
NASA

Technical Memorandum 86087

# DEVELOPMENT OF BASELINE RANDOM VIBRATION ENVIRONMENT CRITERIA FOR SHUTTLE PALLET PAYLOAD SUBSYSTEMS

Frank J. On



APRIL 1984

National Aeronautics and
Space Administration

**Goddard Space Flight Center**
Greenbelt, Maryland 20771

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## PREFACE

This report presents a statistical evaluation of measured random vibration response data obtained from the Office of Space Science-1 (OSS-1) pallet payload. The data were measured during the acoustic test simulation (September 1980) and the ascent phase of the flight of Space Transportation System-3 (STS-3), Orbiter 102 (launched from the Kennedy Space Center on March 22, 1982). Acoustic test efficiency factors are evaluated based on the Dynamic, Acoustic and Thermal Environments (DATE) instrumentation as the source of the measured vibration data. Test efficiency correction to test data is applied in the extrapolation of non-DATE acoustic test data to increase sample population size for improved statistical evaluation. For baseline criteria evaluation and development, data are grouped in accordance with the payload "zone" in which the subsystem is mounted. The results of this study are documented as part of the NASA DATE program activity.

## NOMENCLATURE

| | |
|---|---|
| ASD | acceleration spectral density ($g^2$/Hz) |
| SPSD | sound pressure spectral density ($psi^2$/Hz) |
| 1/3OB | 1/3 octave band |
| AL | acceleration level (dB) |
| SPL | sound pressure level (dB) |
| ASDL | acceleration spectral density level (dB) |
| SPSDL | sound pressure spectral density level (dB) |
| $\Delta f$ | 1/3 octave bandwidth (Hz) |
| E.F. | acoustic simulation efficiency factor (dB) |
| $\mu i$ | average of the ith quantity |
| $\sigma i$ | standard deviation of the ith quantity |

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# 1. INTRODUCTION

This report presents a statistical evaluation of measured random vibration response data obtained from the Office of Space Science-1 (OSS-1) pallet payload (see figure 1). The data were measured during the acoustic test simulation (September 1980) and the ascent phase of the flight of STS-3, Orbiter 102 (launched from the Kennedy Space Center on March 22, 1982). Acoustic test efficiency factors are evaluated based on the Dynamic, Acoustic and Thermal Environments (DATE) instrumentation as the source of the measured vibration data. Test efficiency correction to test data is applied in the extrapolation of non-DATE acoustic test data to increase sample population size for improved statistical evaluation. For baseline criteria evaluation and development, data are grouped in accordance with the payload "zone" in which the subsystem is mounted. A subsystem is defined as a functional subdivision of a payload consisting of two or more components (e.g., attitude control, electrical power and communication subsystems, and instruments).

The flight and acoustic test data required to perform this evaluation were acquired and produced as part of the DATE program activity. The DATE data were obtained from twelve high frequency (5-2K Hz) accelerometers and five microphones at identical locations on the payload during the acoustic test and worst case flight event during the lift-off phase. The non-DATE data also used in this evaluation corresponded to data obtained during the system level acoustic test of the OSS-1 pallet payload which was conducted in the NASA-GSFC 40K cubic foot acoustic noise test facility and extrapolated to the STS-3 flight acoustic environment. The payload related vibration data obtained during the STS-3 flight were acquired and reduced as part of the DATE Experiment activity (reference 1). All the acoustic test data were recorded and reduced by the NASA-GSFC.

In general, all data were acquired via a series of high frequency accelerometers which measured the vibration response at selected experiment shelves and panels and at the base of selective instruments (see Appendix A). A series of microphones measured the acoustic levels at various locations around the OSS-1 payload, such as, in the vicinity of the Thermal Canister Experiment (TCE), the experiment shelf on the forward starboard and aft port side of the payload, and on the forward center of the payload in the vicinity of the vertical shelf. One microphone measured the acoustic level transmitted to the inside of the TCE. The spatial average of the four DATE microphones (excluding the microphone inside the TCE) and the spatial average of the six non-DATE microphones used for control of the test chamber input acoustics are shown in figure 2.

# 2. EXTRAPOLATION OF TEST DATA

## 2.1 Extrapolation Method

Since the GSFC acoustic test of the OSS-1 pallet payload was performed with an input acoustic spectrum different from that measured during STS-3 flight, the acoustic test vibration data must be extrapolated to the STS-3 flight measured payload bay acoustic environment on the payload. The method used to extrapolate the acoustic test data so as to be "equivalent" to the measured flight vibration data consisted of:

o Normalizing the test data to the flight measured payload bay acoustic environment.

o Correcting differences in acoustic simulation efficiency between test and flight.

### 2.1.1 Normalization Method

Consider the acceleration spectral density of an OSS-1 payload subsystem response to an acoustic test sound pressure of spectral density ($SPSD_{test}$) to be given by $ASD_{test}$. Under the assumption of vibration response linearity over acoustic test levels (reference 2), the normalized test vibration respoonse ($ASD^{norm}_{test}$) resulting from the flight acoustic environment ($SPSD_{flight}$), can be obtained from the acoustic test data as follows:

$$ASD^{norm}_{test} = (ASD_{test}/SPSD_{test}) \cdot SPSD_{flight} \qquad (1)$$

where ASD/SPSD is termed the transfer function between vibration response and acoustic input, and the ASD and SPSD are in consistent engineering units (e.g. $g^2$/Hz and $psi^2$/Hz). It follows that (1) can be written in terms of dB units in various forms:

In terms of 1/3 octave band levels,

$$1/3\ OBAL^{norm}_{test} = 1/3\ OBAL_{test} - 1/3\ OBSPL_{test} + 1/3\ OBSPL_{flight} \qquad (2)$$

In terms of 1/3 octave bandwidth spectral density levels,

$$1/3\ OBASDL^{norm}_{test} = 1/3\ OBAL^{norm}_{test} - 10 \log \Delta f \qquad (3)$$

where $\Delta f$ is 1/3 octave bandwidth in Hz.

### 2.1.2 Acoustic Simulation Efficiency

A comparative evaluation of the OSS-1 pallet payload random vibration response data obtained by the DATE instrumentation during the STS-3 flight and the GSFC system level acoustic test (reference 2) indicates a difference in acoustic simulation efficiency between the flight and test acoustic environments. This difference is treated as follows:

Consider the acoustic simulation efficiency factor (E.F.) to be defined as

$$E.F.\ (dB) = 1/3\ OBAL^{norm}_{test} - 1/3\ OBAL_{flight} \qquad (4)$$

From (2) and (4) the "equivalent" flight response is determined by

$$1/3\ OBAL_{flight}^{"equiv."} = 1/3\ OBAL_{test}^{norm} - E.F. \tag{5}$$

In terms of one-third octave bandwidth spectral density level in dB,

$$1/3\ OBASDL_{flight}^{"equiv."}\ (dB) = 1/3\ OBAL_{test}^{norm}\ (dB) - 10 \log \Delta f - E.F.\ (dB) \tag{6}$$

The conversion of the "equivalent" flight result of (6) in dB units to $g^2$/Hz units is accomplished via the relationship

$$1/3\ OBASD_{flight}^{"equiv."}\ (g^2/Hz) = [1/3\ OBASD_{ref}\ (g^2/Hz)] \cdot [10^{0.1(1/3\ OBASDL_{flight}^{"equiv."}\ (dB))}] \tag{7}$$

where $1/3\ OBASD_{ref}\ (g^2/Hz)$ is the assumed reference value for 1/3 OBASDL (dB).

## 2.2 Extrapolation Uncertainties

The basic data used to extrapolate the acoustic test vibration response data consisted of the following:

a. Acoustic test chamber sound pressure levels.

b. Flight payload bay sound pressure levels on OSS-1 pallet payload.

c. Acoustic test vibration response at subsystem mounting locations on the payload.

d. Acoustic simulation efficiency factors.

The acquisition and reduction of the basic data are subject to statistical uncertainties. The uncertainty in sound pressure levels on the payload in the acoustic test chamber and the orbiter payload bay are primarily the results of spatial variation within the test chamber and payload bay and the data reduction process. The uncertainty in the acoustic test payload vibration response is primarily due to data reduction. In addition, the flight vibroacoustic environment is truly nonstationary but is assumed to be piecewise stationary for data reduction purposes. The data from the STS-3 flight are not adequate in sample size to accurately determine the probability distribution function of these quantities for confidence limit evaluation. However, based upon past experience (references 1, 2, and 3) the values shown in table 1 for the variances of the pertinent data quantities can be assumed as uncertainties

to yield a first order estimate of percentage confidence limits. In general, the "K" percent confidence limits (at the 50 percent confidence level) for the true levels of any quantity are defined by:

$$\begin{aligned} \text{Upper K\% limit} &= \mu_i + k\sigma_i \\ \text{Lower K\% limit} &= \mu_i - k\sigma_i \end{aligned} \tag{8}$$

where,

$$K\% = (1 - \alpha) = \text{Kth percentage point} \tag{9}$$

$k = t_m$; $\alpha/2$ = $\alpha/2$ percentage point of Student "t" variable with m degrees of freedom

$\mu_i$ = sample average of the ith quantity

$\sigma_i$ = sample standard deviation of the ith quantity

$i$ = "normalized test data", "efficiency factor" or "equivalent flight data"

It follows that, since the extrapolated data are based on space averaged sound pressure levels:

$\mu_{norm}$ = Average of normalized test (i.e. normalization based on space averaged sound pressure levels)

$$\sigma_{norm} = (\sigma^2_{\text{Test Acous.}} + \sigma^2_{\text{Flt. Acous.}} + \sigma^2_{\text{Test Vibration}})^{1/2} \tag{10}$$

$\mu_{eff.fact.}$ = Measured efficiency factor (i.e., efficiency factor based on average normalized test data and measured flight data).

$$\sigma_{eff.fact.} = (\sigma^2_{norm} + \sigma^2_{Flt.Vib.})^{1/2} \tag{11}$$

$\mu_{equiv.flt.}$ = Average of "Equivalent" Flight (i.e., based on space averaged sound pressure levels)

$$\sigma_{equiv.flt.} = (\sigma^2_{norm} + \sigma^2_{eff.fact.})^{1/2} \tag{12}$$

## 2.3 Equivalent Flight Data

The random vibration response of the payload subsystem mounting locations expected to occur during the STS-3 flight of the OSS-1 payload (i.e., "equivalent" flight data) was predicted by extrapolating the ground acoustic test vibration data based on the flight measured space average acoustic environment on the OSS-1 payload (figure 2) and the acoustic simulation efficiency factor (figure 3) (reference 2). These "equivalent" flight vibration data are presented in Appendix A.

## 3. EVALUATION OF DATA

The development of random vibration environment criteria for payload subsystems requires a statistical analysis of the "equivalent" flight data. This analysis involves certain numerical manipulations where statistical techniques are involved. As has been in the past, the flight data acquisition configuration from a statistical evaluation point of view is far from being ideal. Statistical treatment of the truly nonstationary flight data assumes the data to be a piecewise stationary random process. By invoking this assumption, numerical manipulations of the statistical analysis is simplified while still yielding sufficiently valid results. In addition, the varied concentration of measurements on payload subsystem mounting locations in certain regions of the payload bay during each flight presents a spatial biasing problem. To minimize these problems, the following procedure was adopted in the development of the baseline random vibration environment criteria for subsystems mounted on pallet payloads:

a. Group the payload subsystem mounting locations into four payload mounting zones.

b. Determine the acceleration energy-average and variance of the acceleration levels predicted in each zone.

c. Assume flight variability in the zone accelerations to be same as flight variability for acoustics (reference 3).

d. Determine the desired K percent probability levels for the acceleration energy density.

e. Perform spectrum smoothing on the K percent probability levels.

### 3.1 Zone Definition

A zone is defined as a major area of the OSS-1 payload in which subsystems can be mounted. For the OSS-1 payload, the determination of a particular zone in which a subsystem was mounted is based on the following description:

Zone 1—Payload primary structure within proximity of the payload—orbiter vehicle separation plane.

Zone 2—Payload primary and secondary structure (exclusive of mounting brackets) not included in Zone 1.

Zone 3—Payload structures specifically designed for mounting of subsystems such as shelving, platforms, or brackets.

Zone 4—Payload large surface area light weight structures at outboard areas which respond primarily to acoustic pressure forces.

### 3.2 Probability Levels

For a sufficiently large sample size, the K percent probability level (at the 50 percent confidence level) for the flight average payload subsystem mounting zone acceleration spectral density level is:

$$K\% \text{ Prob.Level (dB)} = 10 \log [\bar{\mu}_f + 2\sigma_f] \quad (13)$$

where,

$\bar{\mu}_f$ = mean flight zone average acceleration spectral density

$\sigma_f^2$ = total variance (flight to flight plus zone average)

## 4. RANDOM VIBRATION CRITERIA DEVELOPMENT

In the development of baseline random vibration environment criteria for payload subsystems, only the worst-case flight events need to be considered. The worst-case flight events based on "30 day DATE reports" (reference 1) correspond to the lift-off and transonic events. In fact, the vibroacoustic levels at lift-off exceeded the levels at transonic flight in all frequency bands except in few narrow bands between 250 and 400 Hz (reference 3).

The NASA/GSFC philosophy in establishing vibroacoustic environment design and test criteria for payloads is to define the flight environment at the 97.73 percent probability level of occurrence. A baseline environment criteria recommended for payload subsystems should, therefore, be consistent with this philosophy.

The evaluation procedure described in Section 3 was applied to the worst-case lift-off event "equivalent flight" data (Appendix A) with the 97.73 percent probability level results for Zones 2, 3, and 4 presented in figures 4, 5 and 6, respectively. No data were evaluated for Zone 1. The results of figures 4 through 6 are subject to the launch vehicle configuration and conditions defined as the following:

- o OV-102 vehicle.
- o Launch from the Kennedy Space Center (KSC).
- o No thrust augmentation.
- o Full complement of thermal radiator panels.
- o Payload bay vents fully opened at all times.
- o Worst-case flight event at lift-off from T - 6 to T + 12 sec.

The results of figures 4 through 6 are presented in terms of 1/3OBASDL (i.e., acceleration spectral density in dB based on 1/3 octave bandwidth $\Delta f_{1/3OB}$). This results from the fact that the acoustic levels used to extrapolate the "equivalent flight" data were given in 1/3OBSPL. The effect of the 1/3 octave bandwidth is increased smoothing over a more narrow bandwidth in spectral density analysis. This effect is not considered a significant

drawback in the development of the baseline criteria as is demonstrated by the sample comparisons of acceleration spectral density based on 1/3 octave bandwidth vs. 4 Hz bandwidth analysis shown in Appendix C.

A baseline environment criteria should represent a smoothed envelope of the 97.73 percent probability levels. Smoothing is required to provide a spectrum that will be reasonably independent of band to band variability since the variability will be highly sensitive to physical details of the payload complement within the payload bay.

The smoothed spectrums based on the 97.73 percentile levels of the 1/3 octave bandwidth ASDL at the subsystem Zones 2, 3, and 4 are shown in figures 7, 8, and 9, respectively. Because the vibration data from the ground acoustic tests (see Appendix A) were not applicable for extrapolating "equivalent" flight data for subsystems on payload Zone 1, the smoothed spectrums for Zone 1 near payload longeron trunnions and keel shown in figure 10 were based on information from reference 4. The spectrums of figures 7 through 10 and table 2, represent baseline random vibration flight environment criteria which can be applied to subsystems to be mounted on Shuttle pallet payloads.

The duration of the lift-off vibroacoustic environment will not exceed 15 seconds. Duration is defined as the total time over which the environmental levels are within 10 dB of the maximum. The duration of the transonic flight vibroacoustic environment will not exceed 30 seconds. Although the maximum expected flight acoustic environment occurs during the lift-off event except at a few frequency bands during transonic, a duration of 30 seconds is recommended for a baseline random vibration environment criteria based on the results of figures 7 through 10. This duration will insure that payloads are designed and tested to cover the environment during transonic flight until additional evaluation can be performed on the effects of payload bay venting.

## 5. CONCLUSIONS

The OSS-1 payload vibroacoustic measurements from the STS-3 flight of the OV-102 orbiter vehicle have been evaluated for the primary purpose of developing a baseline random vibration environment criteria for STS pallet payload subsystems. The evaluation was performed based on data from the two-worst-case flight events (i.e., lift-off and transonic flight) using acceptable statistical methods. The results of the statistical analysis has provided the required basis for producing baseline pallet payload subsystem vibration levels to be used for establishing STS payload design and test criteria consistent with the NASA/GSFC philosophy of a 97.73 percent probability level of occurrence for defining flight acceptance levels.

As the STS-3 flight carried only payload volumes totaling less than 10 percent of the total payload bay volume, the payload bay was essentially representative of an empty bay condition, or a bay with a small payload. Hence, the levels provided herein represent the current best prediction of the maximum expected random vibration level for pallet payload subsystems in the payload bay with a small payload ($\leq$9 feet in diameter). The effect of larger payloads remains a complex issue and highly configuration dependent. The unique criteria for such payloads should continue to be evaluated on an individual basis.

Based on the results of this study, the following recommendations are made:

a. The smoothed envelope random vibration spectrum (figures 7 through 9) based on the results of figures 4 through 6 and figure 10 are recommended to be used as the baseline random vibration environment for flight acceptance of pallet mounted subsystems on small STS payloads (less than 9 feet in diameter and displacing less than 25 percent of total payload bay volume).

b. Adjustment of the baseline random vibration environment to account for effects of larger payloads (greater than 9 feet in diameter and displacing greater then 25 percent of total payload bay volume) should continue to be treated on an individual basis.

c. For design qualification and certification of payload subsystem, 3 dB is to be added to flight acceptance levels.

d. If later data results in a change to the vibroacoustic environment, due to either changes in launch vehicle configuration or conditions, the baseline payload subsystem vibroacoustic environmental levels should be updated accordingly.

## 6. REFERENCES


1. A.F. White, J.A. Garba, et. al., "Payload Bay Acoustic and Vibration Data from STS-3 Flight", DATE Report 004, NASA, June 1982.

2. F.J. On, "Comparative Evaluation of Space Transportation System (STS)-3 Flight and Acoustic Test Random Vibration Response of the OSS-1 Payload", NASA-TM 85089, GSFC, September 1983.

3. F.J. On, "Evaluation of Space Transportation System (STS) OV-102 Orbiter Payload Bay Acoustic Environment", NASA-TM 84958, GSFC, December 1982.

4. JSC 07700, Space Shuttle Systems Payload Accommodations, Volume XIV, Attachment 1 (ICD 2-19001) Shuttle Orbiter/Cargo Standard Interfaces, Interface Revision Notice (IRN) JSC-048.

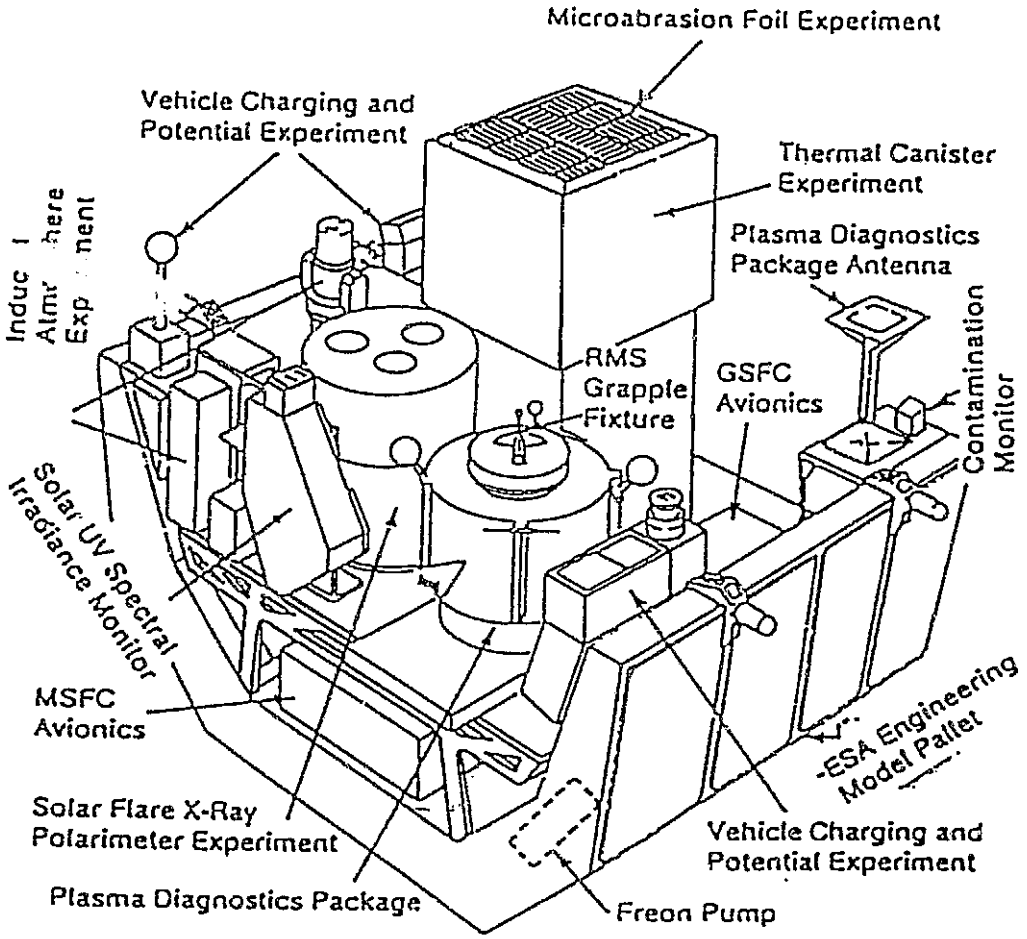



FIG.1 - OSS-1 PAYLOAD CONFIGURATION

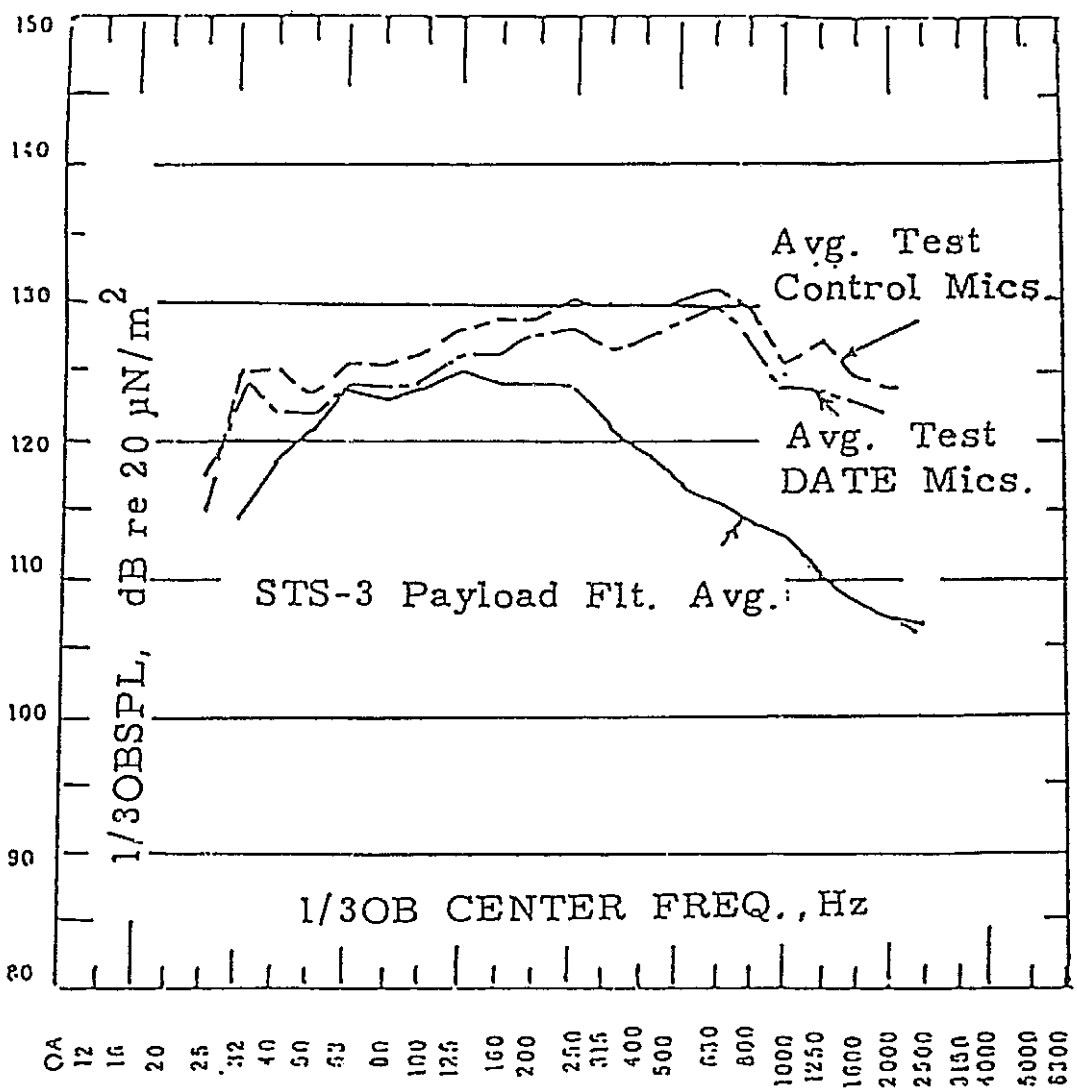



FIG. 2 - OSS-1 PAYLOAD ACOUSTICS

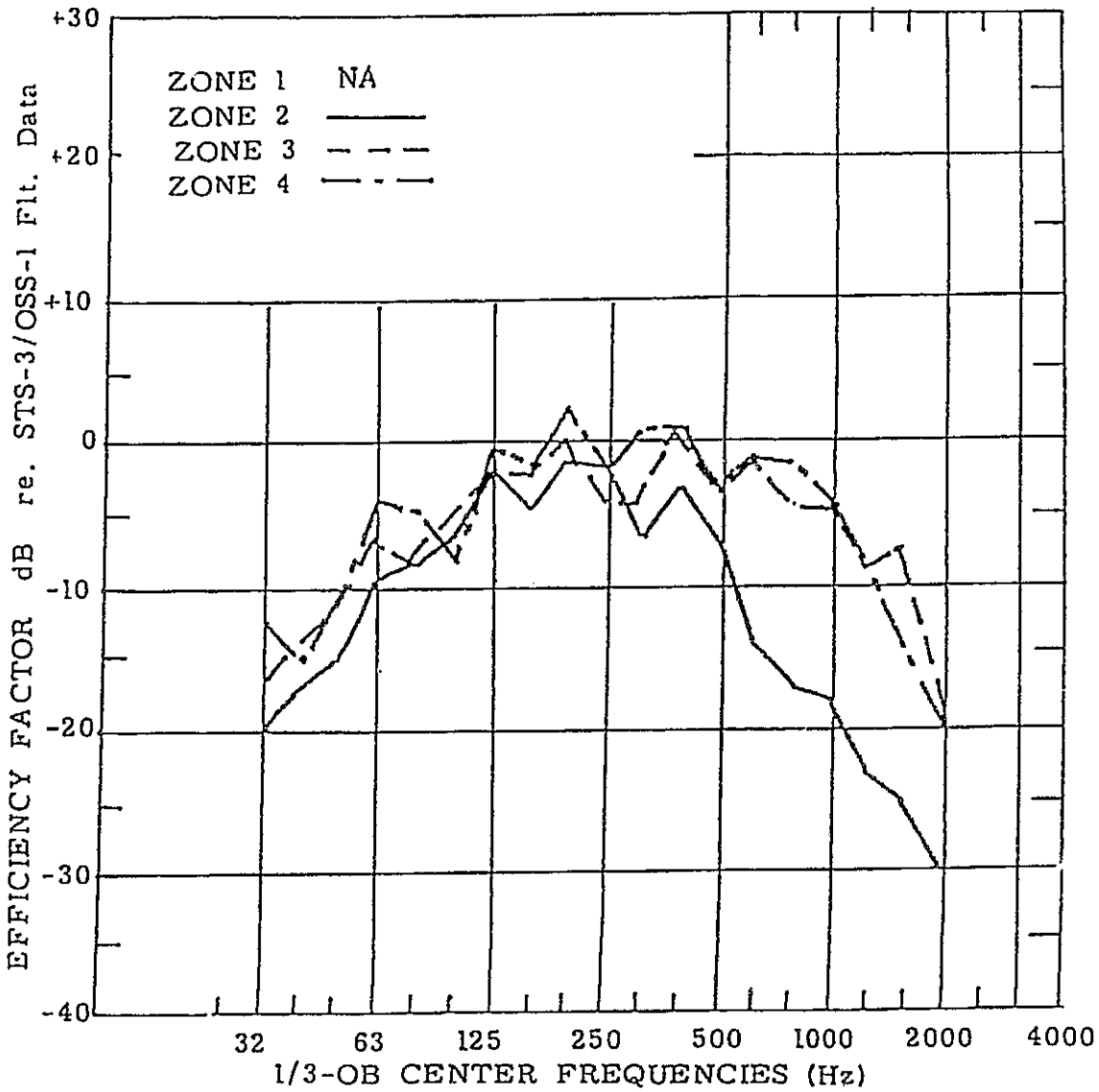



FIG. 3 - ACOUSTIC TEST EFFICIENCY FACTOR
( ALL AXES )

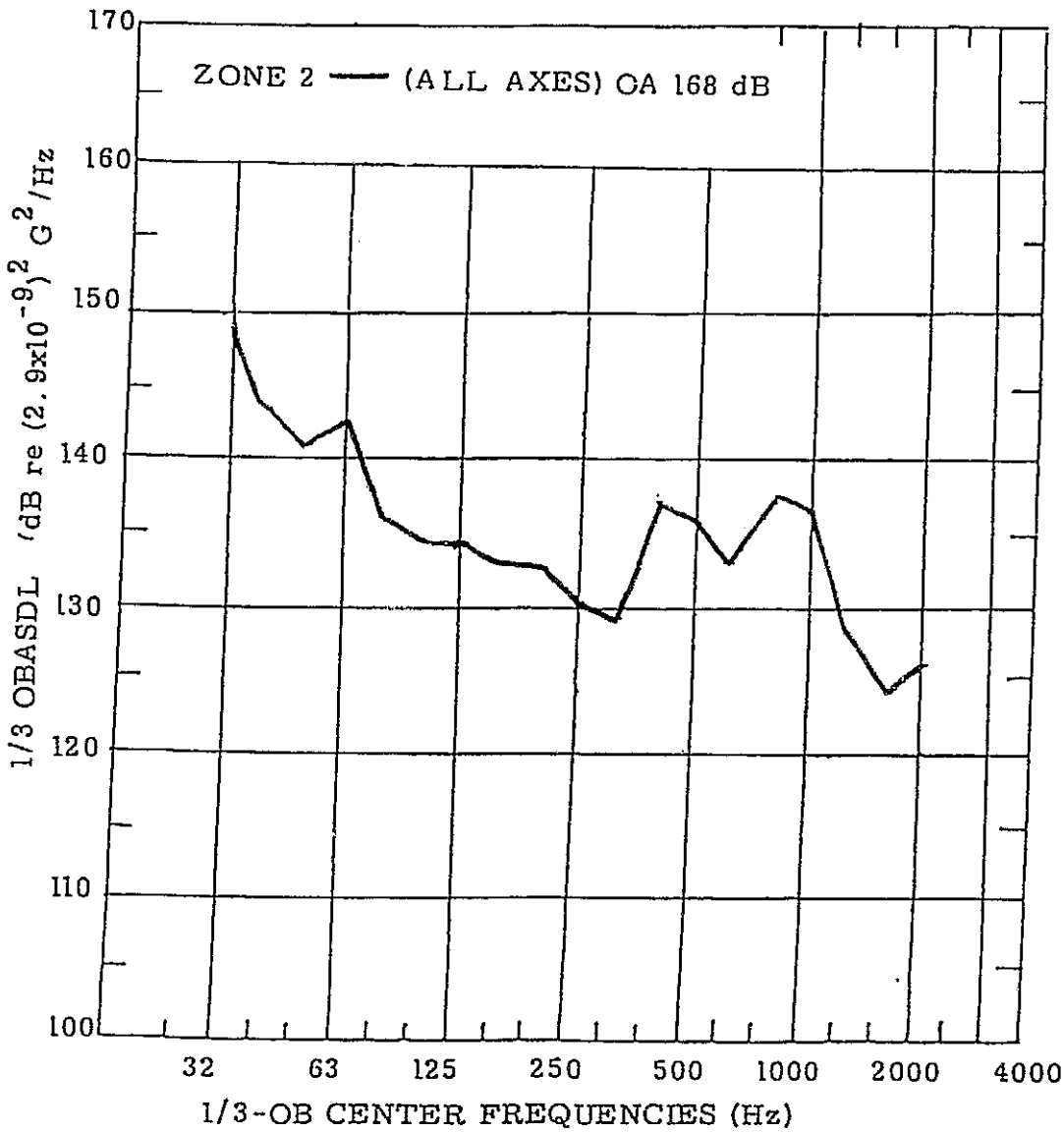



FIG. 4 -ACCELERATION SPECTRAL DENSITY LEVEL
97.73 % PROBABILITY LEVELS

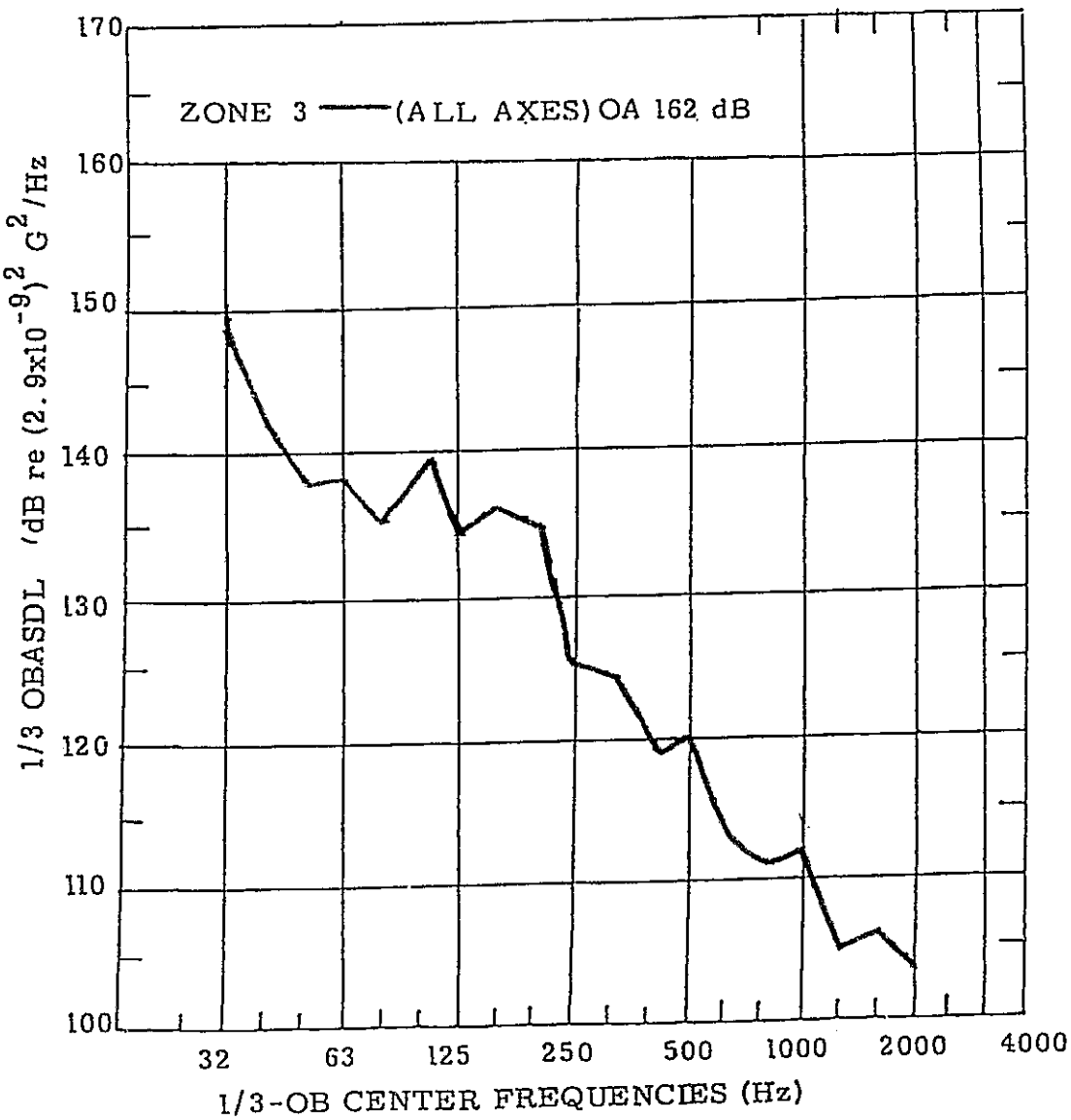



FIG. 5-ACCELERATION SPECTRAL DENSITY LEVEL
97.73 % PROBABILITY LEVELS

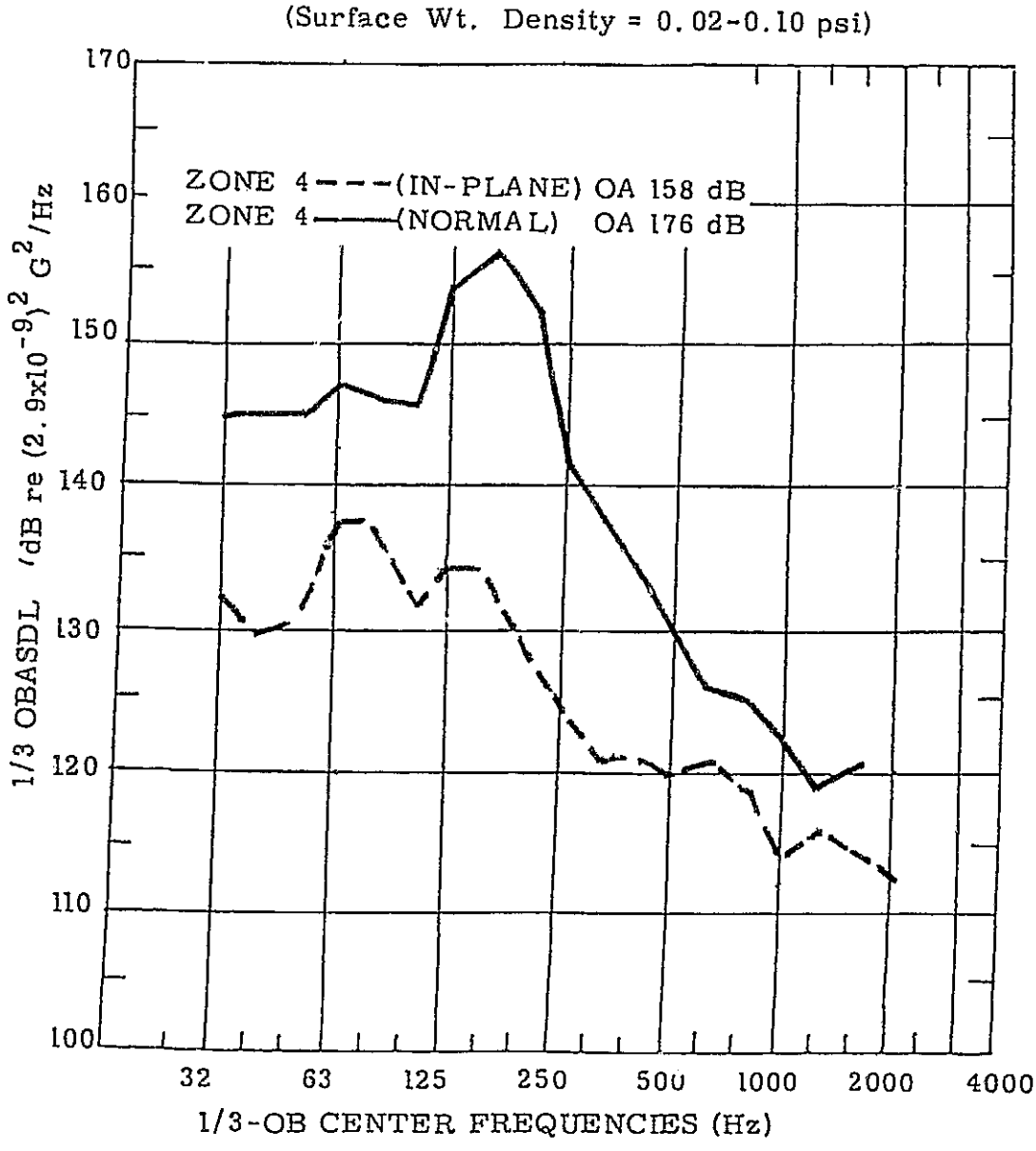



FIG. 6-ACCELERATION SPECTRAL DENSITY LEVEL
97.73 % PROBABILITY LEVELS

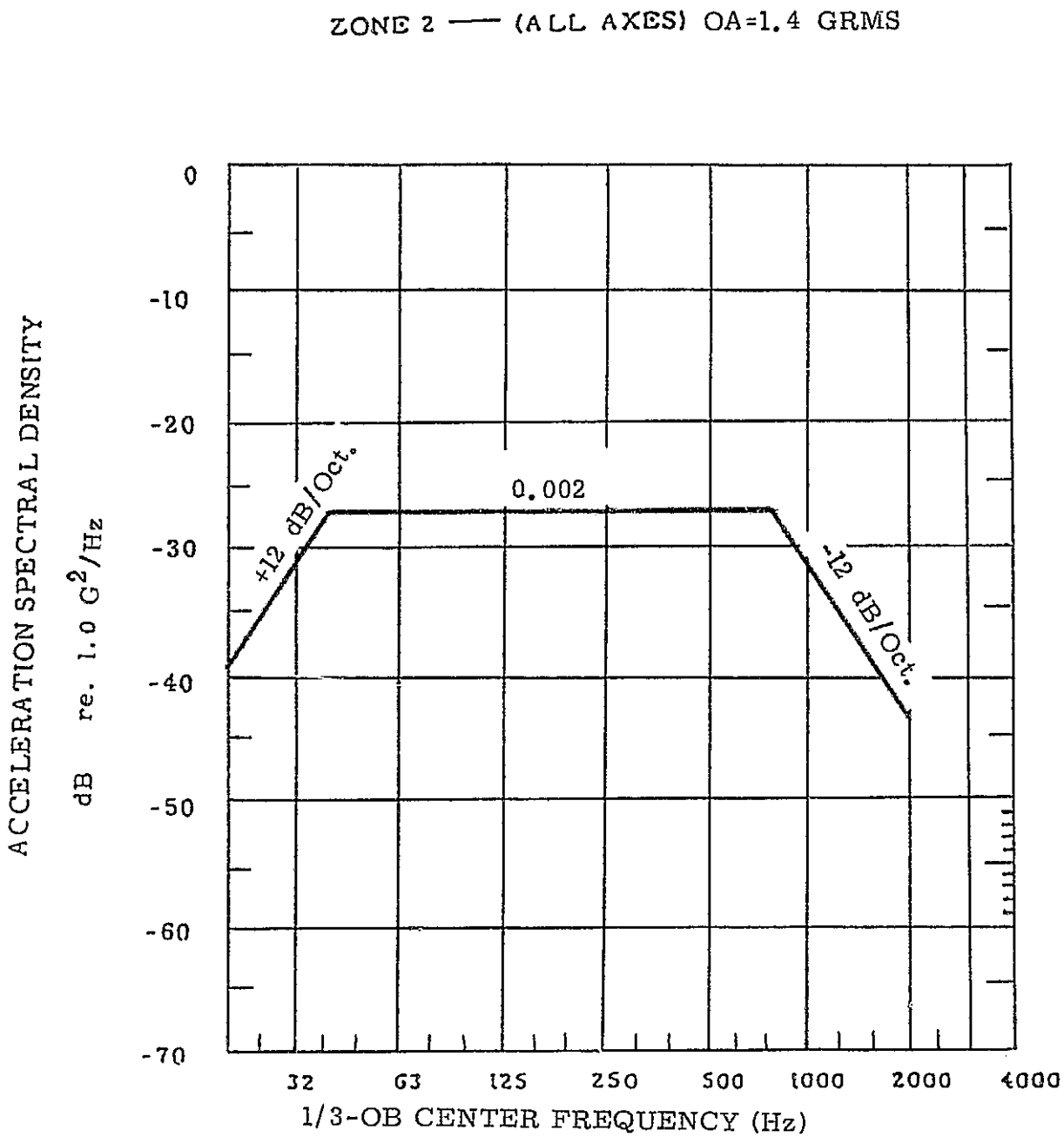



FIG. 7- BASELINE RANDOM VIBRATION ENVIRONMENT CRITERIA

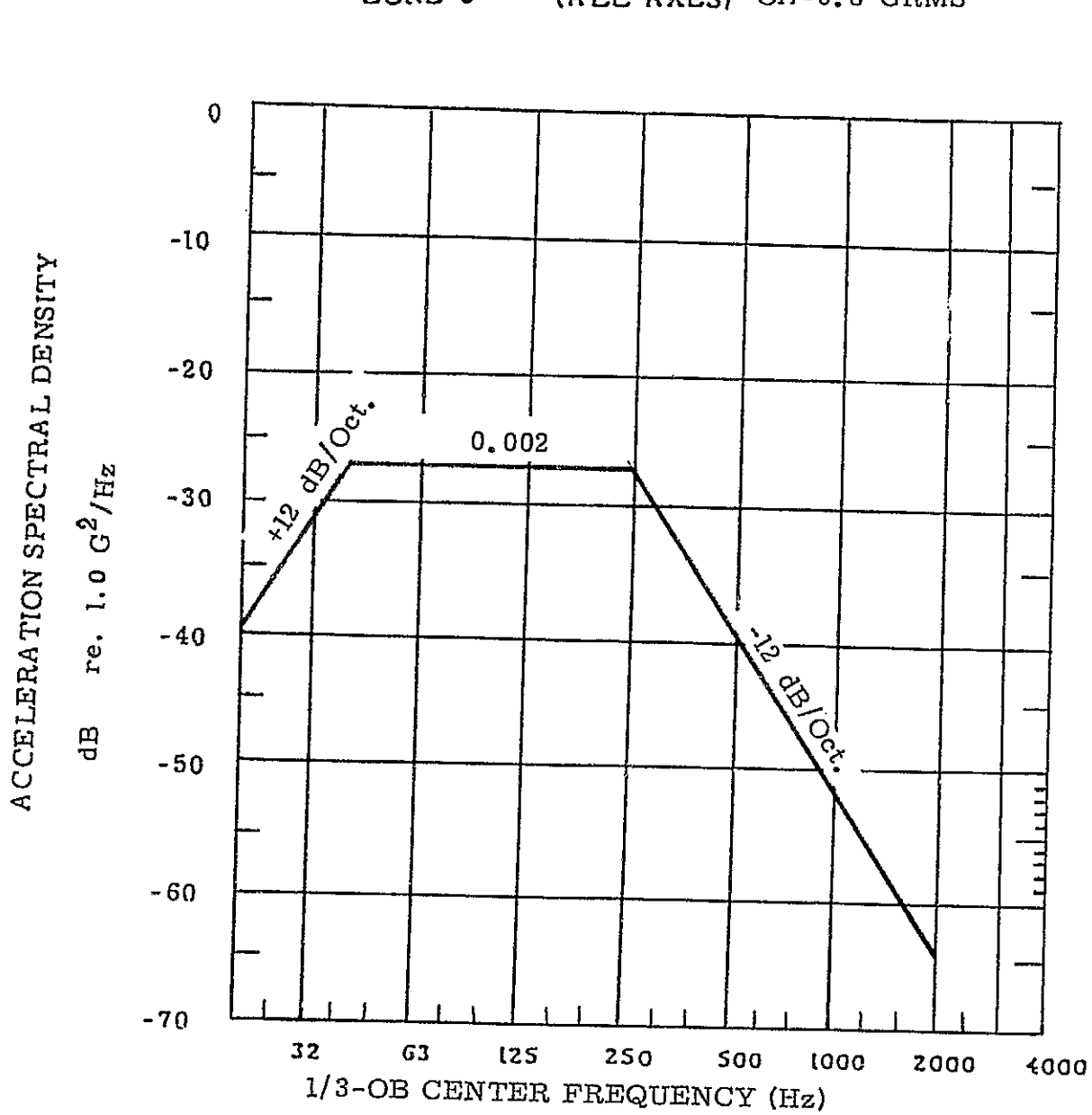



FIG. 8 - BASELINE RANDOM VIBRATION ENVIRONMENT CRITERIA

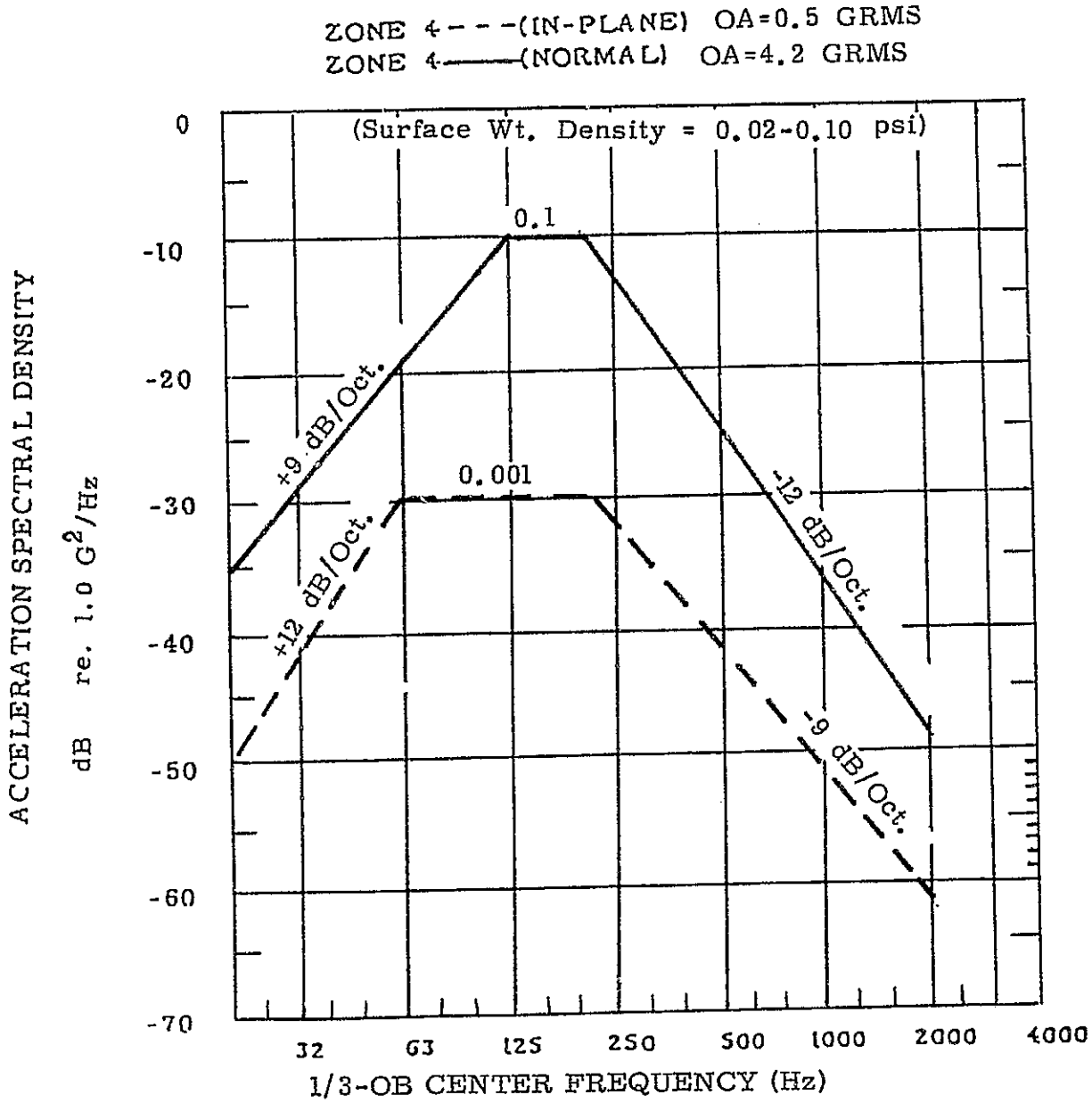



FIG.9 - BASELINE RANDOM VIBRATION ENVIRONMENT CRITERIA

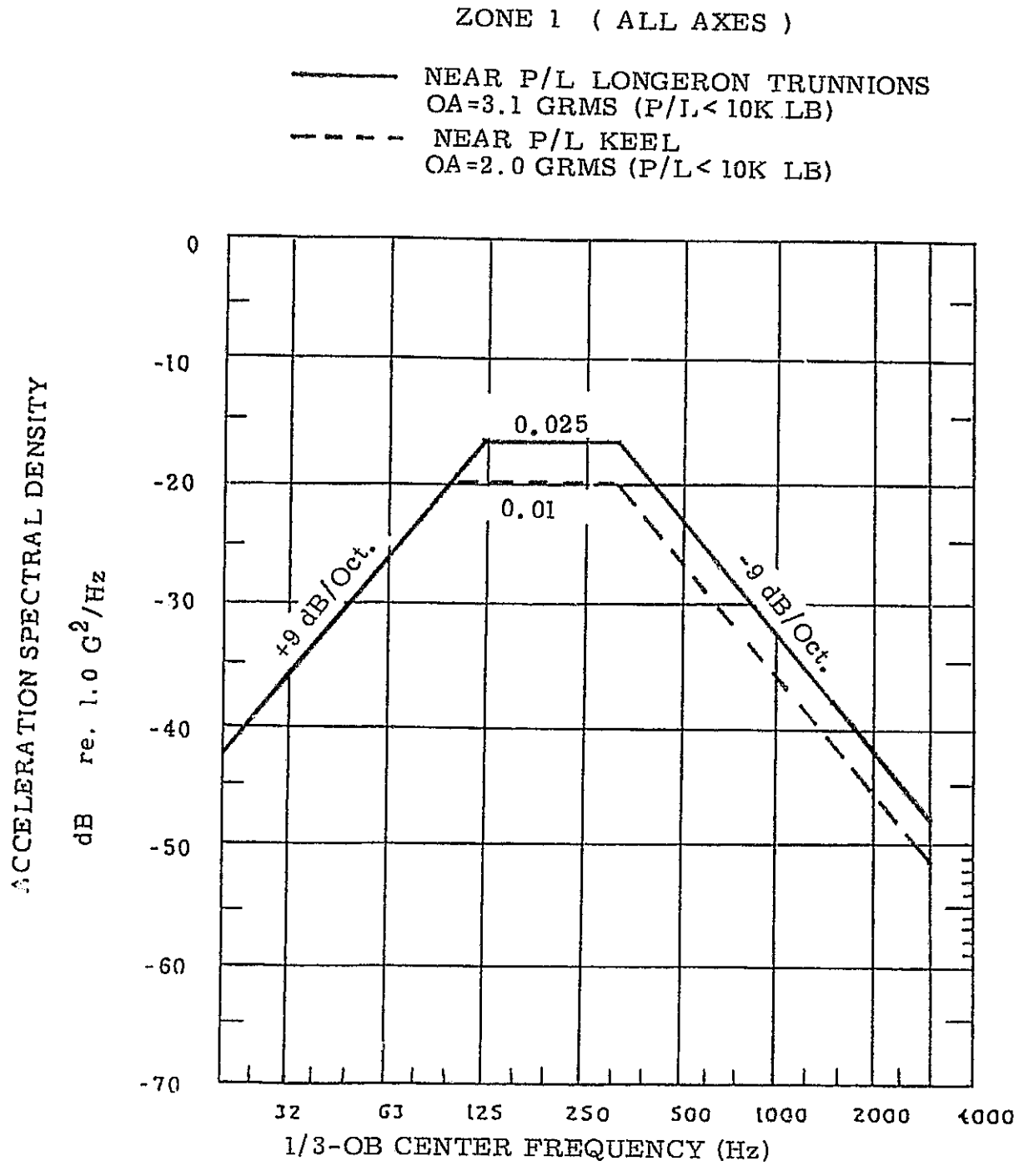



FIG. 10 - BASELINE RANDOM VIBRATION ENVIRONMENT CRITERIA

TABLE 1. ESTIMATED VARIANCES

| 1/3 OB Center Frequency (Hz) | Variance $\sigma^2$ in dB Ref* | | | | | |
|---|---|---|---|---|---|---|
| | Space Average Acoustic (1/3OBSPL) | | Acceleration Spectral Density (1/3OBASDL) | | | Test Efficiency Factor |
| | Test | Flight | Test | Eq.10 Norm Test | Flight | Eq.11 |
| 31.5 - 63 | 2.25 | 1.0 | 0.25 | 3.50 | 0.25 | 3.75 |
| 63 - 200 | 0.50 | 3.0 | 0.25 | 3.75 | 0.25 | 4.00 |
| 200 - 2000 | 0.25 | 3.0 | 0.25 | 3.50 | 0.25 | 3.75 |

* 1/3OBSPL referenced to 20 $\mu N/m^2$ 1/3OBASDL referenced to $(2.9 \times 10^{-9}$ grms$)^2$ /Hz

TABLE 2

BASELINE RANDOM VIBRATION ENVIRONMENT CRITERIA
FOR SHUTTLE PALLET PAYLOAD SUBSYSTEMS
FLIGHT LEVELS

| ZONE | FREQUENCY HZ | ACCELERATION SPECTRAL DENSITY $G^2$/HZ | |
|---|---|---|---|
| 1 | | Near P/L Trunnion: | |
| (All Axes)* | 20 - 125 | +9 dB/oct | |
| | 125 - 315 | 0.025 | <10,000 lb P/L |
| | 315 - 2000 | -9 dB/oct | |
| | OA grms | 3.1 | |
| 1 | | Near P/L Keel: | |
| (All Axes) | 20 - 100 | +9 dB/oct | |
| | 100 - 315 | 0.01 | <10,000 lb P/L |
| | 315 - 2000 | -9 dB/oct | |
| | OA grms | 2.0 | |

* Shuttle Orbiter Axes

TABLE 2 (Cond't)

BASELINE RANDOM VIBRATION ENVIRONMENT CRITERIA
FOR SHUTTLE PALLET PAYLOAD SUBSYSTEMS
FLIGHT LEVELS

| ZONE | FREQUENCY HZ | ACCELERATION SPECTRAL DENSITY $G^2$/HZ |
|---|---|---|
| 2 | 20 - 40 | +12 dB/oct |
| (All Axes) | 40 - 800 | 0.002 |
| | 800 - 2000 | -12 dB/oct |
| | OA grms | 1.4 |
| 3 | 20 - 40 | +12 dB/oct |
| (All Axes) | 40 - 250 | 0.002 |
| | 250 - 2000 | -12 dB/oct |
| | OA grms | 0.8 |
| 4* | 20 - 125 | +9 dB/oct |
| (Normal) | 125 - 200 | 0.10 |
| | 200 - 2000 | -12 dB/oct |
| | OA grms | 4.2 |
| 4 | 20 - 63 | +12 dB/oct |
| (in-plane) | 63 - 200 | 0.001 |
| | 200 - 2000 | -9 dB/oct |
| | OA grms | 0.5 |

* Surface Weight Density: 0.02 to 0.1 psi.

# APPENDIX A

A.1 Accelerometer / Microphone Locations

A.2 Zone 2 STS-3 Flight Equivalent Test Data

A.3 Zone 3 STS-3 Flight Equivalent Test Data

A.4 Zone 4 STS-3 Flight Equivalent Test Data

# A.1 Accelerometer / Microphone Locations

# TABLE A.1.1

## ACOUSTIC TEST ACCELEROMETERS

| ACCEL NO. | ZONE NO | LOCATION DATE | AXIS GSFC | FACILITY | PSD NO | DESCRIPTION |
|---|---|---|---|---|---|---|
| 1 | | | | 1X | 1 | |
| 2 | 2 | | | 1Y | 2 | HP #17 PALLET |
| 3 | | | | 1Z | 3 | |
| 4 | | | | 2X | 4 | |
| 5 | 2 | | | 2Y | 60 | HP #1 PALLET |
| 6 | | | | 2Z | 61 | |
| 7 | | | | 3X | 5 | COLUMBIA CG |
| 8 | | | | 3Y | 6 | |
| 9 | | | | 3Z | 7 | |
| 10 | | | | 4X | 62 | IOWA CG |
| 11 | | | | 4Y | 63 | |
| 12 | | | | 4Z | 64 | |
| 13 | | | | 5X | 8 | IOWA BASE |
| 14 | 2 | | | 5Y | 9 | |
| 15 | | | | 5Z | 10 | |
| 16 | | | | 6X | 65 | SUNY PEDESTAL BASE |
| 17 | 3 | | | 6Y | 66 | |
| 18 | | | | 6Z | 67 | |
| 19 | | | | 7X | 11 | |
| 20 | 2 | | | 7Y | 12 | HP #3 PALLET |
| 21 | | | | 7Z | 13 | |
| 22 | 2 | 8X | | | 14 | VERTICAL SHELF |
| 23 | | | | 8Y | 15 | |
| 24 | | 8Z | | | 16 | |
| 25 | | | | 9X | 17 | |
| 26 | 2 | | | 9Y | 18 | MSFC CPSS FMDM |
| 27 | | | | 9Z | 19 | |
| 28 | 3 | 10X | | | 20 | SILL SHELF 3 (USU) |
| 29 | | 10Y | | | 21 | |
| 30 | | 10Z | | | 22 | |
| 31 | | | | 11X | 23 | SILL SHELF 3 (USU) |
| 32 | 3 | | | 11Y | 24 | |
| 33 | | | | 11Z | 25 | |

Table A.1.1 Continued

| ACCEL NO. | ZONE NO | LOCATION DATE | AXIS GSFC | FACILITY | PSD NO | DESCRIPTION |
|---|---|---|---|---|---|---|
| 34 | | 12X | | | 26 | SILL SHELF 4 (USU) |
| 35 | 3 | | | 12Y | 27 | |
| 36 | | 12Z | | | 68 | |
| 37 | | | | 13X | 28 | SILL SHELF 5 (USU) |
| 38 | 3 | | | 13Y | 29 | |
| 39 | | | | 13Z | 30 | |
| 40 | | | | 14X | 31 | SILL SHLEF 6 (IOkA) |
| 41 | 3 | | | 14Y | 32 | |
| 42 | | | | 14Z | 33 | |
| 43 | 2 | | | 15X | 69 | BOX BEAN @ HARD POINT |
| 44 | | | | 15Y | 70 | |
| 45 | | | | 15Z | 71 | |
| 46 | | | | 16X | 34 | HARD POINT 1 |
| 47 | 2 | | | 16Y | 35 | |
| 48 | | | | 16Z | 36 | |
| 49 | 2 | | | 17X | 37 | HARD POINT 4 |
| 50 | | | | 17Y | 38 | |
| 51 | | | | 17Z | 39 | |
| 52 | | | | 18X | 40 | HARD POINT 8 |
| 53 | 2 | | | 18Y | 41 | |
| 54 | | | | 18Z | 42 | |
| 55 | 2 | | | 19X | 72 | HARD POINT 14 |
| 56 | | | | 19Y | 73 | |
| 57 | | | | 19Z | 74 | |
| 58 | | 20X | | | 43 | PANEL 4 CENTER |
| 59 | 4 | $20_{\perp}$ | | | 44 | |
| 60 | | | | 20// | 45 | |
| 61 | 4 | | | $21_{\perp}$ | 75 | PANEL 4 QUARTER SPAN |
| 62 | | | | 22Y | 86 | PANEL 18 |
| 63 | | | | $22_{\perp}$ | 87 | |
| 64 | 4 | | | 23X | 88 | FREON LINE (PANEL 19) |
| 65 | | | | 23Y | 89 | |
| 66 | | | | 23Z | 90 | |

Table A.1.1 Continued

| ACCEL NO. | ZONE NO | LOCATION DATE | AXIS GSFC | FACILITY | PSD NO | DESCRIPTION |
|---|---|---|---|---|---|---|
| 67 | 4 | | | 24X | 46 | FREON LINE STANDOFF |
| 68 | | | | 24⊥ | 47 | (PANEL 19) |
| 69 | | | | 24// | 48 | |
| 70 | 4 | | | 25⊥ | 49 | PALLET OUTER PANEL |
| 71 | 4 | | | 26⊥ | 50 | PALLET OUTER PANEL |
| 72 | | | | 27X | 51 | SUBSYSTEM MSFC |
| 73 | 2 | | | 27Y | 52 | CPSS (PCB) SIDE |
| 74 | | | | 27Z | 53 | |
| 75 | 2 | | | 28X | 54 | EXPERIMENT CPSS |
| 76 | | | | 28⊥ | 55 | |
| 77 | | | | 28// | 56 | |
| 78 | 3 | | | 29X | 57 | FWD FRAME/FREON PUMP |
| 79 | | | | 29Y | 58 | |
| 80 | | | | 29Z | 59 | |
| 81 | | | | 30X | 91 | RF ANTENNA TOP |
| 82 | | | | 30Y | 92 | |
| 83 | 4 | | | 31⊥ | 93 | PANEL 9 |
| 84 | 4 | | | 32X | 94 | PANEL 20 |
| 85 | | | | 32⊥ | 162 | |
| 86 | 2 | | | 33X | 96 | FRAME BETWEEN PANEL |
| 87* | | | | 33Y | | 17/18 |
| 88* | | | | 33Z | | |
| 89* | | | | 34X | | FRAME BETWEEN PANEL |
| 90* | | | | 34Y | | 23/24 |
| 91* | | | | 34Z | | |
| 92* | | | | 35X | | LONGERON BETEWWN |
| 93* | | | | 35Y | | PANEL 17-13 |
| 94* | | | | 35Z | | |
| 95* | | | | 36X | | LONGERON BETWEEN |
| 96* | | | | 36Y | | PANEL 23/19 |
| 97* | | | | 36Z | | |

* Instrumentation beyond facility recording capability
(not included in test)

Table A.1.1 Continued

| ACCEL NO. | ZONE NO | LOCATION DATE | AXIS GSFC | FACILITY | PSD NO | DESCRIPTION |
|---|---|---|---|---|---|---|
| 98 | | | | 37X | 97 | |
| 99 | 2 | | | 37Y | 98 | HARD POINT 2 |
| 100 | | | | 37Z | 99 | |
| 101 | | | | 38X | 100 | |
| 102 | 2 | | | 38Y | 101 | HARD POINT 5 |
| 103 | | | | 38Z | 161 | |
| 104 | | | | 39X | 103 | |
| 105 | 2 | | | 39Y | 104 | HARD POINT 6 |
| 106 | | | | 39Z | 105 | |
| 107 | | | | 40X | 106 | |
| 108 | 2 | | | 40Y | 107 | HARD POINT 7 |
| 109 | | | | 40Z | 108 | |
| 110 | | | | 41X | 109 | |
| 111 | 2 | | | 41Y | 110 | HARD POINT 10 |
| 112 | | | | 41Z | 111 | |
| 113 | | | | 42X | 112 | |
| 114 | | | | 42Y | 113 | AFT TRUNNION (+Y) |
| 115 | | | | 42Z | 114 | |
| 116 | | | | 43X | 115 | |
| 117 | | | | 43Y | 116 | AFT TRUNNION (-Y) |
| 118 | | | | 43Z | 117 | |
| 119 | | | | 44X | 118 | |
| 120 | | | | 44Y | 119 | FWD TRUNNION (+Y) |
| 121 | | | | 44Z | 120 | |
| 122 | | | | 45X | 121 | |
| 123 | 2 | | | 45Y | 122 | HARD POINT 3 |
| 124 | | | | 45Z | 126 | |
| 125 | | | | 46X | 124 | |
| 126 | 2 | | | 46Y | 125 | HARD POINT 17 |
| 127 | | | | 46Z | 126 | |
| 128 | | | | 47X | 127 | HARD POINT 11 |
| 129 | 2 | | | 47Y | 128 | PALLET |
| 130 | | | | 47Z | 129 | |

Table A.1.1 Continued

| ACCEL NO. | ZONE NO | LOCATION DATE | AXIS GSFC | FACILITY | PSD NO | DESCRIPTION |
|---|---|---|---|---|---|---|
| 131 | | | | 48X | 130 | HARD POINT 12 |
| 132 | 2 | | | 48Y | 131 | |
| 133 | | | | 48Z | 132 | |
| 134 ** | | | | 49X | | HARD POINT 13 |
| 135 ** | | | | 49Y | | |
| 136 ** | | | | 49Z | | |
| 137 | | 50X | | | 133 | THERMAL CANISTER BASE |
| 138 | 2 | 50Z | | | 134 | |
| 139 | 3 | 51X | | | 135 | THERMAL CANISTER |
| 140 | | 51Y | | | 136 | INSIDE |
| 141 | | 52X | | | 137 | THERMAL CANISTER TOP |
| 142 | | 52Y | | | 138 | |
| 143 | | 52Z | | | 139 | |
| 144 | 3 | 53X | | | 140 | SUNY INSTRUMENT BASE |
| 145 | | 53Y | | | 141 | |
| 146 | | 53Z | | | 142 | |
| 147 | 2 | 54X | | | 143 | VERTICAL SHELF |
| 148 | 2 | 55X | | | 144 | VERTICAL SHELF |
| 149 | | 55Y | | | 145 | |
| 150 | | | 56X | | | FWD TRUNNION (+Y) |
| 151 | | | 56Z | | | |
| 152 | | | 57X | | | FWD TRUNNION (-Y) |
| 153 | | | | | | |
| 154 | | | 58X | | | AFT TRUNNION (+Y) |
| 155 | | | 59X | | | AFT TRUNNION (-Y) |
| 156 | | | 60Y | | | STRUT, AFT (+Y) |
| 157 | | | 61Y | | | STRUT, (AFT) (-Y) |

** Not installed (inaccessable)

Table A.1.1 Continued

| ACCEL NO. | ZONE NO | LOCATION DATE | AXIS GSFC | FACILITY | PSD NO | DESCRIPTION |
|---|---|---|---|---|---|---|
| 158 | 2 | | | 62X | 146 | HARD POINT 2 |
| 159 | 3 | | | 62Y | 147 | PALLET SILL |
| 160 | | | | 62Z | 148 | |
| 161 | 3 | | | 63X | 149 | SILL SHELF 5 |
| 162 | | | | 63Y | 150 | AFT OUT BD |
| 163 | | | | 63Z | 151 | |
| 164 | 3 | | | 64X | 152 | SILL SHELF 5 |
| 165 | | | | 64Y | 153 | FWD OUT BD |
| 166 | | | | 64Z | 154 | |
| 167 | 3 | | | 65X | 155 | SILL SHELF 5 |
| 168 | | | | 65Y | 156 | AFT IN BD |
| 169 | | | | 65Z | 157 | |
| 170 | 3 | | | 66X | 158 | SILL SHELF 5 |
| 171 | | | | 66Y | 159 | FWD IN BD |
| 172 | | | | 66Z | 160 | |

TABLE A.1.2

OSS-1 ACOUSTIC TEST MICROPHONES

| MICROPHONE NO | LOCATION DATE | LOCATION FACILITY | CONTROL | DISCRIPTION |
|---|---|---|---|---|
| M1 | * | | | INSIDE THERMAL CANISTER |
| M2 | * | | | OUTSIDE THERMAL CANISTER X, -Y CORNER |
| M3 | * | | | VERTICAL SHELF |
| M4 | * | | | SILL SHELF 4 |
| M5 | * | | | SILL SHELF 6 |
| M6 | | * | * | FORWARD |
| M7 | | * | * | AFT |
| M8 | | * | * | PORT |
| M9 | | * | * | STARBOARD |
| M10 | | * | * | TOP |
| M11 | | * | * | BOTTOM |

## A.2 Zone 2 STS-3 Flight Equivalent Test Data

TABLE A.2.1

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Thermal Canister Base

DIRECTION x

PSD NO. 133

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 134.22 | 145.82 | 126.11 |
| 40 | 134.59 | 145.19 | 122.93 |
| 50 | 139.15 | 151.55 | 126.86 |
| 63 | 152.59 | 161.49 | 134.68 |
| 80 | 147.54 | 152.84 | 123.65 |
| 100 | 146.35 | 149.75 | 118.33 |
| 125 | 149.37 | 150.27 | 116.62 |
| 160 | 153.27 | 150.77 | 114.65 |
| 200 | 157.54 | 154.54 | 116.18 |
| 250 | 157.74 | 153.34 | 112.76 |
| 320 | 155.83 | 150.63 | 107.58 |
| 400 | 154.15 | 148.85 | 103.56 |
| 500 | 155.98 | 150.48 | 102.96 |
| 630 | 158.37 | 152.87 | 103.84 |
| 800 | 159.25 | 158.45 | 106.23 |
| 1000 | 159.17 | 164.87 | 109.62 |
| 1250 | 157.77 | 162.27 | 105.59 |
| 1600 | 156.63 | 164.63 | 105.48 |
| 2000 | 159.92 | 172.92 | 111.54 |

TABLE A.2.2

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Thermal Canister Base

DIRECTION z

PSD NO. 134

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 141.00 | 152.69 | 132.08 |
| 40 | 141.30 | 151.90 | 129.64 |
| 50 | 141.65 | 153.85 | 129.36 |
| 63 | 148.25 | 157.15 | 130.34 |
| 80 | 146.87 | 151.37 | 122.18 |
| 100 | 147.85 | 150.45 | 119.03 |
| 125 | 151.90 | 152.80 | 119.15 |
| 160 | 158.50 | 156.00 | 119.97 |
| 200 | 162.81 | 159.81 | 121.46 |
| 250 | 159.22 | 154.82 | 114.23 |
| 320 | 159.90 | 154.70 | 111.65 |
| 400 | 161.30 | 156.00 | 110.71 |
| 500 | 162.54 | 157.04 | 109.52 |
| 630 | 163.49 | 157.90 | 108.16 |
| 800 | 160.00 | 159.20 | 107.07 |
| 1000 | 158.12 | 163.02 | 108.58 |
| 1250 | 155.87 | 160.37 | 103.69 |
| 1600 | 152.16 | 160.16 | 101.01 |
| 2000 | 152.80 | 165.80 | 104.42 |

TABLE A.2.3

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Vertical Shelf

DIRECTION x

PSD NO. 144

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 140.42 | 152.02 | 132.31 |
| 40 | 135.89 | 146.49 | 124.23 |
| 50 | 135.44 | 147.64 | 123.15 |
| 63 | 151.33 | 160.23 | 133.43 |
| 80 | 151.17 | 156.47 | 127.28 |
| 100 | 153.97 | 157.37 | 125.95 |
| 125 | 163.39 | 164.29 | 130.63 |
| 160 | 158.20 | 155.70 | 119.58 |
| 200 | 156.86 | 153.86 | 115.51 |
| 250 | 160.38 | 155.98 | 115.39 |
| 320 | 151.93 | 146.73 | 103.67 |
| 400 | 151.45 | 146.15 | 100.87 |
| 500 | 151.23 | 145.73 | 98.21 |
| 630 | 149.51 | 144.01 | 94.19 |
| 800 | 149.43 | 148.63 | 96.41 |
| 1000 | 149.63 | 154.53 | 100.08 |
| 1250 | 149.55 | 154.05 | 97.37 |
| 1600 | 150.20 | 158.20 | 99.05 |
| 2000 | 149.12 | 162.12 | 100.74 |

TABLE A.2.4

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Vertical Shelf

DIRECTION y

PSD NO. 145

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 141.88 | 153.48 | 133.77 |
| 40 | 142.26 | 152.86 | 130.60 |
| 50 | 139.91 | 152.11 | 127.62 |
| 63 | 145.83 | 154.73 | 127.93 |
| 80 | 148.58 | 153.88 | 124.68 |
| 100 | 152.54 | 155.94 | 124.52 |
| 125 | 161.99 | 162.80 | 129.14 |
| 160 | 170.10 | 167.60 | 131.48 |
| 200 | 169.57 | 166.57 | 128.22 |
| 250 | 168.08 | 163.68 | 123.09 |
| 320 | 165.60 | 160.40 | 117.34 |
| 400 | 170.88 | 165.58 | 120.29 |
| 500 | 170.60 | 165.10 | 117.58 |
| 630 | 168.20 | 162.70 | 112.88 |
| 800 | 168.47 | 167.67 | 115.45 |
| 1000 | 162.64 | 167.54 | 113.09 |
| 1250 | 162.52 | 167.82 | 110.34 |
| 1600 | 162.24 | 170.24 | 111.09 |
| 2000 | 163.03 | 176.03 | 114.65 |

TABLE A.2.5

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Box Beam at HP

DIRECTION x

PSD NO. 69

ZONE NO.2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 133.83 | 145.43 | 125.72 |
| 40 | 134.53 | 145.13 | 122.87 |
| 50 | 139.83 | 151.23 | 126.74 |
| 63 | 152.99 | 161.89 | 135.09 |
| 80 | 147.55 | 152.85 | 123.66 |
| 100 | 146.86 | 150.26 | 118.84 |
| 125 | 149.43 | 150.33 | 116.68 |
| 160 | 152.73 | 150.23 | 114.11 |
| 200 | 157.00 | 154.00 | 115.65 |
| 250 | 156.75 | 152.35 | 111.76 |
| 320 | 156.33 | 151.13 | 108 08 |
| 400 | 154.62 | 149.32 | 104 03 |
| 500 | 152.86 | 147.36 | 99.84 |
| 630 | 155.61 | 150.11 | 100.28 |
| 800 | 152.75 | 151.95 | 99.73 |
| 1000 | 151.62 | 156.52 | 102.87 |
| 1250 | 153.40 | 157.90 | 101.22 |
| 1600 | 145.15 | 153.15 | 94.01 |
| 2000 | 142.92 | 155.92 | 94.54 |

TABLE A.2.6

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Box Beam at HP

DIRECTION z

PSD NO. 71

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 133.36 | 144.96 | 125.25 |
| 40 | 140.22 | 150.82 | 128.56 |
| 50 | 140.31 | 152.51 | 128.02 |
| 63 | 144.71 | 153.61 | 126.81 |
| 80 | 147.94 | 153.24 | 124.85 |
| 100 | 149.84 | 152.44 | 121.81 |
| 125 | 147.85 | 148.75 | 115.10 |
| 160 | 150.99 | 148.49 | 112.37 |
| 200 | 157.59 | 154.59 | 116.24 |
| 250 | 160.68 | 156.28 | 115.69 |
| 320 | 160.26 | 155.86 | 112.88 |
| 400 | 160.54 | 155.24 | 109.95 |
| 500 | 160.81 | 154.51 | 106.99 |
| 630 | 160.24 | 154.74 | 104.91 |
| 800 | 154.88 | 153.28 | 101.87 |
| 1000 | 154.64 | 159.54 | 105.89 |
| 1250 | 153.87 | 158.37 | 101.69 |
| 1600 | 154.22 | 162.22 | 103.87 |
| 2000 | 151.42 | 164.42 | 103.84 |

TABLE A.2.7

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Subsystem MSFC CPSS (PCB) Side

DIRECTION x

PSD NO. 51

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 139.50 | 151.10 | 131.39 |
| 40 | 140.38 | 150.98 | 128.72 |
| 50 | 132.68 | 144.88 | 120.39 |
| 63 | 146.88 | 155.78 | 128.98 |
| 80 | 155.23 | 160.53 | 131.34 |
| 100 | 152.06 | 155.46 | 124.03 |
| 125 | 150.99 | 151.89 | 118.23 |
| 160 | 156.50 | 154.80 | 117.88 |
| 200 | 156.26 | 153.26 | 114.91 |
| 250 | 153.22 | 148.02 | 108.23 |
| 320 | 148.83 | 143.63 | 100.58 |
| 400 | 148.93 | 143.63 | 98.35 |
| 500 | 151.96 | 146.46 | 98.94 |
| 630 | 156.42 | 150.92 | 101.09 |
| 800 | 149.40 | 148.60 | 96.38 |
| 1000 | 149.33 | 154.23 | 99.78 |
| 1250 | 150.23 | 154.73 | 98.05 |
| 1600 | 146.94 | 154.94 | 95.70 |
| 2000 | 146.33 | 159.33 | 97.95 |

TABLE A.2.8

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Subsystem MSFC CPSS (PCB) Side

DIRECTION y

PSD NO. 52

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 139.11 | 150.71 | 131.00 |
| 40 | 138.79 | 149.39 | 127.13 |
| 50 | 137.34 | 149.54 | 125.05 |
| 63 | 147.13 | 156.83 | 129.23 |
| 80 | 146.55 | 151.85 | 122.66 |
| 100 | 147.90 | 151.30 | 119.87 |
| 125 | 154.54 | 155.44 | 121.79 |
| 160 | 154.42 | 151.92 | 115.80 |
| 200 | 157.80 | 154.80 | 116.44 |
| 250 | 156.99 | 152.59 | 112.00 |
| 320 | 149.16 | 143.96 | 100.90 |
| 400 | 149.19 | 143.89 | 98.60 |
| 500 | 149.45 | 143.95 | 96.43 |
| 630 | 150.38 | 144.88 | 95.05 |
| 800 | 148.39 | 147.50 | 95.38 |
| 1000 | 150.77 | 155.67 | 101.22 |
| 1250 | 151.29 | 155.79 | 99.11 |
| 1600 | 148.45 | 156.45 | 97.30 |
| 2000 | 150.89 | 163.89 | 102.51 |

TABLE A.2.9

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Subsystem MSFC CPSS (PCB) Side

DIRECTION z

PSD NO. 53

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 137.03 | 148.63 | 128.91 |
| 40 | 137.25 | 147.85 | 125.59 |
| 50 | 136.86 | 149.06 | 124.57 |
| 63 | 150.40 | 159.30 | 132.50 |
| 80 | 154.90 | 160.20 | 131.80 |
| 100 | 154.30 | 157.70 | 126.36 |
| 125 | 156.80 | 157.70 | 124.04 |
| 160 | 161.80 | 159.30 | 123.26 |
| 200 | 160.26 | 157.26 | 118.90 |
| 250 | 158 61 | 154.21 | 113.62 |
| 320 | 157.55 | 152.35 | 109.30 |
| 400 | 154.86 | 149.56 | 104.27 |
| 500 | 156.71 | 151.21 | 103.60 |
| 630 | 163 76 | 158.26 | 108.43 |
| 800 | 158.73 | 157.03 | 105.72 |
| 1000 | 160.62 | 165.52 | 111.00 |
| 1250 | 159.72 | 164.22 | 107.54 |
| 1600 | 156.35 | 164.35 | 105.20 |
| 2000 | 151.42 | 164.42 | 103.04 |

TABLE A.2.10

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Experiment CPSS

DIRECTION x

PSD NO. 54

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 141.29 | 152.89 | 133.18 |
| 40 | 136.38 | 146.98 | 124.72 |
| 50 | 136.42 | 148.62 | 124.13 |
| 63 | 151.77 | 160.67 | 133.87 |
| 80 | 152.28 | 157.58 | 128.39 |
| 100 | 154.47 | 157.87 | 126.45 |
| 125 | 153.99 | 154.89 | 121.23 |
| 160 | 155.79 | 153.29 | 117.17 |
| 200 | 153.98 | 150.98 | 112.63 |
| 250 | 152.51 | 155.11 | 114.53 |
| 320 | 153.45 | 148.25 | 105.20 |
| 400 | 148.51 | 143.21 | 97.92 |
| 500 | 148.45 | 142.95 | 95.43 |
| 630 | 151.83 | 145.53 | 95.78 |
| 800 | 148.93 | 148.13 | 95.92 |
| 1000 | 158.51 | 155.41 | 100.96 |
| 1250 | 149.88 | 154.38 | 97.70 |
| 1600 | 148.49 | 156.49 | 97.34 |
| 2000 | 144.75 | 157.75 | 96.37 |

TABLE A.2 11

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Experiment CPSS

DIRECTION ⊥

PSD NO. 55

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 139.70 | 151.30 | 131.59 |
| 40 | 141.33 | 151.93 | 129.67 |
| 50 | 138.23 | 150.43 | 125.94 |
| 63 | 146.15 | 155.05 | 128.25 |
| 80 | 153.38 | 158.68 | 129.40 |
| 100 | 159.40 | 162.80 | 131.37 |
| 125 | 165.15 | 166.05 | 132.39 |
| 160 | 167.83 | 164.53 | 128.41 |
| 200 | 166.94 | 163.94 | 125.58 |
| 250 | 169.51 | 165.11 | 124.53 |
| 320 | 162.12 | 156.92 | 113.87 |
| 400 | 161.01 | 155.71 | 110.42 |
| 500 | 158.63 | 153.13 | 105.62 |
| 630 | 165.40 | 159.90 | 110.07 |
| 800 | 164.63 | 163.83 | 111.61 |
| 1000 | 159.79 | 164.69 | 110.24 |
| 1250 | 158.61 | 163.11 | 106.43 |
| 1600 | 157.66 | 165.66 | 106.51 |
| 2000 | 153.16 | 166.16 | 104.78 |

TABLE A.2.12

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Experiment CPSS

DIRECTION //

PSD NO. 56

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 135.57 | 147.17 | 127.46 |
| 40 | 137.58 | 148.18 | 125.92 |
| 50 | 140.41 | 152.81 | 128.12 |
| 63 | 146.42 | 155.32 | 128.52 |
| 80 | 150.40 | 155.70 | 126.51 |
| 100 | 156.77 | 160.17 | 128.75 |
| 125 | 156.67 | 157.57 | 123.92 |
| 160 | 159.17 | 156.67 | 120.55 |
| 200 | 151.30 | 148.30 | 109.95 |
| 250 | 158.57 | 154.17 | 113.59 |
| 320 | 160.14 | 154.94 | 111.80 |
| 400 | 155.12 | 149.82 | 104.54 |
| 500 | 153.10 | 147.69 | 100.17 |
| 630 | 159.38 | 153.88 | 104.85 |
| 800 | 158.91 | 158.11 | 105.80 |
| 1000 | 151.20 | 156.10 | 101.65 |
| 1250 | 150.97 | 155.47 | 98.79 |
| 1600 | 151.94 | 150.94 | 100.70 |
| 2000 | 153.32 | 166.32 | 104.94 |

TABLE A.2 13

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Vertical Shelf

DIRECTION x

PSD NO. 14

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 147.52 | 159.12 | 139.41 |
| 40 | 145.36 | 155.96 | 133.70 |
| 50 | 139.86 | 152.86 | 127.57 |
| 63 | 144 76 | 153.66 | 126.85 |
| 80 | 141.16 | 146.46 | 117.27 |
| 100 | 148.27 | 151.67 | 120.25 |
| 125 | 151.37 | 152.27 | 118.61 |
| 160 | 147.41 | 144.91 | 108.70 |
| 200 | 149.60 | 146.60 | 108.33 |
| 250 | 151.25 | 146.85 | 106.27 |
| 320 | 151.00 | 145.80 | 102.84 |
| 400 | 147.76 | 142.46 | 97.18 |
| 500 | 149.88 | 144.38 | 96.87 |
| 630 | 154.86 | 149.36 | 99.53 |
| 800 | 153.56 | 152.76 | 100.55 |
| 1000 | 149.52 | 154.42 | 99.98 |
| 1250 | 150.76 | 155.26 | 98.58 |
| 1600 | 147.74 | 155.74 | 96.50 |
| 2000 | 148.81 | 161.81 | 99.63 |

TABLE A 2.14

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Vertical Shelf

DIRECTION y

PSD NO. 15

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 143.81 | 155.41 | 135.70 |
| 40 | 141.88 | 152.48 | 130.22 |
| 50 | 138.88 | 150.28 | 125.79 |
| 63 | 150.42 | 159.32 | 132.52 |
| 80 | 145.11 | 150.41 | 121.22 |
| 100 | 143.30 | 146.70 | 115.28 |
| 125 | 145.78 | 146.68 | 113.02 |
| 160 | 146.34 | 143.84 | 107.72 |
| 200 | 146.90 | 143.90 | 105.63 |
| 250 | 148.58 | 144.18 | 103.59 |
| 320 | 145.73 | 140.53 | 97.48 |
| 400 | 146.90 | 141.60 | 96.31 |
| 500 | 146.41 | 140.91 | 93.39 |
| 630 | 149.91 | 144.41 | 94.58 |
| 800 | 148.67 | 147.87 | 95.65 |
| 1000 | 146.41 | 151.31 | 96.86 |
| 1250 | 147.70 | 152.20 | 95.52 |
| 1600 | 146.85 | 154.85 | 95.70 |
| 2000 | 147.43 | 160.43 | 99.05 |

TABLE A.2.15

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Vertical Shelf

DIRECTION z

PSD NO. 16

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 143.19 | 154.79 | 135.08 |
| 40 | 140.68 | 151.28 | 129.02 |
| 50 | 138.74 | 150.94 | 126.45 |
| 63 | 146.60 | 155.50 | 128.70 |
| 80 | 143.98 | 149.28 | 128.09 |
| 100 | 145.48 | 148.88 | 117.45 |
| 125 | 144.71 | 145.61 | 111.95 |
| 160 | 143.96 | 141.46 | 105.33 |
| 200 | 147.64 | 144.64 | 106.29 |
| 250 | 147.60 | 143.20 | 102.62 |
| 320 | 146.44 | 141.24 | 98.19 |
| 400 | 149.39 | 144.09 | 98.81 |
| 500 | 153.16 | 147.66 | 100.14 |
| 630 | 154.55 | 149.05 | 99.22 |
| 800 | 149.80 | 149.00 | 96.79 |
| 1000 | 148.25 | 153.15 | 98.70 |
| 1250 | 149.68 | 154.18 | 97.50 |
| 1600 | 149.83 | 157.83 | 97.88 |
| 2000 | 146.94 | 159.94 | 98.56 |

TABLE A.2.16

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION MSFC CPSS FMDM

DIRECTION x

PSD NO. 17

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 134.66 | 146.26 | 126.55 |
| 40 | 135.33 | 145.93 | 123.67 |
| 50 | 133.84 | 145.24 | 120.75 |
| 63 | 144 10 | 153.00 | 126.20 |
| 80 | 151.98 | 157.28 | 128.80 |
| 100 | 153.87 | 156.47 | 125.84 |
| 125 | 152.91 | 153.81 | 120.15 |
| 160 | 155.80 | 152.59 | 116.46 |
| 200 | 156.63 | 153.63 | 115.28 |
| 250 | 151.95 | 147.55 | 106.97 |
| 320 | 147.80 | 141.80 | 98.83 |
| 400 | 147.75 | 142.45 | 97.17 |
| 500 | 151.56 | 146.06 | 98.55 |
| 630 | 152.35 | 146.85 | 97.02 |
| 800 | 146.74 | 145.94 | 93.73 |
| 1000 | 148.75 | 153.65 | 99.20 |
| 1250 | 151.83 | 156.33 | 99.65 |
| 1600 | 149.83 | 157.83 | 98.68 |
| 2000 | 159.59 | 163.59 | 102.21 |

TABLE A.2.17

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION MSFC CPSS FMDM

DIRECTION y

PSD NO. 18

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 139.96 | 151.56 | 131.85 |
| 40 | 140.22 | 150.82 | 128.56 |
| 50 | 138.67 | 150.87 | 126.38 |
| 63 | 140.88 | 150.78 | 131.98 |
| 80 | 151.24 | 156.54 | 127.35 |
| 100 | 147.82 | 150.42 | 119.00 |
| 125 | 150.47 | 151.37 | 117.72 |
| 160 | 153.23 | 150.73 | 114.61 |
| 200 | 157.10 | 154.10 | 115.84 |
| 250 | 155.50 | 151.10 | 110.51 |
| 320 | 150.16 | 144.96 | 101.90 |
| 400 | 148.68 | 143.38 | 98.89 |
| 500 | 149.61 | 144.11 | 96.59 |
| 630 | 153.24 | 147.74 | 97.91 |
| 800 | 156.86 | 155.26 | 103.84 |
| 1000 | 156.68 | 161 58 | 107.13 |
| 1250 | 164.84 | 169.34 | 112.66 |
| 1600 | 164.23 | 172.23 | 113.88 |
| 2000 | 156.78 | 169.78 | 108.40 |

TABLE A.2.18

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION MSFC CPSS FMDM

DIRECTION z

PSD NO. 19

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 137.92 | 149.52 | 129.81 |
| 40 | 141.27 | 151.87 | 129.61 |
| 50 | 142.59 | 154.79 | 130.30 |
| 63 | 153.33 | 162.23 | 135.42 |
| 80 | 159.97 | 163.27 | 136.07 |
| 100 | 160.54 | 163.94 | 132.52 |
| 125 | 162.39 | 163.29 | 129.54 |
| 160 | 167.12 | 164.62 | 128.49 |
| 200 | 164.66 | 161.66 | 123.31 |
| 250 | 160.77 | 156.37 | 115.79 |
| 320 | 155.45 | 150.25 | 107.28 |
| 400 | 153.29 | 147.99 | 102.70 |
| 500 | 153.54 | 148.84 | 100.52 |
| 630 | 155.49 | 149.99 | 100.16 |
| 800 | 156.91 | 156.11 | 103.89 |
| 1000 | 158.23 | 163.13 | 108.68 |
| 1250 | 164.79 | 169.29 | 112.61 |
| 1600 | 161.41 | 169.41 | 110.26 |
| 2000 | 156.66 | 169.66 | 108.28 |

TABLE A.2.19

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Iowa Base

DIRECTION x

PSD NO. 8

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 140.04 | 151.64 | 131.93 |
| 40 | 137.89 | 148.49 | 126.23 |
| 50 | 136.75 | 148.95 | 124.46 |
| 63 | 143.71 | 152.61 | 125.81 |
| 80 | 142.14 | 147.44 | 118.25 |
| 100 | 141.01 | 144.41 | 112.99 |
| 125 | 145.74 | 146.64 | 112.98 |
| 160 | 144.87 | 142.37 | 106.25 |
| 200 | 145.93 | 142.93 | 104.57 |
| 250 | 145.62 | 141.22 | 100.64 |
| 320 | 148.93 | 143.73 | 100.68 |
| 400 | 153 31 | 148.01 | 102.72 |
| 500 | 157.03 | 151.53 | 104.01 |
| 630 | 161.20 | 155.70 | 105.87 |
| 800 | 155 14 | 154.34 | 102.12 |
| 1000 | 152.71 | 157.61 | 103.17 |
| 1250 | 152.36 | 156.86 | 100.18 |
| 1600 | 150.53 | 158.53 | 99.39 |
| 2000 | 148.05 | 161.05 | 99.67 |

TABLE A.2.20

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Iowa Base

DIRECTION y

PSD NO. 9

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 135.75 | 147.35 | 127.64 |
| 40 | 136.10 | 146 70 | 124.44 |
| 50 | 134.52 | 146.72 | 122.23 |
| 63 | 140.49 | 149.39 | 122.58 |
| 80 | 140.19 | 145.49 | 116.30 |
| 100 | 139.39 | 142.79 | 111.37 |
| 125 | 142.51 | 143.41 | 109.76 |
| 160 | 142.57 | 140.07 | 103.95 |
| 200 | 146.82 | 143.82 | 105.47 |
| 250 | 142.94 | 138.54 | 97.95 |
| 320 | 144.68 | 139.48 | 96.42 |
| 400 | 150.47 | 145.17 | 99.89 |
| 500 | 153.85 | 147.55 | 100.03 |
| 630 | 156.96 | 150 56 | 100.73 |
| 800 | 151.38 | 150.58 | 98.36 |
| 1000 | 152.85 | 156.95 | 102.50 |
| 1250 | 151.12 | 155.62 | 98.94 |
| 1600 | 150.68 | 150.68 | 99.53 |
| 2000 | 149.49 | 162.49 | 101.11 |

TABLE A.2.21

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Iowa Base

DIRECTION z

PSD NO. 10

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 134.96 | 146.56 | 126.85 |
| 40 | 140.80 | 151.40 | 129 14 |
| 50 | 141.18 | 153.38 | 128.89 |
| 63 | 145.13 | 154.03 | 127.22 |
| 80 | 143.82 | 149.12 | 119.93 |
| 100 | 143.25 | 146.65 | 115.22 |
| 125 | 145.35 | 146.25 | 112.60 |
| 160 | 147.87 | 145.37 | 109.24 |
| 200 | 152.85 | 149.85 | 111.50 |
| 250 | 155.07 | 150.67 | 110.08 |
| 320 | 156.60 | 151.40 | 108.35 |
| 400 | 159.70 | 154.40 | 109.20 |
| 500 | 161.93 | 156.43 | 108.92 |
| 630 | 166.02 | 160.52 | 110.69 |
| 800 | 159.16 | 158.36 | 106.14 |
| 1000 | 157.21 | 162.11 | 107.67 |
| 1250 | 155.94 | 160.44 | 103.76 |
| 1600 | 155.83 | 163.83 | 104.68 |
| 2000 | 153.75 | 166.75 | 105.37 |

TABLE A.2.22

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#3 (OL)

DIRECTION x

PSD NO. 121

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 121.12 | 132.72 | 113.01 |
| 40 | 121.54 | 132 14 | 109.88 |
| 50 | 118.27 | 130.47 | 105.98 |
| 63 | 127.60 | 136 50 | 109.69 |
| 80 | 125.66 | 130.86 | 101.66 |
| 100 | 127.99 | 131 39 | 99.97 |
| 125 | 133.34 | 134.24 | 100.58 |
| 160 | 135.11 | 132.61 | 96.49 |
| 200 | 136.29 | 133.29 | 94.93 |
| 250 | 132 32 | 127.92 | 87.34 |
| 320 | 129.14 | 123.94 | 80.80 |
| 400 | 130.02 | 124.72 | 79.43 |
| 500 | 136.27 | 130.77 | 83.25 |
| 630 | 139.02 | 133.52 | 83.69 |
| 800 | 138.41 | 137.61 | 85.39 |
| 1000 | 136.84 | 141.74 | 87.29 |
| 1250 | 138.98 | 143.48 | 86.80 |
| 1600 | 139.70 | 147.70 | 88.55 |
| 2000 | 138.89 | 151.80 | 89.71 |

TABLE A.2.23

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#3 (OL)

DIRECTION y

PSD NO. 122

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 118.72 | 130.32 | 110.61 |
| 40 | 122.45 | 133.05 | 110.79 |
| 50 | 117.88 | 130.88 | 105.59 |
| 63 | 120.03 | 137.03 | 111.13 |
| 80 | 133.91 | 139.21 | 110.02 |
| 100 | 133.41 | 136.81 | 105.39 |
| 125 | 132.99 | 133.89 | 100.24 |
| 160 | 130.22 | 135.72 | 99.60 |
| 200 | 137.17 | 134.17 | 95.81 |
| 250 | 130.63 | 135.23 | 94.64 |
| 320 | 130.93 | 133.73 | 90.68 |
| 400 | 142.82 | 137.52 | 92.23 |
| 500 | 130.75 | 134.25 | 86.73 |
| 630 | 141.93 | 136.47 | 86.60 |
| 800 | 140.18 | 130.38 | 87.16 |
| 1000 | 130.20 | 144.10 | 80.65 |
| 1250 | 130.65 | 143.15 | 86.47 |
| 1600 | 130.84 | 146.84 | 87.60 |
| 2000 | 137.06 | 150.06 | 88.68 |

TABLE A.2.24

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#6 (OL)

DIRECTION x

PSD NO. 103

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 140.98 | 152.58 | 132.87 |
| 40 | 138.22 | 148.82 | 126.56 |
| 50 | 133.74 | 145.94 | 121.45 |
| 63 | 145.20 | 154.70 | 127.29 |
| 80 | 142.10 | 147.40 | 118.20 |
| 100 | 146.08 | 149.48 | 118.06 |
| 125 | 149.96 | 150.86 | 117.21 |
| 160 | 155.81 | 153.31 | 117.18 |
| 200 | 160.84 | 157.84 | 119.48 |
| 250 | 160.32 | 155.92 | 115.33 |
| 320 | 160.20 | 155.00 | 111.95 |
| 400 | 163.52 | 158.22 | 112.94 |
| 500 | 160.56 | 164.06 | 116.54 |
| 630 | 160.15 | 163.65 | 113.82 |
| 800 | 167.31 | 166.51 | 114.20 |
| 1000 | 164.17 | 160.07 | 114.62 |
| 1250 | 166.52 | 171.02 | 114.34 |
| 1600 | 165.78 | 173.78 | 114.63 |
| 2000 | 164.00 | 177.00 | 115.62 |

TABLE A.2.25

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#6 (OL)

DIRECTION y

PSD NO. 104

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 139.50 | 151.10 | 131.39 |
| 40 | 142.68 | 153.28 | 131.02 |
| 50 | 139.52 | 151.72 | 127.23 |
| 63 | 140.28 | 149.18 | 122.38 |
| 80 | 144.42 | 149.72 | 120.53 |
| 100 | 149.08 | 152.48 | 121.06 |
| 125 | 158.44 | 159.34 | 125.68 |
| 160 | 161.70 | 159.20 | 123.17 |
| 200 | 163.77 | 160.77 | 122.41 |
| 250 | 163.23 | 158.83 | 118.24 |
| 320 | 166.50 | 161.30 | 118.25 |
| 400 | 167.85 | 162.55 | 117.27 |
| 500 | 167.63 | 162.13 | 114.61 |
| 630 | 170.62 | 165.12 | 115.29 |
| 800 | 167.96 | 167.16 | 114.94 |
| 1000 | 165.60 | 170.50 | 116.06 |
| 1250 | 167.10 | 171.60 | 115.01 |
| 1600 | 168.96 | 176.96 | 117.81 |
| 2000 | 169.76 | 182.76 | 121.38 |

TABLE A.2.26

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#6 (OL)

DIRECTION z

PSD NO. 105

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 138.39 | 149.99 | 130.28 |
| 40 | 138.58 | 149.18 | 126.92 |
| 50 | 141.31 | 153.51 | 129.82 |
| 63 | 149.81 | 157.91 | 131.11 |
| 80 | 147.96 | 153.26 | 124.87 |
| 100 | 149.73 | 153.13 | 121.71 |
| 125 | 155.21 | 156.11 | 122.46 |
| 160 | 157.52 | 155.02 | 118.99 |
| 200 | 159.52 | 156.52 | 118.17 |
| 250 | 156.82 | 152.42 | 111.84 |
| 320 | 159.98 | 154.78 | 111.73 |
| 400 | 162.47 | 157.17 | 111.88 |
| 500 | 164.39 | 158.89 | 111.37 |
| 630 | 168.11 | 162.61 | 112.78 |
| 800 | 167.89 | 166.29 | 114.87 |
| 1000 | 165.83 | 170.73 | 116.28 |
| 1250 | 169.16 | 173.66 | 116.98 |
| 1600 | 169.82 | 177.82 | 118.67 |
| 2000 | 168.11 | 181.11 | 119.73 |

TABLE A.2.27

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#5 (OL)

DIRECTION x

PSD NO. 100

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 148.38 | 151.98 | 132.27 |
| 40 | 139.76 | 150.36 | 128.10 |
| 50 | 135.35 | 147.55 | 123.06 |
| 63 | 144.96 | 153.86 | 127.06 |
| 80 | 142.41 | 147.71 | 118.51 |
| 100 | 146.52 | 149.92 | 118.50 |
| 125 | 152.37 | 153.27 | 119.61 |
| 160 | 157.44 | 154.94 | 118.82 |
| 200 | 161.82 | 158.82 | 120.47 |
| 250 | 161.17 | 156.77 | 116.18 |
| 320 | 162.42 | 157.22 | 114.16 |
| 400 | 165.51 | 160.21 | 114.92 |
| 500 | 172.19 | 166.69 | 119.17 |
| 630 | 173.87 | 167.57 | 117.74 |
| 800 | 171.28 | 170.48 | 118.27 |
| 1000 | 167.15 | 172.05 | 117.60 |
| 1250 | 166.27 | 170.77 | 114.09 |
| 1600 | 164.84 | 172.84 | 112.89 |
| 2000 | 163.84 | 176.84 | 114.65 |

TABLE A.2.28

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#5 (OL)

DIRECTION y

PSD NO. 101

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 142.06 | 153.66 | 133.95 |
| 40 | 144.74 | 155.34 | 133.08 |
| 50 | 140.19 | 152.39 | 127.98 |
| 63 | 142.85 | 150.95 | 124.15 |
| 80 | 146.58 | 151.88 | 122.69 |
| 100 | 151.82 | 155.22 | 123.80 |
| 125 | 161.84 | 162.74 | 129.09 |
| 160 | 165.34 | 162.84 | 126.72 |
| 200 | 168.83 | 165.83 | 127.47 |
| 250 | 164.88 | 160.48 | 119.89 |
| 320 | 164.32 | 159.12 | 116.07 |
| 400 | 167.42 | 162.12 | 116.83 |
| 500 | 167.90 | 162.40 | 114.89 |
| 630 | 167.69 | 162.19 | 112.36 |
| 800 | 166.81 | 165.21 | 112.99 |
| 1000 | 164.95 | 169.85 | 115.41 |
| 1250 | 163.11 | 167.61 | 110.93 |
| 1600 | 162.74 | 170.74 | 111.59 |
| 2000 | 163.53 | 176.53 | 115.15 |

TABLE A.2.29

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#5 (OL)

DIRECTION z

PSD NO. 161

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 141.95 | 153.55 | 133.84 |
| 40 | 141.25 | 151.85 | 129.59 |
| 50 | 142.33 | 154.53 | 130.04 |
| 63 | 150.38 | 150.28 | 132.48 |
| 80 | 150.84 | 155.34 | 126.15 |
| 100 | 152.21 | 155.61 | 124.18 |
| 125 | 157.29 | 158.19 | 124.53 |
| 160 | 161.82 | 158.52 | 122.40 |
| 200 | 164.87 | 161.87 | 122.71 |
| 250 | 162.17 | 157.77 | 117.18 |
| 320 | 165.46 | 160.26 | 117.20 |
| 400 | 163.41 | 158.11 | 112.82 |
| 500 | 163.25 | 157.75 | 110.23 |
| 630 | 167.55 | 162.05 | 112.22 |
| 800 | 166.79 | 165.99 | 113.78 |
| 1000 | 165.79 | 170.69 | 116.25 |
| 1250 | 166.36 | 170.86 | 114.18 |
| 1600 | 164.11 | 172.11 | 112.96 |
| 2000 | 162.85 | 175.85 | 114.47 |

TABLE A.2.30

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#2 (OL)

DIRECTION x

PSD NO. 97

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 149.85 | 160.65 | 140.94 |
| 40 | 146.34 | 156.94 | 134.68 |
| 50 | 140.87 | 152.27 | 127.78 |
| 63 | 147.00 | 155.90 | 129.10 |
| 80 | 144.91 | 150.21 | 121.81 |
| 100 | 143.64 | 147.84 | 115.62 |
| 125 | 150.61 | 151.51 | 117.85 |
| 160 | 155.51 | 153.81 | 116.89 |
| 200 | 158.76 | 155.76 | 117.41 |
| 250 | 160.29 | 155.89 | 115.30 |
| 320 | 165.18 | 159.98 | 116.93 |
| 400 | 171.12 | 165.82 | 120.54 |
| 500 | 175.77 | 170.27 | 122.75 |
| 630 | 174.21 | 168.71 | 118.88 |
| 800 | 170.57 | 169.77 | 117.56 |
| 1000 | 165.25 | 170.15 | 115.71 |
| 1250 | 159.10 | 163.60 | 106.92 |
| 1600 | 155.55 | 163.55 | 104.40 |
| 2000 | 158.31 | 171.31 | 109.93 |

TABLE A.2.31

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#2 (OL)

DIRECTION y

PSD NO. 98

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 152.37 | 163.97 | 144.26 |
| 40 | 152.26 | 162.86 | 140.60 |
| 50 | 149.26 | 161.46 | 136.97 |
| 63 | 155.58 | 164.48 | 137.68 |
| 80 | 155.44 | 160.74 | 131.54 |
| 100 | 157.16 | 160.56 | 129.14 |
| 125 | 155.21 | 156.11 | 122.46 |
| 160 | 156.45 | 153.95 | 117.83 |
| 200 | 159.20 | 156.20 | 117.85 |
| 250 | 162.61 | 158.21 | 117.62 |
| 320 | 167.37 | 162.17 | 119.12 |
| 400 | 167.97 | 162.67 | 117.38 |
| 500 | 173.31 | 167.81 | 120.20 |
| 630 | 175.13 | 169.63 | 119.80 |
| 800 | 174.16 | 173.36 | 121.15 |
| 1000 | 172.95 | 177.85 | 123.41 |
| 1250 | 170.76 | 175.26 | 118.58 |
| 1600 | 169.71 | 177.71 | 118.56 |
| 2000 | 171.75 | 184.75 | 123.37 |

TABLE A.2.32

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#2 (OL)

DIRECTION z

PSD NO. 99

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 154.58 | 166.18 | 146.47 |
| 40 | 152.87 | 162.67 | 140.41 |
| 50 | 149.62 | 161.82 | 137.32 |
| 63 | 151.99 | 160.89 | 134.89 |
| 80 | 147.46 | 152.76 | 123.57 |
| 100 | 147.25 | 150.65 | 119.22 |
| 125 | 154.67 | 155.47 | 121.81 |
| 160 | 159.46 | 156.96 | 120.83 |
| 200 | 167.44 | 164.44 | 126.00 |
| 250 | 168.46 | 164.06 | 123.48 |
| 320 | 171.82 | 166.62 | 123.56 |
| 400 | 174.74 | 169.44 | 124.16 |
| 500 | 176.18 | 170.68 | 123.16 |
| 630 | 170.44 | 164.94 | 115.11 |
| 800 | 165.97 | 165.17 | 112.96 |
| 1000 | 160.32 | 165.22 | 110.77 |
| 1250 | 157.93 | 162.43 | 105.75 |
| 1600 | 152.44 | 167.44 | 108.20 |
| 2000 | 163.10 | 176.10 | 114.72 |

TABLE A.2.33

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#4 (OL)

DIRECTION x

PSD NO. 37

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 141.06 | 152.66 | 132.95 |
| 40 | 136.63 | 147.23 | 124.98 |
| 50 | 135.16 | 147.36 | 122.87 |
| 63 | 142.32 | 151.22 | 124.42 |
| 80 | 140.05 | 146.25 | 117.06 |
| 100 | 144.68 | 148.08 | 116.65 |
| 125 | 149.03 | 149.93 | 116.28 |
| 160 | 155.30 | 152.80 | 116.68 |
| 200 | 158.25 | 155.25 | 116.90 |
| 250 | 158.91 | 154.51 | 113.92 |
| 320 | 158.85 | 153.65 | 110.60 |
| 400 | 167.90 | 162.60 | 117.31 |
| 500 | 174.11 | 168.61 | 121.09 |
| 630 | 179.36 | 173.86 | 124.03 |
| 800 | 168.12 | 167.32 | 115.11 |
| 1000 | 169.86 | 173.96 | 119.51 |
| 1250 | 164.60 | 169.10 | 112.42 |
| 1600 | 157.94 | 165.94 | 106.79 |
| 2000 | 152.58 | 165.58 | 104.20 |

TABLE A.2.34

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#4 (OL)

DIRECTION y

PSD NO. 38

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 135.47 | 147.87 | 127.36 |
| 40 | 137.68 | 148.28 | 126.82 |
| 50 | 135.33 | 147.63 | 123.04 |
| 63 | 139.87 | 147.97 | 121.17 |
| 80 | 140.38 | 145.68 | 116.49 |
| 100 | 139.94 | 143.34 | 111.92 |
| 125 | 144.72 | 145.62 | 111.97 |
| 160 | 152.97 | 150.47 | 114.35 |
| 200 | 155.28 | 152.20 | 113.84 |
| 250 | 157.15 | 152.75 | 112.16 |
| 320 | 160.95 | 155.75 | 112.69 |
| 400 | 165.87 | 160.57 | 115.28 |
| 500 | 167.18 | 161.68 | 114.16 |
| 630 | 172.90 | 167.49 | 117.66 |
| 800 | 175.35 | 174.55 | 122.33 |
| 1000 | 166.55 | 171.45 | 117.89 |
| 1250 | 163.58 | 168.88 | 111.48 |
| 1600 | 162.41 | 170.41 | 111.27 |
| 2000 | 159.86 | 172.86 | 111.48 |

TABLE A.2.35

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#4 (OL)

DIRECTION z

PSD NO. 39

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 136.69 | 148.29 | 128.57 |
| 40 | 137.46 | 148.06 | 125.80 |
| 50 | 136.88 | 149.88 | 124.59 |
| 63 | 142.75 | 151.65 | 124.85 |
| 80 | 142.01 | 147.31 | 118.12 |
| 100 | 145.99 | 149.30 | 117.97 |
| 125 | 150.14 | 151.04 | 117.38 |
| 160 | 152.20 | 149.70 | 113.57 |
| 200 | 153.62 | 150.62 | 112.26 |
| 250 | 157.35 | 152.95 | 112.36 |
| 320 | 156.40 | 151.20 | 108.24 |
| 400 | 161.72 | 156.42 | 111.13 |
| 500 | 169.17 | 163.67 | 116.15 |
| 630 | 177.80 | 171.50 | 121.76 |
| 800 | 178.12 | 177.32 | 125.10 |
| 1000 | 171.21 | 176.11 | 121.66 |
| 1250 | 165.88 | 170.38 | 113.70 |
| 1600 | 160.50 | 160.50 | 100.45 |
| 2000 | 158.53 | 171.53 | 110.15 |

TABLE A.2.36

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#1 (OL)

DIRECTION x

PSD NO. 34

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 151.32 | 162.92 | 143.21 |
| 40 | 149.57 | 160.17 | 137.91 |
| 50 | 145.55 | 157.76 | 133.26 |
| 63 | 153.08 | 161.98 | 135.17 |
| 80 | 150.58 | 155.88 | 126.69 |
| 100 | 148.73 | 152.13 | 120.71 |
| 125 | 154.85 | 155.75 | 122.09 |
| 160 | 159.17 | 156.67 | 120.55 |
| 200 | 162.52 | 159.52 | 121.17 |
| 250 | 162.65 | 158.25 | 117.67 |
| 320 | 168.40 | 163.20 | 120.14 |
| 400 | 175.17 | 169.87 | 124.59 |
| 500 | 181.60 | 176.10 | 128.58 |
| 630 | 180.09 | 174.59 | 124.76 |
| 800 | 171.90 | 171.10 | 118.88 |
| 1000 | 166.91 | 171.81 | 117.36 |
| 1250 | 163.76 | 168.26 | 111.58 |
| 1600 | 162.39 | 170.39 | 111.24 |
| 2000 | 167.75 | 180.75 | 119.37 |

TABLE A.2.37

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#1 (OL)

DIRECTION y

PSD NO. 35

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 146.63 | 158.23 | 138.52 |
| 40 | 143.98 | 154.58 | 132.32 |
| 50 | 145.72 | 157.92 | 133.43 |
| 63 | 154.31 | 163.21 | 136.41 |
| 80 | 151.36 | 156.66 | 127.47 |
| 100 | 150.14 | 153.54 | 122.12 |
| 125 | 162.97 | 163.87 | 130.22 |
| 160 | 160.83 | 158.33 | 122.20 |
| 200 | 164.81 | 161.81 | 123.46 |
| 250 | 162.82 | 158.42 | 117.84 |
| 320 | 164.61 | 159.41 | 116.36 |
| 400 | [illegible] | 164.57 | 119.28 |
| 500 | 176.82 | 170.52 | 123.00 |
| 630 | 176.16 | 170.66 | 120.83 |
| 800 | 173.74 | 172.94 | 120.73 |
| 1000 | 172.71 | 177.61 | 123.16 |
| 1250 | 173.75 | 170.25 | 121.57 |
| 1600 | 173.34 | 181.34 | 122.19 |
| 2000 | 176.37 | 189.37 | 127.99 |

TABLE A.2.38

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#1 (OL)

DIRECTION z

PSD NO. 36

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 145.40 | 157.00 | 137.29 |
| 40 | 144.41 | 155.01 | 132.75 |
| 50 | 142.28 | 154.48 | 129.99 |
| 63 | 150.86 | 159.76 | 132.96 |
| 80 | 150.40 | 155.70 | 126.51 |
| 100 | 151.26 | 154.66 | 123.24 |
| 125 | 159.05 | 159.95 | 126.30 |
| 160 | 161.53 | 159.03 | 122.91 |
| 200 | 168.50 | 165.50 | 127.14 |
| 250 | 168.70 | 164.30 | 123.71 |
| 320 | 166.95 | 161.75 | 118.69 |
| 400 | 174.90 | 169.69 | 124.40 |
| 500 | 175.20 | 169.70 | 122.18 |
| 630 | 173.73 | 168.23 | 118.40 |
| 800 | 165.21 | 164.41 | 112.20 |
| 1000 | 159.73 | 164.63 | 110.18 |
| 1250 | 160.55 | 165.05 | 108.37 |
| 1600 | 161.24 | 169.24 | 110.09 |
| 2000 | 163.66 | 176.66 | 115.28 |

TABLE A.2.39

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet HP#3 (OL)

DIRECTION x

PSD NO. 11

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 141.36 | 152.96 | 133.25 |
| 40 | 139.19 | 149.79 | 127.53 |
| 50 | 135.85 | 148.85 | 123.56 |
| 63 | 145.71 | 154.61 | 127 81 |
| 80 | 144.36 | 149.66 | 128.47 |
| 100 | 146.75 | 150.15 | 118.72 |
| 125 | 150.80 | 151.70 | 118.04 |
| 160 | 150.73 | 156.23 | 120.10 |
| 200 | 160.87 | 157.87 | 119.51 |
| 250 | 161.05 | 156.65 | 116.07 |
| 320 | 161.79 | 156.59 | 113.53 |
| 400 | 160.87 | 163.57 | 118.20 |
| 500 | 171.15 | 165.65 | 118.13 |
| 630 | 172.23 | 166.73 | 116.90 |
| 800 | 171.42 | 170.62 | 118.40 |
| 1000 | 172.54 | 177.44 | 122 90 |
| 1250 | 175.40 | 179.90 | 123.31 |
| 1600 | 175.25 | 183.25 | 124 10 |
| 2000 | 168.34 | 181.34 | 119.06 |

TABLE A.2 40

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet HP#3 (OL)

DIRECTION y

PSD NO. 12

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 137.40 | 149.00 | 129.29 |
| 40 | 137.70 | 148.30 | 126.04 |
| 50 | 137.44 | 149.64 | 125.15 |
| 63 | 143.75 | 152.65 | 125.85 |
| 80 | 143.49 | 148.70 | 119.60 |
| 100 | 146.27 | 149.67 | 118.24 |
| 125 | 150.15 | 151.05 | 117.39 |
| 160 | 150.75 | 156.25 | 120.13 |
| 200 | 163.50 | 160.50 | 122.14 |
| 250 | 161.72 | 157.32 | 116.74 |
| 320 | 163.61 | 158.41 | 115.36 |
| 400 | 166.88 | 160.78 | 115.50 |
| 500 | 168.36 | 162.86 | 115.34 |
| 630 | 172 65 | 167 15 | 117.32 |
| 800 | 172.86 | 172.86 | 119.85 |
| 1000 | 175 05 | 170.05 | 125.50 |
| 1250 | 176.91 | 181.41 | 124.73 |
| 1600 | 178.50 | 178.50 | 119.35 |
| 2000 | 165.43 | 178.43 | 117.05 |

TABLE A.2.41

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet HP#3 (OL)

DIRECTION z

PSD NO. 13

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 137.20 | 148.80 | 129.00 |
| 40 | 136.30 | 146.90 | 124.64 |
| 50 | 137.17 | 149.37 | 124.88 |
| 63 | 144.49 | 153.39 | 126.59 |
| 80 | 145.64 | 150.94 | 121.75 |
| 100 | 148.64 | 152.04 | 120.62 |
| 125 | 155.47 | 156.37 | 122.72 |
| 160 | 155.17 | 152.67 | 116.55 |
| 200 | 156.11 | 153.11 | 114.75 |
| 250 | 161.11 | 156.71 | 116.12 |
| 320 | 160.71 | 155.51 | 112.46 |
| 400 | 165.30 | 160.00 | 114.72 |
| 500 | 164.98 | 159.48 | 111.96 |
| 630 | 170.87 | 165.37 | 115.54 |
| 800 | 170.77 | 169.97 | 117.75 |
| 1000 | 176.43 | 181.33 | 126.88 |
| 1250 | 180.81 | 185.31 | 128.63 |
| 1600 | 174.94 | 182.94 | 123.79 |
| 2000 | 167.44 | 180.44 | 119.06 |

TABLE A.2.42

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet HP#1 (OL)

DIRECTION x

PSD NO. 4

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 144.77 | 156.37 | 136.66 |
| 40 | 143.88 | 153.68 | 131.42 |
| 50 | 139.24 | 151.44 | 126.95 |
| 63 | 151.96 | 160.86 | 134.05 |
| 80 | 147.48 | 152.78 | 123.59 |
| 100 | 143.46 | 146.86 | 115.43 |
| 125 | 150.99 | 151.89 | 118.24 |
| 160 | 150.40 | 156.90 | 120.78 |
| 200 | 162.98 | 159.98 | 121.62 |
| 250 | 159.20 | 154.80 | 114.21 |
| 320 | 160.07 | 154.87 | 111.82 |
| 400 | 161.53 | 156.23 | 110.94 |
| 500 | 162.88 | 157.38 | 109.86 |
| 630 | 165.10 | 159.60 | 109.77 |
| 800 | 165.37 | 164.57 | 112.36 |
| 1000 | 169.43 | 174.33 | 119.88 |
| 1250 | 170.08 | 174.58 | 117.90 |
| 1600 | 166.64 | 174.64 | 115.50 |
| 2000 | 161.99 | 174.99 | 113.61 |

TABLE A.2.43

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet HP#1 (OL)

DIRECTION y

PSD NO. 60

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 143.39 | 154.99 | 135.28 |
| 40 | 143.91 | 154.51 | 132.25 |
| 50 | 144.52 | 156.72 | 132.23 |
| 63 | 147.89 | 156.79 | 129.99 |
| 80 | 149.94 | 155.24 | 126.85 |
| 100 | 153.72 | 157.12 | 125.70 |
| 125 | 163.86 | 164.76 | 131.11 |
| 160 | 164.81 | 162.31 | 126.19 |
| 200 | 169.79 | 166.79 | 128.44 |
| 250 | 165.95 | 161.55 | 120.96 |
| 320 | 169.59 | 164.39 | 121.33 |
| 400 | 170.77 | 165.47 | 120.18 |
| 500 | 173.14 | 167.64 | 120.13 |
| 630 | 173.92 | 168.42 | 118.59 |
| 800 | 171.68 | 170.80 | 118.58 |
| 1000 | 168.22 | 173.12 | 118.68 |
| 1250 | 162.57 | 167.07 | 110.39 |
| 1600 | 161.91 | 169.91 | 110.76 |
| 2000 | 158.71 | 171.71 | 110.33 |

TABLE A.2.44

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet HP#1 (OL)

DIRECTION z

PSD NO. 61

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 141.20 | 152.80 | 133.08 |
| 40 | 138.37 | 148.97 | 126.71 |
| 50 | 134.44 | 146.64 | 122.15 |
| 63 | 146.90 | 155.80 | 129.00 |
| 80 | 144.13 | 149.43 | 120.24 |
| 100 | 147.44 | 150.84 | 119.42 |
| 125 | 151.95 | 152.85 | 119.20 |
| 160 | 159.39 | 156.89 | 120.77 |
| 200 | 164.25 | 161.25 | 122.90 |
| 250 | 160.25 | 155.85 | 115.26 |
| 320 | 158.63 | 153.43 | 110.38 |
| 400 | 161.59 | 156.20 | 111.00 |
| 500 | 165.34 | 159.84 | 112.33 |
| 630 | 168.97 | 163.47 | 113.64 |
| 800 | 169.88 | 168.28 | 116.06 |
| 1000 | 167.48 | 172.38 | 117.94 |
| 1250 | 164.74 | 169.24 | 112.56 |
| 1600 | 162.49 | 170.49 | 111.34 |
| 2000 | 161.92 | 174.92 | 113.54 |

TABLE A.2.45

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#17 (IL)

DIRECTION x

PSD NO. 124

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 135.62 | 147.22 | 127.51 |
| 40 | 136.31 | 146.91 | 124.65 |
| 50 | 137.70 | 149.90 | 125.41 |
| 63 | 150.80 | 159.70 | 132.90 |
| 80 | 147.80 | 153.10 | 124.00 |
| 100 | 149.31 | 152.71 | 121.20 |
| 125 | 154.17 | 155.07 | 121.42 |
| 160 | 154.50 | 152.00 | 115.88 |
| 200 | 154.65 | 151.65 | 113.20 |
| 250 | 154.03 | 149.63 | 109.05 |
| 320 | 155.53 | 150.33 | 107.28 |
| 400 | 153.70 | 148.40 | 103.20 |
| 500 | 160.94 | 155.44 | 107.93 |
| 630 | 168.73 | 163.23 | 113.40 |
| 800 | 174.39 | 173.50 | 121.37 |
| 1000 | 176.38 | 181.20 | 126.75 |
| 1250 | 178.27 | 182.77 | 126.09 |
| 1600 | 161.95 | 169.95 | 110.80 |
| 2000 | 150.75 | 163.75 | 102.37 |

TABLE A.2.46

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#17 (IL)

DIRECTION y

PSD NO. 125

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 144.94 | 156.54 | 136.83 |
| 40 | 142.78 | 153.38 | 131.12 |
| 50 | 139.08 | 151.28 | 126.79 |
| 63 | 152.87 | 161.77 | 134.97 |
| 80 | 148.11 | 153.41 | 124.22 |
| 100 | 144.26 | 147.66 | 116.24 |
| 125 | 154.66 | 155.56 | 121.91 |
| 160 | 158.89 | 156.39 | 120.27 |
| 200 | 158.78 | 155.78 | 117.43 |
| 250 | 155.82 | 151.42 | 110.83 |
| 320 | 158.59 | 153.39 | 110.34 |
| 400 | 157.53 | 152.23 | 106.94 |
| 500 | 158.33 | 152.83 | 105.32 |
| 630 | 161.97 | 156.47 | 106.65 |
| 800 | 162.15 | 161.35 | 109.14 |
| 1000 | 159.73 | 164.63 | 110.19 |
| 1250 | 156.58 | 161.08 | 104.40 |
| 1600 | 158.50 | 166.50 | 107.35 |
| 2000 | 155.97 | 168.97 | 107.59 |

TABLE A.2.47

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#17 (IL)

DIRECTION z

PSD NO. 126

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 131.63 | 143.23 | 123.52 |
| 40 | 131.89 | 142.49 | 120.23 |
| 50 | 133.50 | 145.79 | 121.30 |
| 63 | 139.21 | 148.11 | 121.30 |
| 80 | 138.90 | 144.20 | 115.01 |
| 100 | 141.17 | 144.57 | 113.15 |
| 125 | 145.84 | 146.74 | 113.08 |
| 160 | 146.20 | 143.70 | 107.66 |
| 200 | 143.75 | 140.75 | 102.39 |
| 250 | 141.98 | 137.58 | 97.00 |
| 320 | 140.94 | 135.74 | 92.68 |
| 400 | 144.80 | 139.50 | 94.21 |
| 500 | 142.60 | 137.10 | 89.58 |
| 630 | 142.24 | 136.74 | 86.91 |
| 800 | 144.86 | 144.06 | 91 84 |
| 1000 | 141.93 | 146.83 | 92.38 |
| 1250 | 140.13 | 144.63 | 87.95 |
| 1600 | 135.24 | 143.24 | 84.00 |
| 2000 | 135.31 | 148.31 | 86.93 |

TABLE A.2.48

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet HP#11 (IL)

DIRECTION x

PSD NO. 127

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 135.92 | 147.52 | 127.81 |
| 40 | 137.70 | 148.30 | 126.04 |
| 50 | 134.54 | 146.74 | 122.25 |
| 63 | 144.75 | 153.65 | 126.85 |
| 80 | 143.21 | 148.51 | 119.32 |
| 100 | 146.25 | 149.65 | 118.23 |
| 125 | 154.86 | 154.96 | 121.30 |
| 160 | 156.17 | 153.67 | 117.54 |
| 200 | 152.62 | 149.62 | 111.27 |
| 250 | 153.83 | 149.43 | 108.85 |
| 320 | 154.90 | 149.70 | 106.65 |
| 400 | 158.44 | 153.14 | 107.85 |
| 500 | 162.00 | 156.50 | 108.98 |
| 630 | 161.23 | 155 73 | 105.91 |
| 800 | 161.54 | 160.74 | 108.53 |
| 1000 | 153.88 | 158.78 | 104.33 |
| 1250 | 156.36 | 160.86 | 104.18 |
| 1600 | 154.63 | 162.63 | 103.48 |
| 2000 | 153.61 | 166 61 | 105.23 |

TABLE A.2.49

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet HP#11 (IL)

DIRECTION y

PSD NO. 128

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 160.67 | 172.27 | 152.55 |
| 40 | 157.36 | 167.96 | 145.70 |
| 50 | 156.77 | 168.97 | 144.48 |
| 63 | 161.55 | 170.45 | 143.64 |
| 80 | 160.19 | 165.49 | 136.30 |
| 100 | 164.87 | 167.47 | 136.04 |
| 125 | 168.38 | 169.28 | 135.62 |
| 160 | 175.14 | 172.64 | 136.51 |
| 200 | 177.91 | 174.91 | 136.56 |
| 250 | 179.45 | 175.85 | 134.46 |
| 320 | 181.77 | 176.57 | 133.52 |
| 400 | 192.15 | 186.85 | 141.57 |
| 500 | 193.62 | 188.12 | 140.60 |
| 630 | 192.35 | 186.85 | 137.82 |
| 800 | 194.89 | 193.29 | 141.87 |
| 1000 | 189.57 | 194.47 | 140.82 |
| 1250 | 181.89 | 185.59 | 128.92 |
| 1600 | 173.56 | 181.56 | 122.42 |
| 2000 | 169.22 | 182.22 | 120.84 |

TABLE A.2.50

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet HP#11 (IL)

DIRECTION z

PSD NO. 129

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 159.51 | 171.11 | 151.48 |
| 40 | 155.81 | 166.41 | 144.15 |
| 50 | 155.84 | 167.24 | 142.75 |
| 63 | 163.70 | 172.60 | 145.80 |
| 80 | 161.21 | 166.51 | 137.31 |
| 100 | 162.63 | 166.03 | 134.61 |
| 125 | 165.62 | 166.52 | 132.87 |
| 160 | 168.18 | 165.68 | 129.55 |
| 200 | 170.77 | 167.77 | 129.42 |
| 250 | 170.28 | 165.88 | 125.29 |
| 320 | 171.16 | 165.96 | 122.91 |
| 400 | 179.88 | 174.58 | 129.30 |
| 500 | 186.94 | 181.44 | 133.92 |
| 630 | 190.81 | 184.51 | 134.68 |
| 800 | 192.46 | 191.66 | 139.45 |
| 1000 | 188.64 | 193.54 | 139.89 |
| 1250 | 182.83 | 186.53 | 129.85 |
| 1600 | 177.17 | 185.17 | 126.83 |
| 2000 | 176.20 | 189.20 | 127.82 |

TABLE A.2.51

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#12 (IL)

DIRECTION x

PSD NO. 130

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 140.25 | 151.85 | 132.14 |
| 40 | 138.46 | 149.06 | 126.80 |
| 50 | 134.42 | 146.62 | 122.13 |
| 63 | 144.22 | 153.12 | 126.32 |
| 80 | 147.16 | 152.46 | 123.27 |
| 100 | 143.80 | 147.20 | 115.78 |
| 125 | 146.62 | 147.52 | 113.86 |
| 160 | 151.83 | 149.33 | 113.21 |
| 200 | 152.27 | 149.27 | 110.92 |
| 250 | 153.07 | 148.67 | 108.08 |
| 320 | 155.03 | 149.83 | 106.78 |
| 400 | 157.42 | 152.12 | 106.84 |
| 500 | 162.23 | 156.73 | 109.21 |
| 630 | 165.50 | 160.00 | 110.17 |
| 800 | 166.45 | 165.65 | 113.44 |
| 1000 | 173.77 | 170.67 | 124.22 |
| 1250 | 161.45 | 165.95 | 109.27 |
| 1600 | 158.94 | 166.94 | 107.79 |
| 2000 | 156.62 | 169.62 | 108.24 |

TABLE A.2.52

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#12 (IL)

DIRECTION y

PSD NO. 131

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 138.52 | 150.12 | 130.41 |
| 40 | 137.13 | 147.73 | 125.47 |
| 50 | 135.53 | 147.73 | 123.24 |
| 63 | 142.41 | 151.31 | 124.51 |
| 80 | 143.61 | 148.91 | 119.72 |
| 100 | 142.94 | 146.34 | 114.92 |
| 125 | 147.75 | 148.65 | 114.99 |
| 160 | 148.10 | 145.60 | 109.48 |
| 200 | 148.38 | 145.38 | 107.03 |
| 250 | 152.68 | 148.28 | 107.70 |
| 320 | 153.21 | 148.81 | 104.96 |
| 400 | 154.64 | 149.34 | 104.05 |
| 500 | 160.60 | 155.10 | 107.58 |
| 630 | 165.13 | 159.63 | 109.80 |
| 800 | 167.50 | 166.70 | 114.48 |
| 1000 | 174.43 | 170.33 | 124.88 |
| 1250 | 162.92 | 167.42 | 110.74 |
| 1600 | 158.89 | 166.89 | 107.74 |
| 2000 | 156.88 | 169.88 | 107.70 |

TABLE A.2.53

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#12 (IL)

DIRECTION z

PSD NO. 132

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 136.29 | 147.89 | 128.18 |
| 40 | 135.66 | 146.26 | 124.00 |
| 50 | 137.92 | 150.12 | 125.63 |
| 63 | 144.52 | 153.42 | 126.62 |
| 80 | 140.86 | 155.16 | 125.97 |
| 100 | 146.77 | 150.17 | 118.75 |
| 125 | 151.81 | 151.91 | 118.25 |
| 160 | 150.77 | 156.27 | 120.14 |
| 200 | 150.23 | 155.23 | 116.38 |
| 250 | 162.43 | 150.03 | 117.44 |
| 320 | 162.52 | 157.32 | 114.26 |
| 400 | 164.14 | 150.84 | 113.56 |
| 500 | 163.57 | 150.07 | 110.55 |
| 630 | 165.32 | 150.82 | 109.99 |
| 800 | 162.39 | 161.59 | 109.38 |
| 1000 | 164.50 | 160.40 | 114.95 |
| 1250 | 161.42 | 165.02 | 109.24 |
| 1600 | 164.99 | 172.99 | 113.84 |
| 2000 | 167.51 | 180.51 | 119.13 |

TABLE A.2.54

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#7 (IL)

DIRECTION x

PSD NO. 106

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 136.26 | 147.86 | 128.15 |
| 40 | 134.92 | 145.52 | 123.26 |
| 50 | 138.13 | 150.33 | 125.84 |
| 63 | 145.71 | 154.61 | 127.80 |
| 80 | 144.58 | 149.88 | 129.69 |
| 100 | 143.25 | 146.65 | 115.23 |
| 125 | 147.45 | 148.35 | 114.70 |
| 160 | 153.73 | 151.23 | 115.11 |
| 200 | 155.88 | 152.88 | 114.52 |
| 250 | 156.82 | 152.42 | 111.84 |
| 320 | 158.93 | 153.73 | 110.68 |
| 400 | 165.23 | 159.93 | 114.65 |
| 500 | 171.14 | 165.64 | 118.12 |
| 630 | 173.46 | 167.96 | 118.13 |
| 800 | 168.73 | 167.93 | 115.71 |
| 1000 | 164.86 | 160.76 | 115.31 |
| 1250 | 162.18 | 166.68 | 110.80 |
| 1600 | 156.98 | 164.98 | 105.83 |
| 2000 | 158.86 | 171.86 | 110.48 |

TABLE A.2.55

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#7 (IL)

DIRECTION y

PSD NO. 107

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 139.69 | 151.29 | 131.58 |
| 40 | 140.52 | 151.12 | 128.86 |
| 50 | 141.94 | 154.14 | 129.65 |
| 63 | 145.81 | 154.71 | 127.90 |
| 80 | 149.77 | 155.07 | 125.88 |
| 100 | 152.23 | 155.63 | 124.21 |
| 125 | 159.10 | 160.00 | 126.35 |
| 160 | 162.82 | 160.32 | 124.10 |
| 200 | 166.13 | 163.13 | 124.77 |
| 250 | 165.38 | 160.08 | 120.30 |
| 320 | 162.71 | 157.51 | 114.45 |
| 400 | 167.56 | 162.26 | 116.97 |
| 500 | 173.66 | 168.16 | 120.65 |
| 630 | 174.84 | 169.34 | 119.51 |
| 800 | 175.32 | 174.52 | 122.30 |
| 1000 | 170.11 | 175.01 | 120.56 |
| 1250 | 166.92 | 171.42 | 114.74 |
| 1600 | 162.67 | 170.67 | 111.52 |
| 2000 | 158.15 | 171.15 | 109.77 |

TABLE A.2.56

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#7 (IL)

DIRECTION z

PSD NO. 108

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 139.30 | 150.90 | 131.19 |
| 40 | 135.49 | 146.89 | 123.83 |
| 50 | 131.70 | 143.90 | 119.41 |
| 63 | 145.86 | 154.76 | 127.96 |
| 80 | 144.91 | 150.21 | 121.82 |
| 100 | 143.35 | 146.75 | 115.33 |
| 125 | 150.60 | 151.50 | 117.85 |
| 160 | 154.33 | 151.83 | 115.71 |
| 200 | 155.86 | 152.86 | 114.50 |
| 250 | 155.79 | 151.39 | 110.81 |
| 320 | 156.50 | 151.30 | 108.24 |
| 400 | 159.87 | 154.57 | 109.28 |
| 500 | 164.71 | 159.21 | 111.70 |
| 630 | 168.89 | 163.39 | 113.56 |
| 800 | 165.33 | 164.53 | 112.32 |
| 1000 | 162.63 | 167.53 | 113.88 |
| 1250 | 159.52 | 164.02 | 107.34 |
| 1600 | 158.58 | 166.58 | 107.43 |
| 2000 | 153.68 | 166.68 | 105.30 |

TABLE A.2.57

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#10 (IL)

DIRECTION x

PSD NO. 109

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 135.92 | 147.52 | 127.81 |
| 40 | 137.23 | 147.83 | 125.57 |
| 50 | 141.96 | 154.16 | 129.67 |
| 63 | 151.91 | 160.81 | 134.81 |
| 80 | 147.27 | 152.57 | 123.38 |
| 100 | 150.31 | 153.71 | 122.20 |
| 125 | 154.28 | 155.18 | 121.53 |
| 160 | 155.72 | 153.22 | 117.89 |
| 200 | 155.99 | 152.99 | 114.64 |
| 250 | 153.83 | 148.63 | 108.85 |
| 320 | 153.58 | 148.38 | 105.33 |
| 400 | 153.48 | 148.18 | 102.98 |
| 500 | 160.75 | 155.25 | 107.73 |
| 630 | 166.66 | 161.16 | 111.33 |
| 800 | 167.86 | 167.06 | 114.84 |
| 1000 | 166.72 | 171.62 | 117.18 |
| 1250 | 164.53 | 169.83 | 112.35 |
| 1600 | 165.55 | 173.55 | 114.40 |
| 2000 | 165.70 | 178.70 | 117.32 |

TABLE A.2.58

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#10 (IL)

DIRECTION y

PSD NO. 110

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 138.81 | 150.41 | 130.69 |
| 40 | 139.42 | 150.02 | 127.76 |
| 50 | 142.40 | 154.60 | 130.11 |
| 63 | 144.89 | 153.79 | 126.99 |
| 80 | 145.26 | 150.56 | 121.36 |
| 100 | 147.10 | 150.59 | 119.17 |
| 125 | 153.64 | 154.54 | 120.89 |
| 160 | 157.83 | 155.33 | 119.20 |
| 200 | 158.65 | 155.65 | 117.30 |
| 250 | 159.18 | 154.78 | 114.19 |
| 320 | 160.34 | 155.14 | 112.08 |
| 400 | 159.11 | 153.81 | 108.52 |
| 500 | 162.97 | 157.47 | 109.95 |
| 630 | 169.82 | 163.52 | 113.69 |
| 800 | 161.26 | 160.46 | 108.24 |
| 1000 | 157.50 | 162.40 | 107.95 |
| 1250 | 154.41 | 158.91 | 102.23 |
| 1600 | 162.61 | 170.61 | 111.47 |
| 2000 | 165.70 | 178.70 | 117.32 |

TABLE A.2.59

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2 9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#10 (IL)

DIRECTION z

PSD NO. 111

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 143.22 | 154.82 | 135.11 |
| 40 | 142.18 | 152.78 | 130.52 |
| 50 | 137.97 | 150.17 | 125.68 |
| 63 | 148.37 | 157.27 | 130.47 |
| 80 | 148.85 | 154.15 | 124.96 |
| 100 | 148.40 | 151.80 | 120.47 |
| 125 | 152.14 | 153.84 | 119.38 |
| 160 | 156.47 | 153.97 | 117.84 |
| 200 | 161.92 | 158.92 | 120.57 |
| 250 | 165.21 | 160.81 | 120.22 |
| 320 | 163.55 | 158.35 | 115.20 |
| 400 | 161.36 | 156.06 | 110.78 |
| 500 | 162.66 | 157.16 | 109.64 |
| 630 | 166.14 | 160.64 | 110.81 |
| 800 | 163.91 | 163.11 | 110.90 |
| 1000 | 162.23 | 167.13 | 112.68 |
| 1250 | 159.10 | 163.60 | 106.92 |
| 1600 | 166.02 | 174.02 | 114.87 |
| 2000 | 168.40 | 181.40 | 120.11 |

TABLE A.2.60

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#14 (IL)

DIRECTION x

PSD NO. 72

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 133.50 | 145.10 | 125.39 |
| 40 | 134.74 | 145.34 | 123.08 |
| 50 | 137.71 | 149.91 | 125.41 |
| 63 | 150.70 | 159.80 | 132.80 |
| 80 | 145.73 | 151.03 | 121.84 |
| 100 | 145.85 | 149.25 | 117.83 |
| 125 | 148.06 | 148.96 | 115.31 |
| 160 | 152.34 | 149.84 | 113.72 |
| 200 | 157.32 | 154.32 | 115.97 |
| 250 | 158.00 | 153.60 | 113.01 |
| 320 | 157.71 | 152.51 | 109.46 |
| 400 | 160.15 | 154.85 | 109.57 |
| 500 | 169.63 | 164.13 | 116.62 |
| 630 | 174.07 | 168.57 | 118.75 |
| 800 | 166.89 | 166.89 | 113.88 |
| 1000 | 161.63 | 166.53 | 112.08 |
| 1250 | 156.43 | 160.93 | 104.25 |
| 1600 | 152.80 | 160.80 | 101.65 |
| 2000 | 154.20 | 167.20 | 105.82 |

TABLE A.2.61

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2 9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#14 (IL)

DIRECTION y

PSD NO. 73

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 138.18 | 149.78 | 138.07 |
| 40 | 138.25 | 148.85 | 126.59 |
| 50 | 141.66 | 153.86 | 129.37 |
| 63 | 142.98 | 151.88 | 125.08 |
| 80 | 142.20 | 147.50 | 118.31 |
| 100 | 145.15 | 148.55 | 117.13 |
| 125 | 152.87 | 152.97 | 119.31 |
| 160 | 155.87 | 152.57 | 116.44 |
| 200 | 156.20 | 153.20 | 114.85 |
| 250 | 155.53 | 151.13 | 110.55 |
| 320 | 156.65 | 151.45 | 108.40 |
| 400 | 155.26 | 149.96 | 104.67 |
| 500 | 158.81 | 153.31 | 105.70 |
| 630 | 164.51 | 159.01 | 109.18 |
| 800 | 164.04 | 163.24 | 111.02 |
| 1000 | 163.30 | 168.20 | 113.75 |
| 1250 | 156.62 | 161.12 | 104.44 |
| 1600 | 154.82 | 162.02 | 102.87 |
| 2000 | 152.83 | 165.83 | 104.45 |

TABLE A.2.62

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#14 (IL)

DIRECTION z

PSD NO. 74

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 139.96 | 151.56 | 131.84 |
| 40 | 141.16 | 151.76 | 129.50 |
| 50 | 143.04 | 155.24 | 130.75 |
| 63 | 148.48 | 157.38 | 130.58 |
| 80 | 145.70 | 151.00 | 121.81 |
| 100 | 147.12 | 150.52 | 119.09 |
| 125 | 153.97 | 154.87 | 121.22 |
| 160 | 160.27 | 157.77 | 121.65 |
| 200 | 165.01 | 162.01 | 123.65 |
| 250 | 160.90 | 156.50 | 115.92 |
| 320 | 163.36 | 158.16 | 115.10 |
| 400 | 164.29 | 158.98 | 113.69 |
| 500 | 163.33 | 157.83 | 110.31 |
| 630 | 166.69 | 161.19 | 111.36 |
| 800 | 162.88 | 162.08 | 109.86 |
| 1000 | 164.67 | 169.57 | 115.13 |
| 1250 | 164.64 | 169.14 | 112.46 |
| 1600 | 162.86 | 170.86 | 111.71 |
| 2000 | 160.08 | 173.08 | 111.70 |

TABLE A.2.63

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#8 (IL)

DIRECTION x

PSD NO. 40

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 135.04 | 147.54 | 127.83 |
| 40 | 134.40 | 145.00 | 122.74 |
| 50 | 135.61 | 147.81 | 123.32 |
| 63 | 140.00 | 149 80 | 123.00 |
| 80 | 140.84 | 146.14 | 116.95 |
| 100 | 145.69 | 149.09 | 117.67 |
| 125 | 149.68 | 150.58 | 116.92 |
| 160 | 155.17 | 152.67 | 116.55 |
| 200 | 155.99 | 152.99 | 114.64 |
| 250 | 156.77 | 152.37 | 111.70 |
| 320 | 157.90 | 152.70 | 109.65 |
| 400 | 161.88 | 156.59 | 111.29 |
| 500 | 169.85 | 164 35 | 116.83 |
| 630 | 173.37 | 167.87 | 118.05 |
| 800 | 167.26 | 166.46 | 114.24 |
| 1000 | 163.88 | 160.78 | 114.33 |
| 1250 | 158.72 | 163.22 | 106.54 |
| 1600 | 155.46 | 163.36 | 104.32 |
| 2000 | 154.50 | 167.50 | 106.12 |

TABLE A.2.64

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#8 (IL)

DIRECTION y

PSD NO. 41

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 134.11 | 145.71 | 126.00 |
| 40 | 136.46 | 147.06 | 124.80 |
| 50 | 141.18 | 153.38 | 128.80 |
| 63 | 146.10 | 155.00 | 128.20 |
| 80 | 146.15 | 151 45 | 122.26 |
| 100 | 148.73 | 152.13 | 120.71 |
| 125 | 154.30 | 155.20 | 121.54 |
| 160 | 161.77 | 159.27 | 123.15 |
| 200 | 160.87 | 157.87 | 119.52 |
| 250 | 159.30 | 154.90 | 114.41 |
| 320 | 162.47 | 157.27 | 114.22 |
| 400 | 162.98 | 157.68 | 112.30 |
| 500 | 171.17 | 165.67 | 118.16 |
| 630 | 175.04 | 169.54 | 119.72 |
| 800 | 172.27 | 171.47 | 119.26 |
| 1000 | 165.41 | 170.31 | 115.86 |
| 1250 | 160.23 | 164.73 | 108.05 |
| 1600 | 158.90 | 166.90 | 107 75 |
| 2000 | 159.63 | 172.63 | 111.25 |

## TABLE A.2.65

### STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2 9 E-9 GRMS )
ACCELEROMETER DESCRIPTION
LOCATION HP#8 (IL)
DIRECTION z
PSD NO. 42
ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 134.41 | 146.01 | 126.30 |
| 40 | 135.22 | 145 82 | 123.56 |
| 50 | 140.28 | 152.48 | 127.00 |
| 63 | 140.90 | 149.80 | 122.99 |
| 80 | 143.50 | 148.88 | 119.60 |
| 100 | 146.61 | 150.01 | 118.50 |
| 125 | 150.54 | 151.44 | 117.78 |
| 160 | 154.80 | 151 50 | 115.47 |
| 200 | 154.04 | 151.04 | 112.68 |
| 250 | 150.23 | 154.83 | 114.24 |
| 320 | 150.80 | 154.60 | 111.55 |
| 400 | 161.58 | 156.28 | 110.90 |
| 500 | 160.73 | 163.23 | 115.71 |
| 630 | 160.21 | 163 71 | 113 88 |
| 800 | 160.27 | 167.47 | 115.25 |
| 1000 | 164.54 | 160.44 | 114.90 |
| 1250 | 165.10 | 160.60 | 112.92 |
| 1600 | 164.90 | 172.90 | 113.75 |
| 2000 | 163.94 | 176.94 | 115.56 |

## TABLE A.2.66

### STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )
ACCELEROMETER DESCRIPTION
LOCATION Pallet HP#17 (IL)
DIRECTION x
PSD NO. 1
ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 134.85 | 146.45 | 126.74 |
| 40 | 132.85 | 143.45 | 121.10 |
| 50 | 132.28 | 144.48 | 119.90 |
| 63 | 140.90 | 140 80 | 123.00 |
| 80 | 141.37 | 146.67 | 117.48 |
| 100 | 145.12 | 148.52 | 117.10 |
| 125 | 148.13 | 140.03 | 115.37 |
| 160 | 155.90 | 153.40 | 117.36 |
| 200 | 156.70 | 153.70 | 115.34 |
| 250 | 155.34 | 150.94 | 110.35 |
| 320 | 157.45 | 152.25 | 109.19 |
| 400 | 161.48 | 156.18 | 110.80 |
| 500 | 166.80 | 161.30 | 113.79 |
| 630 | 172.57 | 167 07 | 117.24 |
| 800 | 170.68 | 160 88 | 117.66 |
| 1000 | 171.14 | 176.04 | 121.60 |
| 1250 | 175.23 | 170.73 | 123.05 |
| 1600 | 168.01 | 176.01 | 116.86 |
| 2000 | 168.25 | 181.25 | 110.87 |

TABLE A.2 67

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet HP#17 (IL)

DIRECTION y

PSD NO. 2

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 136.45 | 148.06 | 128.34 |
| 40 | 136.51 | 147.11 | 124.85 |
| 50 | 138.86 | 151.06 | 126.57 |
| 63 | 141.47 | 150.37 | 123.56 |
| 80 | 141.50 | 146.80 | 117.61 |
| 100 | 146.02 | 149.42 | 118.00 |
| 125 | 153.45 | 154.35 | 120.69 |
| 160 | 155.46 | 152.96 | 116.83 |
| 200 | 157.00 | 154.00 | 115.65 |
| 250 | 155.67 | 151.27 | 110.68 |
| 320 | 156.47 | 151.27 | 108.21 |
| 400 | 159.02 | 153.72 | 108.43 |
| 500 | 162.47 | 156.97 | 109.46 |
| 630 | 171.28 | 165.78 | 115.95 |
| 800 | 171.11 | 170.31 | 118.09 |
| 1000 | 173.32 | 178.22 | 123.77 |
| 1250 | 177.38 | 181.88 | 125.20 |
| 1600 | 168.73 | 176.73 | 117.58 |
| 2000 | 167.96 | 188.96 | 119.58 |

TABLE A.2.68

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet HP#17 (IL)

DIRECTION z

PSD NO. 3

ZONE NO. 2

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 138.51 | 150.11 | 130.40 |
| 40 | 139.09 | 149.69 | 127.43 |
| 50 | 140.47 | 152.67 | 128.18 |
| 63 | 141.64 | 150.54 | 123.74 |
| 80 | 143.86 | 149.16 | 119.97 |
| 100 | 145.78 | 149.18 | 117.76 |
| 125 | 153.36 | 154.26 | 120.61 |
| 160 | 154.75 | 152.25 | 116.13 |
| 200 | 159.56 | 156.56 | 118.20 |
| 250 | 157.81 | 153.41 | 112.83 |
| 320 | 158.75 | 153.55 | 110.50 |
| 400 | 162.12 | 156.82 | 111.53 |
| 500 | 166.11 | 160.61 | 113.09 |
| 630 | 171.82 | 166.32 | 116.49 |
| 800 | 178.30 | 169.50 | 117.29 |
| 1000 | 172.17 | 177.87 | 122.62 |
| 1250 | 175.34 | 179.84 | 123.16 |
| 1600 | 165.95 | 173.95 | 114.80 |
| 2000 | 160.34 | 173.34 | 111.96 |

## A.3 Zone 3 STS-3 Flight Equivalent Test Data

TABLE A.3.1

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Fwd. Frame / Freon Pump

DIRECTION x

PSD NO. 57

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 138.95 | 146.55 | 126.83 |
| 40 | 133.89 | 140.19 | 117.94 |
| 50 | 132.85 | 141.25 | 116.76 |
| 63 | 150.94 | 156.84 | 130.04 |
| 80 | 146.79 | 150.89 | 120.90 |
| 100 | 144.40 | 145.80 | 114.37 |
| 125 | 150.27 | 149.17 | 115.52 |
| 160 | 155.44 | 151.94 | 115.81 |
| 200 | 159.66 | 156.16 | 117.81 |
| 250 | 156.62 | 151.22 | 110.63 |
| 320 | 154.75 | 147.85 | 103.99 |
| 400 | 161.88 | 151.28 | 106.00 |
| 500 | 164.10 | 152.60 | 105.88 |
| 630 | 165.59 | 151.59 | 101.76 |
| 800 | 164.30 | 152.50 | 100.28 |
| 1000 | 164.58 | 156.98 | 102.53 |
| 1250 | 161.63 | 152.13 | 95.45 |
| 1600 | 162.45 | 157.45 | 98.30 |
| 2000 | 162.15 | 161.15 | 99.77 |

TABLE A.3.2

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Fwd. Frame / Freon Pump

DIRECTION y

PSD NO. 58

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 141.64 | 149.24 | 129.53 |
| 40 | 140.83 | 147.93 | 125.67 |
| 50 | 137.30 | 146.50 | 122.01 |
| 63 | 143.50 | 149.40 | 122.60 |
| 80 | 145.00 | 148.30 | 119.11 |
| 100 | 147.58 | 148.98 | 117.56 |
| 125 | 156.00 | 154.90 | 121.24 |
| 160 | 162.45 | 158.95 | 122.83 |
| 200 | 165.29 | 161.79 | 123.44 |
| 250 | 158.13 | 152.73 | 112.14 |
| 320 | 158.52 | 150.82 | 107.76 |
| 400 | 159.55 | 149.75 | 104.46 |
| 500 | 161.28 | 149.70 | 102.18 |
| 630 | 162.23 | 148.23 | 98.40 |
| 800 | 160.57 | 148.77 | 96.56 |
| 1000 | 158.24 | 150.64 | 96.19 |
| 1250 | 162.66 | 153.16 | 96.48 |
| 1600 | 164.34 | 159.34 | 100.19 |
| 2000 | 159.33 | 158.33 | 96.95 |

TABLE A.3.3

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Fwd. Frame / Freon Pump

DIRECTION z

PSD NO. 59

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 135.35 | 142.95 | 123.24 |
| 40 | 137.94 | 145.84 | 122.78 |
| 50 | 136.42 | 145.62 | 121.13 |
| 63 | 143.25 | 149.15 | 122.35 |
| 80 | 144.01 | 147.31 | 118.12 |
| 100 | 147.80 | 149.20 | 117 78 |
| 125 | 153.69 | 152.59 | 118.93 |
| 160 | 159.10 | 155.60 | 119.47 |
| 200 | 162.81 | 159.31 | 120.96 |
| 250 | 159.16 | 153.76 | 113.17 |
| 320 | 158.93 | 151.23 | 108.18 |
| 400 | 160.97 | 151.17 | 105.88 |
| 500 | 164.13 | 152.63 | 105.11 |
| 630 | 165.53 | 151.53 | 101.70 |
| 800 | 161.50 | 149.70 | 97.48 |
| 1000 | 162.49 | 154.89 | 100.44 |
| 1250 | 161.43 | 151.93 | 95.25 |
| 1600 | 158.69 | 153.69 | 94.54 |
| 2000 | 156.02 | 155.02 | 93.64 |

TABLE A.3.4

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION SUNY Pedestal Base

DIRECTION x

PSD NO. 65

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 140.00 | 147.69 | 127.98 |
| 40 | 139.48 | 146.58 | 124.32 |
| 50 | 141.92 | 151.12 | 126.63 |
| 63 | 145.12 | 151.02 | 124.21 |
| 80 | 139.02 | 142.32 | 113.13 |
| 100 | 138.44 | 139.84 | 108.42 |
| 125 | 144.00 | 142.99 | 109.34 |
| 160 | 142.58 | 139.08 | 102.96 |
| 200 | 143.94 | 140.44 | 102.09 |
| 250 | 145.81 | 140.41 | 99.83 |
| 320 | 147.85 | 140.15 | 97.10 |
| 400 | 149.37 | 139.57 | 94.28 |
| 500 | 152.71 | 141.21 | 93.69 |
| 630 | 156.45 | 142.45 | 92.62 |
| 800 | 150.68 | 138.88 | 86.66 |
| 1000 | 151.23 | 143.63 | 89.18 |
| 1250 | 152.58 | 143.08 | 86.40 |
| 1600 | 149.71 | 144.71 | 85.56 |
| 2000 | 144.83 | 143.83 | 82.45 |

TABLE A.3.5

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION SUNY Pedestal Base

DIRECTION y

PSD NO. 66

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 138.71 | 146.31 | 126.60 |
| 40 | 139.74 | 146.84 | 124.58 |
| 50 | 139.01 | 148.21 | 123.72 |
| 63 | 142.55 | 148.45 | 121.65 |
| 80 | 138.91 | 142.21 | 113.02 |
| 100 | 140 63 | 142.03 | 110.61 |
| 125 | 144.55 | 143.45 | 109.80 |
| 160 | 145.00 | 141.50 | 105.38 |
| 200 | 145.26 | 141.76 | 103.40 |
| 250 | 147.25 | 141 85 | 101.26 |
| 320 | 148.60 | 140.90 | 97.84 |
| 400 | 151.86 | 142.06 | 96.78 |
| 500 | 156.23 | 144.73 | 97.21 |
| 630 | 157.01 | 143.01 | 93.18 |
| 800 | 153.62 | 141.82 | 89.61 |
| 1000 | 148.44 | 140.84 | 86.39 |
| 1250 | 149.78 | 140.28 | 83.60 |
| 1600 | 148.04 | 143.04 | 83.89 |
| 2000 | 142.64 | 141.64 | 80.26 |

TABLE A.3.6

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION SUNY Pedestal Base

DIRECTION z

PSD NO. 67

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 141 56 | 149.16 | 129.45 |
| 40 | 140.82 | 147.92 | 125.66 |
| 50 | 135.85 | 145.85 | 120.56 |
| 63 | 148.36 | 154.26 | 127.46 |
| 80 | 147.68 | 150.98 | 121.79 |
| 100 | 147.88 | 149.28 | 117.86 |
| 125 | 149.52 | 148.42 | 114.77 |
| 160 | 150.68 | 147.18 | 111.06 |
| 200 | 148.14 | 144.64 | 106.28 |
| 250 | 151.89 | 146.49 | 105.90 |
| 320 | 151.26 | 143.56 | 100.50 |
| 400 | 147.71 | 137.91 | 92.63 |
| 500 | 152.85 | 141.35 | 93.83 |
| 630 | 159.09 | 145.89 | 95.27 |
| 800 | 157.13 | 145.33 | 93.11 |
| 1000 | 151.47 | 143.87 | 89.42 |
| 1250 | 151.59 | 142.89 | 85.41 |
| 1600 | 151.05 | 146.05 | 86.91 |
| 2000 | 147.63 | 146.63 | 85.25 |

TABLE A.3.7

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Thermal Canister Inside

DIRECTION x

PSD NO. 135

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | | | |
| 40 | 142.57 | 150.17 | 130.46 |
| 50 | 137.22 | 144.32 | 122.06 |
| 63 | 139.06 | 148.26 | 123.77 |
| 80 | 147.67 | 153.57 | 126.76 |
| 100 | 151.81 | 155.11 | 125.92 |
| 125 | 150.91 | 152.31 | 120.88 |
| 160 | 148.44 | 147.34 | 113.69 |
| 200 | 146.02 | 142.52 | 106.40 |
| 250 | 145.47 | 141.07 | 103.61 |
| 320 | 145.50 | 140.10 | 99.52 |
| 400 | 145.74 | 138.04 | 94.98 |
| 500 | 152.43 | 142.63 | 97.34 |
| 630 | 151.24 | 139.74 | 92.22 |
| 800 | 158.01 | 144.01 | 94.18 |
| 1000 | 158.50 | 146.70 | 94.48 |
| 1250 | 158.72 | 151.12 | 96.67 |
| 1600 | 162.95 | 153.45 | 96.77 |
| 2000 | 162.96 | 157.96 | 98.81 |
| | 154.38 | 153.38 | 92.00 |

TABLE A.3.8

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Thermal Canister Inside

DIRECTION y

PSD NO. 136

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | | | |
| 40 | 148.15 | 155.75 | 136.04 |
| 50 | 148.73 | 155.83 | 133.57 |
| 63 | 149.34 | 158.54 | 134.05 |
| 80 | 154.14 | 160.04 | 133.24 |
| 100 | 162.13 | 165.43 | 136.24 |
| 125 | 172.45 | 173.85 | 142.43 |
| 160 | 171.20 | 170.10 | 136.44 |
| 200 | 178.68 | 175.18 | 139.06 |
| 250 | 178.65 | 175.15 | 136.80 |
| 320 | 172.47 | 167.07 | 126.48 |
| 400 | 176.70 | 169.00 | 125.94 |
| 500 | 175.27 | 165.47 | 120.19 |
| 630 | 173.63 | 162.13 | 114.62 |
| 800 | 174.42 | 160.42 | 110.59 |
| 1000 | 173.48 | 161.68 | 109.47 |
| 1250 | 170.78 | 163.18 | 108.73 |
| 1600 | 164.13 | 154.63 | 97.95 |
| 2000 | 162.53 | 157.53 | 98.38 |
| | 155.80 | 154.89 | 92.71 |

TABLE A.3.9

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION SUNY Instrument Base

DIRECTION x

PSD NO. 140

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 148.34 | 155.94 | 136.23 |
| 40 | 147.19 | 154.29 | 132.03 |
| 50 | 145.40 | 154.60 | 130.11 |
| 63 | 148.81 | 154.71 | 127.91 |
| 80 | 156.26 | 159.56 | 130.37 |
| 100 | 159.18 | 160.58 | 129.16 |
| 125 | 156.68 | 155.58 | 121.93 |
| 160 | 155.08 | 151.58 | 115.46 |
| 200 | 156.58 | 153.08 | 114.73 |
| 250 | 157.32 | 151.92 | 111.33 |
| 320 | 159.34 | 151.64 | 108.59 |
| 400 | 158.83 | 149.03 | 103.74 |
| 500 | 158.45 | 146.95 | 99.43 |
| 630 | 160.92 | 146.92 | 97.09 |
| 800 | 158.47 | 146.67 | 94.45 |
| 1000 | 156.64 | 149.04 | 94.60 |
| 1250 | 156.98 | 147.48 | 90.80 |
| 1600 | 159.32 | 154.32 | 95.18 |
| 2000 | 159.70 | 158.70 | 97.32 |

TABLE A.3.10

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION SUNY Instrument Base

DIRECTION y

PSD NO. 141

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 130.73 | 138.33 | 118.62 |
| 40 | 135.72 | 142.82 | 120.56 |
| 50 | 143.25 | 152.45 | 127.96 |
| 63 | 146.82 | 152.72 | 125.92 |
| 80 | 147.36 | 150.66 | 121.47 |
| 100 | 146.74 | 148.14 | 116.71 |
| 125 | 147.06 | 145.96 | 112.31 |
| 160 | 142.49 | 138.99 | 102.87 |
| 200 | 139.49 | 135.99 | 97.64 |
| 250 | 146.21 | 140.81 | 100.23 |
| 320 | 150.12 | 142.42 | 99.36 |
| 400 | 152.04 | 142.24 | 96.95 |
| 500 | 159.38 | 147.88 | 100.36 |
| 630 | 162.50 | 148.50 | 98.67 |
| 800 | 152.93 | 141.13 | 88.91 |
| 1000 | 149.32 | 141.72 | 87.27 |
| 1250 | 147.24 | 137.74 | 81.06 |
| 1600 | 151.82 | 146.82 | 87.68 |
| 2000 | 149.80 | 148.80 | 87.42 |

TABLE A.3.11

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION SUNY Instrument Base

DIRECTION z

PSD NO. 142

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 145.47 | 153.07 | 133.35 |
| 40 | 143.43 | 150.53 | 128.27 |
| 50 | 141.32 | 150.52 | 126 02 |
| 63 | 145.19 | 151.09 | 124 29 |
| 80 | 143.67 | 146.97 | 117.77 |
| 100 | 141.54 | 142 94 | 111.52 |
| 125 | 144.61 | 143.51 | 109.86 |
| 160 | 148.48 | 144.98 | 108.86 |
| 200 | 148.09 | 144.59 | 106.23 |
| 250 | 150.42 | 145.02 | 104.43 |
| 320 | 151.15 | 143.45 | 100.40 |
| 400 | 155.04 | 145.24 | 99.96 |
| 500 | 155.71 | 144.21 | 96.70 |
| 630 | 163.17 | 149.17 | 99.34 |
| 800 | 161.36 | 149.56 | 97.34 |
| 1000 | 164.26 | 156.66 | 102.21 |
| 1250 | 166.52 | 157.02 | 100.34 |
| 1600 | 164.56 | 159.56 | 100 41 |
| 2000 | 152.17 | 151.17 | 89.79 |

TABLE A.3.12

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#2 Pallet Sill

DIRECTION x

PSD NO. 146

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 145.97 | 153.57 | 133.86 |
| 40 | 142.85 | 149.95 | 127.69 |
| 50 | 138 88 | 148.88 | 123.59 |
| 63 | 152.11 | 158.81 | 131.21 |
| 80 | 147.79 | 151.89 | 121.90 |
| 100 | 144.54 | 145.94 | 114.52 |
| 125 | 153.73 | 152.63 | 118.98 |
| 160 | 159.81 | 155.51 | 119.39 |
| 200 | 163.52 | 160.02 | 121.67 |
| 250 | 159.86 | 154.46 | 113.87 |
| 320 | 160.68 | 152.98 | 109.93 |
| 400 | 164.39 | 154.59 | 109.30 |
| 500 | 165.52 | 154.82 | 106.50 |
| 630 | 164.27 | 150.27 | 100 44 |
| 800 | 168.57 | 156.77 | 104.55 |
| 1000 | 170.94 | 163.34 | 108.89 |
| 1250 | 160.34 | 159.84 | 103.16 |
| 1600 | 166.50 | 161.50 | 102.35 |
| 2000 | 150 19 | 158.19 | 96 81 |

TABLE A.3.13

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#2 Pallet Sill

DIRECTION y

PSD NO. 147

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 147.37 | 154.97 | 135.26 |
| 40 | 150.77 | 157.87 | 135.61 |
| 50 | 148.39 | 157.59 | 133.10 |
| 63 | 154.45 | 160.35 | 133.54 |
| 80 | 151.33 | 154.63 | 125.44 |
| 100 | 154.14 | 155.54 | 124.12 |
| 125 | 163.94 | 162.84 | 129.19 |
| 160 | 164.96 | 161.46 | 125.34 |
| 200 | 170.46 | 166.96 | 128.60 |
| 250 | 167.79 | 162.39 | 121.80 |
| 320 | 171.10 | 163.40 | 120.35 |
| 400 | 172.20 | 162.40 | 117.11 |
| 500 | 173.48 | 161.98 | 114.46 |
| 630 | 173.48 | 159.48 | 109.65 |
| 800 | 170.47 | 158.67 | 106.46 |
| 1000 | 166.18 | 158.58 | 104.13 |
| 1250 | 161.84 | 152.34 | 95.66 |
| 1600 | 160.42 | 155.42 | 96.28 |
| 2000 | 159.43 | 158.43 | 97.05 |

TABLE A.3.14

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION HP#2 Pallet Sill

DIRECTION z

PSD NO. 148

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 143.76 | 151.36 | 131.65 |
| 40 | 144.37 | 151.47 | 129.21 |
| 50 | 140.80 | 150.80 | 125.51 |
| 63 | 149.83 | 154.93 | 128 13 |
| 80 | 148.17 | 151.47 | 122.28 |
| 100 | 151.52 | 152.92 | 121.50 |
| 125 | 157.04 | 155.94 | 122.28 |
| 160 | 161.88 | 158.38 | 122.26 |
| 200 | 166.24 | 162.74 | 124.39 |
| 250 | 160.33 | 154.93 | 114.34 |
| 320 | 161.81 | 153.31 | 110.25 |
| 400 | 161.95 | 152.15 | 106.86 |
| 500 | 166.92 | 155.42 | 107.90 |
| 630 | 170.15 | 156.15 | 106.32 |
| 800 | 169.54 | 157.74 | 105.52 |
| 1000 | 166.47 | 158.87 | 104.42 |
| 1250 | 163.20 | 153.70 | 97.02 |
| 1600 | 160.56 | 155.56 | 96.42 |
| 2000 | 159.56 | 158.56 | 97.18 |

TABLE A.3.15

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 6 (Iowa)

DIRECTION x

PSD NO. 31

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 150.50 | 150.10 | 130.47 |
| 40 | 146.15 | 153.25 | 130.90 |
| 50 | 145.90 | 155.10 | 130.61 |
| 63 | 141.30 | 147.20 | 120.40 |
| 80 | 146.80 | 150.10 | 120.91 |
| 100 | 147.72 | 149.12 | 117.70 |
| 125 | 156.00 | 155.80 | 122.15 |
| 160 | 161.27 | 157.77 | 121.64 |
| 200 | 160.30 | 156.80 | 110.44 |
| 250 | 152.23 | 146.83 | 106.25 |
| 320 | 155.76 | 140.06 | 105.00 |
| 400 | 155.22 | 145.42 | 100.14 |
| 500 | 155.85 | 144.35 | 96.83 |
| 630 | 150.70 | 145.70 | 95.95 |
| 800 | 160.00 | 140.20 | 96.06 |
| 1000 | 150.90 | 152.30 | 97.04 |
| 1250 | 150.02 | 150.32 | 93.64 |
| 1600 | 150.11 | 154.11 | 94.96 |
| 2000 | 151.30 | 150.30 | 90.01 |

TABLE A.3.16

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 6 (Iowa)

DIRECTION y

PSD NO. 32

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 140.07 | 157.47 | 137.76 |
| 40 | 140.01 | 156.01 | 133.75 |
| 50 | 146.41 | 155.61 | 131.12 |
| 63 | 154.70 | 160.60 | 133.80 |
| 80 | 154.05 | 150.25 | 120.05 |
| 100 | 152.24 | 153.64 | 122.22 |
| 125 | 155.82 | 154.72 | 121.06 |
| 160 | 160.04 | 156.54 | 120.42 |
| 200 | 150.21 | 154.71 | 116.35 |
| 250 | 150.06 | 145.46 | 104.00 |
| 320 | 140.41 | 141.71 | 90.66 |
| 400 | 156.40 | 146.60 | 101.31 |
| 500 | 150.20 | 147.70 | 100.27 |
| 630 | 166.30 | 152.30 | 102.55 |
| 800 | 150.42 | 147.62 | 95.40 |
| 1000 | 157.05 | 140.45 | 95.00 |
| 1250 | 156.42 | 146.02 | 00.24 |
| 1600 | 154.54 | 140.54 | 00.30 |
| 2000 | 150.07 | 140.07 | 07.60 |

TABLE A.3.17

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 6 (Iowa)

DIRECTION z

PSD NO. 33

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 148.37 | 155.97 | 136.26 |
| 40 | 145 87 | 152.97 | 130.71 |
| 50 | 146.66 | 155.86 | 131.37 |
| 63 | 154.80 | 160.70 | 133.89 |
| 80 | 155.90 | 159.20 | 130.00 |
| 100 | 155.27 | 156.67 | 125.25 |
| 125 | 162.41 | 161.31 | 127.66 |
| 160 | 166.27 | 162.77 | 126.65 |
| 200 | 162.37 | 158.87 | 120.51 |
| 250 | 158.75 | 153.35 | 112.76 |
| 320 | 162.42 | 154.72 | 111.66 |
| 400 | 160.10 | 150.30 | 105.02 |
| 500 | 161.52 | 150.02 | 102.50 |
| 630 | 165.71 | 151.71 | 101.89 |
| 800 | 162.01 | 150.21 | 97.99 |
| 1000 | 163.22 | 155.62 | 101.18 |
| 1250 | 163.15 | 153.65 | 96.97 |
| 1600 | 162.70 | 157.70 | 98.55 |
| 2000 | 159.33 | 158.33 | 96.95 |

TABLE A.3.18

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 (USU)

DIRECTION x

PSD NO. 28

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 156.30 | 163.90 | 144.19 |
| 40 | 153.02 | 160.12 | 137.86 |
| 50 | 145 75 | 154.95 | 130.46 |
| 63 | 150.93 | 156.83 | 130.03 |
| 80 | 152.14 | 155.44 | 126.24 |
| 100 | 154.92 | 156.32 | 124.90 |
| 125 | 155.36 | 154.26 | 120.60 |
| 160 | 155.15 | 151.65 | 115.53 |
| 200 | 151.85 | 148.35 | 110.00 |
| 250 | 156.64 | 151.24 | 110.65 |
| 320 | 158.88 | 151.18 | 108.13 |
| 400 | 162.59 | 152.79 | 107.51 |
| 500 | 161.09 | 149.59 | 102.07 |
| 630 | 158.38 | 144.38 | 94.55 |
| 800 | 169.66 | 157.86 | 105.65 |
| 1000 | 163.42 | 155.82 | 101.37 |
| 1250 | 162.40 | 152.90 | 96.22 |
| 1600 | 161.50 | 156.50 | 97.36 |
| 2000 | 161.42 | 160.42 | 99.04 |

TABLE A.3.19

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 (USU)

DIRECTION y

PSD NO. 29

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 142.47 | 150.07 | 130.36 |
| 40 | 142.06 | 149.16 | 126.90 |
| 50 | 143.71 | 152.91 | 128.42 |
| 63 | 154.53 | 160.43 | 133.63 |
| 80 | 154.69 | 157.89 | 128.80 |
| 100 | 158.44 | 159.84 | 128.42 |
| 125 | 157.24 | 156.14 | 122.49 |
| 160 | 161.63 | 158.13 | 122 81 |
| 200 | 162.15 | 158.65 | 120.29 |
| 250 | 163.11 | 157.71 | 117.12 |
| 320 | 164.83 | 157.13 | 114.07 |
| 400 | 164.49 | 154.69 | 109.40 |
| 500 | 181.51 | 170.01 | 122.49 |
| 630 | 177.10 | 163.10 | 113.27 |
| 800 | 167.42 | 155.62 | 103.40 |
| 1000 | 166.69 | 159.09 | 104.64 |
| 1250 | 170.67 | 161.17 | 104.49 |
| 1600 | 159.55 | 154.55 | 95.40 |
| 2000 | 167.45 | 166.45 | 105.07 |

TABLE A.3.20

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 (USU)

DIRECTION z

PSD NO. 30

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 155.25 | 162.85 | 143.14 |
| 40 | 153.38 | 160.48 | 138.22 |
| 50 | 146.36 | 155.56 | 131.07 |
| 63 | 151.80 | 157.70 | 130.98 |
| 80 | 151.72 | 155.02 | 125.83 |
| 100 | 158.45 | 151.85 | 120.42 |
| 125 | 150.90 | 149.80 | 116.15 |
| 160 | 162.58 | 159.08 | 122.95 |
| 200 | 162.46 | 159.06 | 120.60 |
| 250 | 162.77 | 157.37 | 116.79 |
| 320 | 166.25 | 158.55 | 115.49 |
| 400 | 168.25 | 158.45 | 113.17 |
| 500 | 173.83 | 162.33 | 114.81 |
| 630 | 174.44 | 160.44 | 110.61 |
| 800 | 175.13 | 163.33 | 111.11 |
| 1000 | 175.06 | 167.46 | 113.01 |
| 1250 | 168.26 | 158.76 | 102.08 |
| 1600 | 164.05 | 159.05 | 99.98 |
| 2000 | 160.63 | 159.63 | 98.25 |

TABLE A.3.21

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Aft Outbd.

DIRECTION x

PSD NO. 149

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 153.38 | 160.98 | 141.26 |
| 40 | 148.08 | 155.18 | 132.92 |
| 50 | 138.85 | 148.85 | 123.56 |
| 63 | 149.52 | 155.42 | 128.61 |
| 80 | 150.34 | 153.64 | 124.45 |
| 100 | 151.67 | 153.87 | 121.65 |
| 125 | 155.30 | 154.20 | 120.55 |
| 160 | 157.18 | 153.68 | 117.56 |
| 200 | 153.00 | 149.50 | 111.14 |
| 250 | 153.43 | 148.03 | 107.45 |
| 320 | 161.88 | 154.18 | 111.12 |
| 400 | 166.41 | 156.61 | 111.32 |
| 500 | 167.30 | 155.80 | 108.29 |
| 630 | 165.63 | 151.63 | 101.81 |
| 800 | 161.53 | 149.73 | 97.51 |
| 1000 | 158.46 | 150.66 | 96 41 |
| 1250 | 154.10 | 144.60 | 87.92 |
| 1600 | 151.45 | 146.45 | 87.30 |
| 2000 | 157.55 | 156.55 | 95.17 |

TABLE A.3.22

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Aft. Outbd.

DIRECTION y

PSD NO. 150

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 148.91 | 156.51 | 136.80 |
| 40 | 148.98 | 156.08 | 133.82 |
| 50 | 148.86 | 158.06 | 133.57 |
| 63 | 154.30 | 160.20 | 133.39 |
| 80 | 155.66 | 158.96 | 129.77 |
| 100 | 160.00 | 161.40 | 129.97 |
| 125 | 158.59 | 157.49 | 123.84 |
| 160 | 158.11 | 154.61 | 118.48 |
| 200 | 161.19 | 157.69 | 119.34 |
| 250 | 163.74 | 158.34 | 117.75 |
| 320 | 164.51 | 156.81 | 113.75 |
| 400 | 163.35 | 153.55 | 100.26 |
| 500 | 164.41 | 152.91 | 105.40 |
| 630 | 165.61 | 151.61 | 101.78 |
| 800 | 163.61 | 151.81 | 99.59 |
| 1000 | 163.65 | 156.05 | 101.60 |
| 1250 | 162.76 | 153.26 | 96.58 |
| 1600 | 159.18 | 154.18 | 95.03 |
| 2000 | 160 02 | 150.02 | 97 64 |

TABLE A.3.23

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Aft. Outbd.

DIRECTION z

PSD NO. 151

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 153.56 | 161.16 | 141.45 |
| 40 | 150.39 | 157.49 | 135.23 |
| 50 | 150.63 | 159.03 | 135.34 |
| 63 | 153.83 | 159.73 | 132.93 |
| 80 | 153.23 | 156.53 | 127.34 |
| 100 | 148.84 | 150.24 | 118.82 |
| 125 | 150.19 | 149.89 | 115.44 |
| 160 | 156.87 | 152.57 | 116.45 |
| 200 | 165.67 | 162.17 | 123.81 |
| 250 | 167.91 | 162.51 | 121.92 |
| 320 | 169.93 | 162.23 | 119.17 |
| 400 | 168.65 | 158.85 | 113.56 |
| 500 | 167.79 | 156.29 | 108.78 |
| 630 | 168.84 | 154 84 | 104.21 |
| 800 | 166.14 | 154.34 | 102.13 |
| 1000 | 164.83 | 157.23 | 102.78 |
| 1250 | 162.35 | 152.85 | 96.17 |
| 1600 | 157.46 | 152.46 | 93.31 |
| 2000 | 160.34 | 159.34 | 97.96 |

TABLE A.3.24

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Fwd. Outbd.

DIRECTION x

PSD NO. 152

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 153.75 | 161.35 | 141.64 |
| 40 | 140.46 | 156.56 | 134.30 |
| 50 | 140.85 | 149.25 | 124.75 |
| 63 | 152.83 | 158.73 | 131.93 |
| 80 | 152.62 | 155.92 | 126.73 |
| 100 | 153.92 | 155.32 | 123.90 |
| 125 | 158.47 | 157.37 | 123.72 |
| 160 | 159.31 | 155.81 | 119.69 |
| 200 | 153.26 | 149.76 | 111.41 |
| 250 | 155.31 | 149.91 | 109.32 |
| 320 | 163.65 | 155.95 | 112.90 |
| 400 | 167.73 | 157.93 | 112.65 |
| 500 | 165.98 | 154.48 | 106.97 |
| 630 | 160.45 | 146.45 | 96.62 |
| 800 | 162.83 | 150.23 | 98.81 |
| 1000 | 160.22 | 152.62 | 98.17 |
| 1250 | 155.83 | 146.33 | 89.65 |
| 1600 | 155.56 | 150.56 | 91.41 |
| 2000 | 159.58 | 158.58 | 97.20 |

TABLE A.3.25

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Fwd. Outbd.

DIRECTION y

PSD NO. 153

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 149.35 | 156.95 | 137.24 |
| 40 | 147.40 | 154.50 | 132.24 |
| 50 | 137.86 | 147.06 | 122.57 |
| 63 | 151.34 | 157.24 | 130.44 |
| 80 | 148.67 | 151.97 | 122.78 |
| 100 | 153.21 | 154.61 | 123.18 |
| 125 | 153.41 | 152.31 | 118.66 |
| 160 | 154.30 | 150.80 | 114.67 |
| 200 | 162.24 | 158.74 | 120.38 |
| 250 | 160.69 | 155.29 | 114.70 |
| 320 | 166.56 | 158.86 | 115.81 |
| 400 | 168.31 | 158.51 | 113.22 |
| 500 | 170.87 | 159.37 | 111.86 |
| 630 | 171.57 | 157.57 | 107.74 |
| 800 | 170.52 | 158.72 | 106.50 |
| 1000 | 171.42 | 163.82 | 109.37 |
| 1250 | 166.98 | 157.48 | 100.80 |
| 1600 | 163.76 | 158.76 | 99.61 |
| 2000 | 159.42 | 158.42 | 97.04 |

TABLE A.3.26

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Fwd. Outbd.

DIRECTION z

PSD NO. 154

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 146.52 | 154.12 | 134.41 |
| 40 | 145.91 | 153.81 | 130.75 |
| 50 | 145.91 | 155.11 | 130.62 |
| 63 | 156.83 | 161.93 | 135.13 |
| 80 | 153.85 | 157.15 | 127.95 |
| 100 | 154.66 | 156.86 | 124.64 |
| 125 | 156.86 | 154.96 | 121.30 |
| 160 | 161.52 | 158.02 | 121.89 |
| 200 | 160.88 | 157.38 | 119.02 |
| 250 | 159.21 | 153.81 | 113.22 |
| 320 | 165.92 | 158.22 | 115.17 |
| 400 | 161.94 | 152.14 | 106.85 |
| 500 | 162.82 | 151.32 | 103.80 |
| 630 | 161.26 | 147.26 | 97.44 |
| 800 | 166.18 | 154.38 | 102.16 |
| 1000 | 158.95 | 151.35 | 96.91 |
| 1250 | 159.23 | 149.73 | 93.85 |
| 1600 | 157.25 | 152.25 | 93.10 |
| 2000 | 157.71 | 156.71 | 95.33 |

TABLE A.3.27

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Aft. Inbd.

DIRECTION x

PSD NO. 155

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 145.91 | 153.51 | 133.80 |
| 40 | 147.10 | 154.20 | 131.94 |
| 50 | 150.28 | 159.48 | 134.99 |
| 63 | 152.43 | 158.33 | 131.53 |
| 80 | 153.43 | 156.73 | 127.53 |
| 100 | 159.89 | 161.29 | 129.87 |
| 125 | 158.74 | 157.64 | 123.98 |
| 160 | 157.11 | 153.61 | 117.49 |
| 200 | 162.19 | 158.69 | 120.33 |
| 250 | 162.85 | 157.45 | 116.86 |
| 320 | 161.76 | 154.06 | 111.01 |
| 400 | 160.67 | 150.87 | 105.59 |
| 500 | 163.82 | 152.32 | 104.80 |
| 630 | 168.22 | 154.22 | 104.39 |
| 800 | 160.87 | 149.07 | 96.85 |
| 1000 | 164.29 | 156.69 | 102.24 |
| 1250 | 160.77 | 151.27 | 94.59 |
| 1600 | 154.15 | 149.15 | 90.00 |
| 2000 | 151.72 | 150.72 | 89.54 |

TABLE A.3.28

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Aft. Inbd.

DIRECTION y

PSD NO. 156

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 159.49 | 167.89 | 147.38 |
| 40 | 156.50 | 163.60 | 141.34 |
| 50 | 158.97 | 160.17 | 135.68 |
| 63 | 147.79 | 153.69 | 126.89 |
| 80 | 148.43 | 151.73 | 122.54 |
| 100 | 151.77 | 153.17 | 121.75 |
| 125 | 151.94 | 150.84 | 117.19 |
| 160 | 152.73 | 149.23 | 113.18 |
| 200 | 163.72 | 160.22 | 121.87 |
| 250 | 165.04 | 159.64 | 119.06 |
| 320 | 165.26 | 157.56 | 114.50 |
| 400 | 165.39 | 155.59 | 110.31 |
| 500 | 165.02 | 153.52 | 106.00 |
| 630 | 164.21 | 150.21 | 100.39 |
| 800 | 160.77 | 157.97 | 105.75 |
| 1000 | 167.42 | 159.82 | 105.38 |
| 1250 | 165.44 | 155.94 | 99.26 |
| 1600 | 162.80 | 157.80 | 98.65 |
| 2000 | 162.07 | 161.07 | 99.69 |

TABLE A.3.29

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Aft. Inbd.

DIRECTION z

PSD NO. 157

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 145.59 | 153.19 | 133.48 |
| 40 | 143.48 | 150.58 | 128.32 |
| 50 | 142.14 | 151.34 | 126.85 |
| 63 | 140.39 | 155.29 | 128.49 |
| 80 | 140.38 | 151.68 | 122.49 |
| 100 | 151.40 | 152.80 | 121.38 |
| 125 | 160.59 | 159.49 | 125.84 |
| 160 | 164.68 | 161.18 | 125.06 |
| 200 | 167.74 | 164.24 | 125.88 |
| 250 | 165.25 | 159.85 | 119.26 |
| 320 | 171.43 | 163.73 | 120.67 |
| 400 | 172.43 | 162.63 | 117.35 |
| 500 | 175.68 | 164.18 | 116.67 |
| 630 | 174.28 | 160.28 | 110.45 |
| 800 | 169.84 | 157.24 | 105.02 |
| 1000 | 166.27 | 158.67 | 104.22 |
| 1250 | 162.36 | 152.86 | 96.18 |
| 1600 | 158.74 | 153.74 | 94.59 |
| 2000 | 155.86 | 154.86 | 93.48 |

TABLE A.3.30

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Fwd. Inbd.

DIRECTION x

PSD NO. 158

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 158.00 | 166.50 | 146.79 |
| 40 | 156.63 | 163.73 | 141.47 |
| 50 | 151.15 | 160.35 | 135.86 |
| 63 | 146.84 | 152.74 | 125.94 |
| 80 | 147.01 | 150.31 | 121.12 |
| 100 | 151.38 | 152.78 | 121.36 |
| 125 | 152.96 | 151.86 | 118.21 |
| 160 | 152.29 | 148.79 | 112.67 |
| 200 | 156.40 | 154.90 | 116.55 |
| 250 | 159.96 | 154.56 | 113.98 |
| 320 | 165.87 | 158.17 | 115.12 |
| 400 | 162.61 | 152.81 | 107.52 |
| 500 | 162.46 | 150.96 | 103.44 |
| 630 | 163.48 | 149.48 | 98.65 |
| 800 | 169.28 | 157.48 | 105.26 |
| 1000 | 166.86 | 159.26 | 104.81 |
| 1250 | 164.53 | 155.83 | 98.35 |
| 1600 | 161.14 | 156.14 | 96.99 |
| 2000 | 157.77 | 156.77 | 95.39 |

TABLE A.3.31

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Fwd. Inbd.

DIRECTION y

PSD NO. 159

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 151.01 | 158.61 | 138.90 |
| 40 | 150.00 | 157.10 | 134.84 |
| 50 | 147.73 | 156.93 | 132.44 |
| 63 | 157.38 | 163.28 | 136.48 |
| 80 | 155.75 | 159.05 | 129.86 |
| 100 | 156.43 | 157.83 | 126.41 |
| 125 | 158.94 | 157.84 | 124.19 |
| 160 | 162.89 | 159.39 | 123.27 |
| 200 | 162.35 | 158.85 | 120.49 |
| 250 | 159.56 | 154.16 | 113.58 |
| 320 | 163.64 | 155.84 | 112.78 |
| 400 | 161.16 | 151.36 | 106.07 |
| 500 | 165.08 | 153.58 | 106.06 |
| 630 | 166.25 | 152.25 | 102.43 |
| 800 | 163.20 | 151.40 | 99.18 |
| 1000 | 158.30 | 150.70 | 96.25 |
| 1250 | 160.46 | 150.96 | 94.28 |
| 1600 | 153.88 | 148.88 | 89.73 |
| 2000 | 153.68 | 152.68 | 91.30 |

TABLE A.3.32

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 5 Fwd. Inbd.

DIRECTION z

PSD NO. 160

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 143.95 | 151.55 | 131.84 |
| 40 | 143.35 | 150.45 | 128.19 |
| 50 | 140.59 | 149.79 | 125.30 |
| 63 | 150.28 | 156.18 | 129.38 |
| 80 | 147.68 | 150.98 | 121.79 |
| 100 | 148.02 | 149.42 | 117.99 |
| 125 | 157.02 | 155.92 | 122.27 |
| 160 | 160.33 | 156.83 | 120.70 |
| 200 | 163.16 | 159.66 | 121.31 |
| 250 | 163.11 | 157.71 | 117.12 |
| 320 | 168.36 | 160.66 | 117.61 |
| 400 | 172.81 | 163.81 | 117.72 |
| 500 | 173.39 | 161.89 | 114.37 |
| 630 | 173.83 | 159.83 | 109.20 |
| 800 | 166.48 | 154.68 | 102.46 |
| 1000 | 162.70 | 155.10 | 100.65 |
| 1250 | 161.00 | 151.50 | 94.82 |
| 1600 | 160.67 | 155.67 | 96.52 |
| 2000 | 156.49 | 155.49 | 94.11 |

TABLE A.3.33

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 4 (USU)

DIRECTION x

PSD NO. 26

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 158.87 | 166.47 | 146.76 |
| 40 | 155.54 | 162.64 | 140.30 |
| 50 | 148.00 | 157.28 | 132.79 |
| 63 | 155 48 | 161.38 | 134.57 |
| 80 | 157.55 | 160.85 | 131.66 |
| 100 | 156.12 | 157.52 | 126.10 |
| 125 | 157.35 | 156.25 | 122.60 |
| 160 | 150.07 | 155.57 | 119.44 |
| 200 | 167.37 | 163.87 | 125.52 |
| 250 | 160.80 | 155.40 | 114.82 |
| 320 | 156.91 | 149.21 | 106.16 |
| 400 | 159.65 | 149.85 | 104.57 |
| 500 | 164.25 | 152.75 | 105.23 |
| 630 | 174.94 | 160.94 | 111.12 |
| 800 | 167.45 | 155.65 | 103.43 |
| 1000 | 172.51 | 164.91 | 110.46 |
| 1250 | 165.98 | 156.48 | 99.80 |
| 1600 | 165.99 | 160.99 | 101.84 |
| 2000 | 154.47 | 153.47 | 92.00 |

TABLE A.3.34

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 4 (USU)

DIRECTION y

PSD NO. 27

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 160.83 | 168.43 | 148.72 |
| 40 | 157.60 | 164.70 | 142.44 |
| 50 | 145.72 | 154.92 | 130.43 |
| 63 | 155.26 | 161.16 | 134.36 |
| 80 | 158.36 | 161.66 | 132.47 |
| 100 | 154.44 | 155.84 | 124.42 |
| 125 | 161.83 | 160.73 | 127.08 |
| 160 | 170.93 | 167.43 | 131.31 |
| 200 | 176.88 | 173.38 | 135.03 |
| 250 | 166.59 | 161.19 | 120.61 |
| 320 | 160.08 | 152.38 | 109.33 |
| 400 | 162.53 | 152.73 | 107.45 |
| 500 | 170.85 | 159.35 | 111.84 |
| 630 | 167.87 | 153.87 | 104.05 |
| 800 | 171.50 | 159.70 | 107.49 |
| 1000 | 172 47 | 164.87 | 110.42 |
| 1250 | 165.83 | 156.33 | 99.65 |
| 1600 | 166.84 | 161.84 | 101.89 |
| 2000 | 157.52 | 156.52 | 95.14 |

TABLE A.3.35

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 4 (USU)

DIRECTION z

PSD NO. 68

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 152.57 | 160.17 | 140.46 |
| 40 | 149.08 | 156.18 | 133.92 |
| 50 | 138.61 | 147.81 | 123.32 |
| 63 | 140.24 | 155.14 | 128.34 |
| 80 | 147.32 | 150.62 | 121.43 |
| 100 | 152.20 | 153.60 | 122.27 |
| 125 | 165.62 | 164.52 | 130.86 |
| 160 | 165.85 | 162.35 | 126.23 |
| 200 | 165.51 | 162.01 | 123.66 |
| 250 | 164.28 | 158.88 | 118.30 |
| 320 | 165.71 | 158.01 | 114.95 |
| 400 | 167.44 | 157.64 | 112.36 |
| 500 | 172.54 | 161.04 | 113.52 |
| 630 | 175.58 | 161.58 | 111.75 |
| 800 | 171.04 | 159.24 | 107.03 |
| 1000 | 161.68 | 154.06 | 99.61 |
| 1250 | 160.63 | 159.13 | 102.45 |
| 1600 | 171.33 | 166.33 | 107.18 |
| 2000 | 161.47 | 160.47 | 99.09 |

TABLE A.3.36

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 3 (USU)

DIRECTION x

PSD NO. 23

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 148.00 | 155.60 | 135.89 |
| 40 | 143.65 | 150.75 | 128.49 |
| 50 | 146.42 | 155.62 | 131.13 |
| 63 | 145.06 | 150.96 | 124.15 |
| 80 | 147.06 | 150.36 | 121.16 |
| 100 | 147.86 | 149.26 | 117.84 |
| 125 | 150.28 | 149.18 | 115.52 |
| 160 | 152.05 | 148.55 | 112.43 |
| 200 | 150.96 | 147.48 | 109.10 |
| 250 | 151.28 | 145.88 | 105.29 |
| 320 | 150.69 | 142.99 | 99.93 |
| 400 | 153.05 | 143.25 | 97.96 |
| 500 | 156.28 | 144.78 | 97.26 |
| 630 | 158.63 | 144.63 | 94.80 |
| 800 | 155.53 | 143.73 | 91.51 |
| 1000 | 150.98 | 143.38 | 88.85 |
| 1250 | 151.79 | 142.29 | 85.61 |
| 1600 | 148.93 | 143.93 | 84.78 |
| 2000 | 146.47 | 145.47 | 84.09 |

TABLE A.3.37

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 3 (USU)

DIRECTION y

PSD NO. 24

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | ASDL |
|---|---|---|---|
| 31 | 157.52 | 165.12 | 145.41 |
| 40 | 154.55 | 161.65 | 139.39 |
| 50 | 152.34 | 161.54 | 137.05 |
| 63 | 151.92 | 157.82 | 131.01 |
| 80 | 150.80 | 154.10 | 124.91 |
| 100 | 144.35 | 145.75 | 114.33 |
| 125 | 148.99 | 147.89 | 114.23 |
| 160 | 152.17 | 148.67 | 112.55 |
| 200 | 156.21 | 152.71 | 114.36 |
| 250 | 157.23 | 151.83 | 111.24 |
| 320 | 162.47 | 154.77 | 111.72 |
| 400 | 159.05 | 149.25 | 103.96 |
| 500 | 159.62 | 148.12 | 100.60 |
| 630 | 163.06 | 149.06 | 99.24 |
| 800 | 159.96 | 148.16 | 95.94 |
| 1000 | 157.74 | 150.14 | 95.69 |
| 1250 | 154.71 | 145.21 | 88.53 |
| 1600 | 152.74 | 147.74 | 88.50 |
| 2000 | 144.04 | 143.04 | 81.66 |

TABLE A.3.38

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 3 (USU)

DIRECTION z

PSD NO. 25

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | ASDL |
|---|---|---|---|
| 31 | 151.33 | 158.93 | 139.22 |
| 40 | 149.65 | 156.75 | 134.49 |
| 50 | 143.66 | 152.86 | 128.37 |
| 63 | 152.45 | 158.35 | 131.54 |
| 80 | 154.52 | 157.82 | 128.62 |
| 100 | 152.84 | 153.44 | 122.01 |
| 125 | 148.95 | 147.85 | 114.20 |
| 160 | 150.14 | 146.64 | 110.52 |
| 200 | 151.70 | 148.20 | 109.85 |
| 250 | 152.45 | 147.85 | 106.46 |
| 320 | 157.50 | 149.89 | 106.84 |
| 400 | 154.22 | 144.42 | 99.13 |
| 500 | 156.19 | 144.69 | 97.17 |
| 630 | 157.12 | 143.12 | 93.29 |
| 800 | 155.87 | 141.27 | 89.85 |
| 1000 | 151.31 | 143.71 | 89.26 |
| 1250 | 151.85 | 141.55 | 84.88 |
| 1600 | 145.97 | 140.97 | 81.82 |
| 2000 | 146.77 | 145.77 | 84.39 |

TABLE A.3.39

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 3 (USU)

DIRECTION x

PSD NO. 20

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 144.62 | 152.22 | 132.51 |
| 40 | 140.52 | 147.62 | 125.36 |
| 50 | 136.38 | 145.58 | 121.09 |
| 63 | 143.45 | 149.35 | 122.55 |
| 80 | 148.51 | 151.81 | 122.62 |
| 100 | 148.93 | 150.33 | 118.91 |
| 125 | 149.85 | 148.75 | 115.09 |
| 160 | 152.22 | 148.72 | 112.60 |
| 200 | 151.06 | 147.56 | 109.20 |
| 250 | 148.78 | 143.38 | 102.79 |
| 320 | 147.09 | 139.39 | 96.33 |
| 400 | 148.98 | 139.18 | 93.90 |
| 500 | 153.80 | 142.30 | 94.78 |
| 630 | 154.22 | 140.22 | 90.39 |
| 800 | 150.47 | 138.67 | 86.45 |
| 1000 | 148.70 | 141.10 | 86.65 |
| 1250 | 149.69 | 140.19 | 83.51 |
| 1600 | 148.46 | 143.46 | 84.31 |
| 2000 | 147.31 | 146.31 | 84.93 |

TABLE A.3.40

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 3 (USU)

DIRECTION y

PSD NO. 21

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 143.70 | 151.30 | 131.68 |
| 40 | 151.70 | 158.80 | 136.63 |
| 50 | 149.24 | 158.44 | 133.95 |
| 63 | 152.80 | 158.70 | 131.90 |
| 80 | 152.32 | 155.62 | 126.43 |
| 100 | 148.18 | 149.58 | 118.16 |
| 125 | 158.31 | 157.21 | 123.55 |
| 160 | 163.40 | 159.90 | 123.78 |
| 200 | 164.07 | 160.57 | 122.22 |
| 250 | 164.80 | 159.49 | 118.91 |
| 320 | 163.53 | 155.83 | 112.77 |
| 400 | 163.06 | 153.26 | 107.98 |
| 500 | 166.45 | 154.95 | 107.43 |
| 630 | 163.55 | 149.55 | 99.72 |
| 800 | 161.87 | 150.07 | 97.85 |
| 1000 | 157.46 | 149.86 | 95.41 |
| 1250 | 159.41 | 149.91 | 93.23 |
| 1600 | 155.63 | 150.63 | 91.49 |
| 2000 | 149.83 | 148.83 | 87.45 |

TABLE A.3.41

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Sill Shelf 3 (USU)

DIRECTION z

PSD NO. 22

ZONE NO. 3

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 139.64 | 147.24 | 127.53 |
| 40 | 140.73 | 147.83 | 125.57 |
| 50 | 139.20 | 148.40 | 123.90 |
| 63 | 147.99 | 153.89 | 127.09 |
| 80 | 149.77 | 153.07 | 123.88 |
| 100 | 145.77 | 147.17 | 115.75 |
| 125 | 145.58 | 144.48 | 110.83 |
| 160 | 146.89 | 143.39 | 107.27 |
| 200 | 148.95 | 145.45 | 107.09 |
| 250 | 152.79 | 147.39 | 106.81 |
| 320 | 151.98 | 144.28 | 101.22 |
| 400 | 148.17 | 138.37 | 93.09 |
| 500 | 150.47 | 138.97 | 91.45 |
| 630 | 151.12 | 137.12 | 87.29 |
| 800 | 149.62 | 137.82 | 85.60 |
| 1000 | 148.95 | 141.35 | 86.90 |
| 1250 | 149.44 | 139.94 | 83.26 |
| 1600 | 151 00 | 146.00 | 86.85 |
| 2000 | 148.03 | 147.03 | 85.65 |

## A.4 Zone 4 STS-3 Flight Equivalent Test Data

## TABLE A.4.1

### STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Panel 4 Center
DIRECTION x
PSD NO. 43
ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 144.80 | 148.68 | 128.97 |
| 40 | 141.90 | 147.00 | 124.74 |
| 50 | 139.17 | 147.37 | 122.88 |
| 63 | 150.07 | 155.97 | 129.16 |
| 80 | 145.92 | 149.72 | 120.53 |
| 100 | 146.51 | 148.41 | 116.99 |
| 125 | 158.64 | 157.54 | 123.89 |
| 160 | 161.23 | 157.73 | 121.61 |
| 200 | 163.79 | 159.29 | 120.94 |
| 250 | 163.87 | 157.27 | 116.69 |
| 320 | 164.83 | 155.83 | 112.78 |
| 400 | 173.88 | 162.58 | 117.30 |
| 500 | 178.87 | 165.37 | 117.85 |
| 630 | 179.69 | 163.30 | 113.47 |
| 800 | 178.56 | 164.76 | 112.54 |
| 1000 | 176.75 | 164.05 | 109.60 |
| 1250 | 176.20 | 168.70 | 112 02 |
| 1600 | 170.42 | 168 42 | 109.27 |
| 2000 | 165.90 | 168.90 | 107.52 |

## TABLE A.4.2

### STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Panel 4 Center
DIRECTION //
PSD NO. 45
ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 139.81 | 143.61 | 123.89 |
| 40 | 140.67 | 145.77 | 123.51 |
| 50 | 144.87 | 152.27 | 127.78 |
| 63 | 151.17 | 157.87 | 130.27 |
| 80 | 150.83 | 153.83 | 124.64 |
| 100 | 150.40 | 152.30 | 120.88 |
| 125 | 158.67 | 157.57 | 123.92 |
| 160 | 159.86 | 156.36 | 120.24 |
| 200 | 162.08 | 157.58 | 119.23 |
| 250 | 167.93 | 161.33 | 120 74 |
| 320 | 165.27 | 156.27 | 113.21 |
| 400 | 170.16 | 158.86 | 113.58 |
| 500 | 171.36 | 157.86 | 110.34 |
| 630 | 177.84 | 160.74 | 110.91 |
| 800 | 177.30 | 163.50 | 111.37 |
| 1000 | 177.81 | 165.11 | 110.66 |
| 1250 | 169.23 | 161.73 | 105.05 |
| 1600 | 164.25 | 162.25 | 103.10 |
| 2000 | 165.40 | 168.40 | 107.02 |

TABLE A.4.3

STS-3 FLIGHT EQUIVALENT TEST DATA
1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )
ACCELEROMETER DESCRIPTION
LOCATION Freon Line Standoff (Panel 19)
DIRECTION x
PSD NO. 46
ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 138.74 | 143.34 | 123.63 |
| 40 | 139.09 | 144.10 | 121.93 |
| 50 | 137.61 | 145.81 | 121.31 |
| 63 | 145.28 | 151.18 | 124.37 |
| 80 | 145.64 | 149.44 | 120.25 |
| 100 | 149.74 | 151.64 | 120.21 |
| 125 | 161.50 | 160.40 | 126 75 |
| 160 | 168.82 | 164.52 | 128.40 |
| 200 | 167.43 | 162.93 | 124.57 |
| 250 | 161.88 | 155.28 | 114.69 |
| 320 | 164.72 | 155.72 | 112.67 |
| 400 | 164.94 | 153.64 | 108.35 |
| 500 | 173.74 | 160.24 | 112.72 |
| 630 | 182.17 | 165.87 | 116.04 |
| 800 | 176.92 | 163.12 | 110.90 |
| 1000 | 172.11 | 159.41 | 104.96 |
| 1250 | 168.43 | 160.93 | 104.25 |
| 1600 | 161.25 | 159.25 | 100.10 |
| 2000 | 159.62 | 162.62 | 101 24 |

TABLE A.4.4

STS-3 FLIGHT EQUIVALENT TEST DATA
1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )
ACCELEROMETER DESCRIPTION
LOCATION Freon Line Standoff (Panel 19)
DIRECTION //
PSD NO. 48
ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 138.07 | 142.67 | 122.96 |
| 40 | 139.89 | 144.99 | 122.73 |
| 50 | 138.55 | 146.75 | 122.26 |
| 63 | 143.69 | 149.59 | 122.79 |
| 80 | 143.87 | 147.67 | 118.48 |
| 100 | 147.20 | 149.10 | 117.67 |
| 125 | 155.93 | 154.83 | 121.17 |
| 160 | 163.50 | 160.00 | 123.88 |
| 200 | 161.09 | 156.59 | 118.23 |
| 250 | 161.14 | 154.54 | 113.95 |
| 320 | 163.40 | 154.40 | 111 35 |
| 400 | 168.73 | 157.43 | 112.14 |
| 500 | 173.75 | 160.25 | 112.73 |
| 630 | 183.45 | 167.15 | 117.32 |
| 800 | 178.09 | 165.19 | 112.97 |
| 1000 | 170.39 | 157.69 | 103 24 |
| 1250 | 163.25 | 155.75 | 99.87 |
| 1600 | 158.38 | 156.38 | 97.24 |
| 2000 | 156.84 | 159.84 | 97.66 |

TABLE A 4 5

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Freon Line (panel 19)

DIRECTION x

PSD NO. 88

ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 140.54 | 145.14 | 125.43 |
| 40 | 139.42 | 144.52 | 122.26 |
| 50 | 138.41 | 146.61 | 122.12 |
| 63 | 146.05 | 151.95 | 125.15 |
| 80 | 152.71 | 156.51 | 127.32 |
| 100 | 152.21 | 154.11 | 122.68 |
| 125 | 162.85 | 161.75 | 128.09 |
| 160 | 169.76 | 166.26 | 130.13 |
| 200 | 161.45 | 156.95 | 118.60 |
| 250 | 164.75 | 158.15 | 117.56 |
| 320 | 164.38 | 155.38 | 112.33 |
| 400 | 167.80 | 156.50 | 111.21 |
| 500 | 163.88 | 150.38 | 102.87 |
| 630 | 164.62 | 148.32 | 98.49 |
| 800 | 157.05 | 143.25 | 91.84 |
| 1000 | 158.67 | 145.97 | 91.52 |
| 1250 | 162.84 | 154.54 | 97.86 |
| 1600 | 160.61 | 158.61 | 99.47 |
| 2000 | 159.38 | 161.38 | 100.00 |

TABLE A.4.6

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Freon Line (Panel 19)

DIRECTION z

PSD NO. 90

ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 140.21 | 144.81 | 125.10 |
| 40 | 143.49 | 148.59 | 126.33 |
| 50 | 143.75 | 151.95 | 127.46 |
| 63 | 155.99 | 161.89 | 135.09 |
| 80 | 161.18 | 164.98 | 135.79 |
| 100 | 159.35 | 161.25 | 129.82 |
| 125 | 166.82 | 165.72 | 132.06 |
| 160 | 169.76 | 166.26 | 130.14 |
| 200 | 166.20 | 161.70 | 123.35 |
| 250 | 164.93 | 158.33 | 117.75 |
| 320 | 170.62 | 161.62 | 118.57 |
| 400 | 174.51 | 163.21 | 117.92 |
| 500 | 169.49 | 155.99 | 108.48 |
| 630 | 171.85 | 154.75 | 104.93 |
| 800 | 171.56 | 157.76 | 105.55 |
| 1000 | 167.25 | 154.55 | 100.10 |
| 1250 | 162.42 | 154.92 | 98.24 |
| 1600 | 159.20 | 157.20 | 98.05 |
| 2000 | 162.85 | 165.85 | 103.67 |

## TABLE A.4.7

## STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Panel 20

DIRECTION x

PSD NO. 94

ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 138.56 | 143.16 | 123.44 |
| 40 | 139.93 | 145.03 | 122.77 |
| 50 | 137.62 | 145.82 | 121.33 |
| 63 | 143.17 | 149.07 | 122.26 |
| 80 | 143.48 | 147.28 | 118.08 |
| 100 | 144.60 | 146.50 | 115.08 |
| 125 | 150.06 | 148.96 | 115.31 |
| 160 | 158.57 | 155.07 | 118.95 |
| 200 | 159.72 | 155.22 | 116.86 |
| 250 | 161.80 | 155.20 | 114.62 |
| 320 | 164.39 | 155.39 | 112.34 |
| 400 | 167.70 | 156.40 | 111.11 |
| 500 | 173.93 | 160.43 | 112.91 |
| 630 | 181.91 | 165.61 | 115.79 |
| 800 | 188.06 | 166.26 | 114.05 |
| 1000 | 177.50 | 164.89 | 118.44 |
| 1250 | 177.08 | 169.58 | 112.90 |
| 1600 | 173.62 | 171.62 | 112.47 |
| 2000 | 168.78 | 171.78 | 110.40 |

## TABLE A.4.8

## STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Panel 4 Center

DIRECTION ⊥

PSD NO. 44

ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 154.28 | 158.88 | 139.17 |
| 40 | 156.43 | 161.53 | 139.27 |
| 50 | 155.18 | 163.38 | 138.89 |
| 63 | 161.23 | 167.13 | 140.33 |
| 80 | 167.09 | 170.89 | 141.70 |
| 100 | 170.05 | 171.95 | 140.52 |
| 125 | 186.53 | 185.43 | 151.78 |
| 160 | 185.16 | 181.66 | 145.54 |
| 200 | 181.39 | 176.89 | 138.54 |
| 250 | 179.53 | 172.93 | 132.35 |
| 320 | 182.27 | 173.27 | 130.21 |
| 400 | 182.90 | 171.60 | 126.40 |
| 500 | 180.50 | 167.89 | 119.57 |
| 630 | 182.81 | 165.71 | 115.88 |
| 800 | 181.85 | 167.25 | 115.03 |
| 1000 | 176.15 | 163.45 | 109.00 |
| 1250 | 172.15 | 164.65 | 107.97 |
| 1600 | 168.76 | 166.76 | 107.61 |
| 2000 | 164.97 | 167.97 | 106.59 |

TABLE A.4.9

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Panel 4 Quarter Span

DIRECTION ⊥

PSD NO. 75

ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 152.46 | 157.06 | 137.35 |
| 40 | 155.17 | 160.27 | 138.01 |
| 50 | 153.63 | 161.83 | 137.34 |
| 63 | 158.08 | 164.88 | 138.08 |
| 80 | 164.19 | 167.99 | 138.79 |
| 100 | 166.57 | 168.47 | 137.05 |
| 125 | 183.04 | 181.94 | 148.28 |
| 160 | 181 11 | 177.61 | 141.49 |
| 200 | 178 30 | 173.80 | 135.44 |
| 250 | 185.46 | 178.86 | 138.27 |
| 320 | 186.53 | 177.53 | 134.47 |
| 400 | 185.18 | 173 88 | 128.60 |
| 500 | 186.54 | 173.04 | 125.52 |
| 630 | 188.66 | 172.36 | 122.54 |
| 800 | 186.35 | 172.55 | 120.33 |
| 1000 | 182.26 | 169.56 | 115.11 |
| 1250 | 182.71 | 175.21 | 118.53 |
| 1600 | 181.57 | 170.57 | 120.43 |
| 2000 | 173.80 | 176.80 | 115.42 |

TABLE A.4.10

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Panel 9

DIRECTION ⊥

PSD NO. 93

ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 149 88 | 154 48 | 134.77 |
| 40 | 151 66 | 156 76 | 134 50 |
| 50 | 152 23 | 160 43 | 135.94 |
| 63 | 161 27 | 167 17 | 140.37 |
| 80 | 164 83 | 168.63 | 139.43 |
| 100 | 168.18 | 170 08 | 138.66 |
| 125 | 175.84 | 173.94 | 140.29 |
| 160 | 183 34 | 179.84 | 143.72 |
| 200 | 180.44 | 175.94 | 137.59 |
| 250 | 173.83 | 167 23 | 126.64 |
| 320 | 182.92 | 173.92 | 130.87 |
| 400 | 184.22 | 172.92 | 127 64 |
| 500 | 184.26 | 170.76 | 123.24 |
| 630 | 187.26 | 170.96 | 121.14 |
| 800 | 180.87 | 167.87 | 114.85 |
| 1000 | 181.61 | 168 91 | 114 46 |
| 1250 | 181.48 | 173.98 | 117.30 |
| 1600 | 176.17 | 174.17 | 115.82 |
| 2000 | 172.73 | 175.73 | 114.35 |

## TABLE A.4.11

## STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Panel 18

DIRECTION ⊥

PSD NO. 87

ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 142.10 | 146.70 | 126.99 |
| 40 | 138.57 | 143.67 | 121.41 |
| 50 | 133.39 | 141.59 | 117.10 |
| 63 | 142.18 | 148.88 | 121.28 |
| 80 | 143.63 | 147.43 | 118.23 |
| 100 | 144.07 | 145.97 | 114.55 |
| 125 | 151.02 | 149.92 | 116.26 |
| 160 | 158.97 | 155.47 | 119.35 |
| 200 | 160.69 | 156.19 | 117.84 |
| 250 | 157.76 | 151.16 | 110.57 |
| 320 | 160.06 | 151.06 | 108.01 |
| 400 | 165.51 | 154.21 | 108.92 |
| 500 | 166.86 | 152.56 | 105.05 |
| 630 | 167.86 | 150.76 | 100.93 |
| 800 | 168.07 | 154.27 | 102.06 |
| 1000 | 172.51 | 159.81 | 105.36 |
| 1250 | 175.26 | 167.76 | 111.08 |
| 1600 | 178.34 | 176.34 | 117.19 |
| 2000 | 166.61 | 169.61 | 108.23 |

## TABLE A.4.12

## STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Panel 18

DIRECTION y

PSD NO. 86

ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT AL | FLIGHT EQUIVALENT ASDL |
|---|---|---|---|
| 31 | 150.94 | 155.54 | 135.83 |
| 40 | 154.09 | 159.19 | 136.93 |
| 50 | 154.90 | 163.10 | 138.61 |
| 63 | 159.51 | 165.41 | 138.61 |
| 80 | 166.51 | 170.31 | 141.12 |
| 100 | 167.77 | 169.67 | 138.25 |
| 125 | 177.24 | 176.14 | 142.49 |
| 160 | 184.18 | 180.68 | 144.55 |
| 200 | 186.17 | 181.67 | 143.31 |
| 250 | 180.91 | 174.31 | 133.73 |
| 320 | 177.54 | 168.54 | 125.48 |
| 400 | 178.36 | 167.06 | 121.78 |
| 500 | 180.88 | 167.38 | 119.86 |
| 630 | 182.86 | 166.56 | 116.73 |
| 800 | 180.65 | 166.85 | 114.64 |
| 1000 | 178.11 | 165.41 | 110.96 |
| 1250 | 178.76 | 171.26 | 114.58 |
| 1600 | 173.56 | 171.56 | 112.41 |
| 2000 | 167.33 | 170.33 | 108.95 |

TABLE A.4.13

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Freon Line Standoff (Panel 19)

DIRECTION ⊥

PSD NO. 47

ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 147.67 | 152.27 | 132.56 |
| 40 | 150.12 | 155.22 | 132.96 |
| 50 | 150.88 | 159.88 | 134.59 |
| 63 | 156.37 | 162.27 | 135.46 |
| 80 | 159.56 | 163.36 | 134.17 |
| 100 | 164.43 | 166.33 | 134.91 |
| 125 | 177.27 | 176.17 | 142.51 |
| 160 | 183.42 | 179.92 | 143.80 |
| 200 | 180.36 | 175.86 | 137.51 |
| 250 | 175.42 | 168.82 | 128.24 |
| 320 | 182.49 | 173.49 | 130.44 |
| 400 | 183.12 | 171.82 | 126 53 |
| 500 | 182.65 | 169.15 | 121.64 |
| 630 | 182.88 | 166.58 | 116 75 |
| 800 | 179.75 | 165.95 | 113.74 |
| 1000 | 177.23 | 164.53 | 110.88 |
| 1250 | 174.89 | 167.39 | 110.71 |
| 1600 | 171.86 | 169.86 | 109.91 |
| 2000 | 167.34 | 170.34 | 108.96 |

TABLE A.4.14

STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Freon Line (Panel 19)

DIRECTION y

PSD NO. 89

ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 143.88 | 148.48 | 128.77 |
| 40 | 148.48 | 153.58 | 131.32 |
| 50 | 152.94 | 161 14 | 136.64 |
| 63 | 163 47 | 169.37 | 142.57 |
| 80 | 167.19 | 170.99 | 141.80 |
| 100 | 157.71 | 159.61 | 128.19 |
| 125 | 166.06 | 164.96 | 131.30 |
| 160 | 168 22 | 164.72 | 128.60 |
| 200 | 165.28 | 160.78 | 122.42 |
| 250 | 169.24 | 162.64 | 122.06 |
| 320 | 172.40 | 163.40 | 120.35 |
| 400 | 171.26 | 159.96 | 114 67 |
| 500 | 171.58 | 158.08 | 110.56 |
| 630 | 175 56 | 159.26 | 109.44 |
| 800 | 171.50 | 157.70 | 105.48 |
| 1000 | 167.30 | 154.60 | 100.16 |
| 1250 | 166.00 | 158.50 | 101.82 |
| 1600 | 159.77 | 157 77 | 98.62 |
| 2000 | 156.35 | 159.35 | 97.97 |

## TABLE A.4.15

### STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet Outer Panel
DIRECTION ⊥
PSD NO. 49
ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 157.58 | 162.18 | 142.47 |
| 40 | 159.89 | 164.99 | 142.73 |
| 50 | 158.82 | 167.02 | 142.53 |
| 63 | 163.45 | 169.35 | 142.54 |
| 80 | 167.34 | 171.14 | 141.95 |
| 100 | 171.64 | 173.54 | 142.11 |
| 125 | 182.04 | 188.94 | 147.29 |
| 160 | 193.19 | 189.69 | 153.56 |
| 200 | 191.26 | 186.76 | 148.41 |
| 250 | 186.19 | 179.59 | 139.01 |
| 320 | 184.12 | 175.12 | 132.06 |
| 400 | 186.14 | 174.84 | 129.56 |
| 500 | 187.38 | 173.88 | 126.36 |
| 630 | 185.51 | 169.21 | 119.38 |
| 800 | 184.69 | 170.89 | 118.67 |
| 1000 | 184.65 | 171.95 | 117.50 |
| 1250 | 183.41 | 175.91 | 119.23 |
| 1600 | 183.29 | 181.29 | 122.15 |
| 2000 | 180.66 | 183.66 | 122.28 |

## TABLE A.4.16

### STS-3 FLIGHT EQUIVALENT TEST DATA

1/3 OBAL / 1/3 OBASDL ( dB re 2.9 E-9 GRMS )

ACCELEROMETER DESCRIPTION

LOCATION Pallet Outer Panel
DIRECTION ⊥
PSD NO. 50
ZONE NO. 4

| 1/3 OCTAVE BAND CENTER FREQ | ACOUSTIC TEST | FLIGHT EQUIVALENT | |
|---|---|---|---|
| | | AL | ASDL |
| 31 | 157.07 | 161.67 | 141.96 |
| 40 | 159.45 | 164.55 | 142.29 |
| 50 | 158.57 | 166.77 | 142.28 |
| 63 | 163.66 | 169.56 | 142.76 |
| 80 | 167.41 | 171.21 | 142.02 |
| 100 | 172.46 | 174.36 | 142.93 |
| 125 | 182.72 | 181.62 | 147.96 |
| 160 | 193.68 | 190.18 | 154.06 |
| 200 | 193.19 | 188.69 | 150.34 |
| 250 | 185.76 | 179.16 | 138.57 |
| 320 | 185.89 | 176.89 | 133.03 |
| 400 | 188.16 | 176.86 | 131.57 |
| 500 | 188.76 | 175.26 | 127.74 |
| 630 | 187.46 | 171.16 | 121.33 |
| 800 | 188.49 | 174.69 | 122.47 |
| 1000 | 187.47 | 174.77 | 120.32 |
| 1250 | 185.62 | 178.12 | 121.44 |
| 1600 | 183.82 | 181.82 | 122.68 |
| 2000 | 181.86 | 184.86 | 123.48 |

# APPENDIX B

## Statistics of STS-3 Flight Equivalent Test Data

B.1. Zone 2

B.2. Zone 3

B.3. Zone 4

# B.1. Zone 2 Statistics

# TABLE B.1.1

## STATISTICS OF STS-3 FLIGHT EQUIVALENT TEST DATA

## ZONE 2

### 1/3- OCT. BAND ACCEL. SPECTRAL DENSITY LEVEL
( dB Re 2.9 E-9 GRMS )
Direction: All Axes

| HZ | AVERAGE | VARIANCE | 95% CONFIDENCE LIMIT UPPER | LOWER |
|---|---|---|---|---|
| 31.5 | 138.94 | 28.00 | 149.52 | 128.36 |
| 40.0 | 133.00 | 24.34 | 142.87 | 123.13 |
| 50.0 | 131.30 | 25.37 | 141.38 | 121.23 |
| 63.0 | 133.07 | 23.07 | 142.68 | 123.47 |
| 80.0 | 126.65 | 20.30 | 135.67 | 117.64 |
| 100.0 | 124.43 | 21.75 | 133.75 | 115.10 |
| 125.0 | 124.60 | 19.91 | 133.53 | 115.68 |
| 160.0 | 122.97 | 25.16 | 133.00 | 112.94 |
| 200.0 | 122.70 | 26.01 | 132.90 | 112.50 |
| 250.0 | 119.40 | 29.87 | 130.33 | 108.46 |
| 315.0 | 117.70 | 32.89 | 129.17 | 106.23 |
| 400.0 | 124.13 | 41.18 | 136.97 | 111.30 |
| 500.0 | 123.99 | 37.12 | 136.17 | 111.80 |
| 630.0 | 121.85 | 32.60 | 133.27 | 110.43 |
| 800.0 | 125.54 | 35.40 | 137.44 | 113.64 |
| 1000.0 | 125.26 | 32.83 | 136.72 | 113.80 |
| 1250.0 | 118.46 | 22.95 | 128.04 | 108.88 |
| 1600.0 | 114.98 | 20.51 | 124.04 | 105.93 |
| 2000.0 | 116.64 | 21.63 | 125.94 | 107.34 |
| 2500.0 | 116.64 | 21.63 | 125.94 | 107.34 |
| OAL | 156.71 | | 167.63 | 146.09 |

# TABLE B.1.2

## STATISTICS OF STS-3 FLIGHT EQUIVALENT TEST DATA

## ZONE 2

### 1/3- OCT. BAND ACCEL. SPECTRAL DENSITY

$G^2/HZ$

Direction: All Axes

| HZ | AVERAGE | 95% CONFIDENCE LIMIT | |
|---|---|---|---|
| | | UPPER | LOWER |
| 31.5 | 6.6E-004 | 7.5E-003 | 5.8E-005 |
| 40.0 | 1.7E-004 | 1.6E-003 | 1.7E-005 |
| 50.0 | 1.1E-004 | 1.2E-003 | 1.1E-005 |
| 63.0 | 1.7E-004 | 1.6E-003 | 1.9E-005 |
| 80.0 | 3.9E-005 | 3.1E-004 | 4.9E-006 |
| 100.0 | 2.3E-005 | 2.0E-004 | 2.7E-006 |
| 125.0 | 2.4E-005 | 1.9E-004 | 3.1E-006 |
| 160.0 | 1.7E-005 | 1.7E-004 | 1.7E-006 |
| 200.0 | 1.6E-005 | 1.6E-004 | 1.5E-006 |
| 250.0 | 7.3E-006 | 9.1E-005 | 5.9E-007 |
| 315.0 | 4.9E-006 | 6.9E-005 | 3.5E-007 |
| 400.0 | 2.2E-005 | 4.2E-004 | 1.1E-006 |
| 500.0 | 2.1E-005 | 3.5E-004 | 1.3E-006 |
| 630.0 | 1.3E-005 | 1.8E-004 | 9.3E-007 |
| 800.0 | 3.0E-005 | 4.7E-004 | 1.9E-006 |
| 1000.0 | 2.8E-005 | 3.9E-004 | 2.0E-006 |
| 1250.0 | 5.9E-006 | 5.4E-005 | 6.5E-007 |
| 1600.0 | 2.6E-006 | 2.1E-005 | 3.3E-007 |
| 2000.0 | 3.9E-006 | 3.3E-005 | 4.6E-007 |
| 2500.0 | 3.9E-006 | 3.3E-005 | 4.6E-007 |
| GRMS | 2.0E-001 | 7.0E-001 | 5.8E-002 |

## B.2. Zone 3 Statistics

# TABLE B.2.1

## STATISTICS OF STS-3 FLIGHT EQUIVALENT TEST DATA

## ZONE 3

### 1/3- OCT. BAND ACCEL. SPECTRAL DENSITY LEVEL
( dB Re 2.9 E-9 GRMS )
Direction: All Axes

| | | | 95% CONFIDENCE LIMIT | |
|---|---|---|---|---|
| HZ | AVERAGE | VARIANCE | UPPER | LOWER |
| 31 5 | 140.44 | 16 71 | 148 61 | 132 26 |
| 40.0 | 134.92 | 15 33 | 142 75 | 127.09 |
| 50 0 | 130.90 | 12 96 | 138.10 | 123.70 |
| 63 0 | 130 96 | 11.66 | 137.79 | 124.13 |
| 80.0 | 127.18 | 16 01 | 135.18 | 119.17 |
| 100 0 | 127 97 | 31 23 | 139.14 | 116.79 |
| 125 0 | 124 57 | 22 65 | 134 09 | 115.05 |
| 160.0 | 125.31 | 29.50 | 136.17 | 114 44 |
| 200 0 | 124.88 | 24 92 | 134 86 | 114 89 |
| 250 0 | 116.45 | 17 75 | 124.88 | 108.02 |
| 315 0 | 114 75 | 20.41 | 123 79 | 105.71 |
| 400 0 | 110 86 | 17.67 | 119.27 | 102.45 |
| 500 0 | 110.70 | 22 24 | 120.13 | 101.26 |
| 630 0 | 105.47 | 15.86 | 113.43 | 97 50 |
| 800.0 | 103.06 | 15.04 | 110 81 | 95.30 |
| 1000.0 | 104.11 | 16 83 | 112.31 | 95.90 |
| 1250.0 | 97.29 | 14 00 | 104 77 | 89.80 |
| 1600 0 | 97.65 | 16 41 | 105.75 | 89 55 |
| 2000.0 | 96.01 | 15.27 | 103.82 | 88.19 |
| 2500.0 | 96 01 | 15.27 | 103.82 | 88.19 |
| OAL | 153.23 | | 161 92 | 144.89 |

# TABLE B.2.2

## STATISTICS OF STS-3 FLIGHT EQUIVALENT TEST DATA

### ZONE 3

### 1/3- OCT. BAND ACCEL. SPECTRAL DENSITY

$G^2/HZ$

Direction: All Axes

| | | 95% CONFIDENCE LIMIT | |
|---|---|---|---|
| HZ | AVERAGE | UPPER | LOWER |
| 31.5 | 9 3E-004 | 6 1E-003 | 1.4E-004 |
| 40.0 | 2.6E-004 | 1 6E-003 | 4 3E-005 |
| 50 0 | 1.0E-004 | 5.4E-004 | 2.0E-005 |
| 63.0 | 1 0E-004 | 5 1E-004 | 2 2E-005 |
| 80.0 | 4.4E-005 | 2 8E-004 | 7 0E-006 |
| 100.0 | 5 3E-005 | 6 9E-004 | 4 0E-006 |
| 125 0 | 2 4E-005 | 2 2E-004 | 2.7E-006 |
| 160 0 | 2 9E-005 | 3 5E-004 | 2 3E-006 |
| 200.0 | 2.6E-005 | 2 6E-004 | 2.6E-006 |
| 250 0 | 3 7E-006 | 2 6E-005 | 5 3E-007 |
| 315.0 | 2 5E-006 | 2.0E-005 | 3 1E-007 |
| 400 0 | 1 0E-006 | 7.1E-006 | 1 5E-007 |
| 500.0 | 9 9E-007 | 8 7E-006 | 1 1E-007 |
| 630.0 | 3 0E-007 | 1 9E-006 | 4 7E-008 |
| 800.0 | 1.7E-007 | 1.0E-006 | 2 9E-008 |
| 1000.0 | 2 2E-007 | 1 4E-006 | 3 3E-008 |
| 1250.0 | 4 5E-008 | 2.5E-007 | 8 0E-009 |
| 1600.0 | 4 9E-008 | 3 2E-007 | 7 6E-009 |
| 2000.0 | 3 4E-008 | 2 0E-007 | 5 5E-009 |
| 2500.0 | 3 4E-008 | 2 0E-007 | 5 5E-009 |
| GRMS | 1 3E-001 | 3 6E-001 | 5.1E-002 |

## B.3. Zone 4 Statistics

TABLE B.3.1

STATISTICS OF STS-3 FLIGHT EQUIVALENT TEST DATA

ZONE 4

1/3- OCT. BAND ACCEL. SPECTRAL DENSITY LEVEL
( dB Re 2.9 E-9 GRMS )
Direction· Out of Plane

| | | | 95% CONFIDENCE LIMIT | |
|---|---|---|---|---|
| HZ | AVERAGE | VARIANCE | UPPER | LOWER |
| 31.5 | 138.04 | 12.99 | 145.25 | 130.84 |
| 40.0 | 138.35 | 12.83 | 145.52 | 131.19 |
| 50.0 | 138.69 | 11 74 | 145 54 | 131.84 |
| 63.0 | 140.19 | 10 51 | 146 68 | 133.71 |
| 80 0 | 140 17 | 10 51 | 146.65 | 133.68 |
| 100.0 | 138.89 | 12 53 | 145.97 | 131.81 |
| 125.0 | 146.29 | 14 38 | 153.88 | 138.71 |
| 160.0 | 148.33 | 16.62 | 156.48 | 140.18 |
| 200.0 | 143.88 | 17.14 | 152.16 | 135.60 |
| 250.0 | 134.82 | 13 56 | 142.19 | 127.46 |
| 315.0 | 130.58 | 11.59 | 137.39 | 123.77 |
| 400.0 | 127.21 | 12.10 | 134.16 | 120.25 |
| 500.0 | 123.33 | 12.54 | 130.41 | 116.25 |
| 630.0 | 118:73 | 11.68 | 125.57 | 111 90 |
| 800.0 | 117.26 | 13.51 | 124.61 | 109.90 |
| 1000.0 | 114.59 | 14.23 | 122.14 | 107.05 |
| 1250.0 | 116.55 | 13.01 | 123.76 | 109.34 |
| 1600.0 | 118.09 | 13.71 | 125.50 | 110.68 |
| 2000.0 | 117.30 | 16.60 | 125.45 | 109.15 |
| 2500.0 | 117.25 | 16.76 | 125.44 | 109 06 |
| OAL | 167.82 | | 175.69 | 160.02 |

# TABLE B.3.2

## STATISTICS OF STS-3 FLIGHT EQUIVALENT TEST DATA

## ZONE 4

## 1/3- OCT. BAND ACCEL. SPECTRAL DENSITY

$G^2/HZ$

Direction: Out of Plane

| HZ | AVERAGE | 95% CONFIDENCE LIMIT | |
|---|---|---|---|
| | | UPPER | LOWER |
| 31 5 | 5.4E-004 | 2.8E-003 | 1.0E-004 |
| 40.0 | 5.8E-004 | 3 0E-003 | 1.1E-004 |
| 50 0 | 6.2E-004 | 3.0E-003 | 1 3E-004 |
| 63.0 | 8 8E-004 | 3.9E-003 | 2.0E-004 |
| 80.0 | 8 7E-004 | 3 9E-003 | 2.0E-004 |
| 100 0 | 6.5E-004 | 3 3E-003 | 1.3E-004 |
| 125.0 | 3.6E-003 | 2.1E-002 | 6 2E-004 |
| 160 0 | 5.7E-003 | 3.7E-002 | 8.8E-004 |
| 200 0 | 2.1E-003 | 1 4E-002 | 3.1E-004 |
| 250.0 | 2.6E-004 | 1 4E-003 | 4.7E-005 |
| 315.0 | 9 6E-005 | 4.6E-004 | 2.0E-005 |
| 400.0 | 4 4E-005 | 2.2E-004 | 8.9E-006 |
| 500.0 | 1.8E-005 | 9.2E-005 | 3.5E-006 |
| 630.0 | 6.3E-006 | 3.0E-005 | 1.3E-006 |
| 800 0 | 4 5E-006 | 2 4E-005 | 8.2E-007 |
| 1000.0 | 2.4E-006 | 1.4E-005 | 4.3E-007 |
| 1250 0 | 3.8E-006 | 2.0E-005 | 7.2E-007 |
| 1600.0 | 5.4E-006 | 3 0E-005 | 9.8E-007 |
| 2000.0 | 4.5E-006 | 3.0E-005 | 6.9E-007 |
| 2500.0 | 4.5E-006 | 2.9E-005 | 6.9E-007 |
| GRMS | 7 1E-001 | 1.8E+000 | 2.9E-001 |

# TABLE B.3.3

## STATISTICS OF STS-3 FLIGHT EQUIVALENT TEST DATA

## ZONE 4

## 1/3- OCT. BAND ACCEL. SPECTRAL DENSITY LEVEL
( dB Re 2.9 E-9 GRMS )
Direction: In Plane

| | | | 95% CONFIDENCE LIMIT | |
|---|---|---|---|---|
| HZ | AVERAGE | VARIANCE | UPPER | LOWER |
| 31.5 | 125.27 | 10 32 | 131 70 | 118 85 |
| 40 0 | 123 72 | 8.93 | 129 69 | 117.74 |
| 50 0 | 124 48 | 11.15 | 131 15 | 117 80 |
| 63 0 | 129 41 | 14 71 | 137 08 | 121 74 |
| 80 0 | 128 52 | 19 54 | 137 36 | 119 68 |
| 100 0 | 123.34 | 17 01 | 131 59 | 115.09 |
| 125 0 | 126 87 | 14.23 | 134 41 | 119.32 |
| 160 0 | 126.75 | 12 79 | 133.90 | 119.60 |
| 200 0 | 121 10 | 11 39 | 127 84 | 114.35 |
| 250 0 | 117.18 | 10 28 | 123 59 | 110.77 |
| 315 0 | 114 07 | 11 65 | 120 90 | 107 24 |
| 400 0 | 114.28 | 11.64 | 121 10 | 107.45 |
| 500 0 | 112.91 | 12 81 | 120 07 | 105.75 |
| 630 0 | 113.85 | 11 77 | 120 72 | 106.99 |
| 800 0 | 111 22 | 10 66 | 117 75 | 104.69 |
| 1000 0 | 107.38 | 12.31 | 114 39 | 100 36 |
| 1250.0 | 107 92 | 14.90 | 115.64 | 100.20 |
| 1600 0 | 106 52 | 15.99 | 114.52 | 98 52 |
| 2000.0 | 105 84 | 12.71 | 112 97 | 98.71 |
| 2500 0 | 104 73 | 13.63 | 112.12 | 97.35 |
| OAL | 150.01 | | 157.50 | 142.64 |

# TABLE B.3.4

## STATISTICS OF STS-3 FLIGHT EQUIVALENT TEST DATA

## ZONE 4

## 1/3- OCT. BAND ACCEL. SPECTRAL DENSITY

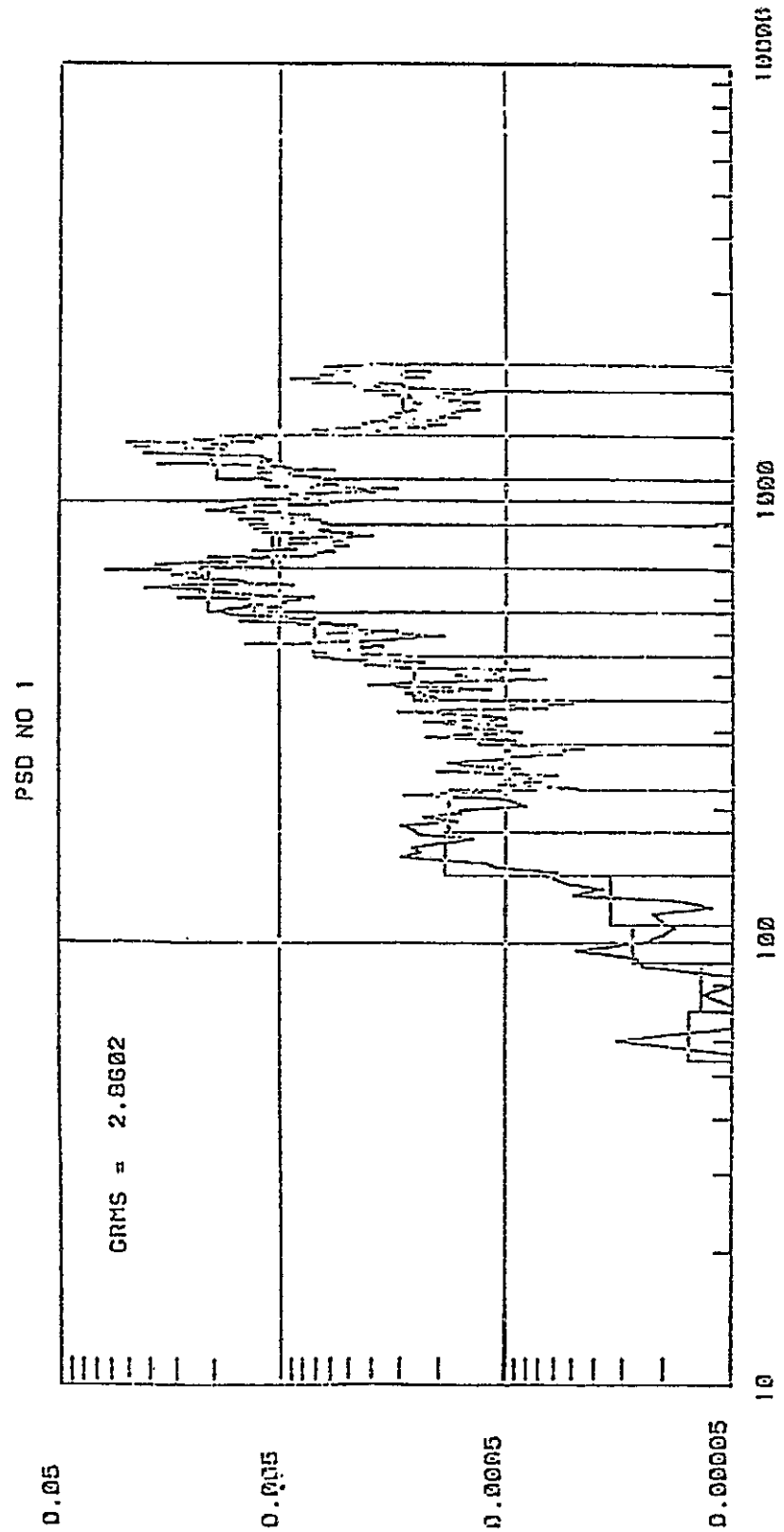
$G^2/HZ$

Direction: In Plane

| | | 95% CONFIDENCE LIMIT | |
|---|---|---|---|
| HZ | AVERAGE | UPPER | LOWER |
| 31.5 | 2.8E-005 | 1.2E-004 | 6.5E-006 |
| 40.0 | 2.0E-005 | 7.8E-005 | 5.0E-006 |
| 50.0 | 2.4E-005 | 1.1E-004 | 5.1E-006 |
| 63.0 | 7.3E-005 | 4.3E-004 | 1.3E-005 |
| 80.0 | 6.0E-005 | 4.6E-004 | 7.8E-006 |
| 100.0 | 1.8E-005 | 1.2E-004 | 2.7E-006 |
| 125.0 | 4.1E-005 | 2.3E-004 | 7.2E-006 |
| 160.0 | 4.0E-005 | 2.1E-004 | 7.7E-006 |
| 200.0 | 1.1E-005 | 5.1E-005 | 2.3E-006 |
| 250.0 | 4.4E-006 | 1.9E-005 | 1.0E-006 |
| 315.0 | 2.1E-006 | 1.0E-005 | 4.5E-007 |
| 400.0 | 2.3E-006 | 1.1E-005 | 4.7E-007 |
| 500.0 | 1.6E-006 | 8.5E-006 | 3.2E-007 |
| 630.0 | 2.0E-006 | 9.9E-006 | 4.2E-007 |
| 800.0 | 1.1E-006 | 5.0E-006 | 2.5E-007 |
| 1000.0 | 4.6E-007 | 2.3E-006 | 9.1E-008 |
| 1250.0 | 5.2E-007 | 3.1E-006 | 8.8E-008 |
| 1600.0 | 3.8E-007 | 2.4E-006 | 6.0E-008 |
| 2000.0 | 3.2E-007 | 1.7E-006 | 6.2E-008 |
| 2500.0 | 2.5E-007 | 1.4E-006 | 4.6E-008 |
| GRMS | 9.2E-002 | 2.2E-001 | 3.9E-002 |

# APPENDIX C

Sample Comparisons of Bandwidth Effects
on Acceleration Spectral Density
1/3 Octave Bandwidth Vs. 4 Hz Bandwidth
( Data From Acoustic Test )



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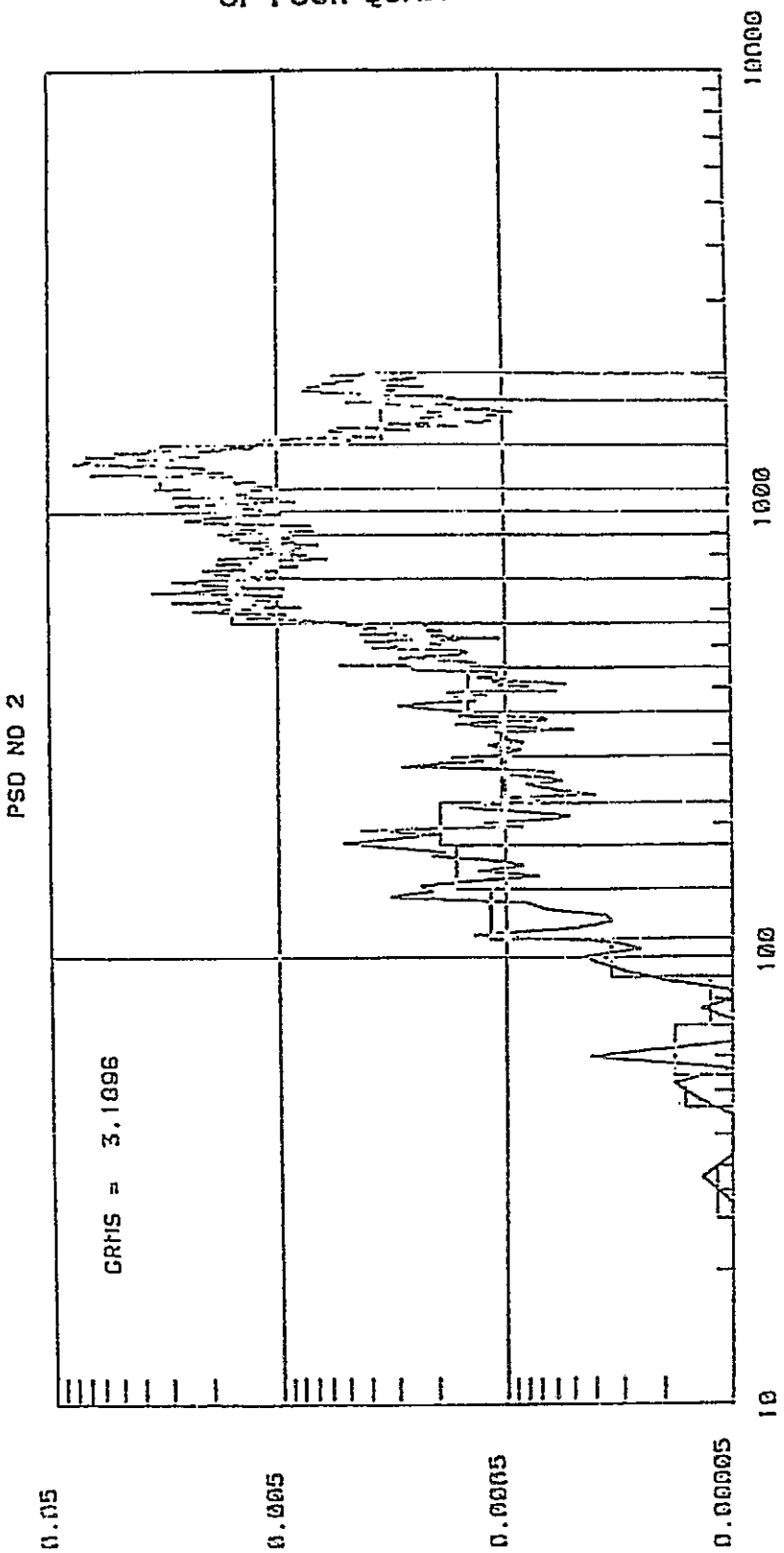
OF POOR QUALITY



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