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Volume 92

USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK

Volume 92

F-14A Aircraft, Far-Field Noise

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

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The USN F-14A is a carrier-based fighter aircraft powered by two TF30-P-412 turbofan 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 18 locations are normalized to standard meteorological conditions and extrapolated from 75-

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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, Capt Nick Farinacci, for his assistance in acquiring the raw data, Mr. Keith Kettler, Mr. Henry Mohlman and Mr. David Eilerman of the University of Dayton for assistance in the mechanics of data processing, and Mrs. Peggy Massie and Mr. Mike Patterson for assistance in typing and preparation of the graphics.

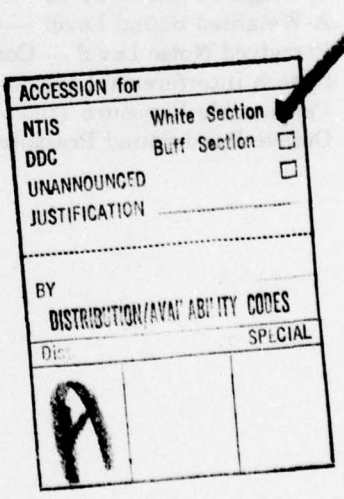


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INTRODUCTION

The USN F-14A is a carrier-based fighter aircraft powered by two TF30-P-412 turbofan engines. The aircraft was manufactured by the Grumman Aerospace Corporation and the engines by the Pratt and Whitney Aircraft Division of United Aircraft 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 F-14A 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 or Navy 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 the far-field data during a 1-hour test period, thus keeping similar meteorological conditions throughout the test. Figure 1 shows the ground runup area, ground cover, aircraft orientation and microphone measurement sites on the semicircle. The center of the 75 meter radius semicircle used in surveying the TF30-P-412 engines was on the ground directly below the intersection of the aircraft's centerline and the plane passing through both engines' exhaust-nozzle exits. The ground runup area did not have a blast deflector; therefore, the engines' exhausts were in a "free-flow" condition.

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 aquisition.

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

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

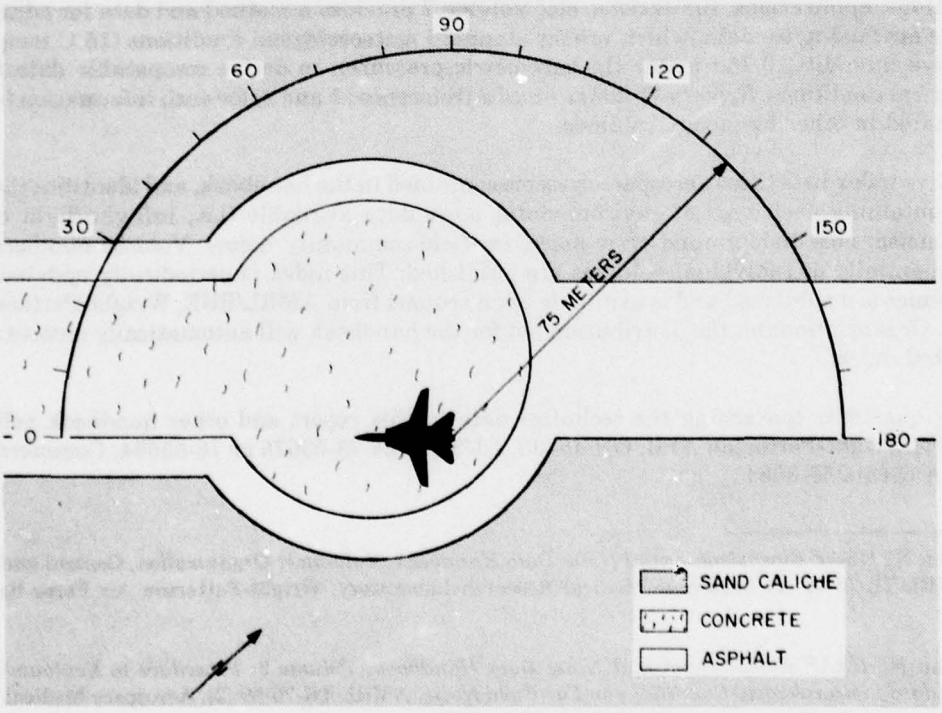


Figure 1. Far-Field Measurement Locations on Pad 18 Edwards AFB, CA

TABLE 1

TEST CONDITIONS
FOR FAR-FIELD NOISE MEASUREMENTS

F-14A Aircraft, Ground Runups, Edwards AFB, CA
Tail #158615, 16 July 1973

Aircraft Engine Operation

Idle	Both Engines 70 % RPM, Core Speed 590 C, Turbine Inlet Temperature 950 LBS/HR, Fuel Flow
80% Runup (#1 Engine Idle)	#2 (Starboard) Engine 80 % RPM, NC 610 C, TIT 1500 LBS/HR, FF
80% Runup	80 % RPM, NC 630 C, TIT 1600 LBS/HR, FF
Military (#1 Engine Idle)	#2 (Starboard) Engine 102 % RPM, NC 1180 C, TIT 7200 LBS/HR, FF
Afterburner, Zone 3 (#1 Engine Idle)	#2 (Starboard) Engine 102 % RPM, NC 1180 C, TIT 7200 LBS/HR, FF (Plus Afterburner Fuel)

Meteorology

Temperature	18.3 C
Bar Pressure	0.699 M Hg
Rel Humidity	39 %
Wind — Speed	3.3 M/Sec (6.5 KTS)
— Direction	210 Deg

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 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 F-14A 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 intermedite power settings (e.g., 85% 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 180 degree location for the idle power nor at the 170/180 locations for the other power setings because of turbulent air flow behind the aircraft. Typically, the A-weighted levels for these angles are 10 to 20 dBA below the level measured at the preceding micropone location.

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

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

TABLE: 2

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 2

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	68<	70<	66<	69<	73<	73<		67<	67<	71<		69<	71<	70<	70<	74<	67<		
31.5	68<	69<	68<	69<	73<	72<	70<	69<	67<	71<	68<	71<	72<	71<	73<	70<	70<	69<	
40	71<	72<	70<	70<	73<	71<	69<	71<	69<	70<	69<	72<	74<	73<	72<	73<	71<	68<	
50	71<	73<	73<	73<	72<	70<	68<	68<	70<	67<	68<	70<	71<	70<	69<	71<	68<		
63	70<	71<	71<	74<	70<	71<	68<	69<	70<	69<	70<	69<	70<	72<	72<	72<	71<		
80	77	78	76	74	74	78	77	76	79	77	78	78	80	80	82	83	81	72<	
100	78	79	78	76	76	80	78	77	79	77	76	78	80	81	83	85	82	73<	
125	71<	72<	71<	72<	71<	69<	68<	68<	70<	71<	70<	72<	74<	76	75	76	73<	66<	
160	75	73<	73<	75	72<	73<	71<	72<	75	76	77	78	81	82	80	80	79	69<	
200	72	73	73	71	68<	70	69<	69	71	71	72	74	77	79	77	77	76	66<	
250	73	73	71	68<	69	69	69	67<	71	71	72	73	76	79	78	75	74	64<	
315	76	76	71	71	71	71	68	67	72	73	72	74	77	77	79	73	72	63<	
400	77	76	72	73	72	72	68	68	71	72	72	74	76	77	77	74	71	59<	
500	76	76	73	73	72	72	69	66	70	69	70	71	75	74	75	69	67	57<	
630	76	75	74	74	74	75	72	71	74	70	74	72	77	74	77	72	71	57<	
800	77	75	74	73	73	72	67	64	66	65	66	64	70	70	69	64	62	55<	
1000	78	78	77	77	77	75	69	66	66	64	66	62	68	67	67	65	61	54<	
1250	83	82	81	80	80	76	70	70	69	67	66	63	68	68	68	68	64	56<	
1600	88	87	85	84	84	81	75	73	72	66	66	68	69	71	71	71	68	60	
2000	101	101	98	98	99	94	90	87	85	79	78	81	80	81	80	82	79	73	
2500	91	90	88	90	89	86	81	81	79	74	71	75	77	76	77	77	75	66	
3150	91	90	88	88	87	84	78	78	77	70	70	71	73	73	73	72	75	63	
4000	92	92	90	91	91	88	82	82	79	73	74	74	77	76	76	74	72	64	
5000	89	88	87	89	88	86	79	79	76	71	73	75	78	79	79	76	72	63	
6300	86	86	85	85	85	82	75	75	72	68	69	72	76	76	76	73	67	59	
8000	80	80	79	79	79	76	70	70	67	63	67	70	73	74	73	70	64	52	
10000	75	74	73	73	73	70	64	63	61	56	59	62	65	66	66	62	57	45<	
OVERALL	102	102	100	100	101	97	92	91	90	86	86	88	90	91	91	91	89	80	

< 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 75-002-028
RUN 02
07 MAY 75
PAGE 2

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

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

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 2

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

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 2

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

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 2

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

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 2

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	73<	74<	76<	75<	75<	75<	77	77	80	81	81	80	86	90	93	96	96		
31.5	80	79	79	78	79	80	79	82	82	82	84	84	88	95	99	100	98		
40	80	80	79	80	81	82	82	85	86	86	88	89	92	98	104	107	101		
50	81	80	80	80	82	82	82	84	85	86	87	89	95	101	106	107	102		
63	81	81	83	83	83	84	86	86	87	89	91	94	100	105	110	110	102		
80	84	84	85	84	85	86	87	88	89	92	94	96	102	109	114	113	105		
100	89	89	90	90	90	91	90	92	93	96	97	100	106	115	119	118	106		
125	89	90	91	91	91	91	92	93	94	97	98	101	107	116	121	120	105		
160	92	93	94	93	92	93	93	94	95	98	100	104	109	115	123	121	105		
200	93	94	96	93	93	93	95	96	96	98	101	105	110	115	119	121	106		
250	94	94	95	93	94	94	95	96	97	99	102	105	112	117	118	121	103		
315	96	95	94	94	95	95	95	96	97	100	102	106	110	118	120	117	100		
400	95	94	93	95	95	94	95	96	97	98	102	106	111	115	118	115	97		
500	92	93	94	95	95	95	95	96	97	99	102	105	110	114	115	113	92		
630	91	93	95	95	95	95	95	96	97	98	102	105	108	112	113	109	85		
800	89	91	93	95	95	95	94	95	96	98	100	103	106	108	109	105	82		
1000	88	90	93	94	94	94	93	95	95	97	99	101	103	105	107	101	80		
1250	87	89	92	92	92	93	93	94	95	96	97	98	100	103	104	100	79		
1600	88	89	91	92	92	93	92	94	94	96	98	98	100	103	103	102	77		
2000	96	94	92	91	92	92	92	93	93	95	98	99	100	102	102	101	74		
2500	87	88	89	89	90	90	90	92	91	94	98	100	100	101	101	98	73		
3150	85	86	88	88	89	89	90	91	90	93	96	99	99	100	100	96	72		
4000	85	86	86	87	88	88	88	90	89	92	94	97	97	98	98	95	71		
5000	82	83	85	85	86	86	87	89	88	91	93	94	95	95	96	93	70		
6300	78	79	81	81	82	82	83	85	85	88	90	92	92	92	92	91	66		
8000	73	75	77	77	78	78	79	81	80	84	85	88	88	88	89	88	65		
10000	68	69	71	72	73	73	74	75	76	79	81	84	84	85	87	84	65		
OVERALL	104	104	105	105	105	106	106	107	107	110	112	115	120	125	129	128	114		

< 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 75-002-028
RUN 05
07 MAY 75
PAGE 2

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

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	84	84	85	84	86	88	88	87	88	89	92	97	103	104	105	102		
31.5	88	88	86	89	89	89	92	91	92	93	96	97	102	108	110	109	102		
40	90	89	89	90	91	92	92	93	93	94	95	99	106	111	113	111	104		
50	89	87	89	91	90	91	92	94	93	93	97	101	105	112	113	112	104		
63	89	91	92	92	93	94	95	95	95	96	98	103	110	116	117	113	106		
80	91	93	95	93	94	95	97	97	97	99	102	106	114	119	118	115	107		
100	95	96	97	97	98	98	99	99	101	103	104	110	118	125	122	119	109		
125	96	99	98	98	98	98	101	100	101	104	107	112	120	126	124	120	109		
160	98	100	100	100	99	101	101	103	105	106	109	113	120	127	125	123	109		
200	99	101	101	100	99	101	102	103	105	106	110	115	119	124	125	122	108		
250	96	99	99	99	100	100	102	102	105	106	110	115	119	122	123	121	106		
315	96	100	99	100	101	101	103	104	105	108	111	116	120	124	122	118	104		
400	95	99	99	100	101	101	103	104	106	108	112	116	120	123	121	115	99		
500	95	98	100	101	101	102	103	103	106	108	111	116	119	121	119	113	96		
630	95	98	101	102	102	102	103	104	106	108	112	115	117	120	117	110	93		
800	94	97	100	101	102	102	103	104	105	108	112	113	115	118	114	106	90		
1000	93	95	99	100	101	102	103	104	105	107	111	111	113	116	112	104	88		
1250	92	94	99	99	100	101	102	103	105	106	109	110	111	114	111	104	86		
1600	92	93	98	99	99	101	102	103	104	104	109	112	111	114	111	105	87		
2000	100	96	97	97	98	100	101	101	103	104	109	111	111	113	110	103	86		
2500	92	91	95	96	97	99	100	100	103	105	108	110	110	112	108	102	85		
3150	90	89	94	94	97	99	99	99	103	105	107	109	109	111	106	101	84		
4000	90	88	92	93	95	97	99	98	102	103	106	108	107	110	106	99	83		
5000	88	86	91	91	94	96	97	97	100	102	105	106	107	109	105	98	81		
6300	85	83	87	87	90	92	94	94	96	99	102	104	105	107	103	95	77		
8000	79	78	83	83	86	89	91	90	93	96	100	101	103	105	102	93	73		
10000	73	72	78	79	82	85	86	86	89	92	98	99	102	104	100	90	70		
OVERALL	108	110	111	112	112	113	114	115	117	119	122	126	129	134	133	129	117		

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01

07 MAY 75

PAGE 6

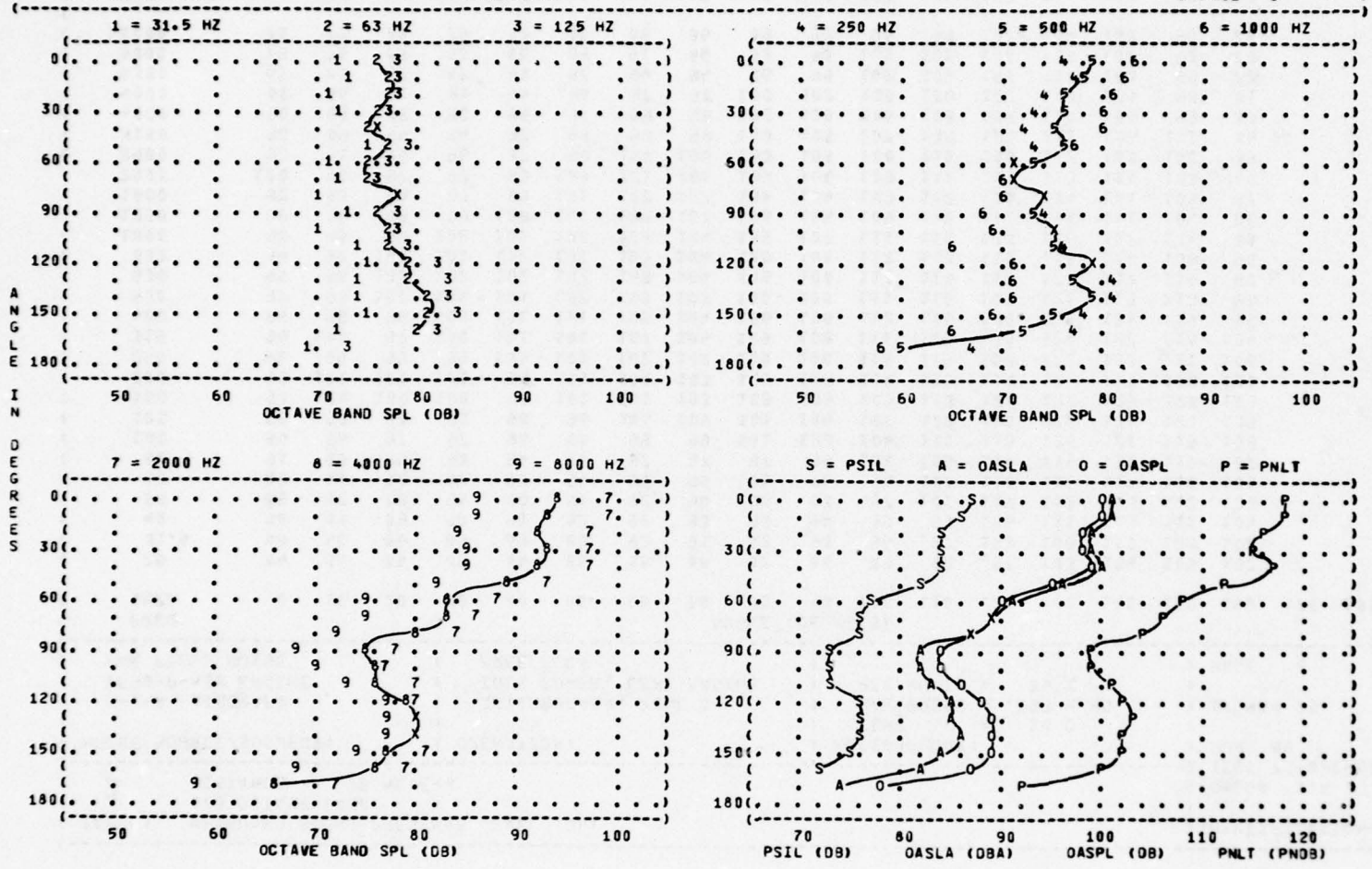


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:

F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:

80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

METEOROLOGY:

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

IDENTIFICATION:

OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 6

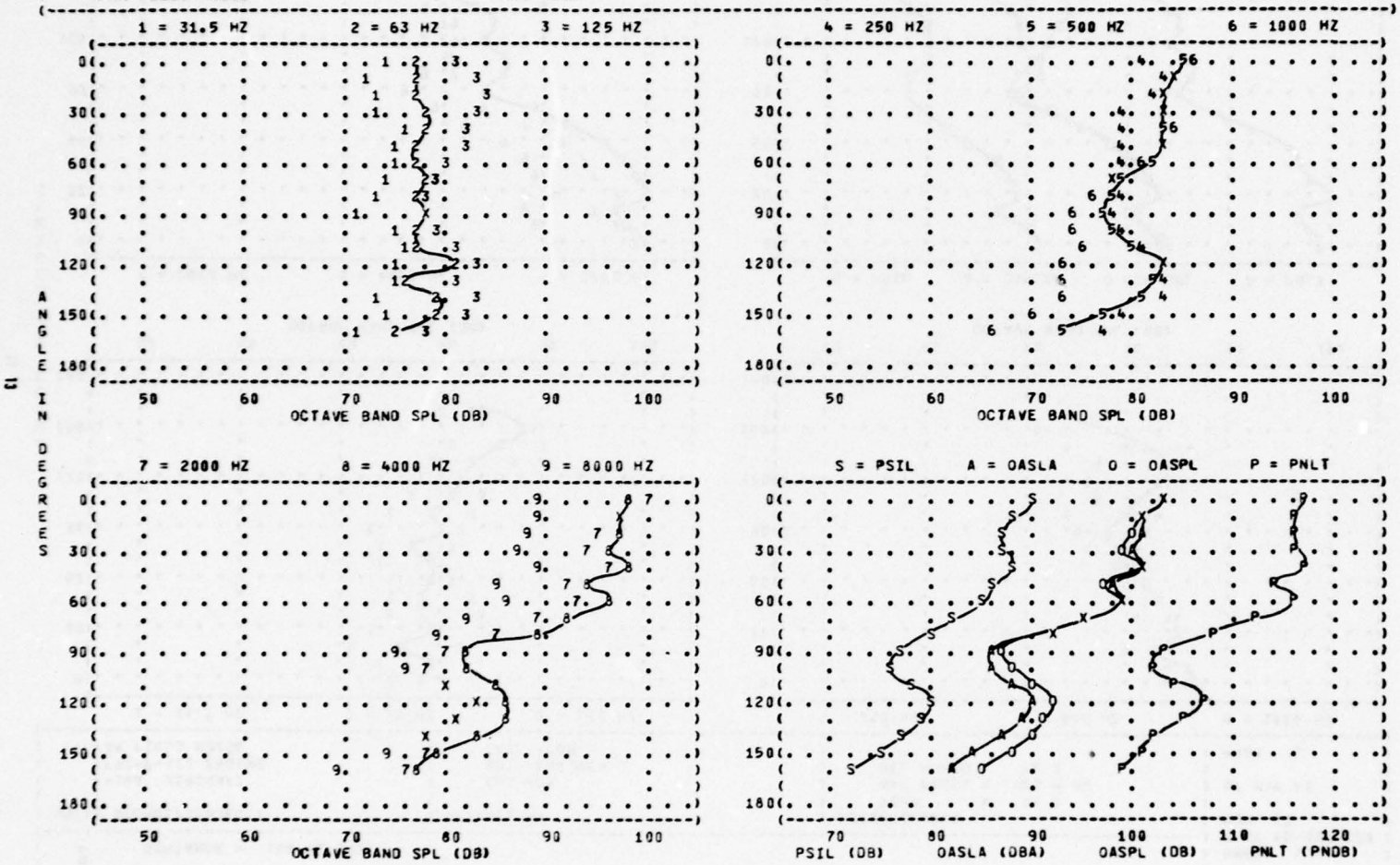


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 6

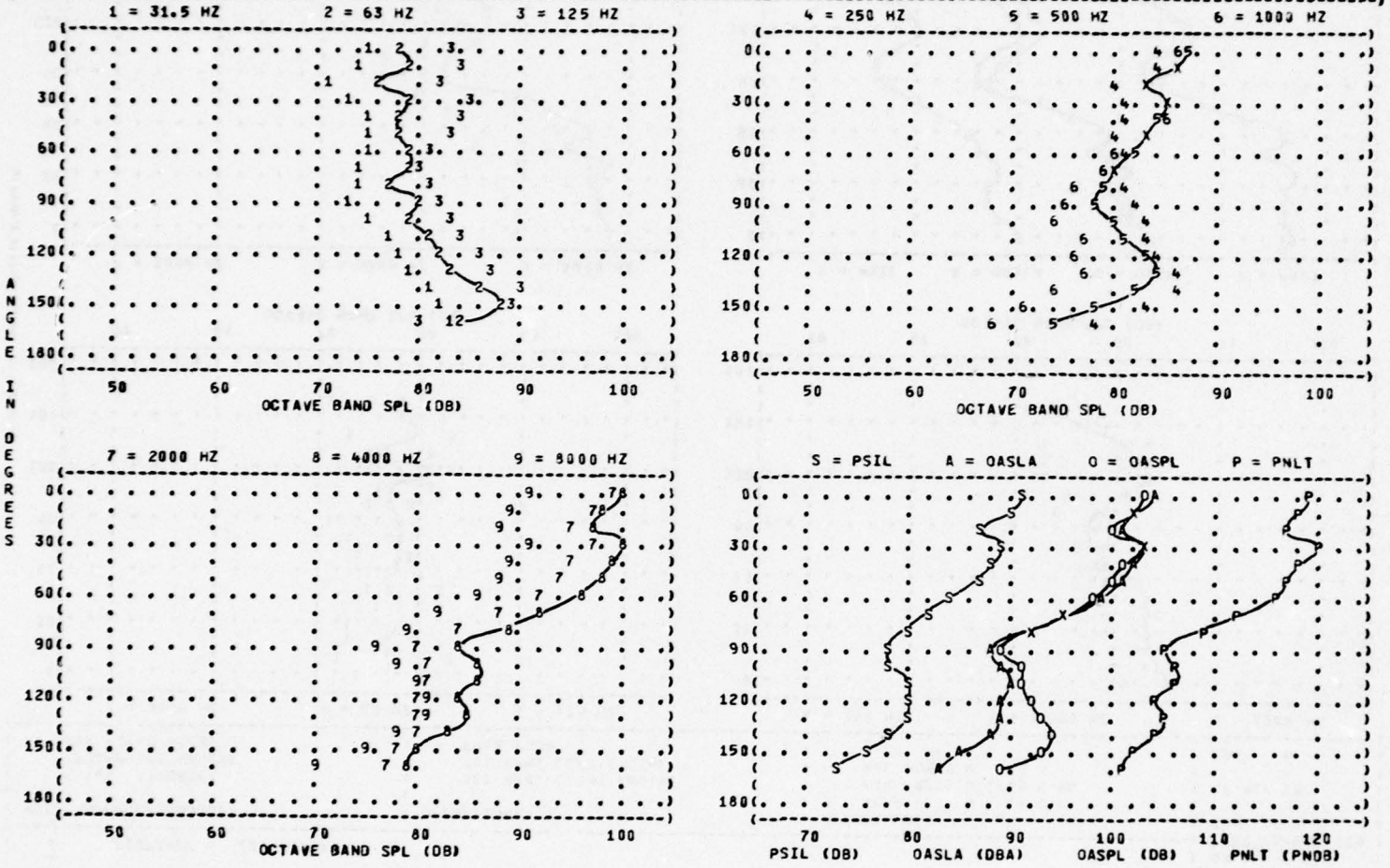


FIGURE 2 NORMALIZED FARFIELD NOISE LEVELS

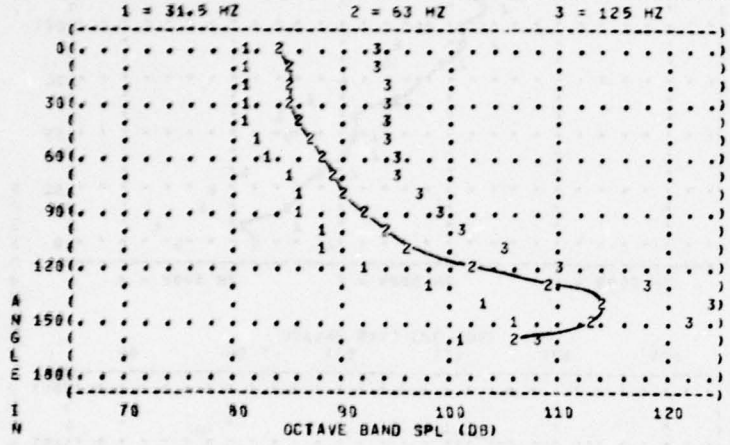
DISTANCE = 100 METERS

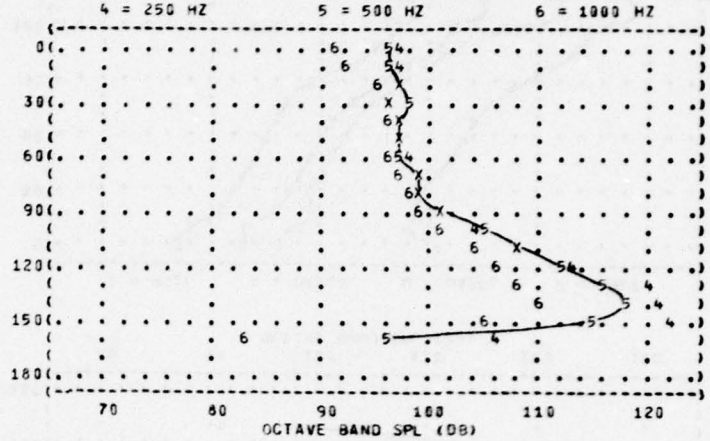
NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

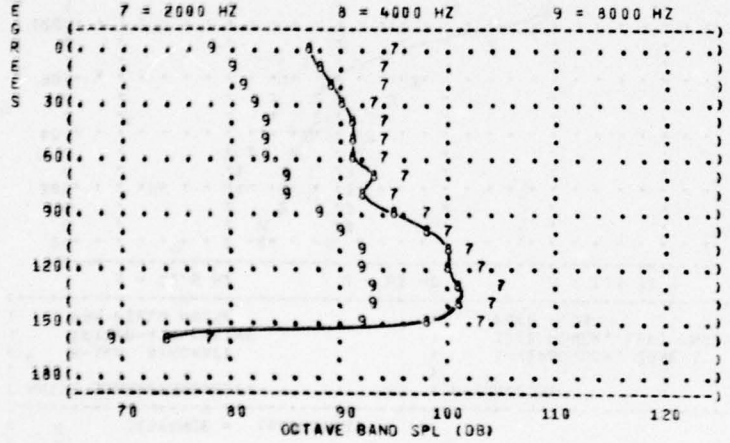
OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 6







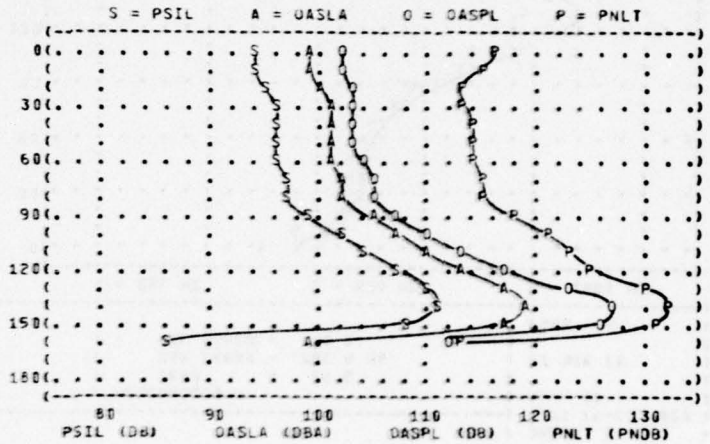


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

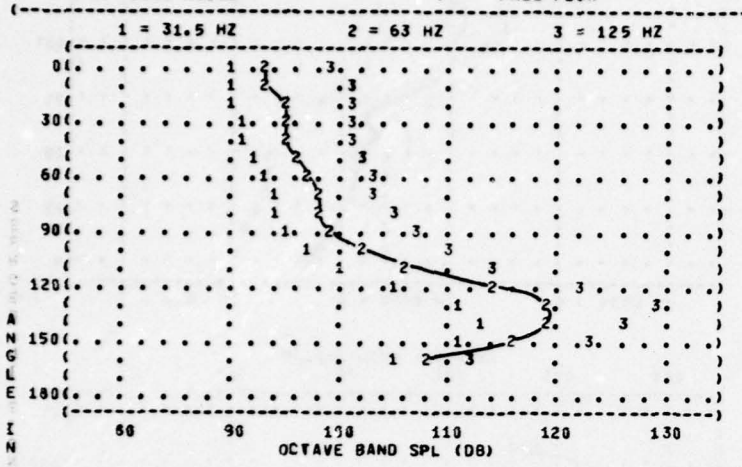
2 DISTANCE = 100 METERS

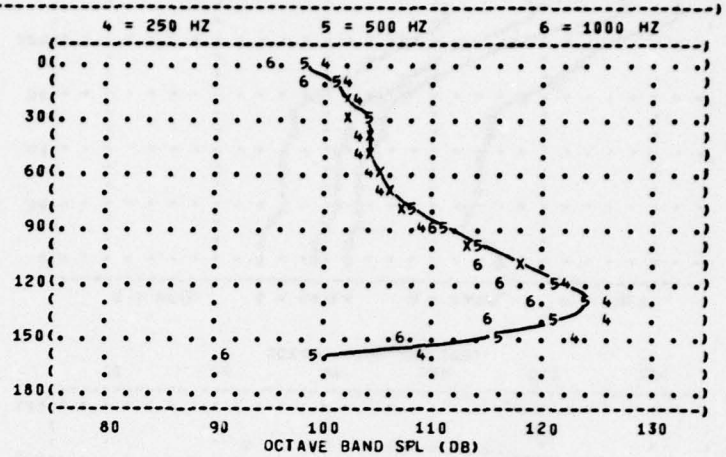
NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

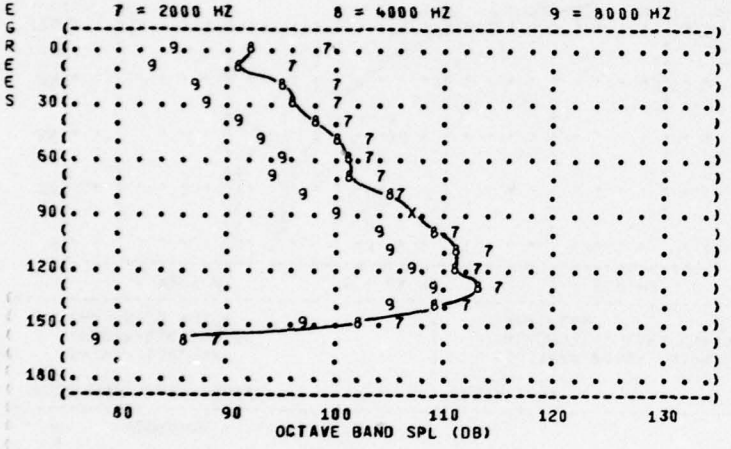
OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 6







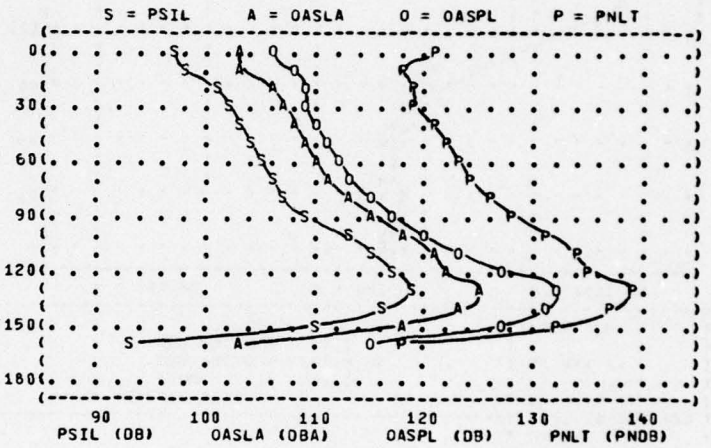


FIGURE: ACOUSTIC POWER LEVEL (PWL)

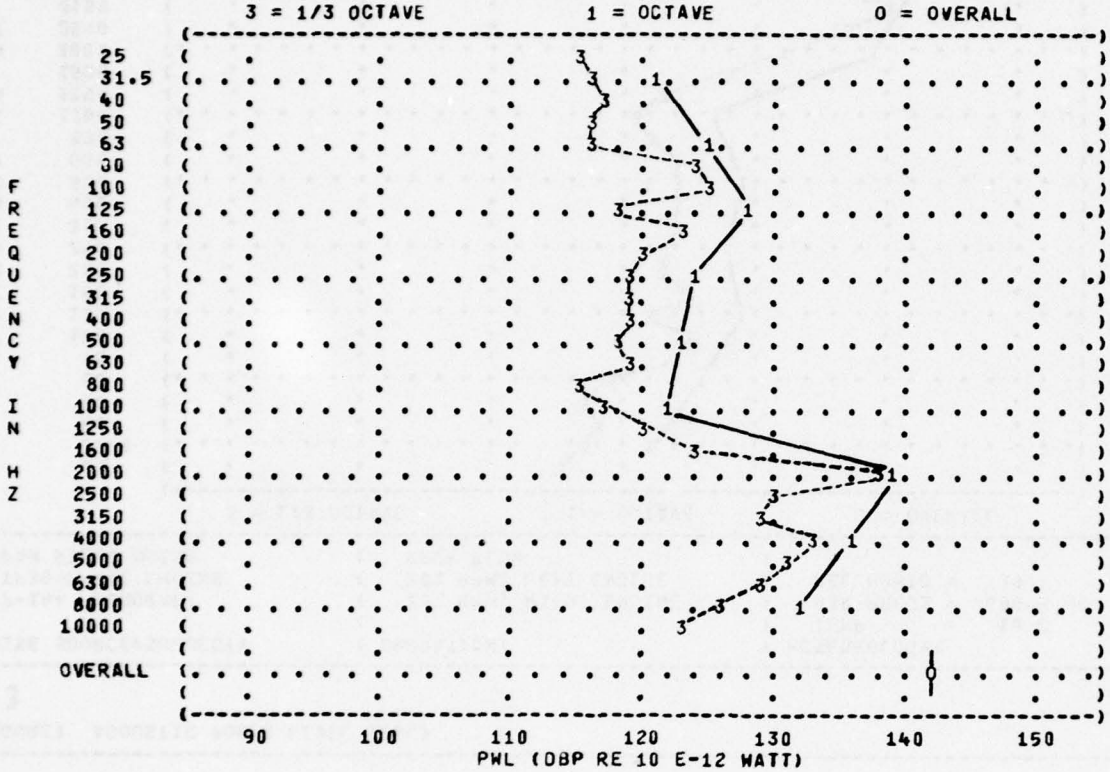
3

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 3



	PWL	
	1/3 OCTAVE	OCTAVE
25	115.3	
31.5	116.2	121.0
40	116.9	
50	115.6	
63	116.1	125.4
80	124.3	
100	125.1	
125	117.8	127.6
160	122.9	
200	119.7	
250	118.9	124.1
315	119.3	
400	118.9	
500	117.5	123.5
630	119.4	
800	114.9	
1000	116.9	122.5
1250	119.8	
1600	124.0	
2000	138.3	139.0
2500	129.9	
3150	128.8	
4000	132.8	136.0
5000	131.0	
6300	129.3	
8000	126.2	131.7
10000	123.1	
OVERALL	141.8	

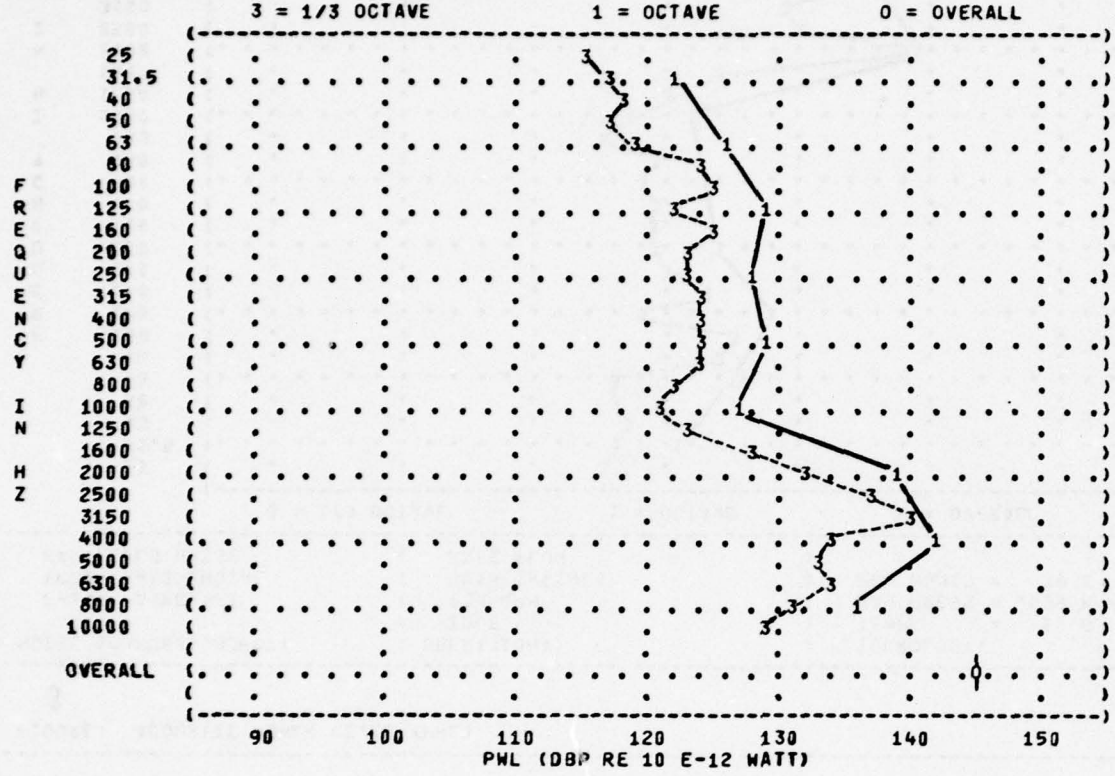
FIGURE: 3 ACOUSTIC POWER LEVEL (PWL)

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	115.2	
31.5	117.3	122.0
40	118.5	
50	116.8	
63	118.5	125.6
80	123.8	
100	125.0	
125	121.9	128.8
160	124.6	
200	122.8	
250	123.0	128.1
315	124.0	
400	124.0	
500	123.6	128.8
630	124.4	
800	122.2	
1000	121.5	127.0
1250	122.9	
1600	128.4	
2000	131.8	138.6
2500	137.0	
3150	140.1	
4000	134.1	141.7
5000	133.1	
6300	133.5	
8000	131.1	136.4
10000	129.2	
OVERALL		144.7

FIGURE: ACOUSTIC POWER LEVEL (PWL)

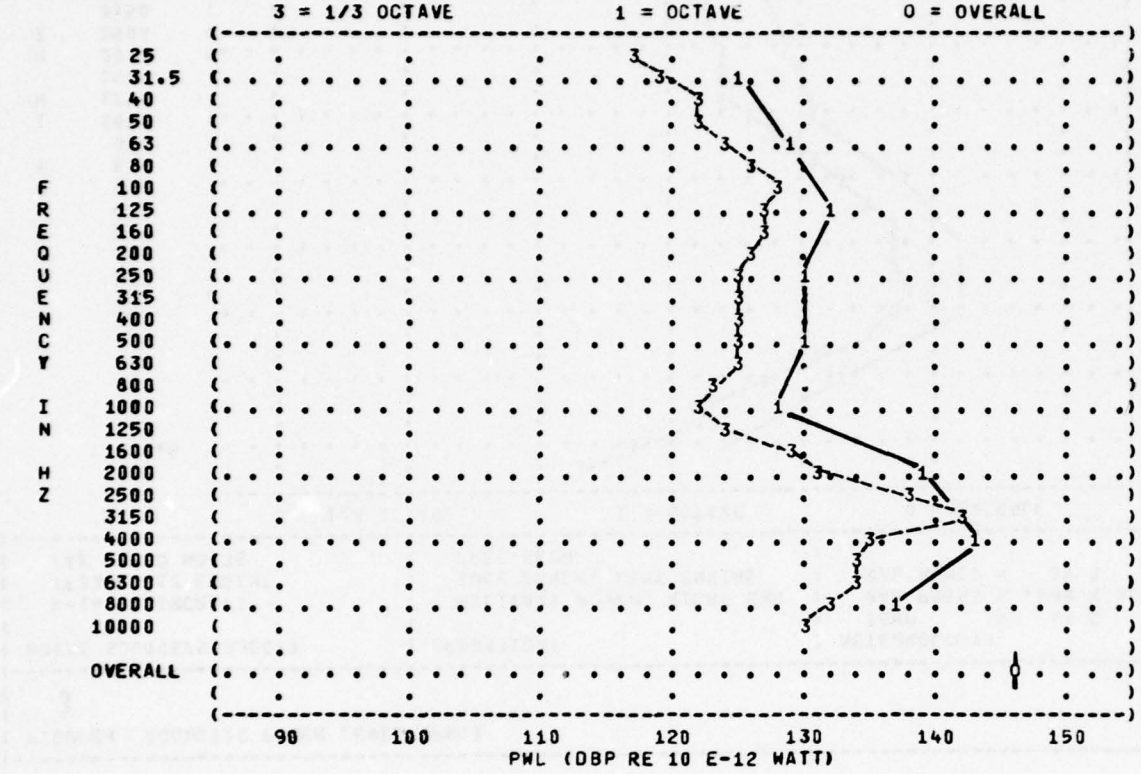
3

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 3



	PWL	
	1/3 OCTAVE	OCTAVE
25	116.7	
31.5	119.4	124.9
40	122.5	
50	122.1	
63	124.1	129.2
80	126.2	
100	128.5	
125	127.1	132.4
160	127.3	
200	125.9	
250	125.4	130.3
315	125.4	
400	125.3	
500	124.7	129.7
630	124.8	
800	122.9	
1000	122.3	128.0
1250	124.1	
1600	129.2	
2000	131.0	139.0
2500	137.7	
3150	141.8	
4000	135.3	143.2
5000	134.1	
6300	134.5	
8000	132.0	137.3
10000	130.1	
OVERALL		146.0

FIGURE: ACOUSTIC POWER LEVEL (PWL)

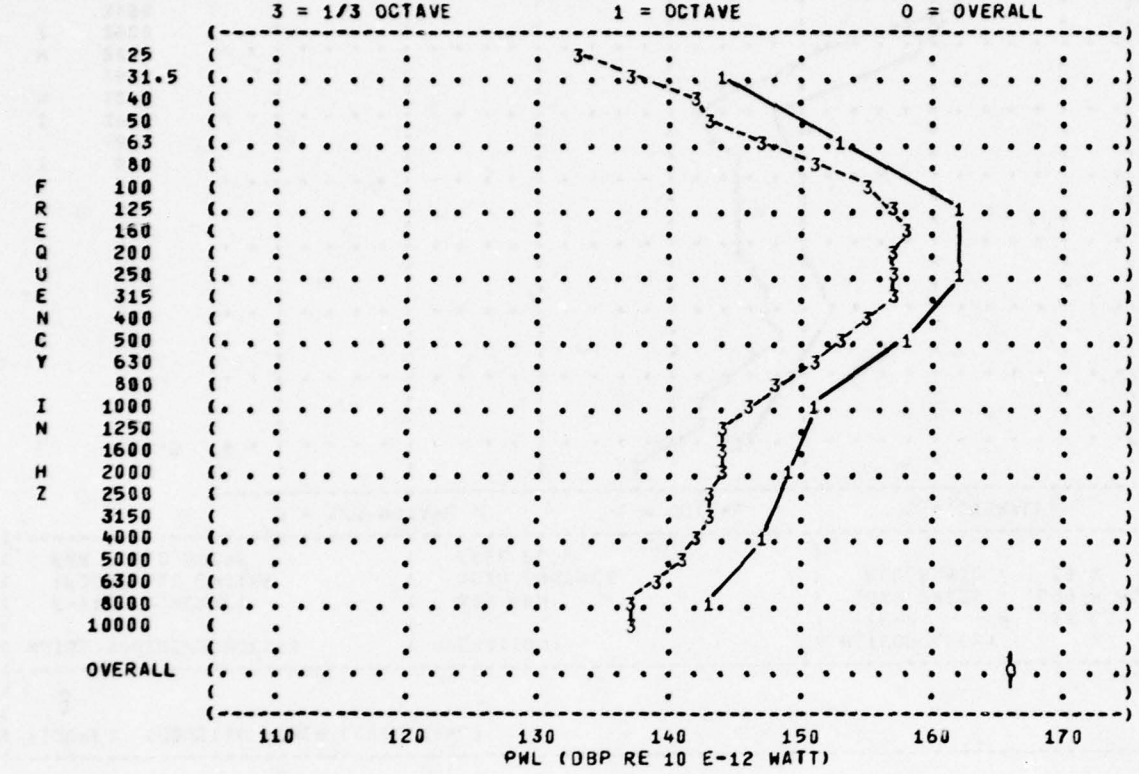
3

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 3



PWL	1/3 OCTAVE	OCTAVE
	133.1	
	137.1	143.9
	142.4	
	143.5	
	147.0	152.7
	150.6	
	155.2	
	157.2	161.9
	158.3	
	157.0	
	157.0	161.7
	156.9	
	154.9	
	153.2	158.1
	151.2	
	148.4	
	146.1	151.3
	143.9	
	144.0	
	144.0	148.6
	143.4	
	143.1	
	142.2	146.9
	140.8	
	139.1	
	137.4	142.6
	136.7	
	166.2	

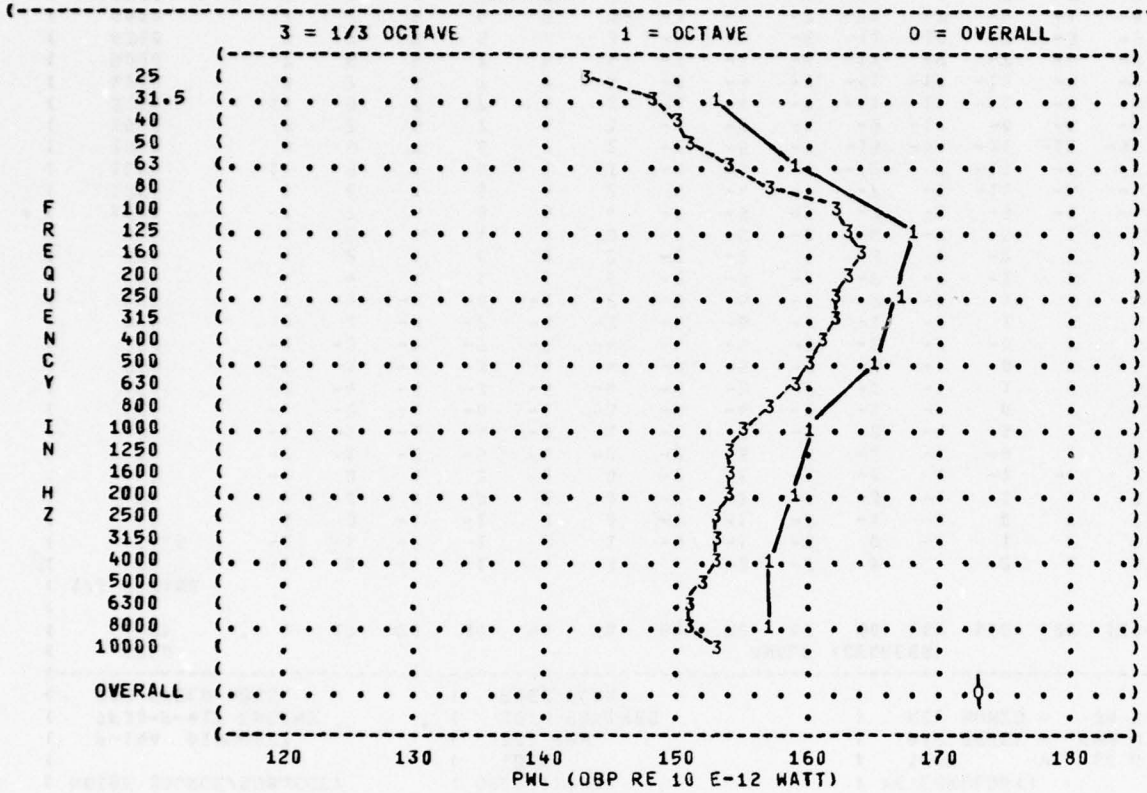
FIGURE: 3 ACOUSTIC POWER LEVEL (PWL)

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-082-028
RUN 05
07 MAY 75
PAGE 3



	PWL 1/3 OCTAVE	PWL OCTAVE
25	142.8	
31.5	147.6	152.6
40	150.2	
50	151.0	
63	154.4	159.4
80	156.7	
100	161.6	
125	163.1	167.8
160	164.1	
200	162.9	
250	161.6	167.0
315	161.9	
400	160.9	
500	159.7	164.6
630	158.8	
800	156.9	
1000	155.2	160.3
1250	153.9	
1600	154.4	
2000	153.7	158.6
2500	153.2	
3150	153.0	
4000	152.6	157.4
5000	152.2	
6300	151.3	
8000	151.2	156.5
10000	152.6	
OVERALL	172.5	

TABLE: DIRECTIVITY INDEX (DB)

3

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 4

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

TABLE: DIRECTIVITY INDEX (DB)

3

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 4

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

TABLE: DIRECTIVITY INDEX (DB) 3

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 4

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

TABLE: 3 DIRECTIVITY INDEX (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 4

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

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	-14	-13	-11	-13	-13	-13	-11	-10	-8	-7	-7	-7	-2	3	6	9	9		
31.5	-12	-12	-13	-14	-12	-11	-12	-10	-10	-10	-8	-8	-3	3	7	9	6		
40	-17	-17	-18	-17	-16	-15	-15	-12	-11	-11	-9	-8	-5	1	7	10	4		
50	-17	-18	-18	-18	-16	-16	-16	-14	-13	-12	-11	-9	-3	3	8	9	4		
63	-21	-20	-19	-19	-18	-18	-16	-15	-14	-12	-10	-7	-1	4	9	9	1		
80	-21	-21	-20	-21	-20	-19	-18	-17	-16	-13	-11	-9	-3	4	9	8	-0		
100	-21	-20	-20	-20	-19	-19	-19	-18	-16	-14	-13	-10	-4	5	9	8	-4		
125	-22	-22	-21	-20	-21	-21	-19	-19	-17	-15	-13	-10	-5	4	10	8	-7		
160	-20	-20	-19	-20	-21	-20	-19	-19	-17	-15	-12	-9	-4	2	10	8	-8		
200	-18	-17	-16	-18	-18	-18	-17	-15	-15	-13	-10	-7	-1	4	8	10	-5		
250	-18	-17	-16	-18	-17	-17	-16	-15	-15	-12	-9	-6	0	6	6	9	-9		
315	-15	-16	-18	-17	-17	-17	-16	-15	-14	-12	-9	-5	-1	7	9	6	-11		
400	-14	-15	-16	-15	-14	-15	-14	-13	-13	-11	-7	-4	1	5	9	5	-12		
500	-15	-14	-13	-12	-12	-13	-13	-11	-11	-9	-5	-2	2	6	7	6	-16		
630	-14	-13	-11	-10	-11	-10	-10	-9	-9	-7	-3	-1	3	6	7	4	-20		
800	-14	-12	-9	-8	-8	-7	-9	-8	-6	-5	-2	1	3	6	7	2	-20		
1000	-12	-10	-7	-6	-6	-6	-7	-6	-5	-3	-1	1	3	5	7	1	-21		
1250	-11	-9	-6	-6	-6	-5	-5	-4	-3	-2	-1	0	2	5	6	2	-19		
1600	-10	-9	-6	-6	-5	-5	-6	-3	-4	-2	0	0	2	5	5	4	-21		
2000	-2	-3	-5	-6	-6	-6	-6	-4	-5	-2	0	2	3	5	4	3	-24		
2500	-9	-9	-8	-7	-6	-6	-7	-4	-6	-2	1	3	4	4	4	1	-23		
3150	-10	-9	-8	-8	-6	-7	-6	-4	-6	-2	1	4	4	4	4	0	-23		
4000	-9	-8	-7	-6	-6	-6	-5	-4	-5	-2	1	3	3	4	4	1	-23		
5000	-10	-9	-7	-6	-5	-5	-5	-3	-3	-0	2	3	3	3	4	2	-22		
6300	-10	-9	-8	-8	-7	-7	-6	-4	-4	-1	1	3	3	3	4	2	-22		
8000	-11	-10	-8	-7	-6	-6	-6	-4	-4	-1	1	3	3	3	4	3	-19		
10000	-13	-12	-10	-9	-8	-8	-7	-6	-5	-2	-0	3	3	4	6	3	-16		
OCTAVE																			
31.5	-15	-15	-15	-15	-15	-14	-13	-11	-10	-10	-8	-8	-4	2	7	10	5		
63	-20	-20	-20	-20	-19	-18	-17	-16	-15	-13	-11	-9	-2	4	9	8	1		
125	-21	-21	-20	-20	-20	-20	-19	-19	-17	-15	-13	-9	-4	4	10	8	-6		
250	-17	-17	-16	-18	-17	-17	-16	-15	-15	-12	-10	-6	-1	6	8	9	-8		
500	-15	-14	-14	-13	-13	-13	-13	-12	-11	-9	-5	-2	2	6	8	5	-14		
1000	-12	-11	-8	-7	-7	-6	-7	-6	-5	-4	-2	1	3	5	7	2	-20		
2000	-5	-6	-6	-6	-6	-5	-6	-4	-5	-2	1	2	3	5	5	3	-22		
4000	-10	-9	-7	-7	-6	-6	-5	-4	-5	-2	1	3	3	4	4	1	-23		
8000	-11	-10	-8	-8	-7	-7	-6	-4	-4	-1	1	3	3	3	4	2	-20		
OVERALL	-16	-16	-15	-15	-15	-15	-15	-13	-13	-11	-8	-5	-1	5	9	8	-6		

TABLE: DIRECTIVITY INDEX (DB)

3

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

METEOROLOGY:
TEMP = 18 C
BAR PRESS = .699 M HG
REL HUMID = 39 %

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 4

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
1/3 OCTAVE																			
25	-13	-13	-13	-12	-13	-11	-9	-9	-10	-9	-8	-5	-1	5	7	7	5		
31.5	-14	-14	-16	-13	-13	-13	-10	-11	-10	-9	-6	-5	-0	6	8	7	-0		
40	-15	-15	-16	-14	-14	-13	-13	-12	-12	-11	-9	-6	1	6	8	6	-0		
50	-16	-18	-16	-14	-15	-15	-14	-11	-13	-12	-8	-5	-0	7	8	7	-2		
63	-20	-18	-17	-17	-15	-15	-14	-14	-13	-12	-11	-6	1	7	8	4	-3		
80	-20	-18	-16	-18	-17	-16	-14	-14	-14	-12	-9	-5	3	8	7	4	-4		
100	-21	-20	-19	-19	-18	-18	-17	-17	-15	-13	-12	-6	2	9	6	3	-7		
125	-21	-19	-19	-19	-19	-19	-17	-17	-16	-13	-10	-5	3	9	6	3	-9		
160	-21	-19	-19	-19	-19	-18	-17	-16	-14	-13	-9	-5	1	9	7	4	-9		
200	-18	-17	-16	-18	-18	-17	-16	-14	-12	-11	-8	-3	2	7	8	5	-9		
250	-20	-17	-17	-17	-16	-16	-14	-14	-11	-10	-6	-1	3	6	7	5	-10		
315	-20	-17	-17	-16	-15	-15	-14	-13	-11	-9	-5	-1	3	8	6	2	-12		
400	-20	-17	-16	-15	-14	-14	-13	-11	-10	-7	-4	1	4	7	5	0	-16		
500	-19	-16	-14	-13	-13	-12	-11	-11	-8	-6	-3	2	5	7	5	-1	-18		
630	-18	-15	-12	-11	-11	-11	-10	-9	-7	-5	-1	2	4	7	4	-3	-20		
800	-17	-14	-11	-10	-9	-9	-8	-7	-6	-3	1	2	4	7	3	-5	-21		
1000	-17	-14	-10	-10	-8	-8	-7	-6	-4	-2	1	2	4	7	2	-5	-21		
1250	-16	-14	-9	-9	-8	-7	-6	-4	-3	-2	1	2	3	6	3	-4	-21		
1600	-16	-15	-10	-9	-9	-7	-6	-5	-4	-4	1	4	3	6	3	-3	-21		
2000	-7	-11	-10	-10	-9	-7	-6	-6	-4	-3	2	4	4	6	3	-4	-21		
2500	-15	-15	-11	-11	-9	-7	-7	-6	-3	-1	2	4	4	5	2	-4	-21		
3150	-15	-16	-11	-11	-9	-7	-6	-6	-2	-0	2	4	4	5	1	-5	-21		
4000	-14	-17	-12	-11	-9	-7	-6	-6	-3	-1	2	3	3	5	2	-5	-22		
5000	-16	-17	-12	-12	-9	-7	-6	-6	-3	-1	2	3	4	6	2	-5	-22		
6300	-16	-18	-14	-13	-10	-8	-7	-7	-4	-2	1	3	4	6	2	-6	-24		
8000	-20	-21	-16	-15	-13	-10	-8	-8	-5	-3	2	2	5	6	3	-6	-25		
10000	-24	-24	-19	-18	-15	-12	-11	-10	-7	-5	2	2	5	7	3	-6	-27		
OCTAVE																			
31.5	-14	-15	-15	-14	-13	-13	-11	-11	-11	-10	-8	-5	1	6	8	6	1		
63	-19	-18	-16	-17	-16	-16	-14	-13	-14	-12	-10	-5	2	7	8	5	-3		
125	-21	-19	-19	-19	-19	-18	-17	-17	-15	-13	-10	-6	2	9	6	3	-8		
250	-19	-17	-16	-17	-16	-16	-15	-14	-12	-10	-6	-1	3	7	7	4	-10		
500	-19	-16	-14	-13	-13	-12	-11	-10	-8	-6	-2	2	5	7	5	-1	-17		
1000	-17	-14	-10	-10	-9	-8	-7	-6	-5	-2	1	2	4	7	3	-5	-21		
2000	-11	-13	-10	-10	-9	-7	-6	-6	-4	-3	1	4	4	6	2	-4	-21		
4000	-15	-17	-12	-11	-9	-7	-6	-6	-3	-1	2	3	4	5	2	-5	-22		
8000	-18	-20	-15	-15	-12	-9	-8	-8	-5	-3	1	3	4	6	3	-6	-25		
OVERALL	-18	-17	-15	-15	-14	-13	-12	-12	-10	-8	-4	-1	3	8	6	3	-9		

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

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 13

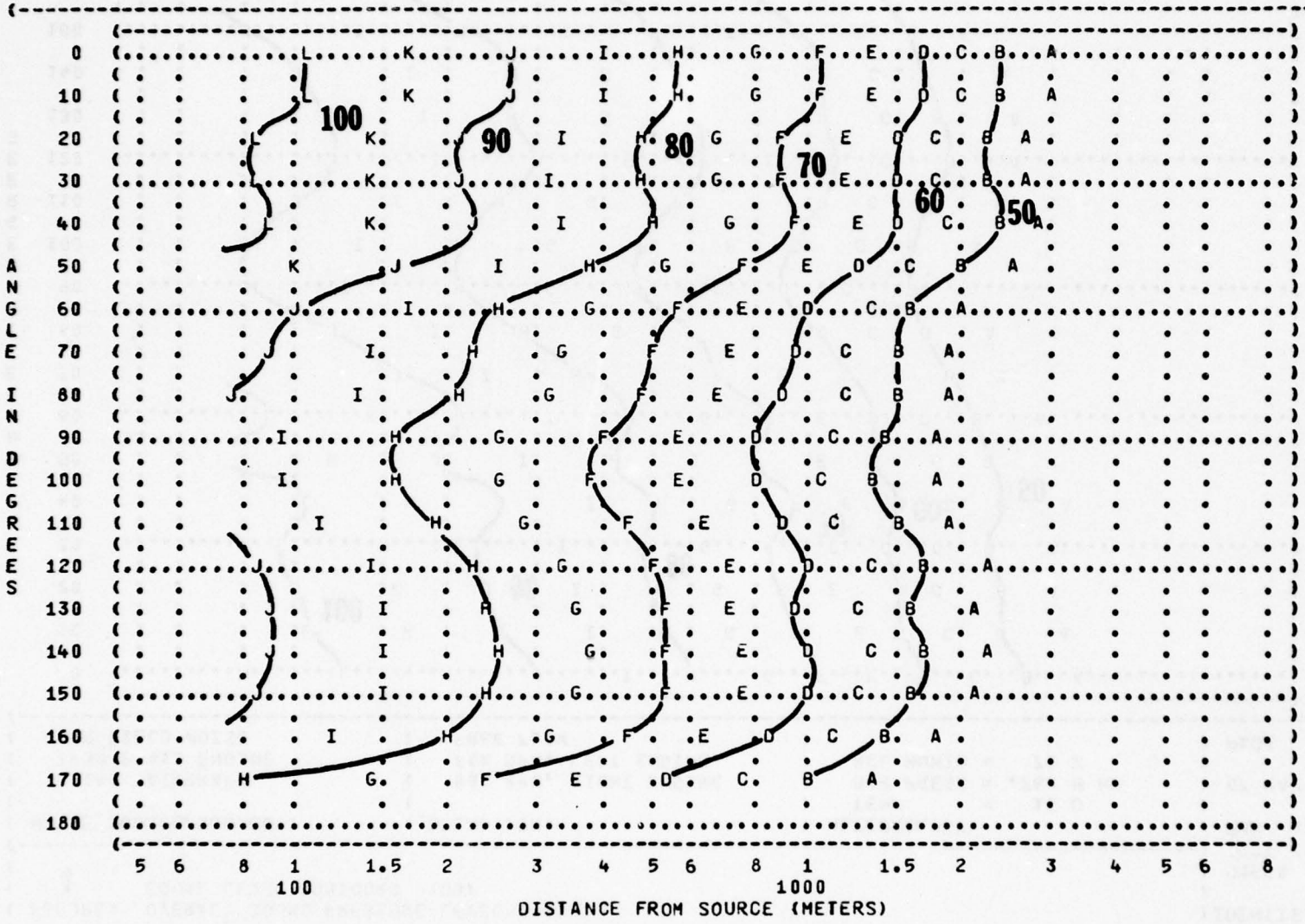


FIGURE 4: OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:

OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 13

NOISE SOURCE/SUBJECT:

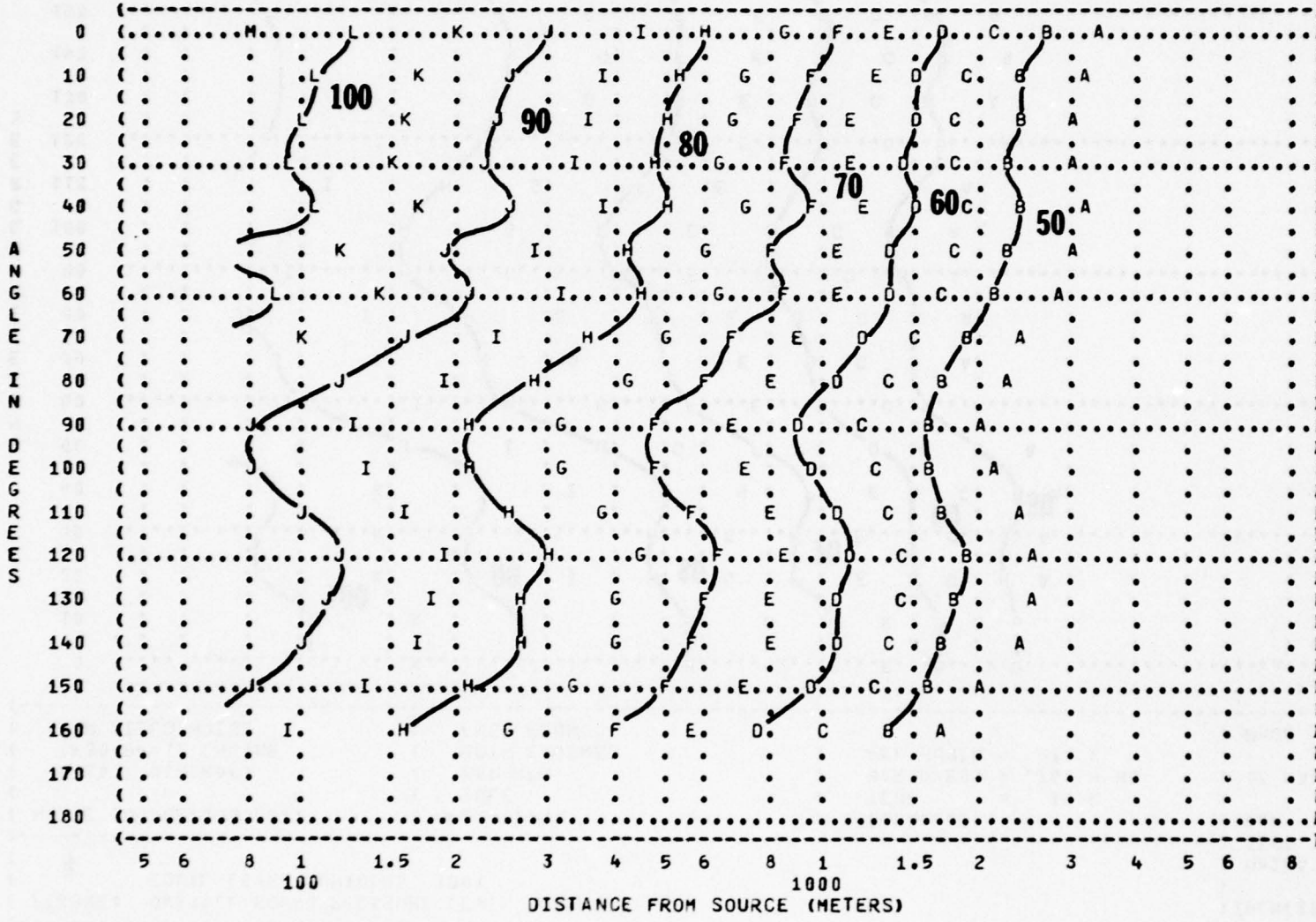
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:

80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 13

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

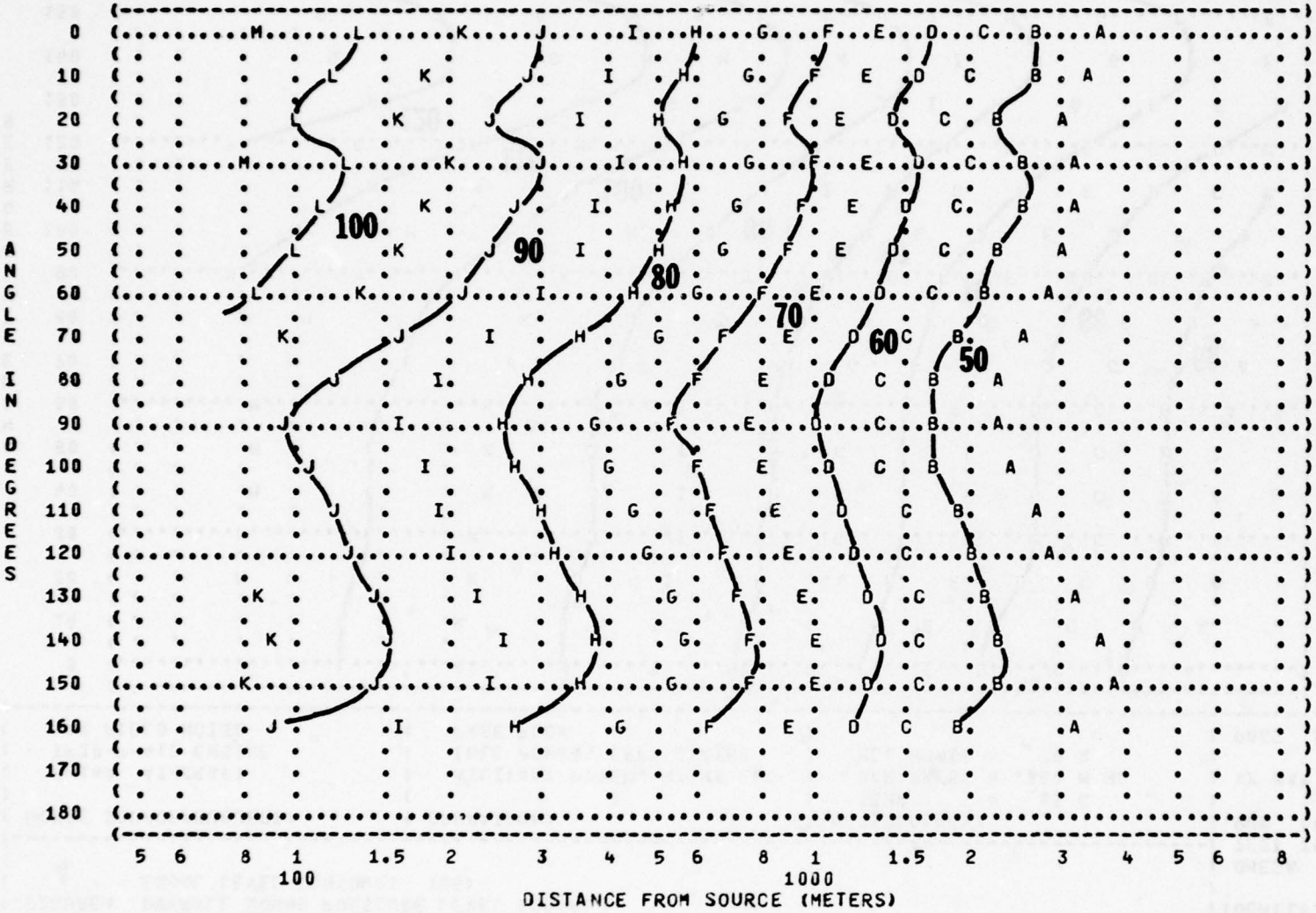


FIGURE 4: OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 13

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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
P	120
Q	125

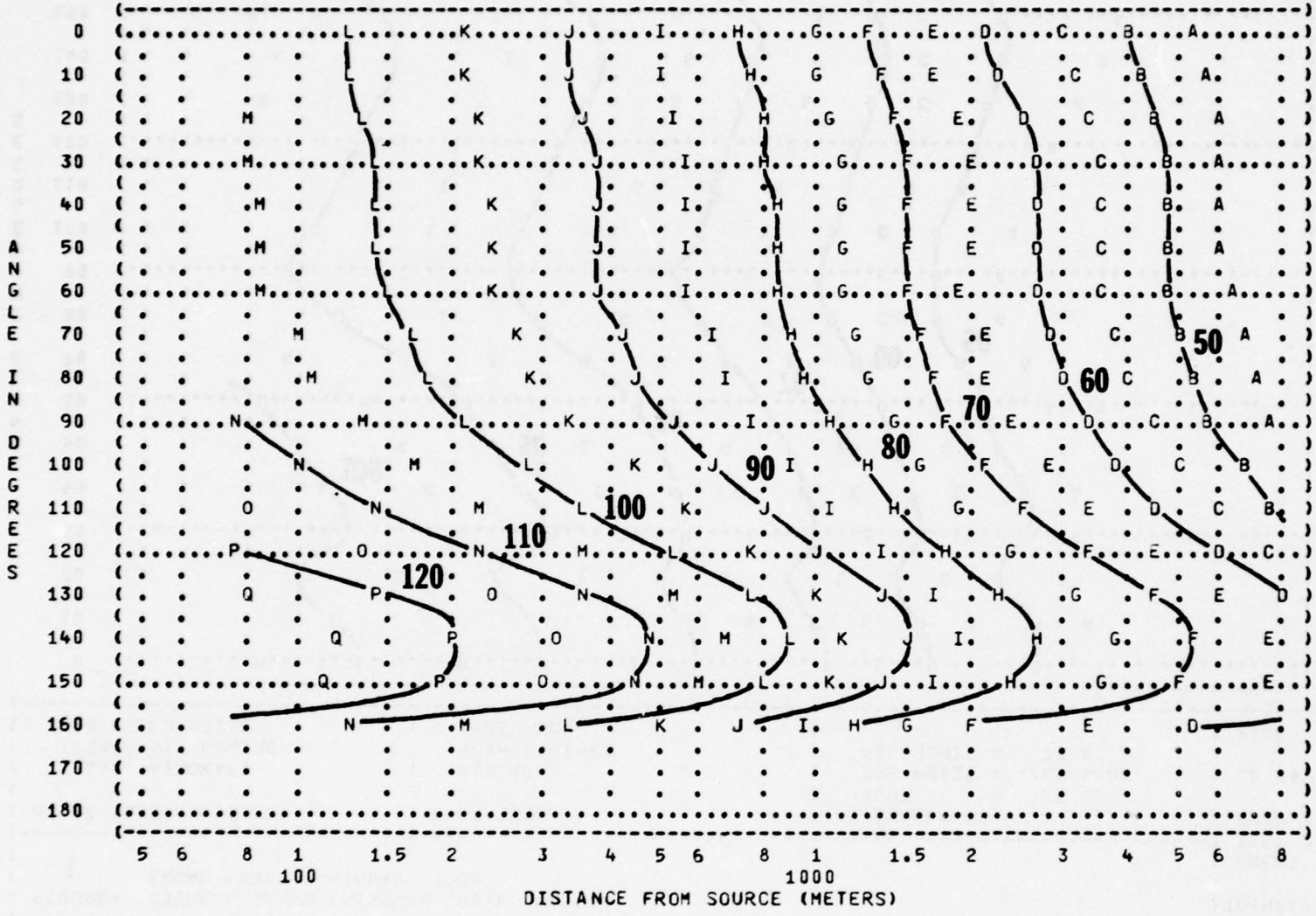


FIGURE 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 13

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

POINT	DB
A	50
B	55
C	60
D	65
E	70
F	75
G	80
H	85
I	90
J	95
K	100
L	105
M	110
N	115
O	120
P	125
Q	130

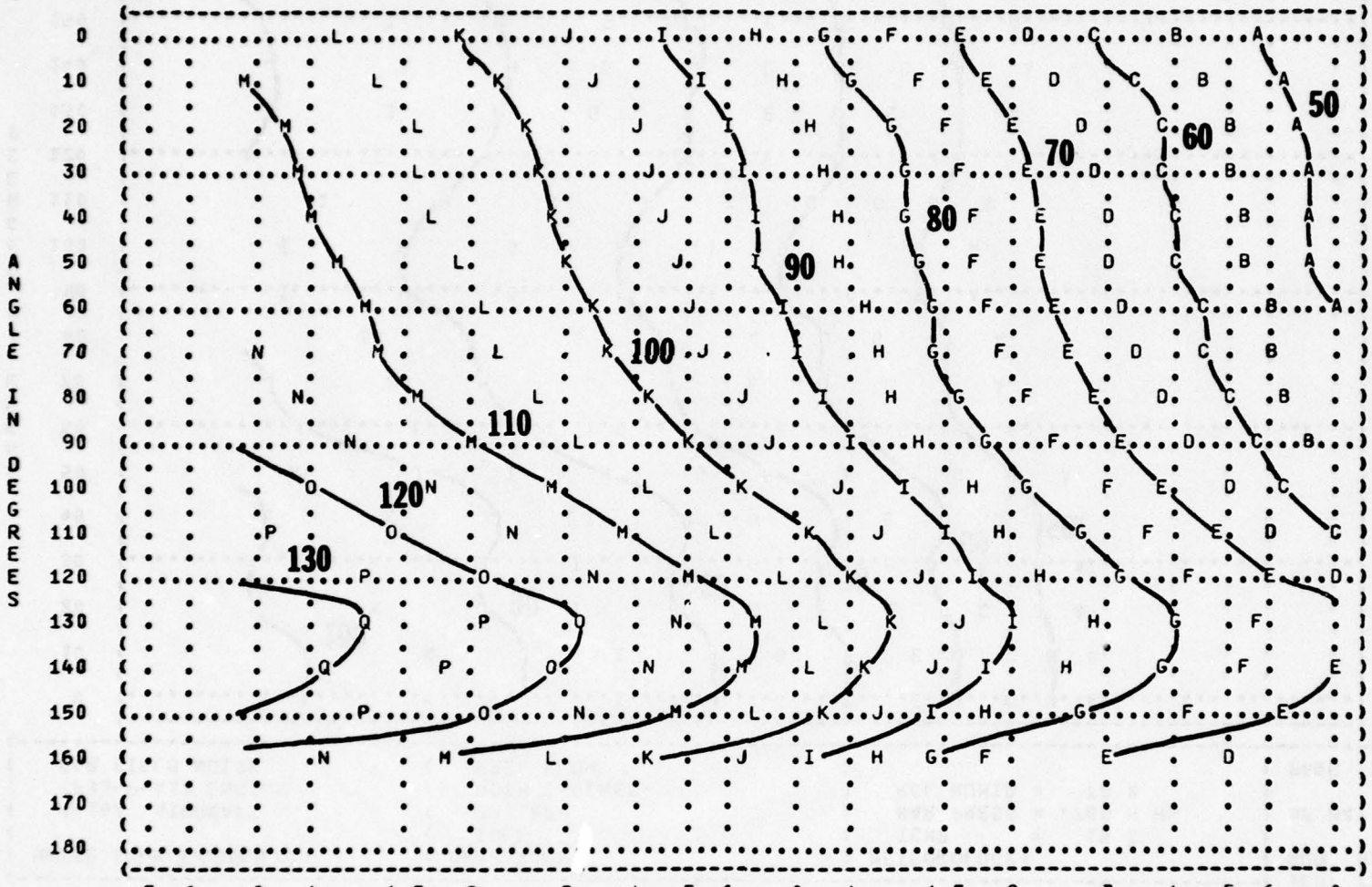


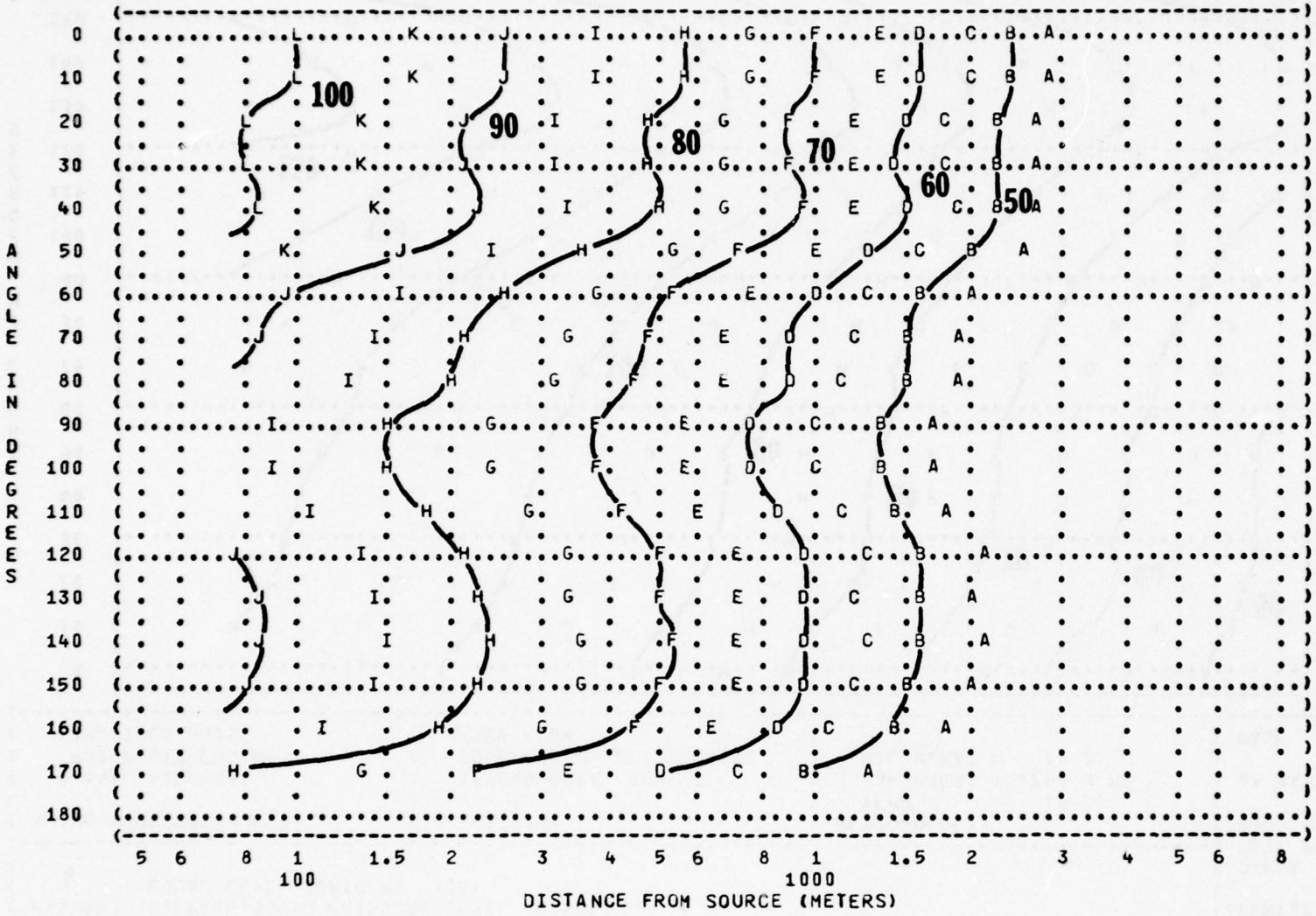
FIGURE 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 14



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

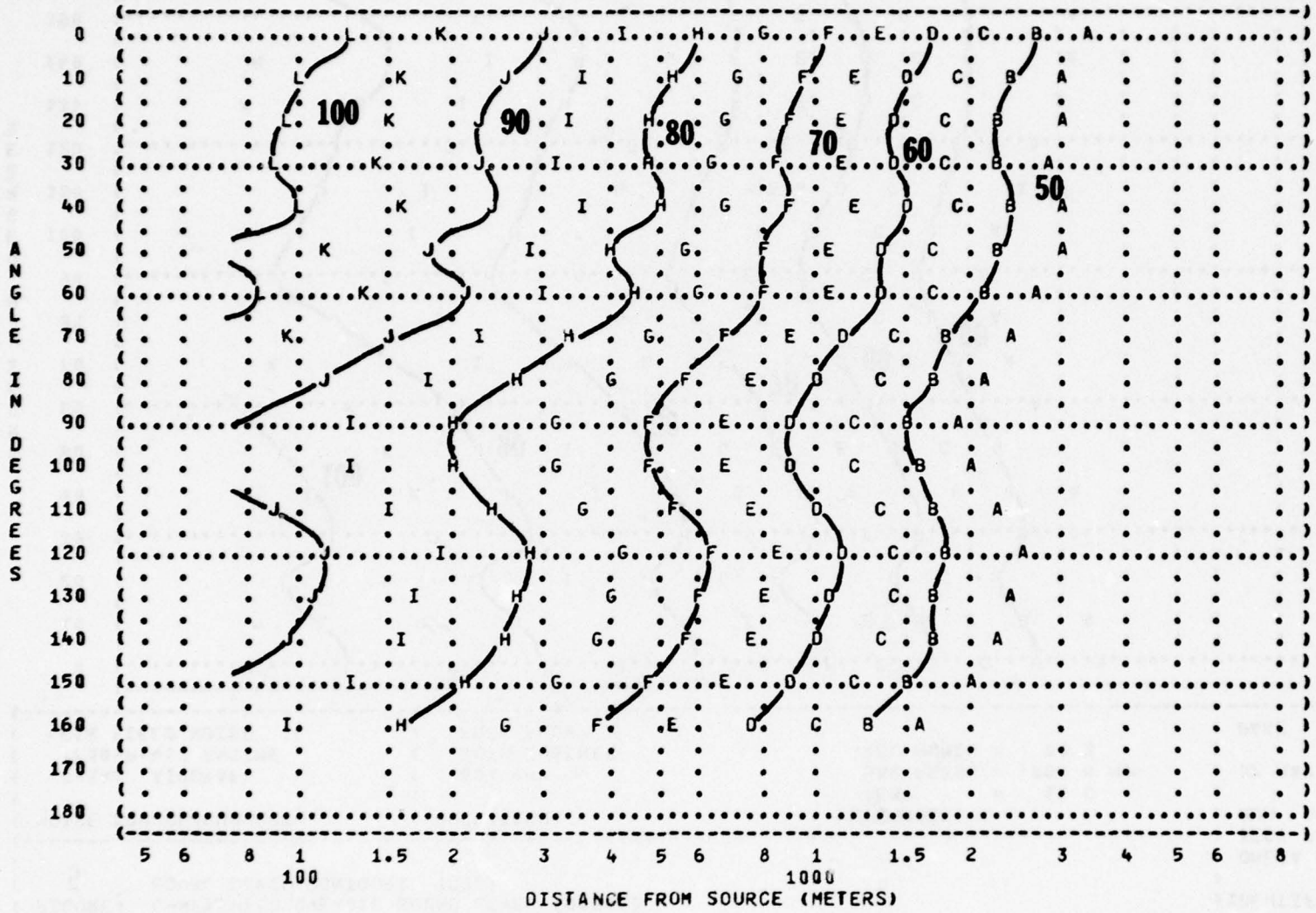
FIGURE: 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 14

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

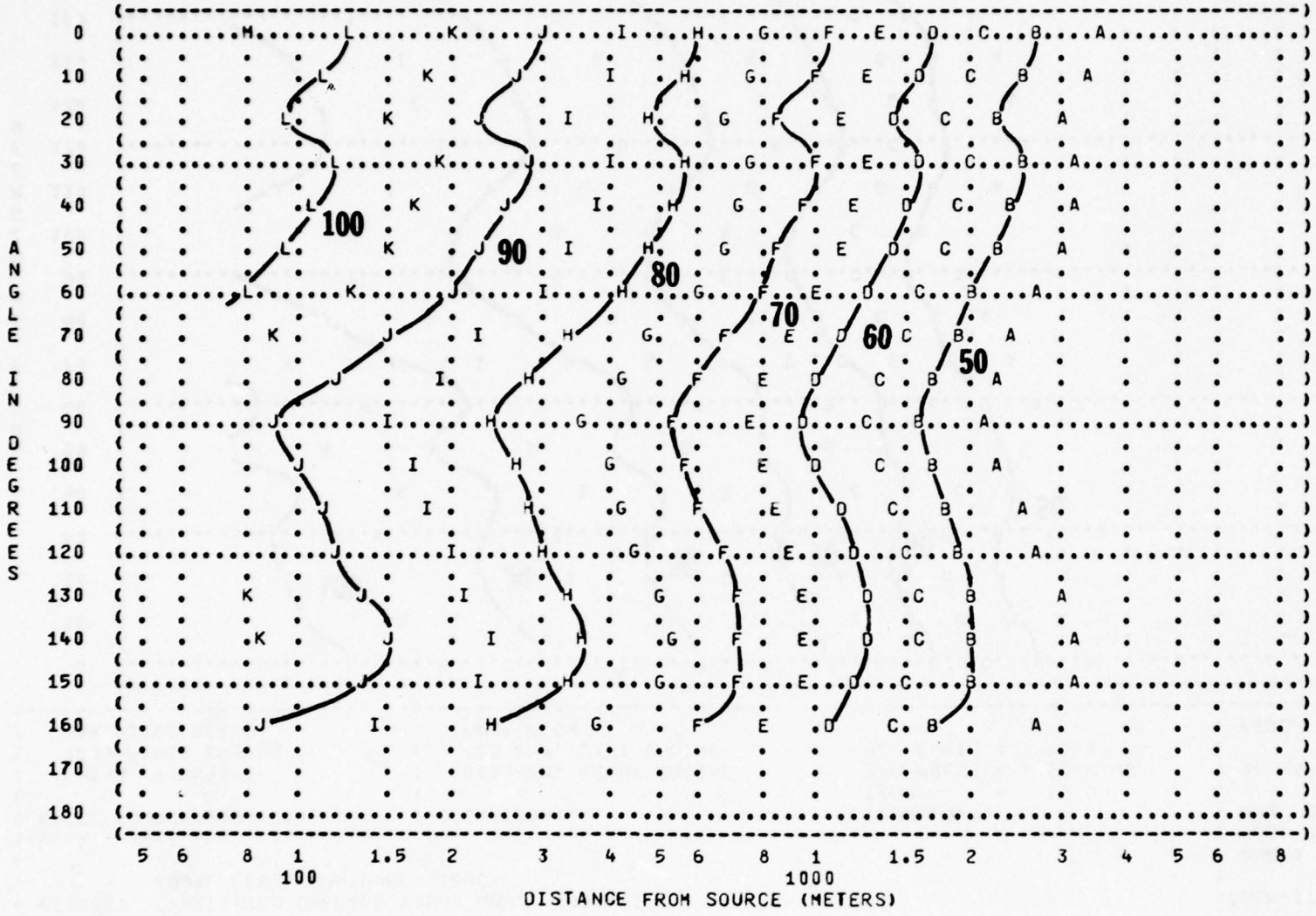
FIGURE 5: C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 14

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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



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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 14

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95
L	100
M	105
N	110
O	115
P	120
Q	125

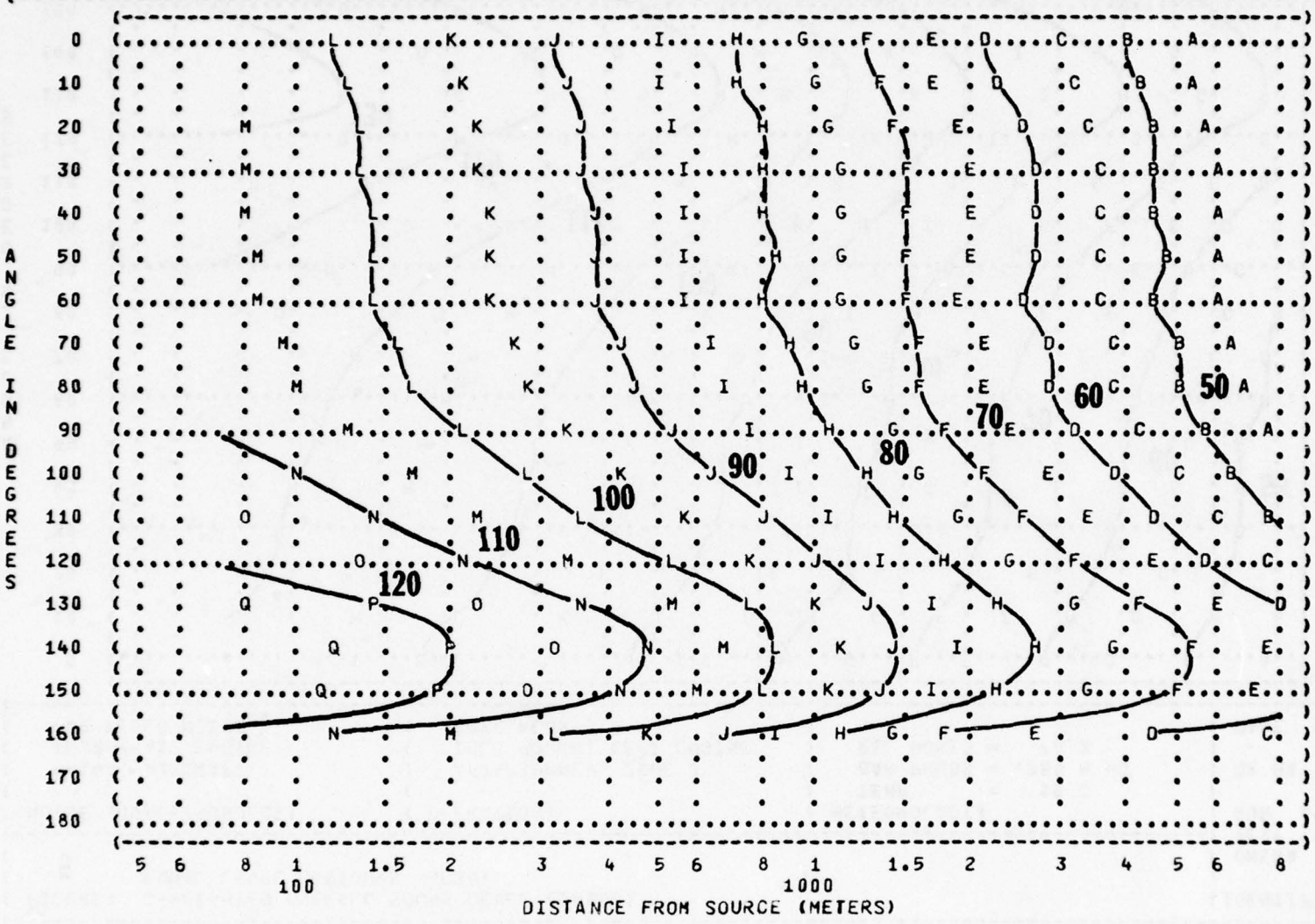


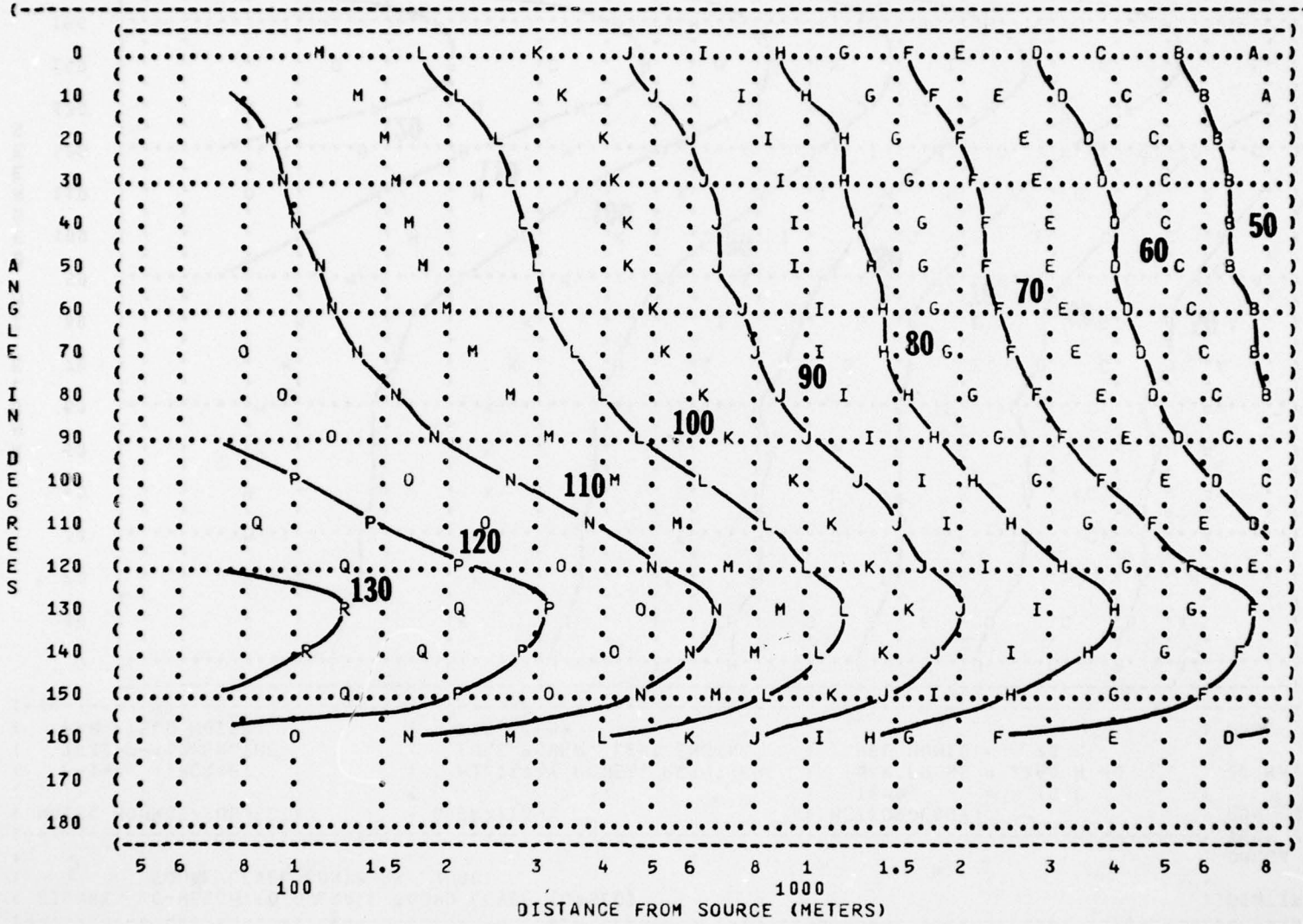
FIGURE: 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 14



POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95
L	100
M	105
N	110
O	115
P	120
Q	125
R	130

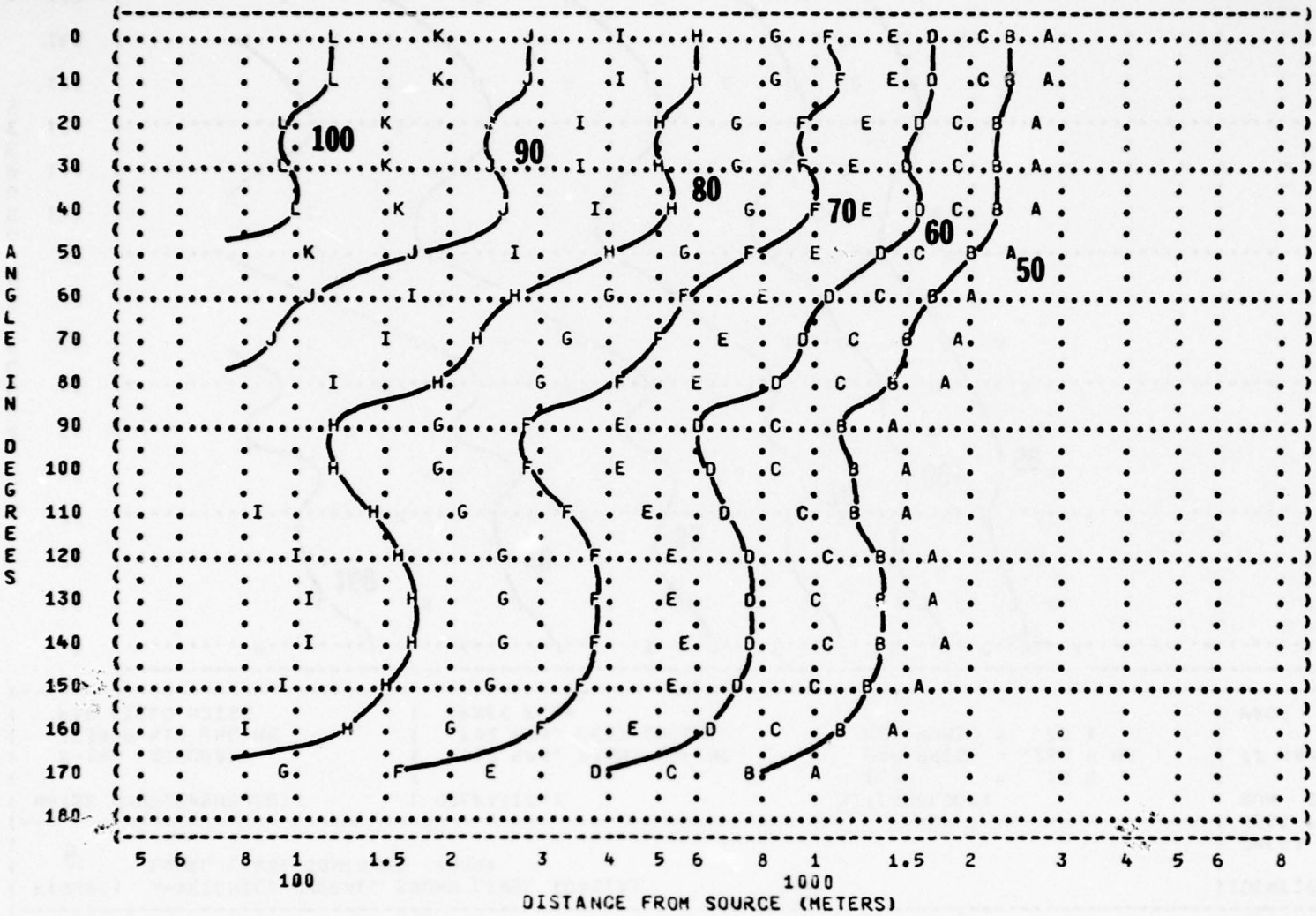
FIGURE: 6 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 15

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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



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

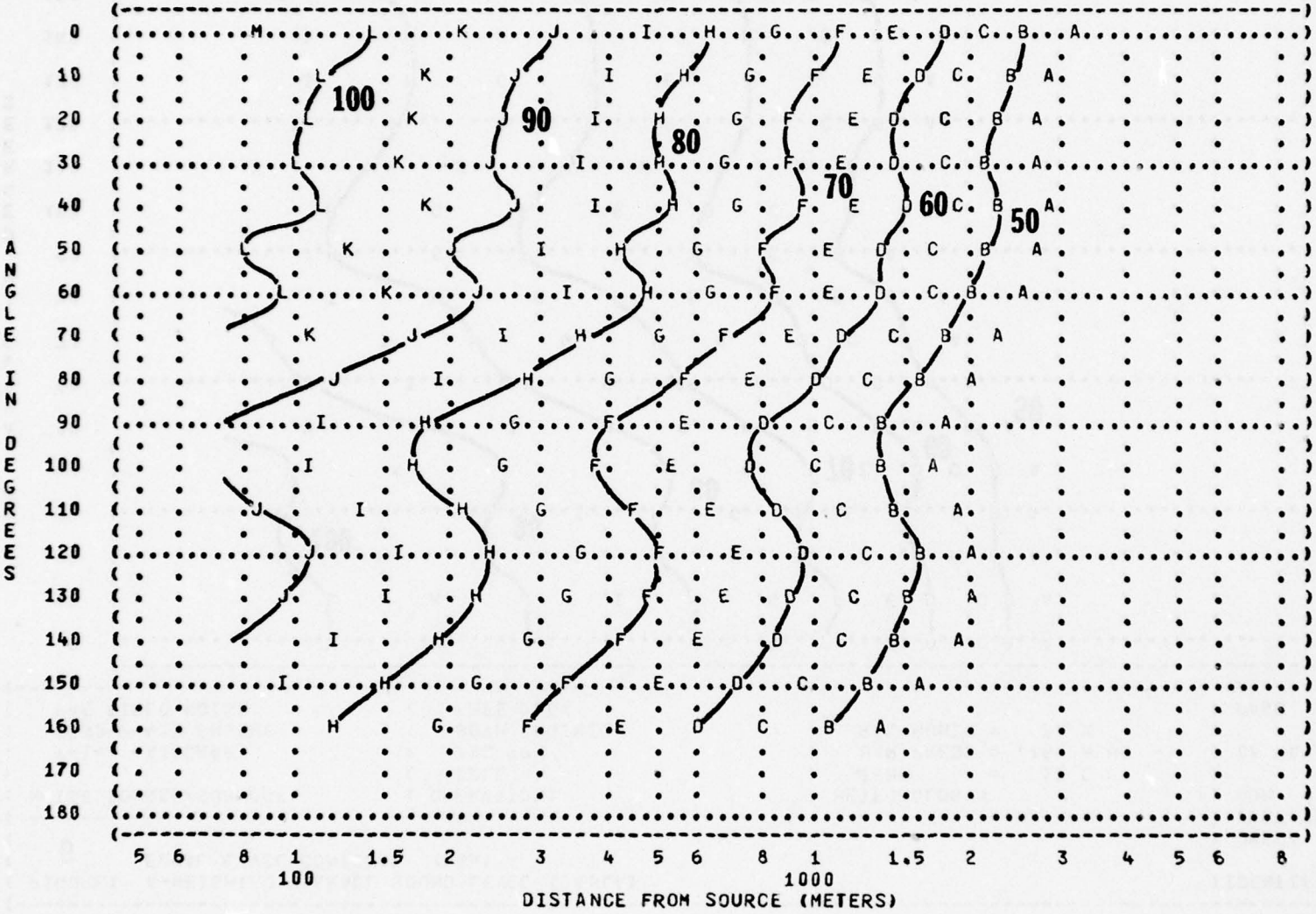
FIGURE: 6 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 15

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

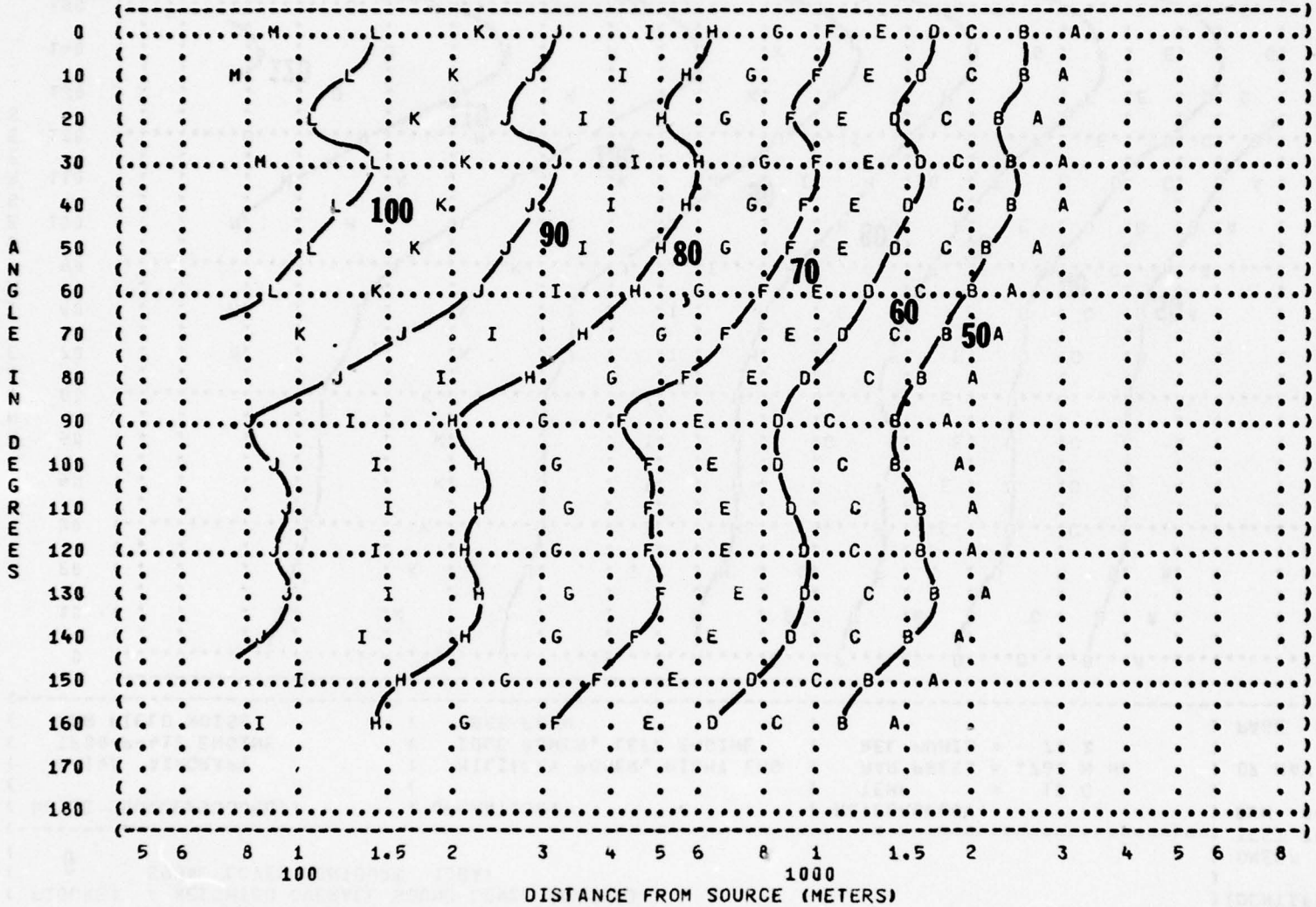
FIGURE: 6 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 15

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

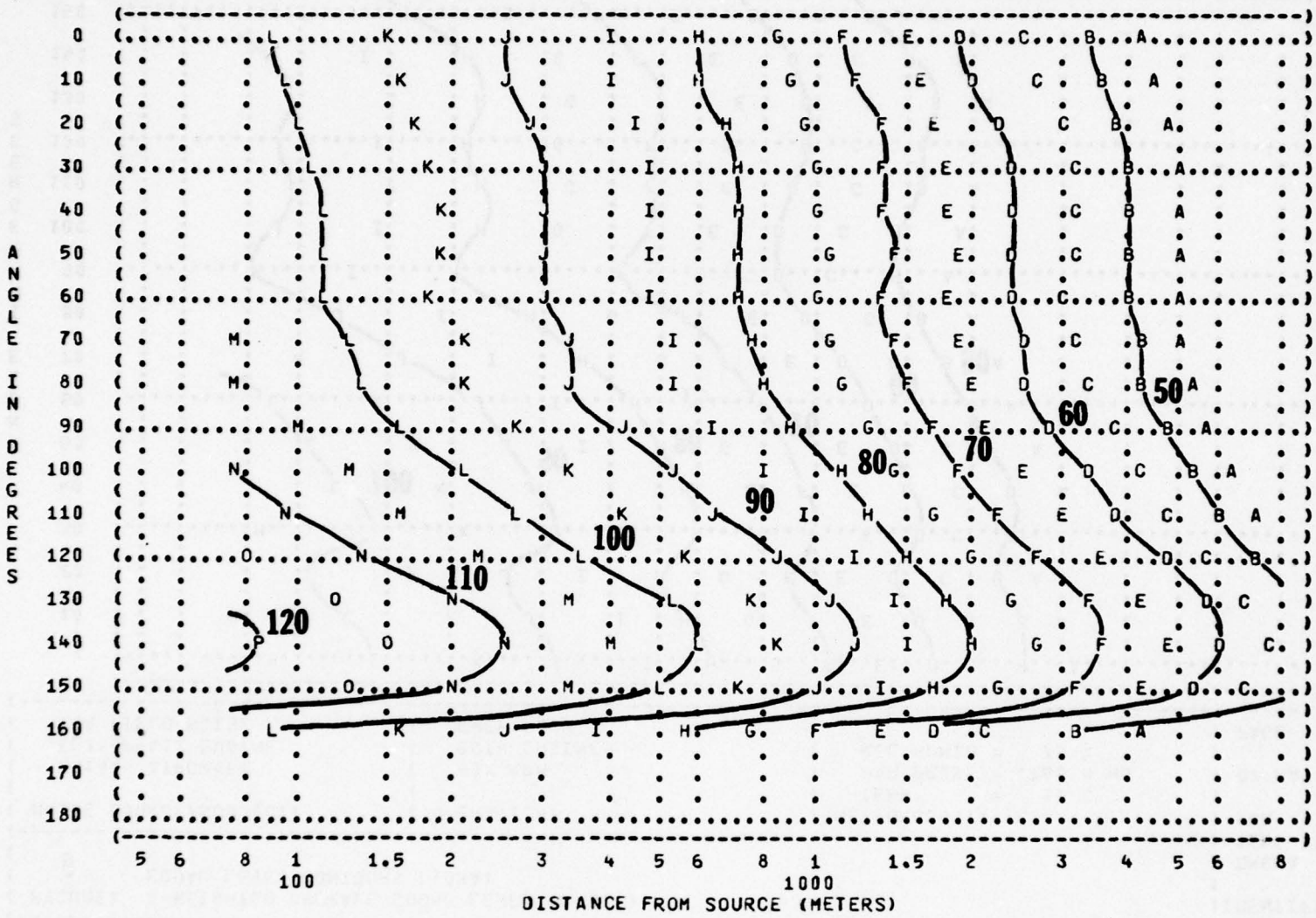
FIGURE 6: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 15

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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
P	120

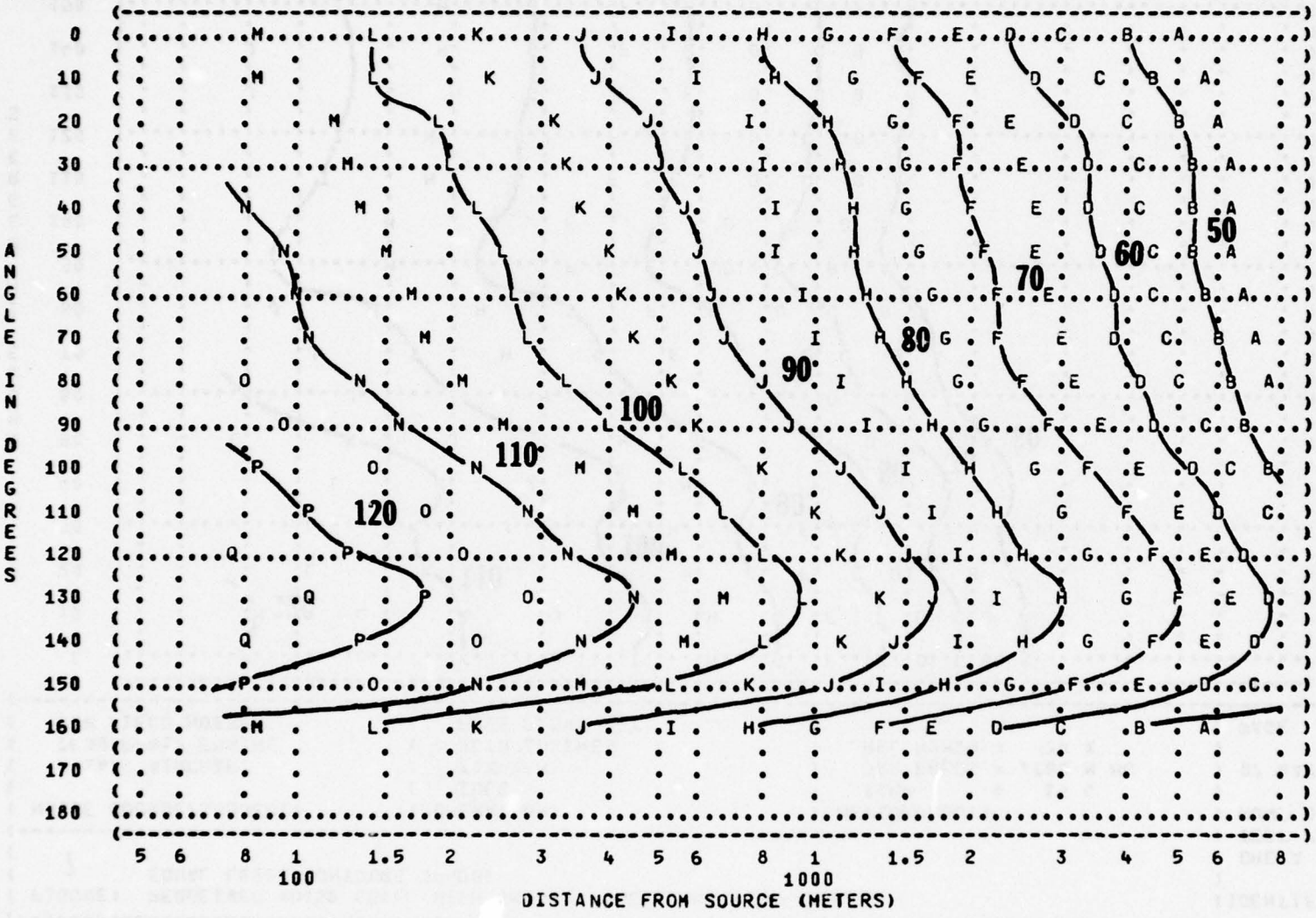
FIGURE: 6 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 15

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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
P	120
Q	125

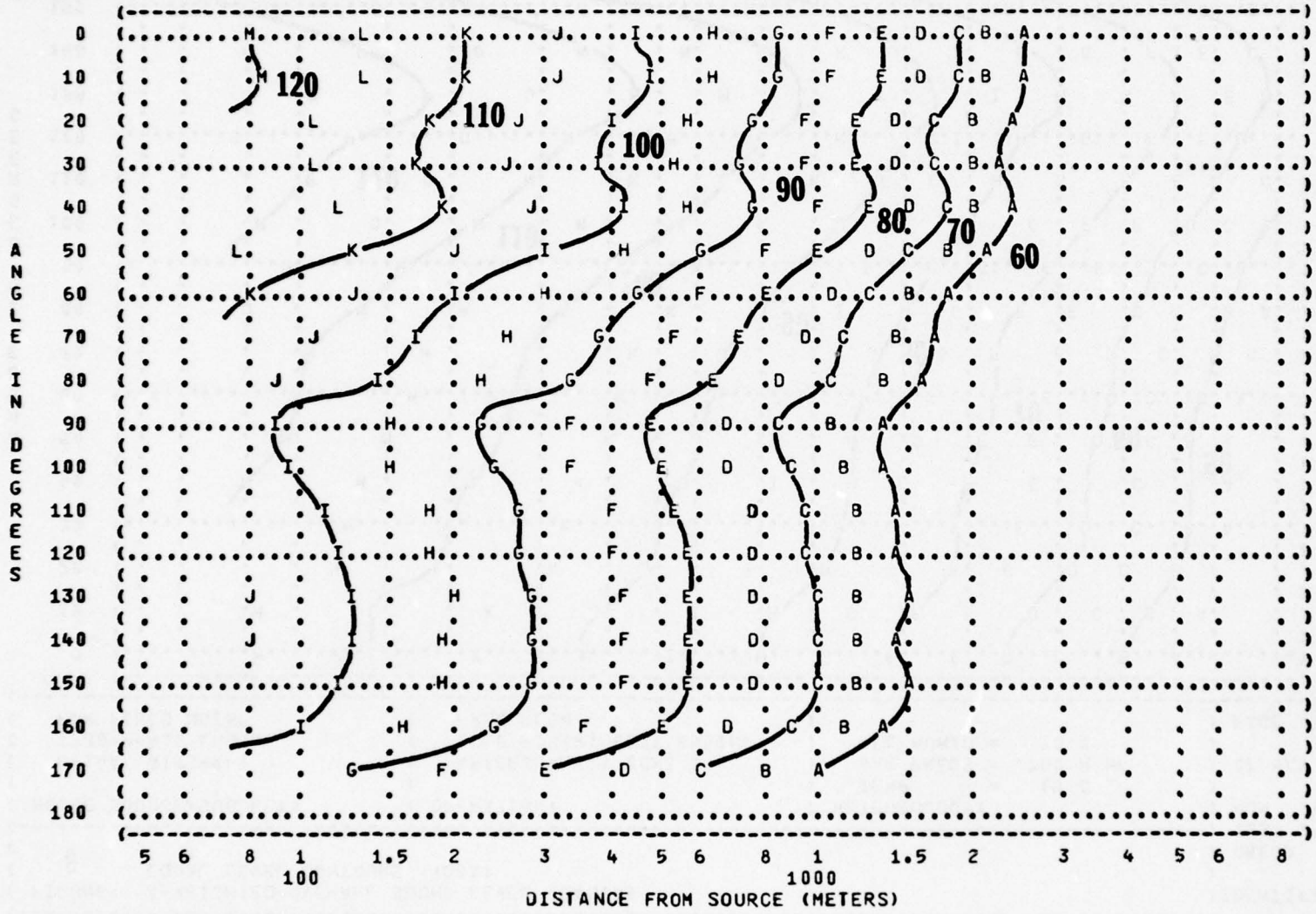
FIGURE 7: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 16

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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 75-002-028
RUN 02
07 MAY 75
PAGE 16

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

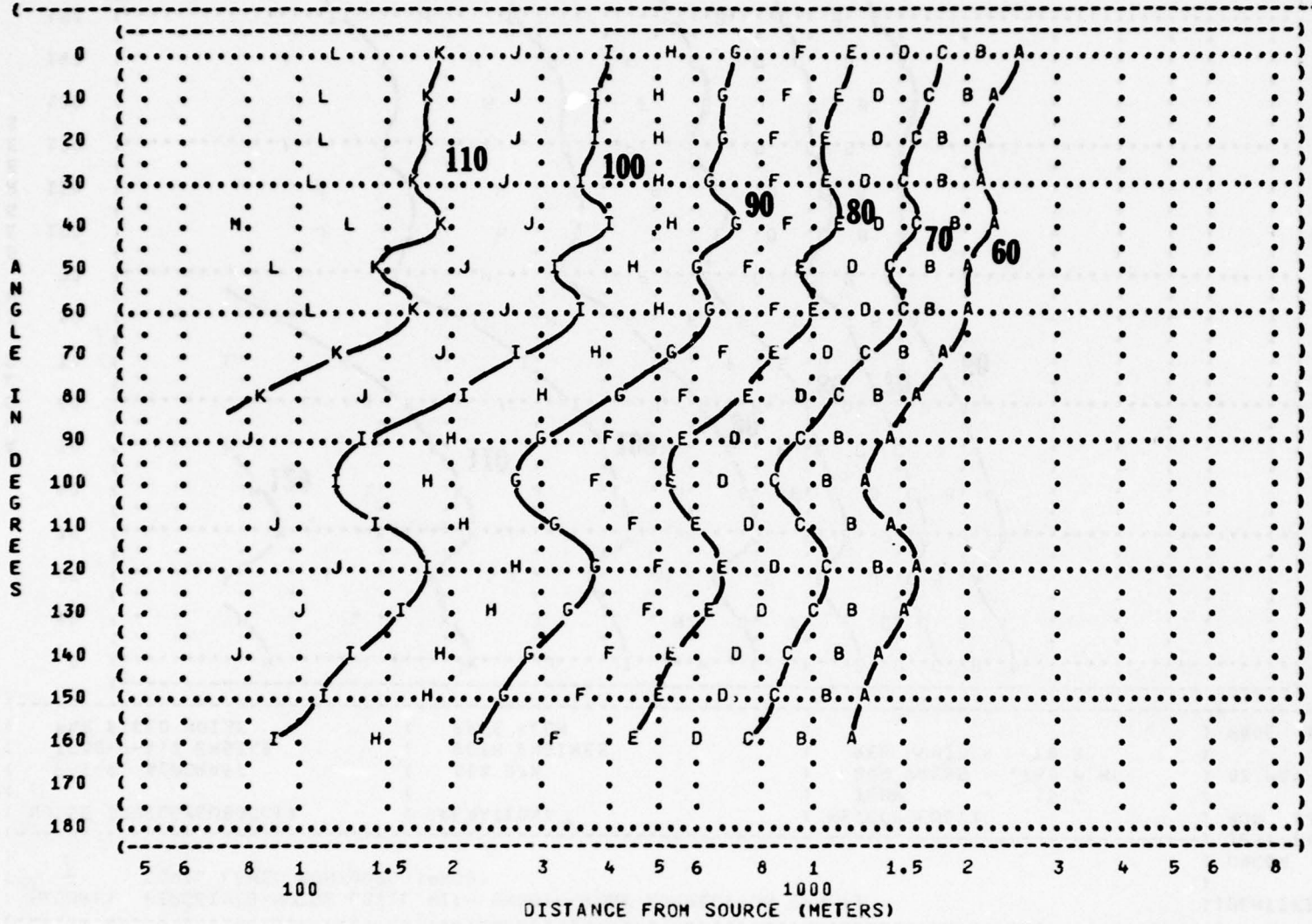


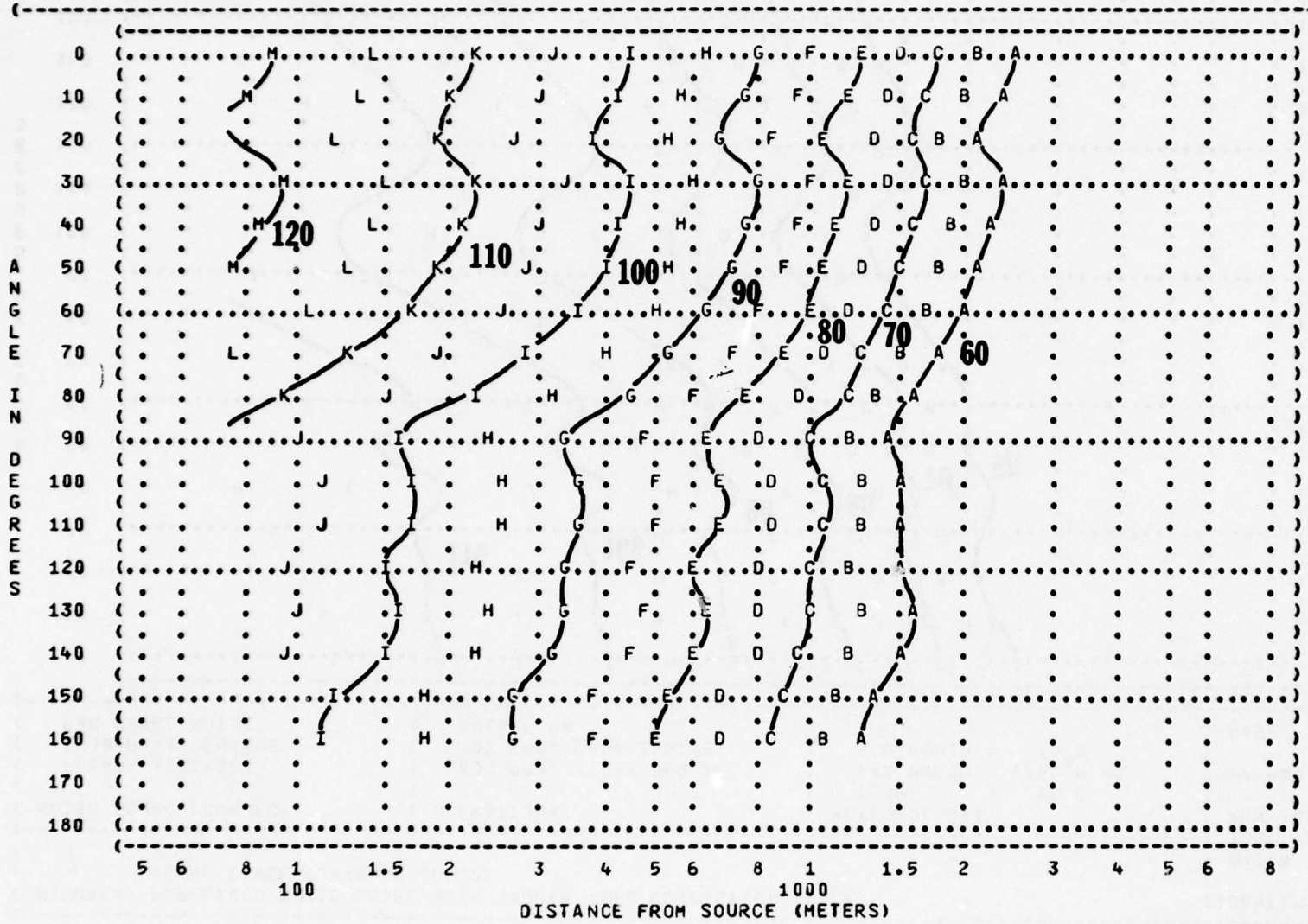
FIGURE 7 PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 16



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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 16

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95
I	100
J	105
K	110
L	115
M	120
N	125
O	130

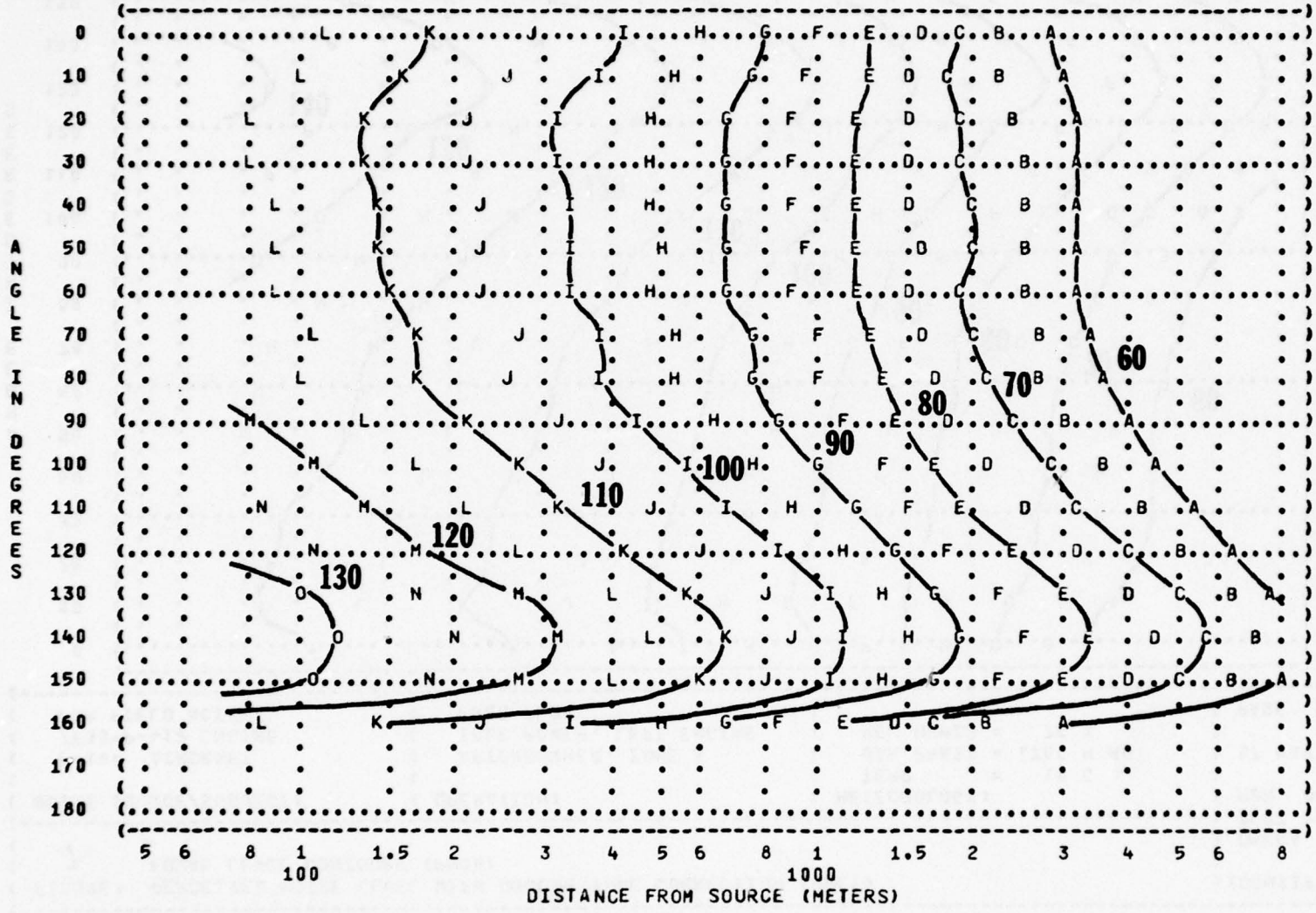


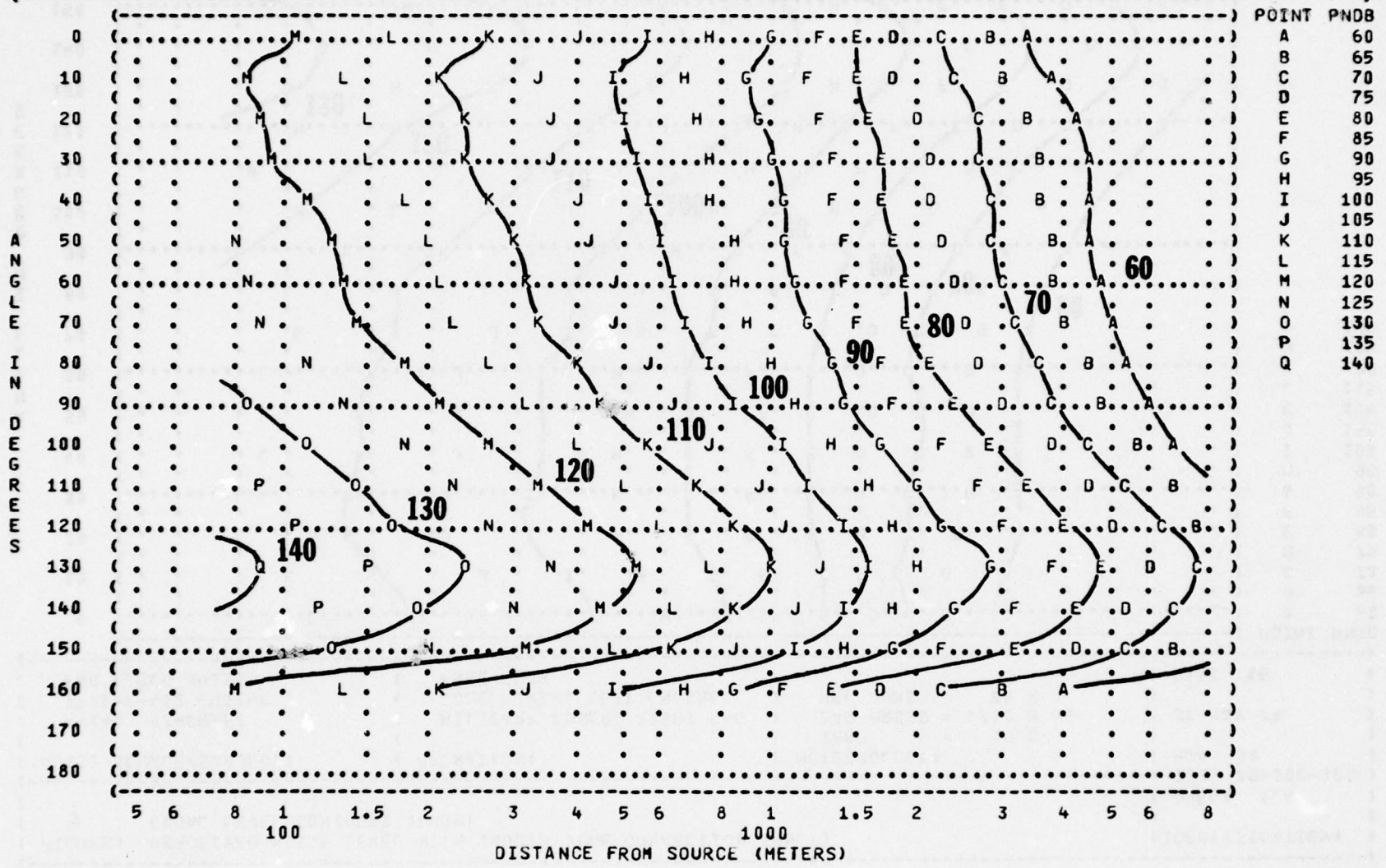
FIGURE 7: PERCEIVED NOISE LEVEL WITH SMOOTH TONE CORRECTION (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 16

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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



POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95
I	100
J	105
K	110
L	115
M	120
N	125
O	130
P	135
Q	140

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 17

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

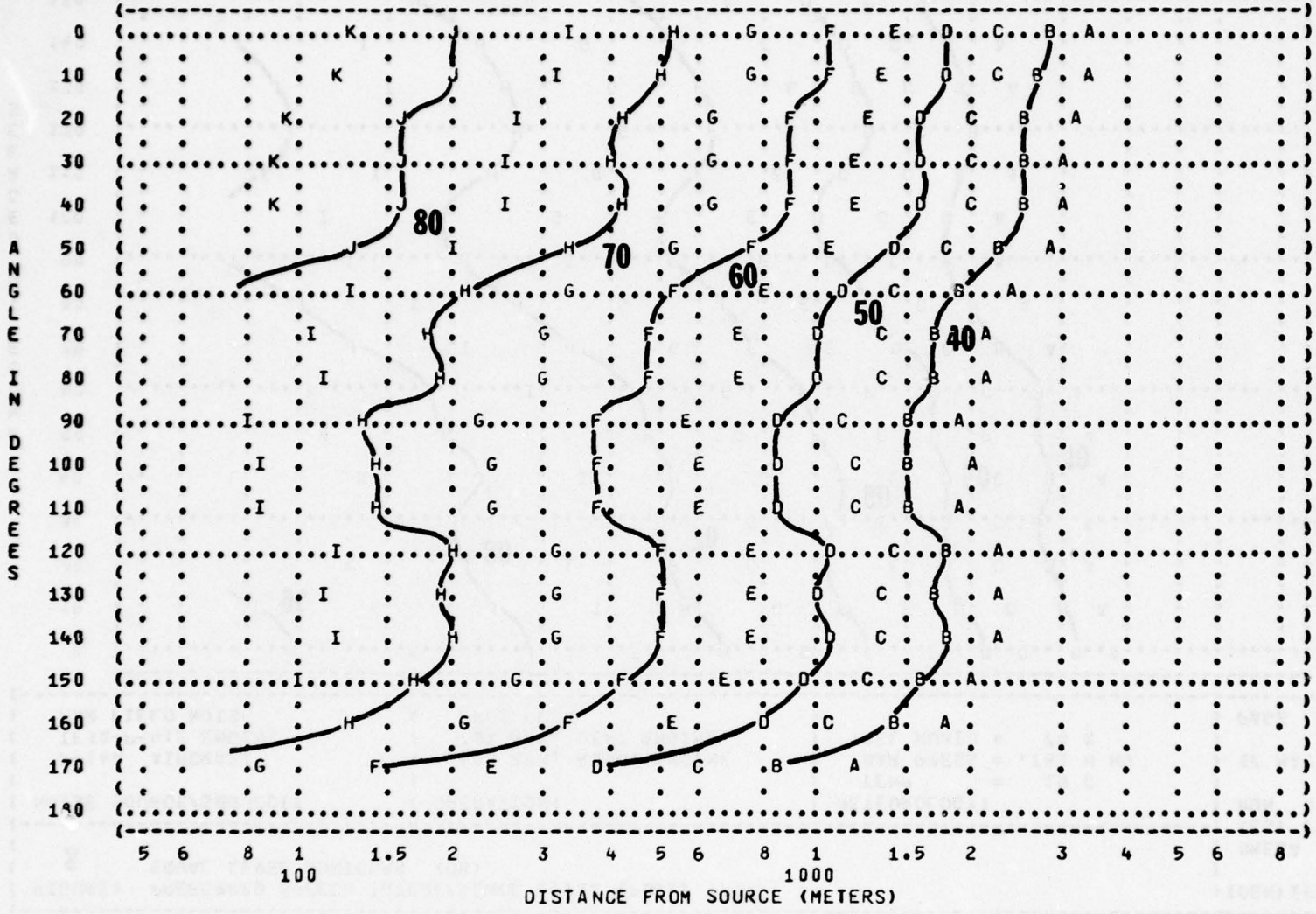


FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 17

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

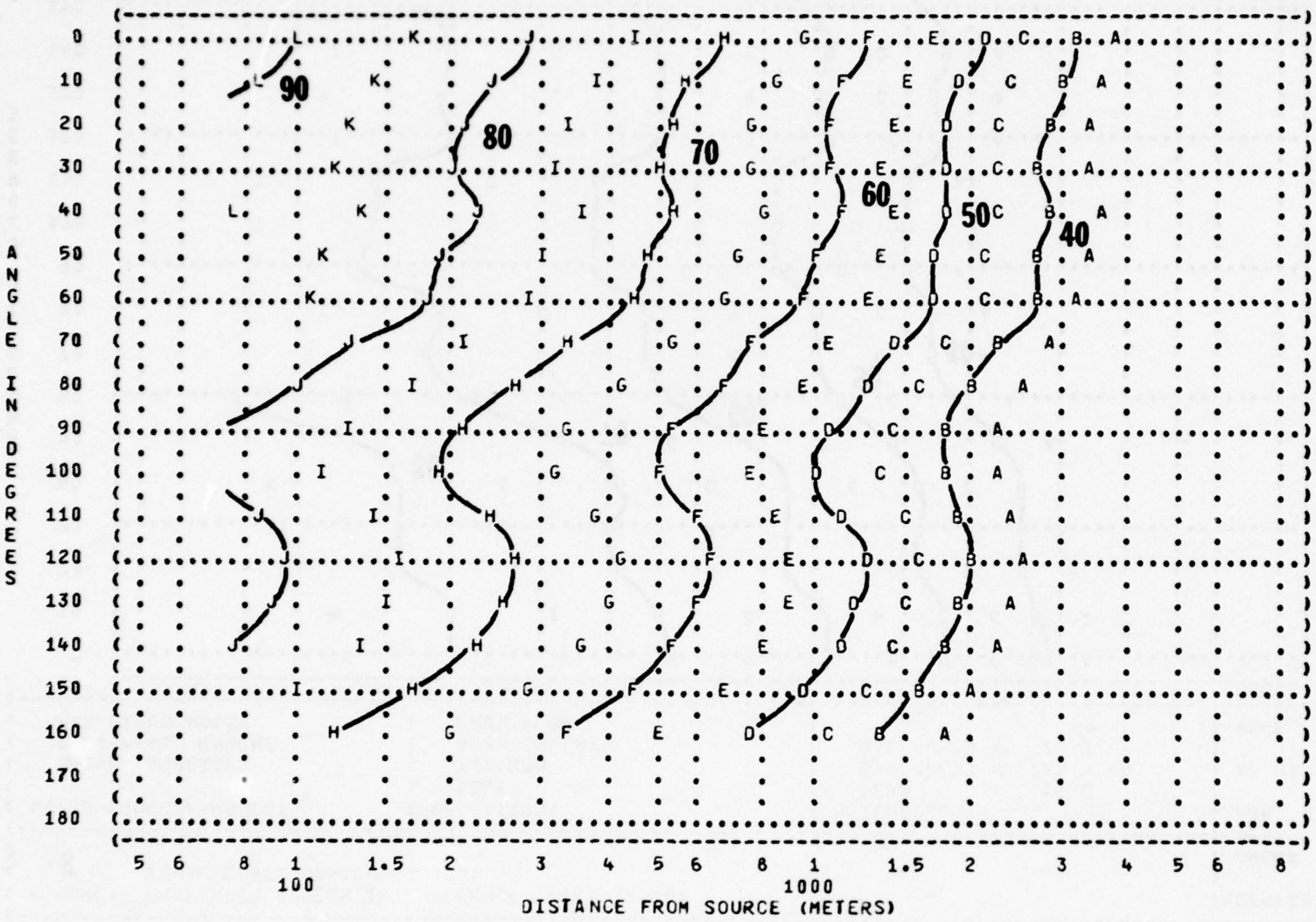


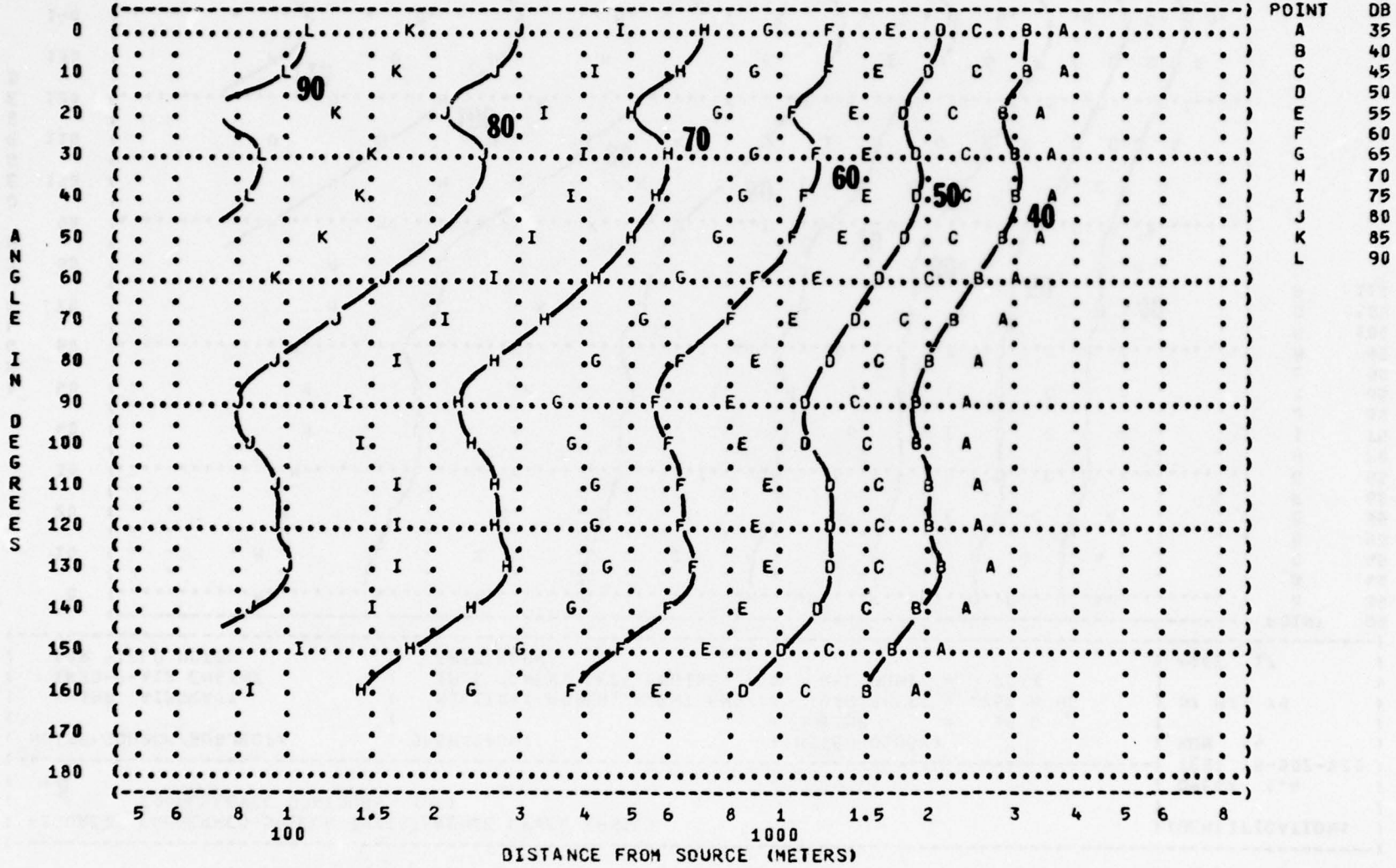
FIGURE 8 PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 17

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

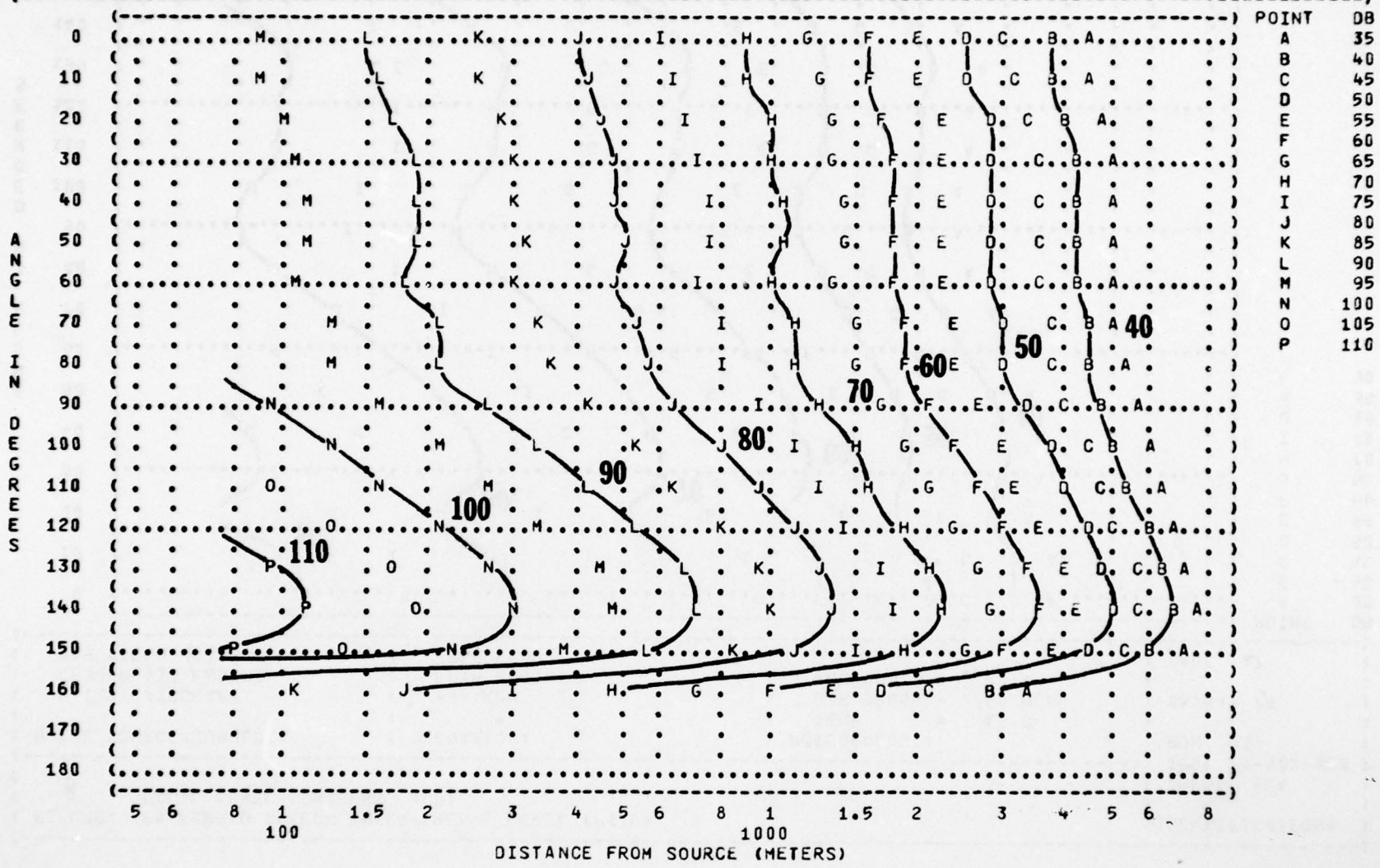
FIGURE: 8 PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 17

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

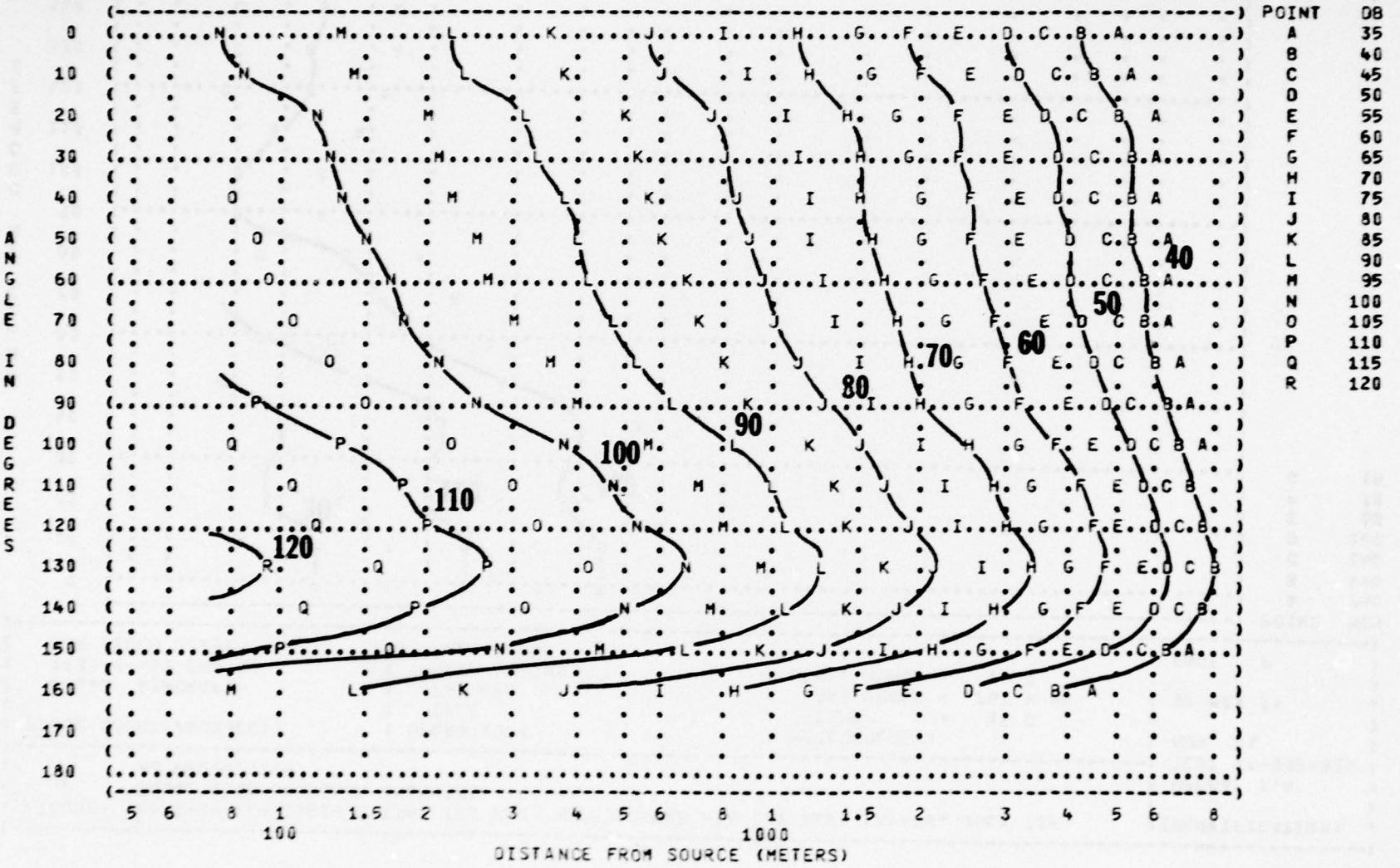
FIGURE 8 PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 17



POINT DB
A 35
B 40
C 45
D 50
E 55
F 60
G 65
H 70
I 75
J 80
K 85
L 90
M 95
N 100
O 105
P 110
Q 115
R 120

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 75-002-028
RUN 01
07 MAY 75
PAGE 7

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

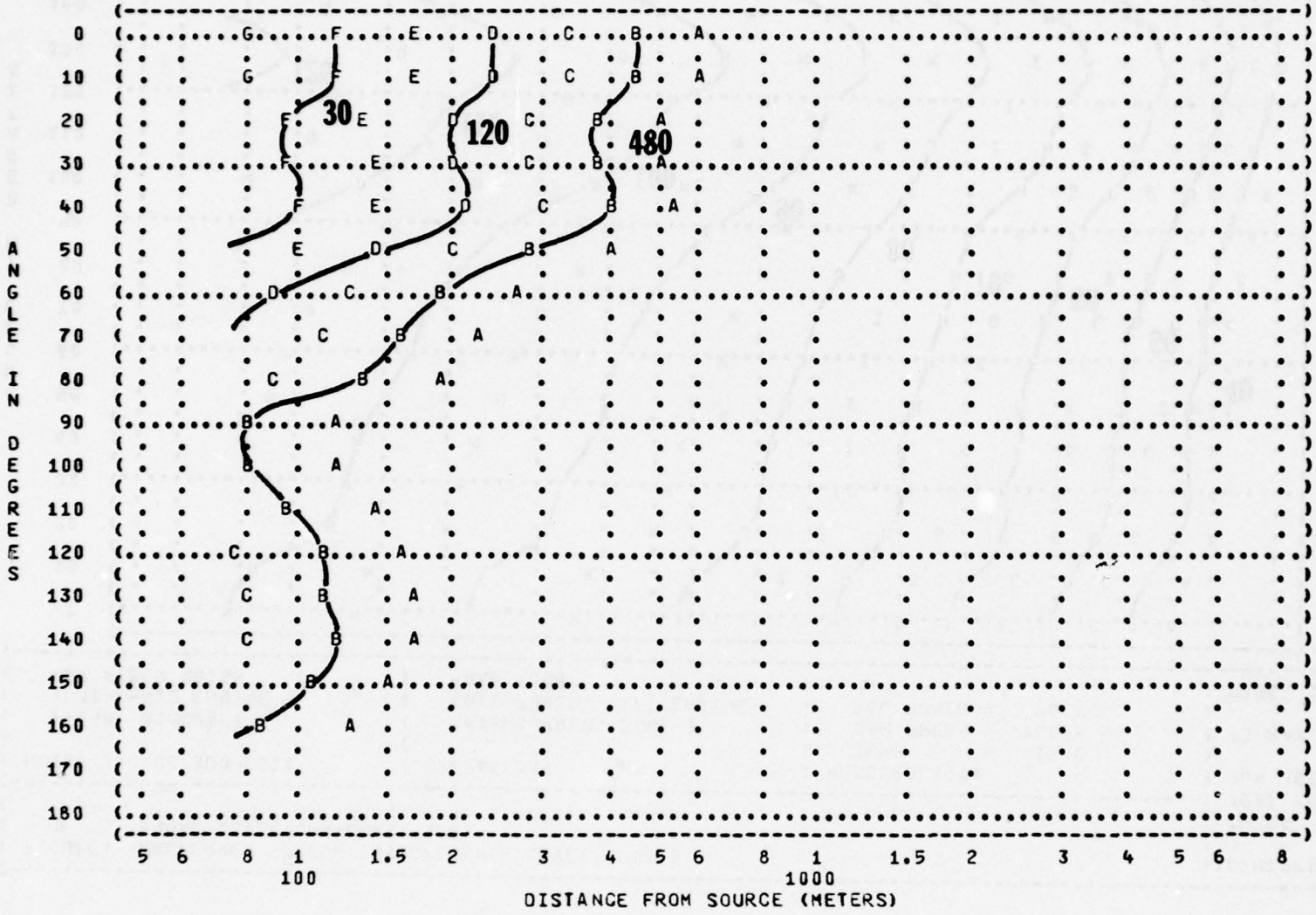


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 8

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

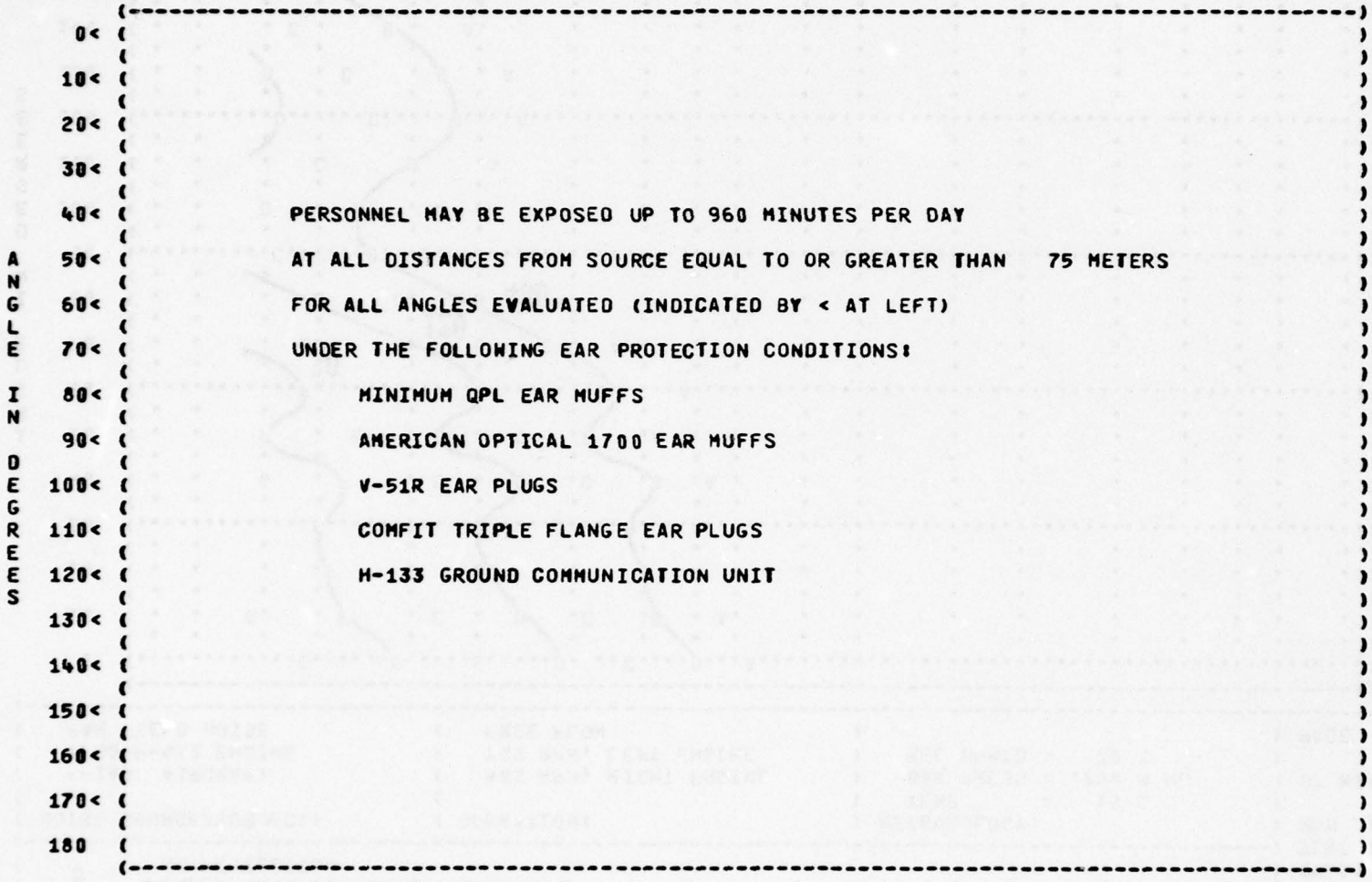


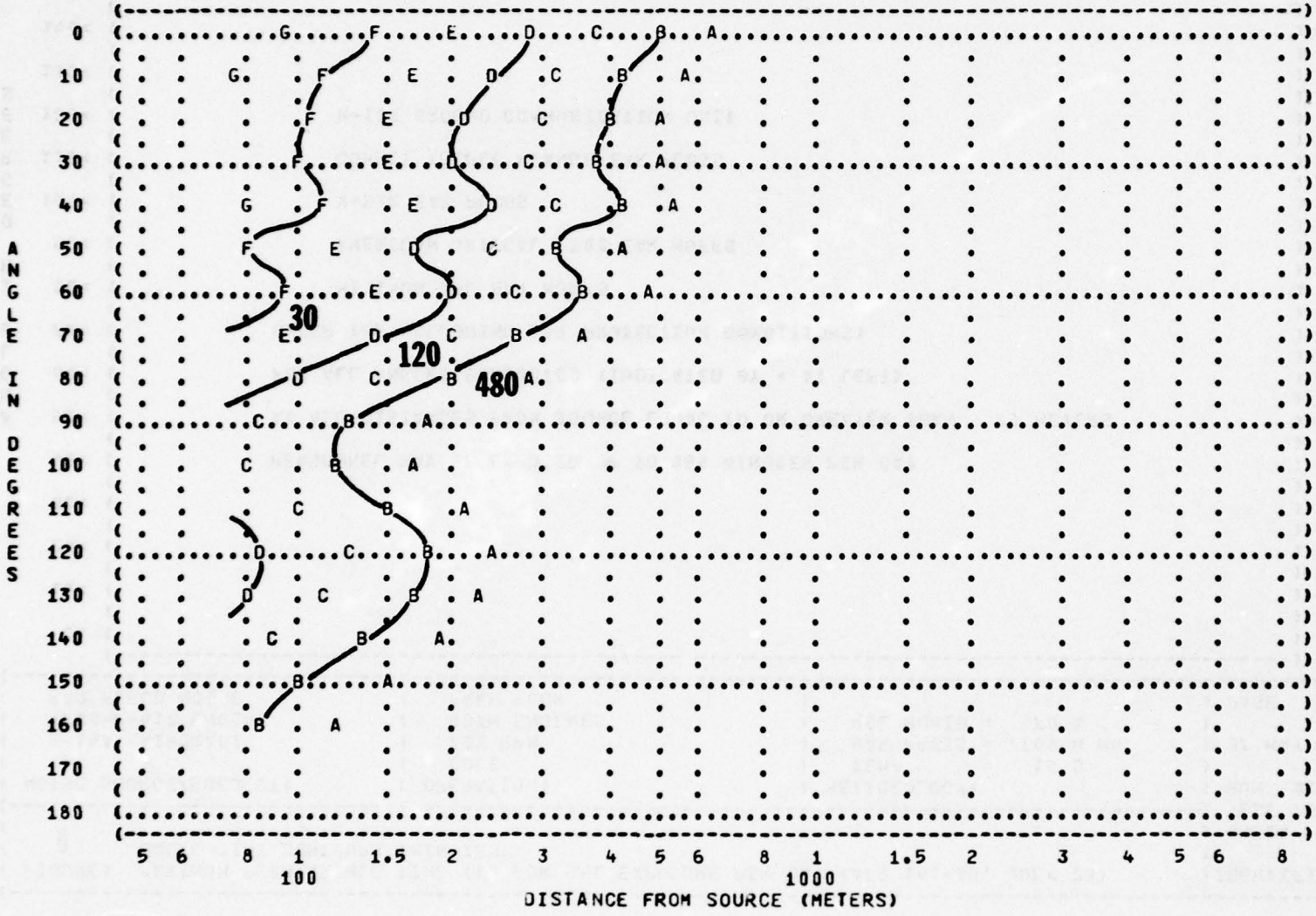
FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 7

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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)
COMFIT TRIPLE FLANGE EAR PLUGS

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
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POINT	MIN
A	960

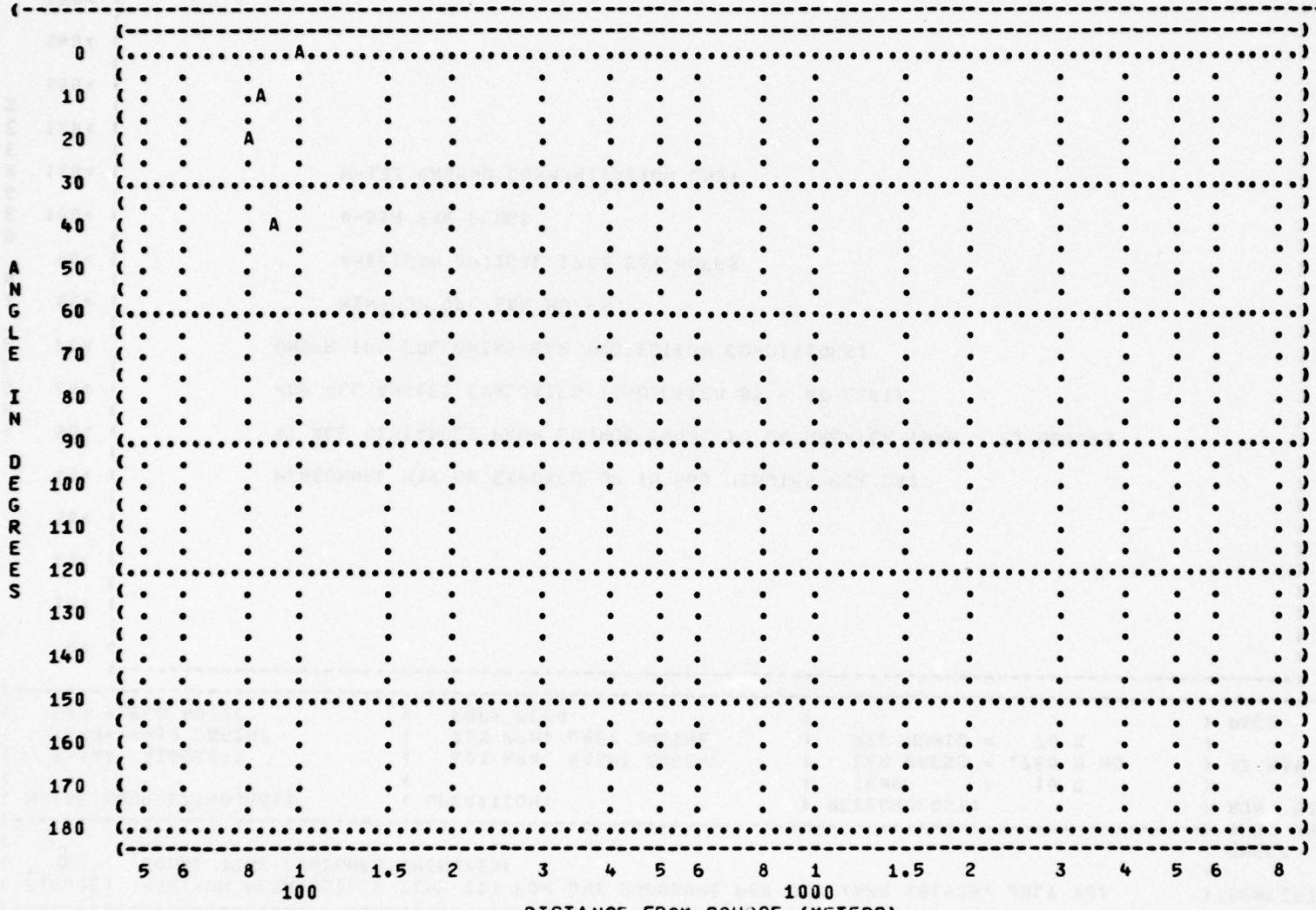


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 9

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

PERSONNEL MAY BE EXPOSED UP TO 960 MINUTES PER DAY

AT ALL DISTANCES FROM SOURCE EQUAL TO OR GREATER THAN 75 METERS

FOR ALL ANGLES EVALUATED (INDICATED BY < AT LEFT)

UNDER THE FOLLOWING EAR PROTECTION CONDITIONS:

MINIMUM QPL EAR MUFFS

AMERICAN OPTICAL 1700 EAR MUFFS

V-51R EAR PLUGS

H-133 GROUND COMMUNICATION UNIT

ANGLE IN DEGREES

0< 10< 20< 30< 40< 50< 60< 70< 80< 90< 100< 110< 120< 130< 140< 150< 160< 170 180

5 6 8 1 1.5 2 3 4 5 6 8 1 1.5 2 3 4 5 6 8
100 1000

DISTANCE FROM SOURCE (METERS)

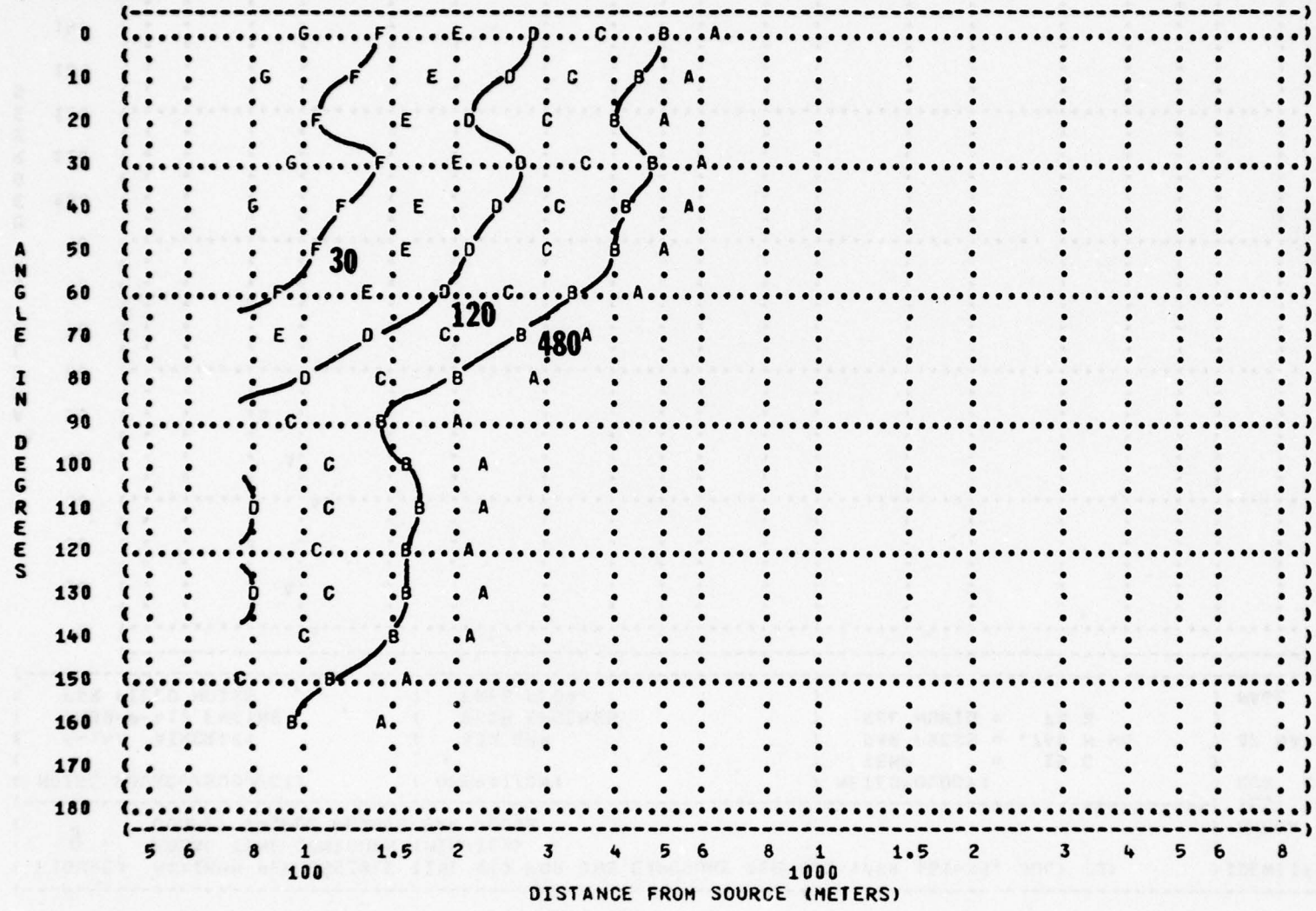
FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 7

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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)
COMFIT TRIPLE FLANGE EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 8

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

POINT	MIN
A	960

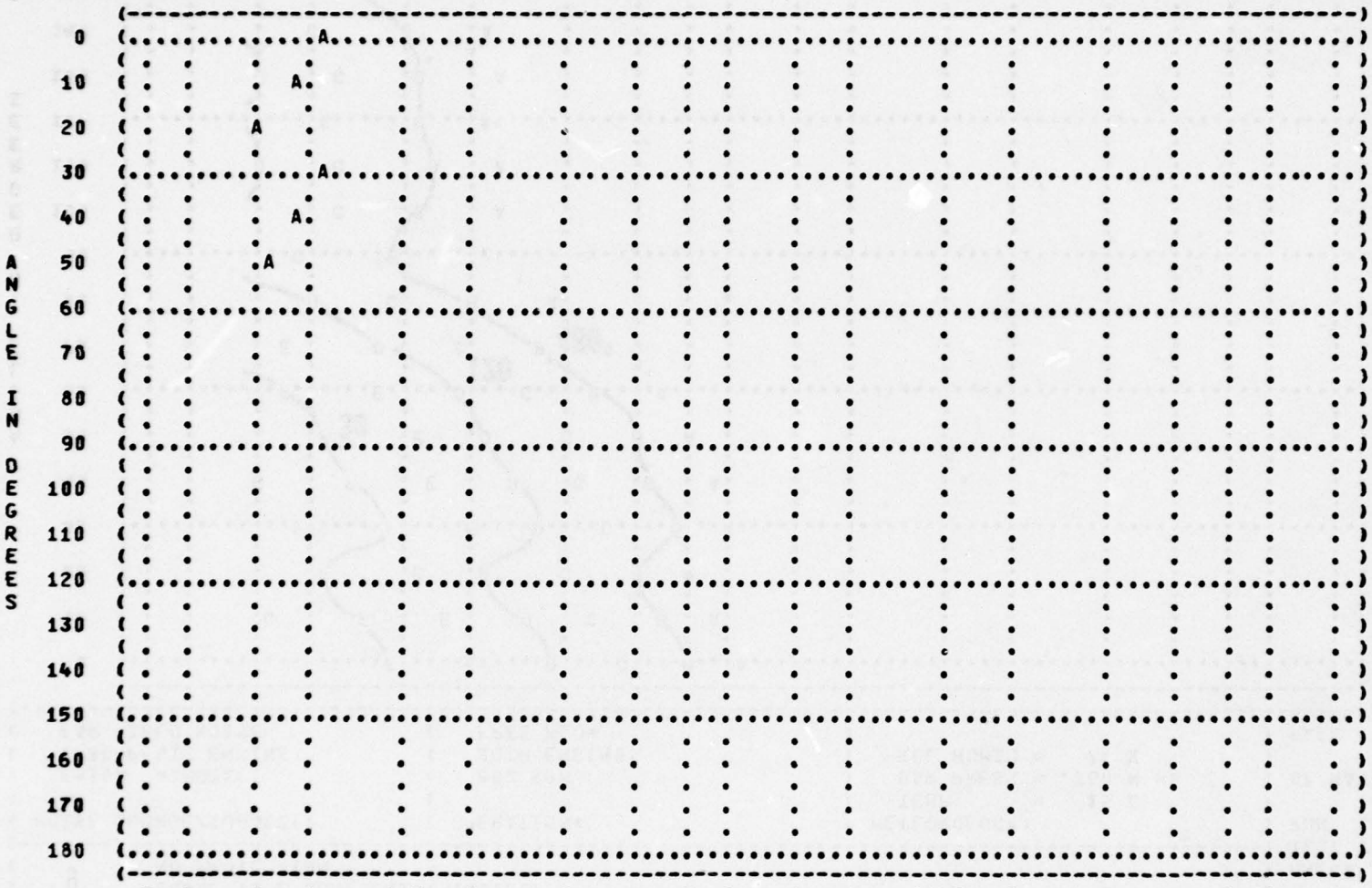


FIGURE 9 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
H-133 GROUND COMMUNICATION UNIT

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 9

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

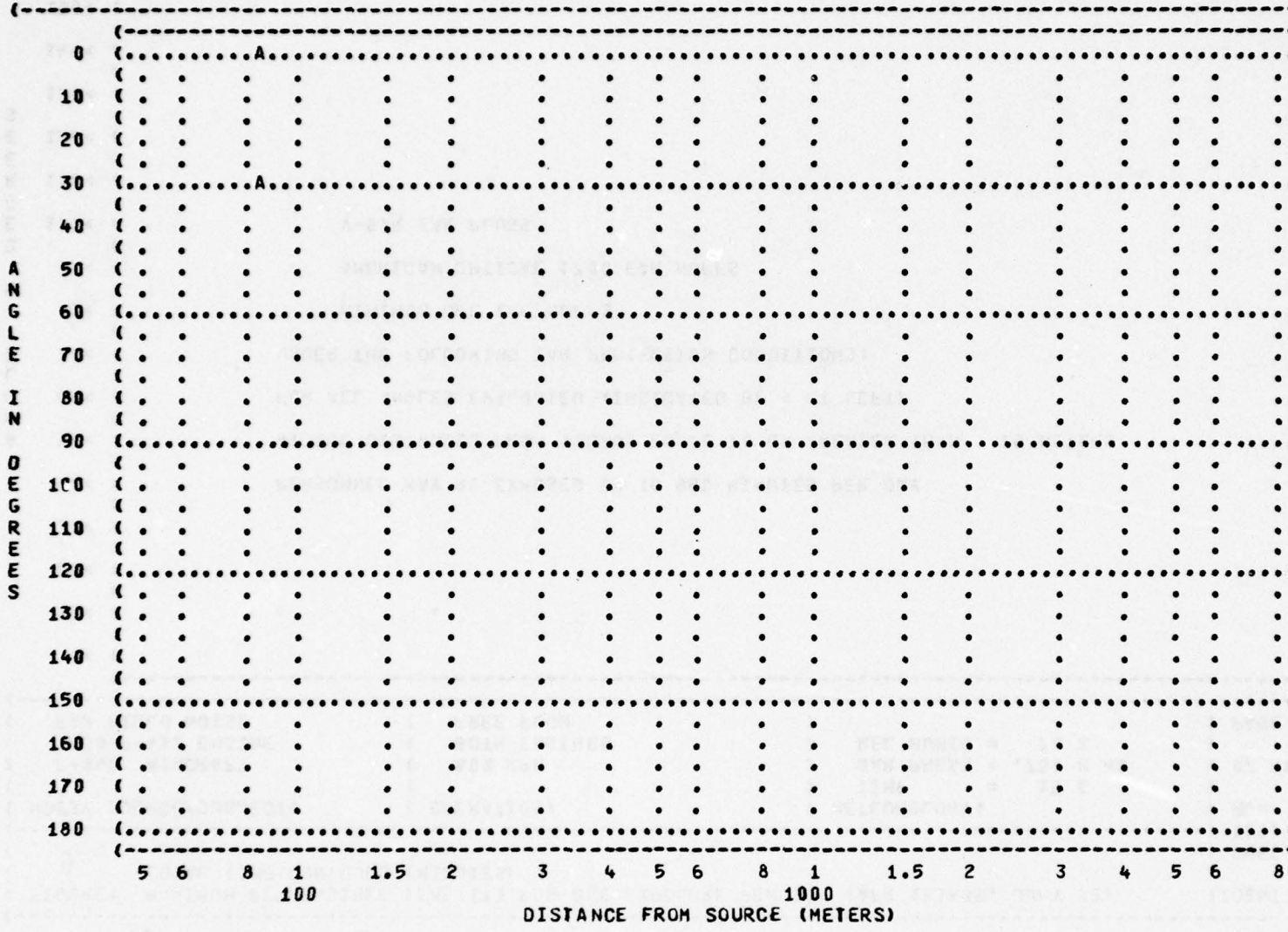


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 10

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

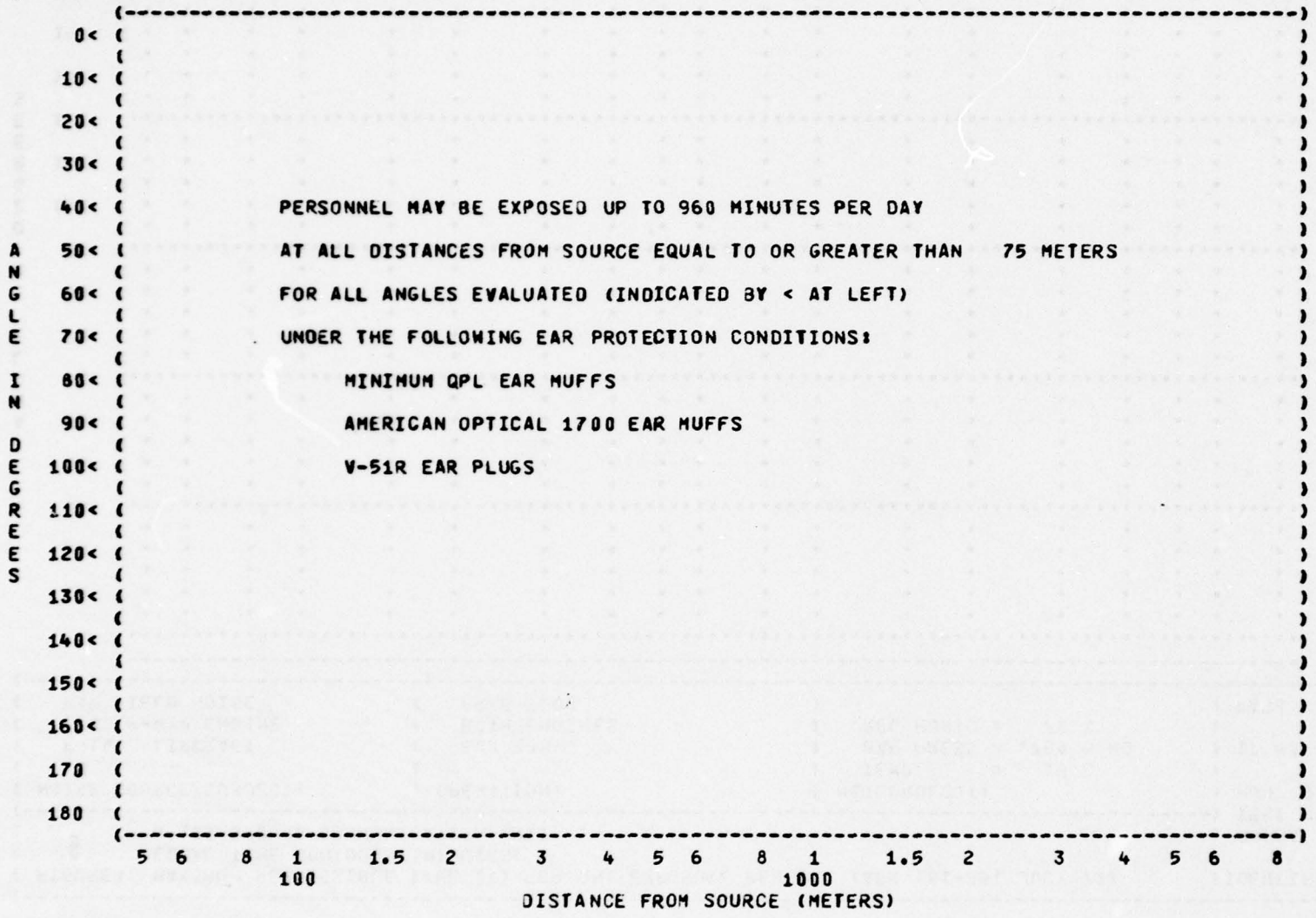


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

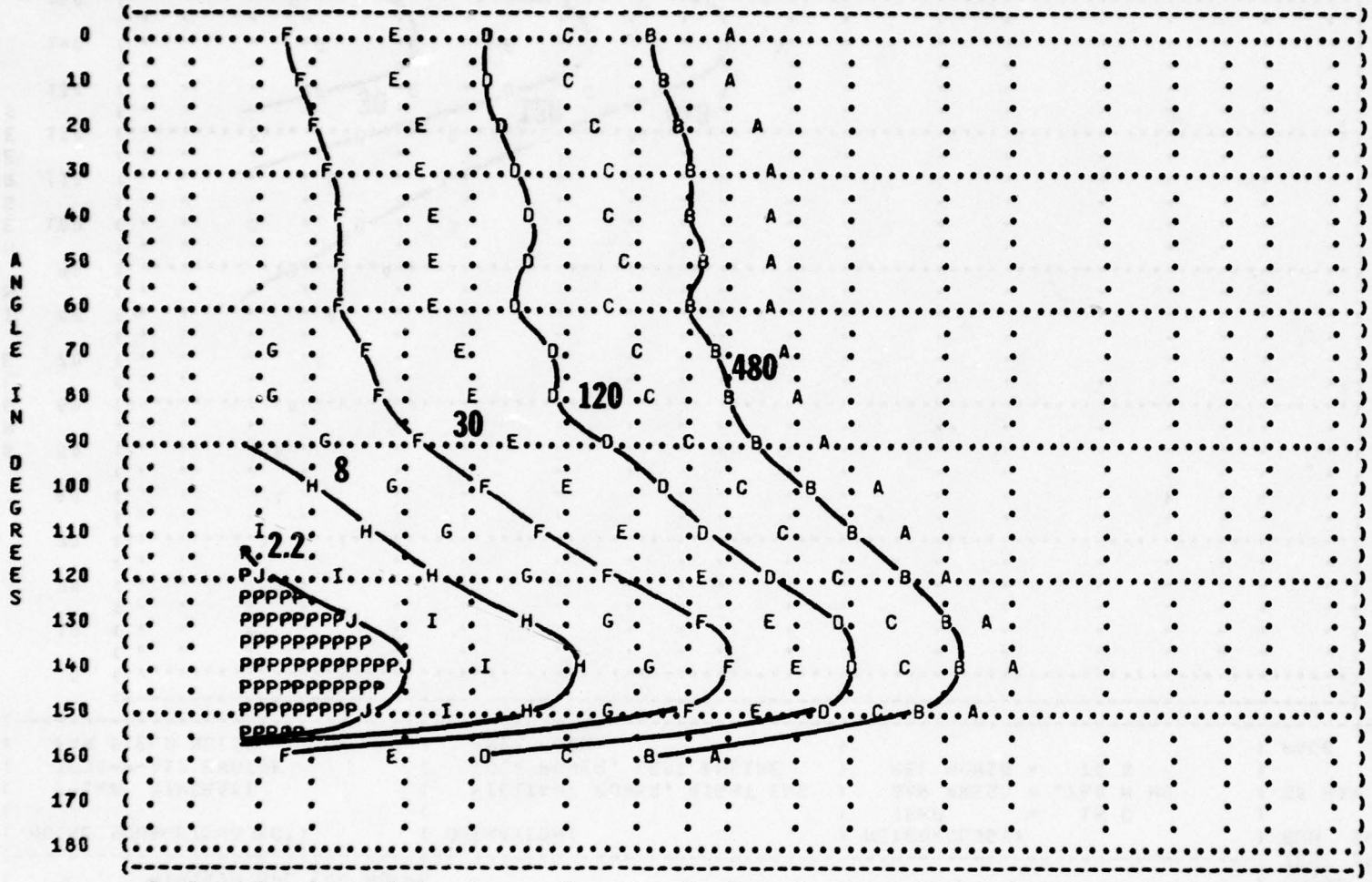
IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 7

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 8

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

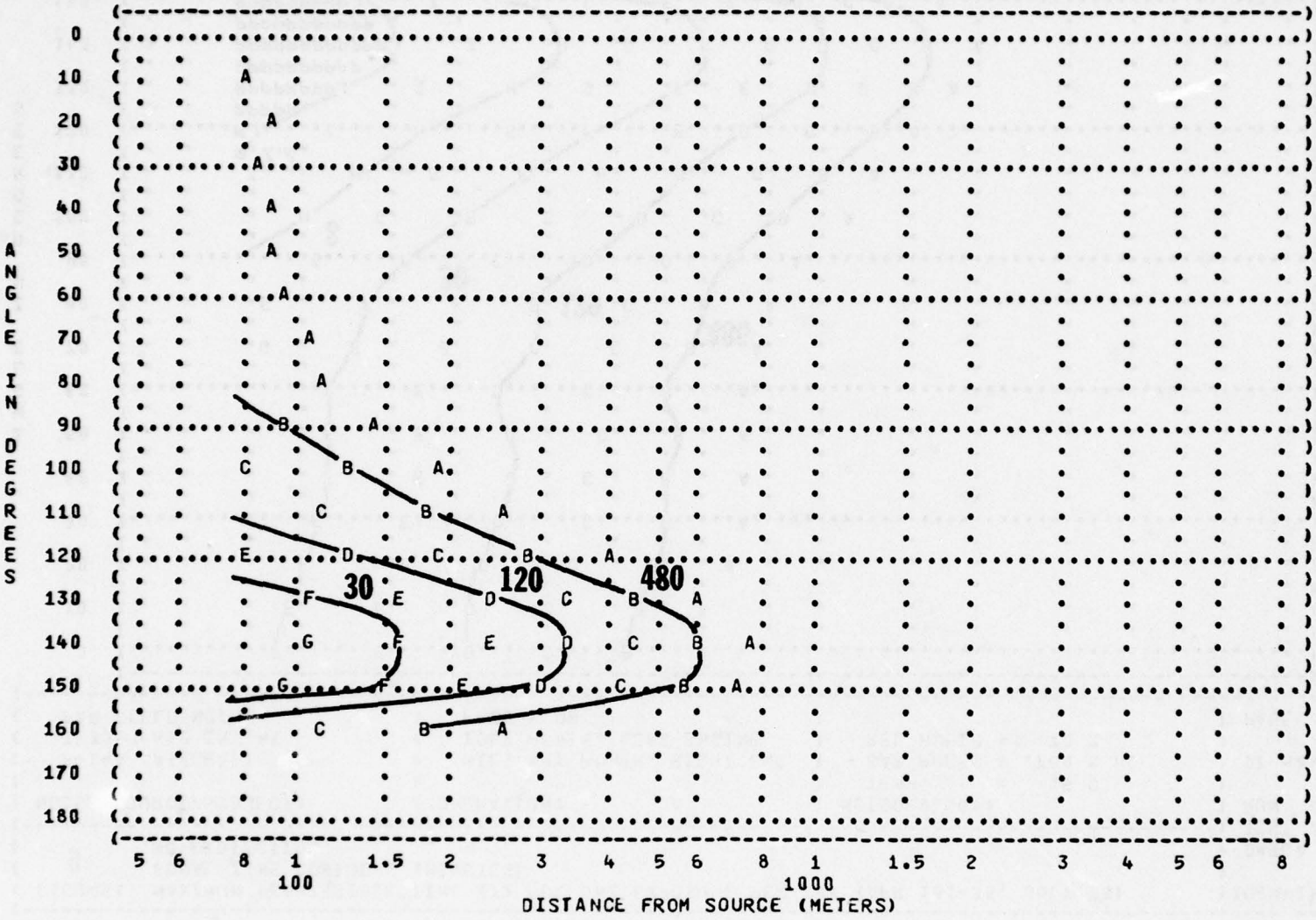


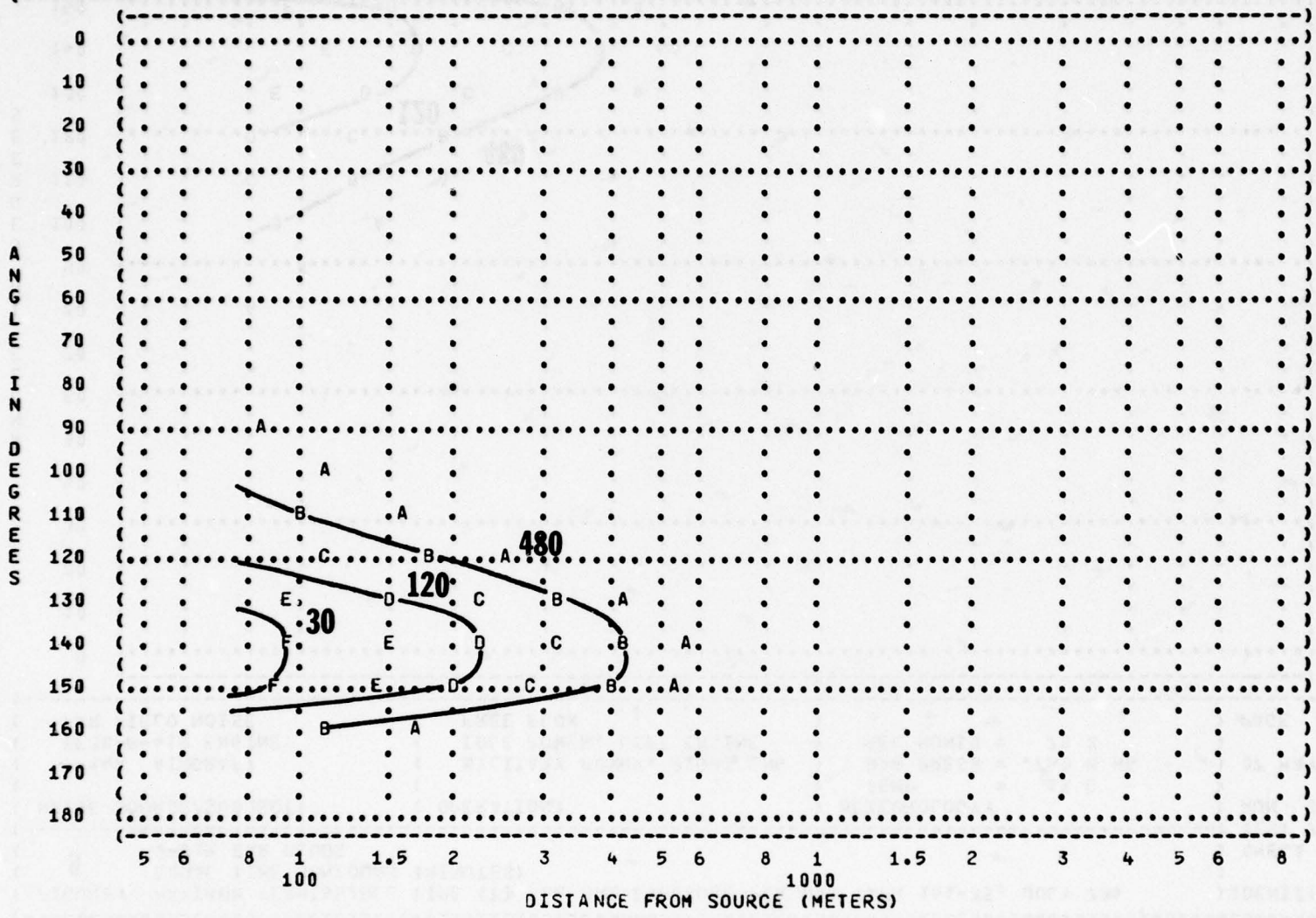
FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
AMERICAN OPTICAL 1700 EAR MUFFS

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 9



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)
V-51R EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 10

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

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

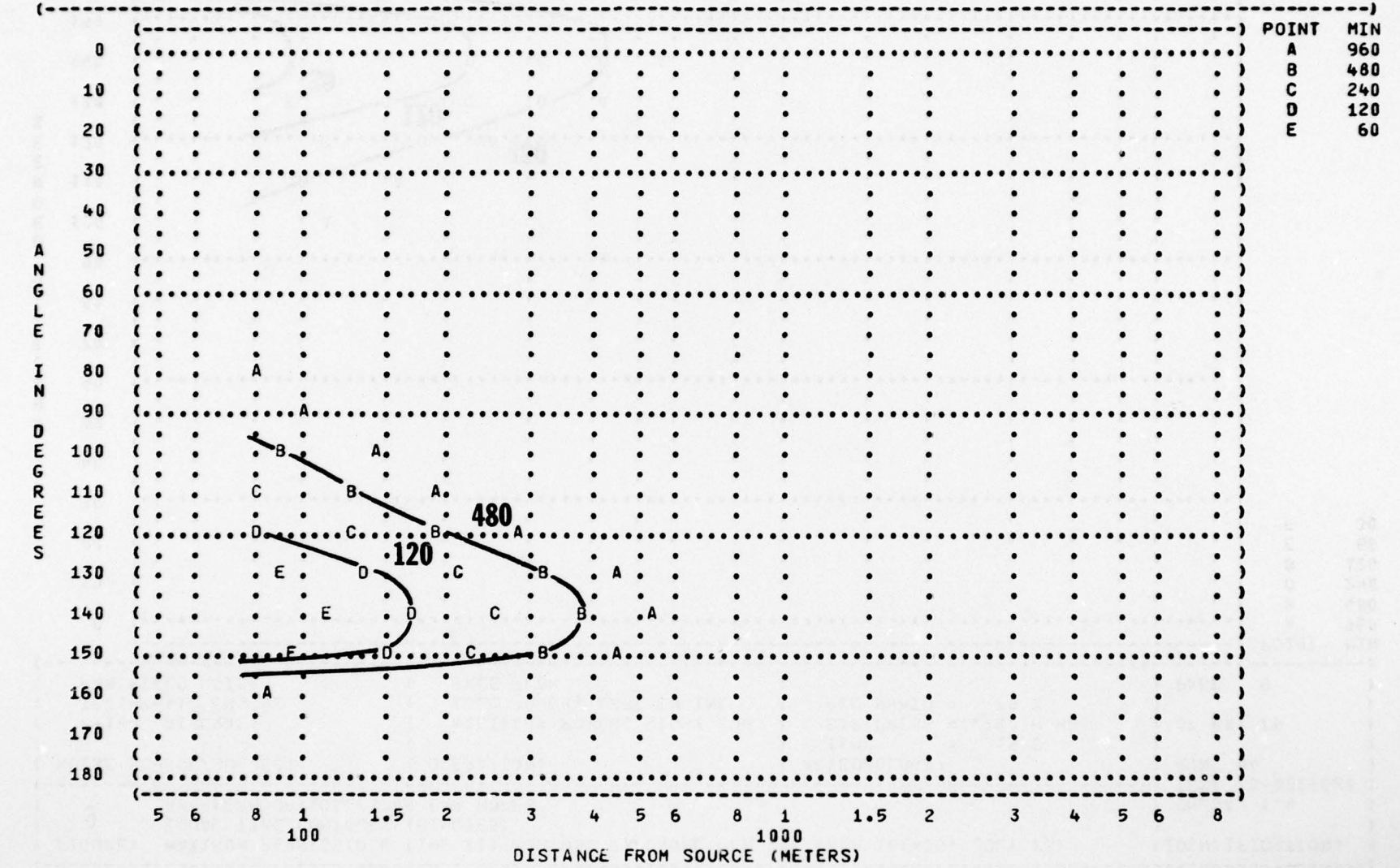


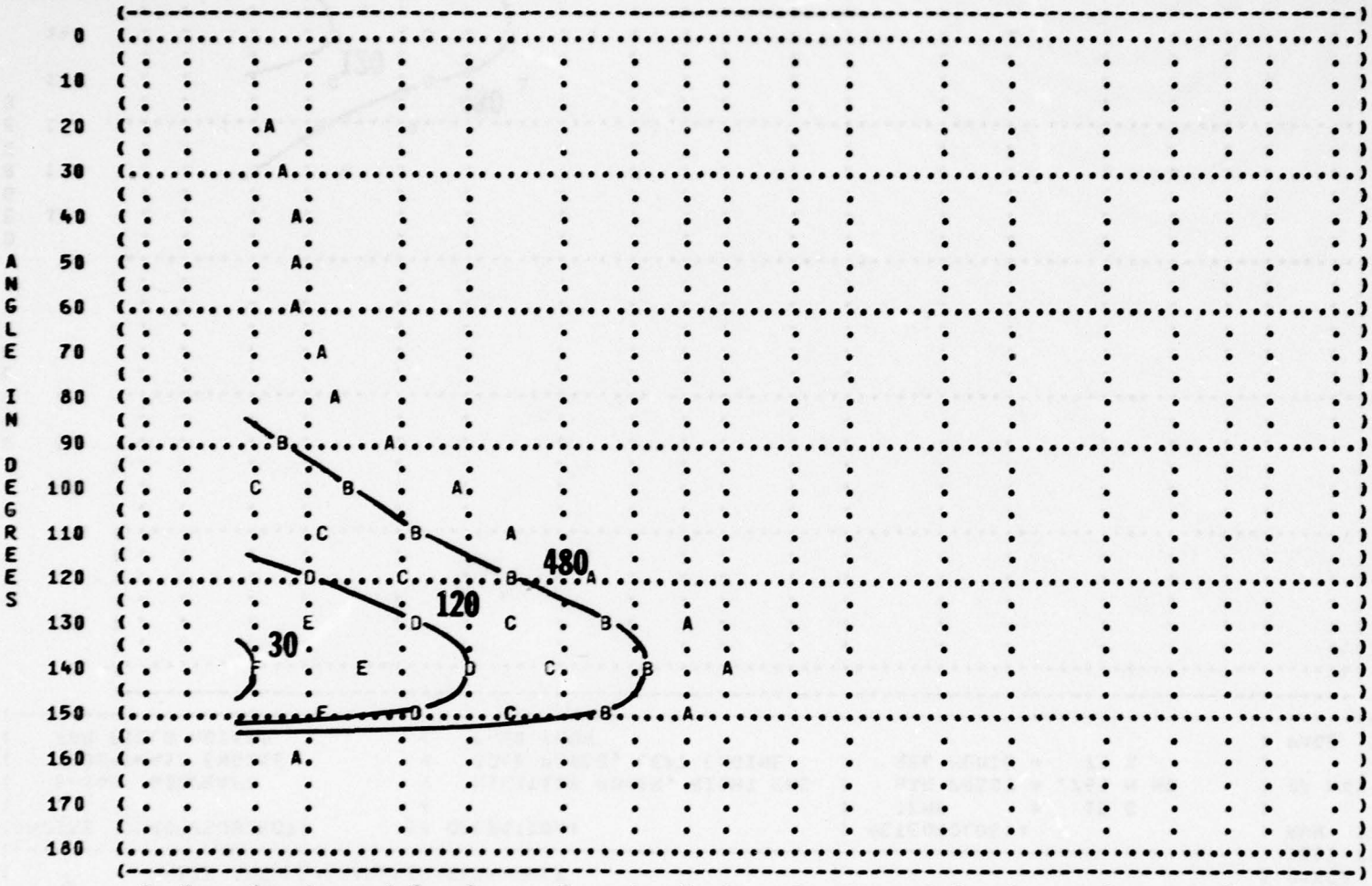
FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
COMFIT TRIPLE FLANGE EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 11

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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



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

FIGURE 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:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 12

POINT	MIN
A	960
B	480
C	240
D	120

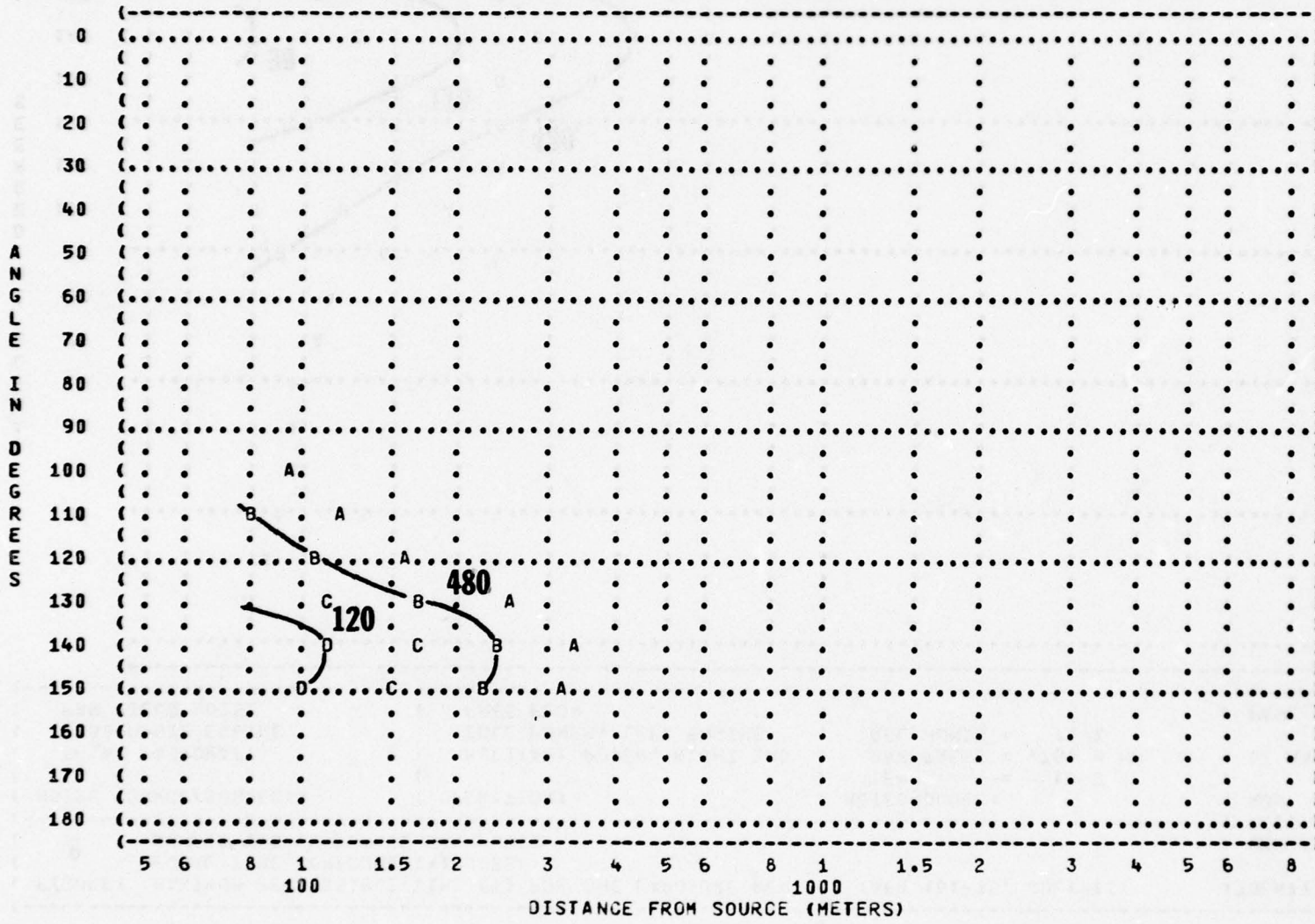


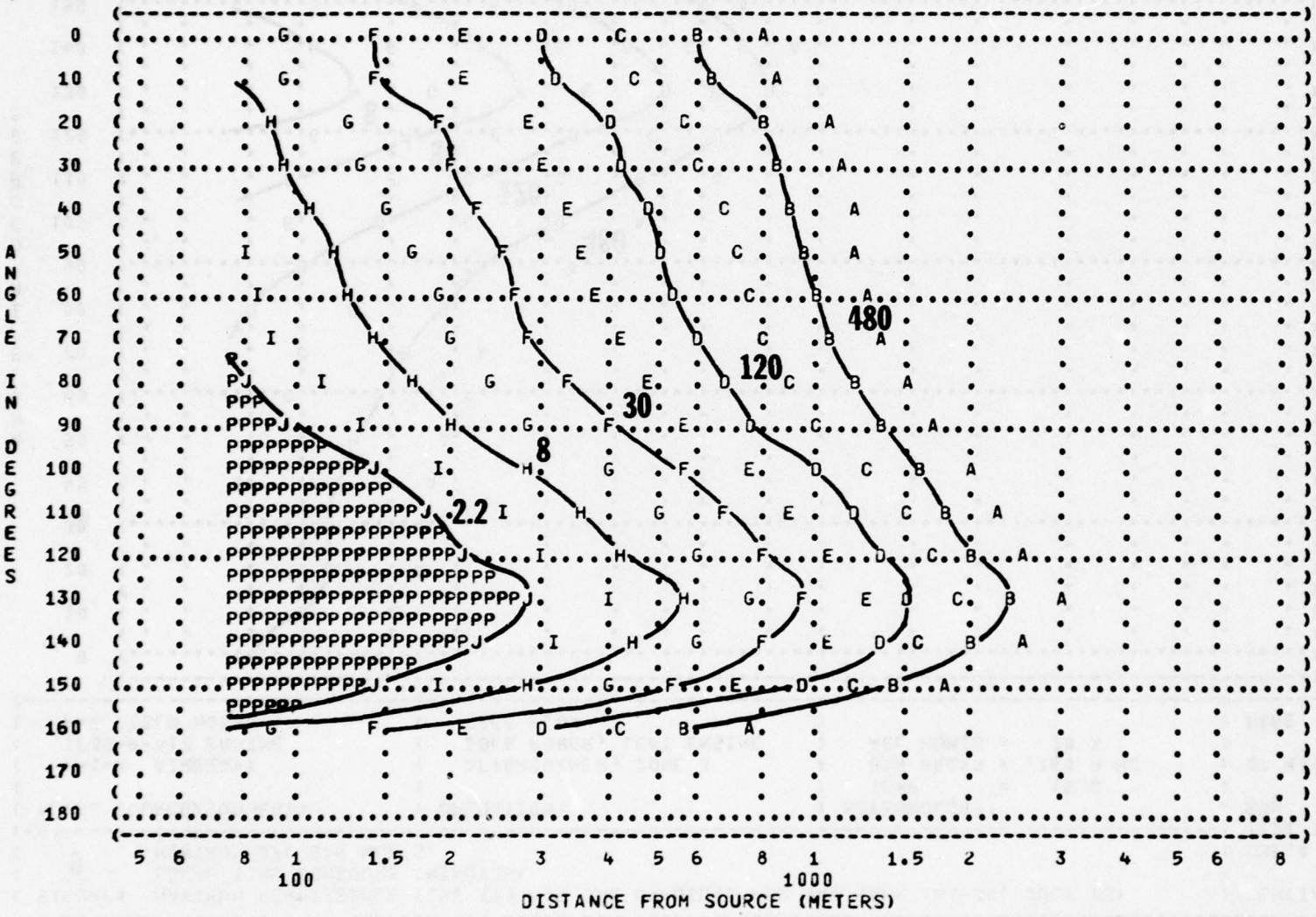
FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 7

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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



P ADDITIONAL EAR PROTECTION REQUIRED.

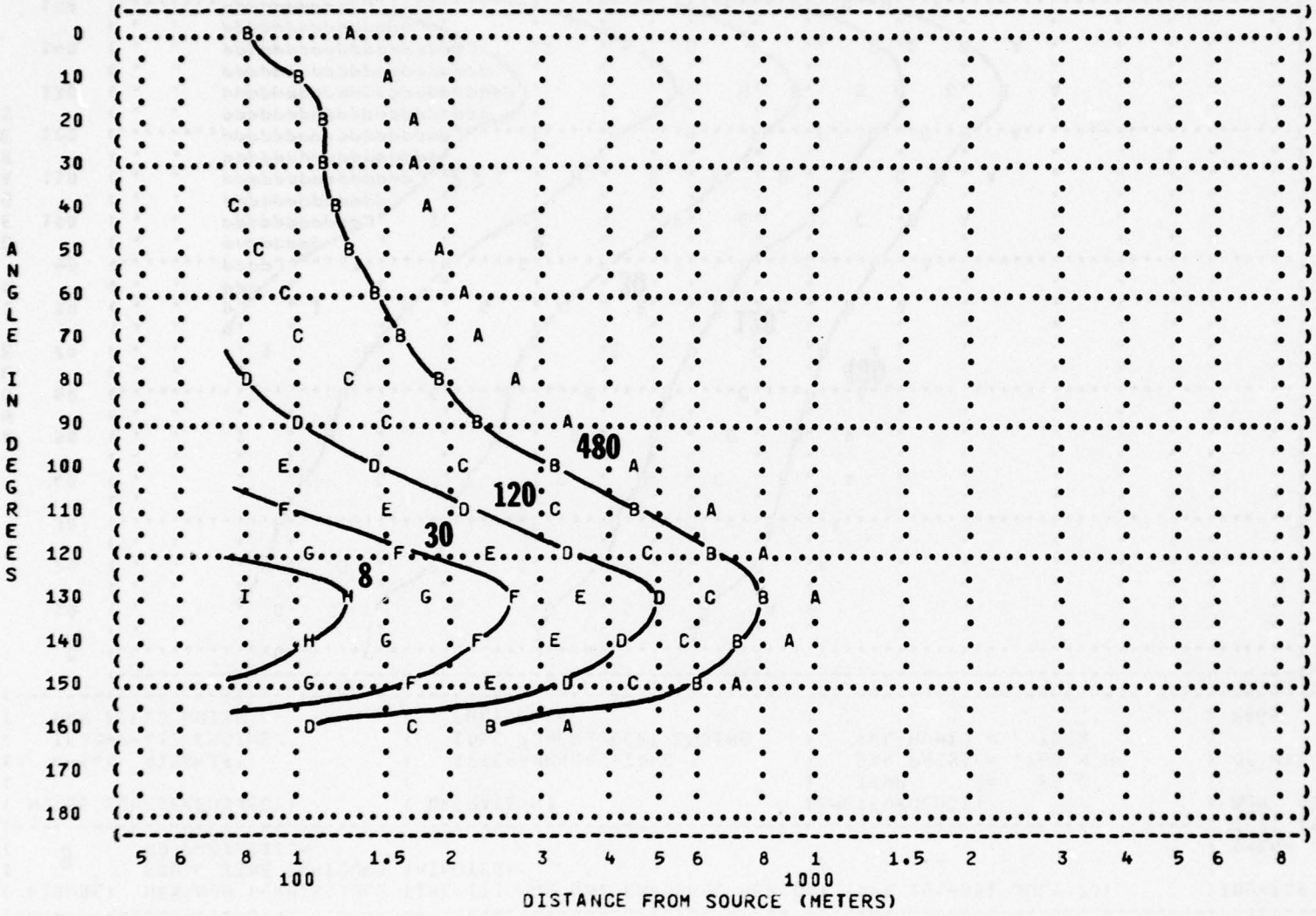
FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
MINIMUM QPL EAR MUFFS

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 8



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

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 75-002-028
RUN 05
07 MAY 75
PAGE 9

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

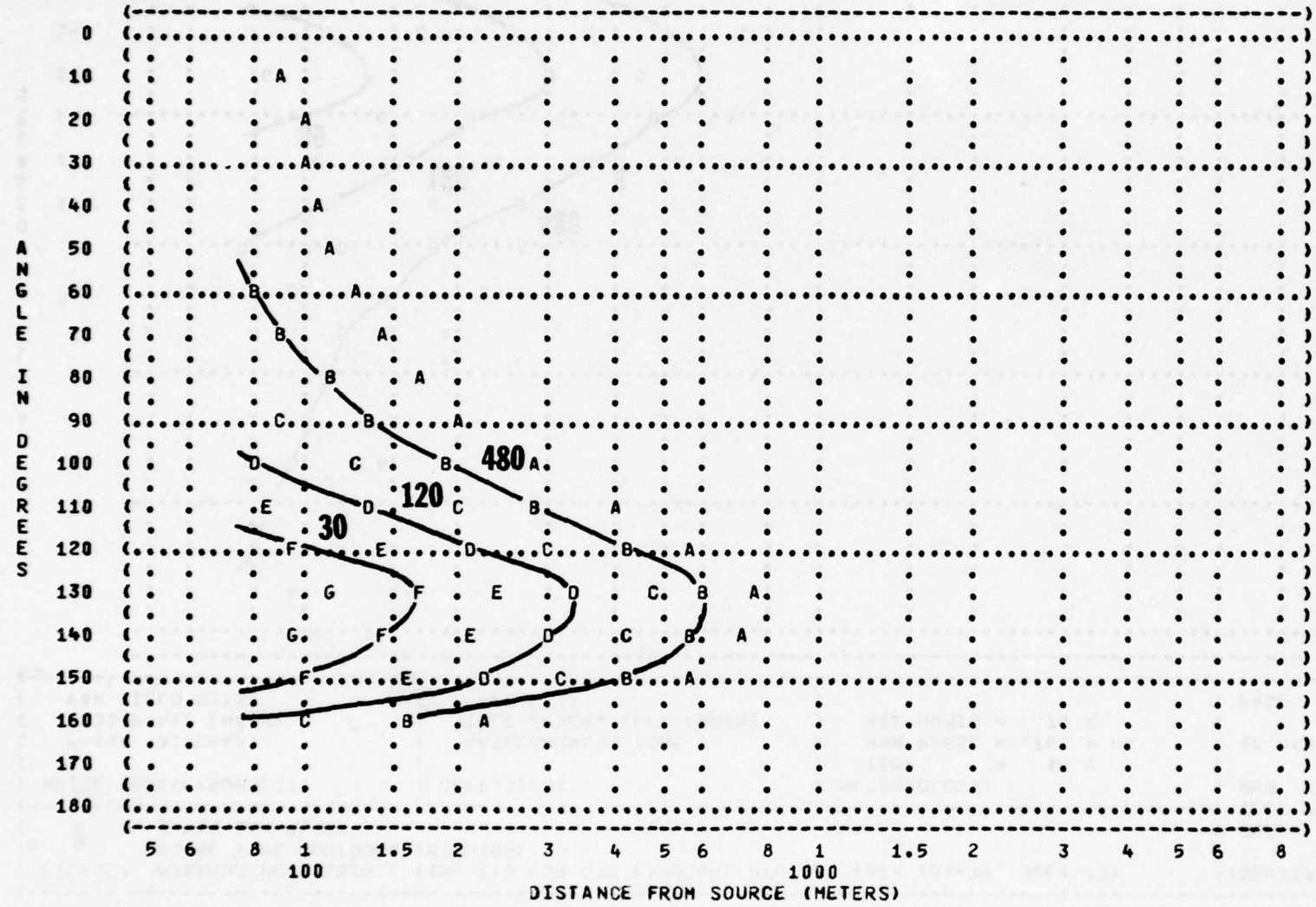


FIGURE: 9

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

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 10

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

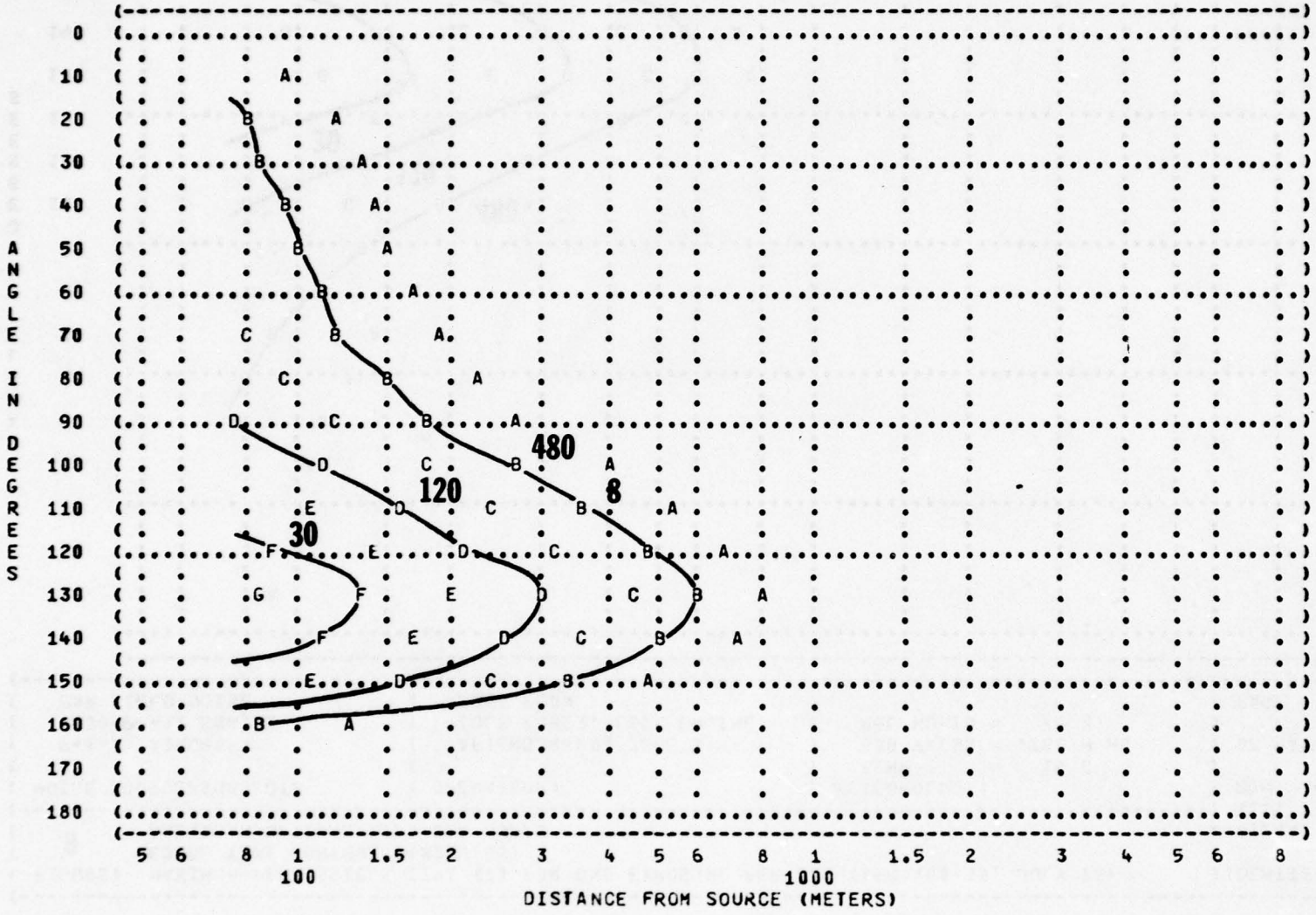


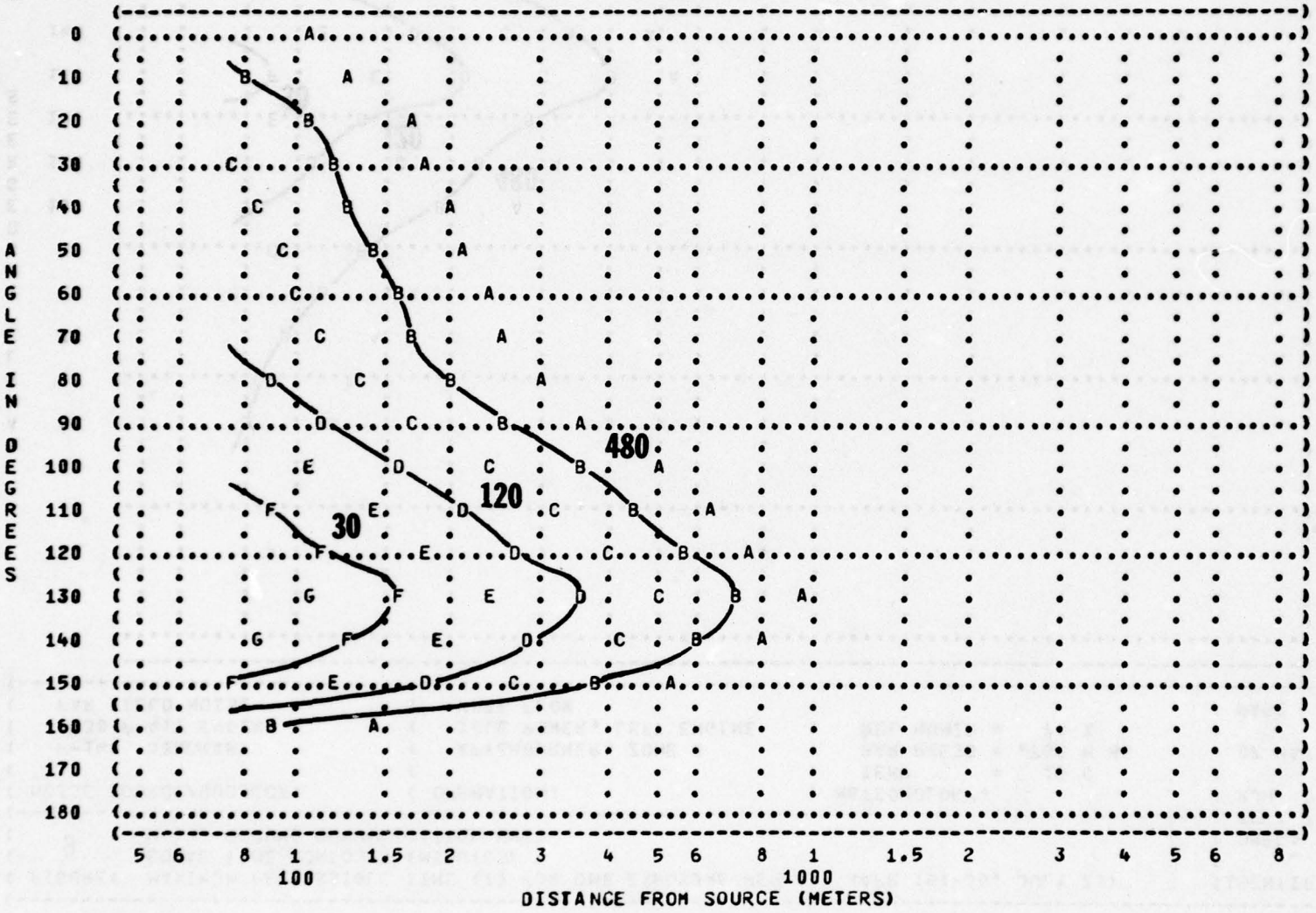
FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
COMFIT TRIPLE FLANGE EAR PLUGS

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 11

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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)
H-133 GROUND COMMUNICATION UNIT

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 12

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

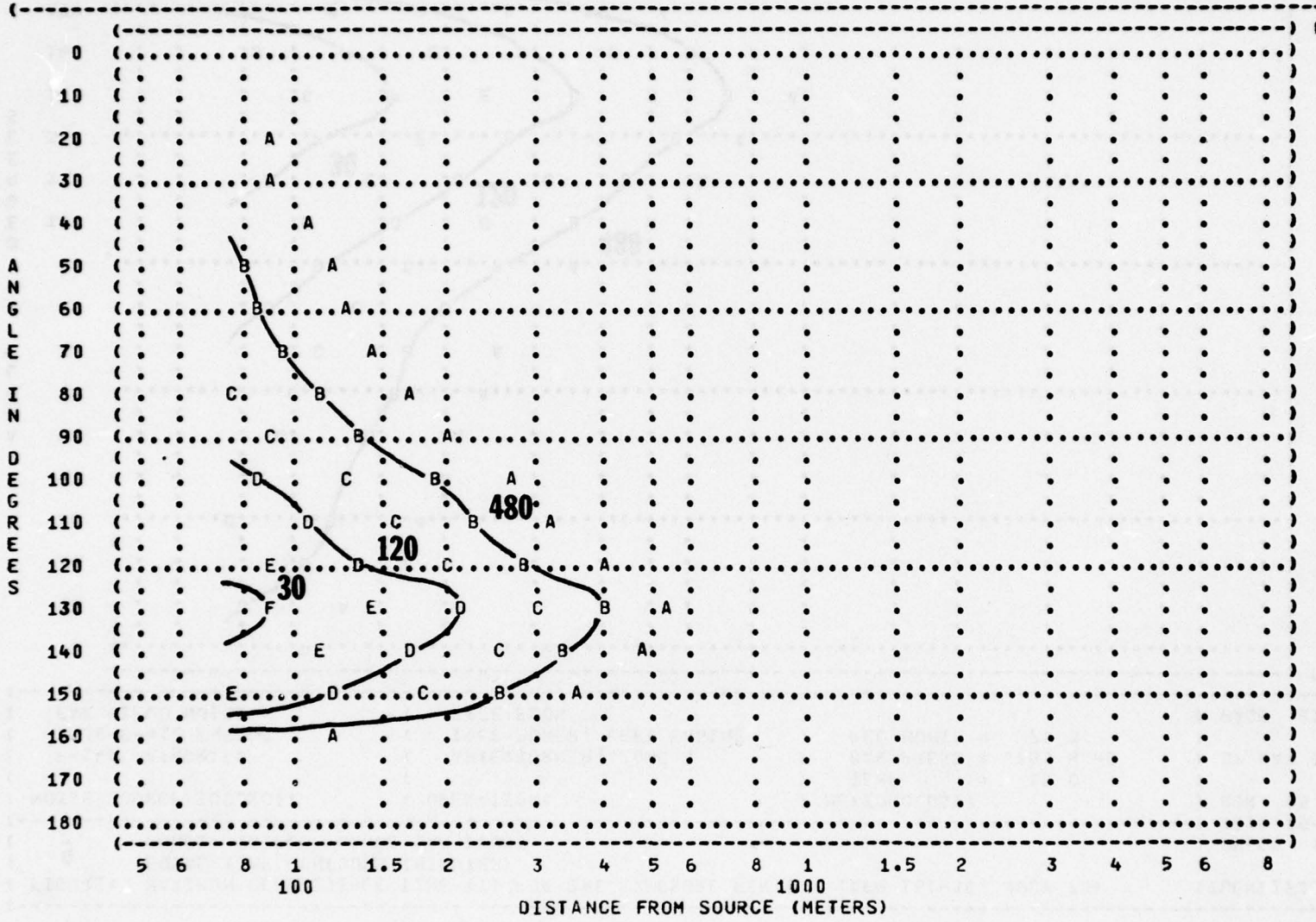


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 / TEST 75-002-028 / RUN 01 / 07 MAY 75 / PAGE 18

NOISE SOURCE/SUBJECT: F-14A AIRCRAFT; TF30-P-412 ENGINE; FAR FIELD NOISE

OPERATION: IDLE; 70% RPM; BOTH ENGINES; FREE FLOW

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

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

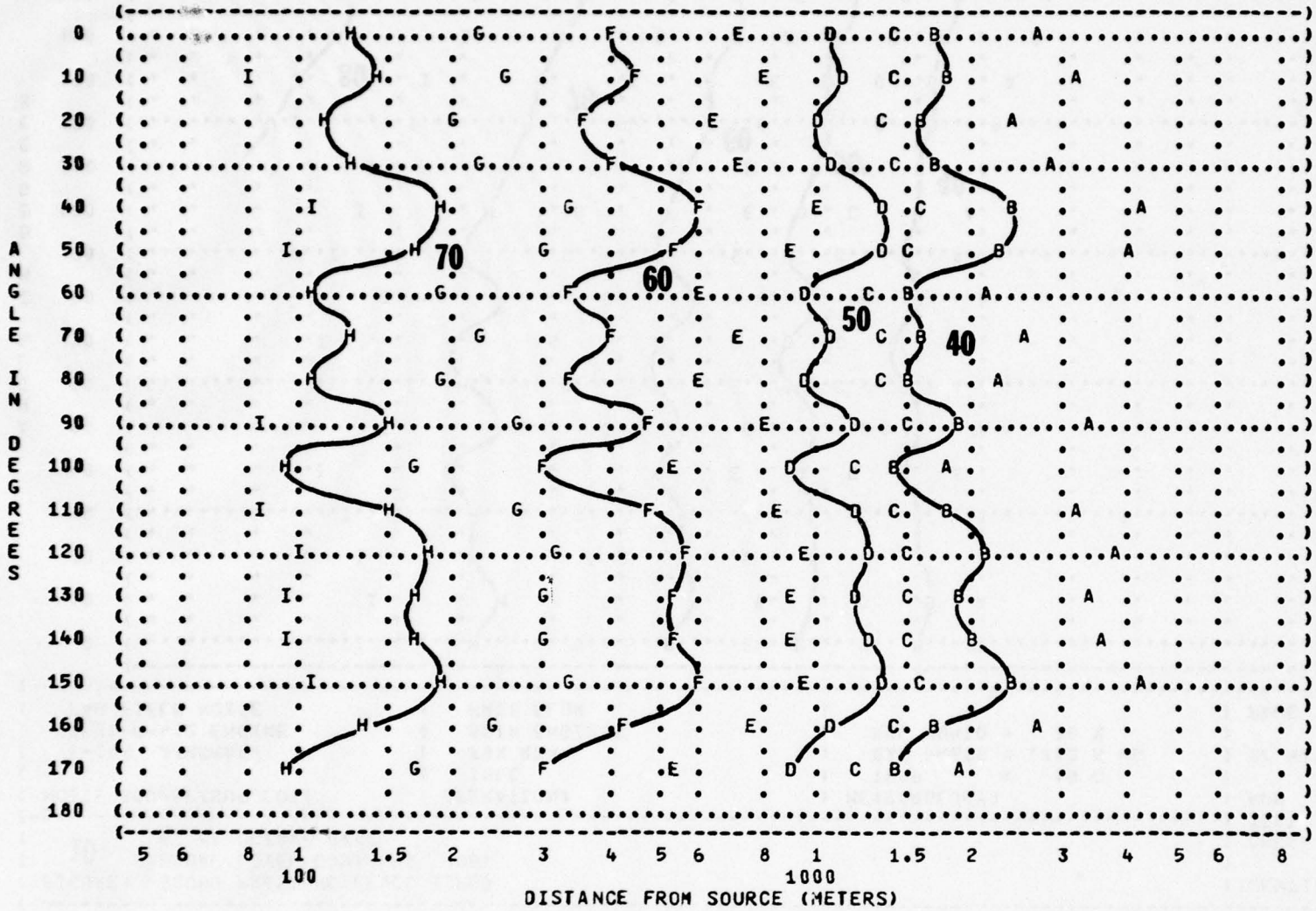


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 19

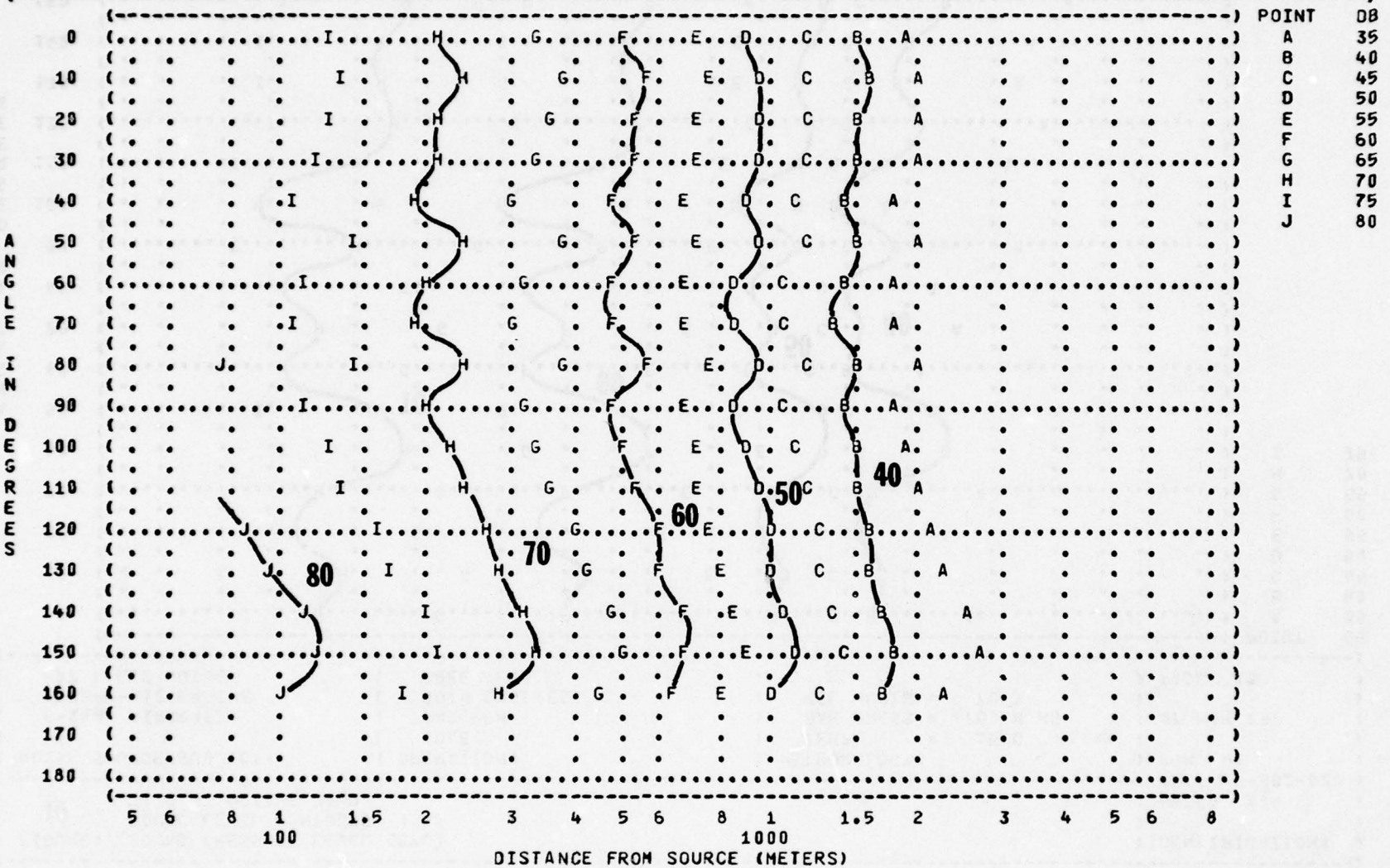


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 20

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

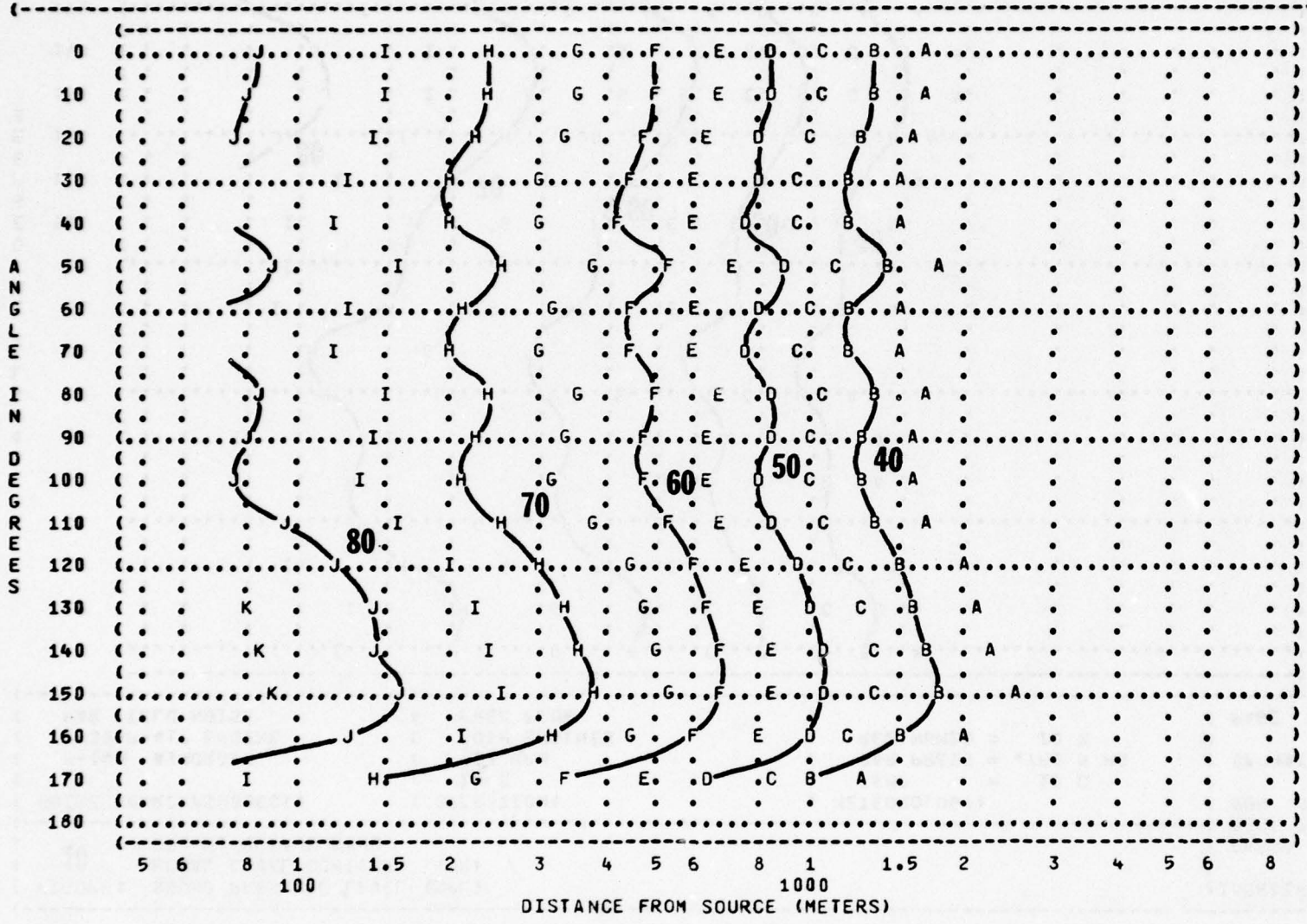


FIGURE: 10

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01

07 MAY 75

PAGE 21

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

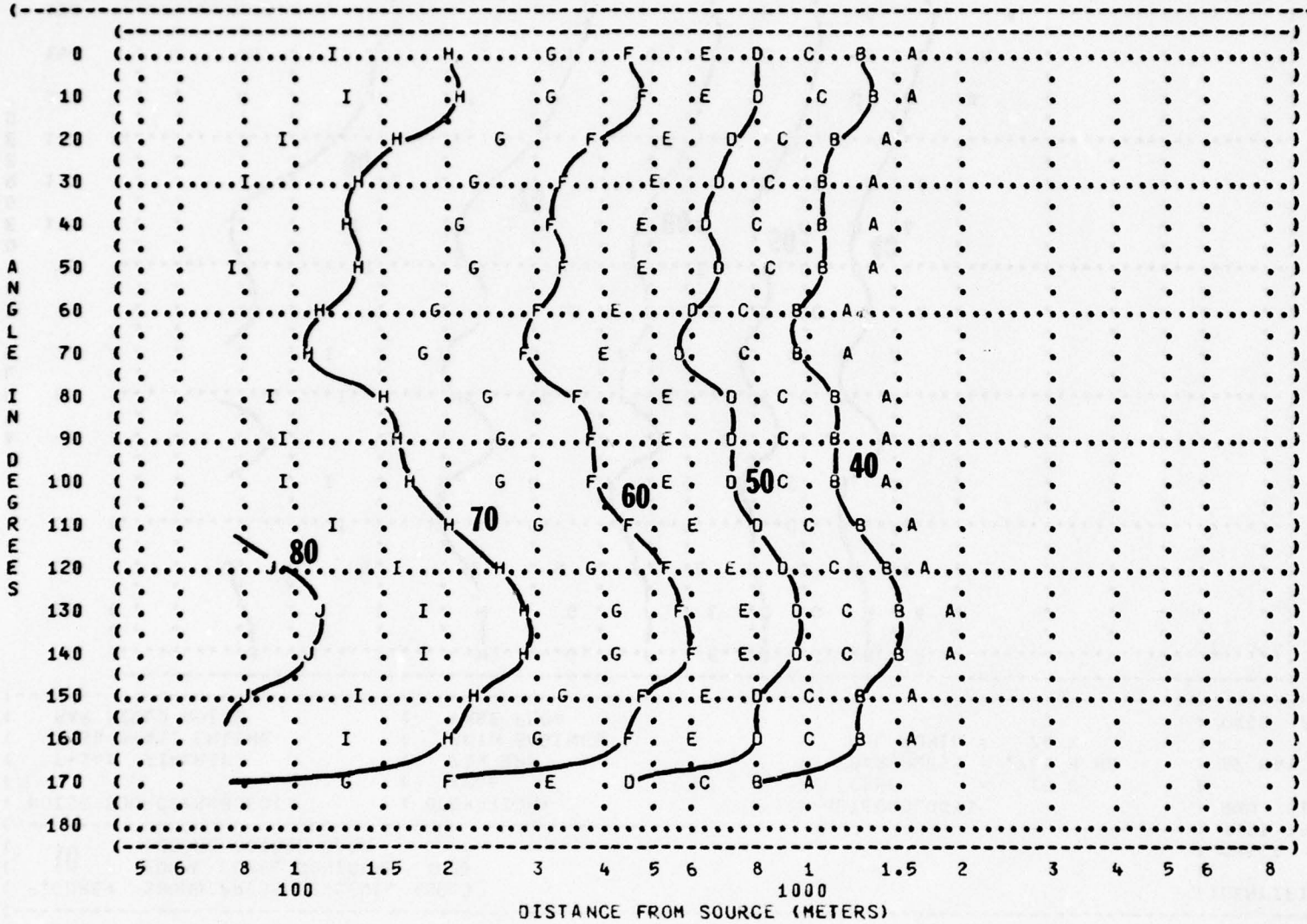


FIGURE: 10

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 22

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

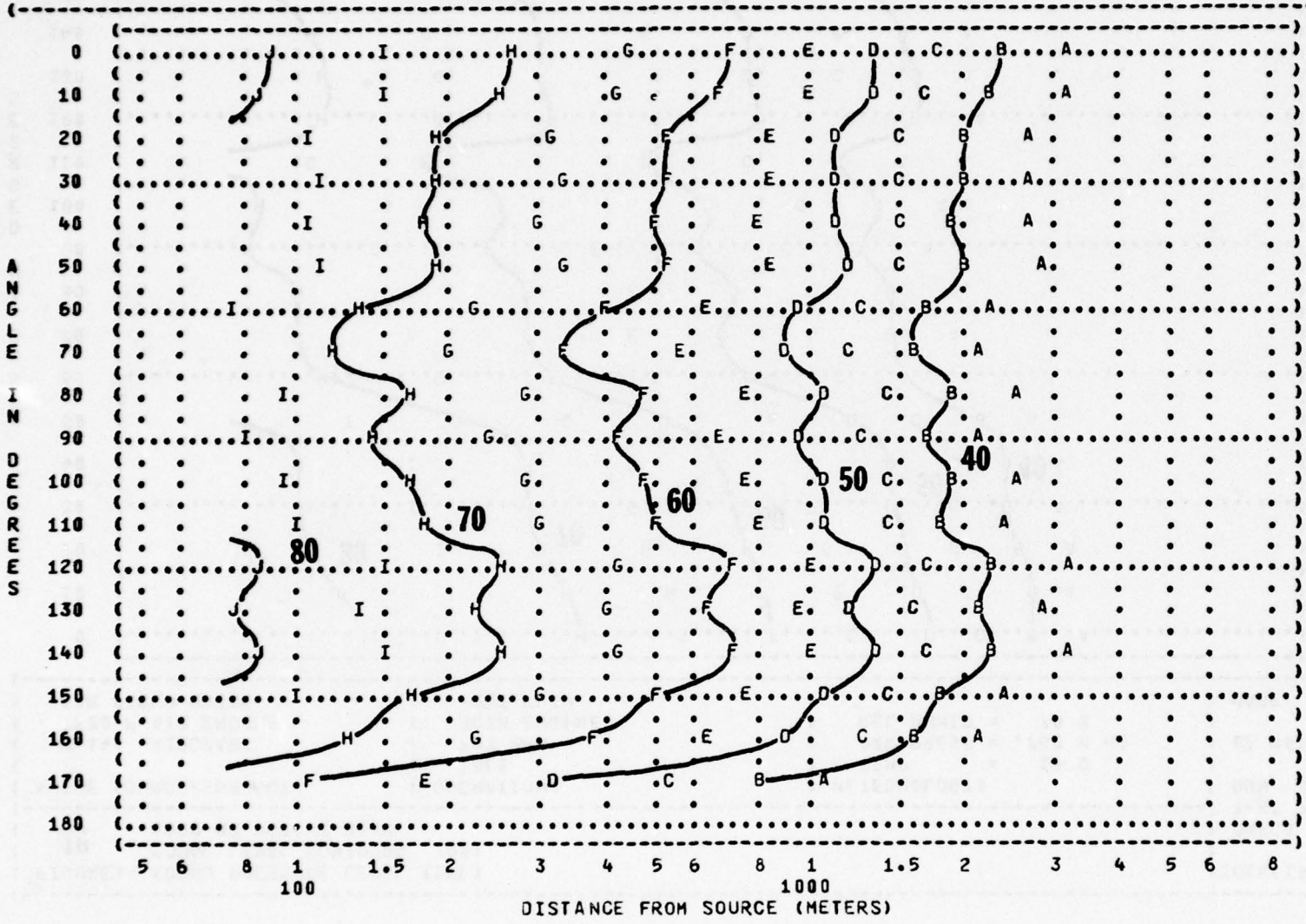


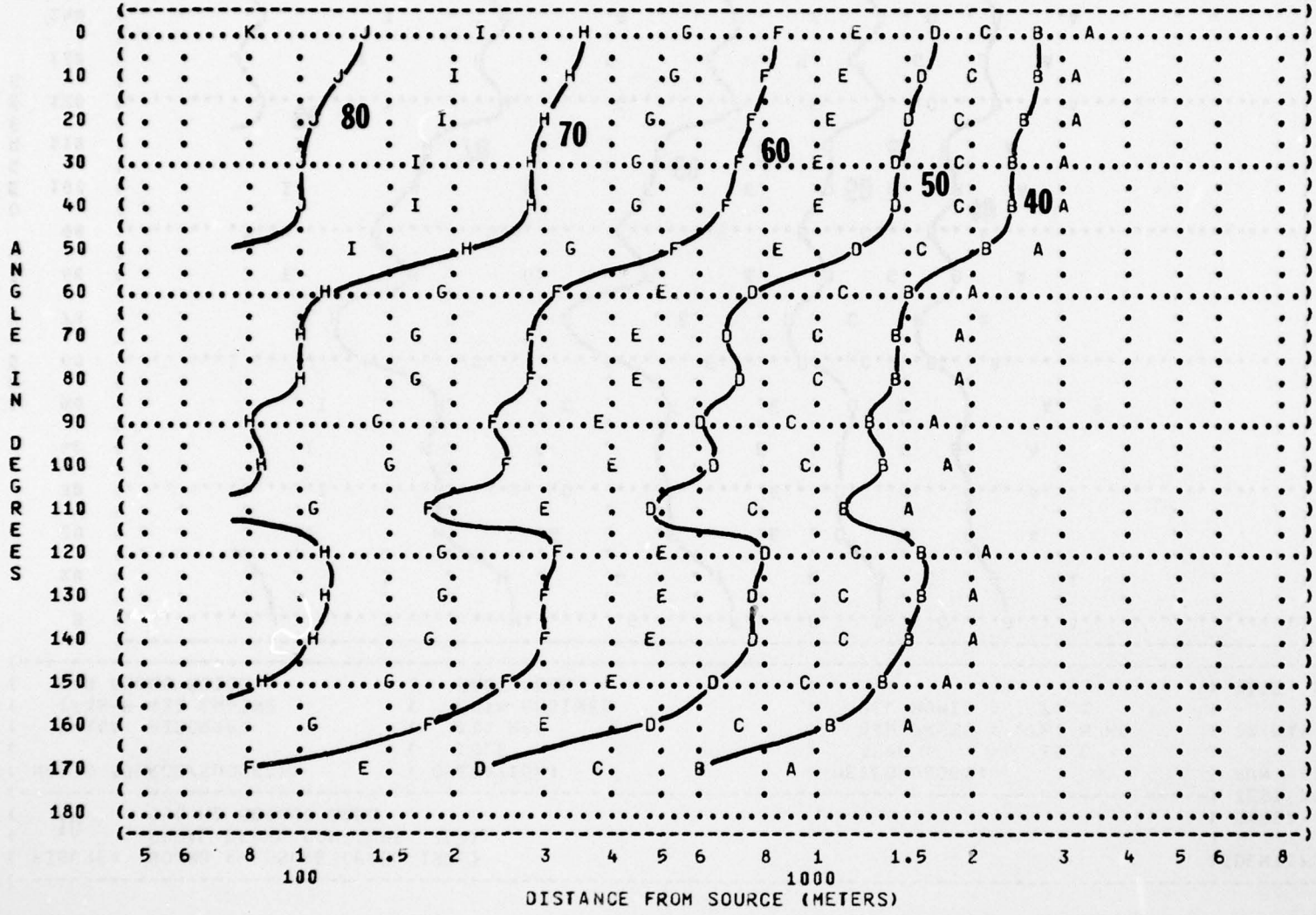
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 23



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

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

IDENTIFICATION: OMEGA 1.4 TEST 75-002-028 RUN 01 07 MAY 75 PAGE 24

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

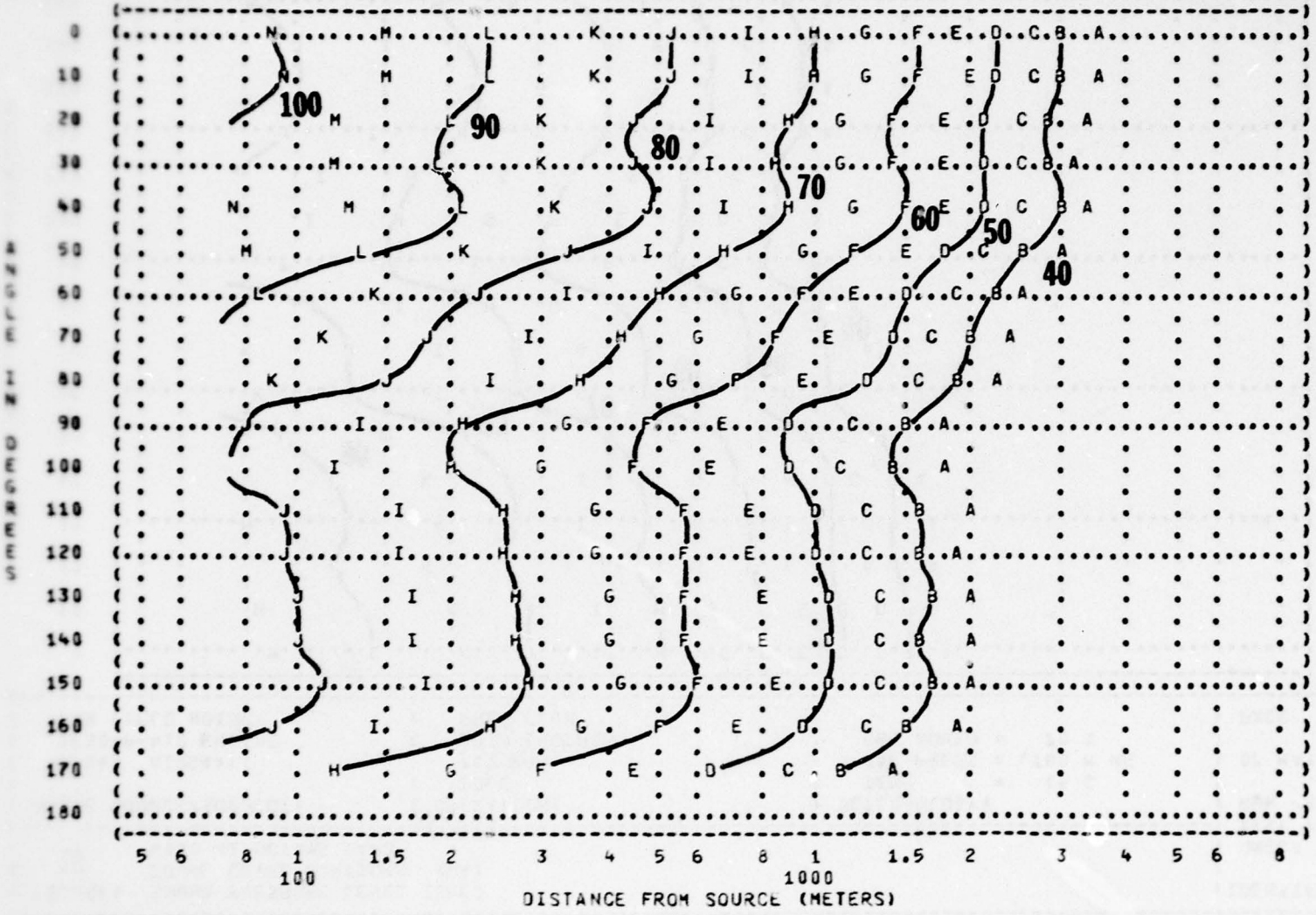


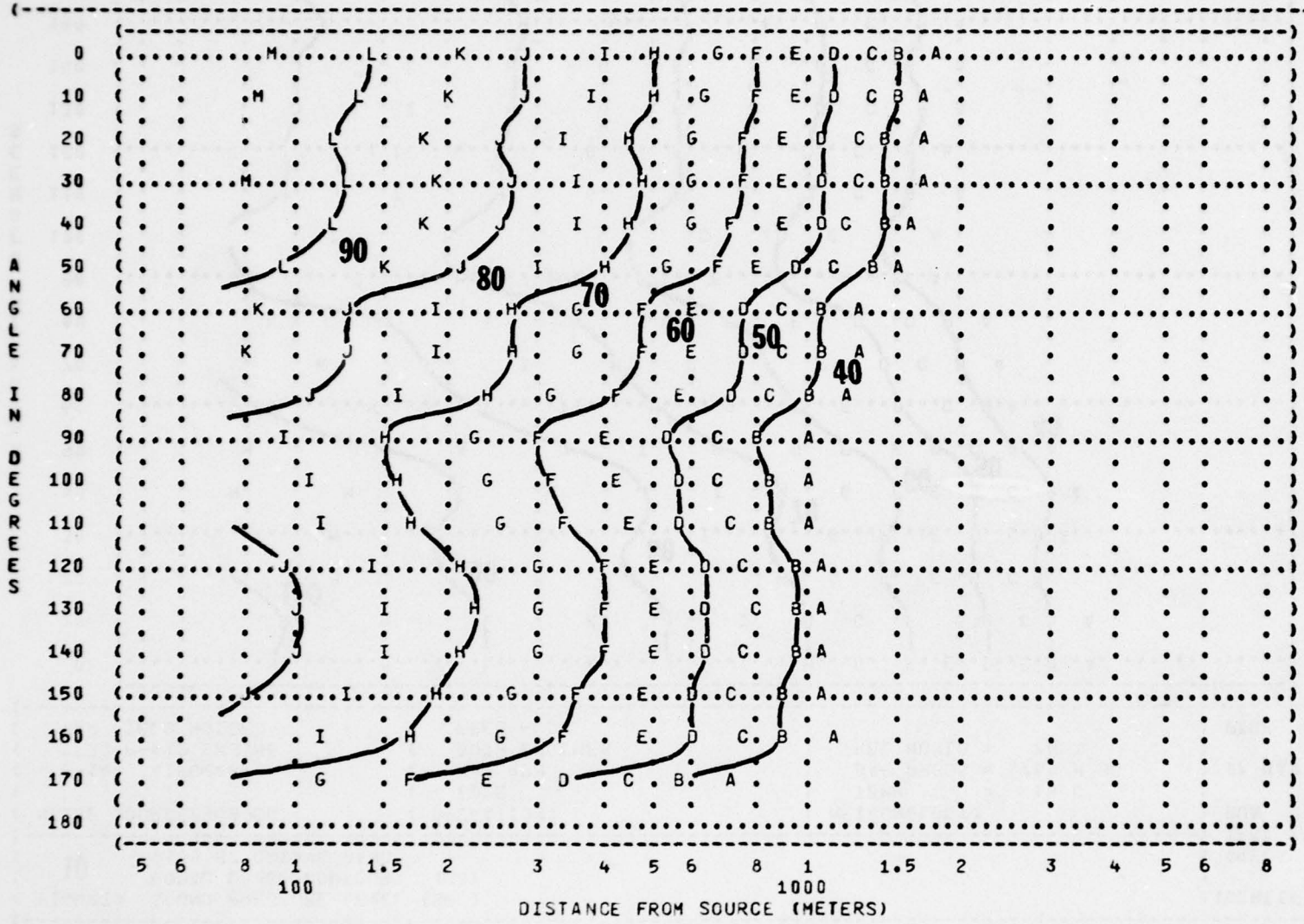
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 25



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

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

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
IDLE
70% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 01
07 MAY 75
PAGE 26

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

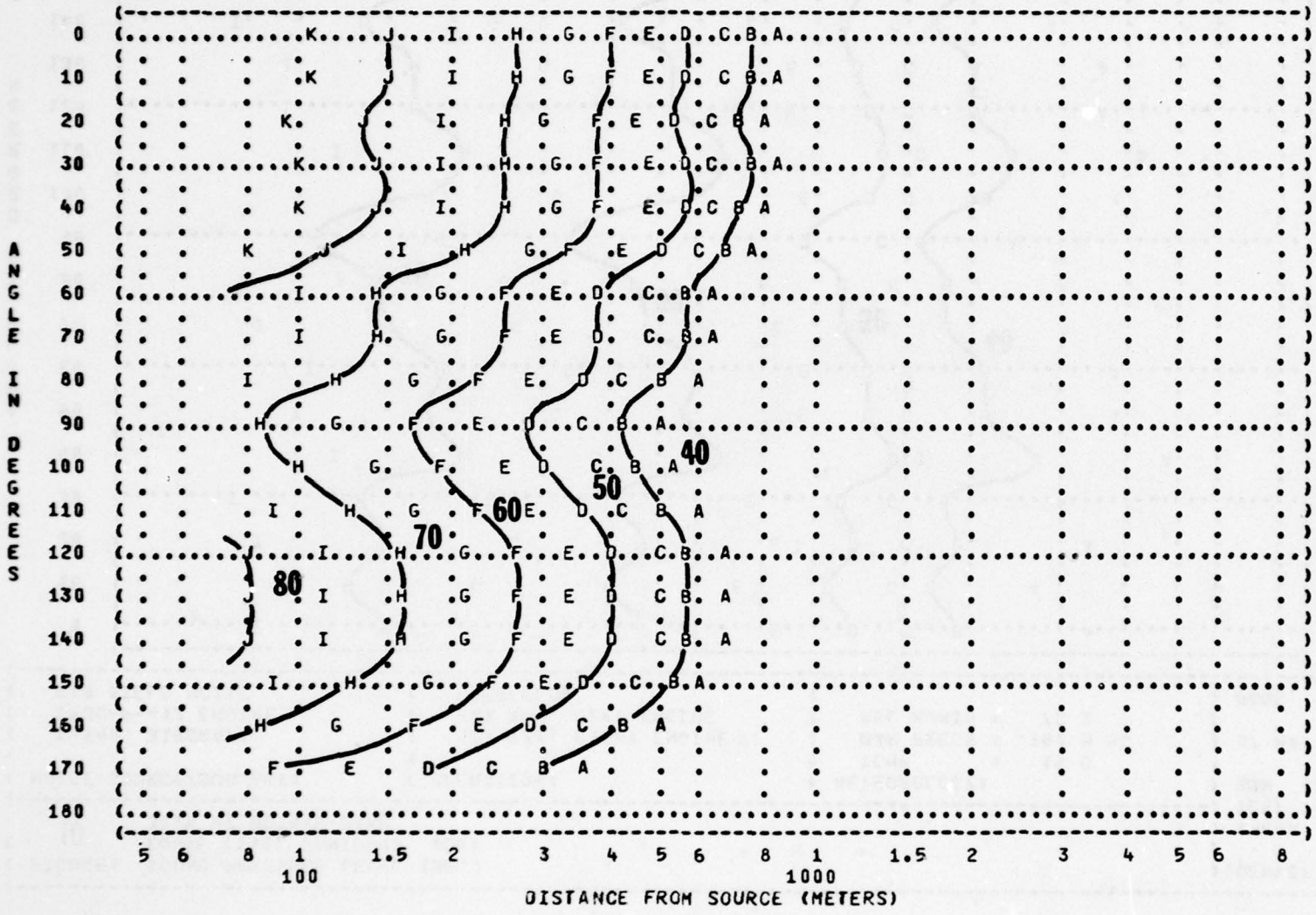


FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 18

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

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

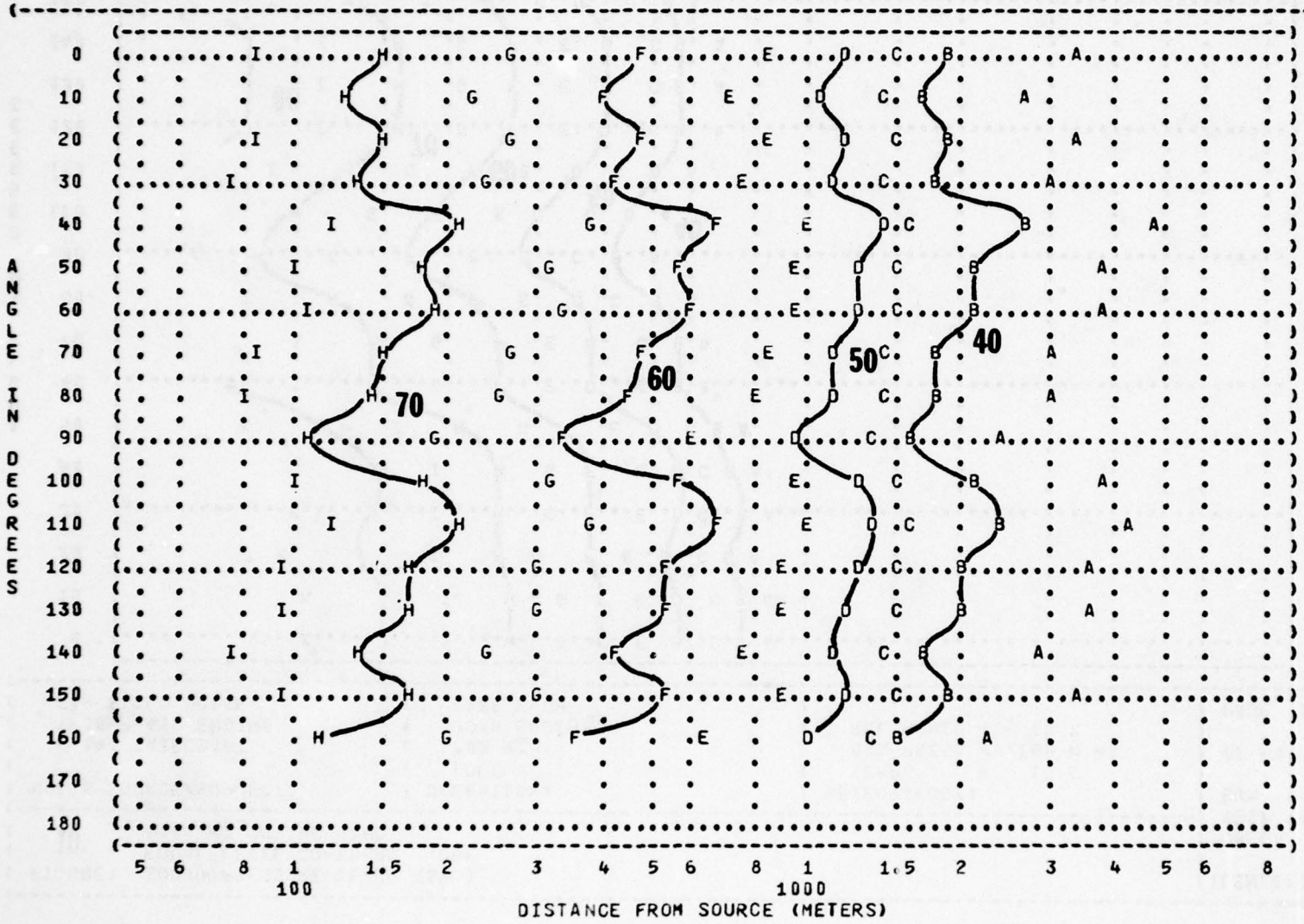


FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 19

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

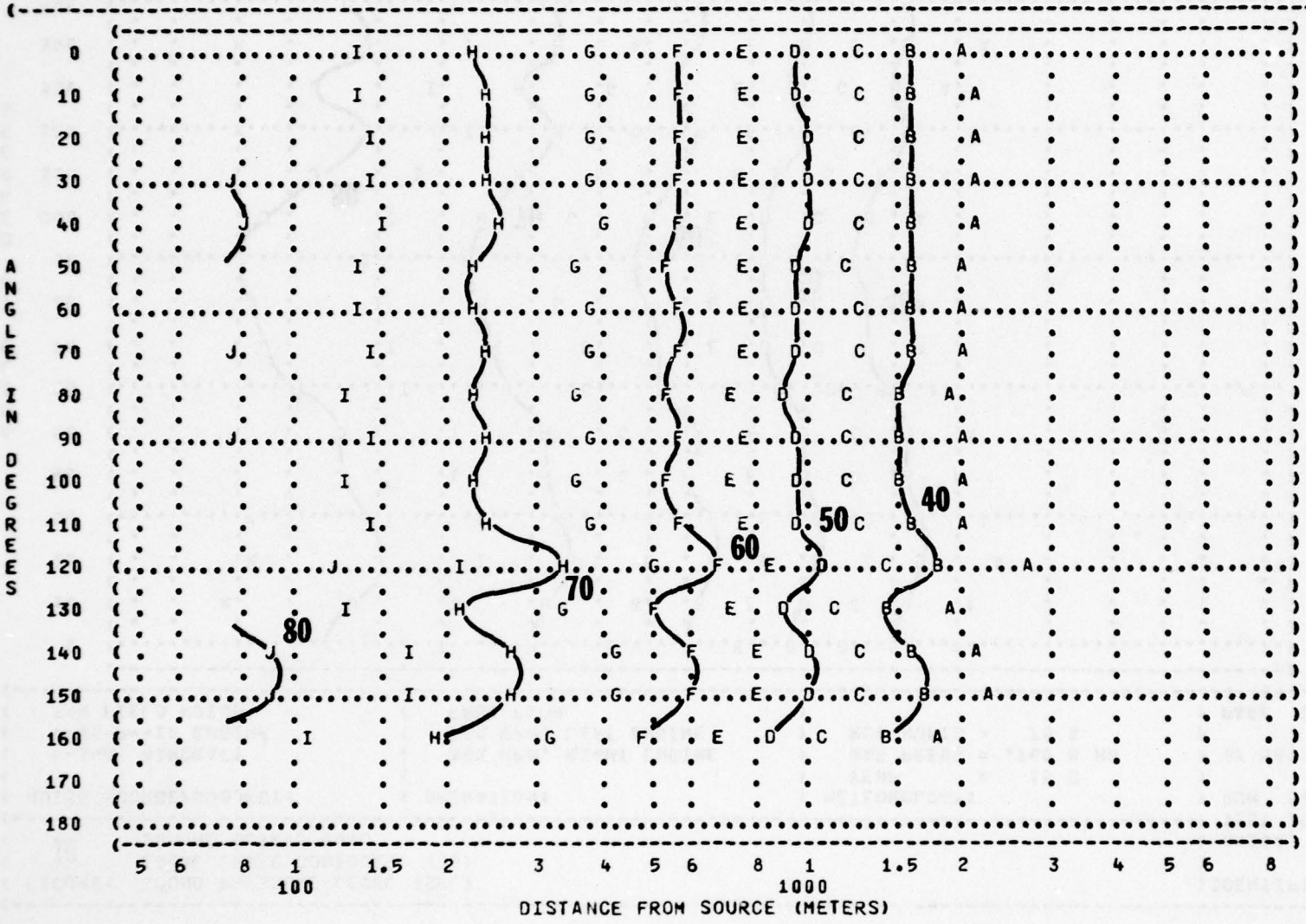


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 20

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

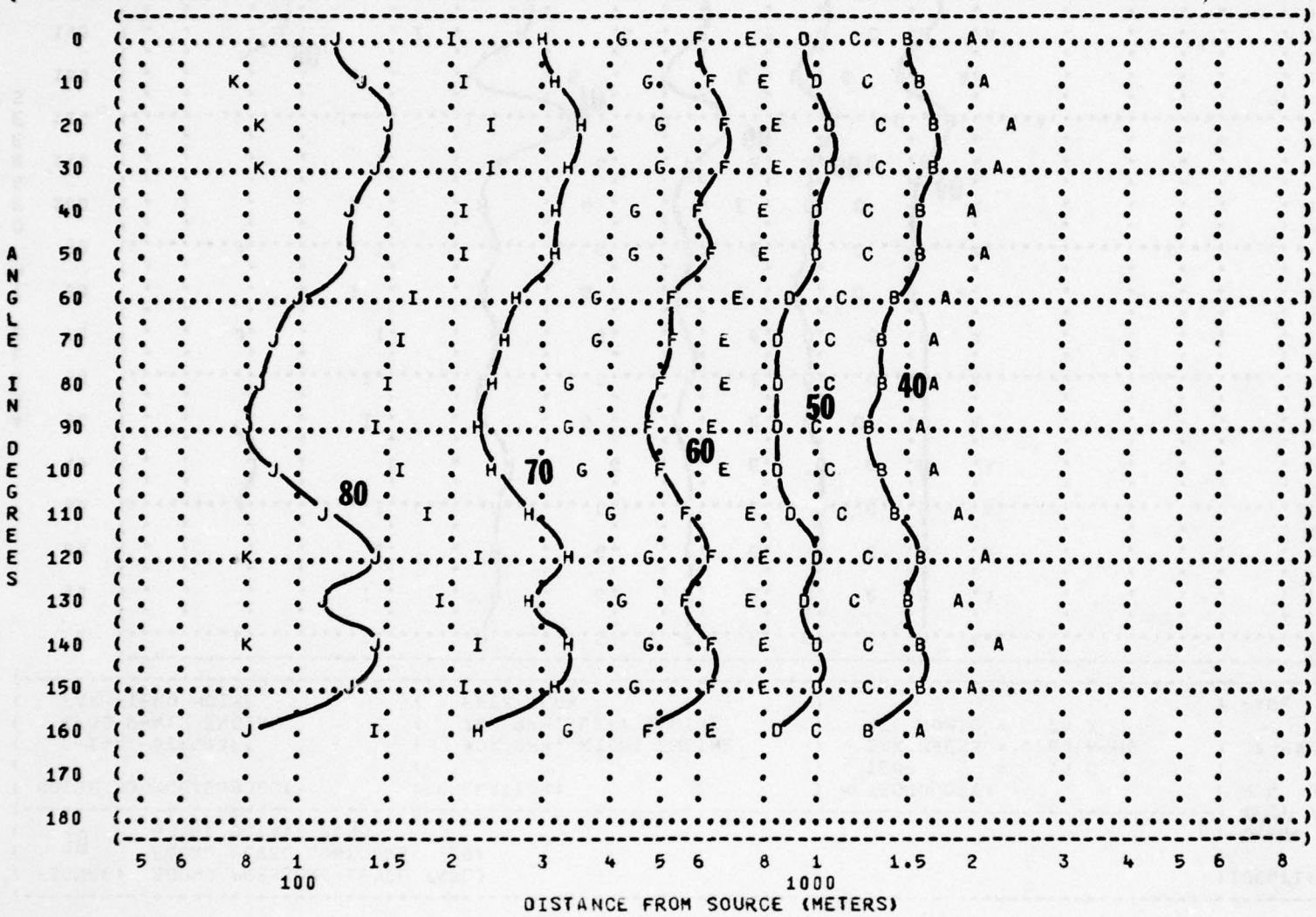


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 21

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

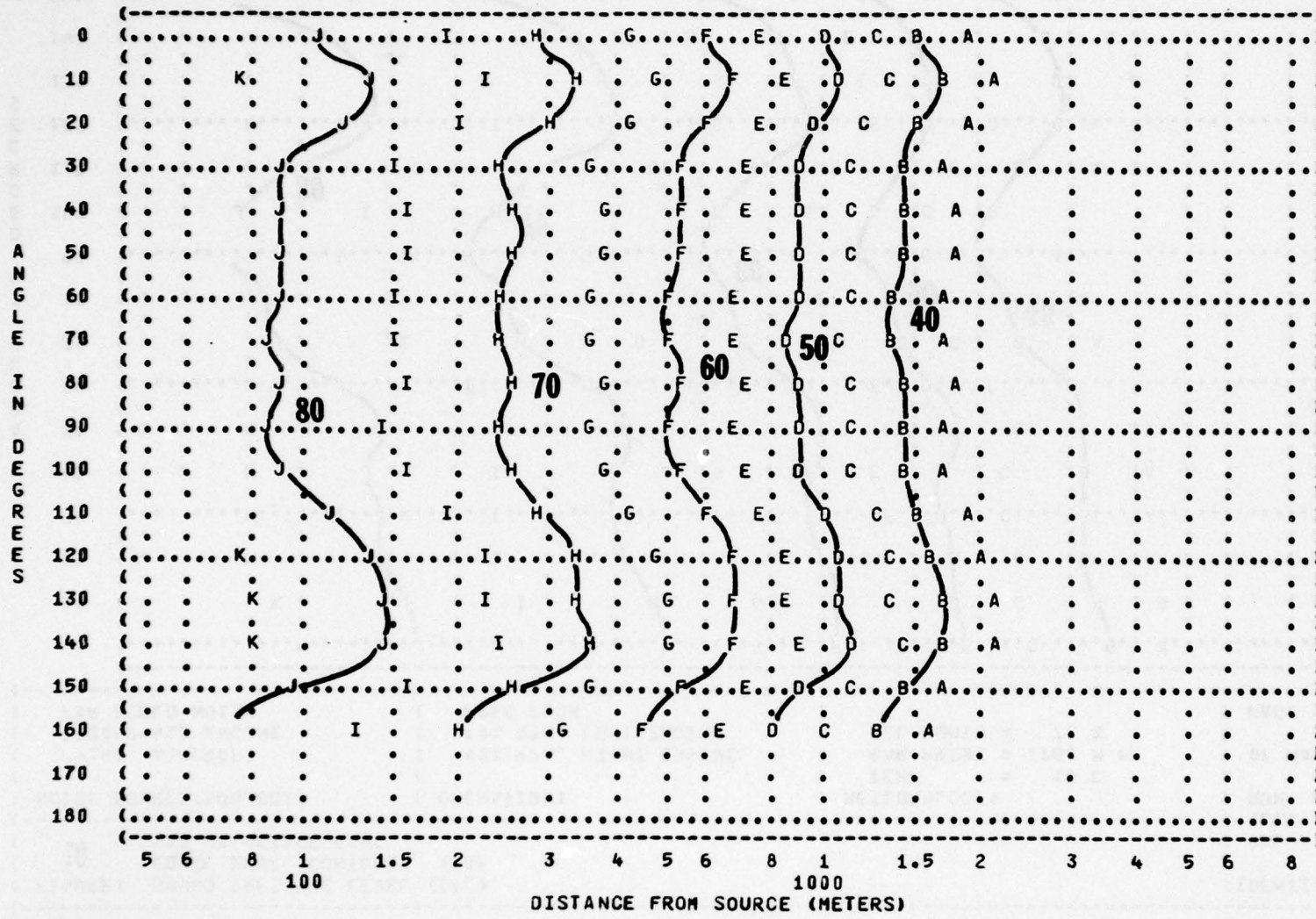


FIGURE: 10

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

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 22

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

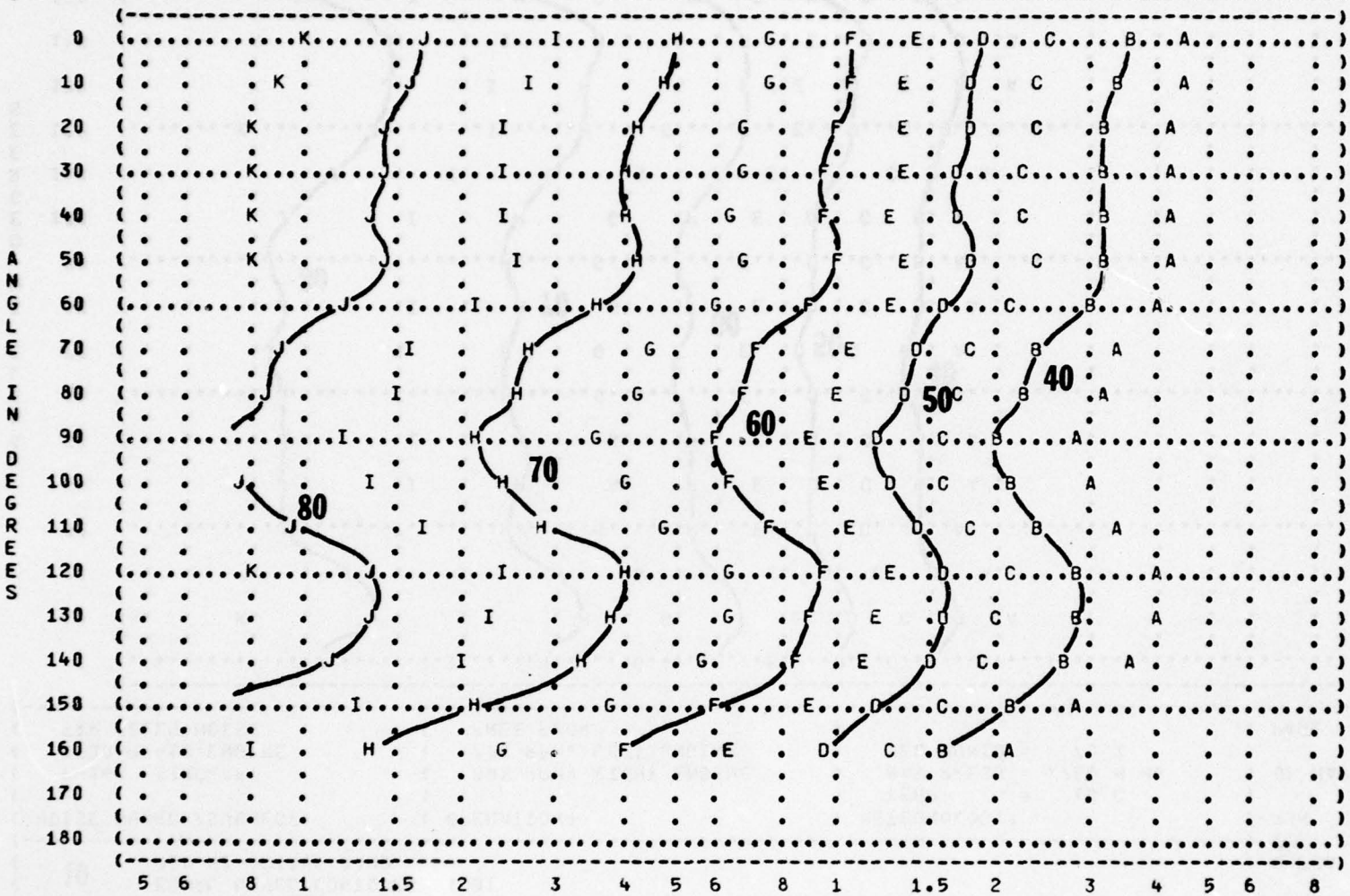


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 23

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

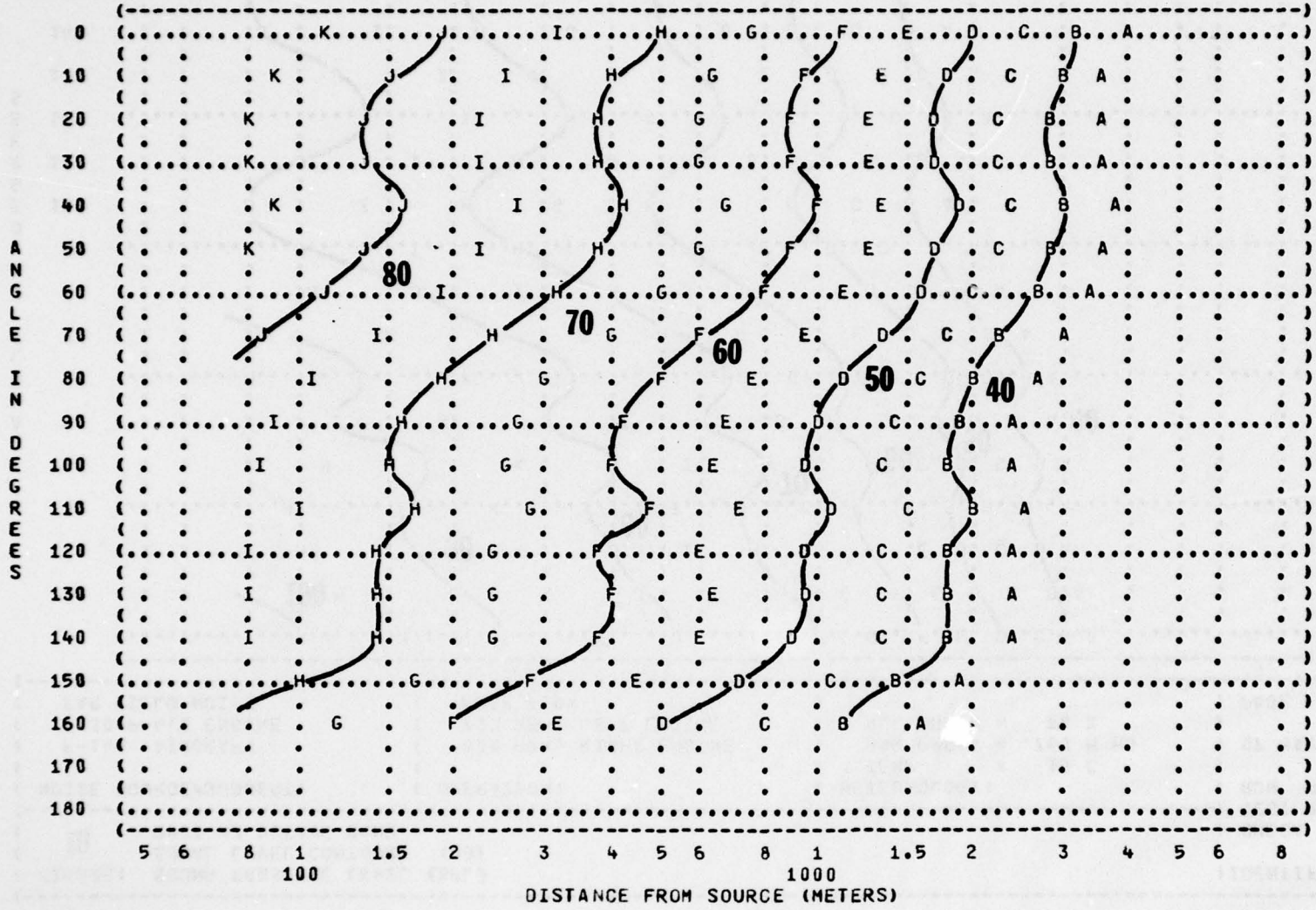


FIGURE: 10

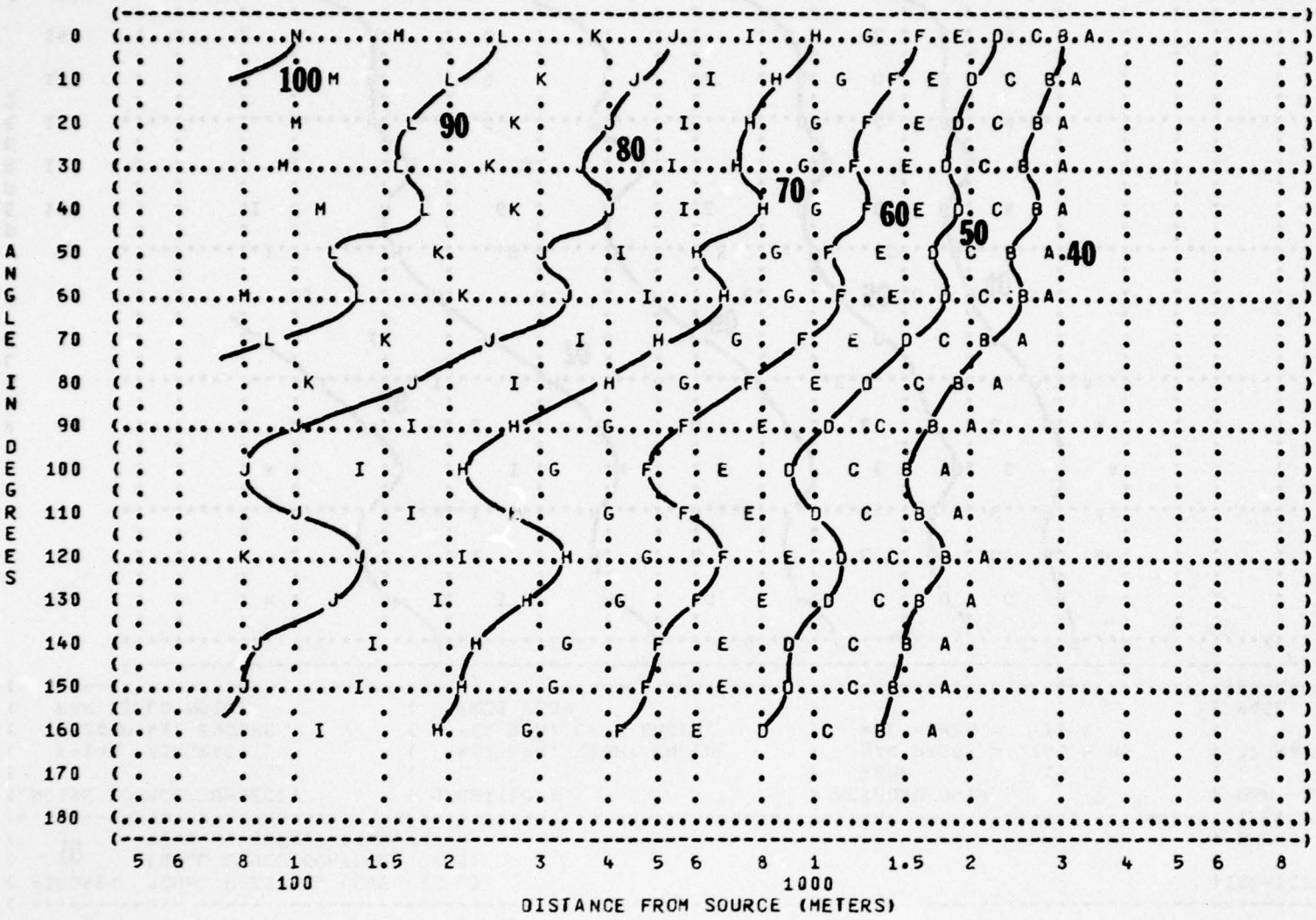
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATIONS:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 24



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

FIGURE: 10

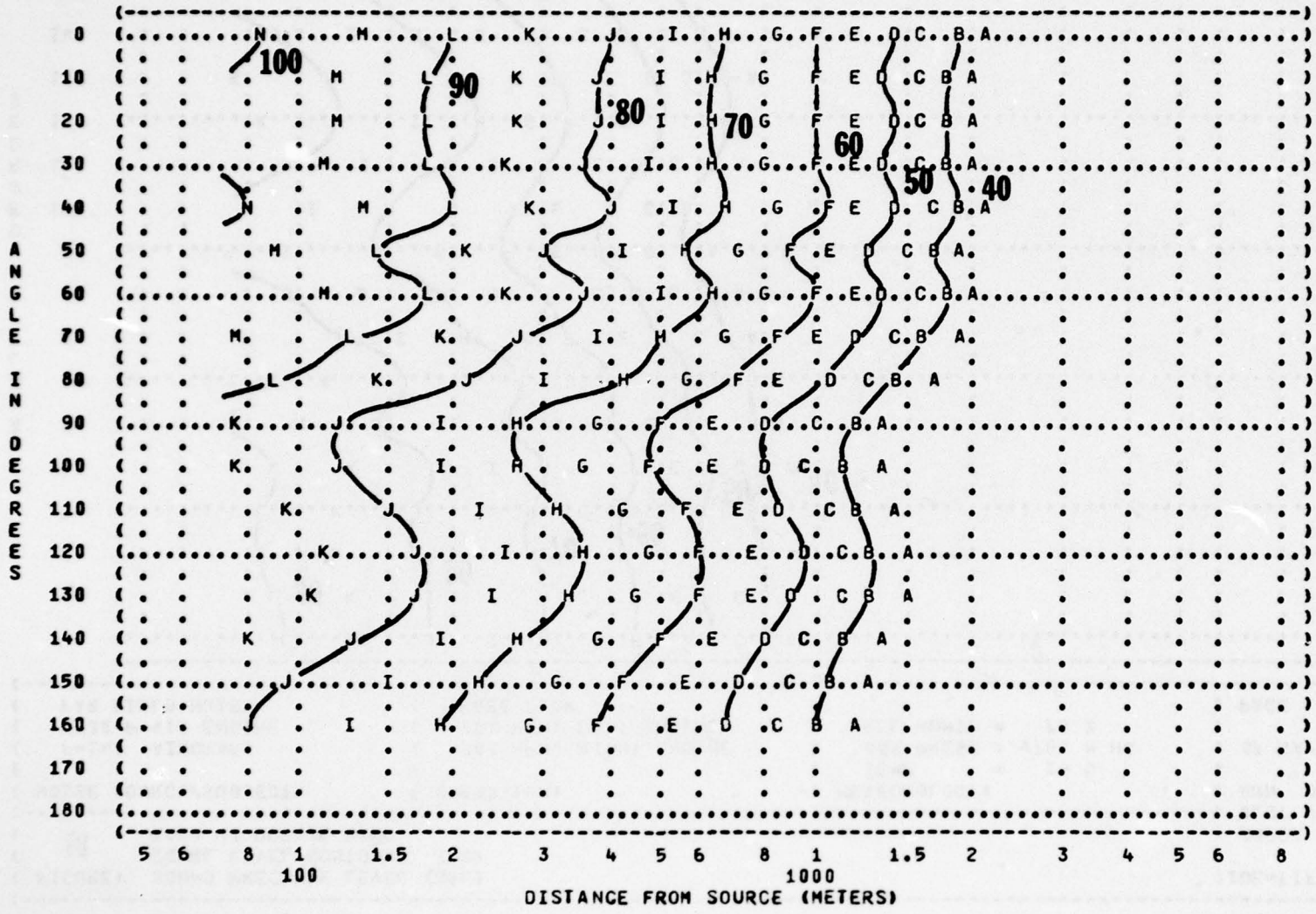
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 25



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

FIGURE: 10

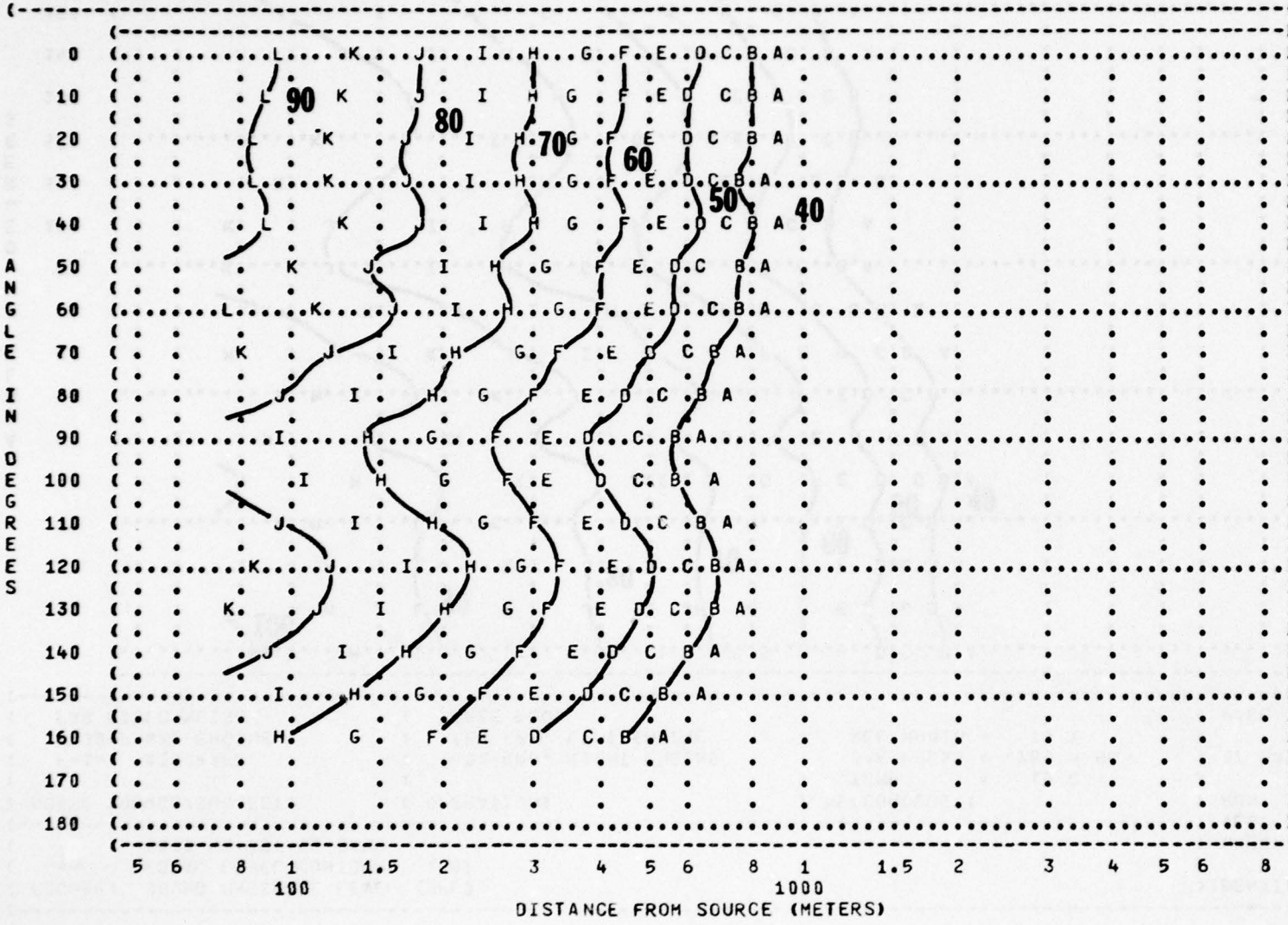
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM, RIGHT ENGINE
70% RPM, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 02
07 MAY 75
PAGE 26



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

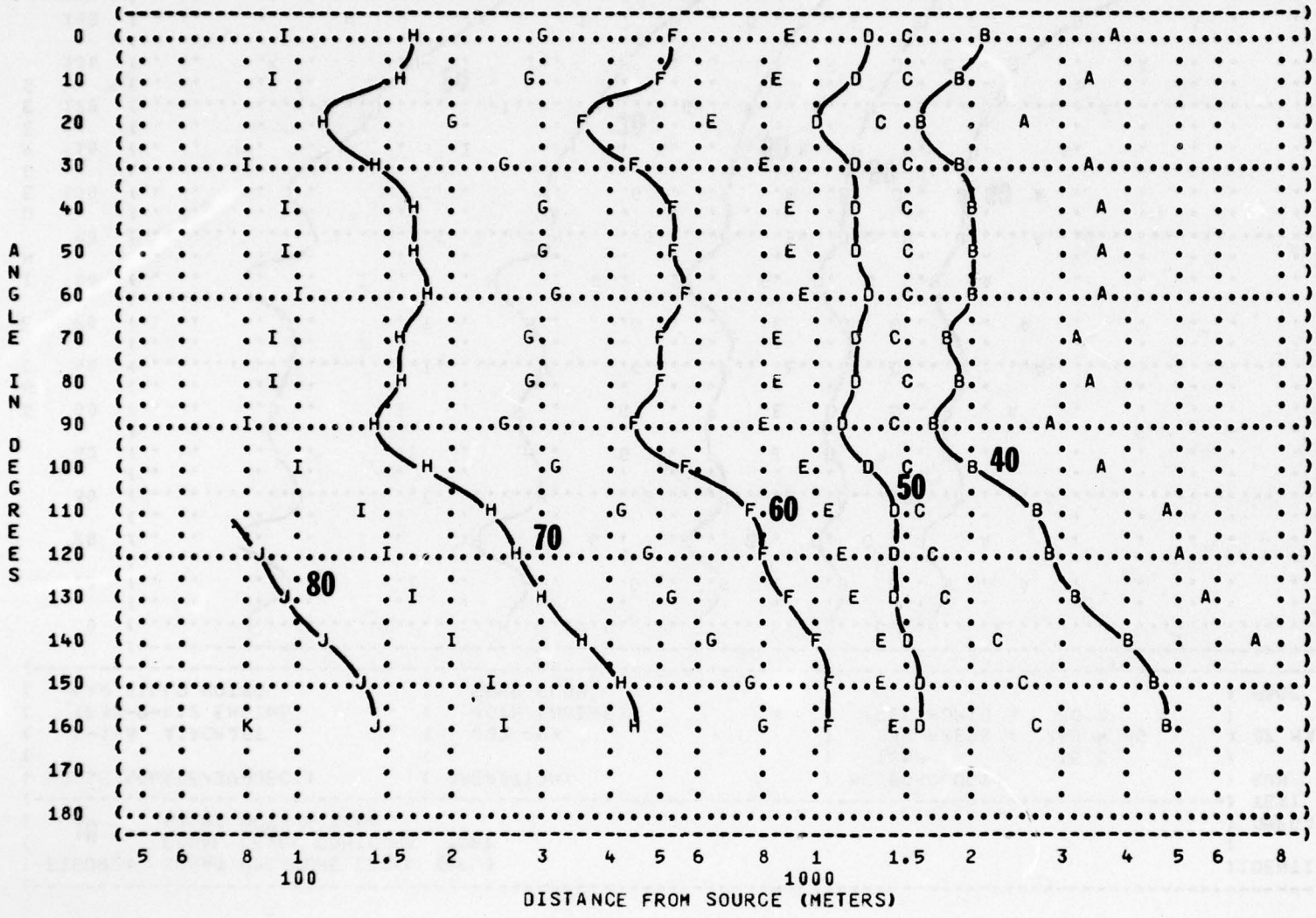
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 18



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

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

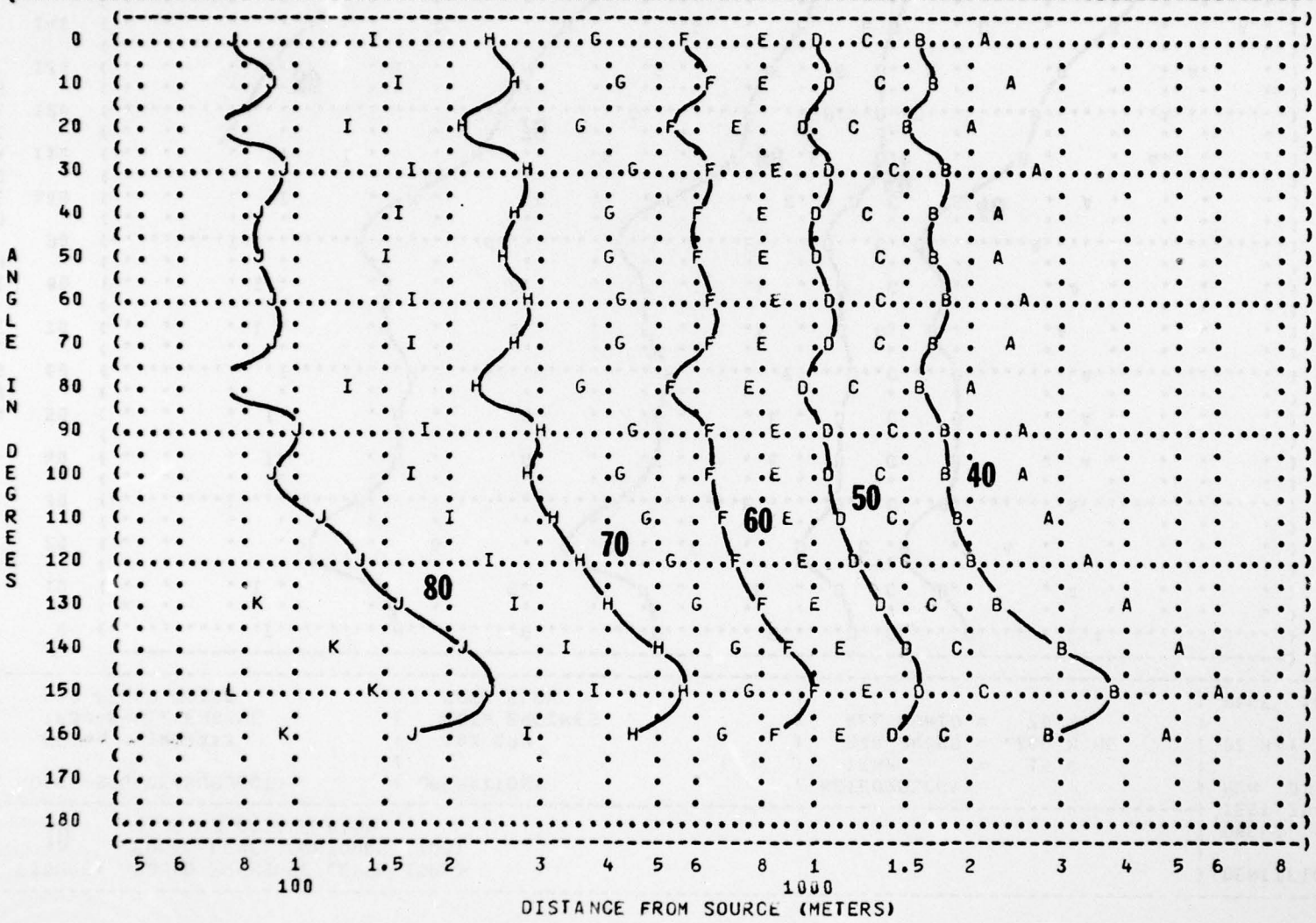
NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

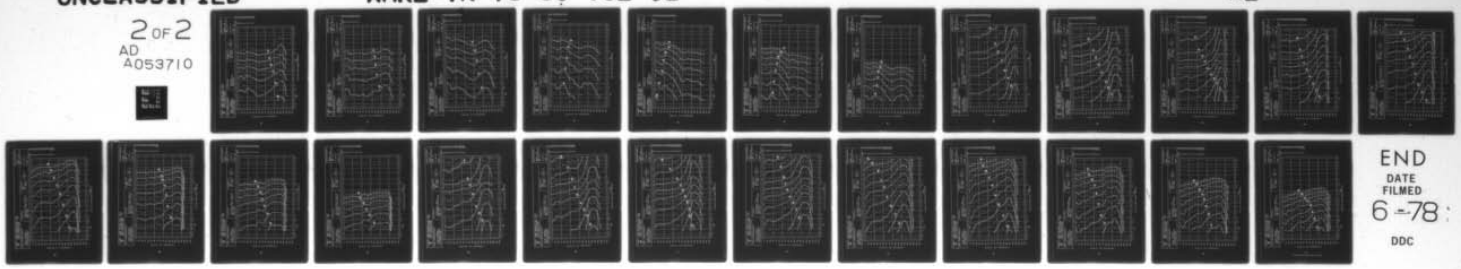
IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 19

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



AD-A053 710 AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OHIO F/G 1/2
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 92. F-14A AIR--ETC(U)
JUN 77 R G POWELL
UNCLASSIFIED AMRL-TR-75-50-VOL-92 NL

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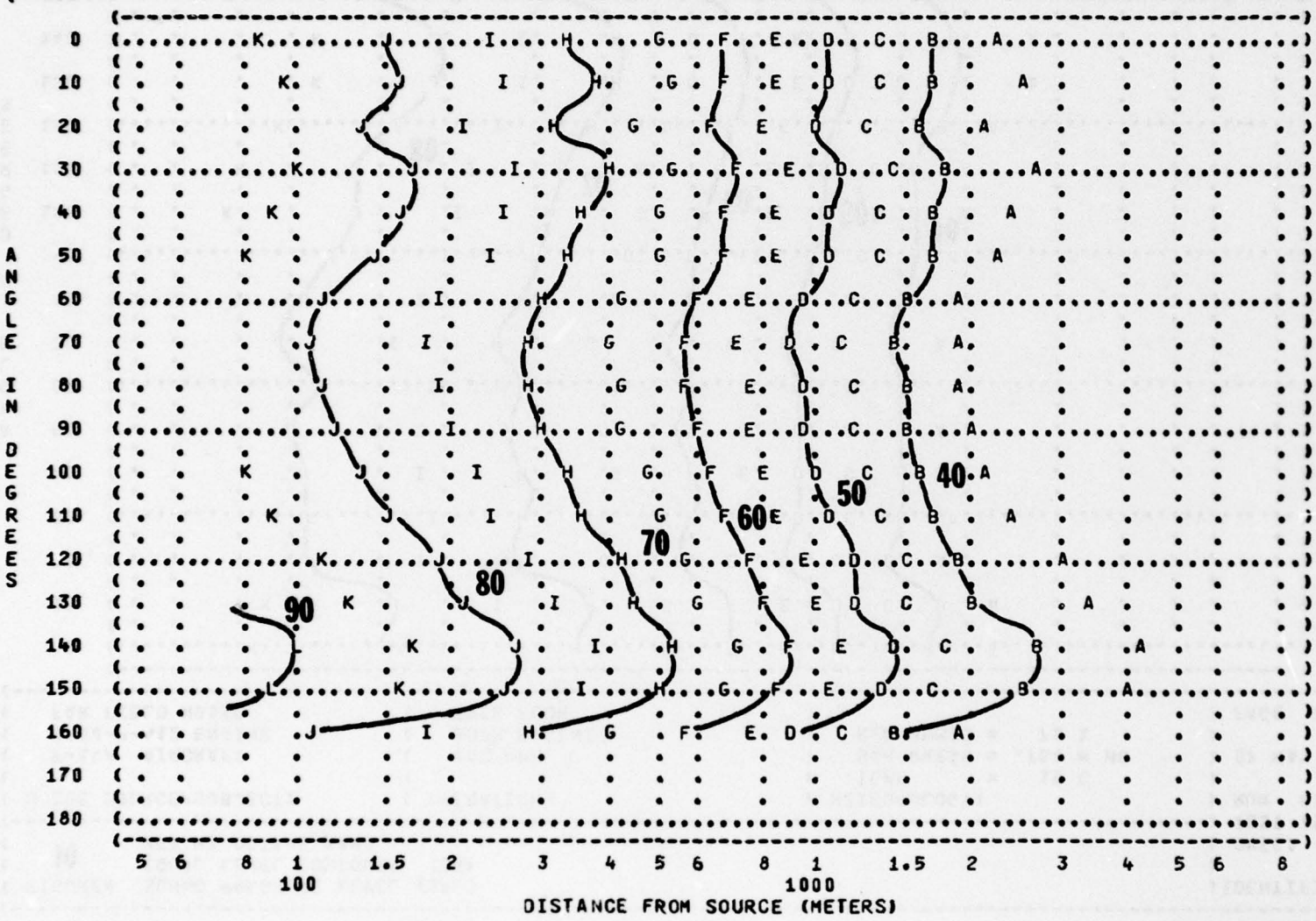
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 20



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

FIGURE: 10

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 21

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

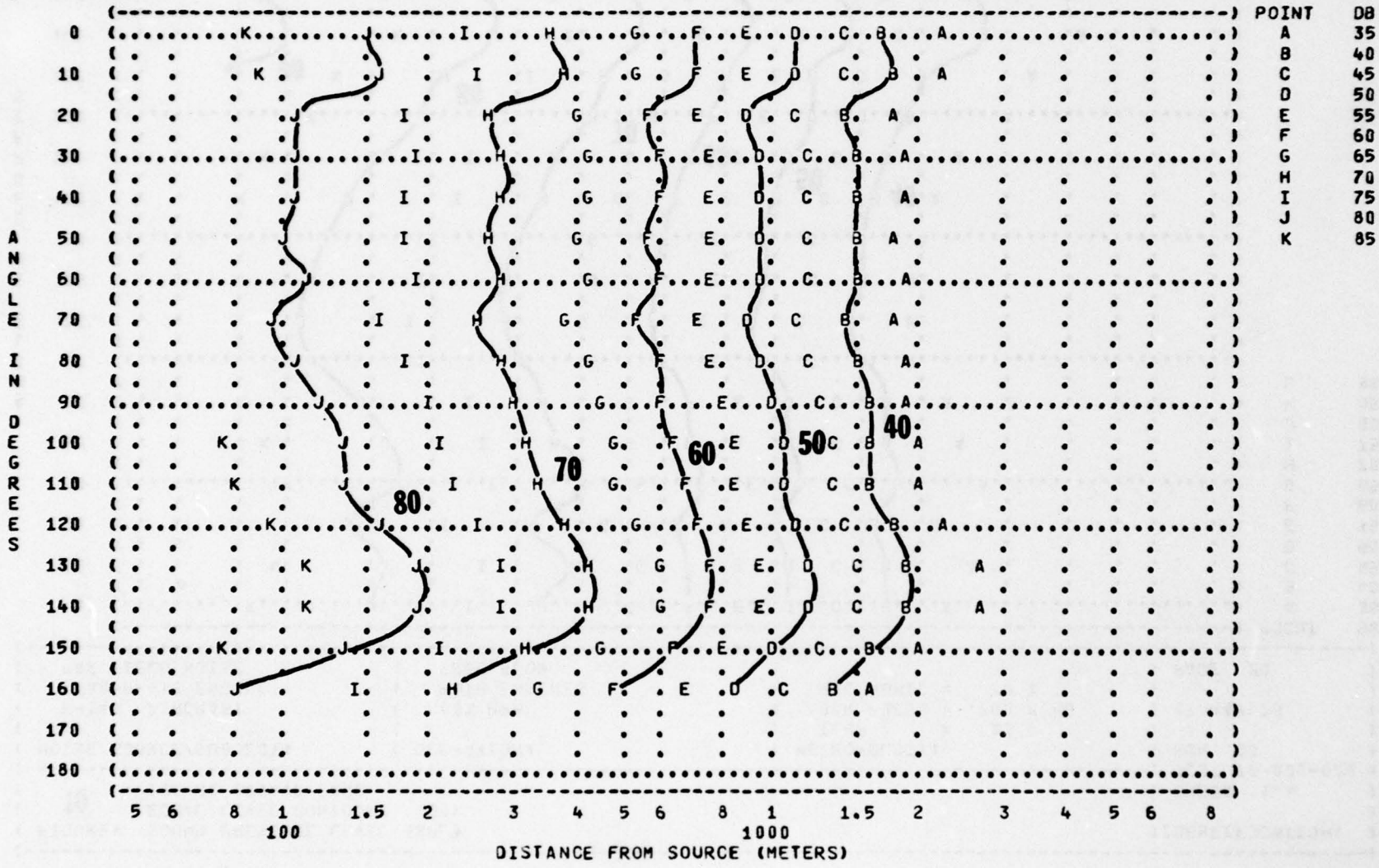


FIGURE: 10

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

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 22

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

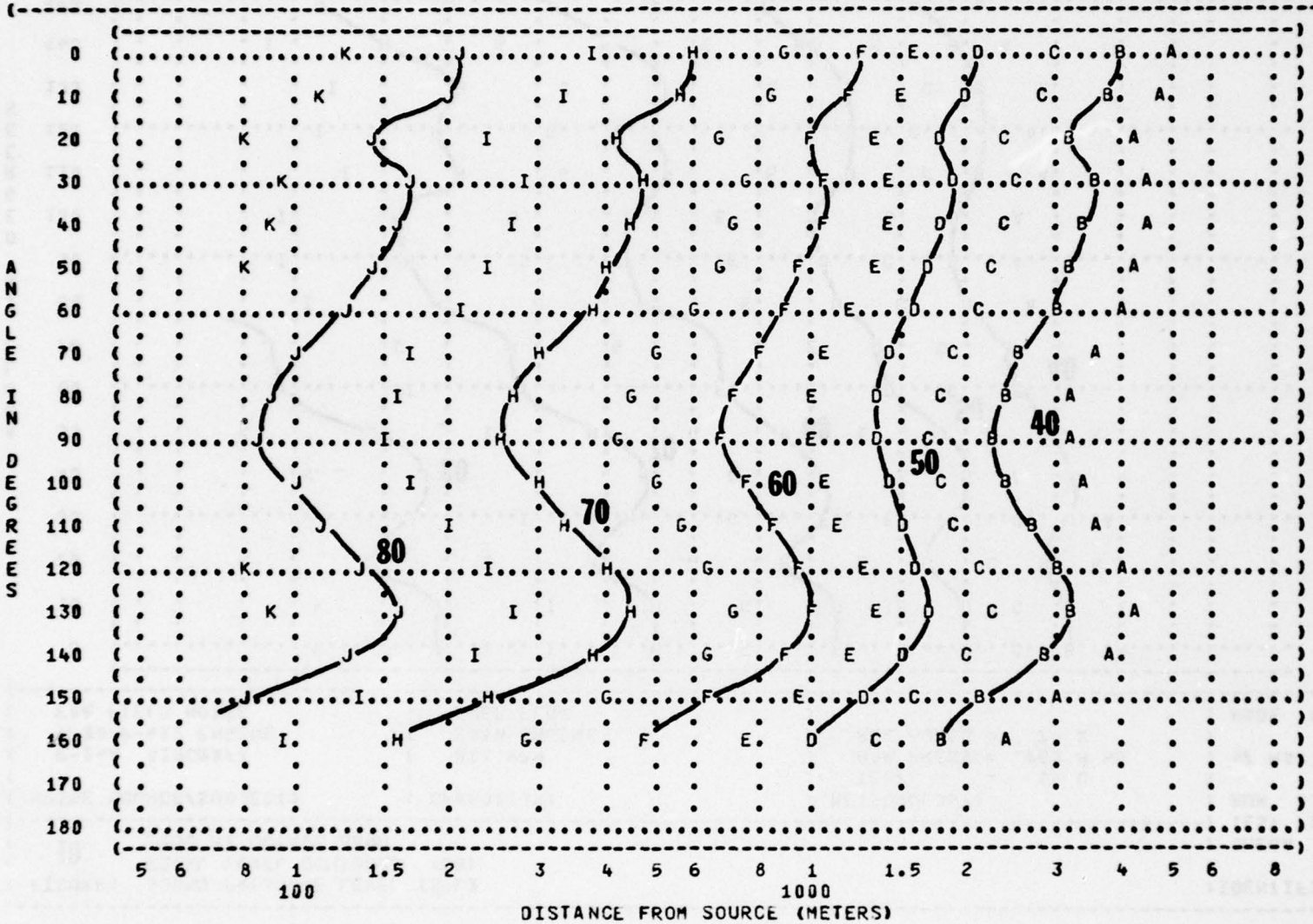


FIGURE: 10

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

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 23

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

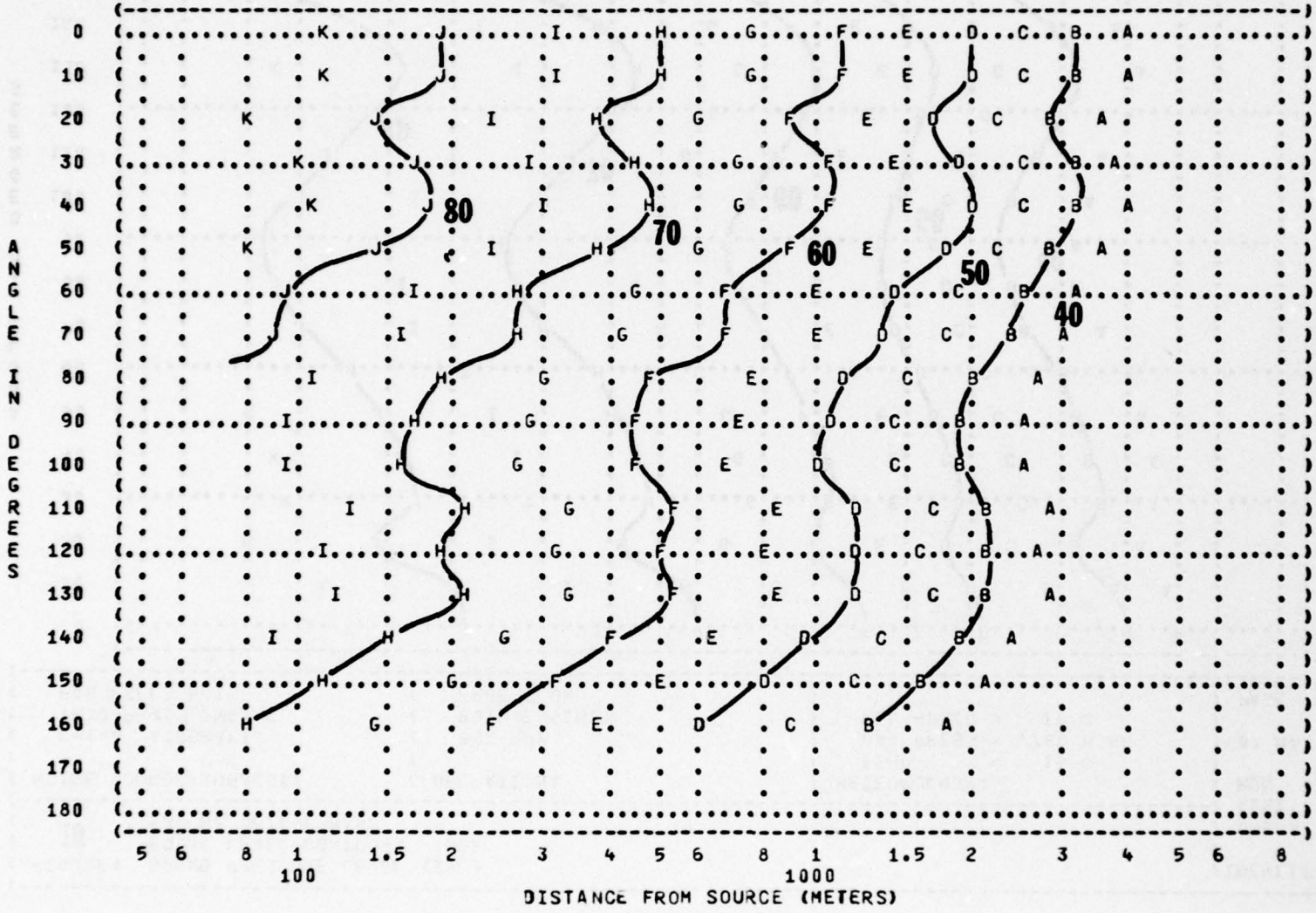


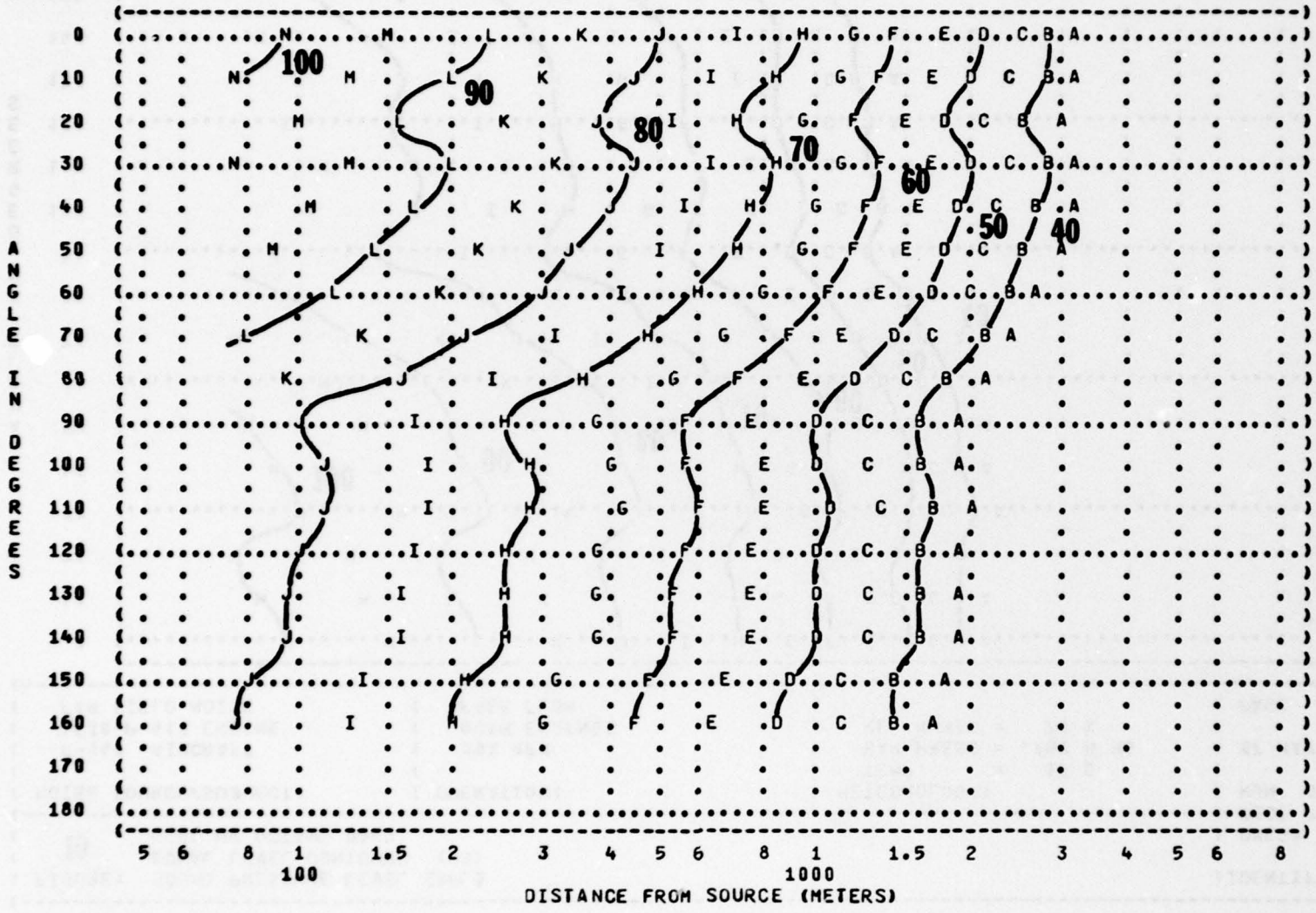
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 24



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

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 25

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

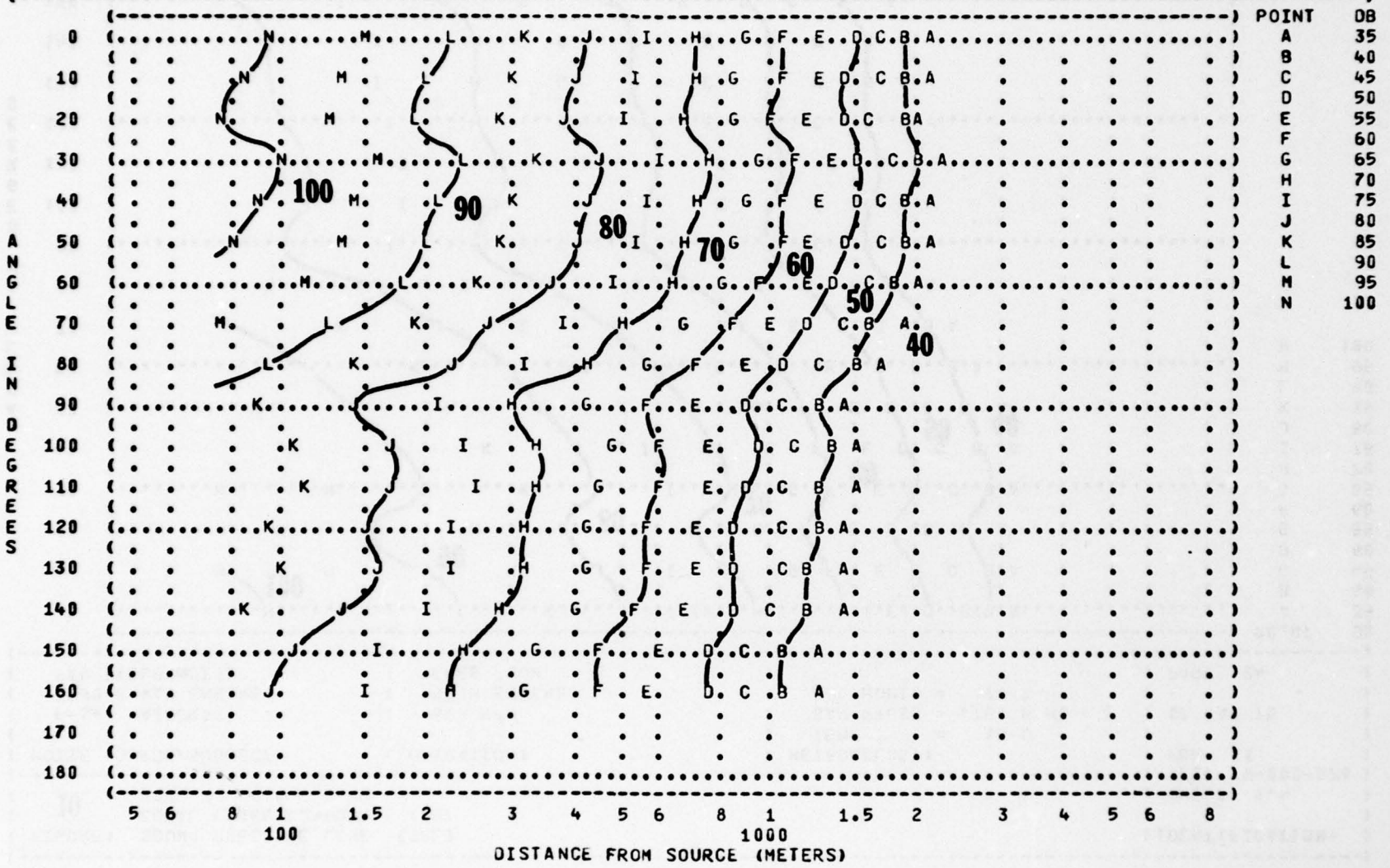


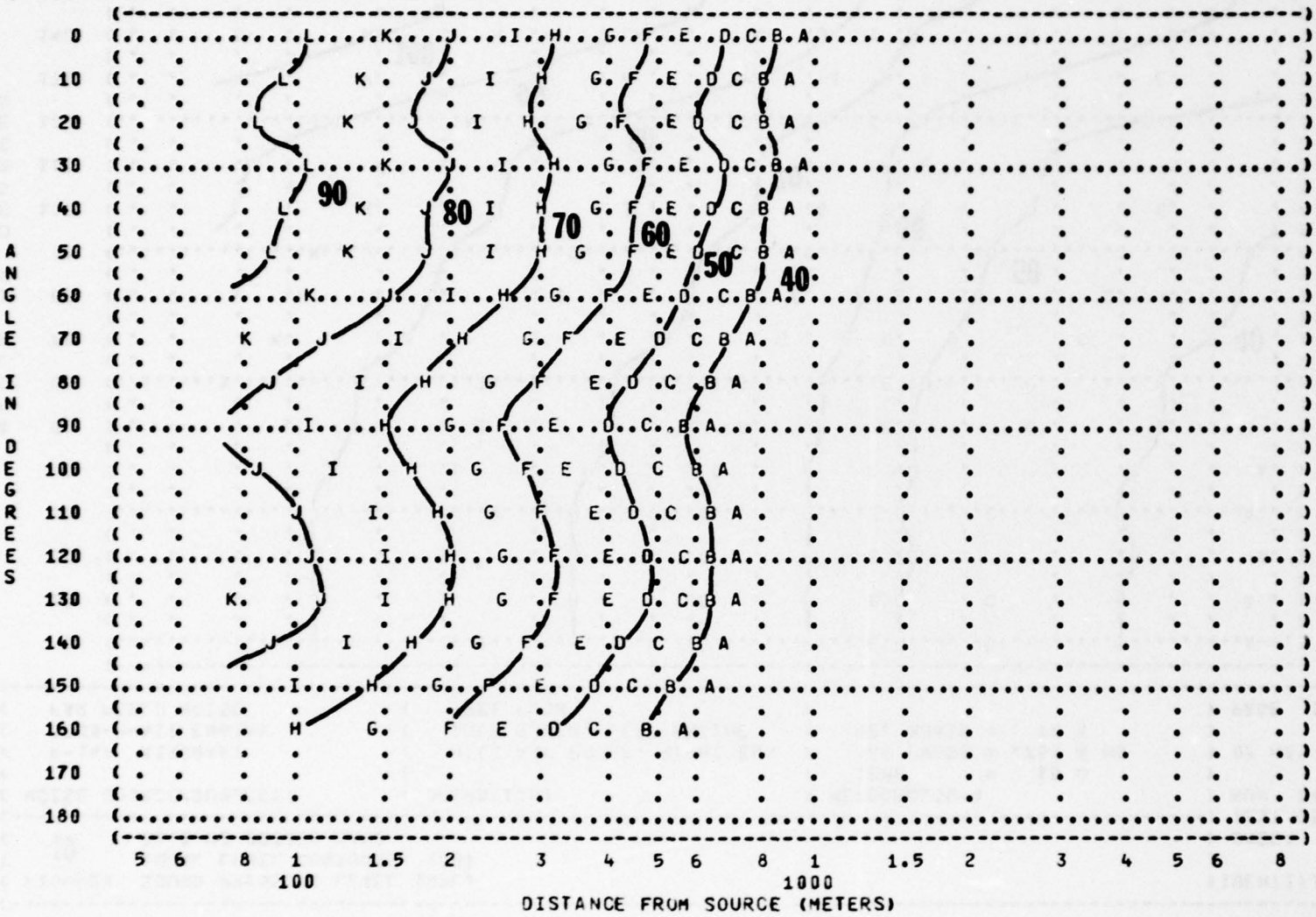
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 03
07 MAY 75
PAGE 26

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
FREE FLOW

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

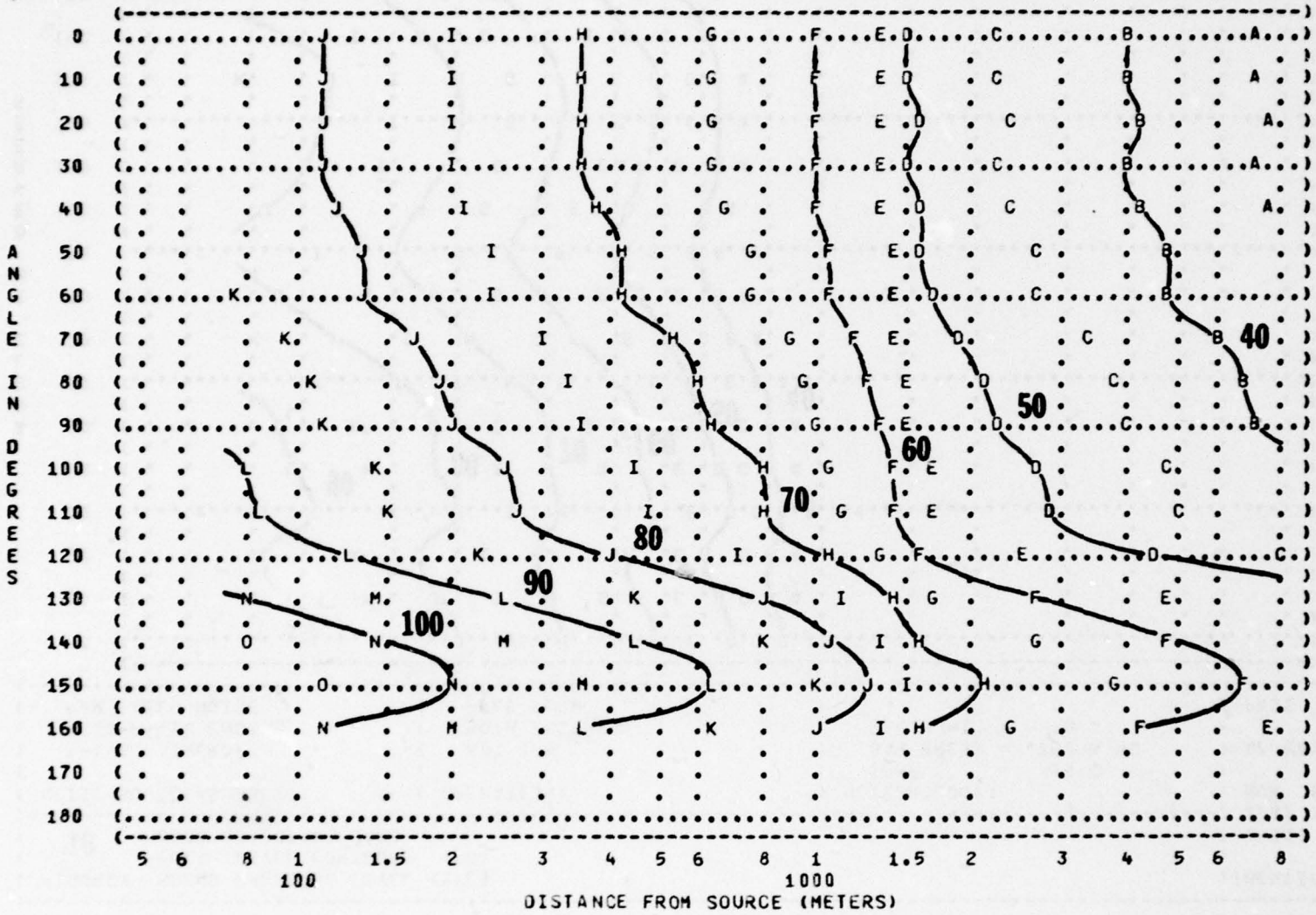
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 18



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

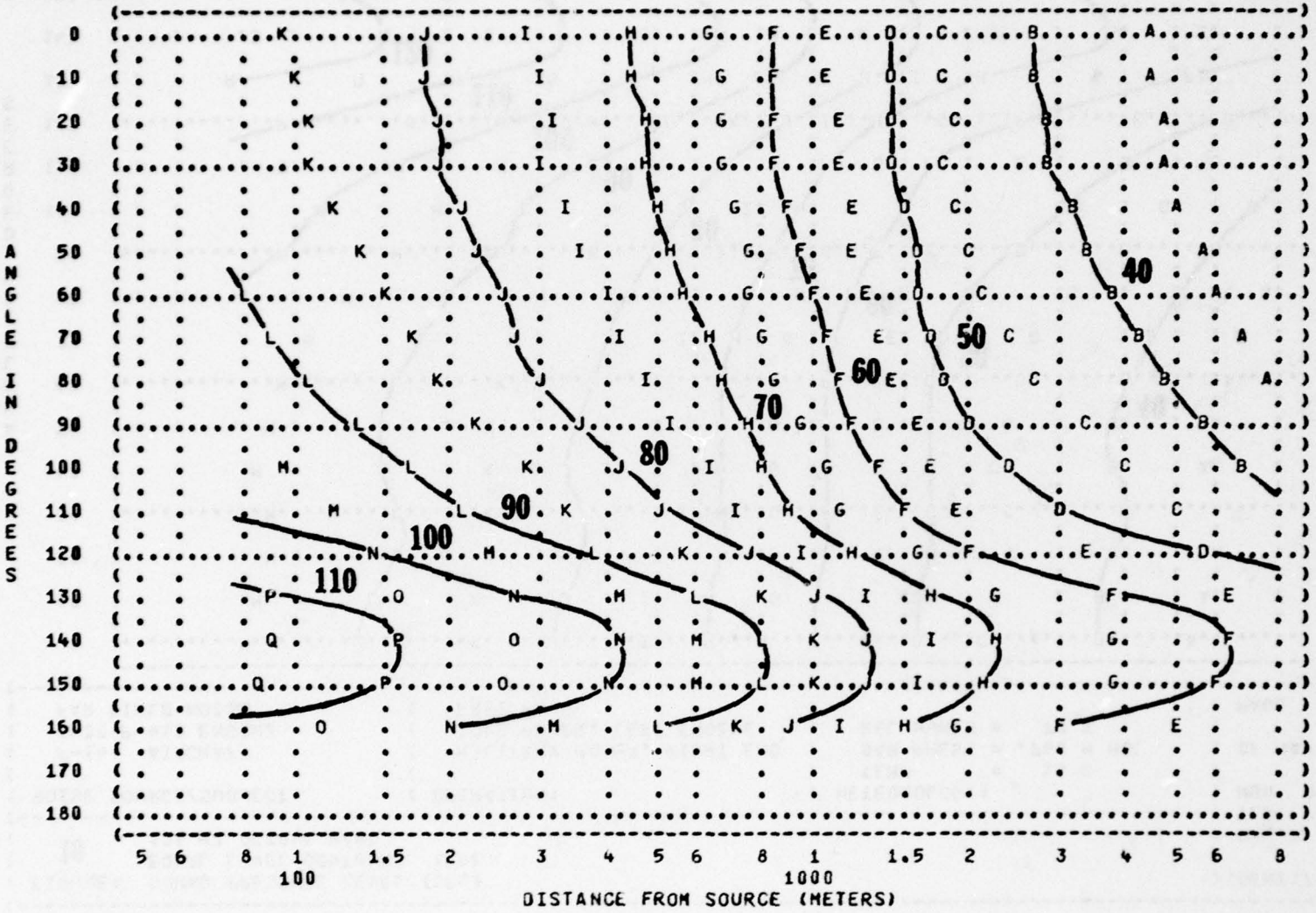
FIGURE 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 19



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95
N	100
O	105
P	110
Q	115

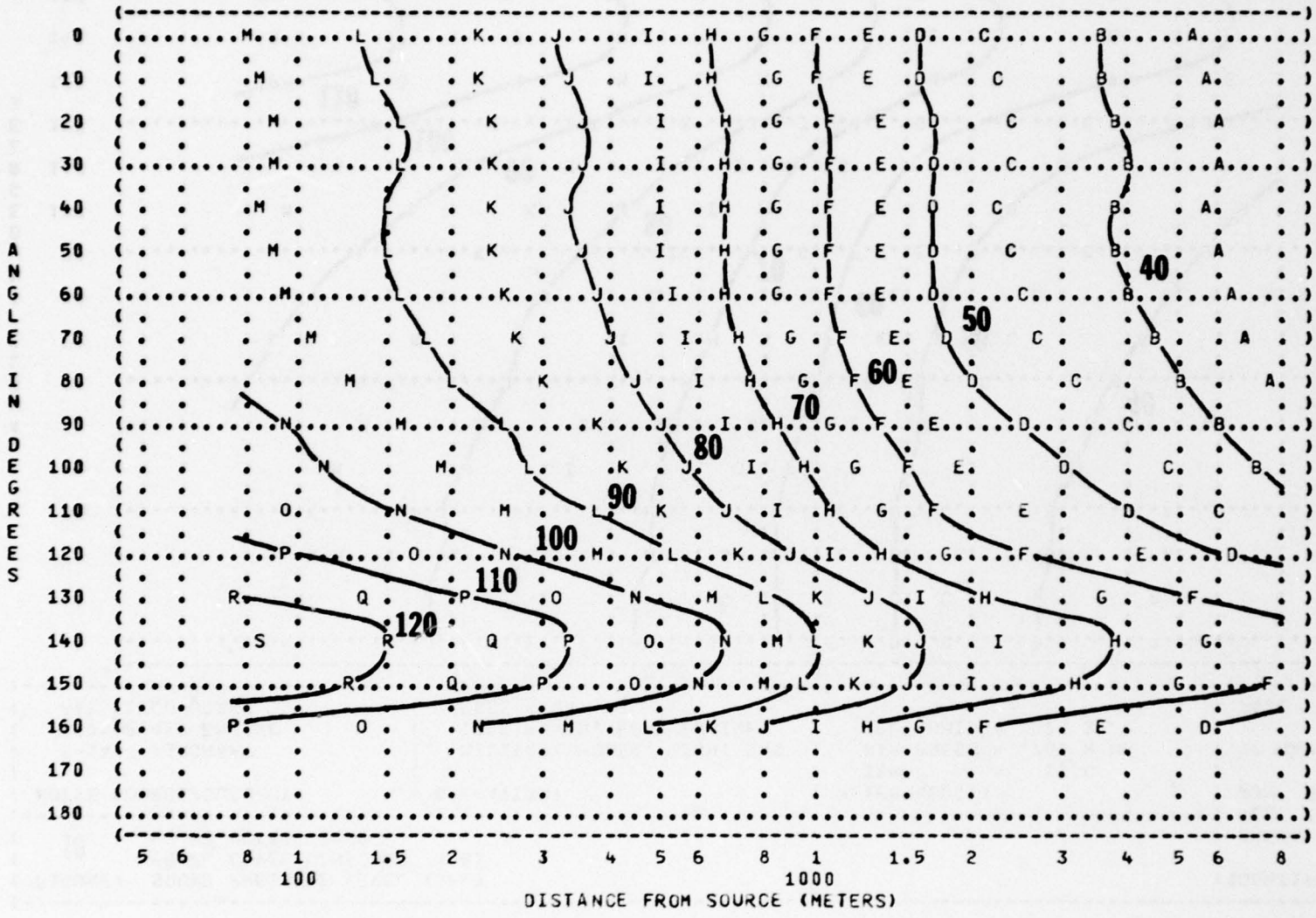
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 20



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95
N	100
O	105
P	110
Q	115
R	120
S	125

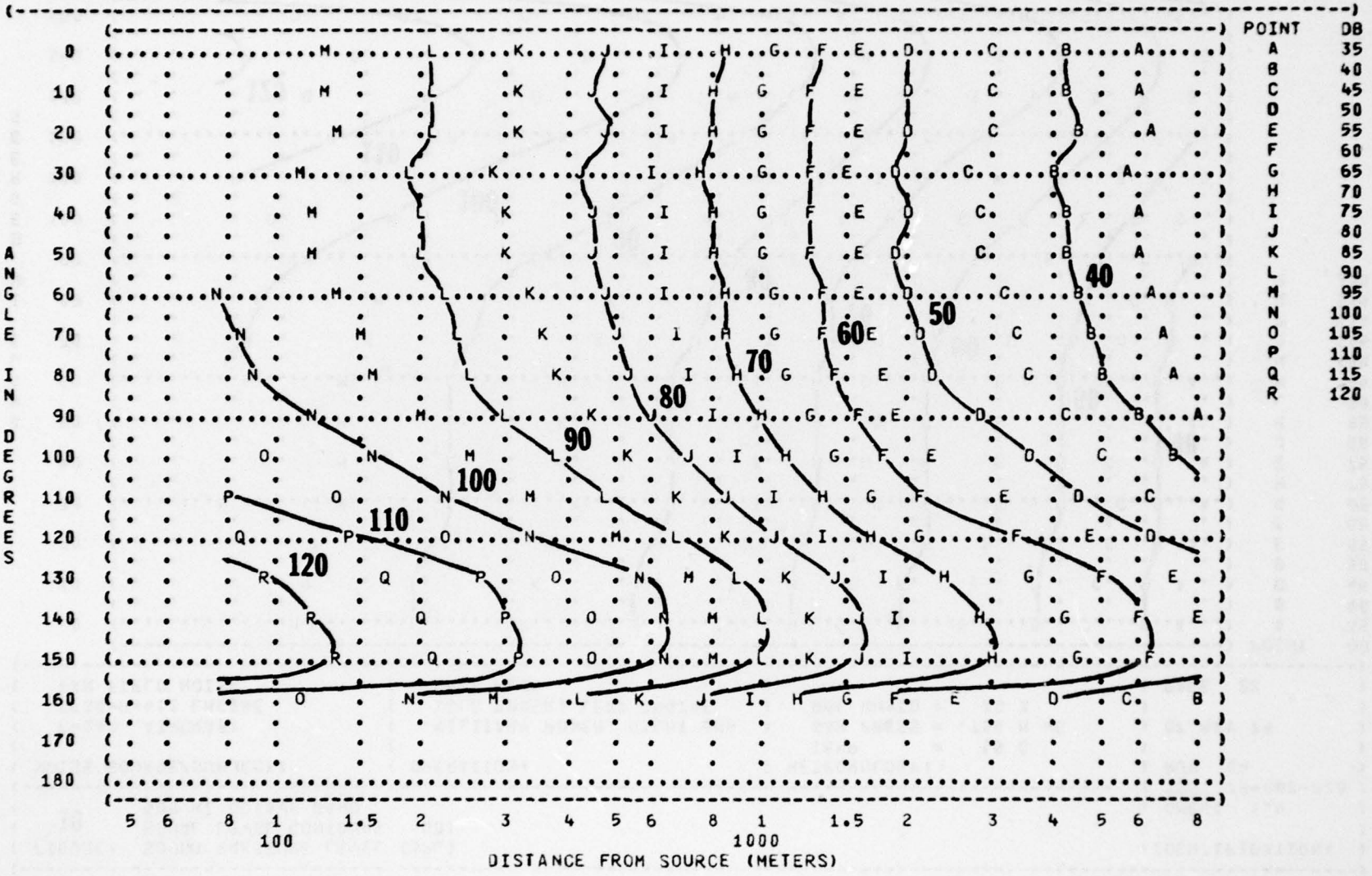
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 21

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95
N	100
O	105
P	110
Q	115
R	120

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 22

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95
N	100
O	105
P	110
Q	115
R	120

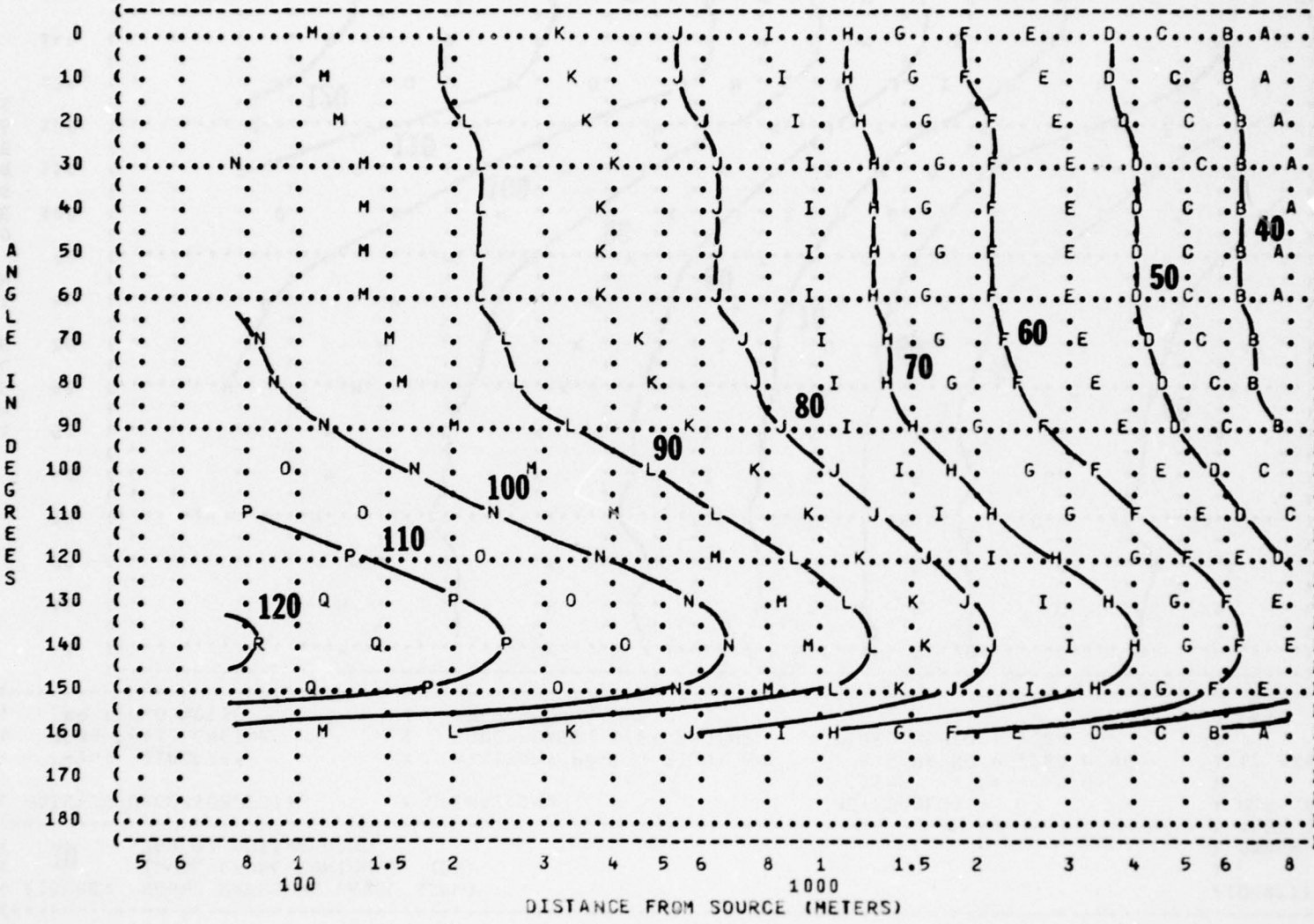


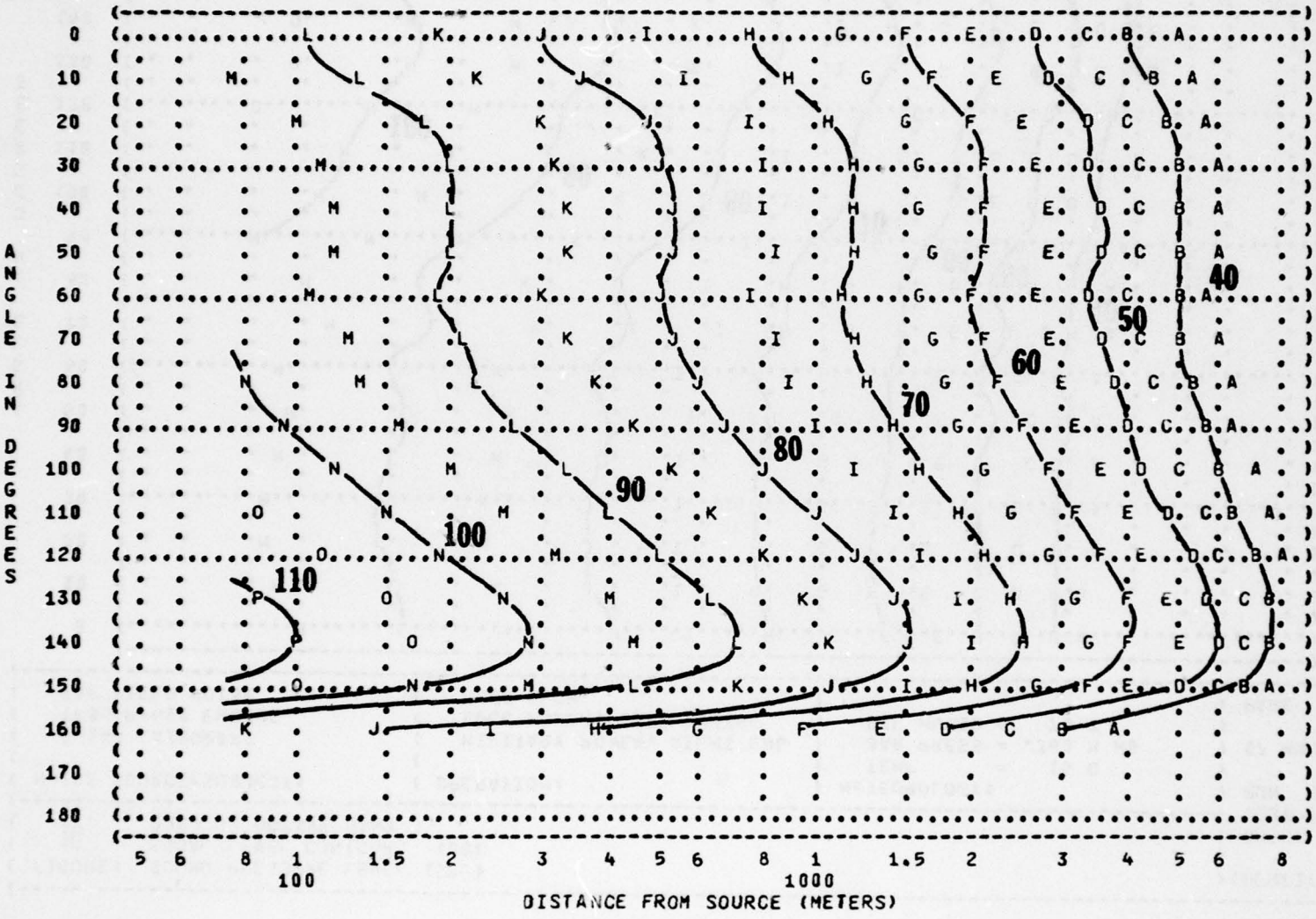
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 23

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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)
2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 24

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

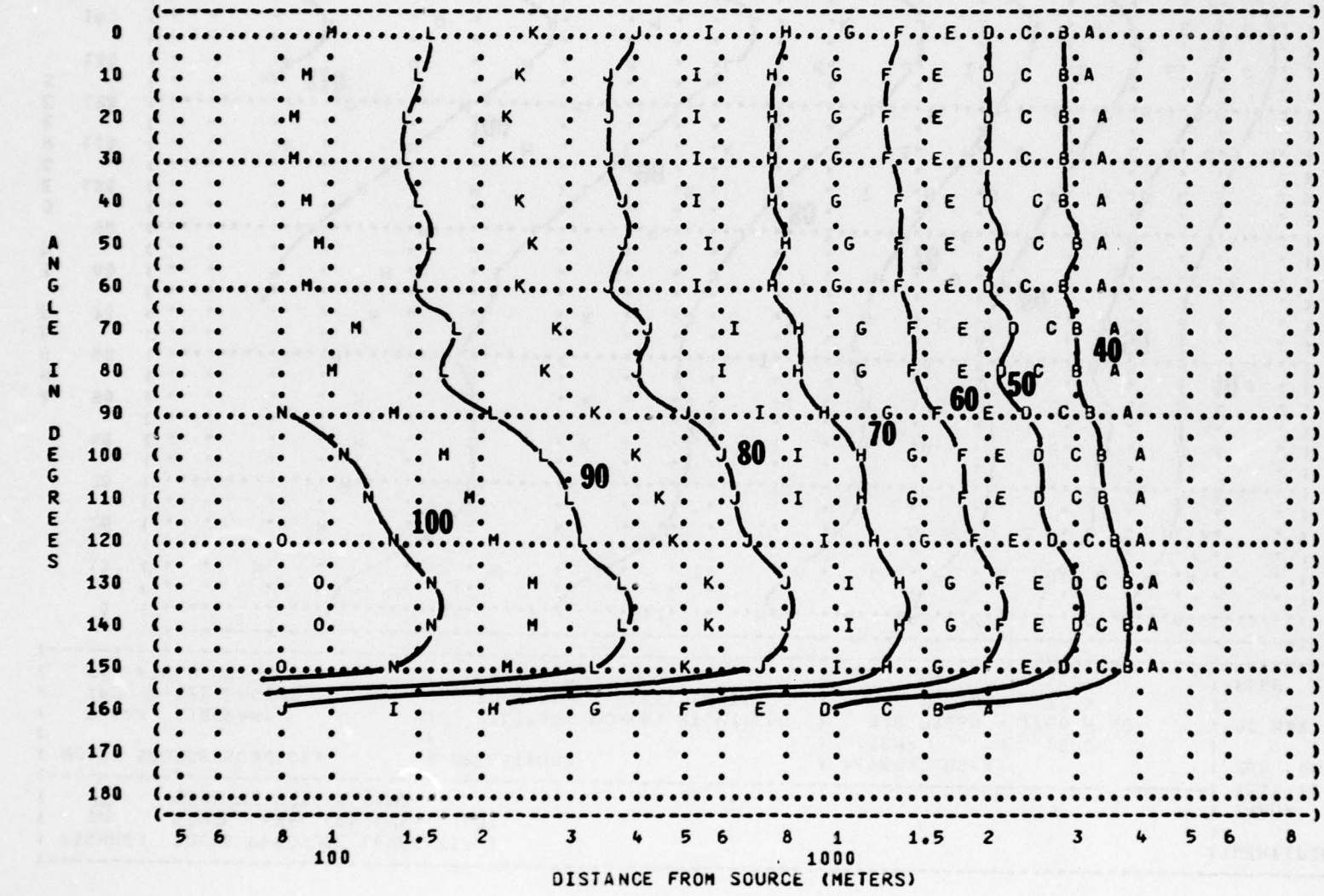


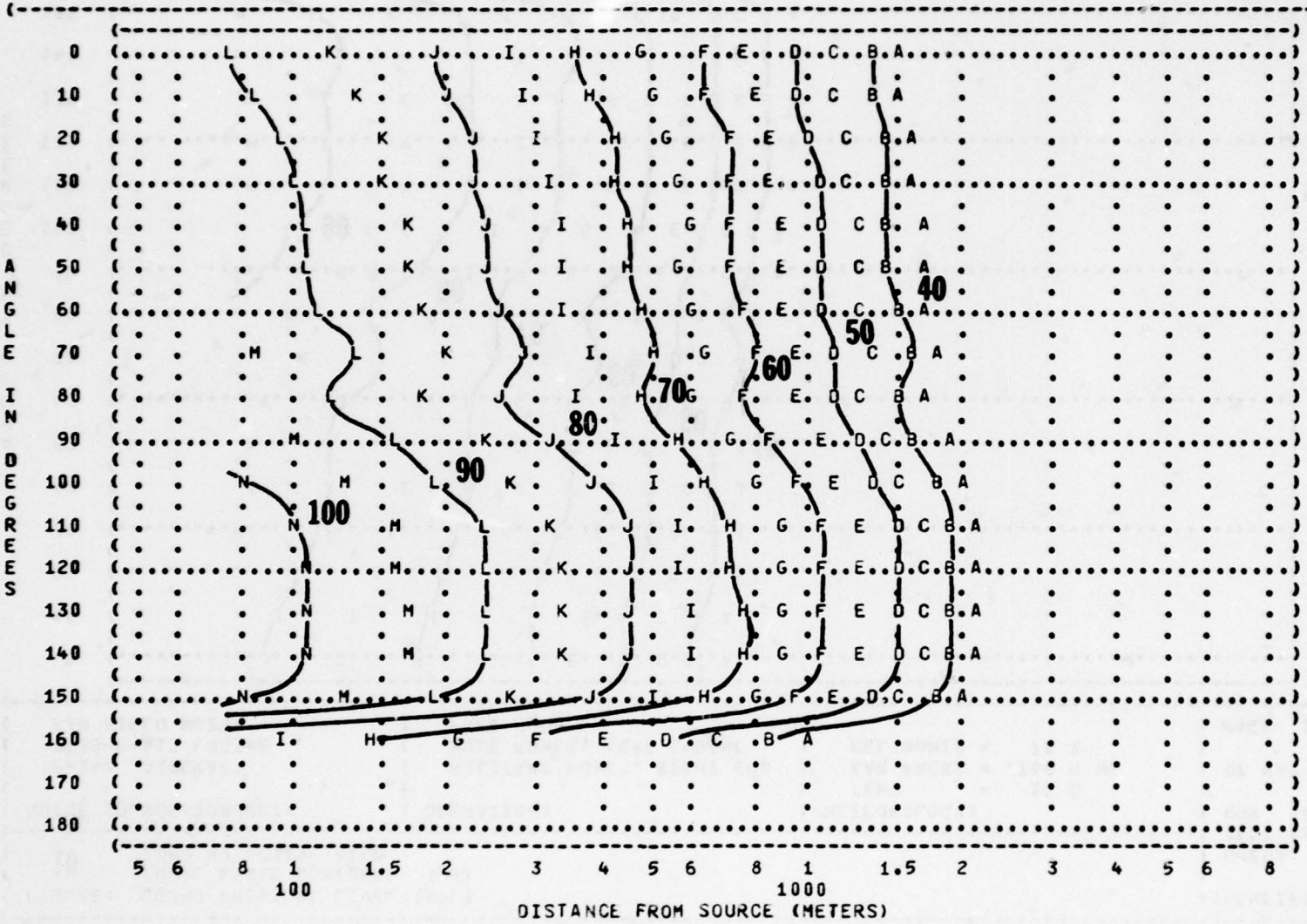
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 25



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

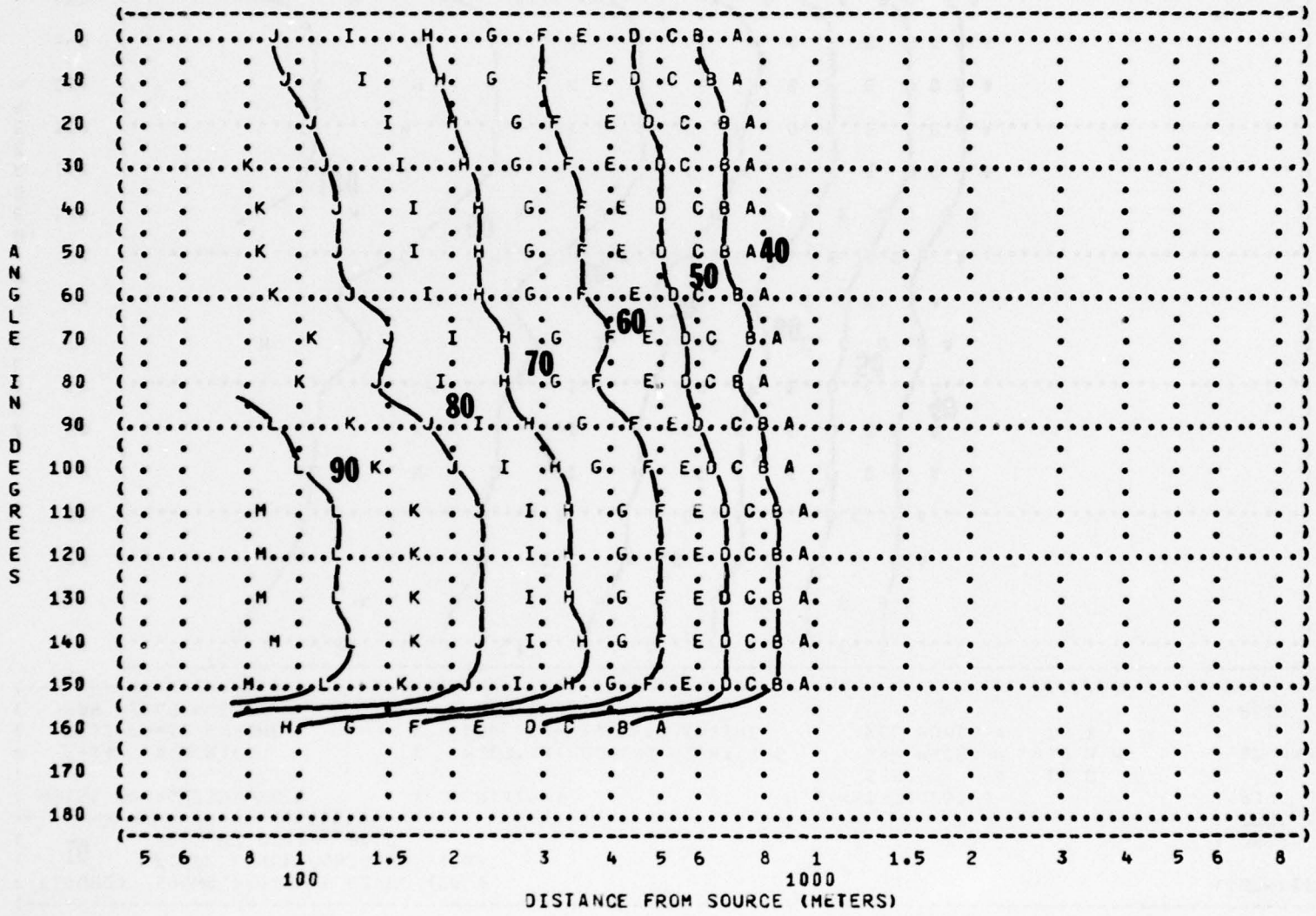
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
MILITARY POWER, RIGHT ENG
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 04
07 MAY 75
PAGE 26



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

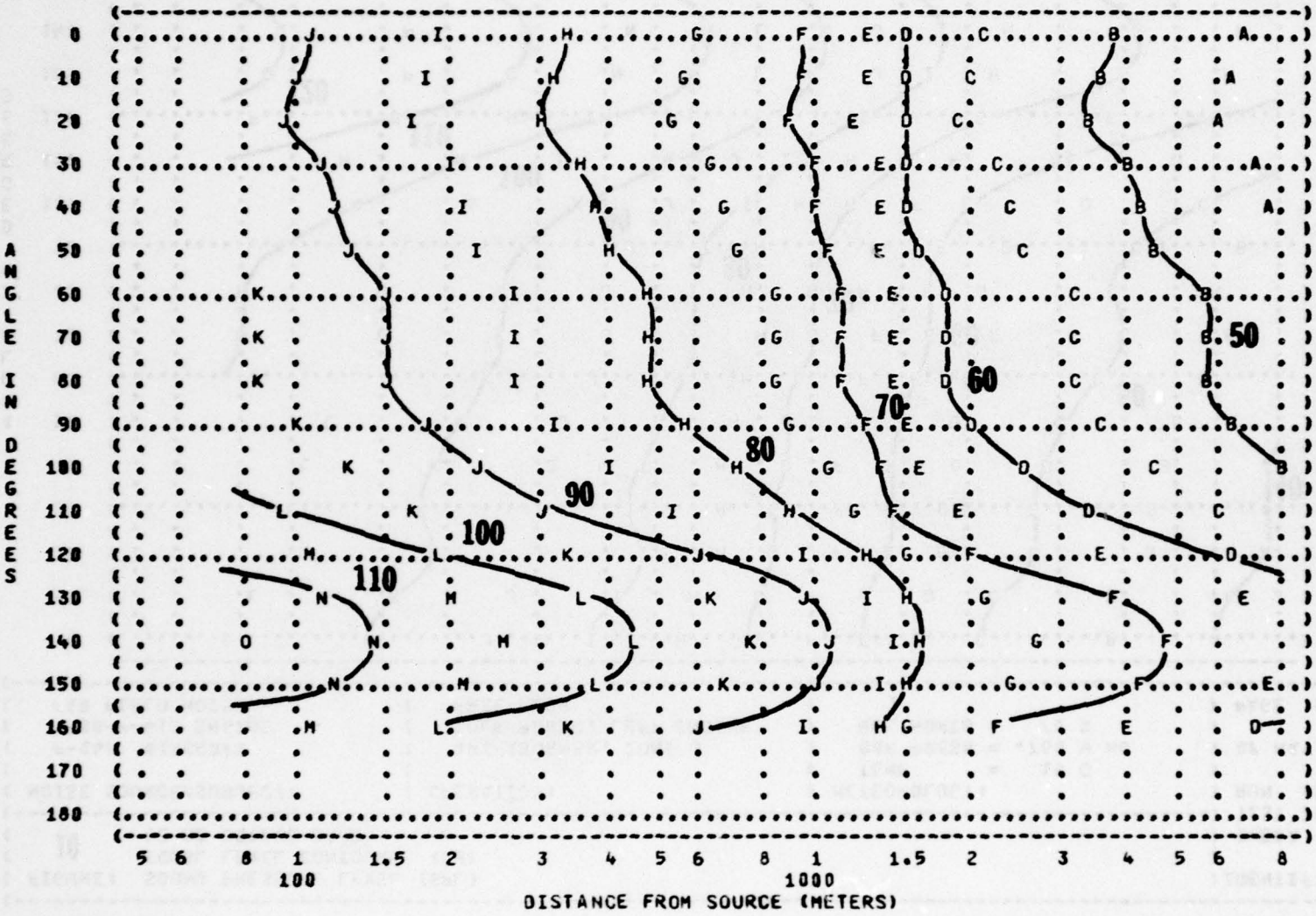
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 18



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) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 19

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

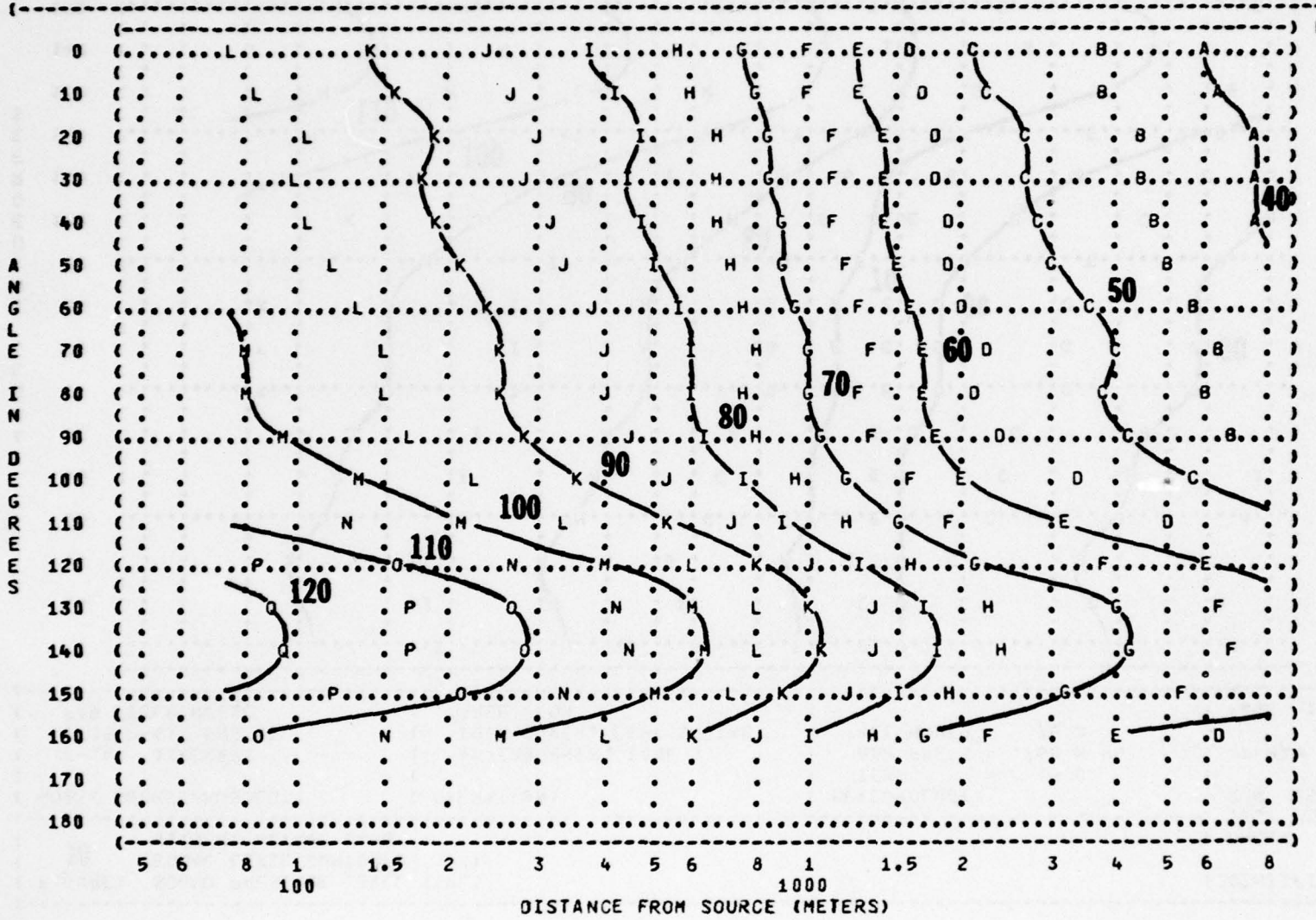


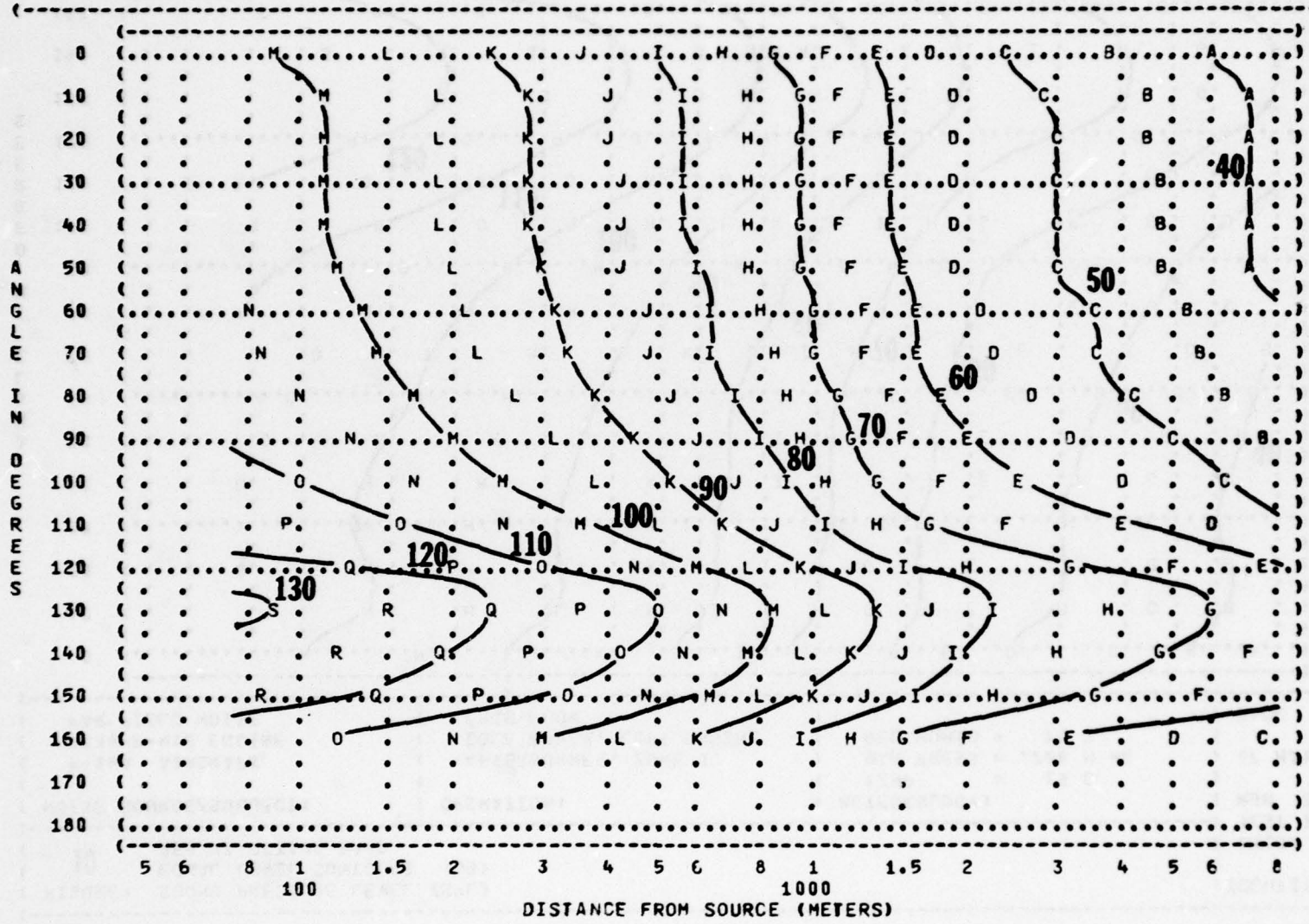
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
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
P	115
Q	120
R	125
S	130

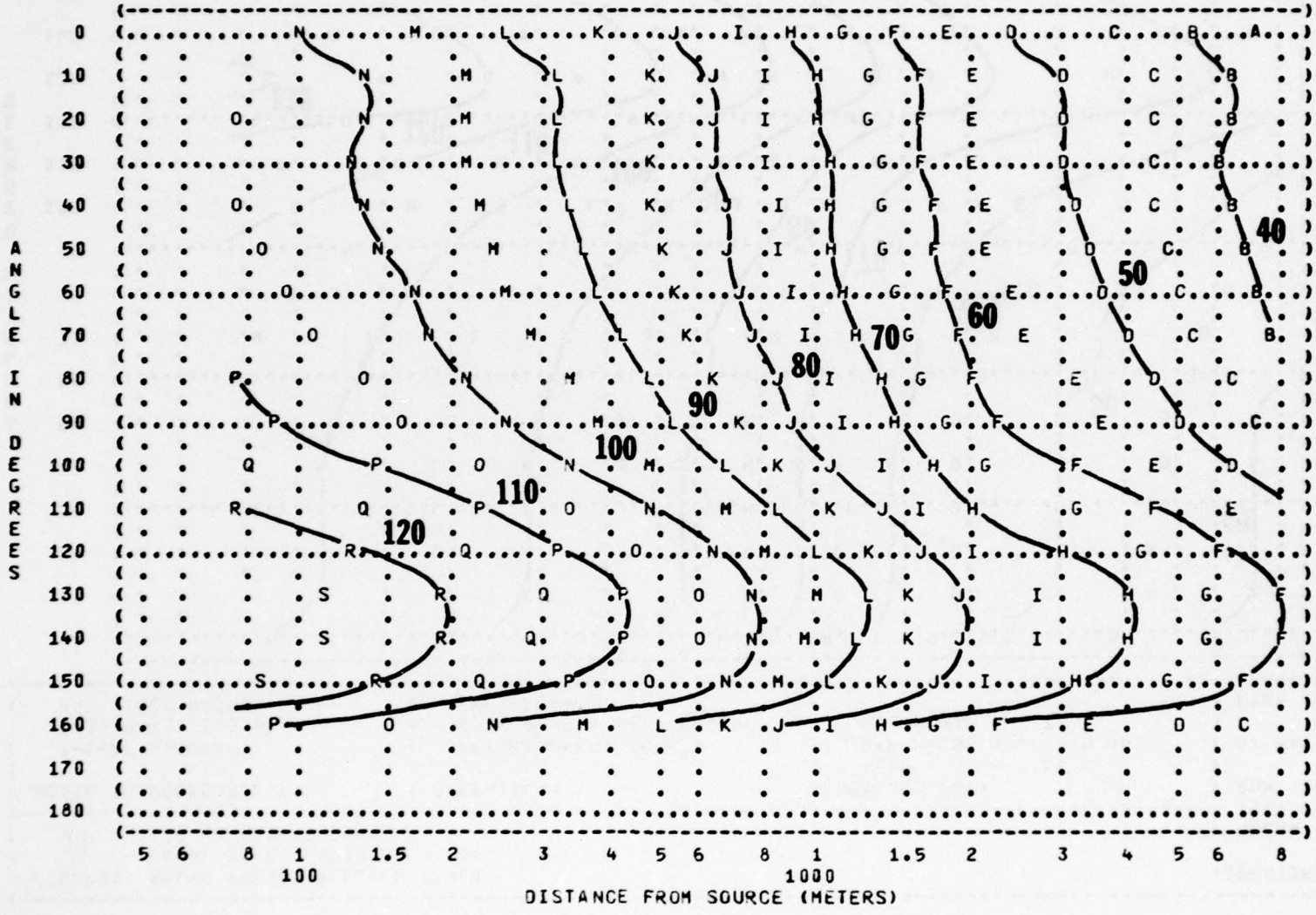
FIGURE 10: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 21



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95
N	100
O	105
P	110
Q	115
R	120
S	125

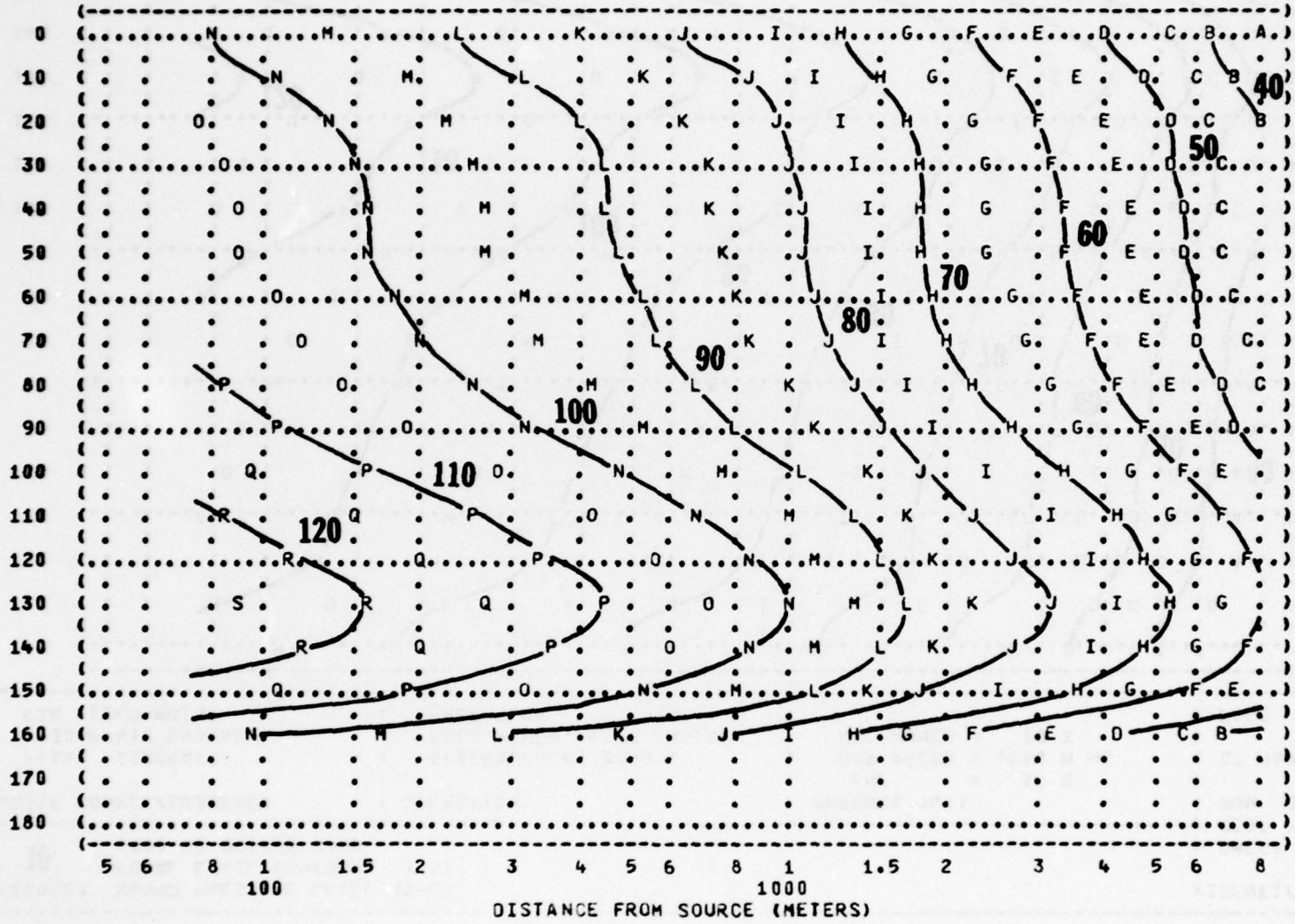
FIGURE 10: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 22



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95
N	100
O	105
P	110
Q	115
R	120
S	125

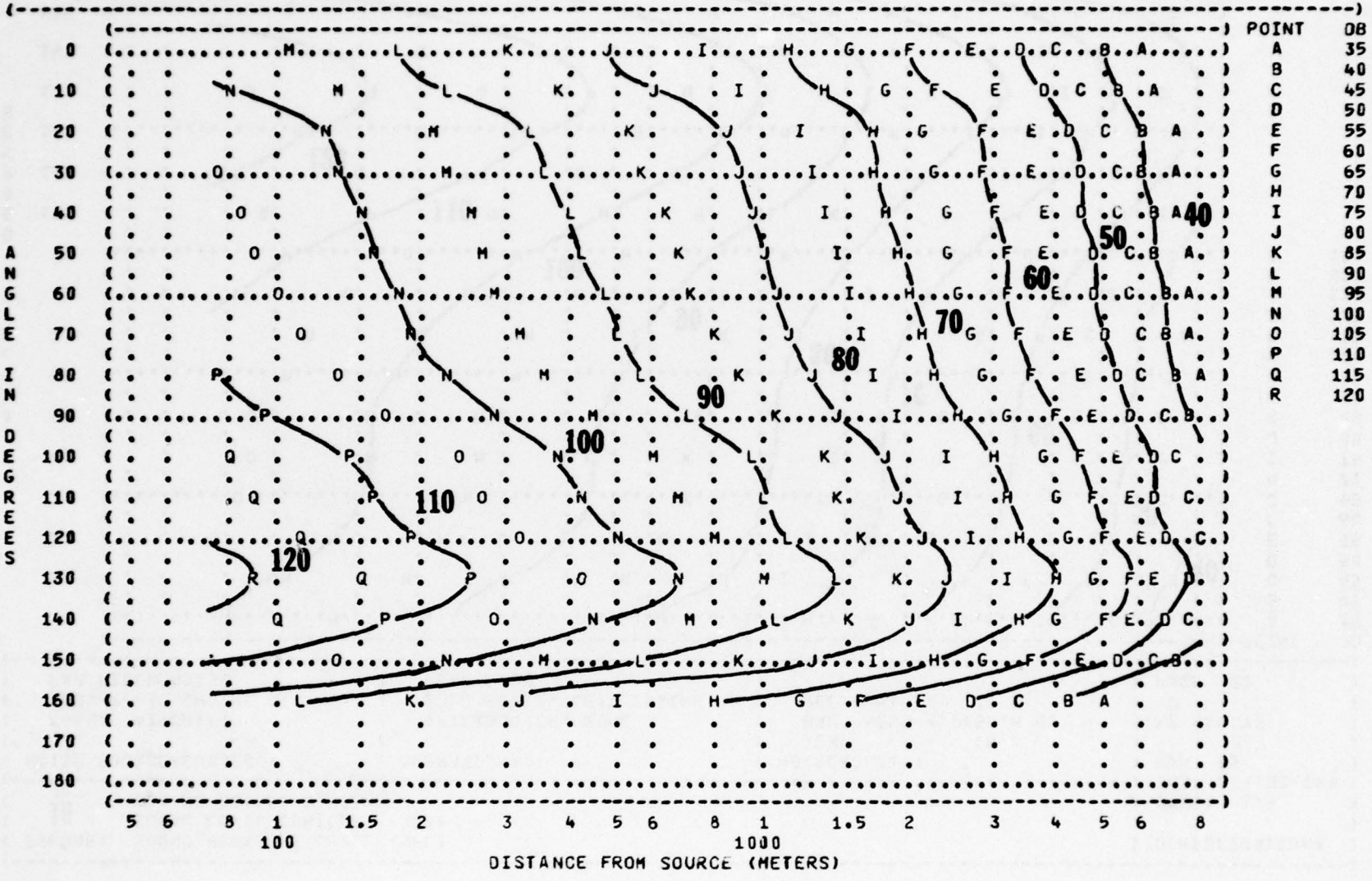
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
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NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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



POINT DB
A 35
B 40
C 45
D 50
E 55
F 60
G 65
H 70
I 75
J 80
K 85
L 90
M 95
N 100
O 105
P 110
Q 115
R 120

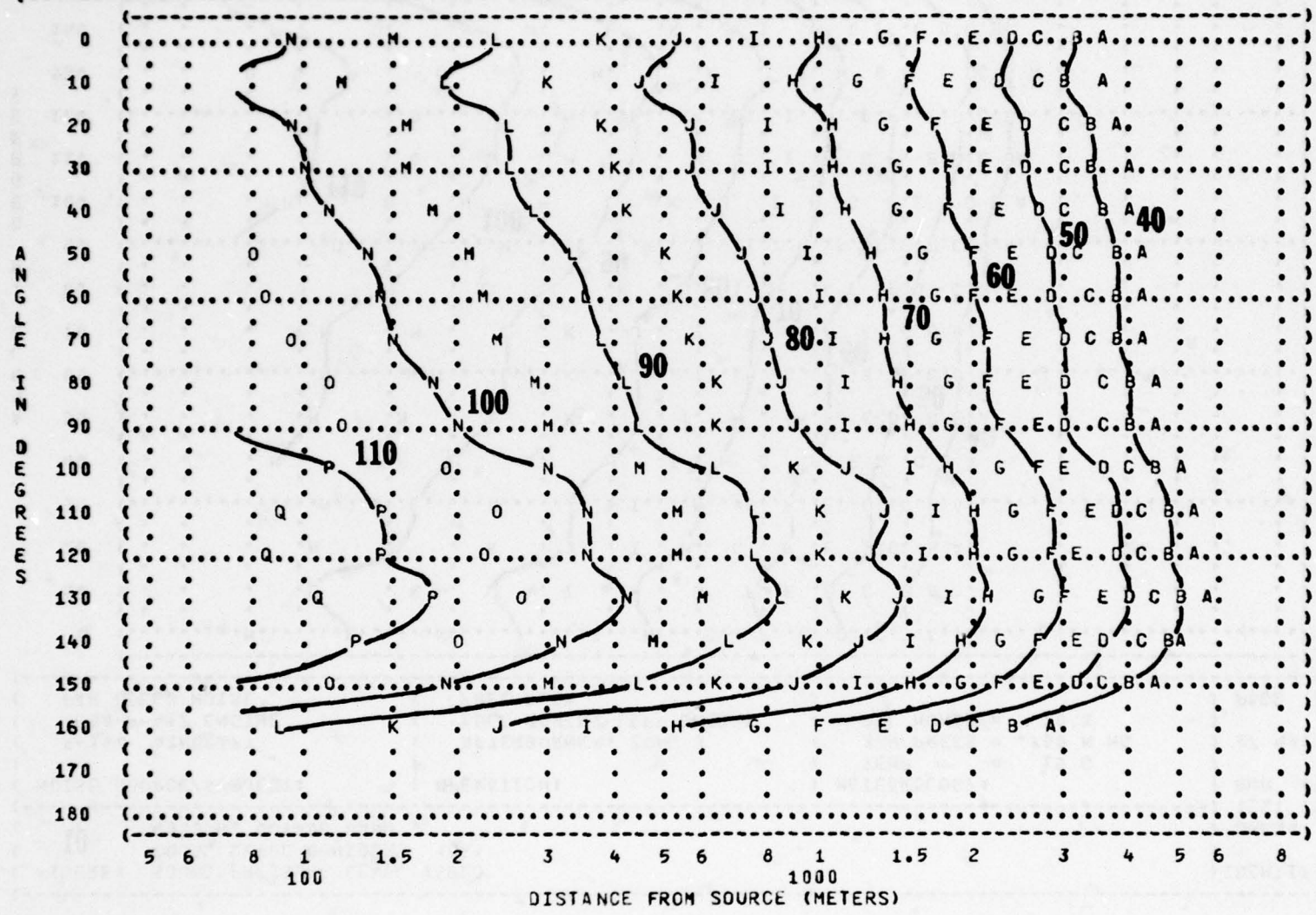
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 24



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95
N	100
O	105
P	110
Q	115

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 25

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

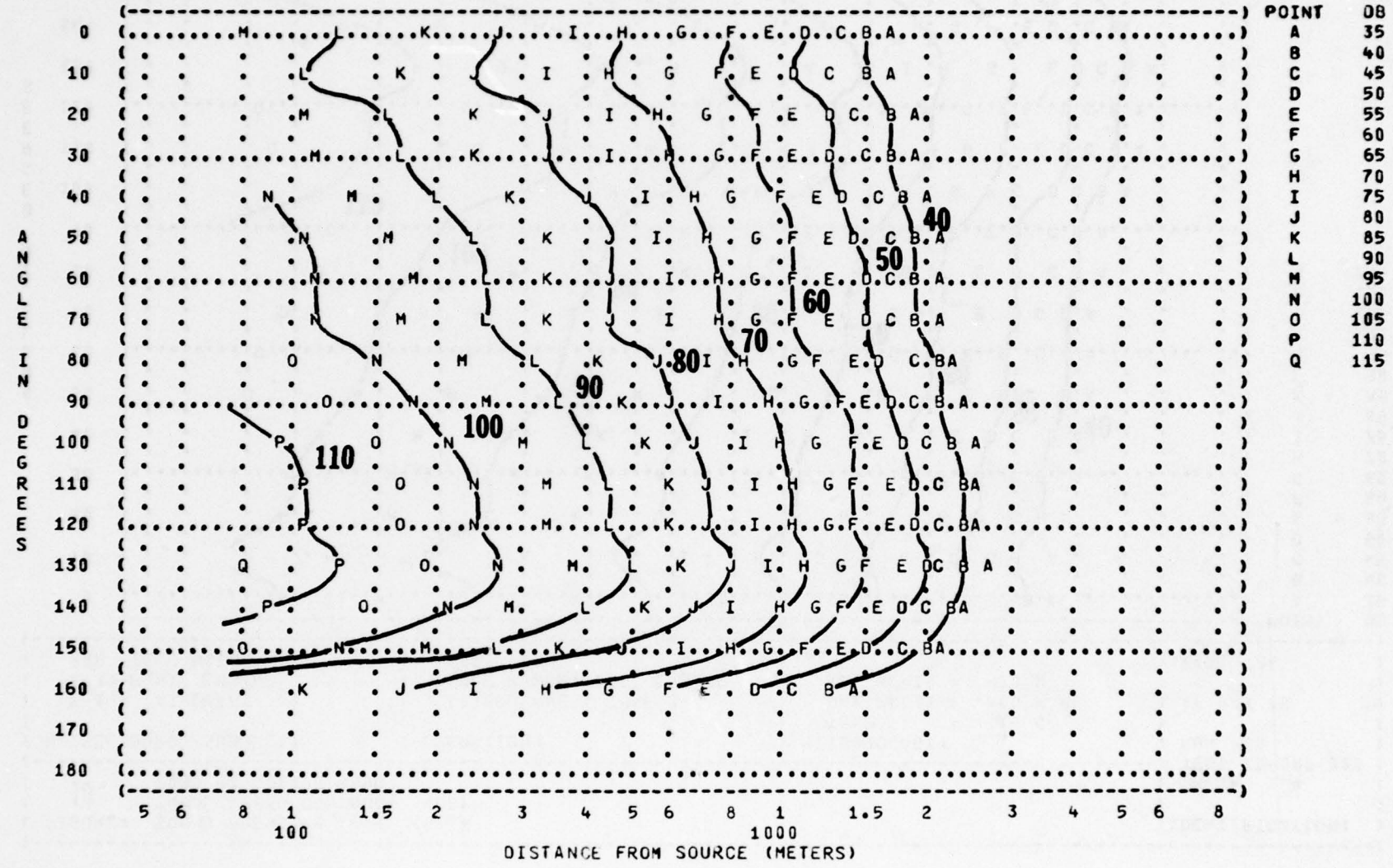


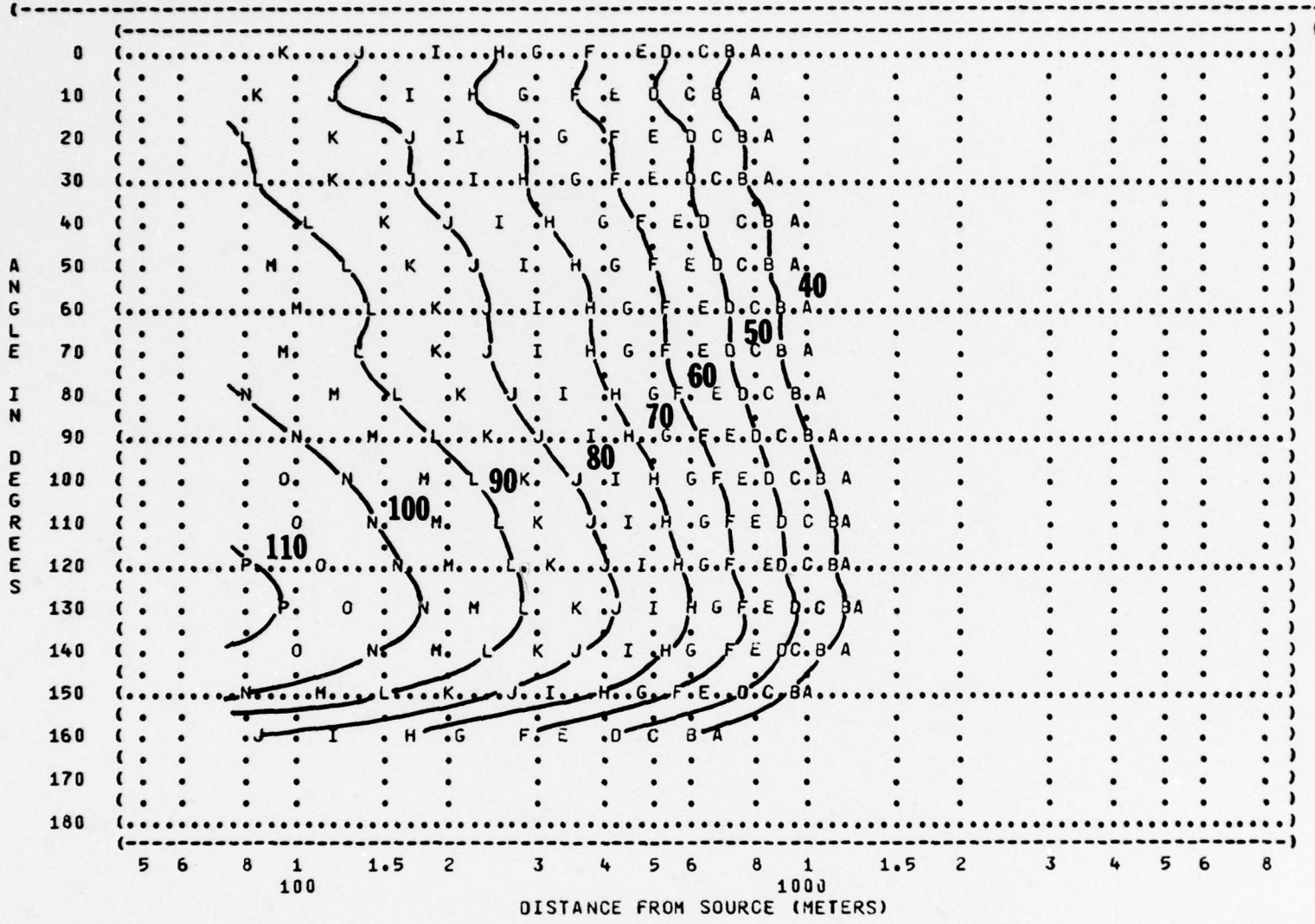
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-14A AIRCRAFT
TF30-P-412 ENGINE
FAR FIELD NOISE

OPERATION:
AFTERBURNER, ZONE 3
IDLE POWER, LEFT ENGINE
FREE FLOW

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

IDENTIFICATION:
OMEGA 1.4
TEST 75-002-028
RUN 05
07 MAY 75
PAGE 26



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

*U.S.Government Printing Office: 1978 — 757-080/377