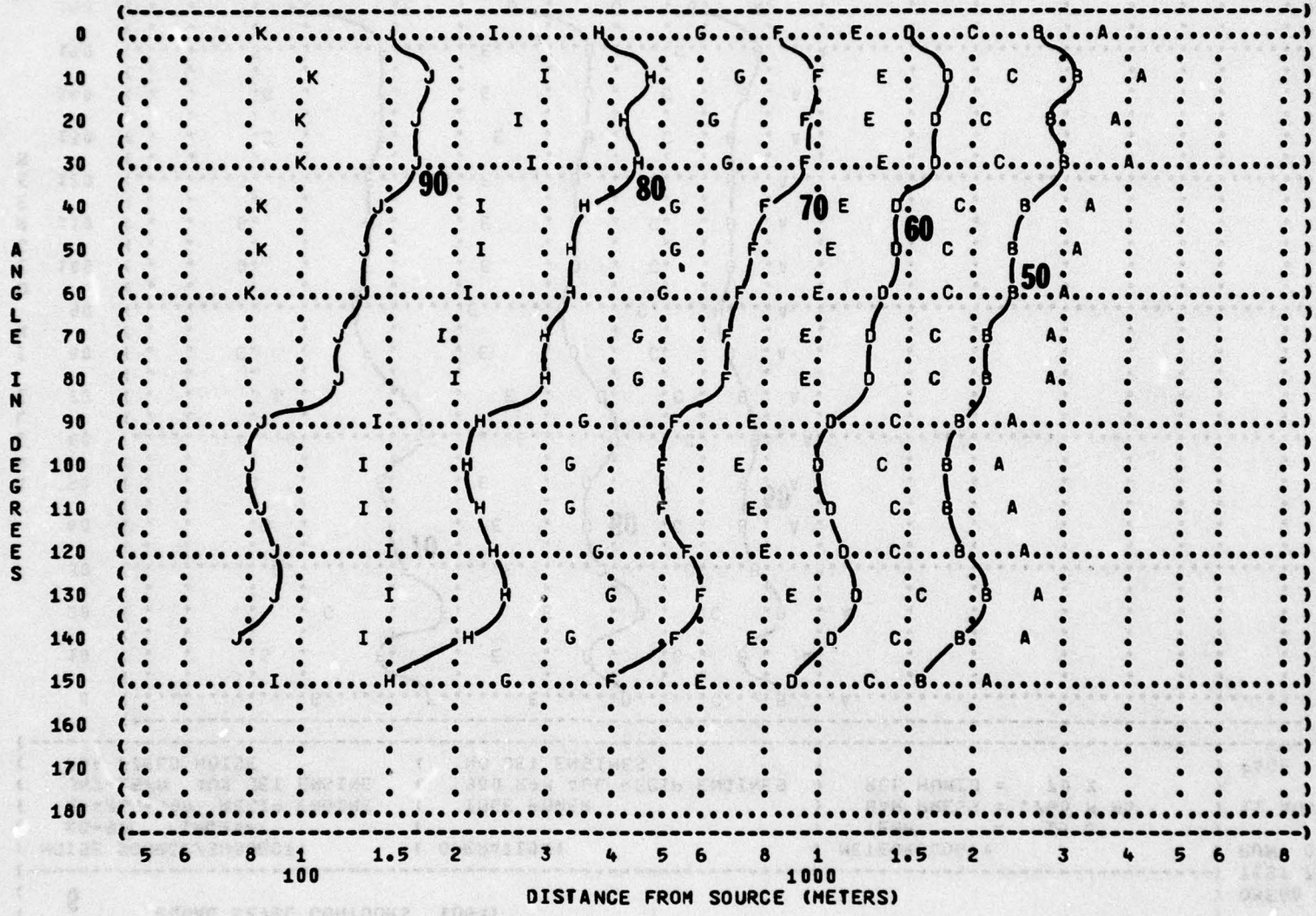


FIGURE 6: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 15

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

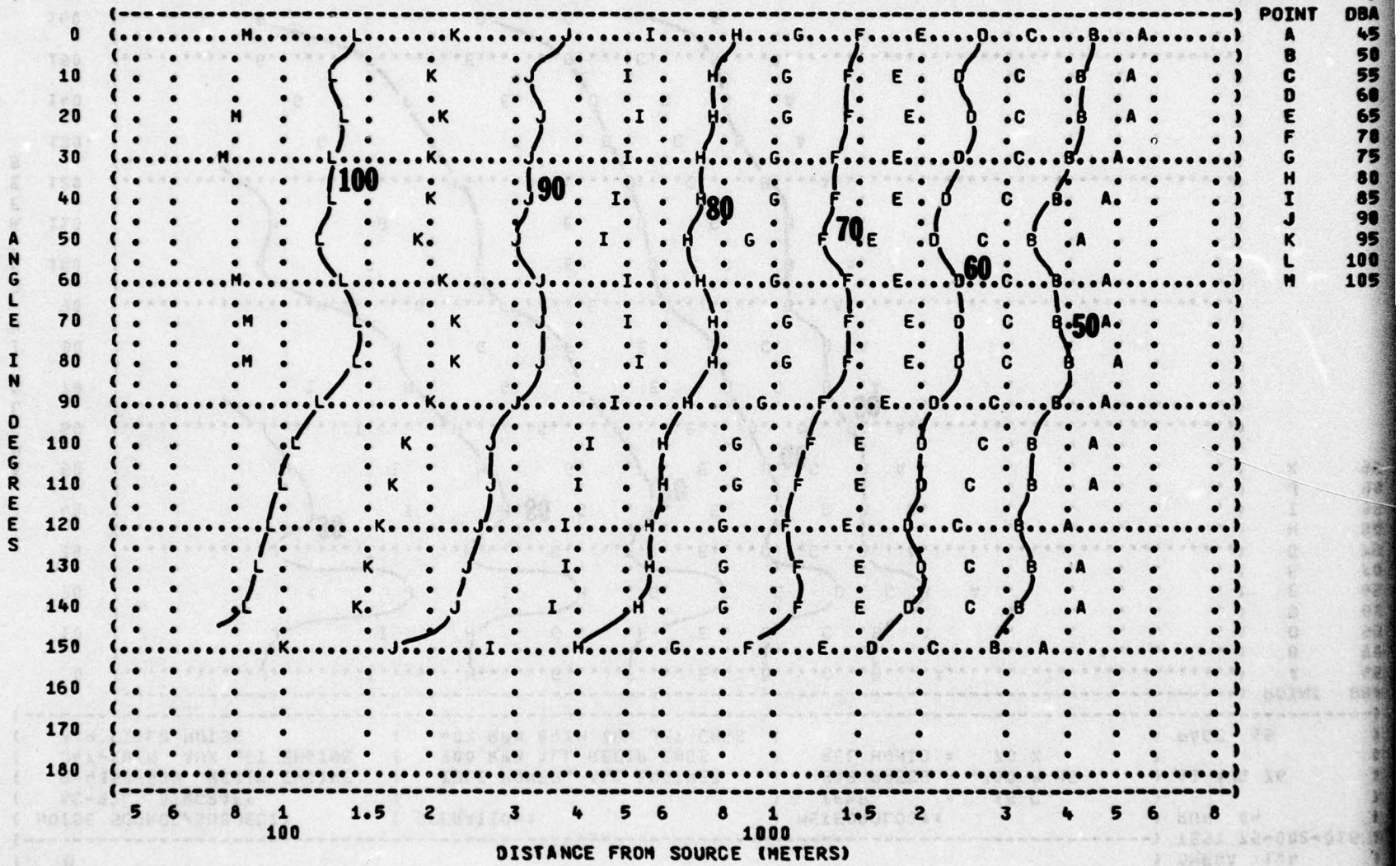


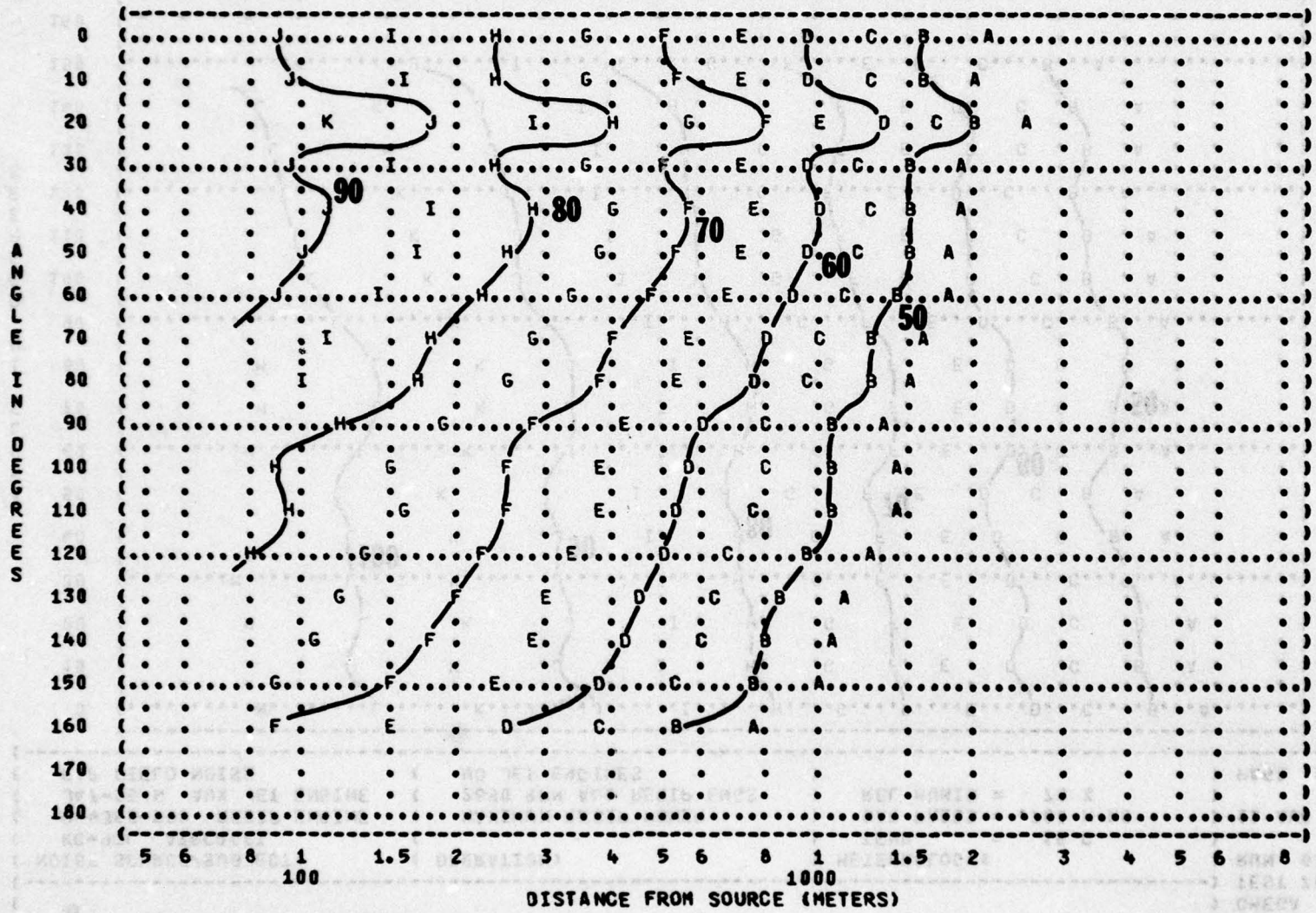
FIGURE: 6 — A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-016
RUN 04
11 AUG 76
PAGE 15

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

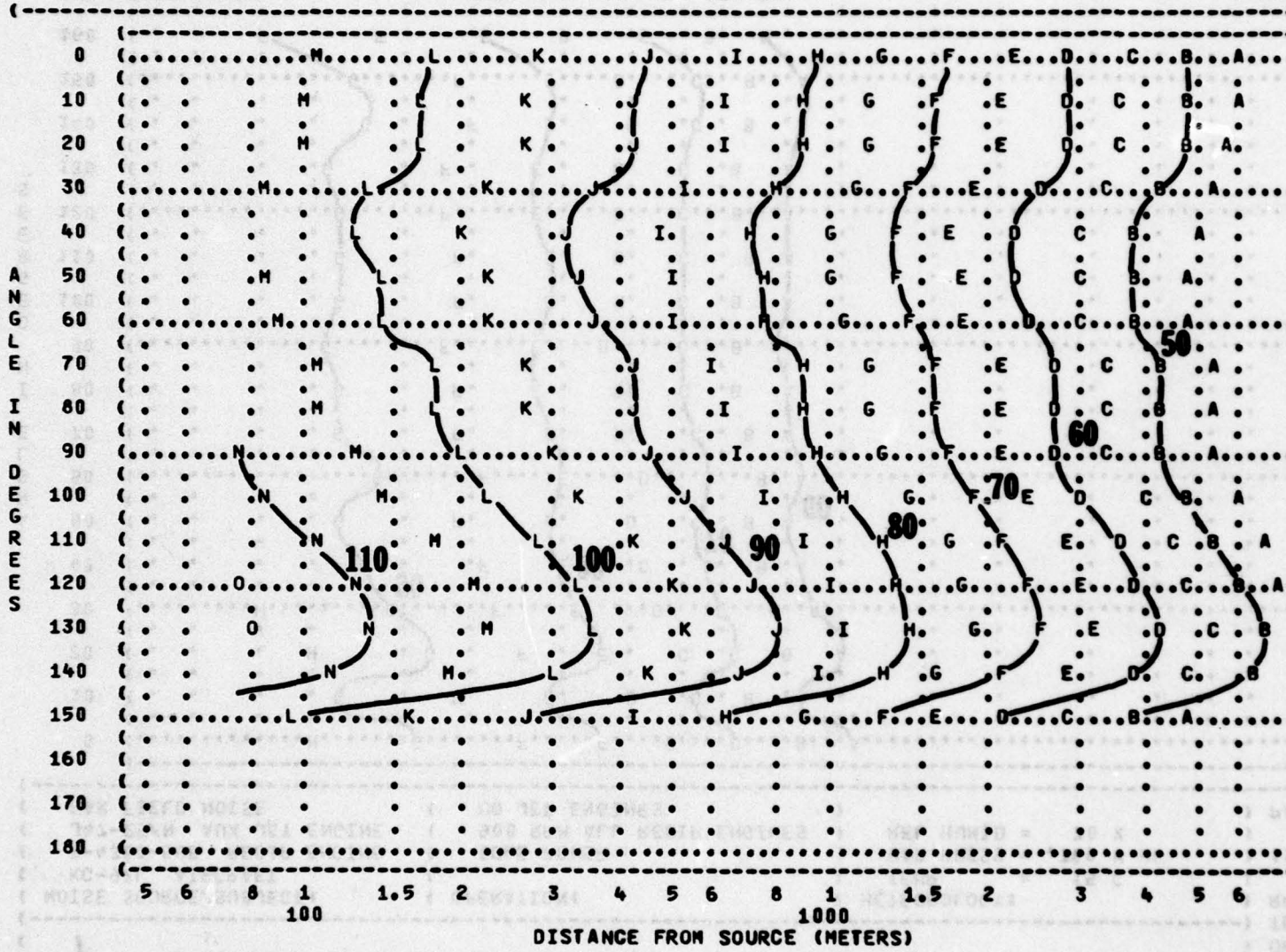
FIGURE: 6 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 15

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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



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

FIGURE: 7 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)
EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 16

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

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

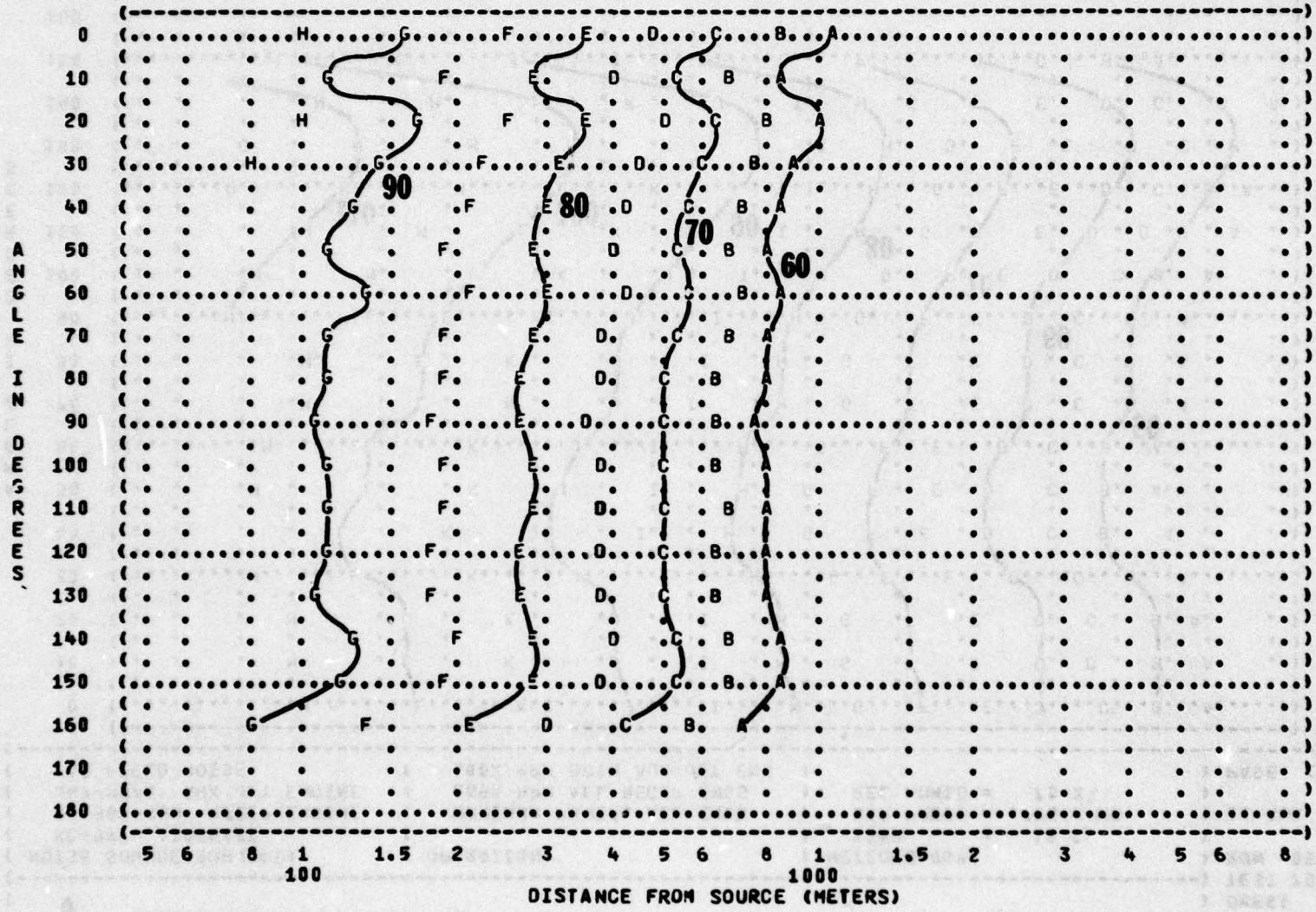


FIGURE 7 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 16

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

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

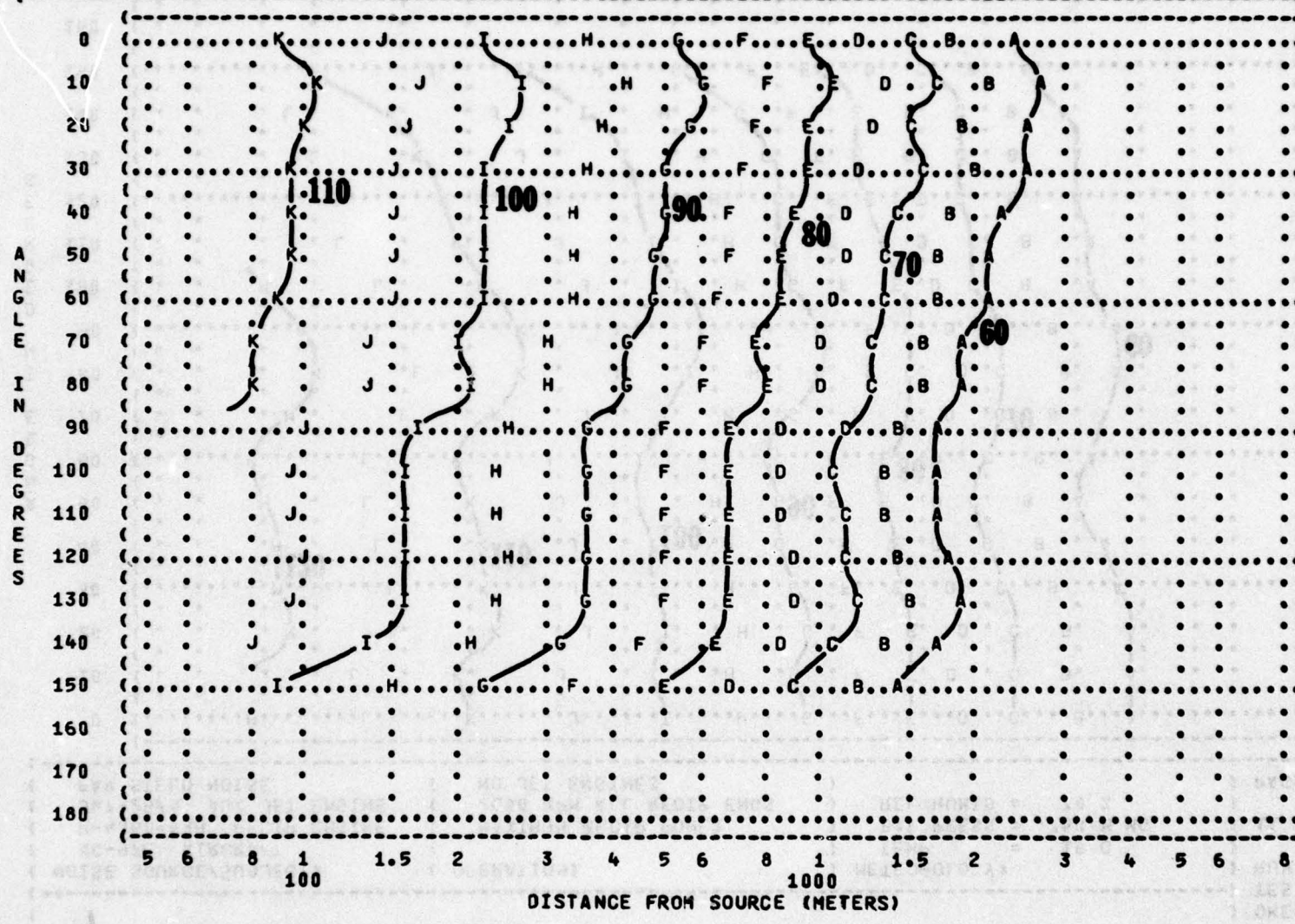


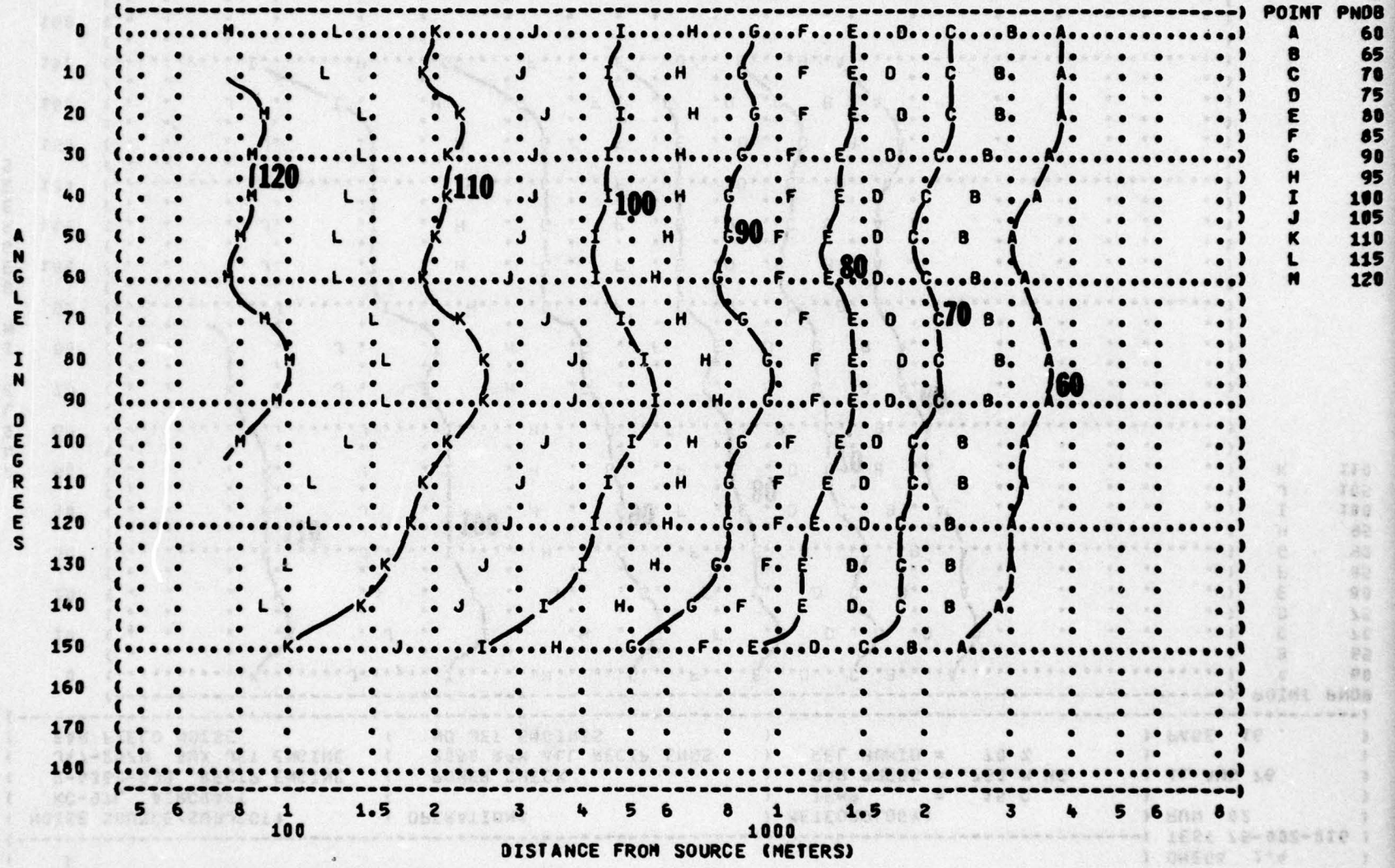
FIGURE: 7 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)
EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 16

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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



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

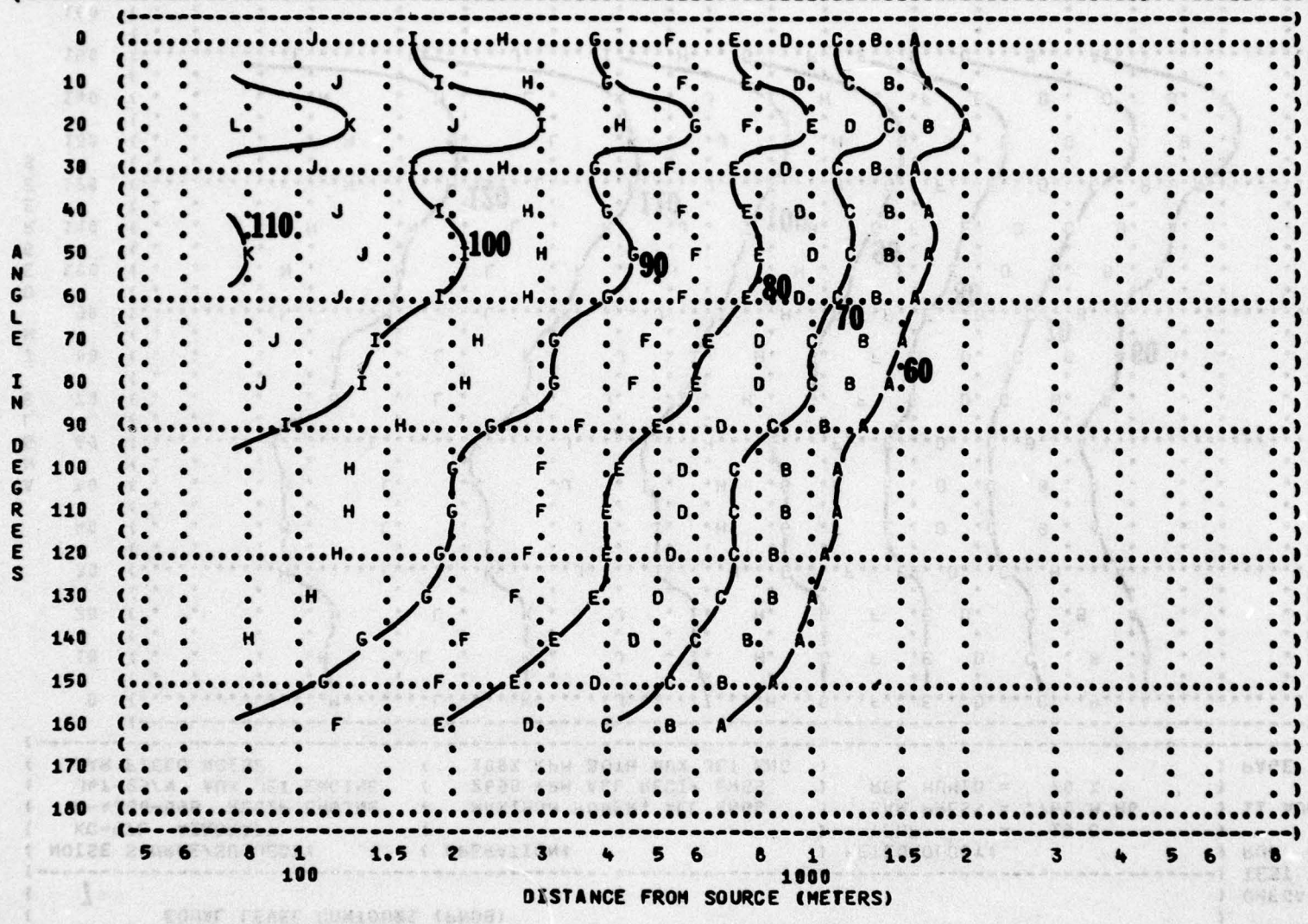
FIGURE: 7 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT)
EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 16

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

7

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 16

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

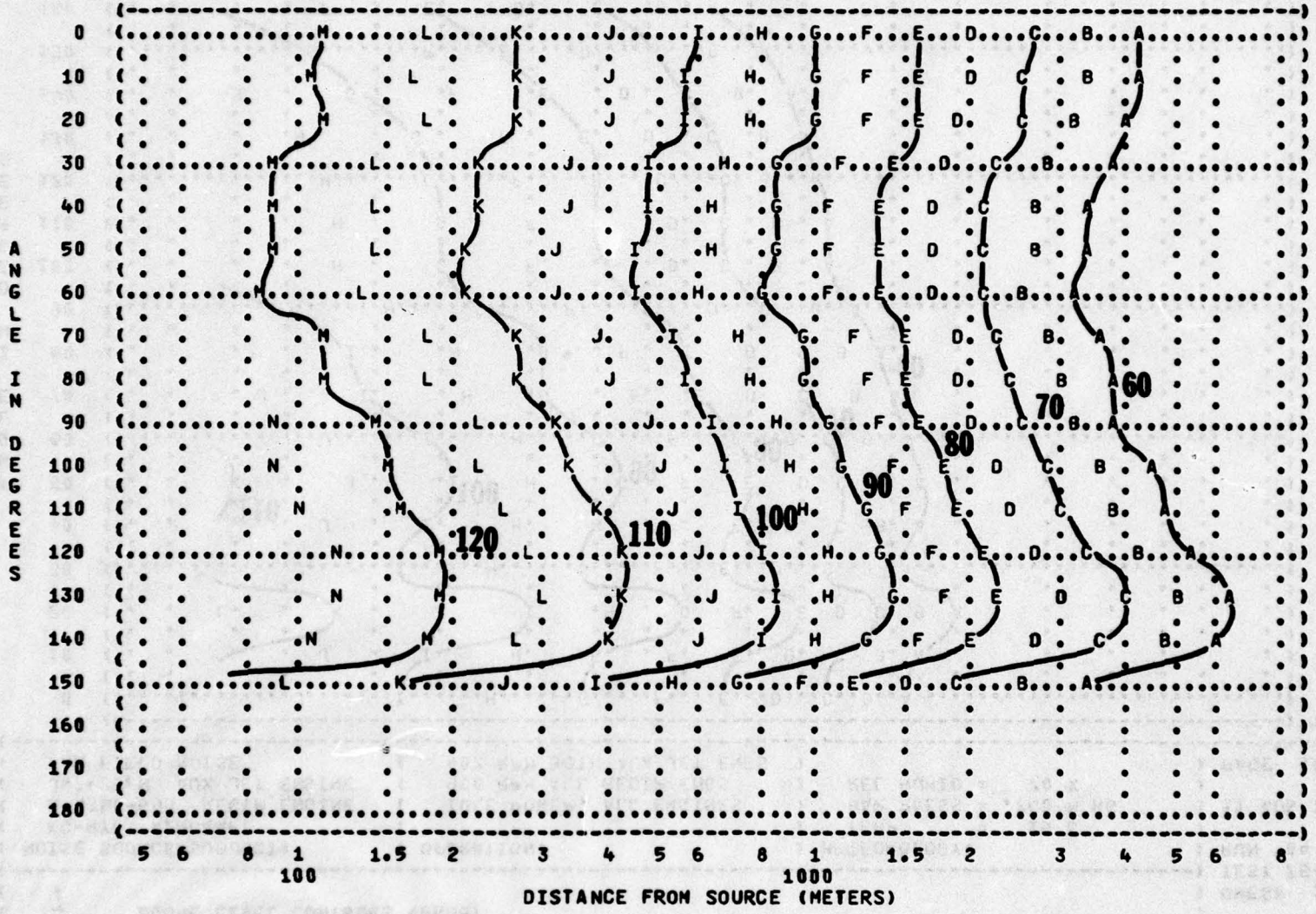


FIGURE: 8 PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 17

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

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

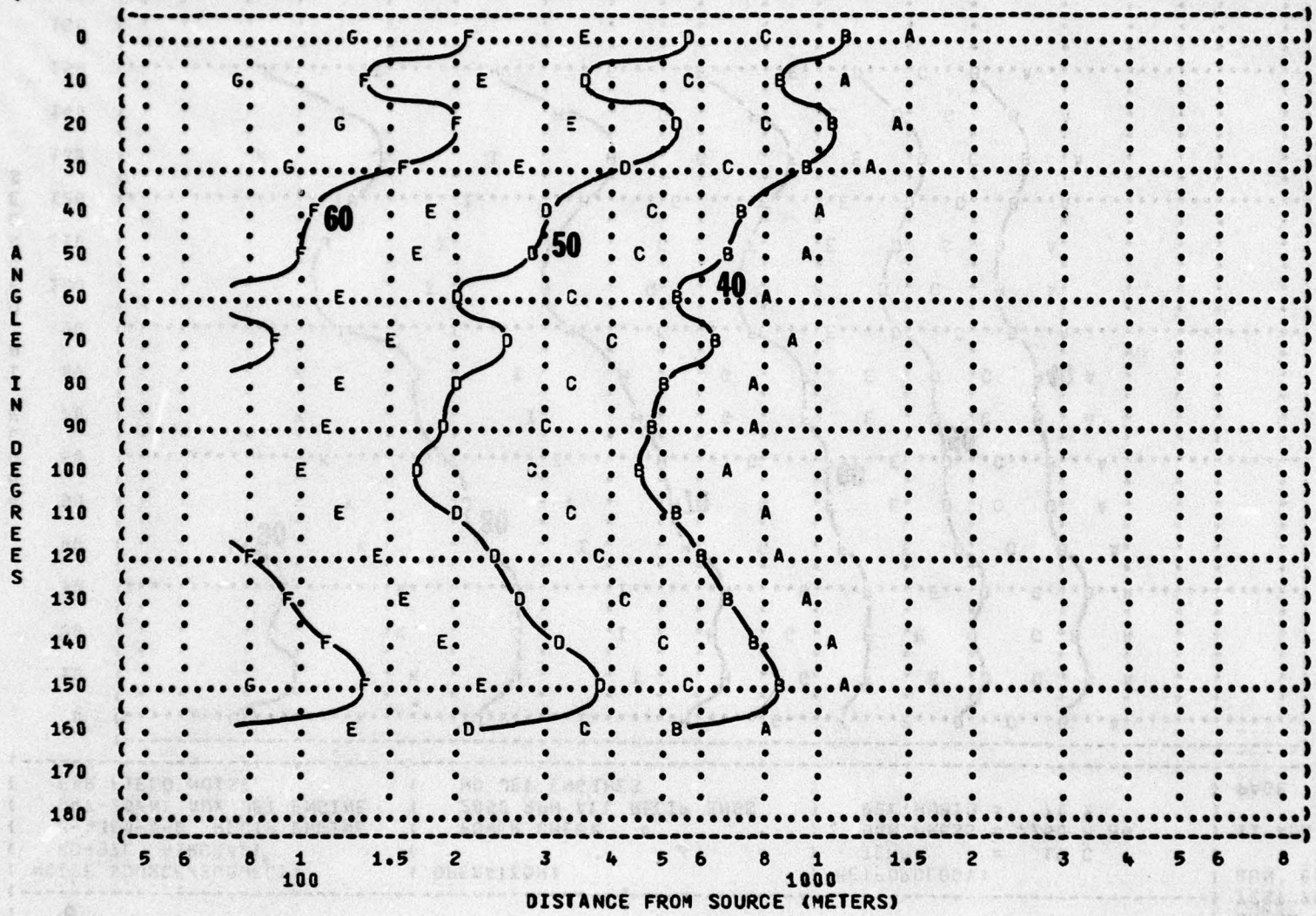


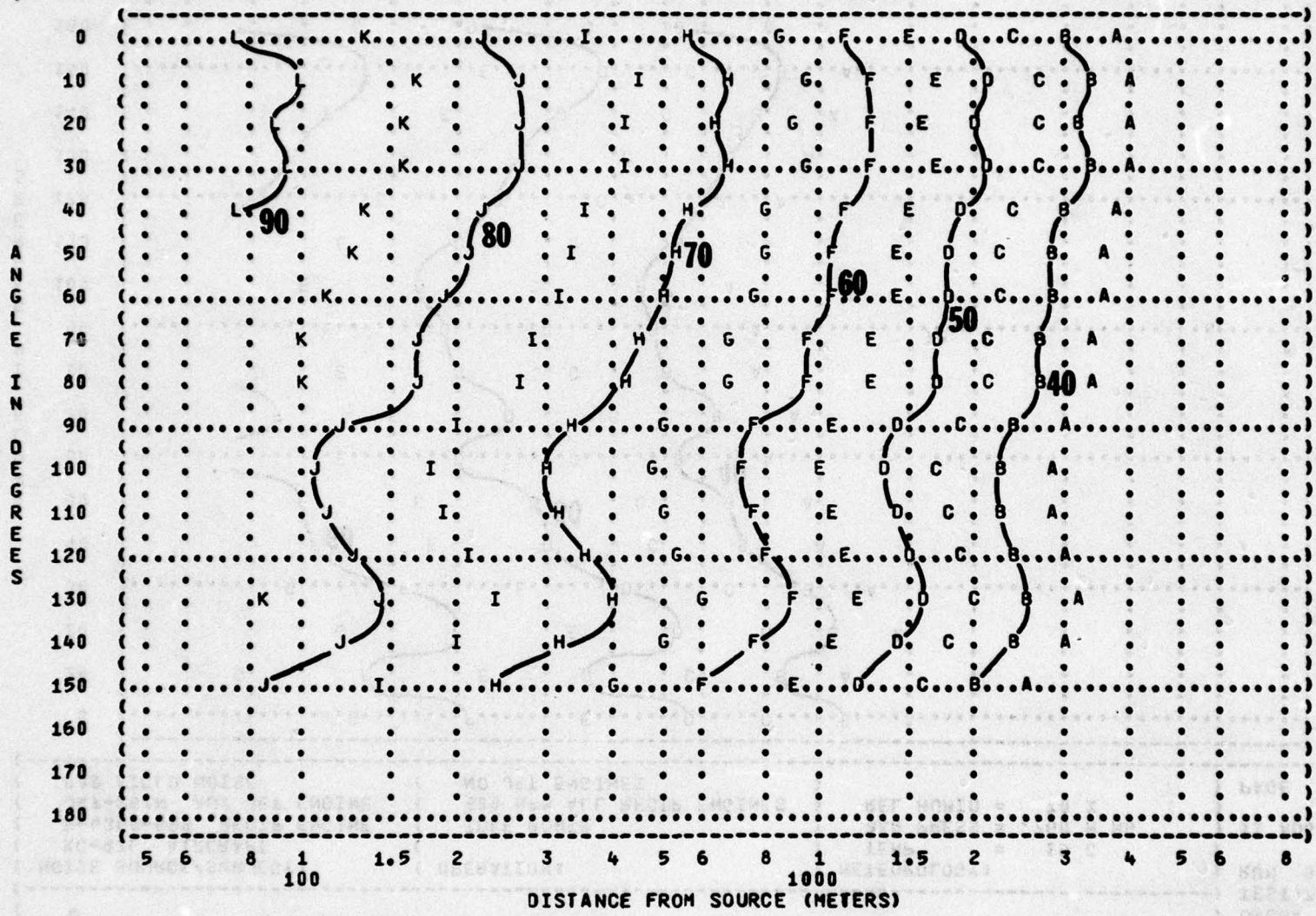
FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-802-016
RUN 02
11 AUG 76
PAGE 17



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

FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 17

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

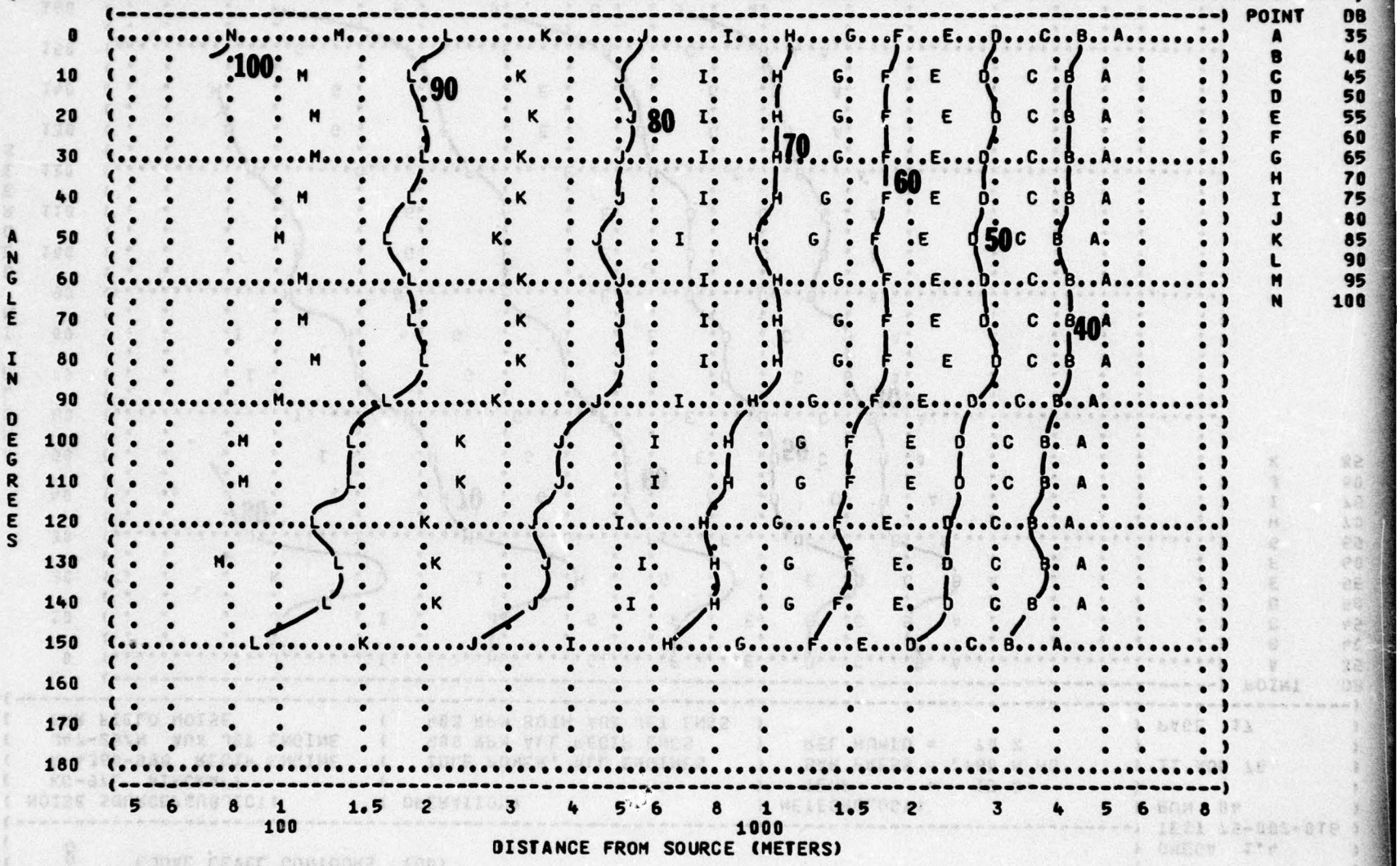


FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 17

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

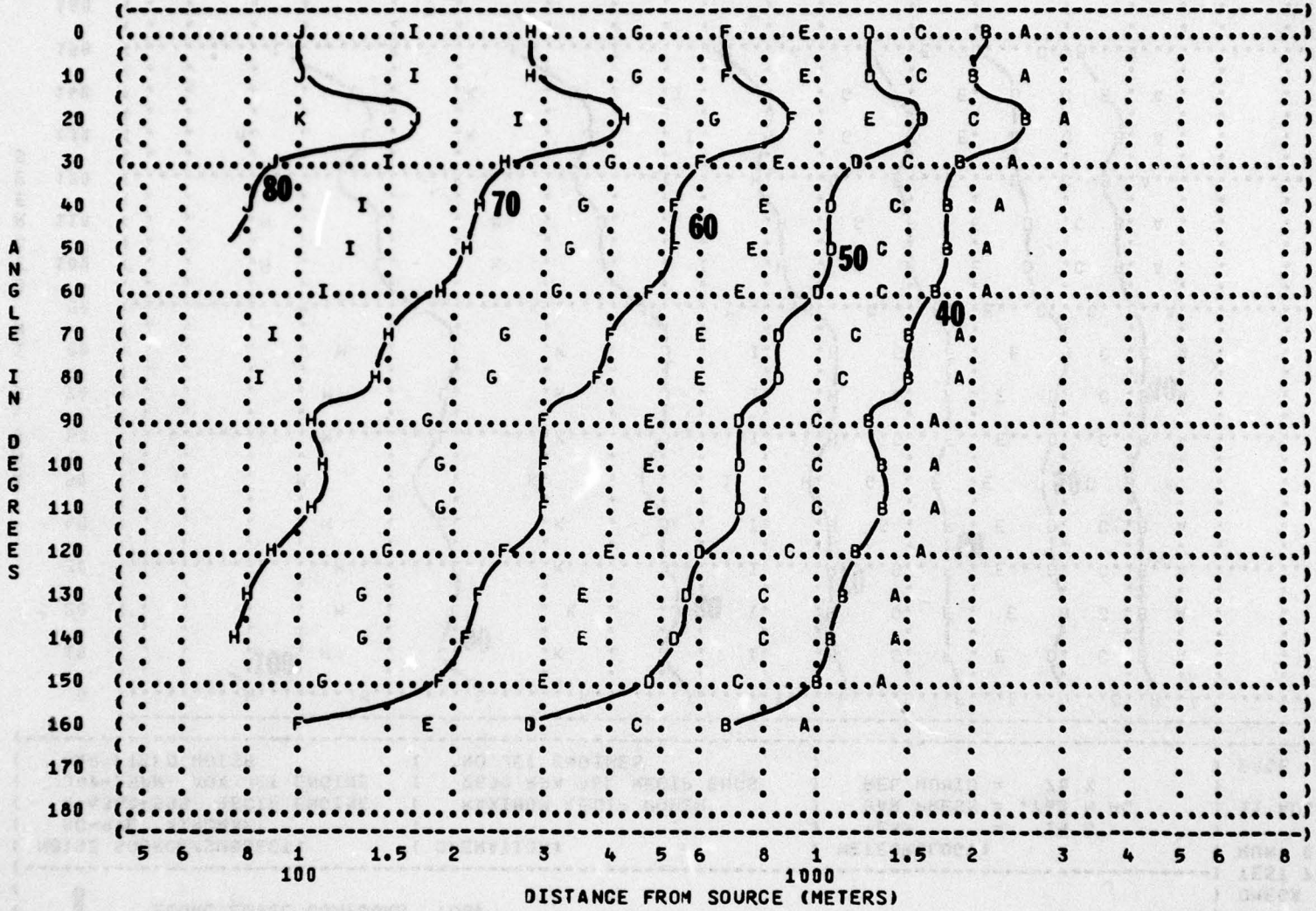


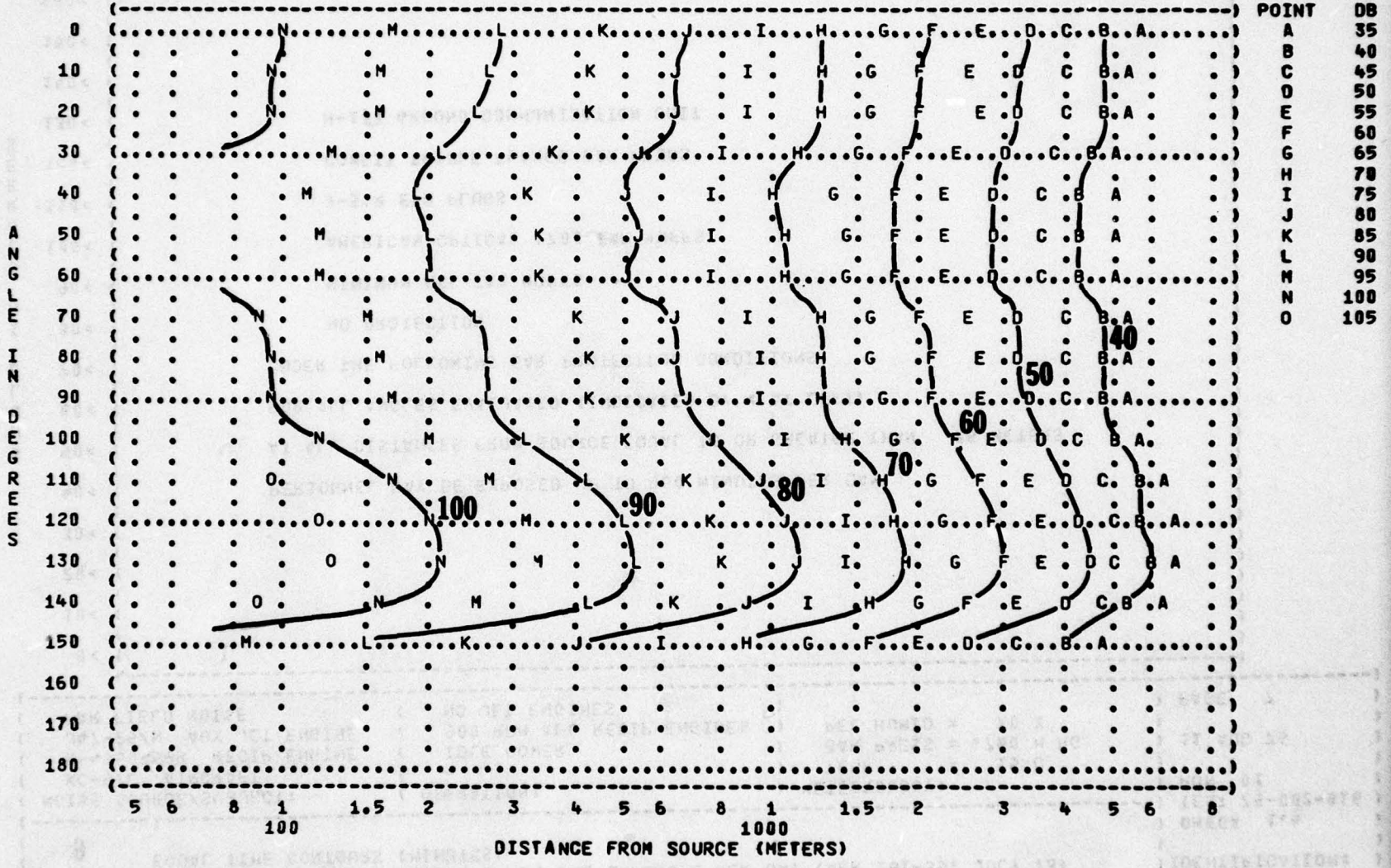
FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 17

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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



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

FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 7

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

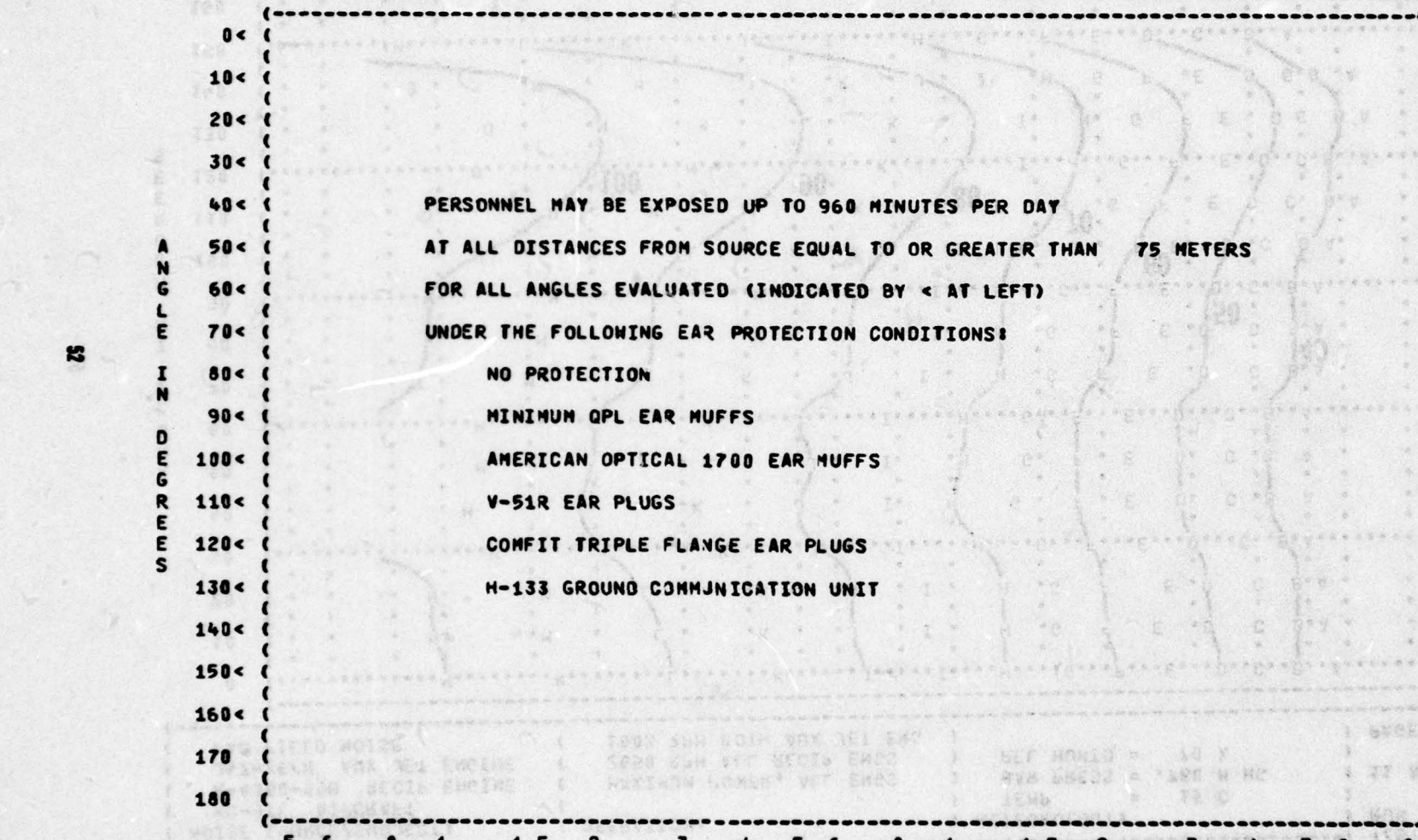


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 7

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

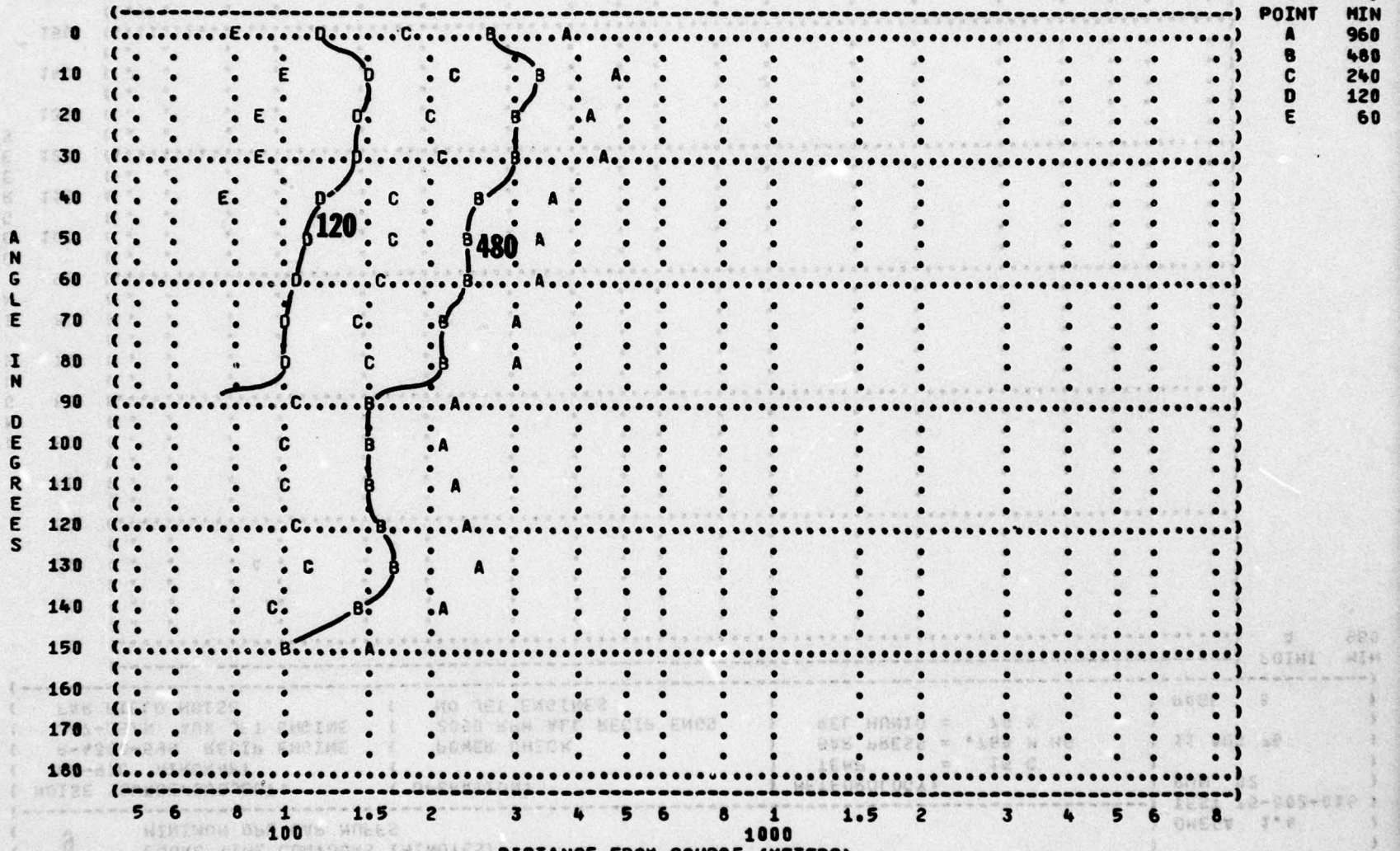


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
MINIMUM QPL EAR MUFFS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 8

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

POINT	MIN
A	960

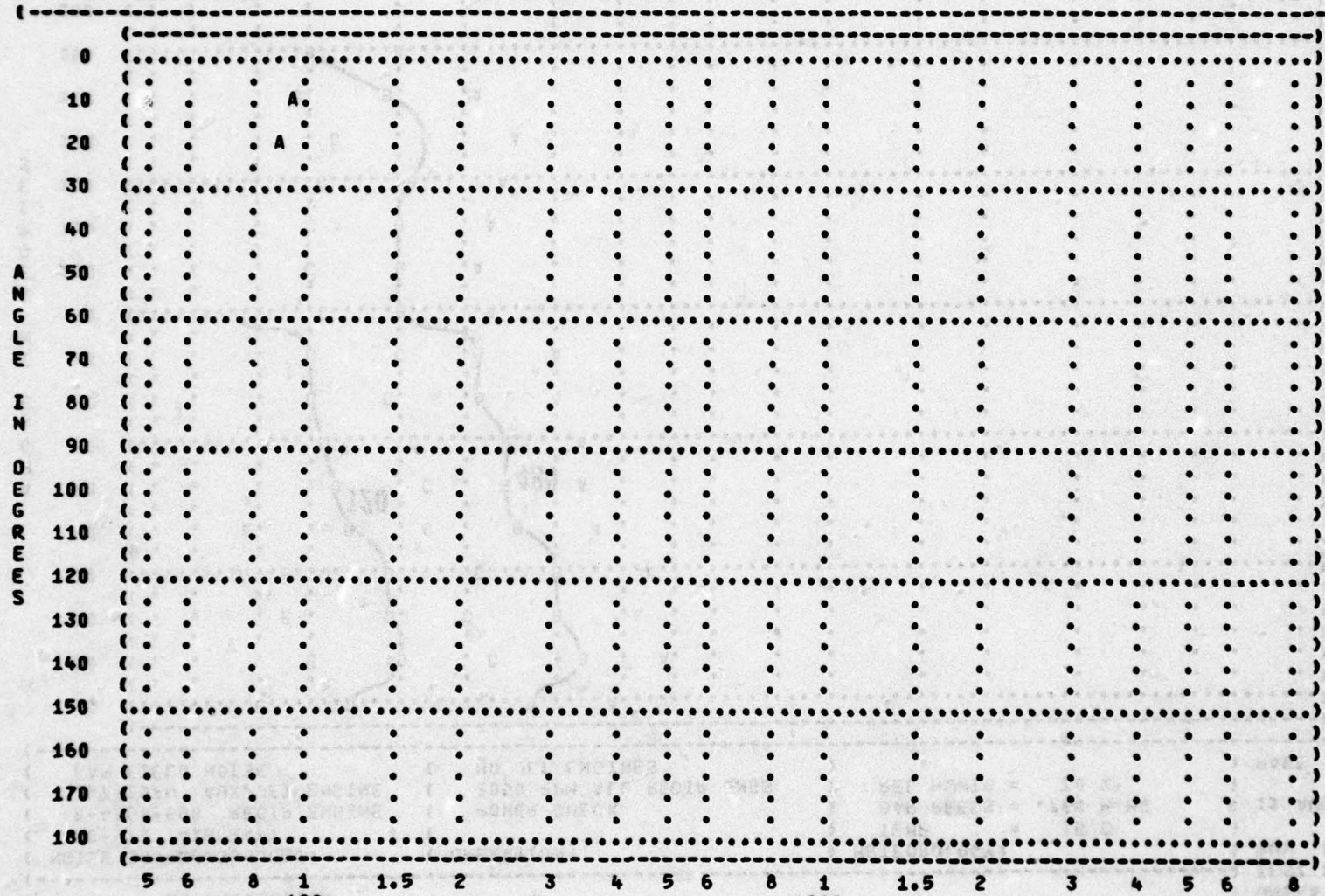


FIGURE: 9	MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) EQUAL TIME CONTOURS (MINUTES)	IDENTIFICATION:
NOISE SOURCE/SUBJECT: KC-97L AIRCRAFT R-4360-59B RECIP ENGINE J47-25/N AUX JET ENGINE FAR FIELD NOISE	OPERATION: POWER CHECK 2050 RPM ALL RECIP ENGS NO JET ENGINES	METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

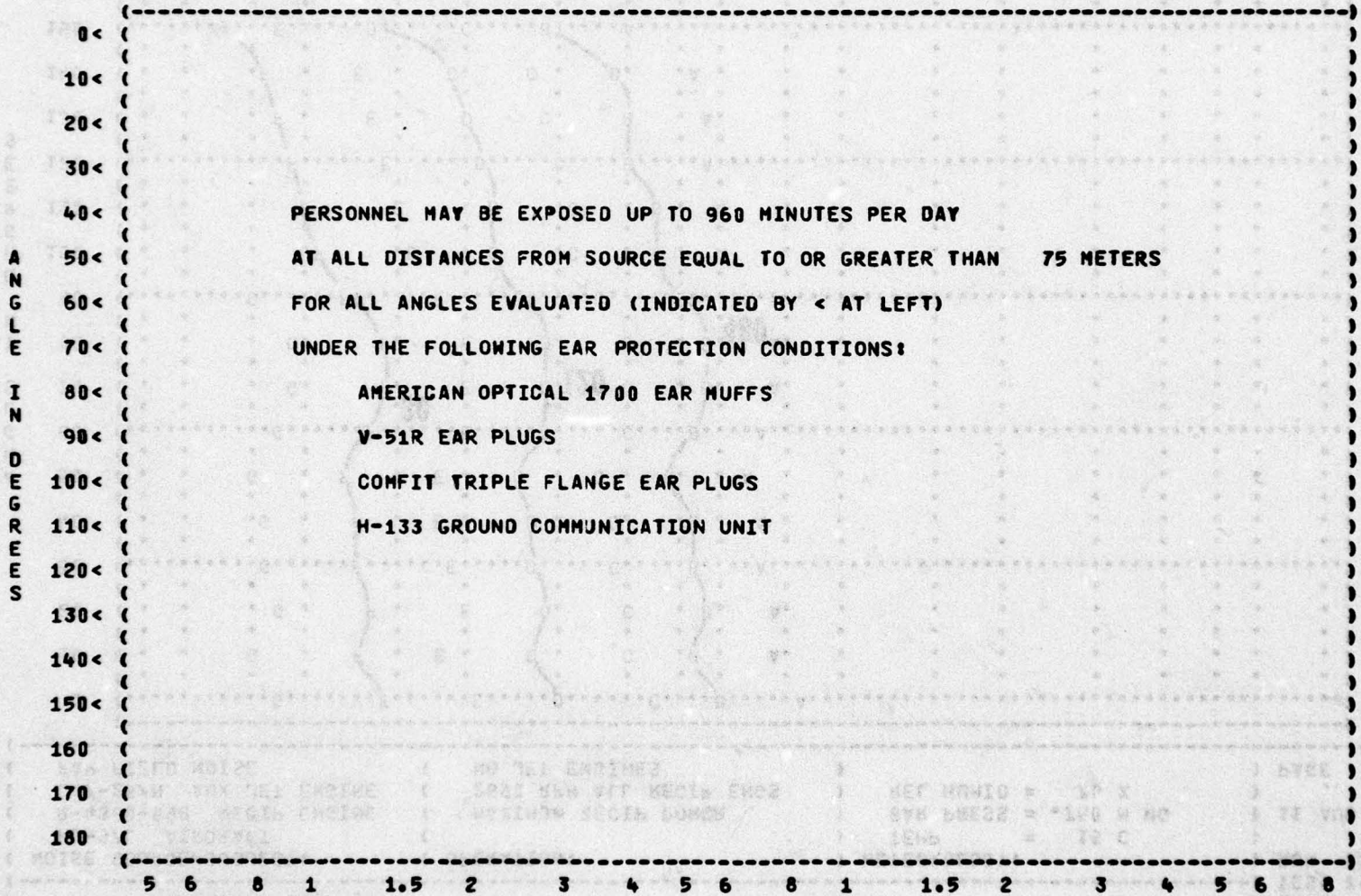


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 7

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

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

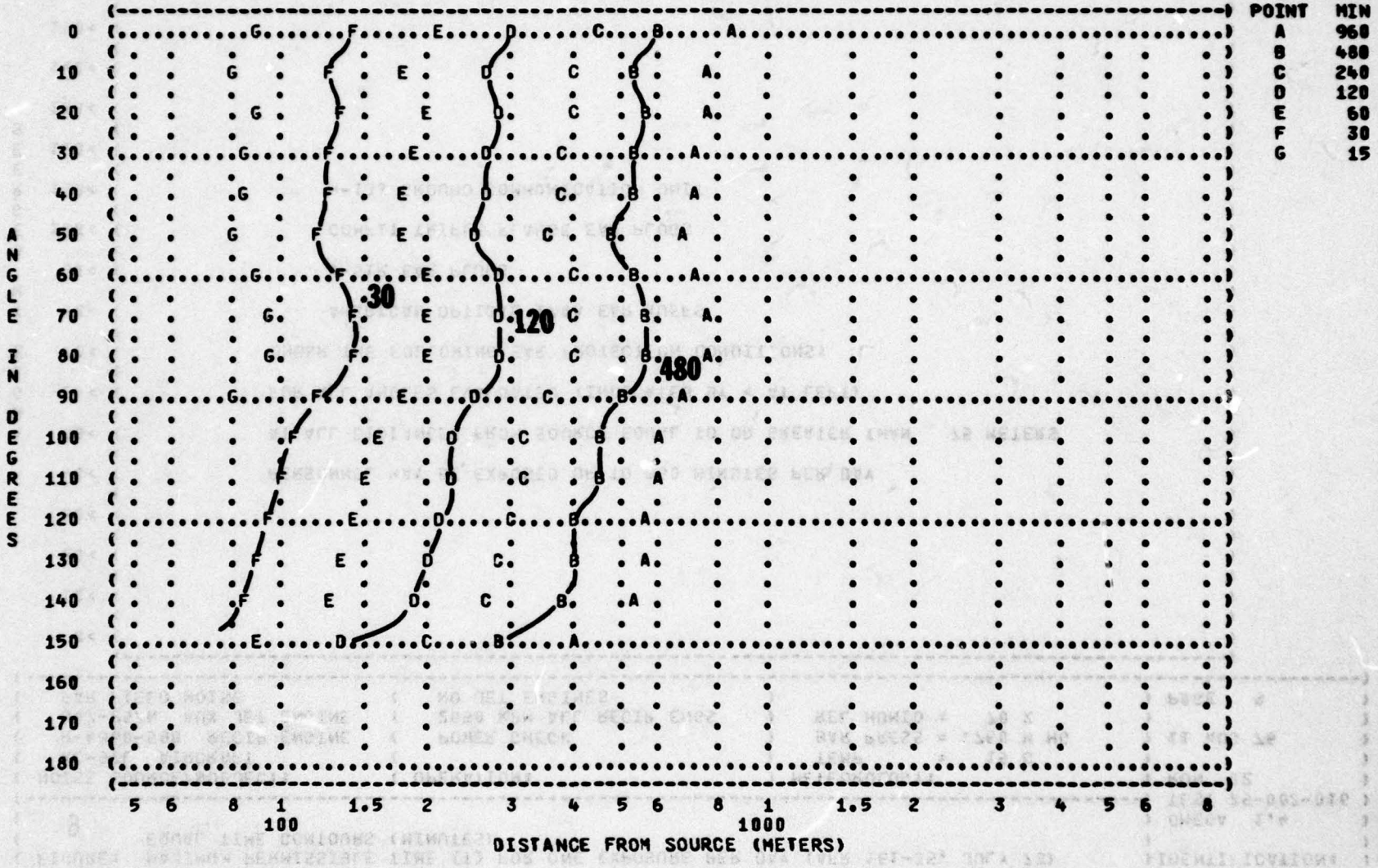


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
MINIMUM QPL EAR MUFFS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 8

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

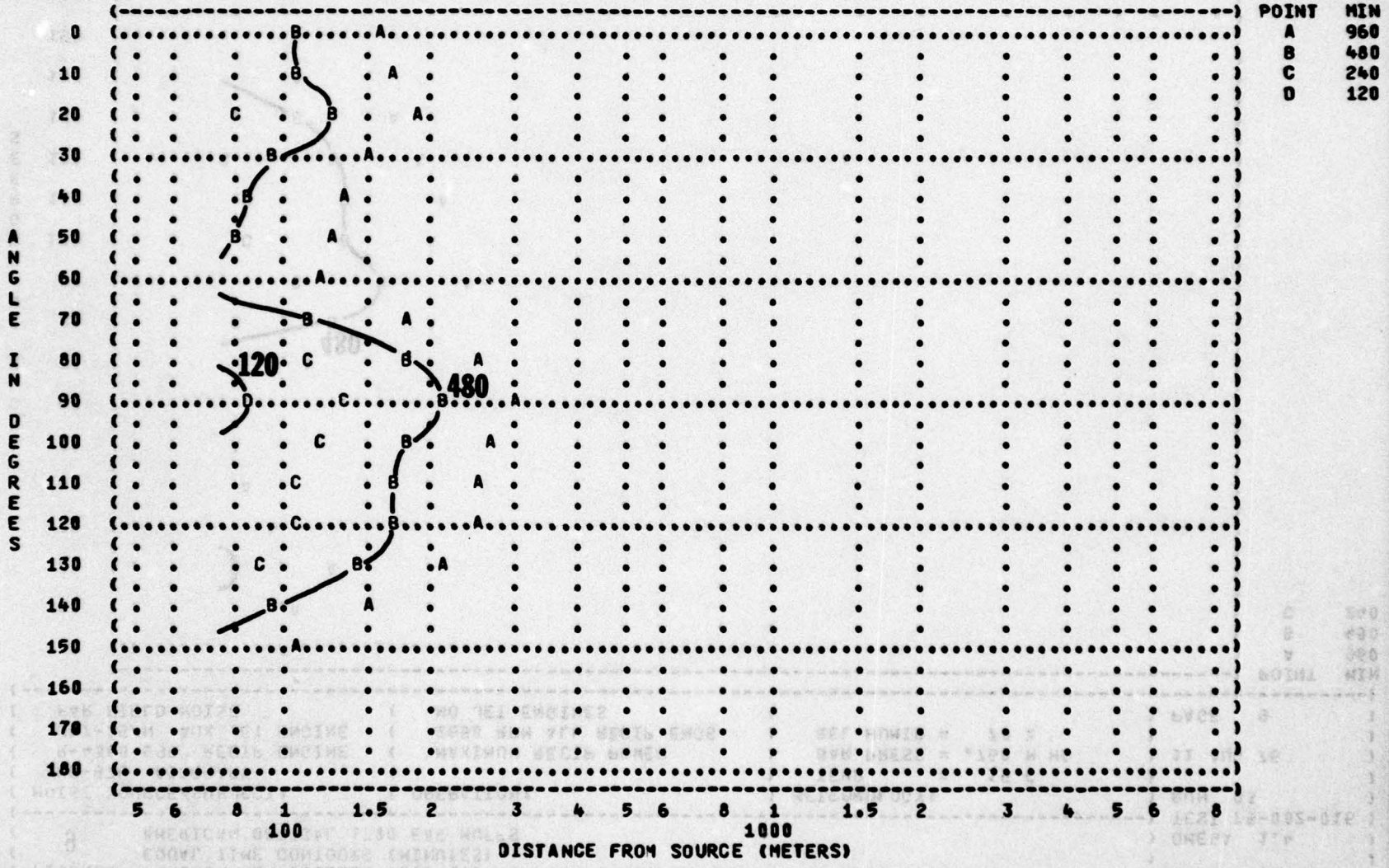


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
AMERICAN OPTICAL 1700 EAR MUFFS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 9

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

POINT	MIN
A	960
B	480
C	240

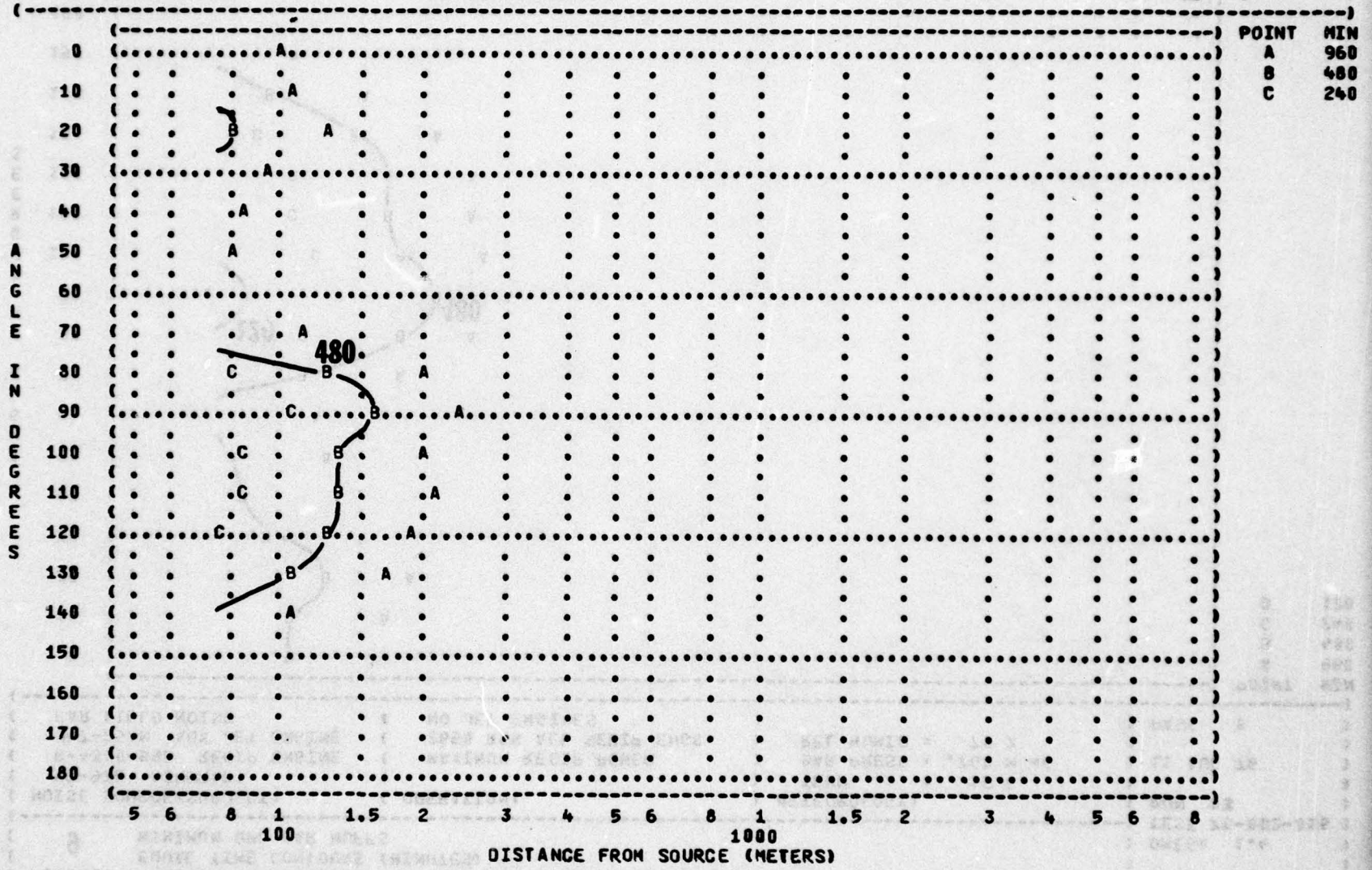


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
V-51R EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-016
RUN 03
11 AUG 76
PAGE 18

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

POINT	MIN
A	960

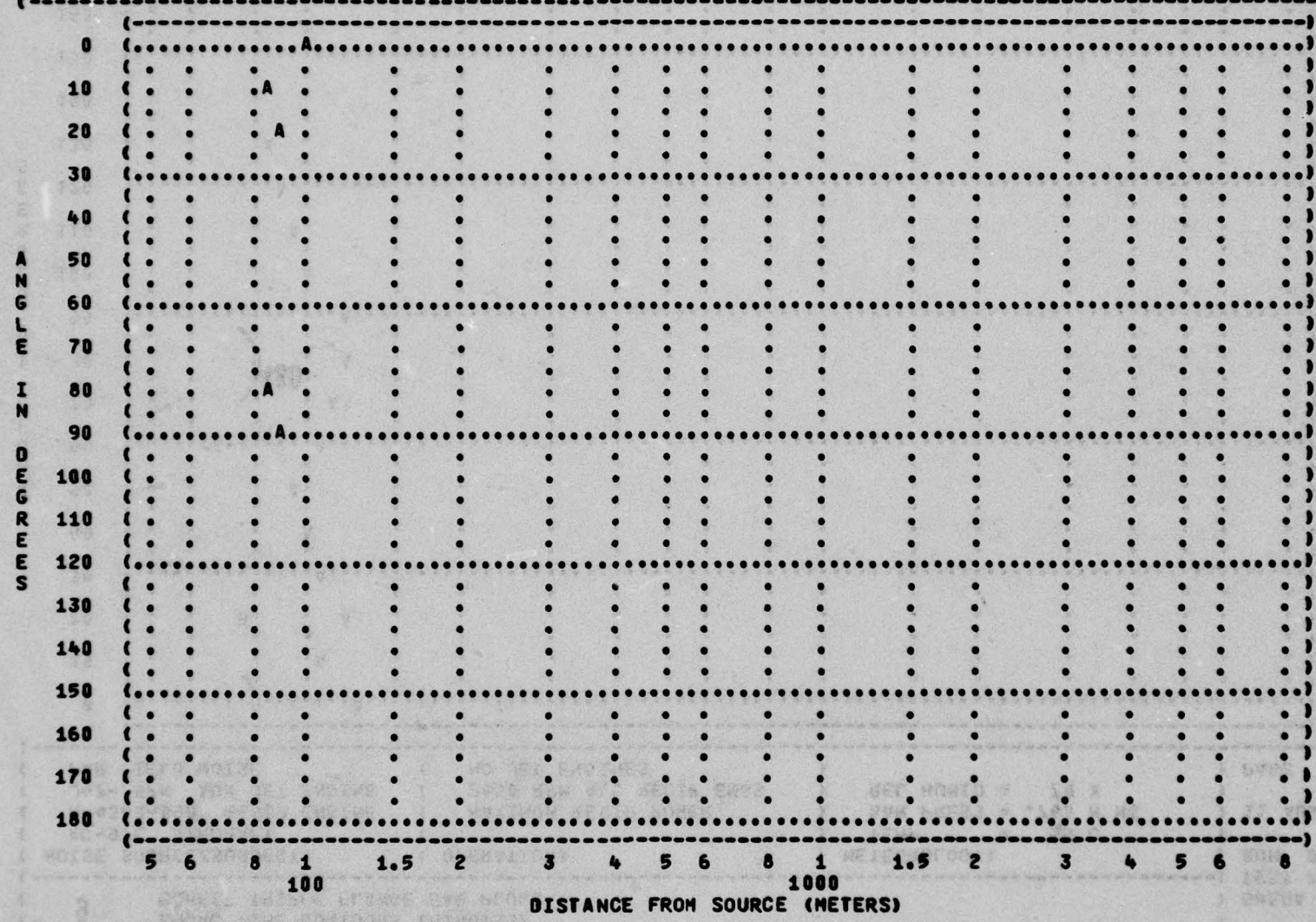


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
COMFIT TRIPLE FLANGE EAR PLUGS

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-016
RUN 03
11 AUG 76
PAGE 11

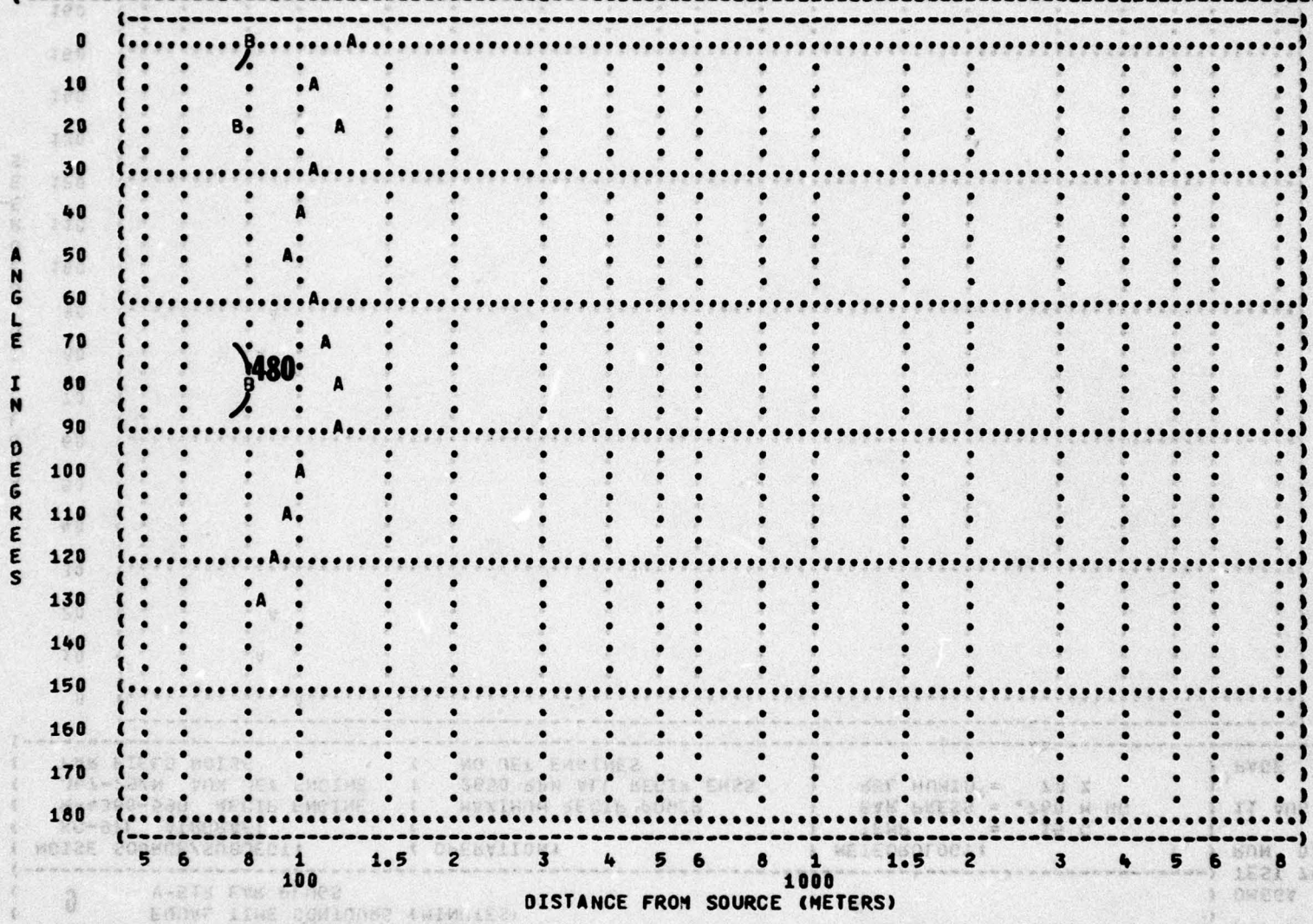


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
H-133 GROUND COMMUNICATION UNIT

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 12

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

POINT	MIN
A	960
B	480

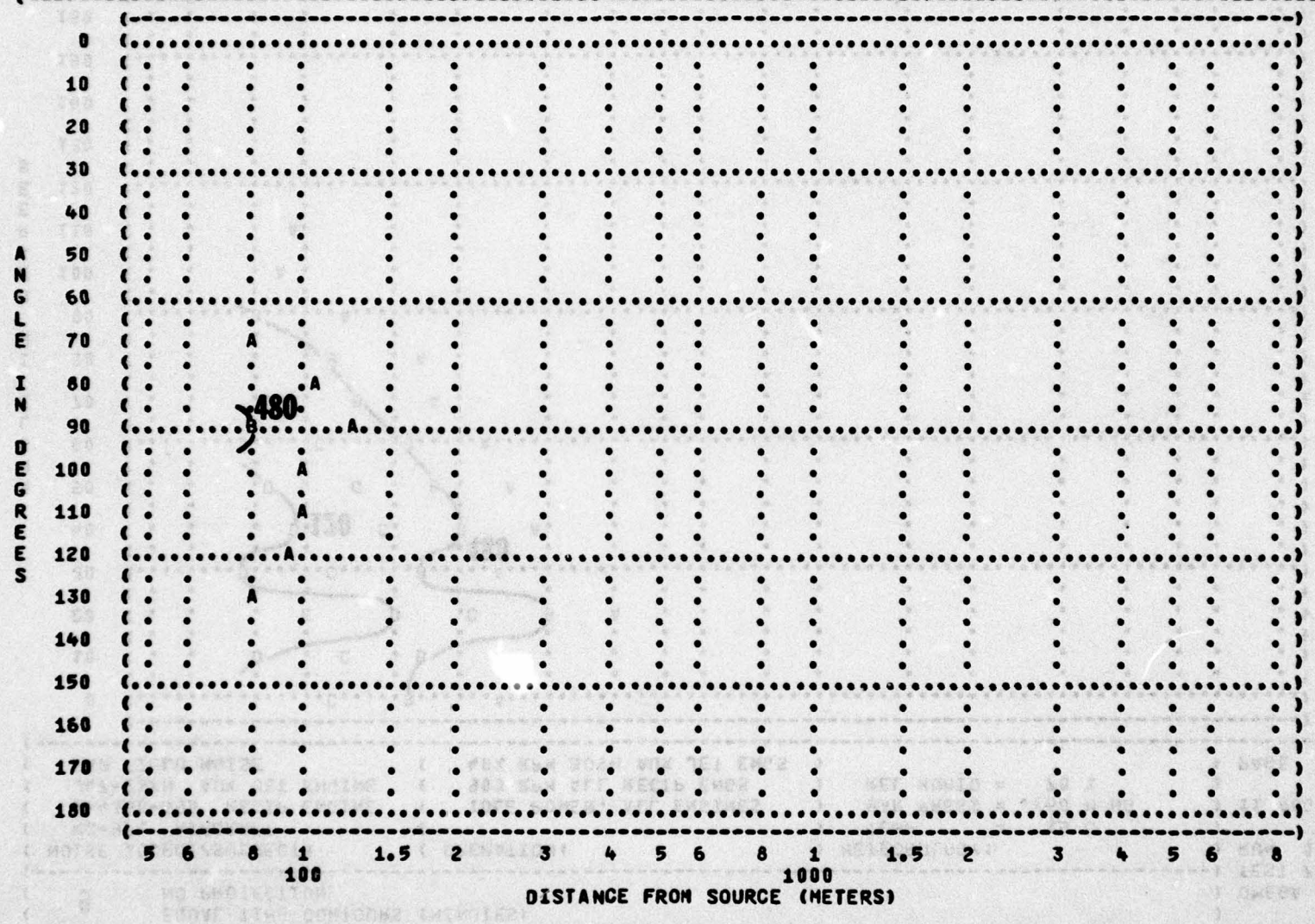


FIGURE: 9

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 7

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

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

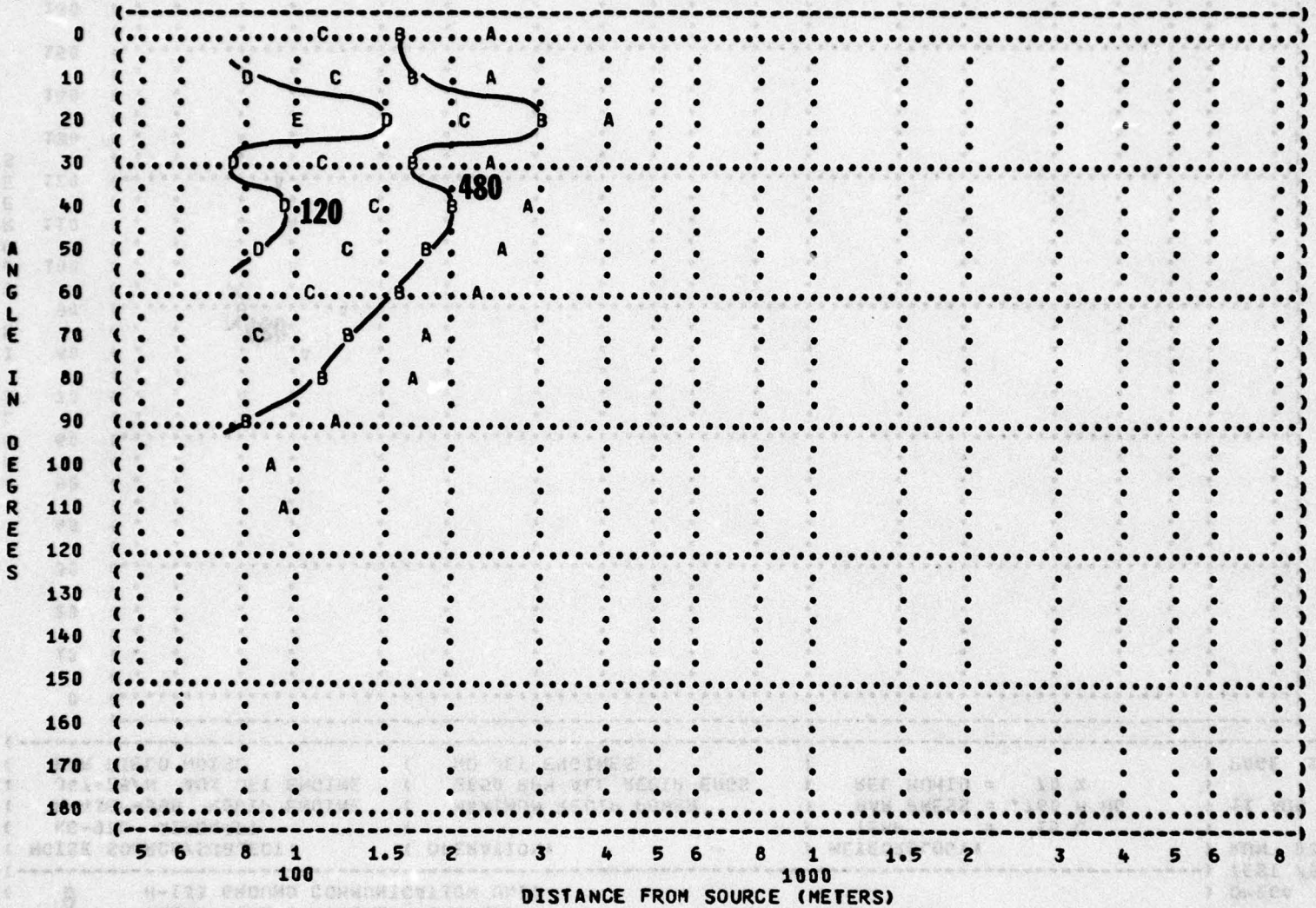


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 8

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

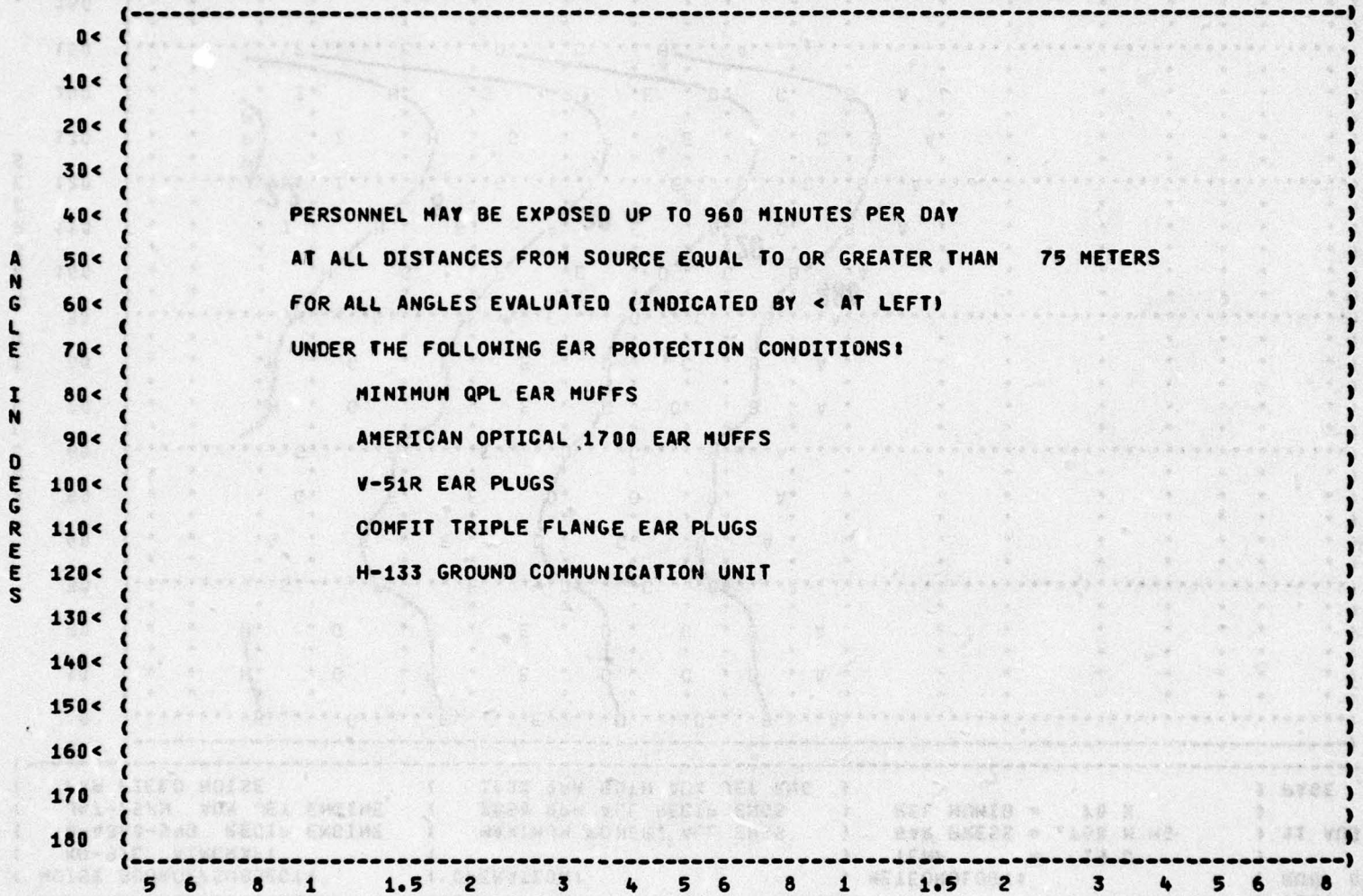


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

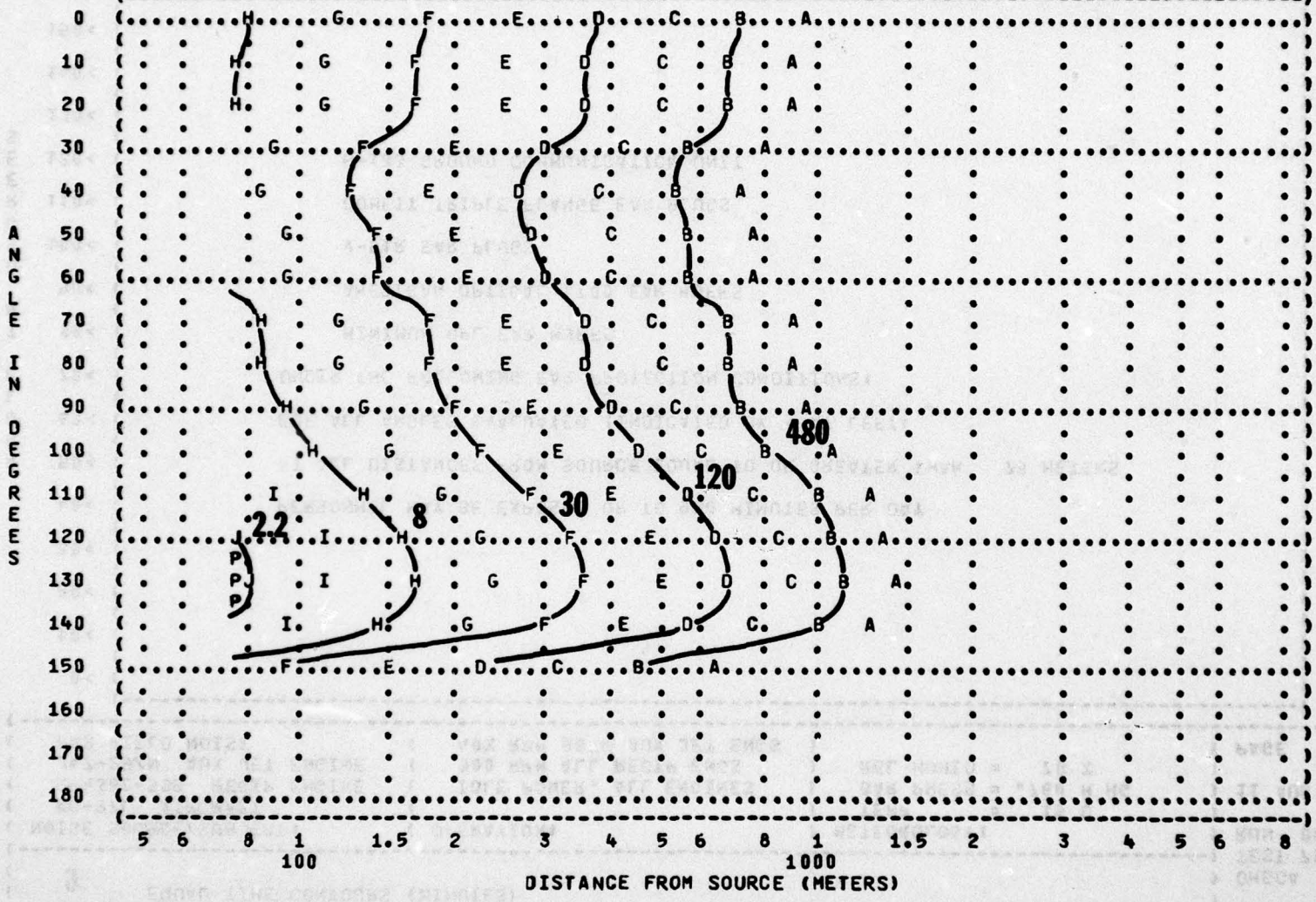
IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 7

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

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



P ADDITIONAL EAR PROTECTION REQUIRED.

FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
MINIMUM QPL EAR MUFFS

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-016
RUN 05
11 AUG 76
PAGE 8

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

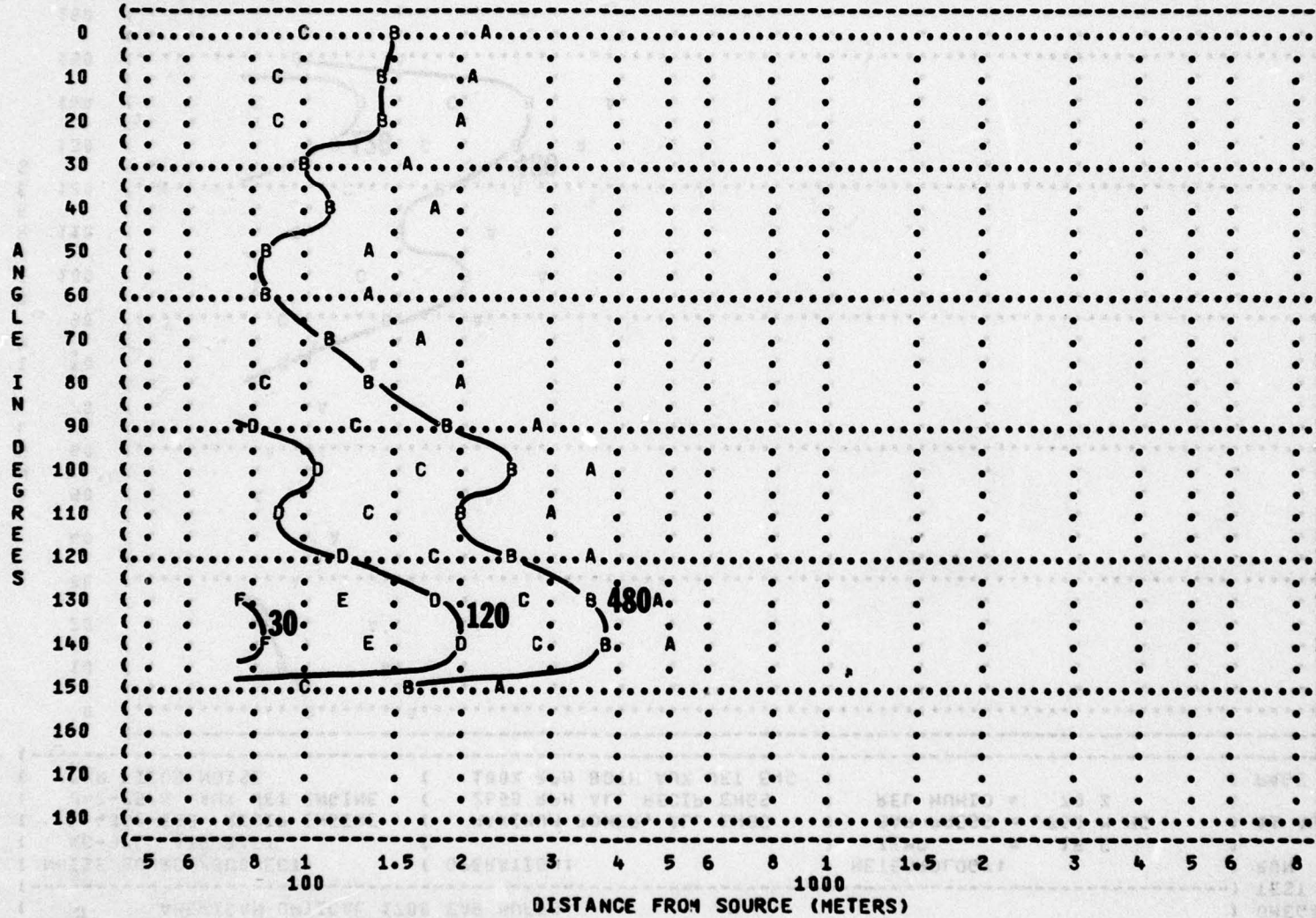


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
AMERICAN OPTICAL 1700 EAR MUFFS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 9

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

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

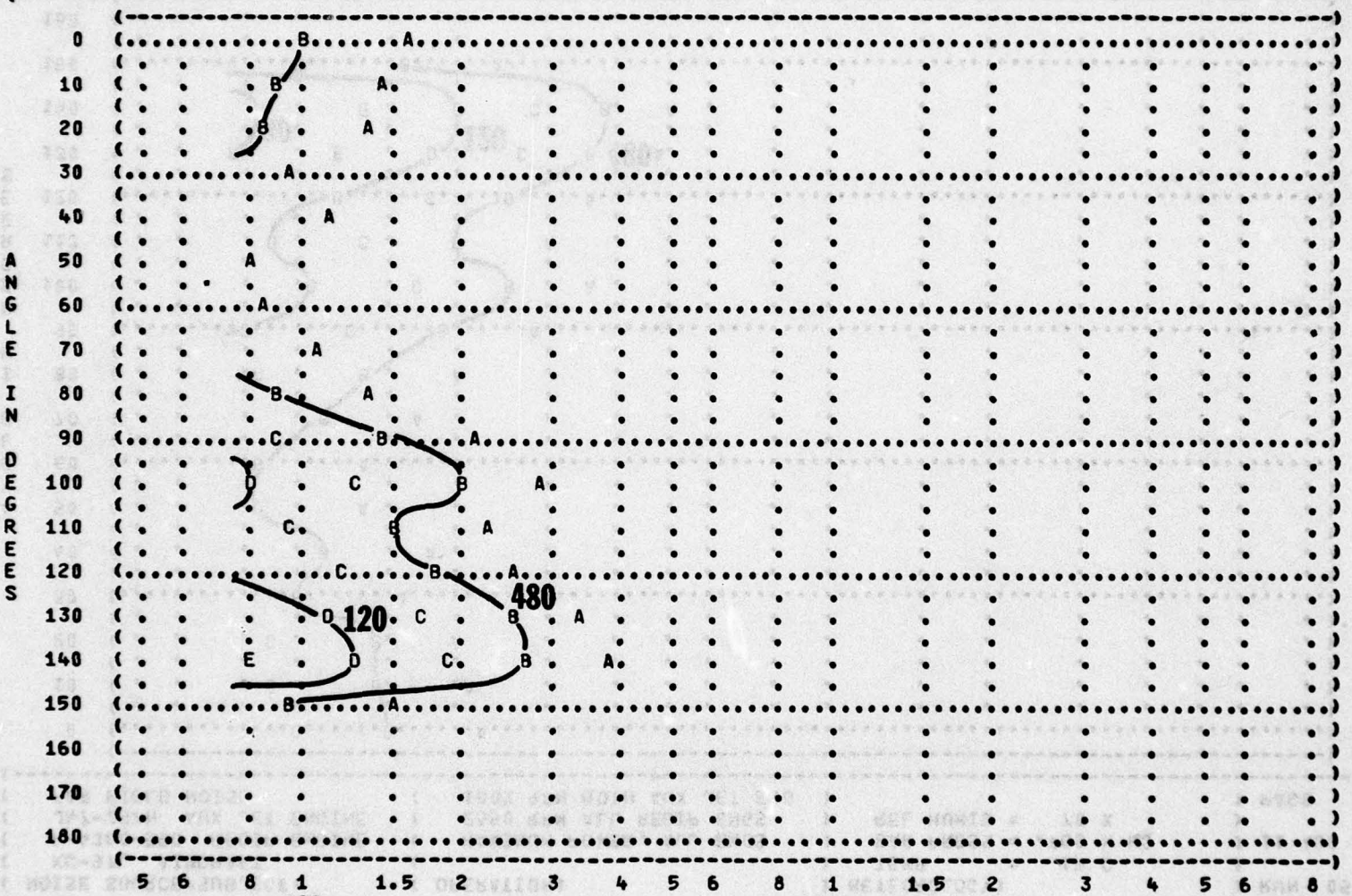


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
V-51R EAR PLUGS

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05

11 AUG 76

PAGE 10

POINT	MIN
A	960
B	480
C	240
D	120

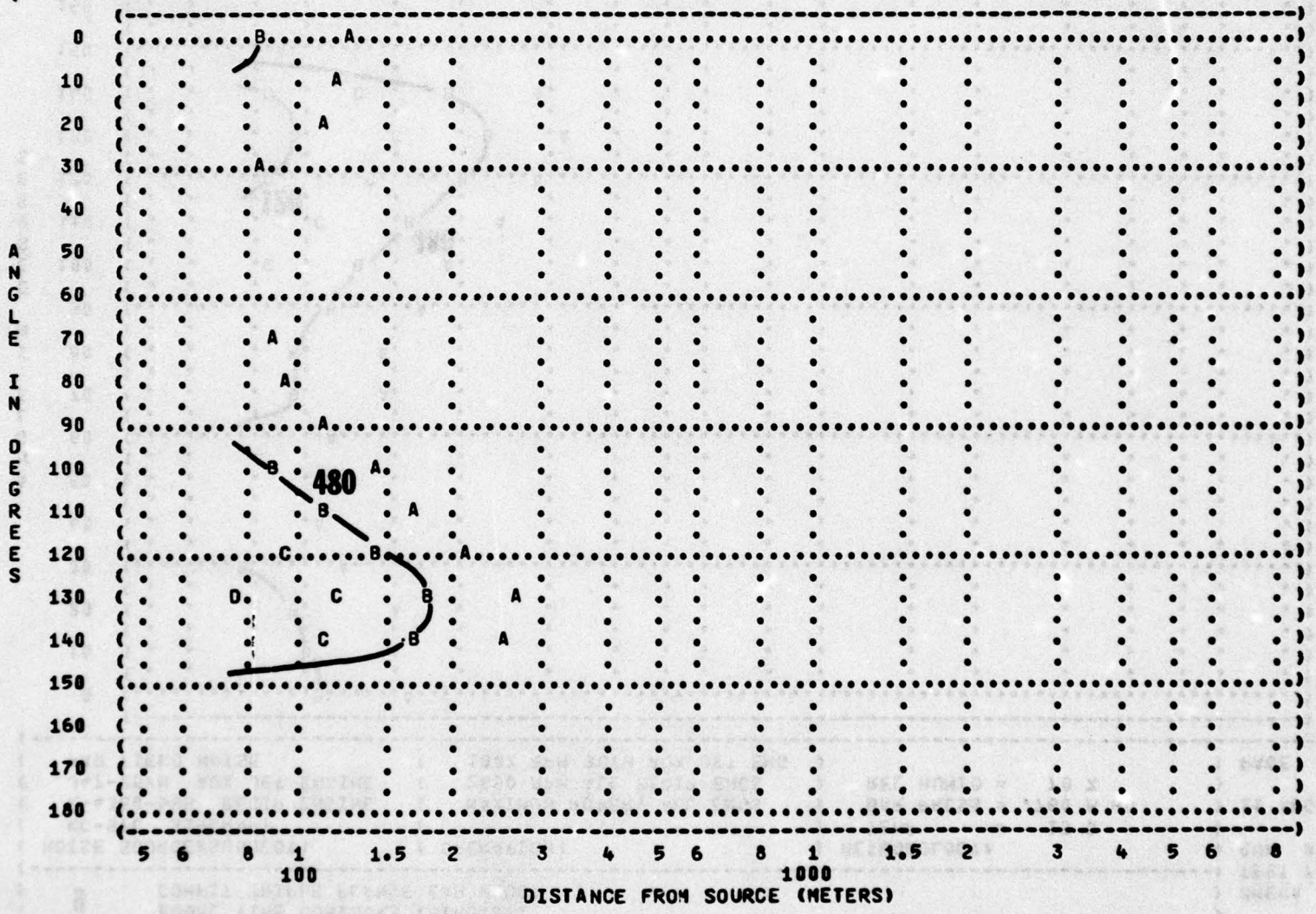


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
COMFIT TRIPLE FLANGE EAR PLUGS

IDENTIFICATIONS:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 11

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

POINT	MIN
A	960
B	480
C	240
D	120

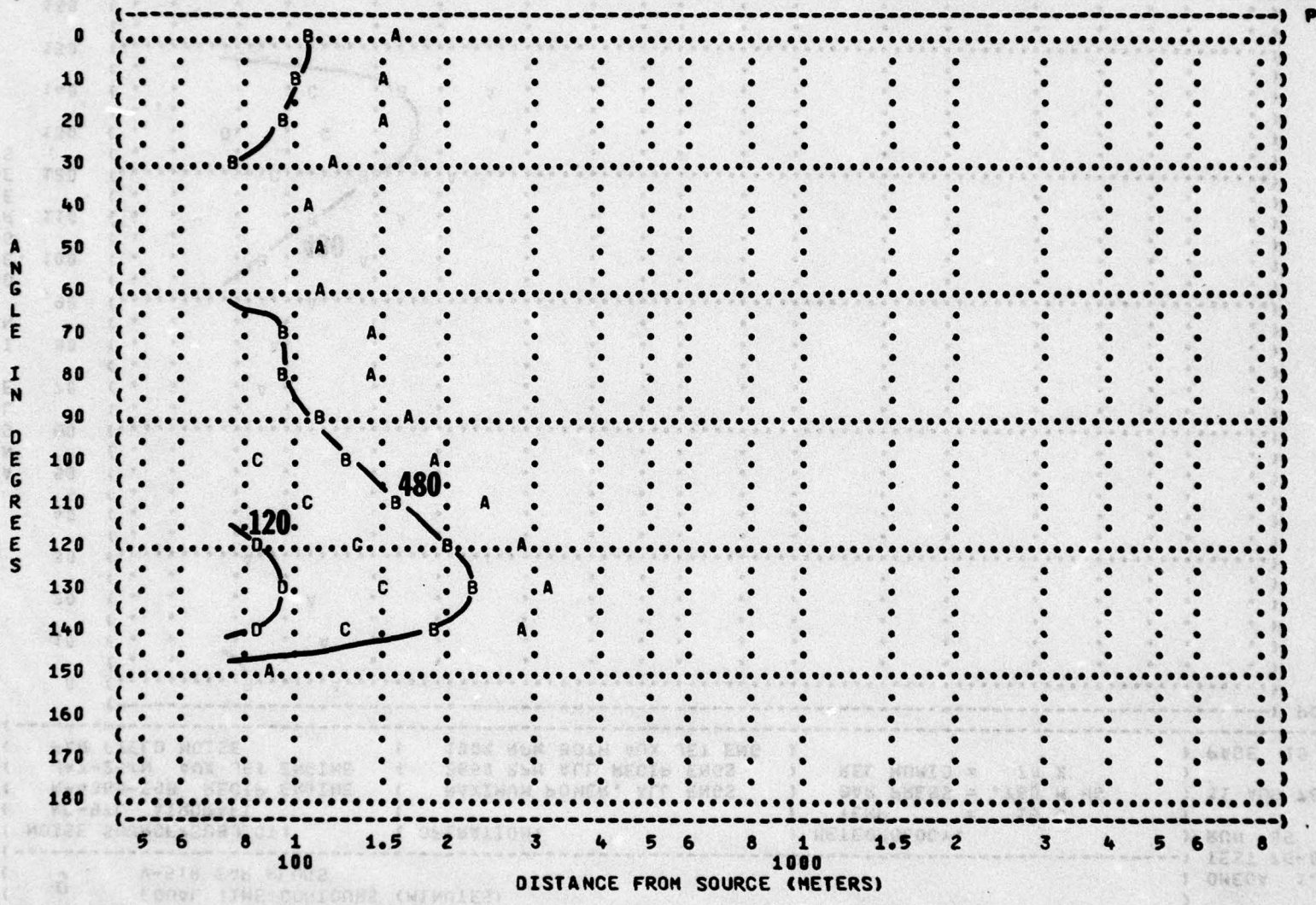


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
H-133 GROUND COMMUNICATION UNIT

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 12

POINT	MIN
A	960
B	480
C	240

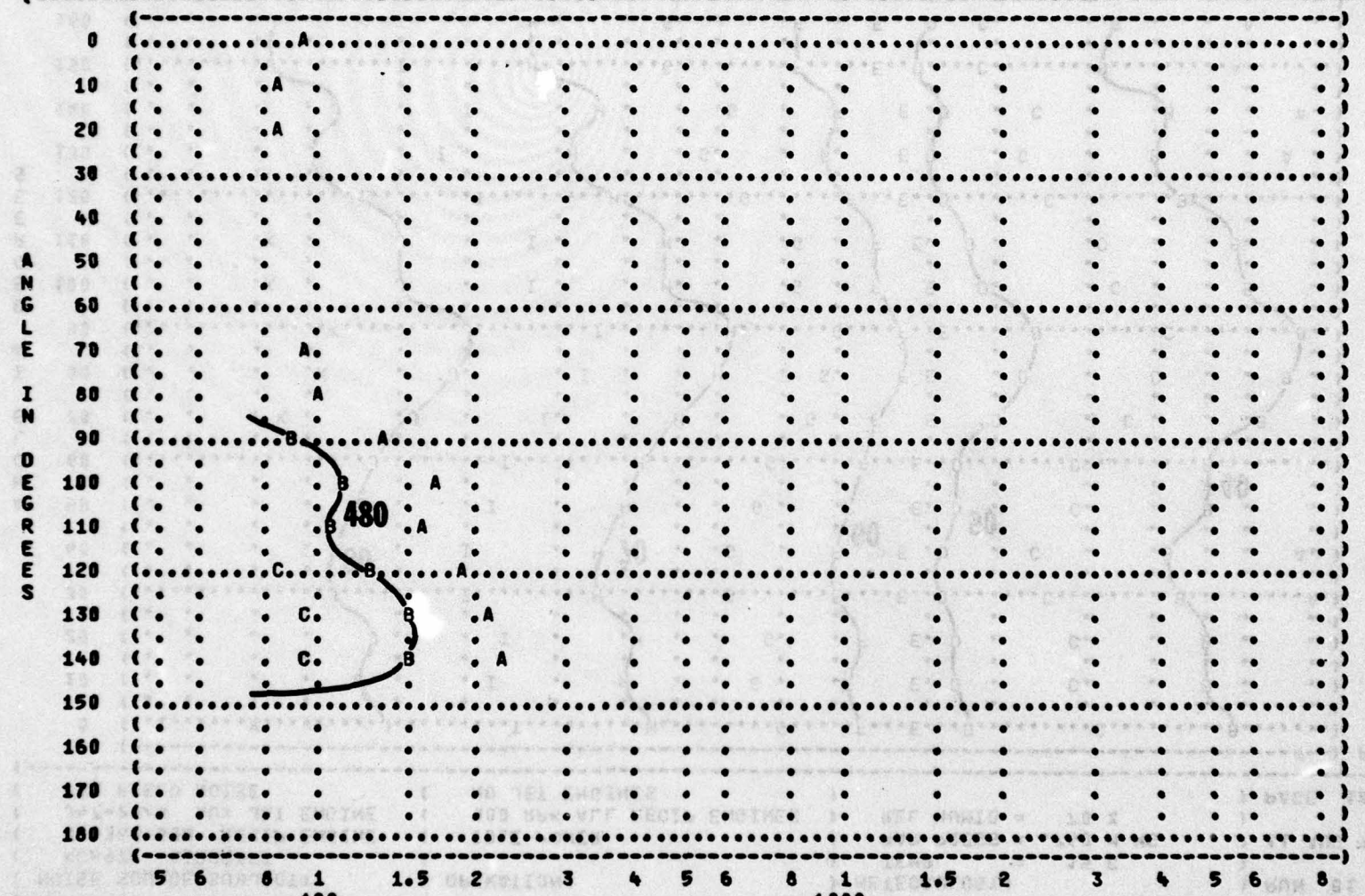


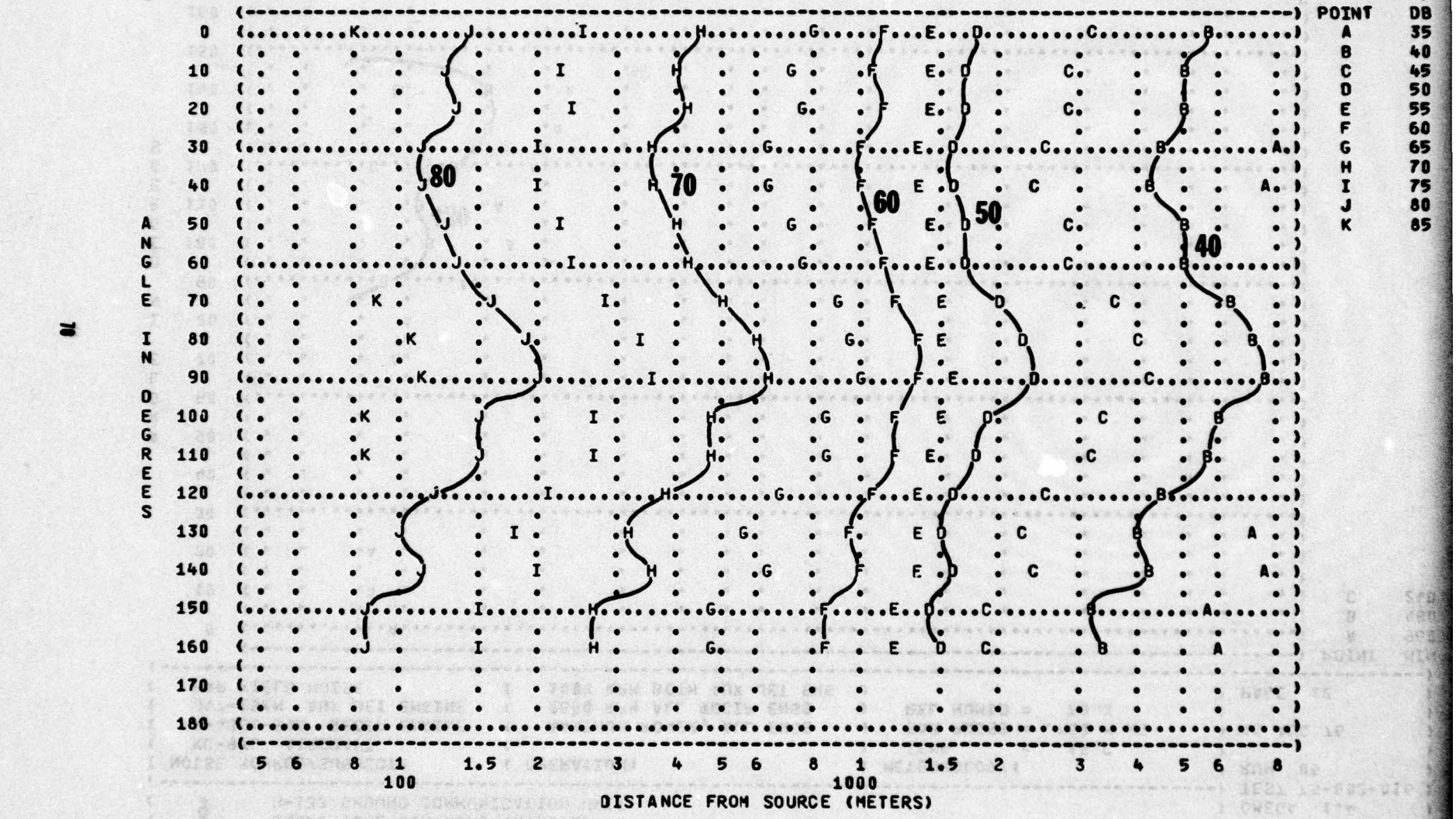
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 18



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

FIGURE: 10

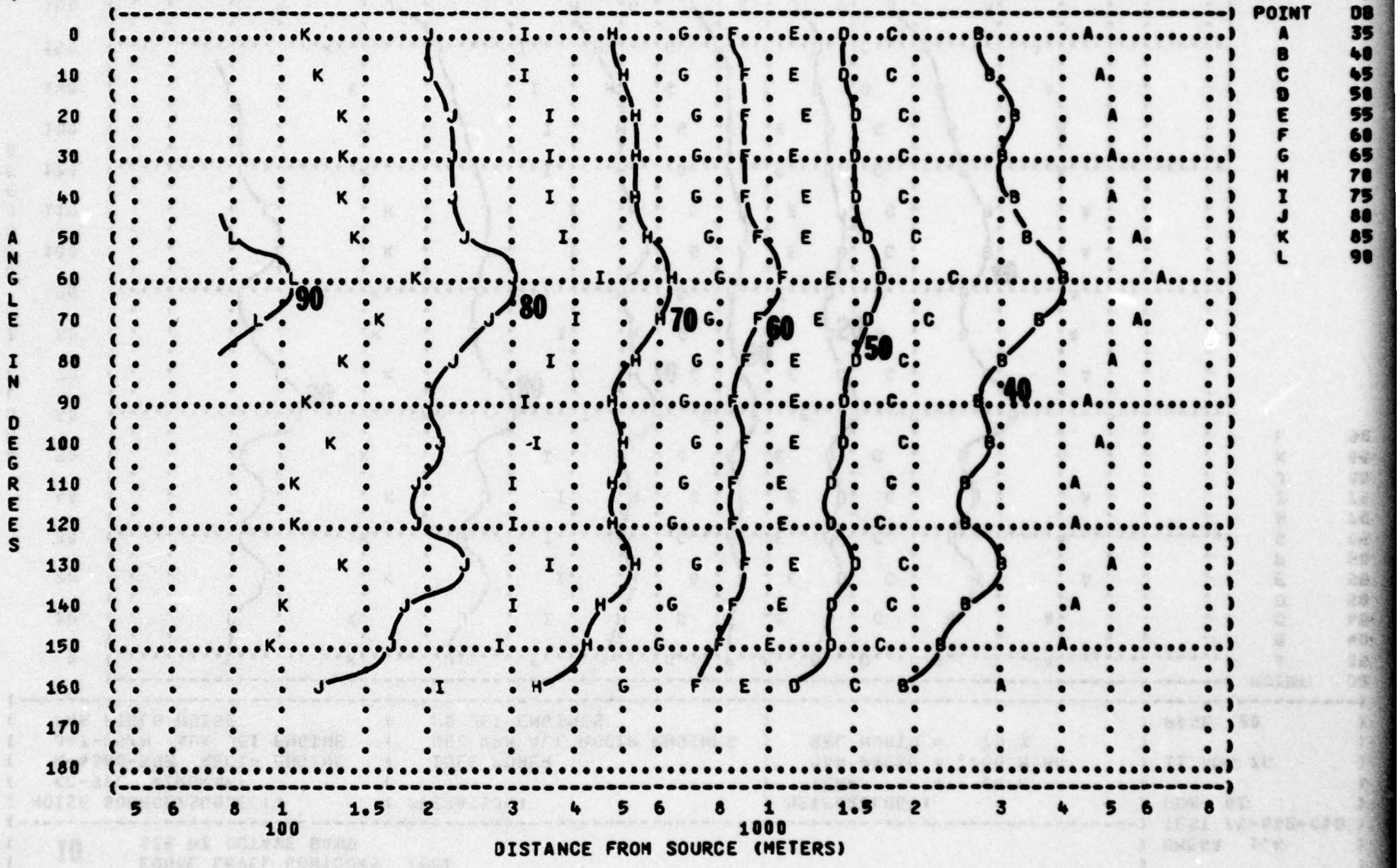
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
63 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 19

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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



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

FIGURE: 10

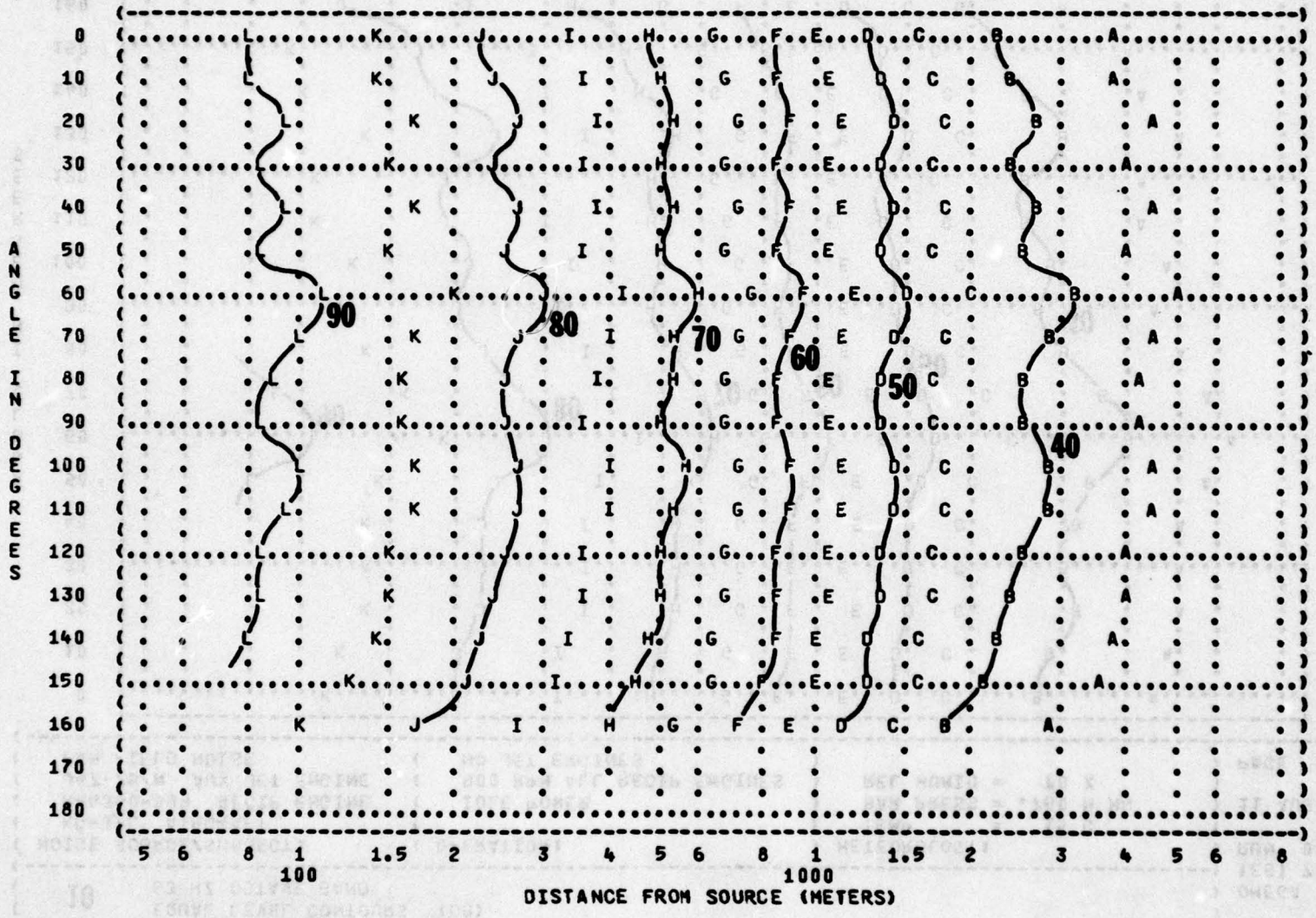
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 20



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

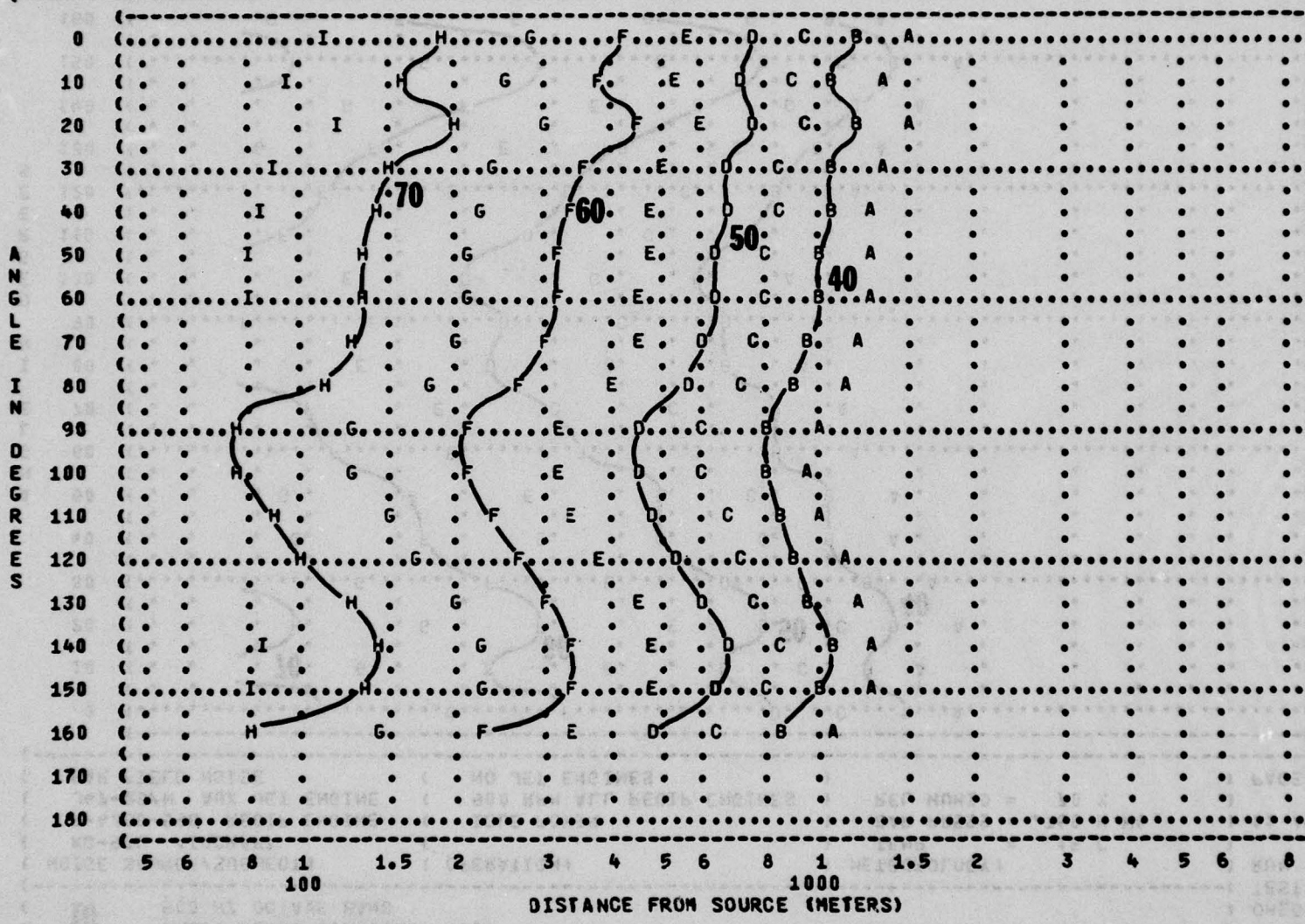
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 21



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

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 22

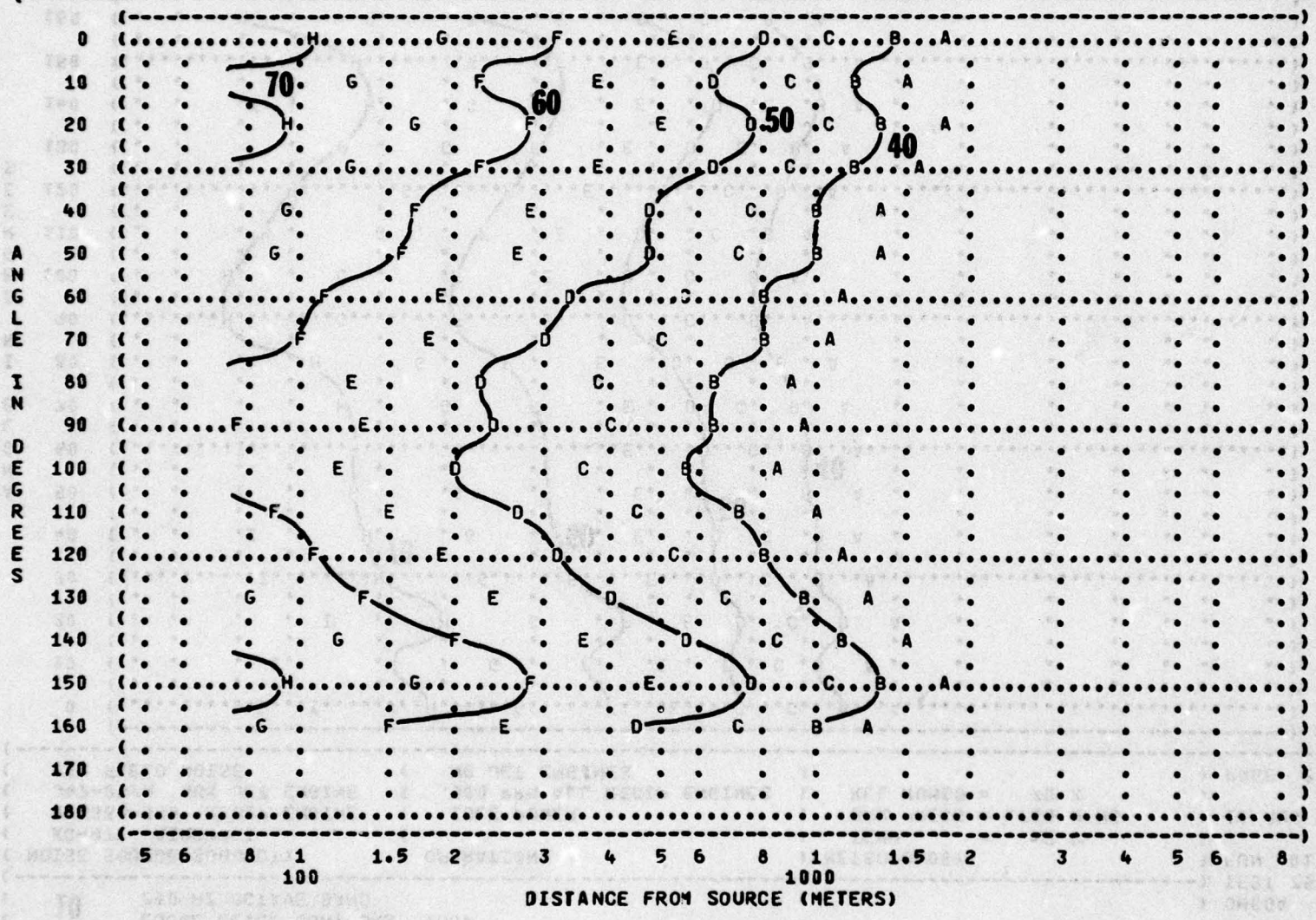


FIGURE: 10

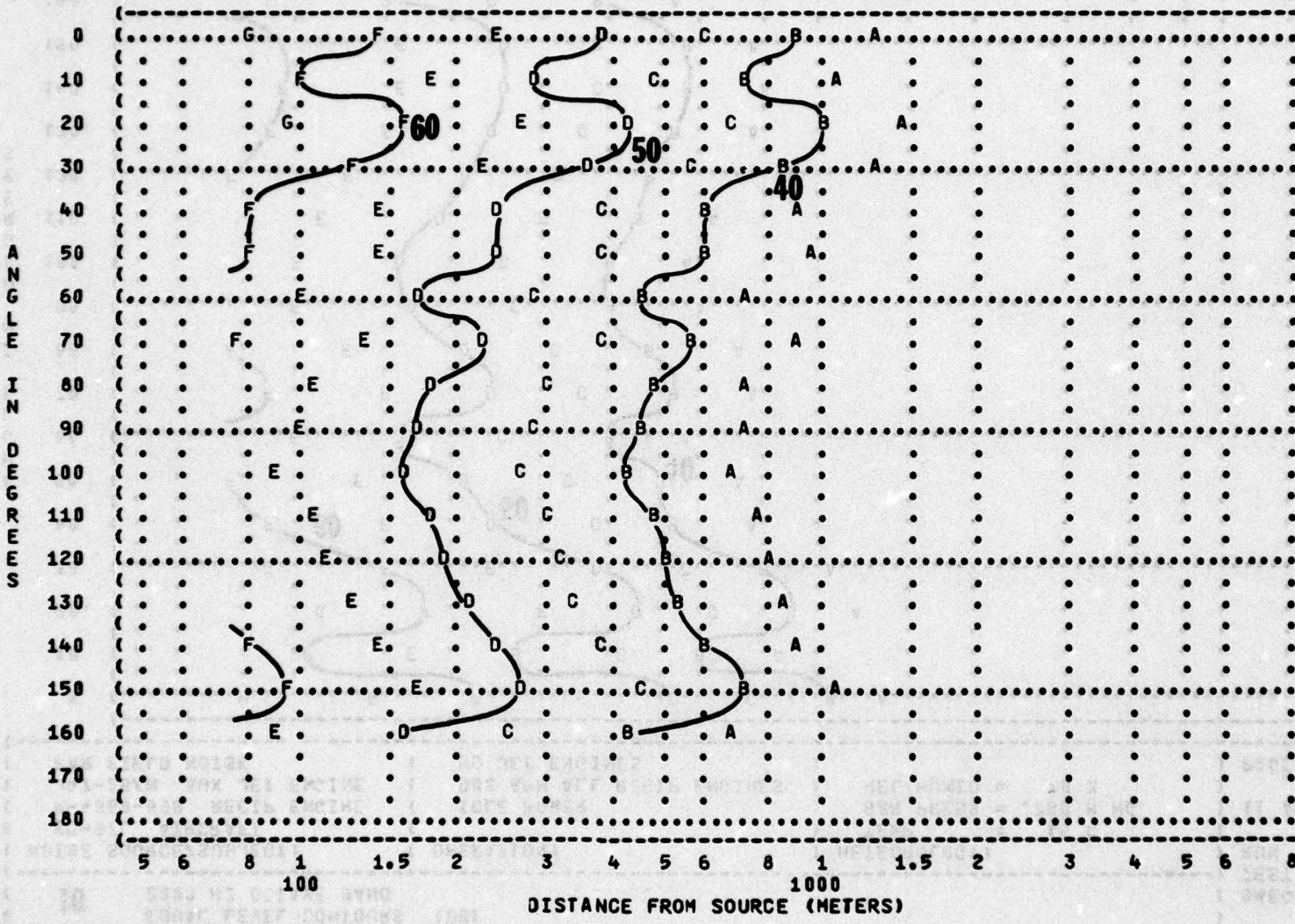
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-016
RUN 01
11 AUG 76
PAGE 23

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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



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

FIGURE: 10

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

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-802-016
RUN 01
11 AUG 76
PAGE 24

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

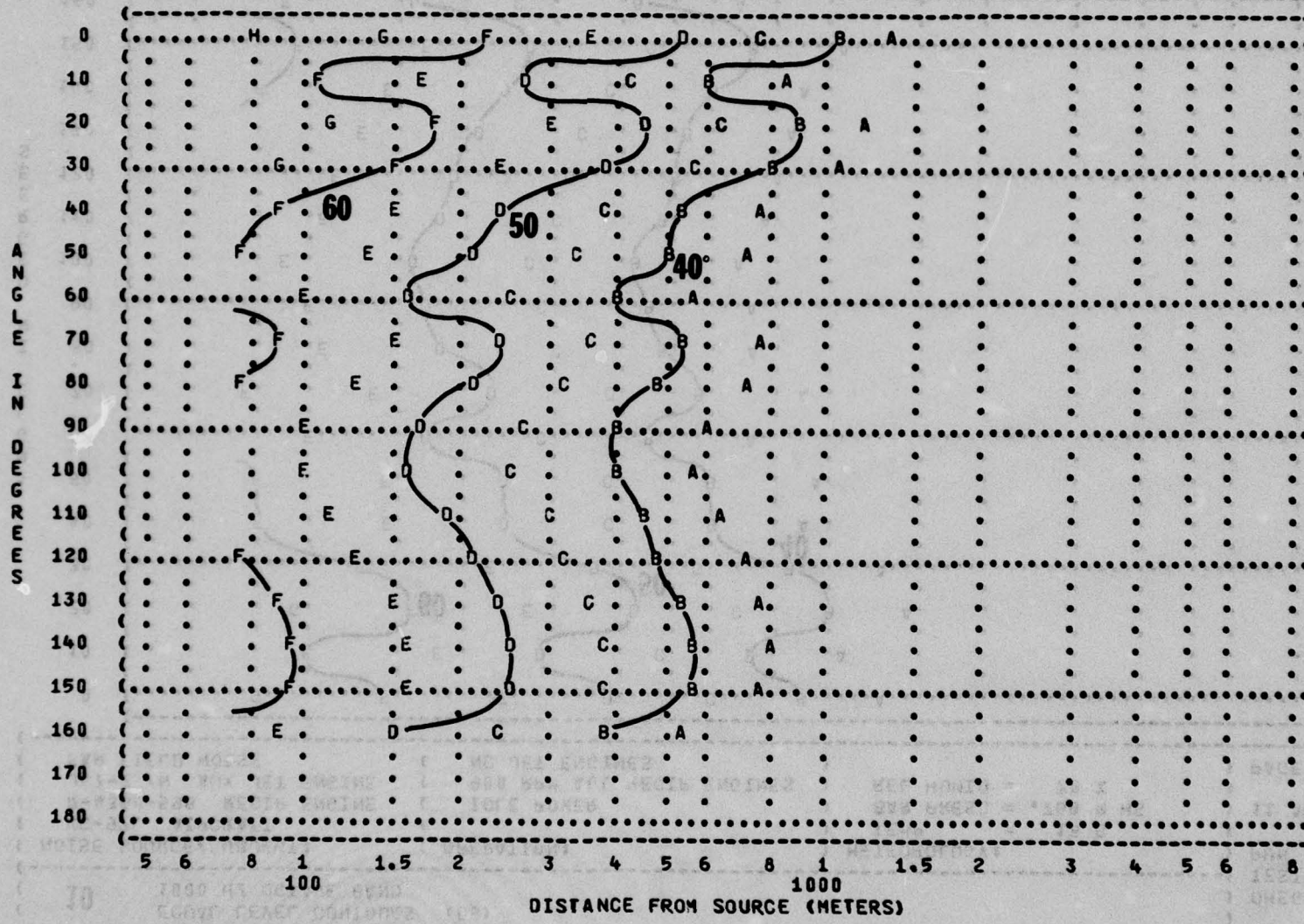


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 25

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

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

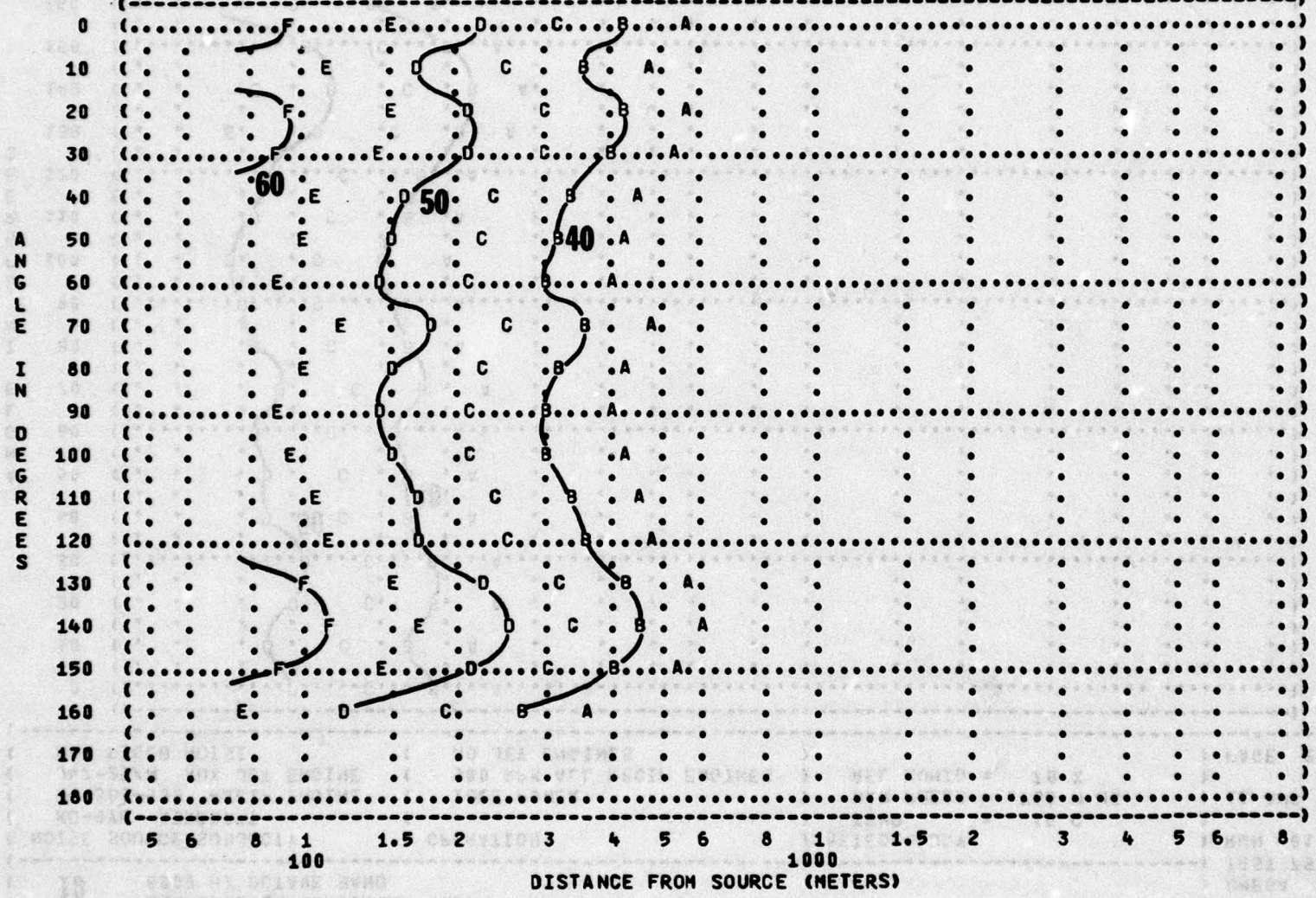


FIGURE: 10

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 01
11 AUG 76
PAGE 26

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER
900 RPM ALL RECIP ENGINES
NO JET ENGINES

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

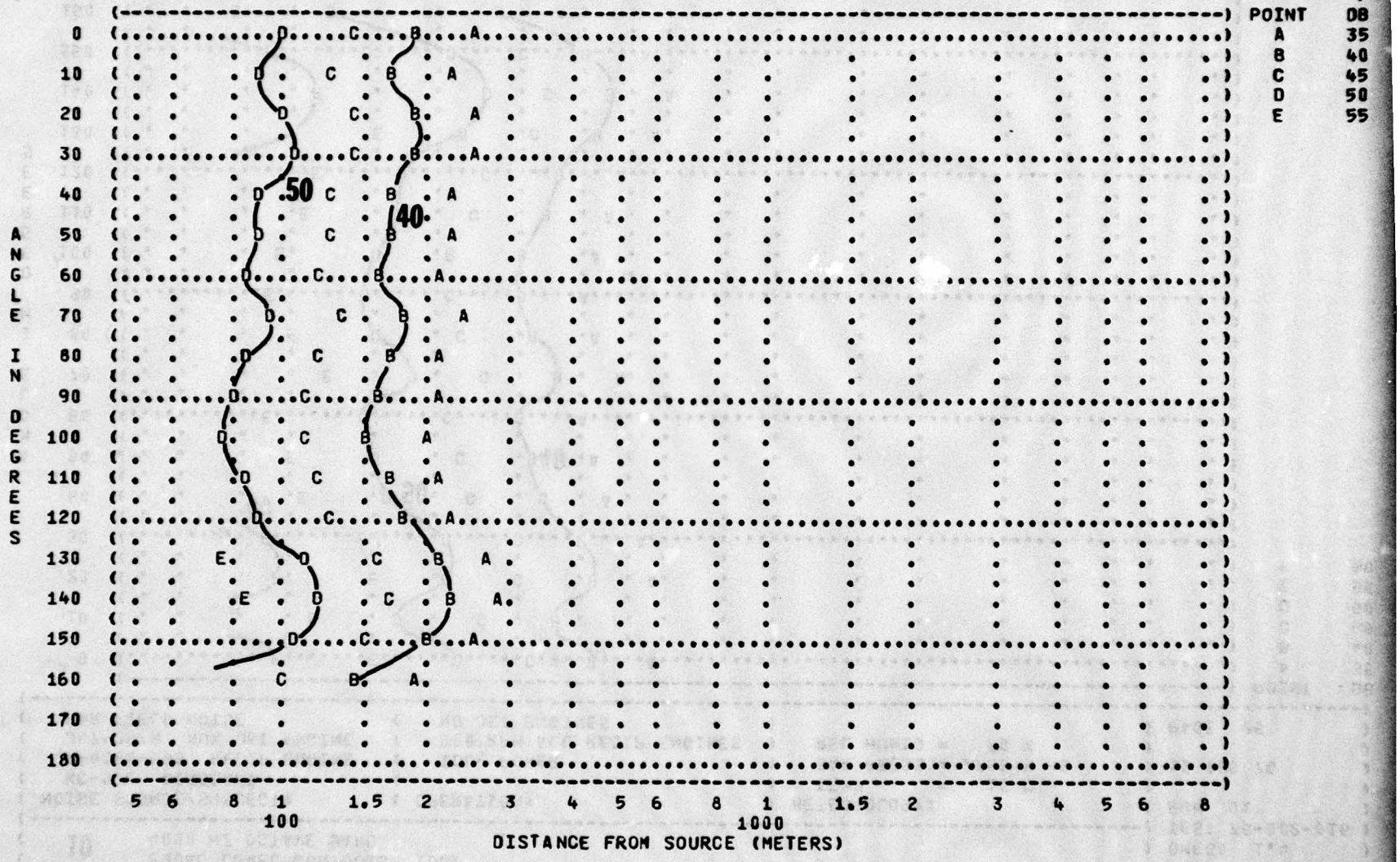


FIGURE: 10

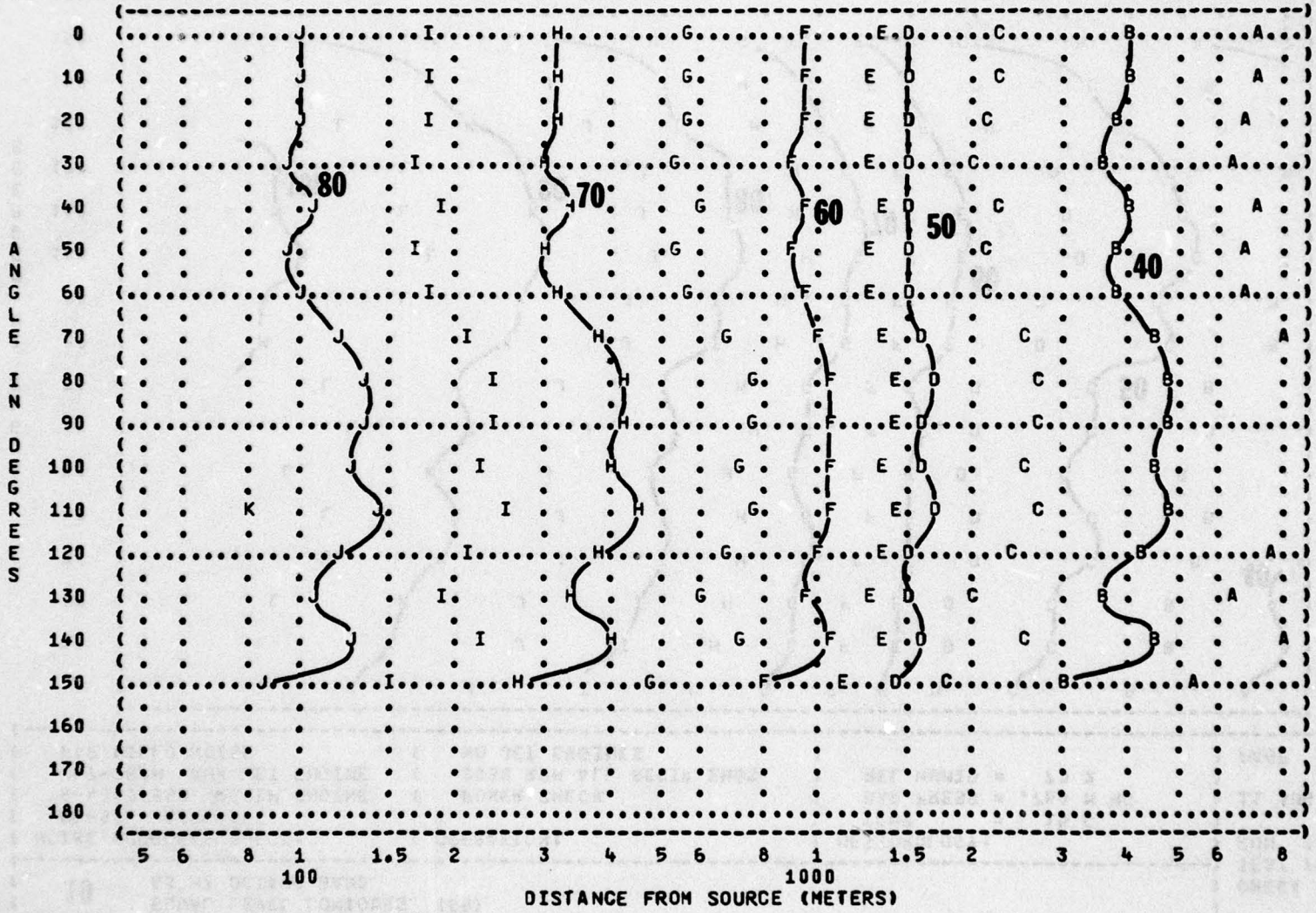
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 18



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

FIGURE: 10

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 19

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

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

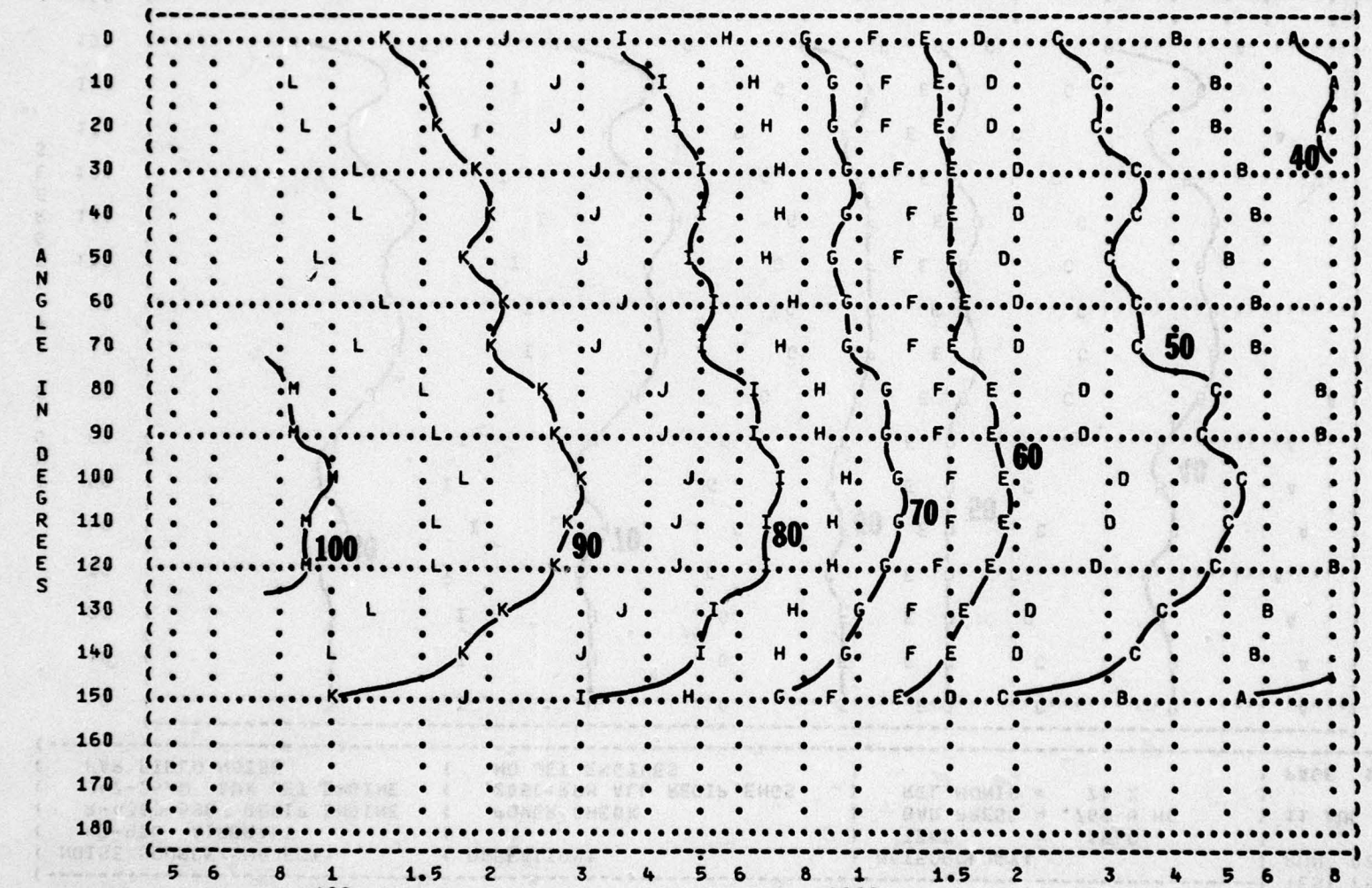


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 20

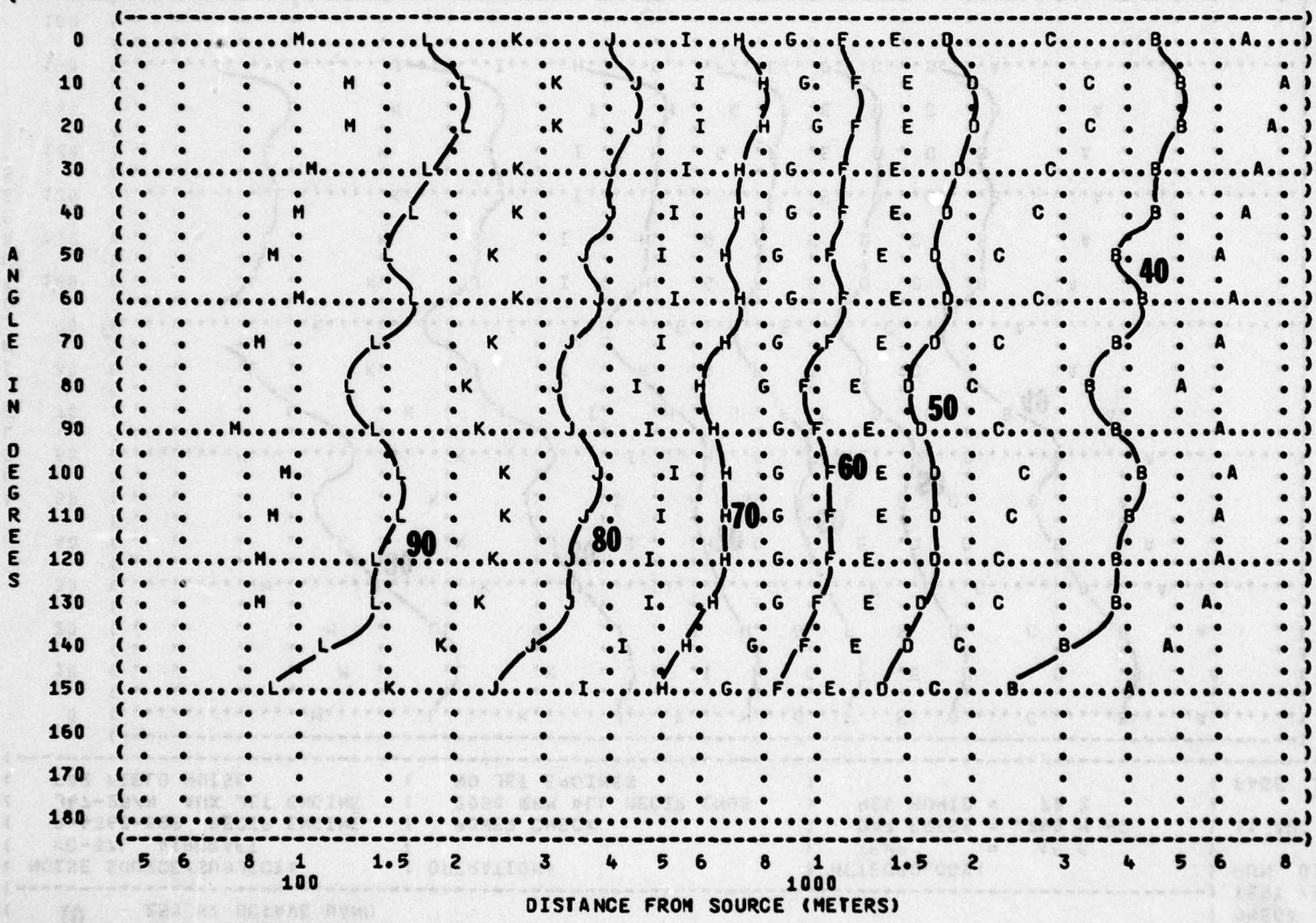


FIGURE: 10

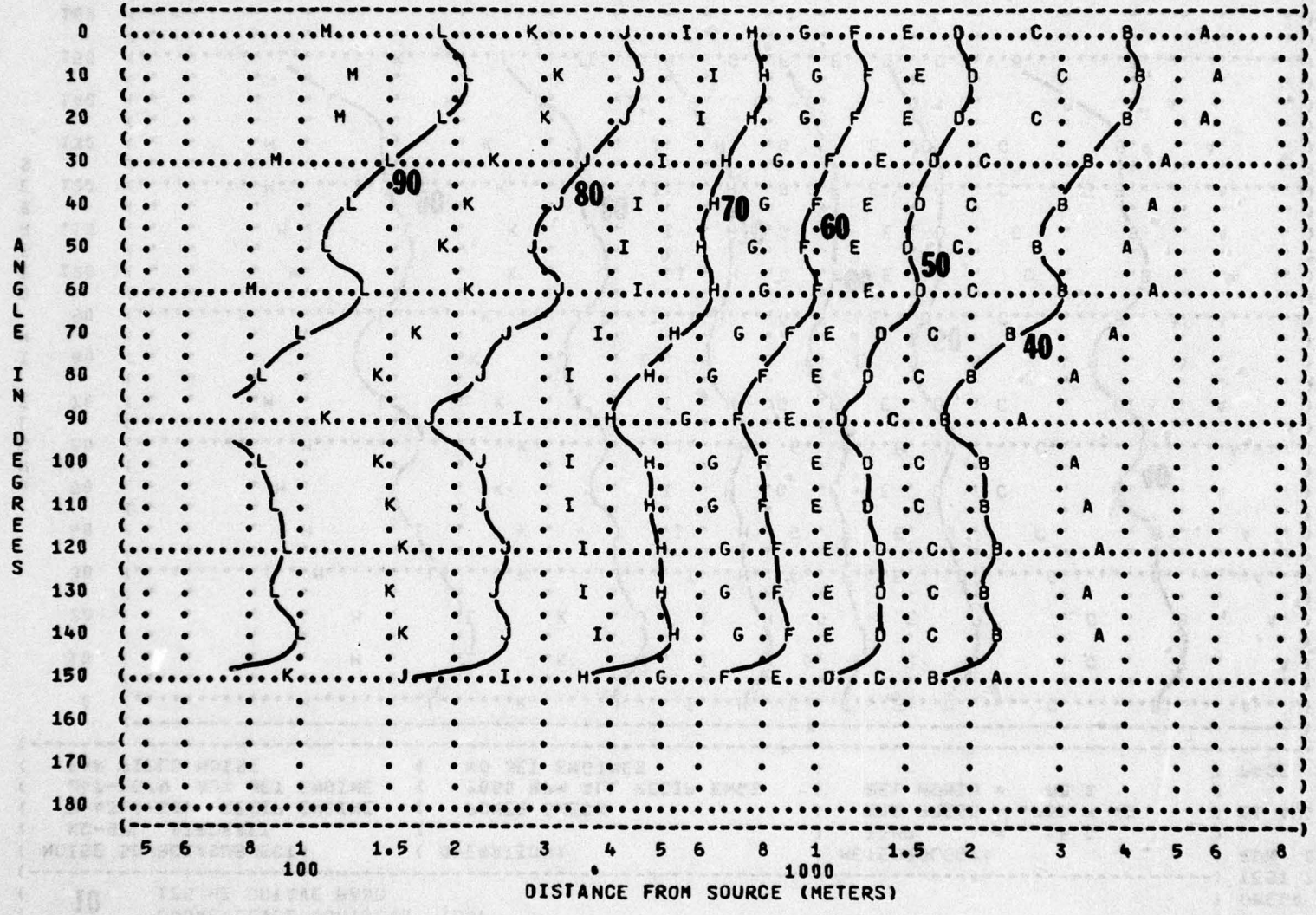
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 21



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

FIGURE: 10

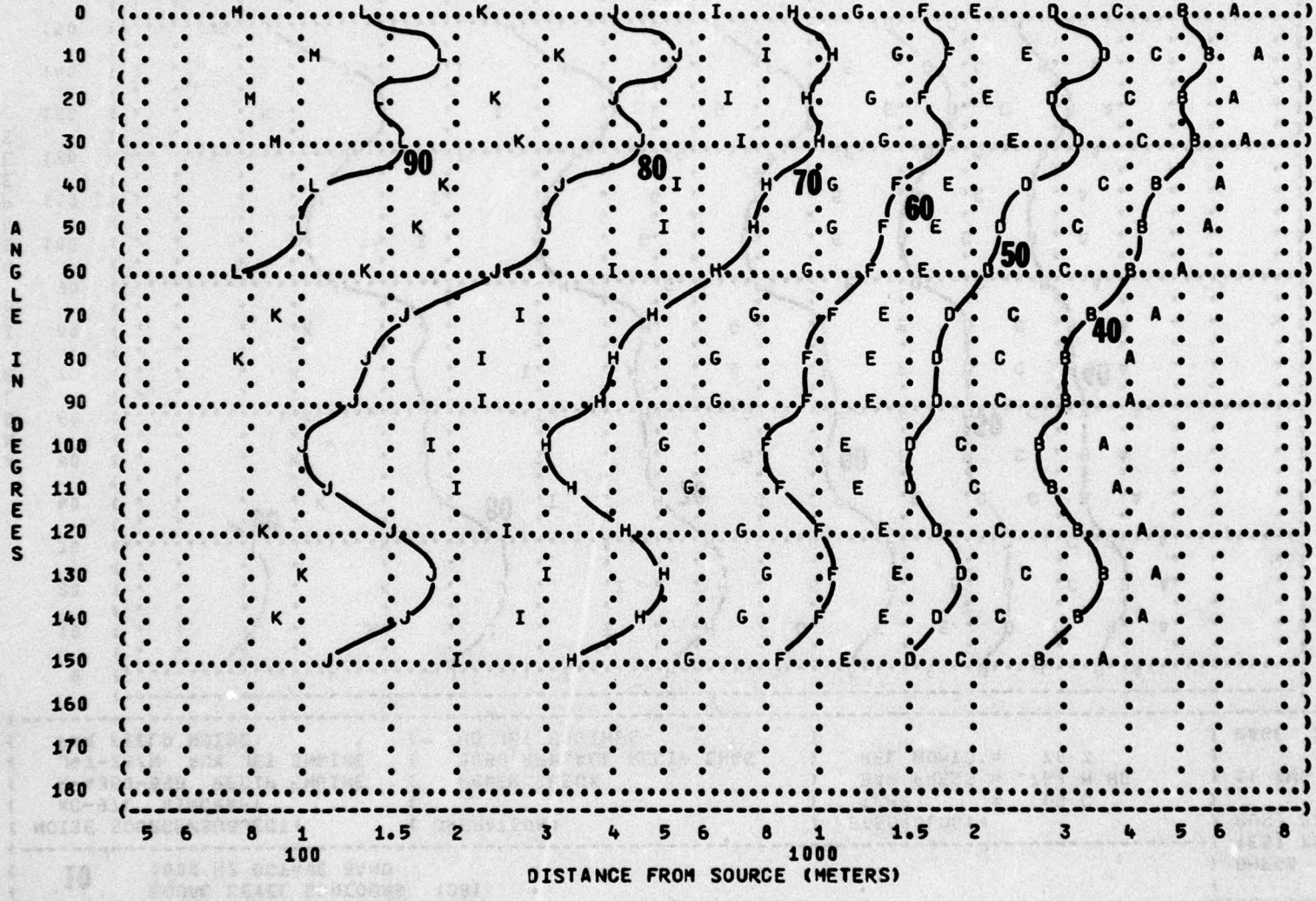
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 22



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

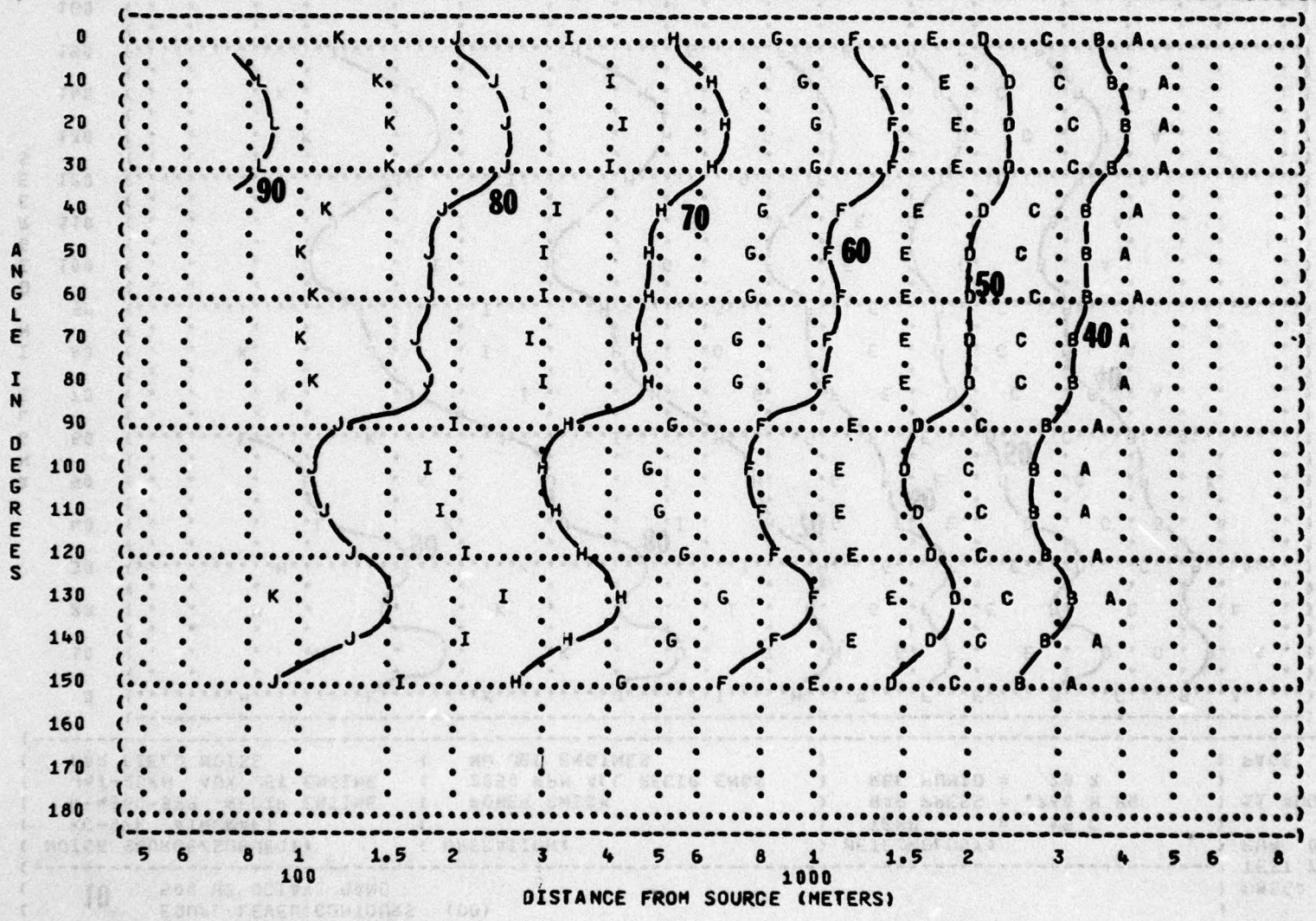
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 23



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

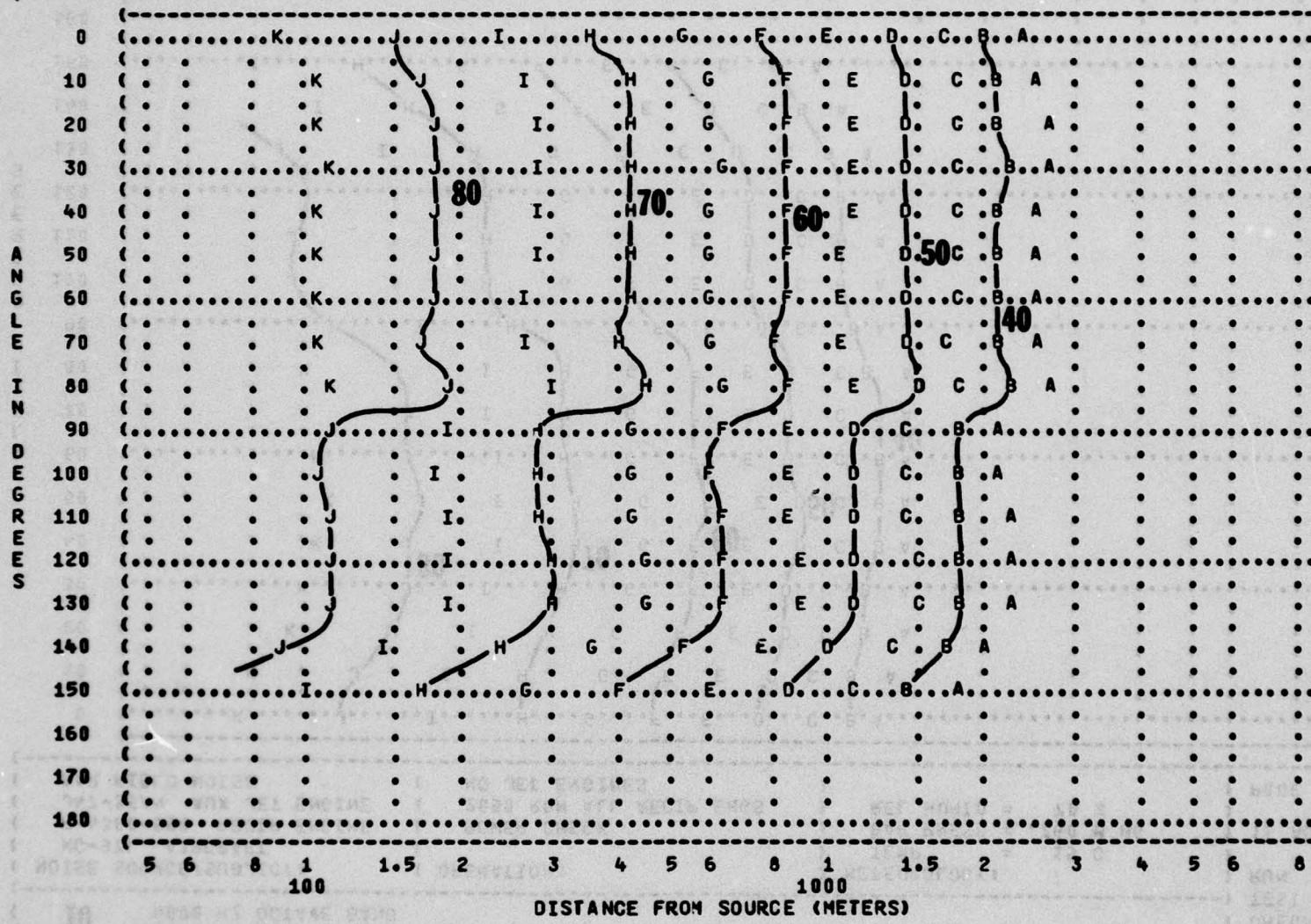
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KO-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 24



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

FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 25

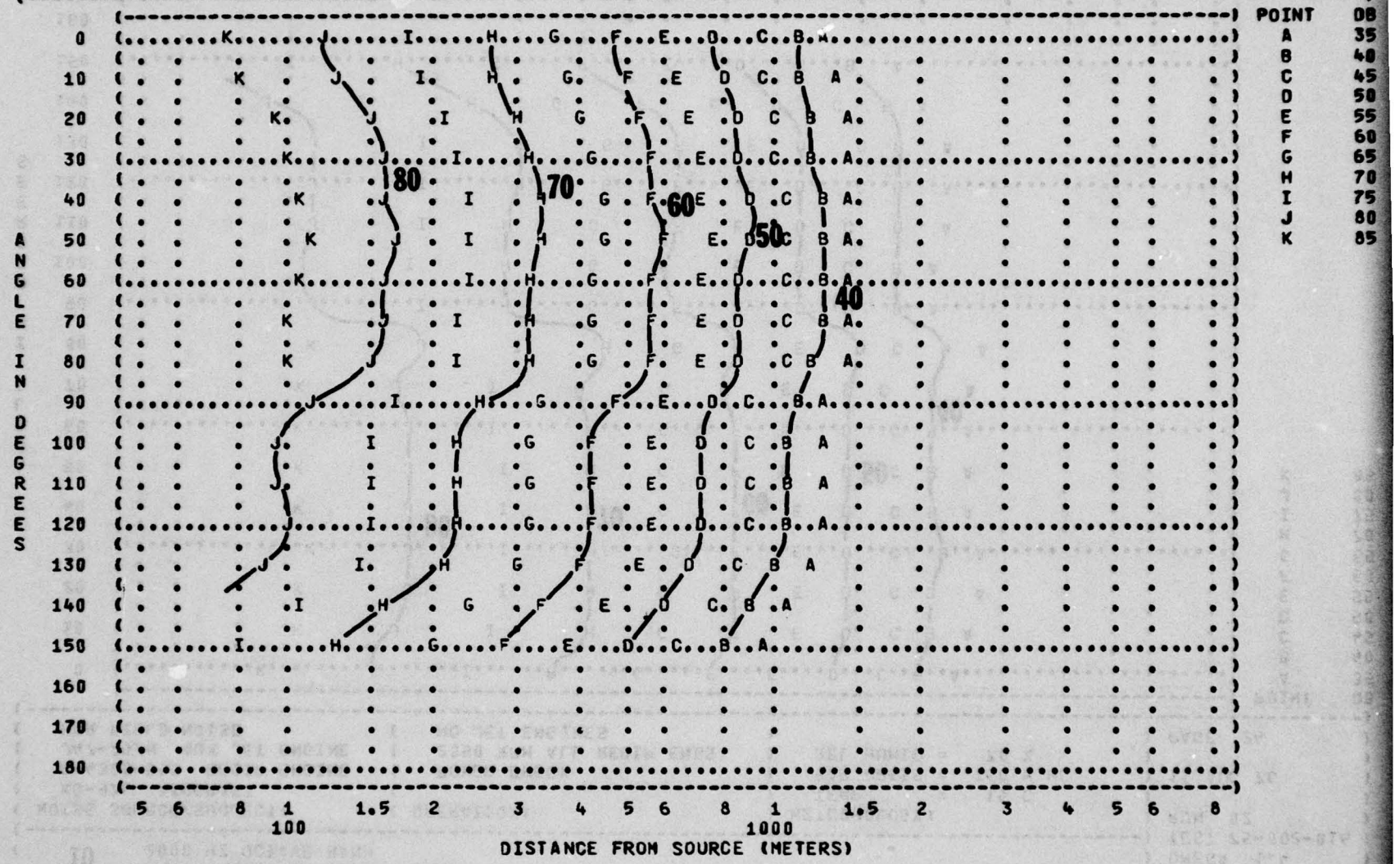


FIGURE: 10

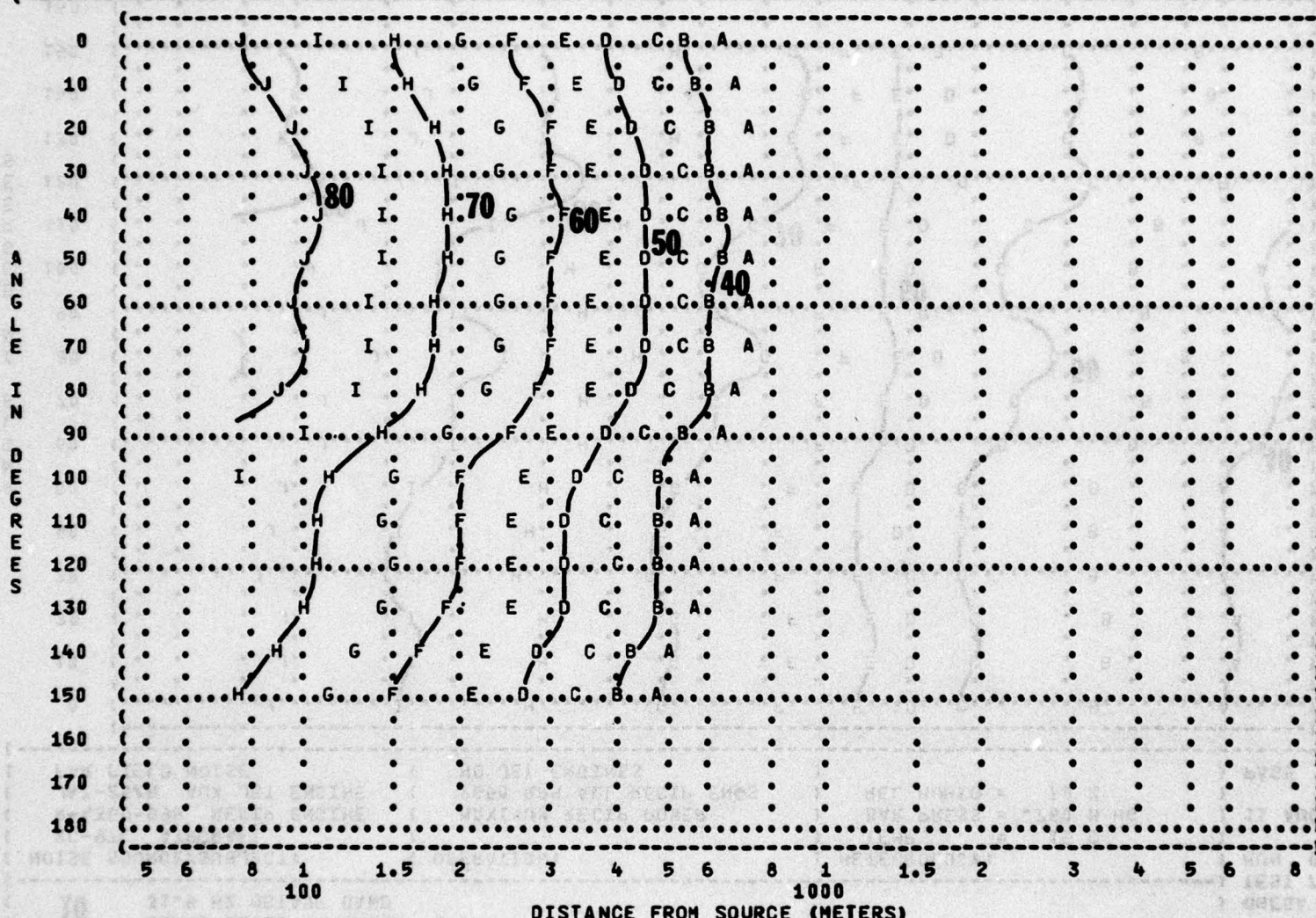
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
8000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 02
11 AUG 76
PAGE 26

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
POWER CHECK
2050 RPM ALL RECIP ENGS
NO JET ENGINES

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



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

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-016
RUN 03
11 AUG 76
PAGE 18

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

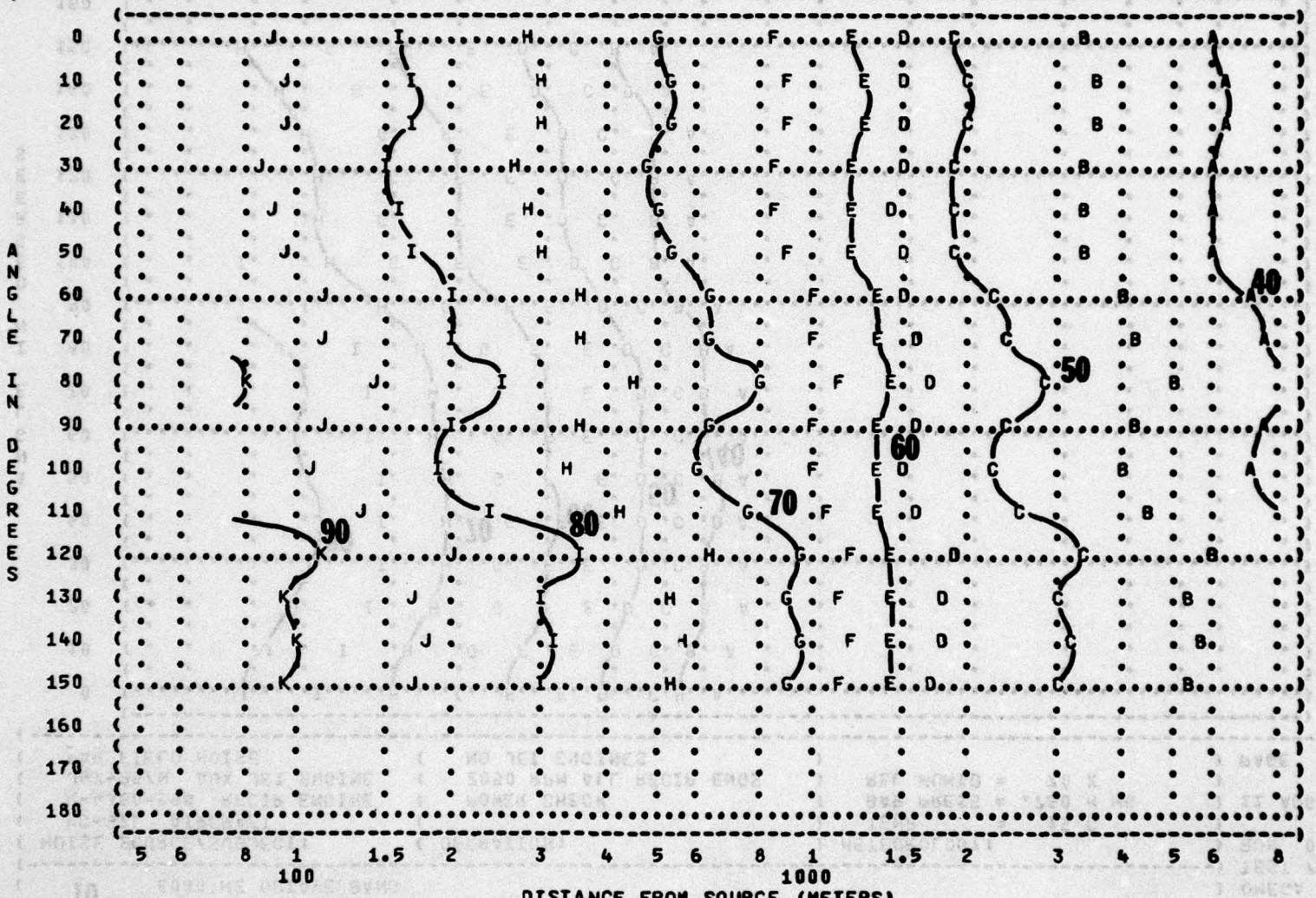


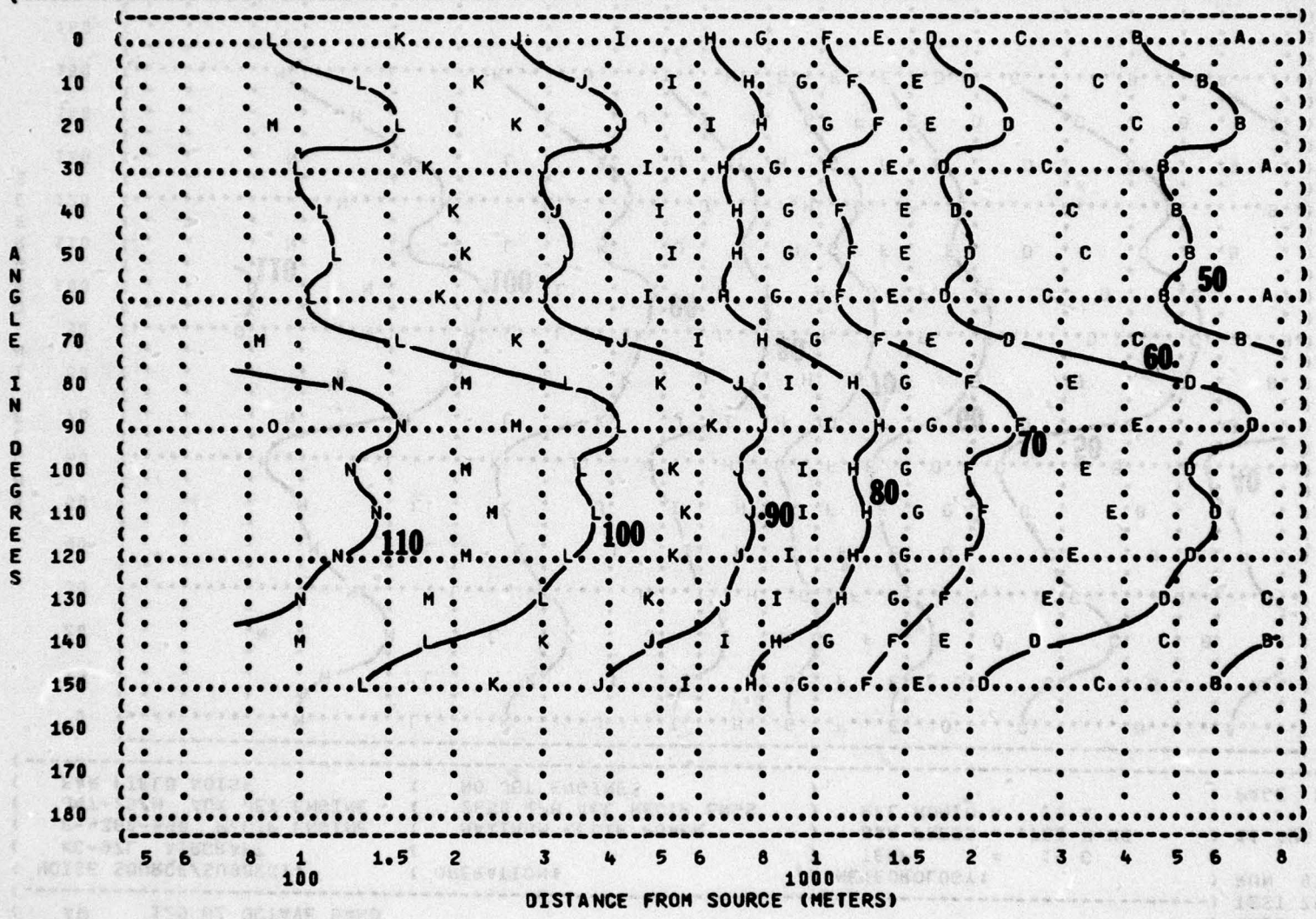
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 19



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

FIGURE: 10

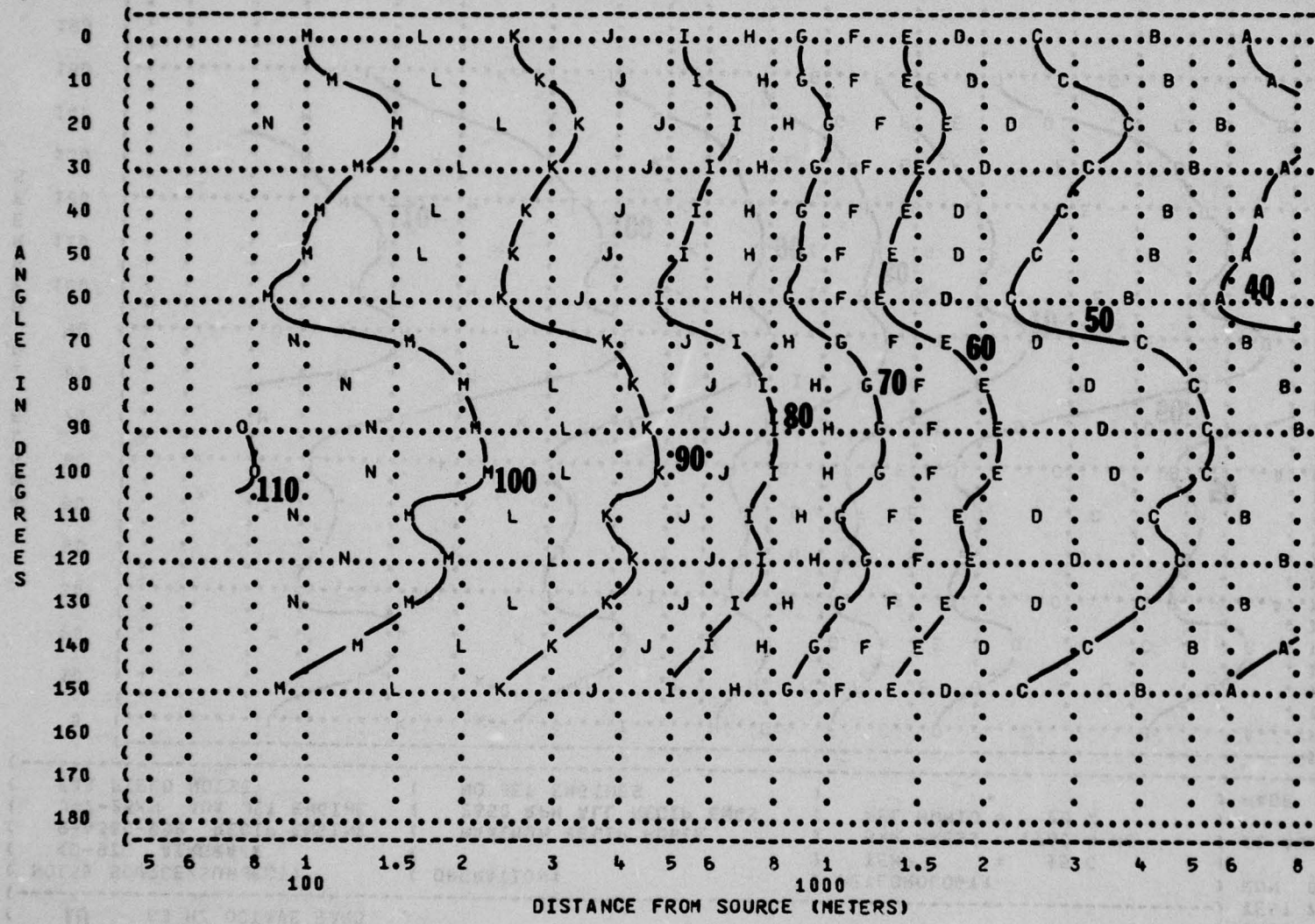
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 20



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

FIGURE: 10

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

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 93
11 AUG 76
PAGE 21

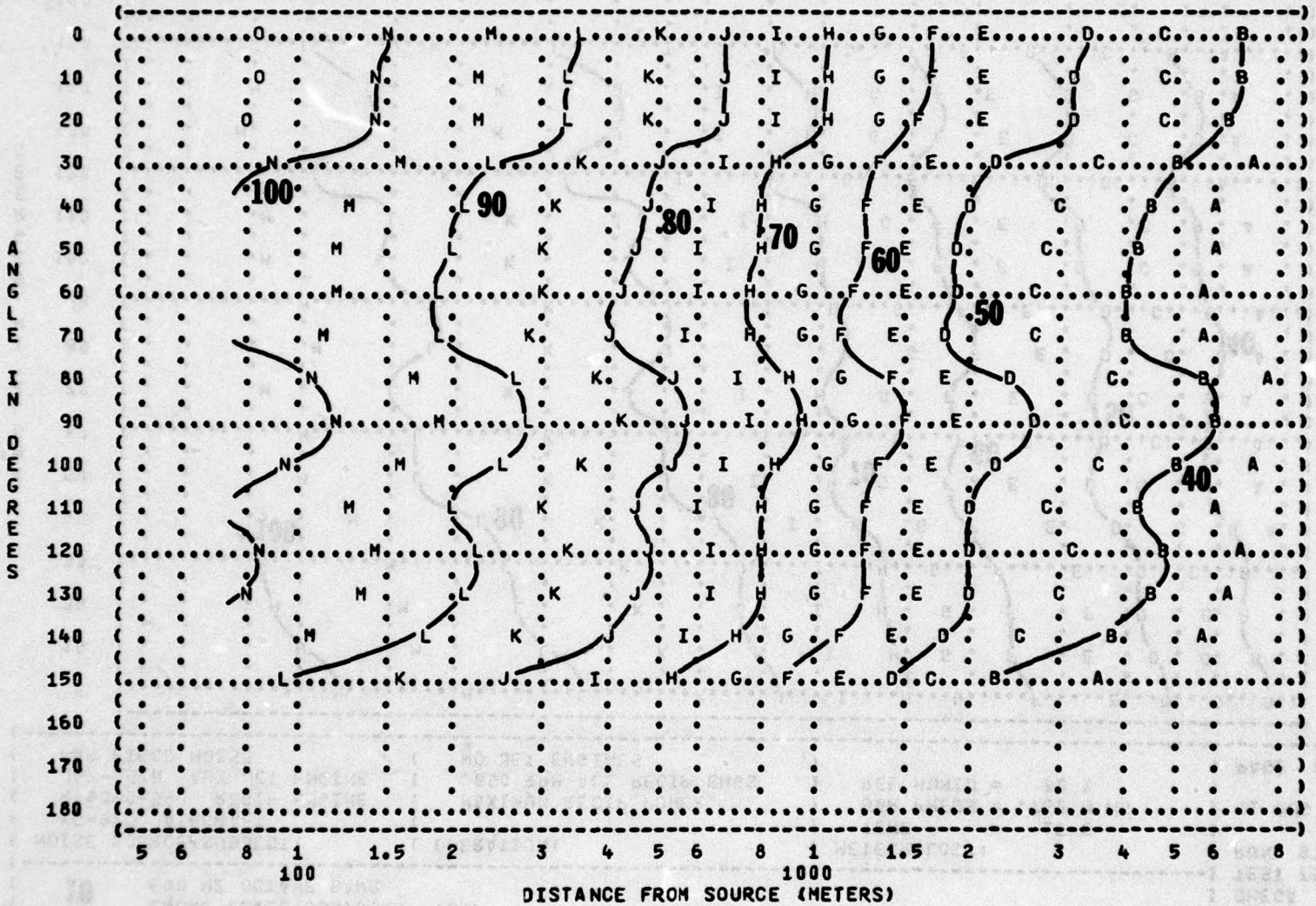


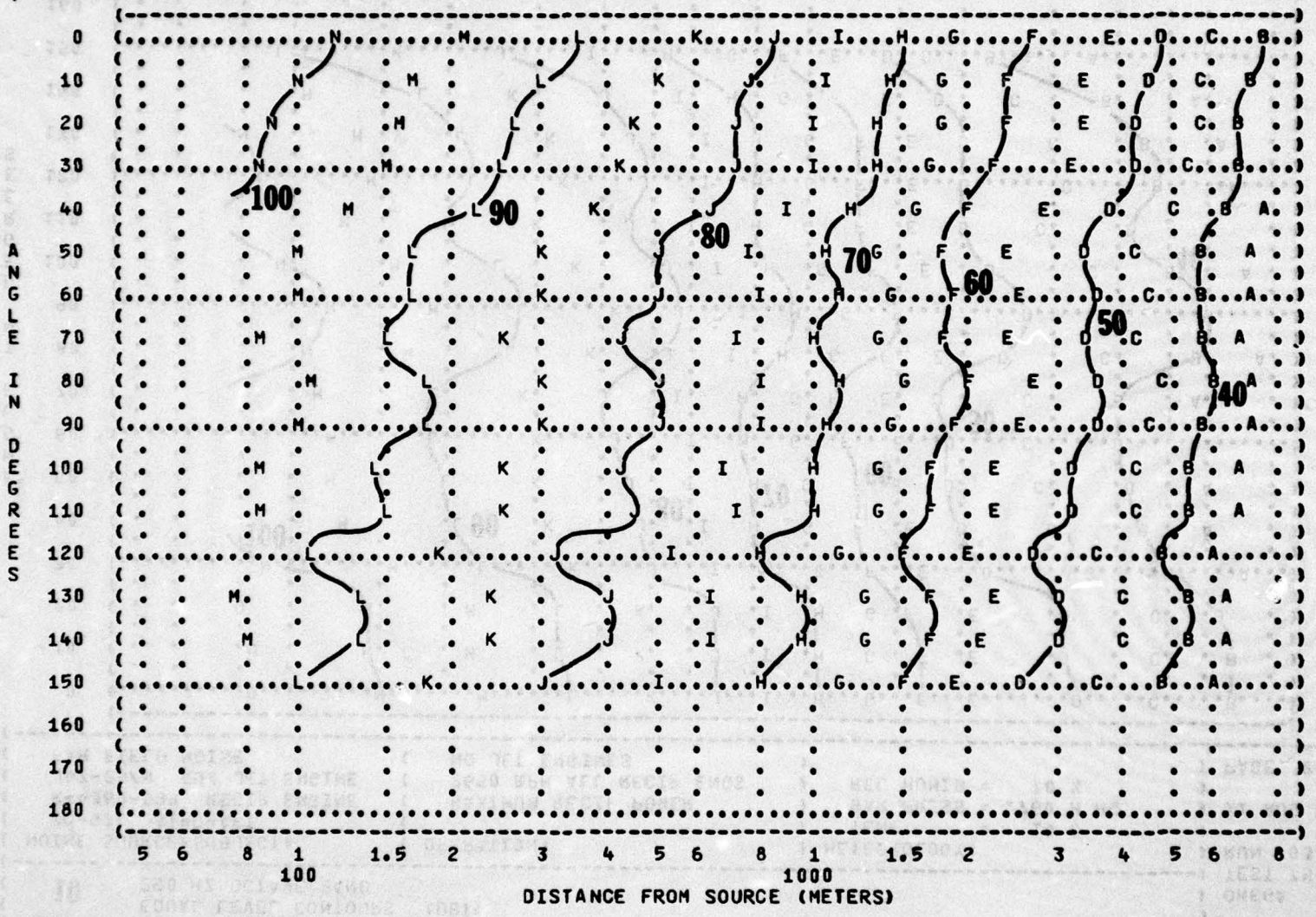
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 22

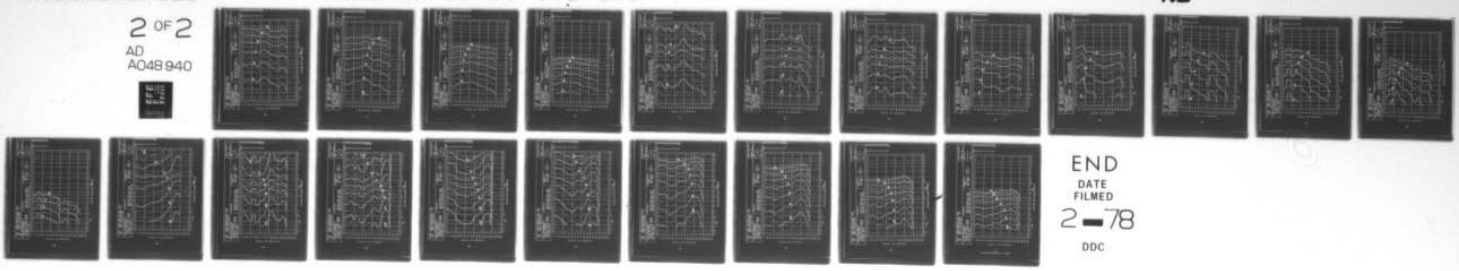


POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95
N	100

AD-A048 940 AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OHIO F/G 20/1
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 101. KC-97L A--ETC(U)
JUN 77 R G POWELL

UNCLASSIFIED AMRL-TR-75-50-VOL-101 NL

2 OF 2
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A048 940



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FIGURE: 10

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 23

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

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

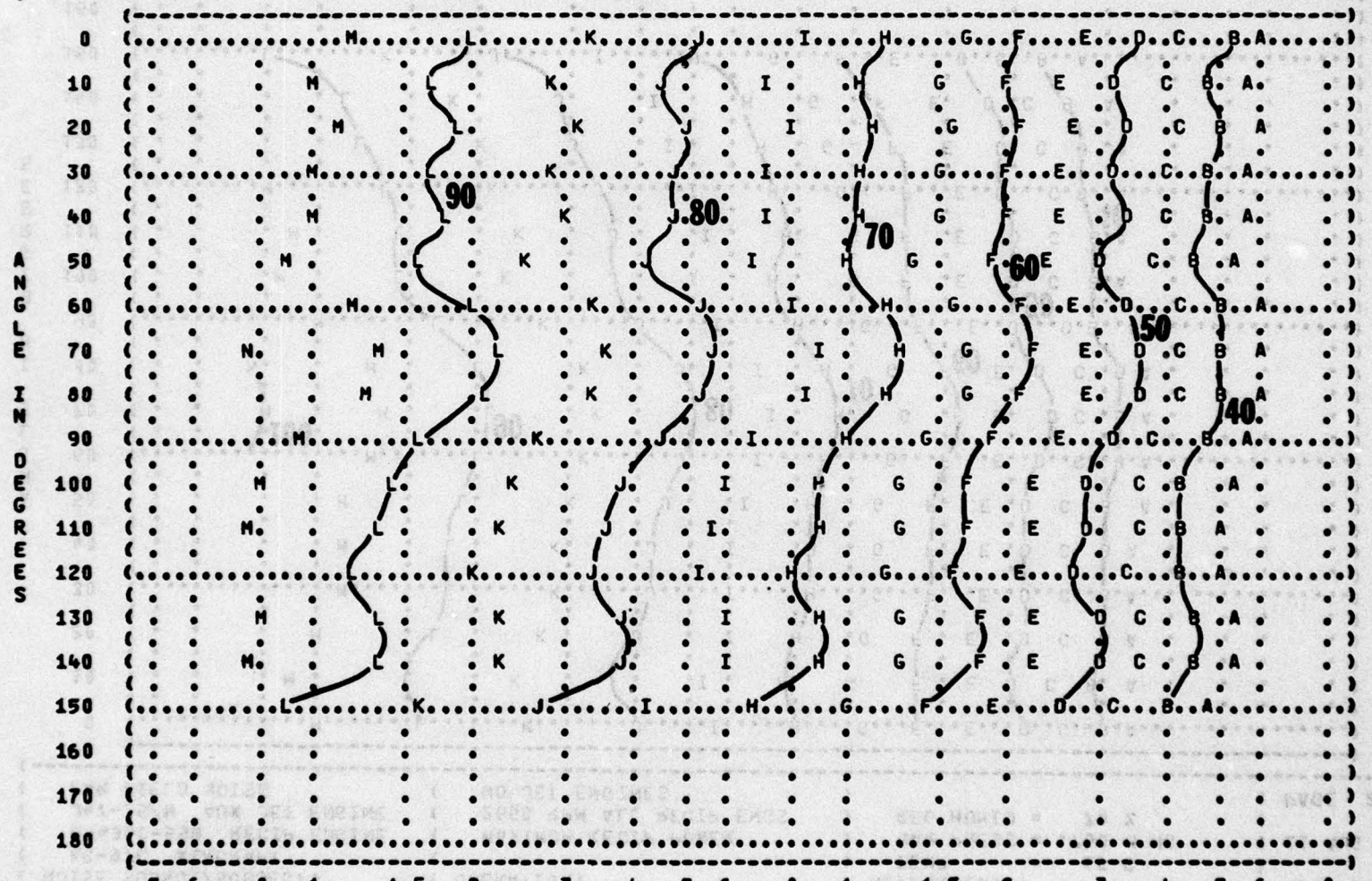


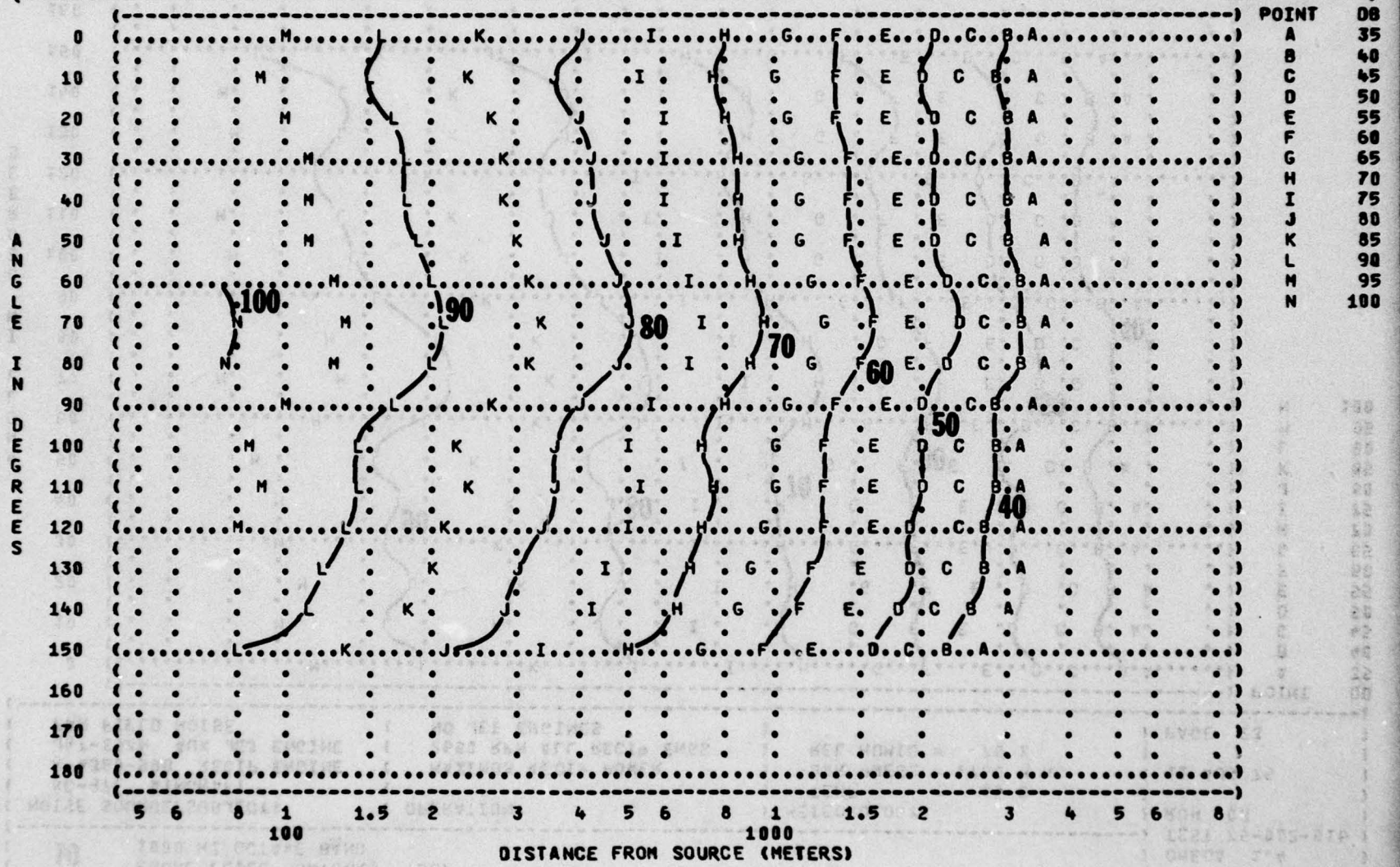
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-802-016
RUN 03
11 AUG 76
PAGE 24



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

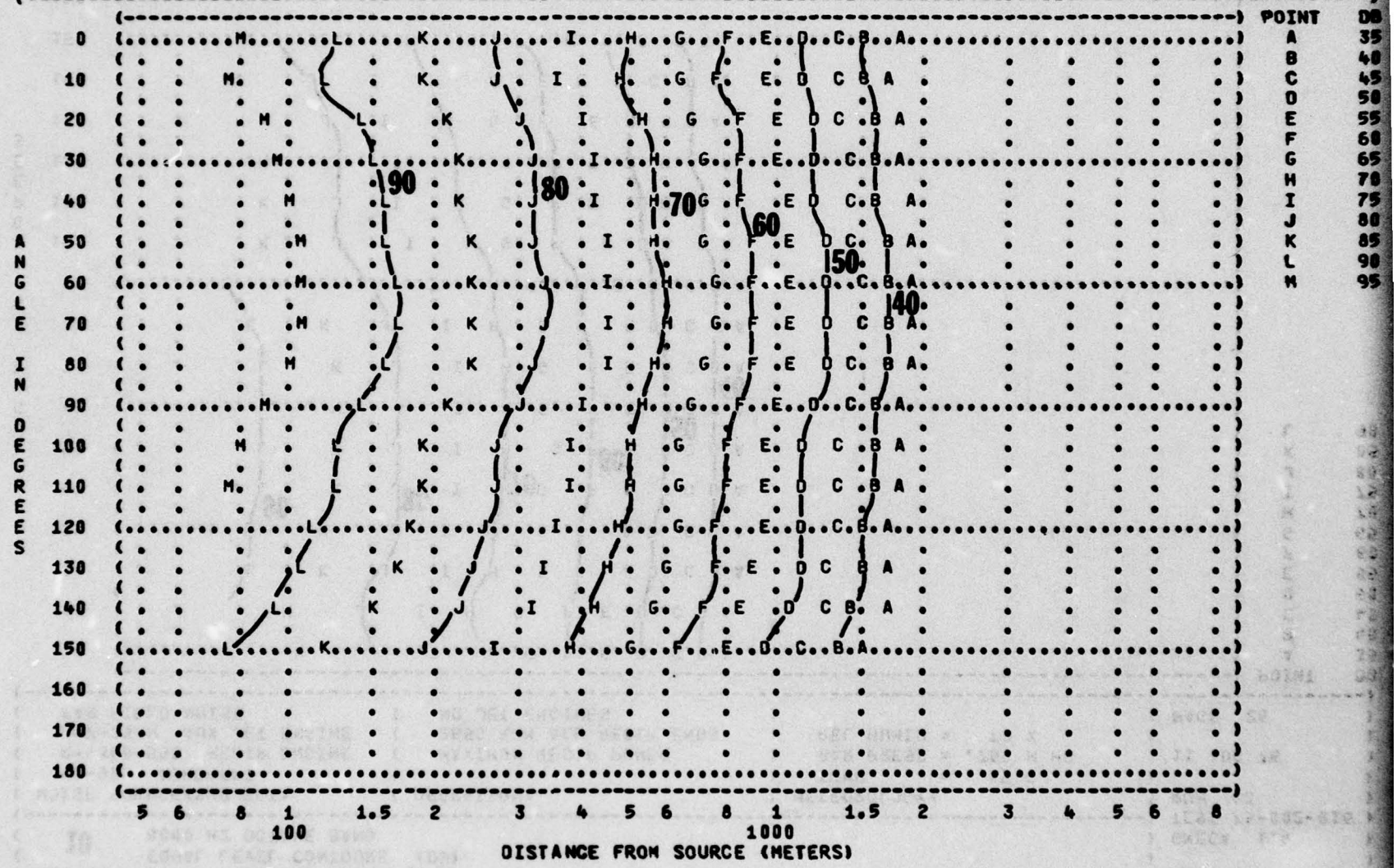
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-016
RUN 03
11 AUG 76
PAGE 25



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

FIGURE: 10

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 03
11 AUG 76
PAGE 26

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM RECIP POWER
2650 RPM ALL RECIP ENGS
NO JET ENGINES

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

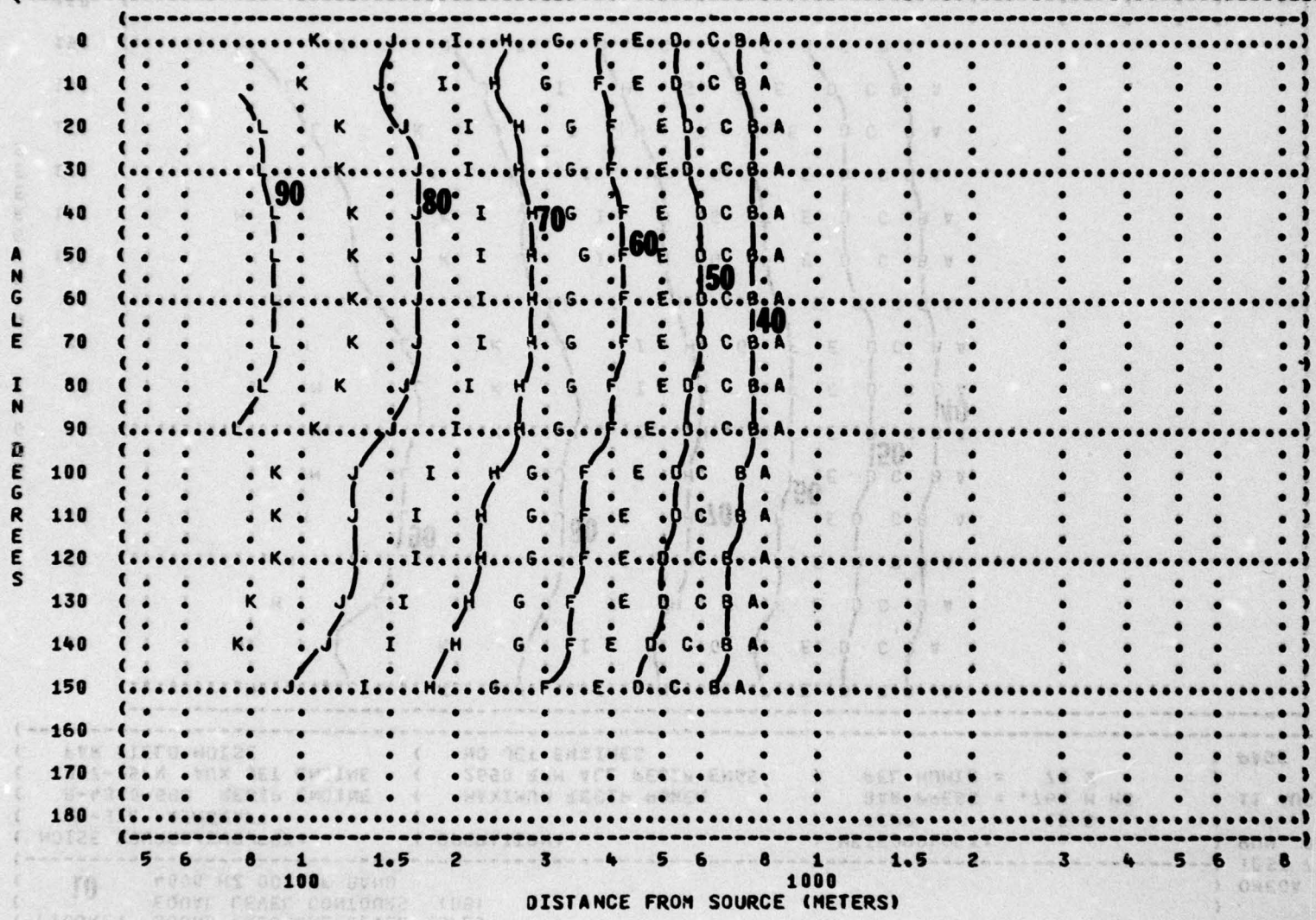


FIGURE: 10

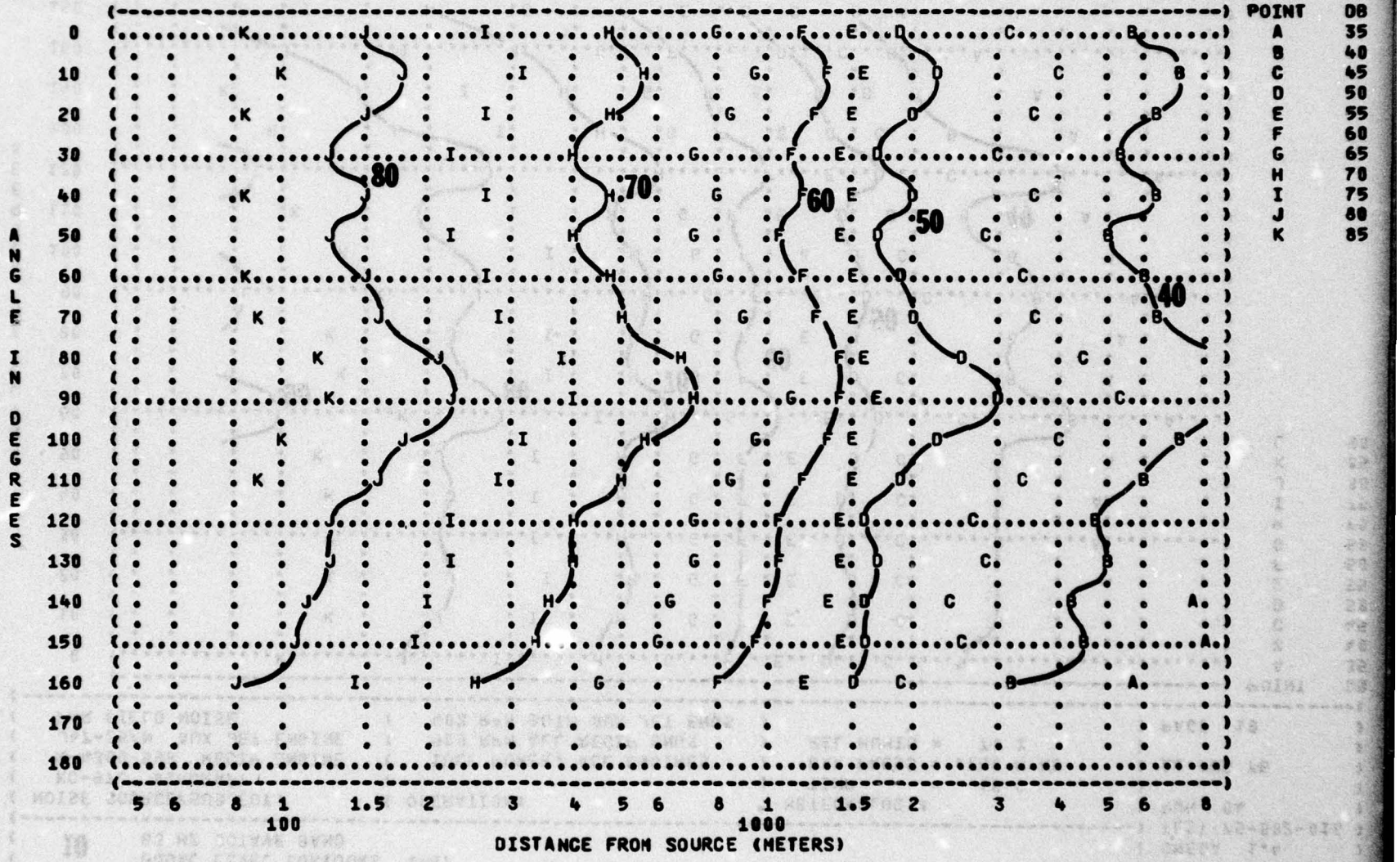
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
31.5 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 18

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 19

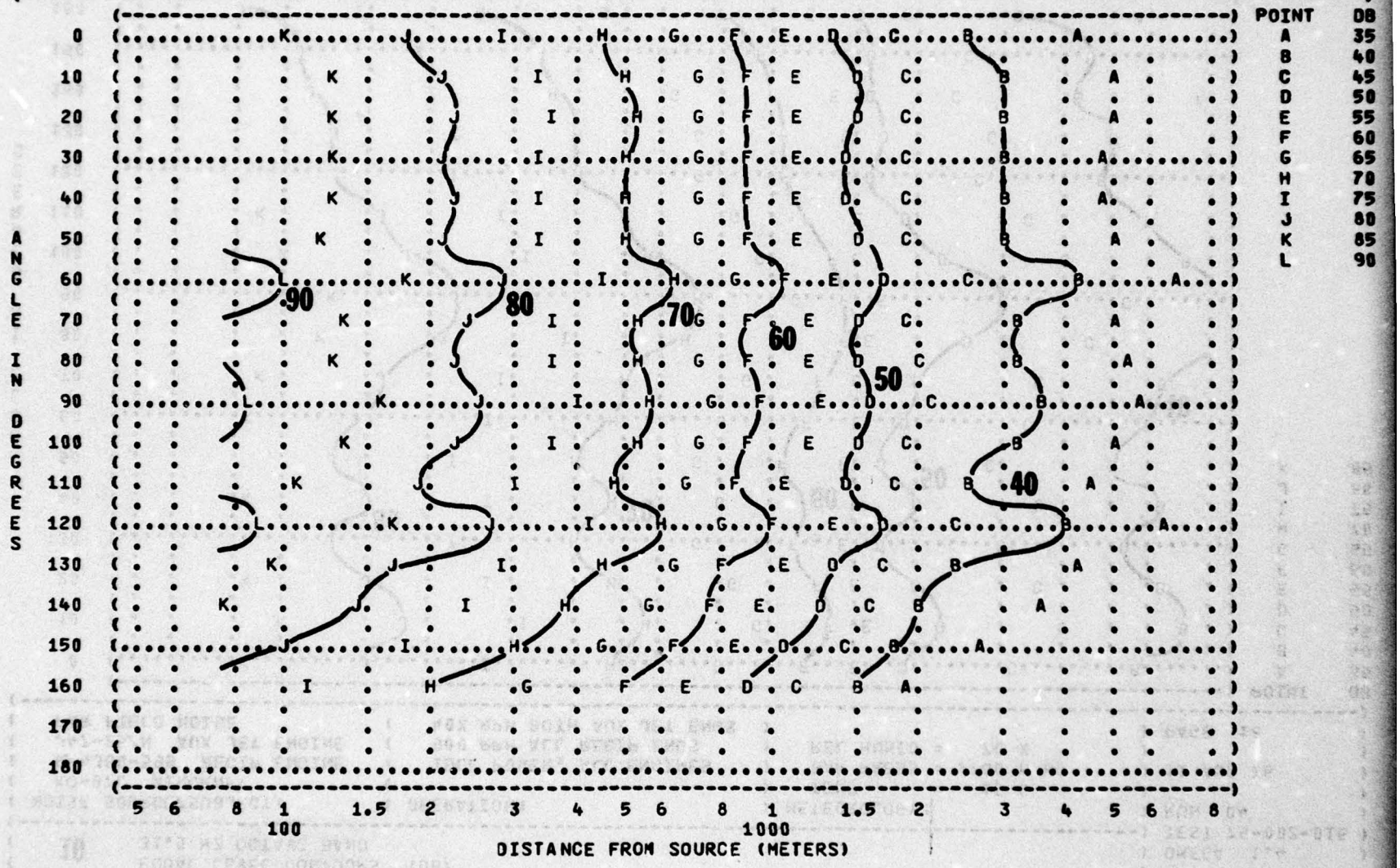


FIGURE 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 20

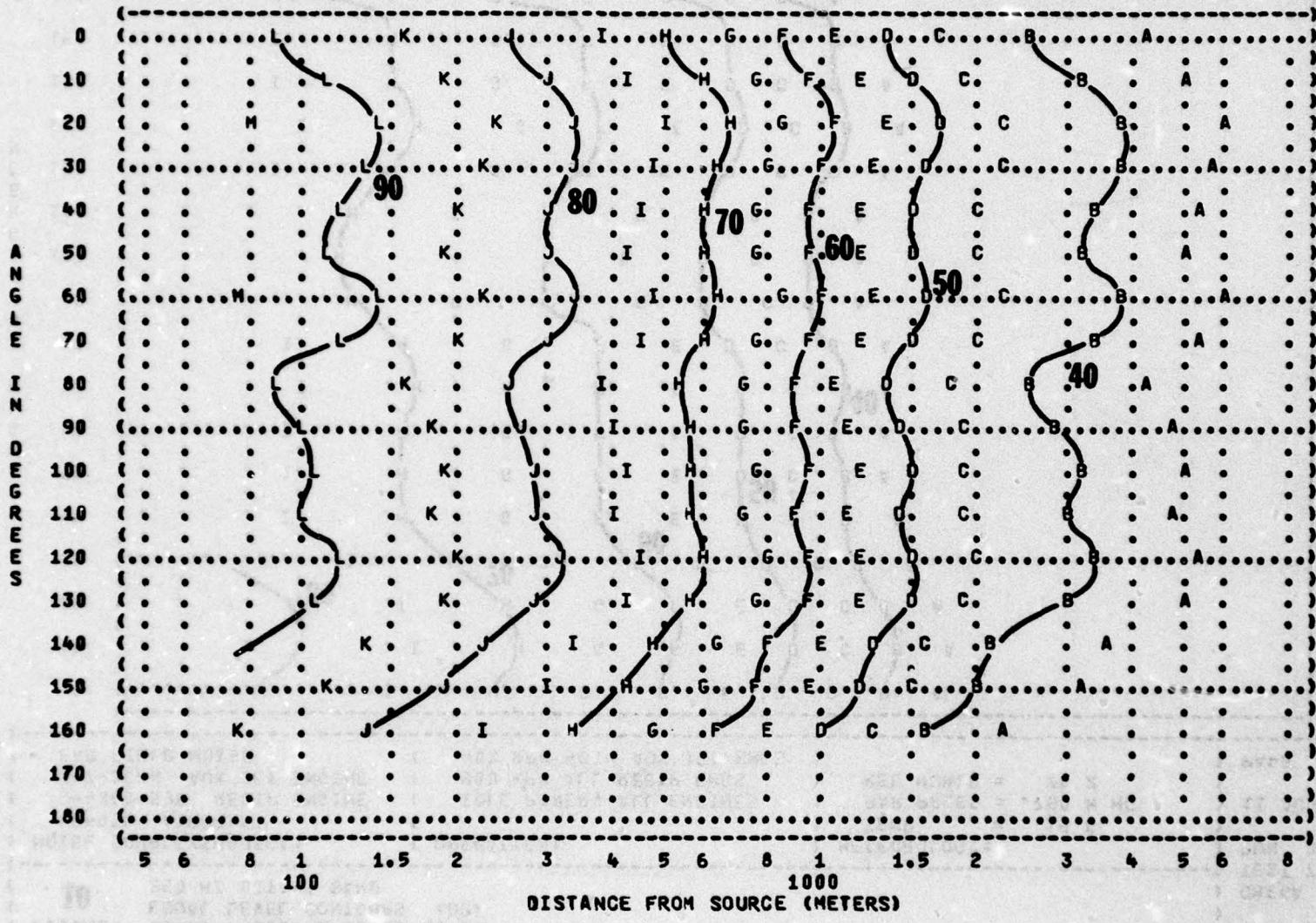


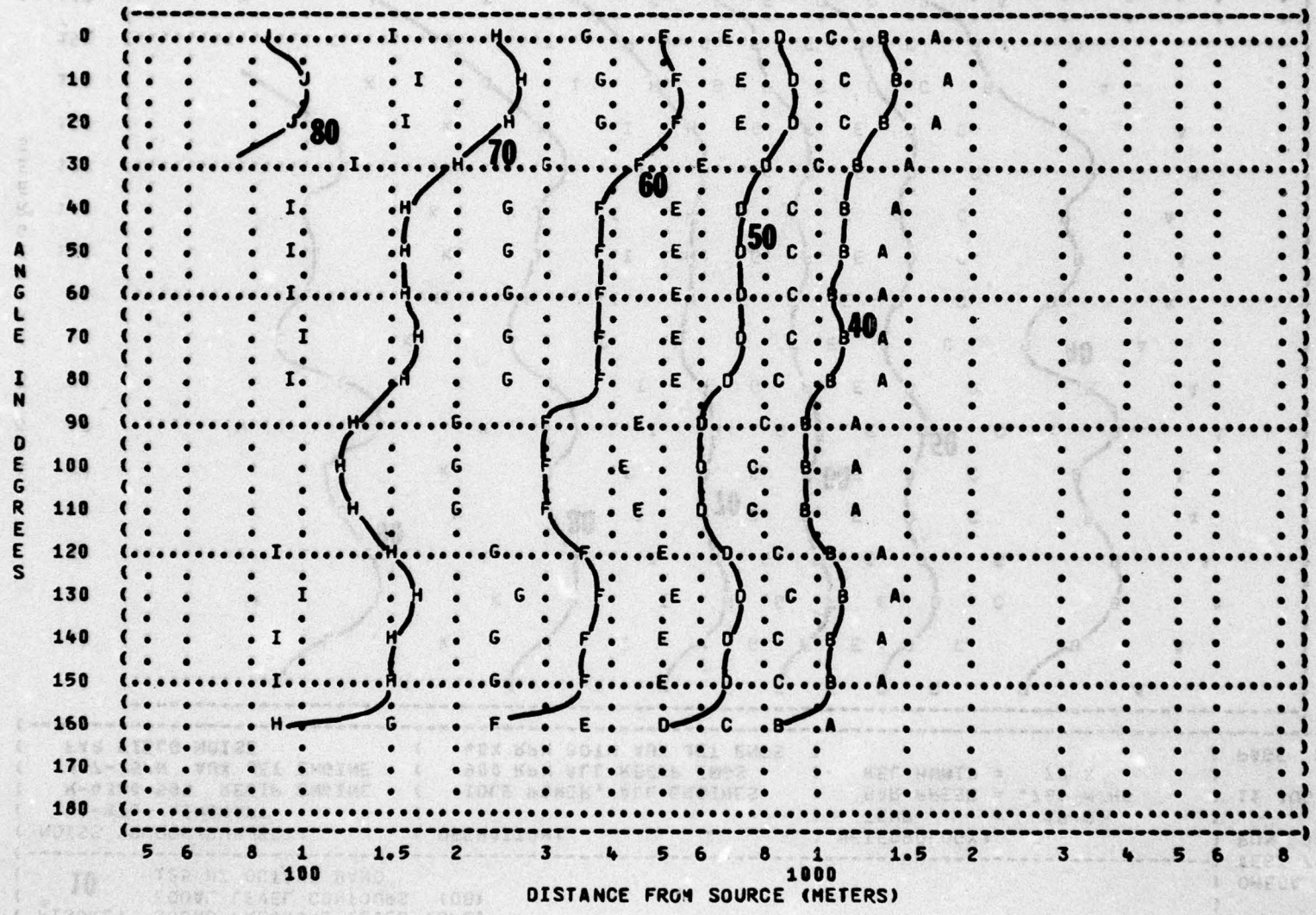
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-802-016
RUN 04
11 AUG 76
PAGE 21



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

FIGURE: 10

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 22

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

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

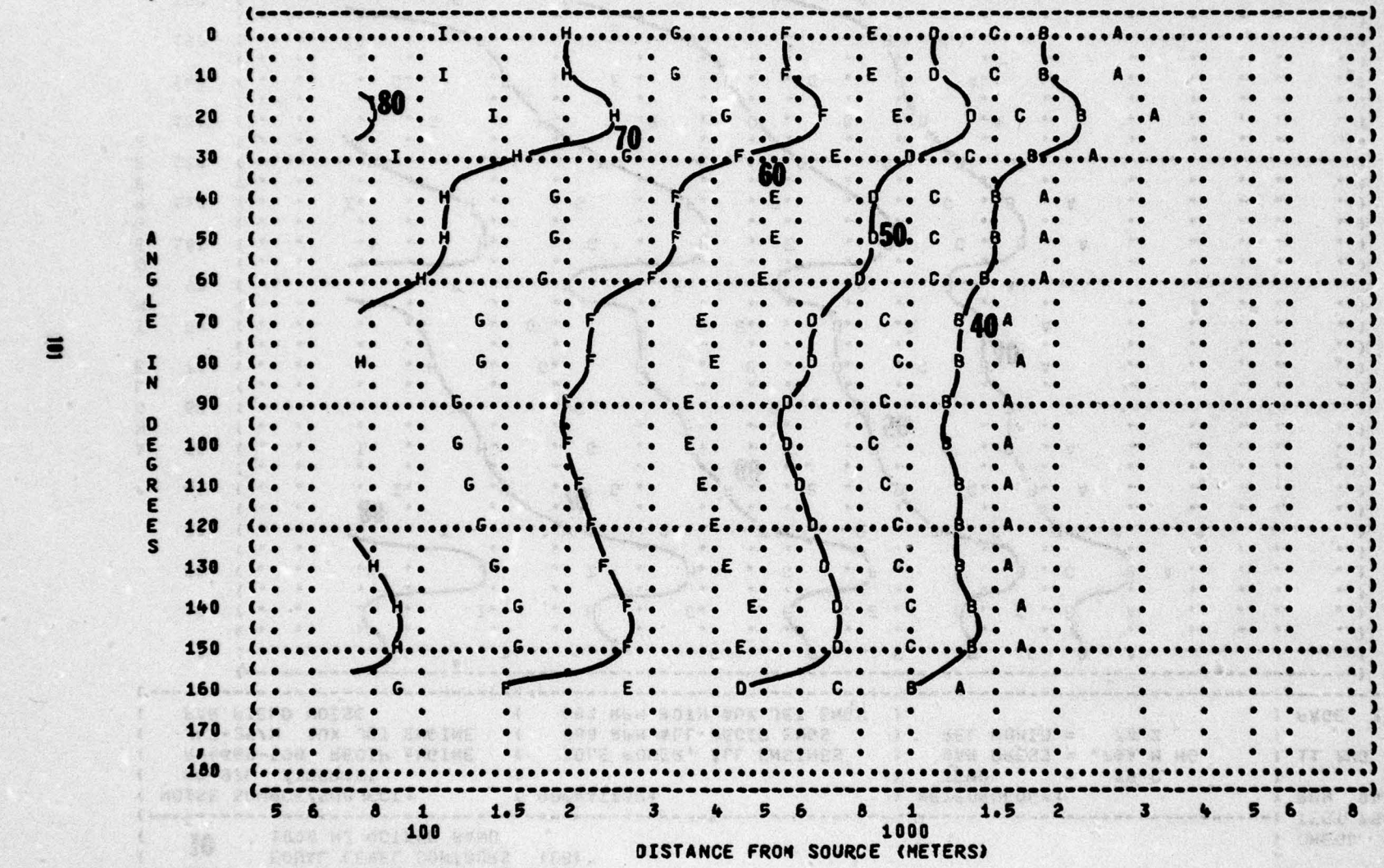


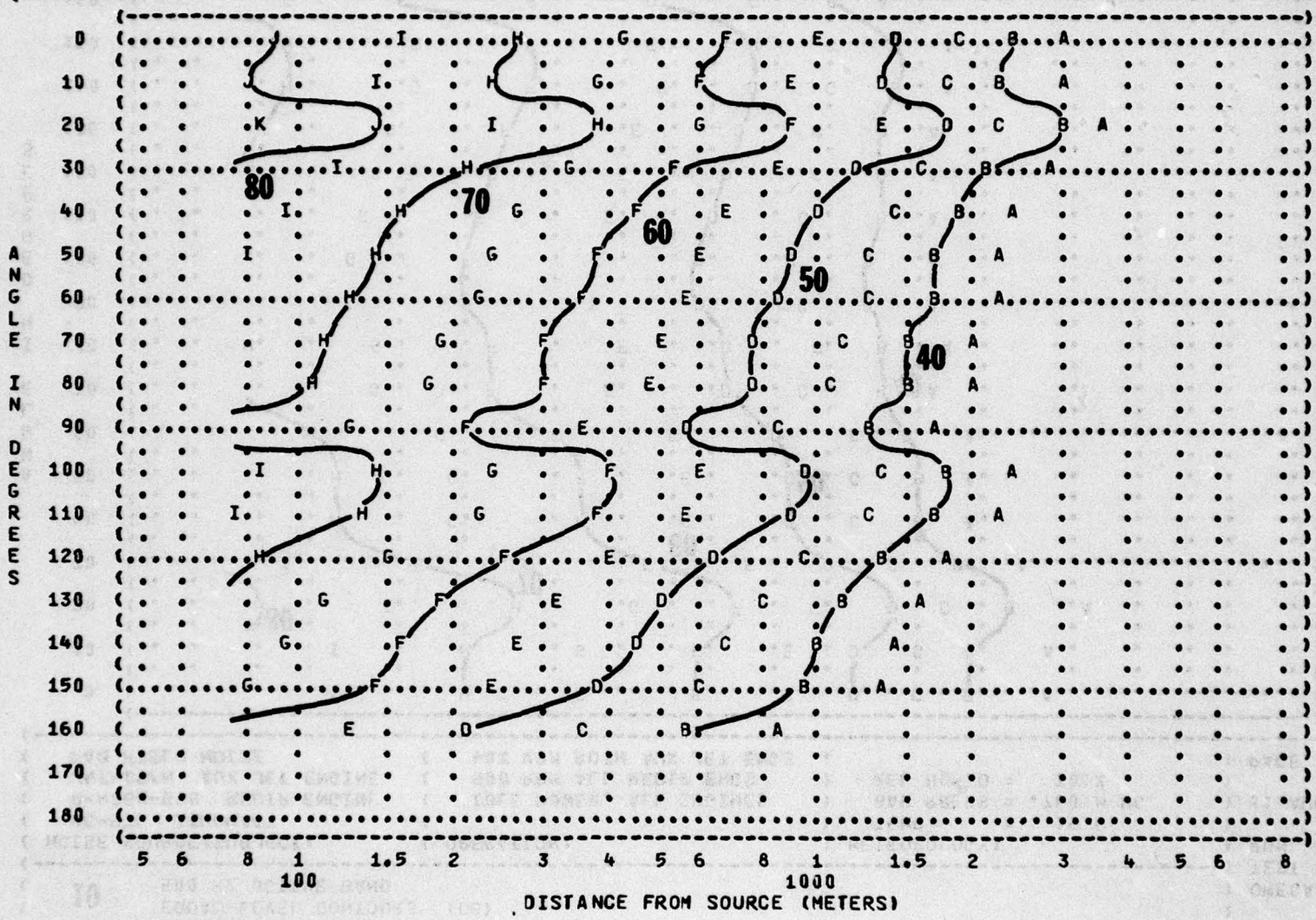
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 23



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

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 84
11 AUG 76
PAGE 24

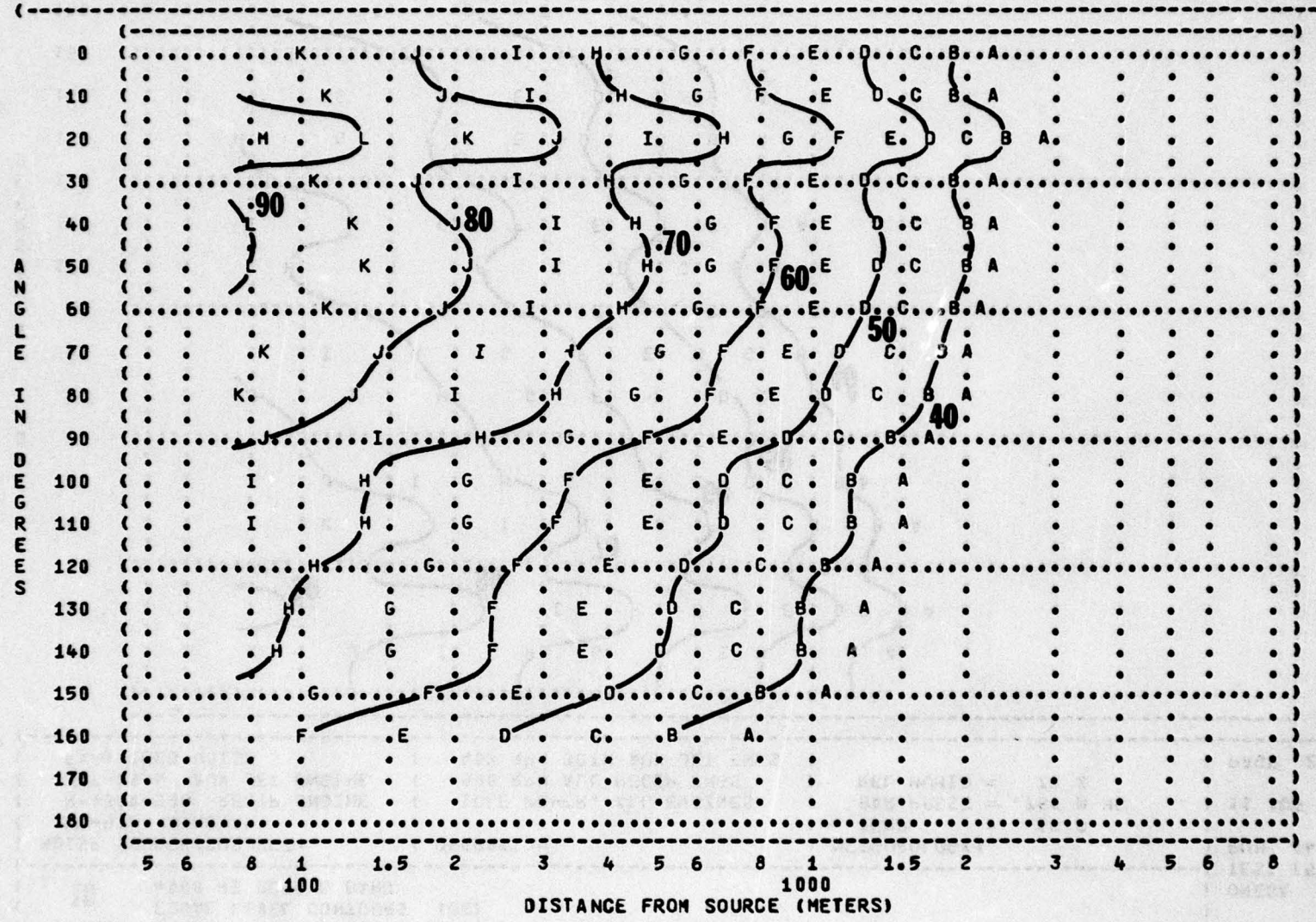


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-802-016
RUN 04
11 AUG 76
PAGE 25

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

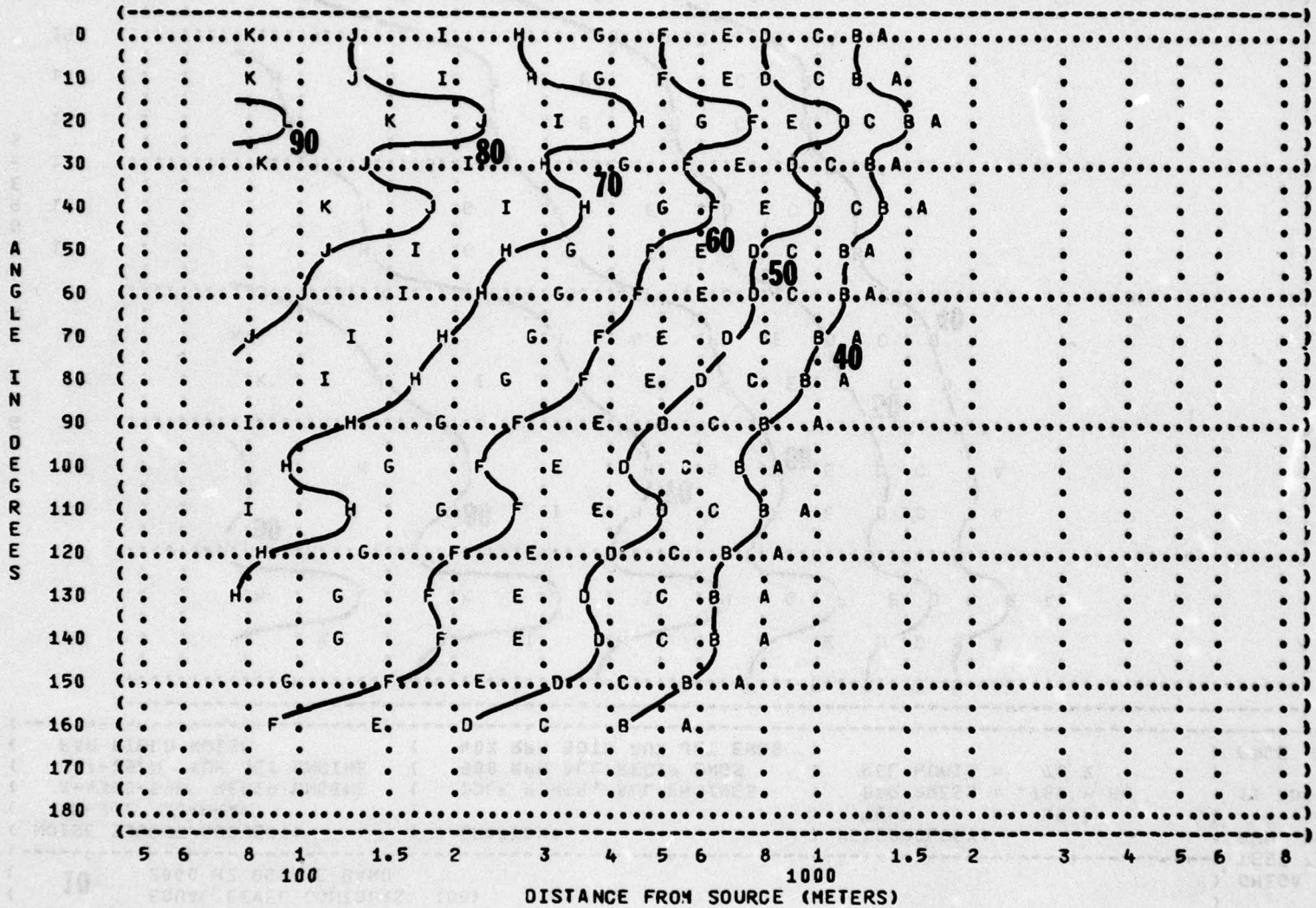


FIGURE: 10

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

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
IDLE POWER, ALL ENGINES
900 RPM ALL RECIP ENGS
40% RPM BOTH AUX JET ENGS

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 04
11 AUG 76
PAGE 26

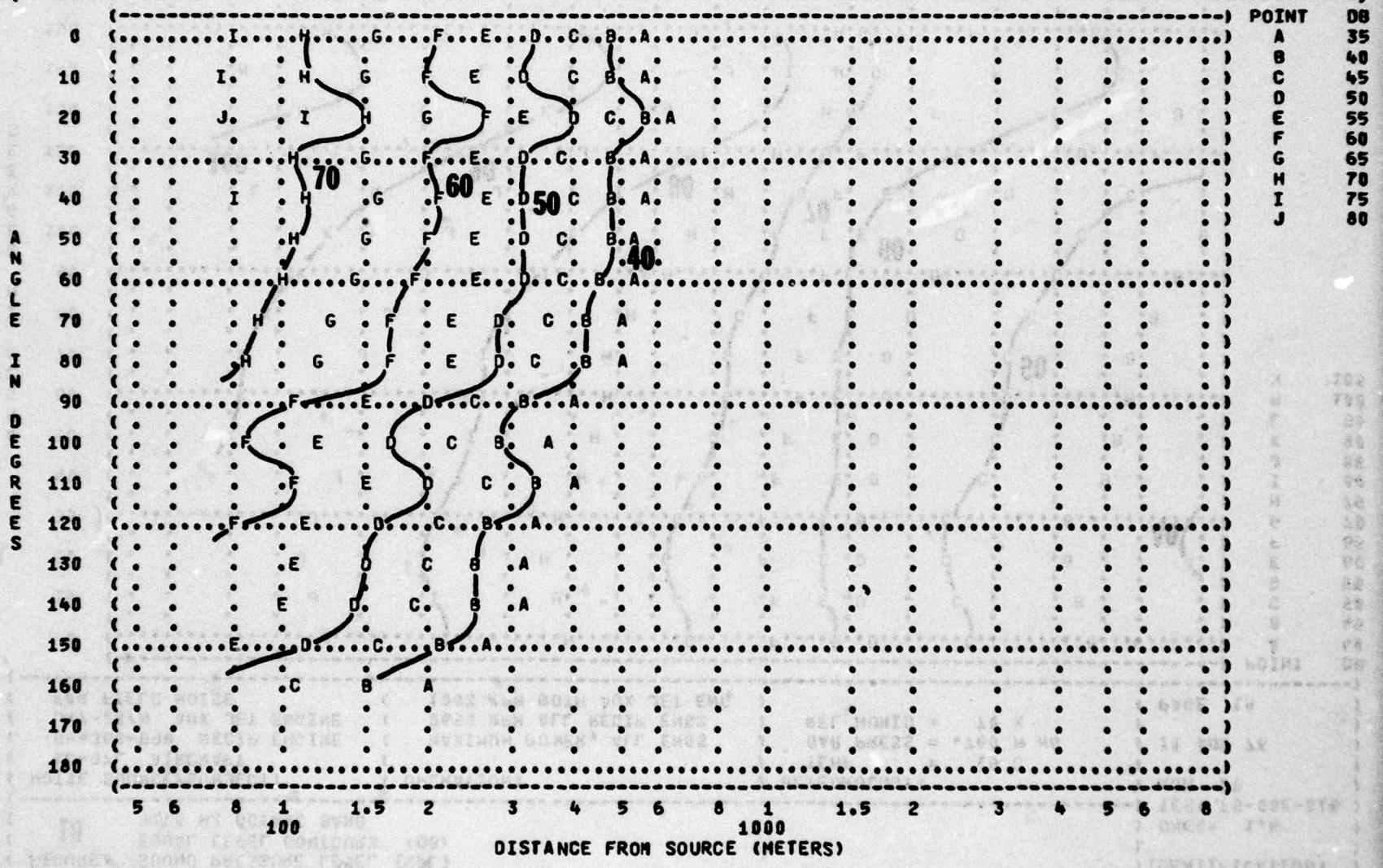


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-016
RUN 05
11 AUG 76
PAGE 18

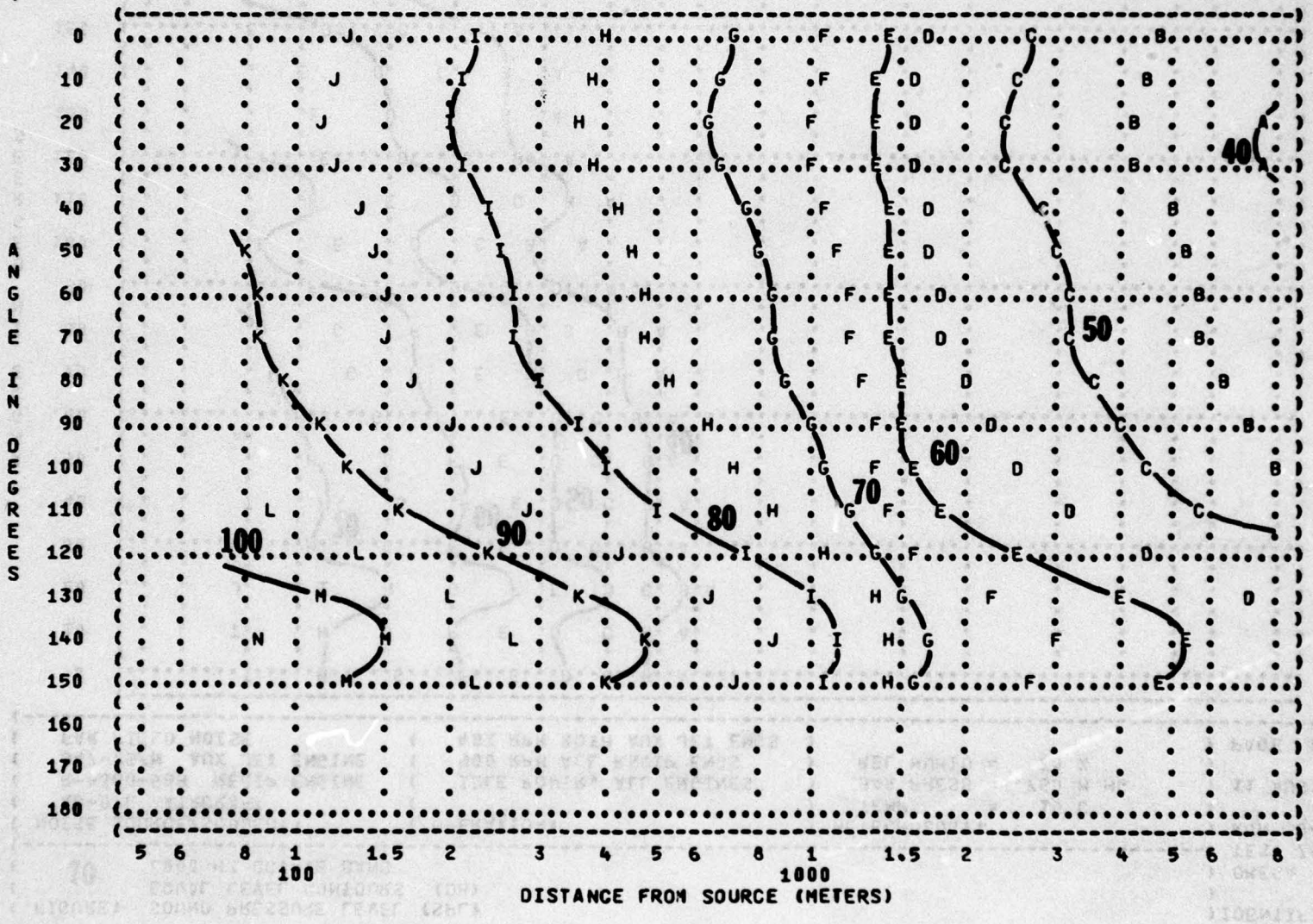


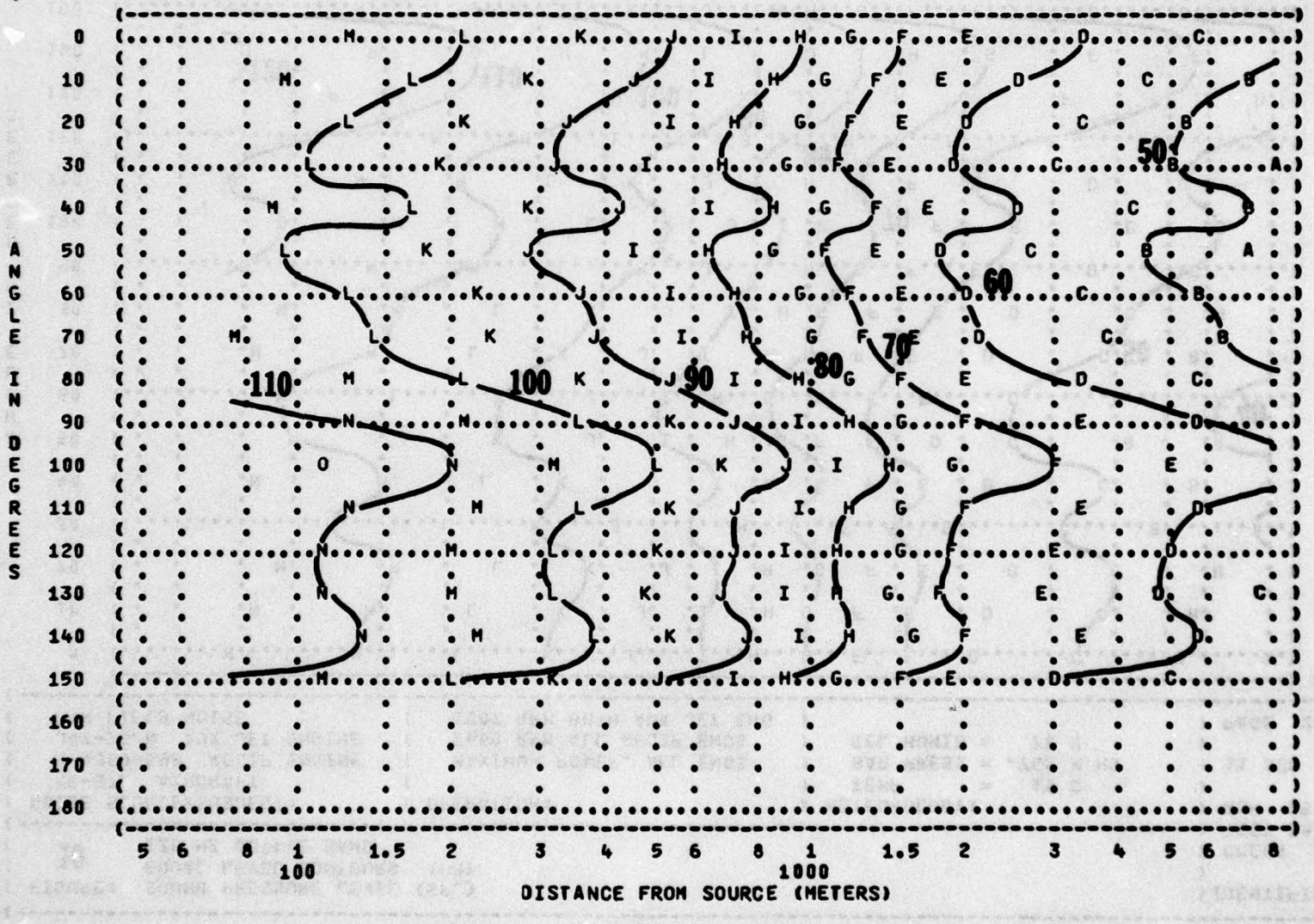
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 19

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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



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

FIGURE: 10

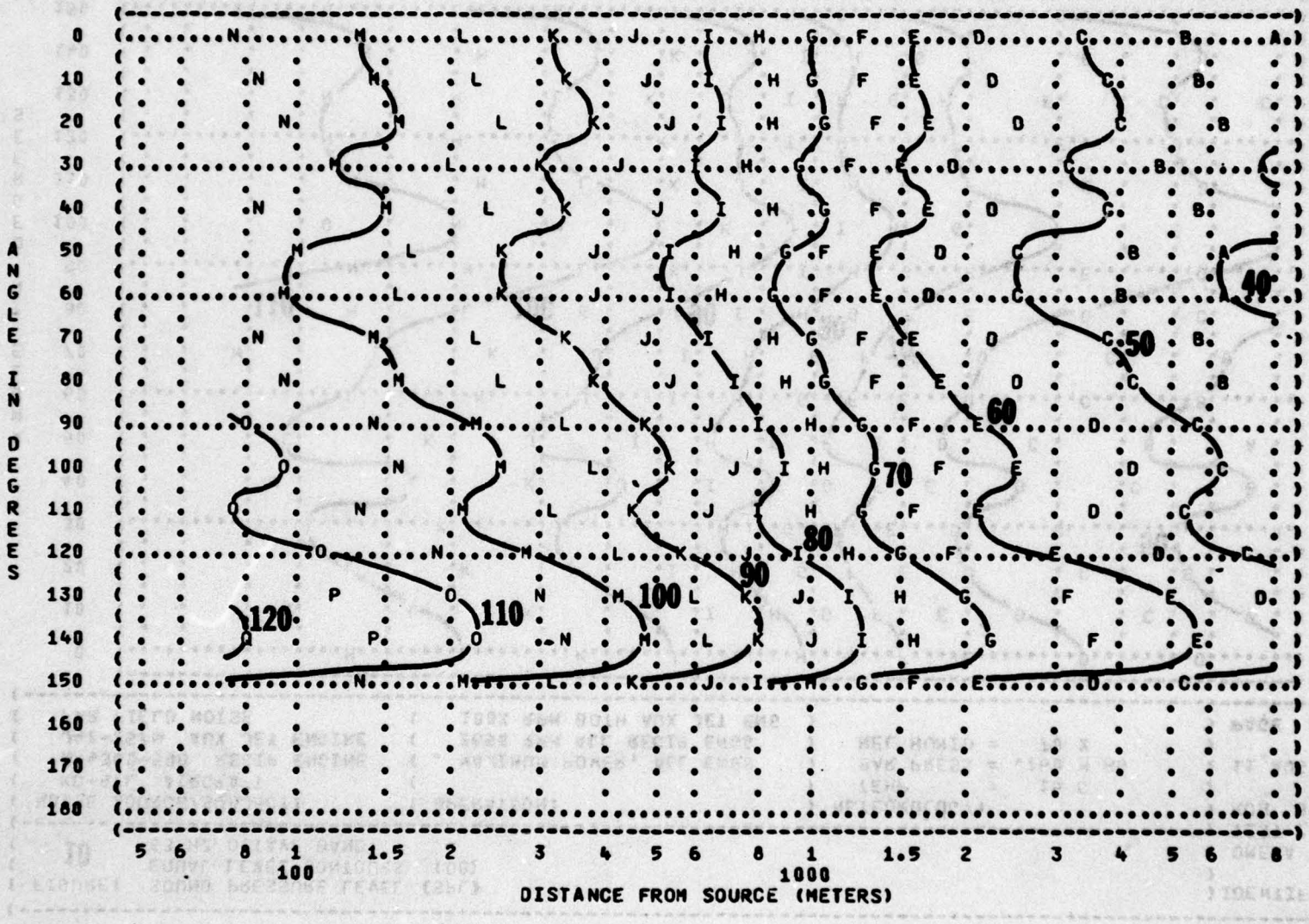
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-882-016
RUN 05
11 AUG 76
PAGE 28

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-598 RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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



POINT DB

POINT	DB
A	40
B	45
C	50
D	55
E	60
F	65
G	70
H	75
I	80
J	85
K	90
L	95
M	100
N	105
O	110
P	115
Q	120

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-002-016 RUN 05 11 AUG 76 PAGE 21

NOISE SOURCE/SUBJECT: KC-97L AIRCRAFT; R-4360-59B RECIP ENGINE; J47-25/N AUX JET ENGINE; FAR FIELD NOISE

OPERATION: MAXIMUM POWER, ALL ENGS; 2650 RPM ALL RECIP ENGS; 100% RPM BOTH AUX JET ENG

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

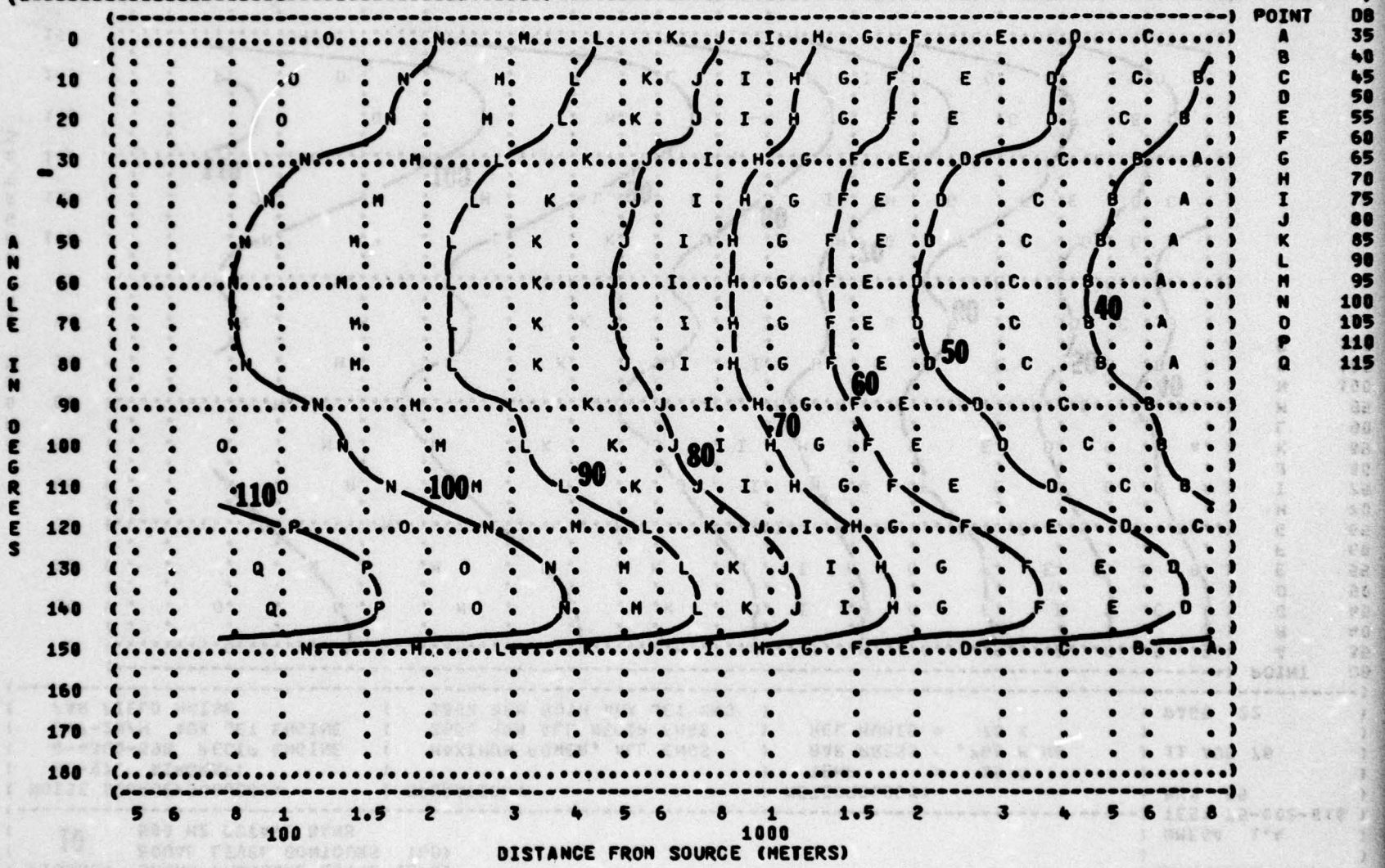


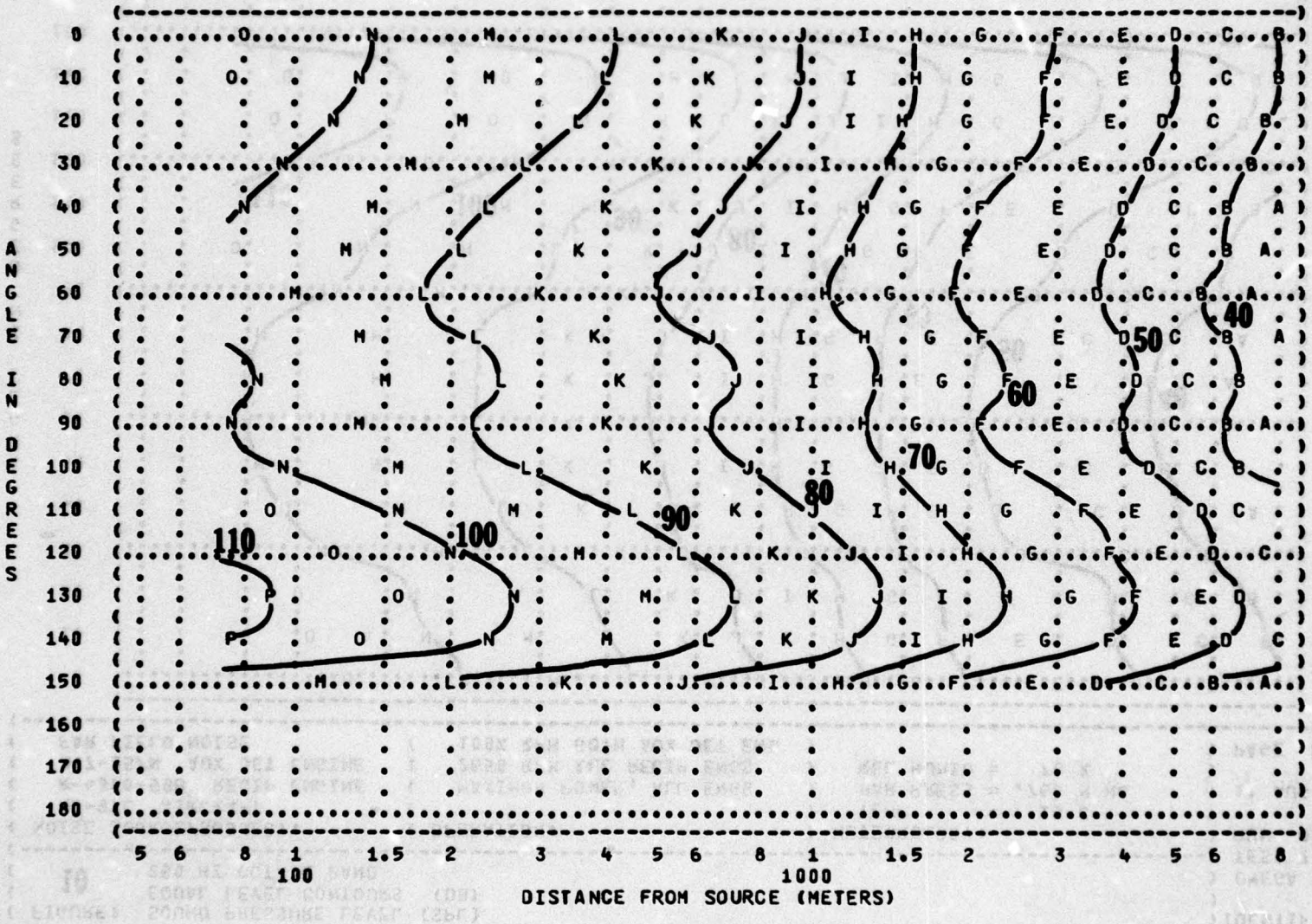
FIGURE 10: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
500 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 22

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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



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

FIGURE: 10

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

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 23

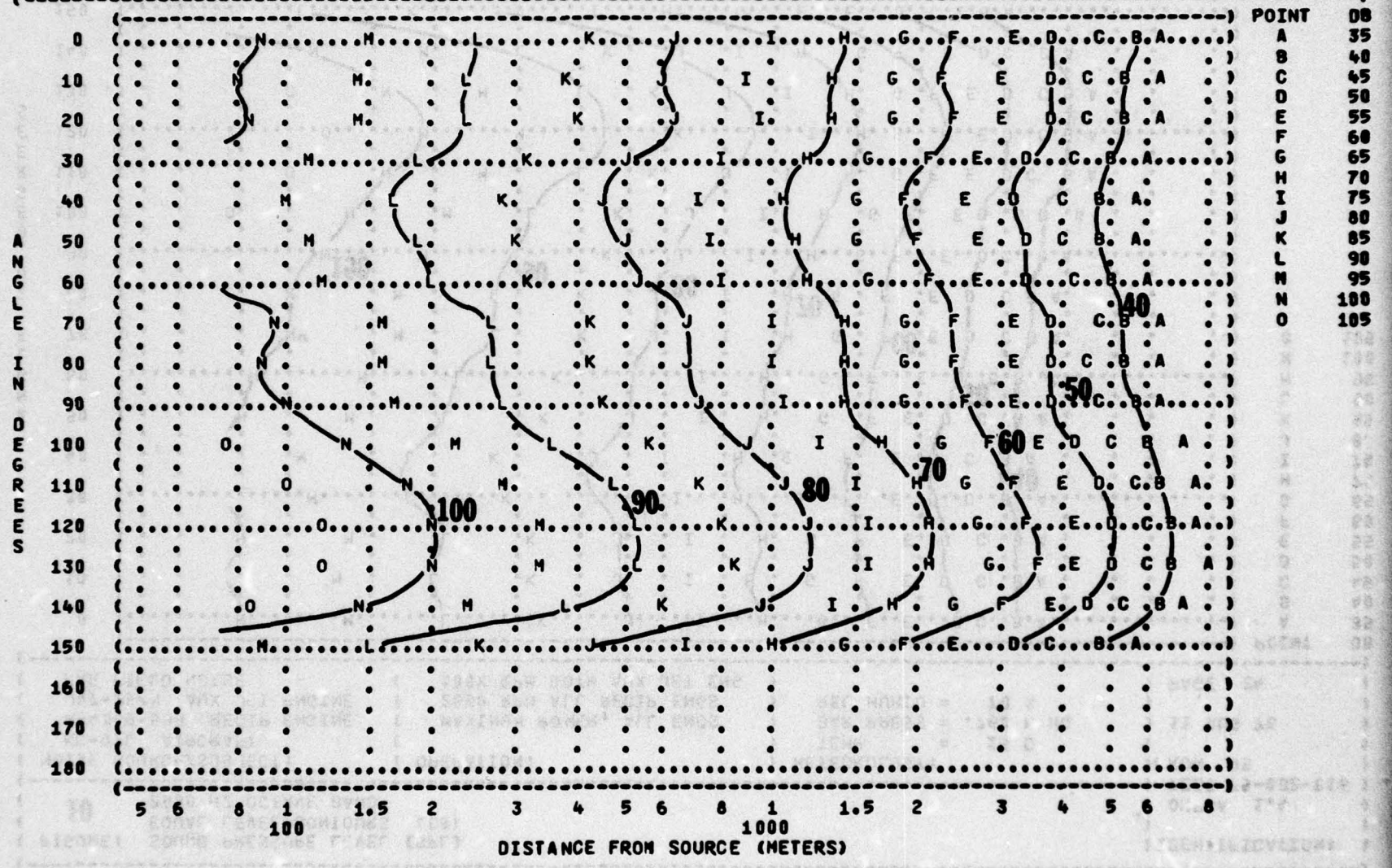


FIGURE: 10

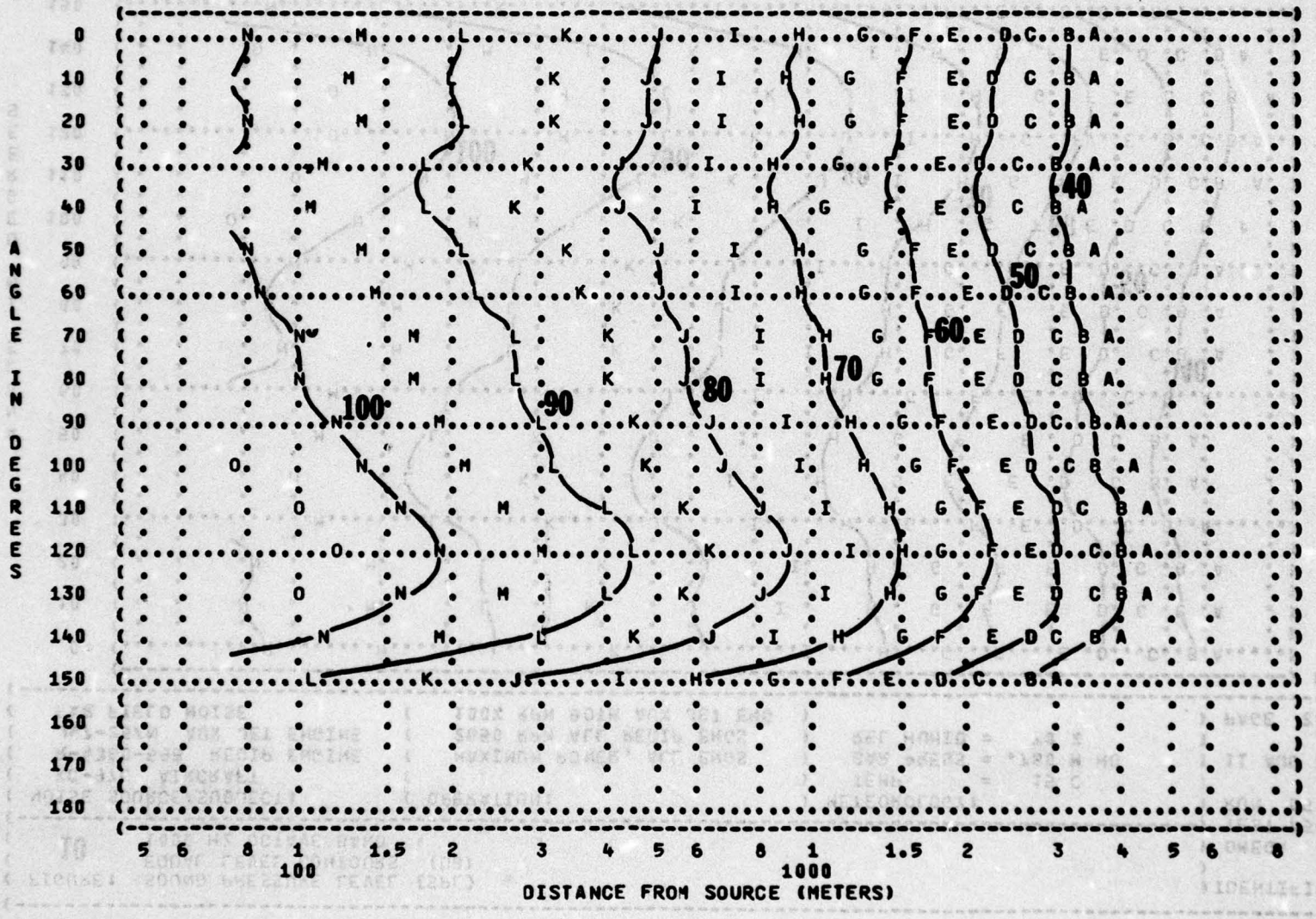
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-016
RUN 05
11 AUG 76
PAGE 24



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	7[illegible]
I	75
J	8[illegible]
K	85
L	90
M	95
N	100
O	105

FIGURE: 10

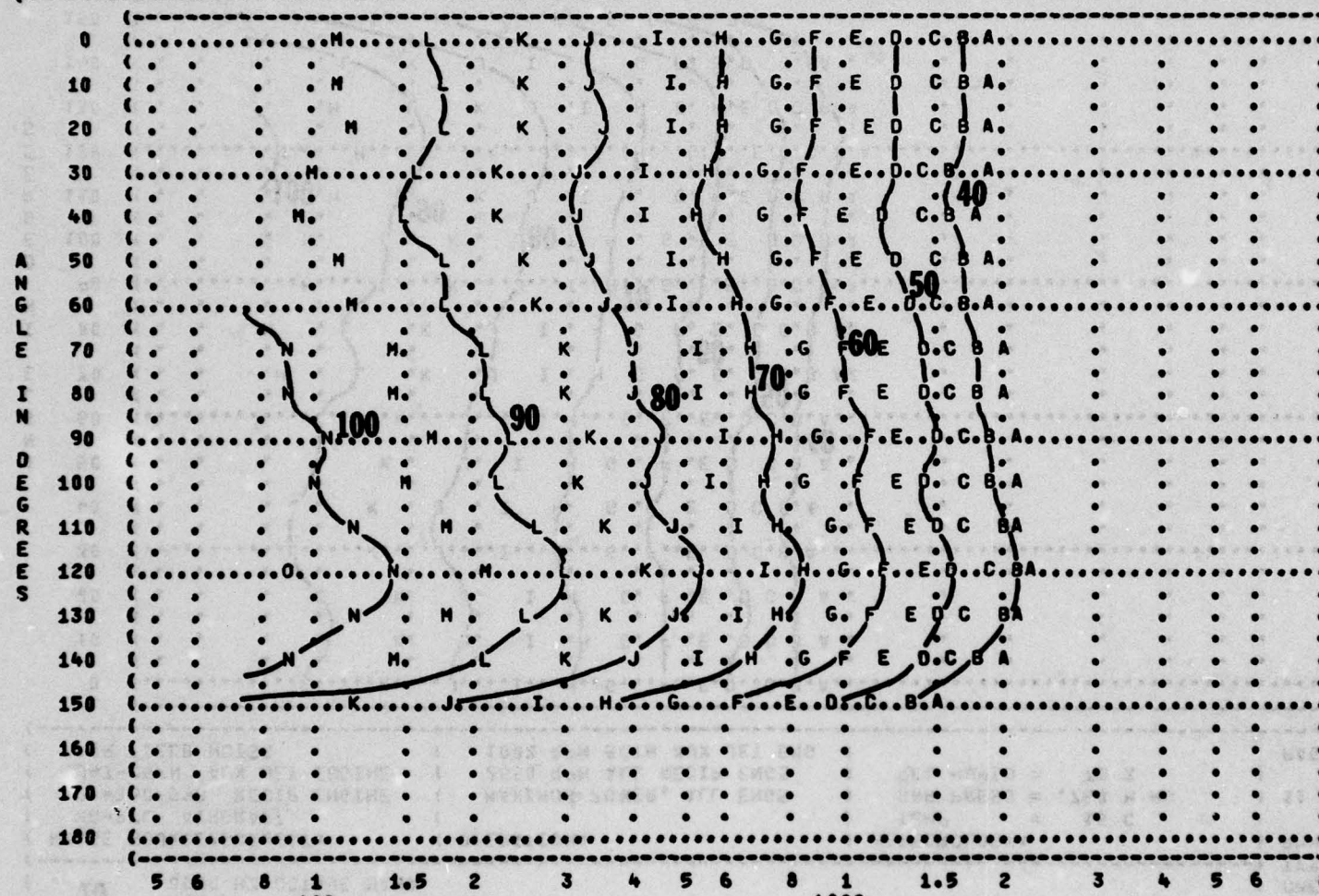
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
KC-97L AIRCRAFT
R-4360-59B RECIP ENGINE
J47-25/N AUX JET ENGINE
FAR FIELD NOISE

OPERATION:
MAXIMUM POWER, ALL ENGS
2650 RPM ALL RECIP ENGS
100% RPM BOTH AUX JET ENG

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-016
RUN 05
11 AUG 76
PAGE 25



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

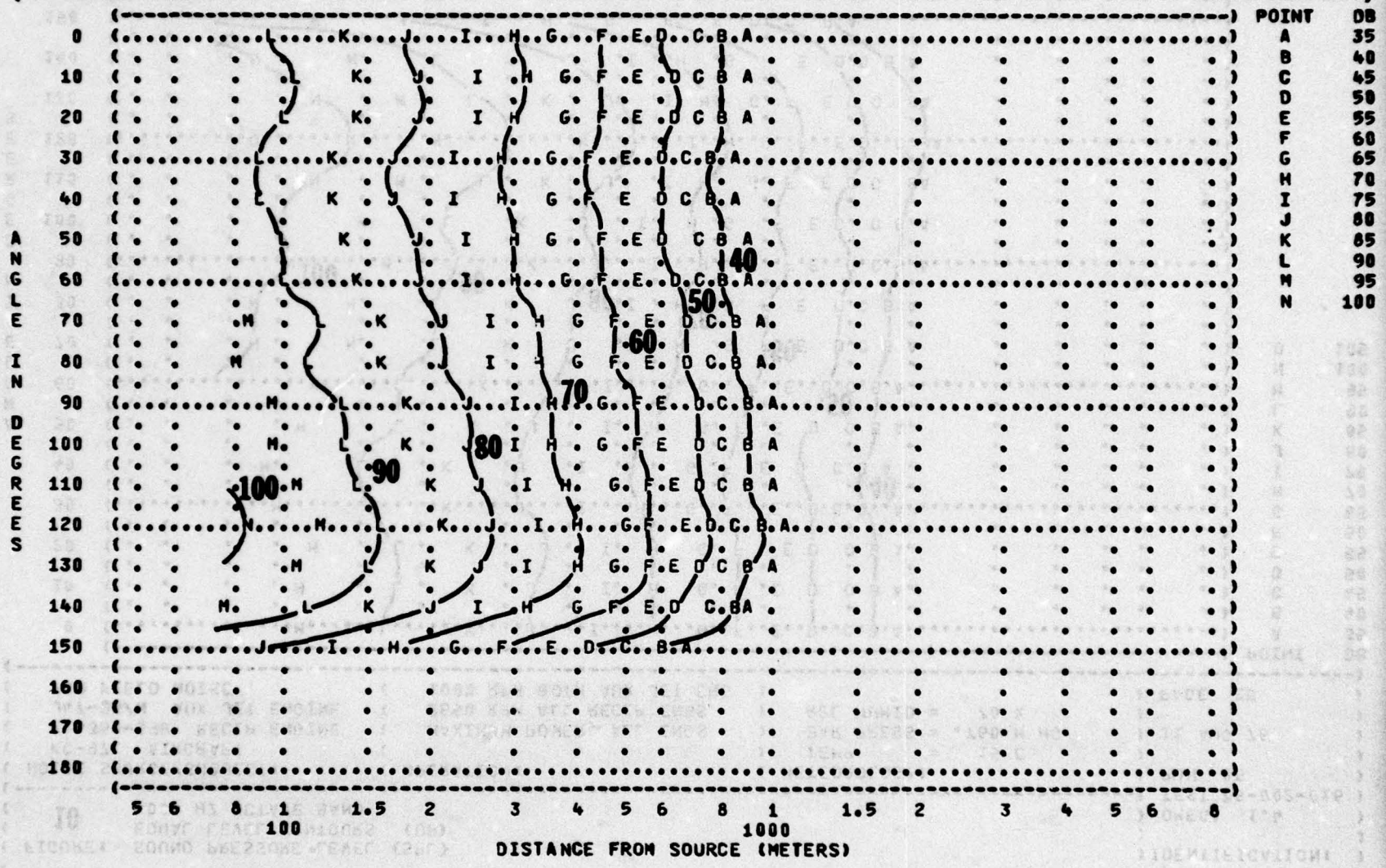
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 75-002-016 RUN 05 11 AUG 76 PAGE 26

NOISE SOURCE/SUBJECT: KC-97L AIRCRAFT; R-4360-59B RECIP ENGINE; J47-25/N AUX JET ENGINE; FAR FIELD NOISE

OPERATION: MAXIMUM POWER, ALL ENGS; 2650 RPM ALL RECIP ENGS; 100% RPM BOTH AUX JET ENG

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



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

*U.S.Government Printing Office: 1977 — 757-080/236