



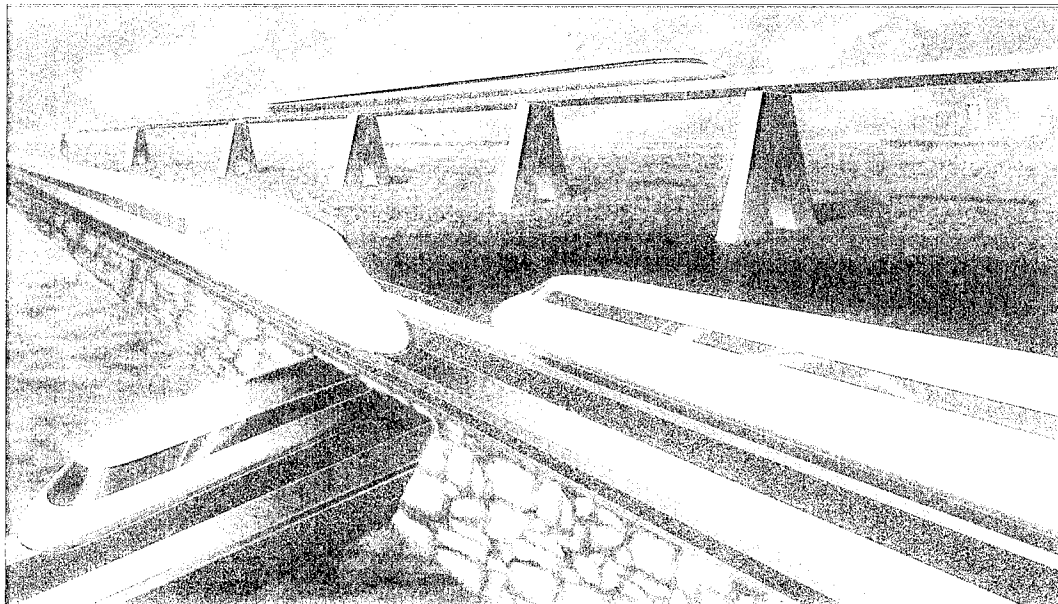
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U. S. Department
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Safety of High Speed Guided Ground Transportation Systems

Office of Research
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Washington, D.C. 20590



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| 13. ABSTRACT (Maximum 200 words) The safety of magnetically levitated (maglev) and high speed rail (HSR) trains proposed for application in the United States is the responsibility of the Federal Railroad Administration (FRA). A franchise has been awarded to the Texas High Speed Rail Corporation to operate a 200 mph French Train a Grande Vitesse (TGV) in the Texas Triangle (Dallas-Fort Worth, Houston, San Antonio), with construction to begin in 1995. This report provides the Analysis (Vol. I) of results, and detailed data and statistical summaries (Vol. II, Appendices) of representative electric and magnetic field (EMF) profiles on TGV-A trains between Paris and Tours for two electro-technologies (1.5 KV DC near Paris, and 2x25 KV at 50 Hz AC). EMF data represent a range of train operating conditions and locations (in vehicles, stations and wayside), as well as in traffic control and electrical facilities. A portable magnetic field monitoring system (augmented to include an electric fields probe) was used to sample, record and store 3 axis static and AC magnetic fields waveforms simultaneously, at multiple locations. A real time Digital Audio Tape (DAT) recorder able to capture EMF transients, and two personal power-frequency magnetic field monitors were used to collect complementary data. The statistical and Fourier analysis of results in <u>Volume I-Analysis</u> enable a comparative characterization of EMF intensities, and spatial and temporal variability, by frequency band, and by distance from the source. EMF Extra Low Frequency (ELF) levels for the TGV system are comparable to those produced by common home, work, and power lines. EMF field levels for the TGV rail system components are within the ranges of other common environmental EMF sources, but have specific frequency signatures. <u>Volume II-Appendices</u> catalogs and documents detailed data files by electro-technology, source and location. | | |
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SYSTÈME INTERNATIONAL (SI) UNIT DEFINITIONS AND
CONVERSIONS USED IN THIS REPORT

DISTANCE (ENGLISH-TO-SI CONVERSION):

| | | |
|-------------|-------------------------|--------------------|
| 1 inch (in) | = 2.54 centimeters (cm) | = 0.025 meters (m) |
| 1 foot (ft) | = 30.5 centimeters (cm) | = 0.305 meters (m) |
| 1 yard (yd) | = 91.4 centimeters (cm) | = 0.914 meters (m) |
| 1 mile (mi) | = 1.61 kilometers (km) | = 1,610 meters (m) |

ELECTRICAL QUANTITIES:

Electric Fields

| | |
|-------------------------|--------------------------------|
| 1 Volt/meter (V/m) | = 0.01 Volts/centimeter (V/cm) |
| 1 kiloVolt/meter (kV/m) | = 1000 Volts/meter (V/m) |
| 1 kiloVolt/meter (kV/m) | = 10 Volts/centimeter (V/cm) |

Magnetic Flux Densities (English-to-SI Conversion)

| | |
|----------------------|----------------------|
| 10,000 Gauss (G) | = 1 Tesla (T) |
| 10 milliGauss (mG) | = 1 microTesla (iT) |
| 1 milliGauss (mG) | = .1 microTesla (iT) |
| 0.01 milliGauss (mG) | = 1 nanoTesla (nT) |

Electromagnetic Frequency Bands

| | |
|----------------------------------|---------------------|
| 1 cycle per second | = 1 Hertz (Hz) |
| 1,000 cycles per second | = 1 kiloHertz (kHz) |
| Ultra Low Frequency (ULF) Band | = 0 Hz to 3 Hz |
| Extreme Low Frequency (ELF) Band | = 3 Hz to 3 kHz |
| Very Low Frequency (VLF) Band | = 3 kHz to 30 kHz |
| Low Frequency (LF) Band | = 30 kHz to 300 kHz |

PREFACE

The Federal Railroad Administration (FRA) has undertaken a series of studies to assess the safety and facilitate the introduction of advanced high speed guided ground transportation (HSGGT) technology to the US. These studies include both magnetic levitation (maglev) and steel wheel on rail alternatives. HSGGT technology options, such as the French Train a Grande Vitesse (TGV), the Swedish Tilt Train (X2000), or the German Intercity Express (ICE), can be expected to undergo public scrutiny and environmental assessment in order to convincingly establish their safety. A franchise has been awarded to the Texas High Speed Rail Corporation to operate a 200 mph French TGV in the Texas Triangle (Dallas-Fort Worth, Houston, San Antonio), with construction to begin in 1995.

Timely development of technical information required for rulemaking initiatives is needed to ensure the public safety. An emerging concern that relates to the environment, workers and public health and safety is that potentially adverse health effects of extra-low frequency (ELF) electric and magnetic fields (EMF) commonly associated with power transmission and distribution lines. Magnetic fields are of greater concern, because they are pervasive, penetrate biological tissues without attenuation, and are more difficult to shield than electric fields.

To enable informed assessments and comparisons to be made amongst emerging and existing technologies, a thorough EMF characterization (frequency, intensity, spatial and temporal variability, source analysis) of all representative existing and advanced electrical transportation systems is needed.

This report is one of a comprehensive series of studies and reports addressing the ELF EMF safety issues for candidate HSGGT technologies and systems. Electric Research and Management, Inc. (ERM) was engaged to measure, characterize and analyze the EMF for representative existing and advanced rail and transit systems.

An EMF survey of the TGV-Atlantique (TGV-A) system, a close analog of the Texas proposal, was performed. This report presents data on static and alternating (AC) magnetic fields and AC electric fields obtained between Paris and Tours in September, 1992. Volume I, Analysis presents a summary of representative EMF data on rail system components and facilities, over a full range of operating conditions, as well as a comparison with EMF produced by home appliances and common electric power distribution and transmission lines. Volume II, Appendices contains detailed EMF data files by location, time, and frequency range, as well as statistics.

This report was prepared by a team of ERM personnel designated as authors for each volume, including: The ERM project was led by Fred M. Dietrich, Program Manager and William E. Feero, President.

The technical monitor for this task and for the series of reports characterizing ELF EMF for rail technologies was Dr. Aviva Brecher of the John A. Volpe National Transportation Systems Center

(VNTSC), who manages the FRA's EMF Research Program. Guidance and program support was provided by Robert Dorer, the HSGGT Safety Program Manager at VNTSC. Arne Bang, Senior Manager of Special Programs and the FRA sponsor for this work is thanked for overall direction and oversight.

The French National Rail Company (SNCF) provided a special TGV test trainset, access to facilities and excellent technical and logistical support. Special thanks are due to M. Jaques Balause and Jean-Michel Gayon of the SNCF International Affairs, Mme. Nicole Dubalen and Alain Jeunesse from the SNCF Center for Signal and Telecommunications, Christian Courtois, SNCF power system expert and Patrick Meyer, SNCF interpreter. Assistance from technical representatives from GEC Alsthom (especially G. Beaudienville) and the participation of other SNCF and French Ministry of Transportation representatives in our technical briefings are gratefully acknowledged.

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APPENDIX A

DESCRIPTION OF APPENDED DATA

The following 34 appendices contain a detailed reporting of the magnetic field characteristics measured onboard the electrified railroad and near associated facilities. The data have been consolidated and presented as efficiently as possible without resorting to summary measures which obscure the temporal or frequency characteristics of the magnetic fields. The analysis of summary data obtained by collapsing the frequency spectra into a small number of relatively broad bands or by collapsing the time distributions into statistical parameters is found in the body of the report.

One appendix is provided for each of the 34 repetitive waveform datasets collected during the September 8 and 9, 1992 measurement program along the TGV Atlantique Paris - Tours Line. Table A-1 provides a list of the datasets and the relevant parameters, and the appendix where each dataset may be found. Appendices may contain the following material:

- Table of measurement parameters
- Vehicle speed profile
- Vehicle load current profile
- Field by frequency and time plots for each field sensor
- Field by distance and time plot for six frequency bands
- Summary statistics

Each of these items is described below.

Table of Measurement Parameters

Each appendix begins with a table of measurement parameters. It identifies the dataset by number and title and gives measurement setup code which refers to the sensor staff and reference probe locations on the appropriate sketch of the measurement setup. (Copies of the setup sketches are included in this appendix as Figures A-1 through A-10.) The vehicle status entry indicates whether the trains were operating during the test and includes general comments on the mode of operation.

The next group of data on the table of measurement parameters identifies the time during which repetitive waveform measurements were made. Start and stop time are merely clock times for the first and last waveform samples, respectively. During that time period, the indicated number of waveform samples were taken. The programmed sample interval and actual sample interval represent the requested and actual time between successive waveform samples. These should agree, except during those tests in which the test engineers wanted the waveform capture system to sample as frequently as possible. In this mode, samples are sometimes delayed if the system is automatically adjusting its programmable amplifiers in response to a sudden change in field intensity.

The table of measurement parameters also contains various parameters from the waveform sampling and subsequent Fourier transformation of the waveform data that affect the interpretation of the magnetic field frequency spectra. The tabulated maximum frequency and minimum frequency are center frequencies of the upper and lower components of the Fourier transform. The spectral bandwidth is the interval between frequency components in the Fourier transform and is effectively the smallest increment in frequency that can be resolved in the frequency spectrum. The spectral bandwidth parameter is also important to the reader because the intensity of broadband magnetic field components (as opposed to fields at unique discrete frequencies) is proportional to the square root of the bandwidth. Consequently, to compare the spectral data for broadband signals contained in these appendices to values reported by others, one must make the appropriate bandwidth adjustments to the data.

The final item on the table of measurement parameters is a listing of any missing or suspect data within that particular dataset.

Vehicle Speed Profile

During the magnetic field measurements in locomotive cabs, the test engineers were occasionally able to maintain a manual log of train speed readings from the vehicle's speedometer. Those data are plotted in the vehicle speed profile and are useful when interpreting the changes in magnetic field conditions which occur over the time of the measurements.

Field by Frequency and Time Plots for Each Sensor

The first set of data plots in each appendix is the field by frequency and time plots for each magnetic field sensor. These plots are described in more detail in Section 2 of this report. The top frame of each page shows the static magnetic field component and time varying components up to 64 Hz. The lower frame has the static field suppressed to show the time varying magnetic field components in more detail. Although all of the time varying magnetic measurements extended out to a maximum frequency of 2560 Hz, only that portion of the spectrum containing fields of significant amplitude were plotted. In some cases, supplemental plots showing extended portions of the frequency spectrum or "blow-ups" of portions of the time domain are included to show interesting field characteristics in more detail.

Field by Distance and Time Plots

The next group of graphs in each appendix show the intensity of the field in each of six frequency bands as a function of distance from some reference point (such as floor of the vehicle, etc.) over the time of the measurements. These graphs were created for each set of measurements whether the spatial distribution was expected to

help identify the source of the magnetic field or establish an attenuation rate which would be useful for predicting field intensities at other distances from the source.

The spatial sampling of the magnetic field level is by necessity limited to only the few points where magnetic field sensors were placed (see the sketch of sensor locations in each appendix). From this relatively sparse sample, the contours of the field by distance and time plots were generated by a computer program which attempts to fit a surface to the available data points. These plots are therefore very accurate at the sensor locations but represent a "best fit" approximation of the field levels between sensor locations. In those cases where the attenuation data are orderly and consistent, the contours are expected to be a good approximation of reality. However, in the cases where field values are erratic or inconsistent between probe locations, the validity of the contour is more uncertain at places other than the sample locations. In evaluating these curves, the reader should be cognizant of the actual measurement locations and place the most credibility in the data at those locations.

Summary Statistics

Statistical summaries of individual datasets are also included in the appendix. Those summaries consist of tables of field strength and variability parameters.

TABLE A-1.
INDEX OF REPETITIVE WAVEFORM DATA FRENCH TGV SEPTEMBER 8 - SEPTEMBER 9, 1992

| DATA FILE NUMBER | APPENDIX CONTAINING DATA | DATE/TIME | PROBE LOCATION | | SAMPLE INTERVAL, SECONDS | NUMBER OF SAMPLES | LOCATION AND TYPE OF MEASUREMENT |
|------------------|--------------------------|-----------------------|----------------|------|--------------------------|-------------------|---|
| | | | FIG. STAFF | REF. | | | |
| TGV001 | B | SEP 08 07:57-08:17 | 3-2 | 1 | 4 | 10 | TGV TEST TRAIN, DOUBLE TRAIN SET, IN 1ST COACH, (R1B, FIGURE 3-1). FOUR SENSOR STAFF AT FRONT OF COACH IN 1ST CLASS SALON. STAFF IN VERTICAL POSITION. FLOOR OF COACH AS REFERENCE. |
| TGV002 | C | 08:18-08:22 | 3-2 | 1 | 4 | 30 | SAME |
| TGV003 | D | 08:23-08:27 | 3-2 | 2 | 4 | 30 | SAME EXCEPT STAFF IS IN A HORIZONTAL POSITION ALONG THE AXIS OF THE TRAIN 1 m (3.3 ft) ABOVE THE FLOOR. DOOR ABOVE MIDDLE SEAT IS REFERENCE. |
| TGV004 | E | 08:28-08:33 | 3-2 | 3 | 4 | 30 | SAME EXCEPT STAFF IS IN A HORIZONTAL POSITION TRANSVERSE TO THE AXIS OF THE TRAIN 1 m (3.3 ft) ABOVE THE FLOOR. WINDOW ABOVE SIDE SEAT IS REFERENCE. |

TABLE A-1.

INDEX OF REPETITIVE WAVEFORM DATA FRENCH TGV SEPTEMBER 8 - SEPTEMBER 9, 1992 (CONT'D)

| DATA FILE NUMBER | APPENDIX CONTAINING DATA | DATE/TIME | PROBE LOCATION FIG. STAFF REF. | SAMPLE INTERVAL, SECONDS | NUMBER OF SAMPLES | LOCATION AND TYPE OF MEASUREMENT |
|------------------|--------------------------|-------------|--------------------------------|--------------------------|-------------------|---|
| TGV005 | F | 09:15-09:29 | 4-1 5 8 | 10 | 75 | TGV TEST TRAIN, DOUBLE TRAIN SET, IN PULL LOCOMOTIVE TGV24081 (TU1B, FIGURE 3-1). FOUR SENSOR STAFF AT DRIVERS RIGHT SHOULDER IN THE LOCOMOTIVE CAB. STAFF IN VERTICAL POSITION. FLOOR OF CAB AS REFERENCE. |
| TGV006 | G | 09:30-09:42 | 4-1 5 8 | 30 | 25 | SAME |
| TGV007 | H | 09:43-09:48 | 4-1 6 8 | 30 | 10 | SAME EXCEPT STAFF IS IN A HORIZONTAL POSITION TRANSVERSE TO THE AXIS OF THE TRAIN 1 m (3.3 ft) ABOVE THE FLOOR. SIDE WALL OF CAB IS REFERENCE. |
| TGV008 | I | 09:49-09:53 | 4-1 7 8 | 30 | 10 | SAME EXCEPT STAFF IS IN A HORIZONTAL POSITION ALONG THE AXIS OF THE TRAIN 1.3 m (4.3 ft) ABOVE THE FLOOR. BACK WALL OF CAB IS THE REFERENCE. |
| TGV009 | J | 09:56-10:14 | 4-1 5 8 | 30 | 38 | STAFF IN SAME POSITION AS FOR DATASET TGV005 |
| TGV010 | K | 10:50-10:51 | 8-1 10 12 | 10 | 10 | IN THE TGV CONTROL CENTER ON 6TH FLOOR IN FRONT OF COMPUTER MONITORS. USING 4 SENSOR STAFF IN THE VERTICAL POSITION. FLOOR OF CONTROL CENTER IS THE REFERENCE. |

TABLE A-1.

INDEX OF REPETITIVE WAVEFORM DATA FRENCH TGV SEPTEMBER 8 - SEPTEMBER 9, 1992 (CONT'D)

| DATA FILE NUMBER | APPENDIX CONTAINING DATA | DATE/TIME | PROBE LOCATION FIG. STAFF REF. | SAMPLE INTERVAL, SECONDS | NUMBER OF SAMPLES | LOCATION AND TYPE OF MEASUREMENT |
|------------------|--------------------------|-------------|--------------------------------|--------------------------|-------------------|--|
| TGV011 | L | 10:52-10:54 | 8-1 11 12 | 10 | 10 | SAME EXCEPT STAFF IS IN THE HORIZONTAL DIRECTION .9 m (3 ft) ABOVE THE FLOOR. CENTER OF A MONITOR SCREEN IS THE REFERENCE. |
| TGV012 | M | 14:03-14:20 | 3-3 13 16 | 10 | 95 | TGV TEST TRAIN, DOUBLE TRAIN SET, IN 2ND COACH (R2B, FIGURE 3-1). FOUR SENSOR STAFF IN CENTER OF A 1ST CLASS CLUB CAR. STAFF IN VERTICAL DIRECTION. FLOOR OF COACH AS REFERENCE. |
| TGV013 | N | 14:21-14:26 | 3-3 14 16 | 30 | 10 | SAME EXCEPT STAFF IS IN A HORIZONTAL POSITION TRANSVERSE TO THE AXIS OF THE TRAIN 1 m (3.3 ft) ABOVE THE FLOOR. SIDE WALL ABOVE SEATS 42 & 43 IS THE REFERENCE. |
| TGV014 | O | 14:28-14:32 | 3-3 15 16 | 30 | 10 | SAME EXCEPT STAFF IS IN A HORIZONTAL POSITION ALONG THE AXIS OF THE TRAIN 1 m (3.3 ft) ABOVE THE FLOOR. MIDLINE BETWEEN SEATS 41 & 42 IS THE REFERENCE. |
| TGV015 | P | 15:09-15:11 | 8-2 17 - | 10 | 12 | IN VENDOME RELAY ROOM. FOUR SENSOR STAFF NEAR AC POWER CABINET. STAFF IN VERTICAL POSITION. FLOOR OF RELAY ROOM IS REFERENCE. |

TABLE A-1.

INDEX OF REPETITIVE WAVEFORM DATA FRENCH TGV SEPTEMBER 8 - SEPTEMBER 9, 1992 (CONT'D)

| DATA FILE NUMBER | APPENDIX CONTAINING DATA | DATE/TIME | PROBE LOCATION FIG. STAFF REF. | SAMPLE INTERVAL, SECONDS | NUMBER OF SAMPLES | LOCATION AND TYPE OF MEASUREMENT |
|------------------|--------------------------|-------------|--------------------------------|--------------------------|-------------------|---|
| TGV016 | Q | 15:15-15:17 | 8-2 18 | 10 | 12 | IN VENDOME RELAY ROOM. FOUR SENSOR STAFF BETWEEN TWO ROWS OF RELAYS. STAFF IN VERTICAL POSITION. FLOOR OF RELAY ROOM IS REFERENCE. |
| TGV017 | R | 16:03-16:05 | 6-1 19 20 | 5 | 13 | ON TGV PLATFORM AT VENDOME. HIGH SPEED TRAIN TO TOURS ON FAR TRACK. SINGLE TRAIN SET. FOUR SENSOR STAFF. STAFF IN VERTICAL POSITION. TO PARIS PLATFORM FLOOR AS REFERENCE. |
| TGV018 | S | 16:34-16:45 | 6-1 19 20 | 5 | 73 | SAME EXCEPT A DIFFERENT TRAIN PASSED HEADING TO TOURS. |
| TGV019 | T | 16:50-16:54 | 6-1 19 20 | 5 | 25 | SAME EXCEPT HIGH SPEED TRAIN TO PARIS ON THE NEAR TRACK. DOUBLE TRAIN SET. |
| TGV020 | U | 17:14-17:16 | 3-4 21 24 | 5 | 22 | TGV TEST TRAIN, DOUBLE TRAIN SET, IN 5TH COACH (R5B, FIGURE 3-1). FOUR SENSOR STAFF IN CENTER OF 2ND CLASS CAR. STAFF IN VERTICAL POSITION. FLOOR OF COACH NEAR CORNER OF SEAT 47 IS THE REFERENCE. |
| TGV021 | V | 17:17-17:27 | 3-4 21 24 | 5 | 63 | SAME |

TABLE A-1.
INDEX OF REPETITIVE WAVEFORM DATA FRENCH TGV SEPTEMBER 8 - SEPTEMBER 9, 1992 (CONT'D)

| DATA FILE NUMBER | APPENDIX CONTAINING DATA | DATE/TIME | PROBE LOCATION FIG. STAFF REF. | SAMPLE INTERVAL, SECONDS | NUMBER OF SAMPLES | LOCATION AND TYPE OF MEASUREMENT |
|------------------|--------------------------|-------------|--------------------------------|--------------------------|-------------------|---|
| TGV022 | W | 17:28-17:32 | 3-4 22 24 | 30 | 10 | SAME EXCEPT STAFF IS IN A HORIZONTAL POSITION TRANSVERSE TO THE AXIS OF THE TRAIN 1 m (3.3 ft) ABOVE THE FLOOR. SIDE WINDOW ACROSS FROM SEATS 41 & 42 IS THE REFERENCE. |
| TGV023 | X | 17:33-17:38 | 3-4 23 24 | 30 | 10 | SAME EXCEPT STAFF IS IN A HORIZONTAL POSITION ALONG THE AXIS OF THE TRAIN 1 m (3.3 ft) ABOVE THE FLOOR. CORNER OF SEAT 46 IS THE REFERENCE. |
| TGV024 | Y | 17:38-17:54 | 3-4 21 24 | 30 | 32 | STAFF IN SAME POSITION AS FOR DATASET TGV020 |
| TGV025 | Z | 07:45-08:01 | 4-2 25 26 | 10 | 88 | TGV REVENUE TRAIN, SINGLE TRAIN SET, IN PULL LOCOMOTIVE TGV24006 (TU2, FIGURE 3-1). FOUR SENSOR STAFF AT DRIVER'S RIGHT SHOULDER IN THE LOCOMOTIVE CAB. STAFF IN VERTICAL DIRECTION. FLOOR OF CAB IS STAFF REFERENCE. |
| TGV026 | AA | 08:01-08:21 | 4-2 25 26 | 30 | 40 | SAME |

TABLE A-1.

INDEX OF REPETITIVE WAVEFORM DATA FRENCH TGV SEPTEMBER 8 - SEPTEMBER 9, 1992 (CONT'D)

| DATA FILE NUMBER | APPENDIX CONTAINING DATA | DATE/TIME | PROBE LOCATION FIG. STAFF REF. | SAMPLE INTERVAL, SECONDS | NUMBER OF SAMPLES | LOCATION AND TYPE OF MEASUREMENT |
|------------------|--------------------------|-------------|--------------------------------|--------------------------|-------------------|--|
| TGV027 | AB | 10:16-10:18 | 7-2 27 28 | 10 | 12 | TGV AUTOTRANSFORMER AT CHAILLOT. MEASUREMENTS OUTSIDE BACK FENCE OF AUTOTRANSFORMER ALONG TGV LINE AT CHAILLOT NEAR THE 121 km MARKER. STAFF IN VERTICAL POSITION. GROUND IS STAFF REFERENCE. |
| TGV028 | AC | 10:26-10:34 | 7-2 27 28 | 10 | 36 | SAME |
| TGV029 | AD | 10:58-11:03 | 5-1 29 30 | 5 | 33 | OVERPASS NEAR THE 120 km MARKER CLOSE TO CHAILLOT. MEASUREMENTS OVER THE CATENARY 1 m (3.3 ft) FROM THE STEEL GUARD RAIL. MEASUREMENTS TAKEN AS HIGH SPEED (DOUBLE TRAIN SET) TRAIN TO PARIS PASSED UNDER THE OVERPASS. STAFF IN VERTICAL POSITION. GROUND IS STAFF REFERENCE. |
| TGV030 | AE | 13:24-13:29 | 5-2 31 32 | 10 | 23 | UNDERPASS NEAR THE 105 km MARKER CLOSE TO BONNEVAL. MEASUREMENTS TAKEN AS HIGH SPEED TRAIN TO PARIS PASSED OVER THE UNDERPASS. STAFF IN VERTICAL POSITION. GROUND IS STAFF REFERENCE. |

TABLE A-1.

INDEX OF REPETITIVE WAVEFORM DATA FRENCH TGV SEPTEMBER 8 - SEPTEMBER 9, 1992 (CONT'D)

| DATA FILE NUMBER | APPENDIX CONTAINING DATA | DATE/TIME | PROBE LOCATION FIG. STAFF REF. | SAMPLE INTERVAL, SECONDS | NUMBER OF SAMPLES | LOCATION AND TYPE OF MEASUREMENT |
|------------------|--------------------------|-------------|--------------------------------|--------------------------|-------------------|--|
| TGV031 | AF | 14:15-14:32 | 5-3 | 10 | 83 | OPEN SPACE NEAR TRACK AT THE 104 km MARKER. MEASUREMENT STAFF 7.5 m (24.6 ft) FROM THE NEAR TRACK (TO PARIS). MEASUREMENTS TAKEN FOR DOUBLE TRAIN SET TO TOURS, SINGLE TRAIN SET TO TOURS, AND SINGLE TRAIN SET TO PARIS. STAFF IN THE VERTICAL POSITION. GROUND IS STAFF REFERENCE. |
| | | | 33 | | | |
| | | | 34 | | | |
| TGV032 | AG | 15:18-15:22 | 7-1 | 10 | 25 | GAULT ST. DENIS SUBSTATION AT THE 94.75 km MARKER. MEASUREMENTS TAKEN 2 m (6.6 ft) OUTSIDE OF FENCE AT THE BACK OF THE SUBSTATION. DURING MEASUREMENT SEQUENCE SINGLE TRAIN SET TO PARIS PASSED. STAFF IN THE VERTICAL POSITION. GROUND IS STAFF REFERENCE. |
| | | | 35 | | | |
| TGV033 | AH | 15:25-15:28 | 7-1 | 10 | 19 | SAME |
| | | | 35 | | | |
| TGV034 | AI | 15:43-15:56 | 7-1 | 10 | 68 | SAME EXCEPT MEASUREMENT WAS TAKEN IN SIDE OF THE SUBSTATION CONTROL HOUSE. MEASUREMENT TAKEN WHILE SINGLE TRAIN SET TO TOURS AND A SINGLE TRAIN SET TO PARIS PASSED BY. STAFF IN THE VERTICAL DIRECTION. CONTROL HOUSE FLOOR IS STAFF REFERENCE. |
| | | | 37 | | | |
| | | | 38 | | | |

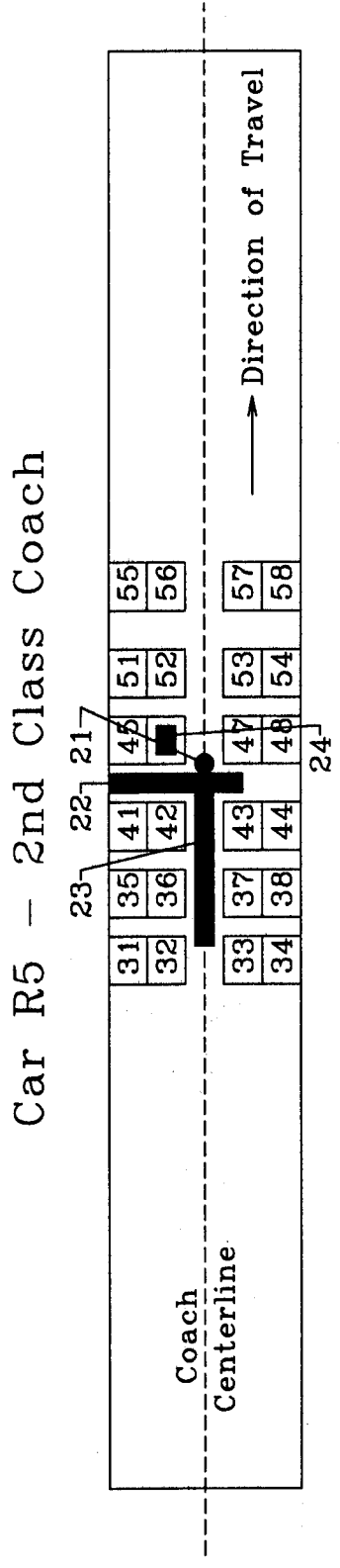
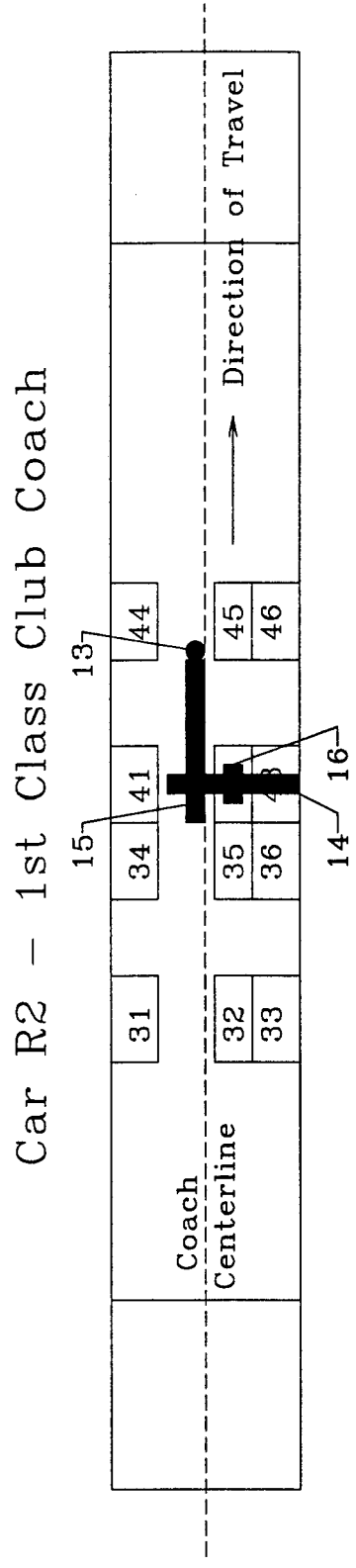
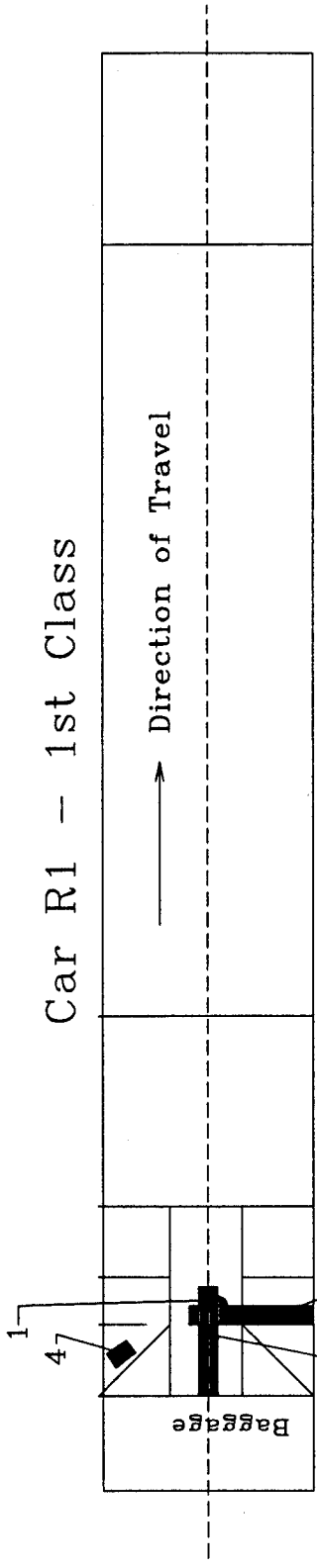
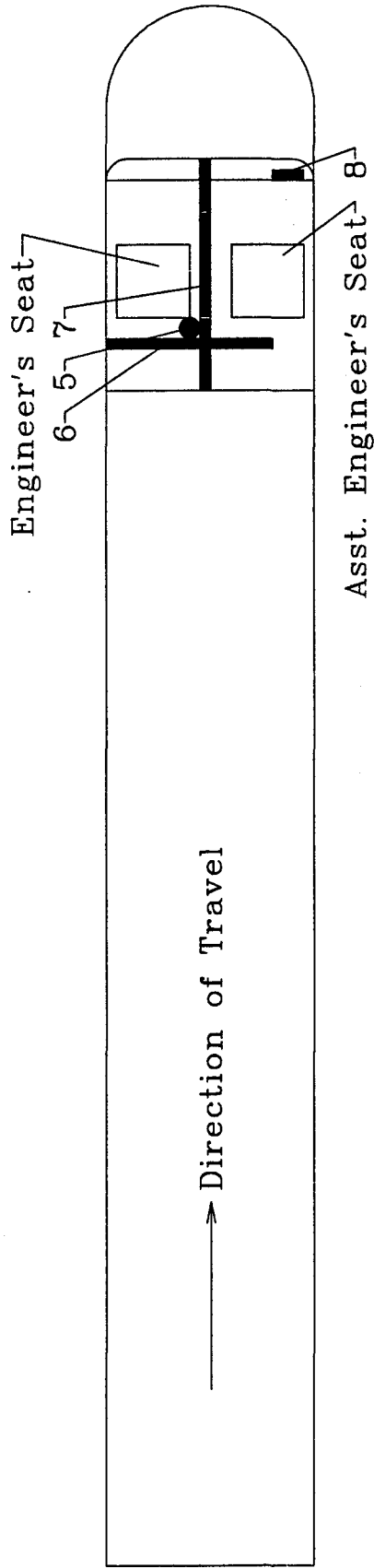


FIGURE A-1. CAR R1-FIRST CLASS, CAR R2-FIRST CLASS CLUB COACH, CAR R5-SECOND CLASS COACH

First Locomotive of Test Train



First Locomotive of Revenue Train

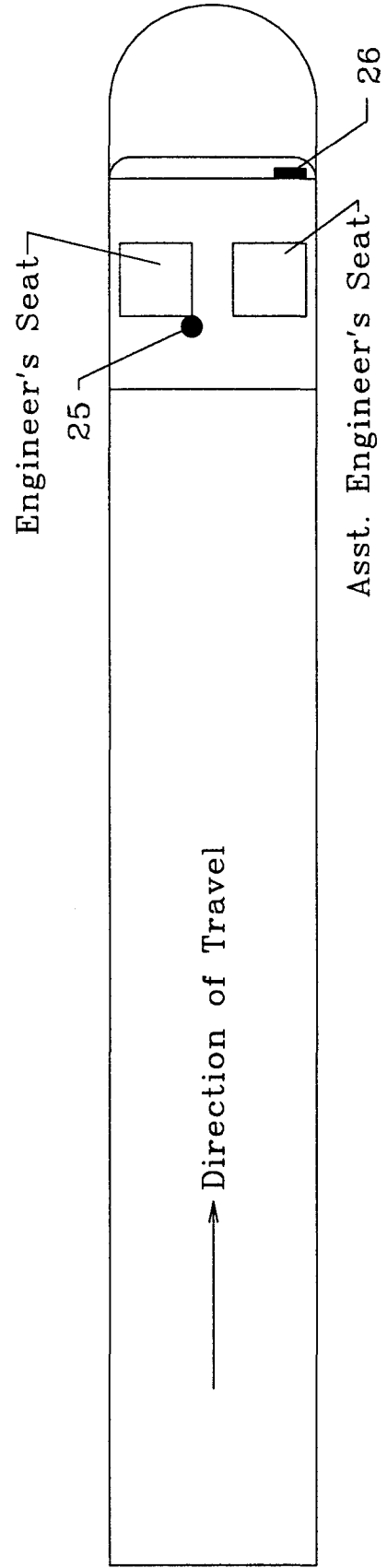


FIGURE A-2. FIRST LOCOMOTIVE OF TEST TRAIN, FIRST LOCOMOTIVE OF REVENUE TRAIN

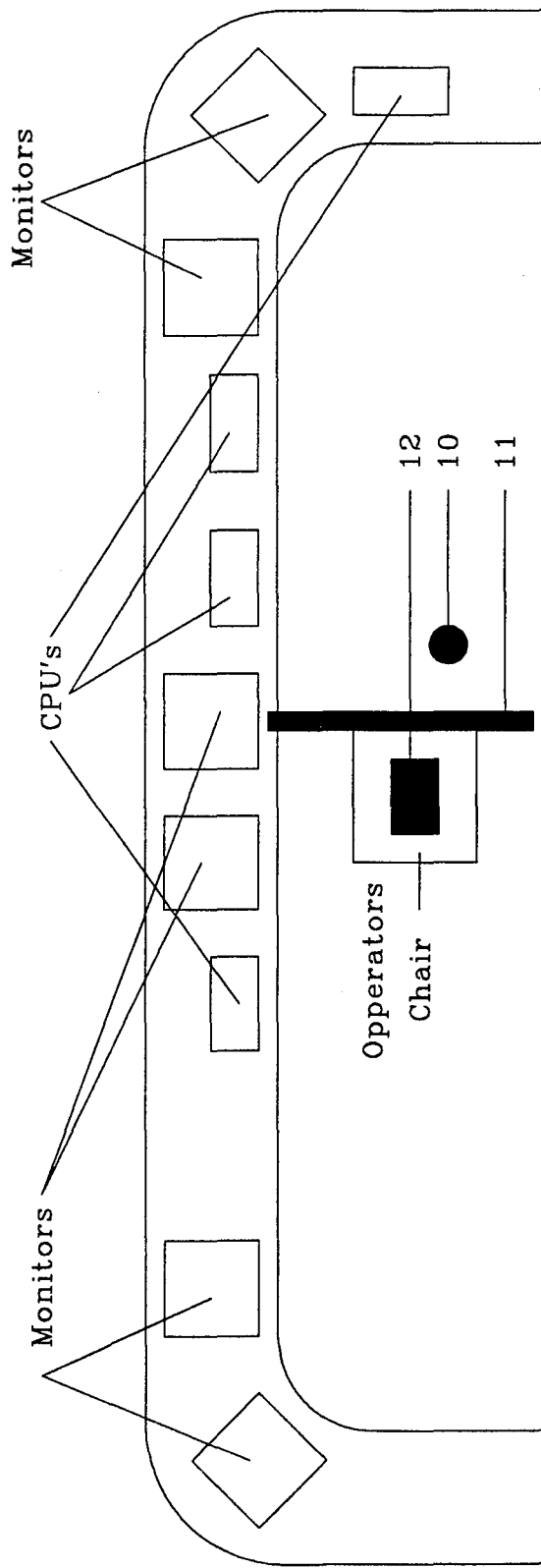


FIGURE A-3. TGV CONTROL CENTER IN PARIS (MONTPARNASSE STATION)

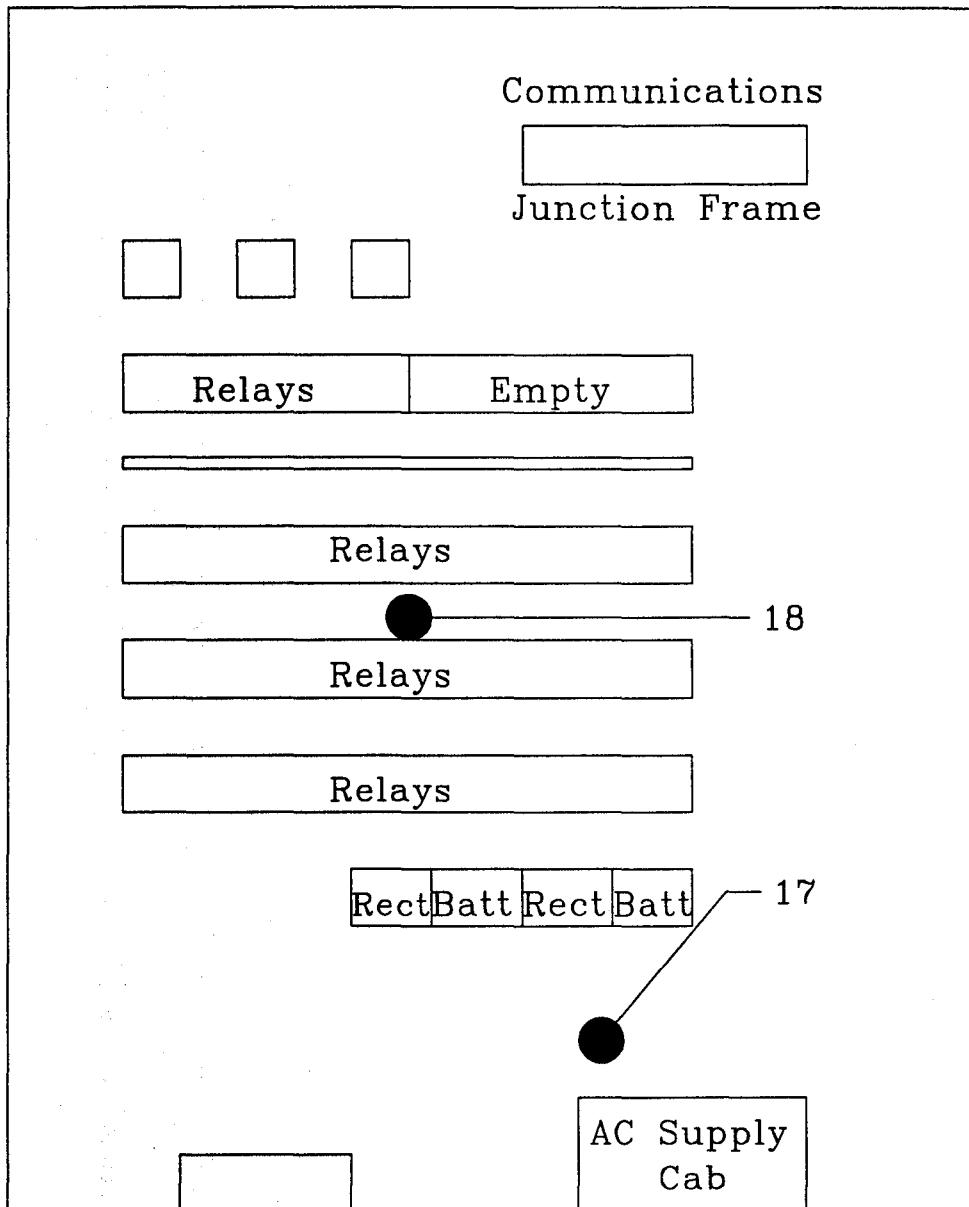


FIGURE A-4. RELAY ROOM VENDOME STATION

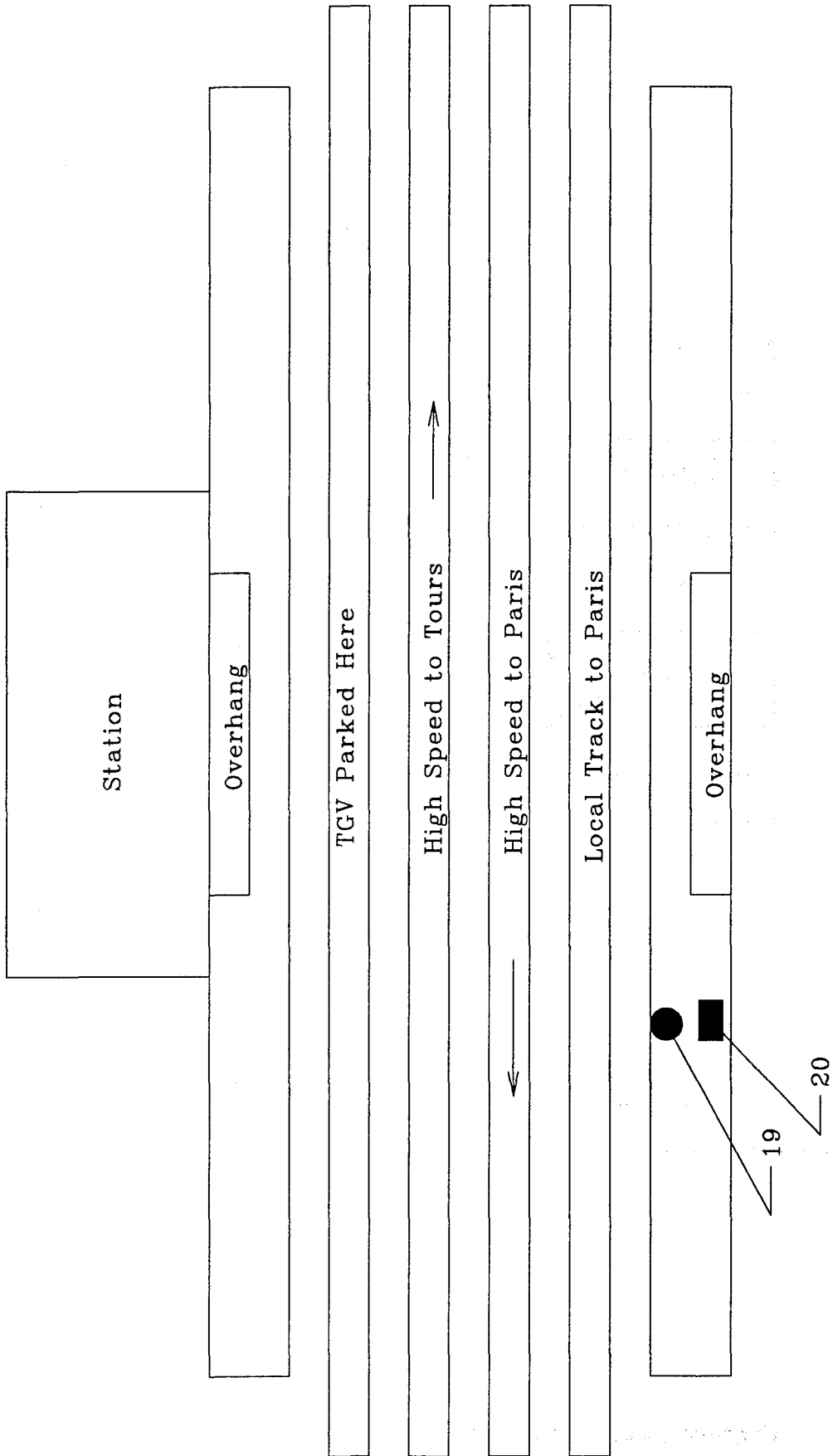


FIGURE A-5. VENDÔME STATION

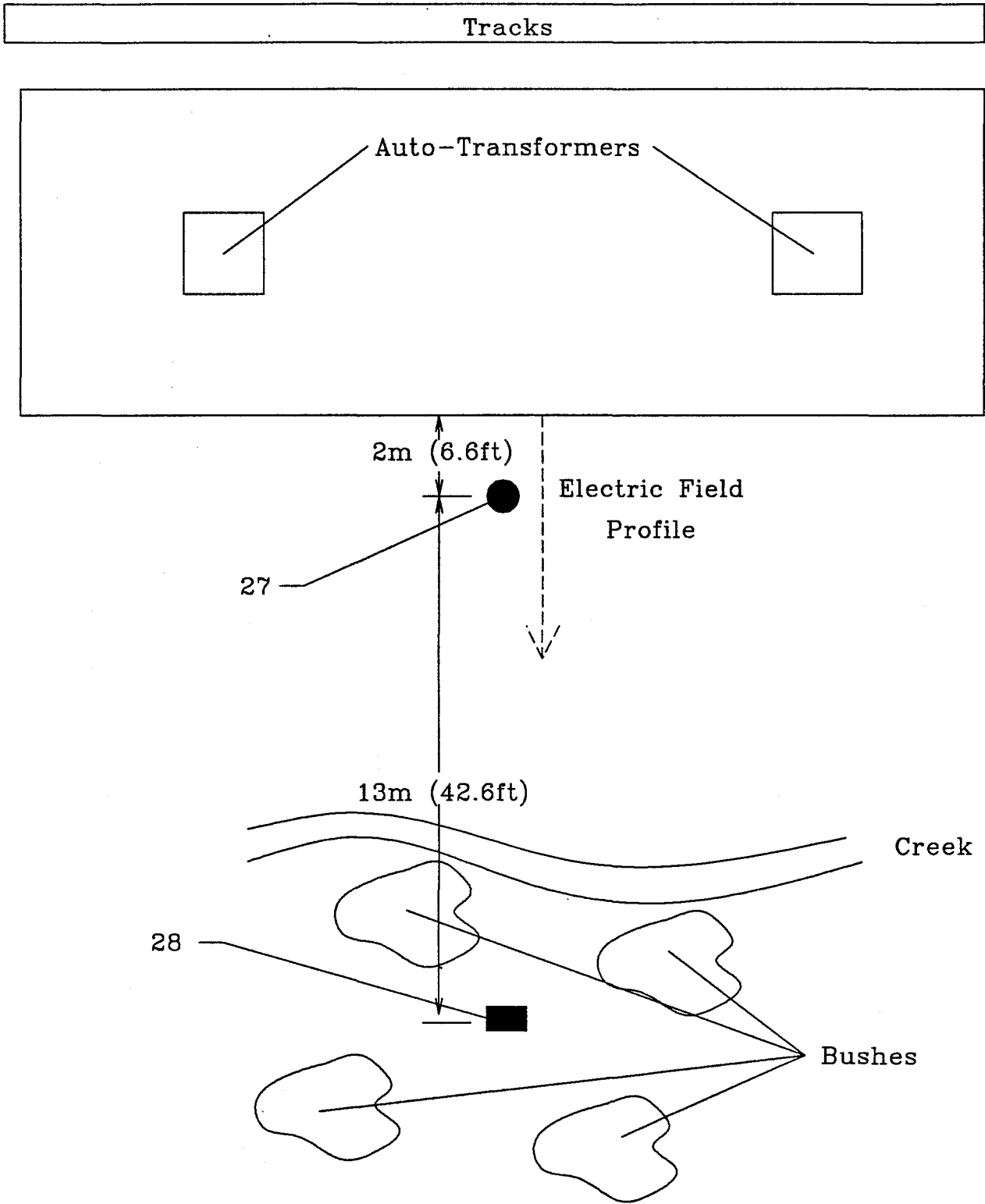


FIGURE A-6. AUTO-TRANSFORMER STATION CHAILLOT AT MARKER 120.875 km

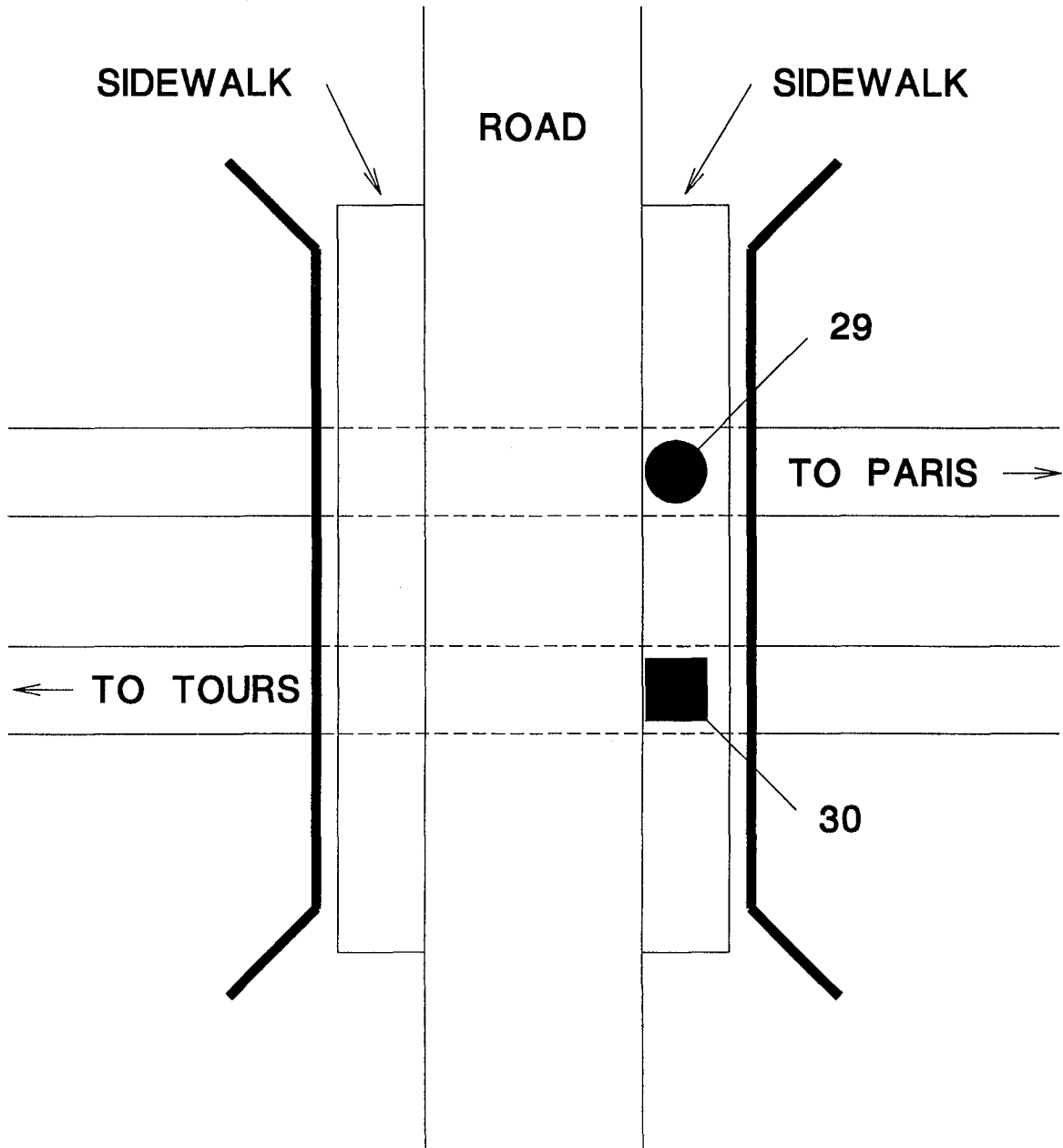


FIGURE A-7. HIGHWAY OVERPASS

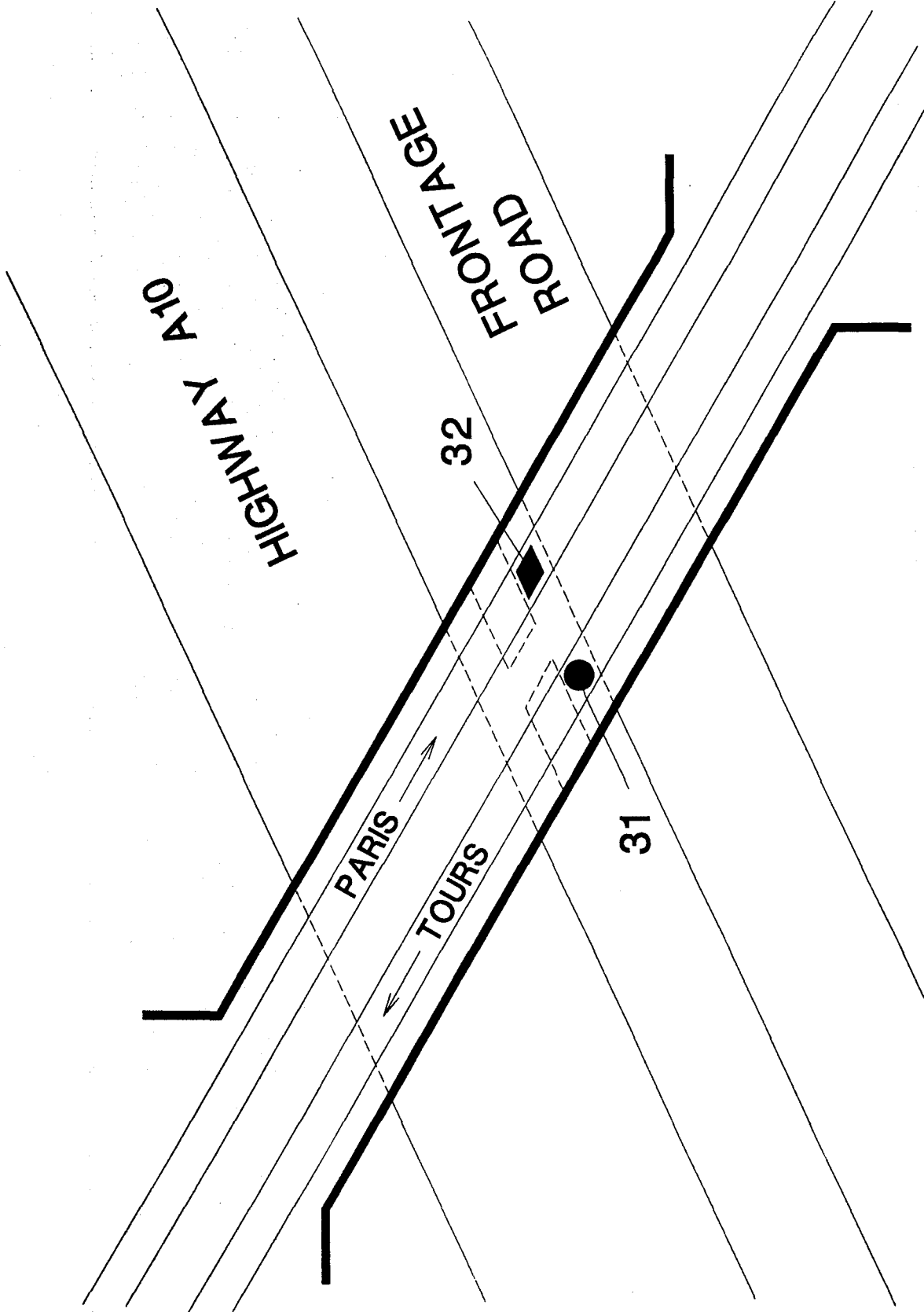


FIGURE A-8. HIGHWAY UNDERPASS

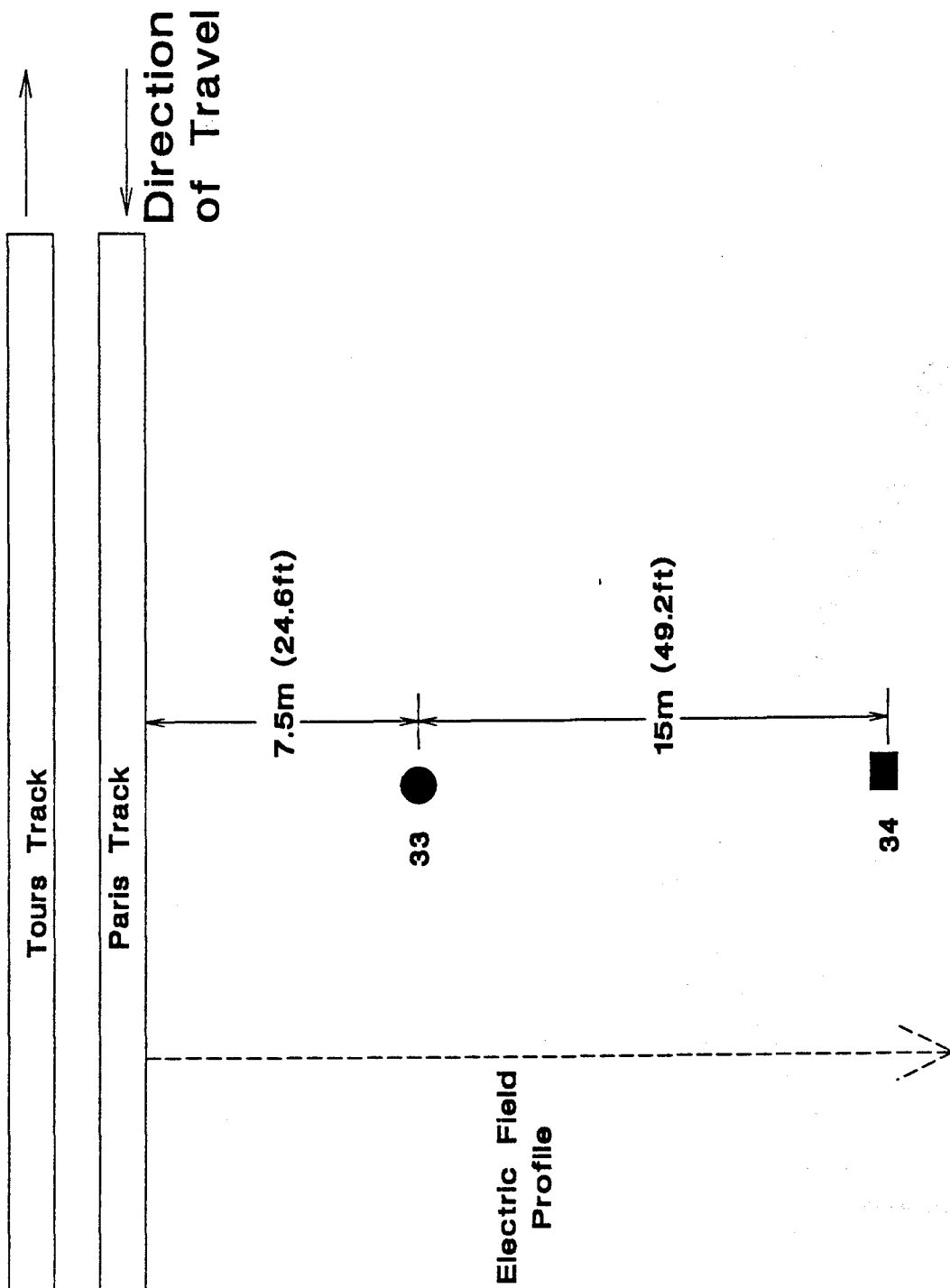


FIGURE A-9. WAYSIDE MEASUREMENT AT MARKER 104 km

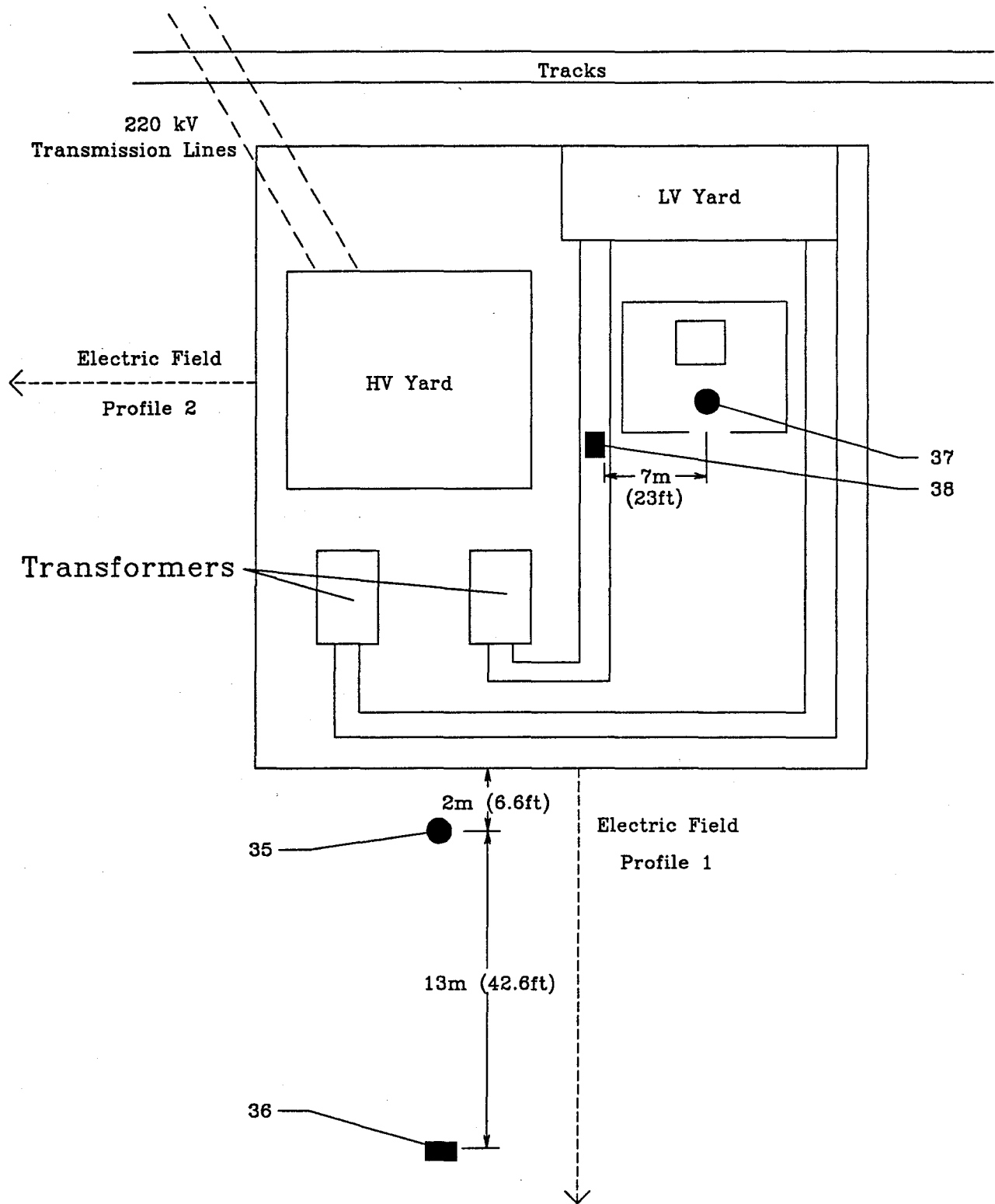


FIGURE A-10. GAULT ST. DENIS SUBSTATION

APPENDIX B

DATASET TGV001
FIRST CLASS SALON AT FRONT OF COACH R1B

Measurement Setup Code: Staff: 1 Reference: 4
Drawing: A-1

Vehicle Status: Coach trip from Montparnasse
station in Paris to Tours station

Measurement Date: September 8, 1992

Measurement Time: Start: 07:57:30
End: 08:16:30

Number of Samples: 101

Programmed Sample Interval: 10 sec

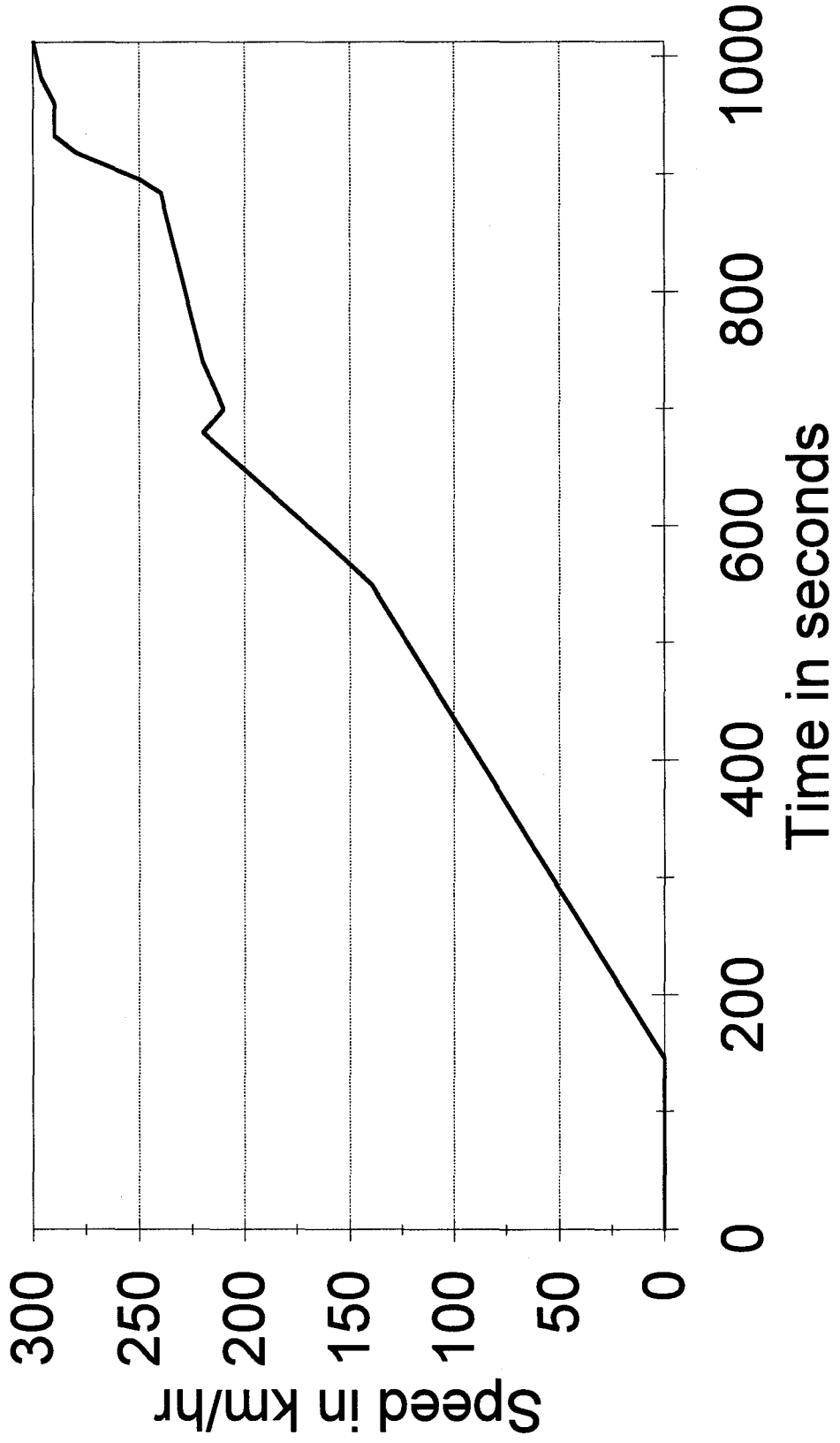
Actual Sample Interval: 11.4 sec

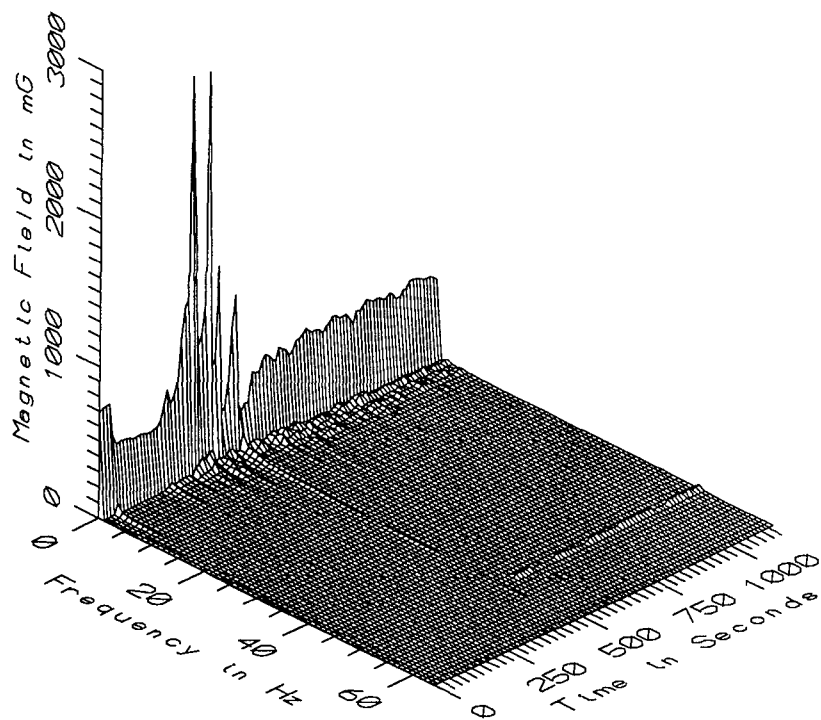
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

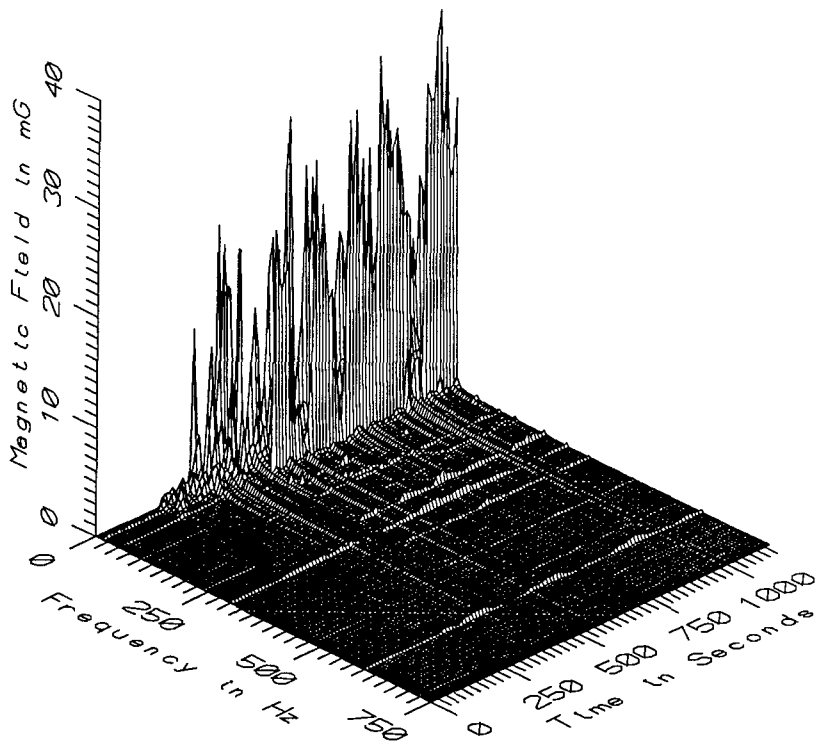
Missing or Suspect Data: None

TRAIN SPEED - TGV001

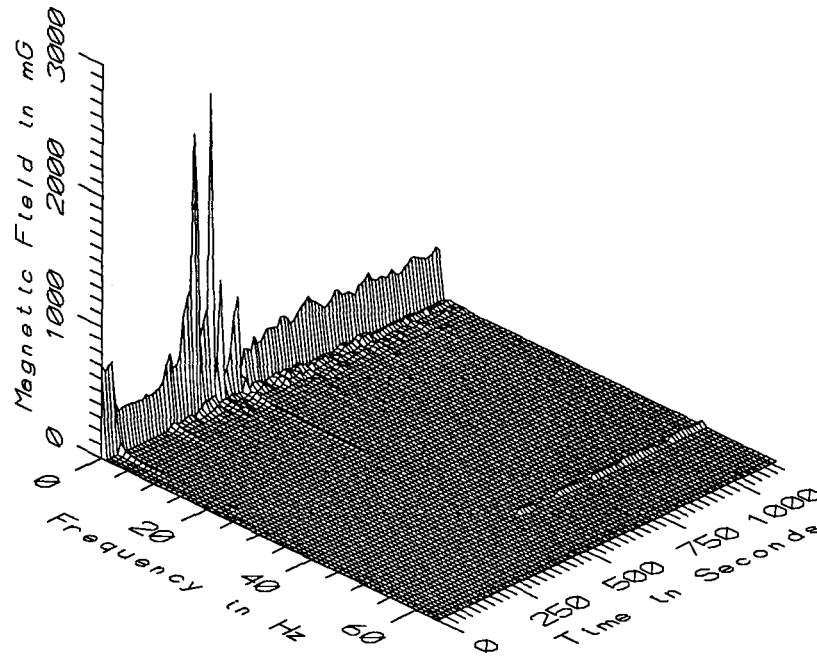




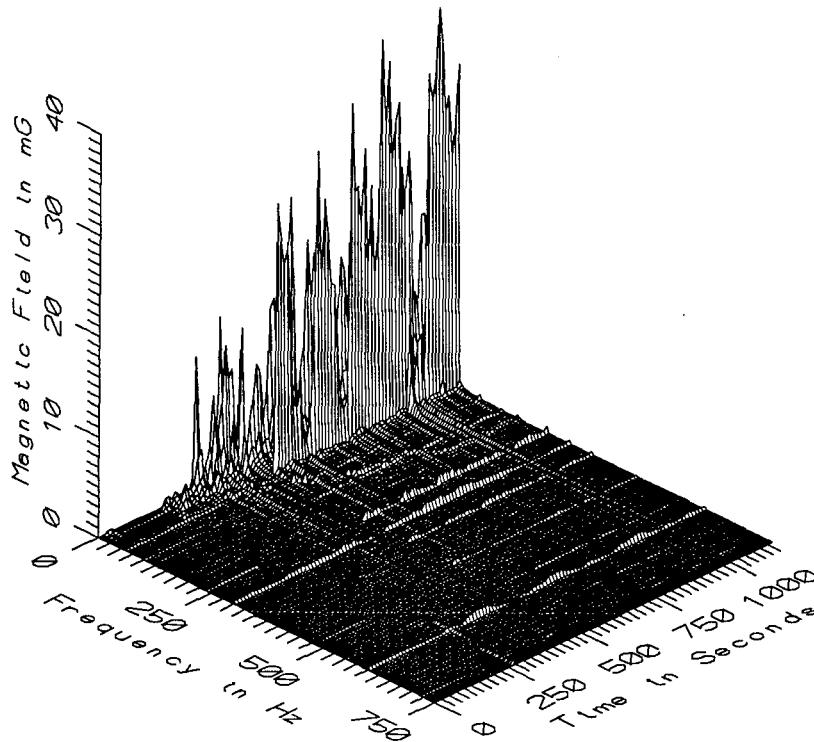
TGV001 - 10cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



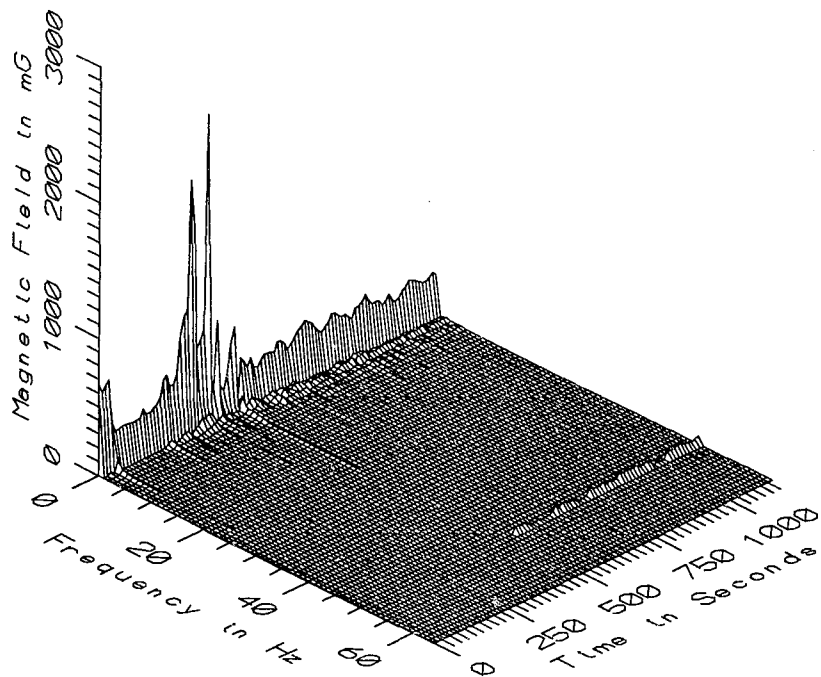
TGV001 - 10cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



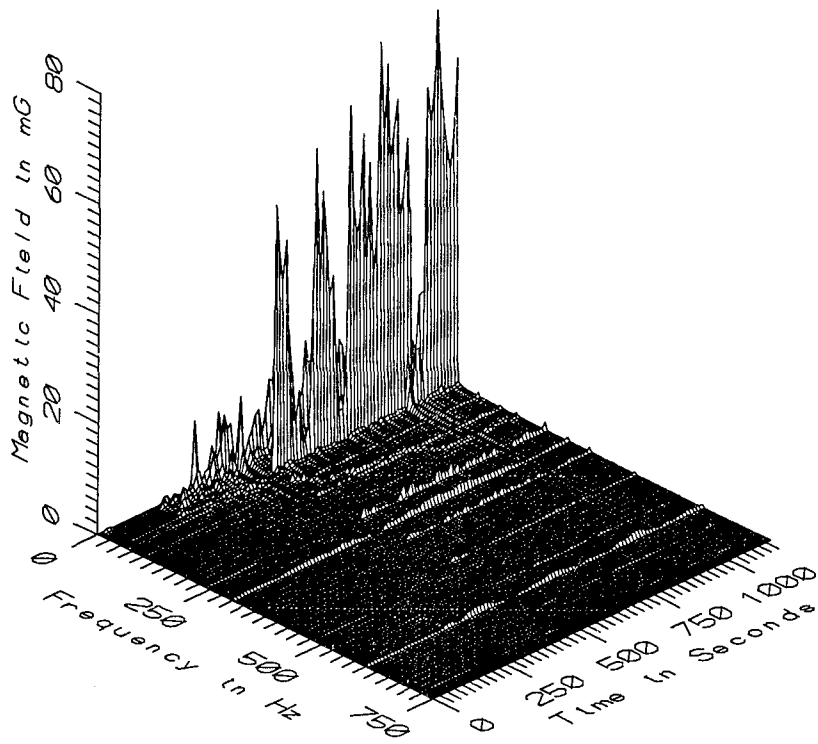
TGV001 - 60cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



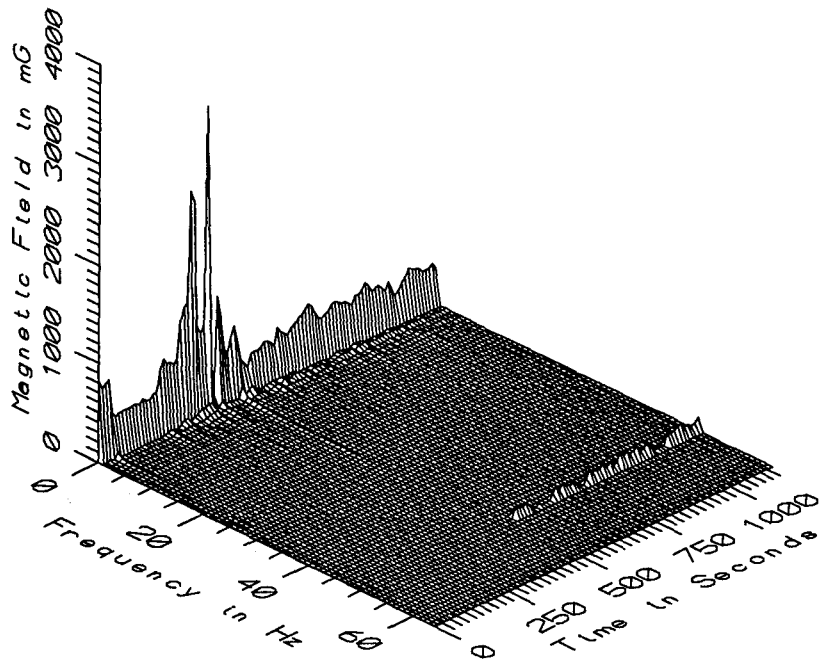
TGV001 - 60cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



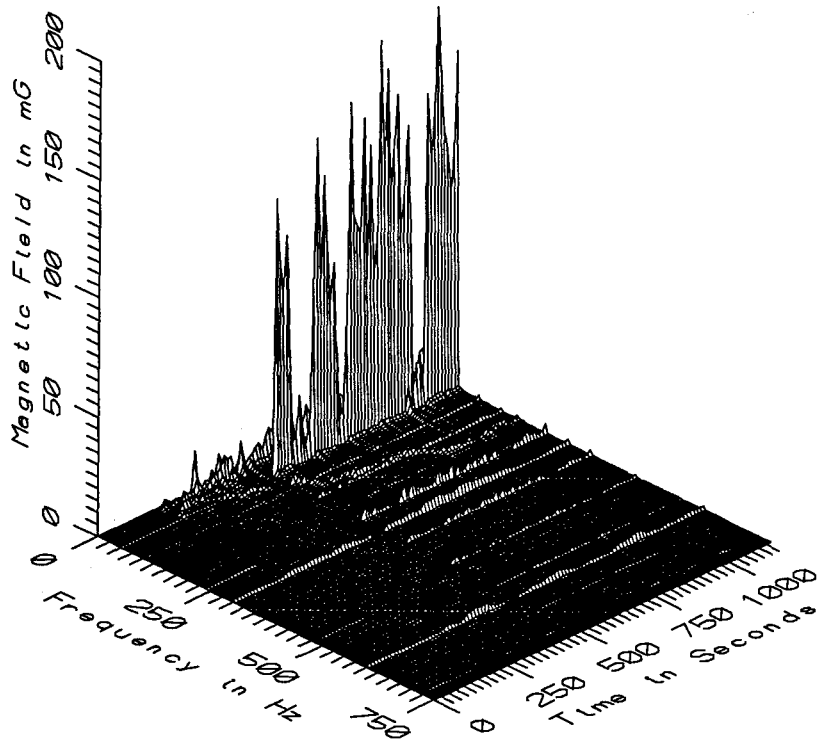
TGV001 - 110cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



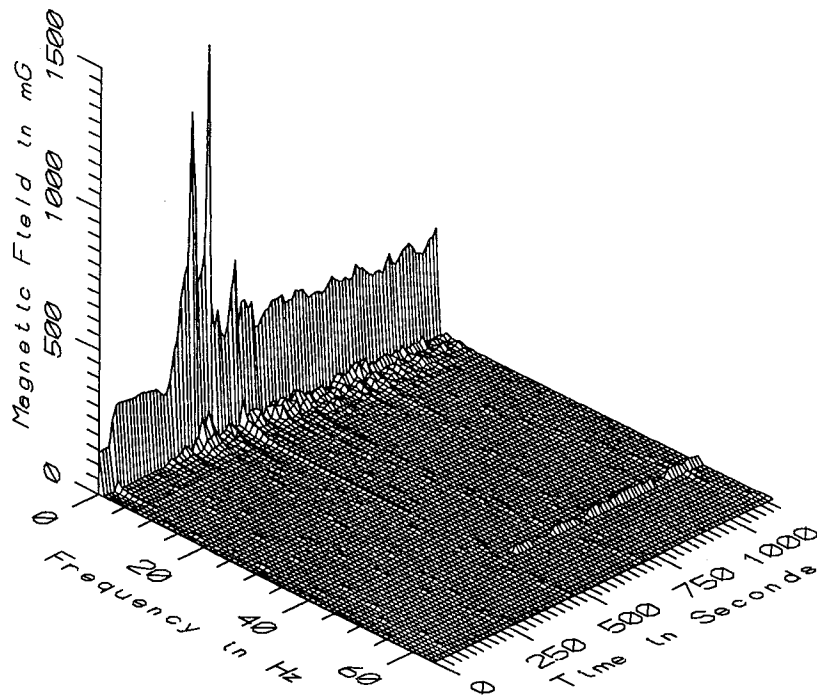
TGV001 - 110cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



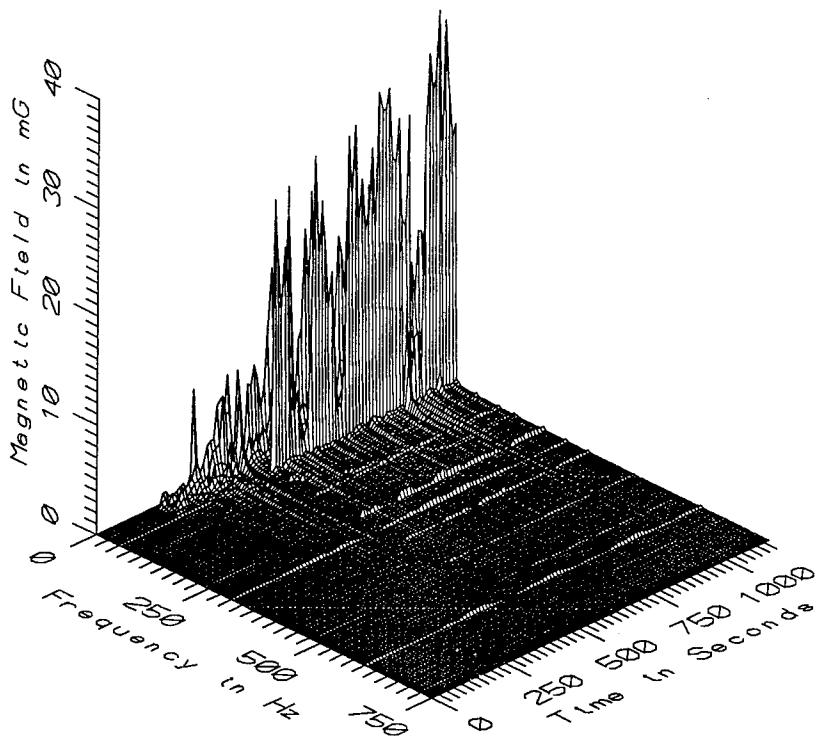
TGV001 - 160cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



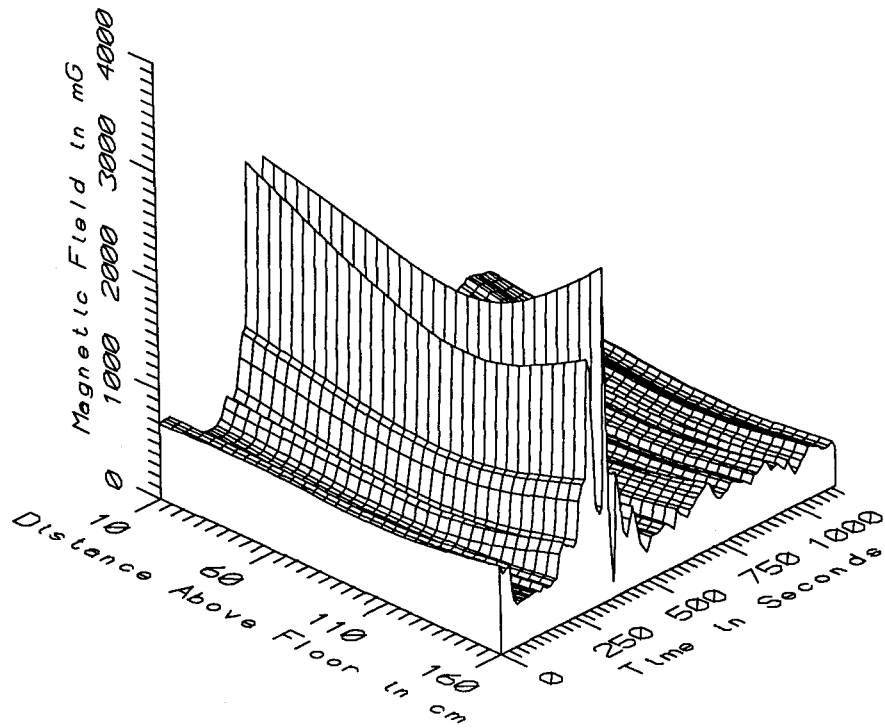
TGV001 - 160cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



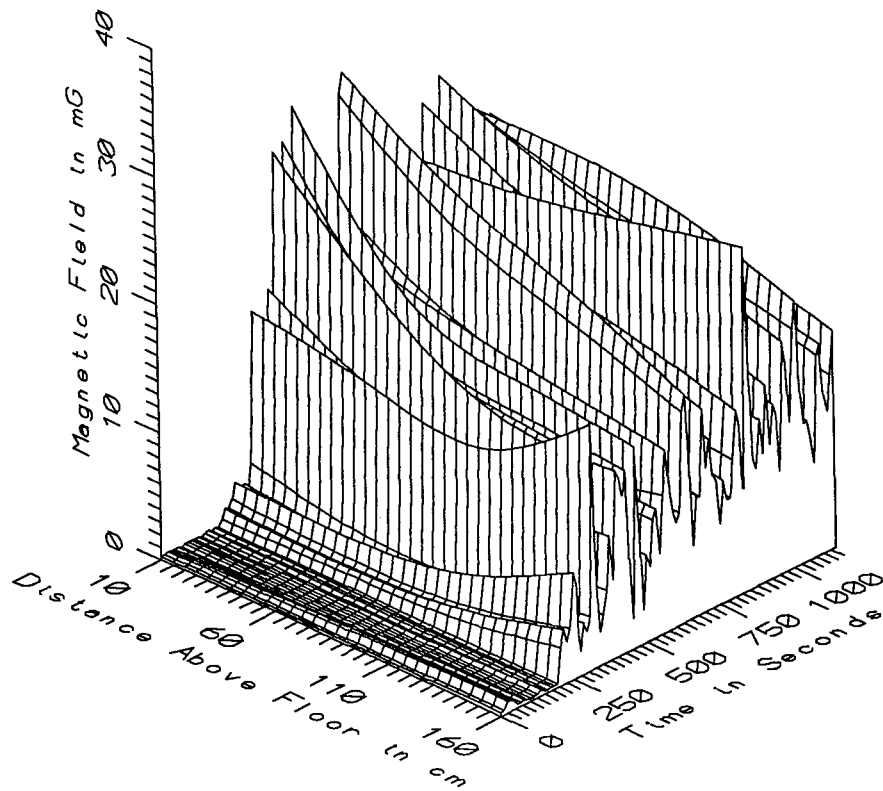
TGV001 - REFERENCE PROBE - ON CORNER SEAT AT FRONT OF COACH R1B



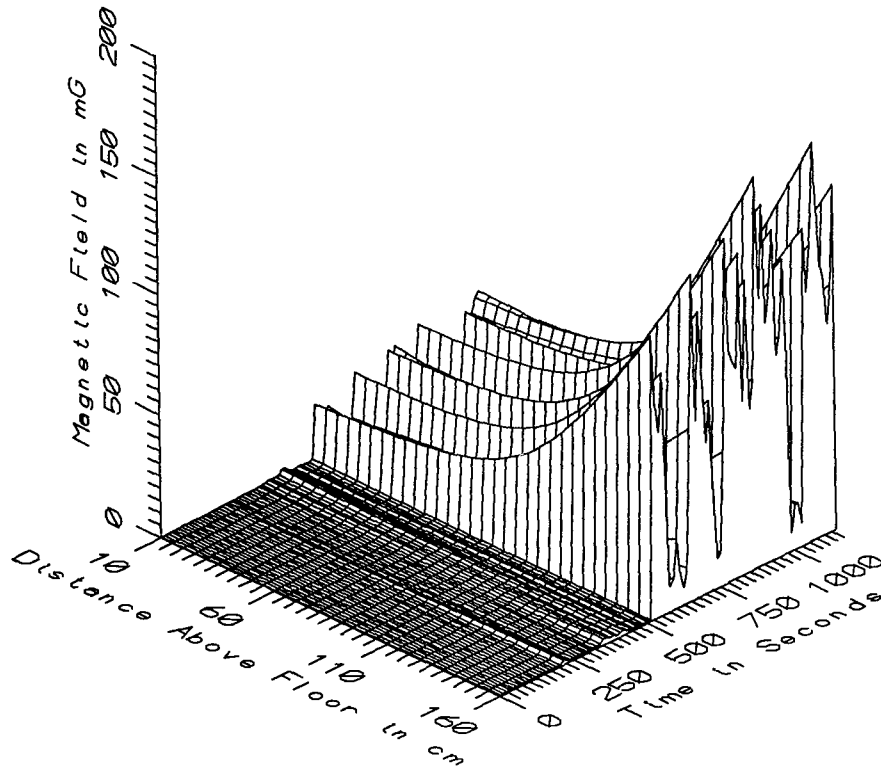
TGV001 - REFERENCE PROBE - ON CORNER SEAT AT FRONT OF COACH R1B



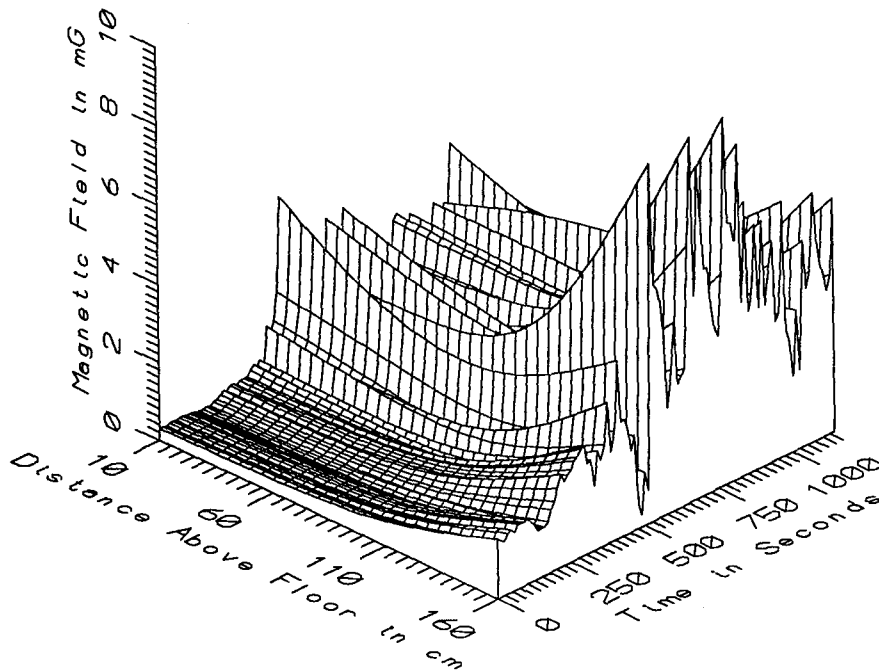
TGV001 - CENTER OF AISLE AT FRONT OF COACH R1B - STATIC



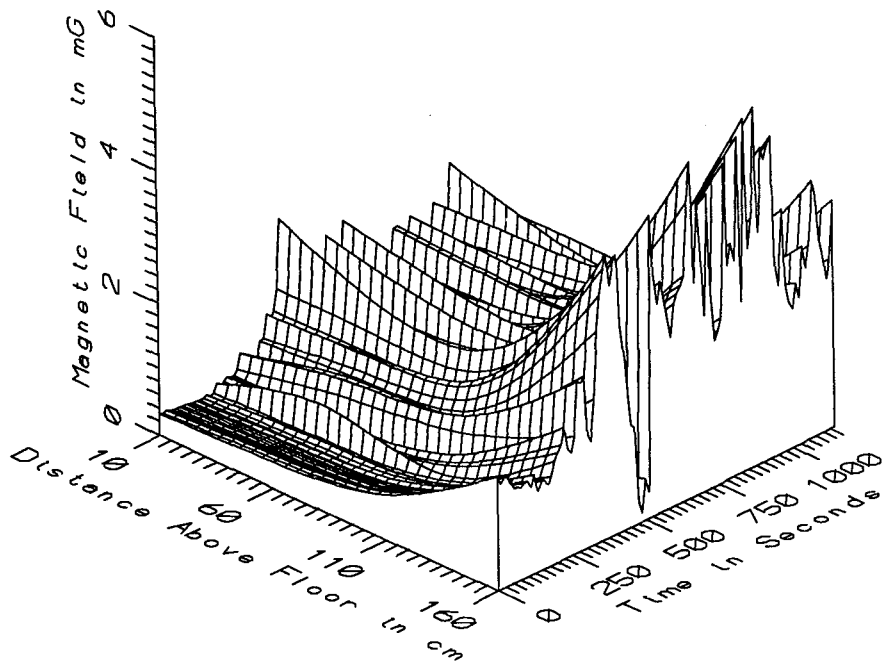
TGV001 - CENTER OF AISLE AT FRONT OF COACH R1B - LOW FREQ, 5-45Hz



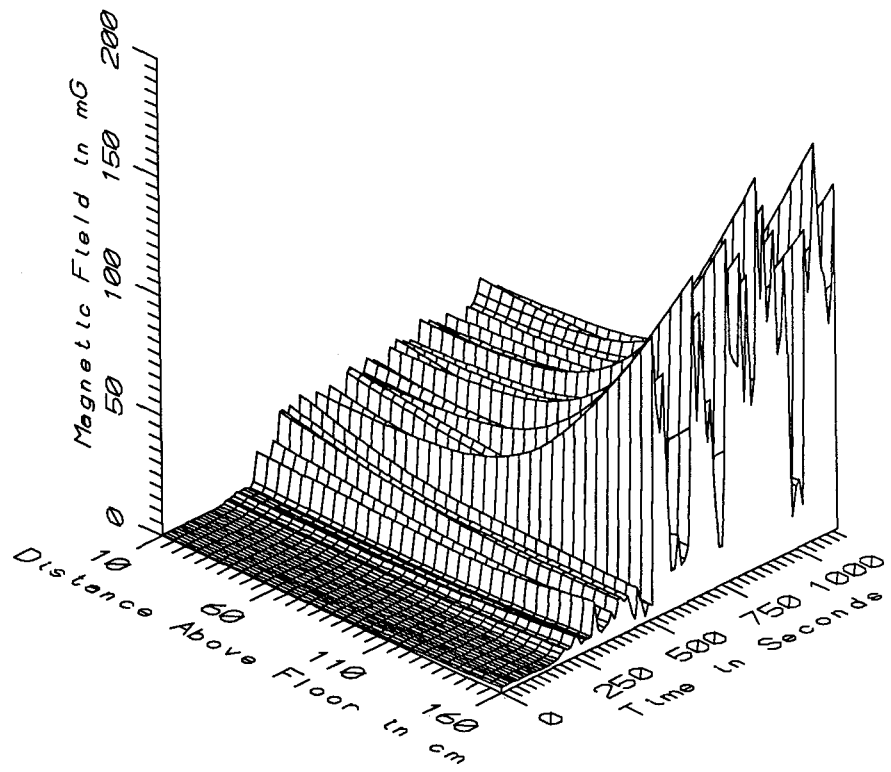
TGV001 - CENTER OF AISLE AT FRONT OF COACH R1B - POWER FREQ, 50-60Hz



TGV001 - CENTER OF AISLE AT FRONT OF COACH R1B - POWER HARM, 65-300Hz



TGV001 - CENTER OF AISLE AT FRONT OF COACH R1B - HIGH FREQ, 305-2560Hz



TGV001 - CENTER OF AISLE AT FRONT OF COACH R1B - ALL FREQ, 5-2560Hz

| TGV001 - FRONT OF FIRST COACH, ALL SAMPLES | | TOTAL OF 101 SAMPLES | | | | |
|--|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 260.98 | 2670.86 | 628.02 | 355.68 | 56.64 |
| | 60 | 109.82 | 2387.63 | 459.55 | 318.56 | 69.32 |
| | 110 | 37.37 | 2272.85 | 405.74 | 299.25 | 73.76 |
| | 160 | 138.85 | 3065.39 | 576.03 | 394.78 | 68.54 |
| 5-45HZ LOW FREQ | 10 | 0.19 | 30.83 | 12.03 | 9.06 | 75.29 |
| | 60 | 0.17 | 25.34 | 9.84 | 7.43 | 75.51 |
| | 110 | 0.12 | 24.83 | 9.02 | 6.69 | 74.19 |
| | 160 | 0.22 | 26.87 | 8.68 | 5.87 | 67.64 |
| 50-60HZ PWR FREQ | 10 | 0.13 | 35.83 | 10.01 | 11.22 | 112.06 |
| | 60 | 0.17 | 38.83 | 11.35 | 12.71 | 111.95 |
| | 110 | 0.16 | 70.13 | 19.79 | 22.65 | 114.43 |
| | 160 | 0.24 | 164.68 | 45.30 | 52.63 | 116.20 |
| 65-300HZ PWR HARM | 10 | 0.24 | 4.70 | 1.39 | 0.93 | 67.13 |
| | 60 | 0.31 | 3.43 | 1.33 | 0.79 | 59.85 |
| | 110 | 0.40 | 4.24 | 1.77 | 0.95 | 53.88 |
| | 160 | 0.31 | 9.30 | 3.67 | 2.09 | 56.94 |
| 305-2560HZ HIGH FREQ | 10 | 0.18 | 2.36 | 0.76 | 0.43 | 56.35 |
| | 60 | 0.19 | 1.70 | 0.81 | 0.36 | 44.76 |
| | 110 | 0.18 | 2.14 | 1.20 | 0.51 | 42.24 |
| | 160 | 0.14 | 5.40 | 2.74 | 1.19 | 43.61 |
| 5-2560HZ ALL FREQ | 10 | 0.44 | 41.38 | 17.22 | 12.62 | 73.30 |
| | 60 | 0.53 | 40.13 | 16.56 | 13.08 | 78.97 |
| | 110 | 0.80 | 70.69 | 23.66 | 21.83 | 92.27 |
| | 160 | 1.88 | 165.02 | 48.73 | 50.81 | 104.27 |

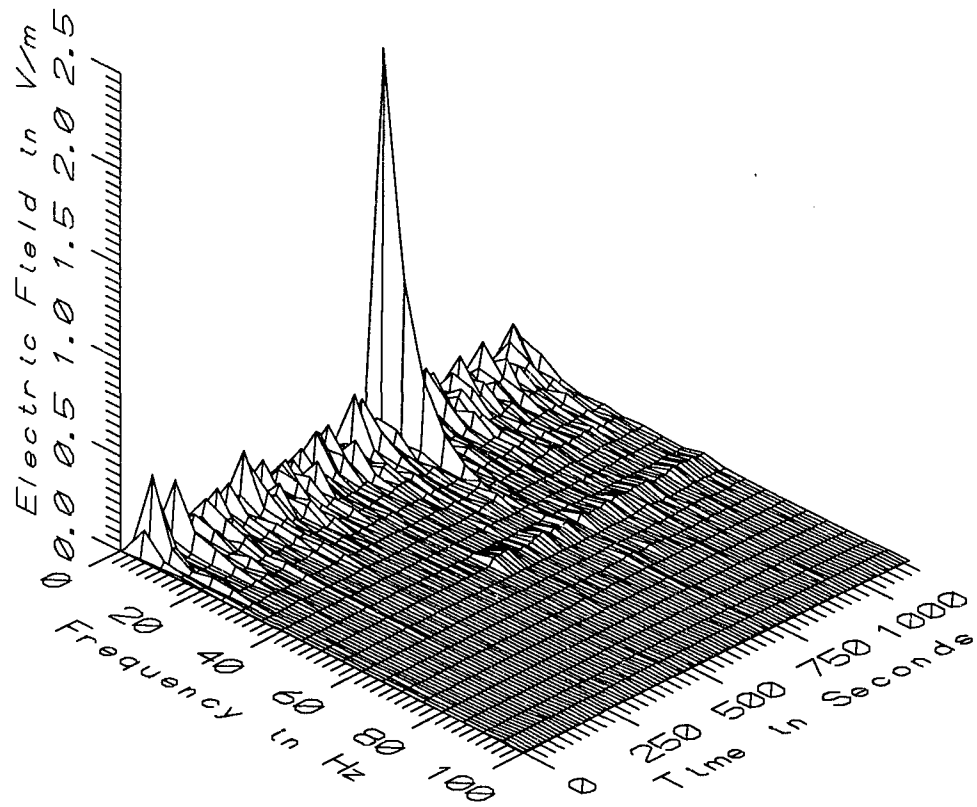
| TGV001 - TRAIN AT REST | | TOTAL OF 19 SAMPLES | | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|--|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) | |
| STATIC | 10 | 402.22 | 713.09 | 485.82 | 118.78 | 24.45 | |
| | 60 | 293.32 | 702.26 | 390.66 | 155.01 | 39.68 | |
| | 110 | 260.74 | 660.45 | 362.35 | 148.86 | 41.08 | |
| | 160 | 383.93 | 813.05 | 496.20 | 155.65 | 31.37 | |
| 5-45Hz LOW FREQ | 10 | 0.19 | 0.84 | 0.37 | 0.14 | 37.09 | |
| | 60 | 0.17 | 1.00 | 0.32 | 0.20 | 63.34 | |
| | 110 | 0.12 | 1.37 | 0.33 | 0.33 | 98.57 | |
| | 160 | 0.22 | 2.96 | 0.53 | 0.63 | 119.13 | |
| 50-60Hz PWR FREQ | 10 | 0.13 | 0.28 | 0.18 | 0.04 | 23.39 | |
| | 60 | 0.17 | 0.36 | 0.24 | 0.06 | 25.83 | |
| | 110 | 0.16 | 0.60 | 0.35 | 0.11 | 30.33 | |
| | 160 | 0.47 | 0.65 | 0.53 | 0.04 | 7.65 | |
| 65-300Hz PWR HARM | 10 | 0.24 | 0.40 | 0.29 | 0.04 | 12.99 | |
| | 60 | 0.31 | 0.45 | 0.38 | 0.04 | 10.47 | |
| | 110 | 0.49 | 0.84 | 0.63 | 0.08 | 12.22 | |
| | 160 | 1.19 | 2.01 | 1.49 | 0.20 | 13.32 | |
| 305-2560Hz HIGH FREQ | 10 | 0.20 | 0.35 | 0.26 | 0.04 | 15.04 | |
| | 60 | 0.30 | 0.76 | 0.37 | 0.10 | 27.34 | |
| | 110 | 0.49 | 0.70 | 0.58 | 0.07 | 11.31 | |
| | 160 | 1.25 | 1.76 | 1.49 | 0.15 | 9.90 | |
| 5-2560Hz ALL FREQ | 10 | 0.44 | 1.02 | 0.58 | 0.12 | 20.79 | |
| | 60 | 0.53 | 1.22 | 0.68 | 0.17 | 25.45 | |
| | 110 | 0.80 | 1.82 | 1.02 | 0.23 | 22.25 | |
| | 160 | 1.88 | 4.00 | 2.29 | 0.45 | 19.89 | |

| TGV001 - TRAIN MOVING | | TOTAL OF 82 SAMPLES | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 260.98 | 2670.86 | 660.97 | 383.68 | 58.05 |
| | 60 | 109.82 | 2387.63 | 475.51 | 344.34 | 72.42 |
| | 110 | 37.37 | 2272.85 | 415.79 | 324.18 | 77.97 |
| | 160 | 138.85 | 3065.39 | 594.53 | 430.33 | 72.38 |
| 5-45Hz LOW FREQ | 10 | 1.45 | 30.83 | 14.74 | 7.87 | 53.43 |
| | 60 | 1.18 | 25.34 | 12.05 | 6.48 | 53.77 |
| | 110 | 1.24 | 24.83 | 11.04 | 5.78 | 52.41 |
| | 160 | 1.94 | 26.87 | 10.57 | 4.83 | 45.64 |
| 50-60Hz PWR FREQ | 10 | 0.25 | 35.83 | 12.29 | 11.29 | 91.88 |
| | 60 | 0.30 | 38.83 | 13.93 | 12.80 | 91.88 |
| | 110 | 0.37 | 70.13 | 24.30 | 22.90 | 94.22 |
| | 160 | 0.24 | 164.68 | 55.67 | 53.30 | 95.75 |
| 65-300Hz PWR HARM | 10 | 0.36 | 4.70 | 1.65 | 0.85 | 51.90 |
| | 60 | 0.36 | 3.43 | 1.55 | 0.72 | 46.53 |
| | 110 | 0.40 | 4.24 | 2.03 | 0.87 | 42.54 |
| | 160 | 0.31 | 9.30 | 4.18 | 2.00 | 47.95 |
| 305-2560Hz HIGH FREQ | 10 | 0.18 | 2.36 | 0.88 | 0.39 | 44.96 |
| | 60 | 0.19 | 1.70 | 0.92 | 0.32 | 35.42 |
| | 110 | 0.18 | 2.14 | 1.35 | 0.45 | 33.76 |
| | 160 | 0.14 | 5.40 | 3.03 | 1.14 | 37.74 |
| 5-2560Hz ALL FREQ | 10 | 1.61 | 41.38 | 21.08 | 10.80 | 51.24 |
| | 60 | 1.41 | 40.13 | 20.24 | 11.76 | 58.11 |
| | 110 | 2.03 | 70.69 | 28.90 | 20.98 | 72.59 |
| | 160 | 2.64 | 165.02 | 59.49 | 50.64 | 85.12 |

| TGV001 - DC SECTION ONLY | | TOTAL OF 17 SAMPLES | | | | |
|--------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 530.72 | 2670.86 | 1096.78 | 664.41 | 60.58 |
| | 60 | 109.82 | 2387.63 | 852.09 | 621.15 | 72.90 |
| | 110 | 196.31 | 2272.85 | 793.22 | 566.98 | 71.48 |
| | 160 | 138.85 | 3065.39 | 1110.93 | 734.51 | 66.12 |
| 5-45Hz LOW FREQ | 10 | 1.45 | 27.28 | 7.00 | 7.18 | 102.55 |
| | 60 | 1.18 | 19.29 | 5.22 | 5.37 | 102.91 |
| | 110 | 1.24 | 14.63 | 4.71 | 4.08 | 86.69 |
| | 160 | 1.94 | 19.11 | 6.34 | 4.52 | 71.29 |
| 50-60Hz PWR FREQ | 10 | 0.28 | 1.44 | 0.61 | 0.38 | 61.41 |
| | 60 | 0.30 | 1.20 | 0.56 | 0.31 | 55.88 |
| | 110 | 0.37 | 1.22 | 0.76 | 0.27 | 35.04 |
| | 160 | 0.54 | 2.58 | 1.24 | 0.66 | 53.52 |
| 65-300Hz PWR HARM | 10 | 0.41 | 2.33 | 0.83 | 0.54 | 65.82 |
| | 60 | 0.48 | 1.87 | 0.75 | 0.38 | 50.30 |
| | 110 | 0.64 | 1.65 | 1.06 | 0.24 | 22.66 |
| | 160 | 1.62 | 3.55 | 2.44 | 0.40 | 16.32 |
| 305-2560Hz HIGH FREQ | 10 | 0.33 | 1.34 | 0.61 | 0.30 | 49.34 |
| | 60 | 0.38 | 1.32 | 0.75 | 0.31 | 41.45 |
| | 110 | 0.60 | 1.72 | 1.11 | 0.39 | 34.95 |
| | 160 | 1.57 | 4.27 | 2.66 | 1.00 | 37.57 |
| 5-2560Hz ALL FREQ | 10 | 1.61 | 27.45 | 7.14 | 7.18 | 100.56 |
| | 60 | 1.41 | 19.46 | 5.43 | 5.31 | 97.82 |
| | 110 | 2.14 | 14.85 | 5.15 | 3.93 | 76.26 |
| | 160 | 4.20 | 19.32 | 7.71 | 4.13 | 53.63 |

| TGV001 - TRANSITION BETWEEN DC & AC SECTIONS | | TOTAL OF 10 SAMPLES | | | | |
|--|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 260.98 | 1057.78 | 471.74 | 269.80 | 57.19 |
| | 60 | 141.36 | 739.93 | 348.47 | 184.17 | 52.85 |
| | 110 | 37.37 | 619.50 | 317.31 | 158.85 | 50.06 |
| | 160 | 259.80 | 920.23 | 523.13 | 205.37 | 39.26 |
| 5-45Hz LOW FREQ | 10 | 2.47 | 30.13 | 15.10 | 10.67 | 70.63 |
| | 60 | 2.09 | 19.10 | 9.95 | 6.44 | 64.70 |
| | 110 | 1.61 | 16.60 | 8.86 | 5.38 | 60.69 |
| | 160 | 2.34 | 15.63 | 8.86 | 4.88 | 55.09 |
| 50-60Hz PWR FREQ | 10 | 0.25 | 2.86 | 1.09 | 0.99 | 90.86 |
| | 60 | 0.33 | 1.75 | 0.76 | 0.48 | 62.97 |
| | 110 | 0.40 | 1.44 | 0.83 | 0.37 | 44.44 |
| | 160 | 0.24 | 2.01 | 0.92 | 0.56 | 60.62 |
| 65-300Hz PWR HARM | 10 | 0.36 | 4.70 | 1.55 | 1.37 | 88.21 |
| | 60 | 0.36 | 3.03 | 1.15 | 0.78 | 67.80 |
| | 110 | 0.40 | 2.84 | 1.28 | 0.70 | 54.51 |
| | 160 | 0.31 | 4.48 | 2.05 | 1.28 | 62.68 |
| 305-2560Hz HIGH FREQ | 10 | 0.18 | 2.36 | 0.74 | 0.66 | 88.69 |
| | 60 | 0.19 | 1.70 | 0.63 | 0.44 | 68.82 |
| | 110 | 0.18 | 2.02 | 0.80 | 0.56 | 69.54 |
| | 160 | 0.14 | 4.20 | 1.65 | 1.35 | 82.24 |
| 5-2560Hz ALL FREQ | 10 | 2.51 | 30.17 | 15.27 | 10.77 | 70.53 |
| | 60 | 2.16 | 19.15 | 10.08 | 6.48 | 64.33 |
| | 110 | 2.03 | 16.71 | 9.07 | 5.40 | 59.56 |
| | 160 | 2.64 | 15.91 | 9.41 | 5.00 | 53.08 |

| TGV001 - AC SECTION ONLY | | TOTAL OF 55 SAMPLES | | | | |
|--------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 468.16 | 616.00 | 560.66 | 34.82 | 6.21 |
| | 60 | 310.21 | 490.82 | 382.21 | 37.16 | 9.72 |
| | 110 | 243.42 | 417.22 | 317.03 | 40.04 | 12.63 |
| | 160 | 294.30 | 613.81 | 447.90 | 64.06 | 14.30 |
| 5-45Hz LOW FREQ | 10 | 5.00 | 30.83 | 17.06 | 5.86 | 34.36 |
| | 60 | 4.11 | 25.34 | 14.54 | 5.07 | 34.84 |
| | 110 | 4.24 | 24.83 | 13.39 | 4.62 | 34.48 |
| | 160 | 5.70 | 26.87 | 12.19 | 4.01 | 32.85 |
| 50-60Hz PWR FREQ | 10 | 1.93 | 35.83 | 17.93 | 9.61 | 53.60 |
| | 60 | 2.50 | 38.83 | 20.45 | 10.67 | 52.17 |
| | 110 | 3.42 | 70.13 | 35.84 | 19.34 | 53.96 |
| | 160 | 7.17 | 164.68 | 82.45 | 45.20 | 54.83 |
| 65-300Hz PWR HARM | 10 | 0.80 | 3.90 | 1.92 | 0.64 | 33.32 |
| | 60 | 0.87 | 3.43 | 1.87 | 0.55 | 29.42 |
| | 110 | 1.10 | 4.24 | 2.47 | 0.65 | 26.33 |
| | 160 | 1.93 | 9.30 | 5.11 | 1.74 | 34.09 |
| 305-2560Hz HIGH FREQ | 10 | 0.43 | 1.92 | 0.98 | 0.31 | 31.55 |
| | 60 | 0.54 | 1.57 | 1.02 | 0.25 | 24.80 |
| | 110 | 0.93 | 2.14 | 1.52 | 0.33 | 21.98 |
| | 160 | 2.09 | 5.40 | 3.39 | 0.91 | 26.77 |
| 5-2560Hz ALL FREQ | 10 | 10.99 | 41.38 | 26.45 | 6.61 | 24.98 |
| | 60 | 9.50 | 40.13 | 26.66 | 7.87 | 29.52 |
| | 110 | 9.23 | 70.69 | 39.85 | 16.68 | 41.86 |
| | 160 | 14.29 | 165.02 | 84.61 | 43.43 | 51.33 |



TGV001 - ELECTRIC FIELD IN COACH R1B



APPENDIX C

DATASET TGV002
FIRST CLASS SALON AT FRONT OF COACH R1B

Measurement Setup Code: Staff: 1 Reference: 4
 Drawing: A-1

Vehicle Status: Coach trip from Montparnasse
 station in Paris to Tours station

Measurement Date: September 8, 1992

Measurement Time: Start: 08:17:38
 End: 08:21:35

Number of Samples: 9

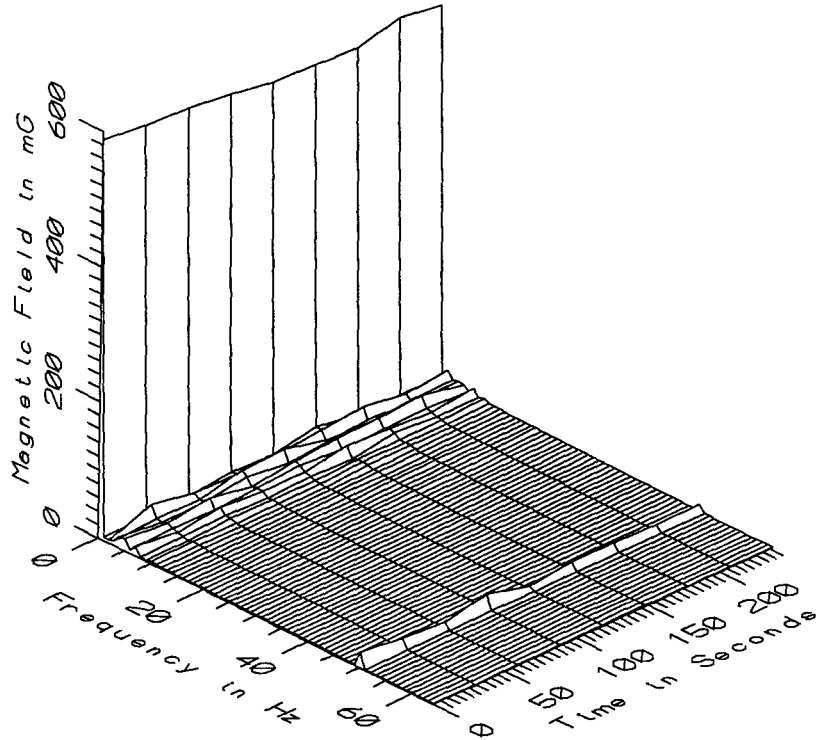
Programmed Sample Interval: 30 sec

Actual Sample Interval: 29.6 sec

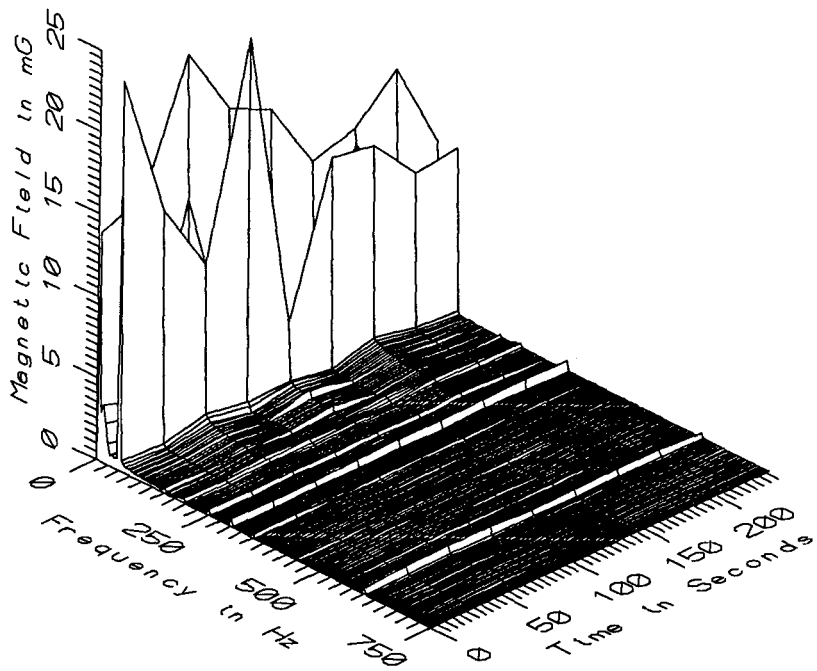
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

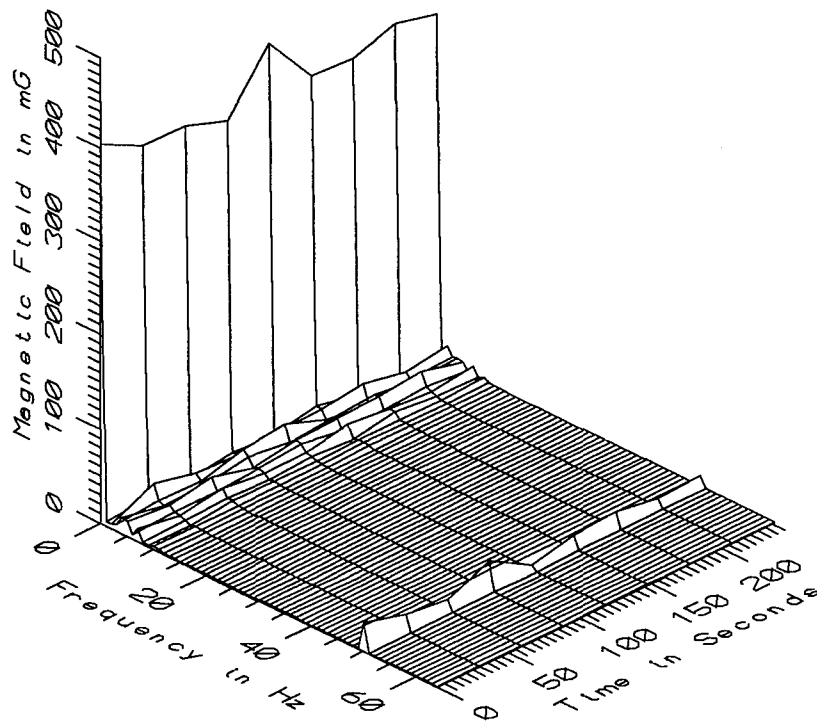
Missing or Suspect Data: None



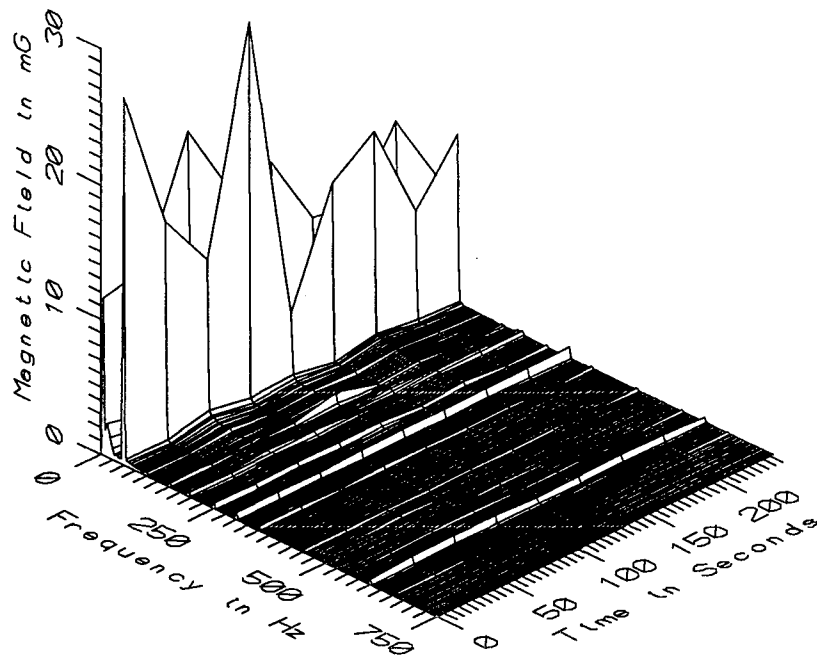
TGV002 - 10cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



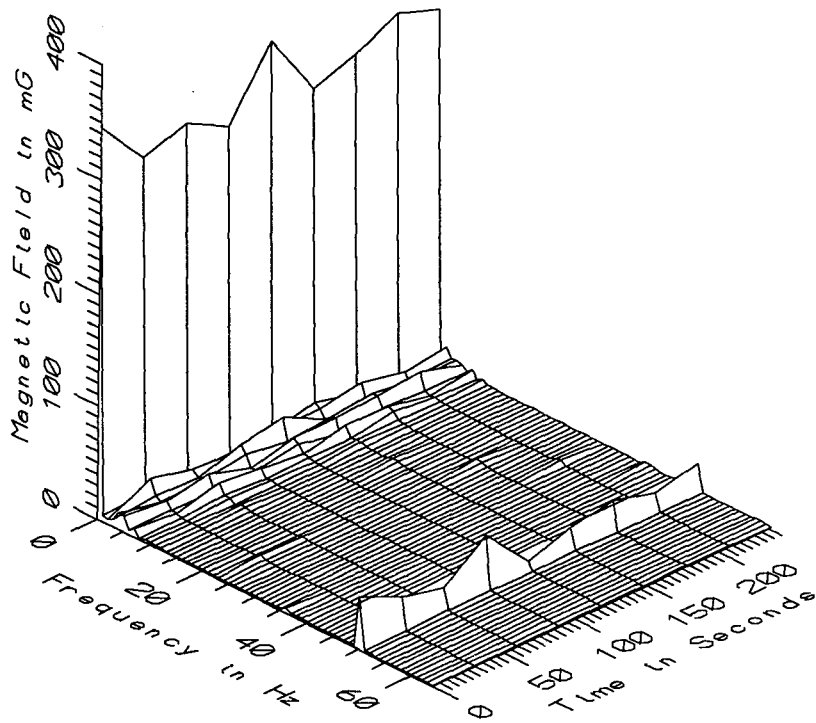
TGV002 - 10cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



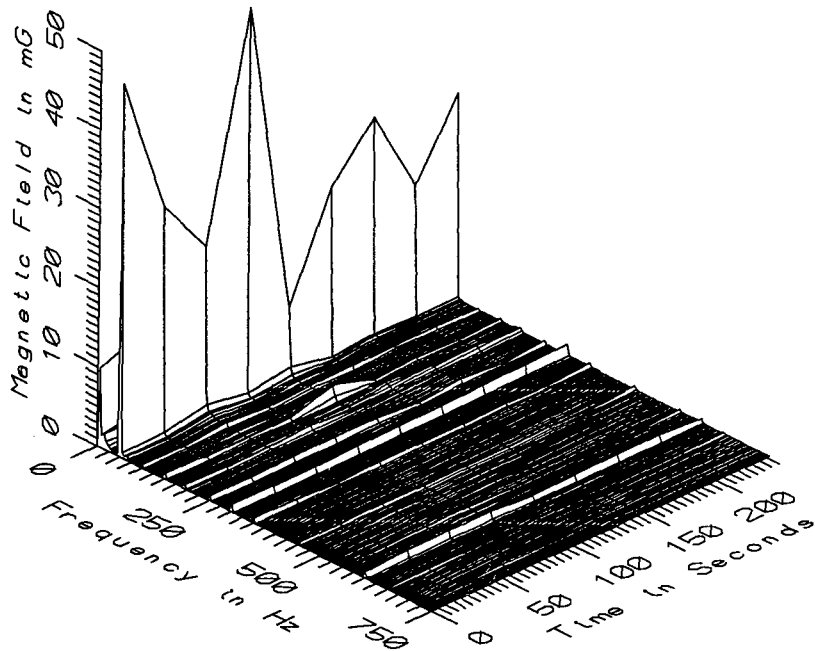
TGV002 - 60cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



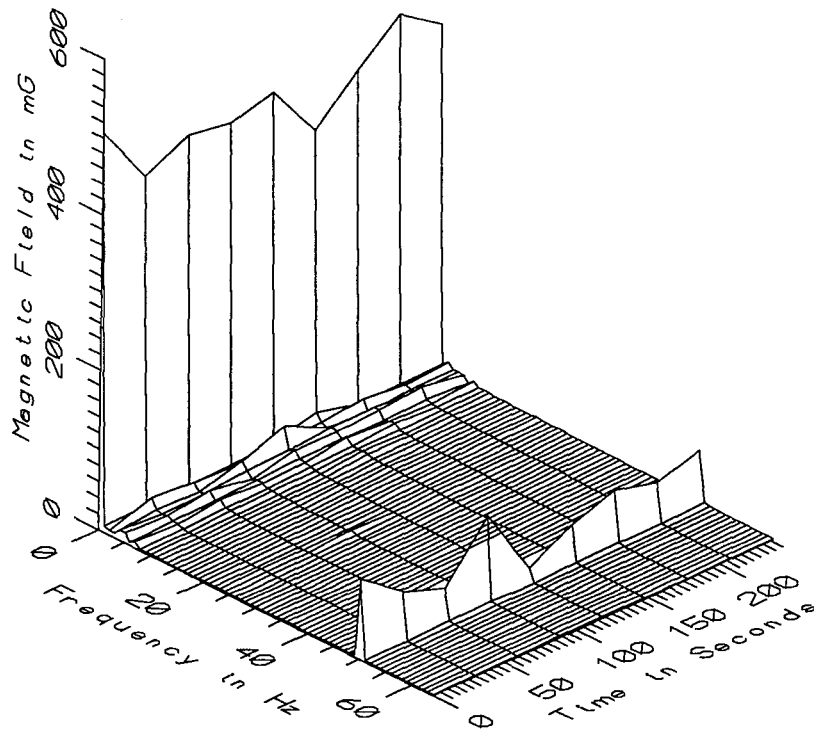
TGV002 - 60cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



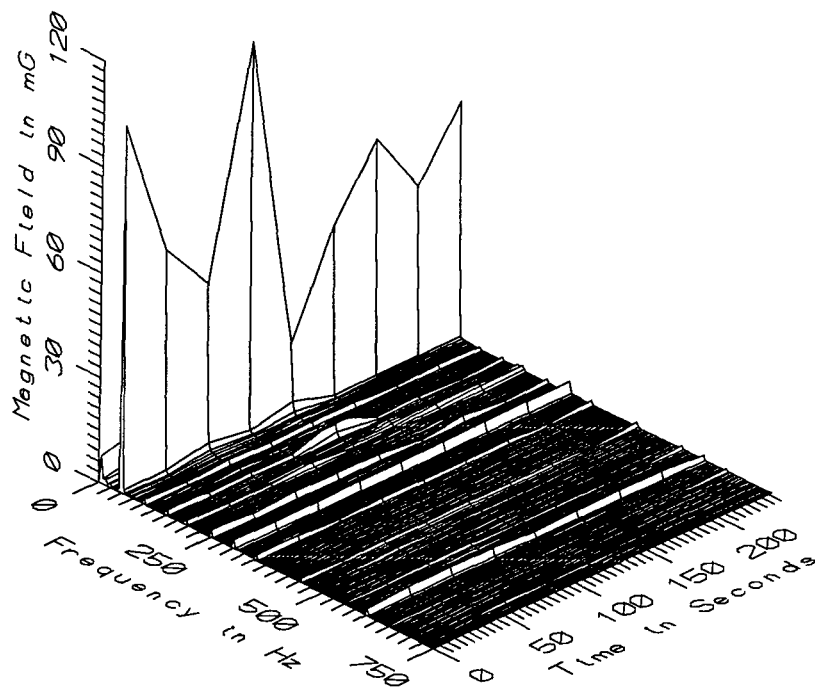
TGV002 - 110cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



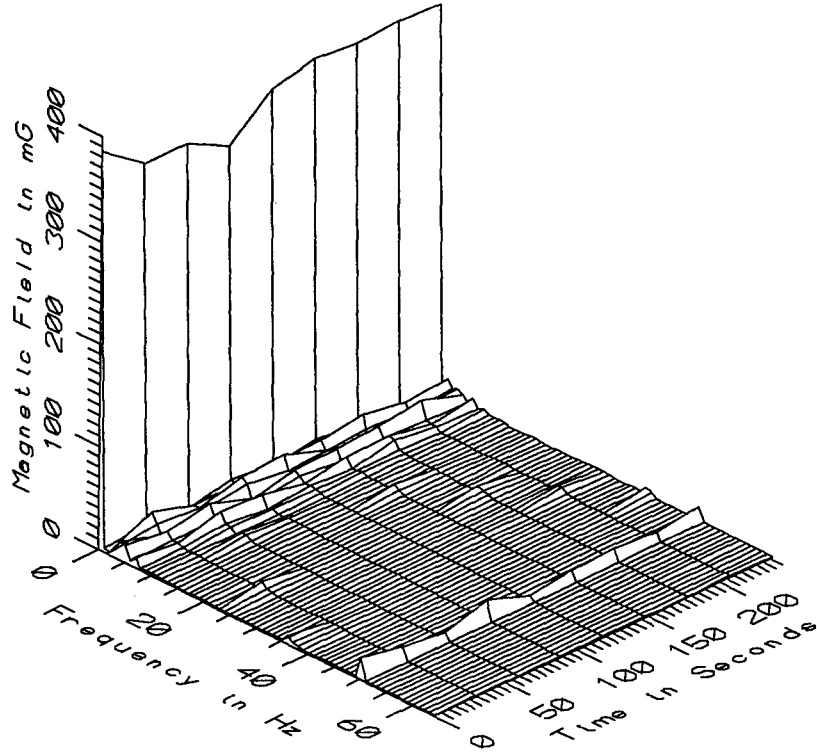
TGV002 - 110cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



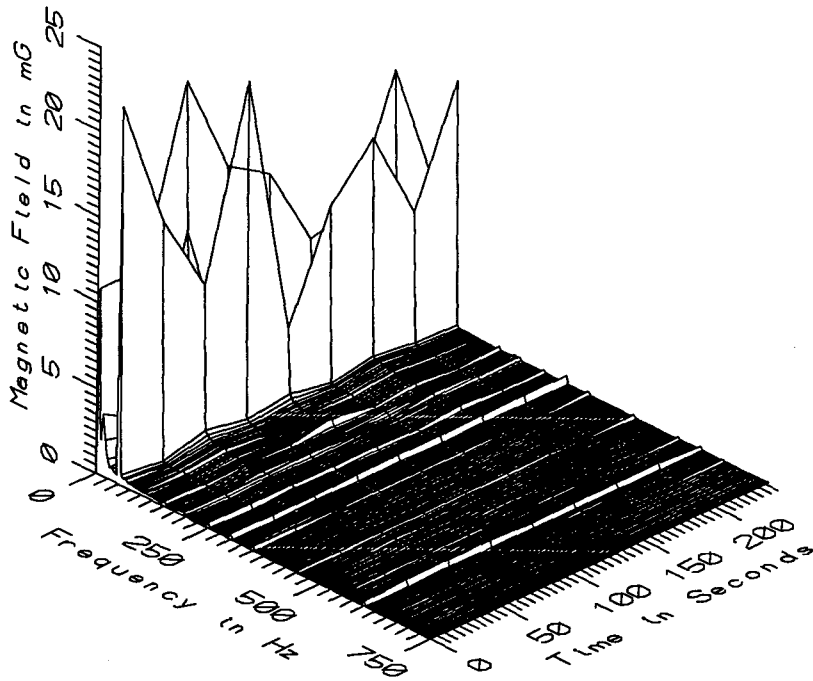
TGV002 - 160cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



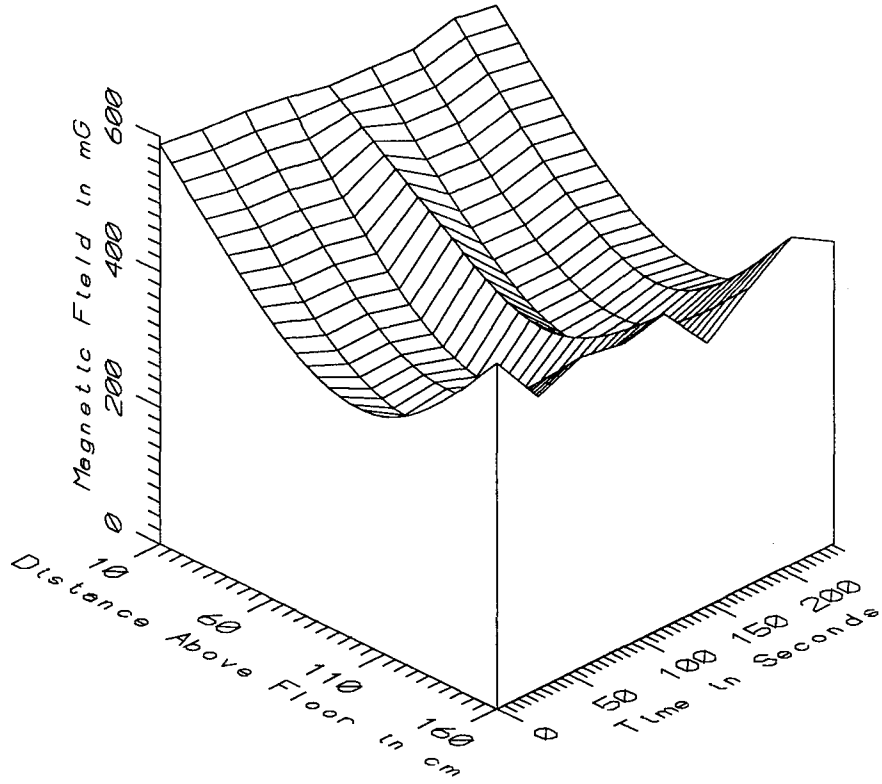
TGV002 - 160cm ABOVE FLOOR IN CENTER OF AISLE AT FRONT OF COACH R1B



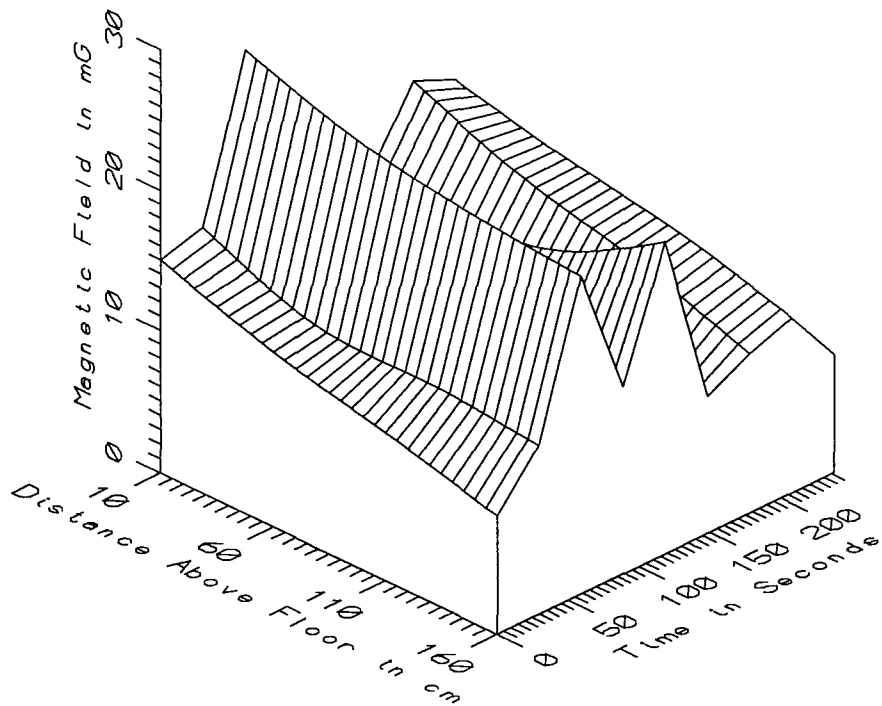
TGV002 - REFERENCE PROBE - ON CORNER SEAT AT FRONT OF COACH R1B



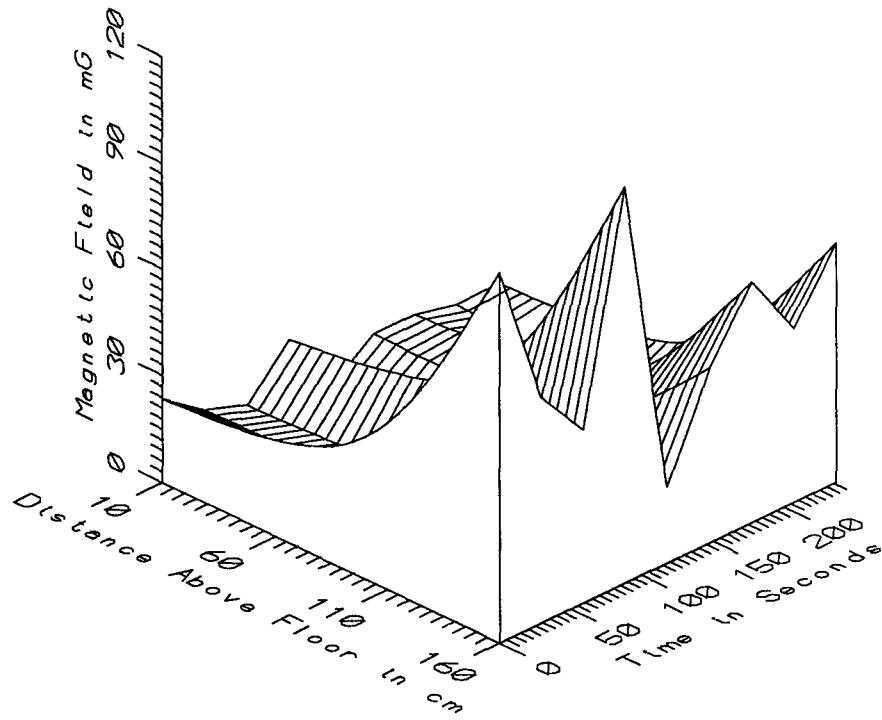
TGV002 - REFERENCE PROBE - ON CORNER SEAT AT FRONT OF COACH R1B



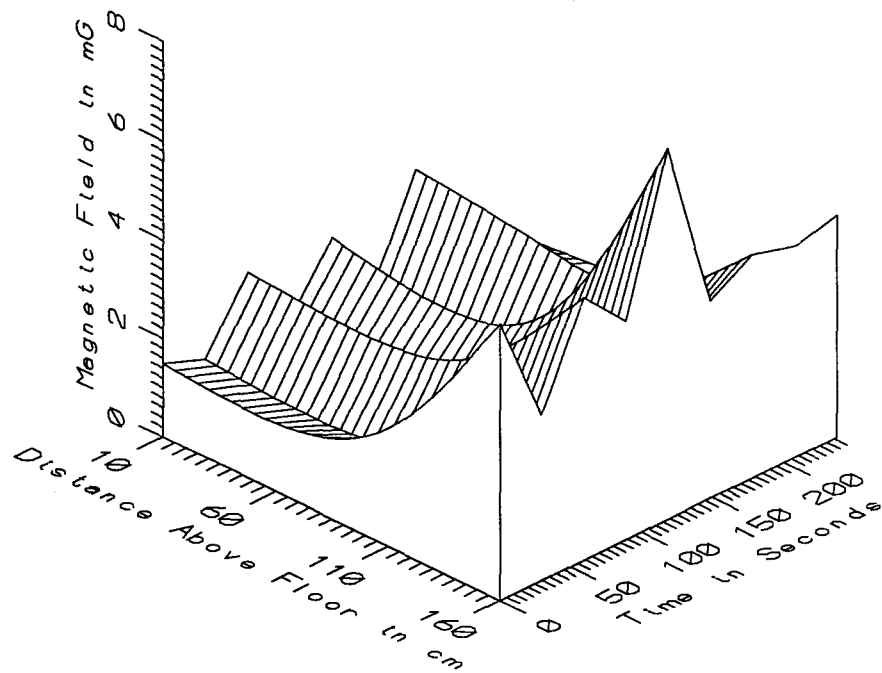
TGV002 - CENTER OF AISLE AT FRONT OF COACH R1B - STATIC



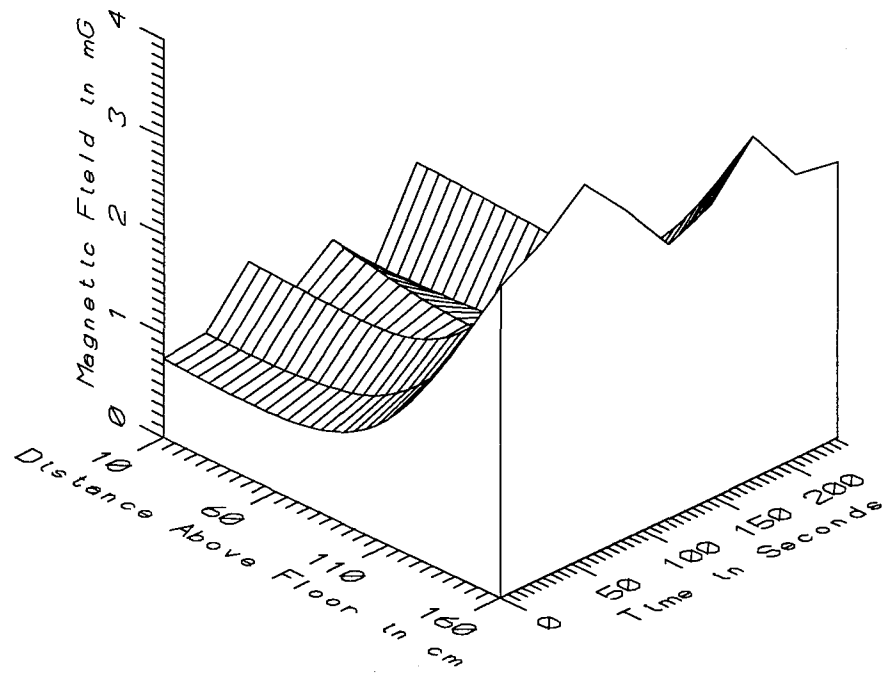
TGV002 - CENTER OF AISLE AT FRONT OF COACH R1B - LOW FREQ, 5-45Hz



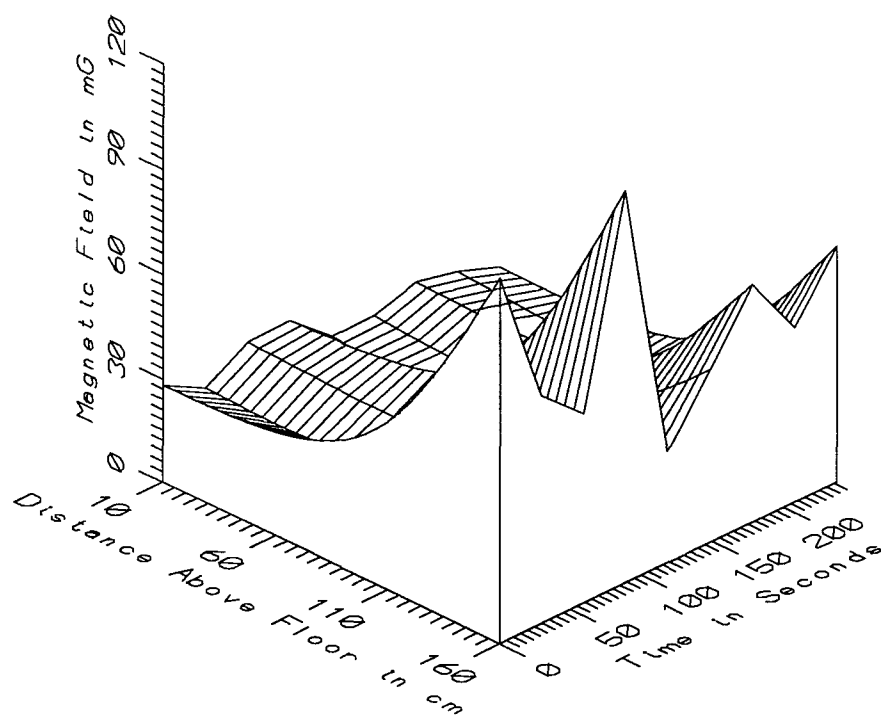
TGV002 - CENTER OF AISLE AT FRONT OF COACH R1B - POWER FREQ, 50-60Hz



TGV002 - CENTER OF AISLE AT FRONT OF COACH R1B - POWER HARM, 65-300Hz



TGV002 - CENTER OF AISLE AT FRONT OF COACH R1B - HIGH FREQ, 305-2560Hz



TGV002 - CENTER OF AISLE AT FRONT OF COACH R1B - ALL FREQ, 5-2560Hz

| TGV002 - FIRST COACH, ALL SAMPLES IN AC SECTION | | | | TOTAL OF 9 SAMPLES | | | |
|---|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|--|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) | |
| STATIC | 10 | 549.60 | 588.14 | 566.11 | 13.34 | 2.36 | |
| | 60 | 364.83 | 427.84 | 383.88 | 20.25 | 5.27 | |
| | 110 | 291.87 | 350.64 | 314.89 | 20.99 | 6.66 | |
| | 160 | 385.14 | 506.17 | 447.91 | 33.93 | 7.58 | |
| 5-45Hz | 10 | 12.33 | 27.11 | 17.66 | 4.23 | 23.95 | |
| LOW FREQ | 60 | 10.56 | 24.55 | 15.16 | 4.21 | 27.77 | |
| | 110 | 9.41 | 23.15 | 13.95 | 4.29 | 30.77 | |
| | 160 | 8.24 | 22.36 | 13.21 | 5.35 | 40.50 | |
| 50-60Hz | 10 | 4.50 | 23.74 | 13.58 | 6.23 | 45.87 | |
| PWR FREQ | 60 | 5.41 | 28.33 | 15.59 | 7.70 | 49.38 | |
| | 110 | 9.15 | 49.41 | 27.72 | 13.16 | 47.48 | |
| | 160 | 21.61 | 111.77 | 64.92 | 28.32 | 43.62 | |
| 65-300Hz | 10 | 0.97 | 2.99 | 1.69 | 0.75 | 44.13 | |
| PWR HARM | 60 | 1.04 | 2.72 | 1.62 | 0.62 | 38.47 | |
| | 110 | 1.52 | 3.16 | 2.24 | 0.59 | 26.35 | |
| | 160 | 3.32 | 7.49 | 4.82 | 1.20 | 24.86 | |
| 305-2560Hz | 10 | 0.43 | 1.52 | 0.91 | 0.34 | 37.52 | |
| HIGH FREQ | 60 | 0.63 | 1.45 | 0.93 | 0.27 | 28.45 | |
| | 110 | 1.10 | 1.76 | 1.39 | 0.23 | 16.38 | |
| | 160 | 2.72 | 3.74 | 3.12 | 0.35 | 11.19 | |
| 5-2560Hz | 10 | 16.02 | 29.56 | 23.02 | 4.88 | 21.21 | |
| ALL FREQ | 60 | 16.53 | 32.45 | 22.68 | 5.88 | 25.94 | |
| | 110 | 20.11 | 51.39 | 32.17 | 10.93 | 33.97 | |
| | 160 | 31.85 | 112.66 | 67.47 | 26.19 | 38.81 | |

APPENDIX D

DATASET TGV003

AXIAL PROFILE IN FIRST CLASS SALON AT FRONT OF COACH R1B

Measurement Setup Code: Staff: 2 Reference: 4
 Drawing: A-1

Vehicle Status: Coach trip from Montparnasse
 station in Paris to Tours station

Measurement Date: September 8, 1992

Measurement Time: Start: 08:22:32
 End: 08:27:02

Number of Samples: 10

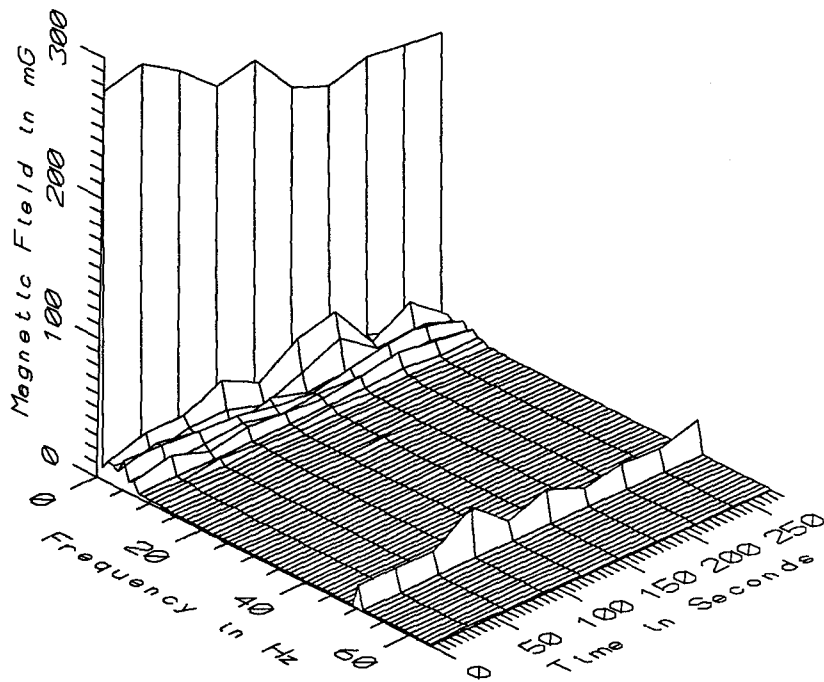
Programmed Sample Interval: 30 sec

Actual Sample Interval: 30 sec

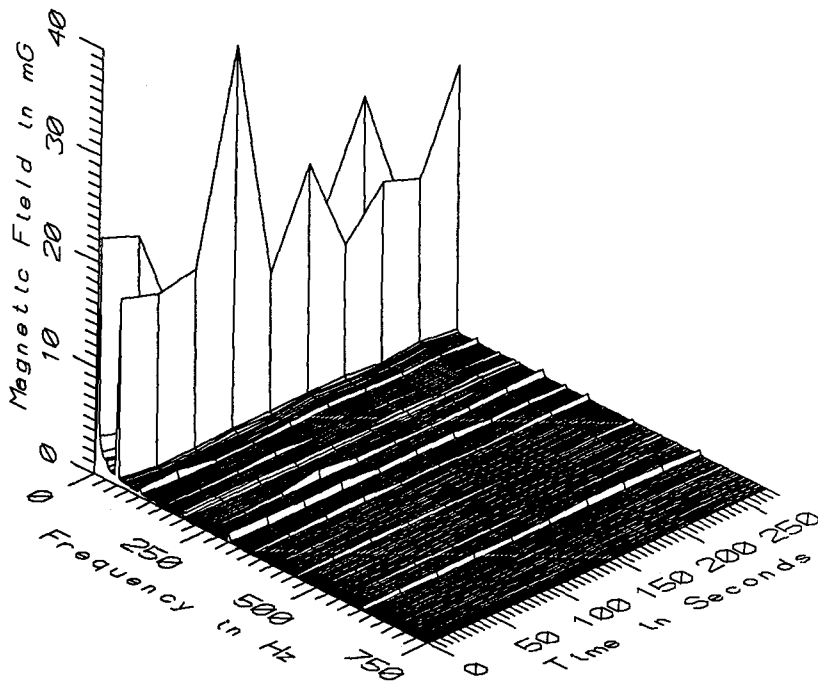
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

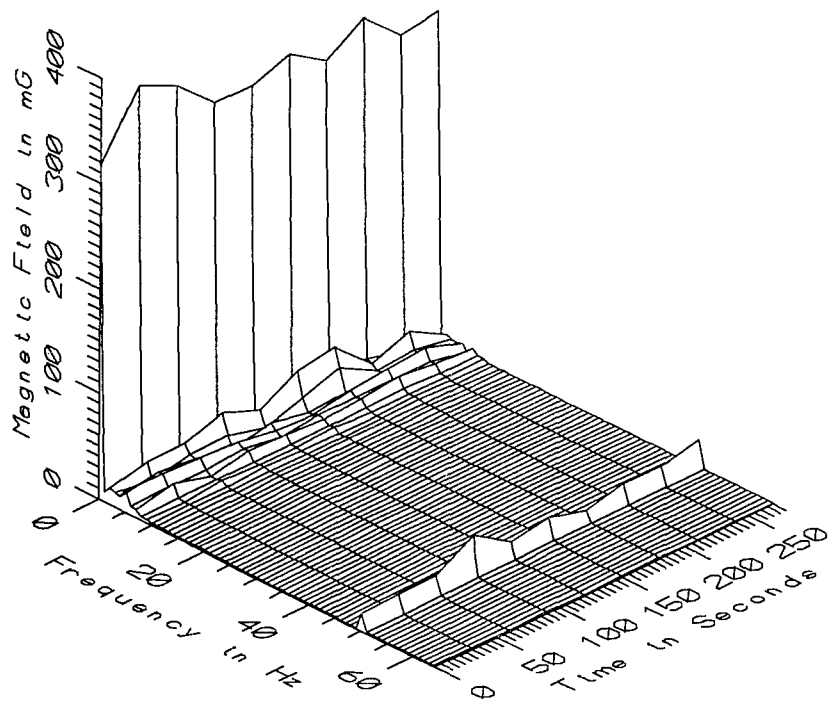
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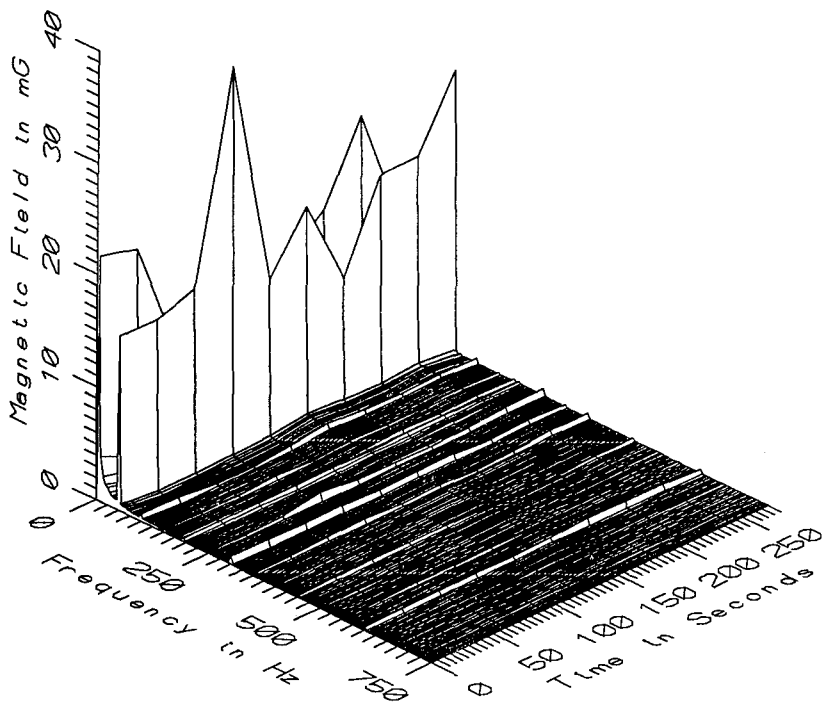
TGV003 - 10cm FROM CENTER OF DOOR AT FRONT OF COACH R1B



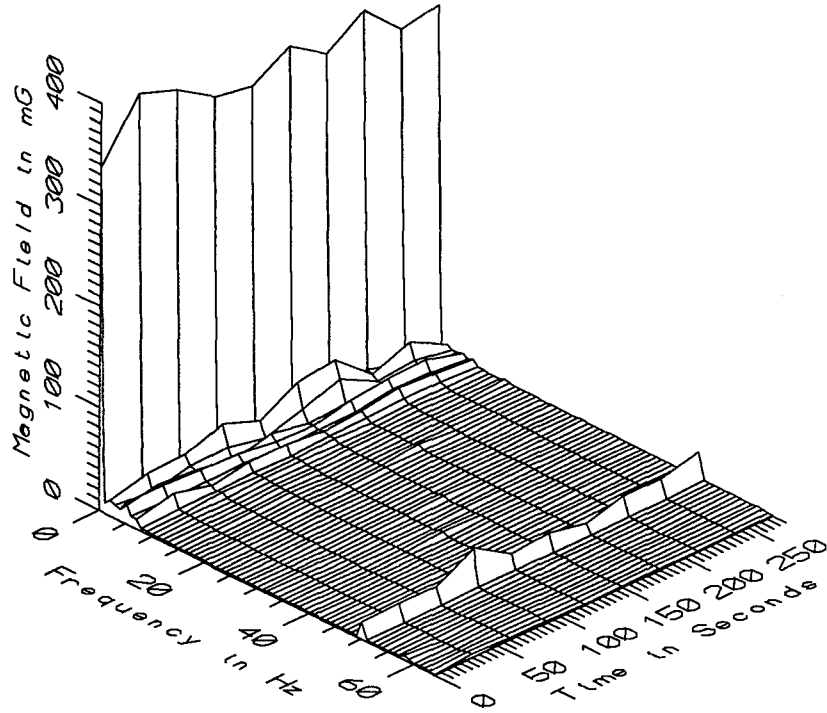
TGV003 - 10cm FROM CENTER OF DOOR AT FRONT OF COACH R1B



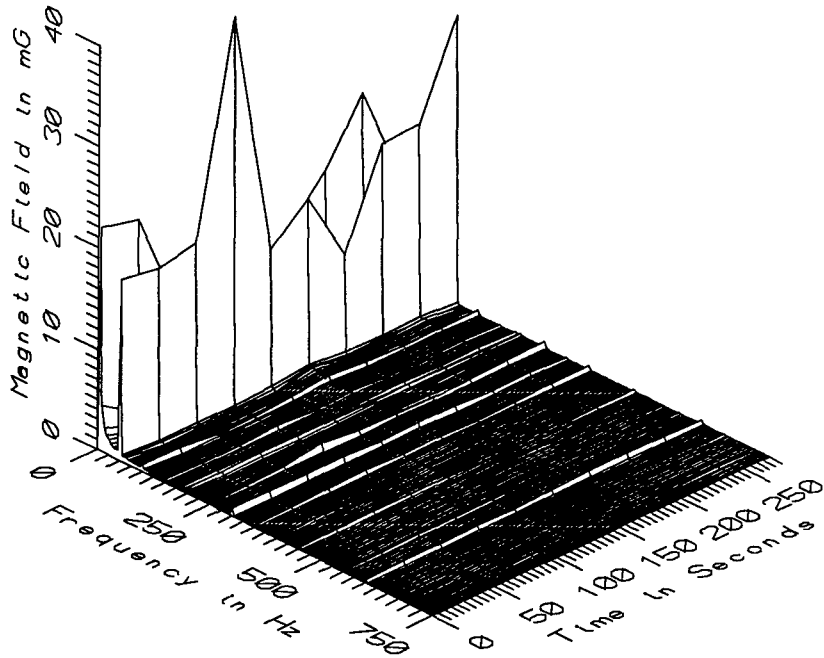
TGV003 - 60cm FROM CENTER OF DOOR AT FRONT OF COACH R1B



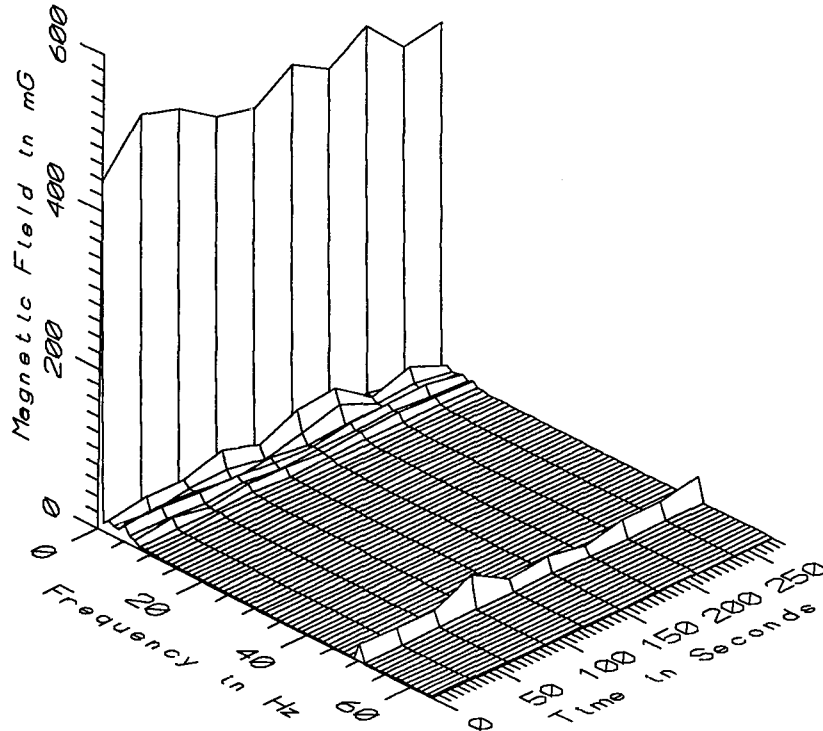
TGV003 - 60cm FROM CENTER OF DOOR AT FRONT OF COACH R1B



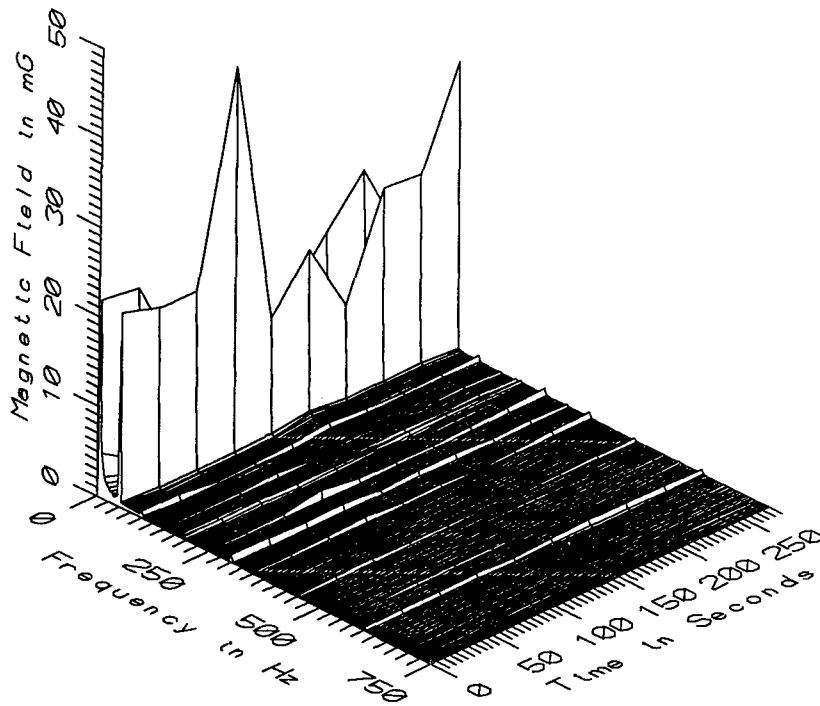
TGV003 - 110cm FROM CENTER OF DOOR AT FRONT OF COACH R1B



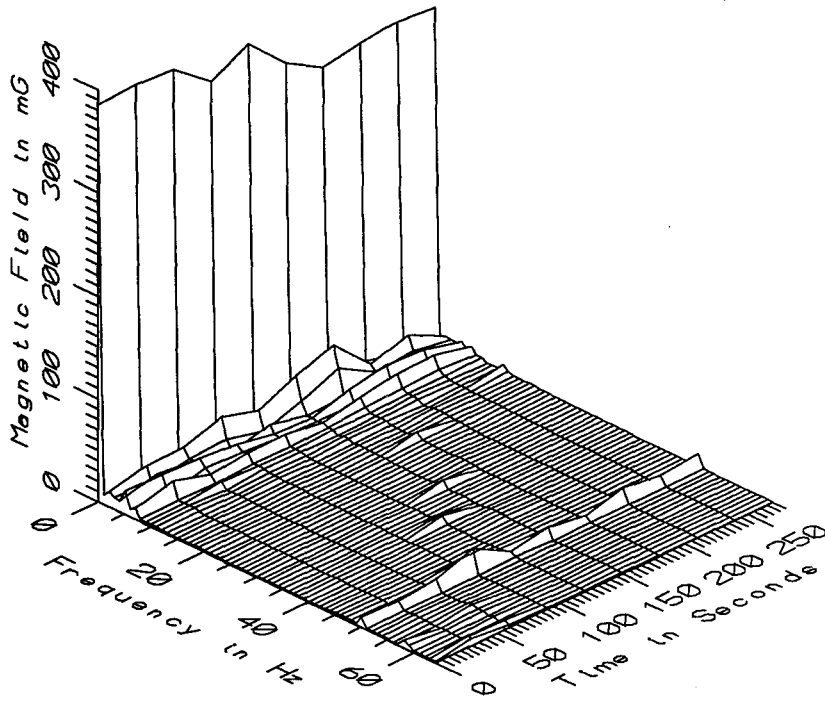
TGV003 - 110cm FROM CENTER OF DOOR AT FRONT OF COACH R1B



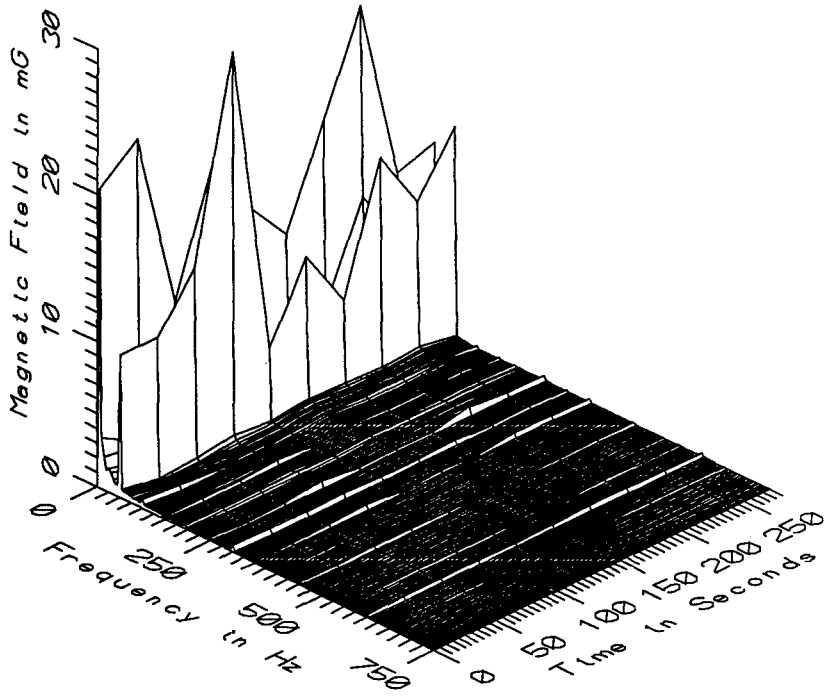
TGV003 - 160cm FROM CENTER OF DOOR AT FRONT OF COACH R1B



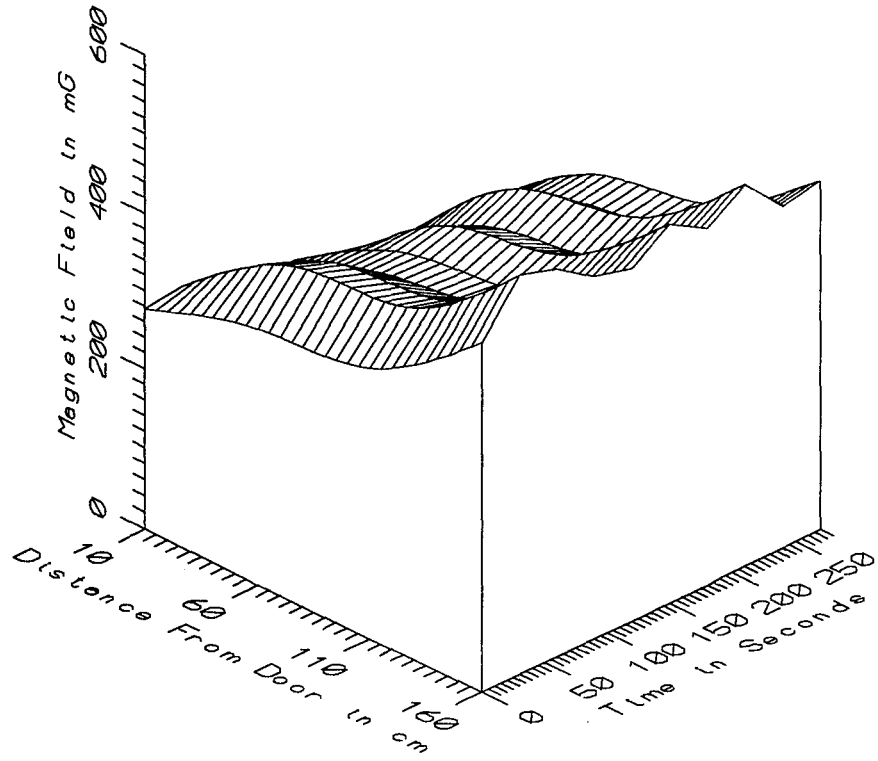
TGV003 - 160cm FROM CENTER OF DOOR AT FRONT OF COACH R1B



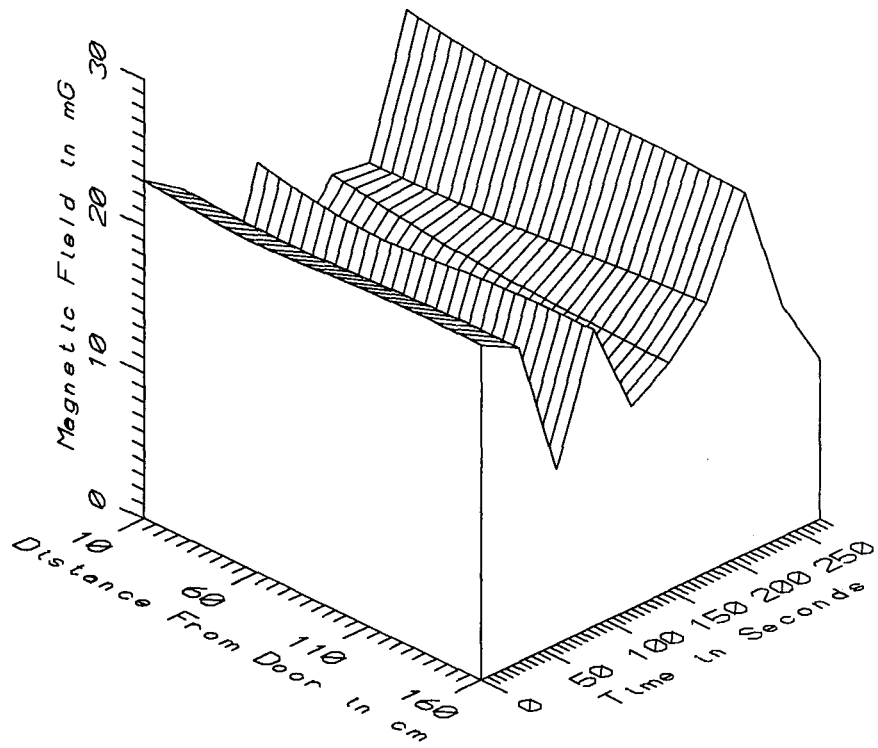
TGV003 - REFERENCE PROBE - ON CORNER SEAT AT FRONT OF COACH R1B



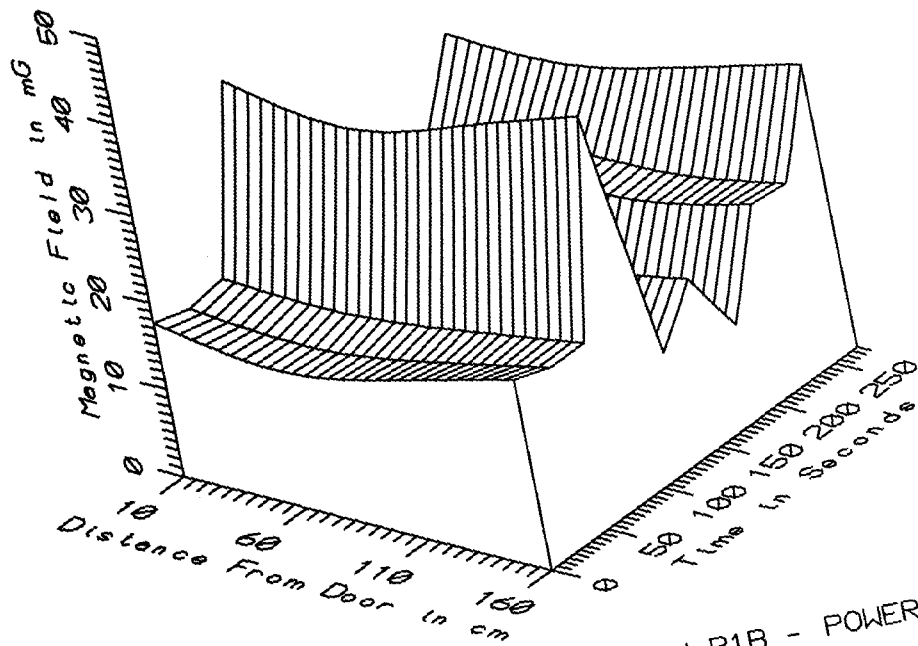
TGV003 - REFERENCE PROBE - ON CORNER SEAT AT FRONT OF COACH R1B



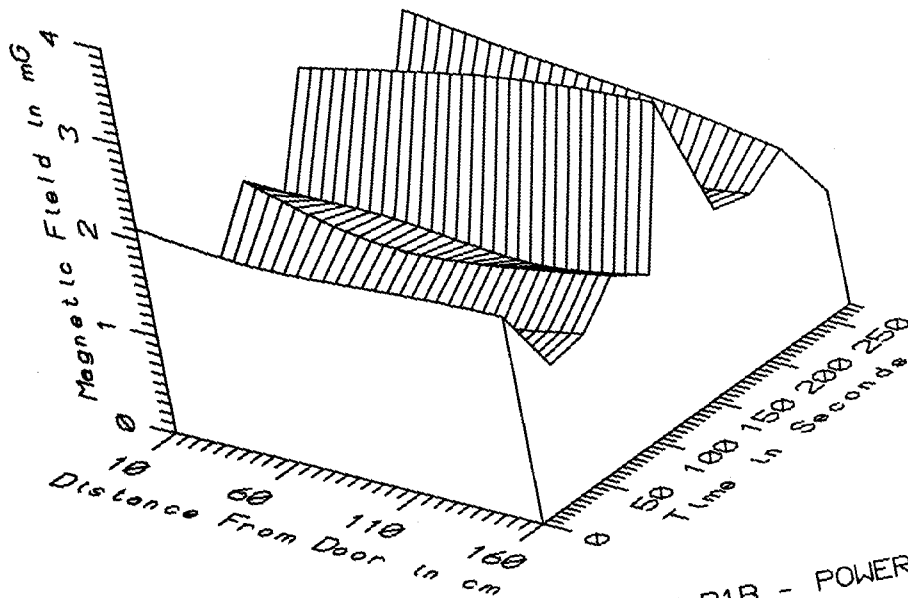
TGV003 - AXIAL PROFILE AT FRONT OF COACH R1B - STATIC



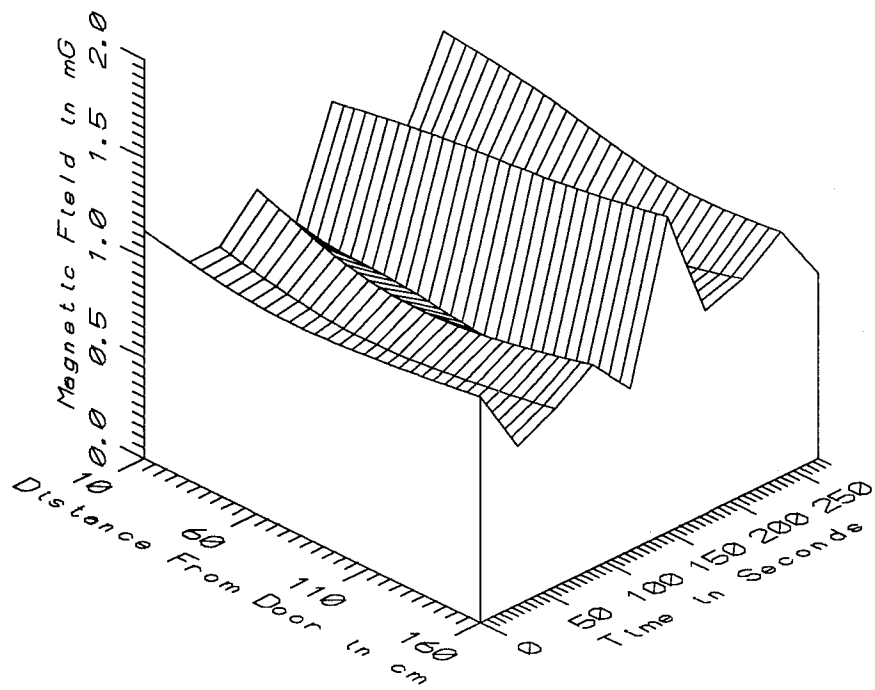
TGV003 - AXIAL PROFILE AT FRONT OF COACH R1B - LOW FREQ, 5-45Hz



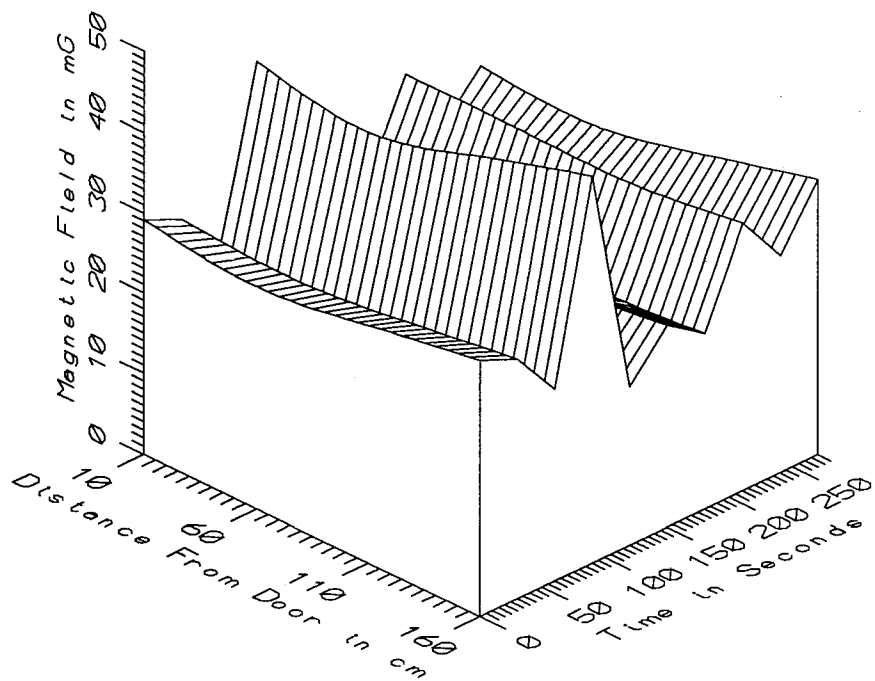
TGV003 - AXIAL PROFILE AT FRONT OF COACH R1B - POWER FREQ, 50-60Hz



TGV003 - AXIAL PROFILE AT FRONT OF COACH R1B - POWER HARM, 65-300Hz



TGV003 - AXIAL PROFILE AT FRONT OF COACH R1B - HIGH FREQ, 305-2560Hz



TGV003 - AXIAL PROFILE AT FRONT OF COACH R1B - ALL FREQ, 5-2560Hz

| TGV003 - FIRST COACH, ALL SAMPLES IN AC SECTION | | TOTAL OF 10 SAMPLES | | | | |
|---|----------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | DIST. FROM DOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 205.33 | 283.31 | 237.13 | 30.10 | 12.69 |
| | 60 | 306.74 | 376.23 | 332.05 | 21.94 | 6.61 |
| | 110 | 335.49 | 392.58 | 357.82 | 19.42 | 5.43 |
| | 160 | 432.74 | 501.97 | 460.86 | 24.13 | 5.24 |
| 5-45Hz | 10 | 11.44 | 26.22 | 18.01 | 4.74 | 26.31 |
| LOW FREQ | 60 | 11.24 | 25.20 | 17.38 | 4.68 | 26.94 |
| | 110 | 11.12 | 25.06 | 17.56 | 4.74 | 26.99 |
| | 160 | 10.99 | 24.74 | 17.63 | 4.68 | 26.56 |
| 50-60Hz | 10 | 13.11 | 36.63 | 19.56 | 7.00 | 35.81 |
| PWR FREQ | 60 | 11.38 | 34.92 | 19.07 | 6.70 | 35.10 |
| | 110 | 10.08 | 38.82 | 20.09 | 8.06 | 40.10 |
| | 160 | 11.01 | 43.45 | 22.53 | 9.28 | 41.18 |
| 65-300Hz | 10 | 1.02 | 2.52 | 1.73 | 0.50 | 28.97 |
| PWR HARM | 60 | 0.91 | 2.80 | 1.66 | 0.55 | 33.44 |
| | 110 | 0.97 | 3.01 | 1.69 | 0.59 | 34.76 |
| | 160 | 1.17 | 3.12 | 1.80 | 0.54 | 29.72 |
| 305-2560Hz | 10 | 0.78 | 1.42 | 1.06 | 0.21 | 19.60 |
| HIGH FREQ | 60 | 0.73 | 1.42 | 0.98 | 0.24 | 24.64 |
| | 110 | 0.70 | 1.47 | 0.96 | 0.24 | 24.93 |
| | 160 | 0.79 | 1.57 | 1.04 | 0.23 | 22.24 |
| 5-2560Hz | 10 | 19.63 | 42.08 | 27.13 | 6.62 | 24.40 |
| ALL FREQ | 60 | 19.95 | 40.06 | 26.39 | 6.09 | 23.08 |
| | 110 | 19.71 | 43.76 | 27.36 | 7.12 | 26.04 |
| | 160 | 19.45 | 48.00 | 29.31 | 8.23 | 28.06 |

APPENDIX E

DATASET TGV004

TRANSVERSE PROFILE IN FIRST CLASS SALON AT FRONT OF COACH R1B

Measurement Setup Code: Staff: 3 Reference: 4
 Drawing: A-1

Vehicle Status: Coach trip from Montparnasse
 station in Paris to Tours station

Measurement Date: September 8, 1992

Measurement Time: Start: 08:28:04
 End: 08:32:30

Number of Samples: 10

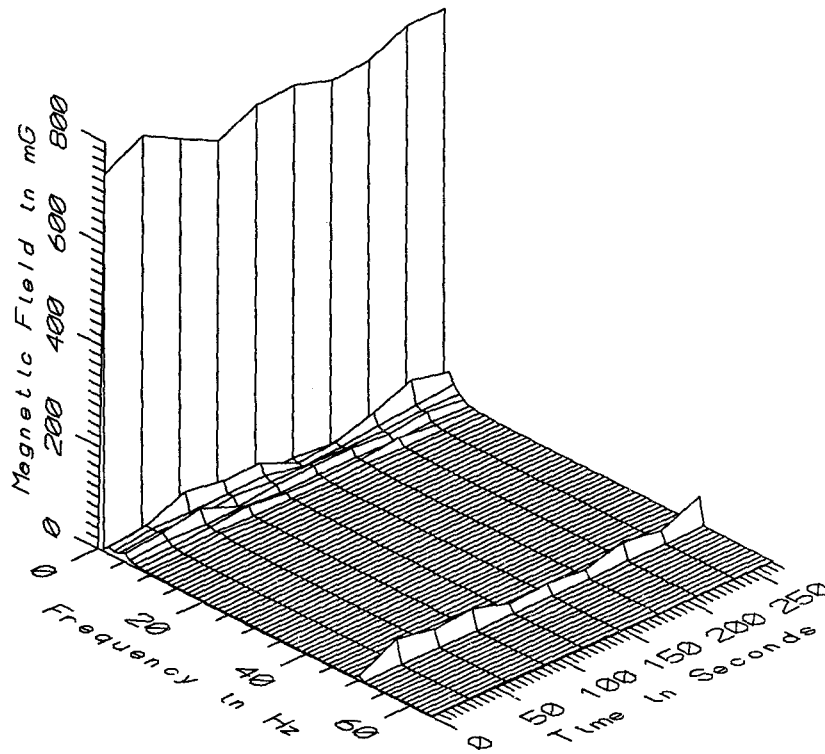
Programmed Sample Interval: 30 sec

Actual Sample Interval: 29.6 sec

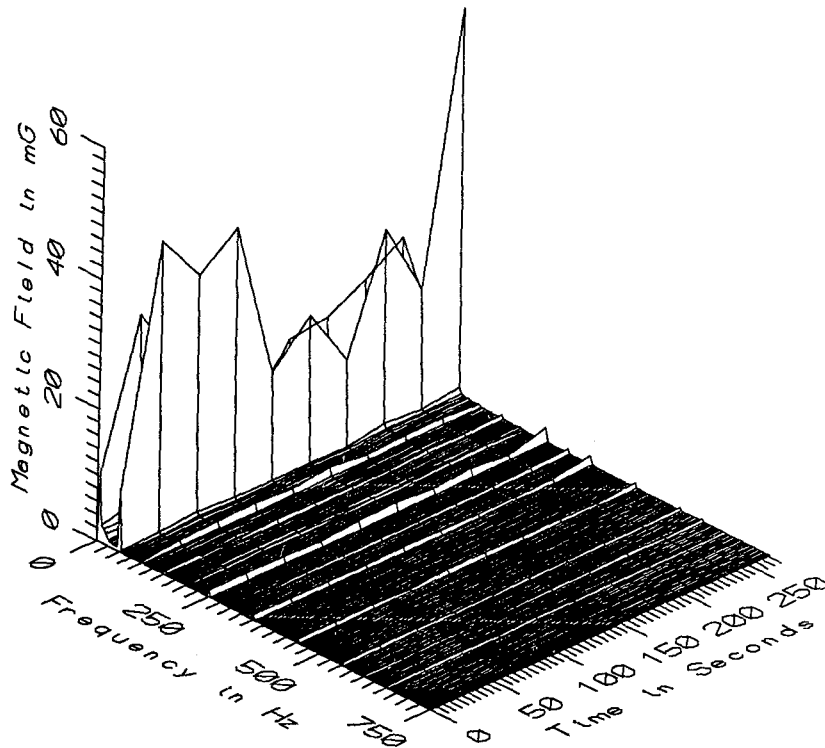
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

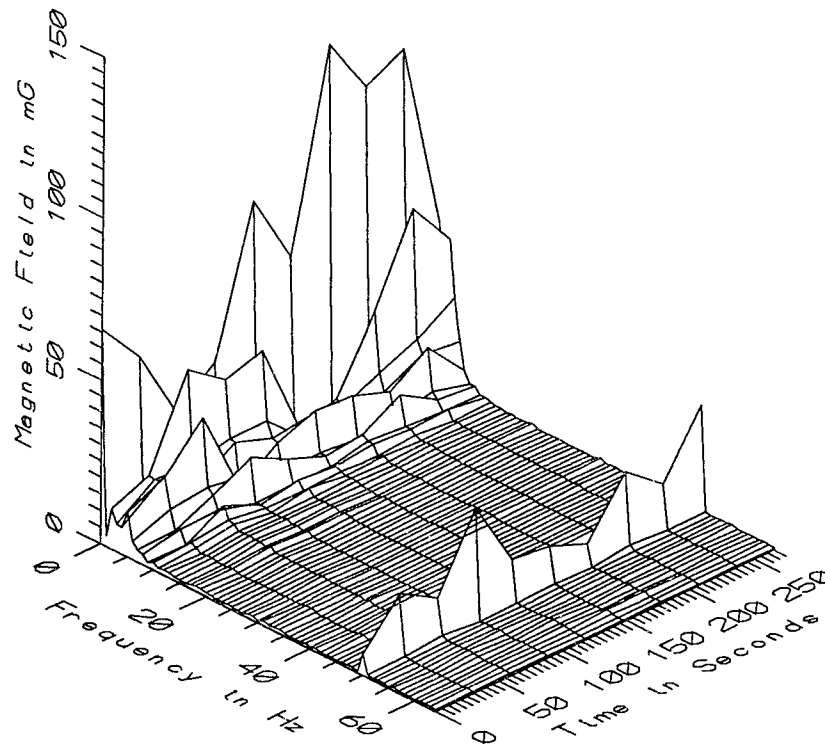
Missing or Suspect Data: None



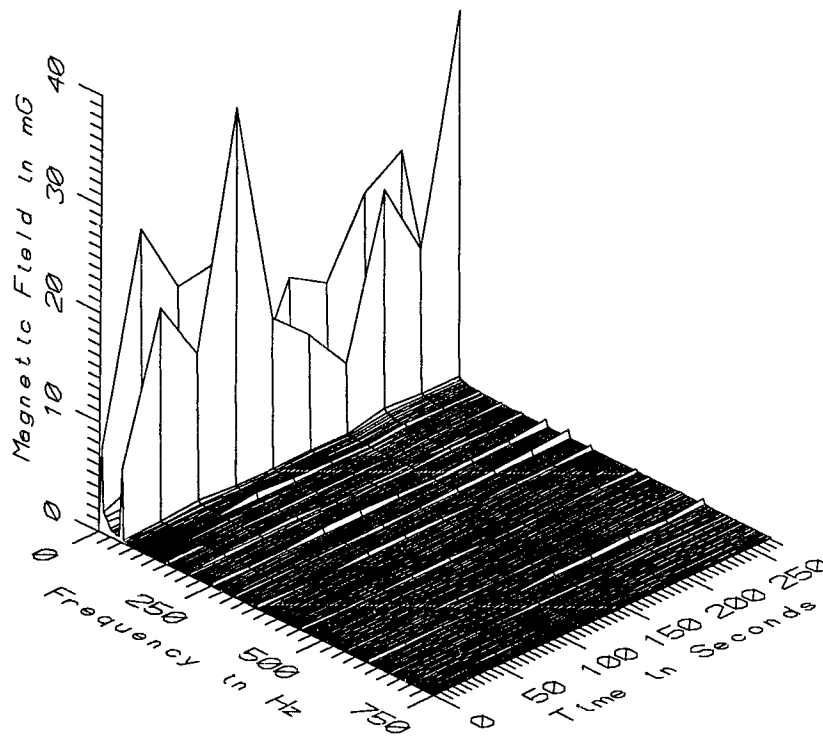
TGV004 - 10cm FROM WINDOW ABOVE SIDE SEAT AT FRONT OF COACH R1B



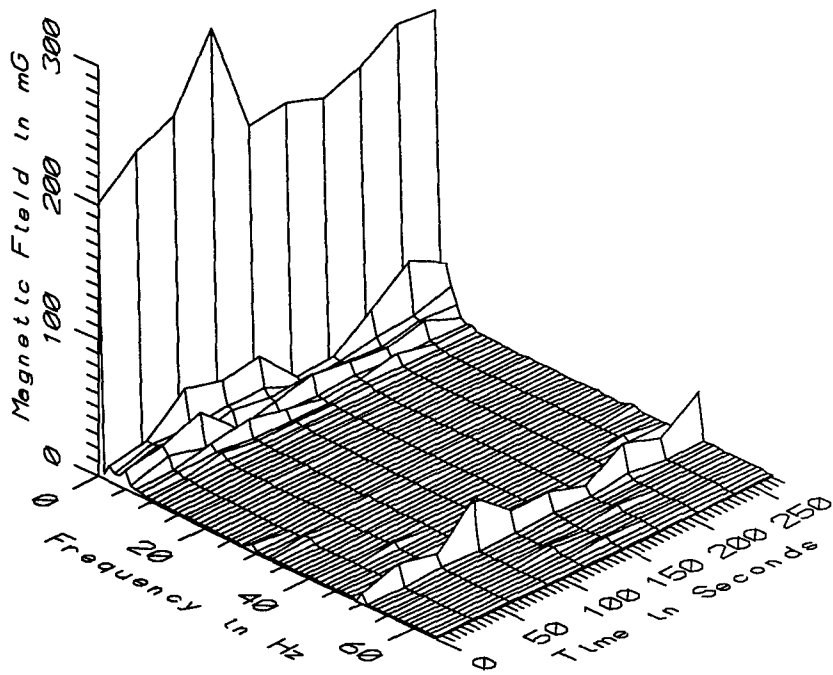
TGV004 - 10cm FROM WINDOW ABOVE SIDE SEAT AT FRONT OF COACH R1B



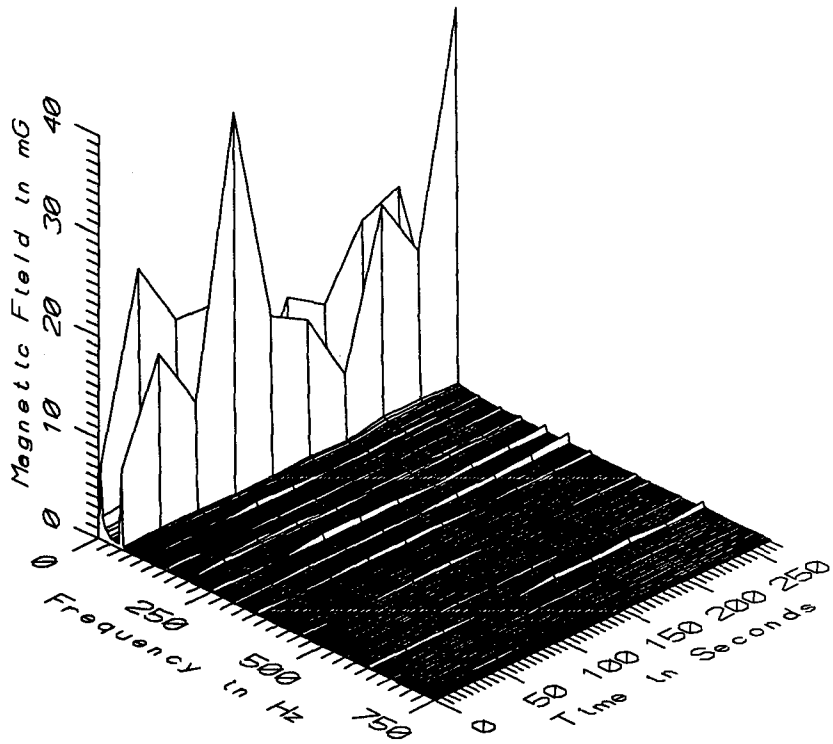
TGV004 - 60cm FROM WINDOW ABOVE SIDE SEAT AT FRONT OF COACH R1B



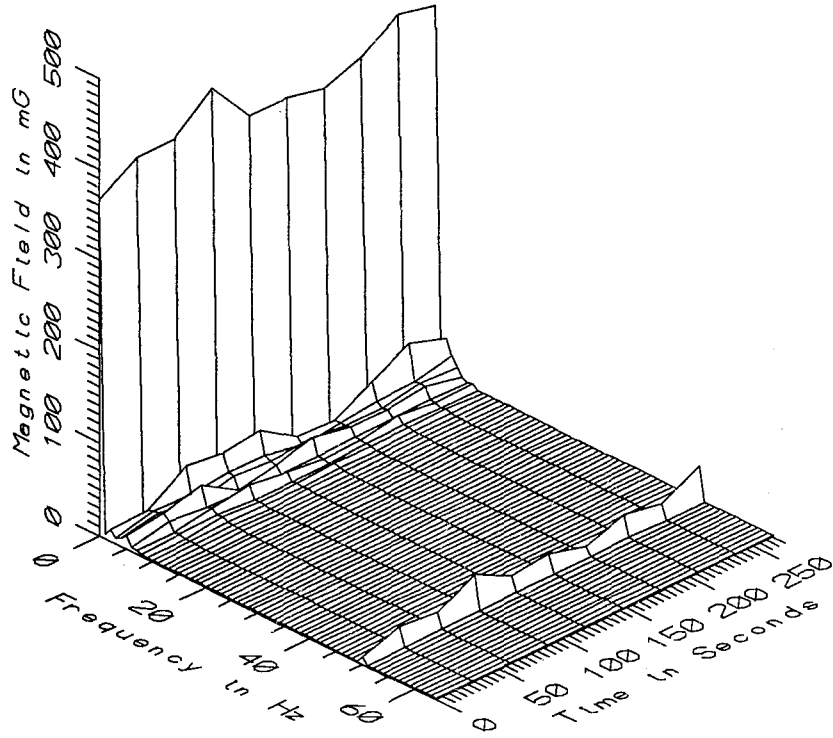
TGV004 - 60cm FROM WINDOW ABOVE SIDE SEAT AT FRONT OF COACH R1B



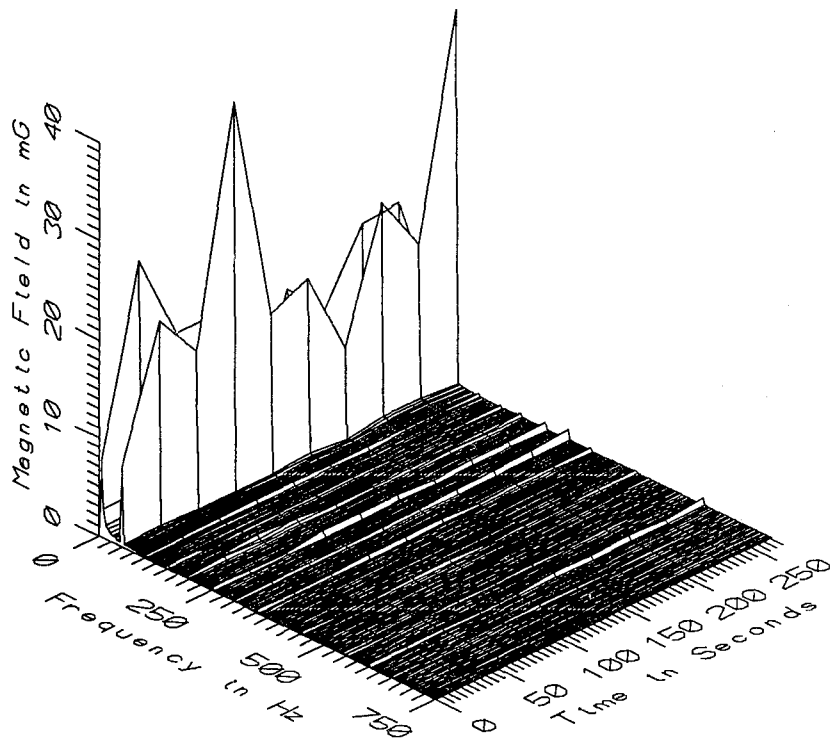
TGV004 - 110cm FROM WINDOW ABOVE SIDE SEAT AT FRONT OF COACH R1B



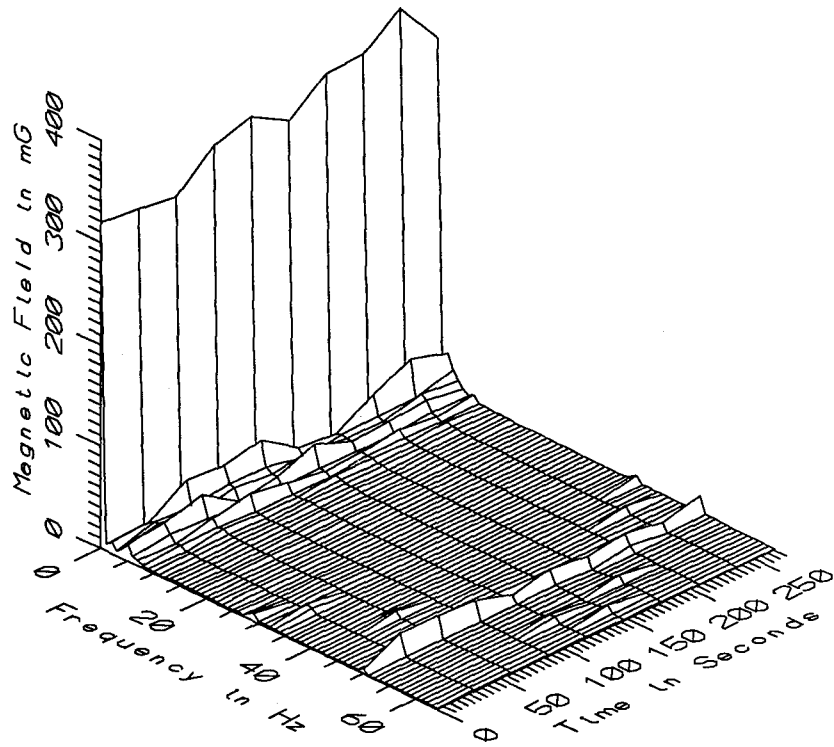
TGV004 - 110cm FROM WINDOW ABOVE SIDE SEAT AT FRONT OF COACH R1B



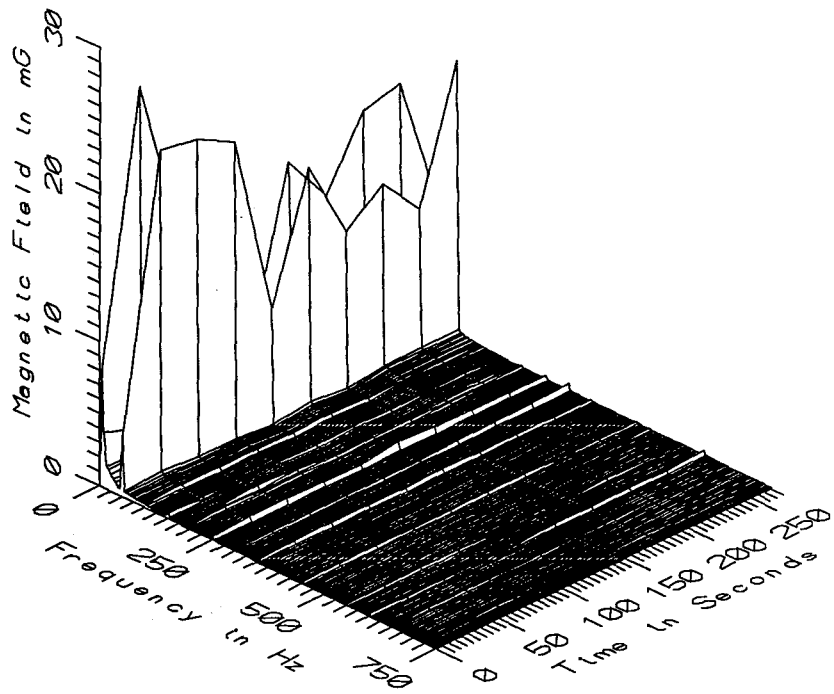
TGV004 - 160cm FROM WINDOW ABOVE SIDE SEAT AT FRONT OF COACH R1B



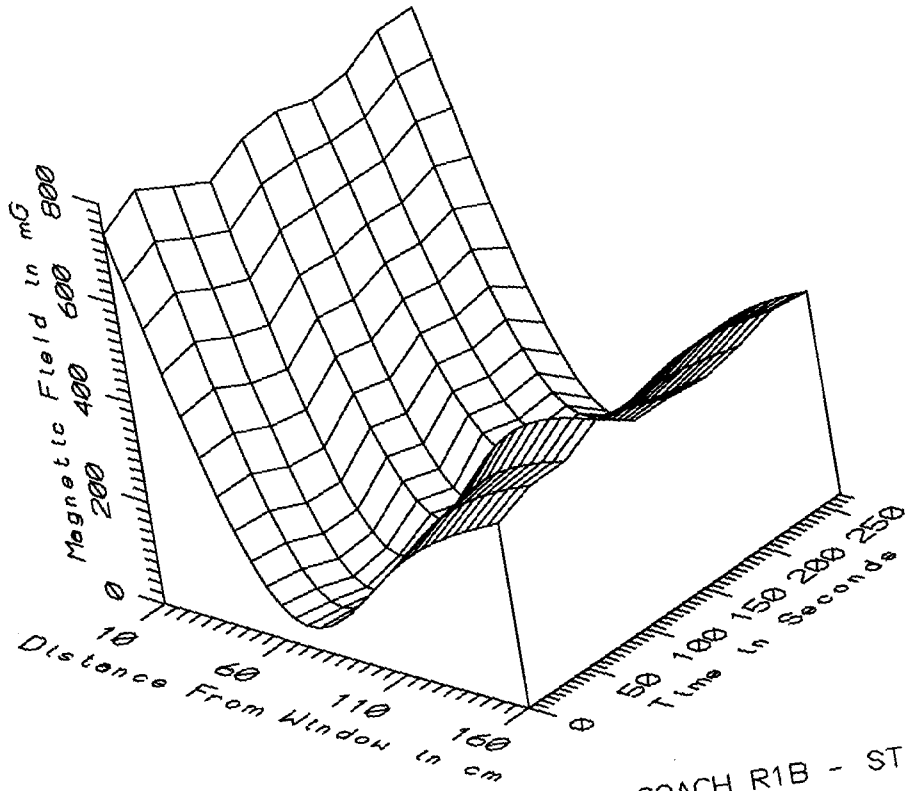
TGV004 - 160cm FROM WINDOW ABOVE SIDE SEAT AT FRONT OF COACH R1B



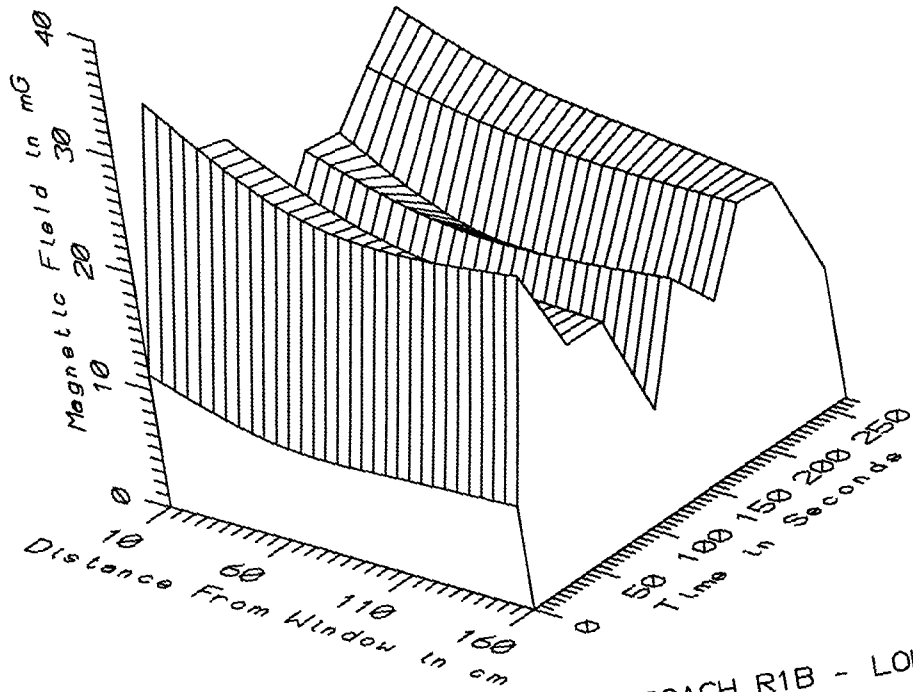
TGV004 - REFERENCE PROBE - ON CORNER SEAT AT FRONT OF COACH R1B



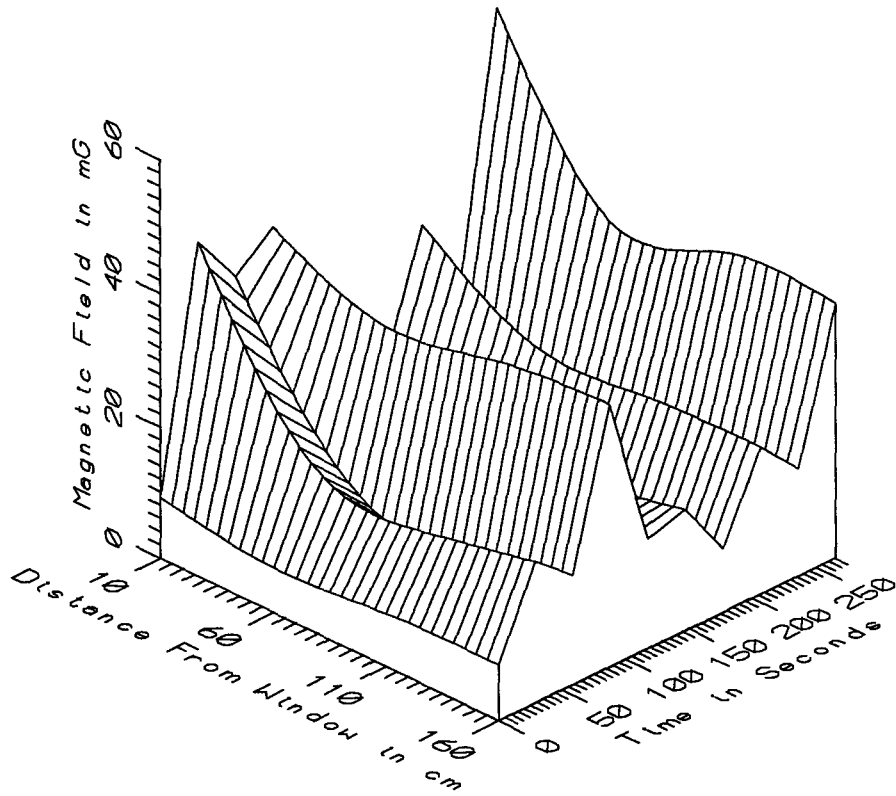
TGV004 - REFERENCE PROBE - ON CORNER SEAT AT FRONT OF COACH R1B



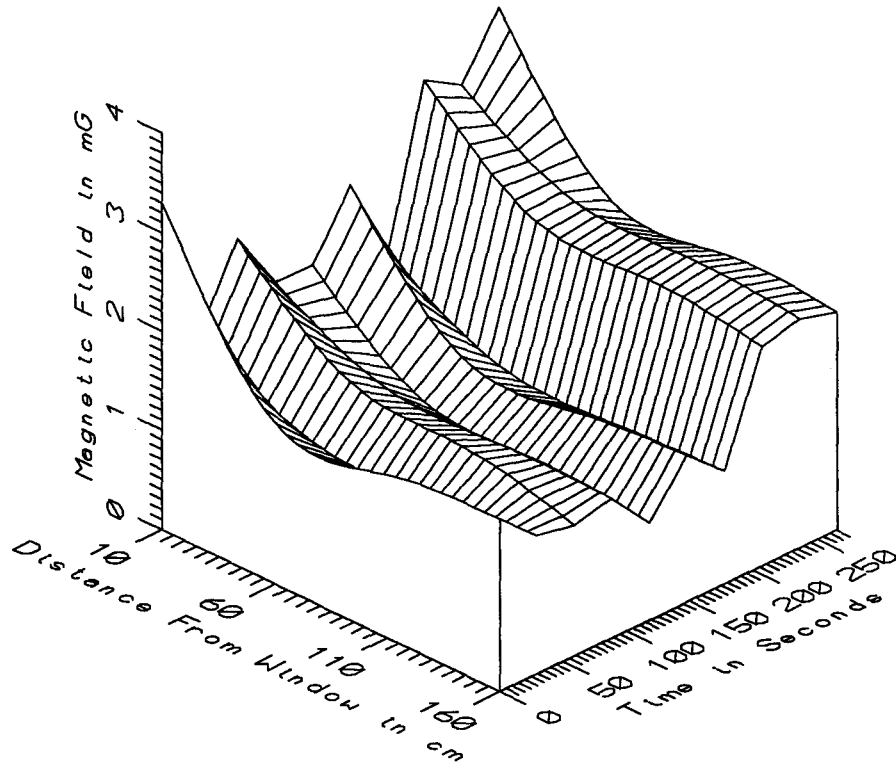
TGV004 - TRANSVERSE PROFILE AT FRONT OF COACH R1B - STATIC



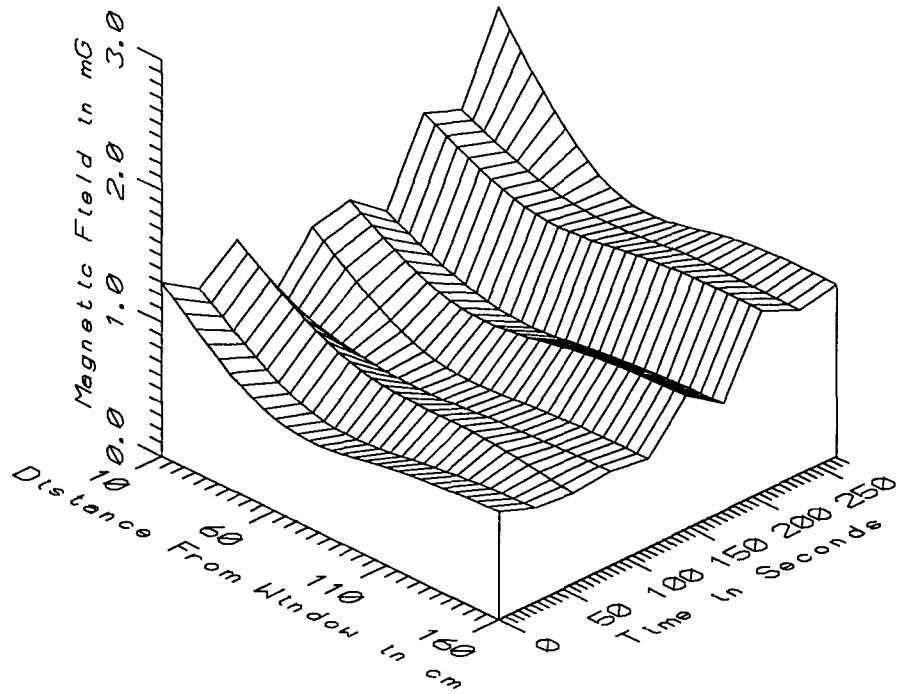
TGV004 - TRANSVERSE PROFILE AT FRONT OF COACH R1B - LOW FREQ, 5-45Hz



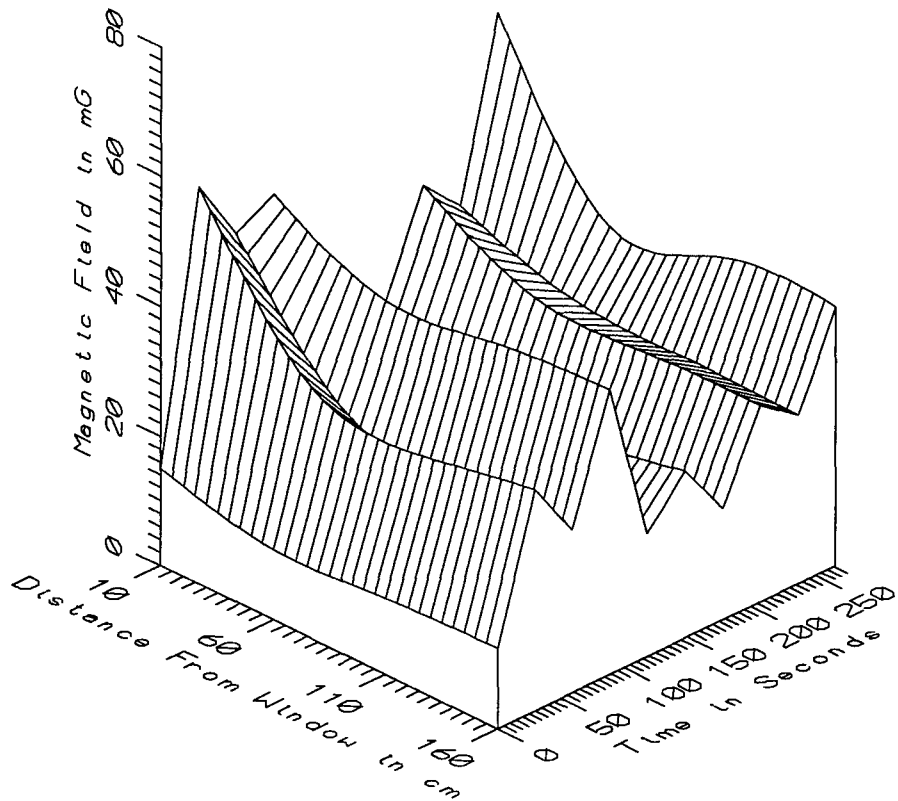
TGV004 - TRANSVERSE PROFILE AT FRONT OF COACH R1B - POWER FREQ, 50-60Hz



TGV004 - TRANSVERSE PROFILE AT FRONT OF COACH R1B - POWER HARM, 65-300Hz



TGV004 - TRANSVERSE PROFILE AT FRONT OF COACH R1B - HIGH FREQ, 305-2560Hz



TGV004 - TRANSVERSE PROFILE AT FRONT OF COACH R1B - ALL FREQ, 5-2560Hz

| TGV004 - FIRST COACH, ALL SAMPLES IN AC SECTION | | TOTAL OF 10 SAMPLES | | | | |
|---|------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | DIST. FROM WINDOW (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 701.32 | 778.93 | 743.59 | 23.36 | 3.14 |
| | 60 | 28.82 | 121.31 | 71.27 | 31.41 | 44.08 |
| | 110 | 197.94 | 288.27 | 222.07 | 26.70 | 12.02 |
| | 160 | 366.80 | 430.60 | 391.99 | 19.25 | 4.91 |
| 5-45Hz LOW FREQ | 10 | 10.32 | 32.57 | 21.13 | 7.23 | 34.22 |
| | 60 | 8.32 | 26.62 | 17.42 | 6.43 | 36.89 |
| | 110 | 8.31 | 25.33 | 16.61 | 5.85 | 35.21 |
| | 160 | 8.79 | 26.48 | 16.62 | 5.70 | 34.26 |
| 50-60Hz PWR FREQ | 10 | 9.13 | 59.40 | 29.68 | 15.98 | 53.85 |
| | 60 | 6.69 | 35.11 | 17.76 | 10.13 | 57.03 |
| | 110 | 6.81 | 38.08 | 18.66 | 11.11 | 59.54 |
| | 160 | 8.29 | 39.72 | 20.67 | 10.63 | 51.45 |
| 65-300Hz PWR HARM | 10 | 1.71 | 3.62 | 2.58 | 0.70 | 27.24 |
| | 60 | 1.10 | 2.41 | 1.65 | 0.51 | 30.91 |
| | 110 | 1.06 | 2.39 | 1.63 | 0.51 | 31.41 |
| | 160 | 0.97 | 2.31 | 1.61 | 0.47 | 29.37 |
| 305-2560Hz HIGH FREQ | 10 | 0.81 | 2.17 | 1.33 | 0.38 | 28.24 |
| | 60 | 0.60 | 1.28 | 0.86 | 0.27 | 31.05 |
| | 110 | 0.62 | 1.34 | 0.89 | 0.28 | 31.24 |
| | 160 | 0.66 | 1.36 | 0.92 | 0.27 | 29.50 |
| 5-2560Hz ALL FREQ | 10 | 14.93 | 60.44 | 37.58 | 14.95 | 39.79 |
| | 60 | 10.82 | 40.88 | 25.92 | 9.44 | 36.43 |
| | 110 | 11.63 | 42.64 | 26.12 | 9.87 | 37.78 |
| | 160 | 12.23 | 43.89 | 27.35 | 10.00 | 36.55 |

APPENDIX F

DATASET TGV005
TEST TRAIN LOCOMOTIVE, AGAINST ENGINEER'S CHAIR

Measurement Setup Code: Staff: 5 Reference: 8
 Drawing: A-2

Vehicle Status: Locomotive trip from Tours station
 to Montparnasse station in Paris

Measurement Date: September 8, 1992

Measurement Time: Start: 09:15:28
 End: 09:28:30

Number of Samples: 75

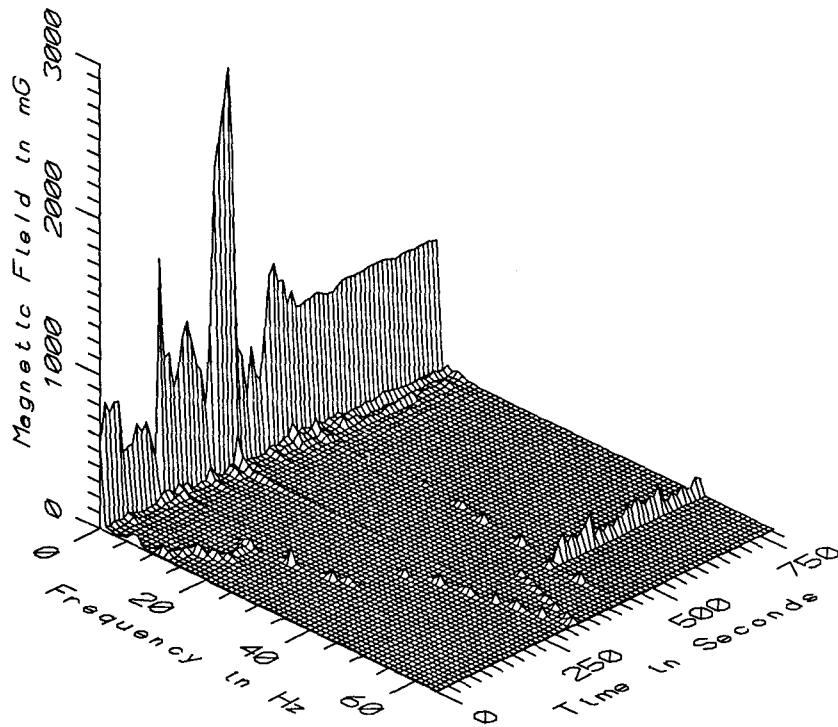
Programmed Sample Interval: 10 sec

Actual Sample Interval: 10.6 sec

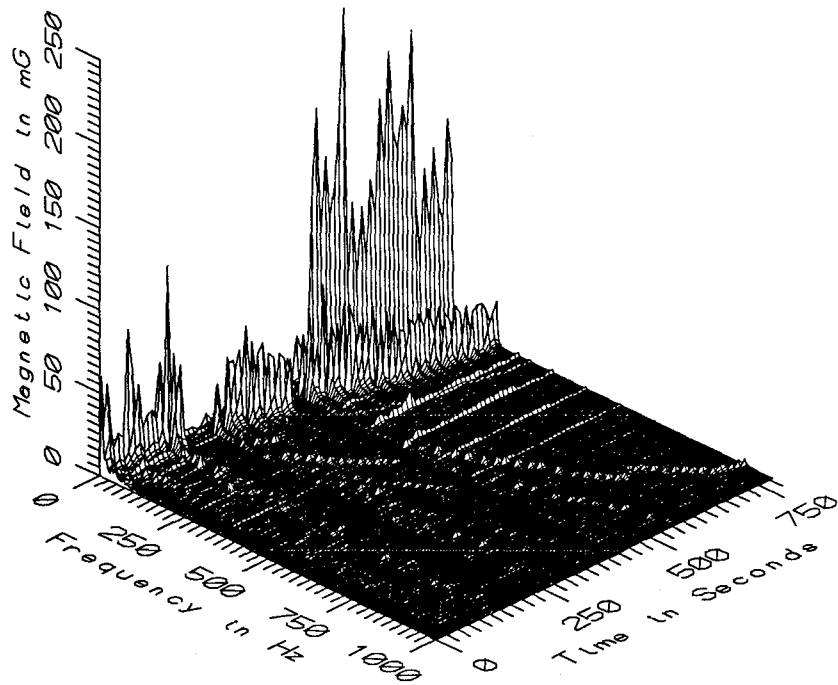
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

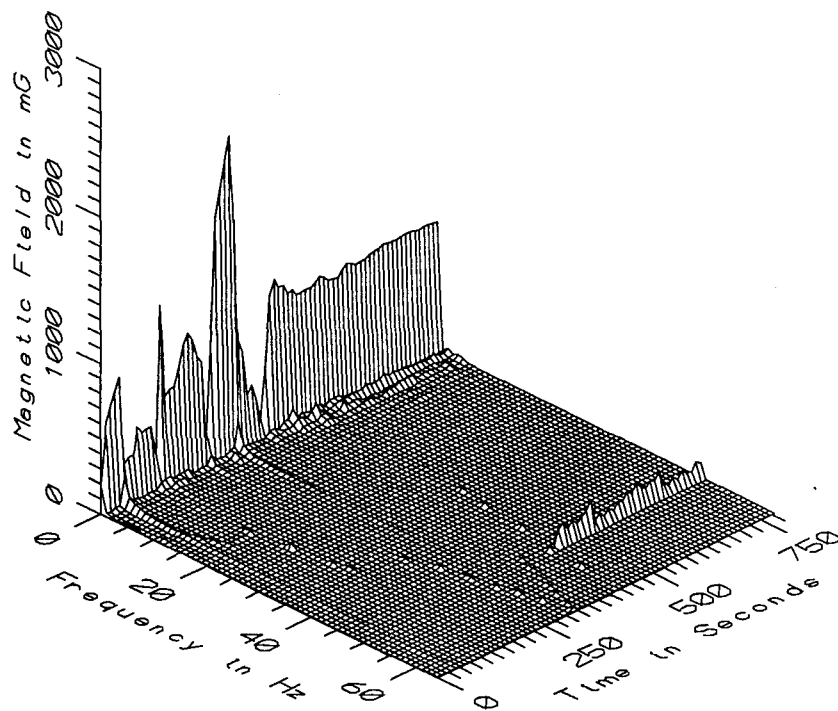
Missing or Suspect Data: None



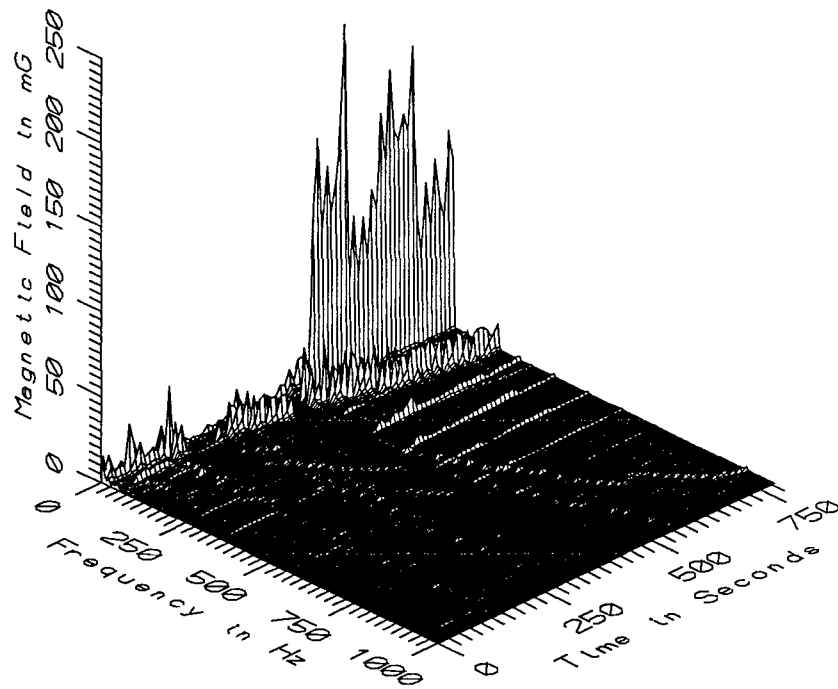
TGV005 - 10cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



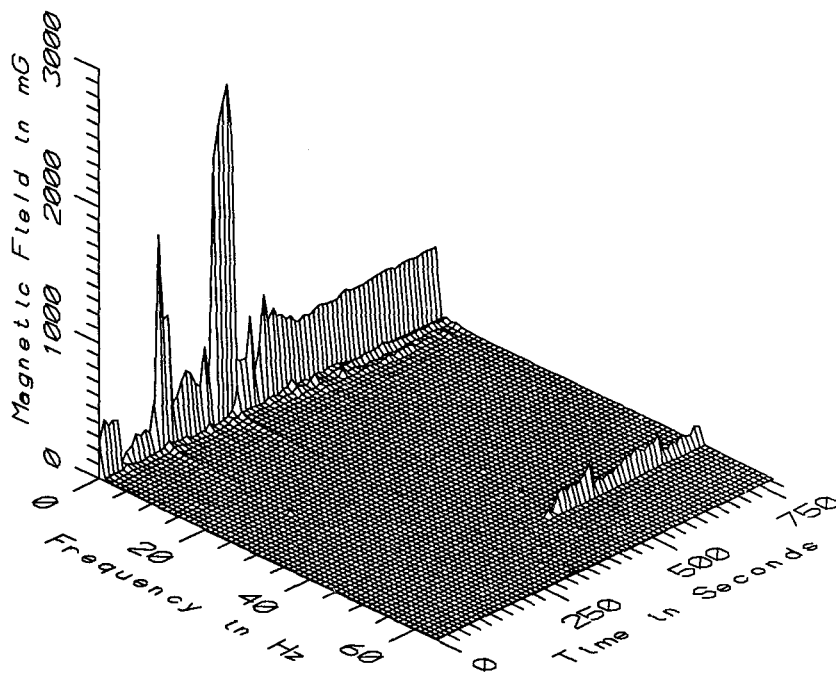
TGV005 - 10cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



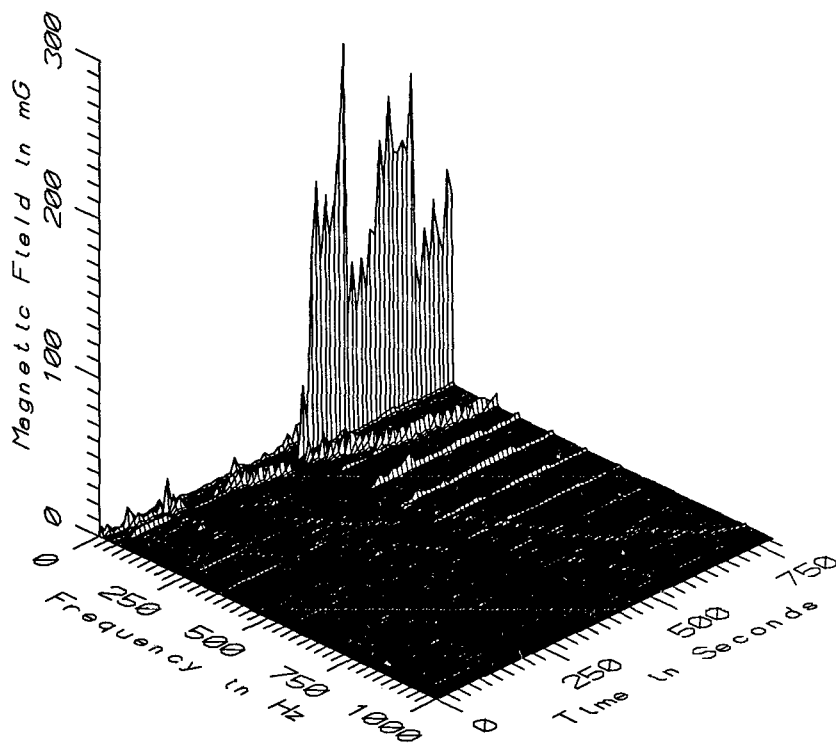
TGV005 - 60cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



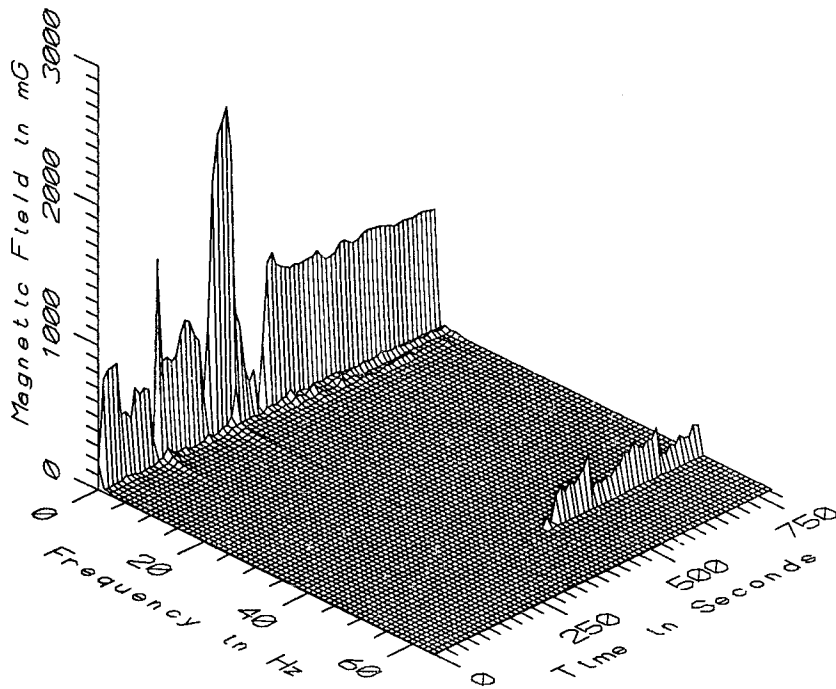
TGV005 - 60cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



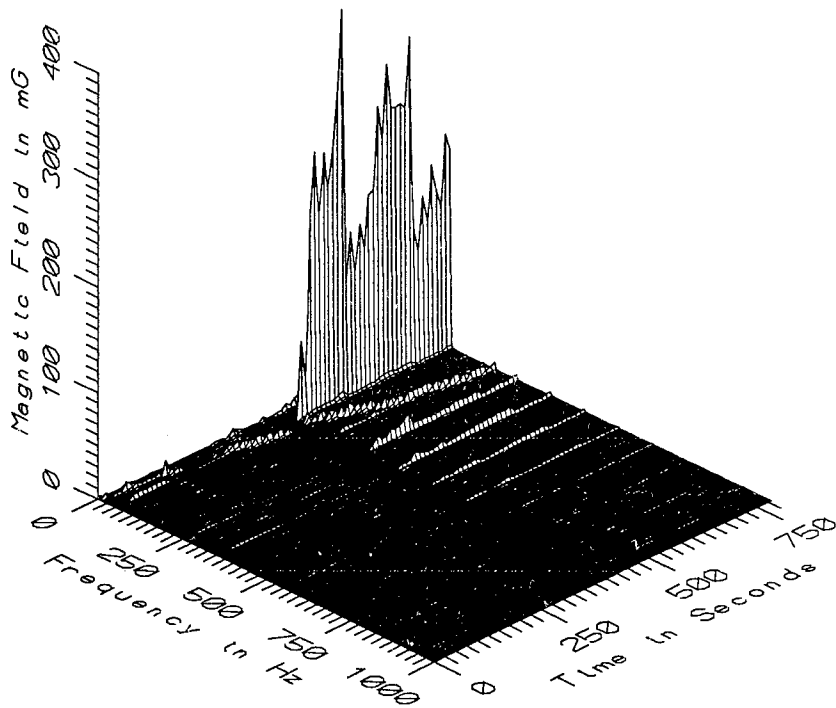
TGV005 - 110_{cm} ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



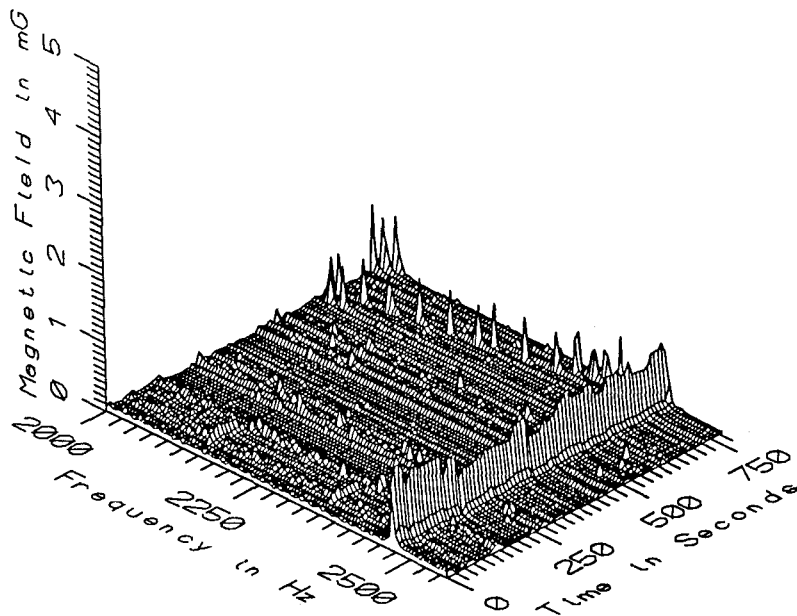
TGV005 - 110_{cm} ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



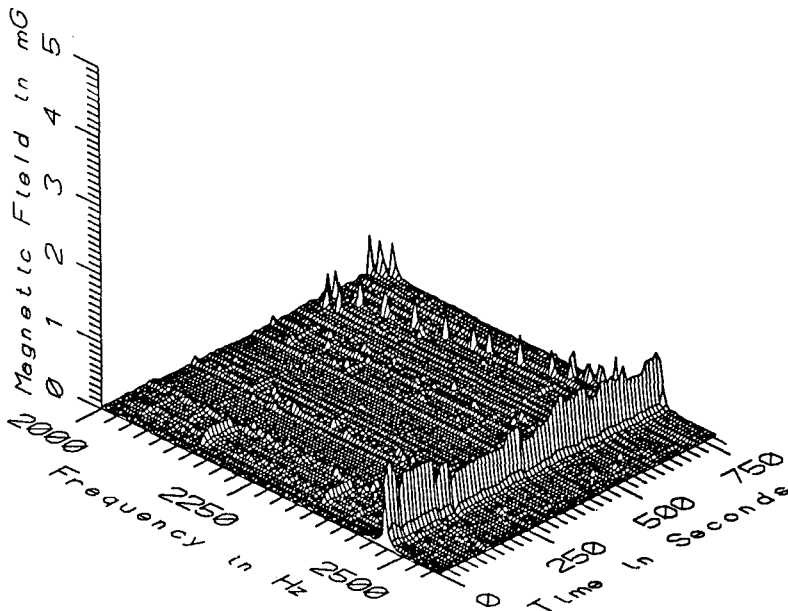
TGV005 - 160cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



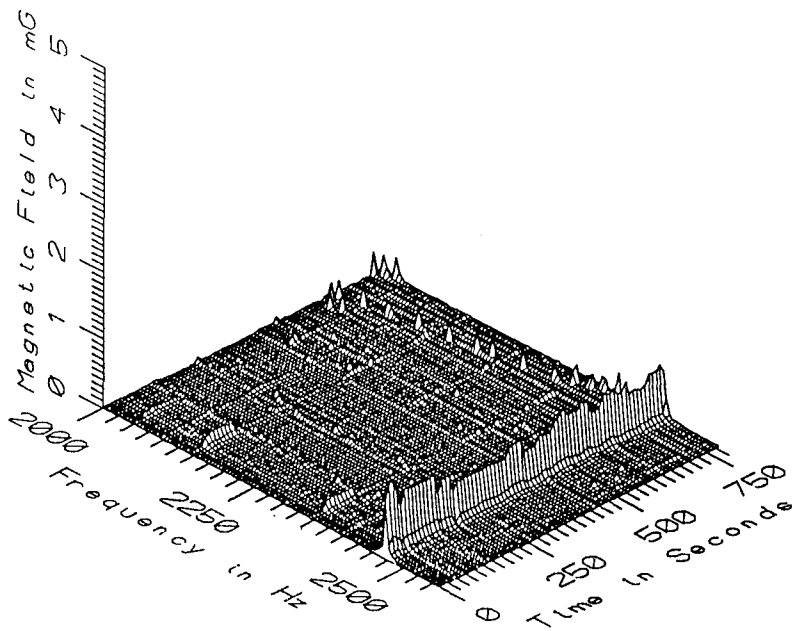
TGV005 - 160cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



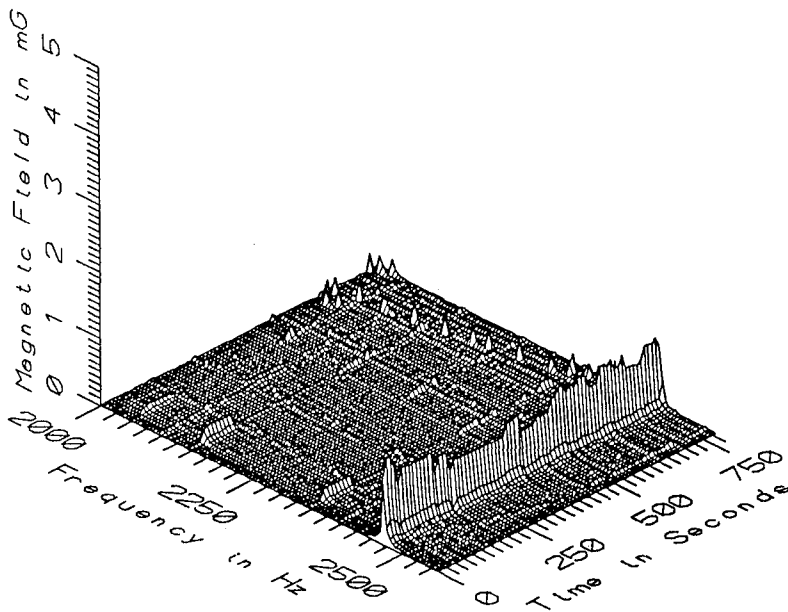
TGV005 - 10cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



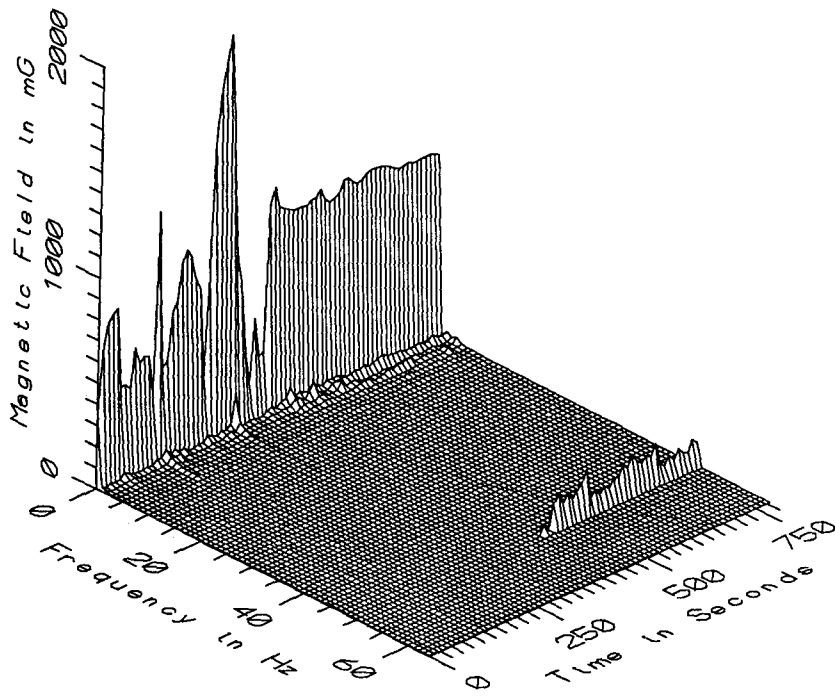
TGV005 - 60cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



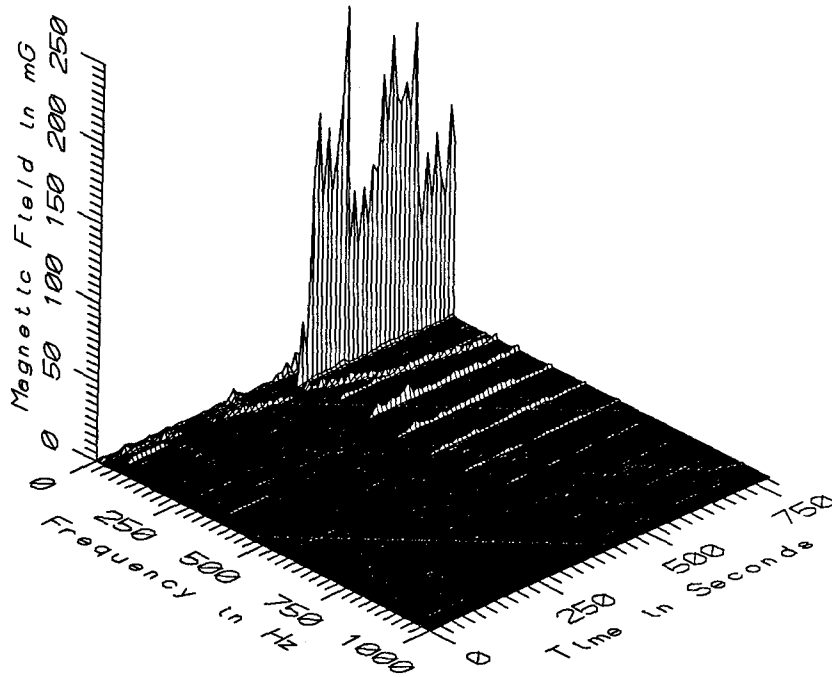
TGV005 - 110cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



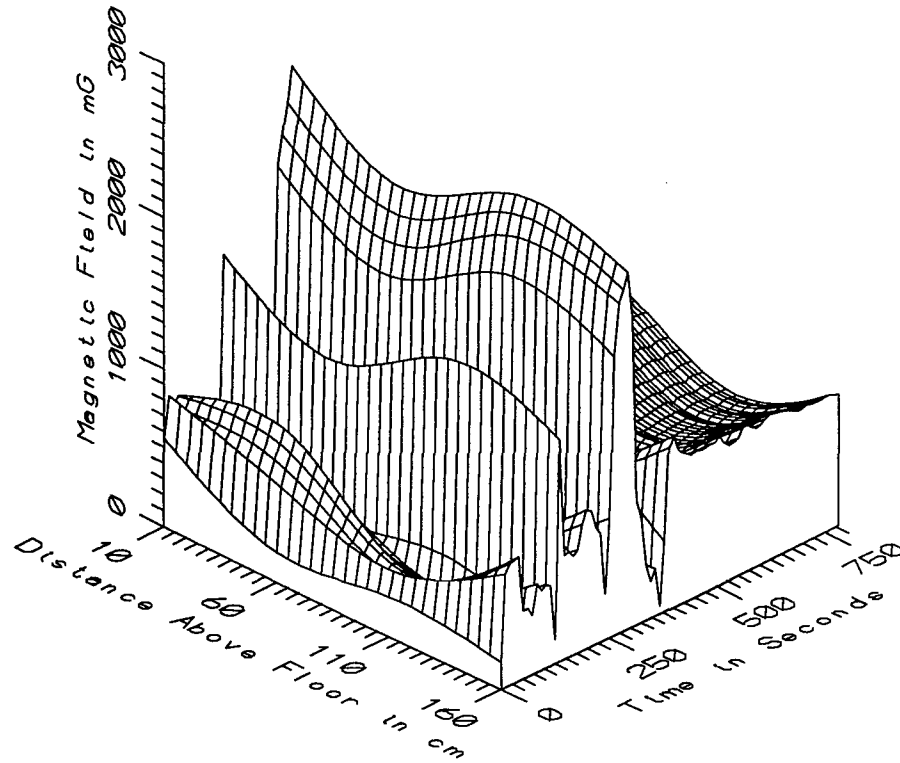
TGV005 - 160cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



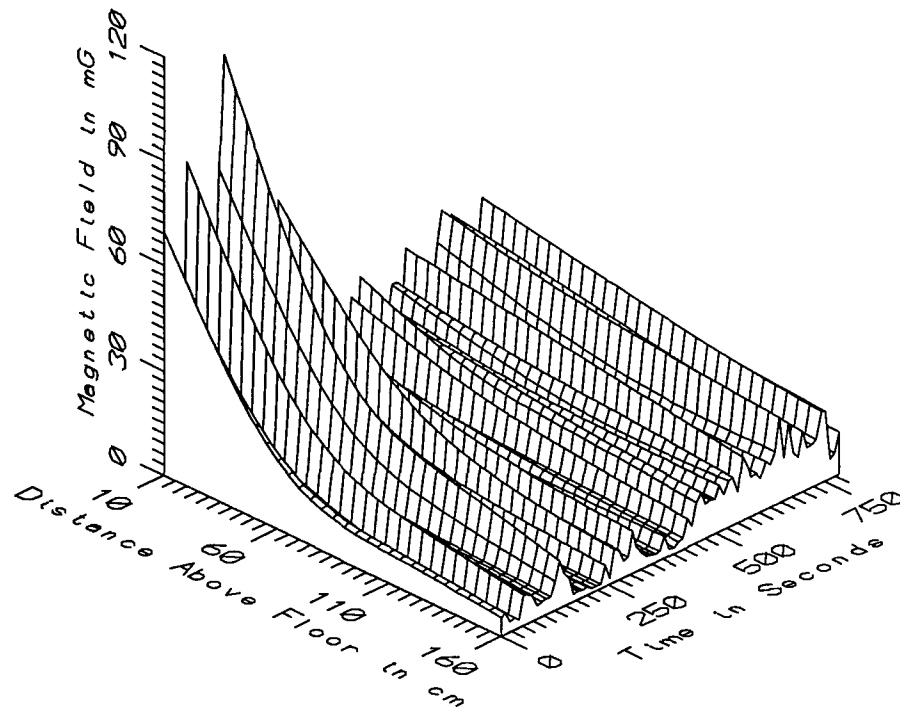
TGV005 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, PULL LOCOMOTIVE



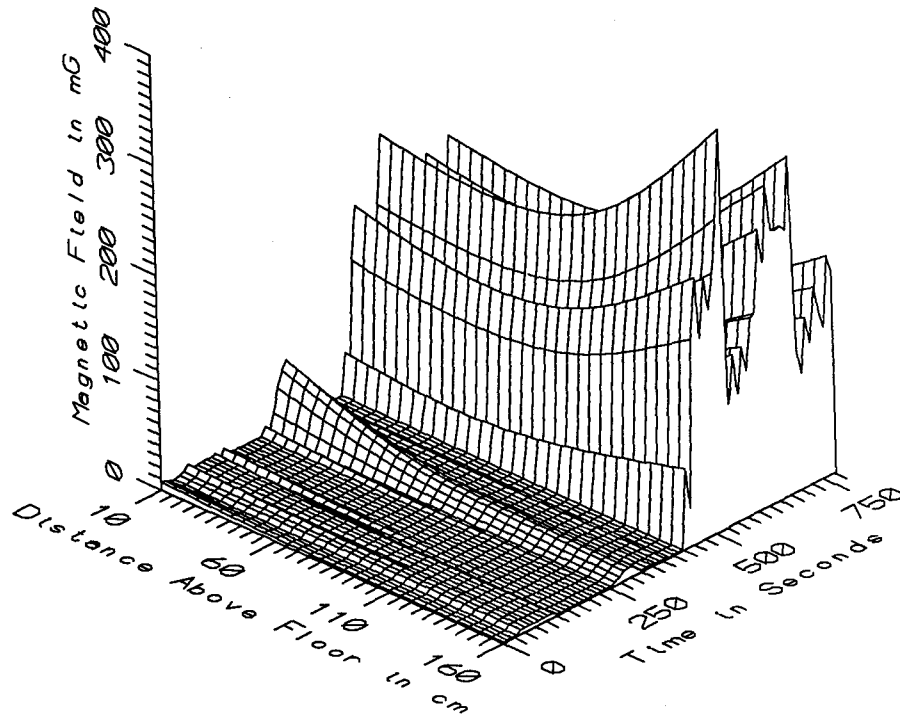
TGV005 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, PULL LOCOMOTIVE



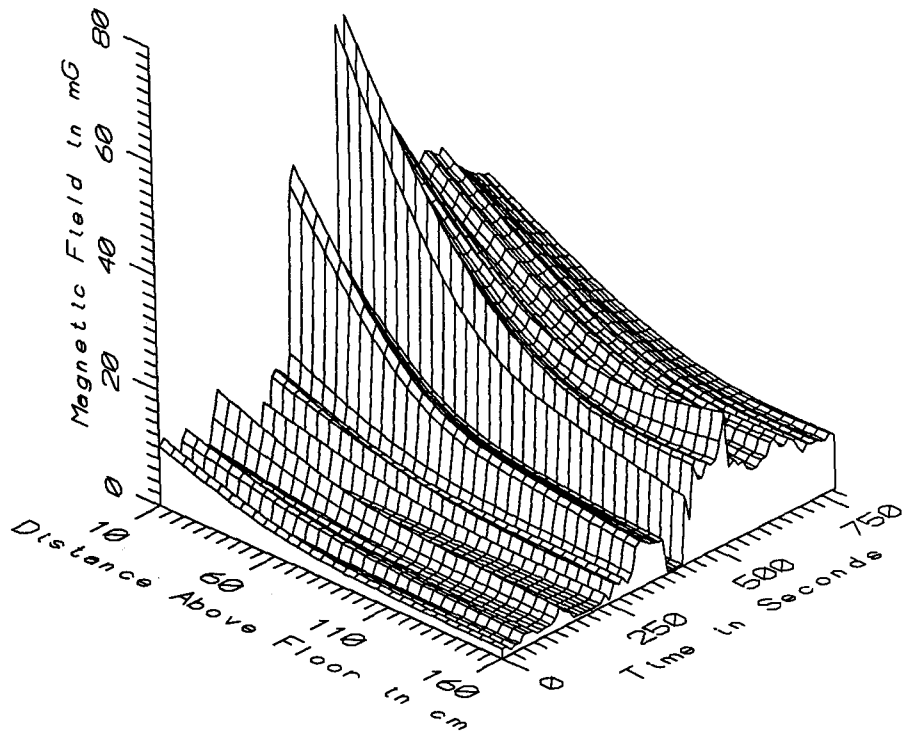
TGV005 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - STATIC



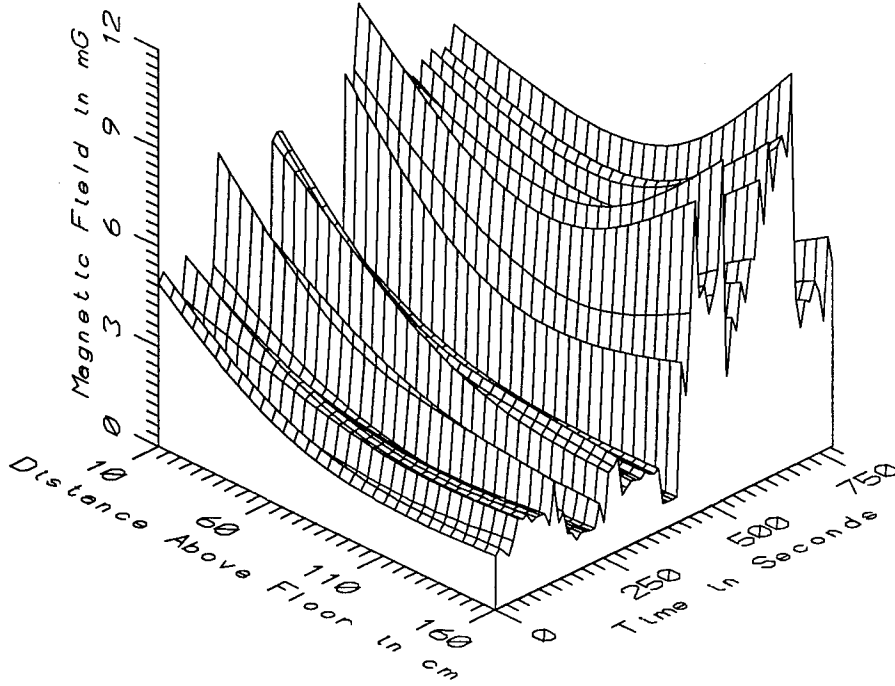
TGV005 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - LOW FREQ, 5-45Hz



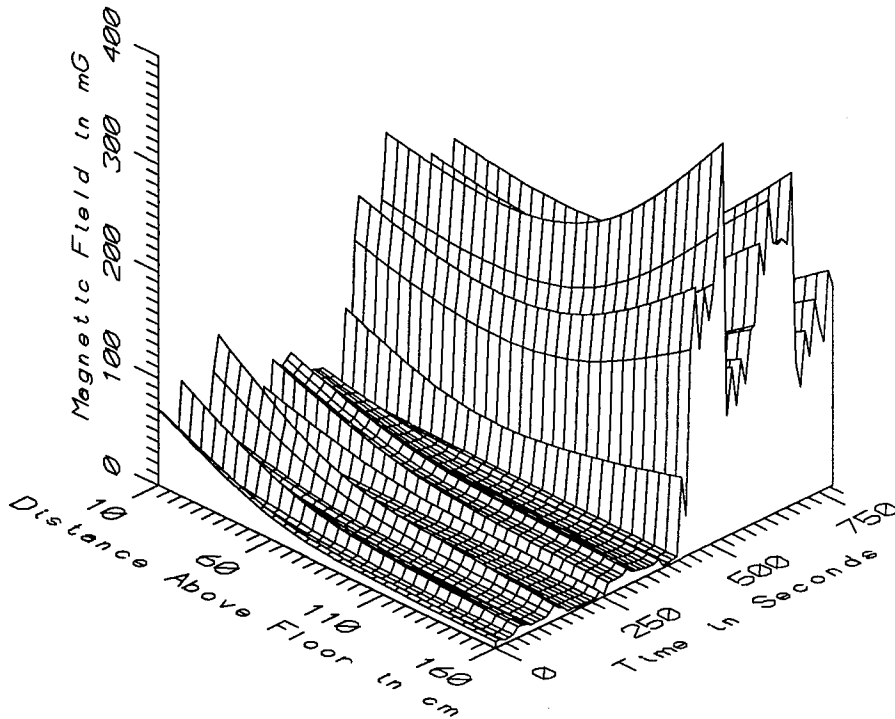
TGV005 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - POWER FREQ, 50-60Hz



TGV005 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - POWER HARM, 65-300Hz



TGV005 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - HIGH FREQ, 305-2560Hz



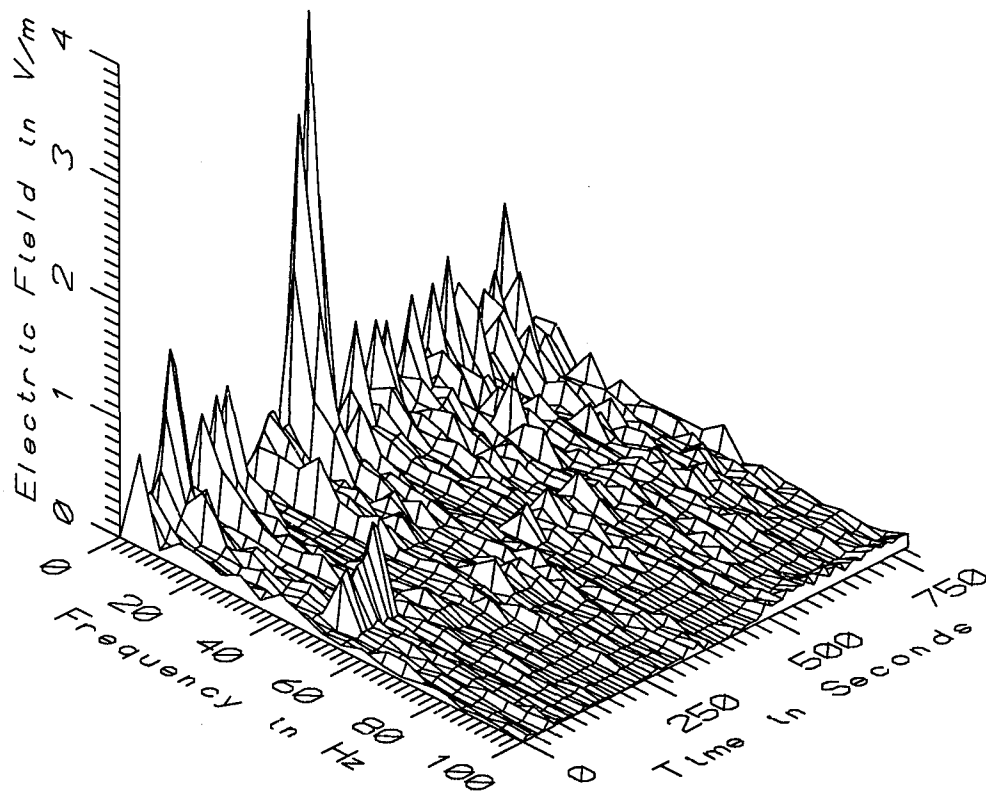
TGV005 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - ALL FREQ, 5-2560Hz

| TGV005 - ALL SAMPLES | | TOTAL OF 75 SAMPLES | | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|--|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) | |
| STATIC | 10 | 307.50 | 2579.82 | 888.50 | 407.52 | 45.87 | |
| | 60 | 115.92 | 2130.40 | 799.32 | 366.16 | 45.81 | |
| | 110 | 37.21 | 2443.37 | 585.29 | 482.26 | 82.40 | |
| | 160 | 48.34 | 2277.68 | 841.84 | 405.08 | 48.12 | |
| 5-45Hz LOW FREQ | 10 | 3.31 | 112.47 | 26.83 | 21.45 | 79.95 | |
| | 60 | 1.97 | 41.95 | 14.56 | 8.46 | 58.11 | |
| | 110 | 1.38 | 27.55 | 10.17 | 6.25 | 61.49 | |
| | 160 | 1.17 | 24.61 | 8.52 | 5.47 | 64.17 | |
| 50-60Hz PWR FREQ | 10 | 0.38 | 220.66 | 54.56 | 59.29 | 108.67 | |
| | 60 | 0.30 | 210.75 | 50.37 | 58.44 | 116.02 | |
| | 110 | 0.29 | 247.45 | 59.36 | 70.41 | 118.63 | |
| | 160 | 0.28 | 366.56 | 88.87 | 106.98 | 120.38 | |
| 65-300Hz PWR HARM | 10 | 0.57 | 68.33 | 25.33 | 19.39 | 76.53 | |
| | 60 | 0.39 | 33.85 | 13.31 | 10.21 | 76.72 | |
| | 110 | 0.37 | 19.82 | 7.85 | 6.00 | 76.43 | |
| | 160 | 0.27 | 22.67 | 6.93 | 5.60 | 80.86 | |
| 305-2560Hz HIGH FREQ | 10 | 0.70 | 10.51 | 5.27 | 2.51 | 47.55 | |
| | 60 | 0.62 | 7.54 | 3.63 | 1.89 | 51.91 | |
| | 110 | 0.58 | 8.07 | 3.14 | 1.94 | 61.89 | |
| | 160 | 0.74 | 11.85 | 3.94 | 2.91 | 73.92 | |
| 5-2560Hz ALL FREQ | 10 | 3.75 | 227.36 | 76.82 | 52.93 | 68.89 | |
| | 60 | 2.36 | 213.38 | 58.95 | 55.25 | 93.72 | |
| | 110 | 1.85 | 248.67 | 63.54 | 68.50 | 107.80 | |
| | 160 | 1.88 | 367.65 | 91.74 | 105.48 | 114.97 | |

| TGV005 - DC SECTION ONLY | | TOTAL OF 30 SAMPLES | | | | |
|--------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 307.50 | 2579.82 | 972.73 | 621.32 | 63.87 |
| | 60 | 187.79 | 2130.40 | 790.41 | 534.49 | 67.62 |
| | 110 | 37.21 | 2443.37 | 707.28 | 747.45 | 105.68 |
| | 160 | 157.74 | 2277.68 | 877.53 | 592.28 | 67.49 |
| 5-45Hz LOW FREQ | 10 | 3.31 | 112.47 | 38.36 | 28.82 | 75.13 |
| | 60 | 1.97 | 41.95 | 14.59 | 9.97 | 68.37 |
| | 110 | 1.38 | 21.76 | 7.50 | 4.95 | 65.98 |
| 50-60Hz PWR FREQ | 160 | 1.17 | 13.60 | 5.36 | 3.28 | 61.27 |
| | 10 | 1.05 | 59.39 | 10.94 | 16.32 | 149.20 |
| | 60 | 0.79 | 22.24 | 4.99 | 6.07 | 121.57 |
| | 110 | 0.76 | 12.95 | 3.36 | 3.49 | 104.02 |
| 65-300Hz PWR HARM | 160 | 0.77 | 9.48 | 2.82 | 2.60 | 92.23 |
| | 10 | 0.68 | 14.77 | 6.93 | 4.64 | 66.93 |
| | 60 | 0.50 | 7.73 | 3.41 | 2.15 | 63.18 |
| | 110 | 0.51 | 4.80 | 2.01 | 1.22 | 60.81 |
| 305-2560Hz HIGH FREQ | 160 | 0.59 | 3.70 | 1.65 | 0.89 | 53.81 |
| | 10 | 0.83 | 7.98 | 3.80 | 2.25 | 59.23 |
| | 60 | 0.78 | 4.62 | 2.33 | 1.14 | 48.91 |
| | 110 | 0.75 | 3.37 | 1.74 | 0.72 | 41.61 |
| 5-2560Hz ALL FREQ | 160 | 0.92 | 3.00 | 1.79 | 0.58 | 32.20 |
| | 10 | 3.75 | 113.72 | 43.73 | 29.26 | 66.90 |
| | 60 | 2.36 | 42.90 | 16.85 | 10.60 | 62.90 |
| | 110 | 1.85 | 22.55 | 9.10 | 5.50 | 60.47 |
| 160 | 1.88 | 15.34 | 6.85 | 3.78 | 55.17 | |

| TGV005 - TRANSITION BETWEEN DC AND AC SECTIONS | | TOTAL OF 11 SAMPLES | | | | |
|--|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 420.08 | 1175.21 | 792.77 | 264.42 | 33.35 |
| | 60 | 115.92 | 1016.79 | 605.78 | 322.02 | 53.16 |
| | 110 | 235.28 | 771.16 | 506.44 | 159.85 | 31.56 |
| | 160 | 48.34 | 1076.90 | 620.90 | 362.12 | 58.32 |
| 5-45Hz LOW FREQ | 10 | 3.68 | 19.44 | 8.95 | 4.57 | 51.00 |
| | 60 | 2.90 | 11.26 | 5.69 | 2.71 | 47.73 |
| | 110 | 2.38 | 7.79 | 4.08 | 1.78 | 43.64 |
| | 160 | 1.89 | 6.72 | 3.45 | 1.63 | 47.34 |
| 50-60Hz PWR FREQ | 10 | 0.38 | 24.03 | 4.91 | 6.79 | 138.18 |
| | 60 | 0.30 | 9.65 | 2.11 | 2.67 | 126.77 |
| | 110 | 0.29 | 5.56 | 1.41 | 1.49 | 105.64 |
| | 160 | 0.28 | 4.18 | 1.16 | 1.12 | 96.32 |
| 65-300Hz PWR HARM | 10 | 0.57 | 47.01 | 25.90 | 20.26 | 78.24 |
| | 60 | 0.39 | 18.55 | 10.39 | 7.92 | 76.30 |
| | 110 | 0.37 | 10.75 | 6.04 | 4.52 | 74.74 |
| | 160 | 0.27 | 8.12 | 4.60 | 3.43 | 74.43 |
| 305-2560Hz HIGH FREQ | 10 | 0.70 | 5.78 | 3.51 | 2.24 | 63.97 |
| | 60 | 0.62 | 3.24 | 2.06 | 1.14 | 55.48 |
| | 110 | 0.58 | 2.13 | 1.48 | 0.71 | 47.97 |
| | 160 | 0.74 | 1.95 | 1.44 | 0.56 | 38.68 |
| 5-2560Hz ALL FREQ | 10 | 3.84 | 53.95 | 30.11 | 18.75 | 62.25 |
| | 60 | 3.05 | 22.87 | 13.26 | 7.00 | 52.77 |
| | 110 | 2.51 | 13.91 | 8.17 | 3.99 | 48.88 |
| | 160 | 2.08 | 10.98 | 6.46 | 3.21 | 49.64 |

| TGV005 - AC SECTION ONLY | | TOTAL OF 34 SAMPLES | | | | | |
|--------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|--|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) | |
| STATIC | 10 | 813.65 | 943.42 | 845.16 | 22.92 | 2.71 | |
| | 60 | 821.28 | 899.43 | 869.80 | 22.26 | 2.56 | |
| | 110 | 461.29 | 522.74 | 503.16 | 16.94 | 3.37 | |
| | 160 | 829.11 | 933.44 | 881.83 | 29.49 | 3.34 | |
| 5-45Hz LOW FREQ | 10 | 8.84 | 37.51 | 22.44 | 6.95 | 30.96 | |
| | 60 | 7.80 | 31.15 | 17.41 | 6.02 | 34.60 | |
| | 110 | 6.60 | 27.55 | 14.49 | 5.21 | 35.95 | |
| | 160 | 5.45 | 24.61 | 12.94 | 4.35 | 33.59 | |
| 50-60Hz PWR FREQ | 10 | 19.47 | 220.66 | 109.10 | 44.91 | 41.17 | |
| | 60 | 15.90 | 210.75 | 106.03 | 42.24 | 39.84 | |
| | 110 | 22.42 | 247.45 | 127.52 | 48.48 | 38.02 | |
| | 160 | 35.67 | 366.56 | 193.17 | 71.79 | 37.17 | |
| 65-300Hz PWR HARM | 10 | 28.27 | 68.33 | 41.39 | 11.22 | 27.11 | |
| | 60 | 14.20 | 33.85 | 23.00 | 4.71 | 20.46 | |
| | 110 | 8.78 | 19.82 | 13.59 | 2.69 | 19.78 | |
| | 160 | 7.51 | 22.67 | 12.33 | 2.98 | 24.20 | |
| 305-2560Hz HIGH FREQ | 10 | 5.07 | 10.51 | 7.14 | 1.23 | 17.19 | |
| | 60 | 2.98 | 7.54 | 5.29 | 1.11 | 21.00 | |
| | 110 | 2.82 | 8.07 | 4.91 | 1.38 | 28.17 | |
| | 160 | 3.63 | 11.85 | 6.64 | 2.20 | 33.16 | |
| 5-2560Hz ALL FREQ | 10 | 41.74 | 227.36 | 121.13 | 40.96 | 33.81 | |
| | 60 | 22.90 | 213.38 | 110.88 | 40.56 | 36.58 | |
| | 110 | 25.12 | 248.67 | 129.50 | 47.88 | 36.97 | |
| | 160 | 37.04 | 367.65 | 194.25 | 71.62 | 36.87 | |



TGV005 - ELECTRIC FIELD IN TEST TRAIN LOCOMOTIVE

APPENDIX G

DATASET TGV006
TEST TRAIN LOCOMOTIVE, AGAINST ENGINEER'S CHAIR

Measurement Setup Code: Staff: 5 Reference: 8
 Drawing: A-2

Vehicle Status: Locomotive trip from Tours station
 to Montparnasse station in Paris

Measurement Date: September 8, 1992

Measurement Time: Start: 09:30:15
 End: 09:42:02

Number of Samples: 25

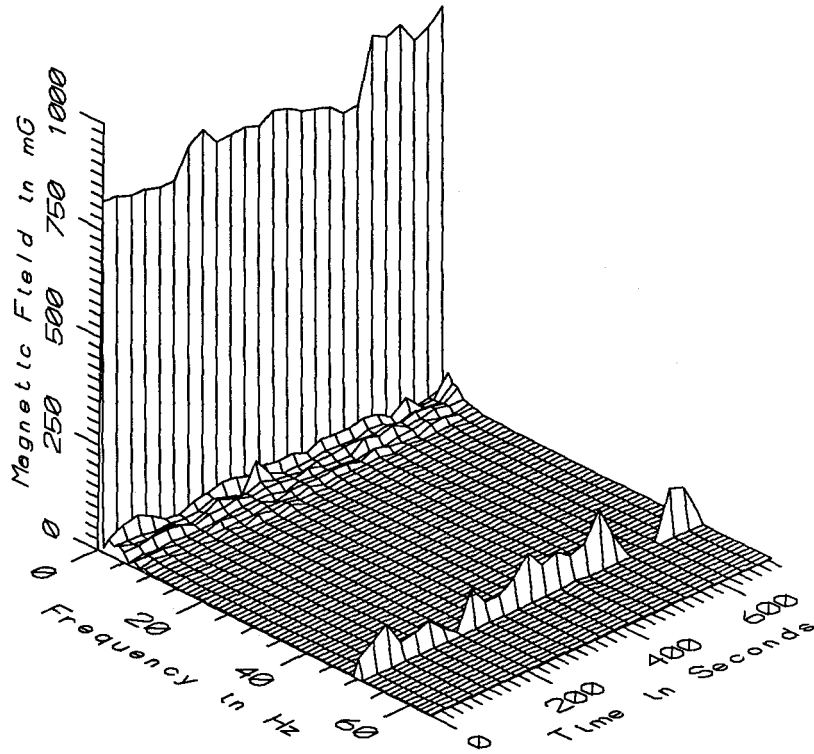
Programmed Sample Interval: 30 sec

Actual Sample Interval: 29.5 sec

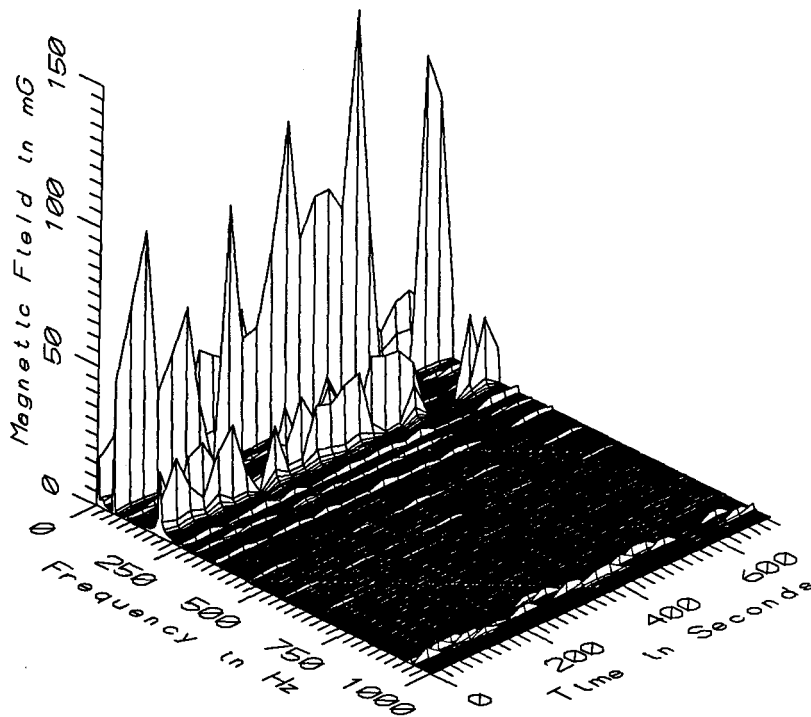
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

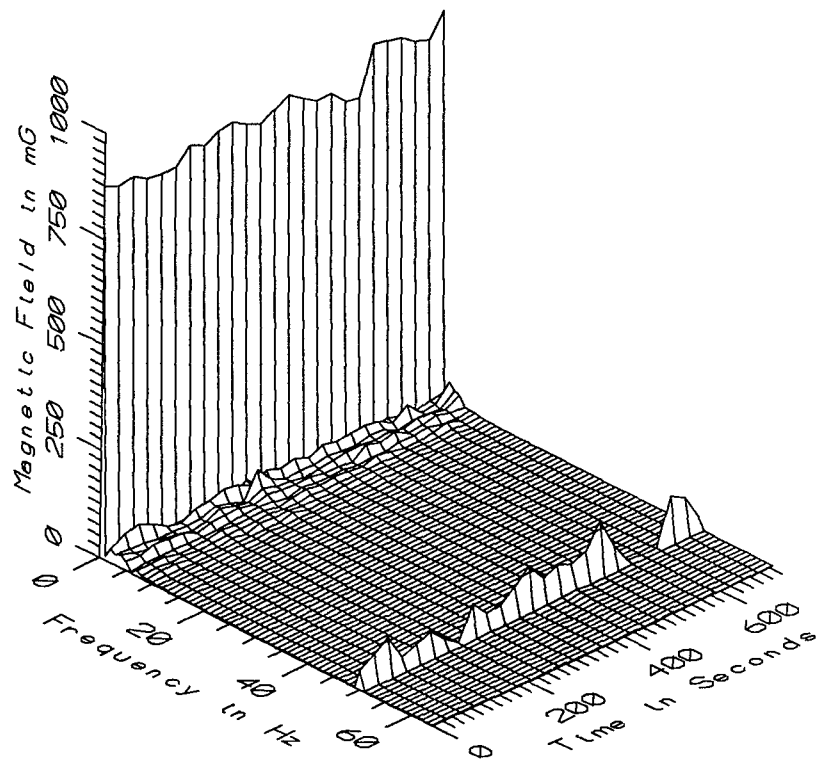
Missing or Suspect Data: None



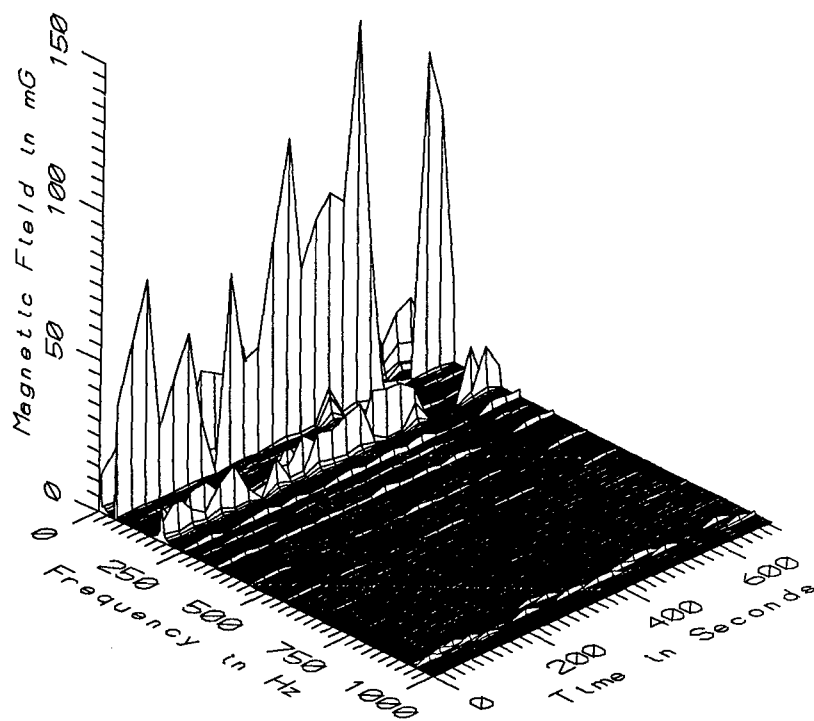
TGV006 - 10cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



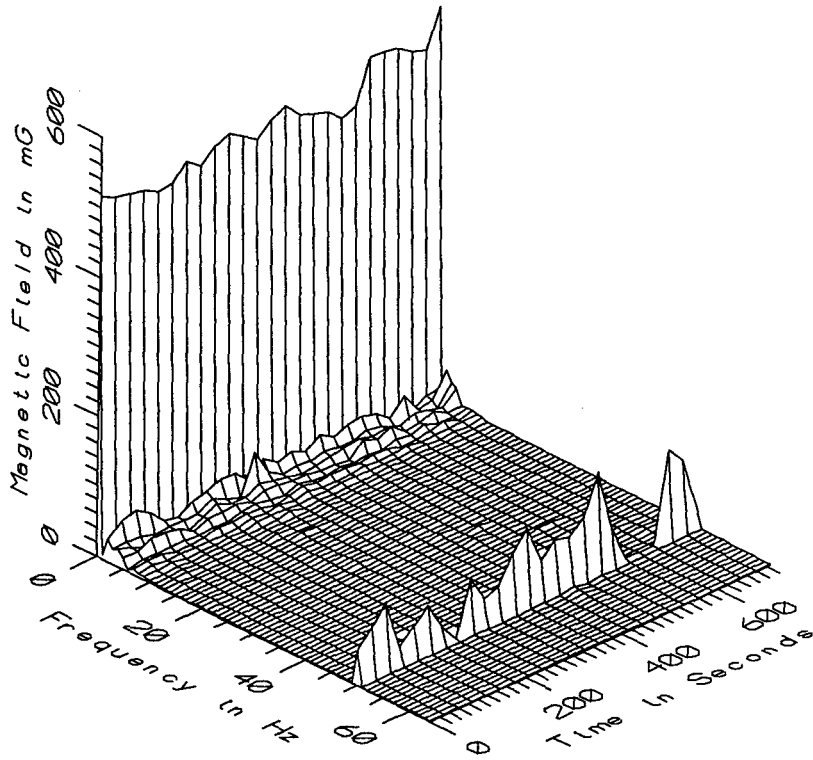
TGV006 - 10cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



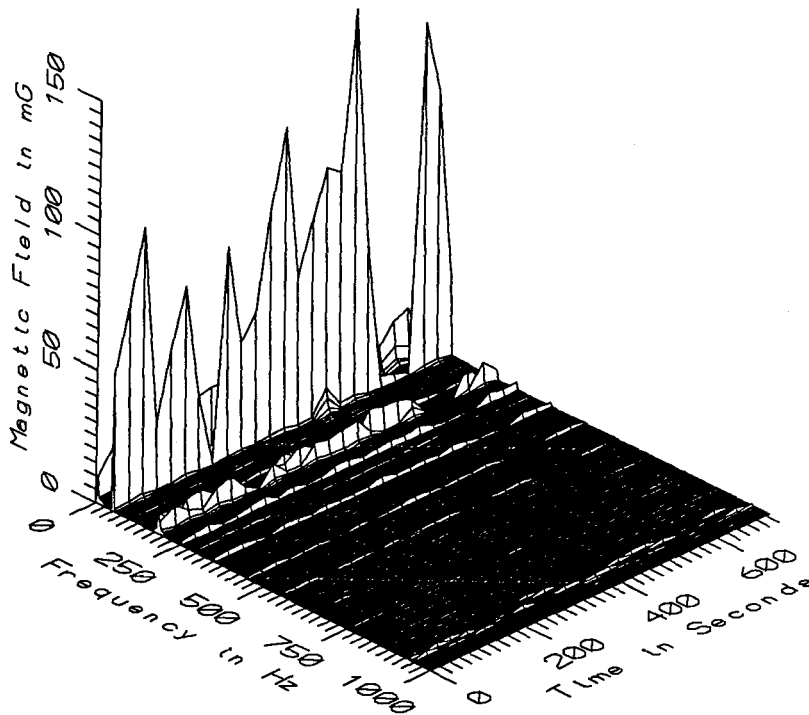
TGV006 - 60cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



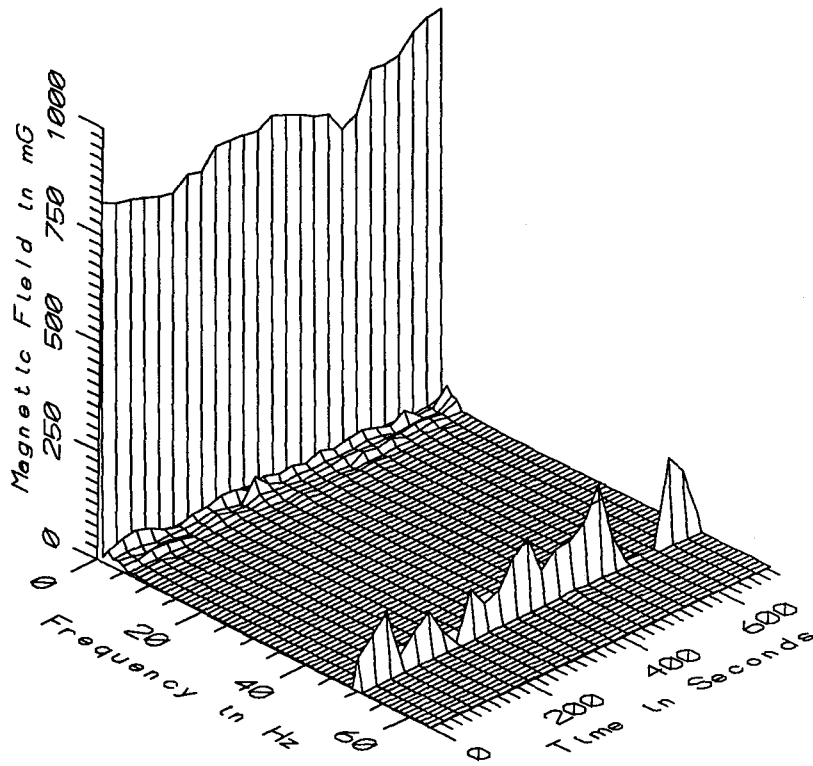
TGV006 - 60cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



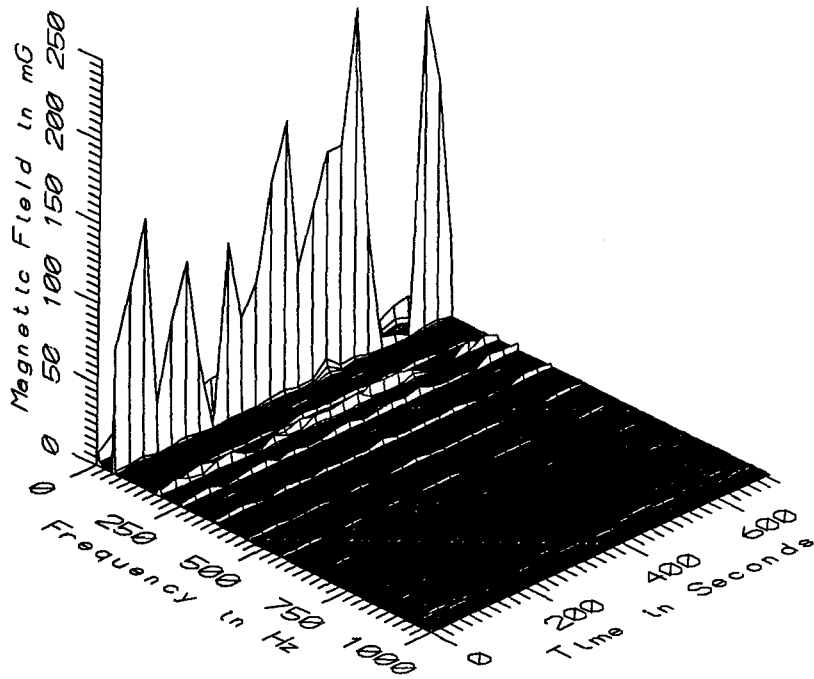
TGV006 - 110cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



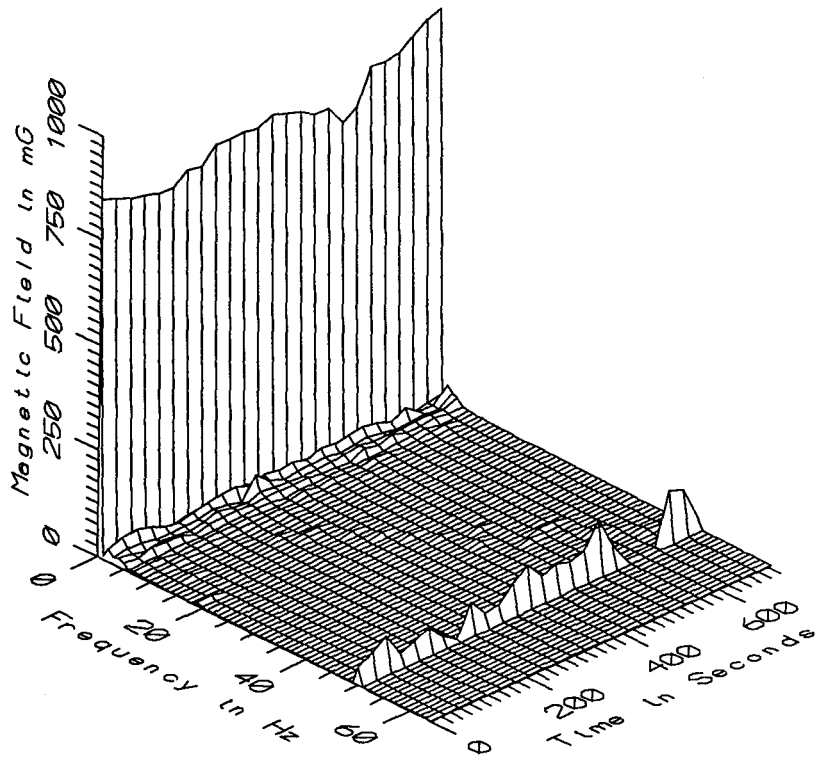
TGV006 - 110cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



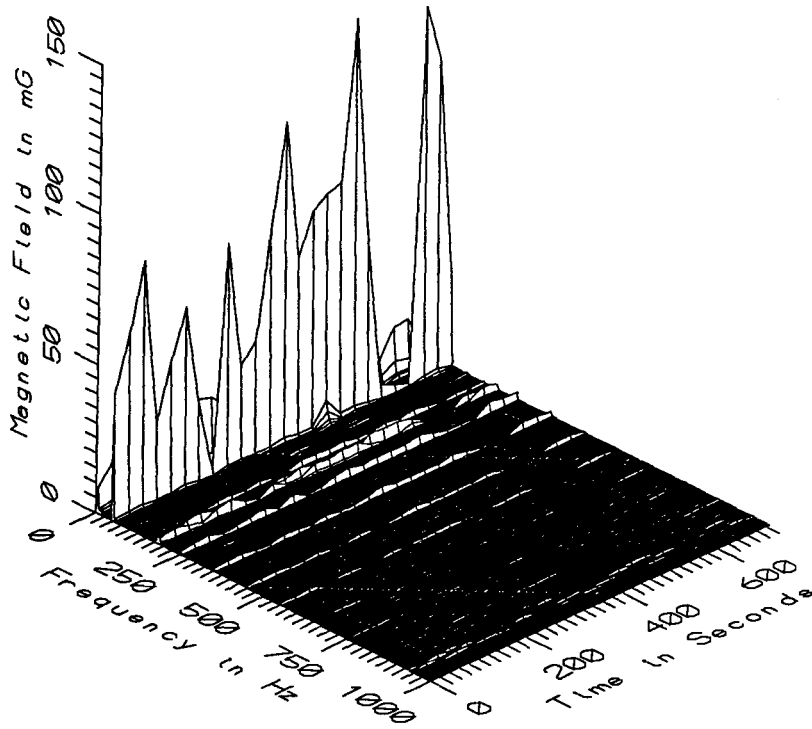
TGV006 - 160_{cm} ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



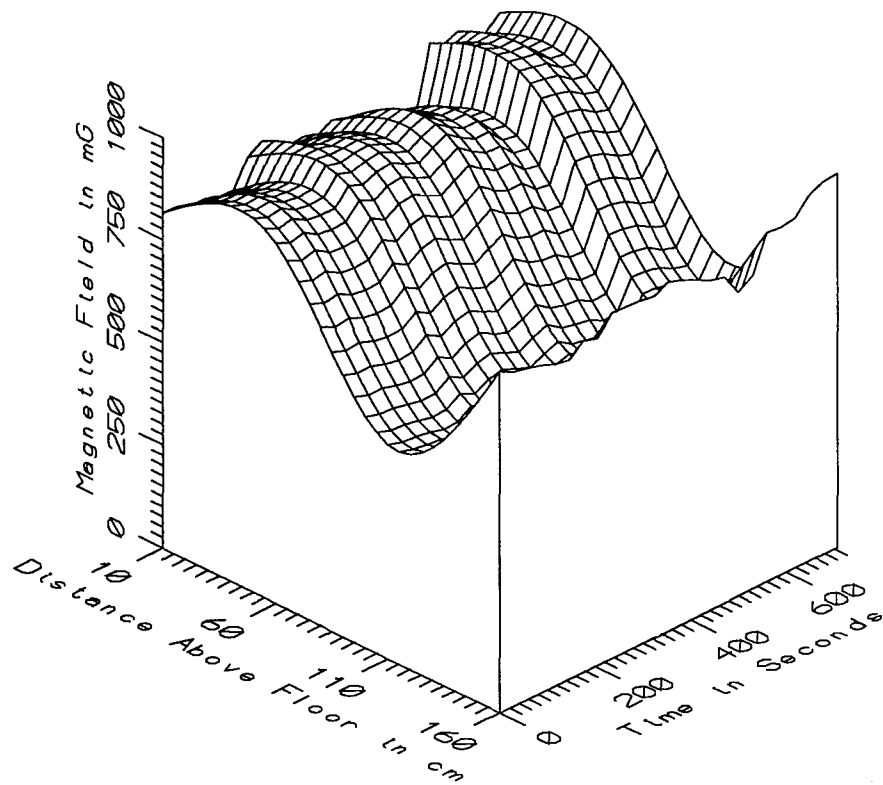
TGV006 - 160_{cm} ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



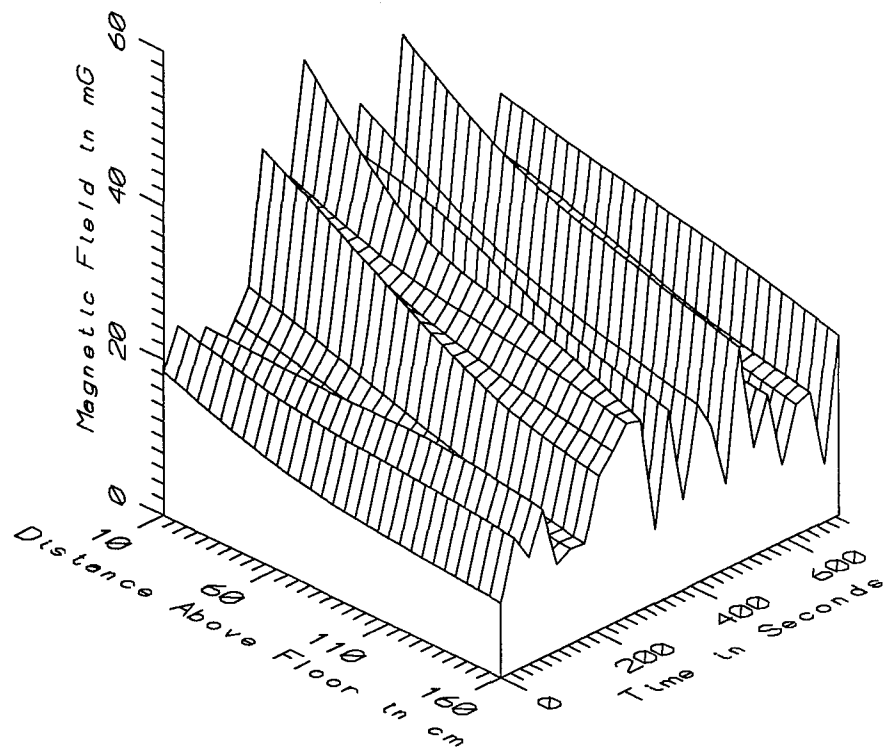
TGV006 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, PULL LOCOMOTIVE



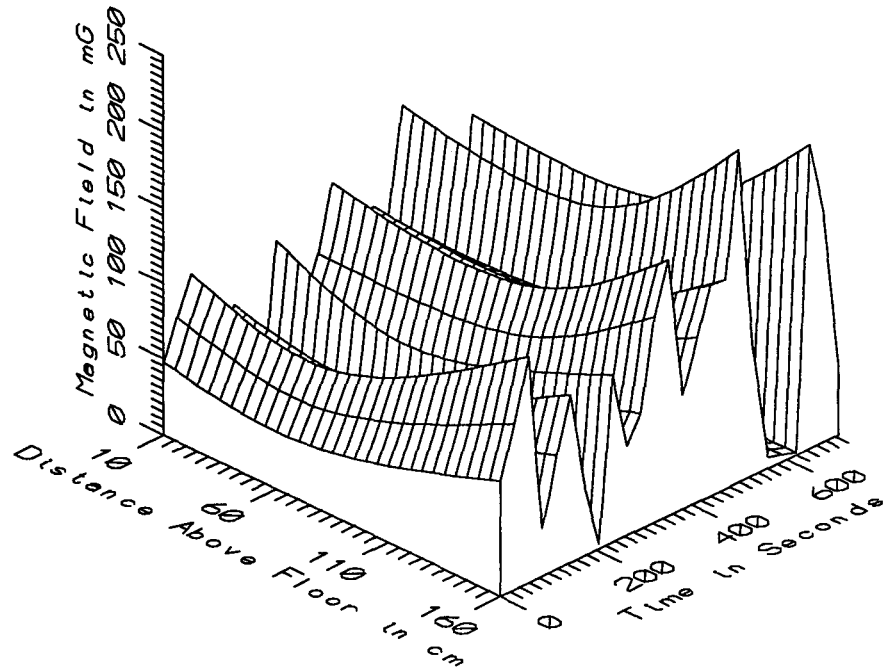
TGV006 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, PULL LOCOMOTIVE



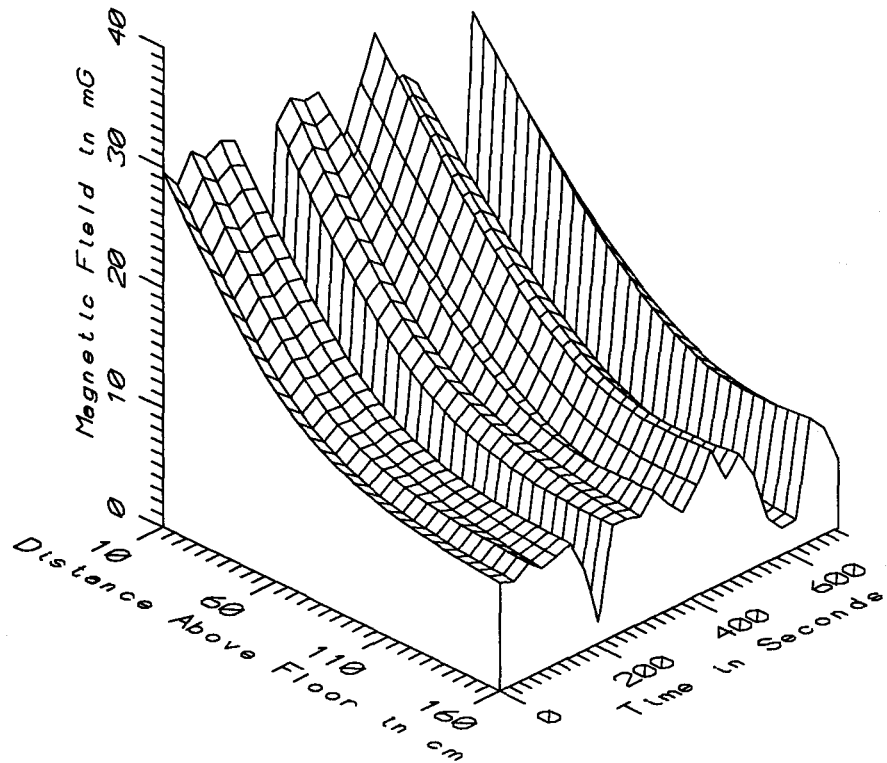
TGV006 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - STATIC



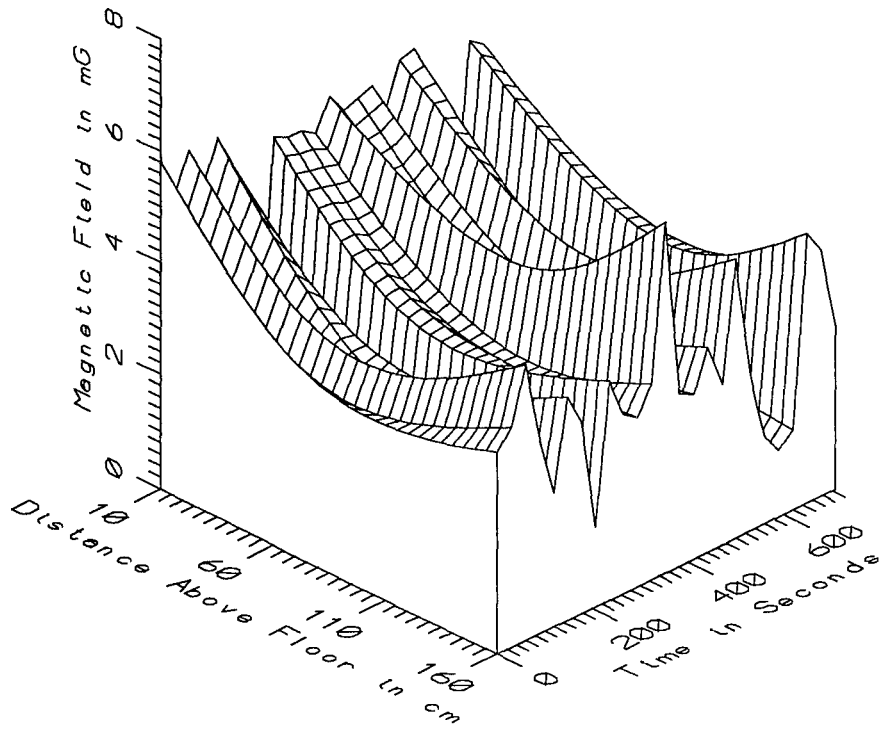
TGV006 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - LOW FREQ, 5-45Hz



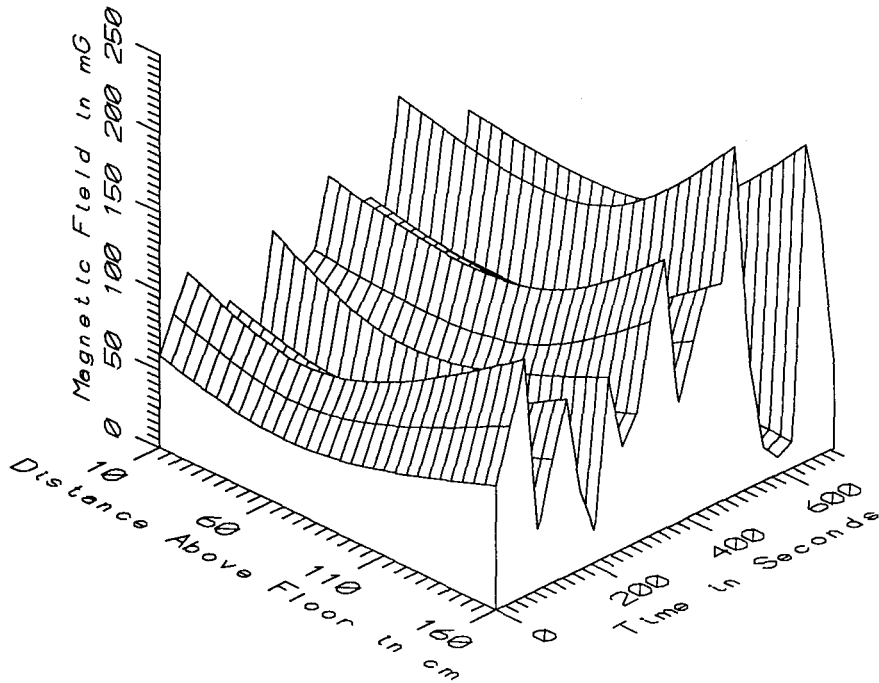
TGV006 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - POWER FREQ, 50-60Hz



TGV006 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - POWER HARM, 65-300Hz



TGV006 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - HIGH FREQ, 305-2560Hz



TGV006 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - ALL FREQ, 5-2560Hz

| TGV006 - TEST TRAIN CAB, ALL SAMPLES IN AC SECTION | | TOTAL OF 25 SAMPLES | | | | |
|--|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 764.15 | 922.46 | 836.22 | 46.29 | 5.54 |
| | 60 | 807.46 | 920.98 | 868.10 | 28.51 | 3.28 |
| | 110 | 466.61 | 565.52 | 506.75 | 21.62 | 4.27 |
| | 160 | 738.38 | 911.13 | 821.13 | 42.04 | 5.12 |
| 5-45Hz LOW FREQ | 10 | 17.50 | 50.15 | 29.31 | 9.35 | 31.90 |
| | 60 | 13.31 | 37.50 | 23.83 | 7.43 | 31.17 |
| | 110 | 9.36 | 32.27 | 19.72 | 6.63 | 33.61 |
| | 160 | 7.53 | 27.65 | 16.81 | 5.84 | 34.73 |
| 50-60Hz PWR FREQ | 10 | 3.18 | 140.84 | 60.59 | 37.46 | 61.82 |
| | 60 | 2.46 | 130.05 | 52.29 | 34.56 | 66.09 |
| | 110 | 1.73 | 146.83 | 62.61 | 40.12 | 64.07 |
| | 160 | 1.62 | 219.07 | 93.25 | 60.77 | 65.17 |
| 65-300Hz PWR HARM | 10 | 2.50 | 32.77 | 23.53 | 10.15 | 43.14 |
| | 60 | 2.07 | 20.26 | 13.65 | 5.56 | 40.72 |
| | 110 | 1.80 | 12.44 | 8.63 | 3.14 | 36.34 |
| | 160 | 1.79 | 11.54 | 7.85 | 2.65 | 33.78 |
| 305-2560Hz HIGH FREQ | 10 | 1.42 | 5.82 | 4.60 | 1.41 | 30.76 |
| | 60 | 1.21 | 4.39 | 3.14 | 0.84 | 26.86 |
| | 110 | 0.99 | 4.34 | 2.70 | 0.79 | 29.14 |
| | 160 | 1.15 | 6.16 | 3.26 | 1.20 | 36.84 |
| 5-2560Hz ALL FREQ | 10 | 20.73 | 151.35 | 75.06 | 32.32 | 43.06 |
| | 60 | 14.85 | 136.48 | 62.14 | 30.05 | 48.37 |
| | 110 | 12.66 | 150.74 | 68.87 | 36.01 | 52.28 |
| | 160 | 11.48 | 221.09 | 97.27 | 57.51 | 59.12 |

APPENDIX H

DATASET TGV007
TRANSVERSE PROFILE FROM SIDE WALL OF TEST TRAIN LOCOMOTIVE

Measurement Setup Code: Staff: 6 Reference: 8
 Drawing: A-2

Vehicle Status: Locomotive trip from Tours station
 to Montparnasse station in Paris

Measurement Date: September 8, 1992

Measurement Time: Start: 09:43:16
 End: 09:47:30

Number of Samples: 10

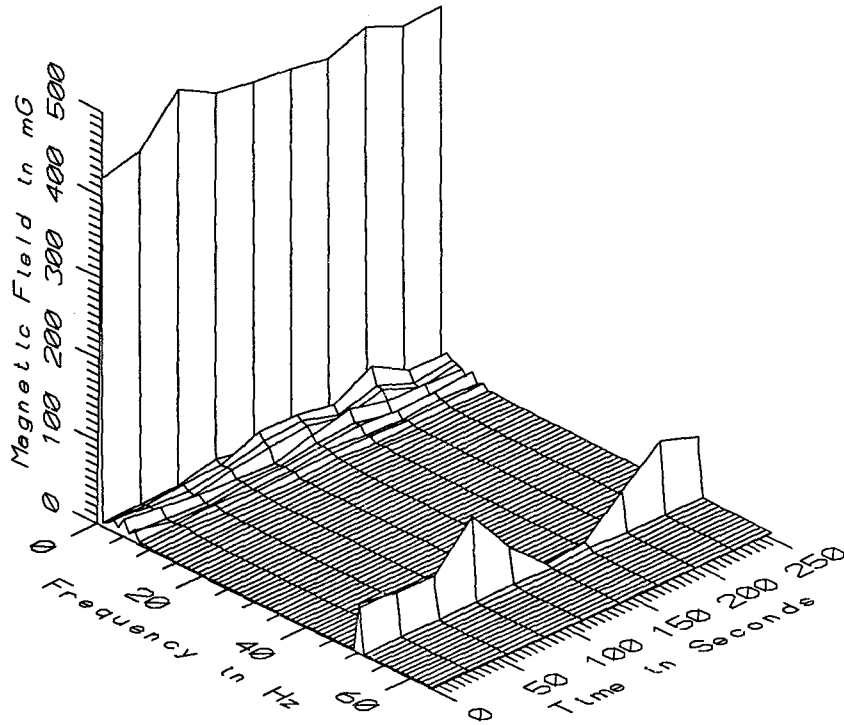
Programmed Sample Interval: 30 sec

Actual Sample Interval: 28.2 sec

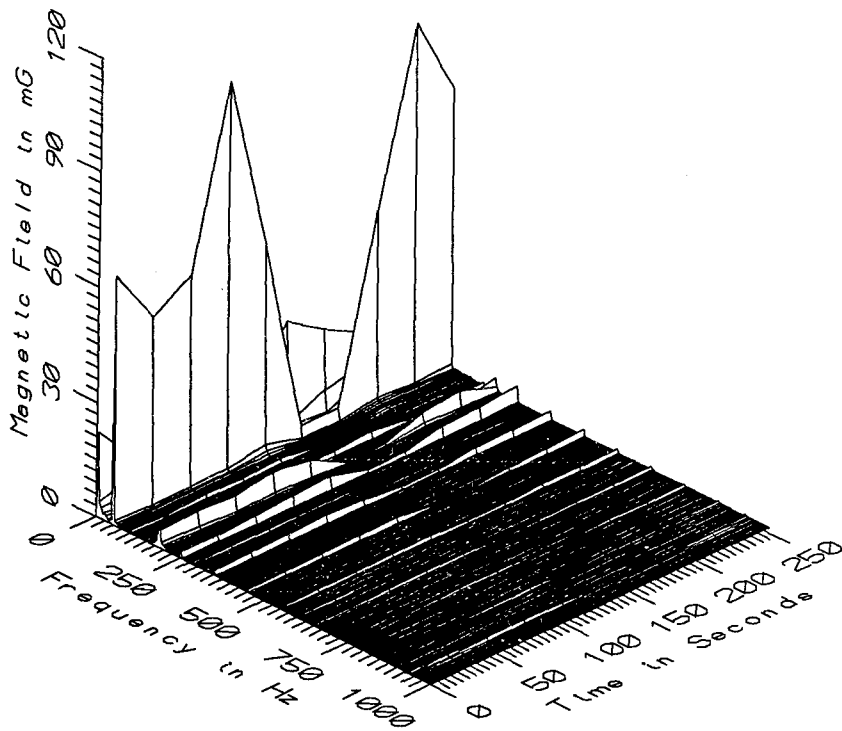
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

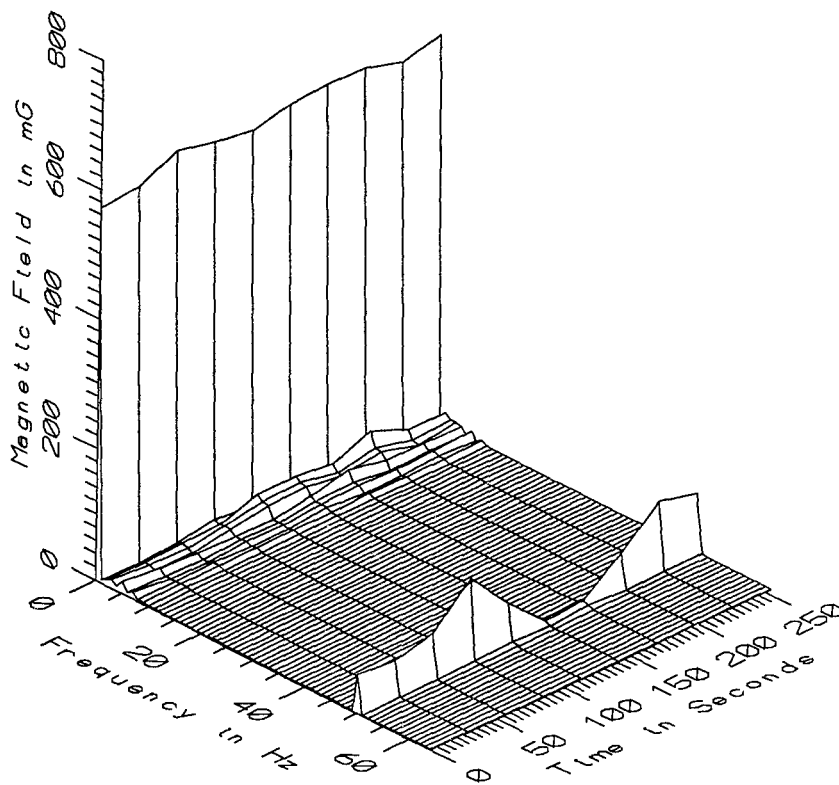
Missing or Suspect Data: None



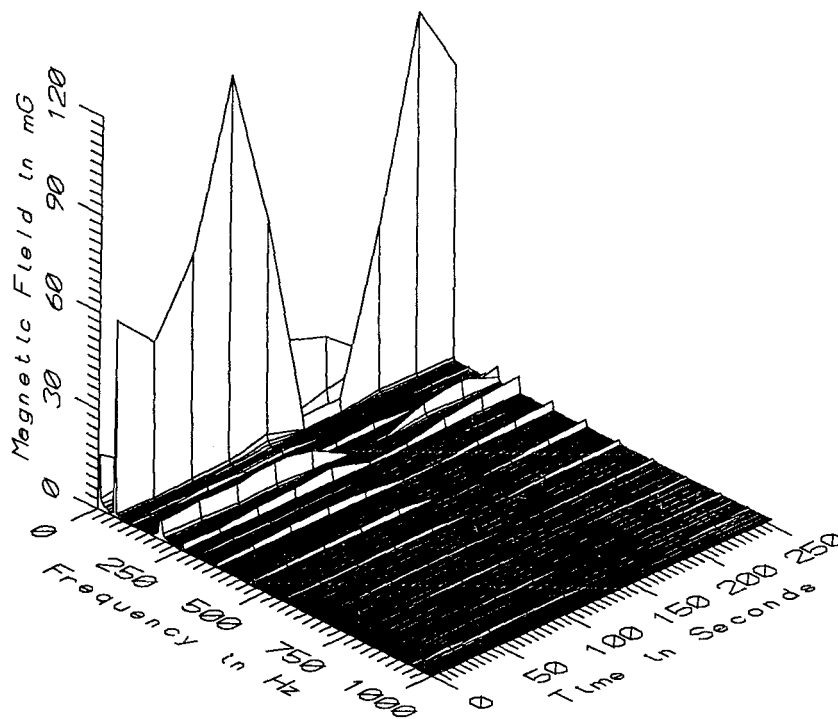
TGV007 - 10cm FROM SIDE WALL BEHIND ENGINEER'S CHAIR, PULL LOCOMOTIVE



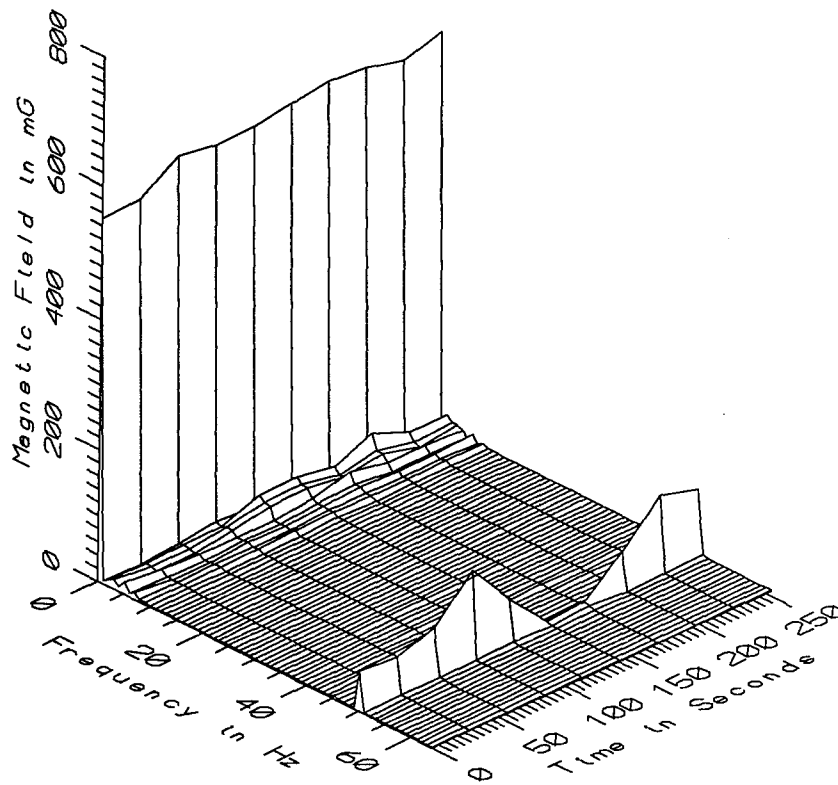
TGV007 - 10cm FROM SIDE WALL BEHIND ENGINEER'S CHAIR, PULL LOCOMOTIVE



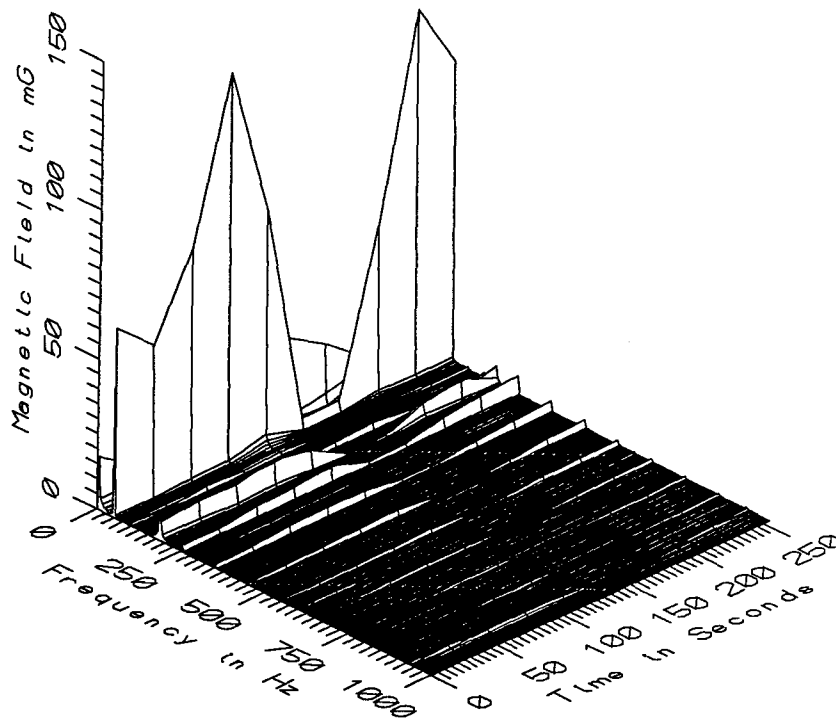
TGV007 - 60cm FROM SIDE WALL BEHIND ENGINEER'S CHAIR, PULL LOCOMOTIVE



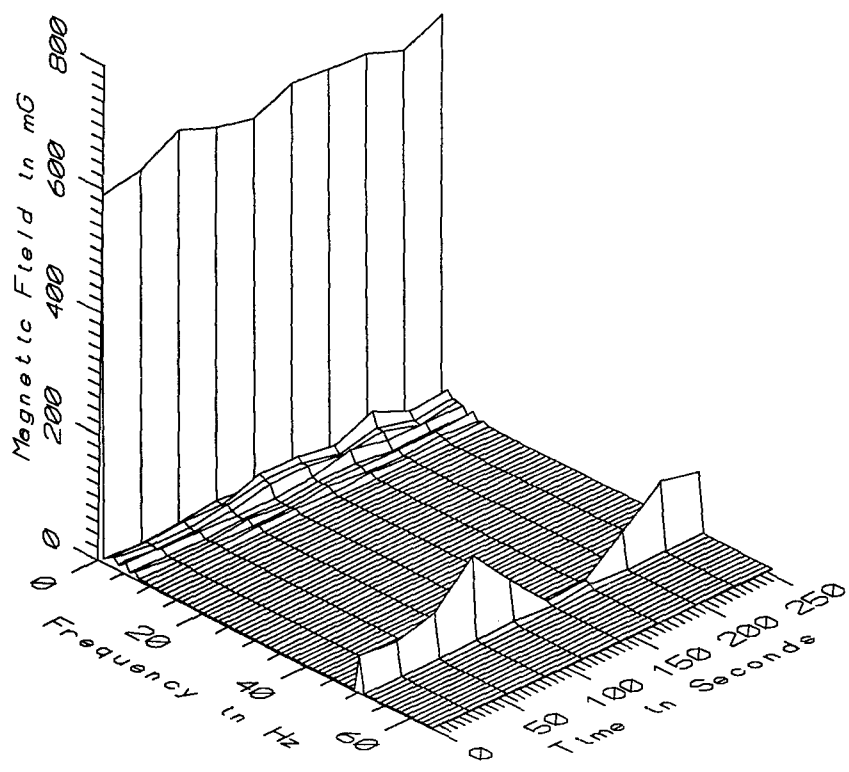
TGV007 - 60cm FROM SIDE WALL BEHIND ENGINEER'S CHAIR, PULL LOCOMOTIVE



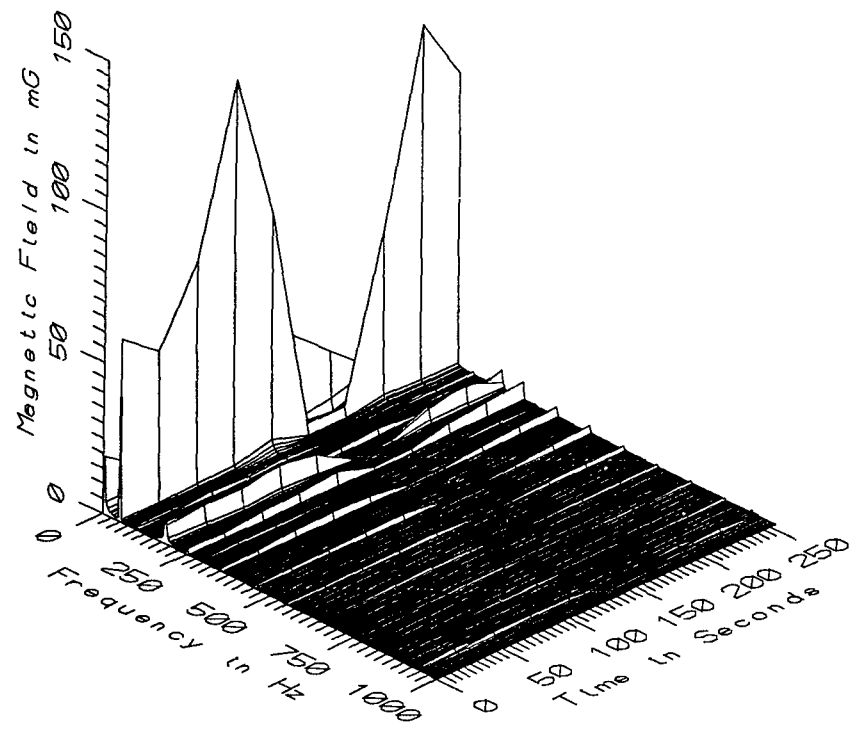
TGV007 - 110cm FROM SIDE WALL BEHIND ENGINEER'S CHAIR, PULL LOCOMOTIVE



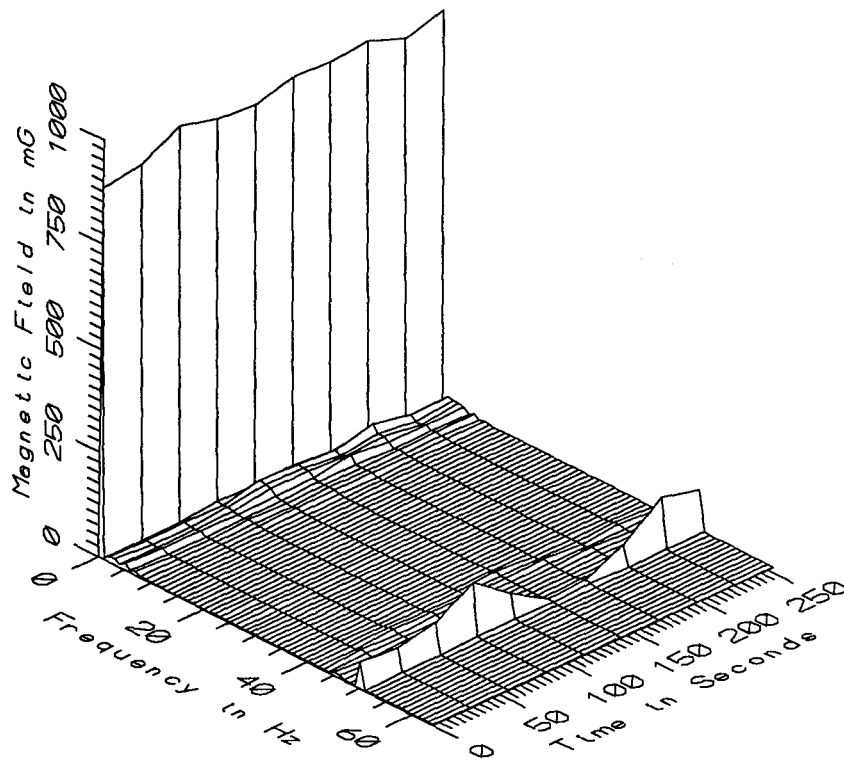
TGV007 - 110cm FROM SIDE WALL BEHIND ENGINEER'S CHAIR, PULL LOCOMOTIVE



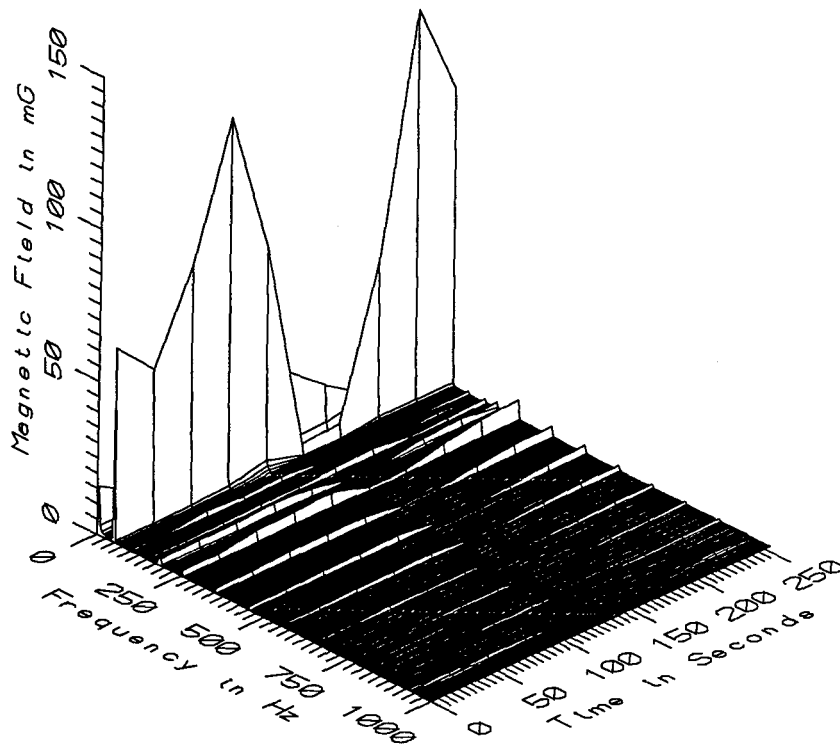
TGV007 - 160cm FROM SIDE WALL BEHIND ENGINEER'S CHAIR, PULL LOCOMOTIVE



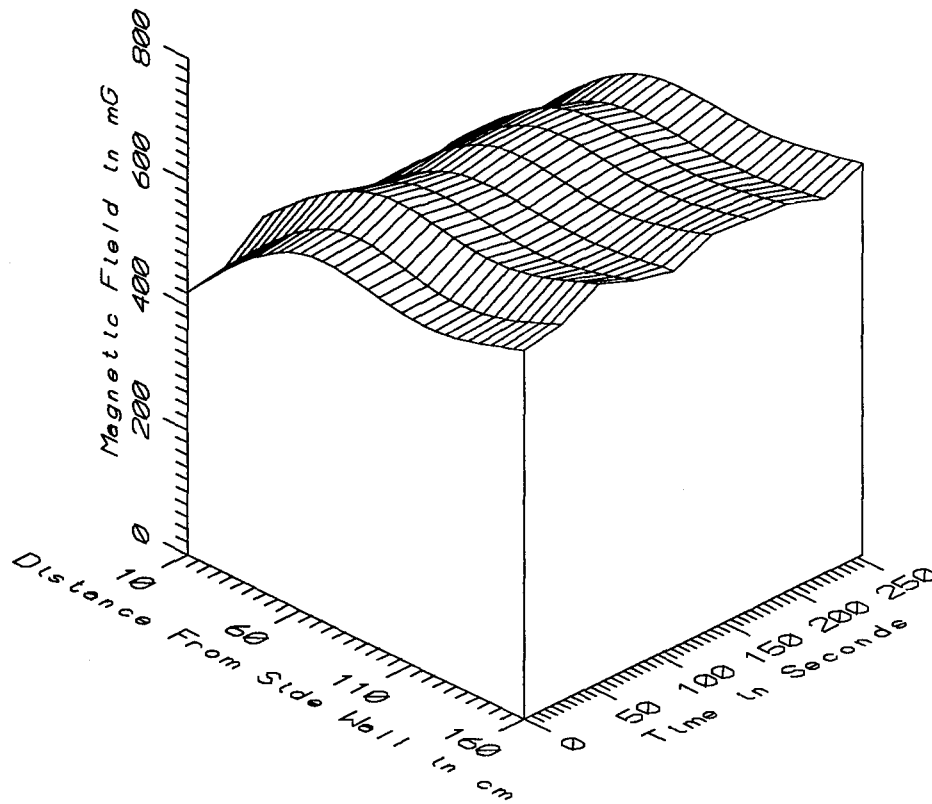
TGV007 - 160cm FROM SIDE WALL BEHIND ENGINEER'S CHAIR, PULL LOCOMOTIVE



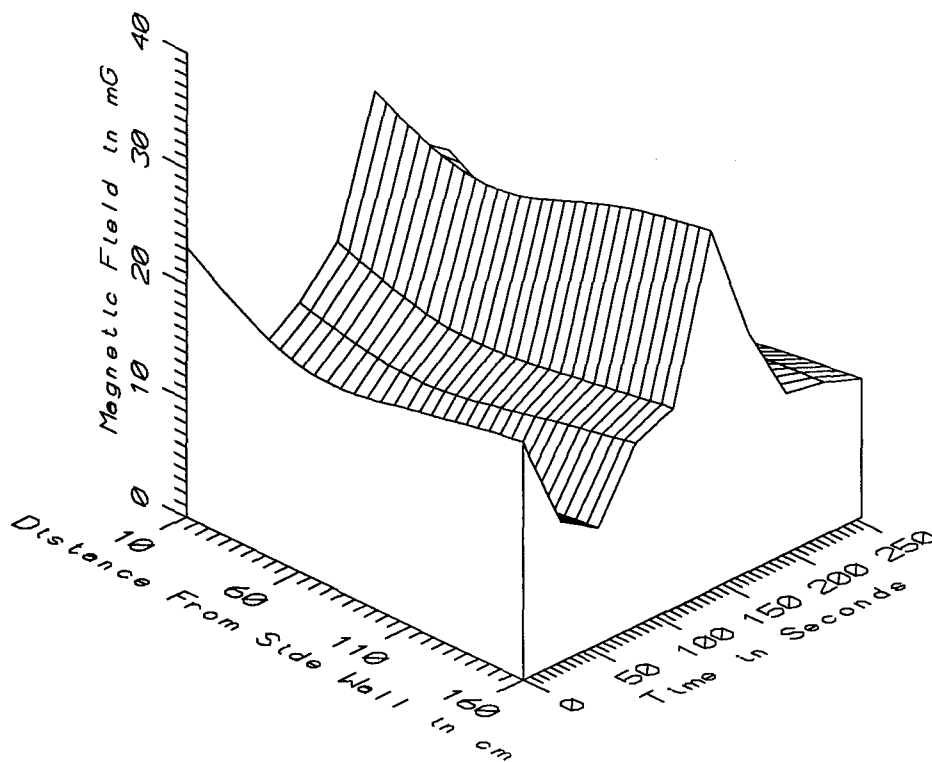
TGV007 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, PULL LOCOMOTIVE



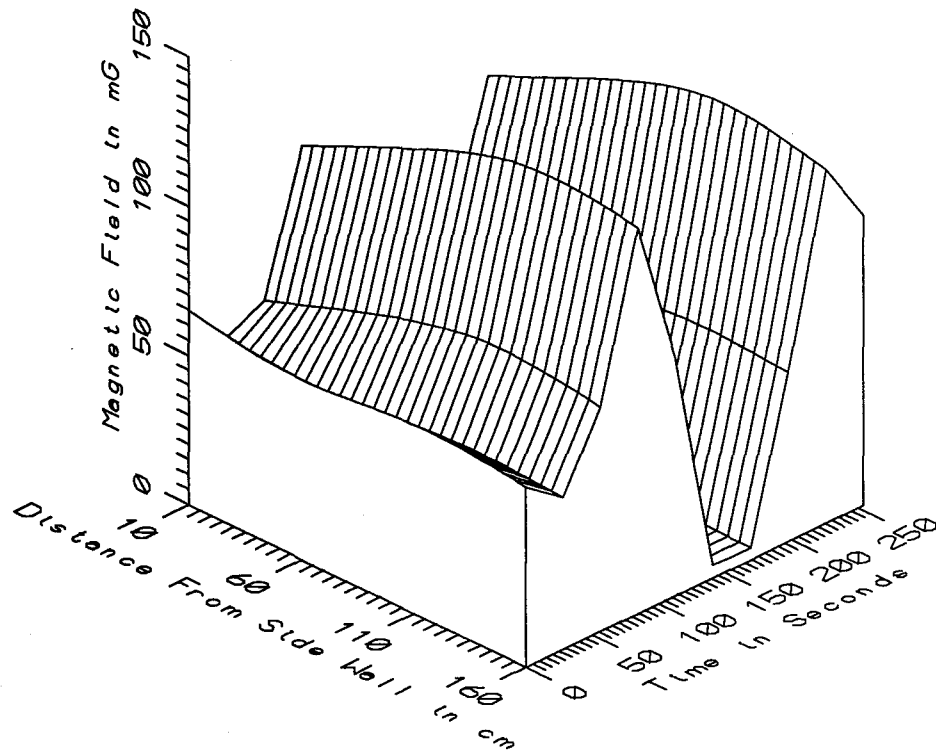
TGV007 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, PULL LOCOMOTIVE



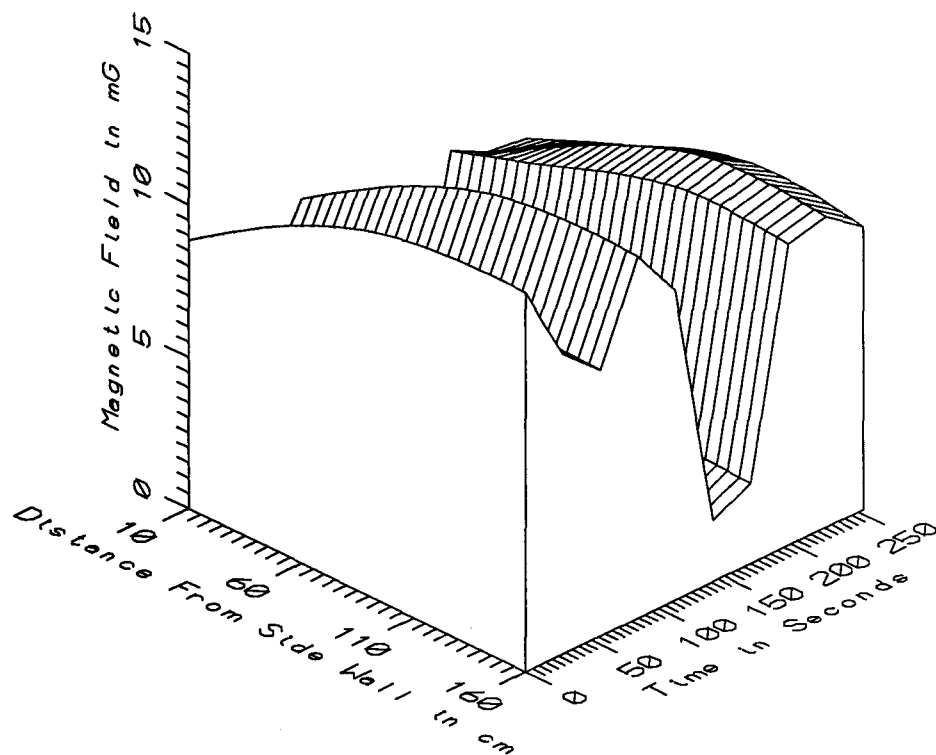
TGV007 - TRANSVERSE PROFILE IN PULL LOCOMOTIVE - STATIC



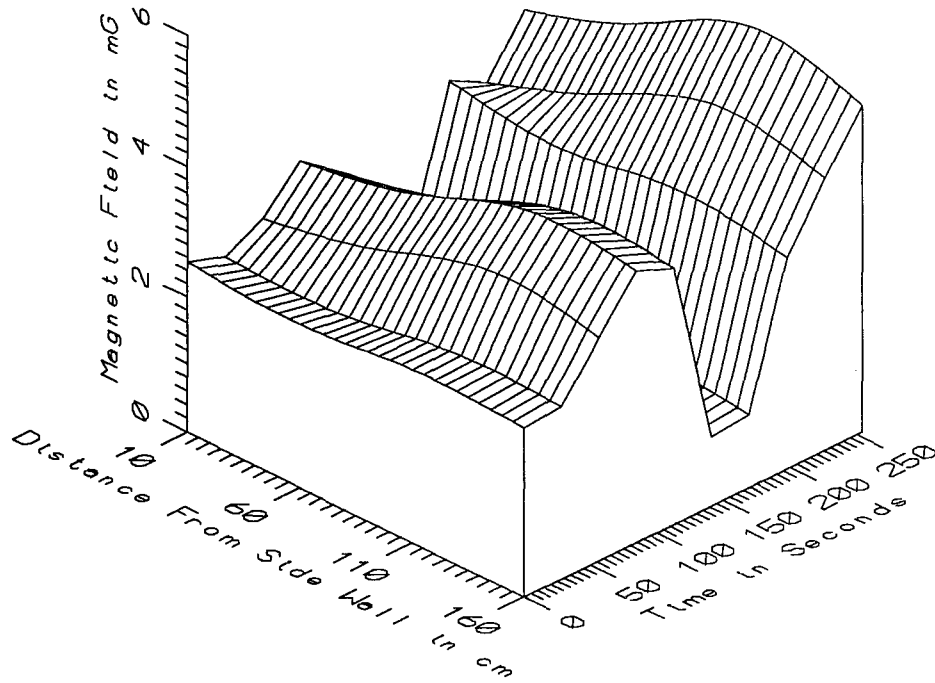
TGV007 - TRANSVERSE PROFILE IN PULL LOCOMOTIVE - LOW FREQ, 5-45Hz



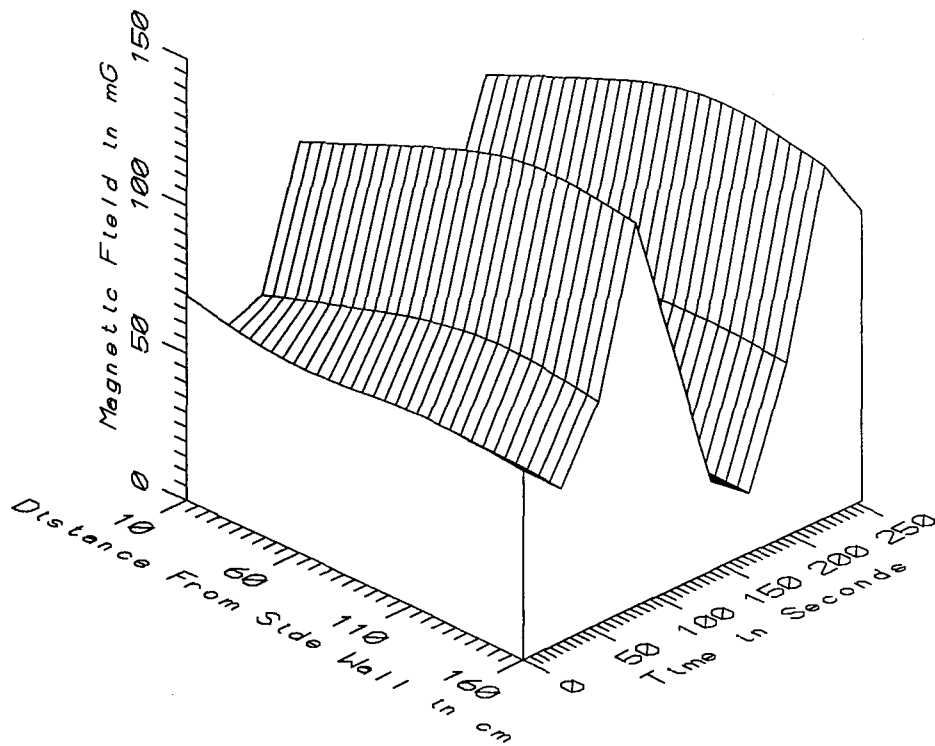
TGV007 - TRANSVERSE PROFILE IN PULL LOCOMOTIVE - POWER FREQ, 50-60Hz



TGV007 - TRANSVERSE PROFILE IN PULL LOCOMOTIVE - POWER HARM, 65-300Hz



TGV007 - TRANSVERSE PROFILE IN PULL LOCOMOTIVE - HIGH FREQ, 305-2560Hz



TGV007 - TRANSVERSE PROFILE IN PULL LOCOMOTIVE - ALL FREQ, 5-2560Hz

| TGV007 - TEST TRAIN CAB, ALL SAMPLES IN AC SECTION | | TOTAL OF 10 SAMPLES | | | | |
|--|----------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | DIST. FROM WALL (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 421.87 | 484.47 | 446.10 | 17.60 | 3.95 |
| | 60 | 570.63 | 607.93 | 591.87 | 12.21 | 2.06 |
| | 110 | 551.01 | 602.12 | 583.82 | 18.09 | 3.10 |
| 5-45Hz LOW FREQ | 160 | 590.06 | 639.13 | 615.14 | 16.07 | 2.61 |
| | 10 | 10.08 | 28.90 | 17.43 | 6.37 | 36.52 |
| | 60 | 8.37 | 25.53 | 14.48 | 5.71 | 39.48 |
| 110 | 110 | 8.65 | 28.54 | 15.40 | 5.95 | 38.66 |
| | 160 | 9.97 | 30.87 | 16.48 | 6.17 | 37.41 |
| | 10 | 3.66 | 102.37 | 55.57 | 32.70 | 58.83 |
| 50-60Hz PWR FREQ | 60 | 4.26 | 119.44 | 63.19 | 39.02 | 61.76 |
| | 110 | 4.29 | 131.82 | 69.58 | 43.45 | 62.44 |
| | 160 | 4.11 | 129.07 | 67.55 | 42.11 | 62.34 |
| 65-300Hz PWR HARM | 10 | 1.78 | 8.87 | 6.28 | 2.37 | 37.79 |
| | 60 | 1.82 | 11.11 | 7.79 | 3.13 | 40.17 |
| | 110 | 2.11 | 12.31 | 8.77 | 3.50 | 39.92 |
| 160 | 160 | 2.00 | 12.46 | 8.72 | 3.55 | 40.73 |
| | 10 | 1.22 | 3.93 | 2.67 | 0.86 | 32.25 |
| | 60 | 0.99 | 4.54 | 2.81 | 1.13 | 40.34 |
| 305-2560Hz HIGH FREQ | 110 | 1.13 | 5.32 | 3.21 | 1.36 | 42.38 |
| | 160 | 1.02 | 4.92 | 3.04 | 1.28 | 42.08 |
| | 10 | 23.63 | 103.69 | 62.12 | 25.48 | 41.01 |
| 5-2560Hz ALL FREQ | 60 | 22.22 | 120.56 | 68.61 | 32.89 | 47.94 |
| | 110 | 21.68 | 133.10 | 75.34 | 37.03 | 49.15 |
| | 160 | 21.00 | 130.62 | 73.68 | 35.49 | 48.17 |

APPENDIX I

DATASET TGV008
AXIAL PROFILE FROM REAR WALL OF TEST TRAIN LOCOMOTIVE

Measurement Setup Code: Staff: 7 Reference: 8
 Drawing: A-2

Vehicle Status: Locomotive trip from Tours station
 to Montparnasse station in Paris

Measurement Date: September 8, 1992

Measurement Time: Start: 09:48:56
 End: 09:53:32

Number of Samples: 10

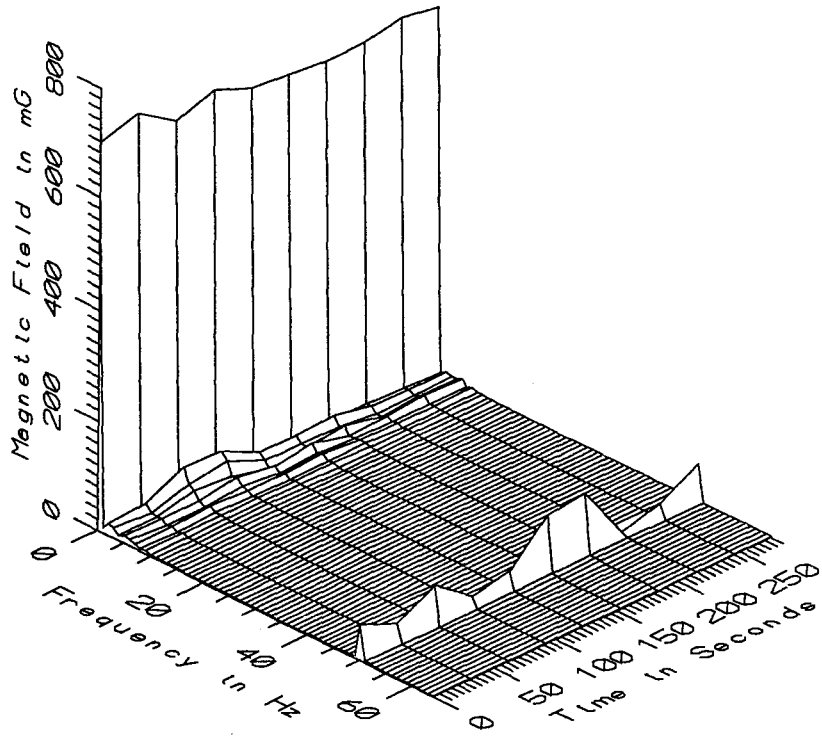
Programmed Sample Interval: 30 sec

Actual Sample Interval: 30.7 sec

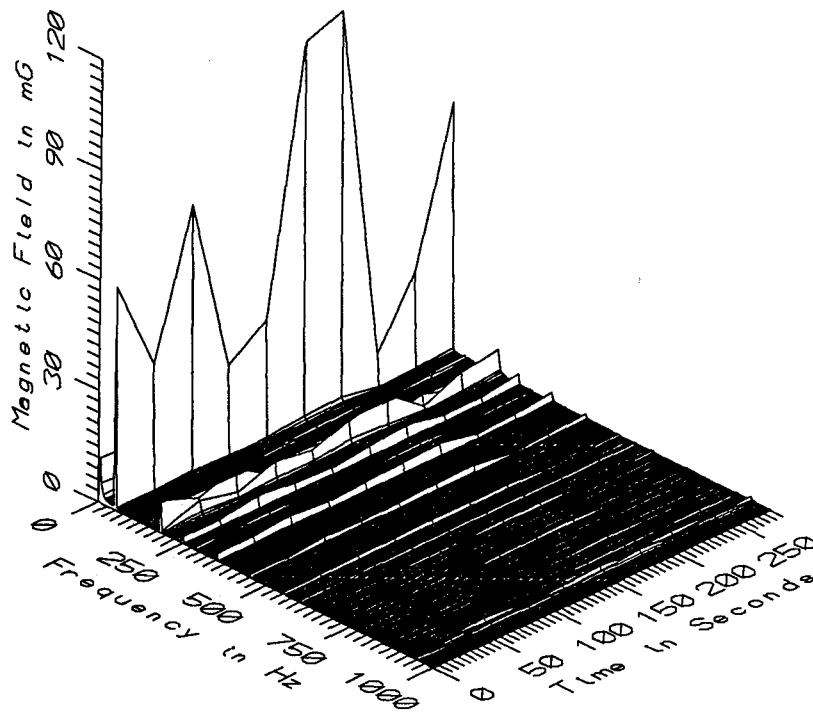
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

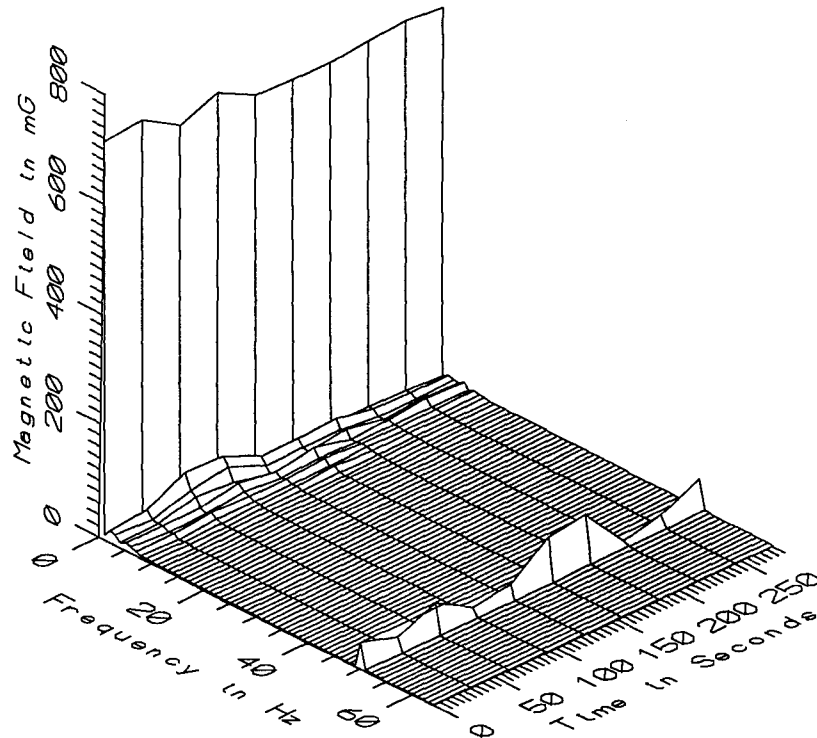
Missing or Suspect Data: None



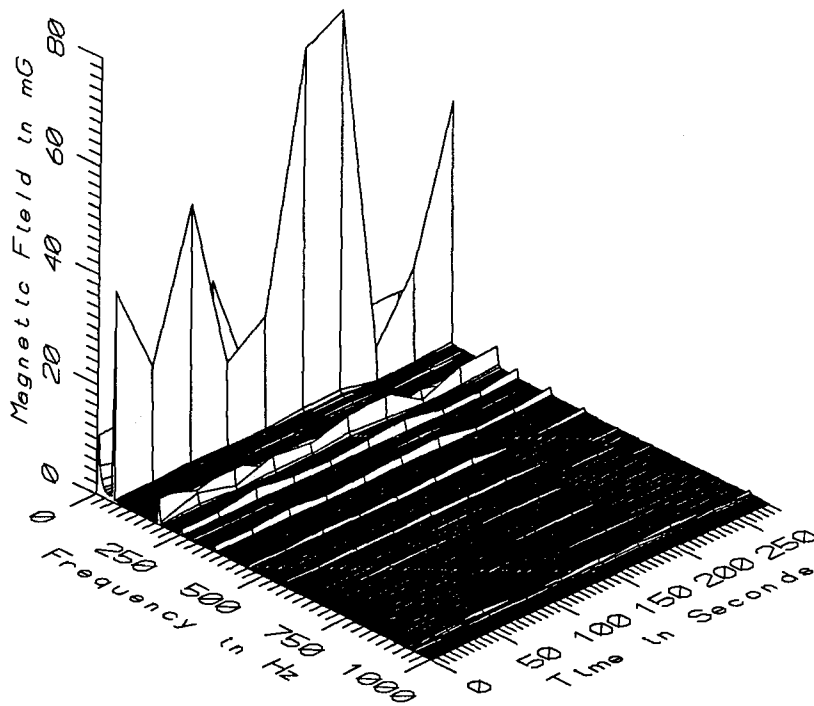
TGV008 - 10cm FROM REAR WALL BETWEEN ENGINEERS' CHAIRS, PULL LOCOMOTIVE



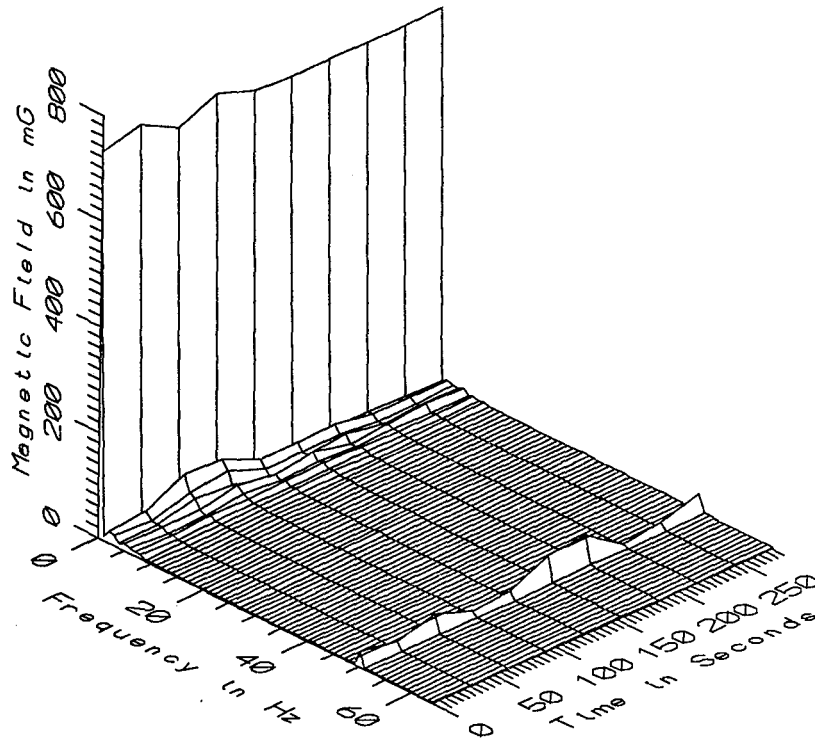
TGV008 - 10cm FROM REAR WALL BETWEEN ENGINEERS' CHAIRS, PULL LOCOMOTIVE



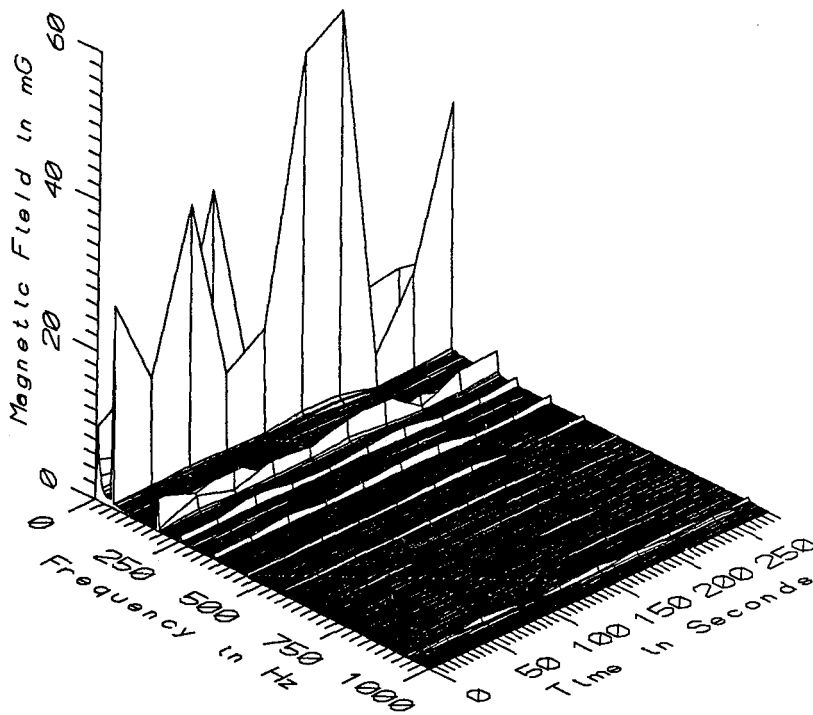
TGV008 - 60cm FROM REAR WALL BETWEEN ENGINEERS' CHAIRS, PULL LOCOMOTIVE



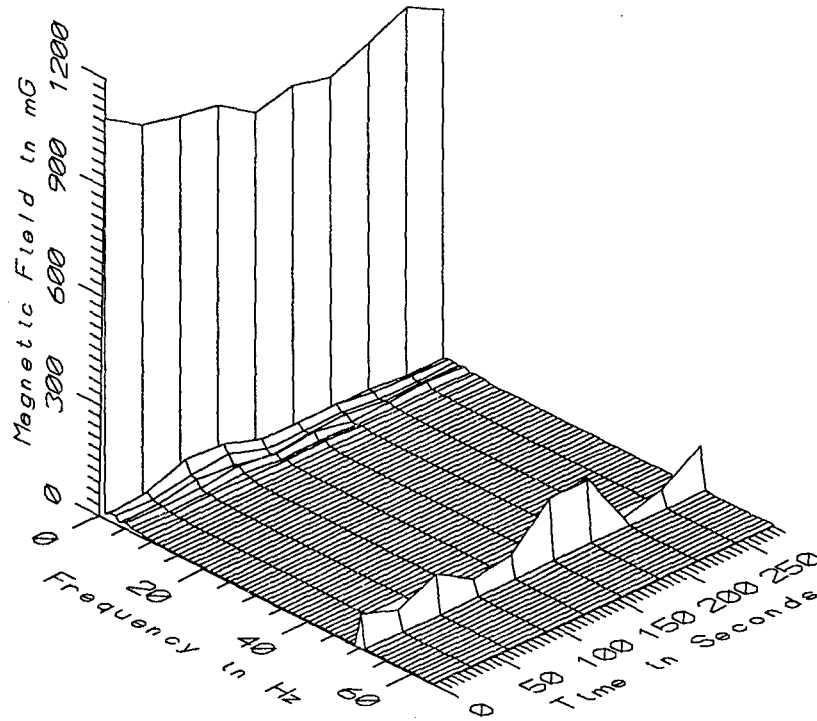
TGV008 - 60cm FROM REAR WALL BETWEEN ENGINEERS' CHAIRS, PULL LOCOMOTIVE



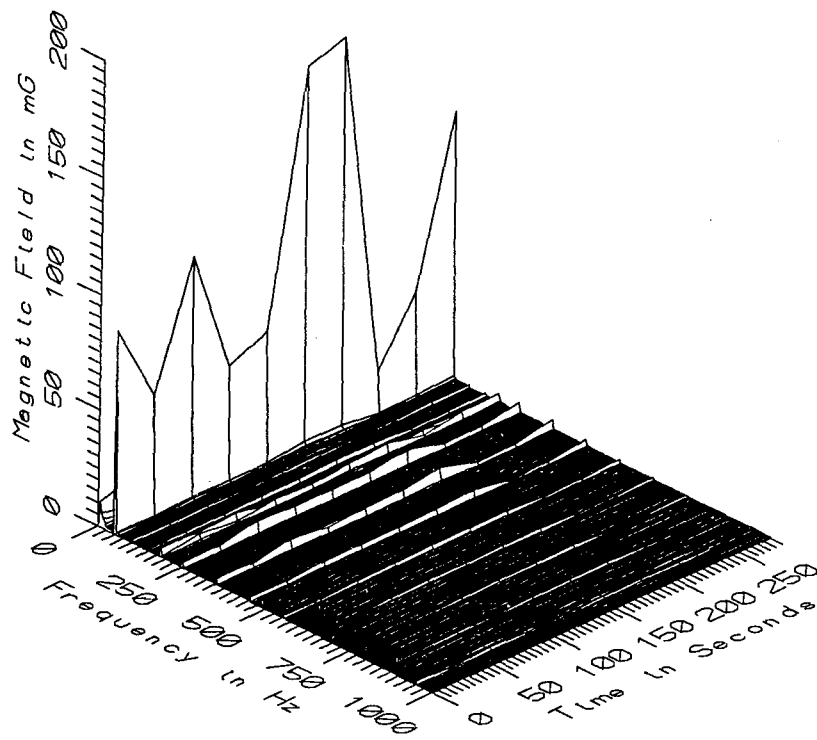
TGV008 - 110cm FROM REAR WALL BETWEEN ENGINEERS' CHAIRS, PULL LOCOMOTIVE



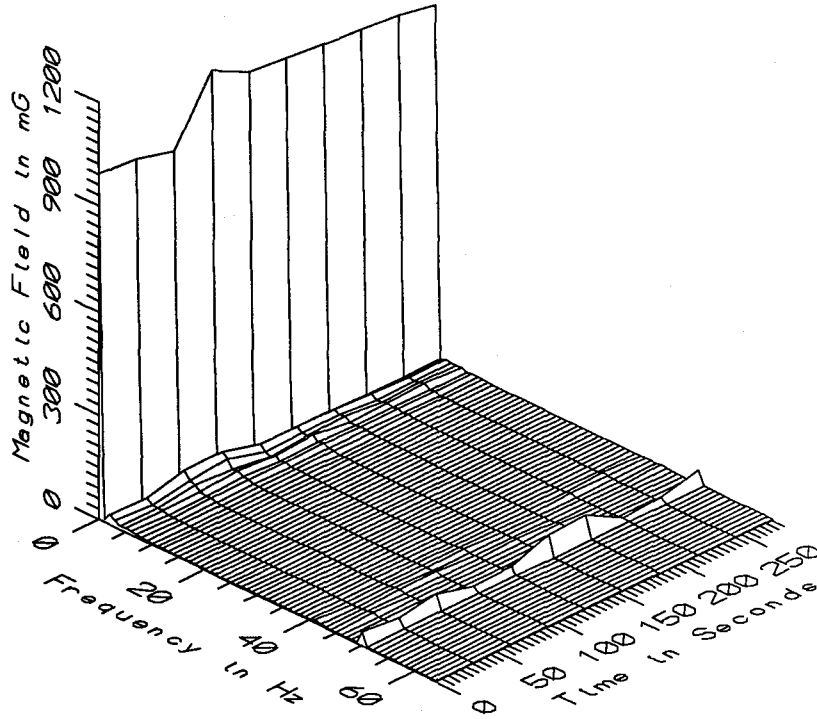
TGV008 - 110cm FROM REAR WALL BETWEEN ENGINEERS' CHAIRS, PULL LOCOMOTIVE



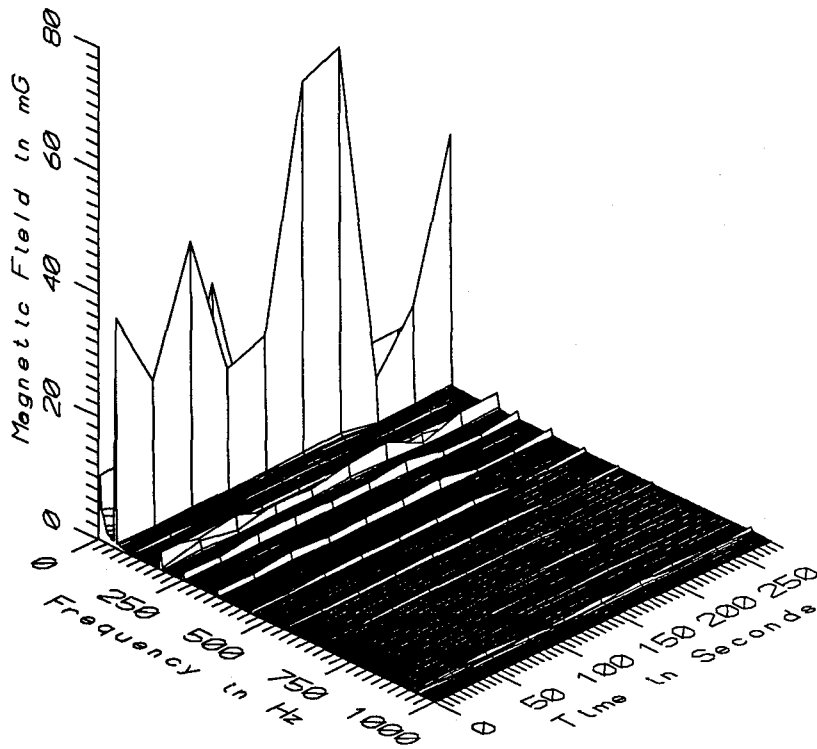
TGV008 - 160cm FROM REAR WALL BETWEEN ENGINEERS' CHAIRS, PULL LOCOMOTIVE



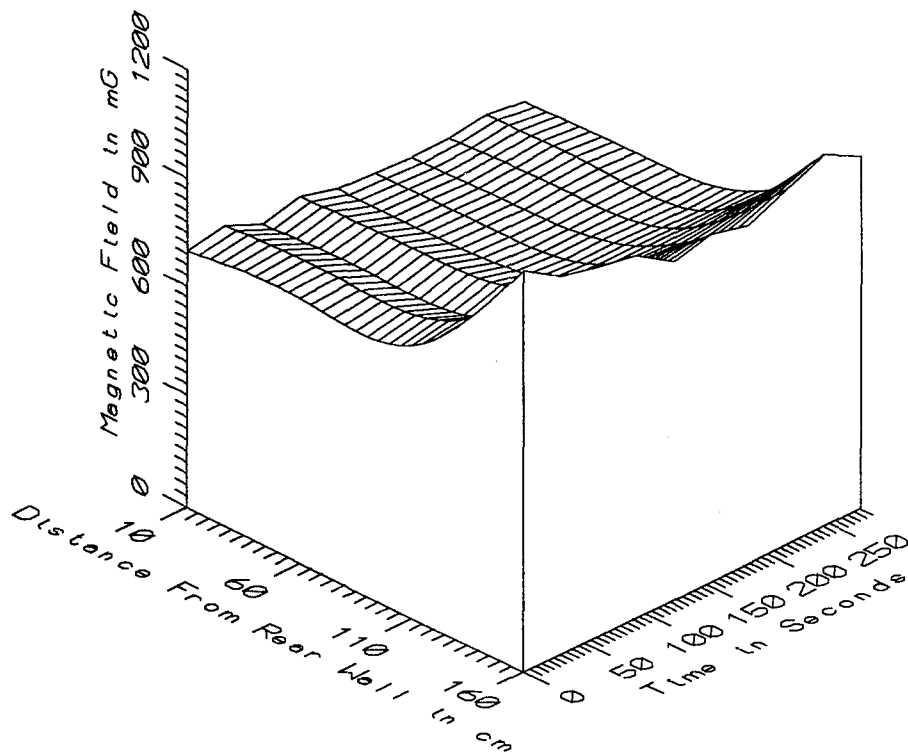
TGV008 - 160cm FROM REAR WALL BETWEEN ENGINEERS' CHAIRS, PULL LOCOMOTIVE



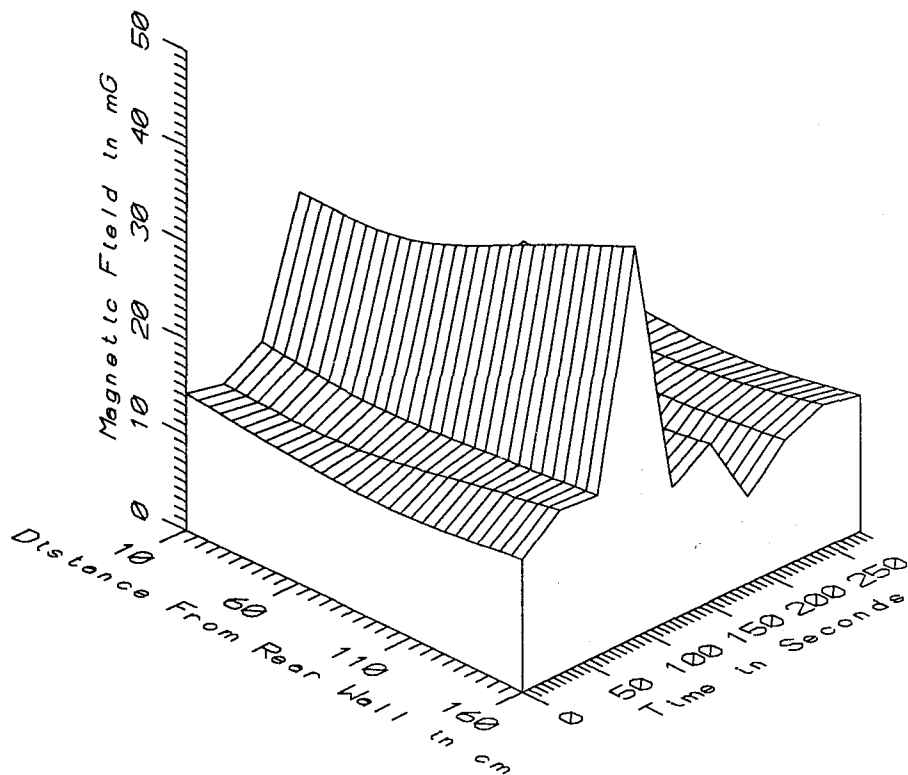
TGV008 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, PULL LOCOMOTIVE



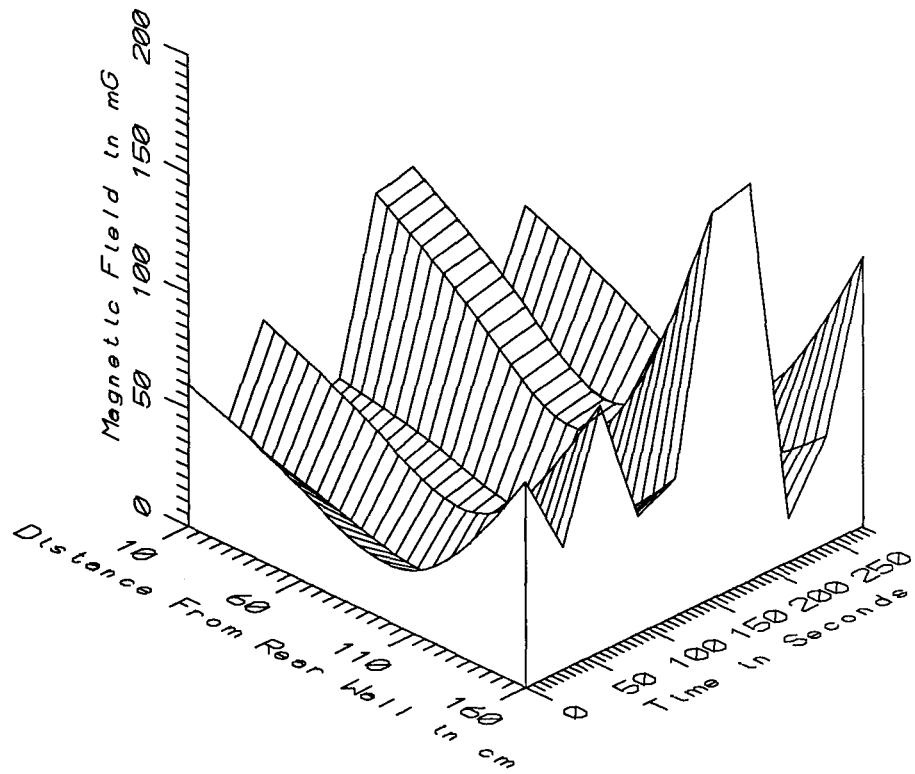
TGV008 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, PULL LOCOMOTIVE



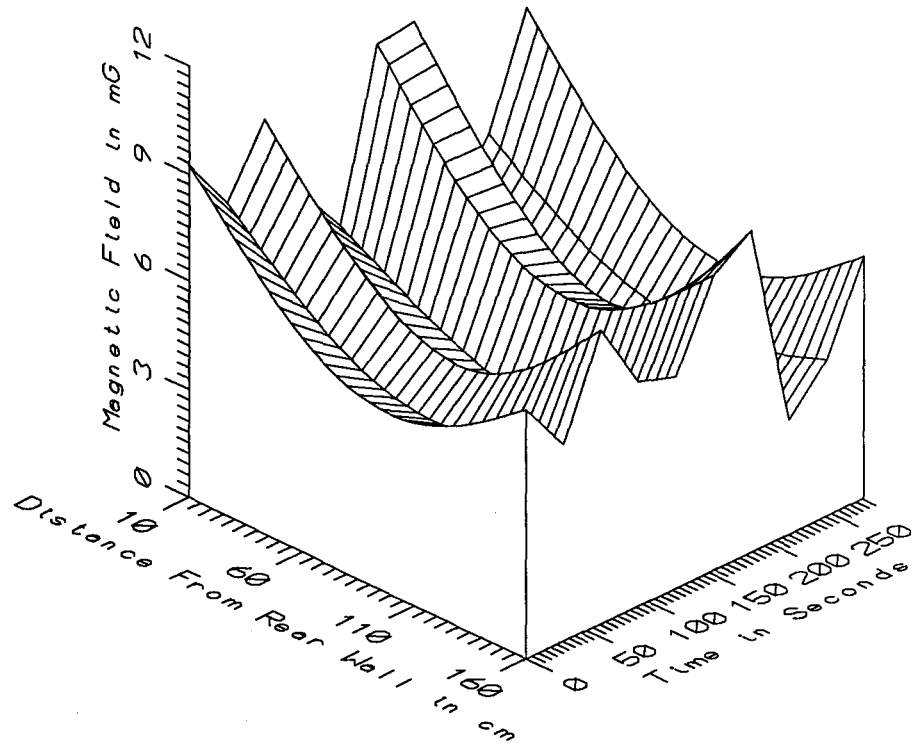
TGV008 - AXIAL PROFILE IN PULL LOCOMOTIVE - STATIC



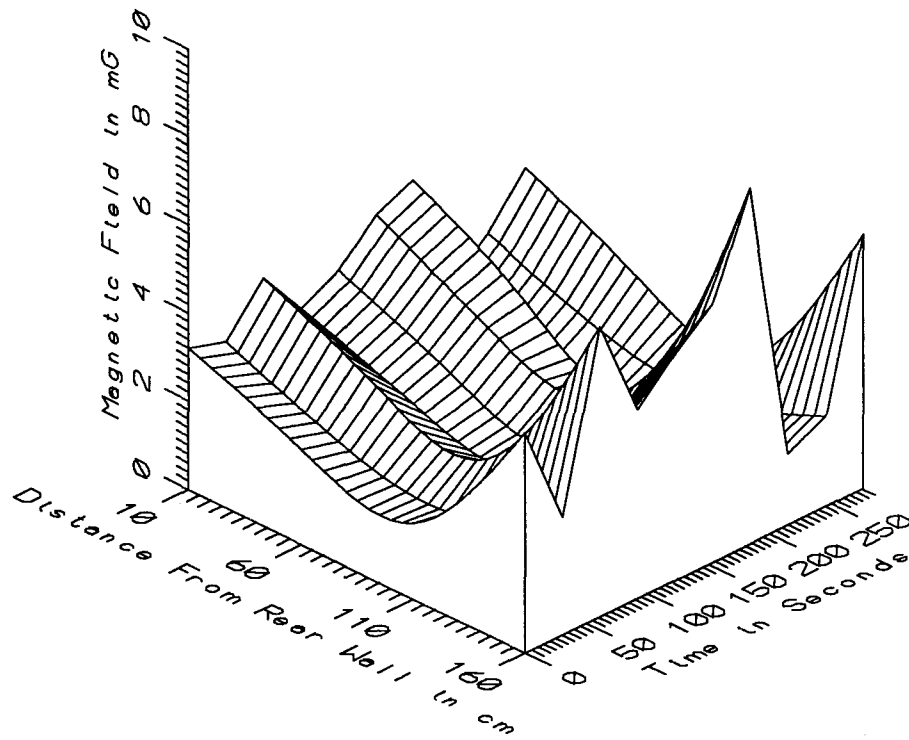
TGV008 - AXIAL PROFILE IN PULL LOCOMOTIVE - LOW FREQ, 5-45Hz



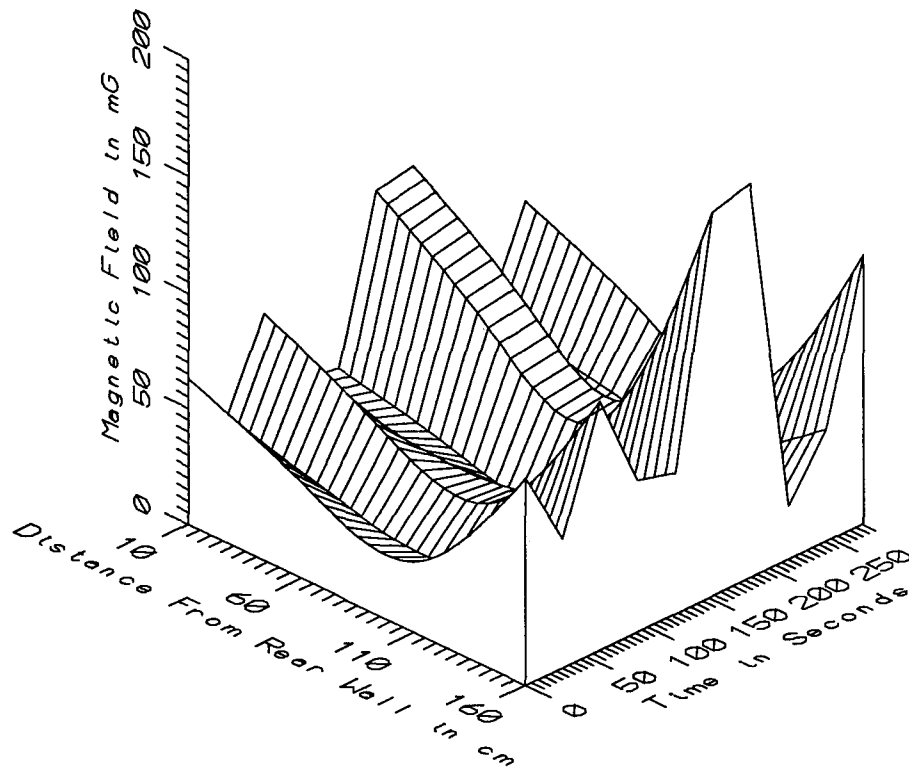
TGV008 - AXIAL PROFILE IN PULL LOCOMOTIVE - POWER FREQ, 50-60Hz



TGV008 - AXIAL PROFILE IN PULL LOCOMOTIVE - POWER HARM, 65-300Hz



TGV008 - AXIAL PROFILE IN PULL LOCOMOTIVE - HIGH FREQ, 305-2560Hz



TGV008 - AXIAL PROFILE IN PULL LOCOMOTIVE - ALL FREQ, 5-2560Hz

| TG008 - TEST TRAIN CAB, ALL SAMPLES IN AC SECTION | | TOTAL OF 10 SAMPLES | | | | |
|---|---------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | DIST FROM WALL (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 660.29 | 720.55 | 680.51 | 19.53 | 2.87 |
| | 60 | 666.89 | 722.10 | 685.82 | 20.36 | 2.97 |
| | 110 | 710.78 | 749.13 | 721.74 | 14.12 | 1.96 |
| | 160 | 914.99 | 1088.30 | 981.48 | 52.84 | 5.38 |
| 5-45Hz LOW FREQ | 10 | 8.82 | 29.66 | 14.99 | 5.52 | 36.83 |
| | 60 | 8.05 | 30.28 | 14.21 | 5.94 | 41.78 |
| | 110 | 8.49 | 35.35 | 15.10 | 7.40 | 48.97 |
| | 160 | 9.26 | 40.73 | 17.08 | 8.62 | 50.46 |
| 50-60Hz PWR FREQ | 10 | 8.91 | 106.96 | 53.93 | 33.87 | 62.80 |
| | 60 | 6.01 | 71.33 | 35.30 | 22.46 | 63.62 |
| | 110 | 4.37 | 53.01 | 25.79 | 16.76 | 64.99 |
| | 160 | 18.82 | 168.97 | 86.69 | 51.10 | 58.95 |
| 65-300Hz PWR HARM | 10 | 4.76 | 10.27 | 7.95 | 2.00 | 25.17 |
| | 60 | 2.95 | 6.49 | 5.11 | 1.20 | 23.56 |
| | 110 | 2.49 | 5.73 | 4.39 | 1.04 | 23.65 |
| | 160 | 3.18 | 8.92 | 6.40 | 1.78 | 27.87 |
| 305-2560Hz HIGH FREQ | 10 | 1.73 | 4.54 | 3.28 | 0.84 | 25.43 |
| | 60 | 1.03 | 3.01 | 2.16 | 0.61 | 28.12 |
| | 110 | 0.81 | 2.39 | 1.72 | 0.50 | 28.95 |
| | 160 | 1.58 | 8.01 | 4.66 | 2.06 | 44.22 |
| 5-2560Hz ALL FREQ | 10 | 16.21 | 107.91 | 58.11 | 31.52 | 54.23 |
| | 60 | 13.56 | 72.12 | 40.14 | 19.87 | 49.50 |
| | 110 | 12.97 | 53.98 | 32.25 | 14.10 | 43.71 |
| | 160 | 23.30 | 169.65 | 90.04 | 49.28 | 54.73 |

APPENDIX J

DATASET TGV009
TEST TRAIN LOCOMOTIVE, AGAINST ENGINEER'S CHAIR

Measurement Setup Code: Staff: 5 Reference: 8
 Drawing: A-2

Vehicle Status: Locomotive trip from Tours station
 to Montparnasse station in Paris

Measurement Date: September 8, 1992

Measurement Time: Start: 09:55:52
 End: 10:14:02

Number of Samples: 38

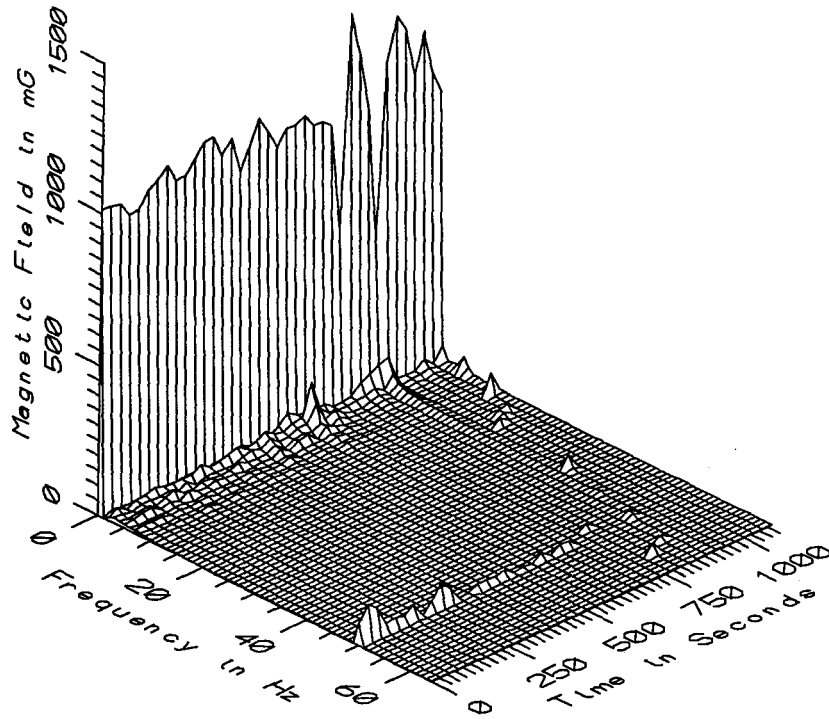
Programmed Sample Interval: 30 sec

Actual Sample Interval: 29.5 sec

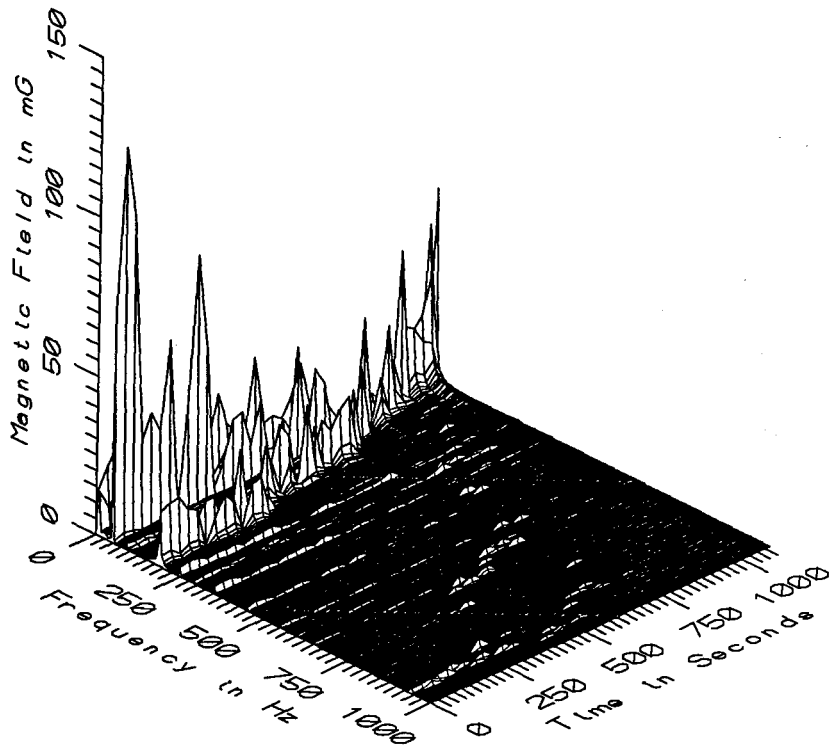
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

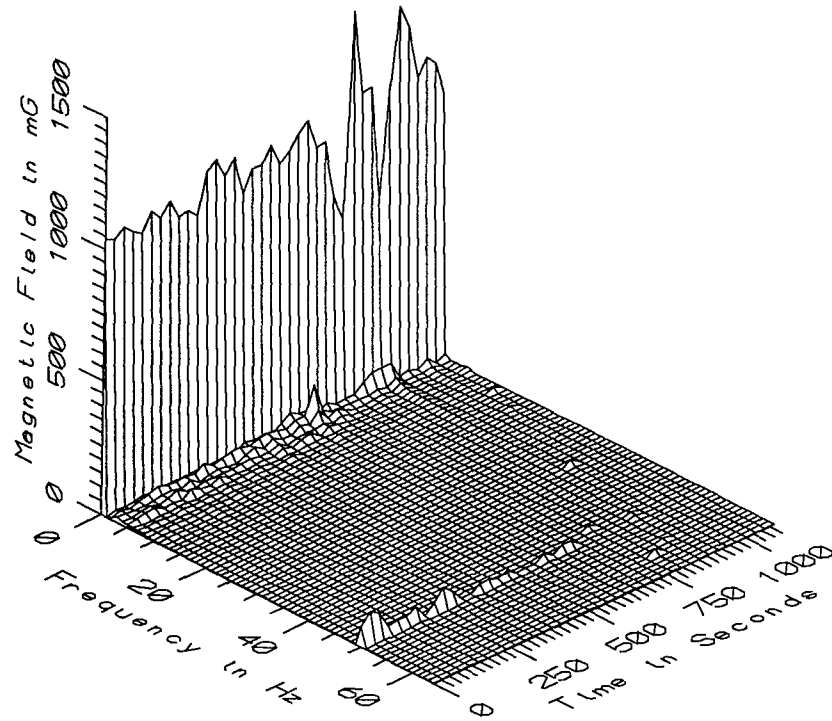
Missing or Suspect Data: None



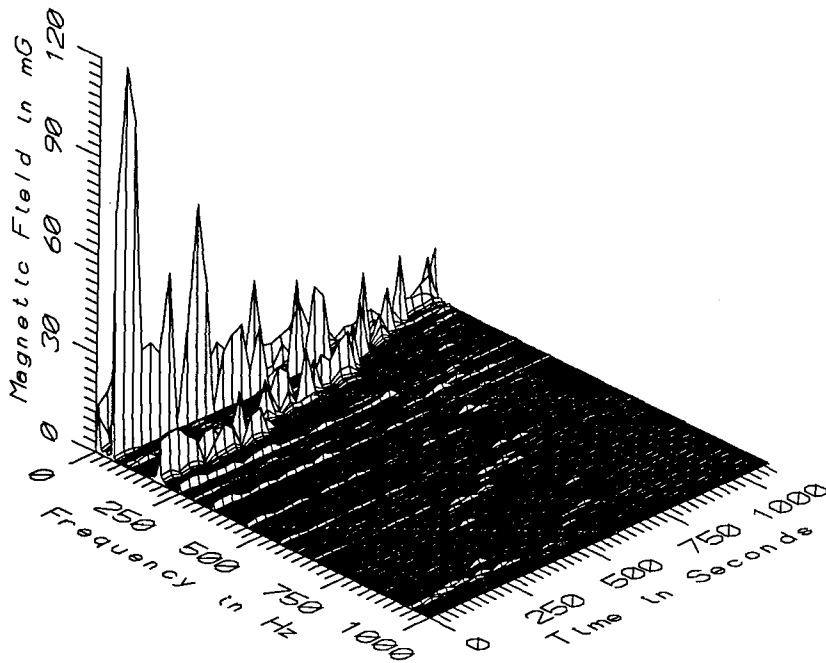
TGV009 - 10cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



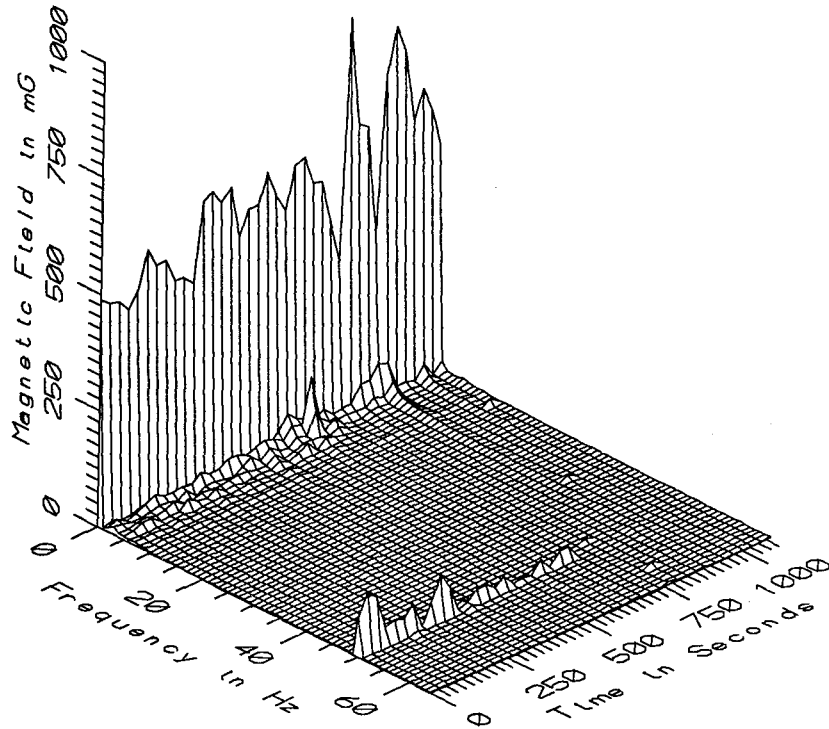
TGV009 - 10cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



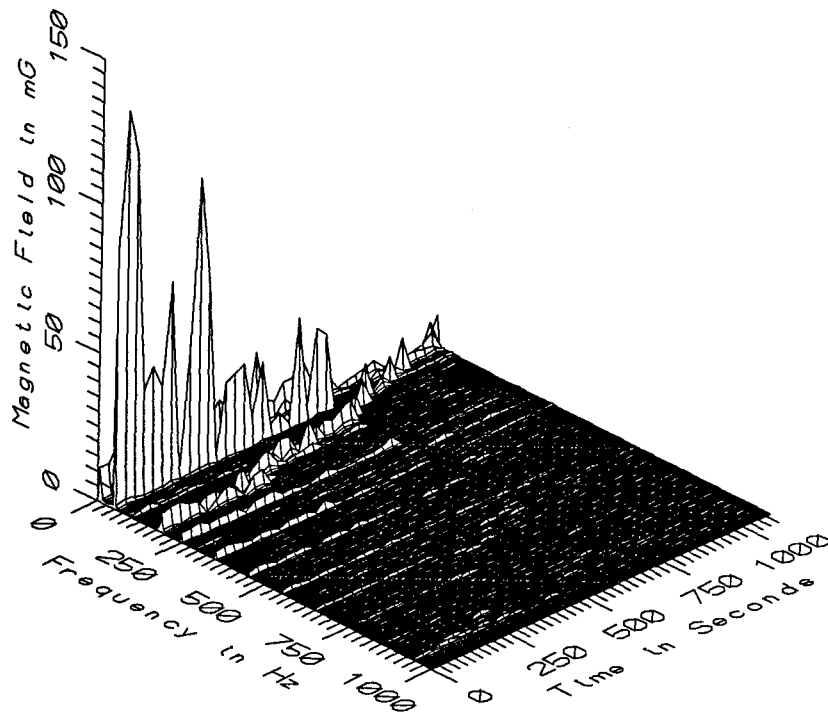
TGV009 - 60cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



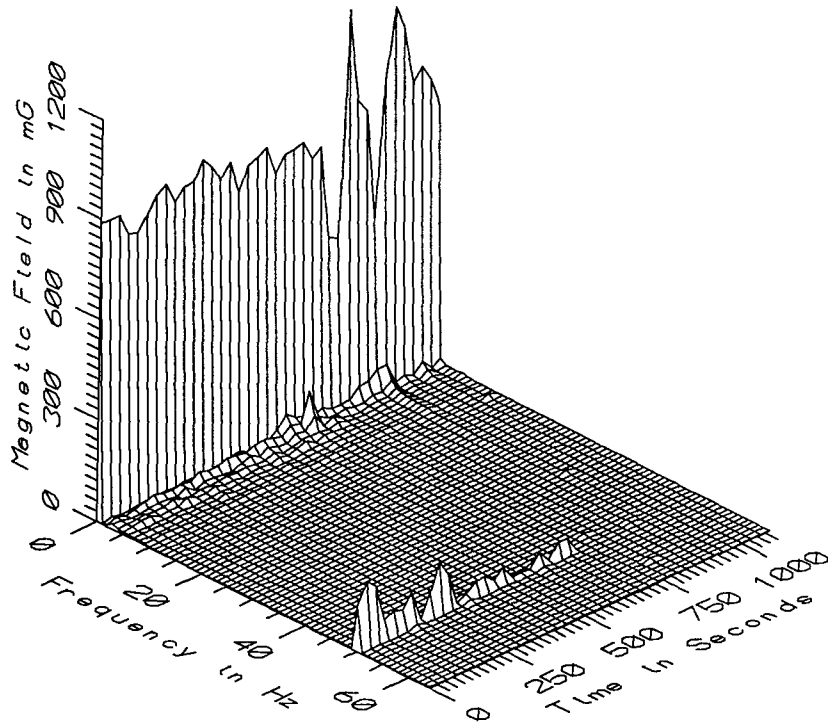
TGV009 - 60cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



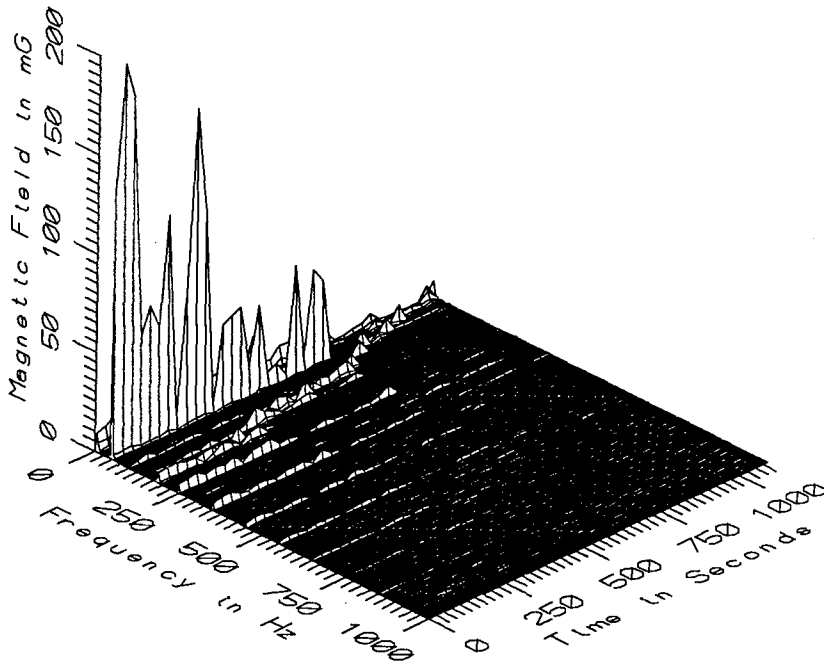
TGV009 - 110cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



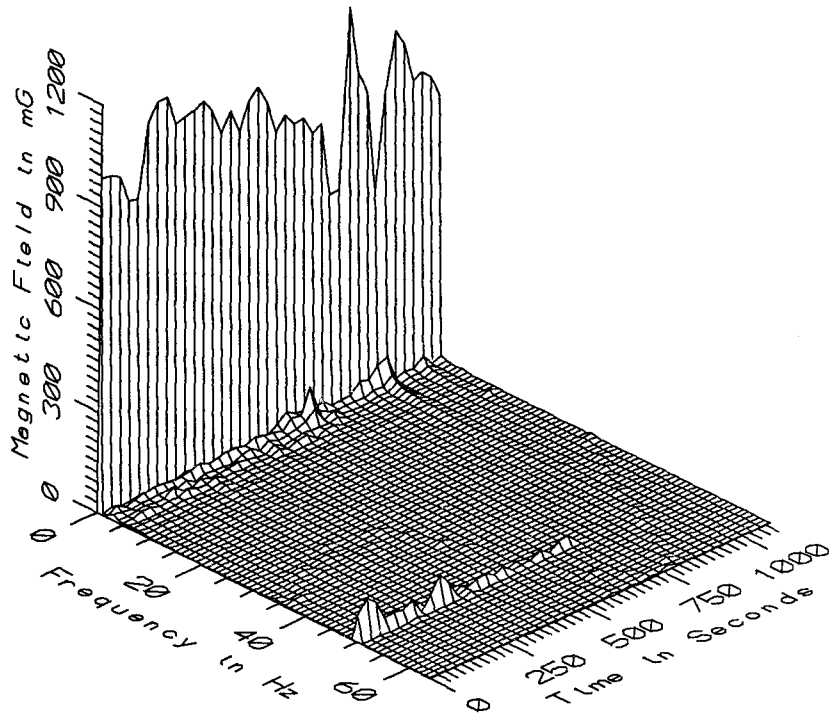
TGV009 - 110cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



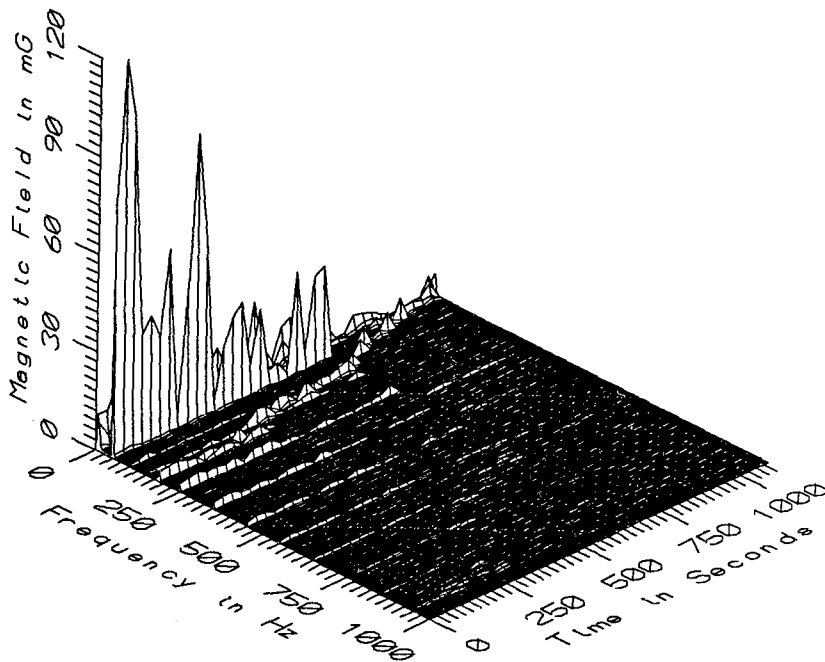
TGV009 - 160cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



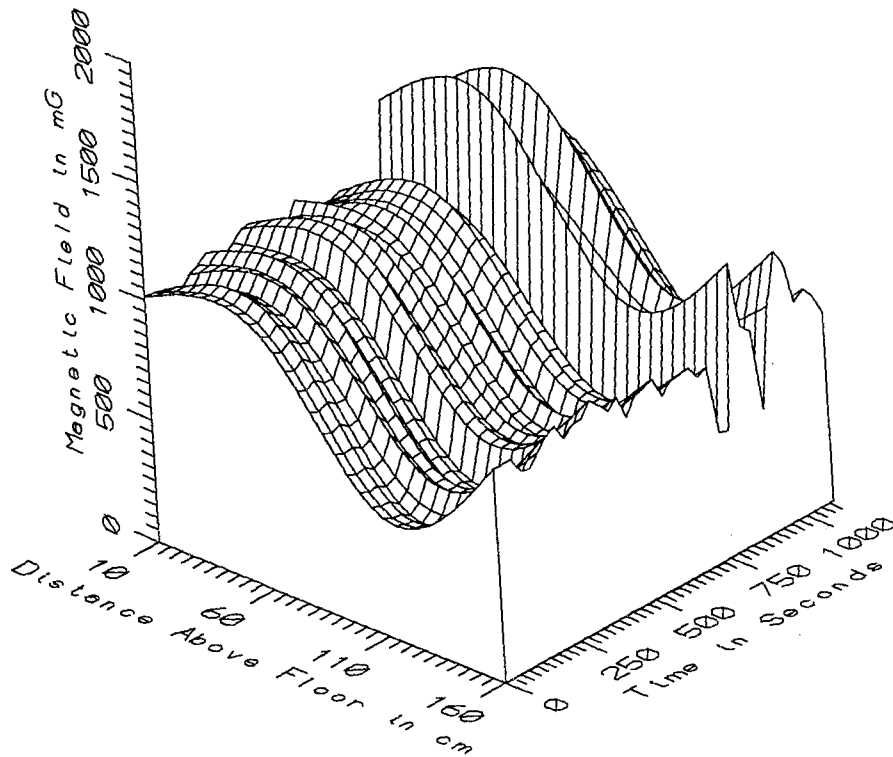
TGV009 - 160cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE



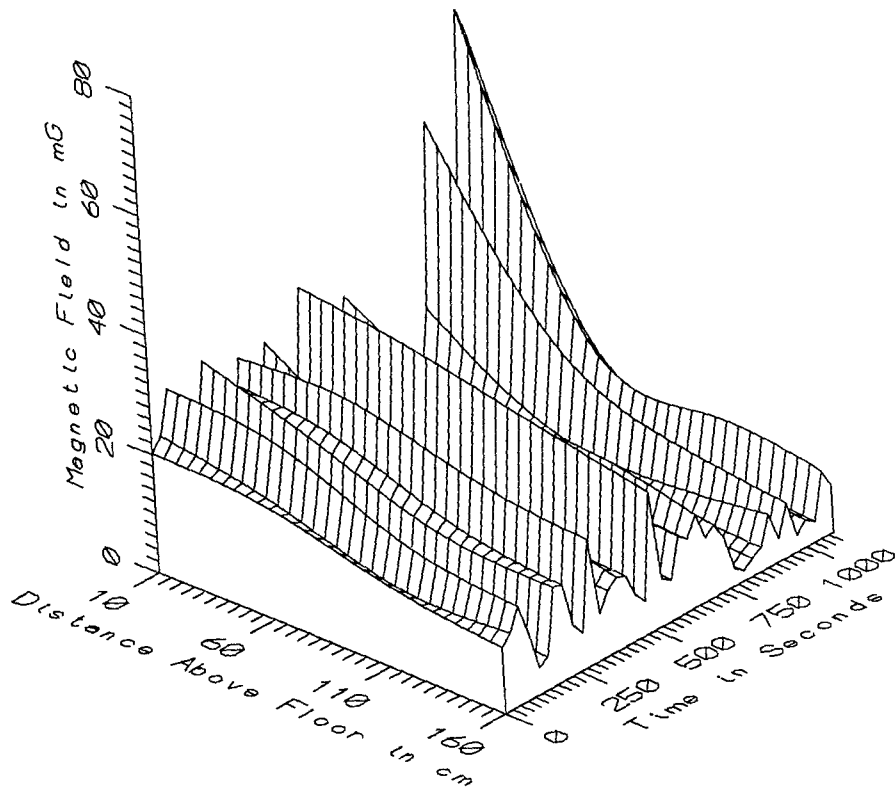
TGV009 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, PULL LOCOMOTIVE



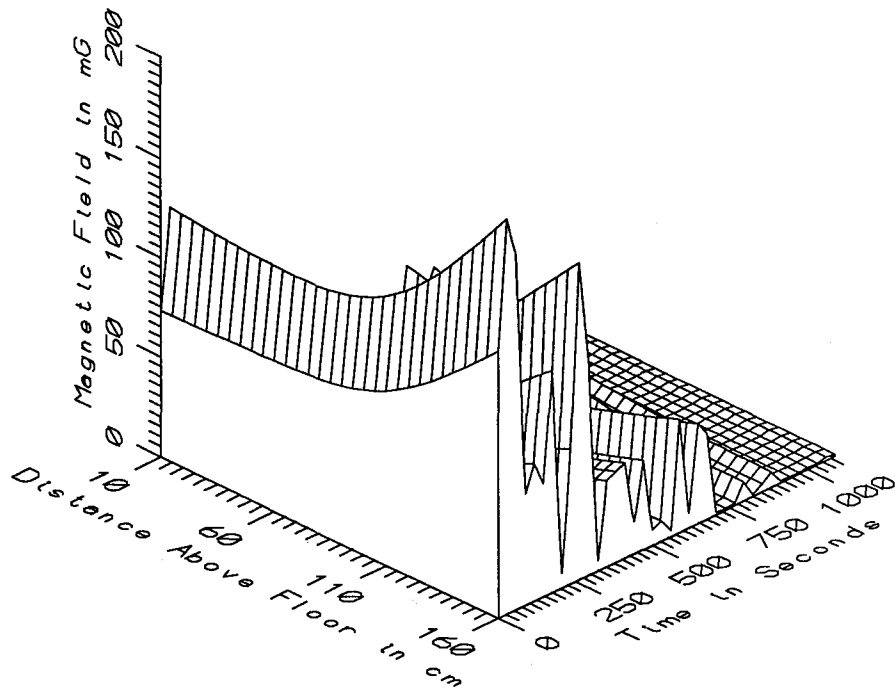
TGV009 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, PULL LOCOMOTIVE



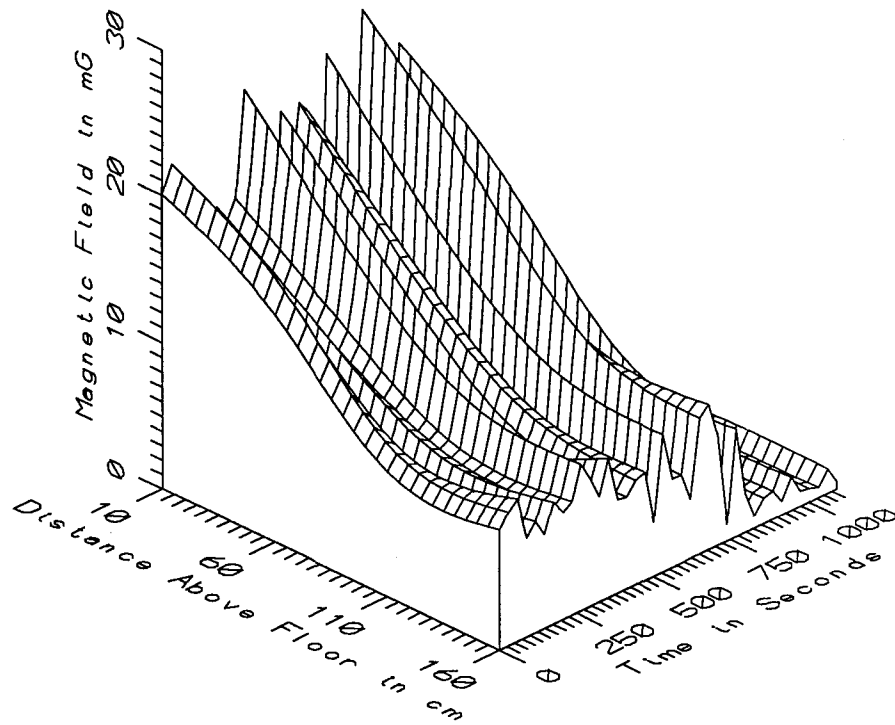
TGV009 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - STATIC



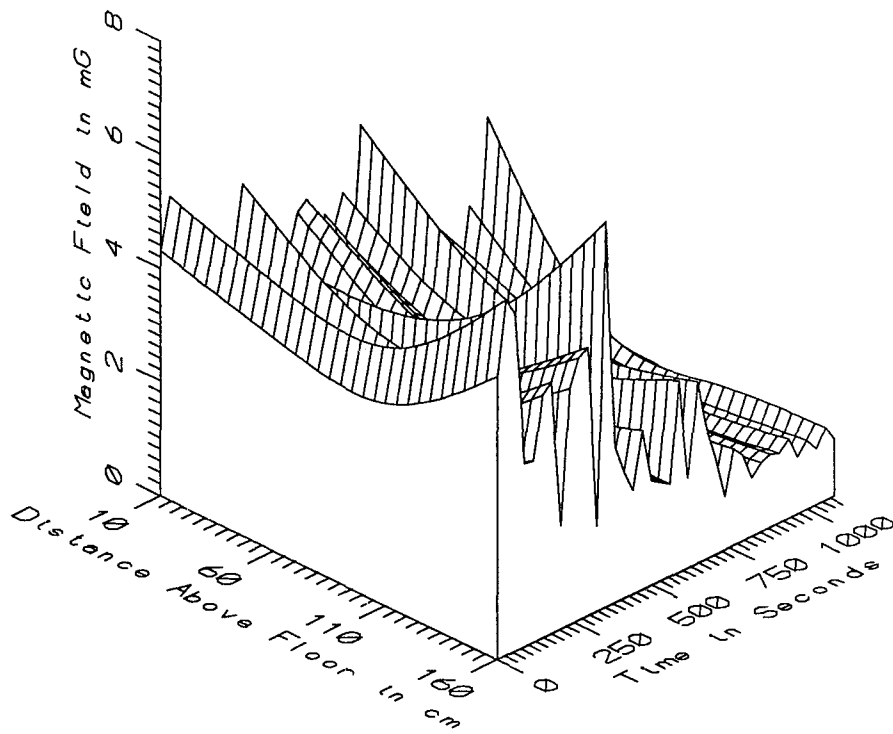
TGV009 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - LOW FREQ, 5-45Hz



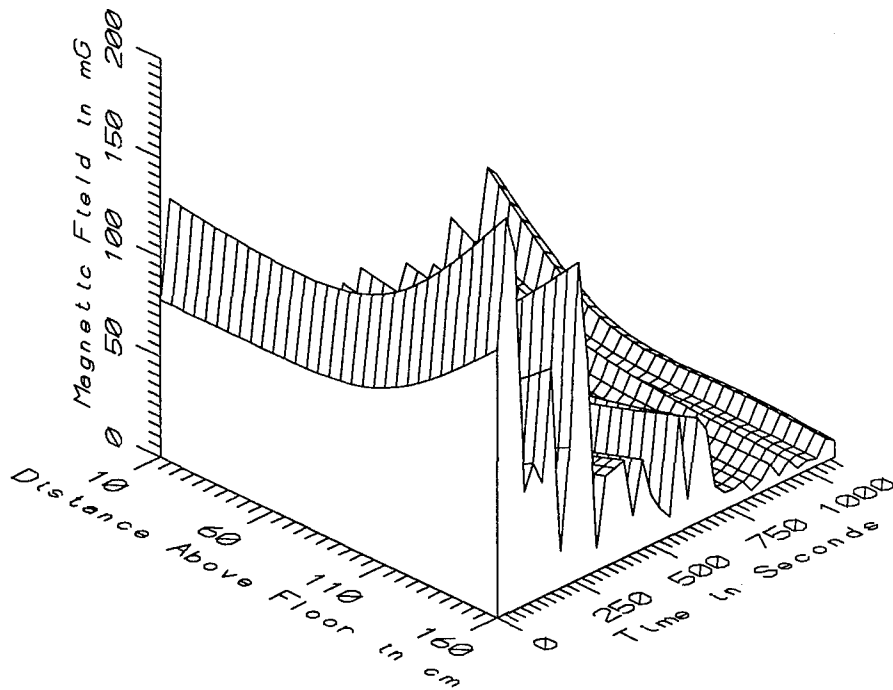
TGV009 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - POWER FREQ, 50-60Hz



TGV009 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - POWER HARM, 65-300Hz



TGV009 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - HIGH FREQ, 305-2560Hz



TGV009 - AGAINST ENGINEER'S CHAIR, PULL LOCOMOTIVE - ALL FREQ, 5-2560Hz

| TGV009 - ALL SAMPLES | | TOTAL OF 38 SAMPLES | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 512.93 | 1292.51 | 998.79 | 134.60 | 13.48 |
| | 60 | 702.99 | 1476.99 | 1067.49 | 144.97 | 13.58 |
| | 110 | 333.98 | 855.23 | 544.08 | 104.62 | 19.23 |
| | 160 | 511.98 | 1188.87 | 857.30 | 130.34 | 15.20 |
| 5-45Hz LOW FREQ | 10 | 4.75 | 65.38 | 21.41 | 13.73 | 64.12 |
| | 60 | 3.19 | 31.39 | 13.59 | 7.18 | 52.87 |
| | 110 | 2.81 | 27.30 | 10.87 | 5.85 | 53.82 |
| | 160 | 1.79 | 23.28 | 9.41 | 5.05 | 53.65 |
| 50-60Hz PWR FREQ | 10 | 0.36 | 123.06 | 23.96 | 29.13 | 121.57 |
| | 60 | 0.46 | 118.23 | 21.50 | 27.89 | 129.67 |
| | 110 | 0.60 | 133.34 | 26.31 | 34.47 | 131.01 |
| | 160 | 0.68 | 198.16 | 40.75 | 53.54 | 131.41 |
| 65-300Hz PWR HARM | 10 | 0.56 | 26.18 | 13.55 | 8.15 | 60.16 |
| | 60 | 0.58 | 18.56 | 9.29 | 5.83 | 62.75 |
| | 110 | 0.47 | 10.93 | 5.87 | 3.42 | 58.32 |
| | 160 | 0.54 | 10.08 | 5.66 | 3.26 | 57.64 |
| 305-2560Hz HIGH FREQ | 10 | 0.65 | 5.18 | 2.96 | 1.19 | 40.20 |
| | 60 | 0.71 | 4.51 | 2.22 | 0.96 | 43.46 |
| | 110 | 0.70 | 4.42 | 2.00 | 1.03 | 51.62 |
| | 160 | 0.92 | 6.75 | 2.56 | 1.63 | 63.57 |
| 5-2560Hz ALL FREQ | 10 | 6.99 | 127.07 | 41.08 | 25.09 | 61.09 |
| | 60 | 4.28 | 120.91 | 30.66 | 25.63 | 83.59 |
| | 110 | 3.86 | 134.35 | 32.12 | 32.36 | 100.74 |
| | 160 | 3.29 | 198.88 | 45.03 | 51.57 | 114.53 |

| TGV009 - AC SECTION ONLY | | TOTAL OF 24 SAMPLES | | | | |
|--------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 926.11 | 1080.08 | 1007.31 | 40.15 | 3.99 |
| | 60 | 972.44 | 1149.41 | 1053.08 | 50.47 | 4.79 |
| | 110 | 433.55 | 608.93 | 521.96 | 56.23 | 10.77 |
| | 160 | 792.18 | 939.28 | 861.98 | 39.70 | 4.61 |
| 5-45Hz | 10 | 8.13 | 33.98 | 19.64 | 7.22 | 36.78 |
| LOW FREQ | 60 | 6.12 | 31.39 | 16.03 | 6.99 | 43.60 |
| | 110 | 5.18 | 27.30 | 13.17 | 5.62 | 42.67 |
| | 160 | 4.54 | 23.28 | 11.38 | 4.84 | 42.52 |
| 50-60Hz | 10 | 2.49 | 123.06 | 33.48 | 32.13 | 95.95 |
| PWR FREQ | 60 | 1.91 | 118.23 | 31.53 | 30.66 | 97.25 |
| | 110 | 2.22 | 133.34 | 40.16 | 36.89 | 91.87 |
| | 160 | 2.89 | 198.16 | 63.18 | 56.41 | 89.29 |
| 65-300Hz | 10 | 2.04 | 26.18 | 17.81 | 5.30 | 29.73 |
| PWR HARM | 60 | 2.70 | 18.56 | 12.42 | 3.54 | 28.54 |
| | 110 | 3.18 | 10.93 | 7.85 | 1.79 | 22.84 |
| | 160 | 3.74 | 10.08 | 7.64 | 1.74 | 22.72 |
| 305-2560Hz | 10 | 1.33 | 5.18 | 3.55 | 0.86 | 24.10 |
| HIGH FREQ | 60 | 1.51 | 4.51 | 2.73 | 0.73 | 26.85 |
| | 110 | 1.38 | 4.42 | 2.55 | 0.90 | 35.20 |
| | 160 | 1.49 | 6.75 | 3.34 | 1.58 | 47.41 |
| 5-2560Hz | 10 | 20.05 | 127.07 | 46.71 | 27.44 | 58.74 |
| ALL FREQ | 60 | 15.52 | 120.91 | 40.67 | 27.38 | 67.33 |
| | 110 | 11.11 | 134.35 | 45.67 | 33.99 | 74.42 |
| | 160 | 9.76 | 198.88 | 66.76 | 54.16 | 81.12 |

| TGV009 - TRANSITION BETWEEN AC AND DC SECTIONS | | TOTAL OF 7 SAMPLES | | | | |
|--|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 512.93 | 1292.51 | 910.04 | 279.70 | 30.73 |
| | 60 | 702.99 | 1476.99 | 1004.26 | 282.34 | 28.11 |
| | 110 | 333.98 | 855.23 | 529.12 | 179.49 | 33.92 |
| | 160 | 511.98 | 1188.87 | 760.46 | 255.55 | 33.60 |
| 5-45Hz LOW FREQ | 10 | 4.75 | 13.29 | 8.51 | 2.84 | 33.34 |
| | 60 | 3.19 | 13.95 | 6.57 | 3.60 | 54.87 |
| | 110 | 2.81 | 13.85 | 6.09 | 3.90 | 64.03 |
| | 160 | 1.79 | 11.97 | 5.94 | 3.90 | 65.66 |
| 50-60Hz PWR FREQ | 10 | 0.36 | 36.40 | 12.29 | 15.36 | 124.93 |
| | 60 | 0.46 | 23.45 | 7.33 | 8.93 | 121.79 |
| | 110 | 0.60 | 11.56 | 4.14 | 4.44 | 107.39 |
| | 160 | 0.73 | 9.42 | 3.59 | 3.61 | 100.51 |
| 65-300Hz PWR HARM | 10 | 0.56 | 22.75 | 8.71 | 9.20 | 105.59 |
| | 60 | 0.76 | 16.47 | 6.25 | 6.49 | 103.72 |
| | 110 | 0.75 | 9.06 | 3.76 | 3.55 | 94.44 |
| | 160 | 0.84 | 7.72 | 3.38 | 2.94 | 87.06 |
| 305-2560Hz HIGH FREQ | 10 | 0.65 | 3.27 | 2.07 | 1.06 | 51.06 |
| | 60 | 0.71 | 2.55 | 1.65 | 0.72 | 43.56 |
| | 110 | 0.70 | 1.76 | 1.22 | 0.41 | 33.77 |
| | 160 | 0.92 | 1.69 | 1.32 | 0.31 | 23.29 |
| 5-2560Hz ALL FREQ | 10 | 6.99 | 37.80 | 22.02 | 10.88 | 49.40 |
| | 60 | 4.28 | 24.56 | 14.52 | 7.16 | 49.31 |
| | 110 | 3.86 | 16.69 | 9.80 | 4.13 | 42.15 |
| | 160 | 3.45 | 14.39 | 9.05 | 3.61 | 39.92 |

| TGV009 - DC SECTION ONLY | | TOTAL OF 7 SAMPLES | | | | | |
|--------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|--|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) | |
| STATIC | 10 | 885.35 | 1214.93 | 1058.33 | 117.01 | 11.06 | |
| | 60 | 1004.89 | 1415.06 | 1180.16 | 140.72 | 11.92 | |
| | 110 | 485.38 | 790.27 | 634.88 | 106.41 | 16.76 | |
| | 160 | 780.19 | 1135.77 | 938.09 | 121.57 | 12.96 | |
| 5-45HZ LOW FREQ | 10 | 19.07 | 65.38 | 40.39 | 18.10 | 44.81 | |
| | 60 | 6.28 | 21.17 | 12.22 | 5.86 | 47.96 | |
| | 110 | 3.63 | 13.13 | 7.75 | 3.93 | 50.72 | |
| | 160 | 2.87 | 11.19 | 6.15 | 3.23 | 52.50 | |
| 50-60HZ PWR FREQ | 10 | 1.06 | 5.79 | 2.96 | 1.52 | 51.44 | |
| | 60 | 0.85 | 2.21 | 1.31 | 0.46 | 34.80 | |
| | 110 | 0.61 | 1.65 | 0.99 | 0.33 | 33.87 | |
| | 160 | 0.68 | 1.64 | 1.00 | 0.31 | 30.83 | |
| 65-300HZ PWR HARM | 10 | 0.69 | 8.10 | 3.75 | 2.35 | 62.68 | |
| | 60 | 0.58 | 2.86 | 1.60 | 0.71 | 44.27 | |
| | 110 | 0.47 | 2.19 | 1.16 | 0.60 | 52.01 | |
| | 160 | 0.54 | 2.34 | 1.18 | 0.62 | 52.86 | |
| 305-2560HZ HIGH FREQ | 10 | 0.89 | 3.86 | 1.84 | 1.01 | 55.16 | |
| | 60 | 0.85 | 1.19 | 1.01 | 0.15 | 14.45 | |
| | 110 | 0.75 | 1.09 | 0.91 | 0.15 | 16.54 | |
| | 160 | 0.97 | 1.37 | 1.14 | 0.16 | 13.85 | |
| 5-2560HZ ALL FREQ | 10 | 19.66 | 66.25 | 40.80 | 18.10 | 44.35 | |
| | 60 | 6.56 | 21.44 | 12.47 | 5.84 | 46.81 | |
| | 110 | 3.88 | 13.40 | 7.98 | 3.92 | 49.11 | |
| | 160 | 3.29 | 11.50 | 6.49 | 3.20 | 49.33 | |



APPENDIX K

DATASET TGV010
TGV CONTROL CENTER IN MONTPARNASSE STATION

Measurement Setup Code: Staff: 10 Reference: 12
 Drawing: A-3

Vehicle Status: Not Applicable

Measurement Date: September 8, 1992

Measurement Time: Start: 10:49:45
 End: 10:51:20

Number of Samples: 10

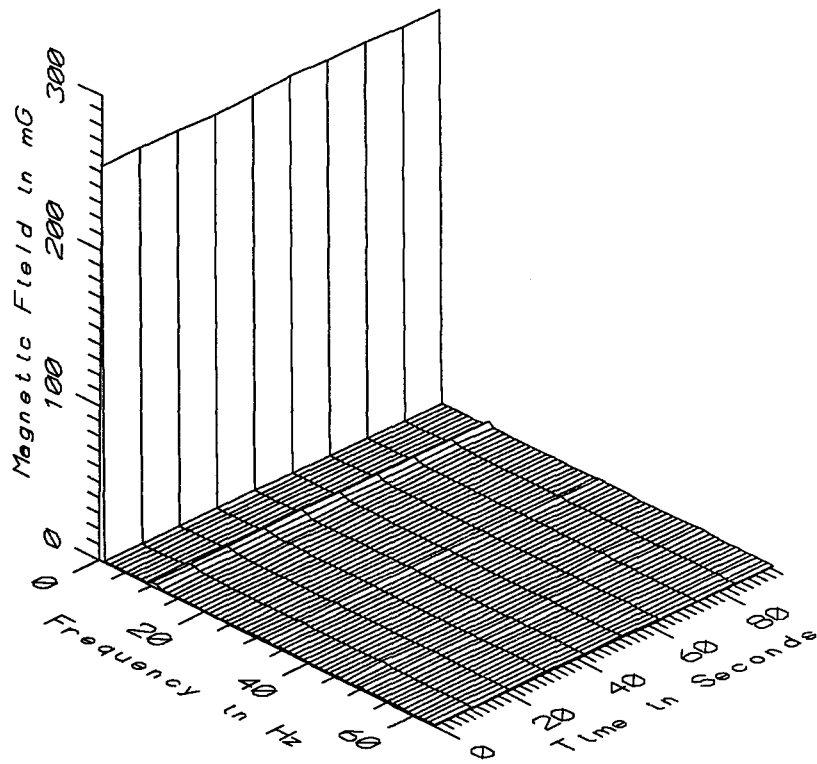
Programmed Sample Interval: 10 sec

Actual Sample Interval: 10.5 sec

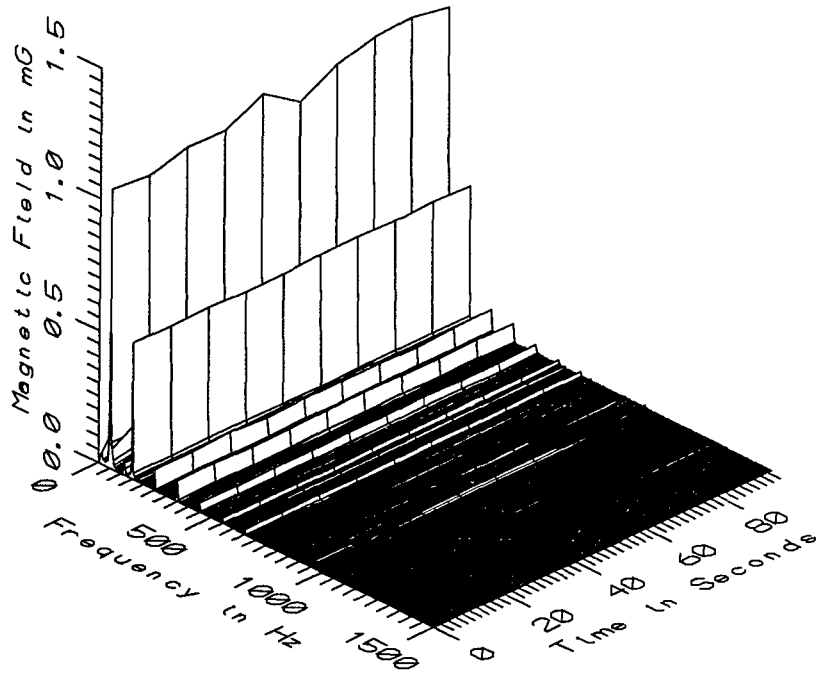
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

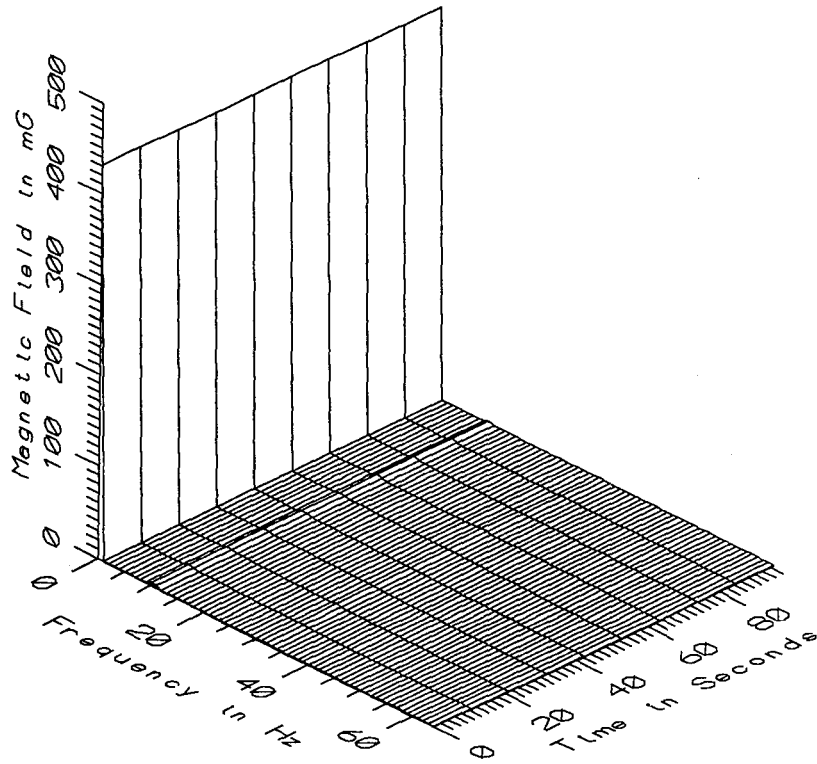
Missing or Suspect Data: None



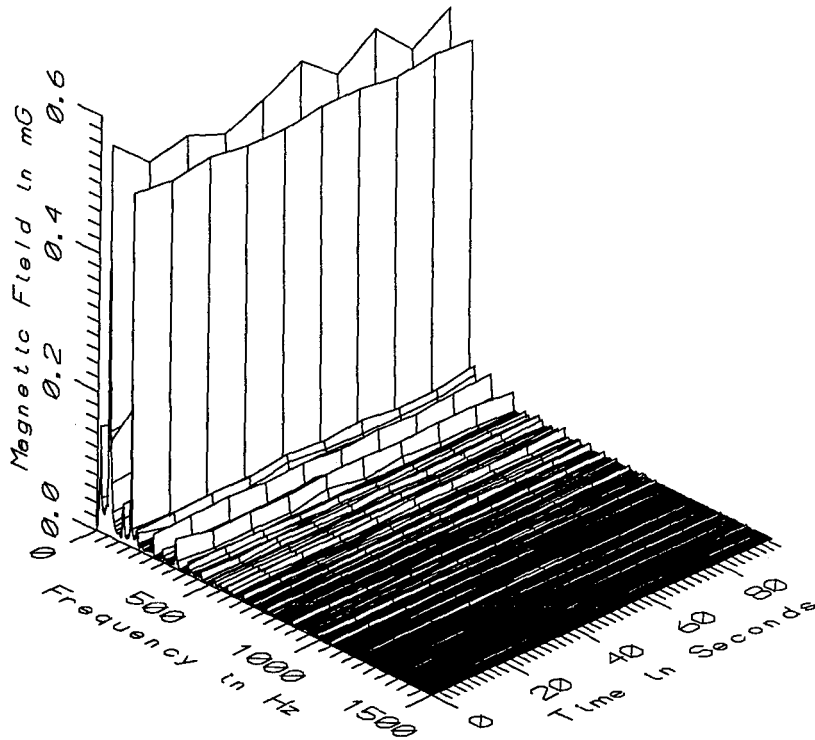
TGV010 - 10cm ABOVE FLOOR NEAR CONSOLE IN TGV CONTROL CENTER



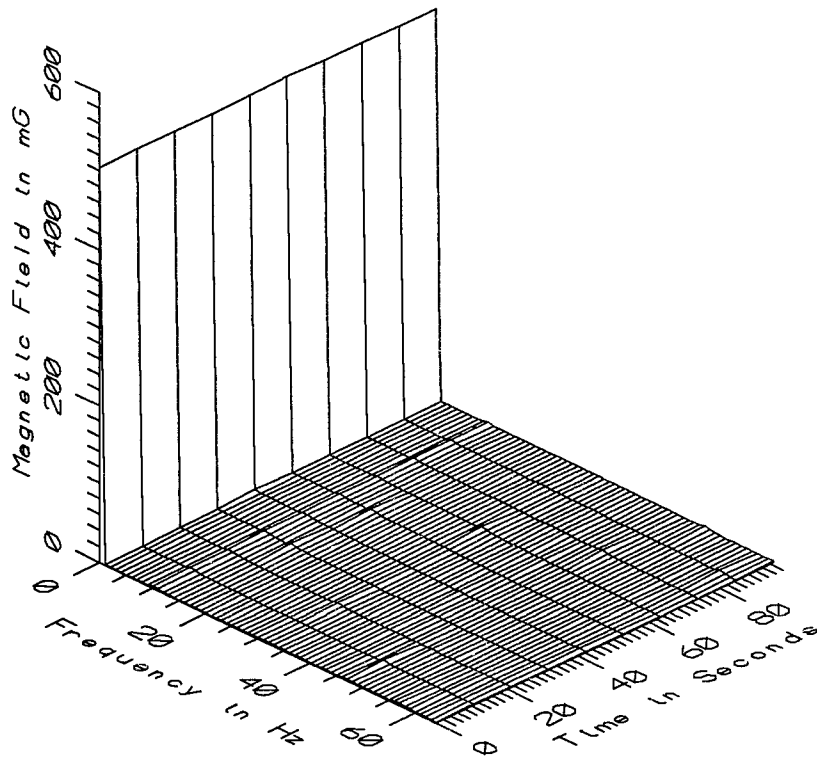
TGV010 - 10cm ABOVE FLOOR NEAR CONSOLE IN TGV CONTROL CENTER



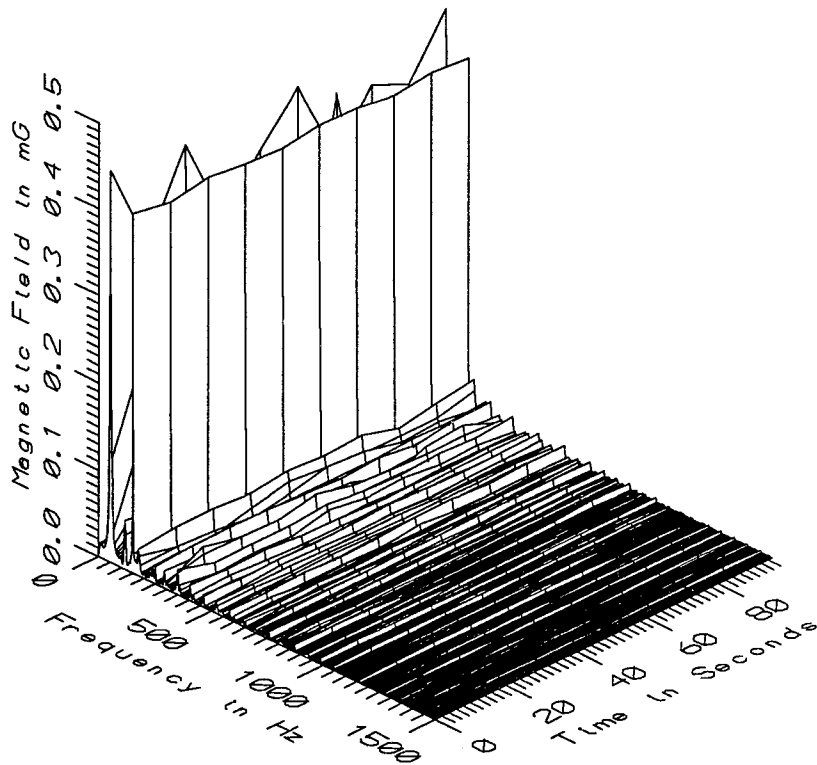
TGV010 - 60cm ABOVE FLOOR NEAR CONSOLE IN TGV CONTROL CENTER



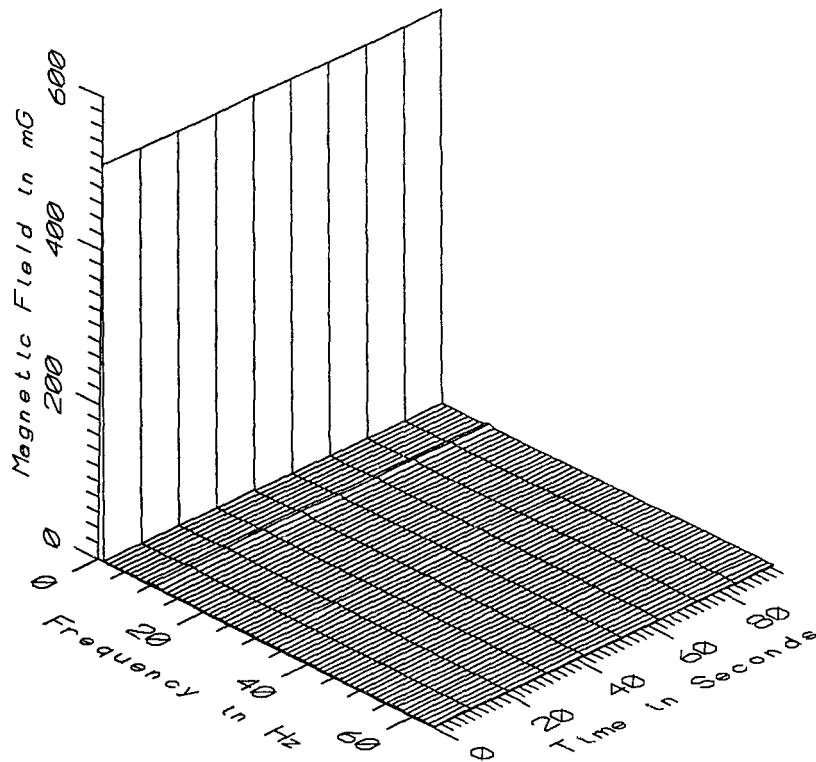
TGV010 - 60cm ABOVE FLOOR NEAR CONSOLE IN TGV CONTROL CENTER



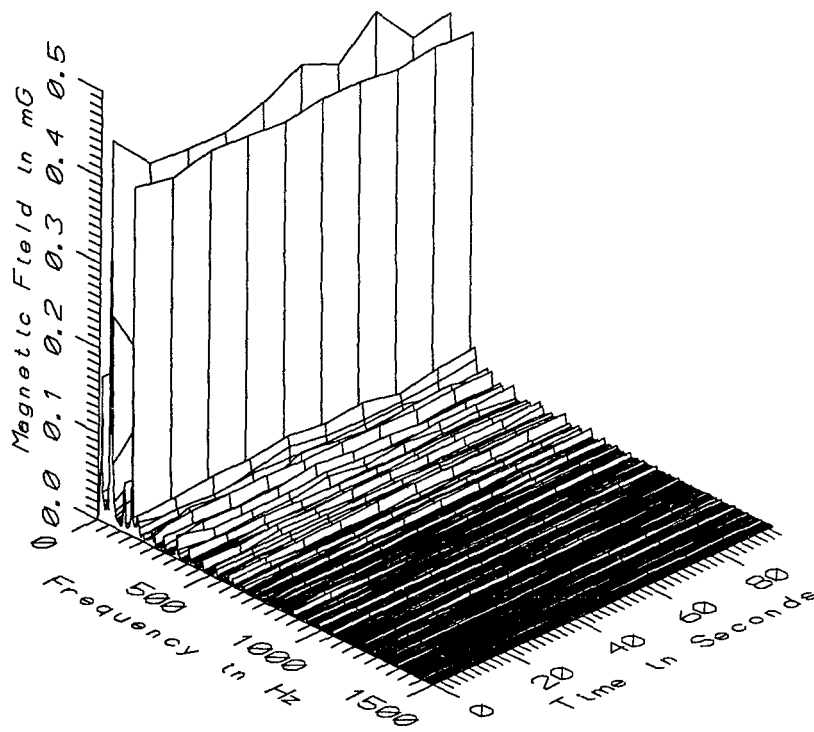
TGV010 - 110cm ABOVE FLOOR NEAR CONSOLE IN TGV CONTROL CENTER



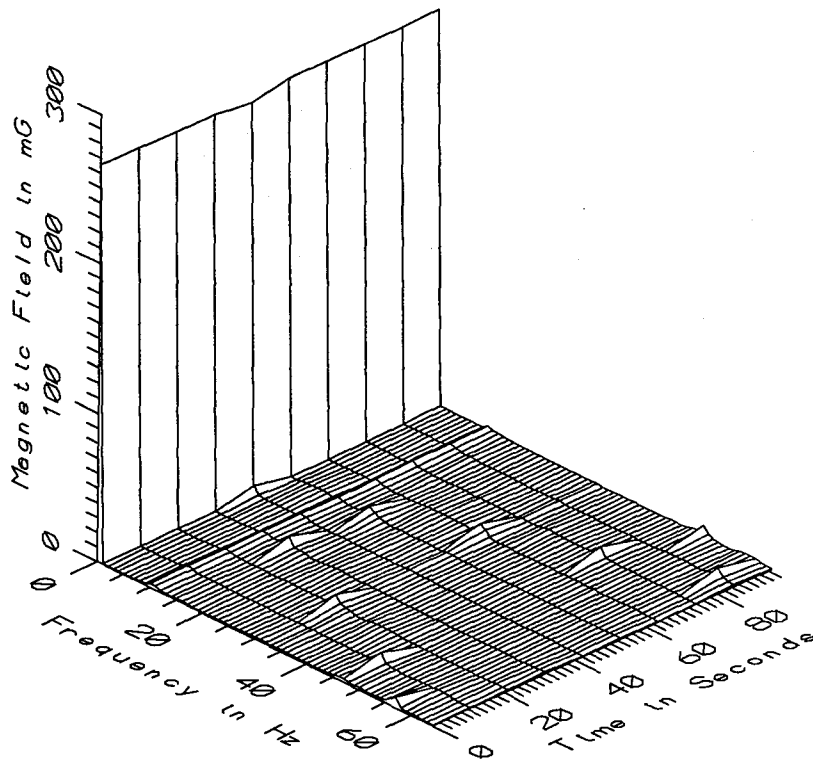
TGV010 - 110cm ABOVE FLOOR NEAR CONSOLE IN TGV CONTROL CENTER



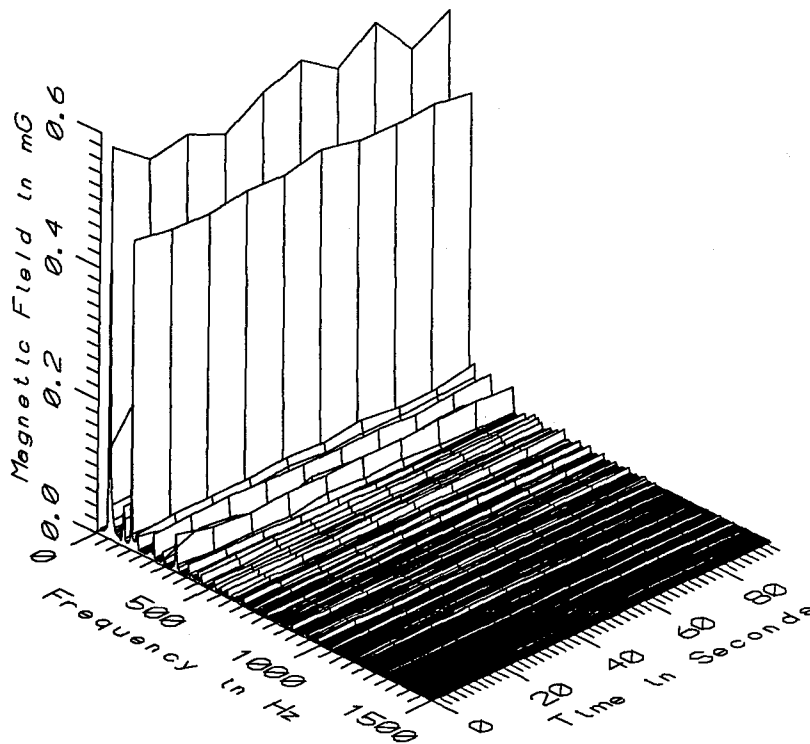
TGV010 - 160cm ABOVE FLOOR NEAR CONSOLE IN TGV CONTROL CENTER



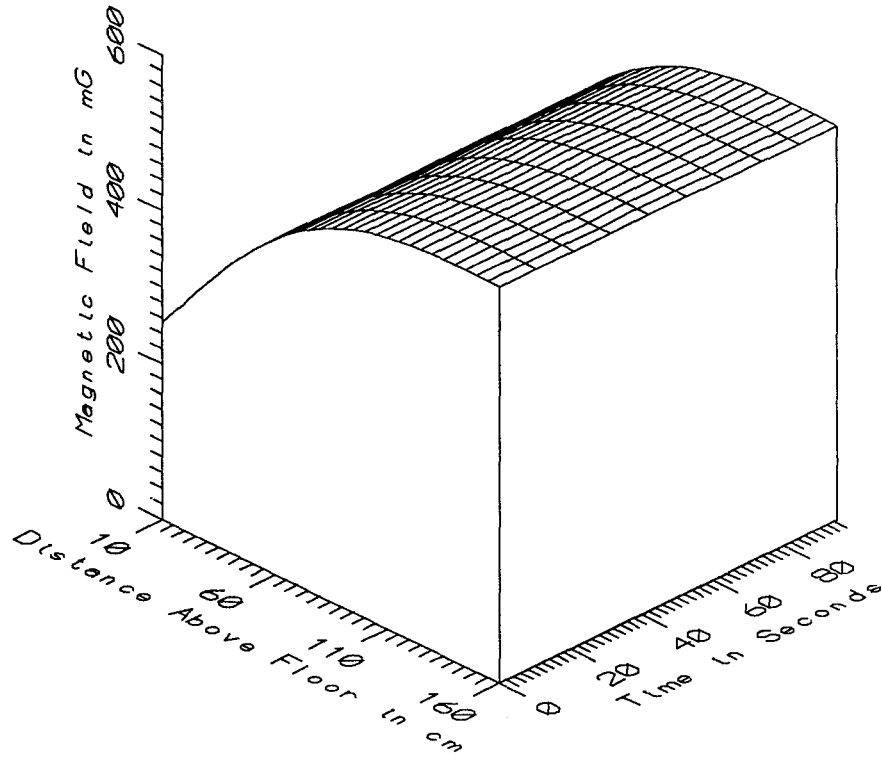
TGV010 - 160cm ABOVE FLOOR NEAR CONSOLE IN TGV CONTROL CENTER



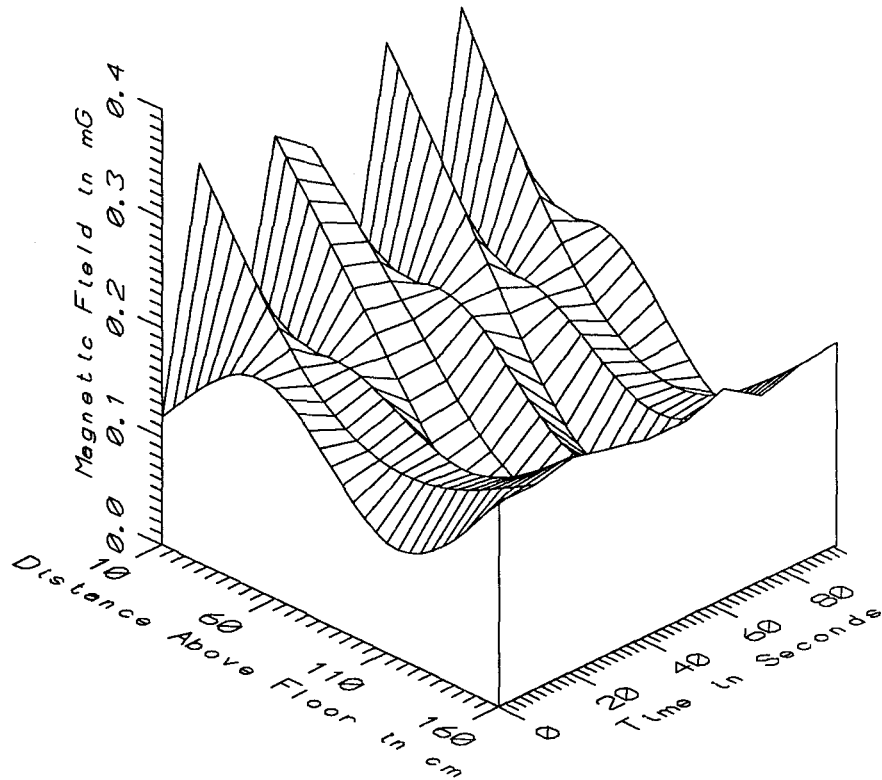
TGV010 - REFERENCE PROBE - ON CHAIR NEAR CONSOLE IN TGV CONTROL CENTER



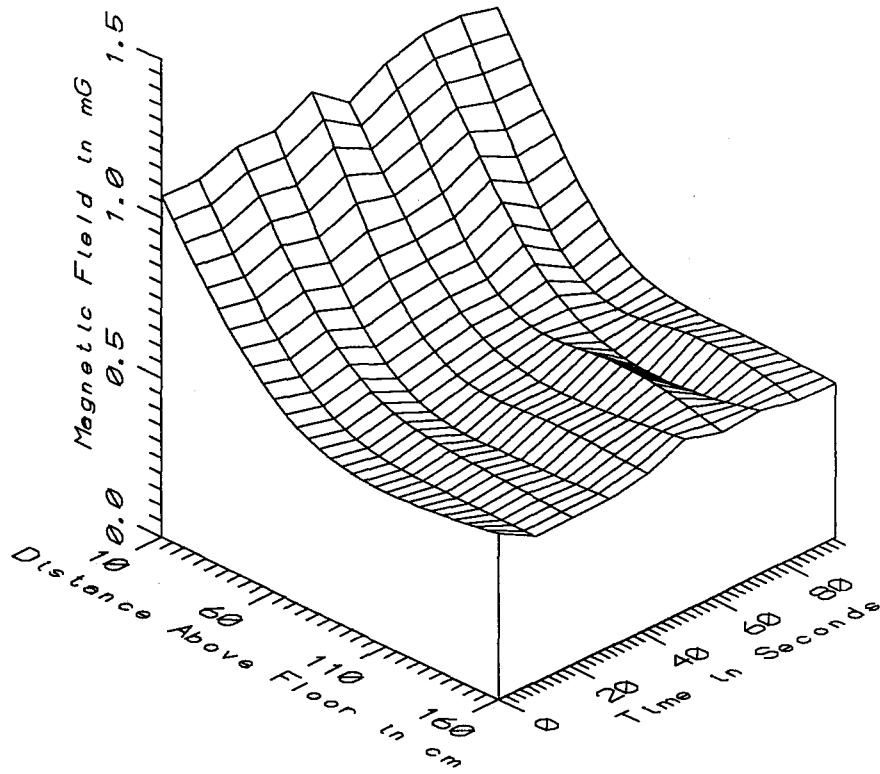
TGV010 - REFERENCE PROBE - ON CHAIR NEAR CONSOLE IN TGV CONTROL CENTER



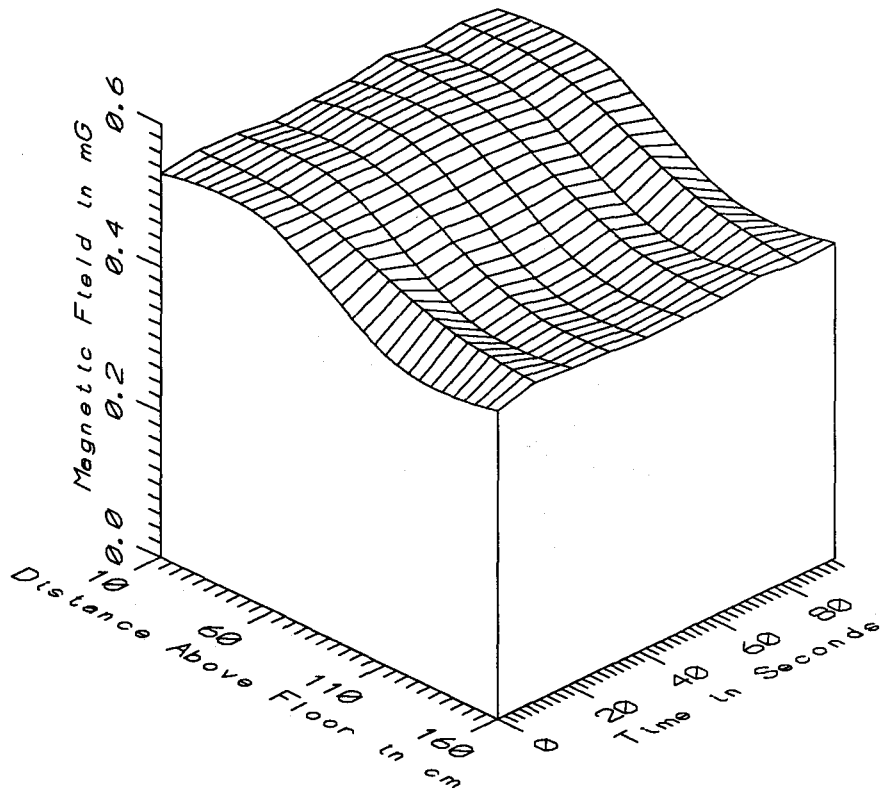
TGV010 - NEAR CONSOLE IN TGV CONTROL CENTER - STATIC



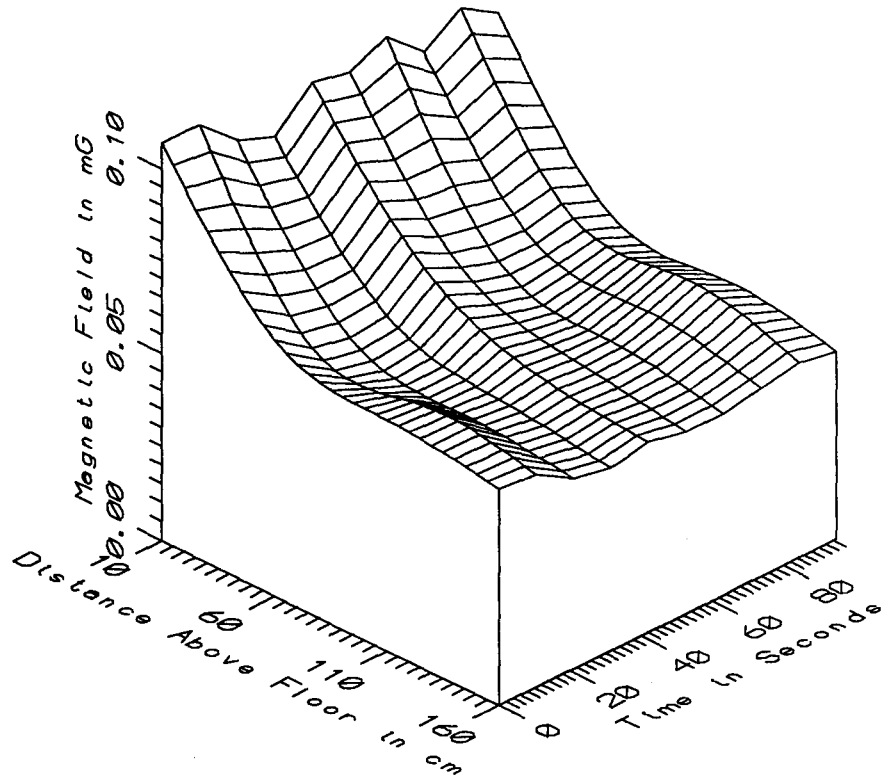
TGV010 - NEAR CONSOLE IN TGV CONTROL CENTER - LOW FREQ, 5-45Hz



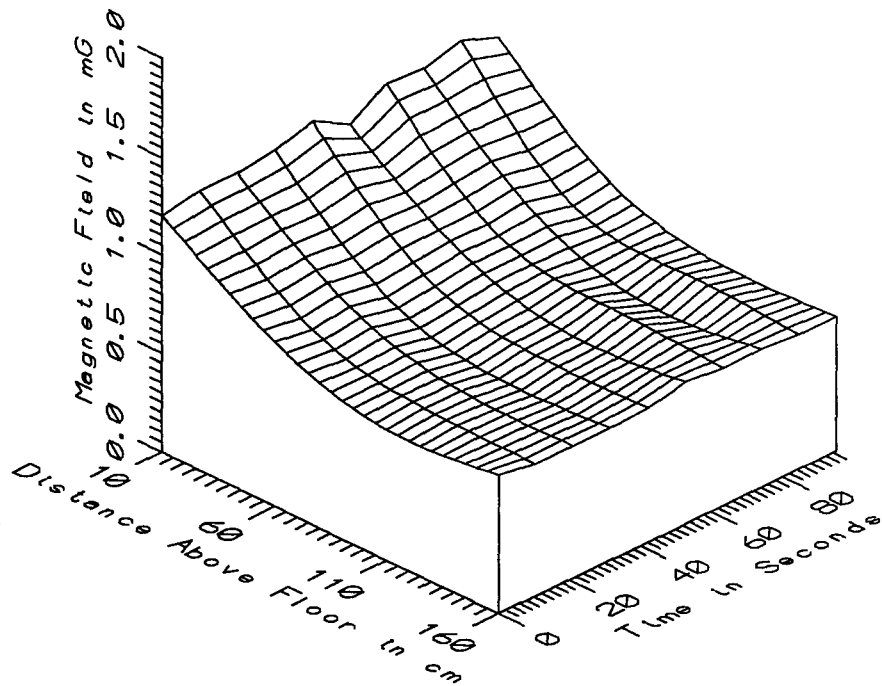
TGV010 - NEAR CONSOLE IN TGV CONTROL CENTER - POWER FREQ, 50-60Hz



TGV010 - NEAR CONSOLE IN TGV CONTROL CENTER - POWER HARM, 65-300Hz

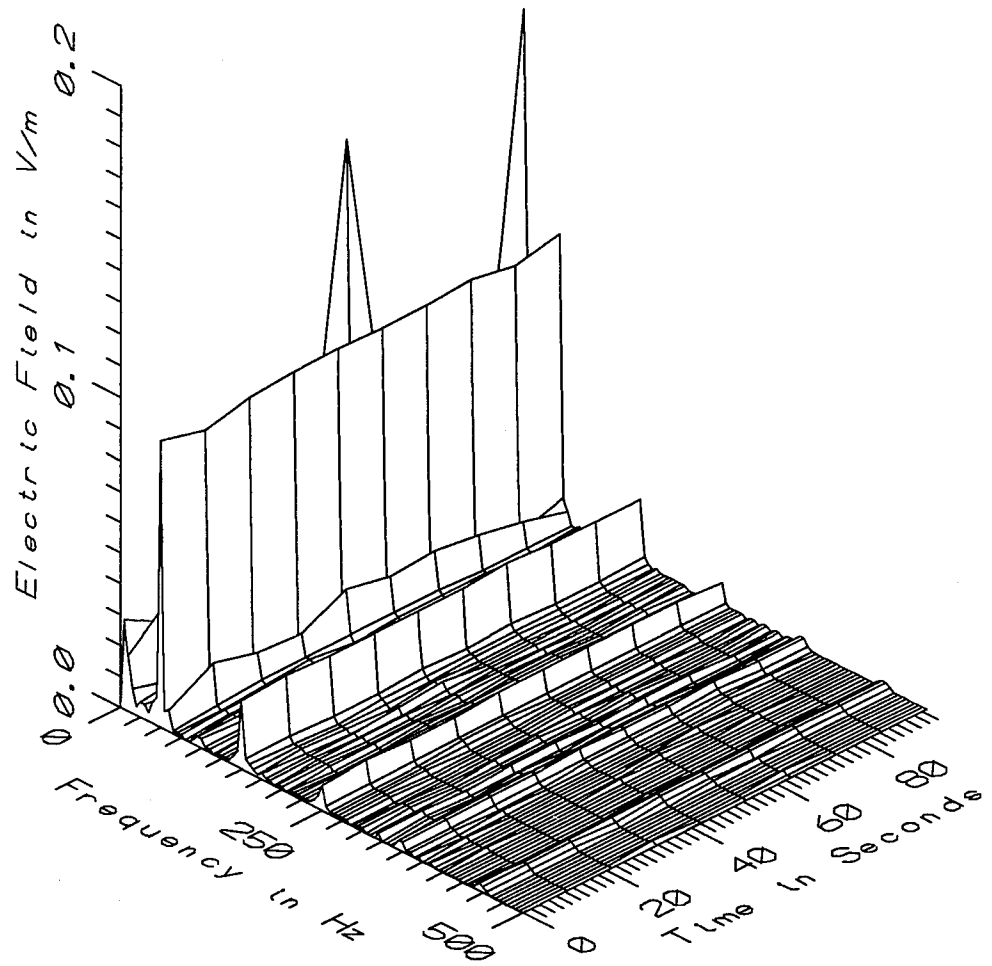


TGV010 - NEAR CONSOLE IN TGV CONTROL CENTER - HIGH FREQ, 305-2560Hz



TGV010 - NEAR CONSOLE IN TGV CONTROL CENTER - ALL FREQ, 5-2560Hz

| TGV010 - TGV CONTROL CENTER, GARE MONTPARNASSE | | TOTAL OF 10 SAMPLES | | | | |
|--|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 253.12 | 256.00 | 254.79 | 0.92 | 0.36 |
| | 60 | 431.48 | 433.69 | 432.64 | 0.62 | 0.14 |
| | 110 | 503.57 | 506.27 | 504.66 | 0.78 | 0.15 |
| | 160 | 509.71 | 512.14 | 510.56 | 0.79 | 0.16 |
| 5-45Hz LOW FREQ | 10 | 0.11 | 0.36 | 0.23 | 0.11 | 48.27 |
| | 60 | 0.17 | 0.20 | 0.18 | 0.01 | 4.30 |
| | 110 | 0.07 | 0.14 | 0.10 | 0.03 | 25.73 |
| | 160 | 0.17 | 0.20 | 0.19 | 0.01 | 4.02 |
| 50-60Hz PWR FREQ | 10 | 1.06 | 1.19 | 1.13 | 0.05 | 4.52 |
| | 60 | 0.55 | 0.63 | 0.59 | 0.03 | 4.27 |
| | 110 | 0.45 | 0.56 | 0.49 | 0.03 | 6.74 |
| | 160 | 0.46 | 0.54 | 0.49 | 0.03 | 5.57 |
| 65-300Hz PWR HARM | 10 | 0.53 | 0.55 | 0.54 | 0.00 | 0.89 |
| | 60 | 0.52 | 0.54 | 0.53 | 0.00 | 0.78 |
| | 110 | 0.43 | 0.47 | 0.44 | 0.01 | 2.90 |
| | 160 | 0.43 | 0.44 | 0.43 | 0.00 | 1.08 |
| 305-2560Hz HIGH FREQ | 10 | 0.09 | 0.11 | 0.10 | 0.00 | 4.53 |
| | 60 | 0.06 | 0.07 | 0.06 | 0.00 | 5.67 |
| | 110 | 0.05 | 0.06 | 0.06 | 0.00 | 6.11 |
| | 160 | 0.05 | 0.06 | 0.05 | 0.00 | 6.31 |
| 5-2560Hz ALL FREQ | 10 | 1.20 | 1.36 | 1.28 | 0.05 | 4.15 |
| | 60 | 0.78 | 0.84 | 0.81 | 0.02 | 2.16 |
| | 110 | 0.64 | 0.72 | 0.67 | 0.03 | 3.98 |
| | 160 | 0.66 | 0.71 | 0.68 | 0.02 | 2.56 |



TGV010 - ELECTRIC FIELD IN TGV CONTROL CENTER



APPENDIX L

DATASET TGV011
HORIZONTAL PROFILE FROM CONSOLE MONITOR
TGV CONTROL CENTER IN MONTPARNASSE STATION

Measurement Setup Code: Staff: 11 Reference: 12
 Drawing: A-3

Vehicle Status: Not Applicable

Measurement Date: September 8, 1992

Measurement Time: Start: 10:51:59
 End: 10:53:30

Number of Samples: 10

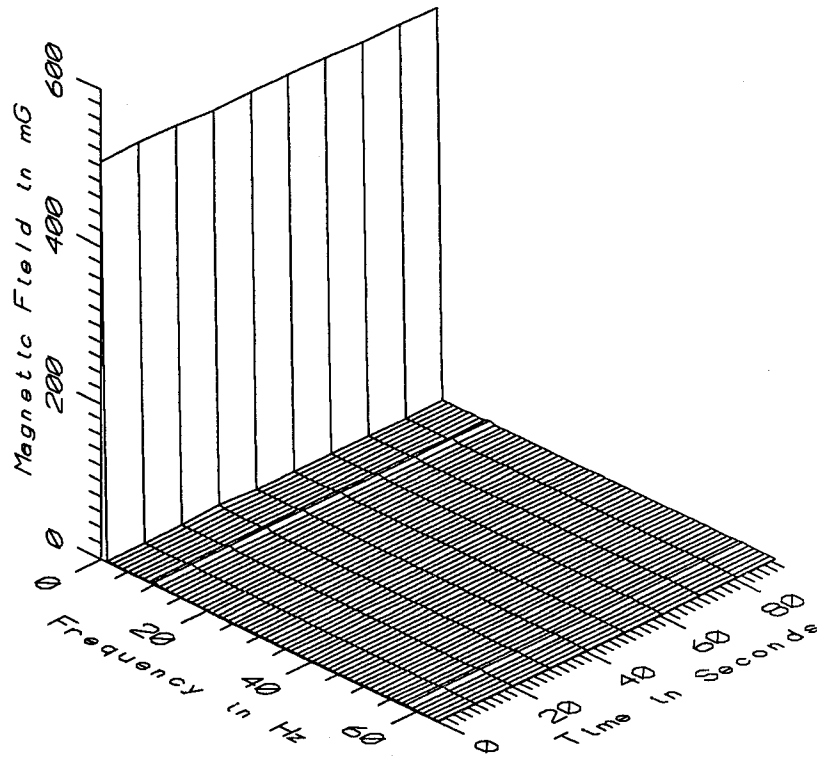
Programmed Sample Interval: 10 sec

Actual Sample Interval: 10.1 sec

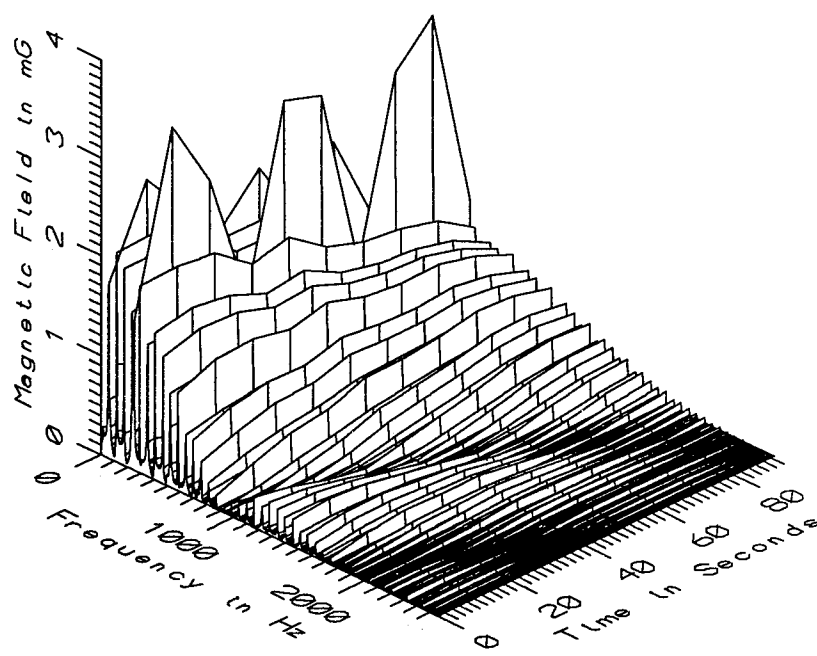
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

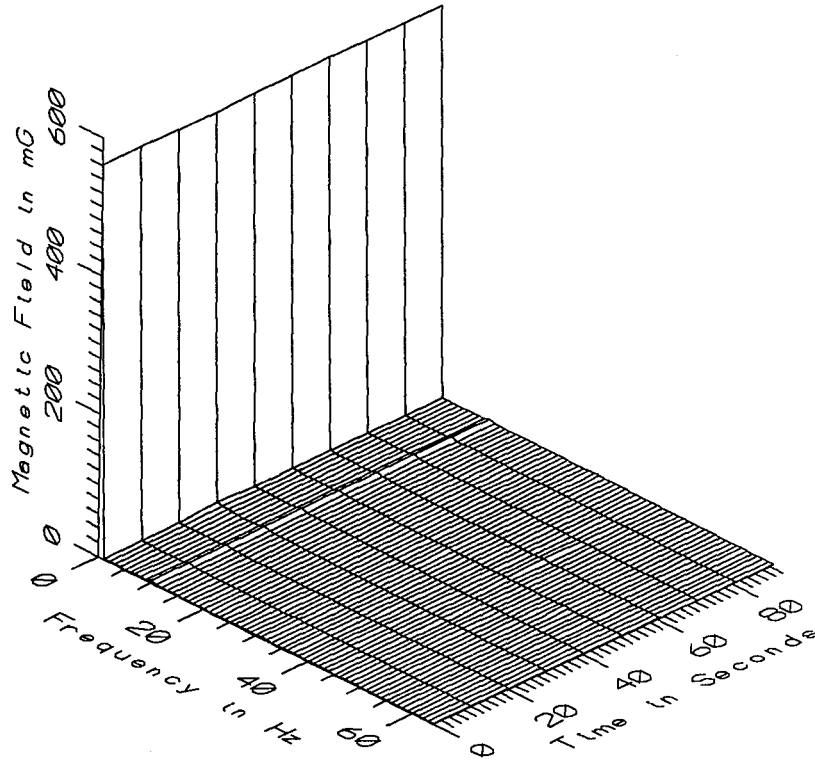
Missing or Suspect Data: None



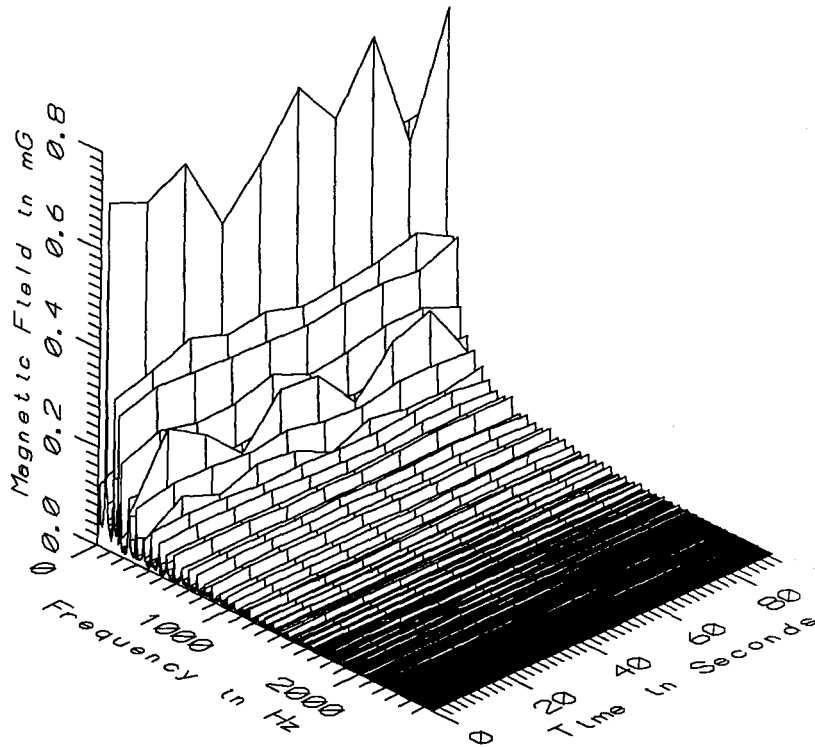
TGV011 - 10cm FROM CENTER OF MONITOR IN TGV CONTROL CENTER



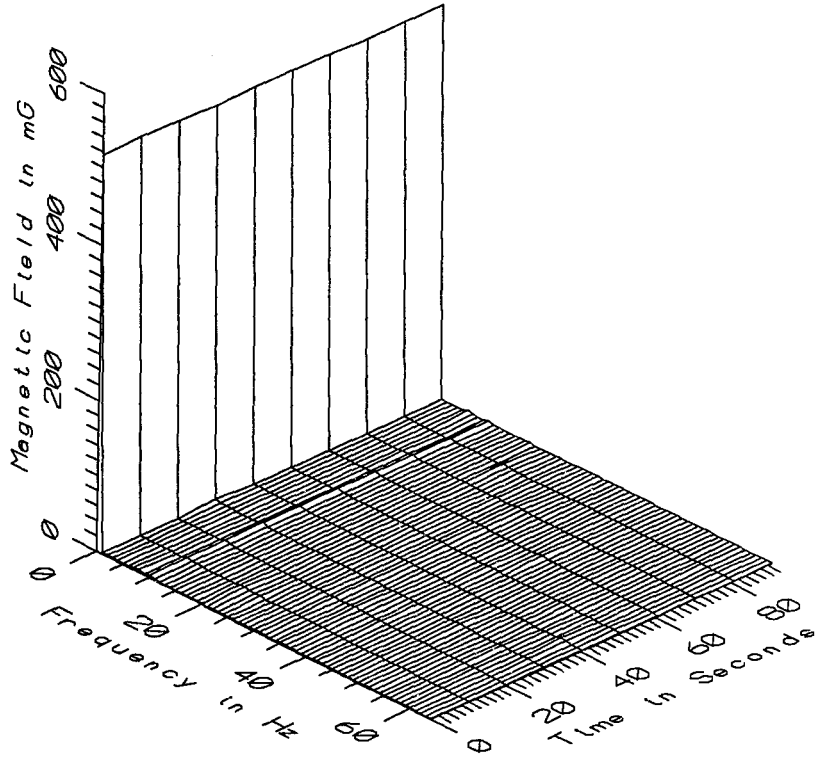
TGV011 - 10cm FROM CENTER OF MONITOR IN TGV CONTROL CENTER



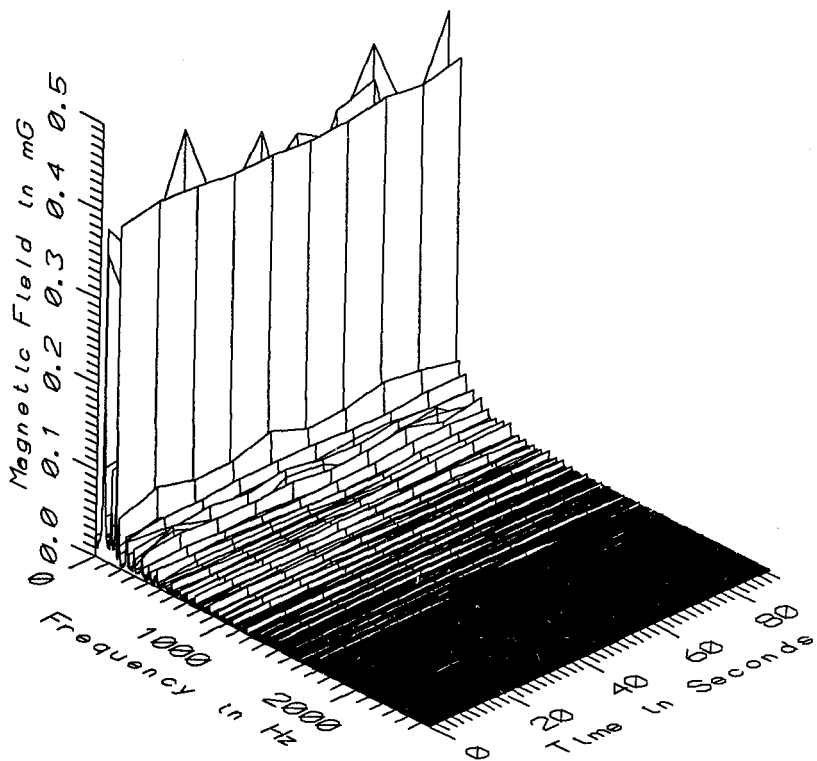
TGV011 - 60cm FROM CENTER OF MONITOR IN TGV CONTROL CENTER



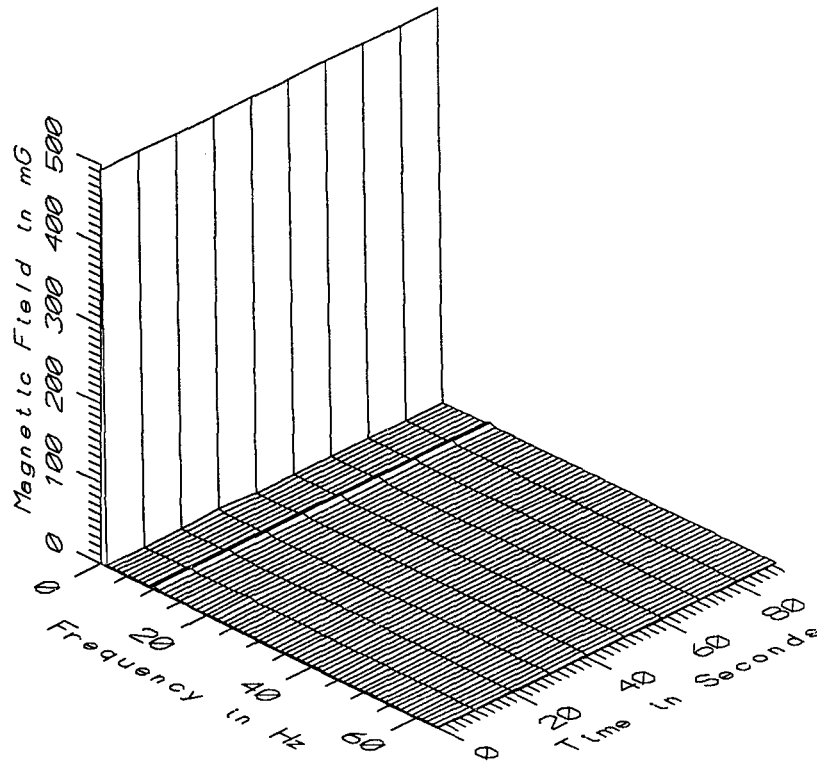
TGV011 - 60cm FROM CENTER OF MONITOR IN TGV CONTROL CENTER



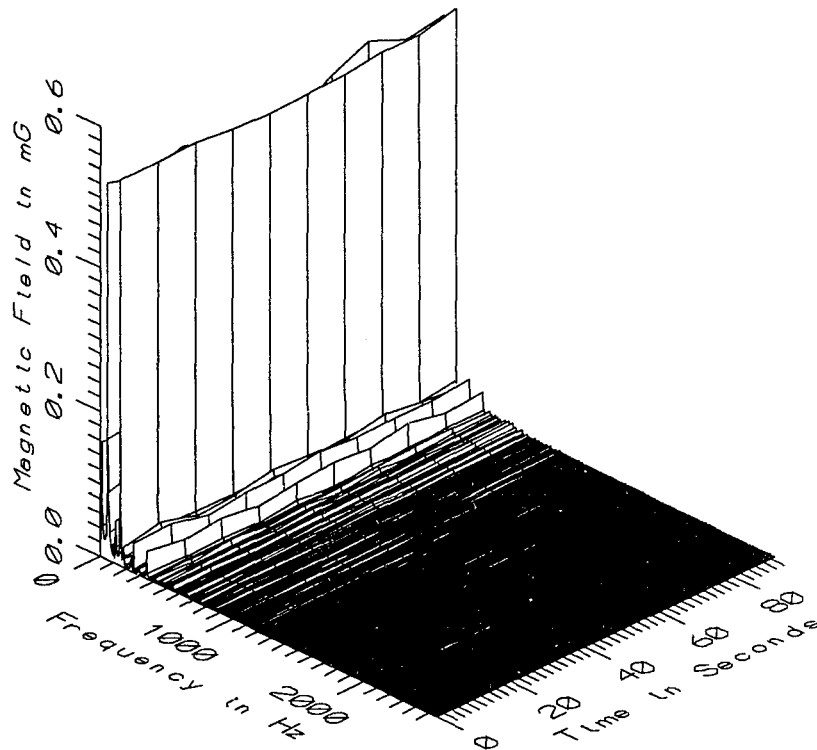
TGV011 - 110cm FROM CENTER OF MONITOR IN TGV CONTROL CENTER



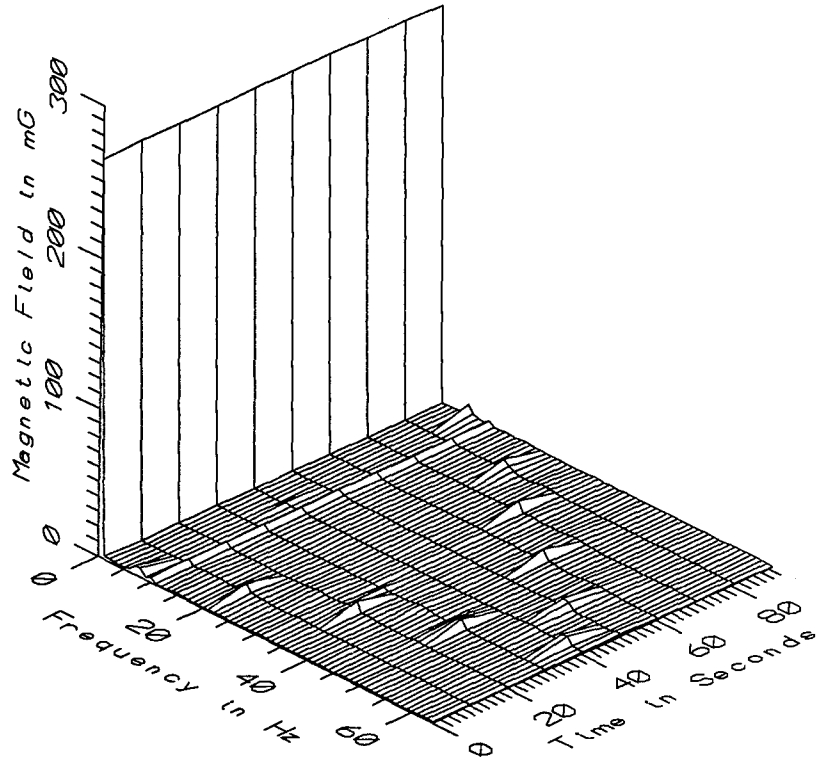
TGV011 - 110cm FROM CENTER OF MONITOR IN TGV CONTROL CENTER



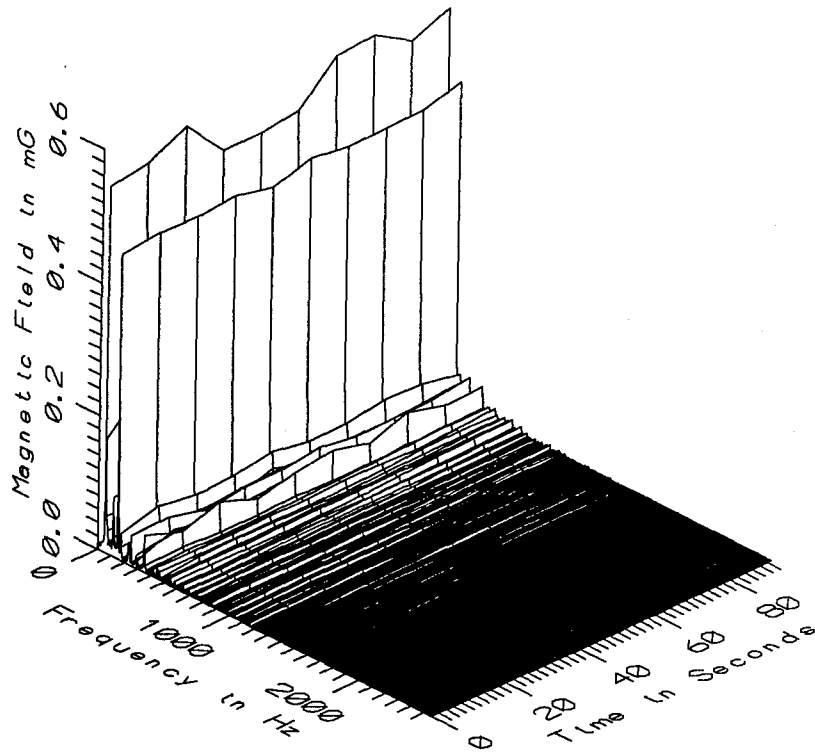
TGV011 - 160cm FROM CENTER OF MONITOR IN TGV CONTROL CENTER



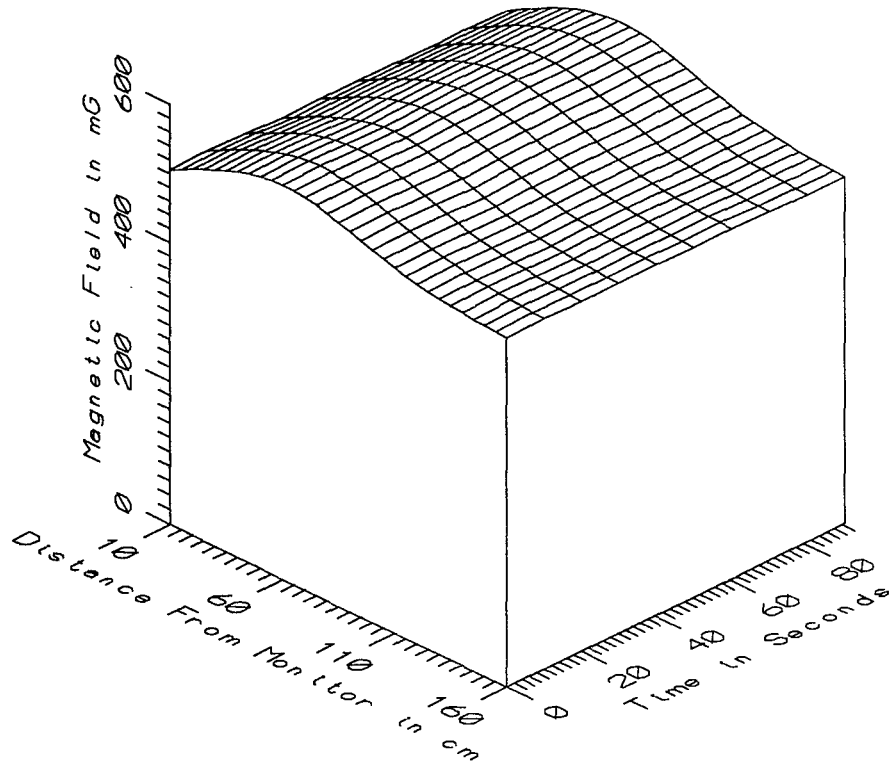
TGV011 - 160cm FROM CENTER OF MONITOR IN TGV CONTROL CENTER



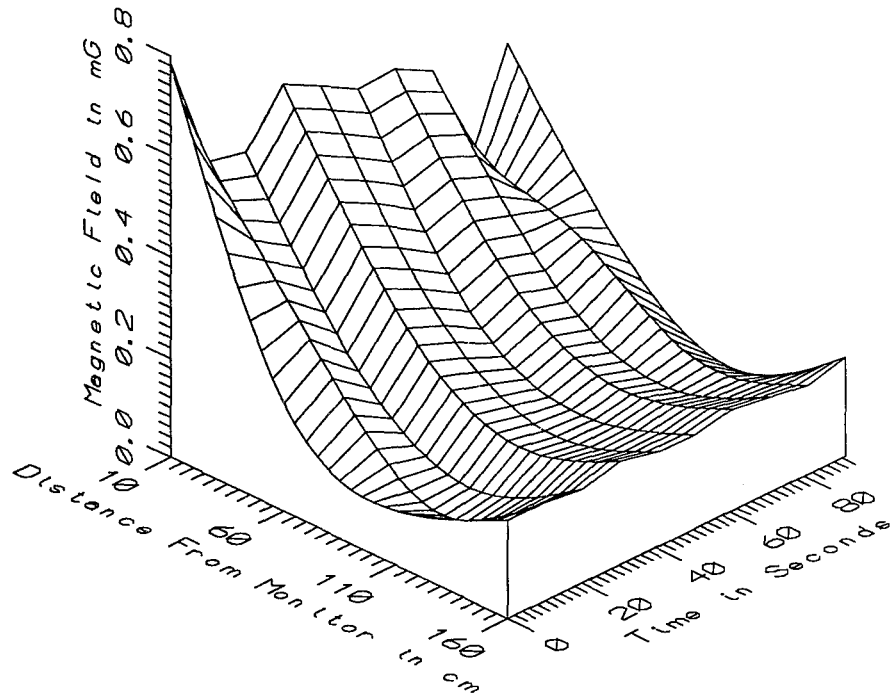
TGV011 - REFERENCE PROBE - ON CHAIR NEAR CONSOLE IN TGV CONTROL CENTER



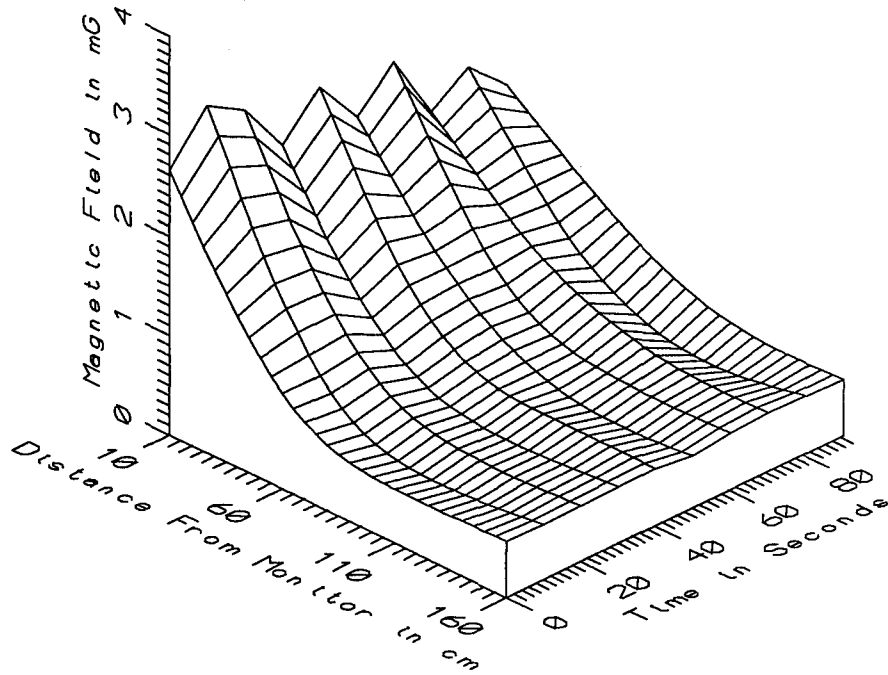
TGV011 - REFERENCE PROBE - ON CHAIR NEAR CONSOLE IN TGV CONTROL CENTER



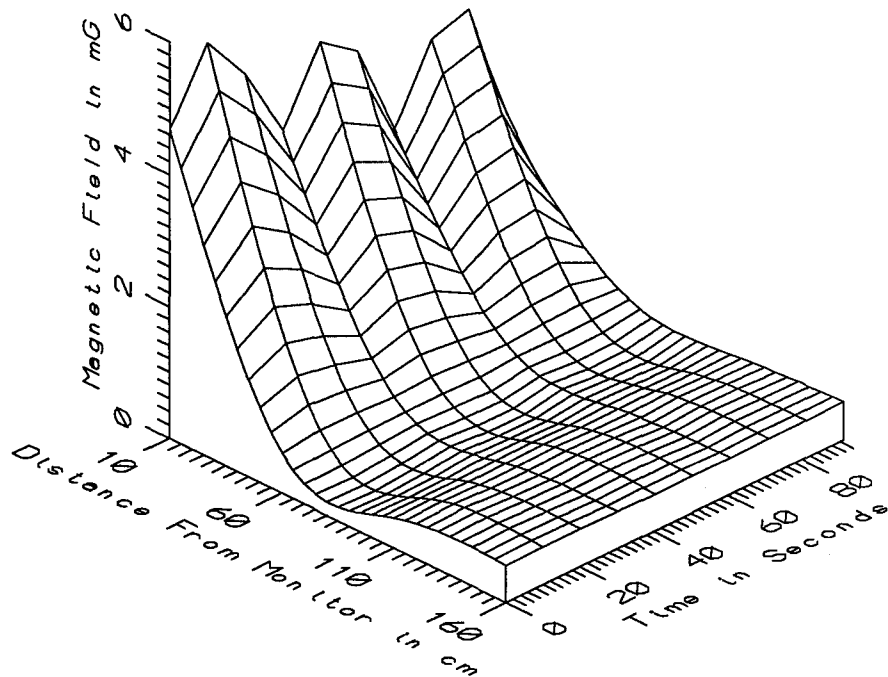
TGV011 - FROM MONITOR IN TGV CONTROL CENTER - STATIC



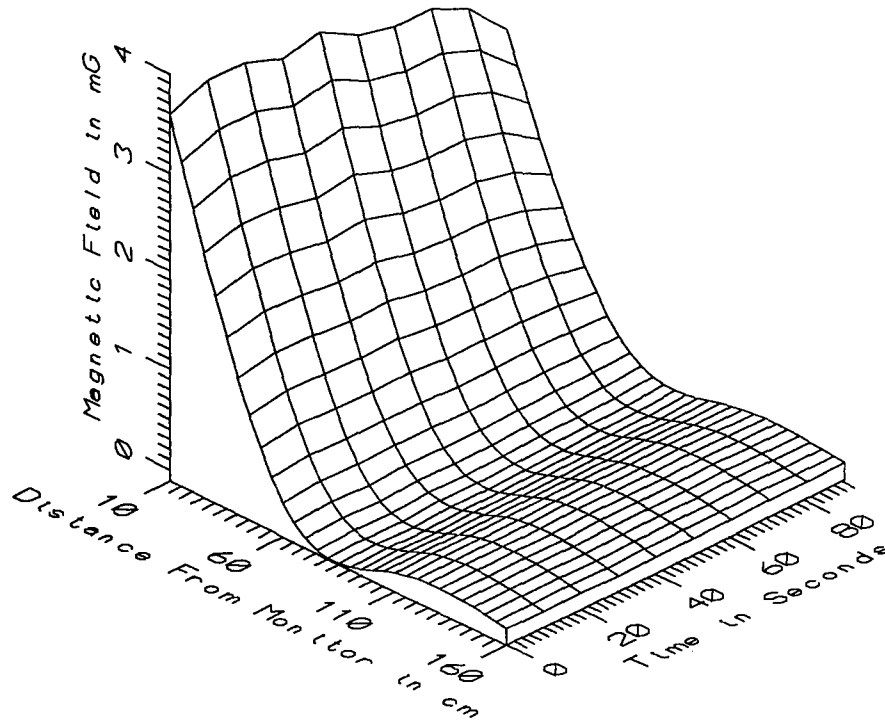
TGV011 - FROM MONITOR IN TGV CONTROL CENTER - LOW FREQ, 5-45Hz



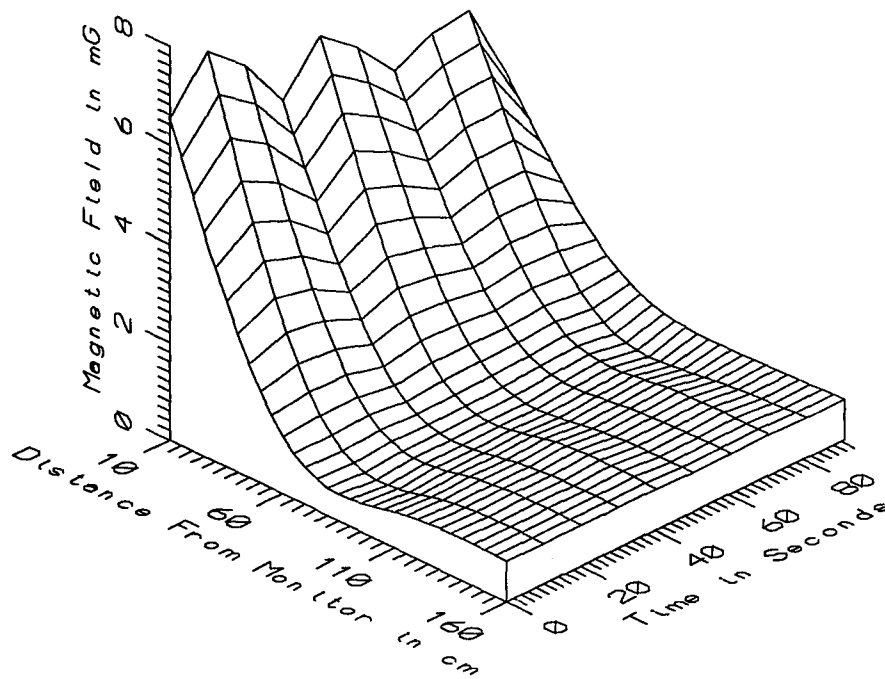
TGV011 - FROM MONITOR IN TGV CONTROL CENTER - POWER FREQ, 50-60Hz



TGV011 - FROM MONITOR IN TGV CONTROL CENTER - POWER HARM, 65-300Hz



TGV011 - FROM MONITOR IN TGV CONTROL CENTER - HIGH FREQ, 305-2560Hz



TGV011 - FROM MONITOR IN TGV CONTROL CENTER - ALL FREQ, 5-2560Hz

| TGVO11 - TGV CONTROL CENTER, GARE MONTPARNASSE | | TOTAL OF 10 SAMPLES | | | | |
|--|---------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | DIST. FROM CRT (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 501.18 | 507.78 | 504.01 | 2.07 | 0.41 |
| | 60 | 560.21 | 564.84 | 562.76 | 1.56 | 0.28 |
| | 110 | 516.04 | 520.29 | 518.63 | 1.59 | 0.31 |
| | 160 | 492.40 | 496.14 | 494.39 | 0.97 | 0.20 |
| 5-45Hz LOW FREQ | 10 | 0.31 | 0.78 | 0.56 | 0.12 | 21.40 |
| | 60 | 0.21 | 0.30 | 0.24 | 0.03 | 12.43 |
| | 110 | 0.07 | 0.14 | 0.11 | 0.03 | 23.25 |
| | 160 | 0.18 | 0.21 | 0.19 | 0.01 | 4.25 |
| 50-60Hz PWR FREQ | 10 | 1.87 | 3.10 | 2.47 | 0.40 | 16.25 |
| | 60 | 0.85 | 1.07 | 0.98 | 0.06 | 6.35 |
| | 110 | 0.44 | 0.63 | 0.53 | 0.06 | 11.39 |
| | 160 | 0.52 | 0.59 | 0.56 | 0.02 | 3.51 |
| 65-300Hz PWR HARM | 10 | 2.38 | 5.71 | 4.25 | 0.97 | 22.75 |
| | 60 | 0.59 | 0.69 | 0.65 | 0.03 | 4.49 |
| | 110 | 0.45 | 0.47 | 0.46 | 0.01 | 1.87 |
| | 160 | 0.55 | 0.57 | 0.56 | 0.01 | 1.45 |
| 305-2560Hz HIGH FREQ | 10 | 2.81 | 3.75 | 3.47 | 0.29 | 8.35 |
| | 60 | 0.22 | 0.25 | 0.23 | 0.01 | 3.90 |
| | 110 | 0.07 | 0.08 | 0.08 | 0.00 | 5.29 |
| | 160 | 0.04 | 0.06 | 0.05 | 0.00 | 8.00 |
| 5-2560Hz ALL FREQ | 10 | 4.16 | 7.52 | 6.07 | 0.94 | 15.48 |
| | 60 | 1.13 | 1.29 | 1.22 | 0.05 | 3.96 |
| | 110 | 0.65 | 0.80 | 0.71 | 0.05 | 6.72 |
| | 160 | 0.79 | 0.84 | 0.82 | 0.01 | 1.72 |

APPENDIX M

DATASET TGV012
CENTER OF FIRST CLASS COACH R2B

Measurement Setup Code: Staff: 13 Reference: 16
 Drawing: A-1

Vehicle Status: Coach trip from Montparnasse
 station in Paris to Vendome station

Measurement Date: September 8, 1992

Measurement Time: Start: 14:03:10
 End: 14:20:10

Number of Samples: 95

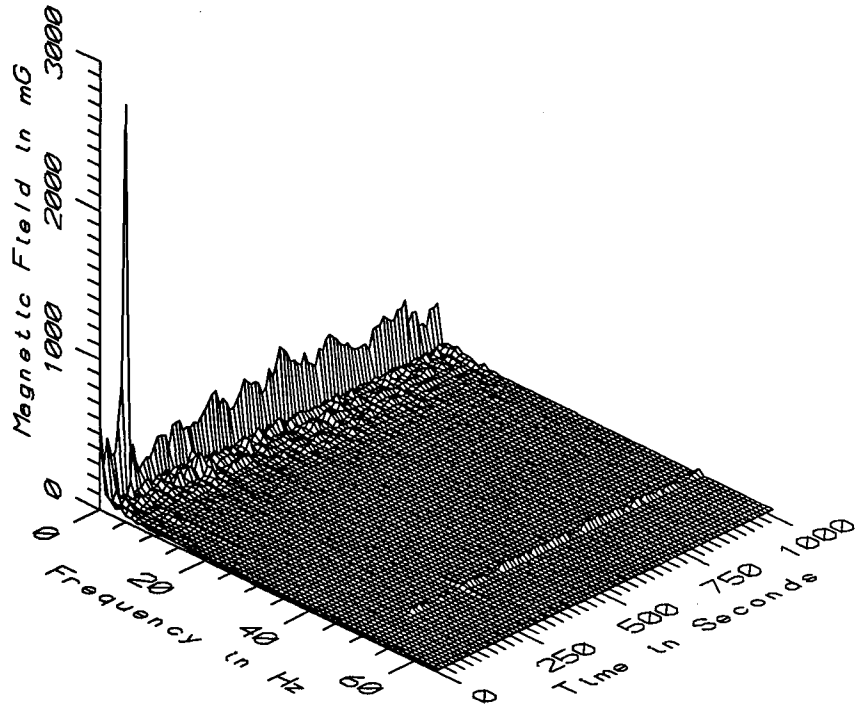
Programmed Sample Interval: 10 sec

Actual Sample Interval: 10.9 sec

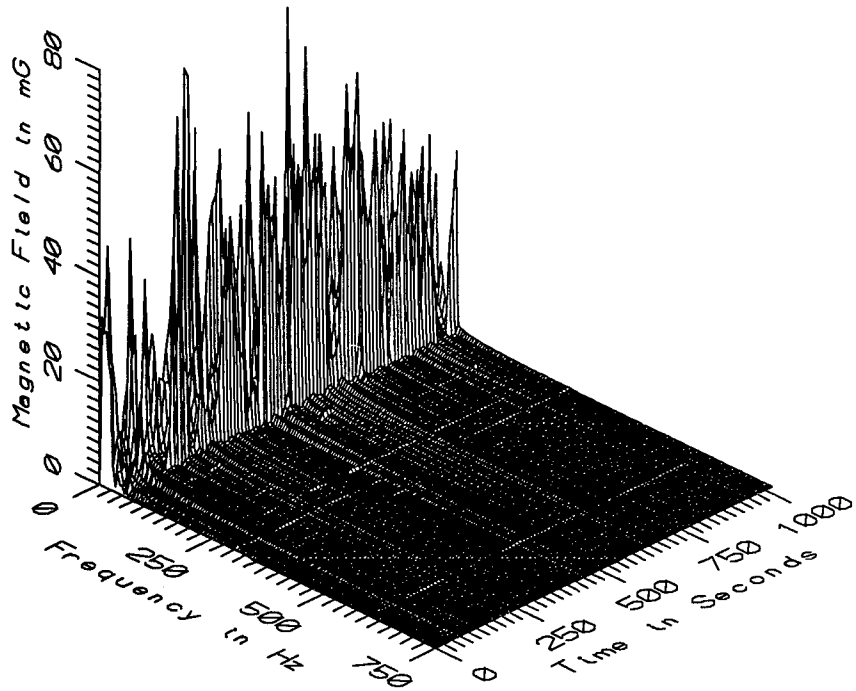
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

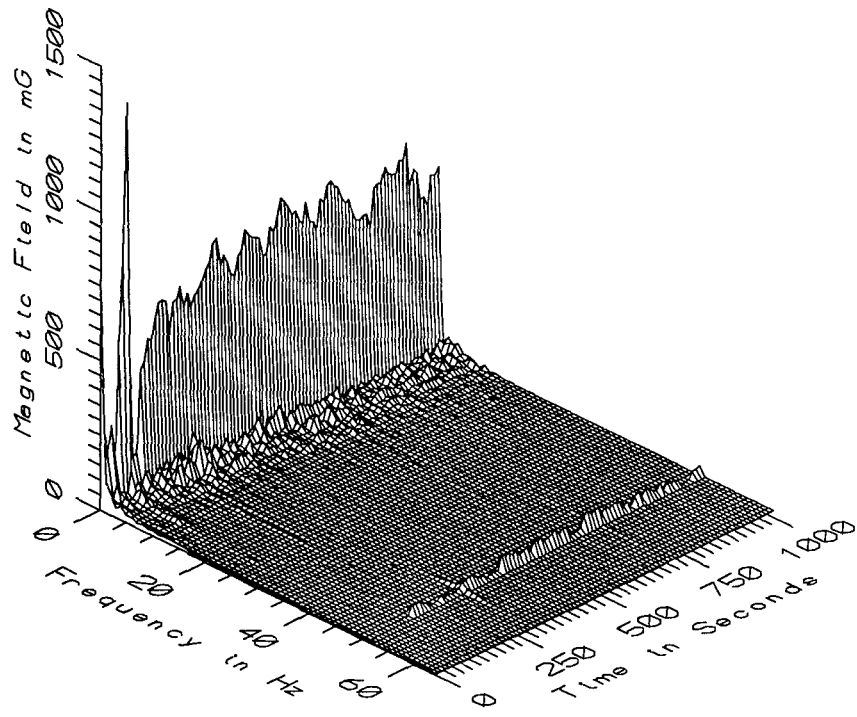
Missing or Suspect Data: None



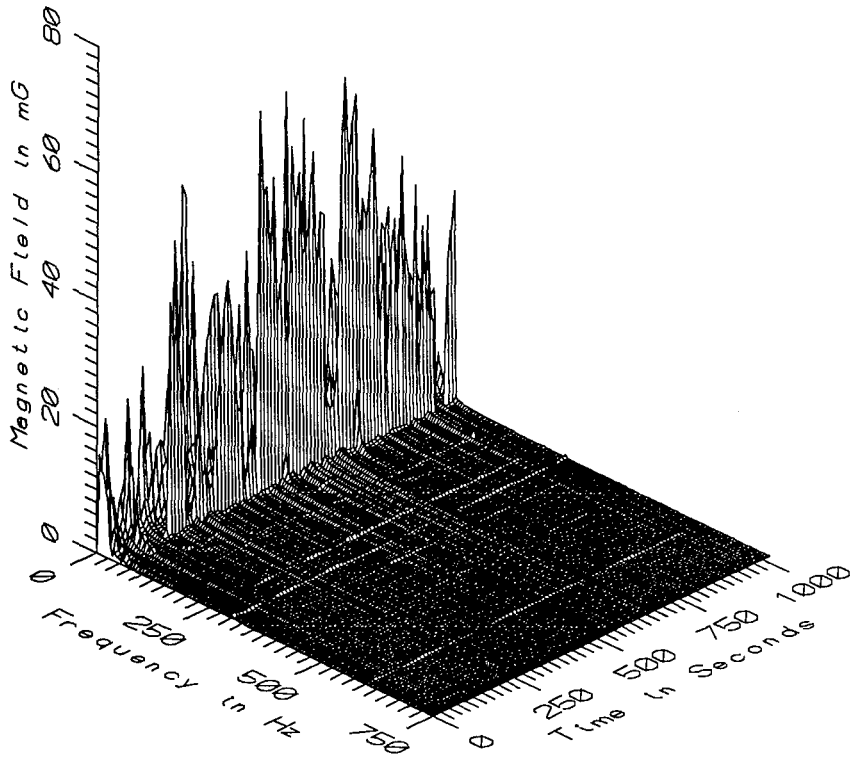
TGV012 - 10cm ABOVE FLOOR IN CENTER OF COACH R2B



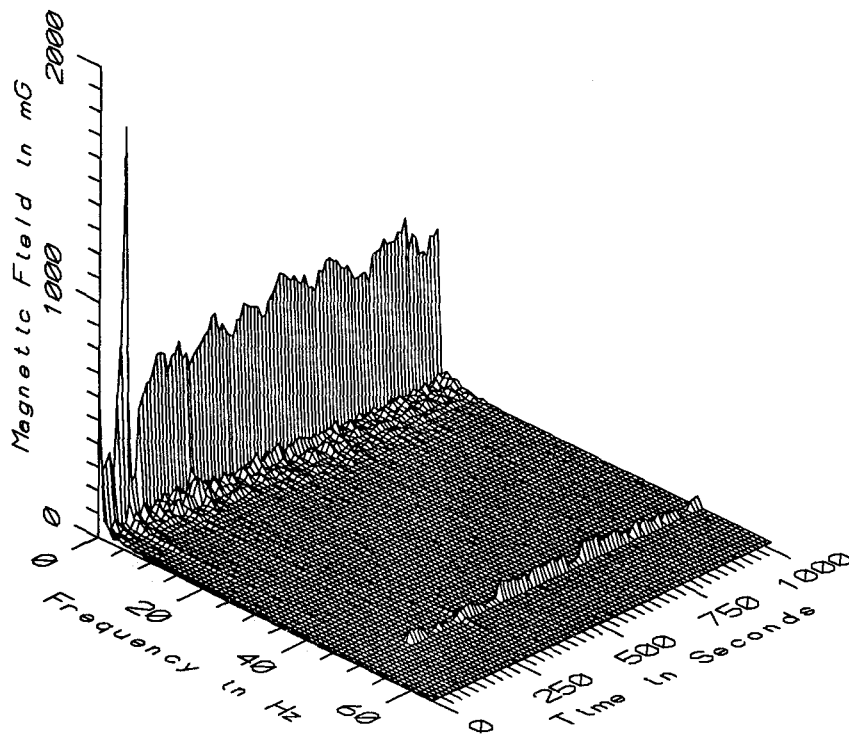
TGV012 - 10cm ABOVE FLOOR IN CENTER OF COACH R2B



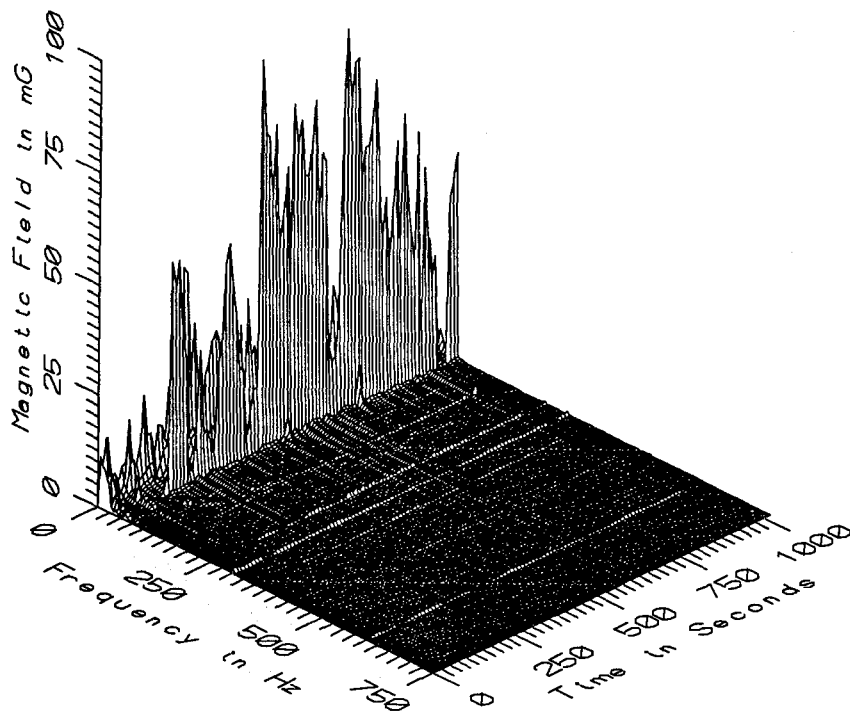
TGV012 - 60cm ABOVE FLOOR IN CENTER OF COACH R2B



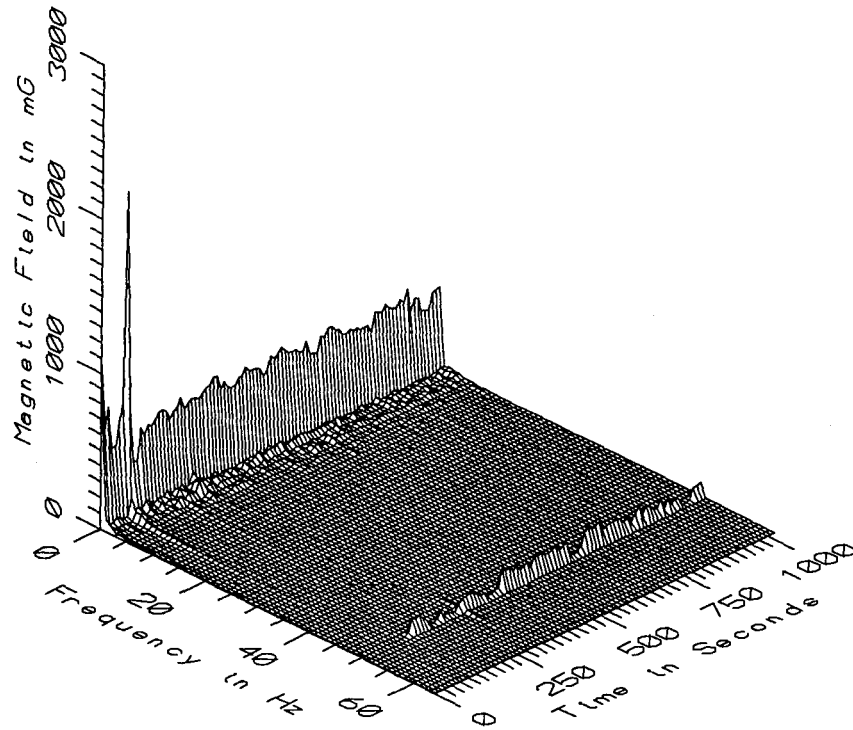
TGV012 - 60cm ABOVE FLOOR IN CENTER OF COACH R2B



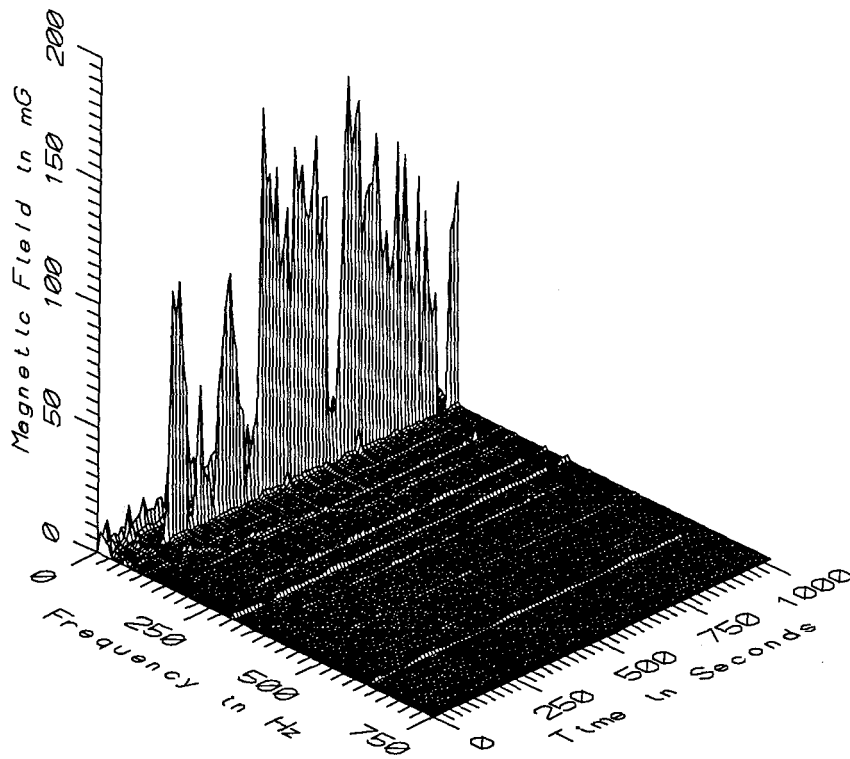
TGV012 - 110cm ABOVE FLOOR IN CENTER OF COACH R2B



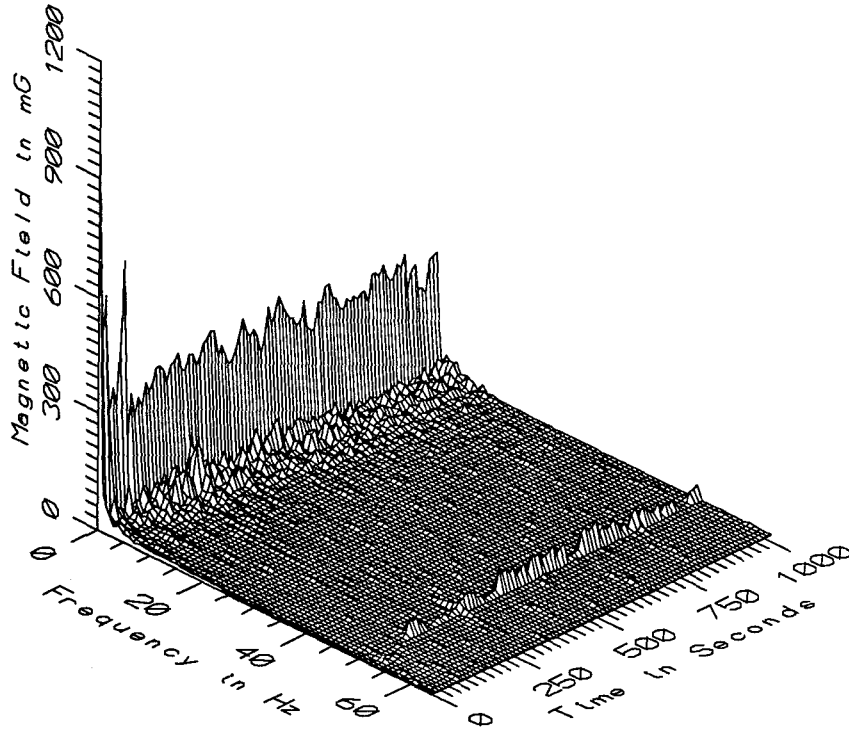
TGV012 - 110cm ABOVE FLOOR IN CENTER OF COACH R2B



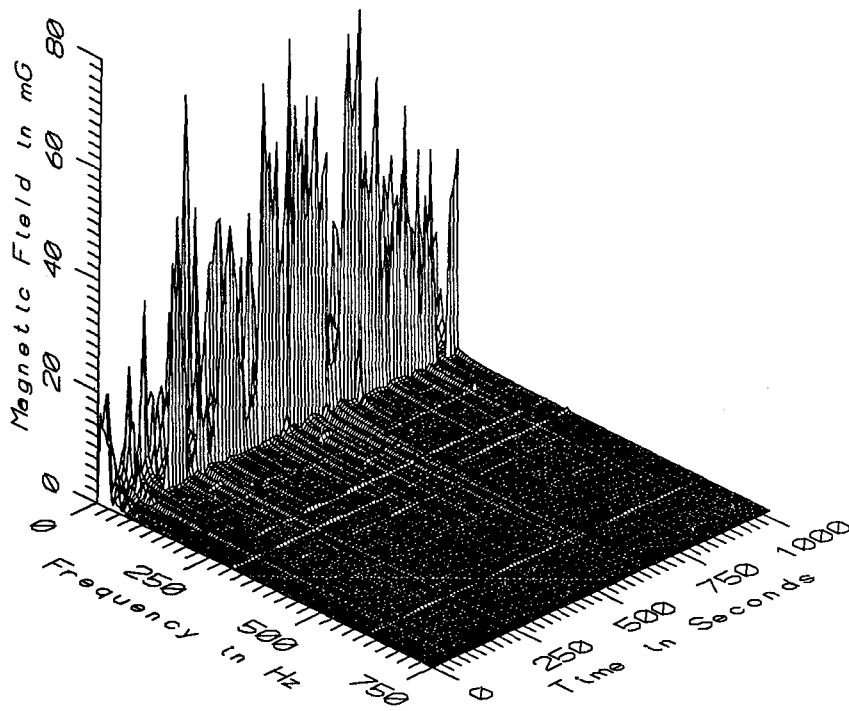
TGV012 - 160cm ABOVE FLOOR IN CENTER OF COACH R2B



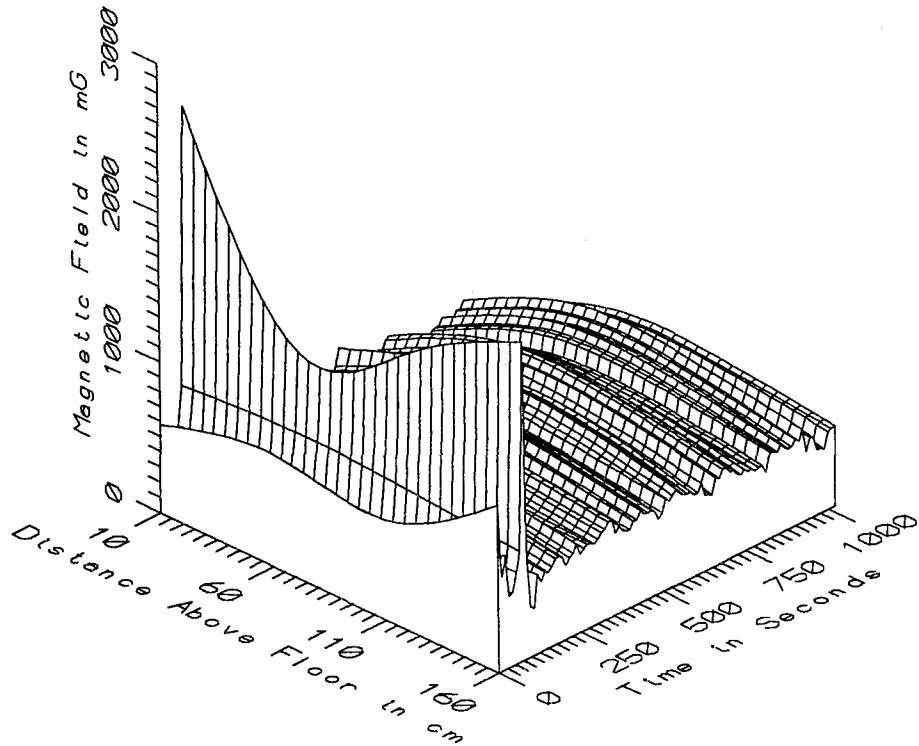
TGV012 - 160cm ABOVE FLOOR IN CENTER OF COACH R2B



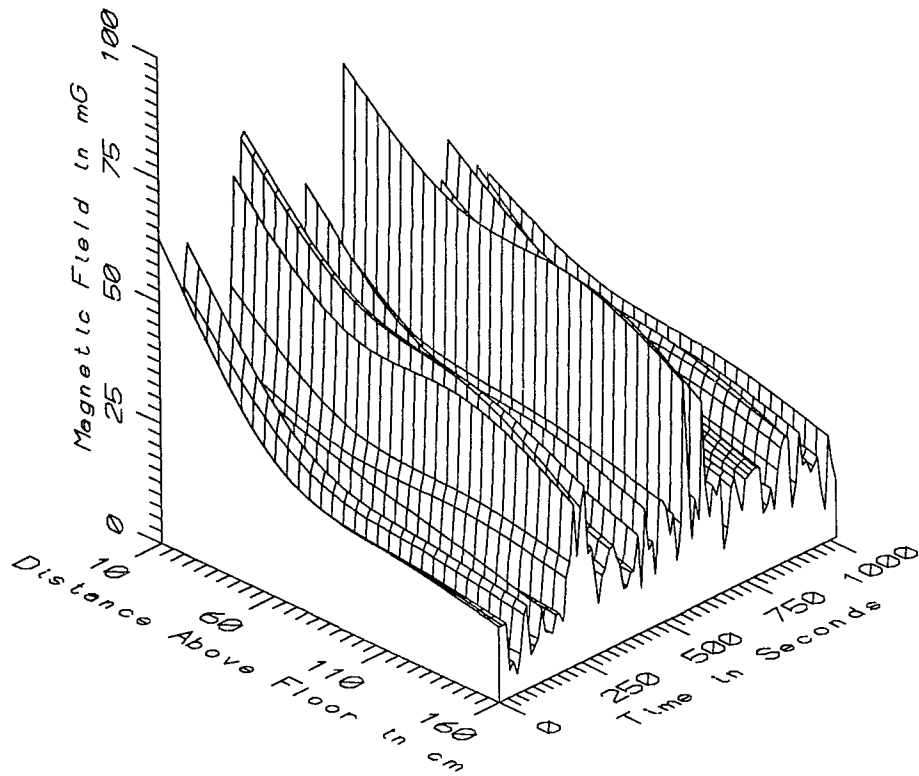
TGV012 - REFERENCE PROBE - ON MIDDLE SEAT IN COACH R2B



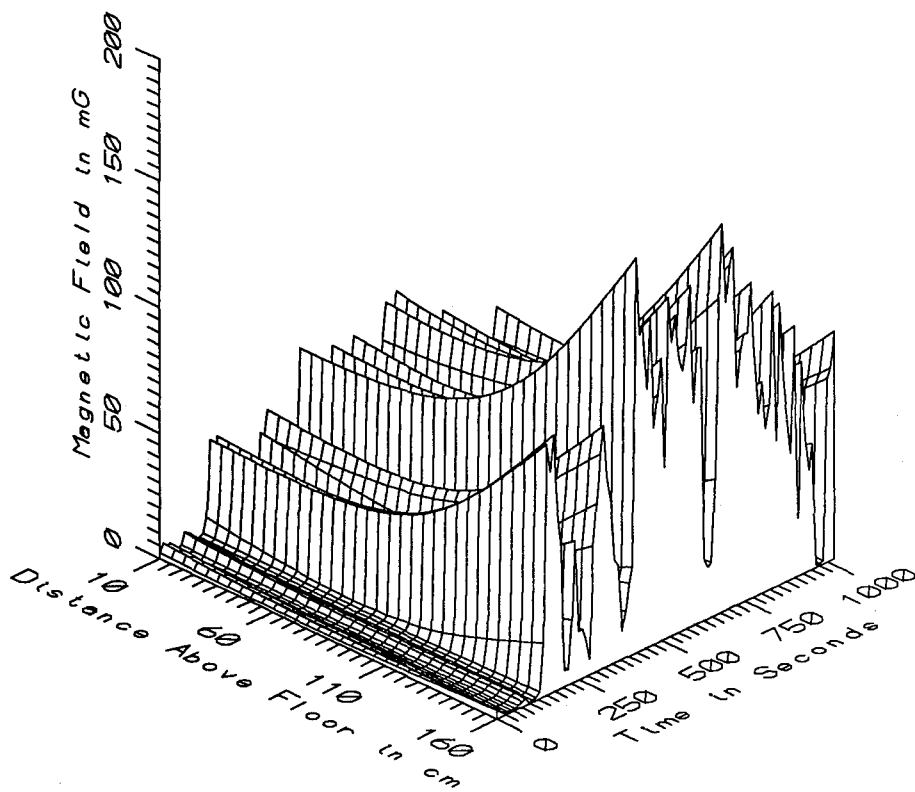
TGV012 - REFERENCE PROBE - ON MIDDLE SEAT IN COACH R2B



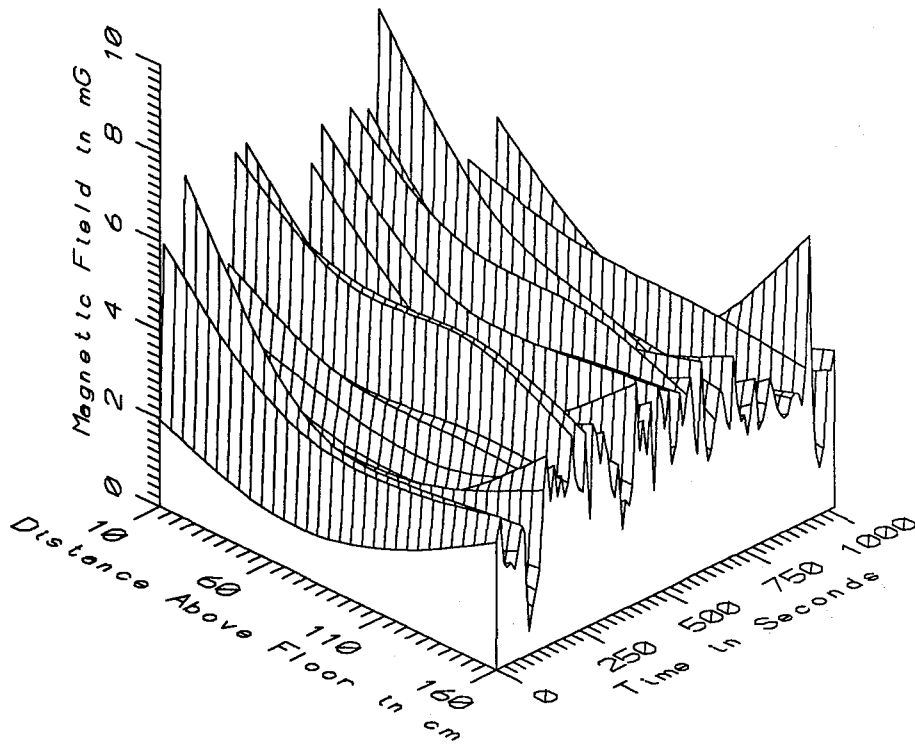
TGV012 - CENTER OF COACH R2B - STATIC



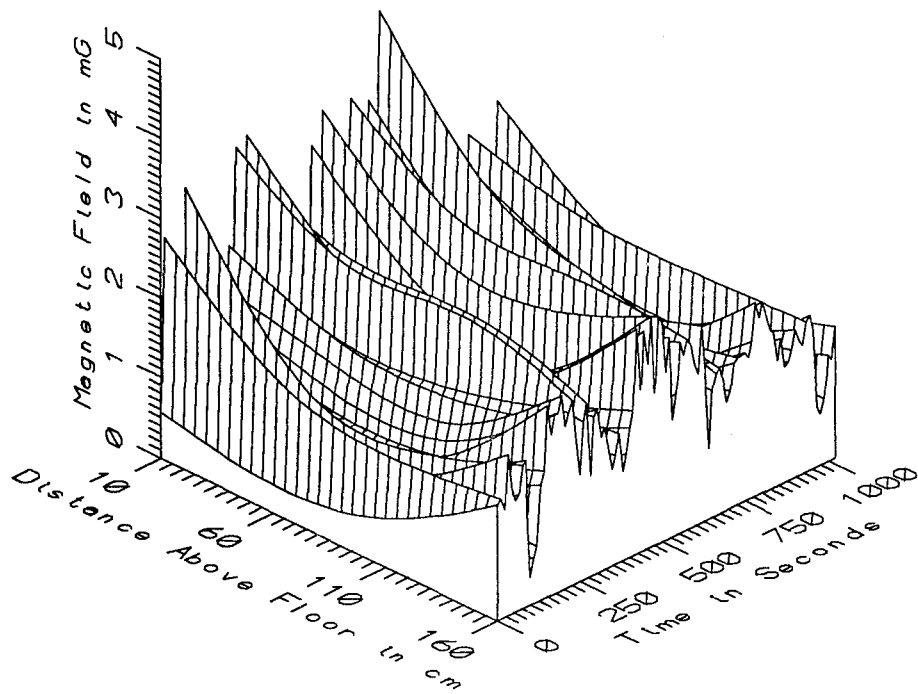
TGV012 - CENTER OF COACH R2B - LOW FREQ, 5-45Hz



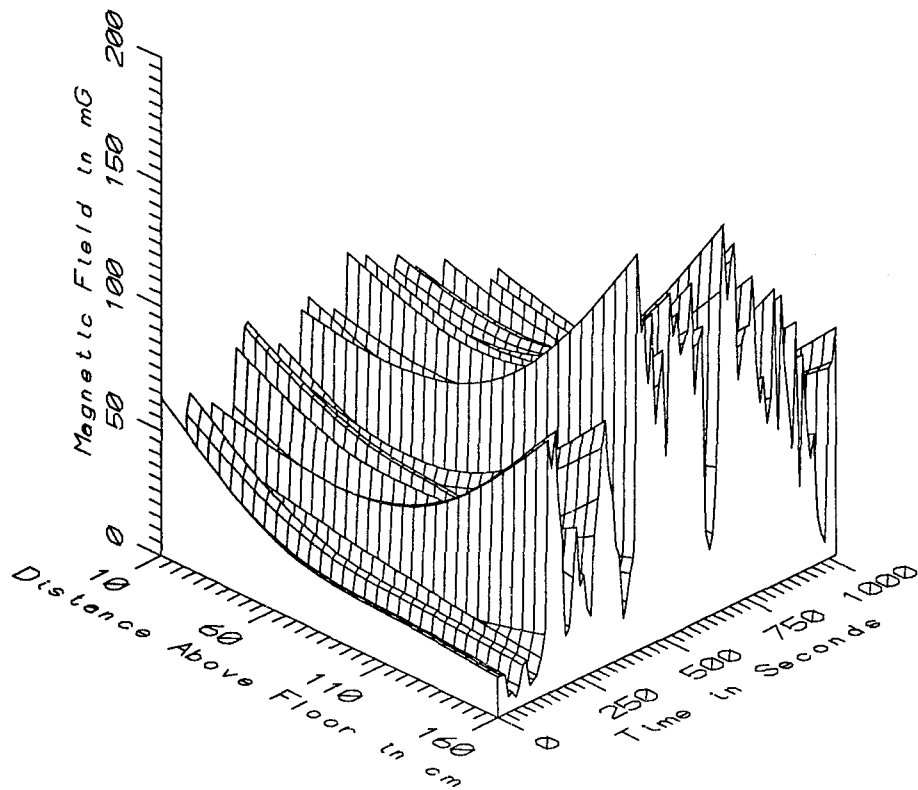
TGV012 - CENTER OF COACH R2B - POWER FREQ, 50-60Hz



TGV012 - CENTER OF COACH R2B - POWER HARM, 65-300Hz



TGV012 - CENTER OF COACH R2B - HIGH FREQ, 305-2560Hz



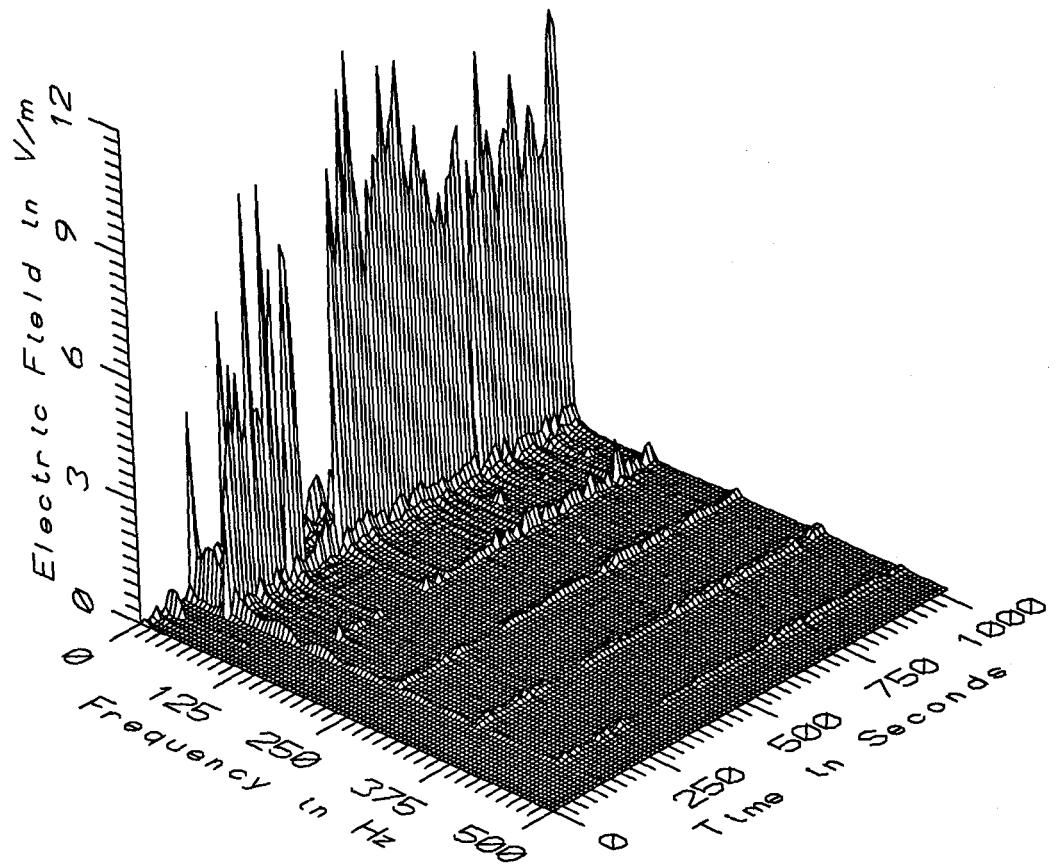
TGV012 - CENTER OF COACH R2B - ALL FREQ, 5-2560Hz

| TGV012 - ALL SAMPLES | | TOTAL OF 95 SAMPLES | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 140.82 | 2627.26 | 345.35 | 253.82 | 73.49 |
| | 60 | 125.07 | 1333.02 | 605.65 | 151.43 | 25.00 |
| | 110 | 175.66 | 1681.88 | 631.28 | 155.65 | 24.66 |
| | 160 | 310.83 | 2101.17 | 561.57 | 182.32 | 32.47 |
| 5-45Hz LOW FREQ | 10 | 6.89 | 80.03 | 38.99 | 15.31 | 39.27 |
| | 60 | 4.58 | 61.49 | 25.74 | 10.59 | 41.12 |
| | 110 | 4.48 | 58.65 | 22.65 | 9.96 | 43.97 |
| | 160 | 4.15 | 47.39 | 17.63 | 7.40 | 41.94 |
| 50-60Hz PWR FREQ | 10 | 0.43 | 60.97 | 22.13 | 16.38 | 74.02 |
| | 60 | 0.35 | 61.10 | 23.83 | 17.47 | 73.32 |
| | 110 | 0.39 | 87.84 | 35.23 | 25.63 | 72.75 |
| | 160 | 0.44 | 157.34 | 65.20 | 46.68 | 71.59 |
| 65-300Hz PWR HARM | 10 | 0.60 | 8.92 | 3.43 | 1.71 | 49.97 |
| | 60 | 0.51 | 5.54 | 2.44 | 1.12 | 46.04 |
| | 110 | 0.41 | 5.54 | 2.47 | 1.01 | 40.95 |
| | 160 | 0.53 | 6.41 | 3.18 | 0.94 | 29.48 |
| 305-2560Hz HIGH FREQ | 10 | 0.32 | 4.28 | 1.61 | 0.82 | 51.06 |
| | 60 | 0.25 | 2.68 | 1.16 | 0.54 | 46.22 |
| | 110 | 0.19 | 2.68 | 1.22 | 0.48 | 39.62 |
| | 160 | 0.35 | 2.86 | 1.77 | 0.50 | 28.24 |
| 5-2560Hz ALL FREQ | 10 | 6.94 | 85.55 | 47.50 | 16.46 | 34.65 |
| | 60 | 4.65 | 71.58 | 37.74 | 15.19 | 40.24 |
| | 110 | 4.65 | 92.00 | 44.89 | 22.40 | 49.90 |
| | 160 | 4.89 | 158.71 | 70.19 | 43.34 | 61.75 |

| TGV012 - DC SECTION | | TOTAL OF 8 SAMPLES | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 273.91 | 2627.26 | 732.39 | 782.84 | 106.89 |
| | 60 | 153.62 | 1333.02 | 529.67 | 409.64 | 77.34 |
| | 110 | 242.49 | 1681.88 | 604.70 | 477.54 | 78.97 |
| | 160 | 473.15 | 2101.17 | 859.14 | 539.35 | 62.78 |
| 5-45Hz LOW FREQ | 10 | 6.89 | 63.09 | 36.16 | 21.68 | 59.95 |
| | 60 | 4.58 | 28.01 | 17.38 | 9.54 | 54.90 |
| | 110 | 4.48 | 19.96 | 13.12 | 6.66 | 50.79 |
| | 160 | 4.15 | 15.54 | 10.83 | 5.10 | 47.05 |
| 50-60Hz PWR FREQ | 10 | 0.43 | 5.61 | 2.90 | 2.01 | 69.36 |
| | 60 | 0.35 | 2.72 | 1.37 | 0.92 | 66.86 |
| | 110 | 0.41 | 2.18 | 1.23 | 0.70 | 56.72 |
| | 160 | 0.67 | 3.42 | 1.45 | 0.97 | 67.10 |
| 65-300Hz PWR HARM | 10 | 0.60 | 7.22 | 3.36 | 2.38 | 71.01 |
| | 60 | 0.63 | 3.42 | 1.72 | 1.06 | 61.37 |
| | 110 | 1.02 | 2.93 | 1.71 | 0.70 | 40.72 |
| | 160 | 2.08 | 3.41 | 2.58 | 0.47 | 18.05 |
| 305-2560Hz HIGH FREQ | 10 | 0.32 | 3.22 | 1.47 | 1.14 | 77.56 |
| | 60 | 0.35 | 1.62 | 0.80 | 0.51 | 63.87 |
| | 110 | 0.58 | 1.35 | 0.86 | 0.32 | 36.57 |
| | 160 | 1.36 | 2.02 | 1.57 | 0.23 | 14.51 |
| 5-2560Hz ALL FREQ | 10 | 6.94 | 63.15 | 36.56 | 21.76 | 59.51 |
| | 60 | 4.65 | 28.06 | 17.57 | 9.59 | 54.59 |
| | 110 | 4.65 | 20.10 | 13.34 | 6.69 | 50.13 |
| | 160 | 4.89 | 16.24 | 11.42 | 5.01 | 43.84 |

| TGV012 - TRANSITION BETWEEN DC AND AC SECTIONS | | TOTAL OF 6 SAMPLES | | | | |
|--|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 140.82 | 327.04 | 201.97 | 64.78 | 32.07 |
| | 60 | 125.07 | 498.87 | 343.34 | 169.35 | 49.33 |
| | 110 | 175.66 | 588.22 | 418.24 | 184.07 | 44.01 |
| | 160 | 310.83 | 766.24 | 484.56 | 164.65 | 33.98 |
| 5-45Hz LOW FREQ | 10 | 8.04 | 59.24 | 25.03 | 19.67 | 78.60 |
| | 60 | 5.66 | 28.20 | 15.76 | 9.75 | 61.91 |
| | 110 | 6.92 | 21.17 | 13.16 | 6.36 | 48.34 |
| | 160 | 6.65 | 16.95 | 10.98 | 4.11 | 37.45 |
| 50-60Hz PWR FREQ | 10 | 0.52 | 7.56 | 2.70 | 2.83 | 104.93 |
| | 60 | 0.36 | 2.61 | 1.42 | 0.98 | 68.90 |
| | 110 | 0.39 | 5.42 | 1.88 | 1.86 | 99.23 |
| | 160 | 0.44 | 21.79 | 4.86 | 8.35 | 171.63 |
| 65-300Hz PWR HARM | 10 | 0.78 | 3.11 | 2.04 | 1.07 | 52.50 |
| | 60 | 0.51 | 2.28 | 1.57 | 0.74 | 47.08 |
| | 110 | 0.41 | 2.42 | 1.53 | 0.73 | 47.95 |
| | 160 | 0.53 | 3.55 | 1.86 | 1.13 | 60.66 |
| 305-2560Hz HIGH FREQ | 10 | 0.38 | 1.46 | 0.96 | 0.49 | 50.74 |
| | 60 | 0.25 | 1.09 | 0.76 | 0.36 | 47.00 |
| | 110 | 0.19 | 1.16 | 0.77 | 0.37 | 48.56 |
| | 160 | 0.35 | 1.83 | 1.08 | 0.62 | 57.11 |
| 5-2560Hz ALL FREQ | 10 | 8.15 | 59.52 | 25.42 | 19.70 | 77.50 |
| | 60 | 5.80 | 28.42 | 15.94 | 9.78 | 61.37 |
| | 110 | 6.95 | 21.30 | 13.51 | 6.43 | 47.58 |
| | 160 | 6.70 | 24.25 | 13.58 | 6.75 | 49.67 |

| TGV012 AC SECTION | | TOTAL OF 81 SAMPLES | | | | |
|-------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 165.41 | 505.04 | 317.75 | 67.21 | 21.15 |
| | 60 | 484.83 | 759.11 | 632.58 | 63.22 | 9.99 |
| | 110 | 538.07 | 762.29 | 649.69 | 50.76 | 7.81 |
| | 160 | 406.17 | 630.14 | 537.89 | 45.18 | 8.40 |
| 5-45Hz | 10 | 12.90 | 80.03 | 40.30 | 13.89 | 34.47 |
| LOW FREQ | 60 | 8.02 | 61.49 | 27.31 | 10.04 | 36.77 |
| | 110 | 7.73 | 58.65 | 24.29 | 9.57 | 39.39 |
| | 160 | 6.93 | 47.39 | 18.80 | 7.18 | 38.22 |
| 50-60Hz | 10 | 1.50 | 60.97 | 25.46 | 15.42 | 60.55 |
| PWR FREQ | 60 | 0.86 | 61.10 | 27.71 | 15.98 | 57.66 |
| | 110 | 1.00 | 87.84 | 41.06 | 23.20 | 56.50 |
| | 160 | 0.75 | 157.34 | 75.96 | 41.94 | 55.20 |
| 65-300Hz | 10 | 1.21 | 8.92 | 3.54 | 1.65 | 46.63 |
| PWR HARM | 60 | 0.93 | 5.54 | 2.57 | 1.10 | 42.97 |
| | 110 | 1.13 | 5.54 | 2.61 | 0.99 | 37.90 |
| | 160 | 1.06 | 6.41 | 3.33 | 0.86 | 25.82 |
| 305-2560Hz | 10 | 0.42 | 4.28 | 1.67 | 0.79 | 47.41 |
| HIGH FREQ | 60 | 0.41 | 2.68 | 1.23 | 0.53 | 42.99 |
| | 110 | 0.50 | 2.68 | 1.28 | 0.47 | 36.82 |
| | 160 | 0.63 | 2.86 | 1.85 | 0.47 | 25.45 |
| 5-2560Hz | 10 | 14.32 | 85.55 | 50.22 | 14.02 | 27.92 |
| ALL FREQ | 60 | 9.58 | 71.58 | 41.35 | 12.94 | 31.30 |
| | 110 | 8.24 | 92.00 | 50.33 | 19.48 | 38.71 |
| | 160 | 7.23 | 158.71 | 80.19 | 38.93 | 48.54 |



TGV012 - ELECTRIC FIELD IN COACH R2B

APPENDIX N

DATASET TGV013
TRANSVERSE PROFILE FROM SIDE WALL OF FIRST CLASS COACH R2B

Measurement Setup Code: Staff: 14 Reference: 16
 Drawing: A-1

Vehicle Status: Coach trip from Montparnasse
 station in Paris to Vendome station

Measurement Date: September 8, 1992

Measurement Time: Start: 14:21:32
 End: 14:26:00

Number of Samples: 10

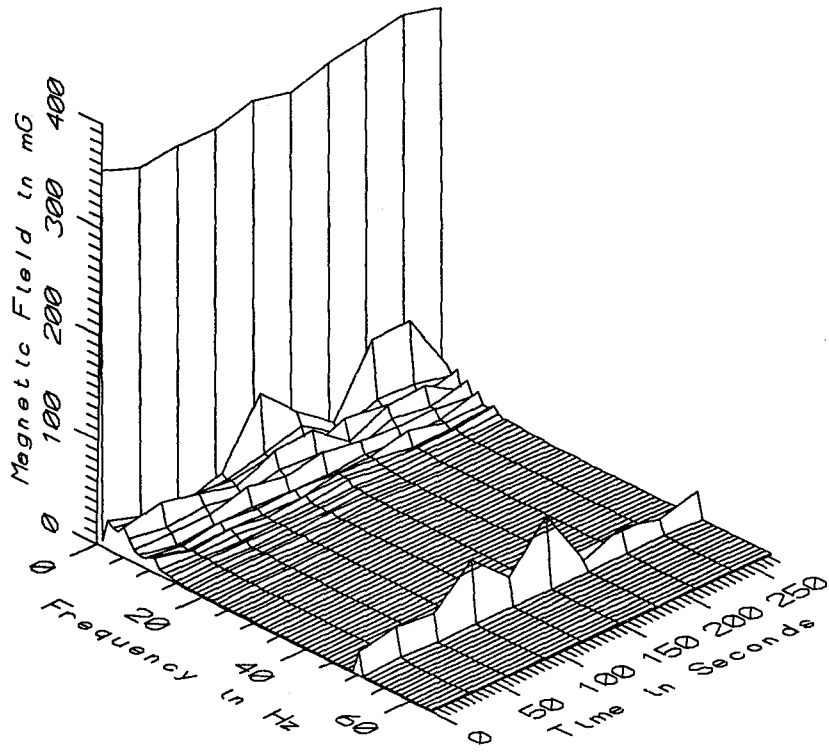
Programmed Sample Interval: 30 sec

Actual Sample Interval: 29.8 sec

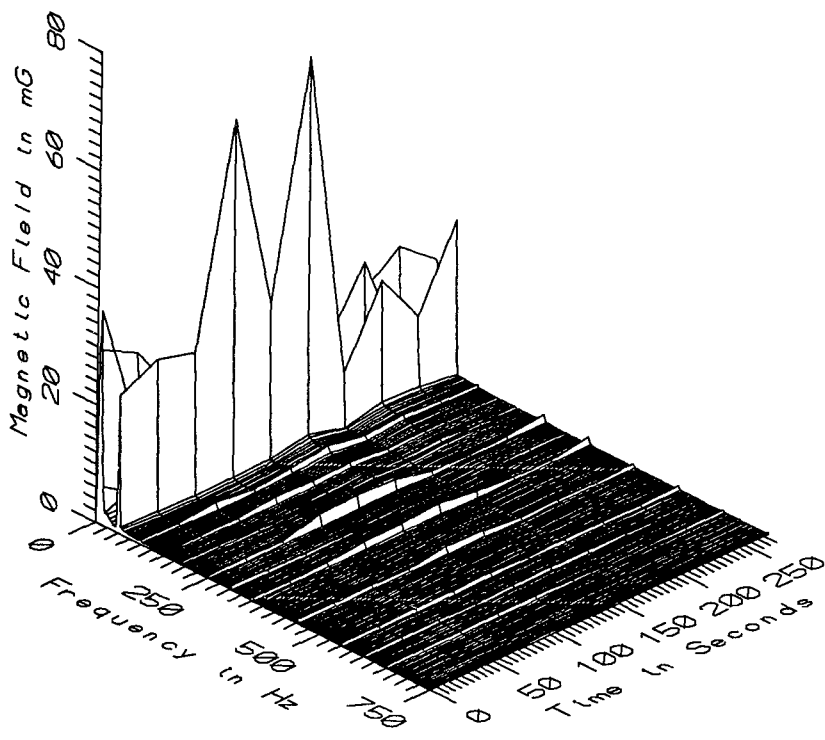
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

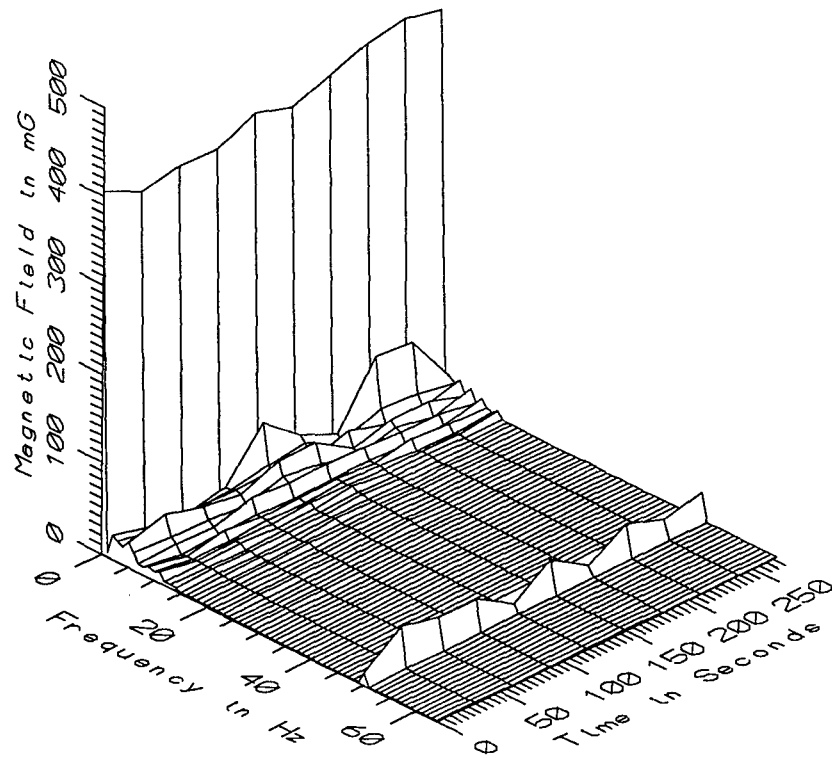
Missing or Suspect Data: None



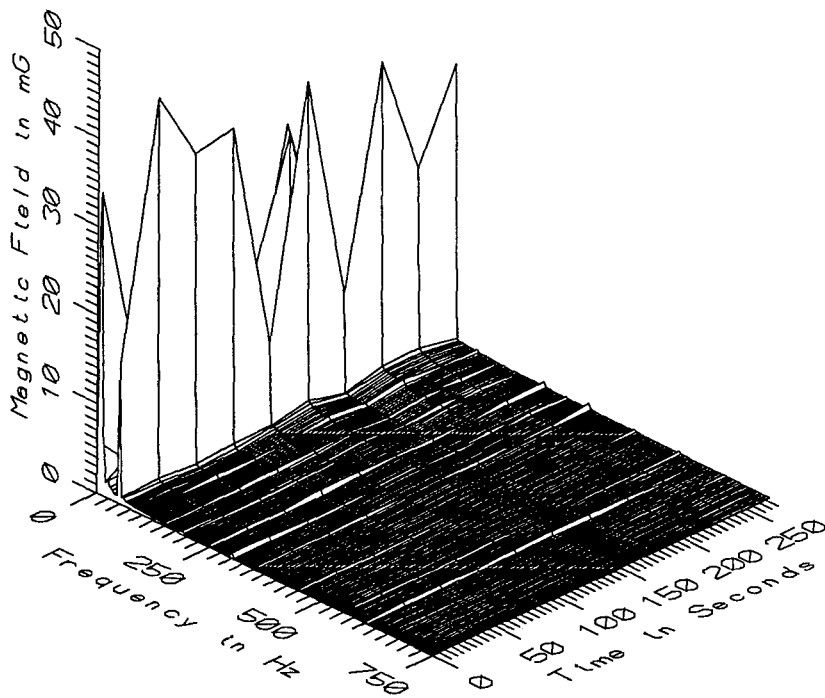
TGV013 - 10cm FROM SIDE WALL ABOVE SEATS 42 & 43 IN COACH R2B



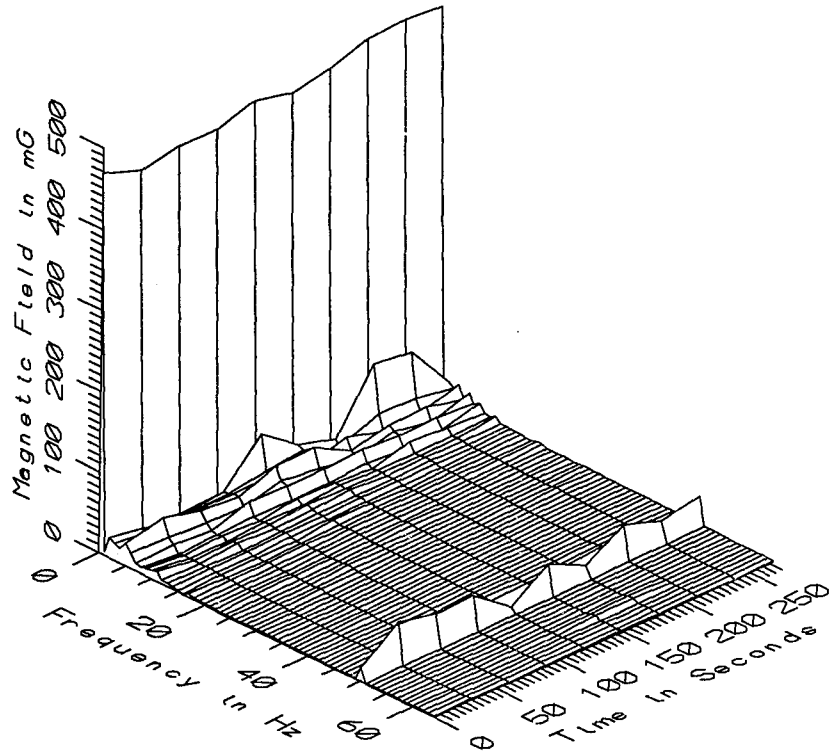
TGV013 - 10cm FROM SIDE WALL ABOVE SEATS 42 & 43 IN COACH R2B



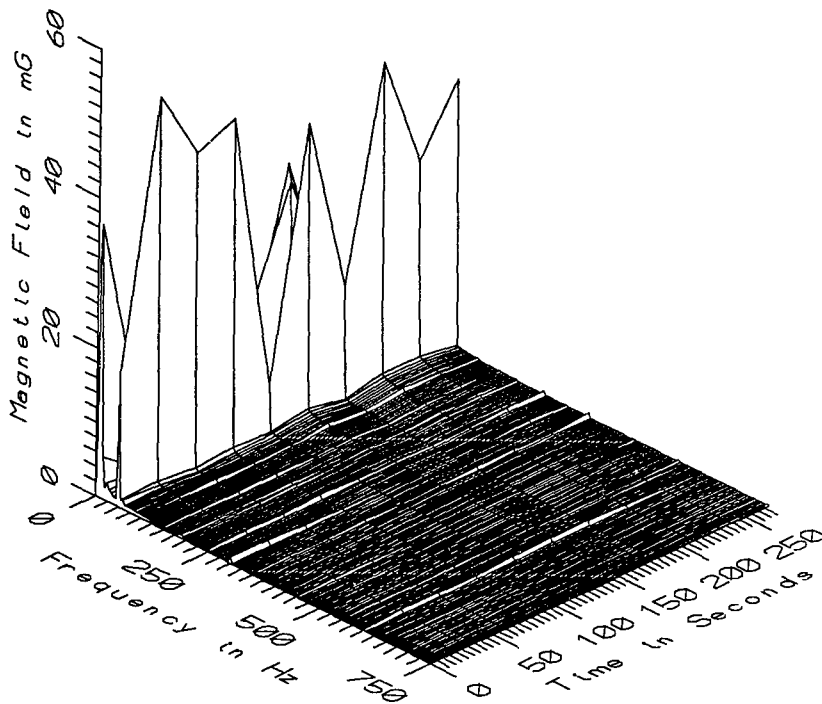
TGV013 - 60cm FROM SIDE WALL ABOVE SEATS 42 & 43 IN COACH R2B



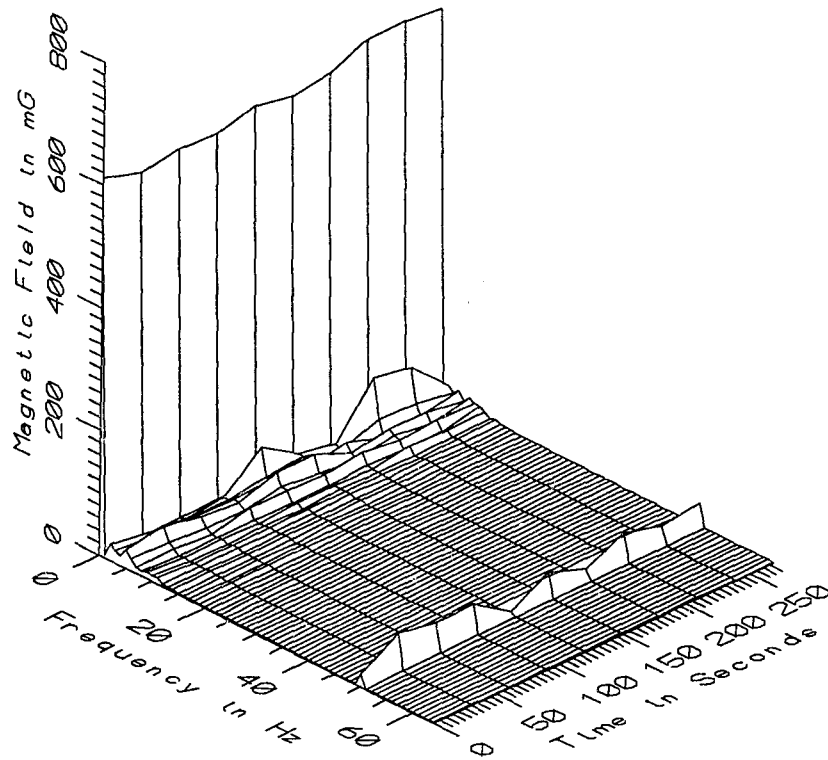
TGV013 - 60cm FROM SIDE WALL ABOVE SEATS 42 & 43 IN COACH R2B



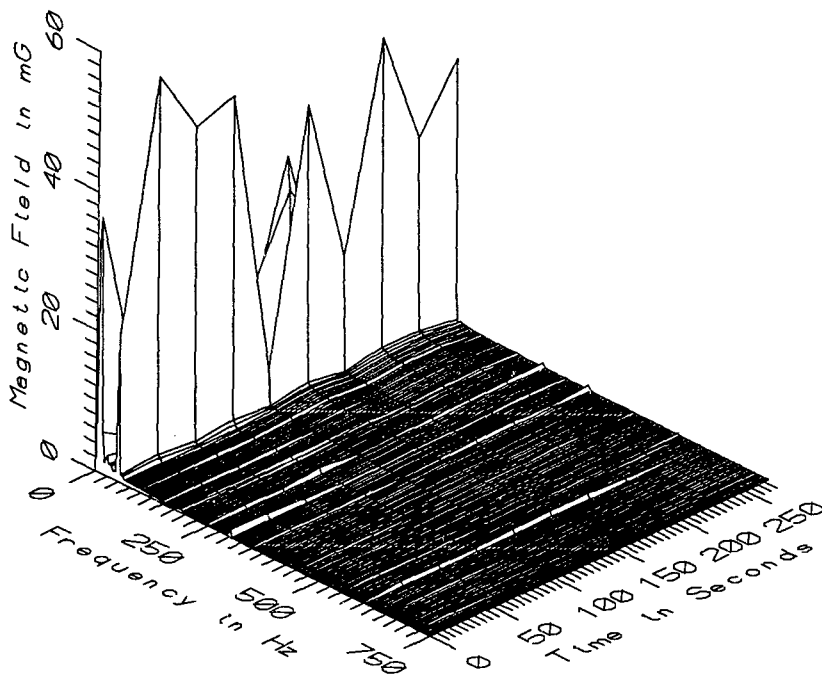
TGV013 - 110cm FROM SIDE WALL ABOVE SEATS 42 & 43 IN COACH R2B



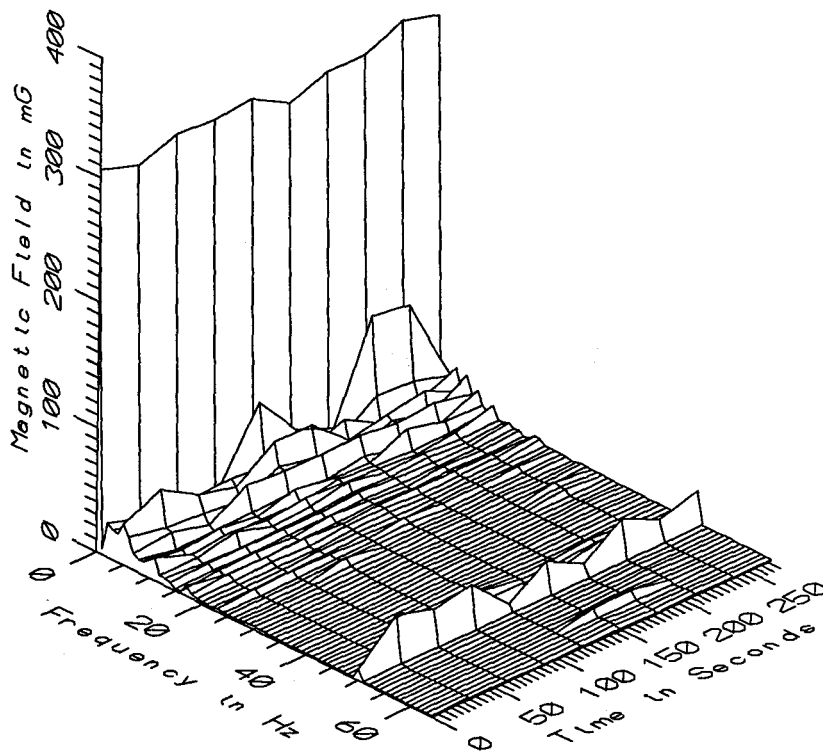
TGV013 - 110cm FROM SIDE WALL ABOVE SEATS 42 & 43 IN COACH R2B



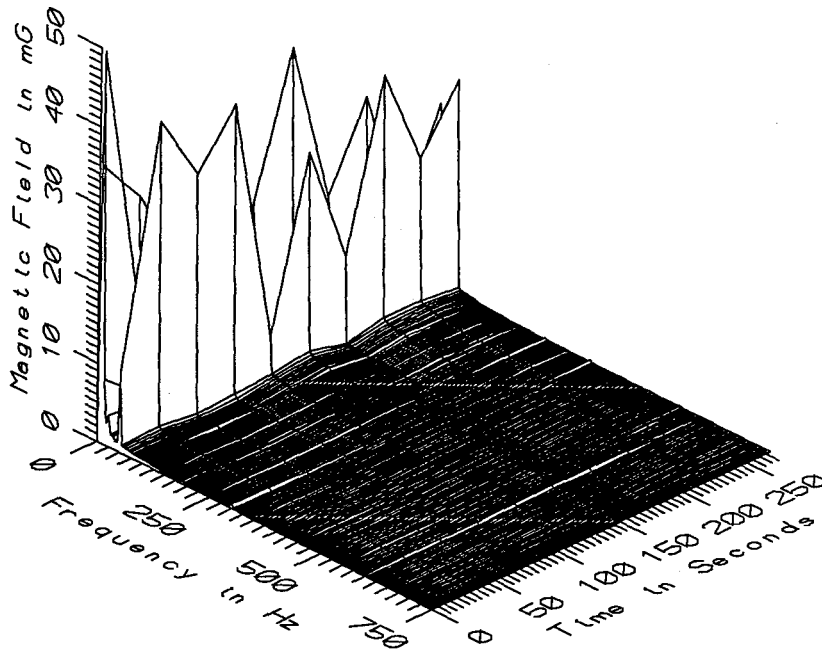
TGV013 - 160cm FROM SIDE WALL ABOVE SEATS 42 & 43 IN COACH R2B



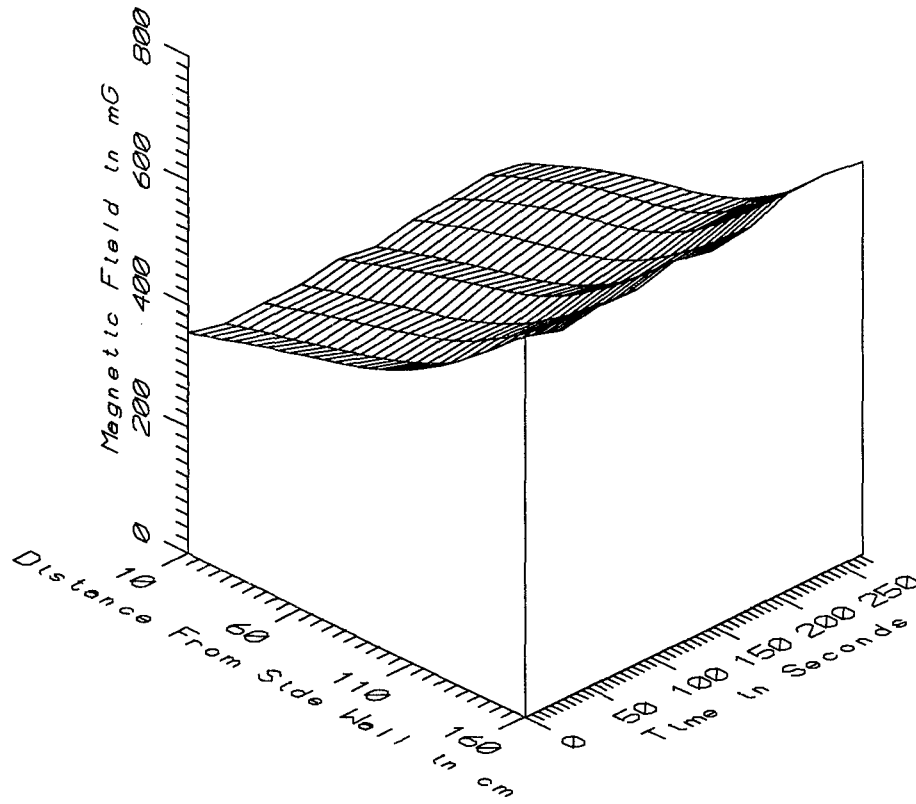
TGV013 - 160cm FROM SIDE WALL ABOVE SEATS 42 & 43 IN COACH R2B



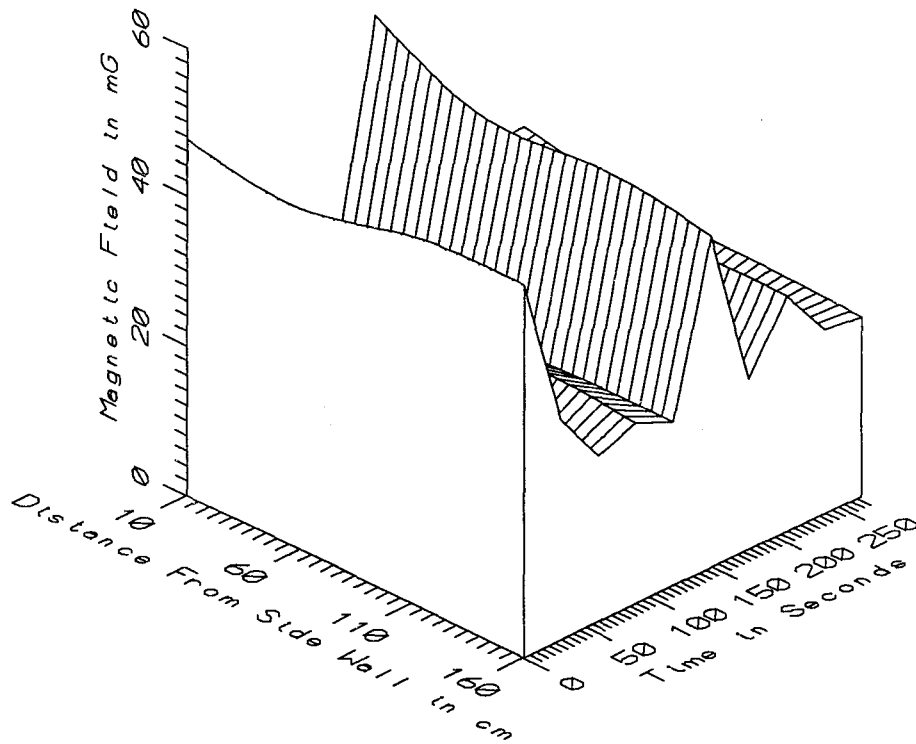
TGV013 - REFERENCE PROBE - ON MIDDLE SEAT IN COACH R2B



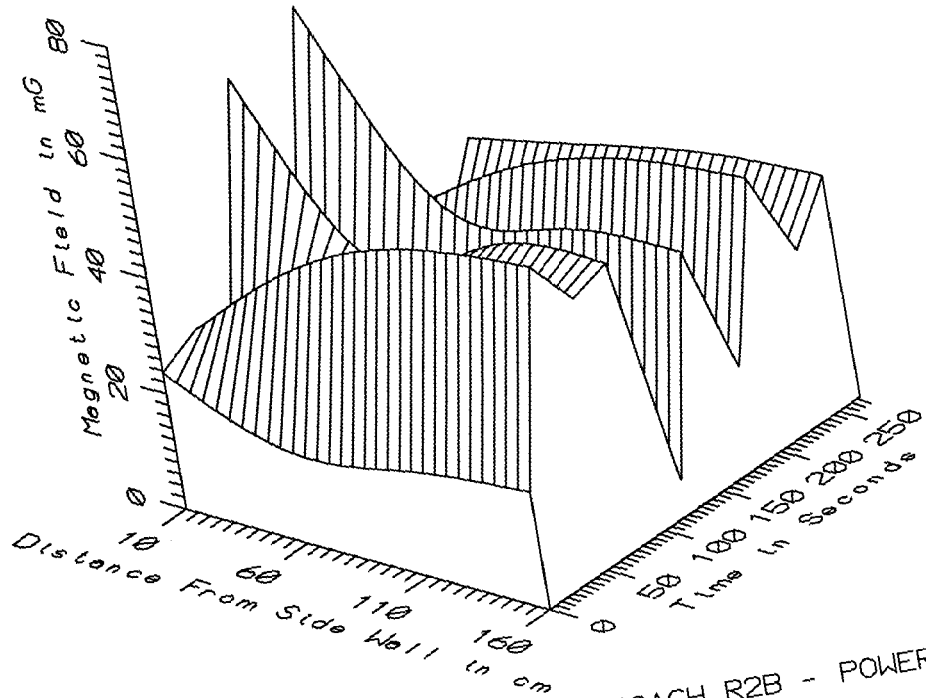
TGV013 - REFERENCE PROBE - ON MIDDLE SEAT IN COACH R2B



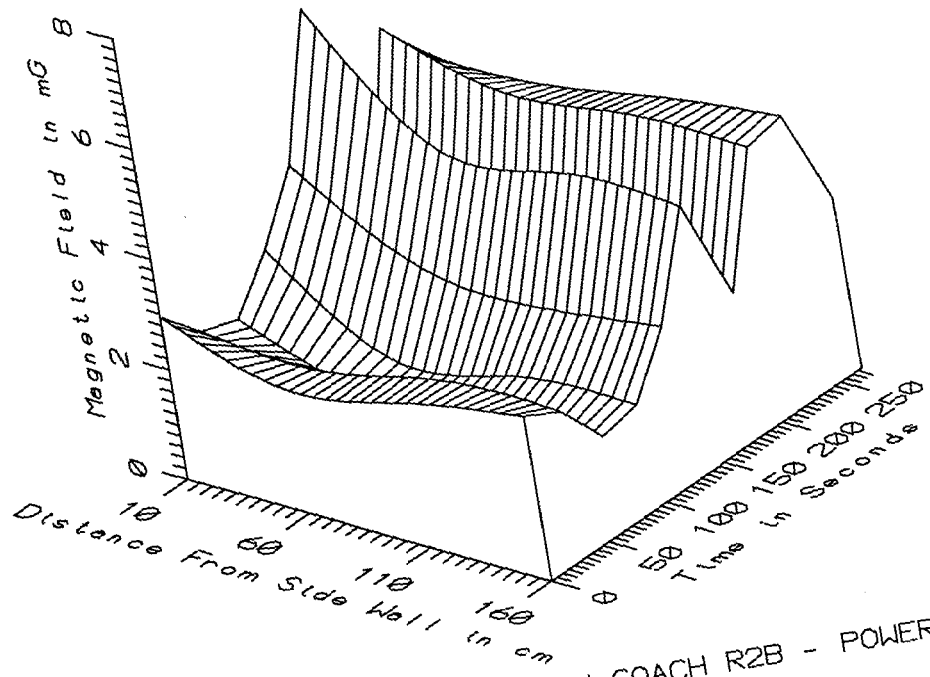
TGV013 - ABOVE SEATS 42 & 43 IN COACH R2B - STATIC



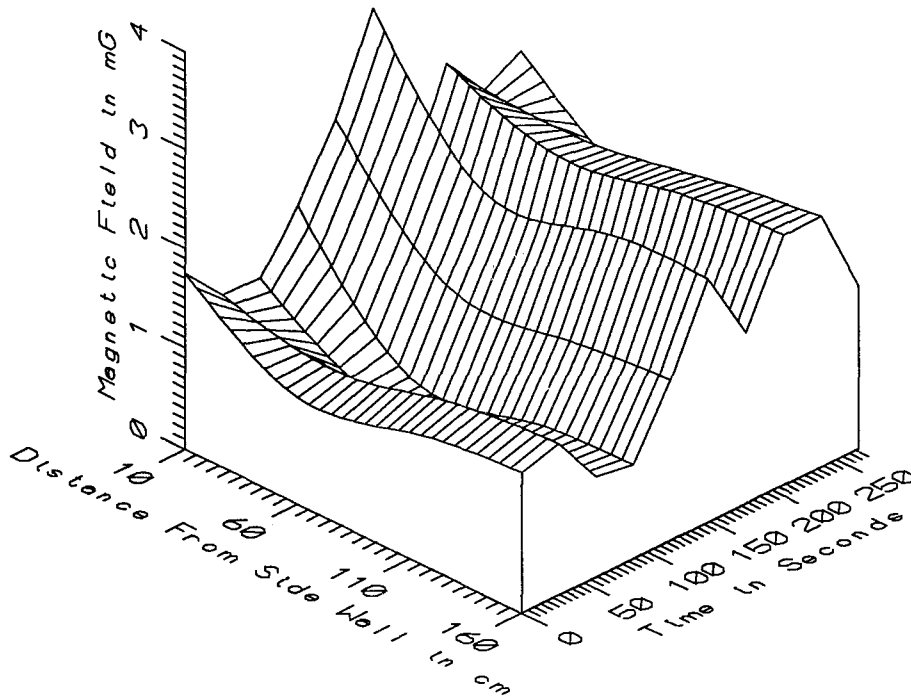
TGV013 - ABOVE SEATS 42 & 43 IN COACH R2B - LOW FREQ, 5-45Hz



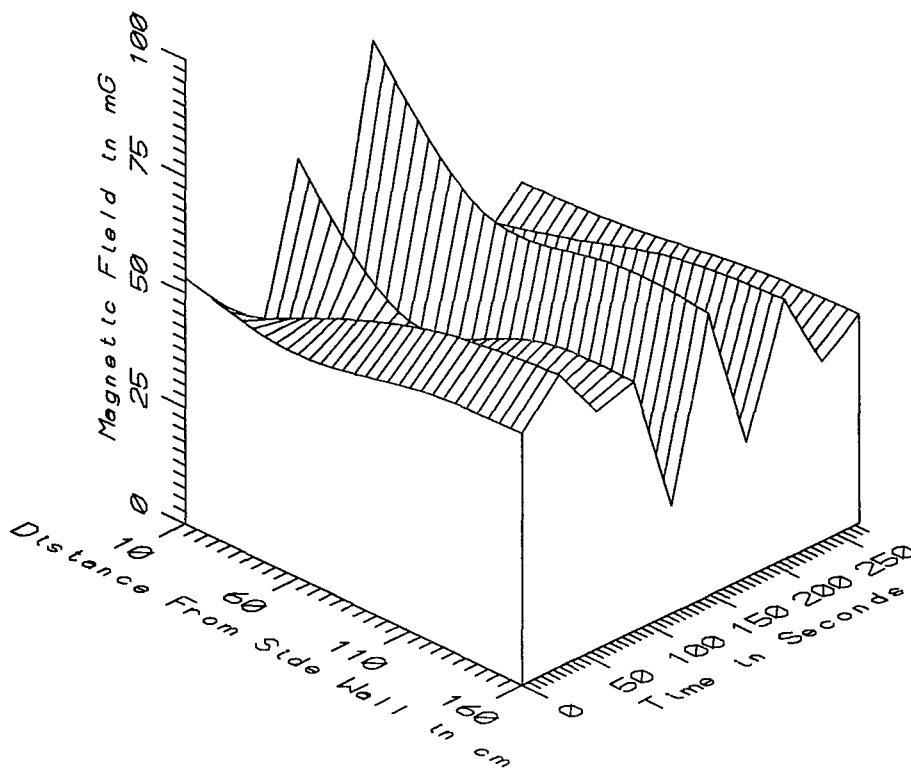
TGV013 - ABOVE SEATS 42 & 43 IN COACH R2B - POWER FREQ, 50-60Hz



TGV013 - ABOVE SEATS 42 & 43 IN COACH R2B - POWER HARM, 65-300Hz



TGV013 - ABOVE SEATS 42 & 43 IN COACH R2B - HIGH FREQ, 305-2560Hz



TGV013 - ABOVE SEATS 42 & 43 IN COACH R2B - ALL FREQ, 5-2560Hz

| TGV013 - ALL SAMPLES IN AC SECTION | | TOTAL OF 10 SAMPLES | | | | |
|------------------------------------|----------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | DIST. FROM WALL (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 340.42 | 377.08 | 356.80 | 12.07 | 3.38 |
| | 60 | 385.48 | 441.90 | 411.93 | 19.34 | 4.69 |
| | 110 | 450.76 | 491.18 | 470.97 | 13.81 | 2.93 |
| | 160 | 591.59 | 640.80 | 615.35 | 17.17 | 2.79 |
| 5-45Hz LOW FREQ | 10 | 19.96 | 52.46 | 31.18 | 10.63 | 34.10 |
| | 60 | 19.74 | 45.66 | 28.13 | 9.74 | 34.64 |
| | 110 | 21.01 | 49.09 | 29.29 | 10.28 | 35.11 |
| | 160 | 21.94 | 49.85 | 29.53 | 9.86 | 33.38 |
| 50-60Hz PWR FREQ | 10 | 9.99 | 66.43 | 30.50 | 18.66 | 61.18 |
| | 60 | 10.21 | 43.76 | 28.10 | 12.11 | 43.10 |
| | 110 | 7.51 | 52.63 | 32.94 | 14.86 | 45.10 |
| | 160 | 6.30 | 55.58 | 34.97 | 15.84 | 45.29 |
| 65-300Hz PWR HARM | 10 | 2.05 | 6.38 | 3.52 | 1.43 | 40.60 |
| | 60 | 1.35 | 4.61 | 2.79 | 1.25 | 44.84 |
| | 110 | 1.53 | 4.87 | 3.04 | 1.24 | 40.93 |
| | 160 | 1.78 | 5.01 | 3.26 | 1.18 | 36.26 |
| 305-2560Hz HIGH FREQ | 10 | 1.34 | 3.53 | 2.12 | 0.68 | 31.87 |
| | 60 | 0.70 | 2.20 | 1.42 | 0.59 | 41.67 |
| | 110 | 0.83 | 2.39 | 1.57 | 0.59 | 37.91 |
| | 160 | 0.93 | 2.50 | 1.71 | 0.58 | 33.79 |
| 5-2560Hz ALL FREQ | 10 | 26.28 | 84.96 | 45.10 | 18.35 | 40.68 |
| | 60 | 23.46 | 59.47 | 41.05 | 11.78 | 28.69 |
| | 110 | 23.14 | 61.27 | 45.75 | 13.22 | 28.89 |
| | 160 | 23.07 | 62.98 | 47.56 | 13.38 | 28.13 |

APPENDIX O

DATASET TGV014
AXIAL PROFILE FROM CENTER OF FIRST CLASS COACH R2B

Measurement Setup Code: Staff: 15 Reference: 16
 Drawing: A-1

Vehicle Status: Coach trip from Montparnasse
 station in Paris to Vendome station

Measurement Date: September 8, 1992

Measurement Time: Start: 14:27:43
 End: 14:32:02

Number of Samples: 10

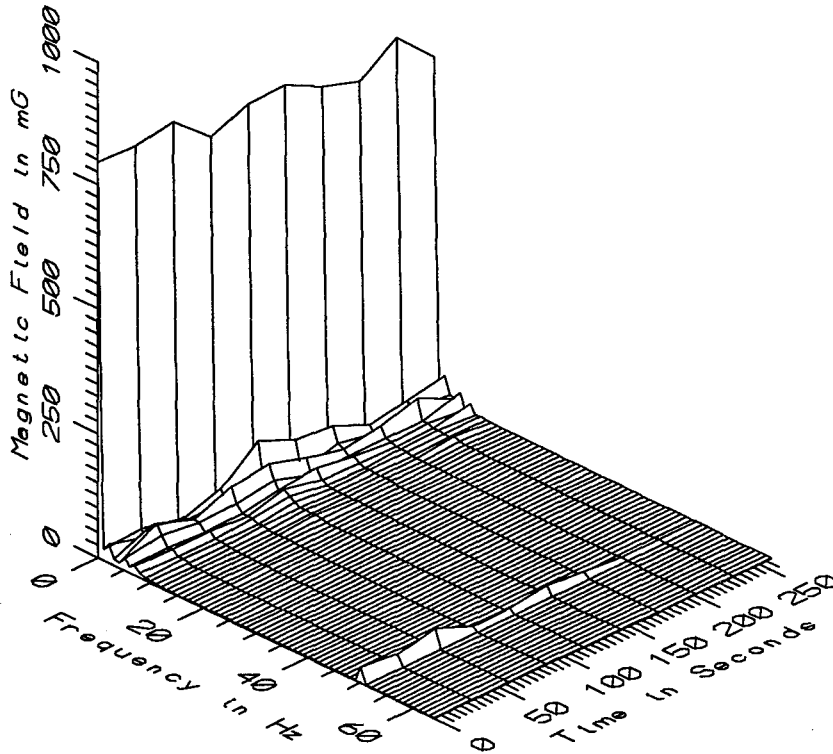
Programmed Sample Interval: 30 sec

Actual Sample Interval: 28.8 sec

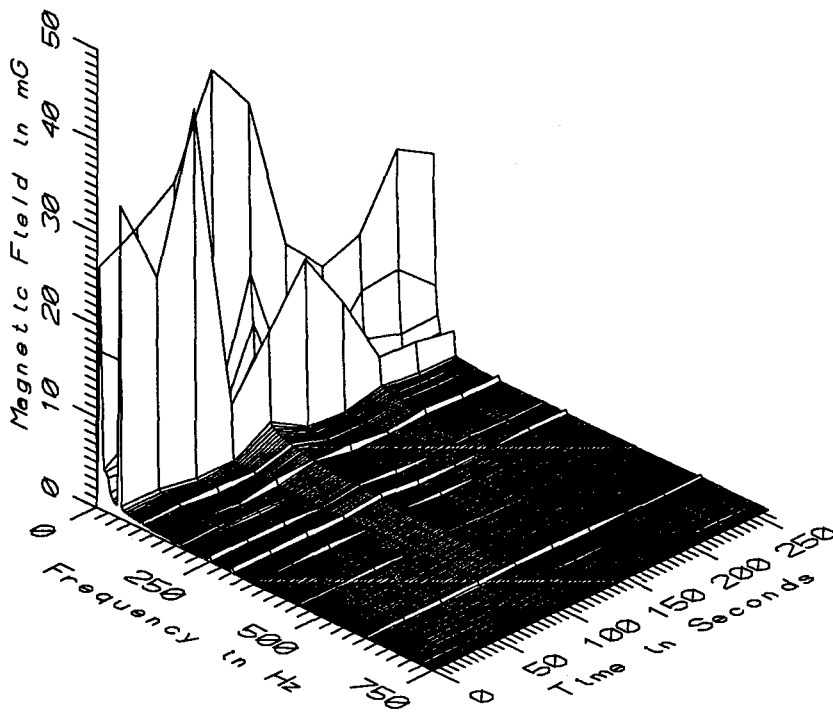
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

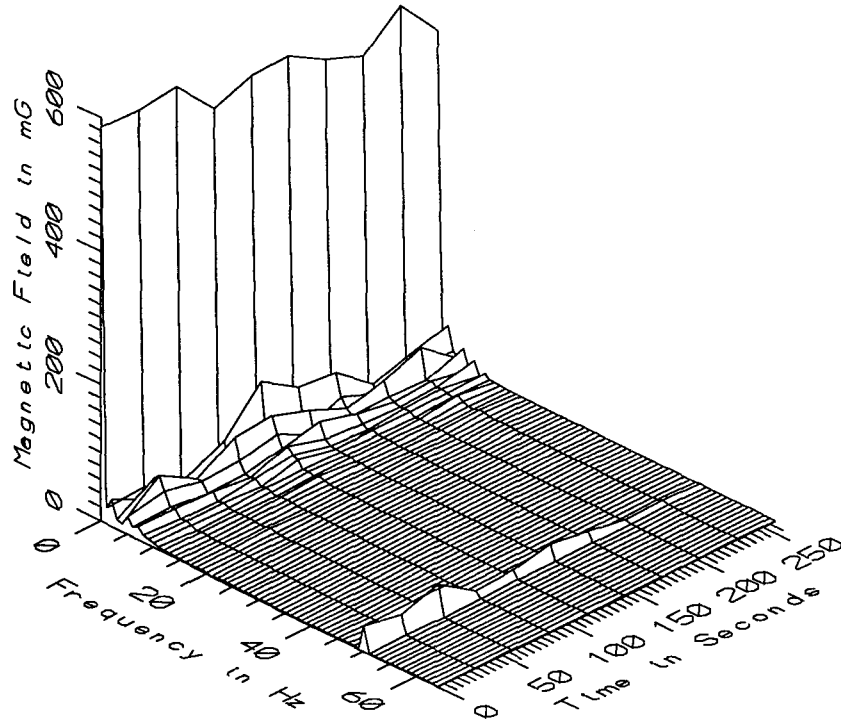
Missing or Suspect Data: None



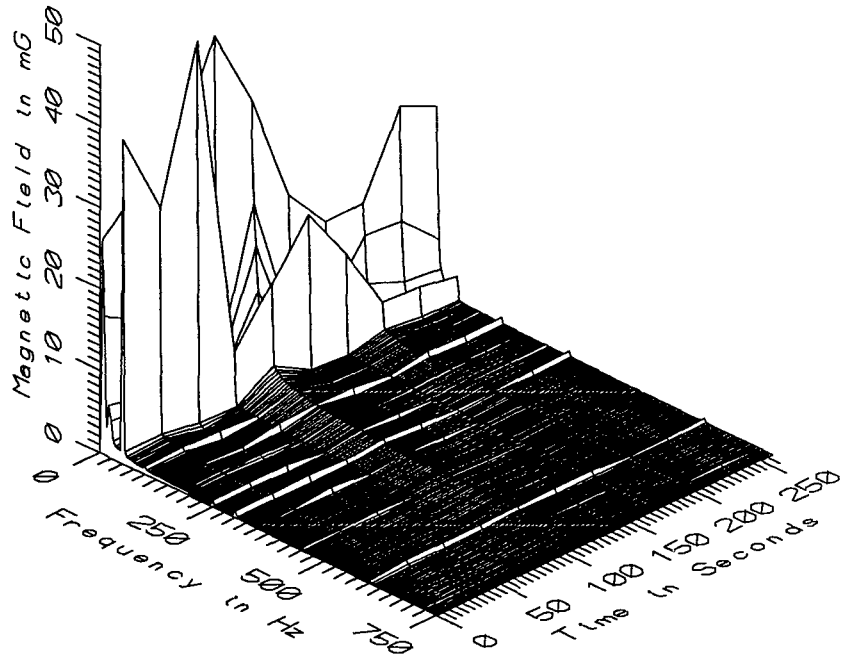
TGV014 - 10cm FROM CENTER LINE BETWEEN SEATS 41 & 42 IN COACH R2B



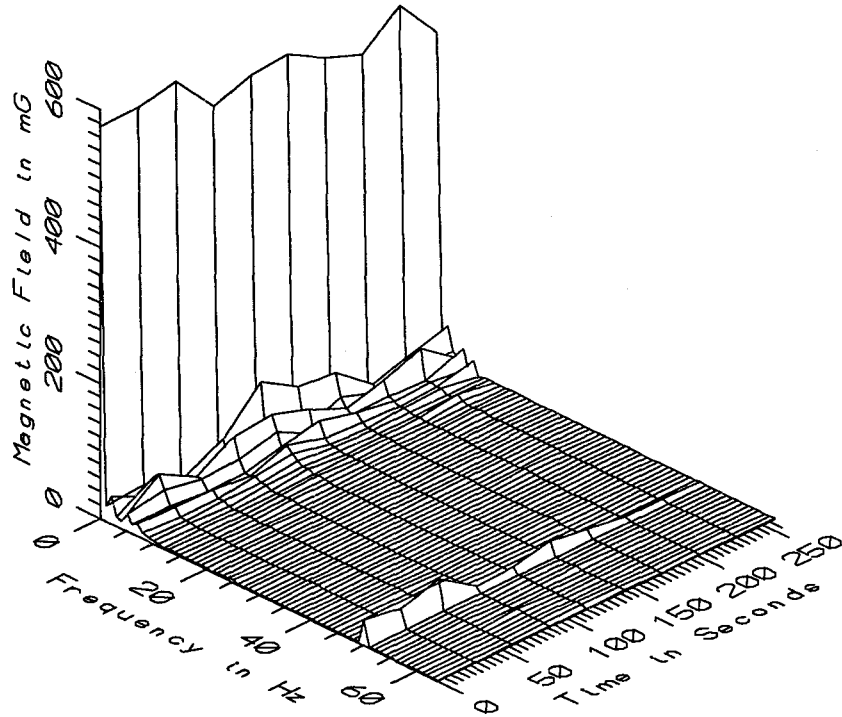
TGV014 - 10cm FROM CENTER LINE BETWEEN SEATS 41 & 42 IN COACH R2B



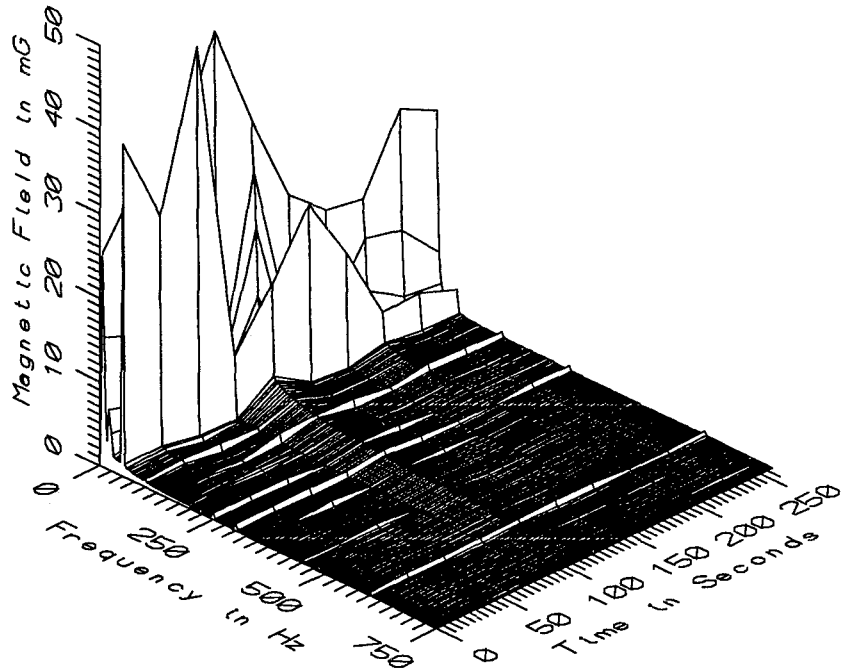
TGV014 - 60cm FROM CENTER LINE BETWEEN SEATS 41 & 42 IN COACH R2B



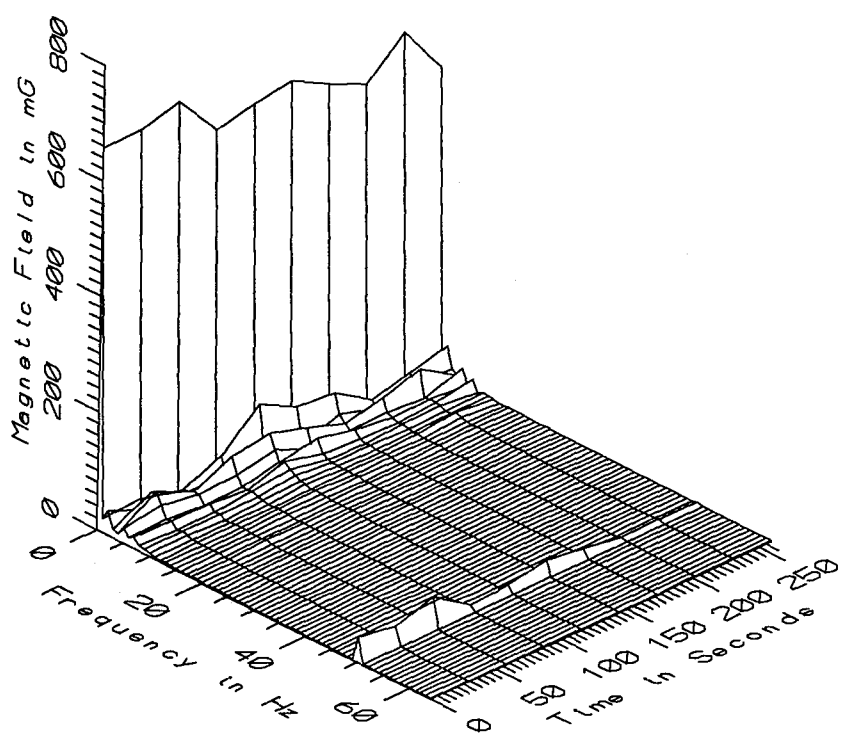
TGV014 - 60cm FROM CENTER LINE BETWEEN SEATS 41 & 42 IN COACH R2B



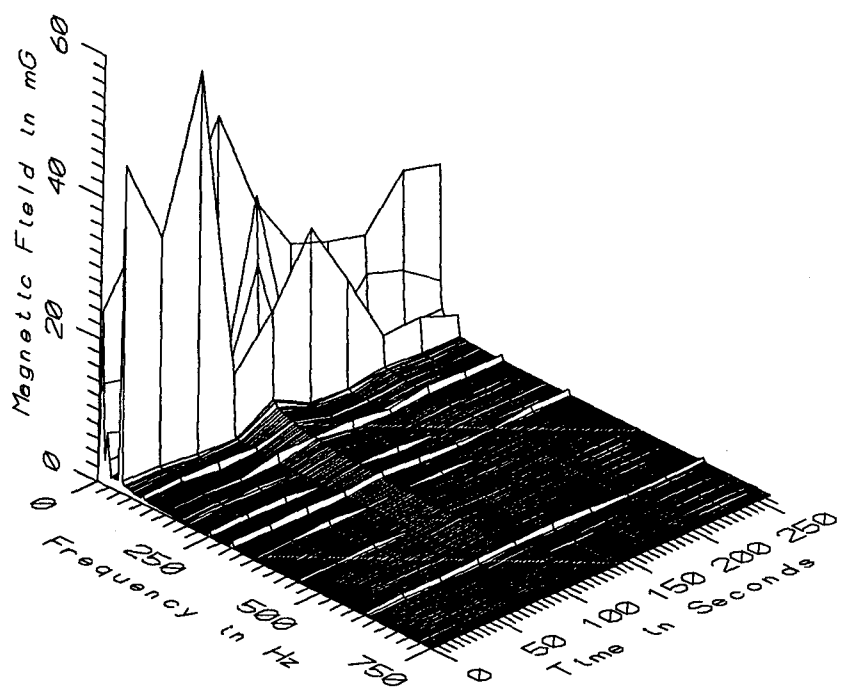
TGV014 - 110cm FROM CENTER LINE BETWEEN SEATS 41 & 42 IN COACH R2B



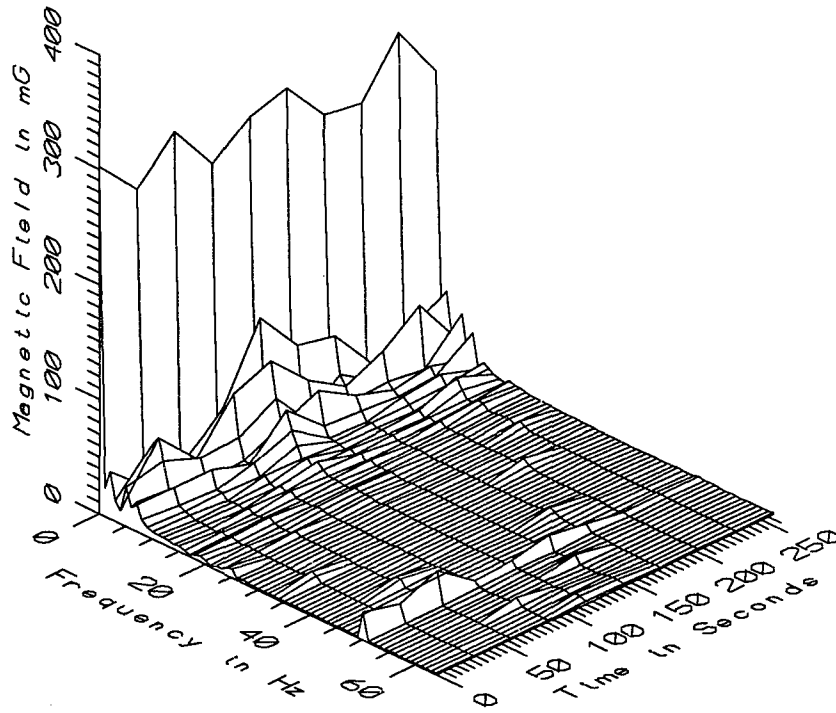
TGV014 - 110cm FROM CENTER LINE BETWEEN SEATS 41 & 42 IN COACH R2B



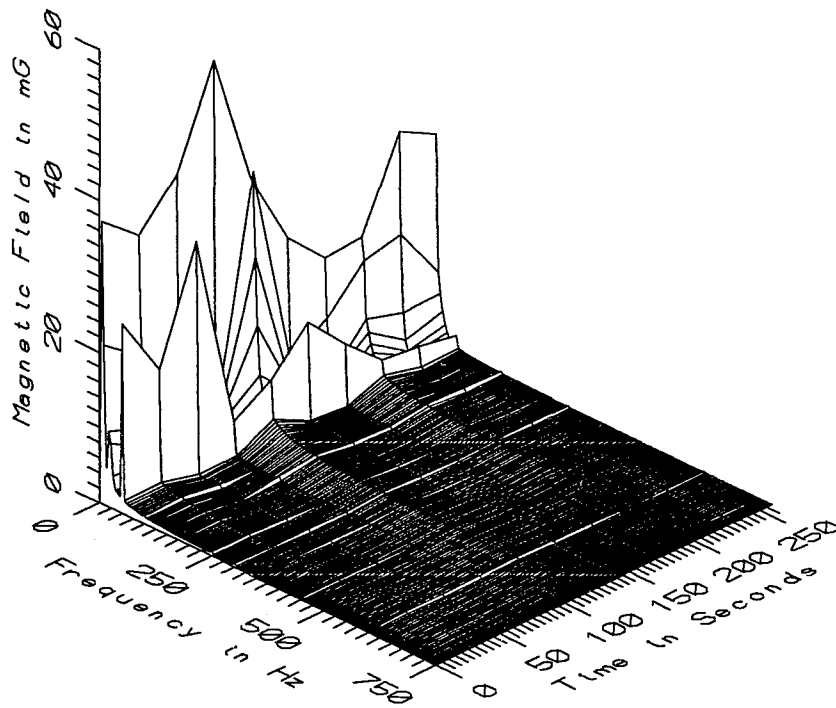
TGV014 - 160cm FROM CENTER LINE BETWEEN SEATS 41 & 42 IN COACH R2B



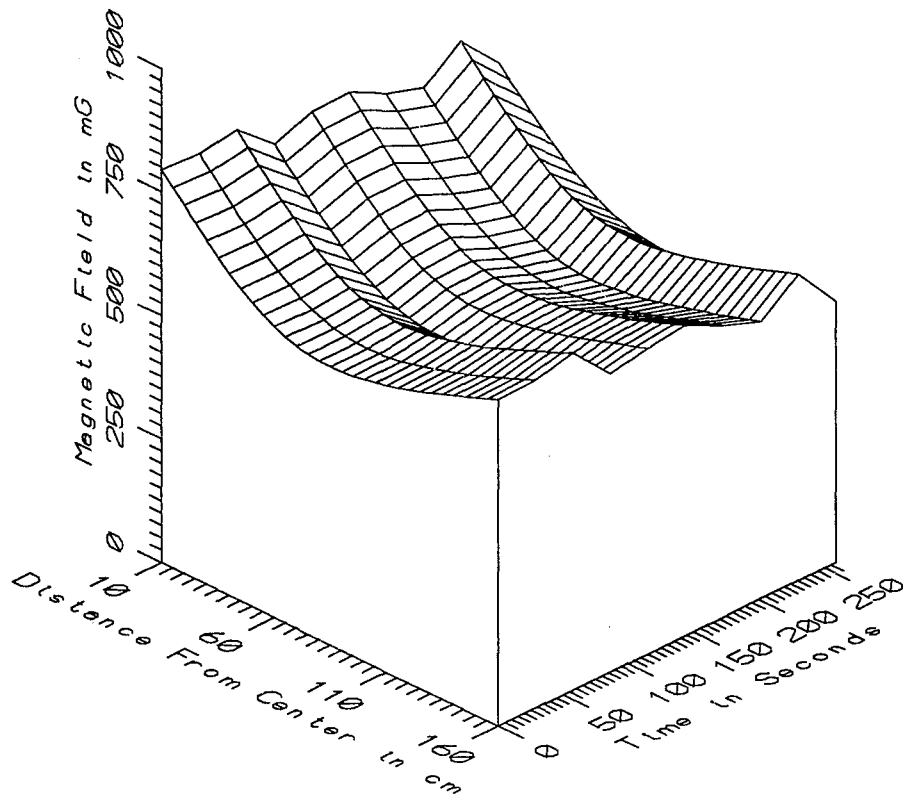
TGV014 - 160cm FROM CENTER LINE BETWEEN SEATS 41 & 42 IN COACH R2B



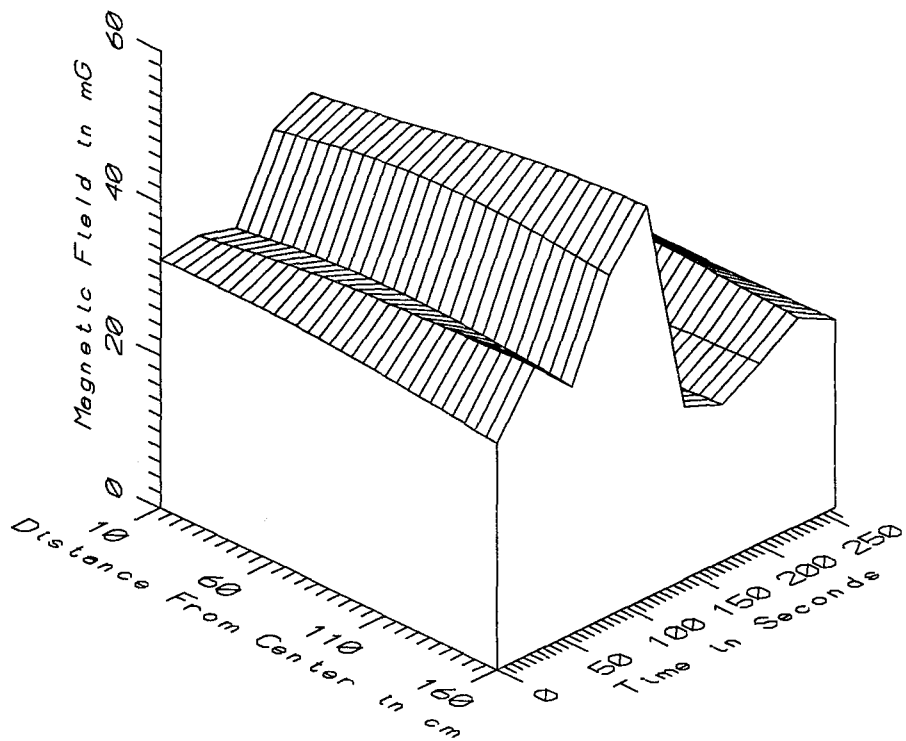
TGV014 - REFERENCE PROBE - ON MIDDLE SEAT IN COACH R2B



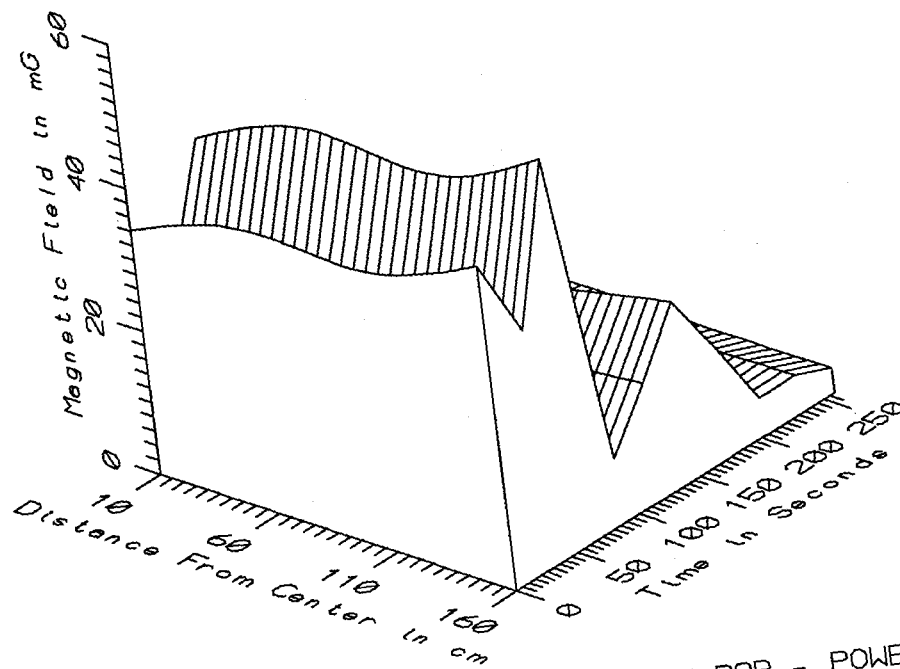
TGV014 - REFERENCE PROBE - ON MIDDLE SEAT IN COACH R2B



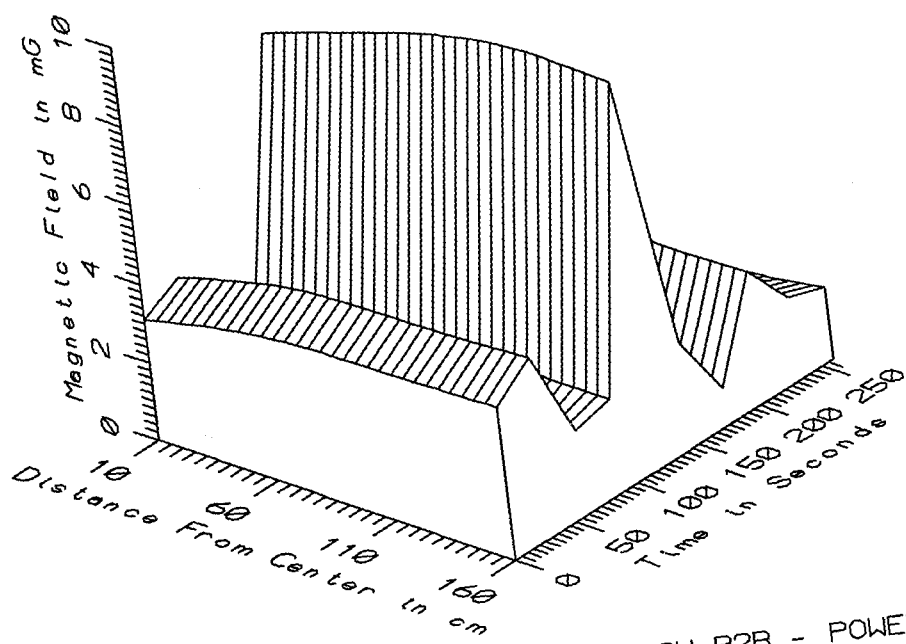
TGV014 - AXIAL PROFILE FROM CENTER OF COACH R2B - STATIC



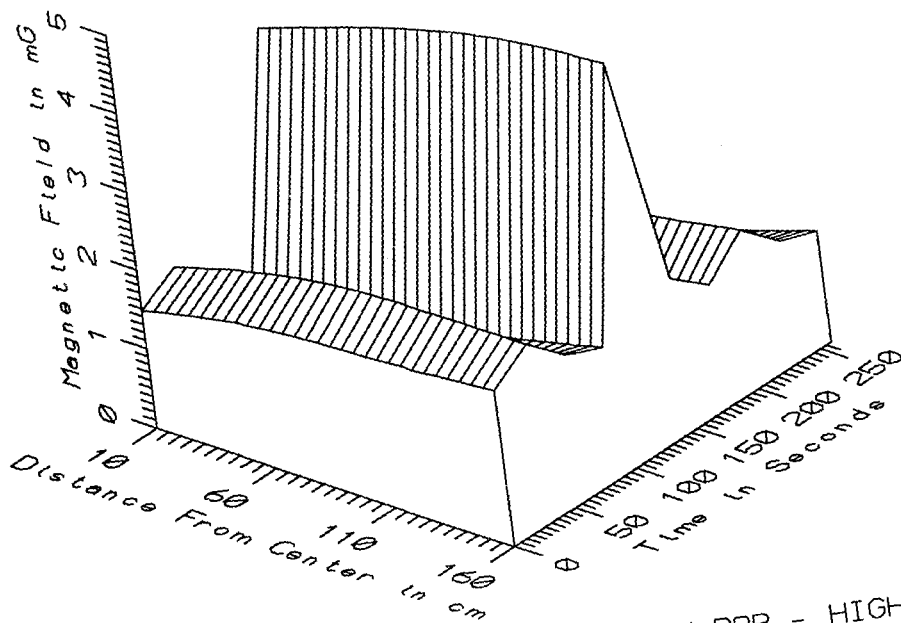
TGV014 - AXIAL PROFILE FROM CENTER OF COACH R2B - LOW FREQ, 5-45Hz



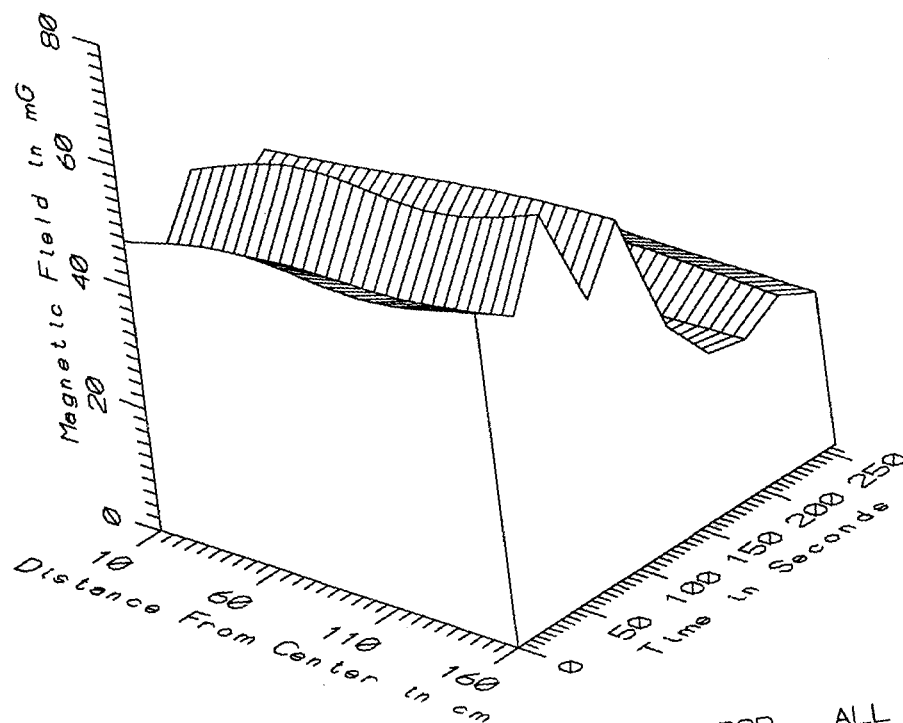
TGV014 - AXIAL PROFILE FROM CENTER OF COACH R2B - POWER FREQ, 50-60Hz



TGV014 - AXIAL PROFILE FROM CENTER OF COACH R2B - POWER HARM, 65-300Hz



TGV014 - AXIAL PROFILE FROM CENTER OF COACH R2B - HIGH FREQ, 305-2560Hz



TGV014 - AXIAL PROFILE FROM CENTER OF COACH R2B - ALL FREQ, 5-2560Hz

| TGV014 - ALL SAMPLES IN AC SECTION | | TOTAL OF 10 SAMPLES | | | | |
|------------------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | DIST. FROM CENTER (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 684.28 | 803.54 | 754.54 | 39.44 | 5.23 |
| | 60 | 491.57 | 593.18 | 549.86 | 34.14 | 6.21 |
| | 110 | 477.82 | 588.57 | 540.18 | 35.74 | 6.62 |
| | 160 | 529.17 | 677.81 | 612.96 | 45.94 | 7.49 |
| 5-45HZ LOW FREQ | 10 | 15.94 | 45.09 | 29.20 | 9.69 | 33.17 |
| | 60 | 16.57 | 47.56 | 30.66 | 10.30 | 33.59 |
| | 110 | 18.98 | 50.22 | 31.52 | 10.32 | 32.75 |
| | 160 | 20.70 | 51.41 | 31.47 | 10.17 | 32.30 |
| 50-60Hz PWR FREQ | 10 | 3.19 | 40.76 | 16.19 | 13.20 | 81.51 |
| | 60 | 3.35 | 47.52 | 18.20 | 15.69 | 86.19 |
| | 110 | 3.23 | 46.92 | 18.77 | 15.31 | 81.56 |
| | 160 | 3.47 | 54.50 | 21.59 | 17.88 | 82.83 |
| 65-300Hz PWR HARM | 10 | 0.85 | 8.10 | 2.77 | 2.07 | 74.80 |
| | 60 | 0.94 | 9.14 | 3.11 | 2.37 | 76.03 |
| | 110 | 1.01 | 9.91 | 3.24 | 2.58 | 79.51 |
| | 160 | 0.98 | 9.91 | 3.41 | 2.51 | 73.75 |
| 305-2560Hz HIGH FREQ | 10 | 0.69 | 3.94 | 1.40 | 0.96 | 68.51 |
| | 60 | 0.78 | 4.44 | 1.60 | 1.09 | 67.69 |
| | 110 | 0.95 | 4.82 | 1.79 | 1.14 | 63.83 |
| | 160 | 1.40 | 4.98 | 2.12 | 1.04 | 49.12 |
| 5-2560Hz ALL FREQ | 10 | 19.99 | 51.90 | 35.11 | 12.38 | 35.25 |
| | 60 | 20.85 | 58.34 | 37.80 | 14.07 | 37.23 |
| | 110 | 23.59 | 57.82 | 38.83 | 13.58 | 34.99 |
| | 160 | 24.58 | 63.48 | 40.77 | 14.83 | 36.38 |

APPENDIX P

DATASET TGV015
VENDOME STATION RELAY ROOM NEAR AC SUPPLY CABINET

Measurement Setup Code: Staff: 17 Reference: -
 Drawing: A-4

Vehicle Status: Not Applicable

Measurement Date: September 8, 1992

Measurement Time: Start: 15:08:53
 End: 15:10:40

Number of Samples: 12

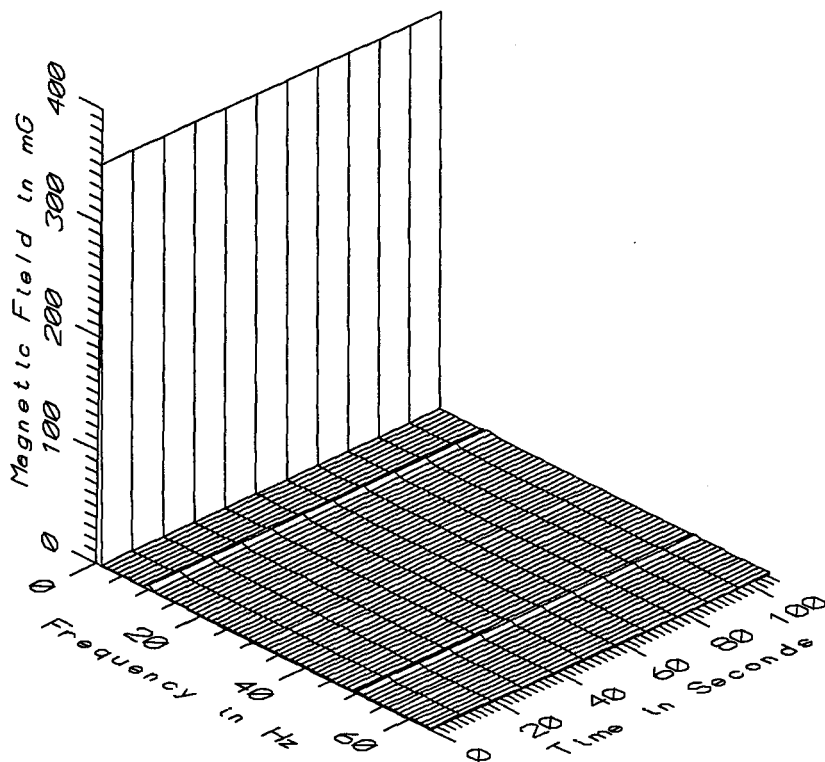
Programmed Sample Interval: 10 sec

Actual Sample Interval: 9.7 sec

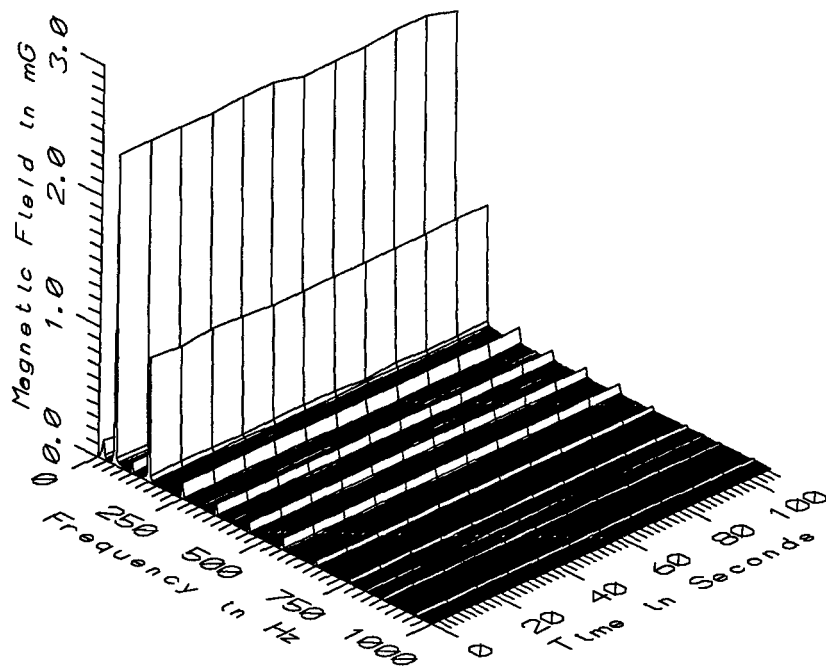
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

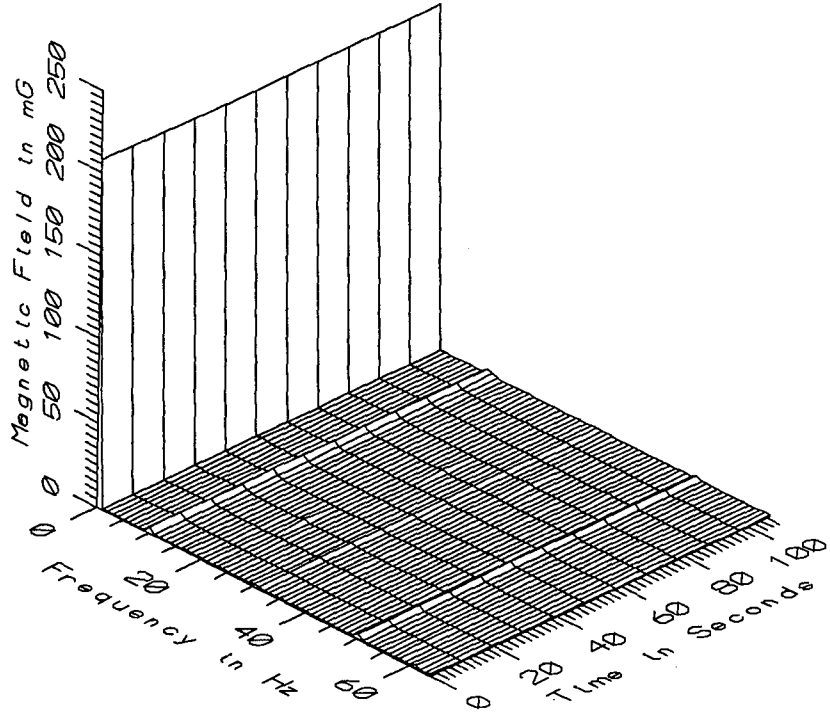
Missing or Suspect Data: None



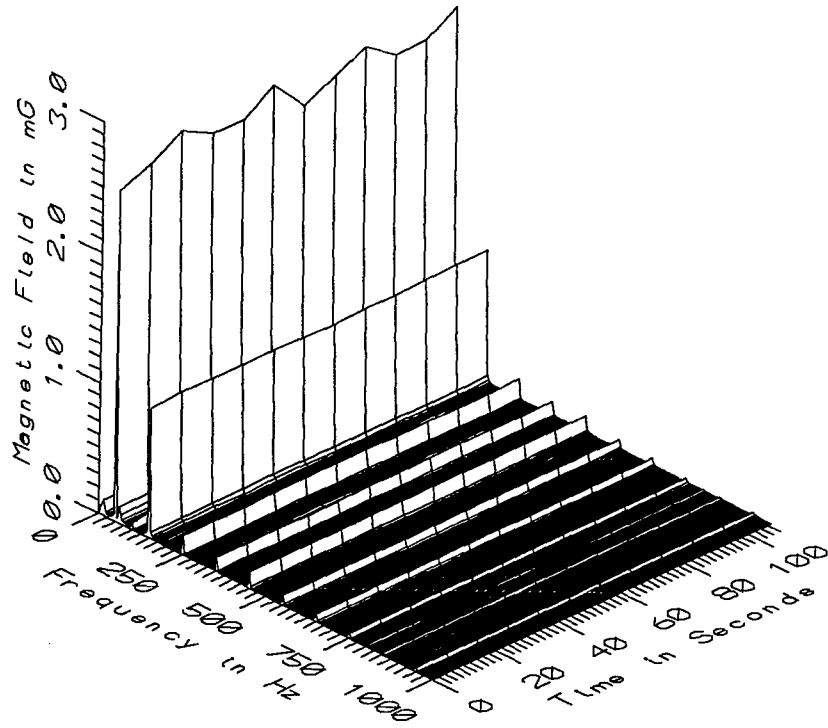
TGV015 - 10cm ABOVE FLOOR NEAR AC SUPPLY CABINET IN VENDOME RELAY ROOM



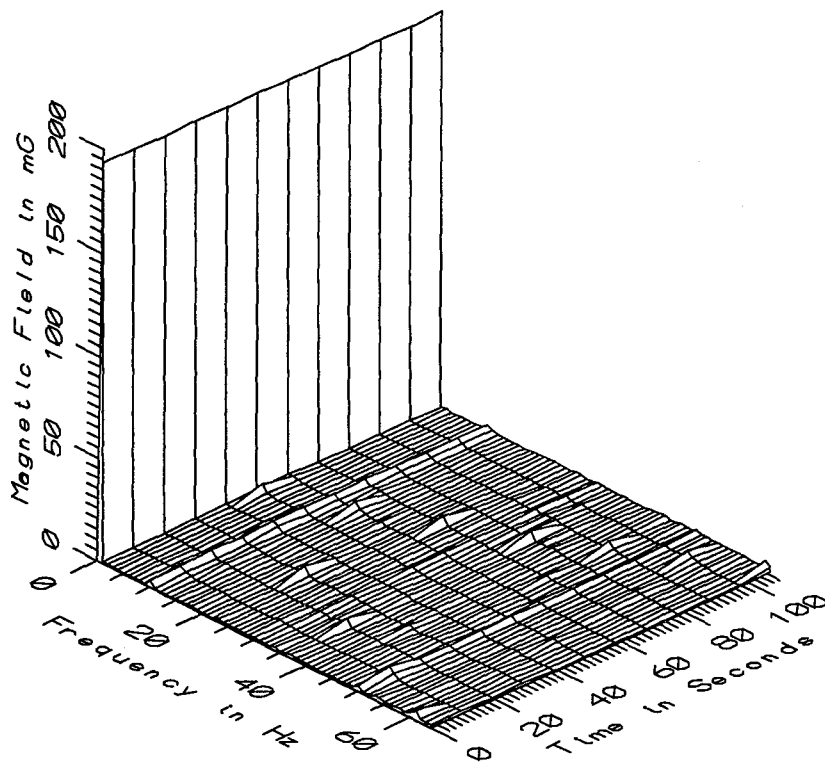
TGV015 - 10cm ABOVE FLOOR NEAR AC SUPPLY CABINET IN VENDOME RELAY ROOM



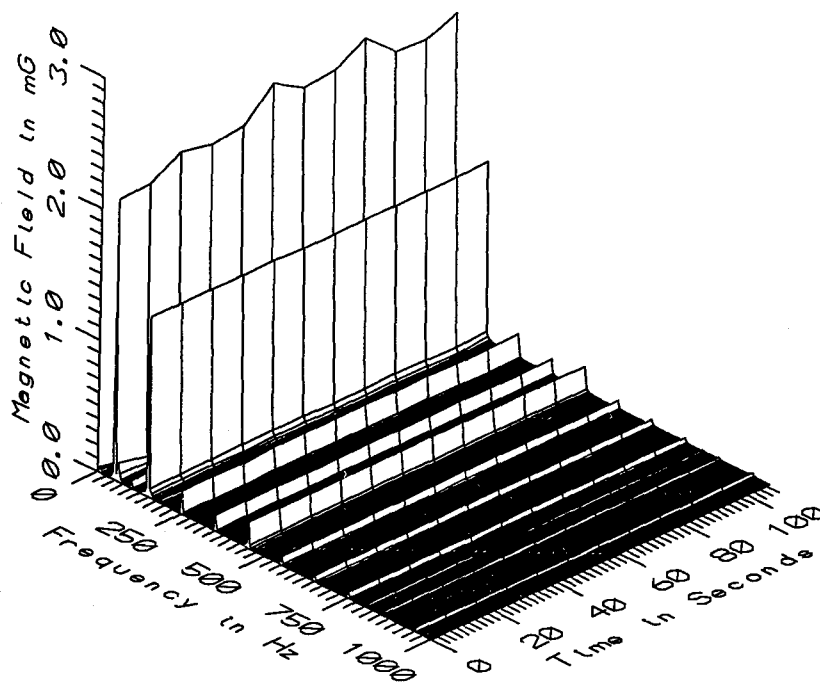
TGV015 - 60cm ABOVE FLOOR NEAR AC SUPPLY CABINET IN VENDOME RELAY ROOM



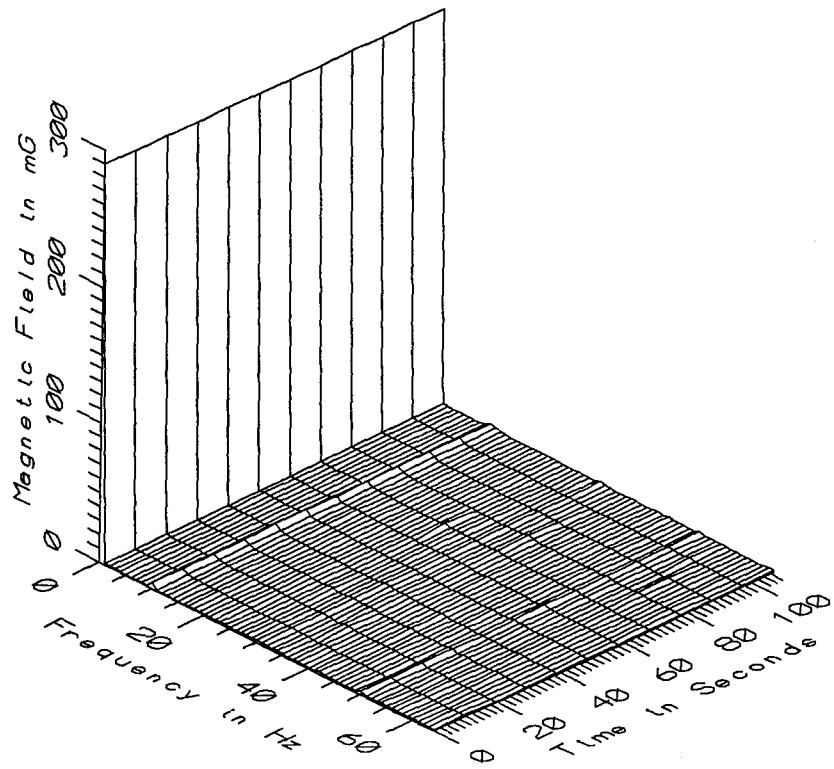
TGV015 - 60cm ABOVE FLOOR NEAR AC SUPPLY CABINET IN VENDOME RELAY ROOM



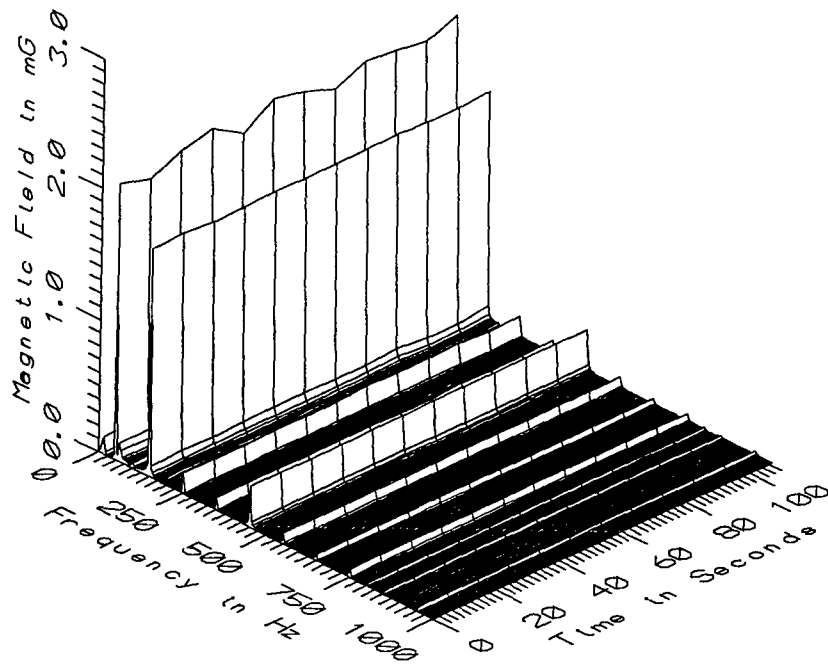
TGV015 - 110cm ABOVE FLOOR NEAR AC SUPPLY CABINET IN VENDOME RELAY ROOM



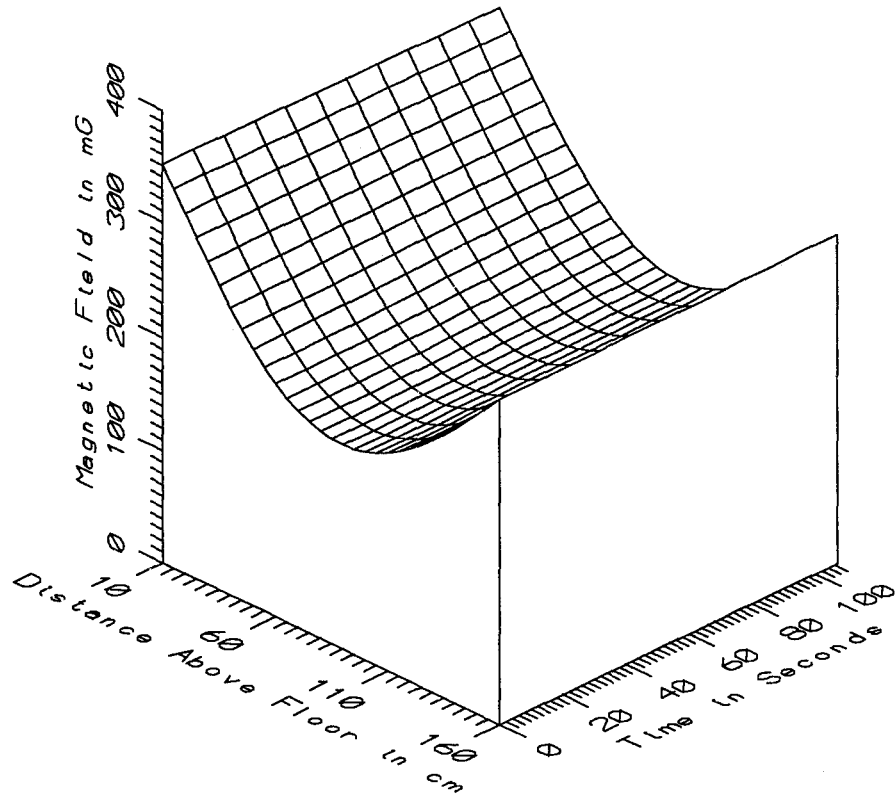
TGV015 - 110cm ABOVE FLOOR NEAR AC SUPPLY CABINET IN VENDOME RELAY ROOM



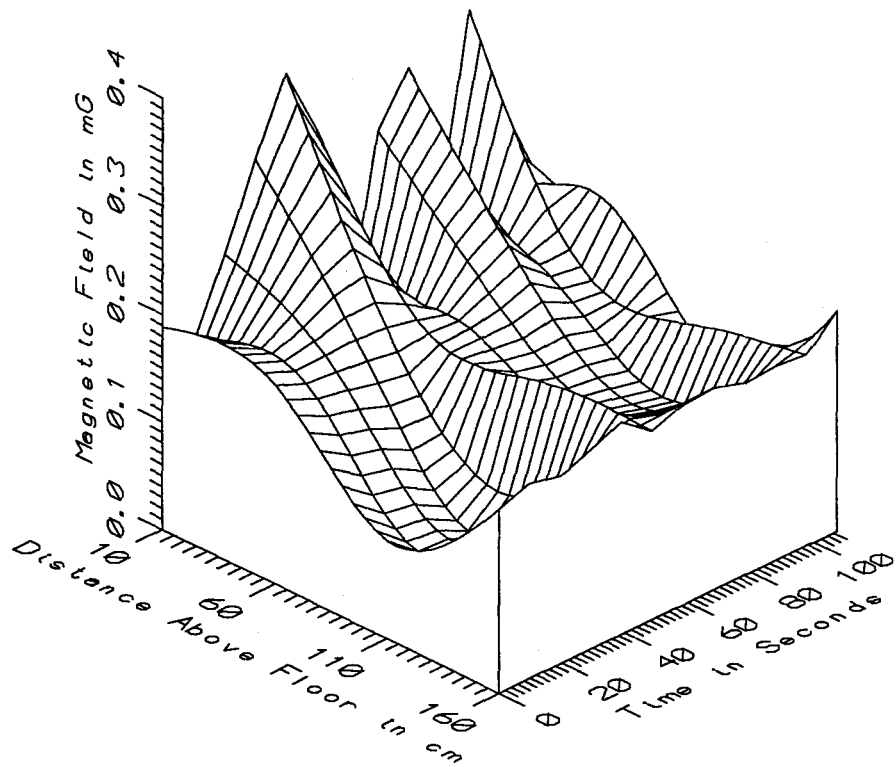
TGV015 - 160cm ABOVE FLOOR NEAR AC SUPPLY CABINET IN VENDOME RELAY ROOM



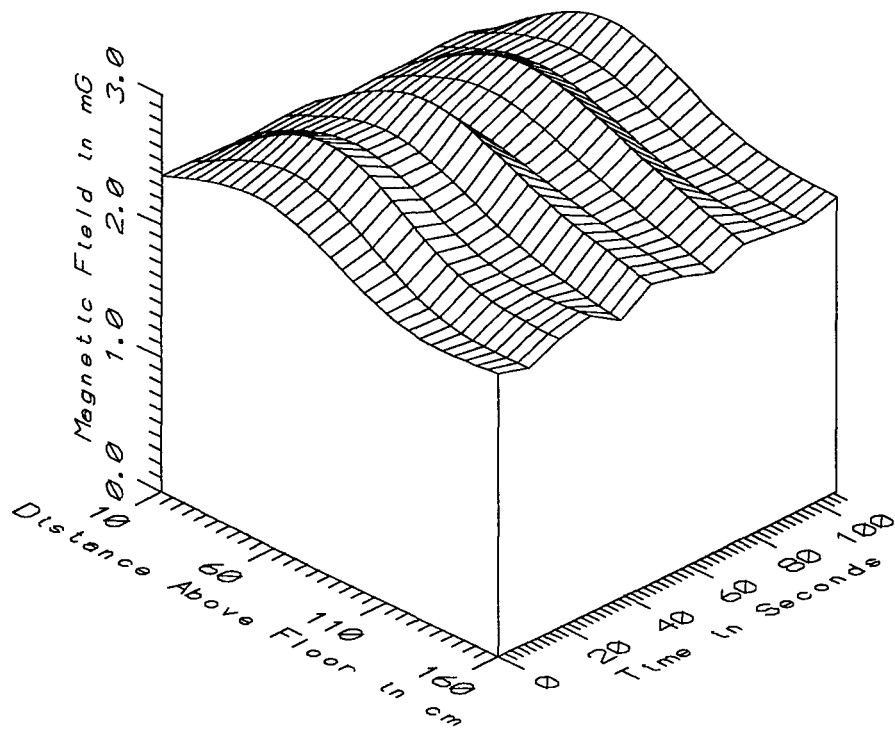
TGV015 - 160cm ABOVE FLOOR NEAR AC SUPPLY CABINET IN VENDOME RELAY ROOM



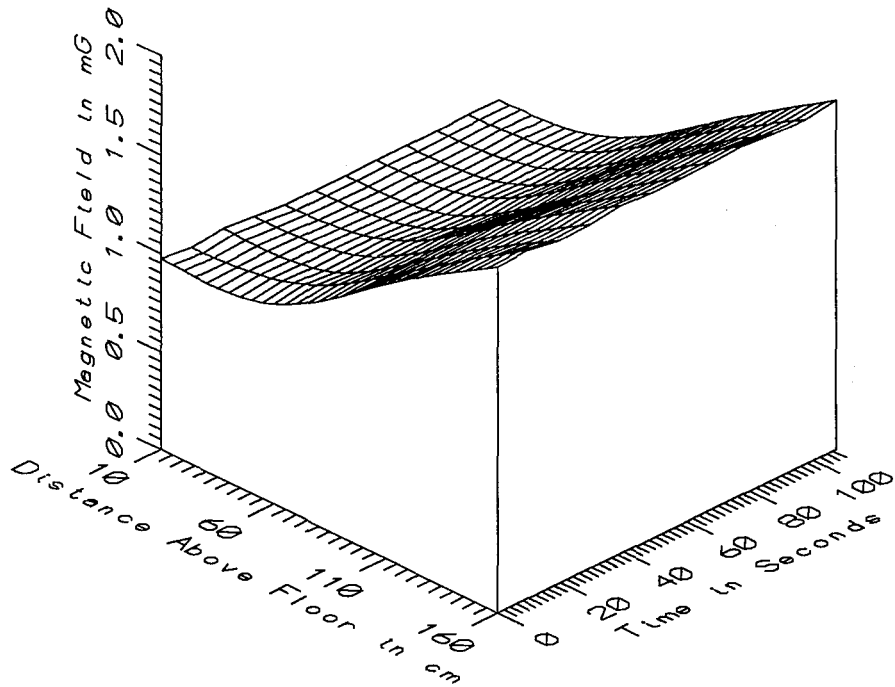
TGV015 - NEAR AC SUPPLY IN VENDOME RELAY ROOM - STATIC



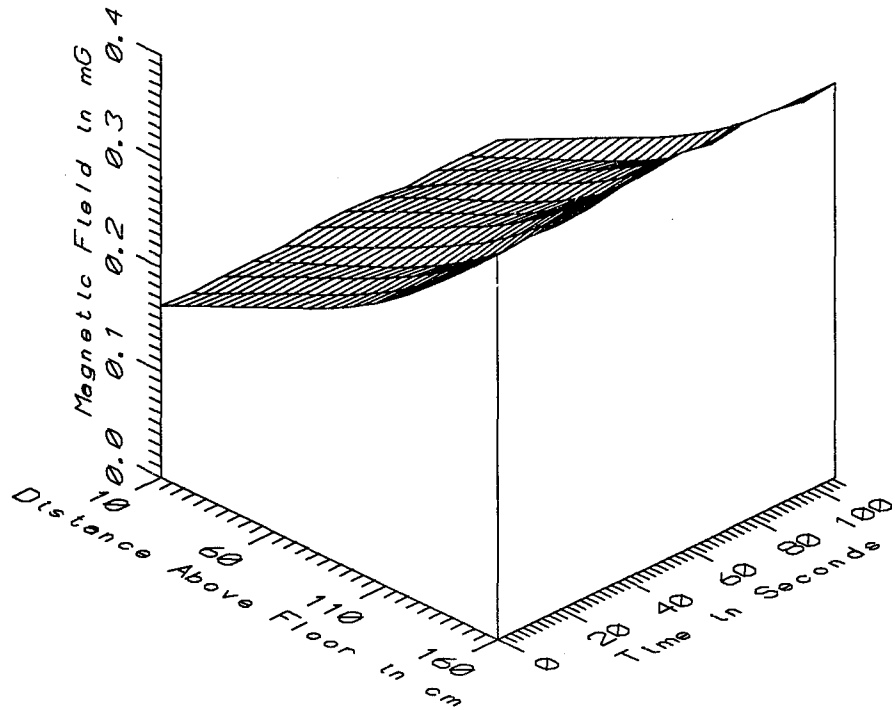
TGV015 - NEAR AC SUPPLY IN VENDOME RELAY ROOM - LOW FREQ, 5-45Hz



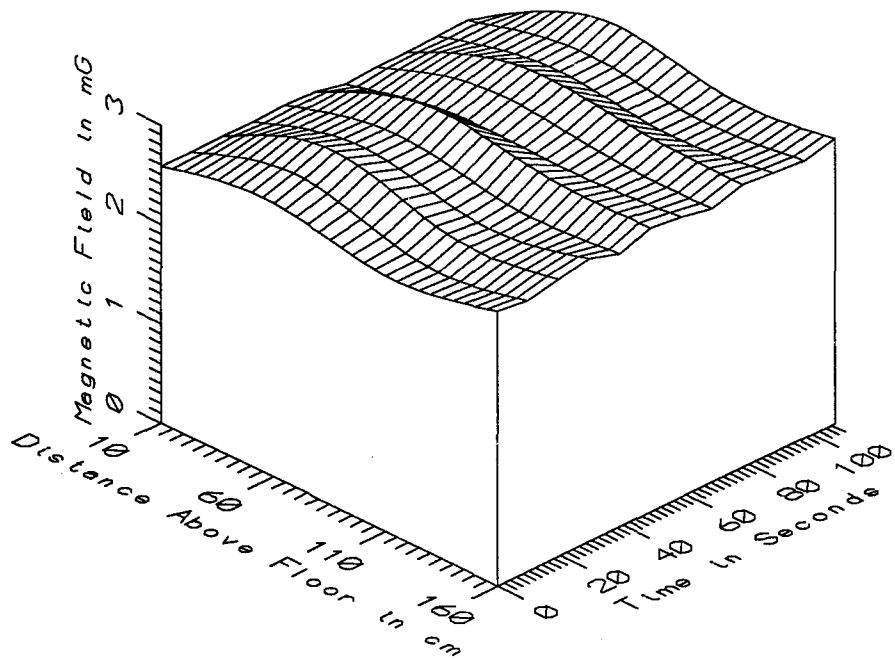
TGV015 - NEAR AC SUPPLY IN VENDOME RELAY ROOM - POWER FREQ, 50-60Hz



TGV015 - NEAR AC SUPPLY IN VENDOME RELAY ROOM - POWER HARM, 65-300Hz

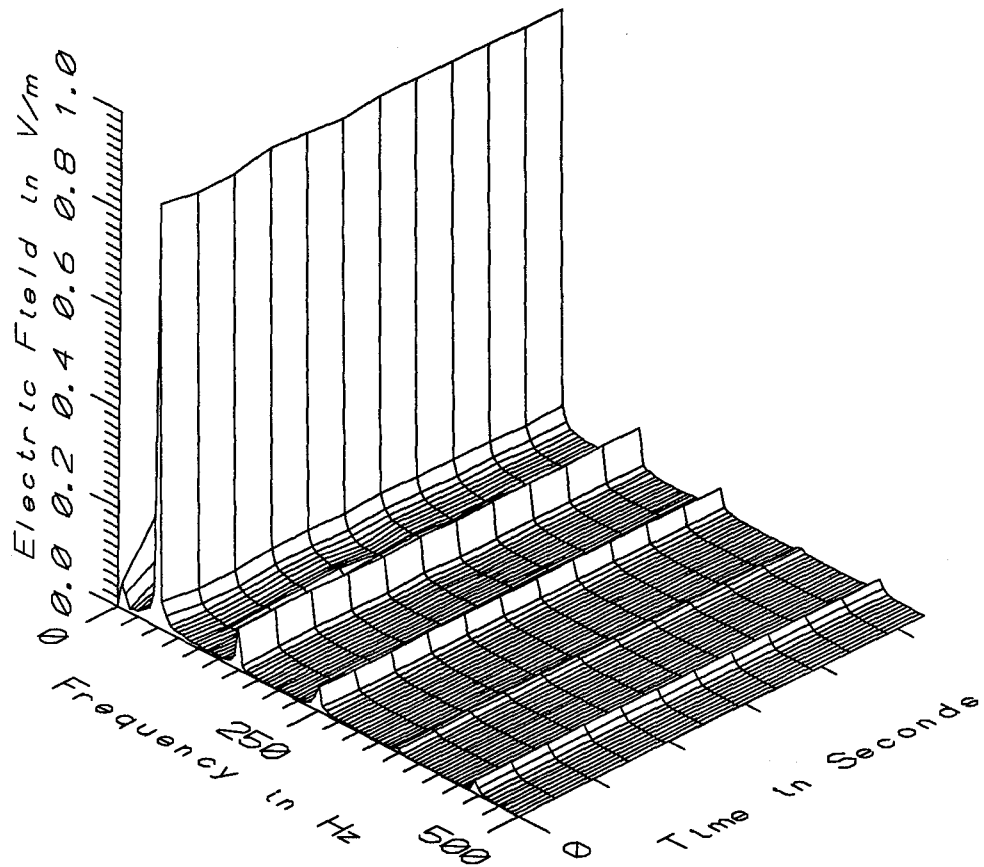


TGV015 - NEAR AC SUPPLY IN VENDOME RELAY ROOM - HIGH FREQ, 305-2560Hz



TGV015 - NEAR AC SUPPLY IN VENDOME RELAY ROOM - ALL FREQ, 5-2560Hz

| TGV015 - VENDOME RELAY ROOM, NEAR AC SUPPLY CABINET | | TOTAL OF 12 SAMPLES | | | | |
|---|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 350.67 | 351.26 | 350.97 | 0.22 | 0.06 |
| | 60 | 207.05 | 207.79 | 207.45 | 0.24 | 0.12 |
| | 110 | 192.74 | 193.79 | 193.33 | 0.36 | 0.19 |
| | 160 | 289.08 | 290.45 | 289.71 | 0.47 | 0.16 |
| 5-45Hz LOW FREQ | 10 | 0.12 | 0.37 | 0.24 | 0.08 | 34.29 |
| | 60 | 0.16 | 0.20 | 0.17 | 0.01 | 7.31 |
| | 110 | 0.05 | 0.17 | 0.10 | 0.04 | 34.75 |
| | 160 | 0.17 | 0.21 | 0.18 | 0.01 | 5.48 |
| 50-60Hz PWR FREQ | 10 | 2.29 | 2.40 | 2.36 | 0.03 | 1.24 |
| | 60 | 2.54 | 2.81 | 2.67 | 0.09 | 3.40 |
| | 110 | 2.14 | 2.52 | 2.32 | 0.12 | 4.97 |
| | 160 | 2.03 | 2.22 | 2.14 | 0.06 | 2.96 |
| 65-300Hz PWR HARM | 10 | 0.95 | 0.98 | 0.96 | 0.01 | 1.06 |
| | 60 | 1.02 | 1.05 | 1.03 | 0.01 | 0.92 |
| | 110 | 1.38 | 1.40 | 1.39 | 0.01 | 0.42 |
| | 160 | 1.74 | 1.77 | 1.76 | 0.01 | 0.62 |
| 305-2560Hz HIGH FREQ | 10 | 0.16 | 0.17 | 0.16 | 0.00 | 1.47 |
| | 60 | 0.21 | 0.22 | 0.21 | 0.00 | 1.50 |
| | 110 | 0.27 | 0.28 | 0.27 | 0.00 | 1.36 |
| | 160 | 0.37 | 0.38 | 0.37 | 0.00 | 1.04 |
| 5-2560Hz ALL FREQ | 10 | 2.50 | 2.61 | 2.57 | 0.03 | 1.23 |
| | 60 | 2.75 | 3.00 | 2.87 | 0.09 | 2.97 |
| | 110 | 2.57 | 2.90 | 2.72 | 0.10 | 3.69 |
| | 160 | 2.72 | 2.87 | 2.80 | 0.05 | 1.75 |



TGV015 - ELECTRIC FIELD IN VENDOME RELAY ROOM

APPENDIX Q

DATASET TGV016

VENDOME STATION RELAY ROOM BETWEEN TWO ROWS OF RELAY SHELVES

Measurement Setup Code: Staff: 18 Reference: -
 Drawing: A-4

Vehicle Status: Not Applicable

Measurement Date: September 8, 1992

Measurement Time: Start: 15:14:42
 End: 15:16:30

Number of Samples: 12

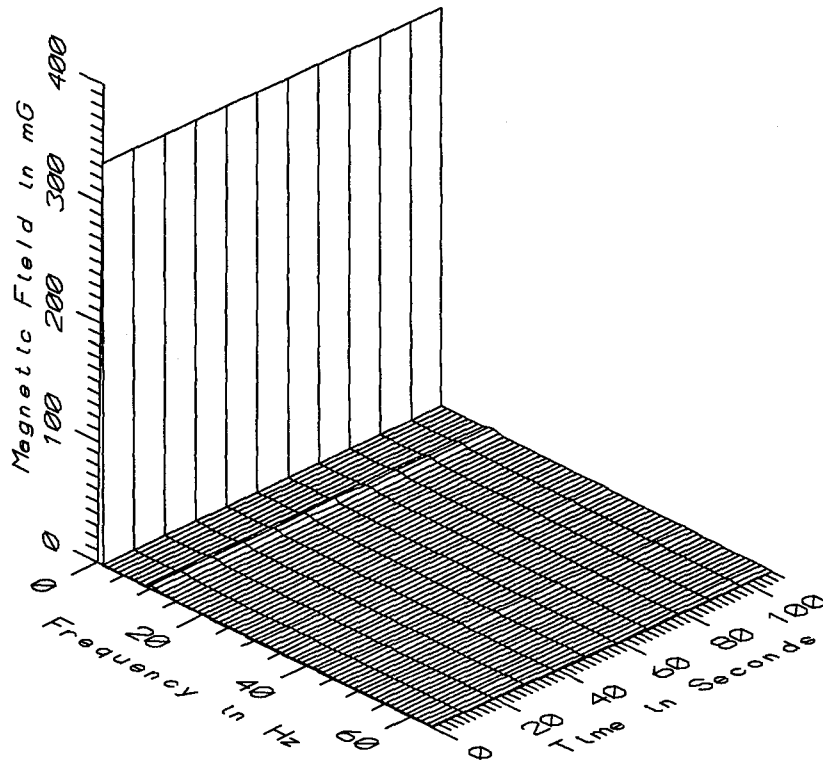
Programmed Sample Interval: 10 sec

Actual Sample Interval: 9.8 sec

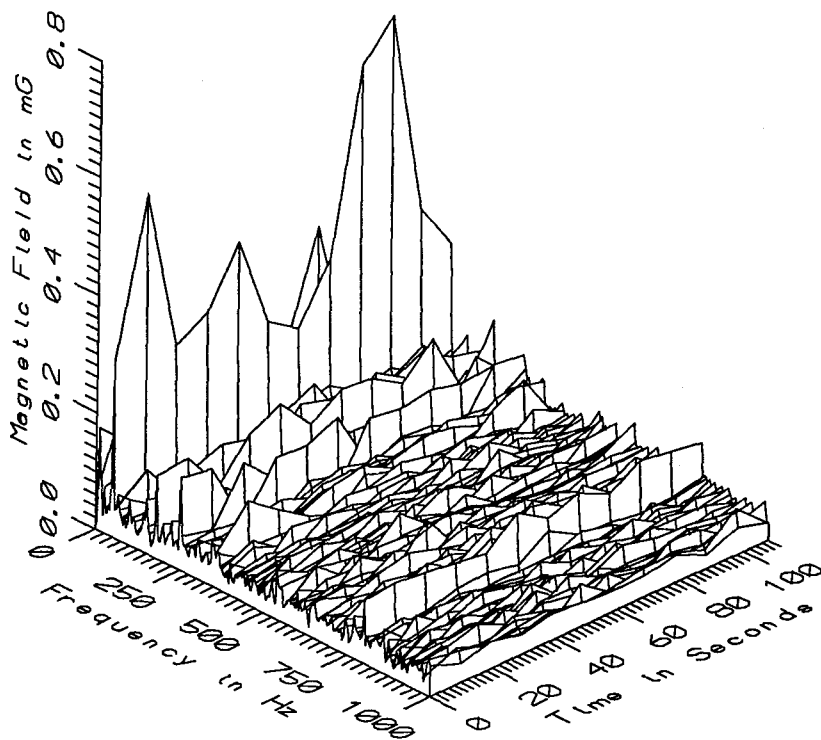
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

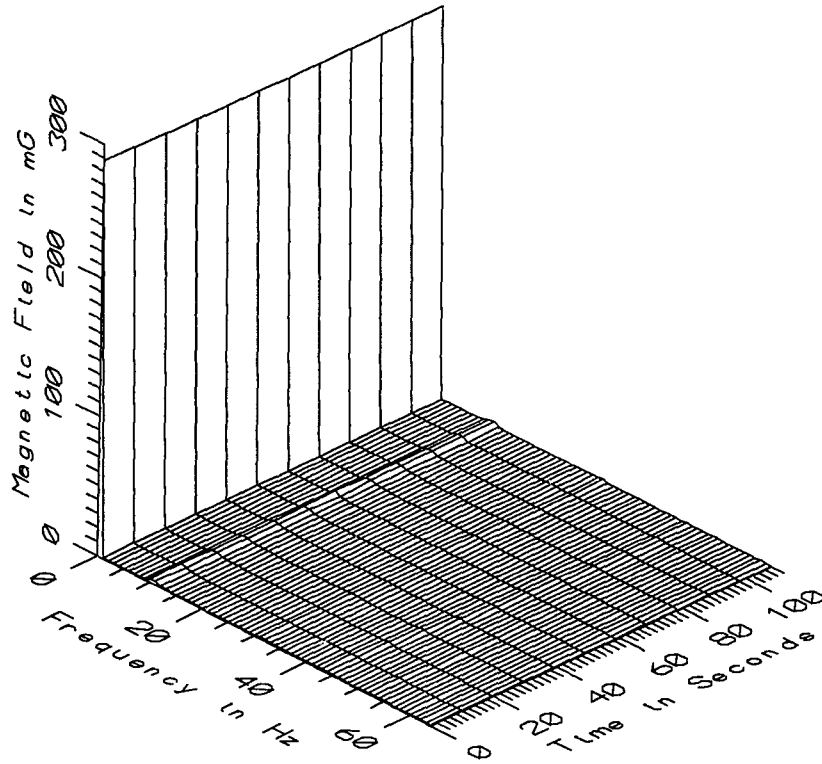
Missing or Suspect Data: None



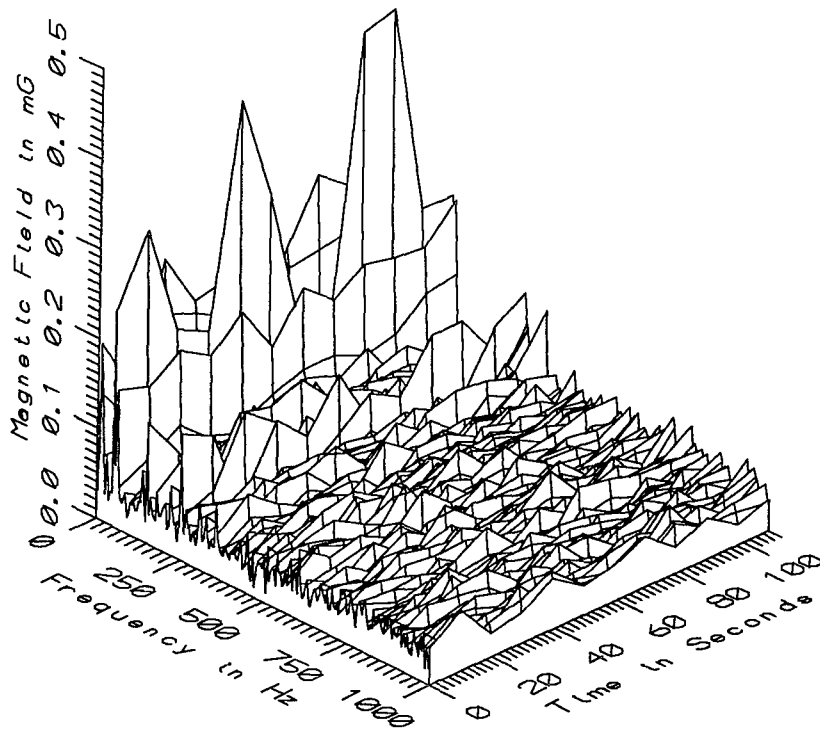
TGV016 - 10cm ABOVE FLOOR BETWEEN RELAY SHELVES, VENDOME RELAY ROOM



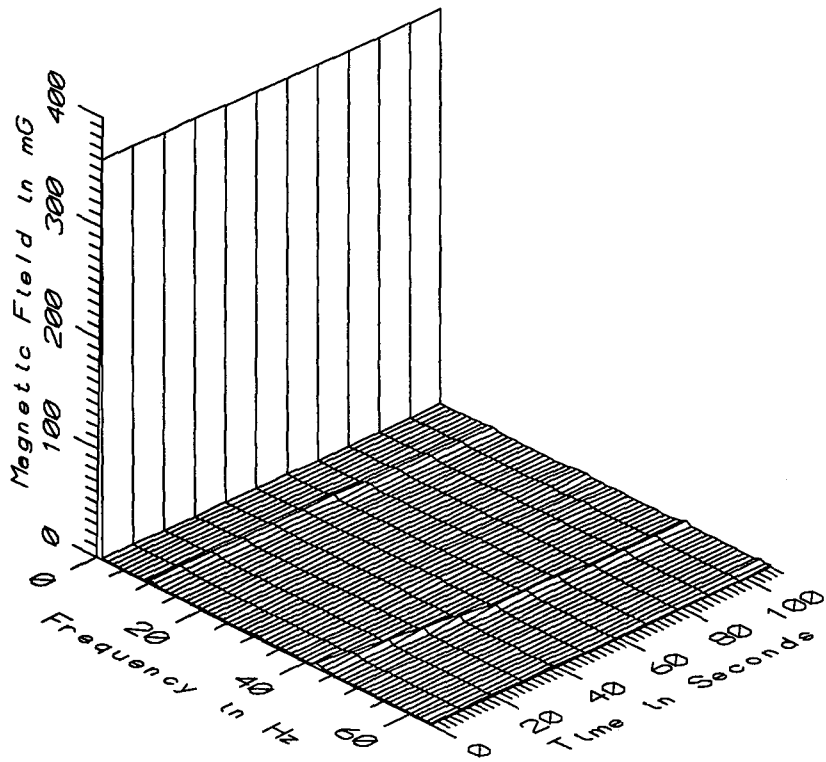
TGV016 - 10cm ABOVE FLOOR BETWEEN RELAY SHELVES, VENDOME RELAY ROOM



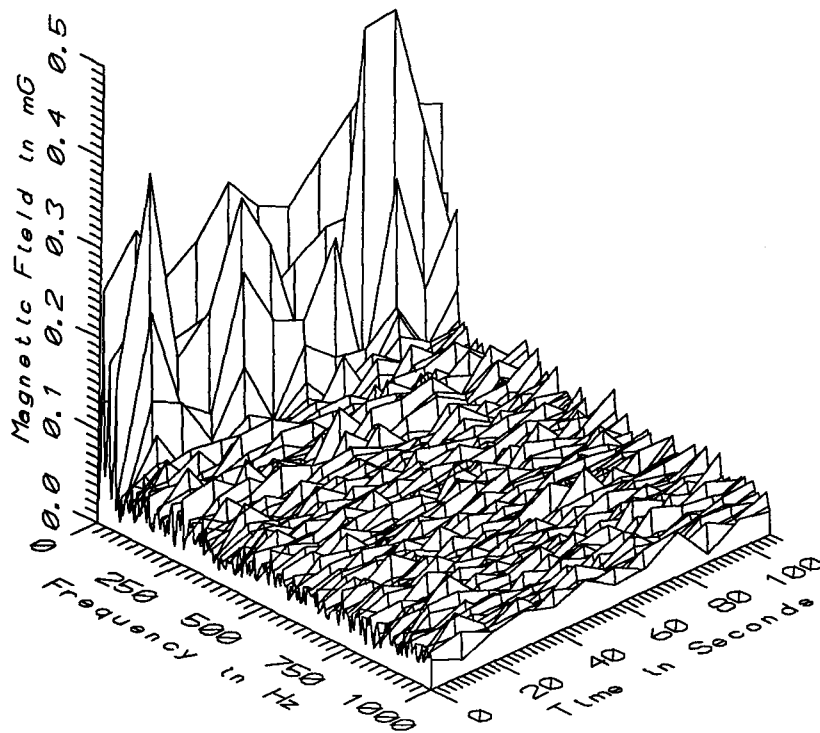
TGV016 - 60cm ABOVE FLOOR BETWEEN RELAY SHELVES, VENDOME RELAY ROOM



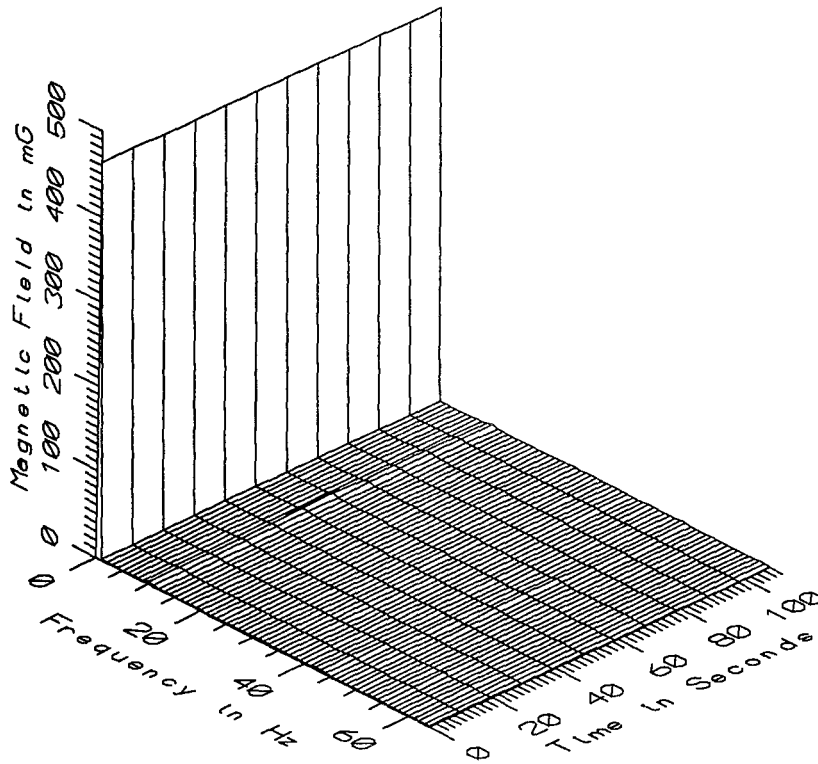
TGV016 - 60cm ABOVE FLOOR BETWEEN RELAY SHELVES, VENDOME RELAY ROOM



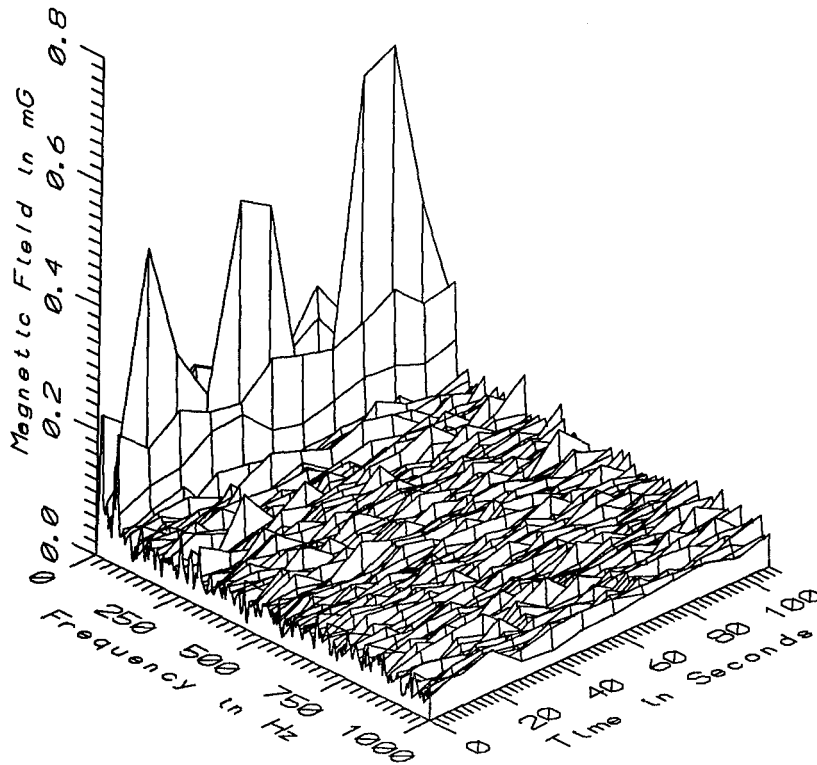
TGV016 - 110cm ABOVE FLOOR BETWEEN RELAY SHELVES, VENDOME RELAY ROOM



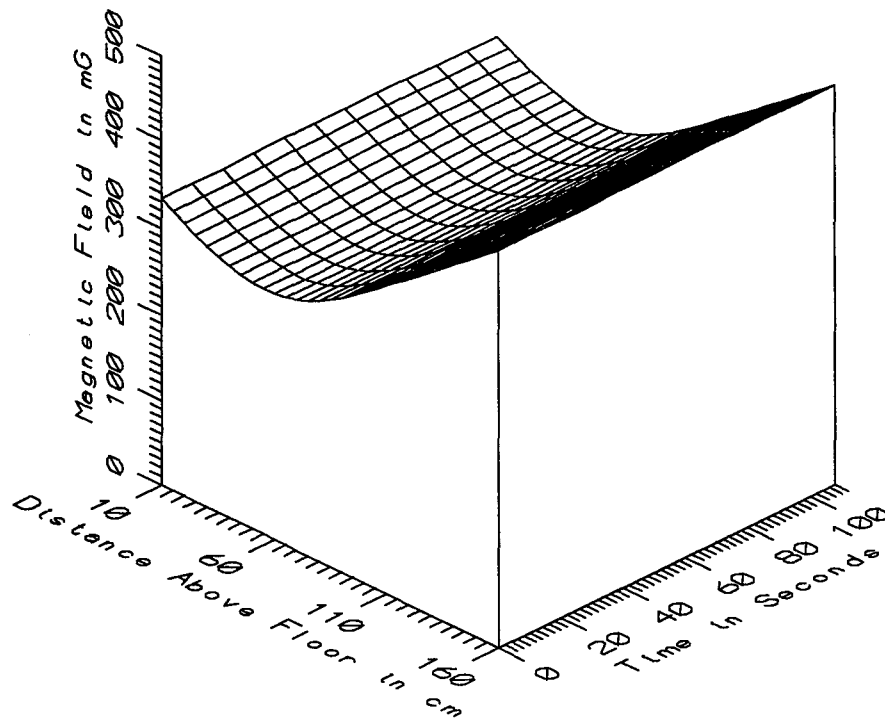
TGV016 - 110cm ABOVE FLOOR BETWEEN RELAY SHELVES, VENDOME RELAY ROOM



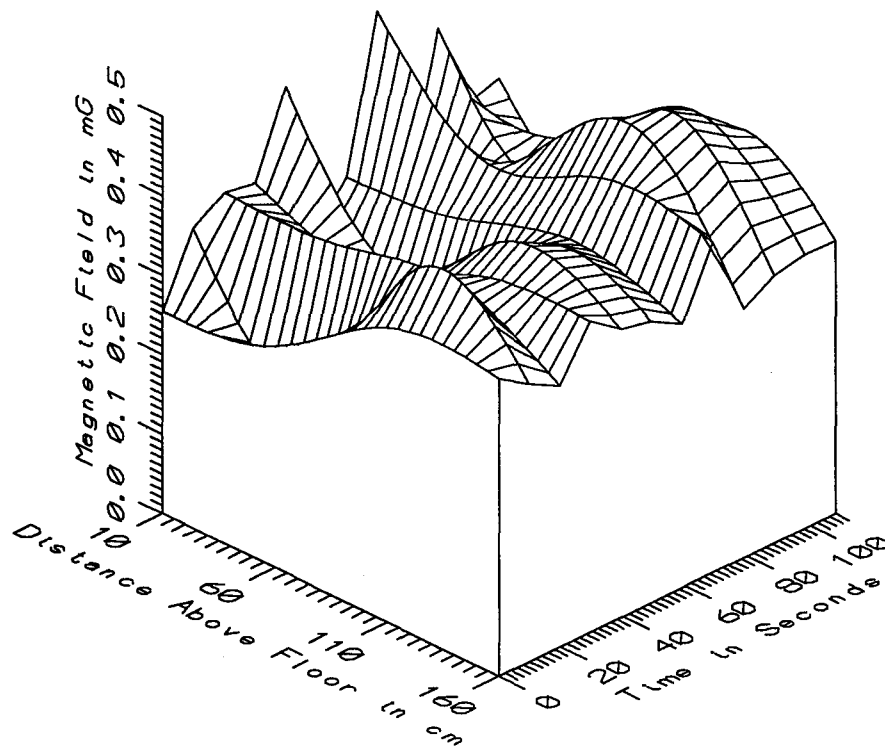
TGV016 - 160cm ABOVE FLOOR BETWEEN RELAY SHELVES, VENDOME RELAY ROOM



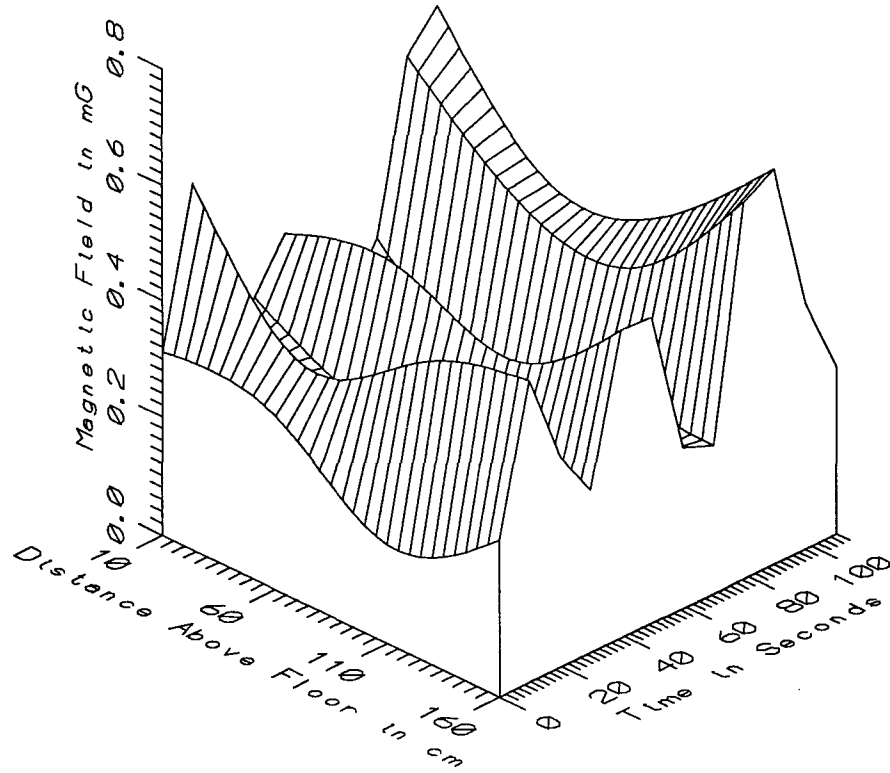
TGV016 - 160cm ABOVE FLOOR BETWEEN RELAY SHELVES, VENDOME RELAY ROOM



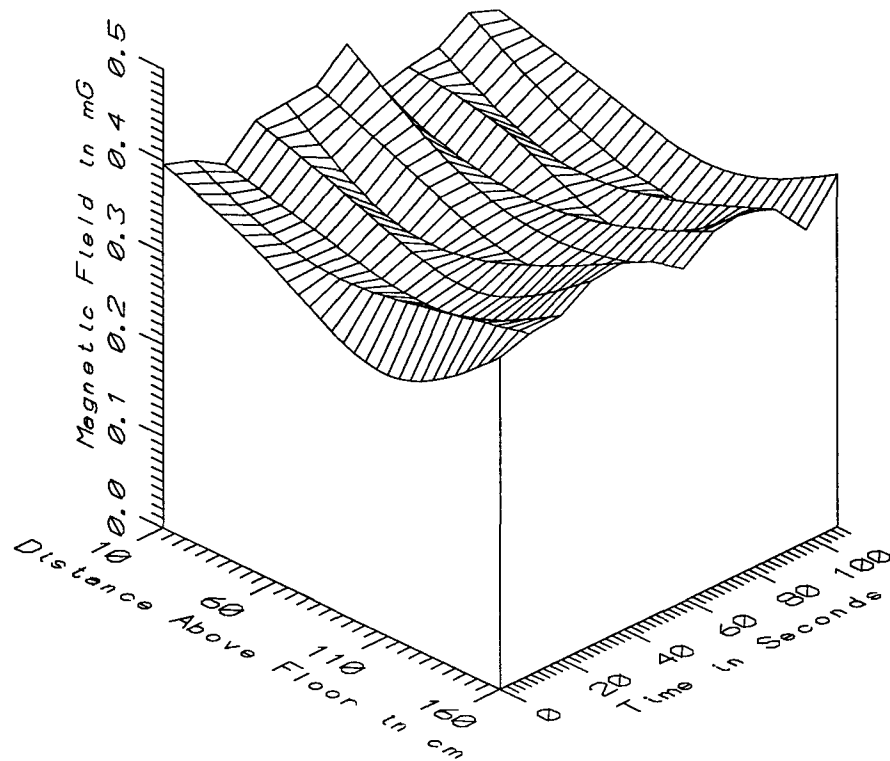
TGV016 - BETWEEN RELAY SHELVES, VENDOME RELAY ROOM - STATIC



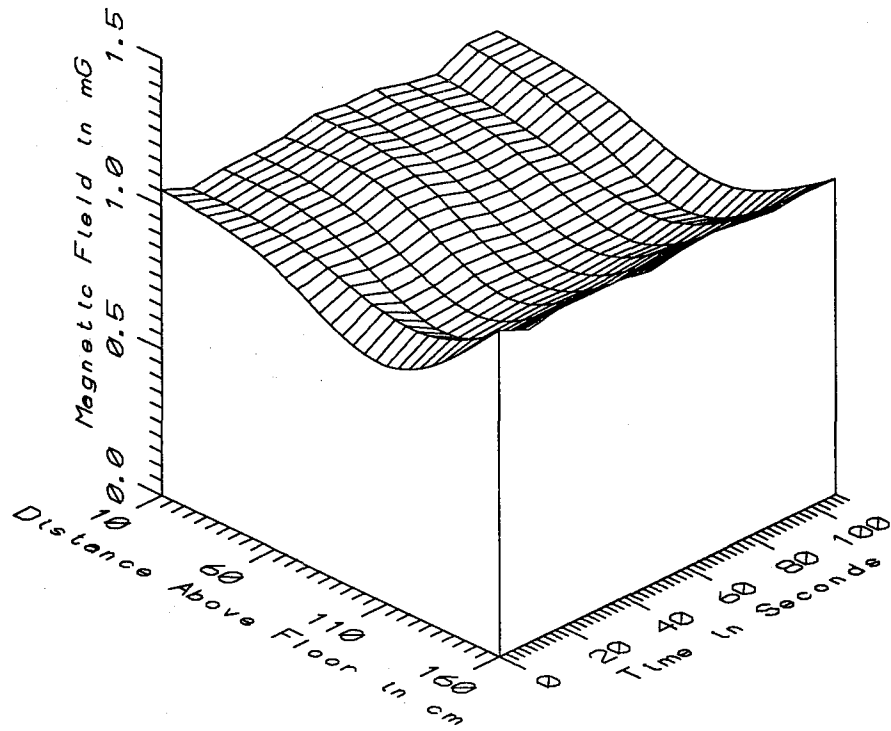
TGV016 - BETWEEN RELAY SHELVES, VENDOME RELAY ROOM - LOW FREQ, 5-45Hz



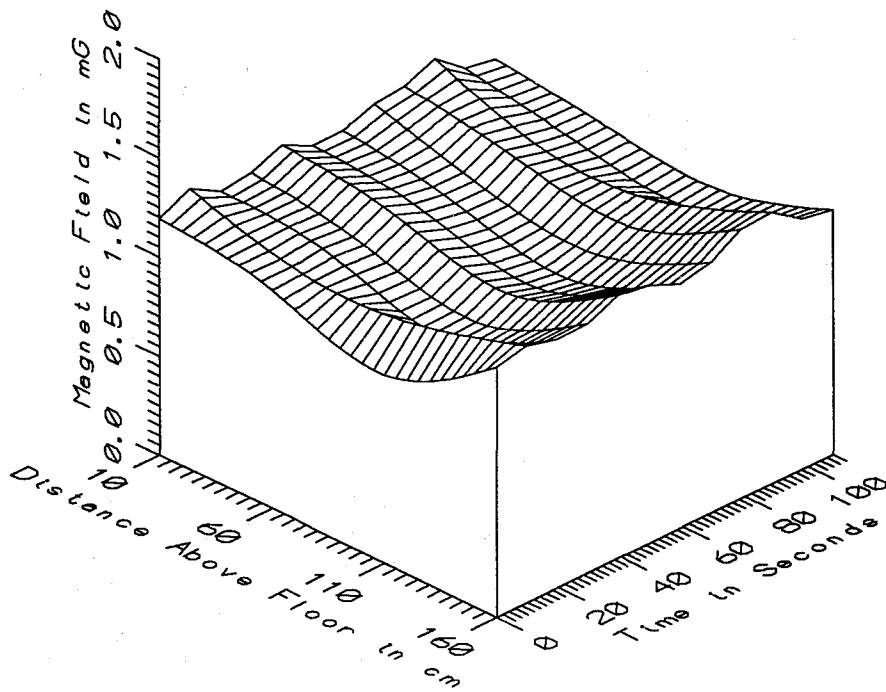
TGV016 - BETWEEN RELAY SHELVES, VENDOME RELAY ROOM - POWER FREQ, 50-60Hz



TGV016 - BETWEEN RELAY SHELVES, VENDOME RELAY ROOM - POWER HARM, 65-300Hz



TGV016 - BETWEEN RELAY SHELVES, VENDOME RELAY ROOM - HIGH FREQ, 305-2560Hz



TGV016 - BETWEEN RELAY SHELVES, VENDOME RELAY ROOM - ALL FREQ, 5-2560Hz

| TGV016 - VENDOME RELAY ROOM, BETWEEN RELAY SHELVES | | TOTAL OF 12 SAMPLES | | | | |
|--|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 332.94 | 333.74 | 333.34 | 0.26 | 0.08 |
| | 60 | 286.72 | 287.80 | 287.14 | 0.32 | 0.11 |
| | 110 | 359.53 | 361.10 | 359.92 | 0.41 | 0.11 |
| | 160 | 462.42 | 464.14 | 463.31 | 0.53 | 0.11 |
| 5-45Hz | 10 | 0.25 | 0.50 | 0.35 | 0.08 | 22.19 |
| LOW FREQ | 60 | 0.21 | 0.38 | 0.31 | 0.06 | 18.84 |
| | 110 | 0.37 | 0.48 | 0.42 | 0.04 | 9.52 |
| | 160 | 0.31 | 0.42 | 0.35 | 0.03 | 8.04 |
| 50-60Hz | 10 | 0.24 | 0.68 | 0.39 | 0.15 | 39.89 |
| PWR FREQ | 60 | 0.19 | 0.47 | 0.32 | 0.10 | 30.48 |
| | 110 | 0.17 | 0.50 | 0.30 | 0.11 | 37.80 |
| | 160 | 0.25 | 0.68 | 0.42 | 0.15 | 36.98 |
| 65-300Hz | 10 | 0.36 | 0.43 | 0.39 | 0.02 | 4.78 |
| PWR HARM | 60 | 0.32 | 0.35 | 0.34 | 0.01 | 3.40 |
| | 110 | 0.28 | 0.34 | 0.32 | 0.02 | 5.24 |
| | 160 | 0.34 | 0.40 | 0.38 | 0.02 | 4.49 |
| 305-2560Hz | 10 | 0.99 | 1.05 | 1.03 | 0.02 | 1.90 |
| HIGH FREQ | 60 | 0.93 | 1.01 | 0.97 | 0.02 | 2.20 |
| | 110 | 0.81 | 0.89 | 0.85 | 0.02 | 2.61 |
| | 160 | 1.07 | 1.12 | 1.09 | 0.01 | 1.22 |
| 5-2560Hz | 10 | 1.18 | 1.33 | 1.23 | 0.05 | 3.95 |
| ALL FREQ | 60 | 1.09 | 1.19 | 1.12 | 0.03 | 2.69 |
| | 110 | 0.95 | 1.16 | 1.05 | 0.06 | 6.05 |
| | 160 | 1.23 | 1.37 | 1.29 | 0.05 | 3.60 |



APPENDIX R

DATASET TGV017
VENDOME STATION PLATFORM AS TRAIN FROM PARIS PASSED

Measurement Setup Code: Staff: 19 Reference: 20
 Drawing: A-5

Vehicle Status: Single train set from Paris passed
 60 seconds into the record

Measurement Date: September 8, 1992

Measurement Time: Start: 16:03:27
 End: 16:05:05

Number of Samples: 13

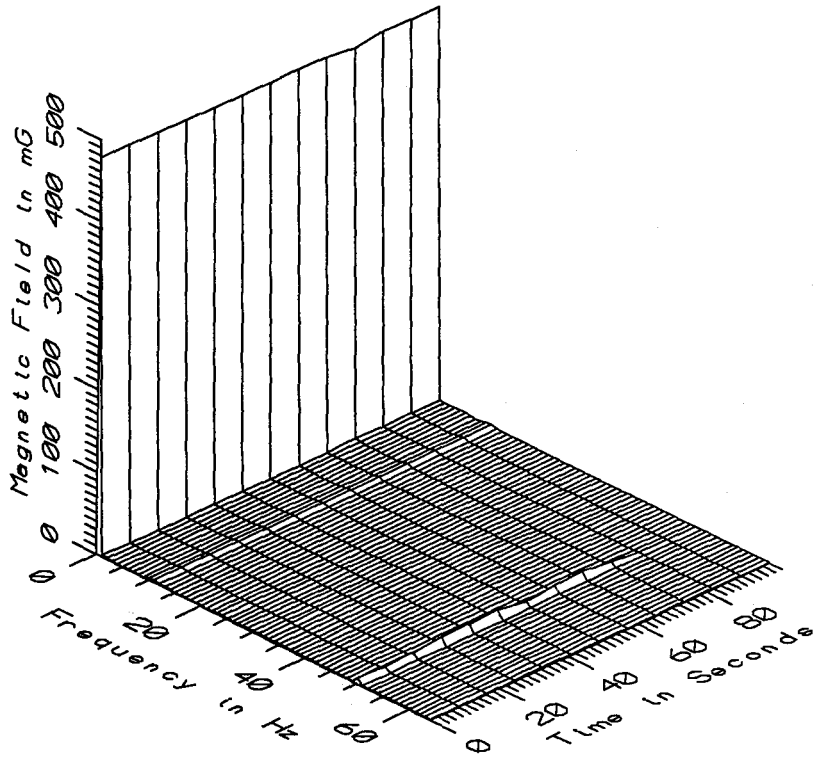
Programmed Sample Interval: 5 sec

Actual Sample Interval: 8.2 sec

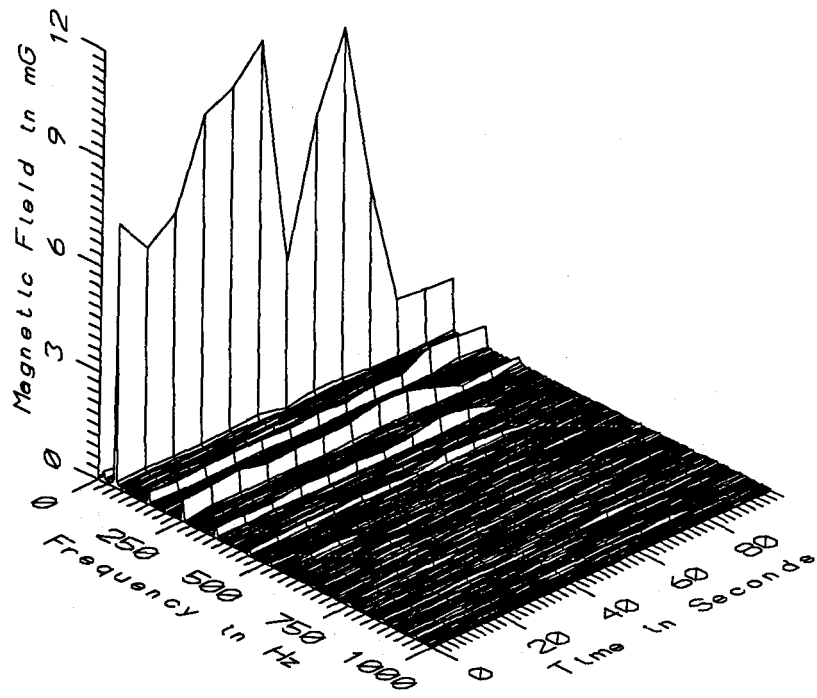
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

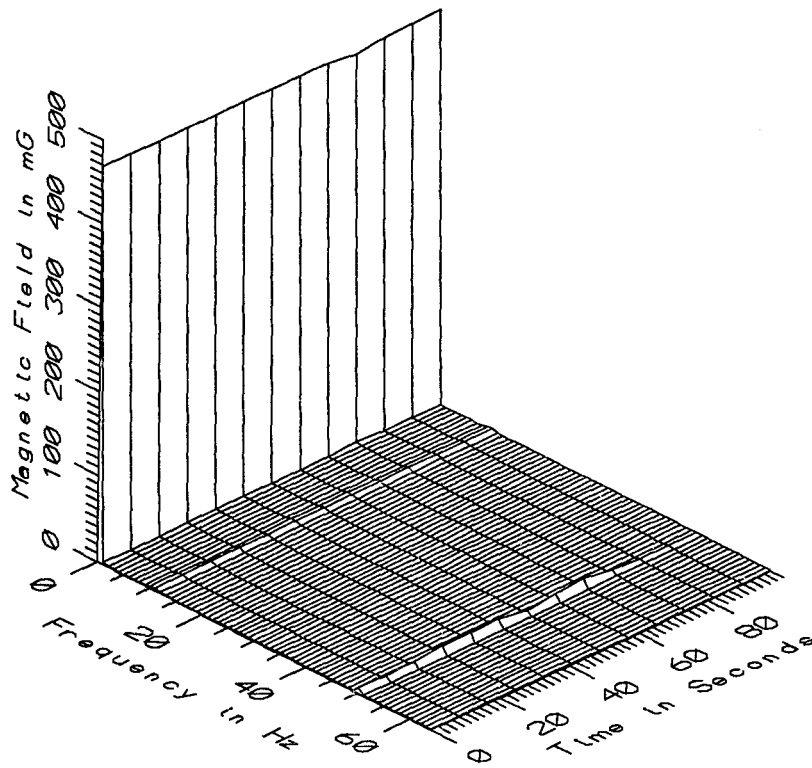
Missing or Suspect Data: None



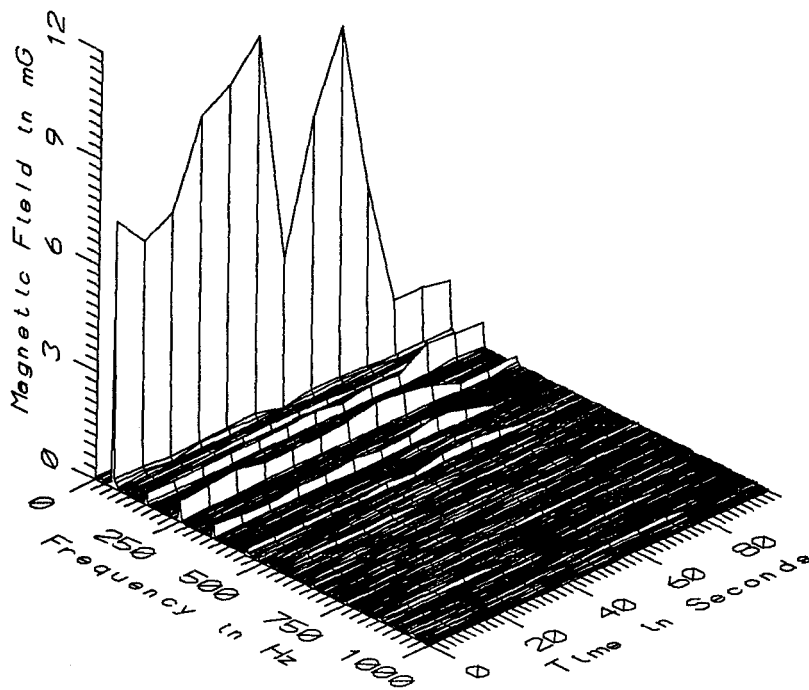
TGV017 - 10cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



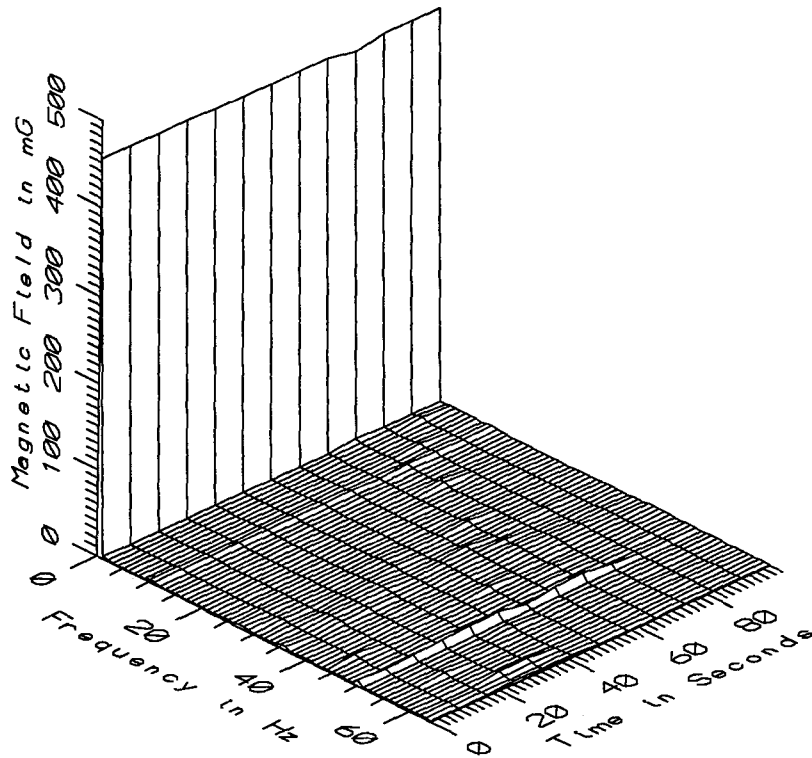
TGV017 - 10cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



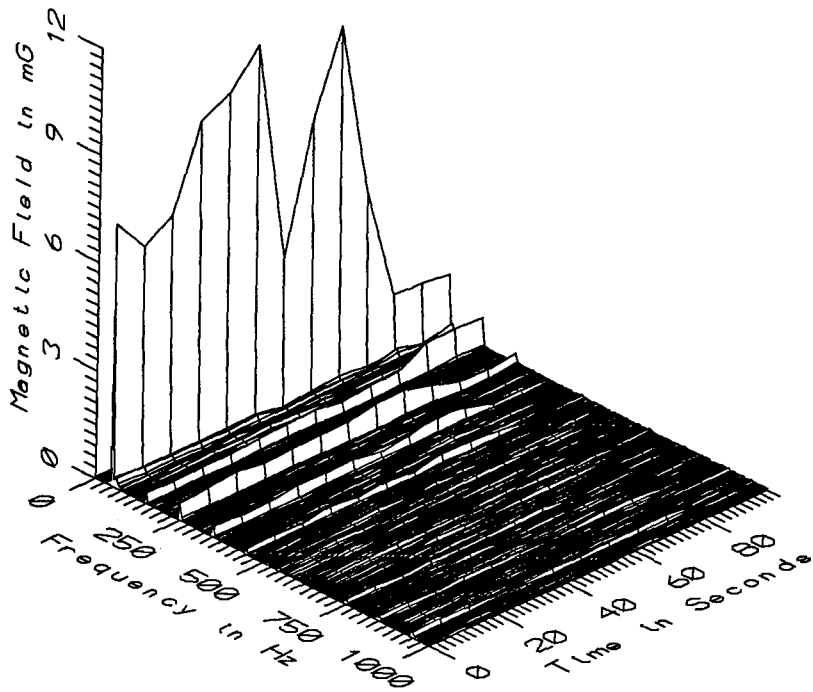
TGV017 - 60cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



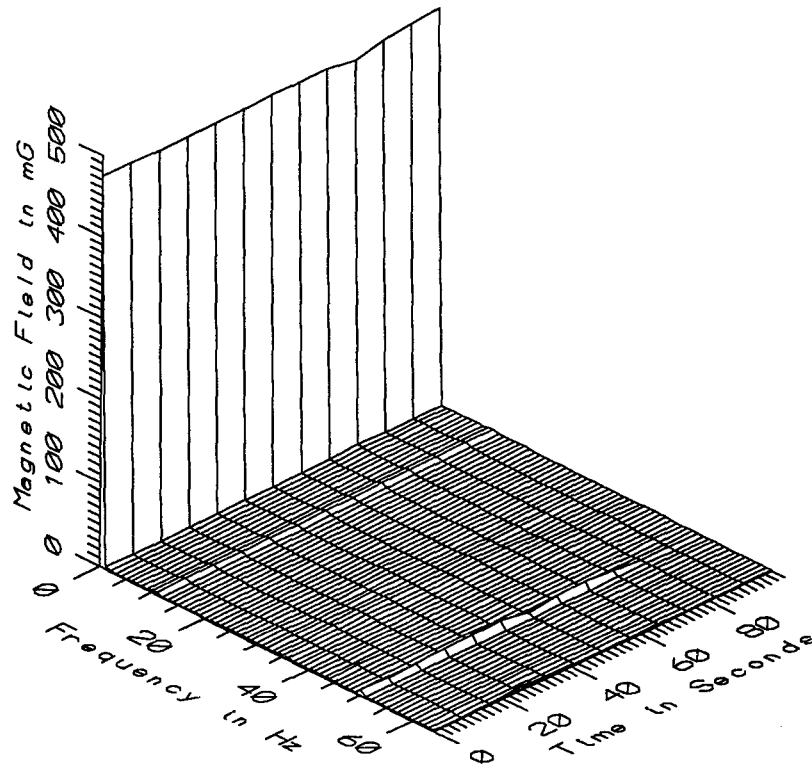
TGV017 - 60cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



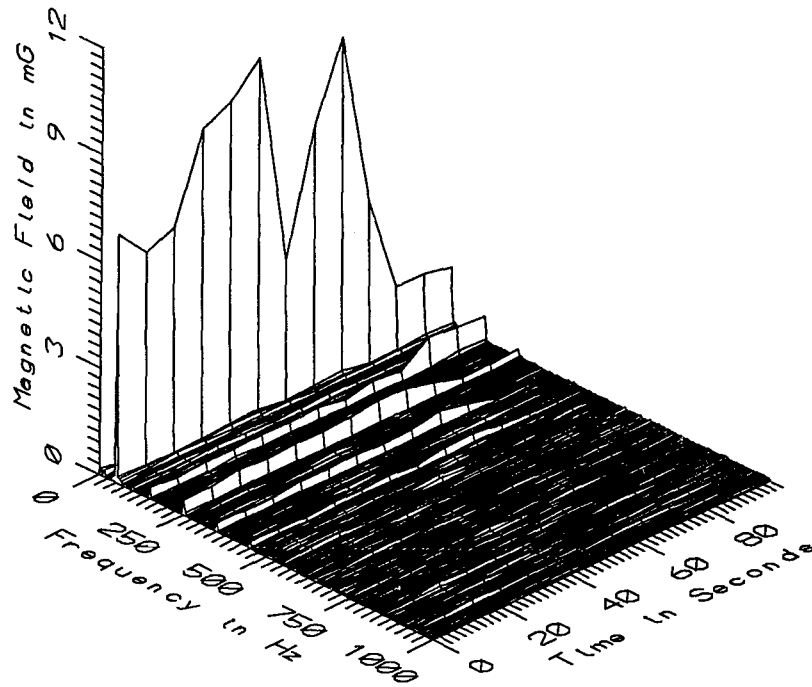
TGV017 - 110cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



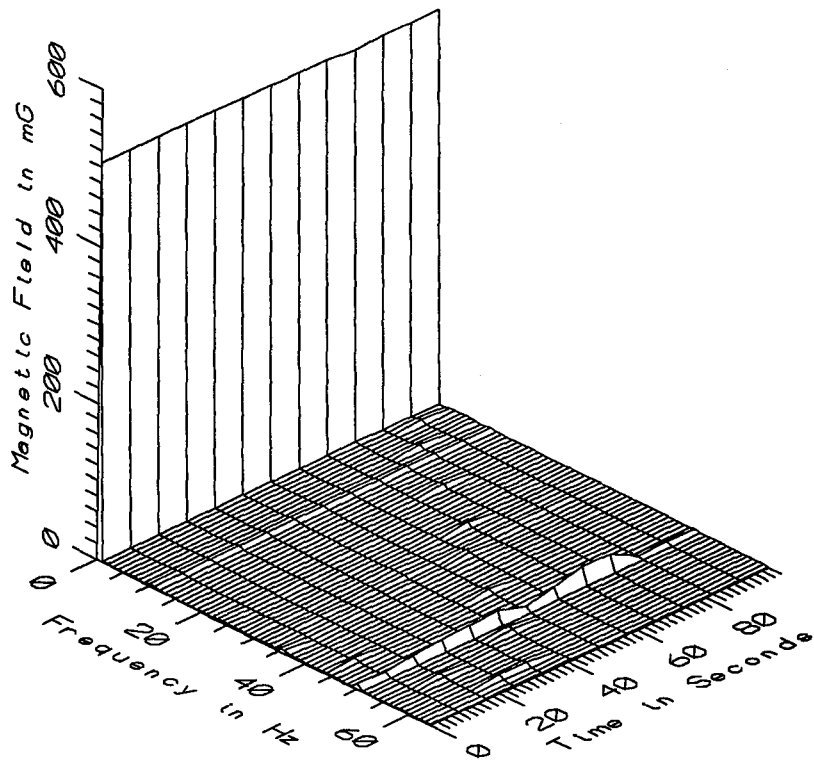
TGV017 - 110cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



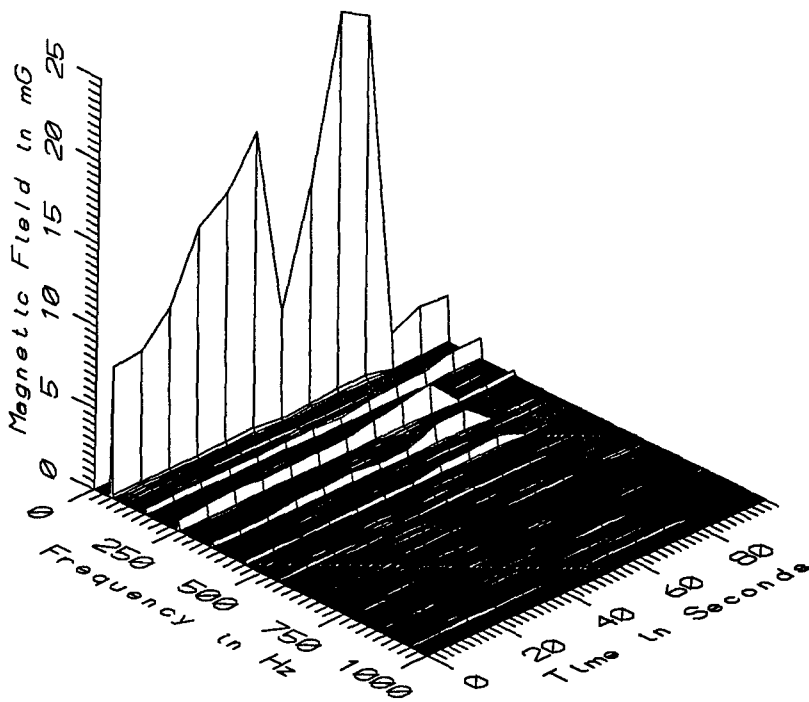
TGV017 - 160cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



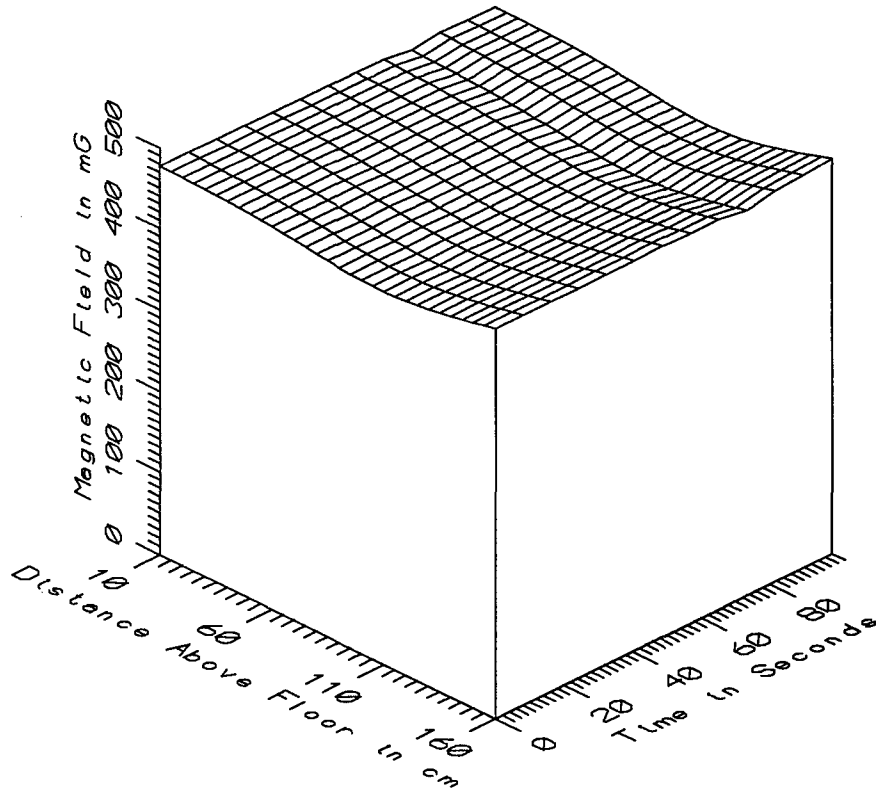
TGV017 - 160cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



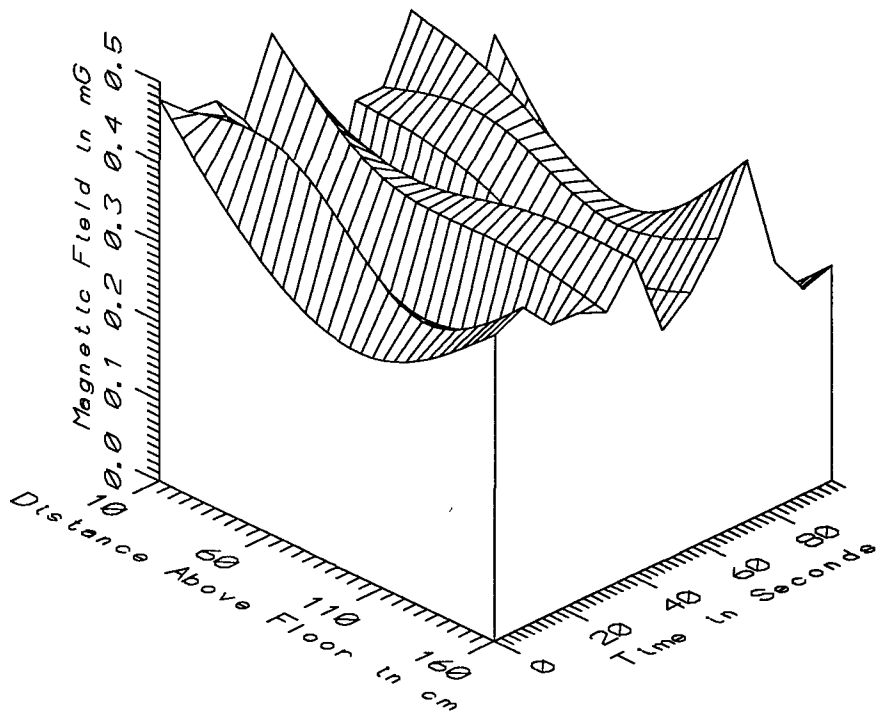
TGV017 - REFERENCE PROBE - 5m FROM EDGE OF PLATFORM, VENDOME STATION



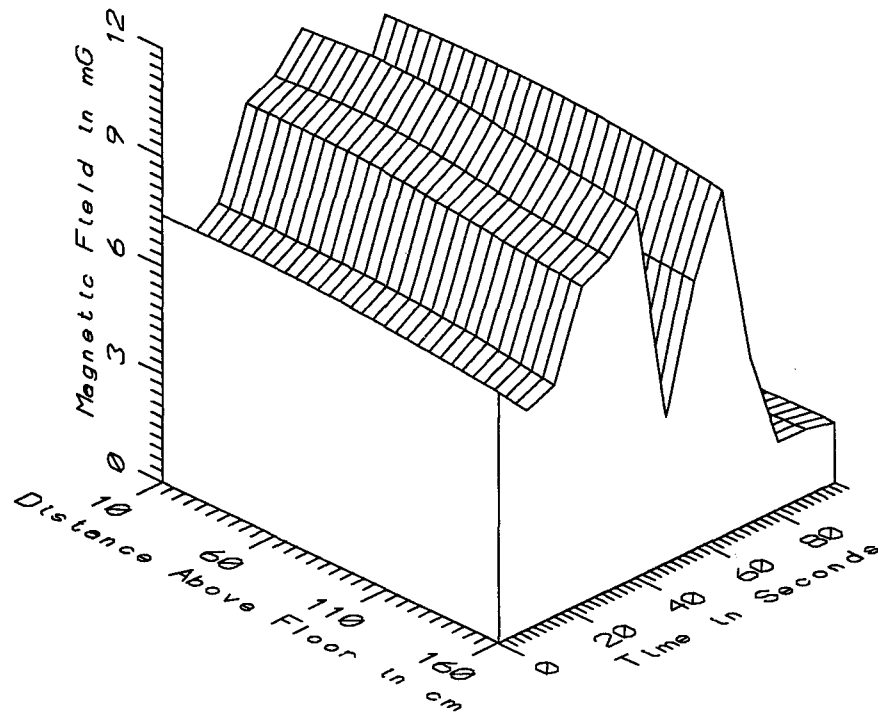
TGV017 - REFERENCE PROBE - 5m FROM EDGE OF PLATFORM, VENDOME STATION



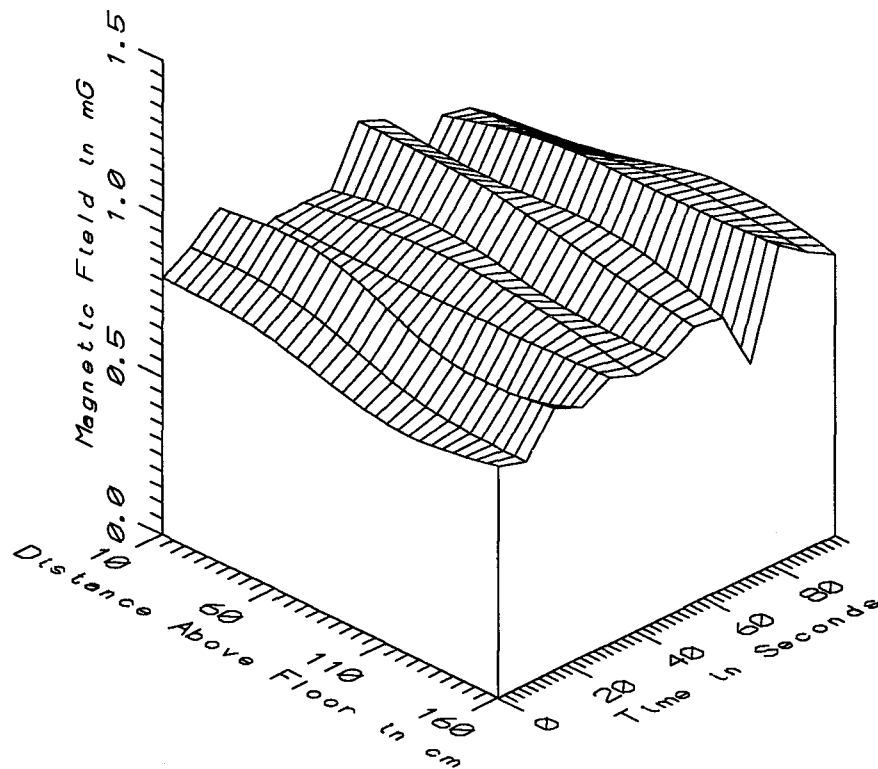
TGV017 - EDGE OF PLATFORM, VENDOME STATION - STATIC



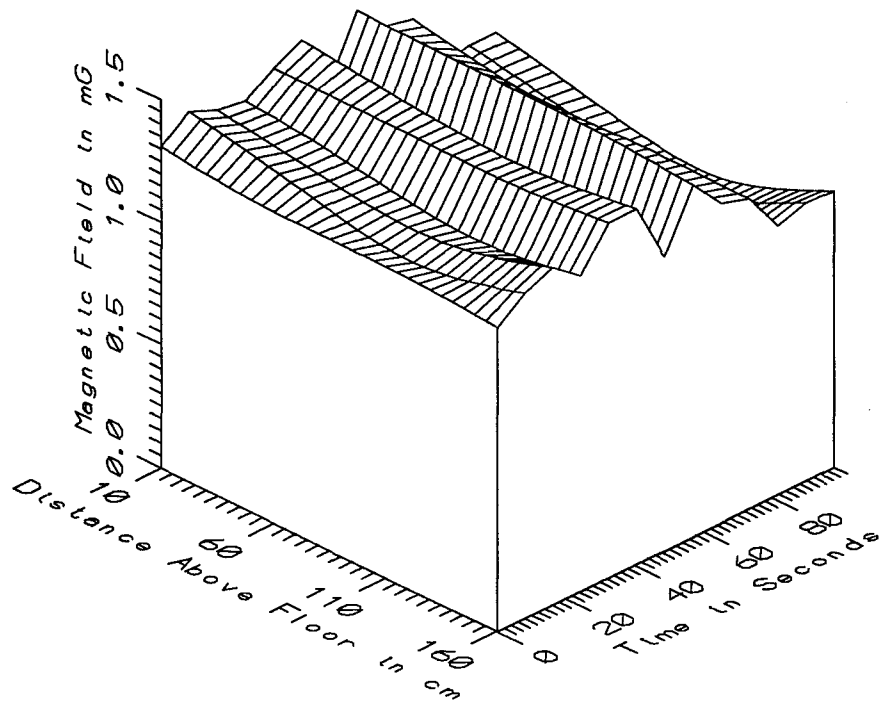
TGV017 - EDGE OF PLATFORM, VENDOME STATION - LOW FREQ, 5-45Hz



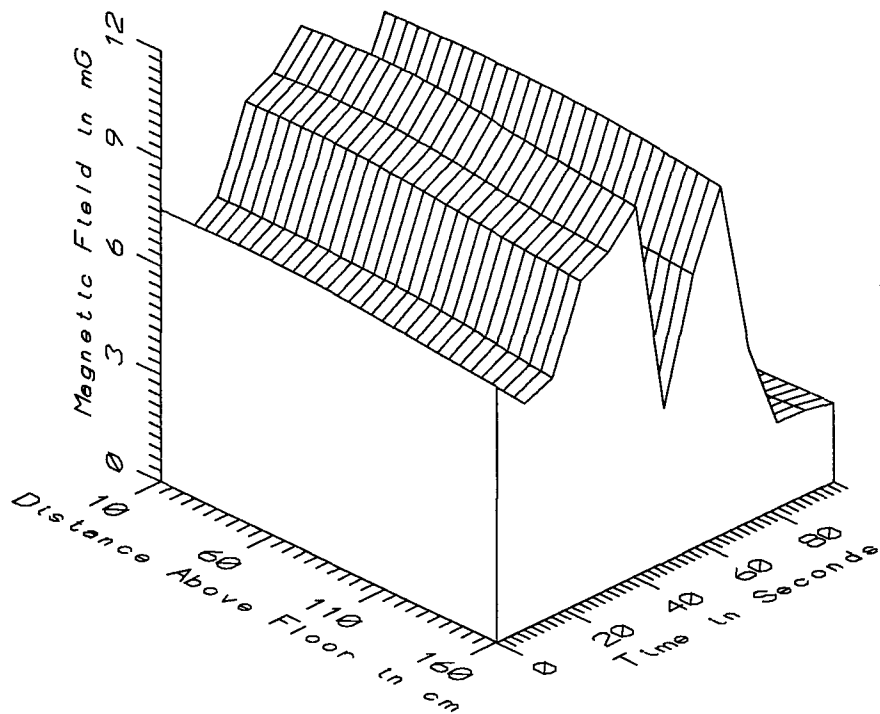
TGV017 - EDGE OF PLATFORM, VENDOME STATION - POWER FREQ, 50-60Hz



TGV017 - EDGE OF PLATFORM, VENDOME STATION - POWER HARM, 65-300Hz

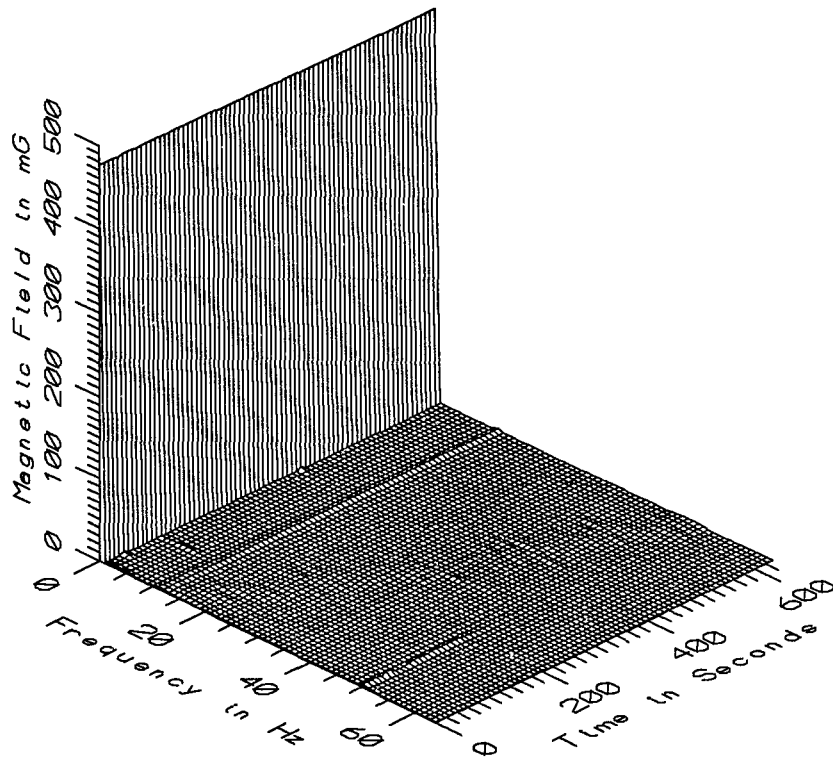


TGV017 - EDGE OF PLATFORM, VENDOME STATION - HIGH FREQ, 305-2560Hz

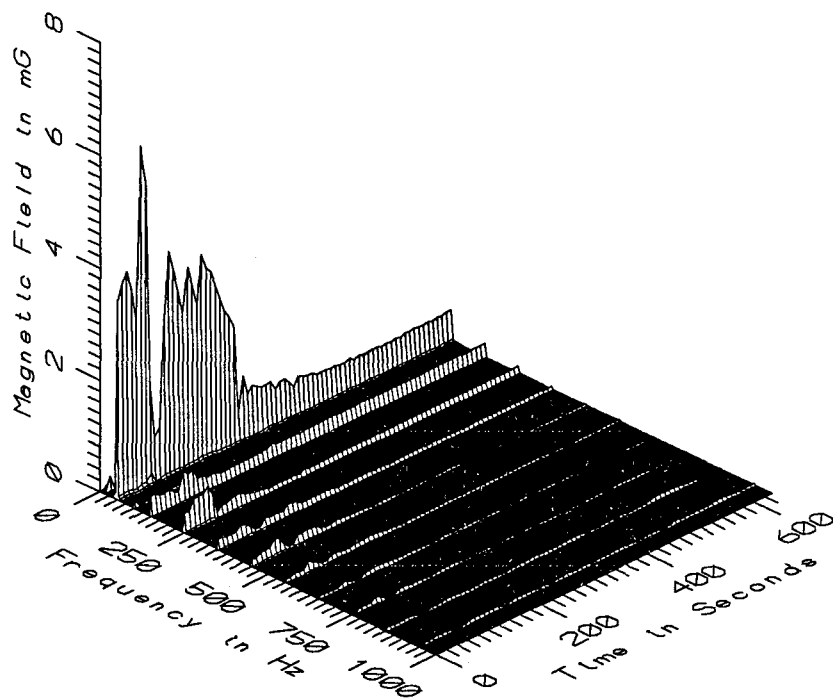


TGV017 - EDGE OF PLATFORM, VENDOME STATION - ALL FREQ, 5-2560Hz

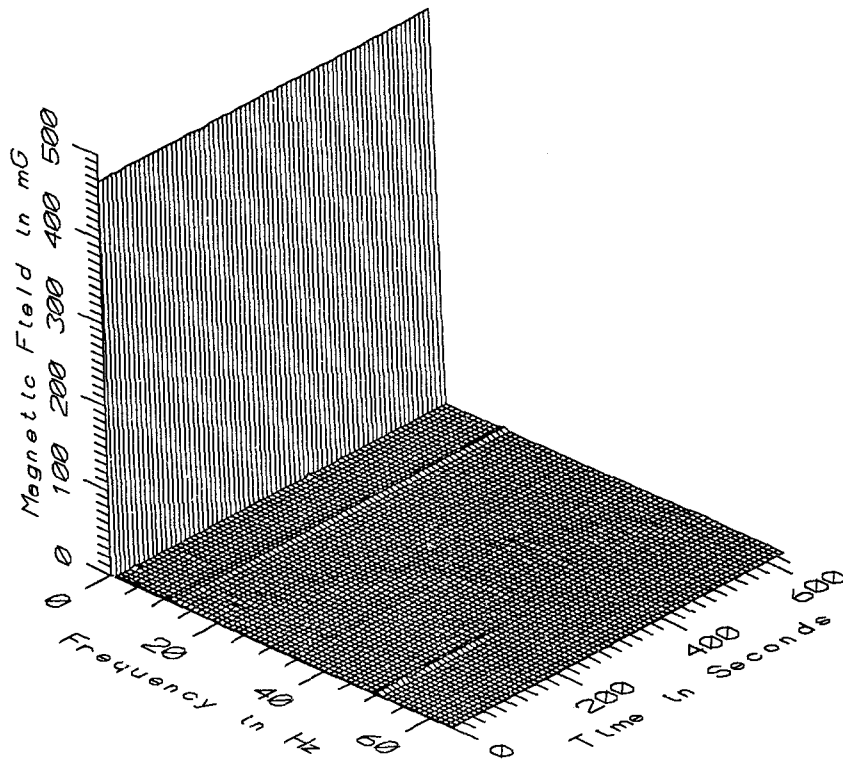
| TGV017 - ON VENDOME PLATFORM - TRAIN FROM PARIS | | TOTAL OF 13 SAMPLES | | | | |
|---|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 473.34 | 478.86 | 477.55 | 1.50 | 0.31 |
| | 60 | 463.31 | 469.49 | 467.81 | 1.46 | 0.31 |
| | 110 | 449.21 | 455.78 | 454.40 | 1.65 | 0.36 |
| | 160 | 470.84 | 485.77 | 476.59 | 3.84 | 0.81 |
| 5-45Hz LOW FREQ | 10 | 0.22 | 0.49 | 0.39 | 0.08 | 21.54 |
| | 60 | 0.19 | 0.44 | 0.32 | 0.07 | 23.21 |
| | 110 | 0.16 | 0.39 | 0.28 | 0.07 | 27.14 |
| | 160 | 0.26 | 0.45 | 0.35 | 0.06 | 16.31 |
| 50-60Hz PWR FREQ | 10 | 1.53 | 10.70 | 6.36 | 3.29 | 51.71 |
| | 60 | 1.45 | 10.85 | 6.41 | 3.34 | 52.09 |
| | 110 | 1.58 | 10.51 | 6.26 | 3.21 | 51.25 |
| | 160 | 1.66 | 10.13 | 6.07 | 3.03 | 49.99 |
| 65-300Hz PWR HARM | 10 | 0.76 | 1.01 | 0.86 | 0.07 | 8.57 |
| | 60 | 0.78 | 0.99 | 0.88 | 0.07 | 8.14 |
| | 110 | 0.69 | 0.99 | 0.85 | 0.10 | 12.06 |
| | 160 | 0.67 | 1.00 | 0.83 | 0.09 | 10.91 |
| 305-2560Hz HIGH FREQ | 10 | 1.09 | 1.48 | 1.31 | 0.13 | 9.98 |
| | 60 | 1.01 | 1.47 | 1.25 | 0.15 | 12.10 |
| | 110 | 0.96 | 1.46 | 1.22 | 0.17 | 13.62 |
| | 160 | 1.09 | 1.44 | 1.27 | 0.12 | 9.37 |
| 5-2560Hz ALL FREQ | 10 | 2.09 | 10.84 | 6.63 | 3.14 | 47.28 |
| | 60 | 1.98 | 10.98 | 6.66 | 3.19 | 47.88 |
| | 110 | 2.08 | 10.65 | 6.51 | 3.07 | 47.26 |
| | 160 | 2.21 | 10.27 | 6.33 | 2.89 | 45.62 |



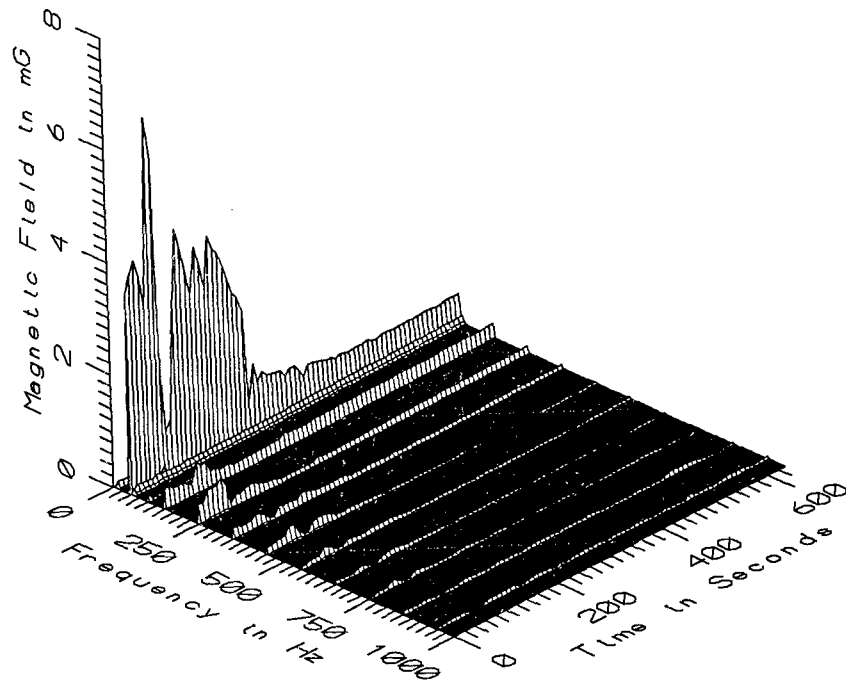
TGV018 - 10cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



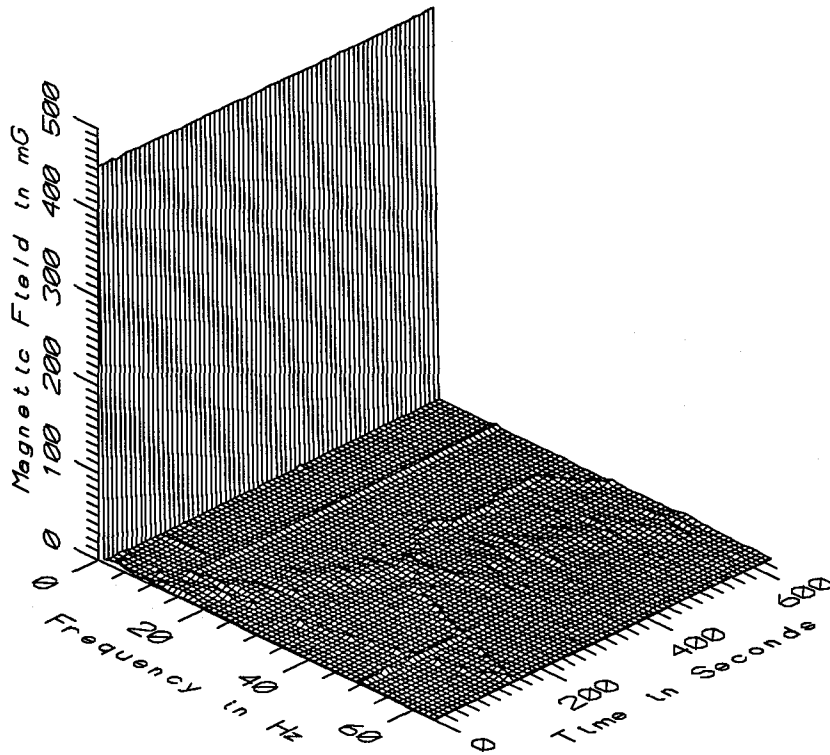
TGV018 - 10cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



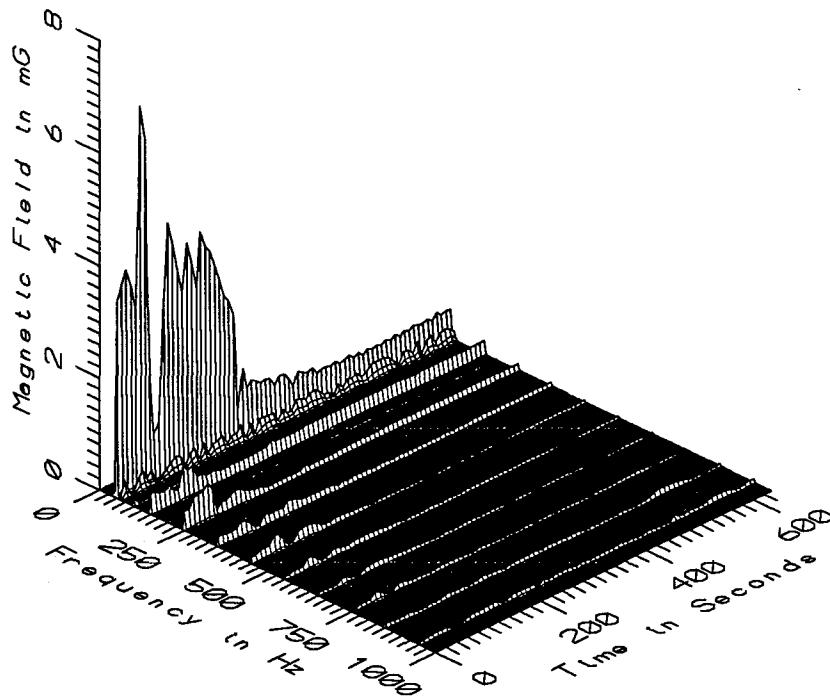
TGV018 - 60cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



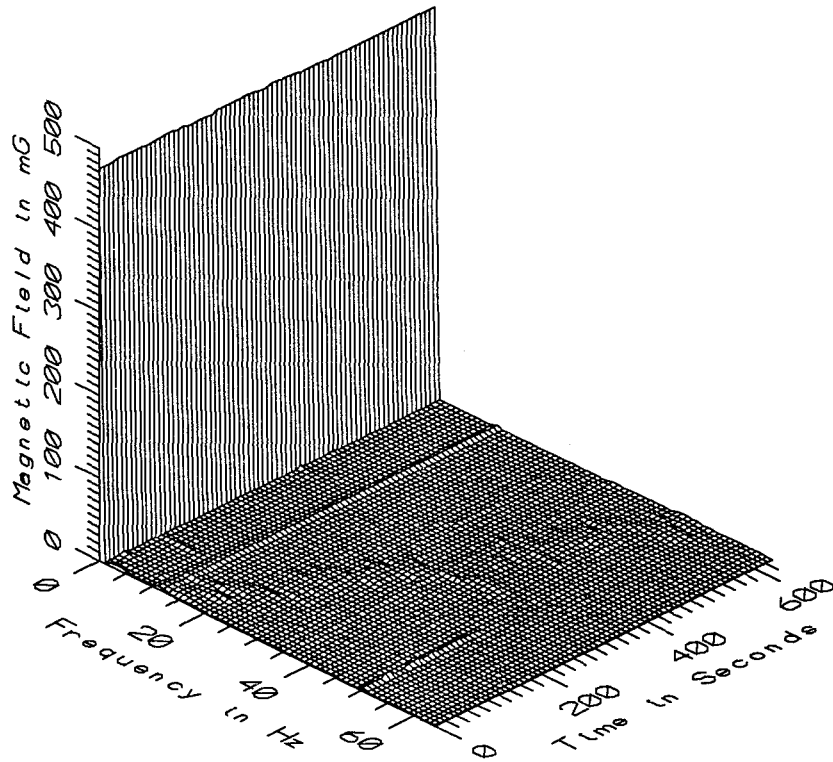
TGV018 - 60cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



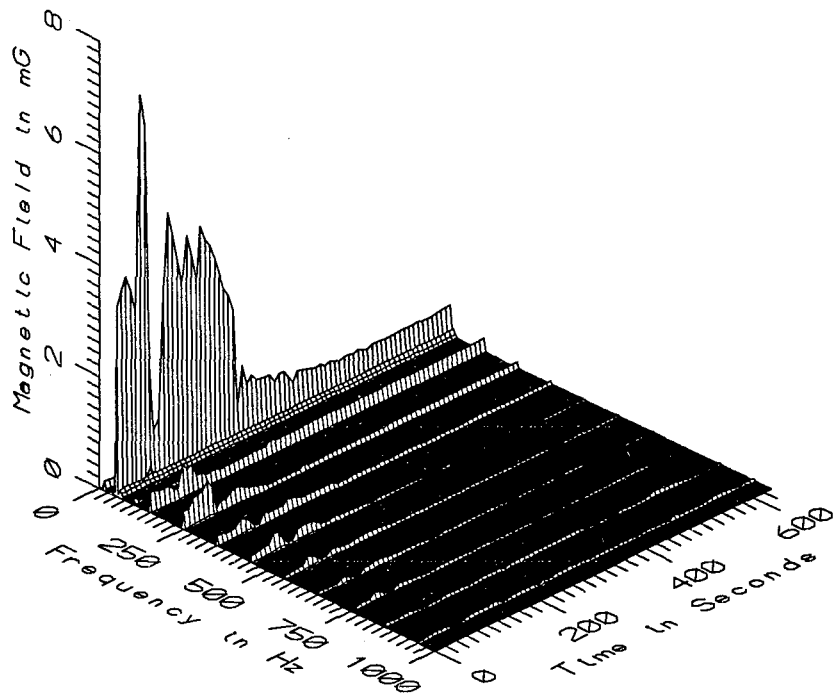
TGV018 - 110cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



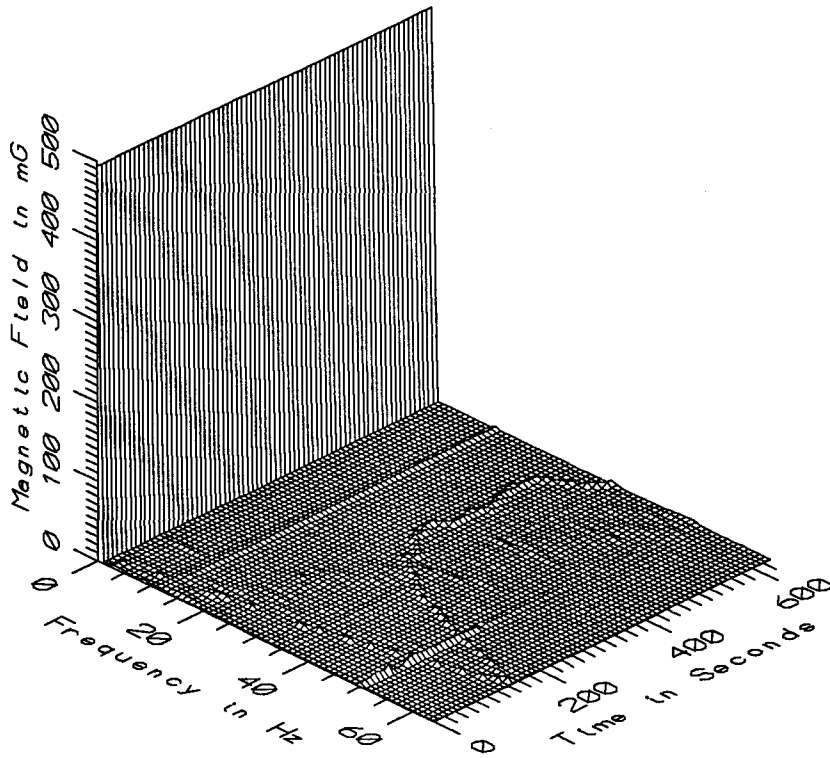
TGV018 - 110cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



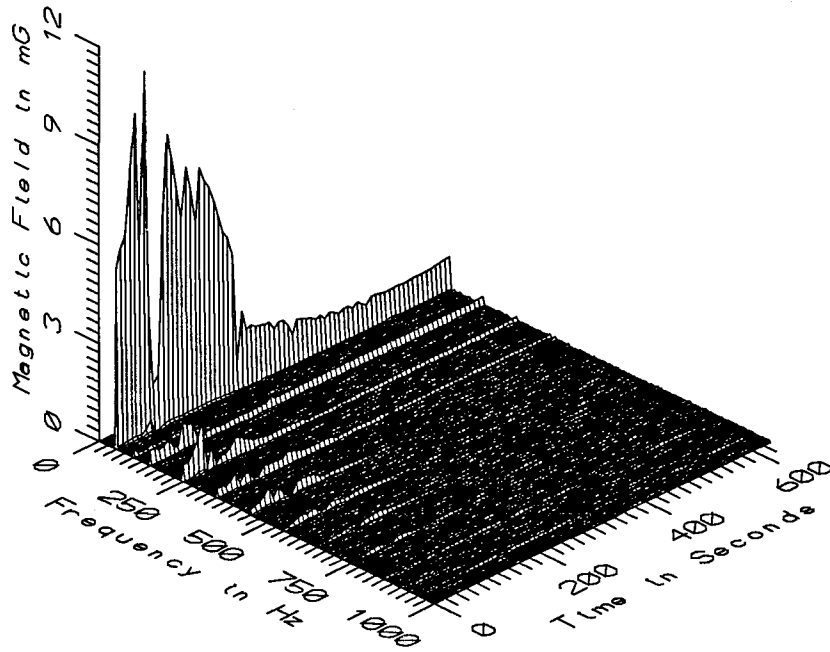
TGV018 - 160cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



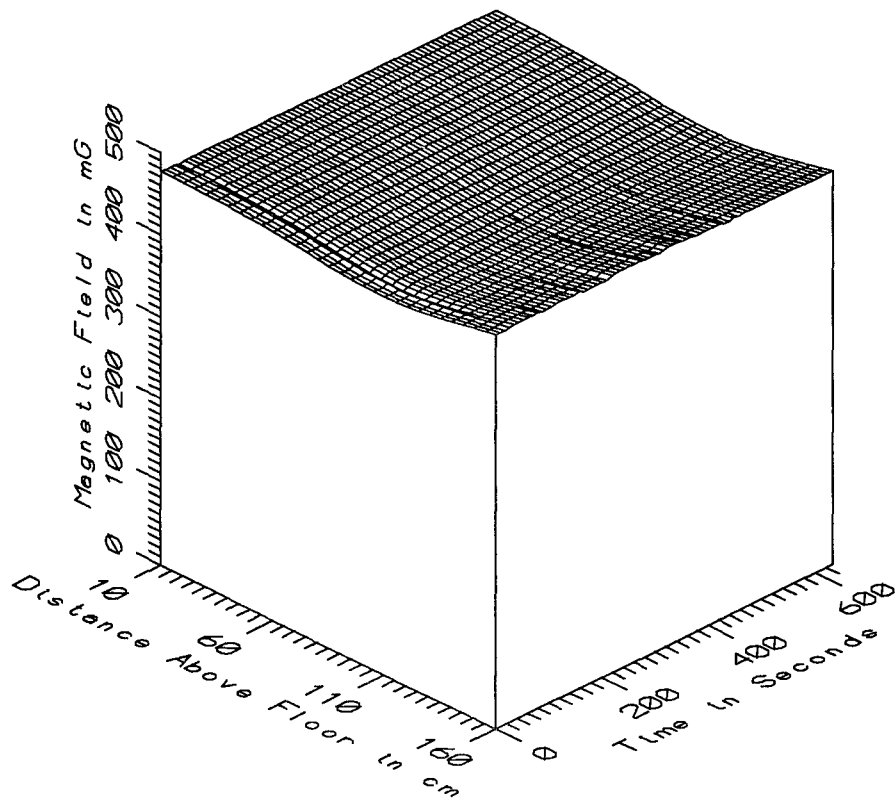
TGV018 - 160cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



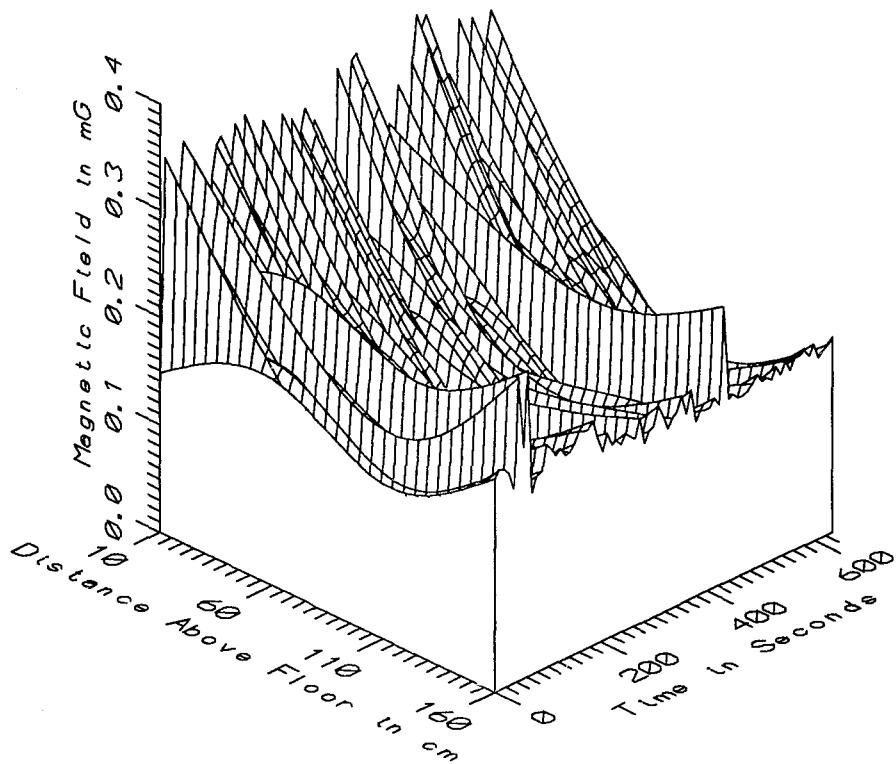
TGV018 - REFERENCE PROBE - 5m FROM EDGE OF PLATFORM, VENDOME STATION



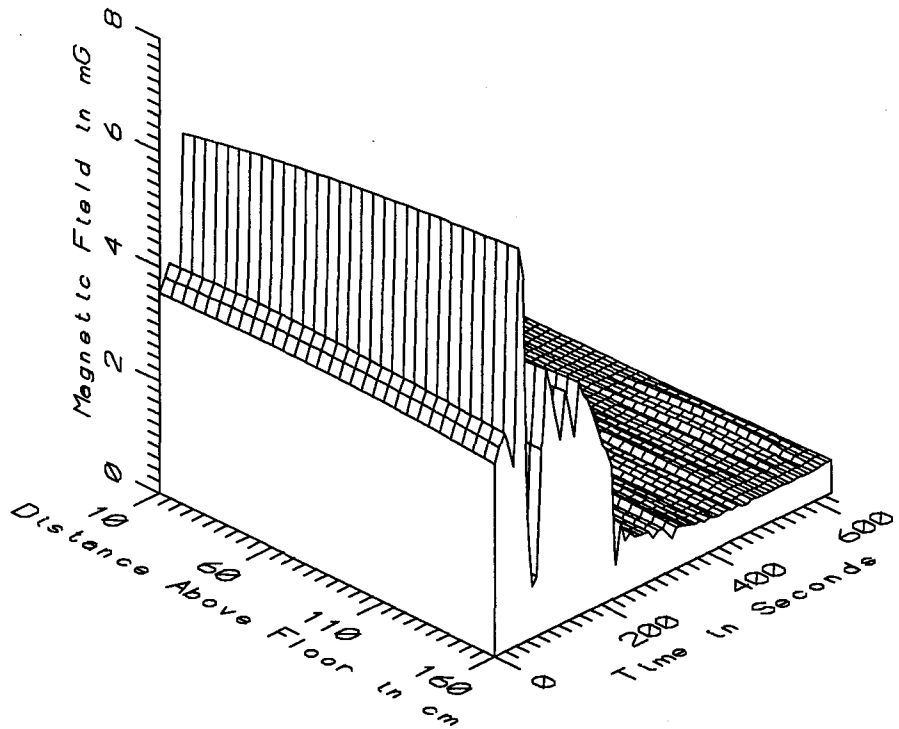
TGV018 - REFERENCE PROBE - 5m FROM EDGE OF PLATFORM, VENDOME STATION



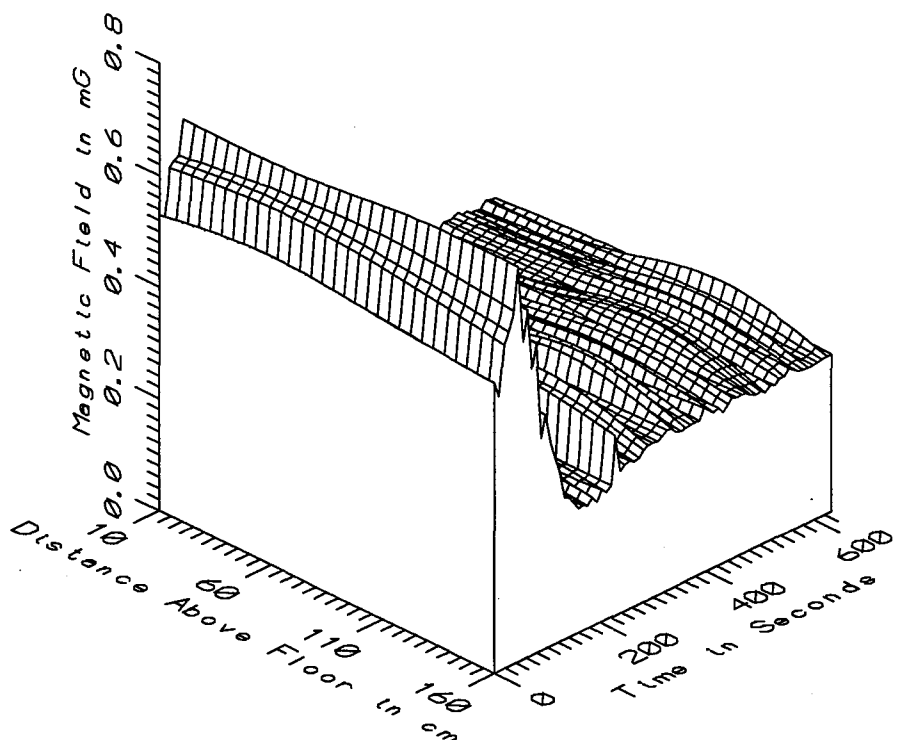
TGV018 - EDGE OF PLATFORM, VENDOME STATION - STATIC



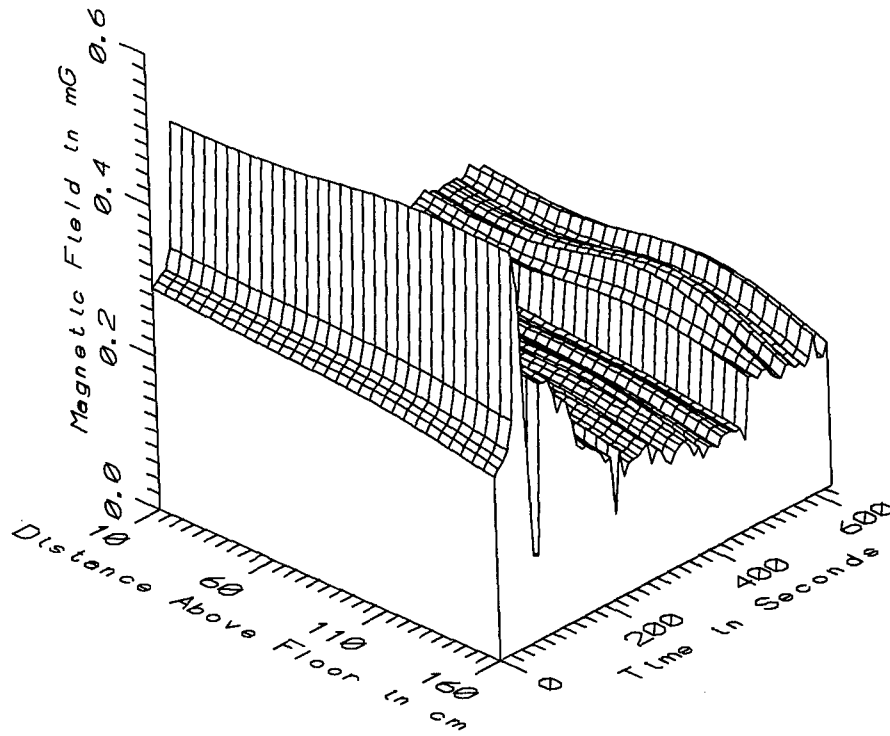
TGV018 - EDGE OF PLATFORM, VENDOME STATION - LOW FREQ, 5-45Hz



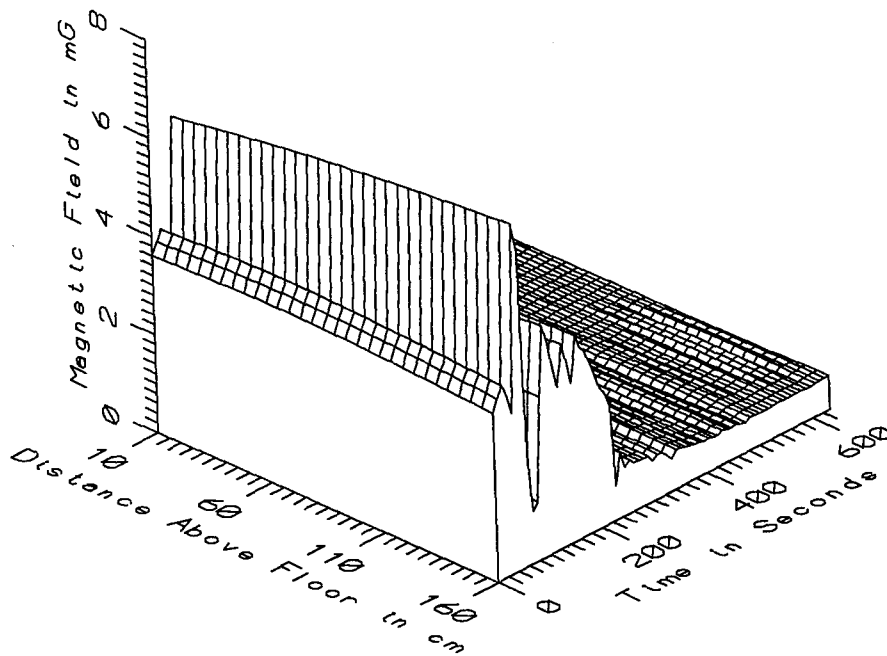
TGV018 - EDGE OF PLATFORM, VENDOME STATION - POWER FREQ, 50-60Hz



TGV018 - EDGE OF PLATFORM, VENDOME STATION - POWER HARM, 65-300Hz



TGV018 - EDGE OF PLATFORM, VENDOME STATION - HIGH FREQ, 305-2560Hz



TGV018 - EDGE OF PLATFORM, VENDOME STATION - ALL FREQ, 5-2560Hz

| TGV018 - ON VENDOME PLATFORM - TRAIN FROM PARIS | | | | TOTAL OF 73 SAMPLES | | | |
|---|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|--|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) | |
| STATIC | 10 | 474.72 | 477.05 | 476.41 | 0.35 | 0.07 | |
| | 60 | 466.49 | 469.38 | 468.26 | 0.50 | 0.11 | |
| | 110 | 451.61 | 456.11 | 454.62 | 0.61 | 0.13 | |
| | 160 | 473.88 | 480.00 | 476.75 | 1.30 | 0.27 | |
| 5-45Hz LOW FREQ | 10 | 0.10 | 0.37 | 0.25 | 0.08 | 33.89 | |
| | 60 | 0.16 | 0.26 | 0.18 | 0.02 | 9.85 | |
| | 110 | 0.06 | 0.23 | 0.12 | 0.03 | 26.93 | |
| | 160 | 0.16 | 0.29 | 0.19 | 0.02 | 12.18 | |
| 50-60Hz PWR FREQ | 10 | 0.48 | 6.11 | 1.52 | 1.41 | 92.81 | |
| | 60 | 0.49 | 6.49 | 1.58 | 1.49 | 94.32 | |
| | 110 | 0.49 | 6.76 | 1.64 | 1.53 | 93.52 | |
| | 160 | 0.51 | 6.98 | 1.66 | 1.58 | 95.06 | |
| 65-300Hz PWR HARM | 10 | 0.20 | 0.68 | 0.30 | 0.11 | 36.39 | |
| | 60 | 0.22 | 0.68 | 0.31 | 0.11 | 35.52 | |
| | 110 | 0.21 | 0.70 | 0.33 | 0.11 | 33.07 | |
| | 160 | 0.22 | 0.71 | 0.32 | 0.11 | 35.15 | |
| 305-2560Hz HIGH FREQ | 10 | 0.18 | 0.50 | 0.24 | 0.05 | 22.56 | |
| | 60 | 0.15 | 0.50 | 0.22 | 0.06 | 28.89 | |
| | 110 | 0.12 | 0.52 | 0.22 | 0.07 | 32.04 | |
| | 160 | 0.11 | 0.52 | 0.20 | 0.07 | 37.82 | |
| 5-2560Hz ALL FREQ | 10 | 0.63 | 6.18 | 1.63 | 1.36 | 83.79 | |
| | 60 | 0.62 | 6.55 | 1.67 | 1.46 | 87.38 | |
| | 110 | 0.59 | 6.82 | 1.72 | 1.50 | 87.41 | |
| | 160 | 0.61 | 7.04 | 1.74 | 1.55 | 88.95 | |

APPENDIX T

DATASET TGV019
VENDOME STATION PLATFORM AS TRAIN TO PARIS PASSED

Measurement Setup Code: Staff: 19 Reference: 20
 Drawing: A-5

Vehicle Status: Single train set to Paris passed
 200 seconds into the record

Measurement Date: September 8, 1992

Measurement Time: Start: 16:50:37
 End: 16:54:10

Number of Samples: 25

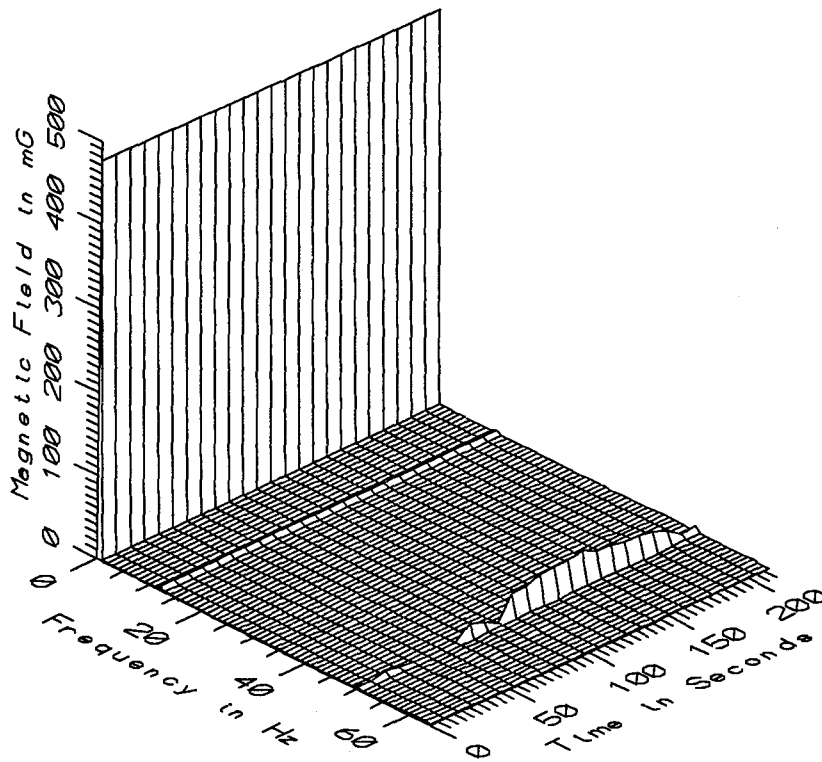
Programmed Sample Interval: 5 sec

Actual Sample Interval: 8.9 sec

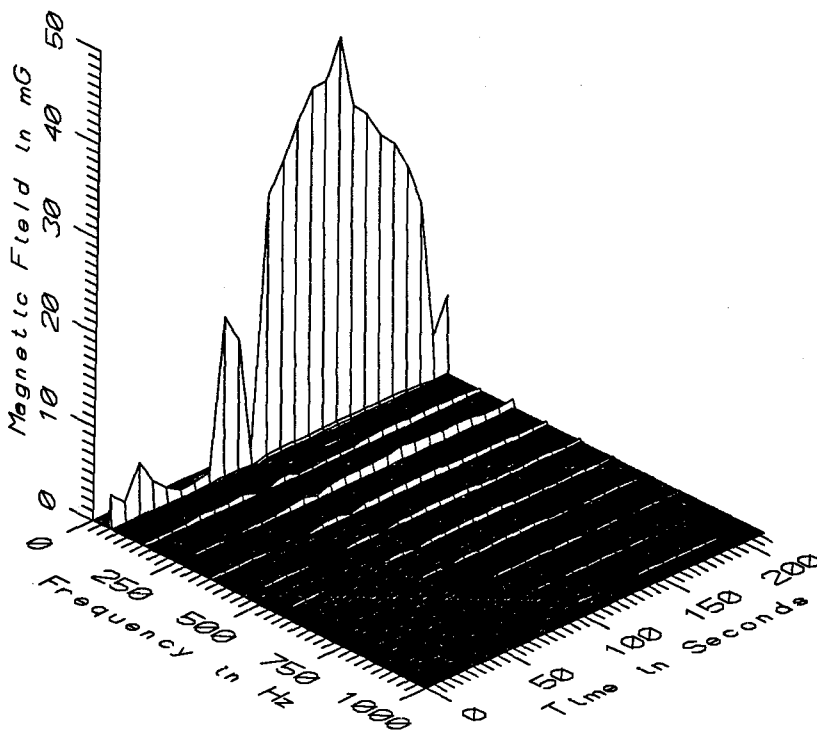
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

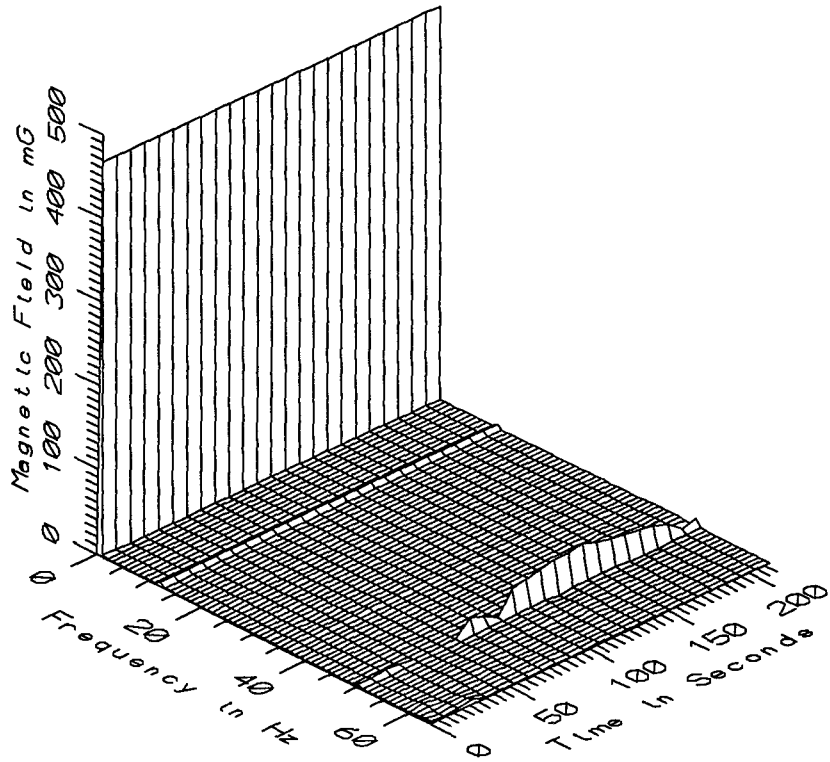
Missing or Suspect Data: None



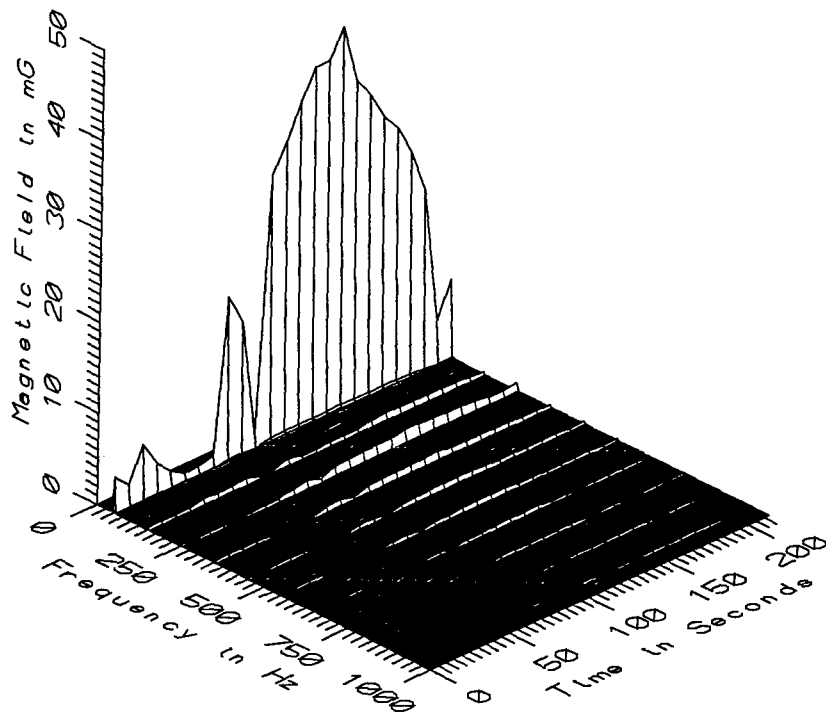
TGV019 - 10cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



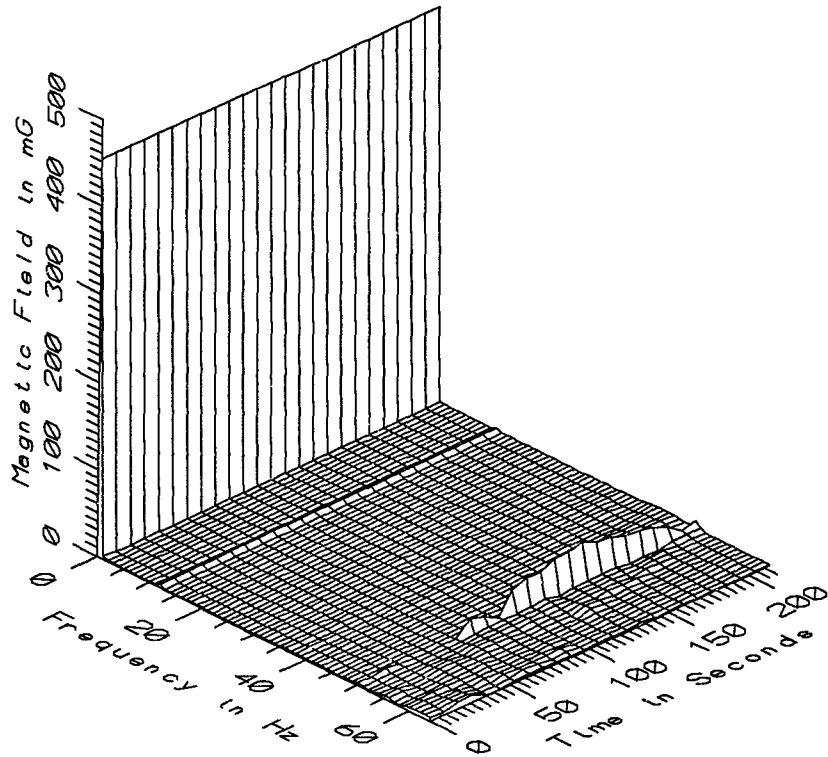
TGV019 - 10cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



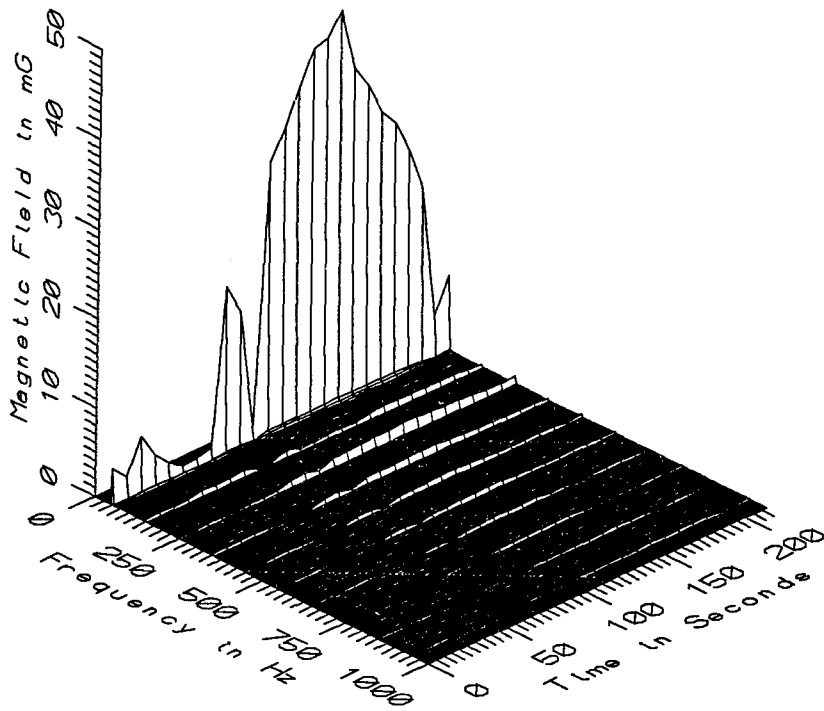
TGV019 - 60cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



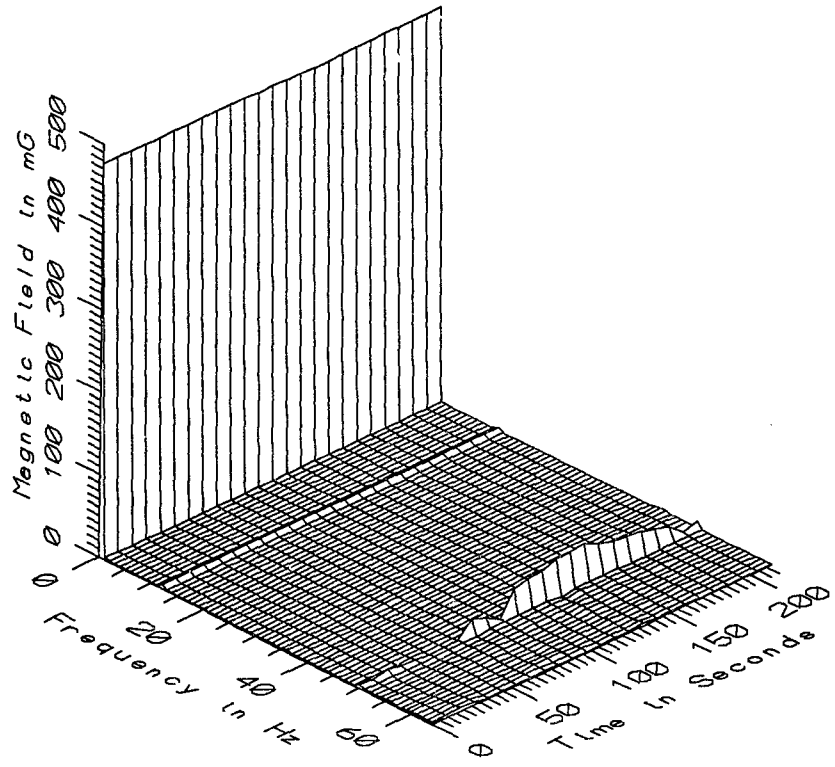
TGV019 - 60cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



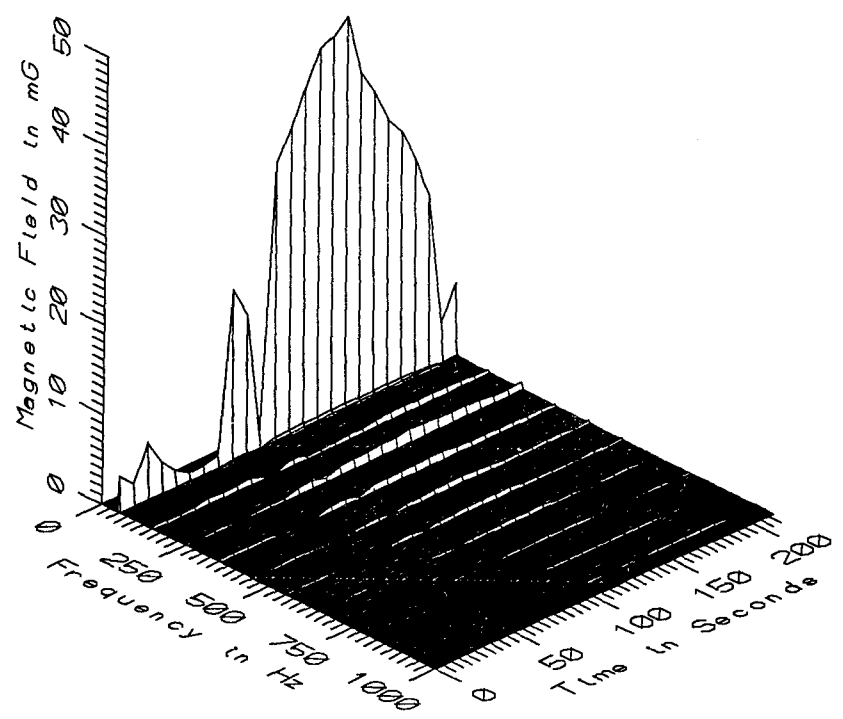
TGV019 - 110cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



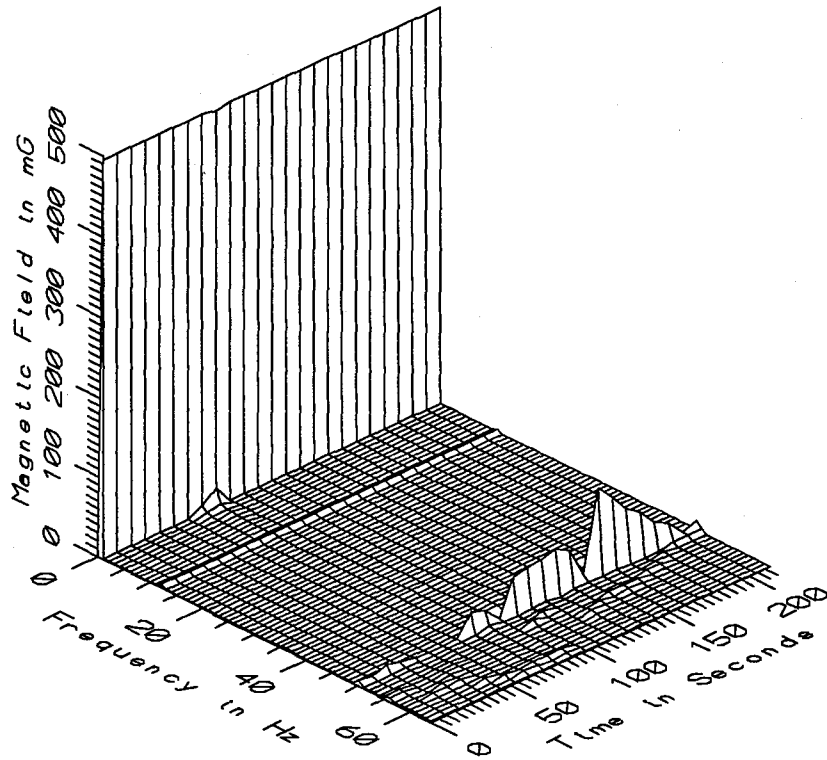
TGV019 - 110cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



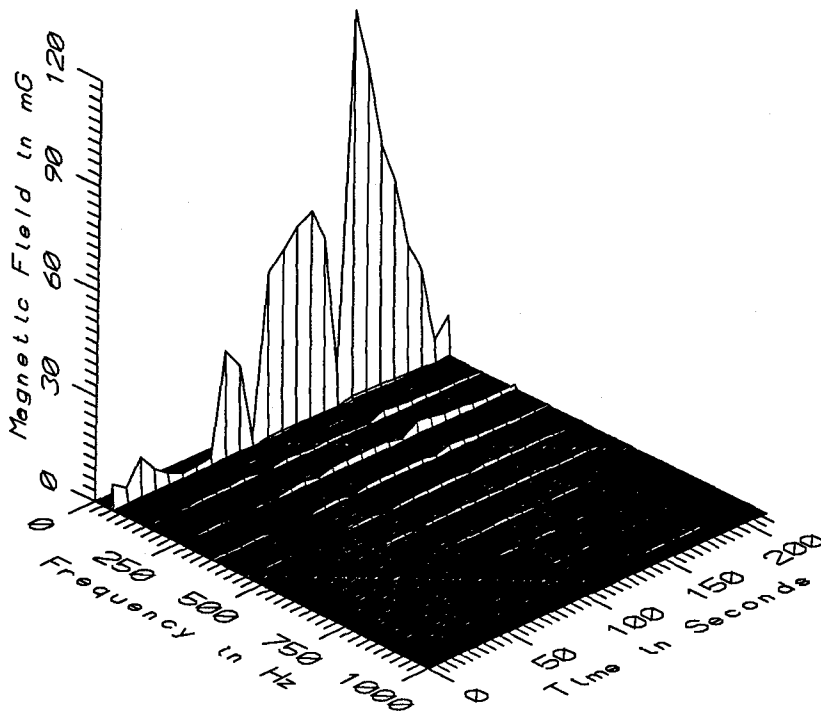
TGV019 - 160cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



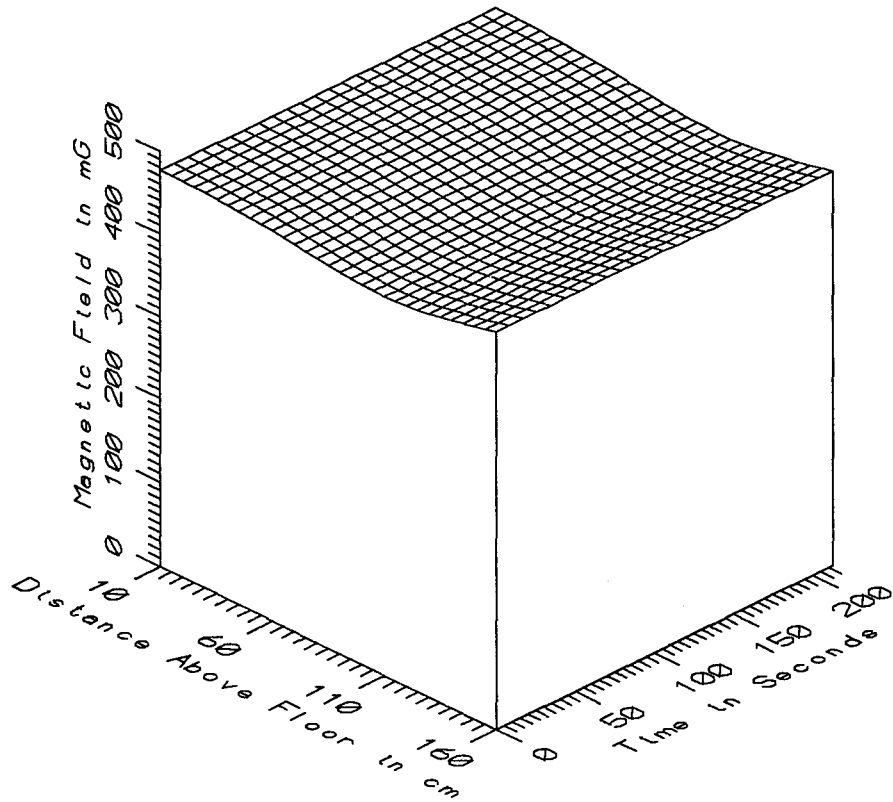
TGV019 - 160cm ABOVE FLOOR AT EDGE OF PLATFORM, VENDOME STATION



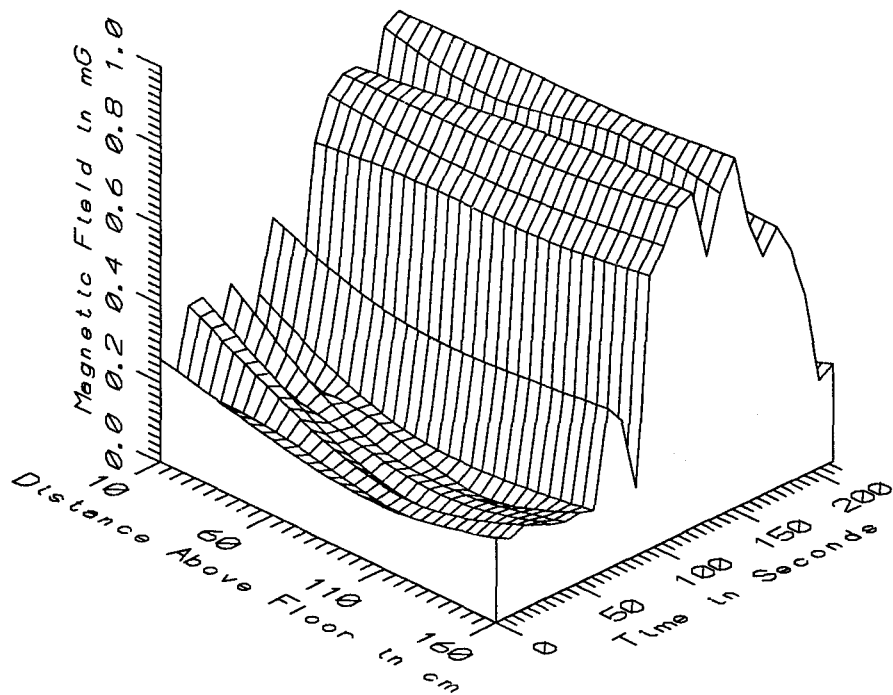
TGV019 - REFERENCE PROBE - 5m FROM EDGE OF PLATFORM, VENDOME STATION



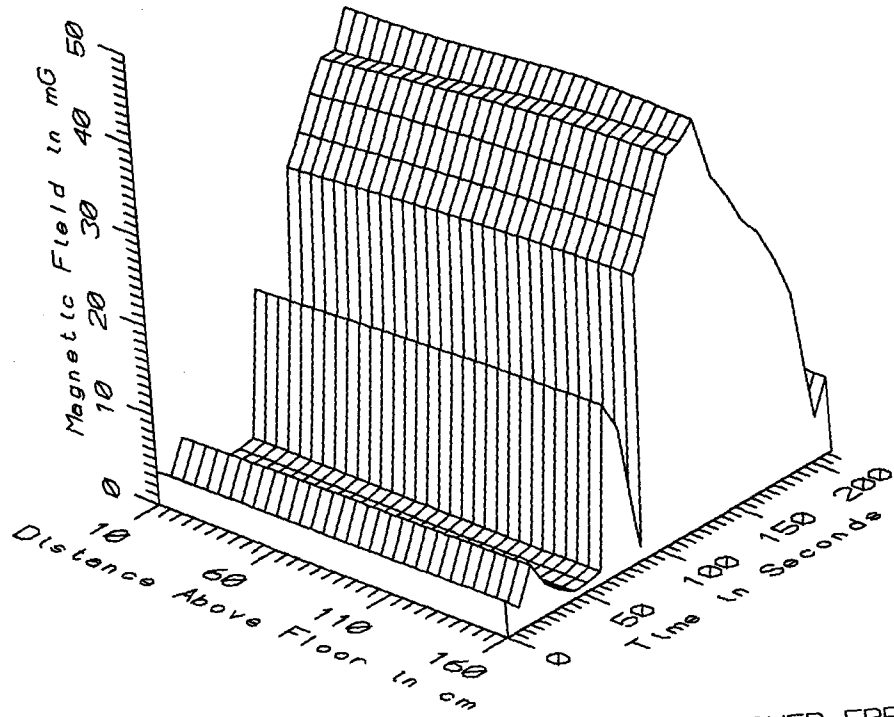
TGV019 - REFERENCE PROBE - 5m FROM EDGE OF PLATFORM, VENDOME STATION



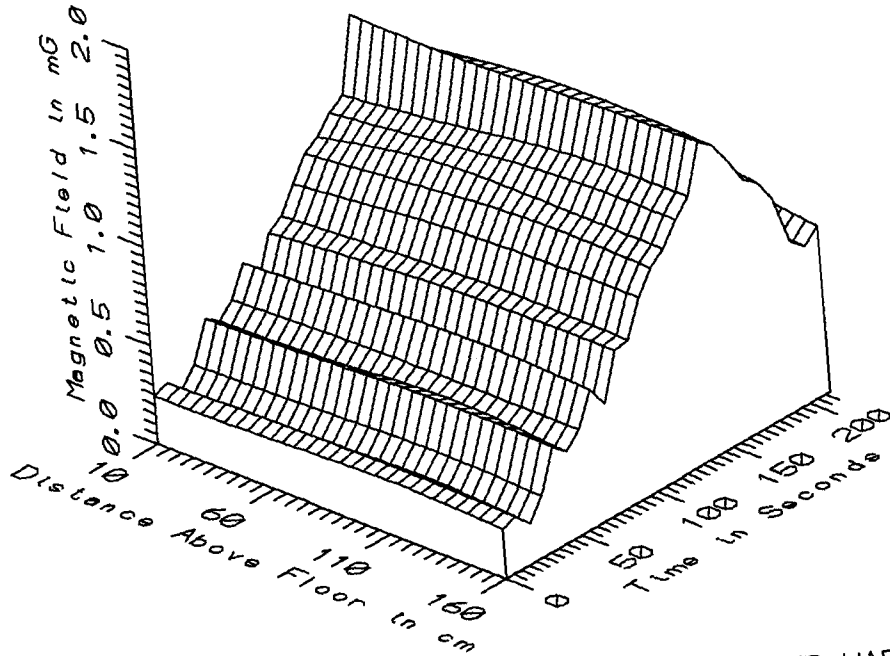
TGV019 - EDGE OF PLATFORM, VENDOME STATION - STATIC



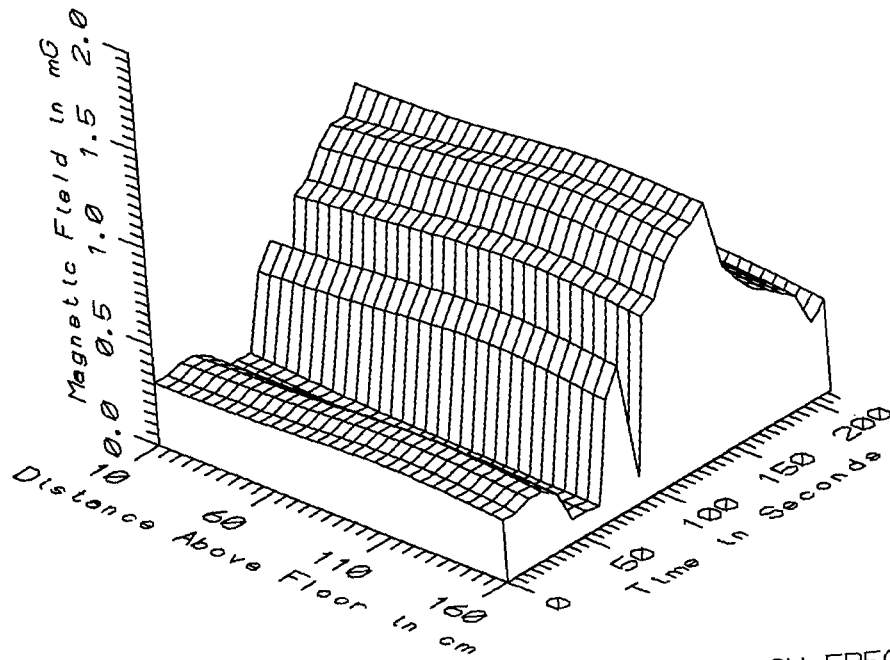
TGV019 - EDGE OF PLATFORM, VENDOME STATION - LOW FREQ, 5-45Hz



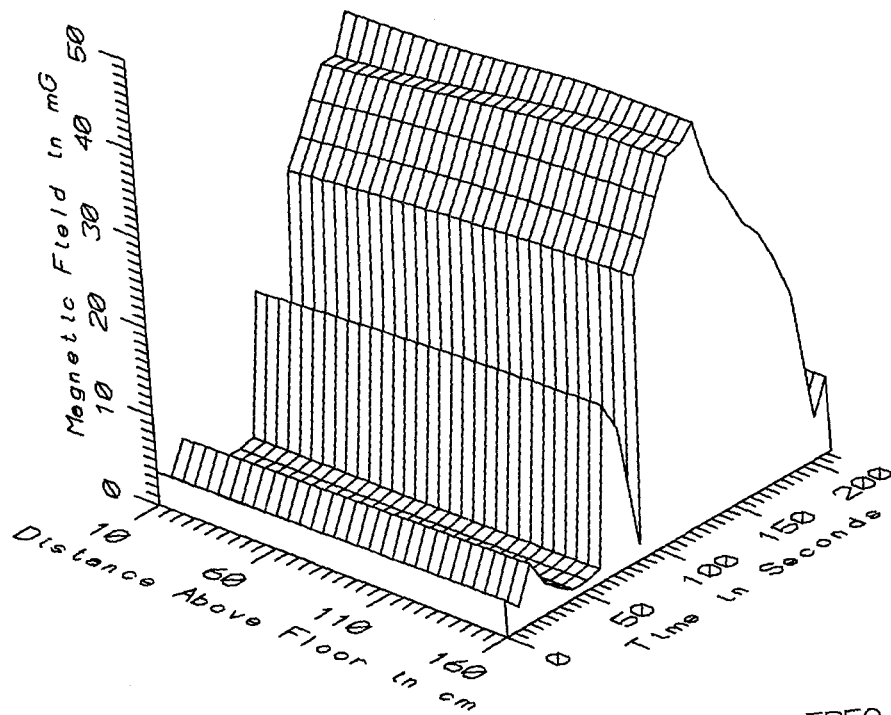
TGV019 - EDGE OF PLATFORM, VENDOME STATION - POWER FREQ, 50-60Hz



TGV019 - EDGE OF PLATFORM, VENDOME STATION - POWER HARM, 65-300Hz



TGV019 - EDGE OF PLATFORM, VENDOME STATION - HIGH FREQ, 305-2560Hz



TGV019 - EDGE OF PLATFORM, VENDOME STATION - ALL FREQ, 5-2560Hz

| TGV019 - ON VENDOME PLATFORM - TRAIN TO PARIS | | TOTAL OF 25 SAMPLES | | | | |
|---|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 476.01 | 477.00 | 476.45 | 0.21 | 0.04 |
| | 60 | 467.70 | 468.70 | 468.18 | 0.26 | 0.06 |
| | 110 | 453.11 | 454.78 | 454.16 | 0.45 | 0.10 |
| | 160 | 473.29 | 476.59 | 475.14 | 0.99 | 0.21 |
| 5-45HZ LOW FREQ | 10 | 0.12 | 0.85 | 0.48 | 0.23 | 48.38 |
| | 60 | 0.16 | 0.86 | 0.44 | 0.25 | 58.01 |
| | 110 | 0.10 | 0.86 | 0.41 | 0.29 | 69.78 |
| 50-60HZ PWR FREQ | 160 | 0.17 | 0.89 | 0.46 | 0.27 | 58.29 |
| | 10 | 0.77 | 41.41 | 17.54 | 14.45 | 82.37 |
| | 60 | 0.77 | 42.10 | 18.29 | 15.07 | 82.39 |
| 110 | 110 | 0.81 | 43.68 | 18.77 | 15.60 | 83.08 |
| | 160 | 0.83 | 43.83 | 18.98 | 15.79 | 83.19 |
| | 10 | 0.20 | 1.54 | 0.83 | 0.40 | 47.80 |
| 65-300HZ PWR HARM | 60 | 0.21 | 1.54 | 0.87 | 0.41 | 47.22 |
| | 110 | 0.24 | 1.57 | 0.90 | 0.42 | 46.35 |
| | 160 | 0.21 | 1.59 | 0.87 | 0.42 | 47.69 |
| 305-2560HZ HIGH FREQ | 10 | 0.18 | 1.20 | 0.59 | 0.31 | 53.00 |
| | 60 | 0.14 | 1.23 | 0.61 | 0.34 | 55.80 |
| | 110 | 0.12 | 1.28 | 0.64 | 0.37 | 57.42 |
| 160 | 160 | 0.10 | 1.27 | 0.60 | 0.36 | 60.52 |
| | 10 | 0.97 | 41.46 | 17.61 | 14.42 | 81.85 |
| | 60 | 0.92 | 42.15 | 18.36 | 15.04 | 81.93 |
| 5-2560HZ ALL FREQ | 110 | 0.96 | 43.73 | 18.84 | 15.57 | 82.63 |
| | 160 | 0.97 | 43.88 | 19.04 | 15.76 | 82.77 |

APPENDIX U

DATASET TGV020
CENTER OF SECOND CLASS COACH R5B

Measurement Setup Code: Staff: 21 Reference: 24
 Drawing: A-1

Vehicle Status: Coach trip from Vendome station to
 Montparnasse station in Paris

Measurement Date: September 8, 1992

Measurement Time: Start: 17:14:10
 End: 17:16:20

Number of Samples: 22

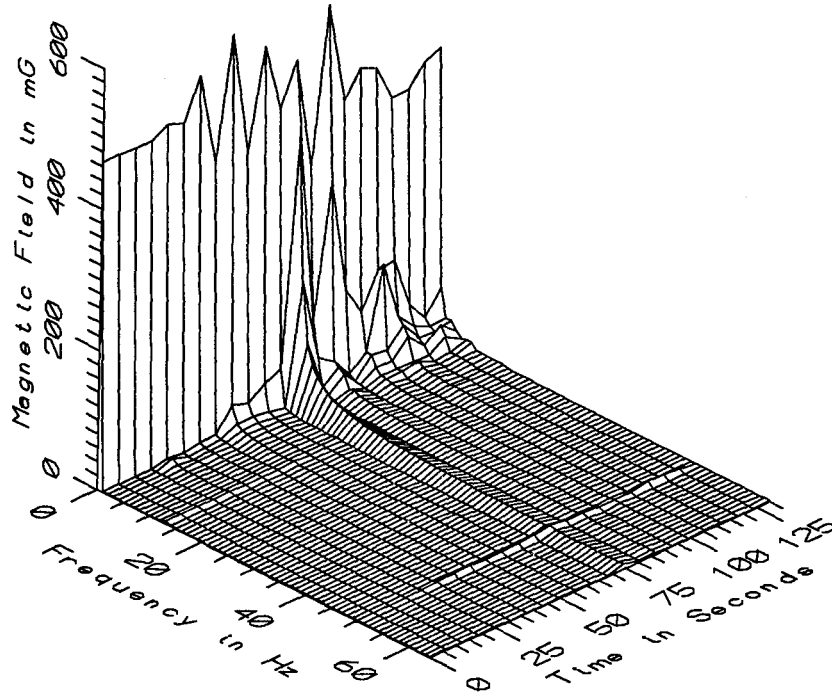
Programmed Sample Interval: 5 sec

Actual Sample Interval: 6.2 sec

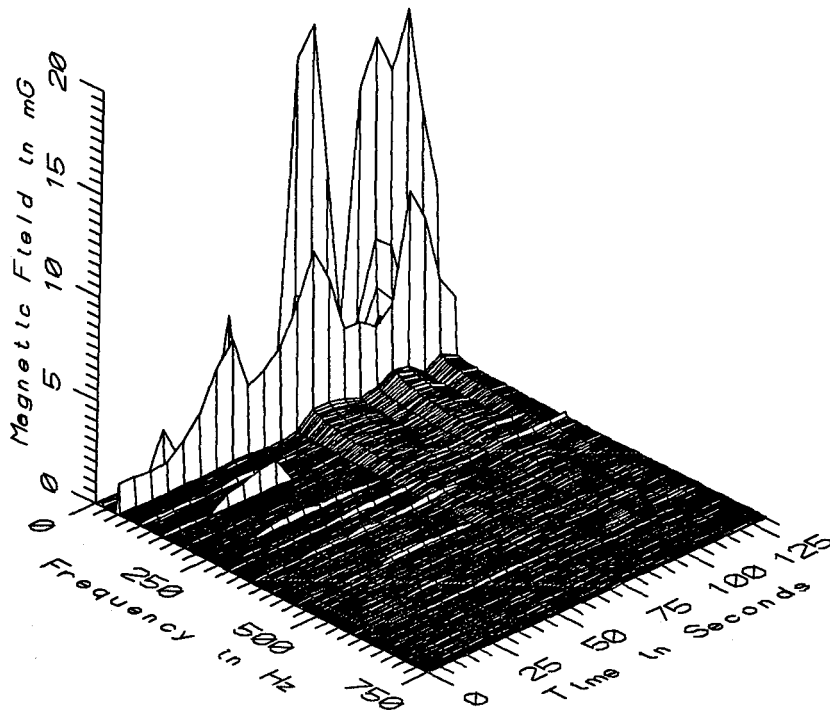
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

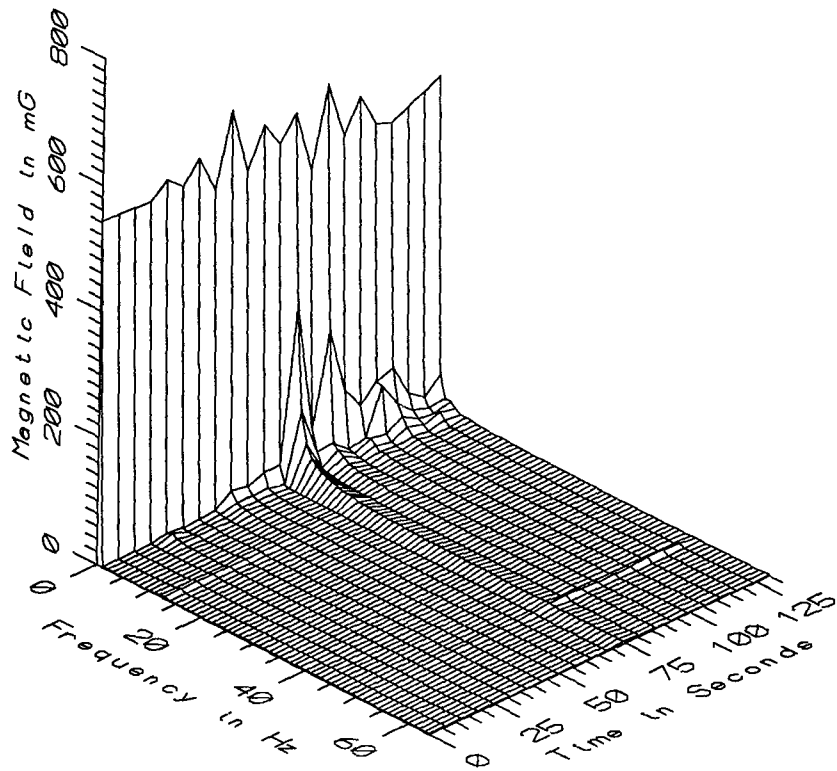
Missing or Suspect Data: None



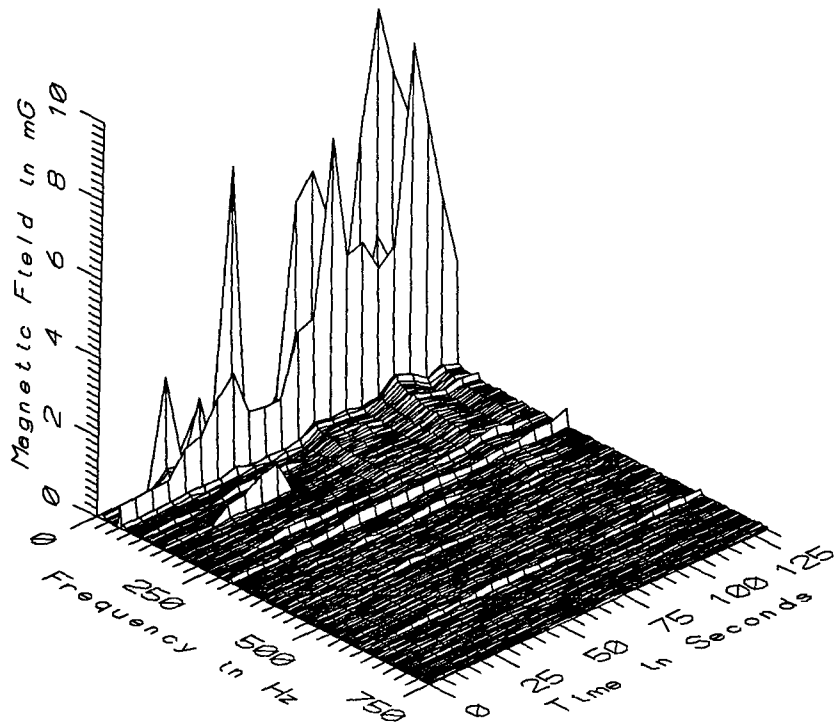
TGV020 - 10cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



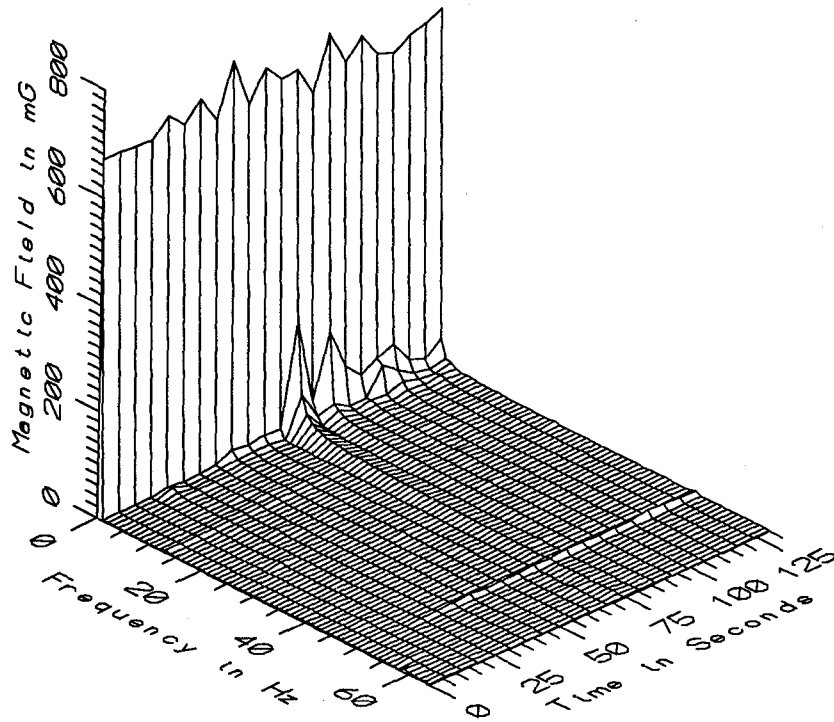
TGV020 - 10cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



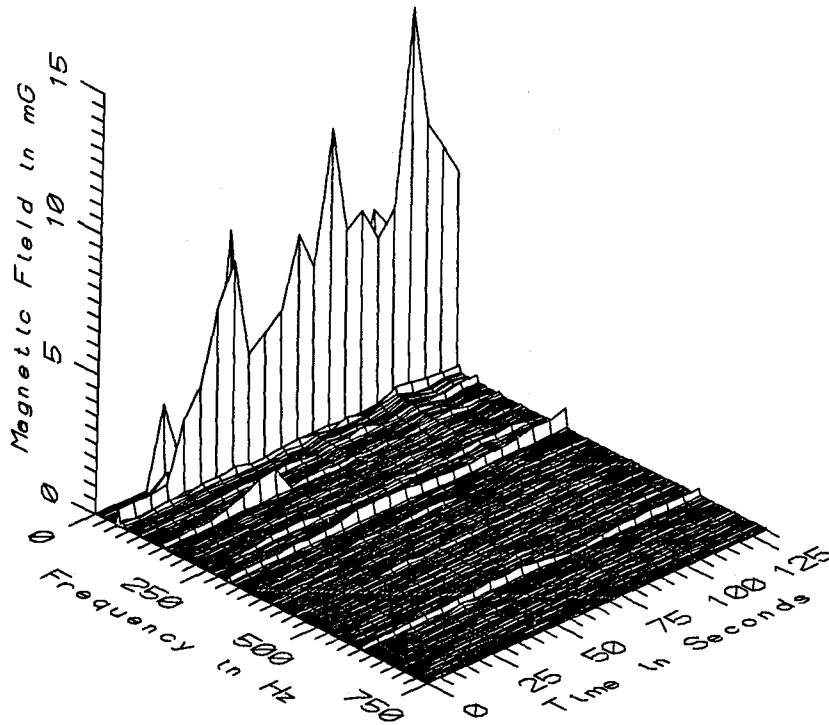
TGV020 - 60cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



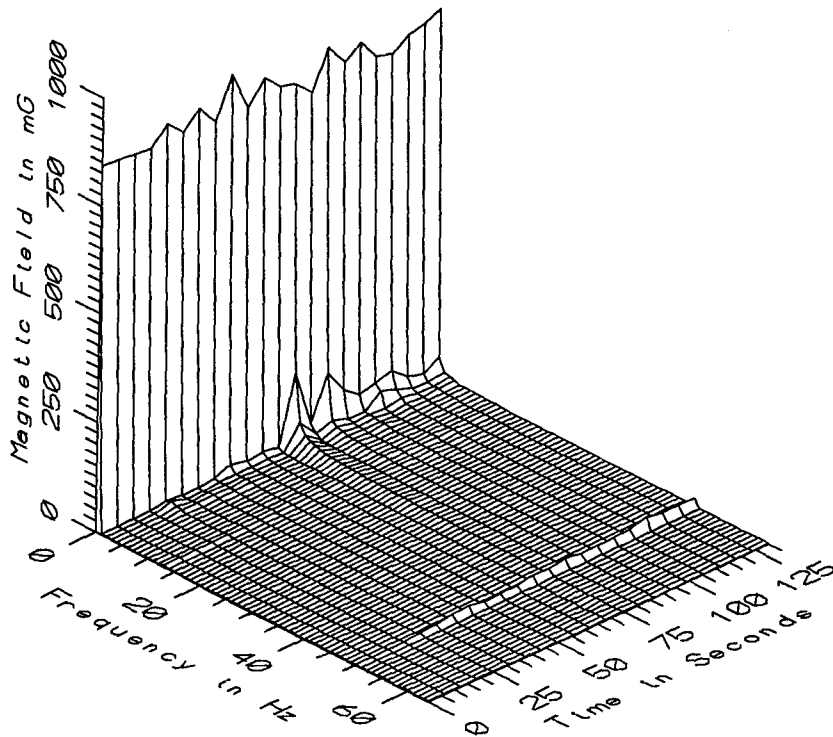
TGV020 - 60cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



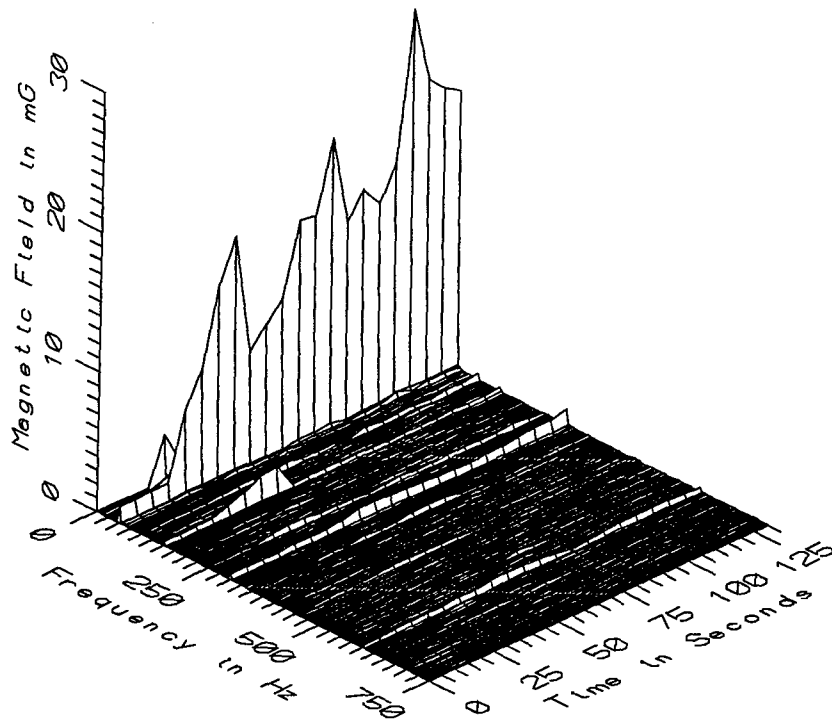
TGV020 - 110cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



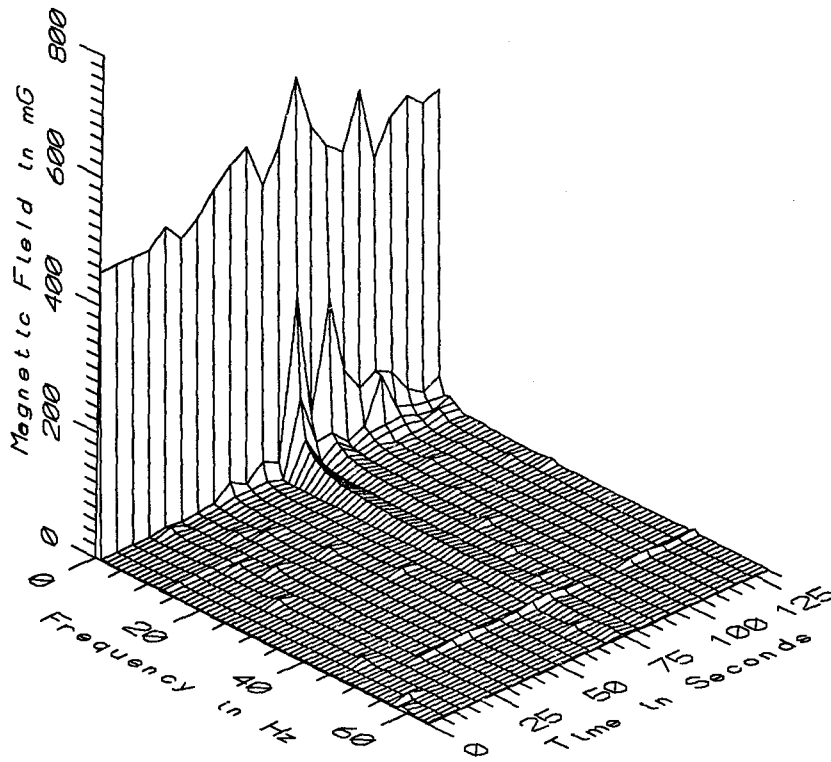
TGV020 - 110cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



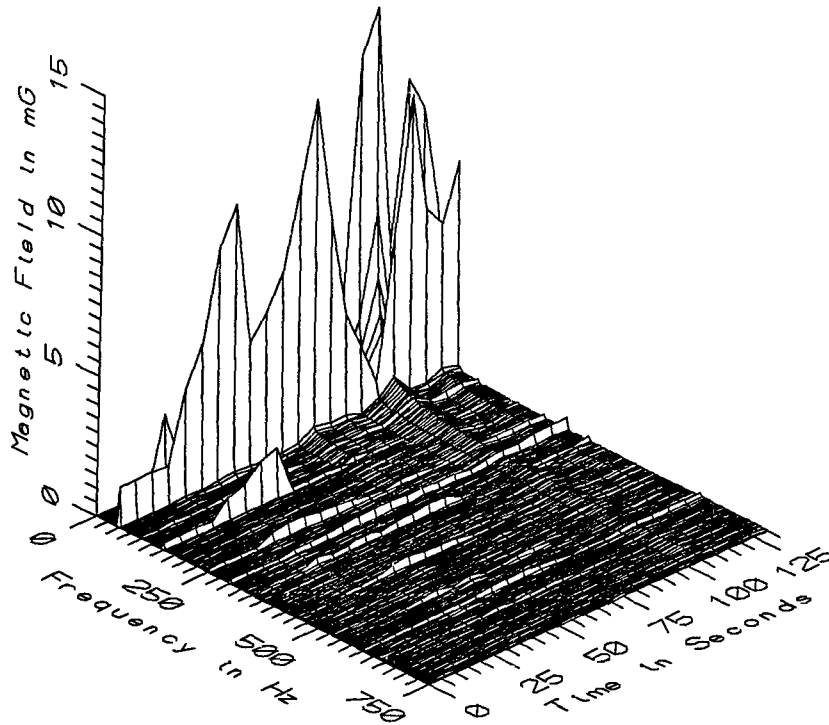
TGV020 - 160cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



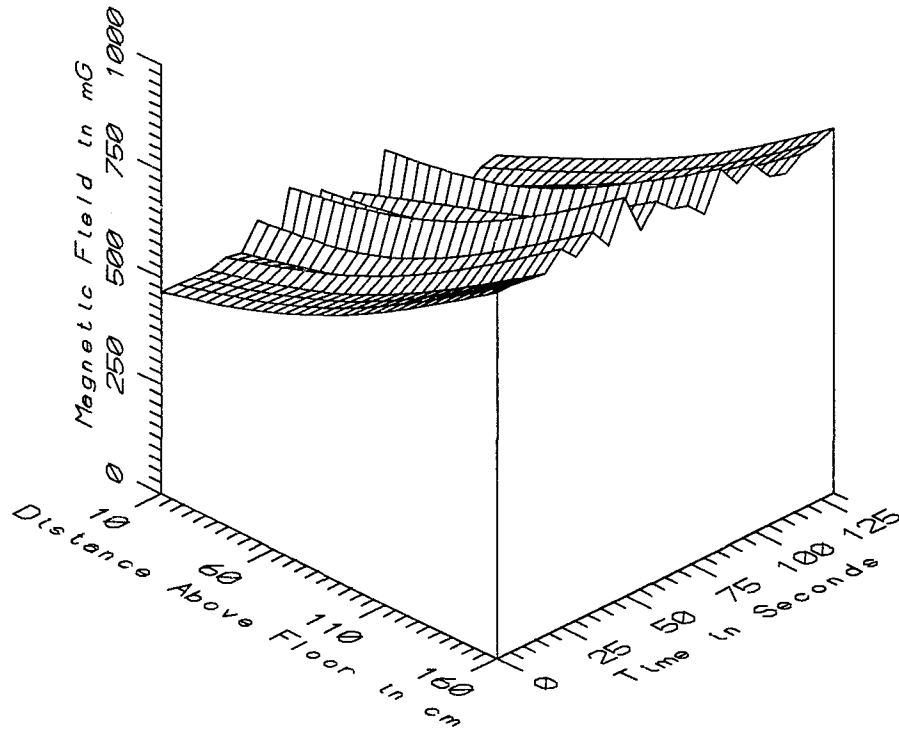
TGV020 - 160cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



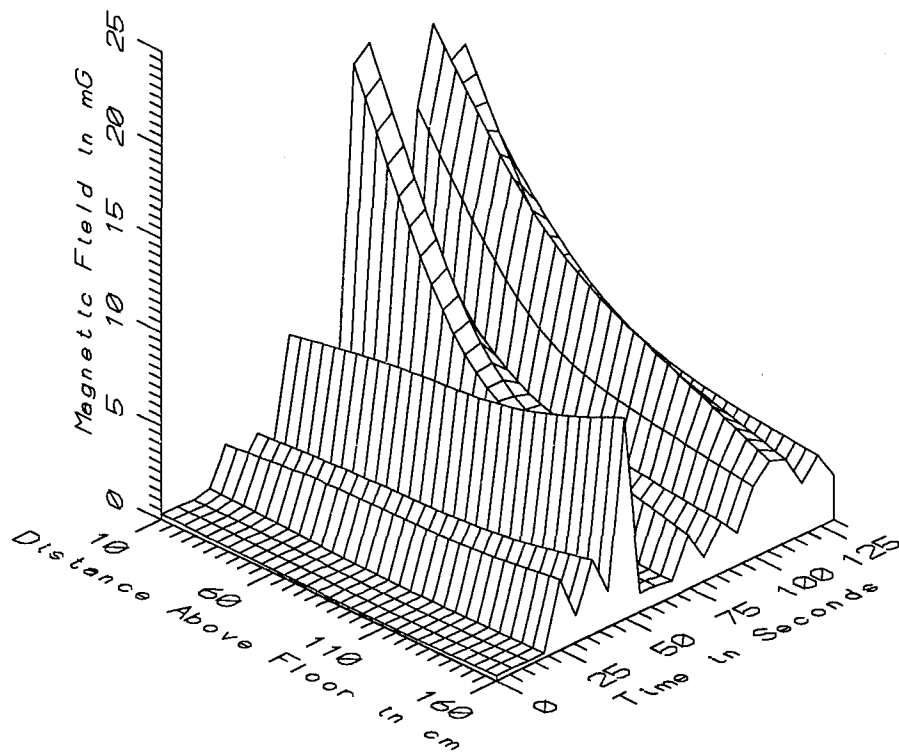
TGV020 - REFERENCE PROBE - ON SEAT 46 IN COACH R5B



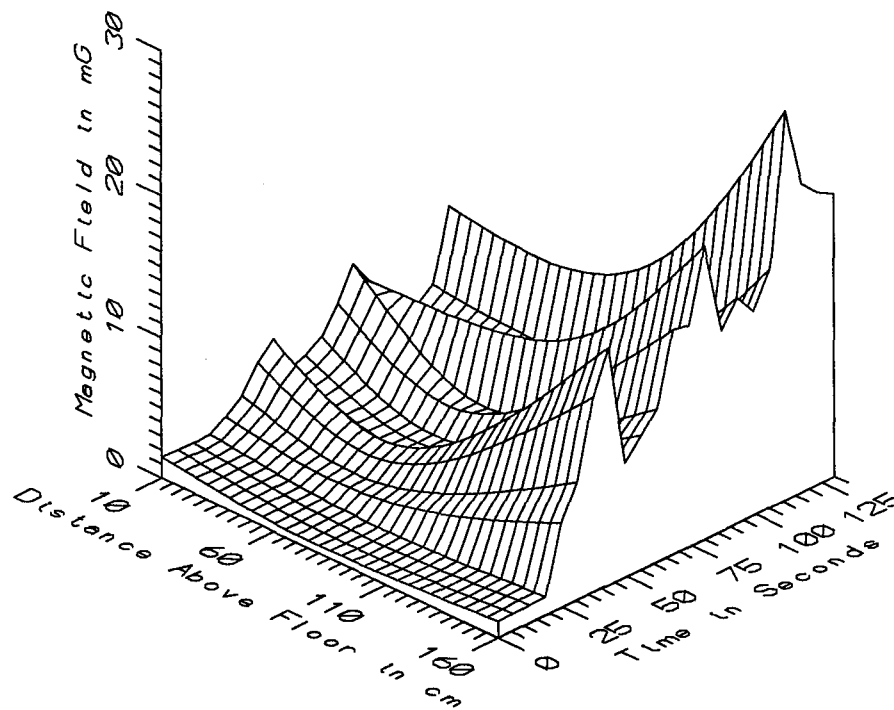
TGV020 - REFERENCE PROBE - ON SEAT 46 IN COACH R5B



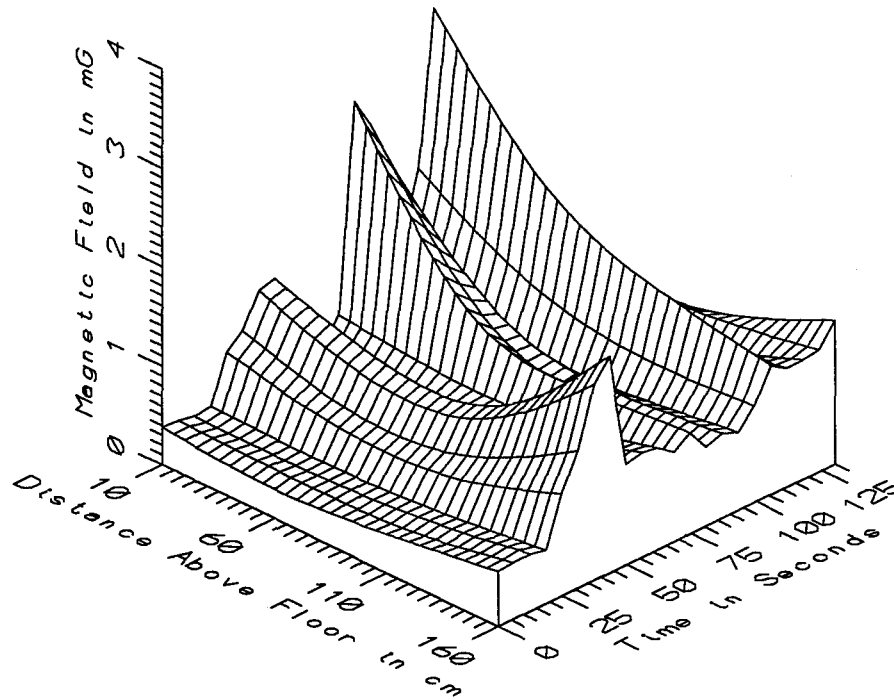
TGV020 - NEAR CORNER OF SEAT 47 IN COACH R5B - STATIC



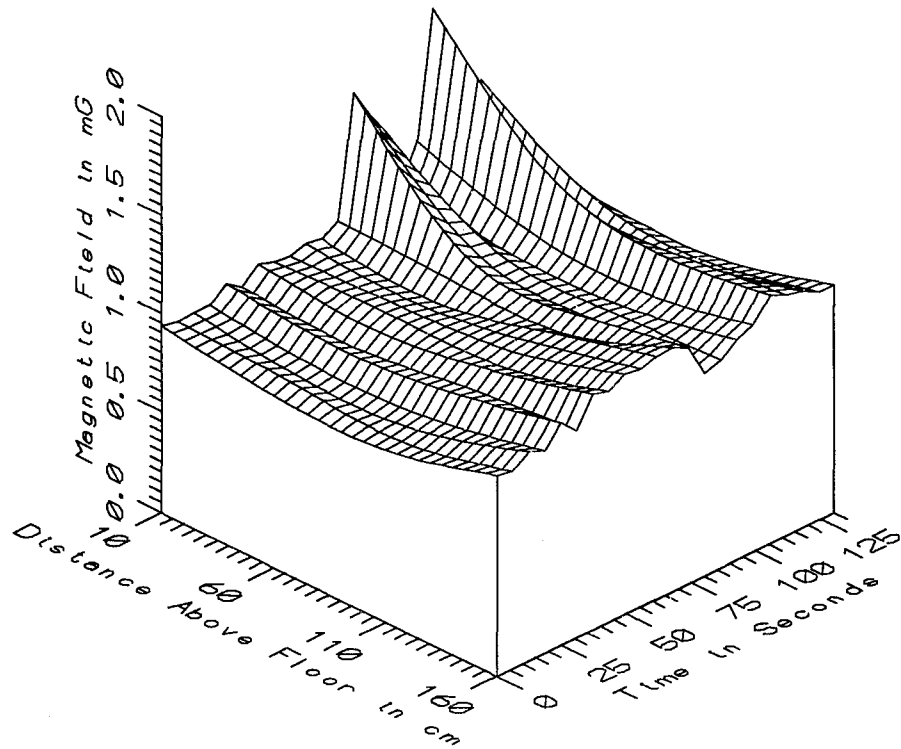
TGV020 - NEAR CORNER OF SEAT 47 IN COACH R5B - LOW FREQ, 5-45Hz



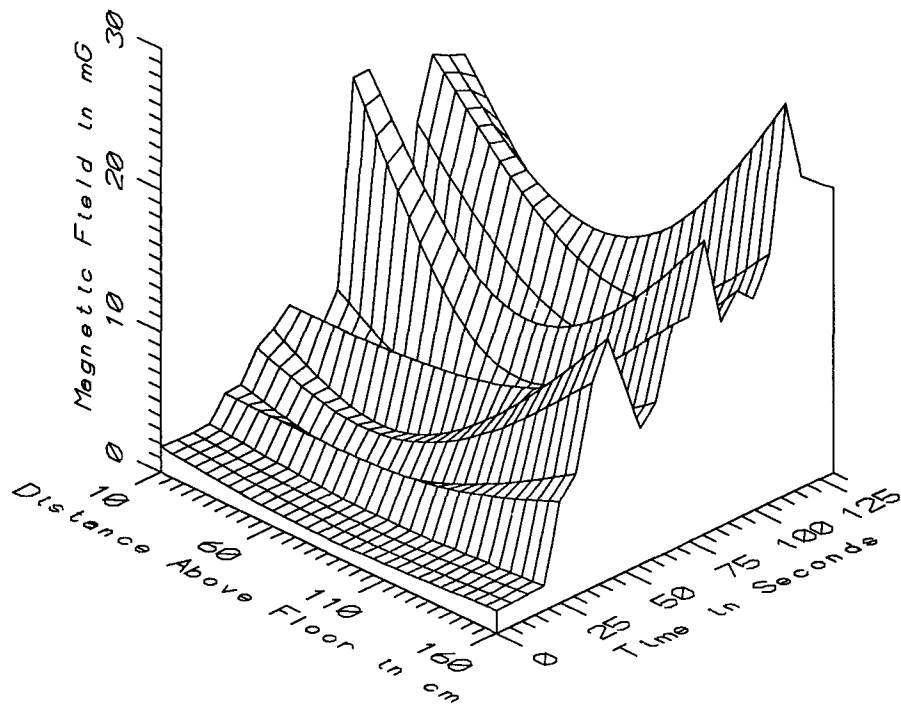
TGV020 - NEAR CORNER OF SEAT 47 IN COACH R5B - POWER FREQ, 50-60Hz



TGV020 - NEAR CORNER OF SEAT 47 IN COACH R5B - POWER HARM, 65-300Hz



TGV020 - NEAR CORNER OF SEAT 47 IN COACH R5B - HIGH FREQ, 305-2560Hz



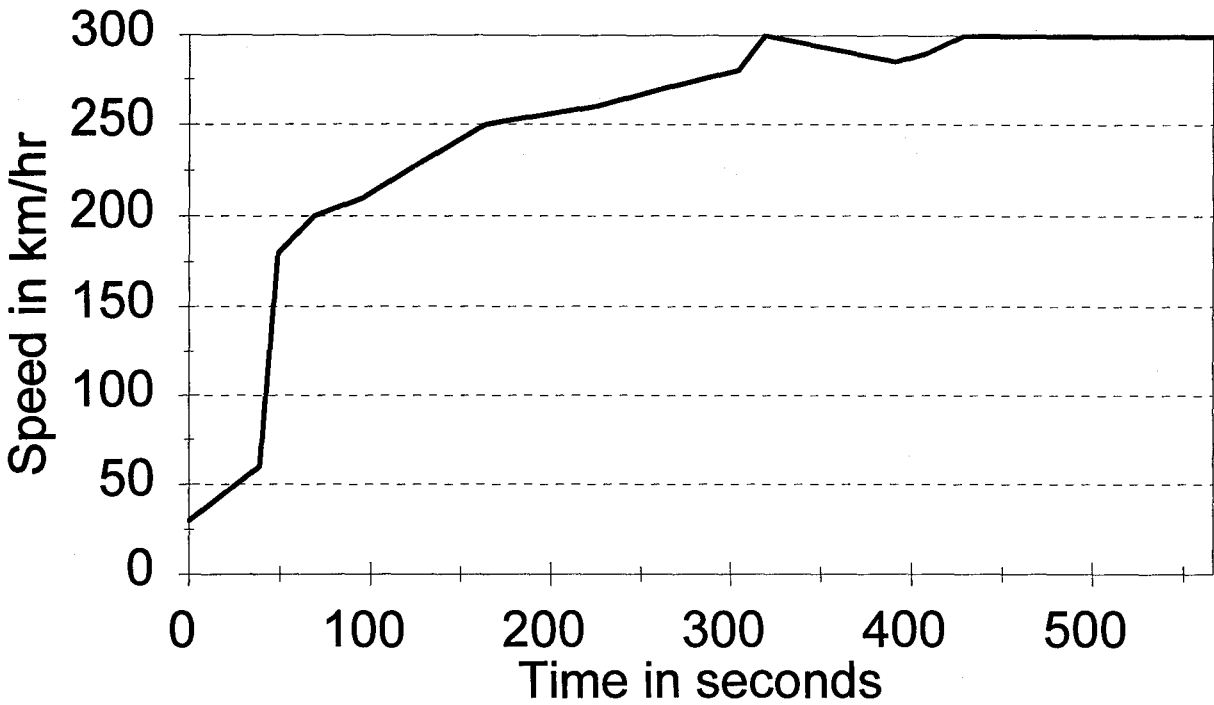
TGV020 - NEAR CORNER OF SEAT 47 IN COACH R5B - ALL FREQ, 5-2560Hz

| TGV020 - ALL SAMPLES | | TOTAL OF 22 SAMPLES | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 324.14 | 566.54 | 444.54 | 62.94 | 14.16 |
| | 60 | 471.95 | 624.70 | 537.35 | 36.87 | 6.86 |
| | 110 | 612.27 | 743.80 | 666.89 | 30.82 | 4.62 |
| | 160 | 791.63 | 917.86 | 840.96 | 29.09 | 3.46 |
| 5-45HZ LOW FREQ | 10 | 0.23 | 20.16 | 7.70 | 7.70 | 100.06 |
| | 60 | 0.19 | 11.42 | 4.02 | 3.46 | 86.11 |
| | 110 | 0.12 | 8.42 | 2.85 | 2.42 | 84.91 |
| | 160 | 0.23 | 10.74 | 2.57 | 2.34 | 91.33 |
| 50-60HZ PWR FREQ | 10 | 1.39 | 9.43 | 4.42 | 2.31 | 52.27 |
| | 60 | 0.57 | 8.98 | 3.05 | 2.34 | 76.74 |
| | 110 | 0.59 | 13.82 | 5.77 | 3.43 | 59.46 |
| | 160 | 1.16 | 27.38 | 12.83 | 7.48 | 58.34 |
| 65-300HZ PWR HARM | 10 | 0.34 | 3.29 | 1.27 | 0.90 | 71.21 |
| | 60 | 0.30 | 2.03 | 0.81 | 0.42 | 52.26 |
| | 110 | 0.37 | 1.53 | 0.79 | 0.28 | 35.80 |
| | 160 | 0.54 | 2.19 | 1.08 | 0.42 | 39.00 |
| 305-2560HZ HIGH FREQ | 10 | 0.92 | 1.89 | 1.16 | 0.28 | 24.45 |
| | 60 | 0.85 | 1.34 | 1.00 | 0.11 | 11.37 |
| | 110 | 0.85 | 1.19 | 1.01 | 0.08 | 8.40 |
| | 160 | 0.98 | 1.25 | 1.12 | 0.08 | 7.38 |
| 5-2560HZ ALL FREQ | 10 | 1.72 | 21.51 | 9.70 | 7.25 | 74.75 |
| | 60 | 1.08 | 12.93 | 5.48 | 3.83 | 69.88 |
| | 110 | 1.11 | 15.29 | 6.86 | 3.69 | 53.88 |
| | 160 | 1.66 | 27.79 | 13.46 | 7.33 | 54.47 |

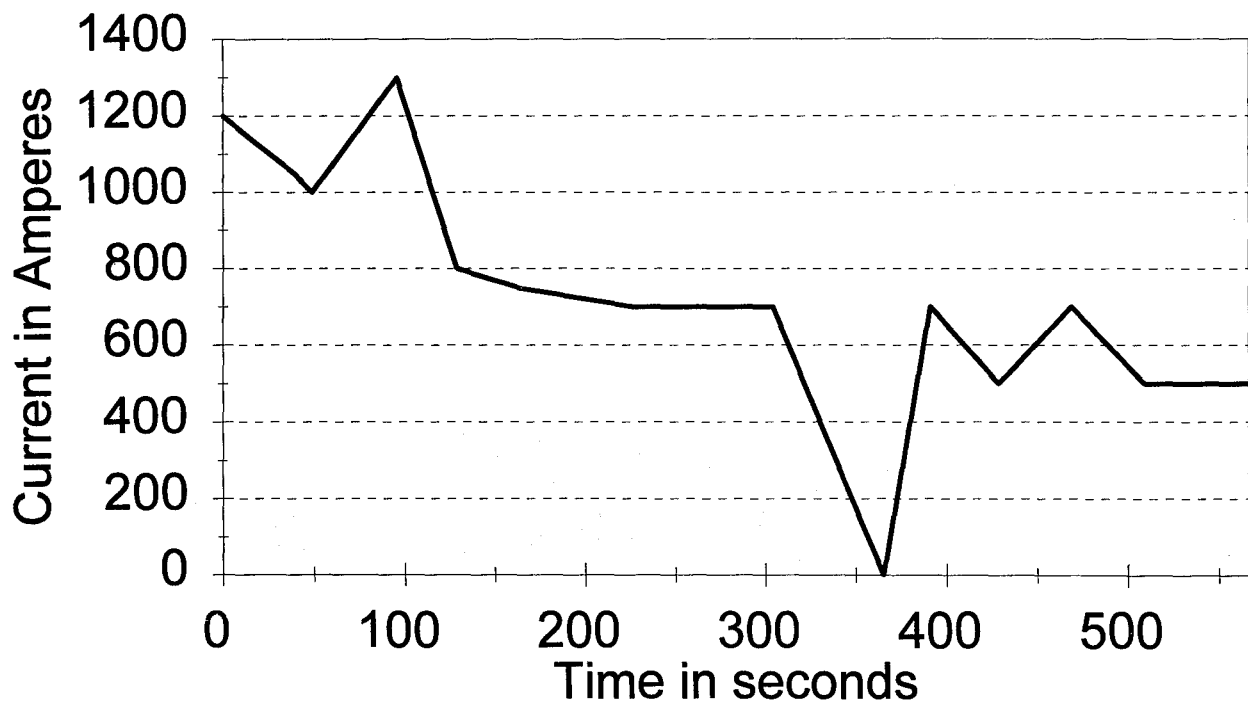
| TGV020 - TRAIN AT REST | | TOTAL OF 4 SAMPLES | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 464.09 | 466.43 | 465.23 | 1.11 | 0.24 |
| | 60 | 537.92 | 542.23 | 540.53 | 1.94 | 0.36 |
| | 110 | 664.90 | 670.08 | 667.91 | 2.46 | 0.37 |
| | 160 | 830.85 | 840.64 | 836.82 | 4.58 | 0.55 |
| 5-45Hz LOW FREQ | 10 | 0.23 | 0.43 | 0.31 | 0.09 | 28.68 |
| | 60 | 0.19 | 0.22 | 0.20 | 0.01 | 5.47 |
| | 110 | 0.12 | 0.16 | 0.14 | 0.02 | 12.83 |
| | 160 | 0.23 | 0.27 | 0.25 | 0.02 | 7.82 |
| 50-60Hz PWR FREQ | 10 | 1.39 | 1.50 | 1.46 | 0.05 | 3.35 |
| | 60 | 0.57 | 0.65 | 0.61 | 0.04 | 6.25 |
| | 110 | 0.59 | 0.71 | 0.64 | 0.05 | 8.21 |
| | 160 | 1.16 | 1.31 | 1.23 | 0.07 | 5.76 |
| 65-300Hz PWR HARM | 10 | 0.34 | 0.38 | 0.36 | 0.02 | 5.48 |
| | 60 | 0.30 | 0.34 | 0.33 | 0.02 | 6.42 |
| | 110 | 0.37 | 0.40 | 0.39 | 0.01 | 3.47 |
| | 160 | 0.54 | 0.58 | 0.56 | 0.02 | 2.93 |
| 305-2560Hz HIGH FREQ | 10 | 0.92 | 0.94 | 0.93 | 0.01 | 0.75 |
| | 60 | 0.85 | 0.88 | 0.86 | 0.02 | 1.78 |
| | 110 | 0.85 | 0.89 | 0.87 | 0.02 | 1.91 |
| | 160 | 0.98 | 1.04 | 1.01 | 0.02 | 2.37 |
| 5-2560Hz ALL FREQ | 10 | 1.72 | 1.85 | 1.79 | 0.06 | 3.18 |
| | 60 | 1.08 | 1.15 | 1.13 | 0.03 | 2.62 |
| | 110 | 1.11 | 1.21 | 1.16 | 0.04 | 3.47 |
| | 160 | 1.66 | 1.76 | 1.70 | 0.06 | 3.31 |

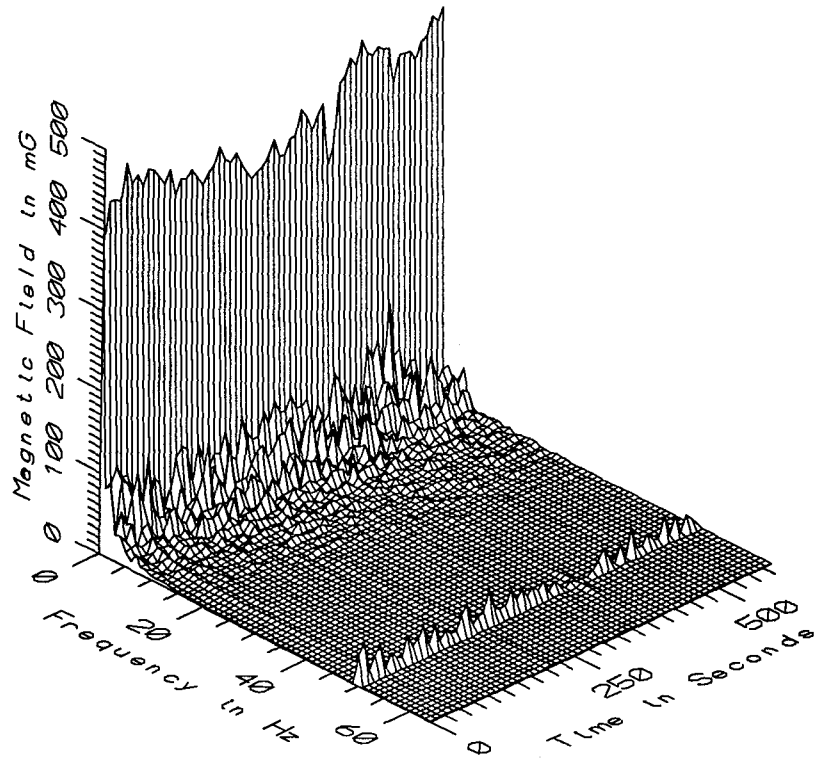
| TGV020 - AC SECTION ONLY | | TOTAL OF 18 SAMPLES | | | | |
|--------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 324.14 | 566.54 | 439.95 | 69.07 | 15.70 |
| | 60 | 471.95 | 624.70 | 536.64 | 40.93 | 7.63 |
| | 110 | 612.27 | 743.80 | 666.67 | 34.23 | 5.13 |
| | 160 | 791.63 | 917.86 | 841.87 | 32.20 | 3.82 |
| 5-45Hz LOW FREQ | 10 | 0.88 | 20.16 | 9.34 | 7.59 | 81.23 |
| | 60 | 0.67 | 11.42 | 4.87 | 3.26 | 66.89 |
| | 110 | 0.73 | 8.42 | 3.46 | 2.26 | 65.54 |
| | 160 | 0.85 | 10.74 | 3.08 | 2.29 | 74.36 |
| 50-60Hz PWR FREQ | 10 | 2.20 | 9.43 | 5.08 | 2.02 | 39.74 |
| | 60 | 1.25 | 8.98 | 3.59 | 2.25 | 62.61 |
| | 110 | 2.75 | 13.82 | 6.91 | 2.64 | 38.20 |
| | 160 | 6.00 | 27.38 | 15.40 | 5.52 | 35.84 |
| 65-300Hz PWR HARM | 10 | 0.43 | 3.29 | 1.47 | 0.88 | 59.78 |
| | 60 | 0.48 | 2.03 | 0.92 | 0.39 | 42.74 |
| | 110 | 0.64 | 1.53 | 0.88 | 0.23 | 26.11 |
| | 160 | 0.80 | 2.19 | 1.19 | 0.38 | 31.52 |
| 305-2560Hz HIGH FREQ | 10 | 0.94 | 1.89 | 1.21 | 0.29 | 23.91 |
| | 60 | 0.91 | 1.34 | 1.03 | 0.10 | 9.90 |
| | 110 | 0.97 | 1.19 | 1.04 | 0.06 | 5.31 |
| | 160 | 1.01 | 1.25 | 1.15 | 0.07 | 5.95 |
| 5-2560Hz ALL FREQ | 10 | 3.47 | 21.51 | 11.46 | 6.85 | 59.81 |
| | 60 | 1.86 | 12.93 | 6.45 | 3.56 | 55.18 |
| | 110 | 4.07 | 15.29 | 8.12 | 2.74 | 33.74 |
| | 160 | 7.23 | 27.79 | 16.07 | 5.16 | 32.13 |

TRAIN SPEED - TGV021

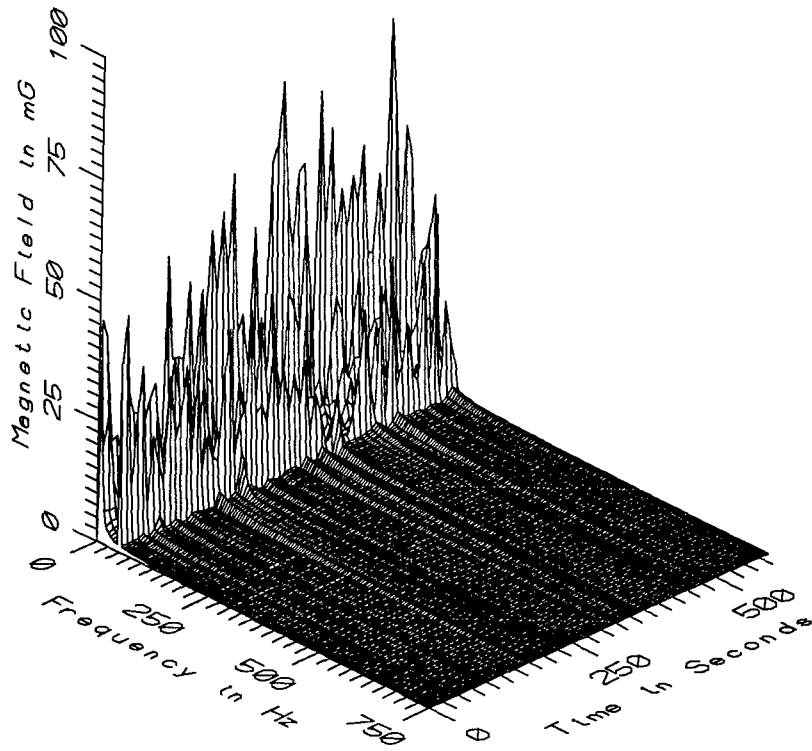


TRAIN CURRENT - TGV021

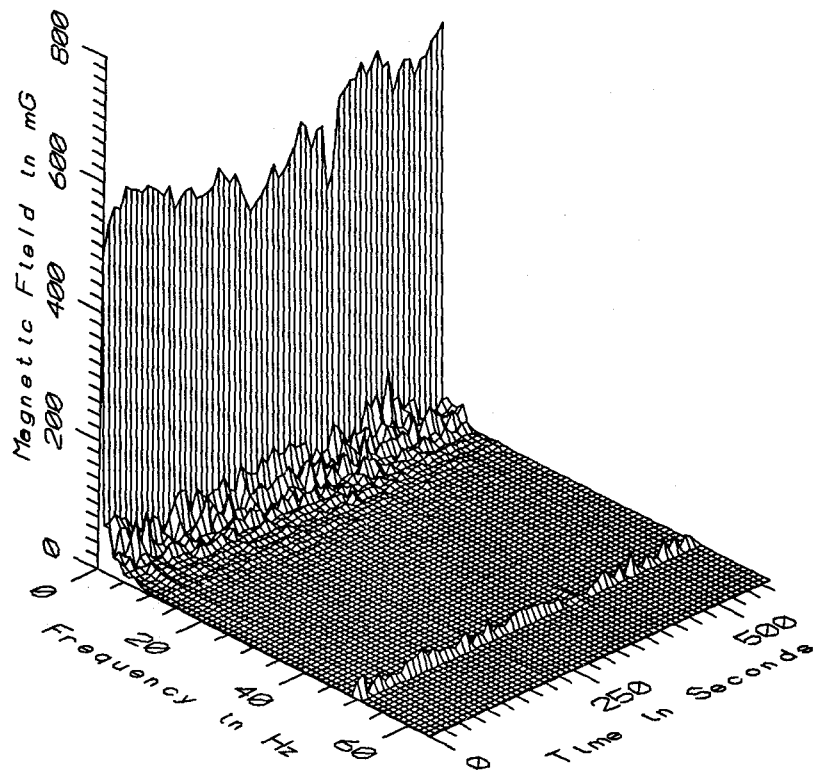




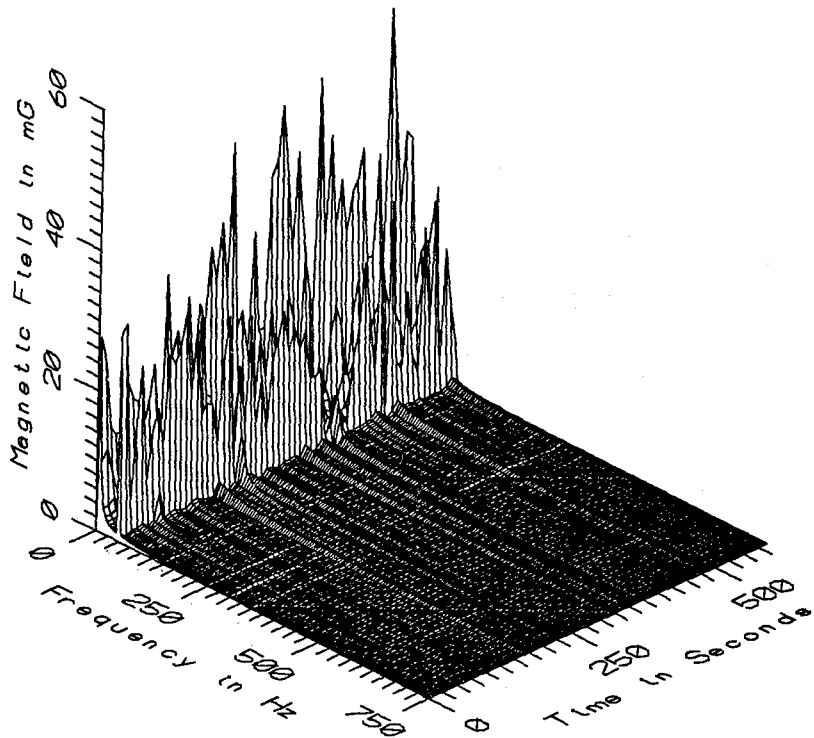
TGV021 - 10cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



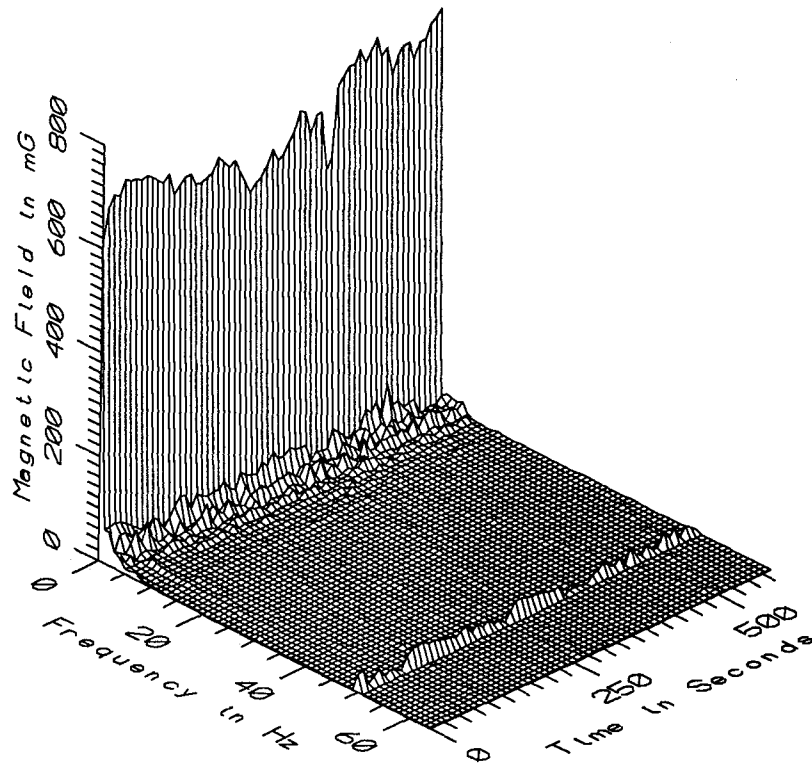
TGV021 - 10cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



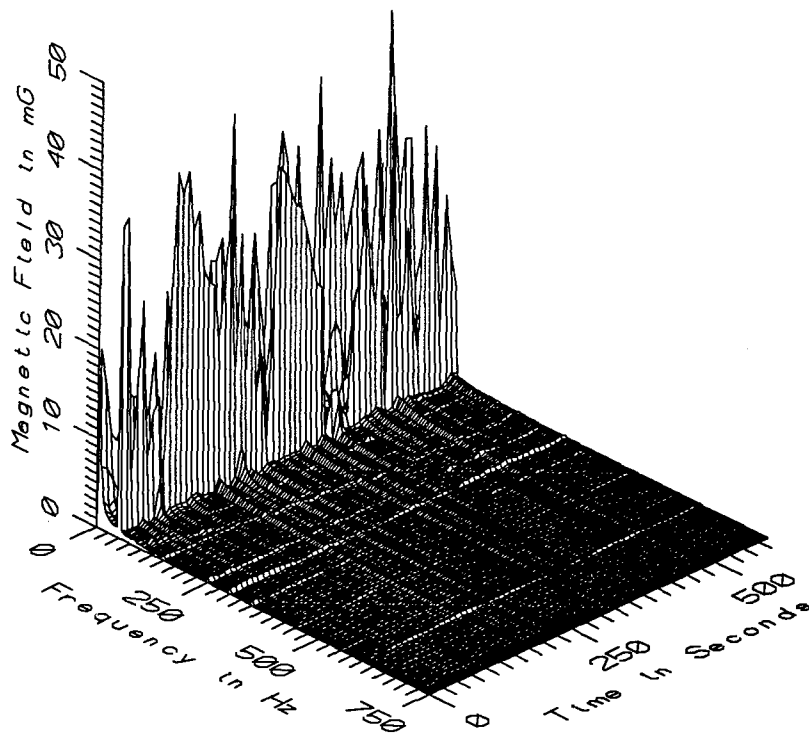
TGV021 - 60cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



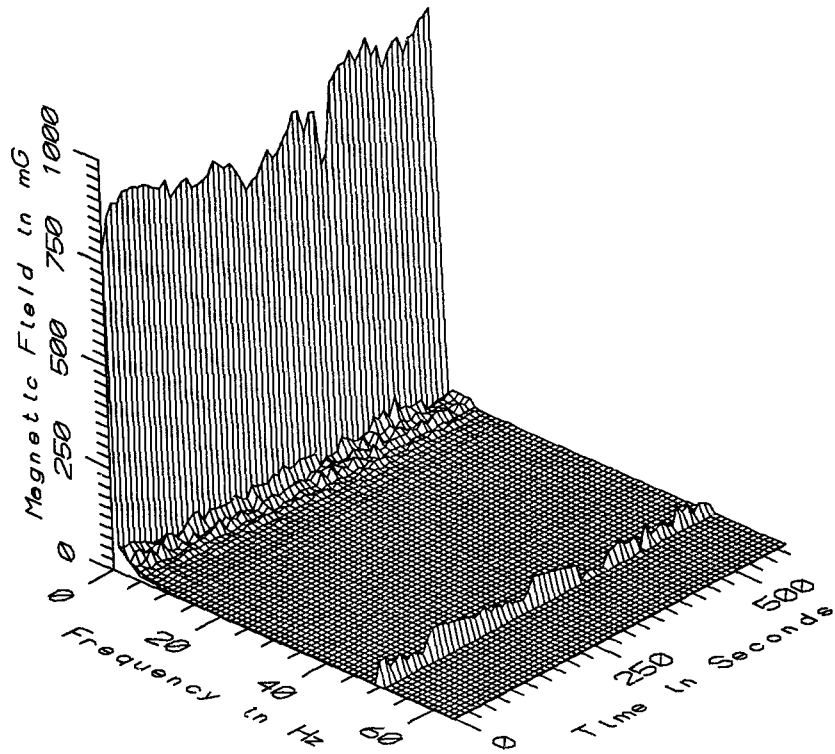
TGV021 - 60cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



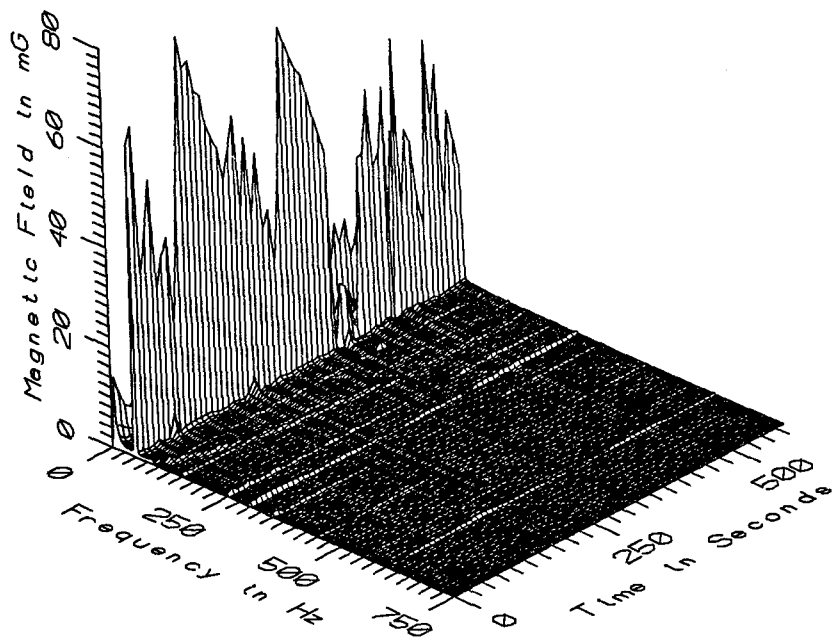
TGV021 - 110cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



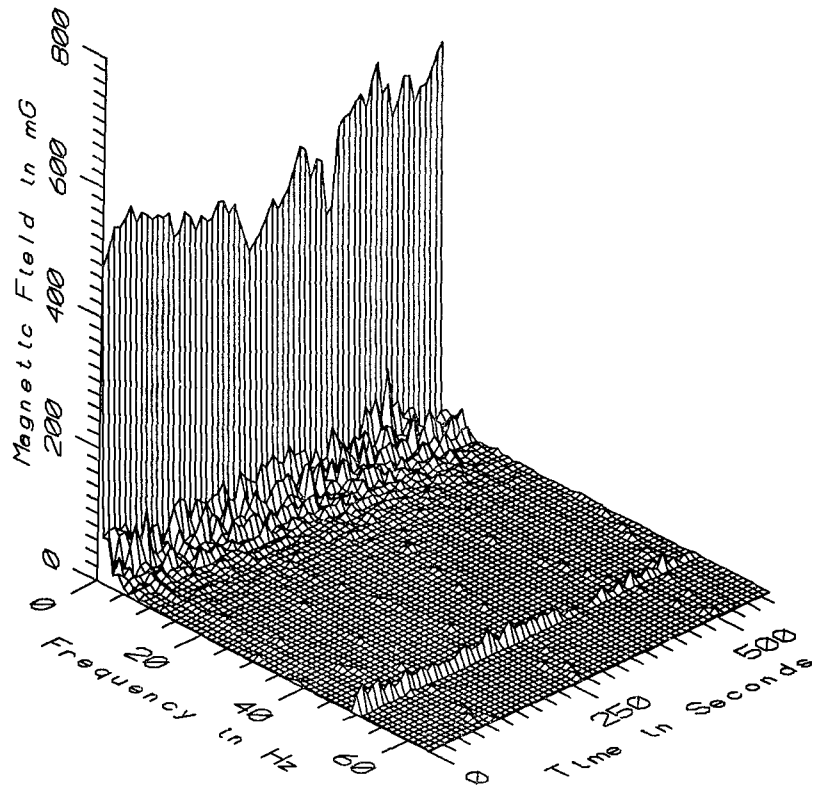
TGV021 - 110cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



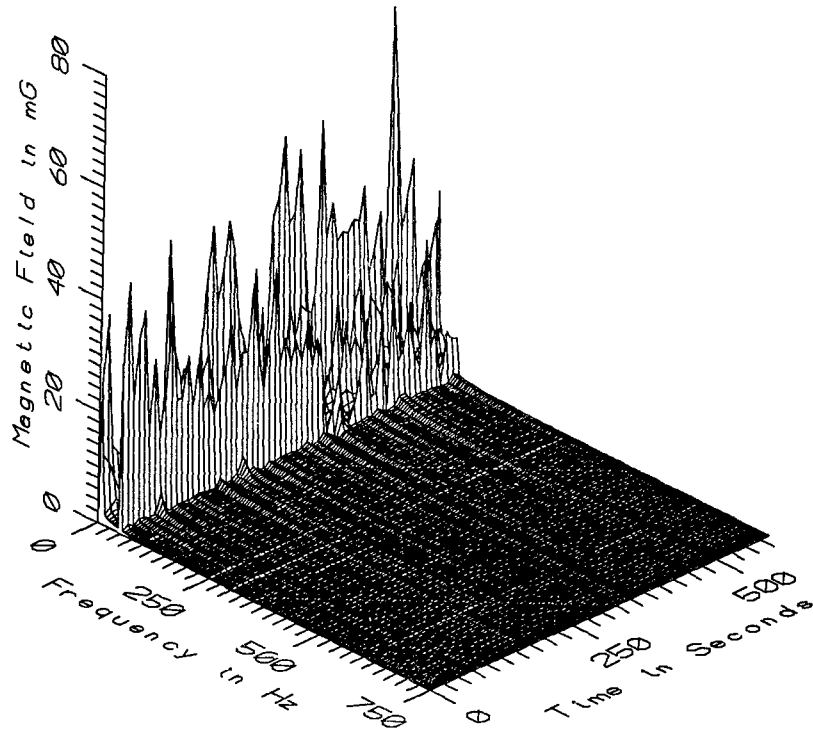
TGV021 - 160cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



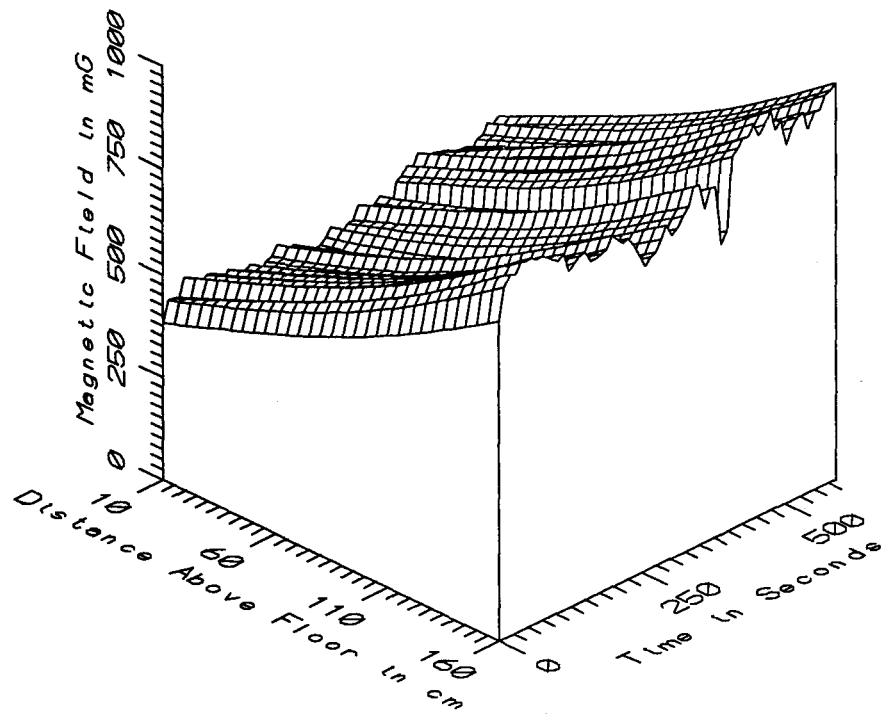
TGV021 - 160cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



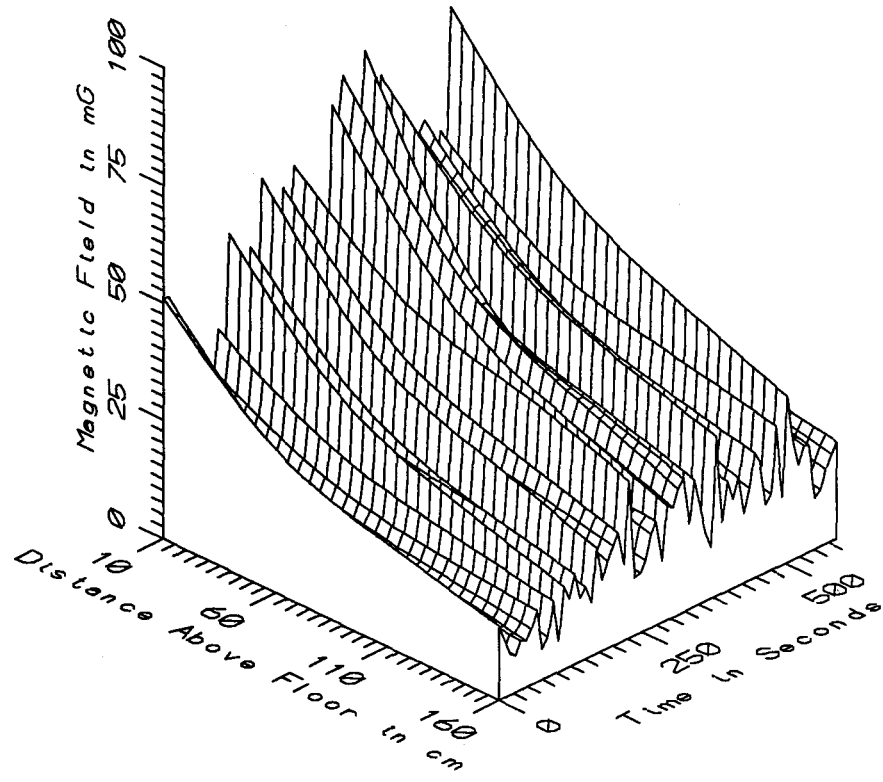
TGV021 - REFERENCE PROBE - ON SEAT 46 IN COACH R5B



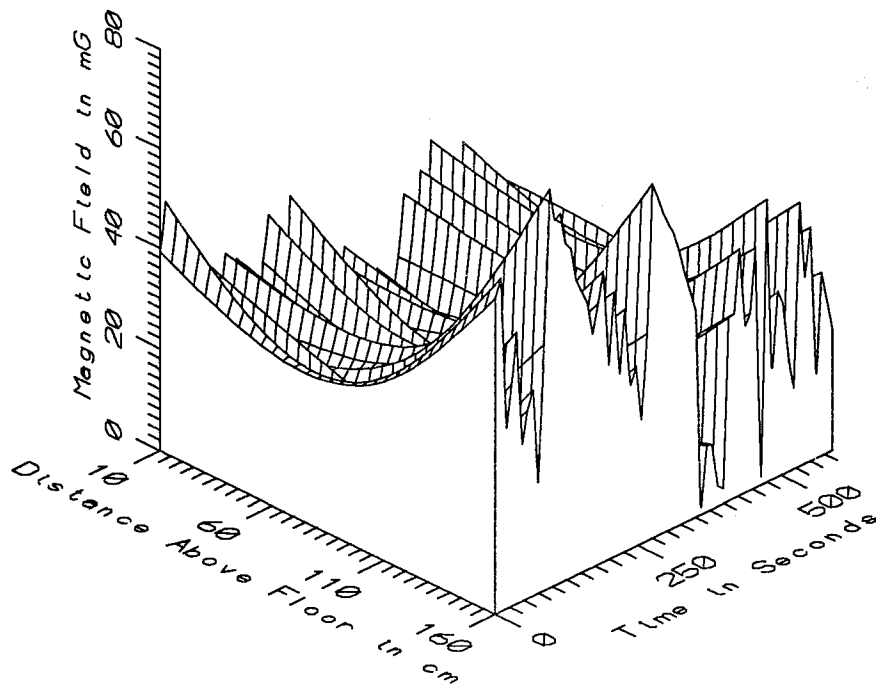
TGV021 - REFERENCE PROBE - ON SEAT 46 IN COACH R5B



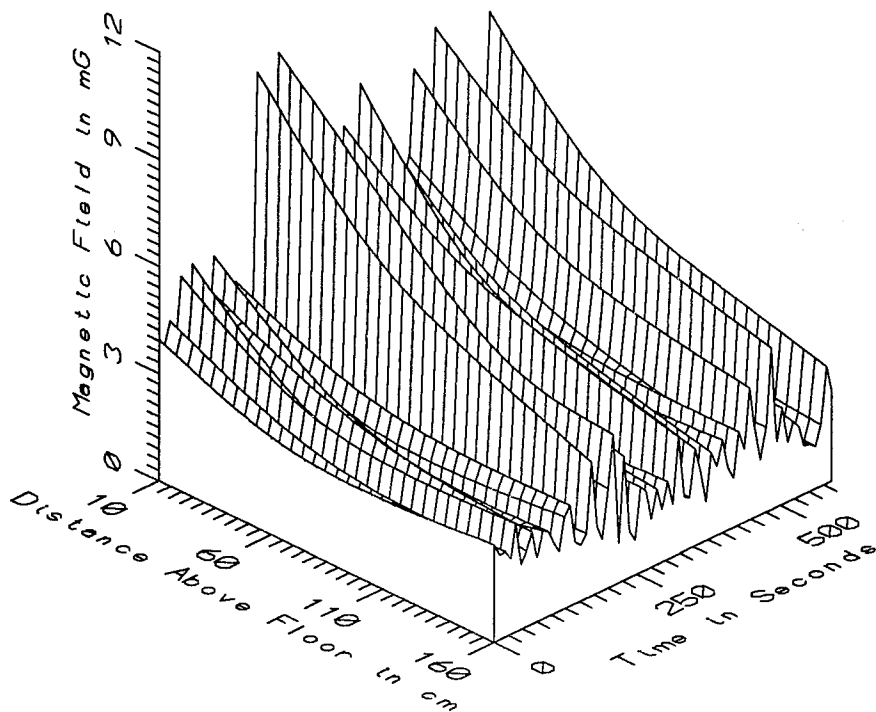
TGV021 - NEAR CORNER OF SEAT 47 IN COACH R5B - STATIC



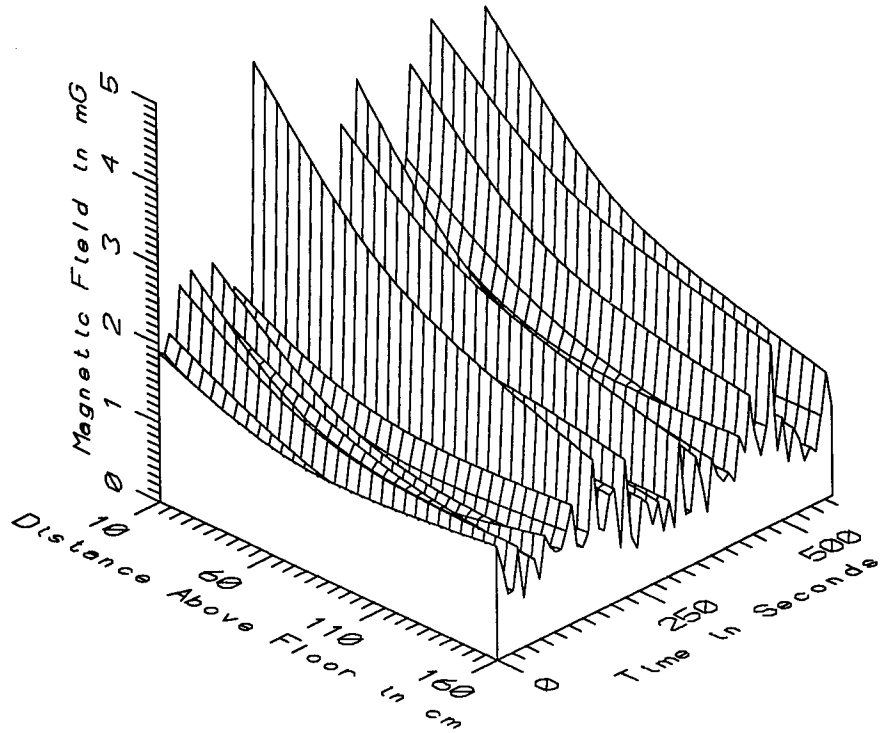
TGV021 - NEAR CORNER OF SEAT 47 IN COACH R5B - LOW FREQ, 5-45Hz



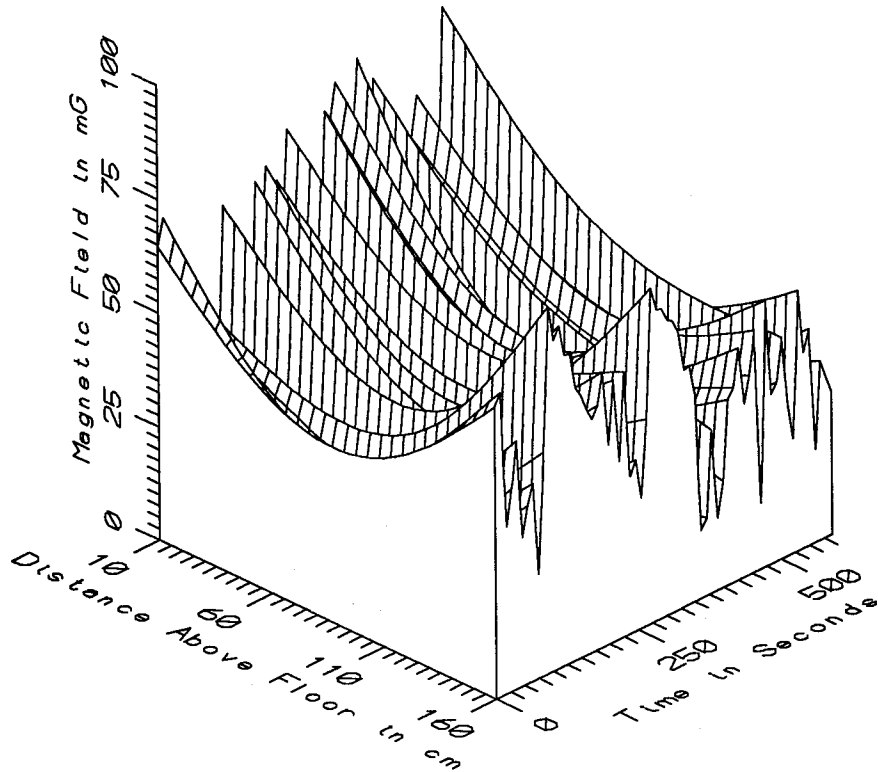
TGV021 - NEAR CORNER OF SEAT 47 IN COACH R5B - POWER FREQ, 50-60Hz



TGV021 - NEAR CORNER OF SEAT 47 IN COACH R5B - POWER HARM, 65-300Hz

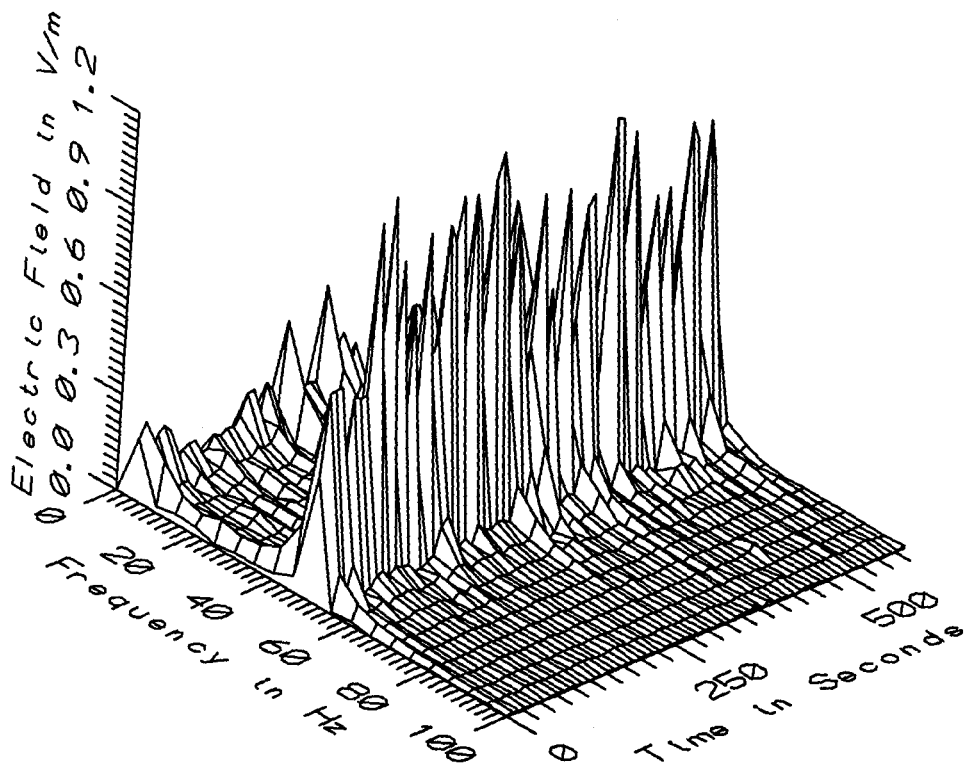


TGV021 - NEAR CORNER OF SEAT 47 IN COACH R5B - HIGH FREQ, 305-2560Hz

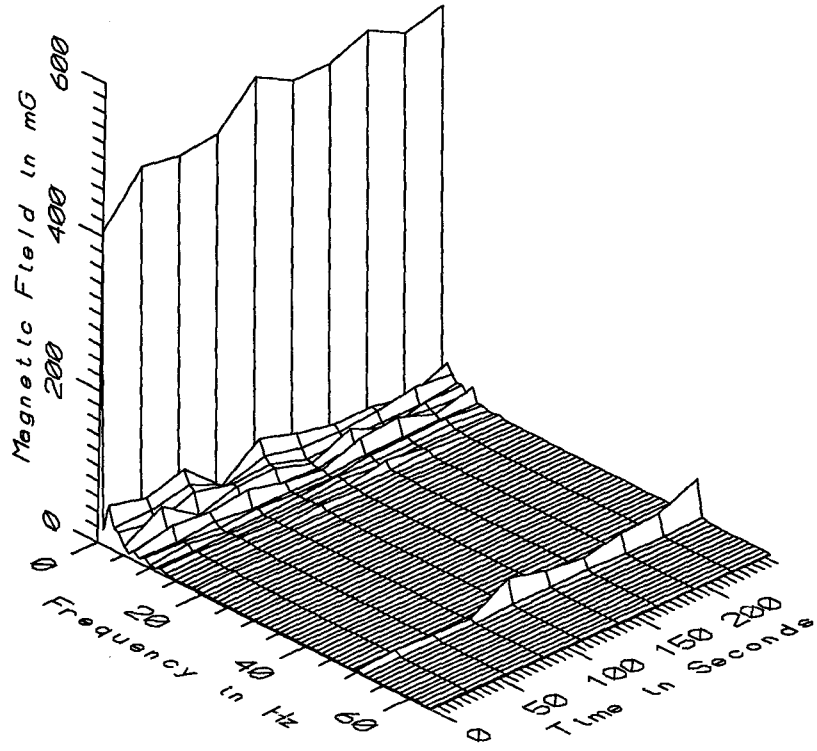


TGV021 - NEAR CORNER OF SEAT 47 IN COACH R5B - ALL FREQ, 5-2560Hz

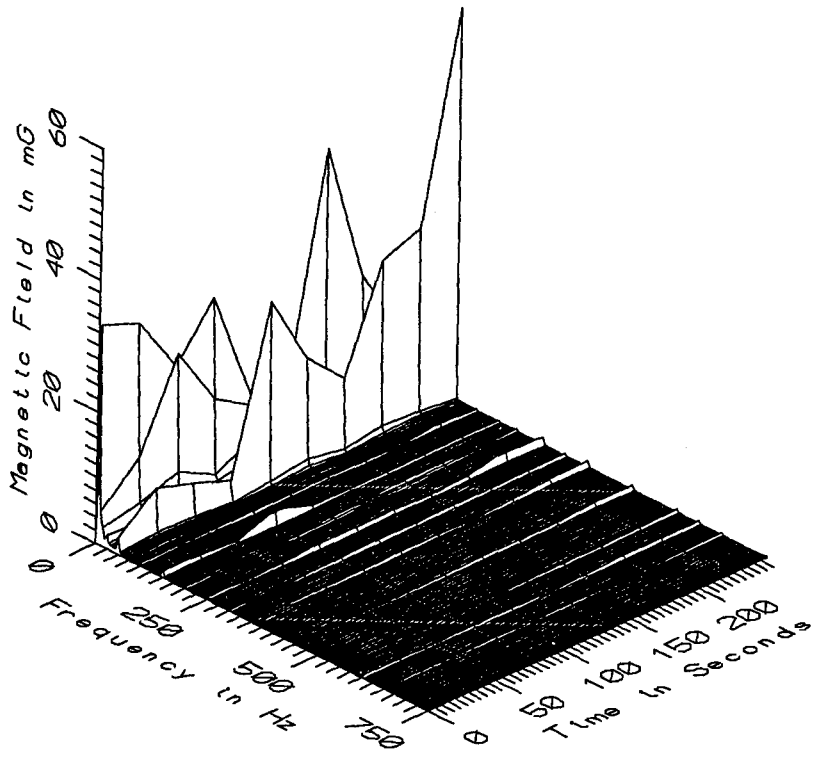
| TGV021 - ALL SAMPLES IN AC SECTION | | TOTAL OF 63 SAMPLES | | | | | |
|------------------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|--|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) | |
| STATIC | 10 | 353.32 | 488.99 | 429.22 | 29.93 | 6.97 | |
| | 60 | 430.32 | 615.09 | 537.29 | 43.70 | 8.13 | |
| | 110 | 551.83 | 763.46 | 675.21 | 49.65 | 7.35 | |
| | 160 | 704.66 | 962.24 | 856.88 | 59.70 | 6.97 | |
| 5-45Hz LOW FREQ | 10 | 17.57 | 83.46 | 49.34 | 15.98 | 32.38 | |
| | 60 | 10.06 | 57.41 | 31.29 | 10.47 | 33.44 | |
| | 110 | 7.91 | 44.53 | 23.43 | 8.14 | 34.73 | |
| | 160 | 6.47 | 34.95 | 17.94 | 6.58 | 36.70 | |
| 50-60Hz PWR FREQ | 10 | 2.87 | 48.71 | 17.81 | 10.69 | 60.02 | |
| | 60 | 1.22 | 30.73 | 14.91 | 8.00 | 53.67 | |
| | 110 | 1.31 | 38.23 | 19.39 | 10.44 | 53.85 | |
| | 160 | 1.27 | 78.77 | 41.61 | 18.65 | 44.82 | |
| 65-300Hz PWR HARM | 10 | 0.74 | 10.40 | 4.34 | 2.05 | 47.28 | |
| | 60 | 0.47 | 7.42 | 2.85 | 1.40 | 49.07 | |
| | 110 | 0.67 | 5.36 | 2.30 | 1.01 | 43.63 | |
| | 160 | 0.97 | 4.51 | 2.18 | 0.76 | 34.71 | |
| 305-2560Hz HIGH FREQ | 10 | 0.32 | 4.92 | 2.06 | 0.92 | 44.82 | |
| | 60 | 0.23 | 3.27 | 1.35 | 0.62 | 45.90 | |
| | 110 | 0.35 | 2.64 | 1.10 | 0.46 | 41.76 | |
| | 160 | 0.55 | 2.27 | 1.05 | 0.35 | 33.45 | |
| 5-2560Hz ALL FREQ | 10 | 26.08 | 86.03 | 53.98 | 15.26 | 28.27 | |
| | 60 | 17.66 | 59.93 | 35.91 | 9.85 | 27.42 | |
| | 110 | 10.57 | 48.89 | 31.91 | 9.39 | 29.41 | |
| | 160 | 14.57 | 80.33 | 46.80 | 16.08 | 34.35 | |



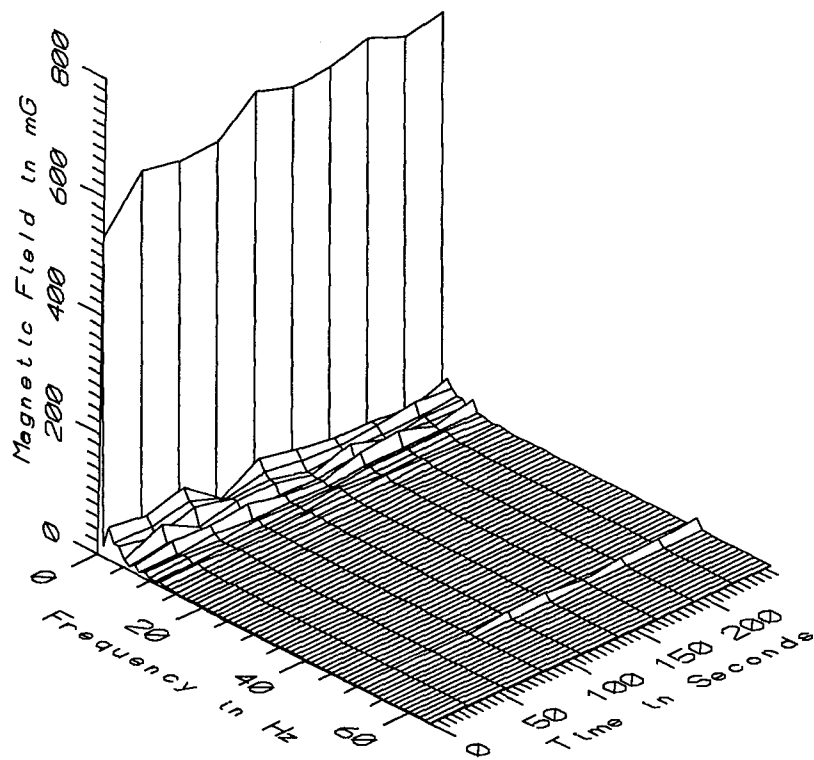
TGV021 - ELECTRIC FIELD IN COACH R5B



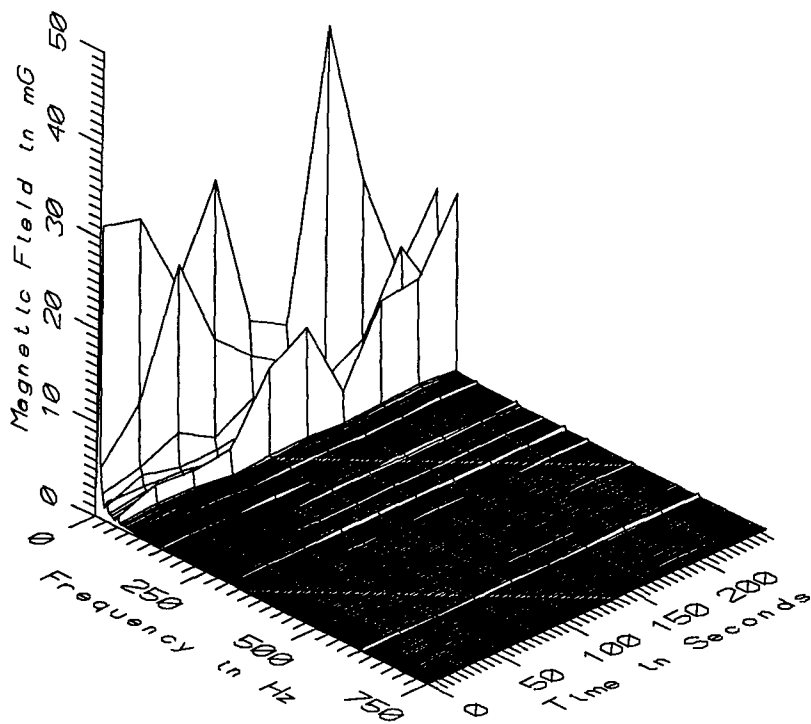
TGV022 - 10cm FROM SIDE WALL ACROSS SEATS 41 & 42 IN COACH R5B



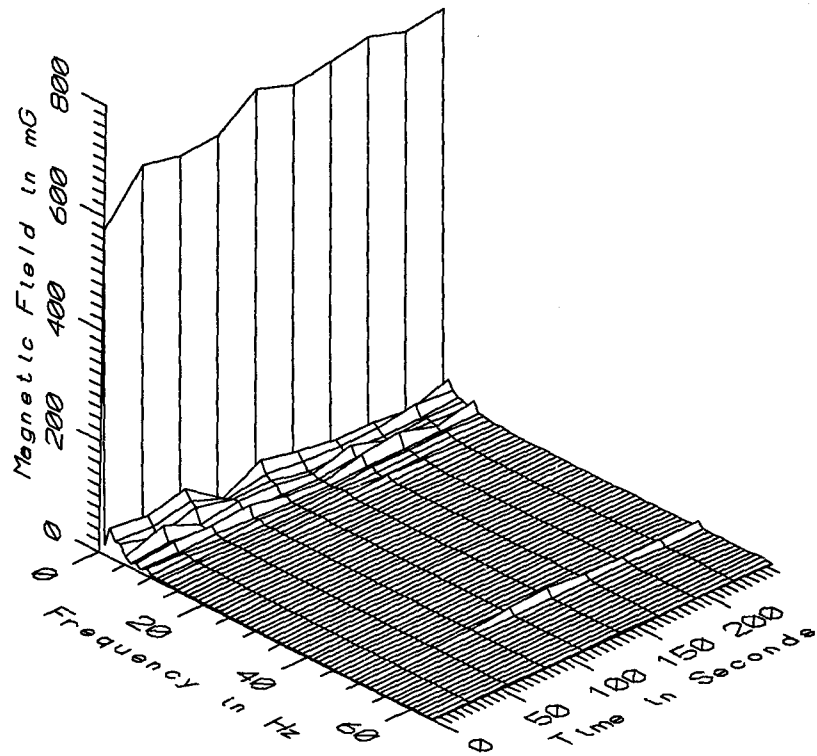
TGV022 - 10cm FROM SIDE WALL ACROSS SEATS 41 & 42 IN COACH R5B



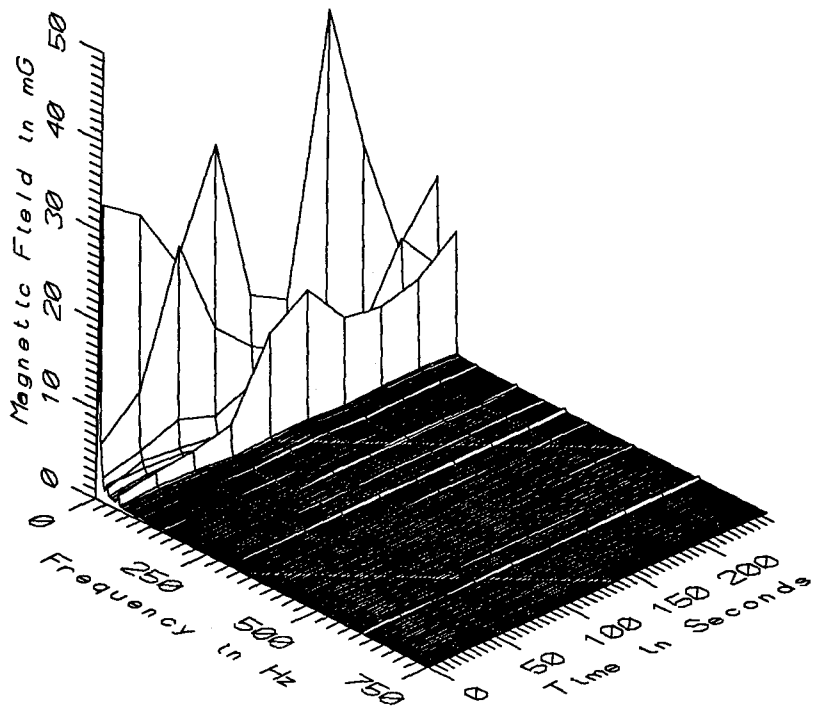
TGV022 - 60cm FROM SIDE WALL ACROSS SEATS 41 & 42 IN COACH R5B



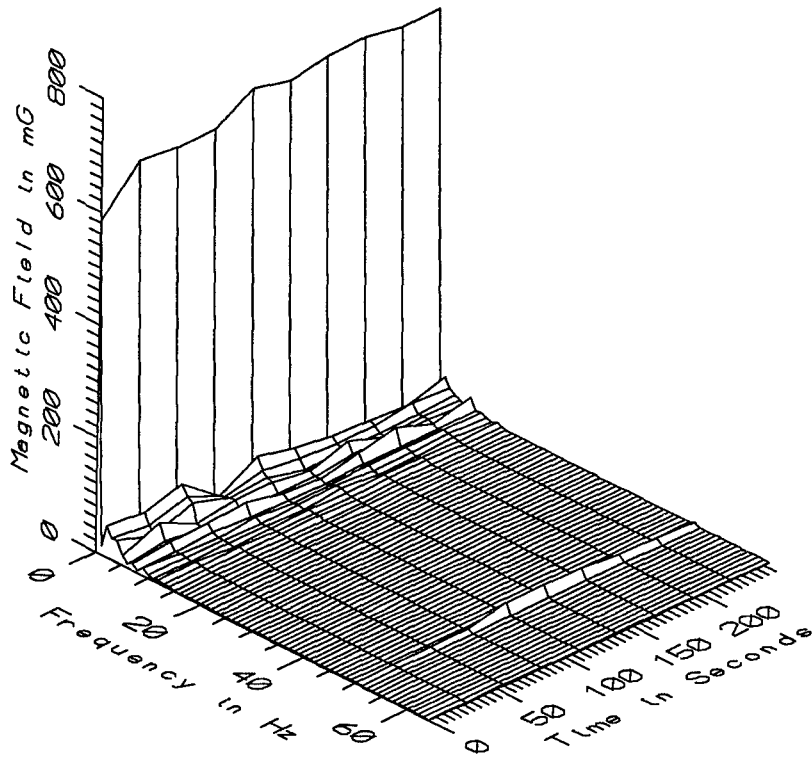
TGV022 - 60cm FROM SIDE WALL ACROSS SEATS 41 & 42 IN COACH R5B



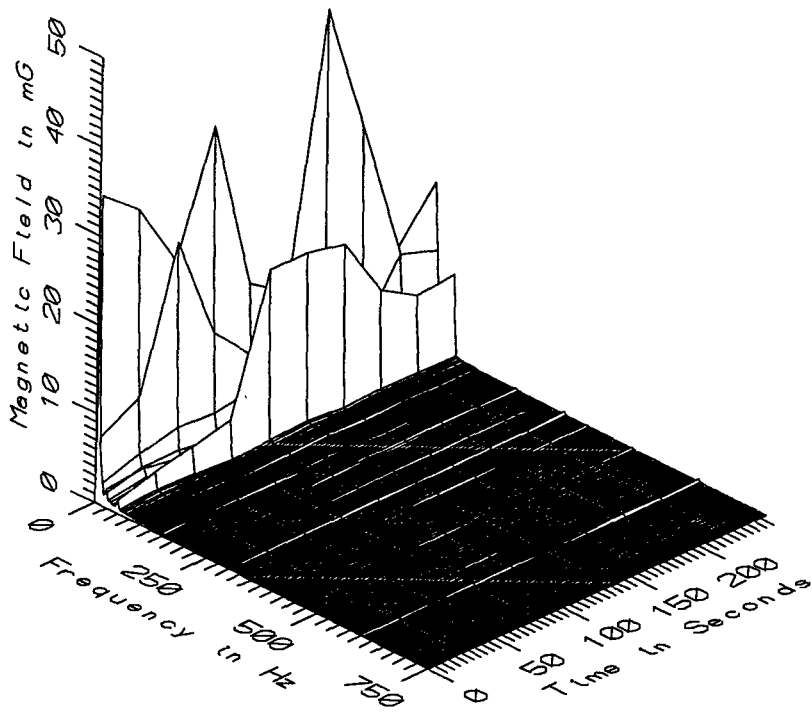
TGV022 - 110cm FROM SIDE WALL ACROSS SEATS 41 & 42 IN COACH R5B



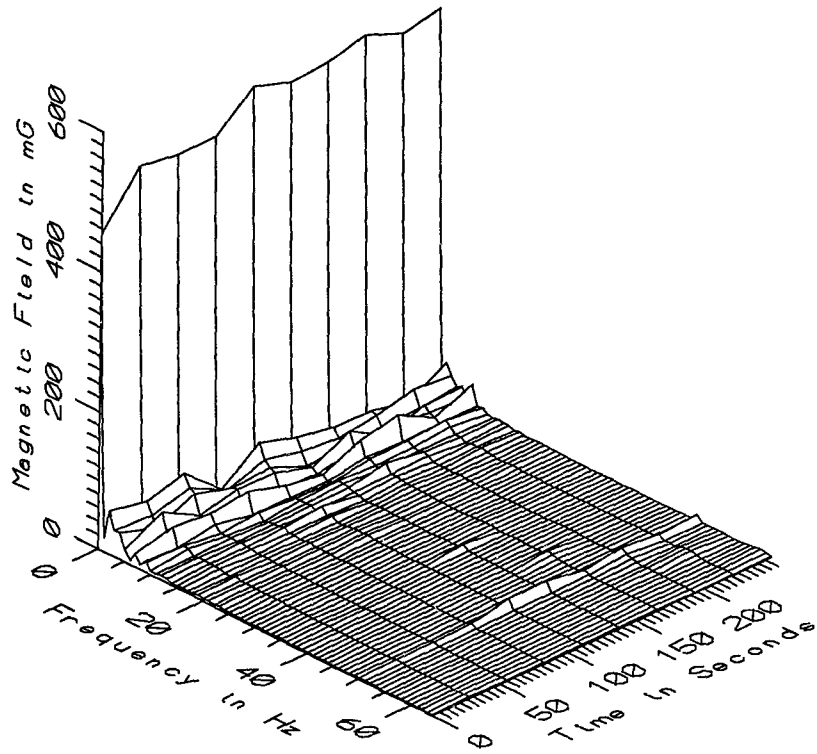
TGV022 - 110cm FROM SIDE WALL ACROSS SEATS 41 & 42 IN COACH R5B



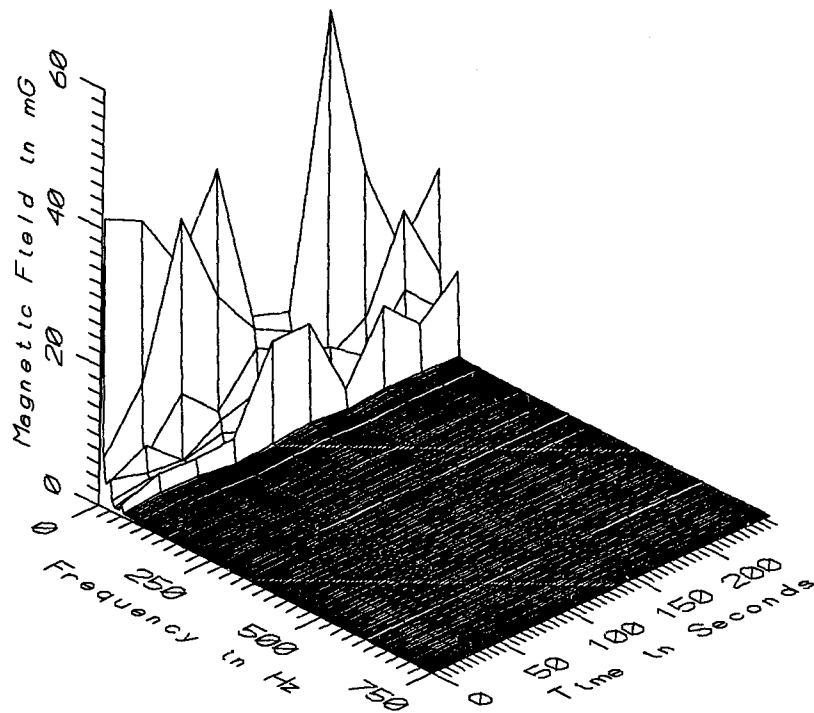
TGV022 - 160cm FROM SIDE WALL ACROSS SEATS 41 & 42 IN COACH R5B



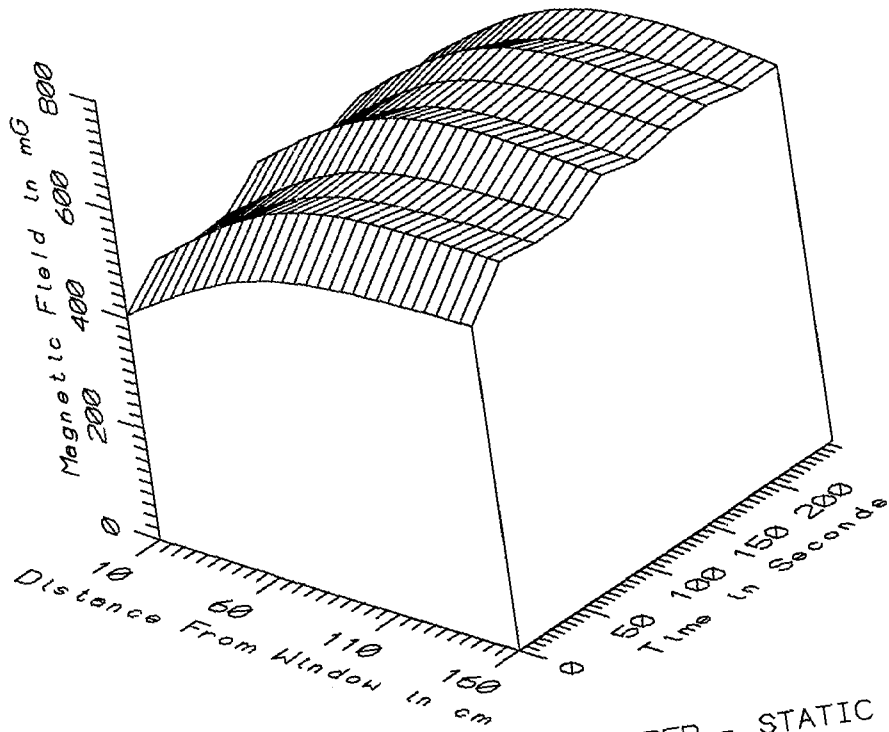
TGV022 - 160cm FROM SIDE WALL ACROSS SEATS 41 & 42 IN COACH R5B



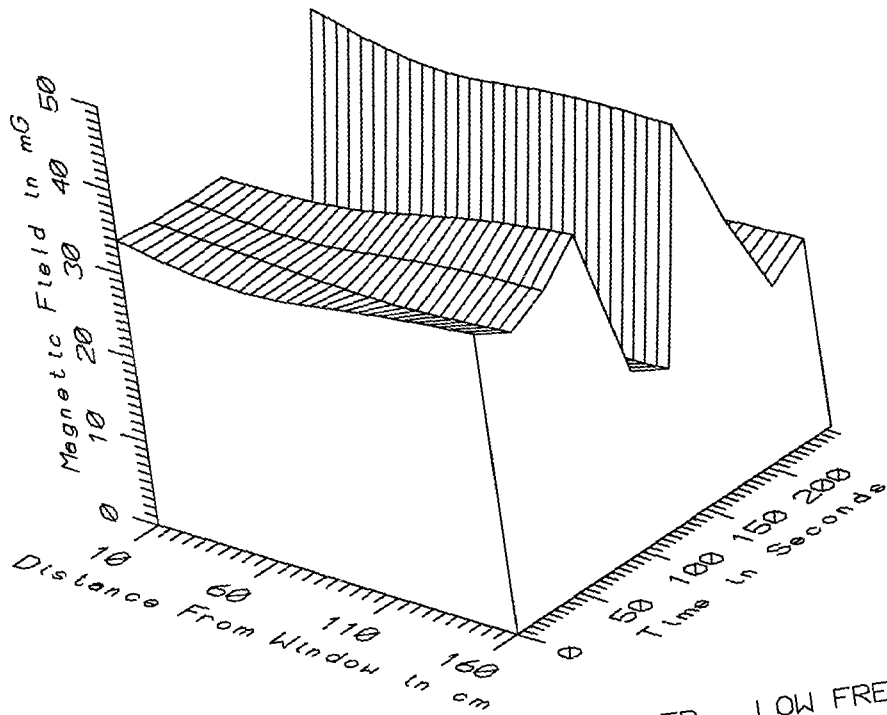
TGV022 - REFERENCE PROBE - ON SEAT 46 IN COACH R5B



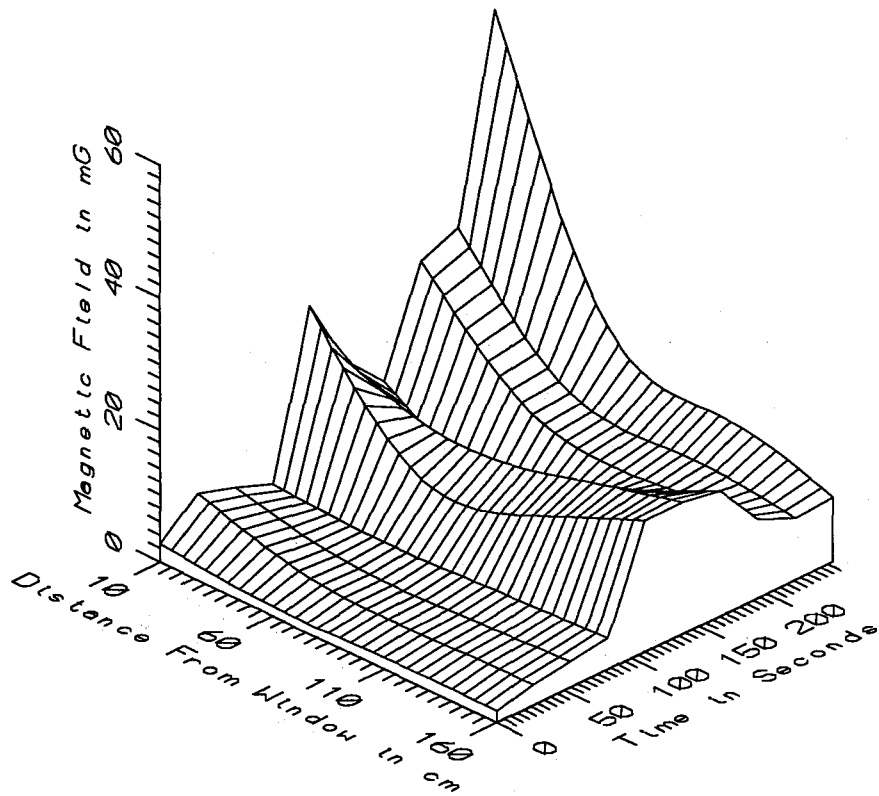
TGV022 - REFERENCE PROBE - ON SEAT 46 IN COACH R5B



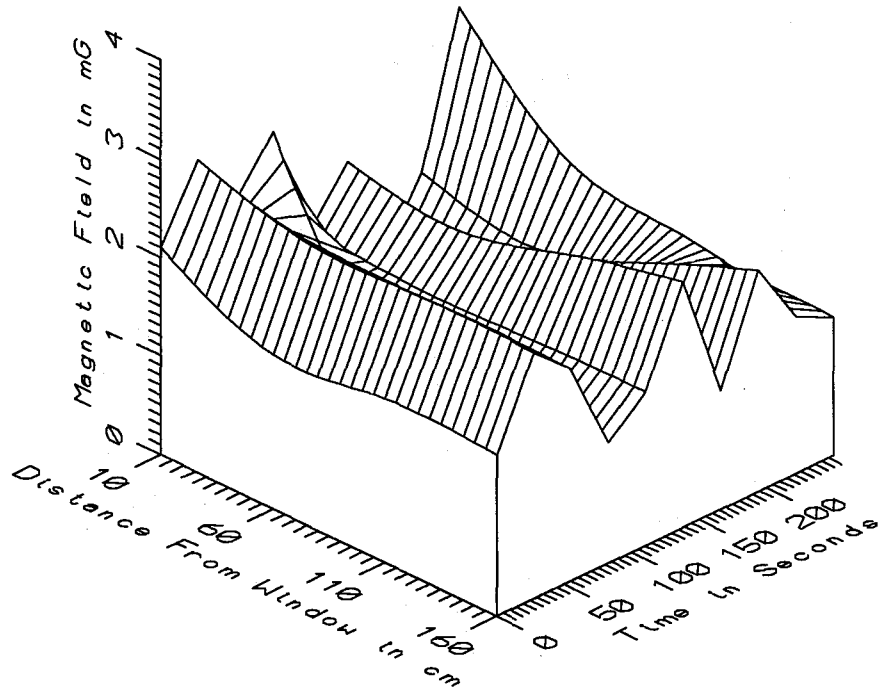
TGV022 - ACROSS SEATS 41 & 42 IN COACH R5B - STATIC



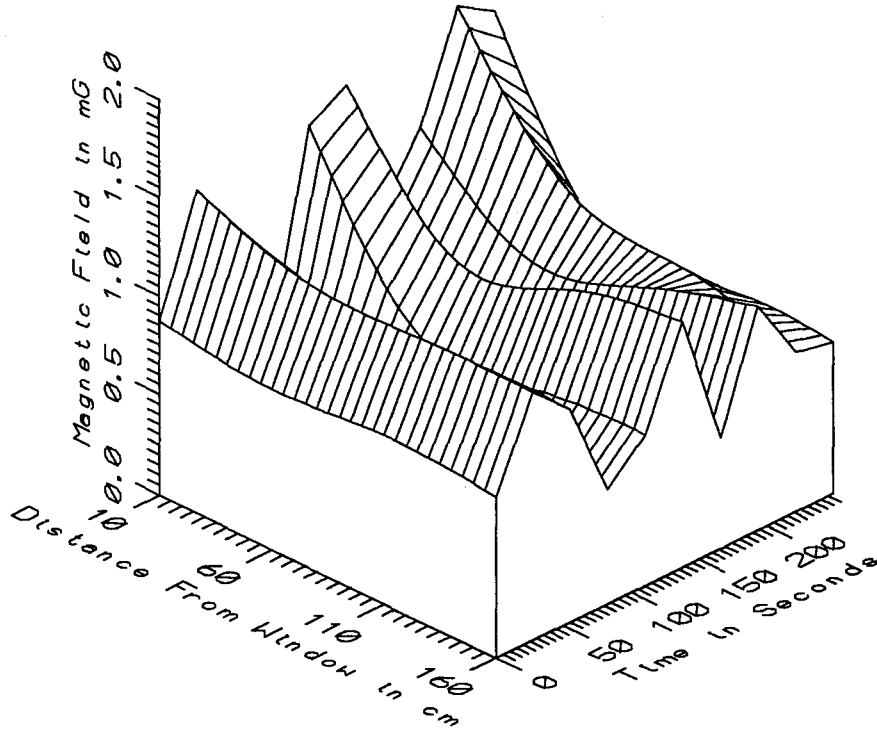
TGV022 - ACROSS SEATS 41 & 42 IN COACH R5B - LOW FREQ. 5-45Hz



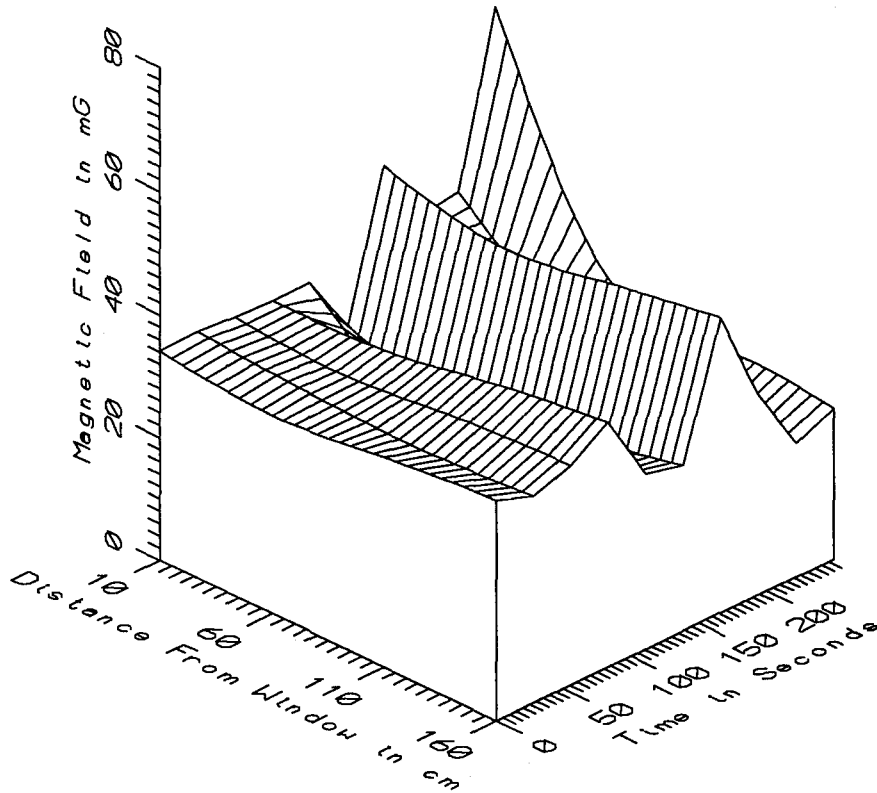
TGV022 - ACROSS SEATS 41 & 42 IN COACH R5B - POWER FREQ, 50-60Hz



TGV022 - ACROSS SEATS 41 & 42 IN COACH R5B - POWER HARM, 65-300Hz



TGV022 - ACROSS SEATS 41 & 42 IN COACH R5B - HIGH FREQ, 305-2560Hz



TGV022 - ACROSS SEATS 41 & 42 IN COACH R5B - ALL FREQ, 5-2560Hz

| TGV022 - 5th COACH, ALL SAMPLES IN AC SECTION | | TOTAL OF 10 SAMPLES | | | | |
|---|------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | DIST. FROM WINDOW (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 405.89 | 518.53 | 480.77 | 33.35 | 6.94 |
| | 60 | 532.58 | 665.44 | 626.10 | 39.48 | 6.31 |
| | 110 | 575.83 | 707.13 | 670.63 | 39.73 | 5.92 |
| | 160 | 584.61 | 694.75 | 667.54 | 33.12 | 4.96 |
| 5-45Hz | 10 | 16.00 | 45.25 | 28.10 | 9.10 | 32.36 |
| LOW FREQ | 60 | 15.52 | 42.43 | 27.33 | 8.65 | 31.65 |
| | 110 | 16.86 | 43.83 | 28.69 | 8.95 | 31.20 |
| | 160 | 17.91 | 44.21 | 29.85 | 9.23 | 30.92 |
| 50-60Hz | 10 | 2.72 | 59.73 | 19.04 | 17.55 | 92.14 |
| PWR FREQ | 60 | 1.39 | 19.50 | 7.89 | 6.02 | 76.25 |
| | 110 | 1.76 | 15.26 | 8.32 | 5.09 | 61.13 |
| | 160 | 1.71 | 19.80 | 10.23 | 7.11 | 69.47 |
| 65-300Hz | 10 | 0.95 | 3.08 | 2.09 | 0.66 | 31.44 |
| PWR HARM | 60 | 0.96 | 2.49 | 1.63 | 0.51 | 31.20 |
| | 110 | 1.11 | 2.51 | 1.73 | 0.47 | 26.92 |
| | 160 | 1.20 | 2.49 | 1.79 | 0.50 | 27.89 |
| 305-2560Hz | 10 | 0.54 | 1.74 | 1.27 | 0.39 | 30.99 |
| HIGH FREQ | 60 | 0.43 | 1.24 | 0.82 | 0.26 | 31.24 |
| | 110 | 0.50 | 1.23 | 0.86 | 0.25 | 28.55 |
| | 160 | 0.55 | 1.23 | 0.88 | 0.25 | 28.83 |
| 5-2560Hz | 10 | 23.38 | 63.55 | 37.52 | 10.70 | 28.53 |
| ALL FREQ | 60 | 19.92 | 42.60 | 29.50 | 6.90 | 23.39 |
| | 110 | 22.87 | 45.01 | 30.72 | 7.32 | 23.84 |
| | 160 | 21.71 | 48.05 | 32.67 | 7.78 | 23.81 |

APPENDIX X

DATASET TGV023
AXIAL PROFILE FROM CENTER OF SECOND CLASS COACH R5B

Measurement Setup Code: Staff: 23 Reference: 24
 Drawing: A-1

Vehicle Status: Coach trip from Vendome station to
 Montparnasse station in Paris

Measurement Date: September 8, 1992

Measurement Time: Start: 17:33:03
 End: 17:37:30

Number of Samples: 10

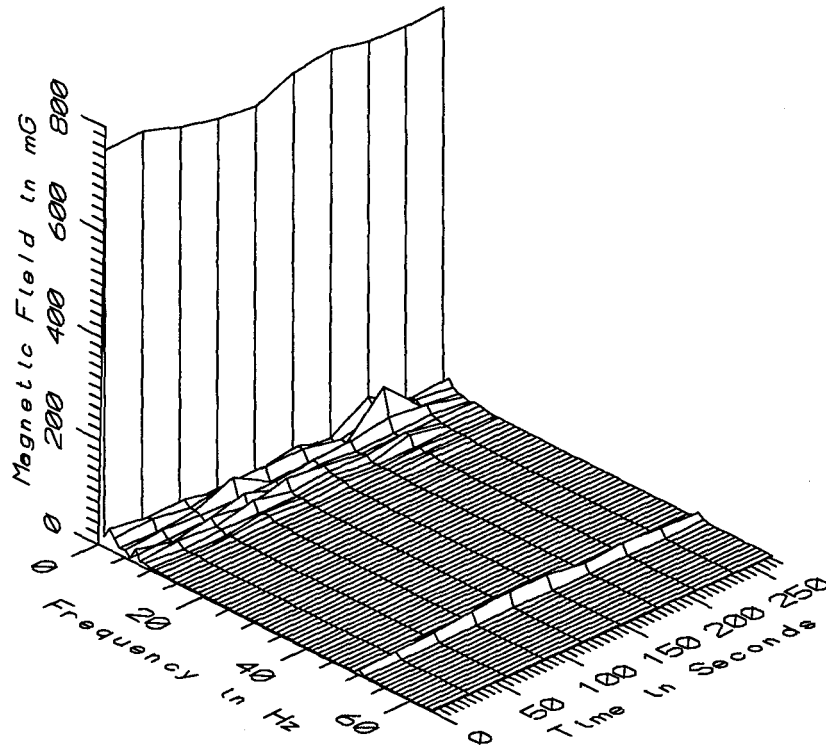
Programmed Sample Interval: 30 sec

Actual Sample Interval: 29.7 sec

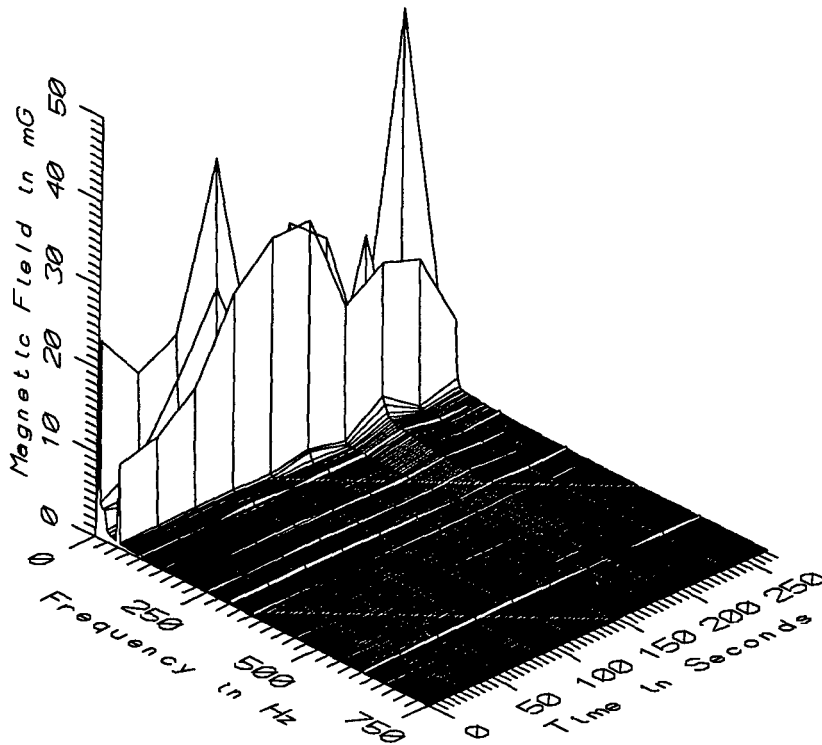
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

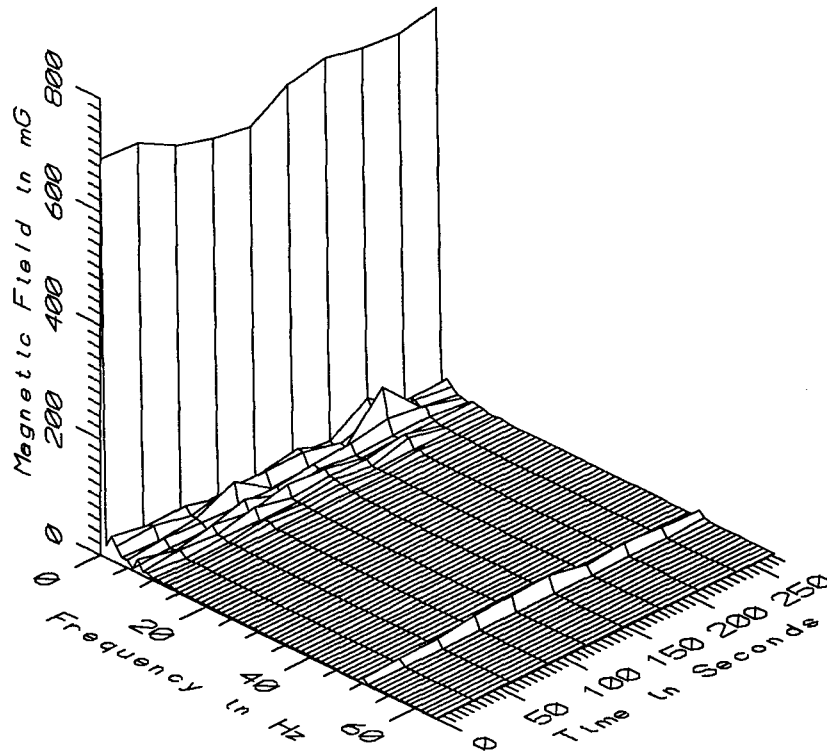
Missing or Suspect Data: None



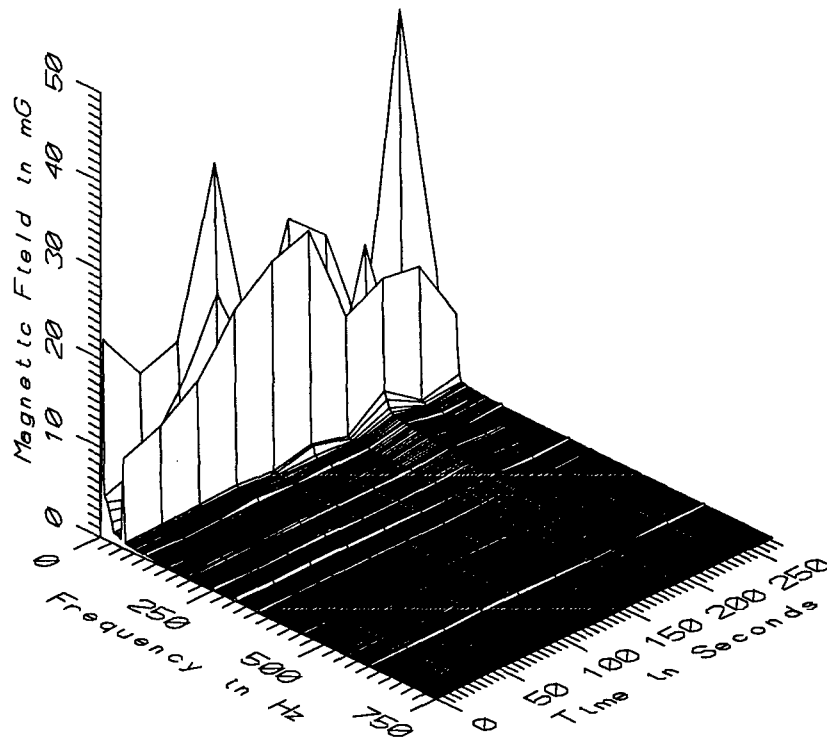
TGV023 - 10cm FROM CORNER OF SEAT 46 ALONG CENTER LINE OF COACH R5B



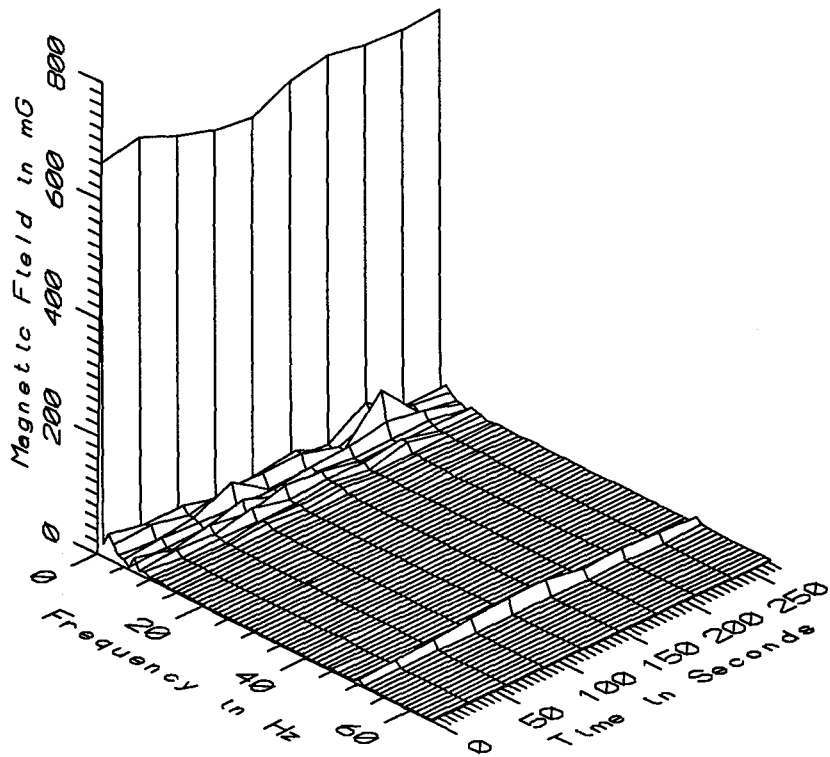
TGV023 - 10cm FROM CORNER OF SEAT 46 ALONG CENTER LINE OF COACH R5B



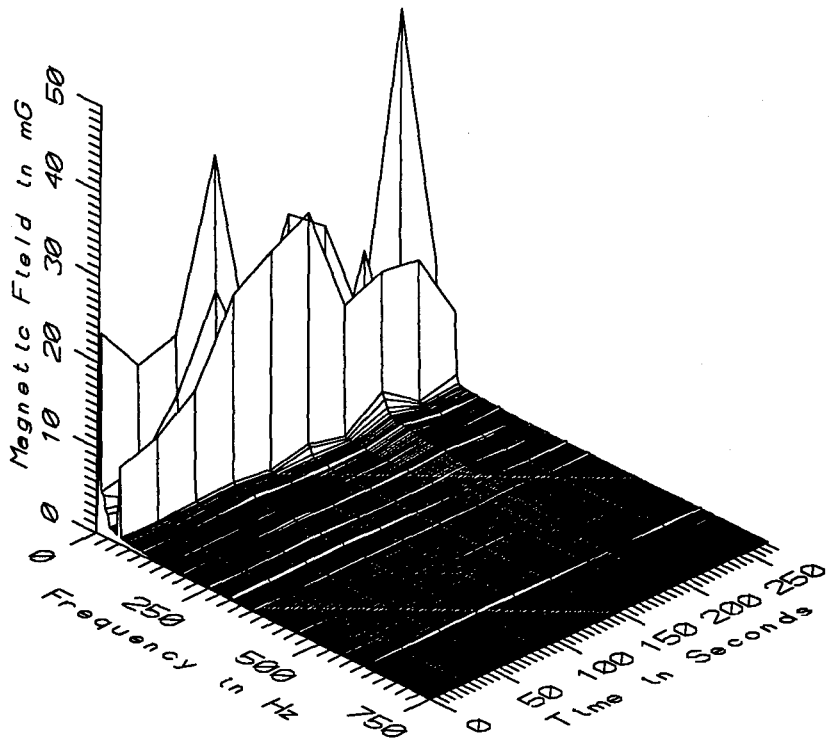
TGV023 - 60cm FROM CORNER OF SEAT 46 ALONG CENTER LINE OF COACH R5B



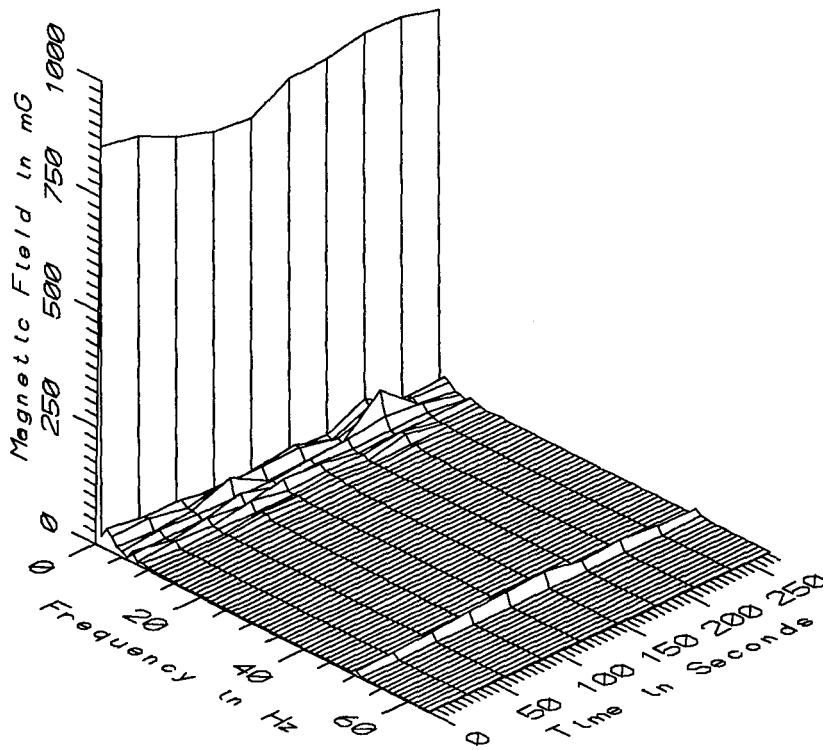
TGV023 - 60cm FROM CORNER OF SEAT 46 ALONG CENTER LINE OF COACH R5B



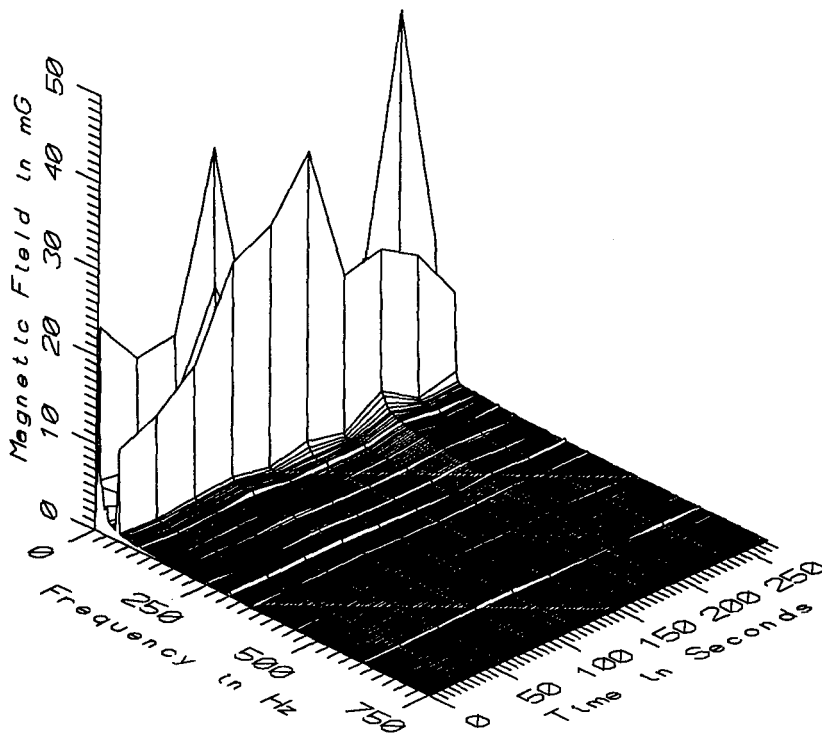
TGV023 - 110cm FROM CORNER OF SEAT 46 ALONG CENTER LINE OF COACH R5B



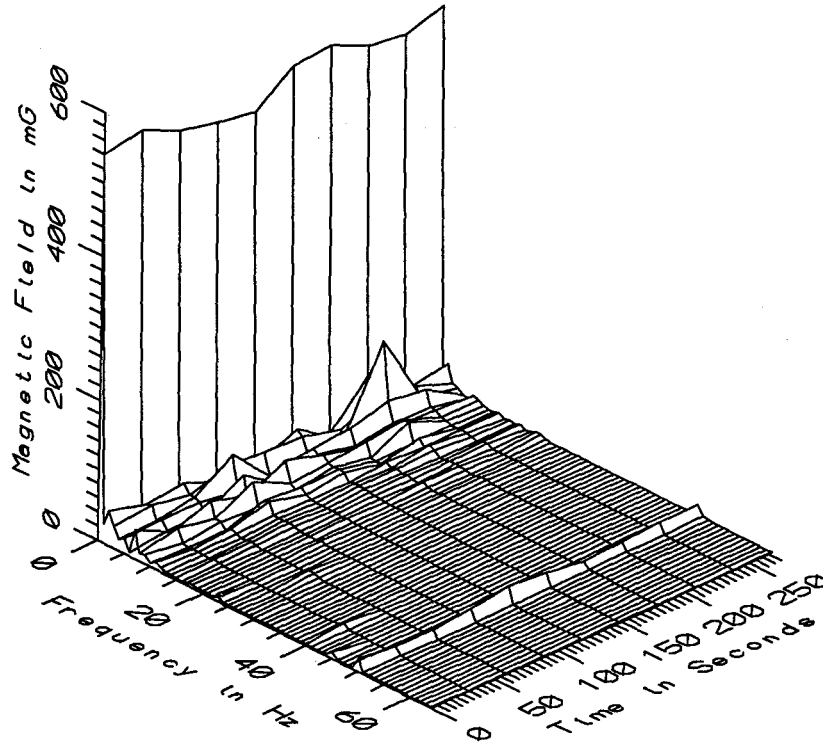
TGV023 - 110cm FROM CORNER OF SEAT 46 ALONG CENTER LINE OF COACH R5B



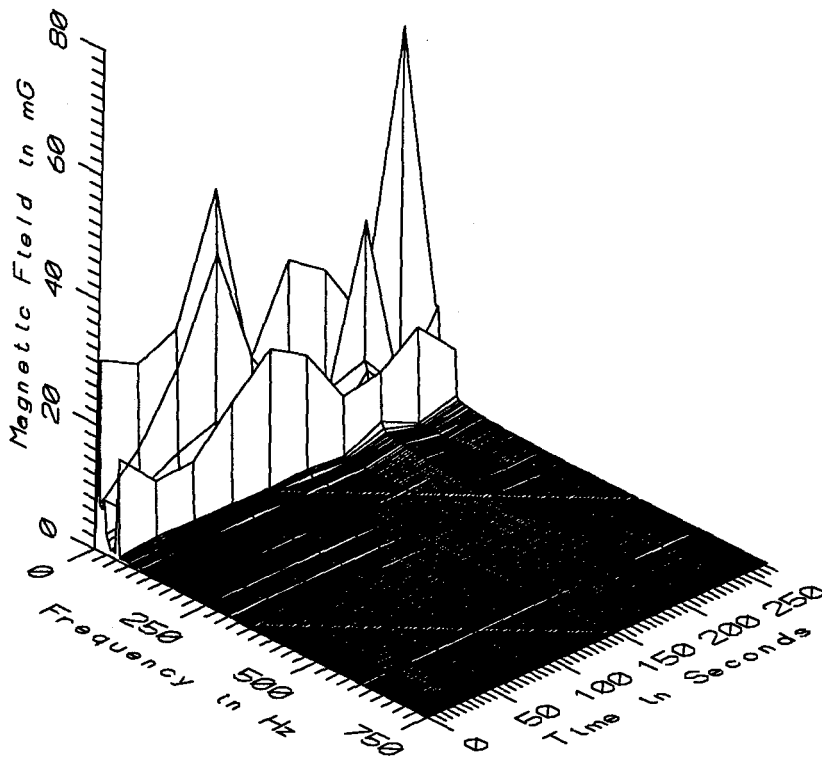
TGV023 - 160cm FROM CORNER OF SEAT 46 ALONG CENTER LINE OF COACH R5B



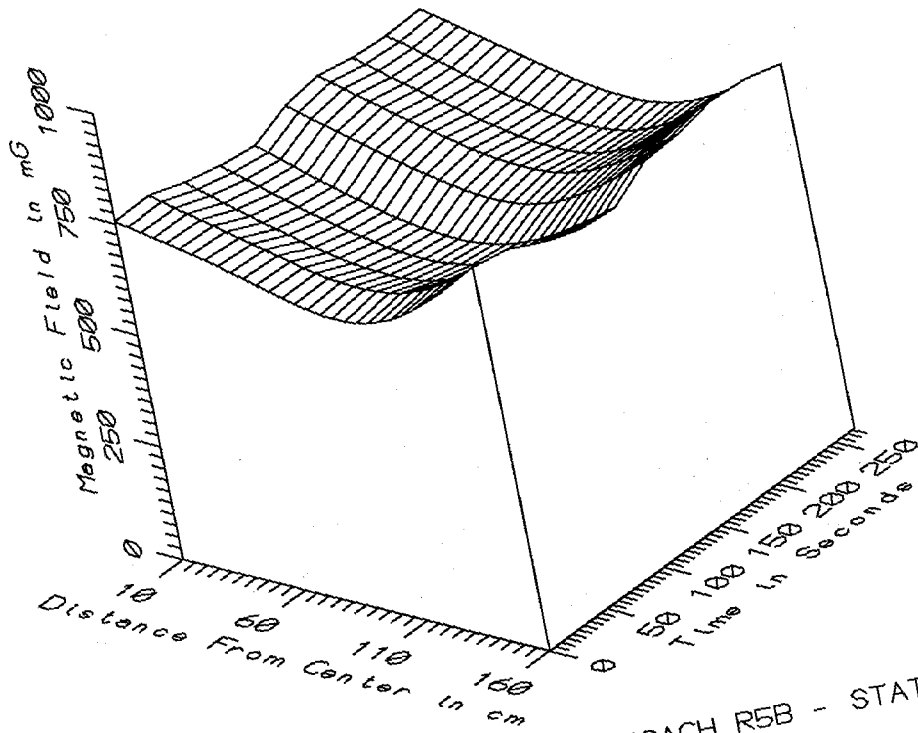
TGV023 - 160cm FROM CORNER OF SEAT 46 ALONG CENTER LINE OF COACH R5B



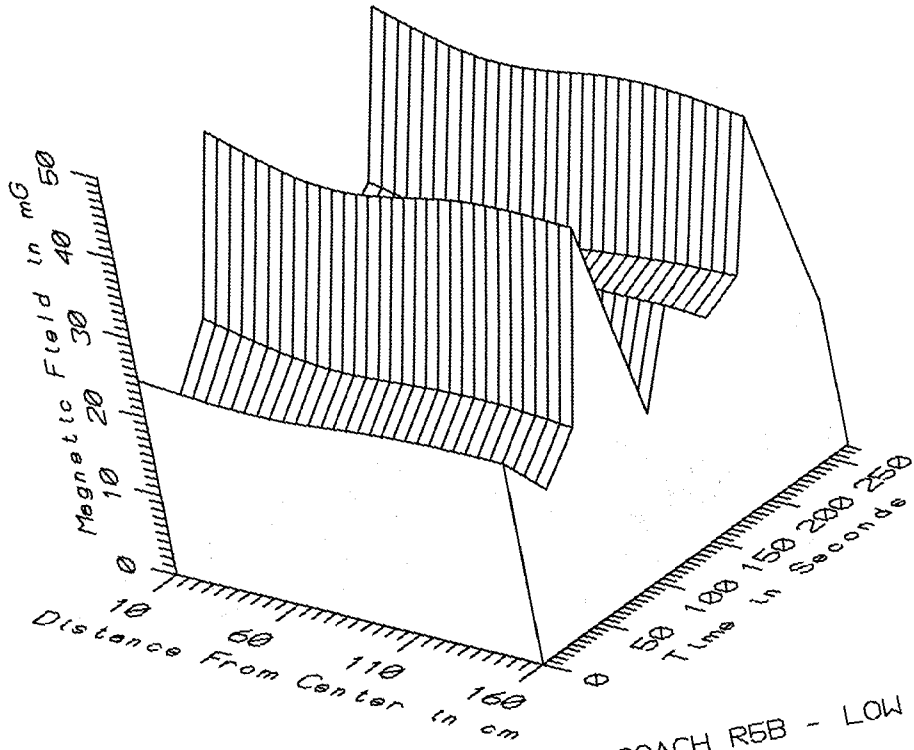
TGV023 - REFERENCE PROBE - ON SEAT 46 IN COACH R5B



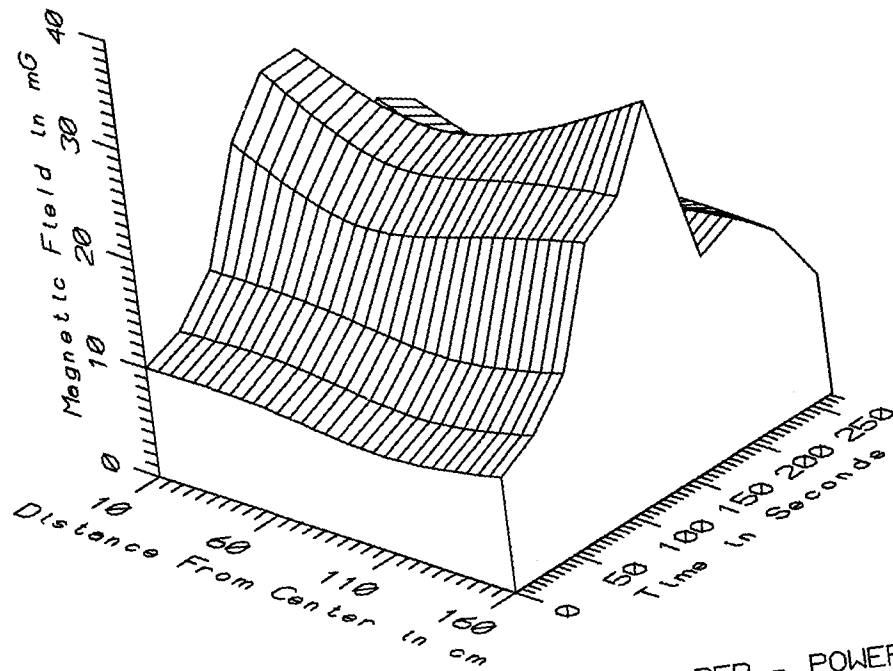
TGV023 - REFERENCE PROBE - ON SEAT 46 IN COACH R5B



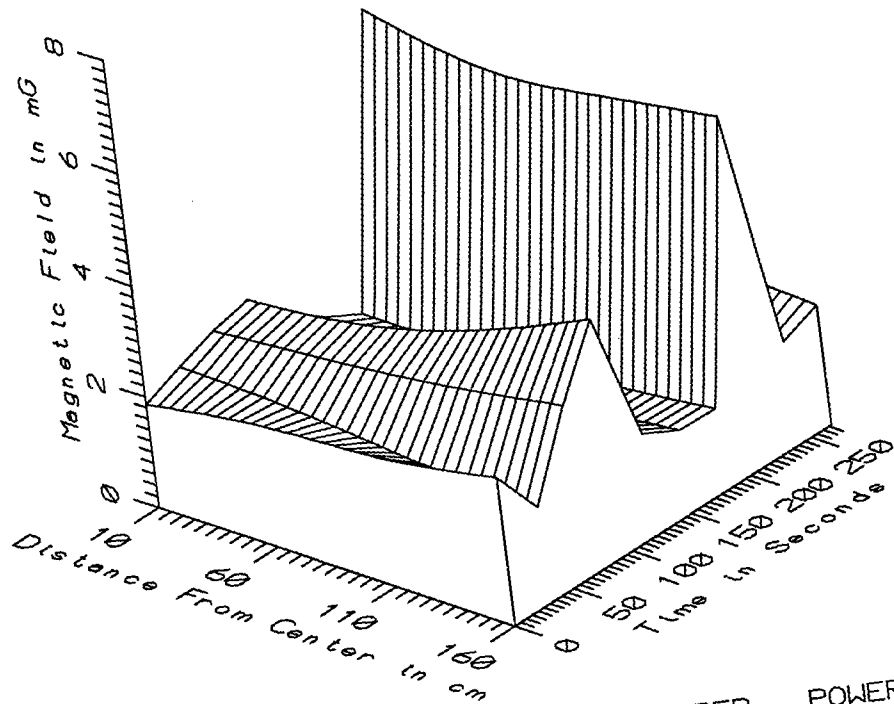
TGV023 - AXIAL PROFILE FROM CENTER OF COACH R5B - STATIC



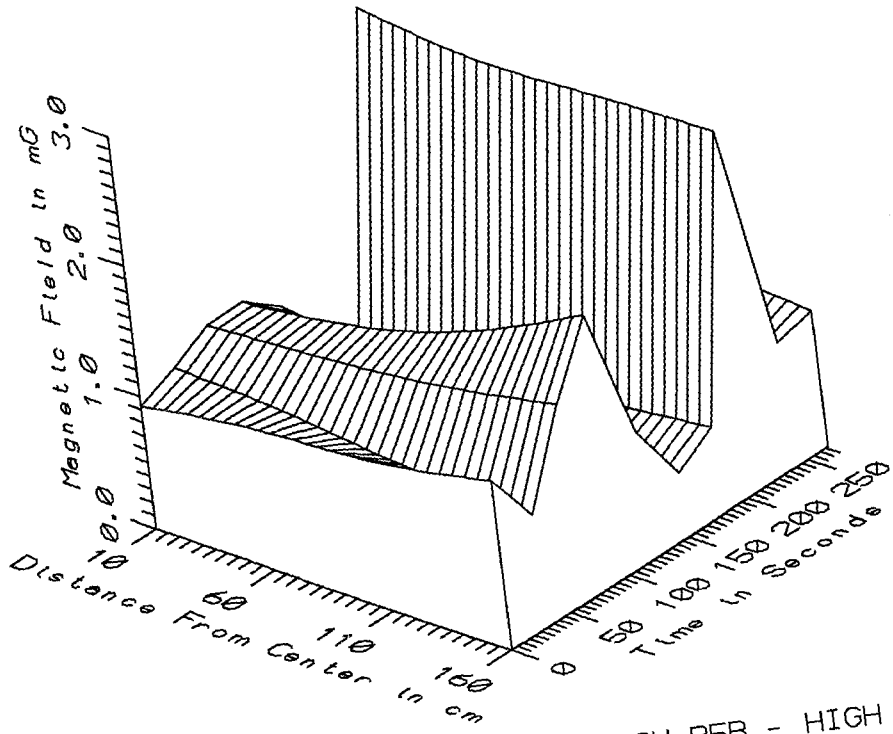
TGV023 - AXIAL PROFILE FROM CENTER OF COACH R5B - LOW FREQ. 5-45Hz



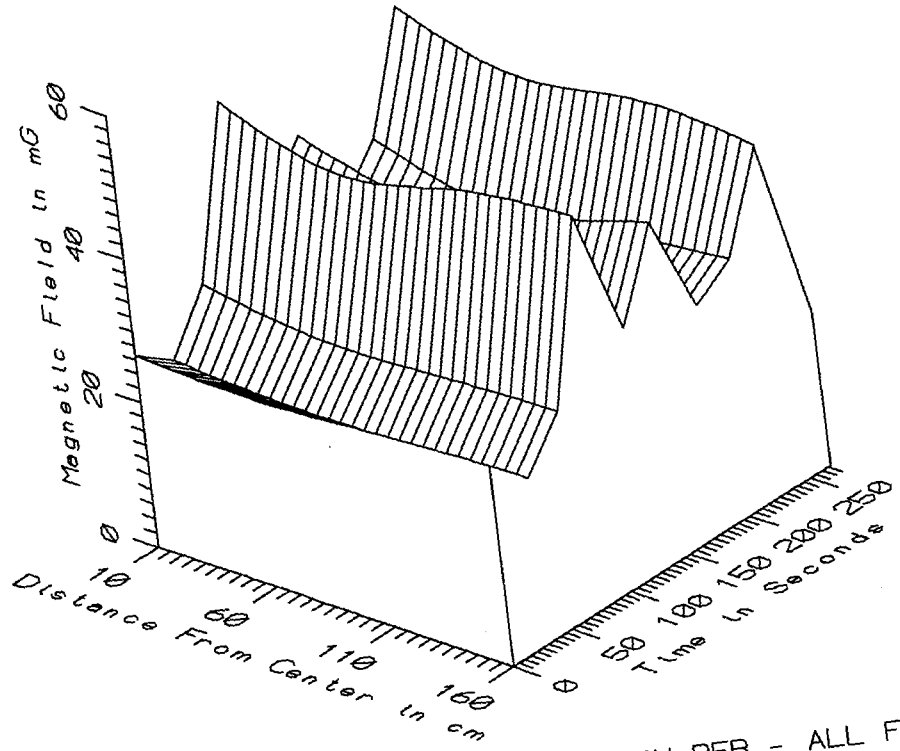
TGV023 - AXIAL PROFILE FROM CENTER OF COACH R5B - POWER FREQ, 50-60Hz



TGV023 - AXIAL PROFILE FROM CENTER OF COACH R5B - POWER HARM, 65-300Hz



TGV023 - AXIAL PROFILE FROM CENTER OF COACH R5B - HIGH FREQ, 305-2560Hz



TGV023 - AXIAL PROFILE FROM CENTER OF COACH R5B - ALL FREQ, 5-2560Hz

| TGV023 - 5th COACH, ALL SAMPLES IN AC SECTION | | TOTAL OF 10 SAMPLES | | | | |
|---|------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | DIST. FROM CENTER (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 707.23 | 759.00 | 737.94 | 16.55 | 2.24 |
| | 60 | 623.40 | 693.62 | 664.60 | 22.58 | 3.40 |
| | 110 | 619.58 | 675.26 | 653.27 | 17.19 | 2.63 |
| | 160 | 769.03 | 857.29 | 818.56 | 28.90 | 3.53 |
| 5-45Hz LOW FREQ | 10 | 16.21 | 47.02 | 28.21 | 10.67 | 37.82 |
| | 60 | 14.50 | 43.61 | 26.01 | 9.99 | 38.41 |
| | 110 | 16.27 | 45.64 | 27.51 | 10.32 | 37.50 |
| | 160 | 18.11 | 45.98 | 27.90 | 9.90 | 35.49 |
| 50-60Hz PWR FREQ | 10 | 9.12 | 28.95 | 18.27 | 7.32 | 40.08 |
| | 60 | 8.48 | 25.76 | 16.19 | 5.82 | 35.93 |
| | 110 | 9.04 | 28.69 | 17.20 | 6.99 | 40.63 |
| | 160 | 10.68 | 35.04 | 19.64 | 8.06 | 41.06 |
| 65-300Hz PWR HARM | 10 | 1.10 | 6.12 | 2.39 | 1.43 | 59.76 |
| | 60 | 1.13 | 5.77 | 2.33 | 1.35 | 57.77 |
| | 110 | 1.27 | 5.99 | 2.46 | 1.41 | 57.29 |
| | 160 | 1.49 | 6.33 | 2.71 | 1.55 | 57.07 |
| 305-2560Hz HIGH FREQ | 10 | 0.50 | 2.80 | 1.15 | 0.65 | 56.22 |
| | 60 | 0.49 | 2.70 | 1.11 | 0.63 | 56.43 |
| | 110 | 0.46 | 2.73 | 1.15 | 0.65 | 56.16 |
| | 160 | 0.49 | 2.75 | 1.25 | 0.68 | 54.75 |
| 5-2560Hz ALL FREQ | 10 | 18.89 | 52.71 | 34.31 | 11.17 | 32.55 |
| | 60 | 17.04 | 47.93 | 31.24 | 10.06 | 32.21 |
| | 110 | 18.80 | 51.31 | 33.13 | 10.78 | 32.54 |
| | 160 | 21.30 | 53.16 | 34.90 | 10.80 | 30.95 |

APPENDIX Y

DATASET TGV024
CENTER OF SECOND CLASS COACH R5B

Measurement Setup Code: Staff: 21 Reference: 24
 Drawing: A-1

Vehicle Status: Coach trip from Vendome station to
 Montparnasse station in Paris

Measurement Date: September 8, 1992

Measurement Time: Start: 17:38:24
 End: 17:54:02

Number of Samples: 32

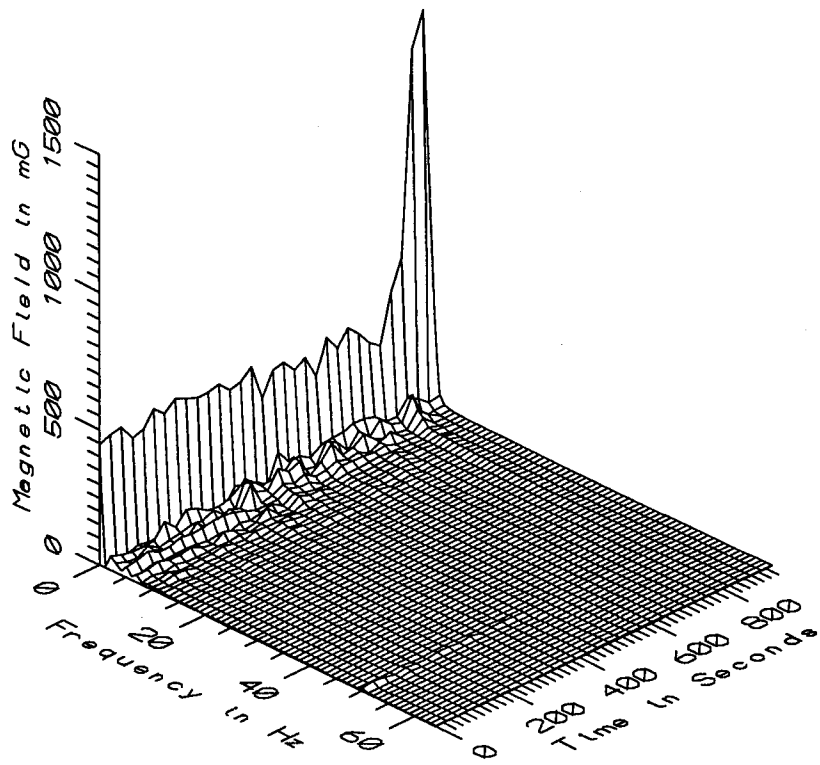
Programmed Sample Interval: 30 sec

Actual Sample Interval: 30.3 sec

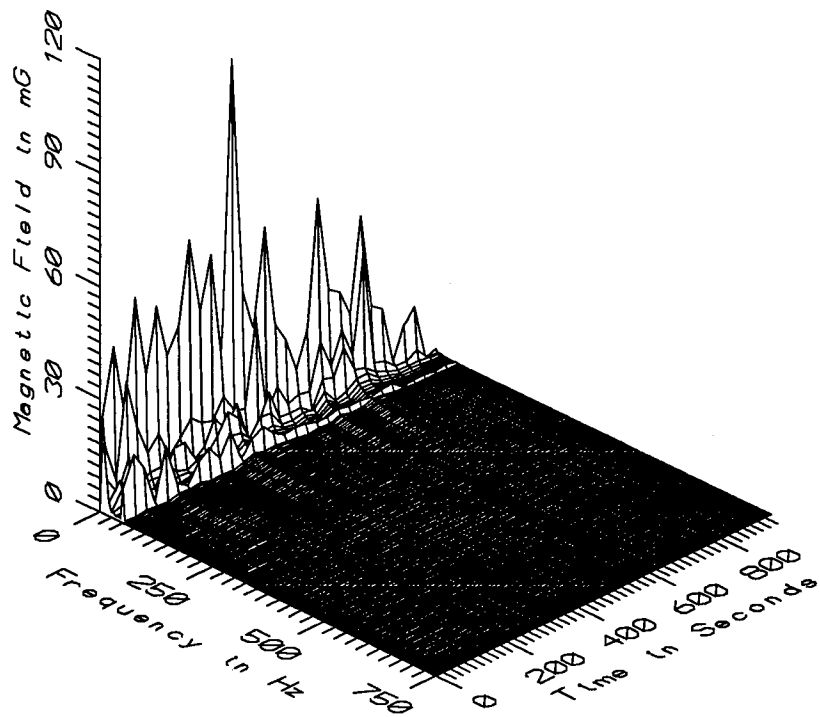
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

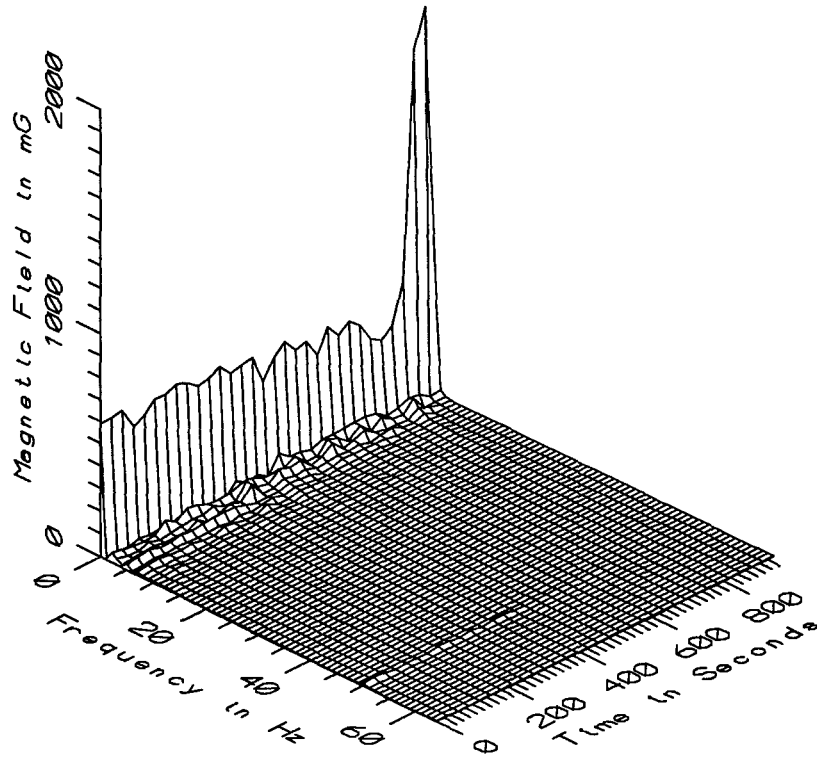
Missing or Suspect Data: None



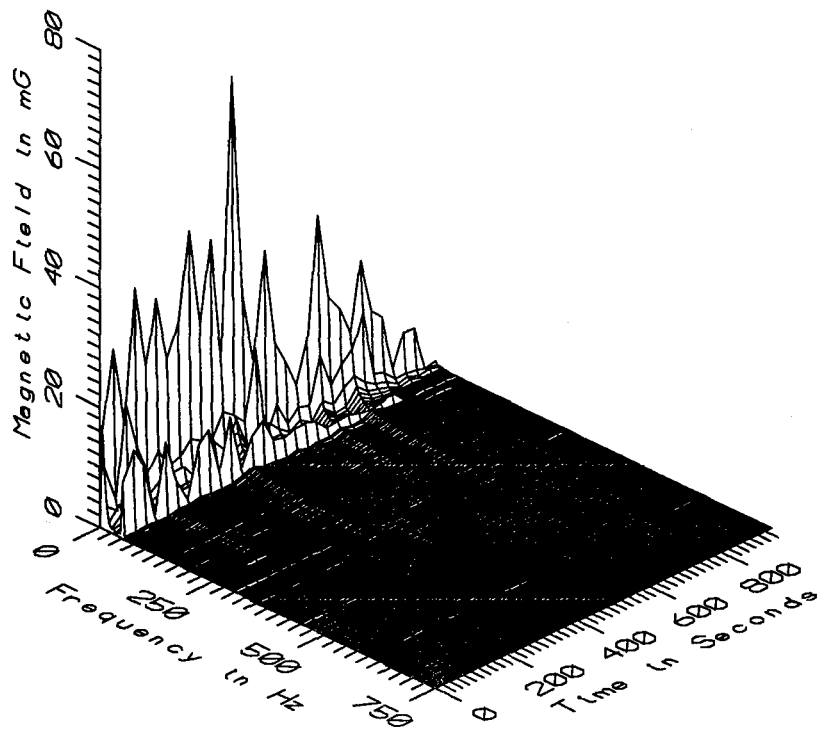
TGV024 - 10cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



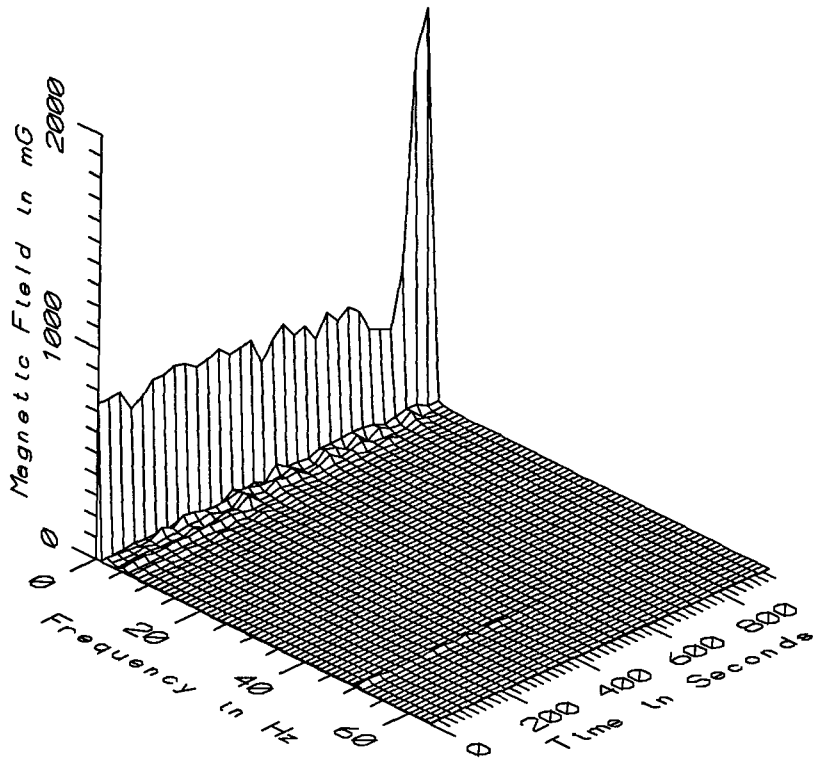
TGV024 - 10cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



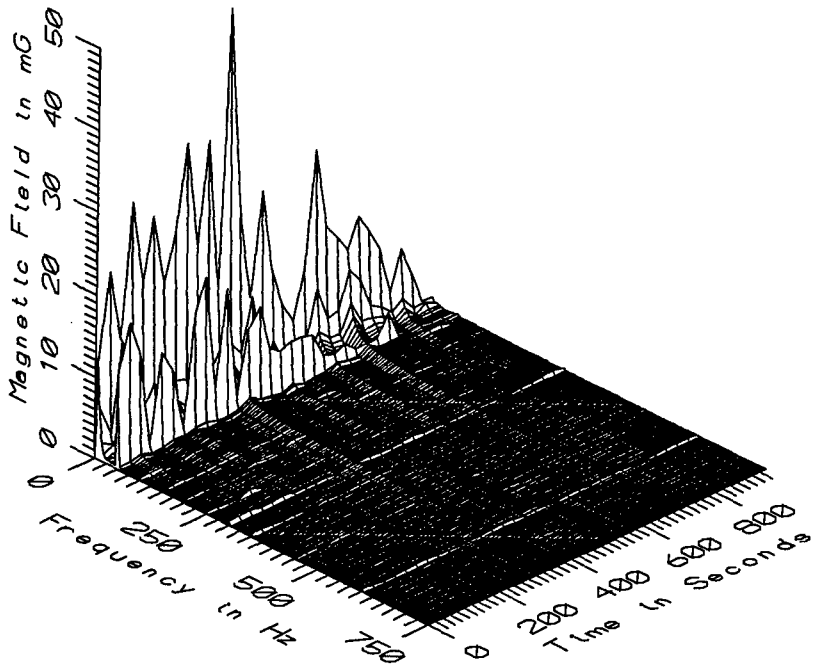
TGV024 - 60cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



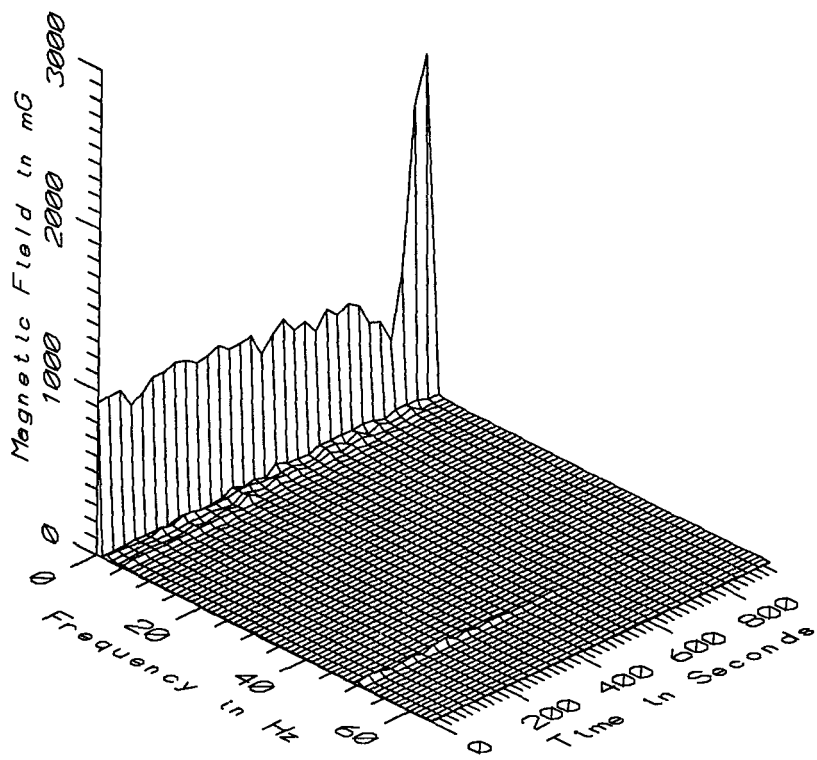
TGV024 - 60cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



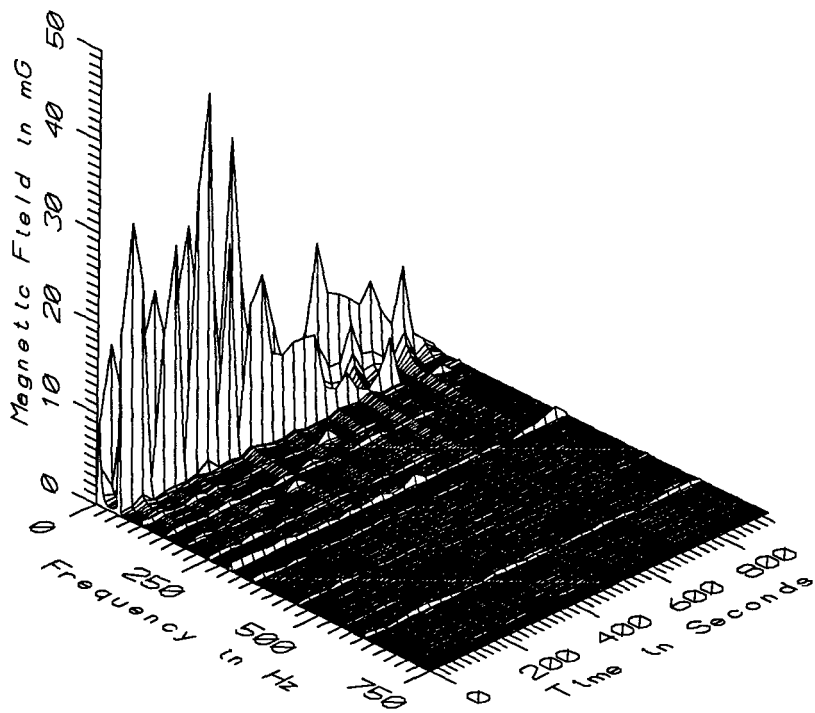
TGV024 - 110cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



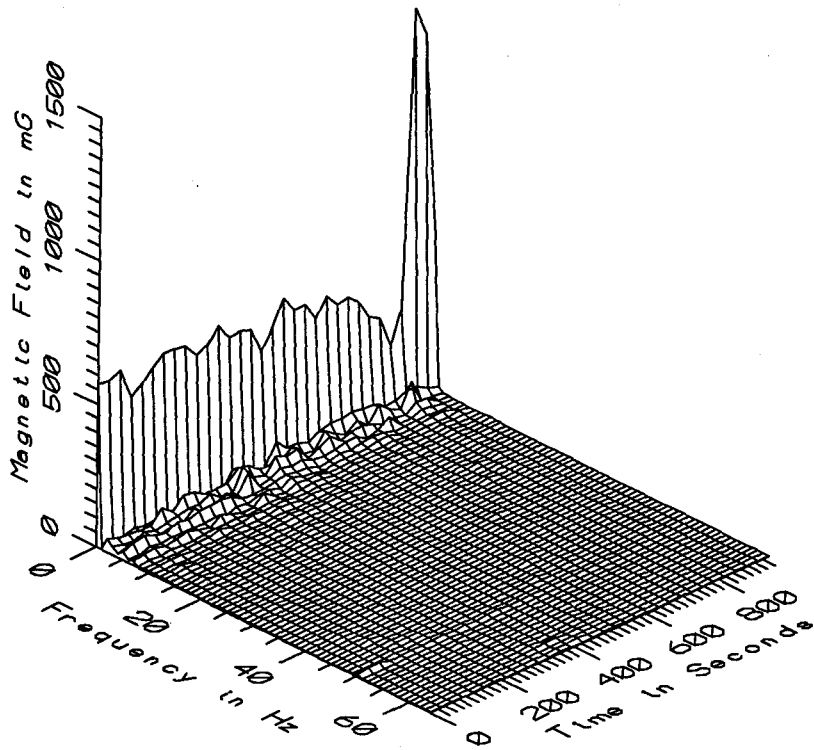
TGV024 - 110cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



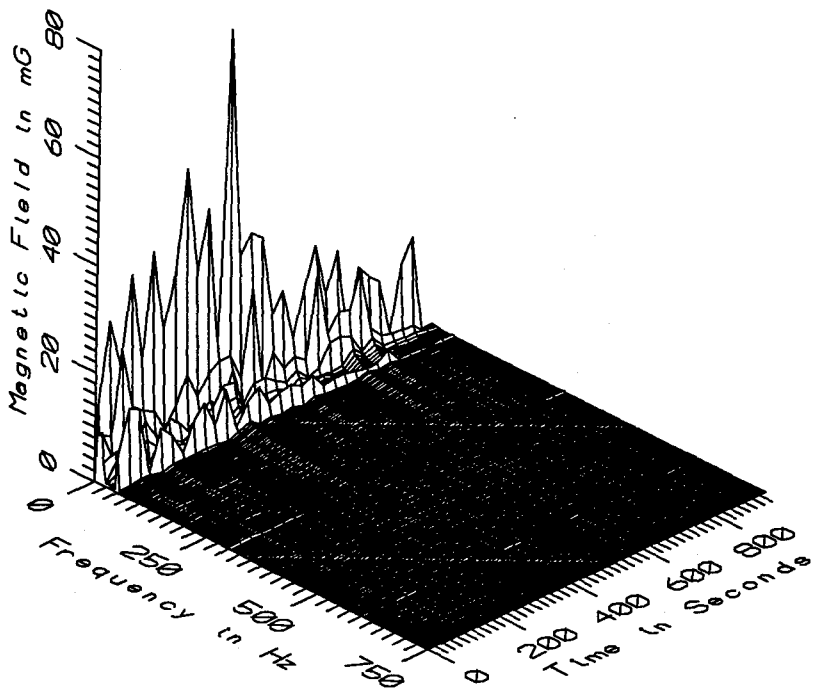
TGV024 - 160cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



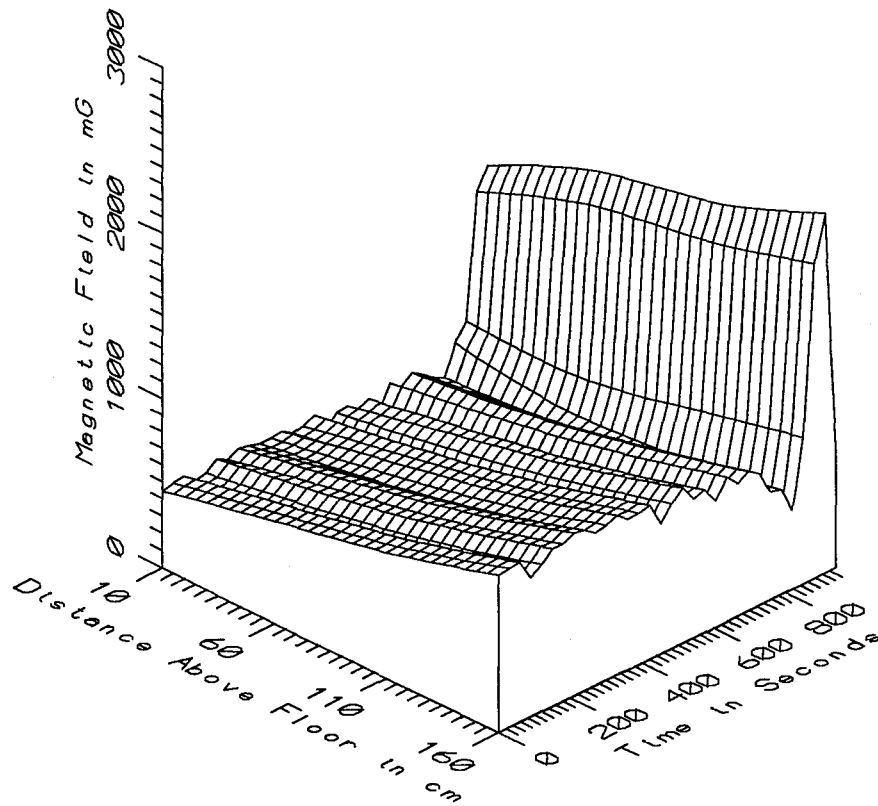
TGV024 - 160cm ABOVE FLOOR NEAR CORNER OF SEAT 47 IN COACH R5B



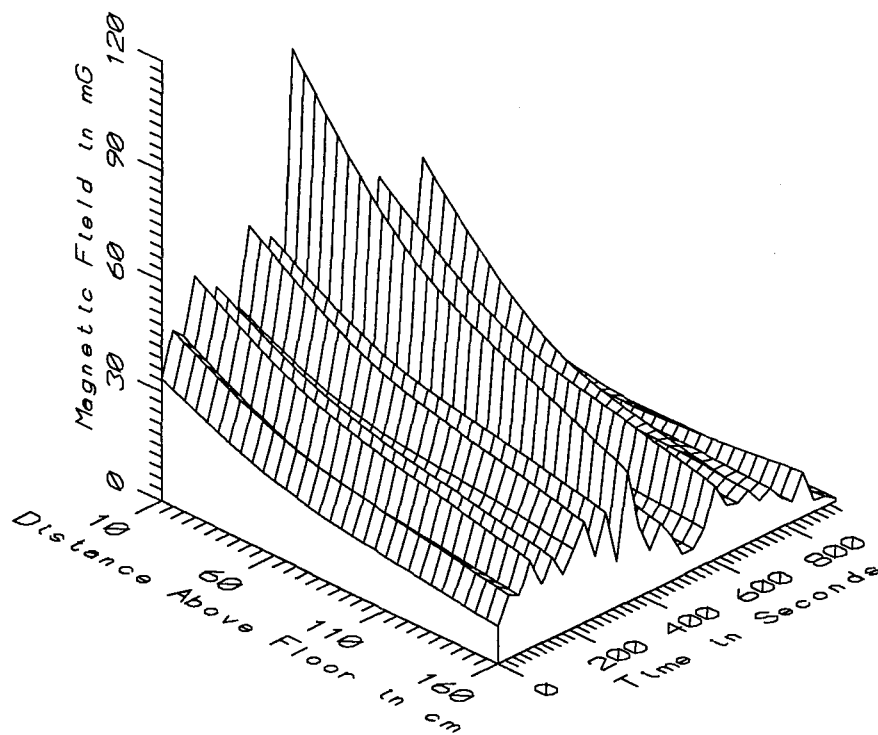
TGV024 - REFERENCE PROBE - ON SEAT 46 IN COACH R5B



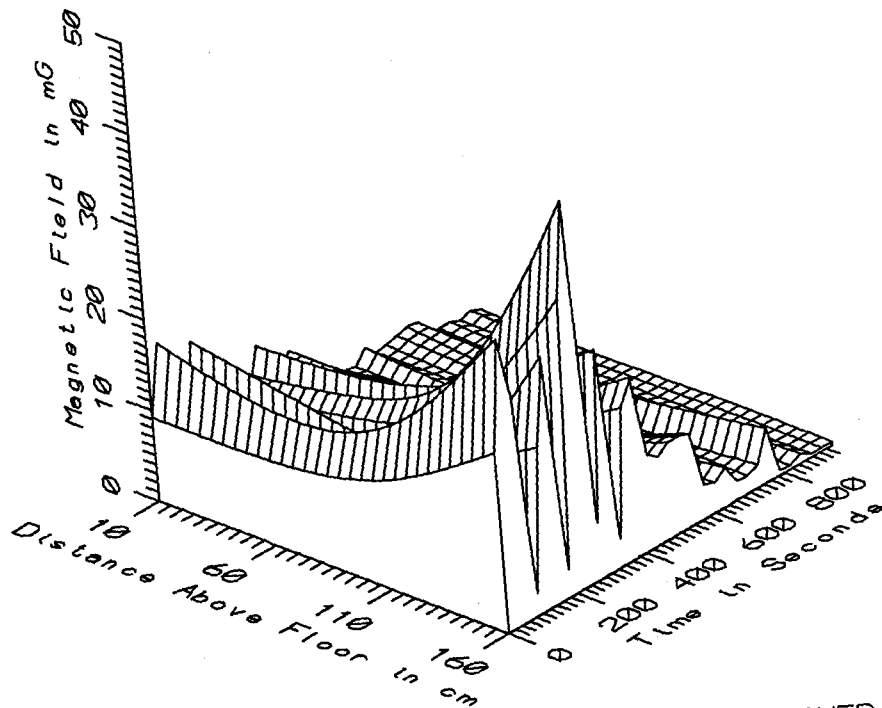
TGV024 - REFERENCE PROBE - ON SEAT 46 IN COACH R5B



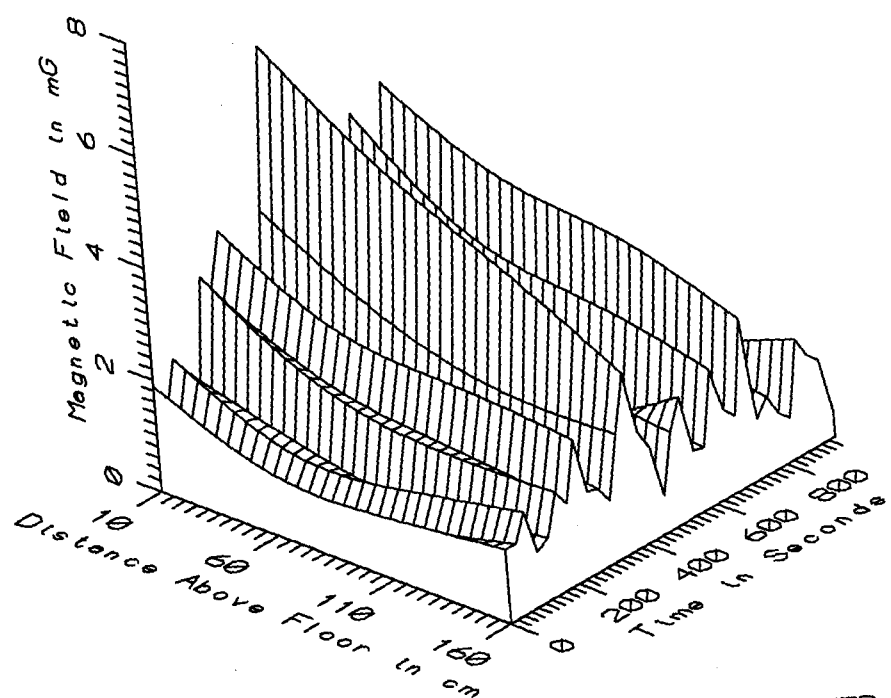
TGV024 - NEAR CORNER OF SEAT 47 IN COACH R5B - STATIC



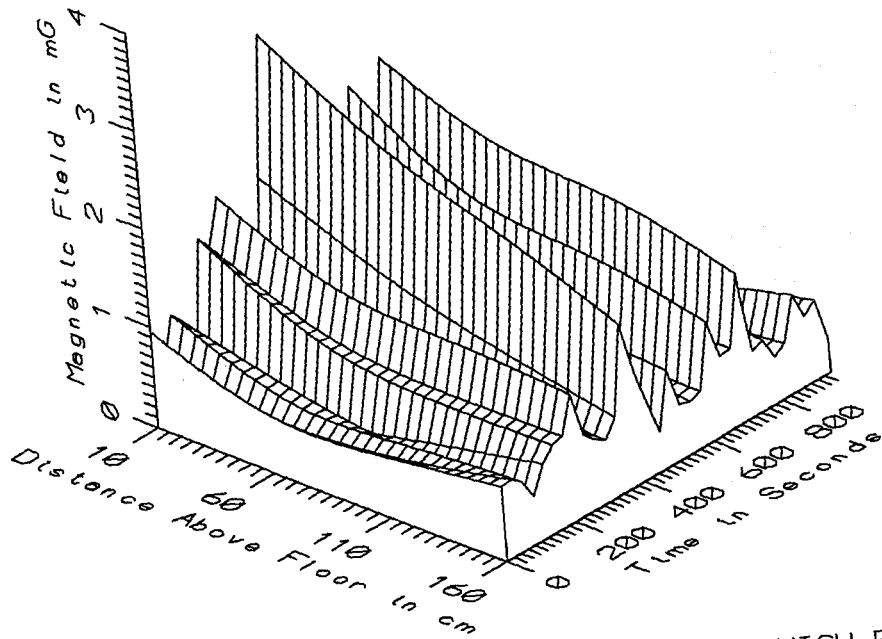
TGV024 - NEAR CORNER OF SEAT 47 IN COACH R5B - LOW FREQ, 5-45Hz



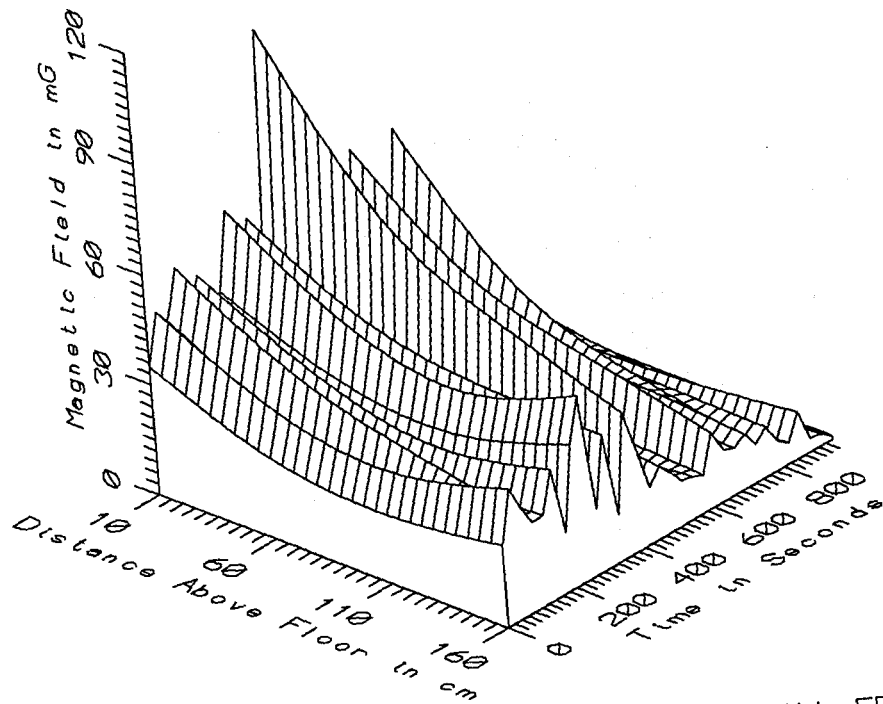
TGV024 - NEAR CORNER OF SEAT 47 IN COACH R5B - POWER FREQ, 50-60Hz



TGV024 - NEAR CORNER OF SEAT 47 IN COACH R5B - POWER HARM, 65-300Hz



TGV024 - NEAR CORNER OF SEAT 47 IN COACH R5B - HIGH FREQ, 305-2560Hz



TGV024 - NEAR CORNER OF SEAT 47 IN COACH R5B - ALL FREQ, 5-2560Hz

| TGV024 - ALL SAMPLES | | TOTAL OF 32 SAMPLES | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 308.08 | 1468.72 | 482.36 | 249.42 | 51.71 |
| | 60 | 361.34 | 1755.88 | 596.63 | 290.38 | 48.67 |
| | 110 | 445.09 | 1898.04 | 729.01 | 293.60 | 40.27 |
| | 160 | 458.16 | 2153.54 | 903.98 | 313.76 | 34.71 |
| 5-45Hz LOW FREQ | 10 | 1.63 | 106.21 | 37.18 | 21.52 | 57.87 |
| | 60 | 1.24 | 66.88 | 23.68 | 13.71 | 57.90 |
| | 110 | 1.09 | 49.10 | 18.05 | 10.27 | 56.88 |
| | 160 | 0.89 | 34.88 | 14.11 | 7.59 | 53.79 |
| 50-60Hz PWR FREQ | 10 | 0.45 | 16.74 | 4.77 | 4.15 | 86.96 |
| | 60 | 0.28 | 13.77 | 4.59 | 4.02 | 87.62 |
| | 110 | 0.35 | 18.59 | 6.04 | 5.61 | 92.80 |
| | 160 | 0.35 | 42.08 | 10.83 | 11.36 | 104.90 |
| 65-300Hz PWR HARM | 10 | 0.40 | 6.65 | 2.49 | 1.51 | 60.64 |
| | 60 | 0.31 | 5.25 | 1.73 | 1.07 | 62.06 |
| | 110 | 0.38 | 4.27 | 1.55 | 0.86 | 55.21 |
| | 160 | 0.46 | 3.19 | 1.58 | 0.63 | 39.84 |
| 305-2560Hz HIGH FREQ | 10 | 0.20 | 3.24 | 1.21 | 0.73 | 60.66 |
| | 60 | 0.16 | 2.56 | 0.84 | 0.52 | 61.43 |
| | 110 | 0.22 | 2.11 | 0.78 | 0.41 | 52.87 |
| | 160 | 0.33 | 1.65 | 0.78 | 0.29 | 37.57 |
| 5-2560Hz ALL FREQ | 10 | 1.86 | 106.67 | 37.78 | 21.63 | 57.24 |
| | 60 | 1.32 | 67.50 | 24.42 | 13.95 | 57.14 |
| | 110 | 1.26 | 50.33 | 19.53 | 11.00 | 56.33 |
| | 160 | 1.11 | 49.94 | 19.08 | 11.89 | 62.34 |

| TGV024 - AC SECTION ONLY | | TOTAL OF 26 SAMPLES | | | | |
|--------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 312.12 | 478.05 | 419.95 | 44.85 | 10.68 |
| | 60 | 390.50 | 606.11 | 535.99 | 57.37 | 10.70 |
| | 110 | 496.32 | 753.69 | 674.84 | 65.10 | 9.65 |
| | 160 | 628.14 | 953.56 | 856.56 | 78.94 | 9.22 |
| 5-45Hz LOW FREQ | 10 | 16.55 | 106.21 | 43.60 | 18.27 | 41.90 |
| | 60 | 10.40 | 66.88 | 27.71 | 11.76 | 42.46 |
| | 110 | 7.33 | 49.10 | 20.97 | 8.97 | 42.77 |
| 50-60Hz PWR FREQ | 160 | 5.60 | 34.88 | 16.11 | 6.78 | 42.08 |
| | 10 | 1.69 | 16.74 | 5.67 | 4.11 | 72.62 |
| | 60 | 1.19 | 13.77 | 5.54 | 3.89 | 70.25 |
| | 110 | 1.32 | 18.59 | 7.31 | 5.47 | 74.84 |
| 65-300Hz PWR HARM | 160 | 1.94 | 42.08 | 13.21 | 11.34 | 85.88 |
| | 10 | 0.82 | 6.65 | 2.86 | 1.42 | 49.60 |
| | 60 | 0.67 | 5.25 | 1.96 | 1.04 | 53.31 |
| | 110 | 0.69 | 4.27 | 1.71 | 0.86 | 50.10 |
| 305-2560Hz HIGH FREQ | 160 | 0.69 | 3.19 | 1.66 | 0.62 | 37.28 |
| | 10 | 0.31 | 3.24 | 1.38 | 0.69 | 50.13 |
| | 60 | 0.29 | 2.56 | 0.95 | 0.51 | 53.47 |
| | 110 | 0.34 | 2.11 | 0.85 | 0.42 | 49.45 |
| 5-2560Hz ALL FREQ | 160 | 0.39 | 1.65 | 0.82 | 0.30 | 36.48 |
| | 10 | 17.01 | 106.67 | 44.30 | 18.24 | 41.17 |
| | 60 | 11.26 | 67.50 | 28.59 | 11.83 | 41.36 |
| | 110 | 9.23 | 50.33 | 22.76 | 9.45 | 41.53 |
| 160 | 10.24 | 49.94 | 22.16 | 10.93 | 49.34 | |

| TGV024 - DC SECTION ONLY | | TOTAL OF 4 SAMPLES | | | | |
|--------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 326.59 | 1468.72 | 931.18 | 560.02 | 60.14 |
| | 60 | 470.95 | 1755.88 | 1097.69 | 668.18 | 60.87 |
| | 110 | 557.99 | 1898.04 | 1216.60 | 681.10 | 55.98 |
| | 160 | 701.07 | 2153.54 | 1397.57 | 725.00 | 51.88 |
| 5-45Hz LOW FREQ | 10 | 1.63 | 15.97 | 7.87 | 7.31 | 92.83 |
| | 60 | 1.24 | 8.80 | 4.95 | 4.21 | 85.03 |
| | 110 | 1.09 | 9.24 | 4.32 | 3.72 | 86.27 |
| | 160 | 0.89 | 12.32 | 4.81 | 5.11 | 106.19 |
| 50-60Hz PWR FREQ | 10 | 0.45 | 1.14 | 0.82 | 0.33 | 40.27 |
| | 60 | 0.28 | 0.63 | 0.41 | 0.15 | 36.96 |
| | 110 | 0.35 | 0.76 | 0.50 | 0.18 | 36.45 |
| | 160 | 0.35 | 1.05 | 0.53 | 0.34 | 64.62 |
| 65-300Hz PWR HARM | 10 | 0.40 | 0.79 | 0.61 | 0.20 | 33.16 |
| | 60 | 0.31 | 0.88 | 0.52 | 0.25 | 47.19 |
| | 110 | 0.38 | 1.29 | 0.78 | 0.38 | 48.68 |
| | 160 | 0.46 | 2.07 | 1.41 | 0.69 | 48.48 |
| 305-2560Hz HIGH FREQ | 10 | 0.20 | 0.39 | 0.32 | 0.09 | 29.85 |
| | 60 | 0.16 | 0.43 | 0.28 | 0.11 | 39.83 |
| | 110 | 0.22 | 0.65 | 0.44 | 0.18 | 40.22 |
| | 160 | 0.33 | 0.95 | 0.69 | 0.26 | 38.32 |
| 5-2560Hz ALL FREQ | 10 | 1.86 | 16.00 | 8.03 | 7.20 | 89.65 |
| | 60 | 1.32 | 8.87 | 5.03 | 4.18 | 83.13 |
| | 110 | 1.26 | 9.38 | 4.48 | 3.69 | 82.46 |
| | 160 | 1.11 | 12.57 | 5.17 | 5.06 | 98.01 |

APPENDIX Z

DATASET TGV025
REVENUE TRAIN LOCOMOTIVE, AGAINST ENGINEER'S CHAIR

Measurement Setup Code: Staff: 25 Reference: 26
 Drawing: A-2

Vehicle Status: Locomotive trip from Montparnasse
 station in Paris to Vendome station

Measurement Date: September 9, 1992

Measurement Time: Start: 07:44:50
 End: 08:00:33

Number of Samples: 88

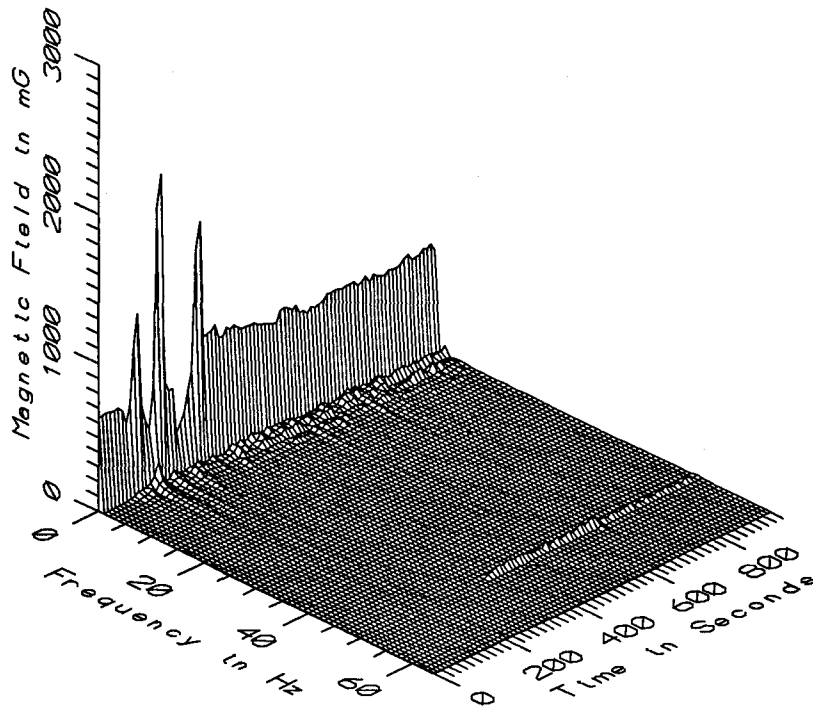
Programmed Sample Interval: 10 sec

Actual Sample Interval: 10.8 sec

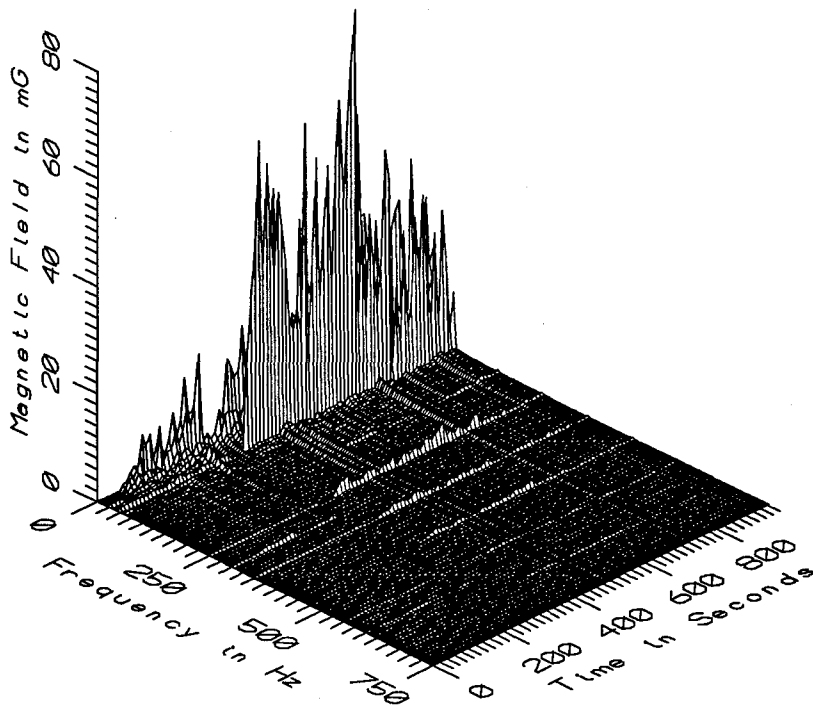
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

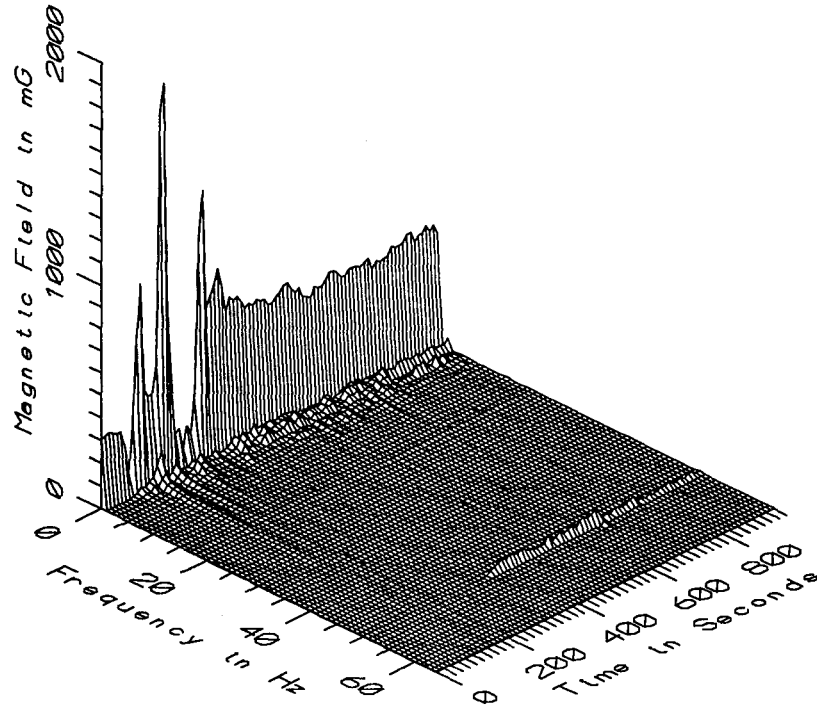
Missing or Suspect Data: 60 cm sensor malfunctioning early
 in the record



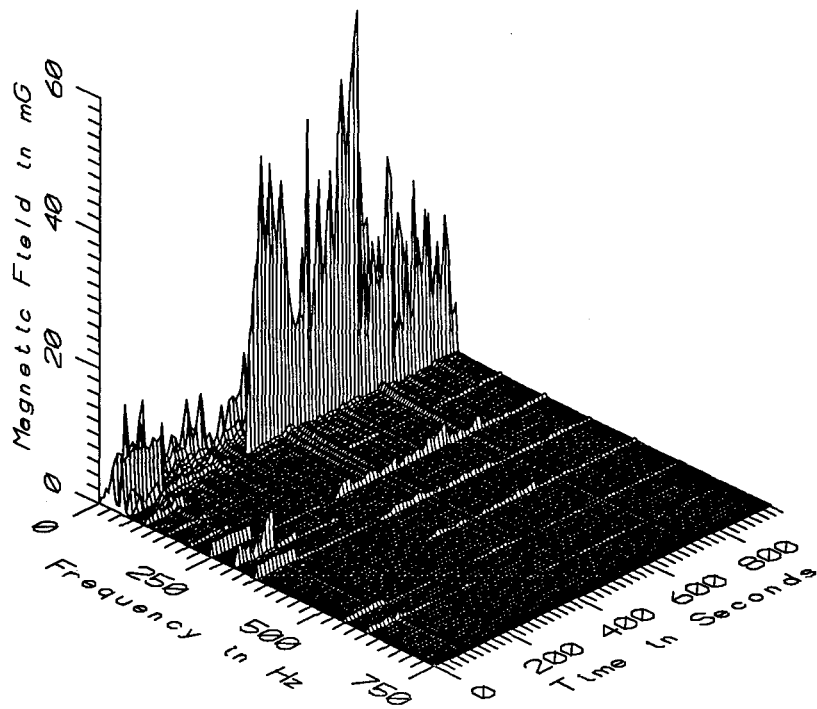
TGV025 - 10cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



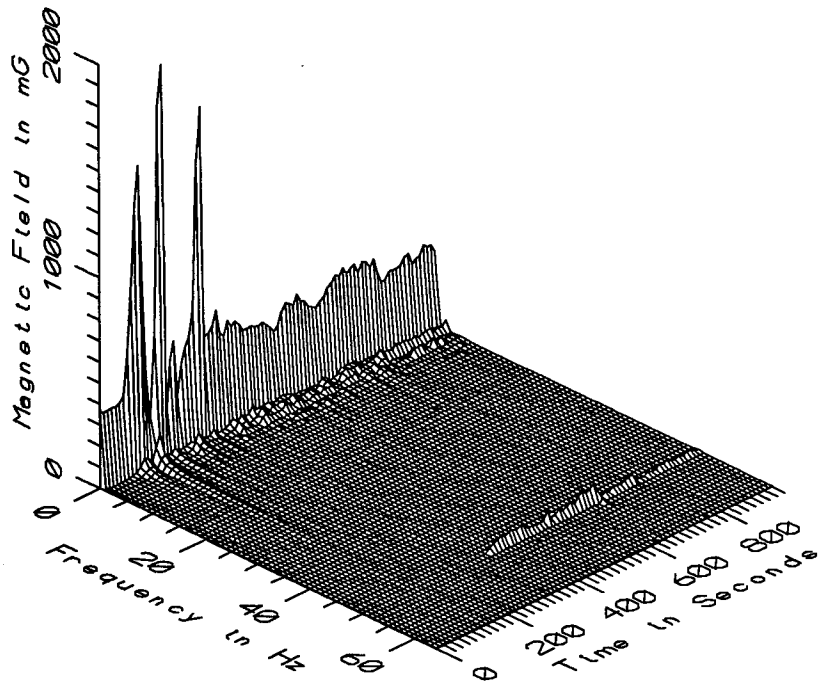
TGV025 - 10cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



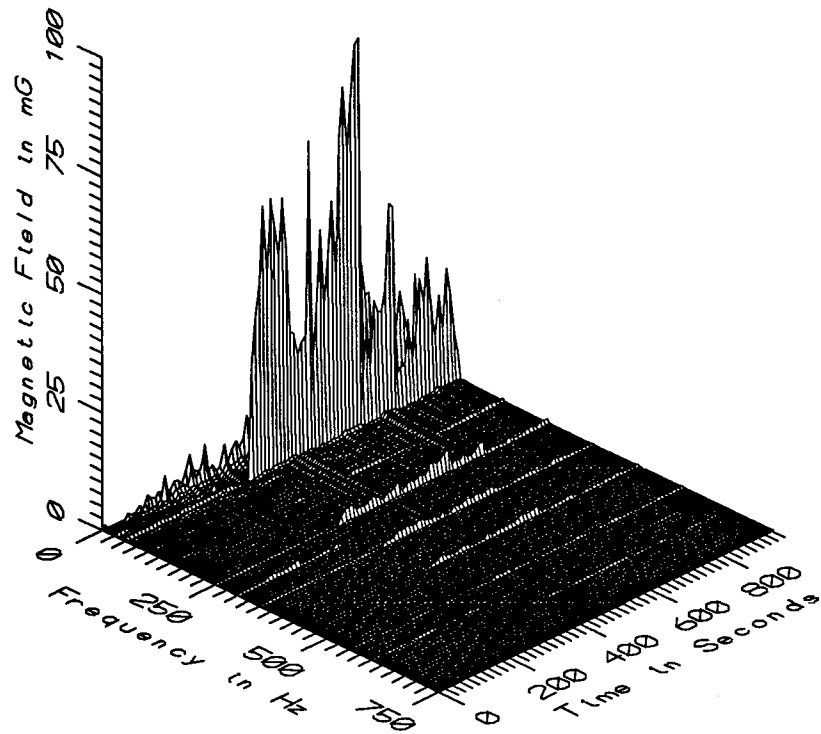
TGV025 - 60cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



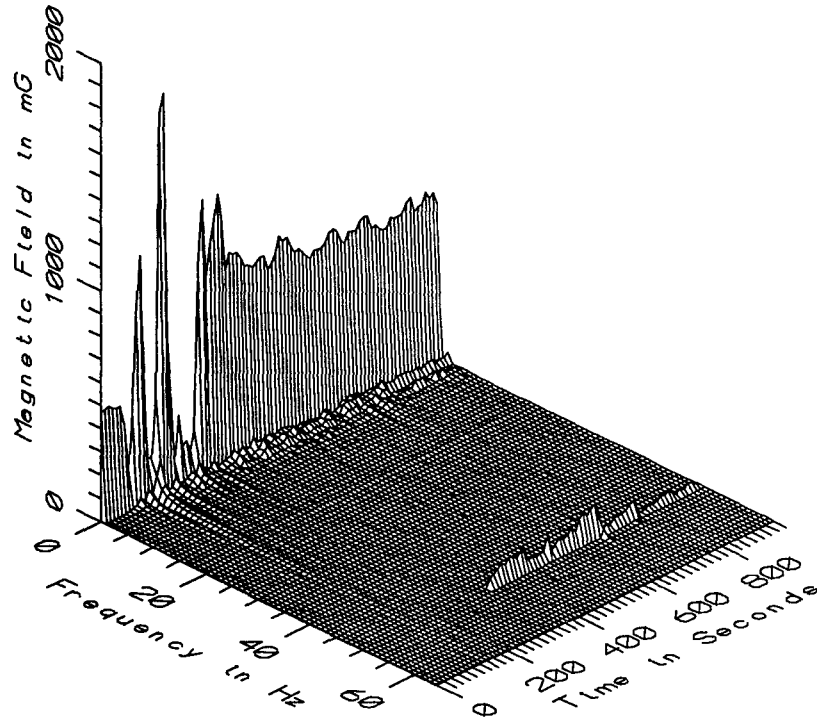
TGV025 - 60cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



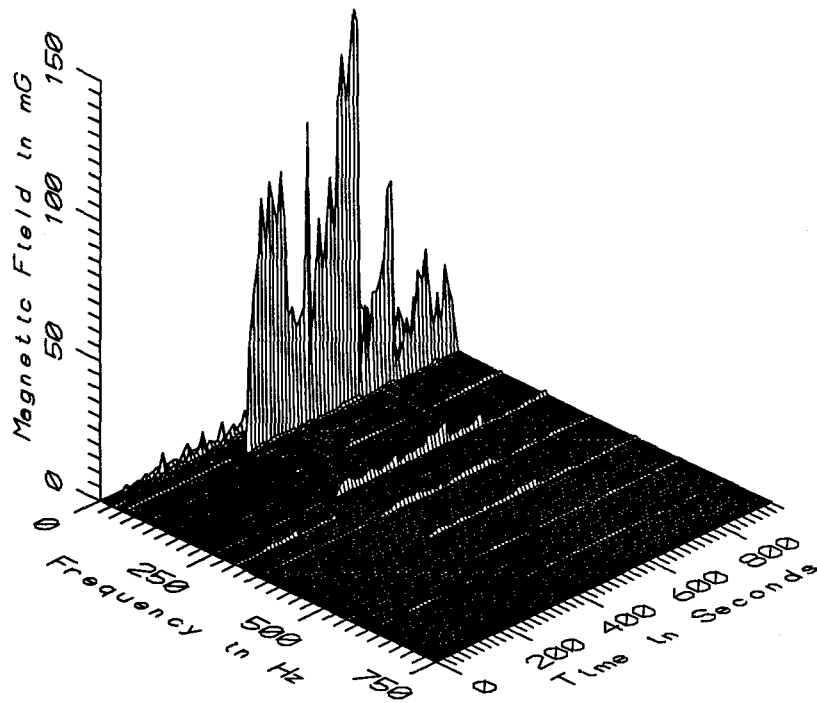
TGV025 - 110cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



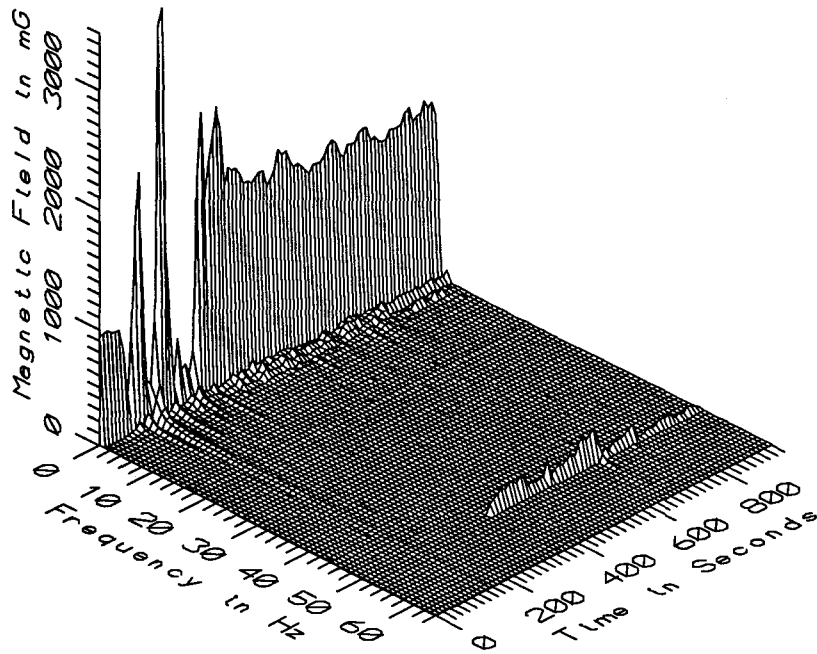
TGV025 - 110cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



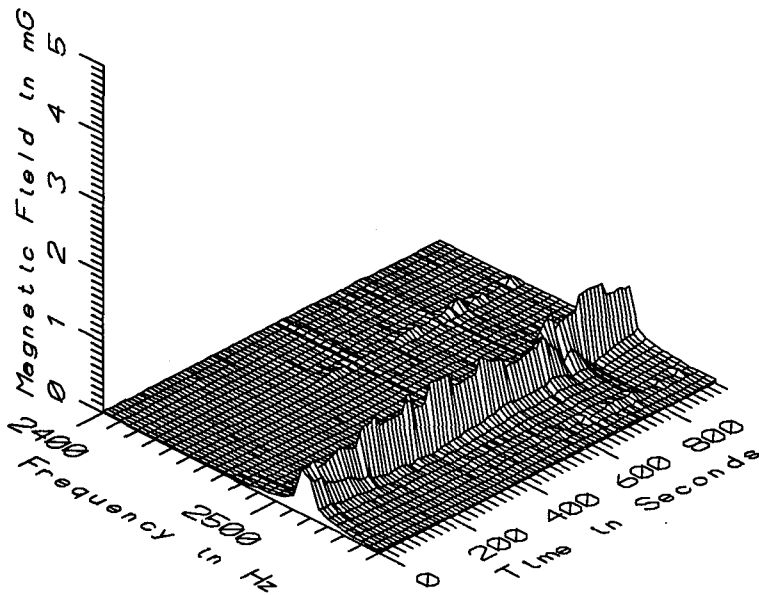
TGV025 - 160cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



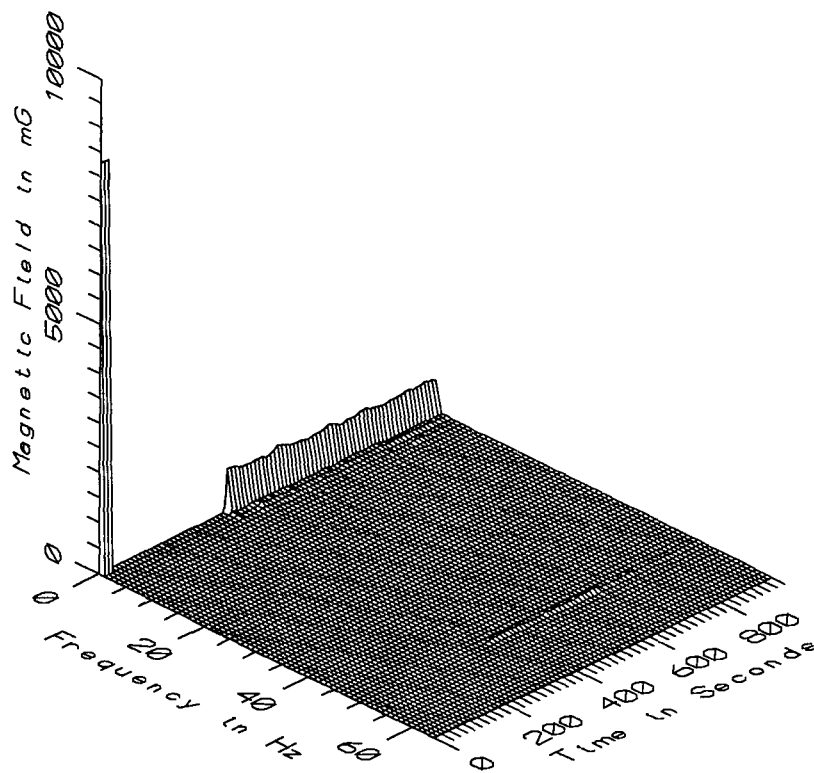
TGV025 - 160cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



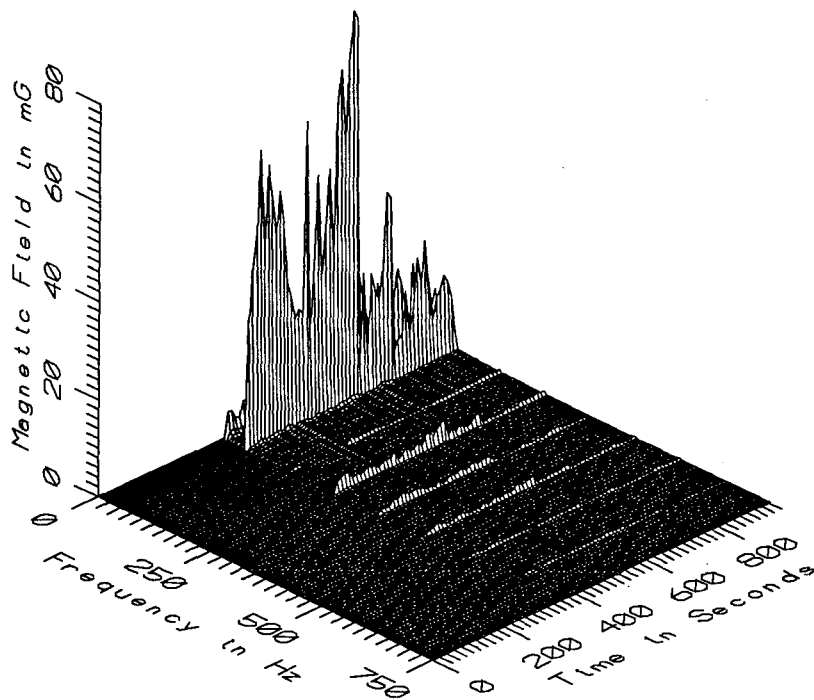
TGV025 - 160cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



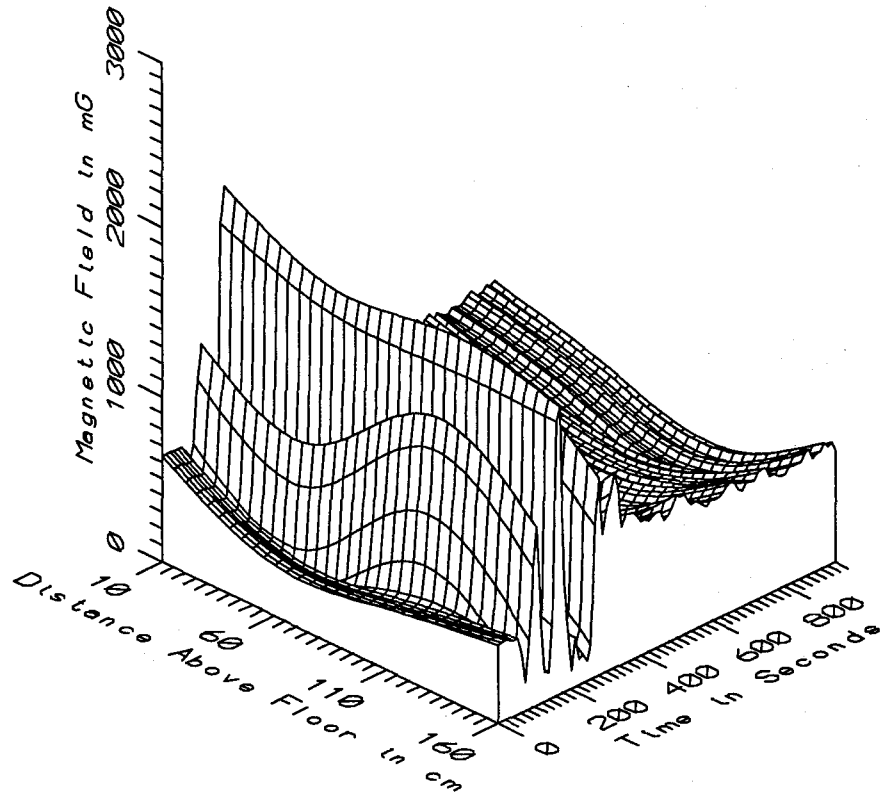
TGV025 - 160cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



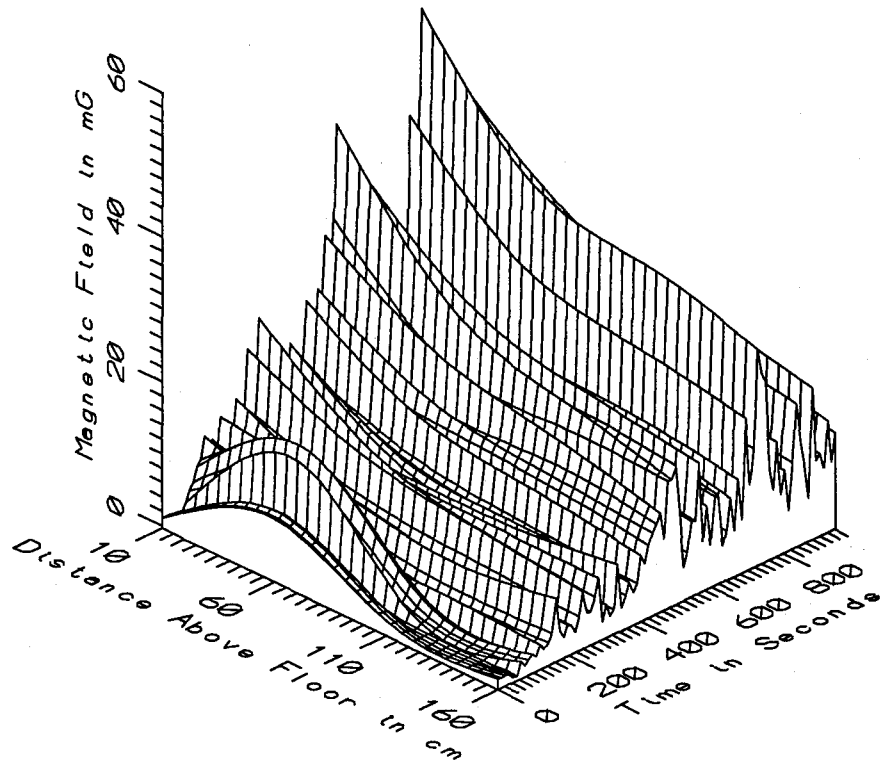
TGV025 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, REVENUE TRAIN



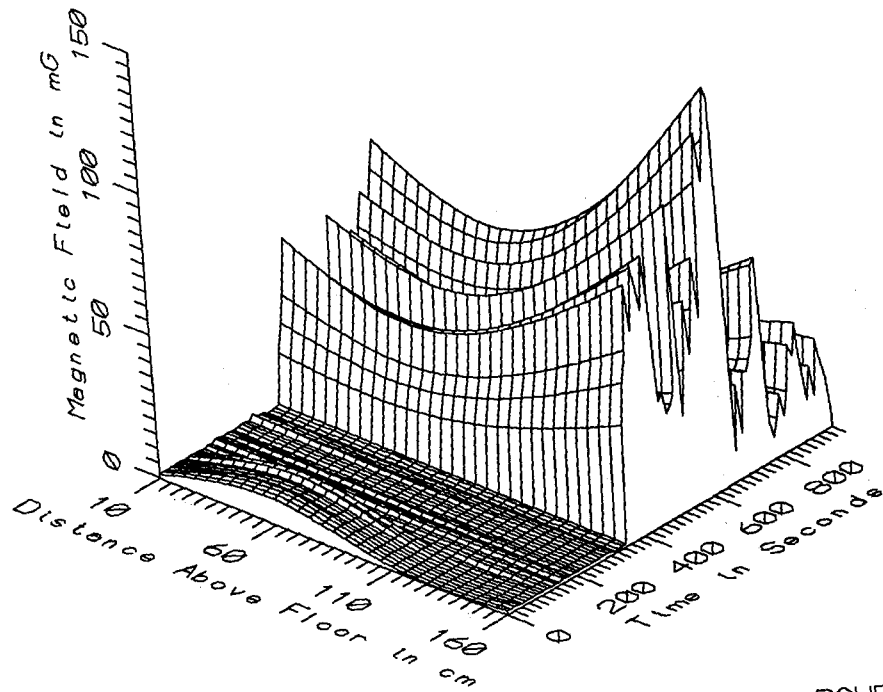
TGV025 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, REVENUE TRAIN



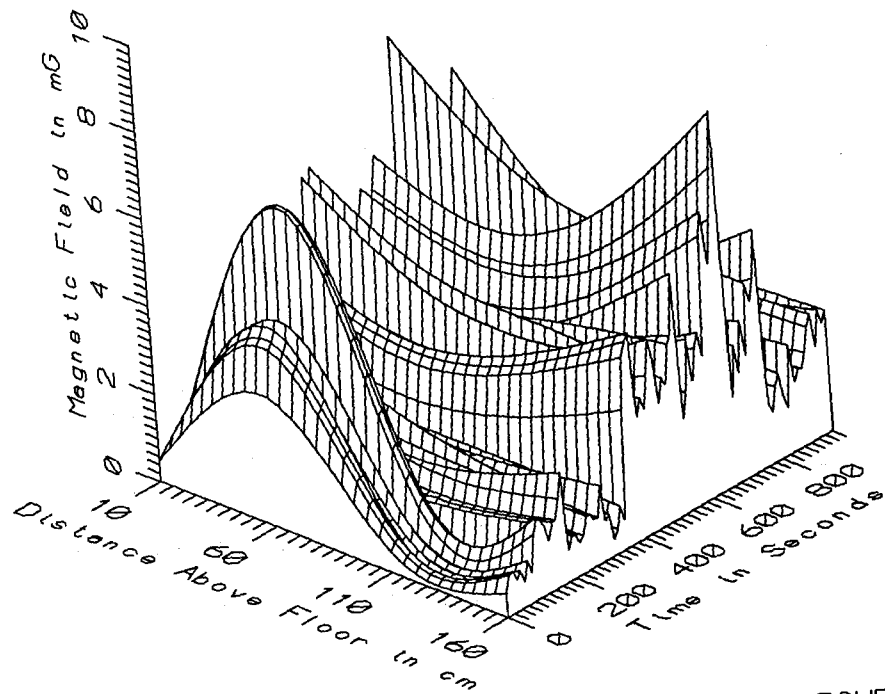
TGV025 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - STATIC



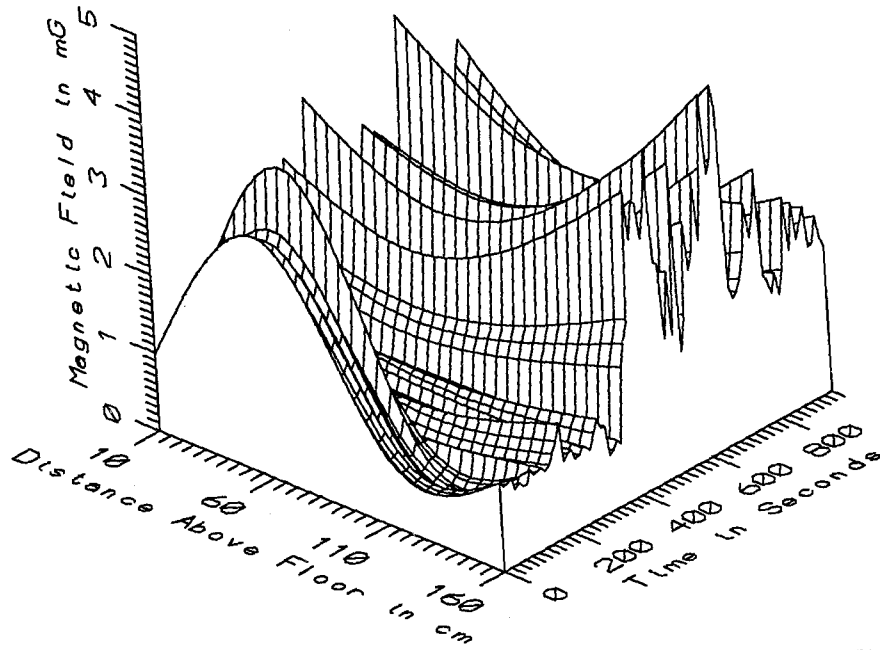
TGV025 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - LOW FREQ, 5-45Hz



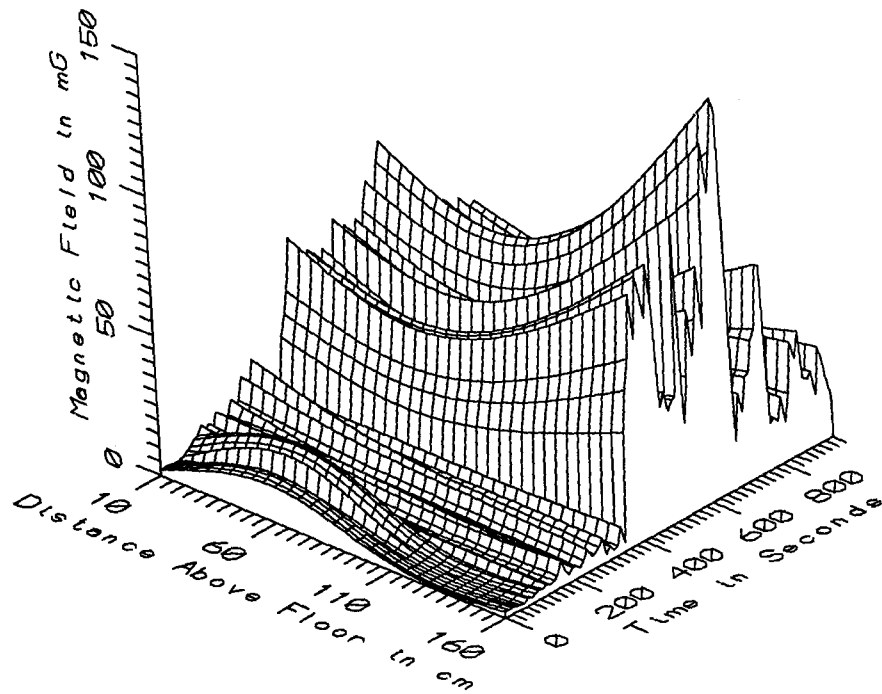
TGV025 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - POWER FREQ, 50-60Hz



TGV025 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - POWER HARM, 65-300Hz



TGV025 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - HIGH FREQ, 305-2560Hz



TGV025 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - ALL FREQ, 5-2560Hz

| TGV025 - ALL SAMPLES | | TOTAL OF 88 SAMPLES | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 290.71 | 2062.19 | 745.71 | 255.77 | 34.30 |
| | 60 | 89.56 | 1776.04 | 549.27 | 250.99 | 45.70 |
| | 110 | 228.62 | 1855.00 | 503.16 | 295.27 | 58.68 |
| | 160 | 106.94 | 1732.20 | 705.34 | 275.66 | 39.08 |
| 5-45Hz LOW FREQ | 10 | 0.43 | 54.50 | 17.01 | 11.15 | 65.54 |
| | 60 | 1.46 | 37.49 | 12.18 | 6.91 | 56.68 |
| | 110 | 0.28 | 33.90 | 9.64 | 6.95 | 72.07 |
| | 160 | 0.33 | 29.71 | 8.61 | 6.23 | 72.35 |
| 50-60Hz PWR FREQ | 10 | 0.25 | 72.58 | 18.69 | 18.57 | 99.34 |
| | 60 | 0.14 | 57.98 | 16.27 | 14.37 | 88.28 |
| | 110 | 0.24 | 82.44 | 21.08 | 22.31 | 105.86 |
| | 160 | 0.13 | 139.71 | 33.49 | 37.80 | 112.86 |
| 65-300Hz PWR HARM | 10 | 0.44 | 6.92 | 2.20 | 1.29 | 58.72 |
| | 60 | 0.24 | 6.79 | 2.18 | 1.30 | 59.52 |
| | 110 | 0.21 | 5.28 | 1.88 | 1.08 | 57.51 |
| | 160 | 0.37 | 8.57 | 2.55 | 1.69 | 66.29 |
| 305-2560Hz HIGH FREQ | 10 | 0.59 | 3.48 | 1.44 | 0.60 | 41.65 |
| | 60 | 0.52 | 3.66 | 1.50 | 0.68 | 45.42 |
| | 110 | 0.57 | 2.85 | 1.42 | 0.63 | 44.23 |
| | 160 | 0.72 | 4.58 | 2.04 | 1.08 | 52.71 |
| 5-2560Hz ALL FREQ | 10 | 1.45 | 73.97 | 27.51 | 18.94 | 68.84 |
| | 60 | 1.57 | 58.69 | 22.09 | 13.70 | 61.99 |
| | 110 | 1.25 | 82.93 | 24.84 | 21.73 | 87.46 |
| | 160 | 1.48 | 140.41 | 36.35 | 36.82 | 101.28 |

| TGV025 - TRAIN AT REST | | TOTAL OF 9 SAMPLES | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 510.16 | 640.58 | 616.86 | 41.45 | 6.72 |
| | 60 | 101.13 | 314.83 | 272.14 | 70.02 | 25.73 |
| | 110 | 349.86 | 870.29 | 439.48 | 176.57 | 40.18 |
| | 160 | 170.00 | 477.30 | 414.41 | 98.99 | 23.89 |
| 5-45Hz LOW FREQ | 10 | 0.43 | 4.03 | 1.53 | 1.25 | 81.47 |
| | 60 | 1.90 | 15.01 | 8.20 | 4.17 | 50.88 |
| | 110 | 0.28 | 1.74 | 1.08 | 0.53 | 48.89 |
| | 160 | 0.33 | 2.09 | 1.14 | 0.56 | 49.22 |
| 50-60Hz PWR FREQ | 10 | 0.79 | 1.21 | 1.05 | 0.12 | 11.37 |
| | 60 | 8.09 | 9.66 | 8.81 | 0.52 | 5.90 |
| | 110 | 0.83 | 1.06 | 0.93 | 0.08 | 8.14 |
| | 160 | 0.85 | 1.12 | 0.97 | 0.10 | 10.18 |
| 65-300Hz PWR HARM | 10 | 0.46 | 1.02 | 0.62 | 0.18 | 28.28 |
| | 60 | 2.78 | 6.78 | 4.04 | 1.17 | 28.99 |
| | 110 | 0.43 | 1.07 | 0.62 | 0.19 | 30.20 |
| | 160 | 0.55 | 1.51 | 0.87 | 0.29 | 33.30 |
| 305-2560Hz HIGH FREQ | 10 | 0.78 | 0.98 | 0.88 | 0.07 | 7.55 |
| | 60 | 2.57 | 3.66 | 2.90 | 0.32 | 10.91 |
| | 110 | 0.71 | 0.87 | 0.79 | 0.06 | 8.06 |
| | 160 | 0.92 | 1.13 | 1.02 | 0.08 | 7.87 |
| 5-2560Hz ALL FREQ | 10 | 1.45 | 4.42 | 2.27 | 1.00 | 44.03 |
| | 60 | 9.72 | 18.05 | 13.39 | 2.85 | 21.29 |
| | 110 | 1.25 | 2.39 | 1.79 | 0.37 | 20.55 |
| | 160 | 1.48 | 2.78 | 2.06 | 0.43 | 20.69 |

| TGV025 - TRAIN MOVING | | TOTAL OF 79 SAMPLES | | | | | |
|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|--|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) | |
| STATIC | 10 | 290.71 | 2062.19 | 760.39 | 265.82 | 34.96 | |
| | 60 | 89.56 | 1776.04 | 580.84 | 244.73 | 42.13 | |
| | 110 | 228.62 | 1855.00 | 510.41 | 305.82 | 59.92 | |
| | 160 | 106.94 | 1732.20 | 738.48 | 269.95 | 36.55 | |
| 5-45Hz LOW FREQ | 10 | 2.21 | 54.50 | 18.77 | 10.38 | 55.28 | |
| | 60 | 1.46 | 37.49 | 12.64 | 7.03 | 55.60 | |
| | 110 | 1.68 | 33.90 | 10.61 | 6.66 | 62.77 | |
| | 160 | 1.73 | 29.71 | 9.46 | 6.01 | 63.48 | |
| 50-60Hz PWR FREQ | 10 | 0.25 | 72.58 | 20.70 | 18.56 | 89.67 | |
| | 60 | 0.14 | 57.98 | 17.13 | 14.93 | 87.20 | |
| | 110 | 0.24 | 82.44 | 23.37 | 22.43 | 95.97 | |
| | 160 | 0.13 | 139.71 | 37.20 | 38.18 | 102.64 | |
| 65-300Hz PWR HARM | 10 | 0.44 | 6.92 | 2.38 | 1.24 | 52.11 | |
| | 60 | 0.24 | 6.79 | 1.97 | 1.13 | 57.70 | |
| | 110 | 0.21 | 5.28 | 2.03 | 1.05 | 51.77 | |
| | 160 | 0.37 | 8.57 | 2.74 | 1.68 | 61.22 | |
| 305-2560Hz HIGH FREQ | 10 | 0.59 | 3.48 | 1.51 | 0.60 | 39.85 | |
| | 60 | 0.52 | 2.76 | 1.32 | 0.48 | 36.48 | |
| | 110 | 0.57 | 2.85 | 1.50 | 0.62 | 41.54 | |
| | 160 | 0.72 | 4.58 | 2.17 | 1.08 | 49.62 | |
| 5-2560Hz ALL FREQ | 10 | 2.35 | 73.97 | 30.39 | 17.83 | 58.69 | |
| | 60 | 1.57 | 58.69 | 23.08 | 14.10 | 61.06 | |
| | 110 | 1.81 | 82.93 | 27.47 | 21.41 | 77.93 | |
| | 160 | 2.57 | 140.41 | 40.26 | 36.89 | 91.63 | |

| TGV025 - AC SECTION ONLY | | TOTAL OF 55 SAMPLES | | | | |
|--------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 662.30 | 830.94 | 722.01 | 39.45 | 5.46 |
| | 60 | 486.44 | 668.90 | 553.25 | 39.81 | 7.20 |
| | 110 | 328.62 | 501.89 | 410.79 | 44.71 | 10.88 |
| | 160 | 673.14 | 897.41 | 755.92 | 56.38 | 7.46 |
| 5-45Hz LOW FREQ | 10 | 4.17 | 54.50 | 23.10 | 9.11 | 39.45 |
| | 60 | 3.36 | 37.49 | 15.23 | 6.55 | 42.99 |
| | 110 | 3.55 | 33.90 | 13.33 | 6.10 | 45.76 |
| | 160 | 4.29 | 29.71 | 11.77 | 5.69 | 48.35 |
| 50-60Hz PWR FREQ | 10 | 3.40 | 72.58 | 29.19 | 16.01 | 54.86 |
| | 60 | 4.94 | 57.98 | 23.87 | 12.95 | 54.27 |
| | 110 | 6.02 | 82.44 | 33.18 | 20.11 | 60.61 |
| | 160 | 4.86 | 139.71 | 53.05 | 35.54 | 67.00 |
| 65-300Hz PWR HARM | 10 | 0.84 | 6.92 | 2.80 | 1.22 | 43.66 |
| | 60 | 0.70 | 4.93 | 2.13 | 0.79 | 36.90 |
| | 110 | 0.78 | 5.28 | 2.49 | 0.92 | 37.03 |
| | 160 | 1.08 | 8.57 | 3.41 | 1.56 | 45.71 |
| 305-2560Hz HIGH FREQ | 10 | 1.03 | 3.48 | 1.79 | 0.53 | 29.34 |
| | 60 | 0.98 | 2.57 | 1.49 | 0.35 | 23.42 |
| | 110 | 1.13 | 2.85 | 1.84 | 0.46 | 25.09 |
| | 160 | 1.51 | 4.58 | 2.73 | 0.85 | 31.19 |
| 5-2560Hz ALL FREQ | 10 | 14.34 | 73.97 | 39.66 | 12.70 | 32.03 |
| | 60 | 11.79 | 58.69 | 29.99 | 10.89 | 36.32 |
| | 110 | 12.19 | 82.93 | 37.41 | 18.12 | 48.44 |
| | 160 | 13.90 | 140.41 | 55.80 | 33.97 | 60.88 |

| TG025 - TRANSITION BETWEEN DC AND AC SECTIONS | | TOTAL OF 6 SAMPLES | | | | |
|---|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 779.41 | 879.61 | 830.77 | 39.94 | 4.81 |
| | 60 | 610.97 | 824.63 | 720.78 | 74.10 | 10.28 |
| | 110 | 441.49 | 578.07 | 494.40 | 48.26 | 9.76 |
| | 160 | 831.31 | 1177.36 | 992.23 | 138.26 | 13.93 |
| 5-45Hz LOW FREQ | 10 | 2.21 | 8.25 | 4.83 | 2.37 | 49.15 |
| | 60 | 1.46 | 7.17 | 3.56 | 1.96 | 54.98 |
| | 110 | 1.68 | 7.30 | 3.48 | 1.96 | 56.42 |
| 50-60Hz PWR FREQ | 160 | 2.17 | 9.13 | 4.00 | 2.62 | 65.50 |
| | 10 | 0.25 | 1.43 | 0.82 | 0.45 | 54.99 |
| | 60 | 0.14 | 0.89 | 0.56 | 0.30 | 52.68 |
| | 110 | 0.24 | 1.04 | 0.61 | 0.32 | 53.40 |
| 65-300Hz PWR HARM | 160 | 0.13 | 1.01 | 0.57 | 0.35 | 61.64 |
| | 10 | 0.44 | 1.60 | 0.95 | 0.39 | 41.22 |
| | 60 | 0.24 | 1.04 | 0.66 | 0.28 | 42.19 |
| | 110 | 0.21 | 1.07 | 0.68 | 0.30 | 44.63 |
| 305-2560Hz HIGH FREQ | 160 | 0.37 | 1.02 | 0.74 | 0.26 | 34.61 |
| | 10 | 0.59 | 0.98 | 0.80 | 0.16 | 19.83 |
| | 60 | 0.52 | 0.82 | 0.68 | 0.13 | 18.62 |
| | 110 | 0.57 | 0.90 | 0.73 | 0.14 | 19.57 |
| 5-2560Hz ALL FREQ | 160 | 0.72 | 1.12 | 0.89 | 0.18 | 20.19 |
| | 10 | 2.35 | 8.51 | 5.09 | 2.35 | 46.18 |
| | 60 | 1.57 | 7.31 | 3.75 | 1.95 | 52.05 |
| | 110 | 1.81 | 7.44 | 3.70 | 1.95 | 52.59 |
| 160 | 2.57 | 9.26 | 4.26 | 2.55 | 59.92 | |

| TGV025 - DC SECTION ONLY | | TOTAL OF 18 SAMPLES | | | | | |
|--------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|--|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) | |
| STATIC | 10 | 290.71 | 2062.19 | 854.19 | 550.41 | 64.44 | |
| | 60 | 89.56 | 1776.04 | 618.50 | 507.21 | 82.01 | |
| | 110 | 228.62 | 1855.00 | 820.13 | 536.96 | 65.47 | |
| | 160 | 106.94 | 1732.20 | 600.61 | 524.22 | 87.28 | |
| 5-45Hz LOW FREQ | 10 | 5.08 | 22.28 | 10.19 | 4.63 | 45.44 | |
| | 60 | 3.42 | 15.55 | 7.74 | 3.59 | 46.39 | |
| | 110 | 2.33 | 9.43 | 4.67 | 2.21 | 47.28 | |
| 50-60Hz PWR FREQ | 160 | 1.73 | 8.52 | 4.26 | 2.11 | 49.59 | |
| | 10 | 0.80 | 2.91 | 1.41 | 0.49 | 34.89 | |
| | 60 | 0.82 | 8.92 | 2.05 | 2.42 | 118.19 | |
| | 110 | 0.63 | 1.37 | 1.00 | 0.21 | 21.17 | |
| 65-300Hz PWR HARM | 160 | 0.66 | 1.35 | 0.98 | 0.16 | 16.50 | |
| | 10 | 1.05 | 3.14 | 1.56 | 0.50 | 32.21 | |
| | 60 | 0.85 | 6.79 | 1.89 | 1.79 | 94.99 | |
| | 110 | 0.65 | 1.61 | 1.08 | 0.26 | 23.76 | |
| 305-2560Hz HIGH FREQ | 160 | 0.72 | 2.51 | 1.35 | 0.48 | 35.66 | |
| | 10 | 0.80 | 1.33 | 0.96 | 0.15 | 15.37 | |
| | 60 | 0.76 | 2.76 | 1.09 | 0.60 | 54.98 | |
| | 110 | 0.71 | 1.01 | 0.83 | 0.08 | 10.02 | |
| 5-2560Hz ALL FREQ | 160 | 0.91 | 1.46 | 1.05 | 0.14 | 13.57 | |
| | 10 | 5.41 | 22.73 | 10.48 | 4.63 | 44.14 | |
| | 60 | 3.79 | 19.10 | 8.43 | 4.47 | 52.98 | |
| | 110 | 2.79 | 9.62 | 5.01 | 2.13 | 42.55 | |
| 160 | 2.80 | 8.94 | 4.77 | 1.98 | 41.40 | | |

APPENDIX AA

DATASET TGV026
REVENUE TRAIN LOCOMOTIVE, AGAINST ENGINEER'S CHAIR

Measurement Setup Code: Staff: 25 Reference: 26
 Drawing: A-2

Vehicle Status: Locomotive trip from Montparnasse
 station in Paris to Vendome station

Measurement Date: September 9, 1992

Measurement Time: Start: 08:01:17
 End: 08:20:33

Number of Samples: 40

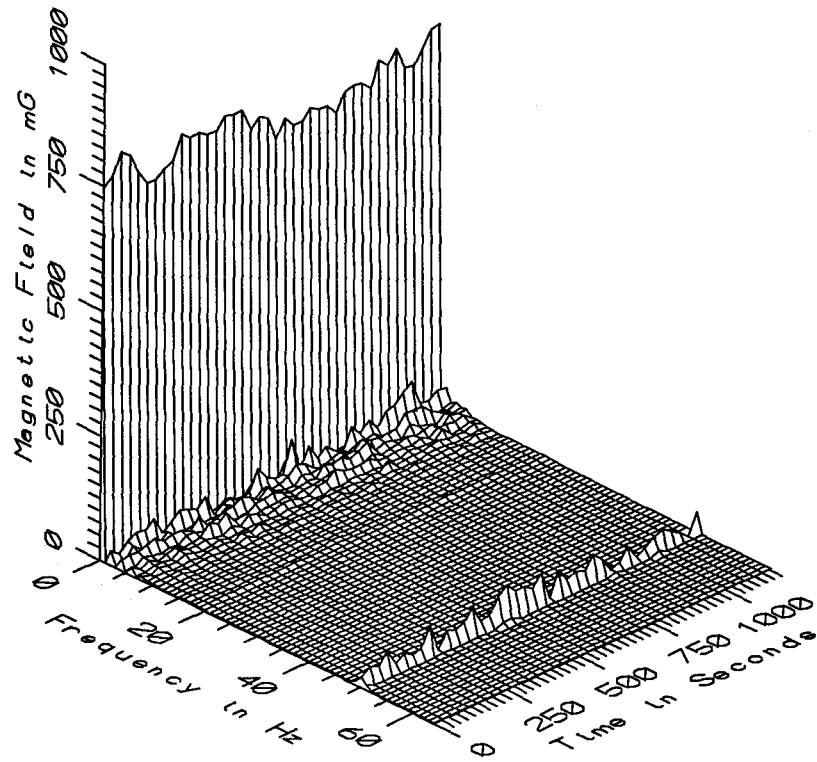
Programmed Sample Interval: 30 sec

Actual Sample Interval: 29.6 sec

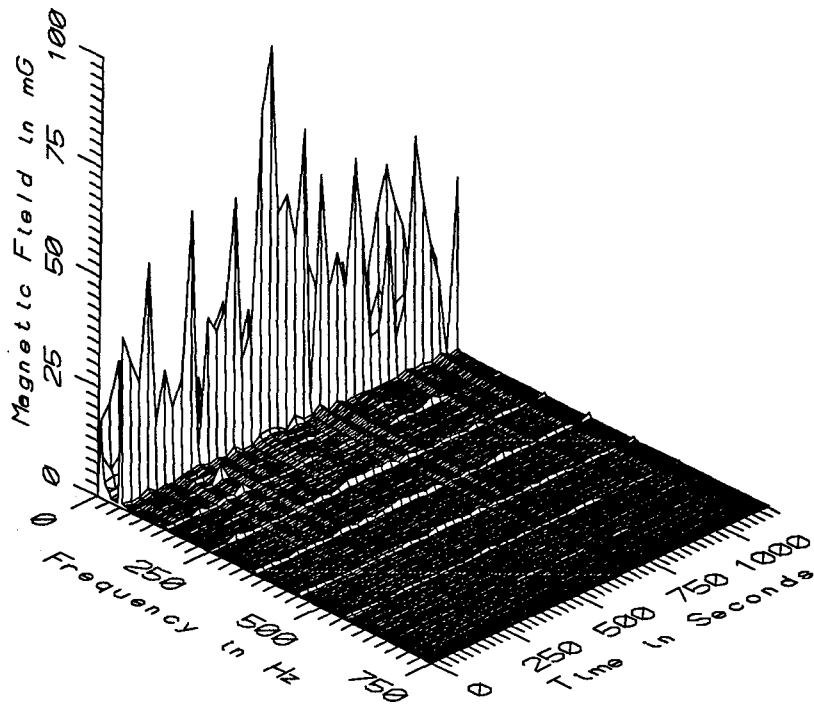
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

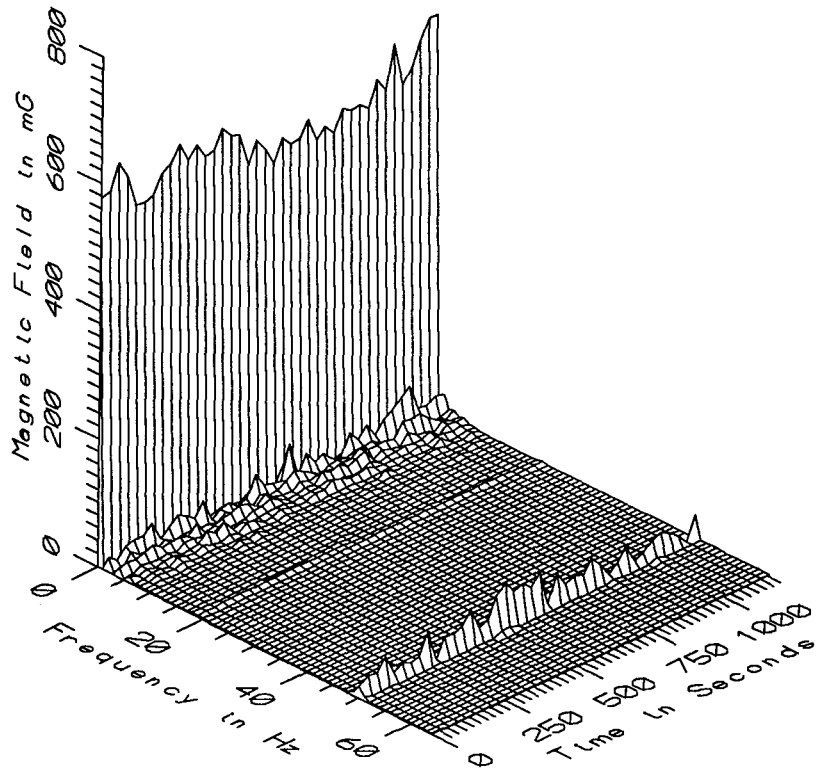
Missing or Suspect Data: None



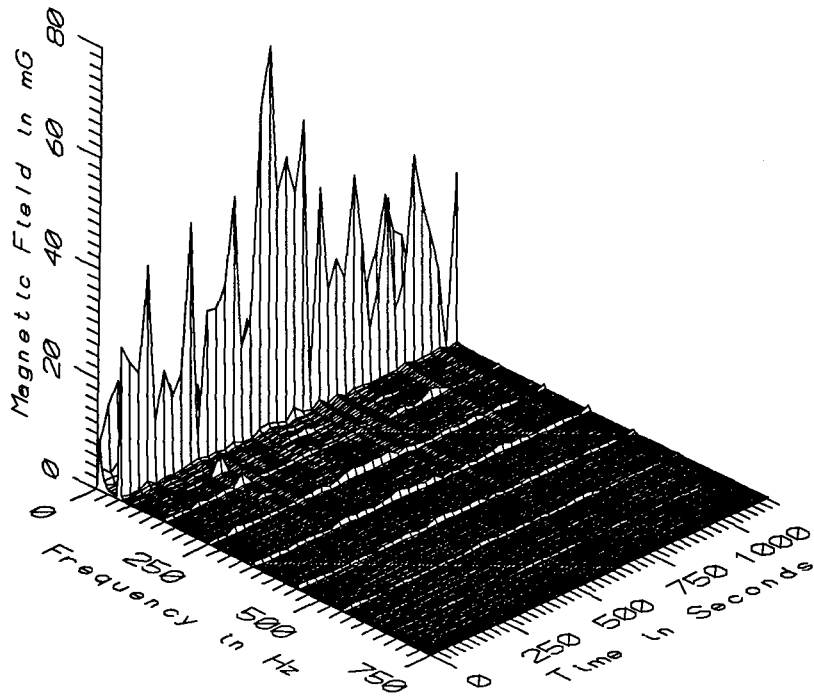
TGV026 - 10cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



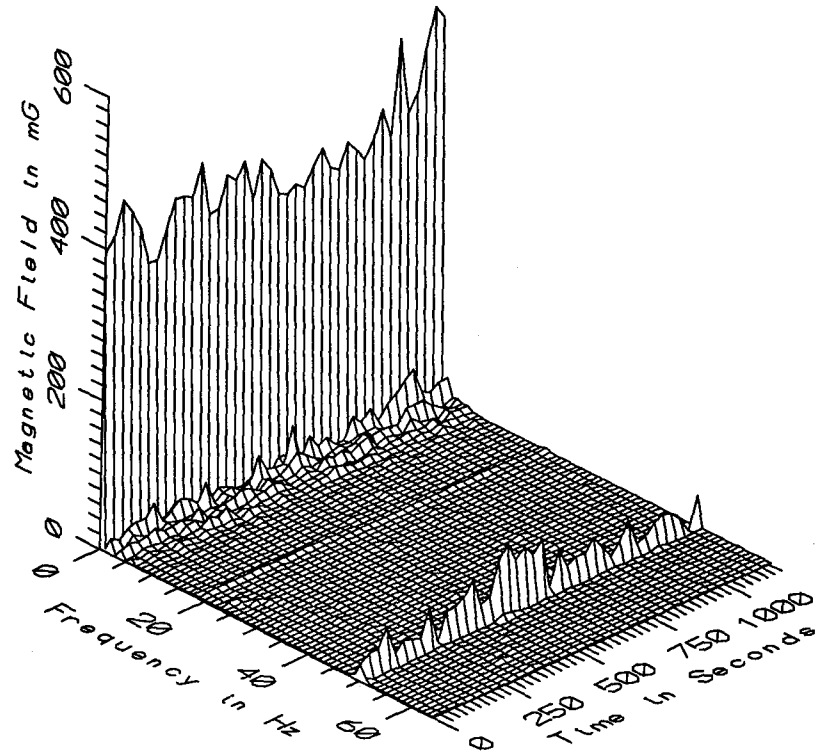
TGV026 - 10cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



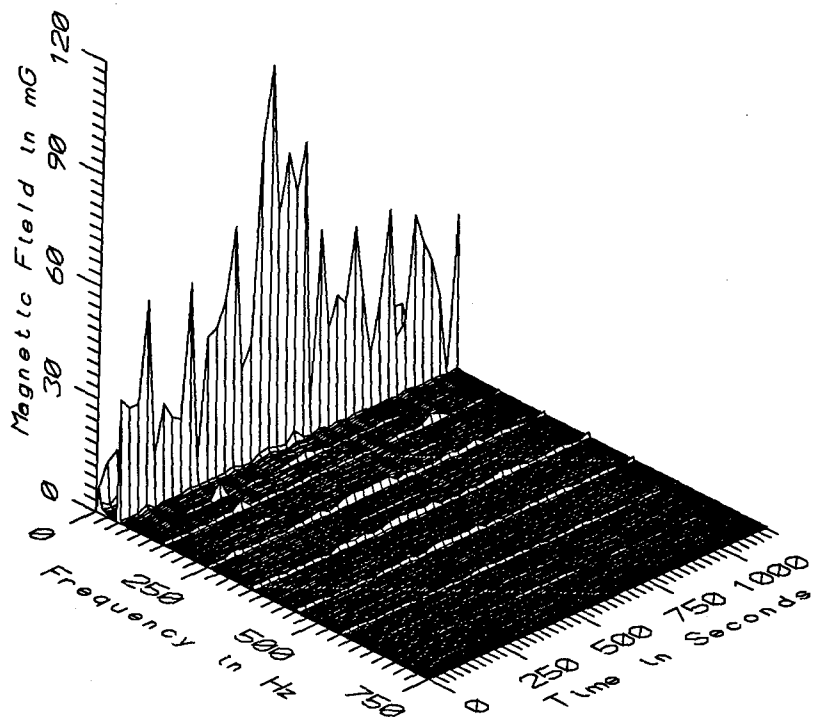
TGV026 - 60cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



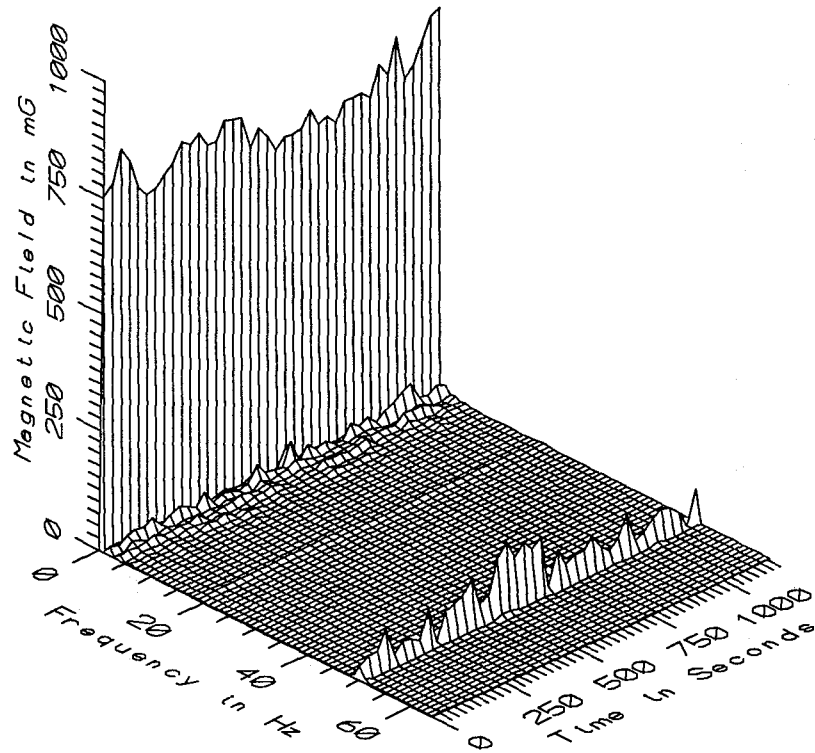
TGV026 - 60cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



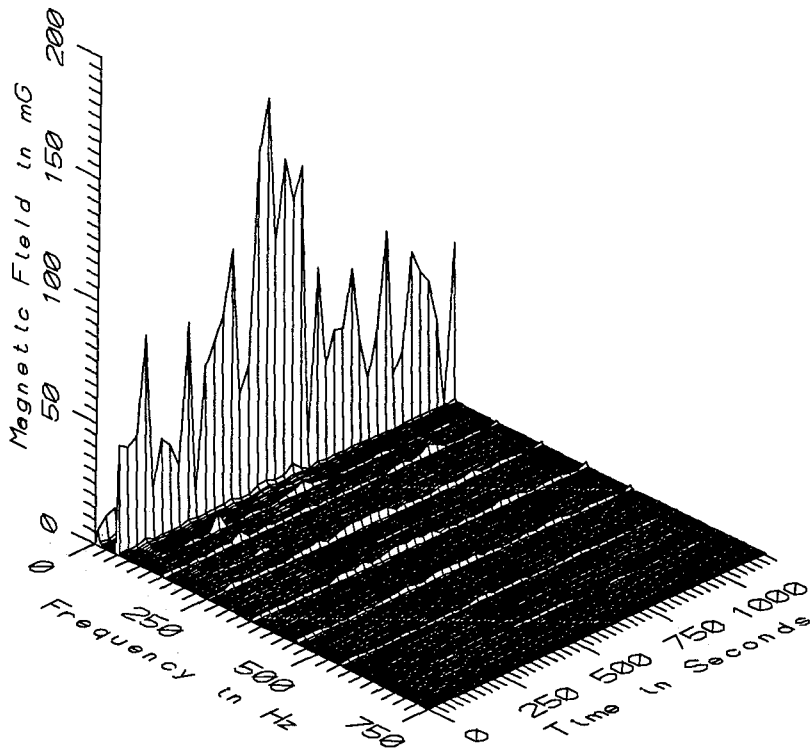
TGV026 - 110cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



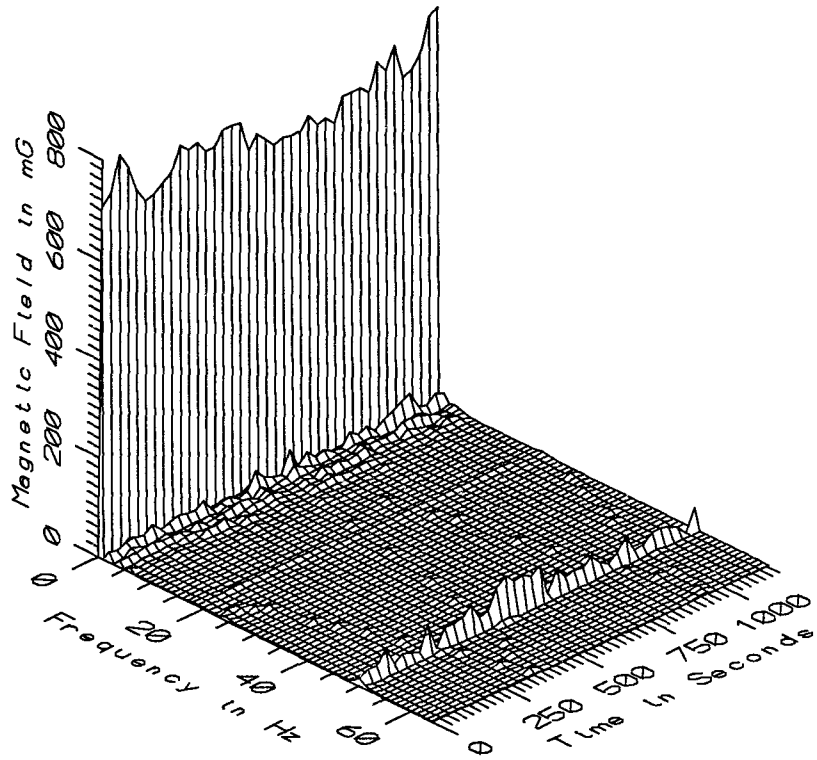
TGV026 - 110cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



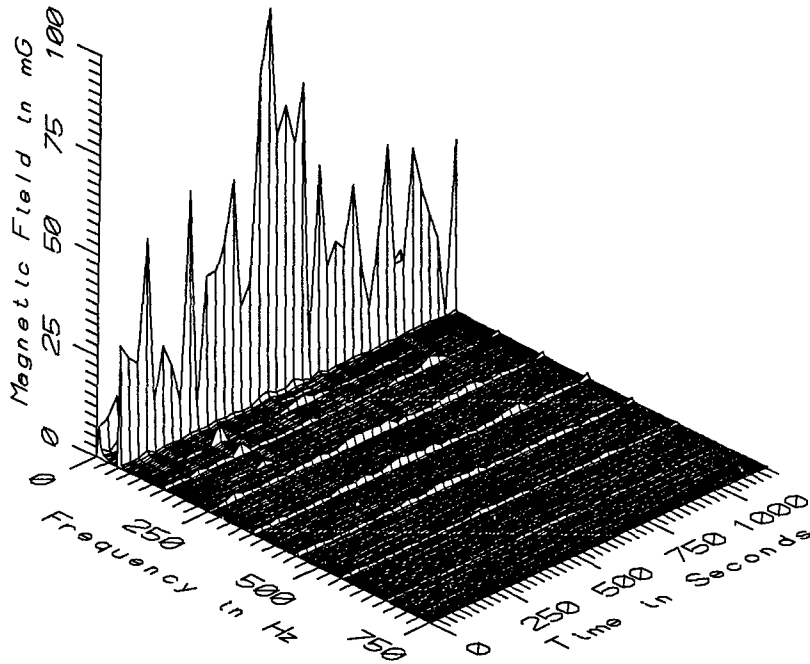
TGV026 - 160cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



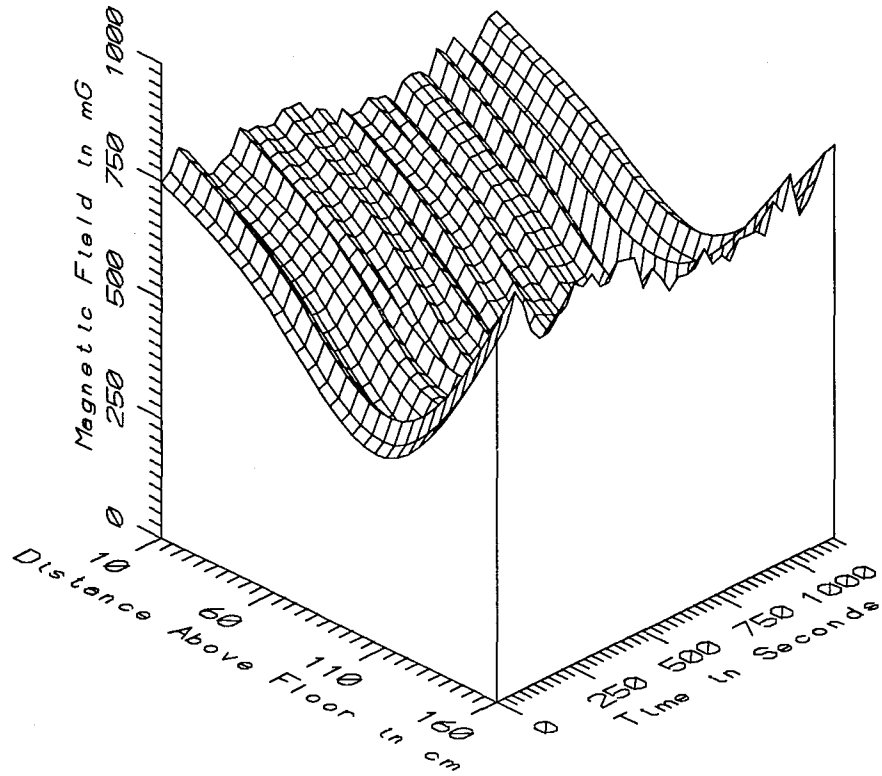
TGV026 - 160cm ABOVE FLOOR AGAINST ENGINEER'S CHAIR, REVENUE TRAIN



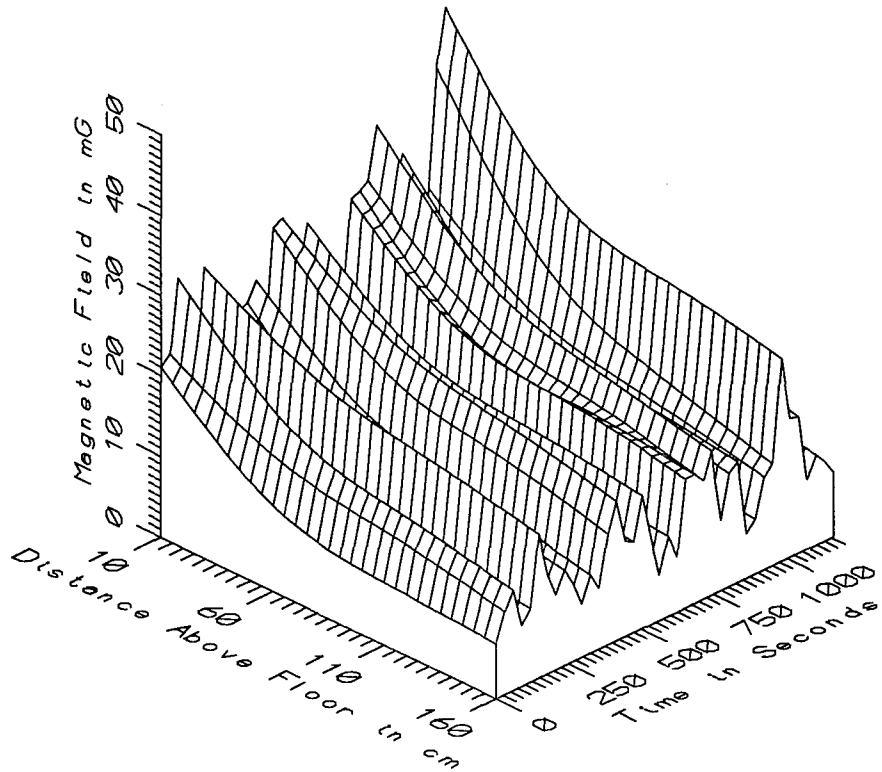
TGV026 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, REVENUE TRAIN



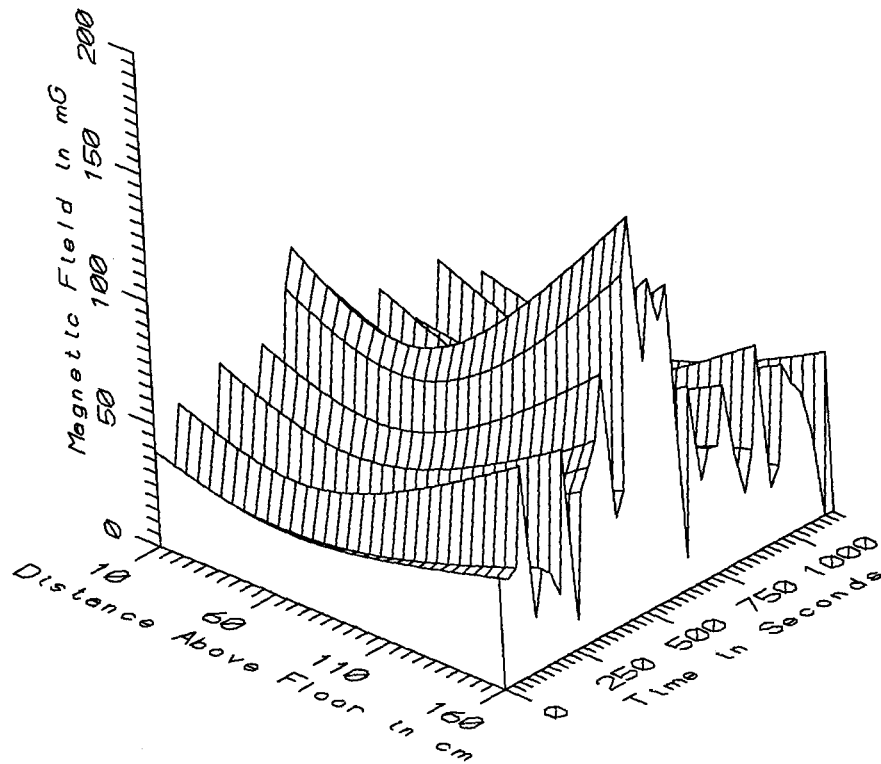
TGV026 - REF. PROBE - ASSISTANT ENGINEER'S CONSOLE, REVENUE TRAIN



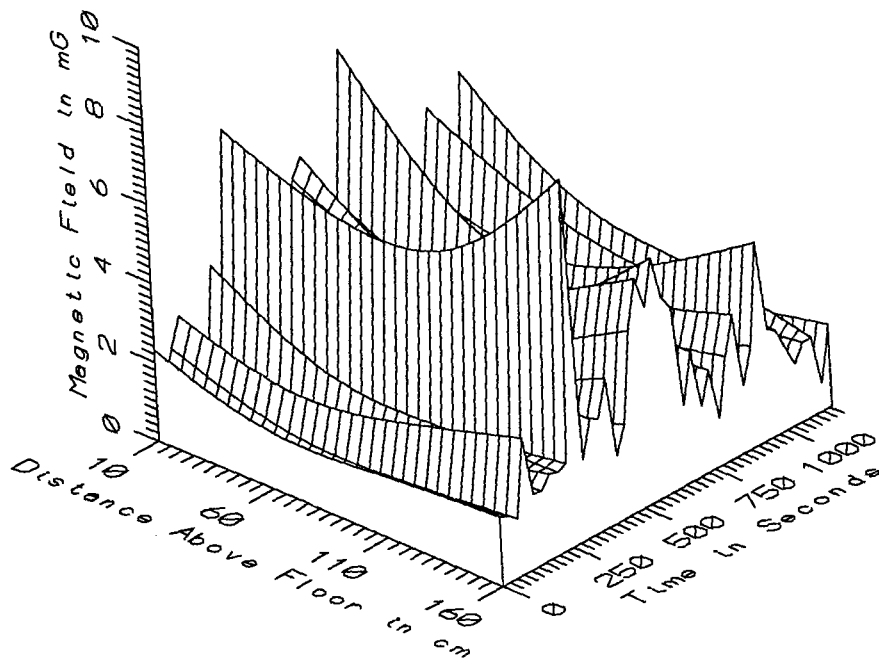
TGV026 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - STATIC



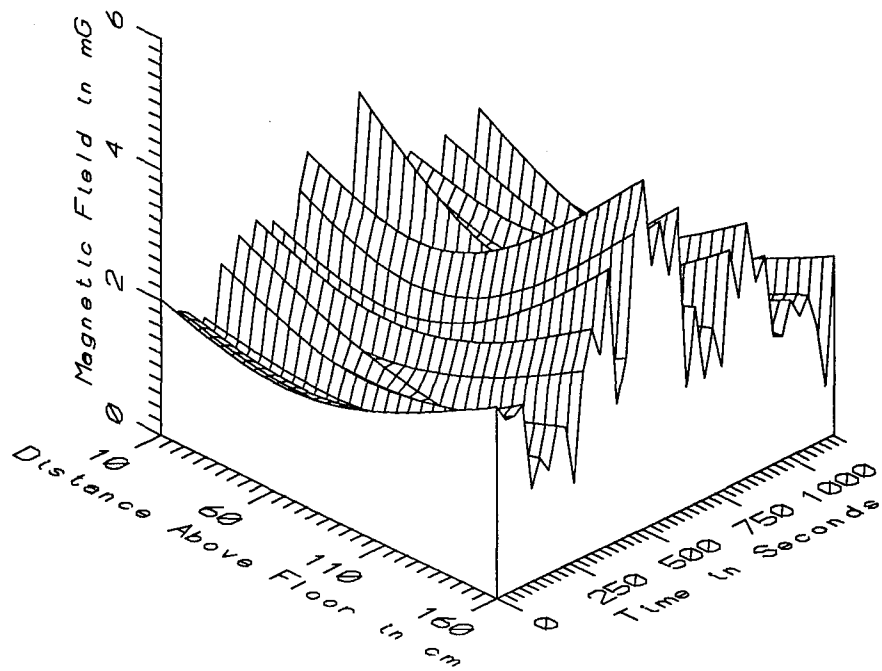
TGV026 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - LOW FREQ, 5-45Hz



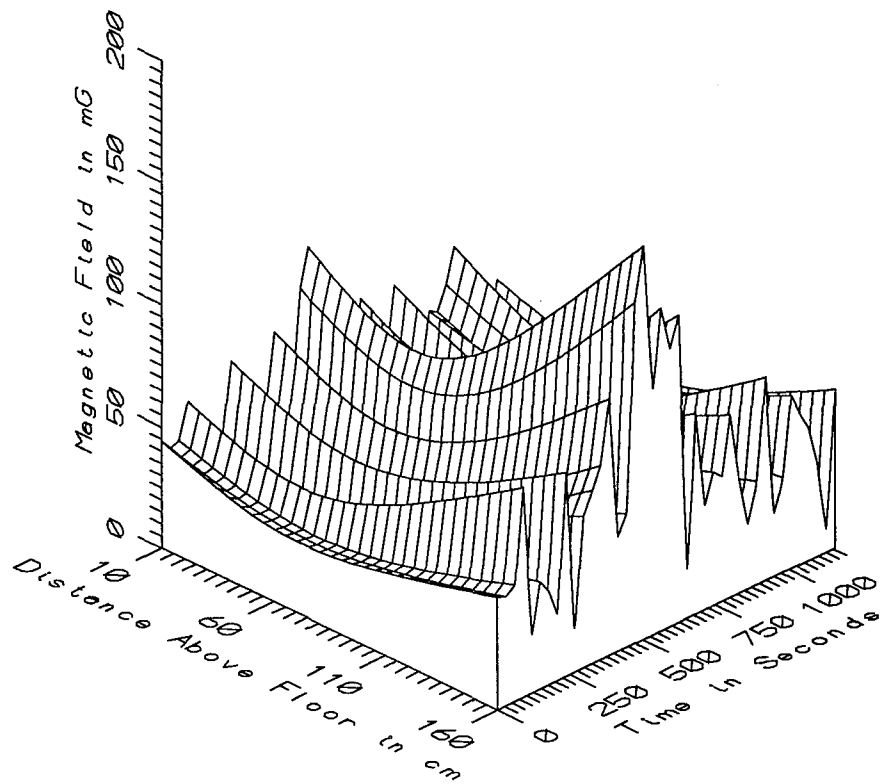
TGV026 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - POWER FREQ, 50-60Hz



TGV026 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - POWER HARM, 65-300Hz

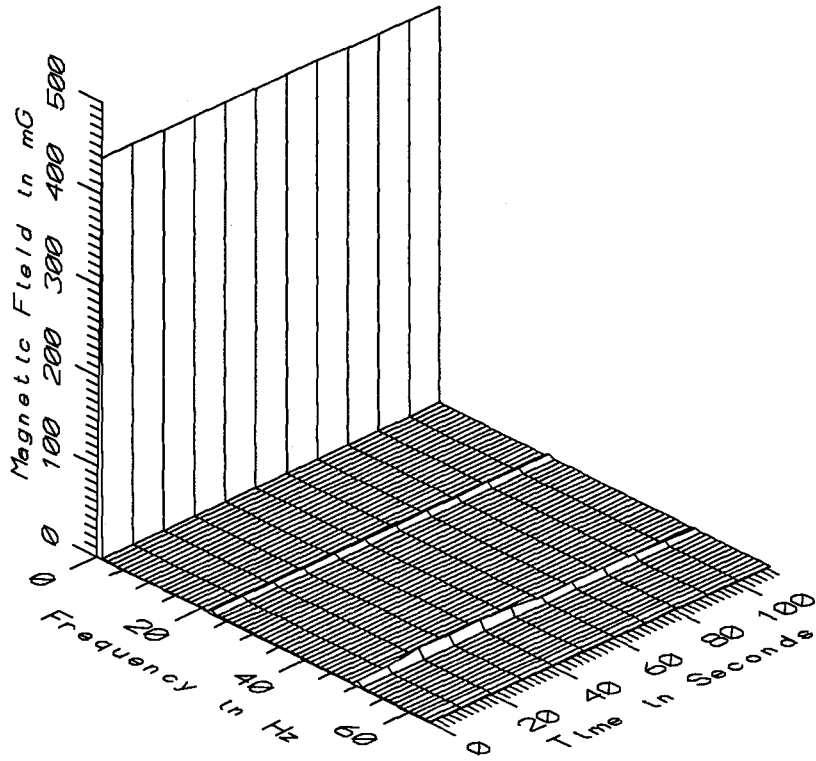


TGV026 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - HIGH FREQ, 305-2560Hz

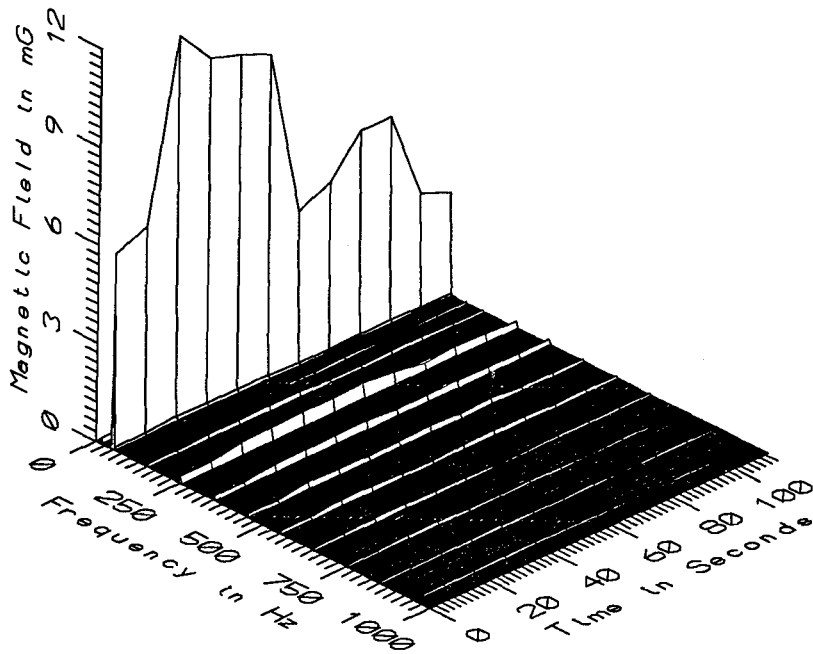


TGV026 - AGAINST ENGINEER'S CHAIR, REVENUE TRAIN - ALL FREQ, 5-2560Hz

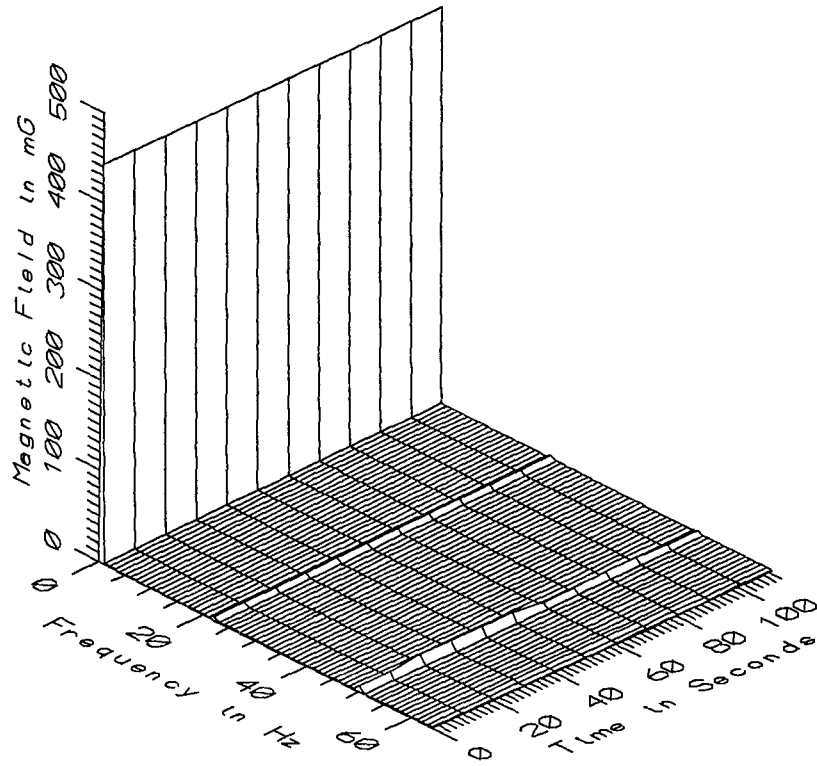
| TGV026 - ALL SAMPLES IN AC SECTION | | TOTAL OF 40 SAMPLES | | | | |
|------------------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 678.61 | 802.40 | 736.11 | 31.19 | 4.24 |
| | 60 | 505.36 | 620.89 | 559.11 | 32.45 | 5.80 |
| | 110 | 353.34 | 526.35 | 405.05 | 42.78 | 10.56 |
| | 160 | 682.17 | 837.84 | 747.01 | 41.91 | 5.61 |
| 5-45Hz LOW FREQ | 10 | 12.55 | 48.76 | 26.18 | 7.81 | 29.82 |
| | 60 | 6.83 | 32.22 | 16.45 | 5.42 | 32.94 |
| | 110 | 5.89 | 27.95 | 13.79 | 4.75 | 34.47 |
| | 160 | 5.56 | 25.05 | 11.73 | 4.20 | 35.80 |
| 50-60Hz PWR FREQ | 10 | 0.76 | 89.60 | 34.77 | 19.92 | 57.28 |
| | 60 | 0.41 | 70.05 | 27.95 | 15.24 | 54.53 |
| | 110 | 0.48 | 104.12 | 39.28 | 22.92 | 58.35 |
| | 160 | 0.58 | 159.82 | 61.46 | 36.80 | 59.88 |
| 65-300Hz PWR HARM | 10 | 0.86 | 7.27 | 2.81 | 1.55 | 54.94 |
| | 60 | 0.47 | 5.81 | 2.00 | 1.06 | 53.20 |
| | 110 | 0.52 | 6.23 | 2.17 | 1.10 | 50.55 |
| | 160 | 0.73 | 9.23 | 2.89 | 1.65 | 57.17 |
| 305-2560Hz HIGH FREQ | 10 | 0.73 | 3.74 | 1.89 | 0.65 | 34.17 |
| | 60 | 0.60 | 2.61 | 1.51 | 0.43 | 28.52 |
| | 110 | 0.59 | 3.48 | 1.84 | 0.59 | 31.87 |
| | 160 | 0.77 | 5.22 | 2.67 | 1.00 | 37.58 |
| 5-2560Hz ALL FREQ | 10 | 19.31 | 94.73 | 45.81 | 16.20 | 35.35 |
| | 60 | 13.49 | 73.10 | 33.91 | 12.98 | 38.28 |
| | 110 | 11.55 | 105.80 | 42.94 | 21.09 | 49.13 |
| | 160 | 9.89 | 160.83 | 63.58 | 35.52 | 55.86 |



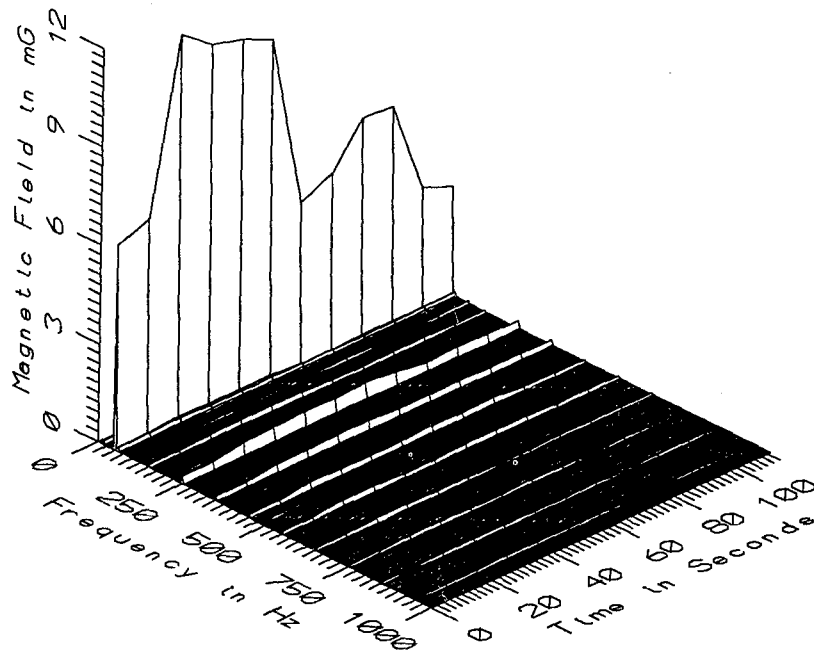
TGV027 - 10cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



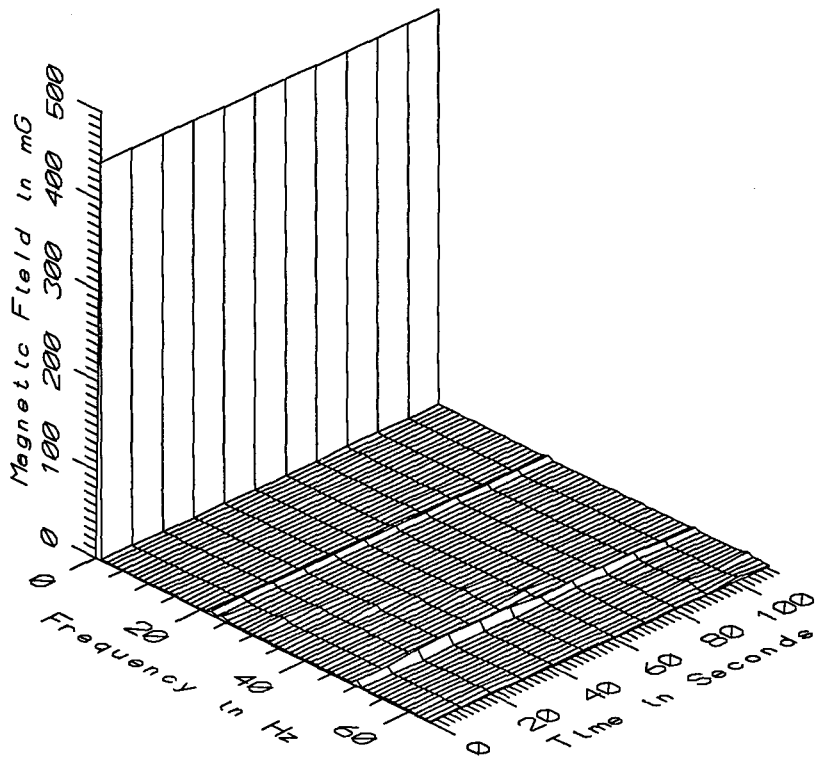
TGV027 - 10cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



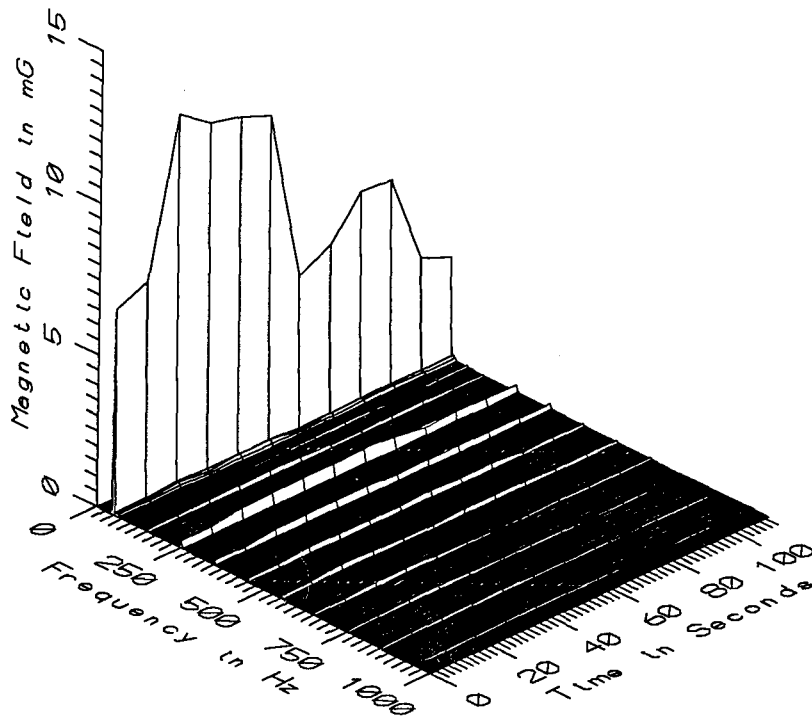
TGV027 - 60cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



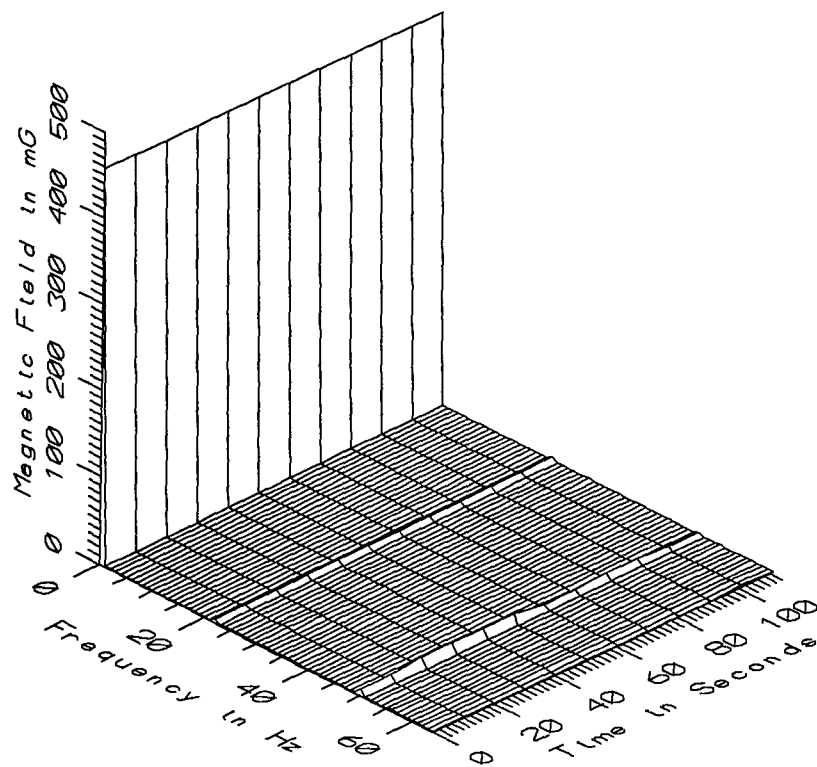
TGV027 - 60cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



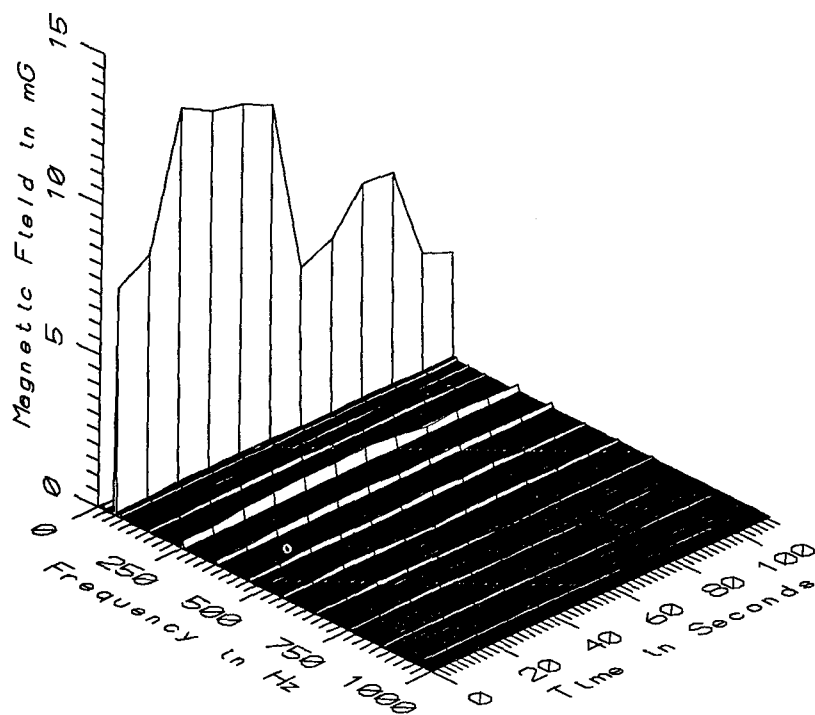
TGV027 - 110cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



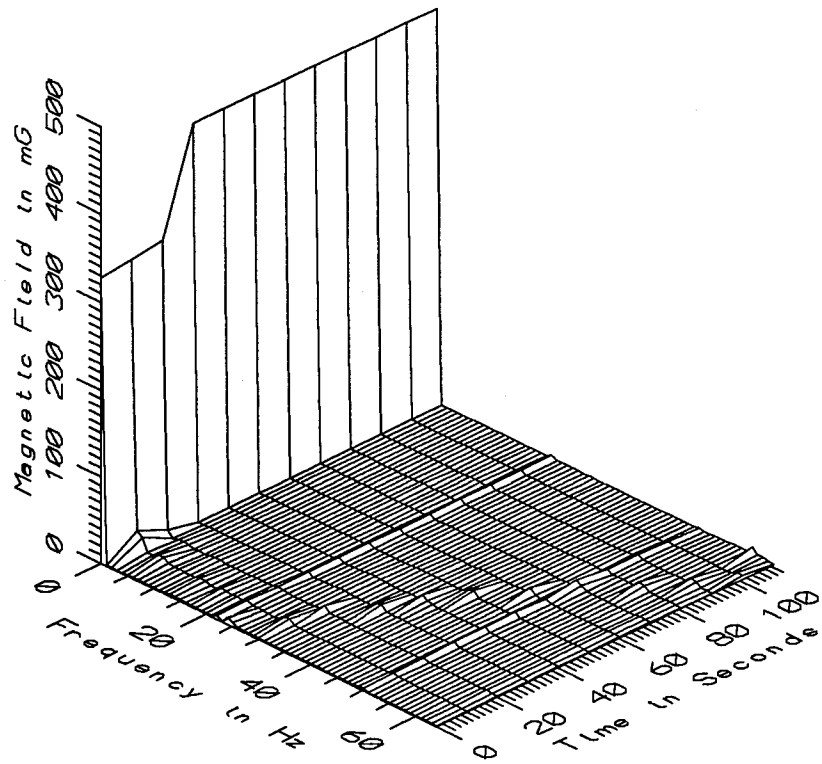
TGV027 - 110cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



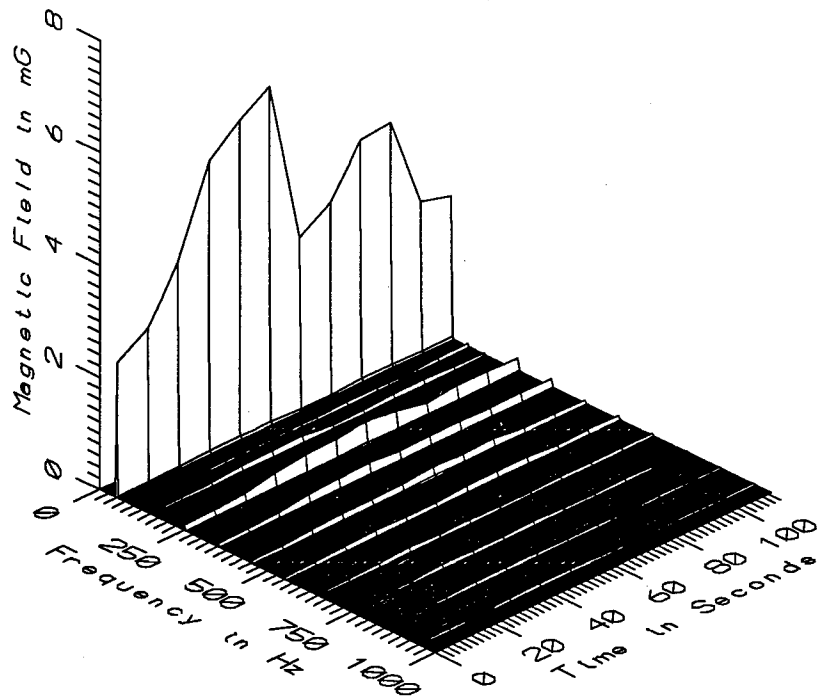
TGV027 - 160cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



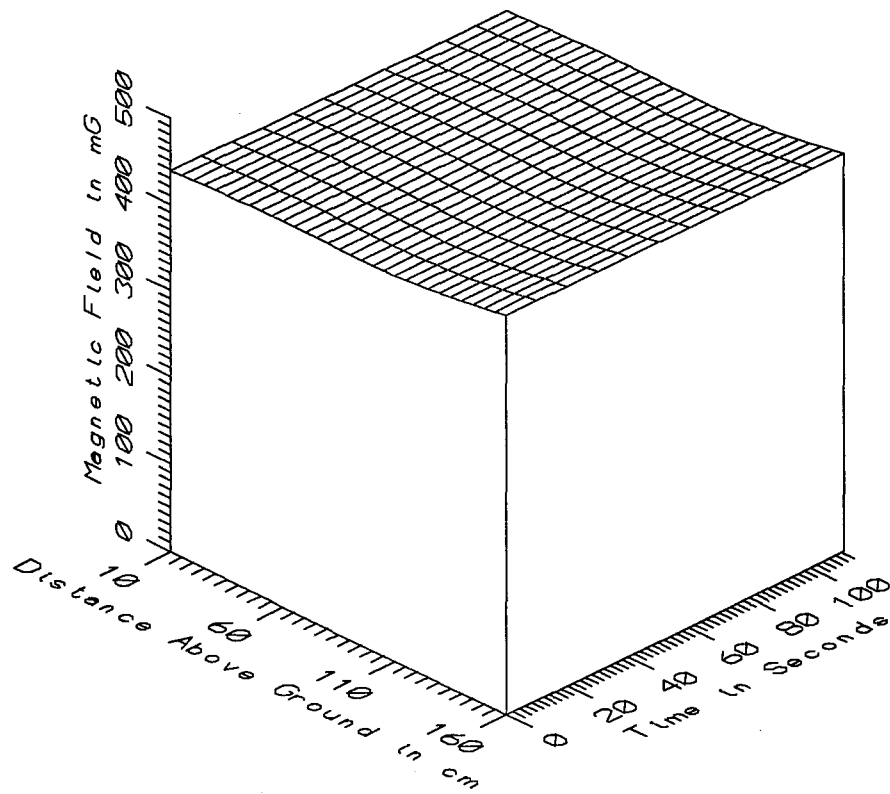
TGV027 - 160cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



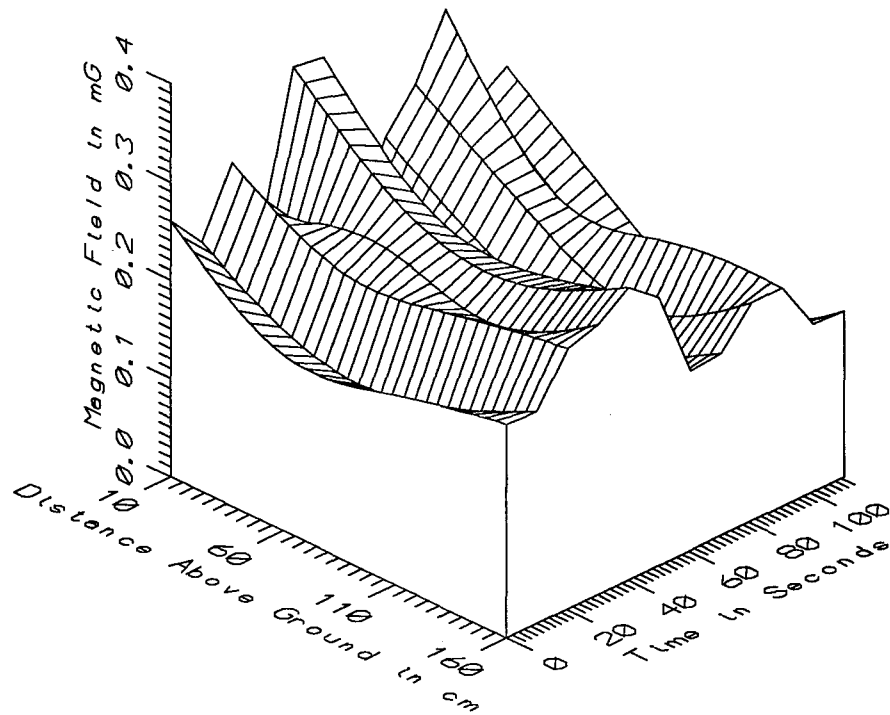
TGV027 - REFERENCE PROBE - 15m FROM STAFF AT CHAILLOT AUTO-TRANSFORMER



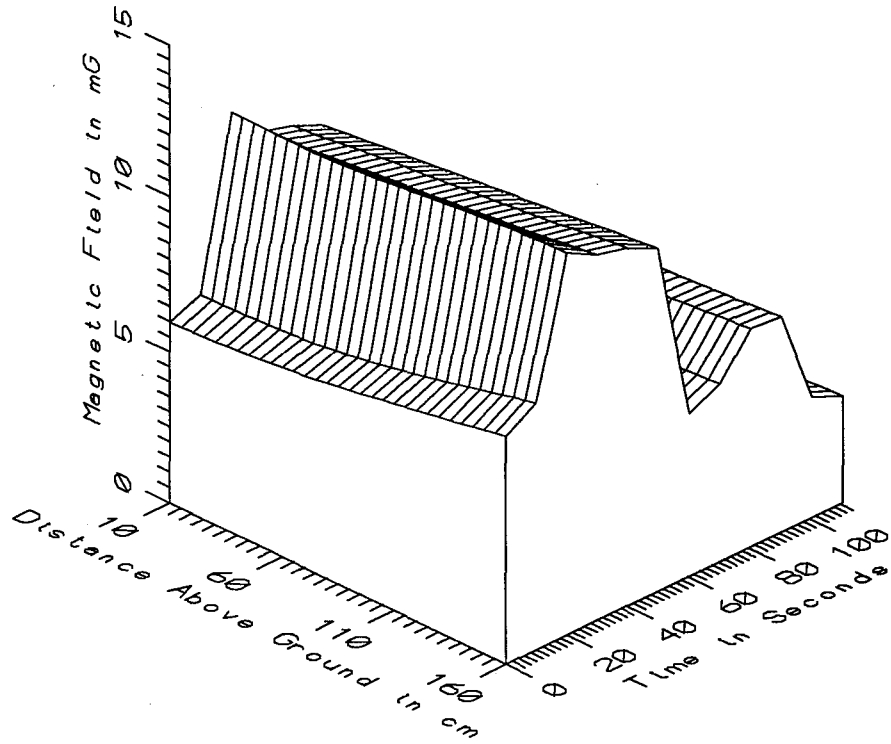
TGV027 - REFERENCE PROBE - 15m FROM STAFF AT CHAILLOT AUTO-TRANSFORMER



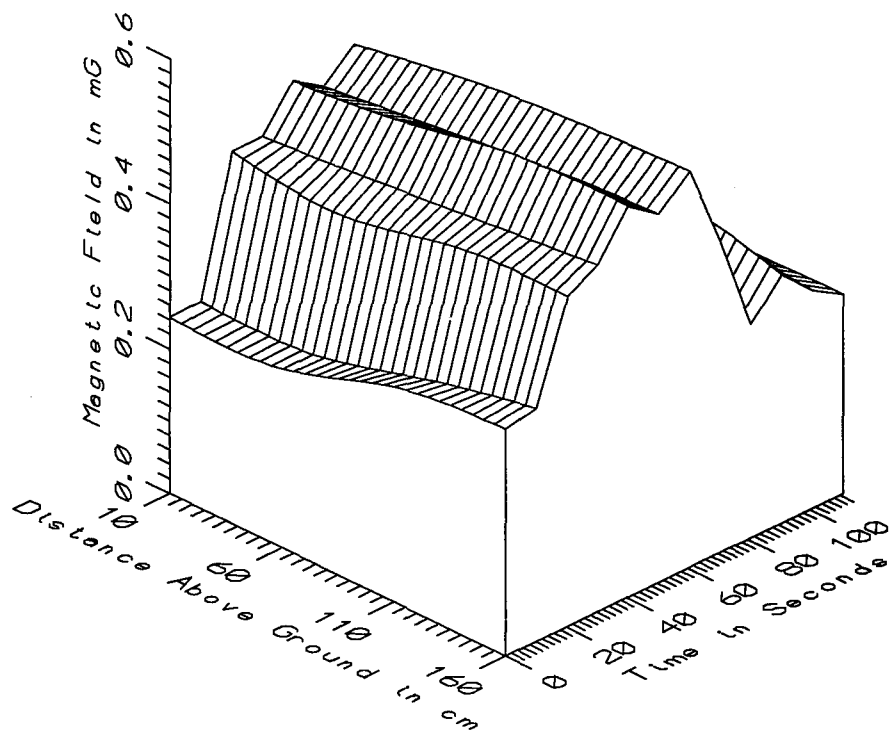
TGV027 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - STATIC



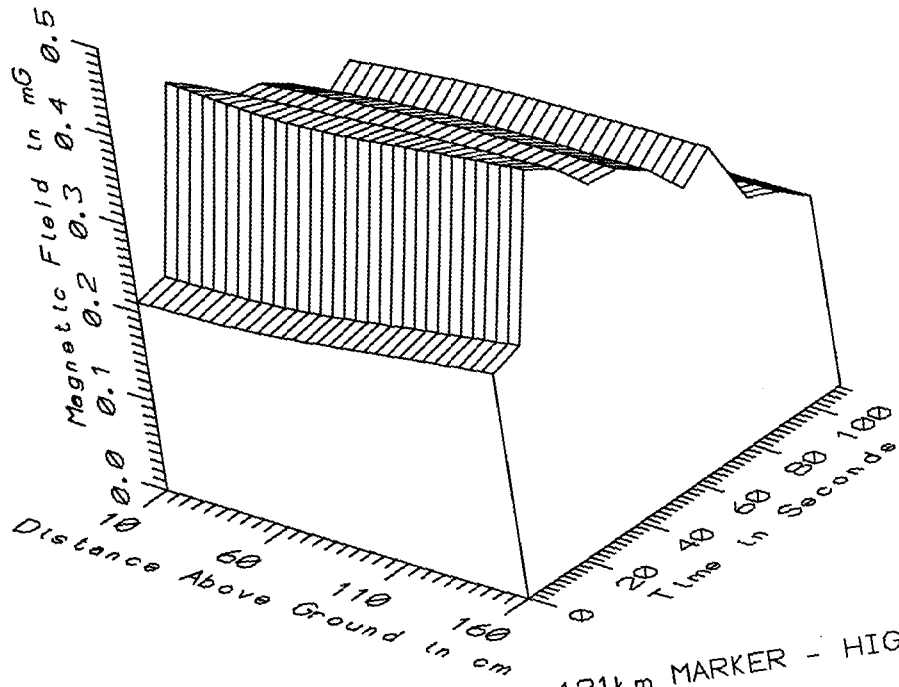
TGV027 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - LOW FREQ, 5-45Hz



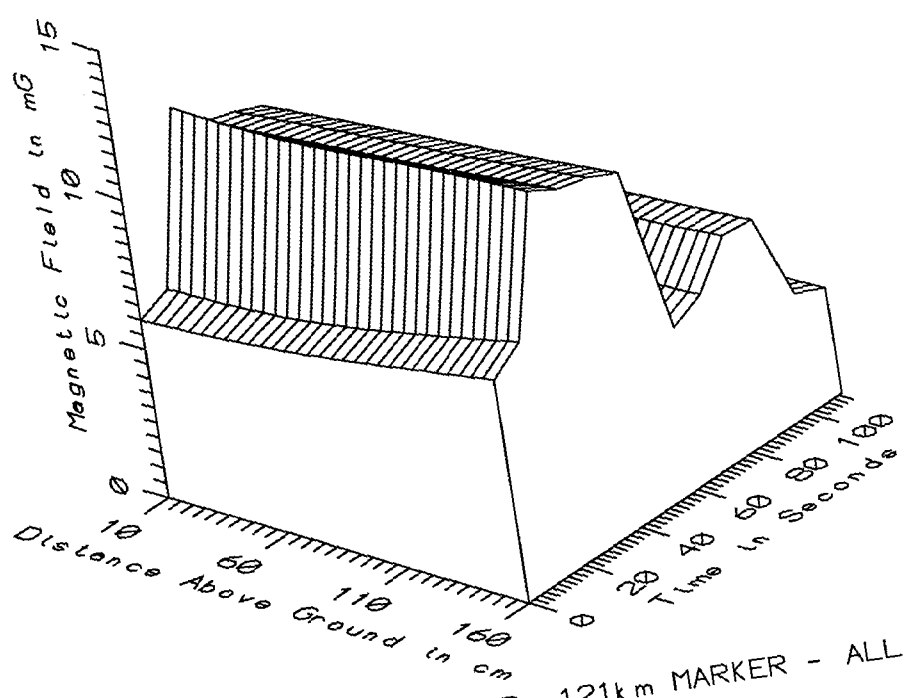
TGV027 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - POWER FREQ, 50-60Hz



TGV027 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - POWER HARM, 65-300Hz



TGV027 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - HIGH FREQ, 305-2560Hz



TGV027 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - ALL FREQ, 5-2560Hz

| TGV027 - CHAILLOT AUTO-TRANSFORMER | | TOTAL OF 12 SAMPLES | | | | | |
|------------------------------------|--------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|--|
| FREQUENCY BAND | HEIGHT ABOVE GROUND (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) | |
| STATIC | 10 | 436.81 | 438.55 | 437.78 | 0.52 | 0.12 | |
| | 60 | 442.42 | 443.05 | 442.78 | 0.17 | 0.04 | |
| | 110 | 441.71 | 442.22 | 441.86 | 0.16 | 0.04 | |
| | 160 | 457.34 | 458.56 | 458.09 | 0.40 | 0.09 | |
| 5-45HZ LOW FREQ | 10 | 0.16 | 0.36 | 0.27 | 0.06 | 22.64 | |
| | 60 | 0.16 | 0.27 | 0.20 | 0.04 | 19.20 | |
| | 110 | 0.11 | 0.25 | 0.18 | 0.05 | 27.44 | |
| | 160 | 0.17 | 0.30 | 0.22 | 0.04 | 19.48 | |
| 50-60HZ PWR FREQ | 10 | 3.12 | 11.79 | 7.03 | 2.93 | 41.66 | |
| | 60 | 3.28 | 11.81 | 7.30 | 2.97 | 40.73 | |
| | 110 | 3.38 | 12.24 | 7.62 | 3.07 | 40.33 | |
| | 160 | 3.52 | 12.57 | 8.02 | 3.18 | 39.59 | |
| 65-300HZ PWR HARM | 10 | 0.24 | 0.50 | 0.35 | 0.11 | 29.71 | |
| | 60 | 0.25 | 0.53 | 0.37 | 0.11 | 29.45 | |
| | 110 | 0.27 | 0.54 | 0.39 | 0.10 | 25.86 | |
| | 160 | 0.28 | 0.55 | 0.40 | 0.10 | 25.65 | |
| 305-2560HZ HIGH FREQ | 10 | 0.20 | 0.42 | 0.30 | 0.08 | 25.61 | |
| | 60 | 0.21 | 0.41 | 0.30 | 0.08 | 24.71 | |
| | 110 | 0.21 | 0.42 | 0.31 | 0.07 | 23.98 | |
| | 160 | 0.21 | 0.44 | 0.32 | 0.07 | 23.52 | |
| 5-2560HZ ALL FREQ | 10 | 3.15 | 11.81 | 7.05 | 2.92 | 41.49 | |
| | 60 | 3.30 | 11.83 | 7.32 | 2.97 | 40.59 | |
| | 110 | 3.40 | 12.26 | 7.64 | 3.07 | 40.20 | |
| | 160 | 3.54 | 12.58 | 8.04 | 3.17 | 39.46 | |

APPENDIX AC

DATASET TGV028
AT CHAILLOT AUTOTRANSFORMER

Measurement Setup Code: Staff: 27 Reference: 28
 Drawing: A-6

Vehicle Status: Single train set passed 320 seconds
 into the record

Measurement Date: September 9, 1992

Measurement Time: Start: 10:26:43
 End: 10:33:30

Number of Samples: 36

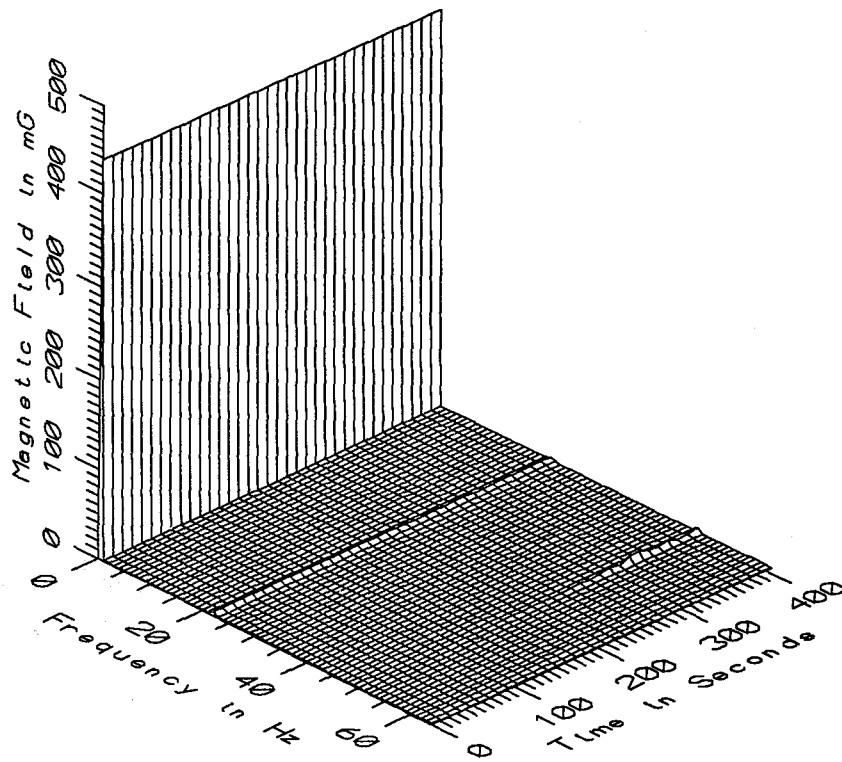
Programmed Sample Interval: 10 sec

Actual Sample Interval: 11.6 sec

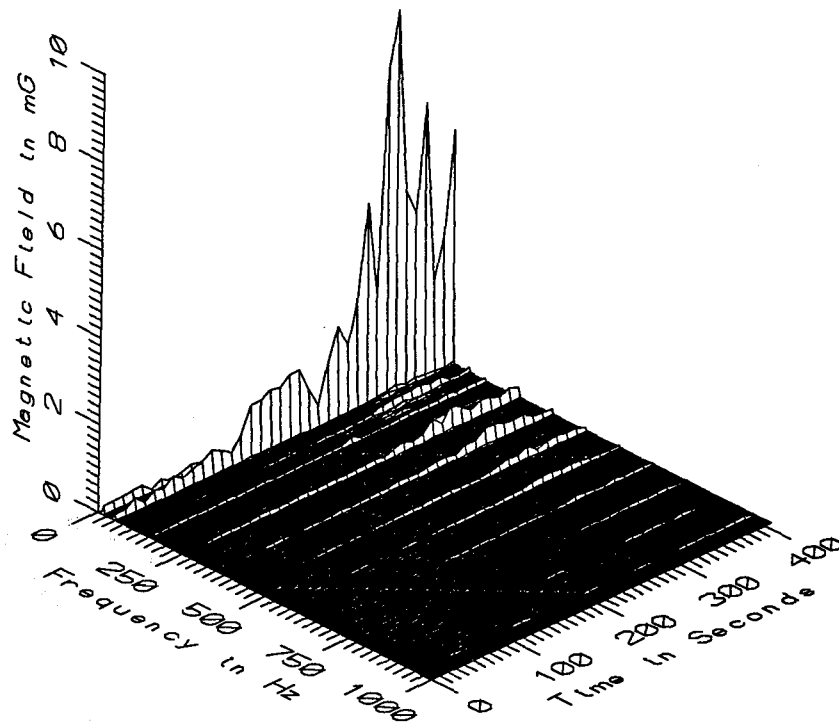
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

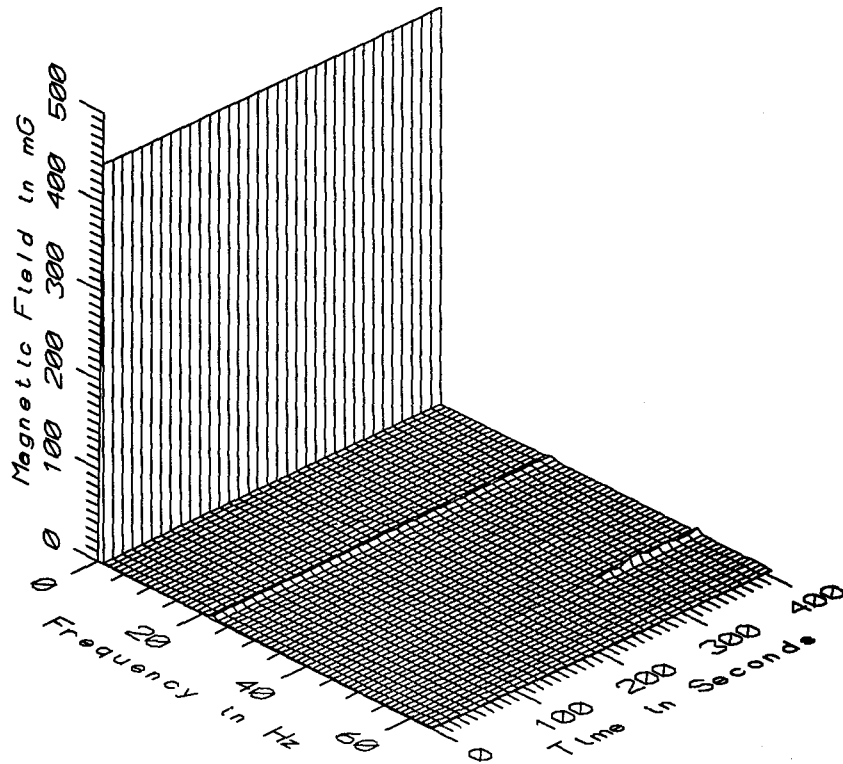
Missing or Suspect Data: None



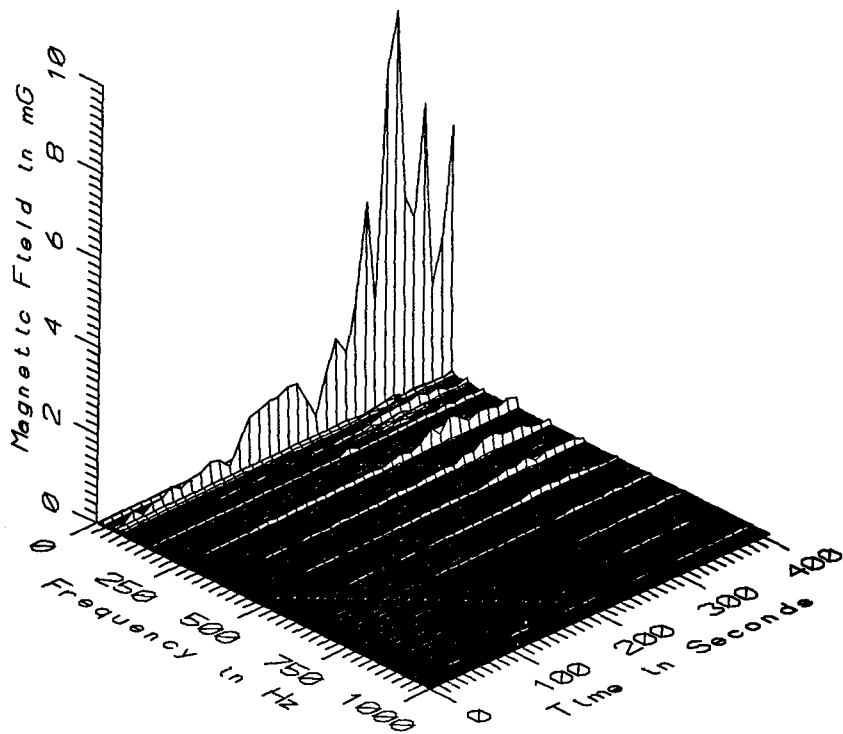
TGV028 - 10cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



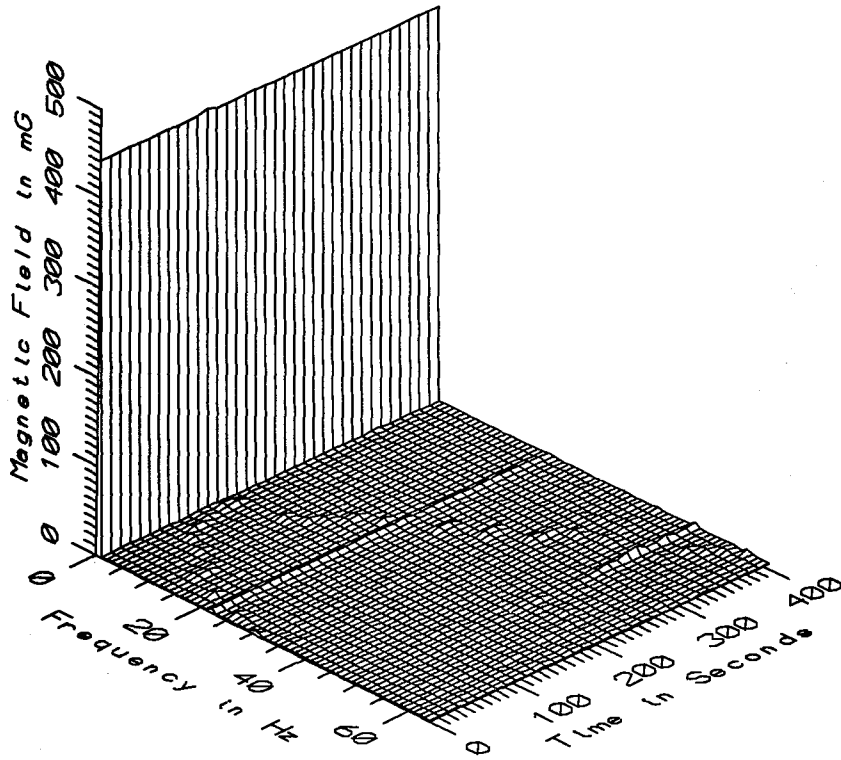
TGV028 - 10cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



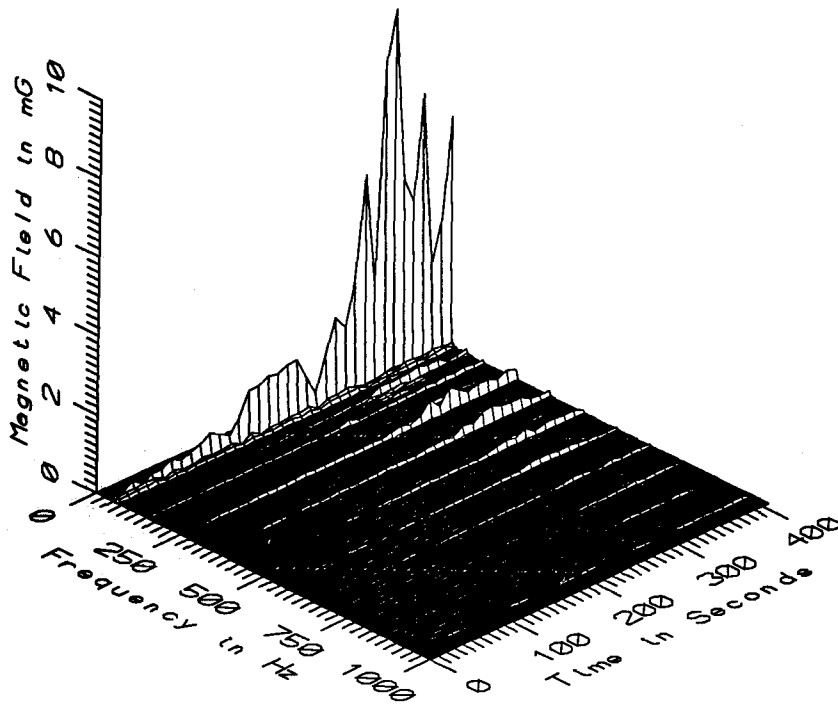
TGV028 - 60cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



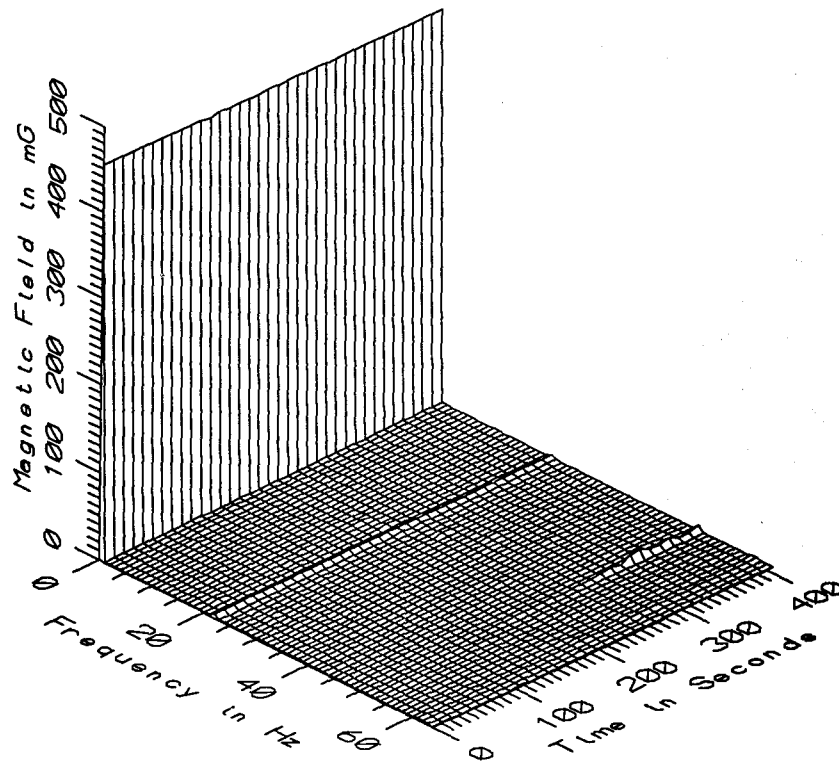
TGV028 - 60cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



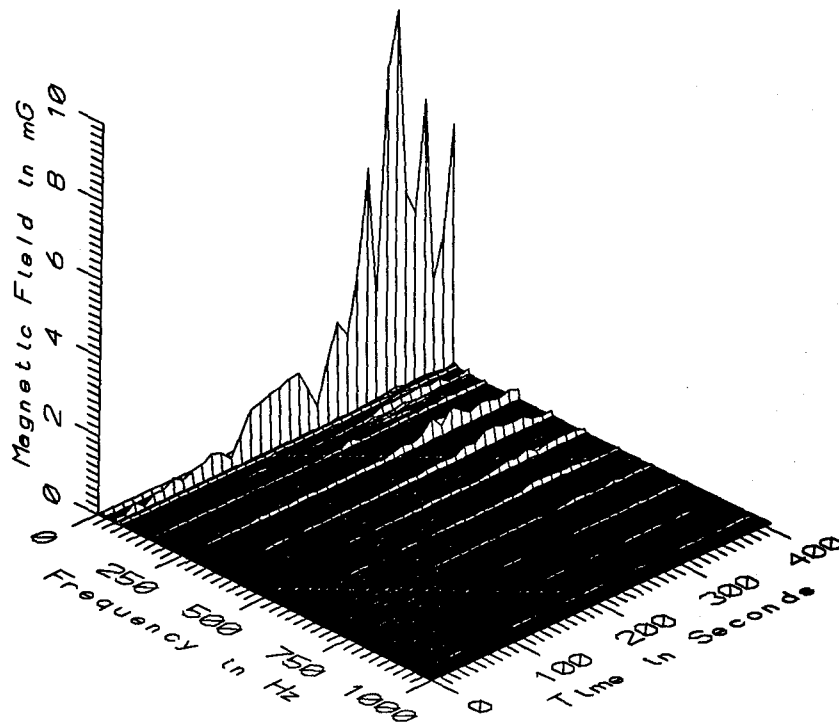
TGV028 - 110cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



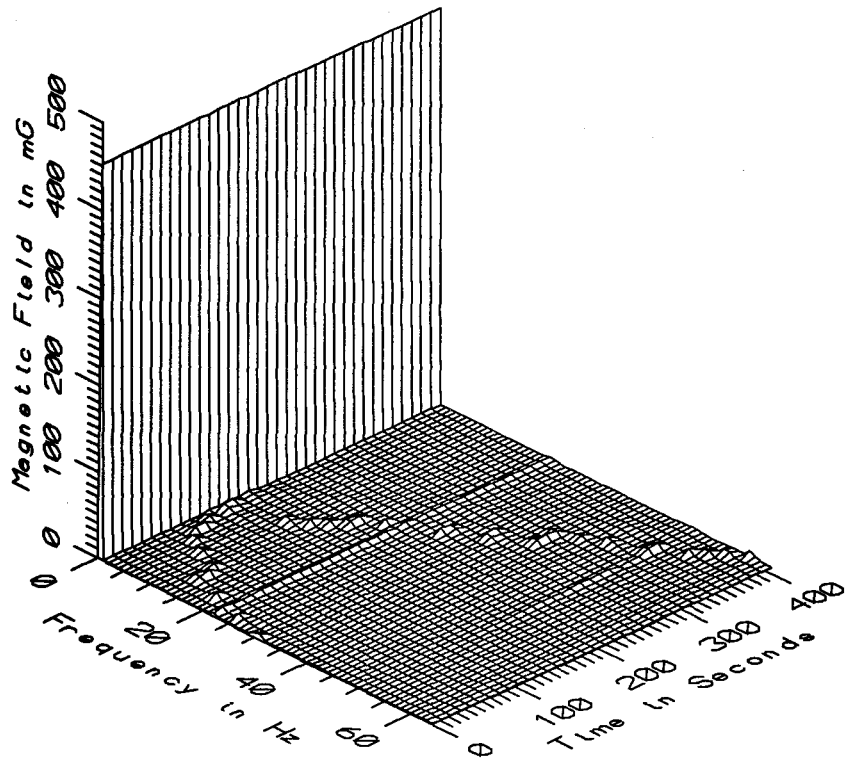
TGV028 - 110cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



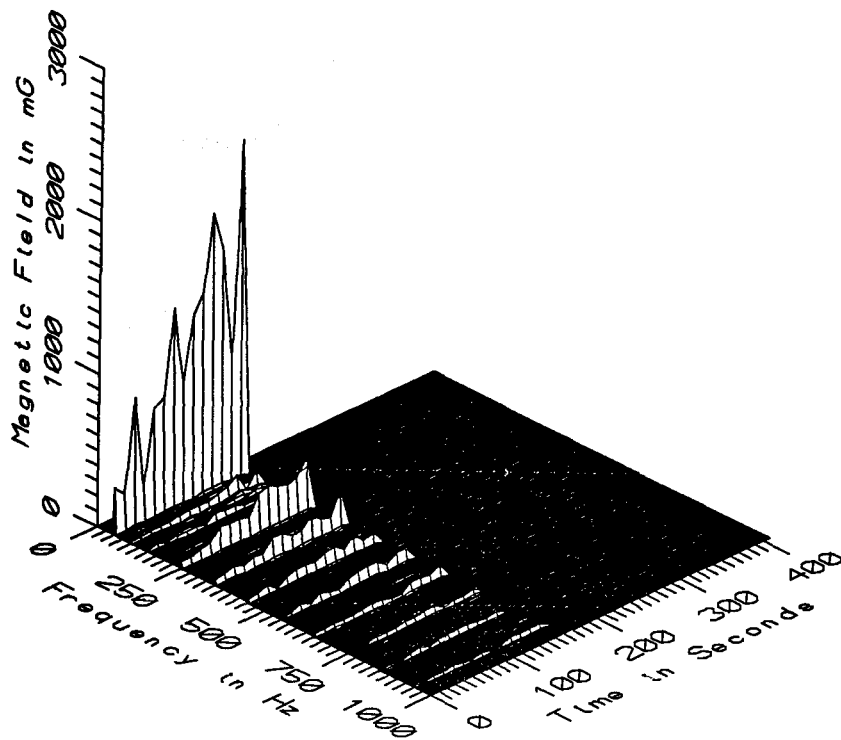
TGV028 - 160cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



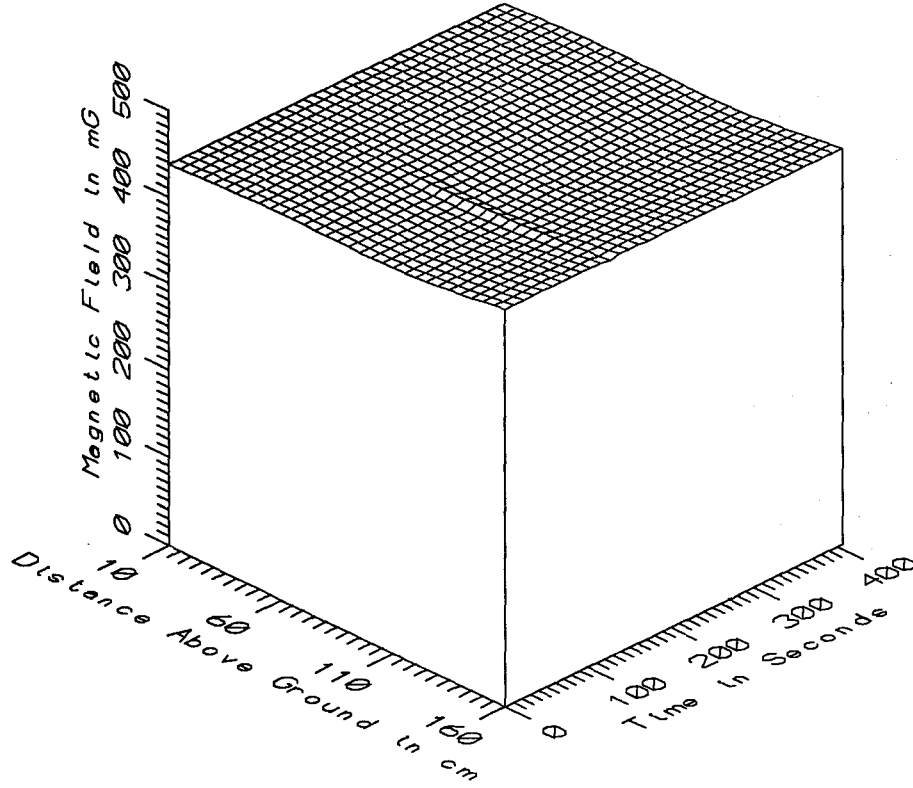
TGV028 - 160cm ABOVE GROUND AT CHAILLOT AUTO-TRANSFORMER, 121km MARKER



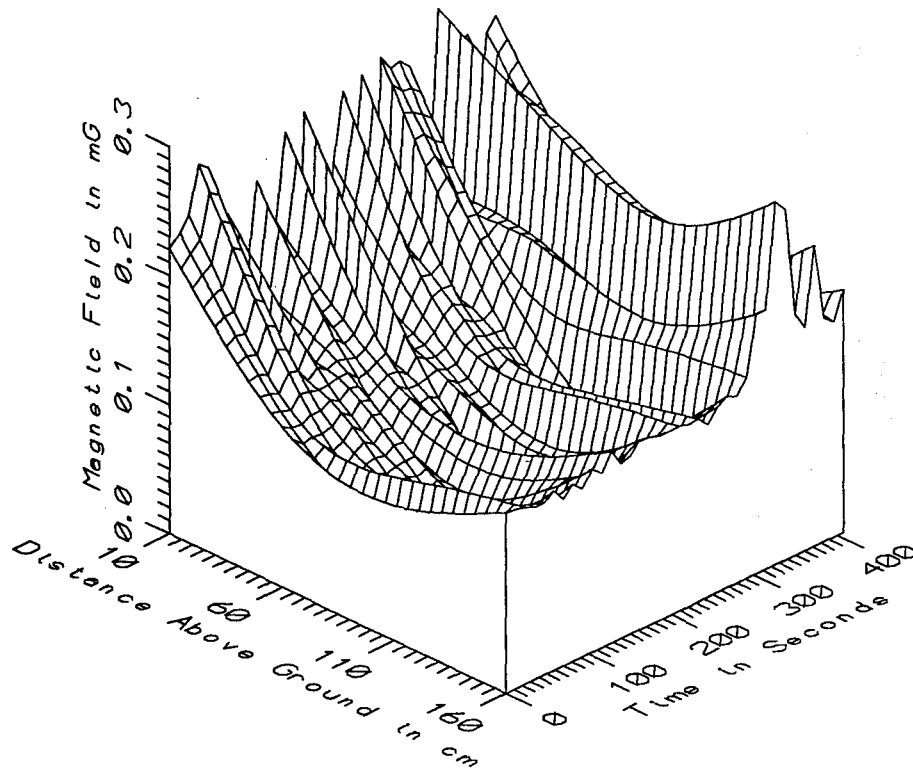
TGV028 - REFERENCE PROBE - 15m FROM STAFF AT CHAILLOT AUTO-TRANSFORMER



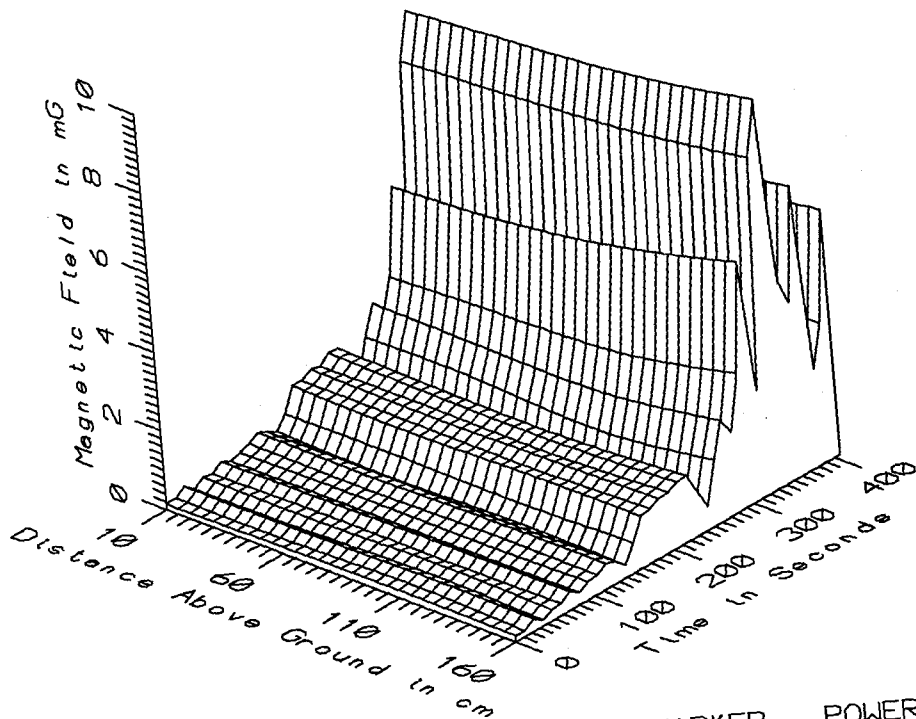
TGV028 - REFERENCE PROBE - 15m FROM STAFF AT CHAILLOT AUTO-TRANSFORMER



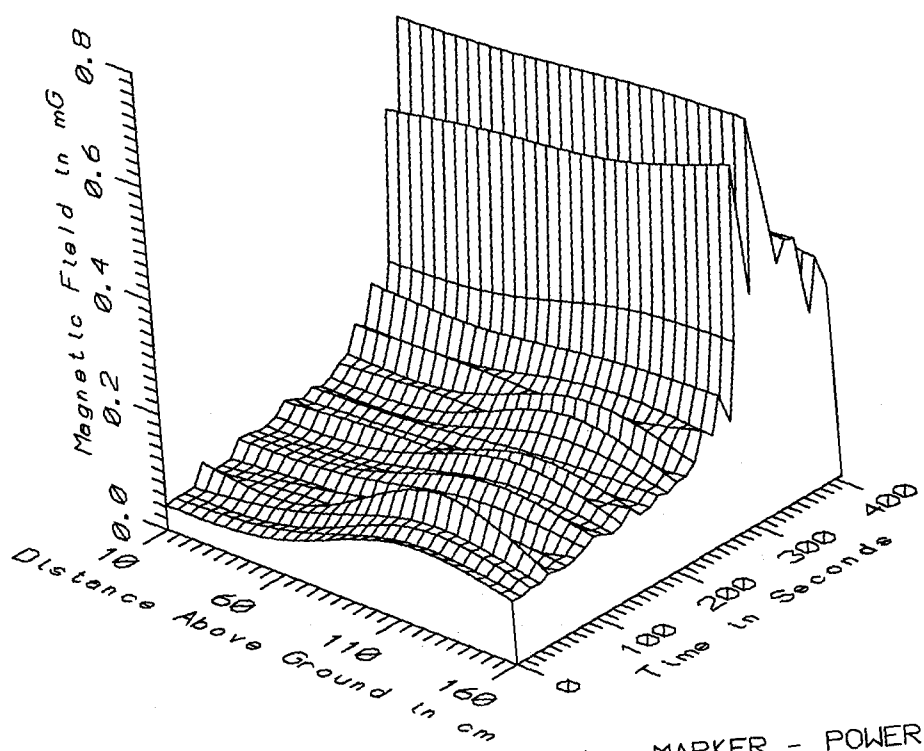
TGV028 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - STATIC



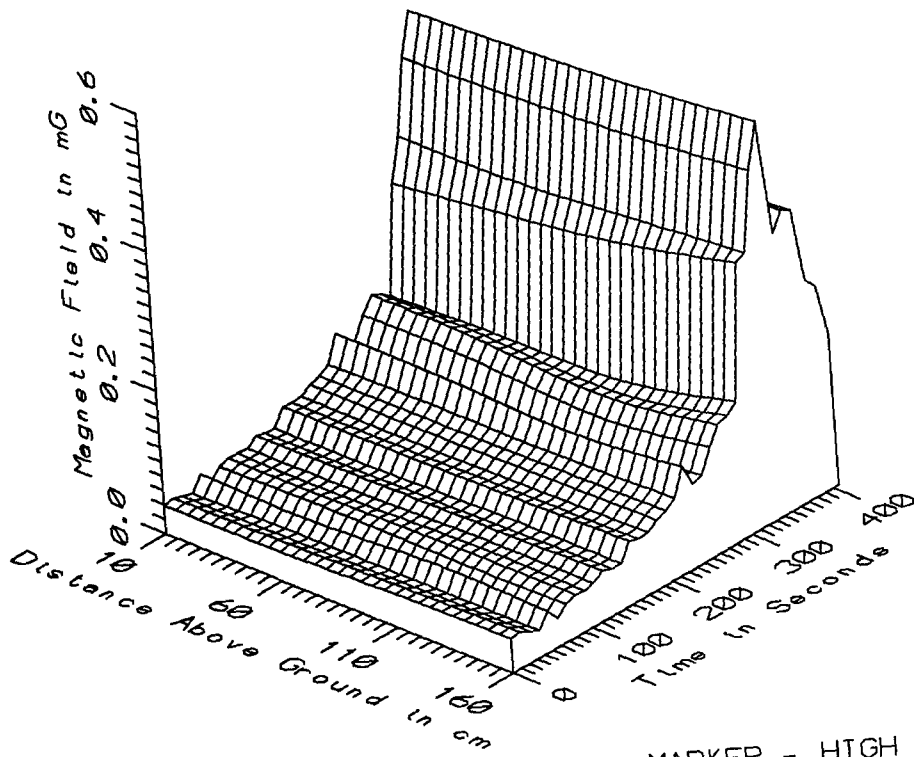
TGV028 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - LOW FREQ, 5-45Hz



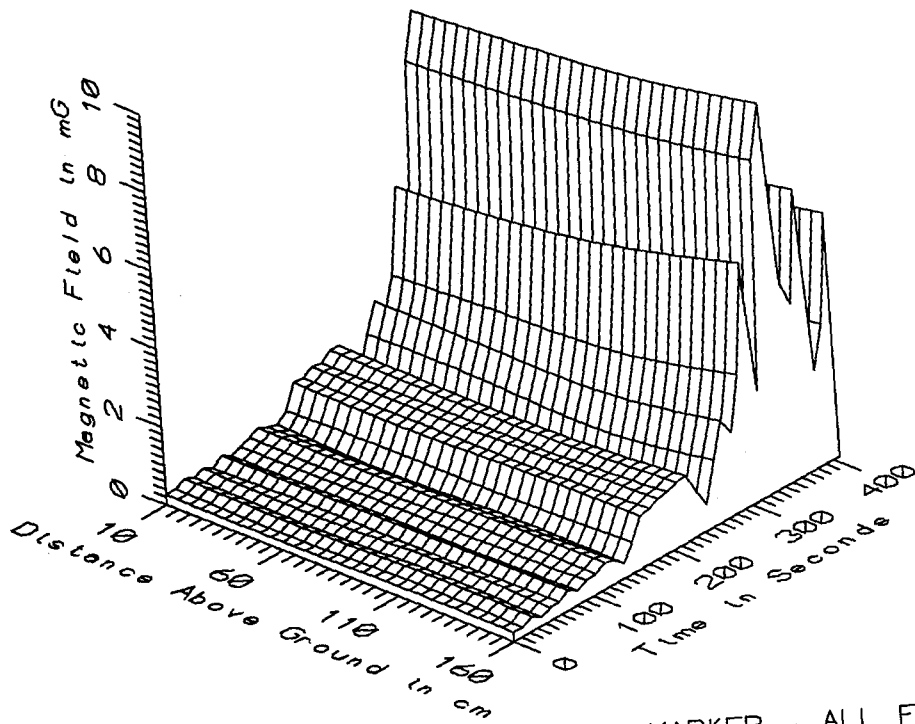
TGV028 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - POWER FREQ, 50-60Hz



TGV028 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - POWER HARM, 65-300Hz



TGV028 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - HIGH FREQ, 305-2560Hz



TGV028 - CHAILLOT AUTO-TRANSFORMER, 121km MARKER - ALL FREQ, 5-2560Hz

| TGV028 - CHAILLOT AUTO-TRANSFORMER | | TOTAL OF 36 SAMPLES | | | | | |
|------------------------------------|--------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|--|
| FREQUENCY BAND | HEIGHT ABOVE GROUND (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) | |
| STATIC | 10 | 437.48 | 438.46 | 437.86 | 0.25 | 0.06 | |
| | 60 | 442.17 | 443.02 | 442.54 | 0.21 | 0.05 | |
| | 110 | 440.70 | 444.98 | 441.39 | 0.67 | 0.15 | |
| | 160 | 453.44 | 456.12 | 455.39 | 0.47 | 0.10 | |
| 5-45HZ LOW FREQ | 10 | 0.11 | 0.31 | 0.23 | 0.06 | 25.19 | |
| | 60 | 0.12 | 0.26 | 0.14 | 0.03 | 24.04 | |
| | 110 | 0.06 | 0.23 | 0.11 | 0.04 | 38.74 | |
| | 160 | 0.13 | 0.28 | 0.16 | 0.04 | 23.32 | |
| 50-60HZ PWR FREQ | 10 | 0.11 | 8.70 | 1.95 | 2.20 | 112.59 | |
| | 60 | 0.14 | 8.95 | 2.01 | 2.28 | 113.64 | |
| | 110 | 0.18 | 9.25 | 2.08 | 2.36 | 113.57 | |
| | 160 | 0.14 | 9.79 | 2.26 | 2.53 | 112.11 | |
| 65-300HZ PWR HARM | 10 | 0.04 | 0.64 | 0.18 | 0.16 | 86.29 | |
| | 60 | 0.06 | 0.65 | 0.20 | 0.16 | 79.80 | |
| | 110 | 0.08 | 0.68 | 0.24 | 0.15 | 63.33 | |
| | 160 | 0.11 | 0.69 | 0.24 | 0.16 | 67.67 | |
| 305-2560HZ HIGH FREQ | 10 | 0.03 | 0.53 | 0.16 | 0.14 | 88.42 | |
| | 60 | 0.04 | 0.54 | 0.16 | 0.14 | 88.78 | |
| | 110 | 0.04 | 0.55 | 0.16 | 0.14 | 88.72 | |
| | 160 | 0.04 | 0.56 | 0.17 | 0.15 | 86.70 | |
| 5-2560HZ ALL FREQ | 10 | 0.27 | 8.73 | 2.01 | 2.18 | 108.85 | |
| | 60 | 0.20 | 8.98 | 2.04 | 2.28 | 111.80 | |
| | 110 | 0.25 | 9.29 | 2.12 | 2.36 | 111.75 | |
| | 160 | 0.23 | 9.83 | 2.30 | 2.53 | 109.92 | |

APPENDIX AD

DATASET TGV029
OVERPASS

Measurement Setup Code: Staff: 29 Reference: 30
Drawing: A-7

Vehicle Status: Double train set passed 223 seconds
into the record

Measurement Date: September 9, 1992

Measurement Time: Start: 10:58:02
End: 11:03:10

Number of Samples: 33

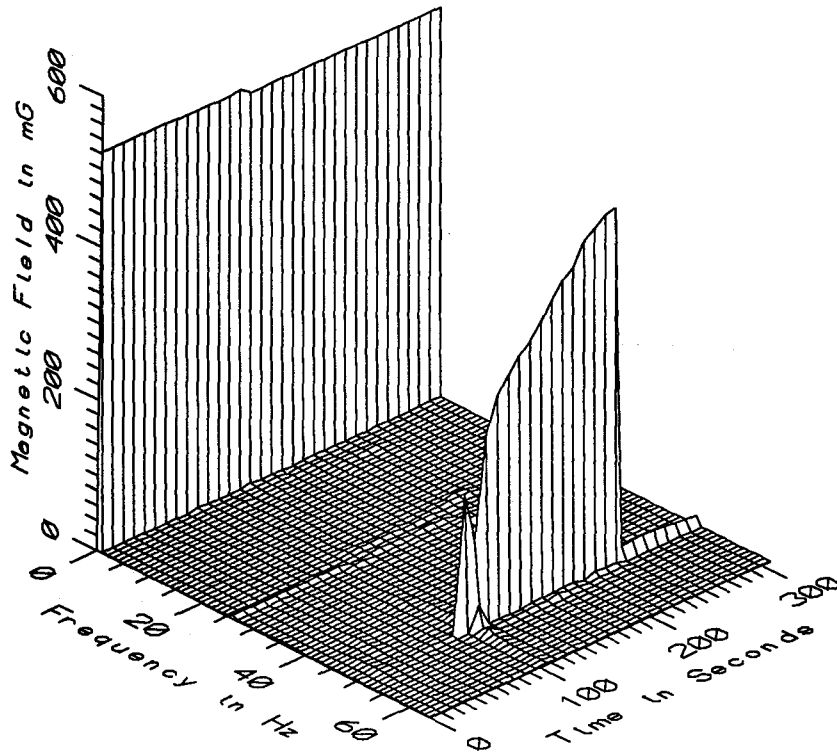
Programmed Sample Interval: 5 sec

Actual Sample Interval: 9.6 sec

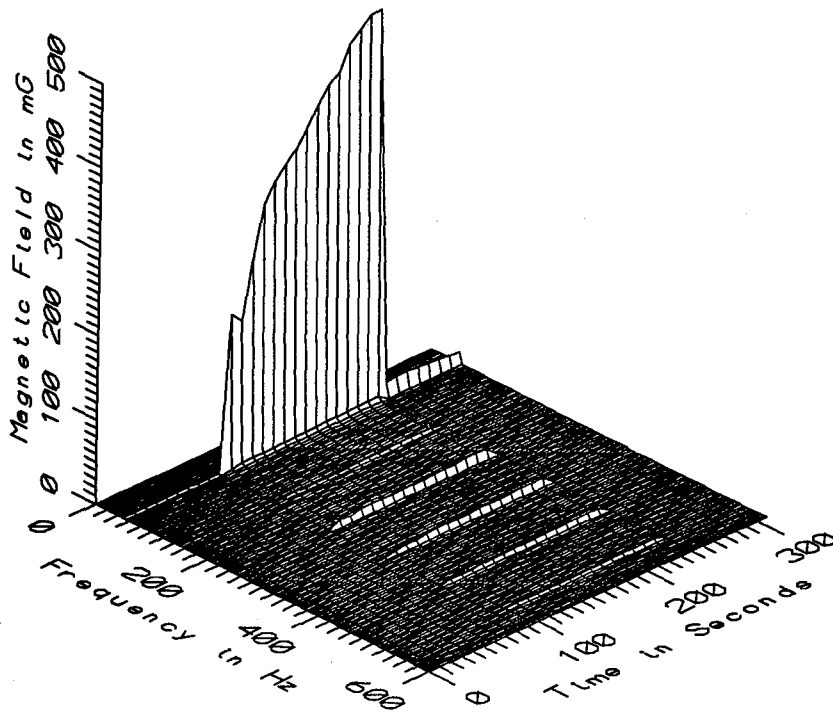
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

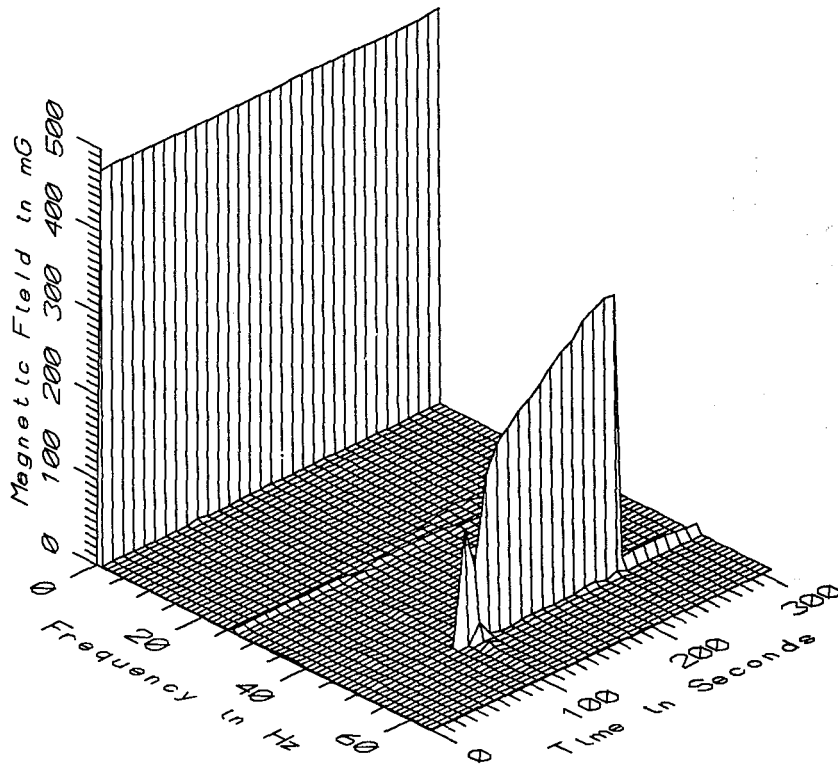
Missing or Suspect Data: None



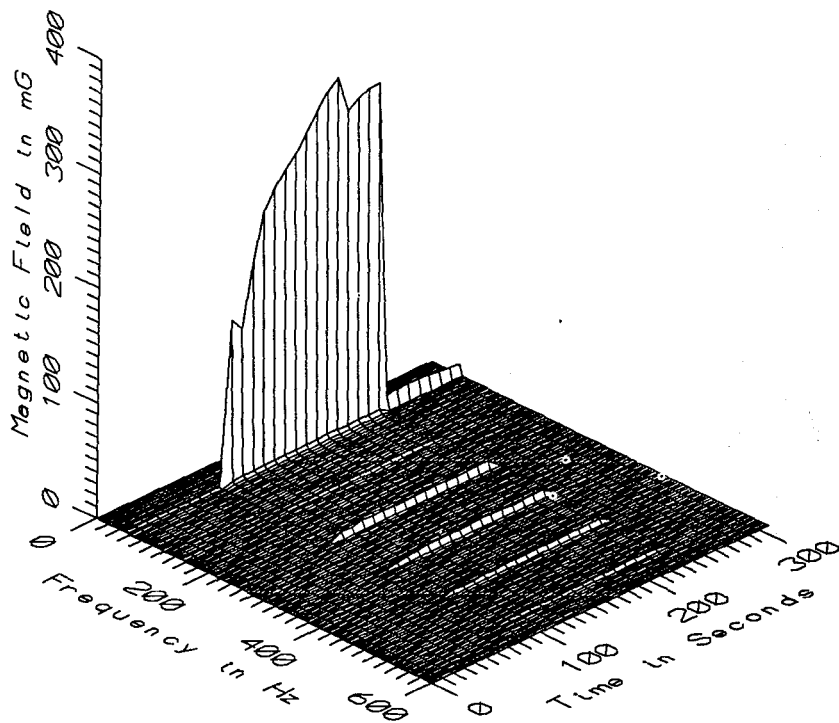
TGV029 - 10cm ABOVE OVERPASS BASE, ABOVE PARIS BOUND LINE. 120km MARKER



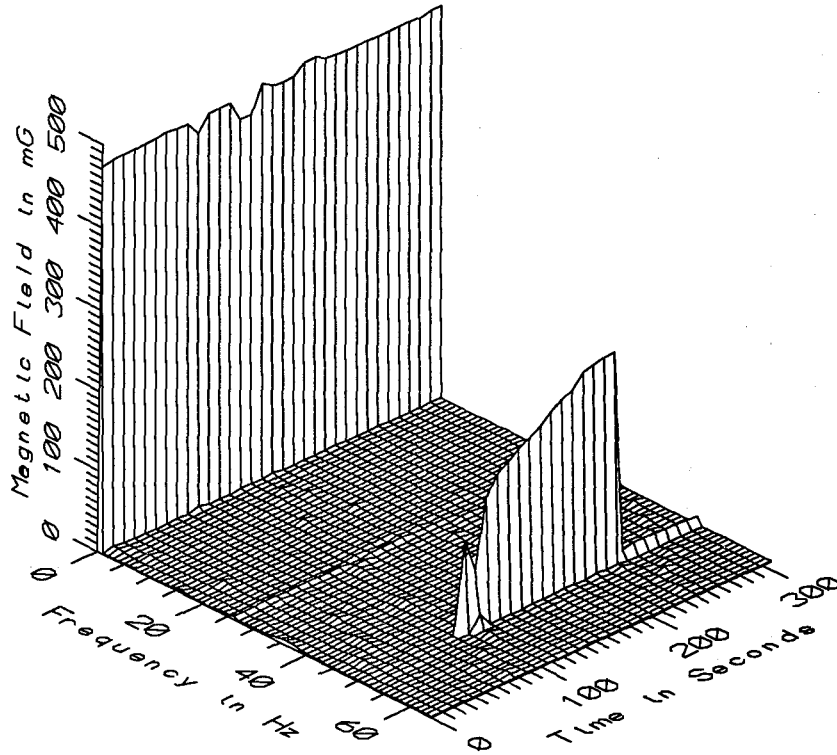
TGV029 - 10cm ABOVE OVERPASS BASE, ABOVE PARIS BOUND LINE. 120km MARKER



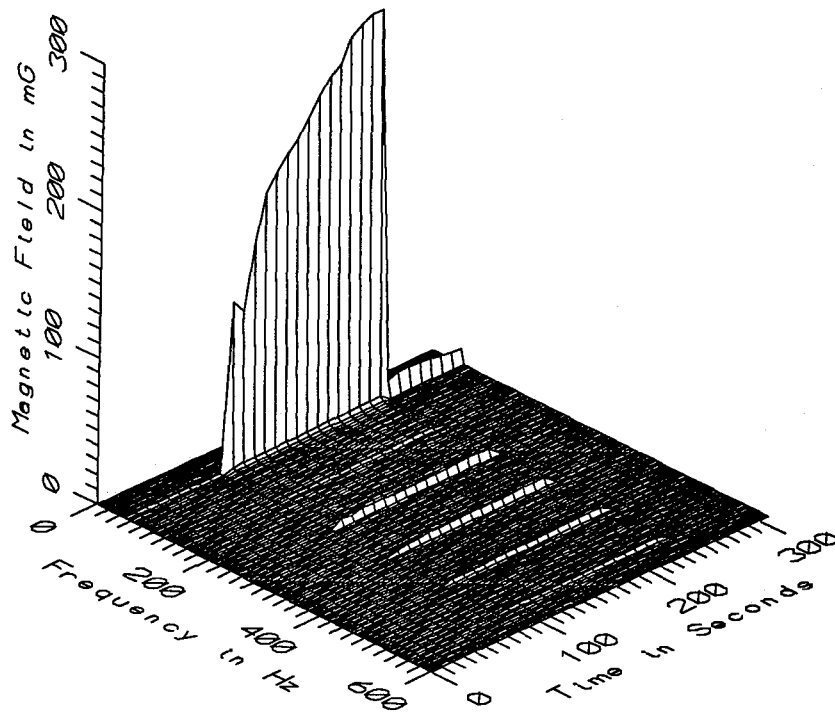
TGV029 - 60cm ABOVE OVERPASS BASE, ABOVE PARIS BOUND LINE. 120k m MARKER



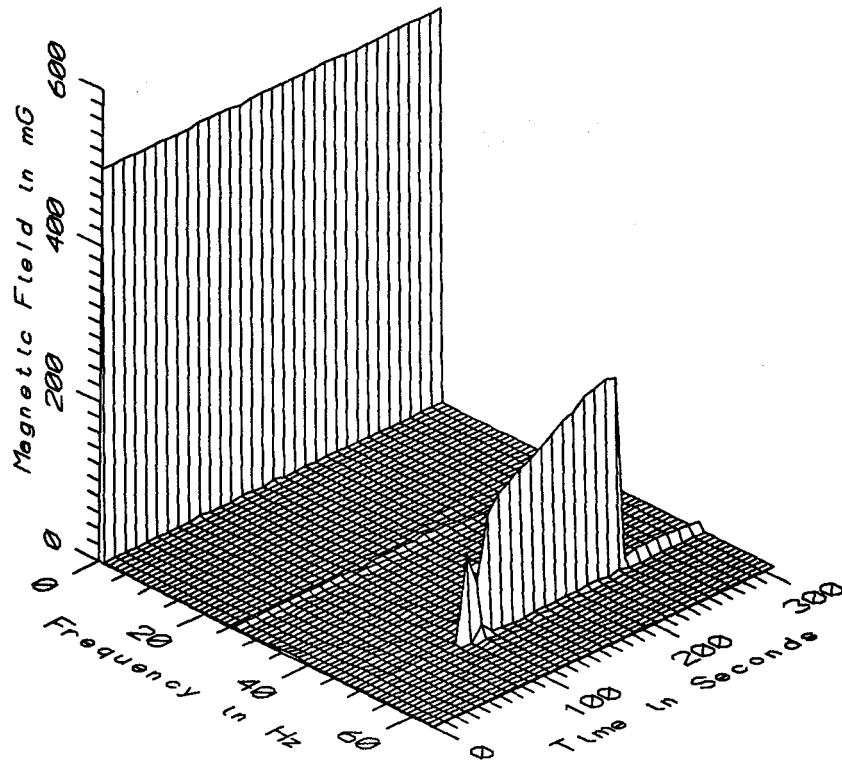
TGV029 - 60cm ABOVE OVERPASS BASE, ABOVE PARIS BOUND LINE. 120k m MARKER



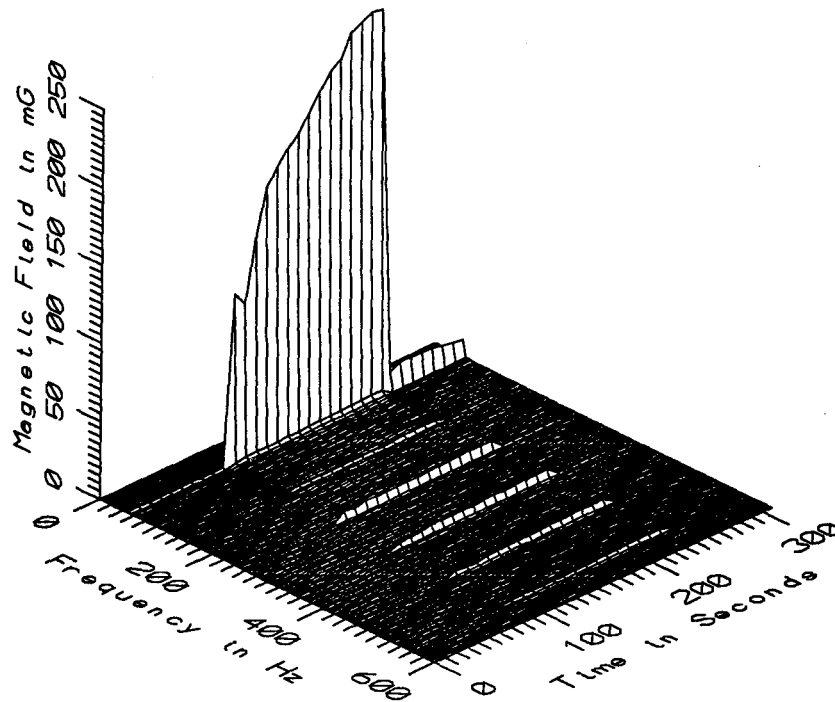
TGV029 - 110cm ABOVE OVERPASS BASE, ABOVE PARIS BOUND LINE. 120k m MARKER



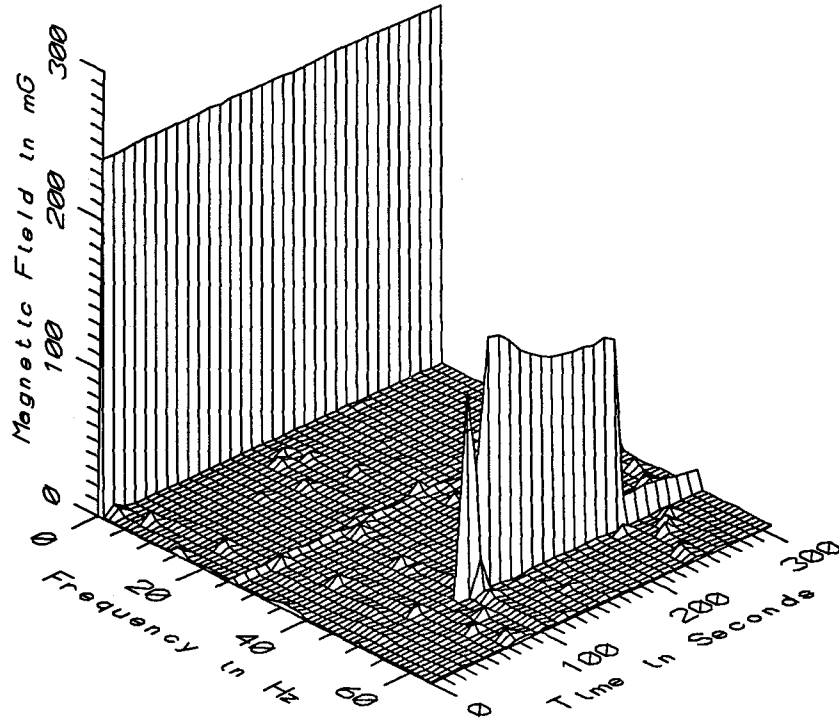
TGV029 - 110cm ABOVE OVERPASS BASE, ABOVE PARIS BOUND LINE. 120k m MARKER



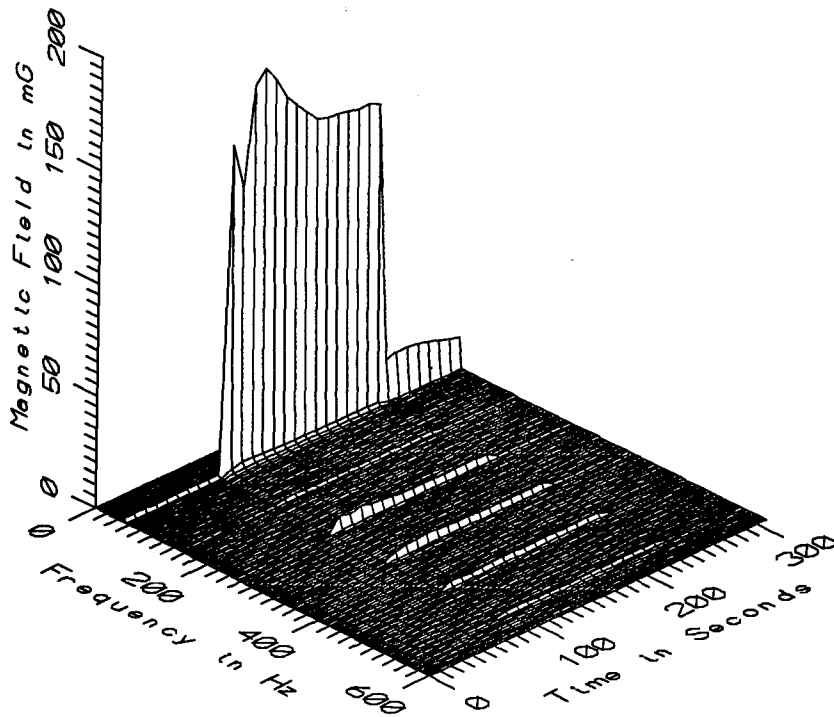
TGV029 - 160cm ABOVE OVERPASS BASE, ABOVE PARIS BOUND LINE. 120km MARKER



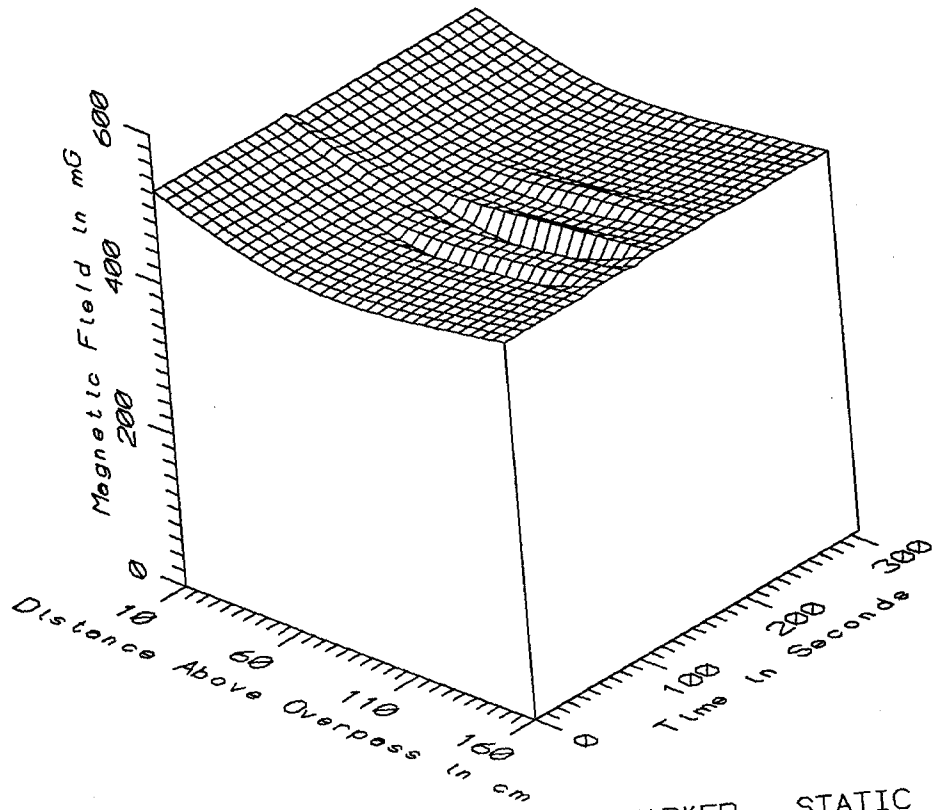
TGV029 - 160cm ABOVE OVERPASS BASE, ABOVE PARIS BOUND LINE. 120km MARKER



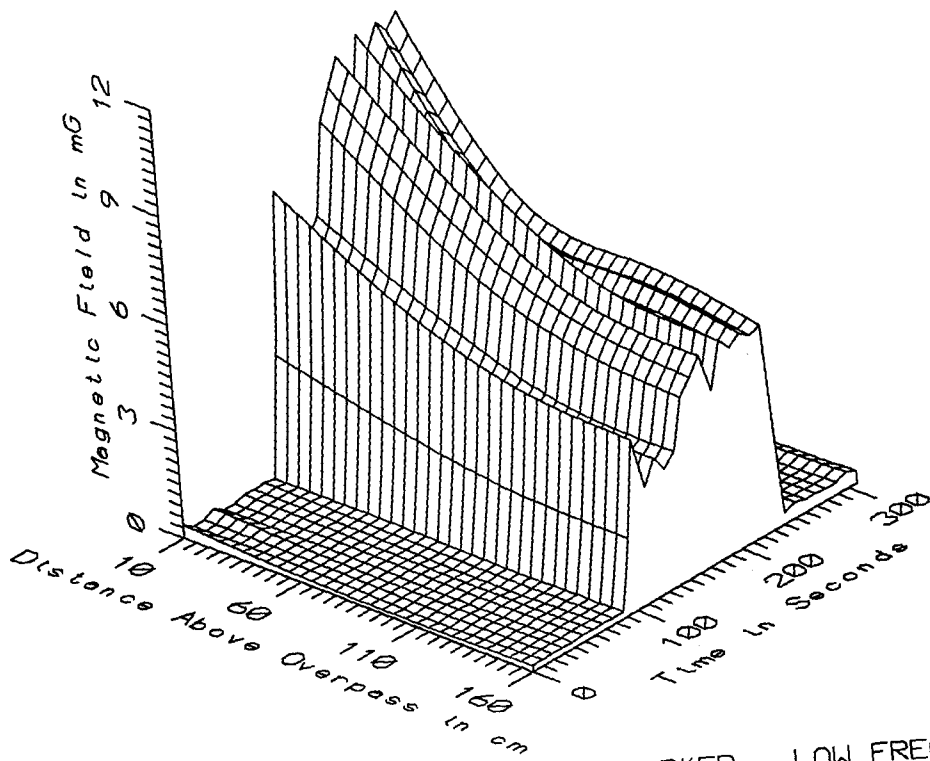
TGV029 - REFERENCE PROBE - AT BASE OF OVERPASS ABOVE PARIS OUTBOUND LINE



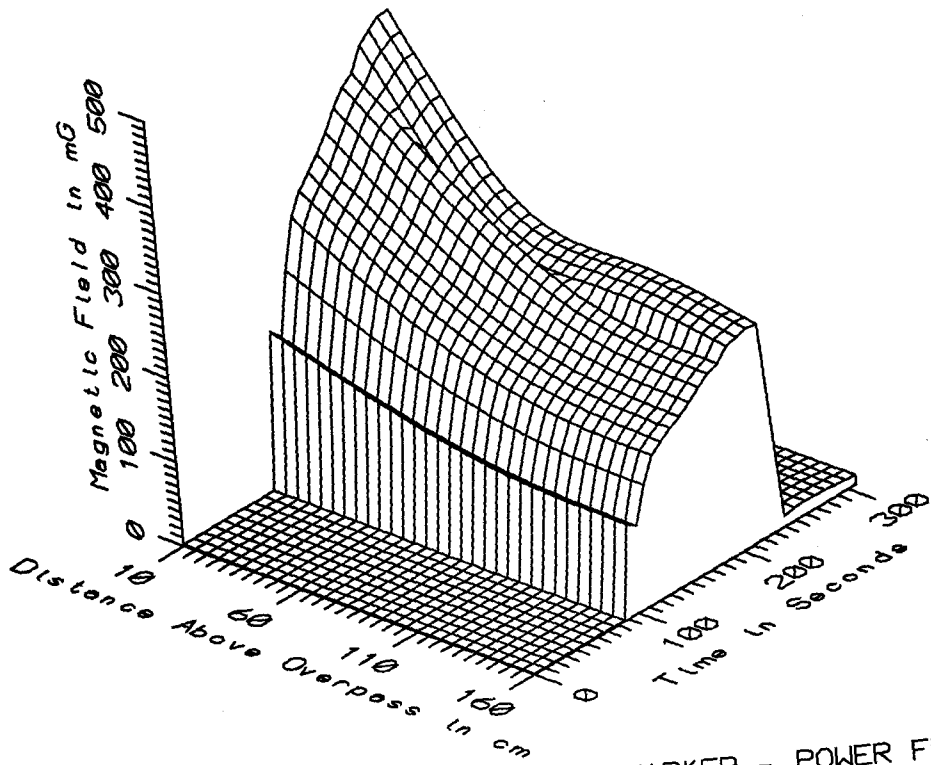
TGV029 - REFERENCE PROBE - AT BASE OF OVERPASS ABOVE PARIS OUTBOUND LINE



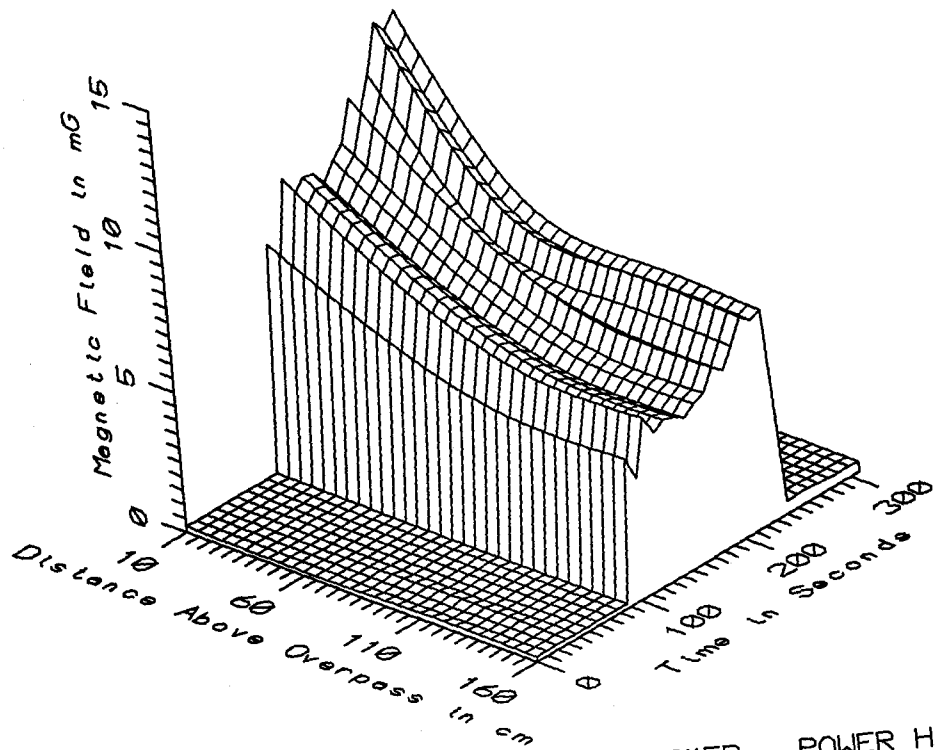
TGV029 - ABOVE PARIS BOUND LINE, 120k m MARKER - STATIC



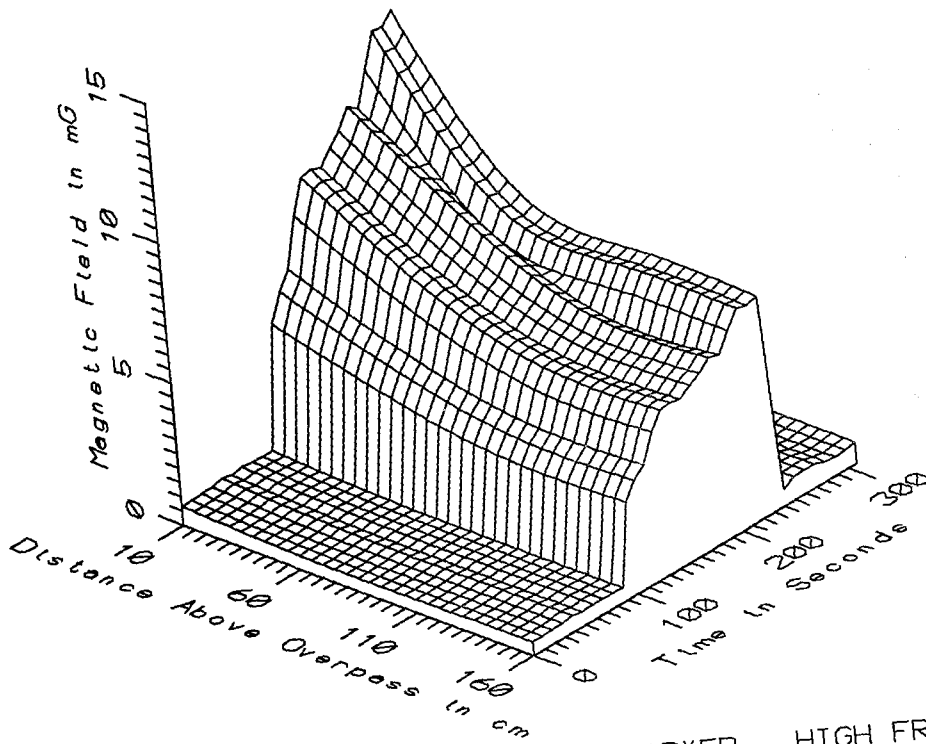
TGV029 - ABOVE PARIS BOUND LINE, 120k m MARKER - LOW FREQ, 5-45Hz



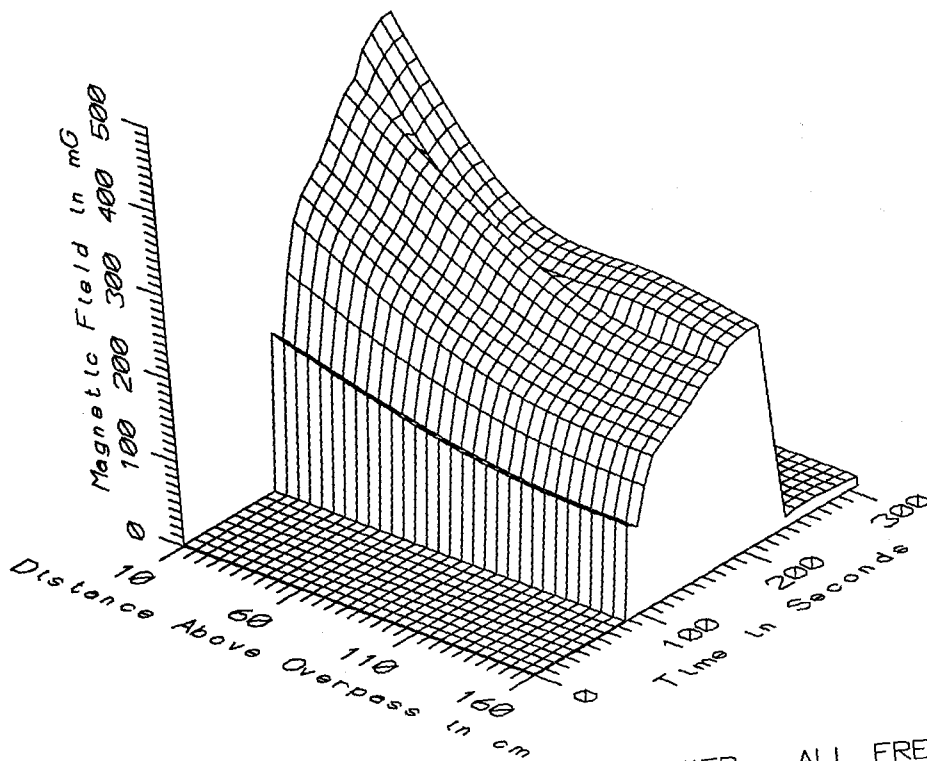
TGV029 - ABOVE PARIS BOUND LINE, 120k m MARKER - POWER FREQ, 50-60Hz



TGV029 - ABOVE PARIS BOUND LINE, 120k m MARKER - POWER HARM, 65-300Hz



TGV029 - ABOVE PARIS BOUND LINE, 120k m MARKER - HIGH FREQ, 305-2560Hz



TGV029 - ABOVE PARIS BOUND LINE, 120k m MARKER - ALL FREQ, 5-2560Hz

| TGV029 - OVERPASS - ABOVE PARIS BOUND LINE | | TOTAL OF 33 SAMPLES | | | | |
|--|--------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE GROUND (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 514.32 | 524.46 | 518.84 | 3.58 | 0.69 |
| | 60 | 473.28 | 477.11 | 474.73 | 0.77 | 0.16 |
| | 110 | 451.67 | 487.83 | 476.38 | 7.90 | 1.66 |
| | 160 | 497.59 | 503.31 | 500.62 | 1.79 | 0.36 |
| 5-45Hz LOW FREQ | 10 | 0.14 | 10.83 | 4.03 | 4.41 | 109.48 |
| | 60 | 0.15 | 8.05 | 2.86 | 3.08 | 107.50 |
| | 110 | 0.08 | 6.30 | 2.38 | 2.58 | 108.11 |
| 50-60Hz PWR FREQ | 160 | 0.18 | 5.96 | 2.29 | 2.38 | 103.97 |
| | 10 | 1.30 | 466.97 | 165.39 | 186.07 | 112.51 |
| | 60 | 1.00 | 309.84 | 116.90 | 128.87 | 110.23 |
| 65-300Hz PWR HARM | 110 | 0.82 | 267.83 | 98.16 | 108.20 | 110.23 |
| | 160 | 0.84 | 249.26 | 92.49 | 101.01 | 109.21 |
| | 10 | 0.19 | 13.52 | 4.92 | 5.27 | 107.15 |
| 305-2560Hz HIGH FREQ | 60 | 0.14 | 8.36 | 3.46 | 3.62 | 104.65 |
| | 110 | 0.13 | 7.74 | 2.94 | 3.03 | 103.18 |
| | 160 | 0.18 | 7.64 | 2.91 | 2.98 | 102.48 |
| 5-2560Hz ALL FREQ | 10 | 0.65 | 13.20 | 4.85 | 4.80 | 98.92 |
| | 60 | 0.47 | 8.17 | 3.44 | 3.31 | 96.19 |
| | 110 | 0.46 | 7.69 | 2.97 | 2.81 | 94.47 |
| | 160 | 0.48 | 7.60 | 3.00 | 2.80 | 93.35 |
| 5-2560Hz ALL FREQ | 10 | 1.49 | 467.48 | 165.64 | 186.21 | 112.42 |
| | 60 | 1.14 | 310.14 | 117.08 | 128.96 | 110.15 |
| | 110 | 0.96 | 268.11 | 98.32 | 108.27 | 110.12 |
| | 160 | 1.01 | 249.54 | 92.66 | 101.08 | 109.08 |

APPENDIX AE

DATASET TGV030
UNDERPASS

Measurement Setup Code: Staff: 31 Reference: 32
 Drawing: A-8

Vehicle Status: A train set passed 159 seconds
 into the record

Measurement Date: September 9, 1992

Measurement Time: Start: 13:23:54
 End: 13:29:03

Number of Samples: 23

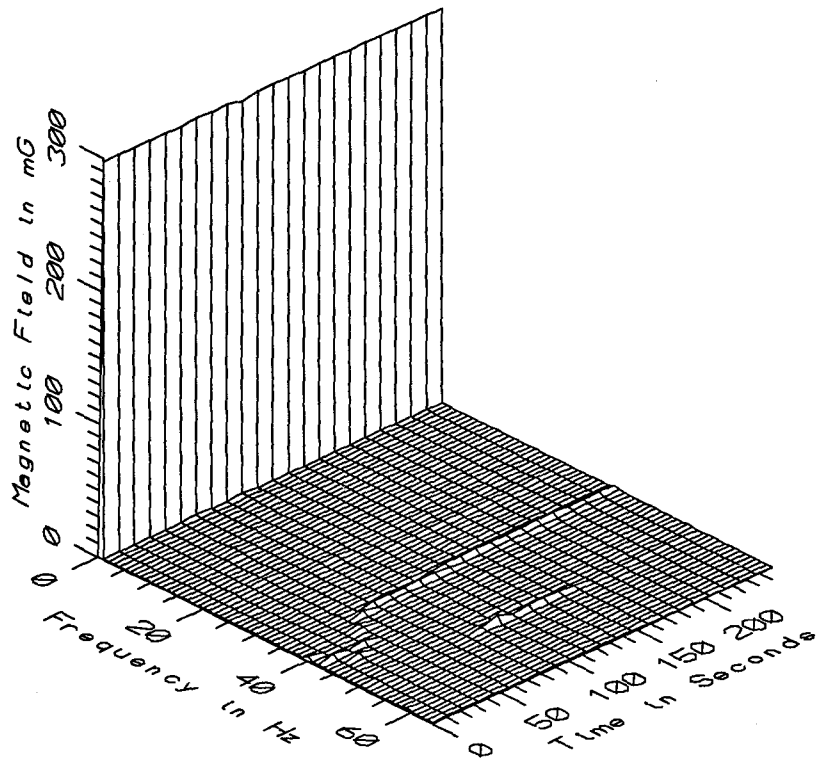
Programmed Sample Interval: 10 sec

Actual Sample Interval: 14.1 sec

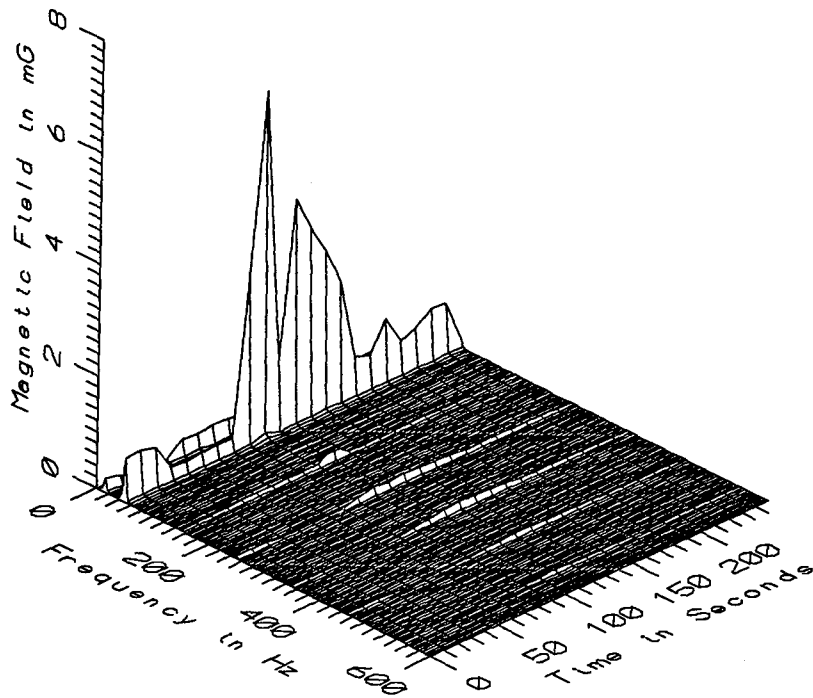
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

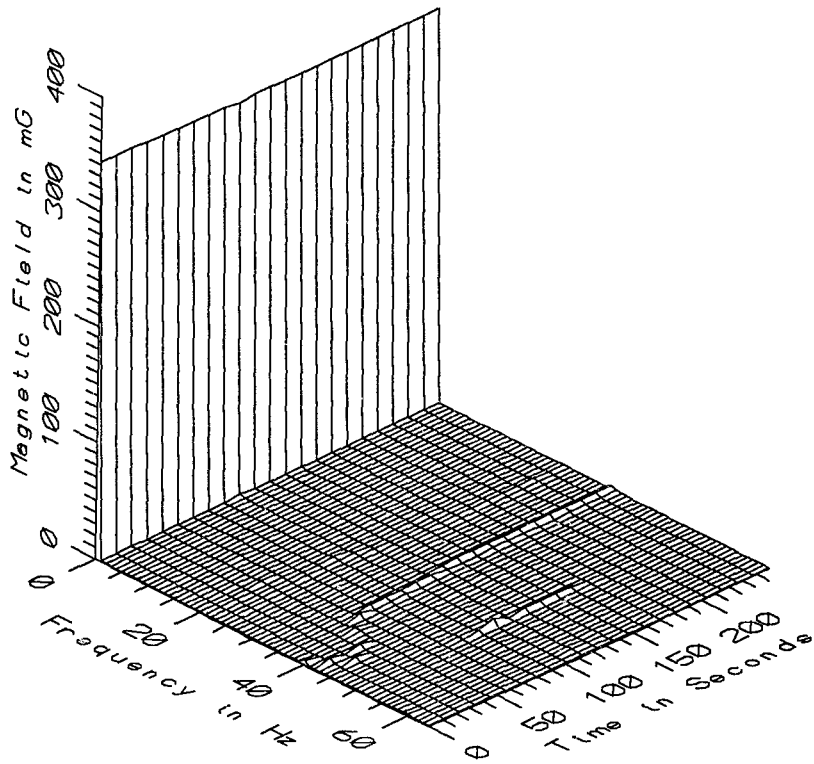
Missing or Suspect Data: None



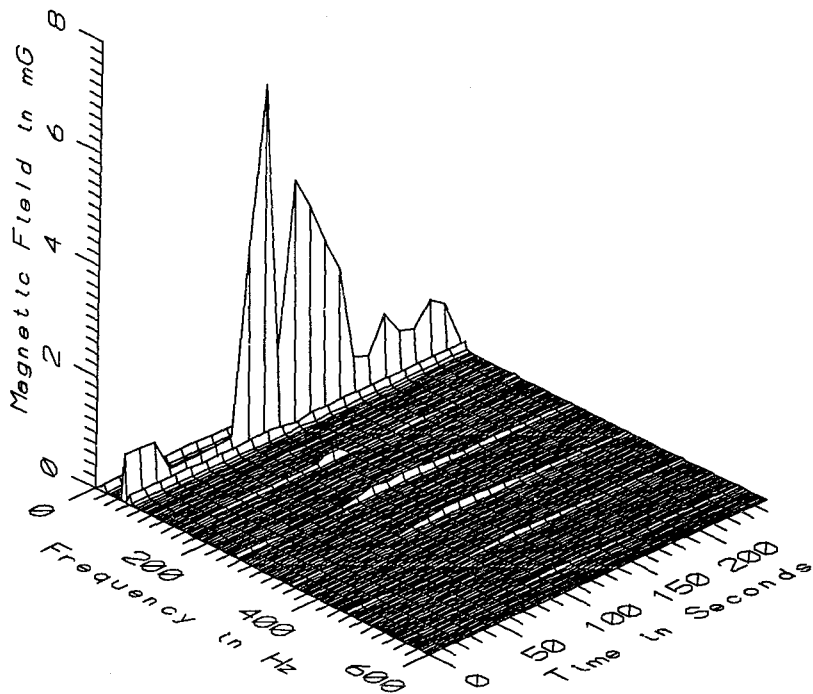
TGV030 - 10cm ABOVE GROUND UNDER TOURS BOUND LINE AT UNDERPASS



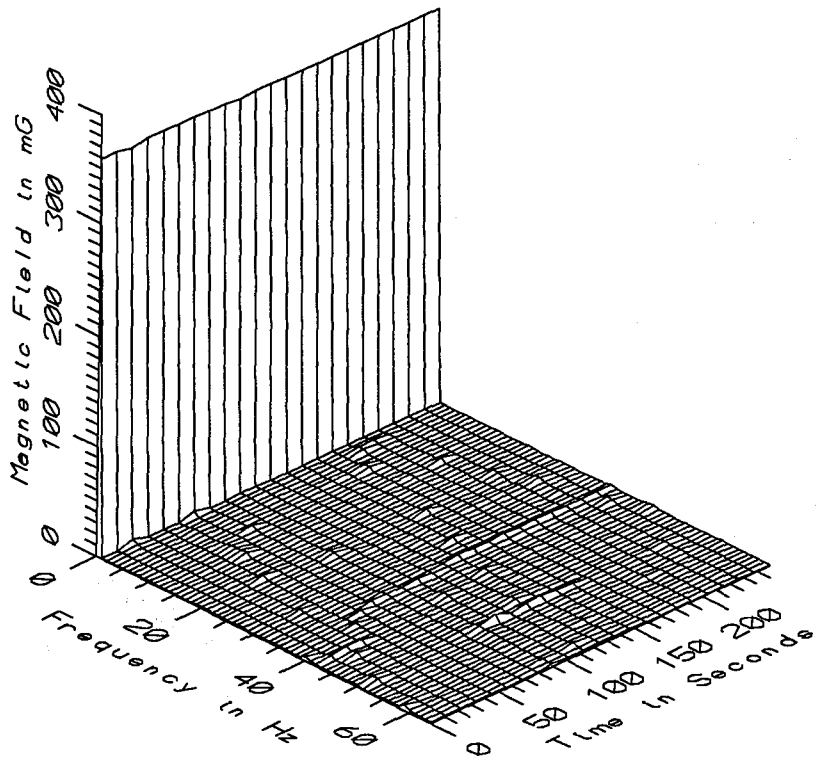
TGV030 - 10cm ABOVE GROUND UNDER TOURS BOUND LINE AT UNDERPASS



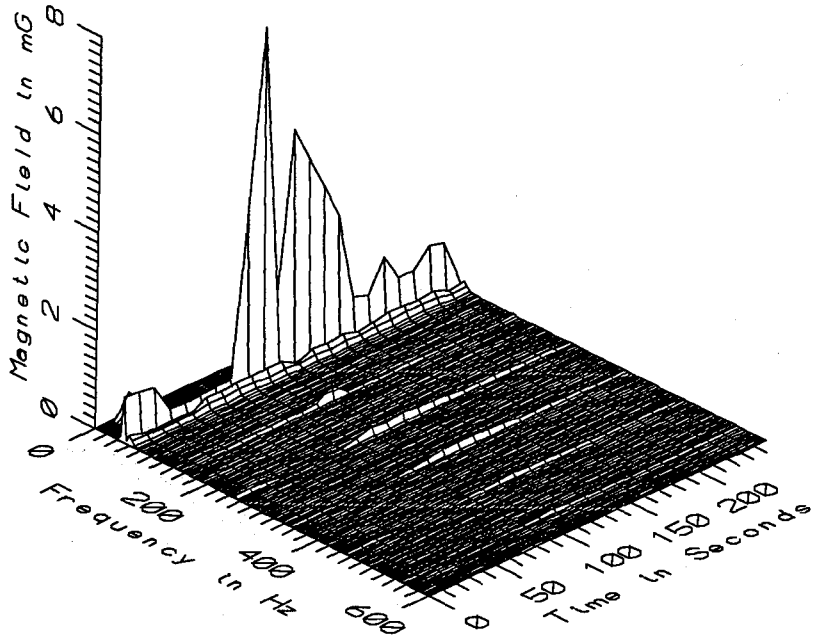
TGV030 - 60cm ABOVE GROUND UNDER TOURS BOUND LINE AT UNDERPASS



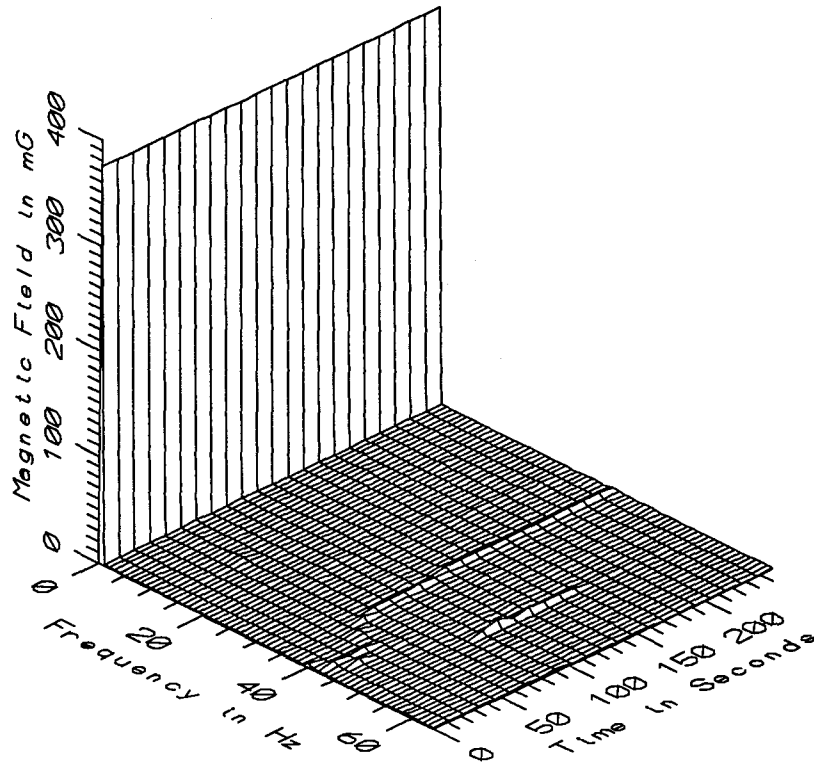
TGV030 - 60cm ABOVE GROUND UNDER TOURS BOUND LINE AT UNDERPASS



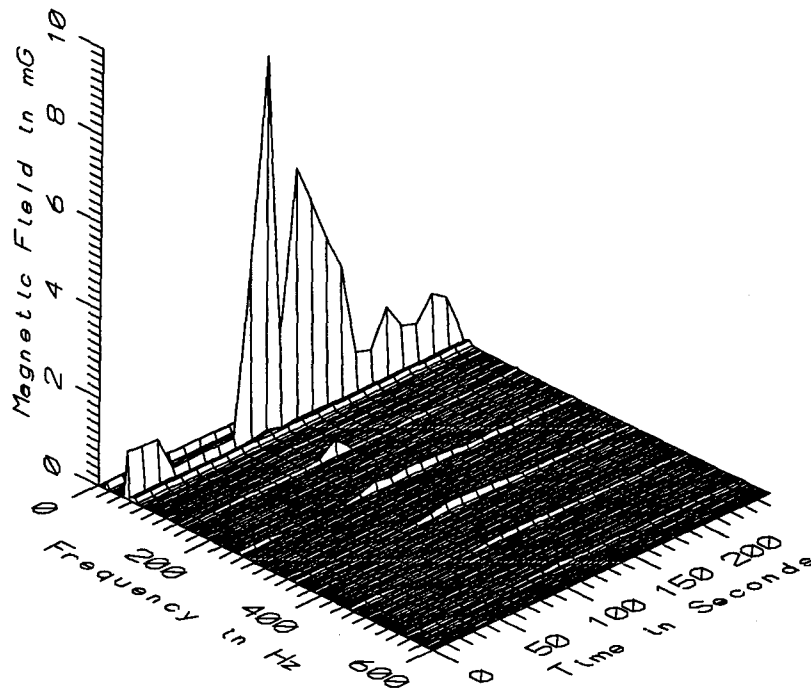
TGV030 - 110cm ABOVE GROUND UNDER TOURS BOUND LINE AT UNDERPASS



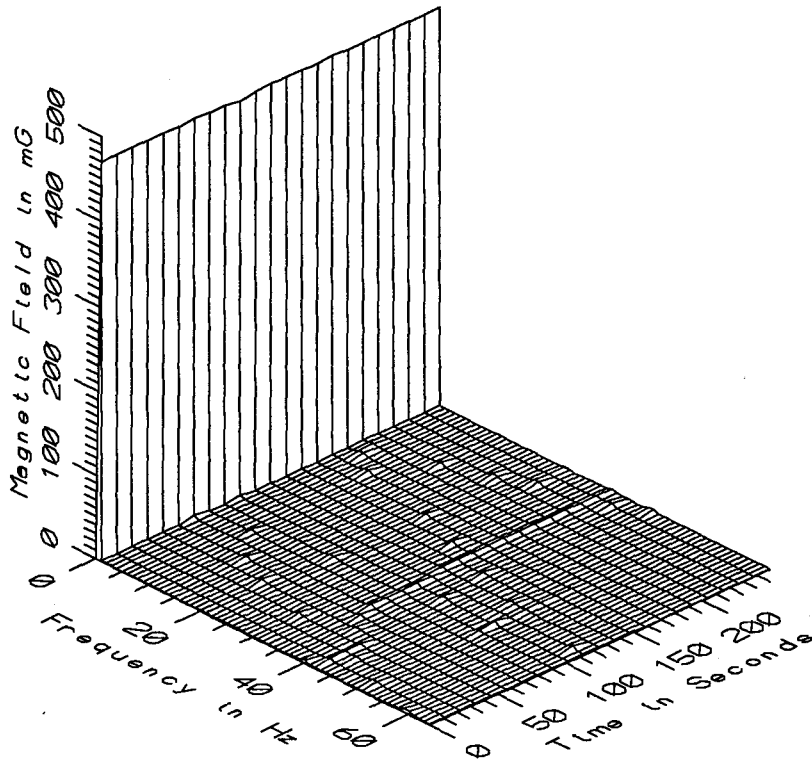
TGV030 - 110cm ABOVE GROUND UNDER TOURS BOUND LINE AT UNDERPASS



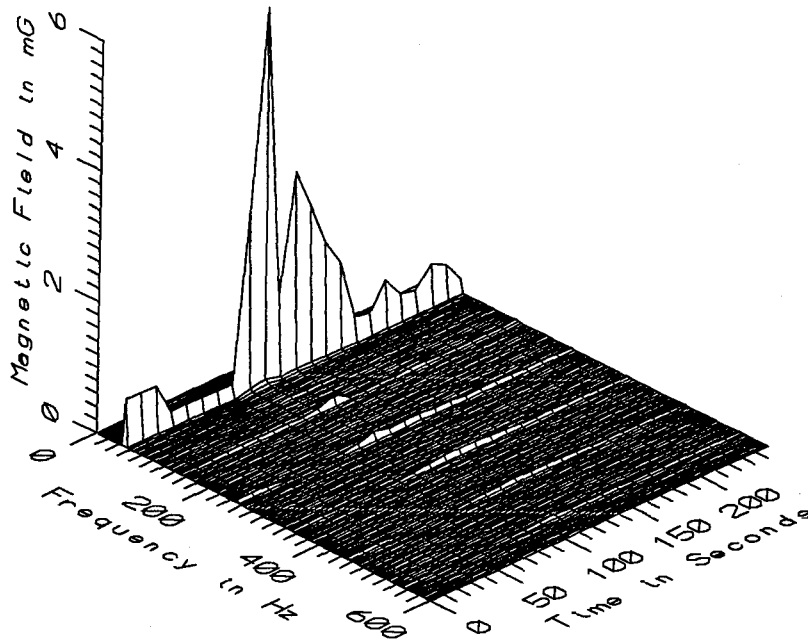
TGV030 - 160cm ABOVE GROUND UNDER TOURS BOUND LINE AT UNDERPASS



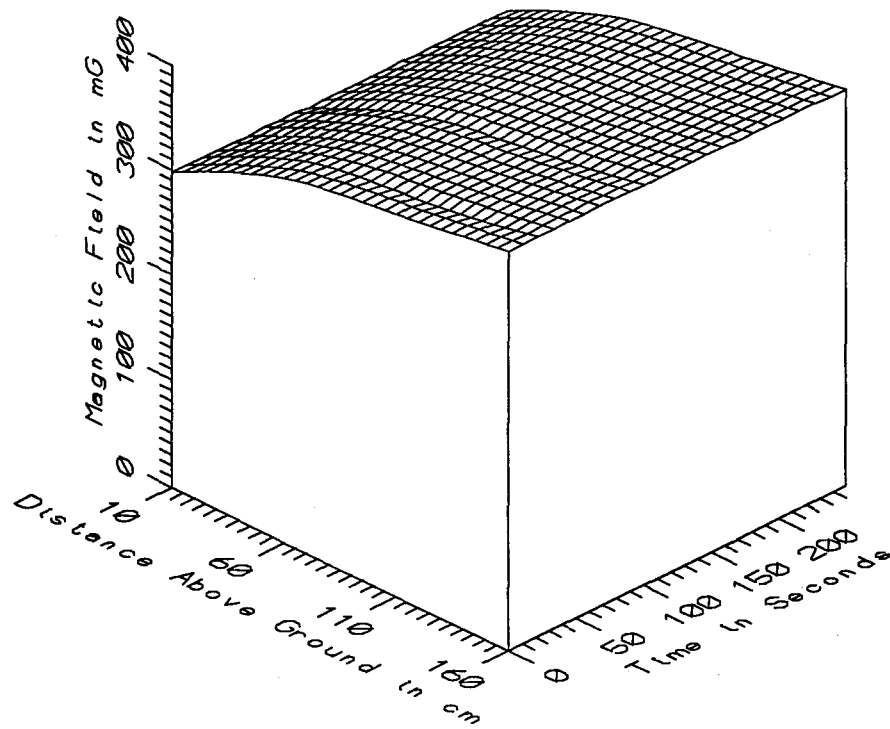
TGV030 - 160cm ABOVE GROUND UNDER TOURS BOUND LINE AT UNDERPASS



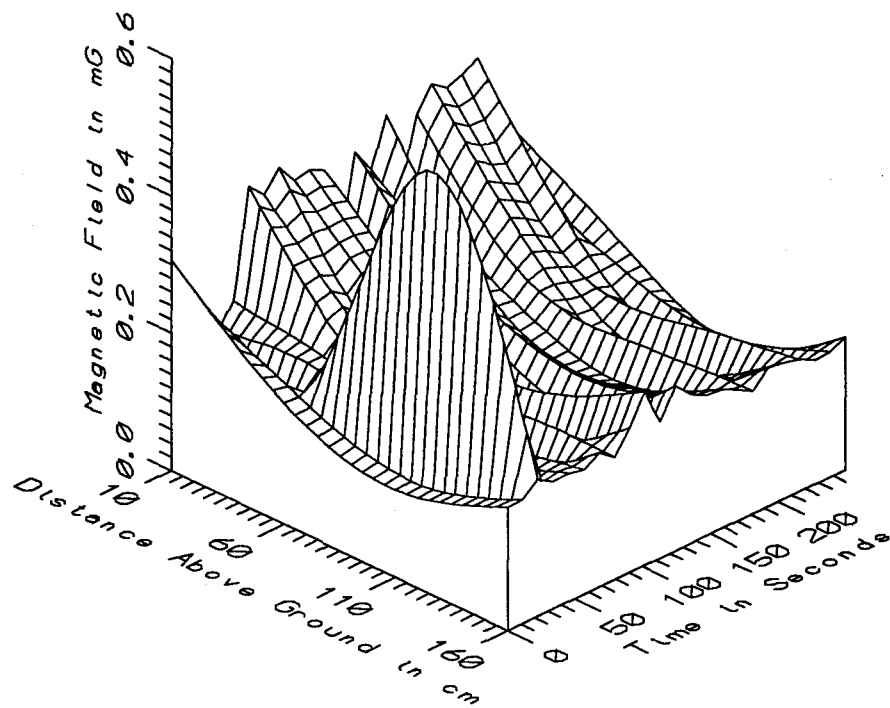
TGV030 - REFERENCE PROBE - ON GROUND 14.5ft FROM STAFF AT UNDERPASS



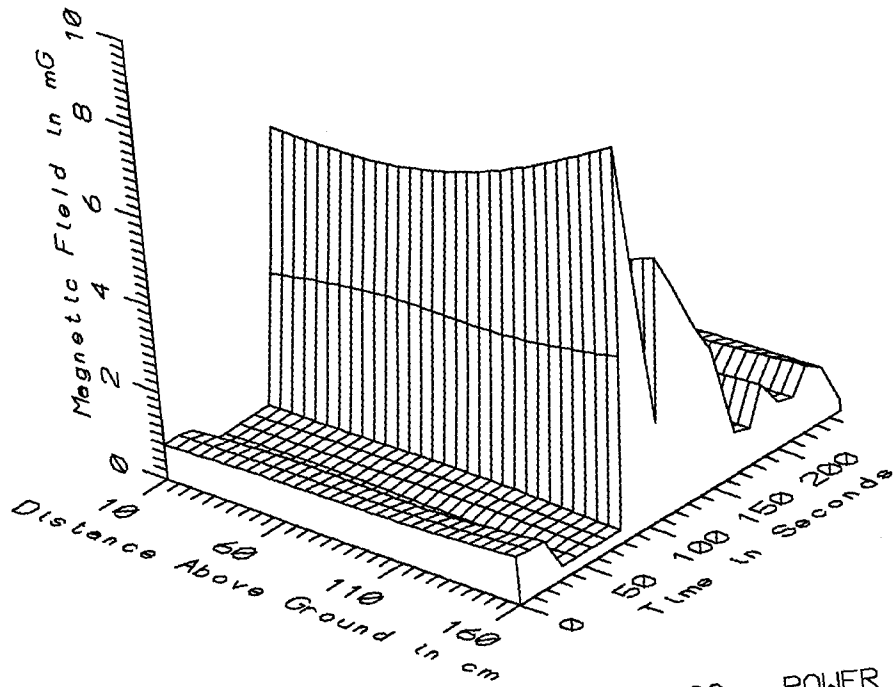
TGV030 - REFERENCE PROBE - ON GROUND 14.5ft FROM STAFF AT UNDERPASS



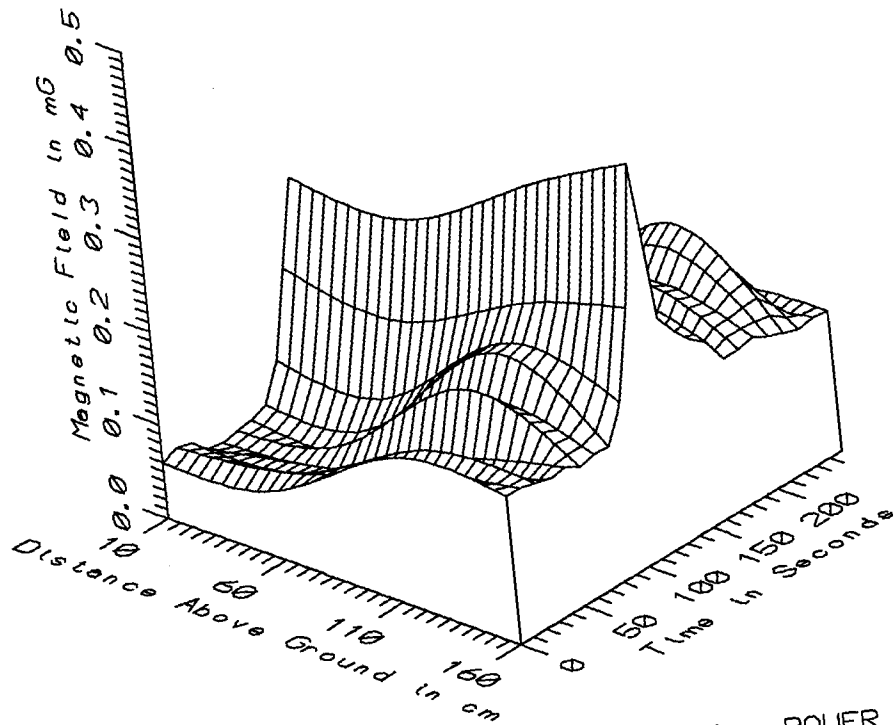
TGV030 - UNDER TOURS BOUND LINE AT UNDERPASS - STATIC



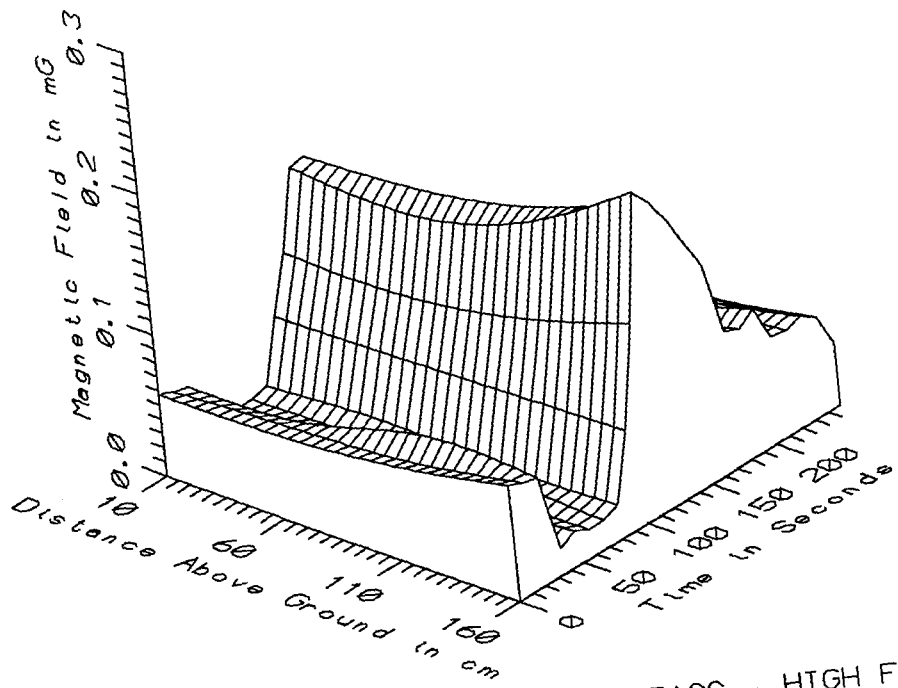
TGV030 - UNDER TOURS BOUND LINE AT UNDERPASS - LOW FREQ, 5-45Hz



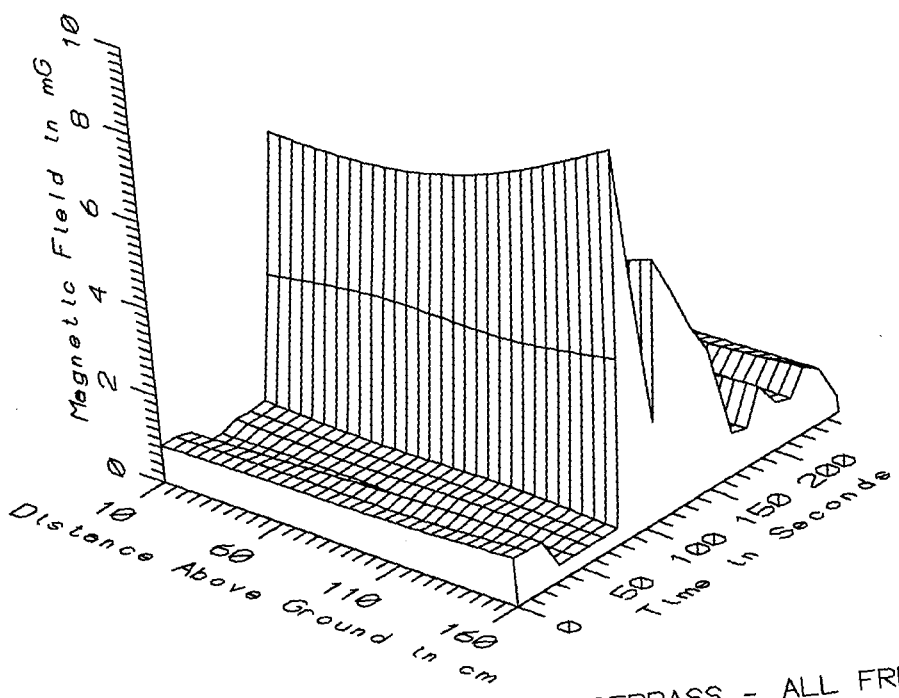
TGV030 - UNDER TOURS BOUND LINE AT UNDERPASS - POWER FREQ, 50-60Hz



TGV030 - UNDER TOURS BOUND LINE AT UNDERPASS - POWER HARM, 65-300Hz



TGV030 - UNDER TOURS BOUND LINE AT UNDERPASS - HIGH FREQ, 305-2560Hz



TGV030 - UNDER TOURS BOUND LINE AT UNDERPASS - ALL FREQ, 5-2560Hz

| TGV030 - UNDERPASS - UNDERNEATH PARIS BOUND LINE | | TOTAL OF 23 SAMPLES | | | | |
|--|--------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE GROUND (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 295.28 | 298.45 | 297.43 | 0.57 | 0.19 |
| | 60 | 338.98 | 342.64 | 341.21 | 0.78 | 0.23 |
| | 110 | 355.99 | 359.75 | 358.91 | 0.83 | 0.23 |
| | 160 | 374.55 | 376.36 | 375.56 | 0.53 | 0.14 |
| 5-45Hz LOW FREQ | 10 | 0.17 | 0.39 | 0.31 | 0.07 | 21.47 |
| | 60 | 0.17 | 0.21 | 0.18 | 0.01 | 5.67 |
| | 110 | 0.07 | 0.57 | 0.15 | 0.10 | 64.53 |
| | 160 | 0.18 | 0.25 | 0.20 | 0.02 | 9.41 |
| 50-60Hz PWR FREQ | 10 | 0.18 | 6.20 | 1.42 | 1.53 | 107.76 |
| | 60 | 0.25 | 6.36 | 1.55 | 1.62 | 104.29 |
| | 110 | 0.23 | 7.19 | 1.68 | 1.79 | 106.10 |
| | 160 | 0.25 | 8.68 | 1.96 | 2.15 | 109.56 |
| 65-300Hz PWR HARM | 10 | 0.04 | 0.27 | 0.09 | 0.05 | 61.59 |
| | 60 | 0.06 | 0.27 | 0.10 | 0.05 | 47.03 |
| | 110 | 0.10 | 0.35 | 0.18 | 0.05 | 28.55 |
| | 160 | 0.14 | 0.42 | 0.18 | 0.06 | 33.84 |
| 305-2560Hz HIGH FREQ | 10 | 0.02 | 0.16 | 0.07 | 0.04 | 66.16 |
| | 60 | 0.02 | 0.16 | 0.07 | 0.04 | 62.00 |
| | 110 | 0.02 | 0.18 | 0.08 | 0.05 | 63.88 |
| | 160 | 0.02 | 0.23 | 0.09 | 0.06 | 67.16 |
| 5-2560Hz ALL FREQ | 10 | 0.31 | 6.22 | 1.49 | 1.50 | 100.19 |
| | 60 | 0.32 | 6.37 | 1.58 | 1.60 | 101.43 |
| | 110 | 0.30 | 7.20 | 1.72 | 1.77 | 102.58 |
| | 160 | 0.35 | 8.69 | 2.00 | 2.13 | 106.22 |

APPENDIX AF

DATASET TGV031
WAYSIDE NEAR 104 km MARKER

Measurement Setup Code: Staff: 33 Reference: 34
 Drawing: A-9

Vehicle Status: Double train set from Paris 139
 seconds into record, single train
 set from Paris 510 seconds into
 record, single train set to Paris
 858 seconds into record

Measurement Date: September 9, 1992

Measurement Time: Start: 14:15:04
 End: 14:31:52

Number of Samples: 83

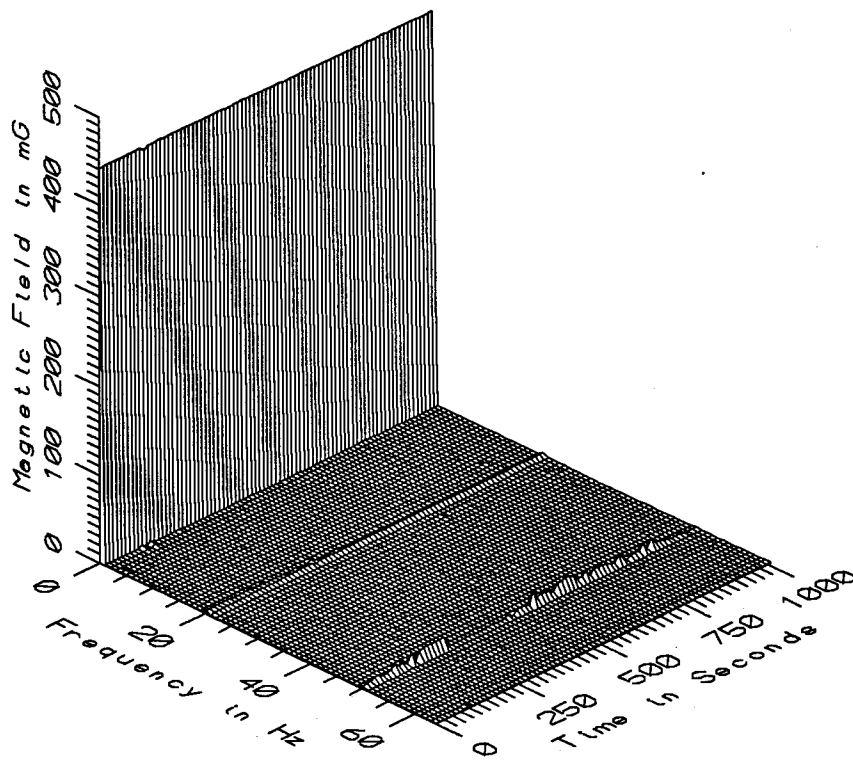
Programmed Sample Interval: 10 sec

Actual Sample Interval: 12.3 sec

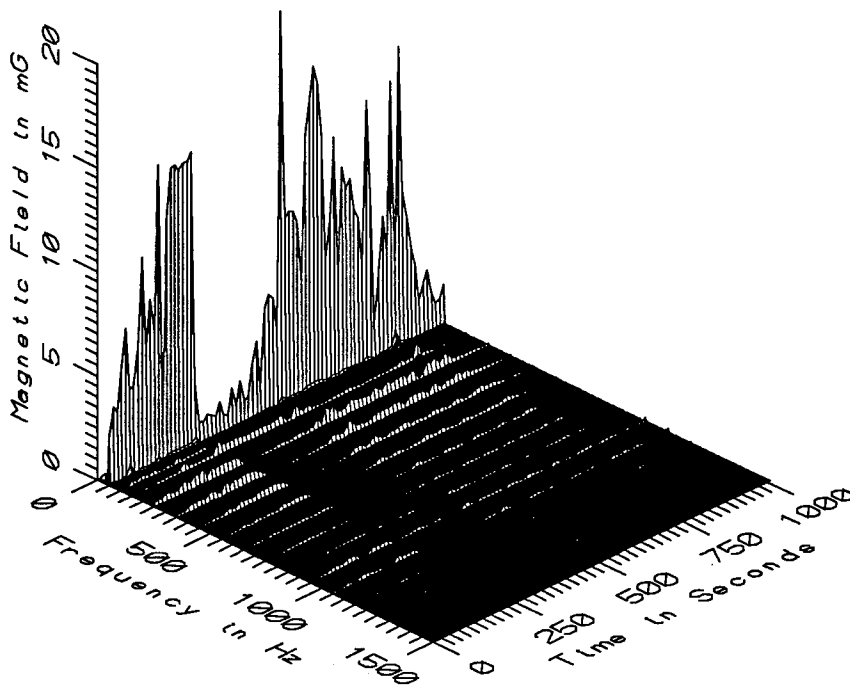
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

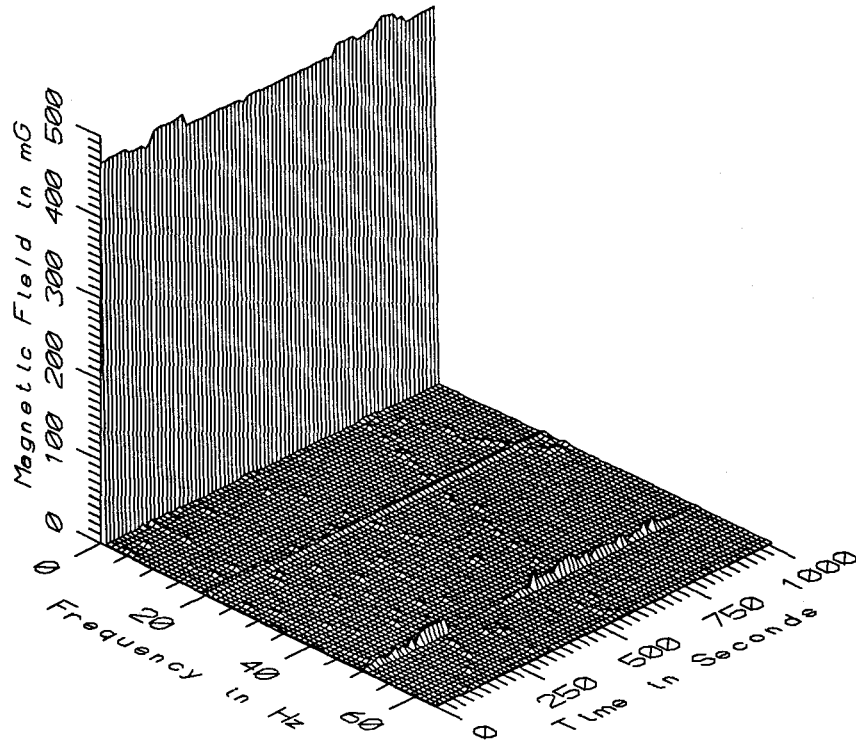
Missing or Suspect Data: 60 cm sensor malfunctioned during
 the record. The reference probe
 was not able to auto-range during
 the first few samples



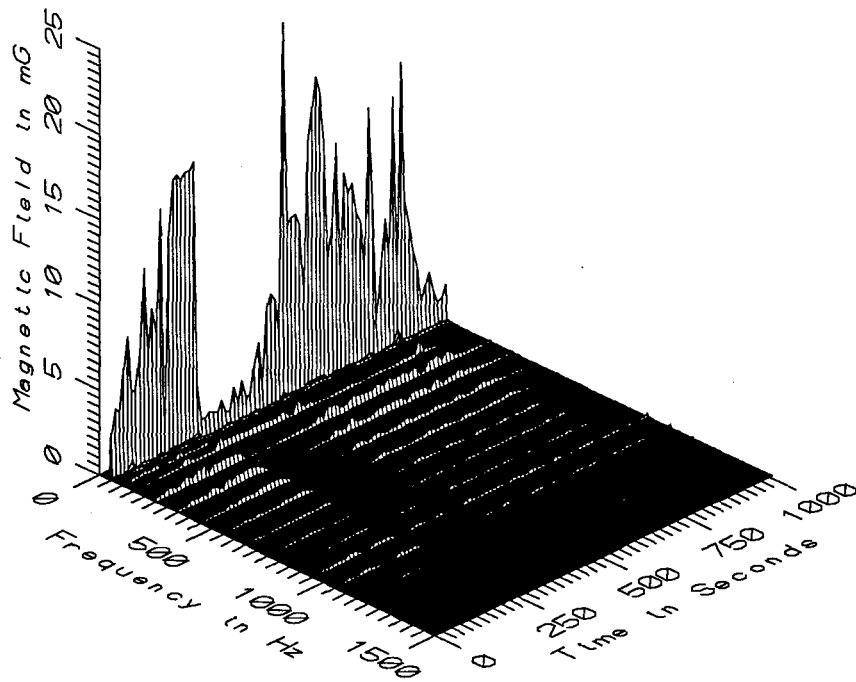
TGV031 - 10cm ABOVE GROUND 7.5m FROM PARIS BOUND LINE AT WAYSIDE



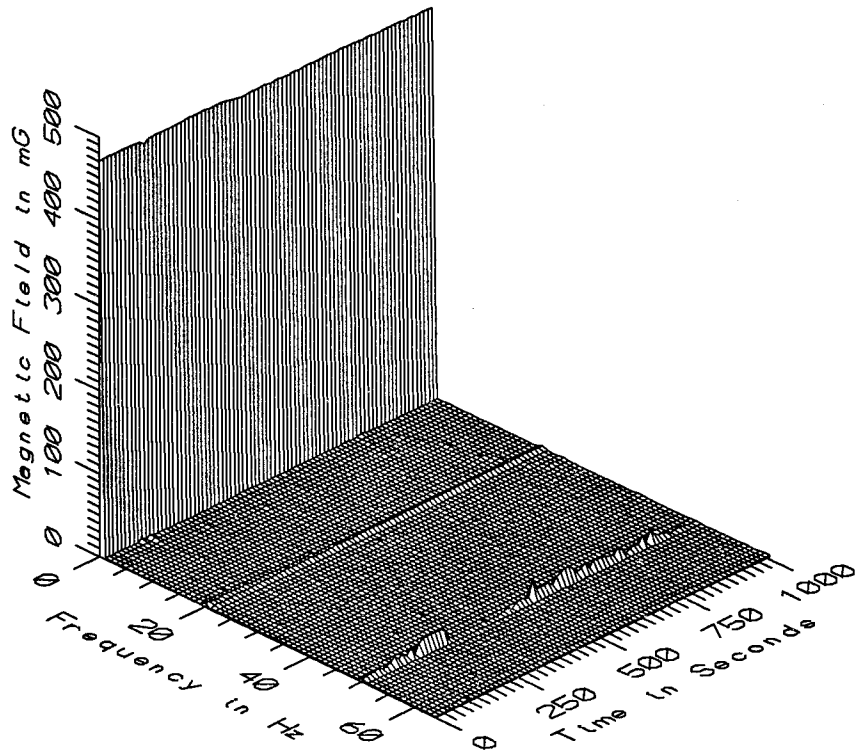
TGV031 - 10cm ABOVE GROUND 7.5m FROM PARIS BOUND LINE AT WAYSIDE



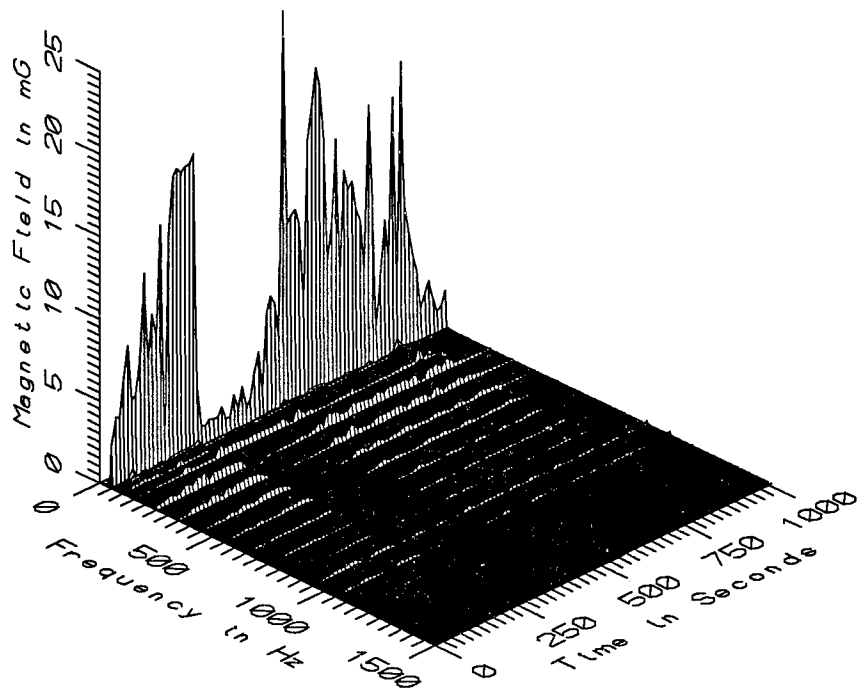
TGV031 - 110cm ABOVE GROUND 7.5m FROM PARIS BOUND LINE AT WAYSIDE



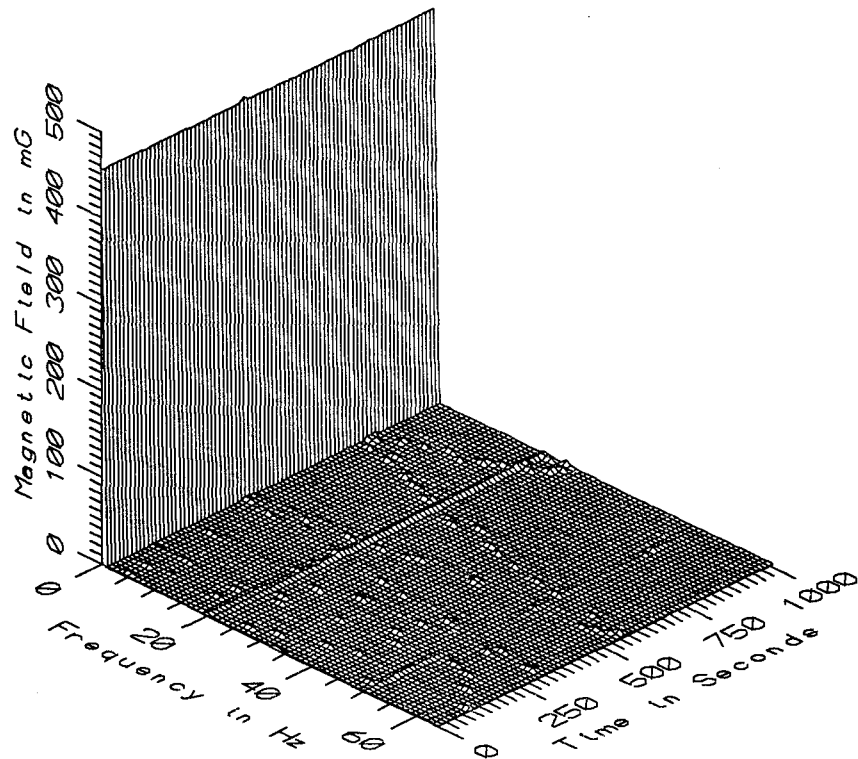
TGV031 - 110cm ABOVE GROUND 7.5m FROM PARIS BOUND LINE AT WAYSIDE



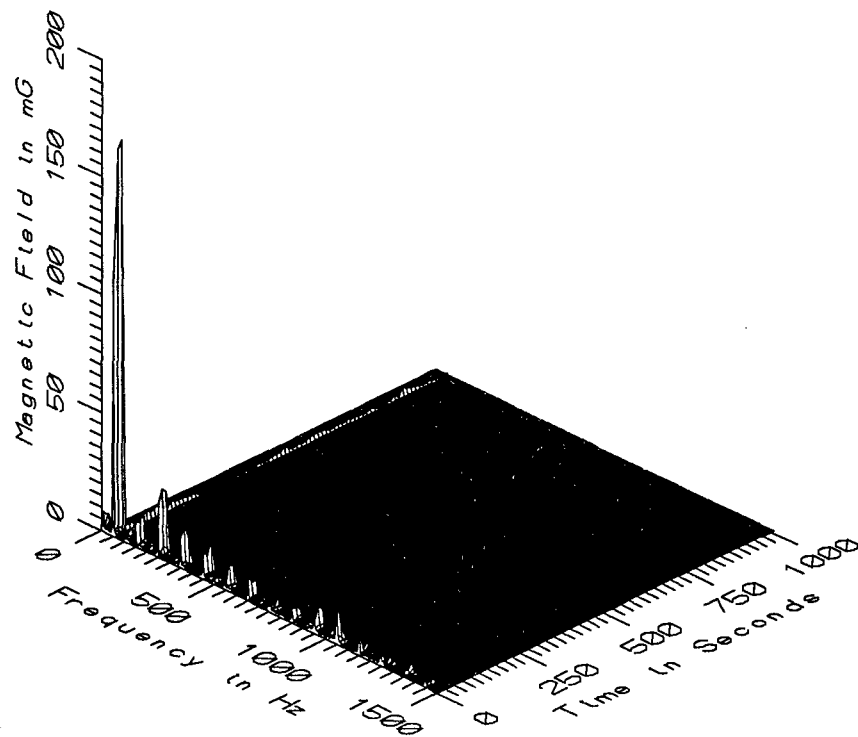
TGV031 - 160cm ABOVE GROUND 7.5m FROM PARIS BOUND LINE AT WAYSIDE



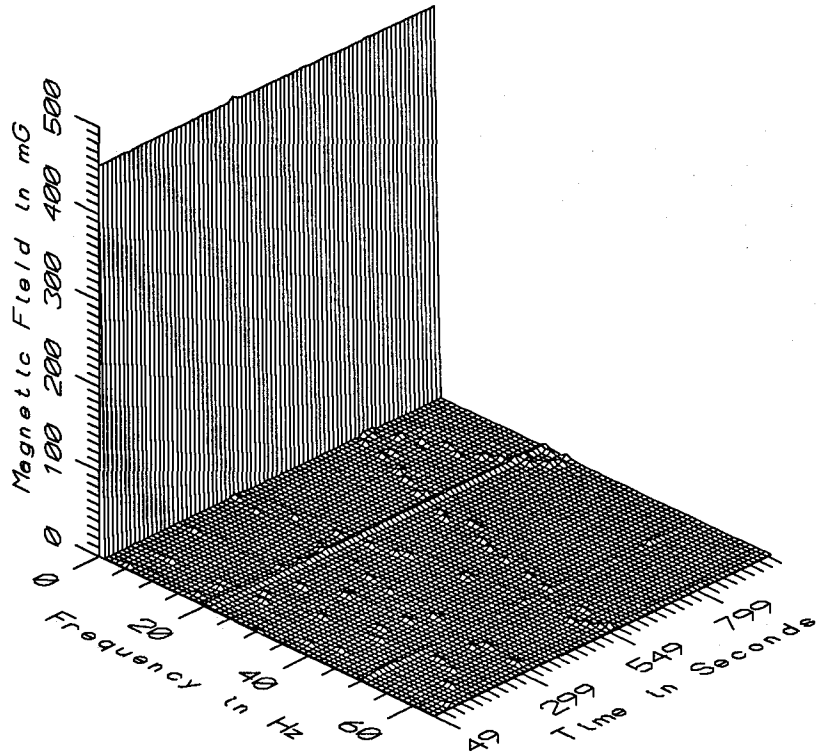
TGV031 - 160cm ABOVE GROUND 7.5m FROM PARIS BOUND LINE AT WAYSIDE



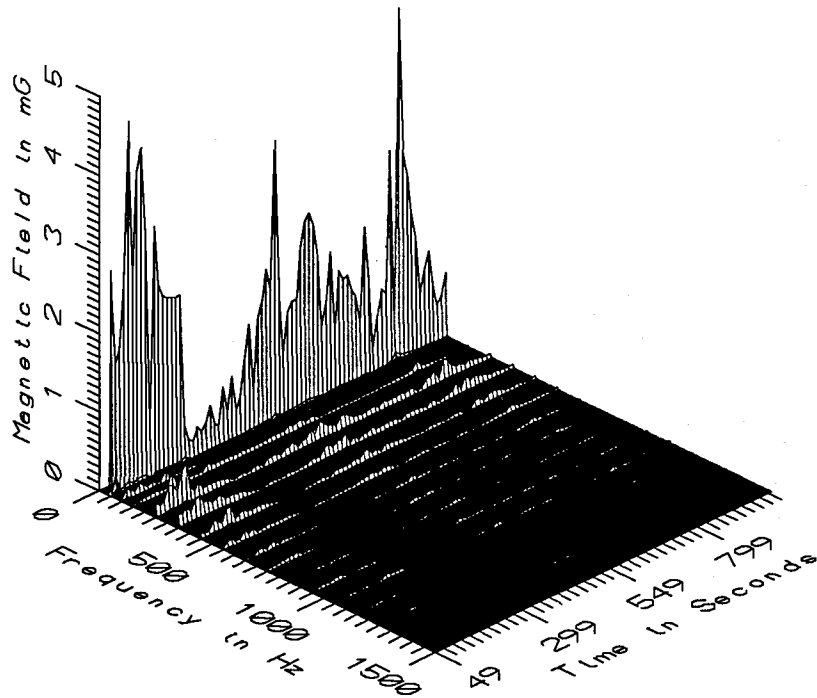
TGV031 - REFERENCE PROBE - 15m BEHIND STAFF AT WAYSIDE



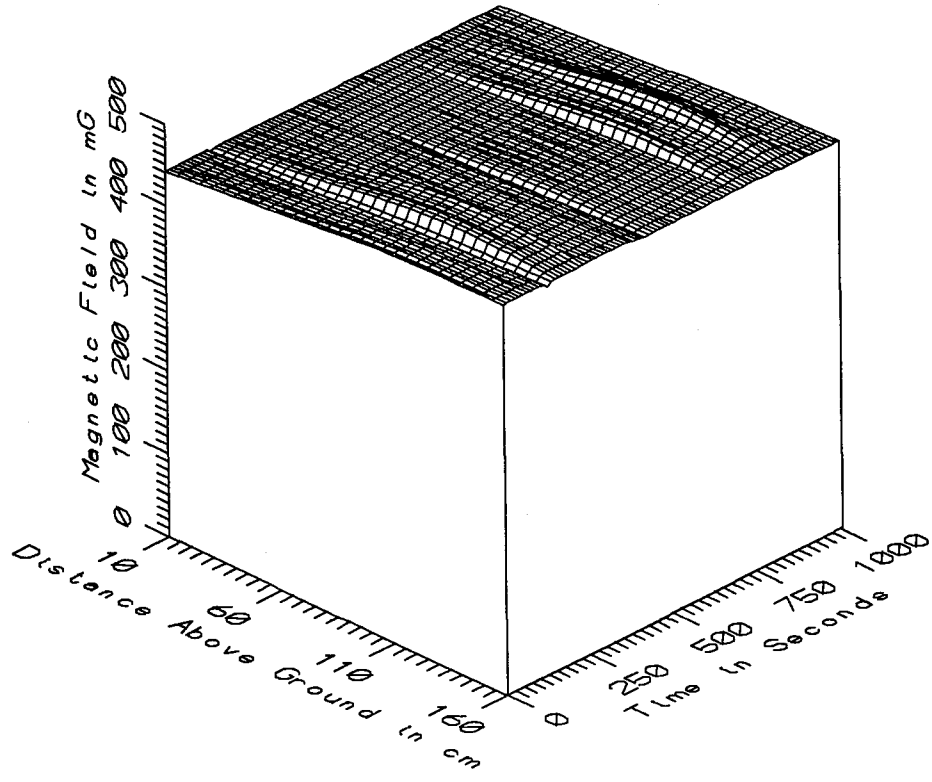
TGV031 - REFERENCE PROBE - 15m BEHIND STAFF AT WAYSIDE



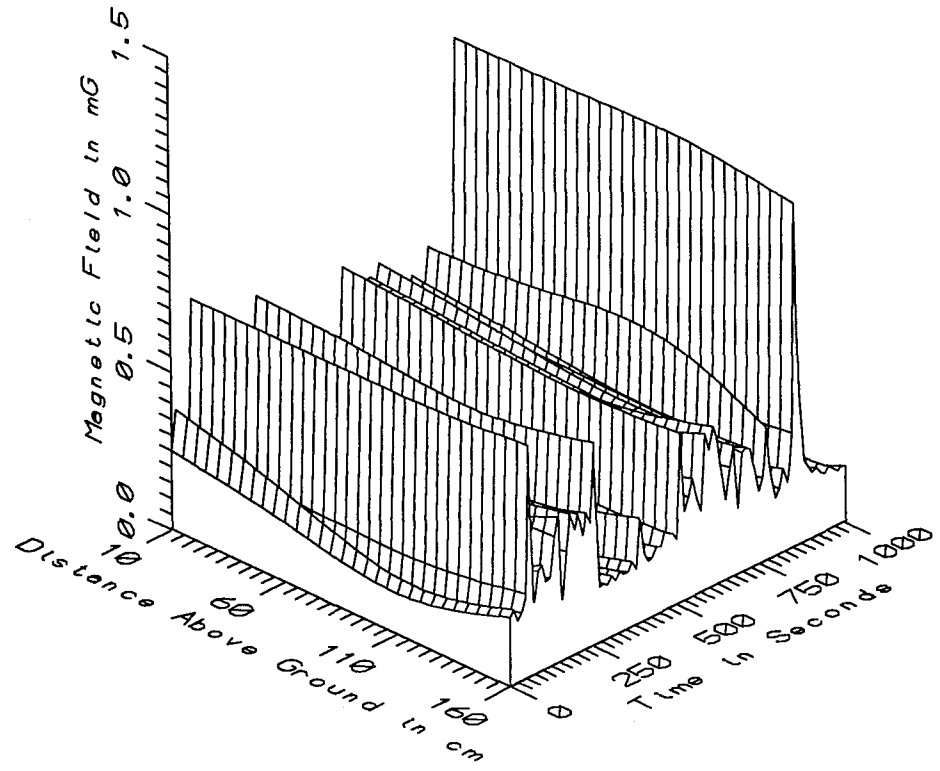
TGV031 - REFERENCE PROBE - 15m BEHIND STAFF AT WAYSIDE



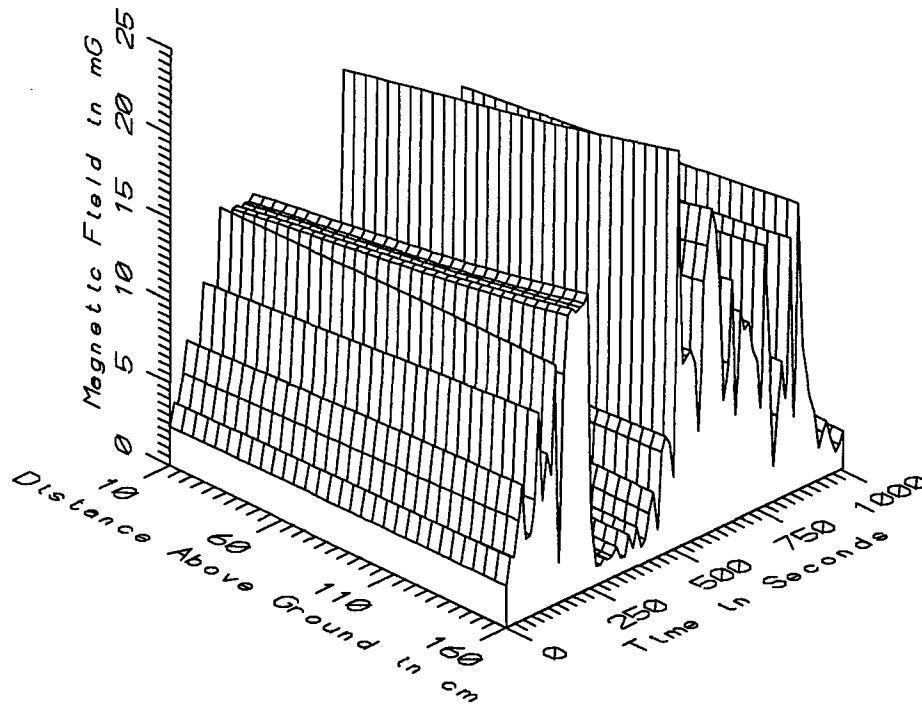
TGV031 - REFERENCE PROBE - 15m BEHIND STAFF AT WAYSIDE



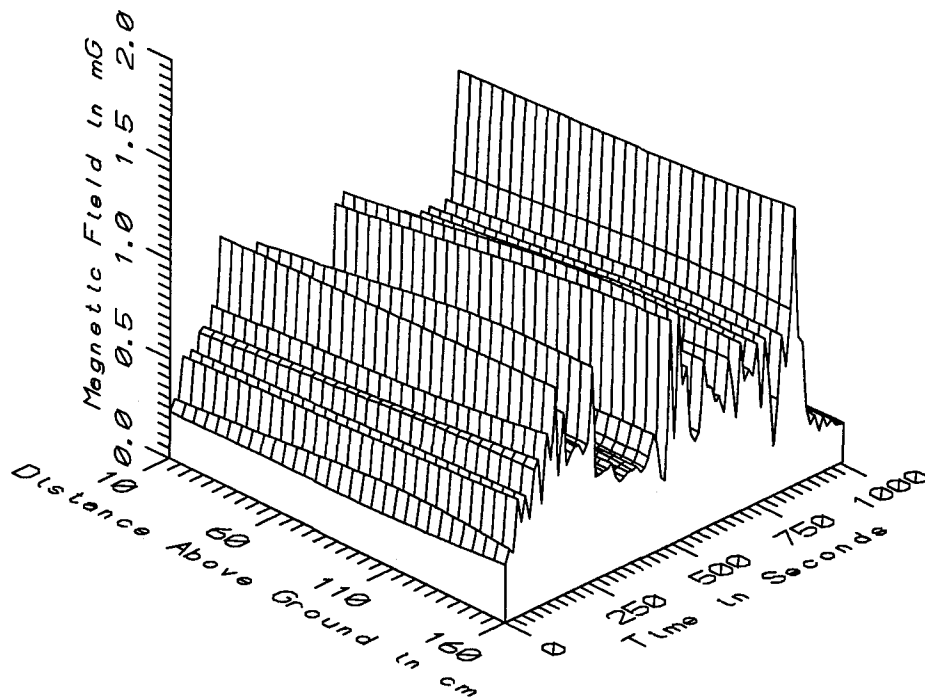
TGV031 - 7.5m FROM PARIS BOUND LINE AT WAYSIDE - STATIC



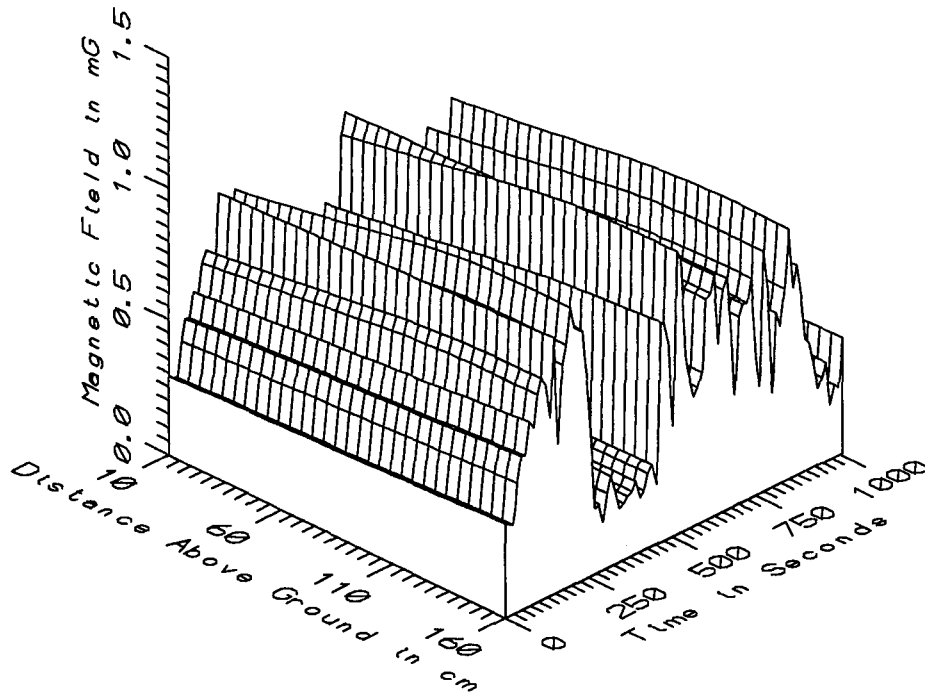
TGV031 - 7.5m FROM PARIS BOUND LINE AT WAYSIDE - LOW FREQ, 5-45Hz



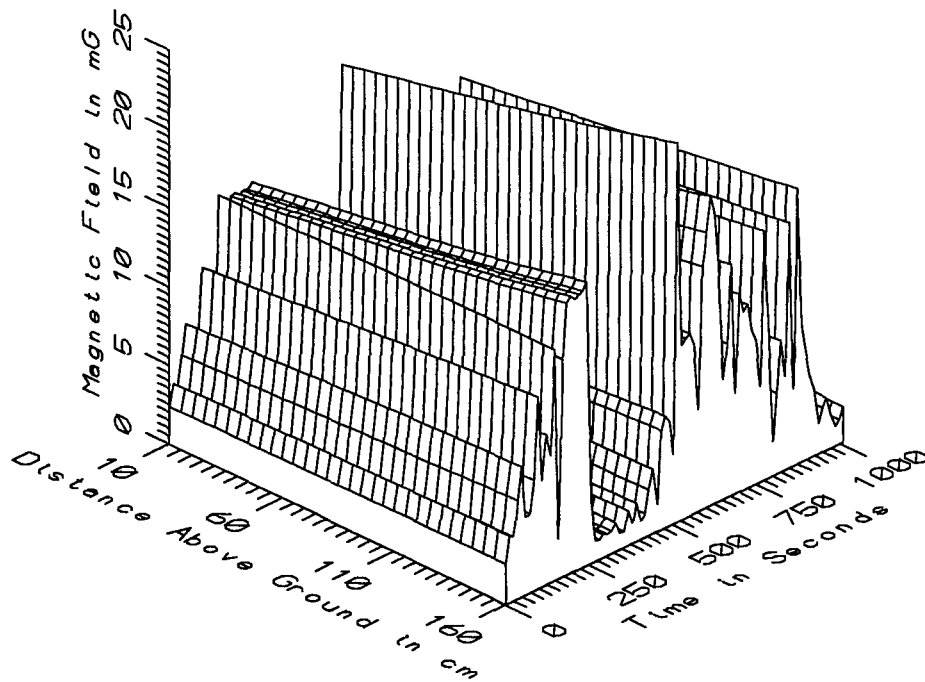
TGV031 - 7.5m FROM PARIS BOUND LINE AT WAYSIDE - POWER FREQ, 50-60Hz



TGV031 - 7.5m FROM PARIS BOUND LINE AT WAYSIDE - POWER HARM, 65-300Hz



TGV031 - 7.5m FROM PARIS BOUND LINE AT WAYSIDE - HIGH FREQ, 305-2560Hz



TGV031 - 7.5m FROM PARIS BOUND LINE AT WAYSIDE - ALL FREQ, 5-2560Hz

| TGV031 - OPEN SPACE - 7.5m FROM PARIS BOUND TRACK | | TOTAL OF 83 SAMPLES | | | | |
|---|--------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE GROUND (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 438.36 | 442.84 | 441.64 | 0.55 | 0.12 |
| | 110 | 457.94 | 483.11 | 467.23 | 6.04 | 1.29 |
| | 160 | 465.74 | 472.07 | 469.41 | 1.36 | 0.29 |
| 5-45Hz | 10 | 0.12 | 1.11 | 0.33 | 0.14 | 42.87 |
| LOW FREQ | 110 | 0.05 | 1.13 | 0.23 | 0.17 | 72.81 |
| | 160 | 0.17 | 1.08 | 0.30 | 0.14 | 48.20 |
| 50-60Hz | 10 | 0.67 | 18.82 | 6.37 | 4.66 | 73.21 |
| PWR FREQ | 110 | 0.79 | 22.06 | 7.30 | 5.39 | 73.82 |
| | 160 | 0.86 | 23.98 | 7.85 | 5.85 | 74.60 |
| 65-300Hz | 10 | 0.11 | 1.26 | 0.47 | 0.21 | 44.78 |
| PWR HARM | 110 | 0.18 | 1.34 | 0.57 | 0.23 | 39.65 |
| | 160 | 0.20 | 1.41 | 0.59 | 0.23 | 39.90 |
| 305-2560Hz | 10 | 0.15 | 0.97 | 0.48 | 0.22 | 45.83 |
| HIGH FREQ | 110 | 0.18 | 1.04 | 0.55 | 0.25 | 45.31 |
| | 160 | 0.18 | 1.05 | 0.57 | 0.25 | 44.45 |
| 5-2560Hz | 10 | 0.82 | 18.88 | 6.43 | 4.64 | 72.16 |
| ALL FREQ | 110 | 0.93 | 22.12 | 7.37 | 5.37 | 72.88 |
| | 160 | 1.01 | 24.04 | 7.92 | 5.83 | 73.66 |

APPENDIX AG

DATASET TGV032
BEHIND GAULT ST. DENIS SUBSTATION

Measurement Setup Code: Staff: 35 Reference: 36
 Drawing: A-10

Vehicle Status: A single stain set to Paris passed
 during the record

Measurement Date: September 9, 1992

Measurement Time: Start: 15:18:21
 End: 15:22:20

Number of Samples: 25

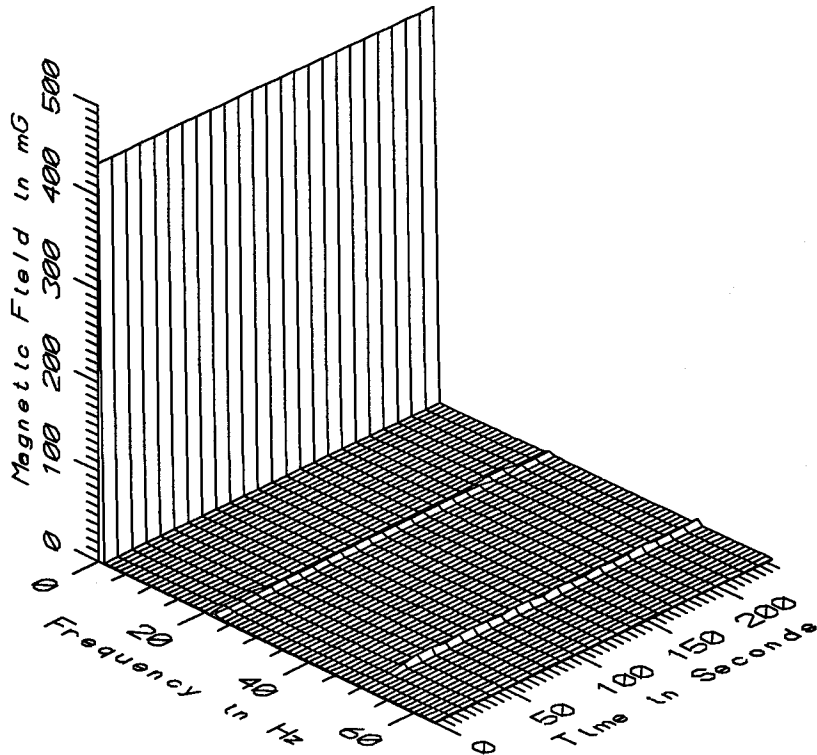
Programmed Sample Interval: 10 sec

Actual Sample Interval: 10.0 sec

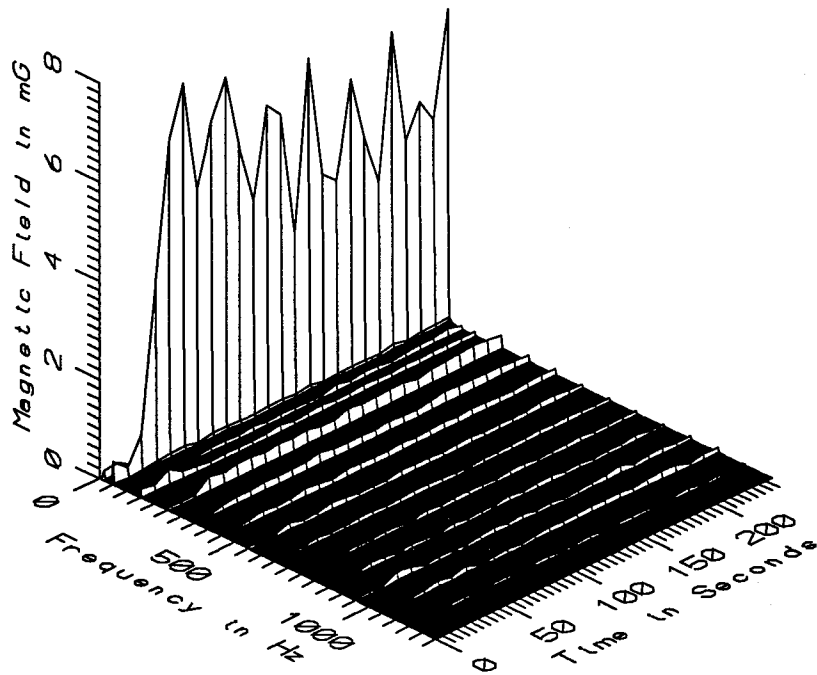
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

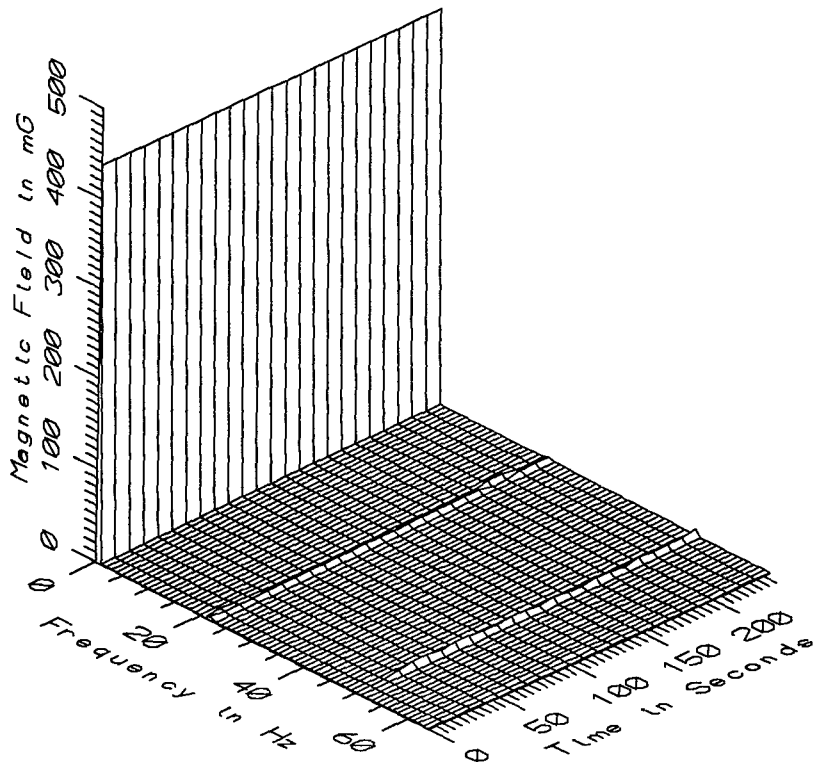
Missing or Suspect Data: None



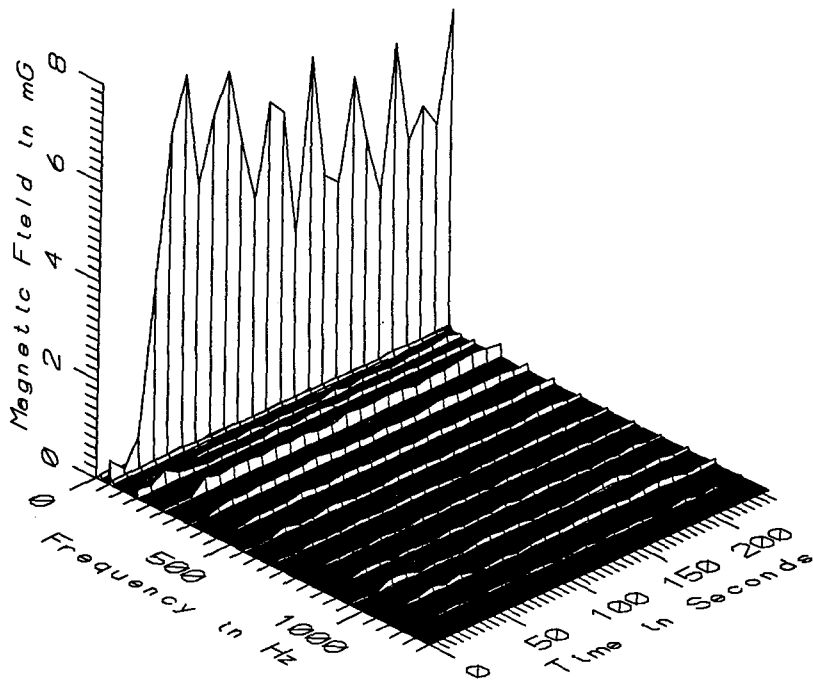
TGV032 - 10cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



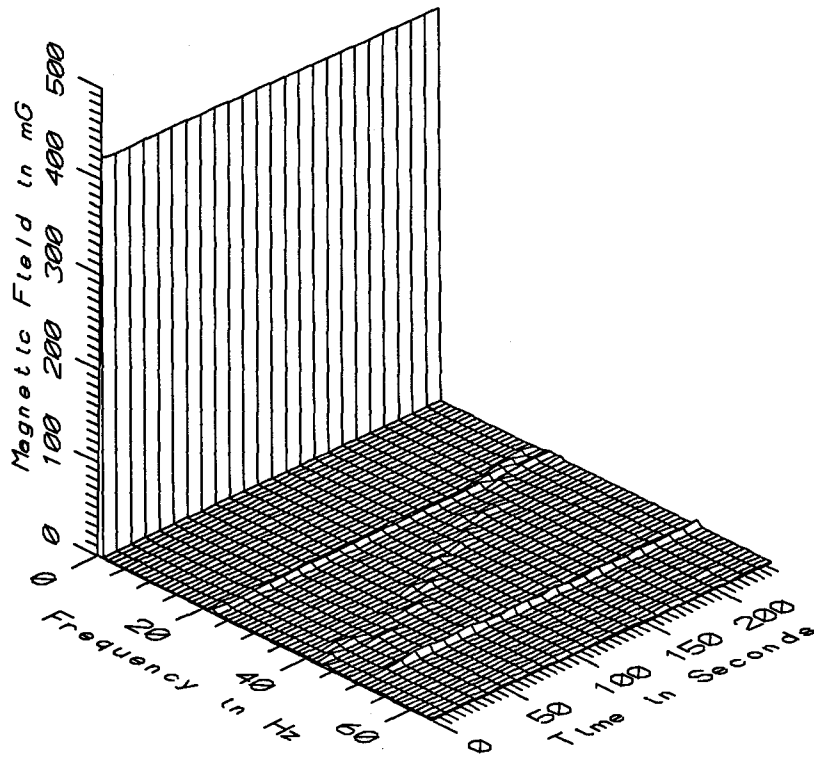
TGV032 - 10cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



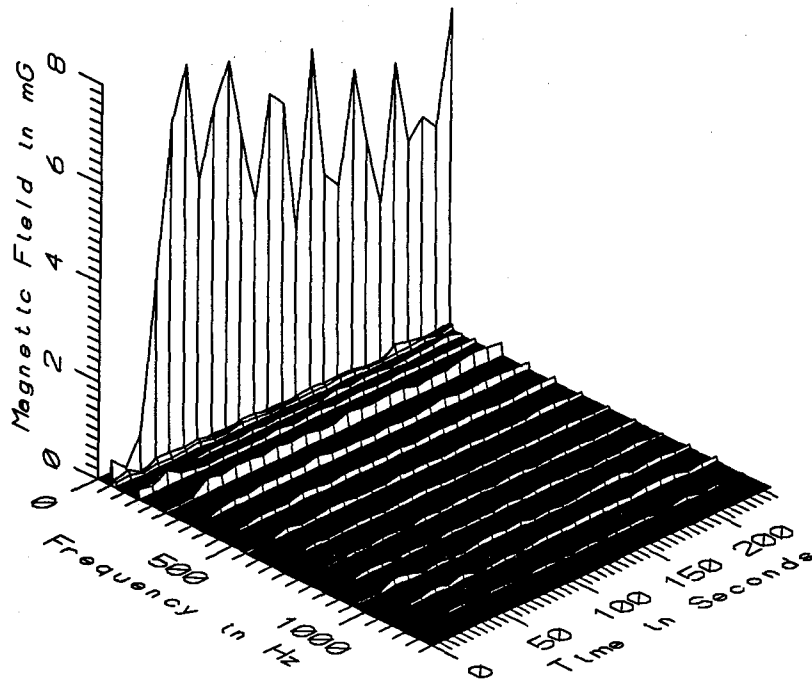
TGV032 - 60cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



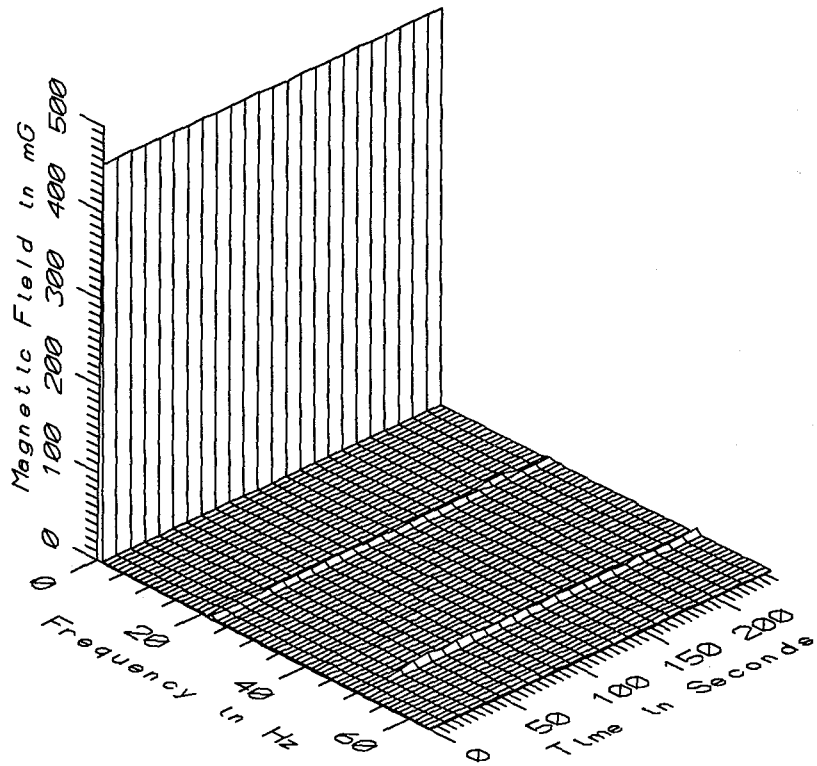
TGV032 - 60cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



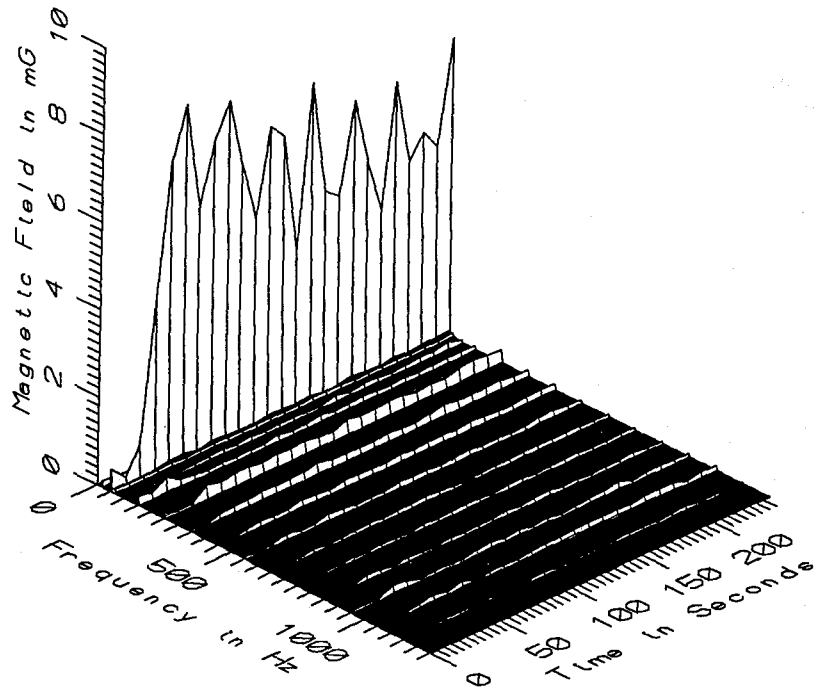
TGV032 - 110_{cm} ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



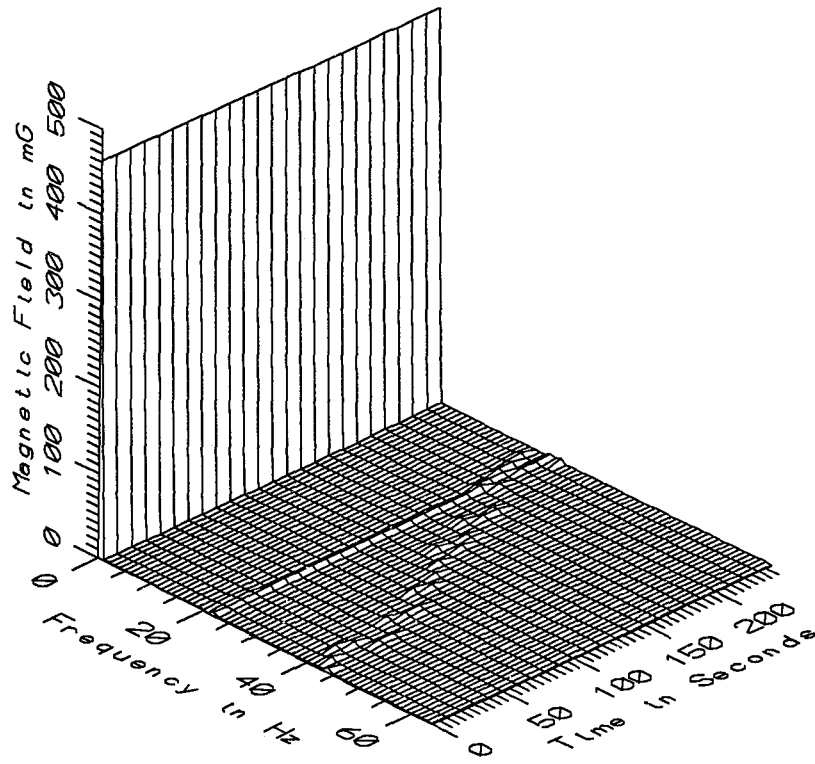
TGV032 - 110_{cm} ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



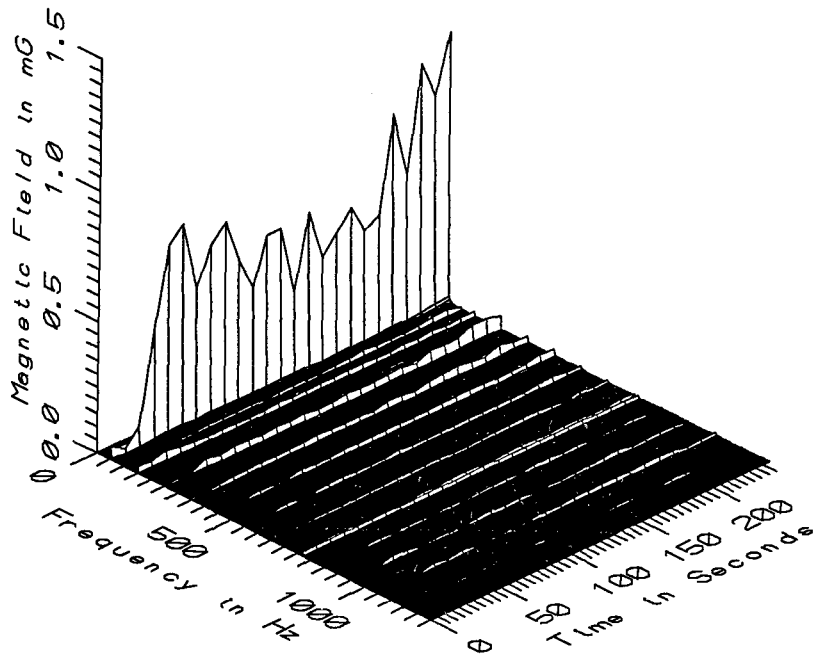
TGV032 - 160cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



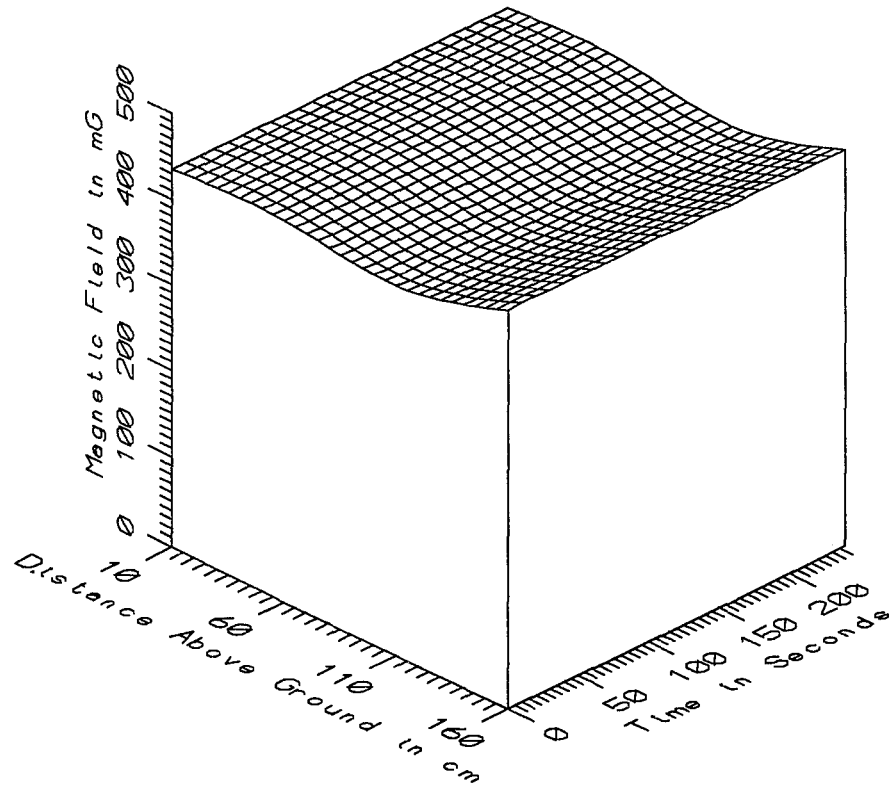
TGV032 - 160cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



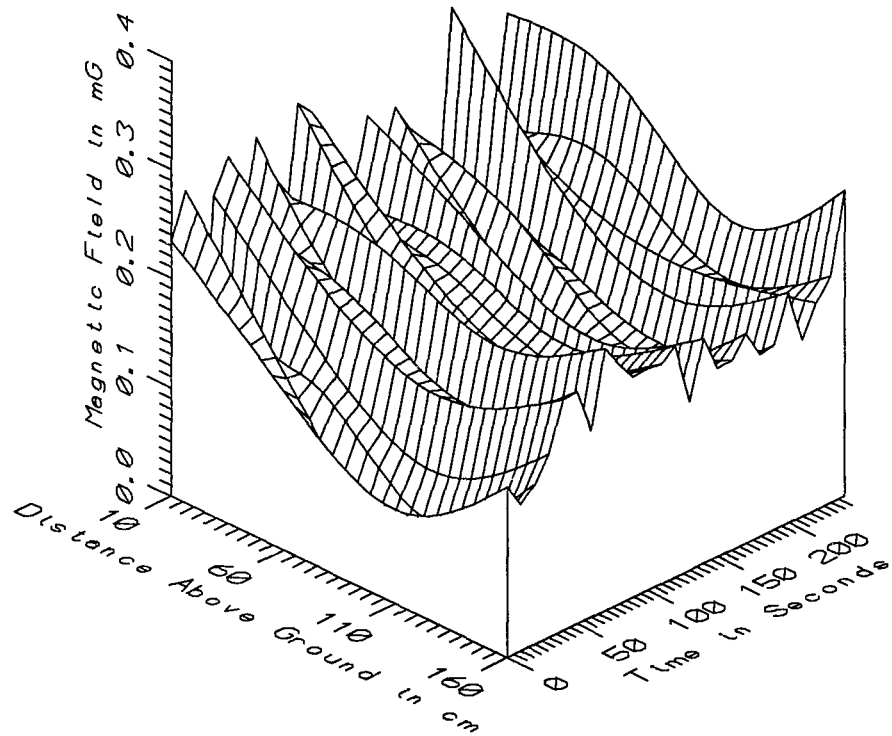
TGV032 - REFERENCE PROBE - 15m BEHIND STAFF, GAULT ST. DENIS SUBSTATION



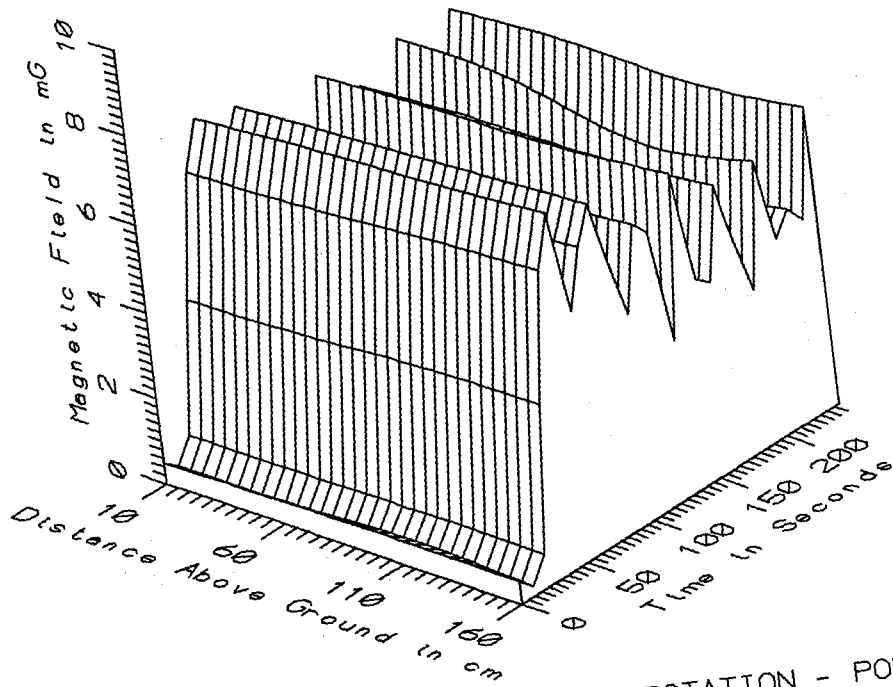
TGV032 - REFERENCE PROBE - 15m BEHIND STAFF, GAULT ST. DENIS SUBSTATION



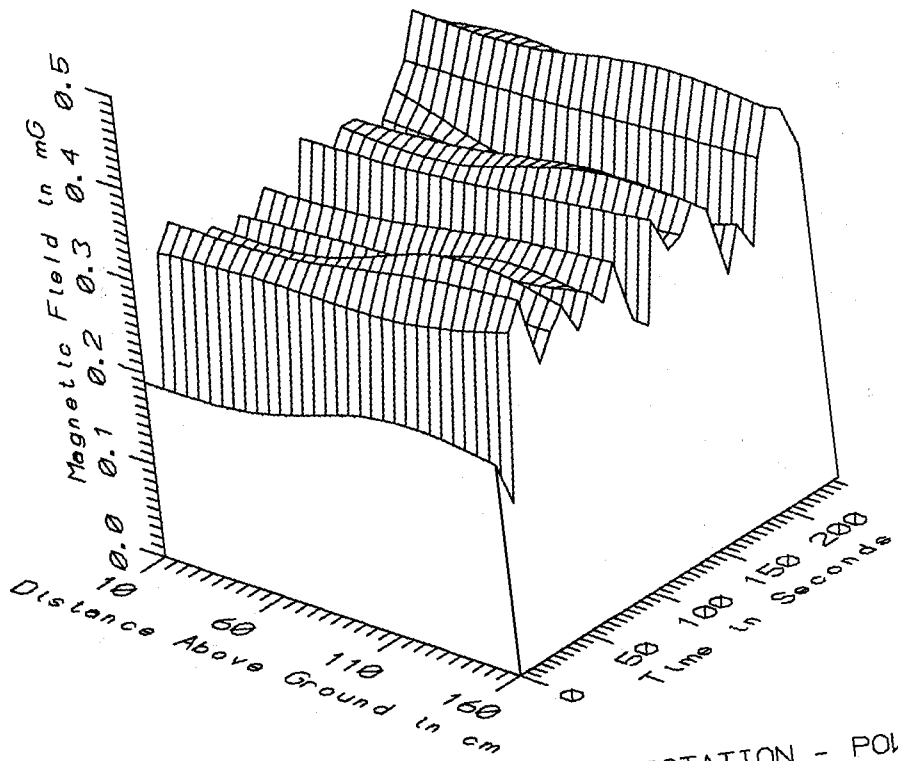
TGV032 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - STATIC



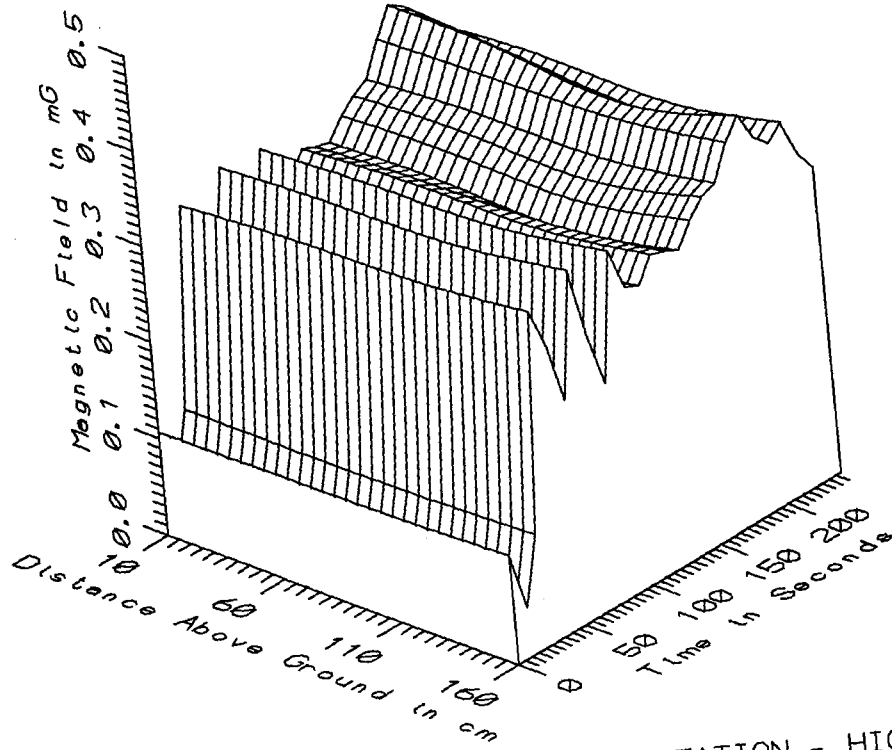
TGV032 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - LOW FREQ, 5-45Hz



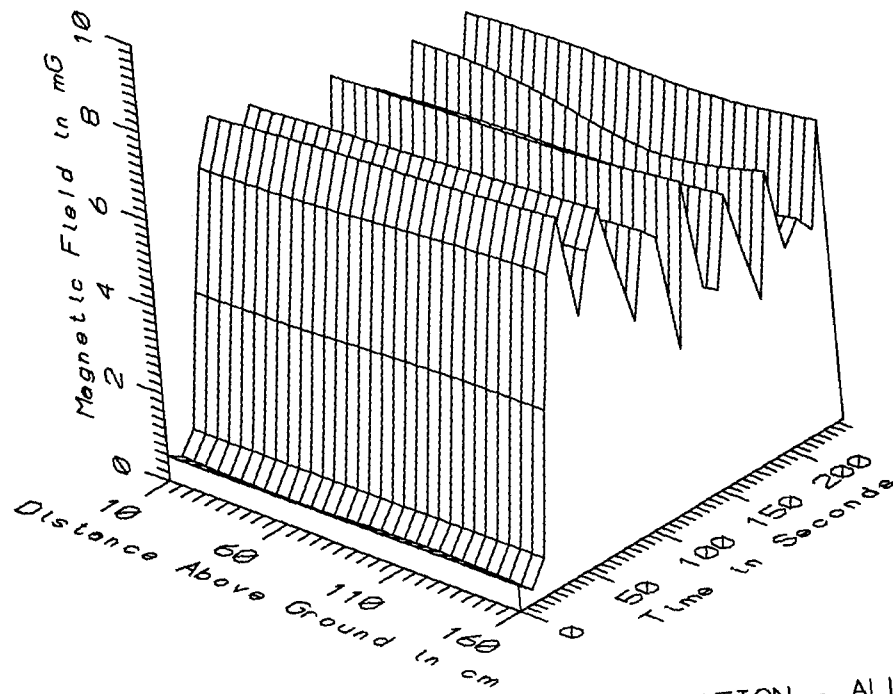
TGV032 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - POWER FREQ, 50-60Hz



TGV032 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - POWER HARM, 65-300Hz



TGV032 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - HIGH FREQ. 305-2560Hz



TGV032 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - ALL FREQ. 5-2560Hz

| TGV032 - BEHIND GAULT ST. DENIS SUBSTATION | | TOTAL OF 25 SAMPLES | | | | |
|--|--------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE GROUND (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 434.47 | 435.57 | 435.04 | 0.28 | 0.06 |
| | 60 | 436.67 | 437.60 | 437.19 | 0.20 | 0.05 |
| | 110 | 420.81 | 422.45 | 421.45 | 0.45 | 0.11 |
| | 160 | 455.48 | 457.26 | 456.54 | 0.46 | 0.10 |
| 5-45Hz LOW FREQ | 10 | 0.10 | 0.33 | 0.24 | 0.05 | 22.63 |
| | 60 | 0.13 | 0.28 | 0.18 | 0.03 | 17.85 |
| | 110 | 0.04 | 0.20 | 0.14 | 0.04 | 27.76 |
| | 160 | 0.13 | 0.28 | 0.19 | 0.03 | 16.97 |
| 50-60Hz PWR FREQ | 10 | 0.22 | 7.43 | 4.72 | 1.98 | 41.97 |
| | 60 | 0.22 | 7.68 | 4.81 | 2.04 | 42.34 |
| | 110 | 0.34 | 7.87 | 4.86 | 2.07 | 42.60 |
| | 160 | 0.22 | 8.10 | 5.07 | 2.15 | 42.32 |
| 65-300Hz PWR HARM | 10 | 0.13 | 0.40 | 0.29 | 0.06 | 19.30 |
| | 60 | 0.15 | 0.40 | 0.30 | 0.06 | 18.45 |
| | 110 | 0.19 | 0.42 | 0.32 | 0.05 | 16.80 |
| | 160 | 0.18 | 0.42 | 0.33 | 0.05 | 16.38 |
| 305-2560Hz HIGH FREQ | 10 | 0.05 | 0.39 | 0.28 | 0.09 | 30.34 |
| | 60 | 0.05 | 0.39 | 0.29 | 0.09 | 29.96 |
| | 110 | 0.05 | 0.38 | 0.29 | 0.09 | 29.57 |
| | 160 | 0.05 | 0.41 | 0.30 | 0.09 | 29.77 |
| 5-2560Hz ALL FREQ | 10 | 0.38 | 7.45 | 4.76 | 1.95 | 41.08 |
| | 60 | 0.30 | 7.69 | 4.84 | 2.02 | 41.69 |
| | 110 | 0.40 | 7.88 | 4.88 | 2.05 | 42.04 |
| | 160 | 0.32 | 8.12 | 5.11 | 2.12 | 41.59 |

APPENDIX AH

DATASET TGV033
BEHIND GAULT ST. DENIS SUBSTATION

Measurement Setup Code: Staff: 35 Reference: 36
 Drawing: A-10

Vehicle Status: Double train set to Paris passed
 94 seconds into record

Measurement Date: September 9, 1992

Measurement Time: Start: 15:25:06
 End: 15:28:10

Number of Samples: 19

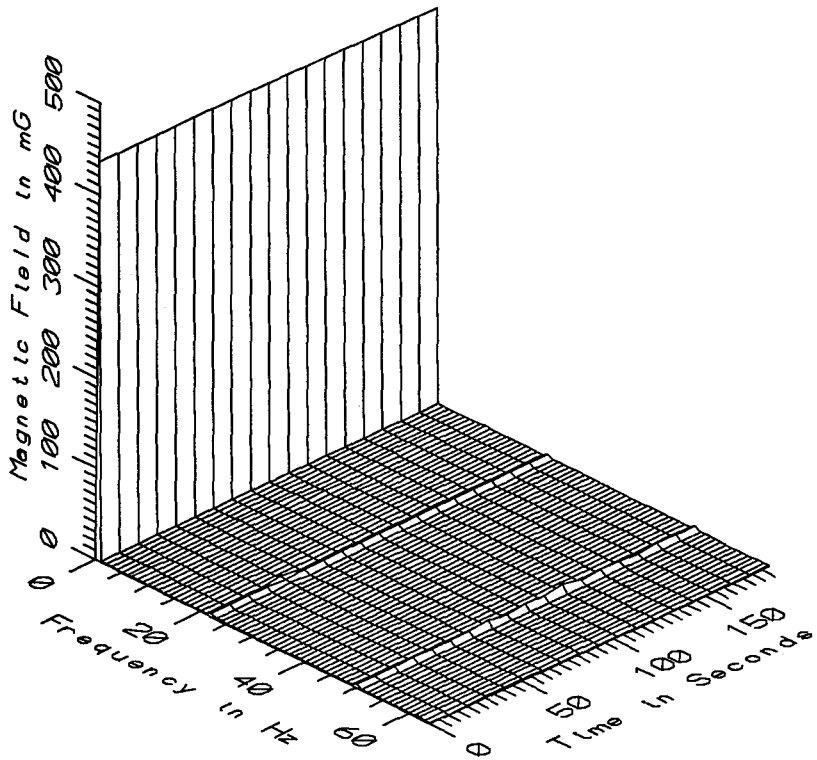
Programmed Sample Interval: 10 sec

Actual Sample Interval: 10.2 sec

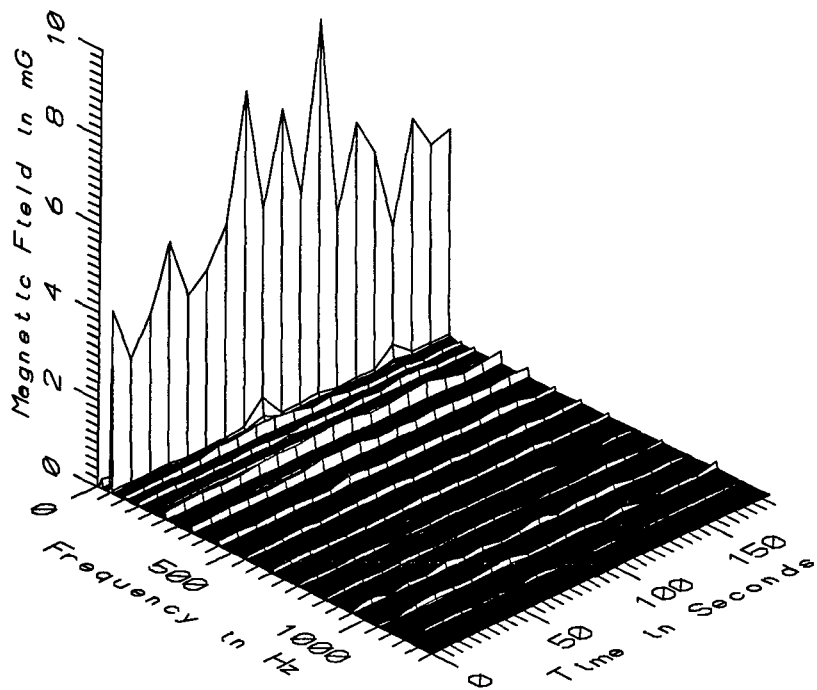
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

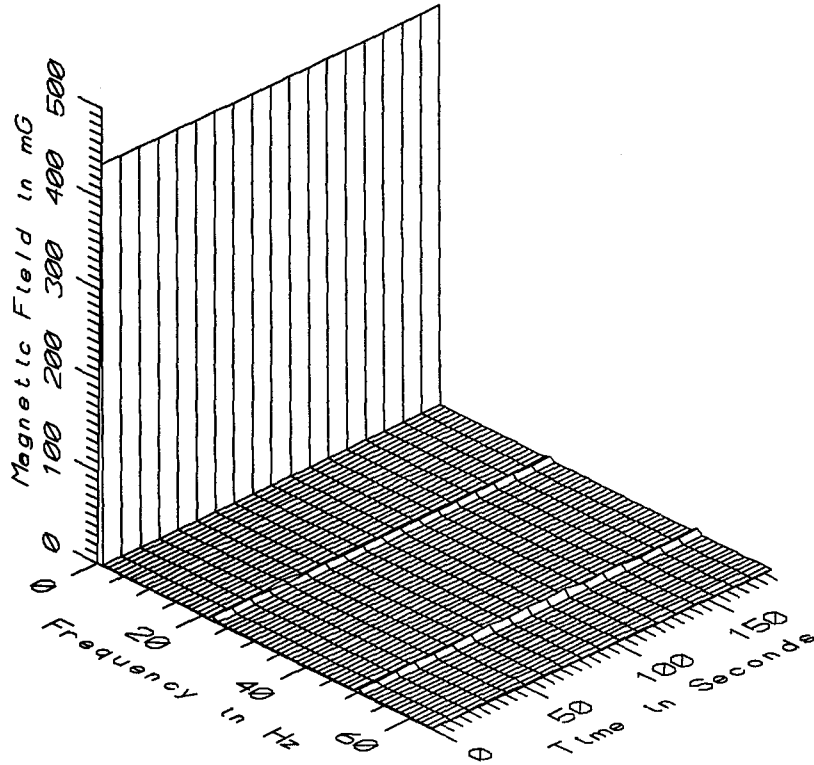
Missing or Suspect Data: None



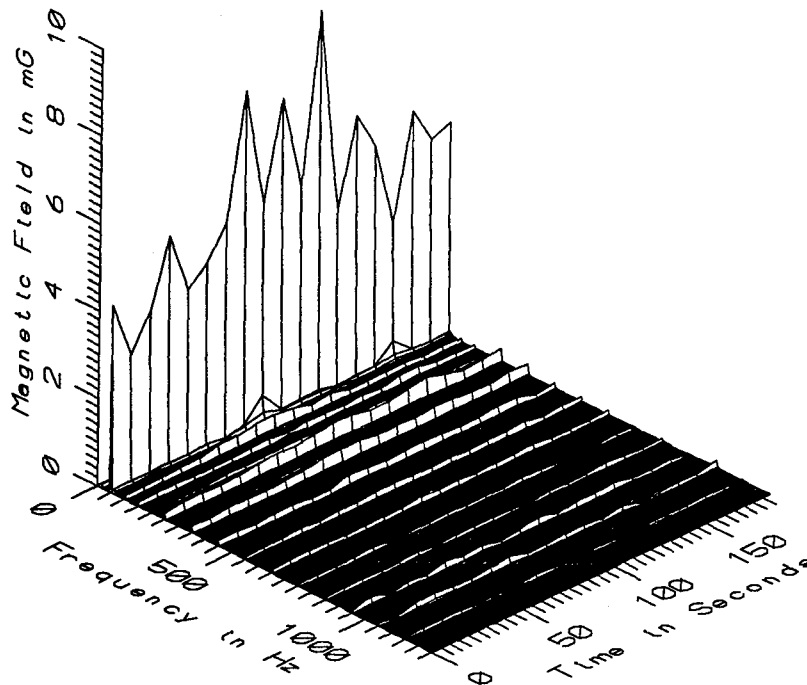
TGV033 - 10cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



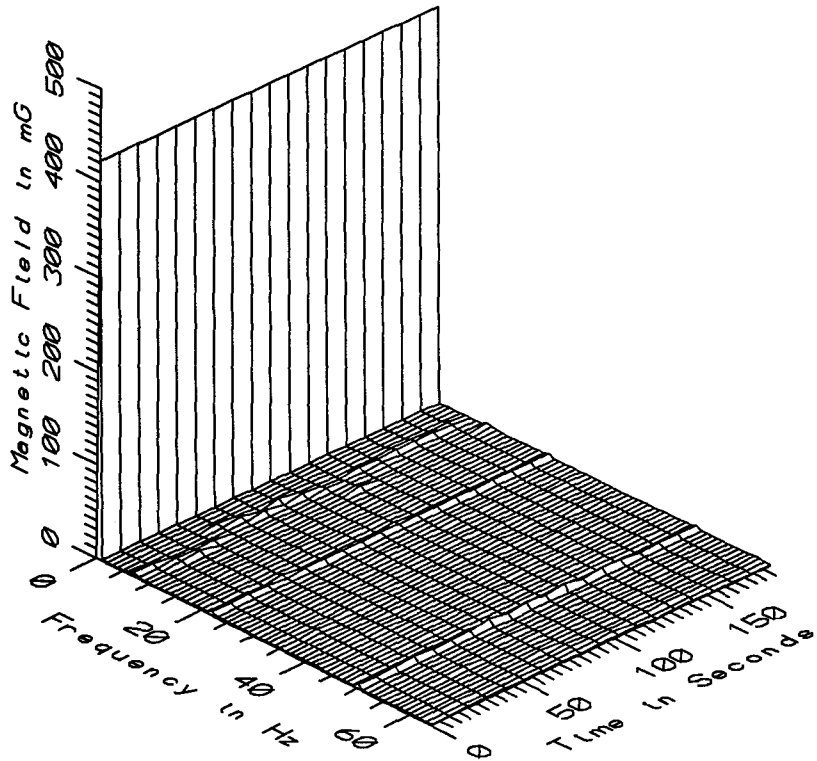
TGV033 - 10cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



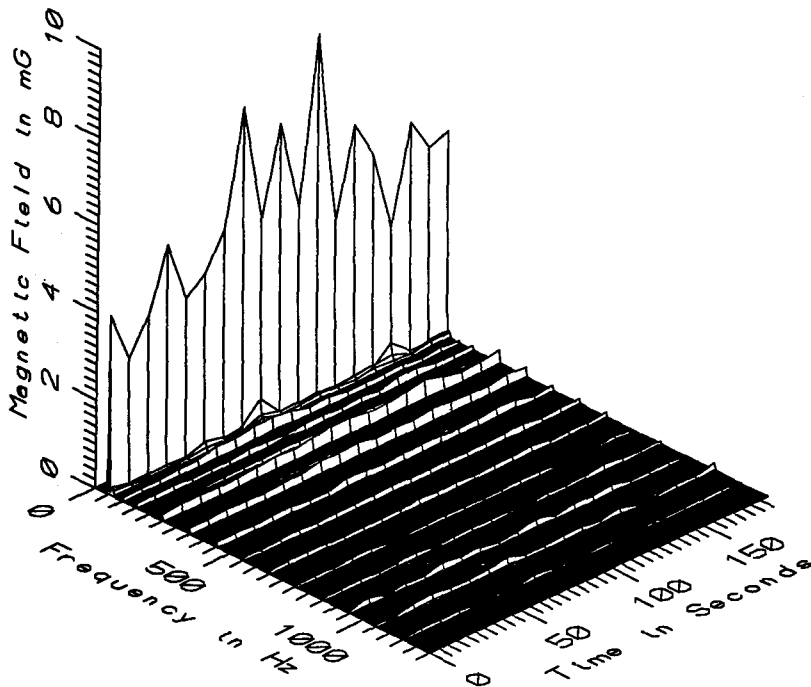
TGV033 - 60cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



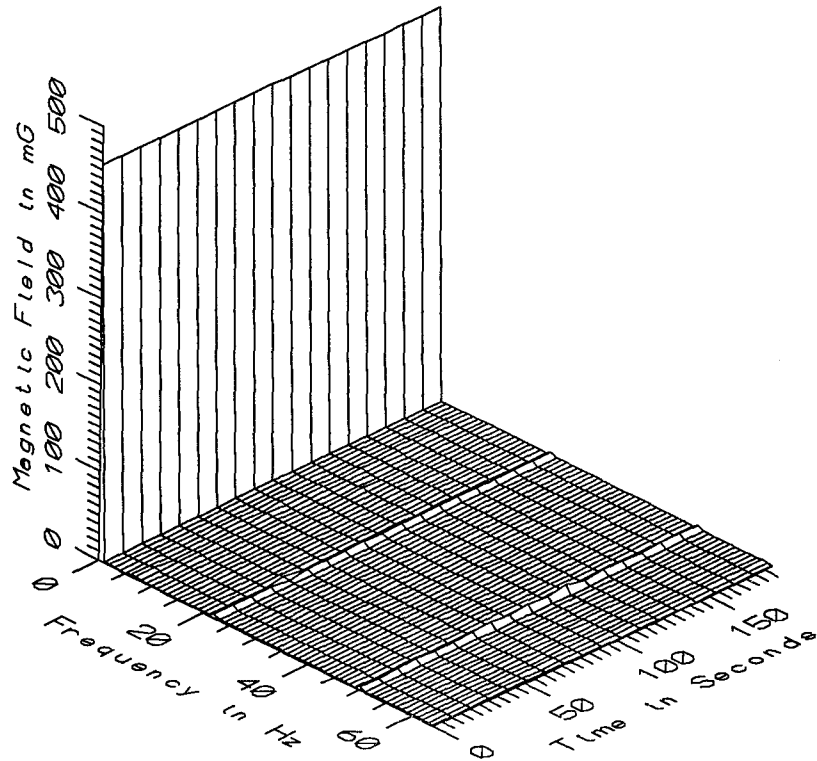
TGV033 - 60cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



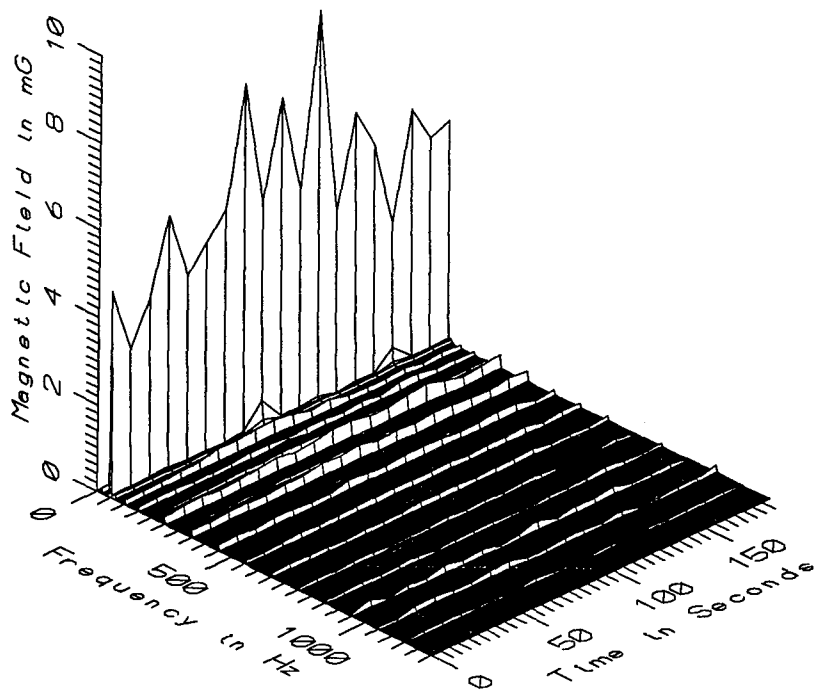
TGV033 - 110cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



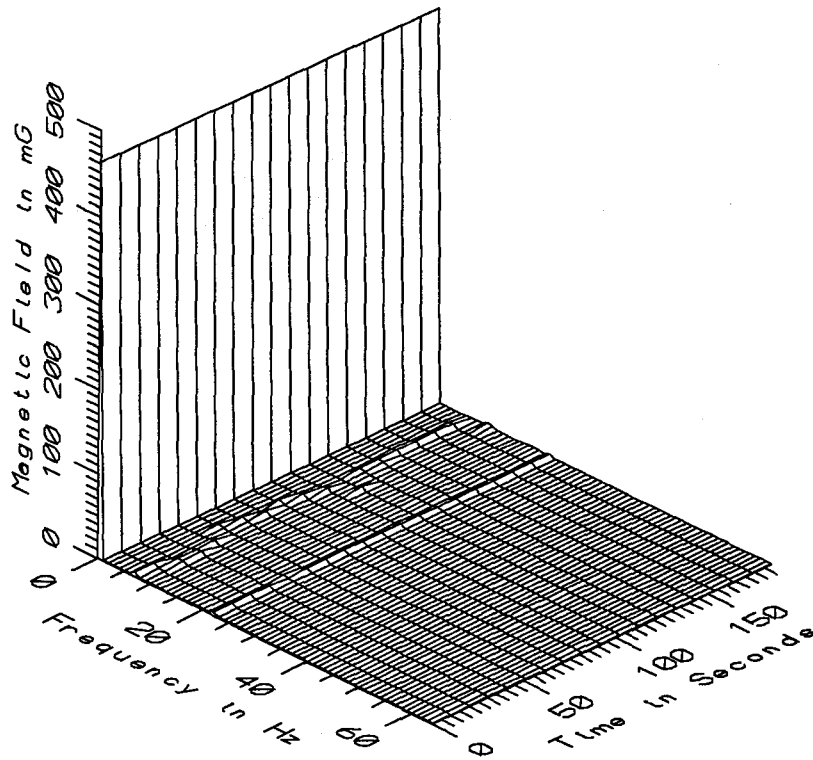
TGV033 - 110cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



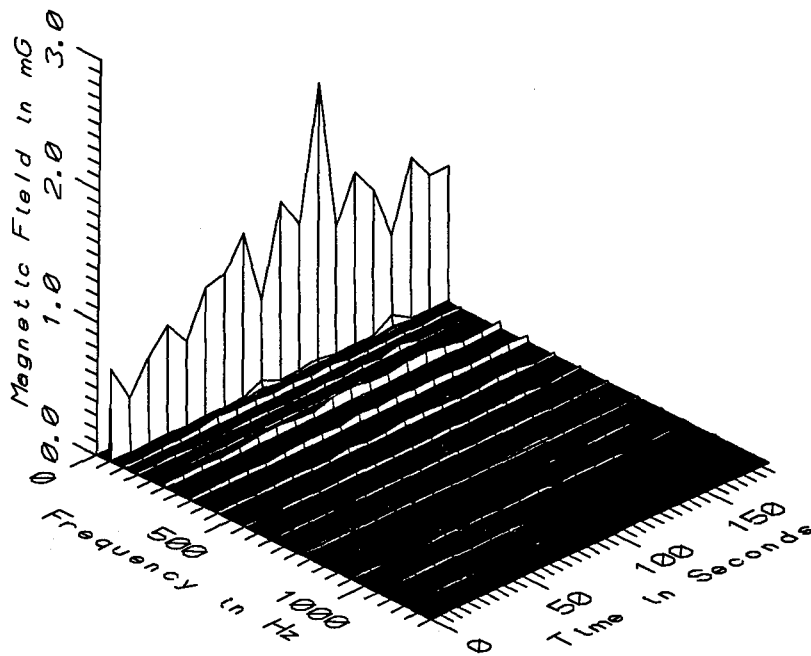
TGV033 - 160cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



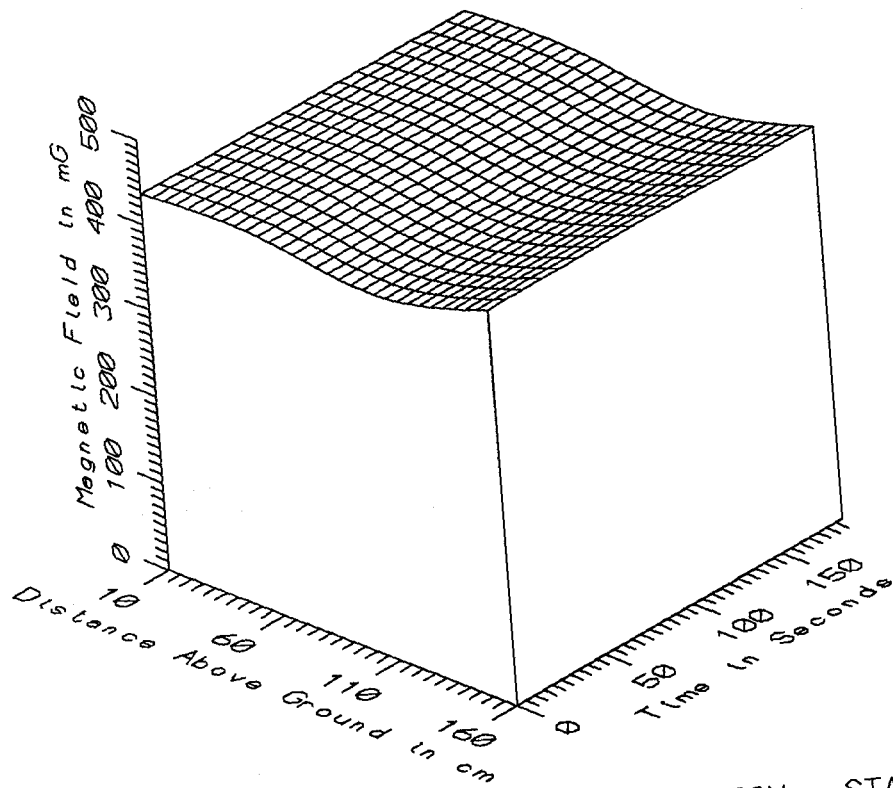
TGV033 - 160cm ABOVE GROUND NEAR FENCE OF GAULT ST. DENIS SUBSTATION



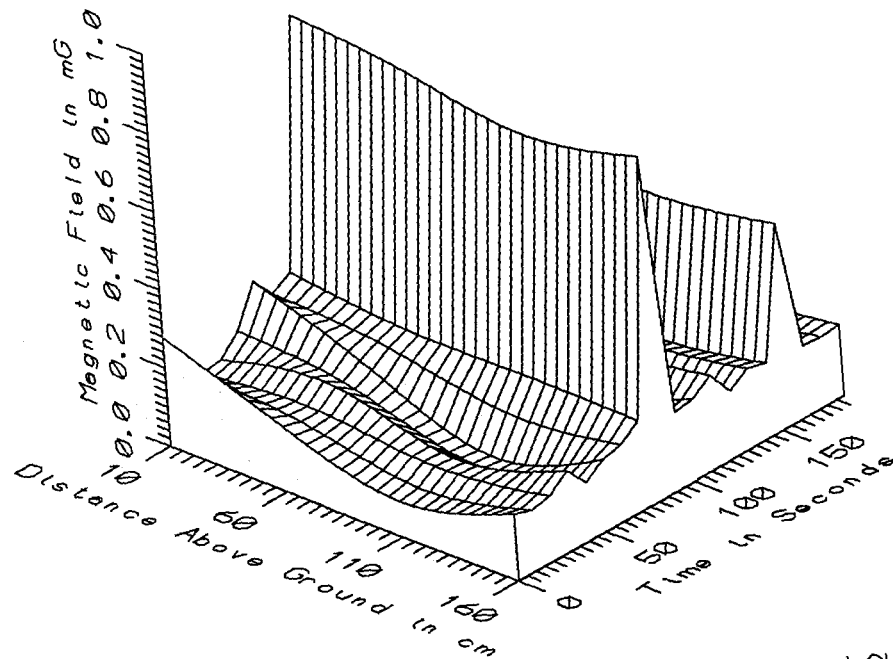
TGV033 - REFERENCE PROBE - 15m BEHIND STAFF, GAULT ST. DENIS SUBSTATION



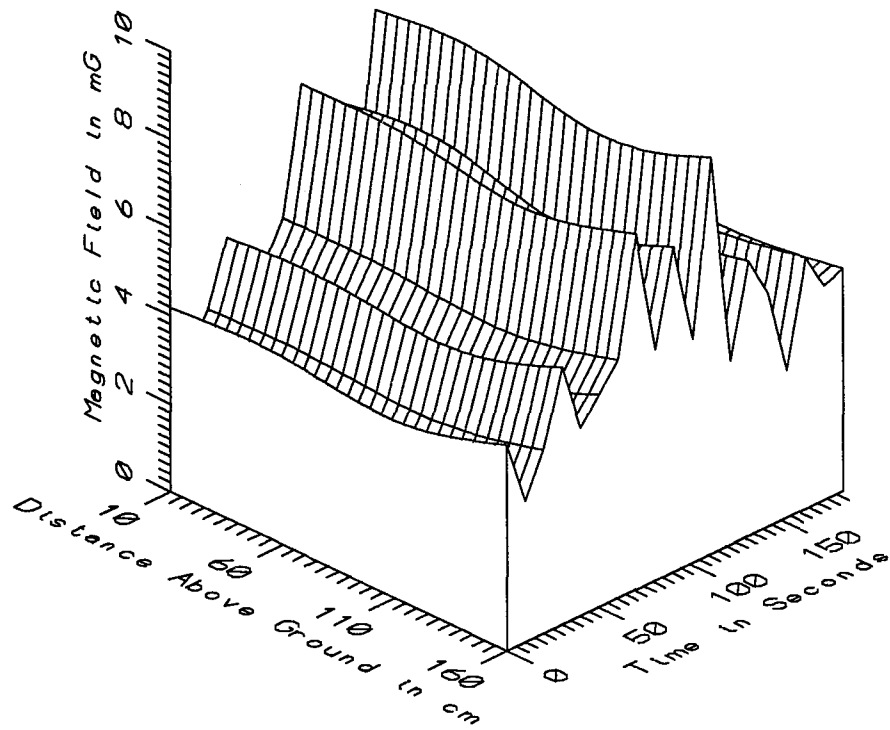
TGV033 - REFERENCE PROBE - 15m BEHIND STAFF, GAULT ST. DENIS SUBSTATION



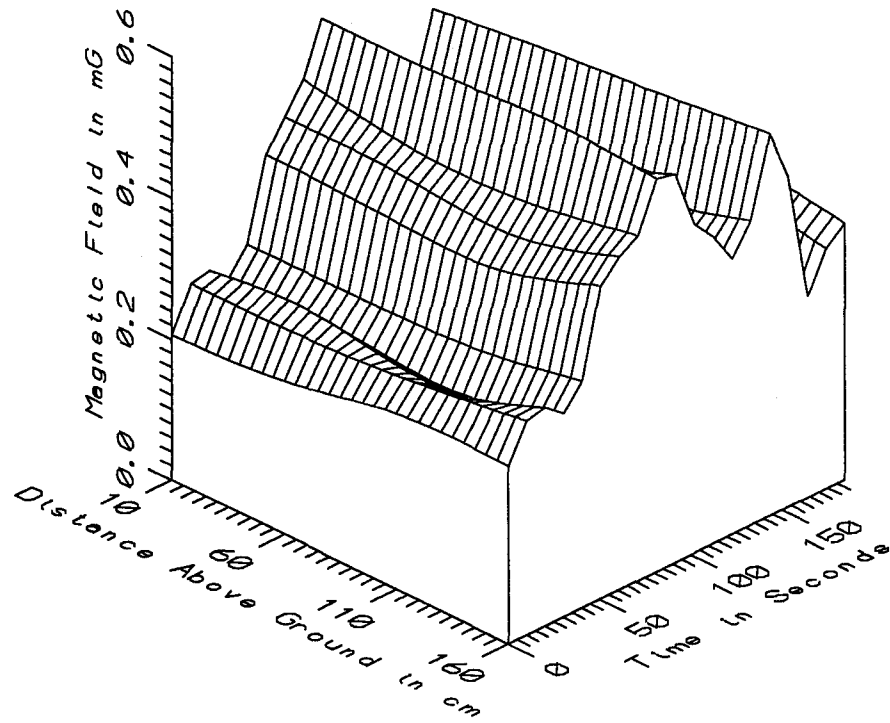
TGV033 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - STATIC



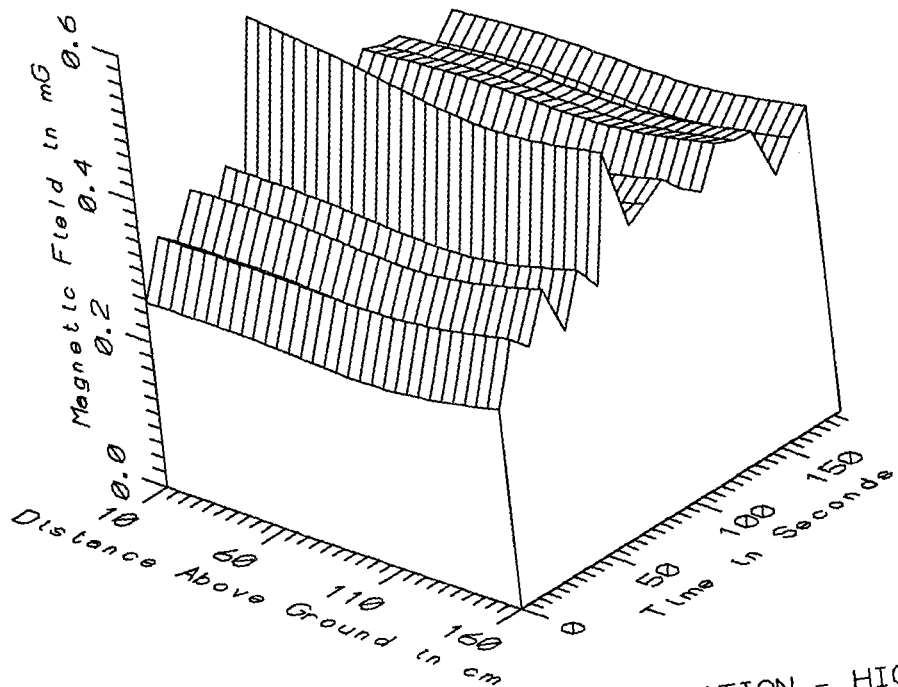
TGV033 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - LOW FREQ, 5-45Hz



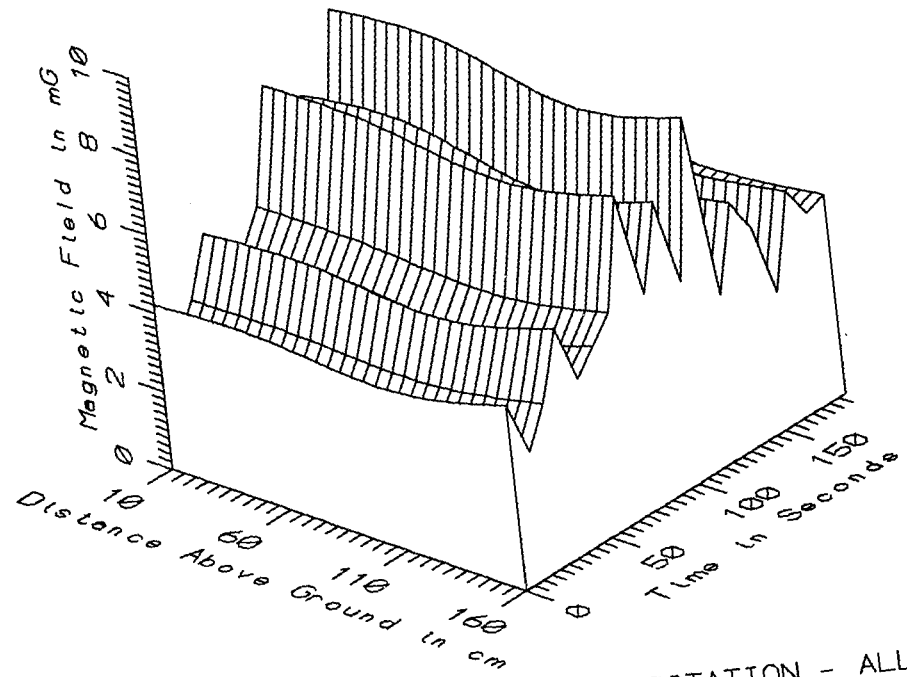
TGV033 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - POWER FREQ, 50-60Hz



TGV033 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - POWER HARM, 65-300Hz



TGV033 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - HIGH FREQ, 305-2560Hz



TGV033 - NEAR FENCE OF GAULT ST. DENIS SUBSTATION - ALL FREQ, 5-2560Hz

| TGV033 - BEHIND GAULT ST. DENIS SUBSTATION | | TOTAL OF 19 SAMPLES | | | | |
|--|--------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE GROUND (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 435.01 | 435.64 | 435.40 | 0.17 | 0.04 |
| | 60 | 437.48 | 438.37 | 437.95 | 0.24 | 0.05 |
| | 110 | 421.85 | 423.42 | 422.53 | 0.39 | 0.09 |
| | 160 | 455.44 | 457.95 | 456.68 | 0.62 | 0.14 |
| 5-45Hz LOW FREQ | 10 | 0.13 | 0.89 | 0.28 | 0.17 | 60.89 |
| | 60 | 0.15 | 0.86 | 0.23 | 0.17 | 71.96 |
| | 110 | 0.08 | 0.82 | 0.19 | 0.18 | 94.97 |
| | 160 | 0.15 | 0.87 | 0.24 | 0.17 | 71.67 |
| 50-60Hz PWR FREQ | 10 | 2.90 | 8.69 | 5.00 | 1.49 | 29.80 |
| | 60 | 2.95 | 8.83 | 5.09 | 1.50 | 29.50 |
| | 110 | 2.89 | 8.29 | 4.87 | 1.40 | 28.66 |
| | 160 | 3.25 | 8.99 | 5.38 | 1.48 | 27.48 |
| 65-300Hz PWR HARM | 10 | 0.21 | 0.55 | 0.37 | 0.10 | 27.45 |
| | 60 | 0.22 | 0.55 | 0.38 | 0.10 | 26.47 |
| | 110 | 0.24 | 0.56 | 0.38 | 0.10 | 25.26 |
| | 160 | 0.25 | 0.55 | 0.40 | 0.10 | 23.95 |
| 305-2560Hz HIGH FREQ | 10 | 0.26 | 0.55 | 0.37 | 0.06 | 16.59 |
| | 60 | 0.25 | 0.53 | 0.38 | 0.06 | 15.90 |
| | 110 | 0.25 | 0.51 | 0.37 | 0.06 | 15.47 |
| | 160 | 0.28 | 0.53 | 0.40 | 0.06 | 14.00 |
| 5-2560Hz ALL FREQ | 10 | 2.94 | 8.71 | 5.04 | 1.49 | 29.45 |
| | 60 | 2.99 | 8.85 | 5.13 | 1.50 | 29.18 |
| | 110 | 2.93 | 8.31 | 4.91 | 1.39 | 28.33 |
| | 160 | 3.28 | 9.01 | 5.42 | 1.47 | 27.15 |

APPENDIX AI

DATASET TGV034
INSIDE CONTROL HOUSE AT GAULT ST. DENIS SUBSTATION

Measurement Setup Code: Staff: 37 Reference: 38
 Drawing: A-10

Vehicle Status: Single train set from Paris passed
 324 seconds into record, single
 train set to Paris passed 588
 seconds into record

Measurement Date: September 9, 1992

Measurement Time: Start: 15:43:06
 End: 15:55:33

Number of Samples: 68

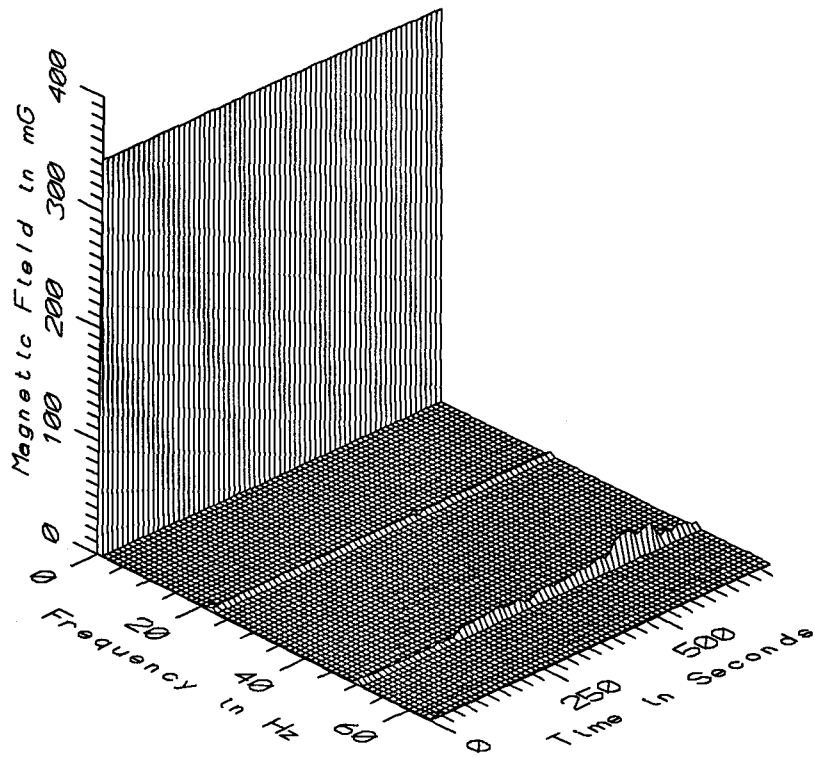
Programmed Sample Interval: 10 sec

Actual Sample Interval: 11.1 sec

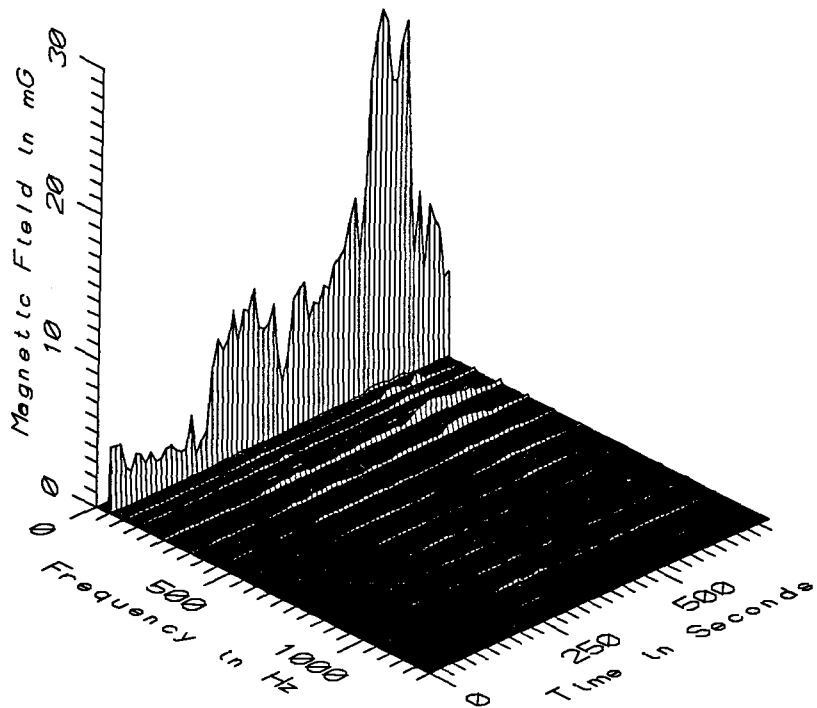
Frequency Spectrum Parameters

| <u>Probe Type:</u> | <u>Wideband</u> | <u>Static</u> |
|-------------------------|-----------------|---------------|
| Maximum Frequency (Hz) | 2560 | 64 |
| Minimum Frequency (Hz) | 5 | 0 |
| Spectral Bandwidth (Hz) | 5 | 1 |

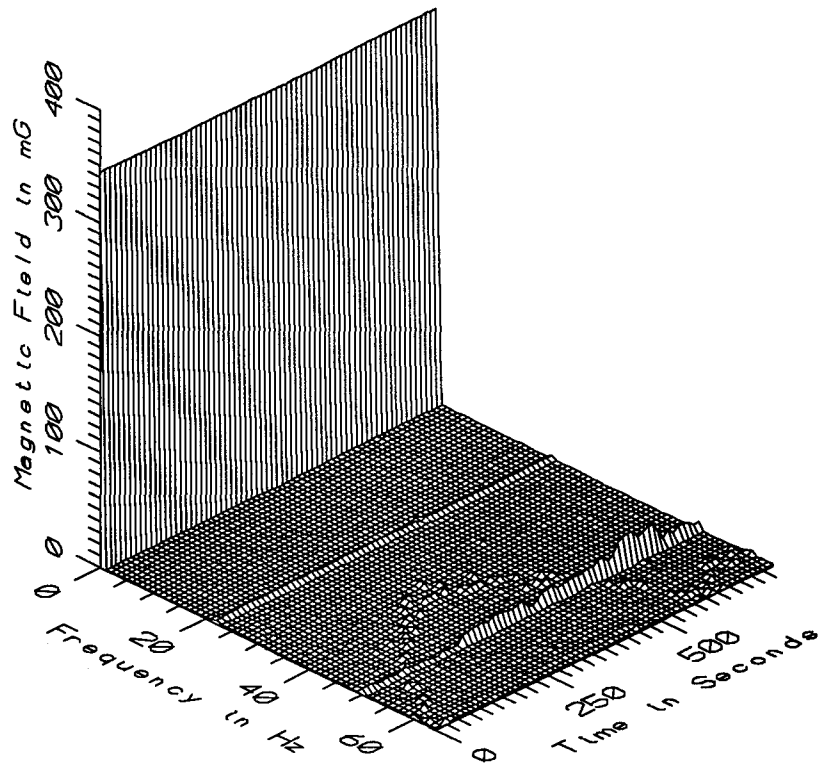
Missing or Suspect Data: 60 cm sensor malfunctioned during
 record



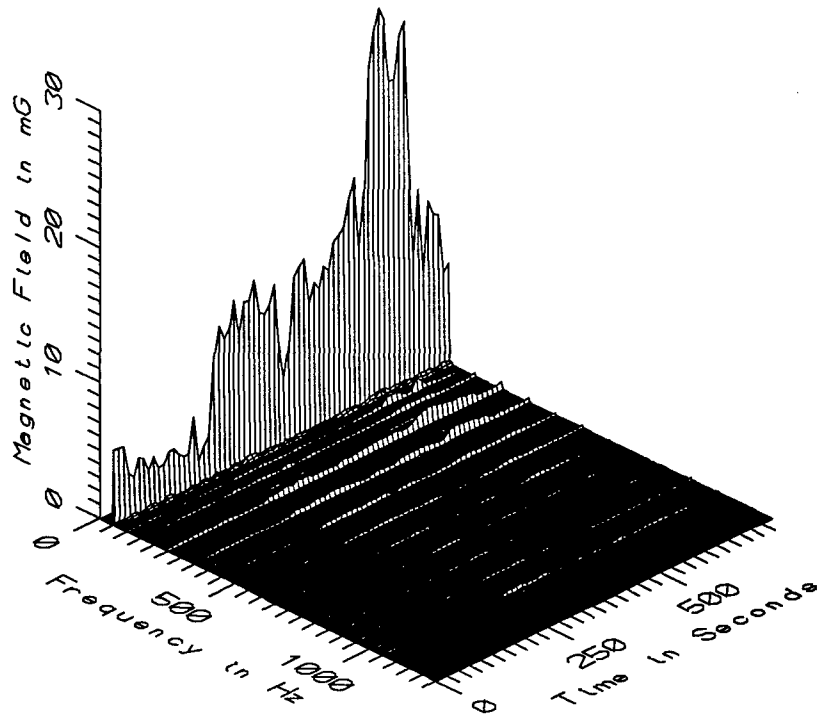
TGV034 - 10cm ABOVE FLOOR IN CONTROL HOUSE, GAULT ST. DENIS SUBSTATION



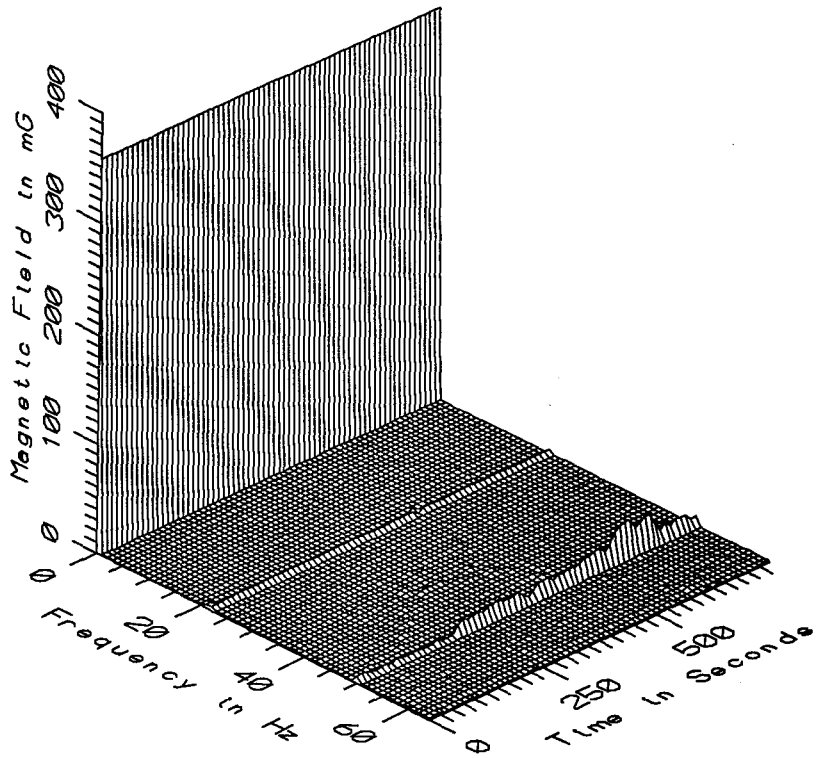
TGV034 - 10cm ABOVE FLOOR IN CONTROL HOUSE, GAULT ST. DENIS SUBSTATION



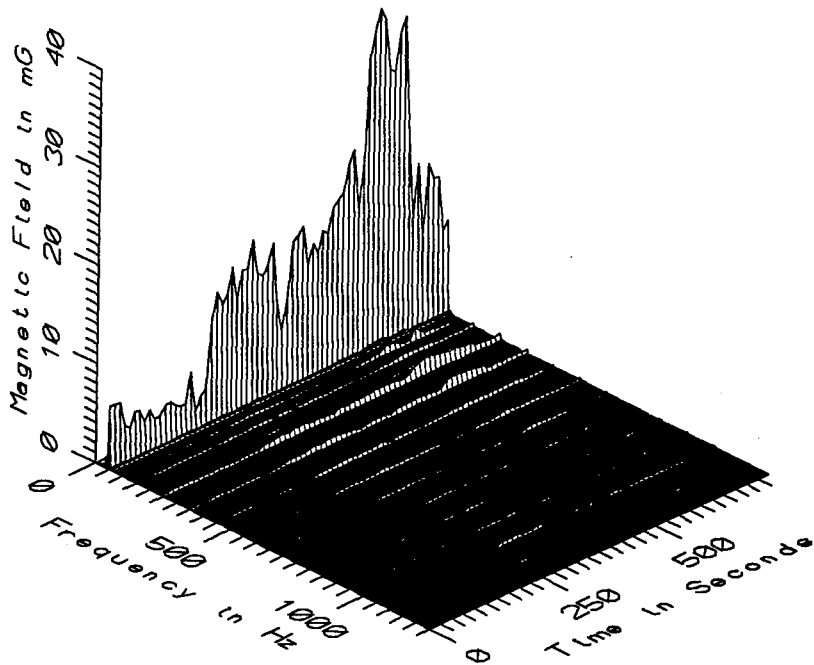
TGV034 - 110cm ABOVE FLOOR IN CONTROL HOUSE, GAULT ST. DENIS SUBSTATION



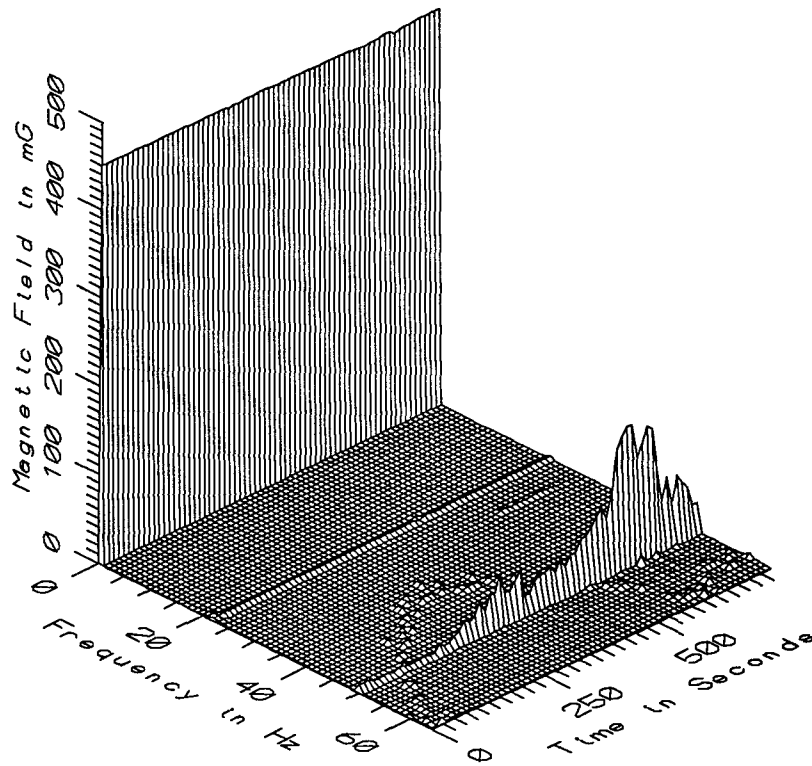
TGV034 - 110cm ABOVE FLOOR IN CONTROL HOUSE, GAULT ST. DENIS SUBSTATION



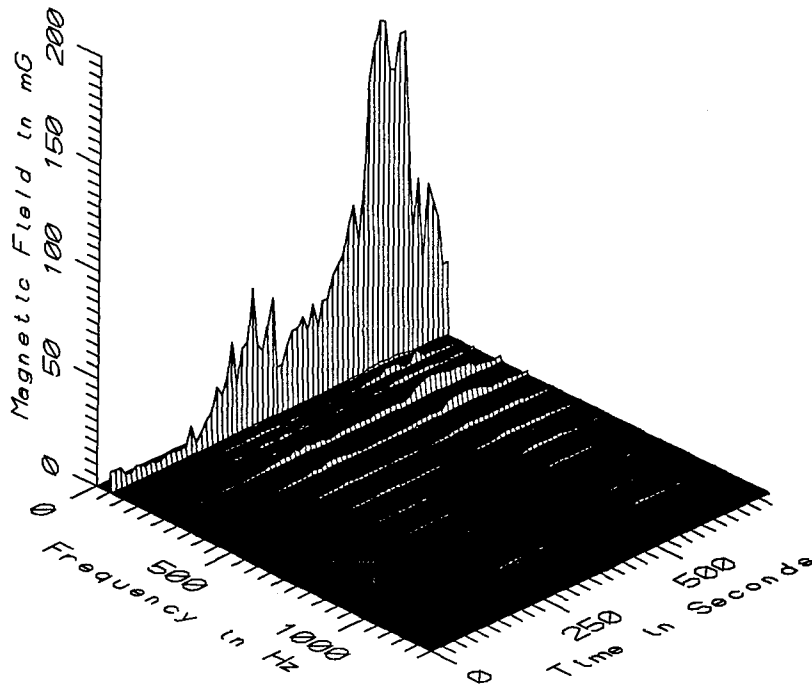
TGV034 - 160cm ABOVE FLOOR IN CONTROL HOUSE, GAULT ST. DENIS SUBSTATION



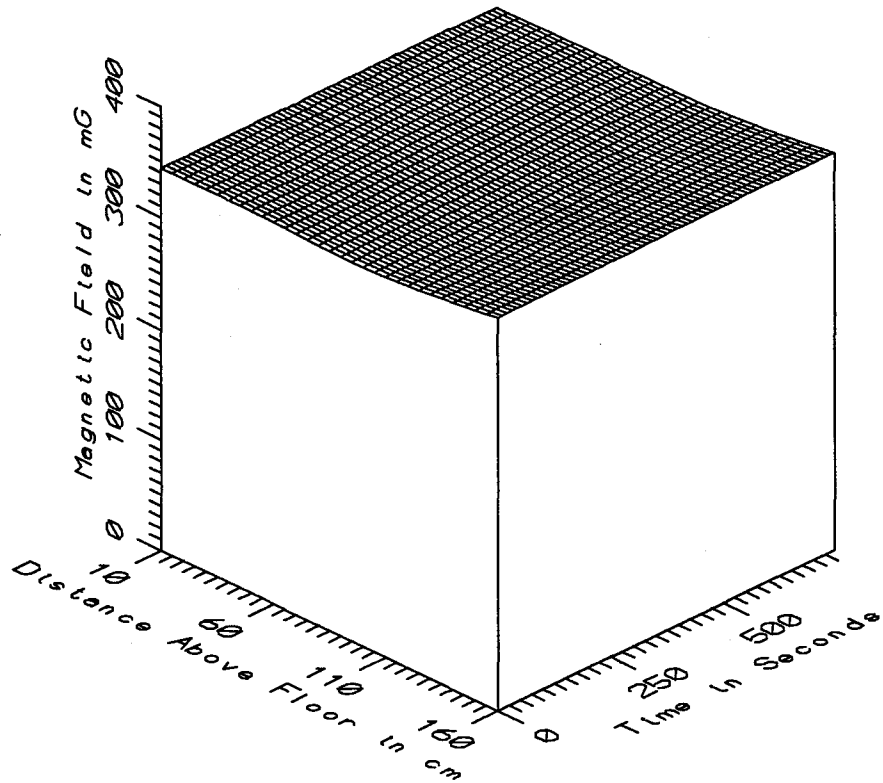
TGV034 - 160cm ABOVE FLOOR IN CONTROL HOUSE, GAULT ST. DENIS SUBSTATION



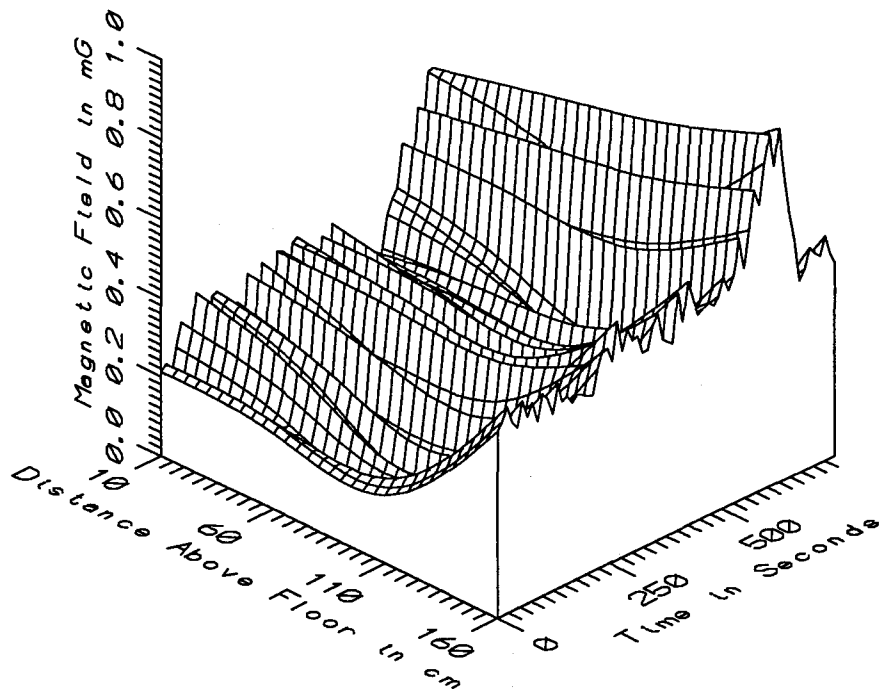
TGV034 - REF. PROBE - OUTSIDE CONTROL HOUSE, GAULT ST. DENIS SUBSTATION



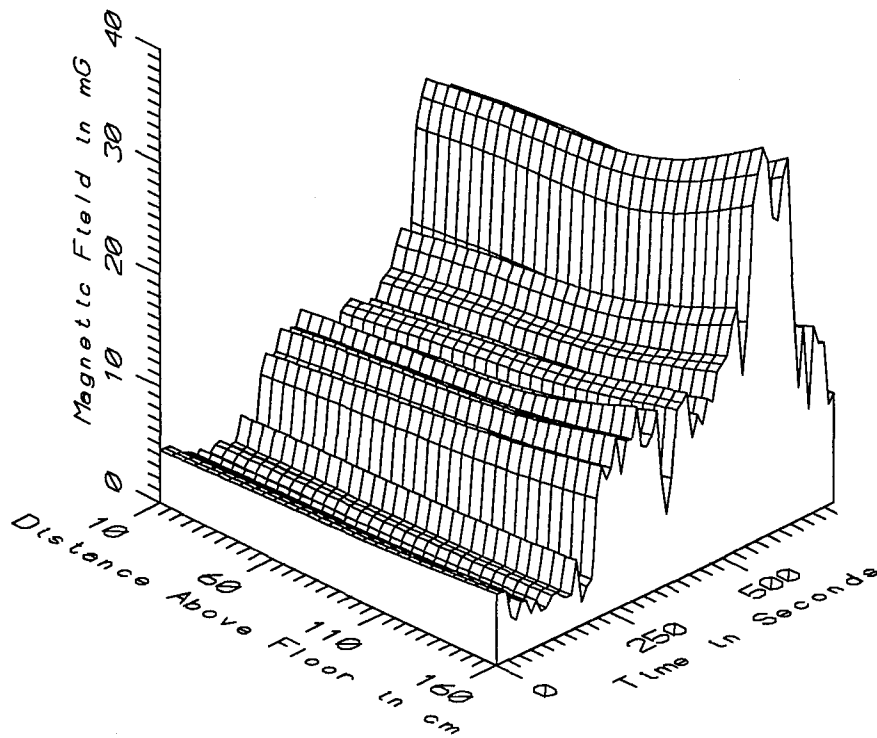
TGV034 - REF. PROBE - OUTSIDE CONTROL HOUSE, GAULT ST. DENIS SUBSTATION



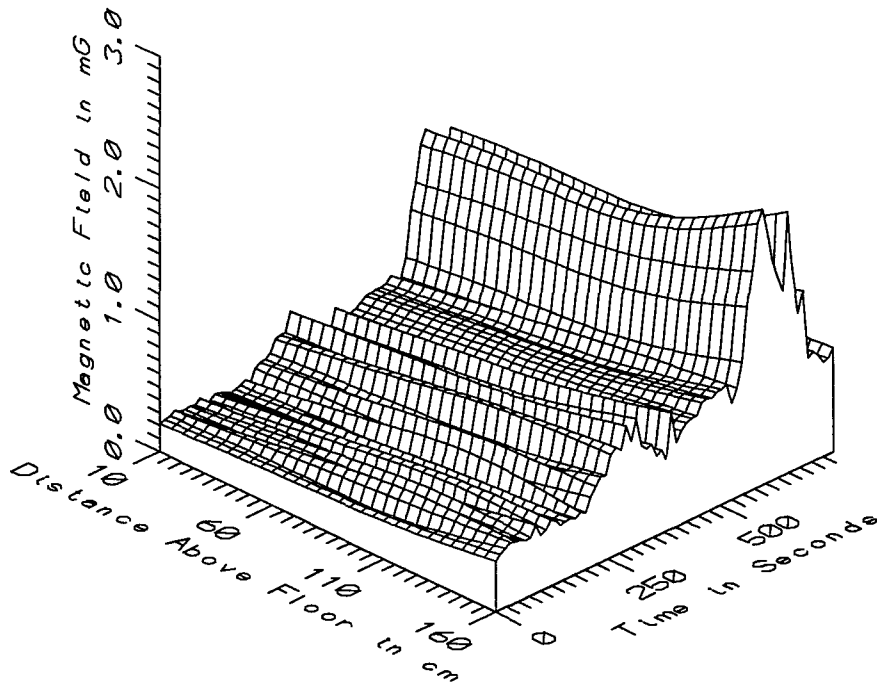
TGV034 - IN CONTROL HOUSE, GAULT ST. DENIS SUB. - STATIC



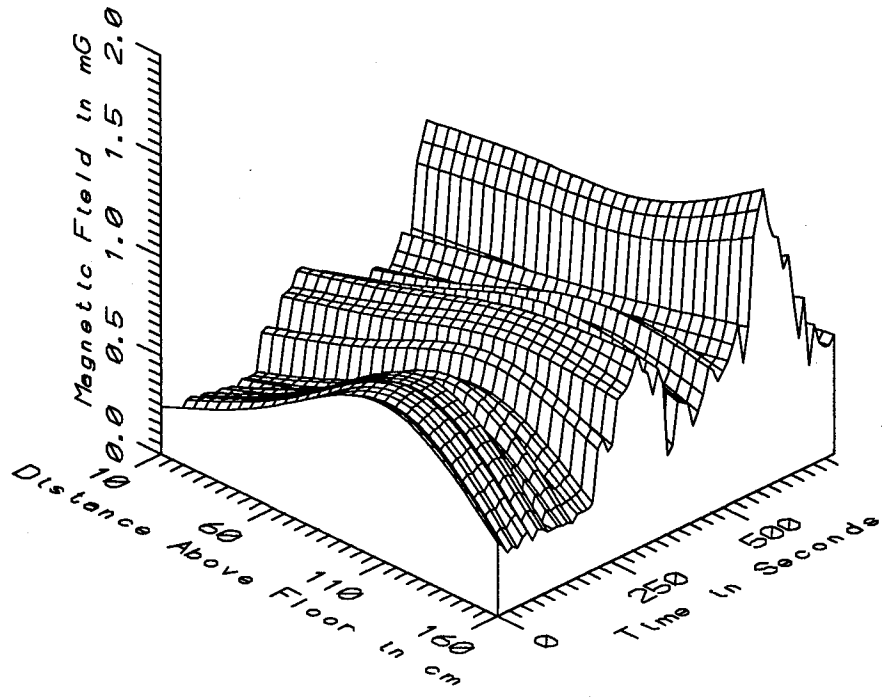
TGV034 - IN CONTROL HOUSE, GAULT ST. DENIS SUB. - LOW FREQ, 5-45Hz



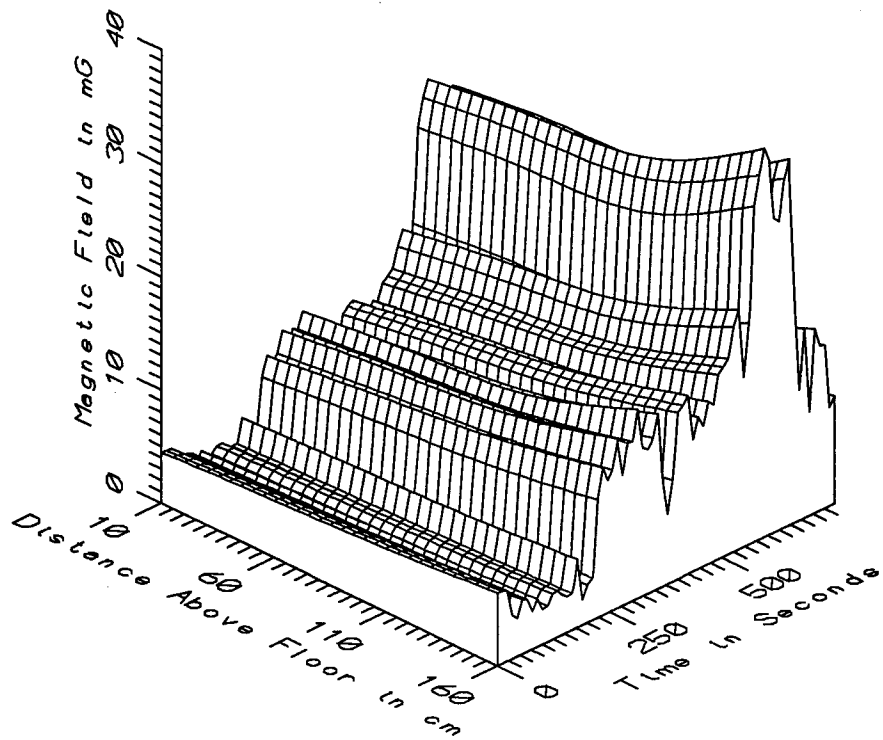
TGV034 - IN CONTROL HOUSE, GAULT ST. DENIS SUB. - POWER FREQ, 50-60Hz



TGV034 - IN CONTROL HOUSE, GAULT ST. DENIS SUB. - POWER HARM, 65-300Hz



TGV034 - IN CONTROL HOUSE, GAULT ST. DENIS SUB. - HIGH FREQ, 305-2560Hz



TGV034 - IN CONTROL HOUSE, GAULT ST. DENIS SUB. - ALL FREQ, 5-2560Hz

| TGV034 - IN CONTROL HOUSE AT GAULT ST. DENIS SUBSTATION | | TOTAL OF 68 SAMPLES | | | | |
|---|-------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|------------------------------|
| FREQUENCY BAND | HEIGHT ABOVE FLOOR (cm) | MINIMUM MAGNETIC FIELD (mG) | MAXIMUM MAGNETIC FIELD (mG) | AVERAGE MAGNETIC FIELD (mG) | STANDARD DEVIATION (mG) | COEFFICIENT OF VARIATION (%) |
| STATIC | 10 | 343.58 | 345.17 | 344.27 | 0.36 | 0.10 |
| | 110 | 344.48 | 346.00 | 345.18 | 0.36 | 0.10 |
| | 160 | 356.74 | 358.07 | 357.40 | 0.27 | 0.08 |
| 5-45Hz | 10 | 0.12 | 0.65 | 0.32 | 0.12 | 39.38 |
| LOW FREQ | 110 | 0.11 | 0.79 | 0.28 | 0.16 | 56.40 |
| | 160 | 0.44 | 0.89 | 0.55 | 0.10 | 18.74 |
| 50-60Hz | 10 | 1.43 | 26.05 | 8.91 | 6.37 | 71.50 |
| PWR FREQ | 110 | 1.77 | 28.66 | 10.69 | 6.91 | 64.68 |
| | 160 | 2.10 | 34.26 | 12.95 | 8.38 | 64.67 |
| 65-300Hz | 10 | 0.20 | 1.48 | 0.49 | 0.33 | 66.84 |
| PWR HARM | 110 | 0.28 | 1.65 | 0.67 | 0.34 | 50.30 |
| | 160 | 0.39 | 2.10 | 0.84 | 0.43 | 50.81 |
| 305-2560Hz | 10 | 0.16 | 1.03 | 0.41 | 0.22 | 53.62 |
| HIGH FREQ | 110 | 0.31 | 1.17 | 0.74 | 0.16 | 21.41 |
| | 160 | 0.28 | 1.50 | 0.65 | 0.31 | 47.12 |
| 5-2560Hz | 10 | 1.50 | 26.12 | 8.94 | 6.38 | 71.32 |
| ALL FREQ | 110 | 1.96 | 28.74 | 10.75 | 6.90 | 64.14 |
| | 160 | 2.22 | 34.37 | 13.01 | 8.38 | 64.37 |

