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THE PENNSYLVANIA STATE UNIVERSITY

REPORT ON OBJECTIVE RIDE QUALITY EVALUATION

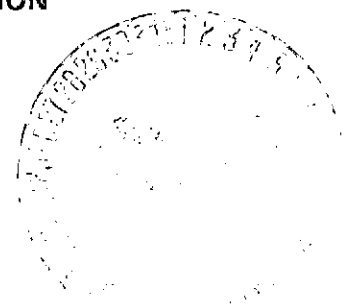
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Submitted to
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

by
J. C. Wambold and W. H. Park

March 1974

In Cooperation with the Department of Mechanical Engineering



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The Pennsylvania Transportation Institute



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SUMMARY

Objectives

This research is concerned with establishing a correlation between objective and subjective comfort ratings of vehicles. The Absorbed Power (AP) comfort criterion was used in an Amplitude Frequency Distribution (AFD) format for the objective measure. The objective ratings were then correlated with passenger subjective responses.

Method

The method used in this project to reduce analog tape records of acceleration versus time into a compact and useful form was the Amplitude Frequency Distribution method. The AFD method, which is a discrete joint probability of amplitude and frequency, unlike the Power Spectral Density (PSD) method, retains amplitude distribution data as well as frequency distribution data.

The Absorbed Power concept of comfort evaluation was then employed to evaluate ride quality. The Absorbed Power concept uses the power absorbed by a human body as the measure of discomfort and has been shown to correlate with subjective response. The acceleration data were put into AFD format and then transformed into absorbed power, as an objective ride measure. This computed objective ride measure was then correlated with the subjective evaluation for the same ride. Hybrid computer methods were used to process acceleration and absorbed power data, and for correlation studies.

Correlation studies were based on subjective ride data taken on a city bus with the objective ride data developed from three-dimensional acceleration-

time histories recorded on the bus. On completion of the correlation of the bus data, a corresponding six-degree model was developed for future evaluation of aircraft ride quality.

Conclusion

The correlation of absorbed power as an objective ride measure to the subjective evaluation for the bus data was successful. For some individual bus rides the correlations were poor, but when a sufficient number of rides was used to give reasonable sample base, an excellent correlation was obtained. The following logarithmical function was derived:

$$S = 1.7245 \ln (39.6849 AP)$$

where S = one subjective rating of the ride; and

AP = the absorbed power in watts.

A six-degree-of-freedom method developed for aircraft data was completed and some preliminary correlations were attempted. However, because of insufficient data (too small a sample), and since there was no assurance that the acceleration data were properly matched with the subjective ratings (exact start-stop times were unknown), the correlation of aircraft data is not considered to be very exact.

Finally, preliminary correlation of absorbed power with ISO standards further enhances the bus ride and absorbed power correlation numbers since the AP's obtained are of the same order of magnitude for both correlations. While it would then appear that one could just use ISO standards, there is no way to add the effect of three degrees of freedom. On the other hand, the absorbed power provides a method of adding the effects due to the three major directions plus the pitch and roll.

1. INTRODUCTION

1.1 Problem Statement and Research Objective

The following is the original work statement from the research proposal:

It is the object of this research to take vehicle acceleration versus time data supplied by NASA and perform an objective evaluation of ride quality for that vehicle/guideway system. The Amplitude Frequency Distribution (AFD) techniques as applied to the Absorbed Power method of comfort evaluation previously used on automobile/road roughness studies by the investigators will be extended to include three degrees of freedom. This extended method will then be used to evaluate the subjective ride and acceleration data taken by Old Dominion University researchers on a city bus. The subjective and objective ride ratings will then be correlated.

After correlating the above data, work will be initiated to develop the method to include all six degrees of freedom so that the same or similar techniques might be applied to aircraft ride data.

1.2 Basic Statistical Measures

Measured records must be recognized as random signals of finite duration and, as such, they can be viewed and described in terms of three basic "domains": time, amplitude, and frequency. The time domain description is the unprocessed signal-versus-time. All types of amplitude domain descriptions reduce the measured signal to a single number or a table of values which is mathematically equivalent to computing an amplitude-probability distribution for the signal. Frequency domain representations of signals are generally considered to be the most useful. They are based on the concept that any observed random signal can be reconstructed by adding together a number of different sine waves.

At first glance, it would appear that the power spectral density contains a complete description of amplitude variations, thus making any

amplitude-distribution calculations superfluous. However, the ordinate of a PSD curve indicates only the average signal amplitude at a particular frequency. A large PSD value can conceivably be produced by either a few cycles of large amplitude or a large number with small amplitudes; the distinction cannot be made from the PSD curve alone. On the other hand, it is not possible to extract any information about frequency distribution from amplitude density curves. It is evident from these considerations that the PSD and amplitude density curves each contain unique information, and a simple method of combining the two representations is desirable.

An effective method for combining the information contained in both the PSD and the amplitude representations is to reduce the random time-history signal to a simple tabular array that displays both the height and the length features on the random data, as in Figure 1.1. Here the coordinates (linear or logarithmic), amplitude (in feet, g's, etc.) versus frequency (in Hertz, rpm, cycles per foot, etc.), are divided into a number of finite bands as shown. Numbers like N are computed and entered at each window-like intersection of the bands. The numbers express the total number of signal peaks with the amplitude and frequency of that box in the array. The complete array of numbers thus identifies the random signal as a combined amplitude and frequency distribution. Thus, the AFD not only gives the frequency distribution, but also shows the amplitude make-up and distribution of each frequency band.

1.3 Historical Review of Comfort Measurement

Many experimental investigations concerned with human reaction to vibration have dealt with the degree of comfort expressed by test subjects. These individuals were exposed to ride levels associated with various

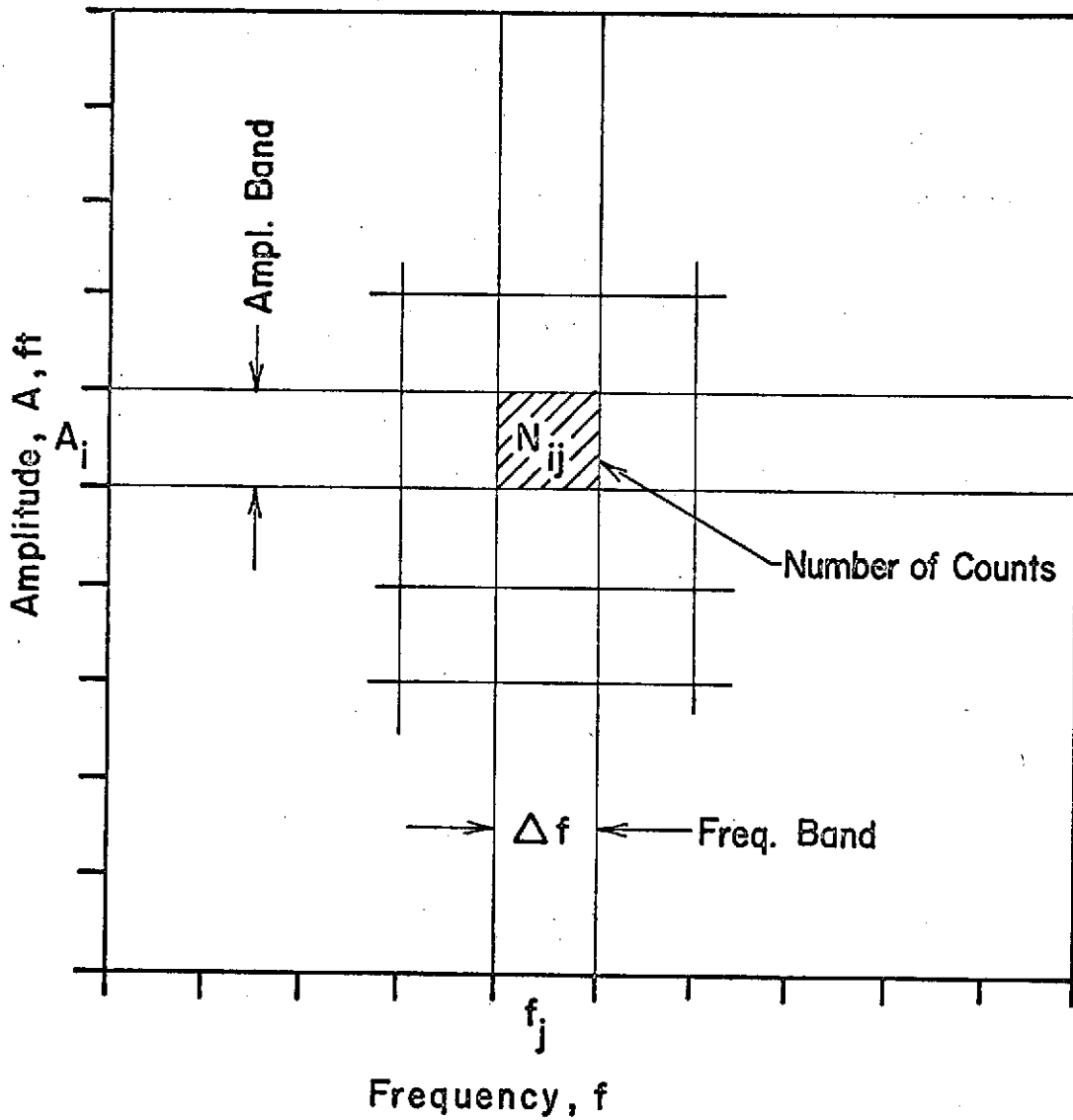


Figure 1.1. Basic Elements of AFD, the Amplitude Frequency Description

vibrational frequencies and amplitudes and then were asked to form an opinion of the ride sensation. For the most part, these experimental vibrational inputs have been generated in the laboratory, although a few investigations have been conducted in on-the-road environments. As a result of these subjective interpretations of the ride environment, several sets of tolerance curves have been developed to define limits on vibrational intensity for sinusoidal and random motion.

One of the first studies was conducted in Germany in 1931 by Reiher and Meister (1). Twenty-five subjects of varying ages were subjected to horizontal and vertical accelerations while in standing and sitting positions. After 15 minutes each subject was asked to evaluate his ride and place his interpretation of roughness into one of six categories, from imperceptible to intolerable. From these data several tolerance-level curves were formulated.

In 1933, Jacklin and Liddel (2), using only three ride-level categories in their study--perceptible, disturbing, and uncomfortable--developed a mathematical relationship to describe a comfort index. This relationship utilized both the amplitude and frequency of the vibration.

Several years later, based on a comprehensive review of other tolerance studies, Janeway (3) developed an equation to describe "comfort level" at various frequencies due to vertical sinusoidal vibrations. In addition to vibration amplitude, Janeway considered comfort a function of "jerk," the first derivative of the acceleration, for frequencies from 1 to 6 Hz, a function of acceleration between 6 and 20 Hz, and a function of velocity from 20 to 60 Hz.

Ten Cate (4) also attempted to place different ride levels into mathematical form, using the principle that a sensation is proportional to

the common logarithm to the base 10 of the stimulus intensity. He proposed a standard vibration intensity unit called a Pal and defined three categories of comfort from just detectable to troublesome.

Most of the tolerance curves described in the preceding have somewhat similar shapes. Tolerance generally decreases at very low frequencies, with a minimum value occurring between 4 and 8 Hz. Above 8 Hz, tolerance to vibratory intensity increases rapidly. This fact is attributed to the increased attenuation of the vibration by the human body. Differences among the comfort criteria, however, are also apparent. The major difference is due to the definition of ride level by each investigator.

Two particular tests in 1962 warrant mentioning. Snyder (5) reported the results of a series of studies conducted at the Boeing Company, Wichita, Kansas. The experiments were designed to establish four levels of test scores. These scores were to provide a preliminary comparison of effects of sinusoidal and random vibrations on human performance. Snyder found "some similarity" in effects on performance for these vibrational inputs. The most promising relationship between these two vibrations appears to be a combination of root mean square amplitude, power, and frequency.

Later in the same year, one of the first studies utilizing on-the-road environments was attempted. To measure "riding comfort," Van Deusen (6) devised a jury rating system. A group of trained ride-engineers were asked to assign a number to their impression of the ride on a particular road. An average number was then assigned to that surface.

Van Deusen then attempted to develop some physical measurement of ride comfort that would require fewer experimental observations, and, at the same time, be more objective than jury rating. He measured acceleration

at the seat and head of the passenger in three mutually perpendicular directions. This was done while driving over 38 road sections of a proving ground course. Measurements of acceleration, velocity, and jerk, together with subjective jury ratings from the same segment of proving ground course, were examined for correlation. High correlation was found for mean square acceleration and mean square jerk in the three directions. It was also found that the mean square vertical acceleration of the body correlated 0.815 with jury rating.

In 1965, using the Dynamic Ride Simulator facility at the U. S. Army Tank-Automotive Center, Holland (7) subjected human subjects to vertical random vibrations in a systematic manner, testing their ability to perform simple tasks under vibrational conditions. The experimental results consisted of their subjective judgments of severity placed on a numerical scale. He found that direct magnitude estimates provide an effective method for qualifying the subjective counterpart of random vibratory motion. The subjective estimates of vibratory roughness depend on the relative distribution of the frequency spectrum.

In 1966, Butkunas (8), considering all input motion to the passenger (tactile motion as well as whole-body motion), developed a technique whereby an overall ride sensation index is formed. He evaluated acceleration data obtained on 14 different vehicles under four different road-speed combinations to arrive at his comfort index. These acceleration measurements were taken on the seat cushion, seat back, and floor pan.

To compute one comfort index from these three measurements, each measurement was processed through a weighing function--weighing the PSD spectra with the frequency response of the "man." The resulting weighed

spectra were integrated over the frequency range and summed. The square root of this sum gives the final comfort index.

The techniques of comfort evaluation mentioned above have been generally restricted to sinusoidal inputs generated in the laboratory. Since road surface irregularities are random in nature, these investigations fail to provide an accurate picture of the situation. Moreover, the investigators who have conducted on-the-road experimentation have relied on subjective interpretations of ride comfort from trained individuals. These results have also failed to be adequate. Nevertheless, the results from the above investigations have been a starting point in comfort evaluation, even though they fail to produce a numerical ride index with physical interpretation in regard to passenger response.

In 1966, to overcome the existing research trend of heavy emphasis on experimental tests to assess the effects of mechanical vibration on comfort measurement, Pradko and Lee (9, 10, 11) introduced a new comfort parameter called "absorbed power." Absorbed power is an energy flow rate dependent on the anatomical properties of the human body and relatable to passenger subjective responses. It was developed, without prior knowledge of the frequency spectrum, to describe human dynamics. Absorbed power techniques are discussed in Chapter 2 and in detail in Appendix A.

An International Standards Organization (ISO) standard defining human tolerance to whole-body vibration has been under development for a number of years. It is understood that it has received the necessary approval by ISO member nations and is likely to be published shortly. A Draft International Standard (ISO/DIS 2631), "Guide for the Evaluation of Human Exposure to Whole-Body Vibration," was submitted on April 28, 1972, and voted on by

August 28, 1972. It seems likely that European countries will incorporate the ISO document into their own new standards and replace existing standards of which the most significant is that of the German VDI (12).

Three degrees of disturbance are postulated: reduced comfort, fatigue decreased proficiency, and an exposure limit above which an acute physical hazard due to the vibration is considered to exist. The standard suggests methods of dealing with broad frequency band linear vibration in a given direction, but does not deal adequately with combined effects of different directional vibration components or effects of rotational vibration.

The limitations of this standard are well known by its originators, and it has been stressed that the criteria suggested must be confirmed in each individual type of vibration environment. There are two further limitations of the draft standard: first, it deals with vibration only above 1 Hz, whereas significant amounts of energy even in the vertical direction exist below 1 Hz; second, two alternative measurement procedures are specified allowing either (a) third-octave analysis of each vibration component so that individual frequency components can be compared with the appropriate limiting criteria for that frequency, or (b) averaging of a component vibration in a frequency-weighted meter with a total effect indicated from the weighting.

In relation to the effect of vibration below 1 Hz, recent analysis of the published data by Allen et al. (13) suggests that the tolerance again drops, to be no higher than that in the 4 to 8 Hz frequency range. Experiments to determine the significance of pitch and roll motions have been reported from Italy (14), but there has been little confirmation of the tolerance data.

More recent work in ride quality was reported at the first symposium held on vehicle ride quality (15). This symposium was conducted by the National Aeronautics and Space Administration at the Langley Research Center. While all of the papers presented at this symposium are pertinent, one is singled out here. Vinje (16) reported on analytical and experimental evaluation of proposed ride comfort criteria at United Aircraft Research Laboratories. He reported a lack of correlation between index and rating due to human tendency to rate ride relative to average ride rather than to an absolute standard. He further noted that one must know how the bumps occur rather than compute their average and that somehow this must be taken into account to establish an index.

Since the first symposium in Summer 1972, there have been ride quality workshops held about every six months to allow people in the ride quality area to exchange ideas. Unfortunately, no formal documentation of these meetings is available. However, some notes and list of attendees can be obtained from the VSTOL office at NASA Langley.

In November 1973, the Council for Advanced Transportation Studies, University of Texas at Austin, published "Literature Survey on Passenger and Seat Modeling for the Evaluation of Ride Quality" (17) as a research memo to the Department of Transportation (DOT OS 30093RM8). While this is not 100 percent complete, it is an excellent working survey for anyone in the ride quality area.

2. CORRELATION OF OBJECTIVE WITH SUBJECTIVE RIDE RATINGS

2.1 Objective Ride Criterion

The objective ride measures used in this study are based on the concept of absorbed power. This criterion was developed by researchers at the Army Tank Automotive Command (9, 10, 11) and is based on an energy flow rate which is dependent on the anatomical properties of the human body. The human body properties were determined experimentally and the absorbed power was related to passenger subjective responses. The basic concepts of absorbed power are given in detail in Appendix A.

The information needed for the determination of absorbed power is the acceleration at the interface between the passenger and the vehicle. The experimental data which was used as input had been obtained prior to initiation of this project and consisted of three-directional accelerations measured on the floor of a bus using a NASA instrument package. These accelerations in the vertical, longitudinal, and lateral directions were measured near the front of the bus and simultaneously near the center of the bus, and recorded on magnetic analog tape. The accelerations were not measured at the passenger seat interface, but were used in this initial project to see if the absorbed power criterion might correlate to subjective passenger response. Seat transfer characteristics were determined and proved to be of little consequence. Future work should require that the accelerations be measured at the proper location or seat transfer characteristics will have to be determined for every case.

Absorbed power can be computed from the acceleration data in either the time or frequency domain for each direction. Since power is a scalar

quantity, the total power can be obtained by summing the power in all three directions. For this study, the frequency method was used since the results would reveal those frequency bands that contribute to the greatest discomfort. The format for the calculations is shown by Equation A.6 (Appendix A) as follows:

$$\text{Average AP} = \sum_{i=0}^N K_i A_{i\text{RMS}}^2$$

Where AP = the absorbed power in watts;

$A_{i\text{RMS}}$ = the root mean square of the acceleration at a given frequency; and
 K_i = the parameter used to transform the acceleration squared into absorbed power at a given frequency.

Before giving the calculation details, the AFD concept for formatting the data will be presented.

2.2 AFD Format for Absorbed Power

The AFD method has been found useful in making comfort measurements because it readily identifies both amplitude and frequency bands of the acceleration inputs that are causing the discomfort to the vehicle passenger (18). Details of this method, which can be used on any random data, are given in Appendix B. The acceleration data for each of the three directions were filtered into eight frequency bands and peaks were placed in six amplitude bands.

2.3 Computation of Absorbed Power Using AFD

The seat acceleration AFD is the beginning point for comfort evaluation by the Absorbed Power method. As indicated above, Equation A.6 shows that the total absorbed power for a vibration spectrum is the summation of

the power at each frequency. The K_i values are for frequencies in Hz, which can be obtained by multiplying the mid-frequency by the vehicle speed in fps. Since each block of the seat acceleration AFD has a mid-amplitude and a mid-frequency value, the average absorbed power attributable to each AFD can be calculated from Equation A.6. Intermediate values for this calculation are based on run 8, vertical motion, and are shown in Table 2.1. The resultant absorbed power matrix is shown in Figure 2.1. This value of absorbed power shown in each block, however, would be the power absorbed by a passenger subjected totally to an acceleration of that mid-frequency and mid-amplitude value. To take account of the fact that the actual acceleration consists of various frequencies and amplitudes, the absorbed power matrix is normalized by dividing each block by the maximum number of counts that would be shown by a sine wave of that mid-frequency for that length of time. For example, the last column has a mid-frequency of 11.314 Hz. Any amplitude sine wave of that frequency would produce 169.7 counts in that time. These numbers of counts could be termed M_i and are calculated for each frequency. By dividing the absorbed power matrix by the M_i values, a new matrix is obtained which will be called the Normalized Absorbed Power Matrix (NAPM). Each block of the NAPM is then $K_i A_i^2 / M_i$ which is equal to the absorbed power contribution per count of the seat acceleration AFD. These values are shown on the matrix of Figure 2.2. The NAPM matrix shows those areas which contribute the most to absorbed power (or discomfort) and, thus, gives a picture of the amplitudes and frequencies that contribute to a comfortable ride.

To determine the absorbed power for a particular ride segment, the NAPM is multiplied block by block with the seat acceleration AFD to give the

Table 2.1. Factors for Absorbed Power Calculation
for Run 8, Vertical Motion

Mid-Frequency Hz	Absorbed Power Constant K_1 Watts/(ft/sec ^{1.2}) ²
0.088	0.000082
0.177	0.00033
0.354	0.001325
0.707	0.005631
1.414	0.02460
2.828	0.12150
5.657	0.14595
11.314	0.03647

Mid-Acceleration, g's	0.401	0.00682	0.02746	0.11024	0.46851	2.04678	10.10910	12.14340	3.03440
	0.257	0.00281	0.01132	0.04543	0.19309	0.84354	4.16625	5.00465	1.25056
	0.165	0.00116	0.00466	0.01872	0.07958	0.34765	1.71703	2.06256	0.51539
	0.101	0.00048	0.00192	0.00772	0.03280	0.14328	0.70764	0.85004	0.21241
	0.069	0.00020	0.00079	0.00318	0.01352	0.05905	0.29164	0.35033	0.08754
	0.044	0.00008	0.00033	0.00131	0.00557	0.02434	0.12019	0.14438	0.03608
		0.088	0.177	0.354	0.707	1.414	2.828	5.657	11.314
Mid-Frequency in Hertz									

Figure 2.1. Absorbed Power Matrix, $K_i A_i^2$ (watts), for Run 8, Vertical Motion

Mid-Acceleration, g's	0.401	0.00515	0.01035	0.02079	0.04417	0.09849	0.23827	0.14311	0.01788
	0.257	0.00212	0.00427	0.00857	0.01820	0.03976	0.09820	0.05898	0.00737
	0.165	0.00087	0.00176	0.00353	0.00750	0.01639	0.04047	0.02431	0.00304
	0.101	0.00036	0.00072	0.00146	0.00309	0.00675	0.01668	0.01002	0.00125
	0.069	0.00015	0.00030	0.00060	0.00127	0.00278	0.00687	0.00413	0.00052
	0.044	0.00006	0.00012	0.00025	0.00053	0.00115	0.00283	0.00170	0.00021
		0.088	0.177	0.354	0.707	1.414	2.828	5.657	11.314
Mid-Frequency in Hertz									

Figure 2.2. Normalized Absorbed Power Matrix (NAPM), $(K_i A_i^2 / M_i)$ (watts per count), for Run 8, Vertical Motion

Mid-Acceleration, g's	0.401	0.000	0.000	0.021	0.044	0.000	0.000	0.000	0.000
	0.257	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000
	0.165	0.000	0.002	0.004	0.000	0.000	0.000	0.000	0.003
	0.101	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.010
	0.069	0.000	0.000	0.001	0.000	0.008	0.000	0.004	0.023
	0.044	0.000	0.000	0.000	0.001	0.002	0.008	0.017	0.011
		0.088	0.177	0.354	0.707	1.414	2.828	5.657	11.314
Mid-Frequency in Hertz									

Figure 2.3. Absorbed Power AFD Determined from Experimental Acceleration for Run 8, Segment 1, Vertical Motion

absorbed power AFD as shown in Figure 2.3 for run 8, segment 1, vertical motion. The absorbed power AFD shows the amount of power attributed to each frequency and amplitude block for the guideway and vehicle being examined. The absorbed power for each frequency band can then be obtained by summing the blocks vertically, or the total absorbed power can be obtained by summing all the blocks. The absorbed power AFD's and totals are given in Appendix E.

2.4 Correlation Method for Objective and Subjective Ride Ratings

The subjective ride ratings from the Old Dominion bus study were given by the two passengers seated directly over each instrument package used to record the floor accelerations. The correlation simply consisted of plotting the total absorbed power for all three directions against the ride rating number assigned by the passenger. The results are shown in Chapter 4.

3. TEST DATA PROCESSING

Programs were developed for two different computers, a hybrid computer in the Penn State College of Engineering and a Systems 95 digital computer in the Applied Research Laboratory (ARL). However, only the ARL computer was used to process the data in this investigation.

The first section of this chapter describes the two basic approaches used, the second describes the hybrid program, and the third describes the ARL programs. The actual programs are listed in Appendixes C and D.

3.1 The Two Approaches

Once a random signal has been stored--in continuous analog form on FM tape, or in discrete, digitized form on IBM tape (Figure 3.1)--processing the signal to determine its amplitude frequency distribution demands performance of two distinguishable but serially connected operations. The signal must be filtered in each of a number of narrow bandpass filters, and the amplitude peaks must be discriminated and counted for each filter's output. The techniques utilized for each of these two operations (Figures 3.2 and 3.3) reflect (a) differing roles assigned to the analog and digital members of the hybrid team; (b) the inevitable limitations in available hardware at the particular installation; and (c) tradeoffs between processing time and the precision required.

To get a fairly precise characterization of the amplitude frequency distribution of a random signal, quite a few relatively narrow (about an octave or less) frequency bands will be wanted. This need presses against the limitations of cost and availability of hardware. Processing time is reduced

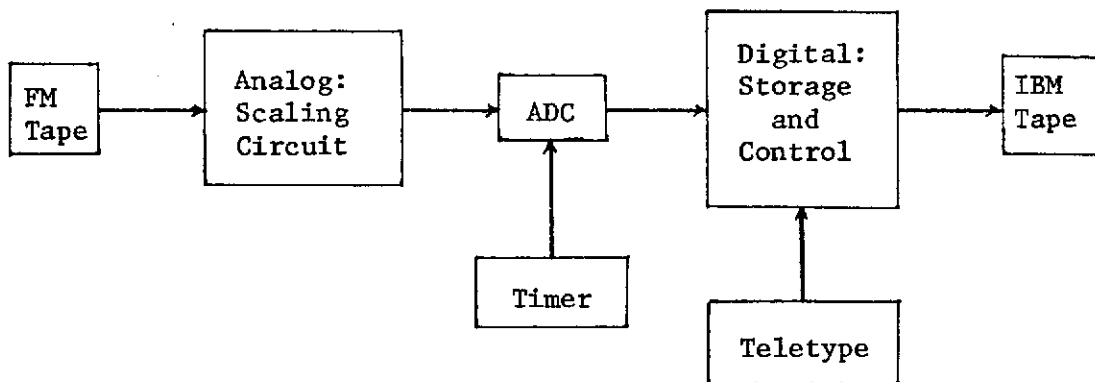


Figure 3.1. Digitizing the Data

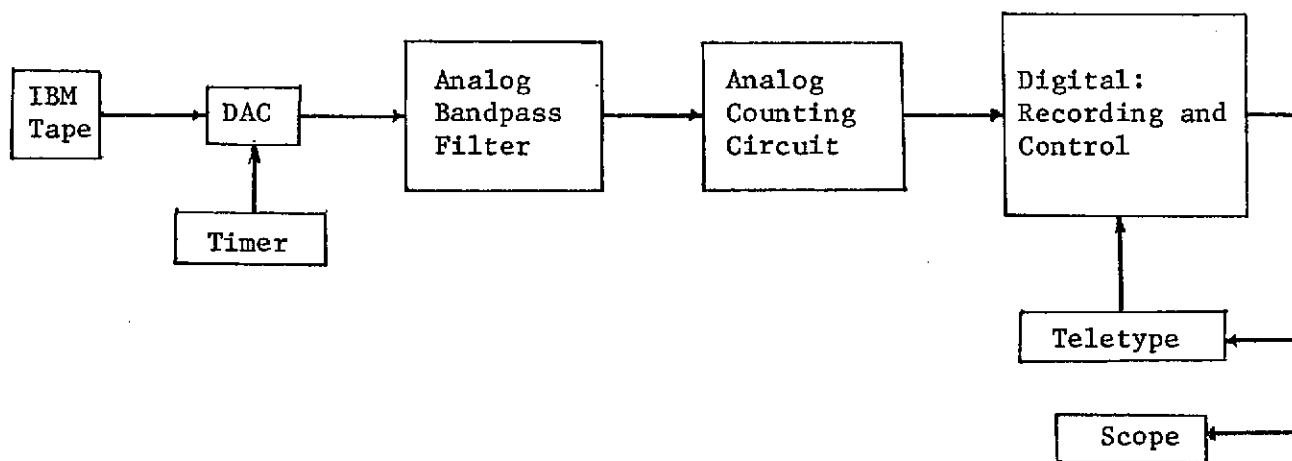


Figure 3.2. Determining the Amplitude Frequency Distribution of a Random Signal: Serial Method

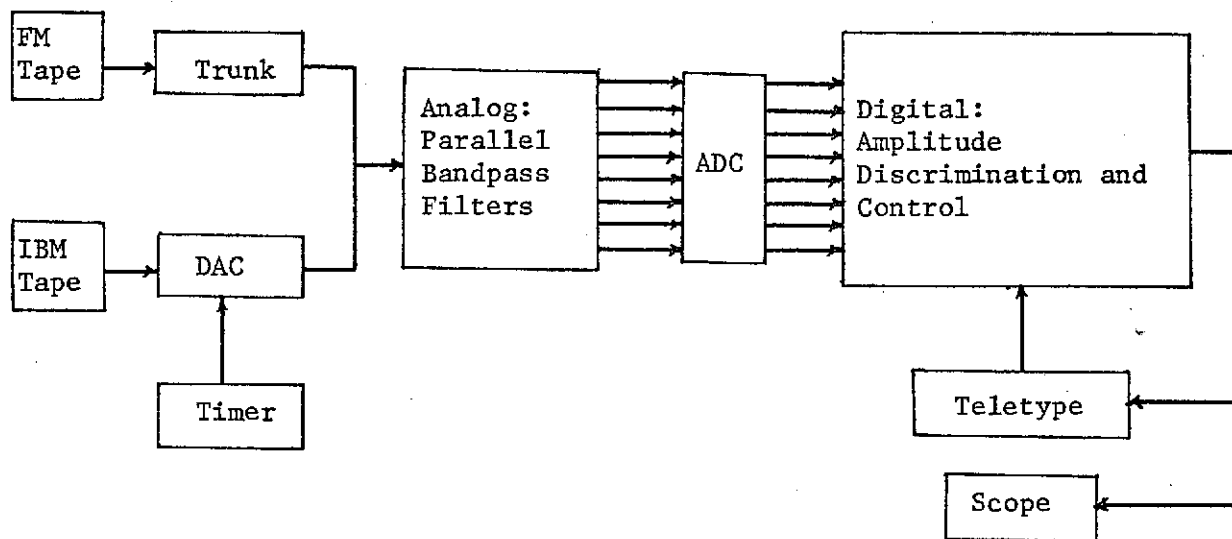


Figure 3.3. Determining Joint Probability Density of a Random Signal: Parallel Filtering and Digital Peak Discrimination

dramatically if a random signal can be fed into a parallel set of filters which yield simultaneously the filtered outputs for all filter bands.

An alternative plan is to use a single filter. The filtering is then done serially by passing the data through the filter once for each frequency band required, resetting the two cutoff frequencies of the filter by playback speed. This permits almost any number of narrow bandpass filters to be used. The price, of course, is an increase in processing time. The processing time will now be the product of the number of filters and the record length plus a substantial overhead time (mainly tape handling) that may very well exceed the actual filtering time.

When the output of a bandpass filter is available, the peak discrimination can be done. For a narrow bandpass filter the output will be a quasi-sinusoidal signal with fairly uniform frequency but varying amplitude. The function of peak discrimination is to detect when a peak has occurred, to determine in which of a spectrum of discrete amplitude levels the signal has peaked, and to record this event by updating an appropriate counter. In both methods, the outputs of the several filters are digitized and the peak discrimination and counting are done by purely digital means.

The single filter method was implemented on the hybrid and the parallel filter method was used on the Applied Research Laboratory computer facilities.

3.2 The Hybrid Program Method

The purpose of the first hybrid program is to take data in the analog form from the tapes and convert it to digital form (Figure 3.1) usable by the subsequent program. The data is converted to digital form using analog-to-digital converters, one for each degree of freedom (up to six), and output

is stored as digital files, also one for each degree of freedom. The sampling rate (numbers of times per second that the analog value is converted to a digital number) is set by the user before each run. The total number of samples taken is determined by the length of the test run and is set by the user.

The files created by the digitizing program are then used by the AFD program (Figure 3.4). The AFD program utilizes a single bandpass filter with fixed frequency levels. The data is taken from the files created by the digitizing program and converted by digital-to-analog converter to analog form. This analog data is then bandpass filtered to discriminate the frequency bands. To obtain the various frequency levels desired, the data is converted to an analog signal at a rate different from the sampling rate used in the digitizing program.

For example, to filter a frequency band whose upper and lower frequency levels are twice those of the bandpass filter, the data is converted to analog form at a rate one half the sampling rate. This is done for each frequency band wanted. The filtered data is then reconverted to digital form by analog-to-digital converters. Peaks in the amplitude of the data are found by comparing each digital sample with the sample preceding it and the one following it, until a maximum in the amplitude is found (Figure 3.5). For each cycle in the amplitude of the data, the peak value is found and stored in an array. In addition, the time in seconds (since the beginning of the test run) at which the peak occurred is also stored in the array. Insignificant amplitude peaks, down in the noise level, are ignored. The data is then printed out in a listing as described in Chapter 4. This listing gives the amplitude of each peak in the data, the time of the peak occurrence,

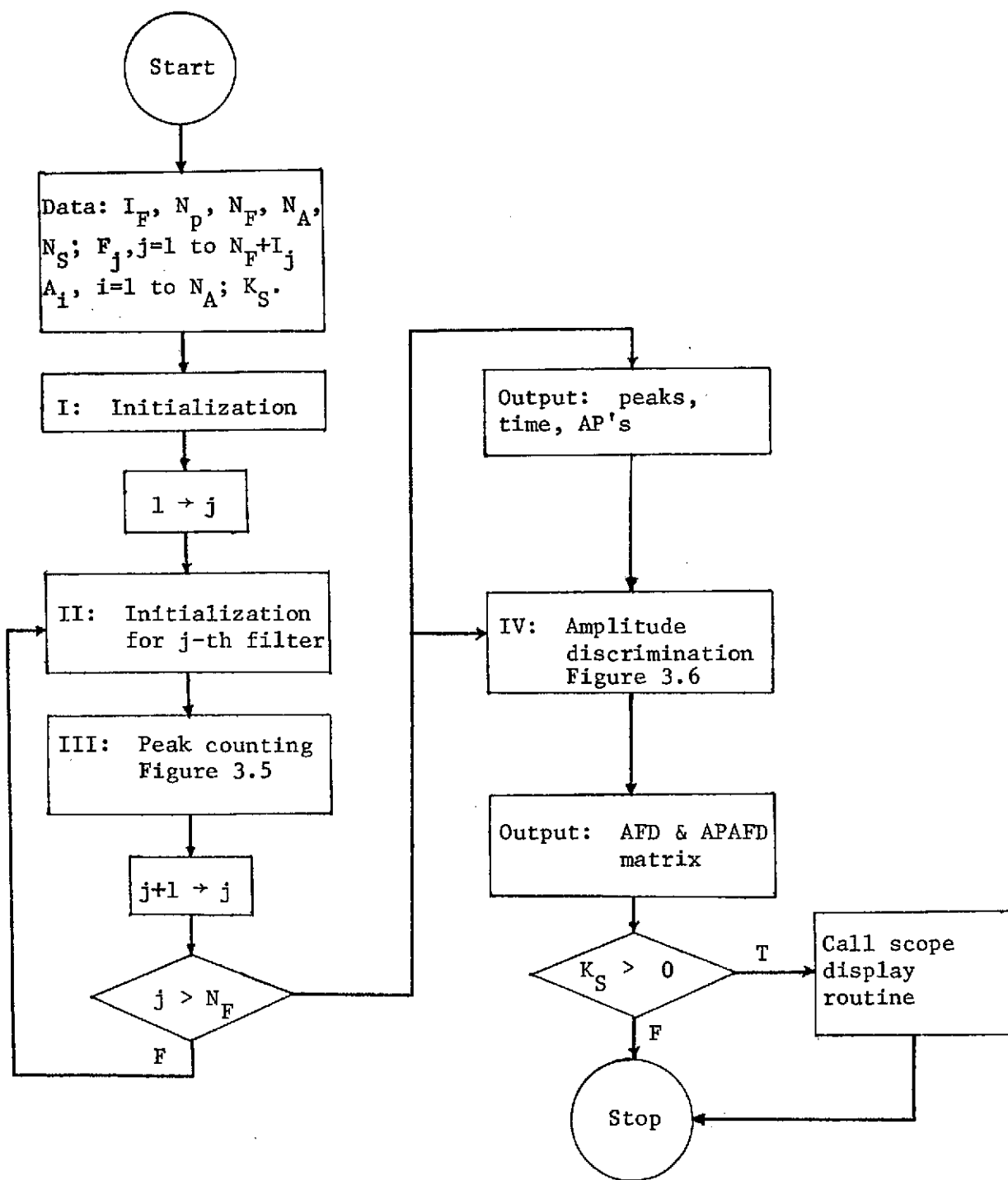


Figure 3.4. Algorithm for Serial Method: General Outline

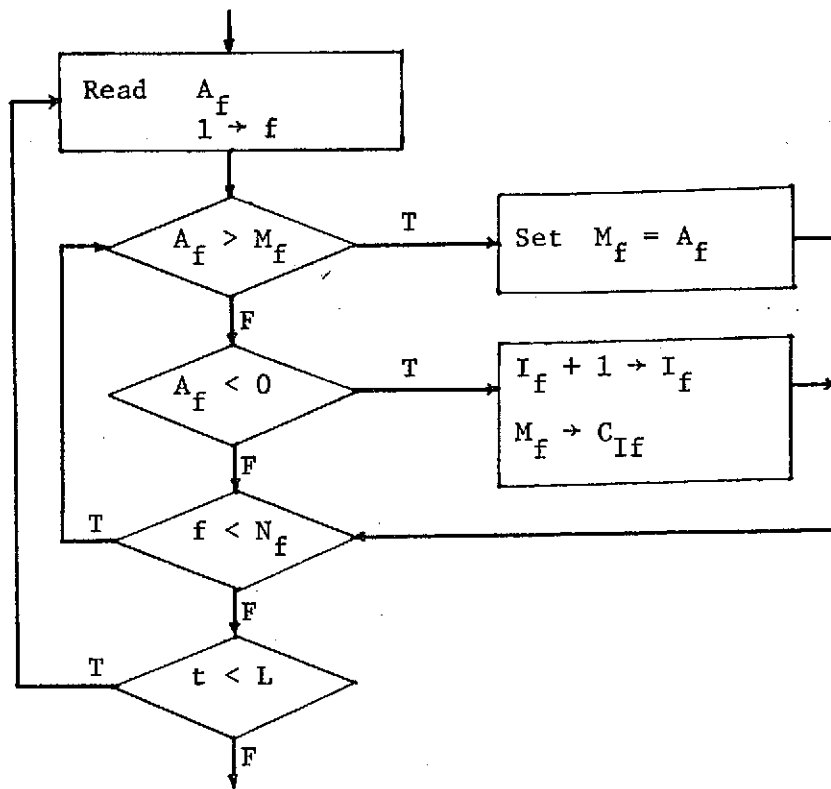


Figure 3.5. Conversion of Each Filter's Output to Count Peaks and Store Each Peak's Value

Legend

- A_f - Present amplitude of f filter signal
- M_f - Past largest value of A_f
- I_f - Peak number of f filter
- C_{If} - Minimum amplitude to be discriminated
- f - Index of filter band
- N_f - Number of filter bands
- t - Time
- L - Processing time

the unadjusted absorbed power, and the absorbed power contributed by the peak. One such listing is provided for each frequency band of each degree of freedom. The peaks are now discriminated into the amplitude bands for the AFD (Figure 3.6) and the value of each peak is compared with the upper amplitude levels of the amplitude bands, starting with the lowest. Each amplitude band is tested until the upper level of that band exceeds the value of the peak. The number in the AFD array whose position is determined by that amplitude band and the frequency band being processed is then increased by one. In this way, the number of peaks having each particular combination of amplitude and frequency can be determined. The unadjusted Absorbed Power AFD (APAFD) is then calculated by multiplying the number of peaks in the AFD for each amplitude-frequency combination by the square of the center amplitude of that amplitude band, and multiplying this by the proper K factor for that frequency band. The absorbed power AFD is calculated by dividing each value in the unadjusted APAFD by the maximum number of counts that could have occurred during the test run by a continuous sine wave having a frequency equal to the center frequency of the band containing the value. The AFD, unadjusted absorbed power AFD, and absorbed power AFD are printed out for each degree of freedom.

3.3 Applied Research Laboratory Program

The digitizing work for the System 95 computer was obtained as a service from the Applied Research Laboratory. The data was filtered into eight frequency bands in parallel and recorded on digital tape. In order to save time and tape, the data was digitized at a low rate of 32 samples/sec. The digitized data was converted to Fortran compatible form by a computer program (Figure 3.7), and rewritten in this form on more digital

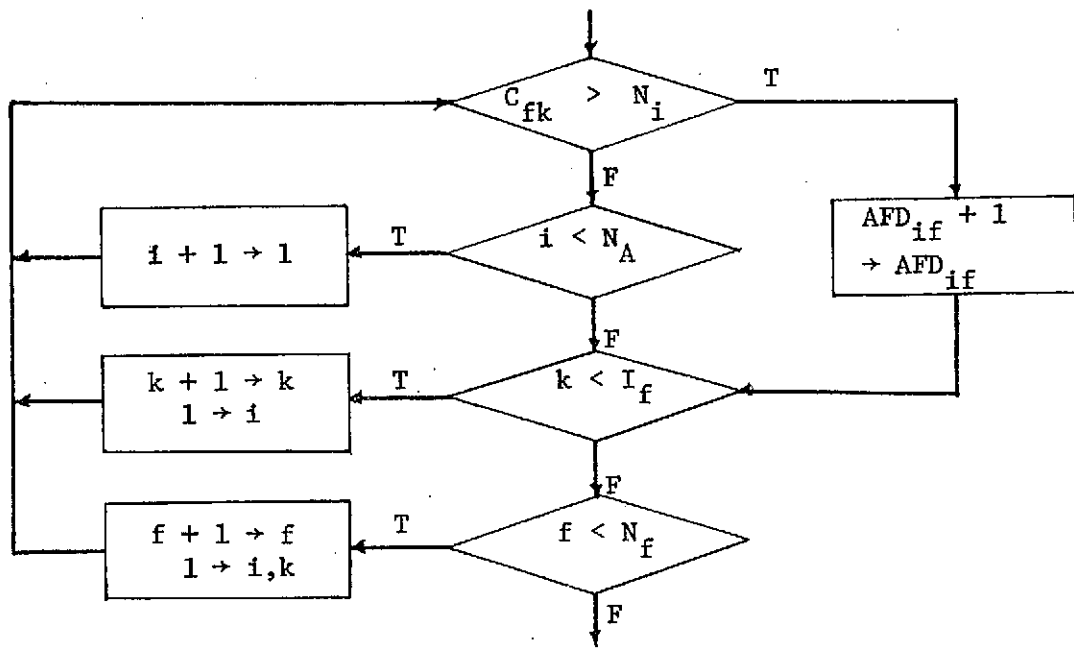


Figure 3.6. Amplitude Discrimination for Each Peak and Counting AFD

Legend

- N_i - Amplitude level
- i - Amplitude level index
- N_a - Number of amplitude levels
- k - Peak number
- I_f - Number of peaks in f^{th} filter
- f - Filter band index
- N_f - Number of filter bands
- C_{fk} - Peak value, k^{th} peak in f^{th} filter band

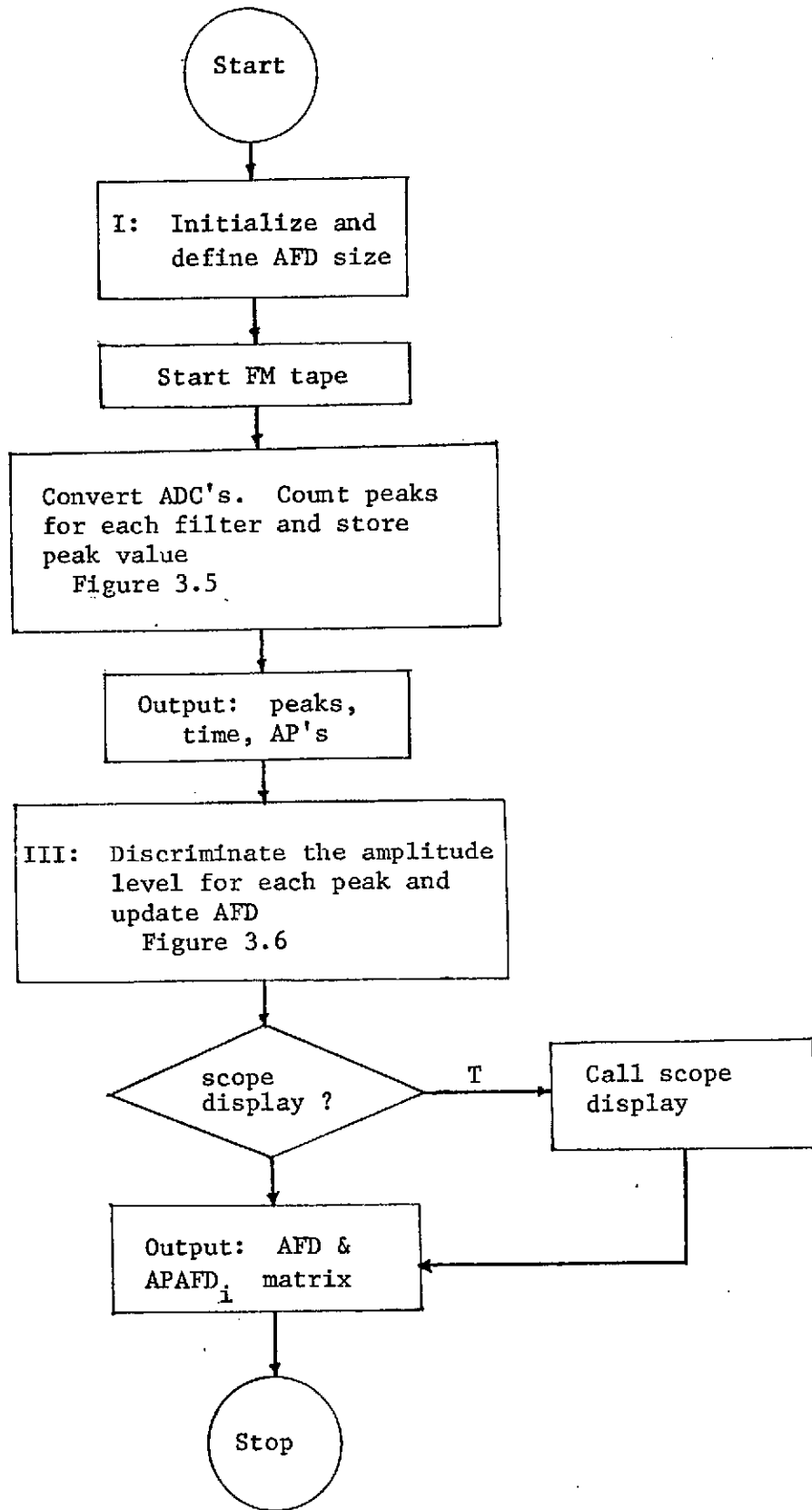


Figure 3.7. Algorithm for Parallel Method

tape. This program is listed in Appendix D. After digitizing and conversion of the data, the AFD program was run. The data was input to the AFD program from the digital tapes. As the data was already filtered into the desired frequency bands as written on the tapes, no filtering was required in the AFD program. Because the sampling rate of 32 samples/sec. was too low to accurately define the peaks in the higher frequency bands, Fast Fourier Transforms were used to provide more data between the data points actually sampled. This gives an effective sampling rate of 256 samples/sec. This was done only for the three highest frequency bands where the higher sampling rates are needed. The peak identification, data output listing, AFD, unadjusted absorbed power AFD, and absorbed power AFD parts of the program are all similar to those of the hybrid program.

4. RESULTS OF DATA PROCESSING

This chapter describes the results obtained by processing the NASA bus ride data and aircraft data. The complete set of results can be found in Appendixes E and F and typical samples are displayed here. The first and second sections of this chapter are concerned with the bus data results. The aircraft results are described in the third and fourth sections.

4.1 Objective--Bus Data Results

The first part of the output listing gives the amplitude and frequency bands selected. This listing provides band limits and depending on the scales chosen (linear or log), the center frequencies and amplitudes are calculated and listed. This listing is not repeated until the next computer run when a different set of bands can be chosen.

The next part of the computer output consists of eight listings, one for each frequency band of each segment of bus data. The first column gives the time in seconds, after the beginning of the segment, at which a peak in the acceleration amplitude occurs. The second column gives the amplitude of this peak, and the third column gives the unadjusted absorbed power which is used as an intermediate step in calculating absorbed power. The fourth column gives the absorbed power contributed by the amplitude peak. This is the actual power absorbed by the passenger due to this acceleration peak. This listing contains only those peaks with an acceleration amplitude of at least 0.02 g's, so that insignificant peaks with small absorbed power values are ignored. The listing is provided so that the time and amplitude of those peaks contributing large absorbed power values can be identified. Figures 4.1, 4.2, and 4.3 are typical listings from run 7, segment 3, vertical direction,

```

RUN=7
  DEGREE=1
    SEGMENT= 3
      FREQ BAND=1
INEW=  2

```

TIMEO(SEC)	AMP(G'S)	AP	NAP
2.28	0.10	0.000	0.0003
13.03	0.10	0.000	0.0003

Figure 4.1. Listing for Run 7, Segment 3, Vertical, Frequency Band 1

```

RUN=7
  DEGREE=1
    SEGMENT= 3
      FREQ BAND=6
INEW=  8

```

TIMEO(SEC)	AMP(G'S)	AP	NAP
14.03	0.03	0.047	0.0011
28.84	0.04	0.109	0.0026
31.41	0.05	0.128	0.0030
35.78	0.04	0.083	0.0020
42.12	0.04	0.091	0.0021
45.00	0.06	0.228	0.0054
81.91	0.03	0.047	0.0011
96.03	0.03	0.047	0.0011

Figure 4.2. Listing for Run 7, Segment 3, Vertical, Frequency Band 6

RUN=7

DEGREE=1

SEGMENT= 3

FREQ BAND=8

INew= 116

31

TIMEO (SEC)	AMP (G'S)	AP	NAP
0.38	0.03	0.017	0.0001
1.03	0.05	0.039	0.0002
1.69	0.04	0.024	0.0001
2.31	0.05	0.053	0.0003
3.00	0.06	0.073	0.0004
5.28	0.05	0.039	0.0002
5.97	0.04	0.037	0.0002
6.59	0.03	0.021	0.0001
7.25	0.03	0.019	0.0001
8.44	0.03	0.014	0.0001
9.12	0.05	0.039	0.0002
16.09	0.03	0.014	0.0001
16.81	0.03	0.019	0.0001
17.53	0.03	0.015	0.0001
18.19	0.03	0.018	0.0001
21.00	0.03	0.019	0.0001
24.34	0.03	0.019	0.0001
25.66	0.06	0.061	0.0004
26.34	0.05	0.048	0.0003
27.06	0.08	0.134	0.0008
27.97	0.07	0.100	0.0006
28.78	0.07	0.081	0.0005
29.37	0.09	0.139	0.0008
30.06	0.15	0.443	0.0026
42.97	0.05	0.057	0.0003
45.12	0.04	0.037	0.0002
45.91	0.06	0.068	0.0004
48.66	0.04	0.030	0.0002
49.25	0.05	0.045	0.0003
49.81	0.03	0.016	0.0001
50.31	0.03	0.017	0.0001
50.94	0.06	0.075	0.0004
51.62	0.06	0.064	0.0004
52.25	0.04	0.030	0.0002

Figure 4.3. Partial Listing for Run 7, Segment 3, Vertical, Frequency Band 8

from front accelerometers. Note that each listing is first identified by run number, segment number, and frequency band. Figure 4.1 is the listing for frequency band 1. In most cases, the lower frequency bands contain few peaks above the minimum, and these peaks have small absorbed power values due to the small K factors in these bands. Figure 4.2 is the listing for frequency band 6, and shows that the middle frequency bands generally contain a moderate number of peaks with large absorbed power values. Figure 4.3 is a partial listing for frequency band 8. There are 116 peaks in the complete listing. The absorbed power values are small due to small K factors.

After the eight listings, the amplitude frequency distribution is printed out; the amplitude frequency distribution shows the number of peaks that occurred in the segment having any particular amplitude and frequency combination. A separate amplitude frequency distribution is provided for each degree of freedom of each segment. Figure 4.4 shows the AFD output for run 7, segment 3, vertical. This is a typical AFD, showing the approximate distribution found in most of the runs. Figure 4.5 is the AFD for run 8, segment 2, lateral, from the center of the bus, and shows that a few AFD's have counts in the upper amplitude bands, with resulting high absorbed powers.

The unadjusted absorbed power AFD and absorbed power AFD are then printed out. These give the unadjusted absorbed power and absorbed power contributed by each amplitude-frequency combination. The unadjusted absorbed power AFD's are not shown since they have no meaning; an absorbed power AFD is shown in Figure 4.6 for run 7, segment 3, vertical.

Finally, the total unadjusted absorbed power and total absorbed power of the segment are printed. Each of these is simply a single number found

Amplitude Levels Are Set At

0.03 0.05 0.08 0.13 0.21 0.32 0.50

Frequency Levels Are Set At

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

RUN=7

DEGREE=1

SEGMENT= 3

AFD OUTPUT

0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	1
2	0	0	0	0	0	1	7
0	0	1	1	6	1	5	28
0	1	0	2	4	4	10	49

Figure 4.4. AFD Output, Run 7, Segment 3, Vertical Motion

Amplitude Levels Are Set At

0.03 0.05 0.08 0.13 0.21 0.32 0.50

Frequency Levels Are Set At

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

RUN=8

DEGREE=5

SEGMENT= 2

AFD OUTPUT							
0	0	2	0	0	0	0	0
0	2	1	1	0	0	0	0
1	0	0	0	0	0	0	6
1	2	3	1	0	0	0	72
1	0	0	2	1	0	9	81
0	1	2	2	1	1	34	26

Figure 4.5. AFD Output, Run 8, Segment 2, Lateral Motion

Amplitude Levels Are Set At

0.03 0.05 0.08 0.13 0.21 0.32 0.50

Frequency Levels Are Set At

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.009
0.000	0.000	0.001	0.001	0.001	0.017	0.007	0.021	0.014
0.000	0.000	0.000	0.001	0.001	0.005	0.011	0.017	0.010

SUMAP= 11.524

SUMNAP= 0.129

Figure 4.6. Absorbed Power AFD, Run 7, Segment 3, Vertical Motion

by summing the values in the unadjusted absorbed power AFD and absorbed power AFD, respectively. Complete listing of the AFD's and the absorbed power AFD's are given in Appendix E.

4.2 Subjective Data

The bus subjective data used in the correlation studies, taken by experimenters of old Dominion University and supplied by NASA, are shown in Appendix F (Tables 1-8). For runs 2 and 6, the subject assigned a number from 1 to 5 to the quality of the ride, where 1 was the best quality ride and 5 was the worst. Runs 7 and 8 were similar, except that the scale ranged from 1 to 6. The subjective data for runs 1, 3, 4, 5 were unusable, and therefore the objective data for these runs were not processed. The objective and subjective data were tabulated for the correlation studies. The first three columns contain total absorbed power of each segment for the vertical, lateral, and longitudinal directions. The fourth column contains the sum of the first three columns, which is the total absorbed power to be correlated to the subjective data. The fifth column gives the subjective response to the ride quality of each segment. Two tabulations were made for each run, one for the front accelerometer and another for the center accelerometer, except for run 8. The tabulation for run 7, front accelerometer, is shown in Table 4.1.

In a given run, all the absorbed power values corresponding to a single subjective response number were averaged, and then standard deviation from this average was calculated. These average values are plotted as in Figure 4.7, which is from run 7, front accelerometer.

It was noted that a few extremely large acceleration values, especially in the lateral and longitudinal degrees of freedom, were causing large

Table 4.1. Listing of Absorbed Power (Three-Degree Motion) with the Subjective Ratings (Front Seat) for Bus Run 7 (AP in Watts).

Segment	Vertical	Lateral	Fore-Aft	Sum	A - 1
1	0.022	0.071	0.001	0.094	3
2	0.025	0.002	0.000	0.027	2
3	0.129	0.502	0.004	0.635	4
4	0.005	0.069	0.000	0.074	2
5	0.143	1.060	0.084	1.287	5
6	0.002	0.012	0.016	0.030	2
7	1.165	9.392	8.761	(19.318) 1.165	4
8	0.027	0.071	0.001	0.099	2
9	0.148	(12.482)	0.005	(12.635) 0.153	6
10	0.162	0.189	0.003	0.354	3
11	0.006	0.030	0.000	0.036	4
12	0.019	0.070	0.001	0.090	1
13	0.128	0.349	0.188	0.665	2
14	0.812	3.041	2.534	(6.387) 0.812	3
15	0.043	(5.382)	0.002	(5.427) 0.045	2
16	0.028	0.374	0.001	0.403	2
17	0.184	8.526	0.003	(8.713) 0.187	6

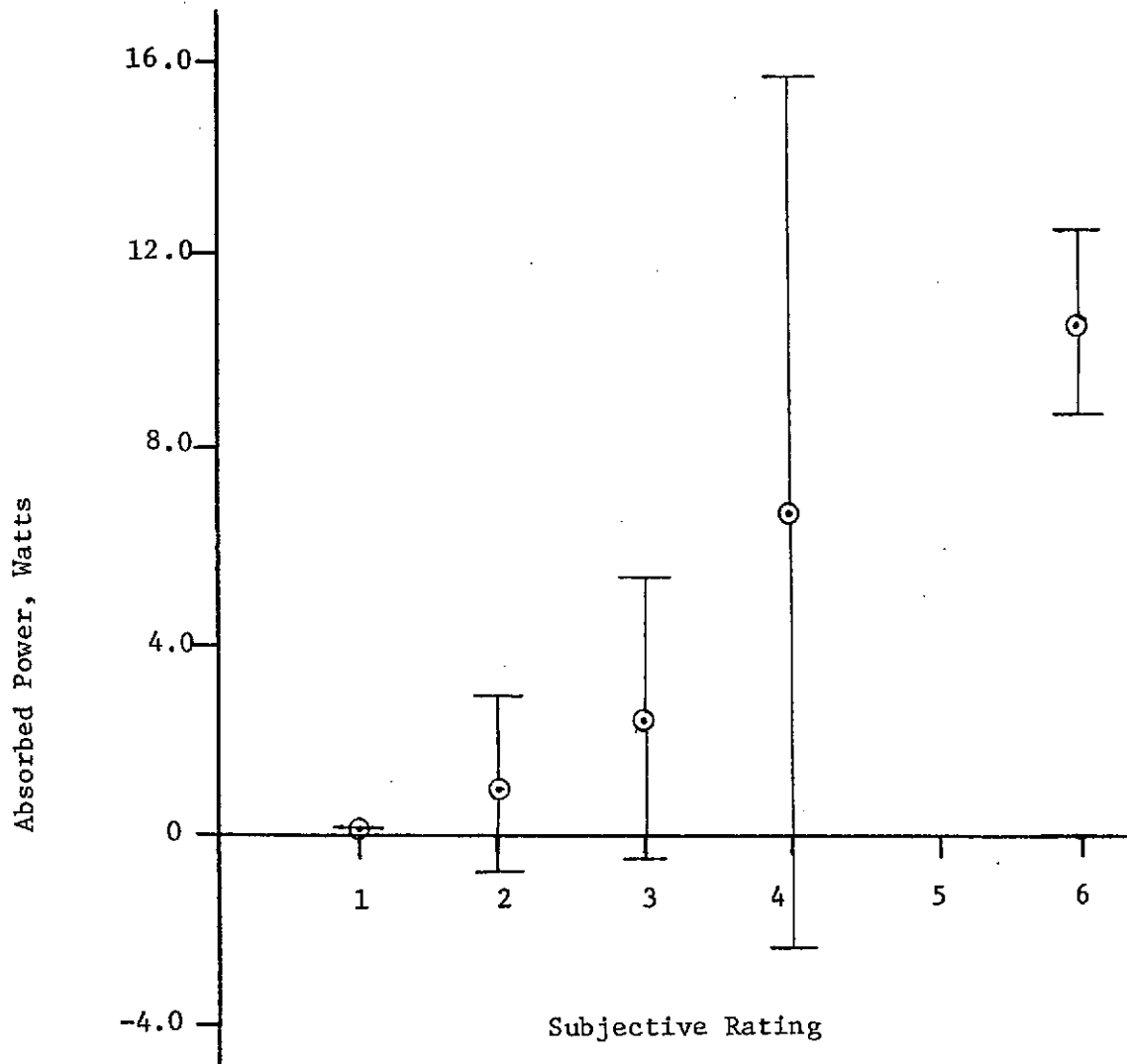


Figure 4.7. Absorbed Power vs. Subjective Rating for Run 7, Segment 3, Front Seat of Bus Data

absorbed power values where the subjective rating was small. These absorbed power values were discarded because such accelerations were large enough to move the passengers from their seats and were unreasonable since the subjective responses were small.

A second set of correlation plots was made after discarding these high values, and the absorbed power scale on the plots was reduced accordingly (Figure 4.8).

A final composite correlation plot, combining the data for all segments of all runs from both accelerometers, was made. Although in the individual plots the curve was not always exponential as expected, the composite plot does show an exponential curve (Figure 4.9).

The composite plot appears as a straight line in a semi-log plot, Figure 4.10, and fits the equation:

$$S = 1.7245 \ln (3.96849AP)$$

where S = the subjective response; and

AP = the absorbed power in watts.

4.3 Objective--Aircraft Data Results

The aircraft data consists of four test runs, with each run containing from eight to fourteen segments. The segments vary in length, but average about 30 seconds each. As the total time per run is from 16 to 28 minutes, it can be seen that only about one-third of the information recorded on the data tape is valid data. Since it cannot be assumed that the test segments containing the valid data are evenly spaced, some type of timing method is required to determine the beginning of each segment. Such a timing method was included on a separate channel of the tape, the NASA time code.

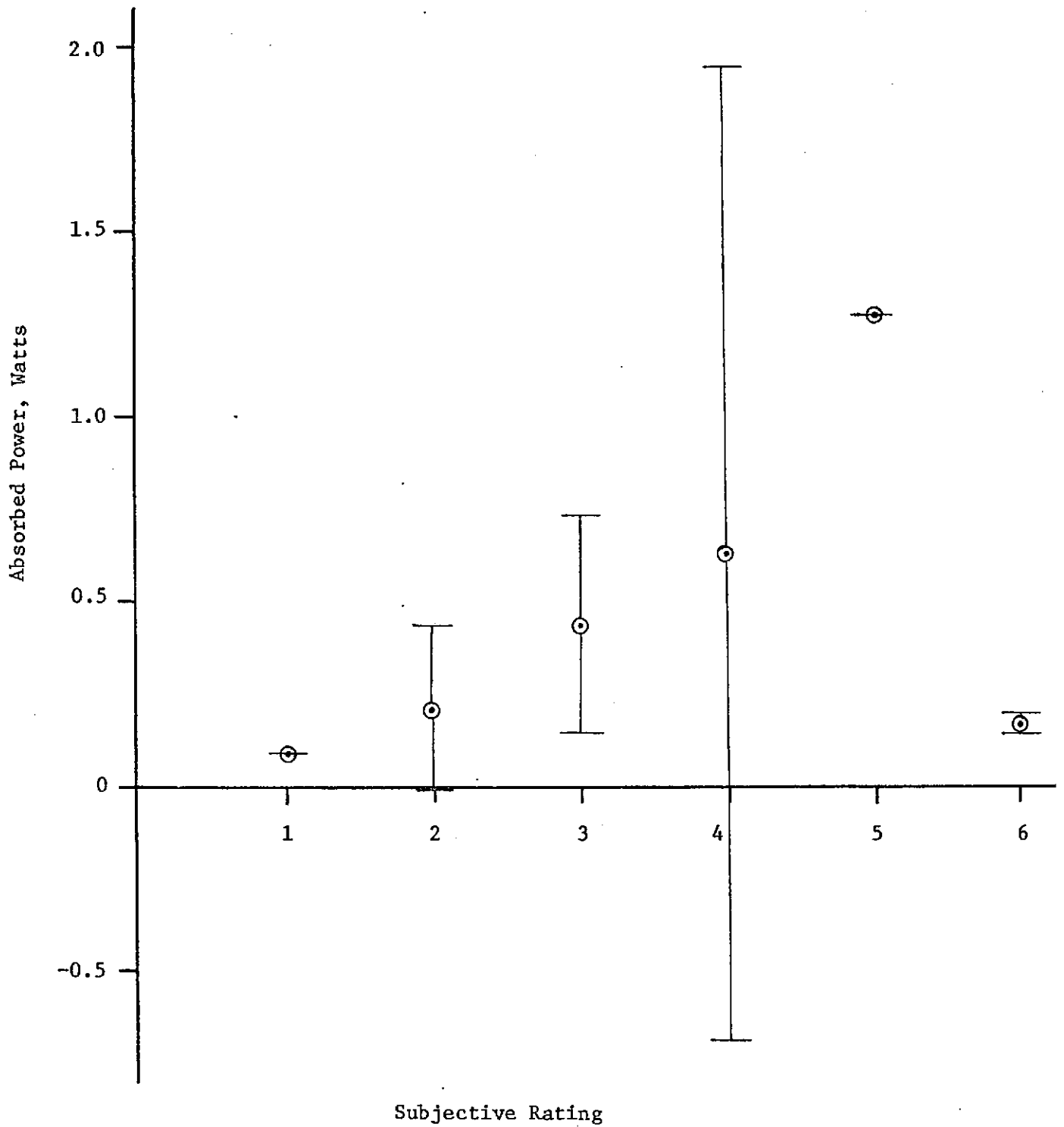


Figure 4.8. Absorbed Power vs. Subjective Ratings for Run 7, Segment 3, Front Seat of Bus with Extreme Value Removed

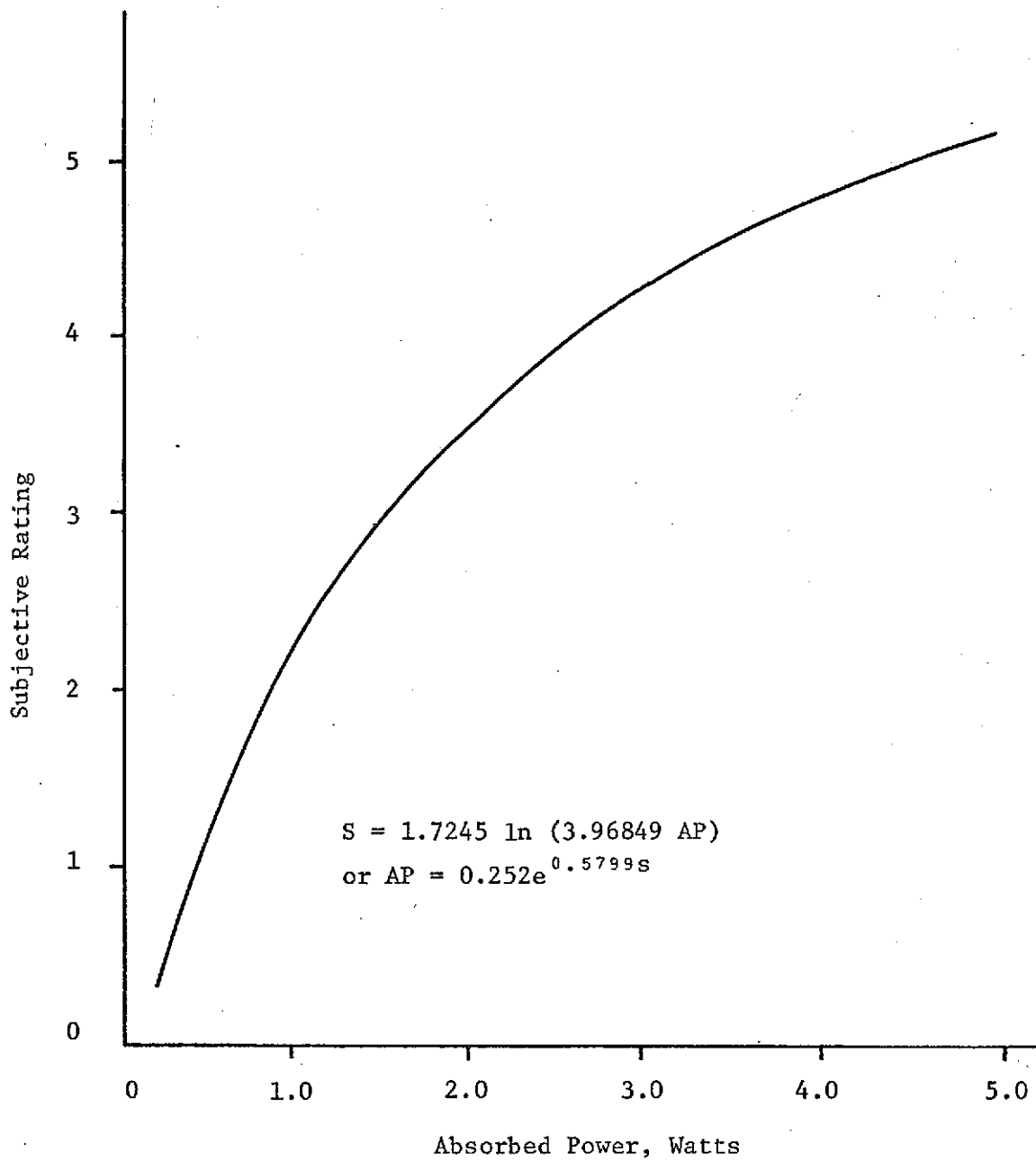


Figure 4.9. Correlation of Absorbed Power (For Three Degrees of Motion) with Subjective Bus Ride Data

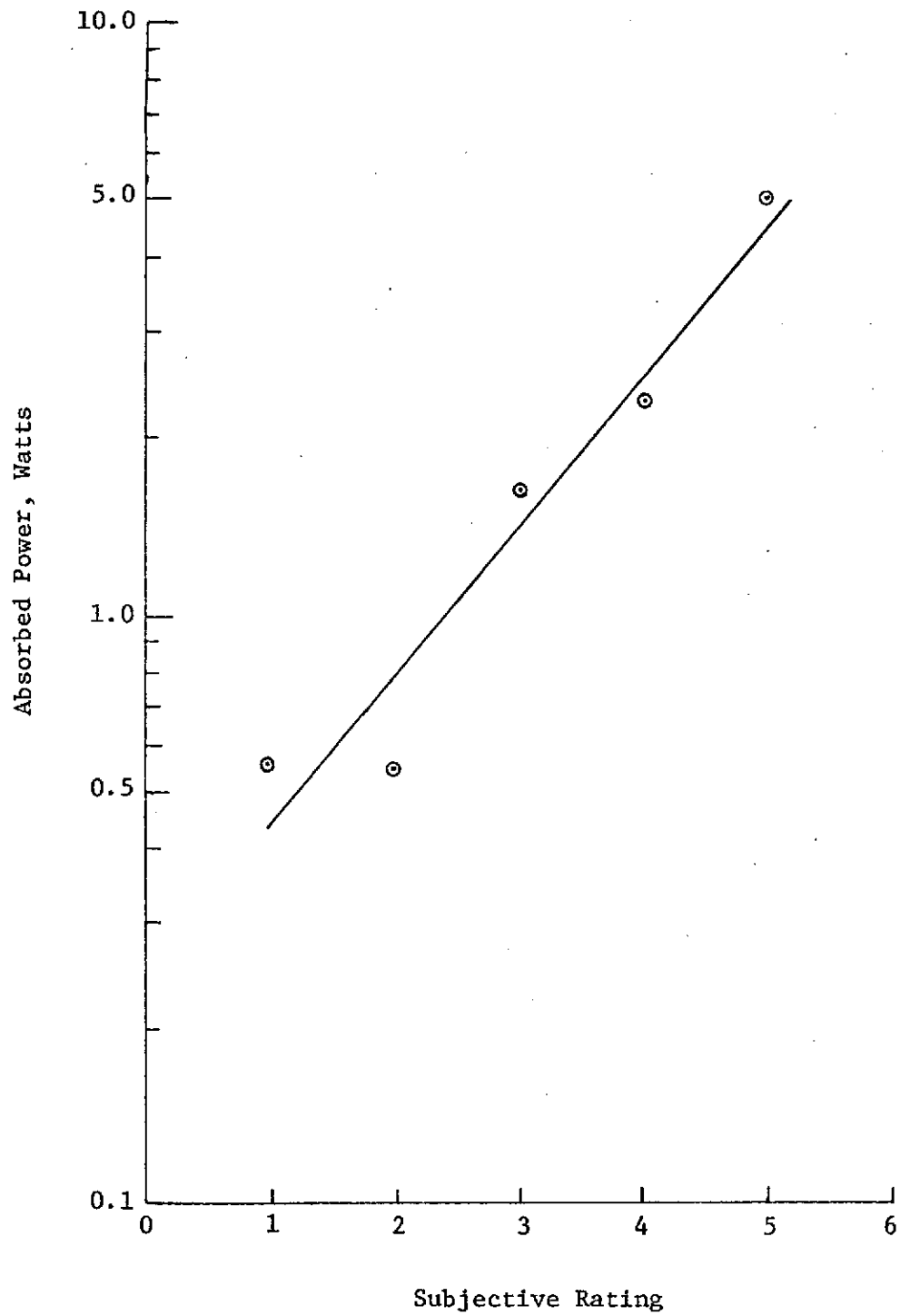


Figure 4.10. Composite Plot of Bus Data

Unfortunately, this time code was unusable by the investigators. Nevertheless, it was decided that the aircraft data investigation would be carried to completion to show that the technique can be used with data having up to six degrees of freedom, even though valid results cannot be expected.

It was assumed that the segments were 30 seconds long, evenly spaced throughout the test run, and that the first segment began 15 seconds after the beginning of the test run.

In view of the invalidity of the data and a shortage of available computer time, only the first five segments of each run were processed.

In runs three and four, the data for the pitch, roll, and yaw were recorded as velocity instead of acceleration, and were therefore unusable. Only the three translational degrees of freedom were processed for these runs. The results are tabulated in Table 4.2 and the correlation plot is displayed in Figure 4.11.

Table 4.2. Listing of Absorbed Power (Six Degrees of Motion) with the Subjective Ratings for the Three Test Runs of Aircraft Data

SEGMENT	AP, WATTS	SUBJECTIVE RATINGS (2 persons)	
TEST 1			
1	9.4052	2	2
2	0.0077	3	3
3	1.3014	3	2
4	0.0678	3	3
5	0.2828	3	3
TEST 2			
1	9.5426	3	3
2	0.0513	4	4
3	0.0099	5	5
4	0.0039	4	4
5	0.0091	4	4
TEST 3			
1	0.0196	2	3
2	0.0201	3	4
3	0.0039	3	4
4	0.0103	3	4
5	0.0674	3	4
TEST 4			
1	0.004	1	-
2	0.000	1	-
3	0.000	2	-
4	0.000	2	-
5	0.000	2	-

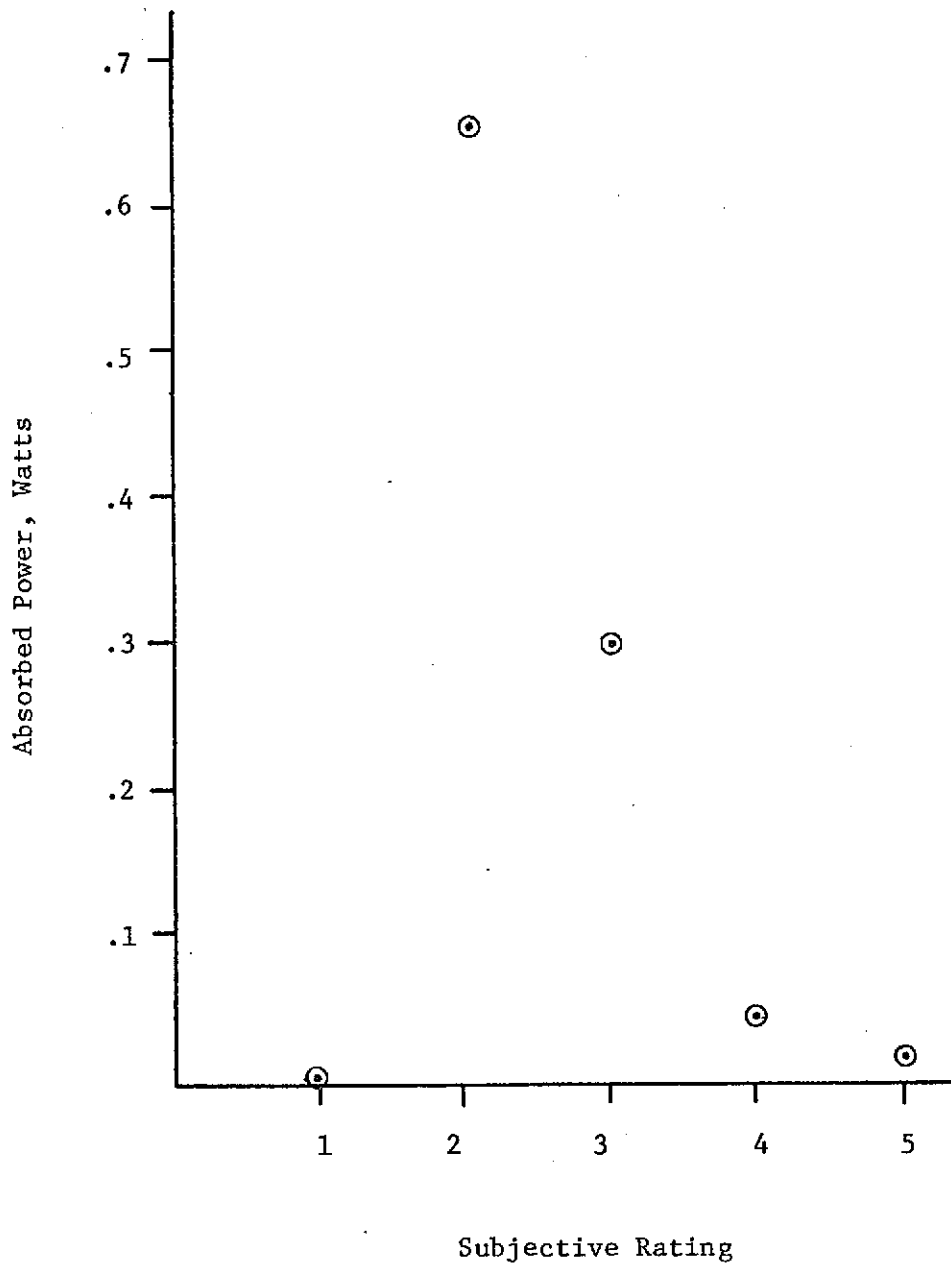


Figure 4.11. Absorbed Power (For Six Degrees of Motion) vs. Subjective Aircraft Ride Data

5. APPRAISAL OF RESULTS, APPLICATIONS, AND RECOMMENDATIONS

5.1 Appraisal of Results and Applications

The correlation results of absorbed power as an objective ride measure to the subjective evaluation for the NASA bus data was very successful. Individual segments and rides gave poor correlation since the data base was too small to give a reasonable random sample. However, when sufficient numbers of rides are used to give a reasonable sample base, excellent correlation was obtained and the following logarithmical relation was shown by the data:

$$S = 1.7245 \ln (3.96849 AP)$$

where S = the subjective rating (on a 5-point scale); and

AP = the absorbed power in watts.

The six-degree-of-freedom computational method for the aircraft data was completed. A few samples were reduced, but they provided insufficient data (i.e. too small a sample size). In addition, there was no assurance that the acceleration data were properly matched with subjective ratings since exact start-stop times of the segments were not known. For these reasons, the aircraft data are not considered to be very exact and thus little can be drawn from the correlation plots.

Since there was a successful correlation of the bus data, a further correlation of ISO standards and the Absorbed Power (AP) method was started. Appendix H gives the details of the results of this comparison. It was found that these two methods do agree rather well. In the whole-body frequency range, AP is slightly more conservative; in the 10 to 100 Hz, the two agree; but in the 2 Hz and below range, the AP is not as restrictive

as ISO standards. Since AP only accounts for vibration effects and such things as motion sickness are not included, there is justification for the harsher requirements of ISO standards in this range.

Since the two methods compare reasonably well, one can use either method as an overall criterion. However, the AP method has the distinct advantage that effects due to more than one degree of freedom can be determined by adding the effect of the individual degrees of freedom. It thus appears, if the proposed ISO standards are to be used, a combination of ISO standards and the AP method would be in order.

Once the bus subjective and ISO standard correlations with AP have been made, it is useful to compare these two correlations. Table 5.1 shows the AP values for both correlations with the ISO standards for one-hour exposure.

With the exception of the very good ride, the two correlations give absorbed power levels that are very similar. Even the very good ride (subjective rating of 1) is close in terms of overall rating--a .45 AP to 4.57 AP range for the bus data and .15 AP to 5.88 AP range for the ISO standards.

5.2 Recommendations

Since the bus data and ISO standards were successfully correlated, more work should be done with the aircraft data. The computer programs are now operational and the costs of completing the study of aircraft data would be mainly for computational time.

It is also recommended that a new set of K values for the AP method be developed from the ISO standards and that both these values and the

Table 5.1. Comparison of the Bus Ride Correlation with the ISO Standard Correlation Using Absorbed Power as the Basis for Comparison

<u>Subjective Ratings</u>	<u>Average AP for a 1-Hr. ISO Standard Exposure</u>	<u>AP Level from Bus Ride Correlation</u>
1	.15	.45
2	-	.8
3	1.5	1.44
4	-	2.56
5	5.88	4.57

original absorbed power K values be tried in the computer programs. Since the programs accept K values as data, it will be a simple task to compute AP values based on both sets of values.

In summary, the authors feel that the absorbed power approach has merits and would like to propose to use the results of this study to run complete correlations of the University of Virginia aircraft data and any other NASA ride data that might be available.

REFERENCES

1. Reiher, H. and Meister, F. J. "Die Empfindlichkeit des Menschen gegen Erschulterungen." Forschung auf dem Ingenieurwesens 22 (1931), pp. 381-386.
2. Jacklin, M. H. and Liddel, G. J. "Riding Comfort Analysis." Engineering Bulletin, Research Series No. 44, Purdue University, Lafayette, Ind., May 1933.
3. Janeway, R. N. "Ride and Vibration Data." Special Publication SP-6, Society of Automotive Engineers, 1950.
4. Ten Cate, W., translated by Murray, R. D. "Vibration Nuisance." Royal Aircraft Establishment, Great Britain, Oct. 1957.
5. Snyder, F. W. "Effects of Low Frequency Vertical Vibration on Human Performance." Paper read at Aerospace Medical Association, Apr. 1962.
6. Van Deusen, B. D. "Analytical Techniques for Designing Riding Quality." S.A.E. Publication No. 670021, 1967.
7. Holland, Clarence L. "Some Aspects of Human Response to Random Vibration." Technical Report No. 9010 (11 105), Army Tank-Automotive Center, Aug. 1965.
8. Butkunas, Andrius A. "Power Spectral Density and Ride Evaluation." Ford Motor Company, S.A.E. Publication No. 660138, 1966.
9. Pradko, Fred and Lee, R. A. "Vibration Comfort Criteria." S.A.E. Publication No. 660139, Jan. 1966.
10. Pradko, Fred and Lee, R. A. "Analytical Analysis of Human Vibration." S.A.E. Publication No. 680091, 1968.
11. Pradko, Fred, Lee, R. A., and Kauluz, V. "Theory of Human Vibration Response." A.S.M.F. Publication No. 66-WA/BHF-15, 1966.
12. Beurteilung der Einwirkung mechanischer Schwingungen auf den Menschen." (Assessing the Effect of Mechanical Vibrations on the Human Body.) VDI-Richtl. 2057,2. Entwurf, Dec. 1961.
13. Allen, G. R. Private Communication. (R.A.E. Farnborough, England.)
14. Simic, D. "Influenza delle vibrazioni angolari sul corpo umano" (Effect of Pitching Vibration on the Human Body). A.T.A., Vol. 24, No. 7 (1971), p. 361.
15. Symposium on Vehicle Ride Quality. NASA TMX-2620, Oct. 1972.

16. Vinje, E. W. "Analytical and Experimental Evaluation of Proposed Ride Comfort Criteria." Symposium on Vehicle Ride Quality, NASA TMX-2620, Oct. 1972, pp. 115-141.
17. Shanahan, B., Stearman, R., Heobez, A. "Literature Survey on Passenger and Seat Modeling for the Evaluation of Ride Quality." Research Memo to DOT (DOT OS 30093RM8), Nov. 1973.
18. Brickman, A. D., Park, W. H., and Wambold, J. C. Road Roughness Effects On Vehicle Performance. Penna. Dept. of Transportation Research Project No. 69-15. TTSC Report 7207, Pennsylvania Transportation and Traffic Safety Center, The Pennsylvania State University, 1972.
19. Wambold, J. C., Park, W. H., and Vashlishan, R. G. "A New Random Data Description and Its Use in Transferring Road Roughness to Vehicle Response." ASME paper 73-DET-26, September 1973; Journal of Engineering for Industry, Vol. 96, Series B, No. 2 (May 1974), pp. 676-681.
20. Park, W. H., Wambold, J. C., and Vashlishan, R. G. "Prediction of Objective Passenger Comfort from Road Profile." ASME paper 73-DET-114, September 1973; Journal of Engineering for Industry, Vol. 96, Series B, No. 2 (May 1974), pp. 503-508.
21. Brickman, A. D., Wambold, J. C., and Zimmerman, J. D. "An Amplitude-Frequency Description of Road Roughness." Highway Research Record No. 166 (1971).
22. Wambold, J. C. and Zimmerman, J. R. "Hybrid Programs for Calculating the Joint Probability of Amplitude and Frequency of a Random Signal." ACES Transactions, Vol. 3, No. 7 (July 1971), pp. 133-144.
23. Wambold, J. C. and Park, W. H. "A Data Processing Method Giving a Better Physical Description of Random Signals." Presented at the 20th International Instrumentation Symposium, May 1973, Albuquerque, New Mexico; Proceedings of the 20th International Instrumentation Symposium (1974), pp. 371-375.
24. Wambold, J. C. and Park, W. H. Objective Ride Quality Evaluation. PTI 7412, The Pennsylvania Transportation Institute, The Pennsylvania State University, March 1974.

APPENDIX A

Human Response to Random Vibration

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Transfer Function for Seated Vehicle Passenger

In 1965, Pradko and Lee(9, 10, 11)utilized a transfer function approach for the analysis of human vibration. The technique developed accurately identifies, measures, and predicts whole body response to any vibrational input, whether sinusoidal, transient, or random.

Figure A.1 illustrates the force and motion quantities of particular interest in human response dynamics.

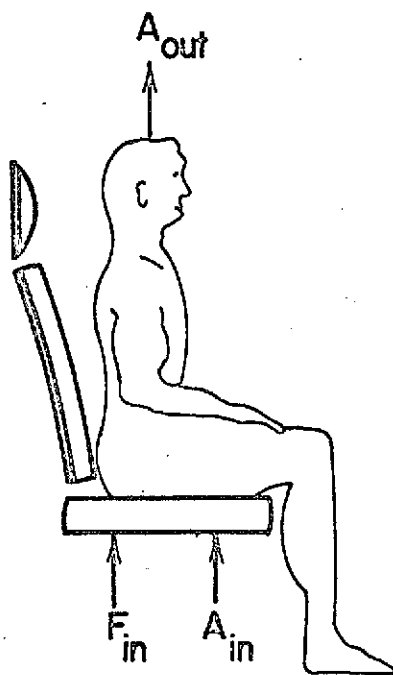


Figure A.1. Response Measurements

There is one transfer function for each combination of output and input. For example, the transfer function relating the acceleration input A_{in} to the output acceleration A_{out} of the system in Figure A.1 is given in the equation:

$$G_{aa}(f) = \frac{A_{out}(f)}{A_{in}(f)} \quad (A.1)$$

There also exists a transfer function relating the force of vibration F_{in} to the output acceleration A_{out} :

$$G_{fa}(f) = \frac{F_{in}(f)}{A_{out}(f)} . \quad (A.2)$$

Pradko and Lee determined and multiplied the above two transfer functions together, producing the following transfer function:

$$\frac{F_{in}(f)}{A_{out}(f)} \times \frac{A_{out}(f)}{A_{in}(f)} = G_m(f) \quad (A.3)$$

or

$$G_m(f) = \frac{F_{in}(f)}{A_{in}(f)} . \quad (A.4)$$

The above transfer function has been termed Effective Mass.

Perhaps a word should be said about the experimental program and instrumentation used in developing the above transfer function. A known sinusoidal input acceleration of specified magnitude and frequency was applied to the seated subject. The steady state output force magnitude and phase were then recorded. The frequency of the input was then changed to another value, and again the output was recorded. The entire frequency range considered important was generated. This ratio of output to input was plotted with the frequency as the abscissa. From this relationship, the transfer function was determined.

Absorbed Power

Although transfer functions allow analytical solutions for the dynamic response of the human body, they do not provide any apparent way for determining the severity of the vibration. A parameter that will relate

the vibrational intensity to the subjective response is required.

Extensive testing by Pradko and Lee has shown that the rate of flow of energy becomes a parameter that characterizes the interaction of the vibrating human and the environment. The energy flow takes place as a result of the complex damped elastic properties of the human anatomy. When vibrational energy distorts the elastic body, dimensional changes take place, producing reactions that tend to restore the body to the original position. The work performed in the process balances the applied load. Consequently, the body's elasticity produces restoring forces which are related to displacement. The body's vibratory motion continues until the energy imparted is dissipated or removed. The time rate at which this energy is used has been defined by Pradko as absorbed power (AP). Absorbed power is a parameter relating vibratory input conditions to subjective response and is defined as follows:

$$\text{Average AP} = \lim_{T \rightarrow \infty} \frac{1}{T} \int_0^T F(t) V(t) dt \quad (\text{A.5})$$

where $F(t)$ = Input force; and

$V(t)$ = Input velocity.

In order to evaluate the absorbed power concept in terms of the passenger's subjective response, Pradko and Lee gathered data from 13 test subjects at the Dynamic Ride Simulator facility at the Army Tank Automotive Command (ATAC). For each particular test, the frequency was present and remained fixed. The sinusoidal acceleration amplitude was increased at a slow rate from zero to a condition of vibration tolerance. The tolerance condition was a combination of vibration severity and subject response where pain, loss of physical control, or advanced stages of

blurred vision were considered by the subject to be unacceptable in the sense that vehicle control could not be maintained. When tolerance was reached, the subject actuated a buzzer which began the data collection procedure. Results shown in Figure A.2 represent a two-sided interval which brackets the mean acceleration with 90 percent confidence level (solid curves). From these tests, mean values of acceleration at corresponding frequencies were used to develop a constant power curve of 290 watts. This curve was then fitted to the sinusoidal as well as a random vibration curve. The results indicated that absorbed power displayed the same characteristics as the subjective judgment criterion.

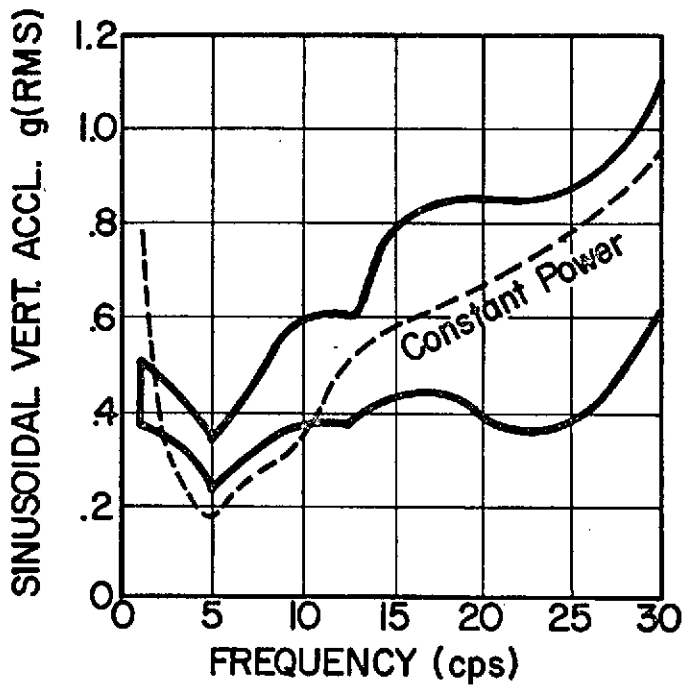


Figure A.2. Acceleration: Power Comparison

Since absorbed power is a function of the energy flow rate of the elastic properties of the human anatomy, it has physical significance and interpretation. Consequently, it is possible to measure the variation of

this parameter for different people and different seating arrangements. For example, it has been found that a muscular person generally has, for the same body weight, a lower absorbed power for the same vibration than a more obese person. The effect of the elastic property of the anatomy can be shown by using a rigid mass in place of a human test subject. The resulting energy flow is zero because of its rigid, inelastic properties.

Pradko and Lee have also shown that a contoured seat generally produces a lower absorbed power than one that is not contoured. This is due to the larger contact area and resulting reduction in body movement. Under very severe conditions where the man moves relative to the seat, the assumption of linear equations is no longer valid; consequently, the transfer function and absorbed power results lose their validity as the system becomes more nonlinear. Pradko has examined this aspect of linearity and verified that the mechanical response characteristics of man in a seated, erect position is linear.

Under normal vibration conditions, using absorbed power as a criterion, one can modify the input or seating arrangement and measure directly the effects on comfort. To examine this sensitivity of absorbed power, a test was performed using ride forms (composed of 26 random waveforms) as the experimental inputs. Each ride contained different PSD variation characteristics in the frequency spectrum of 4 to 36 cps at different levels of acceleration. The rides were presented in sequence of increasing acceleration magnitude. A group of 10 subjects judged each ride subjectively for comfort and reported only those rides that appeared to be "out of place." The test subjects reported nine rides out of place. The absorbed power data which were experimentally measured were compared to

the acceleration levels of the rides. It was found that absorbed power closely agreed with the subjective response, indicating that the acceleration sequence was incorrect. The versatility of absorbed power in determining human discomfort due to vibration is not realized in any other known methods.

In the time domain, absorbed power can be written for an infinite time or a finite averaging time. Equation A.5 shows the average absorbed power function for an infinite averaging time.

Absorbed power can also be described in the frequency domain. The power is computed as the product of the mean squared acceleration (A_i^2 rms) at each frequency and the parameter (K_i), where K_i is a function of frequency, but not amplitude (index i denoting the discrete frequency):

$$\text{Average AP} = \sum_{i=0}^n K_i \times A_i^2 \text{ rms} \quad (\text{A.6})$$

Absorbed power is a scalar quantity and, therefore, can be directly additive. For multi-degree motion, the individual absorbed power values are readily summed for a single quantitative measure of human vibrational comfort. Pradko and Lee have published the K_i values for five degrees of freedom (vertical, fore-aft, lateral, pitch, and roll) as well as for input to the feet. Typical K_i parameters are shown in Table A.1. These K_i values are used to weight the effect of each directional input, and the total absorbed power is the algebraic sum of the absorbed power attributed to each input. Since absorbed power is a scalar, phasing information between the inputs is not needed for evaluation.

As Equation A.5 indicates, the input force and velocity are needed to compute absorbed power. However, utilizing Equation A.6, the absorbed power

Table A.1. Typical Absorbed Power Parameters for Vertical Motion

Frequency (Hz)	K_i watts $(\text{ft}/\text{sec.}^2)^2$	$ G(f) $ (slugs)	ϕ Phase Angle (Radians)
0.00	0.000000	4.3537	0.000000
0.10	0.000082	4.3557	0.000009
0.30	0.000747	4.3716	0.000237
0.50	0.002113	4.4035	0.001111
1.00	0.009149	4.5553	0.009307
1.50	0.022941	4.8118	0.033143
2.00	0.045576	5.1612	0.081930
5.00	0.198689	5.7092	0.93785
7.50	0.075581	2.7408	1.2811
10.00	0.048340	2.4408	1.1623
20.00	0.010555	1.0568	1.1826
40.00	0.003780	0.73906	1.2470
70.00	0.001390	0.45976	1.3741
100.00	0.000702	0.32860	1.4313

calculation can be made directly from acceleration data. Hence, it is possible to determine the absorbed power and, therefore, comfort values by merely measuring the acceleration input to the passenger for each direction.

Information in the literature on the effect of long-time vibration is scarce. However, Pradko and Lee have deduced that a term can be added to absorbed power that might account for long-term effects. Their empirical equation becomes:

$$AP_T = AP_{ave} + \frac{1}{t_o} \int_0^t AP_{ave} dt \quad (A.7)$$

where AP_T = long-term absorbed power;

t_o = time scale factor approximate onset of fatigue; and

t = exposure time.

In the frequency domain, it can be shown that the ratio of short-term to long-term absorbed power can be written as:

$$\frac{AP_{ave}}{AP_T} = \frac{1}{1 + (t/t_o)^1} \quad (A.8)$$

which can be used to calculate the degradation of comfort with time.

Figure A.3 is a diagram of how absorbed power can be determined from the output of an accelerometer mounted at the base of a seated passenger, utilizing the transfer function to generate the force.

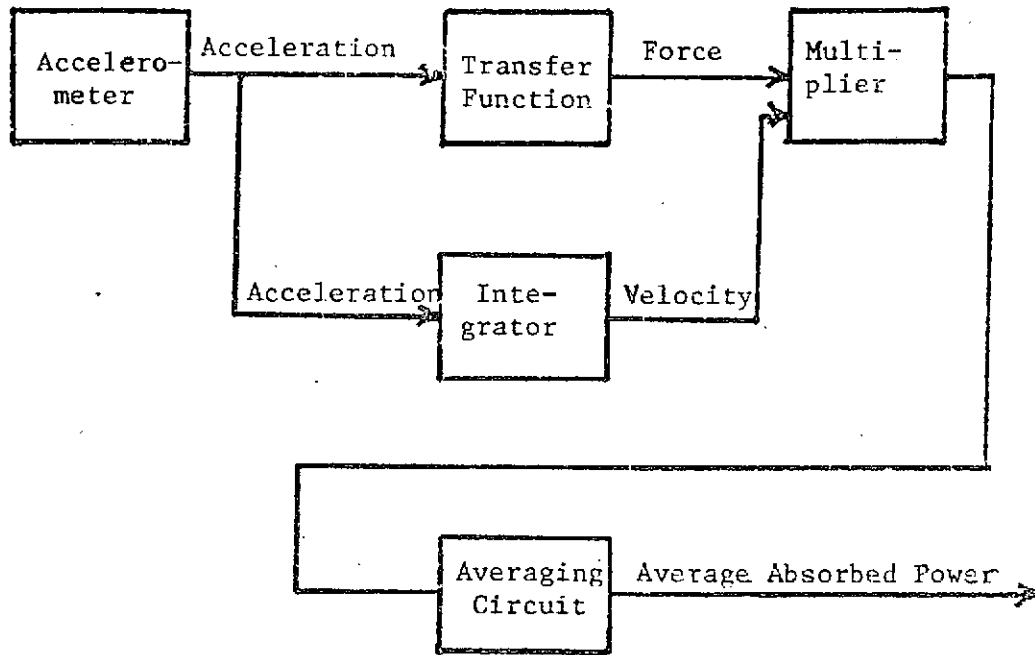


Figure A.3. Block Diagram Showing Absorbed Power Determination

APPENDIX B

The Amplitude Frequency Distribution (AFD) Method

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Measured records must be recognized as random signals of finite duration and, as such, they can be viewed and described in terms of three basic "domains": time, amplitude, and frequency. The time domain description is the unprocessed signal-versus-time. All types of amplitude domain descriptions reduce the measured signal to a single number or table of values which is mathematically equivalent to computing an amplitude probability distribution for the signal. Frequency domain representations of signals are generally considered to be the most useful. They are based on the concept that any observed random signal can be reconstructed by adding together a number of different sine waves.

At first glance, it would appear that the power spectral density contains a complete description of amplitude variations, thus making any amplitude-distribution calculations superfluous. However, the ordinate of a PSD curve indicates only the average signal amplitude at a particular frequency. A large PSD value can conceivably be produced either by a few cycles of large amplitude or a large number with small amplitudes; the distinction cannot be made from the PSD curve alone. On the other hand, it is not possible to extract any information about frequency distribution from amplitude density curves. It is evident from these considerations that the PSD and amplitude density curves each contain unique information, and a simple method of combining the two representations is desirable.

An effective method for combining the information contained in both the PSD and the amplitude representations is to reduce the random time-history signal to a simple tabular array that displays both the height and the length features on the random data, as in Figure B.1. Here the coordinates (linear or logarithmic), amplitude (in feet, g's, etc.) versus frequency

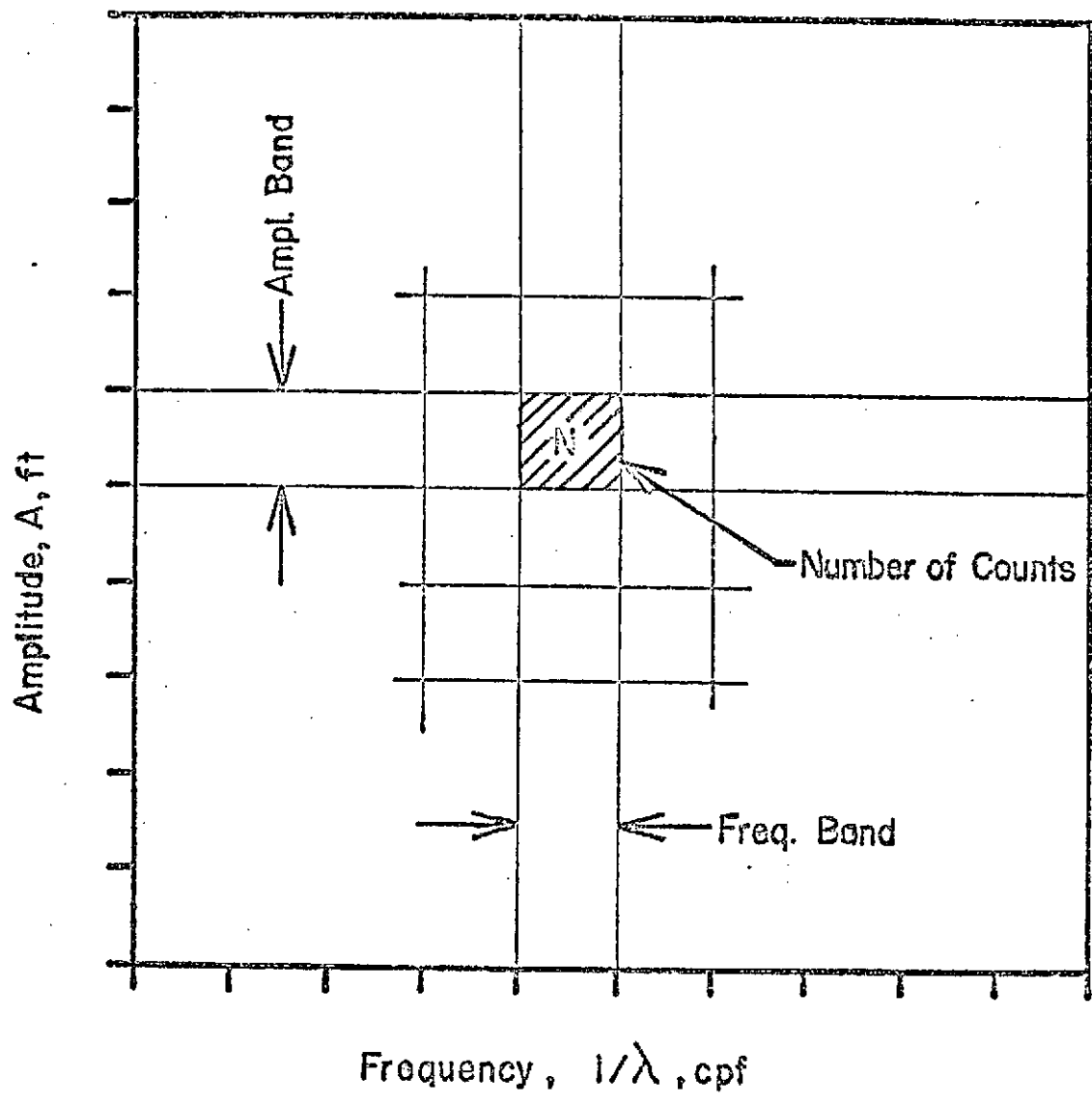


Figure B.1. Basic Elements of AFD, the Amplitude Frequency Distribution

(in Hertz, rpm, cycles per foot, etc.), are divided into a number of finite bands as shown. Numbers like N are computed and entered at each window-like intersection of the bands. The numbers express the total number of signal peaks with the amplitude and frequency of that box in the array. The complete array of numbers thus identifies the random signal as a combined amplitude and frequency distribution (AFD). Thus, the AFD not only gives the frequency distribution, but also shows the amplitude make-up and distribution of each frequency band. Further details of this method and means of computation are given in references 18 through 24.

Research by the authors has shown that the AFD format is useful when calculating absorbed power. By calculating the absorbed power for given amplitude and frequency bands it is easily seen what areas contribute to an uncomfortable ride, and make possible design changes to better the ride. Details of the AFD formatted absorbed power concept are found in references 19, 20, and 24.

APPENDIX C

The Hybrid Computer Program

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```

C*****
C *****AFGD.F4*****
C THIS IS AN AFD PROGRAM FOR UP TO SIX DEGREES OF FREEDOM
C USING AN OCTAVE FILTER WITH THE SERIAL METHOD.
C DATA MUST FIRST BE DIGITIZED USING A PROGRAM LIKE DIGTZ.F4
C AND THEN STORED ON IBM TAPE.
C *****

```

```

C*****
C INTEGER AFD(10,10)
C EXTERNAL ILTDA
C DIMENSION NADC(5000),TIMEO(5000),A(11),
C 1 LA(11),AM(11),FM(11),FL(11),DELT(11),DATAO(10000)
C LOGICAL STAT

```

```

C:*****
C THIS IS THE SET UP SECTION ALLOWING THE OPERATOR TO SPECIFY
C THE FOLLOWING:

```

- C 1.DEGREES OF FREEDOM WANTED
 - C 2.IF YOU WANT TIME AND ORDER OF EACH PEAK LISTED
 - C 3.NUMBER OF AMPLITUDE BANDS WANTED AND THE LEVELS
 - C THEY ARE TO BE SET AT.
 - C 4.NUMBER OF FREQUENCIES BANDS WANTED AND THE
 - C LEVELS THEY ARE TO BE SET AT.
 - C 5.THE DIGITIZING FREQUENCY USED ON THE DATA AND THE
 - C NUMBER OF SAMPLES.
 - C 6.THE DESCRIPTIVE HEADING TO BE PRINTED OUT.
- C THE COMPUTER THEN RESPONDS AND TYPES OUT WHERE THE
C AMPLITUDE LEVELS ARE SET,WHERE THE FREQUENCY CUT OFF'S ARE
C SET,AND WHAT THE CENTER AMPLITUDES AND FREQUENCIES ARE.

```

C*****
C TYPE 2
2 FORMAT('0 THIS IS A PROGRAM TO CALCULATE AFDS FOR UP
1 TO SIX DEGREES OF FREEDOM USING A SINGLE OCTAVE
1 FILTER', $)
C TYPE 3
3 FORMAT('0 TYPE DEGREES OF FREEDOM WANTED, 1 TO 6,=',$)
C ACCEPT 4,NDEG
4 FORMAT(11)
C TYPE 5
5 FORMAT('0 IF YOU WANT ORDER AND TIME OF COUNTS,
1 TYPE 1, IF NOT TYPE 2,=',$)
C ACCEPT 4,ICONT
C TYPE 9
9 FORMAT('0 TYPE NUMBER OF AMPLITUDE BANDS WANTED, UP TO
1 10',//,' IF YOU WANT NORMAL AMPLITUDE LEVELS, TYPE 1,
1 IF NOT TYPE 2,=',$)
C ACCEPT 6,NAMP,LEVEL
6 FORMAT(2I)
MAMP=NAMP+1
IF (LEVEL.LT.2) GO TO 22
TYPE 10,MAMP
10 FORMAT('0TYPE',115,'AMPLITUDE LEVELS WANTED,.01 TO .99,=',$)
C ACCEPT 11,(A(K),K=1,MAMP)
11 FORMAT(20F)
DO 20 K=1,MAMP
20 LA(K)=A(K)*10000
GO TO 236

```

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```

C*****
C      HERE THE STANDARD AMPLITUDES ARE CALCULATED
C*****
22     EXT=ALOG(700.0)
        POWER=(ALOG(10000.0)-EXT)/NAMP
        DO 23 K=1,MAMP
            B=K
            DUM=EXP(POWER*(B-1.0)+EXT)
            LA(K)=DUM
23     AM(K)=EXP(POWER*(B-0.5)+EXT)/10000.0
236    TYPE 36
36     FORMAT('0 TYPE NUMBER OF FREQUENCY BANDS WANTED, UP
            1 TO 10',//'TYPE LOWEST FREQUENCY WANTED IN HZ,IN REAL'/'',='',$)
        ACCEPT 8,NFREQ,FMIN
        MFREQ=NFREQ+1
8      FORMAT(11,1F)
        TYPE 37
37     FORMAT(' TYPE LOWER FREQUENCY OF YOUR FILTER HZ,IN REAL'/'',='',$)
        ACCEPT 11,FIL
        DO 38 I=1,MFREQ
            Y=I-1
38     FL(I)=FMIN*2.0**Y
        TYPE 39
39     FORMAT('0 TYPE IN DIGITIZING RATE (NORMALLY 1000) IN
            1 SAMPLES PER SEC',/'NUMBER OF SAMPLES DIGITIZED'/'',='',$)
        ACCEPT 4,NDIG,NSAMP
        DO 40 NF=1,NFREQ
            DIG=NDIG
            DEN=FL(NF)
            RATE=DIG*FIL/DEN
40     DELT(NF)=(1.0/RATE)*1000000
C*****
C      DELT IS IN MICROSECONDS
C*****
        DO 15 K=1,MAMP
            DA=LA(K)
15     A(K)=DA/10000.0
C*****
C      HERE THE STANDARD FREQUENCIES ARE CALCULATED
C*****
        DO 16 K=1,NFREQ
            B=K
            EXT=ALOG(FMIN)
            FREQ=NFREQ
            POWER=(ALOG(FL(MFREQ))-EXT)/NFREQ
16     FM(K)=EXP(POWER*(B-.5)+EXT)
30     TYPE 31
31     FORMAT('0 TYPE DESCRIPTIVE HEADING FOR CURRENT RUN'/)
        ACCEPT 35,HEAD
35     FORMAT(14A5)
        TYPE 41,(A(K),K=1,MAMP)
41     FORMAT('0 AMPLITUDE LEVELS ARE SET AT',//,11F6.2)
        TYPE 42,(FL(K),K=1,MFREQ)
42     FORMAT('0 FREQUENCY LEVELS ARE SET AT',//,11F6.2)
        IF (LEVEL.GT.1) GO TO 44
        TYPE 43,(AM(K),K=1,NAMP)
43     FORMAT('0 CENTER AMPLITUDES ARE',//,10F7.3)
44     TYPE 45,(FM(K),K=1,NFREQ)
45     FORMAT('0 CENTER FREQUENCIES ARE',//,10F7.3)

```

```

C*****
C   HERE THE HYBID IS INITIALIZED
C*****
      CALL HINIT
      CALL SAMO('SP')
      CALL STCO('NSEC')
      CALL SLMO('CLEAR')
C*****
C   START PROCESSING THE DATA . ONE DEGREE (NDEG) AT A TIME
C   OPEN THE APPROPRIATE FILE FOR THE NDEG TO BE PROCESSED.
C*****
62   DO 999 ID=1,NDEG
      GO TO (71,72,73,74,75,76),NDEG
76   CALL IFILE(1,'DATA6')
      GO TO 777
75   CALL IFILE(1,'DATA5')
      GO TO 777
74   CALL IFILE(1,'DATA4')
      GO TO 777
73   CALL IFILE(1,'DATA3')
      GO TO 777
72   CALL IFILE(1,'DATA2')
      GO TO 777
71   CALL IFILE(1,'DATA1')
777  CONTINUE
      DO 63 KK=1,10
      DO 63 JJ=1,10
63   AFD(JJ,KK)=0
C*****
C   NEED TO ZERO FOR EACH DEGREE OF FREEDOM
C*****
      DO 99 IF=1,NFREQ
      IADC=0
      ISW=0
      INEW=0
      IMAX=10
      NSIZE=10000
      IF(NSIZE.GT.NSAMP) NSIZE=NSAMP
      ITEST=NSIZE-NSAMP
      READ(1)(DATA0(I),I=1,NSAMP)
      CALL STINT
      CALL SAMO('IC')
      CALL SRLT('LINK',0,0)
65   CALL DTM(DELTA,ERROR,ILTDA,DAC0,NSIZE,DATA0)
      CALL INTCNT(NSAMP)
C*****
C   NEED TO CALL DATA IN FROM DISK HERE
C*****
66   CALL SLMO('RUN')
      CALL SSCL(0)
      CALL SAMO('OP')
110  CALL CRAC(0,IADC)

```

```

C*****
C   TEST IF DATA IS LARGER THEN LAST MAX VALUE,IF NOT
C   CHECK NEXT VALUE, IF IT IS CHANGE IMAX TO THE NEW
C   VALUE AND GO ON TO THE NEXT DATA POINT.
C*****
      IF (IADC.LE.IMAX) GO TO 120
      ISW=1
77     IMAX=IADC
      CALL RRLT(TMIN,SEC)
      GO TO 110
120    CALL DTMSTA(.FALSE.,STAT,IFREE,IDONE)
      IF(STAT) GO TO 88
C*****
C   TEST IF INTERRUPTS ARE THRU AND GO SEE IF ANY MORE DATA
C   IN THIS SAMPLE
C*****
      IF (ISW.LT.1) GO TO 110
      IF(IADC.GE.0) GO TO 110
C*****
C   COUNT THE PEAK NOW IN INEW, STORE PEAK VALUE IN NADC
C   ,AND RECORD PEAK TIME IN TIMEO.
C*****
      INEW=INEW+1
      NADC(INEW)=IMAX
      TIMER=(TMIN*60.0)+(SEC/1000000.0)
      TIMEO(INEW)=TIMER
      IMAX=10
      ISW=0
      GO TO 120
88     CALL SAMO('HOLD')
      CALL SLMO('STOP')
      NEW=NSIZE+1
      IF(TEST.EQ.0) GO TO 90
      NSIZE=NSIZE+10000
      ITEST=NSIZE-NSAMPL
      IF(ITEST.LT.0) GO TO 89
      NSIZE=NSAMP
89     READ(1)(DATAO(I),I=NEW,NSIZE)
      GO TO 65
90     END FILE(1)
      IF(ICONT.GT.1) GO TO 95
      DO 1010 JJ=1,INEW
      TYPE 91,NDEG
      TYPE 92
C*****
C   TYPE OUT HEADINS IF PEAKS AND TIMES ARE WANTED
C*****
92     FORMAT('0 NUMBER',5X,'AMPLITUDE',5X,'TIME')
      TYPE 93,JJ,NADC(JJ),TIMEO(JJ)
93     FORMAT('0',2X,I4,9X,I5,5X,F6.2)
91     FORMAT('1',3X,'COUNTS FOR THE',I,'DEGREE')
95     IF (INEW.LT.1) GO TO 99
C   *****
C   COUNT LEVELS FOR AFD NOW,IF A FREQUENCY BAND HAS NO
C   COUNTS,SKIP TO NEXT
C   *****

```

```

      DO 1010 N=1,INew
      IF(NADC(N).LT.LA(1)) GO TO 1010
      DO 1000 J=2,NAMP
      IF(NADC(N).GE.LA(J)) GO TO 1000
      JJ=NAMP-J+2
      GO TO 1005
1000   CONTINUE
      JJ=1
1005   AFD(JJ,IF)=AFD(JJ,IF)+1
1010   CONTINUE
C
C*****
C   AFD COUNT NOW COMPLETE FOR CURRENT DEGREE OF FREEDOM
C
C*****
99     CONTINUE
      TYPE 54,NDEG
54     FORMAT('1 AFD OUTPUT OF THE',I2,' DEGREE OF FREEDOM FOR--'/)
      TYPE 56,HEAD
C*****
C
C   TYPE OUT AFD HEADING
C
C*****
56     FORMAT('0',14A5)
      DO 550 K=1,NAMP
550    TYPE 400,(AFD(K,I),I=1,NFIL)
C*****
C   TYPE OUT AFD
C*****
400    FORMAT('0',10I7)
999    CONTINUE
      STOP
      END

```

APPENDIX D

Applied Research Laboratory Computer Program

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```
6 KK=KK+2***(L-1)
  K=K-J
5 CONTINUE
  IF(KK-I+1) 4,4,7
7 CMM=Z(I)
  Z(I) = Z(KK+1)
  Z(KK+1)=CMM
4 CONTINUE
  RETURN
  END
```

APPENDIX E

Reduced Bus Data

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RUN 2, DEGREE 1

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

FACTORS ARE

0.000082 0.000330 0.001325 0.005631 0.024699 0.121590 0.145950 0.936470

AMPLITUDE LEVELS ARE SET AT

0.07 0.11 0.17 0.26 0.41 0.64 1.00

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.087 0.136 0.212 0.330 0.514 0.801

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.02729	0.10983	0.44097	1.87405	8.16713	40.43643	48.57364	12.13759
0.01125	0.04526	0.18174	0.77235	3.37415	16.66501	20.01859	5.00225
0.00464	0.01865	0.07490	0.31631	1.39059	5.56814	8.25024	2.06157
0.00191	0.00769	0.03087	0.13116	0.57310	2.63056	3.40016	0.84963
0.00079	0.00317	0.01272	0.05406	0.23619	1.16655	1.40130	0.35016
0.00032	0.00131	0.00524	0.02226	0.09734	0.48077	0.57752	0.14431

NORMALIZED ABSORBED POWER MATRIX

0.02058	0.04142	0.08315	0.17669	0.35595	0.95310	0.57245	0.07152
0.00848	0.01707	0.03421	0.07282	0.15956	0.39230	0.23592	0.02946
0.00350	0.00703	0.01412	0.03001	0.06555	0.16188	0.09723	0.01215
0.00144	0.00290	0.00582	0.01237	0.02712	0.06672	0.04007	0.00501
0.00059	0.00119	0.00240	0.00516	0.01113	0.02750	0.01551	0.00206
0.00024	0.00049	0.00099	0.00216	0.00459	0.01133	0.00661	0.00085

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

RUN=2
DEGREE=1
SEGMENT= 1

AFU INPUT							
0	0	0	0	1	0	2	
0	0	0	1	1	2	0	15
0	0	0	1	3	0	1	40
1	0	0	0	7	4	6	48
0	0	0	1	4	13	16	44
0	0	2	0	6	7	33	25

SUMAP=43A.687

SUMNAP= 0.166

17.430

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	16.374	41.436	0.000	24.275
0.000	0.000	0.000	0.772	3.374	13.130	0.000	75.014
0.000	0.000	0.000	0.318	4.172	0.000	6.250	82.403
0.002	0.000	0.000	0.000	4.017	11.372	28.481	40.752
0.000	0.000	0.000	0.054	2.126	19.165	14.013	15.407
0.000	0.000	0.010	0.178	0.565	3.365	19.058	3.000

NORMALIZED ABSORBED POWER AFU

0.000	0.000	0.000	0.000	0.772	0.953	0.000	0.143
0.000	0.000	0.000	0.673	0.159	0.706	0.000	0.442
0.000	0.000	0.000	0.030	0.177	0.000	0.097	0.486
0.001	0.000	0.000	0.000	0.109	0.287	0.240	0.240
0.000	0.000	0.000	0.005	0.161	0.357	0.163	0.091
0.000	0.000	0.002	0.017	0.020	0.079	0.225	0.021

RUN=2
DEGREE=1
SEGMENT= 3

AFU OUTPUT							
0	1	0	0	0	0	0	6
1	1	0	0	0	0	1	78
1	0	0	0	10	0	3	70
0	0	2	4	7	0	17	40
2	2	1	7	6	13	25	12
0	0	0	3	2	10	29	6

SUMAP=854.434

SUMNAP= 1.835

53.431

790

ABSORBED POWER AFU							
0.000	0.116	0.000	0.000	0.000	0.000	0.000	72.026
0.011	0.045	0.000	0.000	13.447	0.000	20.014	390.175
0.005	0.000	0.000	0.000	13.446	0.000	24.751	144.310
0.000	0.000	0.062	0.525	4.012	0.000	57.803	33.405
0.002	0.006	0.013	0.378	1.417	15.165	35.013	4.202
0.000	0.000	0.000	0.067	0.195	4.818	16.768	0.000

NORMALIZED ABSORBED POWER AFU

0.000	0.041	0.000	0.000	0.000	0.000	0.000	0.429
0.008	0.017	0.000	0.000	0.636	0.000	0.236	7.299
0.003	0.000	0.000	0.000	0.636	0.000	0.262	0.050
0.000	0.000	0.012	0.049	0.149	0.000	0.641	0.205
0.001	0.002	0.002	0.036	0.067	0.097	0.413	0.025
0.000	0.000	0.000	0.000	0.005	0.113	0.197	0.005

RUN=2
DEGREE=1
SEGMENT= 2

AFU OUTPUT							
0	0	0	0	0	0	0	4
1	2	0	0	2	0	0	56
0	0	0	0	0	0	1	07
1	0	1	1	5	1	17	40
1	1	1	2	8	2	36	16
0	1	1	5	2	16	19	1

SUMAP=713.559

SUMNAP= 0.002

44.604

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	48.956
0.011	0.041	0.000	0.000	0.706	0.000	0.000	280.126
0.000	0.000	0.000	0.000	0.334	0.000	0.250	174.357
0.002	0.000	0.031	0.131	2.804	2.871	57.803	39.083
0.001	0.003	0.013	0.108	1.090	2.333	53.250	9.003
0.000	0.001	0.005	0.011	0.195	4.008	10.973	0.144

NORMALIZED ABSORBED POWER AFU

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.286
0.008	0.034	0.000	0.000	0.116	0.000	0.000	1.051
0.000	0.000	0.000	0.000	0.116	0.000	0.097	1.057
0.001	0.000	0.006	0.012	0.134	0.067	0.081	0.230
0.001	0.001	0.002	0.010	0.090	0.065	0.090	0.033
0.000	0.000	0.001	0.011	0.004	0.133	0.129	0.001

RUN=2
DEGREE=1
SEGMENT= 4

AFU OUTPUT							
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	4
6	0	0	0	0	0	0	38
0	1	0	0	7	0	1	64
0	1	0	5	7	0	29	42

SUMAP=91.365

SUMNAP= 0.762

4.710

1.025

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.400
0.000	0.003	0.000	0.000	1.053	0.000	1.461	24.161
0.000	0.001	0.000	0.000	0.111	0.001	0.000	6.401

NORMALIZED ABSORBED POWER AFU

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.001	0.000	0.000	0.076	0.000	0.017	0.102
0.000	0.000	0.000	0.000	0.011	0.002	0.000	0.010

RUN#2
DEGREE#1
SEGMENT# 9

AFD OUTPUT							
0	4	5	2	3	0	4	
0	2	0	1	0	1	3	12
1	0	1	0	2	3	2	46
2	0	2	1	5	2	7	56
0	0	0	4	5	7	19	28
1	0	2	3	5	5	18	10

SUMAP=621.791
33 862
SUMNAP= 9.786
.624

ABSORBED POWER AFD	0.000	0.439	2.205	3.748	24.261	121.309	0.000	44.850
0.000	0.091	0.000	0.772	0.000	16.864	60.056	00.027	

0.005	0.000	0.075	0.000	2.761	20.604	16.500	94.632
0.004	0.000	0.062	0.131	2.866	5.661	30.901	47.577
0.000	0.000	0.000	0.216	1.181	8.166	26.475	9.004
0.000	0.000	0.010	0.067	0.467	2.434	10.395	2.309

NORMALIZED ABSORBED POWER AFD

0.000	0.166	0.418	0.353	1.154	2.859	0.000	0.246
0.000	0.034	0.000	0.073	0.000	2.393	0.708	0.354
0.003	0.000	0.014	0.000	0.131	4.486	0.194	0.259
0.003	0.000	0.012	0.012	0.134	2.133	0.181	0.220
0.000	0.000	0.000	0.020	0.036	2.142	0.114	0.058
0.000	0.000	0.002	0.008	0.021	0.047	0.123	0.014

RUN#2
DEGREE#1
SEGMENT#11

AFD OUTPUT								
0	2	0	0	0	1	0	0	0
2	1	0	0	1	0	0	0	0
0	0	0	1	5	0	0	0	5
1	0	2	3	9	2	0	0	28
1	1	3	10	4	12	1	1	70
1	1	0	1	2	17	19	36	

SUMAP=130.203
9.158
SUMNAP= 2.606
.163

ABSORBED POWER AFD	0.000	0.220	0.000	0.000	0.107	0.000	0.000	0.000
0.022	0.045	0.000	0.000	3.374	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.318	0.953	0.000	0.000	0.000	10.308
0.007	0.000	0.062	0.394	5.154	5.661	0.000	0.000	23.700
0.001	0.003	0.030	0.541	0.945	13.499	1.401	24.511	
0.000	0.001	0.000	0.022	0.145	0.173	10.973	4.967	

NORMALIZED ABSORBED POWER AFD

0.000	0.043	0.000	0.000	0.000	0.386	0.000	0.000	0.000
-------	-------	-------	-------	-------	-------	-------	-------	-------

0.017	0.017	0.000	0.000	0.154	0.000	0.000	0.000
0.000	0.000	0.000	0.000	3.326	0.000	0.000	0.000
0.001	0.000	0.012	0.037	0.243	3.133	0.000	0.140
0.001	0.001	0.007	0.051	0.045	0.330	0.017	0.144
0.000	0.000	0.000	0.000	0.000	0.100	0.100	0.000

B-4

RUN#2
DEGREE#1
SEGMENT#10

AFD OUTPUT							
0	0	0	0	0	0	0	2
1	0	0	0	2	0	0	19
0	0	0	0	5	0	0	35
0	0	0	2	11	5	11	36
1	1	0	5	5	10	20	41
0	0	0	4	2	13	20	23

SUMAP=385.188
14.014
SUMNAP= 4.305
.109

ABSORBED POWER AFD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	24.275
0.011	0.000	0.000	0.000	0.748	0.000	0.000	0.000	95.053
0.000	0.000	0.000	0.000	0.550	2.000	0.000	0.000	72.155
0.000	0.000	0.000	0.267	0.304	14.153	37.402	30.507	
0.001	0.003	0.000	0.270	1.101	11.660	34.230	14.250	
0.000	0.000	0.000	0.089	0.195	4.808	16.170	3.319	

NORMALIZED ABSORBED POWER AFD

0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.143
0.000	0.000	0.000	0.000	0.115	0.000	0.000	0.260
0.000	0.000	0.000	0.000	0.320	0.000	0.000	0.425
0.000	0.000	0.000	0.025	0.297	0.334	0.441	0.180
0.001	0.001	0.000	0.025	0.056	0.275	0.462	0.085

RUN#2
DEGREE#1
SEGMENT#12

AFD OUTPUT								
0	0	0	0	0	0	0	0	1
1	0	0	0	0	0	0	0	4
0	0	0	0	0	1	0	0	3
0	0	0	0	0	0	0	1	6
0	2	0	1	14	1	1	1	51
0	0	0	0	0	4	3	3	49

SUMAP= 86.232
5.390
SUMNAP= 0.972
.061

ABSORBED POWER AFD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.009
0.000	0.000	0.000	0.000	1.391	0.000	0.000	0.000	6.105
0.000	0.000	0.000	0.000	3.439	0.000	0.000	0.000	6.000
0.000	0.000	0.000	0.054	3.307	1.167	1.401	17.058	
0.000	0.000	0.000	0.134	0.357	1.442	1.773	7.071	

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.072
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.110
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010
0.000	0.000	0.000	0.000	0.102	0.000	0.000	0.000	0.010
0.000	0.002	0.000	0.000	0.136	0.027	0.037	0.105	
0.000	0.000	0.000	0.013	0.010	0.019	0.020	0.022	

RUN 2, DEGREE 2

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K² FACTORS ARE

0.015740 0.064076 0.314880 0.785920 0.619200 0.126250 0.022900 0.003500

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

1.30961	5.33078	26.19881	65.39053	51.51901	10.50432	1.90534	0.29121
0.53973	2.19697	10.79726	26.94933	21.23247	4.32913	0.76524	0.12002
0.22244	0.90544	4.44987	11.10660	3.75952	1.78416	0.32362	0.04946
0.09167	0.37316	1.83392	4.57735	3.60634	0.73530	0.13337	0.02038
0.03778	0.15379	0.75581	1.86645	1.48627	0.30304	0.05497	0.00840
0.01557	0.06338	0.31149	0.77746	0.61254	0.12489	0.02265	0.00346

NORMALIZED ABSORBED POWER MATRIX

0.98777	2.01036	4.94009	6.16508	2.42863	0.24759	0.02245	0.00172
0.40709	0.82853	2.03595	2.54081	1.50091	0.10294	0.00925	0.00071
0.16777	0.34146	0.83908	1.04714	0.41250	0.04205	0.00381	0.00029
0.06914	0.14073	0.34581	0.43156	0.17069	0.01733	0.00157	0.00012
0.02850	0.05600	0.14252	0.17766	0.07666	0.00714	0.00065	0.00005
0.01174	0.02398	0.05874	0.07330	0.02888	0.00294	0.00027	0.00002

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

RUN#2 DEGREE#2 SEGMENT# 1

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	6
0	0	0	0	0	0	0	42
1	0	0	0	0	0	0	54
0	1	0	0	0	0	0	45

SUMAP= 2.086 SUMNAP= 0.231

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.222	0.000	0.000	0.000	0.000	0.000	0.000	0.297
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.454
0.000	0.053	0.000	0.000	0.000	0.000	0.000	0.156

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.108	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.001

RUN#2 DEGREE#2 SEGMENT# 3

AFD OUTPUT							
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	29
0	0	0	0	0	0	0	79
1	0	0	0	0	0	0	63
0	0	0	0	0	0	0	37
0	1	1	0	0	0	0	11

SUMAP= 9.724 SUMNAP= 0.200

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.291
0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.480
0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.997
0.092	0.000	0.000	0.000	0.000	0.000	0.000	1.288
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.200
0.000	0.063	0.311	0.000	0.000	0.000	0.000	0.035

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023
0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.008
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.024	0.059	0.000	0.000	0.000	0.000	0.000

IU NUMBER= 4

RUN#2 DEGREE#2 SEGMENT# 2

AFD OUTPUT							
0	0	0	0	2	1	1	1
0	0	3	2	3	1	1	19
0	4	2	1	0	1	1	86
0	2	0	0	1	2	4	64
1	0	1	1	1	2	4	30
0	0	2	0	1	1	3	7

SUMAP=229.265 SUMNAP= 20.188

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	1.000	21.009	1.905	0.291
0.000	0.000	32.392	57.499	63.097	8.658	0.785	2.280
0.000	3.022	8.900	11.107	0.000	1.784	0.324	4.254
0.000	0.706	0.000	0.000	3.000	1.491	0.573	1.305
0.038	0.000	0.756	1.886	1.400	0.000	0.290	0.252
0.000	0.000	0.623	0.000	0.013	0.125	0.008	0.028

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.100	1.495	0.092	0.002
0.000	0.000	0.104	0.000	0.003	0.204	0.009	0.013
0.000	1.308	1.070	1.007	0.000	0.042	0.004	0.025
0.000	0.281	0.000	0.000	0.171	0.035	0.006	0.008
0.028	0.000	0.143	0.176	0.075	0.014	0.003	0.001
0.000	0.000	0.117	0.000	0.029	0.003	0.001	0.000

RUN#2 DEGREE#2 SEGMENT# 4

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	14
0	0	0	0	0	0	0	71

SUMAP= 0.363 SUMNAP= 0.002

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.118
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.260

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

RUN#2
DEGREE#2
SEGMENT# 5

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0
0	1	0	0	0	0	0	0
2	0	0	0	0	0	0	0
2	0	2	0	0	0	0	0
0	2	0	0	0	0	0	0

SUMAP= 9.131 SUMNAP= 1.722

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	2.197	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.905	0.000	0.000	0.000	0.000	0.000	0.000
0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.076	0.000	1.512	0.000	0.000	0.000	0.000	0.000
0.000	0.127	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.829	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.341	0.000	0.000	0.000	0.000	0.000	0.000
0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.057	0.000	0.205	0.000	0.000	0.000	0.000	0.000
0.000	0.048	0.000	0.000	0.000	0.000	0.000	0.000

TOT NUMBER= 17

RUN#2
DEGREE#2
SEGMENT# 6

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
0	2	1	0	0	0	0	2
2	0	0	0	0	0	0	14

SUMAP= 1.251 SUMNAP= 0.352

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.308	0.756	0.000	0.000	0.000	0.000	0.017
0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.048

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.116	0.143	0.000	0.000	0.000	0.000	0.000
0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOT NUMBER= 16

RUN#2
DEGREE#2
SEGMENT# 7

AFU OUTPUT							
0	0	2	0	0	0	0	1
0	1	1	0	0	0	0	15
0	3	0	1	3	1	0	25
0	0	0	0	0	1	0	32
1	0	2	1	0	1	1	49
2	1	0	3	1	1	10	24

SUMAP=119.046 SUMNAP= 16.740

ABSORBED POWER AFU							
0.000	0.000	52.390	0.000	0.000	0.000	0.000	0.291
0.000	2.197	10.797	0.000	0.000	0.000	0.000	1.000
0.000	2.716	0.000	11.107	20.752	1.744	0.000	1.237
0.000	0.000	0.000	0.000	0.000	0.735	0.000	0.852
0.038	0.000	1.512	1.800	0.000	0.303	0.055	0.412
0.031	0.000	0.000	2.132	0.000	1.125	0.227	0.063

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.450	0.000	0.000	0.000	0.000	0.002
0.000	0.829	2.030	0.000	0.000	0.000	0.000	0.011
0.000	1.024	0.000	1.047	1.208	0.042	0.000	0.007
0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.004
0.028	0.000	0.285	0.170	0.000	0.007	0.001	0.002
0.023	0.024	0.000	0.220	0.029	0.003	0.003	0.000

RUN#2
DEGREE#2
SEGMENT# 8

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
1	0	0	0	0	0	0	5
0	0	0	0	0	0	0	21
1	0	0	0	0	0	0	47

SUMAP= 0.598 SUMNAP= 0.084

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.102
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.176
0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.153

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.001

TOT NUMBER= 16

RUN#2
DEGREE#2
SEGMENT# 9

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	2	0	0	0	0	0	0
1	1	0	0	0	0	0	19
2	0	0	0	0	0	0	22
0	0	1	0	0	0	0	54
0	1	2	0	0	0	0	53

SUMAP= 4.574 SUMNAP= 2.891

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	4.394	0.000	0.000	0.000	0.000	0.000	0.000
0.222	0.905	0.000	0.000	0.000	0.000	0.000	0.000
0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.756	0.000	0.000	0.000	0.000	0.000
0.000	0.063	0.623	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	1.057	0.000	0.000	0.000	0.000	0.000	0.000
0.168	0.341	0.000	0.000	0.000	0.000	0.000	0.000
0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.000
0.000	0.074	0.117	0.000	0.000	0.000	0.000	0.001

SEGMENT=10

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	0
1	1	0	0	0	0	0	0
1	0	1	0	0	1	1	13
0	1	1	2	0	3	0	19

SUMAP= 5.360 SUMNAP= 1.159

ABSORBED POWER AFU

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.227	0.905	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.373	0.000	0.000	0.000	0.000	0.000	0.000
0.038	0.000	0.750	0.000	0.000	0.303	0.045	0.109
0.000	0.053	0.311	1.555	0.000	1.375	0.136	0.066

NORMALIZED ABSORBED POWER AFU

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.168	0.341	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.141	0.000	0.000	0.000	0.000	0.000	0.000
0.028	0.000	0.143	0.000	0.000	0.113	0.061	0.001
0.000	0.024	0.059	0.147	0.000	0.109	0.002	0.000

TD NUMBER= 24

RUN#2
DEGREE=2
SEGMENT=11

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	0
1	1	1	0	0	0	0	0

SUMAP= 0.725 SUMNAP= 0.125

ABSORBED POWER AFU

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.016	0.003	0.311	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFU

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.012	0.024	0.059	0.000	0.000	0.000	0.000	0.000

RUN#2
DEGREE=2
SEGMENT=12

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0
0	1	0	0	0	0	0	0
2	2	0	0	0	0	0	2
1	1	2	0	0	0	0	8
2	0	0	0	0	0	0	11

SUMAP= 5.912 SUMNAP= 1.986

ABSORBED POWER AFU

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	2.197	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.905	0.000	0.000	0.000	0.000	0.000	0.000
0.183	0.746	0.000	0.000	0.000	0.000	0.000	0.000
0.038	0.154	1.512	0.000	0.000	0.000	0.000	0.000
0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFU

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.829	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.341	0.000	0.000	0.000	0.000	0.000	0.000
0.138	0.241	0.000	0.000	0.000	0.000	0.000	0.000
0.028	0.054	0.285	0.000	0.000	0.000	0.000	0.000
0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TD NUMBER= 24

RUN#2
DEGREE=2
SEGMENT=13

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	3	0	0	0	1	70
0	0	0	0	0	0	0	38
0	0	0	0	0	0	0	21

SUMAP= 6.354 SUMNAP= 0.106

ABSORBED POWER AFU

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.363
0.092	0.000	0.000	0.000	0.000	0.000	0.000	1.427
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.319
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.71

NORMALIZED ABSORBED POWER AFU

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TD NUMBER= 24

RUN#2
DEGREE=2
SEGMENT#14

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	27
1	0	0	0	0	0	0	105
1	0	0	0	0	0	0	61
0	2	0	0	0	0	0	12

SUMAP= 4.406 SUMNAP= 0.170

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.120
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.315
0.092	0.000	0.000	0.000	0.000	0.000	0.000	2.140
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.512

0.000 0.127 0.000 0.000 0.000 1.000 0.000 0.042

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.013
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.033
0.000	0.048	0.000	0.000	0.000	0.000	0.000	0.000

RUN#2
DEGREE=2
SEGMENT#16

AFU OUTPUT							
0	0	1	0	0	0	0	0
0	1	1	0	0	0	0	6
0	3	0	0	0	0	0	43
2	0	0	2	0	0	0	56
1	1	2	0	0	0	0	38
1	0	1	1	0	1	0	35

SUMAP= 58.609 SUMNAP= 10.375

ABSORBED POWER AFU							
0.000	0.000	26.199	0.000	0.000	0.000	0.000	0.000
0.000	2.197	10.797	0.000	0.000	0.000	0.000	0.720
0.000	2.716	0.000	0.000	0.000	0.000	0.000	2.127
0.183	0.000	0.000	9.155	0.000	0.000	0.000	1.142
0.038	0.154	1.512	0.000	0.000	0.000	0.000	0.319
0.016	0.000	0.311	0.777	0.000	0.125	0.000	0.121

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	4.940	0.000	0.000	0.000	0.000	0.000
0.000	0.829	2.030	0.000	0.000	0.000	0.000	0.004
0.000	1.024	0.000	0.000	0.000	0.000	0.000	0.013
0.138	0.000	0.000	0.863	0.000	0.000	0.000	0.007
0.028	0.058	0.285	0.000	0.000	0.000	0.000	0.002
0.012	0.000	0.059	0.073	0.000	0.003	0.000	0.001

RUN#2
DEGREE=2
SEGMENT#15

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	5
0	0	0	0	0	0	0	49
1	0	0	0	0	0	0	124
1	0	0	0	0	0	0	31
2	2	2	0	0	0	0	2

SUMAP= 8.926 SUMNAP= 1.149

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	2.197	0.000	0.000	0.000	0.000	0.000	0.500
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.424
0.092	0.000	0.000	0.000	0.000	0.000	0.000	2.528
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.280
0.031	0.127	0.623	0.000	0.000	0.000	0.000	0.067

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.829	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013

0.009 0.000 0.000 0.000 0.000 0.000 0.000 0.015
0.028 0.000 0.000 0.000 0.000 0.000 0.000 0.002
0.023 0.048 0.117 0.000 0.000 0.000 0.000 0.000

RUN#2
DEGREE=2
SEGMENT#17

AFU OUTPUT							
0	0	0	0	0	1	1	1
0	1	3	3	3	2	1	0
0	1	0	0	1	1	2	3
1	2	2	1	2	3	3	3
1	0	2	1	0	2	1	27
1	1	1	0	0	1	3	59

SUMAP=234.326 SUMNAP= 21.367

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	10.308	1.405	0.271
0.000	2.197	32.392	80.848	63.897	6.058	0.785	0.900

0.000	0.805	0.000	0.000	4.751	1.788	0.647	0.140
0.092	0.746	3.668	4.577	7.213	3.077	0.867	0.091
0.038	0.000	1.512	1.886	0.000	0.000	0.055	0.227
0.016	0.053	0.311	0.000	0.000	0.125	0.068	0.204

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	3.248	0.082	0.002
0.000	0.829	0.100	7.022	3.003	2.204	0.009	0.000
0.000	0.341	0.000	0.000	0.000	0.000	0.000	0.001
0.009	0.281	0.642	0.432	0.000	0.000	0.000	0.000
0.028	0.000	0.285	0.178	0.000	0.000	0.001	0.001
0.012	0.024	0.059	0.000	0.000	0.003	0.001	0.001

RUN 2, DEGREE 3

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.000000 0.000000 0.000000 0.342000 0.600000 0.260000 0.035000 0.002300

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	28.28886	49.92151	21.63266	2.91209	0.19137
0.00000	0.00000	0.00000	11.65865	21.57410	8.91544	1.20016	0.07857
0.00000	0.00000	0.00000	4.87427	8.47916	3.67431	0.49462	0.03250
0.00000	0.00000	0.00000	1.96022	3.49451	1.51429	0.26385	0.01340
0.00000	0.00000	0.00000	0.81611	1.44619	0.62408	0.08461	0.00552
0.00000	0.00000	0.00000	0.33634	0.59354	0.25720	0.03462	0.00220

NORMALIZED ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	2.65710	2.35332	0.50989	0.03432	0.00110
0.00000	0.00000	0.00000	1.09919	0.96987	0.21014	0.01414	0.00040
0.00000	0.00000	0.00000	0.45301	0.39971	0.08660	0.00563	0.00019
0.00000	0.00000	0.00000	0.16671	0.16473	0.03569	0.00240	0.00008
0.00000	0.00000	0.00000	0.67694	0.65789	0.01471	0.00059	0.00002
0.00000	0.00000	0.00000	0.13171	0.12796	0.00606	0.00041	0.00001

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

C-2

RUN 2, DEGREE 4

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.000082 0.000330 0.001325 0.005631 0.024600 0.121500 0.145950 0.030470

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.063 0.100 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00682	0.02745	0.11024	0.46851	2.14675	10.10910	12.14340	3.03440
0.00281	0.01132	0.04543	0.19309	0.64359	4.16625	5.00465	1.25050
0.00116	0.00466	0.01672	0.07958	0.34765	1.71703	2.06256	0.51539
0.00048	0.00192	0.00772	0.03280	0.14320	0.70764	0.85094	0.21241
0.00020	0.00079	0.00318	0.01352	0.05945	0.29164	0.35033	0.08754
0.00008	0.00033	0.00131	0.00557	0.02434	0.12019	0.14438	0.03600

NORMALIZED ABSORBED POWER MATRIX

0.00515	0.01035	0.02079	0.04117	0.09549	0.23527	0.14311	0.01785
0.00212	0.00427	0.00857	0.01820	0.03976	0.09820	0.05898	0.00737
0.00087	0.00170	0.00353	0.00750	0.01639	0.04047	0.02431	0.00304
0.00036	0.00072	0.00146	0.00309	0.00675	0.01658	0.01002	0.00125
0.00015	0.00030	0.00060	0.00127	0.00278	0.00667	0.00413	0.00052
0.00006	0.00012	0.00025	0.00053	0.00115	0.00283	0.00170	0.00021

R=2 0.3114 5.7 AFD OUTPUT

0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	39

SUMAP= 2.195 SUMNAP= 0.013

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.788
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.407

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ID NUMBER= 1

R=2 0.3114 SEGMENT= 7

AFD OUTPUT

0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	12
0	1	0	0	0	0	0	37
1	0	0	0	0	0	0	46
0	0	1	0	0	0	12	46
1	0	0	3	0	4	22	25

SUMAP= 60.443 SUMNAP= 0.436

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.034
0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.207
0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.070
0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.771
0.000	0.000	0.000	0.000	0.235	0.242	4.204	4.027
0.000	0.000	0.000	0.017	0.214	0.441	3.176	0.902

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN=2 DEGREE=4 SEGMENT= 8

AFD OUTPUT

0	0	0	0	0	0	0	0
0	0	1	1	1	1	0	0
0	2	1	1	1	0	1	0
0	0	0	0	1	0	1	0
1	0	1	1	1	0	2	21
0	0	0	0	2	1	3	49

SUMAP= 15.449 SUMNAP= 0.302

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.045	0.193	0.644	4.160	0.000	0.000
0.000	0.000	0.019	0.080	0.000	0.000	2.063	0.000
0.000	0.000	0.000	0.000	0.143	1.415	0.050	0.037
0.000	0.000	0.003	0.014	0.000	0.000	0.761	1.030
0.000	0.000	0.000	0.000	0.044	0.120	0.413	1.766

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.009	0.018	0.040	0.094	0.000	0.000
0.000	0.000	0.004	0.004	0.008	0.000	0.024	0.000
0.000	0.000	0.000	0.000	0.007	0.035	0.030	0.004
0.000	0.000	0.001	0.001	0.003	0.000	0.004	0.011
0.000	0.000	0.000	0.000	0.002	0.004	0.005	0.010

RUN=2 DEGREE=4 SEGMENT= 9

AFD OUTPUT

0	0	0	0	1	1	1
0	0	1	2	1	2	2
0	2	1	1	3	1	3
1	0	0	0	2	2	4
0	0	1	0	1	3	4
						36

SUMAP= 76.327 SUMNAP= 1.177

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	10.109	12.143	7.034
0.000	0.000	0.045	0.186	0.644	8.333	10.004	1.251
0.000	0.000	0.019	0.080	0.000	1.777	0.000	0.000
0.000	0.000	0.000	0.000	0.207	1.415	3.400	7.009
0.000	0.000	0.003	0.014	0.000	0.000	0.000	1.030
0.000	0.000	0.000	0.000	0.044	0.120	0.413	1.766

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.204	0.143	0.014
0.000	0.000	0.009	0.036	0.040	0.190	0.118	0.007
0.000	0.000	0.004	0.004	0.008	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.007	0.033	0.040	0.004
0.000	0.000	0.001	0.001	0.003	0.001	0.007	0.011
0.000	0.000	0.000	0.000	0.002	0.004	0.005	0.009

RUN#1 DEGREE#4
SEGMENT#10

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2
1	0	0	0	0	0	0	0
0	0	0	0	2	1	0	32
0	0	0	1	5	2	10	39

SUMAP= 13.254 SUMNAP= 0.142

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.031
0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.461
0.000	0.000	0.000	0.000	0.230	0.083	0.350	2.001
0.000	0.000	0.000	0.000	0.122	0.240	1.444	1.407

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.011	0.014	0.004	0.017
0.000	0.000	0.000	0.001	0.006	0.006	0.017	0.008

RUN#2 DEGREE#4
SEGMENT#11

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	2
0	2	0	0	0	0	0	4
1	0	0	1	1	1	1	9
0	0	0	0	0	0	1	30
0	0	1	3	8	6	3	54

SUMAP= 15.257 SUMNAP= 0.154

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.045	0.000	0.000	0.000	0.000	2.501
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.002
0.000	0.000	0.000	0.033	0.143	0.155	0.000	1.912
0.000	0.000	0.000	0.000	0.000	0.000	0.150	2.020
0.000	0.000	0.001	0.017	0.145	0.171	0.073	1.760

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012
0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.011
0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.015
0.000	0.000	0.000	0.002	0.004	0.017	0.005	0.011

RUN#2 DEGREE#4
SEGMENT#12

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2
1	0	0	0	0	0	0	3
0	0	0	0	3	4	0	4
0	0	0	0	6	0	1	39

SUMAP= 5.144 SUMNAP= 0.045

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.251
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.031
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037
0.000	0.000	0.000	0.000	0.177	0.300	0.000	0.250
0.000	0.000	0.000	0.000	0.144	0.000	0.144	1.407

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#2 DEGREE#4
SEGMENT#13

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	3	0	0	41
0	0	0	0	7	0	3	52
0	0	0	0	4	3	17	22

SUMAP= 52.384 SUMNAP= 0.374

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.503
0.000	0.000	0.000	0.000	0.430	0.000	0.000	17.205
0.000	0.000	0.000	0.000	0.000	0.413	0.000	1.054
0.000	0.000	0.000	0.000	0.000	0.000	0.301	2.444
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.740

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#2

DEGREE#4
SEGMENT#14

AFD OUTPUT							
0	0	0	0	1	1	0	
0	0	1	1	2	1	0	
0	2	1	1	1	1	46	
1	0	0	1	1	2	110	
0	0	1	0	6	4	41	
0	0	0	4	1	8	7	

SUMAP= 89.618 SUMNAP= 1.071

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.045	0.193	1.057	4.166	0.000	1.251
0.000	0.000	0.019	0.080	0.348	0.000	2.063	23.708
0.000	0.000	0.000	0.333	0.143	0.704	1.700	23.365
0.000	0.000	0.003	0.000	0.354	0.075	1.401	3.509
0.000	0.000	0.000	0.000	0.097	0.120	1.165	0.253

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.001	0.238	0.143	0.000
0.000	0.000	0.009	0.016	0.030	0.048	0.000	0.007
0.000	0.000	0.004	0.008	0.016	0.000	0.029	0.140
0.000	0.000	0.000	0.003	0.007	0.017	0.020	0.138
0.000	0.000	0.001	0.000	0.017	0.021	0.017	0.021

0.000 0.000 0.000 0.000 0.005 0.003 0.014 0.001

RUN#2

DEGREE#4
SEGMENT#15

AFD OUTPUT							
0	0	0	0	0	0	0	
0	0	0	0	0	0	7	
0	0	0	0	0	0	0	
1	0	0	0	1	0	120	
0	0	0	0	1	2	21	
0	0	0	1	7	0	11	

SUMAP= 69.591 SUMNAP= 0.446

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.754
0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.924
0.000	0.000	0.000	0.000	0.143	0.000	0.000	25.489
0.000	0.000	0.000	0.000	0.059	0.583	0.000	1.038
0.000	0.000	0.000	0.000	0.006	0.170	0.000	1.580

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.052

0.000 0.000 0.000 0.000 0.160 0.000 0.000 0.102
0.000 0.000 0.000 0.000 0.007 0.000 0.000 0.150
0.000 0.000 0.000 0.000 0.003 0.014 0.000 0.011
0.000 0.000 0.000 0.000 0.001 0.008 0.000 0.019 0.000

RUN#2

DEGREE#4
SEGMENT#16

AFD OUTPUT							
0	0	0	0	0	0	0	
0	0	0	0	0	0	0	
0	1	0	0	0	0	0	15
1	0	0	0	0	0	0	47
0	0	1	0	0	3	0	66
0	0	0	0	0	0	7	40

SUMAP= 27.723 SUMNAP= 0.193

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.251
0.000	0.005	0.000	0.000	0.000	0.000	0.000	7.731
0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.903
0.000	0.000	0.003	0.000	0.177	0.000	0.000	5.778
0.000	0.000	0.000	0.000	0.219	0.120	1.011	1.443

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.059
0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.014
0.000	0.000	0.000	0.000	0.010	0.000	0.012	0.009

RUN#2

DEGREE#4
SEGMENT#17

AFD OUTPUT							
0	0	0	0	0	0	0	
0	0	1	0	0	0	0	
0	2	0	1	1	0	0	
0	0	0	0	4	2	0	4
1	0	1	1	4	3	1	22
0	1	0	1	3	4	1	58

SUMAP= 9.521 SUMNAP= 0.180

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.348	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.573	1.415	0.000	0.000
0.000	0.000	0.003	0.014	0.736	0.075	0.350	0.000
0.000	0.000	0.000	0.000	0.073	0.401	0.144	2.096

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.001	0.011	0.021	0.008	0.011	0.011
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012

RUN 2, DEGREE 5

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.015740 0.064070 0.314880 0.785920 0.619200 0.126250 0.022900 0.003500

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

1.30961	5.33078	26.19881	65.39033	51.51401	10.30432	1.90534	0.29121
0.53973	2.19697	10.79728	26.94733	21.23247	4.32913	0.78524	0.12002
0.22244	0.90544	4.44987	11.17000	8.75052	1.78410	0.32362	0.04946
0.09167	0.37310	1.83392	4.57730	3.60034	0.73530	0.13337	0.02038
0.03778	0.15379	0.75581	1.88040	1.48627	0.30304	0.05497	0.00840
0.01557	0.06338	0.31149	0.77740	0.61254	0.12489	0.02265	0.00340

NORMALIZED ABSORBED POWER MATRIX

0.98777	2.01036	4.94009	6.16500	2.42863	0.24759	0.02245	0.00172
0.40709	0.82653	2.03595	2.54081	1.00091	0.10204	0.00925	0.00071
0.16777	0.34146	0.83900	1.04714	0.41250	0.04205	0.00301	0.00029
0.06914	0.14073	0.34581	0.43150	0.17050	0.01733	0.00157	0.00012
0.02850	0.05800	0.14252	0.17735	0.07005	0.00714	0.00005	0.00005
0.01174	0.02399	0.05674	0.07339	0.02880	0.00294	0.00027	0.00002

RUN=2

DEGREE=5
SEGMENT= 1

AFD OUTPUT							
0	0	0	0	0	0	0	5
0	0	0	0	0	0	0	4
0	0	0	0	0	0	0	44
0	0	0	0	0	0	0	45
0	0	0	0	0	0	0	54
0	0	0	0	0	0	0	23

SUMAP= 6.292 SUMNAP= 0.049

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.456
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.088
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.176
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.454
0.016	0.000	0.000	0.000	0.000	0.000	0.113	0.000

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
0.012	0.000	0.000	0.000	0.000	0.000	0.001	0.000

IN NUMBER= 0

RUN=2

DEGREE=5
SEGMENT= 3

AFD OUTPUT							
0	0	0	0	0	0	0	44
0	0	0	0	0	0	0	142
0	1	0	0	0	0	0	44
2	0	0	0	0	0	0	15
0	0	1	0	0	0	0	7
0	1	0	0	0	0	0	3

SUMAP= 29.537 SUMNAP= 6.864

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.813
0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.242
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.176
0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.306
0.000	0.000	0.756	0.000	0.000	0.000	0.000	0.054
0.000	0.063	0.000	0.000	0.000	0.000	0.000	0.023

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.076
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.072
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
0.134	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.000

0.000 0.024 0.000 0.000 0.000 0.000 0.000 0.000

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RUN=2

DEGREE=5
SEGMENT= 2

AFD OUTPUT							
0	0	0	0	0	0	0	44
0	0	0	0	0	0	0	4
0	0	0	0	0	0	0	39
1	0	0	0	0	0	0	8
0	0	1	0	0	0	0	3
0	0	0	0	0	0	0	3

SUMAP= 38.471 SUMNAP= 0.771

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	24.462
0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.041
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.701
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.153
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050
0.000	0.000	0.756	0.000	0.000	0.000	0.000	0.141
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.144
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.059
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

IN NUMBER= 1

RUN=2

DEGREE=5
SEGMENT= 4

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	3
1	0	0	0	0	0	0	43
0	0	0	0	0	0	0	79
0	1	0	0	0	0	0	46

SUMAP= 1.962 SUMNAP= 0.104

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.063	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.001

RUN#2
DEGREE#5
SEGMENT# 5

AFD OUTPUT							
0	0	0	0	0	0	0	13
0	0	0	0	0	0	0	39
1	0	0	0	0	0	0	54
0	0	0	0	0	0	0	53
0	0	0	0	0	0	3	20
0	1	0	0	0	0	0	7

SUMAP= 13.086 SUNNAP= 0.171

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.706
0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.081
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.869
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.066
0.000	0.000	0.000	0.000	0.000	0.000	0.165	0.165
0.000	0.000	0.000	0.000	0.000	0.000	0.159	0.024

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.028
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001
0.000	0.024	0.000	0.000	0.000	0.000	0.002	0.000

RUN#2
DEGREE#5
SEGMENT# 7

AFD OUTPUT							
0	0	0	0	0	0	0	49
0	0	0	0	0	0	0	41
0	0	0	0	0	0	0	49
1	0	0	0	0	0	0	25
0	1	0	0	1	0	0	14
0	0	0	0	0	0	2	8

SUMAP= 23.657 SUNNAP= 0.265

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.269
0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.721
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.724
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.310
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.151
0.000	0.063	0.000	0.000	0.777	0.000	0.000	0.078

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.001

RUN#2
DEGREE#5
SEGMENT# 6

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	1	1	0	0	0	0	0
0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
0	1	1	0	0	0	0	25
0	0	1	0	0	0	0	30

SUMAP= 14.856 SUNNAP= 3.205

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	2.197	10.797	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.122
0.000	0.154	0.756	0.000	0.000	0.000	0.000	0.219
0.000	0.000	0.311	0.000	0.000	0.000	0.000	0.125

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.029	0.036	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.058	0.143	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.059	0.000	0.000	0.000	0.000	0.001

RUN#2
DEGREE#5
SEGMENT# 8

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	1	1	0	0	0	0	3
0	0	0	0	0	0	0	13
2	0	0	0	0	0	0	31
0	0	0	0	0	0	0	42

SUMAP= 15.681 SUNNAP= 3.074

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	2.197	10.797	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.311	0.000	0.000	0.000	0.000	0.204

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.029	0.036	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.059	0.000	0.000	0.000	0.000	0.001

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RUN#2

DEGREE#5

SEGMENT#14

AFU OUTPUT							
0	0	0	0	0	0	0	47
0	1	1	0	0	0	0	126
0	1	0	0	0	0	0	37
1	0	0	0	0	0	0	4
0	1	1	0	0	0	0	0
0	0	0	1	0	0	1	0

SUMAP# 46.422

SUNMAP# 3.730

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.687
0.000	2.197	10.747	0.000	0.000	0.000	0.000	15.122
0.000	0.905	0.000	0.000	0.000	0.000	0.000	1.050
0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.082
0.000	0.154	0.756	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.777	0.000	0.000	0.023	0.000

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.081
0.000	0.029	2.038	0.000	0.000	0.000	0.000	0.089

0.000	0.341	0.000	0.000	0.000	0.000	0.000	0.011
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.008	0.143	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.073	0.000	0.000	0.000	0.000

RUN#2

DEGREE#5

SEGMENT#15

AFU OUTPUT							
0	0	0	0	0	1	2	61
0	1	2	2	1	1	1	164
0	1	0	1	1	1	0	22
1	0	0	0	1	1	0	9
0	0	0	0	0	2	0	4
0	0	1	1	1	2	10	3

SUMAP#201.310

SUNMAP# 14.062

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	18.584	3.811	17.704
0.000	2.197	21.595	53.899	42.465	4.029	0.745	12.482
0.000	0.905	0.000	11.107	8.751	1.744	0.000	1.086
0.092	0.000	0.000	0.000	3.650	0.775	0.400	0.183
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034
0.000	0.000	0.311	0.777	0.613	0.250	0.227	0.010

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.105
0.000	0.029	4.672	5.082	2.902	0.102	0.009	0.074
0.000	0.001	0.000	1.047	0.443	0.042	0.003	0.009
0.069	0.000	0.000	0.000	0.170	0.017	0.005	0.001
0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.000
0.000	0.000	0.009	0.073	0.029	0.005	0.003	0.000

RUN#2

DEGREE#5

SEGMENT#16

AFU OUTPUT							
0	0	0	0	0	0	0	3
0	0	0	0	0	0	0	33
1	0	0	0	0	0	0	32
0	0	0	0	0	0	0	43
0	0	0	0	0	0	0	30
0	0	0	0	0	0	0	15

SUMAP# 8.678

SUNMAP# 0.120

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.374
0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.461
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.572
0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.077
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.292
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.052

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.015
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#2

DEGREE#5

SEGMENT#17

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	2
0	0	0	0	0	0	0	20
1	0	0	0	0	0	0	51
1	0	1	0	0	0	0	65
0	1	1	0	0	0	0	38

SUMAP# 6.404

SUNMAP# 1.169

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	2.197	0.000	0.000	0.000	0.000	0.000	0.240
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.409
0.092	0.000	0.000	0.000	0.000	0.000	0.000	1.000
0.000	0.000	0.756	0.000	0.000	0.000	0.000	1.200
0.000	0.000	0.311	0.000	0.000	0.000	0.000	0.132

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.029	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.023	0.000	0.143	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000

RUN 2, DEGREE 6

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.000000 0.000000 0.000000 0.040000 0.500000 0.260000 0.035000 0.002300

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	28.28886	49.92151	21.63266	2.91209	0.19137
0.00000	0.00000	0.00000	11.65365	20.57410	8.91544	1.20516	0.07887
0.00000	0.00000	0.00000	4.83957	8.47918	3.67431	0.49462	0.03250
0.00000	0.00000	0.00000	1.98322	3.49451	1.51429	0.20385	0.01340
0.00000	0.00000	0.00000	0.81311	1.44019	0.62408	0.08461	0.00552
0.00000	0.00000	0.00000	0.33534	0.59354	0.25720	0.03462	0.00228

NORMALIZED ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	2.66713	2.35332	0.50969	0.03432	0.00113
0.00000	0.00000	0.00000	1.07919	0.96957	0.21014	0.01414	0.00046
0.00000	0.00000	0.00000	0.45301	0.39471	0.08660	0.00553	0.00019
0.00000	0.00000	0.00000	0.18676	0.16473	0.03569	0.00240	0.00008
0.00000	0.00000	0.00000	0.07694	0.06769	0.01471	0.00099	0.00003
0.00000	0.00000	0.00000	0.03171	0.02798	0.00606	0.00041	0.00001

RUN#2
DEGREE#6
SEGMENT#15

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	2	0	0	0	0	0	0
0	0	0	1	1	0	0	5
1	0	0	0	0	1	0	18
0	0	1	1	1	1	1	67
0	0	0	0	1	0	2	66

SUMAP= 23.624 SUMNAP= 1.179

ABSORBED POWER AFU							
0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	4.805	8.479	3.074	0.000	0.153
0.000	0.000	0.000	0.000	0.000	1.514	0.000	0.241
0.000	0.000	0.000	0.816	1.440	0.624	0.044	0.370
0.000	0.000	0.000	0.000	0.544	0.000	0.069	0.150

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.453	0.400	0.047	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.077	0.068	0.015	0.001	0.002
0.000	0.000	0.000	0.000	0.028	0.000	0.001	0.001

RUN#2
DEGREE#6
SEGMENT#17

AFU OUTPUT							
0	0	0	0	0	1	1	1
0	0	2	0	0	2	3	0
0	1	0	1	1	0	3	3
0	0	0	1	1	2	2	2
0	0	0	1	0	1	4	6
1	0	0	0	1	2	4	14

SUMAP=184.75 SUMNAP= 1.544

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	21.033	2.912	0.191
0.000	0.000	0.000	23.117	61.720	17.831	1.266	0.000
0.000	0.000	0.000	4.805	8.479	11.023	1.404	0.000
0.000	0.000	0.000	0.000	0.000	3.074	0.408	0.000
0.000	0.000	0.000	0.816	0.000	0.624	0.336	0.044
0.000	0.000	0.000	0.000	0.544	0.000	0.138	0.000

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.453	0.400	0.047	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.077	0.168	0.071	0.000	0.000
0.000	0.000	0.000	0.000	0.028	0.000	0.002	0.000

RUN#2
DEGREE#6
SEGMENT#16

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	10

SUMAP= 0.036 SUMNAP= 0.000

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN 6, DEGREE 1

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

PK FACTORS ARE

0.000082 0.000330 0.001325 0.005631 0.024600 0.121500 0.145950 0.030479

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.411

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00682	0.02746	0.11024	0.46651	2.04678	10.10910	12.14340	3.93440
0.00281	0.01132	0.04543	0.19309	0.84354	4.16625	5.00465	1.25056
0.00116	0.00466	0.01872	0.07950	0.34765	1.71703	2.06256	0.51539
0.00048	0.00192	0.00772	0.03250	0.14328	0.70764	0.85004	0.21241
0.00020	0.00079	0.00316	0.01352	0.05975	0.29164	0.35033	0.08754
0.00008	0.00033	0.00131	0.00557	0.02434	0.12019	0.14436	0.03608

NORMALIZED ABSORBED POWER MATRIX

0.00515	0.01935	0.02079	0.04417	0.09549	0.23827	0.14311	0.01788
0.00212	0.00427	0.00857	0.01820	0.03576	0.09820	0.05398	0.00737
0.00087	0.00176	0.00353	0.01751	0.01639	0.04047	0.02431	0.00304
0.00036	0.00072	0.00140	0.00309	0.00675	0.01668	0.01002	0.00125
0.00015	0.00030	0.00060	0.00127	0.00278	0.00667	0.00413	0.00052
0.00006	0.00012	0.00025	0.00055	0.00115	0.00283	0.00170	0.00021

RUN#6

DEGREE#1

SEGMENT# 1

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	1
0	0	0	0	1	1	0	6
0	0	0	1	0	1	0	18
1	0	0	1	1	1	1	60
0	0	0	0	4	8	5	53

SUMAP# 21.829

SUNNAP# 0.274

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.251
0.000	0.000	0.000	0.000	0.344	1.717	0.000	3.092
0.000	0.000	0.000	0.033	0.000	0.706	0.000	3.023
0.000	0.000	0.000	0.014	0.413	0.292	0.350	5.242
0.000	0.000	0.000	0.000	0.297	0.962	0.722	1.912

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.307
0.000	0.000	0.000	0.000	0.016	0.040	0.000	0.918

0.000	0.000	0.000	0.003	0.000	0.017	0.000	0.023
0.000	0.000	0.000	0.001	0.019	0.007	0.004	0.031
0.000	0.000	0.000	0.000	0.005	0.023	0.009	0.011

RUN#6

DEGREE#1

SEGMENT# 3

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
0	0	0	0	2	0	0	19
0	0	0	0	0	0	2	42
1	0	0	1	4	2	4	50
0	0	0	3	6	4	17	47

SUMAP# 29.986

SUNNAP# 0.311

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.251
0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.154
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.921
0.000	0.000	0.000	0.014	0.230	0.201	1.401	4.377
0.000	0.000	0.000	0.017	0.140	0.441	2.054	1.020

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.027
0.000	0.000	0.000	0.000	0.033	0.000	0.000	0.030
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.053
0.000	0.000	0.000	0.001	1.011	0.014	0.017	0.020
0.000	0.000	0.000	0.002	0.007	0.011	0.029	0.019

RUN#6

DEGREE#1

SEGMENT# 2

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	2	0	0	45
0	0	0	0	0	0	2	60
0	0	0	0	5	0	25	46

SUMAP# 24.754

SUNNAP# 0.204

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	1.000	0.000	3.092
0.000	0.000	0.000	0.000	0.707	0.000	0.000	4.548
0.000	0.000	0.000	0.000	0.472	0.000	0.701	5.242
0.000	0.000	0.000	0.000	0.162	0.000	3.009	1.000

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.200	0.000	0.038
0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.056
0.000	0.000	0.000	0.000	0.222	0.000	0.008	0.031
0.000	0.000	0.000	0.000	0.006	0.000	0.063	0.010

RUN#6

DEGREE#1

SEGMENT# 4

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	5
0	0	0	0	2	0	0	51

SUMAP# 2.335

SUNNAP# 0.210

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN 6, DEGREE 2

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.015740 0.064070 0.314880 0.788920 1.619200 3.126250 0.022900 0.003500

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.065 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

1.30961	5.33078	26.19881	65.39053	51.51901	10.50432	1.90534	0.29121
0.53973	2.19697	15.79726	26.94933	21.23247	4.32913	0.78524	0.12002
0.22244	0.90544	4.44987	11.10060	8.75052	1.78416	0.32302	0.04946
0.09167	0.37316	1.83392	4.57735	3.60634	0.73530	0.13337	0.02038
0.03778	0.15379	0.75581	1.98645	1.48027	0.30304	0.05497	0.00840
0.01557	0.06336	0.31149	0.77746	0.61259	0.12469	0.02205	0.00346

NORMALIZED ABSORBED POWER MATRIX

0.98777	2.01036	4.94009	6.16506	2.42463	0.24759	0.02245	0.00172
0.40709	0.82053	2.03595	2.54081	1.00091	0.10204	0.00925	0.00071
0.16777	0.34146	0.83908	1.04714	0.41250	0.04205	0.00301	0.00029
0.06914	0.14073	0.34581	0.43156	0.17000	0.01733	0.00157	0.00012
0.02850	0.05800	0.14252	0.17700	0.07000	0.00714	0.00065	0.00005
0.01174	0.02390	0.05374	0.07330	0.02866	0.00294	0.00027	0.00002

RUN#6							
DEGREE#2							
SEGMENT#10							
AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	1	1	2
1	0	0	0	0	1	1	14
0	1	0	0	2	3	1	37
SUMAP= 3.610				SUMNAP= 0.248			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.373	0.000	0.000	0.000	0.735	0.133	0.041
0.038	0.000	0.000	0.000	0.000	0.363	0.065	0.118
0.000	0.063	0.000	0.000	1.225	0.375	0.023	0.128
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.141	0.000	0.000	0.000	0.017	0.002	0.000
0.028	0.000	0.000	0.000	0.000	0.007	0.001	0.001
0.000	0.024	0.000	0.000	0.058	0.059	0.000	0.001

RUN#6							
DEGREE#2							
SEGMENT#12							
AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	3
1	1	0	0	0	0	0	6
0	0	1	0	0	0	0	12
SUMAP= 1.562				SUMNAP= 0.488			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.905	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.038	0.154	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.311	0.000	0.000	0.000	0.000	0.042
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.341	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.028	0.058	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.059	0.000	0.000	0.000	0.000	0.000

RUN#6							
DEGREE#2							
SEGMENT#11							
AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	2
0	0	0	0	0	0	0	40
SUMAP= 0.193				SUMNAP= 0.029			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.017
0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.138
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.001

RUN#6							
DEGREE#2							
SEGMENT#13							
AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	7
0	0	0	0	0	0	0	29
1	0	0	0	0	0	0	74
0	0	0	0	0	0	0	43
SUMAP= 1.746				SUMNAP= 0.039			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#6
DEGREE#2
SEGMENT#14

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	6
0	0	0	0	0	0	0	26
1	0	0	0	0	0	0	49
0	0	0	0	0	0	0	60

SUMAP= 1.443 SUMNAP= 0.037

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.297
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.449
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.412
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.208

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

RUN#6
DEGREE#2
SEGMENT#15

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	3
0	0	0	0	0	0	0	10
0	0	0	0	0	0	0	25
1	0	0	0	0	0	0	38
0	0	0	0	0	0	0	75

SUMAP= 1.991 SUMNAP= 0.040

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.340
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.445
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.510
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.319
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.260

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002

RUN#6
DEGREE#2
SEGMENT#16

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	13
0	0	0	0	0	0	0	31
0	0	0	0	0	0	0	44
0	0	0	0	0	0	0	39

SUMAP= 1.780 SUMNAP= 0.010

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

RUN#6
DEGREE#2
SEGMENT#17

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	3
1	0	0	0	0	0	0	30
0	1	0	0	0	0	0	56
0	1	1	0	0	0	0	40

SUMAP= 1.947 SUMNAP= 0.120

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.120
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.140
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.470
0.000	0.063	0.311	0.000	0.000	0.000	0.000	0.134

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.003

0.000	0.024	0.059	0.000	0.000	0.000	0.001	0.001
-------	-------	-------	-------	-------	-------	-------	-------

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RUN 6, DEGREE 3

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

FACTORS ARE

0.000000 0.000000 0.000000 0.340000 0.610000 0.260000 0.035000 0.002300

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.05 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	20.28000	49.92151	21.03200	2.91209	0.19137
0.00000	0.00000	0.00000	11.65805	20.57410	8.91544	1.20016	0.07637
0.00500	0.00300	0.00000	4.81467	8.47910	3.57431	0.49462	0.03250
0.00000	0.00000	0.00000	1.98022	3.49451	1.51429	0.20385	0.01340
0.00000	0.00000	0.00000	0.81611	1.44319	0.62408	0.08401	0.00552
0.00000	0.00000	0.00000	0.33634	0.59354	0.25720	0.03462	0.00226

NORMALIZED ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	2.66710	2.35332	0.50989	0.03432	0.00113
0.00000	0.00000	0.00000	1.09910	0.95987	0.21014	0.01414	0.00040
0.00000	0.00000	0.00000	0.45301	0.39971	0.08000	0.00583	0.00019
0.00000	0.00000	0.00000	0.18670	0.16473	0.03569	0.00240	0.00008
0.00000	0.00000	0.00000	0.07694	0.06789	0.01471	0.00099	0.00003
0.00000	0.00000	0.00000	0.03171	0.02798	0.00600	0.00041	0.00001

REPRODUCIBILITY OF THIS ORIGINAL PAGE IS POOR

RUN#0
 DEGREE#3
 SEGMENT#17

AFD OUTPUT

0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	4
0	0	0	0	0	0	0	11
0	0	1	0	0	0	0	42
						4	45

SUMAP# 0.750 SUMAP# 0.005

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.130
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.147
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.232
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.102

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN 6, DEGREE 4

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

FACTORS ARE

0.000082 0.000330 0.001325 0.005631 0.024600 0.121500 0.145950 0.036470

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00682	0.02746	0.11024	0.46051	2.04678	10.10910	12.14340	3.03440
0.00281	0.01132	0.04543	0.19309	0.84354	4.16625	5.00465	1.25056
0.00116	0.00466	0.01872	0.07958	0.34765	1.71703	2.06256	0.51539
0.00048	0.00192	0.00772	0.03289	0.14328	0.70764	0.85004	0.21241
0.00020	0.00079	0.00318	0.01352	0.05995	0.29164	0.35033	0.08754
0.00008	0.00033	0.00131	0.00557	0.02434	0.12019	0.14438	0.03608

NORMALIZED ABSORBED POWER MATRIX

0.00515	0.01035	0.02079	0.04117	0.09849	0.23827	0.14311	0.01788
0.00212	0.00427	0.00857	0.01720	0.03976	0.09820	0.05898	0.00737
0.00087	0.00176	0.00353	0.00712	0.01639	0.04047	0.02431	0.00304
0.00036	0.00072	0.00146	0.00309	0.00675	0.01668	0.01002	0.00125
0.00015	0.00030	0.00060	0.00127	0.00270	0.00687	0.00413	0.00052
0.00006	0.00012	0.00025	0.00053	0.00115	0.00283	0.00170	0.00021

DEGREE=4
SEGMENT= 1

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	39
2	0	0	0	3	2	3	66
0	0	1	0	4	5	3	76

SUMAP= 24.152 SUMNAP= 0.155

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.377
0.000	0.002	0.000	0.000	0.000	0.000	0.000	4.234
0.000	0.000	0.000	0.000	0.177	0.203	0.000	5.953
0.000	0.000	0.001	0.000	0.297	1.501	0.433	1.443

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.049
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009

RUN#4

DEGREE=4
SEGMENT= 2

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0
0	0	0	0	0	0	0	11
0	1	0	0	0	0	0	57
1	1	0	1	1	0	1	59
0	0	1	0	7	1	13	45

SUMAP= 27.045 SUMNAP= 0.193

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.067
0.000	0.002	0.000	0.000	0.000	0.000	0.000	12.177
0.000	0.001	0.000	0.000	0.000	0.000	0.000	5.165
0.000	0.000	0.001	0.000	0.177	0.203	1.677	1.623

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033
0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.071
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030
0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.010

RUN#5

DEGREE=4
SEGMENT= 3

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
0	0	1	0	0	0	0	10
0	0	0	0	2	0	0	37
0	0	0	0	2	1	5	48
0	0	0	1	0	4	16	54

SUMAP= 25.804 SUMNAP= 0.213

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.451
0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.154
0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.959
0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.282
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.948

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#6

DEGREE=4
SEGMENT= 4

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	12
0	0	0	0	0	0	0	00

SUMAP= 3.359 SUMNAP= 0.021

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#7

DEGREE=4
SEGMENT= 5

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	1	0	0	22
1	0	0	0	3	1	1	52
0	0	0	0	2	1	9	52

SUMAP= 15.049 SUMNAP= 0.122

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN 6, DEGREE 5

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.015740 0.064070 0.314880 0.785920 0.619230 0.126250 0.022900 0.003500

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

1.30961	5.33078	26.19881	65.39053	51.51901	10.50432	1.90554	0.29121
0.53973	2.19697	10.79728	26.94933	21.23247	4.32913	0.78524	0.12002
0.22244	0.90544	4.44987	11.10663	8.75052	1.78416	0.32362	0.04946
0.09167	0.37316	1.83392	4.57735	3.60634	0.73530	0.13337	0.02038
0.03778	0.15379	0.75581	1.88645	1.48627	0.30304	0.05497	0.00840
0.01557	0.06338	0.31149	0.77746	0.61254	0.12489	0.02265	0.00346

NORMALIZED ABSORBED POWER MATRIX

0.98777	2.61036	4.94009	6.16508	2.42863	0.24759	0.02245	0.00172
0.40709	0.82853	2.03595	2.54081	1.00091	0.10204	0.00925	0.00071
0.16777	0.34146	0.83908	1.84714	0.41250	0.04295	0.00351	0.00029
0.06914	0.14073	0.34581	0.43158	0.17050	0.01733	0.00157	0.00012
0.02850	0.05800	0.14252	0.17736	0.07305	0.00714	0.00065	0.00005
0.01174	0.02390	0.05874	0.07337	0.02888	0.00294	0.00027	0.00002

SEGMENT= 1

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	23
1	0	0	0	0	0	0	55
0	0	0	0	0	0	0	44
0	0	0	0	0	0	0	41

SUMAP= 2.928 SUMNAP= 0.046

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.120
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.138
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.121
0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.370
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.142

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

RUN#6
DEGREE#6
SEGMENT= 2

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	11
0	1	0	0	0	0	0	57
1	0	0	0	0	0	0	83
0	0	1	0	0	0	0	87
0	0	0	0	0	0	0	10

SUMAP= 7.606 SUMNAP= 0.588

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.320
0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.619
0.097	0.000	0.000	0.000	0.000	0.000	0.000	1.264
0.000	0.000	0.756	0.000	0.000	0.000	0.000	0.395
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ID. NUMBER: 63

DEGREE#5
SEGMENT= 3

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	12
0	0	0	0	0	0	0	43
0	1	0	0	0	0	0	53
1	0	0	0	0	0	0	51
0	0	0	0	0	0	0	25

SUMAP= 6.961 SUMNAP= 0.209

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.165
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.440
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.127
0.000	0.773	0.000	0.000	0.000	0.000	0.000	1.049
0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.420
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.113
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.141	0.000	0.000	0.000	0.000	0.000	0.000
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

RUN#6
DEGREE#5
SEGMENT= 4

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	5
0	0	0	0	0	0	0	27
0	0	0	0	0	0	0	65

SUMAP= 0.554 SUMNAP= 0.003

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.102
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.227
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

DEGREE=5
SEGMENT= 5

AFD OUTPUT							
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	7
0	0	0	0	0	0	0	39
0	0	0	0	0	0	0	46
1	0	0	0	0	0	1	49
0	0	0	0	0	0	7	25

SUMAP= 4.748 SUMNAP= 0.658

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.291
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.029
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.012
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002

RUN#6
DEGREE=5
SEGMENT= 6

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1
0	0	0	0	0	0	0	33
0	0	0	0	0	0	0	53

SUMAP= 0.014 SUMNAP= 0.072

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

RUN#7
DEGREE=5
SEGMENT= 7

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	6
0	1	0	0	0	0	0	21
0	0	0	0	0	0	0	49
1	1	0	0	0	0	1	45
0	0	2	0	0	0	3	29

SUMAP= 5.079 SUMNAP= 0.506

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#8
DEGREE=5
SEGMENT= 8

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	37
0	1	0	0	0	0	0	61

SUMAP= 0.683 SUMNAP= 0.056

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#9
DEGREE=5
SEGMENT= 9

AFD OUTPUT							
0	0	0	0	0	0	0	4
0	0	1	0	0	0	0	11
0	0	0	0	0	0	0	30
0	1	0	0	0	0	0	40
2	1	0	1	0	0	2	50
0	1	0	0	1	0	0	24

SUMAP= 19.512 SUMNAP= 2.557

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.165
0.000	0.000	10.792	0.000	0.000	0.000	0.000	1.329
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.484
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.815
0.076	0.154	0.000	1.484	0.000	0.000	0.110	0.429
0.000	0.000	0.000	0.000	0.000	0.000	0.110	0.047

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
0.000	0.000	2.036	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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RUN#6
DFGRFF#5
SEGMENT#14

AFD OUTPUT							
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	14
0	0	0	0	0	0	0	55
0	0	0	0	0	0	0	69
0	0	0	0	0	0	0	36
SUMAP= 1.040				SUMNAP= 0.918			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.291
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.240
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.592
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.121
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.580
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.129
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

RUN#6
DFGRFF#5
SEGMENT#16

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	4
0	0	0	0	0	0	0	32
0	0	0	0	0	0	0	40
0	0	0	0	0	0	0	37
SUMAP= 1.752				SUMNAP= 0.010			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#6
DFGRFF#5
SEGMENT#15

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	20
0	0	0	0	0	0	0	49
0	0	0	0	0	0	0	44
0	0	0	0	0	0	0	48
SUMAP= 8.752				SUMNAP= 1.185			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.246
0.000	0.000	4.450	0.000	0.000	0.000	0.000	0.589
0.000	0.373	0.000	0.000	0.000	0.000	0.000	0.999
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.370
0.000	0.000	0.311	0.277	0.000	0.000	0.000	0.166
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.339	0.000	0.000	0.000	0.000	0.006
0.000	0.141	0.000	0.000	0.000	0.000	0.000	0.006
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.059	0.073	0.000	0.000	0.000	0.001

RUN#6
DFGRFF#5
SEGMENT#17

AFD OUTPUT							
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	5
0	0	0	0	0	0	0	22
0	0	0	0	0	0	0	54
0	0	0	0	0	0	0	42
0	0	0	0	0	0	0	39
SUMAP= 4.003				SUMNAP= 0.132			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.291
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

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RUN 6, DEGREE 6

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.000000 0.000000 0.000000 0.345000 0.600000 0.260000 0.035000 0.002300

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	28.28866	49.92151	21.63265	2.91209	0.19137
0.00000	0.00000	0.00000	11.65865	21.57910	3.91544	1.20015	0.07887
0.00000	0.00000	0.00000	4.80487	8.47918	3.67431	0.49462	0.03250
0.00000	0.00000	0.00000	1.96922	3.49451	1.51429	0.20335	0.01340
0.00000	0.00000	0.00000	0.81611	1.44019	0.62403	0.08401	0.00552
0.00000	0.00000	0.00000	0.33634	1.59354	0.25720	0.03402	0.00228

NORMALIZED ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	2.66710	2.35332	0.50989	0.03432	0.00113
0.00000	0.00000	0.00000	1.59919	1.96987	0.21014	0.01414	0.00040
0.00000	0.00000	0.00000	0.45301	1.39971	0.08860	0.00503	0.00019
0.00000	0.00000	0.00000	0.18678	0.16473	0.03569	0.00240	0.00008
0.00000	0.00000	0.00000	0.07694	0.06789	0.01471	0.00099	0.00003
0.00000	0.00000	0.00000	0.03171	0.02798	0.00606	0.00041	0.00001

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

RUN 7, DEGREE 1

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.000082 0.000330 0.001325 0.005631 0.024500 0.121500 0.145950 0.036470

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.706

ABSORBED POWER MATRIX

0.00682	0.02746	0.11024	0.46541	2.03676	10.10910	12.14340	3.03440
0.00281	0.01132	0.04543	0.19329	0.84354	4.16025	5.00465	1.25056
0.00116	0.00468	0.01872	0.07756	0.34765	1.71763	2.06256	0.51530
0.00048	0.00192	0.00772	0.03280	0.14328	0.70764	0.85094	0.21240
0.00020	0.00079	0.00313	0.01352	0.05915	0.29164	0.35033	0.08754
0.00008	0.00033	0.00131	0.00557	0.02434	0.12019	0.14438	0.03606

NORMALIZED ABSORBED POWER MATRIX

0.00515	0.01035	0.02170	0.04417	0.09649	0.23627	0.14311	0.01788
0.00212	0.00427	0.00857	0.01820	0.03976	0.09820	0.05596	0.00730
0.00087	0.00176	0.00353	0.00759	0.01659	0.04047	0.02431	0.00300
0.00036	0.00072	0.00146	0.00309	0.00675	0.01608	0.01002	0.00125
0.00015	0.00030	0.00060	0.00127	0.00276	0.00687	0.00413	0.00050
0.00006	0.00012	0.00025	0.00055	0.00115	0.00283	0.00170	0.00020

RUN#7
DEGREE#1
SEGMENT# 5

AFU OUTPUT							
0	0	1	0	0	0	0	0
0	1	0	0	0	0	0	0
0	0	0	0	1	0	0	0
1	0	0	0	0	0	0	0
0	0	1	1	2	1	3	40
0	1	0	1	3	2	14	42

SUMAP= 11.00R SUMNAP= 0.14J

ABSORBED POWER AFU							
0.000	0.000	0.110	0.000	0.000	0.000	0.000	0.000
0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.005	0.000	0.000	0.340	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.699
0.000	0.000	0.003	0.014	0.119	0.292	1.051	3.502
0.000	0.000	0.000	0.006	0.073	0.249	2.021	1.015

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.021	0.000	0.000	0.000	0.000	0.000
0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.002	0.000	0.000	0.316	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019
0.000	0.000	0.001	0.001	0.006	0.007	0.012	0.021
0.000	0.000	0.000	0.001	0.003	0.006	0.024	0.009

RUN#7
DEGREE#1
SEGMENT# 6

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	3

SUMAP= 0.263 SUMNAP= 0.002

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.175
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

TO NUMBER 35

RUN#7
DEGREE#1
SEGMENT# 7

AFU OUTPUT							
0	0	0	1	0	1	1	1
0	1	0	2	1	3	1	1
0	1	0	0	0	1	2	1
1	0	0	0	0	0	2	4
0	0	1	2	1	4	10	49
0	0	0	1	4	1	15	36

SUMAP= 72.506 SUMNAP= 1.165

ABSORBED POWER AFU							
0.000	0.000	0.000	0.469	0.000	1.1109	12.143	3.034
0.000	0.011	0.091	0.193	2.531	4.166	5.005	1.251
0.000	0.005	0.000	0.000	0.340	3.434	2.063	3.092
0.000	0.000	0.000	0.000	0.000	1.415	3.400	7.009
0.000	0.000	0.003	0.027	0.059	1.167	3.503	4.209
0.000	0.000	0.000	0.006	0.097	0.120	2.146	1.299

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.044	0.000	0.238	0.143	0.018
0.000	0.004	0.017	0.018	0.119	0.096	0.054	0.007
0.000	0.002	0.000	0.000	0.016	0.061	0.024	0.016
0.000	0.000	0.000	0.000	0.000	0.033	0.040	0.041
0.000	0.000	0.001	0.003	0.003	0.027	0.041	0.025
0.000	0.000	0.000	0.001	0.005	0.003	0.026	0.008

RUN#7
DEGREE#1
SEGMENT# 8

AFU OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
0	0	0	0	0	0	1	6
0	0	0	0	2	3	2	26

SUMAP= 2.512 SUMNAP= 0.027

ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFU							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

0.000 0.000 0.000 0.000 0.002 0.000 0.003 0.000

RUN 7, DEGREE 2

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.015740 0.064070 0.314880 0.785920 0.619260 0.126250 0.022960 0.003500

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

1.30961	5.33078	26.19881	65.39253	51.519.1	10.50432	1.90534	0.29121
0.53973	2.19697	10.79728	26.94933	21.23247	4.32913	0.72524	0.12002
0.22244	0.90544	4.44987	11.10600	3.75152	1.78416	0.32362	0.04946
0.09167	0.37316	1.83392	4.57735	3.60634	0.73530	0.13337	0.02038
0.03778	0.15379	0.75521	1.86695	1.48627	0.30304	0.05497	0.00840
0.01557	0.06338	0.31149	0.77745	0.61254	0.12489	0.02265	0.00346

NORMALIZED ABSORBED POWER MATRIX

0.98777	2.01035	4.94009	6.16568	2.42883	0.24759	0.02245	0.00172
0.40709	0.82853	2.03595	2.54981	1.00091	0.10204	0.00925	0.00071
0.16777	0.34146	0.83908	1.04714	0.41250	0.04205	0.00361	0.00029
0.06914	0.14073	0.34561	0.43150	0.17050	0.01733	0.00157	0.00012
0.02850	0.05800	0.14252	0.17786	0.07016	0.00714	0.00065	0.00005
0.01174	0.02390	0.05874	0.07333	0.02858	0.00294	0.00027	0.00002

RUN#7
DEGREE#2
SEGMENT# 5

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	3
2	0	0	0	0	0	0	41
0	0	0	0	0	0	0	64
0	1	1	0	0	0	2	42

SUMAP= 4.468 SUMNAP= 1.060

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	2.197	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.149
0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.130
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.538
0.000	0.063	0.311	0.000	0.000	0.000	0.045	0.145

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.829	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.005
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.024	0.059	0.000	0.000	0.000	0.001	0.001

RUN#7
DEGREE#2
SEGMENT# 6

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
1	0	0	0	0	0	0	17

SUMAP= 0.083 SUMNAP= 0.012

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.054

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#7
DEGREE#2
SEGMENT# 7

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	2	1	1	0	0	3
0	2	0	0	1	1	0	20
1	0	0	0	0	1	2	41
0	0	1	2	1	1	1	55
0	0	0	0	0	0	1	41

SUMAP= 91.527 SUMNAP= 9.392

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	21.595	26.949	21.232	0.000	0.000	0.360
0.000	1.811	0.000	0.000	8.791	1.744	0.000	0.949
0.092	0.000	0.000	0.000	0.000	0.735	0.267	0.836
0.000	0.000	9.754	3.773	0.000	0.393	0.055	0.462
0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.142

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	4.972	2.541	1.001	0.000	0.000	0.002
0.000	0.653	0.000	0.000	0.413	0.042	0.000	0.006
0.069	0.000	0.000	0.000	0.000	0.017	0.003	0.005
0.000	0.000	0.143	0.356	0.000	0.007	0.001	0.003
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

RUN#7
DEGREE#2
SEGMENT# 8

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	4
0	0	0	0	0	0	0	13
0	0	0	0	0	0	1	24

SUMAP= 0.405 SUMNAP= 0.071

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.082
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.109
0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.100

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

RUN#7
DEGREE#2
SEGMENT# 9

AFD OUTPUT							
0	0	0	0	0	1	1	1
0	0	2	1	3	1	1	5
0	2	0	1	0	2	2	5
1	0	0	1	0	2	2	19
0	0	0	0	0	1	3	23
1	0	1	0	1	1	8	52

SUMAP=156.918 SUMNAP= 12.482

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	10.504	1.405	0.241
0.000	0.000	21.595	26.949	21.232	4.329	0.765	0.000
0.000	1.811	0.000	11.107	0.000	3.568	0.947	0.247
0.092	0.000	0.000	4.577	0.000	1.471	0.267	0.387
0.000	0.000	0.000	0.000	0.000	0.393	0.165	0.193
0.016	0.000	0.311	0.000	0.000	0.013	0.175	0.181

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	6.248	0.022	0.002
0.000	0.000	4.972	2.541	3.003	0.182	0.009	0.004
0.000	0.653	0.000	1.047	0.000	0.084	0.008	0.001
0.069	0.000	0.000	0.432	0.000	0.035	0.003	0.002
0.000	0.000	0.000	0.000	0.000	0.007	0.002	0.001
0.012	0.000	0.059	0.000	0.000	0.009	0.002	0.001

RUN#7
DEGREE#2
SEGMENT#10

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	1
1	0	0	0	0	0	0	12
0	1	0	0	0	5	3	25
0	0	0	0	0	5	6	36

SUMAP= 3.634 SUMNAP= 0.189

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.325	0.944
0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.245
0.000	0.154	0.000	0.000	0.000	1.515	0.165	0.210
0.000	0.000	0.000	0.000	0.000	0.824	0.136	0.125

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.058	0.000	0.000	0.000	0.036	0.002	0.001
0.000	0.000	0.000	0.000	0.000	0.014	0.002	0.001

RUN#7
DEGREE#2
SEGMENT#11

AFD OUTPUT							
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	3
0	0	0	0	0	0	1	4
0	0	0	0	0	0	1	0
0	0	0	0	0	2	1	6
1	0	0	0	0	2	1	17

SUMAP= 1.781 SUMNAP= 0.030

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.291
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.360
0.000	0.000	0.000	0.000	0.000	0.000	0.324	0.196
0.000	0.000	0.000	0.000	0.000	0.000	0.173	0.030
0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.050
0.016	0.000	0.000	0.000	0.000	0.250	0.045	0.050

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
0.012	0.000	0.000	0.000	0.000	0.000	0.001	0.000

RUN#7
DEGREE#2
SEGMENT#12

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1
0	0	0	0	0	0	0	3
0	0	0	0	0	0	6	20

SUMAP= 0.207 SUMNAP= 0.070

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.069

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#7
DEGREE#2
SEGMENT#13

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	33
0	0	0	0	0	0	0	95
1	0	2	0	0	0	0	52

SUMAP= 2.754 SUMNAP= 0.349

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.373	0.000	0.000	0.000	0.000	0.000	0.071
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.704
0.016	0.000	0.623	0.000	0.000	0.000	0.000	0.160

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.141	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.012	0.000	0.117	0.000	0.000	0.000	0.000	0.001

RUN#7							
DEGREE#2							
SEGMENT#14							
AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0
0	1	0	0	0	0	0	0
0	1	0	1	0	0	0	0
1	0	0	0	0	0	0	42
0	0	1	0	0	0	0	79
SUMAP= 17.629				SUMNAP= 3.041			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	10.797	0.000	0.000	0.000	0.000	0.000
0.000	0.905	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.373	0.000	4.577	0.000	0.000	0.000	0.000
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.353
0.000	0.000	0.311	0.000	0.000	0.000	0.000	0.274
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	2.036	0.000	0.000	0.000	0.000	0.000
0.000	0.341	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.141	0.000	0.432	0.000	0.000	0.000	0.000
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.059	0.000	0.000	0.000	0.000	0.002

RUN#7							
DEGREE#2							
SEGMENT#15							
AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	11
1	0	0	0	0	0	0	38
0	0	1	0	0	0	0	67
SUMAP= 44.195				SUMNAP= 5.382			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	10.797	26.949	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.746	0.000	4.577	0.000	0.000	0.000	0.224
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.319
0.000	0.000	0.311	0.000	0.000	0.000	0.000	0.232
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	2.036	2.541	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.281	0.000	0.432	0.000	0.000	0.000	0.001
0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.059	0.000	0.000	0.000	0.000	0.001

RUN#7							
DEGREE#2							
SEGMENT#16							
AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	4
1	0	0	0	0	0	0	46
0	0	0	0	0	0	0	55
SUMAP= 1.602				SUMNAP= 0.374			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.905	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.386
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.199
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.341	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

RUN#7							
DEGREE#2							
SEGMENT#17							
AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	2	1	1	0	0	0
0	0	0	0	0	1	0	0
0	2	0	1	0	2	0	8
1	0	0	0	0	0	2	45
0	0	1	0	1	0	2	59
SUMAP= 80.217				SUMNAP= 8.526			
ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	21.595	26.949	21.232	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	1.784	0.000	0.000
0.000	0.746	0.000	4.577	0.000	1.471	0.000	0.163
0.038	0.000	0.000	0.000	0.000	0.000	0.110	0.374
0.000	0.000	0.311	0.000	0.613	0.000	0.045	0.204
NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	4.072	2.541	1.001	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.042	0.000	0.000
0.000	0.281	0.000	0.432	0.000	0.035	0.000	0.001
0.028	0.000	0.000	0.000	0.000	0.000	0.001	0.002
0.000	0.000	0.059	0.000	0.029	0.000	0.001	0.001

RUN 7, DEGREE 3

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE:

0.000000 0.000000 0.000000 1.340000 0.620000 0.260000 0.035000 0.002300

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.06 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	28.26386	49.92154	21.63266	2.91269	0.19137
0.00000	0.00000	0.00000	11.55055	21.57910	8.91544	1.20916	0.07867
0.00000	0.00000	0.00000	4.60487	8.47316	3.67431	0.49462	0.03250
0.00000	0.00000	0.00000	1.98022	3.47051	1.51429	0.20365	0.01340
0.00000	0.00000	0.00000	0.81611	1.44019	0.62408	0.08401	0.00552
0.00000	0.00000	0.00000	0.33534	0.59354	0.25720	0.03402	0.00226

NORMALIZED ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	2.66711	2.35332	0.50989	0.03432	0.00113
0.00000	0.00000	0.00000	1.09213	0.90987	0.21014	0.01414	0.00046
0.00000	0.00000	0.00000	0.43561	0.34971	0.08660	0.00563	0.00019
0.00000	0.00000	0.00000	0.18673	0.16473	0.03569	0.00260	0.00006
0.00000	0.00000	0.00000	0.07694	0.06769	0.01471	0.00099	0.00003
0.00000	0.00000	0.00000	0.03171	0.02796	0.00695	0.00041	0.00001

RUN#7
DEGREE=3
SEGMENT= 5

AFD OUTPUT							
0	0	1	0	0	0	0	0
0	1	0	0	0	0	0	1
0	0	0	0	0	0	0	5
0	0	0	0	0	0	0	17
0	0	1	0	0	0	1	48
0	1	0	0	0	2	0	47

SUMAP= 1.810 SUMNAP= 0.084

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.079
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.153
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.228
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.265
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.107

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001

RUN#7
DEGREE=3
SEGMENT= 6

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	1	0	0
0	0	0	0	0	0	2	12

SUMAP= 0.721 SUMNAP= 0.016

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000

RUN#7
DEGREE=3
SEGMENT= 7

AFD OUTPUT							
0	0	1	1	0	1	1	1
0	1	1	1	3	3	1	1
1	0	0	0	0	1	3	13
0	0	1	2	0	2	5	48
0	0	0	0	2	2	3	36

SUMAP=179.875 SUMNAP= 8.761

ABSORBED POWER AFD							
0.000	0.000	0.000	28.289	0.000	21.633	2.912	0.191
0.000	0.000	0.000	11.659	61.722	26.746	1.200	0.079
0.000	0.000	0.000	0.000	8.479	7.349	1.484	0.223
0.000	0.000	0.000	0.000	0.000	1.514	0.408	0.335
0.000	0.000	0.000	1.532	0.000	1.248	0.420	0.265
0.000	0.000	0.000	0.000	1.187	0.514	0.104	0.082

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	2.667	0.000	0.510	0.034	0.001
0.000	0.000	0.000	1.099	2.910	0.630	0.014	0.000
0.000	0.000	0.000	0.000	0.400	0.173	0.017	0.002
0.000	0.000	0.000	0.000	0.000	0.036	0.005	0.002
0.000	0.000	0.000	0.154	0.000	0.024	0.005	0.002
0.000	0.000	0.000	0.000	0.056	0.012	0.001	0.000

RUN#7
DEGREE=3
SEGMENT= 8

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	2
0	0	0	0	0	0	0	6
0	0	1	0	0	0	0	24

SUMAP= 0.112 SUMNAP= 0.001

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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RUN#7
DEGREE#3
SEGMENT# 9

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
1	0	0	0	0	0	0	21
0	0	0	0	0	0	3	42

SUMAP= 0.698 SUMNAP= 0.005

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.195
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.188
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.116
0.000	0.000	0.000	0.000	0.000	0.000	0.104	0.096

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001

TD NUMBER= 20

RUN#7
DEGREE#3
SEGMENT#11

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	19

SUMAP= 0.043 SUMNAP= 0.000

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#7
DEGREE#3
SEGMENT#10

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	2
1	0	0	0	0	0	0	21
0	2	0	0	0	0	3	26

SUMAP= 0.338 SUMNAP= 0.003

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.027
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.116
0.000	0.000	0.000	0.000	0.000	0.000	0.104	0.059

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000

RUN#7
DEGREE#3
SEGMENT#12

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2
1	0	0	0	0	0	0	1
0	0	0	0	0	0	0	2
0	1	0	0	0	0	1	10

SUMAP= 0.147 SUMNAP= 0.001

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011
0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.023

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR.

RUN 7, DEGREE 4

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.000082 0.000330 0.001325 0.005631 0.024600 0.121500 0.145950 0.030470

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00682	0.02746	0.11024	0.46851	2.04678	10.10910	12.14340	3.03440
0.00281	0.01132	0.04543	0.19389	0.84354	4.16625	5.00485	1.25056
0.00116	0.00466	0.01872	0.07958	0.34765	1.71703	2.06256	0.51539
0.00048	0.00192	0.00772	0.03280	0.14328	0.70764	0.85904	0.21241
0.00020	0.00079	0.00318	0.01352	0.05925	0.29164	0.35033	0.08754
0.00008	0.00033	0.00131	0.00557	0.02434	0.12019	0.14433	0.03608

NORMALIZED ABSORBED POWER MATRIX

0.00515	0.01035	0.02079	0.04417	0.09649	0.23827	0.14311	0.01786
0.00212	0.00427	0.00857	0.01820	0.03976	0.09820	0.05898	0.00737
0.00087	0.00176	0.00353	0.00750	0.01639	0.04047	0.02431	0.00304
0.00036	0.00072	0.00146	0.00309	0.00675	0.01668	0.01002	0.00125
0.00015	0.00030	0.00060	0.00127	0.00278	0.00687	0.00413	0.00052
0.00006	0.00012	0.00025	0.00053	0.00115	0.00283	0.00170	0.00021

RUN#7

DEGREE=4

SEGMENT= 1

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	7
1	1	0	0	0	0	0	36
0	0	0	0	0	0	1	50

SUMAP= 7.103 SUMNAP= 0.043

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.515
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.487
0.000	0.001	0.000	0.000	0.000	0.000	0.000	3.151
0.000	0.000	0.000	0.000	0.000	0.000	0.144	1.004

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019
0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.011

RUN#7

DEGREE=4

SEGMENT= 2

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	24
0	0	0	0	0	0	1	75

SUMAP= 4.951 SUMNAP= 0.930

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.101
0.000	0.000	0.000	0.000	0.000	0.000	0.144	2.706

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012
0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.016

RUN#7

DEGREE=4

SEGMENT= 3

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
0	1	0	0	0	0	0	5
0	0	0	0	0	0	1	29
2	0	0	0	0	0	4	43
0	0	1	0	0	2	16	32

SUMAP= 20.484 SUMNAP= 0.156

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.251
0.000	0.005	0.000	0.000	0.000	0.000	0.000	2.577
0.000	0.000	0.000	0.000	0.000	0.000	0.850	6.160
0.000	0.000	0.000	0.000	0.000	0.000	1.401	3.764
0.000	0.000	0.001	0.000	0.000	0.249	2.310	1.076

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.015
0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.035
0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.022
0.000	0.000	0.000	0.000	0.002	0.000	0.027	0.011

RUN#7

DEGREE=4

SEGMENT= 4

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1
0	0	1	0	0	0	0	18

SUMAP= 0.743 SUMNAP= 0.006

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.006
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004

TD NUMBER= 12

RUN#7

DEGREE=4

SEGMENT= 5

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0
0	2	0	0	1	0	0	0
0	0	0	1	0	1	0	20
1	0	0	1	0	0	3	46
0	0	1	0	3	1	11	48

SUMAP= 18.635 SUMNAP= 0.174

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.348	0.000	4.039
0.000	0.000	0.000	0.000	0.000	0.750	0.000	4.248
0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.027
0.000	0.000	0.001	0.000	0.000	0.073	0.120	1.588

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.027
0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.025
0.000	0.000	0.000	0.001	0.000	0.000	0.012	0.024
0.000	0.000	0.000	0.000	0.000	0.003	0.007	0.019

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RUN 7, DEGREE 5

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.015740 0.064070 0.314880 0.785920 0.619210 0.126250 0.022900 0.003500

AMPLITUDE LEVELS ARE SET AT

0.07 0.11 0.17 0.26 0.41 0.64 1.00

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.087 0.136 0.212 0.330 0.514 0.801

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.706

ABSORBED POWER MATRIX

5.23843	21.32315	104.79529	261.56226	206.07613	42.01729	7.62135	1.16484
2.15891	8.78786	43.18913	107.79729	64.92987	17.31853	3.14098	0.48006
0.88975	3.62174	17.79950	44.42641	35.09216	7.13664	1.29449	0.19785
0.36669	1.49262	7.33566	18.30946	14.42536	2.94122	0.53350	0.08154
0.15112	0.61515	3.02324	7.54582	5.94510	1.21216	0.21967	0.03360
0.06228	0.25352	1.24597	3.10965	2.45015	0.49957	0.09061	0.01385

NORMALIZED ABSORBED POWER MATRIX

3.95107	8.04145	19.76038	24.66031	9.71453	0.99036	0.08962	0.00686
1.62835	3.31432	8.14362	19.16322	4.00353	0.40815	0.03702	0.00263
0.67109	1.36584	3.35630	4.18856	1.65001	0.16821	0.01526	0.00117
0.27658	0.56296	1.38323	1.72623	0.58902	0.06933	0.00629	0.00048
0.11398	0.23199	0.57007	0.71143	0.28025	0.02857	0.00259	0.00020
0.04698	0.09561	0.23494	0.29329	0.11550	0.01177	0.00107	0.00006

RUN#7
 DEGREE#5
 SEGMENT# 5

AFD OUTPUT							
0	2	0	0	0	0	0	67
1	0	0	0	0	0	0	46
0	0	0	0	0	0	1	41
1	1	1	0	0	0	1	18
2	0	3	4	0	0	15	12
0	1	2	4	0	1	33	4

SUMAP=229.680 SUMAP=24.841
 1,802

ABSORBED POWER AFD							
0.000	42.646	0.000	0.000	0.000	0.000	0.000	78.044
4.318	0.000	0.000	0.000	0.000	0.000	0.000	22.083
0.000	0.000	0.000	0.000	0.000	0.000	1.294	8.112
0.367	1.493	7.336	0.000	0.000	0.000	0.533	1.468
0.302	0.000	9.070	30.183	0.000	0.000	3.298	0.403
0.000	0.254	2.492	12.439	0.000	0.500	2.900	0.055

NORMALIZED ABSORBED POWER AFD							
0.000	16.083	0.000	0.000	0.000	0.000	0.000	0.460
3.257	0.000	0.000	0.000	0.000	0.000	0.000	0.130
0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.048

0.277	0.563	1.383	0.000	0.000	0.000	0.000	0.009
0.228	0.000	1.710	2.846	0.000	0.000	0.039	0.002
0.000	0.096	0.470	1.173	0.000	0.012	0.035	0.000

RUN#7
 DEGREE#5
 SEGMENT# 6

AFD OUTPUT							
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	16
0	0	0	0	0	0	0	43
1	0	0	0	0	0	0	69
0	1	0	0	0	0	0	37

SUMAP=28.213 SUMAP=14.275
 0.076

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.165
0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.681
0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.597
0.367	0.000	0.000	0.000	0.000	0.000	0.000	5.626
0.000	0.615	0.000	0.000	0.000	0.000	0.000	1.243
0.000	0.254	2.492	0.000	0.000	0.000	0.000	0.263

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050
0.277	0.000	0.000	0.000	0.000	0.000	0.000	0.033
0.000	0.232	0.000	0.000	0.000	0.000	0.000	0.007
0.000	0.096	0.470	0.000	0.000	0.000	0.000	0.002

RUN#7
 DEGREE#5
 SEGMENT# 7

AFD OUTPUT							
0	2	3	2	4	3	0	89
1	0	1	0	2	0	3	47
0	1	1	3	0	3	3	39
1	2	2	0	1	0	6	7
2	0	0	1	1	1	36	3
0	0	1	2	0	2	41	2

SUMAP=440.54 SUMAP=210.153
 13,135

ABSORBED POWER AFD							
0.000	42.646	314.386	523.125	824.304	126.052	0.000	103.670
2.159	0.000	43.189	0.000	169.660	0.000	9.423	22.563
0.000	3.622	17.799	133.279	0.000	21.410	3.843	7.716
0.367	2.985	14.671	0.000	14.425	0.000	3.203	0.571
0.302	0.000	0.000	7.546	5.945	1.212	7.915	0.101
0.000	0.000	1.246	6.220	0.000	0.909	3.715	0.028

NORMALIZED ABSORBED POWER AFD							
0.000	16.083	59.201	49.321	38.858	2.971	0.000	0.611
1.628	0.000	8.144	0.000	8.007	0.000	0.111	0.133
0.000	1.366	3.356	12.566	0.000	0.305	0.046	0.145
0.277	1.126	2.768	0.000	0.600	0.000	0.038	0.003
0.228	0.000	0.000	0.711	0.280	0.029	0.003	0.001
0.000	0.000	0.233	0.586	0.000	0.024	0.044	0.000

RUN#7
 DEGREE#5
 SEGMENT# 8

AFD OUTPUT							
0	0	0	0	0	0	0	4
0	0	0	0	0	0	0	28
1	0	0	0	0	0	0	47
0	0	0	2	0	0	2	62
0	2	2	0	0	0	4	19
0	0	5	3	1	2	19	14

SUMAP=120.501 SUMAP=4.641
 0.606

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.319
0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.442
0.890	0.000	0.000	0.000	0.000	0.000	0.000	9.299
0.000	0.000	0.000	35.519	0.000	0.000	1.067	5.055
0.000	1.230	6.046	15.042	0.000	0.000	0.879	0.638
0.000	0.000	0.000	6.230	9.330	2.450	0.999	1.722

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055
0.671	0.000	0.000	0.000	0.000	0.000	0.000	0.079
0.000	0.000	0.000	3.452	0.000	0.000	0.000	0.030
0.000	0.464	1.140	1.423	0.000	0.000	0.010	0.004
0.000	0.000	1.175	0.980	0.116	0.024	0.020	0.001

RUN#7
DEGREE#5
SEGMENT# 9

AFD OUTPUT							
0	2	3	2	4	3	24	
1	1	1	4	0	3	37	
1	2	0	0	1	0	58	
0	0	0	0	1	7	52	
0	2	3	3	1	3	12	14
1	1	4	3	1	2	10	2

SUMAP=630.77 SUMNAP=235.592
11.724

ABSORBED POWER AFD							
0.000	42.646	314.386	523.125	824.304	168.069	22.864	32.015
2.159	8.788	43.189	431.199	0.000	51.950	9.473	17.762
0.890	7.243	0.000	0.000	35.002	0.000	7.747	11.475
0.367	0.000	0.000	0.000	0.000	2.941	3.734	4.240
0.000	1.230	9.070	22.637	5.945	3.636	2.638	0.470
0.062	0.254	4.984	9.330	2.450	0.999	0.906	0.028

NORMALIZED ABSORBED POWER AFD

0.000	16.083	59.281	49.321	38.858	3.941	0.249	0.192
1.024	3.314	8.144	40.653	0.000	1.224	0.111	0.105
0.671	2.732	0.000	0.000	1.000	0.000	0.002	0.000
0.277	0.000	0.000	0.000	0.000	0.069	0.044	0.025
0.000	0.464	1.710	2.134	0.280	0.086	0.031	0.003
0.047	0.096	0.940	0.880	0.116	0.074	0.011	0.000

RUN#7
DEGREE#5
SEGMENT#10

AFD OUTPUT							
0	0	0	0	0	0	20	
0	0	0	0	0	1	24	
1	0	0	0	2	1	32	
0	1	0	1	0	8	27	
1	2	1	3	1	19	32	
1	1	1	2	3	4	23	22

SUMAP=180.947 SUMNAP=0.574

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	23.297
0.000	0.000	0.000	0.000	0.000	0.000	3.141	11.521
0.890	0.000	0.000	0.000	0.000	14.273	1.294	6.731
0.000	1.493	0.000	18.309	0.000	25.471	4.268	2.202
0.151	1.230	3.023	22.637	5.945	9.647	4.178	1.075
0.062	0.254	1.246	6.220	7.350	1.998	2.084	0.305

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.137
0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.068
0.671	0.000	0.000	0.000	0.000	0.330	0.015	0.037
0.000	0.563	0.000	1.726	0.000	0.624	0.040	0.013
0.114	0.464	0.570	2.134	0.280	0.279	0.049	0.006
0.047	0.096	0.235	0.586	0.147	0.047	0.025	0.002

RUN#7
DEGREE#5
SEGMENT#11

AFD OUTPUT						
0	0	0	0	0	0	7

SUMAP=50.391 SUMNAP=1.176
0.069

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.154
0.000	0.000	0.000	0.000	0.000	0.000	9.423	5.241
0.000	0.000	0.000	0.000	0.000	0.000	5.178	8.705
0.367	0.000	0.000	0.000	0.000	2.941	0.513	4.974
0.000	0.000	0.000	0.000	0.000	1.212	0.270	1.243
0.062	0.254	1.246	0.000	0.000	0.000	0.362	0.235

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048
0.000	0.000	0.000	0.000	0.000	0.000	0.111	0.031
0.000	0.000	0.000	0.000	0.000	0.000	0.061	0.051
0.277	0.000	0.000	0.000	0.000	0.069	0.006	0.029
0.000	0.000	0.000	0.000	0.000	0.029	0.003	0.007
0.047	0.096	0.235	0.000	0.000	0.000	0.004	0.001

RUN#7
DEGREE#5
SEGMENT#12

AFD OUTPUT						
0	0	0	0	0	0	2
1	0	0	0	0	0	5
0	0	0	0	0	0	38
1	0	0	1	0	0	44
0	0	0	1	0	1	36
0	2	3	1	0	2	40

SUMAP=56.186 SUMNAP=0.359

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.330
2.159	0.000	0.000	0.000	0.000	0.000	0.000	2.400
0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.518
0.367	0.000	0.000	18.309	0.000	0.000	0.000	3.588
0.000	0.000	0.000	7.546	0.000	0.000	0.220	1.212
0.000	0.597	3.738	3.110	2.450	0.000	0.181	0.556

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014
1.624	0.000	0.000	0.000	0.000	0.000	0.000	0.014
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044
0.277	0.000	0.000	1.726	0.000	0.000	0.000	0.021
0.000	0.000	0.000	0.711	0.000	0.000	0.003	0.007
0.000	0.191	0.705	0.293	0.116	0.000	0.002	0.003

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REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

DEGREES
SEGMENT=13

AFD OUTPUT							
0	0	1	0	0	0	0	82
0	2	1	0	0	0	0	89
1	1	0	0	0	0	0	30
1	0	1	0	0	0	0	8
0	0	1	1	0	0	12	0
2	1	0	1	0	0	40	0

SUMAP=338.603 SUMNAP=40.895
2.594

ABSORBED POWER AFD							
0.000	0.000	104.795	0.000	0.000	0.000	0.000	95.517
0.000	17.576	43.189	0.000	0.000	0.000	0.000	38.405
0.890	3.622	0.000	0.000	0.000	0.000	0.000	5.935
0.367	0.000	7.336	0.000	0.000	0.000	0.000	0.052
0.000	0.000	3.023	7.546	0.000	0.000	2.038	0.000
0.125	0.254	0.000	3.110	0.000	0.000	3.625	0.000

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	19.760	0.000	0.000	0.000	0.000	0.563
0.000	6.628	8.144	0.000	0.000	0.000	0.000	0.226
0.571	1.366	0.000	0.000	0.000	0.000	0.000	0.035
0.277	0.000	1.383	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.570	0.711	0.000	0.000	0.011	0.000
0.094	0.096	0.000	0.243	0.000	0.000	0.043	0.000

RUN=7
DEGREE=5
SEGMENT=14

AFD OUTPUT							
0	1	1	0	0	0	0	11
0	1	1	1	0	1	0	65
0	1	1	0	0	0	0	70
1	1	1	4	1	0	0	34
0	1	1	3	1	0	19	16
0	0	1	2	0	0	51	2

SUMAP=532.458 SUMNAP=70.892
7.506

ABSORBED POWER AFD							
0.000	21.323	104.795	0.000	0.000	0.000	0.000	12.013
0.000	8.788	43.189	107.797	0.000	17.317	0.000	31.204
0.000	3.622	17.799	0.000	0.000	0.000	0.000	13.849
0.367	1.493	7.336	73.238	14.425	0.000	0.000	2.772
0.000	0.015	3.023	22.537	5.945	1.212	4.178	0.005
0.000	0.000	1.246	6.220	0.000	0.000	4.621	0.028

NORMALIZED ABSORBED POWER AFD							
0.000	8.041	19.760	0.000	0.000	0.000	0.000	0.076
0.000	3.314	8.144	10.163	0.000	0.408	0.000	0.184
0.000	1.366	3.356	0.000	0.000	0.000	0.000	0.082

0.277	0.563	1.383	5.905	0.680	0.000	0.000	0.016
0.000	0.232	0.570	2.134	0.280	0.029	0.049	0.004
0.000	0.000	0.235	0.586	0.000	0.000	0.054	0.000

RUN=7
DEGREE=5
SEGMENT=15

AFD OUTPUT							
0	0	3	2	0	0	0	27
0	2	1	2	1	0	0	77
0	0	0	1	1	0	0	44
1	2	2	0	0	1	0	24
1	0	1	2	0	1	5	14
0	0	3	5	1	0	25	4

SUMAP=423.78 SUMNAP=60.714
10.169

ABSORBED POWER AFD							
0.000	0.000	314.386	523.125	0.000	0.000	0.000	31.451
0.000	17.576	43.189	215.595	84.930	0.000	0.000	36.965
0.000	0.000	0.000	44.426	35.002	0.000	0.000	3.705
0.367	2.985	14.671	0.000	0.000	2.941	0.000	2.365
0.151	0.000	3.023	15.092	0.000	1.212	1.049	0.470
0.000	0.000	3.738	15.549	2.450	0.000	2.265	0.055

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	59.281	49.321	0.000	0.000	0.000	0.105
0.000	6.628	8.144	20.326	4.004	0.000	0.000	0.218
0.000	0.000	0.000	4.189	1.650	0.000	0.000	0.051
0.277	3.126	2.766	0.000	0.000	0.069	0.000	0.014
0.114	0.000	0.570	1.423	0.000	0.029	0.013	0.003
0.000	0.000	0.705	1.466	0.116	0.000	0.027	0.000

RUN=7
DEGREE=5
SEGMENT=16

AFD OUTPUT							
0	0	0	0	0	0	0	13
0	1	0	0	0	0	0	59
1	1	0	0	0	0	0	67
0	0	0	0	0	0	0	30
0	2	1	0	0	0	0	16
0	0	3	0	0	0	0	5

SUMAP=81.959 SUMNAP=7.453
0.466

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.143
0.000	8.788	0.000	0.000	0.000	0.000	0.000	28.324
0.890	3.622	0.000	0.000	0.000	0.000	0.000	13.256
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.446
0.000	1.230	3.023	0.000	0.000	0.000	0.000	0.440
0.000	0.000	3.738	0.000	0.000	0.000	0.453	0.069

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049
0.000	3.314	0.000	0.000	0.000	0.000	0.000	0.187
0.671	1.366	0.000	0.000	0.000	0.000	0.000	0.074
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014
0.000	0.464	0.570	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.705	0.000	0.000	0.000	0.005	0.000

RUN=7
DEGREE=5
SEGMENT=17

AFD OUTPUT							
0	0	0	0	0	0	0	58
0	0	0	0	0	0	0	68
1	0	0	0	0	0	0	37
0	0	0	0	0	0	0	22
0	2	0	0	0	0	0	17
0	0	2	0	0	0	3	26

SUMAP=121.794 SUMNAP=4.358
0.147

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	67.560
0.000	0.000	0.000	0.000	0.000	0.000	0.000	32.644
0.890	0.000	0.000	0.000	0.000	0.000	0.000	7.320
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.794
0.000	1.230	0.000	0.000	0.000	0.000	3.738	0.292
0.000	0.000	2.492	0.000	0.000	0.000	1.449	2.356

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.395
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.192
0.671	0.000	0.000	0.000	0.000	0.000	0.000	0.043
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011
0.000	0.464	0.000	0.000	0.000	0.000	0.044	0.001
0.000	0.000	0.470	0.000	0.000	0.000	0.035	0.075

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RUN 7, DEGREE 6

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.000000 0.000000 0.000000 0.340000 0.600000 0.260000 0.035000 0.002500

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	26.28586	49.92151	21.63266	2.91209	0.19137
0.00000	0.00000	0.00000	11.65865	20.57410	3.91544	1.20016	0.07887
0.00000	0.00000	0.00000	4.87487	6.47918	3.67431	0.49462	0.03250
0.00000	0.00000	0.00000	1.92022	3.49451	1.51429	0.20385	0.01340
0.00000	0.00000	0.00000	0.81511	1.44019	0.62408	0.08401	0.00552
0.00000	0.00000	0.00000	0.33634	0.59354	0.25720	0.03462	0.00228

NORMALIZED ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	2.66710	2.35332	0.50989	0.03432	0.00113
0.00000	0.00000	0.00000	1.09919	0.96987	0.21014	0.01414	0.00046
0.00000	0.00000	0.00000	0.45301	0.39971	0.08660	0.00583	0.00019
0.00000	0.00000	0.00000	0.18670	0.18473	0.03569	0.00240	0.00008
0.00000	0.00000	0.00000	0.07094	0.06789	0.01471	0.00099	0.00003
0.00000	0.00000	0.00000	0.03171	0.02790	0.00606	0.00041	0.00001

RUN#7

DEGREE#6
SEGMENT#15

AFD OUTPUT

0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0
0	2	0	0	0	0	0	0
0	2	1	1	0	0	0	2
1	1	0	0	0	0	0	14
0	0	1	0	0	0	1	38

SUMAP= 2.205

SUMNAP= 0.188

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	1.980	0.000	0.000	0.000	0.027
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.077
0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.988

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.187	0.000	0.000	0.000	0.030
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

DEGREE#6
SEGMENT#16

AFD OUTPUT

0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	5
0	1	0	0	0	0	0	25

SUMAP= 0.084

SUMNAP= 0.000

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.028
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.057

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#7

DEGREE#6
SEGMENT#17

AFD OUTPUT

0	0	2	0	0	0	0	0
0	0	1	0	0	0	0	0
1	2	0	1	0	0	0	1
0	1	0	2	0	0	0	1
0	1	1	0	0	0	0	8
2	1	1	2	0	0	1	17

SUMAP= 9.601

SUMNAP= 0.891

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	4.805	0.000	0.000	0.000	0.033
0.000	0.000	0.000	3.900	0.000	0.000	0.000	0.013
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044
0.000	0.000	0.000	0.673	0.000	0.000	0.015	0.039

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.453	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.373	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.063	0.000	0.000	0.000	0.000

RUN 8, DEGREE 1

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.000082 0.000330 0.001325 0.005531 0.020870 0.082150 0.145950 0.036470

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.155 0.257 0.411

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00082	0.002745	0.011624	0.050551	0.04072	10.10910	12.14340	3.03440
0.00281	0.01132	0.04543	0.19359	0.04554	4.16625	5.05465	1.25056
0.00116	0.00466	0.01872	0.07855	0.34765	1.71763	2.75256	0.51539
0.00048	0.00192	0.00772	0.03282	0.14323	0.70764	0.85004	0.21241
0.00020	0.00079	0.00310	0.01352	0.05955	0.29104	0.35033	0.08754
0.00008	0.00033	0.00131	0.00557	0.02434	0.12019	0.14456	0.03608

NORMALIZED ABSORBED POWER MATRIX

0.00515	0.01035	0.02079	0.04917	0.09044	0.25827	0.14311	0.01786
0.00212	0.00427	0.00857	0.01370	0.03976	0.09629	0.05393	0.00737
0.00087	0.00170	0.00353	0.01750	0.01639	0.04047	0.02431	0.00304
0.00036	0.00072	0.00146	0.00309	0.00575	0.01666	0.01002	0.00125
0.00015	0.00033	0.00069	0.00127	0.00278	0.00687	0.00413	0.00052
0.00006	0.00012	0.00025	0.00053	0.00115	0.00283	0.00176	0.00021

RUN#8
DEGREE=1
SEGMENT= 1

AFD OUTPUT							
0	0	1	1	0	0	0	0
0	1	0	0	0	0	0	0

0	1	1	0	0	0	0	1
1	0	0	1	0	0	0	8
0	0	1	0	3	0	1	44
0	0	0	1	2	3	10	51

SUMAP= 10.942 SUMNAP= 0.166

ABSORBED POWER AFD							
0.000	0.000	0.110	0.469	0.000	0.000	0.000	0.000
0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.005	0.019	0.000	0.000	0.000	0.000	0.515
0.000	0.000	0.000	0.033	0.000	0.000	0.000	1.699
0.000	0.000	0.003	0.000	0.177	0.000	0.350	3.952
0.000	0.000	0.000	0.006	0.049	0.361	1.444	1.840

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.021	0.044	0.000	0.000	0.000	0.000
0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.010
0.000	0.000	0.001	0.000	0.008	0.000	0.004	0.023
0.000	0.000	0.000	0.001	0.002	0.008	0.017	0.011

RUN#9
DEGREE=1
SEGMENT= 2

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0
2	0	0	0	0	0	0	0
0	0	0	0	0	0	0	43
0	1	1	0	0	1	83	0
0	0	0	1	4	1	11	46

SUMAP= 20.820 SUMNAP= 0.172

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000
0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.001	0.003	0.000	0.000	0.000	0.350	7.266
0.000	0.000	0.000	0.006	0.007	0.120	1.588	1.660

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000
0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.001	0.000	0.000	0.000	0.004	0.043
0.000	0.000	0.000	0.001	0.005	0.002	0.019	0.010

RUN#5
DEGREE=1
SEGMENT= 1

AFD OUTPUT							
0	0	1	1	0	1	1	1
0	0	1	1	2	1	1	0
0	2	0	0	3	0	2	7
1	0	0	1	3	3	1	30
0	0	1	1	2	4	5	04
0	0	0	0	4	4	6	43

SUMAP= 67.207 SUMNAP= 1.095

ABSORBED POWER AFD							
0.000	0.000	0.110	0.469	0.000	0.109	12.123	3.034
0.000	0.000	0.045	0.193	1.687	4.164	5.005	0.004
0.000	0.009	0.000	0.000	0.000	1.043	4.125	3.008
0.000	0.000	0.000	0.033	0.430	2.123	0.650	6.372
0.000	0.000	0.003	0.014	0.110	1.167	1.752	5.003
0.000	0.000	0.000	0.000	0.007	0.441	0.864	1.451

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.021	0.044	0.000	0.234	0.143	0.018
0.000	0.000	0.009	0.018	0.008	0.044	0.054	0.000
0.000	0.004	0.000	0.000	0.000	0.049	0.000	0.021
0.000	0.000	0.000	0.003	0.020	0.050	0.010	0.038
0.000	0.000	0.001	0.001	0.006	0.027	0.021	0.079
0.000	0.000	0.000	0.000	0.003	0.011	0.010	0.009

RUN#6
DEGREE=1
SEGMENT= 4

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0

0	0	0	0	0	0	0	1
1	0	0	0	0	0	1	1
0	0	1	0	0	0	1	15
0	1	0	0	2	1	0	54

SUMAP= 5.374 SUMNAP= 0.048

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012
0.000	0.000	0.003	0.000	0.000	0.000	0.350	1.313
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.948

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.001
0.000	0.000	0.001	0.000	0.000	0.000	0.004	0.008
0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.011

RUN#7
DEGREE=1
SEGMENT= 5

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0
2	0	1	0	2	0	1	15
0	0	1	0	3	3	3	34
0	1	0	2	2	1	12	52

SUMAP= 14.958 SUMNAP= 0.154

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000
0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.003	0.000	0.177	0.075	1.051	4.777
0.000	0.000	0.000	0.011	0.000	0.120	1.733	1.976

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000
0.001	0.000	0.001	0.000	0.014	0.000	0.010	0.017
0.000	0.000	0.001	0.000	0.006	0.021	0.012	0.028
0.000	0.000	0.000	0.001	0.002	0.003	0.020	0.011

RUN#8
DEGREE#1
SEGMENT# 6

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	3
0	0	0	0	0	0	0	21
0	0	0	0	1	0	0	

SUMAP# 1.045 SUMNAP# 0.008

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.253
0.000	0.000	0.000	0.000	0.624	0.000	0.000	0.758

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.004

RUN#8
DEGREE#1
SEGMENT# 7

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	6
2	0	0	0	0	0	0	19
0	0	1	0	0	0	0	59
0	0	0	0	4	0	19	18

SUMAP# 22.863 SUMNAP# 0.170

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.005	0.000	0.000	0.000	0.000	0.000	3.092
0.001	0.000	0.000	0.000	0.000	0.000	0.000	8.284
0.000	0.000	0.000	0.000	0.000	0.000	2.182	5.165
0.000	0.000	0.000	0.000	0.000	0.000	2.743	1.371

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.018
0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.049
0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.030
0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.008

RUN#8
DEGREE#1
SEGMENT# 8

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	12

SUMAP# 0.434 SUMNAP# 0.003

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.473

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003

RUN#8
DEGREE#1
SEGMENT# 9

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	5
1	0	0	0	0	0	2	12
0	0	1	0	0	0	3	40
0	1	0	0	1	3	11	44

SUMAP# 15.473 SUMNAP# 0.127

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.005	0.000	0.000	0.000	0.000	0.000	2.577

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.015
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.024
0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.019

RUN#A
DEGREE#1
SEGMENT#10

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0
1	0	0	0	4	1	0	23
0	0	0	1	7	3	4	52
0	1	0	3	6	8	19	39

SUMAP= 19.044 SUMNAP= 0.246

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.348	0.400	0.000	0.000
0.000	0.000	0.000	0.000	0.573	0.708	0.000	4.885
0.000	0.000	0.000	0.014	0.413	0.875	1.401	4.592
0.000	0.000	0.000	0.017	0.146	0.962	2.743	1.407

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.027	0.017	0.000	0.029
0.000	0.000	0.000	0.001	0.019	0.021	0.017	0.027
0.000	0.000	0.000	0.002	0.007	0.022	0.032	0.007

RUN#B
DEGREE#1
SEGMENT#11

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	3
1	0	0	0	3	0	4	2
0	0	0	1	2	3	0	7
0	1	0	3	9	2	1	25

SUMAP= 11.445 SUMNAP= 0.143

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.501
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.340
0.000	0.000	0.000	0.000	0.430	0.000	3.400	0.425
0.000	0.000	0.000	0.014	0.115	0.075	0.000	0.013
0.000	0.000	0.000	0.017	0.219	0.240	0.144	0.202

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.001	0.006	0.021	0.000	0.004
0.000	0.000	0.000	0.002	0.010	0.006	0.002	0.005

RUN#B
DEGREE#1
SEGMENT#12

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	4
0	0	0	0	2	0	0	3
0	0	0	0	4	0	1	17

SUMAP= 2.601 SUMNAP= 0.025

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.515
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050
0.000	0.000	0.000	0.000	0.118	0.000	0.000	0.263
0.000	0.000	0.000	0.000	0.097	0.000	0.144	0.013

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.004
0.000	0.000	0.000	0.000	0.005	0.000	0.002	0.004

RUN#B
DEGREE#1
SEGMENT#13

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	2	1	0	0	0	0	0
0	1	0	0	0	0	0	1
2	0	0	1	4	0	0	24
0	0	1	0	2	0	1	87
0	0	0	0	8	0	7	54

SUMAP= 15.760 SUMNAP= 0.154

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000
0.001	0.000	0.000	0.000	0.000	0.000	0.000	4.000
0.000	0.000	0.003	0.000	0.114	0.000	0.000	5.000
0.000	0.000	0.000	0.000	0.195	0.000	1.011	1.000

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000
0.001	0.000	0.000	0.000	0.003	0.000	0.000	0.000
0.000	0.000	0.000	0.001	0.000	0.006	0.000	0.004
0.000	0.000	0.000	0.000	0.004	0.000	0.012	0.011

RUN 8, DEGREE 2

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.015746 0.064070 0.314886 0.785920 0.619200 0.126250 0.022900 0.003500

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.944 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

1.30961	5.33078	26.19861	65.39053	51.51901	10.50432	1.90534	0.29121
0.53973	2.19597	10.79728	26.94933	21.23247	4.32913	0.78524	0.12002
0.22244	0.90544	4.44987	11.13600	8.75052	1.78416	0.32362	0.04946
0.09167	0.37316	1.63392	4.57735	3.60034	0.73530	0.13337	0.02036
0.03778	0.15379	0.75581	1.88645	1.40027	0.30304	0.05497	0.00840
0.01557	0.06338	0.31149	0.77740	0.61254	0.12489	0.02265	0.00346

NORMALIZED ABSORBED POWER MATRIX

0.98777	2.01036	4.94009	6.16568	2.42563	0.24759	0.02245	0.00172
0.40709	0.82853	2.03595	2.54581	1.00091	0.10204	0.00925	0.00071
0.16777	0.34146	0.83908	1.04714	0.41250	0.04205	0.00361	0.00029
0.06914	0.14073	0.34581	0.43156	0.17900	0.01733	0.00157	0.00012
0.02850	0.05500	0.14252	0.17785	0.07500	0.00714	0.00065	0.00005
0.01174	0.02390	0.05874	0.07330	0.02888	0.00294	0.00027	0.00002

RUN#8
DEGREE=2
SEGMENT= 1

AFD OUTPUT

0	0	1	1	0	0	0	0
0	1	1	0	0	0	0	0
0	1	0	0	0	0	0	2
1	0	0	1	0	1	0	32
0	0	1	0	1	0	0	54
0	0	0	0	1	1	2	51

SUMAP=115.426 SUMNAP= 15.083

ABSORBED POWER AFD

0.000	0.000	26.199	65.391	0.000	0.000	0.000	0.000
0.000	2.197	10.797	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.000	0.000	4.577	0.000	0.735	0.000	0.052
0.000	0.000	0.756	0.000	1.486	0.000	0.000	0.080
0.000	0.000	0.000	0.000	0.613	0.125	0.045	0.177

NORMALIZED ABSORBED POWER AFD

0.000	0.000	4.940	6.165	0.000	0.000	0.000	0.000
0.000	0.829	2.036	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.000	0.000	0.432	0.000	0.017	0.000	0.004
0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.000	0.029	0.003	0.001	0.001

RUN#9
DEGREE=2
SEGMENT= 2

AFD OUTPUT

0	0	0	0	0	0	0	1
0	1	0	0	0	0	0	9
2	0	1	0	0	0	0	71
0	0	1	0	0	0	0	63
0	1	0	0	0	0	0	36
0	0	0	1	0	0	1	14

SUMAP= 16.415 SUMNAP= 2.519

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.291
0.000	2.197	0.000	0.000	0.000	0.000	0.000	1.080
0.445	0.000	4.450	0.000	0.000	0.000	0.000	3.512
0.000	0.000	1.834	0.000	0.000	0.000	0.000	1.284
0.000	0.154	0.000	0.000	0.000	0.000	0.000	0.319
0.000	0.000	0.000	0.777	0.000	0.000	0.023	0.044

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.829	0.000	0.000	0.000	0.000	0.000	0.006
0.336	0.000	0.834	0.000	0.000	0.000	0.000	0.021
0.000	0.000	0.346	0.000	0.000	0.000	0.000	0.008
0.000	0.058	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.073	0.000	0.000	0.000	0.004

RUN#8
DEGREE=2
SEGMENT= 3

AFD OUTPUT

0	0	0	1	0	1	1	1
0	2	0	1	1	2	1	7
1	0	0	0	2	0	2	28
0	0	1	0	0	3	1	52
0	0	0	1	0	1	2	41
0	0	0	1	1	0	7	29

SUMAP=190.723 SUMNAP= 10.611

ABSORBED POWER AFD

0.000	0.000	0.000	65.391	0.000	10.504	1.905	0.291
0.000	0.000	21.545	26.049	21.212	6.658	0.785	0.840
0.000	1.811	0.000	0.000	17.501	0.000	0.647	1.385
0.092	0.000	0.000	4.577	0.000	2.210	0.133	1.050
0.000	0.000	0.756	0.000	0.000	0.303	0.110	0.164
0.000	0.000	0.000	0.000	0.777	0.013	0.000	0.159

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	6.165	0.000	0.268	0.022	0.002
0.000	0.000	4.072	2.541	1.061	0.294	0.009	0.005
0.000	0.683	0.000	0.000	0.025	0.000	0.000	0.008
0.069	0.000	0.000	0.432	0.000	0.052	0.002	0.008
0.000	0.000	0.143	0.000	0.000	0.007	0.001	0.002
0.000	0.000	0.000	0.073	0.029	0.000	0.002	0.001

RUN#9
DEGREE=2
SEGMENT= 4

AFD OUTPUT

0	1	0	0	0	0	0	0
0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	53
0	1	1	0	0	0	0	55

SUMAP= 3.340 SUMNAP= 0.984

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	2.197	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.041
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.445
0.000	0.063	0.311	0.000	0.000	0.000	0.000	0.190

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.829	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.024	0.059	0.000	0.000	0.000	0.000	0.001

RUN#8
DEGREE=2

SEGMENT# 5

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	1	1	0	0	0	0	2
0	0	0	0	0	0	0	30
2	0	0	0	0	0	0	44
0	1	1	0	0	0	0	66
0	1	0	0	0	0	0	34

SUMAP# 17.426 SUMNAP# 3.190

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	2.197	10.797	0.000	0.000	0.000	0.000	0.240
0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.484
0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.897
0.000	0.000	0.756	0.000	0.000	0.000	0.000	0.554
0.000	0.063	0.000	0.000	0.000	0.000	0.136	0.118

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.829	2.036	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.005
0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.003
0.000	0.024	0.000	0.000	0.000	0.000	0.002	0.001

RUN#8
DEGREE=2
SEGMENT# 7

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1

AFD OUTPUT							
0	1	0	0	0	0	0	28
2	0	0	0	0	0	0	56
0	0	1	0	0	0	0	56
0	1	0	0	0	0	0	28

SUMAP# 5.190 SUMNAP# 0.666

ABSORBED POWER AFD							
0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.120
0.000	0.905	0.000	0.000	0.000	0.000	0.000	1.385
0.183	0.000	0.000	0.000	0.000	0.000	0.000	1.142
0.000	0.000	0.756	0.000	0.000	0.000	0.000	0.470
0.000	0.063	0.000	0.000	0.000	0.000	0.000	0.097

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.341	0.000	0.000	0.000	0.000	0.000	0.000
0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.003
0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.001

RUN#8
DEGREE=2
SEGMENT# 6

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	7
0	0	0	0	0	0	0	8
0	1	0	0	0	0	0	30

SUMAP# 0.395 SUMNAP# 0.094

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.041
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.067
0.000	0.063	0.000	0.000	0.000	0.000	0.000	0.132

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.001

RUN#8
DEGREE=2
SEGMENT# 8

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	13

SUMAP# 0.153 SUMNAP# 0.070

ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045

NORMALIZED ABSORBED POWER AFD							
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#4
DEGREE=2
SEGMENT# 9

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2
0	1	0	0	0	0	0	9
1	0	0	0	0	0	0	34
0	0	1	0	0	0	0	57
0	0	0	0	0	0	3	40

SUMAP= 3.617 SUMNAP= 0.566

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.300
-------	-------	-------	-------	-------	-------	-------	-------

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.240
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.245
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.243
0.000	0.000	0.756	0.000	0.000	0.000	0.000	0.479
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.138

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001

RUN#8
DEGREE=2
SEGMENT#10

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	3
0	0	0	0	0	0	0	22
1	1	0	0	0	0	1	45
0	0	0	0	0	4	6	44

SUMAP= 2.009 SUMNAP= 0.107

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.140
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.038	0.154	0.000	0.000	0.000	0.000	0.055	0.370
0.000	0.000	0.000	0.000	0.000	0.300	0.136	0.152

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001

RUN#8
DEGREE=2
SEGMENT#11

AFD OUTPUT							
0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	2

SUMAP= 1.841 SUMNAP= 0.108

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.282
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.240
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.247
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.110
0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.023
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.177

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

RUN#8
DEGREE=2
SEGMENT#12

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	3
0	0	0	0	0	0	0	7
0	0	0	0	0	0	0	21

SUMAP= 0.193 SUMNAP= 0.001

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN 8, DEGREE 3

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.000000 0.000000 0.000000 0.36 0.72 1.08 1.44 1.80 2.16 2.52 2.88 3.24 3.60 3.96 4.32 4.68 5.04 5.40 5.76 6.12 6.48 6.84 7.20 7.56 7.92 8.28 8.64 9.00 9.36 9.72 10.08 10.44 10.80 11.16 11.52 11.88 12.24 12.60 12.96 13.32 13.68 14.04 14.40 14.76 15.12 15.48 15.84 16.20 16.56 16.92 17.28 17.64 18.00 18.36 18.72 19.08 19.44 19.80 20.16 20.52 20.88 21.24 21.60 21.96 22.32 22.68 23.04 23.40 23.76 24.12 24.48 24.84 25.20 25.56 25.92 26.28 26.64 27.00 27.36 27.72 28.08 28.44 28.80 29.16 29.52 29.88 30.24 30.60 30.96 31.32 31.68 32.04 32.40 32.76 33.12 33.48 33.84 34.20 34.56 34.92 35.28 35.64 36.00 36.36 36.72 37.08 37.44 37.80 38.16 38.52 38.88 39.24 39.60 39.96 40.32 40.68 41.04 41.40 41.76 42.12 42.48 42.84 43.20 43.56 43.92 44.28 44.64 45.00 45.36 45.72 46.08 46.44 46.80 47.16 47.52 47.88 48.24 48.60 48.96 49.32 49.68 50.04 50.40 50.76 51.12 51.48 51.84 52.20 52.56 52.92 53.28 53.64 54.00 54.36 54.72 55.08 55.44 55.80 56.16 56.52 56.88 57.24 57.60 57.96 58.32 58.68 59.04 59.40 59.76 60.12 60.48 60.84 61.20 61.56 61.92 62.28 62.64 63.00 63.36 63.72 64.08 64.44 64.80 65.16 65.52 65.88 66.24 66.60 66.96 67.32 67.68 68.04 68.40 68.76 69.12 69.48 69.84 70.20 70.56 70.92 71.28 71.64 72.00 72.36 72.72 73.08 73.44 73.80 74.16 74.52 74.88 75.24 75.60 75.96 76.32 76.68 77.04 77.40 77.76 78.12 78.48 78.84 79.20 79.56 79.92 80.28 80.64 81.00 81.36 81.72 82.08 82.44 82.80 83.16 83.52 83.88 84.24 84.60 84.96 85.32 85.68 86.04 86.40 86.76 87.12 87.48 87.84 88.20 88.56 88.92 89.28 89.64 90.00 90.36 90.72 91.08 91.44 91.80 92.16 92.52 92.88 93.24 93.60 93.96 94.32 94.68 95.04 95.40 95.76 96.12 96.48 96.84 97.20 97.56 97.92 98.28 98.64 99.00 99.36 99.72 100.08 100.44 100.80 101.16 101.52 101.88 102.24 102.60 102.96 103.32 103.68 104.04 104.40 104.76 105.12 105.48 105.84 106.20 106.56 106.92 107.28 107.64 108.00 108.36 108.72 109.08 109.44 109.80 110.16 110.52 110.88 111.24 111.60 111.96 112.32 112.68 113.04 113.40 113.76 114.12 114.48 114.84 115.20 115.56 115.92 116.28 116.64 117.00 117.36 117.72 118.08 118.44 118.80 119.16 119.52 119.88 120.24 120.60 120.96 121.32 121.68 122.04 122.40 122.76 123.12 123.48 123.84 124.20 124.56 124.92 125.28 125.64 126.00 126.36 126.72 127.08 127.44 127.80 128.16 128.52 128.88 129.24 129.60 129.96 130.32 130.68 131.04 131.40 131.76 132.12 132.48 132.84 133.20 133.56 133.92 134.28 134.64 135.00 135.36 135.72 136.08 136.44 136.80 137.16 137.52 137.88 138.24 138.60 138.96 139.32 139.68 140.04 140.40 140.76 141.12 141.48 141.84 142.20 142.56 142.92 143.28 143.64 144.00 144.36 144.72 145.08 145.44 145.80 146.16 146.52 146.88 147.24 147.60 147.96 148.32 148.68 149.04 149.40 149.76 150.12 150.48 150.84 151.20 151.56 151.92 152.28 152.64 153.00 153.36 153.72 154.08 154.44 154.80 155.16 155.52 155.88 156.24 156.60 156.96 157.32 157.68 158.04 158.40 158.76 159.12 159.48 159.84 160.20 160.56 160.92 161.28 161.64 162.00 162.36 162.72 163.08 163.44 163.80 164.16 164.52 164.88 165.24 165.60 165.96 166.32 166.68 167.04 167.40 167.76 168.12 168.48 168.84 169.20 169.56 169.92 170.28 170.64 171.00 171.36 171.72 172.08 172.44 172.80 173.16 173.52 173.88 174.24 174.60 174.96 175.32 175.68 176.04 176.40 176.76 177.12 177.48 177.84 178.20 178.56 178.92 179.28 179.64 180.00 180.36 180.72 181.08 181.44 181.80 182.16 182.52 182.88 183.24 183.60 183.96 184.32 184.68 185.04 185.40 185.76 186.12 186.48 186.84 187.20 187.56 187.92 188.28 188.64 189.00 189.36 189.72 190.08 190.44 190.80 191.16 191.52 191.88 192.24 192.60 192.96 193.32 193.68 194.04 194.40 194.76 195.12 195.48 195.84 196.20 196.56 196.92 197.28 197.64 198.00 198.36 198.72 199.08 199.44 199.80 200.16 200.52 200.88 201.24 201.60 201.96 202.32 202.68 203.04 203.40 203.76 204.12 204.48 204.84 205.20 205.56 205.92 206.28 206.64 207.00 207.36 207.72 208.08 208.44 208.80 209.16 209.52 209.88 210.24 210.60 210.96 211.32 211.68 212.04 212.40 212.76 213.12 213.48 213.84 214.20 214.56 214.92 215.28 215.64 216.00 216.36 216.72 217.08 217.44 217.80 218.16 218.52 218.88 219.24 219.60 219.96 220.32 220.68 221.04 221.40 221.76 222.12 222.48 222.84 223.20 223.56 223.92 224.28 224.64 225.00 225.36 225.72 226.08 226.44 226.80 227.16 227.52 227.88 228.24 228.60 228.96 229.32 229.68 230.04 230.40 230.76 231.12 231.48 231.84 232.20 232.56 232.92 233.28 233.64 234.00 234.36 234.72 235.08 235.44 235.80 236.16 236.52 236.88 237.24 237.60 237.96 238.32 238.68 239.04 239.40 239.76 240.12 240.48 240.84 241.20 241.56 241.92 242.28 242.64 243.00 243.36 243.72 244.08 244.44 244.80 245.16 245.52 245.88 246.24 246.60 246.96 247.32 247.68 248.04 248.40 248.76 249.12 249.48 249.84 250.20 250.56 250.92 251.28 251.64 252.00 252.36 252.72 253.08 253.44 253.80 254.16 254.52 254.88 255.24 255.60 255.96 256.32 256.68 257.04 257.40 257.76 258.12 258.48 258.84 259.20 259.56 259.92 260.28 260.64 261.00 261.36 261.72 262.08 262.44 262.80 263.16 263.52 263.88 264.24 264.60 264.96 265.32 265.68 266.04 266.40 266.76 267.12 267.48 267.84 268.20 268.56 268.92 269.28 269.64 270.00 270.36 270.72 271.08 271.44 271.80 272.16 272.52 272.88 273.24 273.60 273.96 274.32 274.68 275.04 275.40 275.76 276.12 276.48 276.84 277.20 277.56 277.92 278.28 278.64 279.00 279.36 279.72 280.08 280.44 280.80 281.16 281.52 281.88 282.24 282.60 282.96 283.32 283.68 284.04 284.40 284.76 285.12 285.48 285.84 286.20 286.56 286.92 287.28 287.64 288.00 288.36 288.72 289.08 289.44 289.80 290.16 290.52 290.88 291.24 291.60 291.96 292.32 292.68 293.04 293.40 293.76 294.12 294.48 294.84 295.20 295.56 295.92 296.28 296.64 297.00 297.36 297.72 298.08 298.44 298.80 299.16 299.52 299.88 300.24 300.60 300.96 301.32 301.68 302.04 302.40 302.76 303.12 303.48 303.84 304.20 304.56 304.92 305.28 305.64 306.00 306.36 306.72 307.08 307.44 307.80 308.16 308.52 308.88 309.24 309.60 310.00 310.40 310.80 311.20 311.60 312.00 312.40 312.80 313.20 313.60 314.00 314.40 314.80 315.20 315.60 316.00 316.40 316.80 317.20 317.60 318.00 318.40 318.80 319.20 319.60 320.00 320.40 320.80 321.20 321.60 322.00 322.40 322.80 323.20 323.60 324.00 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553.20 553.60 554.00 554.40 554.80 555.20 555.60 556.00 556.40 556.80 557.20 557.60 558.00 558.40 558.80 559.20 559.60 560.00 560.40 560.80 561.20 561.60 562.00 562.40 562.80 563.20 563.60 564.00 564.40 564.80 565.20 565.60 566.00 566.40 566.80 567.20 567.60 568.00 568.40 568.80 569.20 569.60 570.00 570.40 570.80 571.20 571.60 572.00 572.40 572.80 573.20 573.60 574.00 574.40 574.80 575.20 575.60 576.00 576.40 576.80 577.20 577.60 578.00 578.40 578.80 579.20 579.60 580.00 580.40 580.80 581.20 581.60 582.00 582.40 582.80 583.20 583.60 584.00 584.40 584.80 585.20 585.60 586.00 586.40 586.80 587.20 587.60 588.00 588.40 588.80 589.20 589.60 590.00 590.40 590.80 591.20 591.60 592.00 592.40 592.80 593.20 593.60 594.00 594.40 594.80 595.20 595.60 596.00 596.40 596.80 597.20 597.60 598.00 598.40 598.80 599.20 599.60 600.00 600.40 600.80 601.20 601.60 602.00 602.40 602.80 603.20 603.60 604.00 604.40 604.80 605.20 605.60 606.00 606.40 606.80 607.20 607.60 608.00 608.40 608.80 609.20 609.60 610.00 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667.60 668.00 668.40 668.80 669.20 669.60 670.00 670.40 670.80 671.20 671.60 672.00 672.40 672.80 673.20 673.60 674.00 674.40 674.80

RUN#8
DEGREE#3
SEGMENT#10

AFD OUTPUT

0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
0	0	0	0	0	0	4	4
0	1	0	0	0	1	2	27
0	1	0	0	1	1	4	47

SUMAP= 2.091 SUMNAP= 0.054

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#8
DEGREE#3
SEGMENT#11

AFD OUTPUT

0	0	0	0	0	0	0	0
0	0	0	0	0	0	6	2
0	0	0	0	0	0	0	3
0	0	0	0	0	0	2	4
1	1	0	0	0	2	0	11
0	0	1	0	0	0	0	26

SUMAP= 2.045 SUMNAP= 0.037

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.098
0.000	0.000	0.000	0.000	0.000	0.000	0.400	0.054
0.000	0.000	0.000	0.000	0.000	1.200	0.000	0.061
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.059

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#8
DEGREE#3
SEGMENT#12

AFD OUTPUT

0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
1	0	0	0	0	0	0	6
0	1	0	0	0	0	0	10

SUMAP= 0.058 SUMNAP= 0.000

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

RUN#8
DEGREE#3
SEGMENT#13

AFD OUTPUT

0	0	0	0	0	0	0	1
0	0	1	0	0	0	0	3
0	2	0	0	0	0	0	17
1	0	0	1	0	0	0	9
0	0	1	0	0	0	0	30
0	1	0	1	0	0	2	45

SUMAP= 3.755 SUMNAP= 0.227

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.191
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.237
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.553
0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.121

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.166
0.000	0.000	0.000	0.316	0.000	0.160	0.000	0.162

RUN 8, DEGREE 4

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

FACTORS ARE

0.000082 0.000330 0.001325 0.005631 0.024600 0.121500 0.145900 0.036470

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 16.00

CENTER AMPLITUDES ARE

0.044 0.068 0.106 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00682	0.02746	0.11024	0.46851	2.04678	10.10910	12.14340	3.03440
0.00281	0.01132	0.04543	0.19309	0.84354	4.16625	5.00465	1.25056
0.00116	0.00466	0.01872	0.07953	0.34765	1.71703	2.06256	0.51539
0.00048	0.00192	0.00772	0.33280	0.14328	0.79764	0.85904	0.21241
0.00020	0.00079	0.00318	0.01352	0.05925	0.29164	0.35933	0.08754
0.00008	0.00033	0.00131	0.00557	0.02434	0.12019	0.14438	0.03608

NORMALIZED ABSORBED POWER MATRIX

0.00515	0.01035	0.02079	0.04417	0.09649	0.23827	0.14311	0.01788
0.00212	0.00427	0.00857	0.01820	0.03976	0.09820	0.05898	0.00737
0.00087	0.00176	0.00353	0.00750	0.01639	0.04047	0.02431	0.00304
0.00036	0.00072	0.00146	0.00309	0.00675	0.01668	0.01002	0.00125
0.00015	0.00030	0.00060	0.00127	0.00273	0.00687	0.00413	0.00052
0.00006	0.00012	0.00025	0.00053	0.00115	0.00283	0.00170	0.00021

RUN#4								
DEGREE=4								
SEGMENT=13								
AFD OUTPUT								
0	0	0	0	0	0	0	0	4
0	0	1	0	0	0	0	0	32
0	1	0	0	0	0	0	0	77
0	0	0	1	4	0	0	0	49
2	0	0	0	4	0	25	24	24
0	0	1	0	7	7	39	13	13
SUMAP=121.463				SUMNAP= 0.869				
ABSORBED POWER AFD								
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.114
0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	40.018
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	39.585
0.000	0.000	0.000	0.000	0.000	0.573	0.000	0.000	19.408
0.000	0.000	0.000	0.000	0.236	0.000	0.000	0.000	8.758
0.000	0.000	0.000	0.000	0.170	0.861	5.643	0.459	0.459
NORMALIZED ABSORBED POWER AFD								
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.072
0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.236
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.234
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.061
0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.103	0.014
0.000	0.000	0.000	0.000	0.000	0.008	0.920	0.066	0.003

RUN#4								
DEGREE=4								
SEGMENT=16								
AFD OUTPUT								
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	8
0	0	0	0	0	0	0	0	49
0	0	0	0	0	0	0	0	76
0	0	0	0	5	0	26	44	44
0	0	0	0	8	4	40	19	19
SUMAP= 73.493				SUMNAP= 0.559				
ABSORBED POWER AFD								
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.004
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	25.254
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.700
0.000	0.000	0.000	0.000	0.000	0.295	0.000	0.108	3.852
0.000	0.000	0.000	0.000	0.195	0.481	5.775	0.685	0.685
NORMALIZED ABSORBED POWER AFD								
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.059
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.169
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.107	0.023
0.000	0.000	0.000	0.000	0.000	0.009	0.911	0.068	0.004

RUN#4								
DEGREE=4								
SEGMENT=15								
AFD OUTPUT								
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	5
0	1	0	0	0	0	0	0	58
0	0	0	0	0	2	0	0	72
1	0	0	0	0	5	3	16	52
0	0	1	2	6	6	31	16	16
SUMAP= 68.990				SUMNAP= 0.527				
ABSORBED POWER AFD								
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.253
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	29.893
0.000	0.000	0.000	0.000	0.000	0.237	0.000	0.000	15.293
0.000	0.000	0.000	0.000	0.000	0.245	0.875	5.665	4.562
0.000	0.000	0.001	0.011	0.146	0.721	4.476	0.577	0.577
NORMALIZED ABSORBED POWER AFD								
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.176
0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.090
0.000	0.000	0.000	0.000	0.000	0.014	0.521	0.066	0.027
0.000	0.000	0.000	0.001	0.007	0.017	0.067	0.007	0.007

RUN#4								
DEGREE=4								
SEGMENT=16								
AFD OUTPUT								
0	0	0	1	0	1	1	1	1
0	1	0	0	0	1	1	20	20
0	0	0	0	0	1	3	64	64
0	1	0	0	1	1	3	72	72
1	0	0	1	3	7	15	32	32
0	0	1	2	5	5	20	14	14
SUMAP=134.244				SUMNAP= 1.446				
ABSORBED POWER AFD								
0.000	0.000	0.000	0.469	0.000	0.000	10.109	12.143	3.034
0.000	0.000	0.000	0.143	0.000	0.000	4.166	5.905	25.011
0.000	0.005	0.000	0.000	0.695	1.717	6.188	31.439	31.439
0.000	0.002	0.000	0.000	0.143	0.708	2.560	15.293	15.293
0.000	0.000	0.000	0.014	0.177	2.061	5.265	2.061	2.061
0.000	0.000	0.001	0.011	0.122	0.601	3.764	0.505	0.505
NORMALIZED ABSORBED POWER AFD								
0.000	0.000	0.000	0.544	0.000	0.238	0.163	0.018	0.018
0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.000	0.167
0.000	0.002	0.000	0.000	0.000	0.033	0.060	0.073	0.185
0.000	0.001	0.000	0.000	0.000	0.007	0.017	0.000	0.090
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017
0.000	0.000	0.000	0.001	0.006	0.014	0.044	0.003	0.003

RUN#4								
DEGREE=4								
SEGMENT=17								
AFD OUTPUT								
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	4
0	0	0	0	1	1	0	21	21
0	0	0	0	3	0	3	31	31
0	0	0	2	1	8	9	71	71
0	0	0	0	5	11	16	43	43
SUMAP= 44.547				SUMNAP= 0.447				
ABSORBED POWER AFD								
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.002
0.000	0.000	0.000	0.000	0.000	0.000	1.717	0.000	10.093
0.000	0.000	0.000	0.000	0.430	0.000	2.560	4.585	4.585
0.000	0.000	0.000	0.027	0.059	2.313	3.163	6.215	6.215
0.000	0.000	0.000	0.000	0.122	1.322	2.310	1.551	1.551
NORMALIZED ABSORBED POWER AFD								
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.016	0.040	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.003	0.003	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

REPRODUCIBILITY OF THE
 ORIGINAL PAGE IS POOR

RUN 8, DEGREE 5

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

K FACTORS ARE

0.015740 0.064076 0.314880 0.705920 0.819200 0.120250 0.022900 0.003500

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.06 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 15.00

CENTER AMPLITUDES ARE

0.044 0.060 0.100 0.105 0.257 0.421

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 109.705

ABSORBED POWER MATRIX

1.30961	5.33070	20.19281	65.39953	90.51971	10.50432	1.70534	0.29121
0.53973	2.19097	11.79720	26.53973	41.23267	4.32913	0.78524	0.12600
0.22244	0.96544	4.44267	11.11060	16.75382	1.78410	0.32302	0.04940
0.09167	0.37310	1.63392	4.07737	3.00039	0.73530	0.13337	0.02020
0.03778	0.15379	0.75561	1.86088	1.43627	0.30304	0.05497	0.00840
0.01557	0.06338	0.31142	0.77708	0.51254	0.12462	0.02205	0.00340

NORMALIZED ABSORBED POWER MATRIX

0.98777	2.01530	4.94609	6.16503	0.42003	0.24759	0.02245	0.00172
0.40709	0.82053	2.03590	2.84281	1.03181	0.10204	0.00925	0.00071
0.16777	0.24140	0.83900	1.06714	0.81201	0.04205	0.00301	0.00029
0.06914	0.14070	0.36561	0.43150	0.70000	0.01733	0.00107	0.00012
0.02850	0.11900	0.14252	0.17700	0.07000	0.00714	0.00095	0.00005
0.01174	0.02390	0.05674	0.07330	0.02000	0.00294	0.00027	0.00002

RUN#8

DEGREE#5

SEGMENT# 1

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	2
1	0	0	0	0	0	0	20
0	0	0	0	0	0	4	66
0	1	0	0	0	15	0	61

SUMAP# 1.987

SUMNAP# 0.107

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.408
0.000	0.000	0.000	0.000	0.000	0.000	0.220	0.554
0.000	0.063	0.000	0.000	0.000	0.000	0.360	0.211

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003
0.000	0.024	0.000	0.000	0.000	0.000	0.004	0.001

RUN#8

DEGREE#5

SEGMENT# 2

AFD OUTPUT							
0	0	2	0	0	0	0	0
0	2	1	1	0	0	0	0
1	0	0	0	0	0	0	6
1	2	3	1	0	0	0	72
1	0	0	2	1	0	0	81
0	1	2	2	1	1	34	25

SUMAP#117.753

SUMNAP# 10.995

ABSORBED POWER AFD

0.000	0.000	52.390	0.000	0.000	0.000	0.000	0.000
0.000	4.394	10.797	26.949	0.000	0.000	0.000	0.000
0.222	0.000	0.000	0.000	0.000	0.000	0.000	0.297

0.092	0.746	5.562	4.577	0.000	0.000	0.000	1.408
0.030	0.000	0.000	3.773	1.408	0.000	0.495	0.000
0.000	0.000	0.000	1.455	0.000	0.129	0.770	0.000

NORMALIZED ABSORBED POWER AFD

0.000	0.000	9.880	0.000	0.000	0.000	0.000	0.000
0.000	1.657	2.036	2.541	0.000	0.000	0.000	0.000
0.168	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.069	0.281	1.037	0.432	0.000	0.000	0.000	0.409
0.028	0.000	0.000	0.356	0.070	0.000	0.066	0.004
0.000	0.024	0.117	0.147	0.624	0.003	0.009	0.001

RUN#8

DEGREE#5

SEGMENT# 3

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	1
0	0	0	0	0	0	0	5
1	0	0	0	0	0	0	42
2	0	3	0	0	0	5	69
0	2	0	0	0	0	25	45

SUMAP# 7.613

SUMNAP# 1.452

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	2.197	0.000	0.000	0.000	0.000	0.000	0.129
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.447
0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.076	0.000	2.267	0.000	0.000	0.000	0.330	0.580
0.000	0.127	0.000	0.000	0.000	0.000	0.560	0.150

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.829	0.000	0.000	0.000	0.000	0.000	0.001
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.005
0.057	0.000	0.428	0.000	0.000	0.000	0.004	0.003
0.000	0.048	0.000	0.000	0.000	0.000	0.007	0.001

RUN#8

DEGREE#5

SEGMENT# 4

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	50
0	0	2	1	0	0	5	66

SUMAP# 2.183

SUMNAP# 0.196

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.420
0.000	0.000	0.623	0.777	0.000	0.000	0.113	0.229

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.623	0.777	0.000	0.000	0.113	0.229

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
0.000	0.000	0.117	0.147	0.000	0.000	0.001	0.001

RUN#8
DEGREE#5
SEGMENT# 5

AFD OUTPUT							
0	0	2	1	0	0	0	0
0	1	2	0	0	0	0	0
0	3	0	0	0	0	0	0
1	1	1	1	0	2	2	15
1	0	1	0	1	0	4	70
0	0	1	2	0	2	10	51

SUMAP=158.556 SUMNAP= 23.456

ABSORBED POWER AFD

0.000	0.000	52.398	65.391	0.000	0.000	0.000	0.000
0.000	2.197	21.595	0.000	0.000	0.000	0.000	0.000
0.000	2.716	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.373	1.834	4.577	0.000	1.471	0.000	0.306
0.038	0.000	0.756	0.000	1.486	0.000	0.220	0.588
0.000	0.000	0.311	1.555	0.000	0.250	0.227	0.177

NORMALIZED ABSORBED POWER AFD

0.000	0.000	9.880	6.145	0.000	0.000	0.000	0.000
0.000	0.829	4.072	0.000	0.000	0.000	0.000	0.000
0.000	1.024	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.141	0.340	0.432	0.000	0.335	0.000	0.002
0.028	0.000	0.143	0.000	0.000	0.000	0.000	0.003
0.000	0.000	0.059	0.147	0.000	0.000	0.003	0.001

RUN#9
DEGREE#5
SEGMENT# 6

AFD OUTPUT							
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	0
0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	10
0	1	1	0	0	0	5	59

SUMAP= 2.277 SUMNAP= 0.736

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.222	0.905	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.373	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004

NORMALIZED ABSORBED POWER AFD

0.000	0.063	0.311	0.000	0.000	0.000	0.113	0.204
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.108	0.341	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.141	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.024	0.059	0.000	0.000	0.000	0.001	0.001

RUN#8
DEGREE#5
SEGMENT# 7

AFD OUTPUT							
0	0	2	0	0	0	0	0
0	1	1	0	0	0	0	0
0	3	0	0	0	0	0	0
1	0	2	1	0	0	0	21
1	1	1	2	0	1	3	62
0	2	0	4	0	3	20	59

SUMAP= 86.851 SUMNAP= 15.917

ABSORBED POWER AFD

0.000	0.000	52.398	0.000	0.000	0.000	0.000	0.000
0.000	2.197	10.797	0.000	0.000	0.000	0.000	0.000
0.000	2.716	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.000	3.668	4.577	0.000	0.000	0.000	0.428
0.038	0.154	0.756	3.773	0.000	0.303	0.165	0.521
0.000	0.127	0.000	3.110	0.000	0.375	0.453	0.204

NORMALIZED ABSORBED POWER AFD

0.000	0.000	9.880	0.000	0.000	0.000	0.000	0.000
0.000	0.829	2.036	0.000	0.000	0.000	0.000	0.000
0.000	1.024	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.000	0.442	0.432	0.000	0.000	0.000	0.003
0.028	0.058	0.143	0.356	0.000	0.007	0.002	0.003
0.000	0.048	0.000	0.243	0.000	0.009	0.005	0.001

RUN#9
DEGREE#5
SEGMENT# 8

AFD OUTPUT							
0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	0
0	0	1	0	0	0	0	3
2	0	1	0	0	0	0	63

SUMAP= 2.712 SUMNAP= 0.776

ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.905	0.000	0.000	0.000	0.000	0.000	0.000
0.092	0.373	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.756	0.000	0.000	0.000	0.000	0.000
0.031	0.000	0.311	0.000	0.000	0.000	0.000	0.028

NORMALIZED ABSORBED POWER AFD

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.341	0.000	0.000	0.000	0.000	0.000	0.000
0.069	0.141	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.000
0.023	0.000	0.059	0.000	0.000	0.000	0.000	0.001

RUN 8, DEGREE 6

(Note: Degrees 1, 2, 3 are degrees 1, 2, 3 for front seat;
degrees 3, 4, 5 are degrees 1, 2, 3 for center seat.)

Frequency and Amplitude Bands are set as follows:

FACTORS ARE

0.000000 0.000000 0.000000 0.340000 0.600000 0.260000 0.035000 0.002000

AMPLITUDE LEVELS ARE SET AT

0.03 0.05 0.08 0.13 0.21 0.32 0.50

FREQUENCY LEVELS ARE SET AT

0.06 0.12 0.25 0.50 1.00 2.00 4.00 8.00 15.00

CENTER AMPLITUDES ARE

0.044 0.068 0.100 0.165 0.257 0.401

CENTER FREQUENCIES ARE

0.088 0.177 0.354 0.707 1.414 2.828 5.657 11.314

MAXIMUM POSSIBLE COUNTS PER SEGMENT

1.326 2.652 5.303 10.607 21.213 42.426 84.853 169.705

ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	28.28386	49.92151	21.63266	2.91209	0.19137
0.00000	0.00000	0.00000	11.65365	20.57410	8.91544	1.20016	0.07887
0.00000	0.00000	0.00000	4.82427	8.47918	3.67431	0.49462	0.03250
0.00000	0.00000	0.00000	1.98922	3.49451	1.51429	0.20385	0.01340
0.00000	0.00000	0.00000	0.81611	1.46619	0.62408	0.08401	0.00552
0.00000	0.00000	0.00000	0.33634	0.59354	0.25720	0.03462	0.00226

NORMALIZED ABSORBED POWER MATRIX

0.00000	0.00000	0.00000	2.66711	2.55332	0.50989	0.03432	0.00113
0.00000	0.00000	0.00000	1.09919	0.96987	0.21014	0.01414	0.00046
0.00000	0.00000	0.00000	0.45301	0.39971	0.08660	0.00583	0.00019
0.00000	0.00000	0.00000	0.18570	0.16473	0.03569	0.00240	0.00008
0.00000	0.00000	0.00000	0.07594	0.06759	0.01471	0.00099	0.00003
0.00000	0.00000	0.00000	0.03171	0.02796	0.00606	0.00041	0.00001

APPENDIX F

Absorbed Power (AP) Bus Correlation Data

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Table F.1. Bus Ride Data for Run 2, Front

Segment	Vertical	Lateral	Fore-Aft	Summation	A-1	A-2
1	0.385	0.231	0.018	0.634	3	3
2	0.379	20.188	0.019	(20.586) .398	2	2
3	0.490	0.206	0.027	0.723	2	2
4	0.005	0.002	0.001	0.008	2	1
5	0.291	1.722	0.014	2.027	3	4
6	0.033	0.352	0.000	0.385	2	2
7	0.418	16.940	0.030	(17.388) .448	3	4
8	0.041	0.084	0.000	0.125	2	2
9	0.624	2.603	8.206	(11.433) 3.22	3	3
10	0.269	1.139	0.021	1.429	3	3
11	0.163	0.125	0.001	0.262	2	3
12	0.061	1.986	0.008	2.055	2	1
13	0.341	0.106	0.063	0.510	2	2
14	0.380	0.170	0.037	0.515	2	3
15	0.627	1.149	2.539	4.315	3	3
16	0.158	10.375	0.016	(10.549) .174	2	2
17	0.208	21.367	0.001	(21.576) .209	2	3

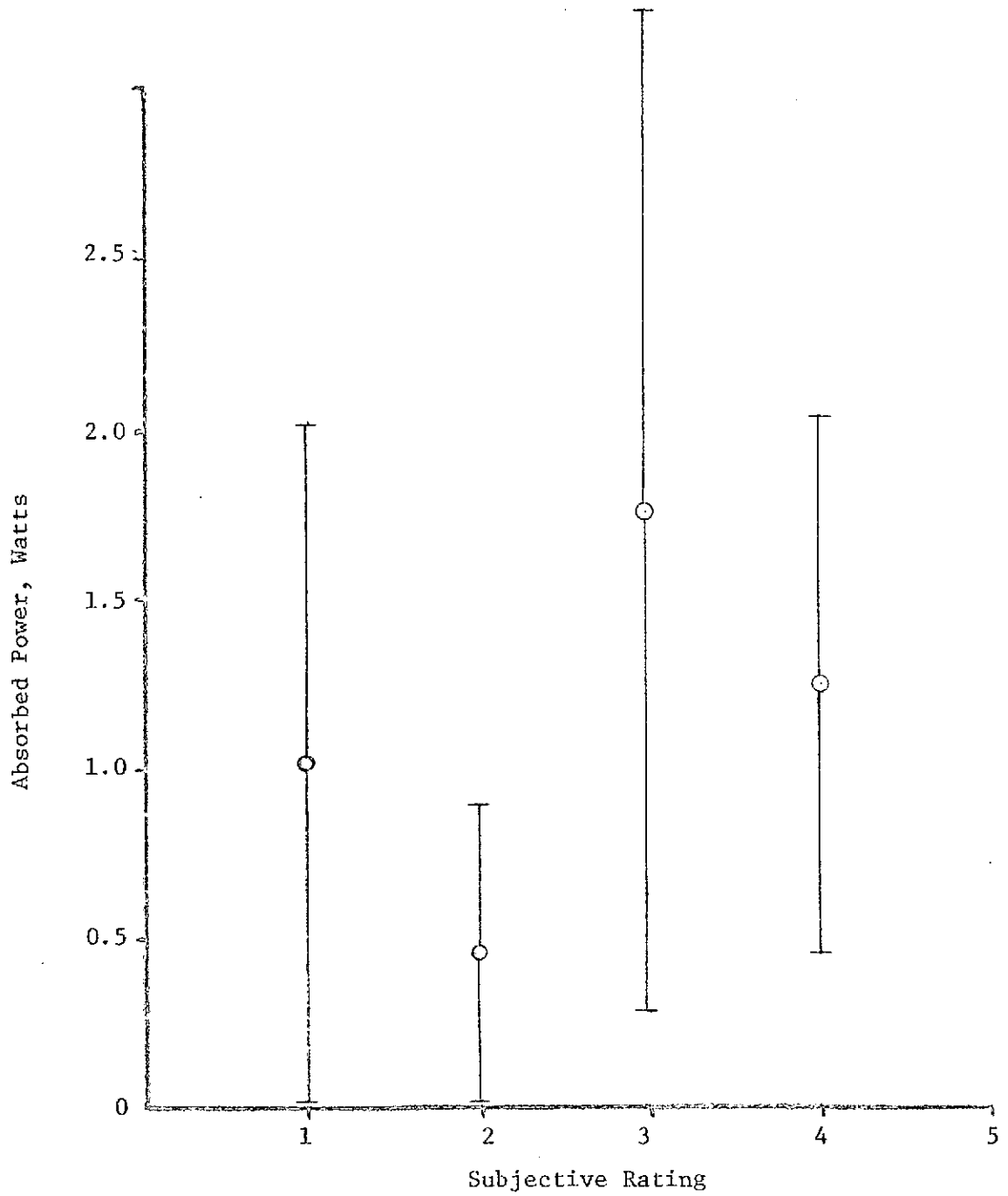


Figure F.1. Objective vs. Subjective Ride Rating for Run 2, Front

Table F.2. Bus Ride Data for Run 2, Center

Segment	Vertical	Lateral	Fore-Aft	Summation	C-1	C-2
1	0.139	0.049	0.006	0.194	3	2
2	0.426	0.771	0.004	1.201	1	2
3	0.737	0.809	0.006	1.552	2	1
4	0.032	0.104	0.000	0.136	3	2
5	0.345	0.171	0.005	0.521	4	4
6	0.013	3.265	0.000	3.278	1	4
7	0.436	0.265	0.008	0.609	3	3
8	0.302	3.074	0.000	3.376	2	2
9	1.177	(16.398)	2.139	(19.714) 3.316	2	3
10	0.142	0.255	0.010	0.307	3	2
11	0.184	1.149	0.002	1.335	2	2
12	0.045	0.260	0.000	0.305	1	2
13	0.374	0.196	0.003	0.573	2	2
14	1.071	(3.730)	0.013	(4.814) 1.084	1	1
15	0.446	(14.862)	1.170	(16.478) 1616	2	2
16	0.190	0.120	0.000	0.310	1	2
17	0.180	1.169	(7.597)	(8.946) 1.349	1	1

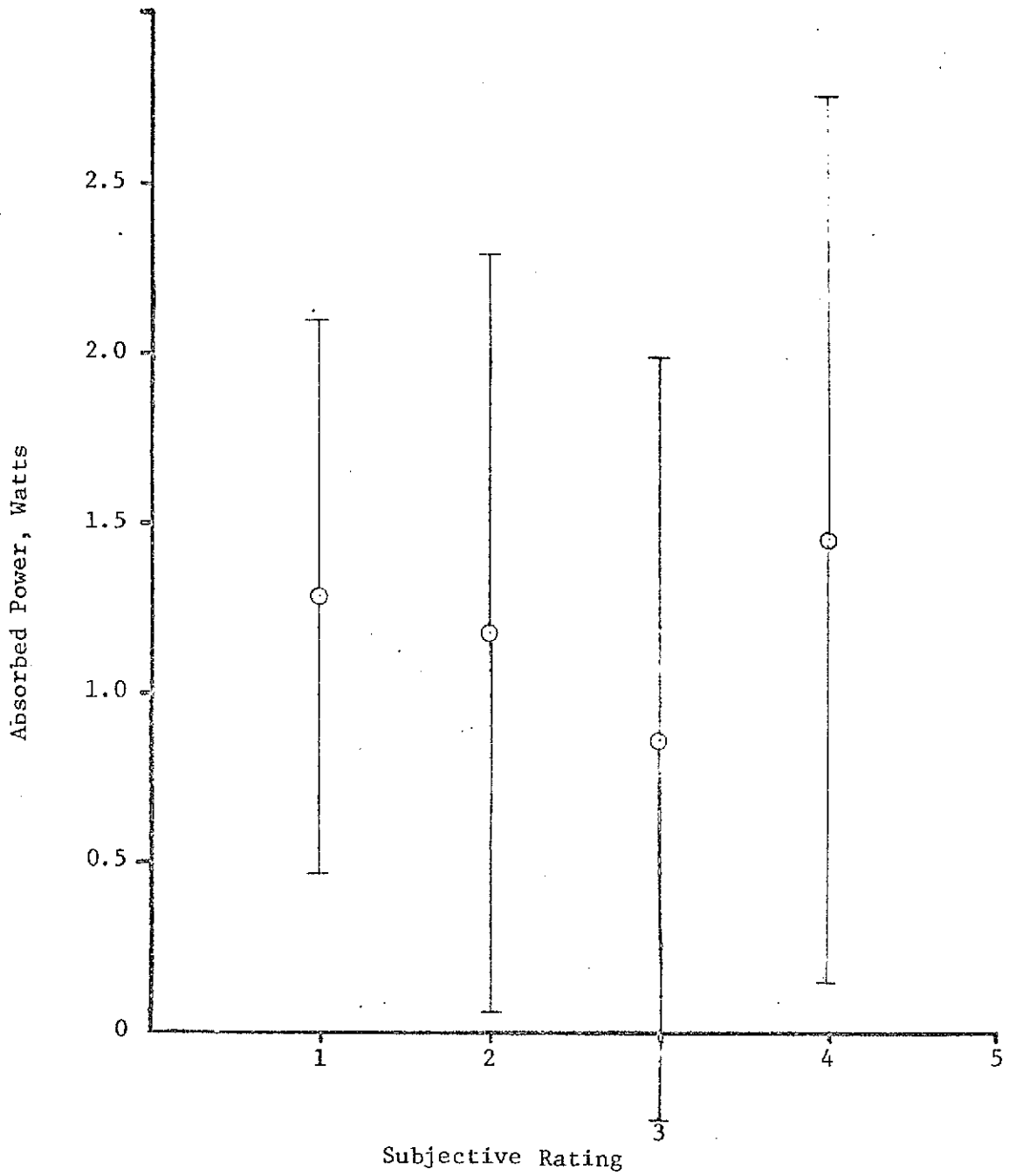


Figure F.2. Objective vs. Subjective Ride Rating for Run 2, Center

Table F.3. Bus Ride Data for Run 6, Front

Segment	Vertical	Lateral	Fore-Aft	Summation	A-1
1	0.274	0.547	0.190	1.011	3
2	0.208	(2.713)	(2.928)	(5.849) .208	2
3	0.311	0.016	0.010	0.337	2
4	0.018	0.029	0.001	0.048	1
5	0.254	0.076	0.010	0.340	4
6	0.015	0.070	0.016	0.101	2
7	0.292	0.058	0.014	0.364	3
8	0.072	0.254	0.002	0.328	2
9	0.179	0.081	0.009	0.269	5
10	0.182	0.288	0.033	0.503	3
11	0.152	0.029	0.002	0.183	2
12	0.038	0.488	0.010	0.536	2
13	0.147	0.039	0.011	0.197	1
14	0.094	0.037	0.004	0.135	1
15	0.124	0.040	0.004	0.168	2
16	0.138	0.010	0.003	0.151	2
17	0.213	0.120	0.005	0.338	2

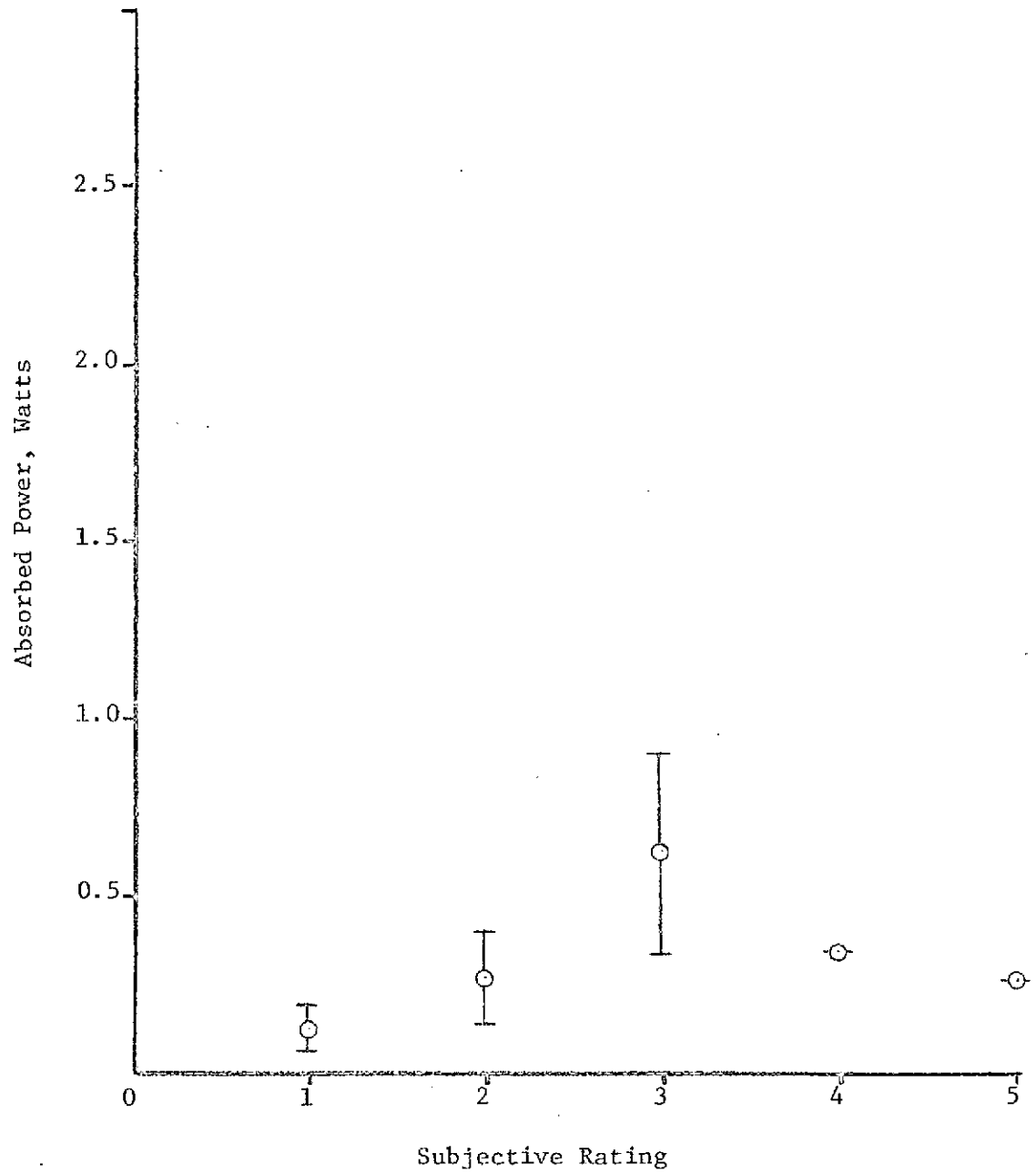


Figure F.3. Objective vs. Subjective Ride Rating for Run 6, Front

Table F.4. Bus Ride Data for Run 6, Center

Segment	Vertical	Lateral	Fore-Aft	Summation	C-1
1	0.155	0.046	0.001	0.202	2
2	0.193	0.588	0.002	0.783	1
3	0.213	0.209	0.003	0.425	1
4	0.021	0.003	0.032	0.056	2
5	0.122	0.058	(13.220)	(13.400) 0.180	2
6	0.009	0.072	0.000	0.081	1
7	0.213	0.566	0.003	0.782	2
8	0.018	0.056	0.000	0.074	1
9	0.187	2.557	0.065	2.809	3
10	0.106	0.169	0.022	0.297	2
11	0.030	0.004	0.000	0.034	2
12	0.034	0.073	0.007	0.114	1
13	0.117	0.095	0.001	0.213	1
14	0.072	0.018	0.000	0.090	2
15	0.129	1.185	0.001	1.315	1
16	0.081	0.010	0.001	0.092	2
17	0.253	0.132	0.002	0.387	1

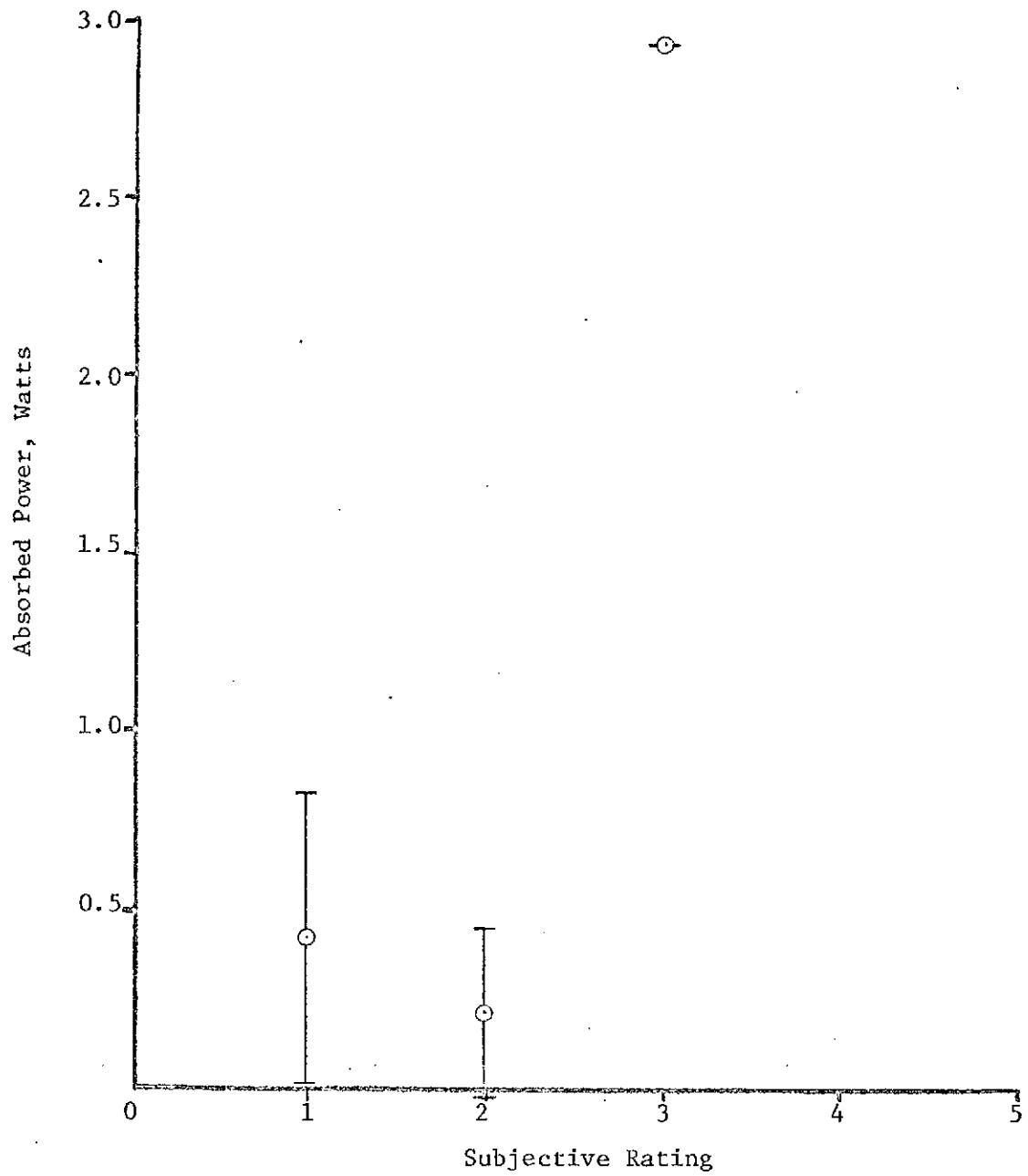


Figure F.4. Objective vs. Subjective Ride Rating for Run 6, Center

Table F.5. Bus Ride Data for Run 7, Front

Segment	Vertical	Lateral	Fore-Aft	Summation	A-1
1	0.022	0.071	0.001	0.094	3
2	0.025	0.002	0.000	0.027	2
3	0.129	0.502	0.004	0.635	4
4	0.005	0.069	0.000	0.074	2
5	0.143	1.060	0.084	1.287	5
6	0.002	0.012	0.016	0.030	2
7	1.165	9.392	8.761	(19.318) 1.165	4
8	0.027	0.071	0.001	0.099	2
9	0.148	(12.482)	0.005	(12.635) 0.153	6
10	0.162	0.189	0.003	0.354	3
11	0.006	0.030	0.000	0.036	4
12	0.019	0.070	0.001	0.090	1
13	0.128	0.349	0.188	0.665	2
14	0.812	3.041	2.534	(6.387) .812	3
15	0.043	(5.382)	0.002	(5.427) .045	2
16	0.028	0.374	0.001	0.403	2
17	0.184	8.526	0.003	(8.713) 0.187	6

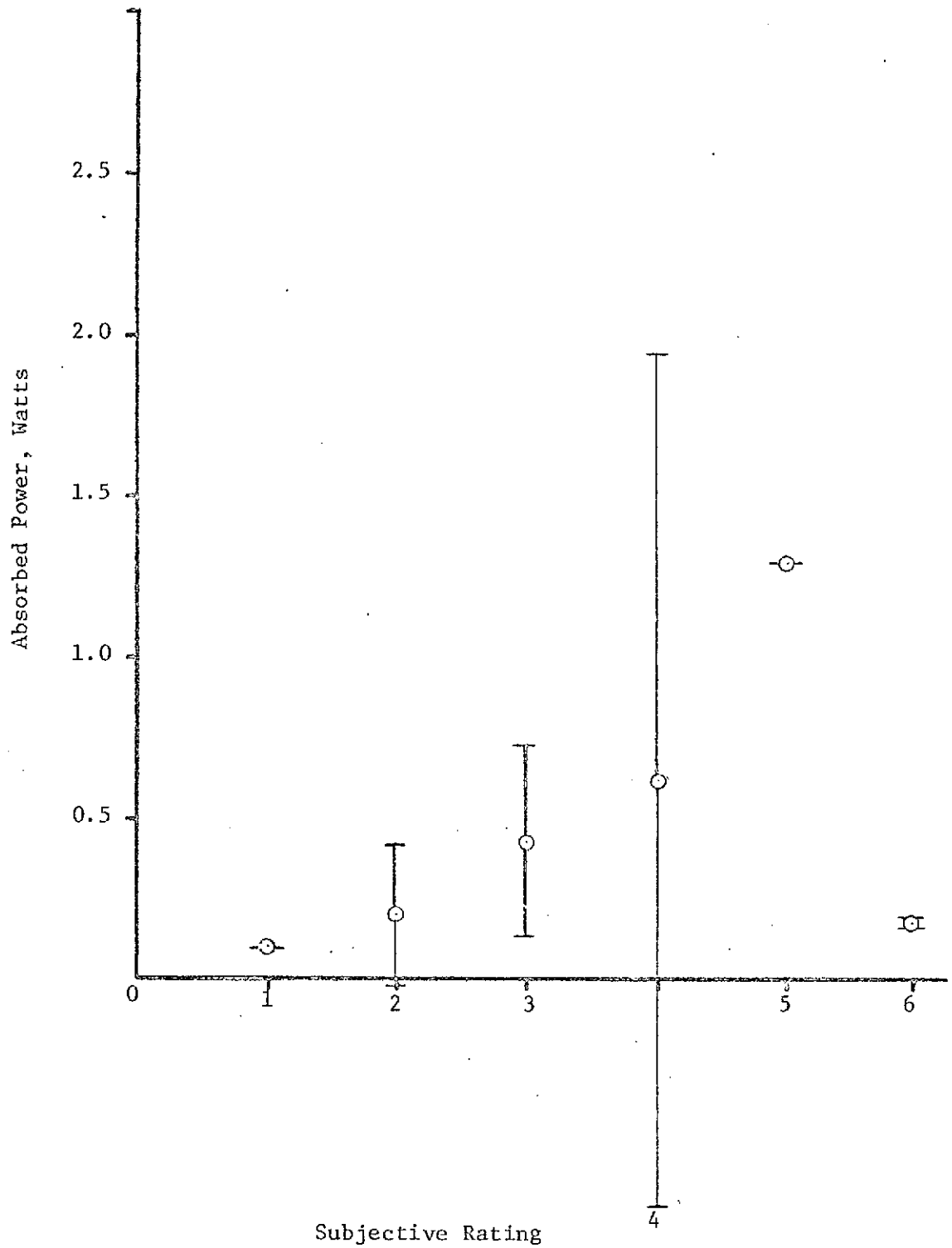


Figure F.5. Objective vs. Subjective Ride Rating for Run 7, Front

Table F.6. Bus Ride Data for Run 7, Center

Segment	Vertical	Lateral	Fore-Aft	Summation	C-1
1	0.043	0.119	0.001	0.163	4
2	0.030	0.058	0.000	0.088	2
3	0.156	0.967	0.001	1.124	2
4	0.006	0.256	0.000	0.262	2
5	0.174	1.802	0.003	1.979	4
6	0.011	0.076	0.016	0.103	1
7	1.088	(13.135)	(11.258)	(25.481) 1.088	4
8	0.032	0.601	10.701	(11.334) .633	1
9	0.141	(14.724)	(11.640)	(26.505) .141	6
10	0.135	0.594	0.002	0.731	3
11	0.008	0.069	0.001	0.078	5
12	0.021	0.359	0.018	0.398	1
13	0.186	2.556	0.032	2.774	3
14	0.884	4.306	0.187	(5.377) 1.071	2
15	0.045	10.169	0.188	(10.304) .233	2
16	0.046	0.466	0.000	0.512	1
17	0.201	0.147	0.891	1.219	5

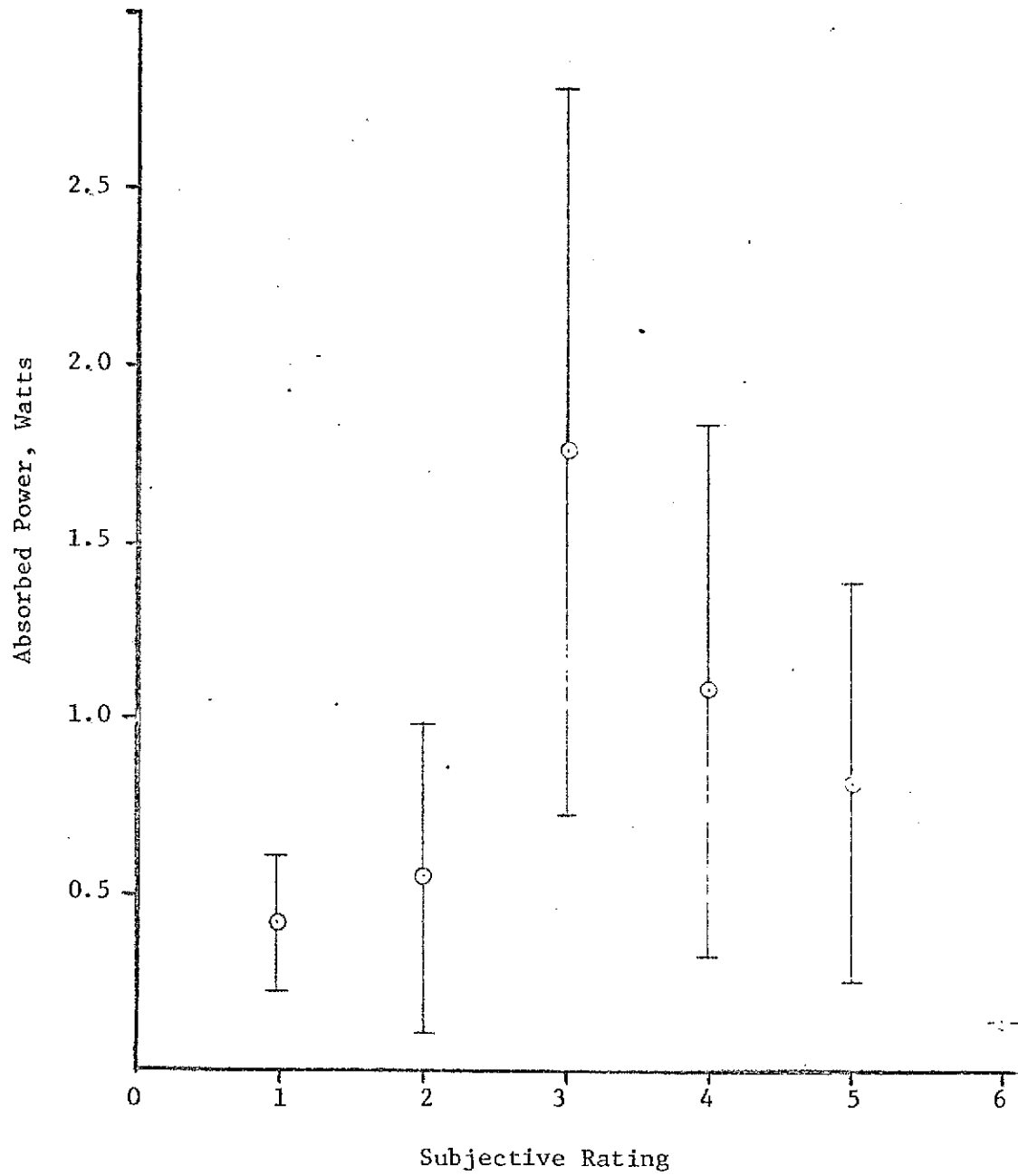


Figure F.6. Objective vs. Subjective Ride Rating for Run 7, Center

Table F.7. Bus Ride Data for Run 8, Front*

Segment	Vertical	Lateral	Fore-Aft	Summation
1	0.166	15.083	6.101	21.350
2	0.172	2.519	0.249	2.940
3	1.095	16.611	6.752	25.458
4	0.048	0.984	0.002	1.034
5	0.154	3.190	0.197	3.641
6	0.008	0.094	0.009	0.111
7	0.170	0.666	0.012	0.848
8	0.003	0.070	0.000	0.073
9	0.127	0.566	0.003	0.696
10	0.246	0.107	0.054	0.407
11	0.143	0.108	0.037	0.288
12	0.025	0.001	0.000	0.026
13	0.152	3.029	0.227	3.408
14	0.076	0.009	0.003	0.088
15	0.076	0.557	0.002	0.635
16	0.969	16.090	0.001	17.060
17	0.108	0.004	0.021	0.133

*No subjective data available for correlation.

Table F.8. Bus Ride Data for Run 8, Center

Segment	Vertical	Lateral	Fore-Aft	Summation	C-1	C-2
1	0.765	0.107	0.029	0.901	4	5
2	1.404	18.905	10.362	30.671	4	5
3	1.951	1.452	0.280	3.673	3	4
4	0.238	0.196	0.007	0.441	3	3
5	0.791	23.456	14.000	38.247	5	4
6	0.120	0.736	0.011	0.967	2	3
7	0.758	15.917	6.770	22.445	4	4
8	0.036	0.778	0.000	0.814	2	3
9	0.592	4.237	6.102	10.931	5	3
10	0.757	0.845	0.163	1.765	5	3
11	0.321	0.967	0.009	1.297	3	2
12	0.093	0.347	0.021	0.461	3	4
13	0.869	0.084	0.064	1.017	4	4
14	0.559	0.070	0.040	0.669	3	3
15	0.527	4.870	6.874	12.371	3	3
16	1.466	0.611	0.054	2.131	4	6
17	0.447	0.006	0.029	0.482	6	4

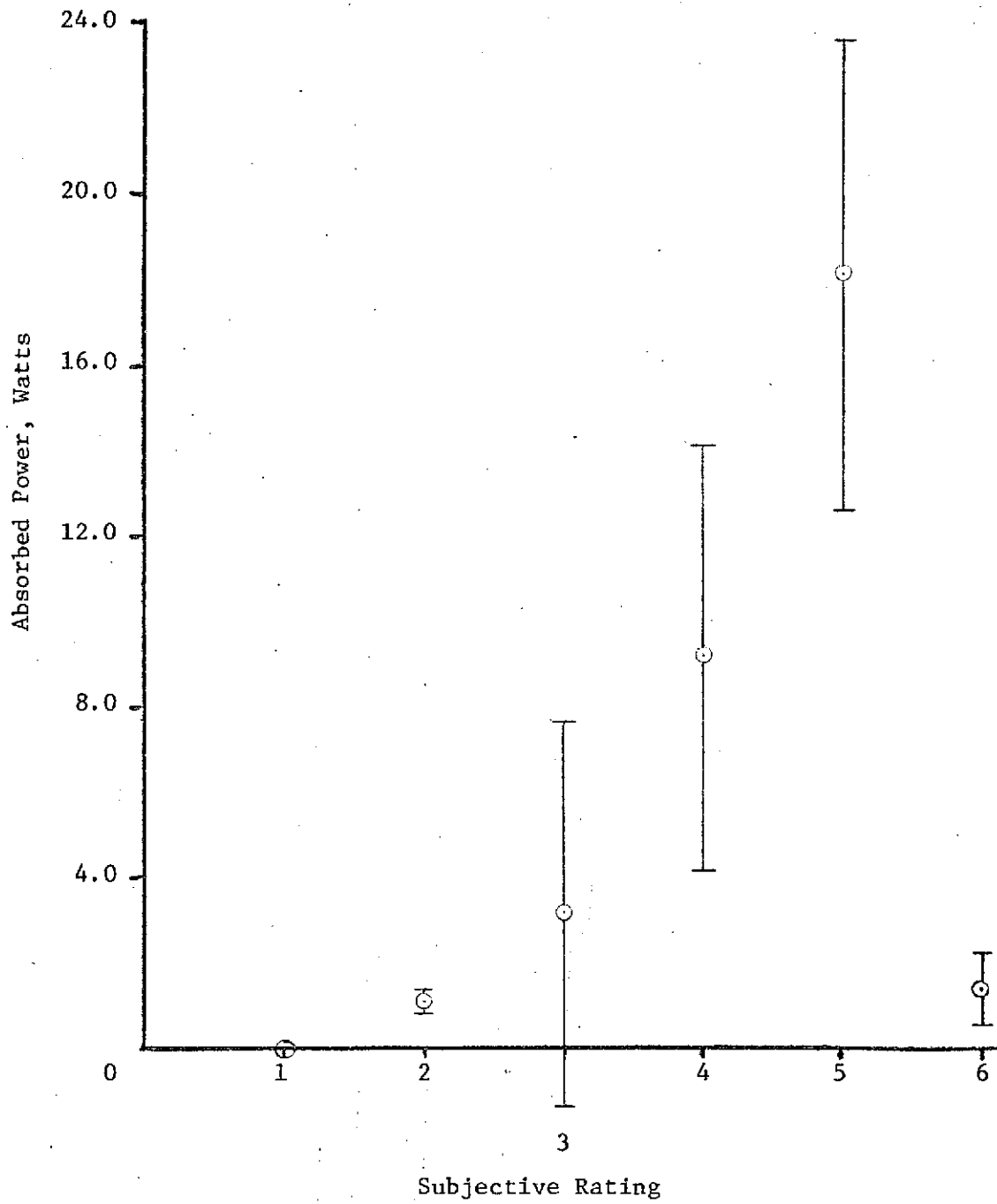


Figure F.8. Objective vs. Subjective Ride Rating for Run 8, Center

APPENDIX G

Bus Seat Transfer Function Data

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ACCELERATION, g	FREQUENCY, HZ																
	1	2	3	4	5	6	7	8	9	10	12	14	16	20	25	30	
.15	1.17	1.18	1.12	1.15	1.17	1.19	1.30	1.21	1.13	1.13	1.35	1.50	1.69	.82	.35	--	Average
	.07	.04	.03	.04	.05	.05	.07	.06	.07	.06	.09	.13	.20	.06	.05	--	Standard Deviation
.10	1.17	1.12	1.16	1.15	1.24	1.29	1.20	1.08	1.07	1.12	1.28	1.64	1.91	.83	.43	.56	Average
	.07	.11	.08	.09	.12	.12	.10	.05	.06	.09	.08	.16	.23	.07	.18	.05	Standard Deviation
.05	1.21	1.08	1.00	1.04	.99	.98	1.03	1.05	1.12	1.15	1.27	1.58	1.99	1.02	.39	.48	Average
	.15	.10	.06	.12	.12	.07	.07	.10	.10	.11	.16	.25	.33	.13	.03	.06	Standard Deviation

Bus Seat 1A Lateral, Transfer Function Amplitude Average/Standard Deviations for 12 Runs

ACCELERATION, g		FREQUENCY, HZ															
.15	1.05	1.12	1.25	1.18	1.18	1.24	1.17	1.17	1.17	1.08	.93	.91	.92	.87	.96	.80	Average
	.04	.06	.04	.09	.09	.08	.11	.19	.17	.17	.16	.15	.18	.19	.18	.16	Standard Deviation
.10	1.16	1.17	1.20	1.26	1.06	1.23	1.23	1.23	1.22	1.09	.90	.87	.85	.84	.88	.72	Average
	.09	.08	.10	.17	.11	.08	.14	.21	.20	.17	.14	.12	.15	.16	.16	.14	Standard Deviation
.05	1.12	.94	.97	1.07	1.05	.99	1.07	1.09	1.12	.89	.86	.71	.60	.68	.68	.59	Average
	.09	.10	.08	.11	.12	.12	.13	.17	.18	.11	.11	.08	.13	.07	.12	.08	Standard Deviation
	1	2	3	4	5	6	7	8	9	10	12	14	16	20	25	30	

Bus Seat 1A Vertical, Transfer Function Amplitude Average/Standard Deviations for 12 Runs

ACCELERATION, g

.15	1.20	1.19	1.13	1.16	1.19	1.21	1.32	1.21	1.19	1.16	1.37	1.53	1.73	.80	.35	--	Average
	.05	.04	.04	.04	.05	.05	.07	.07	.06	.07	.07	.12	.20	.08	.04	--	Standard Deviation
	1.20	1.13	1.16	1.20	1.23	1.32	1.19	1.12	1.10	1.15	1.28	1.65	1.95	.82	.44	.60	Average
.10	.07	.10	.09	.12	.10	.11	.11	.07	.07	.08	.08	.17	.22	.07	.15	.00	Standard Deviation
	1.23	1.13	1.05	1.04	1.00	.98	1.02	1.06	1.14	1.18	1.31	1.63	2.02	1.08	.40	.98	Average
.05	.11	.10	.12	.10	.10	.06	.18	.09	.12	.11	.19	.24	.33	.13	.00	.09	Standard Deviation
	1	2	3	4	5	6	7	8	9	10	12	14	16	20	25	30	

FREQUENCY, HZ

Bus Seat 1B Lateral, Transfer Function Amplitude Average/Standard Deviations for 12 Runs

ACCELERATION, g

.15	1.01	1.12	1.22	1.15	1.21	1.24	1.24	1.14	1.10	1.01	.92	.93	.86	.82	.82	.79	Average
	.04	.08	.06	.07	.08	.10	.10	.10	.09	.12	.13	.16	.14	.15	.16	.17	Standard Deviation
	1.14	1.15	1.18	1.20	1.09	1.25	1.30	1.22	1.13	1.01	.90	.90	.81	.79	.82	.75	Average
.10	.08	.08	.10	.13	.11	.16	.16	.11	.12	.14	.15	.15	.14	.13	.14	.19	Standard Deviation
	1.08	.95	.94	1.08	1.02	.99	1.09	1.14	1.12	.95	.87	.77	.63	.68	.62	.59	Average
.05	.06	.10	.05	.09	.12	.12	.12	.15	.13	.11	.15	.09	.12	.09	.12	.17	Standard Deviation
	1	2	3	4	5	6	7	8	9	10	12	14	16	20	25	30	

FREQUENCY, HZ

Bus Seat 1B Vertical, Transfer Function Amplitude Average/Standard Deviations for 12 Runs

ACCELERATION, g

.15	1.17	1.20	1.17	1.20	1.26	1.23	1.35	1.23	1.16	1.17	1.56	1.59	1.69	.74	.35	--	Average
	.07	.05	.06	.07	.05	.06	.00	.09	.06	.07	.12	.14	.21	.08	.04	--	Standard Deviation
	1.16	1.14	1.20	1.19	1.25	1.36	1.19	1.11	1.09	1.14	1.52	1.86	1.81	.82	.34	.55	Average
.10	.04	.06	.10	.10	.14	.09	.10	.10	.10	.06	.16	.16	.25	.08	.09	.04	Standard Deviation
	1.20	1.09	.99	1.00	.99	1.00	.98	1.02	1.06	1.13	1.48	1.94	1.71	1.06	.34	.48	Average
.05	.09	.09	.11	.04	.10	.00	.05	.06	.11	.16	.19	.16	.30	.11	.08	.09	Standard Deviation
	1	2	3	4	5	6	7	8	9	10	12	14	16	20	25	30	

FREQUENCY, HZ

Bus Seat 2A Lateral, Transfer Function Amplitude Average/Standard Deviations for 12 Runs

ACCELERATION, g		1	2	3	4	5	6	7	8	9	10	12	14	16	20	25	30	
.15		1.00	1.10	1.23	1.14	1.11	1.09	1.09	1.05	1.03	.95	.83	.80	.78	.76	.79	.66	Average
		.05	.05	.05	.06	.07	.13	.12	.12	.12	.10	.12	.14	.15	.14	.16	.09	Standard Deviation
.10		1.14	1.16	1.21	1.28	1.05	1.07	1.12	1.06	1.02	.92	.80	.79	.71	.69	.78	.63	Average
		.09	.10	.09	.17	.10	.13	.15	.09	.15	.12	.13	.15	.14	.10	.15	.08	Standard Deviation
.05		1.04	.95	.95	1.10	1.07	.92	.96	.94	.96	.77	.74	.63	.54	.59	.58	.50	Average
		.07	.10	.06	.12	.12	.12	.10	.08	.12	.09	.14	.13	.10	.12	.12	.08	Standard Deviation

Bus Seat 2A Vertical, Transfer Function Amplitude Average/Standard Deviations for 12 Runs

ACCELERATION, g	FREQUENCY, HZ																	
	1	2	3	4	5	6	7	8	9	10	12	14	16	20	25	30		
.15	1.19	1.20	1.18	1.20	1.27	1.23	1.33	1.24	1.17	1.19	1.58	1.63	1.73	.76	.33	--	Average	
	.07	.05	.05	.05	.06	.06	.09	.09	.06	.07	.12	.14	.23	.09	.03	--	Standard Deviation	
.10	1.16	1.14	1.20	1.18	1.27	1.36	1.19	1.13	1.12	1.13	1.54	1.87	1.86	.82	.35	.73	Average	
	.08	.09	.09	.09	.14	.10	.13	.11	.10	.08	.19	.16	.29	.11	.12	.22	Standard Deviation	
.05	1.21	1.11	1.03	.97	.95	.95	.97	1.07	1.09	1.14	1.46	1.90	1.70	.99	.30	.79	Average	
	.12	.10	.13	.09	.12	.10	.11	.26	.12	.14	.22	.20	.20	.15	.13	.05	Standard Deviation	

Bus Seat 2B Lateral, Transfer Function Amplitude Average/Standard Deviations for 12 Runs

8-9

ACCELERATION, g	FREQUENCY, HZ																
	1	2	3	4	5	6	7	8	9	10	12	14	16	20	25	30	
.15	1.01	1.11	1.22	1.12	1.09	1.09	1.13	1.08	1.06	.97	.82	.81	.85	.78	.74	.64	Average
	.04	.05	.05	.09	.07	.07	.10	.12	.11	.15	.13	.18	.14	.15	.16	.12	Standard Deviation
.10	1.10	1.14	1.23	1.21	1.00	1.06	1.15	1.11	1.01	.98	.78	.81	.78	.71	.71	.58	Average
	.09	.09	.10	.15	.10	.10	.09	.11	.21	.13	.12	.12	.14	.09	.11	.12	Standard Deviation
.05	1.06	.94	.95	1.09	1.01	.89	.94	.91	.92	.81	.72	.65	.55	.64	.51	.45	Average
	.09	.08	.07	.09	.08	.12	.09	.10	.10	.14	.08	.11	.10	.10	.09	.09	Standard Deviation

Bus Seat 2B Vertical, Transfer Function Amplitude Average/Standard Deviations for 12 Runs

ACCELERATION, g	FREQUENCY, HZ																	
	1	2	3	4	5	6	7	8	9	10	12	14	16	20	25	30	Average	Standard Deviation
.15	1.18	1.19	1.15	1.18	1.22	1.22	1.33	1.22	1.16	1.16	1.47	1.56	1.71	.78	.35	--	Average	Standard Deviation
.10	1.17	1.13	1.18	1.18	1.25	1.33	1.19	1.11	1.10	1.14	1.41	1.76	1.88	.82	.39	.61	Average	Standard Deviation
.05	1.21	1.10	1.02	1.01	.98	.98	1.00	1.05	1.10	1.15	1.38	1.76	1.86	1.04	.36	.68	Average	Standard Deviation

Bus Seat Lateral, Transfer Function Amplitude Average for All Seats

01-9

ACCELERATION, g

.15
.10
.05

1.02	1.11	1.23	1.15	1.15	1.17	1.16	1.11	1.09	1.00	.88	.86	.85	.81	.83	.72	Average
1.14	1.16	1.21	1.24	1.05	1.15	1.20	1.16	1.10	1.00	.85	.84	.79	.76	.80	.67	Standard Deviation
1.08	.95	.95	1.09	1.04	.95	1.02	1.02	1.03	.86	.80	.69	.58	.65	.60	.53	Average
1	2	3	4	5	6	7	8	9	10	12	14	16	20	25	30	Standard Deviation

FREQUENCY, HZ

Bus Seat Vertical, Transfer Function Amplitude Average for All Seats

APPENDIX H

Absorbed Power-ISO Standards

Correlation

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

An International Standards Organization (ISO) standard defining human tolerance to whole-body vibration has been under development for a number of years. It is understood that it has received the necessary approval by ISO member nations and is likely to be published shortly. A Draft International Standard (ISO/DIS 2631), "Guide for the Evaluation of Human Exposure to Whole-Body Vibration," was submitted on April 28, 1972 and voted on by August 28, 1972. It seems likely that European countries will incorporate the ISO document into their own new standards, and replace existing standards of which the most significant is that of the German VDI (12).

Three degrees of disturbance are postulated: reduced comfort, fatigue decreased proficiency, and an exposure limit above which an acute physical hazard due to the vibration is considered to exist. The standard suggests methods of dealing with broad frequency band linear vibration in a given direction, but does not deal adequately with combined effects of different directional vibration components or effects of rotational vibration.

The limitations of this standard are well known by its originators, and it has been stressed that the criteria suggested must be confirmed in each individual type of vibration environment. There are four further limitations of the draft standard: first, the standard deals with vibration only above 1 Hz, whereas significant amounts of energy even in the vertical direction exist below 1 Hz; second, only two alternative measurement procedures are specified allowing either (a) third-octave analysis of each vibration component so that individual frequency components can be compared with the appropriate limiting criteria for that frequency, or (b) averaging of a component vibration in a frequency-weighted meter with a total effect indicated from the weighting; third, no provision is made to account

for more than one degree of freedom at a time (it is not reasonable to say a person can be vibrated up to the limit in all six degrees at the same time); and, fourth, the present standards are only good for three degrees.

Since the authors were successful in correlating AP with subjective data in this work, a further correlation of ISO standards and AP was made. Figures H.1 and H.2 show a comparison of constant AP levels (across the frequency spectrum) with the proposed ISO standards for the vertical direction. Figure H.1 is for one-hour and Figure H-2 is for 4-hour exposure. These curves were obtained by plotting the ISO curves onto an AP versus frequency plot to find the mean AP over the 1 to 100 Hz range. It is noted that in the whole-body frequency range, AP is slightly more conservative; in the 10 to 100 Hz the two agree; but in the 2 Hz and below, the AP is not as restrictive as ISO standards. Since AP only accounts for vibration effects, such things as motion sickness are not accounted for and thus there is justification for the harsher requirement of ISO standards in this range.

Figures H.3 and H.4 are a similar set of curves comparing constant AP for fore-aft and side-to-side motion with the single ISO standard of horizontal motion. Perhaps the most important finding in this comparison is that for each exposure time, the constant AP magnitude was the same for each of the three directions. Since AP is based on the fact that ride comfort can be measured by a scaler (i.e., absorbed power), these findings support this idea of a single number. Table H.1 lists the AP for each of the three ISO motions.

The final conclusion is that one can use ISO standards as an overall criterion and can combine more than one degree of freedom by using the AP

technique to add them up. It thus appears, if the proposed ISO standards are to be used as a standard, a combination of ISO Standards and the AP method is required.

The method proposed takes care of the third objection and still leaves the other three. In particular, the first and fourth are the most severe limitations.

Table H.1

Average Absorbed Power Levels to Meet
ISO Levels for FDP

Exposure Time	Average AP		
	Vertical	Side to Side	Fore-Aft
1 Min.	8.22	8.22	8.22
16 Min.	4.64	4.64	4.64
25 Min.	3.28	3.28	3.28
1 Hr.	1.47	1.47	1.07
2.5 Hr.	.52	.52	.52
4 Hr.	.29	.29	.29
8 Hr.	.103	.103	.103

To obtain AP for

"exposure limits": multiply AP (FDP) values by 4,

"reduced comfort boundary": divide AP (FDP) values by 9.9225.

100
10
1

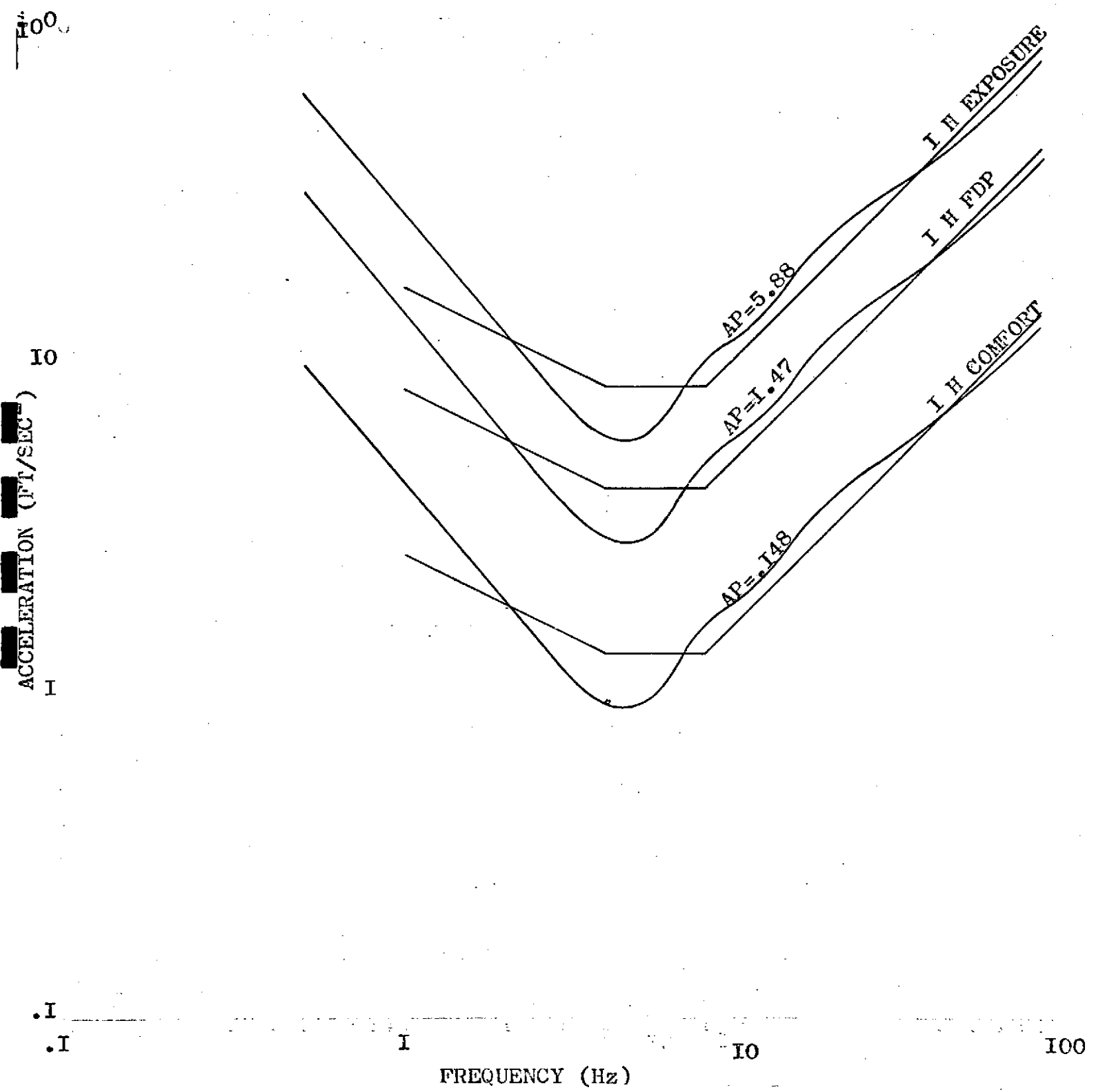


FIGURE H.1. ISO-Vertical and Vertical Constant Power

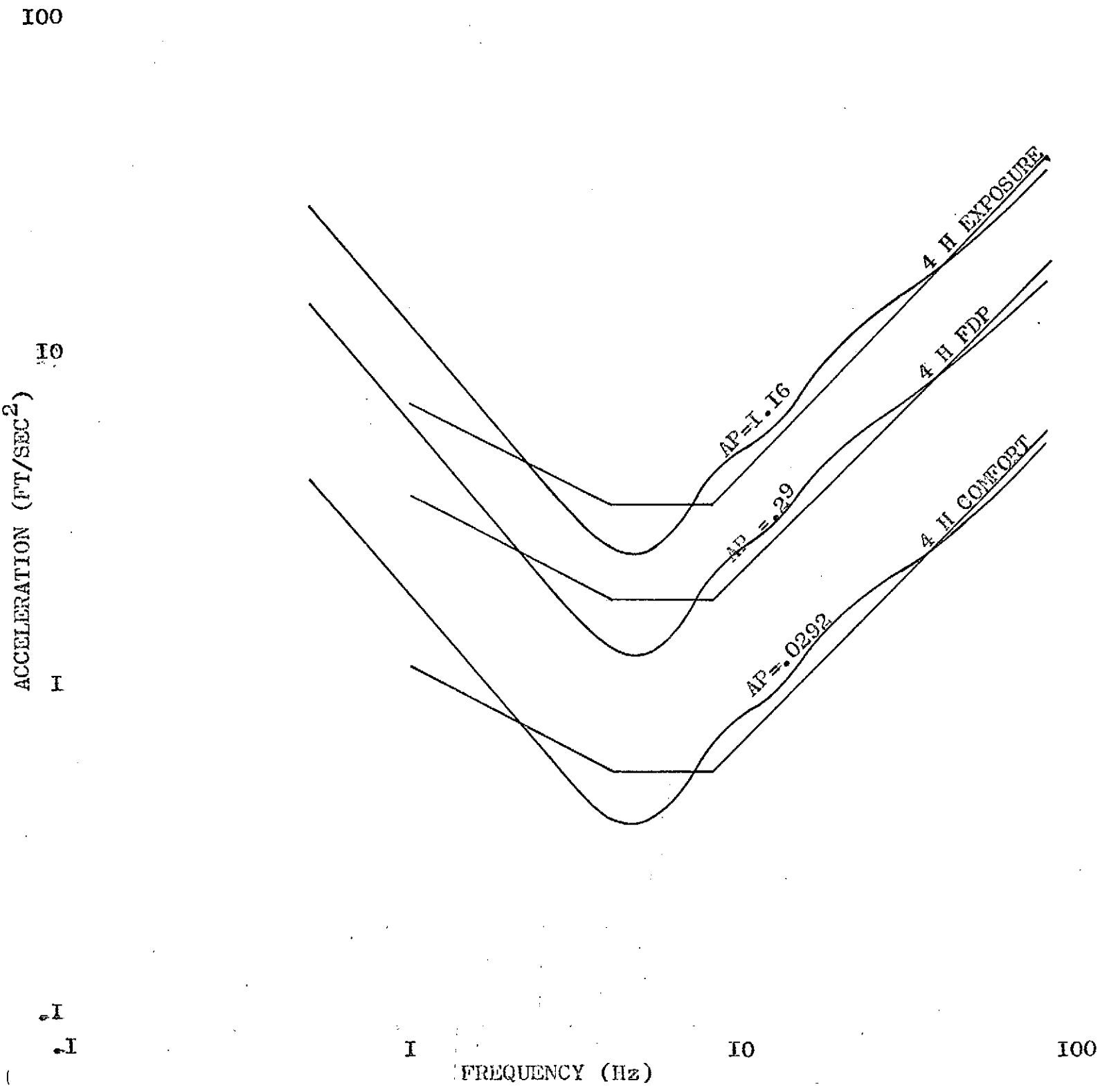


FIGURE H.2. ISO-Vertical and Vertical Constant Power

1. Logarithmic, 3 x 3 Cycles*

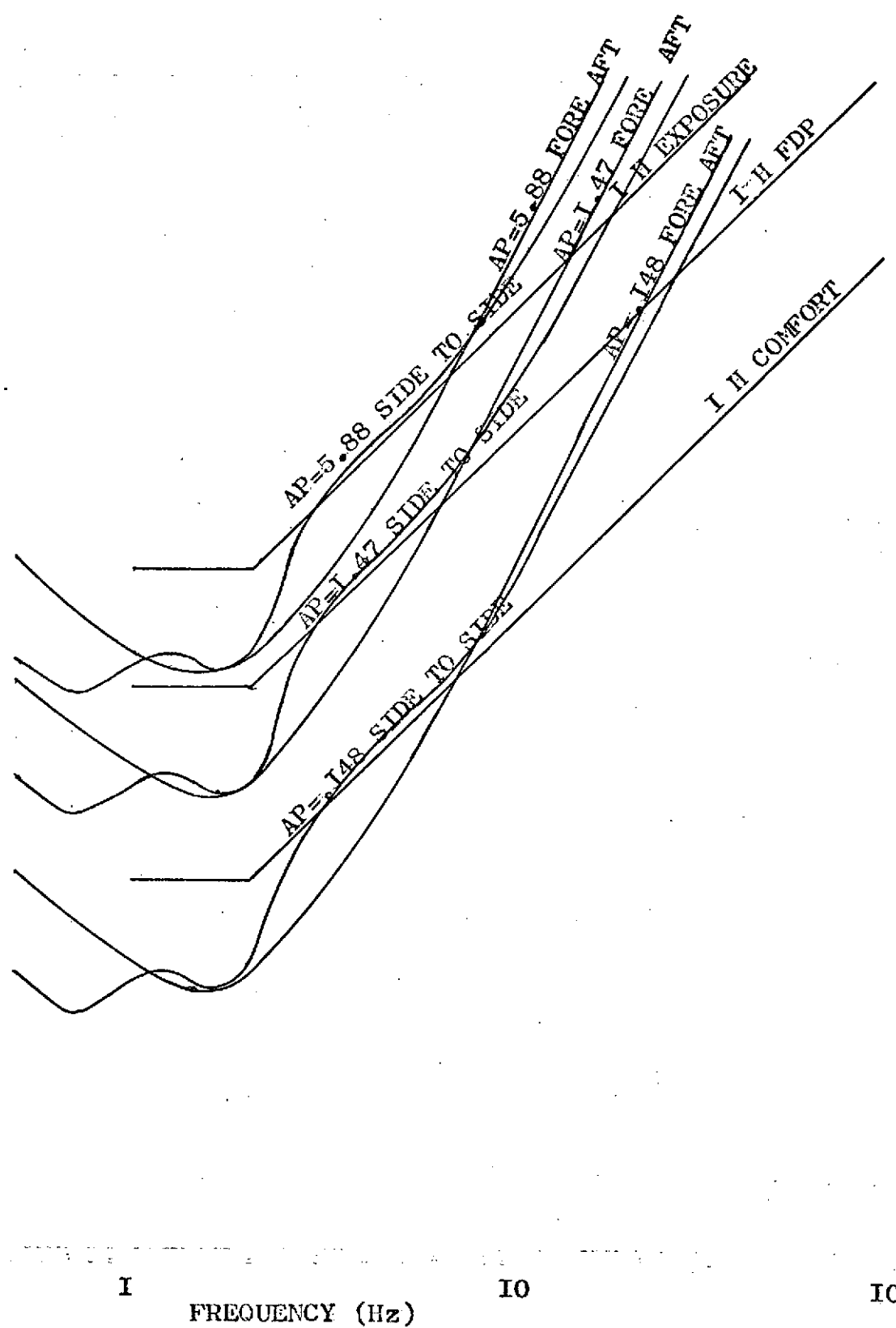
100

10

ACCELERATION (FT/SEC²)

.1

.1



100

1

10

FREQUENCY (Hz)

FIGURE H.3. ISO-Horizontal and Side-to-Side, Fore-Aft Constant Power

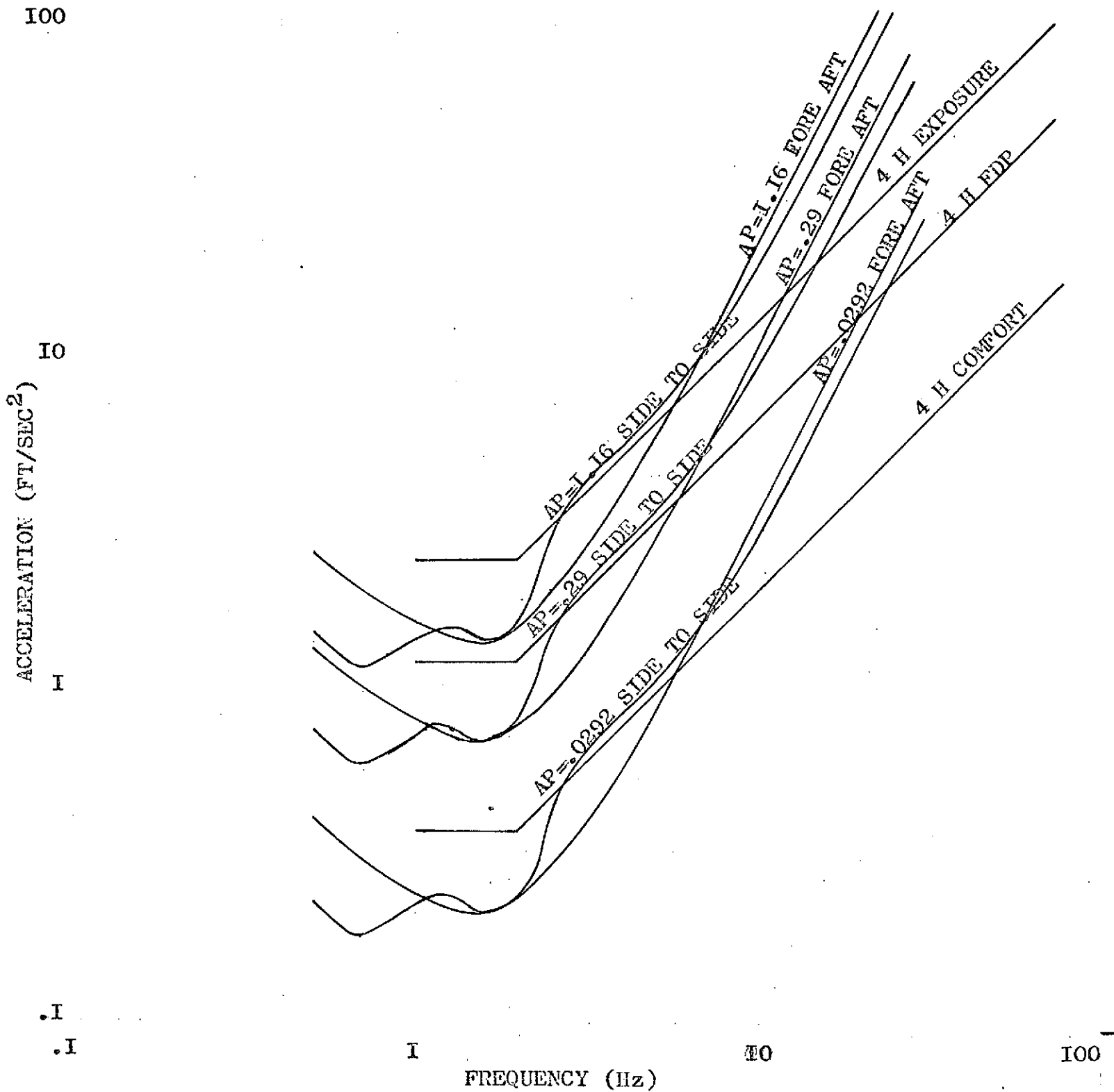


FIGURE H.4. ISO-Horizontal and Side-to-Side, Fore-Aft Constant Power