N81-14998

NASA CONTRACTOR REPORT 152401

Static Source Locations For Four Nozzles Mounted On A J-85 Engine

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CONTRACT NAS2-9399
January 1979

NASA

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Static Source Locations For Four Nozzles Mounted On A J-85 Engine

Leif E. Hoglund
Beam Engineering, Inc.
Sunnyvale, California 94086

Prepared for
Ames Research Center
Under Contract NAS2-9399

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field California 94035

SUMMARY

A J-85 engine with 4 different nozzle configurations was tested at the outdoor X-14 test facility at the Ames Research Center. The test nozzles included a round 17.5" diameter Variable Flap Ejector (VFE) nozzle, a round 'stovepipe' nozzle, and a 104 tube suppressor nozzle operated both with and without an ejector shroud. The velocities tested ranged from 600 to 1600 fps at an approximate total temperature of 1400°R.

The primary test objective was to determine the axial location of apparent noise sources for each configuration. These source locations were determined from acoustic measurements along multiple sideline locations. As expected, the axial position of the noise sources during static operation is determined by jet velocity, Strouhal number, and direction of propagation. The velocity dependence is more evident for the 104 tube suppressor nozzle than for the conical nozzles tested. The results for both the VFE conical nozzle and the stovepipe conical nozzle indicate source locations to be much closer to the jet exit plane than expected. In addition, the data scatter is greater than for the 104 tube nozzle. The reason for this is not known but it is

postulated that both the conical nozzles create the opportunity for substantial jet mixing to occur before the nozzle exit. This is because an after burner nozzle was located upstream of the test nozzle. In effect two jet origins were possible, one upstream of the other. This was not possible for the 104 tube suppressor nozzle since any organized jet structure would be destroyed upon passing through the suppressor.

Corrections for near field effects were found to differ slightly for each nozzle tested. The corrections presented are simply the differences between the measured near field levels and the required near field levels if spherical spreading is assumed from source to far field.

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1. INTRODUCTION

Recently Boeing[1] has successfully used the multiple sideline technique to simulate the effect of flight on jet mixing noise. The method requires outdoor static noise measurements in order to establish empirical relationships between near and far field spectra, as well as to establish apparent source locations within the jet. Far field flight noise levels as well as the directivity can then be determined by direct extrapolation of wind tunnel flight simulation measurements.

The results presented here cover only the first phase of the total flight simulation procedure. The following data is presented:

i - static noise source locations are presented for each nozzle as a function of source readiation angle and Strouhal number.

ii - corrections for near field effects are presented for each nozzle tested.

iii - a computerized procedure is discussed which makes use of the above data for extrapolating wind tunnel near field results to the far field.

2. EXPERIMENTAL ARRANGEMENT

All tests were conducted at the Ames Research Center outdoor static test facility (X-14 pad).

The arrangement of the jet rig and microphones is shown in Figure 1. As indicated, special traversing tracks were used so that fewer microphones could be used while still covering angles from 30° - 165° relative to the jet inlet. A typical traverse took 5-6 minutes during which the angular position was continuously recorded as a voltage variation with distance. The maximum possible averaging time for a particular angle was 2 seconds.

The jet exit and all microphones were mounted 23 feet from the concrete ground surface of the test area. For the two nearest sidelines this gave virtually reflection-free data. The 7m and 12m sidelines were affected to some extent by ground reflections but these effects were largely limited to low frequencies and to shallow emission angles. For the moving microphone data a suitably accurate reflection scheme could not be found so that no reflection corrections were applied to any microphone data. In general the necessary corrections would have been less than 3 dB, but as a result the source locations presented for very low frequencies

may be less accurate than for higher frequencies.

Microphone data was FM recorded on a 32 channel Ampex PR 2200 tape recorder. The voltages representing distance along the traverse were also recorded. Engine data such as RPM, pressure ratio, EGT, and nacelle air temperature were automatically punched on paper tape on a Vidar data collection system. Nacelle air temperature was continuously monitored on a separate digital meter. As a check on the automatic recorder system, the RPM and EGT were hand recorded directly from the engine operator's instrumentation panel. Engine presure ratio was monitored directly using a mercury monometer as well as recorded on the Vidar system.

The following 4 nozzle configurations were tested:

-Variable Flap Ejector (VFE)

-stovepipe conical

-104 tube

-104 tube with ejector

The nozzle have approximately the same flow areas. Important dimensions and sketches are provided in Figure 2.

The test points covered for each nozzle are given in Table 1. Astericks indicate test points for which data is presented.

TABLE 1

PTAPE no.	jet temp. °R	amb. temp. °F	% rel. humidity	V_{jet} ft/sec	pressure ratio	$V_{ambient}$ ft/sec	nozzle type
01x	1158	49	94.5	308	1.024	0	VFE
02x	1159	51	93	614	1.1		"
03x	1191	48	95	814	1.179		"
04x	1228	53	89	974	1.260		"
05x*	1278	48	95	1145	1.363		"
06x	1307	53	90.6	1249	1.437		"
07x*	1349	48	96	1380	1.541		"
08x*	1401	54	92	1515	1.659		"
09x	1464	49	94.5	1669	1.812		"
11x	1141	53	89	399	1.041		STOVEPIPE
12x	1174	59	84	631	1.105		"
13x	1206	55	90	818	1.179		"
14x	1276	70	53	985	1.255		"
15x*	1291	57	88	1168	1.376		"
16x	1341	68	58	1267	1.438		"
17x*	1382	64	63	1405	1.549		"
18x	1416	67	66	1535	1.674		"
19x*	1474	54	89	1687	1.829		"
22x	1369	61	75	654	1.096		104 TUBE
23x	1347	62	65	925	1.208		"
24x	1394	61	75	1088	1.290		"
25x*	1413	59	79	1256	1.402		"
26x	1468	60	77	1389	1.493		"
27x*	1508	59	67	1523	1.607		"
28x	1563	61	75	1648	1.713		"
29x*	1622	61	72	1776	1.835		"
32x	1342	61	61	689	1.11		104 TUBE
33x	1356	60	61	946	1.217		WITH EJECTOR
34x	1383	60	60	1087	1.292		"
35x*	1419	61	57	1249	1.395		"
36x	1464	61	57	1389	1.495		"
37x*	1518	60	63	1538	1.616		"
38x	1581	62	56	1649	1.704		"
39x*	1626	64	57	1793	1.856		"

3. DATA REDUCTION PROCEDURE

The determination of the exit velocity at each test condition and for each nozzle configuration was complicated by the fact that pressure measurements could not be made at the jet exit. Instead, measurements were made immediately upstream of the afterburner section and hence were slightly higher than the correct exit pressure. To determine the pressure loss associated with the flow through the afterburner section, a program developed by the Lewis Research Center for a calibrated J-85 engine was used. Although the engine used in this work was not identical to the intended engine, the errors were considered to be small.

In order to reduce traversing microphone data to 1/3 octave spectra, a computerized data handling system was developed. Operating details can be found in Appendix A. After reducing the data to 1/3 octave spectra the data was then corrected for microphone response and for atmospheric attenuation. The data was then smoothed by fitting an 8th degree polynomial at each angle. If the data contained points which deviated from the polynomial by greater than 6%, then the data point was discarded and the angle position refitted to an 8th degree polynomial. To ensure that the central portion of each spectrum containing the peak was followed closely these points were weighted by including them

twice during the curve-fitting procedure. The very low and very high frequencies were not included at all for curve-fitting on the assumption that this data is generally less reliable. After establishing the appropriate polynomial over the central portion of the spectrum, the portions at very low and very high frequencies were simply determined by extrapolation. The 8th degree fit to the data was established by experiment. It appeared to be the minumum fit required in order to retain the precise frequency location of the spectrum peak. After smoothing the data at each angle (SPL vs frequency), the data was again smoothed at each frequency (SPL vs angle). An 8th degree polynomial was again necessary in order to avoid shifting the angle location of the peak. The smoothed data is printed for comparison to the original data (see Appendix B). For source location computations only the smoothed data was used.

The data for each 1/3 octave frequency was arranged in plots such as in Figure 3. From this, angle pairs could be established. This was done by first assuming that the far field peak originated from the near field peak. For example in Figure 3, the first pair would be θ, θ'. Other pairs can be established by noting that the ΔdB peak shift from the near field to the far field must be constant. On Figure 3, other pairs would be be θ_1, θ_1'; θ_2, θ_2'; etc.

After establishing angle pairs for each Strouhal number, the source locations and radiation angles were determined from geometry (see Figure 4):

$$\theta_s = -\tan^{-1}\left(\frac{y_1}{P_1}\right) \qquad \begin{cases} +\ 180 \text{ if } P_1 > 0 \\ \times(-1) \text{ if } P_1 < 0 \end{cases}$$

$$X = \frac{y_1}{\tan(180 - \theta_1)} - P_1$$

where $P_1 = \dfrac{P_2}{\frac{y_2}{y_1} - 1}$ and $P_2 = \dfrac{y_2}{\tan(180 - \theta_2)} - \dfrac{y_1}{\tan(180 - \theta_1)}$

Note that the noise locations sources defined in this way are assumed to be located at a radial position equal to the nozzle radius.

4. RESULTS

A. 1/3 Octave Spectra

Samples of uncorrected spectrum plots are given for each nozzle in Figures 5 to 8. Both far field and near field spectra are plotted together for angles which come closest to 30°, 60°, 90°, 120°, 150° and 160°. This is not meant to indicate near field and far field angle pairs, but is simply a more compact way of presenting the data. In all cases the near field sideline is 6.67 ft (2m) from the jet centerline and the far field sideline is 39.25 ft (12m) from the jet centerline.

Complete listings of corrected 1/3 octave data and smoothed 1/3 octave data for all of the test points considered are found in Appendix B.

B. Peak Radiation Angle VS Strouhal Number

Plots of noise source peak radiation angle vs Strouhal number are presented for each nozzle in Figures 9 to 12. As expected, there is a tendency for higher frequencies to radiate at smaller angles relative to the jet inlet. The results for the

suppressor nozzle both with and without ejector shroud do not depend on jet exit velocity. This is consistant with results presented by Boeing[2]. Both conical nozzles however, show a tendency for sources in the mid frequency range to radiate at shallower angles when the jet is operated at a lower exit velocity. The reason for this is not known.

C. Peak Source Location VS Strouhal Number

Plots of peak source location vs Strouhal number are presented for each nozzle in Figures 13 to 16. The exact result differs from nozzle to nozzle but high frequency sources are always located closer to the nozzle exit. The 104 tube suppressor nozzle appears to have some velocity dependance for source location.

D. Source Locations VS Radiation Angles

Detailed plots of source locations vs radiation angle for a broad range of Strouhal numbers are presented in Figures 17 to 20. It is evident that both the conical nozzles do not have clearly defined source locations of the expected nature. This may be related to the upstream geometry used for both these nozzles. As indicated in Figure 21 a considerable amount of

mixing is possible immediately following the afterburner nozzle but before the test nozzle. The shaded portion inside the nozzle represents a region of high shear and hence of active source generation. At the test nozzle exit the usual shear layer will also be formed. Since the thickness of the resulting shear layers are related to source size and hence to source radiation frequency, the possibility exists for two dominant noise producing regions at a given frequency. The locations of sources which seem to occur very close to the nozzle exit may have been influenced by sources "born" upstream of the test nozzle exit. In addition to this effect, there will likely be more vigorous turbulence than expected concentrated near the test nozzle exit. This is because in a more usual nozzle arrangement the turbulence levels upstream of the test nozzle exit are more uniform, so that a core of lower turbulence levels is formed at the test nozzle exit and extends 5-6 diameters downstream. In the present case however, the shear layer formed from the afterburner nozzle prevents the formation of any region of lower turbulence at the test nozzle exit and instead contributes to vigorous mixing at the test nozzle exit. The net effect is that a great deal of both large and small scale turbulence occurs at the test nozzle exit. This is confirmed to some extent by the results for source location, as sources over an extremely broad range of frequency and noise emission angles seem to be located 1-2 diameters downstream of the test nozzle exit.

The degree by which the internal noise generation and turbulence structure affects the apparent noise source locations depends on how much of the upstream structure is retained at the test nozzle exit. To some extent this would be expected to depend on PR since the A/B nozzle diameter, and hence the jet which is produced, changes with PR. The plots of source location do appear to have some dependance on jet velocity.

In the case of the 104 tube suppressor nozzle, any organized turbulence generation which does develop would be largely destroyed while passing through the suppressor. The resulting source locations for the 104 tube nozzle with and without an ejector agree very well with what might be expected. Figures 19 and 20 indicate that the source locations and their radiation angles are strongly dependant upon the jet exit velocity. This agrees very well with previous results presented by Boeing for suppressor nozzles.

E. Near Field Corrections

The near sideline is sufficiently close to jet noise sources to be amplified by near field effects. In order to later extrapolate wind tunnel near field data to the far field it is required to know the deviation from the spherical divergence assumption.

This was done by simply subtracting the peak levels for each frequency in the far field from the peak levels for each frequency in the near field. Any deviation from the level difference due to spherical divergence is assumed to be due to near field amplification. This deviation is plotted in Figures 22 to 25 as a function of $\left(\frac{R}{\lambda}\right)\left(\frac{V_j}{a_o}\right)$, where R is the distance from the source to the near field receiver point, λ is the wavelength, and a_o is the acoustic velocity. The 104 tube nozzle seems to exhibit larger corrections over a larger frequency range than the conical nozzles. This was unexpected and it is postulated that it may be due to the very much larger spreading angle of the 104 tube nozzle. For any jet the sources will be concentrated at the center of the mixing shear layer. For small spreading angles this center will be approximately at the nozzle radius. For large spreading angles this center will spread outward and it becomes unreasonable to assume that the sources are concentrated on an annulus at the nozzle radius. The effect is that sources are closer to the near field sideline than they are assumed to be. This is indicated in Figure 26. Corrections will thus appear large for the assumed sideline distance. As the near field sideline in this case is very close to the jet (2m), the effect is quite pronounced. It is expected that if the plots in Figures 24 and 25 are corrected for this effect they would look much like the corrections in Figures 22 and 23. There is probably no advantage in doing this except that the corrections as presented are not universal.

5. PROCEDURE - PHASE II

The plots of source location vs radiation angle (x/D vs θ_s) which result from phase I will become inputs to phase II. Results of in-tunnel near field measurements will also become inputs. Only one sideline will be necessary, rather than at least two as required in phase I. Since the near field measurements will be made with ambient velocity, the static source location plots x/D vs θ_s must be transformed to x'/D vs γ_s. The new angle γ_s is defined as

$$\gamma_s = \tan^{-1}\left(\frac{\sin(\theta_s - 90) + \frac{V_A}{a_o}}{\cos(\theta_s - 90)}\right) + 90$$

This accounts for the effect of convection, the effect of which is indicated in Figure 27. The effect of core stretch is handled by redefining the Strouhal number of each source location plot, so that $St = \frac{fD}{V_j - V_A}$. As ambient velocity increases, the plots are valid for increasingly higher Strouhal numbers.

The inputted near field data must first be corrected for near field effects. The data must then be curve fitted, first at each angle (SPL vs frequency) and then at each frequency (SPL vs angle). For each frequency, the peak angle can be found. Corresponding to

this peak angle there will be a corresponding source position and radiation angle for the same frequency of Strouhal number, as given by the x'/D vs ψ_s plots. The relation between any near field angle ψ_1 and corresponding radiation angle is given by:

$$\frac{y_1}{\tan(180 - \psi_1)} = x' + \frac{y_1}{\tan(180 - \psi_s)}$$

(see Figure 27)

The source location x' is also known since it is a known function of ψ_s, given by the x'/D vs ψ_s plots.

When the proper ψ_s, x' pair are found for each inputted near field angle, then the matching far field angle can be found using the following relation:

$$\psi_2 = -\tan^{-1}\left[\frac{y_2}{\frac{y_2}{\tan(180 - \psi_s)} + x'}\right] + 180$$

Thus for each measured near field angle, a corresponding far field angle can be found. The level in the far field must then be adjusted to account for attenuation with distance. If the ratio y_1/y_2 is constant, this factor will be constant for all radiation angles.

6. CONCLUSIONS AND RECOMMENDATIONS

Outdoor noise measurements have been carried out on a J-85 engine equipped with 4 different nozzle arrangements. The conclusions and recommendations can be summarized as follows:

A. Results of Source Location VS Radiation Angle for the VFE and stovepipe nozzles show source locations which are much closer to the nozzle exit than anticipated. It is postulated that this may be due to vigourous turbulence generated near the nozzle exit, caused by the upstream A/B nozzle.

B. To calculate source locations it is necessary to find near field/far field angle pairs. For the sideline distances used in this work it was found that the angle pairs were very close to one another. A small error in angle measurement could therefore lead to a large error in source location. Since each sideline was measured by only 22 microphone positions each microphone represented an average of greater than 5°. In many cases the near field/ far field angle pairs were separated by less than this. More microphone measurements may not have significantly improved accuracy since it was not possible to determine angular

position to better than approximately $\pm$ 2° on the moving microphone system. This was due to the integration time necessary for analysis although extremely slow traverses may allow some improvement. It is recommended therefore, that for future static noise measurements which are carried out for the purpose of locating sources that the far field sideline be located at least 10X the distance of the near field sideline. This will ensure greater separation between the angle pairs, thereby leading to greater accuracy in determining source position. It should be noted that the problem of small differences between near and far field angles was compounded in this work because the sources were located very close to the nozzle exit.

C. The near field corrections are quite large, particularly for the suppressor nozzle due to its large spread angle. Strictly speaking, the near field corrections should be applied before the source locations are found but this is currently inconvenient to do by computer. To eliminate the problem it is recommended that future near field measurements be done at a distance where corrections are no more than 2 dB. This will ensure that the calculated source locations are not significantly affected by the near field errors.

D. There are several questions concerning the effect of exit velocity on source location and source radiation angle. The physical mechanism for this has not

yet been explained. For the VFE and stovepipe nozzle this can be explained at least partially by the changes in diameter of the A/B nozzle with PR. Such changes increase or decrease the degree of turbulence at the nozzle exit, depending on whether more or less of the A/B-generated jet is able to pass the exit nozzle. For the suppressor nozzle the question is unresolved although very similar results have been reported by Boeing[3] for a 20-lobed suppressor nozzle.

REFERENCES

1. Jaeck, C. L., "Static and Wind Tunnel Near Field/ Far Field Jet Noise Measurements from Model Scale Single-Flow Baseline and Suppressor Nozzles", Sept. 1976, NASA CR-137913.

2. Ibid.

3. Ibid.

4. Bass, H. E., and Shields, F. D., "A Study of Atmospheric Absorption of High Frequency Noise and Application to Fractional-Octave Bands", Advance copy, Contract NAS 3-19431, NASA CR-(low number).

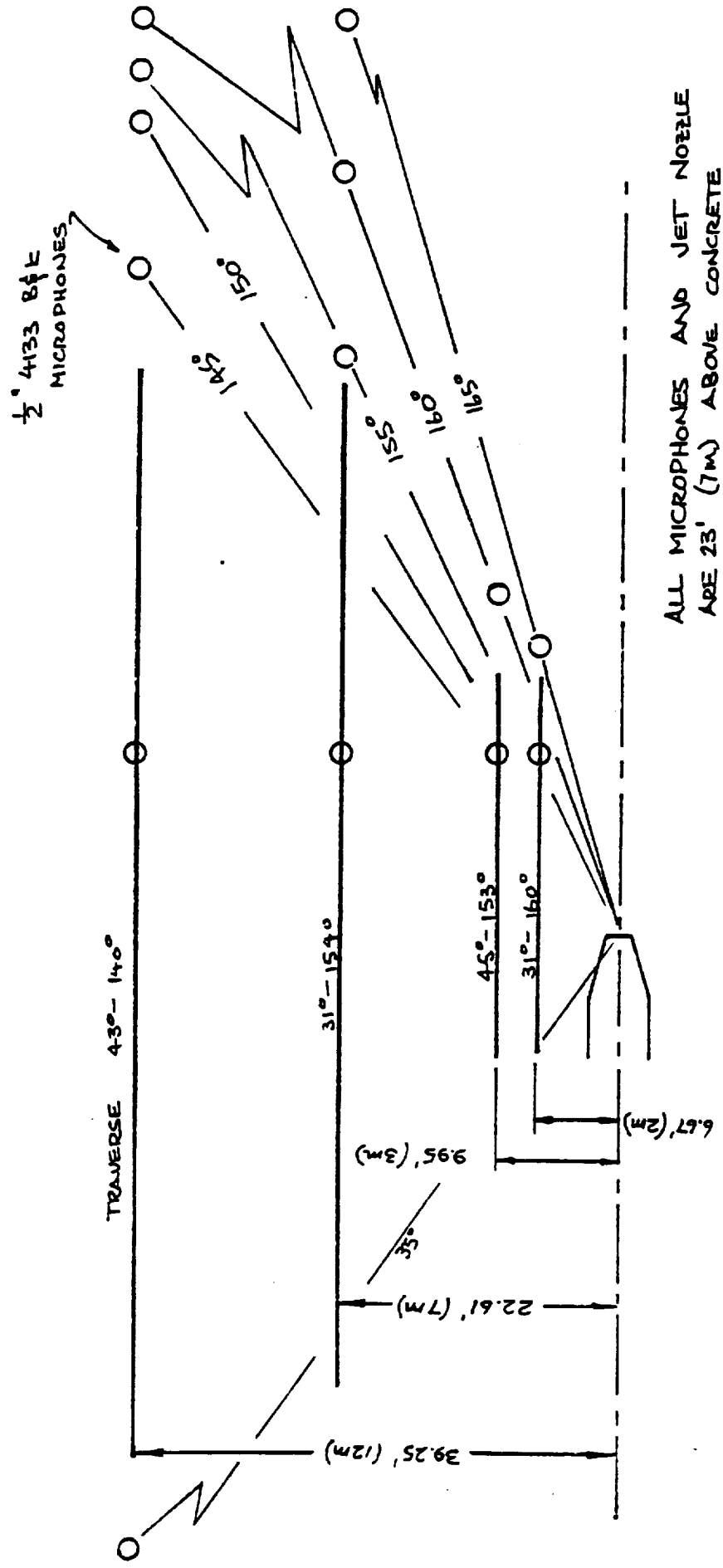
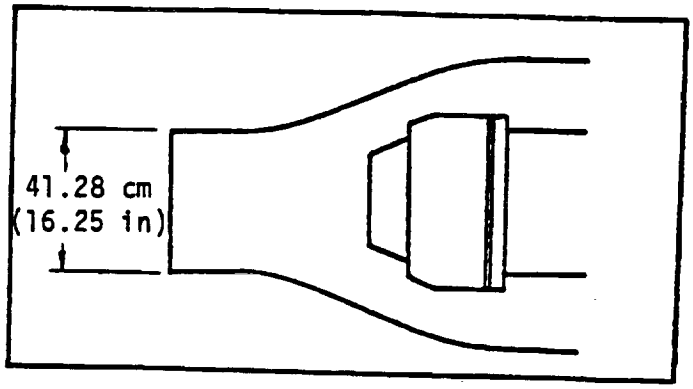
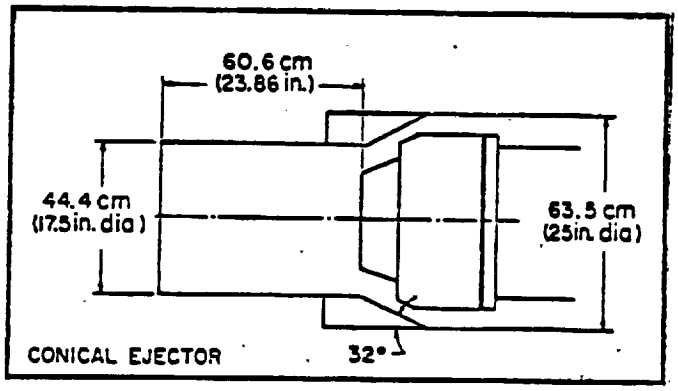


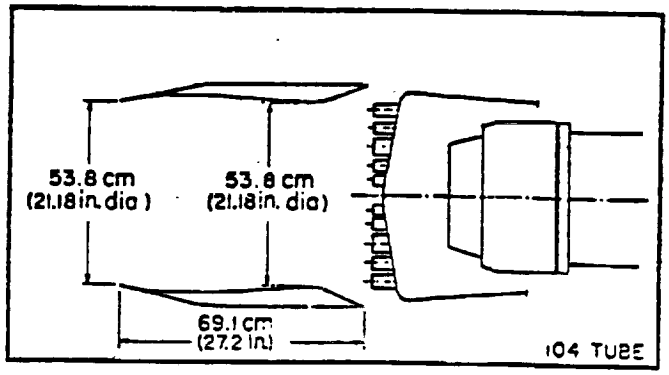
FIGURE 1: Test Site Arrangement



Variable Flap Ejector



Conical Ejector
(Stovepipe)



104 Tube Suppressor
nozzle shown with
ejector shroud

FIGURE 2: Nozzle Configurations

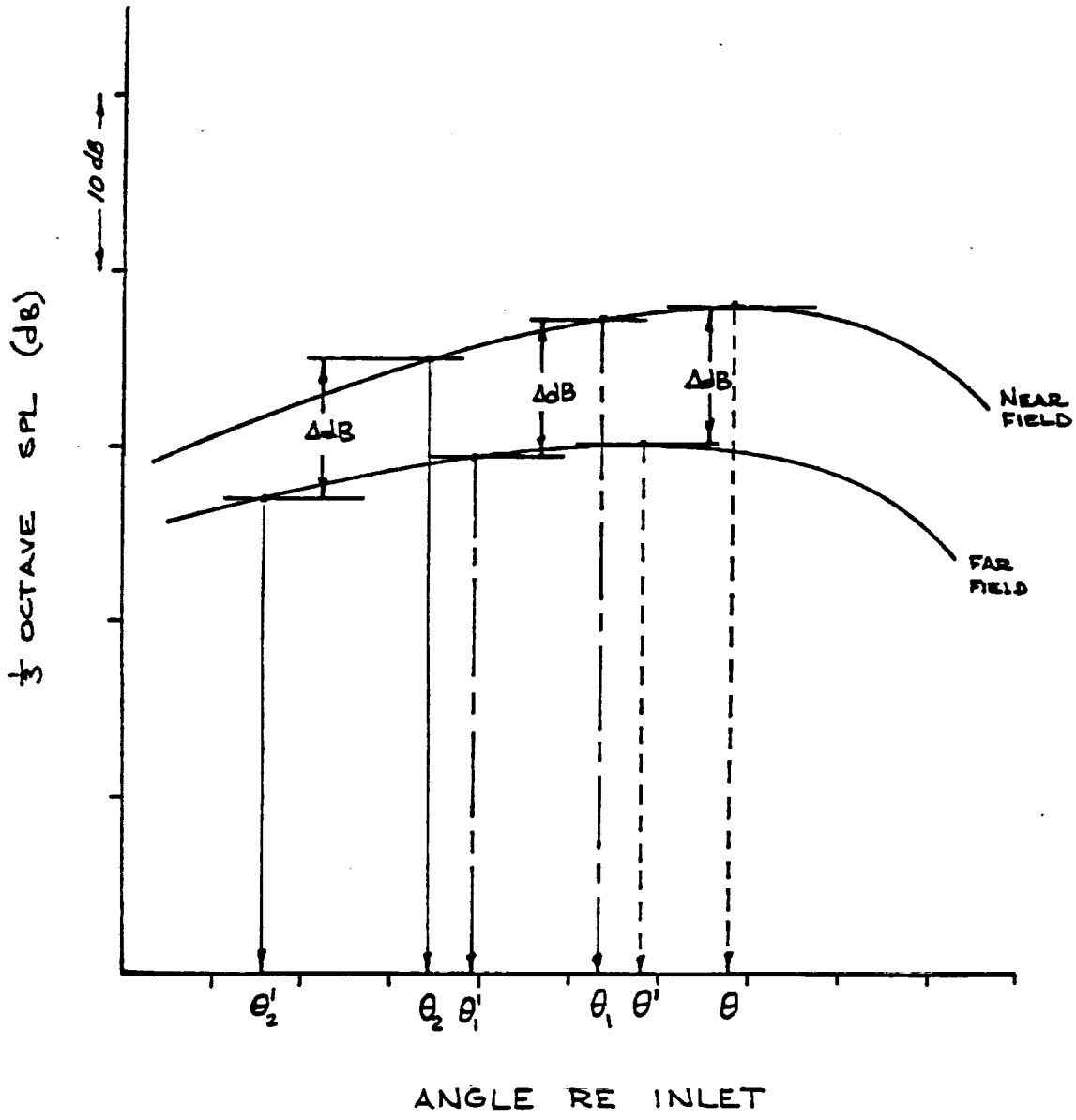


FIGURE 3: Procedure for Determining Angle Pairs

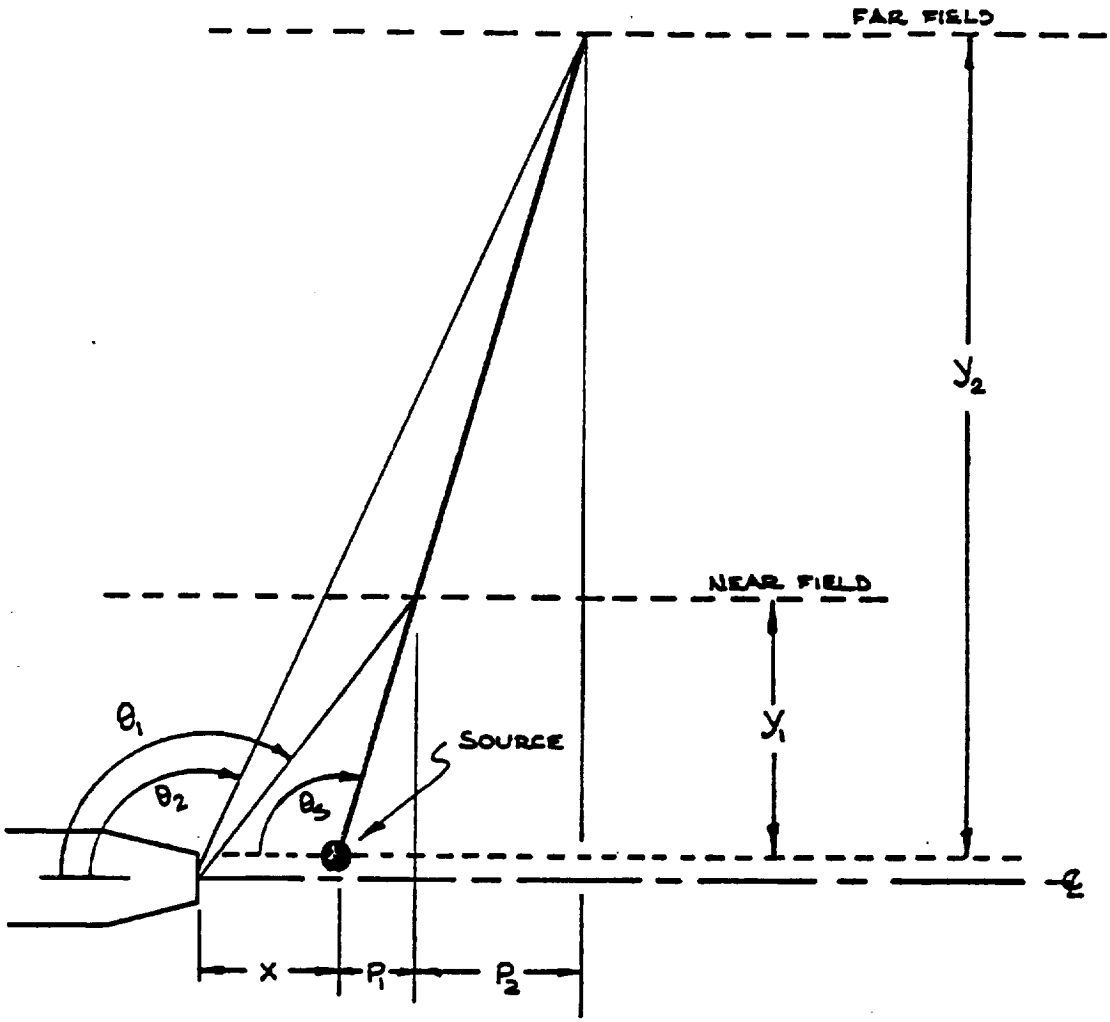


FIGURE 4: Source Location Geometry

FIGURE 5: VFE Nozzle 1/3 Octave Spectra at Both Near Field and Far Field Sidelines (V_j = 1515 fps)

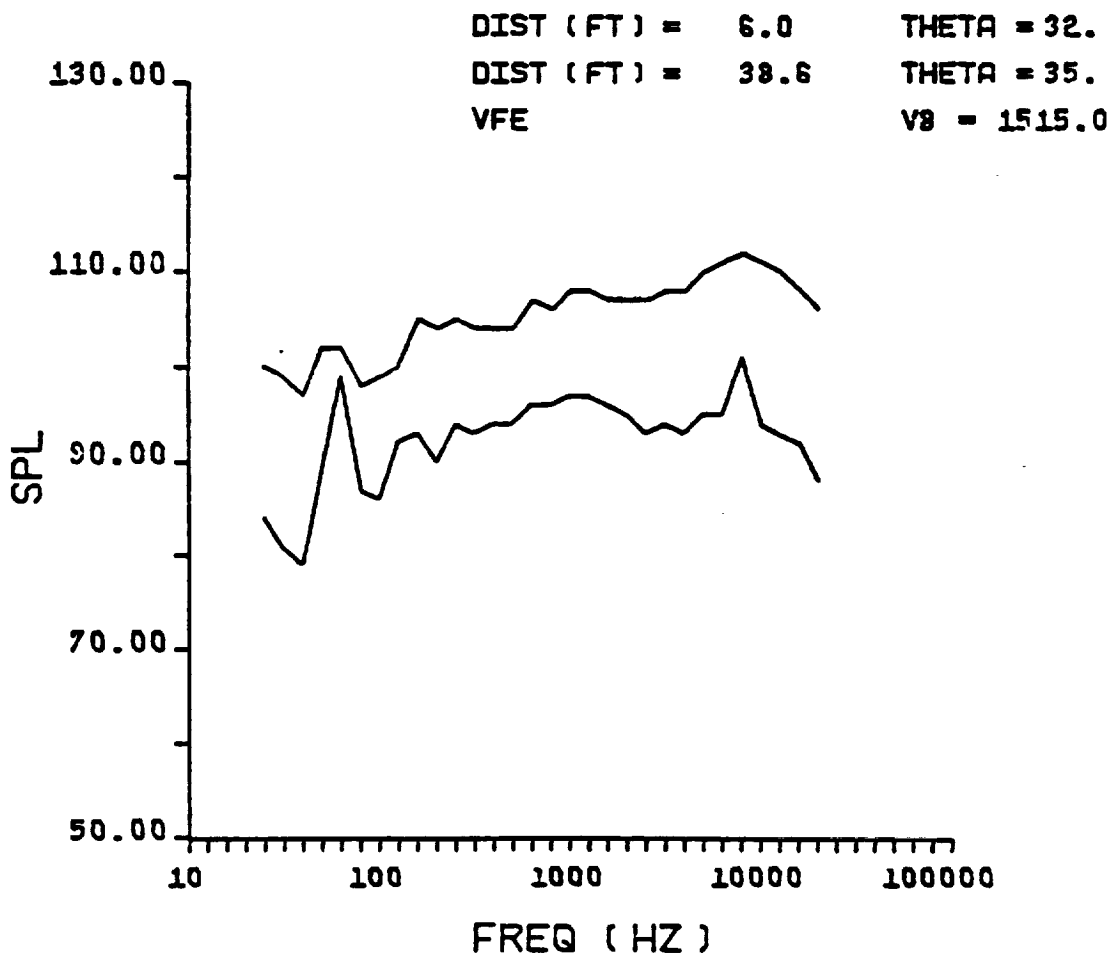
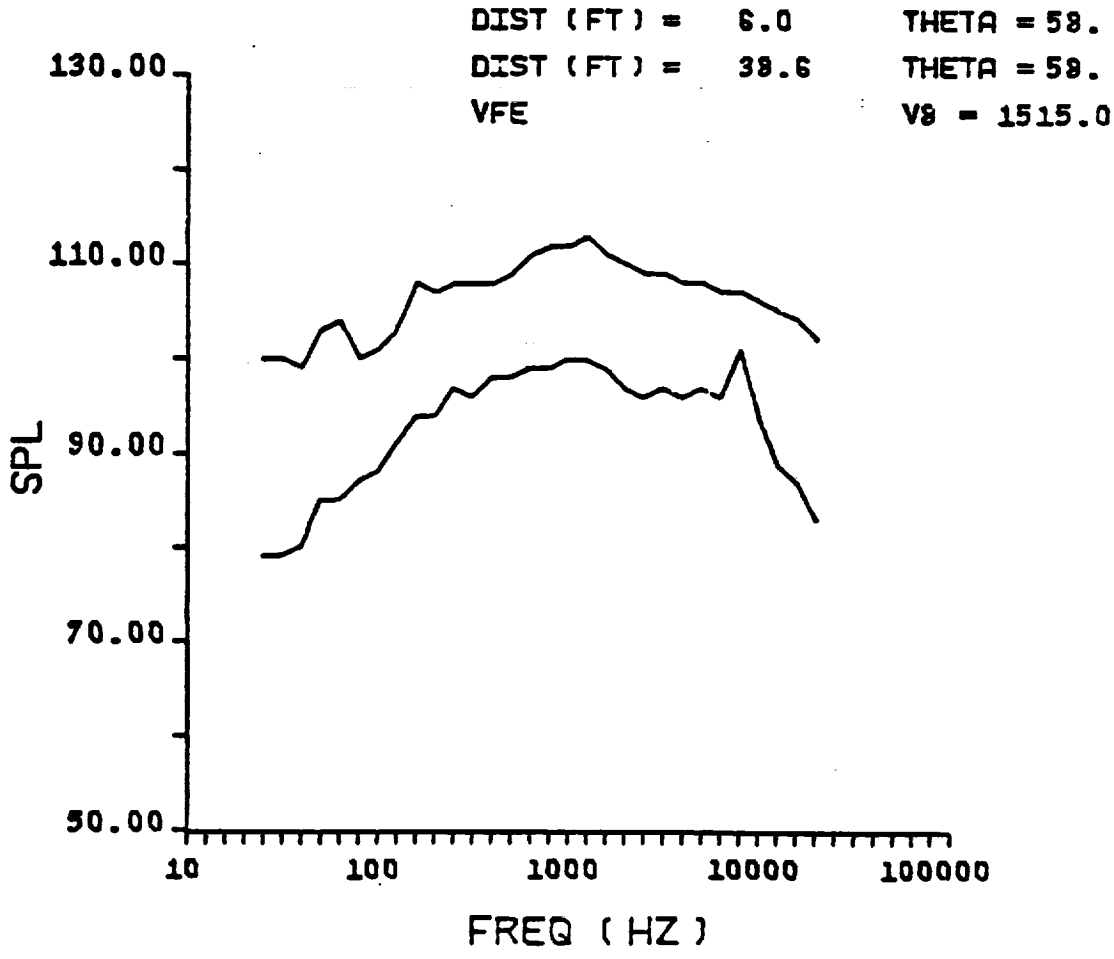

DIST (FT) = 6.0 THETA = 32.
DIST (FT) = 38.6 THETA = 35.
VFE V8 = 1515.0
130.00
110.00
90.00
70.00
50.00
SPL
10
100
1000
10000
100000
FREQ (HZ)

FIGURE 5



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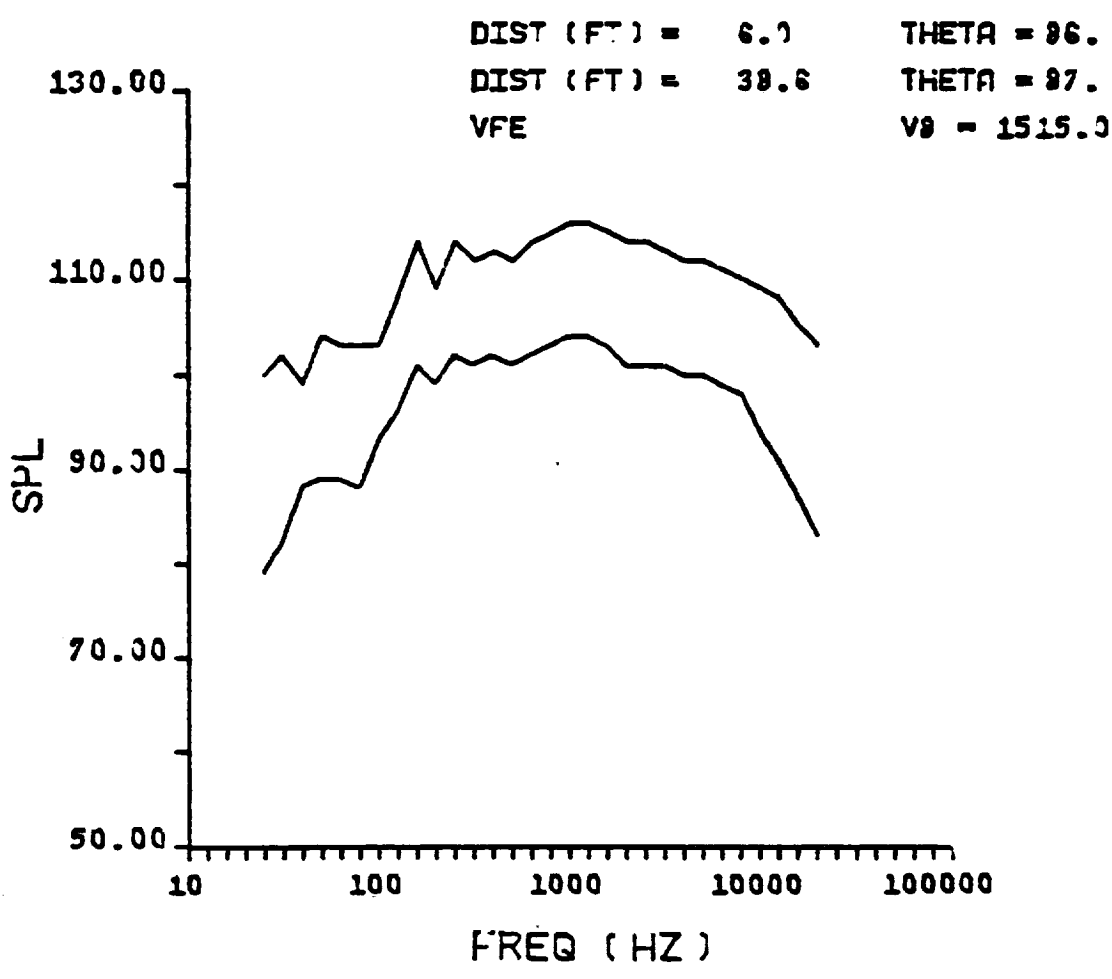

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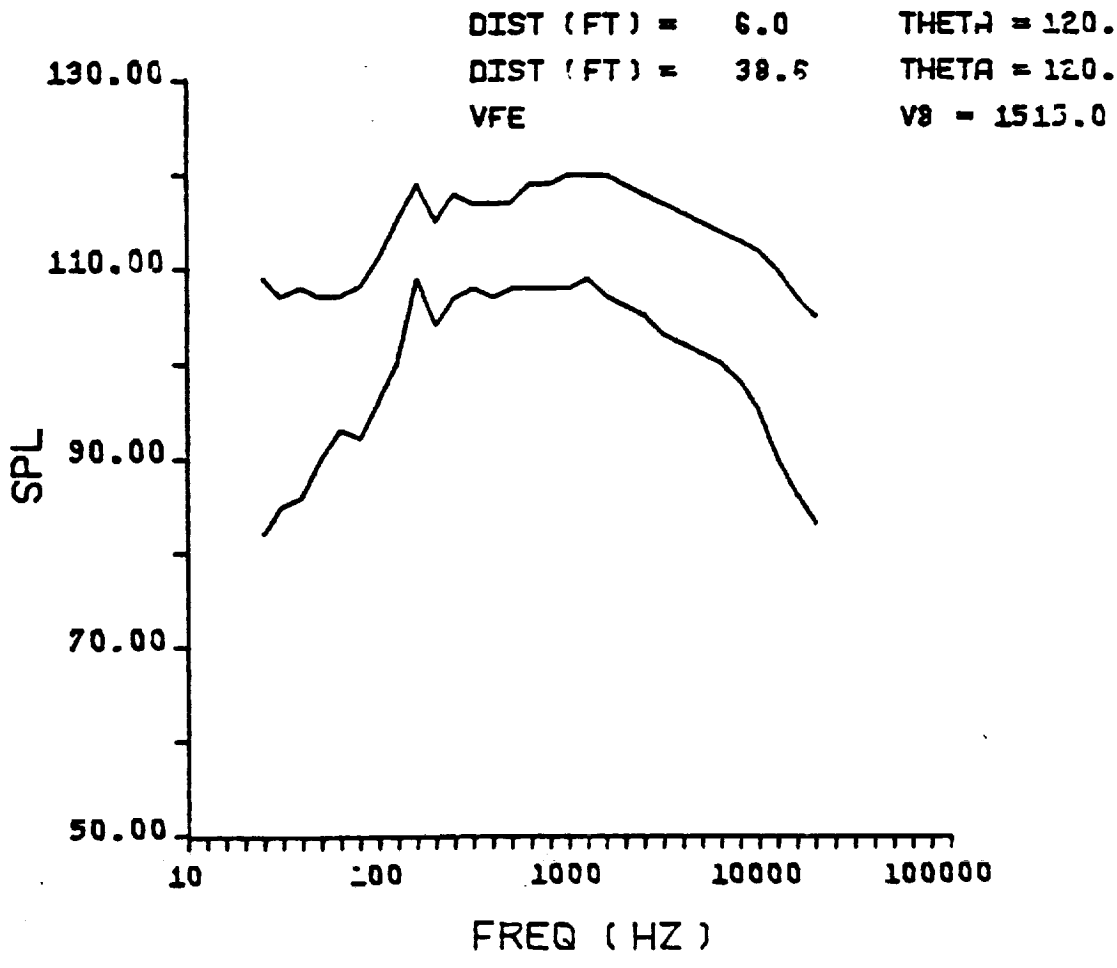

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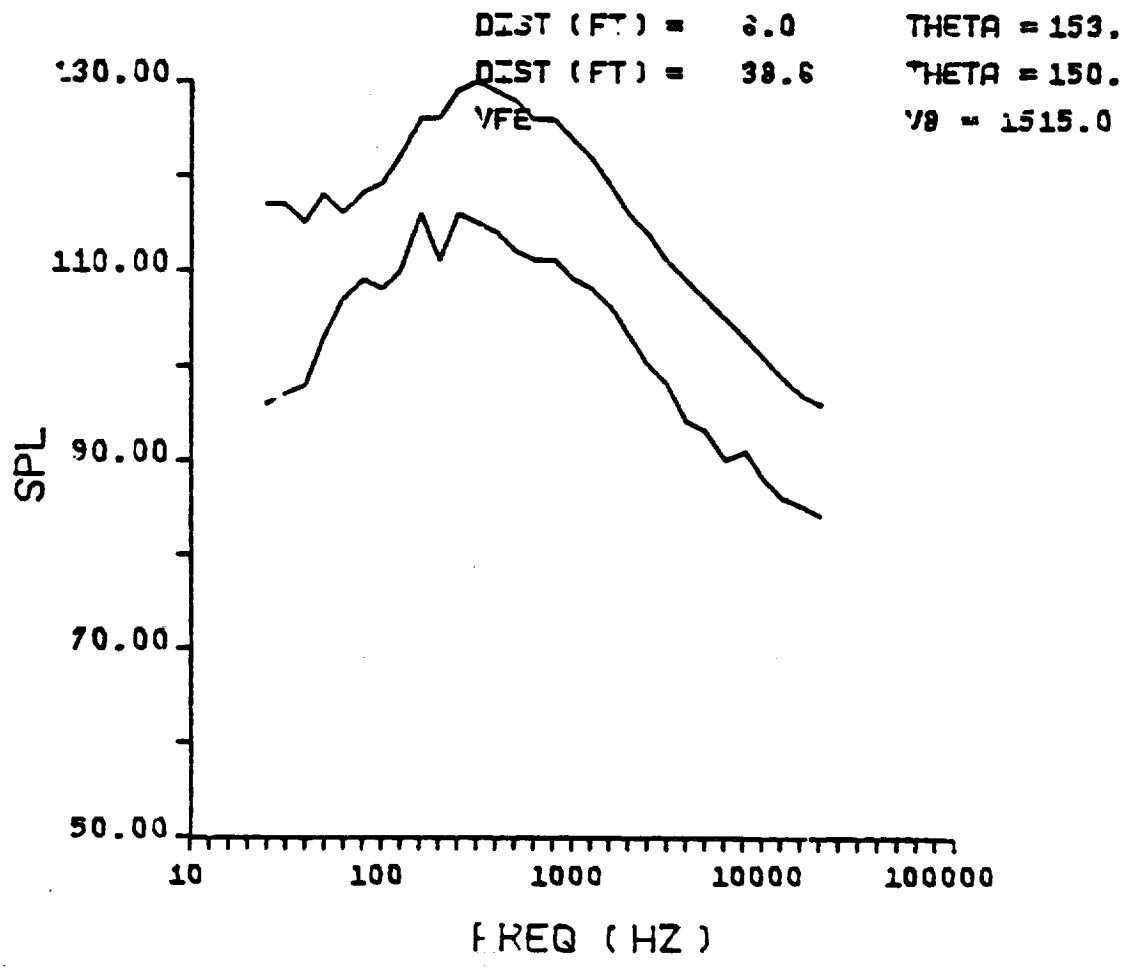

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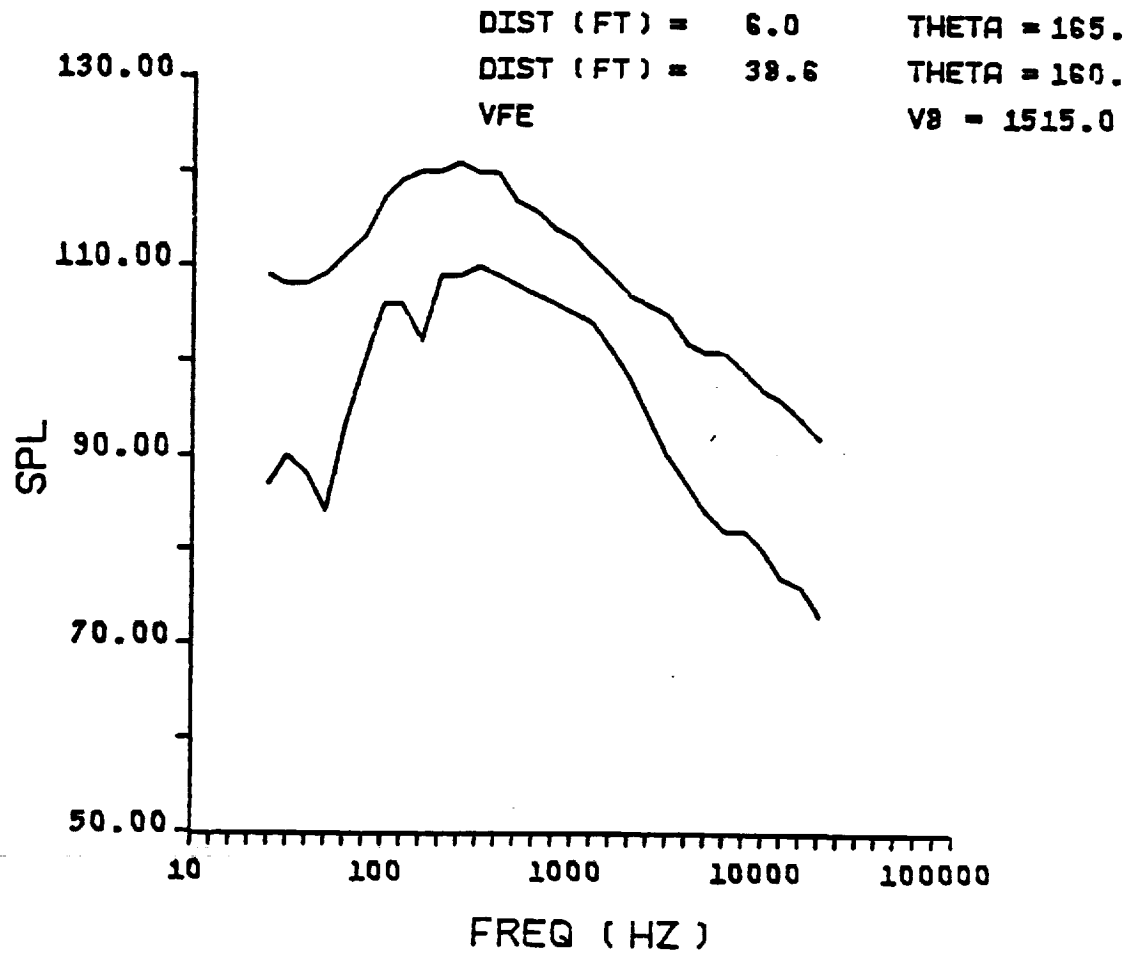
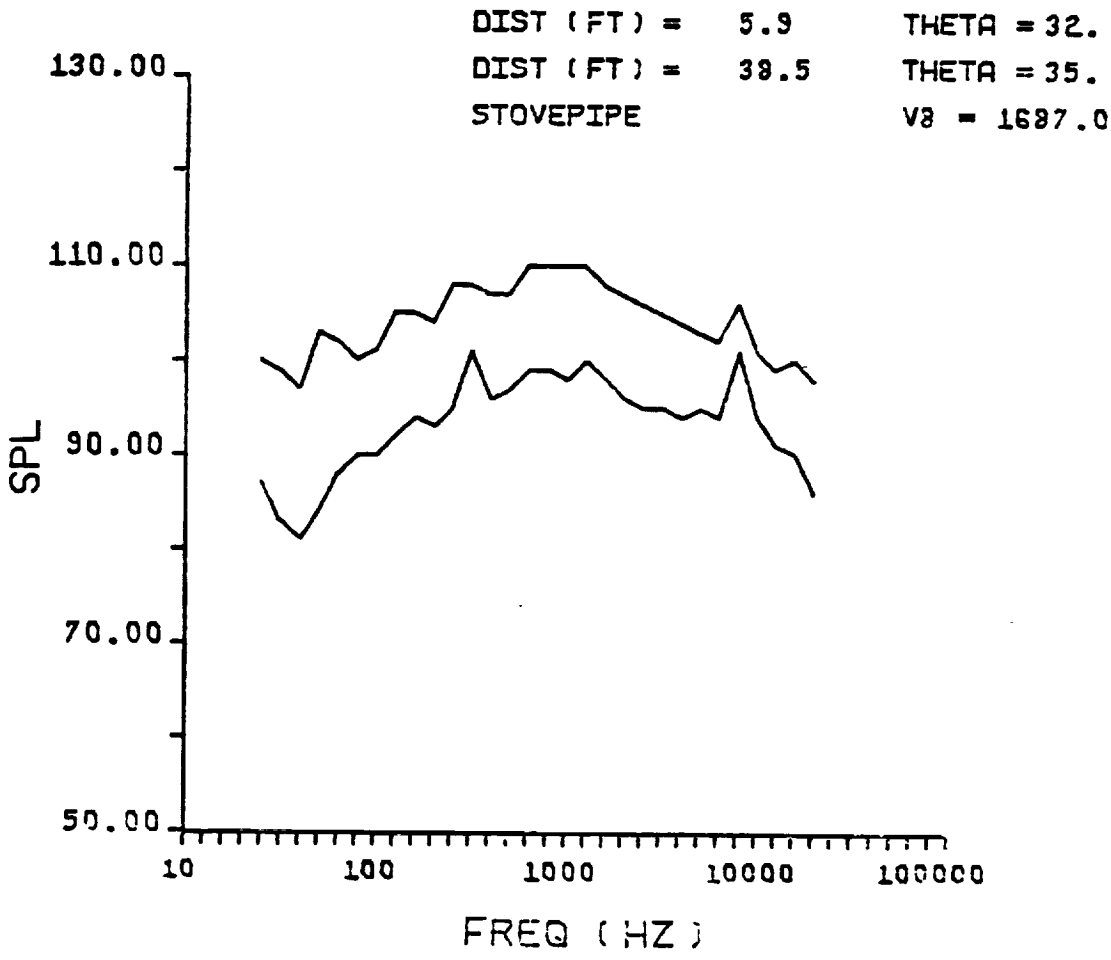


FIGURE 5 Cont'd

FIGURE 6: Stovepipe Nozzle 1/3 Octave Spectra at Both Near Field and Far Field Sidelines (V_j = 1687 fps)


DIST (FT) = 5.9
THETA = 32.
DIST (FT) = 38.5
THETA = 35.
STOVEPIPE
V8 = 1687.0
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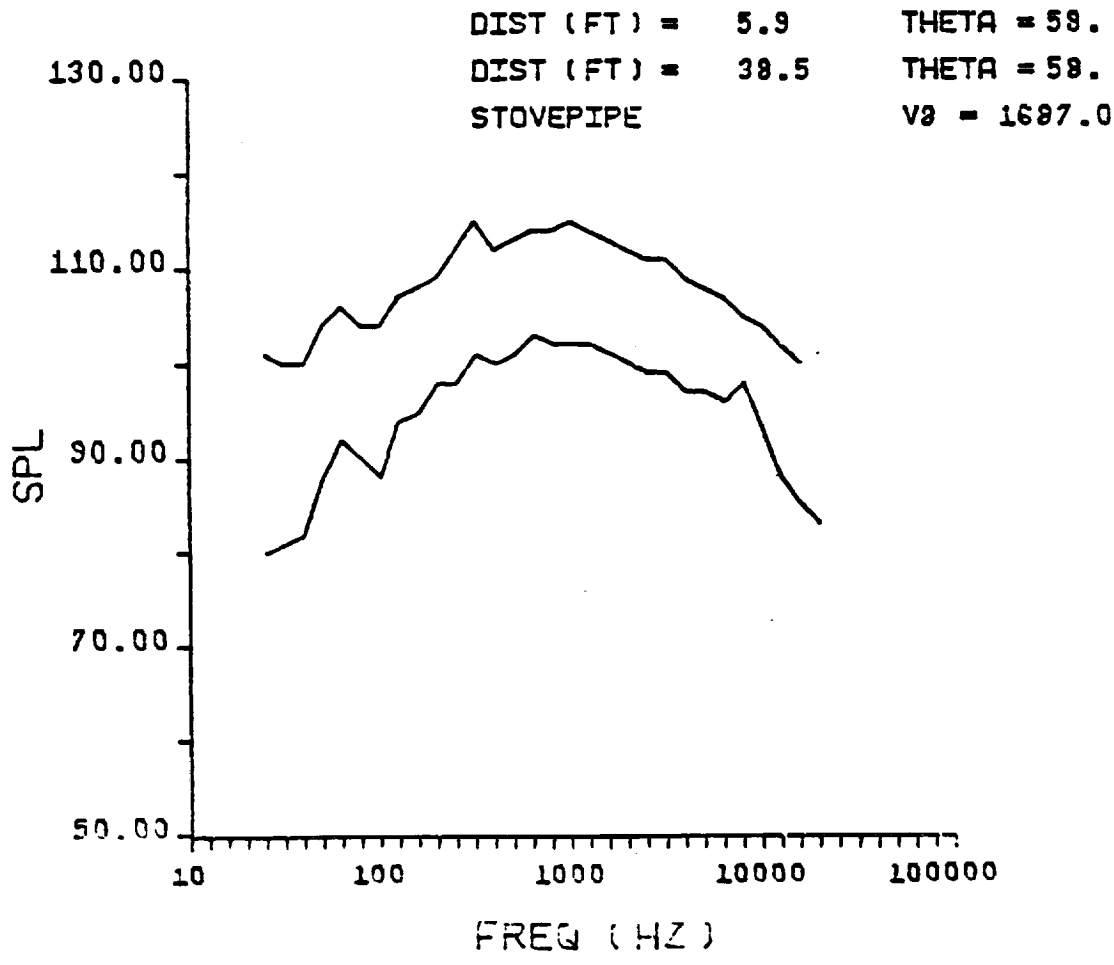
110.00
90.00
70.00
50.00
SPL
10
100
1000
10000
100000
FREQ (HZ)

FIGURE 6



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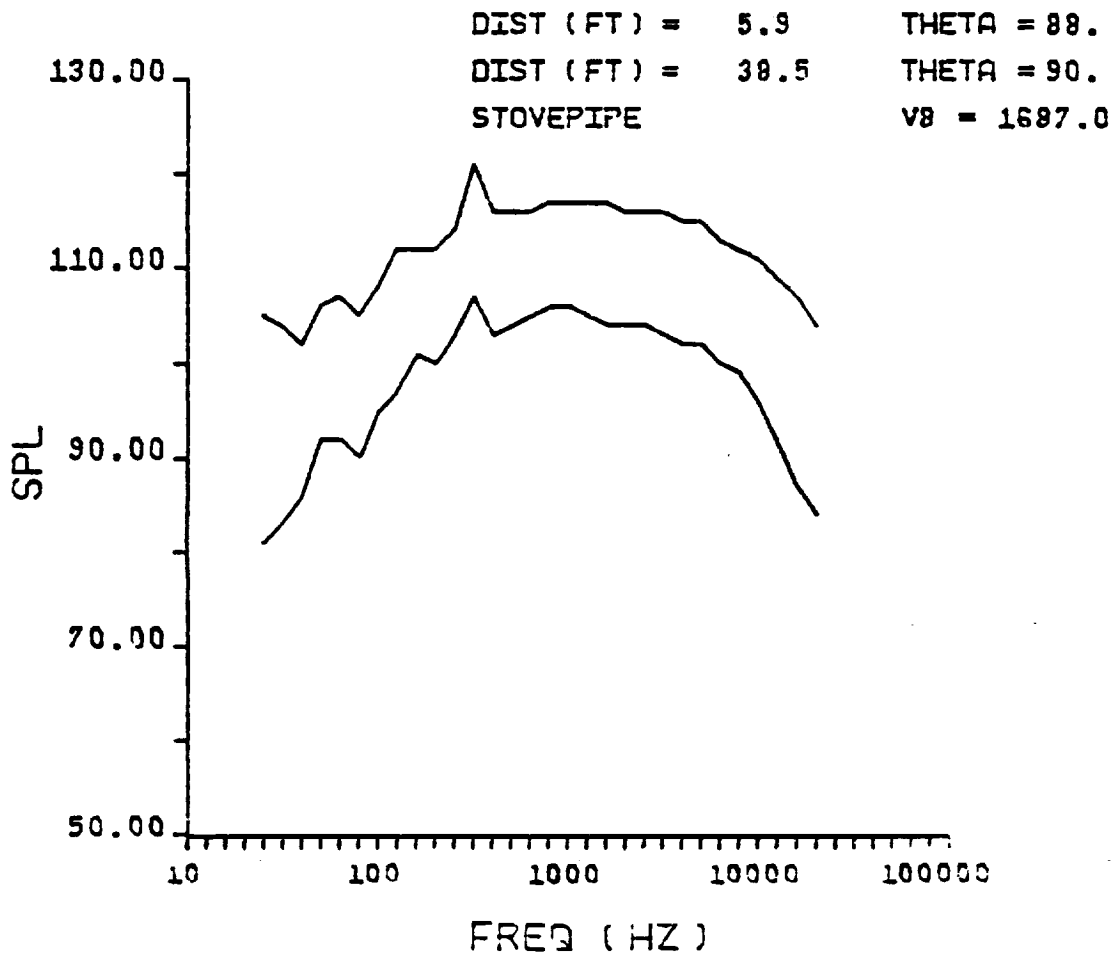

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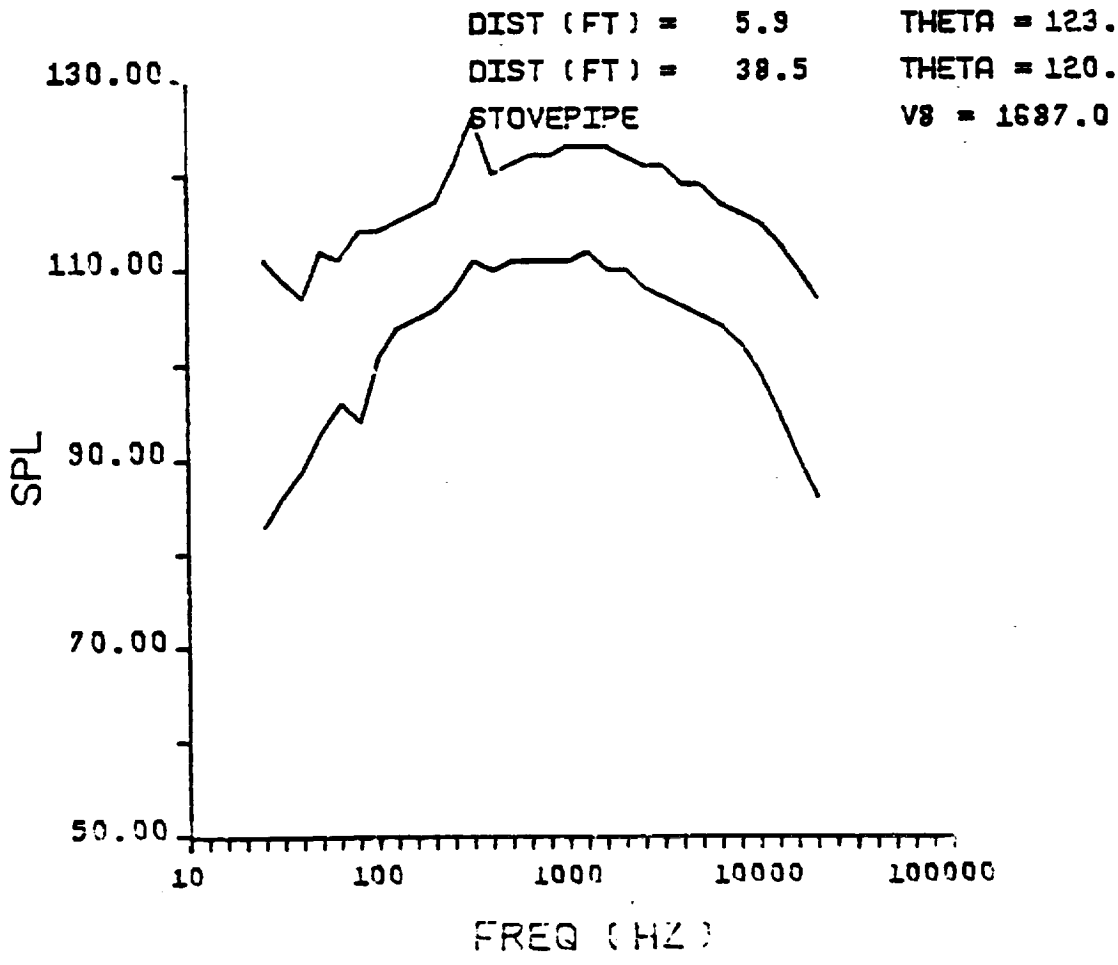

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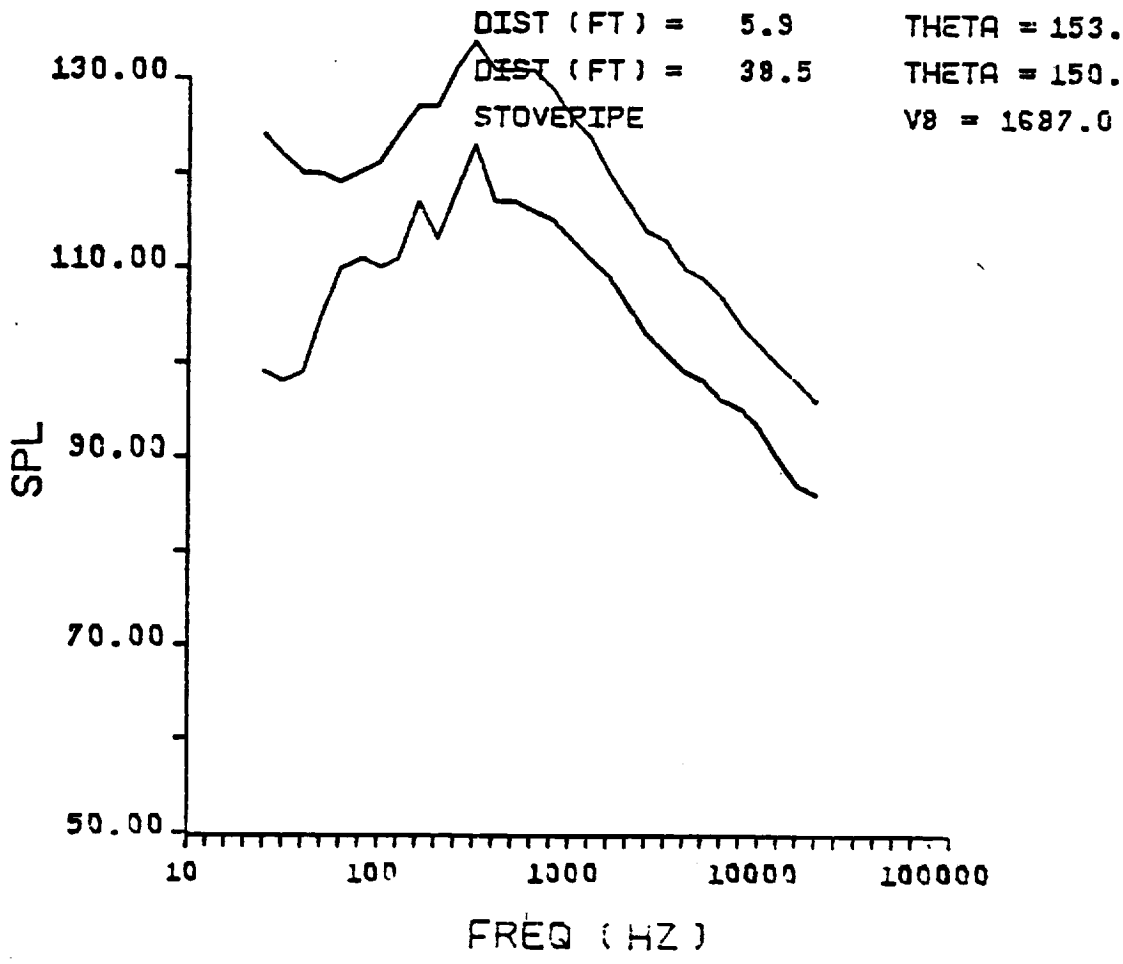

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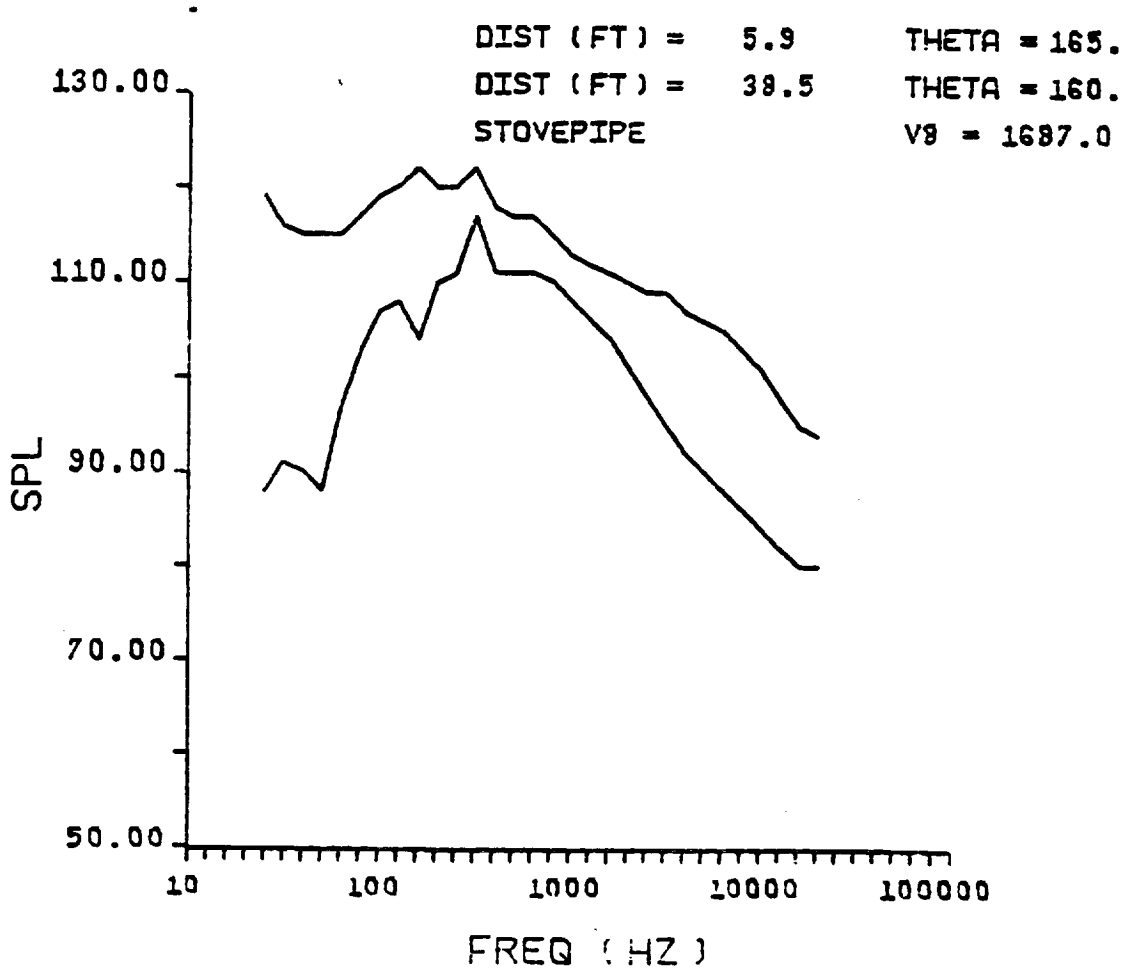

FIGURE 5 cont'd

FIGURE 7: 104 Tube Nozzle 1/3 Octave Spectra at Both Near Field and Far Field Sidelines (V_j = 1776 fps)

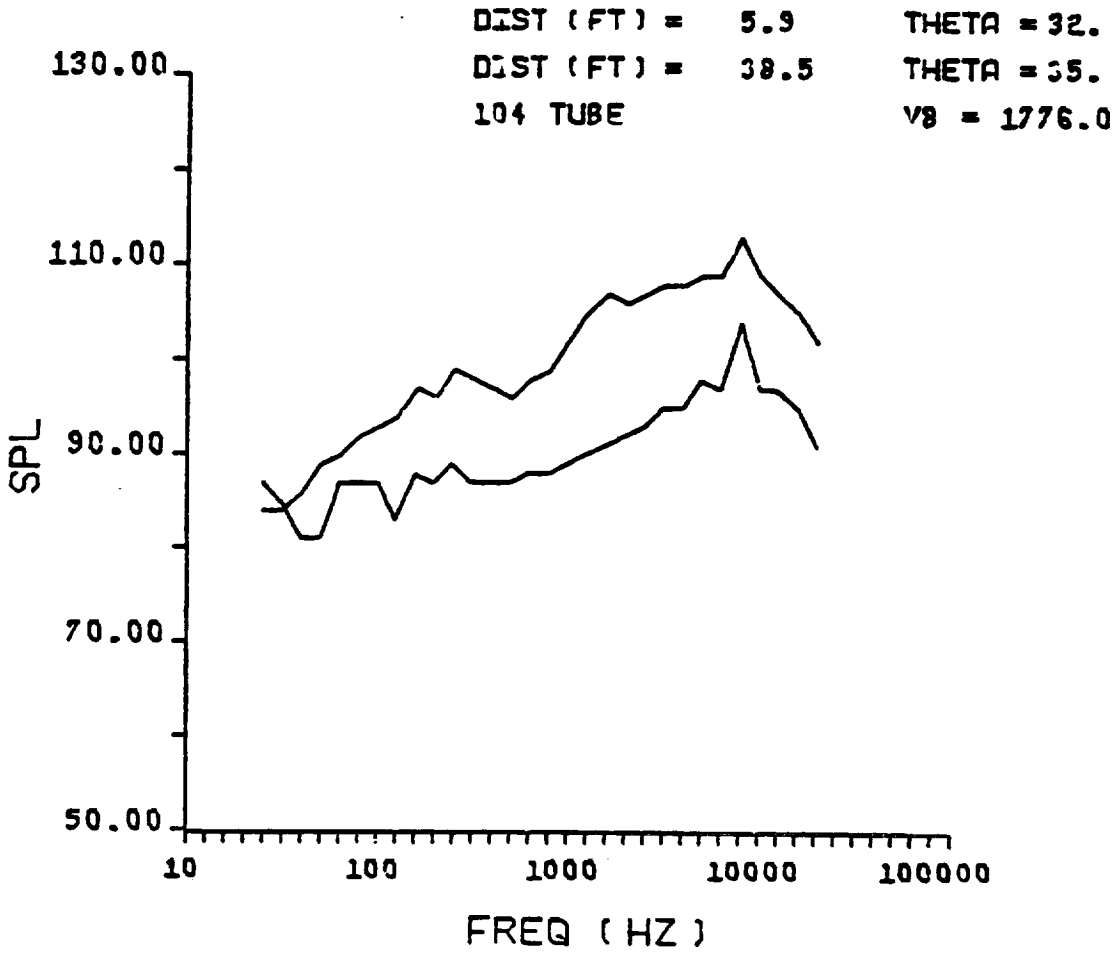
DIST (FT) = 5.9
THETA = 32.
DIST (FT) = 38.5
THETA = 35.
104 TUBE
V8 = 1776.0
130.00
110.00
90.00
70.00
50.00
SPL
10
100
1000
10000
100000
FREQ (HZ)

FIGURE 7

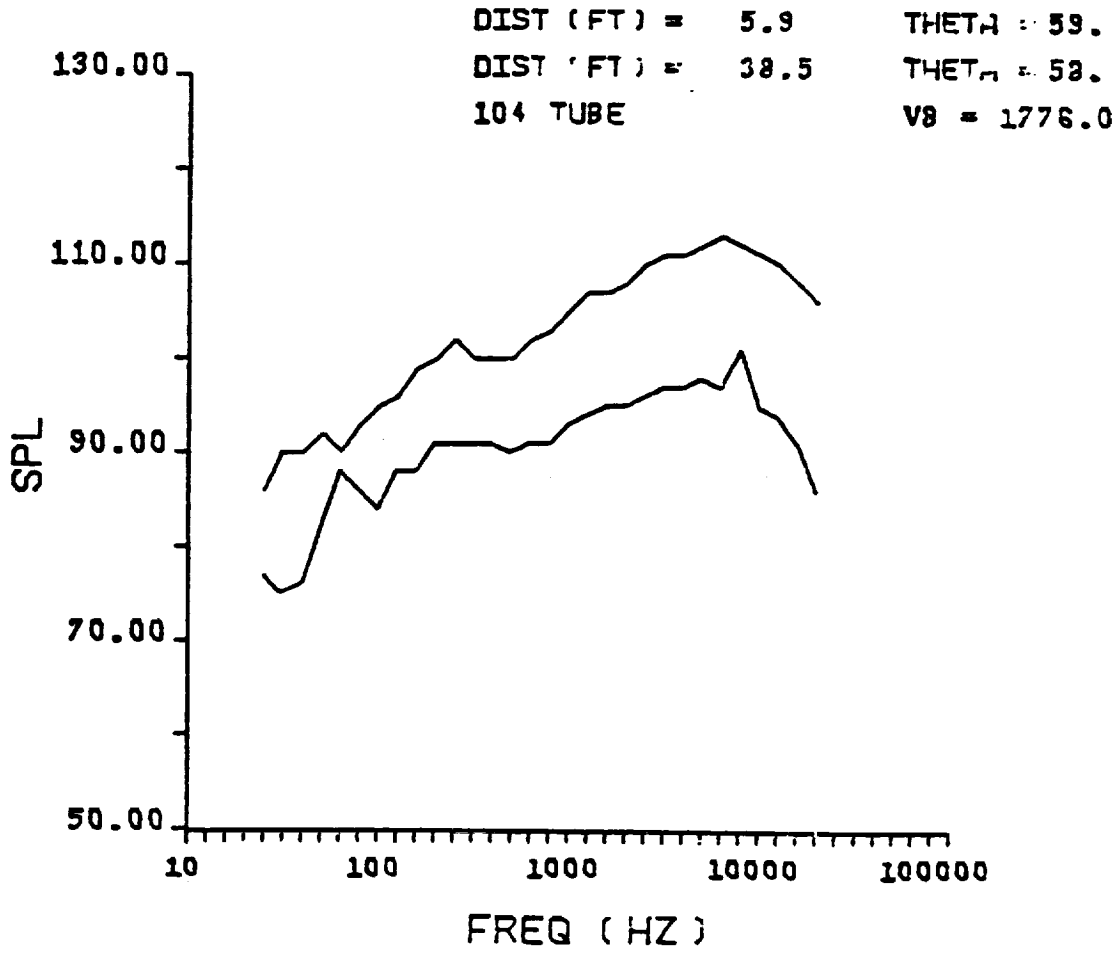

FIGURE 7 cont'd

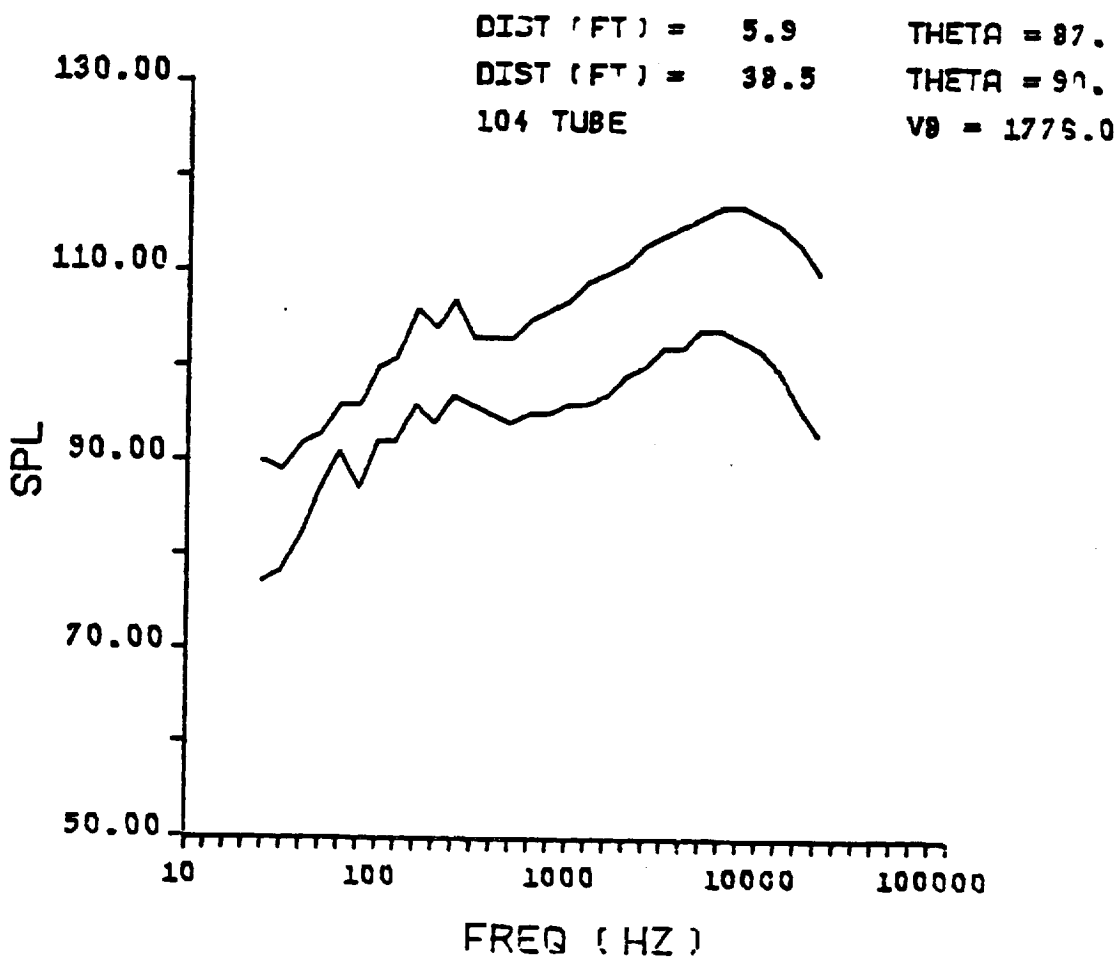

FIGURE 7 cont'd

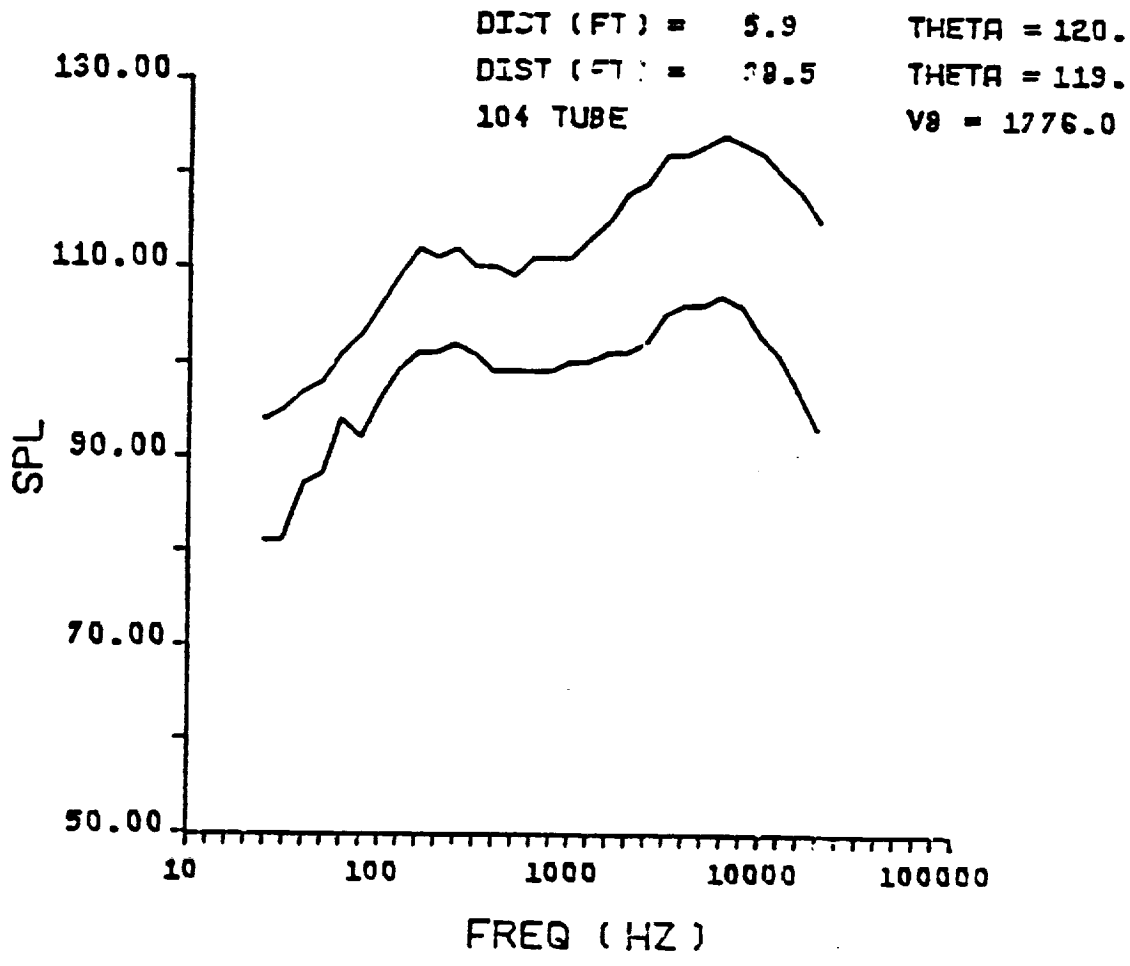

FIGURE 7 cont'd

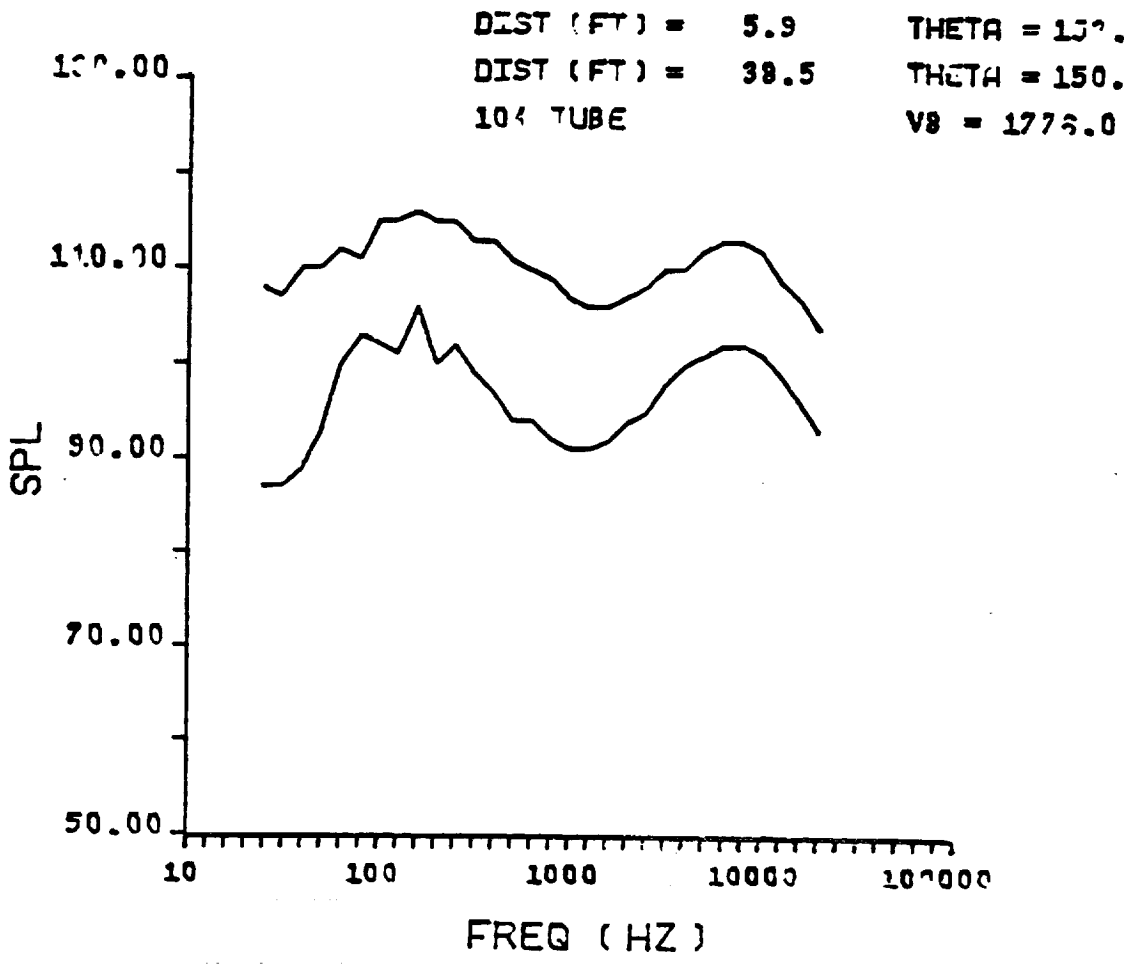

FIGURE 7 cont'd

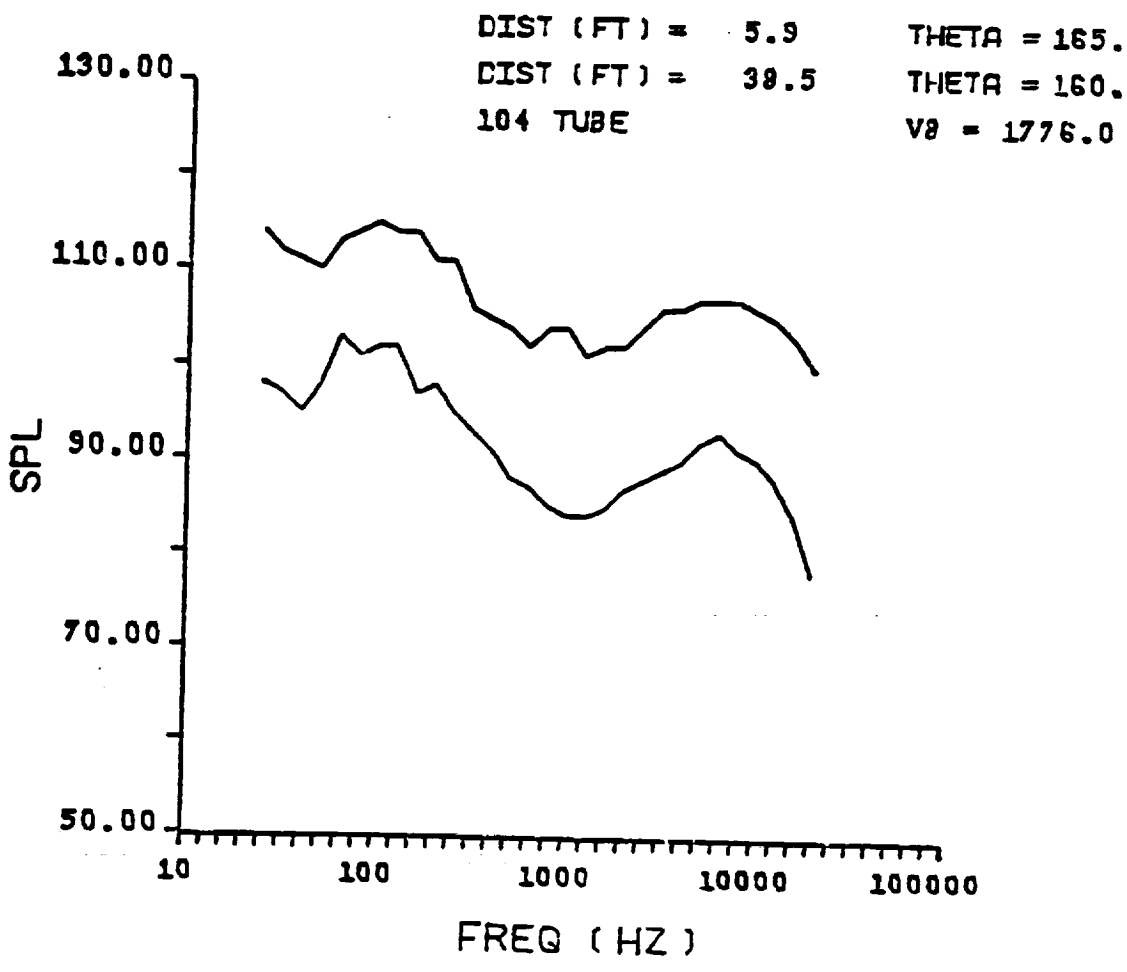

FIGURE 7 cont'd

FIGURE 8: 104 Tube Nozzle with Suppressor
1/3 Octave Spectra at Both Near Field
and Far Field Sidelines (V_j = 1793 fps)

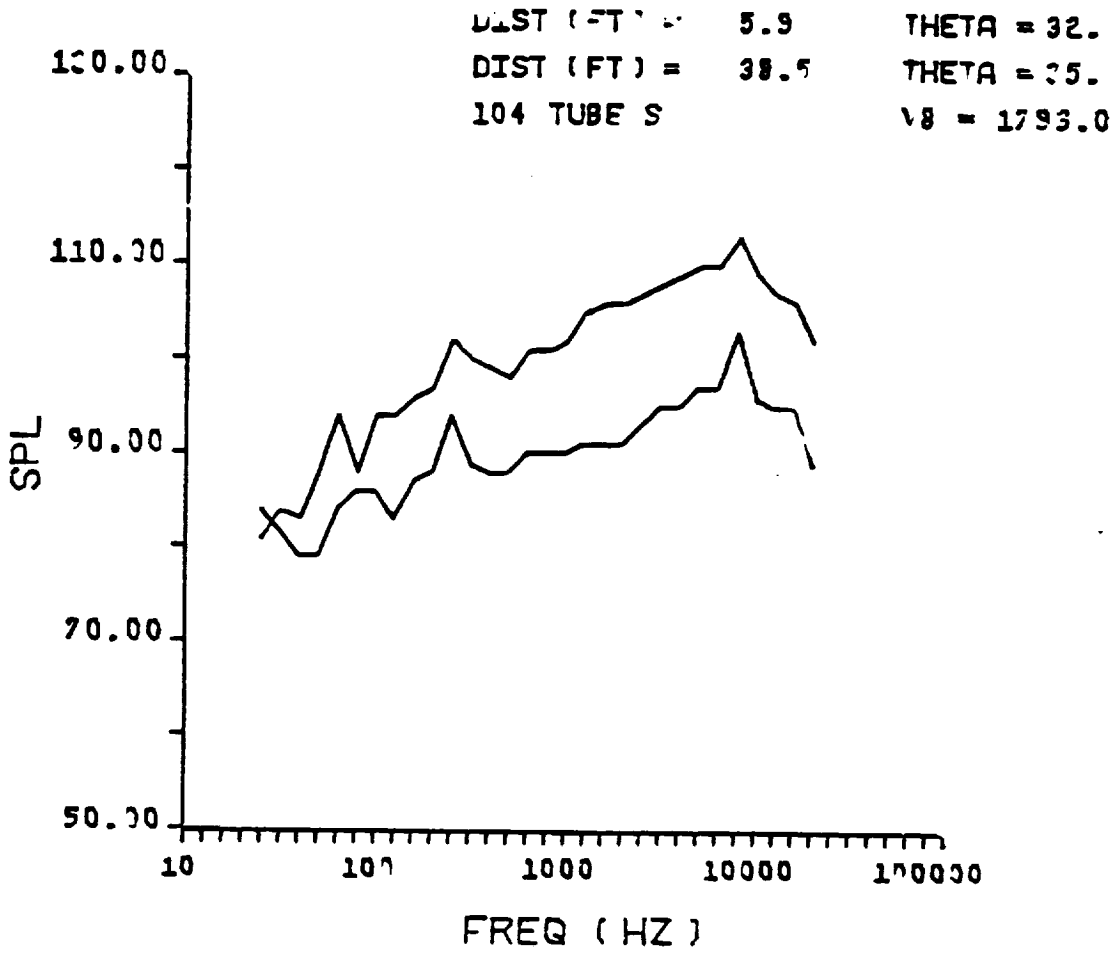
DIST (FT) = 5.9
THETA = 32.
DIST (FT) = 38.5
THETA = 25.
104 TUBE S
V8 = 1793.0
110.00
90.00
70.00
50.00
SPL
10
100
1000
10000
100000
FREQ (HZ)

FIGURE 8

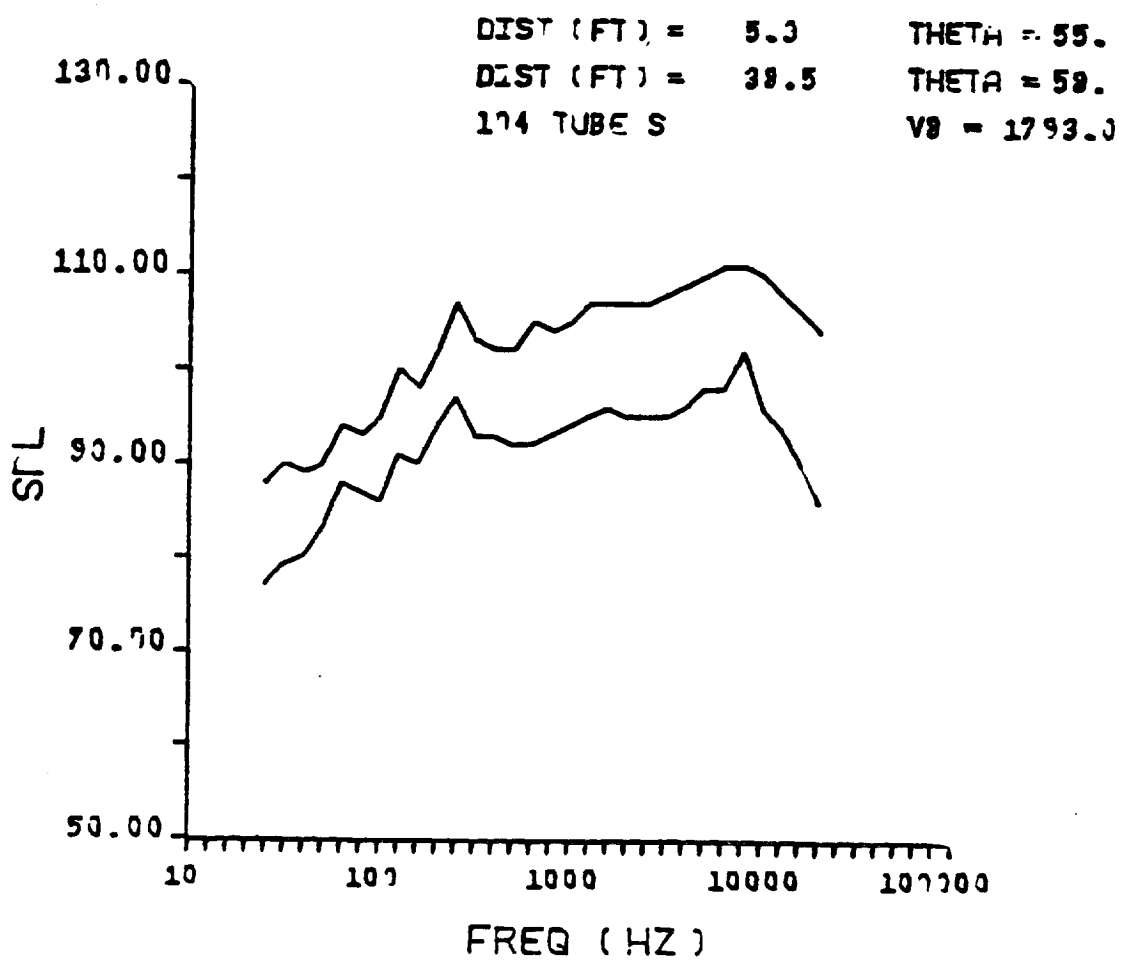

FIGURE 8 cont'd

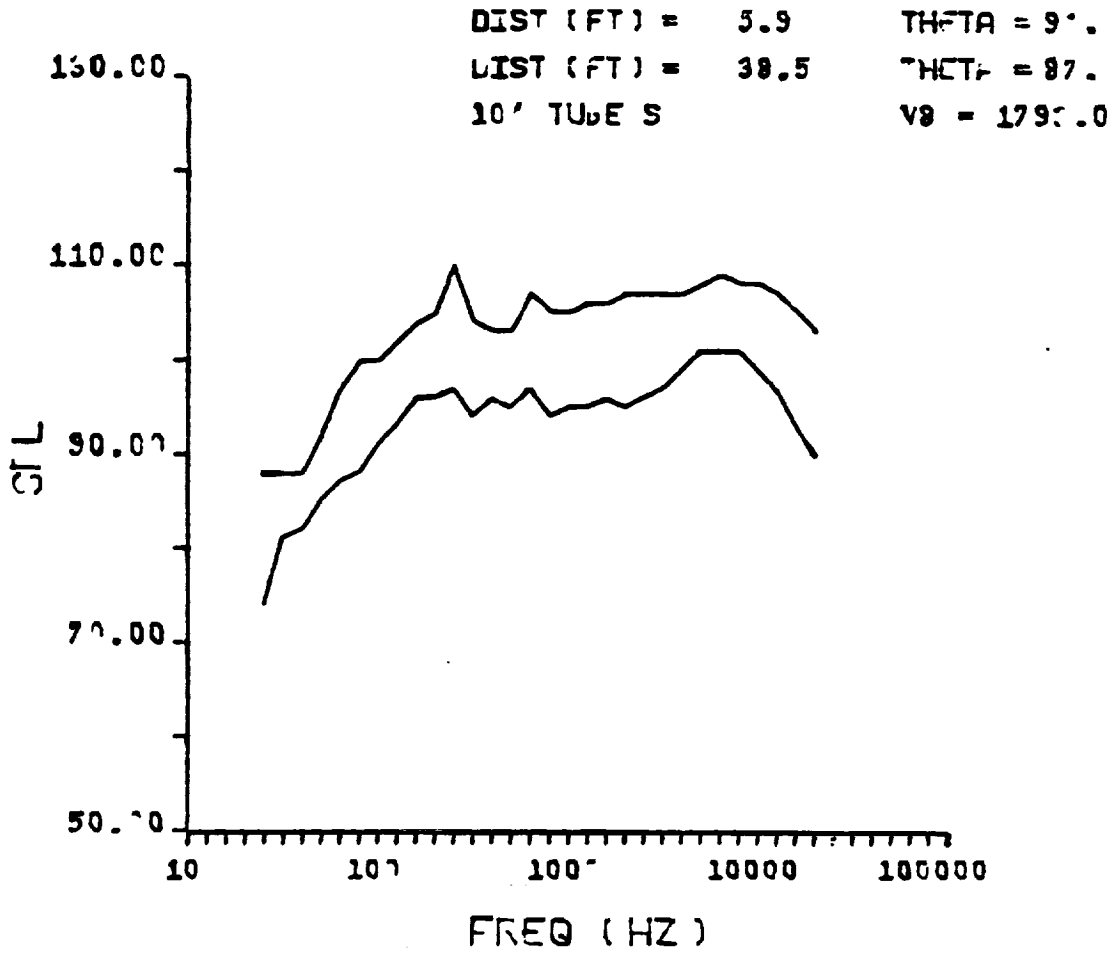

FIGURE 8 cont'd

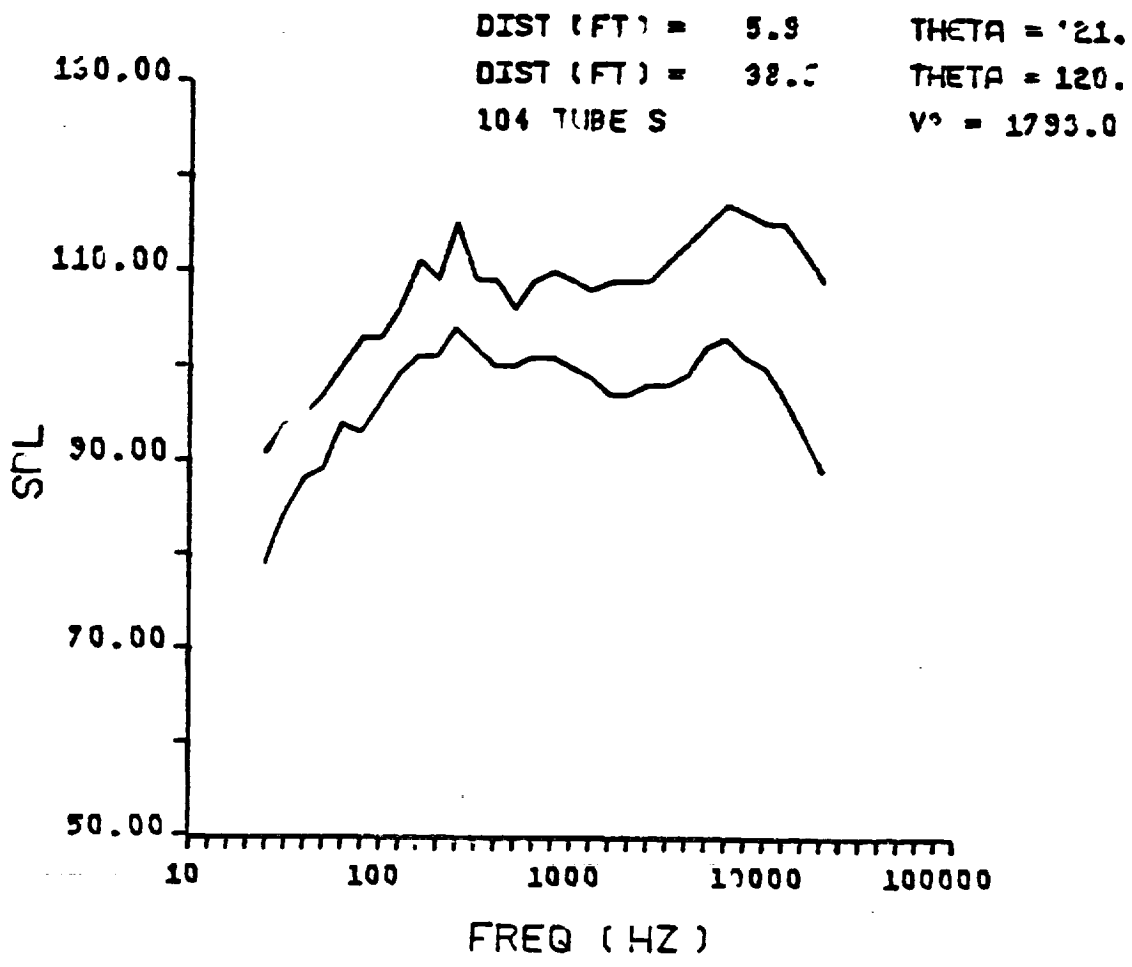

FIGURE 8 cont'd

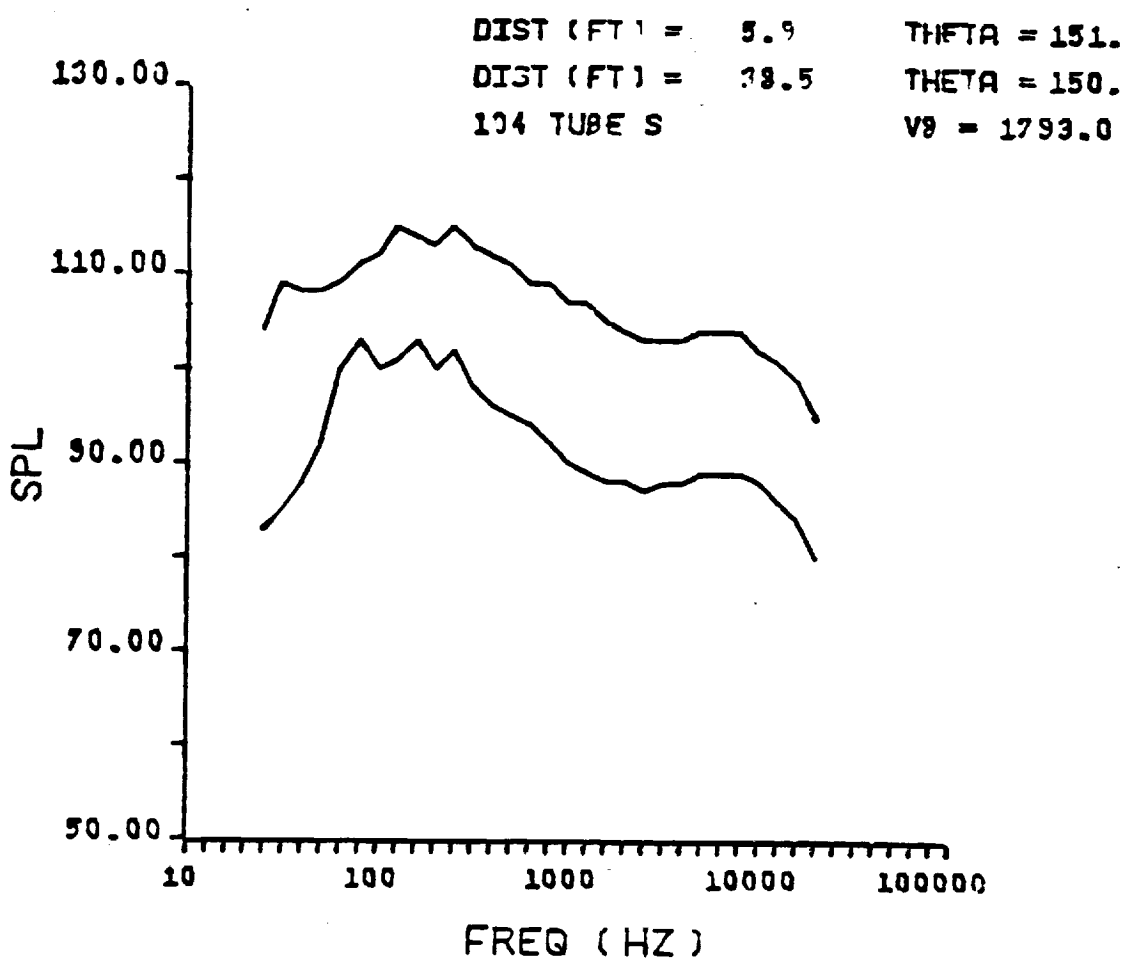

FIGURE 8 cont'd

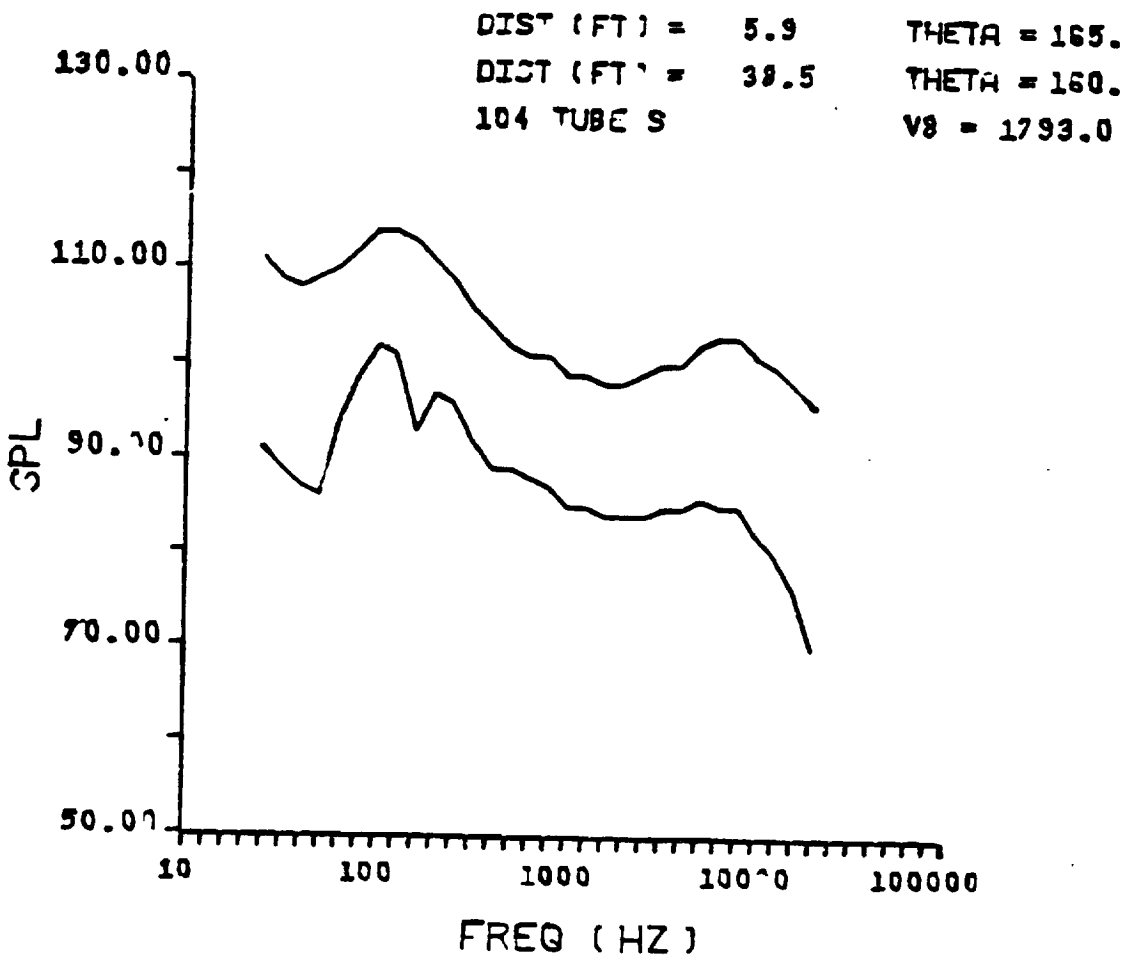

FIGURE 8 cont'd

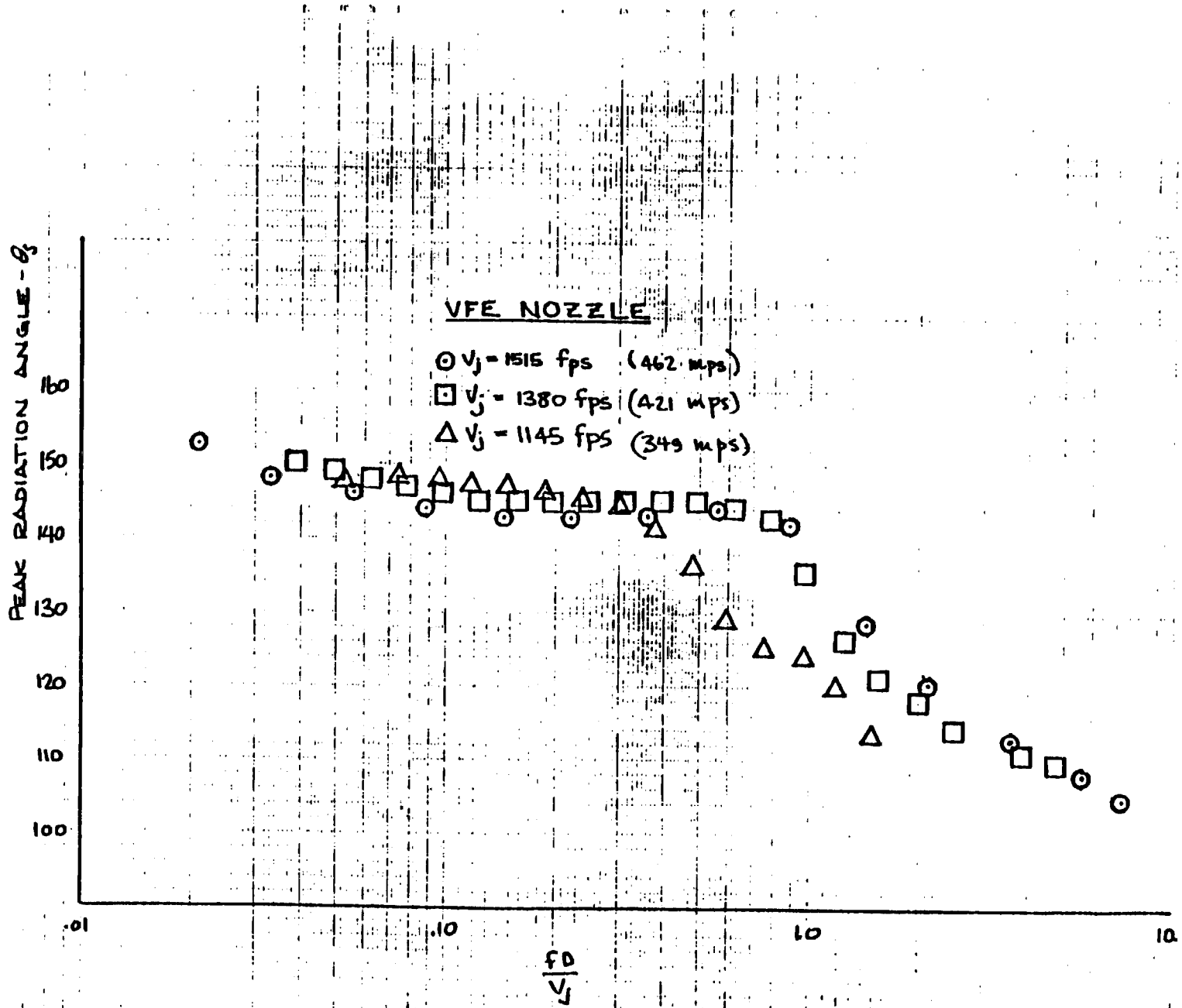

FIGURE 9: Peak Radiation Angle VS Strouhal Number (VFE nozzle)

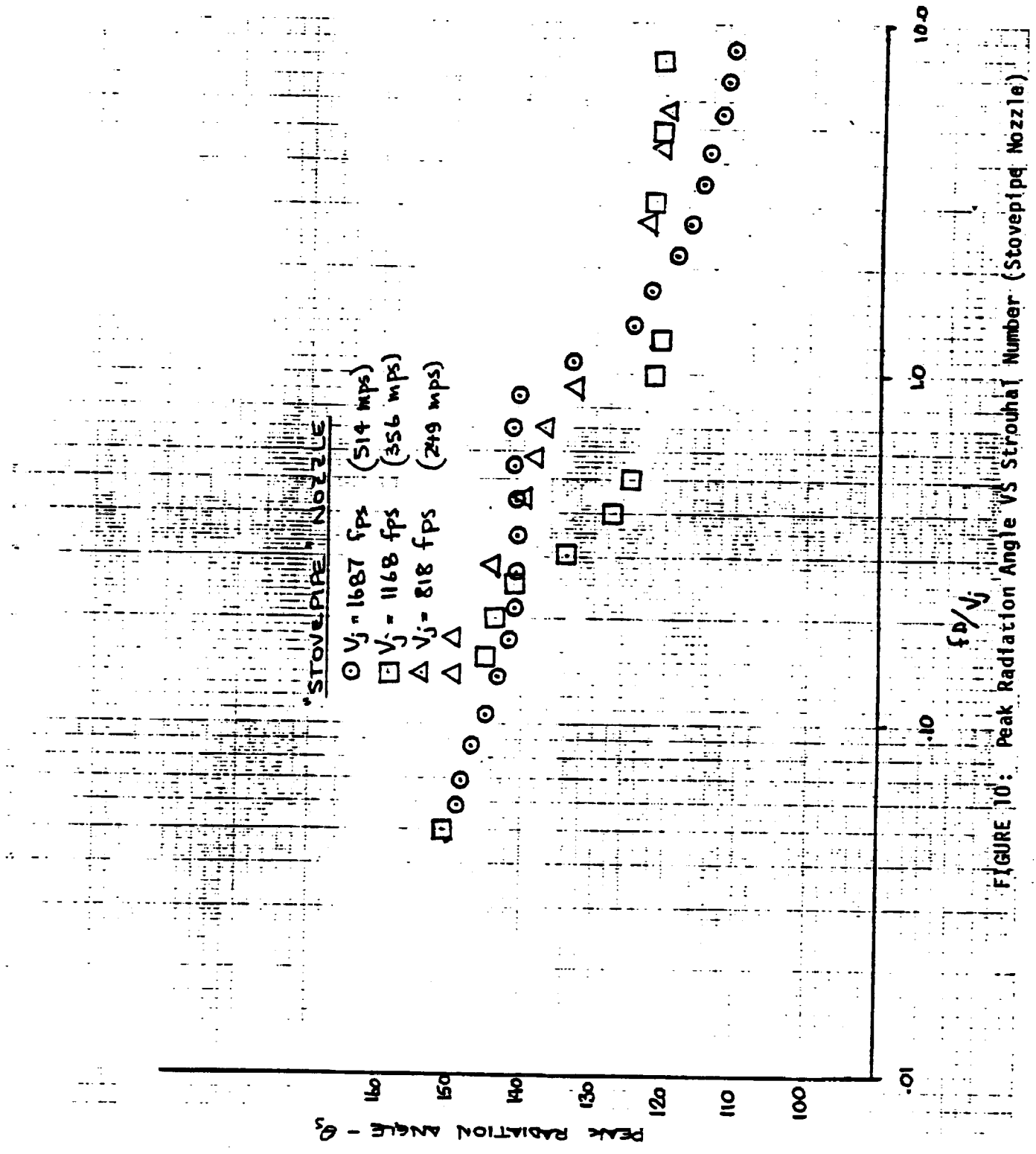

FIGURE 10: Peak Radiation Angle VS Strouhal Number (Stovepipe Nozzle)

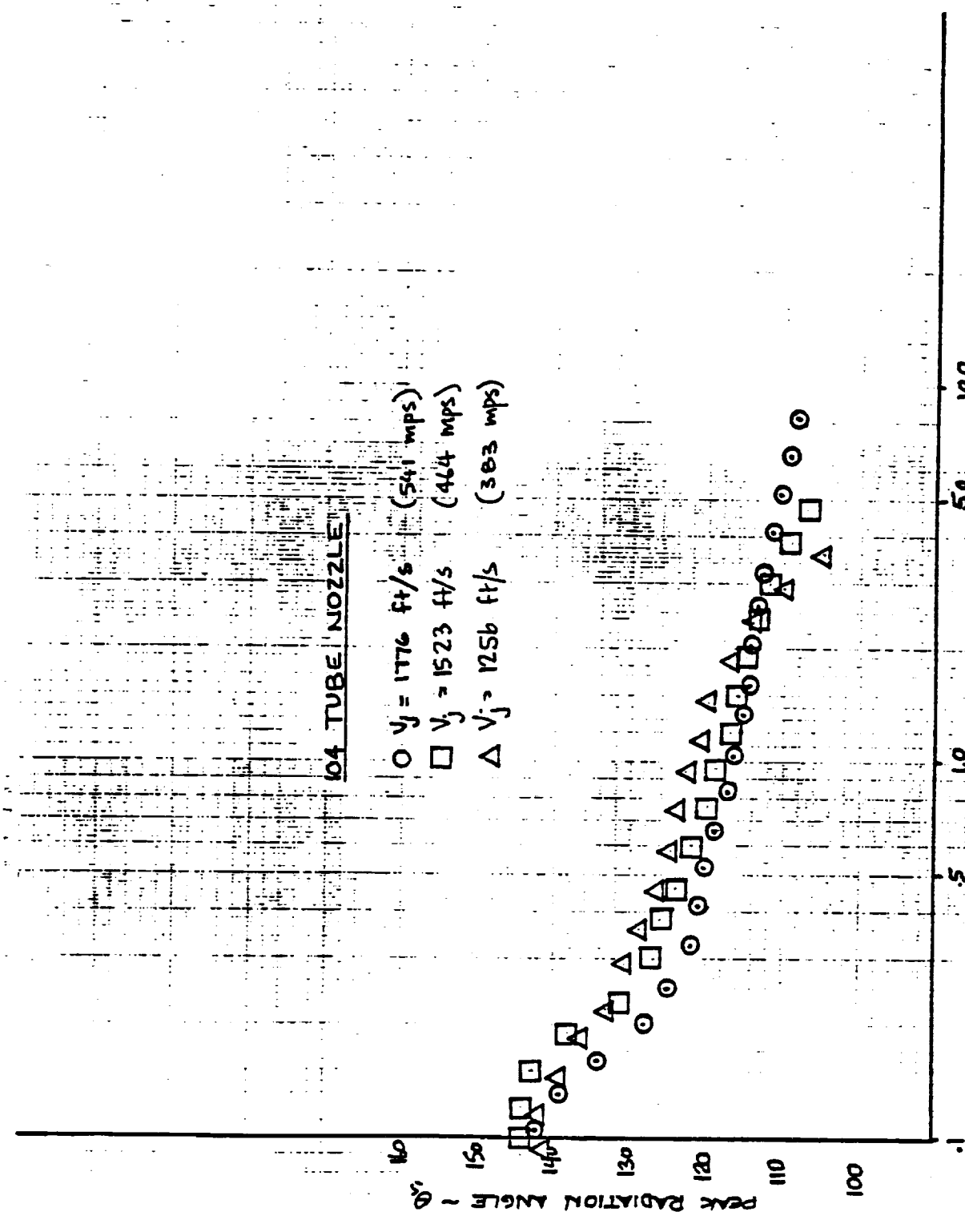

FIGURE 11. Peak Radiation Angle VS Strouhal Number (104 Tube Nozzle)

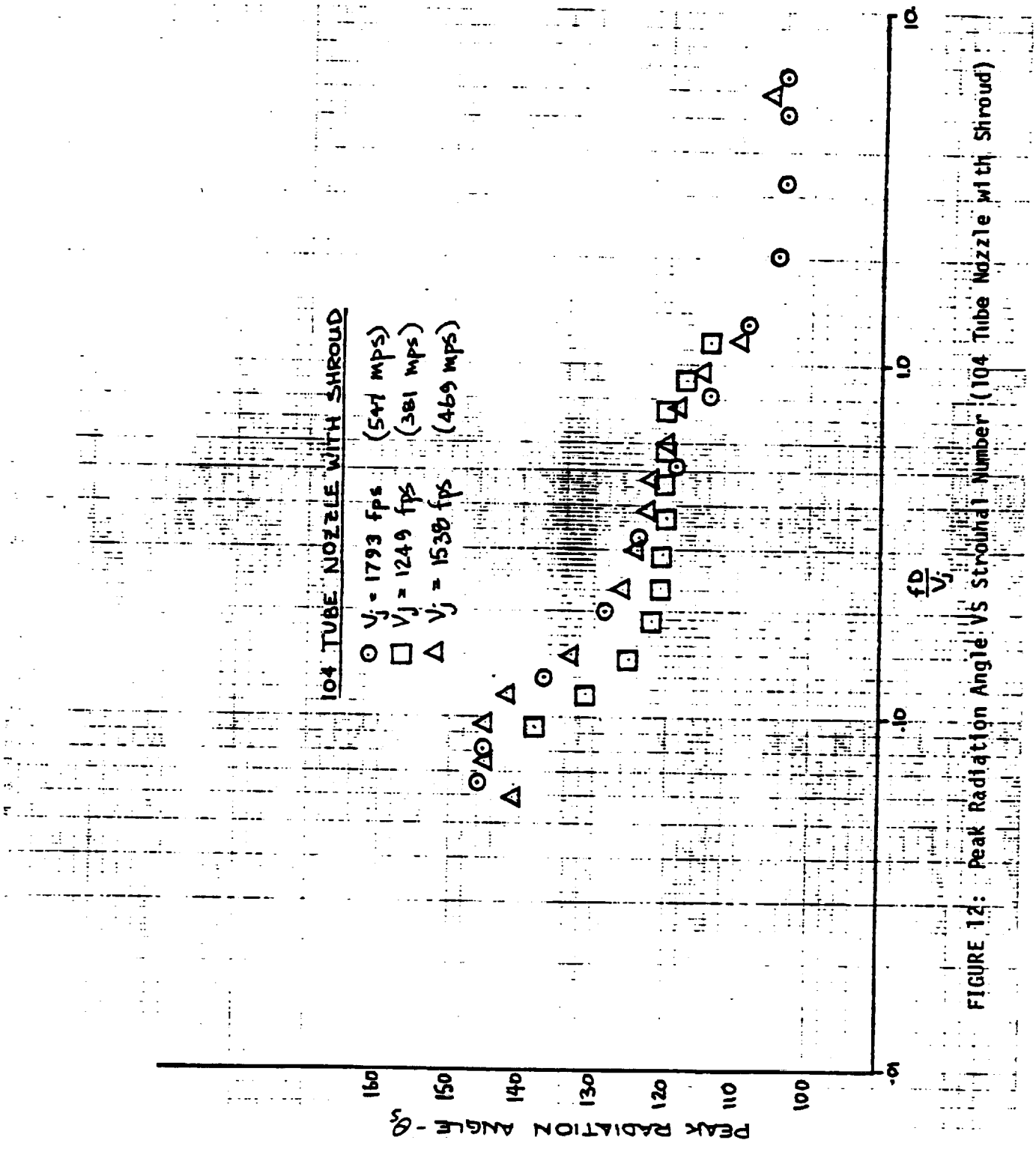

FIGURE 12: Peak Radiation Angle Vs Strouhal Number (104 Tube Nozzle with Shroud)

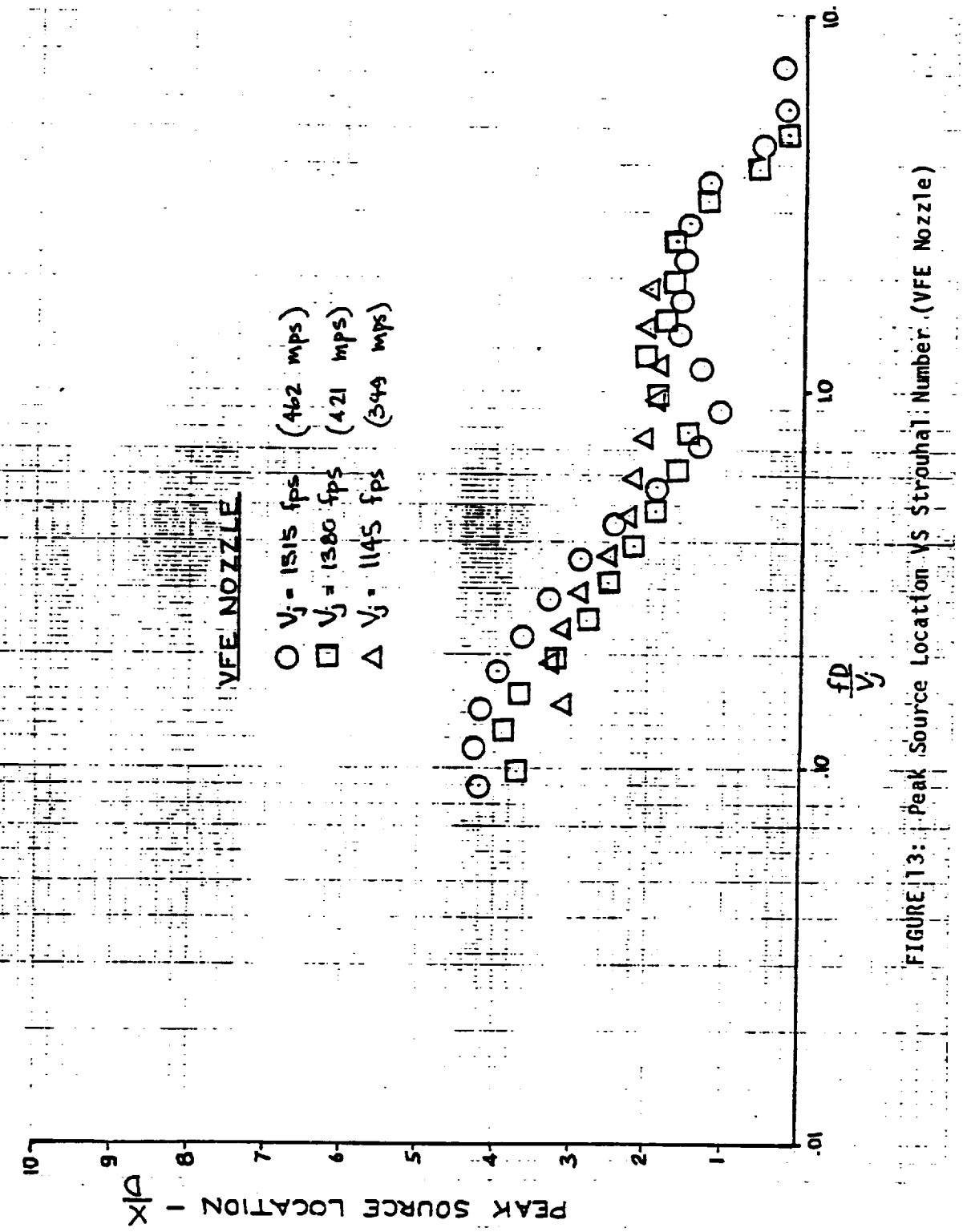

FIGURE 13: Peak Source Location VS Strouhal Number (VFE Nozzle)

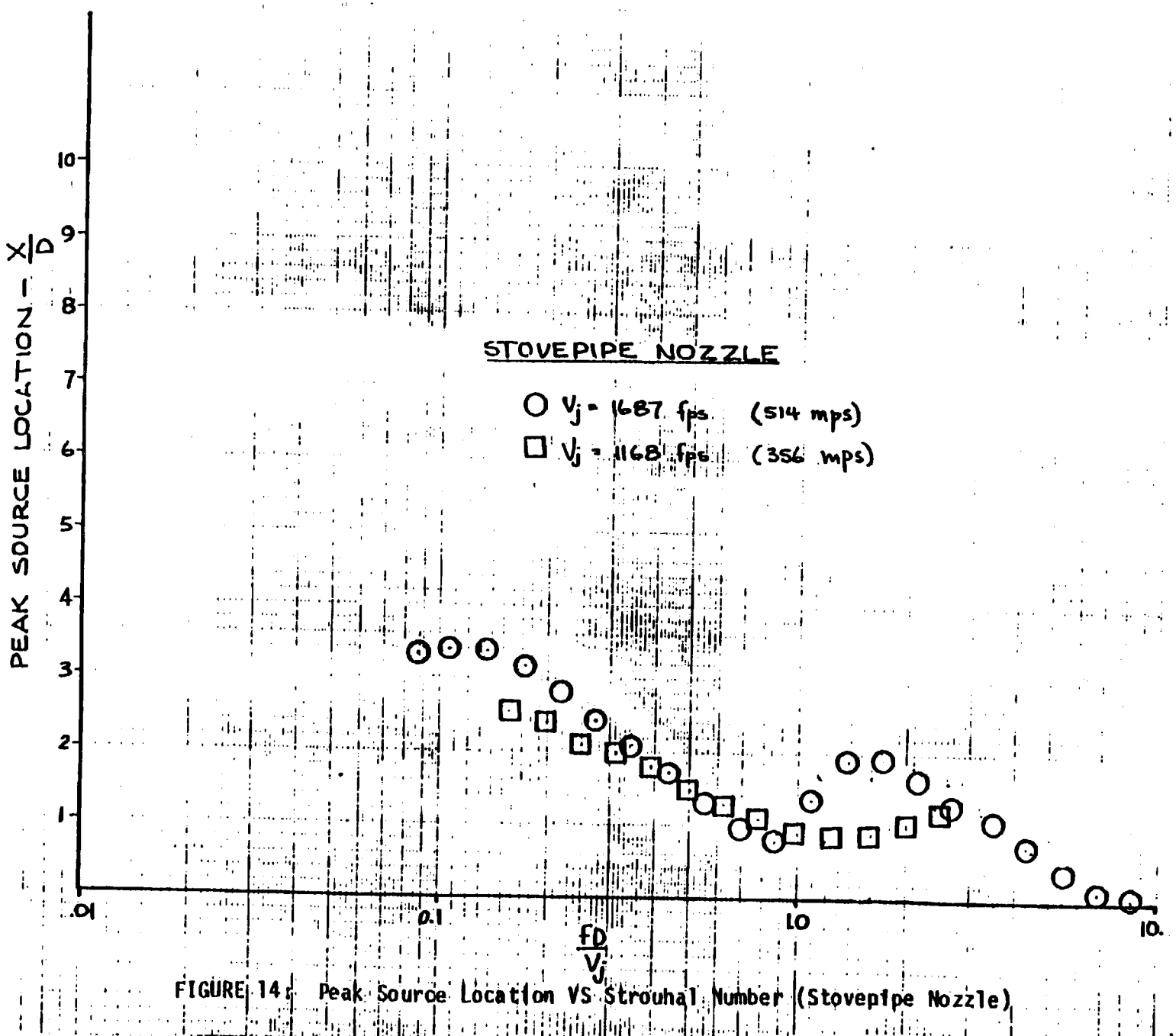

FIGURE 14: Peak Source Location VS Strouhal Number (Stovepipe Nozzle)

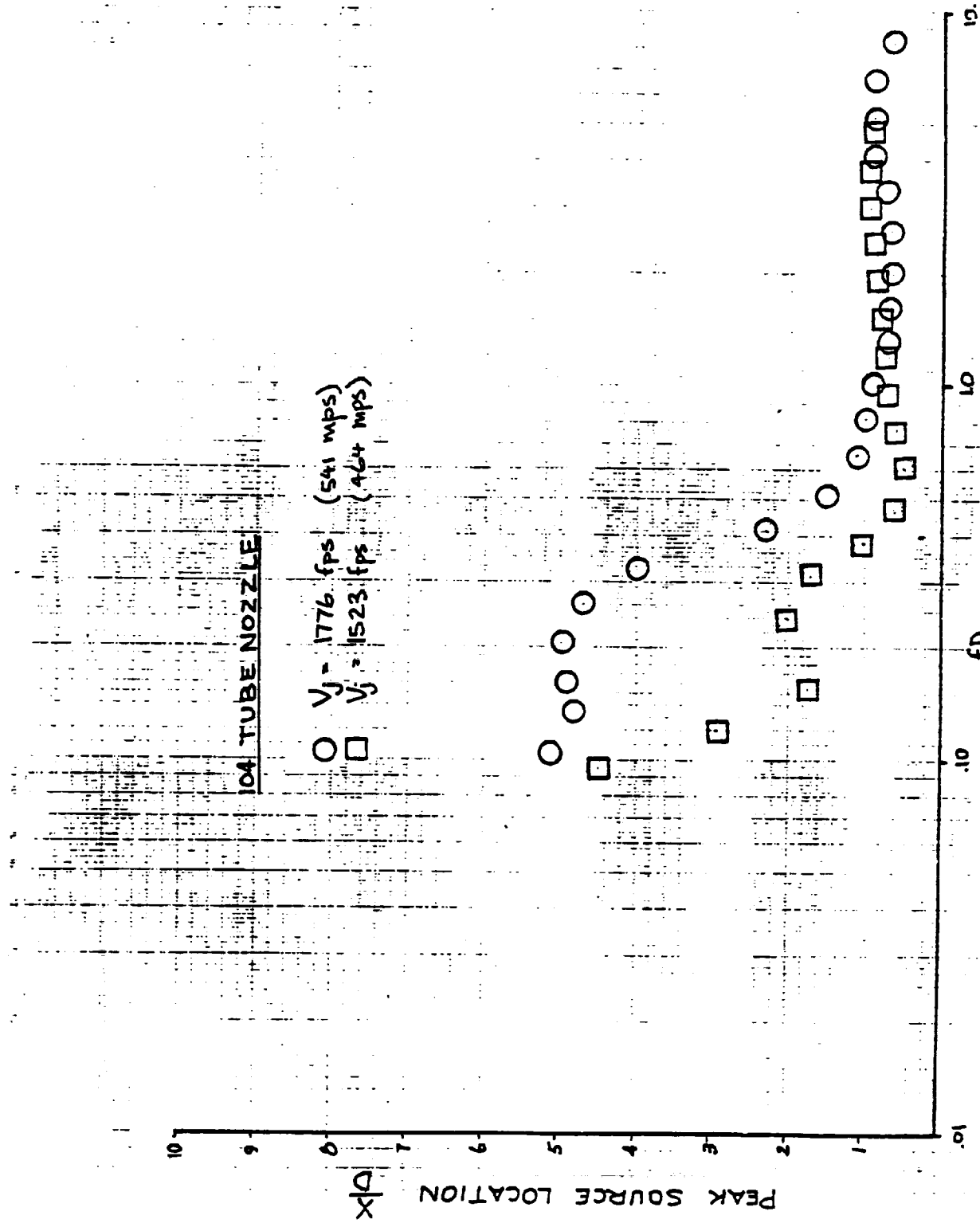

FIGURE 15: Peak Source Location VS Strouhal Number (104 Tube Nozzle)

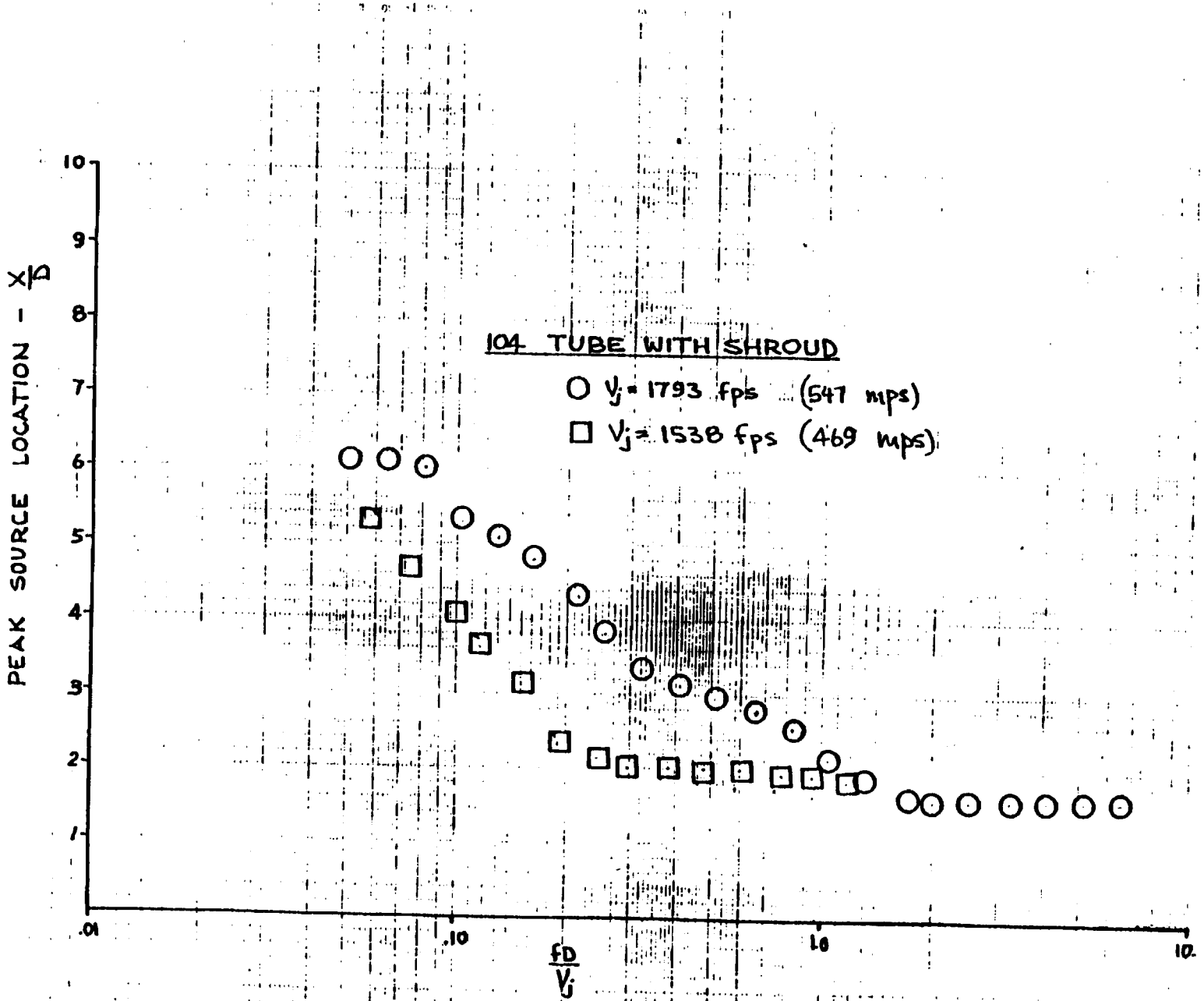

FIGURE 16: Peak Source Location VS Strouhal Number (104 Tube with Shroud)

VFE NOZZLE

FIGURE 17: Noise Source Location vs Noise Emission Angle

○ 1515 fps (462 mps)

□ 1380 fps (421 mps)

△ 1145 fps (349 mps)

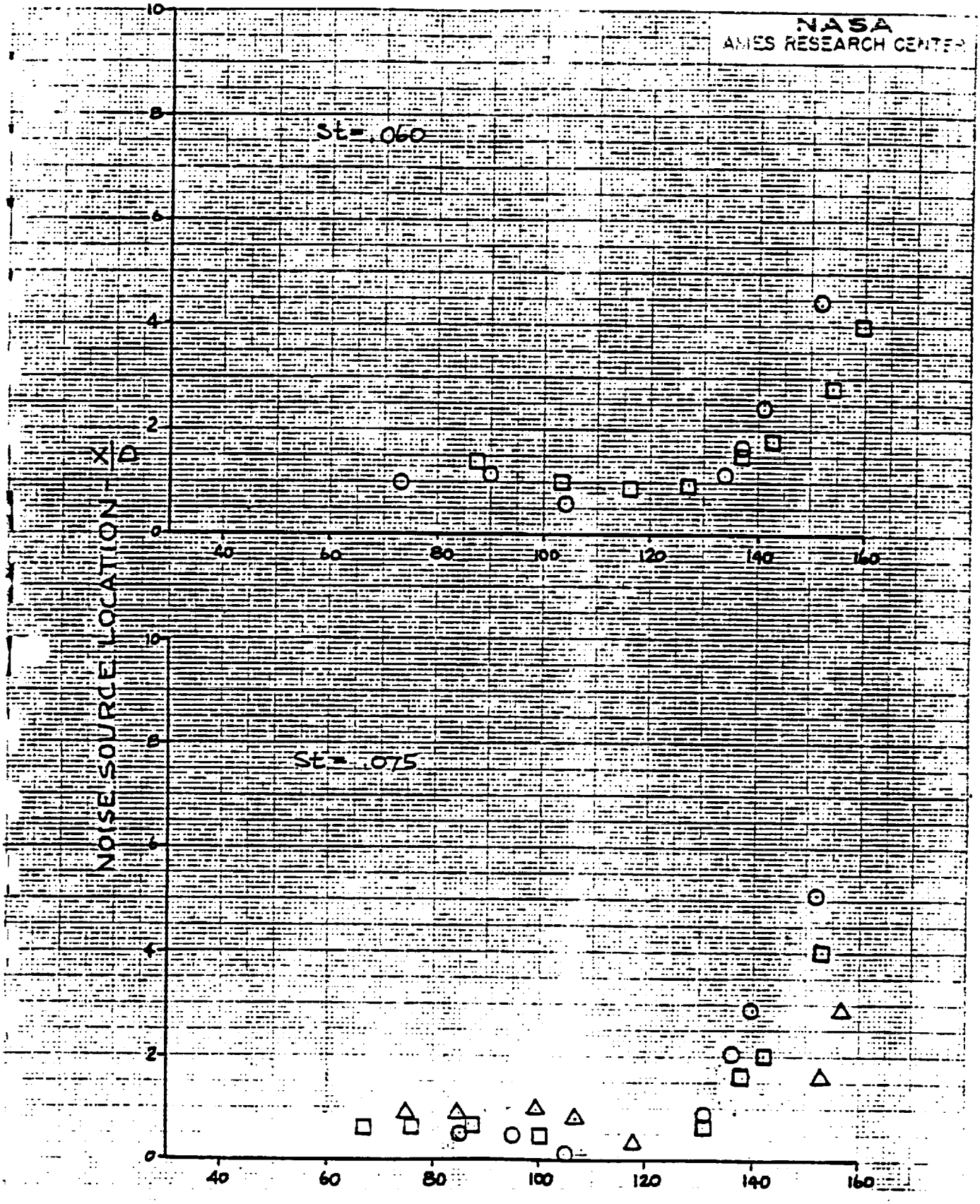
NASA
AMES RESEARCH CENTER
St=.060
St=.075
NOISE SOURCE LOCATION - X/D
0
2
4
6
8
10
40
60
80
100
120
140
160
NOISE EMISSION ANGLE - θ_s

FIGURE 17

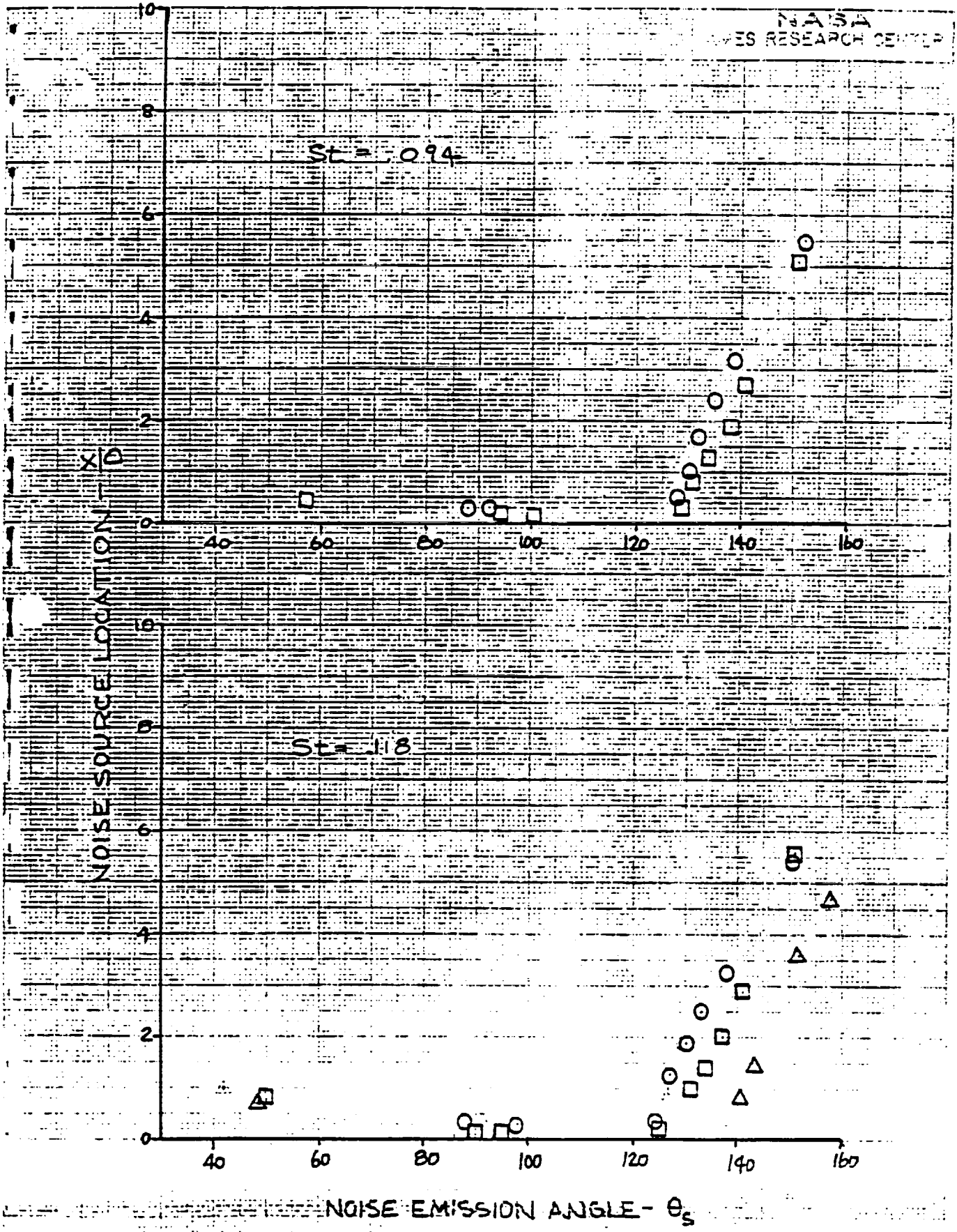

FIGURE 17 cont'd

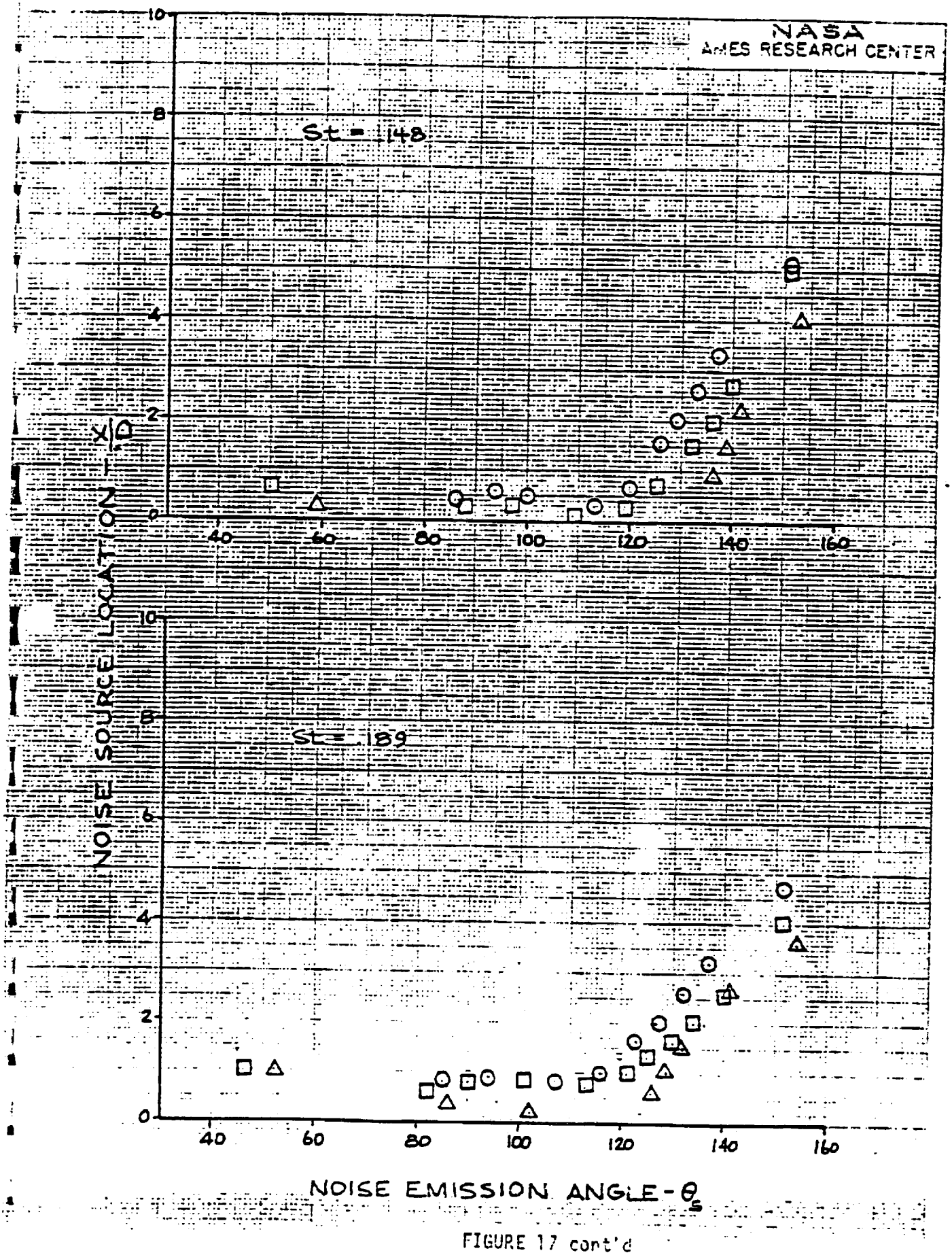

FIGURE 17 cont'd

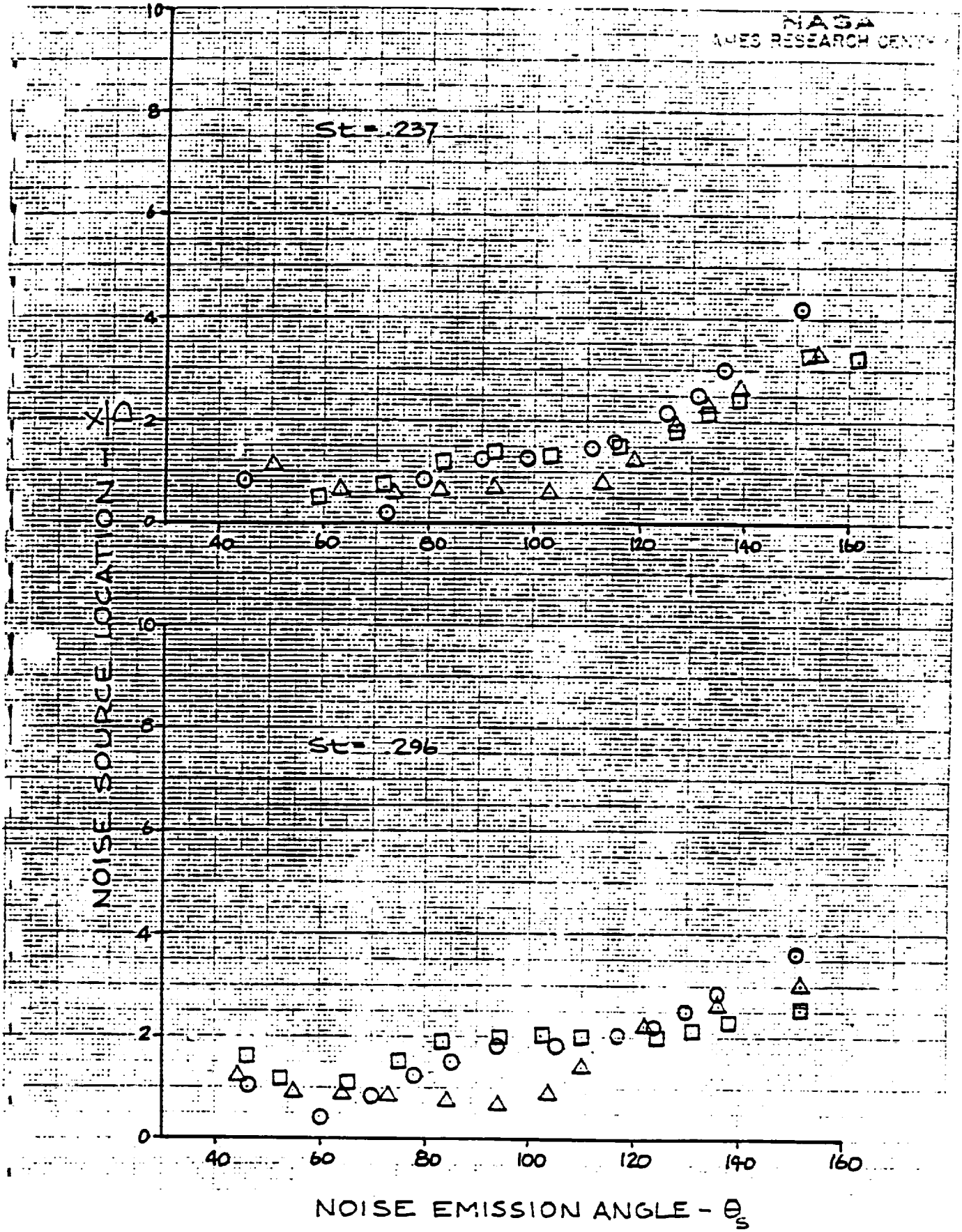

FIGURE 17 cont'd

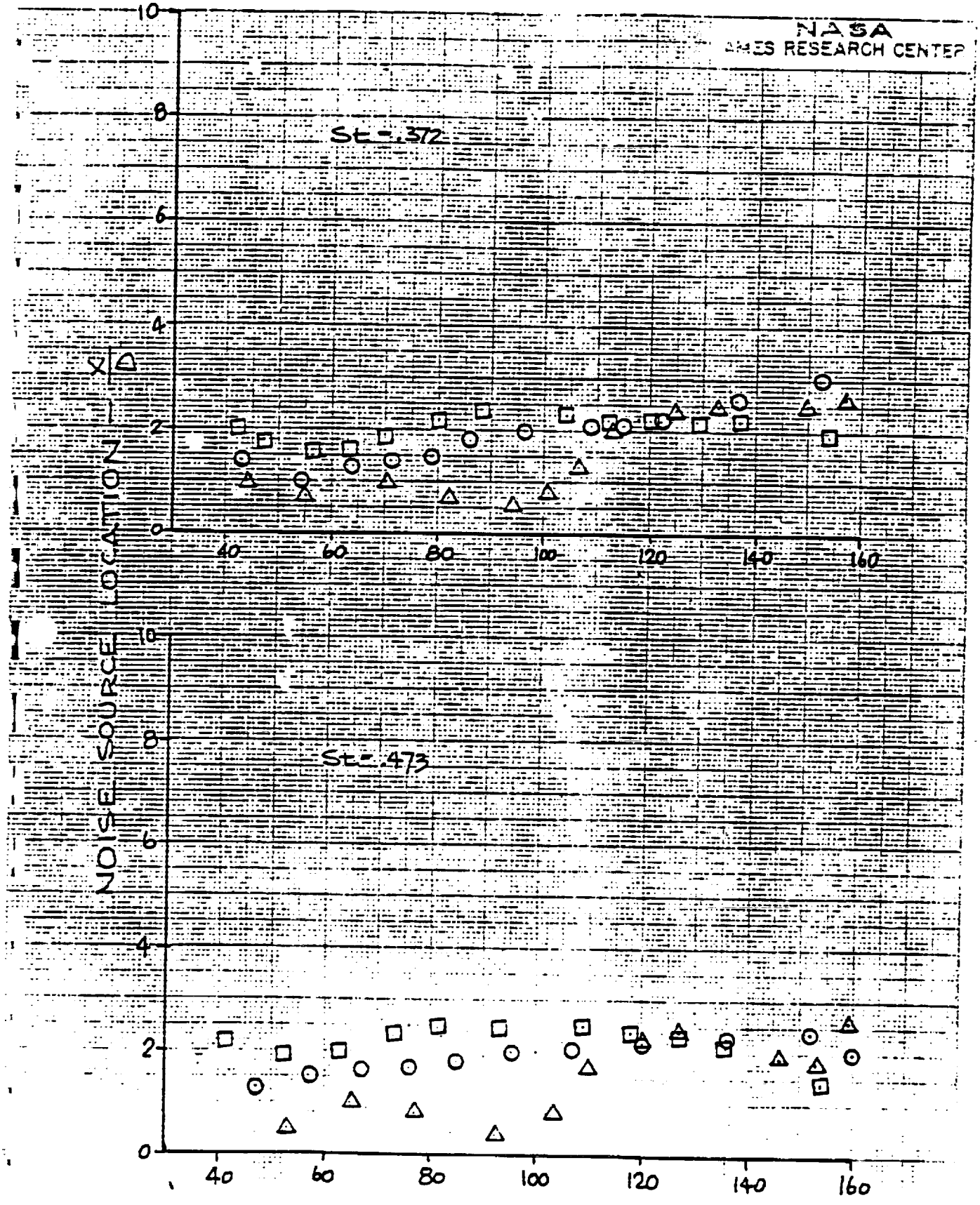

FIGURE 17 cont'd

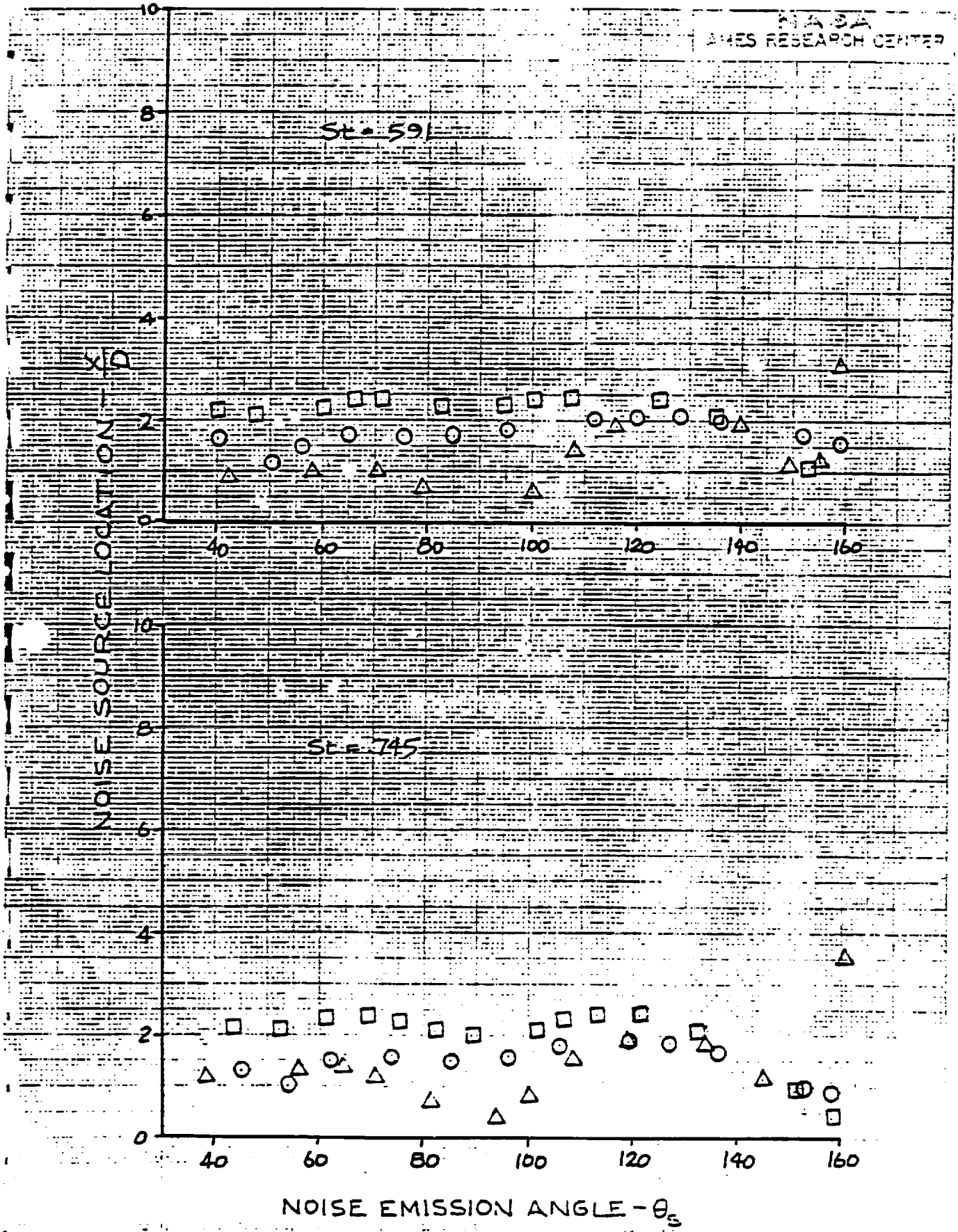

FIGURE 17 cont'd

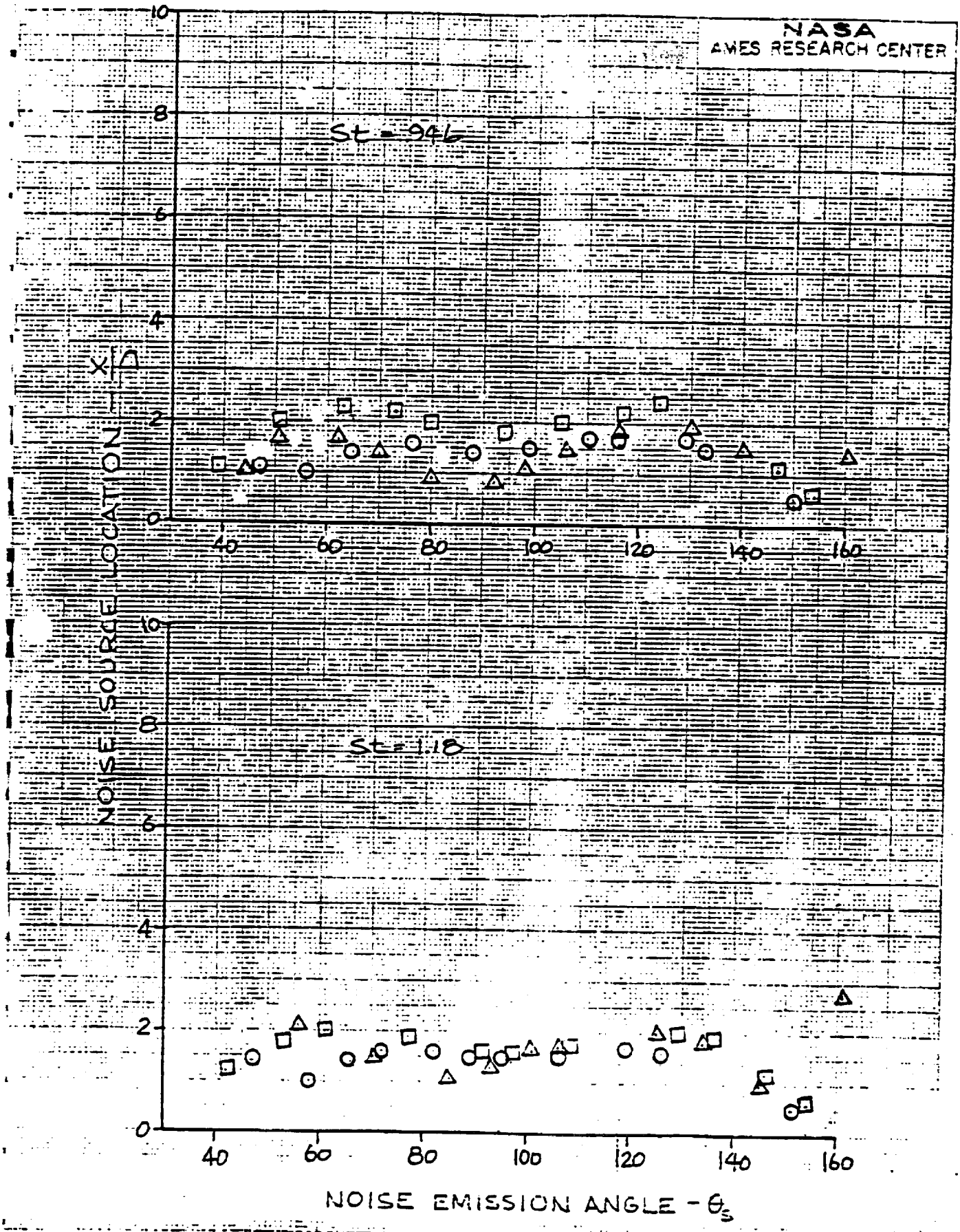

FIGURE 17 cont'd

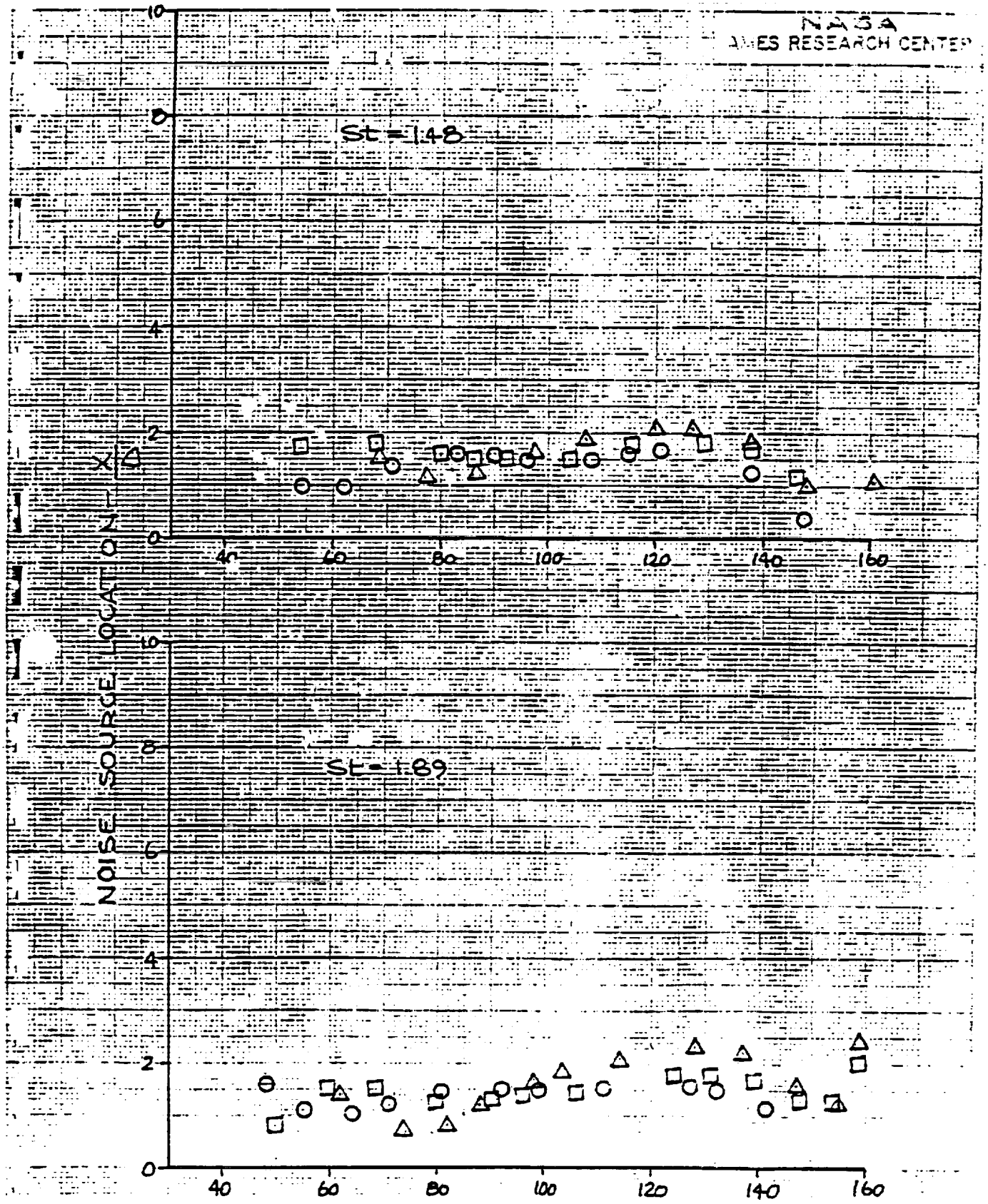

FIGURE 17 cont'd

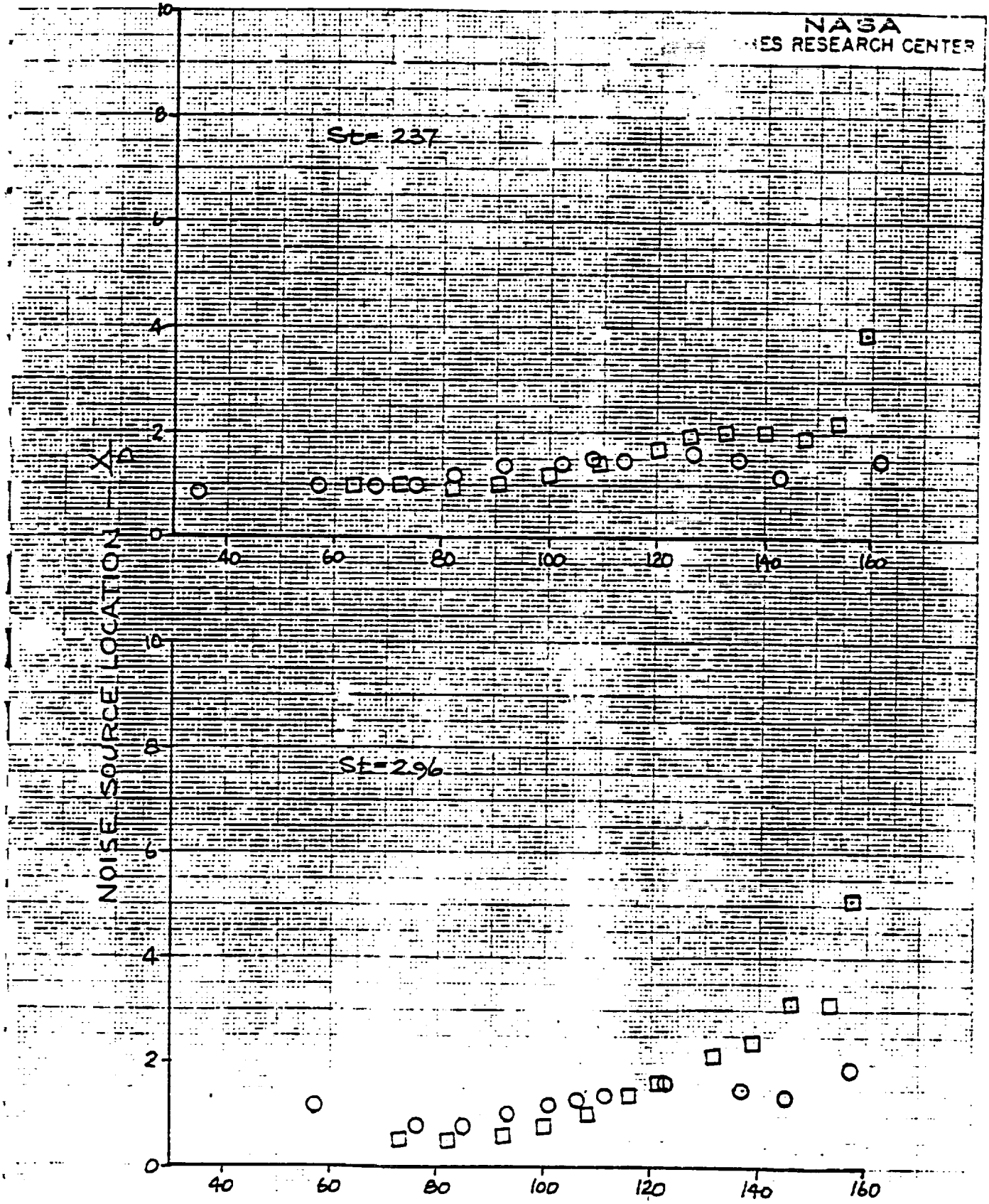

FIGURE 17 cont'd

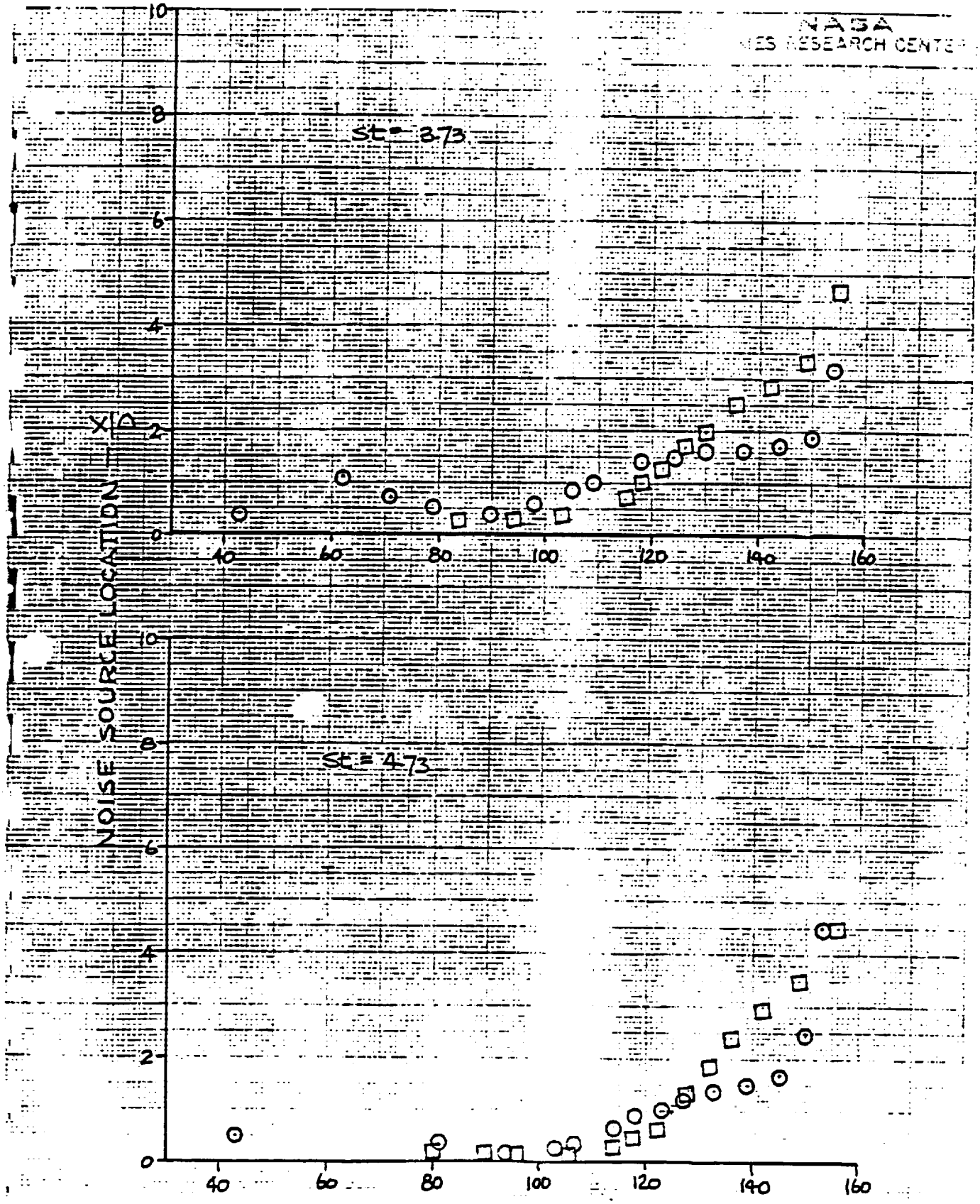

FIGURE 17 cont'd

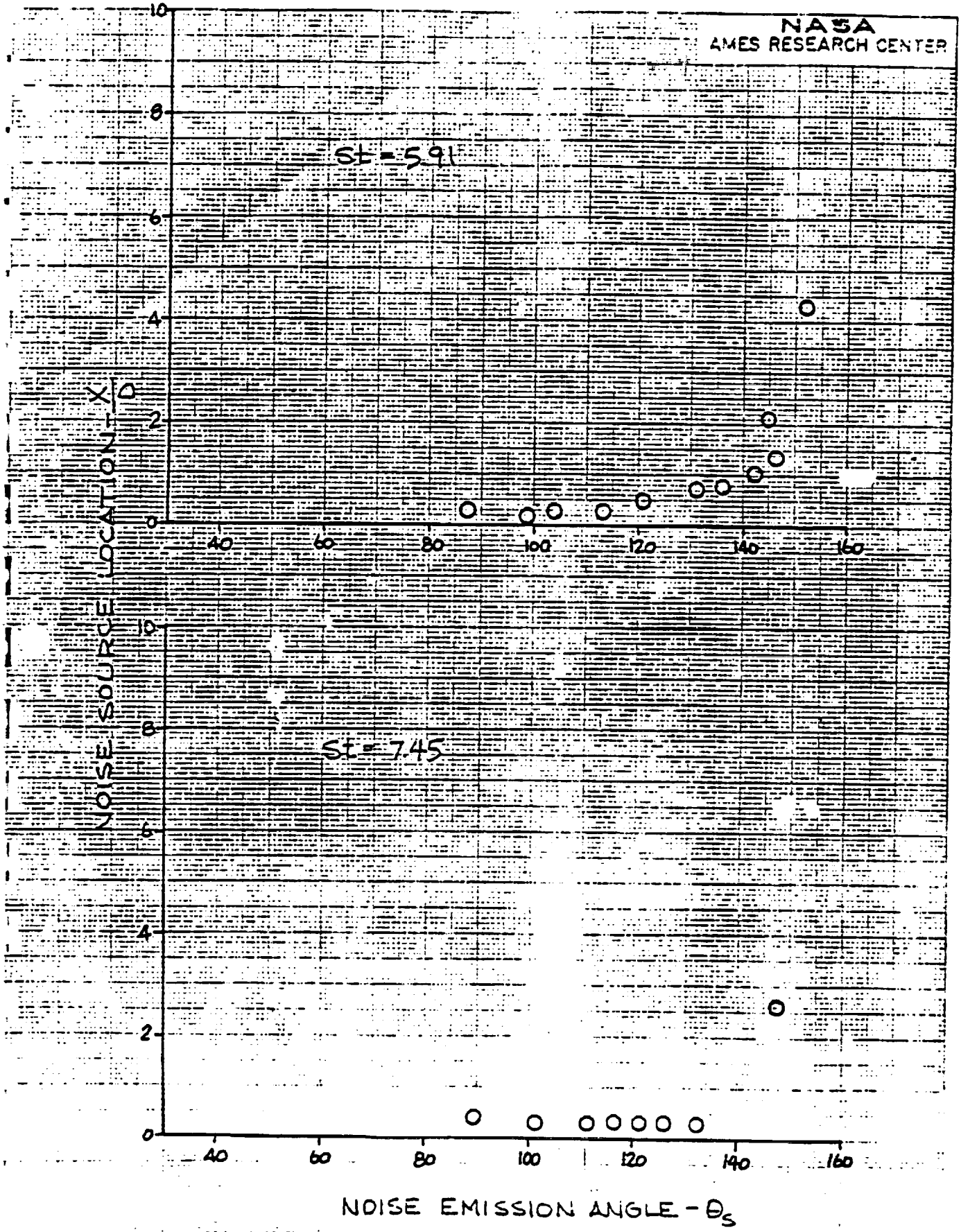

FIGURE 17 cont'd

STOVEPIPE NOZZLE

FIGURE 18: Noise Source Location vs Noise Emission Angle

○ 1687 fps (514 mps)

□ 1168 fps (356 mps)

△ 1405 fps (428 mps)

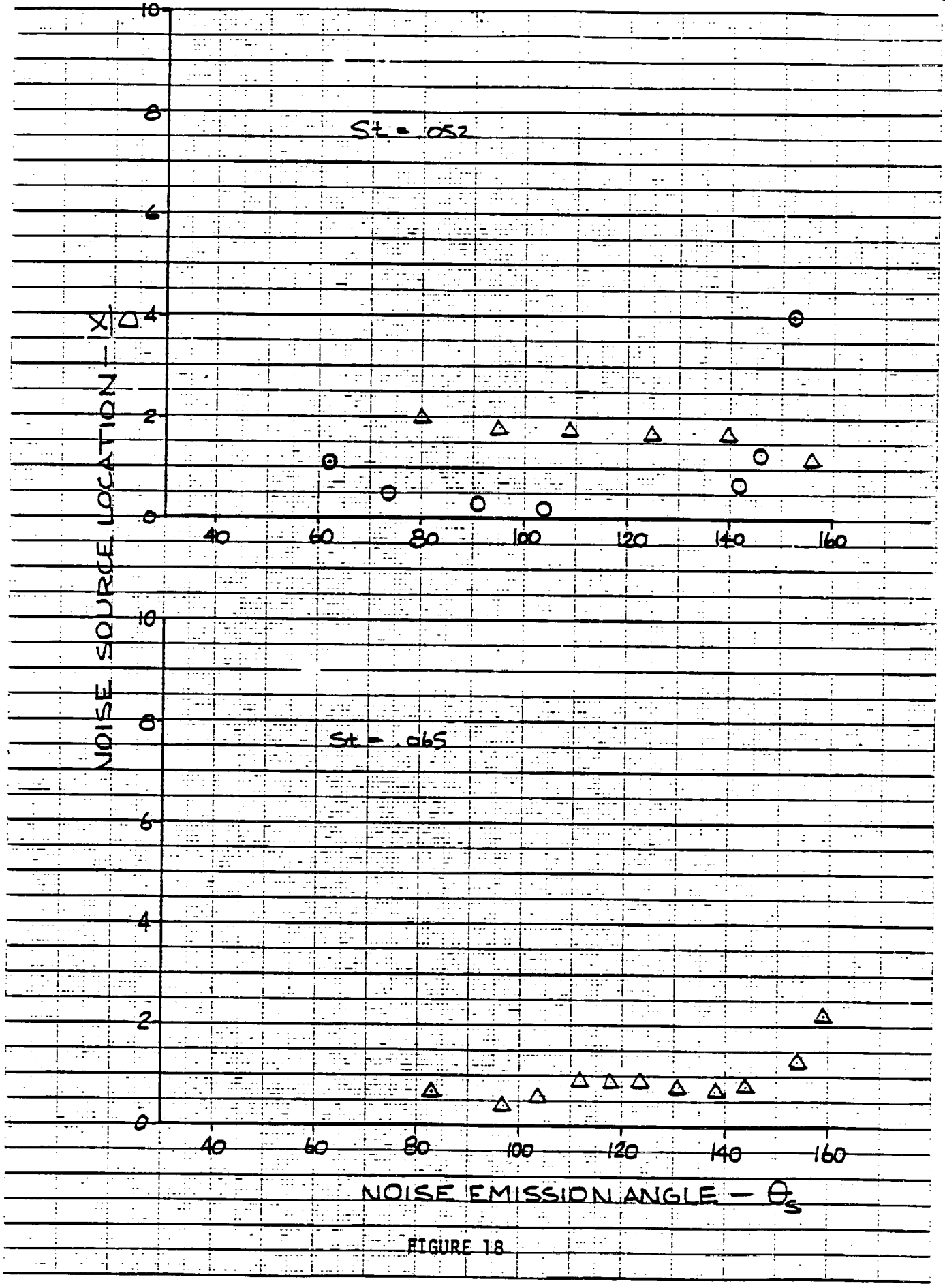
St = .052
St = .065
NOISE SOURCE LOCATION - X/D
NOISE EMISSION ANGLE - θ_s
0
2
4
6
8
10
40
60
80
100
120
140
160

FIGURE 18

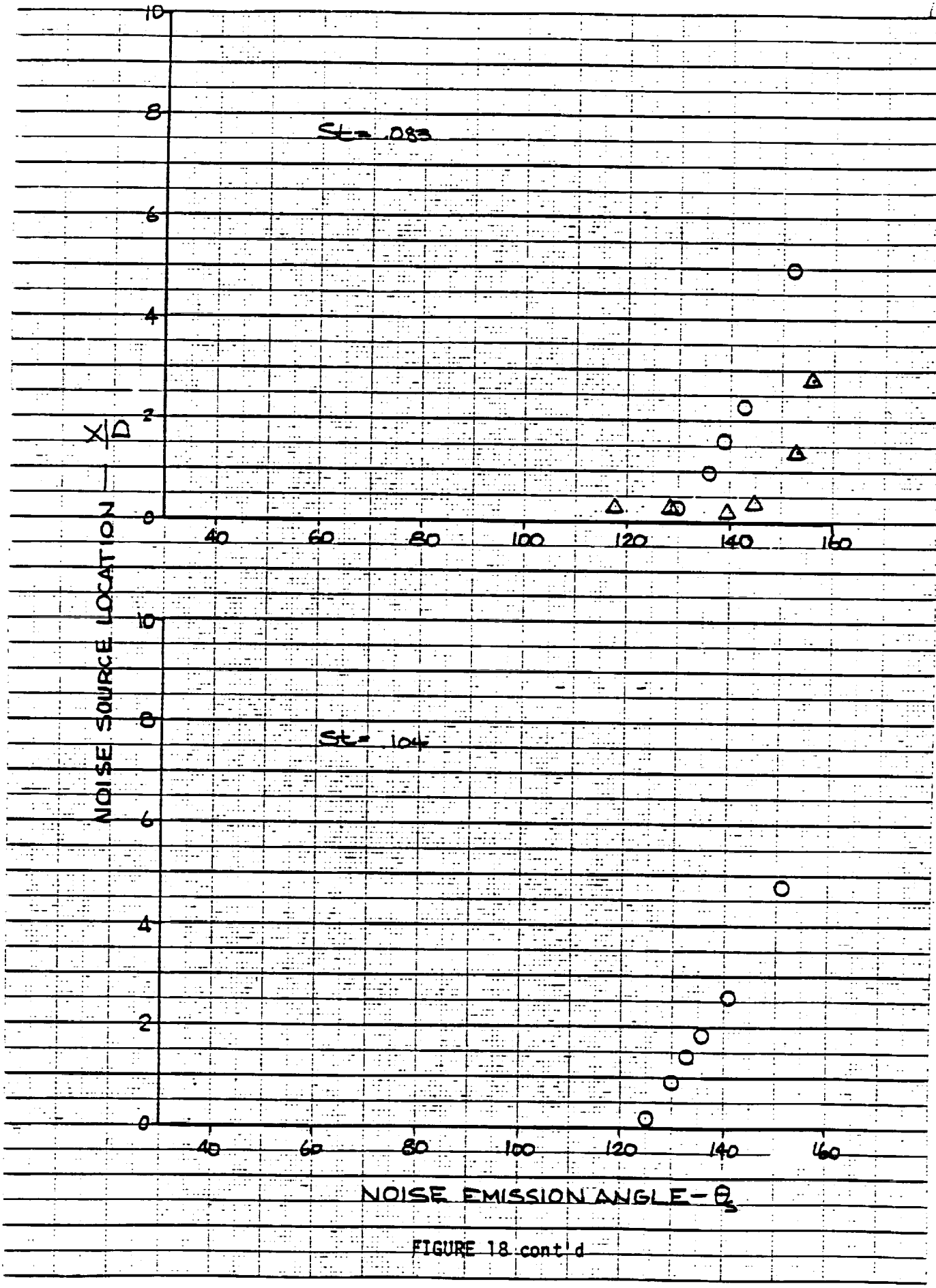

FIGURE 18 cont'd

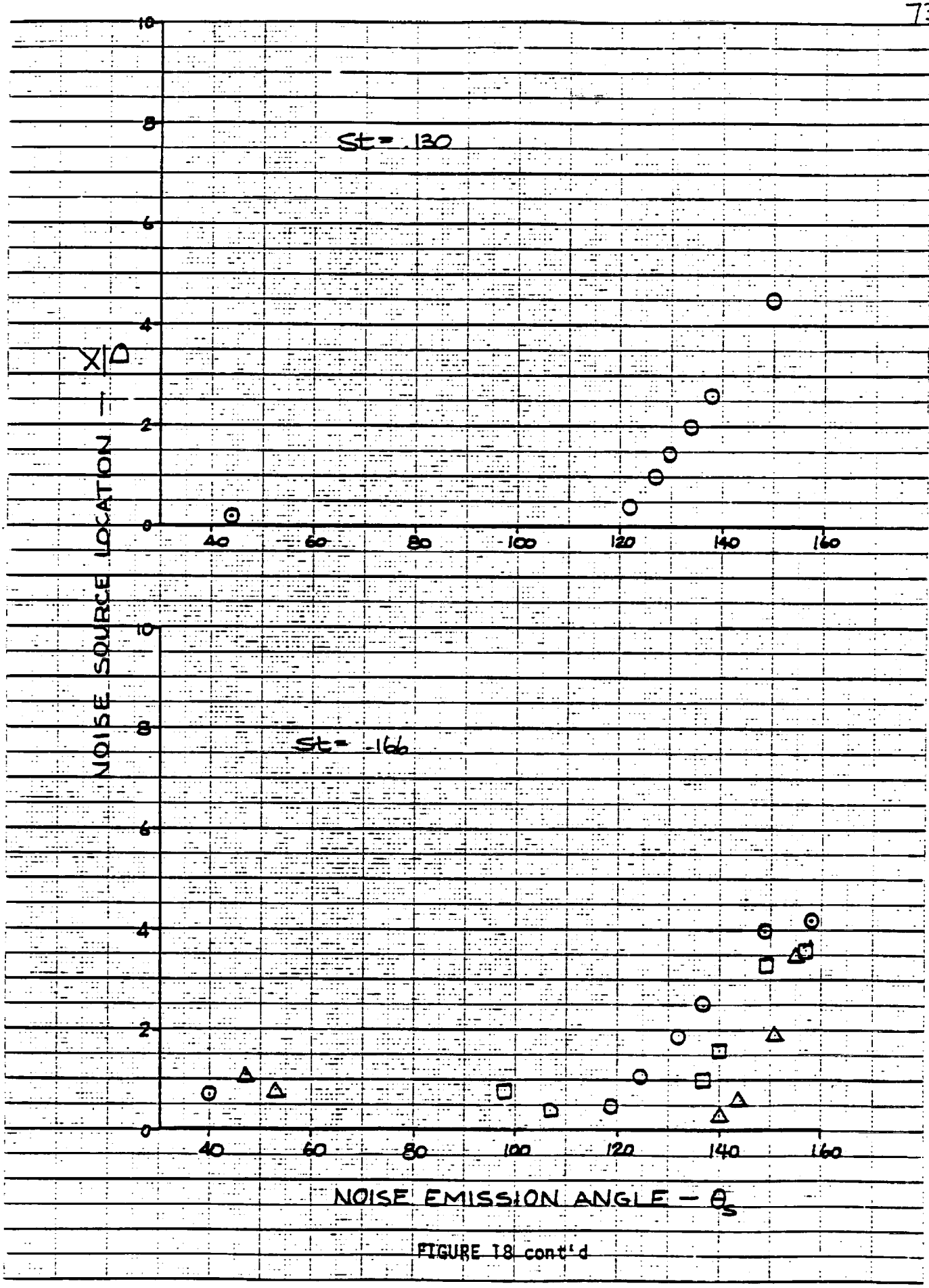

FIGURE 18 cont'd

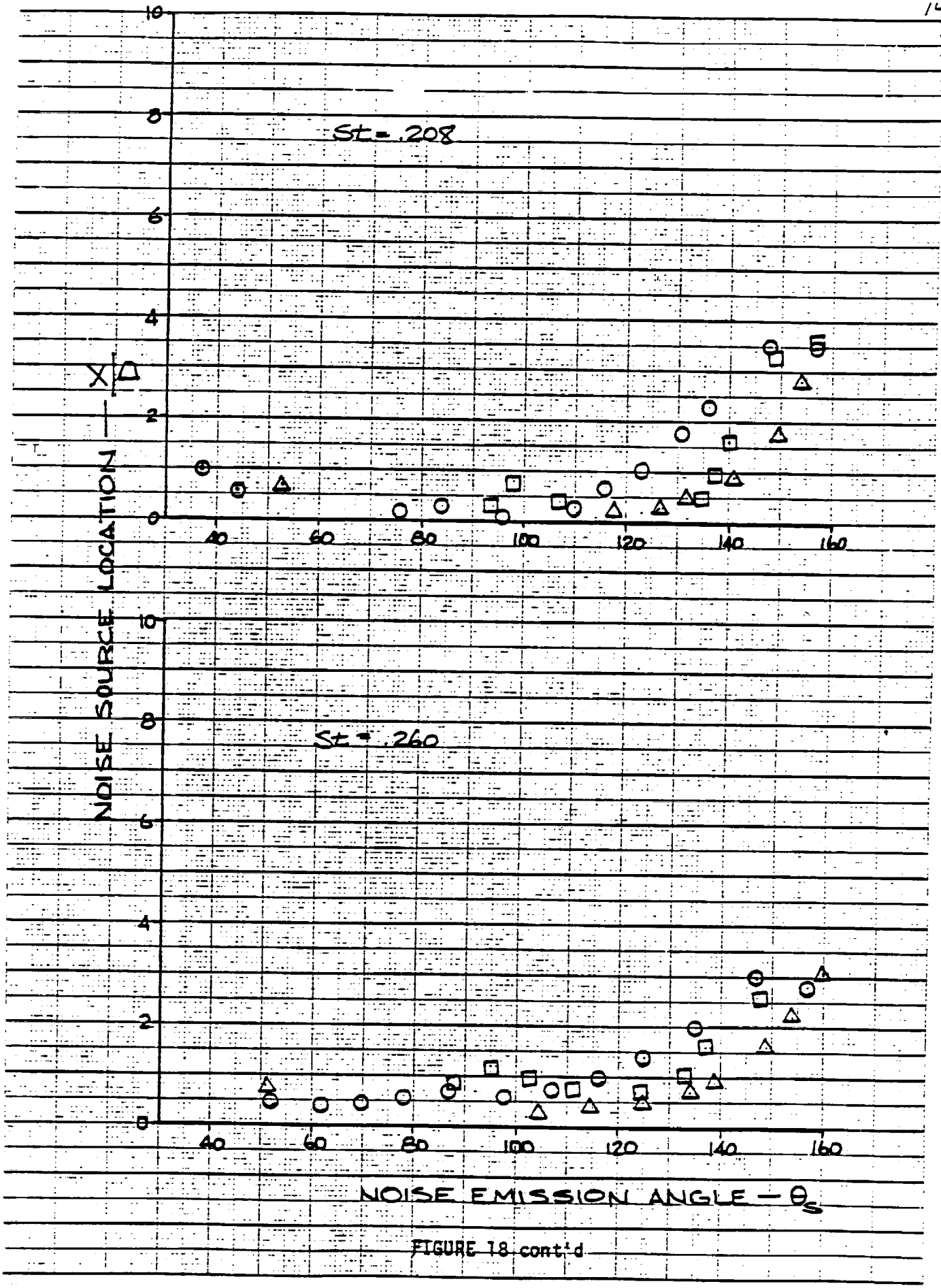

FIGURE 18 cont'd

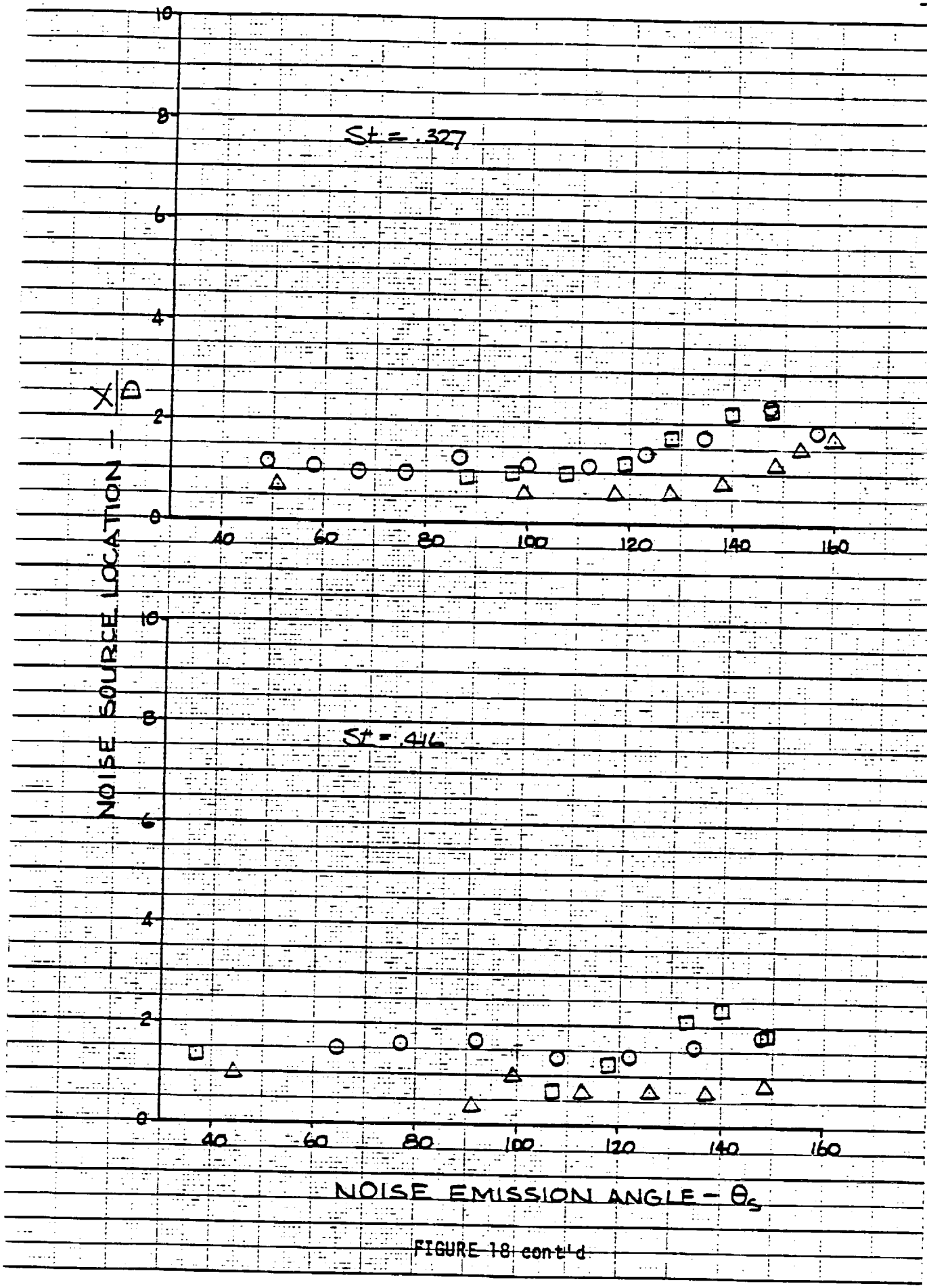

FIGURE 18 cont'd

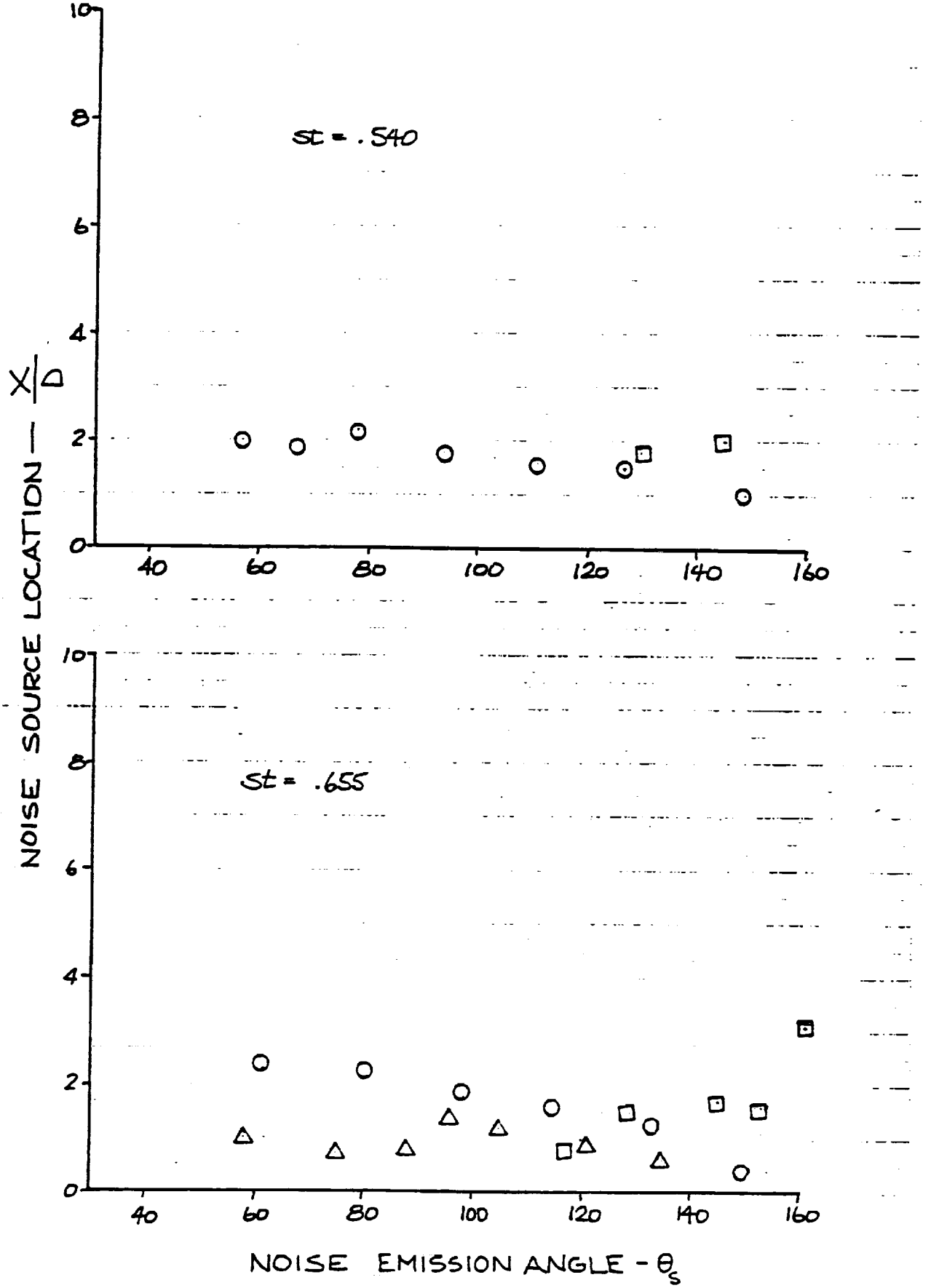

FIGURE 18 cont'd

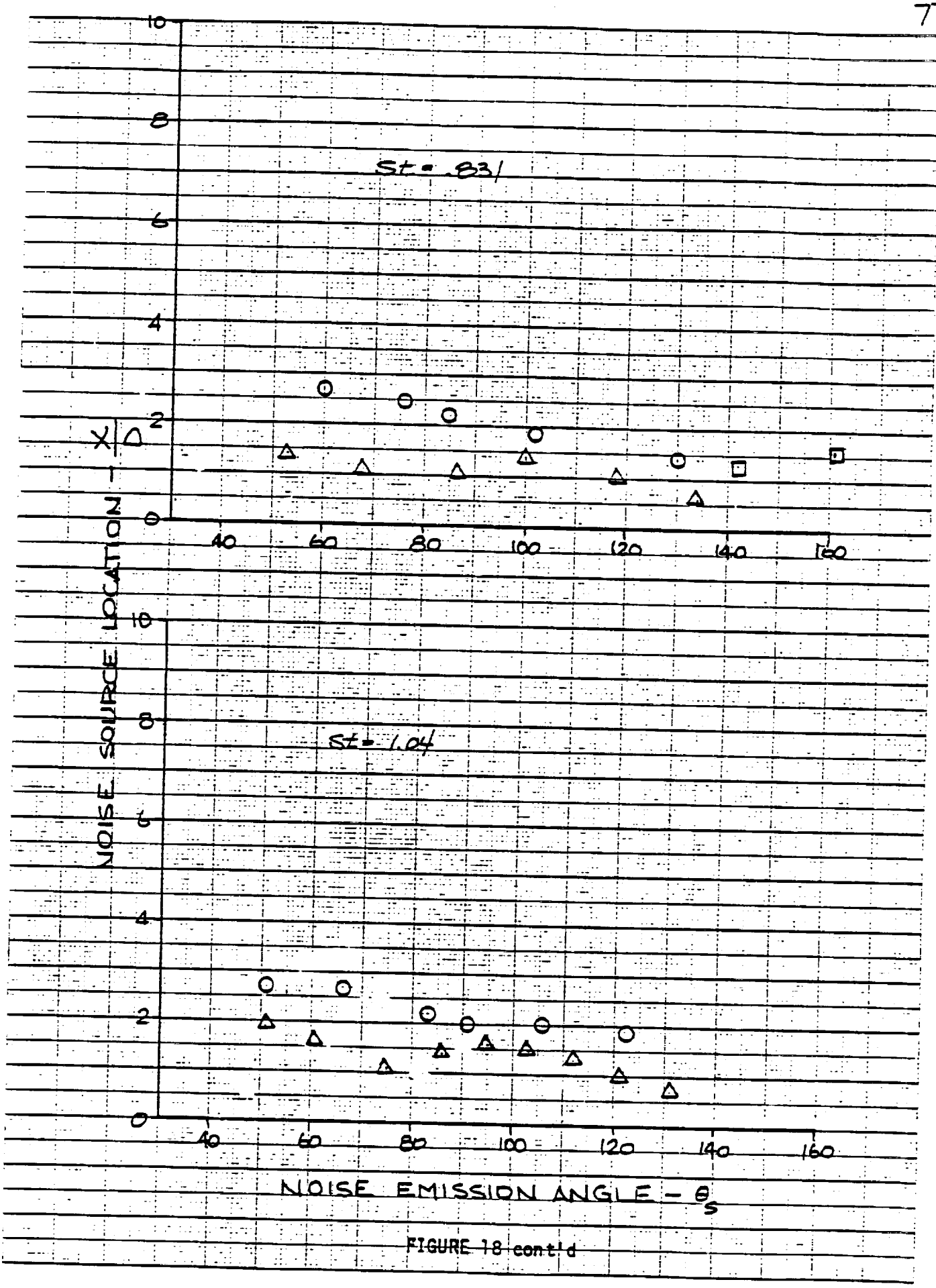

FIGURE 18 cont'd

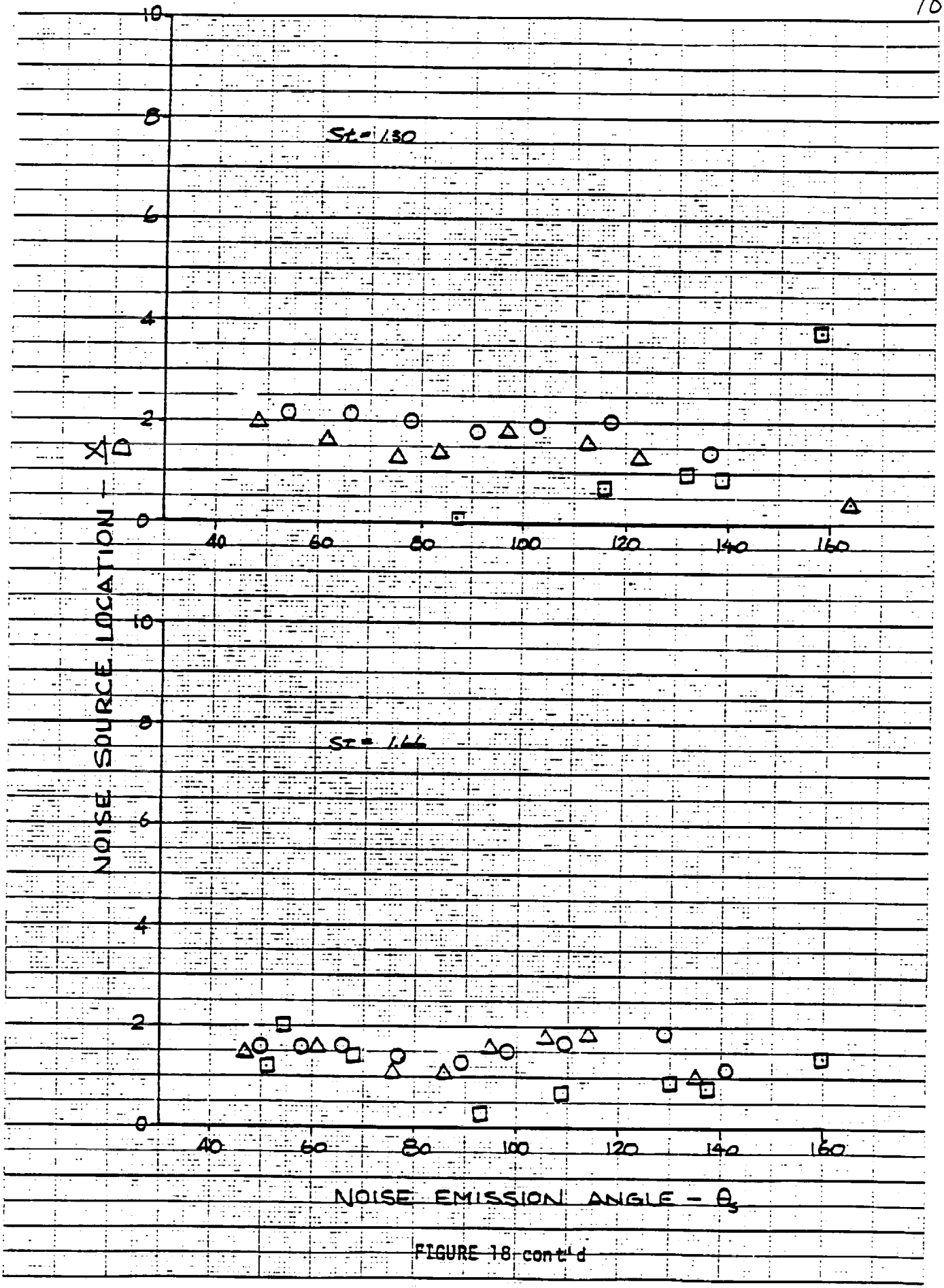

FIGURE 18 cont'd

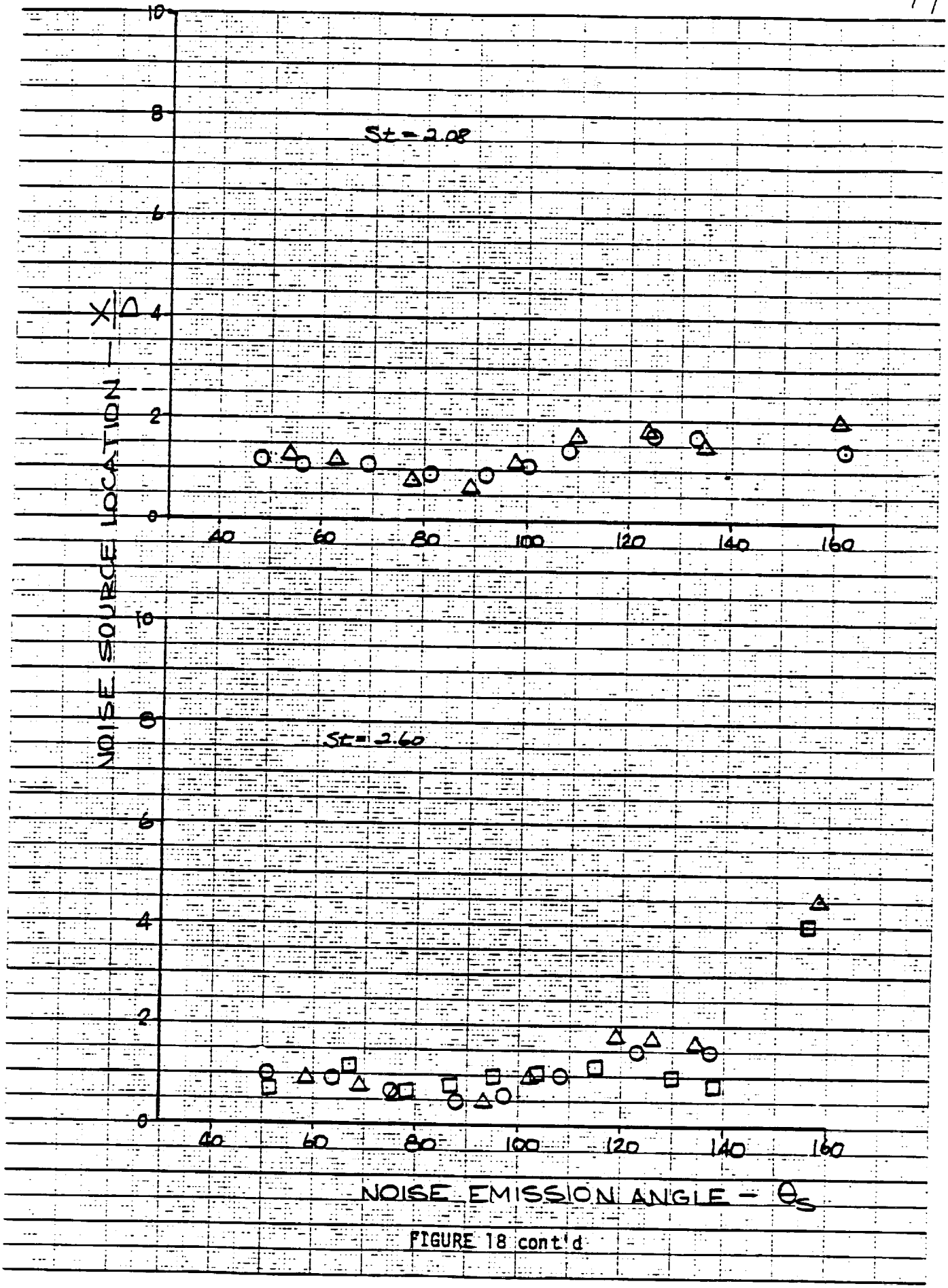

FIGURE 18 cont'd

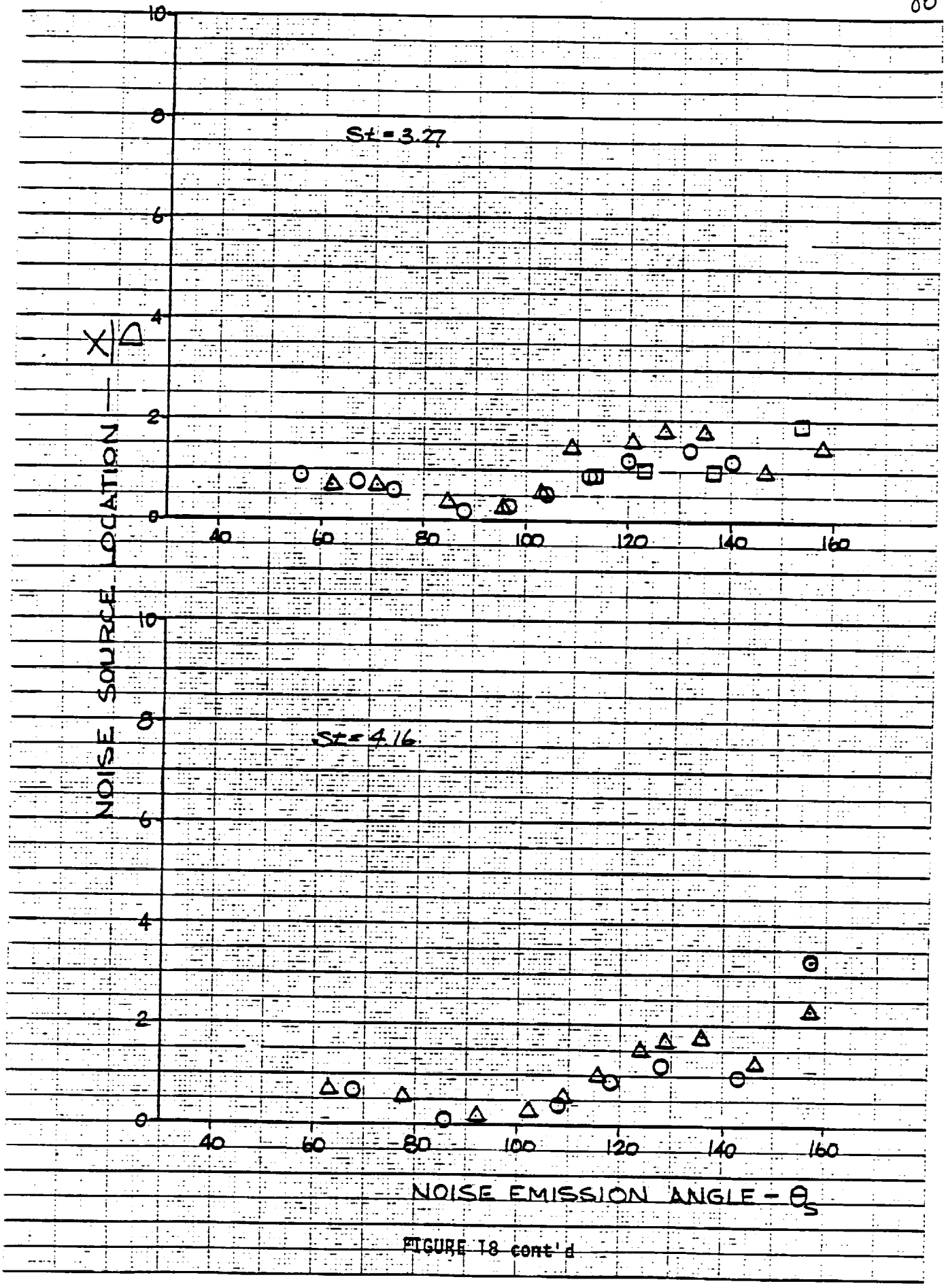

FIGURE 18 cont'd

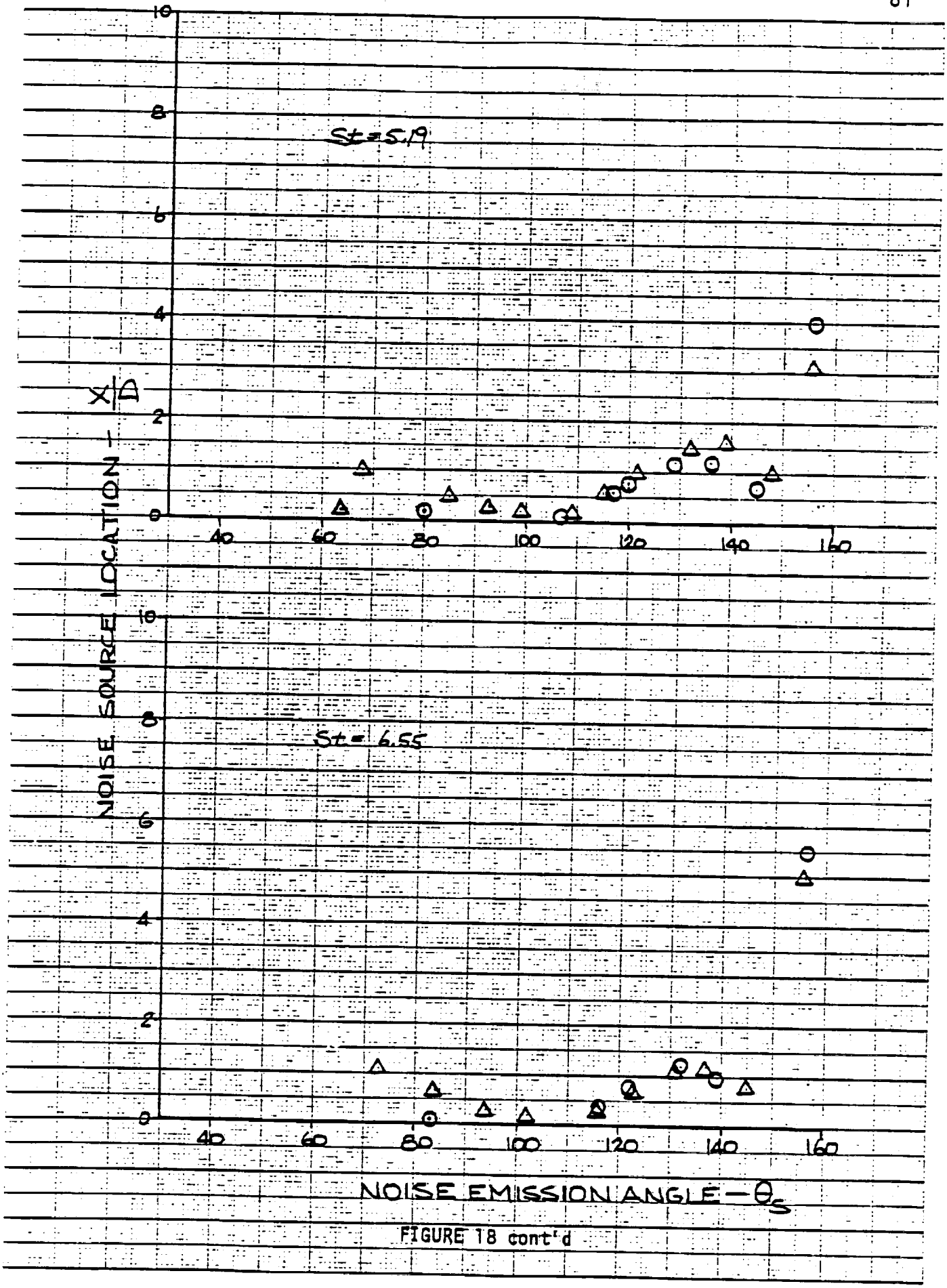

FIGURE 18 cont'd

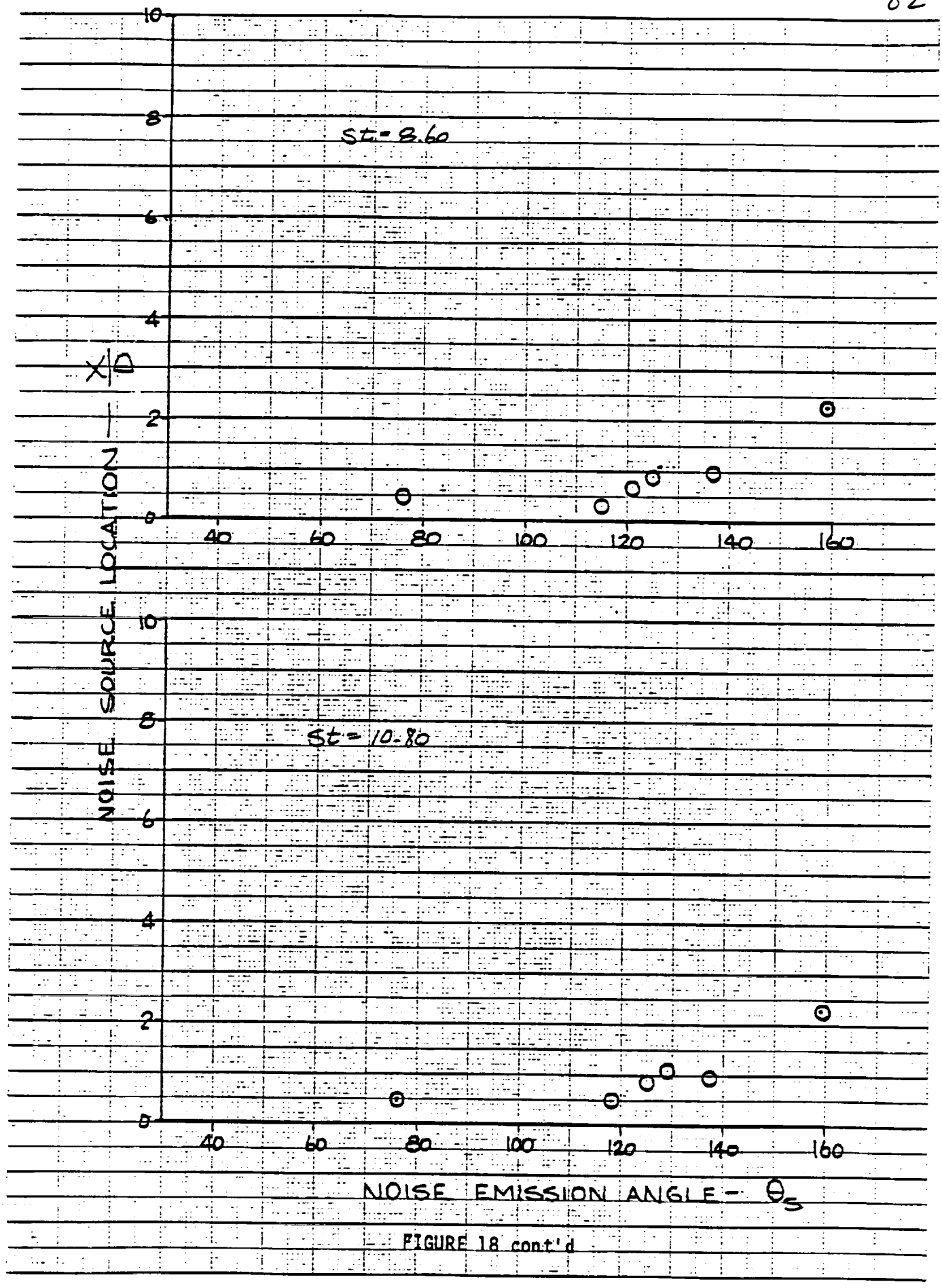

FIGURE 18 cont'd

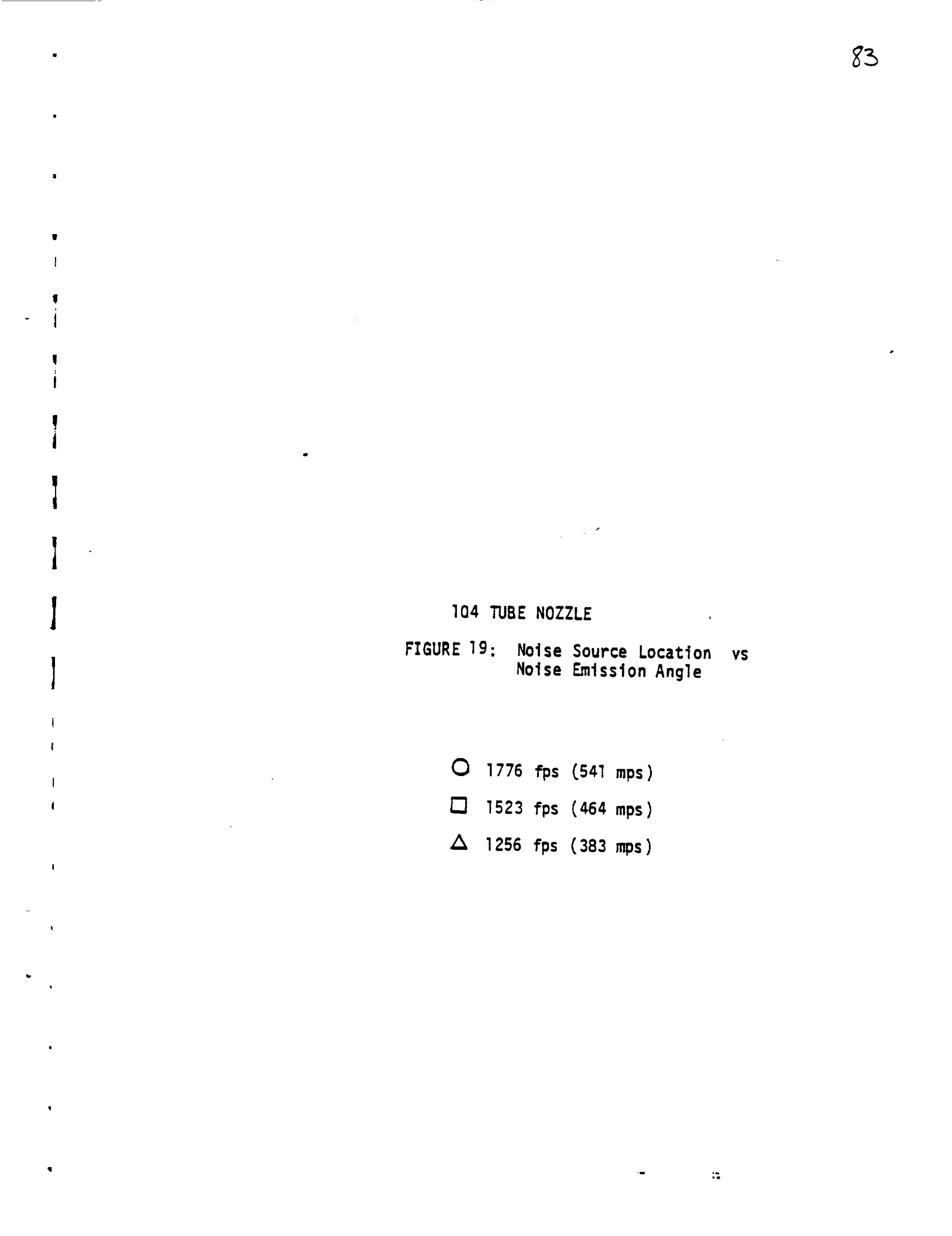

FIGURE 19: Noise Source Location vs Noise Emission Angle

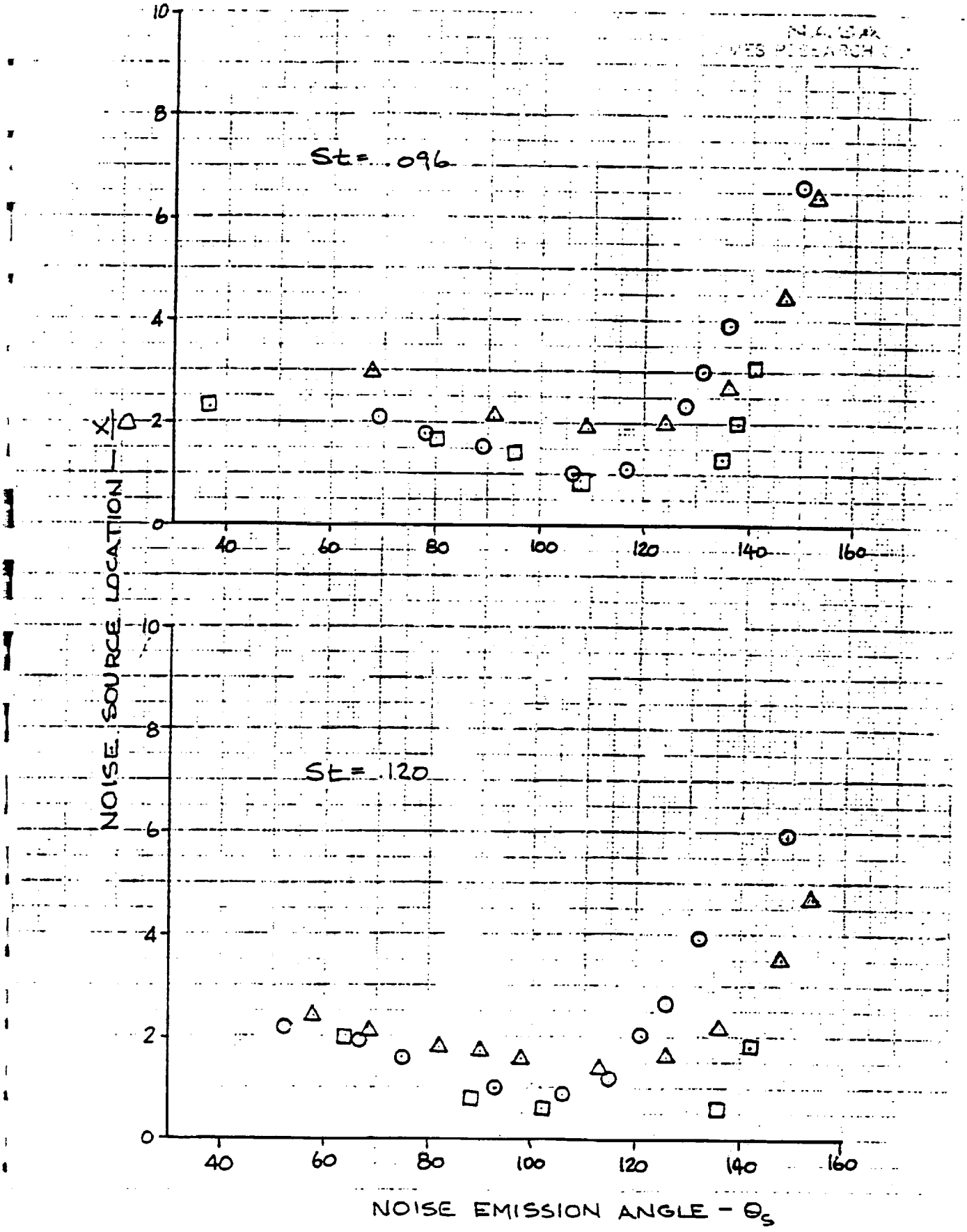
St = .096
St = .120
X/Δ
NOISE SOURCE LOCATION
NOISE EMISSION ANGLE - θ_s
0
2
4
6
8
10
40
60
80
100
120
140
160

FIGURE 19

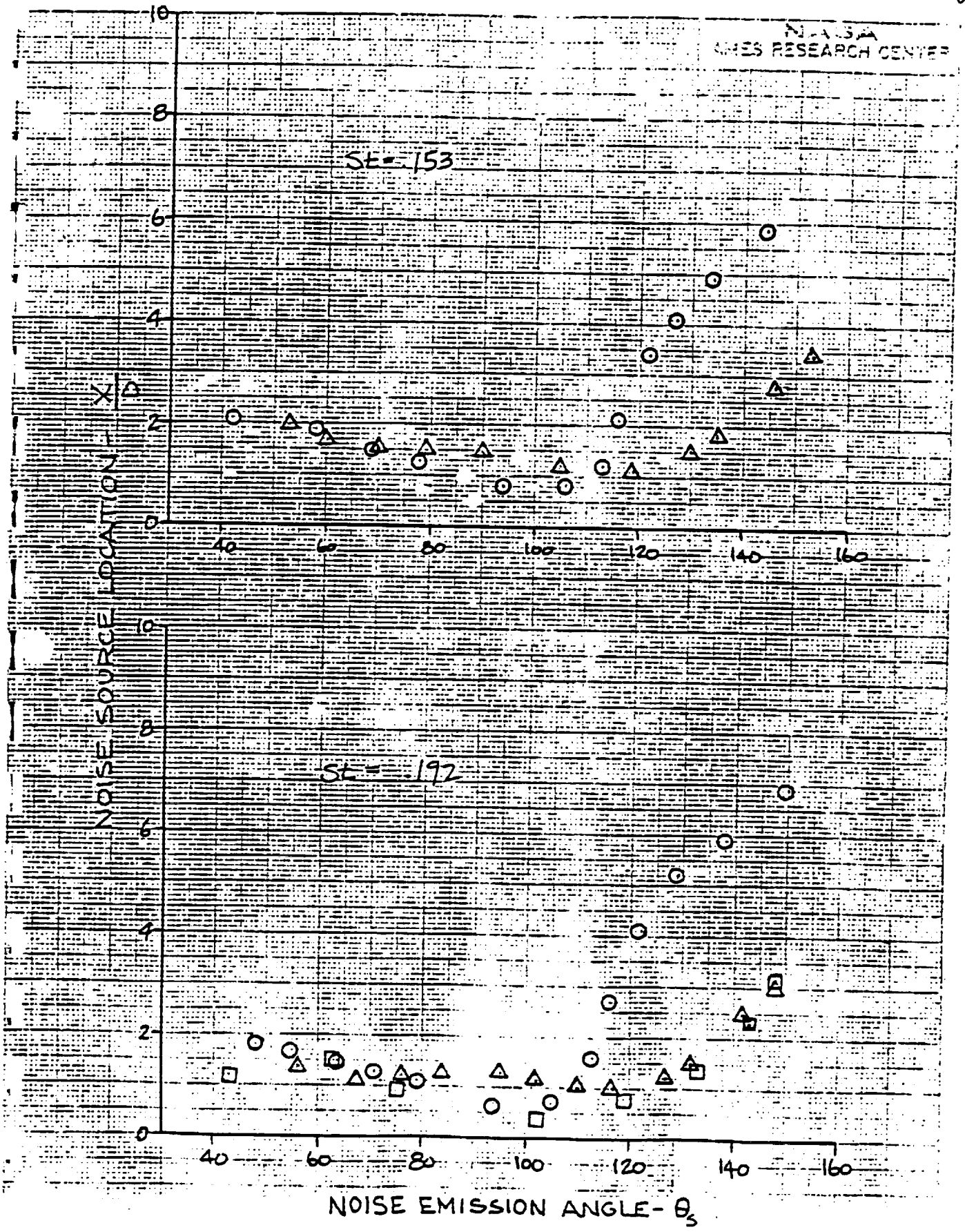

FIGURE 19 cont'd

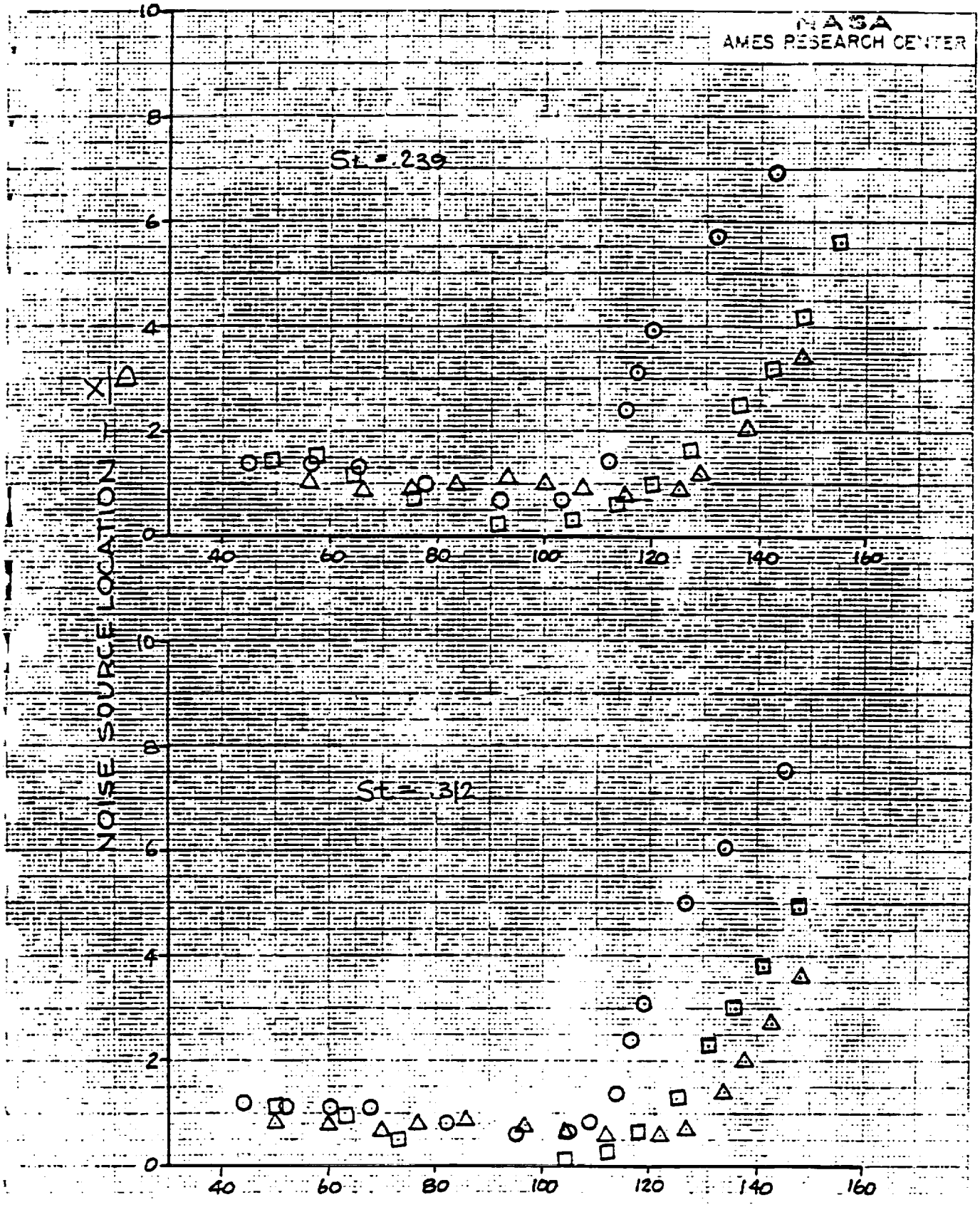

FIGURE 19 cont'd

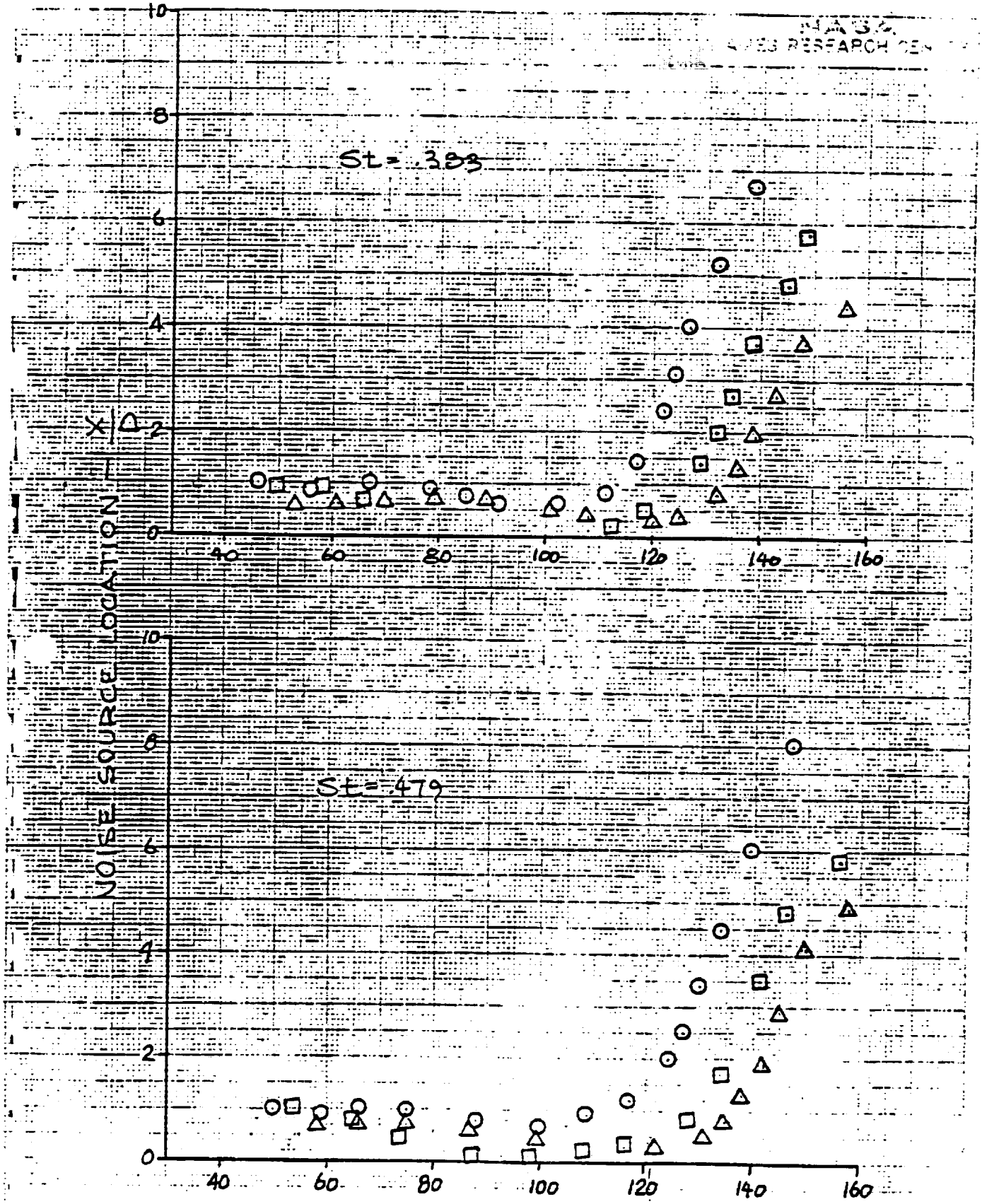

FIGURE 19 cont'd

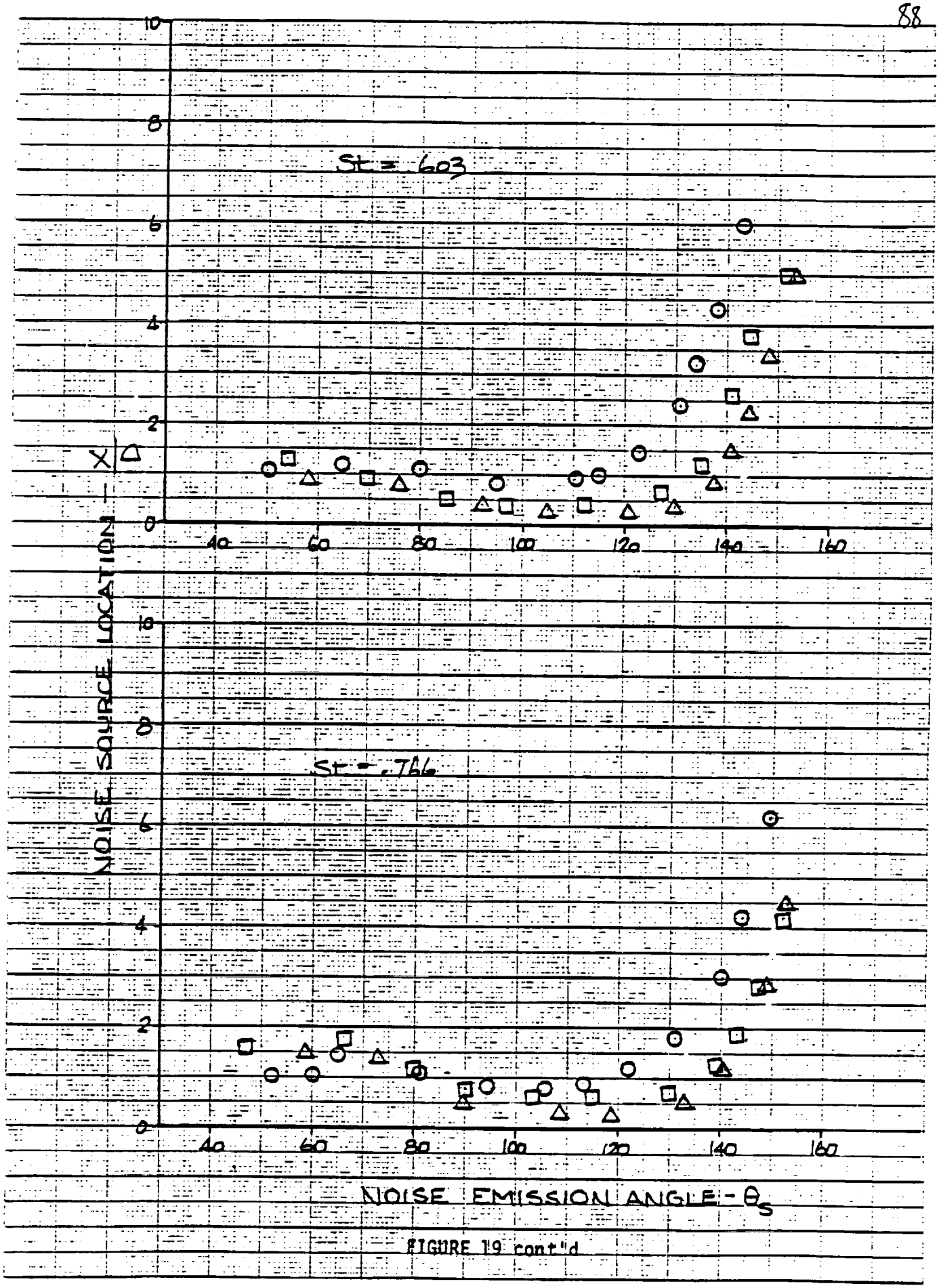

FIGURE 19 cont'd

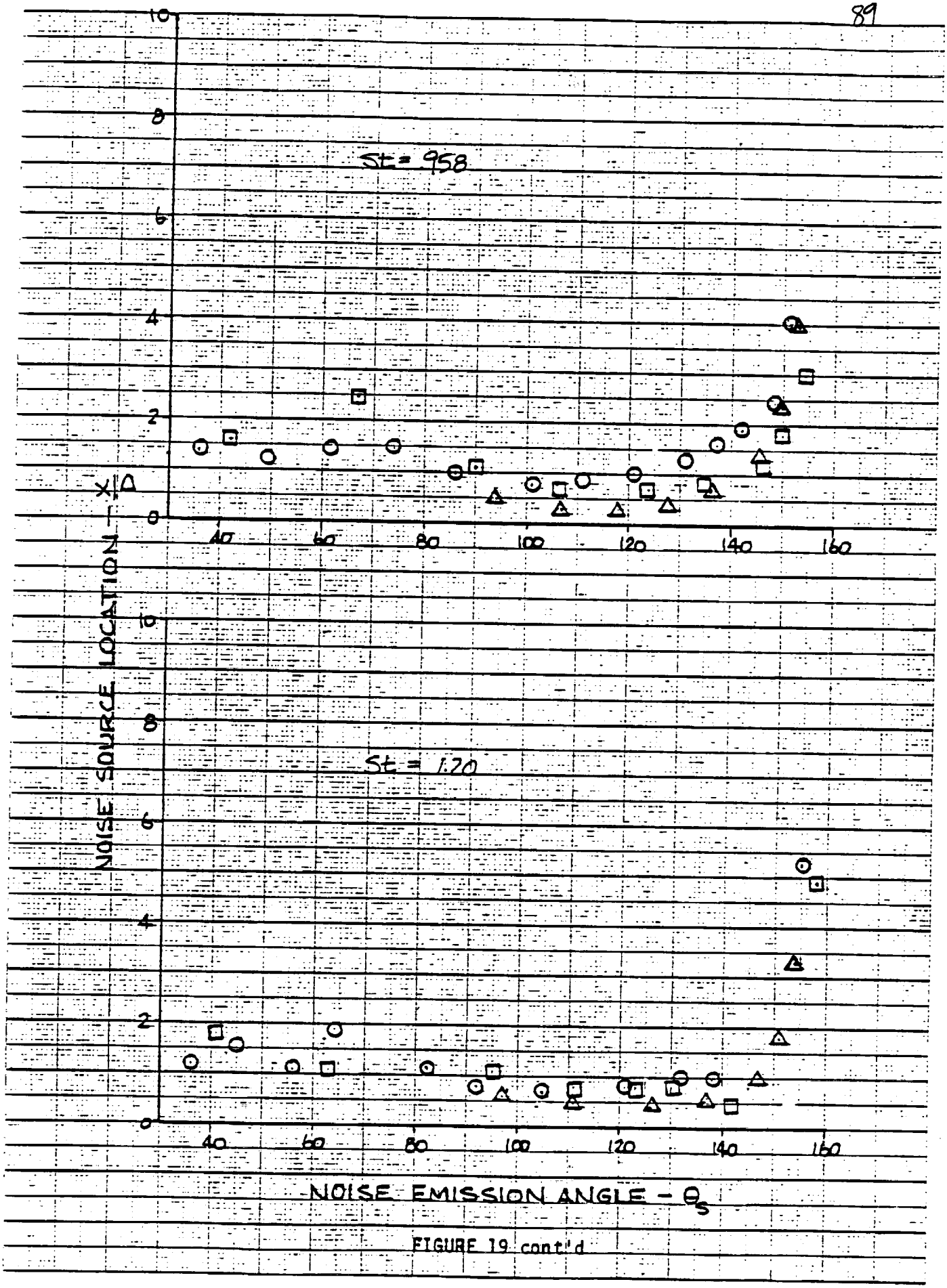

FIGURE 19 cont'd

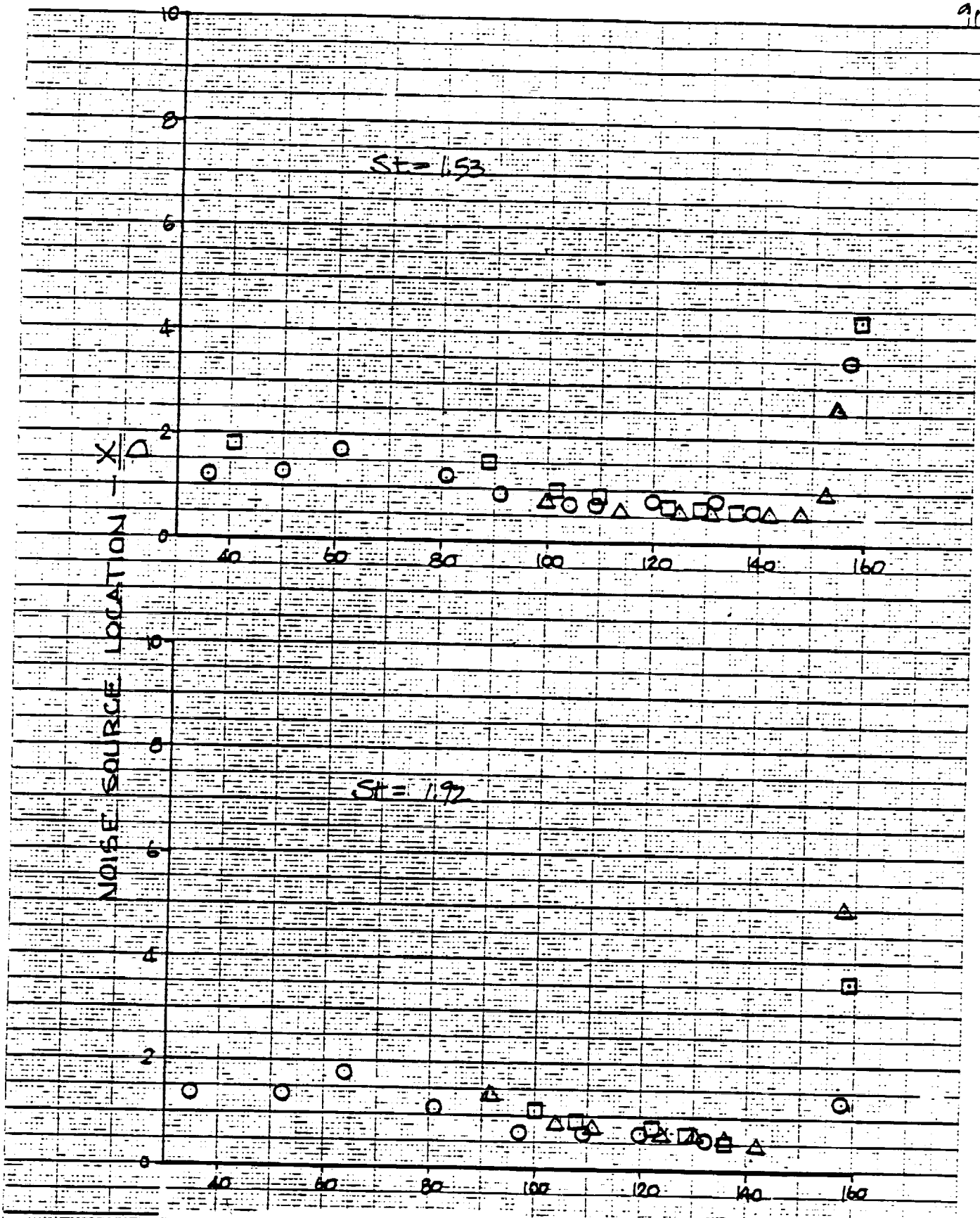

FIGURE 19 cont'd

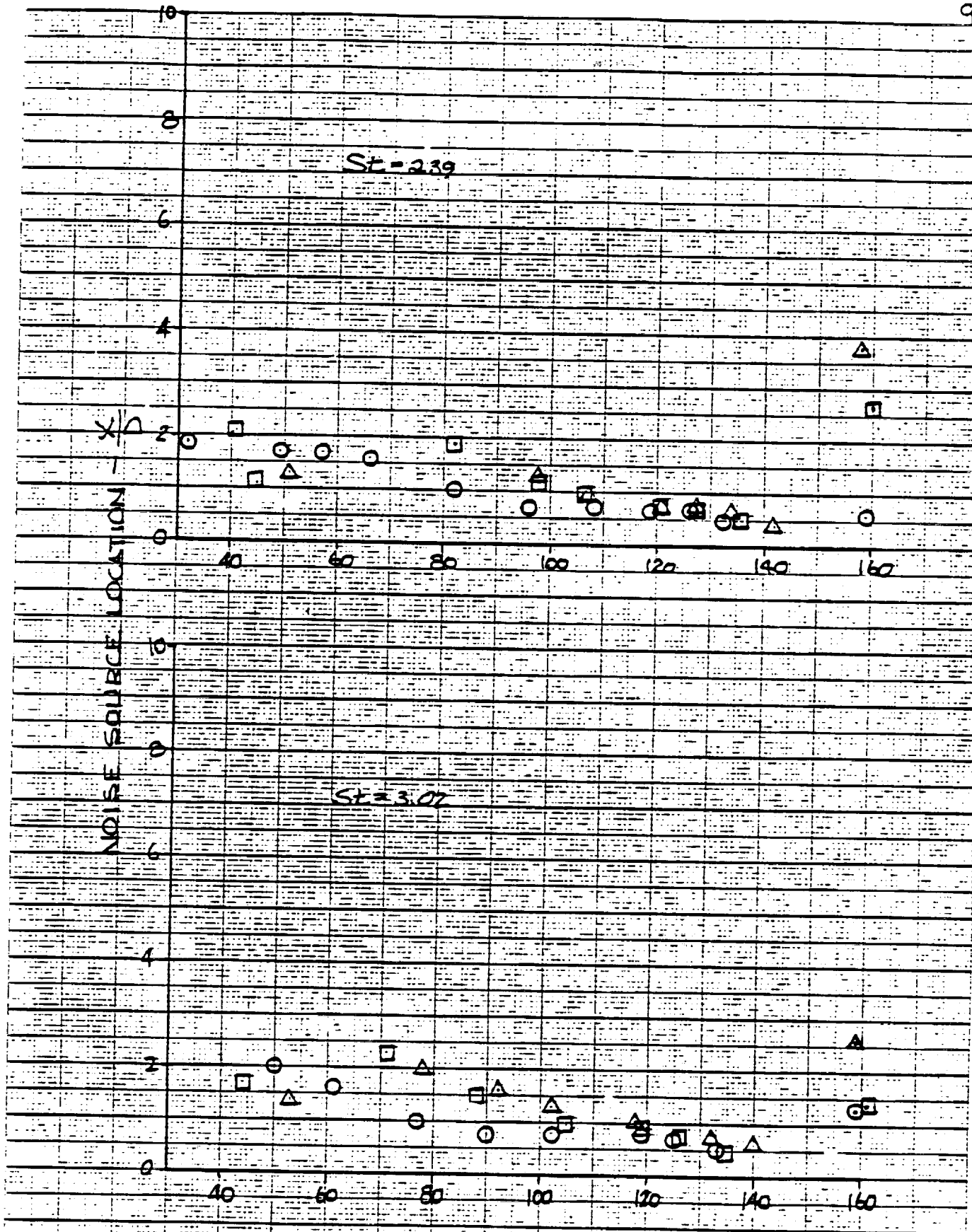

FIGURE 19 cont'd

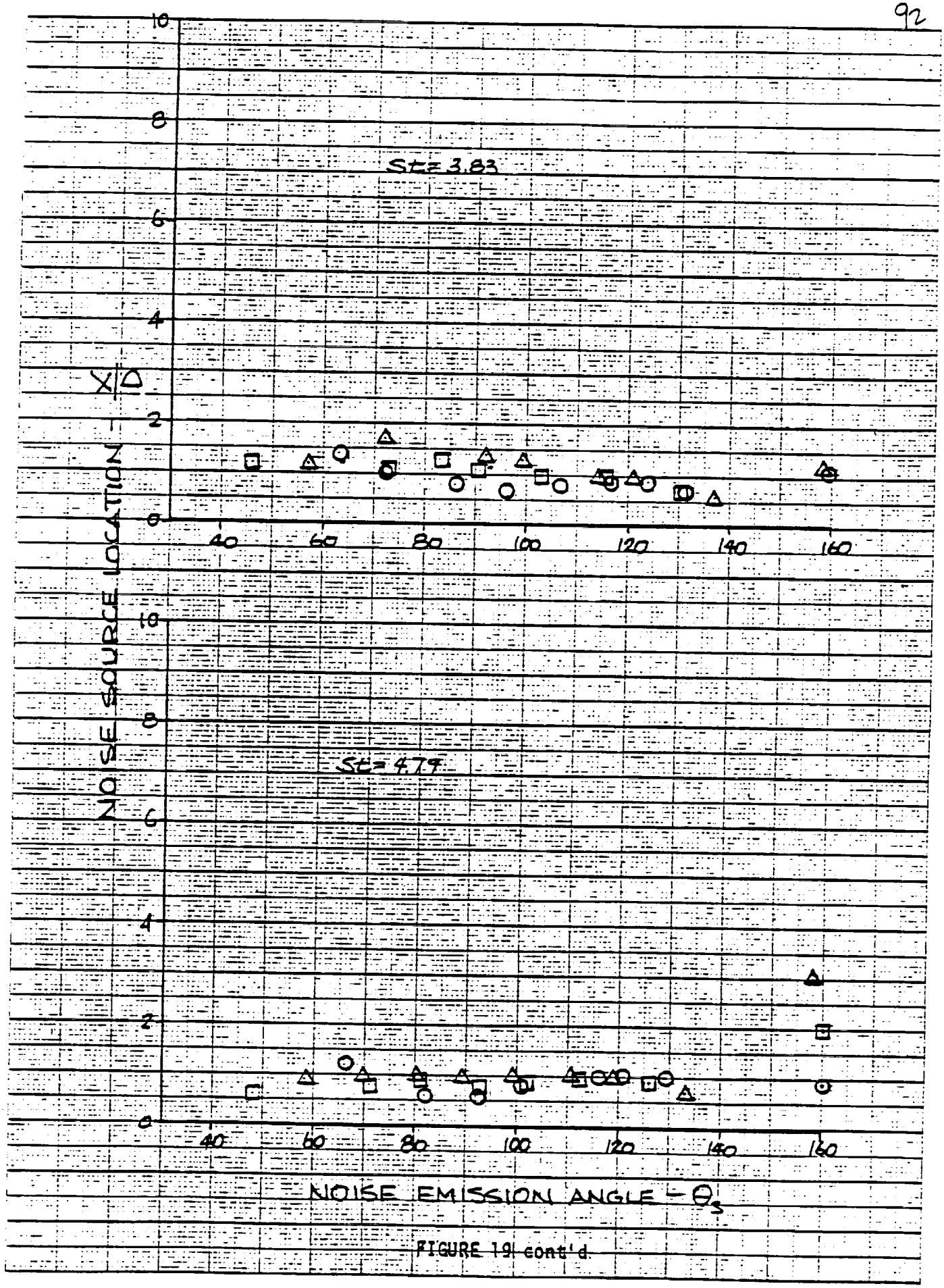

FIGURE 19 cont'd

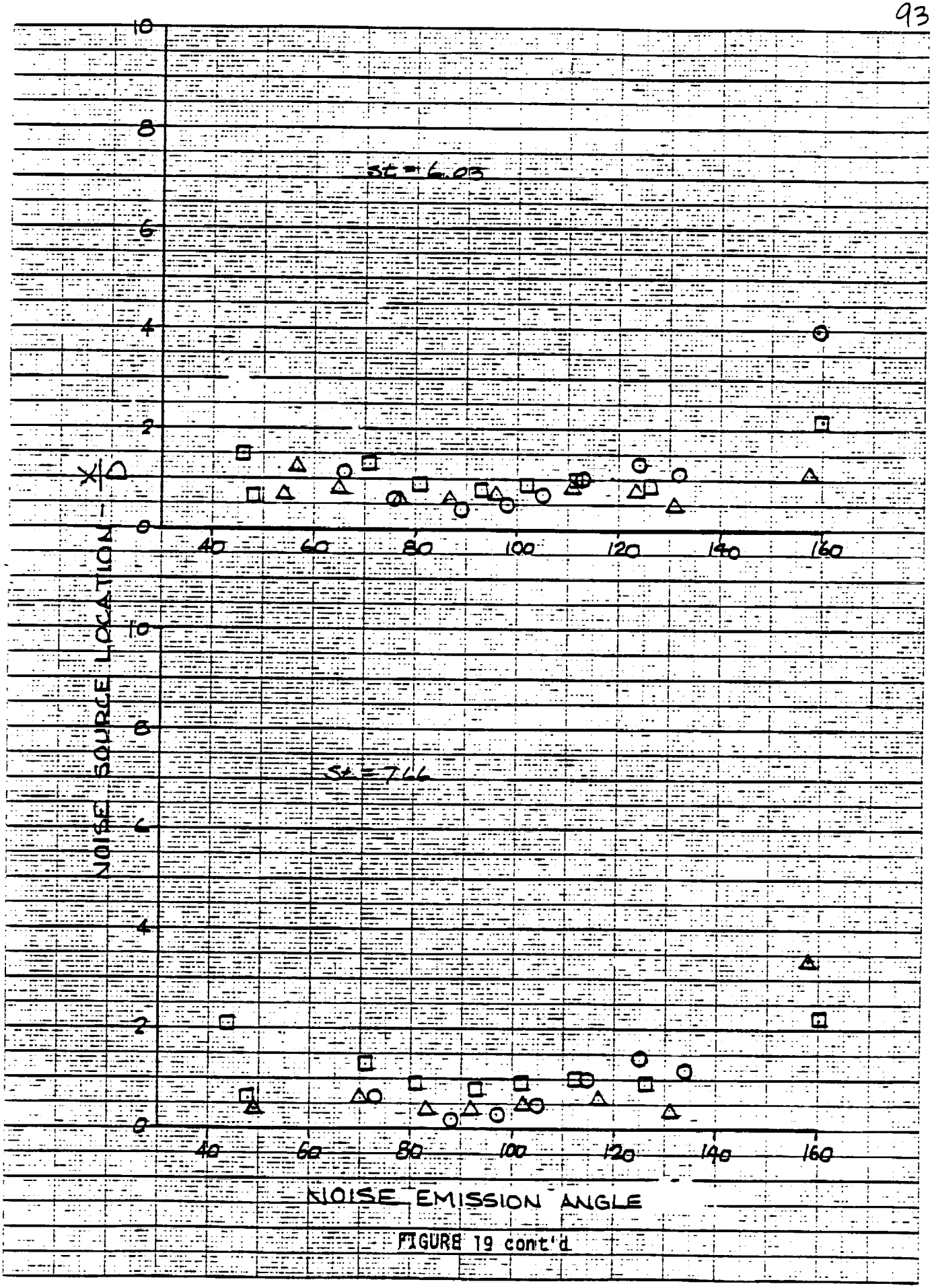

FIGURE 19 cont'd

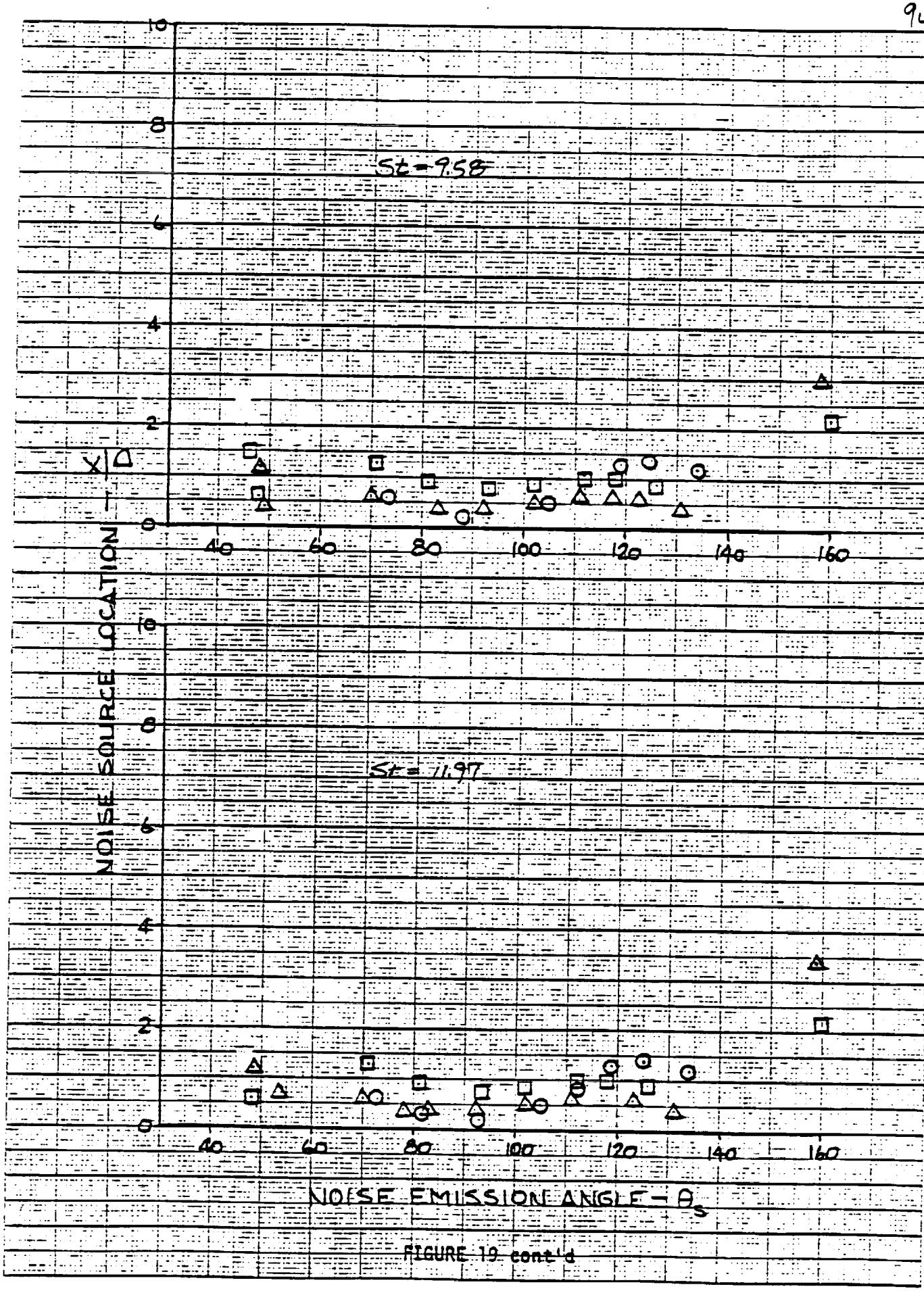

FIGURE 19 cont'd

104 TUBE NOZZLE WITH SHROUD

FIGURE 20: Noise Source Location vs Noise Emission Angle

○ 1793 fps (547 mps)

□ 1249 fps (381 mps)

△ 946 fps (288 mps)

⌂ 1538 fps (469 mps)

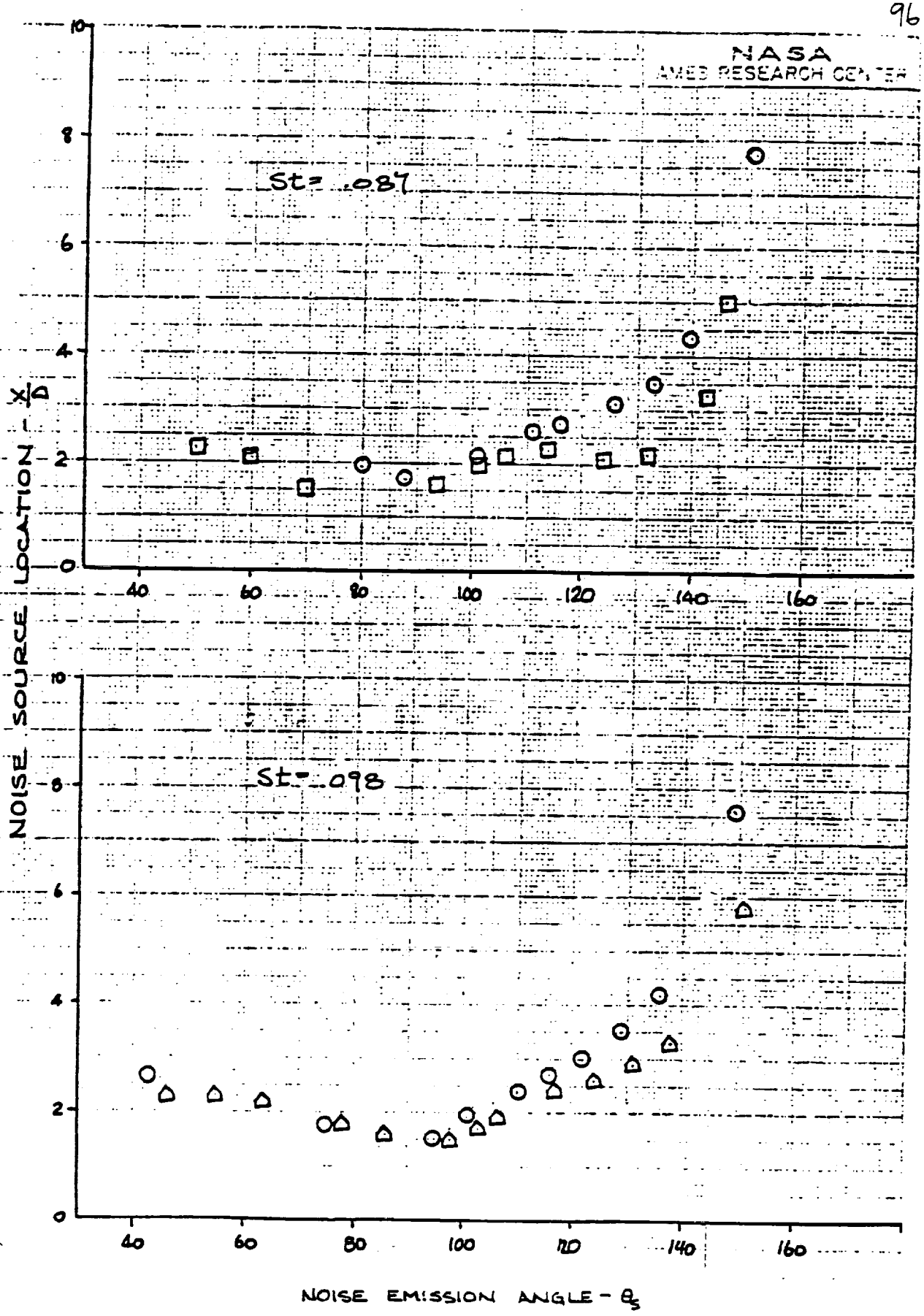
NASA
AMES RESEARCH CENTER
St= .087
St=.098
NOISE SOURCE LOCATION - X/D
NOISE EMISSION ANGLE - θs
0
2
4
6
8
10
40
60
80
100
120
140
160

FIGURE 20

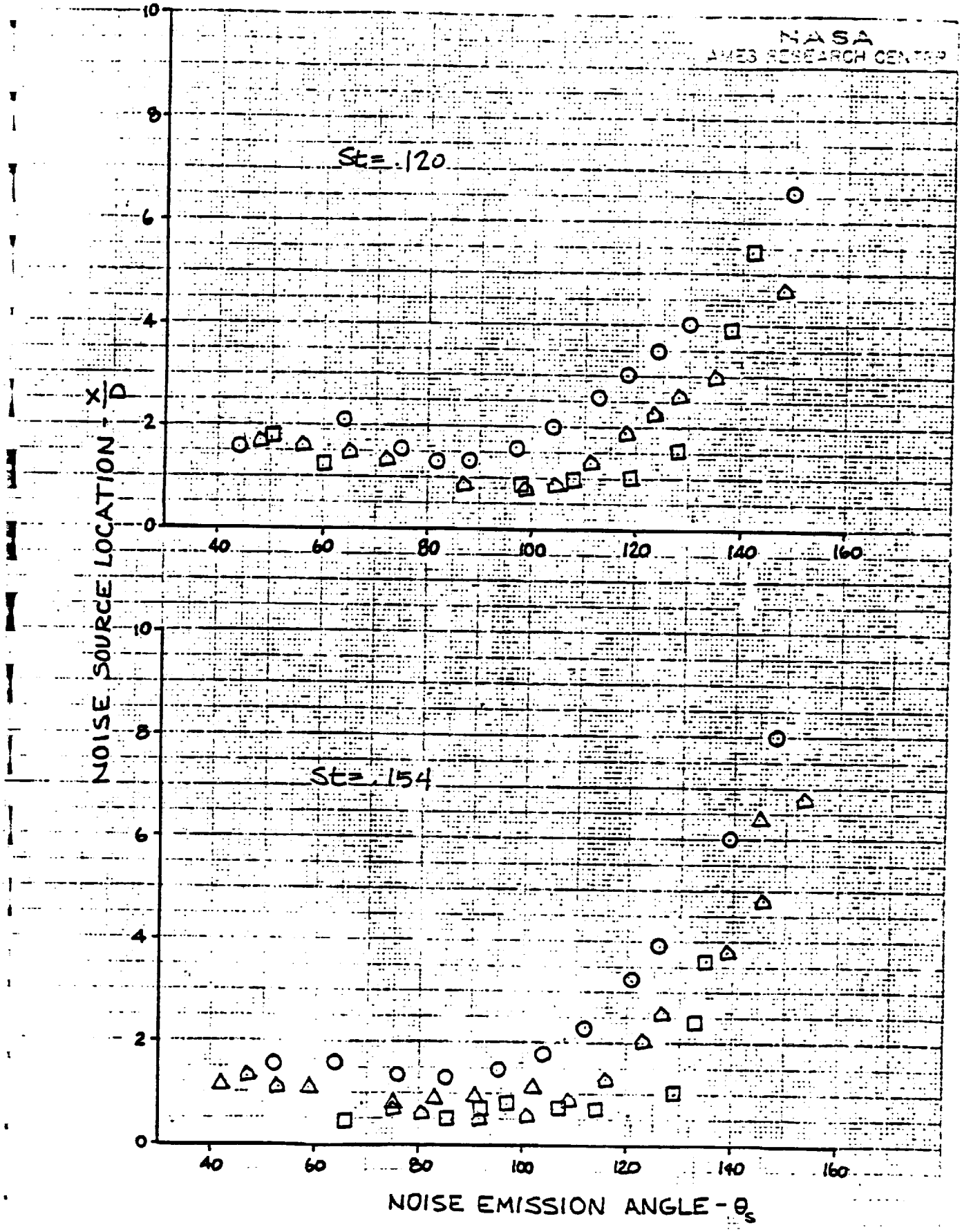

FIGURE 20 cont'd

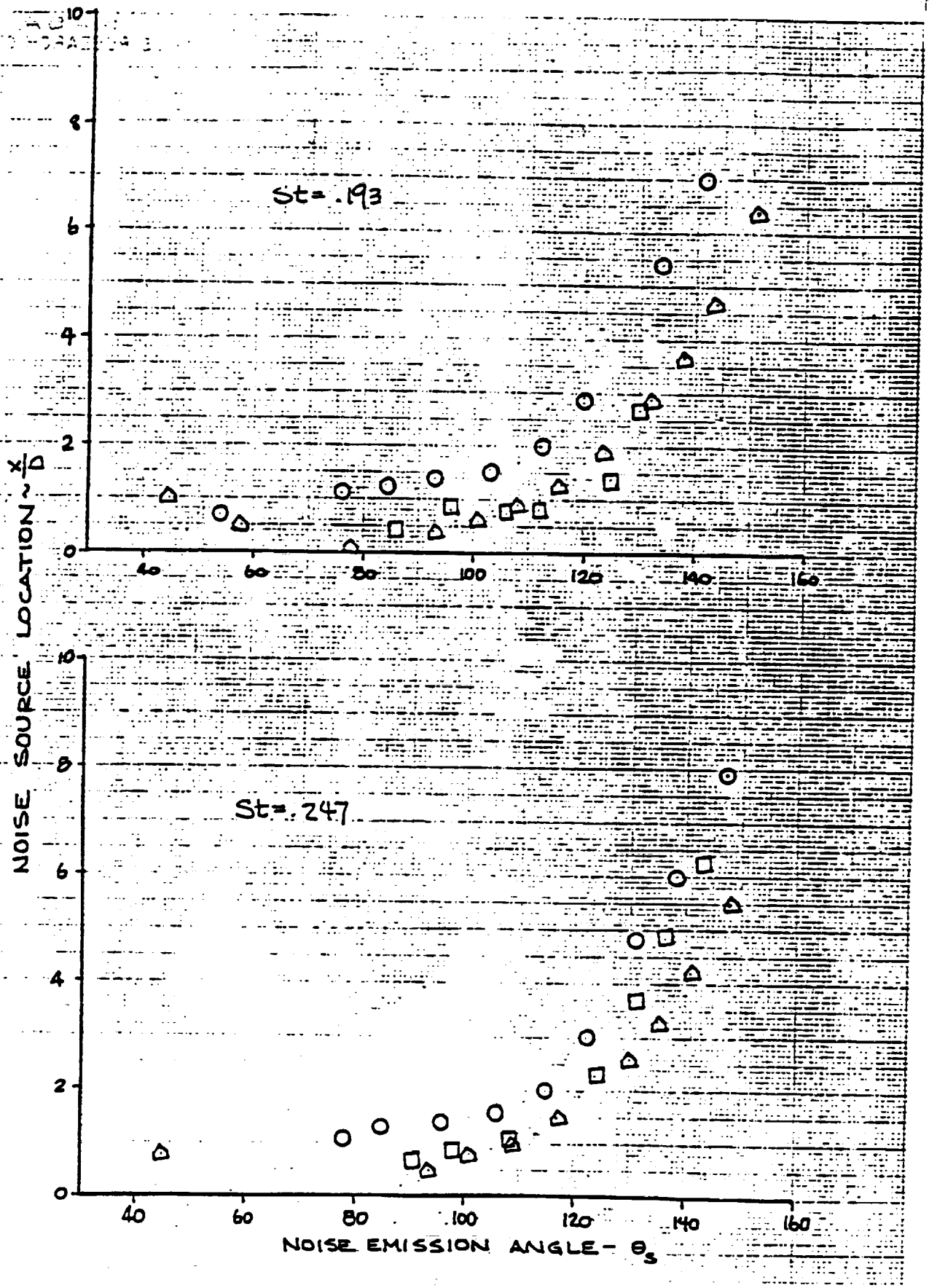

FIGURE 20 cont'd

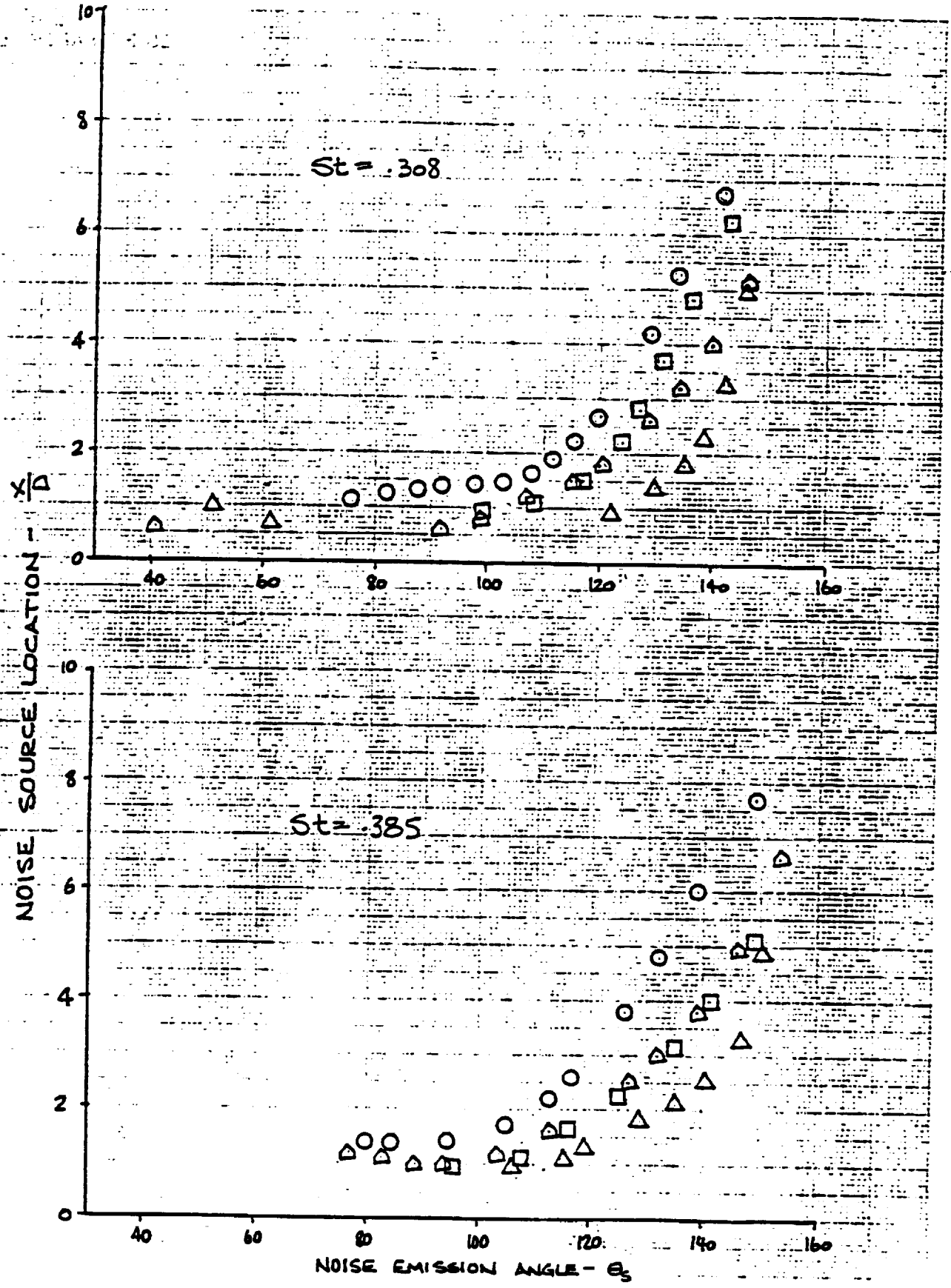

FIGURE 20 cont'd

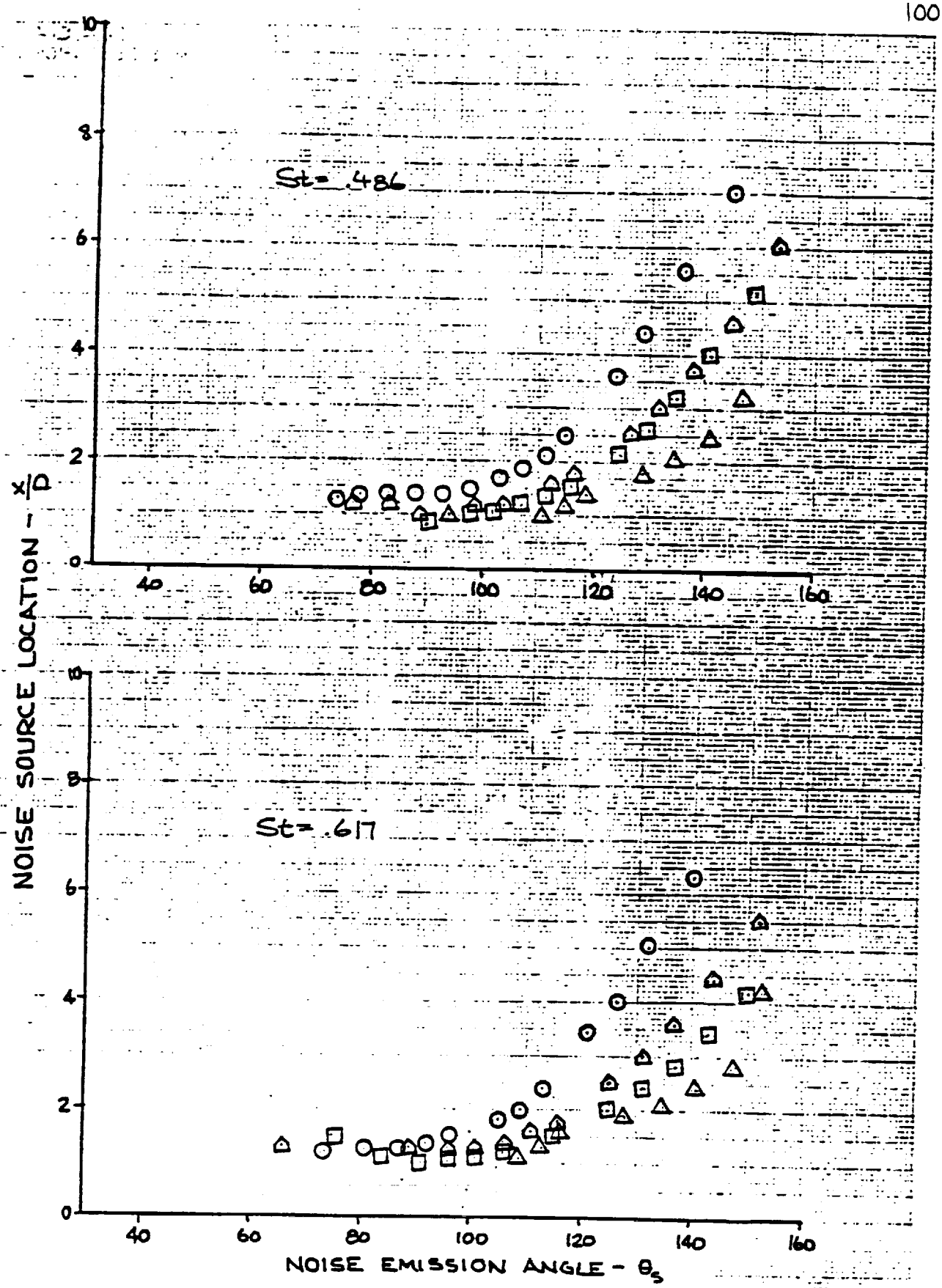

FIGURE 20 cont'd

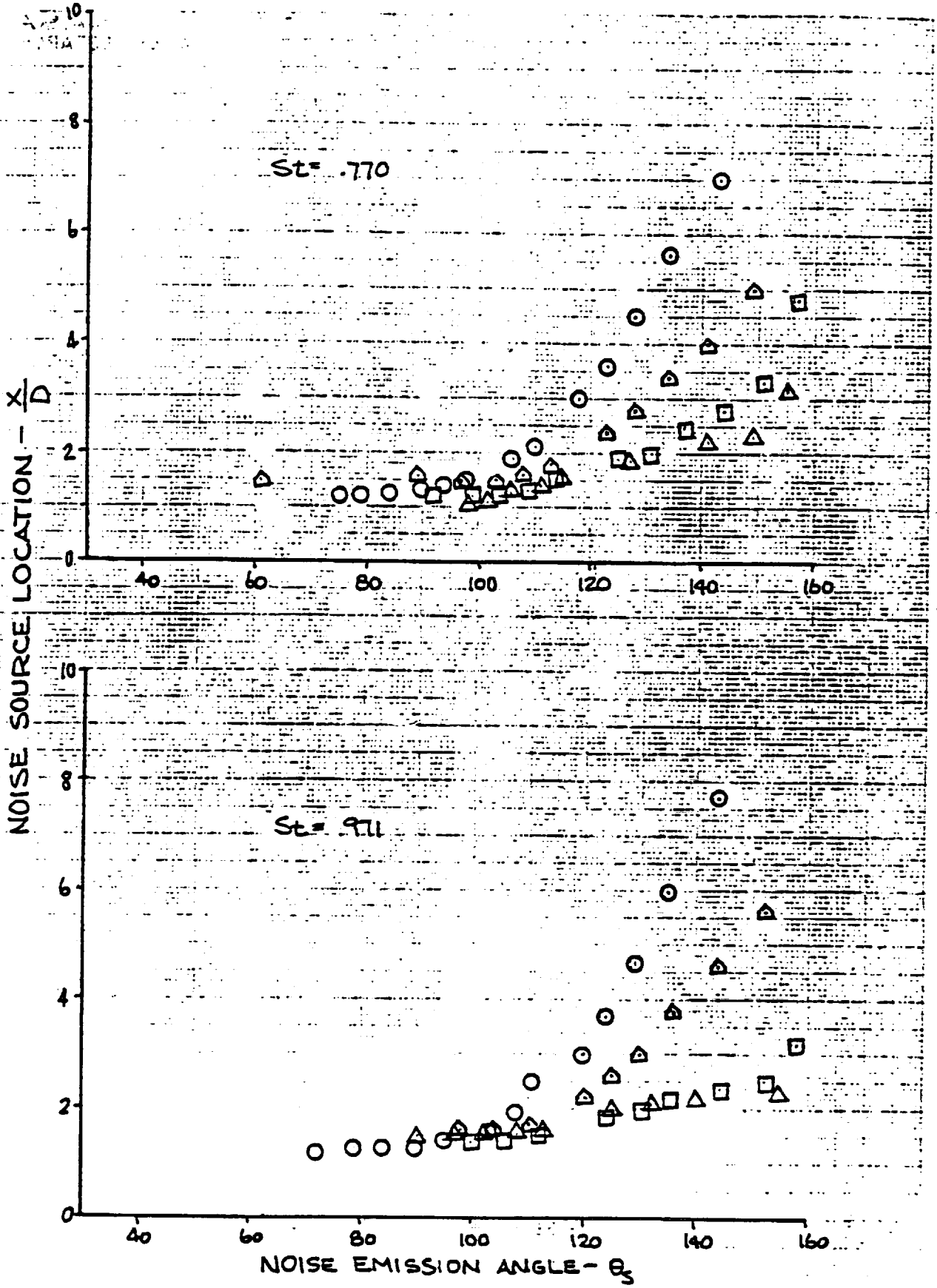

FIGURE 20 cont'd

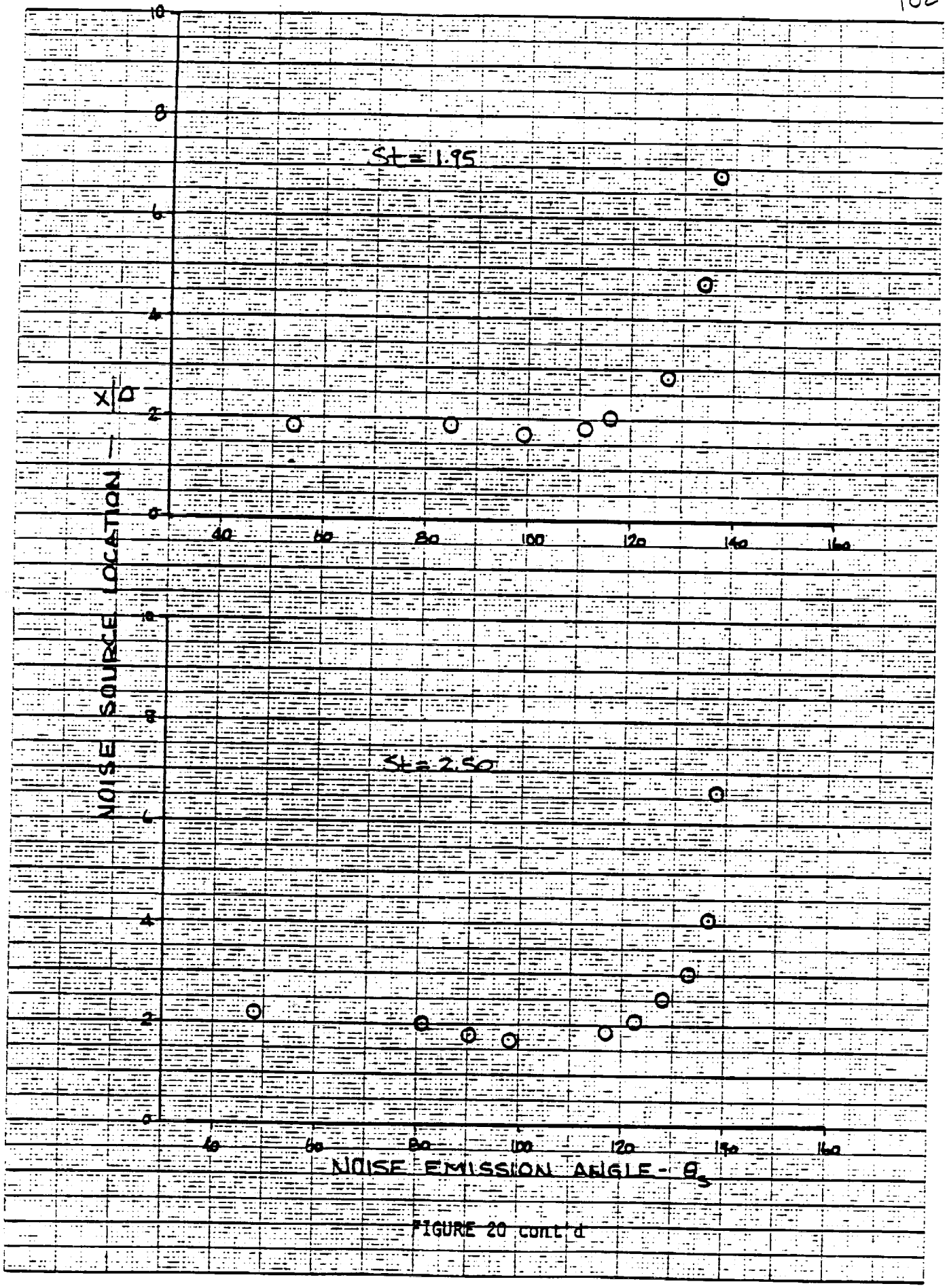

FIGURE 20 Cont'd

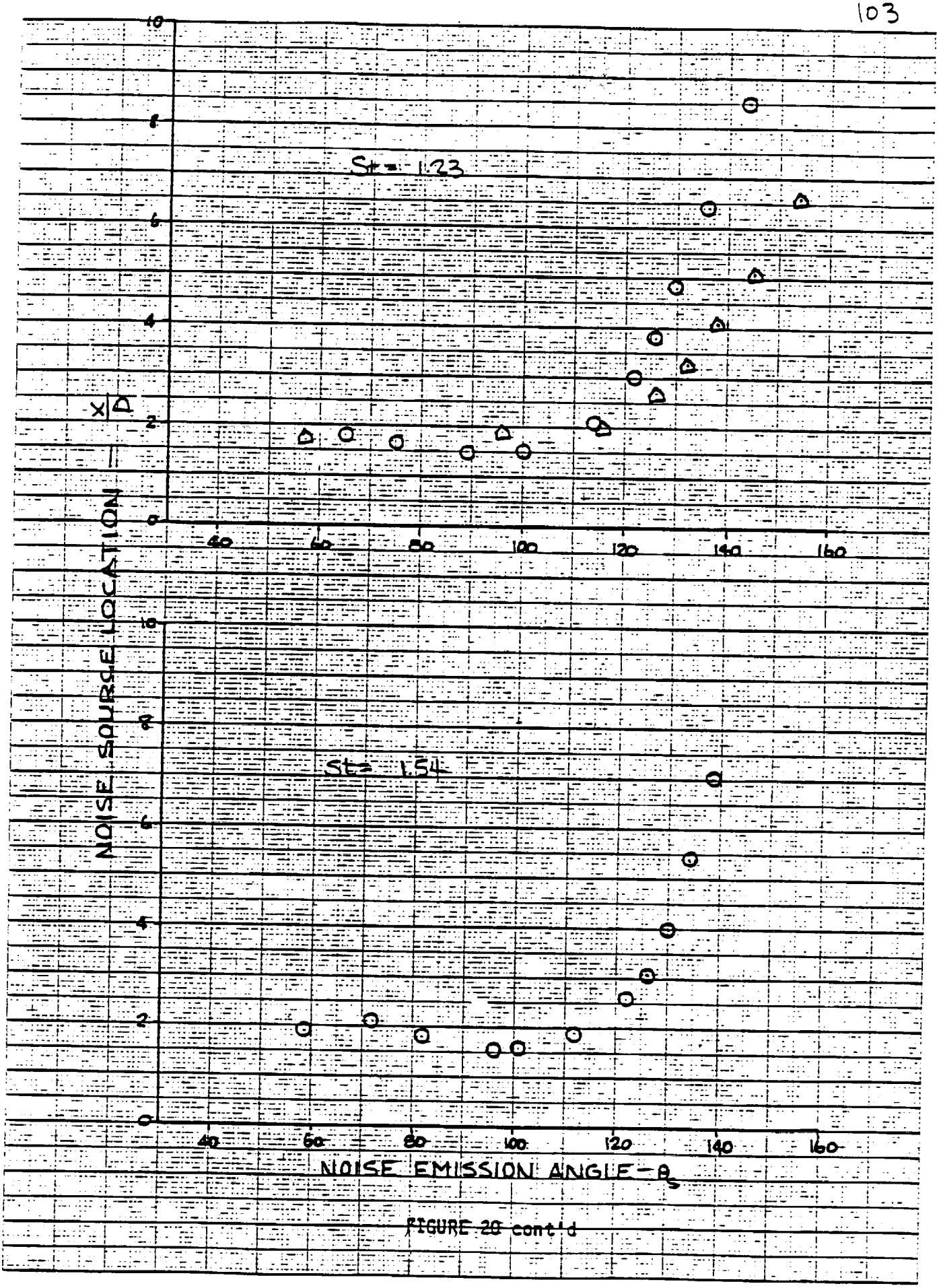

FIGURE 20 cont'd

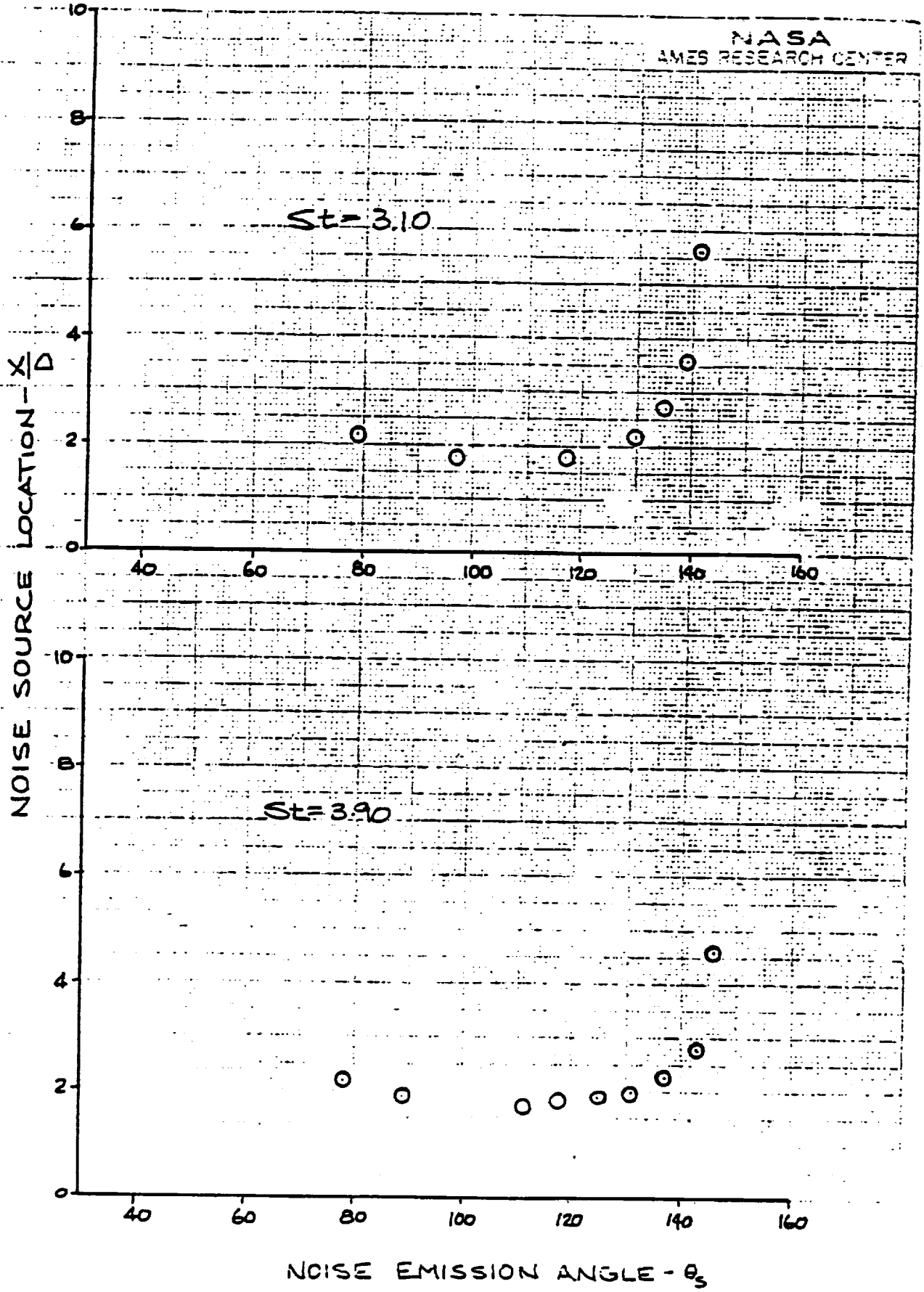

FIGURE 20 cont'd

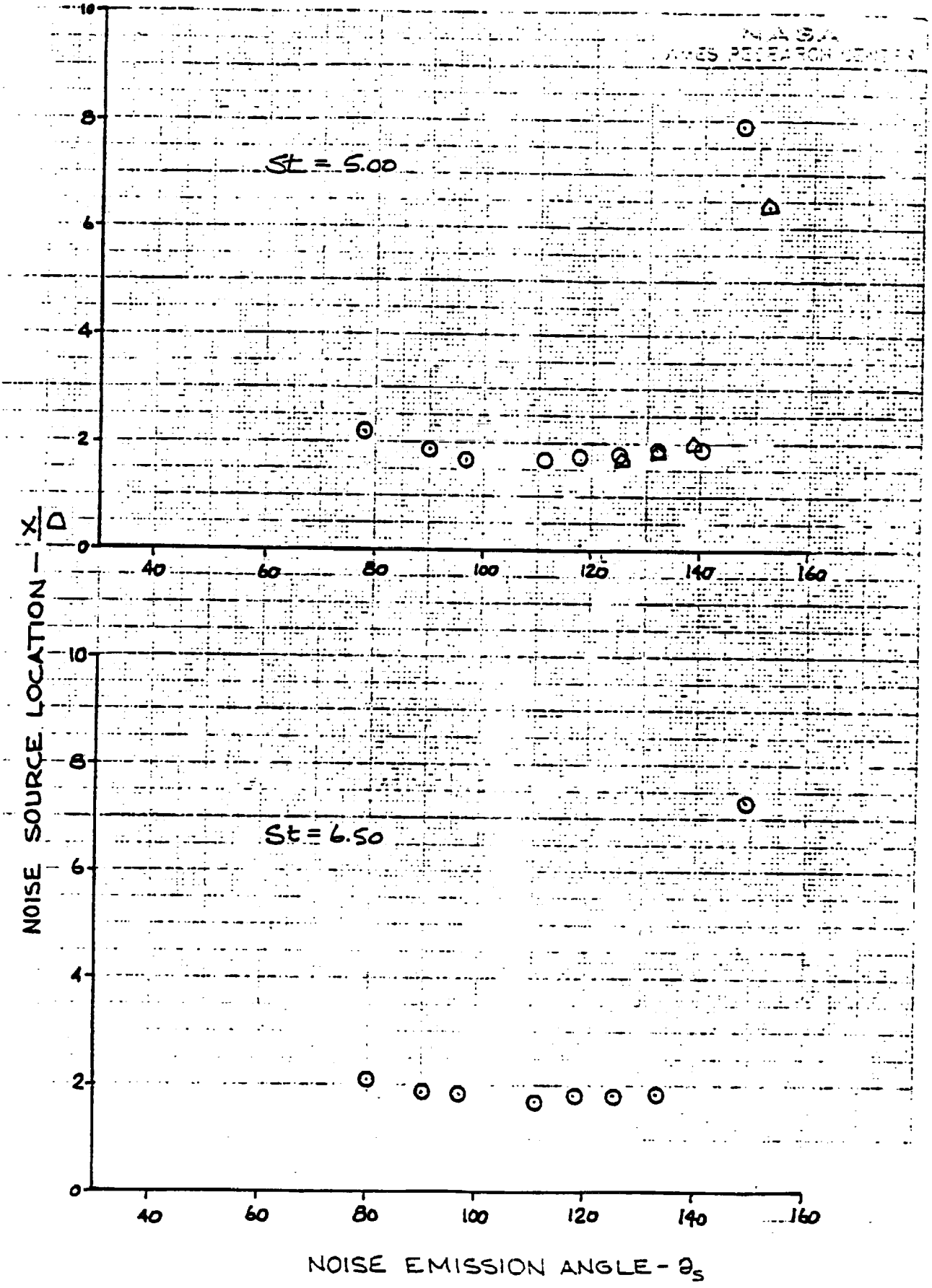

FIGURE 20 cont'd

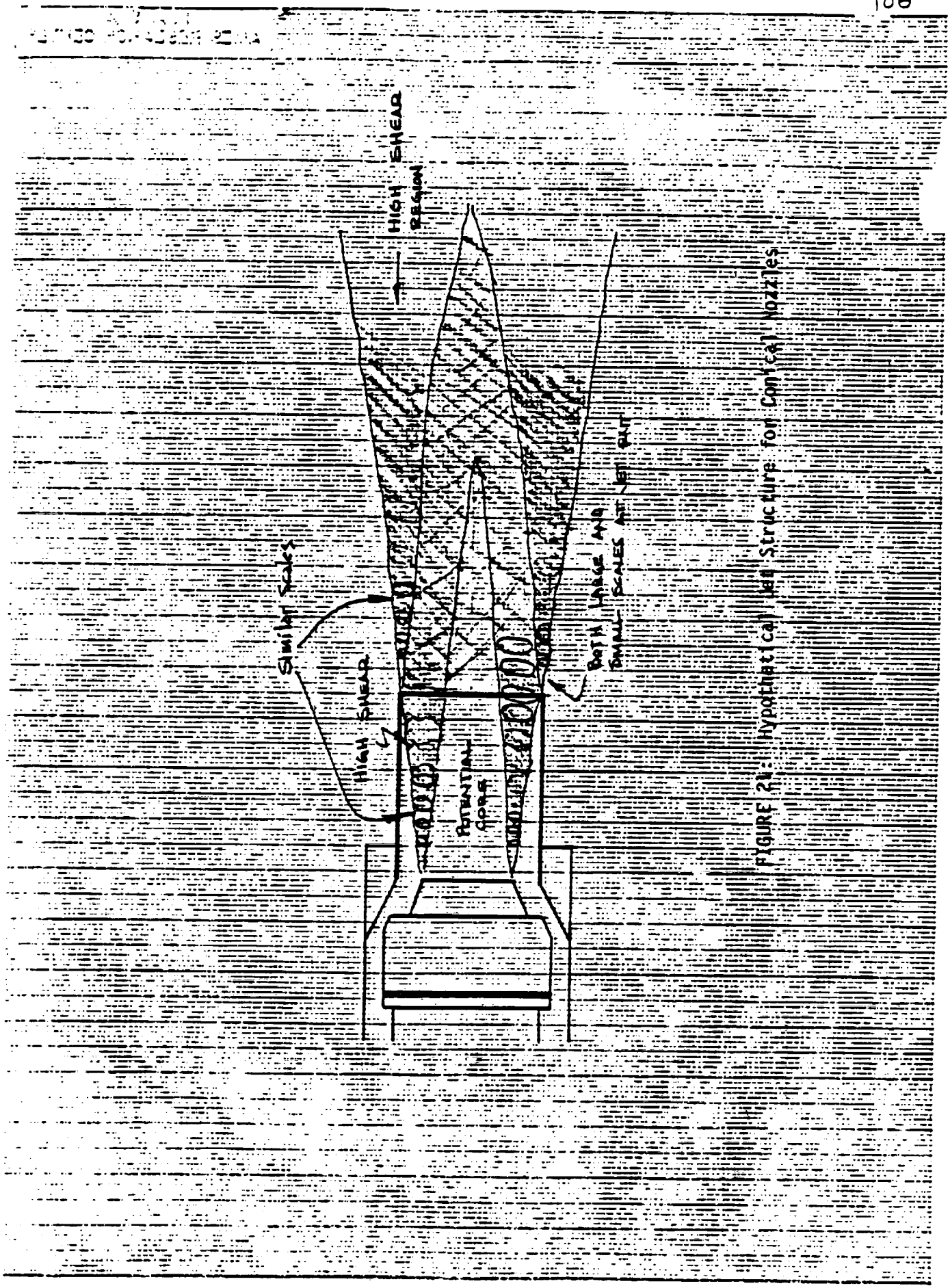

FIGURE 21: Hypothetical Jet Structure for Conical Nozzles

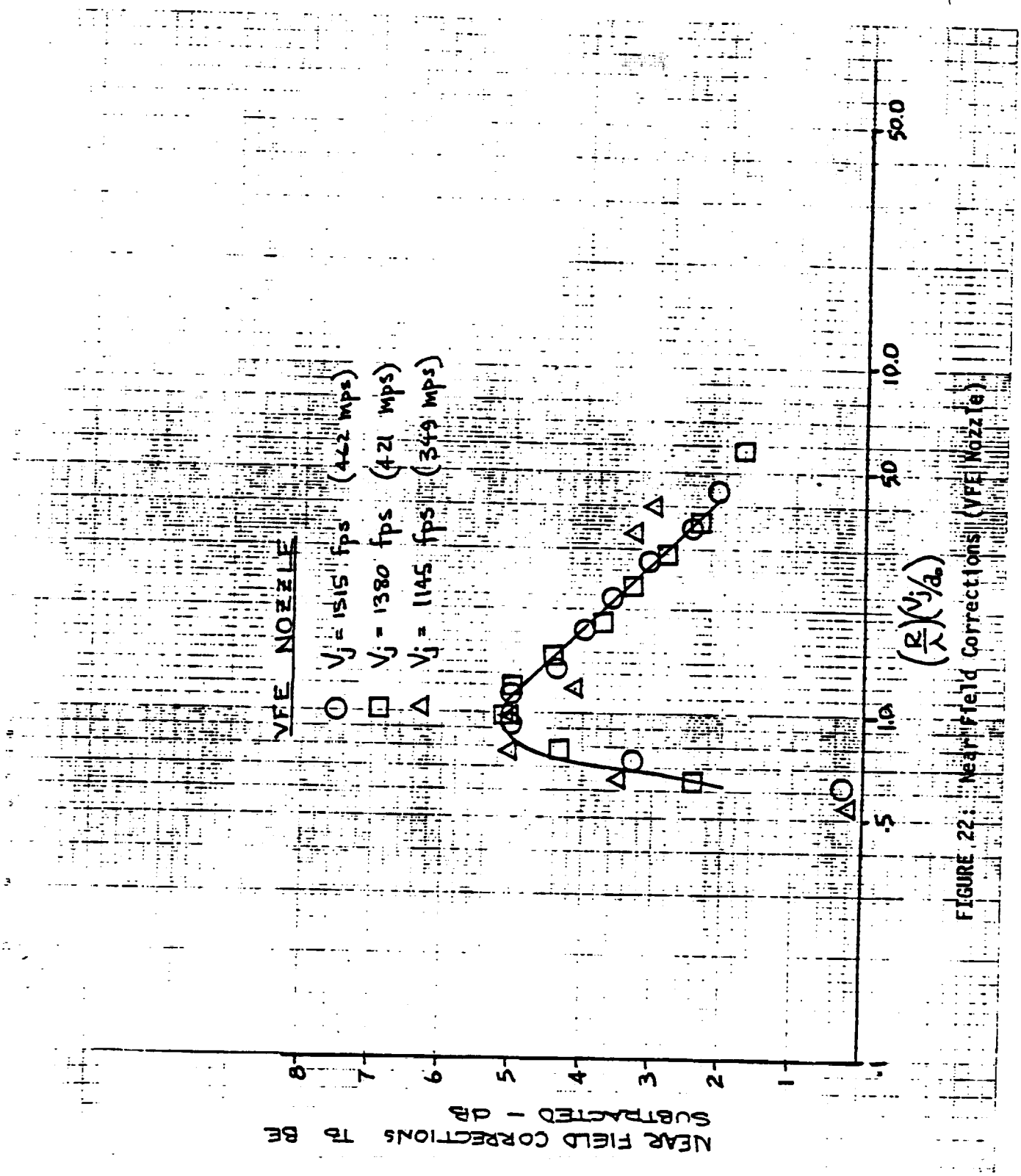

FIGURE 22: Near Field Corrections (VFE Nozzle)

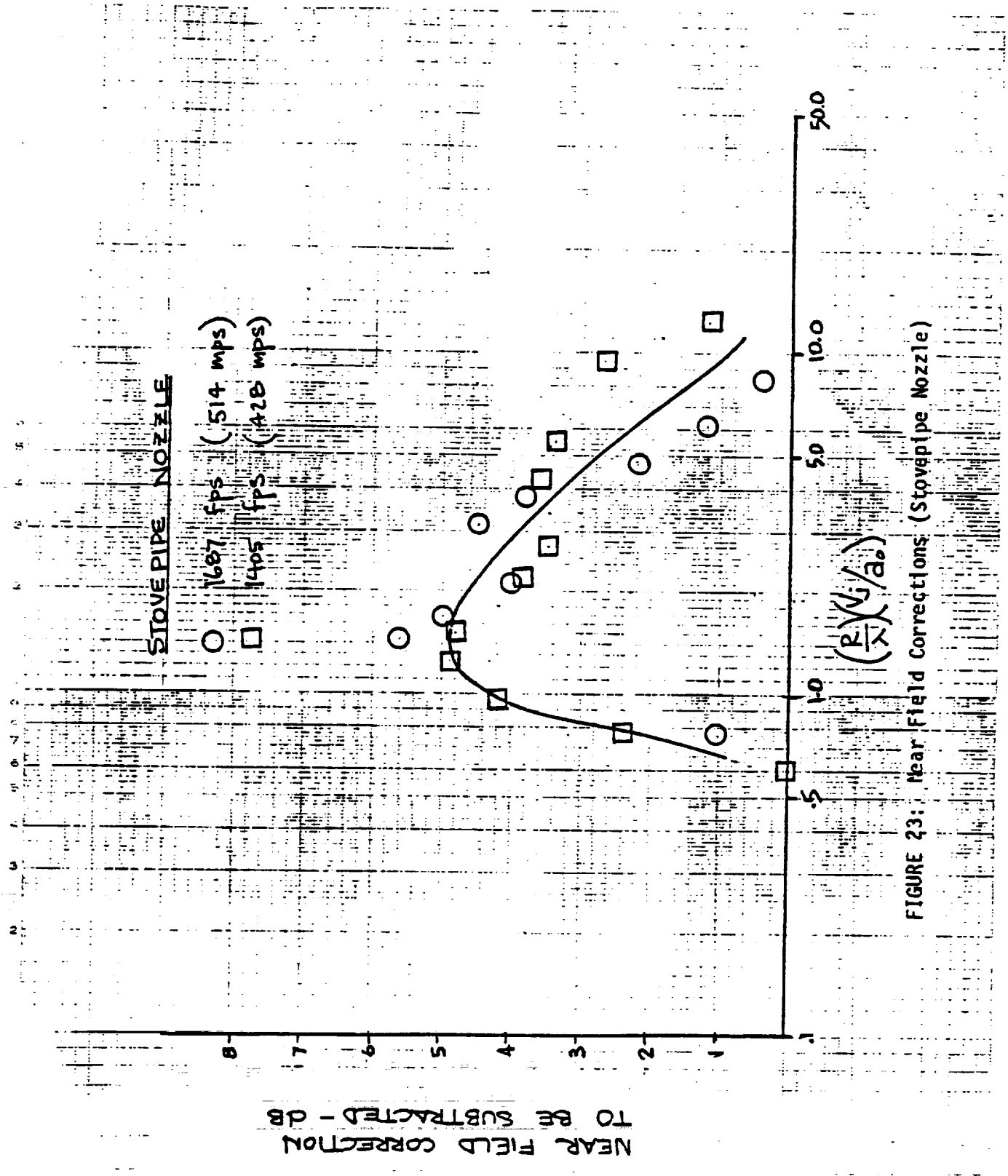

FIGURE 23: Near Field Corrections (Stovepipe Nozzle)

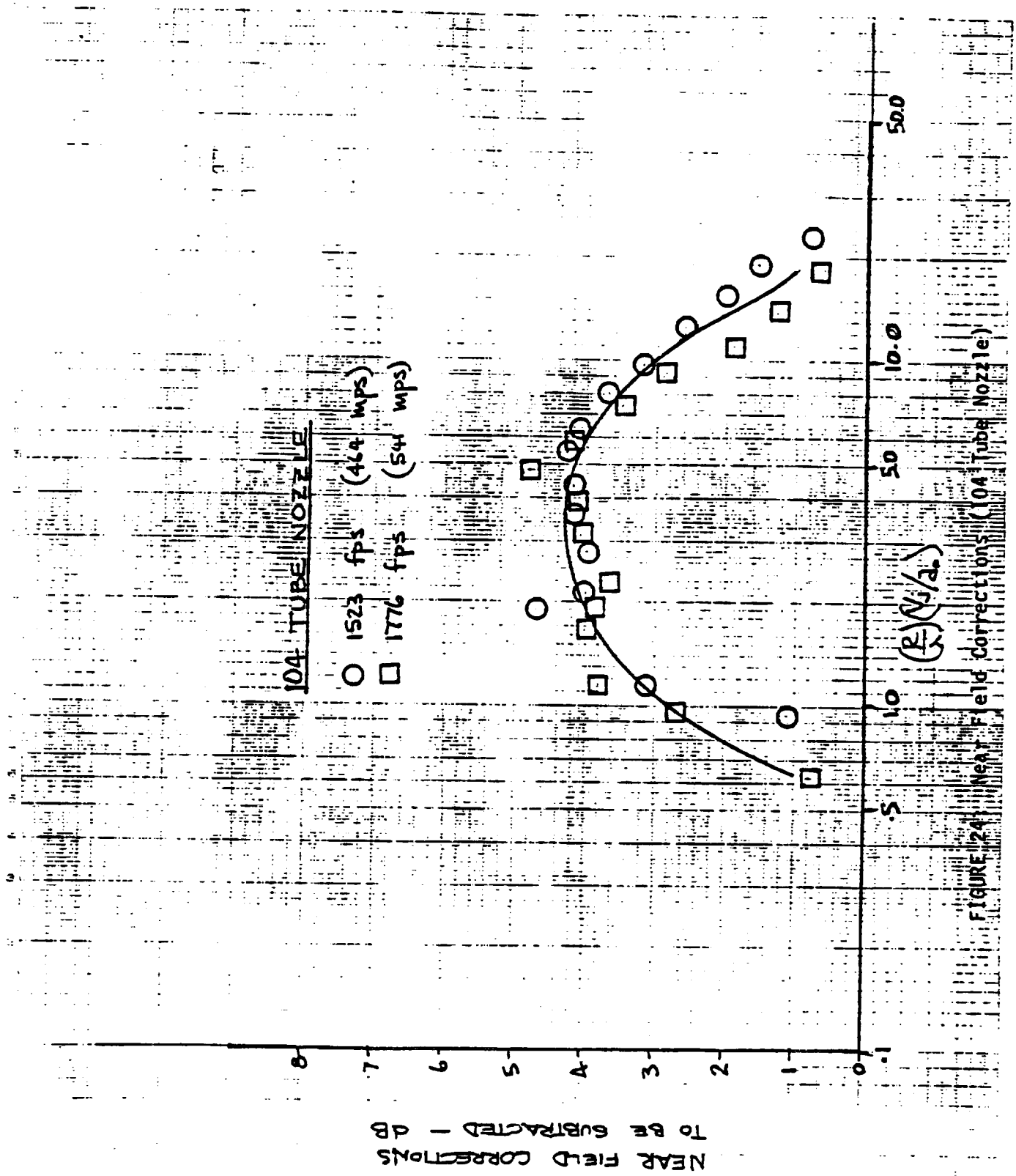

FIGURE 24 Near Field Corrections (104 Tube Nozzle)

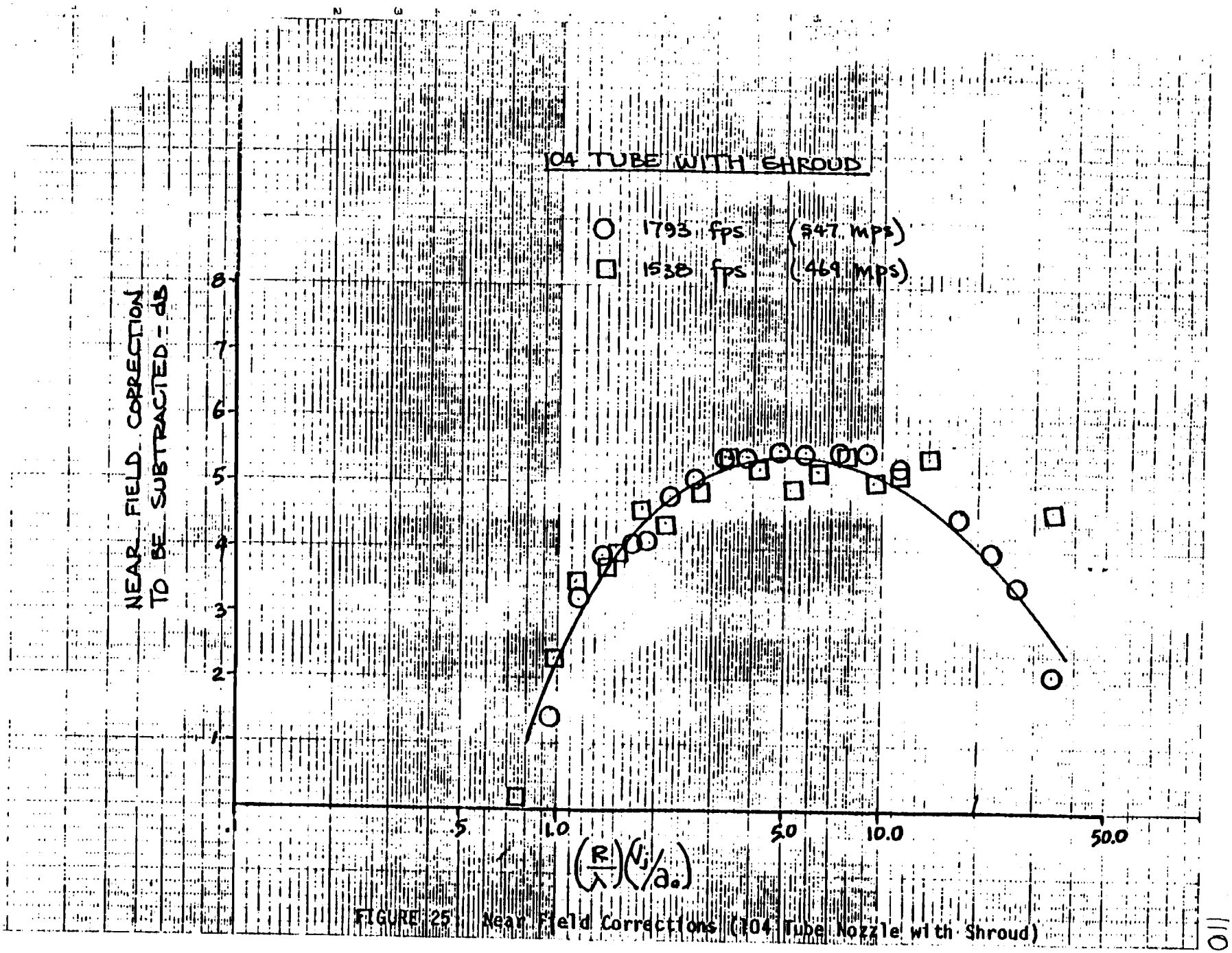

FIGURE 25. Near Field Corrections (104 Tube Nozzle with Shroud)

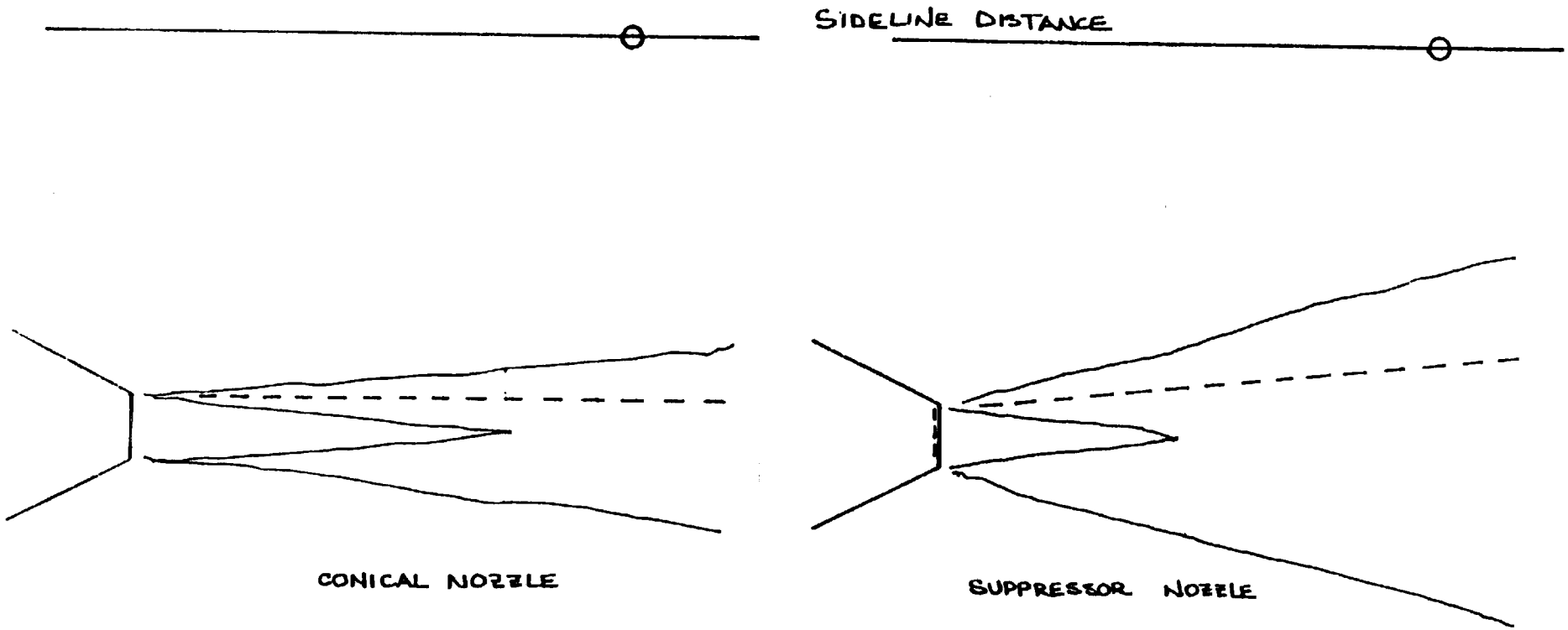

FIGURE 26: Effect of Large Spreading Angle on Assumed Source Locations

i) source location moves a distance Δx due to core stretch

ii) radiation angle changes from θ_s to ψ_s due to convection

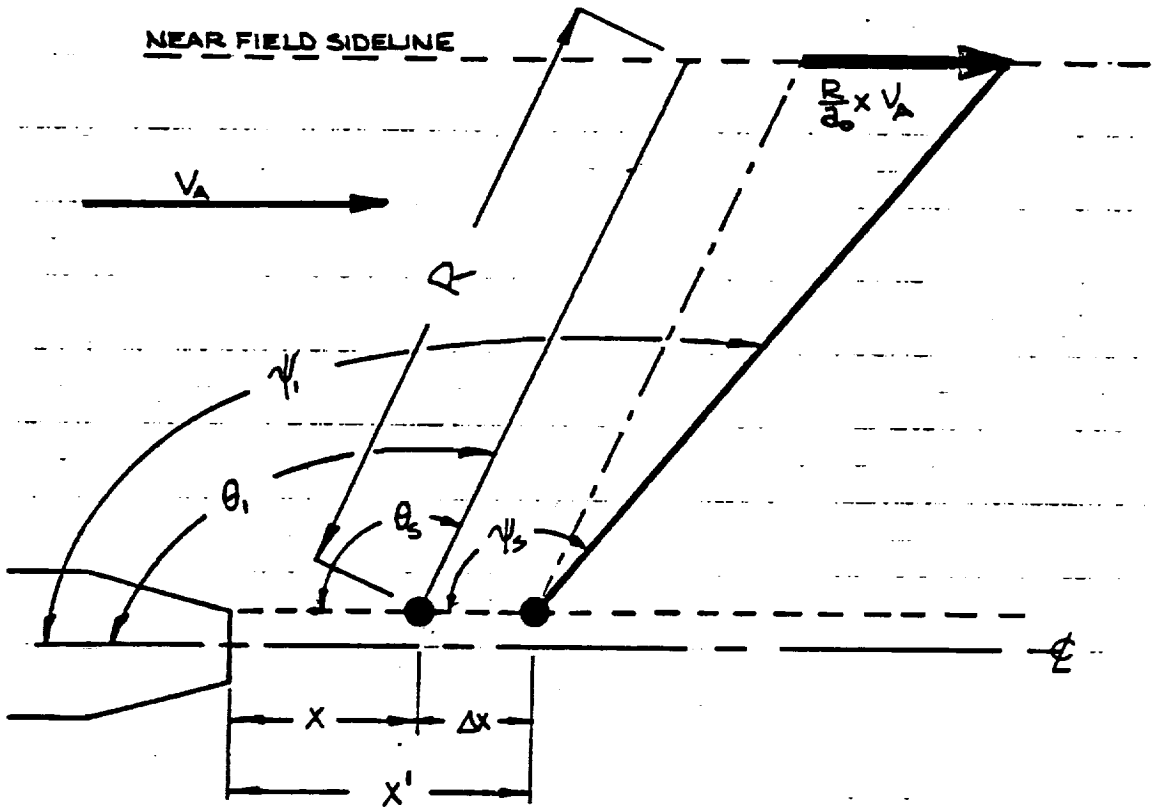

FIGURE 27: Effect of Ambient Velocity

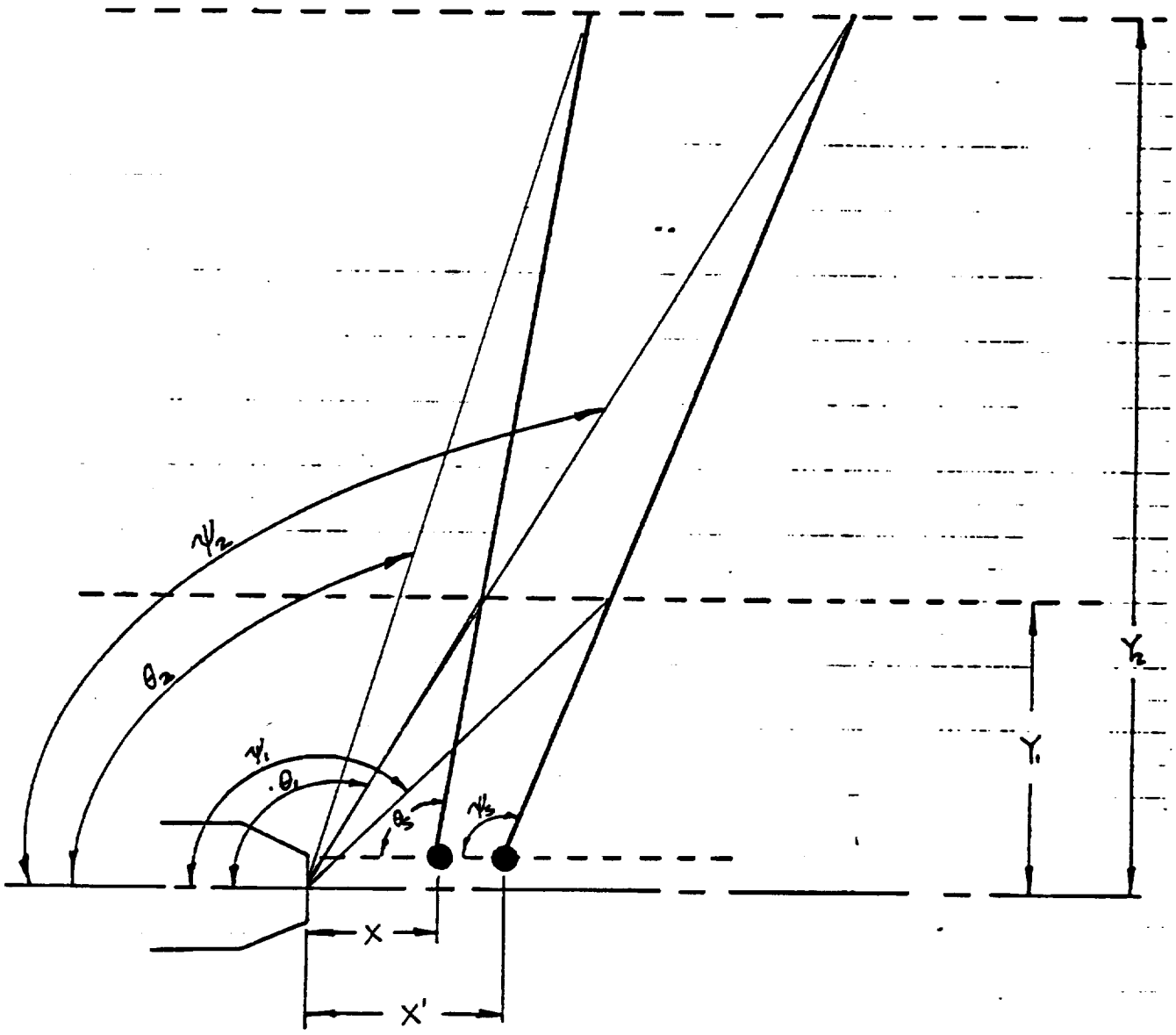

FIGURE 28: Nomenclature

APPENDIX A

A computerized data handling system has been developed which is specifically intended to reduce moving microphone data. The system consists of 2 steps:

1. Convert data stored on analog tapes to 1/3 octave band levels on paper tapes for specified microphone positions. This is done on the Dynamic Analysis System and produces paper tapes which can be read by the IBM 360. The procedure for this step is described here.

2. Data stored on paper tapes are read into the IBM 360. Corrected spectra can then be plotted for any angle at the point. If source locations are required the data on the IBM can be easily transferred to the 7600, where an extensive source location program is located.

The file labelled "JETN" contains all of the programs necessary to produce paper tapes from moving microphone data. The main program is labelled "SAMPL". At present this program is designed to deal with microphone movement that is parallel to the jet axis. The program is written in Time Series Language on the Dynamic Analysis System and requires the GR1921 spectrum analyzer as well. The necessary hardware and appropriate connections are shown in Figure A1.

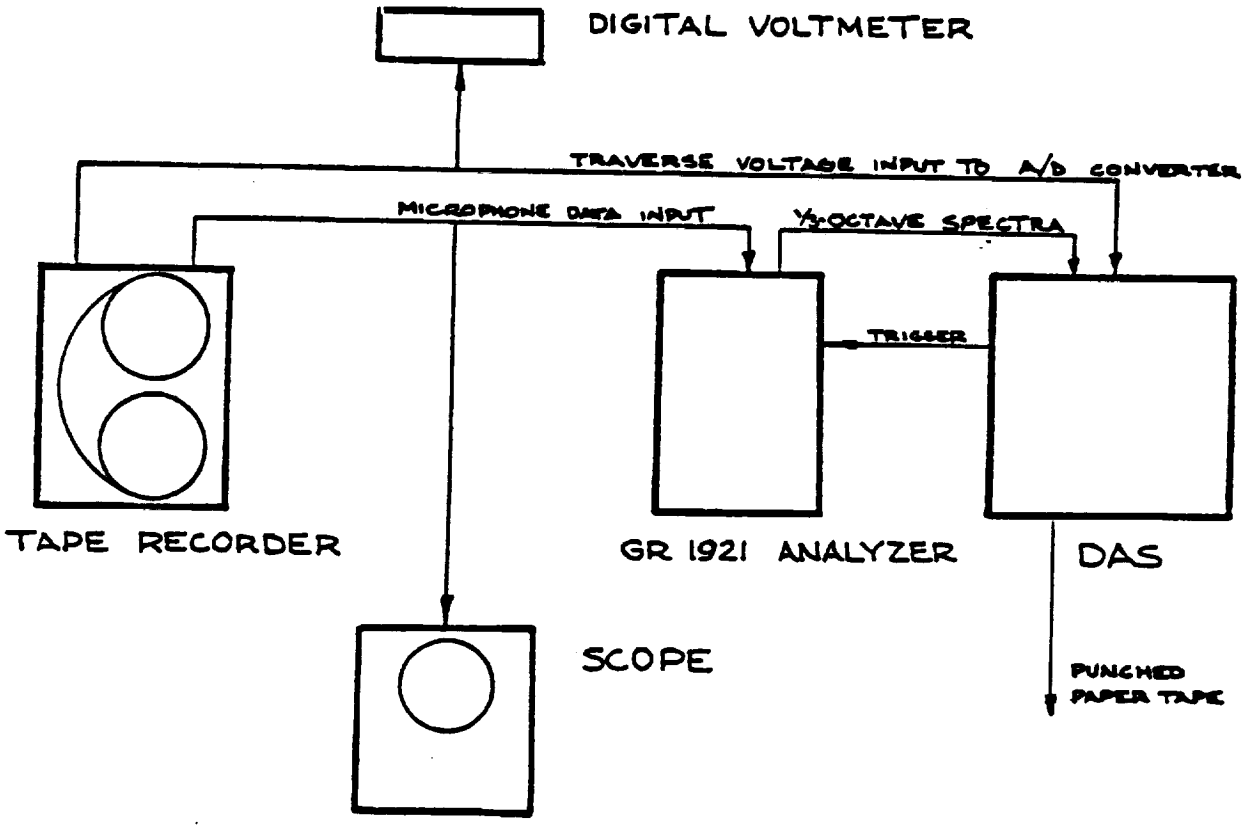

FIGURE A1: Necessary Hardware to Reduce Moving Microphone Data

OPERATING PROCEDURE

To produce data the following procedure must be followed:

i) Bootstrap the DAS -- instructions are on the DAS.

ii) Type .R TSLR51 (. prompt indicates RT-11)
>LOAD 'JETN' (> prompt indicates TSL)

After 'JETN' has been loaded the following programs will also be loaded (to check, type PSTAB):

SAMPL
OTOBM
INITL
BUNK
DUMMY
IN1921
ST1921
RD1921
TOCT21
DISPLY
MUXCH
ACE2CH

The necessary programs are now loaded, but before continuing, the program INITL must be properly initialized. To do this first list the current contents of INITL (type >LIST INITL). A listing similar to the following will result:

```
10 LET R4, -1.53
20 LET R5, 1.47
30 LET R6, 3
40 LET R12, 25
50 LET I1, 19
60 LET I6, 4
70 LET I5, 8
80 LET I4, 20
90 RETURN
```

line 10: This is the value in volts of the traverse at the beginning of the traverse. In most cases this will be approximately -1.5v.

line 20: Value in volts at the finish of the traverse. This will be approximately +1.5v.

line 30: The angle increment at which 1/3 octave spectra will be taken and stored on paper tape. In this case every 3°.

line 40: This is the initial angle and must be less than the minimum angle expected. No data is taken for this angle.

line 50: Condition number. This number appears in plots but not paper tapes.

line 60: Tape recorder channel number from which the data is being taken.

line 70: Gain of data channel in line 60. If linear amplifiers have been used (such as Newports), this value is defined as $20 \log \left(\frac{\text{gain during calibration}}{\text{gain during current condition number}} \right)$. For logarithmic amplifiers, it is simply the difference in dB between the gain during calibration and the gain during data reduction (i.e. $\text{Calib}_{dB} - \text{data}_{dB}$).

line 80: This is the channel number of the traverse track.

The values in each line of INITL must be changed to suit current conditions for each condition number. This is done by simply editing INITL as follows:

- type >EDIT INITL (now in edit mode)
- type statement number of statement you wish to change and complete the statement as you wish it to read. Do this for every statement you wish to change. To check if changes have been made type >LIST INITL, and the current contents of INITL will be listed.

After the contents of INITL have been changed to suit current requirements the process of generating paper tapes can begin. Microphone data can be fed into the GR1921 while a corresponding traverse voltage goes into the DAS A/D converter. At the beginning of the desired traverse type >SAMPL G., 1 or 0 where G = gain of the channel under consideration. This should have the same value as line 70 of INITL. except G is a real number, not an integer. A "1" indicates that the data will be sampled automatically with an angle increment as given in line 30 of INITL. No further input will be required from the operator until the end of the traverse. Since the program requires a finite time to convert input data into 1/3 octave spectra, it may not be possible in some cases for the program to keep up with the specified angle increment. The problem will be most noticeable at 90° where the actual angle increments may be larger than specified. The time for the program to process each angle is controlled mainly by the integration time of the GR1921. This is specified in SAMPL in line 625:

```
625 OTOBM 0, 1, 130, PØ
              ↑
              └── integration time in seconds.
```

The integration time can be changed as necessary via the EDIT command.

If "0" is typed into the SAMPL command then a response will be required from the operator before each angle is processed. The response from the operator must be either 'Y' if the angle is required, an 'N' if not, or 'S' if the programmer wishes the program to be stopped. If a plot is required for any angle, press 'copy' and a hard copy will be produced for the angle currently pictured on the screen.

For each microphone position, there are exactly 34 numbers punched. The first number is '1000' and marks the beginning of the data sequence for each angle. This is followed by channel number, angle, 30 1/3 octave frequencies, and OASPL.

If a mistake is made (i.e., a data sequence is punched which should not have been), then BUNK can be typed. This adds 5 more points to the end of the last data sequence. When the paper tape is fed into the IBM 360, the data sequence containing the 5 extra points will be recognized and hence ignored. Any number of points except 34 points between sucessive '1000' markers will cause the sequence to be ignored.

At the end of the entire traverse when the program SAMPL has ended, type DUMMY. This produces a data sequence consisting of 34 consecutive "1"s. This acts as a stop flag to the IBM 360 program.

The paper must be given a PTAPE number for identification in the IBM 360 program. This is a 3-digit number; the first 2 digits indicate condition number while the last digit indicates the sideline position.

APPENDIX B

Each listing is identified by a 6 digit number. For example, 171174 indicates that the data following consists of data originating from PTAPE 171 and PTAPE 174. The first two digits specify the condition number which in turn specifies both nozzle and operating conditions as listed in Table B1. The last digit of each number specifies the sideline distance. In all cases reported here the near field sideline is 6.67 ft from the jet centerline (indicated by '1') and the far field sideline is 39.25 ft (indicated by '4'). For each series of tabulations 44 microphone angles are listed. In all cases the first 22 are near field microphone angles and 23 to 44 are far field microphone angles.

TABLE B1

PTAPE no.	jet temp. °R	amb. temp. °F	% rel. humidity	V_{jet} ft/sec	pressure ratio	$V_{ambient}$ ft/sec	nozzle type
01x	1158	49	94.5	308	1.024	0	VFE
02x	1159	51	93	614	1.1		"
03x	1191	48	95	814	1.179		"
04x	1228	53	89	974	1.260		"
05x	1278	48	95	1145	1.363		"
06x	1307	53	90.6	1249	1.437		"
07x	1349	48	96	1380	1.541		"
08x	1401	54	92	1515	1.659		"
09x	1464	49	94.5	1669	1.812		"
11x	1141	53	89	399	1.041		STOVEPIPE
12x	1174	59	84	631	1.105		"
13x	1206	55	90	818	1.179		"
14x	1276	70	53	985	1.255		"
15x	1291	57	88	1168	1.376		"
16x	1341	68	58	1267	1.438		"
17x	1382	64	63	1405	1.549		"
18x	1416	67	66	1535	1.674		"
19x	1474	54	89	1687	1.829		"
22x	1369	61	75	654	1.096		104 TUBE
23x	1347	62	65	925	1.208		"
24x	1394	61	75	1088	1.290		"
25x	1413	59	79	1256	1.402		"
26x	1468	60	77	1389	1.493		"
27x	1508	59	67	1523	1.607		"
28x	1563	61	75	1648	1.713		"
29x	1622	61	72	1776	1.835		"
32x	1342	61	61	689	1.11		104 TUBE WITH EJECTOR
33x	1356	60	61	946	1.217		"
34x	1383	60	60	1087	1.292		"
35x	1419	61	57	1249	1.395		"
36x	1464	61	57	1389	1.495		"
37x	1518	60	63	1538	1.616		"
38x	1581	62	56	1649	1.704		"
39x	1626	64	57	1793	1.856		"

CORRECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 05105a RUN 1 DELTA 1 SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/12/78

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.1	38.4	44.7	51.4	58.7	63.1	67.9	78.0	83.3	88.8	94.4	99.6	109.8	114.6	119.0
REF DIST(FT)	12.8	10.7	9.6	8.8	7.8	7.8	7.2	6.8	6.7	6.7	6.7	6.8	7.1	7.3	7.6
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	96.0	95.0	94.0	93.0	93.0	94.0	94.0	97.0	99.0	96.0	100.0	98.0	100.0	102.0	101.0
31	95.0	94.0	93.0	91.0	96.0	95.0	97.0	97.0	99.0	100.0	101.0	100.0	101.0	103.0	103.0
40	94.0	92.0	92.0	93.0	93.0	93.0	96.0	95.0	97.0	99.0	98.0	100.0	99.0	104.0	101.0
50	98.0	98.0	98.0	96.0	95.0	95.0	96.0	96.0	97.0	100.0	100.0	104.0	101.0	103.0	102.0
63	98.0	98.0	98.0	98.0	96.0	97.0	97.0	97.0	96.0	98.0	98.0	99.0	101.0	101.0	103.0
80	93.0	96.0	96.0	96.0	96.0	96.0	96.0	99.0	99.0	100.0	102.0	102.0	100.0	104.0	106.0
100	99.0	99.0	96.0	95.0	100.0	100.0	102.0	104.0	104.0	105.0	107.0	106.0	108.0	108.0	109.0
125	102.0	99.0	97.0	100.0	103.0	103.0	105.0	105.0	106.0	106.0	107.0	107.0	108.0	109.0	110.0
160	99.0	98.0	101.0	102.0	102.0	102.0	102.0	104.0	105.0	104.0	106.0	107.0	110.0	111.0	111.0
200	99.0	100.0	102.0	103.0	104.0	104.0	104.0	107.0	108.0	108.0	108.0	111.0	112.0	112.0	112.0
250	105.0	106.0	107.0	107.0	110.0	111.0	111.0	111.0	112.0	113.0	114.0	114.0	117.0	117.0	116.0
315	100.0	101.0	103.0	103.0	104.0	104.0	105.0	106.0	107.0	107.0	108.0	110.0	111.0	114.0	113.0
400	107.0	105.0	110.0	109.0	109.0	109.0	110.0	112.0	112.0	111.0	112.0	112.0	112.0	112.0	113.0
500	101.0	103.0	104.0	105.0	106.0	107.0	107.0	109.0	109.0	109.0	110.0	111.0	112.0	112.0	113.0
630	104.0	105.0	106.0	106.0	108.0	108.0	108.0	110.0	110.0	111.0	111.0	112.0	112.0	113.0	113.0
800	106.0	106.0	107.0	107.0	108.0	108.0	109.0	111.0	110.0	111.0	111.0	111.0	113.0	113.0	113.0
1000	107.0	106.0	107.0	106.0	107.0	107.0	108.0	109.0	109.0	110.0	111.0	112.0	112.0	113.0	113.0
1250	107.0	108.0	108.0	107.0	107.0	107.0	107.0	108.0	109.0	109.0	110.0	110.0	112.0	112.0	112.0
1600	111.0	111.0	110.0	108.0	107.0	107.0	107.0	108.0	108.0	107.0	108.0	109.0	110.0	110.0	111.0
2000	111.0	112.0	111.0	108.0	108.0	107.0	107.0	107.0	107.0	106.0	107.0	107.0	109.0	109.0	110.0
2500	110.0	113.0	112.0	109.0	108.0	107.0	106.0	106.0	107.0	107.0	107.0	107.0	108.0	108.0	108.0
3150	110.0	113.0	114.0	110.0	109.0	108.0	107.0	106.0	107.0	107.0	107.0	107.0	108.0	109.0	108.0
4000	109.0	112.0	112.0	110.0	109.0	108.0	108.0	107.0	109.0	108.0	108.0	107.0	109.0	108.0	108.0
5000	109.0	112.0	114.0	112.0	110.0	109.0	108.0	107.0	108.0	106.0	107.0	106.0	107.0	108.0	108.0
6300	110.0	112.0	113.0	111.0	109.0	108.0	107.0	106.0	107.0	105.0	106.0	107.0	107.0	106.0	106.0
8000	110.0	111.0	112.0	111.0	109.0	107.0	107.0	106.0	107.0	105.0	105.0	105.0	105.0	104.0	105.0
10000	107.0	109.0	111.0	110.0	108.0	107.0	106.0	105.0	107.0	105.0	104.0	105.0	105.0	105.0	104.0
12500	107.0	108.0	110.0	108.0	107.0	107.0	107.0	105.0	107.0	105.0	105.0	106.0	106.0	105.0	105.0
16000	106.0	106.0	108.0	107.0	106.0	106.0	105.0	104.0	105.0	103.0	103.0	104.0	104.0	104.0	104.0
20000	103.0	104.0	107.0	106.0	105.0	104.0	104.0	102.0	104.0	102.0	101.0	102.0	101.0	101.0	101.0
OVERALL SPL	121.1	122.6	123.4	121.8	121.3	121.0	121.0	121.6	122.2	122.0	122.7	123.1	124.5	124.9	124.0
PNDB	133.9	135.5	136.6	134.9	133.8	133.1	132.7	132.3	133.3	132.1	132.6	132.9	133.9	134.1	134.0

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	126.5	133.2	139.4	145.7	152.0	158.0	165.0	35.0	45.5	45.5	51.8	58.1	64.7	71.1	77.4
REF DIST(FT)	8.5	9.1	10.2	11.6	14.2	17.0	26.0	68.4	59.0	59.0	58.0	46.2	43.4	41.5	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	109.0	107.0	111.0	110.0	113.0	110.0	97.0	81.0	71.0	71.0	72.0	72.0	72.0	73.0	73.0
31	107.0	104.0	108.0	110.0	113.0	112.0	98.0	78.0	71.0	71.0	72.0	73.0	72.0	74.0	73.0
40	107.0	106.0	108.0	110.0	112.0	112.0	101.0	76.0	72.0	72.0	74.0	74.0	77.0	77.0	79.0
50	104.0	109.0	108.0	108.0	111.0	109.0	102.0	86.0	76.0	76.0	79.0	81.0	82.0	83.0	85.0
63	104.0	104.0	106.0	106.0	110.0	109.0	105.0	95.0	82.0	82.0	81.0	83.0	82.0	86.0	88.0
80	108.0	107.0	110.0	110.0	111.0	111.0	107.0	85.0	83.0	83.0	82.0	83.0	82.0	82.0	82.0
100	116.0	111.0	113.0	113.0	118.0	118.0	118.0	83.0	83.0	83.0	86.0	86.0	85.0	87.0	87.0
125	112.0	113.0	114.0	114.0	118.0	118.0	118.0	90.0	90.0	90.0	90.0	91.0	89.0	89.0	89.0
160	111.0	111.0	118.0	114.0	116.0	116.0	113.0	88.0	87.0	87.0	87.0	88.0	91.0	91.0	92.0
200	112.0	113.0	114.0	116.0	117.0	117.0	112.0	89.0	90.0	90.0	91.0	92.0	93.0	93.0	95.0
250	117.0	117.0	118.0	119.0	121.0	119.0	115.0	94.0	94.0	94.0	95.0	96.0	97.0	98.0	97.0
315	115.0	117.0	117.0	116.0	116.0	117.0	111.0	89.0	91.0	91.0	92.0	93.0	93.0	95.0	94.0
400	114.0	115.0	116.0	117.0	117.0	116.0	109.0	95.0	93.0	93.0	95.0	96.0	96.0	97.0	99.0
500	112.0	113.0	113.0	116.0	117.0	117.0	108.0	91.0	92.0	92.0	94.0	94.0	94.0	96.0	96.0
630	114.0	115.0	115.0	116.0	117.0	116.0	108.0	92.0	94.0	94.0	95.0	94.0	97.0	96.0	96.0
800	115.0	115.0	116.0	116.0	117.0	116.0	109.0	93.0	92.0	92.0	95.0	96.0	96.0	97.0	97.0
1000	114.0	113.0	113.0	111.0	109.0	109.0	101.0	91.0	93.0	93.0	94.0	95.0	96.0	97.0	97.0
1250	113.0	113.0	112.0	111.0	107.0	103.0	99.0	92.0	94.0	94.0	95.0	95.0	95.0	96.0	96.0
1600	111.0	110.0	110.0	109.0	105.0	102.0	98.0	91.0	94.0	94.0	96.0	96.0	96.0	96.0	96.0
2000	109.0	109.0	107.0	107.0	104.0	100.0	97.0	92.0	94.0	94.0	95.0	95.0	95.0	96.0	98.0
2500	108.0	107.0	106.0	104.0	102.0	99.0	96.0	92.0	94.0	94.0	94.0	95.0	95.0	96.0	96.0
3150	107.0	106.0	105.0	104.0	102.0	99.0	97.0	93.0	94.0	94.0	94.0	95.0	95.0	96.0	96.0
4000	106.0	105.0	104.0	103.0	101.0	98.0	96.0	93.0	95.0	95.0	94.0	94.0	95.0	95.0	95.0
5000	105.0	104.0	103.0	102.0	99.0	98.0	96.0	93.0	94.0	94.0	94.0	94.0	94.0	95.0	95.0
6300	104.0	103.0	102.0	101.0	99.0	97.0	97.0	97.0	97.0	97.0	98.0	97.0	96.0	96.0	95.0
8000	104.0	102.0	101.0	99.0	97.0	96.0	94.0	101.0	102.0	102.0	103.0	102.0	98.0	101.0	95.0
10000	103.0	102.0	100.0	98.0	96.0	94.0	95.0	93.0	88.0	88.0	89.0	89.0	87.0	88.0	87.0
12500	103.0	102.0	100.0	98.0	96.0	94.0	95.0	93.0	88.0	88.0	89.0	89.0	87.0	88.0	87.0
16000	101.0	101.0	99.0	97.0	94.0	93.0	94.0	94.0	88.0	88.0	88.0	86.0	86.0	85.0	89.0
20000	99.0	98.0	96.0	94.0	92.0	91.0	93.0	89.0	81.0	81.0	81.0	80.0	80.0	80.0	79.0
OVERALL SPL	125.6	126.1	126.7	127.0	127.6	126.3	121.5	107.5	107.8	107.8	109.0	108.5	108.2	109.3	108.7
PNDB	133.0	132.0	132.6	131.9	131.2	129.1	125.9	121.8	122.3	122.3	123.3	122.6	120.8	122.6	119.9

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.1	87.2	91.9	100.4	104.7	113.1	119.8	125.6	129.0	135.2	148.0	158.0	165.8	168.0
REF DIST(FT)	39.9	39.3	39.5	39.9	41.0	42.7	45.1	48.4	50.8	55.7	68.6	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	78.0	74.0	75.0	74.0	75.0	80.0	76.0	76.0	79.0	81.0	78.0	91.0	82.0	84.0
31	78.0	75.0	78.0	78.0	77.0	84.0	78.0	80.0	79.0	79.0	78.0	91.0	82.0	85.0
40	80.0	80.0	81.0	82.0	83.0	86.0	82.0	84.0	85.0	84.0	83.0	89.0	81.0	83.0
50	84.0	84.0	85.0	87.0	86.0	88.0	86.0	88.0	88.0	88.0	90.0	95.0	85.0	78.0
63	84.0	84.0	87.0	87.0	87.0	87.0	90.0	90.0	90.0	93.0	94.0	100.0	92.0	88.0
80	84.0	83.0	84.0	86.0	86.0	89.0	88.0	89.0	90.0	94.0	94.0	102.0	97.0	94.0
100	90.0	91.0	93.0	94.0	94.0	97.0	95.0	96.0	96.0	95.0	96.0	102.0	100.0	99.0
125	91.0	93.0	94.0	95.0	95.0	96.0	99.0	99.0	99.0	101.0	102.0	108.0	98.0	101.0
160	94.0	94.0	94.0	93.0	96.0	97.0	96.0	96.0	98.0	101.0	105.0	106.0	103.0	94.0
200	98.0	96.0	96.0	98.0	97.0	99.0	99.0	100.0	101.0	103.0	104.0	102.0	104.0	101.0
250	98.0	101.0	99.0	99.0	108.0	103.0	105.0	105.0	103.0	105.0	106.0	107.0	105.0	103.0
315	96.0	96.0	97.0	98.0	99.0	101.0	102.0	103.0	103.0	104.0	104.0	103.0	103.0	98.0
400	100.0	99.0	100.0	101.0	100.0	100.0	101.0	103.0	103.0	103.0	104.0	102.0	101.0	97.0
500	96.0	96.0	98.0	99.0	99.0	101.0	102.0	101.0	101.0	103.0	100.0	99.0	98.0	93.0
630	97.0	97.0	98.0	98.0	99.0	101.0	101.0	101.0	101.0	102.0	100.0	99.0	98.0	94.0
800	97.0	97.0	98.0	98.0	99.0	101.0	101.0	102.0	101.0	101.0	99.0	99.0	97.0	92.0
1000	97.0	98.0	98.0	99.0	99.0	101.0	100.0	101.0	100.0	99.0	98.0	96.0	94.0	90.0
1250	96.0	97.0	98.0	98.0	99.0	99.0	100.0	100.0	99.0	98.0	96.0	95.0	93.0	89.0
1600	97.0	97.0	98.0	99.0	98.0	98.0	99.0	98.0	97.0	96.0	93.0	91.0	90.0	87.0
2000	97.0	96.0	98.0	97.0	98.0	98.0	98.0	97.0	96.0	94.0	93.0	91.0	88.0	88.0
2500	97.0	97.0	99.0	99.0	98.0	98.0	97.0	96.0	95.0	93.0	90.0	89.0	86.0	83.0
3150	97.0	96.0	98.0	99.0	99.0	98.0	97.0	96.0	95.0	92.0	90.0	89.0	86.0	83.0
4000	98.0	97.0	98.0	98.0	97.0	97.0	97.0	98.0	95.0	92.0	90.0	88.0	86.0	83.0
5000	97.0	97.0	98.0	97.0	97.0	97.0	96.0	96.0	95.0	92.0	91.0	89.0	86.0	83.0
6300	97.0	97.0	98.0	98.0	97.0	97.0	96.0	95.0	94.0	91.0	90.0	89.0	86.0	83.0
8000	98.0	97.0	97.0	98.0	96.0	96.0	95.0	93.0	93.0	90.0	90.0	89.0	86.0	82.0
10000	93.0	92.0	94.0	93.0	92.0	92.0	92.0	90.0	90.0	87.0	89.0	87.0	84.0	80.0
12500	90.0	89.0	91.0	89.0	89.0	90.0	88.0	86.0	86.0	84.0	89.0	87.0	83.0	79.0
16000	86.0	86.0	87.0	86.0	85.0	85.0	83.0	82.0	82.0	81.0	87.0	85.0	80.0	77.0
20000	81.0	80.0	82.0	81.0	81.0	80.0	80.0	79.0	79.0	78.0	85.0	84.0	76.0	72.0
OVERALL SPL	109.0	110.1	110.9	111.3	111.5	112.5	112.9	113.1	113.6	113.3	113.6	113.9	110.1	109.8
PNDB	122.6	121.5	122.6	122.6	122.2	123.5	122.1	121.5	120.9	119.4	119.1	118.6	116.2	113.1

ALL CORRECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.1	38.4	44.7	51.4	58.7	63.1	67.9	78.0	83.3	88.8	94.4	99.6	109.0	114.6	119.0
REF DIST(FT)	12.5	10.7	9.5	8.5	7.8	7.8	7.2	6.8	6.7	6.7	6.7	6.8	7.1	7.3	7.6
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	96.0	95.0	94.0	93.0	93.0	94.0	94.0	97.0	99.0	96.0	100.0	98.0	100.0	102.0	101.0
31	95.0	94.0	93.0	91.0	96.0	95.0	97.0	97.0	99.0	100.0	101.0	100.0	101.0	103.0	103.0
40	94.0	93.0	92.0	93.0	93.0	93.0	96.0	95.0	97.0	99.0	98.0	100.0	99.0	104.0	101.0
50	94.0	95.0	94.0	96.0	95.0	95.0	96.0	96.0	97.0	100.0	100.0	104.0	101.0	103.0	102.0
63	95.0	93.0	95.0	98.0	96.0	97.0	97.0	97.0	96.0	98.0	98.0	99.0	101.0	101.0	103.0
80	93.0	94.0	94.0	94.0	96.0	96.0	96.0	99.0	99.0	100.0	102.0	100.0	104.0	104.0	105.0
100	99.0	99.0	96.0	95.0	100.0	100.0	102.0	104.0	104.0	105.0	107.0	106.0	108.0	108.0	109.0
125	102.0	99.0	97.0	100.0	103.0	103.0	105.0	105.0	105.0	106.0	107.0	107.0	108.0	109.0	110.0
160	99.0	98.0	101.0	102.0	102.0	102.0	102.0	104.0	105.0	104.0	106.0	107.0	110.0	111.0	111.0
200	99.0	100.0	102.0	103.0	104.0	104.0	104.0	107.0	108.0	108.0	108.0	111.0	112.0	112.0	112.0
250	105.0	105.0	107.0	107.0	110.0	111.0	111.0	111.0	112.0	113.0	110.0	114.0	117.0	117.0	116.0
315	100.0	101.0	103.0	103.0	104.0	104.0	104.0	106.0	107.0	107.0	108.0	110.0	111.0	116.0	113.0
400	107.0	109.0	110.0	109.0	109.0	109.0	110.0	112.0	112.0	111.0	112.0	112.0	112.0	112.0	113.0
500	101.0	103.0	104.0	105.0	106.0	107.0	107.0	109.0	109.0	109.0	110.0	111.0	112.0	112.0	112.0
630	104.0	105.0	106.0	106.0	108.0	108.0	108.0	110.0	110.0	111.0	111.0	112.0	112.0	113.0	113.0
800	106.0	106.0	107.0	107.0	108.0	108.0	109.0	111.0	110.0	111.0	111.0	111.0	113.0	113.0	113.0
1000	107.0	106.0	107.0	106.0	107.0	107.0	108.0	109.0	109.0	110.0	111.0	111.0	112.0	112.0	113.0
1250	107.0	108.0	108.0	107.0	107.0	107.0	107.0	108.0	109.0	109.0	110.0	110.0	112.0	112.0	112.0
1600	111.0	111.0	110.0	108.0	107.0	107.0	107.0	106.0	106.0	107.0	108.0	109.0	110.0	110.0	111.0
2000	111.0	112.0	111.0	108.0	108.0	107.0	107.0	107.0	107.0	106.0	107.0	107.0	109.0	109.0	110.0
2500	110.0	113.0	112.0	109.0	108.0	107.0	106.0	106.0	107.0	107.0	107.0	107.0	108.0	108.0	106.0
3150	110.0	113.0	114.0	110.0	109.0	108.0	107.0	106.0	107.0	107.0	107.0	107.0	108.0	109.0	108.0
4000	109.0	112.0	113.0	110.0	109.0	108.0	108.0	107.0	109.0	108.0	108.0	107.0	109.0	108.0	108.0
5000	109.0	112.0	114.0	112.0	110.0	109.0	108.0	107.0	108.0	106.0	107.0	106.0	107.0	108.0	108.0
6300	110.0	112.0	113.0	111.0	109.0	108.0	107.0	106.0	107.0	105.0	106.0	106.0	107.0	107.0	106.0
8000	110.0	111.0	112.0	111.0	109.0	107.0	107.0	106.0	107.0	105.0	105.0	105.0	105.0	106.0	105.0
10000	107.0	109.0	111.0	110.0	108.0	107.0	106.0	105.0	107.0	104.0	105.0	105.0	105.0	105.0	104.0
12500	107.0	108.0	110.0	108.0	107.0	107.0	107.0	105.0	107.0	105.0	105.0	106.0	106.0	105.0	105.0
16000	104.0	106.0	108.0	107.0	106.0	106.0	105.0	104.0	105.0	103.0	103.0	105.0	104.0	104.0	104.0
20000	103.0	104.0	107.0	106.0	105.0	104.0	104.0	102.0	104.0	102.0	101.0	102.0	101.0	101.0	101.0
OVERALL SPL	121.1	122.6	123.4	121.8	121.3	121.0	121.0	121.6	122.2	122.0	122.7	123.1	124.5	124.9	124.8
PNDB	133.9	135.5	136.4	134.9	133.8	133.1	132.7	132.3	133.3	132.1	132.4	132.9	133.9	134.1	134.0

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	126.5	133.8	139.4	145.7	152.0	158.0	165.0	35.0	45.5	48.5	51.8	58.1	64.7	71.1	77.6
REF DIST(FT)	0.5	0.1	0.2	0.8	0.2	0.8	0.8	0.4	0.0	0.0	0.0	0.2	0.6	0.5	0.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	109.0	107.0	111.0	118.0	113.0	114.0	97.0	81.0	71.0	71.0	72.0	72.0	72.0	73.0	73.0
31	107.0	106.0	108.0	116.0	113.0	112.0	98.0	76.0	71.0	71.0	72.0	73.0	72.0	74.0	73.0
40	107.0	106.0	108.0	116.0	112.0	112.0	101.0	76.0	72.0	72.0	74.0	74.0	77.0	77.0	79.0
50	108.0	109.0	108.0	108.0	111.0	109.0	102.0	86.0	76.0	76.0	79.0	81.0	82.0	83.0	85.0
63	108.0	108.0	108.0	108.0	110.0	109.0	105.0	95.0	82.0	82.0	81.0	83.0	82.0	85.0	88.0
80	108.0	107.0	110.0	110.0	111.0	111.0	107.0	85.0	83.0	83.0	82.0	81.0	82.0	82.0	82.0
100	110.0	111.0	113.0	113.0	113.0	114.0	114.0	83.0	83.0	83.0	86.0	86.0	85.0	87.0	87.0
125	112.0	113.0	114.0	114.0	115.0	116.0	112.0	90.0	90.0	90.0	90.0	91.0	89.0	89.0	89.0
160	111.0	111.0	112.0	114.0	114.0	116.0	113.0	88.0	87.0	87.0	87.0	88.0	91.0	91.0	92.0
200	112.0	113.0	114.0	116.0	117.0	117.0	112.0	89.0	90.0	90.0	91.0	92.0	93.0	93.0	95.0
250	117.0	117.0	118.0	119.0	121.0	119.0	115.0	94.0	94.0	94.0	95.0	96.0	97.0	98.0	97.0
315	115.0	117.0	117.0	118.0	118.0	117.0	111.0	89.0	91.0	91.0	92.0	93.0	95.0	96.0	94.0
400	118.0	119.0	118.0	117.0	117.0	114.0	109.0	95.0	93.0	93.0	99.0	96.0	98.0	97.0	99.0
500	118.0	115.0	115.0	116.0	114.0	111.0	108.0	91.0	92.0	92.0	94.0	94.0	94.0	95.0	96.0
630	118.0	118.0	119.0	118.0	115.0	109.0	104.0	92.0	96.0	94.0	95.0	94.0	97.0	96.0	96.0
800	119.0	119.0	115.0	114.0	111.0	108.0	101.0	93.0	98.0	98.0	95.0	96.0	96.0	97.0	97.0
1000	114.0	113.0	111.0	111.0	109.0	108.0	101.0	91.0	93.0	93.0	94.0	95.0	94.0	97.0	97.0
1250	113.0	113.0	112.0	111.0	107.0	103.0	99.0	92.0	94.0	94.0	95.0	95.0	95.0	96.0	94.0
1600	111.0	110.0	110.0	109.0	108.0	102.0	98.0	91.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0
2000	109.0	109.0	107.0	107.0	106.0	100.0	97.0	92.0	94.0	94.0	95.0	95.0	95.0	94.0	95.0
2500	108.0	107.0	106.0	104.0	102.0	99.0	96.0	92.0	94.0	94.0	94.0	95.0	95.0	96.0	95.0
3150	107.0	106.0	105.0	104.0	102.0	99.0	97.0	93.0	96.0	96.0	96.0	95.0	95.0	95.0	96.0
4000	104.0	105.0	104.0	103.0	101.0	98.0	96.0	93.0	95.0	95.0	94.0	94.0	95.0	95.0	95.0
5000	105.0	104.0	103.0	102.0	99.0	98.0	96.0	93.0	94.0	94.0	94.0	94.0	94.0	95.0	95.0
6300	104.0	103.0	102.0	101.0	99.0	97.0	97.0	97.0	97.0	97.0	98.0	97.0	96.0	98.0	95.0
8000	104.0	102.0	101.0	99.0	97.0	96.0	96.0	101.0	100.0	102.0	103.0	102.0	98.0	101.0	98.0
10000	103.0	102.0	100.0	98.0	96.0	95.0	96.0	92.0	90.0	90.0	90.0	89.0	90.0	91.0	90.0
12500	103.0	102.0	100.0	98.0	96.0	94.0	95.0	93.0	88.0	88.0	89.0	87.0	87.0	88.0	87.0
16000	101.0	101.0	99.0	97.0	94.0	93.0	94.0	90.0	88.0	88.0	88.0	86.0	86.0	85.0	88.0
20000	99.0	98.0	96.0	94.0	92.0	91.0	93.0	89.0	81.0	81.0	81.0	80.0	80.0	80.0	79.0
OVERALL SPL	128.6	126.1	126.7	127.0	127.6	126.3	121.5	107.5	107.8	107.8	109.0	108.5	108.3	109.3	108.7
PNDB	133.0	132.8	132.6	131.9	131.3	129.1	125.9	121.8	122.3	122.3	123.3	122.6	120.8	122.6	119.9

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.1	87.2	93.9	100.4	106.7	113.1	119.5	125.8	129.0	135.2	145.0	150.0	155.0	160.0
REF DIST(FT)	39.5	39.5	39.5	39.5	41.0	42.7	45.1	48.4	50.5	55.7	68.4	78.5	92.0	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	78.0	76.0	75.0	74.0	78.0	89.0	76.0	76.0	78.0	81.0	78.0	91.0	82.0	86.0
31	79.0	79.0	78.0	78.0	77.0	84.0	78.0	80.0	79.0	79.0	78.0	91.0	82.0	85.0
40	80.0	80.0	81.0	80.0	83.0	86.0	83.0	84.0	85.0	84.0	83.0	80.0	81.0	83.0
50	84.0	84.0	85.0	87.0	86.0	88.0	86.0	89.0	88.0	88.0	90.0	95.0	85.0	78.0
63	84.0	84.0	87.0	87.0	87.0	87.0	90.0	90.0	90.0	93.0	94.0	100.0	92.0	88.0
80	84.0	83.0	86.0	85.0	86.0	89.0	88.0	89.0	90.0	94.0	96.0	102.0	97.0	90.0
100	90.0	91.0	93.0	94.0	94.0	97.0	95.0	96.0	96.0	95.0	96.0	102.0	100.0	94.0
125	91.0	93.0	94.0	95.0	95.0	96.0	99.0	99.0	99.0	101.0	102.0	100.0	99.0	101.0
160	94.0	94.0	96.0	93.0	96.0	97.0	96.0	96.0	98.0	101.0	106.0	106.0	103.0	98.0
200	96.0	96.0	96.0	98.0	97.0	99.0	99.0	100.0	101.0	103.0	104.0	102.0	104.0	101.0
250	98.0	101.0	99.0	99.0	102.0	103.0	105.0	105.0	103.0	105.0	104.0	107.0	105.0	103.0
315	96.0	96.0	97.0	96.0	99.0	101.0	102.0	103.0	103.0	104.0	104.0	103.0	103.0	96.0
400	100.0	99.0	100.0	101.0	100.0	100.0	101.0	103.0	103.0	103.0	106.0	102.0	101.0	97.0
500	96.0	96.0	98.0	99.0	99.0	101.0	102.0	101.0	101.0	103.0	100.0	99.0	96.0	93.0
630	97.0	97.0	98.0	98.0	99.0	101.0	101.0	101.0	101.0	102.0	100.0	99.0	98.0	94.0
800	97.0	97.0	98.0	98.0	99.0	101.0	101.0	102.0	101.0	101.0	99.0	99.0	97.0	92.0
1000	97.0	98.0	98.0	99.0	99.0	101.0	100.0	101.0	100.0	99.0	98.0	96.0	94.0	90.0
1250	96.0	97.0	98.0	98.0	99.0	99.0	100.0	100.0	99.0	98.0	96.0	95.0	92.0	89.0
1600	97.0	97.0	98.0	99.0	98.0	98.0	99.0	98.0	97.0	96.0	93.0	91.0	90.0	87.0
2000	97.0	96.0	98.0	97.0	98.0	98.0	98.0	97.0	96.0	93.0	91.0	91.0	88.0	85.0
2500	97.0	97.0	99.0	99.0	98.0	98.0	97.0	96.0	95.0	93.0	90.0	89.0	86.0	83.0
3150	97.0	96.0	98.0	99.0	98.0	98.0	97.0	96.0	95.0	92.0	90.0	89.0	86.0	83.0
4000	98.0	97.0	98.0	98.0	97.0	97.0	97.0	95.0	95.0	92.0	90.0	88.0	86.0	81.0
5000	97.0	97.0	98.0	97.0	97.0	97.0	96.0	94.0	95.0	92.0	91.0	89.0	86.0	83.0
6300	97.0	97.0	98.0	98.0	97.0	97.0	96.0	95.0	94.0	91.0	90.0	89.0	84.0	83.0
8000	98.0	97.0	97.0	98.0	96.0	95.0	96.0	93.0	93.0	90.0	90.0	89.0	86.0	82.0
10000	93.0	92.0	94.0	93.0	92.0	92.0	92.0	90.0	90.0	87.0	89.0	87.0	84.0	80.0
12500	90.0	89.0	91.0	89.0	89.0	90.0	88.0	86.0	86.0	84.0	89.0	87.0	83.0	79.0
16000	84.0	84.0	87.0	84.0	85.0	85.0	83.0	82.0	82.0	81.0	87.0	85.0	80.0	77.0
20000	81.0	80.0	82.0	81.0	81.0	80.0	80.0	79.0	79.0	78.0	85.0	84.0	76.0	72.0
OVERALL SPL	109.9	110.1	110.9	111.3	111.5	112.5	112.9	113.1	113.6	113.3	113.6	113.9	112.1	109.8
PNDB	128.0	127.9	128.6	128.4	128.2	128.8	128.1	127.8	128.9	129.4	129.1	128.4	126.2	123.1

** VALUES AFTER CURVE FIT CALCULATIONS **

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.1	38.4	44.7	51.4	58.7	63.1	67.9	78.0	83.3	88.8	94.4	99.6	109.8	114.6	119.0
REF DIST(FT)	12.5	10.7	9.5	8.5	7.8	7.8	7.8	6.8	6.7	6.7	6.7	6.8	7.1	7.3	7.6
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	96.3	94.9	92.8	92.1	93.5	94.1	94.5	97.3	99.8	96.8	100.6	97.9	100.4	102.1	101.6
31	94.6	93.9	92.6	93.0	94.4	94.3	95.9	98.6	97.9	98.9	99.8	100.2	99.9	103.3	101.5
40	93.8	93.1	92.8	93.5	94.5	94.2	96.2	95.4	96.9	99.4	98.4	100.7	99.8	102.8	101.6
50	93.9	93.1	92.4	94.3	94.8	94.7	96.4	96.4	97.8	99.5	99.4	100.9	100.4	102.9	102.2
63	94.9	93.9	93.3	95.3	95.7	95.8	97.2	97.9	98.6	100.8	100.5	101.6	102.0	103.8	103.7
80	96.1	95.3	94.9	96.7	97.3	97.5	98.5	99.8	99.9	101.8	102.2	102.9	104.1	104.6	105.6
100	97.9	97.0	96.9	98.4	99.3	99.6	100.3	101.9	102.1	102.6	104.1	104.7	106.8	106.7	107.7
125	99.3	98.7	99.9	100.1	101.5	101.7	102.3	103.9	104.3	104.8	106.0	106.6	108.7	109.0	109.7
160	100.5	100.2	101.1	101.8	103.5	103.7	104.2	105.7	106.6	106.4	107.8	108.6	110.6	111.2	111.5
200	101.3	101.4	102.8	103.4	105.2	105.4	105.9	107.3	108.3	108.1	109.2	110.2	112.1	112.8	112.7
250	102.0	102.2	104.2	104.6	106.4	106.6	107.2	108.5	109.5	109.4	110.3	111.4	112.9	113.9	113.5
315	102.8	102.8	105.1	105.9	107.2	107.4	108.0	109.4	110.2	110.2	110.9	112.0	113.3	114.2	113.8
400	103.1	103.4	106.0	106.1	107.5	107.8	108.4	110.0	110.8	110.6	111.2	112.3	113.2	114.1	113.7
500	103.7	104.0	106.2	106.4	107.9	107.8	108.4	110.2	110.3	110.6	111.2	112.1	112.9	113.6	113.4
630	104.4	104.8	106.6	106.6	107.8	107.7	108.2	110.0	109.8	110.3	110.8	111.6	112.4	112.8	113.0
800	105.4	105.9	107.0	106.6	107.2	107.4	107.9	109.6	109.3	109.8	110.4	110.9	111.8	112.6	112.5
1000	106.0	107.1	107.7	106.7	107.1	107.2	107.3	109.1	108.8	109.1	109.9	110.2	111.3	111.3	111.9
1250	106.1	108.6	108.5	106.9	107.1	107.0	107.2	108.4	108.3	108.8	109.3	109.4	110.8	110.7	111.4
1600	106.2	110.1	109.5	107.8	107.4	107.0	107.0	107.7	108.0	108.0	108.7	108.7	110.3	110.2	110.8
2000	110.0	111.4	110.6	108.0	107.8	107.2	107.0	107.1	107.8	107.8	108.1	108.1	109.7	109.7	110.2
2500	110.3	112.0	111.8	108.9	108.3	107.4	107.0	106.7	107.7	107.1	107.6	107.5	109.2	109.3	109.5
3150	110.5	113.0	112.8	109.8	108.8	107.8	107.2	106.4	107.6	106.8	107.1	106.9	108.5	108.8	108.6
4000	110.2	113.0	113.6	110.7	109.3	108.0	107.3	106.3	107.6	106.8	106.7	106.8	107.8	108.1	107.7
5000	109.8	112.9	113.6	111.3	109.4	108.2	107.4	106.3	107.6	106.1	106.2	106.0	107.0	107.4	106.8
6300	108.8	111.9	113.3	111.8	109.3	108.2	107.3	106.3	107.8	105.7	105.8	106.7	106.4	106.7	106.9
8000	108.2	110.3	112.4	111.8	108.8	107.9	107.1	106.1	107.3	105.3	105.3	105.8	106.0	106.0	105.4
10000	107.9	109.1	111.0	109.8	108.1	107.4	106.8	105.7	107.0	104.9	104.8	105.5	105.7	105.4	105.0
12500	107.5	107.9	109.4	108.2	107.1	106.6	106.2	104.8	106.8	104.3	104.1	105.3	105.3	105.1	104.7
16000	106.8	106.8	108.8	106.6	106.0	105.6	105.3	103.6	105.8	103.8	103.0	104.8	104.2	104.6	103.8
20000	102.7	103.8	107.2	104.2	103.0	104.2	104.0	102.2	103.8	101.9	101.1	101.9	100.9	100.9	101.0
OVERALL SPL	121.0	122.5	125.3	121.6	121.2	120.8	120.8	121.4	122.0	121.7	122.4	123.8	124.2	124.6	124.7
PNDB	133.5	135.3	136.7	135.1	133.9	133.1	132.7	132.4	135.4	132.2	132.5	132.8	133.7	133.9	133.7

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	126.5	133.2	139.4	145.7	152.0	158.8	165.2	35.0	45.5	45.5	51.8	58.1	64.7	71.1	77.6
REF DIST(FT)	8.1	9.1	10.2	11.8	14.2	17.8	25.0	68.4	55.0	55.0	50.0	46.2	43.4	41.5	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	109.4	107.1	110.9	111.9	112.9	113.9	96.9	80.9	71.8	71.8	71.8	71.8	71.6	72.6	71.7
31	106.6	107.8	108.4	110.8	113.4	112.7	98.8	78.1	70.6	70.6	72.4	73.1	73.8	76.8	76.1
40	105.3	107.4	107.6	109.8	111.9	110.7	100.1	78.7	73.0	73.0	74.7	75.7	76.8	77.8	78.4
50	105.2	107.4	107.9	108.6	110.6	109.5	102.3	80.8	76.8	76.8	77.6	78.9	79.2	80.6	82.0
63	106.1	107.9	108.8	108.8	110.8	109.7	104.9	83.1	79.9	79.9	80.7	81.9	81.9	83.8	84.2
80	107.5	108.9	110.1	110.0	111.9	111.0	107.6	85.3	83.1	83.1	83.5	84.7	84.4	85.3	86.2
100	109.1	110.1	111.5	111.7	113.8	113.8	110.8	87.1	85.7	85.7	86.8	87.1	86.8	87.8	88.2
125	110.8	111.6	112.9	113.6	115.8	115.1	111.9	88.5	87.7	87.7	88.1	89.1	88.9	89.8	90.1
160	112.2	112.9	114.2	115.3	117.8	116.7	113.0	89.6	89.3	89.3	89.8	90.8	90.8	91.3	92.0
200	113.4	114.1	115.3	116.6	118.2	117.8	113.2	90.5	90.5	90.5	91.2	92.1	92.4	93.1	93.7
250	114.2	115.0	116.0	117.3	118.4	117.4	112.5	91.2	91.4	91.4	92.3	93.2	93.8	94.4	95.1
315	114.6	115.5	116.4	117.4	118.1	116.4	111.1	91.7	92.1	92.1	93.2	94.1	94.7	95.8	96.2
400	114.8	115.6	116.6	117.8	118.9	116.6	109.1	92.1	92.7	92.7	93.8	94.7	95.4	96.6	96.9
500	114.6	115.8	116.8	116.8	118.1	114.2	106.8	92.3	93.0	93.0	94.3	95.1	95.7	97.1	97.3
630	114.3	114.8	115.3	114.8	113.8	109.8	100.8	92.3	93.3	93.3	94.6	95.3	95.8	97.1	97.3
800	113.7	114.1	114.2	113.3	110.8	107.1	102.2	92.2	93.5	93.5	94.8	95.3	95.7	96.8	96.9
1000	113.0	113.1	112.9	111.7	108.7	104.8	100.3	91.9	93.6	93.6	95.0	95.2	95.5	96.3	96.4
1250	112.1	111.9	111.3	110.0	106.8	102.9	98.8	91.7	93.8	93.8	95.1	95.1	95.3	95.8	95.9
1600	111.1	110.9	109.7	108.4	105.2	101.0	97.7	91.6	94.0	94.0	95.2	95.0	95.1	95.8	95.4
2000	109.9	109.1	108.0	106.9	103.8	100.3	97.1	91.5	94.2	94.2	95.3	94.9	95.0	95.2	95.1
2500	108.6	107.6	106.4	105.5	102.7	99.6	96.7	91.8	94.6	94.6	95.4	95.0	95.1	95.4	95.0
3150	107.2	106.1	104.9	104.1	101.6	98.9	96.5	92.5	94.9	94.9	95.5	95.1	95.3	95.8	95.1
4000	105.9	104.8	103.7	102.8	100.6	98.3	96.5	93.4	95.3	95.3	95.6	95.1	95.4	96.0	96.3
5000	104.8	103.7	102.7	101.6	99.6	97.6	96.4	94.3	95.4	95.4	95.5	95.0	95.4	96.0	95.2
6300	103.9	102.9	101.9	100.5	98.5	96.8	96.3	95.0	95.0	95.0	95.0	94.8	95.0	95.7	95.7
8000	103.4	102.4	101.3	99.6	97.8	96.0	96.0	96.1	94.9	94.9	94.1	93.2	93.9	95.7	95.6
10000	103.2	102.2	100.7	98.8	96.4	95.1	95.7	96.0	92.1	92.1	92.4	91.1	92.0	93.5	91.3
12500	102.9	101.9	99.9	97.9	95.6	94.2	95.2	94.5	89.2	89.2	89.8	88.8	88.9	90.6	87.9
16000	101.8	100.9	98.5	96.6	94.2	93.0	94.4	92.5	85.6	85.6	86.2	84.3	84.8	84.7	83.7
20000	98.6	98.0	96.2	94.1	92.0	90.9	92.8	89.4	81.8	81.8	81.5	80.8	80.1	79.8	79.4
OVERALL SPL	125.4	125.9	126.5	126.9	127.4	126.8	121.4	106.5	106.4	106.6	107.4	107.5	107.9	108.8	108.5
PNDB	132.9	132.6	132.4	131.9	130.9	128.7	123.8	119.8	119.2	119.2	119.6	119.2	119.7	120.9	119.7

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.1	87.2	93.9	100.4	106.7	113.1	119.5	128.0	120.0	138.2	145.0	150.0	155.0	160.0
REF DIST(FT)	39.5	39.3	39.3	39.9	41.0	42.7	45.1	48.4	50.5	55.7	60.4	70.5	82.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	71.8	73.6	74.0	73.7	74.5	80.3	75.6	75.9	77.7	80.5	77.5	91.2	82.5	85.1
31	76.5	76.6	78.5	78.9	78.8	83.6	79.6	80.5	80.4	80.4	79.3	89.6	80.3	88.5
40	79.4	79.1	81.2	82.2	81.8	85.6	83.1	84.2	83.7	83.4	83.3	91.6	82.4	91.5
50	82.9	81.6	85.6	84.7	84.9	87.2	86.1	87.3	87.8	87.8	88.1	93.8	86.4	86.6
63	84.2	84.3	86.9	87.0	87.0	89.8	89.0	89.9	90.1	91.5	92.7	97.9	90.9	90.5
80	86.5	87.1	88.4	89.2	89.4	91.1	91.7	92.4	92.9	94.9	96.6	100.4	95.1	94.5
100	88.9	89.9	90.8	91.8	92.1	93.8	94.3	94.7	95.8	97.7	99.8	102.8	98.8	97.8
125	91.8	92.4	93.0	93.6	94.8	95.7	96.6	96.9	97.6	99.9	102.1	103.3	101.0	100.1
160	93.4	94.6	95.8	95.8	96.6	97.8	98.4	98.9	99.8	101.6	103.6	103.8	102.6	101.6
200	95.2	96.3	96.9	97.1	98.1	99.8	100.2	100.6	100.9	102.9	104.4	103.9	103.4	101.5
250	96.5	97.5	97.6	98.3	99.2	100.8	101.4	101.9	102.0	103.7	104.6	103.6	103.8	100.8
315	97.3	98.1	98.3	99.0	99.8	101.5	102.1	102.8	102.7	104.0	104.3	103.1	102.8	99.4
400	97.7	98.2	98.6	99.3	100.0	101.7	102.4	103.1	102.8	103.9	103.8	102.2	101.6	97.5
500	97.7	98.0	98.6	99.3	99.8	101.5	102.2	102.9	102.5	103.3	102.2	101.0	100.0	95.6
630	97.4	97.6	98.4	99.0	99.5	101.0	101.7	102.3	101.7	102.2	100.6	99.0	98.1	93.2
800	97.0	97.1	98.0	98.7	99.0	100.4	100.9	101.3	100.7	100.8	98.7	97.8	96.0	91.2
1000	96.7	96.7	97.9	98.3	98.6	99.7	100.1	100.2	99.4	99.1	96.8	95.9	93.8	89.4
1250	96.4	96.4	97.8	98.1	98.3	99.1	99.2	99.0	98.1	97.2	94.9	93.9	91.6	87.8
1600	96.0	96.3	97.9	98.0	98.1	98.6	98.6	97.9	97.0	95.8	93.2	92.1	89.7	86.5
2000	96.6	96.8	98.0	98.1	98.1	98.2	97.9	97.1	96.1	94.0	91.7	90.6	88.1	85.4
2500	97.0	96.8	98.0	98.3	98.2	98.0	97.8	96.8	95.8	93.9	90.7	89.6	86.9	84.5
3150	97.4	97.1	98.0	98.5	98.2	97.8	97.3	96.2	95.2	92.5	90.1	88.8	86.2	83.7
4000	97.7	97.3	98.2	98.4	98.0	97.6	97.0	95.9	95.1	91.9	89.9	88.6	85.8	83.1
5000	97.7	97.2	98.3	98.3	97.8	97.1	96.6	95.5	94.8	91.6	90.0	88.6	85.8	82.5
6300	97.2	96.8	97.8	97.8	96.8	96.2	95.7	94.8	94.0	91.0	90.2	88.8	85.8	82.8
8000	95.9	95.1	96.3	95.9	94.8	94.8	94.1	92.8	92.5	89.8	90.2	88.7	85.6	81.8
10000	93.4	92.7	94.2	93.4	92.4	92.7	91.6	90.1	89.9	87.6	89.7	88.0	84.7	80.9
12500	90.3	89.2	91.2	90.0	89.2	89.7	88.1	86.4	86.3	84.2	88.6	86.6	82.9	79.6
16000	86.0	84.8	87.2	85.7	85.3	85.5	83.9	82.2	82.2	80.5	84.9	84.0	80.0	77.0
20000	80.9	79.6	81.9	80.9	80.8	79.8	79.6	78.8	78.8	78.1	85.1	84.0	76.8	73.8
OVERALL SPL	109.8	109.9	110.9	111.2	111.4	112.3	112.6	112.8	112.5	113.2	113.5	113.4	111.8	109.4
PNDB	121.6	121.3	122.4	122.4	122.0	122.8	122.0	121.3	120.9	119.4	119.1	118.8	116.1	112.7

CORRECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 07107g RUN 1 DELTA 1 SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/12/78

MICROPHONE:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG):	32.2	38.7	45.2	51.7	58.4	63.7	68.5	73.4	78.7	84.1	89.7	100.7	105.8	110.7	115.5
REF DIST(FT):	12.5	10.7	9.4	8.5	8.1	7.8	7.2	7.0	6.8	6.7	6.7	6.8	6.9	7.1	7.4
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	96.0	96.0	96.0	97.0	97.0	96.0	100.0	100.0	99.0	101.0	101.0	103.0	102.0	104.0	106.0
31	96.0	97.0	97.0	97.0	98.0	99.0	99.0	100.0	101.0	101.0	101.0	104.0	104.0	105.0	107.0
40	94.0	95.0	97.0	98.0	96.0	96.0	98.0	100.0	98.0	100.0	99.0	103.0	103.0	105.0	107.0
50	95.0	98.0	98.0	98.0	99.0	98.0	100.0	99.0	101.0	103.0	102.0	104.0	105.0	107.0	106.0
63	100.0	99.0	97.0	100.0	96.0	99.0	101.0	101.0	100.0	99.0	99.0	101.0	105.0	104.0	105.0
80	95.0	96.0	97.0	95.0	96.0	97.0	99.0	99.0	100.0	101.0	102.0	103.0	103.0	107.0	107.0
100	99.0	99.0	97.0	98.0	98.0	100.0	102.0	102.0	103.0	105.0	106.0	107.0	109.0	109.0	110.0
125	102.0	99.0	99.0	103.0	104.0	106.0	106.0	107.0	107.0	107.0	108.0	110.0	111.0	113.0	113.0
160	102.0	102.0	104.0	104.0	106.0	107.0	107.0	108.0	109.0	110.0	110.0	112.0	113.0	114.0	115.0
200	101.0	101.0	103.0	104.0	105.0	105.0	107.0	107.0	108.0	108.0	110.0	112.0	112.0	113.0	113.0
250	104.0	108.0	107.0	108.0	110.0	110.0	111.0	113.0	114.0	114.0	115.0	115.0	116.0	117.0	117.0
315	103.0	104.0	105.0	106.0	107.0	107.0	108.0	109.0	110.0	110.0	111.0	113.0	113.0	113.0	114.0
400	105.0	105.0	109.0	108.0	109.0	110.0	110.0	112.0	112.0	112.0	112.0	114.0	114.0	115.0	115.0
500	102.0	105.0	109.0	107.0	108.0	108.0	109.0	110.0	111.0	111.0	112.0	113.0	114.0	115.0	115.0
630	106.0	107.0	108.0	109.0	109.0	110.0	110.0	111.0	112.0	112.0	114.0	114.0	115.0	116.0	116.0
800	107.0	108.0	109.0	109.0	110.0	111.0	111.0	112.0	113.0	113.0	114.0	115.0	116.0	116.0	118.0
1000	107.0	108.0	109.0	110.0	109.0	111.0	112.0	112.0	113.0	113.0	114.0	115.0	116.0	115.0	117.0
1250	108.0	109.0	110.0	110.0	110.0	111.0	112.0	112.0	112.0	113.0	114.0	115.0	116.0	116.0	117.0
1600	108.0	109.0	109.0	109.0	109.0	109.0	111.0	111.0	111.0	112.0	112.0	114.0	114.0	115.0	116.0
2000	108.0	109.0	109.0	109.0	109.0	109.0	109.0	110.0	110.0	111.0	111.0	113.0	114.0	114.0	115.0
2500	109.0	110.0	110.0	108.0	108.0	109.0	109.0	110.0	110.0	110.0	111.0	112.0	113.0	113.0	114.0
3150	110.0	110.0	110.0	110.0	109.0	109.0	109.0	110.0	110.0	110.0	111.0	112.0	113.0	113.0	114.0
4000	110.0	110.0	111.0	110.0	110.0	109.0	109.0	109.0	109.0	110.0	110.0	112.0	112.0	113.0	113.0
5000	111.0	111.0	113.0	111.0	111.0	109.0	108.0	109.0	109.0	109.0	110.0	111.0	112.0	113.0	113.0
6300	110.0	111.0	114.0	112.0	111.0	108.0	108.0	108.0	108.0	108.0	108.0	110.0	111.0	112.0	112.0
8000	112.0	111.0	113.0	111.0	110.0	108.0	107.0	107.0	108.0	108.0	108.0	110.0	110.0	110.0	111.0
10000	110.0	111.0	113.0	110.0	109.0	109.0	108.0	108.0	108.0	108.0	108.0	109.0	109.0	109.0	110.0
12500	110.0	110.0	112.0	109.0	109.0	108.0	108.0	107.0	106.0	106.0	107.0	108.0	109.0	109.0	108.0
16000	108.0	108.0	110.0	108.0	108.0	106.0	105.0	106.0	105.0	104.0	105.0	106.0	107.0	107.0	106.0
20000	104.0	104.0	107.0	106.0	105.0	103.0	103.0	103.0	102.0	102.0	102.0	103.0	103.0	103.0	103.0
OVERALL SPL	121.7	122.2	123.5	122.6	122.6	122.6	122.9	123.6	124.1	124.3	125.1	126.3	127.0	127.6	128.3
PNDB	135.3	135.2	137.1	135.7	135.3	134.0	134.1	134.4	134.6	134.7	135.5	136.7	137.4	138.0	138.4

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	123.8	127.4	134.0	140.4	146.7	152.9	158.1	36.0	45.5	45.5	51.9	58.2	64.6	71.0	77.6
REF DIST(FT)	8.0	8.4	9.3	10.5	12.1	14.6	17.9	68.8	55.1	59.1	89.9	46.2	83.8	41.8	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	106.0	106.0	113.0	116.0	115.0	117.0	114.0	83.0	80.0	80.0	80.0	79.0	79.0	79.0	79.0
31	106.0	109.0	111.0	113.0	116.0	118.0	114.0	80.0	79.0	79.0	80.0	79.0	80.0	81.0	80.0
40	107.0	111.0	116.0	114.0	115.0	118.0	115.0	79.0	80.0	80.0	80.0	81.0	82.0	83.0	85.0
50	108.0	109.0	113.0	112.0	114.0	114.0	86.0	85.0	83.0	84.0	86.0	86.0	87.0	86.0	
63	105.0	109.0	110.0	111.0	112.0	115.0	115.0	90.0	87.0	87.0	87.0	85.0	86.0	88.0	87.0
80	108.0	109.0	111.0	113.0	116.0	116.0	116.0	85.0	88.0	85.0	84.0	84.0	86.0	87.0	85.0
100	111.0	113.0	118.0	114.0	117.0	118.0	118.0	86.0	85.0	85.0	84.0	87.0	87.0	90.0	91.0
125	116.0	117.0	117.0	117.0	120.0	122.0	121.0	91.0	91.0	91.0	91.0	91.0	92.0	92.0	93.0
160	114.0	118.0	119.0	120.0	121.0	123.0	123.0	91.0	98.0	92.0	89.0	93.0	94.0	97.0	97.0
200	115.0	116.0	118.0	120.0	121.0	123.0	123.0	90.0	93.0	93.0	93.0	94.0	95.0	95.0	96.0
250	119.0	119.0	121.0	123.0	126.0	127.0	127.0	93.0	96.0	96.0	98.0	97.0	98.0	99.0	100.0
315	116.0	118.0	120.0	123.0	125.0	120.0	126.0	92.0	94.0	94.0	95.0	95.0	97.0	97.0	98.0
400	117.0	117.0	119.0	122.0	125.0	127.0	124.0	93.0	94.0	94.0	99.0	96.0	97.0	99.0	101.0
500	117.0	117.0	118.0	120.0	123.0	124.0	122.0	91.0	94.0	94.0	95.0	96.0	98.0	98.0	99.0
630	118.0	118.0	119.0	121.0	122.0	123.0	120.0	93.0	96.0	96.0	97.0	98.0	98.0	99.0	100.0
800	119.0	119.0	121.0	121.0	122.0	121.0	119.0	94.0	97.0	97.0	98.0	98.0	99.0	101.0	101.0
1000	119.0	119.0	120.0	121.0	120.0	120.0	116.0	94.0	98.0	95.0	97.0	99.0	100.0	100.0	101.0
1250	119.0	119.0	119.0	120.0	120.0	118.0	114.0	95.0	96.0	94.0	98.0	99.0	99.0	100.0	101.0
1600	118.0	118.0	118.0	118.0	117.0	115.0	112.0	94.0	95.0	95.0	96.0	98.0	98.0	99.0	100.0
2000	116.0	116.0	117.0	117.0	115.0	112.0	109.0	93.0	95.0	95.0	96.0	97.0	97.0	98.0	99.0
2500	115.0	115.0	115.0	114.0	113.0	110.0	107.0	94.0	95.0	95.0	95.0	96.0	97.0	98.0	99.0
3150	113.0	114.0	113.0	112.0	110.0	108.0	105.0	94.0	96.0	96.0	96.0	96.0	97.0	97.0	98.0
4000	112.0	112.0	111.0	110.0	108.0	105.0	102.0	93.0	95.0	95.0	96.0	96.0	96.0	97.0	97.0
5000	111.0	111.0	110.0	109.0	106.0	104.0	101.0	95.0	96.0	96.0	96.0	97.0	96.0	97.0	97.0
6300	110.0	110.0	108.0	107.0	106.0	103.0	99.0	95.0	96.0	96.0	96.0	97.0	97.0	96.0	97.0
8000	109.0	108.0	106.0	105.0	103.0	101.0	98.0	103.0	102.0	102.0	103.0	103.0	101.0	100.0	99.0
10000	108.0	107.0	105.0	104.0	102.0	99.0	96.0	95.0	94.0	94.0	93.0	94.0	93.0	93.0	93.0
12500	106.0	105.0	104.0	102.0	100.0	97.0	95.0	93.0	90.0	90.0	90.0	90.0	91.0	90.0	90.0
16000	104.0	103.0	101.0	99.0	97.0	95.0	93.0	94.0	88.0	88.0	89.0	89.0	88.0	87.0	87.0
20000	101.0	100.0	99.0	97.0	95.0	93.0	92.0	89.0	84.0	84.0	83.0	84.0	84.0	83.0	84.0
OVERALL SPL	129.5	130.0	131.0	132.4	133.9	135.1	133.7	108.5	109.0	109.8	110.1	110.5	110.7	111.3	112.0
PNDB	138.0	138.0	138.2	138.4	138.7	139.0	136.5	123.3	123.1	123.1	123.9	124.2	123.5	123.3	123.3

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.2	87.4	94.0	100.4	104.9	113.3	119.7	122.9	129.2	135.5	145.0	150.0	155.0	160.0
REF DIST(FT)	39.5	39.5	39.5	39.9	41.0	42.7	45.2	46.7	50.5	56.0	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	79.0	79.0	79.0	80.0	81.0	81.0	82.0	81.0	83.0	84.0	84.0	94.0	88.0	86.0
31	82.0	81.0	82.0	83.0	82.0	86.0	83.0	84.0	83.0	84.0	85.0	94.0	88.0	87.0
40	84.0	87.0	85.0	88.0	89.0	90.0	90.0	91.0	89.0	90.0	91.0	96.0	88.0	88.0
50	87.0	89.0	89.0	88.0	90.0	93.0	93.0	92.0	95.0	94.0	96.0	100.0	90.0	85.0
63	89.0	88.0	90.0	90.0	91.0	91.0	92.0	93.0	96.0	97.0	99.0	104.0	97.0	92.0
80	85.0	87.0	88.0	89.0	88.0	89.0	93.0	92.0	94.0	97.0	101.0	107.0	102.0	98.0
100	92.0	92.0	94.0	96.0	97.0	97.0	97.0	98.0	99.0	100.0	101.0	107.0	106.0	103.0
125	94.0	95.0	96.0	97.0	98.0	101.0	99.0	103.0	106.0	108.0	109.0	106.0	103.0	106.0
160	99.0	99.0	100.0	100.0	102.0	104.0	105.0	105.0	106.0	107.0	112.0	113.0	108.0	101.0
200	98.0	98.0	99.0	100.0	102.0	103.0	104.0	104.0	107.0	110.0	112.0	109.0	111.0	109.0
250	102.0	103.0	102.0	103.0	104.0	104.0	106.0	108.0	108.0	112.0	114.0	115.0	112.0	111.0
315	100.0	100.0	101.0	102.0	103.0	104.0	105.0	107.0	108.0	111.0	114.0	113.0	113.0	106.0
400	102.0	102.0	101.0	104.0	104.0	104.0	106.0	106.0	109.0	110.0	113.0	111.0	113.0	108.0
500	101.0	101.0	102.0	102.0	103.0	105.0	106.0	107.0	108.0	109.0	110.0	109.0	108.0	104.0
630	101.0	101.0	102.0	103.0	104.0	104.0	106.0	107.0	107.0	108.0	109.0	108.0	107.0	103.0
800	102.0	102.0	103.0	104.0	105.0	106.0	106.0	107.0	107.0	108.0	108.0	107.0	106.0	102.0
1000	102.0	103.0	103.0	104.0	105.0	105.0	106.0	107.0	107.0	107.0	106.0	105.0	104.0	100.0
1250	102.0	102.0	102.0	103.0	104.0	106.0	106.0	107.0	107.0	106.0	105.0	105.0	103.0	98.0
1600	101.0	101.0	101.0	102.0	103.0	104.0	104.0	105.0	105.0	104.0	103.0	102.0	100.0	96.0
2000	99.0	100.0	101.0	101.0	102.0	103.0	104.0	104.0	103.0	102.0	101.0	99.0	97.0	93.0
2500	99.0	99.0	100.0	102.0	102.0	103.0	102.0	102.0	102.0	100.0	99.0	96.0	93.0	89.0
3150	99.0	99.0	100.0	101.0	102.0	102.0	101.0	101.0	100.0	98.0	97.0	94.0	90.0	86.0
4000	99.0	99.0	99.0	101.0	101.0	102.0	101.0	101.0	99.0	96.0	95.0	92.0	88.0	84.0
5000	98.0	99.0	99.0	100.0	101.0	102.0	100.0	100.0	98.0	95.0	94.0	91.0	87.0	84.0
6300	98.0	98.0	99.0	100.0	101.0	101.0	100.0	99.0	98.0	94.0	92.0	90.0	86.0	84.0
8000	98.0	98.0	98.0	99.0	100.0	100.0	98.0	98.0	96.0	93.0	92.0	90.0	87.0	84.0
10000	94.0	94.0	95.0	96.0	96.0	97.0	96.0	94.0	91.0	90.0	91.0	87.0	83.0	80.0
12500	90.0	91.0	91.0	92.0	92.0	92.0	90.0	89.0	87.0	86.0	89.0	85.0	81.0	78.0
16000	87.0	87.0	87.0	88.0	88.0	87.0	86.0	86.0	84.0	83.0	87.0	84.0	79.0	76.0
20000	84.0	84.0	84.0	84.0	85.0	84.0	83.0	83.0	82.0	82.0	84.0	83.0	75.0	74.0
OVERALL SPL	113.2	113.5	113.8	114.9	115.8	116.7	117.1	118.0	118.7	120.8	121.8	121.5	120.2	116.4
PNDB	123.4	123.8	124.4	125.4	126.3	126.8	126.2	126.5	125.8	125.4	126.3	125.0	124.0	119.8

ALL CORRECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.7	45.2	51.7	58.4	63.7	68.5	73.4	78.7	84.1	89.7	100.7	105.8	110.7	115.5
REF DIST(FT)	12.5	10.7	9.4	8.5	8.1	7.4	7.2	7.0	6.8	6.7	6.7	6.8	6.9	7.1	7.4
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	96.0	96.0	96.0	97.0	97.0	96.0	100.0	100.0	99.0	101.0	101.0	103.0	102.0	104.0	106.0
31	96.0	97.0	97.0	97.0	98.0	99.0	99.0	100.0	101.0	101.0	101.0	104.0	104.0	105.0	107.0
40	94.0	95.0	97.0	98.0	96.0	96.0	98.0	100.0	98.0	100.0	99.0	103.0	103.0	105.0	107.0
50	95.0	98.0	98.0	98.0	99.0	98.0	100.0	99.0	101.0	103.0	102.0	104.0	105.0	107.0	106.0
63	100.0	99.0	97.0	100.0	96.0	99.0	101.0	101.0	100.0	99.0	99.0	101.0	105.0	104.0	105.0
80	95.0	96.0	97.0	95.0	96.0	97.0	99.0	99.0	100.0	101.0	102.0	103.0	103.0	107.0	107.0
100	99.0	99.0	97.0	98.0	98.0	100.0	102.0	102.0	103.0	105.0	104.0	107.0	109.0	109.0	110.0
125	102.0	99.0	99.0	103.0	104.0	106.0	106.0	107.0	107.0	107.0	108.0	110.0	111.0	113.0	113.0
160	102.0	102.0	104.0	104.0	106.0	107.0	107.0	108.0	109.0	110.0	110.0	112.0	113.0	114.0	115.0
200	101.0	101.0	103.0	104.0	105.0	105.0	107.0	107.0	108.0	108.0	110.0	112.0	112.0	113.0	113.0
250	106.0	108.0	107.0	108.0	110.0	110.0	111.0	113.0	114.0	114.0	115.0	115.0	116.0	117.0	117.0
315	103.0	104.0	105.0	106.0	107.0	107.0	108.0	109.0	110.0	110.0	111.0	113.0	113.0	113.0	114.0
400	105.0	105.0	109.0	108.0	109.0	110.0	110.0	112.0	112.0	112.0	112.0	114.0	114.0	115.0	115.0
500	102.0	105.0	105.0	107.0	108.0	108.0	109.0	110.0	111.0	111.0	112.0	113.0	114.0	115.0	115.0
630	106.0	107.0	108.0	109.0	109.0	110.0	110.0	111.0	112.0	112.0	114.0	114.0	115.0	116.0	116.0
800	107.0	108.0	109.0	109.0	110.0	111.0	111.0	112.0	113.0	113.0	114.0	115.0	116.0	116.0	118.0
1000	107.0	108.0	109.0	110.0	109.0	111.0	112.0	112.0	113.0	113.0	114.0	115.0	116.0	115.0	117.0
1250	108.0	109.0	110.0	110.0	110.0	111.0	112.0	112.0	112.0	113.0	114.0	115.0	114.0	116.0	117.0
1600	108.0	109.0	109.0	109.0	109.0	109.0	111.0	111.0	111.0	112.0	112.0	114.0	114.0	115.0	116.0
2000	108.0	109.0	109.0	109.0	109.0	109.0	109.0	110.0	110.0	111.0	111.0	113.0	114.0	114.0	115.0
2500	109.0	110.0	110.0	108.0	108.0	109.0	109.0	110.0	110.0	110.0	111.0	112.0	113.0	113.0	114.0
3150	110.0	110.0	110.0	110.0	109.0	109.0	109.0	110.0	110.0	110.0	111.0	112.0	113.0	113.0	114.0
4000	110.0	110.0	111.0	110.0	110.0	109.0	109.0	109.0	109.0	110.0	110.0	112.0	112.0	113.0	113.0
5000	111.0	111.0	113.0	111.0	111.0	109.0	108.0	109.0	109.0	109.0	110.0	111.0	112.0	113.0	113.0
6300	110.0	111.0	114.0	112.0	111.0	108.0	108.0	108.0	108.0	108.0	108.0	110.0	111.0	112.0	112.0
8000	112.0	111.0	113.0	111.0	110.0	108.0	107.0	107.0	108.0	108.0	108.0	110.0	110.0	110.0	111.0
10000	110.0	111.0	113.0	110.0	109.0	109.0	108.0	108.0	108.0	108.0	108.0	109.0	109.0	109.0	110.0
12500	110.0	110.0	112.0	109.0	109.0	108.0	108.0	107.0	106.0	106.0	107.0	108.0	109.0	109.0	108.0
16000	108.0	108.0	110.0	108.0	108.0	106.0	105.0	106.0	105.0	104.0	105.0	106.0	107.0	107.0	106.0
20000	106.0	106.0	107.0	106.0	105.0	103.0	103.0	103.0	102.0	102.0	102.0	103.0	103.0	103.0	103.0
OVERALL SPL	121.7	122.2	123.9	122.6	122.6	122.6	122.9	123.6	124.1	124.3	125.1	126.3	127.0	127.6	128.3
PNDB	135.3	135.2	137.1	135.7	135.3	134.0	134.1	134.4	134.6	134.7	135.9	136.7	137.4	138.0	138.4

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	123.8	127.4	134.0	140.4	146.7	152.9	158.1	35.0	45.5	45.5	51.9	58.2	64.6	71.0	77.6
REF DIST(FT)	8.0	8.4	9.3	10.5	12.1	14.6	17.9	68.4	55.1	55.1	49.9	46.2	43.8	41.5	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	106.0	106.0	113.0	116.0	115.0	117.0	116.0	83.0	80.0	80.0	80.0	79.0	79.0	79.0	79.0
31	106.0	109.0	111.0	113.0	116.0	118.0	114.0	80.0	79.0	79.0	80.0	79.0	80.0	81.0	80.0
40	107.0	111.0	110.0	114.0	115.0	118.0	119.0	79.0	80.0	80.0	80.0	81.0	82.0	83.0	85.0
50	108.0	109.0	110.0	113.0	112.0	114.0	114.0	86.0	83.0	83.0	84.0	86.0	86.0	87.0	88.0
63	105.0	109.0	110.0	111.0	112.0	115.0	115.0	94.0	87.0	87.0	87.0	85.0	86.0	88.0	87.0
80	108.0	109.0	111.0	113.0	116.0	116.0	116.0	85.0	85.0	85.0	86.0	86.0	86.0	87.0	85.0
100	111.0	113.0	118.0	114.0	117.0	118.0	118.0	86.0	85.0	85.0	84.0	87.0	87.0	90.0	91.0
125	115.0	117.0	117.0	117.0	120.0	122.0	121.0	91.0	91.0	91.0	91.0	91.0	92.0	92.0	93.0
160	116.0	118.0	119.0	120.0	121.0	123.0	123.0	91.0	92.0	92.0	89.0	93.0	94.0	97.0	97.0
200	115.0	116.0	118.0	120.0	121.0	123.0	123.0	90.0	93.0	93.0	93.0	94.0	95.0	95.0	95.0
250	119.0	119.0	121.0	123.0	126.0	127.0	127.0	93.0	94.0	96.0	98.0	97.0	98.0	99.0	100.0
315	116.0	118.0	120.0	123.0	125.0	128.0	126.0	92.0	94.0	94.0	95.0	95.0	97.0	97.0	98.0
400	117.0	117.0	119.0	122.0	125.0	127.0	124.0	93.0	94.0	94.0	99.0	96.0	97.0	99.0	101.0
500	117.0	117.0	118.0	120.0	123.0	124.0	122.0	91.0	94.0	94.0	95.0	96.0	98.0	98.0	99.0
630	118.0	118.0	119.0	121.0	122.0	123.0	120.0	93.0	96.0	96.0	97.0	98.0	98.0	99.0	100.0
800	119.0	119.0	121.0	121.0	122.0	121.0	119.0	94.0	97.0	97.0	98.0	98.0	99.0	101.0	101.0
1000	119.0	119.0	120.0	121.0	120.0	120.0	116.0	94.0	98.0	98.0	97.0	99.0	100.0	100.0	101.0
1250	119.0	119.0	119.0	120.0	120.0	118.0	114.0	95.0	96.0	96.0	98.0	99.0	99.0	100.0	101.0
1600	118.0	118.0	118.0	118.0	117.0	115.0	112.0	94.0	95.0	95.0	96.0	98.0	98.0	99.0	100.0
2000	116.0	116.0	117.0	117.0	115.0	112.0	109.0	93.0	95.0	95.0	96.0	97.0	97.0	98.0	99.0
2500	115.0	115.0	115.0	114.0	113.0	110.0	107.0	94.0	95.0	95.0	98.0	96.0	97.0	98.0	99.0
3150	113.0	114.0	113.0	112.0	110.0	108.0	105.0	94.0	96.0	96.0	96.0	96.0	97.0	97.0	98.0
4000	112.0	112.0	111.0	110.0	108.0	105.0	102.0	93.0	95.0	95.0	96.0	96.0	96.0	97.0	97.0
5000	111.0	111.0	110.0	109.0	106.0	104.0	101.0	95.0	96.0	96.0	96.0	97.0	96.0	97.0	97.0
6300	110.0	110.0	108.0	107.0	104.0	103.0	99.0	95.0	96.0	96.0	96.0	97.0	97.0	96.0	97.0
8000	109.0	108.0	106.0	105.0	103.0	101.0	98.0	103.0	102.0	102.0	103.0	103.0	101.0	100.0	99.0
10000	108.0	107.0	105.0	104.0	102.0	99.0	96.0	95.0	94.0	94.0	93.0	94.0	93.0	93.0	93.0
12500	106.0	105.0	104.0	102.0	100.0	97.0	95.0	93.0	90.0	90.0	90.0	90.0	91.0	90.0	90.0
16000	104.0	103.0	101.0	99.0	97.0	95.0	93.0	94.0	88.0	88.0	89.0	89.0	88.0	87.0	87.0
20000	101.0	100.0	99.0	97.0	95.0	93.0	92.0	89.0	84.0	84.0	83.0	84.0	84.0	83.0	84.0
OVERALL SPL	129.5	130.0	131.0	132.4	133.9	135.3	133.7	108.5	109.0	109.0	110.1	110.5	110.7	111.3	112.0
PNDB	130.0	130.0	130.2	130.4	130.7	131.0	130.5	123.3	123.1	123.1	123.9	124.2	123.9	123.3	123.3

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.8	87.4	94.0	100.4	106.9	113.3	119.7	122.9	129.2	135.5	145.0	150.0	159.0	160.0
REF DIST(FT)	39.5	39.3	39.1	39.9	41.0	42.7	45.2	46.7	50.6	56.0	68.4	78.5	92.9	114.8
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	79.0	79.0	79.0	80.0	81.0	81.0	82.0	81.0	83.0	84.0	84.0	94.0	88.0	86.0
31	82.0	81.0	82.0	83.0	82.0	85.0	83.0	84.0	83.0	84.0	85.0	94.0	88.0	87.0
40	84.0	87.0	85.0	88.0	89.0	90.0	90.0	91.0	89.0	90.0	91.0	94.0	88.0	88.0
50	87.0	89.0	89.0	88.0	90.0	93.0	93.0	92.0	95.0	94.0	96.0	100.0	90.0	85.0
63	89.0	88.0	90.0	90.0	91.0	91.0	92.0	93.0	96.0	97.0	99.0	104.0	97.0	92.0
80	85.0	87.0	88.0	89.0	88.0	89.0	93.0	92.0	94.0	97.0	101.0	107.0	102.0	98.0
100	92.0	92.0	94.0	96.0	97.0	97.0	97.0	98.0	99.0	100.0	101.0	107.0	106.0	103.0
125	94.0	95.0	96.0	97.0	98.0	101.0	99.0	103.0	106.0	108.0	109.0	106.0	103.0	104.0
160	99.0	99.0	100.0	100.0	102.0	104.0	105.0	105.0	106.0	107.0	112.0	113.0	108.0	101.0
200	98.0	98.0	99.0	100.0	102.0	103.0	104.0	108.0	107.0	110.0	112.0	109.0	111.0	105.0
250	102.0	103.0	102.0	103.0	104.0	104.0	106.0	108.0	108.0	112.0	114.0	115.0	112.0	111.0
315	100.0	100.0	101.0	102.0	103.0	104.0	105.0	107.0	108.0	111.0	114.0	113.0	113.0	106.0
400	102.0	102.0	101.0	104.0	104.0	104.0	106.0	106.0	109.0	110.0	113.0	111.0	113.0	108.0
500	101.0	101.0	102.0	102.0	103.0	105.0	106.0	107.0	108.0	109.0	110.0	109.0	108.0	104.0
630	101.0	101.0	102.0	103.0	104.0	105.0	106.0	107.0	107.0	108.0	109.0	108.0	107.0	103.0
800	102.0	102.0	103.0	104.0	105.0	106.0	106.0	107.0	107.0	108.0	108.0	107.0	106.0	102.0
1000	102.0	103.0	103.0	104.0	105.0	105.0	106.0	107.0	107.0	107.0	106.0	105.0	104.0	100.0
1250	102.0	102.0	102.0	103.0	104.0	104.0	106.0	107.0	107.0	106.0	105.0	105.0	103.0	98.0
1600	101.0	101.0	101.0	102.0	103.0	104.0	104.0	105.0	105.0	104.0	103.0	102.0	100.0	96.0
2000	99.0	100.0	101.0	101.0	102.0	103.0	104.0	104.0	103.0	102.0	101.0	99.0	97.0	93.0
2500	99.0	99.0	100.0	102.0	102.0	103.0	102.0	102.0	102.0	100.0	99.0	96.0	93.0	89.0
3150	99.0	99.0	100.0	101.0	102.0	102.0	101.0	101.0	100.0	98.0	97.0	94.0	90.0	86.0
4000	99.0	99.0	99.0	101.0	101.0	102.0	101.0	101.0	99.0	96.0	95.0	92.0	88.0	84.0
5000	98.0	99.0	99.0	100.0	101.0	102.0	100.0	100.0	98.0	95.0	94.0	91.0	87.0	84.0
6300	98.0	98.0	99.0	100.0	101.0	101.0	100.0	99.0	98.0	98.0	92.0	90.0	86.0	84.0
8000	98.0	98.0	98.0	99.0	100.0	100.0	98.0	98.0	96.0	93.0	92.0	90.0	87.0	84.0
10000	94.0	94.0	95.0	96.0	96.0	97.0	94.0	94.0	91.0	90.0	91.0	87.0	83.0	80.0
12500	90.0	91.0	91.0	92.0	92.0	92.0	90.0	89.0	87.0	86.0	89.0	85.0	81.0	78.0
16000	87.0	87.0	87.0	88.0	88.0	87.0	86.0	86.0	84.0	83.0	87.0	84.0	79.0	76.0
20000	84.0	84.0	84.0	84.0	85.0	84.0	83.0	83.0	82.0	82.0	84.0	83.0	75.0	74.0
OVERALL SPL	113.2	113.5	113.8	114.9	115.8	116.7	117.1	118.0	118.7	120.0	121.8	121.5	120.2	116.4
PNDB	123.6	123.8	124.4	125.4	126.3	126.8	126.2	126.3	125.8	125.4	124.3	125.0	124.0	119.8

** VALUES AFTER CURVE FIT CALCULATIONS **

MICROPHONE #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.7	45.2	51.7	58.4	63.7	68.5	73.4	78.7	84.1	89.7	100.7	105.8	110.7	115.5
REF DIST(FT)	12.5	10.7	9.4	8.5	8.1	7.4	7.2	7.0	6.8	6.7	6.7	6.8	6.9	7.1	7.4
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BAIN, FREQ(HERTZ)															
25	96.3	95.9	95.9	97.0	97.2	96.7	100.1	100.1	99.5	101.2	101.8	103.8	102.5	104.3	106.7
31	95.0	95.7	97.3	97.5	97.6	97.2	98.8	100.1	99.7	100.8	100.2	103.4	103.1	104.6	106.0
40	94.9	96.7	97.2	97.5	96.9	97.1	98.4	99.4	99.4	100.3	99.6	102.7	103.4	104.8	105.8
50	95.7	96.7	96.8	97.6	96.5	97.5	98.0	99.2	99.5	100.4	100.0	102.5	104.0	105.4	106.2
63	96.9	97.0	96.8	98.0	96.9	98.5	100.1	99.9	100.3	101.3	101.3	103.5	105.1	106.5	107.2
80	98.3	97.7	97.4	98.8	98.3	100.0	101.7	101.4	101.9	102.8	103.2	104.9	106.7	108.1	108.6
100	99.6	98.8	98.6	100.0	100.2	101.8	103.4	103.3	103.9	104.7	105.4	106.9	108.4	109.8	110.2
125	100.8	100.1	100.1	101.6	102.6	103.8	105.0	105.4	106.0	106.6	107.5	109.1	110.1	111.8	111.8
160	101.9	101.4	101.9	103.2	104.6	105.5	106.8	107.4	108.0	108.4	109.4	111.0	111.6	113.0	113.2
200	102.7	102.7	103.7	104.7	106.4	107.0	107.7	109.0	109.7	109.9	111.0	112.6	112.8	114.1	114.3
250	103.3	103.9	105.2	106.1	107.8	108.2	108.7	110.2	111.0	111.0	112.1	113.6	113.7	114.9	115.1
315	103.9	104.9	106.5	107.3	108.7	109.0	109.4	110.9	111.8	111.8	112.8	114.2	114.3	115.4	115.7
400	104.4	105.7	107.4	108.1	109.2	109.5	110.0	111.5	112.2	112.2	113.2	114.4	114.7	115.8	116.0
500	104.9	106.4	107.9	108.6	109.3	109.8	110.3	111.4	112.4	112.4	113.5	114.8	114.9	115.8	116.2
630	105.4	107.0	108.3	108.9	109.2	109.9	110.6	111.4	112.3	112.4	113.3	114.3	115.0	115.8	116.3
800	106.0	107.5	108.4	109.0	109.0	110.0	110.8	111.5	112.1	112.3	113.3	114.2	115.1	115.8	116.3
1000	106.7	108.0	108.5	109.0	108.8	110.0	110.8	111.3	111.8	112.2	113.1	114.0	115.1	116.1	116.3
1250	107.4	108.4	108.7	108.9	108.8	110.0	110.8	111.2	111.5	112.0	112.9	113.9	115.0	116.1	116.1
1600	108.1	108.9	109.0	109.0	108.8	109.9	110.6	111.1	111.2	111.8	112.6	113.8	114.9	116.0	116.0
2000	108.7	109.3	109.4	109.1	109.1	109.7	110.2	110.8	110.8	111.4	112.1	113.6	114.7	115.9	115.9
2500	109.3	109.8	110.0	109.4	109.4	109.5	109.7	110.4	110.4	111.0	111.5	113.1	114.4	115.6	115.6
3150	109.8	110.2	110.8	109.9	109.7	109.1	109.2	109.9	109.8	110.4	110.8	112.5	113.8	115.0	115.0
4000	110.2	110.5	111.7	110.4	110.0	108.8	108.5	109.2	109.2	109.6	110.0	111.7	113.1	114.1	114.3
5000	110.5	110.8	112.9	110.8	110.2	108.4	108.0	108.5	108.6	108.9	109.2	110.8	112.2	113.4	113.4
6300	110.6	110.9	113.1	111.1	110.3	108.2	107.7	107.9	108.1	108.1	108.5	109.9	111.4	112.2	112.5
8000	110.6	110.9	113.4	111.0	110.2	108.2	107.6	107.5	107.7	107.9	107.9	109.3	110.6	111.4	111.5
10000	110.4	110.7	113.2	110.5	109.9	108.3	107.6	107.4	107.3	107.8	107.6	108.8	109.6	110.6	110.6
12500	109.8	110.0	112.2	109.5	109.2	108.1	107.4	107.3	106.7	106.4	107.0	108.3	108.9	109.9	109.7
16000	108.5	108.5	110.3	107.9	107.8	106.8	106.2	106.3	105.3	105.0	105.6	106.8	107.2	108.0	108.6
20000	105.8	105.8	106.8	105.9	104.9	102.6	102.5	102.8	101.7	101.5	101.7	102.5	102.8	103.0	106.7
OVERALL SPL	121.6	122.1	121.4	122.5	122.5	122.4	122.8	123.5	123.9	124.2	125.0	126.3	126.9	127.5	128.2
PNDB	134.7	135.1	136.9	135.4	135.1	134.1	134.0	134.4	134.6	134.7	135.3	136.6	137.3	137.9	138.2

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	123.8	127.4	134.0	140.4	146.7	152.9	158.1	35.0	45.5	45.5	51.9	58.2	64.6	71.0	77.6
REF DIST(FT)	8.0	8.4	9.5	10.5	12.1	14.6	17.9	68.8	55.1	55.1	49.9	46.2	43.4	41.5	40.2
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	106.6	106.6	113.5	115.7	115.8	117.2	113.8	83.3	80.0	80.0	79.7	78.8	78.0	78.1	78.6
31	105.8	108.5	110.7	114.5	118.3	117.8	114.8	79.3	79.1	79.1	80.1	79.6	80.4	81.1	81.7
40	105.8	109.0	109.4	112.7	114.1	116.6	114.3	79.1	80.4	80.4	81.5	81.4	82.2	83.3	83.8
50	106.6	109.5	109.6	111.9	113.2	115.8	114.0	80.8	82.5	82.5	83.2	83.4	84.0	85.4	85.6
63	108.0	110.5	110.8	112.2	113.5	115.3	114.7	83.3	84.7	84.7	85.0	85.5	85.9	87.5	87.3
80	109.8	111.9	112.4	113.4	114.8	116.3	116.3	86.7	86.8	86.8	86.8	87.4	87.8	89.3	89.1
100	111.6	113.5	114.6	115.2	116.8	118.6	118.5	87.8	88.6	88.6	88.5	89.2	89.6	91.1	91.0
125	113.4	115.1	116.4	117.2	119.1	120.6	120.8	89.4	90.2	90.2	90.2	90.8	91.4	92.8	92.9
160	114.9	116.4	117.9	119.1	121.3	123.0	123.0	90.6	91.6	91.6	91.8	92.1	93.2	94.4	94.8
200	116.1	117.4	118.9	120.6	123.0	125.0	124.9	91.4	92.8	92.8	93.4	93.7	94.8	95.9	96.6
250	116.9	118.0	119.4	121.7	124.2	126.3	125.1	91.9	93.8	93.8	94.8	94.9	96.2	97.2	98.1
315	117.5	118.3	119.9	122.2	124.7	126.8	125.2	92.2	94.7	94.7	96.0	96.0	97.4	98.2	99.3
400	117.9	118.4	119.9	122.4	124.6	126.4	124.3	92.8	95.3	95.3	96.9	96.9	98.3	99.1	100.1
500	118.1	118.3	119.8	122.1	124.0	125.3	122.8	92.8	95.7	95.7	97.4	97.5	98.8	99.6	100.6
630	118.3	118.2	119.7	121.6	123.0	123.7	120.8	93.1	95.8	95.8	97.6	97.9	99.0	99.8	100.8
800	118.3	118.1	119.4	120.9	121.7	121.6	118.9	93.4	95.7	95.7	97.6	98.1	98.9	99.8	100.7
1000	118.2	118.0	119.1	120.0	120.3	119.3	116.1	93.6	95.5	95.5	97.2	98.0	98.6	99.6	100.4
1250	117.9	117.8	118.7	119.3	118.7	117.0	113.7	93.8	95.2	95.2	96.8	97.8	98.2	99.2	100.0
1600	117.6	117.3	117.9	117.8	116.9	114.6	111.4	94.0	95.0	95.0	96.3	97.5	97.7	98.7	99.4
2000	116.6	116.4	116.9	116.4	115.0	112.3	109.1	94.0	94.9	94.9	95.9	97.2	97.1	98.3	99.2
2500	115.4	115.8	115.5	114.7	112.9	110.1	107.0	94.0	95.1	95.1	95.7	96.9	97.1	97.9	98.8
3150	114.0	114.4	113.7	112.8	110.7	108.0	104.9	94.0	95.9	95.5	95.7	96.7	97.0	97.7	98.4
4000	112.4	112.7	111.6	110.7	108.3	106.0	102.8	94.0	96.1	96.1	95.8	96.6	97.0	97.6	98.0
5000	110.8	110.8	109.5	108.6	106.0	104.1	100.8	94.2	96.6	96.6	95.9	96.8	97.0	97.1	97.5
6300	109.3	109.0	107.5	106.5	104.0	102.2	99.0	94.5	96.8	96.8	95.8	96.1	96.8	96.6	96.7
8000	108.3	107.6	105.9	104.8	102.3	100.6	97.3	94.8	96.3	96.3	95.1	95.3	96.1	95.6	95.5
10000	107.5	106.6	104.7	103.4	101.1	98.9	96.0	94.9	94.7	94.7	93.8	93.9	94.6	93.9	93.6
12500	106.7	105.7	103.8	102.1	100.0	97.6	94.8	94.6	91.9	91.9	91.0	91.6	92.1	91.2	91.0
16000	105.0	104.0	102.3	100.5	98.4	95.5	93.7	93.0	88.0	88.0	87.5	88.3	88.4	87.4	87.6
20000	100.4	99.4	98.4	96.4	94.4	92.7	91.7	89.2	83.6	83.6	83.5	84.0	83.5	82.6	83.5
OVERALL SPL	129.4	129.9	130.9	132.4	133.8	135.1	131.6	107.1	108.5	108.5	109.1	109.7	110.4	111.1	111.9
PNDB	137.9	138.0	137.8	138.4	138.6	138.8	136.6	119.7	121.0	121.0	120.8	121.2	121.9	122.1	122.5

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.2	87.4	94.0	100.4	106.9	113.3	119.7	122.9	129.2	135.5	149.0	150.0	158.0	160.8
REF DIST(FT)	39.5	39.3	39.3	39.9	41.0	42.7	45.2	46.7	50.6	56.0	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FRQ(HERTZ)														
25	79.1	78.6	79.1	80.0	80.7	81.3	81.5	81.0	82.6	83.6	83.2	93.7	88.2	87.1
31	82.2	82.9	82.2	83.7	83.9	85.0	85.2	85.3	84.7	85.7	87.3	88.8	87.0	84.7
40	84.1	85.1	84.9	86.2	86.5	88.6	88.1	88.5	88.2	88.8	90.6	96.7	88.7	86.2
50	85.7	86.9	87.3	88.2	88.8	91.0	90.7	91.2	92.0	92.5	94.0	99.7	91.9	89.4
63	87.5	88.6	89.7	90.2	91.1	94.5	93.1	93.8	95.6	96.2	97.7	102.6	95.8	93.3
80	89.4	90.5	91.9	92.3	93.4	96.8	95.5	96.4	98.8	99.8	101.6	106.1	99.7	97.1
100	92.0	92.7	94.1	94.6	95.8	98.7	97.9	98.9	161.5	103.1	105.3	107.5	103.3	100.8
125	94.8	94.9	96.1	96.8	98.0	100.4	100.1	101.3	103.7	105.8	108.5	109.3	106.3	103.1
160	96.7	97.1	97.9	98.9	100.1	101.8	102.1	103.4	105.8	108.0	111.0	110.6	108.7	106.1
200	98.7	99.0	99.5	100.6	101.8	103.8	103.8	105.2	106.9	109.5	112.6	111.4	110.3	106.8
250	100.3	100.5	100.8	102.0	103.1	104.9	105.2	106.5	107.8	110.5	113.1	111.8	111.3	107.1
315	101.4	101.5	101.7	103.0	104.0	104.7	106.1	107.3	108.5	110.8	113.1	111.8	111.6	107.2
400	102.0	102.1	102.3	103.5	104.5	105.2	106.6	107.7	109.7	110.7	112.5	111.3	111.1	106.7
500	102.2	102.3	102.6	103.7	104.7	105.4	106.7	107.7	108.6	110.1	111.3	110.4	110.2	105.6
630	102.0	102.2	102.6	103.5	104.5	105.4	106.5	107.4	108.2	109.1	109.2	109.1	108.6	104.1
800	101.6	101.8	102.3	103.2	104.1	105.2	106.0	106.9	107.4	107.9	108.0	107.4	106.6	102.1
1000	101.1	101.4	102.0	102.9	103.7	104.8	105.4	106.2	106.5	106.5	106.2	105.5	104.3	99.8
1250	100.4	100.9	101.5	102.5	103.2	104.4	104.7	105.4	105.8	105.0	104.4	103.3	101.7	97.3
1600	100.2	100.5	101.1	102.1	102.8	104.0	104.0	104.5	104.5	103.8	102.6	101.0	98.9	94.7
2000	99.9	100.2	100.8	101.8	102.6	103.5	103.3	103.8	103.2	101.8	100.8	98.7	96.1	92.0
2500	99.4	99.9	100.5	101.6	102.3	103.2	102.7	103.1	102.1	100.2	99.0	96.5	93.4	89.6
3150	99.0	99.7	100.2	101.4	102.2	102.8	102.1	102.2	101.0	98.6	97.2	94.5	91.0	87.3
4000	99.1	99.3	99.8	101.1	101.8	102.4	101.4	101.2	99.8	97.0	95.6	92.7	88.9	85.8
5000	98.5	98.7	99.3	100.5	101.3	101.8	100.6	100.4	98.5	95.3	93.8	91.1	87.1	84.0
6300	97.6	97.8	98.3	99.5	100.2	100.7	98.9	98.4	96.7	93.5	92.4	89.7	85.7	82.8
8000	96.1	96.3	96.9	98.0	98.5	98.9	96.9	96.3	94.4	91.6	91.2	88.4	84.6	81.7
10000	93.9	94.2	94.7	95.7	96.0	96.3	94.2	93.6	91.5	89.3	90.2	87.1	83.4	80.6
12500	91.1	91.8	91.7	93.6	92.7	92.7	90.7	90.4	88.0	86.8	89.3	85.7	81.9	79.0
16000	87.5	87.8	87.8	88.6	88.8	88.2	86.6	86.6	84.3	84.1	87.6	84.2	79.3	76.7
20000	83.5	83.5	83.6	83.6	84.5	83.3	82.5	82.4	81.6	81.4	83.7	82.8	74.7	73.4
OVERALL SPL	113.1	113.3	113.8	114.8	115.7	116.7	117.1	117.9	118.6	119.9	121.7	121.0	119.8	115.7
PNDB	123.4	123.7	124.1	125.3	126.0	126.7	126.0	126.2	126.6	125.4	124.2	124.9	123.4	119.3

CORRECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 08108A RUN 1 DELTA 1 SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/ 8/70

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.1	38.3	44.6	51.2	58.1	62.2	71.3	76.1	81.1	86.4	96.9	102.2	106.9	116.2	120.3
REF DIST(FT)	12.6	10.8	9.5	8.6	7.8	7.5	7.0	6.9	6.7	6.7	6.7	6.8	7.0	7.4	7.7
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	100.0	100.0	100.0	100.0	100.0	114.0	102.0	100.0	100.0	100.0	101.0	103.0	105.0	106.0	109.0
31	99.0	100.0	100.0	100.0	100.0	113.0	101.0	102.0	101.0	102.0	104.0	104.0	105.0	105.0	107.0
40	97.0	98.0	98.0	98.0	99.0	112.0	99.0	99.0	99.0	99.0	102.0	104.0	103.0	105.0	108.0
50	102.0	103.0	102.0	101.0	103.0	112.0	102.0	102.0	104.0	104.0	104.0	105.0	105.0	107.0	107.0
63	102.0	101.0	103.0	101.0	104.0	111.0	103.0	104.0	102.0	103.0	105.0	105.0	104.0	106.0	107.0
80	98.0	99.0	99.0	100.0	100.0	111.0	100.0	101.0	101.0	103.0	105.0	104.0	104.0	108.0	108.0
100	99.0	100.0	100.0	100.0	101.0	110.0	103.0	104.0	105.0	103.0	107.0	106.0	107.0	110.0	111.0
125	100.0	100.0	102.0	103.0	103.0	111.0	107.0	108.0	108.0	108.0	109.0	112.0	112.0	114.0	115.0
160	105.0	107.0	107.0	108.0	108.0	113.0	112.0	112.0	113.0	114.0	116.0	116.0	118.0	119.0	119.0
200	108.0	105.0	105.0	106.0	107.0	112.0	107.0	109.0	109.0	109.0	112.0	113.0	113.0	116.0	115.0
250	105.0	107.0	106.0	108.0	108.0	114.0	111.0	112.0	113.0	114.0	115.0	116.0	117.0	119.0	118.0
315	104.0	105.0	107.0	107.0	108.0	114.0	110.0	111.0	112.0	112.0	113.0	114.0	115.0	116.0	117.0
400	104.0	106.0	106.0	107.0	108.0	115.0	111.0	112.0	111.0	113.0	114.0	115.0	115.0	116.0	117.0
500	104.0	106.0	107.0	108.0	109.0	115.0	111.0	111.0	112.0	112.0	114.0	115.0	116.0	117.0	117.0
630	107.0	108.0	109.0	110.0	111.0	114.0	113.0	113.0	113.0	114.0	115.0	116.0	116.0	118.0	119.0
800	106.0	109.0	110.0	111.0	112.0	115.0	113.0	115.0	115.0	115.0	116.0	117.0	118.0	119.0	119.0
1000	108.0	109.0	110.0	111.0	112.0	113.0	114.0	114.0	115.0	116.0	117.0	117.0	117.0	119.0	120.0
1250	108.0	110.0	111.0	118.0	113.0	113.0	114.0	114.0	115.0	116.0	117.0	117.0	117.0	119.0	120.0
1600	107.0	109.0	110.0	110.0	111.0	112.0	113.0	114.0	115.0	115.0	116.0	117.0	118.0	120.0	
2000	107.0	108.0	108.0	109.0	110.0	111.0	112.0	113.0	113.0	114.0	115.0	115.0	116.0	117.0	119.0
2500	107.0	108.0	108.0	108.0	109.0	110.0	111.0	112.0	113.0	114.0	114.0	115.0	115.0	117.0	118.0
3150	108.0	109.0	108.0	108.0	109.0	110.0	111.0	111.0	112.0	113.0	114.0	115.0	116.0	116.0	117.0
4000	108.0	109.0	108.0	107.0	108.0	109.0	110.0	111.0	111.0	112.0	114.0	114.0	115.0	116.0	116.0
5000	110.0	109.0	109.0	108.0	108.0	108.0	109.0	110.0	111.0	112.0	114.0	114.0	115.0	116.0	115.0
6300	111.0	110.0	110.0	108.0	107.0	108.0	108.0	108.0	110.0	111.0	113.0	113.0	114.0	115.0	114.0
8000	112.0	111.0	110.0	109.0	107.0	108.0	108.0	108.0	108.0	110.0	112.0	112.0	113.0	114.0	113.0
10000	111.0	109.0	109.0	107.0	106.0	106.0	106.0	107.0	108.0	109.0	110.0	112.0	112.0	113.0	112.0
12500	110.0	108.0	108.0	106.0	105.0	105.0	105.0	106.0	107.0	108.0	110.0	110.0	111.0	110.0	110.0
16000	108.0	107.0	106.0	106.0	104.0	104.0	104.0	105.0	104.0	105.0	107.0	108.0	109.0	108.0	107.0
20000	106.0	104.0	103.0	103.0	102.0	102.0	102.0	102.0	101.0	103.0	104.0	105.0	105.0	105.0	105.0
OVERALL SPL	121.6	121.9	122.1	122.3	122.8	126.7	124.5	125.2	125.7	126.6	127.8	128.4	129.1	130.3	130.9
PNDB	135.1	134.8	134.5	134.0	133.4	135.1	134.7	135.5	136.2	137.1	138.7	139.1	139.9	140.9	140.8

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	127.3	133.9	140.3	146.6	152.8	158.1	165.0	35.0	45.0	48.1	50.5	57.7	64.2	70.7	77.2
REF DIST(FT)	8.4	9.3	10.4	12.1	14.6	17.9	25.8	68.4	55.6	52.7	48.2	46.4	43.6	41.6	40.3
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	109.0	112.0	113.0	117.0	117.0	122.0	109.0	84.0	79.0	78.0	79.0	79.0	79.0	79.0	79.0
31	110.0	113.0	114.0	116.0	117.0	118.0	108.0	81.0	79.0	79.0	79.0	79.0	79.0	80.0	81.0
40	110.0	112.0	113.0	115.0	115.0	117.0	108.0	79.0	79.0	80.0	80.0	80.0	81.0	83.0	85.0
50	109.0	113.0	113.0	115.0	118.0	115.0	109.0	89.0	84.0	82.0	84.0	85.0	85.0	87.0	87.0
63	108.0	112.0	112.0	116.0	116.0	118.0	111.0	99.0	83.0	87.0	86.0	85.0	88.0	89.0	86.0
80	110.0	113.0	115.0	117.0	118.0	118.0	113.0	87.0	85.0	86.0	85.0	87.0	88.0	88.0	87.0
100	113.0	114.0	117.0	117.0	119.0	120.0	117.0	86.0	85.0	85.0	86.0	88.0	87.0	89.0	88.0
125	116.0	117.0	119.0	120.0	122.0	124.0	119.0	92.0	90.0	90.0	91.0	91.0	92.0	93.0	93.0
160	121.0	121.0	123.0	129.0	126.0	126.0	120.0	93.0	94.0	92.0	92.0	94.0	97.0	99.0	100.0
200	117.0	119.0	121.0	123.0	126.0	126.0	120.0	90.0	92.0	92.0	93.0	94.0	95.0	96.0	97.0
250	120.0	123.0	125.0	127.0	129.0	128.0	121.0	94.0	97.0	96.0	97.0	97.0	98.0	98.0	100.0
315	119.0	121.0	124.0	128.0	130.0	127.0	120.0	93.0	95.0	94.0	96.0	96.0	99.0	98.0	99.0
400	119.0	121.0	124.0	129.0	129.0	127.0	120.0	94.0	96.0	97.0	98.0	98.0	98.0	99.0	100.0
500	118.0	121.0	123.0	126.0	128.0	125.0	117.0	94.0	96.0	96.0	97.0	98.0	99.0	100.0	100.0
630	119.0	121.0	122.0	126.0	126.0	122.0	116.0	96.0	98.0	98.0	99.0	99.0	100.0	100.0	101.0
800	121.0	122.0	125.0	126.0	126.0	122.0	114.0	96.0	98.0	98.0	99.0	99.0	101.0	101.0	102.0
1000	121.0	123.0	123.0	124.0	124.0	120.0	113.0	97.0	98.0	99.0	99.0	100.0	101.0	102.0	103.0
1250	122.0	122.0	123.0	124.0	122.0	118.0	111.0	97.0	99.0	99.0	99.0	100.0	102.0	101.0	102.0
1600	121.0	122.0	122.0	122.0	119.0	115.0	109.0	96.0	98.0	97.0	98.0	99.0	99.0	101.0	101.0
2000	119.0	120.0	121.0	119.0	116.0	112.0	107.0	95.0	96.0	96.0	96.0	97.0	99.0	99.0	100.0
2500	116.0	118.0	118.0	117.0	114.0	110.0	106.0	93.0	95.0	96.0	96.0	96.0	99.0	98.0	99.0
3150	117.0	117.0	116.0	114.0	111.0	107.0	105.0	94.0	96.0	95.0	96.0	97.0	98.0	98.0	99.0
4000	115.0	115.0	114.0	112.0	109.0	105.0	102.0	93.0	95.0	94.0	95.0	96.0	97.0	97.0	98.0
5000	114.0	113.0	112.0	110.0	107.0	103.0	101.0	95.0	96.0	96.0	96.0	97.0	98.0	97.0	99.0
6300	112.0	111.0	110.0	108.0	105.0	101.0	101.0	95.0	96.0	96.0	97.0	96.0	97.0	96.0	98.0
8000	111.0	109.0	107.0	106.0	103.0	100.0	99.0	101.0	101.0	101.0	101.0	101.0	100.0	97.0	98.0
10000	110.0	108.0	106.0	104.0	101.0	98.0	97.0	94.0	94.0	94.0	94.0	94.0	94.0	92.0	94.0
12500	107.0	106.0	104.0	102.0	99.0	97.0	96.0	93.0	91.0	90.0	91.0	89.0	90.0	89.0	90.0
16000	106.0	103.0	102.0	100.0	97.0	95.0	94.0	92.0	88.0	88.0	89.0	87.0	87.0	86.0	87.0
20000	103.0	101.0	100.0	98.0	96.0	95.0	92.0	88.0	83.0	84.0	84.0	83.0	84.0	81.0	84.0
OVERALL SPL	131.9	133.2	134.5	136.9	137.7	136.2	129.5	109.2	109.9	109.8	110.3	110.8	111.9	112.0	112.9
PNDB	140.5	140.6	140.9	142.2	141.7	139.2	133.5	122.6	123.0	123.0	123.3	123.4	123.7	122.4	121.5

MICROPHONE#	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)#	83.7	87.0	93.6	100.0	106.6	113.1	119.5	125.8	129.0	135.3	145.0	150.0	155.0	160.0
REF DIST(FT)#	39.5	39.3	39.3	39.9	41.0	42.7	45.1	48.4	50.5	55.8	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	79.0	79.0	79.0	80.0	80.0	81.0	82.0	81.0	83.0	84.0	86.0	96.0	90.0	87.0
31	81.0	82.0	82.0	83.0	84.0	84.0	85.0	86.0	85.0	84.0	88.0	97.0	88.0	90.0
40	82.0	88.0	84.0	86.0	87.0	87.0	86.0	87.0	90.0	90.0	91.0	98.0	87.0	88.0
50	89.0	89.0	89.0	90.0	91.0	90.0	90.0	93.0	96.0	94.0	97.0	103.0	93.0	84.0
63	91.0	89.0	89.0	91.0	92.0	92.0	93.0	96.0	97.0	100.0	103.0	107.0	100.0	93.0
80	88.0	88.0	89.0	91.0	90.0	92.0	92.0	95.0	96.0	99.0	104.0	109.0	104.0	100.0
100	94.0	93.0	94.0	95.0	97.0	99.0	96.0	100.0	100.0	103.0	102.0	108.0	107.0	106.0
125	95.0	96.0	97.0	97.0	99.0	101.0	100.0	105.0	107.0	110.0	111.0	110.0	102.0	106.0
160	99.0	101.0	103.0	104.0	106.0	107.0	109.0	110.0	109.0	110.0	114.0	116.0	112.0	102.0
200	97.0	99.0	99.0	101.0	102.0	103.0	104.0	106.0	108.0	112.0	114.0	111.0	112.0	109.0
250	102.0	102.0	103.0	104.0	106.0	105.0	107.0	109.0	110.0	114.0	115.0	116.0	114.0	109.0
315	101.0	101.0	102.0	103.0	106.0	105.0	108.0	110.0	111.0	114.0	116.0	115.0	113.0	110.0
400	101.0	102.0	102.0	104.0	105.0	106.0	107.0	109.0	111.0	114.0	116.0	114.0	114.0	109.0
500	101.0	101.0	102.0	103.0	105.0	106.0	108.0	110.0	111.0	113.0	114.0	112.0	112.0	108.0
630	102.0	102.0	103.0	105.0	105.0	107.0	108.0	109.0	110.0	112.0	113.0	111.0	111.0	107.0
800	103.0	103.0	103.0	105.0	106.0	107.0	108.0	110.0	110.0	110.0	112.0	111.0	110.0	106.0
1000	104.0	104.0	104.0	105.0	106.0	108.0	108.0	109.0	110.0	109.0	111.0	109.0	108.0	105.0
1250	103.0	104.0	104.0	105.0	105.0	108.0	109.0	110.0	110.0	109.0	109.0	108.0	107.0	104.0
1600	102.0	103.0	103.0	104.0	104.0	106.0	107.0	108.0	108.0	107.0	107.0	106.0	104.0	101.0
2000	101.0	101.0	102.0	103.0	104.0	105.0	106.0	106.0	106.0	105.0	105.0	103.0	101.0	98.0
2500	100.0	101.0	101.0	103.0	103.0	104.0	105.0	105.0	104.0	104.0	102.0	100.0	97.0	94.0
3150	100.0	101.0	101.0	102.0	103.0	103.0	103.0	103.0	103.0	102.0	100.0	98.0	96.0	90.0
4000	99.0	100.0	100.0	101.0	103.0	103.0	102.0	102.0	101.0	99.0	97.0	94.0	90.0	87.0
5000	99.0	100.0	100.0	101.0	102.0	102.0	101.0	101.0	100.0	97.0	95.0	93.0	88.0	84.0
6300	98.0	99.0	99.0	100.0	101.0	102.0	100.0	100.0	99.0	96.0	94.0	90.0	86.0	82.0
8000	98.0	98.0	99.0	99.0	100.0	100.0	98.0	98.0	97.0	94.0	93.0	91.0	86.0	82.0
10000	95.0	94.0	95.0	96.0	97.0	97.0	95.0	94.0	93.0	91.0	91.0	88.0	83.0	80.0
12500	90.0	91.0	92.0	91.0	93.0	92.0	90.0	89.0	89.0	87.0	89.0	86.0	80.0	77.0
16000	87.0	87.0	87.0	87.0	88.0	88.0	86.0	85.0	85.0	84.0	86.0	85.0	78.0	76.0
20000	84.0	83.0	84.0	83.0	84.0	84.0	83.0	82.0	82.0	82.0	84.0	84.0	75.0	74.0
OVERALL SPL	113.9	114.4	114.8	116.1	117.2	118.2	119.2	120.5	121.1	122.9	124.4	123.9	122.2	118.4
PNDB	124.0	124.7	125.0	126.0	127.1	127.9	127.3	127.9	127.8	128.1	129.1	127.5	125.9	121.9

ALL CORRECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.1	38.3	44.6	51.2	58.1	42.2	71.3	76.1	81.1	86.4	96.9	102.2	106.9	116.2	120.3
REF DIST(FT)	12.6	10.8	9.5	8.6	7.8	7.5	7.0	6.9	6.7	6.7	6.7	6.8	7.0	7.4	7.7
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	100.0	100.0	100.0	100.0	100.0	114.0	102.0	100.0	100.0	100.0	101.0	103.0	105.0	106.0	109.0
31	99.0	100.0	100.0	100.0	100.0	113.0	101.0	102.0	101.0	102.0	104.0	104.0	105.0	105.0	107.0
40	97.0	98.0	98.0	98.0	99.0	112.0	99.0	99.0	99.0	99.0	102.0	104.0	103.0	105.0	108.0
50	102.0	103.0	102.0	103.0	103.0	112.0	102.0	102.0	104.0	104.0	104.0	105.0	105.0	107.0	107.0
63	102.0	101.0	101.0	101.0	104.0	111.0	103.0	104.0	102.0	103.0	105.0	105.0	104.0	106.0	107.0
80	98.0	99.0	99.0	100.0	100.0	111.0	100.0	101.0	101.0	103.0	105.0	104.0	104.0	108.0	108.0
100	99.0	100.0	100.0	100.0	101.0	110.0	103.0	104.0	105.0	103.0	107.0	106.0	107.0	110.0	111.0
125	100.0	100.0	102.0	103.0	103.0	111.0	107.0	108.0	108.0	108.0	109.0	112.0	112.0	114.0	115.0
160	105.0	107.0	107.0	108.0	108.0	113.0	112.0	112.0	113.0	114.0	116.0	116.0	118.0	119.0	119.0
200	104.0	105.0	105.0	106.0	107.0	112.0	107.0	109.0	109.0	109.0	112.0	113.0	113.0	114.0	115.0
250	105.0	107.0	106.0	108.0	108.0	114.0	111.0	112.0	113.0	114.0	115.0	116.0	117.0	119.0	118.0
315	104.0	105.0	107.0	107.0	108.0	114.0	110.0	111.0	112.0	112.0	113.0	114.0	115.0	116.0	117.0
400	104.0	106.0	106.0	107.0	108.0	115.0	111.0	112.0	111.0	113.0	114.0	115.0	115.0	116.0	117.0
500	104.0	106.0	107.0	108.0	109.0	115.0	111.0	111.0	112.0	112.0	114.0	115.0	116.0	117.0	117.0
630	107.0	108.0	109.0	110.0	111.0	114.0	113.0	113.0	113.0	114.0	115.0	116.0	116.0	118.0	119.0
800	106.0	109.0	110.0	111.0	112.0	115.0	113.0	115.0	115.0	115.0	116.0	117.0	118.0	119.0	119.0
1000	108.0	109.0	110.0	111.0	112.0	113.0	114.0	114.0	115.0	116.0	117.0	117.0	117.0	119.0	120.0
1250	108.0	110.0	111.0	112.0	113.0	113.0	114.0	114.0	115.0	116.0	117.0	117.0	117.0	119.0	120.0
1600	107.0	109.0	110.0	110.0	111.0	112.0	113.0	114.0	114.0	115.0	115.0	116.0	117.0	118.0	120.0
2000	107.0	108.0	108.0	109.0	110.0	111.0	112.0	113.0	113.0	114.0	115.0	115.0	116.0	117.0	119.0
2500	107.0	108.0	108.0	108.0	109.0	110.0	111.0	112.0	113.0	114.0	114.0	115.0	115.0	117.0	118.0
3150	108.0	109.0	108.0	108.0	109.0	110.0	111.0	111.0	112.0	113.0	114.0	115.0	116.0	116.0	117.0
4000	108.0	109.0	108.0	107.0	108.0	109.0	110.0	111.0	111.0	112.0	114.0	114.0	115.0	116.0	116.0
5000	110.0	109.0	109.0	108.0	108.0	108.0	109.0	110.0	111.0	112.0	114.0	114.0	115.0	116.0	115.0
6300	111.0	110.0	110.0	108.0	107.0	108.0	108.0	108.0	110.0	111.0	113.0	113.0	114.0	115.0	114.0
8000	112.0	111.0	110.0	109.0	107.0	108.0	108.0	108.0	108.0	110.0	112.0	112.0	113.0	114.0	113.0
10000	111.0	109.0	109.0	107.0	106.0	106.0	106.0	107.0	108.0	109.0	110.0	112.0	112.0	113.0	112.0
12500	110.0	108.0	108.0	106.0	105.0	105.0	105.0	106.0	107.0	108.0	110.0	110.0	111.0	110.0	110.0
16000	108.0	107.0	106.0	106.0	104.0	104.0	104.0	105.0	104.0	105.0	107.0	108.0	109.0	108.0	107.0
20000	106.0	104.0	103.0	103.0	102.0	102.0	102.0	102.0	101.0	103.0	104.0	105.0	105.0	105.0	105.0
OVERALL SPL	121.6	121.9	122.1	122.3	122.8	126.7	124.5	125.2	125.7	126.6	127.8	128.4	129.1	130.3	130.9
PNDB	135.1	134.8	134.5	134.0	133.4	135.1	134.7	135.5	136.2	137.1	138.7	139.1	139.9	140.9	140.8

MICROPHONE #	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE (DEG)	127.3	133.9	140.3	146.6	152.8	158.1	165.0	35.0	45.0	48.1	54.5	57.7	64.2	70.7	77.2
REF DIST (FT)	8.8	9.3	10.4	12.1	14.6	17.9	25.8	68.4	55.6	52.7	48.2	46.4	43.6	41.6	40.3
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ (HERTZ)															
25	109.0	112.0	113.0	117.0	117.0	122.0	109.0	84.0	79.0	78.0	79.0	79.0	79.0	79.0	79.0
31	110.0	113.0	114.0	116.0	117.0	118.0	108.0	81.0	79.0	79.0	79.0	79.0	79.0	80.0	81.0
40	110.0	112.0	113.0	115.0	115.0	117.0	108.0	79.0	79.0	80.0	80.0	80.0	81.0	84.0	85.0
50	106.0	111.0	113.0	115.0	116.0	115.0	109.0	89.0	84.0	82.0	84.0	85.0	85.0	87.0	87.0
63	108.0	112.0	112.0	116.0	116.0	118.0	111.0	99.0	83.0	87.0	86.0	85.0	88.0	89.0	86.0
80	110.0	113.0	115.0	117.0	118.0	118.0	113.0	87.0	85.0	86.0	85.0	87.0	88.0	88.0	87.0
100	113.0	114.0	117.0	117.0	119.0	120.0	117.0	86.0	85.0	85.0	86.0	88.0	87.0	89.0	88.0
125	116.0	117.0	119.0	120.0	122.0	124.0	119.0	92.0	90.0	90.0	91.0	91.0	92.0	93.0	93.0
160	121.0	121.0	123.0	125.0	126.0	126.0	120.0	93.0	94.0	92.0	92.0	94.0	97.0	99.0	100.0
200	117.0	119.0	121.0	123.0	126.0	128.0	120.0	90.0	92.0	92.0	93.0	94.0	95.0	96.0	97.0
250	120.0	123.0	125.0	127.0	129.0	128.0	121.0	94.0	97.0	96.0	97.0	97.0	98.0	98.0	100.0
315	119.0	121.0	124.0	128.0	130.0	127.0	120.0	93.0	95.0	94.0	96.0	96.0	99.0	98.0	99.0
400	119.0	121.0	124.0	129.0	129.0	127.0	120.0	94.0	96.0	97.0	98.0	98.0	98.0	99.0	100.0
500	118.0	121.0	123.0	126.0	128.0	125.0	117.0	94.0	96.0	96.0	97.0	98.0	99.0	100.0	100.0
630	119.0	121.0	122.0	126.0	126.0	122.0	116.0	96.0	98.0	98.0	99.0	99.0	100.0	100.0	101.0
800	121.0	122.0	123.0	126.0	126.0	122.0	114.0	96.0	98.0	98.0	99.0	99.0	101.0	101.0	102.0
1000	121.0	123.0	123.0	124.0	124.0	120.0	113.0	97.0	98.0	99.0	99.0	100.0	101.0	102.0	103.0
1250	122.0	122.0	123.0	124.0	122.0	118.0	111.0	97.0	99.0	99.0	99.0	100.0	102.0	101.0	102.0
1600	121.0	122.0	122.0	122.0	119.0	115.0	109.0	96.0	98.0	97.0	98.0	99.0	99.0	101.0	101.0
2000	119.0	120.0	121.0	119.0	116.0	112.0	107.0	95.0	96.0	96.0	96.0	97.0	99.0	99.0	100.0
2500	118.0	118.0	118.0	117.0	114.0	110.0	106.0	93.0	95.0	96.0	96.0	96.0	99.0	98.0	99.0
3150	117.0	117.0	116.0	114.0	111.0	107.0	105.0	94.0	96.0	95.0	96.0	97.0	98.0	98.0	99.0
4000	115.0	115.0	114.0	112.0	109.0	105.0	102.0	93.0	95.0	94.0	95.0	96.0	97.0	97.0	98.0
5000	114.0	113.0	112.0	110.0	107.0	103.0	101.0	95.0	96.0	96.0	96.0	97.0	98.0	97.0	99.0
6300	112.0	111.0	110.0	108.0	105.0	101.0	101.0	95.0	96.0	96.0	97.0	96.0	97.0	96.0	98.0
8000	111.0	109.0	107.0	106.0	103.0	100.0	99.0	101.0	101.0	101.0	101.0	101.0	100.0	97.0	98.0
10000	110.0	108.0	106.0	104.0	101.0	98.0	97.0	94.0	94.0	94.0	94.0	94.0	94.0	92.0	94.0
12500	107.0	106.0	104.0	102.0	99.0	97.0	96.0	93.0	91.0	90.0	91.0	89.0	90.0	89.0	90.0
16000	106.0	103.0	102.0	100.0	97.0	95.0	94.0	92.0	88.0	88.0	89.0	87.0	87.0	86.0	87.0
20000	103.0	101.0	100.0	98.0	96.0	95.0	92.0	88.0	83.0	84.0	84.0	83.0	84.0	83.0	84.0
OVERALL SPL	131.9	133.2	134.5	136.9	137.7	136.2	129.5	109.2	109.9	109.8	110.3	110.8	111.9	112.0	112.9
PNDb	140.5	140.6	140.9	142.2	141.7	139.2	133.5	122.6	123.0	123.0	123.3	123.4	123.7	122.4	123.5

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.7	87.0	93.6	100.0	106.6	113.1	119.5	125.8	129.0	135.3	145.0	150.0	155.0	160.0
REF DIST(FT)	39.9	39.5	39.3	39.9	41.0	42.7	45.1	48.4	50.5	55.8	66.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	79.0	79.0	79.0	80.0	80.0	81.0	82.0	81.0	83.0	84.0	86.0	96.0	90.0	87.0
31	81.0	82.0	82.0	83.0	84.0	84.0	85.0	86.0	85.0	84.0	88.0	97.0	88.0	90.0
40	82.0	88.0	84.0	86.0	87.0	87.0	86.0	87.0	90.0	90.0	91.0	98.0	87.0	88.0
50	89.0	89.0	89.0	90.0	91.0	90.0	90.0	93.0	96.0	94.0	97.0	103.0	93.0	84.0
63	91.0	89.0	89.0	91.0	92.0	92.0	93.0	96.0	97.0	100.0	103.0	107.0	100.0	91.0
80	88.0	88.0	89.0	91.0	90.0	92.0	92.0	95.0	96.0	99.0	104.0	109.0	104.0	100.0
100	94.0	93.0	94.0	95.0	97.0	99.0	96.0	100.0	100.0	103.0	102.0	108.0	107.0	106.0
125	95.0	96.0	97.0	97.0	99.0	101.0	100.0	105.0	107.0	110.0	111.0	110.0	102.0	106.0
160	99.0	101.0	103.0	104.0	106.0	107.0	109.0	110.0	109.0	110.0	114.0	116.0	112.0	102.0
200	97.0	99.0	99.0	101.0	102.0	103.0	104.0	106.0	108.0	112.0	114.0	111.0	112.0	109.0
250	102.0	102.0	103.0	104.0	106.0	105.0	107.0	109.0	110.0	114.0	115.0	116.0	114.0	109.0
315	101.0	101.0	102.0	103.0	106.0	105.0	108.0	110.0	111.0	114.0	116.0	115.0	113.0	110.0
400	101.0	102.0	102.0	104.0	105.0	106.0	107.0	109.0	111.0	114.0	116.0	114.0	114.0	109.0
500	101.0	101.0	102.0	103.0	105.0	106.0	108.0	110.0	111.0	113.0	114.0	112.0	112.0	108.0
630	102.0	102.0	103.0	105.0	105.0	107.0	108.0	109.0	110.0	112.0	113.0	111.0	111.0	107.0
800	103.0	103.0	103.0	105.0	106.0	107.0	108.0	110.0	110.0	110.0	112.0	111.0	110.0	106.0
1000	104.0	104.0	104.0	105.0	106.0	108.0	108.0	109.0	110.0	109.0	111.0	109.0	108.0	105.0
1250	103.0	104.0	104.0	105.0	105.0	108.0	109.0	110.0	110.0	109.0	109.0	108.0	107.0	104.0
1600	102.0	103.0	103.0	104.0	104.0	106.0	107.0	108.0	108.0	107.0	107.0	106.0	104.0	101.0
2000	101.0	101.0	102.0	103.0	104.0	105.0	106.0	106.0	106.0	105.0	105.0	103.0	101.0	98.0
2500	100.0	101.0	101.0	103.0	103.0	104.0	105.0	105.0	104.0	104.0	102.0	100.0	97.0	94.0
3150	100.0	101.0	101.0	102.0	103.0	103.0	103.0	103.0	103.0	102.0	100.0	98.0	94.0	90.0
4000	99.0	100.0	100.0	101.0	103.0	103.0	102.0	102.0	101.0	99.0	97.0	94.0	90.0	87.0
5000	99.0	100.0	100.0	101.0	102.0	102.0	101.0	101.0	100.0	97.0	95.0	93.0	88.0	84.0
6300	98.0	99.0	99.0	100.0	101.0	102.0	100.0	100.0	99.0	96.0	94.0	90.0	86.0	82.0
8000	98.0	98.0	99.0	99.0	100.0	100.0	98.0	98.0	97.0	94.0	93.0	91.0	86.0	82.0
10000	95.0	94.0	95.0	96.0	97.0	97.0	95.0	94.0	93.0	91.0	91.0	88.0	83.0	80.0
12500	90.0	91.0	92.0	91.0	93.0	92.0	90.0	89.0	89.0	87.0	89.0	86.0	80.0	77.0
16000	87.0	87.0	87.0	87.0	88.0	88.0	86.0	85.0	85.0	84.0	86.0	85.0	78.0	76.0
20000	84.0	83.0	84.0	83.0	84.0	84.0	83.0	82.0	82.0	82.0	84.0	84.0	75.0	73.0
OVERALL SPL	113.9	114.4	114.8	116.1	117.2	118.2	119.2	120.5	121.1	122.9	124.4	123.9	122.2	118.4
PNDB	124.0	124.7	125.0	126.0	127.1	127.9	127.3	127.9	127.8	128.1	129.1	127.5	125.9	121.9

-- VALUES AFTER CURVE FIT CALCULATIONS --

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.1	38.3	44.6	51.2	58.1	62.2	71.3	76.1	81.1	86.4	96.9	102.2	106.9	116.2	120.4
REF DIST(FT)	12.6	10.8	9.5	8.6	7.8	7.5	7.0	6.9	6.7	6.7	6.7	6.8	7.0	7.4	7.7
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQUENCY															
25	99.9	99.9	100.2	100.2	99.9	113.9	102.3	100.5	100.4	100.4	101.7	103.4	105.5	106.4	109.4
31	98.9	99.9	99.3	99.4	100.0	113.2	100.3	100.5	100.2	100.7	102.4	103.7	104.2	104.5	107.0
40	98.9	99.8	99.6	99.5	100.4	112.3	99.9	100.5	100.3	100.9	102.8	103.6	103.2	104.5	106.2
50	99.4	99.9	100.3	100.1	101.0	111.5	100.6	101.2	101.1	101.6	103.6	104.0	103.4	105.7	106.8
63	99.9	100.2	101.0	100.9	101.8	110.9	101.9	102.4	102.5	102.9	104.9	105.1	104.7	107.6	108.3
80	100.5	100.8	101.7	101.9	102.6	110.7	103.5	104.1	104.3	104.5	106.5	106.9	106.8	109.8	110.3
100	101.1	101.6	102.4	102.8	103.4	110.9	105.1	105.9	106.2	106.4	108.4	108.9	109.2	111.9	112.4
125	101.8	102.5	103.1	103.8	104.3	111.3	106.7	107.6	108.0	108.2	110.2	110.9	111.8	113.7	114.2
160	102.4	103.5	103.9	104.8	105.3	112.0	108.0	109.1	109.5	109.9	111.7	112.7	113.6	115.1	115.7
200	103.1	104.5	104.8	105.9	106.3	112.8	109.2	110.3	110.7	111.2	113.0	114.1	115.0	116.2	116.7
250	103.9	105.5	105.7	106.9	107.4	113.6	110.1	111.2	111.6	112.2	113.9	115.1	116.0	117.0	117.3
315	104.6	106.3	106.7	107.8	108.4	114.3	110.9	111.9	112.3	112.9	114.5	115.6	116.4	117.4	117.7
400	105.2	107.0	107.6	108.7	109.4	114.7	111.5	112.3	112.8	113.5	114.9	115.9	116.5	117.7	118.0
500	105.8	107.6	108.5	109.4	110.3	114.8	112.1	112.7	113.1	113.9	115.1	116.0	116.4	117.9	118.2
630	106.2	108.0	109.1	110.0	110.9	114.7	112.5	113.0	113.4	114.2	115.3	116.0	116.3	117.9	118.5
800	106.5	108.3	109.5	110.3	111.4	114.3	112.9	113.3	113.7	114.5	115.4	116.0	116.3	118.0	118.8
1000	106.7	108.5	109.6	110.4	111.8	113.6	113.1	113.6	113.9	114.7	115.5	116.0	116.3	118.0	119.1
1250	106.9	108.6	109.5	110.3	111.5	112.8	113.1	113.7	114.1	114.9	115.5	116.0	116.5	118.0	119.4
1600	107.0	108.7	109.2	110.0	111.1	111.9	113.0	113.7	114.1	114.9	115.5	116.0	116.6	117.9	119.4
2000	107.2	108.8	108.9	109.5	110.6	111.0	112.5	113.4	113.8	114.7	115.4	115.9	116.6	117.7	119.2
2500	107.6	108.9	108.7	108.9	109.8	110.2	111.9	112.7	113.3	114.3	115.1	115.6	116.4	117.4	118.7
3150	108.1	109.0	108.5	108.3	109.0	109.5	111.0	111.8	112.5	113.6	114.7	115.1	116.0	116.9	117.7
4000	108.9	109.1	108.5	107.8	108.2	109.0	110.0	110.6	111.5	112.6	114.0	114.4	115.3	116.2	116.4
5000	109.7	109.3	108.8	107.5	107.5	108.5	108.9	109.4	110.4	111.6	113.3	113.5	114.4	115.5	114.9
6300	110.5	109.5	109.1	107.4	106.9	107.9	107.9	108.2	109.3	110.5	112.5	112.7	113.5	114.6	113.5
8000	111.1	109.6	109.4	107.5	106.5	107.3	107.0	107.4	108.5	109.6	111.7	111.9	112.8	113.6	112.2
10000	111.1	109.4	109.3	107.5	106.0	106.4	106.2	106.9	107.7	108.8	110.8	111.3	112.1	112.4	111.3
12500	110.4	108.7	108.5	107.2	105.4	105.2	105.5	106.5	106.9	107.9	109.7	110.5	111.3	110.9	110.3
16000	108.6	107.1	106.4	105.9	104.2	103.7	104.3	105.3	105.0	106.3	107.7	108.8	109.5	108.6	108.5
20000	105.6	103.8	102.6	102.8	101.8	102.1	101.7	101.7	100.5	102.4	103.6	104.5	104.6	104.5	104.2
OVERALL SPL	121.5	121.8	122.0	122.1	122.7	126.7	124.4	125.1	125.5	126.4	127.6	128.3	128.9	130.1	130.8
PNDB	134.8	134.3	134.3	133.5	133.4	135.1	134.7	135.3	136.0	137.0	138.5	139.0	139.7	140.7	140.7

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	127.3	133.9	140.3	146.6	152.8	158.1	165.0	35.0	45.0	48.1	54.5	57.7	64.2	70.7	77.2
REF DIST(FT)	8.4	9.3	10.4	12.1	14.6	17.9	25.8	68.8	55.6	52.7	48.2	46.4	43.6	41.6	40.3
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	109.6	112.2	113.1	116.9	116.9	122.1	109.2	84.7	79.2	78.4	79.0	79.2	79.0	79.0	79.1
31	109.3	112.7	113.6	116.2	116.9	118.2	107.6	79.2	78.6	78.2	79.0	78.7	79.2	80.4	81.8
40	108.7	112.1	112.8	115.2	116.2	116.2	107.8	80.0	79.8	80.2	80.6	80.6	81.3	82.9	83.6
50	108.8	111.9	112.6	114.8	115.9	115.9	109.2	83.0	81.7	82.8	82.8	83.2	84.0	85.6	85.3
63	109.9	112.5	113.3	115.3	116.5	117.0	111.4	86.1	83.9	85.0	84.9	85.7	86.6	88.1	87.0
80	111.7	113.8	115.0	116.6	118.0	118.9	113.9	88.6	86.0	86.8	86.7	87.8	88.9	90.2	89.0
100	113.8	115.5	117.1	118.6	120.1	121.2	116.4	90.2	88.8	88.3	88.4	89.6	90.8	92.1	91.2
125	115.8	117.3	119.4	120.8	122.5	123.5	118.4	91.1	89.9	89.6	90.1	91.2	92.6	93.7	93.5
160	117.4	118.9	121.3	123.0	124.9	125.4	119.9	91.7	91.6	90.9	91.7	92.6	94.2	95.2	95.6
200	118.6	120.2	122.7	124.9	126.9	126.7	120.7	92.1	93.2	92.4	93.4	94.1	95.7	96.5	97.5
250	119.3	121.1	123.6	126.4	128.4	127.3	120.8	92.7	94.7	93.9	95.1	95.6	97.1	97.7	99.1
315	119.6	121.6	124.0	127.3	129.1	127.2	120.2	93.4	95.9	95.4	96.6	97.0	98.3	98.8	100.3
400	119.7	121.8	123.9	127.7	129.2	126.5	119.2	94.2	96.9	96.7	97.9	98.1	99.4	99.7	101.1
500	119.7	121.9	123.7	127.5	128.6	125.3	117.8	95.0	97.6	97.7	98.7	99.0	100.2	100.4	101.5
630	119.8	121.9	123.3	126.9	127.3	123.6	116.1	95.7	98.0	98.3	99.2	99.5	100.6	100.8	101.6
800	119.9	121.8	122.9	125.9	125.6	121.7	114.3	96.2	98.0	98.5	99.1	99.6	100.7	100.9	101.5
1000	120.2	121.7	122.5	124.6	123.5	119.5	112.5	96.4	97.8	98.2	98.7	99.3	100.5	100.8	101.2
1250	120.3	121.5	122.1	123.0	121.2	117.2	110.7	96.1	97.4	97.6	98.0	98.7	100.1	100.5	100.9
1600	120.3	121.1	121.4	121.2	118.8	114.8	109.0	95.7	96.9	96.8	97.2	98.0	99.6	100.0	100.6
2000	119.9	120.3	120.4	119.2	116.3	112.4	107.4	95.0	96.4	96.1	96.5	97.4	99.1	99.4	100.3
2500	119.0	119.0	118.9	117.0	113.9	109.9	105.9	94.4	96.1	95.6	96.0	97.0	98.7	98.8	100.0
3150	117.6	117.3	116.9	114.7	111.5	107.5	104.4	94.0	96.0	95.5	95.9	96.8	98.4	98.2	99.6
4000	115.7	115.2	114.5	112.3	109.2	105.2	102.9	93.8	96.0	95.7	96.2	96.9	98.2	97.6	99.1
5000	113.9	112.9	111.8	110.0	106.9	103.0	101.5	94.0	96.2	96.0	96.6	97.0	97.9	96.9	98.5
6300	111.5	110.6	109.2	107.7	104.8	101.0	100.1	94.4	96.3	96.3	96.8	96.9	97.4	95.9	97.5
8000	109.9	108.7	107.0	105.6	102.7	99.2	98.7	94.7	96.0	96.0	96.6	96.1	96.3	94.5	96.0
10000	109.0	107.2	105.4	103.8	100.8	97.9	97.4	94.7	94.9	94.7	95.3	94.3	94.3	92.6	94.0
12500	108.4	106.1	104.3	102.2	99.1	96.9	96.0	93.7	92.5	92.1	92.7	91.2	91.3	89.8	91.2
16000	107.0	104.4	103.0	100.4	97.4	95.9	94.3	91.5	88.5	88.1	88.6	87.0	87.5	86.4	87.7
20000	102.3	100.3	99.5	97.8	95.8	94.6	91.8	88.0	82.4	83.5	83.8	82.6	83.5	82.6	84.4
OVERALL SPL	131.7	133.1	134.5	136.8	137.7	136.1	129.5	108.1	109.5	109.4	110.1	110.5	111.7	111.8	112.7
PNDB	140.4	140.6	140.9	142.2	141.9	139.1	131.3	120.0	121.3	121.1	121.8	121.9	122.7	122.1	124.3

MICROPHONE #	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE (DEG)	83.7	87.0	93.6	100.0	106.6	113.1	119.5	125.8	129.0	135.3	145.0	150.0	155.0	160.0
REF DIST (FT)	39.5	39.3	39.3	39.9	41.0	42.7	45.1	48.4	50.5	55.8	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ (HERTZ)														
25	79.0	78.9	79.3	80.1	80.1	81.7	82.4	81.7	82.8	83.4	85.7	95.9	89.9	88.1
31	80.7	83.4	81.7	81.2	84.3	83.1	84.3	84.5	86.1	85.8	88.4	96.9	87.3	87.2
40	83.6	85.9	84.2	85.9	86.9	86.1	86.4	88.0	89.7	89.3	92.1	99.4	89.3	88.9
50	86.7	87.8	86.8	88.4	89.2	89.5	88.9	91.8	93.5	93.4	96.1	102.3	93.2	92.2
63	89.5	89.6	89.6	91.0	91.6	93.0	91.9	95.4	96.8	97.6	100.2	105.3	97.5	96.0
80	91.9	91.7	92.4	93.5	94.3	96.1	95.0	98.8	100.0	101.7	104.1	108.0	101.6	99.9
100	93.9	93.8	94.9	96.0	97.0	98.7	98.2	101.7	102.8	105.3	107.6	110.2	105.1	103.2
125	95.6	96.0	97.3	98.2	99.7	101.0	101.1	104.3	105.2	108.3	110.4	111.9	107.9	105.9
160	97.1	98.0	99.2	100.2	102.0	102.8	103.6	106.3	107.2	110.7	112.6	113.1	110.0	107.8
200	98.5	99.7	100.7	101.8	103.9	104.2	105.8	107.9	108.8	112.6	114.2	113.8	111.5	109.0
250	99.8	101.0	101.8	103.1	105.2	105.3	107.0	109.8	110.1	113.4	115.2	114.1	112.5	109.5
315	100.9	101.9	102.6	104.0	105.9	106.1	107.9	109.8	110.9	113.8	115.5	114.1	113.1	109.5
400	101.8	102.8	103.8	104.5	106.2	106.8	108.4	110.1	111.3	113.6	115.4	113.7	113.2	109.2
500	102.4	102.7	103.2	104.7	106.0	106.9	108.5	110.2	111.3	113.1	114.7	113.1	112.8	108.5
630	102.8	102.7	103.2	104.7	105.7	107.1	108.3	110.0	111.0	112.1	113.7	112.1	111.9	107.5
800	102.9	102.7	103.1	104.6	105.2	107.0	108.1	109.6	110.4	111.0	112.3	110.8	110.5	106.3
1000	102.7	102.6	102.9	104.4	104.8	106.8	107.7	108.9	109.6	109.6	110.7	109.3	108.6	104.8
1250	102.3	102.4	102.7	104.1	104.4	106.4	107.2	108.2	108.5	108.2	108.8	107.4	106.2	102.8
1600	101.7	102.3	102.5	103.7	104.1	105.9	106.7	107.3	107.3	106.6	106.7	105.2	103.4	100.5
2000	101.2	102.1	102.2	103.4	103.9	105.4	106.0	106.4	106.1	105.1	104.5	102.8	100.3	97.6
2500	100.6	101.8	101.9	103.0	103.8	104.8	105.2	105.3	104.7	103.4	102.2	100.3	97.1	94.4
3150	100.1	101.4	101.4	102.5	103.5	104.1	104.1	104.1	103.3	101.7	99.9	97.7	93.9	91.0
4000	99.6	100.7	100.8	101.9	103.0	103.2	102.8	102.7	101.8	99.9	97.6	95.1	91.0	87.5
5000	98.9	99.7	99.9	100.9	102.1	102.2	101.1	101.1	100.1	97.8	95.6	92.7	88.3	84.3
6300	98.0	98.3	98.7	99.6	100.8	100.9	99.1	99.1	98.2	95.8	93.7	90.6	86.1	81.7
8000	96.5	96.6	97.1	97.8	99.0	99.1	96.8	96.6	95.8	93.1	92.1	88.9	84.3	80.0
10000	94.3	94.4	95.0	95.3	96.5	96.6	94.1	93.4	93.0	90.4	90.6	87.6	82.6	79.0
12500	91.2	91.5	92.2	92.0	93.3	93.2	91.0	90.1	89.6	87.5	89.0	86.6	80.7	78.4
16000	87.4	87.8	88.5	87.8	89.1	88.8	87.2	85.9	85.7	84.5	86.9	85.5	78.3	77.0
20000	83.6	82.5	83.2	82.4	83.4	83.4	82.2	81.3	81.5	81.7	83.6	83.7	74.8	72.5
OVERALL SPL	113.7	114.2	114.7	115.9	117.1	118.0	119.0	120.4	121.1	122.8	124.4	123.6	122.0	118.6
PNDH	124.0	124.5	124.9	125.9	127.0	127.6	127.3	127.9	127.9	128.2	129.0	127.5	125.9	122.1

CONNECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 151150 RUN 1 DELTA 1 SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/13/70

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.7	45.1	51.6	58.5	64.2	68.8	78.9	84.6	90.3	95.8	101.0	106.3	116.3	120.3
REF DIST(FT)	12.5	10.7	9.4	8.5	7.7	7.4	7.2	6.8	6.7	6.7	6.7	6.8	6.9	7.8	7.7
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	100.0	100.0	100.0	100.0	101.0	100.0	101.0	101.0	101.0	105.0	104.0	103.0	103.0	108.0	106.0
31	99.0	100.0	100.0	99.0	100.0	99.0	101.0	105.0	100.0	104.0	104.0	104.0	104.0	107.0	107.0
40	98.0	99.0	99.0	99.0	100.0	99.0	100.0	101.0	101.0	103.0	104.0	102.0	103.0	106.0	106.0
50	103.0	103.0	104.0	102.0	103.0	103.0	104.0	108.0	104.0	105.0	106.0	105.0	107.0	107.0	108.0
63	104.0	102.0	103.0	105.0	104.0	105.0	103.0	104.0	106.0	106.0	105.0	106.0	107.0	107.0	106.0
80	100.0	102.0	104.0	103.0	102.0	100.0	101.0	103.0	103.0	104.0	104.0	105.0	106.0	107.0	106.0
100	108.0	108.0	108.0	104.0	104.0	105.0	108.0	110.0	111.0	110.0	111.0	111.0	112.0	112.0	113.0
125	108.0	108.0	105.0	104.0	106.0	107.0	109.0	109.0	111.0	111.0	111.0	110.0	111.0	112.0	112.0
160	105.0	104.0	107.0	106.0	108.0	107.0	108.0	108.0	111.0	109.0	110.0	111.0	112.0	112.0	113.0
200	111.0	113.0	113.0	113.0	114.0	113.0	113.0	112.0	113.0	112.0	113.0	114.0	115.0	115.0	115.0
250	118.0	121.0	120.0	119.0	120.0	119.0	119.0	122.0	122.0	123.0	124.0	124.0	124.0	124.0	124.0
315	131.0	138.0	133.0	132.0	133.0	132.0	132.0	135.0	136.0	137.0	137.0	137.0	137.0	137.0	137.0
400	112.0	113.0	114.0	113.0	115.0	114.0	115.0	117.0	118.0	118.0	118.0	119.0	119.0	119.0	119.0
500	109.0	111.0	114.0	113.0	115.0	115.0	115.0	116.0	116.0	116.0	117.0	117.0	117.0	119.0	119.0
630	114.0	119.0	124.0	121.0	122.0	123.0	125.0	124.0	123.0	119.0	120.0	121.0	121.0	124.0	125.0
800	109.0	110.0	111.0	112.0	112.0	113.0	113.0	114.0	114.0	114.0	115.0	115.0	116.0	118.0	118.0
1000	110.0	109.0	109.0	111.0	110.0	112.0	111.0	113.0	112.0	113.0	114.0	114.0	115.0	119.0	119.0
1250	109.0	110.0	110.0	109.0	110.0	111.0	111.0	112.0	112.0	114.0	114.0	116.0	116.0	117.0	116.0
1600	111.0	112.0	111.0	109.0	109.0	109.0	109.0	110.0	110.0	111.0	112.0	113.0	113.0	114.0	115.0
2000	111.0	112.0	112.0	110.0	109.0	110.0	109.0	110.0	110.0	111.0	112.0	112.0	112.0	113.0	113.0
2500	112.0	113.0	113.0	110.0	109.0	109.0	109.0	109.0	109.0	110.0	111.0	111.0	112.0	113.0	113.0
3150	112.0	114.0	114.0	112.0	110.0	110.0	109.0	110.0	110.0	110.0	111.0	112.0	112.0	112.0	112.0
4000	111.0	113.0	113.0	112.0	110.0	109.0	109.0	109.0	109.0	109.0	110.0	111.0	111.0	111.0	111.0
5000	111.0	113.0	114.0	113.0	111.0	109.0	109.0	109.0	108.0	109.0	109.0	110.0	110.0	110.0	110.0
6300	111.0	113.0	114.0	113.0	110.0	108.0	108.0	108.0	107.0	107.0	108.0	108.0	108.0	108.0	108.0
8000	112.0	111.0	113.0	112.0	109.0	108.0	107.0	107.0	106.0	107.0	107.0	107.0	106.0	107.0	107.0
10000	109.0	111.0	112.0	111.0	108.0	108.0	107.0	107.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0
12500	108.0	109.0	110.0	109.0	108.0	107.0	107.0	107.0	106.0	106.0	106.0	105.0	105.0	105.0	104.0
16000	107.0	107.0	108.0	107.0	107.0	106.0	105.0	106.0	104.0	104.0	104.0	104.0	104.0	103.0	103.0
20000	105.0	105.0	106.0	105.0	105.0	104.0	104.0	104.0	103.0	103.0	102.0	102.0	102.0	101.0	101.0
OVERALL SPL	132.1	135.0	134.4	133.3	134.1	133.3	133.6	136.0	136.0	137.6	137.7	137.8	137.8	138.0	138.0
PNDB	138.5	141.0	140.7	139.6	139.5	138.9	138.9	140.6	140.9	141.4	141.7	141.9	142.0	142.4	142.4

MICROPHONE #	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG) #	127.9	134.7	141.2	147.6	153.8	158.1	165.0	35.0	46.4	45.4	51.9	58.2	64.6	71.0	77.7
REF DIST(FT) #	8.4	9.4	10.6	12.8	15.1	17.9	25.8	68.8	55.1	55.1	49.9	46.2	43.4	41.5	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	109.0	112.0	115.0	114.0	116.0	114.0	111.0	85.0	79.0	79.0	79.0	80.0	80.0	78.0	78.0
31	110.0	111.0	113.0	113.0	114.0	112.0	106.0	83.0	80.0	80.0	79.0	80.0	80.0	79.0	80.0
40	109.0	109.0	112.0	111.0	112.0	110.0	110.0	82.0	81.0	81.0	81.0	82.0	83.0	82.0	83.0
50	110.0	109.0	112.0	112.0	110.0	110.0	114.0	86.0	87.0	87.0	88.0	88.0	89.0	88.0	90.0
63	108.0	109.0	111.0	113.0	109.0	112.0	113.0	88.0	90.0	90.0	88.0	91.0	89.0	93.0	88.0
80	109.0	113.0	111.0	113.0	112.0	112.0	110.0	89.0	85.0	85.0	87.0	87.0	87.0	86.0	87.0
100	112.0	114.0	116.0	115.0	114.0	115.0	113.0	90.0	90.0	90.0	93.0	94.0	95.0	95.0	94.0
125	114.0	113.0	115.0	116.0	116.0	116.0	114.0	92.0	94.0	94.0	94.0	94.0	95.0	93.0	94.0
160	114.0	115.0	117.0	117.0	117.0	117.0	112.0	94.0	94.0	94.0	93.0	92.0	94.0	95.0	98.0
200	117.0	117.0	118.0	118.0	119.0	117.0	112.0	96.0	99.0	99.0	102.0	99.0	99.0	98.0	99.0
250	124.0	123.0	121.0	124.0	122.0	121.0	114.0	107.0	104.0	104.0	105.0	110.0	111.0	107.0	102.0
315	136.0	135.0	128.0	135.0	134.0	133.0	126.0	121.0	116.0	116.0	117.0	124.0	129.0	120.0	106.0
400	119.0	119.0	120.0	118.0	117.0	114.0	109.0	98.0	101.0	101.0	100.0	103.0	104.0	103.0	102.0
500	120.0	120.0	119.0	118.0	115.0	112.0	107.0	98.0	100.0	100.0	100.0	103.0	100.0	102.0	103.0
630	129.0	130.0	127.0	129.0	119.0	118.0	111.0	110.0	102.0	102.0	106.0	110.0	103.0	107.0	110.0
800	119.0	119.0	117.0	115.0	110.0	106.0	107.0	96.0	97.0	97.0	98.0	100.0	99.0	100.0	101.0
1000	120.0	119.0	115.0	114.0	107.0	104.0	106.0	94.0	95.0	95.0	97.0	100.0	100.0	100.0	102.0
1250	116.0	116.0	114.0	111.0	105.0	102.0	104.0	96.0	95.0	95.0	98.0	98.0	98.0	98.0	99.0
1600	114.0	114.0	112.0	108.0	103.0	101.0	101.0	93.0	94.0	94.0	97.0	97.0	97.0	98.0	98.0
2000	113.0	112.0	110.0	107.0	102.0	101.0	100.0	93.0	95.0	95.0	96.0	97.0	97.0	98.0	98.0
2500	112.0	111.0	108.0	105.0	102.0	101.0	101.0	93.0	95.0	95.0	96.0	97.0	96.0	97.0	97.0
3150	111.0	110.0	107.0	104.0	101.0	100.0	102.0	94.0	96.0	96.0	96.0	97.0	96.0	97.0	98.0
4000	110.0	108.0	106.0	103.0	100.0	99.0	101.0	93.0	95.0	95.0	95.0	95.0	95.0	97.0	97.0
5000	109.0	107.0	105.0	102.0	99.0	99.0	101.0	94.0	95.0	95.0	95.0	96.0	95.0	97.0	97.0
6300	106.0	105.0	104.0	101.0	99.0	98.0	102.0	97.0	97.0	97.0	98.0	98.0	97.0	99.0	97.0
8000	106.0	104.0	102.0	100.0	98.0	98.0	101.0	103.0	102.0	102.0	103.0	103.0	101.0	101.0	99.0
10000	104.0	103.0	101.0	99.0	97.0	96.0	108.0	94.0	92.0	92.0	92.0	92.0	92.0	94.0	93.0
12500	103.0	102.0	100.0	98.0	96.0	96.0	104.0	94.0	90.0	90.0	90.0	90.0	89.0	91.0	90.0
16000	102.0	101.0	99.0	97.0	96.0	95.0	106.0	95.0	91.0	91.0	91.0	91.0	88.0	88.0	88.0
20000	100.0	100.0	98.0	97.0	95.0	95.0	99.0	90.0	83.0	83.0	83.0	84.0	81.0	84.0	83.0
OVERALL SPL	137.5	137.1	132.8	136.3	135.1	134.1	128.2	121.8	117.4	117.4	118.5	124.7	125.4	121.1	114.9
PNDB	141.9	141.3	138.4	139.5	137.7	136.5	133.4	126.5	124.4	124.4	125.4	128.6	128.7	126.6	124.0

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	81.0	87.5	94.2	100.9	107.5	110.8	117.2	123.6	129.9	136.3	139.3	150.0	155.0	160.0
REF DIST(FT)	39.7	39.3	39.4	40.0	41.2	42.0	44.1	47.1	51.2	56.8	60.2	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	78.0	78.0	80.0	78.0	79.0	83.0	80.0	80.0	80.0	81.0	81.0	92.0	84.0	81.0
31	80.0	81.0	80.0	81.0	81.0	83.0	81.0	81.0	83.0	81.0	81.0	90.0	84.0	83.0
40	84.0	83.0	84.0	83.0	84.0	84.0	85.0	86.0	85.0	86.0	85.0	89.0	84.0	82.0
50	89.0	90.0	89.0	90.0	90.0	89.0	90.0	91.0	91.0	91.0	91.0	95.0	89.0	81.0
63	89.0	91.0	92.0	93.0	90.0	90.0	91.0	94.0	93.0	96.0	94.0	101.0	94.0	87.0
80	87.0	88.0	89.0	87.0	89.0	89.0	89.0	91.0	93.0	95.0	97.0	102.0	97.0	94.0
100	91.0	93.0	94.0	96.0	95.0	95.0	94.0	95.0	96.0	97.0	97.0	103.0	102.0	100.0
125	94.0	95.0	95.0	96.0	97.0	97.0	98.0	98.0	103.0	104.0	102.0	101.0	100.0	101.0
160	99.0	97.0	98.0	99.0	99.0	100.0	100.0	101.0	101.0	104.0	103.0	108.0	101.0	96.0
200	99.0	99.0	100.0	100.0	102.0	102.0	103.0	104.0	105.0	105.0	105.0	104.0	104.0	99.0
250	104.0	104.0	106.0	105.0	107.0	109.0	113.0	113.0	108.0	109.0	109.0	107.0	111.0	105.0
315	114.0	113.0	119.0	116.0	118.0	120.0	127.0	126.0	115.0	120.0	121.0	113.0	124.0	118.0
400	103.0	102.0	104.0	104.0	104.0	104.0	107.0	106.0	106.0	107.0	106.0	104.0	104.0	98.0
500	104.0	102.0	104.0	104.0	105.0	106.0	106.0	108.0	107.0	106.0	105.0	104.0	102.0	99.0
630	112.0	109.0	109.0	109.0	111.0	111.0	110.0	113.0	113.0	108.0	109.0	115.0	112.0	107.0
800	102.0	101.0	101.0	103.0	104.0	104.0	104.0	105.0	105.0	104.0	103.0	100.0	97.0	94.0
1000	102.0	101.0	101.0	104.0	104.0	104.0	106.0	107.0	106.0	104.0	102.0	99.0	93.0	90.0
1250	100.0	100.0	100.0	101.0	104.0	103.0	104.0	104.0	103.0	101.0	100.0	96.0	91.0	90.0
1600	99.0	99.0	100.0	101.0	101.0	102.0	102.0	101.0	100.0	98.0	97.0	93.0	88.0	86.0
2000	98.0	99.0	99.0	100.0	101.0	100.0	101.0	100.0	98.0	96.0	95.0	92.0	88.0	85.0
2500	98.0	99.0	99.0	100.0	101.0	100.0	100.0	98.0	98.0	95.0	94.0	89.0	88.0	85.0
3150	98.0	99.0	99.0	100.0	101.0	100.0	100.0	99.0	97.0	95.0	94.0	90.0	87.0	85.0
4000	98.0	99.0	98.0	99.0	100.0	99.0	99.0	98.0	96.0	95.0	93.0	89.0	87.0	85.0
5000	98.0	98.0	98.0	99.0	100.0	98.0	99.0	98.0	96.0	95.0	92.0	90.0	87.0	85.0
6300	98.0	99.0	98.0	99.0	99.0	98.0	99.0	98.0	96.0	93.0	91.0	90.0	87.0	85.0
8000	101.0	100.0	98.0	100.0	99.0	98.0	98.0	97.0	94.0	93.0	91.0	91.0	88.0	85.0
10000	94.0	94.0	94.0	95.0	95.0	94.0	94.0	93.0	92.0	90.0	89.0	88.0	86.0	83.0
12500	91.0	91.0	91.0	92.0	91.0	91.0	90.0	89.0	88.0	87.0	85.0	87.0	84.0	81.0
16000	88.0	87.0	87.0	88.0	88.0	87.0	86.0	85.0	85.0	84.0	84.0	86.0	83.0	78.0
20000	84.0	84.0	83.0	84.0	84.0	84.0	83.0	83.0	82.0	82.0	81.0	84.0	81.0	75.0
OVERALL SPL	118.0	116.8	120.5	118.8	120.4	121.8	127.6	126.8	119.5	121.6	122.2	119.1	124.7	118.9
PNDB	125.6	125.0	126.5	125.9	127.1	127.6	131.2	130.6	125.9	126.5	126.4	124.7	126.6	121.7

ALL CORRECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.7	45.1	51.6	59.5	64.2	68.8	78.9	84.6	90.3	95.8	101.0	106.3	116.3	120.3
REF DIST(FT)	12.5	10.7	9.4	8.5	7.7	7.4	7.2	6.8	6.7	6.7	6.7	6.8	6.9	7.4	7.7
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	100.0	100.0	100.0	100.0	101.0	100.0	101.0	101.0	103.0	105.0	104.0	103.0	103.0	108.0	106.0
31	99.0	100.0	100.0	99.0	100.0	99.0	101.0	105.0	106.0	104.0	104.0	104.0	104.0	107.0	107.0
40	98.0	99.0	99.0	99.0	100.0	99.0	100.0	101.0	101.0	103.0	104.0	102.0	103.0	106.0	106.0
50	103.0	103.0	104.0	102.0	103.0	103.0	104.0	104.0	104.0	105.0	106.0	105.0	107.0	107.0	108.0
63	104.0	102.0	103.0	105.0	104.0	105.0	103.0	104.0	106.0	106.0	105.0	106.0	107.0	107.0	106.0
80	100.0	102.0	104.0	103.0	102.0	100.0	101.0	103.0	103.0	104.0	104.0	105.0	106.0	107.0	106.0
100	108.0	108.0	108.0	104.0	104.0	105.0	108.0	110.0	111.0	110.0	111.0	111.0	112.0	112.0	113.0
125	108.0	108.0	105.0	104.0	106.0	107.0	109.0	109.0	111.0	111.0	111.0	110.0	111.0	112.0	112.0
160	105.0	104.0	107.0	106.0	108.0	107.0	108.0	108.0	111.0	109.0	110.0	111.0	112.0	112.0	113.0
200	111.0	113.0	113.0	113.0	114.0	113.0	113.0	112.0	113.0	112.0	113.0	114.0	115.0	115.0	115.0
250	118.0	121.0	120.0	119.0	120.0	119.0	119.0	122.0	122.0	123.0	124.0	124.0	124.0	124.0	124.0
315	131.0	135.0	133.0	132.0	133.0	132.0	132.0	135.0	136.0	137.0	137.0	137.0	137.0	137.0	137.0
400	112.0	113.0	114.0	113.0	115.0	114.0	115.0	117.0	118.0	118.0	118.0	119.0	119.0	119.0	119.0
500	109.0	111.0	114.0	113.0	115.0	115.0	115.0	116.0	116.0	117.0	117.0	117.0	119.0	119.0	119.0
630	114.0	119.0	124.0	121.0	122.0	123.0	125.0	124.0	123.0	119.0	120.0	121.0	121.0	124.0	125.0
800	109.0	110.0	111.0	112.0	112.0	113.0	113.0	114.0	114.0	114.0	115.0	115.0	116.0	116.0	116.0
1000	110.0	109.0	109.0	111.0	110.0	112.0	111.0	113.0	112.0	113.0	118.0	118.0	118.0	119.0	119.0
1250	109.0	110.0	110.0	109.0	110.0	111.0	111.0	112.0	112.0	114.0	114.0	116.0	116.0	117.0	116.0
1600	111.0	112.0	111.0	109.0	109.0	109.0	109.0	110.0	110.0	111.0	112.0	113.0	113.0	114.0	115.0
2000	111.0	112.0	112.0	110.0	109.0	110.0	109.0	110.0	110.0	111.0	112.0	112.0	112.0	113.0	113.0
2500	112.0	113.0	113.0	110.0	109.0	109.0	109.0	109.0	109.0	110.0	111.0	111.0	112.0	113.0	113.0
3150	112.0	114.0	114.0	112.0	110.0	110.0	109.0	110.0	110.0	110.0	111.0	112.0	112.0	112.0	112.0
4000	111.0	113.0	113.0	112.0	110.0	109.0	109.0	109.0	109.0	109.0	110.0	111.0	111.0	111.0	111.0
5000	111.0	113.0	114.0	113.0	111.0	109.0	109.0	109.0	108.0	109.0	109.0	110.0	110.0	110.0	110.0
6300	111.0	113.0	114.0	113.0	110.0	108.0	108.0	108.0	107.0	107.0	108.0	108.0	108.0	108.0	108.0
8000	112.0	111.0	113.0	112.0	109.0	108.0	107.0	107.0	106.0	107.0	107.0	107.0	106.0	107.0	107.0
10000	109.0	111.0	112.0	111.0	108.0	108.0	107.0	107.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0
12500	108.0	109.0	110.0	109.0	108.0	107.0	107.0	107.0	106.0	106.0	106.0	105.0	105.0	105.0	104.0
16000	107.0	107.0	108.0	107.0	107.0	106.0	105.0	106.0	104.0	104.0	104.0	104.0	104.0	103.0	103.0
20000	105.0	105.0	106.0	105.0	105.0	104.0	104.0	104.0	103.0	103.0	102.0	102.0	102.0	101.0	101.0
OVERALL SPL	132.1	135.0	134.9	133.3	134.1	133.3	133.6	136.0	136.8	137.6	137.7	137.8	137.8	138.0	138.0
PNDB	138.5	141.0	140.7	139.6	139.5	138.9	138.9	140.6	140.9	141.4	141.7	141.9	142.0	142.4	142.4

MICROPHONE #	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	127.9	134.7	141.2	147.6	153.8	158.1	165.0	35.0	45.4	45.4	51.9	58.2	64.6	71.0	77.7
REF DIST(FT)	8.4	9.8	10.6	12.4	15.1	17.9	25.8	68.8	55.1	55.1	49.9	46.2	43.4	41.5	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	109.0	112.0	115.0	114.0	116.0	114.0	111.0	85.0	79.0	79.0	79.0	80.0	80.0	78.0	78.0
31	110.0	111.0	113.0	113.0	114.0	112.0	106.0	83.0	80.0	80.0	79.0	80.0	80.0	79.0	80.0
40	109.0	109.0	110.0	111.0	112.0	110.0	110.0	82.0	81.0	81.0	81.0	82.0	84.0	82.0	83.0
50	110.0	109.0	112.0	112.0	110.0	110.0	114.0	86.0	87.0	87.0	88.0	88.0	89.0	88.0	90.0
63	108.0	109.0	111.0	113.0	109.0	112.0	113.0	88.0	90.0	90.0	88.0	91.0	89.0	93.0	88.0
80	109.0	113.0	111.0	113.0	112.0	112.0	110.0	89.0	85.0	85.0	87.0	87.0	87.0	86.0	87.0
100	112.0	114.0	116.0	115.0	116.0	115.0	113.0	90.0	90.0	90.0	93.0	94.0	95.0	95.0	93.0
125	114.0	113.0	115.0	116.0	116.0	116.0	114.0	92.0	94.0	94.0	94.0	94.0	95.0	93.0	94.0
160	114.0	115.0	117.0	117.0	117.0	117.0	112.0	94.0	94.0	94.0	93.0	92.0	94.0	95.0	98.0
200	117.0	117.0	118.0	118.0	119.0	117.0	112.0	96.0	99.0	99.0	102.0	99.0	99.0	98.0	99.0
250	124.0	123.0	121.0	124.0	122.0	121.0	114.0	107.0	104.0	104.0	105.0	110.0	111.0	107.0	102.0
315	136.0	135.0	128.0	135.0	134.0	133.0	126.0	121.0	116.0	116.0	117.0	124.0	125.0	120.0	106.0
400	119.0	119.0	120.0	118.0	117.0	114.0	109.0	98.0	101.0	101.0	100.0	103.0	104.0	103.0	102.0
500	120.0	120.0	119.0	118.0	115.0	112.0	107.0	98.0	100.0	100.0	100.0	103.0	100.0	102.0	101.0
630	128.0	130.0	127.0	129.0	119.0	118.0	111.0	110.0	102.0	102.0	106.0	110.0	103.0	107.0	110.0
800	119.0	119.0	117.0	115.0	110.0	106.0	107.0	96.0	97.0	97.0	98.0	100.0	99.0	100.0	101.0
1000	120.0	119.0	115.0	114.0	107.0	104.0	106.0	98.0	95.0	95.0	97.0	100.0	100.0	100.0	102.0
1250	116.0	116.0	114.0	111.0	105.0	102.0	104.0	96.0	95.0	95.0	98.0	98.0	98.0	98.0	99.0
1600	114.0	114.0	112.0	108.0	103.0	101.0	101.0	93.0	94.0	94.0	97.0	97.0	97.0	98.0	98.0
2000	113.0	112.0	110.0	107.0	102.0	101.0	100.0	93.0	95.0	95.0	96.0	97.0	97.0	98.0	98.0
2500	112.0	111.0	108.0	106.0	102.0	101.0	101.0	93.0	95.0	95.0	96.0	97.0	96.0	97.0	97.0
3150	111.0	110.0	107.0	104.0	101.0	100.0	102.0	94.0	96.0	96.0	96.0	97.0	96.0	97.0	98.0
4000	110.0	108.0	106.0	103.0	100.0	99.0	101.0	93.0	95.0	95.0	95.0	95.0	95.0	97.0	97.0
5000	109.0	107.0	105.0	102.0	99.0	99.0	101.0	94.0	95.0	95.0	99.0	96.0	95.0	97.0	97.0
6300	106.0	105.0	104.0	101.0	99.0	98.0	102.0	97.0	97.0	97.0	98.0	98.0	97.0	99.0	97.0
8000	106.0	104.0	102.0	100.0	98.0	98.0	101.0	103.0	102.0	102.0	103.0	103.0	101.0	101.0	99.0
10000	104.0	103.0	101.0	99.0	97.0	96.0	108.0	94.0	92.0	92.0	92.0	92.0	92.0	94.0	93.0
12500	103.0	102.0	100.0	98.0	96.0	96.0	104.0	98.0	90.0	90.0	90.0	90.0	89.0	91.0	90.0
16000	102.0	101.0	99.0	97.0	96.0	95.0	106.0	95.0	91.0	91.0	91.0	91.0	88.0	88.0	88.0
20000	100.0	100.0	98.0	97.0	95.0	95.0	99.0	90.0	83.0	83.0	83.0	84.0	83.0	84.0	83.0
OVERALL SPL	137.5	137.1	132.8	136.3	135.1	134.1	128.2	121.8	117.4	117.4	118.5	124.7	125.4	121.1	114.9
PNDB	141.9	141.3	138.4	139.5	137.7	136.5	133.4	126.5	124.4	124.4	125.4	128.6	128.7	126.6	124.0

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	81.0	87.5	94.2	100.9	107.5	110.8	117.2	123.6	129.9	136.3	139.1	150.0	165.0	160.0
REF DIS(FT)	39.7	39.8	39.8	40.0	41.2	42.0	44.1	47.1	51.2	56.8	60.2	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	78.0	78.0	80.0	78.0	79.0	83.0	80.0	80.0	80.0	81.0	81.0	92.0	84.0	81.0
31	80.0	81.0	80.0	81.0	81.0	83.0	81.0	81.0	83.0	81.0	81.0	90.0	84.0	83.0
40	84.0	83.0	84.0	83.0	84.0	84.0	85.0	86.0	86.0	86.0	85.0	89.0	84.0	82.0
50	89.0	90.0	89.0	90.0	90.0	89.0	90.0	91.0	91.0	91.0	91.0	95.0	89.0	81.0
63	89.0	91.0	92.0	93.0	90.0	90.0	91.0	94.0	93.0	96.0	94.0	101.0	94.0	87.0
80	87.0	88.0	89.0	87.0	89.0	89.0	89.0	91.0	93.0	95.0	97.0	102.0	97.0	94.0
100	91.0	93.0	94.0	96.0	95.0	95.0	94.0	95.0	96.0	97.0	97.0	103.0	102.0	100.0
125	98.0	95.0	95.0	96.0	97.0	97.0	98.0	98.0	103.0	104.0	102.0	101.0	100.0	101.0
160	99.0	97.0	98.0	99.0	99.0	100.0	100.0	101.0	101.0	104.0	103.0	108.0	101.0	96.0
200	99.0	99.0	100.0	100.0	102.0	102.0	103.0	104.0	105.0	105.0	105.0	104.0	106.0	99.0
250	104.0	104.0	106.0	105.0	107.0	109.0	113.0	113.0	108.0	109.0	109.0	107.0	111.0	105.0
315	114.0	113.0	119.0	116.0	118.0	120.0	127.0	126.0	115.0	120.0	121.0	113.0	124.0	118.0
400	103.0	102.0	104.0	104.0	104.0	104.0	107.0	106.0	106.0	107.0	106.0	104.0	104.0	98.0
500	104.0	102.0	104.0	104.0	105.0	106.0	106.0	108.0	107.0	106.0	105.0	104.0	102.0	99.0
630	112.0	109.0	109.0	109.0	111.0	111.0	110.0	113.0	113.0	108.0	109.0	115.0	112.0	107.0
800	102.0	101.0	101.0	103.0	104.0	104.0	104.0	105.0	105.0	104.0	103.0	100.0	97.0	94.0
1000	102.0	101.0	101.0	104.0	104.0	104.0	106.0	107.0	106.0	104.0	102.0	99.0	93.0	90.0
1250	100.0	100.0	100.0	101.0	104.0	103.0	104.0	104.0	103.0	101.0	100.0	96.0	91.0	90.0
1600	99.0	99.0	100.0	101.0	101.0	102.0	102.0	101.0	100.0	98.0	97.0	93.0	88.0	86.0
2000	98.0	99.0	99.0	100.0	101.0	100.0	101.0	100.0	98.0	96.0	95.0	92.0	88.0	85.0
2500	98.0	99.0	99.0	100.0	101.0	100.0	100.0	98.0	98.0	95.0	94.0	89.0	88.0	85.0
3150	98.0	99.0	99.0	100.0	101.0	100.0	100.0	99.0	97.0	95.0	94.0	90.0	87.0	85.0
4000	98.0	99.0	98.0	99.0	100.0	99.0	99.0	98.0	96.0	95.0	93.0	89.0	87.0	85.0
5000	98.0	98.0	98.0	99.0	100.0	98.0	99.0	98.0	96.0	95.0	92.0	90.0	87.0	85.0
6300	98.0	99.0	98.0	99.0	99.0	98.0	99.0	98.0	96.0	93.0	91.0	90.0	87.0	85.0
8000	101.0	100.0	98.0	100.0	99.0	98.0	98.0	97.0	94.0	93.0	91.0	91.0	88.0	89.0
10000	94.0	94.0	94.0	95.0	95.0	94.0	94.0	93.0	92.0	90.0	89.0	88.0	86.0	83.0
12500	91.0	91.0	91.0	92.0	91.0	91.0	90.0	89.0	88.0	87.0	85.0	87.0	84.0	81.0
16000	88.0	87.0	87.0	88.0	88.0	87.0	86.0	85.0	85.0	84.0	84.0	86.0	83.0	78.0
20000	84.0	84.0	83.0	84.0	84.0	84.0	83.0	83.0	82.0	82.0	81.0	80.0	81.0	79.0
OVERALL SPL	118.0	116.8	120.5	118.8	120.4	121.8	127.6	126.8	119.5	121.6	122.2	119.1	124.7	118.9
PNDB	125.6	125.0	126.5	125.9	127.1	127.6	131.2	130.6	125.9	126.5	126.8	124.7	126.6	121.7

-- VALUES AFTER CURVE FIT CALCULATIONS --

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE (DEG)	32.2	38.7	45.1	51.6	59.5	64.2	68.8	78.9	84.6	90.3	95.8	101.0	106.3	116.3	120.3
REF DIST (FT)	12.5	10.7	9.4	8.5	7.7	7.4	7.2	6.8	6.7	6.7	6.7	6.8	6.9	7.4	7.7
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	99.4	99.6	99.2	99.2	99.7	98.9	100.4	101.3	101.9	104.8	103.7	102.9	102.7	108.1	106.2
31	100.1	100.7	101.0	100.2	102.4	101.0	102.0	103.3	102.1	104.1	104.5	103.5	104.0	106.7	106.5
40	99.8	100.3	101.3	100.6	101.7	100.9	101.7	103.5	101.8	104.0	104.6	103.8	104.7	106.4	106.6
50	100.1	100.4	101.5	101.0	100.6	100.5	101.3	103.4	102.2	104.3	104.7	104.2	105.4	106.7	106.8
63	101.4	101.7	102.1	101.7	100.6	101.0	101.8	103.6	103.5	105.1	105.2	105.0	106.3	107.4	107.3
80	103.7	103.8	103.4	102.7	102.0	102.4	103.4	104.6	105.6	106.2	106.3	106.3	107.7	108.4	108.3
100	106.5	106.5	105.2	104.2	104.5	104.8	105.8	106.2	108.3	107.7	107.9	108.1	109.3	109.7	109.7
125	109.2	109.1	107.3	106.0	107.7	107.5	108.6	108.2	111.1	109.4	109.8	110.2	111.2	111.3	111.4
160	111.4	111.2	109.3	108.0	110.9	110.3	111.3	110.4	113.6	111.2	111.8	112.3	113.2	113.1	113.4
200	112.9	112.6	111.1	109.8	113.5	112.7	113.6	112.4	115.7	112.9	113.8	114.3	115.0	115.1	115.5
250	113.6	113.1	112.3	111.4	115.4	114.4	115.1	114.1	117.0	114.5	115.4	116.0	116.5	116.9	117.4
315	113.5	112.9	112.9	112.5	116.3	115.4	115.9	115.2	117.6	115.7	116.6	117.2	117.6	118.4	118.9
400	112.9	112.2	113.1	113.0	116.2	115.6	115.9	115.7	117.5	116.4	117.3	117.9	118.2	119.6	120.0
500	111.9	111.4	112.7	113.0	115.3	115.2	115.3	115.7	116.8	116.7	117.4	118.0	118.3	120.2	120.5
630	111.0	110.5	112.2	112.6	113.9	114.3	114.2	115.2	115.6	116.4	117.1	117.7	118.0	120.2	120.3
800	110.3	110.0	111.5	111.8	112.3	113.2	112.9	114.3	114.3	115.6	116.3	116.9	117.2	119.6	119.6
1000	109.9	109.9	111.0	110.9	110.8	111.9	111.6	113.1	112.9	114.5	115.2	115.8	116.2	118.5	118.5
1250	109.9	110.3	110.7	110.1	109.6	110.9	110.4	112.0	111.6	113.3	114.0	114.6	115.1	117.0	117.0
1600	110.2	111.0	110.8	109.6	109.0	110.0	109.6	110.9	110.5	112.0	112.8	113.5	113.9	115.4	115.4
2000	110.8	112.0	111.3	109.5	108.8	109.4	109.0	110.0	109.8	110.8	111.7	112.4	112.8	113.8	113.9
2500	111.4	112.9	112.1	110.0	109.0	109.1	108.8	109.3	109.2	109.8	110.8	111.5	111.8	112.4	112.5
3150	111.8	113.5	113.0	110.9	109.6	109.0	108.8	109.0	108.9	109.2	110.1	110.9	111.0	111.2	111.4
4000	111.9	113.7	113.8	112.0	110.1	109.0	108.8	108.8	108.6	108.8	109.6	110.3	110.3	110.3	110.5
5000	111.6	113.4	114.3	113.0	110.5	109.0	108.7	108.6	108.2	108.5	109.1	109.7	109.6	109.6	109.6
6300	111.0	112.6	114.3	113.8	110.4	108.8	108.4	108.5	107.7	108.1	108.9	108.9	108.7	108.8	108.7
8000	110.2	111.5	113.4	112.9	109.8	108.3	107.9	108.1	106.9	107.5	107.7	107.8	107.6	107.8	107.6
10000	109.2	110.2	111.8	111.2	108.7	107.7	107.1	107.4	106.0	106.4	106.6	106.3	106.1	106.3	106.0
12500	108.3	109.0	109.7	108.7	107.3	106.7	106.1	106.4	104.9	105.0	105.1	104.6	104.5	104.4	104.1
16000	107.2	107.5	107.5	106.1	106.1	105.6	105.0	105.3	103.9	103.6	103.5	103.0	103.0	102.4	102.2
20000	104.9	104.9	106.4	105.5	105.5	104.3	104.2	104.4	103.3	103.4	102.8	102.6	102.6	101.4	101.4
OVERALL SPL	125.0	125.4	125.7	124.9	125.7	125.4	125.5	125.7	126.9	126.5	127.2	127.7	128.1	129.5	129.6
PNDB	136.4	137.0	138.3	137.4	136.1	135.3	135.1	135.3	135.2	135.4	136.0	136.4	136.5	137.1	137.2

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	127.9	134.7	141.2	147.6	153.8	158.1	165.0	35.0	45.4	45.4	51.9	58.2	64.6	71.0	77.7
REF DIST(FT)	8.8	9.4	10.6	12.4	15.1	17.9	25.8	68.4	55.1	55.1	49.9	46.2	43.4	41.9	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	108.8	112.1	114.6	114.8	115.9	113.7	109.9	84.8	78.6	78.6	78.6	79.8	79.6	77.4	77.3
31	110.3	110.6	113.7	113.6	114.3	112.4	108.9	83.0	80.9	80.9	80.1	80.5	80.9	80.4	81.4
40	109.5	109.5	112.3	112.7	111.7	110.7	109.7	81.4	80.6	80.6	80.9	81.6	82.7	82.8	84.2
50	108.6	109.2	111.2	112.1	110.0	109.9	111.0	84.9	80.7	80.7	82.5	83.2	84.9	84.8	86.2
63	108.9	109.7	111.0	112.3	110.0	110.5	112.2	86.9	82.1	82.1	85.1	86.5	87.3	86.6	88.0
80	109.4	110.8	111.7	113.2	111.5	112.1	113.0	88.9	85.0	85.0	88.6	88.3	89.9	88.3	89.9
100	111.2	112.4	113.3	114.6	113.8	114.3	113.3	90.9	88.8	88.8	92.5	91.4	92.6	90.4	92.0
125	113.5	114.3	115.4	116.5	116.3	116.4	115.3	92.6	92.9	92.9	96.1	94.5	95.3	92.7	94.5
160	115.9	116.2	117.7	117.9	118.4	117.9	117.9	94.1	96.7	96.7	99.1	97.3	97.7	95.2	97.2
200	118.1	117.9	119.8	119.3	119.7	118.5	118.4	95.3	99.7	99.7	101.2	99.6	99.8	97.7	99.7
250	119.8	119.3	121.6	120.1	120.0	118.1	118.8	96.2	101.5	101.5	102.3	101.3	101.5	100.0	102.0
315	120.8	120.2	122.6	120.3	119.2	116.7	118.1	96.8	102.3	102.3	102.4	102.3	102.5	101.0	103.7
400	121.1	120.7	122.8	119.8	117.5	114.5	118.2	97.1	101.9	101.9	101.8	102.7	102.9	101.0	104.7
500	120.9	120.6	122.3	118.7	115.1	111.8	109.2	97.0	100.8	100.8	100.7	102.4	102.8	103.4	105.0
630	120.1	120.0	120.9	117.0	112.4	109.0	108.1	96.6	99.3	99.3	99.5	101.7	102.1	103.1	104.8
800	119.0	119.0	119.0	115.1	109.7	106.4	106.9	95.9	97.6	97.6	98.2	100.7	101.0	102.1	103.3
1000	117.7	117.7	116.6	112.9	107.2	104.1	105.5	95.2	96.2	96.2	97.3	99.5	99.6	100.6	101.8
1250	116.3	116.1	114.2	110.7	105.0	102.4	104.0	94.3	95.1	95.1	96.6	98.4	98.3	99.1	100.1
1600	114.9	114.4	111.8	108.7	103.4	101.2	102.6	93.6	94.9	94.9	96.3	97.5	97.1	97.7	98.6
2000	113.5	112.7	109.7	106.8	102.2	100.5	101.4	93.2	94.8	94.5	96.2	96.8	96.3	96.8	97.5
2500	112.2	111.0	108.0	105.3	101.4	100.2	100.6	93.0	94.7	94.7	96.3	96.5	95.8	96.3	96.9
3150	110.9	109.9	106.7	104.0	100.7	99.9	100.2	93.3	95.2	95.2	96.3	96.4	95.7	96.8	96.9
4000	109.6	108.0	105.7	102.9	100.2	99.6	100.4	93.8	95.7	95.7	96.2	96.4	95.8	97.6	97.2
5000	108.3	106.6	104.9	101.9	99.5	99.1	101.2	94.6	95.8	95.8	95.9	96.4	95.9	98.4	97.6
6300	106.9	105.4	104.1	101.0	98.7	98.3	102.4	95.4	95.6	95.6	95.3	96.2	95.6	98.7	97.6
8000	105.6	104.2	102.9	100.0	97.9	97.3	104.0	95.9	94.9	94.9	94.5	95.4	94.7	97.9	96.6
10000	104.2	103.0	101.4	99.0	97.0	96.3	105.3	95.8	93.5	93.5	93.5	93.9	92.9	95.6	94.4
12500	103.0	101.9	99.6	97.9	96.3	95.6	105.7	94.9	91.4	91.4	91.9	91.5	90.0	91.7	90.8
16000	101.7	100.8	98.2	97.1	95.7	95.2	104.2	93.1	88.4	88.4	89.0	88.4	86.5	87.2	86.5
20000	100.1	100.1	98.4	97.0	95.1	95.0	99.7	90.6	83.9	83.9	83.5	84.8	83.5	84.2	83.5
OVERALL SPL	130.3	130.1	131.3	129.4	128.3	126.8	124.0	108.9	111.2	111.2	111.9	112.4	112.5	112.9	114.0
PNDB	136.9	136.4	136.4	133.6	131.1	129.4	130.7	120.8	121.3	121.3	121.6	122.3	121.9	123.6	123.5

MICROPHONE #	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	81.0	87.5	94.2	100.9	107.5	110.8	117.2	123.6	129.9	136.3	139.3	150.0	155.0	160.0
REF DIST(FT)	39.7	39.3	39.8	40.0	41.2	42.0	44.1	47.1	51.2	56.8	60.2	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	77.3	77.5	78.9	77.7	78.4	82.6	79.5	79.3	79.8	80.6	80.5	92.1	83.8	81.6
31	81.8	81.9	82.4	81.0	82.3	83.8	82.4	82.7	83.2	82.2	82.1	89.1	83.9	81.1
40	84.4	84.8	84.8	85.0	84.8	85.1	85.1	86.3	86.3	85.9	85.6	91.2	85.8	82.9
50	86.1	87.0	86.8	88.6	87.0	86.7	87.7	89.3	89.2	90.1	89.5	94.9	89.1	85.6
63	87.8	88.9	88.9	91.5	89.2	88.9	90.0	91.7	92.0	93.9	93.3	98.5	92.7	89.1
80	89.7	91.0	91.2	93.7	91.8	91.5	92.4	93.8	94.7	97.2	96.5	101.3	96.1	92.7
100	92.1	93.1	93.7	95.6	94.5	94.8	94.8	95.9	97.6	100.0	99.3	103.2	99.1	96.2
125	94.9	95.4	96.3	97.4	97.3	97.4	97.3	98.2	100.5	102.3	101.7	104.3	101.5	99.1
160	97.4	97.6	98.8	99.1	99.9	100.4	99.9	100.7	103.3	104.2	103.7	105.0	103.3	101.3
200	100.0	99.5	101.0	100.9	102.2	103.0	102.4	103.3	105.8	105.9	105.4	105.8	104.5	102.6
250	102.0	101.1	102.6	102.5	103.9	105.1	104.5	105.8	108.0	107.1	106.6	105.9	104.8	103.0
315	103.5	102.2	103.7	104.0	105.1	106.6	106.2	107.9	109.4	107.8	107.3	105.3	104.4	102.4
400	104.2	102.8	104.2	105.0	105.7	107.3	107.2	109.3	110.1	108.0	107.4	104.8	103.1	100.9
500	104.3	102.8	104.0	105.5	105.6	107.3	107.6	109.8	109.9	107.5	106.9	103.9	101.5	98.9
630	103.6	102.3	103.4	105.4	105.2	106.8	107.3	109.4	108.8	106.4	105.7	102.5	99.3	96.1
800	102.6	101.5	102.8	104.8	104.4	105.7	106.4	108.0	107.1	104.8	104.1	100.5	96.6	93.6
1000	101.2	100.6	101.3	103.7	103.5	104.3	105.1	106.1	105.0	102.8	102.0	98.3	93.9	91.0
1250	99.9	99.7	100.2	102.3	102.6	102.9	103.6	103.8	102.7	100.6	99.7	95.8	91.4	88.6
1600	98.8	99.1	99.3	101.0	101.8	101.6	102.1	101.5	100.5	98.5	97.5	93.5	89.2	86.8
2000	98.1	98.7	98.7	99.9	101.2	100.5	100.9	99.7	98.7	96.7	95.6	91.4	87.6	85.5
2500	97.8	98.7	98.5	99.3	100.9	99.8	100.1	98.5	97.4	95.5	94.1	90.0	86.8	84.8
3150	97.9	98.9	98.5	99.1	100.7	99.4	99.7	98.0	96.7	94.7	93.1	89.3	86.5	84.7
4000	98.3	99.2	98.7	99.3	100.5	99.1	99.5	98.1	96.3	94.5	92.5	89.3	86.9	84.9
5000	98.6	99.3	98.4	99.4	100.1	98.8	99.3	98.1	96.2	94.3	92.2	89.7	87.4	85.1
6300	98.8	98.8	98.1	99.4	99.2	98.1	98.7	98.0	95.7	93.9	91.7	90.1	87.7	85.2
8000	97.4	97.4	96.8	98.4	97.6	96.7	97.1	96.6	94.4	92.7	90.6	90.1	87.4	84.6
10000	95.2	94.9	94.4	95.9	95.1	94.3	94.3	93.5	91.9	90.4	88.7	89.2	86.2	83.2
12500	91.8	91.3	91.0	92.8	91.7	91.0	90.4	89.8	88.4	87.0	85.9	87.3	84.2	80.9
16000	87.6	87.2	86.9	87.4	87.8	87.2	85.9	84.5	84.5	83.5	82.9	85.0	82.0	78.0
20000	84.0	83.9	83.1	84.3	84.0	83.9	82.9	83.2	82.2	82.2	81.4	84.4	81.9	75.0
OVERALL SPL	118.8	113.3	114.0	115.2	115.7	116.5	116.7	117.0	118.2	116.8	116.1	115.1	113.0	110.7
PNDB	124.0	124.0	123.9	125.1	125.3	125.0	125.3	125.2	124.6	122.8	121.8	119.8	117.4	114.9

CORRECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 17117A RUN 1 DELTA 1 SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/13/78

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	38.3	38.7	40.3	51.8	59.3	63.3	72.6	77.6	83.1	88.8	93.6	104.1	109.2	113.8	122.0
REF DIST(FT)	12.5	10.7	9.4	6.5	7.8	7.8	7.0	6.8	6.7	6.7	6.7	6.9	7.1	7.3	7.9
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	100.0	100.0	100.0	100.0	100.0	100.0	102.0	102.0	102.0	104.0	104.0	107.0	108.0	107.0	110.0
31	99.0	101.0	99.0	100.0	101.0	99.0	100.0	101.0	103.0	104.0	104.0	107.0	107.0	108.0	110.0
40	97.0	98.0	98.0	100.0	100.0	98.0	101.0	100.0	101.0	104.0	104.0	105.0	105.0	109.0	110.0
50	104.0	104.0	103.0	104.0	105.0	99.0	105.0	105.0	105.0	106.0	106.0	107.0	109.0	108.0	112.0
63	103.0	101.0	105.0	105.0	105.0	103.0	105.0	105.0	106.0	105.0	105.0	107.0	108.0	110.0	110.0
80	99.0	101.0	104.0	103.0	103.0	104.0	104.0	103.0	104.0	104.0	105.0	108.0	109.0	108.0	109.0
100	104.0	104.0	105.0	103.0	103.0	102.0	107.0	107.0	109.0	108.0	109.0	111.0	111.0	113.0	113.0
125	108.0	109.0	108.0	106.0	109.0	108.0	111.0	110.0	111.0	111.0	114.0	111.0	114.0	115.0	115.0
160	107.0	105.0	105.0	109.0	109.0	108.0	112.0	112.0	113.0	113.0	114.0	115.0	116.0	117.0	119.0
200	104.0	107.0	108.0	109.0	110.0	110.0	111.0	111.0	113.0	112.0	112.0	113.0	114.0	115.0	117.0
250	109.0	111.0	111.0	113.0	114.0	111.0	114.0	114.0	117.0	117.0	117.0	118.0	118.0	119.0	120.0
315	119.0	120.0	124.0	127.0	131.0	115.0	130.0	132.0	133.0	133.0	133.0	136.0	136.0	137.0	137.0
400	109.0	114.0	112.0	113.0	116.0	133.0	116.0	117.0	118.0	118.0	118.0	120.0	120.0	121.0	122.0
500	109.0	110.0	113.0	113.0	115.0	117.0	114.0	116.0	118.0	117.0	118.0	117.0	119.0	118.0	118.0
630	114.0	113.0	117.0	115.0	116.0	115.0	115.0	115.0	116.0	117.0	117.0	118.0	117.0	118.0	120.0
800	113.0	114.0	119.0	116.0	118.0	117.0	121.0	118.0	122.0	120.0	122.0	118.0	118.0	119.0	120.0
1000	109.0	110.0	111.0	112.0	113.0	116.0	114.0	114.0	119.0	119.0	116.0	117.0	117.0	117.0	119.0
1250	109.0	110.0	111.0	111.0	112.0	113.0	113.0	114.0	114.0	114.0	116.0	117.0	117.0	117.0	119.0
1600	108.0	108.0	109.0	110.0	110.0	112.0	111.0	111.0	113.0	114.0	114.0	115.0	116.0	117.0	117.0
2000	108.0	109.0	109.0	109.0	109.0	110.0	110.0	111.0	112.0	113.0	114.0	115.0	116.0	116.0	116.0
2500	108.0	109.0	109.0	109.0	109.0	110.0	110.0	111.0	112.0	112.0	113.0	115.0	115.0	116.0	116.0
3150	109.0	109.0	110.0	110.0	110.0	109.0	114.0	110.0	112.0	112.0	113.0	116.0	115.0	116.0	116.0
4000	108.0	108.0	109.0	109.0	109.0	110.0	109.0	109.0	111.0	111.0	112.0	110.0	116.0	114.0	115.0
5000	109.0	109.0	110.0	111.0	110.0	108.0	109.0	109.0	110.0	110.0	111.0	113.0	113.0	114.0	114.0
6300	109.0	109.0	110.0	111.0	109.0	109.0	107.0	108.0	109.0	109.0	110.0	112.0	112.0	112.0	112.0
8000	113.0	109.0	110.0	112.0	109.0	107.0	107.0	108.0	108.0	108.0	109.0	111.0	111.0	111.0	110.0
10000	108.0	109.0	109.0	110.0	108.0	109.0	107.0	107.0	108.0	108.0	108.0	110.0	110.0	110.0	110.0
12500	108.0	107.0	108.0	109.0	107.0	108.0	106.0	106.0	107.0	106.0	107.0	108.0	108.0	109.0	107.0
16000	107.0	106.0	107.0	107.0	106.0	108.0	105.0	105.0	105.0	104.0	105.0	107.0	107.0	106.0	106.0
20000	104.0	103.0	105.0	104.0	104.0	107.0	103.0	103.0	103.0	102.0	103.0	103.0	103.0	104.0	103.0
OVERALL SPL	124.6	130.3	128.5	129.3	132.3	140.0	131.8	133.2	134.4	134.3	134.4	136.9	137.0	137.0	138.1
PNDB	136.3	136.9	136.3	137.2	138.4	148.3	138.1	139.8	140.2	140.0	140.8	142.6	142.5	143.3	143.5

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	125.0	132.4	138.9	145.2	151.5	158.1	165.0	35.0	44.9	48.1	51.3	57.7	64.1	70.6	77.2
REF DIST(FT)	8.8	9.0	10.1	11.7	14.0	17.9	25.8	68.4	58.6	52.7	50.3	46.4	43.6	41.6	40.2
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	109.0	111.0	115.0	110.0	121.0	122.0	109.0	85.0	79.0	80.0	78.0	79.0	79.0	79.0	80.0
31	111.0	111.0	113.0	110.0	119.0	119.0	107.0	83.0	79.0	79.0	79.0	79.0	80.0	80.0	80.0
40	109.0	109.0	114.0	110.0	119.0	117.0	106.0	81.0	79.0	79.0	80.0	80.0	82.0	81.0	81.0
50	110.0	112.0	113.0	116.0	117.0	115.0	109.0	83.0	85.0	83.0	84.0	84.0	86.0	89.0	88.0
63	110.0	113.0	114.0	114.0	115.0	114.0	110.0	89.0	87.0	88.0	88.0	90.0	92.0	90.0	90.0
80	111.0	111.0	115.0	115.0	117.0	117.0	112.0	90.0	88.0	90.0	88.0	89.0	88.0	87.0	90.0
100	115.0	115.0	117.0	118.0	119.0	118.0	113.0	90.0	87.0	88.0	89.0	91.0	92.0	93.0	92.0
125	114.0	116.0	117.0	121.0	121.0	119.0	115.0	97.0	96.0	94.0	97.0	98.0	97.0	97.0	95.0
160	118.0	121.0	122.0	122.0	123.0	122.0	117.0	98.0	97.0	94.0	98.0	94.0	96.0	99.0	101.0
200	117.0	118.0	122.0	123.0	125.0	121.0	116.0	93.0	97.0	94.0	98.0	98.0	98.0	98.0	100.0
250	121.0	122.0	125.0	127.0	126.0	123.0	116.0	99.0	99.0	99.0	101.0	102.0	101.0	101.0	102.0
315	130.0	131.0	140.0	142.0	142.0	136.0	132.0	115.0	105.0	114.0	110.0	119.0	109.0	114.0	110.0
400	123.0	123.0	126.0	129.0	130.0	128.0	116.0	100.0	98.0	101.0	103.0	104.0	100.0	102.0	104.0
500	119.0	121.0	125.0	126.0	129.0	120.0	110.0	100.0	99.0	102.0	102.0	101.0	103.0	105.0	104.0
630	122.0	124.0	126.0	128.0	126.0	110.0	112.0	102.0	102.0	101.0	104.0	101.0	103.0	103.0	103.0
800	121.0	128.0	126.0	126.0	123.0	110.0	109.0	106.0	104.0	104.0	103.0	102.0	103.0	106.0	105.0
1000	120.0	122.0	122.0	122.0	119.0	113.0	107.0	97.0	98.0	99.0	104.0	100.0	101.0	102.0	102.0
1250	119.0	121.0	122.0	121.0	117.0	111.0	107.0	97.0	98.0	99.0	98.0	99.0	100.0	100.0	101.0
1600	118.0	119.0	119.0	118.0	114.0	108.0	105.0	94.0	96.0	96.0	96.0	97.0	98.0	99.0	100.0
2000	116.0	118.0	118.0	115.0	112.0	106.0	103.0	93.0	98.0	96.0	95.0	97.0	98.0	98.0	99.0
2500	116.0	117.0	116.0	113.0	110.0	105.0	103.0	93.0	98.0	96.0	94.0	96.0	97.0	98.0	99.0
3150	116.0	116.0	115.0	111.0	108.0	104.0	103.0	93.0	95.0	96.0	95.0	96.0	97.0	97.0	99.0
4000	114.0	114.0	112.0	110.0	106.0	102.0	101.0	92.0	98.0	95.0	95.0	95.0	96.0	96.0	98.0
5000	113.0	113.0	111.0	108.0	104.0	100.0	100.0	94.0	96.0	97.0	96.0	95.0	96.0	96.0	97.0
6300	112.0	111.0	109.0	106.0	102.0	99.0	99.0	94.0	96.0	96.0	96.0	95.0	95.0	96.0	97.0
8000	109.0	109.0	107.0	104.0	100.0	98.0	99.0	103.0	102.0	104.0	103.0	101.0	99.0	101.0	99.0
10000	109.0	108.0	106.0	102.0	99.0	97.0	97.0	95.0	94.0	94.0	93.0	92.0	93.0	92.0	93.0
12500	106.0	106.0	104.0	101.0	97.0	96.0	96.0	93.0	90.0	90.0	90.0	89.0	89.0	89.0	90.0
16000	105.0	104.0	102.0	99.0	96.0	94.0	95.0	94.0	89.0	89.0	88.0	88.0	87.0	87.0	87.0
20000	102.0	102.0	100.0	97.0	95.0	94.0	93.0	89.0	84.0	84.0	84.0	84.0	83.0	84.0	84.0
OVERALL SPL	139.0	138.6	141.2	143.0	142.9	137.6	132.9	116.9	118.3	116.3	119.2	120.0	118.1	118.8	119.6
PNDB	144.0	144.1	145.5	146.1	146.2	140.0	136.1	126.0	124.1	126.7	126.4	126.6	125.5	124.0	125.9

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.0	87.2	93.6	100.0	106.8	113.0	119.4	128.8	120.0	138.4	145.0	150.0	155.0	160.0
REF DIST(FT)	30.0	30.3	30.3	30.9	40.0	42.6	45.1	48.4	50.5	55.9	60.4	70.5	92.9	114.8
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	80.0	79.0	80.0	80.0	80.0	81.0	82.0	82.0	88.0	83.0	84.0	99.0	88.0	95.0
31	81.0	88.0	81.0	88.0	88.0	83.0	84.0	84.0	81.0	85.0	86.0	99.0	88.0	95.0
40	83.0	85.0	84.0	87.0	88.0	88.0	89.0	89.0	89.0	90.0	89.0	96.0	87.0	93.0
50	87.0	89.0	90.0	90.0	90.0	90.0	92.0	93.0	93.0	94.0	95.0	100.0	90.0	92.0
63	91.0	91.0	91.0	93.0	92.0	95.0	95.0	95.0	97.0	97.0	101.0	108.0	97.0	94.0
80	88.0	88.0	90.0	91.0	90.0	92.0	92.0	95.0	96.0	99.0	102.0	107.0	103.0	99.0
100	94.0	94.0	94.0	97.0	98.0	96.0	98.0	100.0	98.0	100.0	103.0	106.0	104.0	103.0
126	95.0	96.0	96.0	99.0	99.0	101.0	104.0	104.0	104.0	104.0	109.0	106.0	102.0	104.0
160	103.0	102.0	102.0	103.0	104.0	106.0	106.0	105.0	107.0	108.0	113.0	114.0	109.0	102.0
200	100.0	98.0	100.0	101.0	103.0	103.0	104.0	104.0	108.0	110.0	112.0	107.0	110.0	104.0
250	103.0	104.0	105.0	105.0	105.0	105.0	107.0	109.0	111.0	110.0	114.0	114.0	109.0	106.0
315	120.0	123.0	123.0	121.0	119.0	113.0	117.0	122.0	125.0	124.0	130.0	131.0	122.0	124.0
400	106.0	107.0	107.0	107.0	107.0	106.0	108.0	111.0	112.0	113.0	114.0	116.0	110.0	108.0
500	104.0	103.0	104.0	105.0	106.0	106.0	107.0	111.0	111.0	112.0	113.0	109.0	110.0	105.0
630	104.0	103.0	104.0	106.0	106.0	106.0	109.0	110.0	110.0	112.0	114.0	112.0	110.0	105.0
800	104.0	106.0	104.0	106.0	107.0	107.0	108.0	109.0	110.0	112.0	112.0	109.0	108.0	104.0
1000	103.0	103.0	103.0	105.0	105.0	106.0	108.0	107.0	107.0	109.0	109.0	107.0	105.0	101.0
1250	102.0	102.0	102.0	104.0	106.0	106.0	107.0	107.0	107.0	107.0	107.0	106.0	103.0	99.0
1600	101.0	101.0	101.0	103.0	104.0	104.0	105.0	105.0	105.0	105.0	105.0	102.0	100.0	95.0
2000	100.0	100.0	101.0	102.0	103.0	103.0	104.0	103.0	104.0	101.0	102.0	99.0	98.0	92.0
2500	100.0	99.0	100.0	102.0	103.0	104.0	104.0	102.0	102.0	100.0	99.0	96.0	98.0	89.0
3150	99.0	99.0	100.0	102.0	102.0	103.0	103.0	102.0	101.0	98.0	98.0	94.0	91.0	86.0
4000	98.0	98.0	99.0	101.0	101.0	101.0	102.0	100.0	99.0	97.0	95.0	91.0	89.0	88.0
5000	98.0	98.0	98.0	99.0	100.0	100.0	101.0	99.0	98.0	95.0	94.0	91.0	88.0	84.0
6300	98.0	97.0	98.0	99.0	100.0	100.0	100.0	98.0	97.0	95.0	92.0	90.0	87.0	83.0
8000	98.0	98.0	98.0	98.0	99.0	98.0	99.0	96.0	96.0	93.0	92.0	90.0	87.0	83.0
10000	94.0	93.0	93.0	95.0	98.0	96.0	95.0	92.0	93.0	91.0	90.0	88.0	86.0	81.0
12500	90.0	90.0	90.0	91.0	91.0	91.0	90.0	88.0	89.0	88.0	89.0	86.0	83.0	81.0
16000	87.0	87.0	87.0	88.0	87.0	87.0	87.0	85.0	86.0	89.0	86.0	85.0	82.0	80.0
20000	84.0	84.0	84.0	84.0	84.0	84.0	85.0	82.0	83.0	82.0	84.0	84.0	80.0	80.0
OVERALL SPL	121.2	121.7	121.8	122.4	121.1	118.5	120.8	124.0	124.9	125.8	130.9	131.6	123.8	124.6
PNDB	127.0	126.3	126.5	126.3	127.0	126.7	127.6	129.5	130.1	130.4	133.7	133.4	127.4	126.7

ALL CORRECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.3	38.7	45.3	51.8	59.3	63.3	70.8	77.6	81.1	88.6	93.4	100.1	109.2	113.8	122.0
REF DIST(FT)	12.0	10.7	9.4	8.5	7.8	7.5	7.0	6.8	6.7	6.7	6.7	6.9	7.1	7.3	7.9
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	100.0	100.0	100.0	100.0	100.0	100.0	102.0	102.0	102.0	104.0	104.0	107.0	108.0	107.0	110.0
31	99.0	101.0	99.0	100.0	101.0	99.0	100.0	101.0	103.0	104.0	104.0	107.0	107.0	108.0	110.0
40	97.0	98.0	98.0	100.0	100.0	98.0	101.0	100.0	101.0	104.0	104.0	105.0	105.0	109.0	110.0
50	104.0	104.0	103.0	104.0	105.0	99.0	105.0	105.0	105.0	106.0	106.0	107.0	109.0	108.0	112.0
63	103.0	101.0	105.0	105.0	105.0	103.0	105.0	105.0	106.0	105.0	105.0	107.0	106.0	110.0	110.0
80	99.0	101.0	104.0	103.0	103.0	104.0	104.0	103.0	105.0	104.0	105.0	108.0	109.0	108.0	109.0
100	104.0	104.0	108.0	103.0	108.0	102.0	107.0	107.0	106.0	108.0	109.0	111.0	111.0	113.0	113.0
125	108.0	109.0	109.0	106.0	109.0	103.0	111.0	112.0	112.0	111.0	111.0	114.0	111.0	114.0	115.0
160	107.0	105.0	105.0	109.0	109.0	108.0	112.0	112.0	113.0	114.0	115.0	116.0	117.0	119.0	119.0
200	106.0	107.0	108.0	109.0	110.0	110.0	111.0	111.0	113.0	112.0	112.0	113.0	114.0	116.0	117.0
250	109.0	111.0	111.0	113.0	114.0	111.0	114.0	115.0	117.0	117.0	117.0	118.0	118.0	119.0	120.0
315	119.0	119.0	124.0	122.0	121.0	118.0	130.0	132.0	133.0	133.0	133.0	136.0	136.0	137.0	137.0
400	109.0	114.0	112.0	113.0	114.0	113.0	116.0	117.0	118.0	118.0	118.0	120.0	120.0	121.0	122.0
500	109.0	110.0	113.0	113.0	113.0	117.0	116.0	116.0	118.0	117.0	118.0	117.0	119.0	118.0	118.0
630	114.0	113.0	117.0	116.0	114.0	115.0	118.0	118.0	114.0	117.0	117.0	118.0	117.0	118.0	120.0
800	113.0	114.0	115.0	116.0	118.0	117.0	121.0	118.0	122.0	120.0	122.0	118.0	118.0	119.0	120.0
1000	109.0	110.0	111.0	112.0	113.0	114.0	114.0	114.0	115.0	115.0	116.0	117.0	117.0	117.0	119.0
1250	109.0	110.0	111.0	111.0	112.0	113.0	113.0	114.0	114.0	114.0	114.0	117.0	117.0	117.0	119.0
1600	108.0	108.0	109.0	110.0	110.0	112.0	111.0	111.0	113.0	114.0	114.0	115.0	116.0	117.0	117.0
2000	108.0	109.0	109.0	109.0	109.0	110.0	110.0	111.0	112.0	113.0	114.0	116.0	116.0	114.0	114.0
2500	108.0	109.0	109.0	109.0	109.0	110.0	110.0	111.0	112.0	112.0	113.0	115.0	115.0	116.0	116.0
3150	109.0	109.0	110.0	110.0	110.0	109.0	110.0	110.0	112.0	112.0	113.0	115.0	115.0	116.0	116.0
4000	108.0	108.0	109.0	109.0	109.0	110.0	109.0	109.0	111.0	111.0	112.0	114.0	114.0	114.0	115.0
5000	109.0	109.0	110.0	111.0	110.0	108.0	109.0	109.0	110.0	110.0	111.0	113.0	113.0	114.0	114.0
6300	109.0	109.0	110.0	111.0	109.0	108.0	107.0	108.0	109.0	109.0	110.0	112.0	112.0	112.0	112.0
8000	113.0	109.0	110.0	112.0	109.0	107.0	107.0	108.0	108.0	108.0	109.0	111.0	111.0	111.0	110.0
10000	108.0	107.0	109.0	110.0	108.0	109.0	107.0	107.0	108.0	108.0	108.0	110.0	110.0	110.0	110.0
12500	108.0	107.0	108.0	109.0	107.0	108.0	106.0	106.0	107.0	106.0	107.0	108.0	108.0	109.0	107.0
16000	107.0	106.0	107.0	107.0	106.0	108.0	105.0	105.0	105.0	104.0	105.0	107.0	107.0	106.0	106.0
20000	106.0	103.0	105.0	104.0	104.0	107.0	103.0	103.0	103.0	102.0	103.0	103.0	103.0	104.0	103.0
OVERALL SPL	124.6	130.3	128.8	129.3	128.3	140.0	131.8	133.2	134.4	134.3	134.4	136.9	137.0	137.9	138.1
PNDB	136.3	136.9	136.3	137.2	138.4	140.3	138.1	139.0	140.2	140.0	140.8	142.5	142.5	143.3	143.5

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	125.8	132.4	138.9	148.2	151.5	158.1	165.0	35.0	48.9	48.1	81.3	57.7	64.1	70.6	77.2
REF DIST(FT)	8.2	9.0	10.1	11.7	14.0	17.9	25.8	68.4	55.6	52.7	80.3	46.4	43.6	41.6	40.2
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	109.0	111.0	115.0	118.0	121.0	128.0	109.0	85.0	79.0	80.0	78.0	79.0	79.0	79.0	80.0
31	111.0	111.0	113.0	115.0	119.0	116.0	107.0	83.0	79.0	79.0	79.0	79.0	80.0	80.0	80.0
40	109.0	109.0	110.0	113.0	119.0	117.0	108.0	81.0	79.0	79.0	80.0	80.0	82.0	83.0	83.0
50	110.0	112.0	113.0	116.0	117.0	115.0	109.0	83.0	85.0	83.0	86.0	84.0	86.0	89.0	88.0
63	110.0	113.0	114.0	116.0	115.0	114.0	110.0	89.0	87.0	89.0	88.0	90.0	92.0	90.0	90.0
80	111.0	111.0	116.0	115.0	117.0	117.0	112.0	90.0	88.0	90.0	88.0	89.0	88.0	87.0	90.0
100	118.0	118.0	117.0	118.0	119.0	118.0	113.0	96.0	87.0	88.0	89.0	91.0	92.0	93.0	92.0
126	118.0	116.0	117.0	121.0	121.0	119.0	115.0	97.0	96.0	96.0	97.0	98.0	97.0	97.0	98.0
160	118.0	121.0	122.0	122.0	123.0	122.0	117.0	98.0	97.0	96.0	94.0	94.0	96.0	99.0	101.0
200	117.0	118.0	122.0	123.0	125.0	121.0	116.0	93.0	97.0	96.0	98.0	98.0	98.0	98.0	100.0
250	121.0	122.0	125.0	127.0	126.0	123.0	116.0	99.0	99.0	99.0	101.0	102.0	101.0	101.0	102.0
315	138.0	137.0	140.0	142.0	142.0	136.0	132.0	115.0	105.0	114.0	110.0	110.0	109.0	114.0	110.0
400	123.0	123.0	126.0	129.0	128.0	122.0	116.0	100.0	98.0	101.0	103.0	104.0	100.0	102.0	104.0
500	119.0	123.0	125.0	126.0	125.0	120.0	110.0	100.0	99.0	102.0	102.0	101.0	103.0	105.0	104.0
630	128.0	124.0	125.0	126.0	126.0	118.0	112.0	102.0	102.0	101.0	104.0	101.0	103.0	103.0	103.0
800	121.0	125.0	125.0	128.0	123.0	118.0	109.0	104.0	104.0	104.0	103.0	102.0	103.0	106.0	105.0
1000	120.0	122.0	122.0	122.0	119.0	113.0	107.0	97.0	98.0	99.0	100.0	100.0	101.0	102.0	102.0
1250	119.0	121.0	122.0	121.0	117.0	111.0	107.0	97.0	98.0	99.0	98.0	99.0	100.0	100.0	101.0
1600	118.0	119.0	119.0	118.0	114.0	108.0	105.0	94.0	96.0	96.0	96.0	97.0	98.0	99.0	100.0
2000	116.0	118.0	118.0	115.0	112.0	106.0	103.0	93.0	94.0	94.0	95.0	97.0	98.0	98.0	99.0
2500	116.0	117.0	116.0	113.0	110.0	105.0	103.0	93.0	95.0	94.0	98.0	96.0	97.0	98.0	99.0
3150	116.0	115.0	115.0	111.0	108.0	104.0	103.0	93.0	95.0	94.0	95.0	96.0	97.0	97.0	99.0
4000	114.0	114.0	112.0	110.0	106.0	102.0	101.0	92.0	94.0	93.0	95.0	95.0	95.0	96.0	98.0
5000	113.0	113.0	111.0	108.0	104.0	100.0	100.0	94.0	94.0	97.0	96.0	95.0	96.0	96.0	97.0
6300	112.0	111.0	109.0	106.0	102.0	99.0	99.0	94.0	94.0	96.0	96.0	98.0	95.0	96.0	97.0
8000	109.0	109.0	107.0	104.0	100.0	98.0	99.0	103.0	102.0	104.0	103.0	101.0	99.0	101.0	99.0
10000	109.0	108.0	106.0	102.0	99.0	97.0	97.0	95.0	94.0	94.0	93.0	92.0	93.0	92.0	93.0
12500	106.0	106.0	104.0	101.0	97.0	96.0	96.0	93.0	90.0	90.0	90.0	89.0	89.0	89.0	90.0
16000	105.0	104.0	102.0	99.0	96.0	94.0	95.0	90.0	89.0	89.0	88.0	88.0	87.0	87.0	87.0
20000	102.0	102.0	100.0	97.0	95.0	94.0	93.0	89.0	84.0	84.0	84.0	84.0	83.0	84.0	84.0
OVERALL SPL	139.0	138.6	141.2	143.0	138.9	137.4	132.9	116.9	118.3	116.3	119.2	120.0	118.1	116.9	119.6
PNDB	144.0	144.1	145.9	146.1	145.2	140.0	136.1	125.0	124.1	129.7	125.8	125.8	123.5	124.9	125.9

MICROPHONE:	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG):	83.0	87.2	93.6	100.0	106.5	113.0	119.4	125.8	126.0	135.4	145.0	150.0	155.0	160.0
REF DIST(FT):	39.0	39.3	39.3	39.9	40.9	42.6	45.1	48.4	50.5	53.9	60.4	78.8	92.9	114.8
GAIN:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	80.0	79.0	80.0	80.0	80.0	81.0	82.0	82.0	82.0	83.0	84.0	99.0	88.0	95.0
31	81.0	82.0	81.0	82.0	84.0	83.0	86.0	86.0	83.0	85.0	86.0	99.0	88.0	95.0
40	83.0	85.0	84.0	87.0	85.0	86.0	89.0	89.0	86.0	90.0	89.0	96.0	87.0	93.0
50	87.0	89.0	90.0	90.0	90.0	90.0	92.0	91.0	95.0	94.0	93.0	100.0	90.0	92.0
63	91.0	91.0	91.0	93.0	92.0	93.0	93.0	93.0	97.0	97.0	101.0	105.0	97.0	96.0
80	88.0	88.0	90.0	91.0	90.0	92.0	92.0	95.0	96.0	99.0	102.0	107.0	103.0	99.0
100	94.0	94.0	93.0	97.0	98.0	94.0	98.0	100.0	98.0	100.0	103.0	106.0	104.0	103.0
125	95.0	96.0	94.0	99.0	99.0	101.0	104.0	106.0	106.0	106.0	109.0	106.0	102.0	104.0
160	103.0	102.0	102.0	103.0	104.0	106.0	106.0	105.0	107.0	108.0	113.0	114.0	109.0	102.0
200	100.0	98.0	100.0	101.0	103.0	103.0	104.0	106.0	108.0	110.0	112.0	107.0	110.0	104.0
250	103.0	104.0	105.0	106.0	106.0	105.0	107.0	109.0	111.0	110.0	114.0	114.0	109.0	106.0
315	120.0	123.0	125.0	121.0	119.0	113.0	117.0	122.0	123.0	124.0	130.0	131.0	122.0	124.0
400	106.0	107.0	107.0	107.0	107.0	106.0	108.0	111.0	112.0	113.0	116.0	116.0	110.0	108.0
500	108.0	108.0	108.0	108.0	106.0	106.0	107.0	111.0	111.0	112.0	113.0	109.0	110.0	105.0
630	104.0	105.0	106.0	106.0	105.0	106.0	109.0	110.0	110.0	112.0	114.0	112.0	110.0	105.0
800	104.0	104.0	104.0	106.0	107.0	107.0	106.0	109.0	110.0	110.0	112.0	109.0	108.0	104.0
1000	103.0	103.0	103.0	105.0	106.0	106.0	106.0	108.0	107.0	107.0	109.0	109.0	107.0	105.0	101.0
1250	102.0	102.0	102.0	104.0	105.0	104.0	107.0	107.0	107.0	107.0	107.0	106.0	103.0	99.0
1600	101.0	101.0	101.0	103.0	104.0	104.0	105.0	105.0	105.0	105.0	105.0	102.0	100.0	95.0
2000	100.0	100.0	101.0	102.0	103.0	103.0	104.0	103.0	104.0	101.0	102.0	99.0	98.0	92.0
2500	100.0	99.0	100.0	100.0	103.0	104.0	104.0	102.0	102.0	100.0	99.0	96.0	95.0	89.0
3150	99.0	99.0	100.0	100.0	102.0	103.0	103.0	102.0	101.0	98.0	98.0	94.0	91.0	86.0
4000	98.0	98.0	99.0	101.0	101.0	101.0	102.0	100.0	99.0	97.0	95.0	91.0	89.0	85.0
5000	98.0	98.0	98.0	99.0	100.0	100.0	101.0	99.0	98.0	95.0	94.0	91.0	88.0	84.0
6300	98.0	97.0	98.0	99.0	100.0	100.0	100.0	98.0	97.0	95.0	92.0	90.0	87.0	83.0
8000	98.0	98.0	98.0	98.0	99.0	98.0	99.0	96.0	96.0	93.0	92.0	90.0	87.0	83.0
10000	94.0	93.0	93.0	95.0	95.0	95.0	95.0	92.0	93.0	91.0	90.0	88.0	85.0	81.0
12500	90.0	90.0	90.0	91.0	91.0	91.0	90.0	88.0	89.0	88.0	89.0	86.0	83.0	81.0
16000	87.0	87.0	87.0	88.0	87.0	87.0	87.0	85.0	86.0	86.0	86.0	85.0	82.0	80.0
20000	84.0	84.0	84.0	84.0	84.0	84.0	83.0	82.0	83.0	82.0	84.0	84.0	80.0	80.0
OVERALL SPL	121.2	121.7	121.8	122.4	121.1	118.5	120.8	124.0	124.2	125.8	130.9	131.6	123.8	124.6
PNDB	127.0	128.3	128.5	128.3	127.9	126.7	127.9	129.5	130.1	130.4	135.7	135.4	127.4	126.7

-- VALUES AFTER CURVE FIT CALCULATIONS --

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.3	38.7	45.3	51.8	59.3	63.3	72.4	77.6	83.1	88.8	93.6	100.1	109.2	113.8	122.0
REF DIST(FT)	12.5	10.7	9.4	8.5	7.8	7.5	7.0	6.8	6.7	6.7	6.7	6.9	7.1	7.3	7.9
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	100.2	100.1	99.7	99.7	99.7	100.0	101.5	101.0	101.0	103.8	103.9	107.1	107.6	106.8	109.7
31	97.8	100.1	98.9	100.4	101.0	128.1	101.0	100.9	102.6	104.5	104.2	106.4	107.3	108.5	110.7
40	99.3	100.9	100.3	101.4	102.8	102.0	101.6	101.4	102.0	103.8	103.3	104.0	106.9	108.5	110.3
50	101.8	101.1	101.9	102.3	103.8	100.5	102.9	102.7	103.5	104.4	104.7	106.3	106.9	108.4	109.9
63	103.9	101.9	103.2	103.2	103.5	98.8	104.5	104.3	104.6	105.0	105.5	107.3	107.6	108.9	110.2
80	105.2	102.9	104.0	104.0	104.4	99.0	106.2	106.1	106.4	106.8	106.8	108.9	108.9	110.1	111.3
100	105.9	104.2	104.6	105.1	105.7	102.0	108.0	108.0	108.6	108.9	108.8	110.7	110.6	111.9	113.1
125	106.4	105.6	105.4	106.4	107.3	104.6	109.7	109.8	110.9	110.0	110.5	112.7	112.5	113.9	115.1
160	106.8	107.2	106.9	108.0	109.2	107.2	111.3	111.6	113.1	112.2	112.5	114.5	114.4	115.8	117.0
200	107.4	108.7	108.8	109.7	111.2	109.7	113.8	113.2	114.9	114.2	114.5	116.0	116.0	117.4	118.6
250	108.2	110.1	109.7	111.4	113.1	112.0	114.9	114.5	116.3	115.9	116.1	117.2	117.3	118.5	119.8
315	109.1	111.3	111.6	112.9	114.7	113.9	114.9	115.6	117.1	117.1	117.4	117.9	118.1	119.1	120.4
400	110.0	112.1	112.9	114.0	115.8	115.3	115.4	116.2	117.4	117.8	118.2	118.5	119.2	120.1	120.6
500	110.8	112.8	113.9	114.9	116.3	116.2	115.5	116.4	117.2	117.9	118.5	118.3	118.6	119.8	120.4
630	111.1	112.8	114.2	114.4	116.0	116.5	115.3	116.2	116.7	117.6	118.1	118.4	118.4	119.4	119.9
800	111.1	111.9	113.9	113.8	115.2	116.1	114.7	115.6	116.0	117.0	117.7	117.6	117.9	118.1	119.3
1000	110.6	111.2	112.9	112.7	113.9	115.2	113.8	114.7	116.0	116.1	116.8	117.1	117.4	117.6	118.7
1250	109.8	110.3	111.6	111.5	112.8	113.9	112.8	113.6	114.1	115.0	115.8	116.5	116.8	117.1	118.0
1600	108.9	109.4	110.2	110.3	110.9	112.4	111.7	112.4	113.3	114.0	114.7	115.6	116.2	116.7	117.5
2000	108.1	108.7	109.1	109.4	109.7	110.8	110.7	111.3	112.5	113.0	113.8	115.4	115.7	116.3	116.9
2500	107.7	108.3	108.4	108.9	108.9	109.6	109.8	110.3	111.8	112.1	112.9	114.9	115.1	115.9	116.3
3150	107.7	108.2	108.6	109.0	108.7	108.8	109.2	109.6	111.2	111.4	112.2	114.3	114.8	115.6	116.0
4000	108.2	108.5	109.0	109.6	108.9	108.5	108.7	109.1	110.7	110.7	111.6	113.7	113.9	114.6	114.7
5000	109.1	108.9	109.9	110.5	109.4	108.6	108.6	108.7	110.1	110.1	111.1	113.1	113.2	113.9	113.9
6300	110.0	109.3	110.7	111.3	109.7	108.9	108.8	108.6	109.8	110.4	112.2	113.2	113.2	113.8	113.8
8000	110.4	109.3	110.8	111.6	109.6	109.0	107.6	108.0	108.7	108.5	109.5	111.2	111.2	111.8	110.8
10000	109.8	108.7	109.8	110.8	108.6	108.7	106.8	107.2	107.7	107.4	108.2	110.0	109.9	109.8	109.2
12500	108.2	107.4	107.7	108.0	106.8	107.0	105.8	106.0	106.5	106.0	106.8	108.4	108.3	108.3	107.5
16000	105.9	105.3	105.5	106.3	104.9	107.0	103.8	104.5	105.0	104.1	104.7	106.2	106.2	106.6	105.6
20000	104.4	103.3	103.8	104.3	104.9	107.5	103.3	103.2	103.1	102.9	103.2	103.3	103.3	103.9	103.1
OVERALL SPL	123.0	123.3	124.3	125.1	125.9	129.9	126.9	126.5	127.5	127.8	128.4	129.2	129.5	130.1	131.2
PNDB	135.1	134.8	135.9	136.6	135.9	135.9	135.2	135.7	136.7	136.8	137.6	139.0	139.1	139.9	139.9

MICROPHONE:	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG):	125.8	138.4	138.9	148.2	151.8	158.1	169.0	35.0	44.9	48.1	51.3	57.7	64.1	70.6	77.2
REF DIST(FT):	8.2	9.0	10.1	11.7	14.0	17.0	25.8	68.4	59.6	52.7	50.3	46.4	43.6	41.6	40.2
GAIN:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	109.8	111.2	114.6	117.9	120.7	122.1	108.7	85.5	79.2	80.4	77.9	78.8	79.0	78.9	79.6
31	110.1	110.3	110.1	116.1	119.9	119.8	107.8	81.8	78.3	77.4	78.8	78.9	79.8	80.1	81.1
40	109.9	110.3	113.3	118.1	118.1	116.8	107.7	81.9	80.3	80.0	81.8	81.2	82.7	83.7	83.5
50	109.8	110.9	113.0	114.8	116.6	113.3	108.5	84.2	83.5	84.0	84.4	84.2	84.0	87.8	86.1
63	110.2	112.0	113.9	115.3	116.2	113.2	110.0	87.2	86.4	87.8	87.1	87.3	89.0	90.4	88.8
80	111.3	113.3	114.8	116.5	116.9	114.1	111.9	90.3	89.2	90.8	89.8	90.2	91.8	93.0	91.4
100	113.8	114.9	116.5	118.8	118.5	117.6	113.7	93.1	91.7	93.0	91.7	92.8	93.4	94.8	93.8
125	115.8	116.6	118.6	120.3	120.7	119.3	115.2	95.4	93.9	95.7	93.8	95.1	95.1	96.3	96.2
160	116.9	118.3	120.8	122.4	123.1	121.8	116.8	97.4	96.0	96.1	96.0	97.1	96.7	97.8	98.4
200	118.7	120.0	122.7	124.4	125.1	122.2	116.5	98.9	97.9	97.5	98.2	98.9	98.3	99.2	100.4
250	120.1	121.8	124.2	125.9	126.6	122.8	116.2	99.9	99.5	98.8	100.3	100.4	99.7	100.7	102.1
315	121.1	122.7	125.3	127.0	127.3	122.7	115.4	100.6	100.8	100.1	101.9	101.8	101.0	102.1	103.3
400	121.8	123.5	125.8	127.3	127.2	121.9	114.1	100.8	101.6	101.1	103.0	102.1	102.0	103.2	104.1
500	121.6	123.9	125.7	127.0	126.3	120.4	112.3	100.6	101.8	101.7	103.4	102.3	102.6	103.9	104.3
630	121.2	123.8	125.1	126.8	124.6	118.4	110.8	99.9	101.4	101.8	103.8	102.8	102.8	104.0	104.6
800	120.6	123.2	124.2	124.5	122.4	116.1	109.1	98.9	100.8	101.3	101.9	101.2	102.1	103.5	103.3
1000	119.8	122.3	122.9	122.5	119.9	113.6	107.4	97.6	99.1	100.2	100.2	100.2	101.3	102.5	102.3
1250	118.9	121.1	121.3	120.2	117.2	111.1	106.2	96.2	97.5	98.9	98.3	98.9	100.1	101.1	101.2
1600	117.9	119.7	119.6	117.8	114.5	108.7	105.0	94.8	96.1	97.5	96.5	97.7	98.8	99.6	100.1
2000	117.0	118.2	117.9	116.4	112.8	106.6	103.9	93.6	95.8	96.2	95.1	96.7	97.7	98.2	99.2
2500	116.1	116.7	116.1	115.2	109.7	104.7	103.0	92.8	94.4	95.4	94.8	95.9	96.8	97.2	98.6
3150	115.2	115.2	114.3	111.2	107.6	103.1	102.1	92.5	94.8	95.2	94.3	95.4	96.4	96.5	98.3
4000	114.1	113.8	112.8	109.4	105.8	101.7	101.8	92.6	95.2	95.6	94.9	95.3	96.3	96.3	98.2
5000	113.0	112.5	110.8	107.8	104.0	100.5	100.3	93.2	96.1	96.1	95.7	95.2	96.3	96.1	98.0
6300	111.7	111.2	109.1	106.1	102.3	99.3	99.3	94.1	96.8	96.5	96.2	94.9	96.2	95.8	97.4
8000	110.2	109.7	107.4	104.5	100.5	98.1	98.2	94.8	96.7	96.1	95.8	95.0	95.3	94.7	96.1
10000	108.4	107.9	105.7	102.6	98.7	96.8	97.2	95.1	95.3	94.8	93.9	92.3	93.5	92.6	93.8
12500	106.5	105.9	103.9	100.6	97.0	95.5	96.1	94.6	92.3	91.1	90.5	89.7	90.1	89.4	90.6
16000	104.6	103.8	102.1	98.6	95.7	94.4	94.9	92.5	88.8	87.1	86.5	86.7	86.6	85.9	86.8
20000	102.2	102.1	100.6	97.2	95.2	93.9	93.1	89.4	84.0	84.6	84.5	84.5	83.0	84.4	84.0
OVERALL SPL	131.7	133.6	135.0	135.9	135.8	132.2	129.6	110.9	111.6	111.8	112.6	112.1	112.6	113.5	114.1
PNDB	139.8	140.7	141.0	140.8	139.3	134.7	129.6	121.0	122.1	122.1	122.0	121.5	122.3	122.5	123.7

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.8	87.2	91.6	106.8	104.5	113.8	119.4	125.8	129.0	135.4	140.0	150.0	155.0	160.0
REF DIST(FT)	39.8	39.3	39.3	39.9	40.9	42.6	45.1	48.4	50.5	55.9	60.4	70.8	82.9	114.8
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	79.8	78.7	79.3	79.6	80.0	80.5	82.1	82.1	81.2	82.5	85.7	89.3	88.6	96.1
31	81.5	82.8	82.4	81.3	82.1	84.5	84.3	85.0	85.3	86.3	86.8	97.6	86.9	92.9
40	83.6	85.4	85.8	86.4	85.4	87.2	88.0	89.1	88.0	90.1	89.0	98.3	88.1	92.6
50	85.9	87.4	87.2	89.1	89.0	89.7	92.0	92.2	92.3	93.8	94.3	100.2	92.1	94.8
63	88.5	89.8	89.5	91.7	92.4	93.3	95.6	95.1	95.5	97.1	98.7	102.6	96.3	96.3
80	91.3	91.6	92.0	94.2	95.4	95.1	98.5	97.8	98.6	100.0	102.7	105.1	100.0	98.4
100	94.1	94.8	94.6	96.7	98.1	98.8	100.9	100.5	101.6	102.7	106.1	107.4	103.1	100.4
125	96.8	96.5	97.3	99.0	100.3	100.8	102.8	103.1	104.3	105.1	109.0	109.3	105.9	102.1
160	99.3	98.9	99.8	101.2	102.1	103.3	104.3	105.4	106.7	107.4	111.2	111.3	107.3	103.6
200	101.5	101.1	102.0	103.0	103.7	105.3	105.6	107.5	108.8	109.3	113.0	112.6	108.7	104.9
250	103.2	102.9	103.7	104.4	104.9	106.7	106.6	109.1	110.3	111.0	114.1	113.5	109.7	106.0
315	104.4	104.2	104.8	105.8	105.8	107.6	107.8	110.2	111.2	112.1	114.8	113.9	110.3	106.6
400	105.0	104.9	105.4	106.9	106.3	107.8	108.1	110.7	111.6	112.8	114.9	113.7	110.5	106.8
500	105.0	105.0	105.3	106.0	106.2	107.6	108.4	110.6	111.3	112.9	114.9	112.9	110.2	106.3
630	104.6	104.6	104.8	105.8	106.4	107.1	108.3	110.0	110.6	112.1	113.3	111.8	109.3	105.2
800	103.8	103.8	104.0	105.1	105.9	106.4	107.9	109.8	110.3	111.9	111.7	109.5	107.8	103.4
1000	102.8	102.8	103.4	104.4	105.1	105.6	107.3	107.7	108.1	109.1	109.6	107.1	105.7	101.0
1250	101.8	101.7	102.0	103.0	104.0	104.0	106.0	106.2	106.8	106.9	107.2	104.9	103.1	98.2
1600	100.8	100.7	101.1	102.2	103.0	104.3	105.0	104.8	104.9	104.6	104.6	101.7	100.2	95.1
2000	100.0	99.9	100.4	101.5	102.2	103.7	104.6	103.8	103.9	102.8	101.9	98.9	97.2	92.1
2500	99.3	99.3	99.9	101.9	102.6	103.2	103.7	102.3	102.0	100.0	99.4	96.3	94.3	89.2
3150	99.1	98.9	99.7	101.4	102.0	102.7	102.9	101.3	100.8	98.0	97.2	94.1	91.7	86.8
4000	98.9	98.8	99.4	100.8	101.5	101.9	102.2	100.4	99.6	96.9	95.3	92.2	89.6	84.9
5000	98.5	98.1	98.9	100.8	100.7	100.8	101.2	99.3	98.4	95.3	93.8	90.8	88.0	83.6
6300	97.7	97.3	97.9	98.9	99.6	99.3	99.9	97.7	96.9	94.3	92.6	89.7	86.8	82.8
8000	96.3	95.8	96.8	97.8	97.7	97.2	97.9	95.8	95.1	93.2	91.4	88.6	85.9	82.3
10000	94.8	93.6	95.6	96.8	96.0	96.6	96.9	92.3	92.6	91.0	90.1	87.9	85.0	81.7
12500	90.8	90.5	90.8	91.6	91.4	91.4	91.1	88.5	89.6	89.7	88.5	86.7	83.7	81.0
16000	87.1	87.0	86.8	87.9	87.4	87.7	86.7	85.6	86.1	86.7	86.4	85.3	82.8	80.2
20000	83.8	83.9	84.0	84.8	83.8	83.7	83.0	82.1	82.9	82.7	83.9	83.7	79.9	79.8
OVERALL SPL	114.9	114.7	115.2	116.4	117.0	117.9	118.7	119.9	120.5	121.9	123.5	122.9	119.3	115.6
PNDB	124.2	123.9	124.4	125.6	126.2	126.6	127.2	126.8	126.9	127.2	128.1	126.4	123.7	119.7

CORRECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 19114 RUN 1 DELTA 1 SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/13/78

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.1	38.4	44.8	51.3	57.8	65.4	69.1	78.3	83.1	87.7	97.1	102.1	107.9	113.3	123.0
REF DIST(FT)	12.5	10.7	9.5	8.5	7.9	7.3	7.1	6.8	6.7	6.7	6.7	6.8	7.0	7.3	7.9
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	100.0	100.0	100.0	100.0	101.0	103.0	102.0	105.0	103.0	105.0	103.0	107.0	105.0	105.0	111.0
31	99.0	101.0	100.0	100.0	100.0	102.0	103.0	104.0	102.0	104.0	103.0	105.0	106.0	107.0	109.0
40	97.0	98.0	98.0	98.0	100.0	101.0	100.0	101.0	101.0	102.0	103.0	106.0	104.0	106.0	107.0
50	103.0	104.0	103.0	103.0	104.0	104.0	104.0	105.0	107.0	108.0	107.0	107.0	107.0	108.0	112.0
63	102.0	105.0	107.0	105.0	106.0	104.0	105.0	107.0	105.0	107.0	107.0	109.0	109.0	108.0	111.0
80	100.0	101.0	103.0	103.0	104.0	102.0	104.0	105.0	105.0	105.0	106.0	109.0	111.0	108.0	114.0
100	101.0	101.0	102.0	103.0	104.0	105.0	105.0	107.0	107.0	108.0	109.0	112.0	111.0	112.0	114.0
125	105.0	104.0	102.0	109.0	107.0	107.0	109.0	110.0	109.0	112.0	111.0	111.0	113.0	114.0	115.0
160	105.0	104.0	105.0	108.0	108.0	109.0	110.0	111.0	111.0	112.0	113.0	114.0	115.0	116.0	116.0
200	108.0	105.0	106.0	107.0	109.0	110.0	110.0	112.0	111.0	112.0	113.0	113.0	114.0	118.0	117.0
250	108.0	109.0	110.0	110.0	112.0	113.0	112.0	113.0	114.0	114.0	116.0	116.0	118.0	119.0	121.0
315	108.0	112.0	113.0	114.0	115.0	115.0	117.0	118.0	118.0	121.0	121.0	122.0	122.0	124.0	126.0
400	107.0	108.0	109.0	110.0	112.0	113.0	113.0	114.0	115.0	116.0	117.0	118.0	118.0	118.0	120.0
500	107.0	110.0	111.0	112.0	113.0	113.0	114.0	116.0	116.0	116.0	116.0	116.0	118.0	117.0	121.0
630	110.0	112.0	113.0	114.0	114.0	115.0	115.0	115.0	116.0	116.0	117.0	118.0	118.0	120.0	122.0
800	110.0	112.0	112.0	113.0	114.0	115.0	115.0	116.0	118.0	117.0	118.0	118.0	119.0	121.0	122.0
1000	110.0	112.0	113.0	114.0	115.0	115.0	115.0	116.0	117.0	117.0	118.0	119.0	119.0	120.0	123.0
1250	110.0	112.0	113.0	113.0	114.0	115.0	115.0	116.0	117.0	117.0	118.0	119.0	120.0	121.0	123.0
1600	108.0	110.0	112.0	112.0	113.0	114.0	114.0	115.0	116.0	117.0	117.0	118.0	119.0	120.0	123.0
2000	107.0	110.0	110.0	112.0	112.0	114.0	114.0	115.0	116.0	116.0	118.0	118.0	119.0	120.0	122.0
2500	106.0	108.0	109.0	110.0	111.0	113.0	113.0	114.0	115.0	116.0	117.0	118.0	119.0	120.0	121.0
3150	105.0	108.0	108.0	110.0	111.0	112.0	113.0	114.0	115.0	116.0	117.0	118.0	119.0	120.0	121.0
4000	104.0	106.0	107.0	108.0	109.0	111.0	112.0	113.0	113.0	115.0	116.0	117.0	118.0	119.0	119.0
5000	103.0	105.0	106.0	107.0	108.0	110.0	111.0	113.0	113.0	115.0	116.0	116.0	118.0	119.0	119.0
6300	102.0	103.0	104.0	106.0	107.0	109.0	109.0	111.0	113.0	113.0	115.0	116.0	117.0	118.0	117.0
8000	106.0	104.0	104.0	104.0	105.0	107.0	108.0	110.0	111.0	112.0	114.0	115.0	116.0	116.0	116.0
10000	101.0	101.0	101.0	102.0	104.0	106.0	107.0	109.0	110.0	111.0	114.0	114.0	115.0	115.0	115.0
12500	99.0	99.0	99.0	101.0	102.0	104.0	105.0	106.0	108.0	109.0	112.0	113.0	113.0	118.0	113.0
16000	100.0	97.0	98.0	99.0	100.0	101.0	102.0	104.0	106.0	107.0	109.0	110.0	111.0	111.0	110.0
20000	98.0	96.0	96.0	97.0	101.0	100.0	100.0	102.0	103.0	104.0	106.0	107.0	108.0	108.0	107.0
OVERALL SPL	120.4	122.4	123.2	124.1	125.1	125.9	126.4	127.5	128.3	129.1	130.0	130.8	131.5	132.6	134.2
PNDB	131.0	131.3	132.1	133.1	134.2	135.7	136.3	137.8	138.8	139.6	140.9	141.7	142.6	143.5	144.2

MICROPHONE #	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)#	127.1	134.3	140.8	147.1	153.3	158.1	165.0	35.0	48.9	48.0	54.4	57.6	63.9	70.5	77.0
REF DIST(FT)#	8.8	9.3	10.5	12.3	14.8	17.9	25.8	68.4	55.6	52.8	48.3	46.5	43.7	41.6	40.3
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	110.0	112.0	114.0	116.0	124.0	125.0	119.0	87.0	80.0	80.0	80.0	80.0	80.0	79.0	80.0
31	111.0	113.0	114.0	116.0	122.0	122.0	116.0	83.0	80.0	80.0	80.0	81.0	81.0	81.0	82.0
40	110.0	113.0	117.0	119.0	120.0	120.0	115.0	81.0	81.0	82.0	82.0	82.0	83.0	83.0	85.0
50	111.0	112.0	115.0	117.0	120.0	118.0	115.0	84.0	87.0	88.0	89.0	88.0	90.0	91.0	91.0
63	112.0	113.0	116.0	118.0	119.0	119.0	115.0	88.0	91.0	90.0	90.0	92.0	93.0	90.0	94.0
80	114.0	114.0	117.0	119.0	120.0	120.0	117.0	90.0	89.0	90.0	91.0	90.0	89.0	87.0	88.0
100	114.0	117.0	118.0	121.0	121.0	123.0	119.0	90.0	87.0	88.0	88.0	88.0	92.0	90.0	94.0
125	117.0	117.0	120.0	122.0	124.0	124.0	120.0	92.0	93.0	94.0	95.0	94.0	96.0	96.0	95.0
140	118.0	119.0	123.0	123.0	127.0	126.0	122.0	94.0	95.0	95.0	94.0	95.0	96.0	98.0	100.0
200	118.0	120.0	124.0	126.0	127.0	127.0	120.0	93.0	96.0	96.0	96.0	98.0	98.0	98.0	99.0
250	122.0	123.0	127.0	129.0	131.0	128.0	120.0	95.0	97.0	97.0	99.0	98.0	100.0	102.0	102.0
315	126.0	130.0	131.0	135.0	134.0	131.0	122.0	101.0	101.0	101.0	103.0	101.0	101.0	105.0	107.0
400	122.0	126.0	128.0	131.0	131.0	128.0	118.0	96.0	99.0	99.0	100.0	100.0	101.0	102.0	103.0
500	121.0	125.0	129.0	132.0	131.0	126.0	117.0	97.0	99.0	100.0	100.0	101.0	103.0	103.0	103.0
630	122.0	126.0	129.0	132.0	131.0	125.0	117.0	99.0	101.0	101.0	101.0	103.0	103.0	104.0	104.0
800	124.0	126.0	129.0	132.0	129.0	125.0	115.0	99.0	100.0	101.0	102.0	102.0	103.0	104.0	104.0
1000	124.0	126.0	128.0	130.0	124.0	122.0	113.0	98.0	100.0	102.0	102.0	102.0	103.0	104.0	105.0
1250	125.0	126.0	128.0	129.0	124.0	119.0	112.0	100.0	101.0	101.0	102.0	102.0	103.0	103.0	104.0
1600	124.0	125.0	126.0	126.0	120.0	116.0	111.0	98.0	100.0	99.0	100.0	101.0	102.0	103.0	103.0
2000	122.0	124.0	124.0	123.0	117.0	114.0	110.0	96.0	98.0	98.0	99.0	100.0	101.0	102.0	102.0
2500	121.0	122.0	122.0	119.0	114.0	112.0	109.0	95.0	97.0	97.0	98.0	99.0	100.0	101.0	102.0
3150	120.0	121.0	119.0	117.0	113.0	109.0	109.0	95.0	97.0	97.0	98.0	99.0	100.0	101.0	102.0
4000	119.0	118.0	117.0	114.0	110.0	107.0	107.0	94.0	96.0	95.0	96.0	97.0	99.0	99.0	101.0
5000	118.0	117.0	115.0	113.0	109.0	105.0	106.0	95.0	95.0	96.0	96.0	97.0	98.0	99.0	100.0
6300	117.0	115.0	113.0	111.0	107.0	103.0	105.0	94.0	94.0	94.0	95.0	96.0	97.0	98.0	99.0
8000	115.0	113.0	111.0	109.0	104.0	101.0	103.0	101.0	99.0	100.0	99.0	98.0	98.0	98.0	99.0
10000	114.0	112.0	110.0	107.0	102.0	99.0	101.0	94.0	92.0	93.0	93.0	93.0	93.0	94.0	95.0
12500	111.0	110.0	108.0	105.0	100.0	97.0	98.0	91.0	87.0	88.0	87.0	88.0	89.0	89.0	90.0
16000	109.0	107.0	105.0	102.0	98.0	95.0	95.0	90.0	85.0	85.0	85.0	85.0	86.0	86.0	87.0
20000	106.0	105.0	103.0	100.0	96.0	94.0	94.0	86.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0
OVERALL SPL	134.9	137.0	139.1	141.4	140.6	137.8	131.1	110.5	111.4	111.8	112.6	112.8	113.7	114.8	115.6
PNDB	144.0	144.3	145.5	146.7	144.4	140.9	134.9	123.2	122.7	123.2	123.2	123.2	123.8	124.4	125.2

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.6	90.1	93.4	100.0	106.5	113.1	119.5	125.8	129.0	135.3	139.3	150.0	155.0	160.0
REF DIST(FT)	39.5	39.5	39.3	39.9	40.9	42.7	45.1	48.4	50.5	55.8	60.2	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	80.0	81.0	80.0	80.0	81.0	82.0	83.0	83.0	85.0	83.0	86.0	99.0	93.0	88.0
31	82.0	83.0	84.0	82.0	83.0	82.0	86.0	86.0	87.0	87.0	88.0	98.0	92.0	91.0
40	85.0	86.0	87.0	87.0	87.0	88.0	89.0	91.0	89.0	90.0	91.0	99.0	92.0	90.0
50	92.0	92.0	92.0	92.0	93.0	93.0	93.0	95.0	95.0	98.0	96.0	105.0	96.0	88.0
63	93.0	92.0	93.0	95.0	93.0	93.0	96.0	96.0	98.0	101.0	103.0	110.0	103.0	97.0
80	88.0	90.0	91.0	93.0	93.0	94.0	94.0	98.0	97.0	103.0	104.0	111.0	107.0	103.0
100	95.0	95.0	97.0	96.0	98.0	99.0	101.0	101.0	101.0	103.0	104.0	110.0	109.0	107.0
125	97.0	97.0	98.0	98.0	100.0	101.0	104.0	106.0	108.0	109.0	111.0	111.0	105.0	108.0
160	101.0	101.0	102.0	102.0	103.0	103.0	105.0	107.0	109.0	109.0	113.0	117.0	113.0	104.0
200	100.0	100.0	101.0	101.0	103.0	104.0	106.0	110.0	111.0	114.0	117.0	113.0	114.0	110.0
250	102.0	103.0	104.0	105.0	107.0	107.0	108.0	112.0	114.0	117.0	117.0	118.0	114.0	111.0
315	107.0	107.0	108.0	109.0	110.0	109.0	111.0	115.0	118.0	120.0	120.0	123.0	115.0	117.0
400	103.0	103.0	105.0	106.0	107.0	108.0	110.0	114.0	116.0	118.0	118.0	117.0	115.0	111.0
500	103.0	104.0	105.0	106.0	107.0	109.0	111.0	114.0	115.0	117.0	118.0	117.0	114.0	111.0
630	105.0	105.0	105.0	106.0	107.0	109.0	111.0	113.0	115.0	116.0	117.0	116.0	115.0	111.0
800	105.0	106.0	106.0	107.0	108.0	110.0	111.0	113.0	115.0	115.0	116.0	115.0	114.0	110.0
1000	106.0	106.0	106.0	108.0	109.0	111.0	111.0	113.0	113.0	114.0	113.0	113.0	111.0	108.0
1250	104.0	105.0	105.0	107.0	108.0	110.0	112.0	112.0	113.0	113.0	113.0	111.0	110.0	106.0
1600	104.0	104.0	105.0	106.0	108.0	109.0	110.0	111.0	111.0	111.0	111.0	109.0	107.0	104.0
2000	103.0	104.0	105.0	105.0	107.0	107.0	110.0	110.0	110.0	109.0	108.0	106.0	105.0	101.0
2500	103.0	104.0	104.0	106.0	107.0	108.0	108.0	108.0	107.0	106.0	106.0	103.0	102.0	98.0
3150	102.0	103.0	103.0	105.0	106.0	107.0	107.0	107.0	106.0	104.0	104.0	101.0	99.0	95.0
4000	101.0	102.0	103.0	104.0	105.0	107.0	106.0	106.0	105.0	102.0	102.0	99.0	95.0	92.0
5000	101.0	102.0	102.0	103.0	104.0	105.0	105.0	105.0	103.0	101.0	100.0	98.0	93.0	90.0
6300	100.0	100.0	101.0	103.0	104.0	104.0	104.0	103.0	103.0	99.0	98.0	96.0	90.0	88.0
8000	99.0	99.0	101.0	101.0	102.0	102.0	102.0	101.0	100.0	96.0	96.0	95.0	90.0	86.0
10000	95.0	96.0	97.0	98.0	100.0	100.0	99.0	98.0	96.0	93.0	92.0	93.0	88.0	84.0
12500	91.0	92.0	93.0	94.0	95.0	95.0	95.0	93.0	92.0	89.0	88.0	90.0	85.0	82.0
16000	87.0	87.0	88.0	89.0	90.0	90.0	90.0	88.0	87.0	85.0	86.0	87.0	82.0	80.0
20000	84.0	84.0	85.0	86.0	86.0	86.0	86.0	85.0	83.0	83.0	82.0	86.0	81.0	80.0
OVERALL SPL	116.1	116.6	117.2	118.4	119.6	120.6	121.8	123.9	125.3	126.7	127.3	127.9	124.3	121.9
PNDB	125.9	126.6	127.1	128.5	129.6	130.3	130.8	131.4	131.8	131.6	132.1	132.2	129.0	126.2

ALL CONNECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.1	38.4	44.8	51.3	57.8	65.4	69.3	78.3	83.1	87.7	97.1	102.1	107.9	113.3	123.0
REF DIST(FT)	12.9	10.7	9.5	8.5	7.9	7.3	7.1	6.8	6.7	6.7	6.7	6.8	7.0	7.3	7.9
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	100.0	100.0	100.0	100.0	101.0	103.0	102.0	105.0	103.0	105.0	103.0	107.0	105.0	105.0	111.0
31	99.0	101.0	100.0	100.0	100.0	102.0	103.0	104.0	102.0	104.0	103.0	105.0	106.0	107.0	109.0
40	97.0	98.0	98.0	98.0	100.0	101.0	100.0	101.0	101.0	102.0	103.0	106.0	104.0	106.0	107.0
50	103.0	104.0	103.0	103.0	104.0	104.0	104.0	105.0	107.0	106.0	107.0	107.0	107.0	108.0	112.0
63	102.0	105.0	107.0	105.0	106.0	104.0	105.0	107.0	105.0	107.0	107.0	109.0	109.0	108.0	111.0
80	100.0	101.0	103.0	103.0	104.0	102.0	104.0	105.0	105.0	105.0	106.0	109.0	111.0	108.0	114.0
100	101.0	101.0	102.0	103.0	104.0	105.0	105.0	107.0	107.0	108.0	109.0	112.0	111.0	112.0	114.0
125	105.0	104.0	102.0	105.0	107.0	107.0	109.0	110.0	109.0	112.0	111.0	111.0	113.0	118.0	115.0
160	105.0	104.0	105.0	108.0	108.0	109.0	110.0	111.0	111.0	112.0	113.0	114.0	115.0	116.0	116.0
200	104.0	105.0	106.0	107.0	109.0	110.0	110.0	112.0	111.0	112.0	113.0	113.0	114.0	114.0	117.0
250	108.0	109.0	110.0	110.0	112.0	113.0	112.0	115.0	114.0	114.0	116.0	116.0	118.0	119.0	121.0
315	108.0	112.0	113.0	114.0	115.0	115.0	117.0	118.0	118.0	121.0	121.0	122.0	122.0	124.0	126.0
400	107.0	108.0	109.0	110.0	112.0	113.0	113.0	114.0	115.0	116.0	117.0	118.0	118.0	118.0	120.0
500	107.0	110.0	111.0	112.0	113.0	113.0	114.0	116.0	116.0	116.0	116.0	116.0	118.0	117.0	121.0
630	110.0	112.0	113.0	114.0	114.0	115.0	115.0	115.0	116.0	116.0	117.0	118.0	118.0	120.0	122.0
800	110.0	112.0	112.0	113.0	114.0	115.0	115.0	116.0	116.0	117.0	118.0	118.0	119.0	121.0	122.0
1000	110.0	112.0	113.0	113.0	115.0	115.0	115.0	116.0	117.0	117.0	118.0	119.0	119.0	120.0	123.0
1250	110.0	112.0	113.0	113.0	114.0	115.0	115.0	116.0	117.0	117.0	118.0	119.0	120.0	121.0	123.0
1600	108.0	110.0	112.0	112.0	113.0	114.0	114.0	115.0	116.0	117.0	117.0	118.0	119.0	120.0	123.0
2000	107.0	110.0	110.0	112.0	112.0	114.0	114.0	115.0	116.0	116.0	118.0	118.0	119.0	120.0	122.0
2500	106.0	108.0	109.0	110.0	111.0	113.0	113.0	114.0	115.0	116.0	117.0	118.0	119.0	120.0	121.0
3150	105.0	108.0	108.0	110.0	111.0	112.0	113.0	114.0	115.0	116.0	117.0	118.0	119.0	120.0	121.0
4000	104.0	106.0	107.0	108.0	109.0	111.0	112.0	113.0	113.0	115.0	116.0	117.0	118.0	119.0	119.0
5000	103.0	105.0	106.0	107.0	108.0	110.0	111.0	113.0	113.0	115.0	116.0	116.0	118.0	119.0	119.0
6300	102.0	103.0	104.0	106.0	107.0	109.0	109.0	111.0	113.0	113.0	115.0	116.0	117.0	118.0	117.0
8000	106.0	104.0	104.0	104.0	105.0	107.0	108.0	110.0	111.0	112.0	114.0	115.0	116.0	116.0	116.0
10000	101.0	101.0	101.0	102.0	104.0	106.0	107.0	109.0	110.0	111.0	114.0	114.0	115.0	115.0	115.0
12500	99.0	99.0	99.0	101.0	102.0	104.0	105.0	106.0	108.0	109.0	112.0	113.0	113.0	114.0	113.0
16000	100.0	97.0	98.0	99.0	100.0	101.0	102.0	104.0	106.0	107.0	109.0	110.0	111.0	111.0	110.0
20000	98.0	96.0	96.0	97.0	101.0	100.0	100.0	102.0	103.0	104.0	106.0	107.0	108.0	108.0	107.0
OVERALL SPL	120.6	122.4	123.2	124.1	125.1	125.9	126.4	127.5	128.3	129.1	130.0	130.8	131.5	132.6	134.2
PNDB	131.0	131.3	132.1	133.1	134.2	135.7	136.3	137.8	138.8	139.6	140.9	141.7	142.6	143.5	144.2

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE (DEG)	127.1	134.3	140.8	147.1	153.3	158.1	165.0	35.0	44.9	48.0	54.4	57.6	63.9	70.5	77.0
REF DIST (FT)	8.8	9.3	10.5	12.3	14.8	17.9	25.8	68.4	55.6	52.8	48.3	46.5	43.7	41.6	40.5
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ (HERTZ)															
25	110.0	112.0	114.0	116.0	124.0	125.0	119.0	87.0	80.0	80.0	80.0	80.0	80.0	79.0	80.0
31	111.0	115.0	118.0	116.0	122.0	122.0	116.0	83.0	80.0	80.0	80.0	81.0	81.0	81.0	82.0
40	110.0	113.0	117.0	119.0	120.0	120.0	115.0	81.0	81.0	82.0	82.0	82.0	83.0	83.0	85.0
50	111.0	112.0	115.0	117.0	120.0	118.0	115.0	84.0	87.0	88.0	89.0	88.0	90.0	91.0	91.0
63	112.0	113.0	116.0	118.0	119.0	119.0	115.0	88.0	91.0	90.0	90.0	92.0	93.0	90.0	90.0
80	114.0	114.0	117.0	119.0	120.0	120.0	117.0	90.0	89.0	90.0	91.0	90.0	89.0	87.0	88.0
100	114.0	117.0	118.0	121.0	121.0	123.0	119.0	90.0	87.0	88.0	88.0	88.0	92.0	94.0	94.0
125	117.0	117.0	120.0	122.0	124.0	124.0	120.0	92.0	93.0	94.0	95.0	94.0	96.0	96.0	95.0
160	118.0	119.0	123.0	123.0	127.0	126.0	122.0	94.0	95.0	95.0	94.0	95.0	96.0	98.0	100.0
200	118.0	120.0	124.0	126.0	127.0	127.0	120.0	93.0	96.0	96.0	98.0	98.0	98.0	98.0	99.0
250	122.0	123.0	127.0	129.0	131.0	128.0	120.0	95.0	97.0	97.0	99.0	98.0	100.0	102.0	102.0
315	126.0	130.0	131.0	135.0	134.0	131.0	122.0	101.0	101.0	101.0	103.0	101.0	101.0	105.0	107.0
400	122.0	126.0	128.0	131.0	131.0	128.0	118.0	96.0	99.0	99.0	100.0	100.0	101.0	102.0	103.0
500	121.0	125.0	129.0	132.0	131.0	126.0	117.0	97.0	99.0	100.0	100.0	101.0	103.0	103.0	103.0
630	122.0	126.0	129.0	132.0	131.0	125.0	117.0	99.0	101.0	101.0	101.0	103.0	103.0	104.0	104.0
800	124.0	126.0	129.0	132.0	129.0	125.0	115.0	99.0	100.0	101.0	102.0	102.0	103.0	104.0	104.0
1000	124.0	126.0	128.0	130.0	126.0	122.0	113.0	98.0	100.0	102.0	102.0	102.0	103.0	104.0	105.0
1250	125.0	126.0	128.0	129.0	124.0	119.0	112.0	100.0	101.0	101.0	102.0	102.0	103.0	103.0	104.0
1600	124.0	125.0	126.0	126.0	120.0	116.0	111.0	98.0	100.0	99.0	100.0	101.0	102.0	103.0	103.0
2000	122.0	124.0	124.0	123.0	117.0	114.0	110.0	96.0	98.0	98.0	99.0	100.0	101.0	102.0	102.0
2500	121.0	122.0	122.0	119.0	114.0	112.0	109.0	95.0	97.0	97.0	98.0	99.0	100.0	101.0	102.0
3150	120.0	121.0	119.0	117.0	113.0	109.0	109.0	95.0	97.0	97.0	98.0	99.0	100.0	101.0	102.0
4000	119.0	118.0	117.0	114.0	110.0	107.0	107.0	94.0	96.0	95.0	96.0	97.0	99.0	99.0	101.0
5000	118.0	117.0	115.0	113.0	109.0	105.0	106.0	95.0	95.0	96.0	96.0	97.0	98.0	99.0	100.0
6300	117.0	115.0	113.0	111.0	107.0	103.0	105.0	94.0	94.0	94.0	95.0	96.0	97.0	98.0	99.0
8000	115.0	113.0	111.0	109.0	104.0	101.0	103.0	101.0	99.0	100.0	99.0	98.0	98.0	98.0	99.0
10000	114.0	112.0	110.0	107.0	102.0	99.0	101.0	94.0	92.0	93.0	93.0	93.0	93.0	94.0	95.0
12500	111.0	110.0	108.0	105.0	100.0	97.0	98.0	91.0	87.0	88.0	87.0	88.0	89.0	89.0	90.0
16000	109.0	107.0	105.0	102.0	98.0	95.0	95.0	90.0	85.0	85.0	85.0	85.0	86.0	86.0	87.0
20000	106.0	105.0	103.0	100.0	96.0	94.0	94.0	86.0	83.0	83.0	83.0	83.0	84.0	83.0	84.0
OVERALL SPL	134.9	137.0	139.1	141.4	140.6	137.8	141.1	110.5	111.4	111.8	112.6	112.8	113.7	114.8	115.6
PNDB	144.0	144.3	145.5	146.7	144.4	140.9	134.9	123.2	122.7	123.2	123.2	123.2	123.8	124.4	125.2

MICROPHONE #	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG) #	83.6	90.1	93.4	100.0	106.5	113.1	119.5	125.8	129.0	135.3	139.1	150.0	155.0	160.0
REF DIST(FT) #	39.9	39.3	39.3	39.9	40.9	42.7	45.1	48.4	50.5	55.8	60.2	78.5	92.9	118.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	80.0	81.0	80.0	80.0	81.0	82.0	83.0	85.0	85.0	85.0	86.0	99.0	93.0	88.0
31	82.0	83.0	84.0	82.0	83.0	82.0	86.0	86.0	87.0	87.0	88.0	98.0	92.0	91.0
40	85.0	86.0	87.0	87.0	87.0	88.0	89.0	91.0	89.0	90.0	91.0	99.0	92.0	90.0
50	92.0	92.0	92.0	92.0	93.0	93.0	93.0	95.0	95.0	98.0	96.0	105.0	96.0	88.0
63	93.0	92.0	91.0	95.0	93.0	93.0	96.0	96.0	98.0	101.0	103.0	110.0	103.0	97.0
80	88.0	90.0	91.0	93.0	93.0	94.0	94.0	98.0	97.0	103.0	104.0	111.0	107.0	103.0
100	95.0	95.0	97.0	96.0	98.0	99.0	101.0	101.0	101.0	105.0	104.0	110.0	109.0	107.0
125	97.0	97.0	98.0	98.0	100.0	101.0	104.0	106.0	108.0	109.0	111.0	111.0	105.0	108.0
160	101.0	101.0	102.0	102.0	103.0	103.0	105.0	107.0	109.0	109.0	113.0	117.0	113.0	104.0
200	100.0	100.0	101.0	101.0	103.0	104.0	106.0	110.0	111.0	114.0	117.0	113.0	114.0	110.0
250	102.0	103.0	104.0	105.0	107.0	107.0	108.0	112.0	114.0	117.0	117.0	118.0	114.0	111.0
315	107.0	107.0	108.0	109.0	110.0	109.0	111.0	115.0	118.0	120.0	120.0	123.0	115.0	117.0
400	103.0	103.0	105.0	106.0	107.0	108.0	110.0	114.0	116.0	118.0	118.0	117.0	115.0	111.0
500	103.0	104.0	105.0	106.0	107.0	109.0	111.0	114.0	115.0	117.0	118.0	117.0	114.0	111.0
630	105.0	105.0	106.0	106.0	107.0	109.0	111.0	113.0	115.0	116.0	117.0	116.0	115.0	111.0
800	105.0	106.0	106.0	107.0	108.0	110.0	111.0	113.0	115.0	115.0	116.0	115.0	114.0	110.0
1000	106.0	106.0	106.0	108.0	109.0	111.0	111.0	113.0	113.0	114.0	113.0	113.0	111.0	108.0
1250	104.0	105.0	105.0	107.0	108.0	110.0	112.0	112.0	113.0	113.0	113.0	111.0	110.0	106.0
1600	104.0	104.0	105.0	106.0	108.0	109.0	110.0	111.0	111.0	111.0	111.0	109.0	107.0	104.0
2000	103.0	104.0	105.0	105.0	107.0	107.0	110.0	110.0	110.0	109.0	108.0	106.0	105.0	101.0
2500	103.0	104.0	104.0	106.0	107.0	108.0	108.0	108.0	107.0	106.0	106.0	103.0	102.0	98.0
3150	102.0	103.0	103.0	105.0	106.0	107.0	107.0	107.0	106.0	104.0	104.0	101.0	99.0	95.0
4000	101.0	102.0	103.0	104.0	105.0	107.0	106.0	106.0	105.0	102.0	102.0	99.0	95.0	92.0
5000	101.0	102.0	102.0	103.0	104.0	105.0	105.0	105.0	103.0	101.0	100.0	98.0	93.0	90.0
6300	100.0	100.0	101.0	103.0	104.0	104.0	104.0	103.0	103.0	99.0	98.0	96.0	90.0	88.0
8000	99.0	99.0	101.0	101.0	102.0	102.0	102.0	101.0	100.0	96.0	96.0	95.0	90.0	86.0
10000	95.0	96.0	97.0	98.0	100.0	100.0	99.0	98.0	96.0	93.0	92.0	93.0	88.0	84.0
12500	91.0	92.0	93.0	94.0	95.0	95.0	95.0	93.0	92.0	89.0	88.0	90.0	85.0	82.0
16000	87.0	87.0	88.0	89.0	90.0	90.0	90.0	88.0	87.0	85.0	86.0	87.0	82.0	80.0
20000	84.0	84.0	85.0	86.0	86.0	86.0	86.0	85.0	83.0	83.0	82.0	86.0	81.0	80.0
OVERALL SPL	116.1	116.6	117.2	118.0	119.6	120.6	121.8	123.9	125.3	126.7	127.3	127.9	124.3	121.9
PNDB	125.9	126.6	127.1	128.5	129.6	130.3	130.8	131.4	131.8	131.6	132.1	132.2	129.0	126.2

-- VALUES AFTER CURVE FIT CALCULATIONS --

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.1	38.4	44.8	51.3	57.8	65.4	69.3	78.3	83.1	87.7	97.1	102.1	107.9	113.3	123.0
REF DIST(FT)	12.5	10.7	9.5	8.5	7.9	7.3	7.1	6.8	6.7	6.7	6.7	6.8	7.0	7.4	7.9
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	100.0	99.8	99.5	99.8	100.5	102.7	102.1	105.0	102.6	104.7	102.5	106.4	105.0	105.1	110.5
31	98.5	100.6	100.2	99.8	100.7	102.5	102.2	103.4	102.5	104.1	103.9	106.1	105.3	106.6	109.4
40	99.0	101.2	101.1	100.5	101.5	102.1	102.2	103.2	103.0	103.8	104.3	106.2	105.8	106.8	109.2
50	100.2	101.7	101.8	101.4	102.5	102.1	102.7	103.8	103.7	104.2	104.8	106.7	106.7	107.1	109.7
63	101.8	102.6	102.4	102.5	103.6	102.7	103.6	104.9	104.8	105.3	105.8	107.7	108.0	107.9	110.9
80	102.3	102.4	102.9	103.5	104.7	103.9	104.9	106.4	106.1	106.9	107.3	109.1	109.7	109.4	112.4
100	103.1	102.9	103.4	104.6	105.9	105.4	106.5	108.0	107.5	108.7	109.2	110.6	111.5	111.3	114.0
129	103.8	103.7	104.2	105.8	107.1	107.2	108.2	109.6	109.1	110.7	111.1	112.3	113.3	113.5	115.7
160	104.5	104.8	105.3	107.0	108.4	108.9	109.8	111.2	110.7	112.5	113.0	113.8	115.0	115.5	117.3
200	105.3	106.1	106.6	108.3	109.7	110.6	111.4	112.6	112.3	114.0	114.7	115.2	116.4	117.1	118.7
250	106.2	107.5	108.1	109.6	111.1	112.0	112.8	113.8	113.8	115.2	116.0	116.3	117.4	118.4	119.9
315	107.8	108.9	109.6	110.9	112.3	113.2	113.6	114.7	115.0	116.1	116.9	117.2	118.2	119.2	120.9
400	108.1	110.2	111.0	112.0	113.3	114.0	114.3	115.4	116.0	116.7	117.5	117.9	118.7	119.7	121.7
500	108.9	111.2	112.1	112.8	114.0	114.6	114.8	115.8	116.7	116.9	117.8	118.3	118.9	119.9	122.2
630	109.5	111.8	112.8	113.4	114.4	114.8	115.0	116.0	117.1	117.0	117.9	118.5	119.1	119.9	122.6
800	109.7	112.1	113.1	113.6	114.5	114.9	115.0	116.0	117.2	117.0	117.8	118.4	119.1	120.0	122.8
1000	109.6	111.9	112.9	113.5	114.2	114.8	114.9	115.8	117.1	116.9	117.7	118.5	119.1	120.0	122.8
1250	109.1	111.4	112.3	113.0	113.7	114.5	114.7	115.5	116.7	116.7	117.6	118.4	119.1	120.1	122.7
1600	108.3	110.6	111.4	112.4	113.0	114.2	114.3	115.2	116.2	116.6	117.5	118.3	119.1	120.2	122.4
2000	107.2	109.5	110.3	111.5	112.1	113.7	113.9	114.8	115.7	116.4	117.3	118.1	119.1	120.3	121.9
2500	106.1	108.4	109.1	110.5	111.2	113.0	113.3	114.3	115.1	116.1	117.1	117.8	119.0	120.2	121.3
3150	105.1	107.3	108.0	109.4	110.3	112.2	112.7	113.8	114.5	115.7	116.8	117.5	118.8	120.0	120.5
4000	104.1	106.2	106.9	108.3	109.3	111.3	111.8	113.3	113.8	115.2	116.4	117.1	118.4	119.5	119.6
5000	103.3	105.1	105.8	107.1	108.2	110.1	110.8	112.5	113.2	114.5	115.9	116.6	117.9	118.7	118.6
6300	102.7	103.9	104.6	105.8	106.9	108.8	109.6	111.5	112.4	113.5	115.2	115.9	117.1	117.6	117.4
8000	102.2	102.5	103.2	104.3	105.4	107.2	108.1	110.1	111.4	112.3	114.3	115.1	116.1	116.5	116.1
10000	101.6	100.9	101.4	102.6	103.5	105.5	106.5	108.8	110.0	110.8	113.2	114.0	114.7	115.1	114.6
12500	100.7	99.1	99.3	100.7	101.7	103.7	104.6	106.3	108.2	109.0	111.8	112.5	113.1	113.6	112.7
16000	99.4	97.2	97.3	98.7	100.4	101.8	102.5	104.0	105.8	106.8	109.5	110.3	111.0	111.4	110.3
20000	97.9	95.9	96.3	97.2	100.9	99.7	99.9	102.0	103.1	104.1	105.8	107.0	108.0	107.8	107.0
OVERALL SPL	120.5	122.3	123.0	123.9	125.0	125.9	126.2	127.4	128.1	128.8	129.8	130.5	131.4	132.2	133.9
PNDB	130.6	131.3	132.0	133.2	134.3	135.7	136.2	137.7	138.6	139.5	140.9	141.6	142.6	143.4	144.0

MICROPHONE #	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	127.1	134.3	140.8	147.1	153.3	158.1	165.0	35.0	44.9	48.0	54.4	57.6	63.4	70.5	77.0
REF DIST(FT)	8.4	9.5	10.5	12.3	14.8	17.9	25.8	68.4	55.6	52.8	48.3	46.5	43.7	41.6	40.3
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	110.2	112.2	114.3	115.7	123.9	125.1	119.1	87.3	79.7	79.8	79.5	79.7	79.6	78.6	79.2
31	110.5	114.2	117.5	117.2	122.1	121.8	115.9	81.9	80.3	80.3	80.8	81.1	81.5	81.8	83.5
40	110.4	113.7	117.0	117.6	120.4	119.6	114.7	82.1	82.7	83.1	83.5	83.8	84.7	84.6	86.3
50	111.0	112.8	116.6	117.7	119.3	118.7	114.8	88.4	85.4	86.2	86.3	86.6	87.8	87.0	88.5
63	111.9	112.6	115.7	118.0	119.1	119.0	115.9	87.1	87.8	88.7	88.8	88.9	90.3	89.3	90.3
80	113.2	113.4	116.4	118.7	120.0	120.2	117.3	89.1	89.8	90.6	90.8	90.8	92.2	91.4	92.2
100	114.9	115.1	118.0	120.1	121.6	122.1	118.7	91.0	91.5	92.1	92.5	92.3	93.8	93.5	94.2
125	116.6	117.3	120.2	122.0	123.8	124.1	120.0	92.3	92.9	93.3	94.0	93.7	95.1	95.5	96.3
160	118.3	119.7	122.7	124.3	126.3	126.0	120.8	93.3	94.4	94.5	95.5	95.1	96.4	97.6	98.4
200	119.8	121.9	125.0	126.7	128.6	127.5	121.1	94.4	95.8	95.8	97.0	96.7	97.8	99.5	100.3
250	121.1	123.8	127.0	129.0	130.6	128.5	120.8	95.5	97.2	97.3	98.6	98.2	99.2	101.1	102.0
315	122.1	125.2	128.4	131.0	131.9	128.8	120.1	96.6	98.6	98.8	99.9	99.7	100.6	102.5	103.3
400	122.8	126.1	129.3	132.4	132.3	128.4	119.1	97.7	99.7	100.1	101.1	101.0	101.8	103.5	104.2
500	123.3	126.6	129.7	133.1	131.9	127.4	117.7	98.6	100.5	101.1	101.9	102.0	102.7	104.1	104.6
630	123.6	126.7	129.5	132.9	130.7	125.8	116.2	99.1	100.9	101.6	102.2	102.5	103.3	104.2	104.7
800	123.7	126.5	129.0	132.6	128.7	123.8	114.7	99.2	100.9	101.6	102.1	102.5	103.4	104.1	104.5
1000	123.6	126.1	128.2	130.5	126.1	121.5	113.3	98.9	100.5	101.1	101.6	102.2	103.1	103.6	104.0
1250	123.4	125.4	127.0	128.1	123.2	119.0	112.0	98.2	99.8	100.1	100.8	101.5	102.5	103.0	103.4
1600	123.1	124.6	125.6	125.8	120.2	116.5	110.9	97.2	98.9	99.0	99.8	100.6	101.8	102.4	102.9
2000	122.5	123.6	123.9	122.6	117.3	114.0	110.0	96.2	98.1	97.9	98.9	99.8	101.0	101.7	102.4
2500	121.6	122.3	121.9	119.7	114.7	111.6	109.2	95.4	97.3	97.0	98.1	99.0	100.2	101.2	102.0
3150	120.6	120.7	119.7	117.1	112.4	109.3	108.4	94.9	96.8	96.4	97.5	98.4	99.6	100.6	101.6
4000	119.3	118.9	117.4	114.7	110.3	107.1	107.5	94.8	96.1	96.2	97.1	98.0	99.1	100.1	101.2
5000	117.9	116.9	115.0	112.6	108.5	105.0	106.3	95.0	95.9	96.0	96.7	97.5	98.5	99.3	100.5
6300	116.4	114.9	112.7	110.7	106.7	102.9	104.8	95.4	95.2	95.7	95.9	96.6	97.5	98.0	99.3
8000	114.9	113.0	110.8	108.9	104.8	100.9	102.9	95.4	93.9	94.7	94.5	95.1	95.8	96.2	97.4
10000	113.4	111.3	109.3	107.0	102.5	98.9	100.6	94.7	91.8	92.7	92.3	92.6	93.2	93.5	94.6
12500	111.7	109.7	107.9	104.9	99.9	97.0	98.0	92.9	88.7	89.5	89.0	89.1	89.7	90.1	91.0
16000	109.4	107.9	106.2	102.4	97.5	95.1	95.5	89.7	85.3	85.6	85.3	85.3	85.8	86.2	86.8
20000	105.7	104.7	102.5	99.8	96.2	93.9	93.8	85.8	82.6	82.5	82.6	82.7	83.0	82.8	83.0
OVERALL SPL	134.6	136.7	138.9	141.2	140.4	137.7	131.0	110.0	111.3	111.6	112.3	112.7	113.7	114.6	115.3
PNDB	143.9	144.2	145.5	146.7	144.4	140.7	134.6	121.1	121.3	121.7	122.1	122.7	123.6	124.4	125.3

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.6	90.1	93.4	100.0	106.5	113.1	119.5	125.8	129.0	135.3	139.3	150.0	155.0	160.0
REF DIST(FT)	39.5	39.3	39.3	39.9	40.9	42.7	45.1	48.4	50.5	55.8	60.2	78.5	92.9	118.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	79.5	80.5	79.7	79.2	80.4	81.4	83.1	82.6	84.8	82.8	85.6	98.8	93.0	89.1
31	83.2	84.1	84.7	83.8	84.4	84.0	86.0	87.2	87.4	87.8	88.5	98.5	91.2	88.0
40	86.1	86.8	87.7	87.4	87.5	87.3	89.1	90.6	90.1	92.1	92.0	101.0	95.4	89.8
50	88.7	89.8	89.9	90.3	90.1	90.6	92.1	93.5	93.1	95.8	95.9	100.1	97.1	93.1
63	91.0	91.1	92.0	92.7	92.7	93.6	95.1	96.2	96.3	99.1	99.9	107.1	101.1	96.8
80	93.1	93.2	94.1	94.8	95.3	96.3	97.8	99.1	99.6	102.3	103.8	109.6	104.6	100.4
100	95.2	95.3	96.3	96.9	97.9	98.7	100.4	102.1	103.0	105.5	107.5	111.8	107.8	103.7
125	97.2	97.8	98.5	98.9	100.1	100.8	102.7	105.0	106.3	108.6	110.8	113.4	109.7	106.4
160	99.2	99.8	100.6	100.9	102.5	102.8	104.9	107.7	109.4	111.8	113.7	114.9	111.5	108.6
200	101.0	101.3	102.5	102.7	104.5	104.7	106.8	110.1	112.0	113.9	115.8	116.2	112.8	110.3
250	102.5	102.8	104.0	104.4	106.0	106.3	108.3	112.0	114.1	115.9	117.5	117.3	113.9	111.5
315	103.7	104.0	105.1	105.7	107.1	107.7	109.6	113.4	115.5	117.3	118.4	118.0	114.6	112.2
400	104.5	104.9	105.8	106.7	107.9	108.8	110.6	114.2	116.2	118.0	118.6	118.5	115.0	112.4
500	105.0	105.3	106.1	107.2	108.3	109.6	111.2	114.4	116.3	117.9	118.3	117.9	115.0	112.1
630	105.2	105.5	106.1	107.4	108.4	110.0	111.5	114.1	115.8	117.2	117.3	117.0	114.5	111.3
800	105.8	105.8	105.8	107.5	108.5	110.1	111.5	113.5	114.8	116.0	115.9	115.4	113.5	109.9
1000	106.6	105.1	105.4	107.0	108.0	109.9	111.2	112.6	113.5	114.3	114.2	113.3	112.0	108.2
1250	106.1	106.0	105.0	106.5	107.7	109.4	110.7	111.5	112.1	112.3	112.2	110.8	109.9	106.0
1600	105.6	106.4	106.6	106.0	107.4	108.9	110.1	110.5	110.5	110.2	110.2	108.2	107.3	103.5
2000	103.2	104.0	104.3	105.6	107.0	108.3	109.3	109.4	109.1	108.2	108.1	105.5	104.5	100.8
2500	102.7	103.6	104.0	105.2	106.7	107.7	108.5	108.4	107.7	106.2	106.1	103.1	101.5	98.0
3150	102.3	103.2	103.7	104.9	106.2	107.1	107.5	107.5	106.5	104.8	104.1	101.0	98.5	95.2
4000	101.8	102.6	103.2	104.5	105.6	106.4	106.4	106.3	105.2	102.7	102.2	99.3	95.7	92.5
5000	101.0	101.7	102.4	103.8	104.7	105.5	105.1	104.9	103.8	100.9	100.1	97.9	93.1	90.0
6300	99.8	100.3	101.2	102.6	103.4	104.1	103.5	103.0	102.0	98.7	97.9	96.4	90.9	87.8
8000	97.8	98.3	99.3	100.6	101.5	102.1	101.4	100.5	99.5	96.0	95.3	94.8	88.9	85.7
10000	95.0	95.5	96.6	97.7	98.9	99.1	98.7	97.2	96.3	92.7	92.2	92.6	87.0	83.7
12500	91.8	91.9	93.2	93.9	95.4	95.2	95.2	93.2	92.1	89.0	88.8	89.9	85.0	82.0
16000	87.4	87.8	89.0	89.6	91.0	90.4	90.8	88.8	87.4	85.3	85.3	87.2	82.9	80.6
20000	83.7	83.7	84.5	85.8	85.5	85.8	85.6	84.6	82.8	82.9	82.2	86.0	80.7	79.7
OVERALL SPL	115.9	116.4	117.1	118.2	119.4	120.5	121.8	123.8	125.2	126.4	127.1	127.1	124.1	121.1
PNDB	125.9	126.5	127.2	128.4	129.5	130.4	130.8	131.4	131.7	132.0	132.2	131.6	128.8	125.6

CORRECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 751254 RUN 1 DELTA f SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/13/78

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.5	45.0	51.5	58.3	62.2	70.7	75.3	85.3	90.4	95.3	100.2	109.7	114.5	119.0
REF DIST(FT)	12.5	10.7	9.8	8.5	7.8	7.5	7.1	6.9	6.7	6.7	6.7	6.8	7.1	7.3	7.6
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	82.0	80.0	81.0	80.0	81.0	85.0	81.0	84.0	84.0	85.0	87.0	89.0	91.0	89.0	89.0
31	83.0	83.0	81.0	83.0	86.0	85.0	84.0	83.0	86.0	88.0	84.0	90.0	87.0	89.0	90.0
40	81.0	83.0	82.0	84.0	85.0	86.0	84.0	84.0	86.0	87.0	86.0	90.0	90.0	90.0	90.0
50	84.0	85.0	85.0	85.0	85.0	87.0	89.0	88.0	88.0	87.0	90.0	91.0	92.0	94.0	94.0
63	87.0	90.0	88.0	90.0	90.0	91.0	89.0	91.0	93.0	96.0	93.0	95.0	95.0	96.0	99.0
80	85.0	87.0	87.0	89.0	89.0	92.0	91.0	91.0	95.0	96.0	96.0	96.0	98.0	98.0	100.0
100	87.0	89.0	87.0	90.0	90.0	89.0	92.0	92.0	95.0	95.0	95.0	96.0	98.0	100.0	101.0
125	89.0	89.0	91.0	91.0	90.0	92.0	95.0	95.0	97.0	98.0	98.0	98.0	100.0	100.0	101.0
160	92.0	92.0	92.0	94.0	96.0	95.0	97.0	98.0	99.0	100.0	101.0	101.0	102.0	104.0	103.0
200	94.0	93.0	95.0	97.0	97.0	97.0	98.0	99.0	102.0	103.0	103.0	103.0	104.0	105.0	106.0
250	99.0	98.0	100.0	101.0	100.0	101.0	102.0	103.0	105.0	105.0	107.0	107.0	109.0	110.0	110.0
315	91.0	94.0	94.0	95.0	97.0	96.0	98.0	99.0	100.0	101.0	102.0	102.0	104.0	105.0	105.0
400	91.0	93.0	98.0	94.0	95.0	95.0	97.0	97.0	99.0	99.0	100.0	101.0	102.0	104.0	104.0
500	93.0	96.0	97.0	96.0	96.0	96.0	97.0	97.0	99.0	99.0	101.0	101.0	103.0	104.0	104.0
630	96.0	98.0	98.0	98.0	99.0	98.0	99.0	100.0	101.0	102.0	103.0	103.0	104.0	105.0	106.0
800	99.0	100.0	100.0	100.0	99.0	100.0	101.0	101.0	102.0	102.0	102.0	102.0	104.0	105.0	105.0
1000	102.0	102.0	102.0	102.0	102.0	102.0	102.0	103.0	103.0	103.0	104.0	104.0	105.0	106.0	106.0
1250	105.0	105.0	104.0	104.0	104.0	104.0	104.0	105.0	105.0	105.0	105.0	105.0	105.0	107.0	107.0
1600	107.0	108.0	106.0	106.0	105.0	105.0	105.0	105.0	106.0	105.0	105.0	105.0	107.0	107.0	109.0
2000	108.0	110.0	109.0	107.0	106.0	106.0	107.0	106.0	106.0	107.0	107.0	107.0	108.0	109.0	110.0
2500	108.0	111.0	110.0	108.0	107.0	107.0	107.0	107.0	108.0	108.0	109.0	109.0	111.0	111.0	112.0
3150	108.0	110.0	110.0	110.0	108.0	108.0	108.0	109.0	109.0	110.0	111.0	111.0	112.0	113.0	114.0
4000	108.0	110.0	110.0	110.0	109.0	108.0	109.0	109.0	111.0	111.0	112.0	112.0	113.0	114.0	114.0
5000	109.0	110.0	111.0	111.0	110.0	110.0	111.0	112.0	114.0	114.0	115.0	115.0	116.0	116.0	116.0
6300	111.0	110.0	110.0	110.0	109.0	109.0	110.0	110.0	111.0	112.0	113.0	113.0	114.0	115.0	115.0
8000	110.0	109.0	108.0	109.0	109.0	109.0	109.0	110.0	111.0	111.0	111.0	112.0	113.0	114.0	114.0
10000	107.0	106.0	107.0	108.0	107.0	107.0	108.0	108.0	109.0	110.0	110.0	111.0	112.0	113.0	113.0
12500	105.0	105.0	105.0	106.0	106.0	106.0	107.0	107.0	108.0	109.0	109.0	110.0	111.0	111.0	111.0
16000	104.0	103.0	103.0	104.0	104.0	103.0	104.0	104.0	105.0	105.0	105.0	106.0	107.0	108.0	108.0
20000	101.0	101.0	101.0	102.0	102.0	101.0	102.0	102.0	102.0	103.0	104.0	104.0	105.0	106.0	105.0
OVERALL SPL	119.1	119.8	119.6	119.5	118.7	118.6	119.3	119.7	120.8	121.2	121.9	122.2	123.3	124.0	124.3
PNDB	132.8	132.7	132.7	132.8	132.1	132.0	132.8	133.4	134.9	135.1	135.9	136.1	137.1	137.7	137.8

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	127.1	133.9	140.4	146.7	153.0	158.1	165.0	35.0	45.3	48.4	51.6	57.8	64.3	70.4	77.4
REF DIST(FT)	8.4	9.3	10.5	12.1	14.7	17.9	25.8	60.4	59.2	52.5	50.1	46.4	43.6	41.5	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	90.0	93.0	95.0	97.0	103.0	108.0	96.0	82.0	69.0	70.0	68.0	70.0	70.0	70.0	71.0
31	91.0	93.0	98.0	99.0	104.0	102.0	96.0	79.0	69.0	69.0	69.0	70.0	70.0	71.0	73.0
40	92.0	95.0	98.0	101.0	101.0	103.0	97.0	75.0	69.0	70.0	70.0	71.0	73.0	74.0	74.0
50	97.0	98.0	102.0	101.0	101.0	100.0	98.0	77.0	72.0	77.0	77.0	76.0	80.0	81.0	80.0
63	101.0	101.0	102.0	103.0	105.0	104.0	100.0	81.0	82.0	84.0	84.0	82.0	85.0	85.0	84.0
80	102.0	103.0	103.0	105.0	105.0	104.0	102.0	82.0	77.0	81.0	81.0	80.0	81.0	80.0	81.0
100	102.0	102.0	105.0	106.0	106.0	106.0	102.0	81.0	78.0	79.0	78.0	78.0	82.0	83.0	83.0
125	102.0	103.0	104.0	106.0	107.0	105.0	103.0	78.0	81.0	82.0	82.0	84.0	84.0	86.0	84.0
160	104.0	104.0	104.0	106.0	105.0	105.0	101.0	82.0	83.0	84.0	82.0	82.0	83.0	85.0	87.0
200	107.0	107.0	107.0	107.0	106.0	105.0	99.0	82.0	88.0	86.0	85.0	84.0	86.0	86.0	88.0
250	113.0	112.0	111.0	110.0	107.0	105.0	100.0	85.0	85.0	85.0	85.0	88.0	91.0	90.0	91.0
315	107.0	107.0	107.0	105.0	104.0	102.0	96.0	81.0	82.0	83.0	82.0	85.0	86.0	87.0	88.0
400	105.0	106.0	105.0	104.0	102.0	101.0	94.0	80.0	81.0	82.0	82.0	84.0	86.0	86.0	87.0
500	105.0	105.0	104.0	102.0	101.0	99.0	92.0	81.0	81.0	84.0	83.0	84.0	86.0	86.0	87.0
630	106.0	106.0	104.0	102.0	101.0	98.0	93.0	83.0	84.0	85.0	85.0	86.0	88.0	89.0	88.0
800	106.0	106.0	103.0	102.0	100.0	97.0	93.0	84.0	85.0	86.0	86.0	87.0	89.0	89.0	89.0
1000	107.0	106.0	103.0	101.0	99.0	96.0	93.0	85.0	87.0	89.0	88.0	90.0	91.0	91.0	92.0
1250	109.0	108.0	104.0	102.0	99.0	97.0	94.0	88.0	90.0	91.0	91.0	92.0	93.0	93.0	93.0
1600	111.0	109.0	105.0	103.0	101.0	98.0	96.0	89.0	91.0	92.0	92.0	93.0	94.0	95.0	95.0
2000	113.0	110.0	106.0	104.0	102.0	99.0	97.0	90.0	92.0	93.0	93.0	94.0	95.0	96.0	96.0
2500	113.0	110.0	108.0	105.0	103.0	100.0	98.0	91.0	93.0	94.0	94.0	94.0	96.0	96.0	96.0
3150	114.0	111.0	109.0	106.0	104.0	101.0	100.0	92.0	93.0	94.0	94.0	95.0	96.0	96.0	97.0
4000	114.0	111.0	109.0	106.0	104.0	101.0	100.0	92.0	93.0	93.0	94.0	95.0	95.0	96.0	97.0
5000	115.0	111.0	110.0	107.0	105.0	101.0	101.0	94.0	95.0	95.0	95.0	97.0	97.0	98.0	99.0
6300	114.0	110.0	108.0	105.0	103.0	100.0	100.0	98.0	99.0	97.0	98.0	96.0	97.0	97.0	98.0
8000	113.0	109.0	107.0	104.0	102.0	99.0	101.0	99.0	100.0	98.0	98.0	96.0	97.0	96.0	97.0
10000	111.0	107.0	105.0	103.0	100.0	97.0	99.0	92.0	90.0	91.0	91.0	91.0	92.0	93.0	94.0
12500	109.0	106.0	103.0	101.0	98.0	94.0	97.0	94.0	89.0	89.0	90.0	90.0	90.0	91.0	91.0
16000	105.0	103.0	100.0	97.0	94.0	91.0	95.0	93.0	88.0	88.0	89.0	88.0	88.0	89.0	88.0
20000	103.0	100.0	97.0	94.0	90.0	87.0	94.0	88.0	81.0	82.0	82.0	83.0	83.0	83.0	84.0
OVERALL SPL	124.4	122.0	120.5	119.2	118.1	116.5	113.5	105.1	105.5	105.2	105.4	105.5	106.4	106.8	107.4
PNDB	137.3	134.3	132.6	130.2	128.2	125.1	124.7	119.7	120.1	119.3	119.4	118.8	119.7	120.0	120.7

MICROPHONE #	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.0	87.3	91.7	100.2	106.6	113.0	119.5	122.7	129.1	135.3	145.0	150.0	155.0	160.0
REF DIST(FT)	39.5	39.5	39.3	39.9	41.0	42.6	45.1	46.6	50.6	55.8	68.8	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	71.0	71.0	75.0	70.0	72.0	74.0	73.0	75.0	72.0	74.0	78.0	80.0	76.0	77.0
31	72.0	72.0	74.0	73.0	73.0	75.0	74.0	75.0	75.0	75.0	77.0	79.0	78.0	78.0
40	77.0	76.0	75.0	77.0	78.0	79.0	80.0	78.0	77.0	83.0	80.0	78.0	78.0	77.0
50	83.0	82.0	80.0	83.0	85.0	83.0	89.0	83.0	86.0	87.0	86.0	84.0	80.0	76.0
63	85.0	84.0	86.0	87.0	86.0	88.0	89.0	89.0	91.0	91.0	92.0	91.0	87.0	80.0
80	83.0	82.0	83.0	84.0	83.0	86.0	88.0	87.0	90.0	91.0	93.0	93.0	92.0	88.0
100	87.0	85.0	86.0	88.0	88.0	87.0	90.0	90.0	89.0	87.0	90.0	92.0	94.0	94.0
125	86.0	87.0	86.0	87.0	88.0	89.0	91.0	92.0	92.0	93.0	92.0	89.0	90.0	92.0
160	89.0	89.0	89.0	90.0	90.0	91.0	91.0	91.0	90.0	91.0	94.0	93.0	89.0	86.0
200	92.0	90.0	91.0	91.0	93.0	94.0	94.0	93.0	93.0	95.0	94.0	89.0	93.0	88.0
250	92.0	92.0	94.0	95.0	97.0	99.0	100.0	99.0	97.0	97.0	98.0	96.0	90.0	90.0
315	88.0	90.0	90.0	91.0	92.0	93.0	94.0	93.0	95.0	94.0	94.0	89.0	87.0	83.0
400	88.0	88.0	89.0	90.0	90.0	92.0	92.0	93.0	93.0	92.0	91.0	88.0	85.0	81.0
500	87.0	88.0	89.0	90.0	90.0	91.0	93.0	94.0	93.0	92.0	89.0	86.0	83.0	80.0
630	89.0	89.0	90.0	91.0	92.0	93.0	93.0	93.0	93.0	91.0	89.0	85.0	83.0	79.0
800	90.0	90.0	89.0	90.0	91.0	91.0	93.0	93.0	92.0	91.0	88.0	85.0	82.0	79.0
1000	91.0	91.0	91.0	92.0	93.0	93.0	94.0	94.0	93.0	91.0	88.0	85.0	82.0	78.0
1250	93.0	92.0	93.0	93.0	93.0	95.0	96.0	96.0	94.0	93.0	89.0	87.0	85.0	80.0
1600	95.0	95.0	95.0	95.0	95.0	99.0	97.0	96.0	95.0	94.0	91.0	88.0	86.0	82.0
2000	96.0	96.0	96.0	96.0	97.0	97.0	98.0	98.0	96.0	93.0	92.0	90.0	87.0	84.0
2500	97.0	97.0	98.0	98.0	98.0	98.0	99.0	98.0	96.0	95.0	94.0	90.0	88.0	85.0
3150	98.0	98.0	98.0	100.0	100.0	100.0	100.0	100.0	97.0	95.0	95.0	92.0	89.0	86.0
4000	98.0	99.0	99.0	100.0	101.0	100.0	101.0	99.0	98.0	95.0	96.0	92.0	89.0	86.0
5000	100.0	101.0	101.0	102.0	103.0	102.0	102.0	101.0	99.0	96.0	97.0	93.0	90.0	87.0
6300	98.0	99.0	99.0	100.0	101.0	101.0	101.0	99.0	98.0	94.0	96.0	93.0	89.0	86.0
8000	98.0	98.0	98.0	99.0	99.0	99.0	100.0	98.0	97.0	93.0	94.0	92.0	87.0	85.0
10000	94.0	95.0	94.0	97.0	98.0	97.0	98.0	96.0	94.0	90.0	93.0	90.0	85.0	83.0
12500	92.0	93.0	92.0	94.0	95.0	94.0	94.0	93.0	90.0	87.0	91.0	87.0	84.0	81.0
16000	89.0	89.0	89.0	90.0	90.0	90.0	90.0	88.0	86.0	83.0	87.0	84.0	80.0	76.0
20000	85.0	85.0	85.0	86.0	87.0	85.0	85.0	84.0	81.0	79.0	85.0	82.0	76.0	71.0
OVERALL SPL	108.2	108.5	108.7	109.7	110.4	110.3	111.0	110.1	108.7	107.1	107.4	104.8	102.6	100.5
PNDB	121.5	122.2	122.2	123.3	124.1	123.6	124.0	123.1	121.4	118.9	119.5	116.5	113.1	110.2

ALL CORRECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.5	45.0	51.5	58.1	62.2	70.7	75.3	85.3	90.4	95.3	100.2	109.7	114.5	119.0
REF DIST(FT)	12.5	10.7	9.4	8.5	7.8	7.5	7.1	6.9	6.7	6.7	6.7	6.8	7.1	7.3	7.6
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	82.0	80.0	83.0	80.0	83.0	85.0	83.0	84.0	84.0	85.0	87.0	89.0	91.0	89.0	89.0
31	83.0	83.0	81.0	83.0	86.0	85.0	84.0	83.0	86.0	88.0	84.0	90.0	87.0	89.0	90.0
40	81.0	83.0	82.0	84.0	85.0	86.0	84.0	84.0	86.0	87.0	86.0	90.0	90.0	90.0	90.0
50	84.0	85.0	85.0	85.0	85.0	87.0	89.0	88.0	88.0	87.0	90.0	91.0	92.0	94.0	94.0
63	87.0	90.0	88.0	90.0	90.0	91.0	89.0	91.0	93.0	96.0	93.0	95.0	95.0	96.0	99.0
80	85.0	87.0	87.0	89.0	89.0	92.0	91.0	91.0	95.0	96.0	96.0	96.0	98.0	98.0	100.0
100	87.0	89.0	87.0	90.0	90.0	89.0	92.0	92.0	95.0	95.0	95.0	96.0	98.0	100.0	101.0
125	89.0	89.0	91.0	91.0	90.0	92.0	95.0	95.0	97.0	98.0	98.0	98.0	100.0	100.0	101.0
160	92.0	92.0	92.0	94.0	96.0	95.0	97.0	98.0	99.0	100.0	101.0	101.0	102.0	104.0	103.0
200	94.0	91.0	95.0	97.0	97.0	97.0	98.0	99.0	102.0	103.0	103.0	103.0	104.0	105.0	106.0
250	99.0	98.0	100.0	101.0	100.0	101.0	102.0	103.0	105.0	105.0	107.0	107.0	109.0	110.0	110.0
315	91.0	94.0	94.0	95.0	97.0	96.0	98.0	99.0	100.0	101.0	102.0	102.0	104.0	105.0	105.0
400	91.0	93.0	94.0	94.0	95.0	95.0	97.0	97.0	99.0	99.0	100.0	101.0	102.0	104.0	104.0
500	93.0	96.0	97.0	96.0	96.0	96.0	97.0	97.0	99.0	99.0	101.0	101.0	103.0	104.0	104.0
630	96.0	98.0	98.0	98.0	99.0	98.0	99.0	100.0	101.0	102.0	103.0	103.0	104.0	105.0	106.0
800	99.0	100.0	100.0	100.0	99.0	100.0	101.0	101.0	102.0	102.0	102.0	102.0	104.0	105.0	105.0
1000	102.0	102.0	102.0	102.0	102.0	102.0	102.0	103.0	103.0	103.0	104.0	104.0	105.0	106.0	106.0
1250	105.0	105.0	104.0	104.0	104.0	104.0	104.0	105.0	105.0	105.0	105.0	105.0	105.0	107.0	107.0
1600	107.0	108.0	106.0	106.0	105.0	105.0	105.0	106.0	105.0	105.0	106.0	107.0	107.0	109.0	109.0
2000	108.0	110.0	109.0	107.0	106.0	106.0	107.0	106.0	106.0	107.0	107.0	107.0	108.0	109.0	110.0
2500	108.0	111.0	110.0	108.0	107.0	107.0	107.0	107.0	108.0	108.0	109.0	109.0	111.0	111.0	112.0
3150	108.0	110.0	110.0	110.0	108.0	108.0	108.0	109.0	109.0	110.0	111.0	111.0	112.0	113.0	114.0
4000	108.0	110.0	110.0	110.0	109.0	108.0	109.0	109.0	111.0	111.0	112.0	112.0	113.0	114.0	114.0
5000	109.0	110.0	111.0	111.0	110.0	110.0	111.0	112.0	114.0	114.0	115.0	115.0	116.0	116.0	116.0
6300	111.0	110.0	110.0	110.0	109.0	109.0	110.0	110.0	111.0	112.0	113.0	113.0	114.0	115.0	115.0
8000	110.0	109.0	108.0	109.0	109.0	109.0	109.0	110.0	111.0	111.0	111.0	112.0	113.0	114.0	114.0
10000	107.0	106.0	107.0	108.0	107.0	107.0	108.0	108.0	109.0	110.0	110.0	111.0	112.0	113.0	113.0
12500	105.0	105.0	105.0	106.0	106.0	106.0	107.0	107.0	108.0	109.0	109.0	110.0	111.0	111.0	111.0
16000	104.0	103.0	103.0	104.0	104.0	103.0	104.0	104.0	105.0	105.0	105.0	106.0	107.0	108.0	108.0
20000	101.0	101.0	101.0	102.0	102.0	101.0	102.0	102.0	102.0	103.0	104.0	104.0	105.0	106.0	105.0
OVERALL-SPL	119.1	119.8	119.6	119.5	118.7	118.8	119.3	119.7	120.8	121.2	121.9	122.2	123.3	124.0	124.3
PNDB	132.8	132.7	132.7	132.8	132.1	132.0	132.8	133.4	134.9	135.1	135.9	136.1	137.1	137.7	137.8

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	127.1	131.9	140.4	146.7	153.0	158.1	165.0	35.0	45.3	48.4	51.4	57.8	64.3	70.9	77.4
REF DIST(FT)	8.4	9.3	10.5	12.1	14.7	17.9	25.8	68.4	55.2	52.5	50.1	46.4	43.6	41.5	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	90.0	95.0	95.0	97.0	101.0	102.0	96.0	82.0	69.0	70.0	68.0	70.0	70.0	70.0	71.0
31	91.0	93.0	98.0	99.0	104.0	102.0	96.0	79.0	69.0	69.0	69.0	70.0	70.0	71.0	73.0
40	92.0	95.0	98.0	101.0	101.0	103.0	97.0	75.0	69.0	70.0	70.0	71.0	73.0	74.0	74.0
50	97.0	98.0	102.0	101.0	101.0	100.0	98.0	77.0	72.0	77.0	77.0	76.0	80.0	81.0	80.0
63	101.0	101.0	102.0	103.0	105.0	104.0	100.0	81.0	82.0	84.0	84.0	82.0	85.0	85.0	84.0
80	102.0	103.0	103.0	105.0	105.0	104.0	102.0	82.0	77.0	81.0	81.0	80.0	81.0	80.0	81.0
100	102.0	102.0	105.0	106.0	106.0	106.0	102.0	81.0	78.0	79.0	78.0	78.0	82.0	83.0	83.0
125	102.0	103.0	104.0	106.0	107.0	105.0	103.0	78.0	81.0	82.0	82.0	84.0	84.0	86.0	84.0
160	104.0	104.0	104.0	106.0	105.0	105.0	101.0	82.0	83.0	84.0	82.0	82.0	83.0	85.0	87.0
200	107.0	107.0	107.0	107.0	108.0	105.0	99.0	82.0	84.0	86.0	85.0	84.0	86.0	86.0	88.0
250	113.0	112.0	111.0	110.0	107.0	105.0	100.0	85.0	85.0	85.0	85.0	88.0	91.0	90.0	91.0
315	107.0	107.0	107.0	105.0	104.0	102.0	96.0	81.0	82.0	83.0	82.0	85.0	86.0	87.0	88.0
400	105.0	106.0	105.0	104.0	102.0	101.0	94.0	80.0	81.0	82.0	82.0	84.0	86.0	86.0	87.0
500	105.0	105.0	104.0	102.0	101.0	99.0	92.0	81.0	81.0	84.0	83.0	84.0	86.0	86.0	87.0
630	106.0	106.0	104.0	102.0	101.0	98.0	93.0	83.0	84.0	85.0	85.0	86.0	88.0	89.0	88.0
800	106.0	106.0	103.0	102.0	100.0	97.0	93.0	84.0	85.0	86.0	86.0	87.0	89.0	89.0	89.0
1000	107.0	106.0	103.0	101.0	99.0	96.0	93.0	85.0	87.0	89.0	88.0	90.0	91.0	91.0	92.0
1250	109.0	108.0	104.0	102.0	99.0	97.0	94.0	88.0	90.0	91.0	91.0	92.0	93.0	93.0	93.0
1600	111.0	109.0	105.0	103.0	101.0	98.0	96.0	89.0	91.0	92.0	92.0	93.0	94.0	95.0	95.0
2000	113.0	110.0	106.0	104.0	102.0	99.0	97.0	90.0	92.0	93.0	93.0	94.0	95.0	96.0	96.0
2500	113.0	110.0	108.0	105.0	103.0	100.0	98.0	91.0	93.0	94.0	94.0	94.0	96.0	96.0	96.0
3150	114.0	111.0	109.0	106.0	104.0	101.0	100.0	92.0	93.0	94.0	94.0	95.0	96.0	96.0	97.0
4000	114.0	111.0	109.0	106.0	104.0	101.0	100.0	92.0	93.0	93.0	94.0	95.0	95.0	96.0	97.0
5000	115.0	111.0	110.0	107.0	105.0	101.0	101.0	94.0	95.0	95.0	95.0	97.0	97.0	98.0	99.0
6300	114.0	110.0	108.0	105.0	103.0	100.0	100.0	98.0	99.0	97.0	98.0	96.0	97.0	97.0	98.0
8000	113.0	109.0	107.0	104.0	102.0	99.0	101.0	99.0	100.0	98.0	98.0	96.0	97.0	96.0	97.0
10000	111.0	107.0	105.0	103.0	100.0	97.0	99.0	92.0	90.0	91.0	91.0	91.0	92.0	93.0	94.0
12500	109.0	106.0	103.0	101.0	98.0	94.0	97.0	96.0	89.0	89.0	90.0	90.0	90.0	91.0	91.0
16000	105.0	103.0	100.0	97.0	94.0	91.0	95.0	93.0	88.0	88.0	89.0	88.0	88.0	89.0	88.0
20000	103.0	100.0	97.0	94.0	90.0	87.0	94.0	88.0	81.0	82.0	82.0	83.0	83.0	83.0	84.0
OVERALL SPL	124.4	122.0	120.5	119.2	118.1	116.5	113.5	105.1	105.5	105.2	105.4	105.5	106.4	106.8	107.4
PNDB	137.5	134.3	132.6	130.2	128.2	125.1	124.7	119.7	120.1	119.3	119.4	118.8	119.7	120.0	120.7

MICROPHONE #	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.0	87.3	93.7	100.2	106.6	113.0	119.5	122.7	129.1	135.5	145.0	150.0	155.0	160.0
REF DIST(FT)	39.9	39.3	39.3	39.9	41.0	42.6	45.1	46.6	50.6	55.8	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	71.0	71.0	75.0	70.0	72.0	74.0	73.0	75.0	72.0	74.0	78.0	80.0	76.0	77.0
31	72.0	72.0	74.0	73.0	73.0	75.0	74.0	75.0	75.0	75.0	77.0	79.0	78.0	78.0
40	77.0	76.0	79.0	77.0	78.0	79.0	80.0	78.0	77.0	83.0	80.0	78.0	78.0	77.0
50	83.0	82.0	80.0	81.0	85.0	83.0	85.0	83.0	84.0	87.0	86.0	84.0	80.0	76.0
63	85.0	86.0	86.0	87.0	86.0	88.0	89.0	89.0	91.0	91.0	92.0	91.0	87.0	80.0
80	81.0	82.0	83.0	84.0	83.0	86.0	88.0	87.0	90.0	91.0	93.0	93.0	92.0	88.0
100	87.0	85.0	86.0	88.0	88.0	87.0	90.0	90.0	89.0	87.0	90.0	92.0	94.0	94.0
125	86.0	87.0	86.0	87.0	88.0	89.0	91.0	92.0	92.0	93.0	92.0	89.0	90.0	92.0
160	89.0	89.0	89.0	90.0	90.0	91.0	91.0	91.0	90.0	91.0	94.0	93.0	89.0	86.0
200	92.0	90.0	91.0	91.0	93.0	94.0	94.0	93.0	93.0	95.0	94.0	89.0	93.0	88.0
250	92.0	92.0	94.0	95.0	97.0	99.0	100.0	99.0	97.0	97.0	98.0	96.0	90.0	90.0
315	88.0	90.0	90.0	91.0	92.0	93.0	94.0	93.0	95.0	94.0	94.0	89.0	87.0	83.0
400	88.0	88.0	89.0	90.0	90.0	92.0	92.0	93.0	93.0	92.0	91.0	88.0	85.0	81.0
500	87.0	88.0	89.0	90.0	90.0	91.0	93.0	94.0	93.0	92.0	89.0	86.0	83.0	80.0
630	89.0	89.0	90.0	91.0	92.0	93.0	93.0	93.0	93.0	91.0	89.0	85.0	83.0	79.0
800	90.0	90.0	89.0	90.0	91.0	91.0	93.0	94.0	92.0	91.0	88.0	85.0	82.0	79.0
1000	91.0	91.0	91.0	92.0	93.0	93.0	94.0	94.0	93.0	91.0	88.0	85.0	82.0	78.0
1250	93.0	92.0	93.0	93.0	93.0	95.0	96.0	96.0	94.0	93.0	89.0	87.0	85.0	80.0
1600	95.0	95.0	95.0	95.0	95.0	95.0	97.0	96.0	95.0	94.0	91.0	88.0	86.0	82.0
2000	96.0	96.0	96.0	96.0	97.0	97.0	98.0	98.0	96.0	95.0	92.0	90.0	87.0	84.0
2500	97.0	97.0	98.0	98.0	98.0	98.0	99.0	98.0	96.0	95.0	94.0	90.0	88.0	85.0
3150	98.0	98.0	98.0	100.0	100.0	100.0	100.0	100.0	97.0	95.0	95.0	92.0	89.0	86.0
4000	98.0	99.0	99.0	100.0	101.0	100.0	101.0	99.0	98.0	95.0	96.0	92.0	89.0	86.0
5000	100.0	101.0	101.0	102.0	103.0	102.0	102.0	101.0	99.0	96.0	97.0	93.0	90.0	87.0
6300	98.0	99.0	99.0	100.0	101.0	101.0	101.0	99.0	98.0	98.0	96.0	93.0	89.0	86.0
8000	98.0	98.0	98.0	99.0	99.0	99.0	100.0	98.0	97.0	93.0	94.0	92.0	87.0	85.0
10000	94.0	93.0	94.0	97.0	98.0	97.0	98.0	96.0	94.0	90.0	93.0	90.0	85.0	83.0
12500	92.0	93.0	92.0	94.0	95.0	94.0	94.0	93.0	90.0	87.0	91.0	87.0	84.0	81.0
16000	89.0	89.0	89.0	90.0	90.0	90.0	90.0	88.0	86.0	83.0	87.0	84.0	80.0	76.0
20000	85.0	85.0	85.0	86.0	87.0	85.0	85.0	84.0	81.0	79.0	85.0	82.0	76.0	71.0
OVERALL SPL	108.2	108.5	108.7	109.7	110.4	110.3	111.0	110.1	108.7	107.1	107.4	104.8	102.6	100.5
PNDB	121.5	122.2	122.2	123.3	124.1	123.6	124.0	123.1	121.4	118.9	119.5	116.5	113.1	110.2

-- VALUES AFTER CURVE FIT CALCULATIONS --

MICROPHONE:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG):	32.2	38.5	45.0	51.5	58.3	62.2	70.7	75.3	85.3	90.4	95.3	100.2	109.7	114.5	119.0
REF DIST(FT):	12.5	10.7	9.4	8.5	7.8	7.5	7.1	6.9	6.7	6.7	6.7	6.8	7.1	7.3	7.6
GAIN:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	82.8	79.9	82.4	80.0	83.2	84.8	83.0	83.8	84.2	85.5	86.4	88.9	90.2	88.6	88.7
31	81.3	82.8	82.4	83.0	85.3	85.5	84.0	83.6	85.3	86.4	85.4	90.0	89.0	89.7	90.1
40	81.9	84.2	82.6	84.4	85.7	86.2	85.1	84.6	86.7	87.8	86.4	90.5	89.5	91.0	91.7
50	83.6	85.2	83.7	85.6	86.1	87.2	86.8	86.6	88.8	89.8	88.7	91.4	91.3	92.7	93.8
63	85.7	86.5	85.4	87.2	87.1	88.8	89.0	89.2	91.3	92.2	91.6	93.0	93.8	94.9	96.2
80	87.5	88.0	87.5	89.2	88.9	90.5	91.4	91.8	93.9	94.8	94.7	95.1	96.6	97.5	98.8
100	88.9	89.5	89.7	91.2	90.9	92.3	93.7	94.3	96.4	97.3	97.5	97.4	99.3	100.0	101.2
125	89.9	90.9	91.7	93.0	93.0	93.9	95.6	96.2	98.4	99.3	99.7	99.6	101.5	102.3	103.2
160	90.4	92.1	93.2	94.5	94.7	95.1	97.0	97.7	99.9	100.7	101.4	101.3	103.1	104.0	104.6
200	90.8	93.0	94.3	95.5	96.0	95.9	97.9	98.6	100.7	101.5	102.3	102.5	104.1	105.2	105.4
250	91.3	93.7	95.1	96.1	96.8	96.5	98.4	99.8	101.1	101.7	102.7	103.0	104.5	105.8	105.7
315	91.9	94.5	95.7	96.5	97.2	96.9	98.6	99.2	101.1	101.6	102.7	103.1	104.4	105.8	105.7
400	92.9	95.1	96.3	96.8	97.5	97.2	98.7	99.3	100.9	101.3	102.5	102.8	104.1	105.5	105.4
500	94.4	96.5	97.1	97.3	97.9	97.7	98.9	99.5	100.8	101.1	102.2	102.4	103.8	105.2	105.1
630	96.3	98.0	98.2	98.1	98.5	98.5	99.4	99.9	100.9	101.1	102.1	102.3	103.6	104.9	105.1
800	98.6	100.0	99.8	99.4	99.5	99.6	100.2	100.7	101.4	101.5	102.3	102.4	103.8	104.9	105.3
1000	101.1	102.3	101.7	101.1	100.8	101.1	101.4	101.8	102.3	102.4	103.0	103.0	104.3	105.3	106.0
1250	103.6	104.8	103.9	103.1	102.5	102.7	103.0	103.2	103.6	103.6	104.1	104.2	105.4	106.2	107.1
1600	105.8	107.1	106.1	105.3	104.4	104.5	104.7	104.9	105.2	105.3	105.6	105.7	106.8	107.6	108.5
2000	107.6	109.1	108.1	107.3	106.3	106.2	106.4	106.5	107.0	107.1	107.4	107.6	108.8	109.3	110.2
2500	108.9	110.6	109.7	109.0	107.8	107.6	107.9	108.0	108.7	108.9	109.3	109.5	110.4	111.1	112.0
3150	109.6	111.3	110.7	110.2	108.9	108.6	109.1	109.3	110.2	110.5	111.1	111.3	112.2	112.9	113.6
4000	109.6	111.1	111.0	110.7	109.4	109.1	109.8	110.1	111.3	111.7	112.6	112.6	113.7	114.3	114.7
5000	109.3	110.3	110.6	110.5	109.3	109.2	109.9	110.4	111.8	112.3	113.4	113.4	114.5	115.2	115.4
6300	108.7	109.0	109.5	109.7	108.8	108.8	109.6	110.2	111.6	112.2	113.3	113.4	114.6	115.3	115.3
8000	108.1	107.6	108.1	108.7	108.0	108.1	109.0	109.5	110.9	111.5	112.3	112.6	113.9	114.5	114.4
10000	107.5	106.3	106.6	107.5	107.1	107.1	108.0	108.4	109.6	110.2	110.4	111.2	112.2	112.9	112.9
12500	106.6	105.2	105.1	106.4	106.2	105.9	106.8	106.8	107.7	108.3	107.9	109.2	109.9	110.7	110.7
16000	104.8	103.8	103.5	104.8	104.8	104.1	105.0	104.7	105.3	105.9	105.4	106.7	107.3	108.2	108.1
20000	100.2	100.5	100.8	101.6	101.5	100.5	101.5	101.6	101.9	102.7	104.0	103.8	105.0	106.0	105.1
OVERALL SPL	118.9	119.8	119.6	119.5	118.7	118.5	119.2	119.6	120.7	121.1	121.8	122.1	123.2	123.9	124.2
PNDB	131.8	132.5	132.5	132.7	132.0	131.9	132.7	133.1	134.3	134.8	135.6	135.8	137.0	137.8	137.9

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	127.1	133.9	140.4	146.7	153.0	158.1	165.0	35.0	45.3	48.4	51.6	57.8	64.3	70.9	77.4
REF DIST(FT)	8.8	9.3	10.5	12.1	14.7	17.9	25.8	60.8	55.2	52.5	50.1	46.4	43.6	41.5	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	89.3	94.1	94.4	96.8	101.8	102.0	96.2	82.3	69.5	69.7	67.7	69.7	69.1	69.3	70.6
31	92.0	94.9	98.7	99.6	102.6	102.2	95.6	77.7	68.1	69.1	68.9	70.3	71.6	72.3	73.4
40	93.9	95.7	99.8	100.6	102.2	102.0	96.7	76.8	69.2	72.1	72.4	72.5	74.8	75.5	75.9
50	95.8	97.0	100.2	101.4	102.5	102.1	98.3	77.6	71.7	75.9	76.1	75.4	76.0	76.6	76.2
63	98.0	98.9	101.0	102.6	103.4	102.8	100.4	79.0	74.6	79.4	79.3	78.2	80.6	81.3	80.5
80	100.4	101.0	102.2	104.0	104.6	103.8	101.8	80.2	77.5	81.8	81.4	80.5	82.6	83.3	82.7
100	102.7	103.1	103.8	105.5	105.7	104.8	102.5	81.0	79.8	83.2	82.5	82.1	84.0	84.8	84.5
125	104.7	104.9	105.3	106.7	106.5	105.5	102.3	81.4	81.4	83.7	82.9	83.2	84.8	85.7	85.9
160	106.1	106.2	106.5	107.4	106.7	105.6	101.4	81.5	82.4	83.7	82.9	83.8	85.3	86.2	86.9
200	106.9	106.9	107.2	107.8	106.1	105.1	99.9	81.4	82.8	83.4	82.7	84.1	85.6	86.4	87.5
250	107.1	107.2	107.2	106.8	105.4	104.0	98.1	81.4	82.8	83.2	82.5	84.3	85.9	86.9	87.8
315	106.9	107.0	106.7	105.7	104.1	102.5	96.2	81.4	82.7	83.3	82.7	84.5	86.3	86.7	87.9
400	106.6	106.7	105.8	104.5	102.6	100.7	94.5	81.7	82.8	83.7	83.2	85.0	86.8	87.0	88.1
500	106.3	106.3	104.7	103.0	101.3	99.1	93.3	82.2	83.1	84.5	84.0	85.6	87.6	87.6	88.4
630	106.2	106.1	103.9	102.0	100.2	97.8	92.6	83.0	83.8	85.6	85.2	86.6	88.5	88.5	88.9
800	106.6	106.2	103.5	101.4	99.6	96.9	92.5	84.1	84.9	86.9	86.6	87.8	89.6	89.7	89.8
1000	107.4	106.7	103.3	101.4	99.5	96.7	93.0	85.3	86.4	88.4	88.1	89.2	90.9	91.1	90.9
1250	108.6	107.4	103.8	101.9	99.9	97.0	94.1	86.7	88.2	89.9	89.7	90.7	92.1	92.5	92.3
1600	110.2	108.4	104.9	102.8	100.7	97.8	95.5	88.2	90.1	91.3	91.2	92.3	93.4	94.0	93.9
2000	111.8	109.5	106.2	103.9	101.8	98.8	97.0	89.7	91.9	92.6	92.6	93.7	94.6	95.3	95.4
2500	113.3	110.4	107.6	105.1	102.9	99.9	98.5	91.1	93.4	93.7	93.8	94.8	95.6	96.3	96.8
3150	114.4	111.0	108.7	106.0	103.8	100.8	99.7	92.5	94.6	94.6	94.8	95.7	96.4	97.0	97.8
4000	115.0	111.2	109.4	106.4	104.4	101.2	100.5	93.8	95.2	95.2	95.5	96.1	96.8	97.2	98.1
5000	114.8	110.9	109.4	106.3	104.3	101.1	100.8	94.9	95.3	95.5	95.9	96.1	96.8	97.1	98.2
6300	114.0	110.1	108.7	105.5	103.6	100.2	100.9	95.6	95.9	95.3	95.9	95.5	96.3	96.5	97.5
8000	112.5	108.9	107.1	104.2	102.1	98.7	99.7	96.0	94.0	94.6	95.2	94.5	95.2	95.4	96.1
10000	110.7	107.3	105.0	102.5	100.1	96.7	98.6	95.7	92.6	93.2	93.8	92.8	93.3	93.9	94.2
12500	108.9	105.6	102.5	100.0	97.5	94.2	97.3	94.5	90.4	90.7	91.0	90.9	90.7	91.7	91.6
16000	106.0	103.2	99.9	97.7	94.2	91.1	95.7	92.1	87.0	87.0	87.6	87.5	87.3	88.3	88.3
20000	102.7	100.0	97.1	93.8	90.0	87.0	93.7	88.1	81.0	82.0	82.2	83.1	83.1	83.1	83.7
OVERALL SPL	124.2	121.8	120.2	119.0	118.0	116.4	113.5	104.7	104.2	104.8	105.1	105.4	106.3	106.7	107.3
PNDB	137.3	134.3	132.5	130.0	128.1	125.1	124.5	118.4	117.6	118.2	118.5	118.6	119.4	119.8	120.5

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.0	87.3	93.7	100.2	106.6	113.0	119.5	122.7	129.1	135.3	145.0	150.0	155.0	160.0
REF DIST(FT)	39.5	39.3	39.3	39.9	41.0	42.6	45.1	46.6	50.6	55.8	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	70.1	70.1	74.3	69.1	70.8	73.0	72.2	74.4	71.2	72.6	76.8	79.9	76.4	78.2
31	74.2	73.9	75.1	74.7	75.9	77.2	76.0	76.1	75.7	78.5	79.0	78.0	76.4	75.3
40	77.4	77.0	76.7	78.3	78.9	79.7	80.1	79.0	80.1	82.5	81.7	80.6	78.9	76.2
50	80.3	79.8	78.9	81.1	81.5	81.8	83.8	82.3	84.0	85.5	84.8	84.5	82.4	79.2
63	82.9	82.3	81.5	83.5	83.5	84.0	86.8	85.5	87.2	88.0	87.9	88.2	86.1	83.0
80	85.2	84.7	84.2	85.7	85.8	86.4	89.1	88.3	89.5	90.0	90.7	90.7	89.2	86.5
100	87.1	86.6	86.6	87.7	88.0	88.8	90.7	90.5	91.1	91.7	92.9	92.0	91.2	89.0
125	88.5	88.1	88.4	89.3	89.8	90.9	91.7	92.2	92.2	92.8	94.3	92.1	92.1	90.1
160	89.3	89.1	89.7	90.4	91.3	92.5	92.2	93.2	92.9	93.6	95.0	91.4	91.8	90.1
200	89.5	89.6	90.3	91.1	92.1	93.5	92.5	93.8	93.4	93.9	94.8	90.3	90.7	88.8
250	89.4	89.6	90.5	91.3	92.5	93.8	92.6	94.0	93.6	93.8	94.6	89.0	88.9	86.7
315	89.1	89.5	90.3	91.2	92.3	93.7	92.6	94.0	93.6	93.4	92.8	87.7	86.9	84.2
400	88.8	89.2	90.0	91.0	92.0	93.2	92.7	93.9	93.5	92.9	91.5	86.7	85.1	81.8
500	88.7	89.1	89.7	90.7	91.6	92.7	92.9	93.8	93.4	92.3	90.1	86.0	83.6	79.9
630	89.0	89.3	89.7	90.7	91.5	92.3	93.2	93.8	93.3	91.8	89.1	85.7	82.7	78.7
800	89.7	89.9	90.2	91.0	91.5	92.3	93.8	94.0	93.3	91.6	88.6	85.7	82.5	78.1
1000	90.9	90.8	91.1	91.7	92.1	92.7	94.5	94.5	93.4	91.7	88.6	86.1	83.0	78.8
1250	92.4	92.2	92.4	92.9	93.2	93.7	95.4	95.3	93.7	92.1	89.2	86.8	84.0	80.0
1600	94.1	93.9	94.1	94.4	94.7	95.0	96.5	96.2	94.3	92.8	90.3	87.8	85.8	81.7
2000	95.9	95.6	95.9	96.2	96.6	96.7	97.8	97.3	95.2	93.6	91.8	88.9	86.9	83.5
2500	97.4	97.4	97.6	98.0	98.5	98.4	99.1	98.4	96.2	94.5	93.5	90.2	88.2	85.1
3150	98.5	98.8	99.0	99.6	100.2	99.9	100.3	99.4	97.3	95.3	95.1	91.5	89.2	86.3
4000	99.1	99.6	99.8	100.7	101.4	101.0	101.2	100.0	98.2	95.6	96.2	92.6	89.7	86.8
5000	99.0	99.8	99.9	101.1	101.9	101.3	101.6	100.1	98.7	95.4	96.7	93.2	89.5	86.6
6300	98.1	99.2	99.1	100.6	101.8	100.8	101.3	99.6	98.3	94.5	96.3	93.0	88.7	85.9
8000	96.7	97.8	97.4	99.2	100.0	99.4	100.1	98.1	96.9	92.7	95.8	92.0	87.3	84.6
10000	94.7	95.6	95.0	96.8	97.5	97.1	97.7	95.8	94.1	90.1	92.8	89.9	85.6	82.9
12500	92.2	92.6	91.9	93.7	94.3	93.9	94.2	92.5	90.1	86.8	90.0	86.9	83.3	80.6
16000	89.1	89.1	88.6	90.0	90.6	89.9	89.8	88.4	85.4	81.0	87.2	83.8	80.4	77.1
20000	84.9	85.0	85.2	86.1	86.9	85.1	85.1	84.0	81.3	79.1	85.2	82.1	75.9	70.6
OVERALL SPL	108.1	108.5	108.6	109.6	110.3	110.2	110.7	109.9	108.6	106.9	107.2	104.1	102.2	99.7
PNDB	121.2	121.9	121.9	123.1	123.8	123.5	124.0	122.9	121.5	118.7	119.7	116.4	113.0	110.0

CORRECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 271274 RUN 1 DELTA 1 SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/13/78

MICROPHONE:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG):	32.2	38.5	44.9	51.5	58.2	62.0	70.0	78.2	83.2	88.2	97.6	102.3	107.0	115.4	119.2
REF DIST(FT):	12.5	10.7	9.4	8.5	7.8	7.6	7.1	6.8	6.7	6.7	6.7	6.8	7.0	7.4	7.6
GAIN:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	81.0	84.0	83.0	81.0	81.0	84.0	84.0	84.0	84.0	85.0	88.0	86.0	92.0	92.0	91.0
31	83.0	81.0	83.0	83.0	84.0	84.0	84.0	87.0	85.0	87.0	87.0	89.0	89.0	92.0	95.0
40	84.0	83.0	83.0	82.0	85.0	84.0	84.0	86.0	87.0	87.0	89.0	91.0	88.0	93.0	92.0
50	86.0	86.0	85.0	86.0	87.0	86.0	88.0	90.0	89.0	90.0	91.0	91.0	92.0	94.0	96.0
63	90.0	88.0	90.0	90.0	90.0	92.0	91.0	90.0	93.0	93.0	95.0	95.0	97.0	99.0	100.0
80	88.0	88.0	90.0	90.0	90.0	91.0	94.0	93.0	94.0	95.0	98.0	99.0	98.0	102.0	101.0
100	90.0	91.0	90.0	91.0	92.0	94.0	93.0	95.0	95.0	96.0	99.0	98.0	98.0	102.0	102.0
125	91.0	91.0	93.0	92.0	94.0	94.0	94.0	96.0	96.0	97.0	100.0	98.0	100.0	103.0	102.0
160	93.0	94.0	93.0	95.0	96.0	97.0	97.0	99.0	100.0	100.0	102.0	102.0	102.0	105.0	103.0
200	93.0	95.0	94.0	96.0	98.0	96.0	98.0	100.0	101.0	102.0	103.0	103.0	104.0	106.0	106.0
250	99.0	100.0	101.0	101.0	101.0	102.0	102.0	105.0	106.0	107.0	109.0	110.0	110.0	114.0	112.0
315	94.0	95.0	96.0	96.0	97.0	98.0	98.0	101.0	102.0	102.0	104.0	104.0	106.0	107.0	108.0
400	93.0	95.0	95.0	96.0	97.0	96.0	98.0	99.0	100.0	101.0	103.0	103.0	104.0	106.0	107.0
500	95.0	96.0	96.0	96.0	98.0	97.0	99.0	100.0	100.0	101.0	103.0	104.0	104.0	106.0	106.0
630	97.0	98.0	98.0	99.0	99.0	100.0	101.0	102.0	102.0	103.0	105.0	106.0	106.0	107.0	108.0
800	99.0	101.0	100.0	101.0	101.0	101.0	102.0	103.0	103.0	103.0	105.0	105.0	106.0	108.0	108.0
1000	103.0	103.0	103.0	103.0	103.0	103.0	104.0	105.0	105.0	105.0	106.0	106.0	107.0	108.0	109.0
1250	106.0	107.0	106.0	105.0	105.0	105.0	106.0	106.0	107.0	107.0	108.0	107.0	107.0	109.0	110.0
1600	110.0	110.0	109.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	108.0	108.0	109.0	111.0	112.0
2000	110.0	111.0	109.0	109.0	108.0	107.0	108.0	108.0	108.0	109.0	111.0	110.0	110.0	113.0	114.0
2500	110.0	111.0	111.0	110.0	109.0	109.0	109.0	109.0	109.0	111.0	113.0	112.0	113.0	115.0	116.0
3150	110.0	112.0	111.0	111.0	111.0	110.0	110.0	111.0	112.0	112.0	114.0	114.0	115.0	117.0	118.0
4000	111.0	112.0	112.0	112.0	111.0	111.0	111.0	112.0	113.0	114.0	115.0	116.0	116.0	117.0	118.0
5000	111.0	113.0	113.0	113.0	113.0	113.0	113.0	114.0	115.0	116.0	118.0	118.0	118.0	119.0	120.0
6300	111.0	112.0	112.0	113.0	113.0	112.0	113.0	114.0	114.0	116.0	118.0	118.0	119.0	120.0	120.0
8000	112.0	112.0	112.0	113.0	112.0	111.0	112.0	113.0	114.0	114.0	116.0	117.0	118.0	119.0	120.0
10000	108.0	109.0	110.0	111.0	111.0	111.0	111.0	112.0	113.0	114.0	116.0	116.0	117.0	118.0	118.0
12500	106.0	108.0	108.0	110.0	109.0	109.0	109.0	110.0	112.0	113.0	114.0	115.0	116.0	117.0	117.0
16000	104.0	105.0	105.0	107.0	106.0	106.0	107.0	108.0	109.0	110.0	112.0	112.0	113.0	114.0	114.0
20000	101.0	103.0	103.0	104.0	104.0	104.0	105.0	105.0	106.0	107.0	109.0	110.0	110.0	111.0	111.0
OVERALL SPL	120.7	121.7	121.5	121.8	121.8	121.1	121.5	122.4	123.2	124.1	125.8	126.1	126.8	128.1	128.6
PNDB	134.1	134.8	134.7	135.3	135.2	134.6	135.3	136.2	136.7	138.0	139.8	140.0	140.8	142.0	142.3

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	126.0	132.6	139.0	145.2	151.4	157.5	165.0	35.0	44.4	47.5	53.9	60.3	63.5	70.0	76.5
REF DIST(FT)	8.2	9.1	10.2	11.7	13.9	17.4	29.8	68.4	56.1	53.2	48.6	45.2	43.9	41.8	40.6
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	93.0	97.0	99.0	100.0	105.0	107.0	105.0	82.0	72.0	71.0	71.0	78.0	80.0	69.0	78.0
31	94.0	98.0	101.0	101.0	104.0	105.0	103.0	79.0	70.0	71.0	70.0	72.0	82.0	71.0	74.0
40	95.0	99.0	100.0	102.0	106.0	106.0	102.0	77.0	71.0	71.0	73.0	75.0	82.0	77.0	76.0
50	97.0	98.0	102.0	104.0	106.0	107.0	104.0	79.0	79.0	76.0	80.0	82.0	83.0	81.0	82.0
63	99.0	102.0	103.0	105.0	105.0	108.0	105.0	84.0	89.0	84.0	85.0	85.0	87.0	84.0	85.0
80	103.0	106.0	105.0	106.0	108.0	108.0	108.0	84.0	81.0	83.0	83.0	82.0	86.0	82.0	82.0
100	104.0	106.0	106.0	108.0	107.0	110.0	108.0	84.0	82.0	81.0	82.0	84.0	87.0	86.0	87.0
125	104.0	106.0	107.0	109.0	110.0	109.0	108.0	80.0	81.0	83.0	85.0	88.0	90.0	87.0	88.0
160	105.0	106.0	108.0	108.0	110.0	108.0	107.0	83.0	86.0	85.0	85.0	86.0	90.0	87.0	89.0
200	107.0	108.0	108.0	109.0	109.0	109.0	105.0	88.0	85.0	85.0	87.0	87.0	90.0	89.0	90.0
250	114.0	115.0	115.0	113.0	112.0	108.0	104.0	87.0	86.0	87.0	90.0	92.0	93.0	91.0	93.0
315	108.0	109.0	109.0	107.0	109.0	107.0	101.0	83.0	85.0	86.0	86.0	87.0	90.0	89.0	89.0
400	107.0	107.0	107.0	107.0	107.0	105.0	98.0	83.0	85.0	84.0	85.0	87.0	89.0	88.0	89.0
500	107.0	107.0	107.0	105.0	106.0	103.0	96.0	83.0	85.0	86.0	86.0	88.0	89.0	88.0	89.0
630	109.0	109.0	107.0	106.0	106.0	102.0	96.0	84.0	86.0	87.0	87.0	88.0	89.0	89.0	90.0
800	109.0	109.0	107.0	106.0	104.0	100.0	97.0	86.0	87.0	88.0	89.0	90.0	90.0	90.0	90.0
1000	110.0	110.0	105.0	105.0	104.0	99.0	96.0	88.0	90.0	90.0	91.0	92.0	93.0	93.0	93.0
1250	111.0	111.0	106.0	105.0	103.0	100.0	98.0	91.0	92.0	92.0	93.0	95.0	95.0	95.0	94.0
1600	114.0	112.0	108.0	106.0	105.0	100.0	98.0	91.0	93.0	93.0	95.0	96.0	96.0	97.0	97.0
2000	115.0	112.0	110.0	107.0	105.0	101.0	100.0	92.0	93.0	94.0	95.0	96.0	97.0	97.0	97.0
2500	117.0	114.0	111.0	109.0	106.0	102.0	102.0	92.0	95.0	95.0	96.0	97.0	97.0	98.0	98.0
3150	118.0	116.0	113.0	111.0	108.0	104.0	104.0	95.0	96.0	96.0	97.0	98.0	98.0	99.0	99.0
4000	119.0	116.0	114.0	112.0	108.0	104.0	104.0	95.0	96.0	96.0	97.0	99.0	99.0	98.0	99.0
5000	120.0	117.0	115.0	113.0	110.0	105.0	105.0	96.0	97.0	96.0	98.0	99.0	99.0	99.0	101.0
6300	119.0	116.0	114.0	113.0	110.0	105.0	104.0	98.0	98.0	97.0	98.0	99.0	99.0	99.0	101.0
8000	119.0	115.0	114.0	112.0	108.0	104.0	104.0	104.0	104.0	102.0	103.0	100.0	103.0	100.0	101.0
10000	117.0	114.0	111.0	110.0	106.0	102.0	103.0	95.0	93.0	92.0	95.0	96.0	96.0	96.0	97.0
12500	116.0	112.0	110.0	108.0	104.0	101.0	102.0	94.0	90.0	90.0	93.0	93.0	93.0	94.0	94.0
16000	113.0	109.0	107.0	105.0	101.0	97.0	100.0	95.0	89.0	89.0	90.0	91.0	90.0	91.0	91.0
20000	109.0	106.0	104.0	102.0	98.0	93.0	97.0	89.0	83.0	81.0	84.0	86.0	85.0	87.0	87.0
OVERALL SPL	128.6	126.3	124.6	123.3	122.1	120.4	118.5	107.9	108.0	107.1	108.3	108.6	109.4	108.9	109.7
PNDB	141.9	139.4	137.4	136.1	133.5	129.4	128.4	123.1	123.1	121.9	123.1	122.3	123.9	122.5	123.5

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.0	89.6	93.0	99.4	105.9	112.5	118.9	125.1	131.4	137.7	145.0	150.0	155.0	160.0
REF DIST(FT)	39.5	39.3	39.3	39.8	40.8	42.5	44.8	48.0	52.3	58.3	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	72.0	73.0	75.0	77.0	76.0	79.0	78.0	78.0	78.0	82.0	81.0	81.0	82.0	91.0
31	74.0	75.0	74.0	80.0	77.0	75.0	79.0	80.0	78.0	83.0	82.0	82.0	82.0	91.0
40	80.0	79.0	80.0	80.0	82.0	78.0	82.0	84.0	83.0	86.0	83.0	82.0	79.0	88.0
50	82.0	84.0	87.0	85.0	89.0	85.0	88.0	88.0	87.0	91.0	90.0	89.0	84.0	89.0
63	87.0	86.0	87.0	87.0	88.0	87.0	90.0	90.0	94.0	93.0	95.0	94.0	92.0	89.0
80	85.0	84.0	86.0	86.0	87.0	87.0	88.0	89.0	90.0	95.0	97.0	98.0	98.0	93.0
100	87.0	89.0	90.0	90.0	91.0	91.0	91.0	91.0	93.0	93.0	94.0	96.0	98.0	97.0
125	88.0	88.0	89.0	89.0	92.0	90.0	92.0	95.0	97.0	98.0	98.0	95.0	93.0	95.0
160	90.0	90.0	91.0	92.0	93.0	93.0	94.0	94.0	95.0	96.0	98.0	99.0	96.0	88.0
200	90.0	91.0	90.0	91.0	94.0	94.0	95.0	95.0	96.0	98.0	98.0	95.0	95.0	92.0
250	92.0	95.0	95.0	96.0	98.0	99.0	101.0	102.0	102.0	99.0	100.0	99.0	94.0	93.0
315	90.0	92.0	92.0	93.0	95.0	97.0	97.0	97.0	98.0	97.0	96.0	94.0	91.0	88.0
400	90.0	90.0	91.0	93.0	93.0	94.0	96.0	97.0	96.0	96.0	94.0	91.0	89.0	85.0
500	90.0	91.0	91.0	91.0	93.0	93.0	96.0	96.0	95.0	95.0	93.0	90.0	87.0	84.0
630	91.0	92.0	92.0	93.0	94.0	95.0	97.0	96.0	95.0	94.0	92.0	89.0	86.0	83.0
800	91.0	92.0	92.0	93.0	95.0	95.0	97.0	95.0	95.0	93.0	91.0	88.0	85.0	81.0
1000	94.0	94.0	94.0	94.0	96.0	96.0	97.0	96.0	94.0	92.0	91.0	88.0	85.0	82.0
1250	95.0	95.0	95.0	95.0	96.0	97.0	99.0	97.0	95.0	93.0	92.0	89.0	87.0	84.0
1600	97.0	98.0	97.0	97.0	97.0	97.0	100.0	97.0	96.0	94.0	93.0	91.0	89.0	85.0
2000	97.0	98.0	98.0	97.0	98.0	98.0	102.0	99.0	97.0	95.0	94.0	92.0	90.0	87.0
2500	99.0	99.0	99.0	100.0	100.0	100.0	102.0	100.0	99.0	97.0	96.0	93.0	91.0	87.0
3150	100.0	100.0	101.0	102.0	102.0	101.0	104.0	102.0	101.0	98.0	98.0	95.0	93.0	89.0
4000	100.0	101.0	101.0	102.0	103.0	102.0	103.0	102.0	100.0	99.0	99.0	97.0	94.0	90.0
5000	101.0	103.0	103.0	104.0	105.0	103.0	104.0	103.0	101.0	99.0	101.0	97.0	95.0	91.0
6300	101.0	102.0	103.0	104.0	104.0	104.0	104.0	103.0	101.0	98.0	101.0	98.0	95.0	90.0
8000	100.0	101.0	102.0	103.0	104.0	103.0	103.0	102.0	99.0	97.0	100.0	97.0	95.0	90.0
10000	98.0	99.0	99.0	100.0	102.0	101.0	101.0	100.0	97.0	95.0	99.0	95.0	93.0	88.0
12500	96.0	96.0	97.0	98.0	99.0	98.0	98.0	97.0	94.0	91.0	97.0	94.0	90.0	85.0
16000	92.0	93.0	93.0	94.0	95.0	94.0	94.0	92.0	90.0	87.0	94.0	91.0	86.0	81.0
20000	88.0	88.0	89.0	90.0	91.0	90.0	89.0	88.0	86.0	82.0	91.0	88.0	82.0	76.0
OVERALL SPL	110.1	111.0	111.4	112.2	113.1	112.6	113.8	112.7	111.6	110.2	111.2	109.2	107.2	104.8
PNDB	123.7	124.6	125.2	126.1	126.7	126.3	127.0	125.9	124.2	122.0	124.0	121.1	118.4	114.1

ALL CORRECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE (DEG)	32.2	38.5	44.9	51.5	58.2	62.0	70.0	78.2	83.2	88.2	97.6	102.3	107.0	115.4	119.2
REF DIST (FT)	12.5	10.7	9.4	8.5	7.8	7.6	7.1	6.8	6.7	6.7	6.7	6.8	7.0	7.4	7.6
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ (HERTZ)															
25	81.0	84.0	85.0	81.0	81.0	84.0	84.0	84.0	84.0	85.0	88.0	86.0	92.0	92.0	91.0
31	83.0	81.0	83.0	83.0	84.0	84.0	84.0	87.0	85.0	87.0	87.0	89.0	89.0	92.0	95.0
40	84.0	83.0	83.0	82.0	85.0	84.0	84.0	86.0	87.0	87.0	89.0	91.0	88.0	93.0	92.0
50	86.0	86.0	85.0	86.0	87.0	86.0	88.0	90.0	89.0	90.0	91.0	91.0	92.0	94.0	96.0
63	90.0	88.0	90.0	90.0	90.0	92.0	91.0	90.0	93.0	93.0	95.0	95.0	97.0	99.0	100.0
80	88.0	88.0	90.0	90.0	90.0	91.0	94.0	93.0	96.0	95.0	98.0	99.0	98.0	102.0	101.0
100	90.0	91.0	90.0	91.0	92.0	94.0	93.0	95.0	95.0	96.0	99.0	98.0	98.0	102.0	102.0
125	91.0	91.0	93.0	92.0	94.0	94.0	94.0	96.0	96.0	97.0	100.0	98.0	100.0	103.0	102.0
160	93.0	94.0	93.0	95.0	96.0	97.0	97.0	99.0	100.0	100.0	102.0	102.0	102.0	105.0	103.0
200	93.0	95.0	94.0	96.0	98.0	96.0	98.0	100.0	101.0	102.0	103.0	103.0	104.0	106.0	106.0
250	99.0	100.0	101.0	101.0	101.0	102.0	102.0	105.0	106.0	107.0	109.0	110.0	110.0	114.0	112.0
315	94.0	95.0	96.0	96.0	97.0	98.0	98.0	101.0	102.0	102.0	104.0	104.0	106.0	107.0	108.0
400	93.0	95.0	95.0	96.0	97.0	96.0	98.0	99.0	100.0	101.0	103.0	103.0	104.0	106.0	107.0
500	95.0	96.0	96.0	96.0	98.0	97.0	99.0	100.0	100.0	101.0	103.0	104.0	104.0	106.0	106.0
630	97.0	98.0	98.0	99.0	99.0	100.0	101.0	102.0	102.0	103.0	105.0	106.0	106.0	107.0	108.0
800	99.0	101.0	100.0	101.0	101.0	101.0	102.0	103.0	103.0	103.0	105.0	105.0	106.0	108.0	108.0
1000	103.0	103.0	103.0	103.0	103.0	103.0	104.0	105.0	105.0	105.0	106.0	106.0	107.0	108.0	109.0
1250	106.0	107.0	106.0	105.0	105.0	105.0	106.0	106.0	107.0	107.0	108.0	107.0	107.0	109.0	110.0
1600	110.0	110.0	109.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	108.0	108.0	109.0	111.0	112.0
2000	110.0	111.0	109.0	109.0	108.0	107.0	108.0	108.0	108.0	109.0	111.0	110.0	110.0	113.0	114.0
2500	110.0	111.0	111.0	110.0	109.0	109.0	109.0	109.0	109.0	111.0	113.0	112.0	113.0	115.0	116.0
3150	110.0	112.0	111.0	111.0	111.0	110.0	110.0	111.0	112.0	112.0	114.0	114.0	115.0	117.0	118.0
4000	111.0	112.0	112.0	112.0	111.0	111.0	111.0	112.0	113.0	114.0	115.0	116.0	116.0	117.0	118.0
5000	111.0	113.0	113.0	113.0	113.0	113.0	113.0	114.0	115.0	116.0	118.0	118.0	118.0	119.0	120.0
6300	111.0	112.0	112.0	113.0	113.0	112.0	113.0	114.0	114.0	116.0	118.0	118.0	119.0	120.0	120.0
8000	112.0	112.0	112.0	113.0	112.0	111.0	112.0	113.0	114.0	114.0	116.0	117.0	118.0	119.0	120.0
10000	108.0	109.0	110.0	111.0	111.0	111.0	111.0	112.0	113.0	114.0	116.0	116.0	117.0	118.0	118.0
12500	106.0	108.0	108.0	110.0	109.0	109.0	109.0	110.0	112.0	113.0	114.0	115.0	116.0	117.0	117.0
16000	104.0	105.0	105.0	107.0	106.0	106.0	107.0	108.0	109.0	110.0	112.0	112.0	113.0	114.0	114.0
20000	101.0	103.0	103.0	104.0	104.0	104.0	105.0	105.0	106.0	107.0	109.0	110.0	110.0	111.0	111.0
OVERALL SPL	120.7	121.7	121.5	121.8	121.4	121.1	121.5	122.4	123.2	124.1	125.8	126.1	126.8	128.1	128.6
PNDB	134.1	134.8	134.7	135.3	135.2	134.6	135.3	136.2	136.7	138.0	139.8	140.0	140.8	142.0	142.5

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	126.0	132.6	139.0	145.2	151.4	157.5	165.0	35.0	44.4	47.5	53.9	60.3	63.5	70.0	76.5
REF DIST(FT)	8.2	9.1	10.2	11.7	13.9	17.4	25.8	68.4	56.1	53.2	48.6	45.2	43.9	41.8	40.4
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	93.0	97.0	99.0	100.0	105.0	107.0	105.0	82.0	72.0	71.0	71.0	70.0	80.0	69.0	74.0
31	94.0	98.0	101.0	101.0	104.0	105.0	103.0	79.0	70.0	71.0	70.0	72.0	82.0	71.0	74.0
40	95.0	99.0	100.0	102.0	106.0	106.0	102.0	77.0	71.0	71.0	73.0	75.0	82.0	77.0	76.0
50	97.0	98.0	102.0	104.0	106.0	107.0	104.0	79.0	79.0	76.0	80.0	82.0	83.0	81.0	82.0
63	99.0	102.0	103.0	105.0	105.0	108.0	105.0	84.0	89.0	84.0	85.0	85.0	87.0	84.0	85.0
80	103.0	106.0	105.0	106.0	108.0	108.0	108.0	84.0	81.0	83.0	83.0	82.0	86.0	82.0	82.0
100	104.0	106.0	106.0	108.0	107.0	110.0	108.0	84.0	82.0	81.0	82.0	84.0	87.0	86.0	87.0
125	104.0	106.0	107.0	109.0	110.0	109.0	108.0	80.0	81.0	83.0	85.0	88.0	90.0	87.0	88.0
160	105.0	106.0	108.0	108.0	110.0	108.0	107.0	83.0	84.0	85.0	85.0	86.0	90.0	87.0	89.0
200	107.0	108.0	108.0	109.0	109.0	109.0	105.0	84.0	85.0	85.0	87.0	87.0	90.0	89.0	90.0
250	114.0	115.0	115.0	113.0	112.0	108.0	104.0	87.0	86.0	87.0	90.0	92.0	93.0	91.0	93.0
315	108.0	109.0	109.0	107.0	109.0	107.0	101.0	83.0	85.0	86.0	86.0	87.0	90.0	89.0	89.0
400	107.0	107.0	107.0	107.0	107.0	105.0	98.0	83.0	85.0	84.0	85.0	87.0	89.0	88.0	89.0
500	107.0	107.0	107.0	105.0	106.0	103.0	96.0	83.0	85.0	86.0	86.0	88.0	89.0	88.0	89.0
630	109.0	109.0	107.0	106.0	104.0	102.0	96.0	84.0	86.0	87.0	87.0	88.0	89.0	89.0	90.0
800	109.0	109.0	107.0	106.0	104.0	100.0	97.0	86.0	87.0	88.0	89.0	90.0	90.0	90.0	90.0
1000	110.0	110.0	105.0	105.0	104.0	99.0	96.0	88.0	90.0	90.0	91.0	92.0	93.0	93.0	93.0
1250	111.0	111.0	106.0	105.0	103.0	100.0	98.0	91.0	92.0	92.0	93.0	95.0	95.0	95.0	94.0
1600	114.0	112.0	108.0	106.0	103.0	100.0	98.0	91.0	93.0	93.0	95.0	96.0	96.0	97.0	97.0
2000	115.0	112.0	110.0	107.0	105.0	101.0	100.0	92.0	93.0	94.0	95.0	96.0	97.0	97.0	97.0
2500	117.0	114.0	111.0	109.0	106.0	102.0	102.0	92.0	95.0	95.0	96.0	97.0	97.0	98.0	98.0
3150	118.0	116.0	113.0	111.0	108.0	104.0	104.0	95.0	96.0	96.0	97.0	98.0	98.0	99.0	99.0
4000	119.0	116.0	114.0	112.0	108.0	104.0	104.0	95.0	96.0	96.0	97.0	99.0	99.0	98.0	99.0
5000	120.0	117.0	115.0	113.0	110.0	105.0	105.0	96.0	97.0	96.0	98.0	99.0	99.0	99.0	101.0
6300	119.0	116.0	114.0	113.0	110.0	105.0	104.0	98.0	98.0	97.0	98.0	99.0	99.0	99.0	101.0
8000	119.0	115.0	114.0	112.0	108.0	104.0	104.0	104.0	104.0	102.0	103.0	100.0	103.0	100.0	101.0
10000	117.0	114.0	111.0	110.0	106.0	102.0	101.0	95.0	93.0	92.0	95.0	96.0	96.0	96.0	97.0
12500	116.0	112.0	110.0	108.0	104.0	101.0	102.0	94.0	90.0	90.0	93.0	93.0	93.0	94.0	94.0
16000	113.0	109.0	107.0	105.0	101.0	97.0	100.0	95.0	89.0	89.0	90.0	91.0	90.0	91.0	91.0
20000	109.0	106.0	104.0	102.0	98.0	93.0	97.0	89.0	83.0	83.0	84.0	86.0	85.0	87.0	87.0
OVERALL SPL	128.6	126.3	124.6	123.3	122.1	120.4	118.5	107.9	108.0	107.1	108.3	108.6	109.4	108.9	109.7
PNDB	141.9	139.4	137.4	136.1	133.5	129.4	128.4	123.1	123.1	121.9	123.1	122.3	123.9	122.5	123.3

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.0	89.6	93.0	99.4	105.9	112.5	118.9	125.1	131.4	137.7	145.0	150.0	155.0	160.0
REF DIST(FT)	39.5	39.5	39.5	39.8	40.8	42.5	44.8	48.0	52.3	58.3	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	72.0	73.0	75.0	77.0	78.0	75.0	76.0	78.0	78.0	82.0	81.0	81.0	82.0	91.0
31	74.0	75.0	74.0	80.0	77.0	75.0	79.0	80.0	78.0	83.0	82.0	82.0	82.0	91.0
40	80.0	79.0	80.0	80.0	82.0	78.0	82.0	84.0	83.0	86.0	85.0	82.0	79.0	88.0
50	82.0	84.0	87.0	83.0	85.0	85.0	84.0	86.0	87.0	91.0	90.0	89.0	84.0	89.0
63	87.0	86.0	87.0	87.0	88.0	87.0	90.0	90.0	94.0	93.0	95.0	94.0	92.0	89.0
80	85.0	84.0	86.0	86.0	87.0	87.0	88.0	89.0	90.0	95.0	97.0	98.0	98.0	93.0
100	87.0	89.0	90.0	90.0	91.0	93.0	91.0	91.0	93.0	93.0	94.0	96.0	98.0	97.0
125	88.0	88.0	89.0	89.0	92.0	90.0	92.0	95.0	97.0	98.0	98.0	95.0	93.0	95.0
160	90.0	90.0	91.0	92.0	93.0	93.0	94.0	94.0	95.0	96.0	98.0	99.0	96.0	88.0
200	90.0	91.0	90.0	91.0	94.0	94.0	95.0	95.0	96.0	98.0	98.0	95.0	95.0	92.0
250	92.0	95.0	95.0	96.0	98.0	99.0	101.0	102.0	102.0	99.0	100.0	99.0	94.0	93.0
315	90.0	92.0	92.0	93.0	95.0	97.0	97.0	97.0	98.0	97.0	96.0	94.0	91.0	88.0
400	90.0	90.0	91.0	93.0	93.0	94.0	96.0	97.0	96.0	96.0	94.0	91.0	89.0	85.0
500	90.0	91.0	91.0	91.0	93.0	93.0	96.0	96.0	95.0	95.0	93.0	90.0	87.0	84.0
630	91.0	92.0	92.0	93.0	94.0	95.0	97.0	96.0	95.0	94.0	92.0	89.0	86.0	83.0
800	91.0	92.0	92.0	93.0	95.0	95.0	97.0	95.0	95.0	93.0	91.0	88.0	85.0	83.0
1000	94.0	94.0	94.0	94.0	96.0	96.0	97.0	96.0	94.0	92.0	91.0	88.0	85.0	82.0
1250	95.0	95.0	95.0	95.0	96.0	97.0	99.0	97.0	95.0	93.0	92.0	89.0	87.0	84.0
1600	97.0	98.0	97.0	97.0	97.0	97.0	100.0	97.0	96.0	94.0	93.0	91.0	89.0	85.0
2000	97.0	98.0	98.0	97.0	98.0	98.0	102.0	99.0	97.0	95.0	94.0	92.0	90.0	87.0
2500	99.0	99.0	99.0	100.0	100.0	100.0	102.0	100.0	99.0	97.0	96.0	93.0	91.0	87.0
3150	100.0	100.0	101.0	102.0	102.0	101.0	104.0	102.0	101.0	98.0	98.0	95.0	93.0	89.0
4000	100.0	101.0	101.0	102.0	103.0	102.0	103.0	102.0	100.0	99.0	99.0	97.0	94.0	90.0
5000	101.0	103.0	103.0	104.0	105.0	103.0	104.0	103.0	101.0	99.0	101.0	97.0	95.0	91.0
6300	101.0	102.0	103.0	104.0	104.0	104.0	104.0	103.0	101.0	98.0	101.0	98.0	95.0	90.0
8000	100.0	101.0	102.0	103.0	104.0	103.0	103.0	102.0	99.0	97.0	100.0	97.0	95.0	90.0
10000	98.0	99.0	99.0	100.0	102.0	101.0	101.0	100.0	97.0	95.0	99.0	95.0	93.0	88.0
12500	96.0	96.0	97.0	98.0	99.0	98.0	98.0	97.0	94.0	91.0	97.0	94.0	90.0	85.0
16000	92.0	93.0	93.0	94.0	95.0	94.0	94.0	92.0	90.0	87.0	94.0	91.0	86.0	81.0
20000	88.0	88.0	89.0	90.0	91.0	90.0	89.0	88.0	86.0	82.0	91.0	88.0	82.0	76.0
OVERALL SPL	110.1	111.0	111.4	112.2	113.1	112.6	113.8	112.7	111.6	110.2	111.2	109.2	107.2	104.8
PNDB	123.7	124.6	125.2	126.1	126.7	126.3	127.0	125.9	124.2	122.0	124.0	121.1	118.4	114.1

** VALUES AFTER CURVE FIT CALCULATIONS **

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.5	44.9	51.5	58.2	62.0	70.0	78.2	83.2	88.2	97.4	102.3	107.0	115.4	119.2
REF DIST(FT)	12.5	10.7	9.4	8.5	7.8	7.6	7.1	6.8	6.7	6.7	6.7	6.8	7.0	7.4	7.6
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	81.0	83.5	83.0	81.1	81.2	84.1	84.0	84.3	83.7	84.9	87.7	85.8	91.5	91.7	91.0
31	83.0	82.9	82.9	82.3	83.7	83.5	83.6	86.1	85.5	86.9	87.7	89.2	89.3	92.4	91.8
40	84.4	82.9	81.7	83.7	85.3	84.6	85.1	87.1	87.2	88.1	89.0	90.9	89.8	93.3	95.0
50	85.9	84.5	85.4	85.5	86.9	86.8	87.5	88.7	89.2	89.6	91.2	92.3	91.5	94.9	96.0
63	87.6	86.7	87.5	87.7	88.8	89.4	90.1	90.5	91.6	91.6	93.9	94.0	94.0	97.2	97.8
80	89.4	89.1	89.7	90.0	90.8	91.9	92.4	92.8	94.0	94.1	96.7	96.8	96.7	99.8	99.3
100	91.0	91.3	91.7	92.1	92.9	93.9	94.4	95.1	96.4	96.6	99.2	98.3	99.3	102.4	101.5
125	92.2	93.0	93.3	93.8	94.8	95.5	95.8	97.2	98.4	98.8	101.4	100.4	101.8	104.7	103.6
160	93.8	94.1	94.4	95.1	96.2	96.6	96.9	98.9	100.0	100.6	102.9	102.3	103.4	106.4	105.3
200	91.6	94.9	95.1	95.9	97.2	97.2	97.7	100.2	101.0	101.8	103.9	103.8	104.6	107.4	106.6
250	93.9	95.3	95.6	96.5	97.8	97.6	98.3	100.9	101.6	102.5	104.3	104.7	105.3	107.9	107.4
315	94.4	95.8	96.0	96.9	98.2	97.9	98.8	101.3	101.9	102.7	104.5	105.1	105.6	107.8	107.7
400	95.1	96.4	96.6	97.4	98.5	98.2	99.4	101.5	102.0	102.7	104.4	105.2	105.7	107.5	107.7
500	96.2	97.6	97.5	98.1	98.9	98.8	100.2	101.7	102.1	102.6	104.4	105.0	105.6	107.2	107.7
630	97.8	98.9	98.8	99.1	99.7	99.7	101.1	102.0	102.4	102.8	104.5	104.9	105.6	107.1	107.7
800	99.9	100.9	100.5	100.5	100.8	100.9	102.2	102.7	103.0	103.3	105.0	105.1	105.8	107.3	108.1
1000	102.4	103.2	102.8	102.3	102.3	102.4	103.5	103.6	103.9	104.2	105.8	105.6	106.4	108.0	108.9
1250	105.0	105.8	104.9	104.4	104.1	104.1	104.9	105.0	105.2	105.5	107.1	106.7	107.4	109.2	110.2
1600	107.4	108.3	107.3	106.6	106.1	106.0	106.5	106.6	106.8	107.3	108.7	108.2	108.8	110.9	111.8
2000	109.6	110.4	109.4	108.7	108.1	107.8	108.0	108.1	108.6	109.2	110.6	110.0	110.5	112.8	113.8
2500	111.1	112.1	111.1	110.4	109.9	109.8	109.5	110.0	110.4	111.2	112.6	112.2	112.5	114.8	115.7
3150	111.8	113.0	112.3	111.8	111.3	110.7	110.7	111.5	111.9	112.9	114.5	114.3	114.6	116.6	117.6
4000	111.8	113.1	112.7	112.6	112.2	111.6	111.7	112.6	113.2	114.3	116.0	116.1	116.5	118.1	119.0
5000	111.2	112.6	112.5	112.8	112.5	112.0	112.3	113.3	114.0	115.2	117.1	117.4	117.9	119.1	119.9
6300	110.2	111.6	111.9	112.6	112.3	111.9	112.4	113.4	114.3	115.4	117.5	117.9	118.7	119.4	120.0
8000	109.1	110.4	110.8	112.0	111.8	111.6	112.0	112.9	114.0	115.1	117.1	117.6	118.6	119.1	119.5
10000	108.1	109.2	109.6	111.2	110.6	110.4	111.0	112.0	113.2	114.1	116.0	116.4	117.5	118.2	118.4
12500	107.1	108.0	108.2	110.0	109.2	109.0	109.4	110.5	111.7	112.6	114.1	114.4	115.5	116.6	116.6
16000	105.2	106.3	106.2	107.9	107.1	106.9	107.3	108.3	109.4	110.4	111.7	112.1	112.8	114.3	114.2
20000	100.2	102.4	102.4	103.6	103.4	103.6	104.8	104.7	105.8	106.8	109.1	110.0	110.2	110.9	111.0
OVERALL SPL	120.6	121.7	121.4	121.7	121.4	121.0	121.4	122.3	123.1	124.0	125.8	126.1	126.8	128.0	128.6
PNDB	133.3	134.6	134.6	135.2	134.9	134.5	135.1	136.0	136.8	137.8	139.7	140.0	140.7	141.8	142.3

MICROPHONE #	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	126.0	132.6	139.0	145.2	151.4	157.5	165.0	35.0	44.4	47.5	53.9	60.3	63.5	70.0	76.5
REF DIST(FT)	8.2	9.1	10.2	11.7	13.9	17.4	25.9	60.4	56.1	51.2	48.6	45.2	43.9	41.8	40.4
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	97.7	97.0	98.8	99.9	104.7	106.5	109.2	82.0	72.0	71.0	70.3	69.6	80.4	88.8	73.6
31	94.5	97.9	101.0	101.3	105.1	106.1	102.5	78.4	69.9	70.3	71.2	72.8	81.2	72.9	74.7
40	95.9	98.6	101.2	102.3	105.1	106.1	102.4	78.4	71.1	73.0	74.4	76.4	82.2	76.5	77.1
50	96.8	99.8	101.8	103.4	105.4	106.5	103.8	79.8	73.8	76.6	78.2	79.7	83.7	79.6	79.9
63	98.6	101.4	102.3	104.8	106.1	107.3	105.7	81.4	76.9	79.9	81.4	82.5	85.4	82.3	82.7
80	100.9	103.4	103.8	106.3	107.1	108.2	107.3	82.6	79.7	82.3	83.8	84.7	87.1	84.5	85.2
100	103.3	105.3	105.8	107.7	108.3	108.9	108.1	83.3	82.0	83.8	84.3	86.2	88.5	86.2	87.2
125	105.4	107.0	107.7	108.8	109.4	109.4	108.1	83.5	83.5	84.5	86.0	87.0	89.6	87.4	88.6
160	107.0	108.3	109.1	109.4	110.1	109.3	107.1	83.4	84.4	84.8	86.1	87.5	90.2	88.1	89.4
200	108.0	109.0	110.0	109.6	110.3	108.8	105.3	83.2	84.8	84.8	86.1	87.6	90.4	88.4	89.8
250	108.5	109.3	110.1	109.2	110.0	107.7	103.1	83.2	85.0	84.9	86.0	87.6	90.3	88.5	89.8
315	108.5	109.2	109.5	108.5	109.1	106.3	100.8	83.5	85.1	85.1	86.1	87.7	90.1	88.5	89.8
400	108.4	109.0	108.6	107.5	107.9	104.7	98.6	83.7	85.3	85.6	86.4	88.0	89.9	88.7	89.7
500	108.3	108.7	107.5	106.4	106.5	103.1	97.0	84.4	85.8	86.4	87.1	88.5	89.9	89.1	89.9
630	108.4	108.6	106.5	105.5	105.2	101.6	96.0	85.3	86.6	87.4	88.1	89.3	90.2	89.9	90.3
800	109.0	108.8	105.9	104.9	104.1	100.5	95.7	86.4	87.7	88.6	89.3	90.5	90.9	91.0	91.1
1000	110.0	109.4	105.9	104.8	103.4	99.8	96.2	87.7	89.1	89.9	90.7	91.8	92.0	92.4	92.3
1250	111.4	110.8	106.6	105.2	103.3	99.7	97.3	89.0	90.7	91.2	92.2	93.3	93.4	94.0	93.7
1600	113.2	111.6	107.8	106.1	103.7	100.1	98.8	90.4	92.3	92.5	93.6	94.9	95.0	95.8	95.2
2000	115.1	113.0	109.4	107.5	104.7	100.9	100.5	91.8	93.9	93.8	95.0	96.4	96.6	97.1	96.9
2500	116.8	114.4	111.2	109.0	106.0	102.0	102.1	93.2	95.3	95.0	96.2	97.6	97.9	98.3	98.4
3150	118.3	115.5	112.9	110.7	107.5	103.2	103.4	94.6	96.3	96.0	97.2	98.6	98.9	99.1	99.6
4000	119.2	116.3	114.1	112.0	108.8	104.3	104.2	95.9	96.9	96.7	98.0	99.1	99.5	99.4	100.5
5000	119.6	116.5	114.7	112.9	109.6	105.0	104.6	97.0	97.0	97.2	98.4	99.2	99.6	99.2	100.7
6300	119.3	116.2	114.5	113.0	109.6	105.1	104.4	97.8	96.5	97.1	98.3	98.8	99.1	98.6	100.3
8000	118.6	115.3	113.4	112.2	108.6	104.3	103.9	98.1	95.4	96.3	97.9	97.9	98.2	97.6	99.3
10000	117.3	113.8	111.7	110.4	106.6	102.7	103.0	97.7	93.7	94.5	96.6	96.4	96.7	96.3	97.4
12500	115.4	111.8	109.5	107.8	103.8	100.1	101.9	96.2	91.3	91.7	94.1	94.1	94.4	94.0	94.8
16000	113.2	109.3	106.9	104.8	100.6	96.9	100.1	93.5	87.9	87.8	90.0	90.8	90.7	91.7	91.3
20000	109.8	105.9	104.1	102.1	98.2	93.2	97.0	89.2	83.2	83.1	83.8	85.9	84.4	86.6	86.7
OVERALL SPL	128.5	126.1	124.4	123.2	122.0	120.1	118.4	106.7	106.0	106.3	107.6	108.5	109.0	108.8	109.6
PNDB	142.0	139.4	137.6	136.1	133.4	129.5	128.5	120.5	119.3	119.7	121.1	121.8	122.2	121.9	123.1

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.0	89.4	93.0	99.4	105.9	112.5	118.9	125.1	131.4	137.7	145.0	150.0	165.0	160.0
REF DIST(FT)	39.5	39.3	39.3	39.8	40.8	42.5	44.8	48.0	52.3	58.3	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	71.6	72.3	73.8	77.8	75.4	74.3	75.5	77.4	77.0	81.3	80.6	80.8	82.5	91.6
31	75.7	76.5	76.9	79.5	78.6	76.4	79.9	81.5	80.2	84.3	82.1	81.6	79.5	89.2
40	79.1	79.5	80.3	81.3	81.4	79.3	82.4	83.8	83.4	87.0	85.3	84.6	81.7	88.8
50	82.0	82.0	83.4	83.0	84.1	82.9	84.9	85.7	86.5	89.4	88.9	88.4	86.0	89.6
63	84.5	84.2	86.0	84.9	86.6	85.6	86.5	87.7	89.4	91.8	92.4	92.1	90.4	90.9
80	86.4	86.3	88.0	86.9	88.9	88.3	88.8	89.9	92.2	94.0	95.3	95.1	93.9	92.3
100	87.9	88.0	89.5	88.8	90.9	90.7	91.1	92.1	94.4	95.8	97.4	97.1	96.0	93.2
125	89.8	89.5	90.5	90.4	92.5	92.5	93.2	94.2	96.2	97.1	98.5	98.0	96.7	93.5
160	89.6	90.5	91.0	91.7	93.7	93.8	94.9	95.8	97.3	97.9	98.8	97.9	96.2	93.0
200	90.0	91.2	91.5	92.6	94.4	94.7	96.1	96.9	97.8	98.0	98.3	97.0	94.7	91.7
250	90.1	91.5	91.5	93.0	94.7	95.2	96.8	97.5	97.8	97.7	97.4	95.5	92.8	90.0
315	90.2	91.6	91.5	93.1	94.8	95.4	97.0	97.5	97.3	96.9	96.0	93.7	90.6	88.0
400	90.3	91.7	91.6	92.9	94.6	95.3	97.0	97.2	96.6	95.9	94.5	91.8	88.7	86.0
500	90.6	91.8	91.9	92.8	94.4	95.2	96.9	96.6	95.8	94.8	93.2	90.2	87.1	84.3
630	91.2	92.1	92.3	92.8	94.3	95.1	96.9	96.1	95.1	93.8	92.1	89.1	86.1	83.1
800	92.1	92.7	92.9	93.1	94.5	95.2	97.1	95.8	94.7	93.2	91.4	88.4	85.7	82.6
1000	93.2	93.6	93.7	93.7	94.9	95.5	97.7	95.9	94.7	92.9	91.3	88.4	85.9	82.7
1250	94.6	94.9	94.8	94.8	95.8	96.1	98.6	96.4	95.1	93.2	91.7	89.0	86.8	83.5
1600	96.1	96.4	96.2	96.2	97.0	97.0	99.8	97.3	95.9	93.9	92.7	90.2	88.0	84.7
2000	97.6	98.0	97.7	98.0	98.5	98.2	101.1	98.6	97.1	95.1	94.2	91.7	89.6	86.3
2500	98.9	99.5	99.3	99.8	100.2	99.6	102.4	100.0	98.5	96.4	95.9	93.4	91.3	87.8
3150	100.0	100.8	100.8	101.6	101.9	101.1	103.4	101.5	99.8	97.7	97.7	95.1	92.9	89.2
4000	100.7	101.7	102.0	102.9	103.3	102.4	104.1	102.6	100.9	98.7	99.4	96.6	94.3	90.2
5000	101.0	102.1	102.7	103.7	104.3	103.3	104.2	103.2	101.3	99.1	100.6	97.5	95.1	90.6
6300	100.6	101.8	102.7	103.7	104.5	103.8	103.7	103.0	100.9	98.7	101.1	97.7	95.2	90.3
8000	99.7	100.8	101.7	102.7	103.7	102.8	102.6	101.9	99.5	97.2	100.6	97.1	94.5	89.4
10000	98.1	99.1	99.7	100.7	101.9	101.0	100.7	99.7	97.0	94.6	99.1	95.7	92.8	87.7
12500	95.8	96.5	96.7	97.7	99.0	98.0	98.1	96.6	93.6	90.9	96.7	93.3	90.0	85.2
14000	92.5	92.9	92.9	94.1	95.2	94.1	94.4	92.6	89.8	86.6	93.8	90.8	86.3	81.4
20000	87.8	88.0	89.1	90.0	90.9	89.9	88.8	87.9	86.2	82.3	91.2	88.2	81.9	75.8
OVERALL SPL	110.1	111.0	111.3	112.1	113.0	112.4	113.7	112.6	111.3	110.2	111.2	109.0	106.8	104.2
PNDB	123.5	124.5	125.0	125.9	126.8	126.2	126.9	125.9	124.2	122.2	124.1	121.1	118.5	114.1

CORRECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 291294 RUN 1 DELTA 1 SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/12/78

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.5	45.0	51.7	58.9	62.9	71.8	76.6	81.9	87.2	97.4	102.4	107.5	116.4	120.3
REF DIST(FT)	12.5	10.7	9.4	8.5	7.8	7.5	7.0	6.9	6.7	6.7	6.7	6.8	7.0	7.4	7.7
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	84.0	84.0	84.0	88.0	86.0	88.0	88.0	86.0	89.0	90.0	92.0	88.0	91.0	95.0	94.0
31	84.0	85.0	88.0	88.0	90.0	89.0	89.0	90.0	89.0	89.0	94.0	93.0	93.0	97.0	95.0
40	86.0	88.0	88.0	89.0	90.0	90.0	90.0	90.0	90.0	92.0	93.0	94.0	95.0	97.0	97.0
50	89.0	88.0	90.0	89.0	92.0	92.0	91.0	92.0	92.0	93.0	94.0	95.0	97.0	99.0	98.0
63	90.0	93.0	92.0	94.0	90.0	93.0	95.0	94.0	95.0	96.0	96.0	98.0	96.0	101.0	101.0
80	92.0	93.0	93.0	93.0	93.0	96.0	95.0	96.0	96.0	96.0	98.0	99.0	99.0	103.0	103.0
100	93.0	93.0	94.0	94.0	95.0	97.0	97.0	96.0	99.0	100.0	99.0	103.0	102.0	105.0	106.0
125	94.0	94.0	96.0	96.0	96.0	97.0	96.0	99.0	99.0	101.0	102.0	104.0	105.0	107.0	109.0
160	97.0	97.0	97.0	100.0	99.0	101.0	103.0	104.0	105.0	106.0	107.0	109.0	109.0	111.0	112.0
200	96.0	97.0	97.0	100.0	100.0	101.0	101.0	102.0	103.0	104.0	107.0	108.0	109.0	110.0	111.0
250	99.0	100.0	101.0	101.0	102.0	105.0	105.0	106.0	107.0	107.0	110.0	110.0	111.0	112.0	112.0
315	98.0	98.0	99.0	99.0	100.0	102.0	101.0	103.0	103.0	103.0	105.0	107.0	108.0	109.0	110.0
400	97.0	98.0	98.0	99.0	100.0	101.0	100.0	102.0	103.0	103.0	105.0	107.0	107.0	109.0	110.0
500	96.0	98.0	99.0	99.0	100.0	101.0	101.0	102.0	103.0	103.0	105.0	107.0	107.0	109.0	109.0
630	98.0	99.0	100.0	100.0	102.0	102.0	104.0	104.0	104.0	105.0	107.0	107.0	109.0	110.0	111.0
800	99.0	101.0	101.0	102.0	103.0	103.0	104.0	104.0	106.0	106.0	107.0	108.0	109.0	110.0	111.0
1000	102.0	102.0	103.0	104.0	105.0	105.0	107.0	106.0	107.0	107.0	108.0	108.0	109.0	110.0	111.0
1250	105.0	105.0	106.0	106.0	107.0	107.0	107.0	108.0	109.0	109.0	109.0	110.0	110.0	112.0	113.0
1600	107.0	107.0	107.0	107.0	107.0	108.0	109.0	109.0	109.0	110.0	111.0	111.0	111.0	113.0	115.0
2000	106.0	107.0	108.0	108.0	108.0	109.0	110.0	110.0	111.0	111.0	112.0	113.0	113.0	116.0	118.0
2500	107.0	108.0	108.0	109.0	110.0	110.0	110.0	111.0	112.0	113.0	114.0	115.0	115.0	116.0	119.0
3150	108.0	108.0	109.0	110.0	111.0	111.0	112.0	113.0	114.0	114.0	116.0	117.0	117.0	120.0	122.0
4000	108.0	109.0	110.0	111.0	111.0	111.0	112.0	113.0	115.0	115.0	117.0	118.0	118.0	121.0	122.0
5000	109.0	111.0	111.0	111.0	112.0	112.0	114.0	114.0	116.0	116.0	118.0	120.0	120.0	122.0	123.0
6300	109.0	110.0	111.0	112.0	113.0	113.0	114.0	115.0	117.0	117.0	119.0	121.0	121.0	122.0	124.0
8000	113.0	111.0	111.0	112.0	112.0	112.0	114.0	115.0	116.0	117.0	119.0	121.0	121.0	122.0	123.0
10000	109.0	110.0	110.0	111.0	111.0	112.0	113.0	114.0	116.0	116.0	118.0	120.0	121.0	122.0	122.0
12500	107.0	108.0	109.0	110.0	110.0	111.0	112.0	113.0	114.0	115.0	117.0	119.0	120.0	120.0	120.0
16000	105.0	106.0	106.0	108.0	108.0	109.0	110.0	111.0	112.0	113.0	115.0	117.0	117.0	117.0	118.0
20000	102.0	103.0	104.0	106.0	106.0	107.0	108.0	109.0	110.0	110.0	112.0	115.0	115.0	115.0	115.0
OVERALL SPL	119.6	120.0	120.5	121.3	121.8	122.2	123.3	124.1	125.5	125.8	127.6	129.3	129.6	131.1	132.1
PNDB	134.1	133.6	134.0	134.9	135.5	135.9	136.9	137.7	139.3	139.5	141.4	143.2	143.3	144.6	146.0

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	127.3	133.8	140.4	146.6	152.9	158.1	165.0	35.0	45.0	48.2	51.3	57.6	64.0	70.4	76.9
REF DIST(FT)	8.4	9.2	10.5	12.1	14.6	17.9	25.8	68.4	55.5	52.7	50.3	46.5	43.7	41.7	40.3
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	97.0	96.0	101.0	104.0	108.0	110.0	114.0	87.0	80.0	75.0	77.0	77.0	76.0	76.0	77.0
31	95.0	100.0	102.0	105.0	107.0	111.0	112.0	85.0	76.0	75.0	74.0	75.0	77.0	77.0	78.0
40	98.0	100.0	104.0	108.0	110.0	111.0	111.0	81.0	76.0	77.0	74.0	76.0	80.0	78.0	81.0
50	101.0	102.0	105.0	108.0	110.0	111.0	110.0	81.0	79.0	81.0	79.0	82.0	84.0	82.0	84.0
63	104.0	106.0	107.0	111.0	112.0	112.0	113.0	87.0	85.0	85.0	86.0	88.0	87.0	87.0	90.0
80	104.0	108.0	110.0	112.0	111.0	114.0	114.0	87.0	86.0	85.0	86.0	86.0	87.0	87.0	88.0
100	108.0	109.0	112.0	114.0	115.0	116.0	115.0	87.0	84.0	84.0	83.0	84.0	86.0	88.0	89.0
125	111.0	112.0	113.0	115.0	115.0	116.0	114.0	83.0	84.0	87.0	86.0	88.0	91.0	92.0	91.0
160	113.0	113.0	113.0	114.0	116.0	116.0	114.0	88.0	89.0	90.0	89.0	88.0	91.0	93.0	94.0
200	112.0	112.0	112.0	114.0	115.0	114.0	111.0	87.0	88.0	90.0	90.0	91.0	92.0	93.0	92.0
250	115.0	115.0	115.0	115.0	115.0	114.0	111.0	89.0	90.0	91.0	91.0	91.0	94.0	93.0	95.0
315	112.0	111.0	112.0	113.0	113.0	112.0	106.0	87.0	88.0	88.0	89.0	91.0	92.0	93.0	94.0
400	111.0	111.0	111.0	111.0	113.0	110.0	105.0	87.0	88.0	90.0	89.0	91.0	92.0	92.0	94.0
500	111.0	110.0	110.0	111.0	111.0	109.0	104.0	87.0	89.0	89.0	89.0	90.0	91.0	92.0	93.0
630	111.0	111.0	110.0	111.0	110.0	107.0	102.0	88.0	90.0	90.0	91.0	91.0	92.0	92.0	93.0
800	112.0	111.0	110.0	110.0	109.0	105.0	104.0	88.0	90.0	91.0	90.0	91.0	92.0	92.0	94.0
1000	112.0	111.0	109.0	109.0	107.0	104.0	104.0	89.0	91.0	92.0	91.0	93.0	94.0	94.0	94.0
1250	114.0	111.0	110.0	109.0	106.0	103.0	101.0	90.0	93.0	93.0	93.0	94.0	95.0	95.0	96.0
1600	116.0	111.0	110.0	108.0	106.0	103.0	102.0	91.0	94.0	94.0	94.0	95.0	96.0	96.0	96.0
2000	117.0	113.0	111.0	109.0	107.0	103.0	102.0	92.0	94.0	94.0	95.0	95.0	96.0	96.0	97.0
2500	119.0	115.0	113.0	111.0	108.0	105.0	104.0	93.0	95.0	95.0	95.0	96.0	97.0	97.0	98.0
3150	120.0	117.0	115.0	112.0	110.0	107.0	106.0	95.0	96.0	96.0	96.0	97.0	99.0	99.0	99.0
4000	121.0	119.0	117.0	113.0	110.0	107.0	106.0	95.0	96.0	96.0	97.0	97.0	100.0	98.0	100.0
5000	122.0	120.0	118.0	115.0	112.0	108.0	107.0	98.0	98.0	98.0	98.0	98.0	101.0	99.0	100.0
6300	122.0	120.0	118.0	116.0	113.0	108.0	107.0	97.0	98.0	97.0	98.0	97.0	100.0	99.0	101.0
8000	121.0	119.0	118.0	116.0	113.0	108.0	107.0	104.0	101.0	103.0	104.0	101.0	103.0	101.0	101.0
10000	120.0	118.0	117.0	115.0	112.0	107.0	106.0	97.0	96.0	95.0	96.0	95.0	98.0	97.0	98.0
12500	118.0	116.0	114.0	113.0	109.0	105.0	105.0	97.0	94.0	93.0	94.0	94.0	96.0	95.0	96.0
16000	116.0	113.0	111.0	110.0	107.0	102.0	103.0	95.0	91.0	91.0	92.0	91.0	93.0	93.0	93.0
20000	113.0	111.0	109.0	106.0	104.0	98.0	100.0	91.0	85.0	86.0	86.0	86.0	89.0	88.0	89.0
OVERALL SPL	131.0	129.1	127.9	127.2	126.5	125.6	124.5	108.5	107.8	108.3	108.8	108.3	110.3	109.5	110.4
PNDB	148.7	142.7	141.1	139.5	137.1	133.3	132.0	123.7	122.3	123.3	123.9	122.6	124.6	123.8	124.0

MICROPHONE:	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG):	83.2	89.8	93.0	99.4	106.0	112.5	118.9	125.3	131.7	134.8	139.3	150.0	155.0	160.0
REF DIST(FT):	39.9	39.3	39.3	39.8	40.8	42.5	44.8	48.1	52.6	55.3	60.2	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	77.0	77.0	77.0	78.0	79.0	82.0	81.0	79.0	81.0	83.0	82.0	87.0	88.0	98.0
31	78.0	78.0	81.0	82.0	83.0	84.0	81.0	82.0	83.0	85.0	85.0	87.0	86.0	97.0
40	82.0	82.0	86.0	80.0	86.0	85.0	87.0	86.0	89.0	89.0	89.0	89.0	86.0	95.0
50	87.0	87.0	88.0	87.0	90.0	88.0	88.0	90.0	92.0	93.0	93.0	93.0	89.0	98.0
63	90.0	91.0	90.0	91.0	91.0	93.0	94.0	93.0	97.0	96.0	99.0	100.0	98.0	103.0
80	88.0	87.0	90.0	89.0	89.0	89.0	92.0	93.0	97.0	97.0	98.0	103.0	102.0	101.0
100	91.0	92.0	93.0	93.0	95.0	95.0	96.0	97.0	99.0	98.0	99.0	102.0	103.0	102.0
125	92.0	92.0	93.0	94.0	94.0	97.0	99.0	101.0	103.0	102.0	106.0	101.0	97.0	102.0
160	94.0	96.0	96.0	98.0	99.0	101.0	101.0	99.0	100.0	102.0	103.0	106.0	102.0	97.0
200	94.0	94.0	95.0	96.0	96.0	99.0	101.0	101.0	102.0	102.0	104.0	100.0	100.0	98.0
250	95.0	97.0	98.0	99.0	99.0	101.0	102.0	104.0	105.0	104.0	101.0	102.0	98.0	95.0
315	94.0	96.0	96.0	97.0	98.0	99.0	101.0	100.0	101.0	102.0	100.0	99.0	96.0	93.0
400	94.0	95.0	96.0	96.0	98.0	98.0	99.0	100.0	100.0	100.0	99.0	97.0	93.0	91.0
500	94.0	94.0	94.0	96.0	97.0	99.0	99.0	100.0	99.0	100.0	97.0	94.0	91.0	88.0
630	94.0	95.0	96.0	97.0	97.0	99.0	99.0	100.0	99.0	99.0	97.0	94.0	90.0	87.0
800	95.0	95.0	96.0	96.0	98.0	98.0	99.0	99.0	98.0	97.0	96.0	92.0	90.0	85.0
1000	95.0	96.0	96.0	97.0	98.0	99.0	100.0	99.0	98.0	96.0	95.0	91.0	88.0	84.0
1250	96.0	96.0	97.0	97.0	98.0	99.0	100.0	98.0	98.0	96.0	95.0	91.0	89.0	84.0
1600	97.0	97.0	98.0	98.0	99.0	101.0	101.0	99.0	98.0	97.0	95.0	92.0	90.0	85.0
2000	97.0	99.0	99.0	99.0	100.0	102.0	101.0	100.0	100.0	97.0	96.0	94.0	92.0	87.0
2500	99.0	100.0	100.0	100.0	102.0	104.0	102.0	102.0	101.0	99.0	98.0	95.0	93.0	88.0
3150	100.0	102.0	101.0	103.0	104.0	105.0	105.0	103.0	103.0	100.0	100.0	98.0	94.0	89.0
4000	101.0	102.0	102.0	104.0	105.0	106.0	106.0	104.0	103.0	102.0	101.0	100.0	96.0	90.0
5000	102.0	104.0	103.0	105.0	106.0	106.0	106.0	105.0	105.0	104.0	102.0	101.0	97.0	92.0
6300	102.0	104.0	104.0	106.0	106.0	107.0	107.0	106.0	105.0	103.0	102.0	102.0	98.0	93.0
8000	102.0	103.0	104.0	106.0	106.0	106.0	106.0	105.0	104.0	102.0	102.0	102.0	98.0	91.0
10000	100.0	102.0	101.0	104.0	104.0	104.0	103.0	103.0	101.0	99.0	99.0	101.0	98.0	90.0
12500	98.0	100.0	99.0	102.0	102.0	102.0	101.0	99.0	98.0	96.0	95.0	99.0	94.0	88.0
16000	94.0	96.0	96.0	98.0	98.0	97.0	97.0	95.0	94.0	93.0	91.0	96.0	90.0	84.0
20000	91.0	93.0	93.0	95.0	94.0	94.0	93.0	90.0	90.0	88.0	86.0	93.0	87.0	78.0
OVERALL SPL	111.5	113.0	113.0	114.6	115.2	116.1	116.1	115.4	115.3	114.4	114.2	114.0	111.3	110.8
PNDB	125.1	126.7	126.7	128.5	128.8	129.7	129.6	128.7	128.0	126.4	125.3	125.3	121.6	116.7

ALL CORRECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG):	32.2	38.5	45.0	51.7	58.9	62.9	71.8	76.6	81.9	87.2	97.4	102.4	107.5	116.4	120.3
REF DIST(FT):	12.5	10.7	9.4	8.5	7.8	7.5	7.0	6.9	6.7	6.7	6.7	6.8	7.0	7.4	7.7
GAIN:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	84.0	84.0	84.0	88.0	86.0	88.0	88.0	86.0	89.0	90.0	92.0	88.0	91.0	95.0	94.0
31	84.0	85.0	88.0	88.0	90.0	89.0	88.0	90.0	89.0	89.0	94.0	93.0	93.0	97.0	95.0
40	86.0	88.0	88.0	89.0	90.0	90.0	90.0	90.0	90.0	92.0	93.0	94.0	93.0	97.0	97.0
50	89.0	88.0	90.0	89.0	92.0	92.0	91.0	92.0	92.0	93.0	94.0	95.0	97.0	99.0	98.0
63	90.0	93.0	92.0	94.0	90.0	93.0	95.0	94.0	95.0	96.0	96.0	98.0	96.0	101.0	101.0
80	92.0	93.0	93.0	93.0	93.0	96.0	95.0	96.0	96.0	96.0	98.0	99.0	99.0	103.0	103.0
100	93.0	93.0	94.0	94.0	95.0	97.0	97.0	96.0	99.0	100.0	99.0	103.0	102.0	105.0	106.0
125	94.0	94.0	96.0	94.0	96.0	97.0	96.0	99.0	99.0	101.0	102.0	104.0	105.0	107.0	109.0
160	97.0	97.0	97.0	100.0	99.0	101.0	103.0	104.0	105.0	106.0	107.0	109.0	109.0	111.0	112.0
200	96.0	97.0	97.0	100.0	100.0	101.0	101.0	102.0	103.0	104.0	107.0	108.0	109.0	110.0	111.0
250	99.0	100.0	101.0	101.0	102.0	105.0	105.0	106.0	107.0	107.0	110.0	110.0	111.0	112.0	112.0
315	98.0	98.0	99.0	99.0	100.0	102.0	101.0	103.0	103.0	105.0	105.0	107.0	108.0	109.0	110.0
400	97.0	98.0	98.0	99.0	100.0	101.0	100.0	102.0	103.0	103.0	105.0	107.0	107.0	109.0	110.0
500	96.0	98.0	99.0	99.0	100.0	101.0	101.0	102.0	103.0	103.0	105.0	107.0	107.0	109.0	109.0
630	98.0	99.0	100.0	100.0	102.0	102.0	104.0	104.0	104.0	105.0	107.0	107.0	109.0	110.0	111.0
800	99.0	101.0	101.0	102.0	103.0	103.0	104.0	104.0	106.0	106.0	107.0	108.0	109.0	110.0	111.0
1000	102.0	102.0	103.0	104.0	105.0	105.0	107.0	106.0	107.0	107.0	108.0	108.0	109.0	110.0	111.0
1250	105.0	105.0	106.0	106.0	107.0	107.0	107.0	108.0	109.0	109.0	109.0	110.0	110.0	112.0	113.0
1600	107.0	107.0	107.0	107.0	107.0	108.0	109.0	109.0	109.0	110.0	111.0	111.0	111.0	113.0	115.0
2000	106.0	107.0	108.0	108.0	108.0	109.0	110.0	110.0	111.0	111.0	112.0	113.0	113.0	116.0	118.0
2500	107.0	108.0	108.0	109.0	110.0	110.0	110.0	111.0	112.0	113.0	114.0	115.0	115.0	118.0	119.0
3150	108.0	108.0	109.0	110.0	111.0	111.0	112.0	113.0	114.0	114.0	116.0	117.0	117.0	120.0	122.0
4000	108.0	109.0	110.0	111.0	111.0	111.0	112.0	113.0	115.0	115.0	117.0	118.0	118.0	121.0	122.0
5000	109.0	111.0	111.0	111.0	112.0	112.0	114.0	114.0	116.0	116.0	118.0	120.0	120.0	122.0	123.0
6300	109.0	110.0	111.0	112.0	113.0	113.0	114.0	115.0	117.0	117.0	119.0	121.0	121.0	122.0	124.0
8000	113.0	111.0	111.0	112.0	112.0	112.0	114.0	115.0	116.0	117.0	119.0	121.0	121.0	122.0	123.0
10000	109.0	110.0	110.0	111.0	111.0	112.0	113.0	114.0	116.0	116.0	118.0	120.0	121.0	122.0	122.0
12500	107.0	108.0	109.0	110.0	110.0	111.0	112.0	113.0	114.0	115.0	117.0	119.0	120.0	120.0	120.0
16000	105.0	106.0	106.0	108.0	108.0	109.0	110.0	111.0	112.0	113.0	115.0	117.0	117.0	117.0	118.0
20000	102.0	103.0	104.0	106.0	106.0	107.0	108.0	109.0	110.0	110.0	112.0	115.0	115.0	115.0	115.0
OVERALL SPL	119.6	120.0	120.5	121.3	121.8	122.2	123.3	124.1	125.5	125.8	127.6	129.3	129.6	131.1	132.1
PNDB	134.1	133.6	134.0	134.9	135.5	135.9	136.9	137.7	139.3	139.5	141.4	143.2	143.3	144.6	146.0

MICROPHONE:	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG):	127.1	133.8	140.0	146.6	152.9	158.1	165.0	35.0	45.0	48.2	51.3	57.6	64.0	70.4	76.9
REF DIST(FT):	8.4	9.2	10.5	12.1	14.6	17.9	25.8	68.4	55.5	52.7	50.3	46.5	43.7	41.7	40.3
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQUENCY															
25	97.0	96.0	101.0	104.0	108.0	110.0	114.0	87.0	80.0	75.0	77.0	77.0	76.0	76.0	77.0
31	95.0	100.0	102.0	105.0	107.0	111.0	112.0	85.0	76.0	75.0	74.0	75.0	77.0	77.0	78.0
40	98.0	100.0	104.0	108.0	110.0	111.0	111.0	81.0	76.0	77.0	74.0	76.0	80.0	78.0	81.0
50	101.0	102.0	105.0	108.0	110.0	111.0	110.0	81.0	79.0	81.0	79.0	82.0	84.0	82.0	84.0
63	104.0	106.0	107.0	111.0	112.0	112.0	113.0	87.0	85.0	85.0	86.0	88.0	87.0	87.0	90.0
80	104.0	108.0	110.0	112.0	111.0	114.0	114.0	87.0	86.0	85.0	86.0	86.0	87.0	87.0	88.0
100	108.0	109.0	112.0	114.0	115.0	116.0	115.0	87.0	84.0	84.0	83.0	84.0	86.0	88.0	89.0
125	111.0	112.0	113.0	115.0	115.0	116.0	114.0	83.0	64.0	87.0	86.0	88.0	91.0	92.0	91.0
160	113.0	113.0	113.0	114.0	116.0	116.0	114.0	88.0	89.0	90.0	89.0	88.0	91.0	93.0	94.0
200	112.0	112.0	112.0	114.0	115.0	114.0	111.0	87.0	88.0	90.0	90.0	91.0	92.0	93.0	92.0
250	115.0	115.0	115.0	115.0	115.0	114.0	111.0	89.0	90.0	91.0	91.0	91.0	94.0	93.0	95.0
315	112.0	111.0	112.0	113.0	113.0	112.0	106.0	87.0	88.0	88.0	89.0	91.0	92.0	91.0	94.0
400	111.0	111.0	111.0	111.0	113.0	110.0	105.0	87.0	88.0	90.0	89.0	91.0	92.0	92.0	94.0
500	111.0	110.0	110.0	111.0	111.0	109.0	104.0	87.0	89.0	89.0	89.0	90.0	91.0	92.0	93.0
630	111.0	111.0	110.0	111.0	110.0	107.0	102.0	88.0	90.0	90.0	91.0	91.0	92.0	92.0	93.0
800	112.0	111.0	110.0	110.0	109.0	105.0	104.0	88.0	90.0	91.0	90.0	91.0	92.0	92.0	94.0
1000	112.0	111.0	109.0	109.0	107.0	104.0	104.0	89.0	91.0	92.0	91.0	93.0	94.0	94.0	94.0
1250	110.0	111.0	110.0	109.0	106.0	103.0	101.0	90.0	93.0	93.0	93.0	94.0	95.0	95.0	96.0
1600	116.0	111.0	110.0	108.0	106.0	103.0	102.0	91.0	94.0	94.0	94.0	95.0	96.0	96.0	96.0
2000	117.0	113.0	111.0	109.0	107.0	103.0	102.0	92.0	94.0	94.0	95.0	95.0	96.0	96.0	97.0
2500	119.0	115.0	113.0	111.0	108.0	105.0	104.0	93.0	95.0	95.0	95.0	96.0	97.0	97.0	98.0
3150	120.0	117.0	115.0	112.0	110.0	107.0	106.0	95.0	96.0	96.0	96.0	97.0	99.0	99.0	99.0
4000	121.0	119.0	117.0	113.0	110.0	107.0	106.0	95.0	96.0	96.0	97.0	97.0	100.0	98.0	100.0
5000	122.0	120.0	118.0	115.0	112.0	108.0	107.0	98.0	98.0	98.0	98.0	98.0	101.0	99.0	100.0
6300	122.0	120.0	118.0	116.0	113.0	108.0	107.0	97.0	98.0	97.0	98.0	97.0	100.0	99.0	101.0
8000	121.0	119.0	118.0	116.0	113.0	108.0	107.0	104.0	101.0	103.0	104.0	101.0	103.0	101.0	101.0
10000	120.0	118.0	117.0	115.0	112.0	107.0	106.0	97.0	96.0	95.0	96.0	95.0	98.0	97.0	98.0
12500	118.0	116.0	114.0	113.0	109.0	105.0	105.0	97.0	94.0	93.0	94.0	94.0	96.0	95.0	96.0
16000	116.0	113.0	111.0	110.0	107.0	102.0	103.0	95.0	91.0	91.0	92.0	91.0	93.0	93.0	93.0
20000	113.0	111.0	109.0	106.0	104.0	98.0	100.0	91.0	85.0	86.0	86.0	86.0	89.0	88.0	89.0
OVERALL SPL	131.0	129.1	127.9	127.2	126.5	125.6	124.5	108.5	107.8	108.3	108.8	108.3	110.3	109.5	110.4
PNDB	144.7	142.7	141.1	139.5	137.1	133.3	132.0	123.7	122.3	123.3	123.9	122.6	124.6	123.4	124.0

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.2	89.8	93.0	99.4	106.0	112.5	118.9	125.1	131.7	134.8	139.3	150.0	155.0	160.0
REF DIST(FT)	39.5	39.3	39.3	39.8	40.8	42.5	44.8	48.1	52.6	55.3	60.2	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	77.0	77.0	77.0	78.0	79.0	82.0	81.0	79.0	81.0	83.0	82.0	87.0	88.0	98.0
31	78.0	78.0	81.0	82.0	83.0	84.0	81.0	82.0	83.0	85.0	85.0	87.0	86.0	97.0
40	82.0	82.0	86.0	80.0	86.0	85.0	87.0	86.0	89.0	89.0	89.0	89.0	80.0	95.0
50	87.0	87.0	88.0	87.0	90.0	88.0	88.0	90.0	92.0	93.0	93.0	93.0	89.0	98.0
63	90.0	91.0	90.0	91.0	91.0	93.0	94.0	93.0	97.0	96.0	99.0	100.0	98.0	103.0
80	88.0	87.0	90.0	89.0	89.0	89.0	92.0	93.0	97.0	97.0	98.0	103.0	102.0	101.0
100	91.0	92.0	93.0	93.0	95.0	95.0	96.0	97.0	99.0	98.0	99.0	102.0	103.0	102.0
125	92.0	92.0	93.0	94.0	94.0	97.0	99.0	101.0	103.0	102.0	106.0	101.0	97.0	102.0
160	94.0	96.0	96.0	98.0	99.0	101.0	101.0	99.0	100.0	102.0	103.0	106.0	102.0	97.0
200	94.0	94.0	95.0	96.0	96.0	99.0	101.0	101.0	102.0	102.0	104.0	100.0	100.0	98.0
250	95.0	97.0	98.0	99.0	99.0	101.0	102.0	104.0	105.0	104.0	101.0	102.0	98.0	95.0
315	94.0	96.0	96.0	97.0	98.0	99.0	101.0	100.0	101.0	102.0	100.0	99.0	96.0	93.0
400	94.0	95.0	96.0	96.0	98.0	98.0	99.0	100.0	100.0	100.0	99.0	97.0	93.0	91.0
500	94.0	94.0	94.0	96.0	97.0	99.0	99.0	100.0	99.0	100.0	97.0	94.0	91.0	88.0
630	94.0	95.0	96.0	97.0	97.0	99.0	99.0	100.0	99.0	99.0	97.0	94.0	90.0	87.0
800	95.0	95.0	96.0	96.0	98.0	98.0	99.0	99.0	98.0	97.0	96.0	92.0	90.0	85.0
1000	95.0	96.0	96.0	97.0	98.0	99.0	100.0	99.0	98.0	96.0	95.0	91.0	88.0	84.0
1250	96.0	96.0	97.0	97.0	98.0	99.0	100.0	98.0	98.0	96.0	95.0	91.0	89.0	84.0
1600	97.0	97.0	98.0	98.0	99.0	101.0	101.0	99.0	98.0	97.0	95.0	92.0	90.0	85.0
2000	97.0	99.0	99.0	99.0	100.0	102.0	101.0	100.0	100.0	97.0	96.0	94.0	92.0	87.0
2500	99.0	100.0	100.0	100.0	102.0	104.0	102.0	102.0	101.0	99.0	98.0	95.0	93.0	88.0
3150	100.0	102.0	101.0	103.0	104.0	105.0	105.0	103.0	103.0	100.0	100.0	98.0	94.0	89.0
4000	101.0	102.0	102.0	104.0	105.0	106.0	106.0	104.0	103.0	102.0	101.0	100.0	96.0	90.0
5000	102.0	104.0	103.0	105.0	106.0	106.0	106.0	105.0	105.0	104.0	102.0	101.0	97.0	92.0
6300	102.0	104.0	104.0	106.0	106.0	107.0	107.0	106.0	105.0	103.0	102.0	102.0	98.0	93.0
8000	102.0	103.0	104.0	106.0	106.0	106.0	106.0	105.0	104.0	102.0	102.0	102.0	98.0	91.0
10000	100.0	102.0	101.0	104.0	104.0	104.0	103.0	103.0	101.0	99.0	99.0	101.0	98.0	90.0
12500	98.0	100.0	99.0	102.0	102.0	102.0	101.0	99.0	98.0	96.0	95.0	99.0	94.0	88.0
16000	94.0	96.0	96.0	98.0	98.0	97.0	97.0	95.0	94.0	93.0	91.0	96.0	90.0	84.0
20000	91.0	93.0	93.0	95.0	94.0	94.0	93.0	90.0	90.0	88.0	86.0	93.0	87.0	78.0
OVERALL SPL	111.9	113.0	113.0	114.6	115.2	116.1	116.1	115.0	115.3	114.4	114.2	114.0	111.3	110.8
PNDB	125.1	126.7	126.7	128.5	128.8	129.7	129.6	128.7	128.0	126.4	125.5	125.3	121.6	116.7

-- VALUES AFTER CURVE FIT CALCULATIONS --

MICROPHONE:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG):	32.2	38.5	45.0	51.7	58.9	62.9	71.8	76.6	81.9	87.2	97.4	102.4	107.5	116.4	120.5
REF DIST(FT):	12.8	10.7	9.4	8.5	7.8	7.5	7.0	6.9	6.7	6.7	6.7	6.8	7.0	7.4	7.7
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	83.9	83.8	84.1	87.0	86.4	87.9	87.9	86.1	89.1	89.9	92.3	88.4	91.2	95.1	94.1
31	84.5	85.7	87.1	88.3	89.4	89.3	88.4	89.2	89.0	89.8	93.1	92.2	92.7	96.6	95.1
40	85.9	87.3	88.7	88.8	90.2	90.2	89.5	90.5	90.0	90.8	93.3	93.9	93.6	97.4	96.3
50	87.8	89.1	90.1	89.8	90.8	91.3	91.1	91.8	91.8	92.8	93.9	95.5	95.0	98.7	98.3
63	90.0	90.9	91.5	91.4	91.7	93.0	93.4	93.5	94.2	95.3	95.5	97.6	97.2	100.7	100.9
80	92.1	92.7	93.1	93.3	93.2	95.0	95.5	95.7	96.7	98.0	97.9	100.1	100.0	103.2	103.9
100	93.9	94.2	94.7	95.2	94.9	97.1	97.5	98.0	99.2	100.4	100.7	102.8	102.9	105.7	106.7
125	95.2	95.5	96.0	96.8	96.7	99.0	99.1	100.2	101.2	102.4	103.3	105.2	105.5	107.9	109.0
160	96.1	96.5	97.1	98.1	98.3	100.4	100.3	101.8	102.7	103.7	105.3	107.0	107.5	109.5	110.6
200	96.6	97.1	97.9	98.9	99.5	101.4	101.1	102.9	103.6	104.4	106.6	108.2	108.7	110.4	111.3
250	96.8	97.6	98.4	99.4	100.3	101.9	101.6	103.4	104.0	104.6	107.1	108.6	109.3	110.6	111.4
315	97.1	98.0	98.8	99.6	100.8	102.0	101.9	103.5	104.2	104.5	107.1	108.4	109.2	110.3	111.0
400	97.4	98.4	99.2	99.8	101.1	102.1	102.2	103.5	104.2	104.3	106.7	107.9	108.8	109.8	110.4
500	98.0	99.1	99.7	100.2	101.5	102.2	102.7	103.4	104.3	104.3	106.3	107.4	108.3	109.3	109.9
630	98.9	99.9	100.5	100.9	102.0	102.6	103.3	103.6	104.6	104.7	106.1	107.1	108.0	109.1	109.9
800	100.1	101.0	101.6	101.9	102.9	103.3	104.2	104.3	105.2	105.4	106.4	107.2	108.0	109.4	110.3
1000	101.6	102.4	102.9	103.2	104.0	104.4	105.4	105.3	106.3	106.5	107.3	107.9	108.6	110.3	111.4
1250	103.3	103.9	104.5	104.8	105.5	105.9	106.8	106.8	107.7	108.0	108.7	109.2	109.7	111.8	113.1
1600	104.9	105.5	106.1	106.5	107.1	107.4	108.3	108.5	109.3	109.8	110.5	111.0	111.3	113.6	115.1
2000	106.5	107.0	107.6	108.2	108.7	109.0	109.8	110.2	111.1	111.5	112.5	113.1	113.2	115.8	117.4
2500	107.7	108.2	109.0	109.6	110.2	110.3	111.1	111.8	112.8	113.2	114.5	115.2	115.2	117.9	119.6
3150	108.6	109.2	109.9	110.6	111.2	111.4	112.2	113.1	114.2	114.5	116.2	117.2	117.1	119.8	121.4
4000	109.0	109.8	110.5	111.2	111.9	112.0	113.0	113.9	115.4	115.5	117.4	118.8	118.7	121.2	122.7
5000	109.2	110.1	110.7	111.4	112.1	112.2	113.4	114.2	116.0	116.1	118.1	119.9	119.9	122.1	123.4
6300	109.2	110.1	110.6	111.3	111.9	112.1	113.5	114.2	116.3	116.3	118.4	120.4	120.6	122.3	123.4
8000	109.1	109.9	110.3	111.1	111.5	111.8	113.4	114.0	116.1	116.3	118.3	120.4	120.8	121.9	122.8
10000	108.8	109.5	109.8	110.8	111.0	111.6	113.0	113.8	115.5	116.0	118.0	120.0	120.6	121.1	121.8
12500	108.8	108.6	109.0	110.3	110.3	111.2	112.3	113.4	114.4	115.4	117.3	119.2	119.9	119.8	120.4
16000	106.2	106.7	107.3	109.0	108.9	110.0	110.8	112.1	112.7	113.7	115.7	117.7	118.1	118.0	118.3
20000	101.2	102.6	103.4	105.5	105.5	106.5	107.6	108.4	109.6	109.6	111.6	114.6	114.5	114.6	114.8
OVERALL SPL	119.2	119.9	120.4	121.3	121.8	122.2	123.2	124.0	125.4	125.8	127.6	129.3	129.6	131.0	132.1
PNDB	132.5	133.3	133.8	134.6	135.1	135.5	136.7	137.4	139.0	139.3	141.1	142.9	143.3	144.7	145.7

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	127.3	133.8	140.4	146.6	152.9	158.1	165.0	35.0	45.0	88.2	51.3	57.6	64.0	70.4	76.9
REF DIST(FT)	8.4	9.2	10.5	12.1	14.6	17.9	25.8	68.4	55.5	52.7	50.3	46.5	43.7	41.7	40.3
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	96.6	96.6	101.2	104.1	107.8	110.3	114.6	87.8	79.7	74.9	76.7	76.3	75.6	76.1	76.6
31	96.3	98.5	101.8	105.1	107.9	110.4	110.8	83.4	76.2	75.3	74.2	75.9	77.8	76.6	78.7
40	97.5	100.6	103.4	107.0	108.8	110.8	110.5	82.5	77.0	77.5	75.7	78.0	80.4	78.8	81.4
50	99.9	103.0	105.6	109.1	110.1	111.6	111.6	83.1	79.4	80.4	78.9	80.9	82.9	81.9	84.2
63	102.9	105.5	107.8	111.0	111.6	112.8	113.1	84.2	82.1	83.1	82.1	83.7	85.4	85.1	86.8
80	106.8	107.9	109.8	112.6	112.9	114.0	114.2	85.2	84.4	85.3	84.8	85.9	87.5	87.9	88.9
100	108.8	109.9	111.4	113.7	114.1	115.0	114.5	86.0	86.0	87.0	86.7	87.6	89.2	90.1	90.7
125	111.0	111.5	112.6	114.3	114.9	115.6	114.1	86.5	86.9	88.1	87.9	88.6	90.5	91.7	91.9
160	112.4	112.5	113.2	114.5	115.4	115.6	113.1	86.9	87.5	88.7	88.6	89.3	91.4	92.6	92.8
200	112.9	113.0	113.3	114.4	115.3	115.1	111.5	87.0	87.8	89.1	88.9	89.7	91.9	92.9	93.3
250	112.9	112.9	113.0	113.9	114.8	113.9	109.6	87.1	88.0	89.4	89.1	90.0	92.1	92.8	93.6
315	112.8	112.4	112.4	113.2	113.9	112.3	107.6	87.2	88.3	89.6	89.3	90.2	92.2	92.6	93.6
400	111.8	111.7	111.5	112.3	112.7	110.4	105.7	87.4	88.7	89.8	89.5	90.6	92.2	92.4	93.7
500	111.4	111.0	110.6	111.3	111.2	108.4	104.2	87.6	89.3	90.1	89.9	91.0	92.2	92.2	93.7
630	111.2	110.4	109.8	110.3	109.7	106.5	103.0	87.9	89.9	90.5	90.4	91.5	92.3	92.4	93.8
800	111.5	110.1	109.3	109.5	108.3	104.9	102.2	88.4	90.7	91.0	90.9	92.1	92.7	92.8	94.0
1000	112.4	110.2	109.1	108.9	107.2	103.8	101.9	89.0	91.5	91.6	91.6	92.8	93.3	93.4	94.4
1250	113.7	110.8	109.5	108.6	106.5	103.3	102.0	89.7	92.3	92.4	92.4	93.5	94.1	94.3	95.1
1600	115.4	111.9	110.3	108.8	106.4	103.3	102.5	90.7	93.1	93.2	93.2	94.3	95.2	95.4	95.9
2000	117.2	113.4	111.5	109.4	106.9	103.9	103.2	91.8	94.0	94.2	94.2	95.1	96.4	96.5	96.9
2500	118.9	115.2	113.1	110.5	107.8	104.8	104.2	93.1	95.0	95.2	95.2	95.9	97.8	97.5	98.0
3150	120.4	117.0	114.9	111.9	109.2	105.9	105.1	94.6	96.0	96.1	96.4	96.7	99.0	98.3	99.1
4000	121.4	118.6	116.6	113.4	110.7	107.1	106.0	96.1	97.0	97.0	97.5	97.5	100.1	98.9	100.0
5000	121.8	119.7	117.9	114.8	112.1	108.0	106.7	97.5	97.8	97.7	98.4	98.0	100.7	99.2	100.6
6300	121.7	120.1	118.4	115.8	112.9	108.4	107.1	98.6	98.3	98.0	98.9	98.1	100.8	99.1	100.7
8000	121.0	119.5	118.0	116.1	112.9	108.1	107.0	99.1	98.2	97.7	98.8	97.6	100.2	98.6	100.0
10000	119.8	118.0	116.5	115.2	111.8	106.9	106.3	98.8	97.1	96.6	97.7	96.4	98.8	97.6	98.6
12500	118.3	115.8	114.1	113.1	109.5	104.9	105.0	97.5	94.7	94.3	95.3	94.1	96.4	95.8	96.2
16000	116.1	113.1	111.2	109.9	106.6	101.9	102.9	94.8	90.7	90.8	91.4	90.7	93.1	92.9	92.9
20000	112.9	110.9	108.9	106.0	104.1	98.1	100.0	90.9	85.0	85.8	86.0	86.1	88.9	87.9	89.0
OVERALL SPL	131.0	129.0	127.9	127.1	126.4	125.6	120.5	107.7	107.6	107.6	108.0	108.0	110.1	109.4	110.4
PNDB	144.6	142.7	141.2	139.5	137.1	133.4	132.0	121.5	121.2	121.1	121.7	121.4	123.7	122.7	123.9

MICROPHONE #	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG);	83.2	89.8	93.0	99.4	106.0	112.5	118.9	125.3	131.7	134.8	139.3	150.0	155.0	160.0
REF DIST(FT);	39.5	39.3	39.3	39.8	40.8	42.5	44.8	48.1	52.6	55.3	60.2	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	76.5	76.3	76.7	78.3	78.7	82.0	80.6	78.9	80.5	82.6	82.1	86.8	88.2	90.1
31	79.2	79.6	82.0	80.4	83.7	83.9	82.6	82.5	84.3	86.0	84.8	86.8	84.8	96.0
40	82.4	82.6	86.3	82.9	86.4	85.6	85.4	85.9	88.3	89.2	88.9	89.9	87.1	96.8
50	85.5	85.4	87.6	85.7	88.4	87.7	88.5	89.3	92.1	92.2	93.3	94.0	91.4	98.7
63	88.1	87.9	89.5	88.5	90.1	90.2	91.7	92.4	95.4	95.0	97.2	97.9	95.8	100.5
80	90.1	90.1	91.2	91.1	91.9	92.8	94.6	95.1	98.1	97.5	100.2	100.9	99.1	101.6
100	91.7	92.0	92.7	93.3	93.7	95.3	97.1	97.4	100.1	99.6	102.3	102.8	101.0	101.7
125	92.7	93.5	94.0	95.0	95.3	97.4	99.0	99.3	101.5	101.3	103.3	103.6	101.5	101.0
160	93.4	94.5	95.1	96.3	96.6	98.9	100.3	100.6	102.2	102.3	103.5	103.4	100.9	99.5
200	93.8	95.2	95.7	97.0	97.6	99.8	100.9	101.3	102.4	102.8	103.0	102.3	99.4	97.4
250	94.1	95.4	96.1	97.3	98.1	100.0	101.0	101.5	102.1	102.7	102.0	100.7	97.4	95.1
315	94.3	95.4	96.2	97.3	98.2	99.8	100.8	101.3	101.5	102.0	100.6	98.7	95.3	92.6
400	94.2	95.3	96.1	97.0	98.0	99.3	100.3	100.8	100.6	100.9	99.1	96.7	93.3	90.2
500	94.1	95.1	95.9	96.7	97.7	98.7	99.7	100.1	99.6	99.7	97.6	94.8	91.5	88.1
630	94.5	95.0	95.7	96.3	97.4	98.3	99.2	99.4	98.7	98.3	96.3	93.2	90.2	86.5
800	94.7	95.1	95.7	96.2	97.3	98.2	99.0	98.8	98.1	97.2	95.4	92.0	89.3	85.3
1000	95.1	95.5	96.0	96.4	97.5	98.6	99.1	98.5	97.8	96.4	94.9	91.4	89.0	84.7
1250	95.9	96.2	96.6	96.9	98.1	99.4	99.6	98.6	97.9	96.2	94.9	91.5	89.2	84.6
1600	96.5	97.2	97.6	97.8	99.1	100.7	100.5	99.2	98.5	96.5	95.5	92.2	90.0	85.2
2000	97.6	98.6	98.8	99.2	100.5	102.1	101.7	100.1	99.6	97.4	96.5	93.5	91.1	86.2
2500	98.8	100.0	100.1	100.7	102.0	103.7	103.1	101.4	101.0	98.8	98.0	95.3	92.6	87.5
3150	100.0	101.5	101.4	102.4	103.6	105.1	104.5	102.9	102.5	100.4	99.5	97.4	94.3	89.1
4000	101.1	102.8	102.5	104.0	105.0	106.2	105.7	104.3	103.9	102.0	101.0	99.5	96.0	90.6
5000	101.9	103.7	103.3	105.3	106.0	106.7	106.5	105.4	104.8	103.1	102.0	101.3	97.4	91.8
6300	102.2	104.0	103.4	105.9	106.2	106.5	106.5	105.6	104.9	103.3	102.2	102.3	98.2	92.4
8000	101.7	103.4	102.9	105.6	105.7	105.6	105.6	104.9	103.8	102.3	101.3	102.3	98.0	92.1
10000	100.2	101.9	101.5	104.2	104.2	103.9	103.7	102.8	101.5	99.8	99.1	101.1	96.7	90.6
12500	97.6	99.5	99.3	101.8	101.7	101.5	100.8	99.4	97.9	96.1	95.4	98.7	94.2	87.6
16000	94.3	96.4	96.3	98.4	98.2	98.1	97.1	94.9	93.8	91.9	90.8	95.7	90.6	83.4
20000	90.9	92.9	92.8	94.8	93.9	93.6	92.9	90.0	90.1	88.5	86.0	93.2	86.8	78.1
OVERALL SPL	111.5	113.0	112.9	114.6	115.2	116.0	116.0	115.3	115.2	114.4	114.1	113.8	110.8	110.5
PNDB	125.1	126.7	126.5	128.4	128.9	129.5	129.4	128.6	128.0	126.6	125.6	125.4	121.6	116.6

CORRECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 351356 RUN 1 DELTA 1 SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/13/78

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.4	38.9	45.5	52.0	59.6	63.8	68.3	78.1	83.5	89.0	94.4	99.6	109.6	114.1	122.3
REF DIST(FT)	12.8	10.6	9.8	8.5	7.7	7.8	7.2	6.8	6.7	6.7	6.7	6.8	7.1	7.3	7.9
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	90.0	81.0	79.0	82.0	84.0	81.0	87.0	83.0	83.0	82.0	84.0	85.0	84.0	87.0	87.0
31	88.0	82.0	82.0	83.0	83.0	82.0	81.0	84.0	84.0	84.0	87.0	85.0	83.0	88.0	87.0
40	88.0	83.0	82.0	84.0	85.0	83.0	84.0	85.0	83.0	86.0	84.0	85.0	84.0	88.0	88.0
50	88.0	85.0	86.0	87.0	87.0	89.0	88.0	88.0	87.0	90.0	91.0	90.0	91.0	91.0	90.0
63	89.0	90.0	87.0	89.0	94.0	91.0	93.0	92.0	93.0	95.0	94.0	94.0	97.0	97.0	97.0
80	89.0	87.0	89.0	90.0	91.0	91.0	92.0	94.0	92.0	96.0	96.0	96.0	98.0	96.0	99.0
100	90.0	90.0	89.0	91.0	91.0	93.0	93.0	96.0	96.0	95.0	97.0	97.0	99.0	100.0	101.0
125	90.0	91.0	92.0	92.0	91.0	94.0	94.0	97.0	99.0	98.0	100.0	101.0	101.0	102.0	102.0
160	92.0	94.0	93.0	94.0	97.0	98.0	100.0	101.0	101.0	103.0	103.0	104.0	104.0	105.0	106.0
200	94.0	98.0	99.0	100.0	100.0	101.0	102.0	103.0	103.0	104.0	104.0	104.0	105.0	105.0	107.0
250	101.0	102.0	102.0	104.0	103.0	105.0	104.0	106.0	106.0	105.0	106.0	106.0	108.0	107.0	108.0
315	96.0	97.0	98.0	98.0	100.0	100.0	100.0	100.0	101.0	99.0	100.0	100.0	102.0	103.0	104.0
400	95.0	95.0	96.0	97.0	98.0	98.0	99.0	100.0	100.0	100.0	99.0	99.0	101.0	102.0	103.0
500	97.0	97.0	98.0	98.0	99.0	99.0	100.0	99.0	99.0	99.0	100.0	99.0	101.0	102.0	102.0
630	98.0	98.0	99.0	99.0	100.0	100.0	100.0	99.0	100.0	99.0	100.0	100.0	102.0	102.0	102.0
800	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	101.0	101.0	103.0
1000	103.0	103.0	103.0	102.0	102.0	102.0	102.0	101.0	101.0	101.0	101.0	102.0	102.0	102.0	103.0
1250	104.0	106.0	105.0	104.0	104.0	103.0	103.0	102.0	101.0	102.0	102.0	103.0	103.0	103.0	103.0
1600	108.0	108.0	107.0	106.0	104.0	104.0	103.0	103.0	102.0	102.0	101.0	102.0	102.0	101.0	104.0
2000	110.0	110.0	109.0	108.0	106.0	105.0	104.0	104.0	103.0	103.0	102.0	102.0	103.0	103.0	104.0
2500	109.0	110.0	110.0	108.0	107.0	106.0	105.0	104.0	103.0	103.0	103.0	103.0	104.0	104.0	105.0
3150	109.0	111.0	111.0	109.0	108.0	107.0	106.0	105.0	104.0	104.0	104.0	104.0	105.0	105.0	107.0
4000	110.0	110.0	111.0	110.0	108.0	107.0	107.0	106.0	105.0	104.0	104.0	104.0	105.0	106.0	107.0
5000	110.0	111.0	111.0	111.0	109.0	109.0	108.0	106.0	105.0	105.0	105.0	105.0	107.0	108.0	109.0
6300	111.0	111.0	111.0	111.0	109.0	109.0	108.0	107.0	105.0	105.0	105.0	105.0	107.0	107.0	109.0
8000	111.0	109.0	109.0	109.0	109.0	108.0	107.0	106.0	105.0	105.0	104.0	104.0	106.0	107.0	108.0
10000	108.0	108.0	108.0	108.0	107.0	107.0	106.0	105.0	104.0	103.0	103.0	103.0	105.0	106.0	107.0
12500	106.0	106.0	106.0	106.0	106.0	106.0	105.0	104.0	103.0	103.0	102.0	102.0	103.0	104.0	105.0
16000	105.0	104.0	104.0	104.0	104.0	103.0	103.0	102.0	101.0	100.0	100.0	99.0	100.0	101.0	103.0
20000	102.0	102.0	102.0	102.0	102.0	101.0	101.0	100.0	99.0	98.0	98.0	96.0	97.0	98.0	100.0
OVERALL SPL	120.2	120.1	120.3	119.8	118.7	118.4	117.7	117.2	116.5	116.4	116.3	116.4	117.8	118.2	119.3
PNDB	133.5	133.6	133.6	133.4	132.2	131.9	131.2	130.4	129.3	129.1	129.0	129.0	130.6	131.0	132.4

MICROPHONE #	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	126.0	132.7	139.2	145.5	151.7	157.9	165.0	35.0	45.4	45.4	51.7	58.0	64.5	70.9	77.5
REF DIST(FT)	8.2	9.1	10.2	11.8	14.1	17.7	25.8	60.0	55.1	55.1	50.0	46.3	43.5	41.5	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(MEHTZ)															
25	90.0	93.0	95.0	0.0	101.0	104.0	100.0	85.0	70.0	70.0	72.0	69.0	72.0	74.0	73.0
31	90.0	93.0	95.0	98.0	101.0	104.0	99.0	81.0	68.0	68.0	71.0	71.0	73.0	74.0	73.0
40	91.0	89.0	96.0	99.0	101.0	103.0	99.0	78.0	69.0	69.0	71.0	71.0	76.0	78.0	74.0
50	98.0	95.0	97.0	98.0	103.0	99.0	99.0	78.0	72.0	72.0	75.0	78.0	79.0	81.0	81.0
63	98.0	100.0	101.0	101.0	103.0	102.0	100.0	83.0	82.0	82.0	82.0	84.0	85.0	84.0	84.0
80	101.0	100.0	102.0	101.0	103.0	100.0	101.0	81.0	80.0	80.0	80.0	82.0	82.0	82.0	82.0
100	101.0	101.0	101.0	102.0	104.0	103.0	100.0	80.0	78.0	78.0	77.0	80.0	82.0	86.0	86.0
125	102.0	104.0	103.0	102.0	102.0	101.0	100.0	78.0	83.0	83.0	84.0	86.0	84.0	87.0	85.0
160	105.0	104.0	104.0	105.0	104.0	103.0	100.0	84.0	87.0	87.0	85.0	86.0	87.0	88.0	91.0
200	107.0	109.0	107.0	106.0	106.0	103.0	97.0	89.0	90.0	90.0	89.0	89.0	89.0	90.0	92.0
250	109.0	109.0	111.0	110.0	108.0	104.0	98.0	90.0	91.0	91.0	90.0	93.0	95.0	97.0	95.0
315	107.0	105.0	106.0	106.0	102.0	100.0	95.0	84.0	87.0	87.0	87.0	87.0	89.0	89.0	89.0
400	104.0	104.0	104.0	103.0	102.0	99.0	92.0	83.0	84.0	86.0	86.0	87.0	88.0	87.0	88.0
500	103.0	103.0	104.0	103.0	100.0	96.0	91.0	84.0	86.0	86.0	87.0	87.0	88.0	87.0	88.0
630	103.0	105.0	105.0	103.0	98.0	96.0	91.0	84.0	87.0	87.0	86.0	88.0	88.0	88.0	88.0
800	104.0	105.0	105.0	103.0	97.0	94.0	91.0	85.0	87.0	87.0	87.0	88.0	88.0	88.0	89.0
1000	103.0	104.0	104.0	100.0	96.0	93.0	90.0	86.0	89.0	89.0	89.0	90.0	91.0	91.0	91.0
1250	104.0	103.0	102.0	99.0	96.0	93.0	90.0	88.0	91.0	91.0	91.0	92.0	92.0	92.0	92.0
1600	104.0	104.0	102.0	97.0	96.0	94.0	92.0	89.0	91.0	91.0	92.0	94.0	95.0	94.0	93.0
2000	105.0	105.0	103.0	99.0	97.0	95.0	93.0	90.0	92.0	92.0	92.0	94.0	96.0	93.0	95.0
2500	105.0	106.0	103.0	100.0	98.0	96.0	94.0	91.0	93.0	93.0	93.0	94.0	96.0	93.0	95.0
3150	107.0	106.0	103.0	101.0	98.0	98.0	94.0	93.0	93.0	93.0	93.0	94.0	96.0	95.0	95.0
4000	108.0	108.0	104.0	101.0	98.0	98.0	95.0	93.0	93.0	93.0	93.0	95.0	96.0	94.0	96.0
5000	110.0	110.0	106.0	102.0	99.0	98.0	96.0	94.0	94.0	94.0	93.0	95.0	95.0	93.0	95.0
6300	110.0	109.0	106.0	102.0	99.0	98.0	98.0	98.0	97.0	97.0	100.0	98.0	97.0	95.0	98.0
8000	108.0	109.0	105.0	101.0	98.0	96.0	96.0	100.0	98.0	98.0	102.0	98.0	98.0	96.0	96.0
10000	108.0	107.0	104.0	101.0	97.0	94.0	95.0	92.0	91.0	91.0	91.0	91.0	92.0	90.0	92.0
12500	106.0	106.0	103.0	99.0	95.0	92.0	90.0	90.0	89.0	89.0	90.0	90.0	91.0	88.0	90.0
16000	102.0	103.0	100.0	96.0	92.0	88.0	92.0	93.0	88.0	88.0	89.0	88.0	88.0	86.0	87.0
20000	100.0	100.0	97.0	93.0	88.0	86.0	90.0	88.0	81.0	81.0	82.0	82.0	84.0	81.0	83.0
OVERALL SPL	120.0	119.9	118.9	117.2	116.1	114.6	111.7	105.7	105.2	105.2	106.7	106.2	106.9	105.7	106.4
PNDB	133.2	132.8	130.4	127.2	124.3	122.6	120.6	120.4	119.4	119.4	121.6	120.0	120.4	118.7	119.3

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.1	87.3	93.9	100.4	106.8	113.2	119.7	122.8	129.1	135.3	145.0	150.0	155.0	160.0
REF DIST(FT)	39.9	39.3	39.3	39.9	41.0	42.7	45.2	46.7	50.6	55.8	68.8	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(MENTZ)														
25	74.0	74.0	73.0	73.0	74.0	72.0	71.0	75.0	71.0	76.0	76.0	80.0	80.0	78.0
31	72.0	72.0	73.0	75.0	75.0	73.0	75.0	77.0	75.0	76.0	76.0	79.0	79.0	78.0
40	74.0	75.0	76.0	77.0	78.0	79.0	78.0	79.0	80.0	80.0	79.0	80.0	78.0	76.0
50	82.0	81.0	83.0	84.0	82.0	83.0	84.0	85.0	85.0	87.0	84.0	84.0	79.0	73.0
63	86.0	86.0	85.0	87.0	88.0	88.0	88.0	89.0	91.0	89.0	90.0	89.0	86.0	80.0
80	80.0	81.0	83.0	84.0	84.0	85.0	87.0	86.0	88.0	89.0	91.0	91.0	91.0	87.0
100	85.0	88.0	89.0	90.0	88.0	90.0	90.0	91.0	88.0	88.0	87.0	89.0	90.0	89.0
125	85.0	87.0	88.0	90.0	89.0	91.0	91.0	91.0	92.0	92.0	90.0	86.0	85.0	88.0
160	92.0	91.0	91.0	94.0	92.0	94.0	95.0	92.0	91.0	91.0	92.0	91.0	89.0	81.0
200	93.0	92.0	94.0	93.0	94.0	95.0	95.0	94.0	94.0	93.0	92.0	88.0	87.0	87.0
250	95.0	93.0	95.0	94.0	96.0	99.0	99.0	100.0	100.0	95.0	95.0	96.0	88.0	89.0
315	89.0	88.0	90.0	90.0	92.0	93.0	95.0	93.0	95.0	94.0	90.0	88.0	85.0	82.0
400	87.0	87.0	90.0	90.0	90.0	92.0	93.0	93.0	94.0	90.0	88.0	85.0	82.0	79.0
500	88.0	89.0	89.0	90.0	91.0	92.0	92.0	92.0	92.0	91.0	86.0	84.0	82.0	78.0
630	88.0	89.0	90.0	91.0	91.0	92.0	91.0	93.0	93.0	91.0	85.0	84.0	81.0	79.0
800	89.0	90.0	90.0	90.0	90.0	91.0	92.0	93.0	93.0	90.0	85.0	83.0	82.0	79.0
1000	91.0	91.0	91.0	91.0	92.0	92.0	92.0	92.0	91.0	89.0	84.0	83.0	81.0	79.0
1250	92.0	93.0	92.0	92.0	93.0	92.0	92.0	92.0	91.0	89.0	84.0	83.0	82.0	81.0
1600	94.0	95.0	94.0	94.0	94.0	95.0	92.0	92.0	91.0	89.0	85.0	83.0	83.0	81.0
2000	96.0	97.0	96.0	96.0	95.0	95.0	94.0	93.0	92.0	90.0	85.0	84.0	84.0	83.0
2500	96.0	97.0	97.0	96.0	97.0	96.0	94.0	94.0	93.0	90.0	86.0	84.0	84.0	82.0
3150	95.0	97.0	97.0	97.0	98.0	97.0	96.0	96.0	94.0	91.0	86.0	85.0	85.0	84.0
4000	95.0	96.0	97.0	98.0	98.0	98.0	97.0	96.0	94.0	91.0	87.0	85.0	84.0	83.0
5000	94.0	97.0	97.0	98.0	99.0	99.0	98.0	97.0	95.0	92.0	88.0	86.0	85.0	84.0
6300	96.0	97.0	97.0	98.0	99.0	99.0	98.0	97.0	95.0	91.0	90.0	87.0	85.0	84.0
8000	96.0	96.0	94.0	96.0	97.0	98.0	96.0	96.0	94.0	91.0	89.0	87.0	85.0	83.0
10000	90.0	92.0	92.0	93.0	95.0	96.0	94.0	93.0	91.0	88.0	86.0	84.0	82.0	79.0
12500	88.0	89.0	90.0	90.0	92.0	93.0	91.0	90.0	89.0	86.0	86.0	83.0	80.0	77.0
16000	86.0	86.0	87.0	86.0	88.0	89.0	87.0	86.0	84.0	81.0	83.0	80.0	77.0	73.0
20000	80.0	83.0	83.0	82.0	84.0	84.0	82.0	82.0	80.0	78.0	80.0	76.0	73.0	68.0
OVERALL SPL	106.4	107.2	107.4	107.8	108.9	109.0	108.4	108.8	107.4	104.9	103.0	102.0	99.7	98.0
PNDB	119.1	120.1	120.2	120.9	121.8	122.1	121.1	120.4	119.0	115.9	113.8	111.4	109.6	108.0

ALL CORRECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE (DEG)	32.4	38.9	45.5	52.0	59.6	63.8	68.3	78.1	83.5	89.0	94.4	99.6	109.6	114.1	122.3
REF DIST (FT)	12.4	10.6	9.4	8.5	7.7	7.4	7.2	6.8	6.7	6.7	6.7	6.8	7.1	7.3	7.9
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	90.0	81.0	79.0	82.0	84.0	81.0	82.0	83.0	83.0	82.0	84.0	85.0	84.0	87.0	87.0
31	88.0	82.0	82.0	83.0	85.0	82.0	83.0	84.0	84.0	84.0	87.0	85.0	83.0	88.0	87.0
40	88.0	83.0	82.0	84.0	85.0	83.0	84.0	85.0	83.0	86.0	84.0	85.0	84.0	88.0	88.0
50	88.0	85.0	86.0	87.0	87.0	89.0	88.0	88.0	87.0	90.0	91.0	90.0	91.0	91.0	94.0
63	89.0	90.0	87.0	89.0	94.0	91.0	93.0	92.0	93.0	95.0	94.0	94.0	97.0	97.0	97.0
80	89.0	87.0	89.0	90.0	91.0	91.0	92.0	94.0	92.0	96.0	96.0	96.0	98.0	96.0	99.0
100	90.0	90.0	89.0	91.0	91.0	93.0	93.0	96.0	96.0	95.0	97.0	97.0	99.0	100.0	101.0
125	90.0	91.0	92.0	92.0	93.0	94.0	94.0	97.0	99.0	98.0	100.0	101.0	101.0	102.0	102.0
160	92.0	94.0	93.0	94.0	97.0	98.0	100.0	101.0	101.0	103.0	103.0	104.0	104.0	105.0	106.0
200	94.0	98.0	99.0	100.0	100.0	101.0	102.0	103.0	103.0	104.0	104.0	104.0	105.0	105.0	107.0
250	101.0	102.0	102.0	105.0	103.0	105.0	104.0	106.0	106.0	105.0	106.0	106.0	108.0	107.0	108.0
315	96.0	97.0	98.0	98.0	100.0	100.0	100.0	100.0	101.0	99.0	100.0	100.0	102.0	103.0	104.0
400	95.0	95.0	96.0	97.0	98.0	98.0	99.0	100.0	100.0	100.0	99.0	99.0	101.0	102.0	103.0
500	97.0	97.0	98.0	98.0	99.0	99.0	100.0	99.0	99.0	99.0	100.0	99.0	101.0	102.0	102.0
630	98.0	98.0	99.0	99.0	100.0	100.0	100.0	99.0	100.0	99.0	100.0	100.0	102.0	102.0	102.0
800	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	101.0	101.0	103.0
1000	103.0	103.0	103.0	102.0	102.0	102.0	102.0	101.0	101.0	101.0	101.0	102.0	102.0	102.0	103.0
1250	106.0	106.0	105.0	104.0	104.0	103.0	103.0	103.0	102.0	103.0	102.0	102.0	103.0	101.0	103.0
1600	108.0	108.0	107.0	106.0	104.0	104.0	103.0	103.0	102.0	102.0	101.0	102.0	102.0	103.0	104.0
2000	110.0	110.0	109.0	108.0	106.0	105.0	104.0	104.0	103.0	103.0	102.0	102.0	103.0	103.0	104.0
2500	109.0	110.0	110.0	108.0	107.0	106.0	105.0	104.0	103.0	103.0	103.0	103.0	104.0	104.0	105.0
3150	109.0	111.0	111.0	109.0	108.0	107.0	106.0	105.0	104.0	104.0	104.0	104.0	105.0	105.0	107.0
4000	110.0	110.0	111.0	110.0	108.0	107.0	107.0	106.0	105.0	104.0	104.0	104.0	105.0	106.0	107.0
5000	110.0	111.0	111.0	111.0	109.0	109.0	108.0	106.0	105.0	105.0	105.0	105.0	107.0	108.0	109.0
6300	111.0	111.0	111.0	111.0	109.0	109.0	108.0	107.0	105.0	105.0	105.0	105.0	107.0	107.0	109.0
8000	111.0	109.0	109.0	109.0	109.0	108.0	107.0	106.0	105.0	105.0	104.0	104.0	106.0	107.0	108.0
10000	108.0	108.0	108.0	108.0	107.0	107.0	106.0	105.0	104.0	103.0	103.0	103.0	105.0	106.0	107.0
12500	106.0	106.0	106.0	106.0	106.0	106.0	105.0	104.0	103.0	103.0	102.0	102.0	103.0	104.0	105.0
16000	105.0	104.0	104.0	104.0	104.0	103.0	103.0	102.0	101.0	100.0	100.0	99.0	100.0	101.0	103.0
20000	102.0	102.0	102.0	102.0	102.0	101.0	101.0	100.0	99.0	98.0	98.0	96.0	97.0	98.0	100.0
OVERALL SPL	120.2	120.1	120.3	119.8	118.7	118.4	117.7	117.2	116.5	116.4	116.3	116.4	117.8	118.2	119.3
PNDB	133.5	133.6	133.6	133.4	132.2	131.9	131.2	130.4	129.3	129.1	129.0	129.0	130.6	131.0	132.4

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	126.0	132.7	139.8	145.5	151.7	157.9	165.0	35.0	49.4	45.4	51.7	58.0	64.5	70.9	77.5
REF DIST(FT)	8.2	9.1	10.2	11.8	14.1	17.7	25.8	68.4	55.1	55.1	50.0	46.3	43.5	41.5	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	90.0	93.0	95.0	0.0	101.0	104.0	100.0	83.0	78.0	78.0	72.0	69.0	72.0	74.0	73.0
31	90.0	93.0	95.0	98.0	101.0	104.0	99.0	81.0	68.0	68.0	71.0	71.0	73.0	74.0	73.0
40	91.0	89.0	96.0	99.0	101.0	103.0	99.0	78.0	69.0	69.0	71.0	71.0	76.0	78.0	74.0
50	94.0	95.0	97.0	98.0	103.0	99.0	99.0	78.0	72.0	72.0	75.0	78.0	79.0	81.0	81.0
63	98.0	100.0	101.0	101.0	103.0	102.0	100.0	83.0	82.0	82.0	82.0	84.0	85.0	84.0	84.0
80	101.0	100.0	102.0	101.0	103.0	100.0	101.0	81.0	80.0	80.0	80.0	82.0	82.0	82.0	82.0
100	101.0	101.0	101.0	102.0	104.0	103.0	100.0	80.0	78.0	78.0	77.0	80.0	82.0	86.0	86.0
125	102.0	104.0	103.0	102.0	102.0	101.0	100.0	78.0	83.0	83.0	84.0	86.0	84.0	87.0	85.0
160	105.0	104.0	104.0	105.0	104.0	103.0	100.0	84.0	87.0	87.0	85.0	86.0	87.0	88.0	91.0
200	107.0	105.0	107.0	106.0	106.0	103.0	97.0	85.0	90.0	90.0	89.0	89.0	89.0	90.0	92.0
250	109.0	109.0	111.0	110.0	108.0	104.0	98.0	90.0	91.0	91.0	90.0	93.0	95.0	97.0	95.0
315	107.0	105.0	106.0	106.0	102.0	100.0	95.0	84.0	87.0	87.0	87.0	87.0	89.0	89.0	89.0
400	104.0	104.0	104.0	103.0	102.0	99.0	92.0	83.0	86.0	86.0	86.0	87.0	88.0	87.0	88.0
500	103.0	103.0	104.0	103.0	100.0	96.0	91.0	84.0	86.0	86.0	87.0	87.0	88.0	87.0	88.0
630	103.0	105.0	105.0	103.0	98.0	96.0	91.0	84.0	87.0	87.0	86.0	88.0	88.0	88.0	88.0
800	104.0	105.0	105.0	103.0	97.0	94.0	91.0	85.0	87.0	87.0	87.0	88.0	88.0	88.0	89.0
1000	103.0	104.0	104.0	100.0	96.0	93.0	90.0	86.0	89.0	89.0	89.0	90.0	91.0	91.0	91.0
1250	104.0	103.0	102.0	99.0	96.0	93.0	90.0	88.0	91.0	91.0	91.0	92.0	92.0	92.0	92.0
1600	104.0	104.0	102.0	97.0	96.0	94.0	92.0	89.0	91.0	91.0	92.0	94.0	95.0	94.0	93.0
2000	105.0	105.0	103.0	99.0	97.0	95.0	93.0	90.0	92.0	92.0	92.0	94.0	96.0	93.0	95.0
2500	105.0	106.0	103.0	100.0	98.0	96.0	94.0	91.0	93.0	93.0	93.0	94.0	96.0	93.0	95.0
3150	107.0	106.0	105.0	101.0	98.0	98.0	94.0	93.0	93.0	93.0	93.0	94.0	96.0	93.0	95.0
4000	108.0	108.0	104.0	101.0	98.0	98.0	95.0	93.0	93.0	93.0	93.0	95.0	96.0	94.0	96.0
5000	110.0	110.0	106.0	102.0	99.0	98.0	96.0	94.0	94.0	94.0	93.0	95.0	95.0	93.0	95.0
6300	110.0	109.0	106.0	102.0	99.0	98.0	98.0	98.0	97.0	97.0	100.0	98.0	97.0	95.0	96.0
8000	108.0	109.0	105.0	101.0	98.0	96.0	96.0	100.0	98.0	98.0	102.0	98.0	98.0	96.0	96.0
10000	108.0	107.0	104.0	101.0	97.0	94.0	95.0	92.0	91.0	91.0	91.0	91.0	92.0	90.0	92.0
12500	106.0	106.0	103.0	99.0	95.0	92.0	94.0	94.0	89.0	89.0	90.0	90.0	91.0	88.0	90.0
16000	102.0	103.0	100.0	96.0	92.0	88.0	92.0	93.0	88.0	88.0	89.0	88.0	88.0	86.0	87.0
20000	100.0	100.0	97.0	93.0	88.0	86.0	90.0	88.0	81.0	81.0	82.0	82.0	84.0	81.0	83.0
OVERALL SPL	120.0	119.9	118.9	117.2	116.1	114.6	111.7	105.7	105.2	105.2	106.7	106.2	106.9	105.7	106.4
PNDB	133.2	132.8	130.4	127.2	124.3	122.6	120.6	120.4	119.4	119.4	121.6	120.0	120.4	118.7	119.3

MICROPHONE #	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.1	87.3	93.9	100.8	106.8	113.2	119.7	122.8	129.1	135.1	145.0	150.0	155.0	160.0
REF DIST(FT)	39.5	39.5	39.5	39.9	41.0	42.7	45.2	46.7	50.6	55.8	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	74.0	74.0	73.0	73.0	74.0	72.0	71.0	75.0	71.0	76.0	76.0	80.0	80.0	78.0
31	72.0	72.0	73.0	75.0	75.0	73.0	75.0	77.0	75.0	76.0	76.0	79.0	79.0	78.0
40	74.0	75.0	76.0	77.0	78.0	79.0	78.0	79.0	80.0	80.0	79.0	80.0	78.0	76.0
50	82.0	81.0	81.0	84.0	82.0	83.0	84.0	85.0	85.0	87.0	84.0	84.0	79.0	73.0
63	86.0	86.0	85.0	87.0	88.0	88.0	88.0	89.0	91.0	89.0	90.0	89.0	86.0	80.0
80	80.0	81.0	83.0	84.0	84.0	85.0	87.0	86.0	88.0	89.0	91.0	91.0	91.0	87.0
100	85.0	88.0	89.0	90.0	88.0	90.0	90.0	91.0	88.0	88.0	87.0	89.0	90.0	89.0
125	85.0	87.0	88.0	90.0	89.0	91.0	91.0	91.0	92.0	92.0	90.0	86.0	85.0	84.0
160	92.0	91.0	91.0	94.0	92.0	94.0	95.0	92.0	91.0	91.0	92.0	91.0	89.0	81.0
200	93.0	92.0	94.0	93.0	94.0	95.0	95.0	94.0	94.0	93.0	92.0	88.0	87.0	87.0
250	95.0	93.0	95.0	94.0	96.0	99.0	99.0	100.0	100.0	95.0	95.0	96.0	88.0	89.0
315	89.0	88.0	90.0	90.0	92.0	93.0	95.0	93.0	95.0	94.0	90.0	88.0	85.0	82.0
400	87.0	87.0	90.0	90.0	90.0	92.0	93.0	93.0	94.0	90.0	88.0	85.0	82.0	79.0
500	88.0	89.0	89.0	90.0	91.0	92.0	92.0	92.0	92.0	91.0	86.0	84.0	82.0	78.0
630	88.0	89.0	90.0	91.0	91.0	92.0	93.0	93.0	93.0	91.0	85.0	84.0	81.0	79.0
800	89.0	90.0	90.0	90.0	90.0	91.0	92.0	93.0	93.0	90.0	85.0	83.0	82.0	79.0
1000	91.0	91.0	91.0	91.0	92.0	92.0	92.0	92.0	91.0	89.0	84.0	83.0	81.0	79.0
1250	92.0	93.0	92.0	92.0	93.0	92.0	92.0	92.0	91.0	89.0	84.0	83.0	82.0	81.0
1600	94.0	95.0	94.0	94.0	94.0	95.0	92.0	92.0	91.0	89.0	85.0	83.0	83.0	81.0
2000	96.0	97.0	96.0	96.0	95.0	95.0	94.0	93.0	92.0	90.0	85.0	84.0	84.0	81.0
2500	96.0	97.0	97.0	96.0	97.0	96.0	94.0	94.0	93.0	90.0	86.0	84.0	84.0	82.0
3150	95.0	97.0	97.0	97.0	98.0	97.0	96.0	96.0	94.0	91.0	86.0	85.0	85.0	84.0
4000	95.0	96.0	97.0	98.0	98.0	98.0	97.0	96.0	94.0	91.0	87.0	85.0	84.0	83.0
5000	94.0	97.0	97.0	98.0	99.0	99.0	98.0	97.0	95.0	92.0	88.0	86.0	85.0	84.0
6300	96.0	97.0	97.0	98.0	99.0	99.0	98.0	97.0	95.0	91.0	90.0	87.0	85.0	84.0
8000	96.0	96.0	95.0	96.0	97.0	98.0	96.0	96.0	94.0	91.0	89.0	87.0	85.0	83.0
10000	90.0	92.0	92.0	93.0	95.0	96.0	94.0	93.0	91.0	88.0	86.0	84.0	82.0	79.0
12500	88.0	89.0	90.0	90.0	92.0	93.0	91.0	90.0	89.0	86.0	86.0	83.0	80.0	77.0
16000	86.0	86.0	87.0	86.0	88.0	89.0	87.0	86.0	84.0	81.0	83.0	80.0	77.0	73.0
20000	80.0	83.0	83.0	82.0	84.0	84.0	82.0	82.0	80.0	78.0	80.0	76.0	73.0	68.0
OVERALL SPL	106.4	107.2	107.4	107.8	108.5	109.0	108.4	108.0	107.4	104.9	103.0	102.0	99.7	98.0
PNDB	119.1	120.1	120.2	120.9	121.8	122.1	121.1	120.4	119.0	115.9	113.8	111.4	109.6	108.0

-- VALUES AFTER CURVE FIT CALCULATIONS --

MICROPHONE #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE (DEG)	32.4	38.9	45.5	52.0	59.6	63.8	68.3	78.1	83.5	89.0	94.4	99.6	109.6	114.1	122.3
REF DIST(FT)	12.4	10.6	9.4	8.5	7.7	7.4	7.2	6.8	6.7	6.7	6.7	6.8	7.1	7.3	7.9
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	89.6	80.6	78.7	81.7	83.2	80.8	81.6	82.9	83.2	81.9	84.5	85.3	83.8	87.5	86.8
31	89.1	82.9	82.4	83.6	84.7	83.0	83.7	84.1	83.2	84.2	85.0	84.3	83.0	87.2	87.2
40	87.9	83.6	83.5	84.7	85.7	84.7	85.3	85.5	84.4	86.6	86.8	85.9	85.8	88.7	89.3
50	87.4	84.5	84.3	86.0	87.0	86.5	87.1	87.7	86.9	89.5	89.6	89.2	89.9	91.4	92.4
63	87.7	86.1	85.8	87.7	88.9	88.8	89.5	90.5	90.1	92.6	92.9	93.0	94.3	94.8	95.9
80	88.7	88.4	88.0	89.7	91.1	91.5	92.2	93.7	93.7	95.7	96.1	96.7	98.1	97.8	99.2
100	90.2	91.0	90.7	91.8	93.5	94.2	94.9	96.8	97.0	98.3	99.0	99.7	101.0	100.6	102.0
125	91.8	93.3	93.2	93.7	95.7	96.6	97.2	99.3	99.7	100.3	101.1	101.8	102.9	102.8	104.1
160	93.2	95.1	95.4	95.3	97.4	98.5	99.1	101.8	101.5	101.6	102.4	102.9	103.9	104.2	105.3
200	94.4	96.4	96.9	96.4	98.7	99.7	100.3	101.9	102.4	102.1	102.9	103.1	104.2	104.8	105.8
250	95.3	97.0	97.8	97.2	99.4	100.4	100.9	102.0	102.5	102.0	102.7	102.7	104.0	104.7	105.6
315	96.1	97.4	98.3	97.6	99.8	100.5	101.0	101.6	102.1	101.5	102.1	102.0	103.4	104.2	105.0
400	97.0	97.6	98.5	98.0	99.9	100.4	100.9	101.0	101.3	100.8	101.3	101.1	102.7	103.4	104.1
500	98.0	98.1	98.8	98.4	100.0	100.2	100.6	100.1	100.6	100.2	100.5	100.3	102.1	102.5	103.3
630	99.2	99.0	99.4	99.1	100.2	100.2	100.4	99.9	100.1	99.8	99.9	99.9	101.6	101.8	102.6
800	100.8	100.4	100.5	100.2	100.7	100.5	100.5	99.9	99.9	99.9	99.7	99.8	101.3	101.4	102.2
1000	102.7	102.3	102.2	101.6	101.6	101.1	101.0	100.4	100.2	100.3	100.0	100.2	101.4	101.4	102.2
1250	104.7	104.6	104.2	103.3	102.8	102.1	101.8	101.3	100.9	101.0	100.6	100.9	101.7	101.8	102.6
1600	106.7	107.0	106.5	105.2	104.2	103.4	102.9	102.5	101.8	102.0	101.5	101.9	102.4	102.5	103.4
2000	108.5	109.2	108.6	107.1	105.6	104.9	104.2	103.8	102.9	103.8	102.5	102.8	103.2	103.5	104.5
2500	109.9	110.8	110.4	108.7	107.0	106.3	105.4	105.0	103.9	103.9	103.4	103.7	104.1	104.6	105.7
3150	110.7	111.7	111.5	110.0	108.1	107.4	106.5	105.8	104.6	104.5	104.2	104.3	105.1	105.6	106.9
4000	110.9	111.7	111.8	110.7	108.8	108.2	107.3	106.3	105.0	104.8	104.6	104.6	105.9	106.5	107.8
5000	110.5	111.0	111.3	110.7	109.0	108.5	107.7	106.3	105.0	104.7	104.7	104.6	106.5	107.0	108.4
6300	109.8	109.7	110.2	110.2	108.8	108.4	107.6	106.0	104.7	104.4	104.4	104.3	106.6	107.1	108.5
8000	108.9	108.4	108.8	109.2	108.1	107.8	107.0	105.5	104.3	104.0	103.8	103.8	106.2	106.7	108.1
10000	108.1	107.4	107.4	107.8	107.2	107.0	106.1	104.9	103.8	103.5	103.1	103.1	105.0	105.8	107.1
12500	107.2	106.5	106.3	106.3	106.0	105.8	105.0	104.2	103.2	102.7	102.1	102.0	103.0	104.2	105.4
16000	105.6	105.2	104.9	104.4	104.4	103.9	103.4	102.9	101.9	101.2	100.6	99.9	100.3	101.6	103.0
20000	101.5	101.3	101.6	101.7	101.8	100.6	100.8	99.5	98.6	97.4	97.6	95.5	96.8	97.7	99.9
OVERALL SPL	120.0	120.5	120.5	119.6	118.6	118.2	117.7	117.0	116.3	116.2	116.2	116.3	117.6	118.1	119.2
PNDB	133.0	133.2	133.3	133.0	132.1	131.7	131.1	130.1	129.1	128.9	128.8	128.7	130.4	131.0	132.2

MICROPHONE #	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE (DEG) #	126.0	132.7	139.2	145.5	151.7	157.9	165.0	35.0	45.4	45.4	51.7	58.0	64.5	70.9	77.5
REF DIST (FT) #	8.2	9.1	10.2	11.8	14.1	17.7	29.8	68.4	59.1	55.1	50.0	46.3	43.5	41.5	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ (HERTZ)															
25	89.8	93.1	94.4	76.5	100.3	104.0	100.0	83.5	70.0	70.0	71.7	68.8	71.6	73.8	72.4
31	90.2	91.1	95.4	93.2	102.2	104.1	99.0	79.8	68.1	68.1	71.5	70.8	74.3	75.0	74.1
40	91.7	92.1	96.3	99.1	102.0	102.4	98.8	78.3	69.0	69.0	71.9	73.6	75.9	77.4	75.9
50	93.9	94.6	97.5	100.5	101.5	100.8	99.3	78.4	71.6	71.6	73.9	76.6	77.4	80.1	78.1
63	96.6	97.4	99.1	100.5	101.4	100.2	99.9	79.3	75.3	75.3	76.2	79.7	79.3	82.6	80.9
80	99.4	100.1	100.8	100.8	102.3	100.5	100.5	80.6	79.2	79.2	79.3	82.4	81.4	84.8	83.8
100	101.9	102.3	102.5	101.8	103.4	101.4	100.6	81.8	82.6	82.6	82.4	84.7	83.5	86.4	86.5
125	104.0	103.9	104.1	103.3	104.4	102.4	100.3	82.8	85.3	85.3	85.0	86.3	85.3	87.5	88.7
160	105.5	105.0	105.4	104.9	105.1	103.0	99.4	83.5	87.1	87.1	86.7	87.4	86.7	88.0	90.1
200	106.3	105.5	106.3	106.1	105.2	103.0	98.1	83.9	88.0	88.0	87.6	88.0	87.6	88.2	90.7
250	106.5	105.7	106.7	106.7	104.6	102.3	96.5	84.0	88.3	88.3	87.7	88.2	88.0	88.1	90.7
315	106.1	105.5	106.7	106.5	103.5	100.8	94.7	84.0	88.0	88.0	87.5	88.2	88.2	88.0	90.2
400	105.4	105.1	106.3	106.6	101.9	99.0	93.1	84.0	87.6	87.6	87.0	88.2	88.2	88.0	89.6
500	104.6	104.7	105.6	104.2	100.2	97.0	91.7	84.2	87.2	87.2	86.8	88.2	88.3	88.1	89.1
630	103.8	104.2	104.7	102.5	98.5	95.2	90.7	84.5	87.2	87.2	86.9	88.5	88.7	88.6	88.9
800	103.2	103.9	103.8	100.9	97.2	93.9	90.2	85.1	87.5	87.5	87.5	89.0	89.5	89.2	89.2
1000	102.9	103.7	103.1	99.6	96.3	93.2	90.2	85.9	88.2	88.2	88.6	89.9	90.6	90.1	90.0
1250	103.1	103.7	102.5	98.9	95.9	93.2	90.7	87.0	89.1	89.3	89.9	90.9	92.0	91.1	91.2
1600	103.7	104.1	102.3	98.6	96.0	93.8	91.3	88.3	90.6	90.6	91.3	92.1	93.5	92.1	92.6
2000	104.7	104.8	102.9	99.0	96.6	94.9	92.6	89.8	92.0	92.0	92.5	93.4	94.9	93.0	94.1
2500	105.9	105.7	103.0	99.7	97.3	96.3	93.7	91.3	93.2	93.2	93.3	94.5	96.1	93.7	95.3
3150	107.3	106.9	103.7	100.6	98.1	97.5	94.7	92.9	94.0	94.0	93.9	95.4	96.8	94.2	96.1
4000	108.5	108.0	104.5	101.4	98.8	98.3	95.4	94.3	94.5	94.5	93.1	96.0	97.0	94.4	96.5
5000	109.3	108.9	105.2	101.9	99.0	98.4	95.8	95.5	94.5	94.5	92.4	96.2	96.6	94.2	96.0
6300	109.6	109.4	105.6	102.0	98.8	97.7	95.9	96.3	94.1	94.1	91.6	95.9	95.8	93.6	95.1
8000	109.1	109.0	105.5	101.5	98.1	96.2	95.6	97.1	93.4	93.4	91.1	95.0	94.6	92.7	93.9
10000	107.7	107.8	104.5	100.5	96.8	94.0	95.0	97.1	92.2	92.2	90.8	93.5	93.2	91.4	92.4
12500	105.5	105.6	102.7	98.8	94.9	91.4	94.0	96.0	90.4	90.4	90.6	91.1	91.5	89.3	90.5
16000	102.7	102.8	100.1	96.5	92.2	88.7	92.4	93.2	87.2	87.2	88.7	87.5	88.8	86.1	87.7
20000	99.8	100.1	97.0	92.8	88.0	85.8	89.8	87.5	81.0	81.0	82.0	81.9	83.5	80.6	82.5
OVERALL SPL	119.9	119.8	118.5	116.9	115.8	114.5	111.7	105.6	104.5	104.5	103.8	105.8	106.4	104.8	106.2
PNDB	133.0	132.9	130.3	127.2	124.2	122.5	120.5	119.4	117.7	117.7	116.4	119.1	119.4	117.6	119.0

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	84.1	87.3	91.9	100.4	106.8	113.2	119.7	122.8	129.1	135.3	145.0	150.0	155.0	160.0
REF DIST(FT)	39.5	39.3	39.3	39.9	41.0	42.7	45.2	46.7	50.6	55.8	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	74.1	73.4	72.1	72.7	73.3	71.1	70.9	74.5	70.0	75.1	75.3	79.7	80.4	79.0
31	72.5	73.5	74.9	75.4	76.4	75.4	75.8	77.8	74.9	77.9	77.3	79.1	77.5	75.6
40	72.5	75.7	77.2	78.4	78.7	78.6	79.4	80.6	81.1	81.2	80.2	81.3	78.8	76.6
50	74.4	78.9	79.8	81.6	81.1	81.7	82.4	83.3	84.1	84.4	83.4	84.3	81.7	79.7
63	77.6	82.3	82.7	84.8	83.7	84.7	85.4	85.9	86.5	87.0	86.5	86.9	84.7	83.1
80	81.3	85.4	85.7	87.6	86.4	87.7	88.2	88.3	88.6	89.2	89.0	88.7	87.1	86.0
100	84.9	87.8	88.3	89.9	88.9	90.5	90.7	90.4	90.5	90.8	90.8	89.5	88.5	87.6
125	87.7	89.4	90.4	91.5	90.9	92.6	92.9	92.1	92.2	91.9	91.9	89.6	88.8	88.1
160	89.6	90.2	91.6	92.4	92.2	94.1	94.5	93.5	93.5	92.5	92.3	89.1	88.3	87.4
200	90.4	90.3	92.1	92.6	92.9	94.0	95.4	94.3	94.5	92.8	92.0	88.2	87.3	86.0
250	90.3	90.0	92.0	92.2	92.9	94.8	95.6	94.6	95.0	92.8	91.2	87.3	85.9	84.1
315	89.7	89.5	91.4	91.6	92.5	94.3	95.2	94.5	95.0	92.5	90.0	86.3	84.4	82.1
400	89.0	89.1	90.7	90.9	91.9	93.4	94.5	94.1	94.6	92.0	88.6	85.4	83.2	80.5
500	88.5	89.0	90.1	90.4	91.3	92.5	93.9	93.5	93.9	91.4	87.2	84.6	82.2	79.1
630	88.4	89.2	89.8	90.1	90.9	91.9	92.5	92.8	93.0	90.7	85.9	84.0	81.6	78.4
800	88.9	90.0	90.1	90.3	90.9	91.5	91.8	92.2	92.2	90.0	84.8	83.5	81.4	78.4
1000	90.0	91.2	90.9	91.0	91.4	91.7	91.5	91.8	91.5	89.4	84.2	83.1	81.5	79.0
1250	91.6	92.7	92.1	92.1	92.3	92.4	91.7	91.8	91.1	89.1	83.9	83.0	82.0	79.9
1600	93.3	94.3	93.7	93.5	93.7	93.4	92.3	92.3	91.2	89.1	84.1	83.1	82.7	81.1
2000	94.9	95.8	95.3	95.1	95.2	94.8	93.4	93.1	91.7	89.4	84.7	83.4	83.4	82.3
2500	96.1	97.0	96.6	96.5	96.8	96.3	94.7	94.2	92.5	89.9	85.6	84.0	84.1	83.3
3150	96.5	97.7	97.6	97.7	98.1	97.6	96.1	95.4	93.6	90.7	86.7	84.7	84.7	84.0
4000	96.3	97.8	97.8	98.3	98.9	98.5	97.2	96.4	94.5	91.4	87.7	85.6	85.1	84.2
5000	95.3	97.2	97.3	98.2	99.0	98.9	97.8	97.1	95.1	91.8	88.5	86.3	85.1	83.8
6300	94.0	96.0	96.2	97.5	98.4	98.7	97.6	96.9	95.0	91.6	88.8	86.6	84.7	83.0
8000	92.5	94.1	94.5	95.7	97.0	97.6	96.5	95.7	93.9	90.5	88.5	86.3	83.9	81.7
10000	91.2	92.2	92.4	93.2	94.9	95.8	94.2	93.8	91.6	88.4	87.4	85.1	82.4	79.9
12500	89.6	89.7	90.1	90.1	92.0	93.2	91.0	89.9	88.2	85.2	85.5	82.8	80.2	77.3
16000	86.6	86.7	87.2	86.3	88.4	89.4	86.8	85.8	84.1	81.3	82.9	79.6	77.1	73.6
20000	79.4	82.5	82.9	81.8	83.8	83.8	82.1	82.1	80.1	78.0	80.0	76.2	72.9	67.6
OVERALL SPL	106.0	107.1	107.3	107.8	108.4	108.8	108.2	107.7	107.0	104.8	102.7	100.5	99.2	97.8
PNDB	118.4	119.8	120.0	120.6	121.6	121.9	121.0	120.4	119.0	116.1	113.4	111.1	109.5	107.6

CORRECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 37137A RUN 1 DELTA 1 SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/13/78

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.6	45.0	51.7	58.3	63.5	68.0	77.0	83.8	89.0	94.0	99.7	109.9	114.5	118.8
REF DIST(FT)	12.5	10.7	9.4	8.5	7.8	7.5	7.2	6.8	6.7	6.7	6.7	6.8	7.1	7.3	7.6
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	81.0	81.0	81.0	83.0	82.0	85.0	85.0	86.0	84.0	84.0	84.0	89.0	89.0	89.0	90.0
31	82.0	83.0	82.0	84.0	83.0	84.0	84.0	85.0	85.0	85.0	86.0	88.0	91.0	91.0	91.0
40	83.0	86.0	85.0	86.0	85.0	86.0	85.0	86.0	86.0	86.0	88.0	87.0	93.0	89.0	92.0
50	86.0	87.0	87.0	88.0	89.0	90.0	91.0	91.0	91.0	91.0	92.0	92.0	93.0	93.0	95.0
63	88.0	90.0	90.0	90.0	93.0	93.0	91.0	93.0	93.0	95.0	94.0	96.0	98.0	99.0	98.0
80	87.0	90.0	92.0	92.0	94.0	95.0	95.0	96.0	98.0	97.0	96.0	99.0	100.0	102.0	101.0
100	93.0	94.0	96.0	96.0	97.0	97.0	97.0	98.0	99.0	100.0	100.0	101.0	104.0	104.0	104.0
125	91.0	91.0	95.0	95.0	98.0	98.0	97.0	99.0	100.0	101.0	102.0	103.0	103.0	104.0	104.0
160	96.0	96.0	99.0	99.0	100.0	101.0	102.0	103.0	104.0	104.0	105.0	106.0	107.0	108.0	108.0
200	97.0	98.0	101.0	100.0	102.0	104.0	103.0	105.0	105.0	105.0	106.0	106.0	107.0	106.0	107.0
250	104.0	102.0	104.0	104.0	104.0	106.0	107.0	107.0	108.0	107.0	107.0	107.0	109.0	111.0	111.0
315	99.0	100.0	100.0	101.0	103.0	102.0	103.0	104.0	103.0	103.0	103.0	102.0	104.0	106.0	106.0
400	97.0	98.0	99.0	100.0	100.0	101.0	101.0	102.0	101.0	101.0	102.0	102.0	104.0	105.0	105.0
500	97.0	99.0	99.0	100.0	100.0	101.0	101.0	102.0	102.0	102.0	102.0	103.0	103.0	104.0	104.0
630	100.0	101.0	102.0	102.0	103.0	103.0	103.0	103.0	102.0	103.0	104.0	105.0	104.0	106.0	106.0
800	101.0	101.0	101.0	102.0	102.0	103.0	103.0	102.0	103.0	103.0	103.0	103.0	104.0	104.0	104.0
1000	104.0	103.0	103.0	103.0	103.0	104.0	103.0	103.0	103.0	103.0	103.0	103.0	104.0	104.0	105.0
1250	104.0	107.0	106.0	106.0	106.0	105.0	106.0	106.0	105.0	104.0	104.0	108.0	105.0	108.0	106.0
1600	108.0	109.0	108.0	107.0	106.0	106.0	105.0	105.0	104.0	105.0	104.0	104.0	105.0	106.0	106.0
2000	109.0	110.0	110.0	108.0	107.0	106.0	108.0	109.0	105.0	105.0	104.0	105.0	105.0	104.0	104.0
2500	109.0	111.0	111.0	109.0	107.0	107.0	106.0	108.0	106.0	105.0	105.0	106.0	106.0	107.0	108.0
3150	109.0	112.0	112.0	111.0	109.0	108.0	107.0	107.0	106.0	106.0	106.0	107.0	108.0	110.0	110.0
4000	110.0	112.0	112.0	111.0	109.0	109.0	108.0	107.0	107.0	106.0	106.0	109.0	110.0	111.0	111.0
5000	112.0	114.0	114.0	112.0	111.0	111.0	109.0	108.0	108.0	108.0	108.0	111.0	112.0	113.0	113.0
6300	112.0	113.0	113.0	112.0	110.0	111.0	109.0	107.0	107.0	107.0	107.0	108.0	111.0	113.0	114.0
8000	111.0	112.0	112.0	112.0	110.0	109.0	108.0	108.0	107.0	107.0	107.0	108.0	110.0	112.0	113.0
10000	109.0	110.0	111.0	110.0	109.0	109.0	108.0	107.0	106.0	106.0	106.0	107.0	110.0	111.0	112.0
12500	107.0	108.0	109.0	108.0	107.0	108.0	107.0	105.0	105.0	105.0	105.0	106.0	109.0	110.0	111.0
16000	105.0	105.0	106.0	106.0	105.0	105.0	105.0	104.0	103.0	103.0	103.0	104.0	107.0	108.0	109.0
20000	102.0	103.0	104.0	103.0	102.0	103.0	103.0	102.0	101.0	100.0	100.0	100.0	102.0	104.0	105.0
OVERALL SPL	120.7	122.0	122.3	121.8	120.1	120.8	119.3	118.9	118.7	118.5	118.7	119.1	121.0	122.2	123.0
PNDB	134.3	135.4	135.7	134.8	133.4	133.9	132.7	131.8	131.6	131.5	131.3	132.0	134.3	136.7	136.6

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	126.9	133.2	139.6	148.9	158.1	158.1	165.0	35.0	46.2	48.4	51.5	57.8	64.2	70.7	77.2
REF DIST(FT)	8.5	9.1	10.5	11.9	14.2	17.9	25.8	48.4	65.3	62.5	50.2	46.4	43.6	41.6	40.3
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	94.0	95.0	98.0	98.0	105.0	109.0	105.0	83.0	70.0	70.0	60.0	71.0	77.0	73.0	78.0
31	92.0	97.0	95.0	100.0	105.0	104.0	105.0	81.0	71.0	71.0	71.0	73.0	75.0	73.0	75.0
40	95.0	95.0	97.0	101.0	107.0	106.0	104.0	77.0	70.0	70.0	73.0	74.0	75.0	76.0	80.0
50	98.0	99.0	103.0	103.0	109.0	106.0	103.0	78.0	75.0	78.0	74.0	80.0	84.0	82.0	83.0
63	101.0	101.0	101.0	105.0	108.0	107.0	107.0	83.0	85.0	84.0	84.0	87.0	86.0	86.0	84.0
80	102.0	105.0	105.0	106.0	109.0	108.0	107.0	85.0	83.0	85.0	84.0	84.0	83.0	85.0	84.0
100	105.0	106.0	107.0	109.0	111.0	111.0	109.0	85.0	84.0	84.0	84.0	86.0	85.0	86.0	84.0
125	106.0	107.0	104.0	107.0	109.0	108.0	107.0	81.0	84.0	85.0	87.0	88.0	90.0	90.0	90.0
160	110.0	108.0	109.0	108.0	110.0	109.0	107.0	86.0	89.0	89.0	88.0	88.0	90.0	92.0	95.0
200	108.0	109.0	109.0	110.0	110.0	108.0	104.0	86.0	90.0	92.0	91.0	92.0	92.0	92.0	93.0
250	113.0	114.0	115.0	115.0	112.0	108.0	103.0	91.0	91.0	92.0	93.0	95.0	95.0	96.0	95.0
315	108.0	109.0	109.0	109.0	108.0	108.0	101.0	87.0	89.0	90.0	90.0	92.0	91.0	92.0	92.0
400	107.0	108.0	107.0	107.0	107.0	104.0	98.0	88.0	87.0	88.0	88.0	91.0	90.0	90.0	91.0
500	106.0	107.0	108.0	108.0	105.0	103.0	96.0	86.0	88.0	88.0	88.0	89.0	89.0	90.0	91.0
630	107.0	108.0	109.0	107.0	104.0	102.0	96.0	87.0	91.0	90.0	90.0	91.0	91.0	90.0	92.0
800	107.0	108.0	108.0	106.0	104.0	101.0	95.0	87.0	89.0	89.0	90.0	90.0	90.0	90.0	92.0
1000	106.0	107.0	106.0	104.0	102.0	99.0	94.0	88.0	90.0	91.0	91.0	92.0	93.0	94.0	92.0
1250	107.0	106.0	106.0	103.0	102.0	99.0	94.0	90.0	92.0	93.0	93.0	94.0	95.0	95.0	95.0
1600	108.0	106.0	106.0	102.0	101.0	98.0	95.0	91.0	94.0	91.0	94.0	95.0	96.0	97.0	96.0
2000	107.0	107.0	104.0	102.0	100.0	98.0	96.0	91.0	98.0	93.0	95.0	95.0	95.0	96.0	96.0
2500	109.0	108.0	104.0	103.0	100.0	99.0	97.0	93.0	95.0	95.0	95.0	95.0	95.0	97.0	96.0
3150	110.0	109.0	106.0	103.0	101.0	100.0	98.0	95.0	96.0	96.0	96.0	96.0	96.0	97.0	97.0
4000	112.0	110.0	107.0	104.0	101.0	100.0	99.0	95.0	97.0	96.0	96.0	97.0	97.0	98.0	97.0
5000	114.0	113.0	109.0	106.0	102.0	101.0	101.0	96.0	97.0	97.0	96.0	98.0	97.0	97.0	97.0
6300	115.0	113.0	109.0	105.0	102.0	101.0	100.0	97.0	99.0	98.0	97.0	98.0	97.0	98.0	97.0
8000	114.0	112.0	108.0	105.0	102.0	100.0	101.0	103.0	103.0	102.0	102.0	105.0	102.0	103.0	101.0
10000	114.0	111.0	107.0	103.0	100.0	98.0	99.0	95.0	94.0	94.0	93.0	94.0	94.0	94.0	98.0
12500	113.0	110.0	107.0	102.0	99.0	96.0	98.0	94.0	92.0	91.0	91.0	92.0	91.0	92.0	92.0
16000	110.0	108.0	104.0	100.0	96.0	91.0	94.0	95.0	98.0	90.0	89.0	90.0	89.0	90.0	90.0
20000	107.0	105.0	102.0	96.0	92.0	87.0	94.0	88.0	84.0	83.0	83.0	84.0	84.0	85.0	85.0
OVERALL SPL	124.3	123.4	122.2	121.3	121.2	119.8	117.6	107.5	108.3	107.8	107.7	109.3	108.3	109.3	108.7
PNDB	137.0	136.4	135.8	134.6	128.2	126.4	125.4	122.7	123.1	122.8	122.4	124.4	122.8	123.7	122.7

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.9	87.1	93.7	100.1	106.7	113.1	119.8	125.0	129.0	138.3	145.0	150.0	155.0	160.0
REF DIST(FT)	39.8	39.3	39.3	39.9	41.0	42.7	43.1	48.5	50.8	55.0	60.4	70.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	75.0	76.0	79.0	76.0	75.0	68.0	79.0	76.0	79.0	81.0	80.0	81.0	84.0	84.0
31	76.0	77.0	77.0	77.0	79.0	84.0	78.0	79.0	81.0	82.0	84.0	82.0	82.0	82.0
40	80.0	81.0	83.0	83.0	84.0	88.0	82.0	85.0	85.0	86.0	86.0	83.0	81.0	82.0
50	84.0	84.0	87.0	88.0	88.0	87.0	87.0	89.0	89.0	90.0	89.0	86.0	85.0	79.0
63	87.0	84.0	88.0	90.0	88.0	91.0	89.0	92.0	92.0	95.0	91.0	90.0	93.0	87.0
80	89.0	88.0	89.0	87.0	87.0	89.0	90.0	92.0	91.0	96.0	96.0	98.0	97.0	93.0
100	90.0	90.0	92.0	92.0	93.0	93.0	93.0	93.0	94.0	94.0	94.0	96.0	98.0	97.0
125	88.0	89.0	91.0	91.0	93.0	95.0	94.0	95.0	97.0	97.0	97.0	96.0	92.0	93.0
160	95.0	94.0	97.0	96.0	96.0	98.0	98.0	97.0	96.0	97.0	98.0	99.0	95.0	87.0
200	93.0	93.0	94.0	94.0	95.0	97.0	98.0	98.0	99.0	99.0	97.0	94.0	94.0	90.0
250	96.0	96.0	96.0	96.0	98.0	100.0	101.0	104.0	103.0	101.0	97.0	99.0	92.0	89.0
315	91.0	93.0	93.0	94.0	95.0	97.0	98.0	99.0	98.0	97.0	95.0	94.0	90.0	86.0
400	90.0	92.0	92.0	93.0	94.0	94.0	97.0	98.0	97.0	96.0	94.0	92.0	89.0	84.0
500	91.0	92.0	92.0	92.0	93.0	95.0	97.0	97.0	96.0	96.0	92.0	90.0	87.0	83.0
630	92.0	93.0	93.0	93.0	94.0	96.0	96.0	97.0	97.0	95.0	91.0	89.0	86.0	83.0
800	92.0	92.0	93.0	94.0	94.0	94.0	97.0	96.0	96.0	94.0	90.0	88.0	85.0	81.0
1000	93.0	94.0	94.0	94.0	95.0	95.0	96.0	95.0	94.0	92.0	88.0	86.0	84.0	81.0
1250	95.0	95.0	95.0	95.0	95.0	95.0	95.0	94.0	94.0	91.0	88.0	86.0	85.0	82.0
1600	97.0	97.0	96.0	97.0	97.0	96.0	95.0	94.0	93.0	91.0	88.0	86.0	85.0	82.0
2000	97.0	96.0	97.0	97.0	97.0	97.0	96.0	94.0	94.0	91.0	88.0	87.0	85.0	83.0
2500	97.0	97.0	98.0	98.0	98.0	97.0	97.0	95.0	94.0	91.0	89.0	86.0	86.0	83.0
3150	99.0	98.0	99.0	100.0	100.0	99.0	99.0	98.0	96.0	93.0	89.0	88.0	87.0	86.0
4000	99.0	98.0	100.0	100.0	101.0	101.0	100.0	98.0	96.0	93.0	90.0	88.0	87.0	85.0
5000	100.0	99.0	101.0	102.0	102.0	102.0	102.0	98.0	97.0	94.0	92.0	89.0	89.0	85.0
6300	100.0	99.0	100.0	102.0	103.0	103.0	102.0	99.0	97.0	94.0	92.0	90.0	89.0	85.0
8000	100.0	99.0	100.0	100.0	101.0	101.0	100.0	98.0	96.0	93.0	92.0	89.0	89.0	84.0
10000	97.0	95.0	97.0	98.0	99.0	100.0	99.0	95.0	94.0	90.0	90.0	87.0	86.0	81.0
12500	93.0	93.0	94.0	96.0	97.0	97.0	96.0	93.0	91.0	88.0	89.0	86.0	86.0	79.0
16000	90.0	89.0	90.0	91.0	93.0	93.0	91.0	89.0	87.0	85.0	86.0	83.0	80.0	75.0
20000	86.0	85.0	86.0	88.0	88.0	88.0	87.0	84.0	83.0	80.0	83.0	80.0	76.0	69.0
OVERALL SPL	109.2	109.2	110.3	110.9	111.5	111.9	111.9	111.0	110.4	109.2	107.8	107.2	105.2	102.3
PNDB	125.0	122.5	123.5	124.6	125.5	125.4	126.0	122.6	121.6	118.8	117.8	118.0	113.5	109.7

ALL CORRECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.6	45.0	51.7	59.1	63.5	68.0	77.2	83.5	89.8	98.6	99.7	109.2	114.5	118.0
REF DIST(FT)	12.5	10.7	9.4	8.5	7.8	7.8	7.2	6.8	6.7	6.7	6.7	6.8	7.1	7.3	7.6
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	81.0	81.0	81.0	83.0	82.0	86.0	85.0	85.0	84.0	84.0	86.0	89.0	89.0	90.0	
31	82.0	83.0	82.0	84.0	88.0	84.0	84.0	85.0	85.0	85.0	84.0	88.0	91.0	91.0	91.0
40	83.0	86.0	85.0	84.0	88.0	86.0	86.0	84.0	84.0	84.0	88.0	87.0	93.0	89.0	92.0
50	85.0	87.0	87.0	88.0	89.0	90.0	91.0	91.0	91.0	91.0	92.0	92.0	93.0	93.0	93.0
63	88.0	90.0	90.0	90.0	93.0	93.0	91.0	93.0	93.0	93.0	94.0	94.0	98.0	99.0	98.0
80	87.0	90.0	92.0	92.0	94.0	93.0	93.0	94.0	95.0	97.0	96.0	99.0	100.0	102.0	101.0
100	93.0	94.0	96.0	96.0	97.0	97.0	97.0	98.0	99.0	100.0	100.0	101.0	104.0	104.0	104.0
125	91.0	93.0	95.0	95.0	95.0	96.0	97.0	99.0	100.0	101.0	102.0	103.0	103.0	104.0	104.0
160	94.0	96.0	99.0	99.0	100.0	101.0	102.0	105.0	104.0	104.0	105.0	106.0	107.0	108.0	108.0
200	97.0	98.0	101.0	100.0	102.0	104.0	103.0	105.0	105.0	105.0	106.0	106.0	107.0	108.0	107.0
250	104.0	102.0	104.0	106.0	106.0	106.0	107.0	107.0	108.0	107.0	107.0	107.0	109.0	111.0	111.0
315	99.0	100.0	100.0	101.0	101.0	102.0	103.0	104.0	103.0	103.0	103.0	102.0	104.0	106.0	106.0
400	97.0	98.0	99.0	100.0	100.0	101.0	101.0	102.0	101.0	101.0	102.0	102.0	104.0	105.0	105.0
500	97.0	99.0	99.0	100.0	100.0	101.0	101.0	102.0	102.0	102.0	102.0	103.0	103.0	104.0	104.0
630	100.0	101.0	102.0	102.0	103.0	102.0	103.0	103.0	103.0	104.0	104.0	105.0	104.0	105.0	106.0
800	101.0	101.0	101.0	102.0	102.0	103.0	103.0	102.0	103.0	103.0	103.0	103.0	104.0	104.0	106.0
1000	104.0	103.0	103.0	103.0	103.0	104.0	103.0	103.0	103.0	103.0	103.0	103.0	104.0	104.0	105.0
1250	106.0	107.0	106.0	105.0	106.0	105.0	105.0	104.0	104.0	104.0	104.0	104.0	105.0	105.0	106.0
1600	108.0	109.0	108.0	107.0	106.0	106.0	105.0	105.0	104.0	105.0	104.0	104.0	105.0	106.0	106.0
2000	109.0	110.0	110.0	108.0	107.0	106.0	106.0	105.0	105.0	105.0	104.0	105.0	105.0	106.0	106.0
2500	109.0	111.0	111.0	109.0	107.0	107.0	106.0	105.0	105.0	105.0	105.0	106.0	107.0	108.0	110.0
3150	109.0	110.0	110.0	111.0	109.0	108.0	107.0	107.0	106.0	106.0	106.0	107.0	108.0	110.0	111.0
4000	110.0	110.0	110.0	111.0	109.0	109.0	108.0	107.0	107.0	106.0	106.0	106.0	109.0	110.0	111.0
5000	112.0	114.0	114.0	112.0	111.0	111.0	109.0	108.0	108.0	108.0	108.0	108.0	111.0	112.0	113.0
6300	112.0	113.0	113.0	112.0	110.0	111.0	109.0	107.0	107.0	107.0	107.0	108.0	111.0	113.0	114.0
8000	111.0	112.0	113.0	112.0	110.0	110.0	109.0	108.0	107.0	107.0	107.0	108.0	110.0	112.0	113.0
10000	109.0	110.0	111.0	110.0	109.0	109.0	108.0	107.0	106.0	106.0	106.0	107.0	110.0	111.0	112.0
12500	107.0	108.0	109.0	108.0	107.0	106.0	107.0	105.0	105.0	105.0	105.0	106.0	109.0	110.0	111.0
16000	105.0	105.0	106.0	106.0	105.0	105.0	105.0	104.0	103.0	102.0	103.0	103.0	106.0	107.0	108.0
20000	102.0	103.0	104.0	103.0	102.0	103.0	103.0	102.0	101.0	100.0	100.0	100.0	102.0	104.0	105.0
OVERALL SPL	120.7	122.0	122.3	121.2	120.1	120.2	119.3	118.9	118.7	118.5	118.7	119.1	121.0	122.2	123.0
PNDB	134.3	135.4	135.9	134.8	133.4	133.0	132.7	131.9	131.8	131.5	131.5	132.0	134.3	135.7	136.6

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	126.8	133.8	139.6	146.9	152.1	158.1	165.0	35.0	46.2	48.4	61.5	57.8	64.8	70.7	77.2
REF DIST(FT)	8.3	9.1	10.3	11.0	14.2	17.9	25.6	68.8	55.3	92.5	50.2	46.4	43.6	41.6	40.3
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	94.0	98.0	98.0	98.0	105.0	100.0	105.0	83.0	70.0	70.0	68.0	71.0	77.0	73.0	72.0
31	92.0	97.0	98.0	100.0	105.0	104.0	102.0	81.0	71.0	71.0	71.0	72.0	73.0	73.0	75.0
40	95.0	98.0	97.0	101.0	107.0	106.0	104.0	77.0	70.0	70.0	73.0	74.0	75.0	76.0	80.0
50	98.0	99.0	103.0	103.0	109.0	106.0	103.0	78.0	75.0	78.0	76.0	80.0	84.0	82.0	83.0
63	101.0	101.0	101.0	105.0	108.0	107.0	107.0	81.0	86.0	84.0	84.0	86.0	87.0	86.0	84.0
80	102.0	105.0	105.0	106.0	109.0	108.0	107.0	85.0	85.0	88.0	84.0	84.0	83.0	86.0	88.0
100	105.0	106.0	107.0	109.0	111.0	111.0	109.0	85.0	84.0	84.0	84.0	84.0	85.0	88.0	89.0
125	106.0	107.0	106.0	107.0	109.0	108.0	107.0	81.0	86.0	88.0	87.0	88.0	90.0	90.0	90.0
160	110.0	108.0	109.0	108.0	110.0	109.0	107.0	86.0	89.0	89.0	88.0	88.0	90.0	92.0	93.0
200	108.0	109.0	109.0	110.0	110.0	108.0	104.0	86.0	90.0	92.0	93.0	92.0	92.0	92.0	93.0
250	113.0	114.0	113.0	115.0	113.0	108.0	103.0	91.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0
315	108.0	109.0	109.0	109.0	108.0	105.0	101.0	87.0	89.0	90.0	90.0	92.0	91.0	92.0	92.0
400	107.0	109.0	107.0	107.0	107.0	104.0	98.0	85.0	87.0	88.0	88.0	91.0	90.0	90.0	91.0
500	106.0	107.0	108.0	108.0	105.0	103.0	96.0	86.0	88.0	88.0	88.0	89.0	89.0	90.0	91.0
630	107.0	108.0	109.0	107.0	104.0	102.0	96.0	87.0	91.0	90.0	90.0	91.0	91.0	90.0	92.0
800	107.0	108.0	108.0	106.0	104.0	101.0	95.0	87.0	89.0	89.0	90.0	90.0	90.0	90.0	92.0
1000	106.0	107.0	106.0	104.0	102.0	99.0	94.0	88.0	90.0	91.0	91.0	92.0	93.0	94.0	92.0
1250	107.0	106.0	106.0	103.0	100.0	98.0	94.0	90.0	92.0	93.0	93.0	94.0	95.0	95.0	95.0
1600	108.0	106.0	106.0	102.0	101.0	98.0	93.0	91.0	94.0	93.0	94.0	95.0	96.0	97.0	96.0
2000	107.0	107.0	104.0	102.0	100.0	98.0	94.0	91.0	94.0	93.0	95.0	95.0	95.0	96.0	96.0
2500	109.0	108.0	104.0	103.0	100.0	99.0	97.0	93.0	95.0	96.0	96.0	96.0	95.0	97.0	96.0
3150	110.0	109.0	106.0	103.0	101.0	100.0	98.0	98.0	96.0	96.0	96.0	96.0	96.0	97.0	97.0
4000	112.0	110.0	107.0	104.0	101.0	101.0	99.0	96.0	97.0	96.0	96.0	97.0	97.0	98.0	97.0
5000	114.0	113.0	109.0	106.0	103.0	101.0	101.0	96.0	97.0	97.0	96.0	98.0	97.0	97.0	97.0
6300	115.0	113.0	109.0	105.0	102.0	101.0	100.0	97.0	99.0	98.0	97.0	98.0	97.0	98.0	97.0
8000	114.0	112.0	108.0	105.0	102.0	100.0	101.0	103.0	103.0	102.0	102.0	102.0	102.0	101.0	101.0
10000	114.0	111.0	107.0	103.0	100.0	98.0	99.0	96.0	94.0	94.0	93.0	94.0	94.0	94.0	95.0
12500	113.0	110.0	107.0	102.0	99.0	96.0	98.0	94.0	92.0	91.0	91.0	92.0	91.0	92.0	92.0
16000	110.0	108.0	104.0	100.0	96.0	91.0	94.0	95.0	90.0	90.0	89.0	90.0	89.0	90.0	90.0
20000	107.0	105.0	102.0	96.0	92.0	87.0	94.0	88.0	84.0	83.0	83.0	84.0	84.0	85.0	88.0
OVERALL SPL	125.3	123.8	122.2	121.3	121.2	119.8	117.4	107.8	108.3	107.8	107.7	109.3	108.3	109.3	108.7
PNDB	137.0	136.4	135.8	134.6	134.2	134.4	134.4	132.7	133.1	132.5	132.4	134.4	132.8	133.7	132.7

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.9	87.1	91.7	100.1	104.7	113.1	119.5	128.0	130.0	135.3	148.0	156.0	165.0	168.0
REF DIST(FT)	39.0	39.3	39.3	39.9	41.8	48.7	45.1	48.5	50.8	55.0	60.4	76.9	92.9	114.8
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	75.0	76.0	79.0	74.0	75.0	66.0	70.0	76.0	79.0	81.0	80.0	81.0	84.0	84.0
31	76.0	77.0	77.0	77.0	79.0	84.0	78.0	79.0	81.0	82.0	80.0	82.0	82.0	82.0
40	80.0	81.0	83.0	83.0	84.0	85.0	82.0	86.0	86.0	86.0	84.0	83.0	81.0	82.0
50	84.0	84.0	87.0	85.0	88.0	87.0	87.0	89.0	89.0	90.0	89.0	86.0	85.0	79.0
63	87.0	86.0	88.0	90.0	88.0	91.0	89.0	92.0	92.0	93.0	93.0	93.0	91.0	87.0
80	85.0	89.0	89.0	87.0	87.0	89.0	90.0	92.0	91.0	96.0	96.0	98.0	97.0	93.0
100	90.0	90.0	92.0	92.0	93.0	93.0	95.0	93.0	94.0	94.0	94.0	96.0	96.0	97.0
125	88.0	89.0	91.0	91.0	93.0	95.0	94.0	95.0	97.0	97.0	97.0	96.0	92.0	93.0
160	95.0	94.0	97.0	96.0	96.0	98.0	98.0	97.0	96.0	97.0	98.0	99.0	95.0	87.0
200	93.0	93.0	94.0	94.0	95.0	97.0	98.0	98.0	99.0	99.0	97.0	96.0	94.0	90.0
250	94.0	94.0	94.0	94.0	98.0	100.0	101.0	104.0	103.0	101.0	97.0	92.0	92.0	89.0
315	91.0	93.0	93.0	94.0	95.0	97.0	98.0	99.0	98.0	97.0	95.0	94.0	90.0	84.0
400	90.0	92.0	92.0	93.0	94.0	94.0	97.0	98.0	97.0	96.0	94.0	92.0	89.0	84.0
500	91.0	92.0	92.0	92.0	93.0	95.0	97.0	97.0	96.0	96.0	92.0	90.0	87.0	83.0
630	92.0	93.0	93.0	94.0	94.0	96.0	98.0	97.0	97.0	95.0	91.0	89.0	86.0	83.0
800	92.0	92.0	93.0	94.0	94.0	94.0	97.0	96.0	96.0	94.0	90.0	88.0	85.0	81.0
1000	93.0	94.0	94.0	94.0	93.0	93.0	94.0	95.0	94.0	92.0	88.0	86.0	84.0	81.0
1250	95.0	95.0	95.0	95.0	95.0	95.0	95.0	94.0	93.0	91.0	88.0	86.0	85.0	82.0
1600	97.0	97.0	96.0	97.0	97.0	96.0	95.0	94.0	93.0	91.0	88.0	86.0	85.0	82.0
2000	97.0	94.0	97.0	97.0	97.0	97.0	96.0	94.0	94.0	91.0	88.0	87.0	85.0	83.0
2500	97.0	97.0	98.0	98.0	98.0	97.0	97.0	95.0	94.0	91.0	89.0	86.0	86.0	83.0
3150	99.0	98.0	99.0	100.0	100.0	99.0	99.0	95.0	96.0	92.0	89.0	88.0	87.0	85.0
4000	99.0	98.0	100.0	100.0	101.0	101.0	100.0	96.0	96.0	93.0	90.0	88.0	87.0	85.0
5000	100.0	99.0	101.0	102.0	102.0	102.0	102.0	98.0	97.0	94.0	92.0	89.0	89.0	85.0
6300	100.0	99.0	100.0	102.0	103.0	103.0	102.0	99.0	97.0	94.0	92.0	90.0	89.0	86.0
8000	100.0	99.0	100.0	100.0	101.0	101.0	100.0	98.0	96.0	93.0	92.0	89.0	89.0	86.0
10000	97.0	95.0	97.0	98.0	99.0	100.0	99.0	95.0	94.0	90.0	90.0	87.0	86.0	81.0
12500	93.0	93.0	94.0	96.0	97.0	97.0	96.0	93.0	91.0	88.0	89.0	86.0	84.0	79.0
16000	90.0	89.0	90.0	91.0	92.0	92.0	91.0	89.0	87.0	85.0	84.0	83.0	80.0	75.0
20000	86.0	85.0	86.0	88.0	88.0	88.0	87.0	84.0	83.0	80.0	83.0	80.0	76.0	69.0
OVERALL SPL	109.7	109.8	110.3	110.9	111.5	111.9	111.9	111.0	110.4	109.2	107.5	107.2	105.2	102.3
PNDB	123.0	122.5	123.3	124.5	125.3	125.4	125.0	122.6	121.4	118.8	117.0	116.0	113.5	109.7

** VALUES AFTER CURVE FIT CALCULATIONS **

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.6	45.0	51.7	59.3	63.5	64.0	77.0	81.5	89.0	94.4	99.7	109.9	116.5	118.8
REF DIST(FT)	12.0	10.7	9.4	8.5	7.8	7.5	7.2	6.8	6.7	6.7	6.7	6.8	7.1	7.3	7.6
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	80.9	80.6	80.7	82.8	81.9	84.7	84.6	86.8	88.1	88.1	86.0	89.5	89.4	89.6	90.2
31	82.9	84.0	82.9	84.2	84.7	84.7	84.8	88.8	84.3	84.9	86.2	86.6	90.3	89.8	90.4
40	83.8	85.4	84.6	85.2	86.4	86.3	86.1	86.9	86.8	86.9	87.9	88.1	92.1	90.8	92.2
50	84.5	86.9	86.6	86.8	88.5	89.0	88.4	89.3	88.8	90.3	90.8	91.7	94.7	93.9	95.0
63	86.8	88.4	89.5	89.1	90.9	92.8	91.3	92.8	92.4	94.1	94.1	95.7	97.5	97.5	98.0
80	88.7	90.6	92.2	91.9	93.5	95.1	94.4	95.8	96.0	97.8	97.8	99.3	100.4	101.0	101.0
100	91.8	93.8	95.0	94.8	96.1	97.7	97.2	99.6	99.8	100.6	100.6	102.1	102.9	103.9	103.6
125	93.9	94.9	97.4	97.3	98.4	99.9	99.7	101.6	101.8	102.4	102.7	103.9	104.8	106.1	105.6
160	95.9	96.7	99.2	99.3	100.2	101.4	101.3	103.4	103.5	103.7	104.2	104.8	106.0	107.4	106.9
200	97.4	97.9	100.8	100.6	101.8	102.3	102.6	104.6	104.3	104.2	104.9	105.1	106.5	107.9	107.5
250	98.5	98.8	100.6	101.3	102.1	102.8	103.2	104.7	104.8	104.2	105.0	104.9	106.4	107.8	107.6
315	98.9	99.3	100.6	101.8	102.3	102.9	103.3	104.8	104.1	103.8	104.3	104.4	105.9	107.1	107.2
400	99.3	99.4	100.8	101.5	102.3	102.8	103.1	103.7	103.5	103.3	103.9	103.9	105.1	106.3	106.4
500	99.7	100.1	100.8	101.4	102.2	102.7	102.8	103.1	102.8	102.8	103.3	103.4	104.4	105.3	105.9
630	100.4	100.9	100.9	101.6	102.2	102.7	102.6	102.6	102.4	102.6	102.8	103.2	103.7	104.5	104.8
800	101.8	102.0	101.8	102.1	102.8	102.9	102.7	102.6	102.5	102.5	102.6	103.1	103.4	104.0	104.0
1000	102.9	103.4	103.2	103.1	103.2	103.4	103.0	102.6	102.6	102.9	102.7	103.3	103.4	103.9	104.0
1250	104.4	104.8	105.1	104.8	104.2	104.2	103.6	103.2	103.2	103.6	103.1	103.7	103.8	104.2	104.1
1600	106.8	107.6	107.8	106.1	105.8	105.8	105.5	104.1	104.1	104.2	103.8	104.3	104.6	105.0	104.9
2000	108.3	109.7	109.4	107.9	106.8	106.3	105.5	105.1	105.1	105.0	104.6	104.9	105.6	106.2	105.0
2500	109.9	111.5	111.3	109.6	108.1	107.6	106.5	106.1	106.0	106.0	105.6	106.0	106.8	107.6	106.8
3150	110.9	112.8	112.6	110.9	109.2	108.7	107.8	106.9	106.7	106.8	106.2	106.8	108.0	109.0	108.0
4000	111.4	113.4	113.4	111.8	109.9	109.7	108.2	107.4	107.1	106.9	106.7	106.8	109.1	110.4	111.4
5000	111.3	113.3	113.4	112.0	110.2	110.3	108.7	107.8	107.8	107.0	107.0	107.3	110.0	111.3	112.6
6300	110.8	112.6	112.9	111.8	110.0	110.4	108.8	107.5	107.0	106.9	107.0	107.6	110.5	112.1	113.3
8000	110.0	111.3	111.8	111.0	109.5	110.1	108.6	106.9	106.5	106.6	106.7	107.6	110.6	112.2	113.4
10000	109.0	109.8	110.6	109.9	108.7	109.3	108.0	106.4	106.0	106.8	106.2	107.2	110.2	111.8	112.6
12500	107.9	108.1	109.2	108.6	107.4	107.8	107.1	105.7	105.1	106.8	105.2	106.0	109.0	109.9	110.8
16000	105.9	106.6	107.2	106.3	105.8	105.6	105.5	104.4	103.7	103.8	103.4	103.7	106.8	107.4	108.2
20000	101.4	102.5	103.4	102.8	101.7	102.7	102.7	101.7	100.6	99.6	99.8	99.6	101.7	103.0	104.9
OVERALL SPL	120.9	122.8	122.8	121.1	120.0	120.2	119.2	118.7	118.5	118.4	118.6	119.0	120.9	122.1	122.9
PNDB	133.8	135.3	135.6	134.7	133.4	133.7	132.6	131.7	131.3	131.2	131.3	131.8	134.1	135.9	136.4

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	126.8	133.2	139.6	149.9	158.1	158.1	165.0	38.0	46.2	48.4	81.5	87.8	64.2	70.7	77.2
REF DIST(FT)	8.3	9.1	10.3	11.9	14.2	17.9	28.8	68.4	59.3	52.5	50.2	46.4	43.6	41.6	40.3
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	93.6	95.4	97.4	97.8	104.7	109.1	105.5	83.1	78.8	69.9	68.1	70.7	76.8	72.6	71.8
31	93.1	95.8	96.3	100.8	106.8	104.6	103.7	79.9	78.1	76.3	70.9	73.8	75.7	73.8	74.1
40	94.6	96.8	97.0	101.6	106.9	105.6	103.9	78.9	71.6	73.1	73.2	76.4	77.5	76.7	79.2
50	97.1	98.8	100.4	102.9	107.7	106.3	106.6	79.3	74.3	76.8	75.9	77.6	80.6	80.6	81.9
63	100.1	101.1	102.8	104.2	108.5	107.4	106.3	80.6	77.6	80.6	79.8	80.1	83.5	84.8	84.6
80	103.0	103.6	105.0	105.6	109.2	108.3	107.3	82.2	81.1	83.8	82.3	83.0	86.3	87.0	87.3
100	105.8	105.8	106.7	107.1	109.8	108.9	107.7	83.7	84.2	86.3	85.4	85.8	88.5	89.3	89.6
125	107.8	107.6	108.0	108.5	110.2	109.0	107.4	85.8	86.7	88.1	87.9	88.2	90.0	90.7	91.4
160	108.6	108.9	109.0	109.6	110.3	108.7	106.3	85.9	88.4	89.1	89.6	90.1	90.8	91.4	92.6
200	109.8	109.8	109.6	110.2	110.1	108.0	104.7	86.5	89.4	89.6	90.5	91.2	91.2	91.4	93.1
250	109.3	110.0	110.8	110.8	109.8	107.8	102.8	86.7	89.8	89.8	90.7	91.7	91.3	91.1	93.1
315	108.9	109.9	110.0	110.1	108.5	105.8	100.6	86.8	89.7	89.7	90.4	91.8	91.1	90.7	92.8
400	108.8	109.3	109.7	109.3	107.4	104.5	98.6	86.8	89.4	89.6	89.9	91.5	91.0	90.5	92.3
500	107.5	108.5	109.0	108.1	106.0	103.8	96.8	86.8	89.2	89.6	89.6	91.2	91.0	90.8	91.9
630	106.8	107.7	108.8	106.7	104.6	101.7	95.3	87.0	89.2	89.7	89.9	91.0	91.2	90.9	91.8
800	106.3	106.9	107.1	105.8	103.3	100.4	94.4	87.4	89.5	90.0	89.9	91.1	91.7	91.7	92.0
1000	106.1	106.3	106.1	103.9	102.1	99.4	94.1	88.1	90.3	90.6	90.7	91.6	92.3	92.8	92.4
1250	106.5	106.1	105.1	103.0	101.2	98.7	94.2	89.1	91.0	91.4	92.0	92.9	93.8	94.1	93.6
1600	106.9	106.4	104.8	102.4	100.6	98.4	94.9	90.3	92.7	92.8	93.4	93.7	94.1	95.4	94.7
2000	107.9	107.0	104.6	102.3	100.5	98.8	95.9	91.6	94.2	93.6	94.8	94.9	95.1	96.6	95.8
2500	109.2	108.0	106.8	102.6	100.5	98.8	97.1	93.0	95.6	94.8	95.9	96.1	96.1	97.8	96.8
3150	110.7	109.3	105.7	103.3	100.8	99.5	98.3	94.4	96.7	96.0	96.8	97.0	96.8	97.9	97.5
4000	112.2	110.7	106.9	104.2	101.3	100.3	99.1	95.7	97.8	97.0	96.7	97.5	97.8	97.9	97.7
5000	113.8	111.9	108.1	105.6	101.7	100.9	100.2	96.7	97.6	97.7	96.3	97.8	97.6	97.5	97.6
6300	114.4	112.6	109.8	106.3	101.9	101.0	100.8	97.4	97.8	97.9	95.9	97.8	97.4	96.7	97.1
8000	116.9	112.6	109.1	105.1	101.6	100.2	100.2	97.7	96.8	97.3	96.4	96.0	96.6	95.6	96.8
10000	114.2	111.8	108.1	104.0	100.7	98.4	99.4	97.3	94.9	95.7	93.3	96.7	95.1	94.3	95.3
12500	112.8	110.0	106.1	101.9	98.8	95.4	98.0	96.0	92.8	93.0	91.8	92.7	92.7	92.6	93.7
16000	110.3	107.8	103.6	99.2	96.9	91.3	96.1	93.3	89.8	88.8	89.8	89.5	89.1	89.9	90.6
20000	106.9	105.1	102.5	96.4	92.8	87.0	93.9	88.8	84.0	83.1	82.8	84.0	83.6	84.9	84.8
OVERALL SPL	128.2	123.2	121.8	120.8	121.0	119.7	117.4	106.6	107.0	107.2	106.6	107.5	107.7	108.1	108.3
PNDB	137.8	134.3	133.8	130.7	128.1	126.4	125.1	120.4	120.8	120.7	119.4	120.6	120.9	120.8	121.1

MICROPHONE	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.9	87.1	93.7	100.1	106.7	113.1	119.5	126.0	130.0	135.3	140.0	150.0	166.0	180.0
REF DIST(FT)	39.3	39.3	39.3	39.0	41.0	42.7	45.1	48.3	50.3	55.0	60.4	70.5	92.9	114.8
GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	74.6	75.7	78.2	75.5	74.7	80.1	78.5	75.2	78.5	80.4	79.5	81.0	88.3	84.8
31	77.3	78.3	79.7	78.7	80.2	83.7	79.4	81.1	82.2	83.1	80.9	81.3	80.3	81.0
40	79.8	80.3	81.8	81.9	83.5	86.8	83.0	84.9	85.8	86.5	84.6	84.7	82.7	82.4
50	82.8	82.2	84.3	84.8	86.8	88.9	86.3	87.7	87.8	89.8	88.8	88.9	87.1	85.5
63	85.1	84.4	87.0	87.5	88.1	88.0	88.5	90.1	90.3	92.6	92.5	92.7	91.3	88.8
80	87.6	86.8	89.4	89.8	90.2	91.4	91.8	92.2	92.6	94.8	95.2	95.5	94.2	91.3
100	89.7	89.6	91.8	91.7	92.1	93.7	93.8	94.3	94.7	96.5	96.9	97.3	95.6	92.7
125	91.3	91.0	93.0	93.0	93.7	95.6	95.8	96.1	96.5	97.6	97.6	97.9	95.7	93.0
160	92.5	92.4	94.0	93.9	94.6	96.8	97.2	97.7	97.9	98.2	97.6	97.7	94.8	92.0
200	92.7	93.2	94.3	94.3	95.6	97.8	98.3	98.8	98.8	98.4	97.1	96.9	93.3	90.4
250	92.7	93.6	94.2	94.4	95.7	97.6	98.7	99.4	99.2	98.3	96.2	95.5	91.6	88.8
315	92.4	93.5	93.8	93.8	95.5	97.3	98.7	99.5	99.0	97.8	95.3	93.9	89.8	86.4
400	92.0	93.3	93.3	93.0	95.0	96.9	98.4	99.1	98.3	97.0	93.7	92.2	88.4	84.8
500	91.8	93.0	92.9	93.0	94.4	96.7	97.8	98.2	97.4	96.0	92.3	90.6	87.1	83.0
630	91.8	92.8	92.7	92.8	94.0	96.0	97.1	97.1	96.3	94.8	91.0	89.0	86.1	81.9
800	92.2	92.9	92.9	93.6	93.9	96.4	96.3	96.9	96.2	93.5	89.8	87.7	85.3	81.4
1000	93.0	93.4	93.8	94.1	94.1	96.3	95.3	96.8	94.2	92.1	88.8	86.7	84.8	81.3
1250	94.1	94.3	94.4	94.8	94.7	96.1	94.3	96.0	93.7	91.4	88.1	86.1	84.6	81.6
1600	95.4	95.3	95.6	95.9	95.9	96.4	95.5	93.6	93.8	90.9	87.8	85.9	84.7	82.2
2000	96.9	96.8	97.0	97.2	97.1	96.9	96.1	93.8	93.8	90.8	87.9	86.1	85.1	82.9
2500	98.2	97.6	98.4	98.6	98.4	98.1	97.2	94.5	94.8	91.2	88.4	86.6	85.8	83.8
3150	99.3	98.8	99.6	99.9	100.3	99.6	98.6	95.4	92.8	89.3	87.5	86.7	86.4	84.5
4000	99.8	99.8	100.3	101.0	101.0	101.0	100.2	96.8	94.3	92.9	90.4	88.4	87.8	85.8
5000	100.0	99.8	100.6	101.5	102.1	101.3	101.4	97.8	96.0	93.7	91.8	89.2	88.7	86.1
6300	99.8	99.4	100.1	101.4	102.0	102.2	102.8	98.3	97.0	93.9	92.1	89.5	89.0	86.7
8000	98.4	97.3	99.0	100.3	101.1	101.6	101.3	97.8	96.1	93.2	92.0	89.2	88.5	85.7
10000	96.6	95.4	97.0	98.3	99.4	99.6	99.1	96.0	94.1	91.2	90.0	87.8	86.8	83.8
12500	94.1	93.2	94.8	95.8	96.6	96.9	95.4	92.9	90.9	87.9	88.6	85.6	83.7	78.9
16000	90.6	89.8	90.5	91.7	92.8	92.7	90.9	88.7	87.0	83.8	85.6	82.7	79.7	74.7
20000	85.8	84.6	86.7	87.7	87.6	87.7	87.1	84.1	83.0	80.8	81.2	80.2	76.1	69.1
OVERALL SPL	109.6	109.0	110.8	110.9	111.4	111.8	111.9	110.6	110.1	109.0	107.5	106.9	104.6	101.6
PROB	122.7	122.0	123.5	124.3	124.8	125.1	125.0	123.8	123.4	118.9	117.0	116.9	115.5	109.7

CORRECTED FOR ATMOSPHERIC ATTENUATION, MICROPHONE RESPONSE AND BACKGROUND NOISE

TEST 19134A RUN 1 DELTA 1 SPL IN DB REL. .0002 MICROBAR DATE OF TEST 9/12/78

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.5	45.0	51.7	55.4	64.0	68.8	73.8	85.0	90.6	96.2	101.7	107.2	112.2	121.1
REF DIS(FT)	12.5	10.7	9.4	8.5	8.1	7.4	7.2	6.9	6.7	6.7	6.7	6.8	7.0	7.2	7.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	81.0	82.0	81.0	84.0	88.0	83.0	84.0	85.0	84.0	88.0	88.0	91.0	86.0	91.0	91.0
31	84.0	86.0	84.0	84.0	90.0	86.0	90.0	88.0	89.0	88.0	91.0	91.0	91.0	91.0	94.0
40	83.0	86.0	86.0	86.0	89.0	87.0	88.0	86.0	89.0	88.0	90.0	92.0	91.0	91.0	95.0
50	88.0	90.0	89.0	87.0	90.0	90.0	91.0	91.0	92.0	92.0	91.0	93.0	95.0	93.0	97.0
63	94.0	91.0	90.0	95.0	94.0	93.0	91.0	95.0	96.0	97.0	98.0	97.0	99.0	100.0	100.0
80	88.0	92.0	94.0	94.0	93.0	94.0	95.0	95.0	96.0	100.0	97.0	100.0	101.0	101.0	103.0
100	94.0	93.0	94.0	97.0	95.0	95.0	97.0	97.0	100.0	100.0	100.0	102.0	102.0	103.0	103.0
125	94.0	95.0	99.0	99.0	100.0	100.0	100.0	100.0	102.0	102.0	103.0	104.0	105.0	106.0	106.0
160	96.0	98.0	97.0	99.0	98.0	101.0	102.0	103.0	105.0	104.0	107.0	108.0	108.0	109.0	111.0
200	97.0	99.0	99.0	101.0	102.0	104.0	104.0	104.0	105.0	105.0	107.0	106.0	108.0	107.0	109.0
250	102.0	104.0	105.0	107.0	107.0	106.0	107.0	109.0	108.0	110.0	110.0	111.0	110.0	109.0	115.0
315	100.0	102.0	102.0	102.0	103.0	108.0	104.0	105.0	104.0	104.0	108.0	105.0	106.0	107.0	109.0
400	99.0	100.0	102.0	102.0	102.0	103.0	103.0	103.0	103.0	103.0	104.0	104.0	106.0	108.0	109.0
500	98.0	100.0	100.0	101.0	102.0	102.0	102.0	103.0	104.0	103.0	105.0	105.0	105.0	105.0	106.0
630	101.0	103.0	104.0	104.0	105.0	105.0	104.0	105.0	105.0	107.0	107.0	107.0	106.0	107.0	109.0
800	101.0	102.0	103.0	103.0	104.0	105.0	105.0	105.0	105.0	105.0	106.0	107.0	106.0	107.0	110.0
1000	102.0	103.0	103.0	104.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	106.0	106.0	106.0	109.0
1250	105.0	105.0	105.0	106.0	107.0	106.0	106.0	106.0	106.0	106.0	106.0	107.0	106.0	108.0	108.0
1600	106.0	107.0	107.0	107.0	107.0	106.0	107.0	106.0	106.0	106.0	106.0	106.0	107.0	107.0	109.0
2000	106.0	107.0	107.0	107.0	107.0	106.0	105.0	106.0	106.0	107.0	106.0	106.0	107.0	107.0	109.0
2500	107.0	108.0	108.0	108.0	107.0	105.0	105.0	105.0	105.0	107.0	106.0	106.0	107.0	107.0	109.0
3150	108.0	109.0	109.0	109.0	108.0	106.0	106.0	106.0	106.0	107.0	106.0	107.0	108.0	110.0	111.0
4000	109.0	110.0	109.0	108.0	109.0	108.0	107.0	107.0	106.0	107.0	107.0	108.0	109.0	111.0	113.0
5000	110.0	111.0	111.0	110.0	110.0	109.0	108.0	109.0	108.0	108.0	109.0	110.0	112.0	114.0	115.0
6300	110.0	111.0	111.0	111.0	111.0	110.0	109.0	109.0	107.0	109.0	109.0	111.0	112.0	114.0	117.0
8000	113.0	111.0	111.0	111.0	111.0	110.0	110.0	109.0	108.0	108.0	109.0	110.0	112.0	114.0	116.0
10000	109.0	110.0	110.0	110.0	110.0	110.0	108.0	108.0	107.0	108.0	108.0	110.0	112.0	114.0	115.0
12500	107.0	108.0	108.0	108.0	108.0	108.0	108.0	107.0	106.0	107.0	107.0	109.0	110.0	112.0	115.0
16000	106.0	106.0	106.0	107.0	106.0	106.0	106.0	105.0	104.0	105.0	105.0	106.0	108.0	109.0	112.0
20000	102.0	103.0	103.0	104.0	104.0	104.0	103.0	103.0	102.0	103.0	102.0	104.0	105.0	106.0	109.0
OVERALL SPL	120.0	120.5	120.5	120.6	120.6	120.0	119.7	119.9	119.4	120.2	120.5	121.4	122.3	123.6	125.8
PNDB	134.8	134.0	134.1	134.2	134.2	133.5	133.3	132.9	132.2	133.0	133.2	134.5	135.5	137.1	139.5

MICROPHONE	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	128.8	132.1	138.7	145.1	151.5	158.1	165.0	35.0	45.0	48.1	51.3	57.7	64.1	70.6	77.2
REF DIST(FT)	8.6	9.0	10.1	11.7	13.9	17.9	25.8	68.4	55.5	52.7	50.3	46.4	43.6	41.6	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	98.0	95.0	100.0	102.0	104.0	109.0	111.0	84.0	73.0	75.0	73.0	77.0	78.0	77.0	76.0
31	99.0	98.0	102.0	104.0	109.0	109.0	109.0	82.0	73.0	76.0	74.0	79.0	76.0	77.0	77.0
40	97.0	99.0	101.0	103.0	108.0	112.0	108.0	79.0	72.0	75.0	74.0	80.0	78.0	77.0	83.0
50	97.0	97.0	101.0	102.0	108.0	110.0	109.0	79.0	76.0	79.0	78.0	83.0	82.0	86.0	85.0
63	101.0	103.0	105.0	107.0	109.0	110.0	110.0	84.0	84.0	84.0	87.0	88.0	88.0	87.0	87.0
80	105.0	108.0	108.0	108.0	111.0	113.0	112.0	86.0	88.0	85.0	86.0	87.0	88.0	86.0	87.0
100	106.0	108.0	108.0	111.0	112.0	115.0	114.0	86.0	89.0	85.0	84.0	86.0	87.0	90.0	89.0
125	109.0	111.0	111.0	113.0	115.0	116.0	114.0	83.0	86.0	90.0	90.0	91.0	91.0	93.0	91.0
160	111.0	111.0	112.0	112.0	114.0	114.0	113.0	87.0	89.0	89.0	89.0	90.0	93.0	93.0	95.0
200	108.0	111.0	111.0	111.0	113.0	114.0	111.0	88.0	90.0	91.0	92.0	94.0	94.0	94.0	95.0
250	114.0	117.0	118.0	116.0	115.0	113.0	109.0	94.0	91.0	92.0	94.0	97.0	95.0	96.0	96.0
315	110.0	111.0	112.0	112.0	113.0	111.0	106.0	89.0	91.0	92.0	93.0	93.0	94.0	94.0	
400	109.0	110.0	110.0	111.0	112.0	111.0	104.0	88.0	90.0	91.0	90.0	93.0	92.0	93.0	93.0
500	108.0	110.0	110.0	111.0	111.0	109.0	102.0	88.0	89.0	90.0	91.0	92.0	91.0	92.0	93.0
630	111.0	110.0	112.0	110.0	109.0	108.0	101.0	90.0	92.0	92.0	92.0	92.0	92.0	94.0	95.0
800	111.0	110.0	112.0	110.0	109.0	107.0	101.0	90.0	91.0	91.0	91.0	93.0	93.0	94.0	94.0
1000	109.0	110.0	111.0	108.0	107.0	105.0	99.0	90.0	91.0	91.0	92.0	94.0	94.0	95.0	95.0
1250	109.0	109.0	110.0	107.0	107.0	103.0	99.0	91.0	93.0	94.0	93.0	95.0	95.0	96.0	96.0
1600	109.0	109.0	108.0	105.0	105.0	102.0	98.0	91.0	93.0	94.0	93.0	96.0	95.0	96.0	96.0
2000	110.0	110.0	107.0	104.0	104.0	101.0	98.0	91.0	93.0	93.0	93.0	95.0	94.0	95.0	95.0
2500	111.0	111.0	107.0	105.0	103.0	102.0	99.0	93.0	94.0	94.0	93.0	95.0	94.0	95.0	94.0
3150	111.0	112.0	109.0	104.0	103.0	102.0	100.0	95.0	95.0	95.0	94.0	95.0	95.0	95.0	95.0
4000	114.0	114.0	109.0	105.0	103.0	103.0	100.0	95.0	96.0	95.0	95.0	96.0	96.0	97.0	96.0
5000	116.0	117.0	111.0	107.0	104.0	103.0	102.0	97.0	97.0	97.0	97.0	98.0	97.0	98.0	98.0
6300	118.0	118.0	112.0	107.0	104.0	103.0	103.0	97.0	97.0	97.0	97.0	98.0	97.0	98.0	98.0
8000	117.0	116.0	112.0	107.0	104.0	102.0	103.0	103.0	101.0	102.0	103.0	102.0	102.0	103.0	101.0
10000	116.0	116.0	111.0	106.0	102.0	100.0	101.0	96.0	94.0	95.0	95.0	96.0	95.0	97.0	96.0
12500	116.0	114.0	110.0	105.0	101.0	99.0	100.0	95.0	92.0	92.0	93.0	94.0	93.0	93.0	94.0
16000	112.0	112.0	108.0	103.0	99.0	94.0	98.0	95.0	89.0	90.0	90.0	90.0	90.0	91.0	90.0
20000	110.0	109.0	106.0	100.0	95.0	89.0	96.0	89.0	88.0	88.0	85.0	86.0	85.0	87.0	87.0
OVERALL SPL	126.6	126.9	125.3	123.8	124.4	124.6	122.6	108.0	107.4	107.8	108.2	109.1	108.6	109.6	109.5
PNDB	140.4	140.5	136.6	133.0	131.1	129.8	128.3	123.1	122.0	122.6	123.2	123.3	123.0	124.0	123.1

MICROPHONE #	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG):	83.8	87.1	91.7	100.1	106.7	113.1	119.6	122.8	129.1	135.4	145.0	150.0	155.0	160.0
REF DIST(FT):	39.5	39.3	39.3	39.9	41.0	42.7	45.1	46.7	50.6	55.9	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	80.0	74.0	77.0	76.0	124.0	77.0	79.0	86.0	82.0	84.0	85.0	83.0	87.0	91.0
31	82.0	81.0	81.0	82.0	81.0	83.0	84.0	85.0	83.0	86.0	84.0	85.0	85.0	89.0
40	84.0	82.0	83.0	86.0	83.0	85.0	88.0	86.0	87.0	90.0	89.0	88.0	86.0	87.0
50	88.0	85.0	86.0	87.0	87.0	89.0	89.0	90.0	90.0	93.0	93.0	92.0	90.0	86.0
63	86.0	87.0	89.0	91.0	89.0	90.0	94.0	92.0	95.0	97.0	98.0	100.0	97.0	94.0
80	88.0	88.0	87.0	89.0	91.0	91.0	93.0	93.0	94.0	98.0	100.0	103.0	103.0	99.0
100	90.0	91.0	91.0	93.0	90.0	96.0	96.0	95.0	95.0	98.0	99.0	100.0	102.0	102.0
125	93.0	93.0	93.0	95.0	95.0	99.0	99.0	101.0	101.0	103.0	103.0	101.0	97.0	101.0
160	95.0	96.0	97.0	100.0	96.0	101.0	101.0	101.0	100.0	101.0	102.0	103.0	101.0	93.0
200	96.0	96.0	96.0	97.0	99.0	99.0	101.0	101.0	101.0	102.0	101.0	100.0	99.0	97.0
250	98.0	97.0	100.0	101.0	97.0	102.0	104.0	104.0	107.0	107.0	102.0	102.0	98.0	96.0
315	95.0	94.0	96.0	97.0	102.0	100.0	102.0	101.0	100.0	102.0	100.0	98.0	95.0	92.0
400	95.0	96.0	96.0	97.0	99.0	99.0	100.0	100.0	101.0	101.0	98.0	96.0	94.0	89.0
500	95.0	95.0	95.0	97.0	98.0	99.0	100.0	100.0	101.0	100.0	97.0	95.0	92.0	89.0
630	97.0	97.0	97.0	97.0	97.0	100.0	101.0	102.0	100.0	99.0	96.0	94.0	91.0	88.0
800	95.0	94.0	96.0	97.0	98.0	99.0	101.0	101.0	98.0	98.0	95.0	92.0	89.0	87.0
1000	95.0	95.0	96.0	98.0	98.0	100.0	100.0	100.0	97.0	97.0	93.0	90.0	88.0	85.0
1250	97.0	95.0	97.0	98.0	97.0	98.0	99.0	99.0	96.0	95.0	91.0	89.0	87.0	85.0
1600	97.0	96.0	97.0	98.0	98.0	98.0	97.0	97.0	95.0	93.0	90.0	88.0	86.0	84.0
2000	96.0	95.0	96.0	98.0	98.0	98.0	97.0	97.0	94.0	91.0	89.0	88.0	86.0	84.0
2500	96.0	96.0	96.0	98.0	98.0	99.0	98.0	97.0	93.0	92.0	89.0	87.0	85.0	84.0
3150	97.0	97.0	97.0	100.0	98.0	100.0	98.0	97.0	95.0	92.0	89.0	88.0	86.0	85.0
4000	98.0	99.0	99.0	101.0	99.0	102.0	99.0	98.0	95.0	92.0	89.0	88.0	86.0	85.0
5000	100.0	101.0	101.0	103.0	101.0	104.0	102.0	100.0	97.0	93.0	91.0	89.0	87.0	86.0
6300	101.0	101.0	101.0	104.0	103.0	105.0	103.0	102.0	98.0	94.0	92.0	89.0	88.0	86.0
8000	101.0	101.0	101.0	103.0	104.0	104.0	101.0	100.0	97.0	93.0	93.0	89.0	88.0	85.0
10000	99.0	99.0	99.0	101.0	103.0	102.0	100.0	98.0	95.0	92.0	91.0	88.0	85.0	82.0
12500	96.0	97.0	96.0	99.0	101.0	100.0	97.0	95.0	93.0	89.0	90.0	86.0	82.0	80.0
16000	92.0	93.0	92.0	94.0	98.0	95.0	93.0	92.0	89.0	86.0	88.0	84.0	80.0	76.0
20000	88.0	90.0	89.0	90.0	94.0	91.0	89.0	88.0	85.0	81.0	85.0	80.0	75.0	70.0
OVERALL SPL	110.7	110.8	111.2	113.1	124.5	114.4	114.0	113.6	113.0	113.1	111.5	111.2	109.6	107.9
PNDB	124.1	124.2	124.3	126.7	126.8	127.8	126.3	125.5	122.8	120.3	118.8	116.1	114.2	111.7

ALL CONNECTIONS (INCLUDING GROUND REFLECTIONS)

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.5	45.0	51.7	55.4	64.0	68.8	73.8	85.0	90.6	96.2	101.7	107.2	112.2	121.1
REF DIST(FT)	12.5	10.7	9.9	8.5	8.1	7.4	7.2	6.9	6.7	6.7	6.7	6.8	7.0	7.2	7.6
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	81.0	82.0	81.0	84.0	88.0	83.0	89.0	85.0	88.0	88.0	88.0	91.0	88.0	91.0	91.0
31	84.0	86.0	84.0	84.0	90.0	86.0	90.0	88.0	89.0	88.0	91.0	91.0	91.0	91.0	94.0
40	83.0	86.0	86.0	85.0	89.0	87.0	88.0	86.0	89.0	88.0	90.0	92.0	91.0	91.0	95.0
50	88.0	90.0	89.0	87.0	90.0	90.0	91.0	91.0	92.0	92.0	91.0	93.0	95.0	93.0	97.0
63	90.0	91.0	90.0	95.0	94.0	93.0	91.0	95.0	96.0	97.0	98.0	97.0	99.0	100.0	100.0
80	88.0	92.0	90.0	90.0	93.0	94.0	95.0	95.0	96.0	100.0	97.0	100.0	101.0	101.0	103.0
100	90.0	93.0	96.0	97.0	95.0	95.0	97.0	97.0	100.0	100.0	100.0	102.0	102.0	103.0	103.0
125	90.0	95.0	99.0	99.0	100.0	100.0	100.0	100.0	102.0	102.0	103.0	104.0	105.0	106.0	106.0
160	96.0	98.0	97.0	99.0	98.0	101.0	102.0	103.0	105.0	104.0	107.0	108.0	108.0	109.0	111.0
200	97.0	99.0	99.0	101.0	102.0	104.0	104.0	104.0	105.0	105.0	107.0	106.0	108.0	107.0	109.0
250	102.0	104.0	105.0	107.0	107.0	106.0	107.0	109.0	108.0	110.0	110.0	111.0	110.0	109.0	115.0
315	100.0	102.0	102.0	102.0	103.0	104.0	104.0	105.0	104.0	104.0	104.0	105.0	106.0	107.0	109.0
400	99.0	100.0	102.0	102.0	102.0	103.0	103.0	103.0	103.0	103.0	104.0	104.0	106.0	108.0	109.0
500	98.0	100.0	100.0	101.0	102.0	102.0	102.0	103.0	104.0	103.0	105.0	105.0	105.0	105.0	106.0
630	101.0	103.0	104.0	104.0	105.0	105.0	104.0	105.0	105.0	107.0	107.0	107.0	106.0	107.0	109.0
800	101.0	102.0	103.0	103.0	104.0	105.0	105.0	105.0	105.0	105.0	106.0	107.0	106.0	107.0	110.0
1000	102.0	103.0	103.0	104.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	106.0	106.0	106.0	109.0
1250	105.0	105.0	105.0	106.0	107.0	106.0	106.0	106.0	106.0	106.0	106.0	107.0	106.0	108.0	108.0
1600	106.0	107.0	107.0	107.0	107.0	106.0	107.0	106.0	106.0	106.0	106.0	106.0	107.0	107.0	109.0
2000	106.0	107.0	107.0	107.0	107.0	106.0	105.0	106.0	106.0	107.0	106.0	106.0	107.0	107.0	109.0
2500	107.0	108.0	108.0	108.0	107.0	105.0	105.0	105.0	105.0	107.0	106.0	106.0	107.0	107.0	109.0
3150	108.0	109.0	109.0	109.0	108.0	106.0	106.0	106.0	106.0	107.0	106.0	107.0	108.0	110.0	111.0
4000	109.0	110.0	109.0	108.0	109.0	108.0	107.0	107.0	106.0	107.0	107.0	108.0	109.0	111.0	113.0
5000	110.0	111.0	111.0	110.0	110.0	109.0	108.0	109.0	108.0	108.0	109.0	110.0	112.0	114.0	115.0
6300	110.0	111.0	111.0	111.0	111.0	110.0	109.0	109.0	107.0	109.0	109.0	111.0	112.0	114.0	117.0
8000	113.0	111.0	111.0	111.0	111.0	110.0	110.0	109.0	108.0	108.0	109.0	110.0	112.0	114.0	116.0
10000	109.0	110.0	110.0	110.0	110.0	110.0	108.0	108.0	107.0	108.0	108.0	110.0	112.0	114.0	115.0
12500	107.0	108.0	108.0	108.0	108.0	108.0	108.0	107.0	106.0	107.0	107.0	109.0	110.0	112.0	115.0
16000	106.0	106.0	106.0	107.0	106.0	106.0	106.0	105.0	104.0	105.0	105.0	106.0	108.0	109.0	112.0
20000	102.0	103.0	103.0	104.0	104.0	104.0	103.0	103.0	102.0	103.0	102.0	104.0	105.0	106.0	109.0
OVERALL SPL	120.0	120.5	120.5	120.6	120.6	120.0	119.7	119.9	119.4	120.2	120.5	121.4	122.3	123.6	125.8
PNDB	134.0	134.0	134.1	134.2	134.2	133.5	133.3	132.9	132.2	133.0	133.2	134.5	135.5	137.1	139.5

MICROPHONE #	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	128.8	132.1	138.7	145.1	151.3	158.1	165.0	35.0	45.0	48.1	51.3	57.7	64.1	70.6	77.2
REF DIST(FT)	8.6	9.0	10.1	11.7	13.9	17.9	25.8	68.8	55.5	52.7	50.1	46.8	43.6	41.6	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	98.0	95.0	100.0	102.0	104.0	109.0	111.0	84.0	73.0	75.0	75.0	77.0	78.0	77.0	76.0
31	99.0	98.0	102.0	104.0	109.0	109.0	109.0	82.0	73.0	76.0	74.0	79.0	76.0	77.0	77.0
40	97.0	99.0	101.0	103.0	108.0	112.0	108.0	79.0	72.0	75.0	74.0	80.0	78.0	77.0	81.0
50	97.0	97.0	101.0	102.0	108.0	110.0	109.0	79.0	76.0	79.0	78.0	83.0	82.0	86.0	85.0
63	101.0	103.0	105.0	107.0	109.0	110.0	110.0	84.0	84.0	84.0	87.0	88.0	88.0	87.0	87.0
80	105.0	104.0	108.0	108.0	111.0	113.0	112.0	86.0	84.0	85.0	86.0	87.0	88.0	86.0	87.0
100	106.0	108.0	108.0	111.0	112.0	115.0	114.0	86.0	85.0	85.0	84.0	86.0	87.0	90.0	89.0
125	109.0	111.0	111.0	113.0	115.0	116.0	114.0	83.0	86.0	90.0	90.0	91.0	91.0	93.0	91.0
160	111.0	111.0	112.0	112.0	114.0	118.0	115.0	87.0	89.0	89.0	89.0	90.0	93.0	93.0	95.0
200	108.0	111.0	111.0	111.0	113.0	114.0	111.0	88.0	90.0	91.0	92.0	94.0	94.0	94.0	95.0
250	114.0	117.0	118.0	116.0	115.0	113.0	109.0	94.0	91.0	92.0	94.0	97.0	95.0	96.0	96.0
315	110.0	111.0	112.0	112.0	113.0	111.0	106.0	89.0	91.0	92.0	93.0	93.0	93.0	94.0	94.0
400	109.0	110.0	110.0	111.0	112.0	111.0	104.0	88.0	90.0	91.0	90.0	93.0	92.0	93.0	93.0
500	108.0	110.0	110.0	111.0	111.0	109.0	102.0	88.0	89.0	90.0	91.0	92.0	91.0	92.0	93.0
630	111.0	110.0	112.0	110.0	109.0	108.0	101.0	90.0	92.0	92.0	92.0	92.0	92.0	94.0	95.0
800	111.0	110.0	112.0	110.0	109.0	107.0	101.0	90.0	91.0	91.0	91.0	93.0	93.0	94.0	94.0
1000	109.0	110.0	111.0	108.0	107.0	105.0	99.0	90.0	91.0	91.0	92.0	94.0	94.0	95.0	95.0
1250	109.0	109.0	110.0	107.0	107.0	103.0	99.0	91.0	93.0	94.0	93.0	95.0	95.0	96.0	96.0
1600	109.0	109.0	108.0	105.0	105.0	102.0	98.0	91.0	93.0	94.0	93.0	96.0	95.0	96.0	96.0
2000	110.0	110.0	107.0	104.0	104.0	101.0	98.0	91.0	93.0	93.0	93.0	95.0	94.0	95.0	95.0
2500	111.0	111.0	107.0	105.0	103.0	102.0	99.0	93.0	94.0	94.0	93.0	95.0	93.0	95.0	94.0
3150	111.0	112.0	109.0	108.0	103.0	102.0	100.0	95.0	95.0	95.0	94.0	95.0	95.0	95.0	95.0
4000	114.0	114.0	109.0	105.0	103.0	103.0	100.0	95.0	96.0	95.0	95.0	96.0	96.0	97.0	96.0
5000	116.0	117.0	111.0	107.0	104.0	103.0	102.0	97.0	97.0	97.0	97.0	98.0	97.0	98.0	98.0
6300	118.0	118.0	112.0	107.0	104.0	103.0	103.0	97.0	97.0	97.0	97.0	98.0	97.0	98.0	98.0
8000	117.0	116.0	112.0	107.0	104.0	102.0	103.0	103.0	101.0	102.0	103.0	102.0	102.0	103.0	101.0
10000	116.0	116.0	111.0	106.0	102.0	100.0	101.0	96.0	94.0	95.0	95.0	96.0	95.0	97.0	96.0
12500	116.0	114.0	110.0	105.0	101.0	99.0	100.0	95.0	92.0	92.0	93.0	94.0	93.0	93.0	94.0
16000	112.0	112.0	108.0	103.0	99.0	94.0	98.0	95.0	89.0	90.0	90.0	90.0	90.0	91.0	90.0
20000	110.0	109.0	106.0	100.0	95.0	89.0	96.0	89.0	84.0	84.0	85.0	86.0	85.0	87.0	87.0
OVERALL SPL	126.6	126.9	125.3	123.8	124.4	124.6	122.6	108.0	107.4	107.8	108.2	109.1	108.6	109.6	109.3
PNDB	140.8	140.5	136.6	133.0	131.1	129.8	128.3	123.1	122.0	122.6	123.2	123.3	123.0	124.0	123.1

MICROPHONE #	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG)	83.9	87.1	93.7	100.1	106.7	113.1	119.6	122.8	129.1	135.4	145.0	150.0	155.0	160.0
REF DIST(FT)	39.5	39.3	39.3	39.9	41.0	42.7	45.1	46.7	50.6	55.9	68.4	78.5	92.9	114.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	80.0	74.0	77.0	76.0	124.0	77.0	79.0	86.0	82.0	84.0	85.0	83.0	87.0	91.0
31	82.0	81.0	81.0	82.0	81.0	83.0	84.0	85.0	83.0	86.0	84.0	85.0	85.0	89.0
40	84.0	82.0	83.0	86.0	83.0	85.0	88.0	86.0	87.0	90.0	89.0	88.0	86.0	87.0
50	88.0	85.0	86.0	87.0	87.0	89.0	89.0	90.0	90.0	93.0	93.0	92.0	90.0	86.0
63	88.0	87.0	89.0	91.0	89.0	90.0	94.0	92.0	95.0	97.0	98.0	100.0	97.0	94.0
80	88.0	88.0	87.0	89.0	91.0	91.0	93.0	93.0	98.0	98.0	100.0	103.0	103.0	99.0
100	90.0	91.0	91.0	93.0	90.0	96.0	96.0	95.0	95.0	98.0	99.0	100.0	102.0	102.0
125	93.0	93.0	93.0	95.0	95.0	99.0	99.0	101.0	101.0	103.0	103.0	101.0	97.0	101.0
160	95.0	96.0	97.0	100.0	96.0	101.0	101.0	101.0	100.0	101.0	102.0	103.0	101.0	93.0
200	96.0	96.0	94.0	97.0	99.0	99.0	101.0	101.0	101.0	102.0	101.0	100.0	99.0	97.0
250	98.0	97.0	100.0	101.0	97.0	102.0	104.0	104.0	107.0	107.0	102.0	102.0	98.0	96.0
315	95.0	98.0	96.0	97.0	102.0	100.0	102.0	101.0	100.0	102.0	100.0	98.0	95.0	92.0
400	95.0	96.0	96.0	97.0	99.0	99.0	100.0	100.0	101.0	101.0	98.0	96.0	94.0	89.0
500	95.0	95.0	95.0	97.0	98.0	99.0	100.0	100.0	101.0	100.0	97.0	95.0	92.0	89.0
630	97.0	97.0	97.0	97.0	97.0	100.0	101.0	102.0	100.0	99.0	96.0	94.0	91.0	88.0
800	95.0	94.0	96.0	97.0	98.0	99.0	101.0	101.0	98.0	98.0	95.0	92.0	89.0	87.0
1000	95.0	95.0	96.0	98.0	98.0	100.0	100.0	100.0	97.0	97.0	93.0	90.0	88.0	85.0
1250	97.0	95.0	97.0	98.0	97.0	98.0	99.0	99.0	96.0	95.0	91.0	89.0	87.0	85.0
1600	97.0	96.0	97.0	98.0	96.0	98.0	97.0	97.0	95.0	93.0	90.0	88.0	86.0	84.0
2000	96.0	95.0	96.0	98.0	96.0	98.0	97.0	97.0	94.0	91.0	89.0	88.0	86.0	84.0
2500	96.0	96.0	96.0	98.0	98.0	99.0	98.0	97.0	93.0	92.0	89.0	87.0	85.0	84.0
3150	97.0	97.0	97.0	100.0	98.0	100.0	98.0	97.0	95.0	92.0	89.0	88.0	86.0	85.0
4000	98.0	99.0	99.0	101.0	99.0	102.0	99.0	98.0	95.0	92.0	89.0	88.0	86.0	85.0
5000	100.0	101.0	101.0	103.0	101.0	104.0	102.0	100.0	97.0	93.0	91.0	89.0	87.0	86.0
6300	101.0	101.0	101.0	104.0	103.0	105.0	103.0	102.0	98.0	94.0	92.0	89.0	88.0	85.0
8000	101.0	101.0	101.0	103.0	104.0	104.0	101.0	100.0	97.0	93.0	93.0	89.0	88.0	85.0
10000	99.0	99.0	99.0	101.0	103.0	102.0	100.0	98.0	95.0	92.0	91.0	88.0	85.0	82.0
12500	96.0	97.0	96.0	99.0	101.0	100.0	97.0	95.0	93.0	89.0	90.0	86.0	82.0	80.0
16000	92.0	93.0	92.0	94.0	98.0	95.0	93.0	92.0	89.0	86.0	88.0	84.0	80.0	76.0
20000	88.0	90.0	89.0	90.0	94.0	91.0	89.0	88.0	85.0	81.0	85.0	80.0	75.0	70.0
OVERALL SPL	110.7	110.8	111.2	113.1	124.5	114.4	114.0	113.6	113.0	113.1	111.5	111.2	109.6	107.9
PNDB	124.1	124.2	124.3	126.7	126.8	127.8	126.3	125.5	122.8	120.3	118.8	116.1	114.2	111.1

-- VALUES AFTER CURVE FIT CALCULATIONS --

MICROPHONE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ANGLE(DEG)	32.2	38.5	45.0	51.7	55.4	64.0	68.8	73.8	85.0	90.6	96.2	101.7	107.2	112.2	121.1
REF DIST(FT)	12.5	10.7	9.4	8.5	8.1	7.4	7.2	6.9	6.7	6.7	6.7	6.8	7.0	7.2	7.8
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	80.8	81.9	81.0	84.0	88.8	83.5	84.9	85.4	84.7	88.1	88.8	91.6	86.6	91.6	91.4
31	83.4	85.9	84.0	83.8	89.0	85.3	87.7	86.5	87.3	87.3	89.1	89.9	89.3	89.5	93.2
40	85.4	87.5	86.3	85.6	89.6	87.4	89.1	88.1	89.7	89.1	90.4	91.3	92.1	91.3	95.1
50	87.3	88.6	88.4	88.4	90.6	89.7	90.5	90.3	92.3	92.2	92.8	94.0	95.2	94.7	97.2
63	89.3	89.9	90.7	91.6	92.2	92.2	92.5	93.0	95.0	95.6	95.6	97.3	98.2	98.4	99.8
80	91.4	91.8	93.0	94.6	94.2	94.8	94.9	95.8	97.8	98.8	98.6	100.3	101.1	101.7	102.4
100	93.4	94.0	95.3	97.3	96.4	97.3	97.5	98.5	100.3	101.3	101.8	102.9	103.6	104.3	105.0
125	95.1	96.2	97.4	99.3	98.5	99.6	100.0	100.9	102.4	103.2	103.7	104.8	105.6	106.1	107.3
160	96.6	98.1	99.2	100.8	100.4	101.4	102.0	102.8	104.0	104.5	105.4	106.1	106.9	107.3	109.6
200	97.7	99.7	100.5	101.7	101.8	102.8	103.5	104.2	104.9	105.1	106.4	106.8	107.6	107.9	110.1
250	98.6	100.7	101.3	102.3	102.8	103.8	104.3	105.0	105.3	105.3	106.9	107.1	107.8	108.0	110.6
315	99.2	101.3	101.9	102.6	103.5	104.3	104.7	105.3	105.4	105.3	106.8	107.0	107.5	107.9	110.6
400	99.7	101.6	102.2	102.7	103.8	104.5	104.6	105.3	105.2	105.1	106.4	106.8	107.0	107.5	110.2
500	100.2	101.8	102.4	102.9	104.0	104.6	104.4	105.1	104.9	105.0	106.0	106.4	106.4	107.1	109.5
630	100.8	102.1	102.7	103.2	104.2	104.5	104.2	104.8	104.6	104.9	105.5	106.1	105.8	106.7	108.7
800	101.5	102.5	103.1	103.7	104.4	104.5	104.1	104.6	104.5	105.0	105.2	105.8	105.5	106.4	108.1
1000	102.5	103.3	103.8	104.3	104.8	104.5	104.3	104.6	104.6	105.2	105.1	105.7	105.4	106.2	107.8
1250	103.6	104.3	104.7	105.1	105.4	104.8	104.6	104.7	104.9	105.6	105.2	105.7	105.6	106.3	107.8
1600	104.8	105.4	105.8	106.1	106.1	105.2	105.2	105.1	105.4	106.0	105.5	105.9	106.1	106.7	108.3
2000	106.1	107.1	107.0	107.1	107.0	105.7	105.8	105.7	105.8	106.5	106.0	106.3	106.9	107.4	109.2
2500	107.4	108.4	108.1	108.0	107.9	106.4	106.5	106.3	106.3	107.0	106.6	107.0	107.9	108.5	110.4
3150	108.5	109.6	109.2	108.9	108.8	107.2	107.0	107.0	106.6	107.8	107.2	107.7	108.9	109.9	111.6
4000	109.4	110.4	110.1	109.6	109.5	108.0	107.4	107.7	106.8	107.8	107.7	108.5	110.0	111.4	113.3
5000	110.0	110.8	110.6	110.0	110.0	108.7	107.8	108.1	106.9	108.0	108.1	109.4	110.9	112.8	114.6
6300	110.3	110.8	110.8	110.3	110.2	109.3	108.0	108.4	106.9	108.2	108.8	110.0	111.5	114.0	115.7
8000	110.1	110.4	110.5	110.2	110.2	109.6	108.4	108.5	106.9	108.1	108.4	110.3	111.8	114.4	116.2
10000	109.5	109.6	109.7	109.8	109.7	109.5	108.6	108.2	106.8	107.8	108.2	110.1	111.6	113.9	116.0
12500	108.2	108.4	108.4	108.9	108.7	108.7	108.5	107.3	106.4	107.1	107.5	109.0	110.7	112.2	114.8
16000	105.8	106.5	106.3	107.1	106.8	106.9	107.0	105.7	105.0	105.6	105.6	106.9	108.6	109.3	112.5
20000	101.8	102.7	102.8	103.8	103.5	103.4	102.3	102.6	101.4	102.7	101.6	103.5	104.6	105.8	108.7
OVERALL SPL	119.7	120.4	120.4	120.5	120.5	119.9	119.6	119.7	119.3	120.0	120.3	121.2	122.2	123.6	125.6
PNDB	133.3	133.9	134.0	133.9	133.9	133.4	132.7	132.7	131.8	132.7	133.0	134.3	135.5	137.3	139.2

MICROPHONE #	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
ANGLE(DEG)	128.8	132.1	138.7	145.1	151.3	158.1	165.0	35.0	45.0	88.1	51.3	57.7	64.1	70.6	77.2
REF DIST(FT)	8.6	9.0	10.1	11.7	13.9	17.9	25.8	68.4	55.5	52.7	50.3	46.4	43.6	41.6	40.2
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)															
25	99.1	95.8	100.9	102.9	104.9	109.3	111.7	84.1	73.3	75.4	73.2	77.0	77.9	77.2	75.8
31	96.5	96.5	100.0	101.9	107.0	109.1	107.7	81.1	71.7	74.6	72.9	78.8	76.2	76.4	78.4
40	97.0	97.9	101.0	102.8	108.1	109.9	107.7	80.2	73.7	76.8	75.6	80.8	78.3	79.1	81.3
50	99.1	99.9	102.9	104.6	109.1	111.1	109.4	80.7	77.2	79.3	79.2	83.0	81.9	82.8	84.2
63	101.7	102.3	105.1	106.6	110.1	112.3	111.4	81.8	80.7	82.4	82.8	85.2	85.4	86.4	86.8
80	104.3	105.0	107.2	108.6	111.2	113.3	112.9	83.3	83.7	85.1	85.7	87.3	88.4	89.2	88.9
100	106.6	107.6	109.1	110.2	112.3	114.1	113.5	84.9	86.0	87.3	87.9	89.2	90.5	91.2	90.7
125	108.4	109.8	110.6	111.5	113.3	114.4	113.3	86.3	87.6	88.9	89.5	90.7	91.8	92.5	92.1
160	109.7	111.5	111.8	112.5	114.0	114.8	112.8	87.5	88.7	90.0	90.6	91.9	92.5	93.2	93.1
200	110.5	112.5	112.6	113.0	114.2	114.0	110.8	88.4	89.5	90.7	91.2	92.8	92.9	93.6	93.9
250	110.8	112.8	113.0	113.1	114.0	113.3	108.9	89.1	90.0	91.1	91.6	93.3	93.0	93.8	94.4
315	110.9	112.6	113.1	112.9	113.8	112.2	106.8	89.4	90.3	91.3	91.9	93.6	93.0	93.9	94.6
400	110.6	111.9	112.8	112.3	112.4	110.4	104.7	89.6	90.6	91.4	92.0	93.6	92.9	94.0	94.8
500	110.2	110.9	112.2	111.4	111.2	109.3	102.7	89.6	90.8	91.5	92.0	93.5	92.9	94.1	94.7
630	109.7	110.0	111.5	110.2	109.8	107.6	101.1	89.6	91.0	91.5	91.9	93.5	93.0	94.2	94.8
800	109.2	109.1	110.6	108.9	108.3	106.0	99.7	89.7	91.3	91.7	91.9	93.4	93.1	94.3	94.5
1000	108.9	108.7	109.6	107.6	107.0	104.5	98.8	89.9	91.6	91.9	91.8	93.5	93.2	94.4	94.4
1250	108.9	108.6	108.8	106.8	105.8	103.3	98.3	90.2	91.9	92.2	91.9	93.7	93.4	94.5	94.4
1600	109.2	109.1	108.3	105.4	104.8	102.4	98.2	90.9	92.5	92.8	92.1	94.2	93.7	94.7	94.6
2000	109.9	110.1	108.0	104.8	104.2	101.9	98.5	91.8	93.2	93.4	92.7	94.8	94.1	95.1	94.9
2500	111.0	111.5	108.2	104.6	103.7	101.8	99.1	92.9	94.1	94.3	93.5	95.5	94.7	95.7	95.4
3150	112.5	113.0	108.7	104.8	103.5	102.0	100.0	94.3	95.2	95.2	94.5	96.3	95.4	96.4	96.1
4000	114.1	114.6	109.5	105.4	103.5	102.4	100.9	95.7	96.3	96.2	95.8	97.1	96.2	97.2	96.8
5000	115.6	116.0	110.5	106.1	103.5	102.8	101.7	97.0	97.2	97.0	97.0	97.8	97.0	98.0	97.5
6300	116.9	116.9	111.3	106.7	103.5	102.9	102.3	98.0	97.6	97.4	97.8	98.1	97.5	98.5	97.9
8000	117.4	117.0	111.8	107.0	103.3	102.4	102.3	98.4	97.2	97.3	97.8	97.9	97.4	98.4	97.7
10000	117.0	116.2	111.5	106.6	102.7	100.9	101.7	98.0	95.6	96.2	96.7	96.9	96.4	97.3	96.7
12500	115.8	114.5	110.3	105.2	101.4	98.2	100.3	96.4	92.7	93.7	94.1	94.7	94.1	95.0	94.6
16000	112.8	112.0	108.3	102.9	99.1	94.1	98.2	93.6	88.6	89.7	90.0	91.1	90.2	91.3	91.2
20000	109.6	108.8	105.7	99.9	98.8	89.0	95.8	89.3	84.0	83.8	84.8	85.3	84.6	86.5	86.5
OVERALL SPL	126.5	126.7	124.9	123.6	124.3	124.5	122.6	107.5	107.0	107.2	107.4	108.5	108.1	109.1	108.9
PNDB	140.2	140.1	136.5	133.0	131.0	129.8	128.1	121.1	120.6	120.7	120.9	121.7	121.2	122.2	121.8

MICROPHONE:	31	32	33	34	35	36	37	38	39	40	41	42	43	44
ANGLE(DEG):	83.9	87.1	91.7	100.1	106.7	113.1	119.6	122.8	129.1	135.4	145.0	150.0	155.0	160.0
REF DIST(FT):	39.5	39.3	39.3	39.9	41.0	42.7	45.1	46.7	50.6	55.9	68.4	78.5	92.9	114.4
GAIN,	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FREQ(HERTZ)														
25	80.0	74.7	77.3	76.3	123.7	77.7	79.4	86.4	81.7	83.8	84.8	83.0	87.2	92.2
31	82.2	79.4	80.5	81.8	95.4	81.6	83.5	84.3	83.8	86.5	84.7	84.5	83.9	85.9
40	84.2	82.6	83.2	86.1	84.7	85.1	87.1	86.0	86.8	89.8	88.5	88.8	86.9	86.8
50	86.1	85.0	85.6	87.5	83.3	88.3	90.2	89.1	89.9	93.0	93.1	93.6	91.8	90.5
63	88.0	87.2	87.7	89.7	85.9	91.2	92.8	92.3	92.9	95.9	97.1	97.7	96.2	94.8
80	89.8	89.3	89.8	91.8	89.6	93.8	95.0	95.2	95.5	98.3	99.9	100.5	99.3	97.3
100	91.5	91.3	91.7	93.9	92.9	96.0	97.0	97.4	97.7	100.2	101.5	102.0	100.7	98.8
125	93.1	93.0	93.4	95.6	95.4	97.8	98.7	99.1	99.6	101.5	102.1	102.5	100.8	98.9
160	94.3	94.5	94.8	97.1	97.0	99.2	100.1	100.4	101.0	102.5	102.1	102.1	100.0	97.9
200	95.3	95.6	95.9	98.1	98.0	100.2	101.2	101.3	101.9	103.0	101.6	101.1	98.6	96.3
250	95.9	96.2	96.7	98.6	98.5	100.7	102.0	101.9	102.4	103.1	100.8	99.8	97.0	94.5
315	96.3	96.4	97.0	98.6	98.7	100.9	102.3	102.1	102.5	102.8	99.8	98.3	95.4	92.3
400	96.3	96.2	97.1	98.3	98.7	100.6	102.2	102.0	102.0	102.0	98.7	96.7	93.8	90.4
500	96.2	95.8	96.9	97.9	98.7	100.1	101.7	101.7	101.1	100.9	97.5	95.1	92.3	88.7
630	95.9	95.3	96.5	97.3	98.5	99.4	100.8	101.0	99.8	99.4	96.0	93.5	90.8	87.0
800	95.6	94.8	96.1	96.9	98.2	98.7	99.8	100.1	98.3	97.7	94.5	91.9	89.4	86.3
1000	95.4	94.5	95.7	96.7	97.9	98.1	98.9	99.1	96.8	96.0	92.8	90.4	88.1	85.4
1250	95.4	94.5	95.6	96.9	97.5	97.9	98.0	98.2	95.4	94.4	91.3	89.1	86.9	84.8
1600	95.6	94.9	95.8	97.0	97.2	98.0	97.5	97.5	94.5	93.0	90.0	88.2	86.0	84.4
2000	96.1	95.6	96.3	98.2	97.2	98.5	97.5	97.1	94.0	92.1	89.1	87.6	85.5	84.3
2500	96.8	96.6	97.1	99.3	97.6	99.5	97.9	97.3	94.1	91.7	88.7	87.4	85.4	84.4
3150	97.8	97.9	98.2	100.5	98.5	100.8	98.8	97.8	94.7	91.8	88.9	87.6	85.7	84.7
4000	98.8	99.2	99.3	101.7	99.7	102.2	100.0	98.8	95.7	92.3	89.7	88.1	86.4	85.0
5000	99.7	100.2	100.2	102.6	101.2	103.5	101.1	99.7	96.7	93.0	90.8	88.7	87.2	85.3
6300	100.2	100.8	100.7	103.0	102.6	104.2	101.8	100.4	97.3	93.4	91.8	89.2	87.6	85.3
8000	100.1	100.5	100.3	102.7	103.4	104.0	101.7	100.2	97.2	93.3	92.3	89.1	87.3	84.6
10000	98.9	99.3	99.0	101.4	103.1	102.6	100.2	98.7	95.7	92.1	91.9	88.2	85.8	82.9
12500	96.6	97.0	96.4	99.0	101.3	99.8	97.4	95.8	92.9	89.5	90.2	86.2	82.8	79.9
16000	92.8	93.7	92.8	95.1	97.9	95.7	93.2	91.8	88.9	85.6	87.6	83.3	78.9	75.5
20000	87.6	88.6	88.5	89.6	90.0	90.6	88.7	87.9	85.0	81.1	85.1	80.3	75.3	70.2
OVERALL SPL	110.6	110.7	111.0	113.0	124.2	114.3	113.9	113.5	112.6	112.8	111.5	110.9	109.0	106.9
PNDB	123.8	124.1	124.1	126.3	126.6	127.5	125.9	125.0	122.5	120.2	118.6	116.2	114.1	111.2

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
NASA CR-152401		

4. Title and Subtitle	5. Report Date
Static Source Locations For Four Nozzles Mounted On A J-85 Engine	January 1979
	6. Performing Organization Code
7. Author(s)	8. Performing Organization Report No.
Leif E. Hoglund	
	10. Work Unit No.
9. Performing Organization Name and Address	11. Contract or Grant No.
Beam Engineering, Inc. Sunnyvale, California 94086	NAS2-9399
	13. Type of Report and Period Covered
12. Sponsoring Agency Name and Address	Final Report
National Aeronautics and Space Administration Washington, DC 20546	14. Sponsoring Agency Code

15. Supplementary Notes

16. Abstract

The text nozzles included a round 17.5 inch diameter variable flap ejector (VFE), a round 'stovepipe' nozzle, and a 104 tube suppressor nozzle operated both with and without an ejector shroud. The velocities tested ranged from 600 to 1600 fps at an approximate total temperature of 1400 R. The axial position of the noise sources during static operation was determined by jet velocity, Strouhal number, and direction of propagation. The velocity dependence was more evident for the 104 tube suppressor nozzle than for the conical nozzles tested. The results for both the VFE concial nozzle and the 'stovepipe' conical nozzle indicate source locations to be much closer to the jet exit plane than expected. Corrections for near field effects were found to differ slightly for each nozzle tested. The corrections presented are simply the differences between the measured near field levels and the required near field levels if spherical spreading is assumed from source to far field.

17. Key Words (Suggested by Author(s))	18. Distribution Statement
Aerodynamic Noise Conical Nozzle Flow Stability J-85 Engine Jet Flow Noise Propagation Nozzle Geometry	Unclassified - Unlimited STAR Category - 01

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price*
Unclassified	Unclassified	231	

*For sale by the National Technical Information Service, Springfield, Virginia 22161