



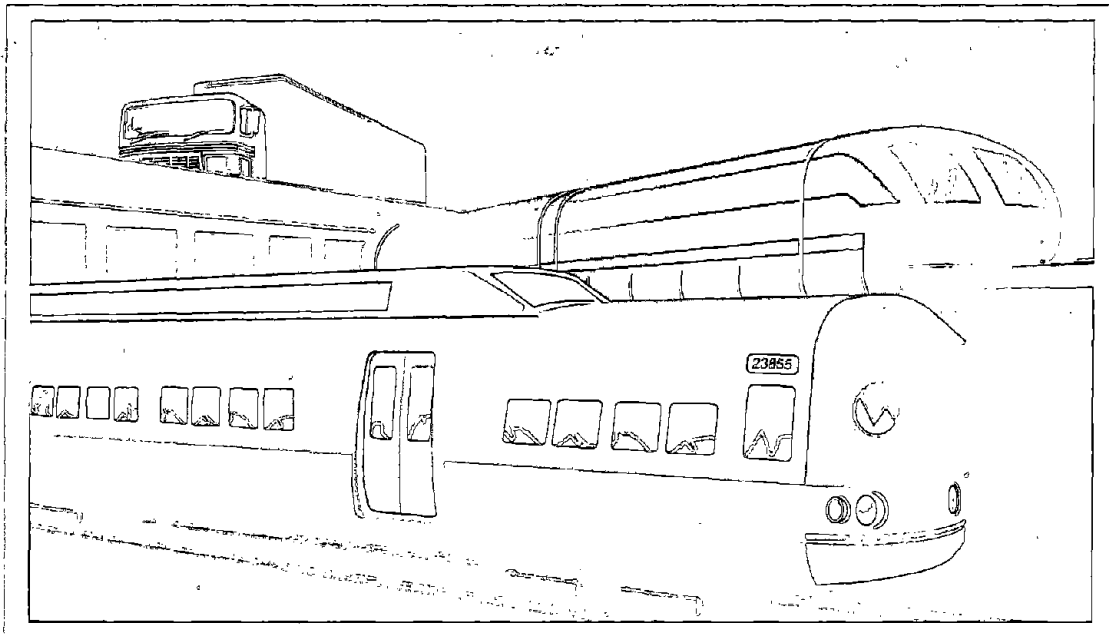
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Safety of High Speed Guided Ground Transportation Systems

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Magnetic and Electric Field Testing of the Amtrak Northeast Corridor and New Jersey Transit/North Jersey Coast Line Rail Systems

Volume II: Appendices



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13. ABSTRACT (Maximum 200 words)

The report is Volume 2 of a series.

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). The characterization of electric and magnetic fields (EMF) produced by both steady (dc) and alternating currents (ac) at power frequency (50 Hz in Europe and 60 Hz in the U.S.) and above, in the Extreme Low Frequency (ELF) range (3-3000 Hz), is of interest with respect to any potential health effects these fields may have on the public and on transportation workers. An EMF survey of National Rail Passengers Corporation trains operating on the Northeast Corridor (NEC) was performed, as part of a comprehensive comparative safety assessment of the German Transrapid (TR-07) maglev system, and of existing (NEC and transit trains) and advanced rail systems (the French TGV). This report provides the analysis of results (Vol. I Analysis), and detailed data summaries (Vol. II, Appendices) of representative EMF profiles for NEC rail technologies, facilities, operating conditions, and locations. A portable magnetic field monitoring system (augmented to include an electric fields probe) was used to sample, record and store three-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.

14. SUBJECT TERMS Electric and Magnetic Fields (EMF); Static (or Direct Current, dc) Magnetic Field; Alternating Current (ac) Magnetic Field; Extreme Low Frequency (ELF); Power Frequency (PF); Harmonics; Transients; Fourier Analysis; North East Corridor (NEC); Electrified Rail; AMTRAK; Conventional Rail; Diesel Locomotive; Electric Locomotive; New Jersey Transit; Transit System; Trains; Railroad Stations; Power Substations; Catenary; EMDEX Personal Magnetic Field Exposure Monitor; Digital Audio Tape (DAT) Recorder; MultiWave Magnetic Field Recording System.	15. NUMBER OF PAGES 632
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**SYSTEME 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 (μ T)
1 milliGauss (mG)	= .1 microTesla (μ T)
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 facilitate the introduction of advanced high speed guided ground transportation (HSGGT) technology to the US, including both magnetic levitation (maglev) and steel wheel on rail alternatives, such as the French Train a Grande Vitesse (TGV), the Swedish Tilt Train (X2000), or the German Intercity Express (ICE). HSGGT technology options can be expected to undergo public scrutiny and environmental assessment in order to convincingly establish their safety.

Timely development of technical information required for rulemaking initiatives is needed to ensure the public safety. An emerging concern that relates to the environment, worker's 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 public 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.

This report presents data on static and alternating (AC) magnetic fields and AC electric fields obtained on rail systems operating along the Northeast Corridor (NEC), and on a branch of the New Jersey Transit commuter rail system (with electrification similar to that proposed for the northern part of the NEC). 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 Electric Research and Management, Inc. (ERM) personnel designated as authors for each volume, led by Fred M. Dietrich, Program Manager and William E. Feero, President. The technical monitor for this task and for the entire series of reports characterizing Extreme Low Frequency (ELF) Electric and Magnetic Fields (EMF) for rail technologies was Dr. Aviva Brecher of the DOT/RSPA 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. Jim Smailes and Richard Cogswell of FRA also provided support and advice for the NEC EMF task. Valuable assistance with the measurements and logistics, as well as review comments were provided by Robert Verhelle and Ed Schnoering of Amtrak, and by Robert Falcon of the New Jersey Transit.

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APPENDIX A

DESCRIPTION OF APPENDED DATA

The following 53 appendices contain a detailed reporting of the magnetic field characteristics measured by the waveform capture system onboard the electrified and non-electrified railroads 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 53 repetitive waveform datasets collected during the March 30 to April 3, 1992 measurement program along the Northeast Corridor and the North Jersey Coast Line. Table A-1 provides a list of the datasets and relevant parameters, and the appendix where each dataset may be found. Appendices may also 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 Drawings A-1 through A-11.) 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.

Locomotive load current was logged along with locomotive speed when possible during the measurements in locomotive cabs. Positive current values indicate the total dc current to the four traction motors while negative values indicate current to the braking resistors. These profiles do not directly indicate catenary current.

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 100 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 was 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

In some special cases, such as lateral profile measurements where datasets represent unique measurements not summarized statistically in the foregoing body of this report, statistical summaries of individual datasets are included in the appendix. Those summaries consist of tables of field strength and variability parameters and, on occasion, are supplemented with graphical representations of those summary data.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and processing, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure throughout its lifecycle.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of a data-driven approach in decision-making and the need for continuous monitoring and improvement of the data management process.

TABLE A-1

INDEX OF REPETITIVE WAVEFORM DATA
 NORTHEAST CORRIDOR MEASUREMENTS
 MARCH 30 - APRIL 3, 1992

DATA FILE NUMBER	APPENDIX CONTAINING DATA	DATE/TIME	PROBE LOCATION FIG. STAFF REF.	SAMPLE INTERVAL, SECONDS	NUMBER OF SAMPLES	LOCATION AND TYPE OF MEASUREMENT
		MAR 30				
NEC001	B	10:50-11:09	3-1 1	3 60	20	REAR COACH, AT WINDOW, 25 Hz SECTION
NEC002	C	11:15-11:21	3-1 1	3 5	61	SAME
NEC003	D	11:23-11:29	3-1 2	3 5	60	REAR COACH AT AISLE, 25 Hz SECTION
NEC004	E	11:32-11:41	3-1 2	3 60	10	SAME
NEC005	F	11:56-12:03	3-1 10	5	61	FRONT OF FIRST COACH AT WINDOW, 25 Hz SECTION
NEC006	G	12:07-12:18	3-1 10	60	12	SAME
NEC007	H	12:22-12:28	3-1 9	5	61	FRONT OF FIRST COACH AT AISLE, 25 Hz SECTION
NEC008	I	12:30-12:39	3-1 9	60	10	SAME
NEC009	J	12:46-12:56	3-1 7	5	102	REAR OF FIRST COACH AT AISLE, 25 Hz SECTION
NEC010	K	14:20-14:36	3-1 9	5	153	FRONT OF FIRST COACH AT AISLE, 60 Hz SECTION

TABLE A-1 CONTINUED

DATA FILE NUMBER	APPENDIX CONTAINING DATA	DATE/TIME	PROBE LOCATION FIG. STAFF REF.	SAMPLE INTERVAL, SECONDS	NUMBER OF SAMPLES	LOCATION AND TYPE OF MEASUREMENT
NEC011	L	14:56-15:04	3-1 4 3	5	71	REAR COACH AT AISLE, 60 Hz SECTION
NEC012	M	15:06-15:32	3-1 4 3	60	27	SAME
NEC013	N	15:34-16:12	3-1 5 3	60	39	REAR COACH AT WINDOW, TRANSITION FROM 60 Hz SECTION TO DIESEL SECTION
NEC014	O	16:15-16:24	3-1 4 3	60	10	REAR COACH AT AISLE, DIESEL SECTION
NEC015	P	16:27-16:33	3-1 4 3	5	61	SAME
NEC016	Q	16:46-16:55	3-1 8 -	5	76	FRONT OF FIRST COACH AT AISLE, DIESEL SECTION
NEC017	R	17:05-17:33	3-1 6 3	60	29	REAR COACH AT AISLE, DIESEL SECTION
		MAR 31				
NEC018	S	07:52-07:55	8-1 48 -	5	39	BOSTON DISPATCH AREA-CETC CONSOLE, VERTICAL PROFILE
NEC019	T	08:00-08:02	8-1 49 -	5	24	BOSTON DISPATCH AREA-CETC CONSOLE, HORIZONTAL PROFILE
NEC020	U	08:07-08:09	8-2 50 -	5	24	BOSTON DISPATCH AREA UPS ROOM
NEC021	V	08:26-08:28		5	24	SOUTH STATION PASSENGER WAITING AREA
NEC022	W	09:24-09:29	4-1 20 -	5	49	DIESEL LOCOMOTIVE, VERTICAL PROFILE AT ENGINEER'S SEAT

TABLE A-1 CONTINUED

DATA FILE NUMBER	APPENDIX CONTAINING DATA	DATE/TIME	PROBE LOCATION FIG. STAFF REF.	SAMPLE INTERVAL, SECONDS	NUMBER OF SAMPLES	LOCATION AND TYPE OF MEASUREMENT
NEC023	X	09:30-09:49	4-1 20	60	20	SAME
NEC024	Y	09:57-10:00	4-1 22	5	10	DIESEL LOCOMOTIVE, HORIZONTAL PROFILE, ALONG CENTERLINE OF CAB
NEC025	Z	10:02-10:05	4-1 23	5	11	DIESEL LOCOMOTIVE, VERTICAL PROFILE AT FIREMAN'S SEAT
NEC026	AA	12:29-12:34	4-1 24	5	56	ELECTRIC LOCOMOTIVE (60 Hz) VERTICAL PROFILE AT ENGINEER'S SEAT
NEC027	AB	12:37-12:42	4-1 26	5	60	ELECTRIC LOCOMOTIVE (60 Hz) VERTICAL PROFILE AT FIREMAN'S SEAT
NEC028	AC	12:45-12:48	4-1 27	5	28	ELECTRIC LOCOMOTIVE (60 Hz) HORIZONTAL PROFILE AT CENTERLINE OF CAB
NEC029	AD	12:49-13:23	4-1 24	60	34	ELECTRIC LOCOMOTIVE (60 Hz) VERTICAL PROFILE AT ENGINEER'S SEAT
NEC030	AE	13:49-13:58	4-1 24	5	100	ELECTRIC LOCOMOTIVE TRANSITION FROM (60-25 Hz) VERTICAL PROFILE AT ENGINEER'S SEAT
NEC031	AF	15:04-15:07		5	36	PENN STATION PASSENGER WAITING AREA
NEC032	AG	15:21-15:28	4-1 24	5	79	ELECTRIC LOCOMOTIVE (25 Hz) VERTICAL PROFILE AT ENGINEER'S SEAT
NEC033	AH	15:29-15:33	4-1 26	5	38	ELECTRIC LOCOMOTIVE (25 Hz) VERTICAL PROFILE AT FIREMAN'S SEAT

TABLE A-1 CONTINUED

DATA FILE NUMBER	APPENDIX CONTAINING DATA	DATE/TIME	PROBE LOCATION FIG. STAFF REF.	SAMPLE INTERVAL, SECONDS	NUMBER OF SAMPLES	LOCATION AND TYPE OF MEASUREMENT
NEC034	AI	15:34-15:39	4-1 27 25	5	60	ELECTRIC LOCOMOTIVE (25 Hz) HORIZONTAL PROFILE AT CENTERLINE OF CAB
NEC035	AJ	15:43-16:12	4-1 24 25	60	30	ELECTRIC LOCOMOTIVE (25 Hz) VERTICAL PROFILE ENGINEER'S SEAT
NEC036	AK	17:02-17:23	3-1 11 12	60	22	FIRST COACH AT AISLE, 25 Hz SECTION
NEC037	AL	12:58-13:17	7-1 54 55	60	20	OUTSIDE 25 Hz SUBSTATION AT PRINCETON JUNCTION, NJ
NEC038	AM	13:43-14:17	6-1 37 38	5	317	STATION PLATFORM-PRINCETON JUNCTION, NJ (25 Hz SECTION)
NEC039	AN	14:38-14:41	5-1 29 30	5	29	WAYSIDE MEASUREMENT NEAR PRINCETON JUNCTION (25 Hz SECTION)
NEC040	AO	14:43-14:52	5-1 29 30	5	44	SAME
NEC041	AP	09:27-09:44	5-1 31 32	5	196	WAYSIDE MEASUREMENT NEAR RYE, NY (60 Hz SECTION)
NEC042	AQ	10:26-10:48	6-1 39 40	5	196	STATION PLATFORM - NEW ROCHELLE, NY (60 Hz SECTION)

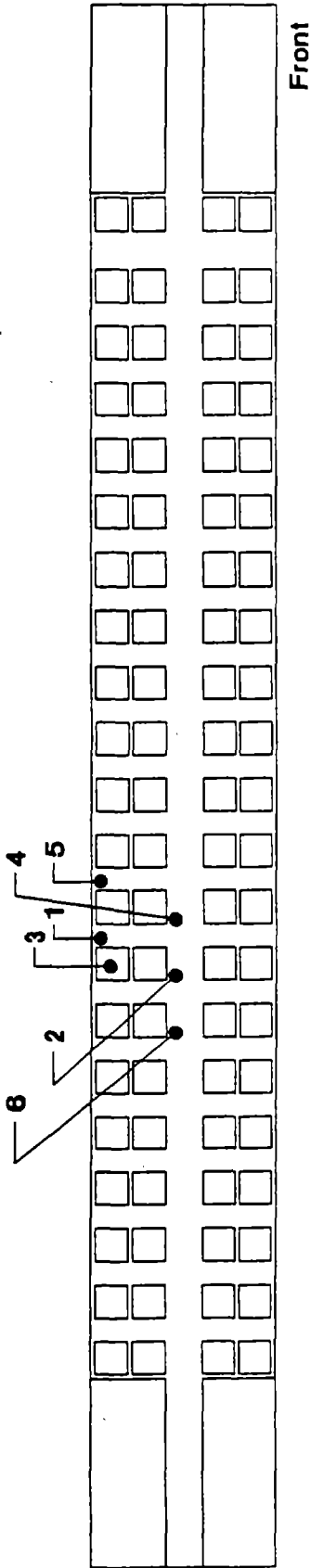
TABLE A-1 CONTINUED

DATA FILE NUMBER	APPENDIX CONTAINING DATA	DATE/TIME	PROBE LOCATION FIG. STAFF REF.	SAMPLE INTERVAL, SECONDS	NUMBER OF SAMPLES	LOCATION AND TYPE OF MEASUREMENT
NEC043	AR	11:17-12:00	6-1 39 40	5	168	SAME
NEC044	AS	12:41-12:42	6-2 41	5	12	STATION PLATFORM AND SUBSTATION AT MT. VERNON, NY (60 Hz SECTION)
NEC045	AT	12:49-12:50	7-2 51-52	5	10	OUTSIDE 60 Hz SUBSTATION AT MT. VERNON, NY
NEC046	AU	17:32-18:00	6-2 42-44 45-47	5	162	STATION PLATFORM-RED BANK, NJ (JERSEY COAST LINE)
NEC047	AV	18:26-18:42	5-1 33 34	5	105	WAYSIDE MEASUREMENT NEAR RED BANK, NJ (JERSEY COAST LINE)
NEC048	AW	APR 3 07:05-07:25	3-2 13-18 19	5	137	VARIOUS COACH LOCATIONS, (JERSEY COAST LINE)
NEC049	AX	08:16-08:22	4-1 24 25	60	6	ELECTRIC LOCOMOTIVE (JERSEY COAST LINE) VERTICAL PROFILE AT ENGINEER'S SEAT
NEC050	AY	08:22-08:34	4-1 24 25	5	86	SAME
NEC051	AZ	08:35-08:43	4-1 24, 27, 28 25	5	60	ELECTRIC LOCOMOTIVE, (JERSEY COAST LINE) VARIOUS LOCATIONS

TABLE A-1 CONTINUED

DATA FILE NUMBER	APPENDIX CONTAINING DATA	DATE/TIME	PROBE LOCATION FIG. STAFF	REF.	SAMPLE INTERVAL, SECONDS	NUMBER OF SAMPLES	LOCATION AND TYPE OF MEASUREMENT
NEC052	BA	09:52-10:14	7-3	53	60	23	OUTSIDE SUBSTATION (JERSEY COAST LINE) NEAR RED BANK, NJ
NEC053	BB	11:22-11:24	5-1	35	5	23	WAYSIDE MEASUREMENT NEAR RED BANK, NJ (JERSEY COAST LINE)

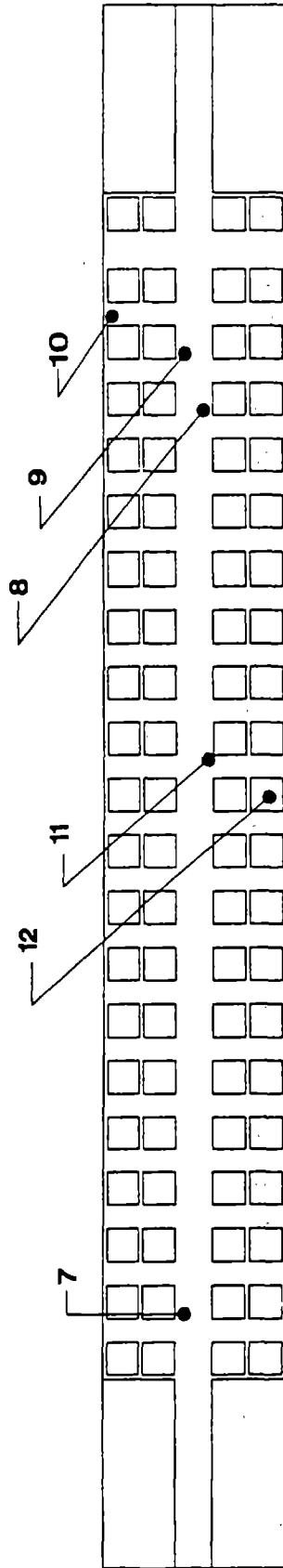
AMTRAK, Home Coach



Front

A-11

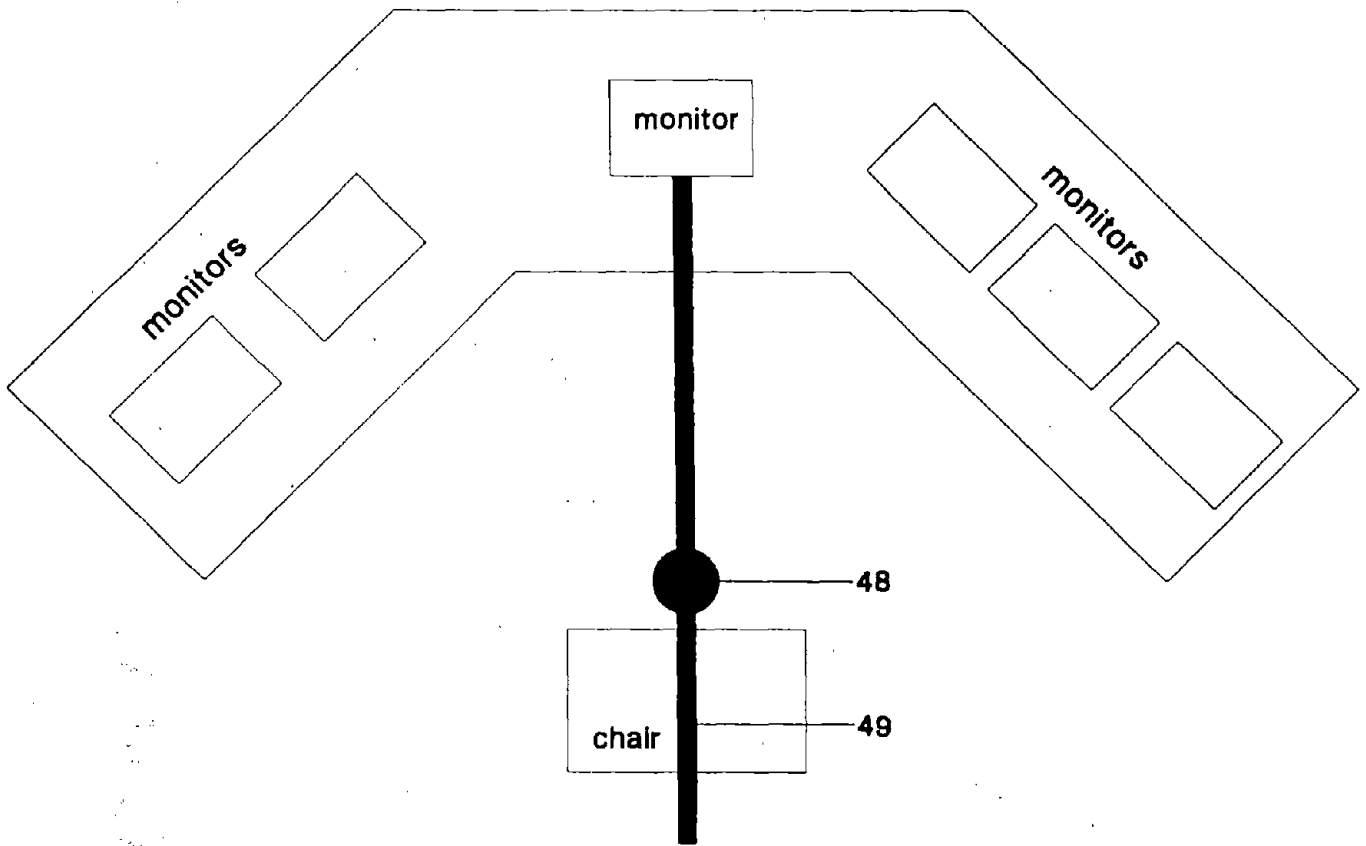
AMTRAK, 1st Coach



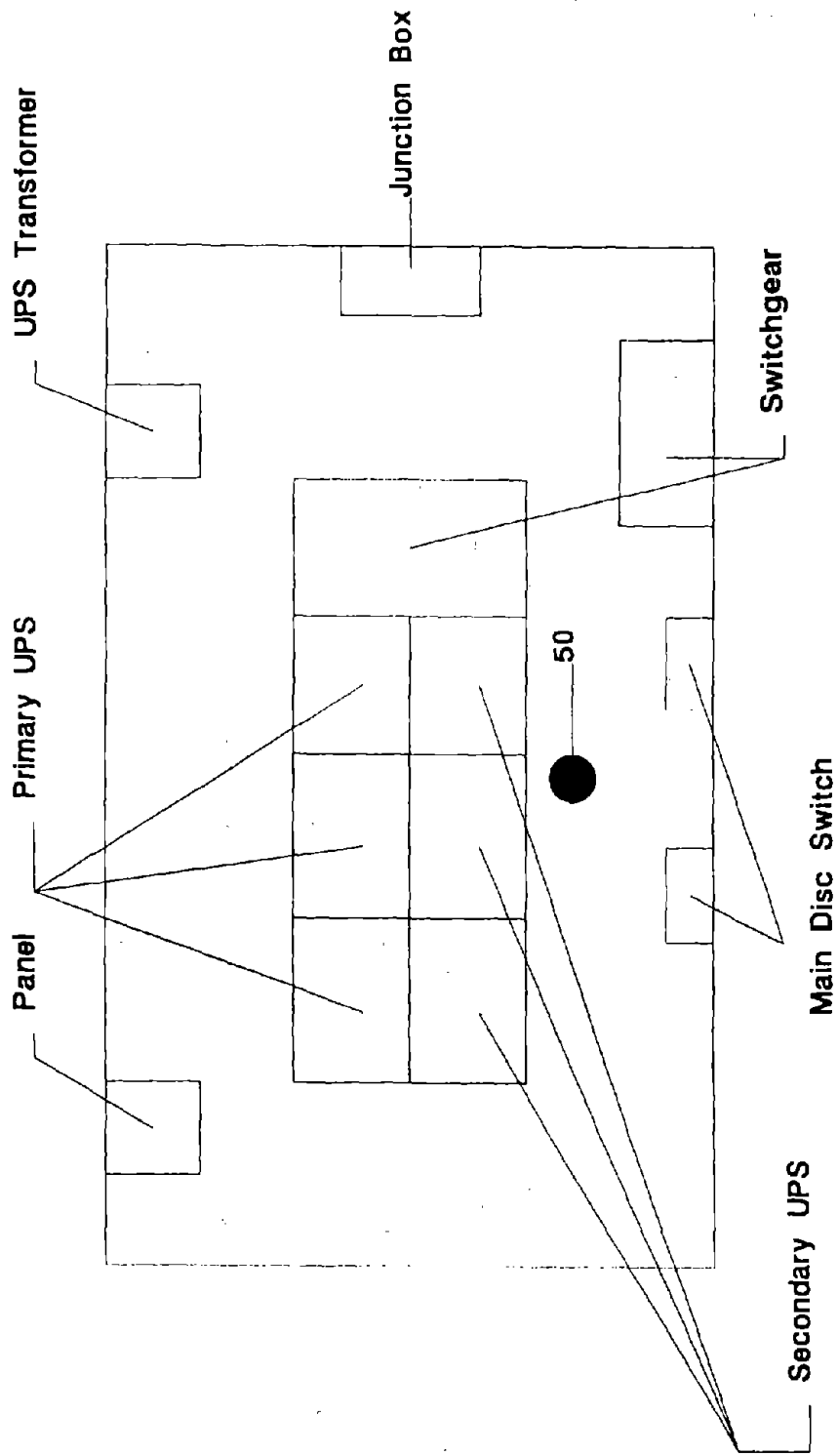
Front

DRAWING A-1

Dispatcher's Room

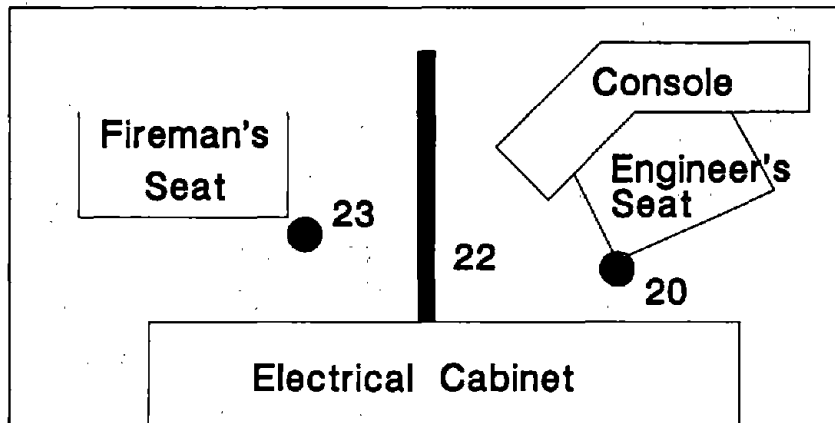


DRAWING A-2

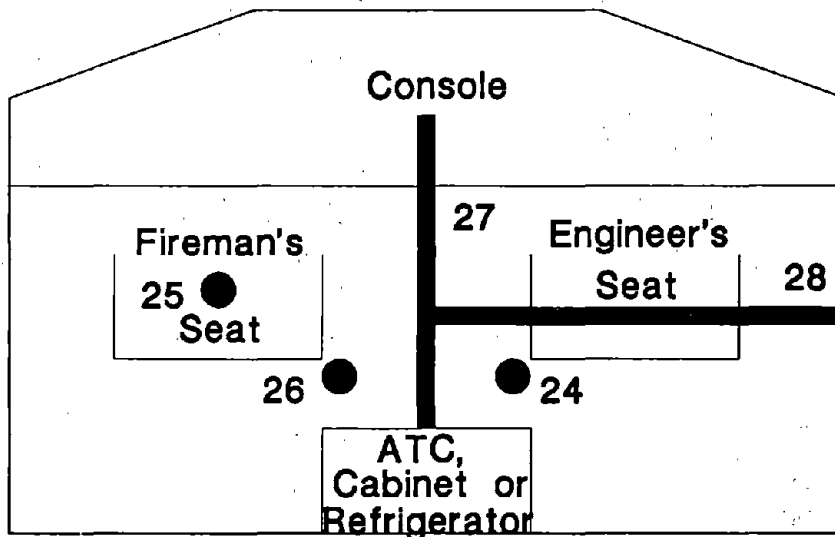


DRAWING A-3

Diesel Locomotive

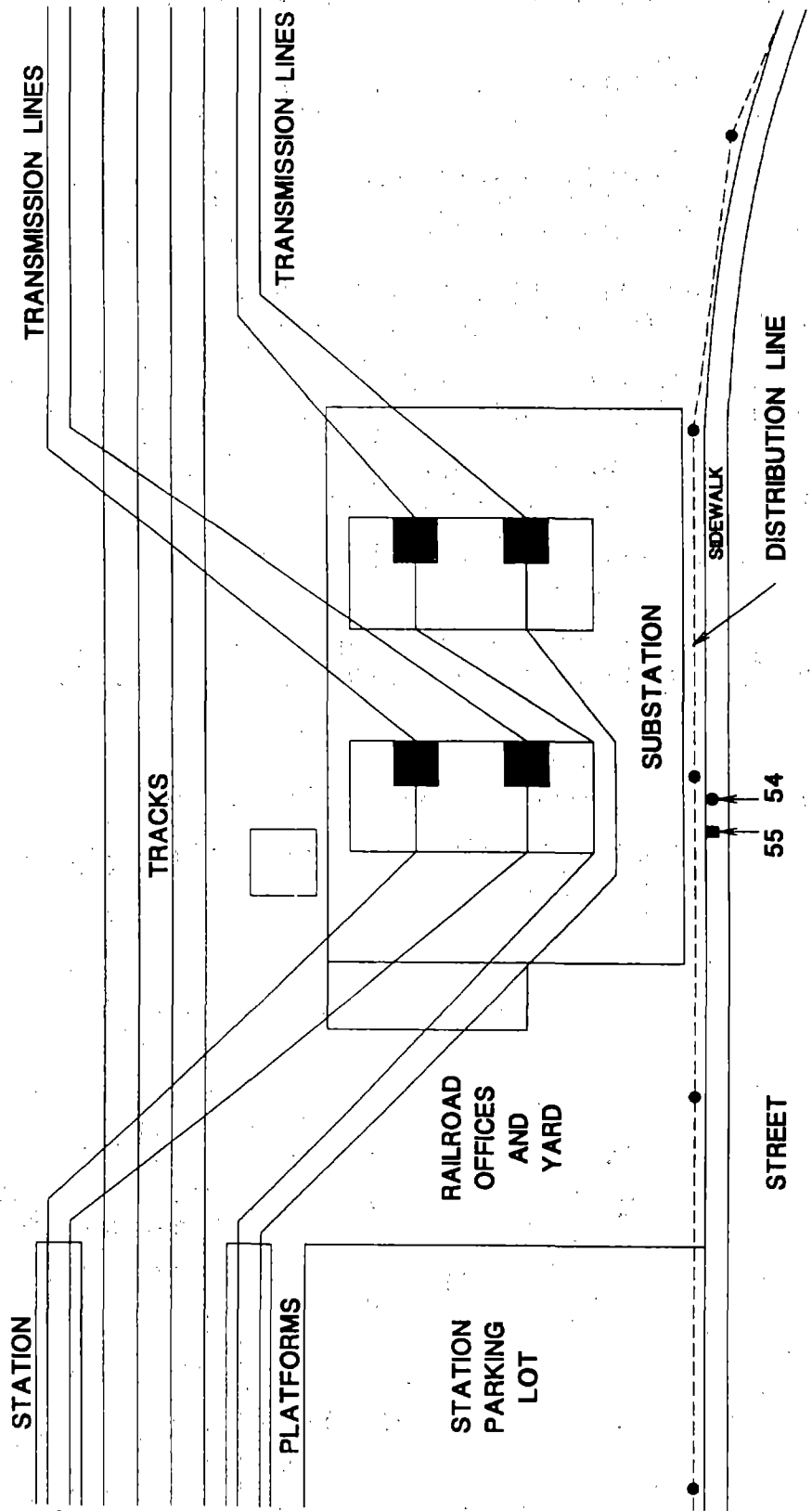


Electric Locomotive



DRAWING A-4

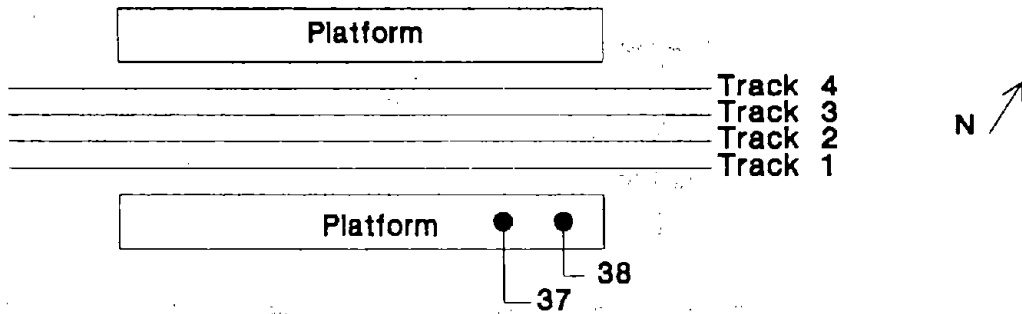
PRINCETON JUNCTION SUBSTATION
(25Hz SECTION OF THE NEC)



DRAWING A-5

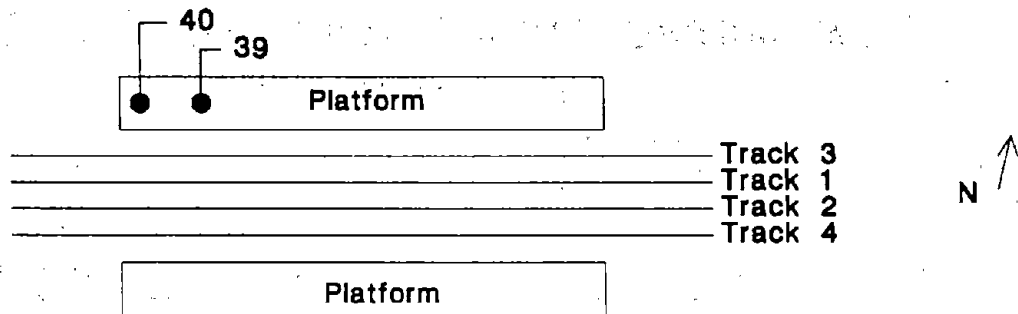
Princeton Junction Station

AMTRAK 25Hz



New Rochelle Station

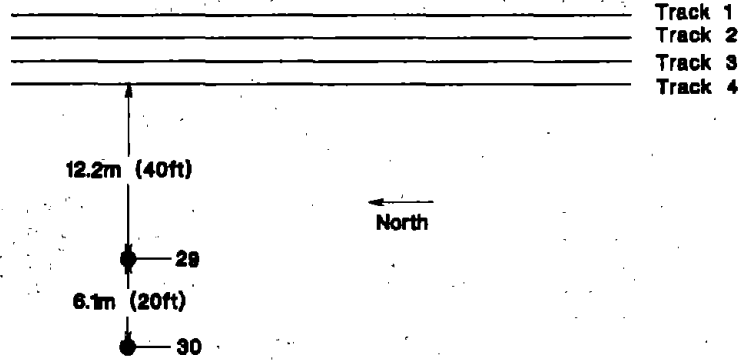
AMTRAK 60Hz



DRAWING A-6

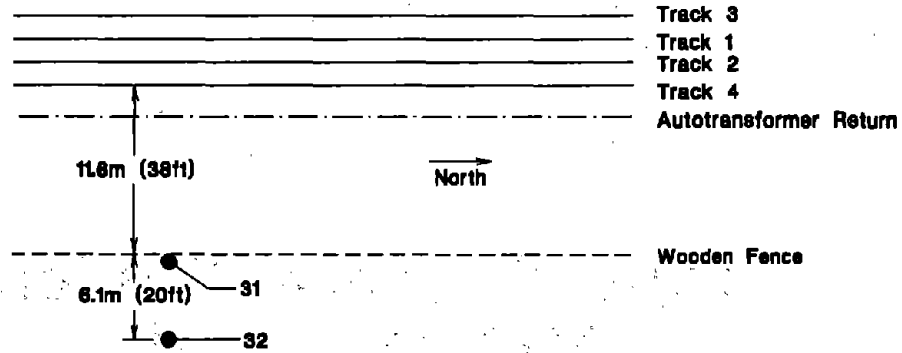
AMTRAK Wayside, Princeton Junction, NJ

(810m (2000ft) North of Station)



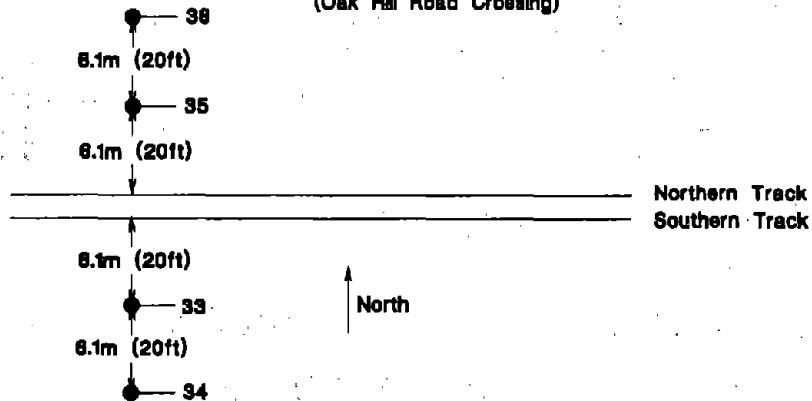
Metro North Wayside, Rye NY

Courtyard Hotel Parking Lot



New Jersey Transit Wayside, Red Bank, NJ

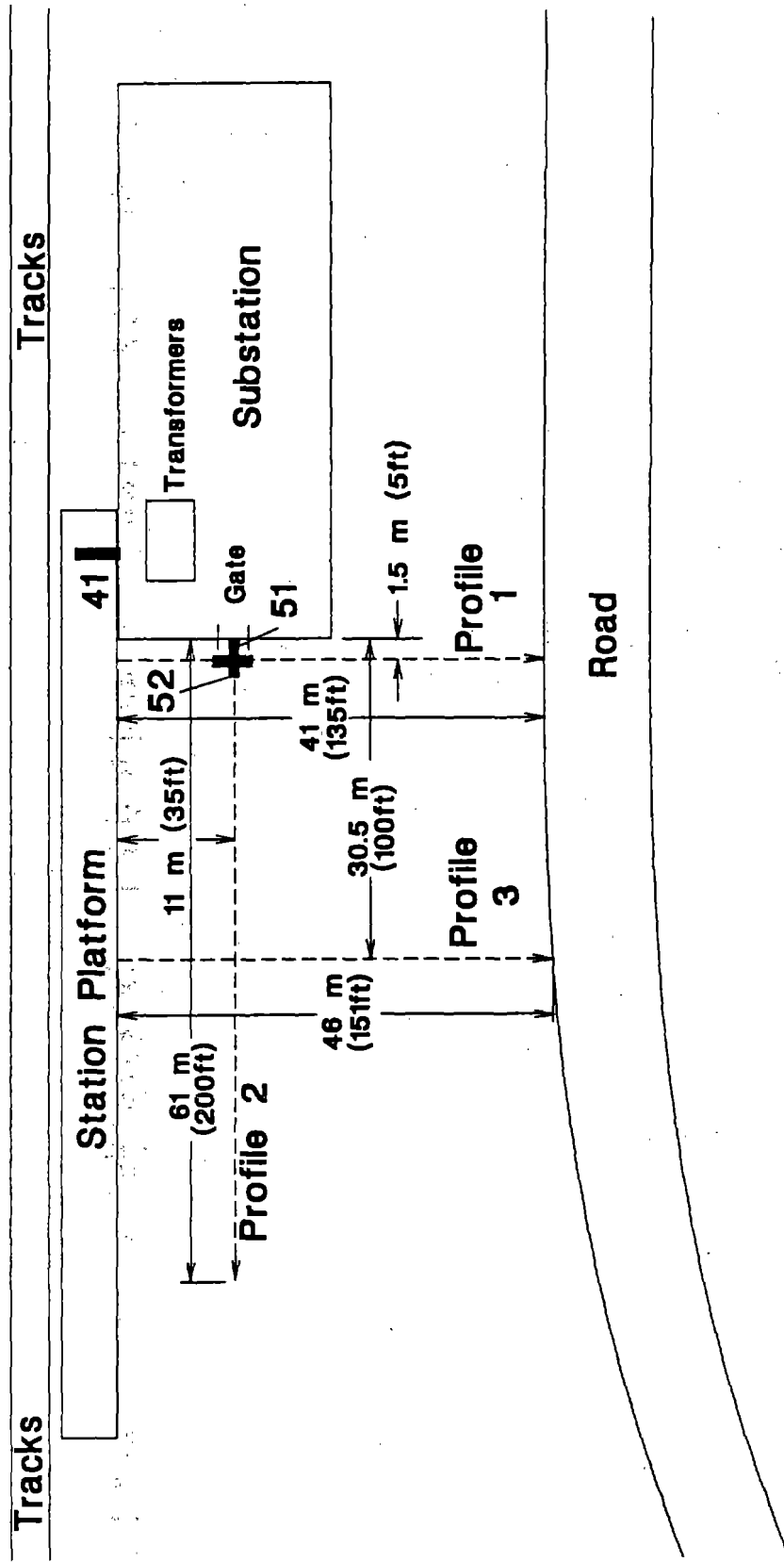
(Oak Hill Road Crossing)



DRAWING A-7

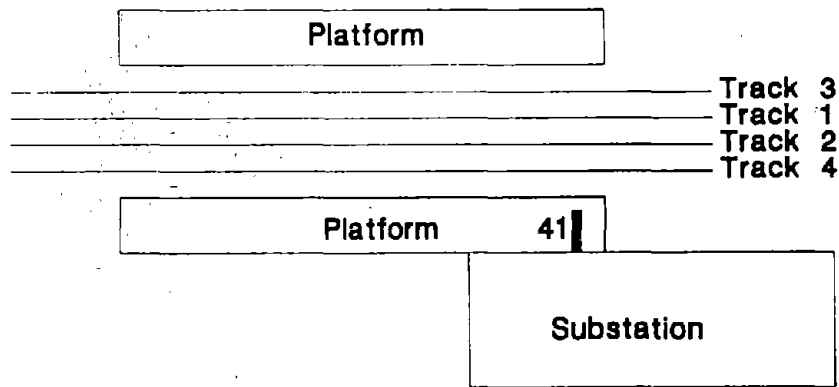
A-17

Mt. Vernon Substation (60 Hz)

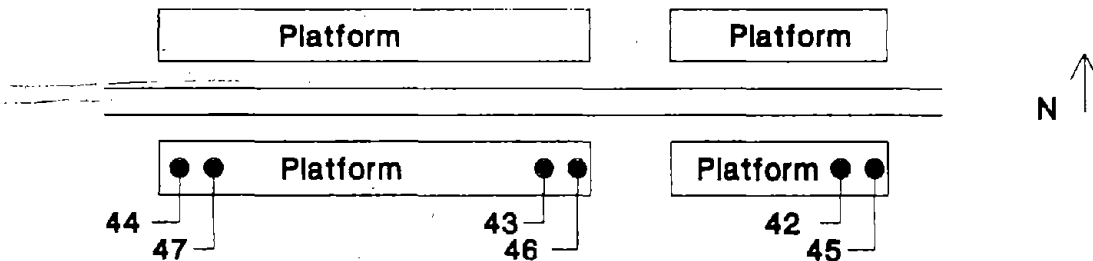


DRAWING A-8

Mt. Vernon AMTRAK 60Hz



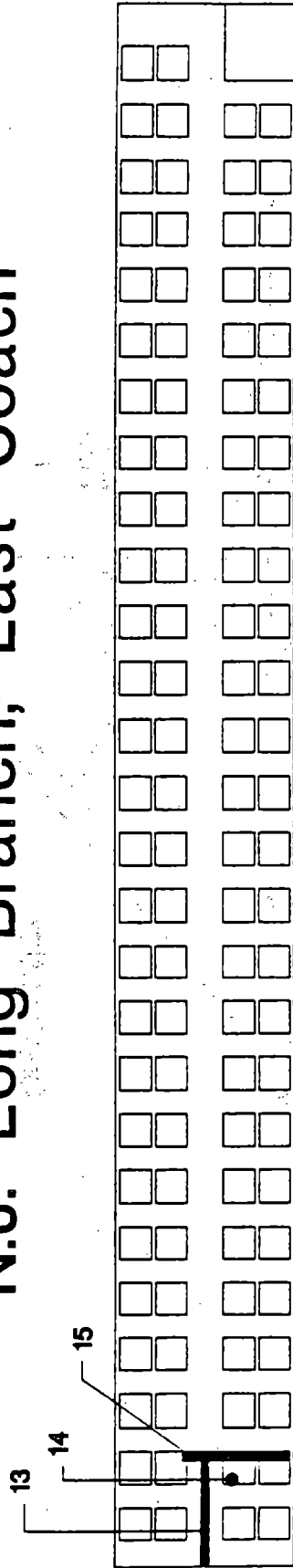
Red Bank Station Long Branch Line



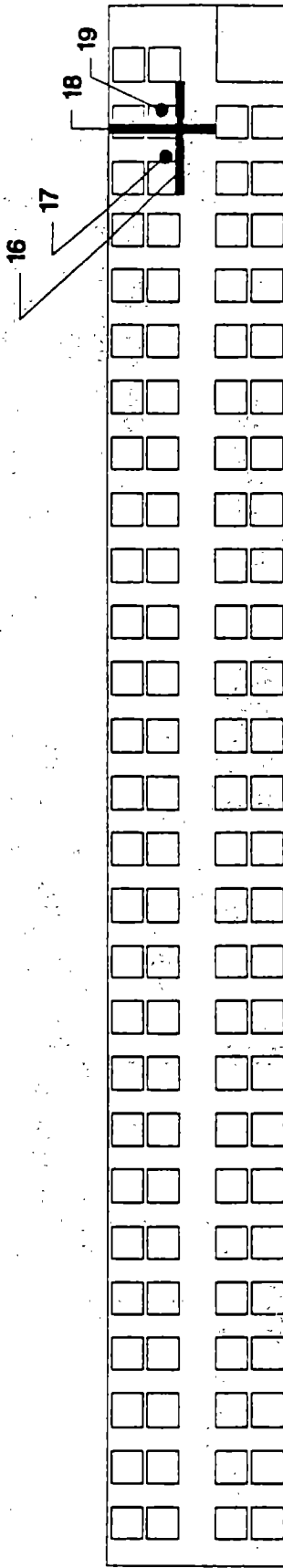
DRAWING A-9

DRAWING A-10

N.J. Long Branch, Last Coach



Front

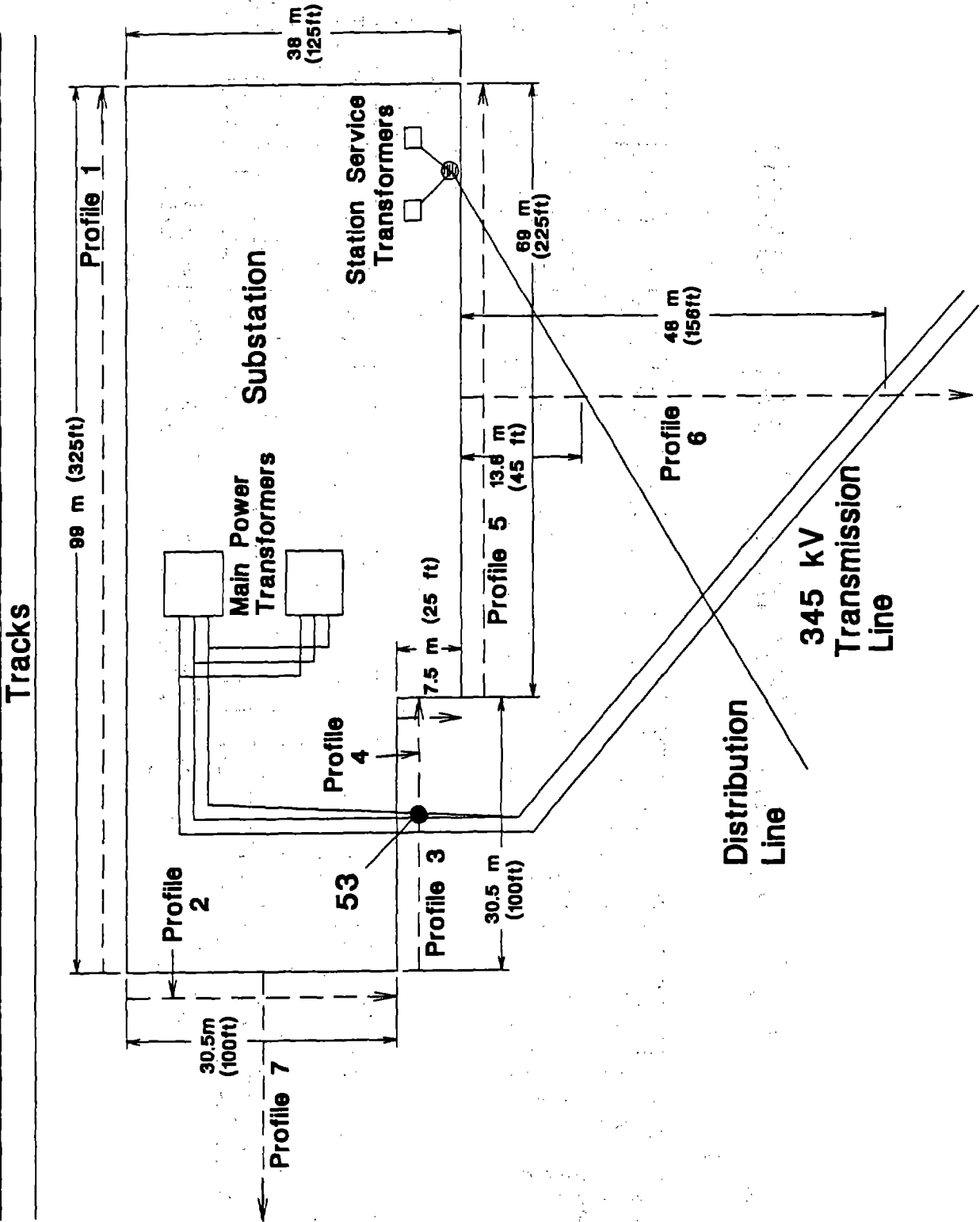


Front

N.J. Long Branch, 1st Coach

DRAWING A-10

Red Bank Substation (New Jersey Transit)



APPENDIX B

DATASET NEC001
HOME (7TH) COACH AT WINDOW, 25 HZ NEC

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

Vehicle Status: Coach trip from BWI Station to
 Baltimore Station

Measurement Date: March 30, 1992

Measurement Time: Start: 10:50:06
 End: 11:09:06

Number of Samples: 20

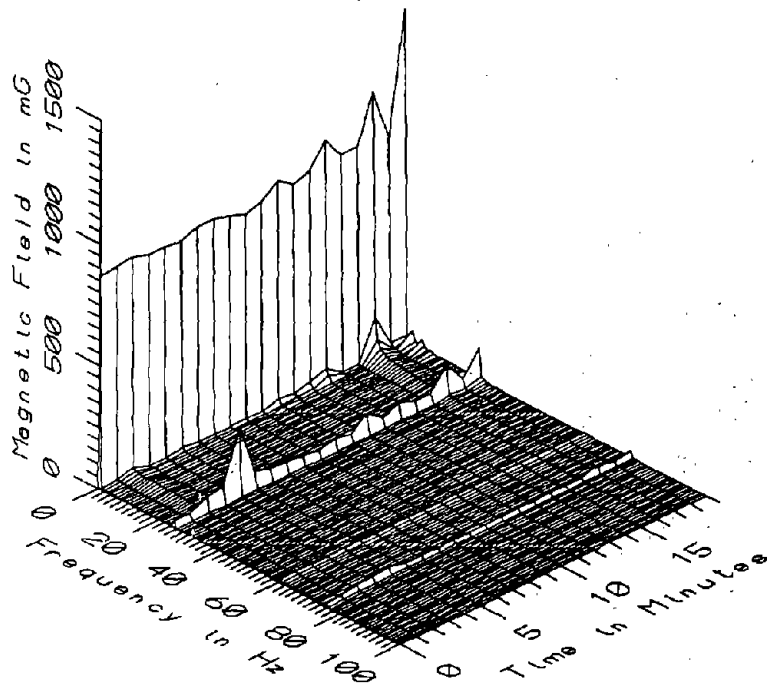
Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

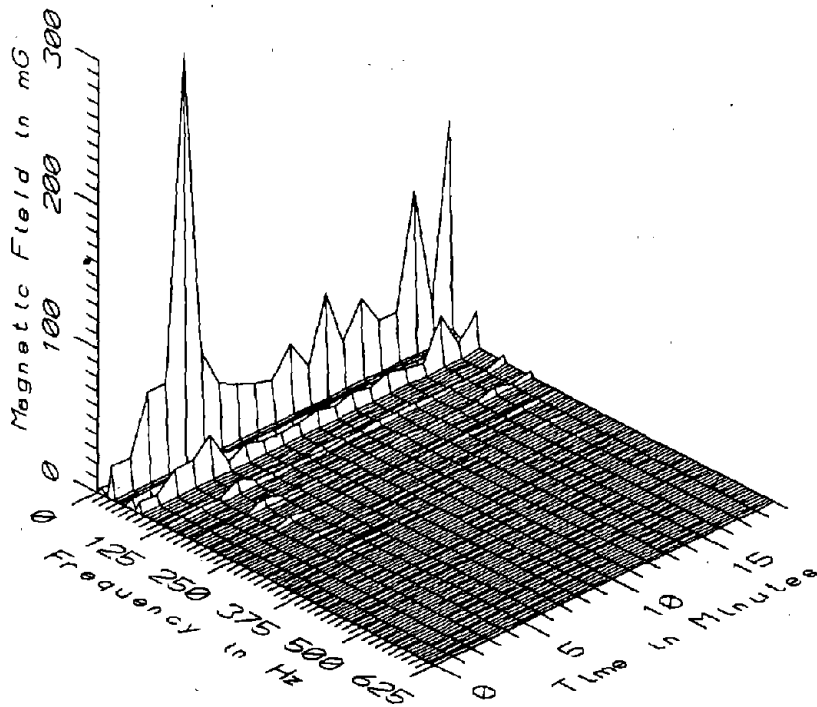
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

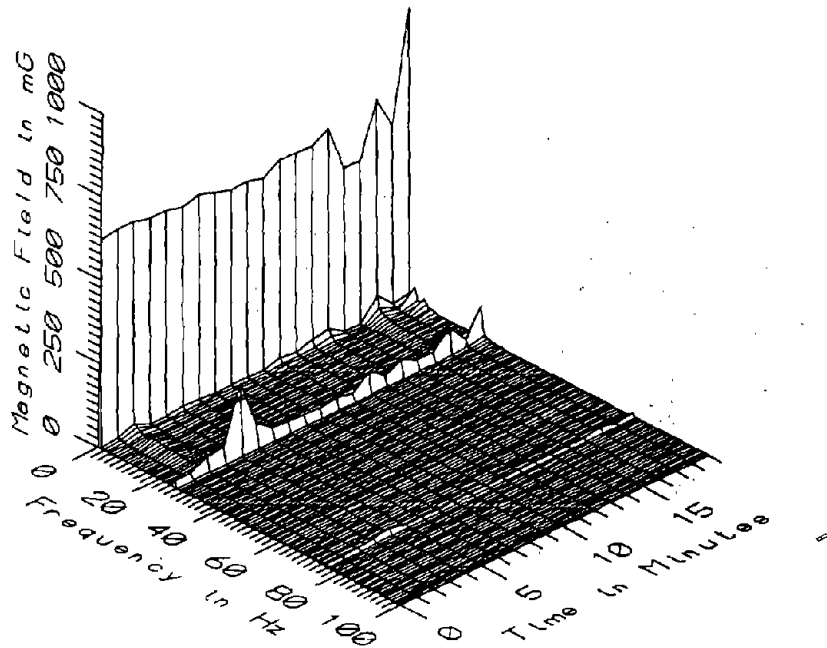
Missing or Suspect Data: None



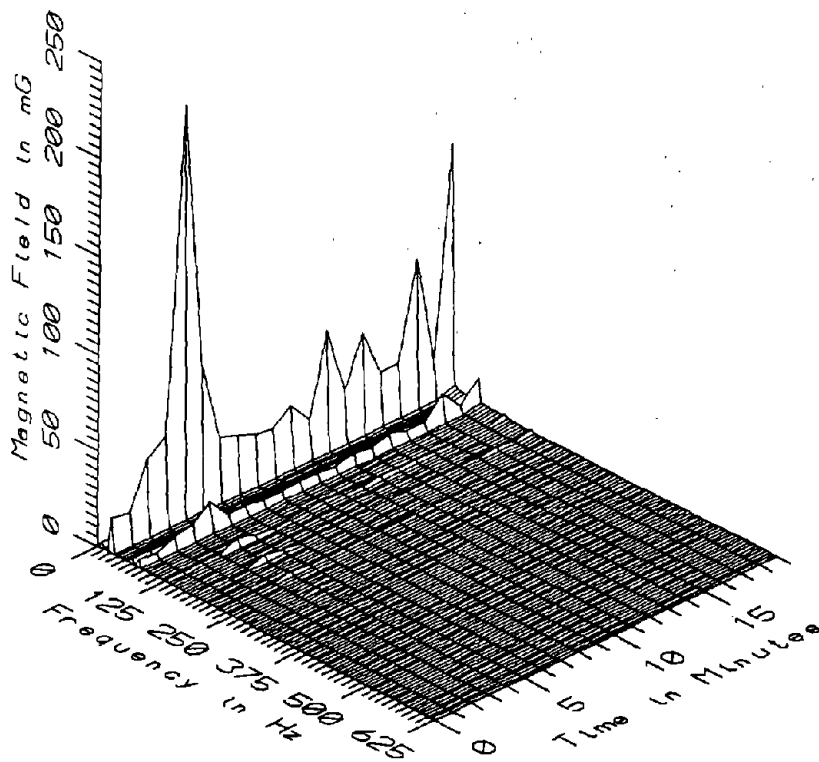
NEC001 - 10cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



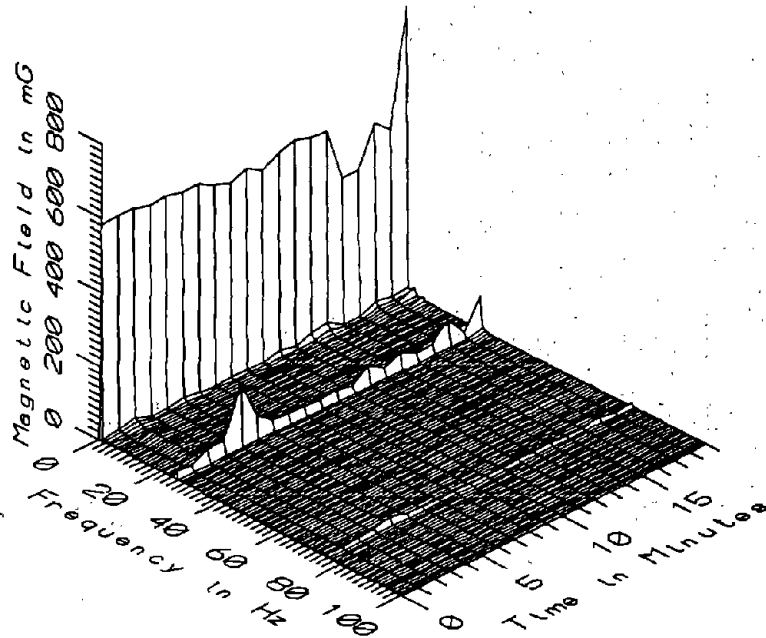
NEC001 - 10cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



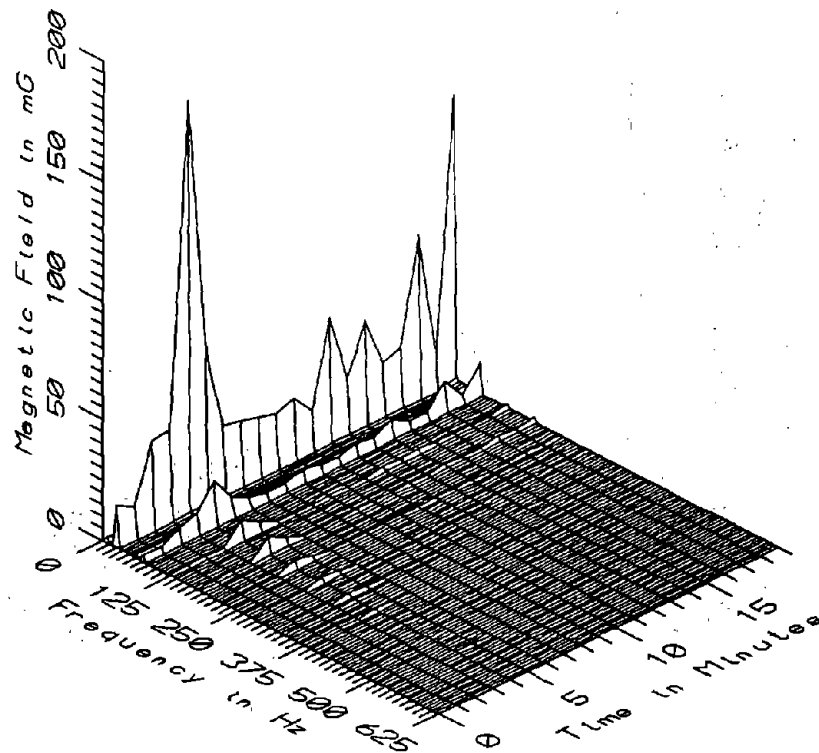
NEC001 - 60cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



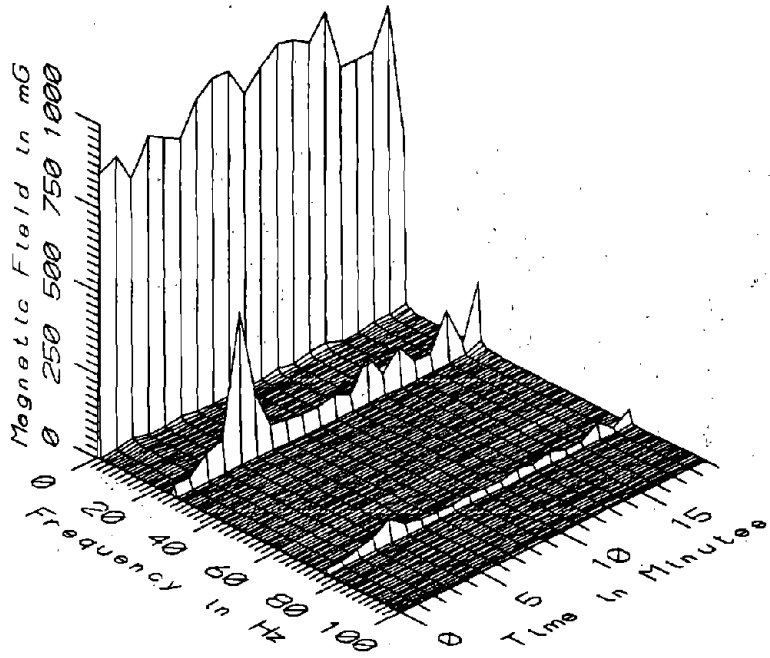
NEC001 - 60cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



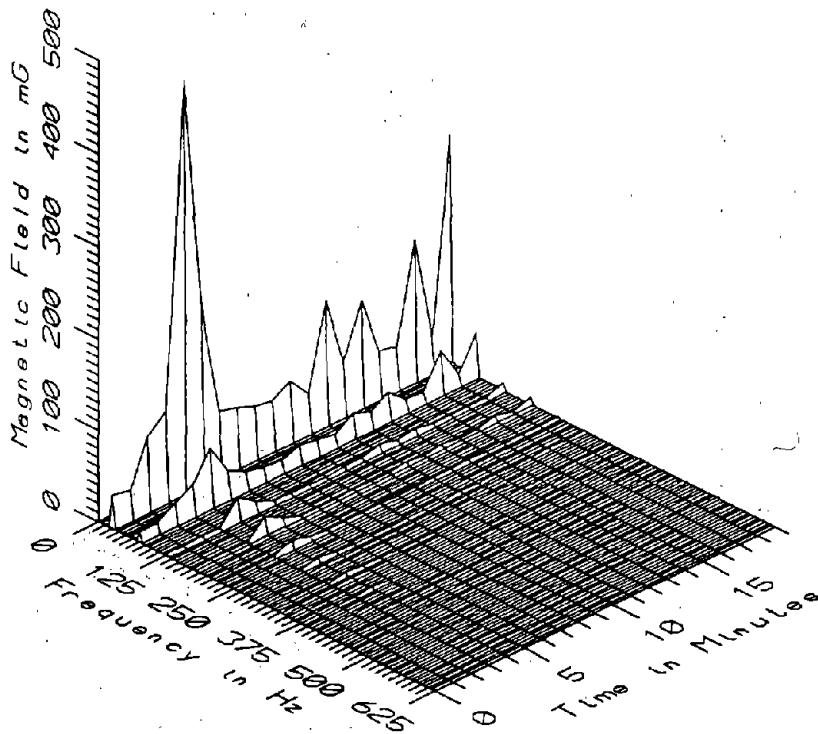
NEC001 - 110cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



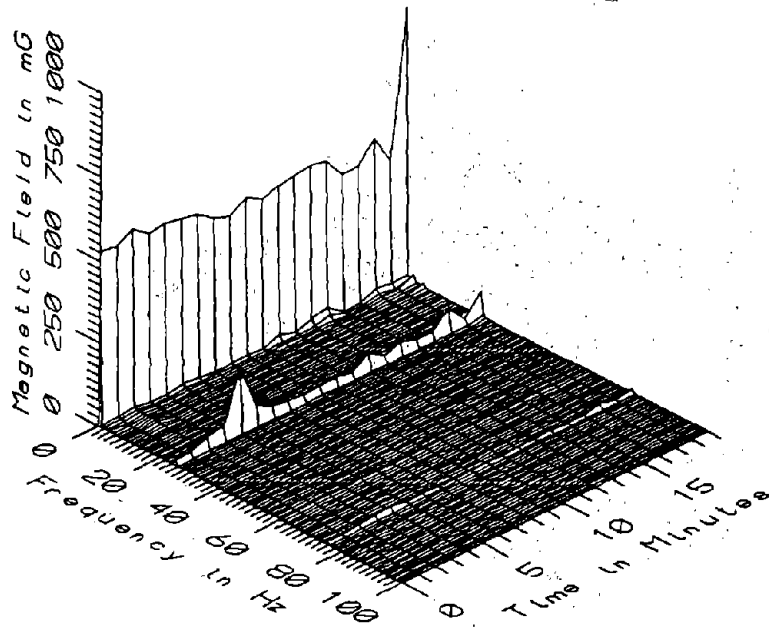
NEC001 - 110cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



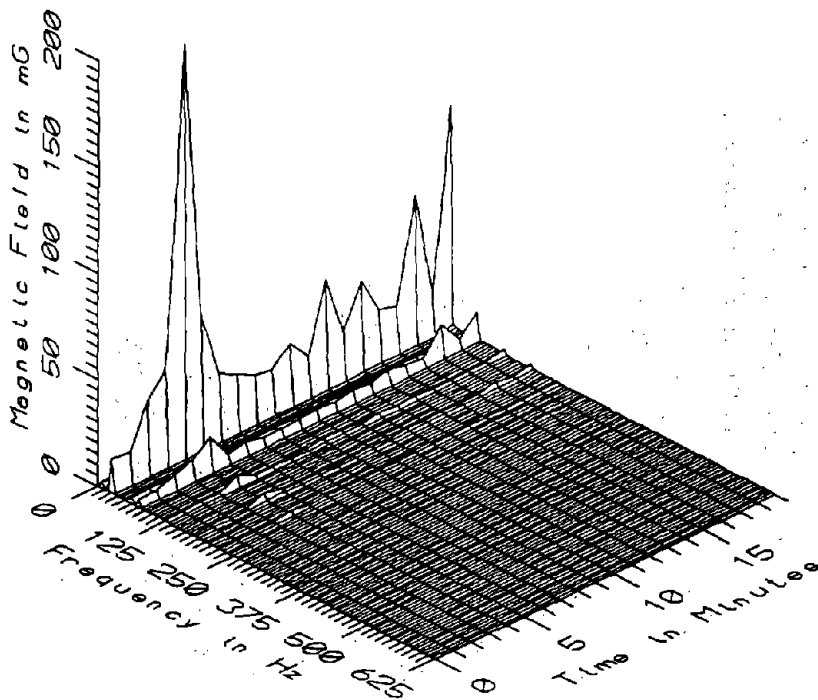
NEC001 - 160cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



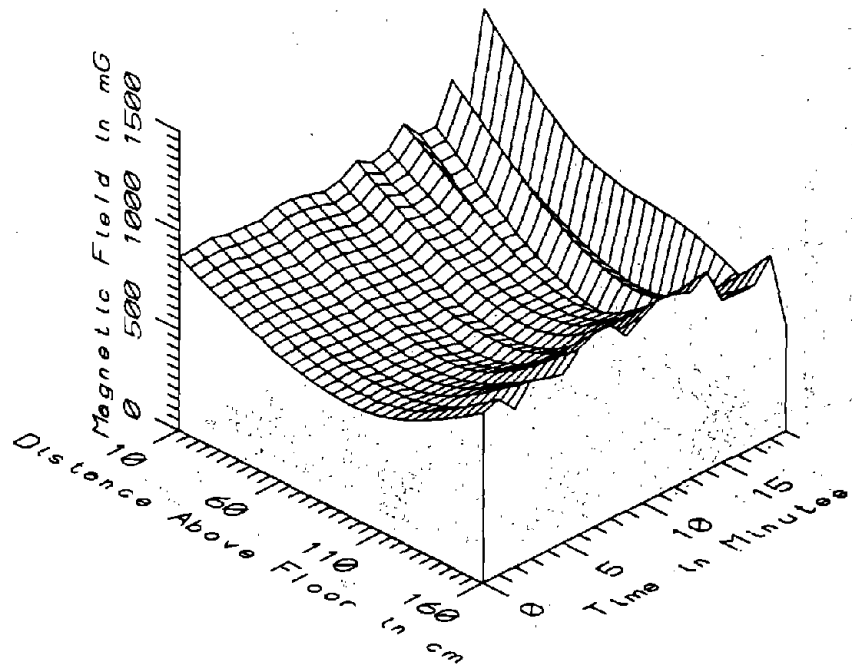
NEC001 - 160cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



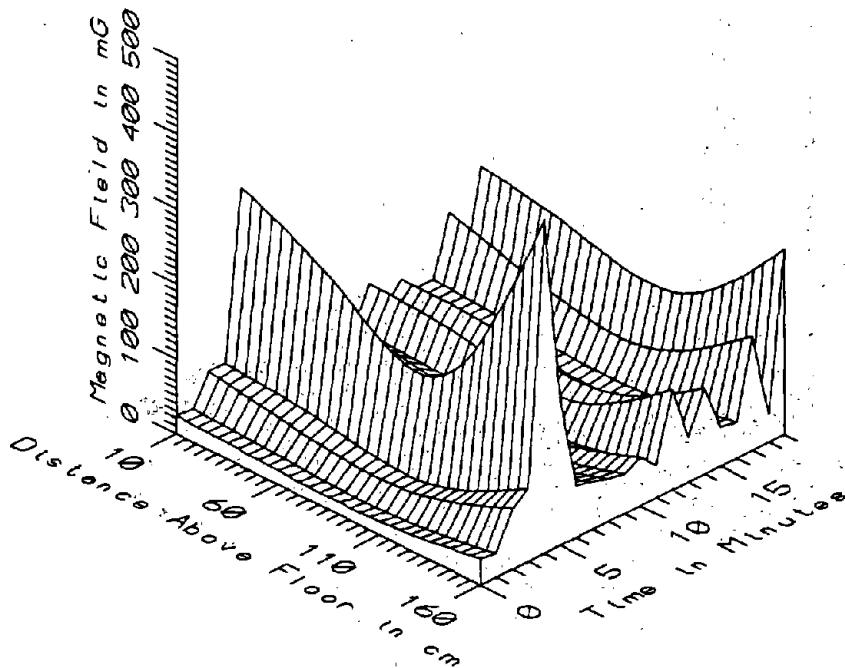
NEC001 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



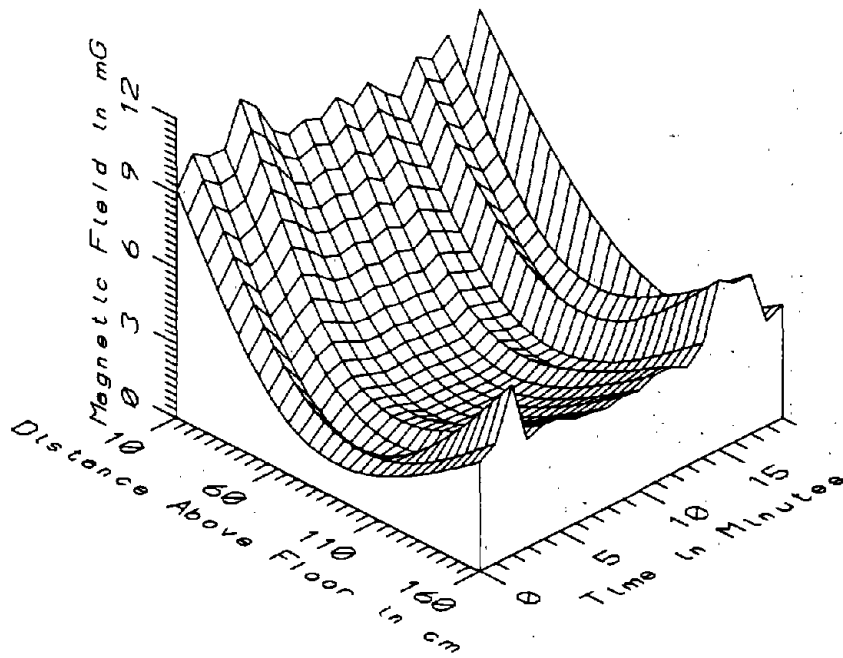
NEC001 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



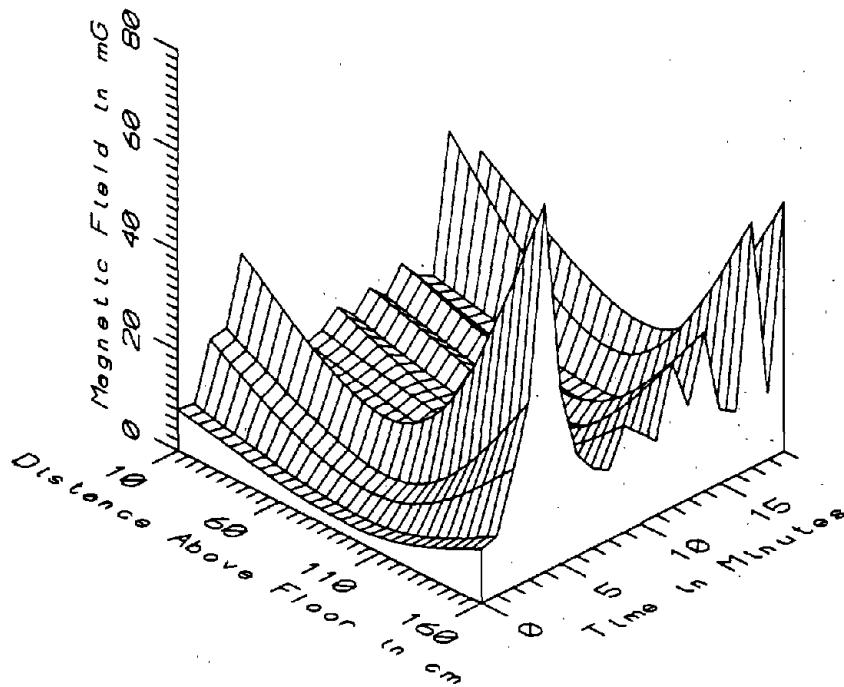
NEC001 - AGAINST SIDE BULKHEAD IN SEVENTH COACH - STATIC



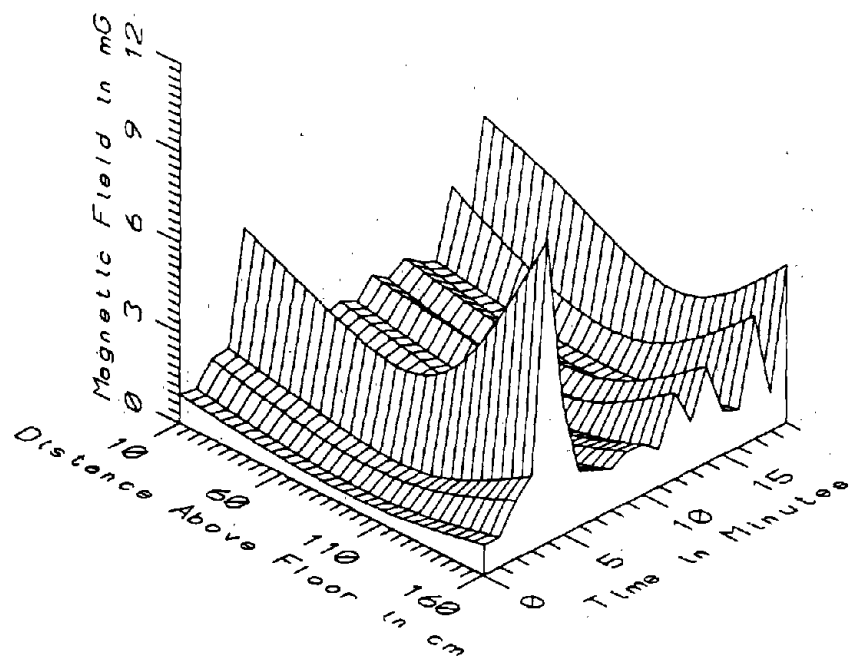
NEC001 - AGAINST SIDE BULKHEAD IN 7TH COACH - LOW FREQ. 5-45Hz



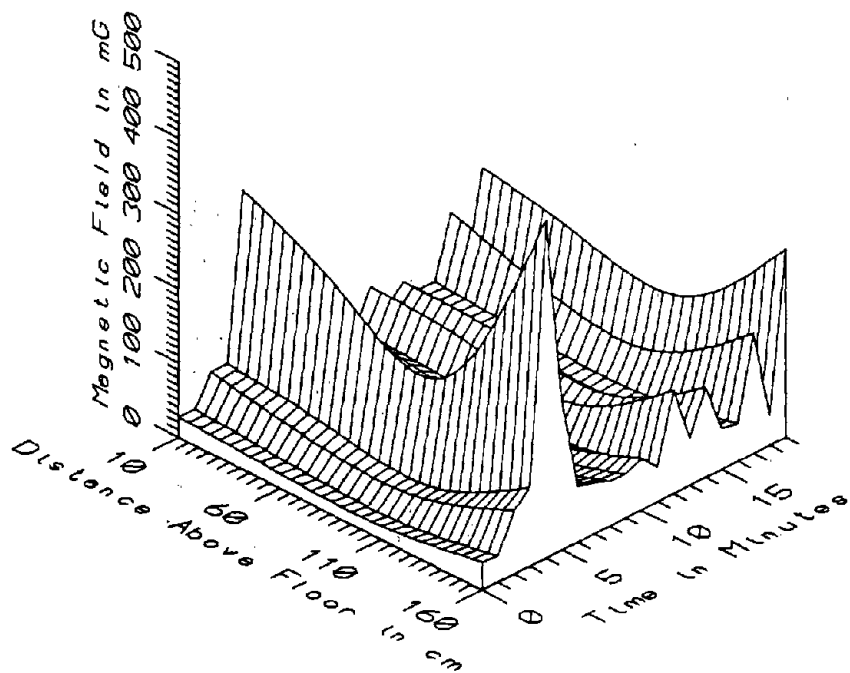
NEC001 - AGAINST SIDE BULKHEAD IN 7TH COACH - POWER FREQ, 50-60Hz



NEC001 - AGAINST SIDE BULKHEAD IN 7TH COACH - POWER HARM, 65-300Hz



NEC001 - AGAINST SIDE BULKHEAD IN 7TH COACH - HIGH FREQ, 305-2560Hz



NEC001 - AGAINST SIDE BULKHEAD IN 7TH COACH - ALL FREQ, 5-2560Hz

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail. The records should be kept up-to-date and should be accessible to all relevant parties.

2. The second part of the document outlines the procedures for handling discrepancies. It is important to identify any errors as soon as possible and to investigate the cause of the discrepancy. Once the cause has been identified, the necessary steps should be taken to correct the error and to prevent it from recurring.

3. The third part of the document discusses the importance of regular communication between all parties involved in the financial process. This includes the management, the accounting department, and the external auditors. Regular communication helps to ensure that everyone is aware of the current status of the financials and any potential issues.

4. The fourth part of the document outlines the responsibilities of each party involved in the financial process. It is important to ensure that everyone understands their role and is held accountable for their actions. This helps to ensure that the financial process is carried out in a professional and efficient manner.

5. The fifth part of the document discusses the importance of maintaining a strong internal control system. This is essential for preventing fraud and for ensuring the accuracy of the financial statements. The internal control system should be designed to identify and prevent any potential weaknesses in the financial process.

APPENDIX C

DATASET NEC002
HOME (7TH) COACH AT WINDOW, 25 HZ NEC

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

Vehicle Status: Train running between stations north
 of Baltimore

Measurement Date: March 30, 1992

Measurement Time: Start: 11:15:15
 End: 11:21:29

Number of Samples: 61

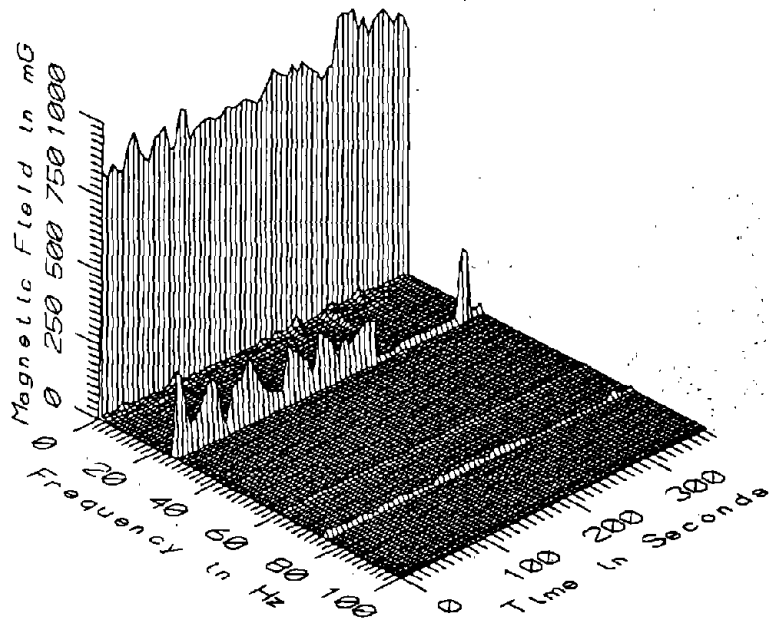
Programmed Sample Interval: 5 sec

Actual Sample Interval: 6.2 sec

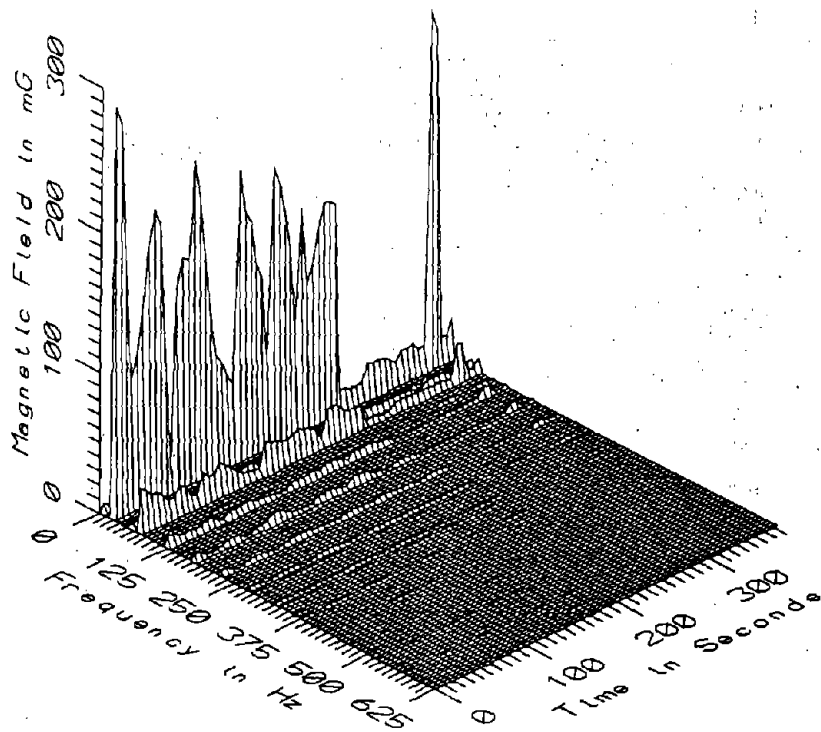
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

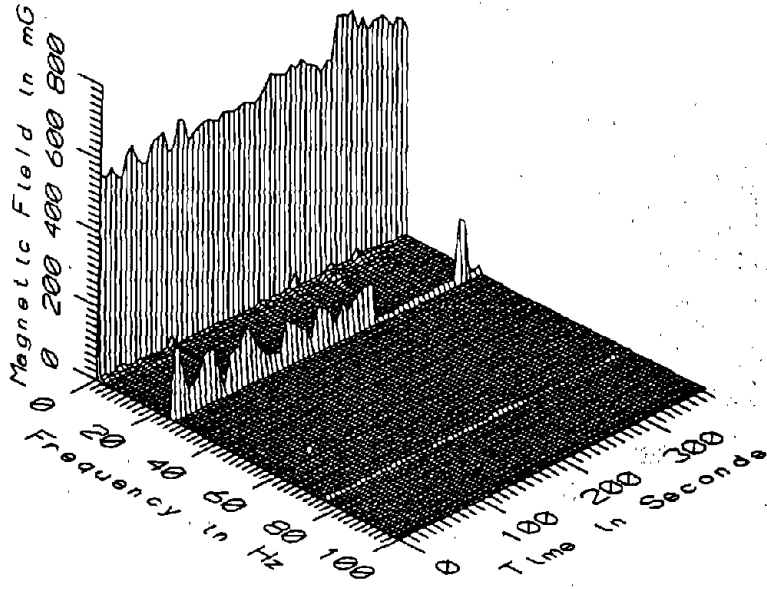
Missing or Suspect Data: None



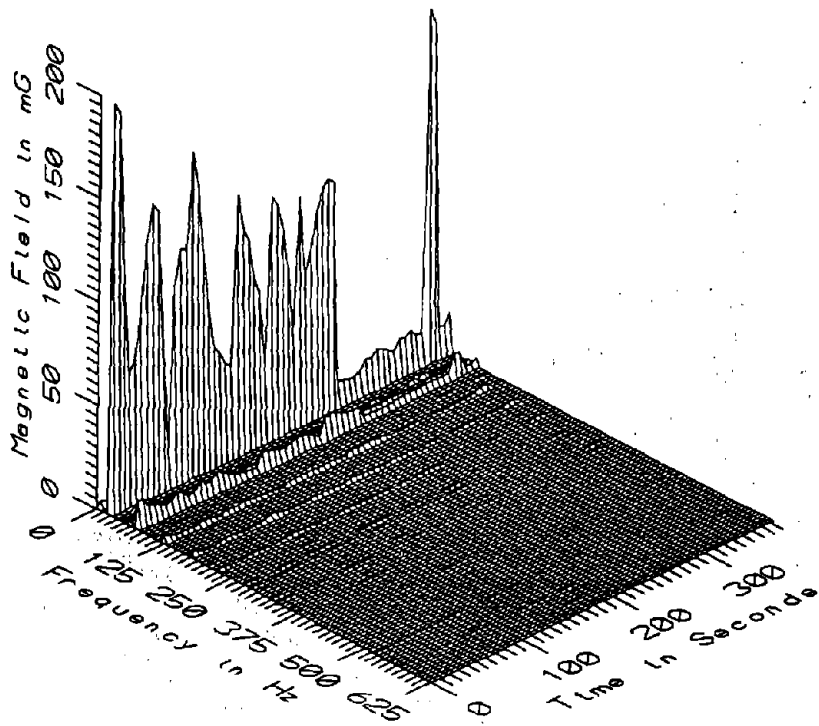
NEC002 - 10cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



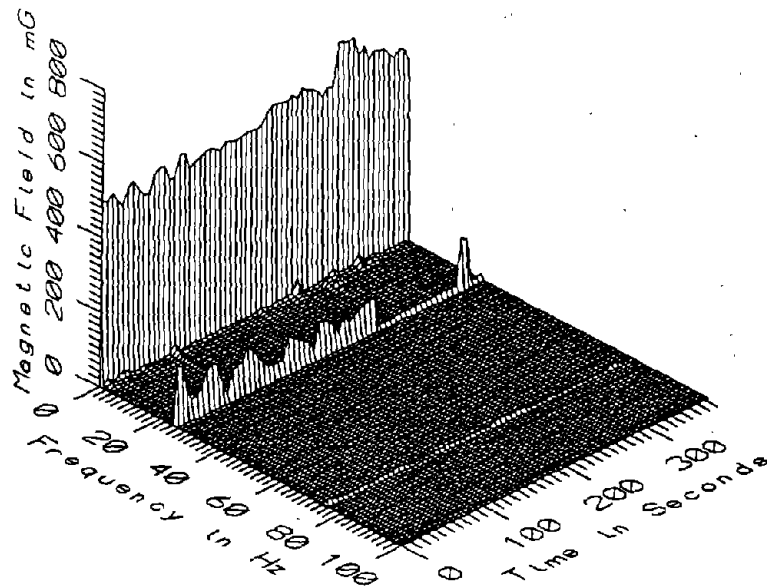
NEC002 - 10cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



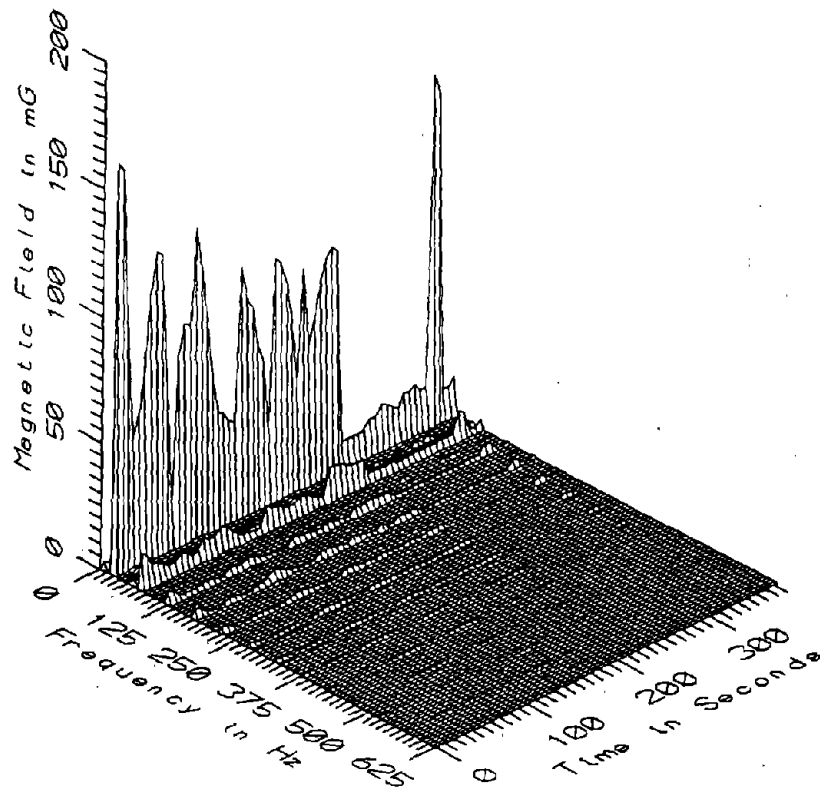
NEC002 - 60cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



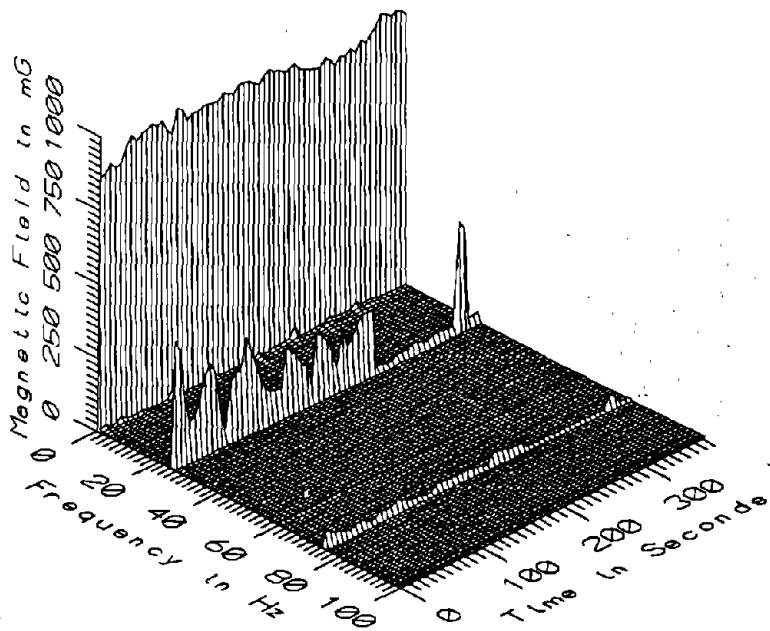
NEC002 - 60cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



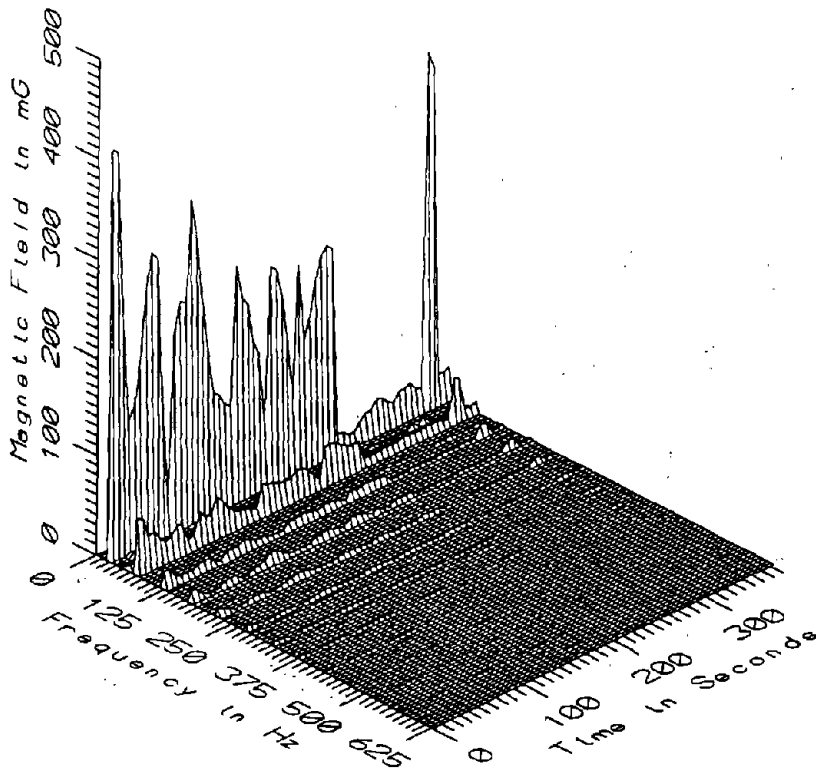
NEC002 - 110cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



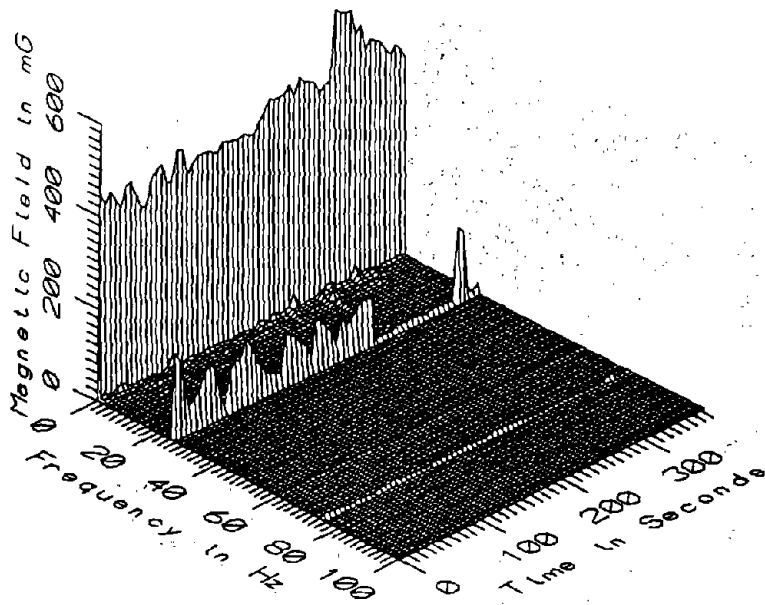
NEC002 - 110cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



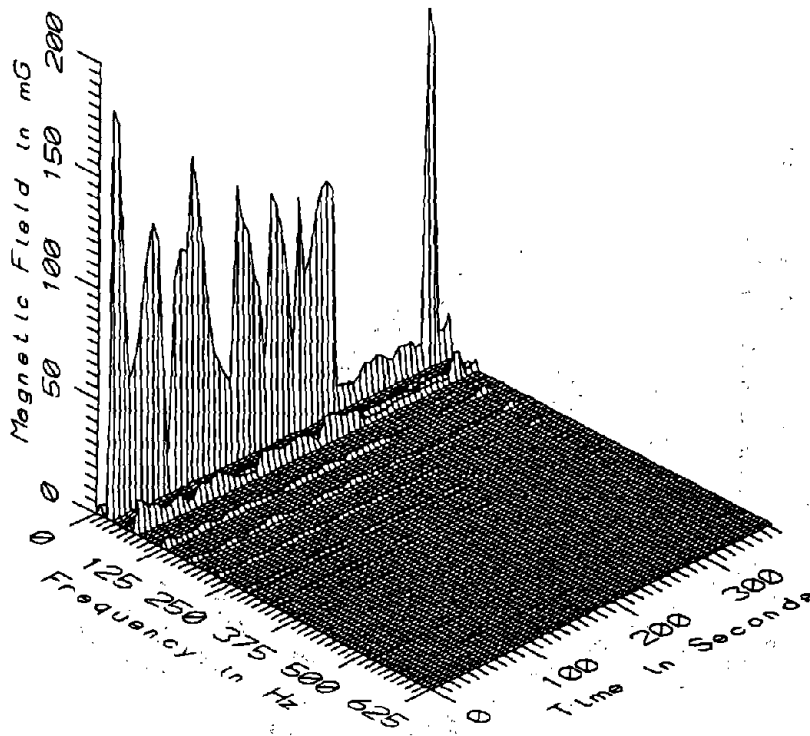
NEC002 - 160cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



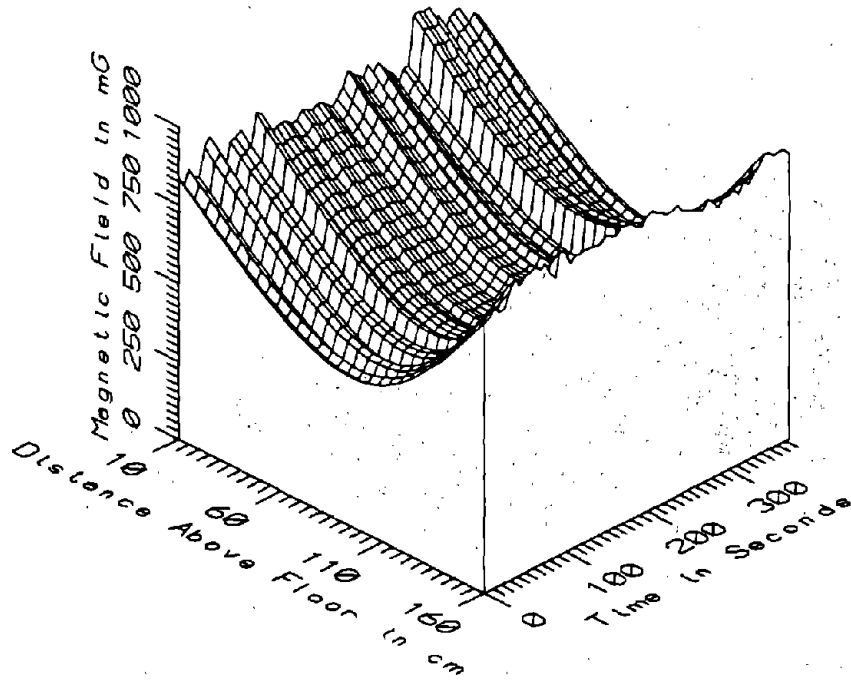
NEC002 - 160cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN SEVENTH COACH



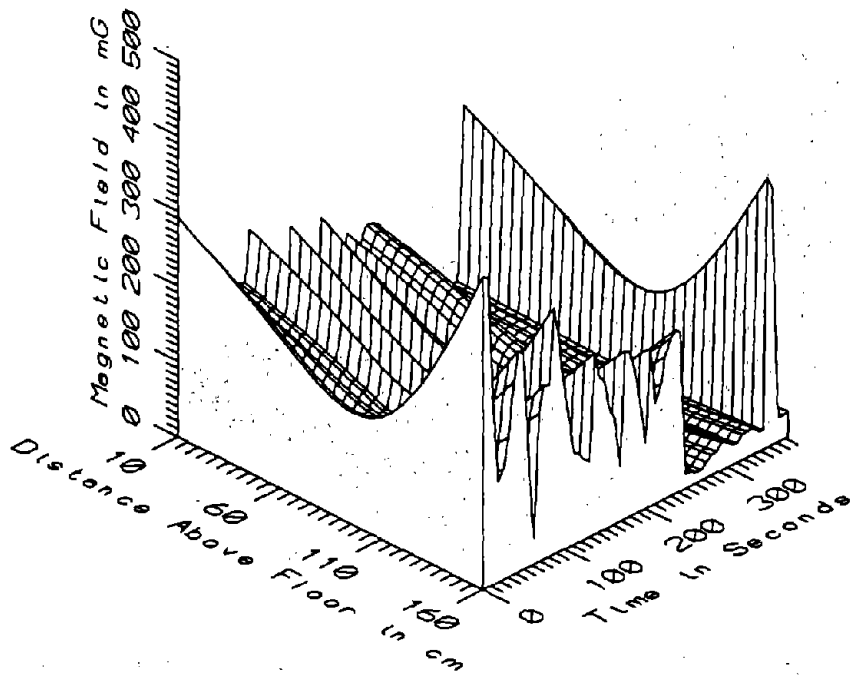
NEC002 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



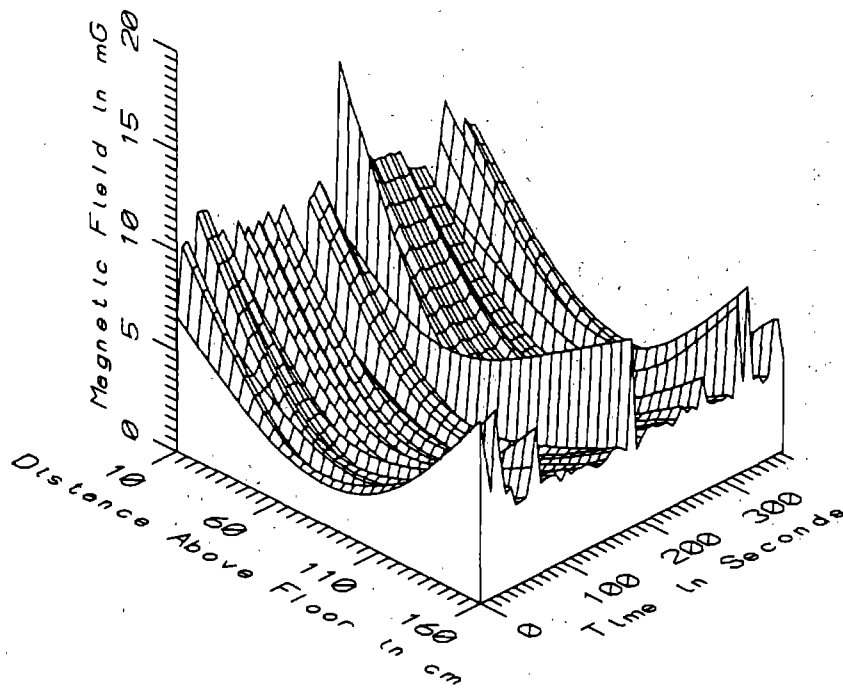
NEC002 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



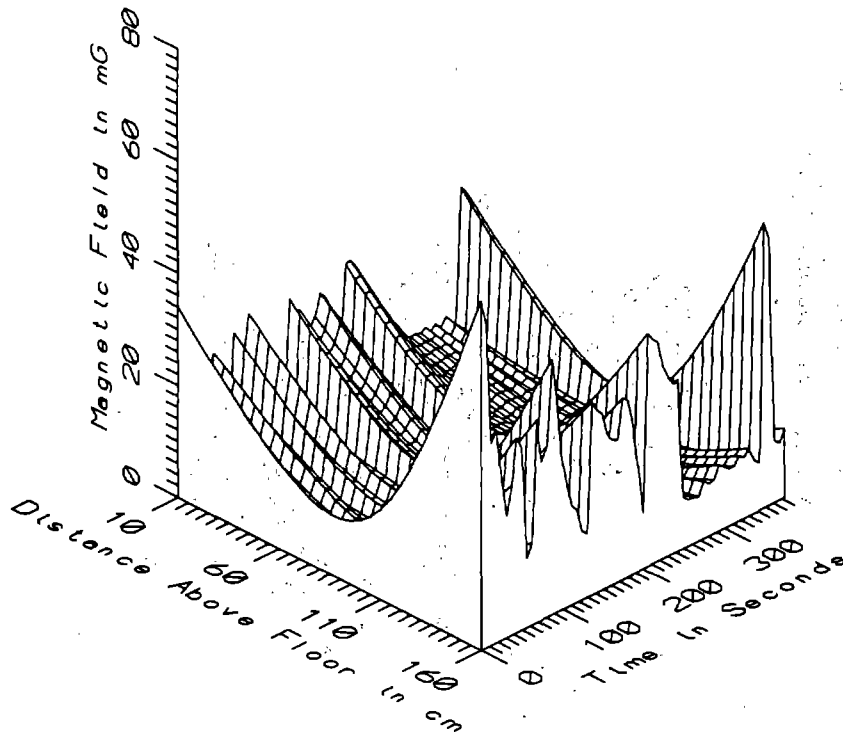
NEC002 - AGAINST SIDE BULKHEAD IN 7TH COACH - STATIC



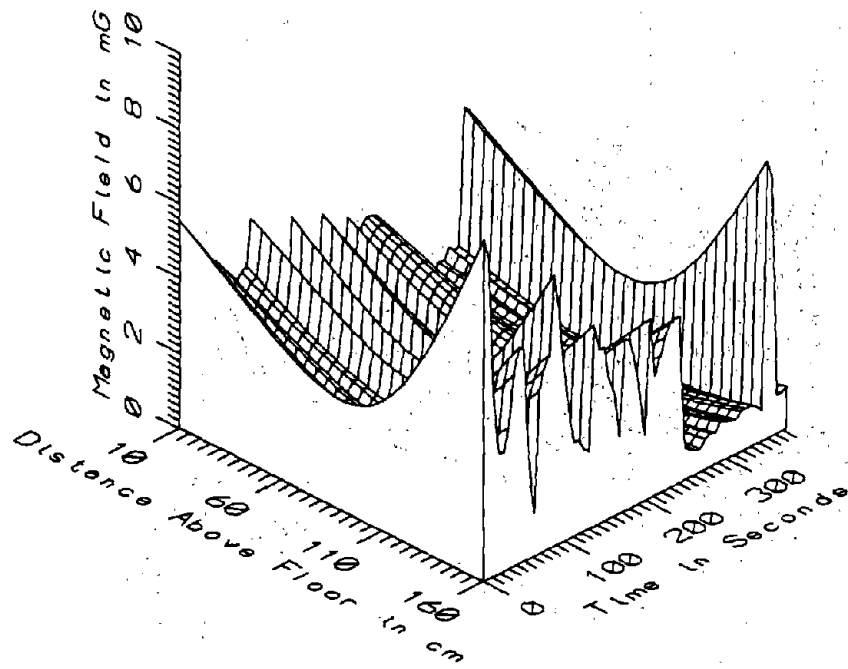
NEC002 - AGAINST SIDE BULKHEAD IN 7TH COACH - LOW FREQ, 5-45Hz



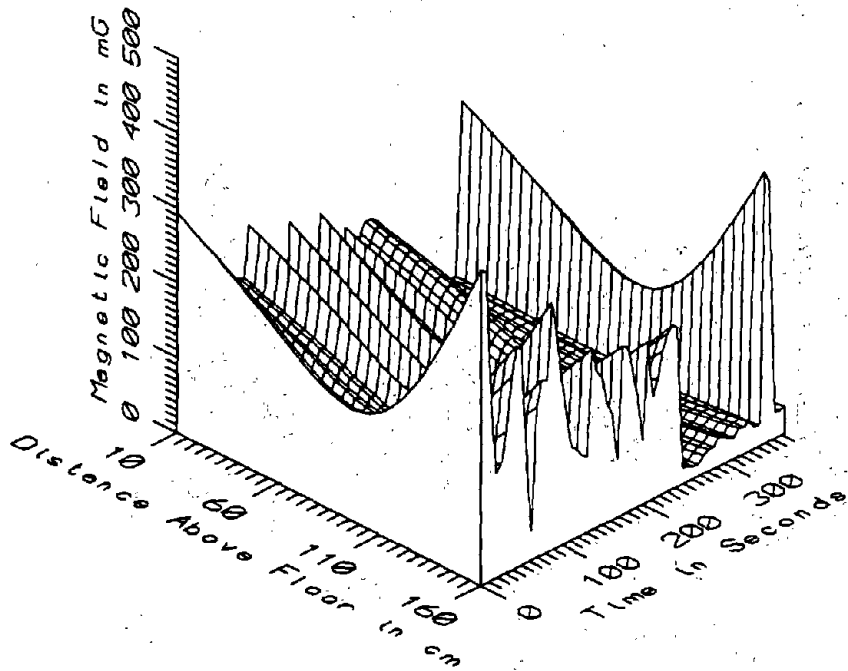
NEC002 - AGAINST SIDE BULKHEAD IN 7TH COACH - POWER FREQ, 50-60Hz



NEC002 - AGAINST SIDE BULKHEAD IN 7TH COACH - POWER HARM, 65-300Hz



NEC002 - AGAINST SIDE BULKHEAD IN 7TH COACH - HIGH FREQ, 305-2560Hz



NEC002 - AGAINST SIDE BULKHEAD IN 7TH COACH - ALL FREQ, 5-2560Hz



APPENDIX D

DATASET NEC003
HOME (7TH) COACH AT AISLE, 25 HZ NEC

Measurement Setup Code: Staff: 2 Reference: 3
 Drawing: A-1

Vehicle Status: Coach trip without stops - Edgewood
 to Aberdeen

Measurement Date: March 30, 1992

Measurement Time: Start: 11:23:17
 End: 11:29:08

Number of Samples: 60

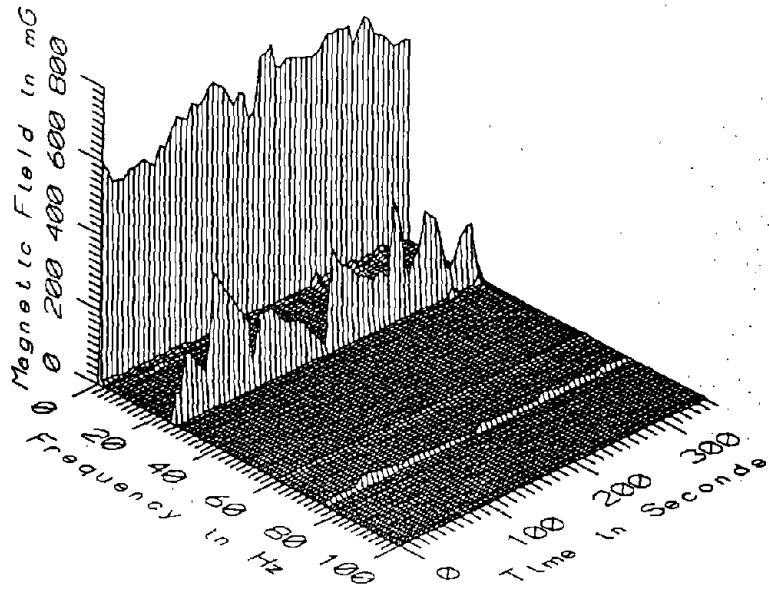
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.9 sec

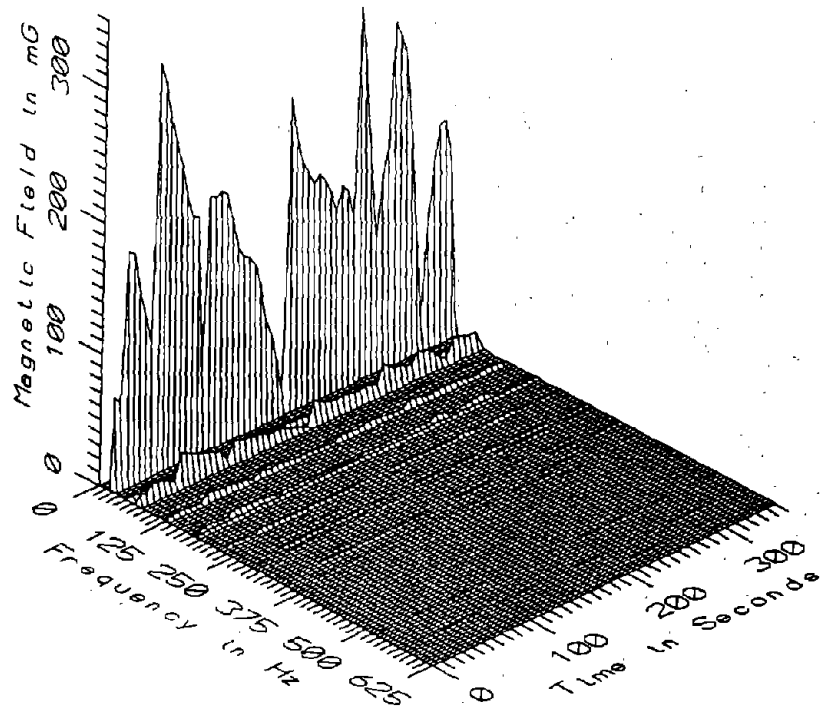
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

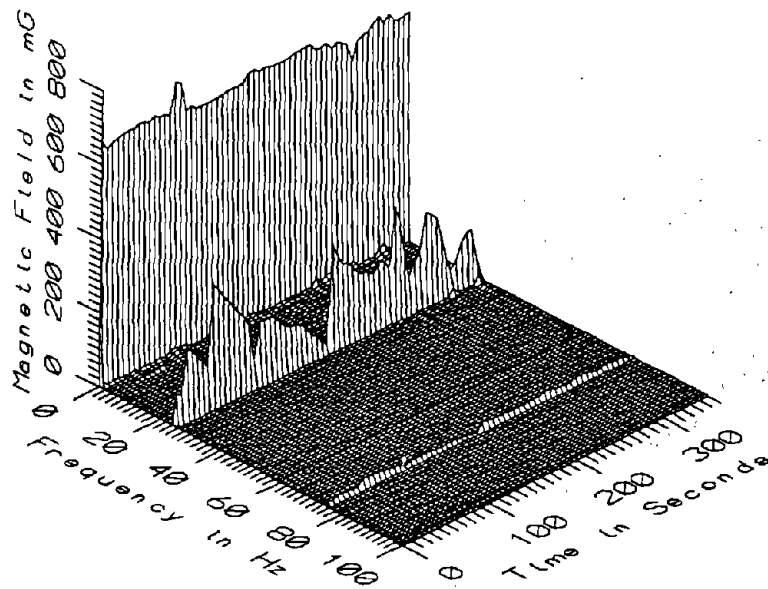
Missing or Suspect Data: None



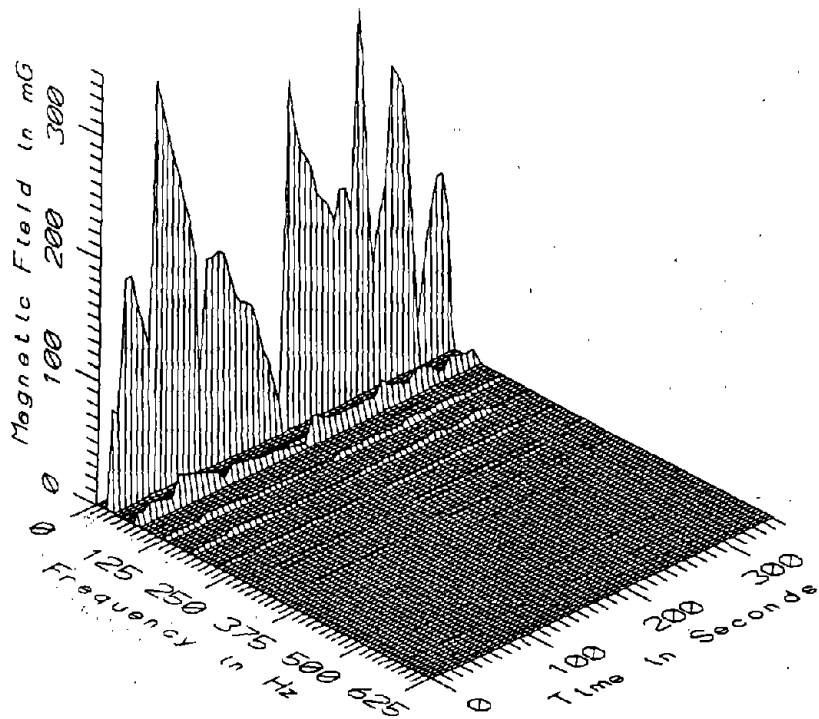
NEC003 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



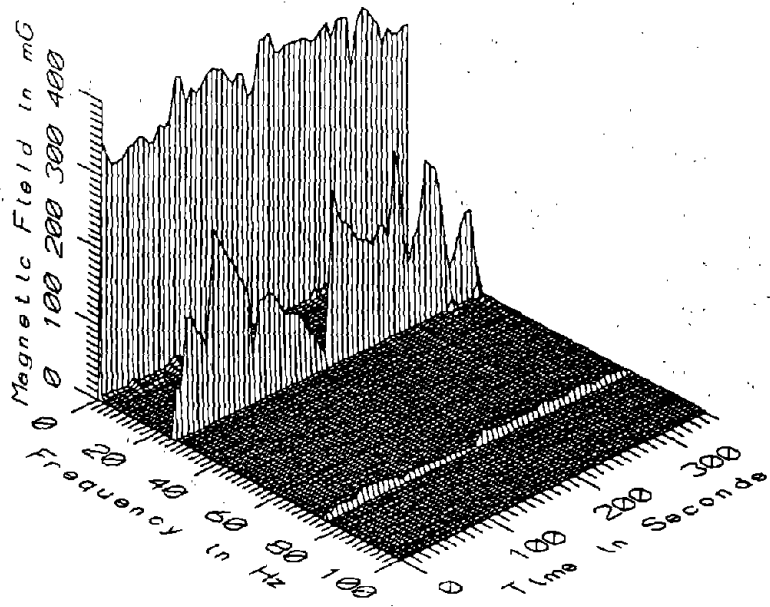
NEC003 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



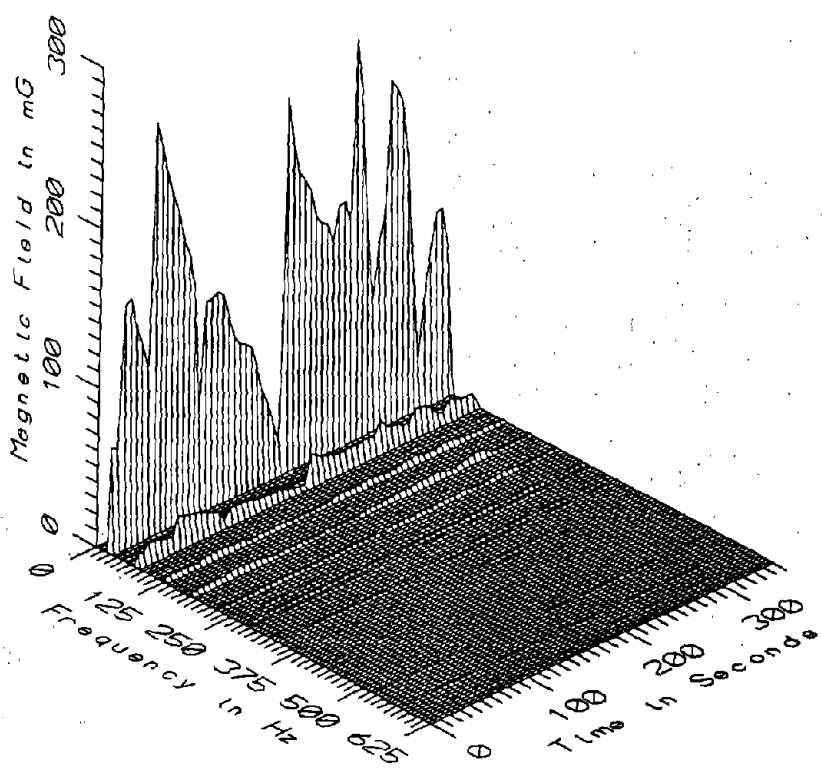
NEC003 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



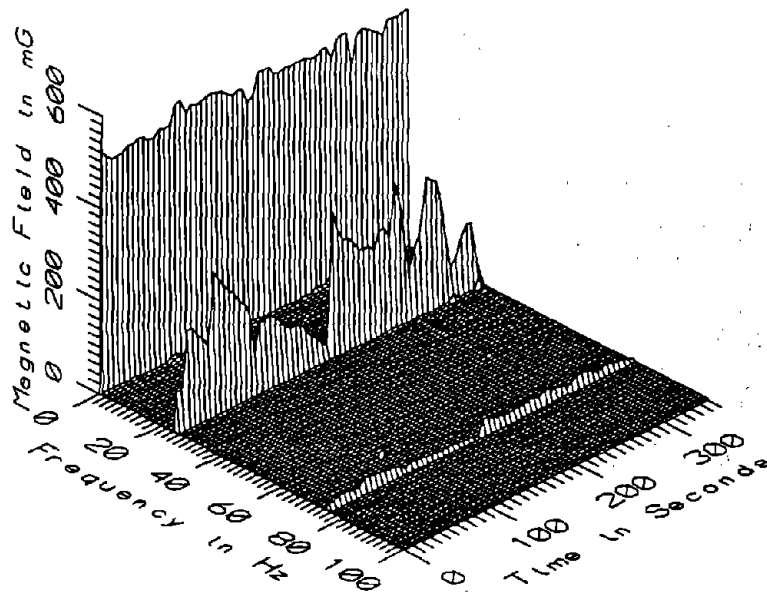
NEC003 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



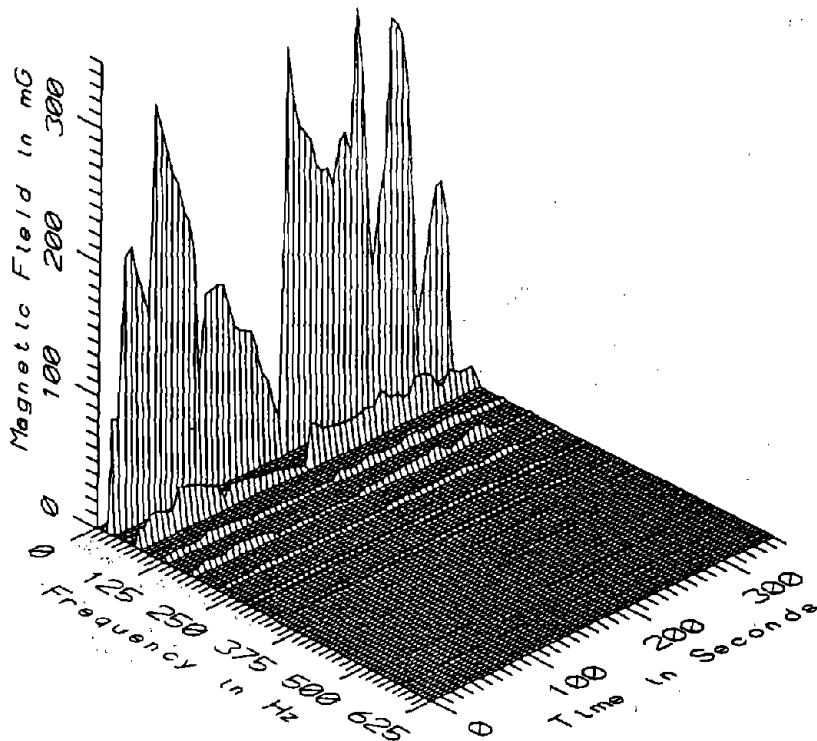
NEC003 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



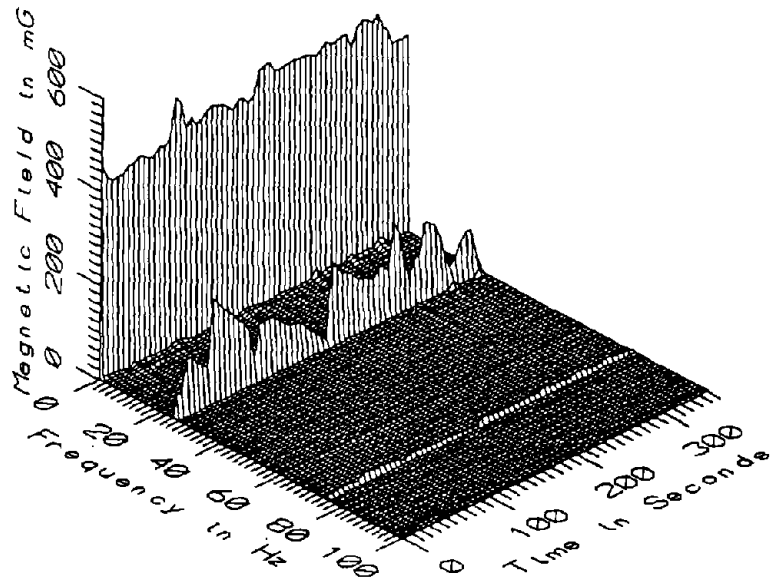
NEC003 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



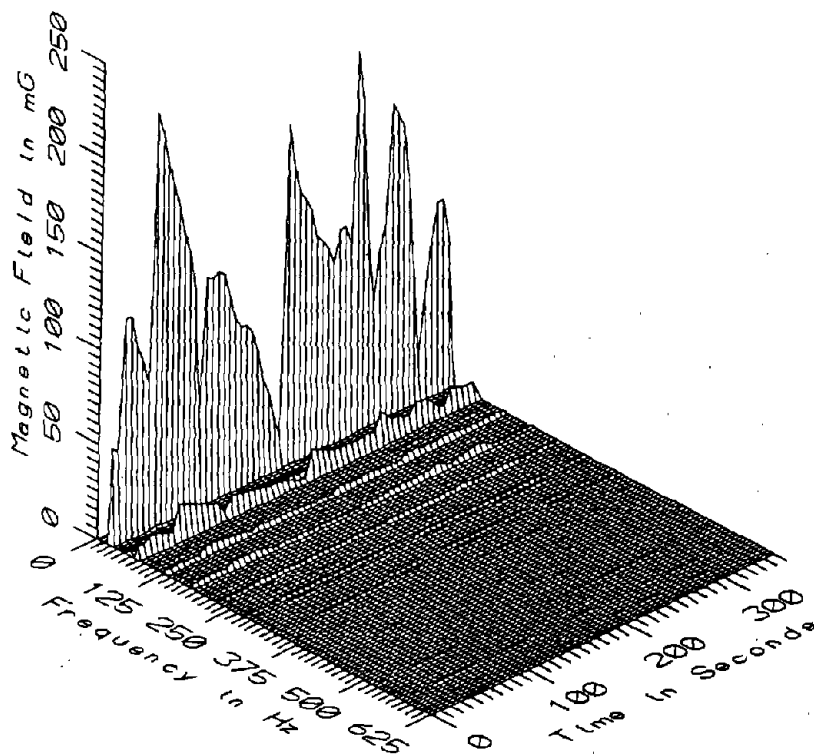
NEC003 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



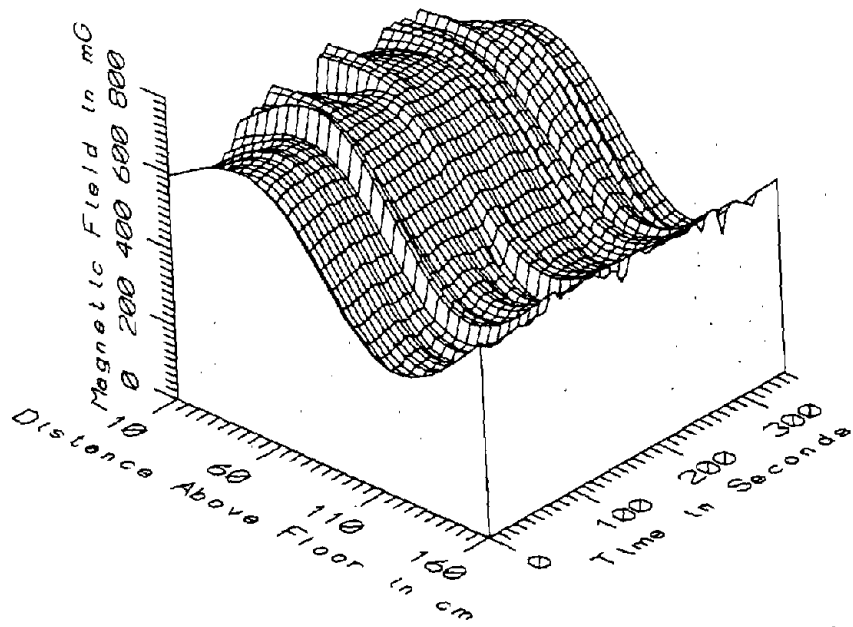
NEC003 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



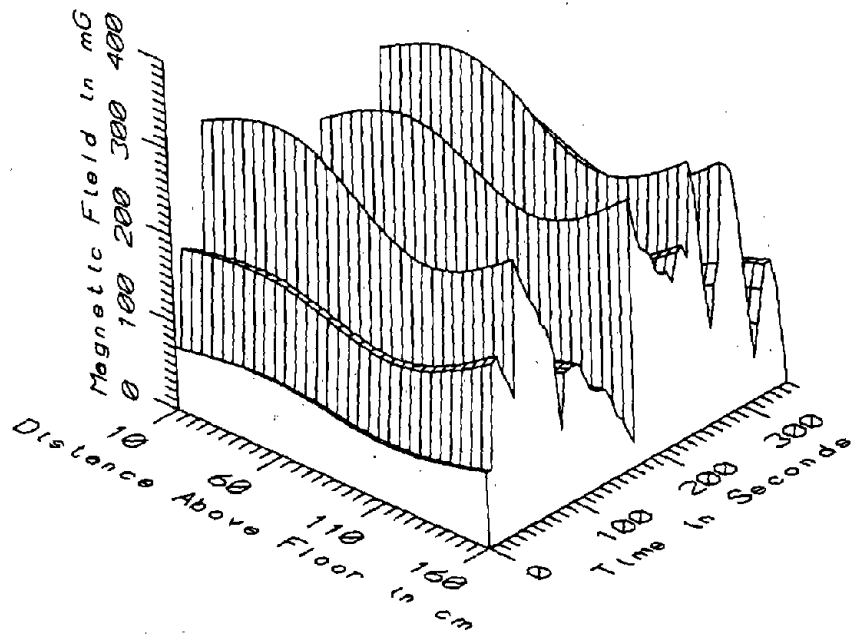
NEC003 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



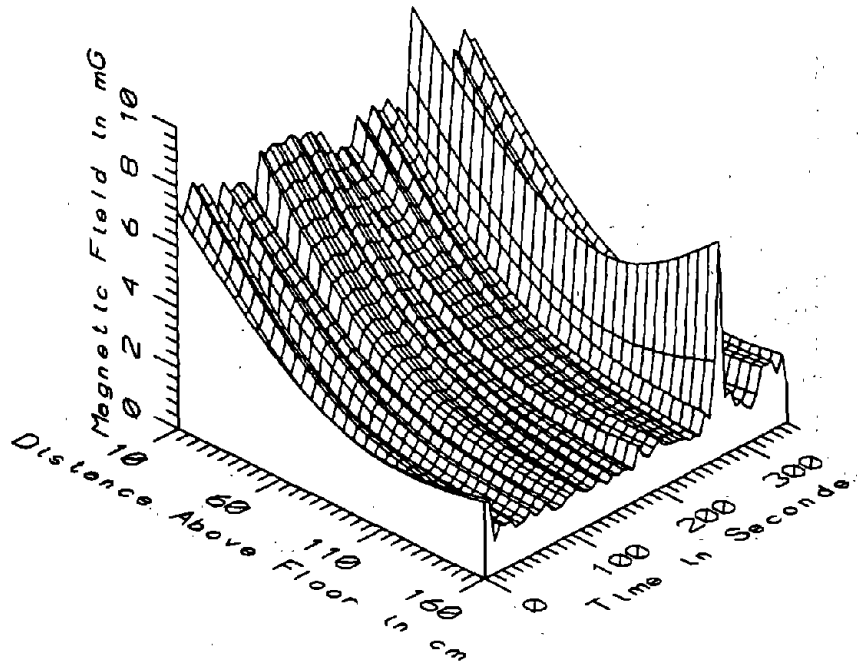
NEC003 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



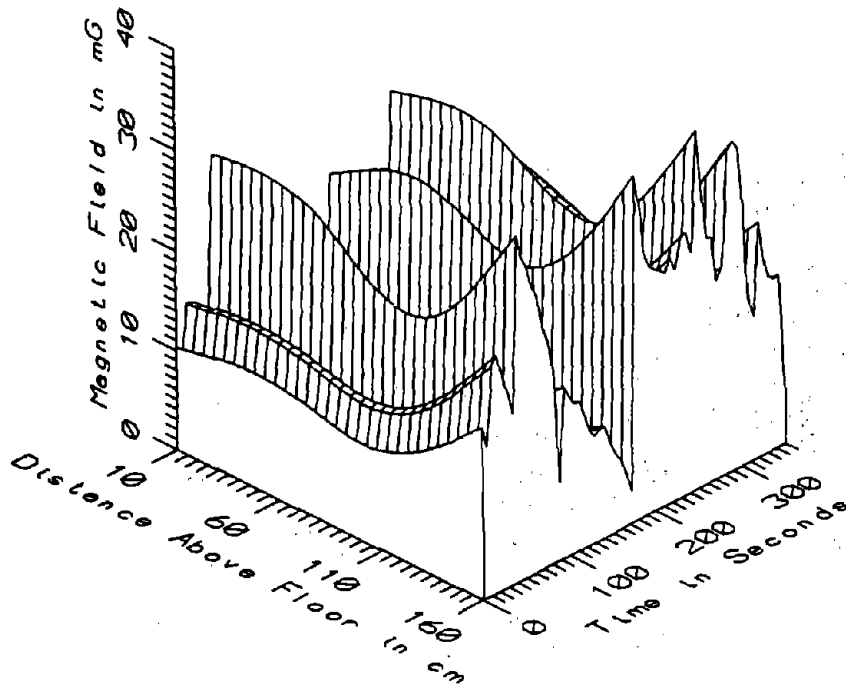
NEC003 - EDGE OF AISLE IN THE 7TH COACH - STATIC



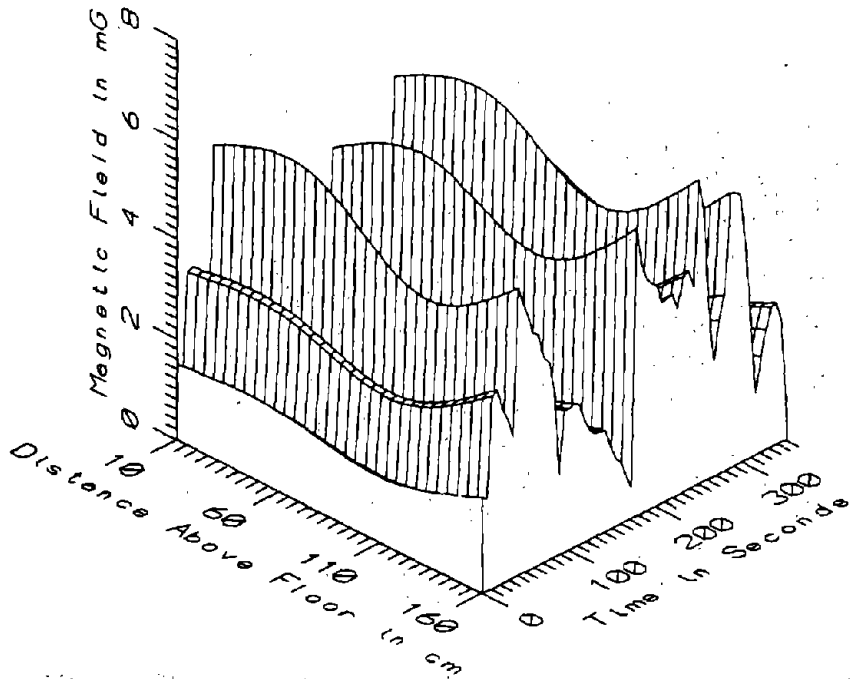
NEC003 - EDGE OF AISLE IN THE 7TH COACH - LOW FREQ, 5-45Hz



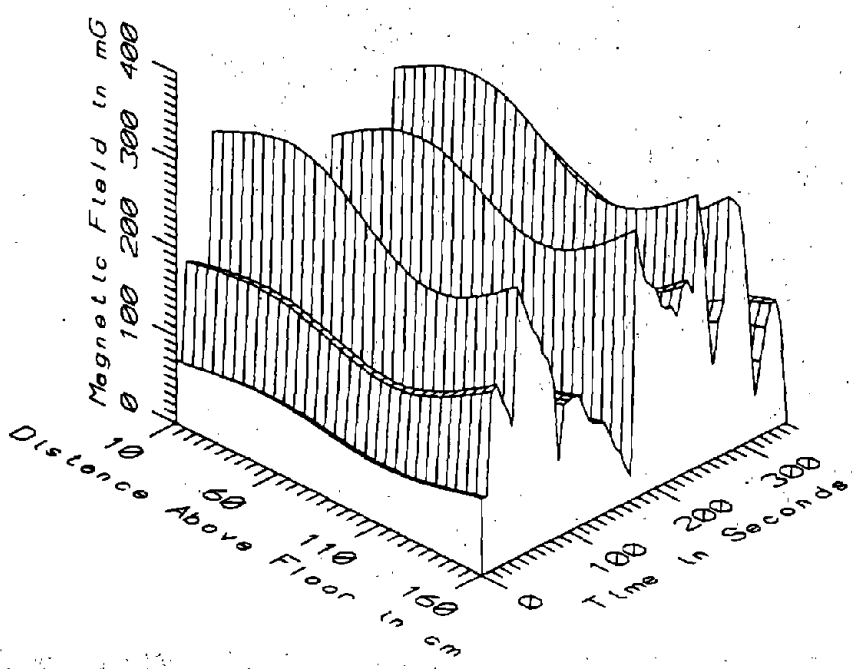
NEC003 - EDGE OF AISLE IN THE 7TH COACH - POWER FREQ, 50-60Hz



NEC003 - EDGE OF AISLE IN THE 7TH COACH - POWER HARM, 65-300Hz



NEC003 - EDGE OF AISLE IN THE 7TH COACH - HIGH FREQ, 305-2560Hz



NEC003 - EDGE OF AISLE IN THE 7TH COACH - ALL FREQ, 5-2560Hz

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APPENDIX E

DATASET NEC004
HOME (7TH) COACH AT AISLE, 25 HZ NEC

Measurement Setup Code: Staff: 2 Reference: 3
 Drawing: A-1

Vehicle Status: Train running at speed - Susquehenna
 Bridge to Elkton

Measurement Date: March 30, 1992

Measurement Time: Start: 11:32:12
 End: 11:41:12

Number of Samples: 10

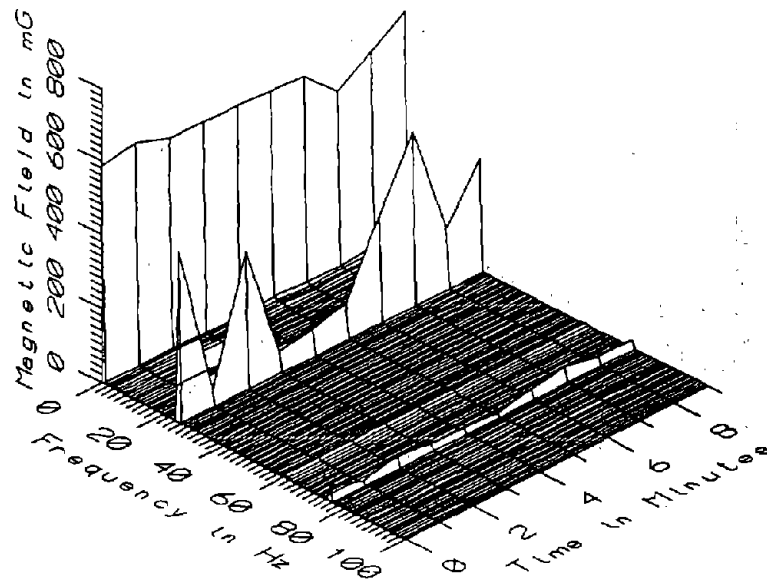
Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

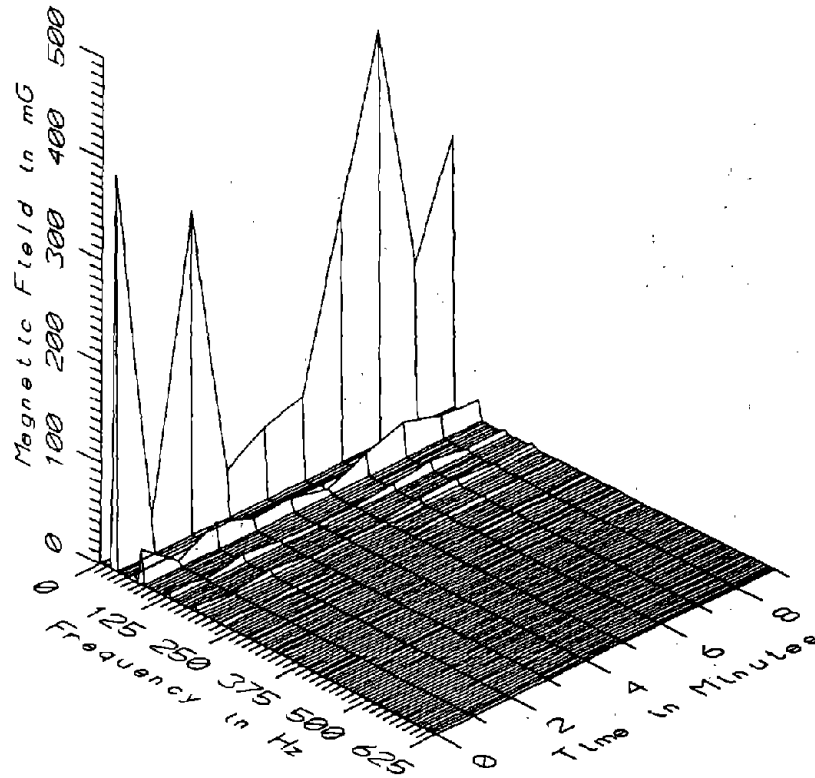
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

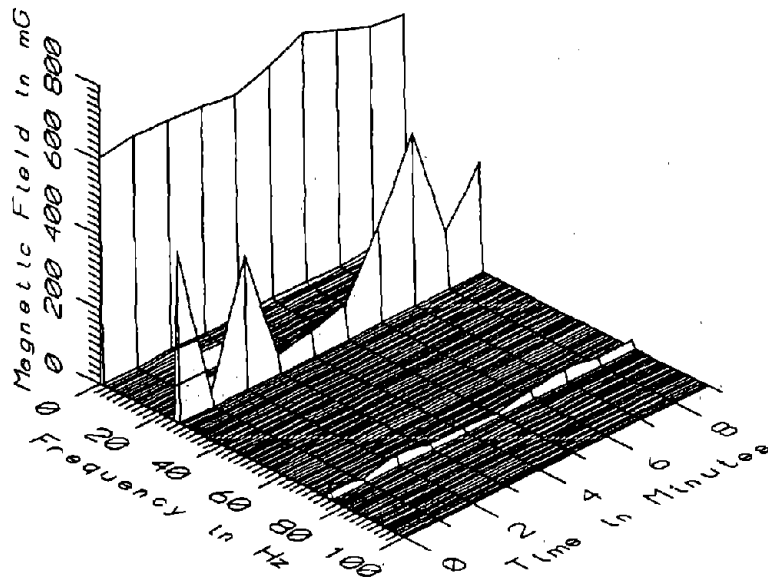
Missing or Suspect Data: None



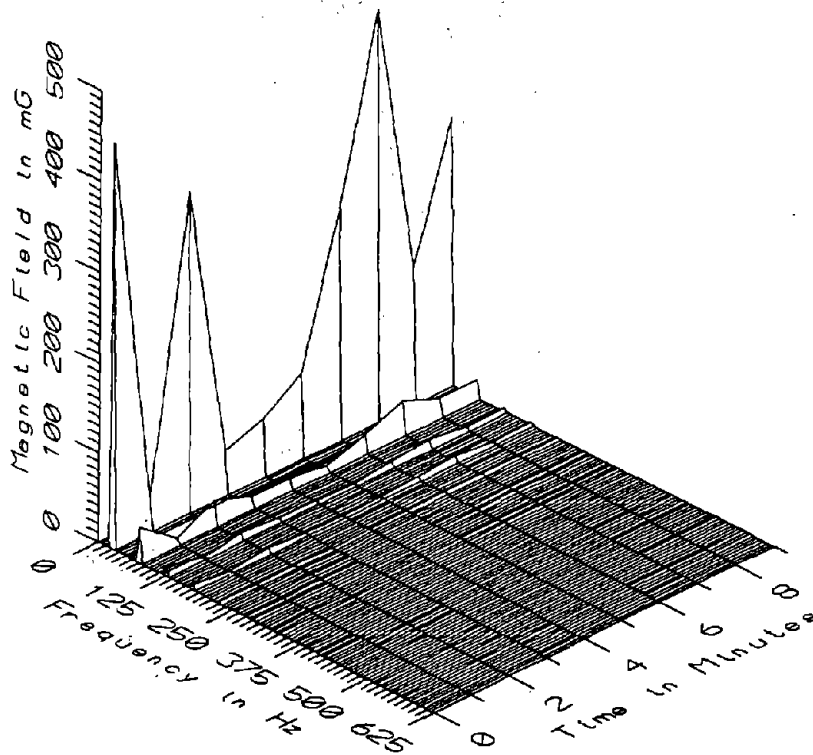
NEC004 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



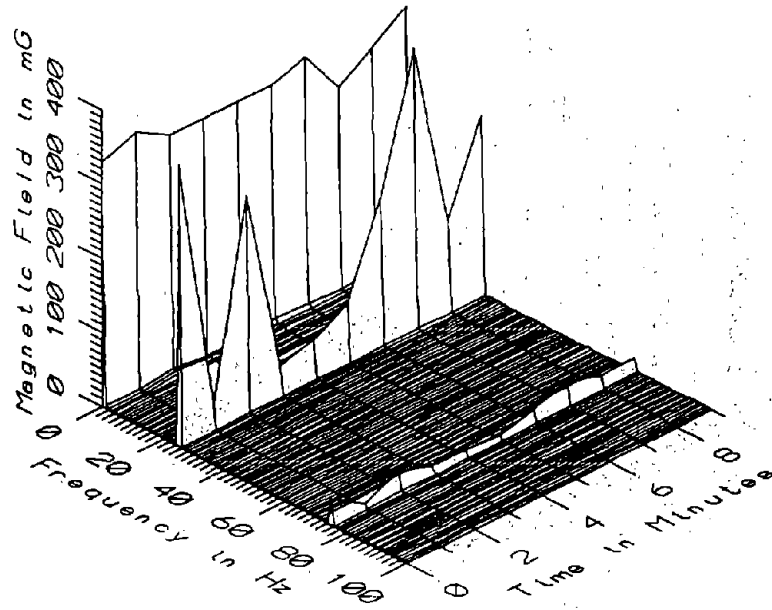
NEC004 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



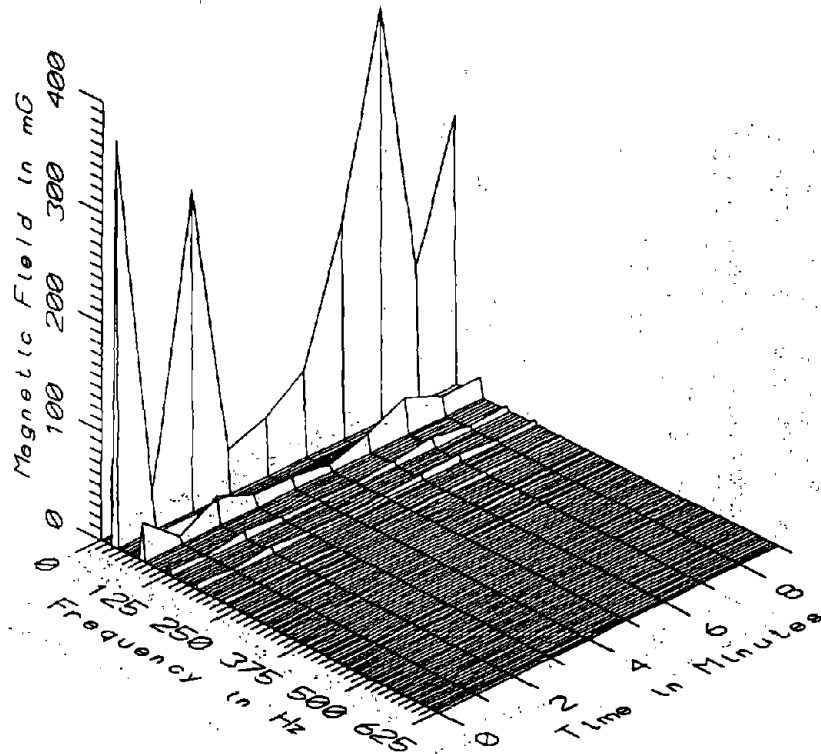
NEC004 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



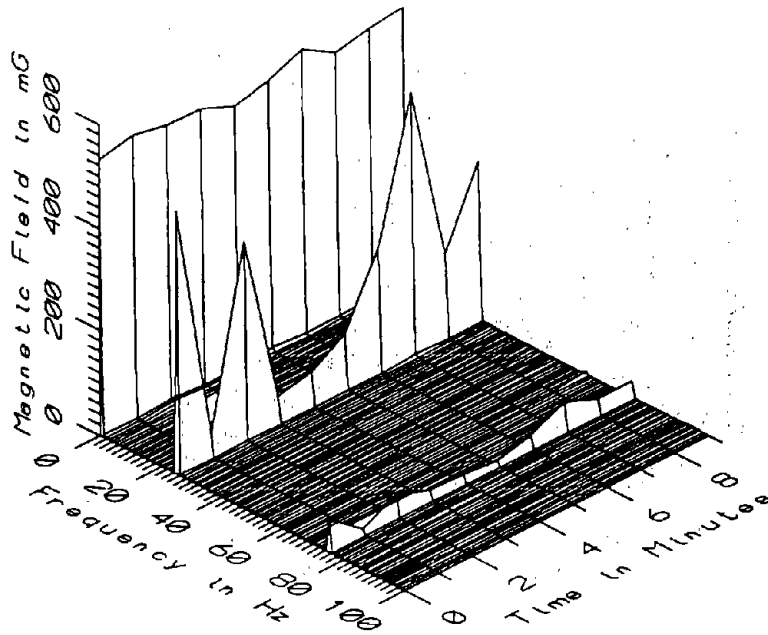
NEC004 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



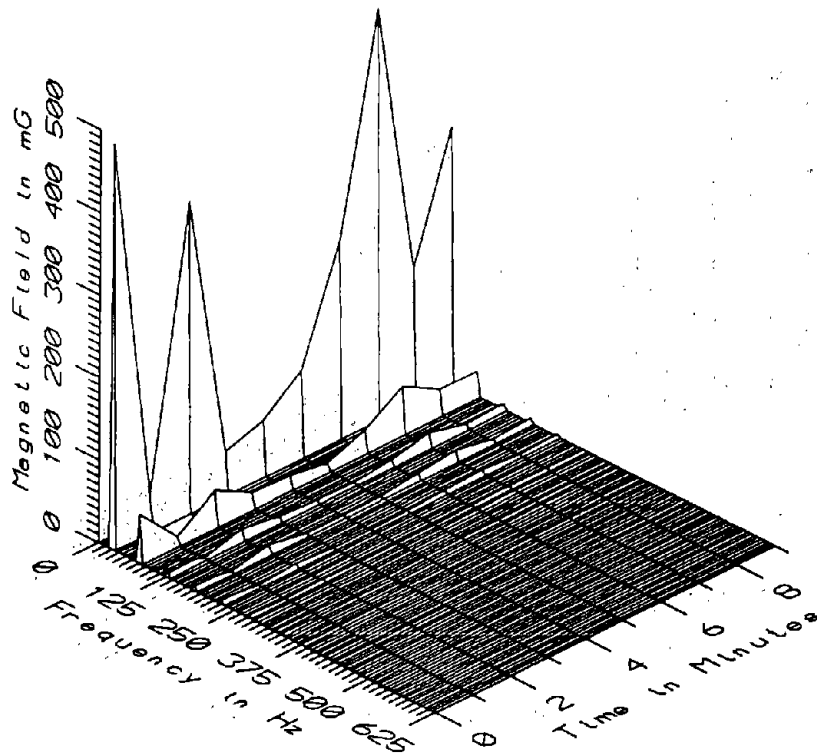
NEC004 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



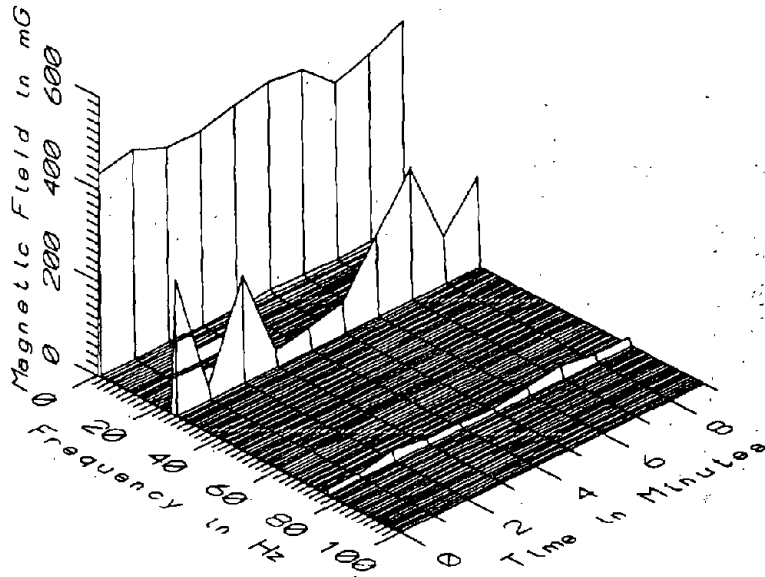
NEC004 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



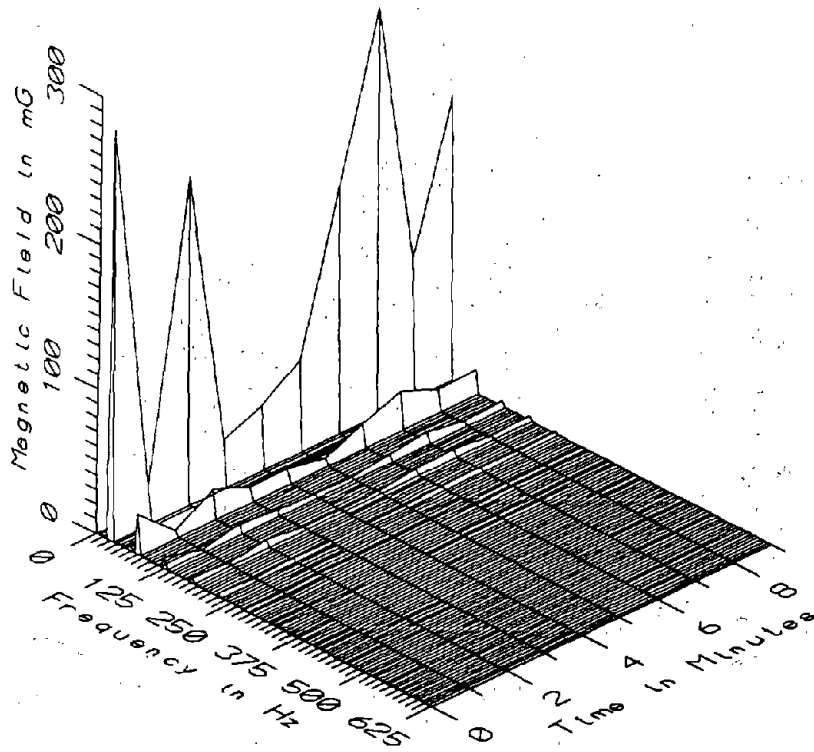
NEC004 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



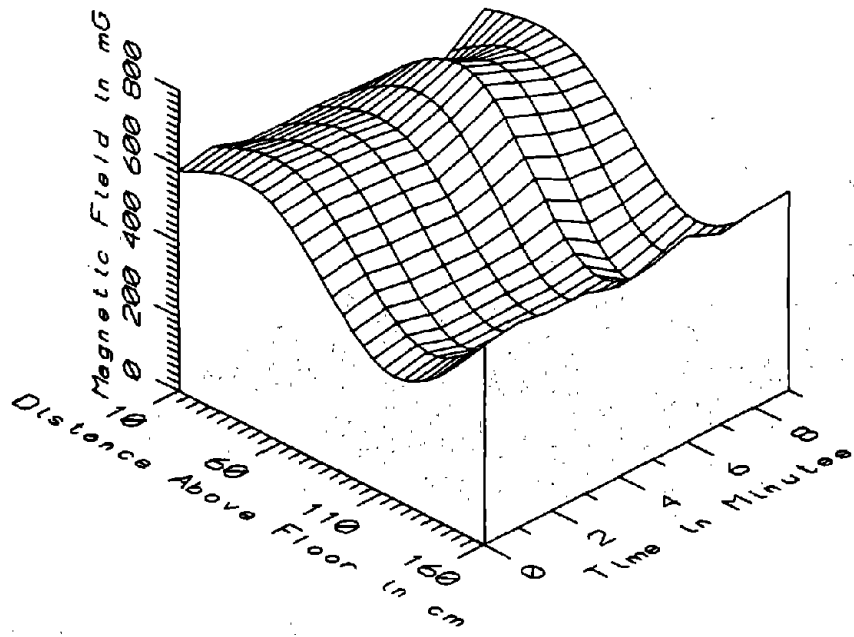
NEC004 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



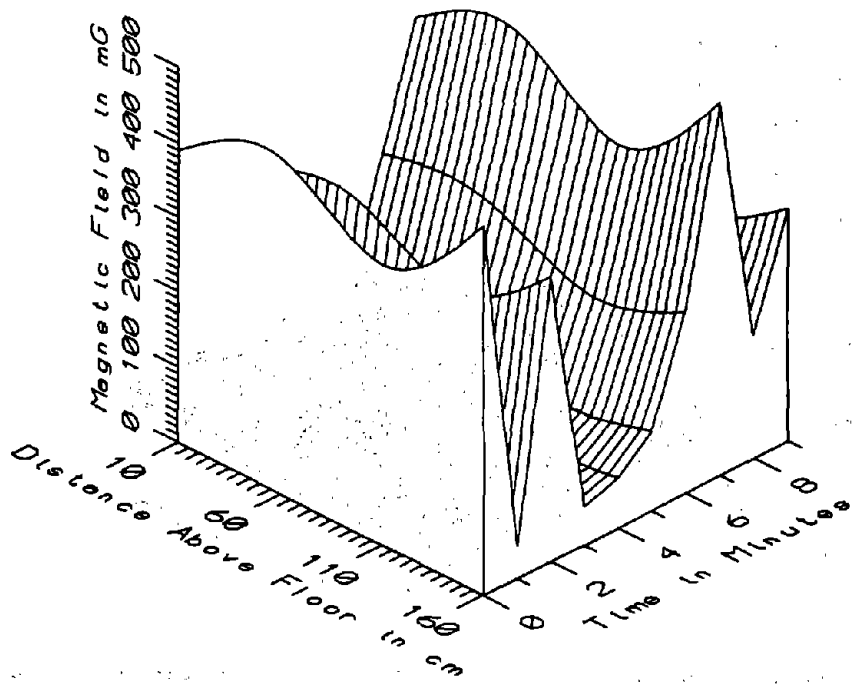
NEC004 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



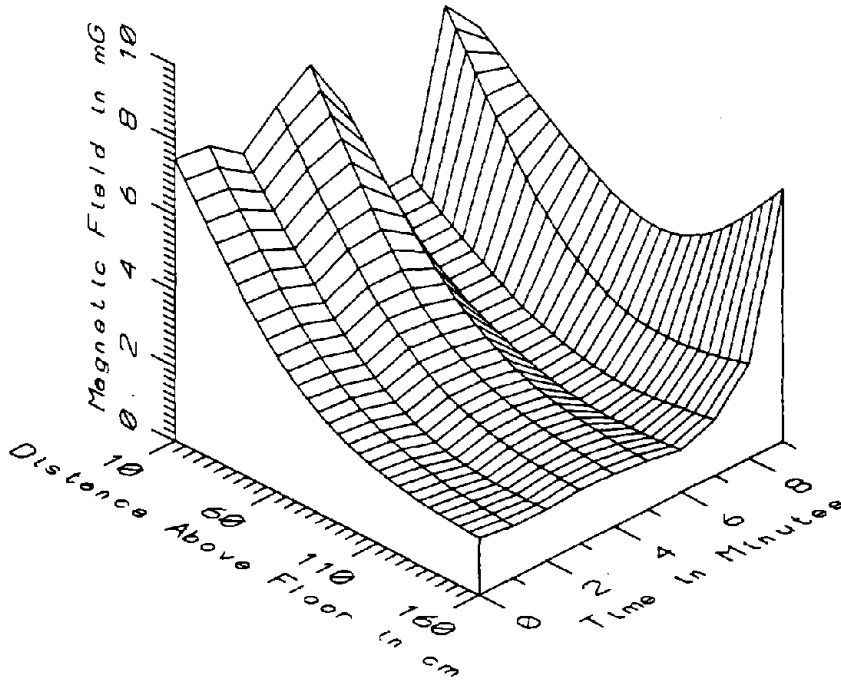
NEC004 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



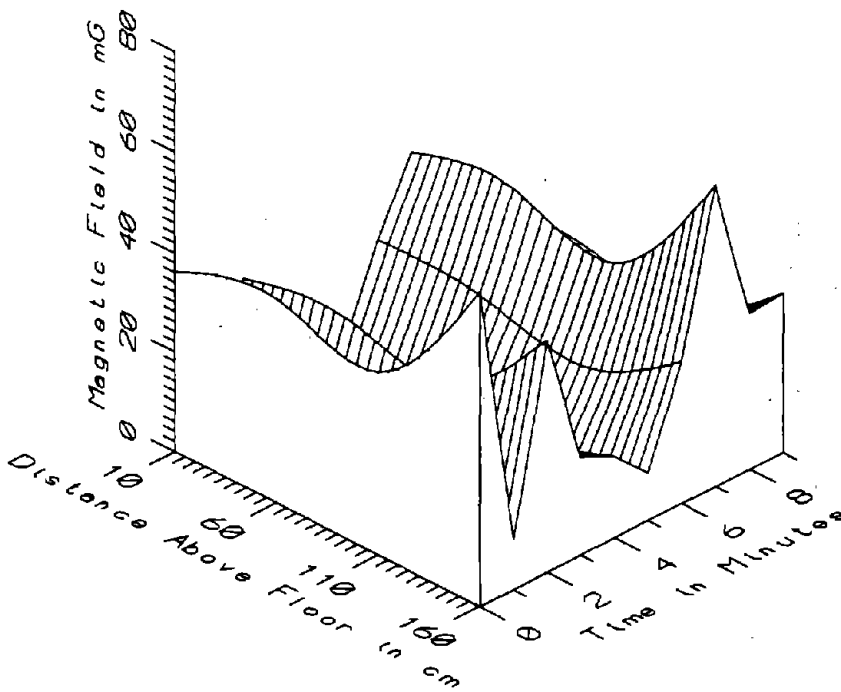
NEC004 - EDGE OF AISLE IN THE 7TH COACH - STATIC



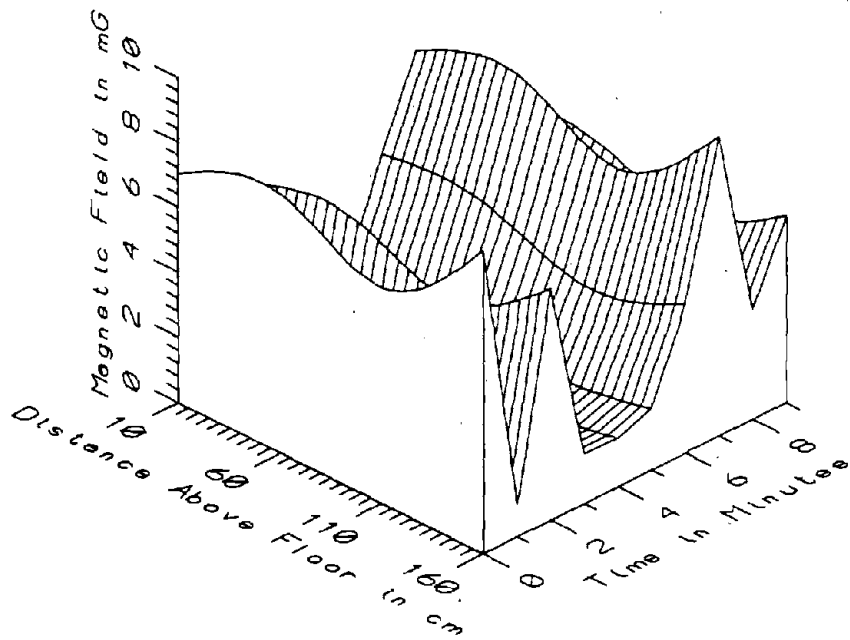
NEC004 - EDGE OF AISLE IN THE 7TH COACH - LOW FREQ, 5-45Hz



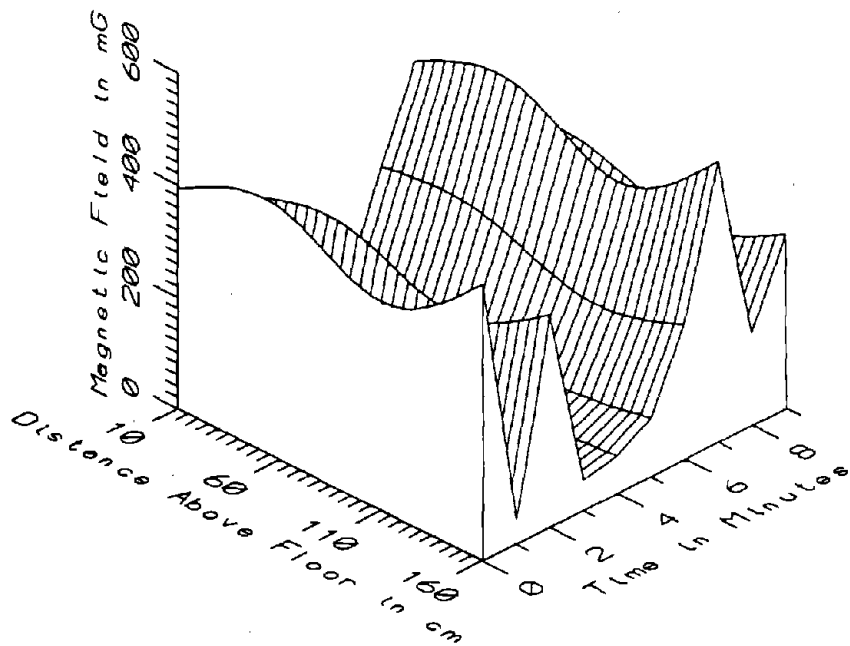
NEC004 - EDGE OF AISLE IN THE 7TH COACH - POWER FREQ, 50-60Hz



NEC004 - EDGE OF AISLE IN THE 7TH COACH - POWER HARM, 65-300Hz



NEC004 - EDGE OF AISLE IN THE 7TH COACH - HIGH FREQ, 305-2560Hz



NEC004 - EDGE OF AISLE IN THE 7TH COACH - ALL FREQ, 5-2560Hz

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APPENDIX F

DATASET NEC005
FRONT OF FIRST COACH AT WINDOW, 25 HZ NEC

Measurement Setup Code: Staff: 10 Reference: None
 Drawing: A-1

Vehicle Status: Departing Wilmington Station and
 accelerating

Measurement Date: March 30, 1992

Measurement Time: Start: 11:56:13
 End: 12:02:37

Number of Samples: 61

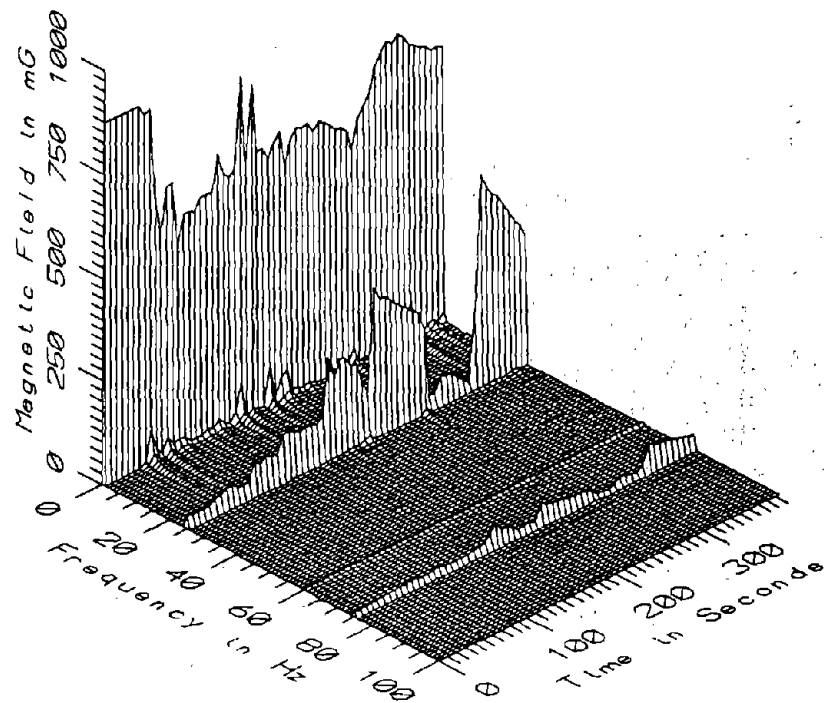
Programmed Sample Interval: 5 sec

Actual Sample Interval: 6.4 sec

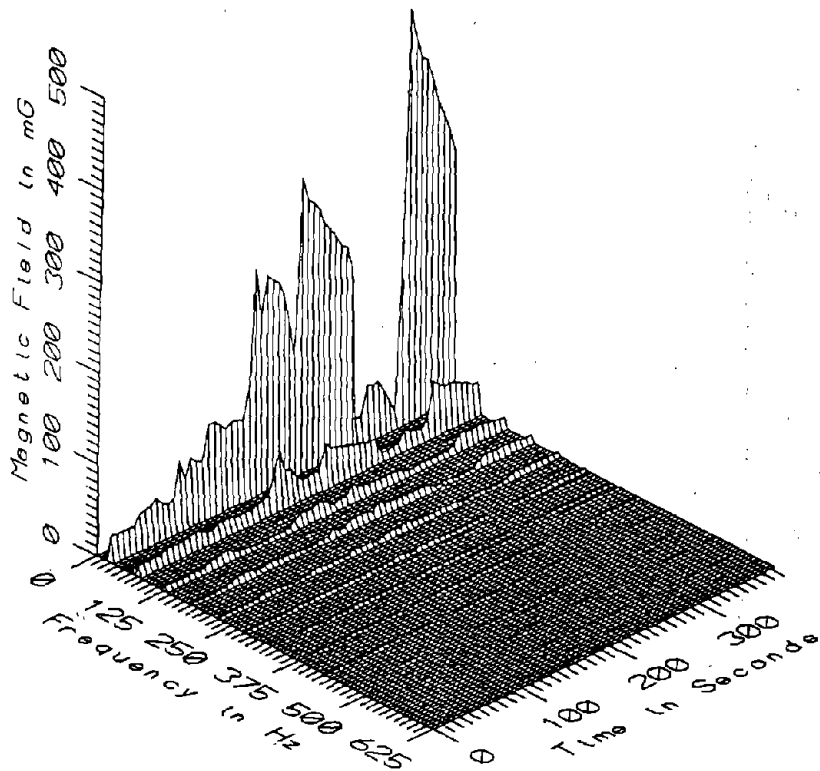
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

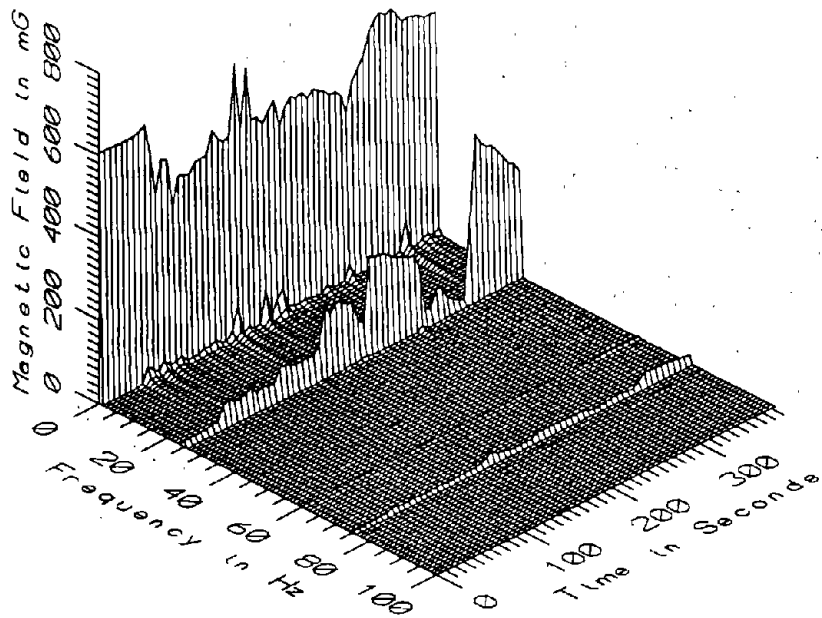
Missing or Suspect Data: None



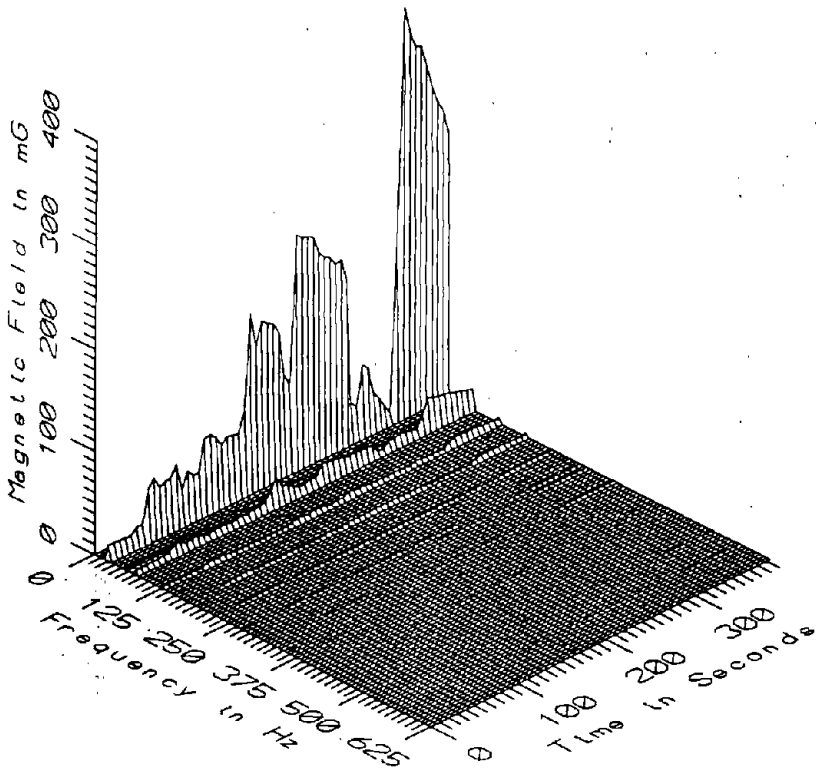
NEC005 - 10cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN FIRST COACH



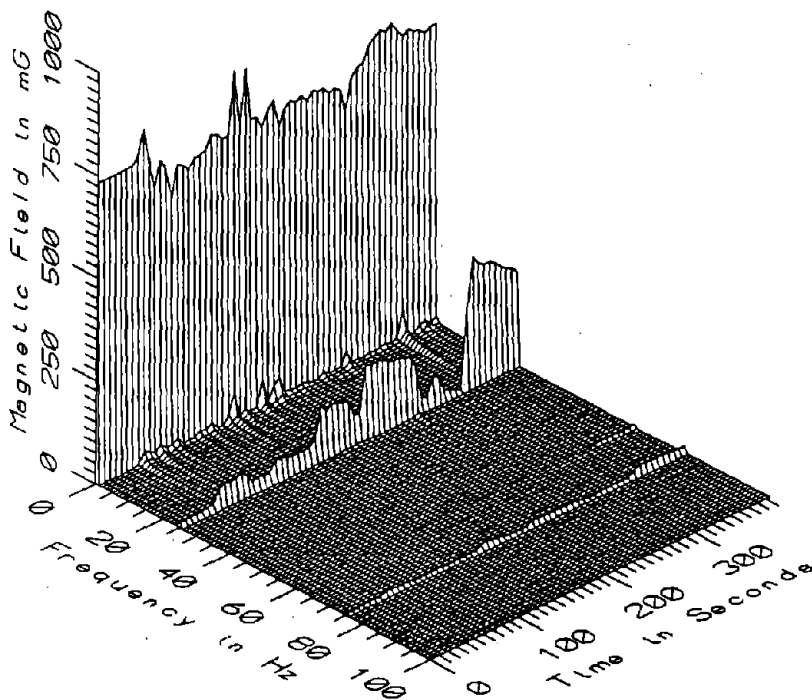
NEC005 - 10cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN FIRST COACH



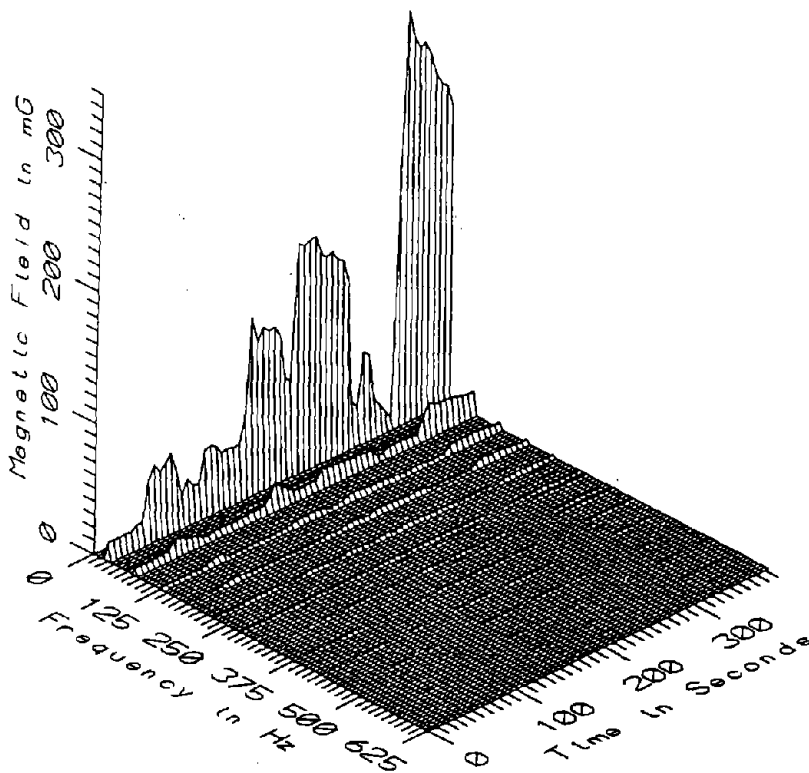
NEC005 - 60cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN FIRST COACH



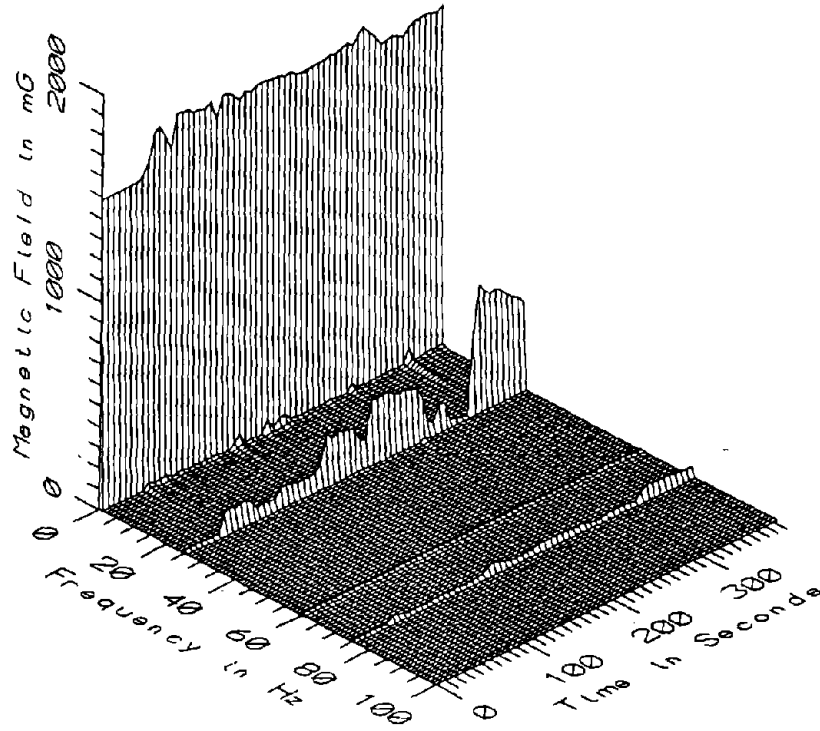
NEC005 - 60cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN FIRST COACH



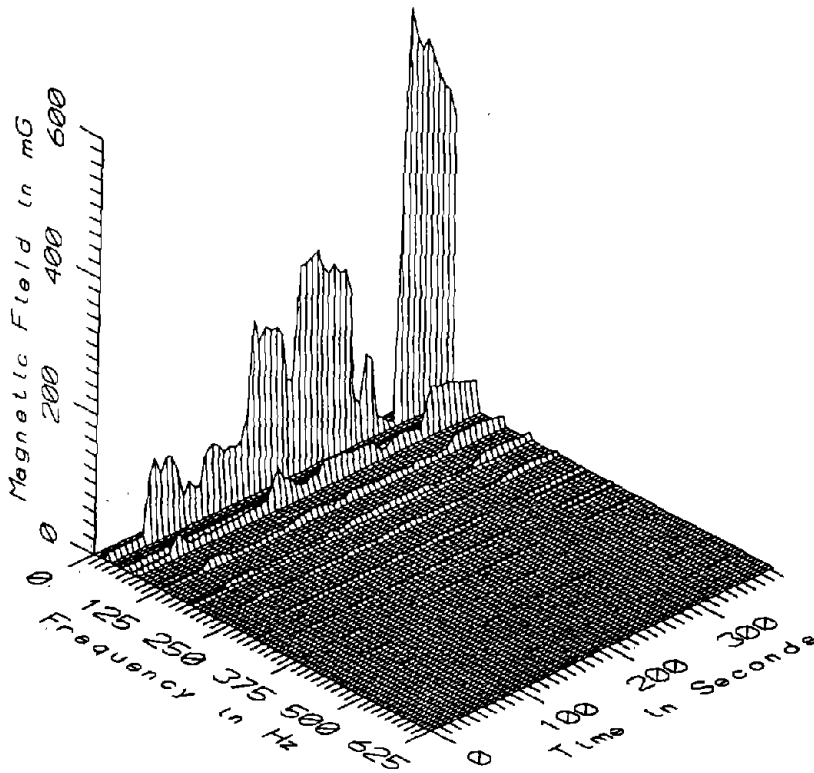
NEC005 - 110cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN FIRST COACH



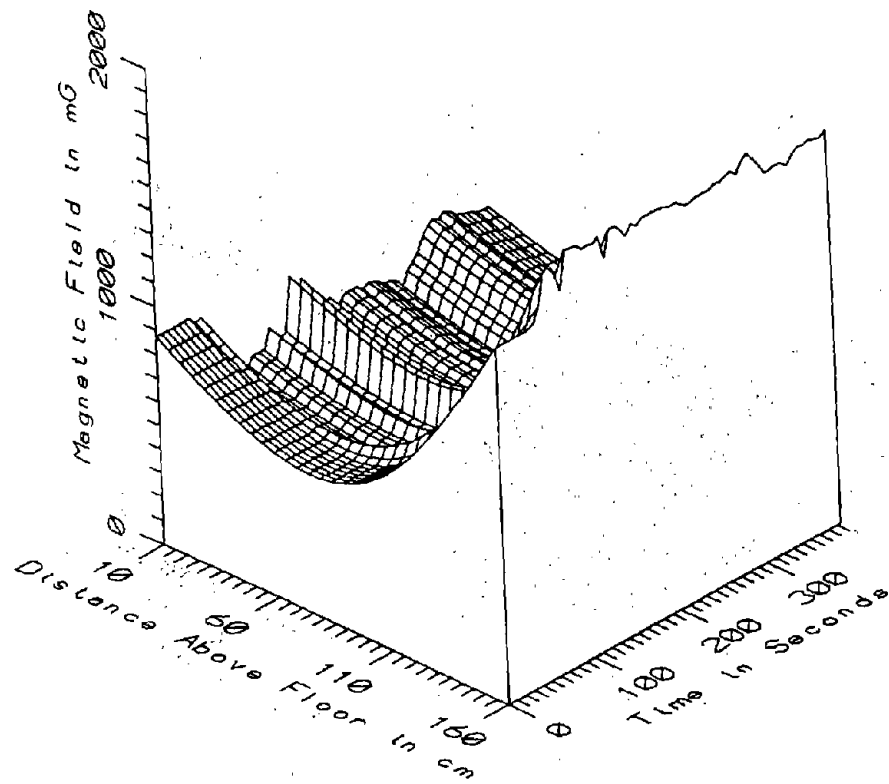
NEC005 - 110cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN FIRST COACH



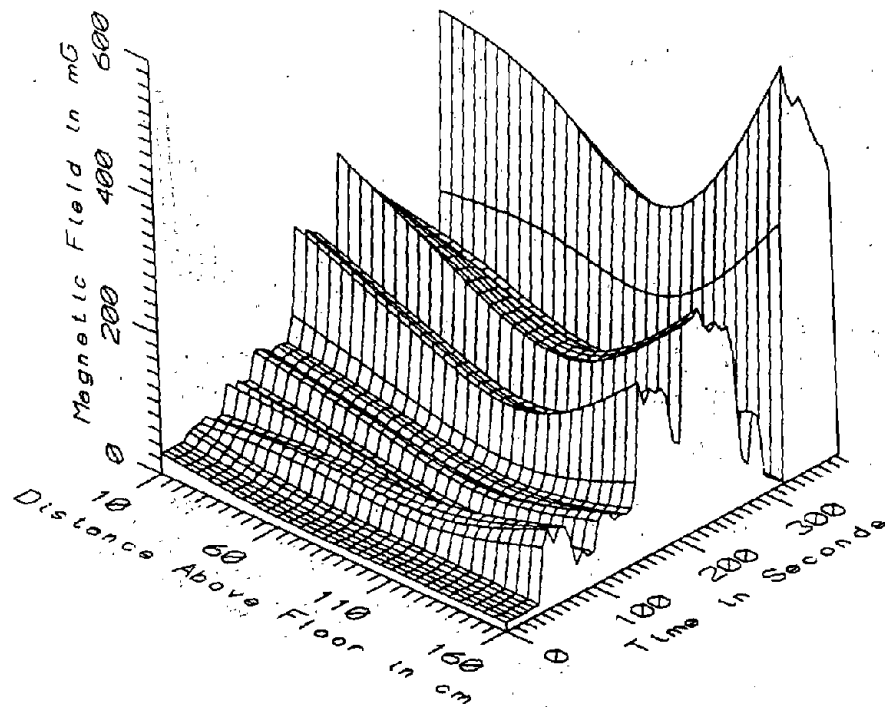
NEC005 - 160cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN FIRST COACH



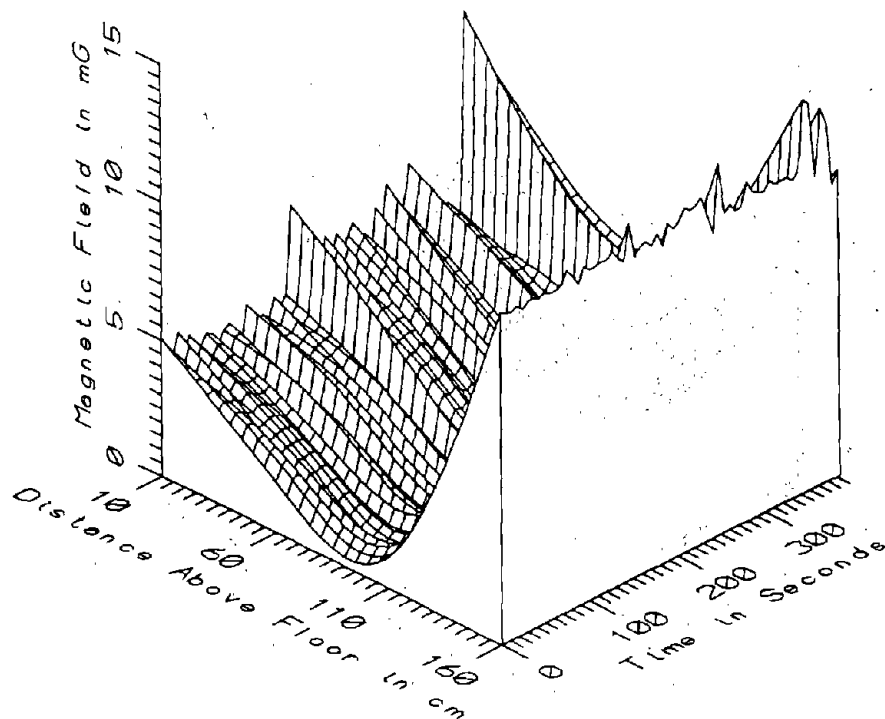
NEC005 - 160cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN FIRST COACH



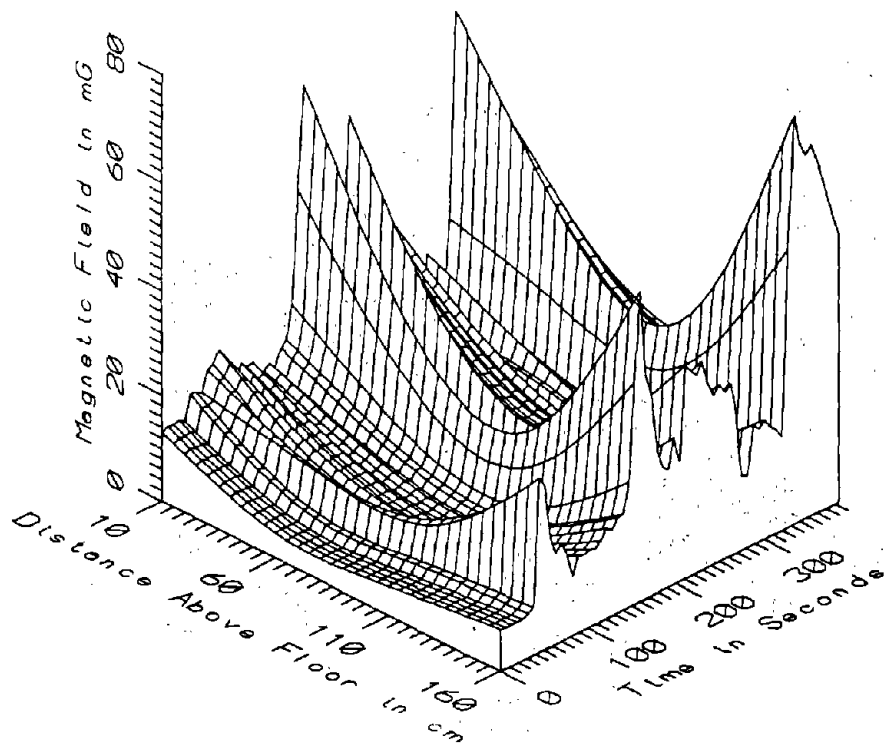
NEC005 - AGAINST SIDE BULKHEAD IN 1ST COACH - STATIC



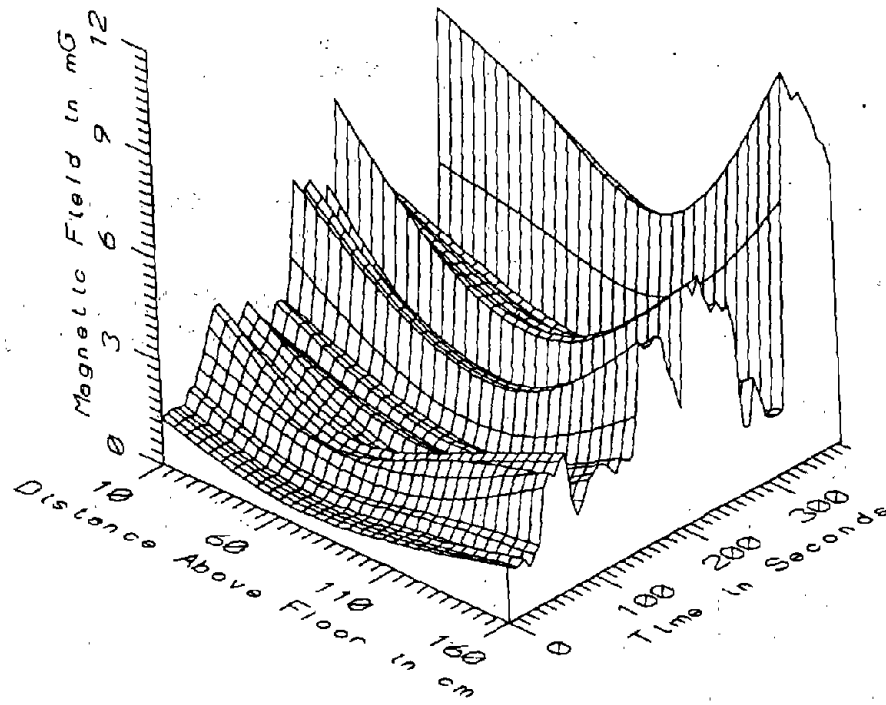
NEC005 - AGAINST SIDE BULKHEAD IN 1ST COACH - LOW FREQ, 5-45Hz



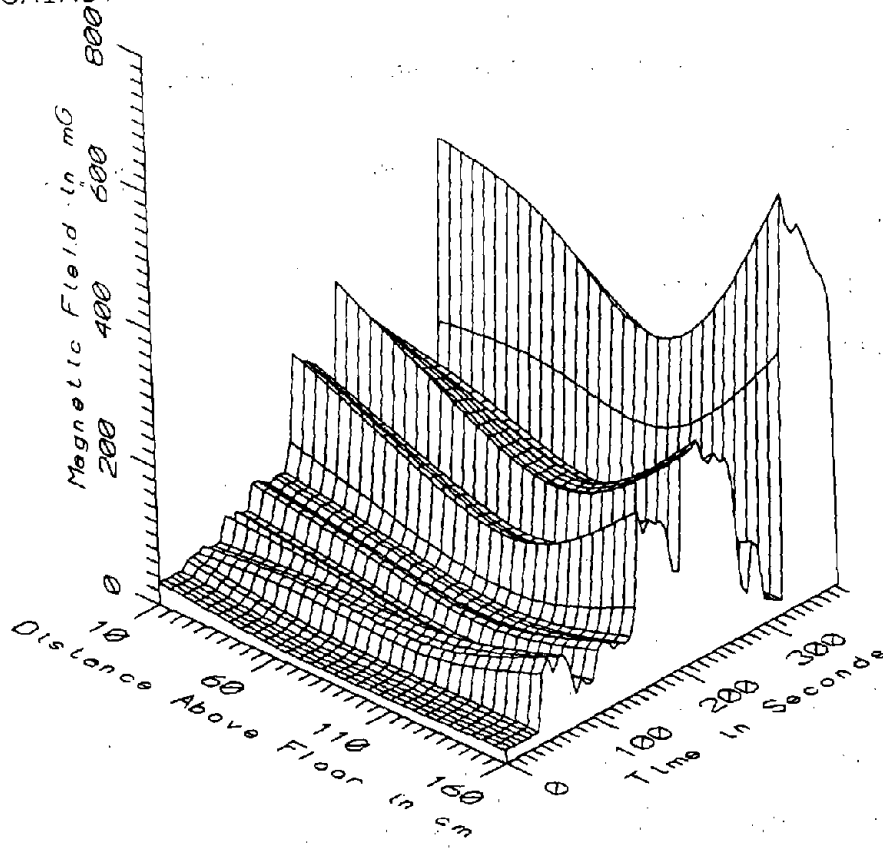
NEC005 - AGAINST SIDE BULKHEAD IN 1ST COACH - POWER FREQ, 50-60Hz



NEC005 - AGAINST SIDE BULKHEAD IN 1ST COACH - POWER HARM, 65-300Hz



NEC005 - AGAINST SIDE BULKHEAD IN 1ST COACH - HIGH FREQ. 305-2560Hz



NEC005 - AGAINST SIDE BULKHEAD IN 1ST COACH - ALL FREQ. 5-2560Hz

APPENDIX G

DATASET NEC006
FRONT OF FIRST COACH AT WINDOW, 25 HZ NEC

Measurement Setup Code: Staff: 10 Reference: None
Drawing: A-1

Vehicle Status: Trip into Philadelphia stopping at
30th Street Station at 9 minutes
into data

Measurement Date: March 30, 1992

Measurement Time: Start: 12:07:05
End: 12:18:05

Number of Samples: 12

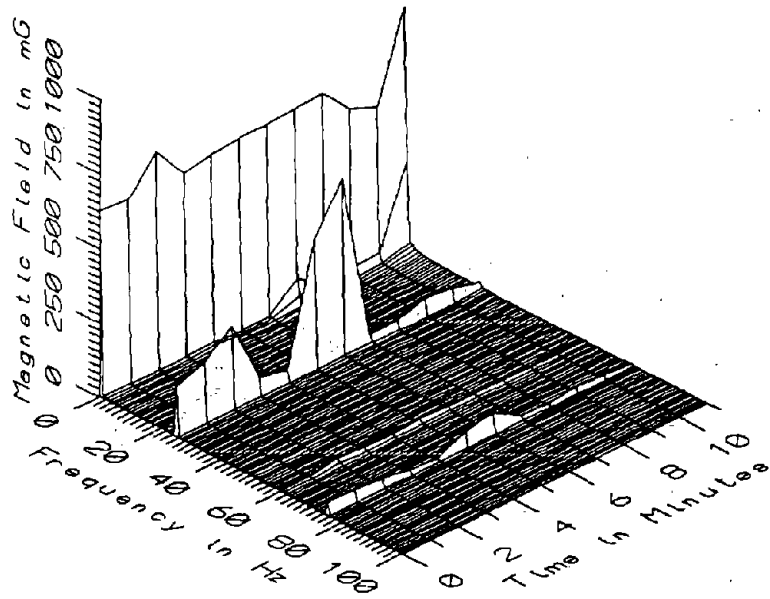
Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

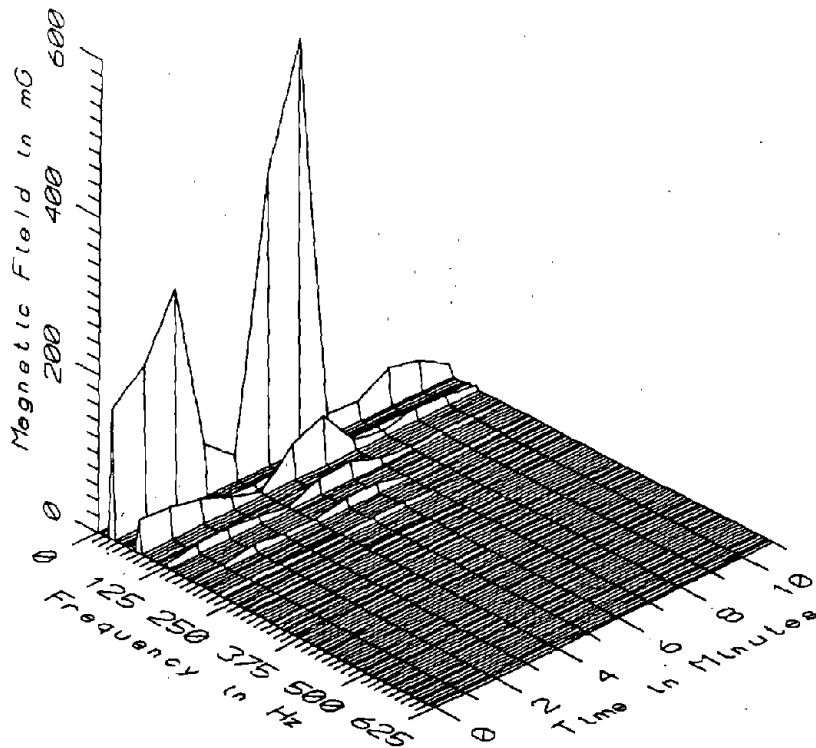
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

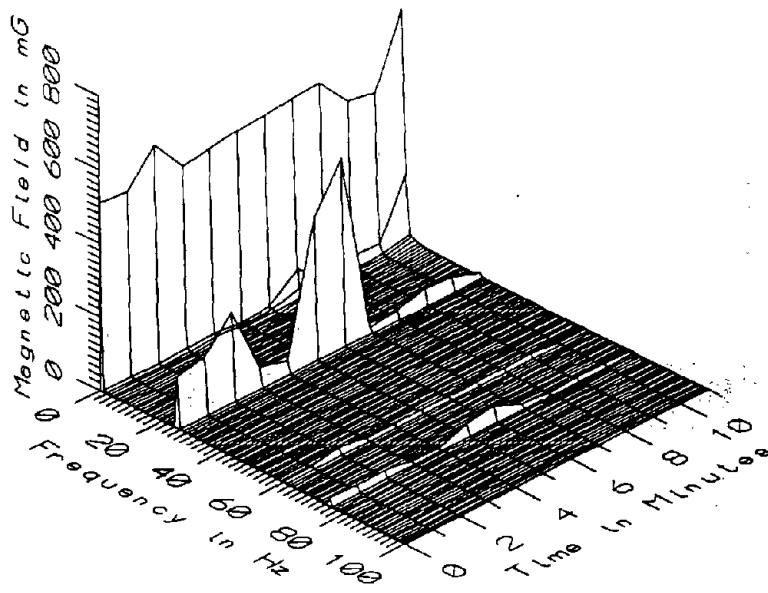
Missing or Suspect Data: None



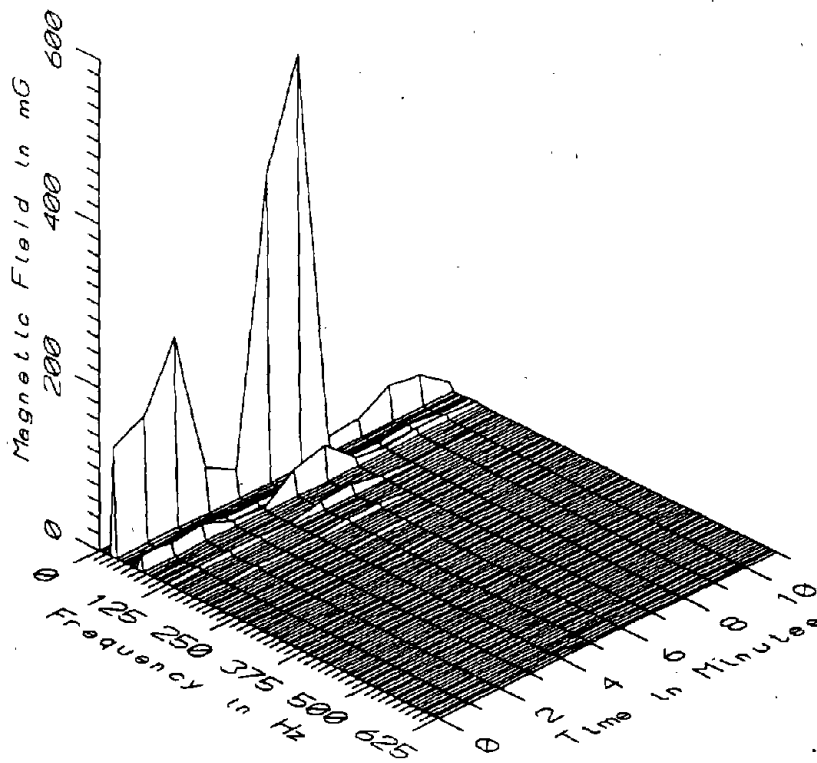
NEC006 - 10cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE FIRST COACH



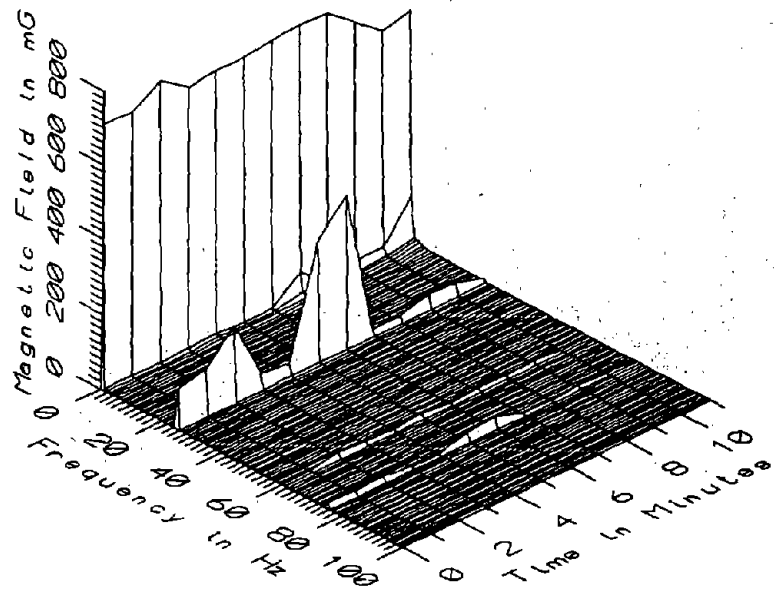
NEC006 - 10cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE FIRST COACH



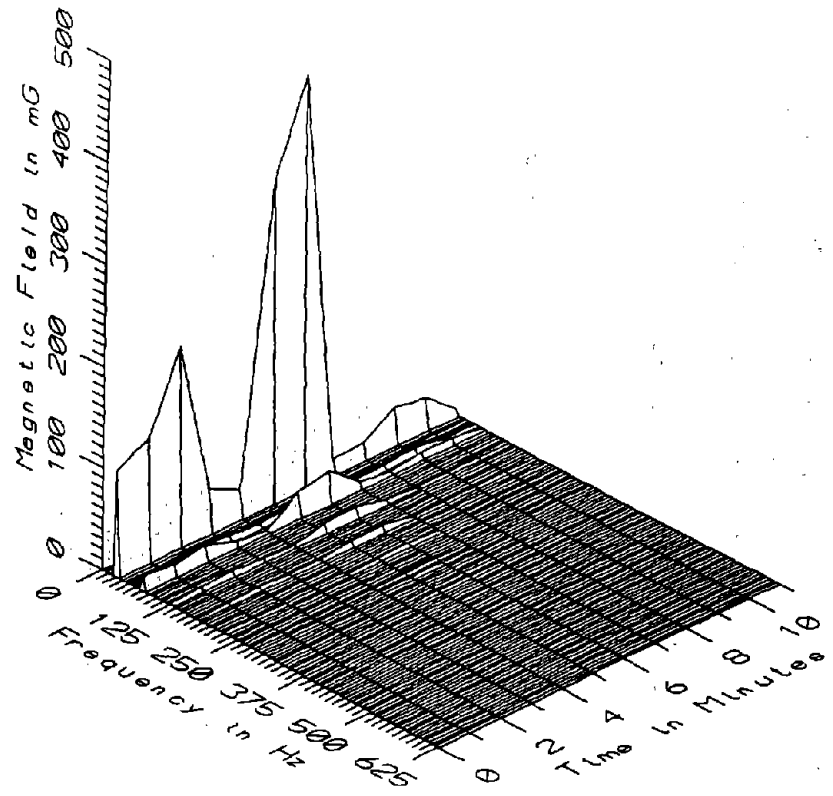
NEC006 - 60cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE FIRST COACH



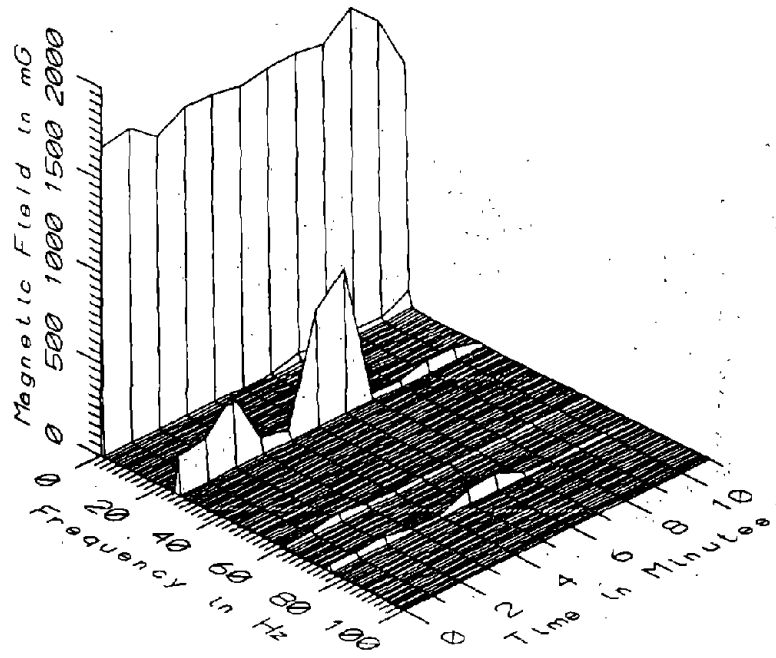
NEC006 - 60cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE FIRST COACH



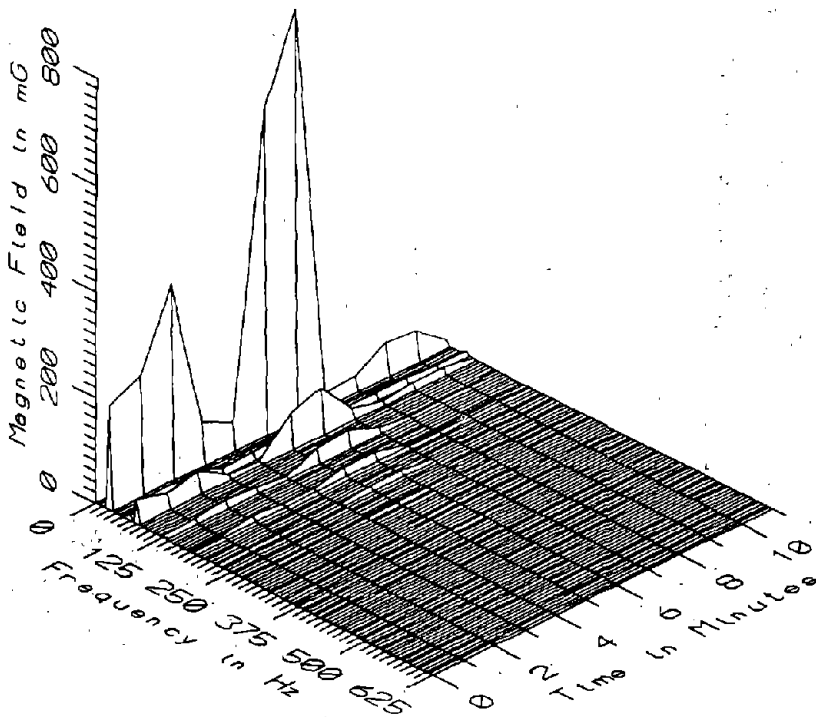
NEC006 - 110cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE FIRST COACH



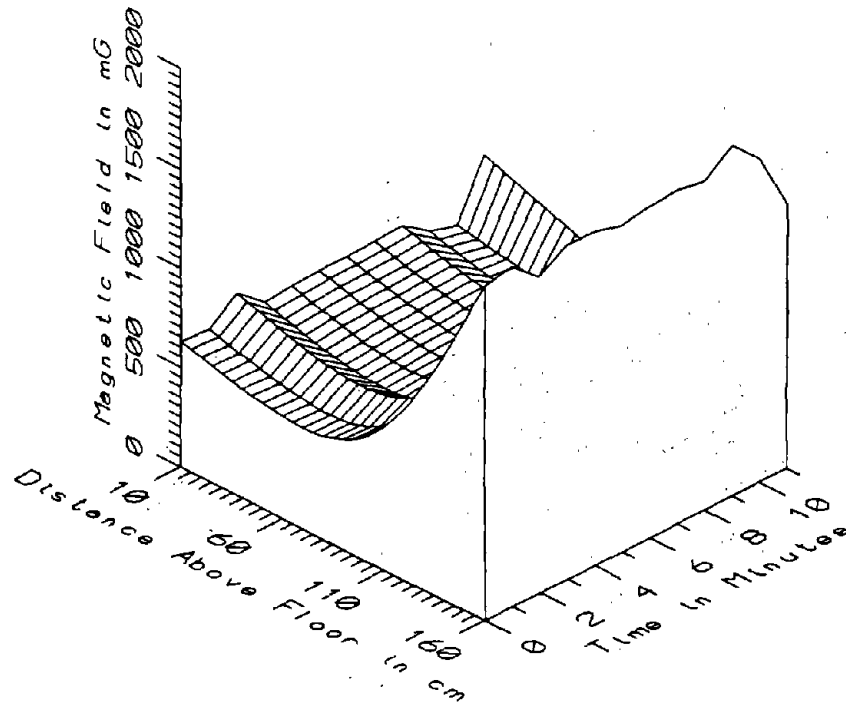
NEC006 - 110cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE FIRST COACH



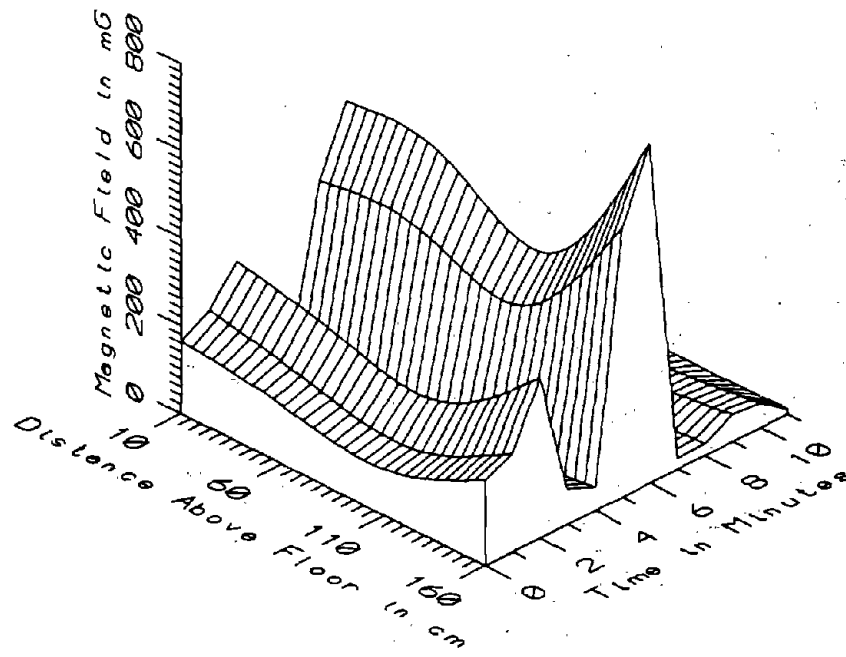
NEC006 - 160cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE FIRST COACH



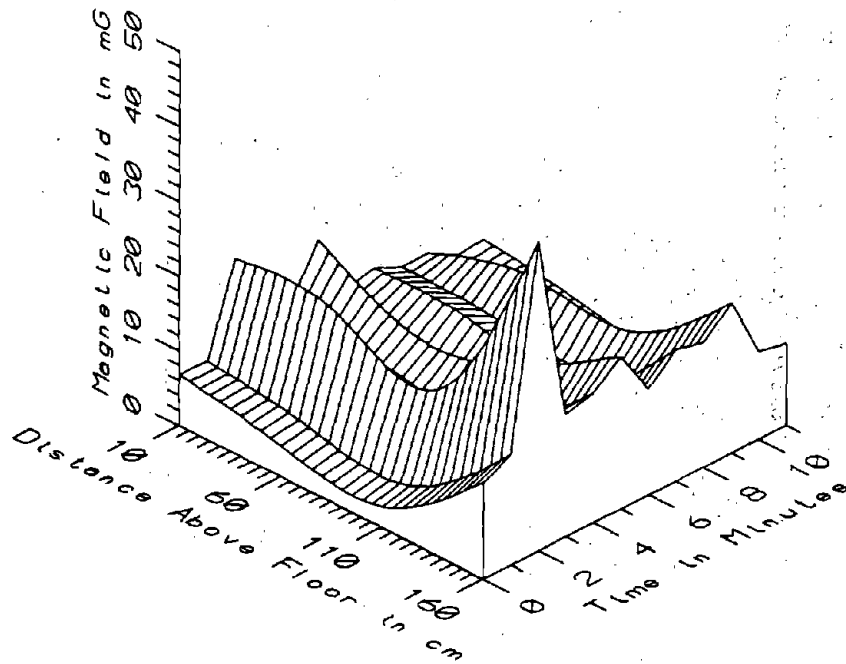
NEC006 - 160cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE FIRST COACH



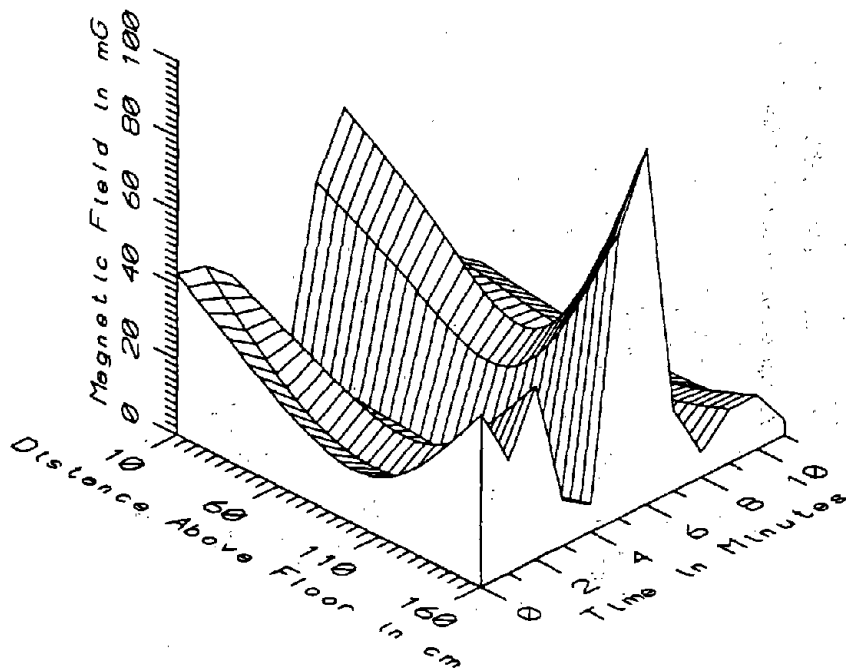
NEC006 - AGAINST SIDE BULKHEAD IN 1ST COACH - STATIC



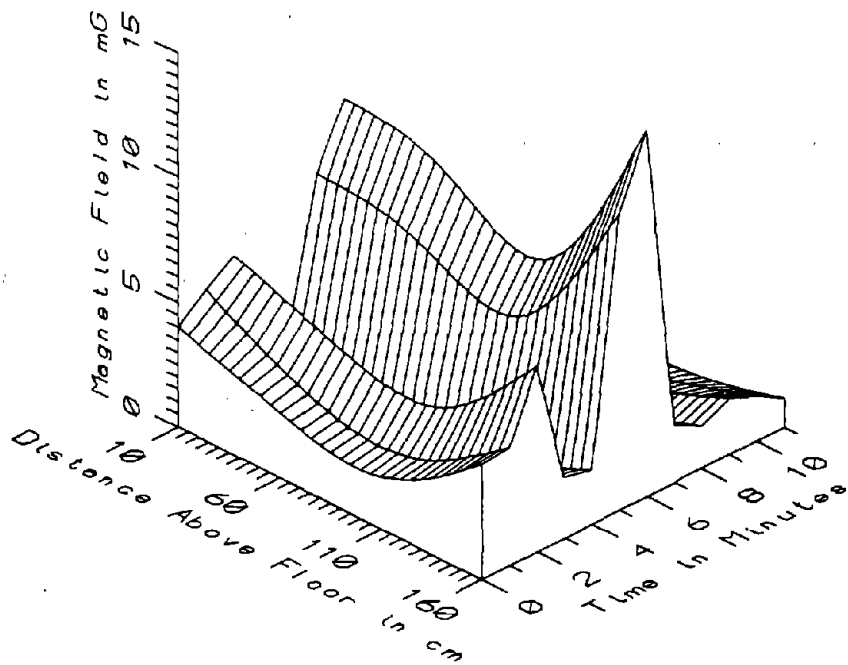
NEC006 - AGAINST SIDE BULKHEAD IN 1ST COACH - LOW FREQ, 5-45Hz



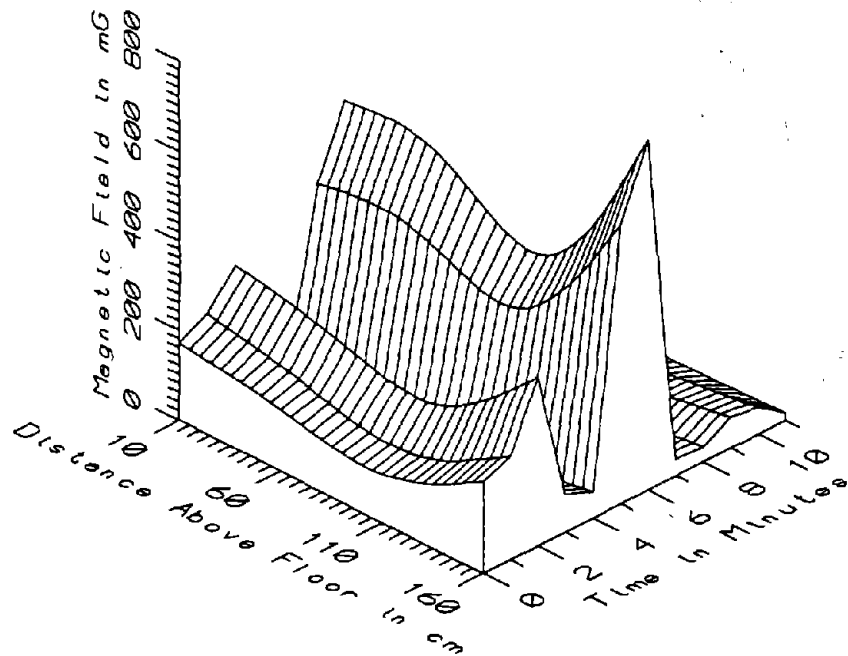
NEC006 - AGAINST SIDE BULKHEAD IN 1ST COACH - POWER FREQ., 50-60Hz



NEC006.- AGAINST SIDE BULKHEAD IN 1ST COACH - POWER HARM, 65-300Hz



NEC006 - AGAINST SIDE BULKHEAD IN 1ST COACH - HIGH FREQ, 305-2560Hz



NEC006 - AGAINST SIDE BULKHEAD IN 1ST COACH - ALL FREQ, 5-2560Hz

APPENDIX H

DATASET NEC007
FRONT OF FIRST COACH AT AISLE, 25 HZ NEC

Measurement Setup Code: Staff: 9 Reference: None
 Drawing: A-1

Vehicle Status: Departing 30th Street Station,
 accelerating to mile post 86

Measurement Date: March 30, 1992

Measurement Time: Start: 12:22:03
 End: 12:27:51

Number of Samples: 61

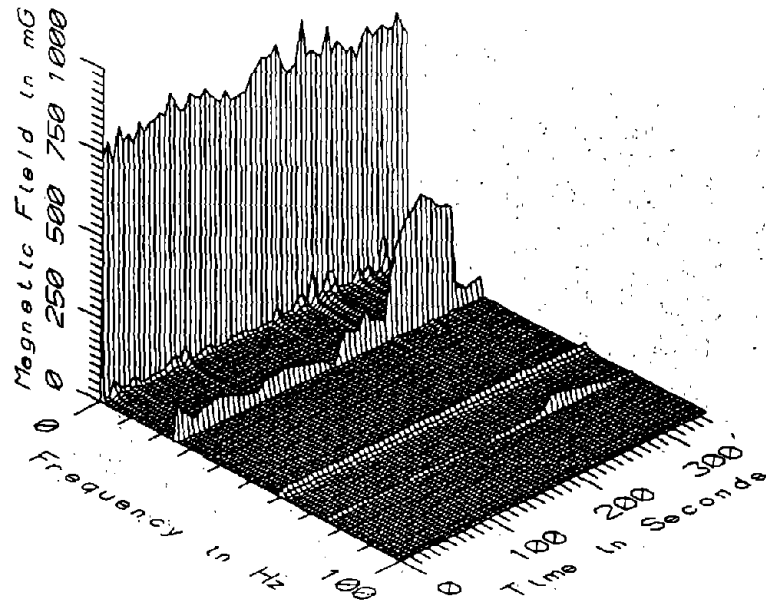
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.8 sec

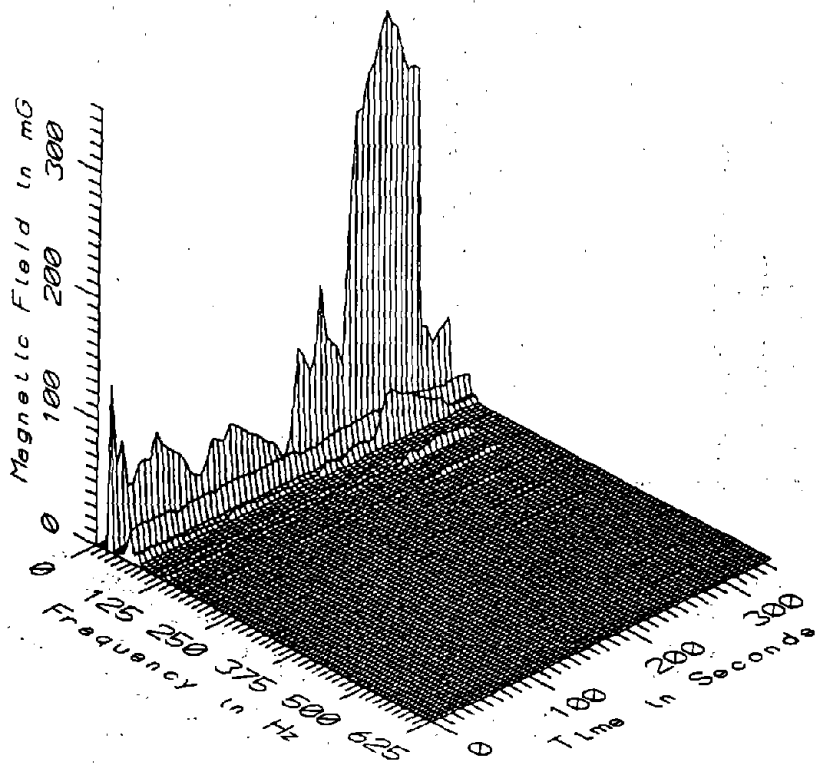
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

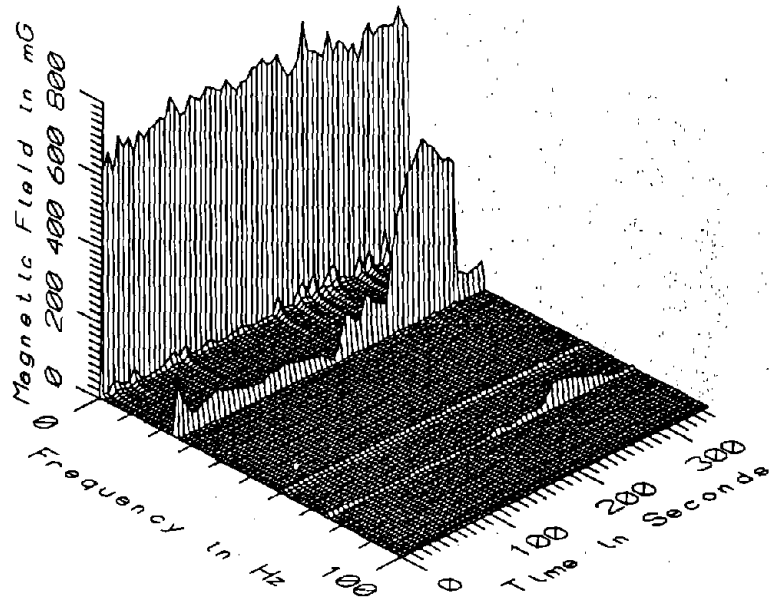
Missing or Suspect Data: None



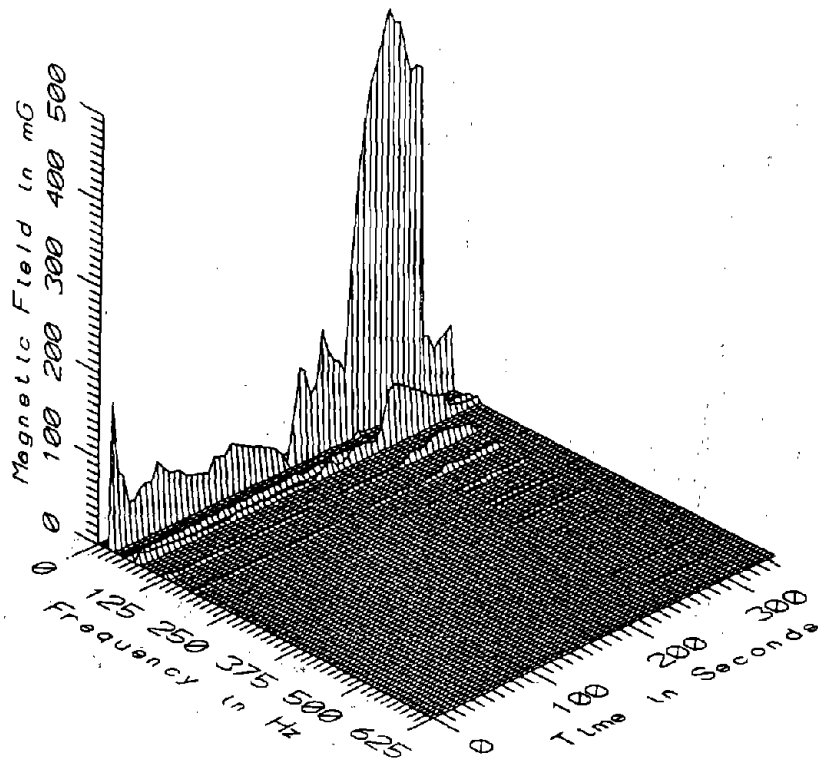
NEC007 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



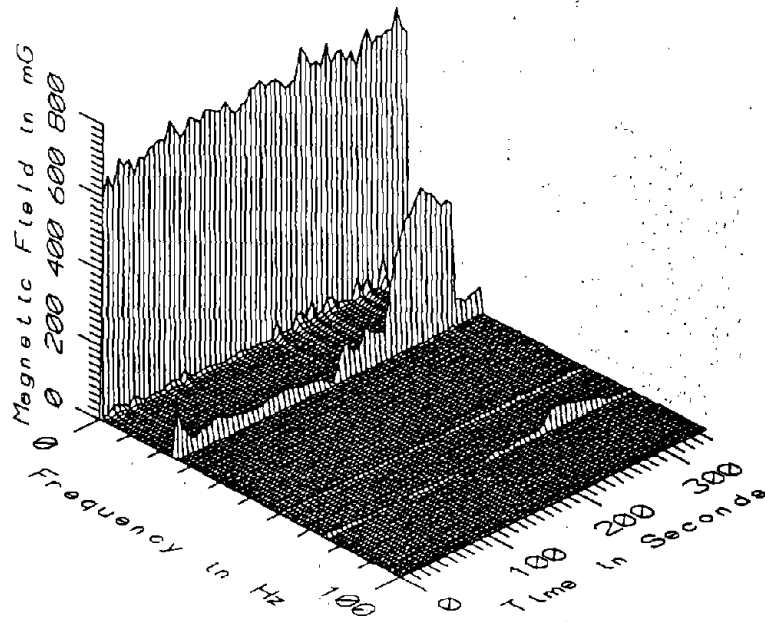
NEC007 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



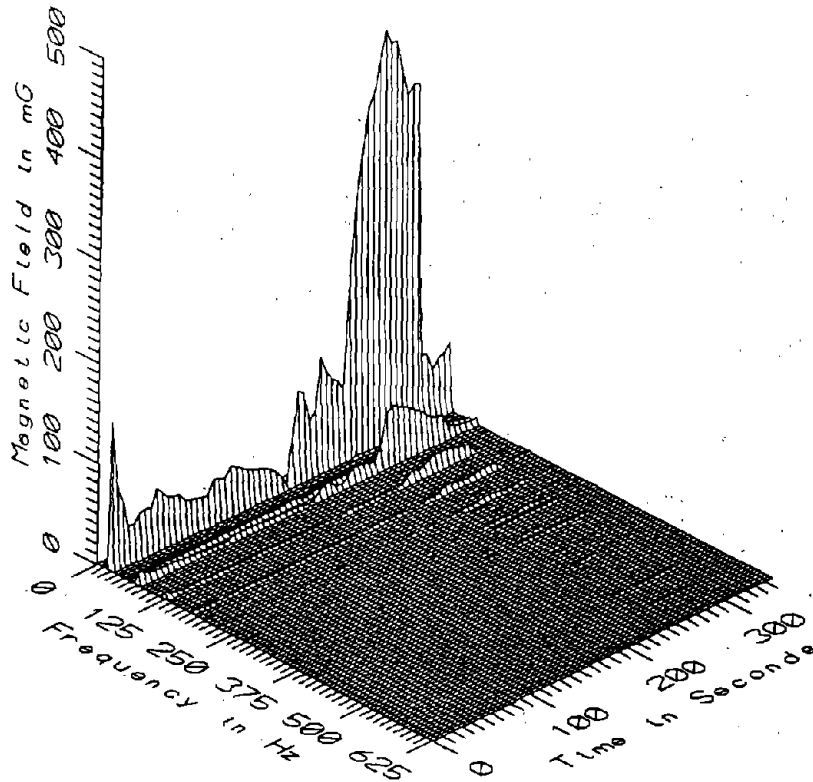
NEC007 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



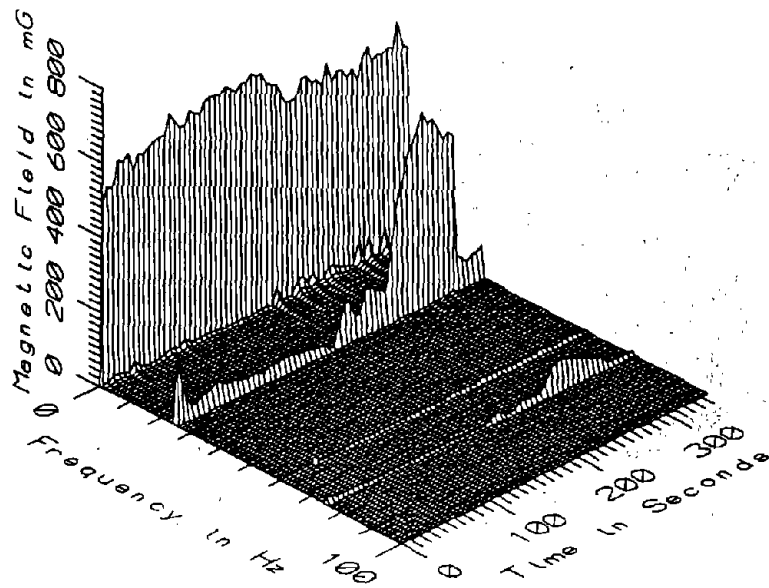
NEC007 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



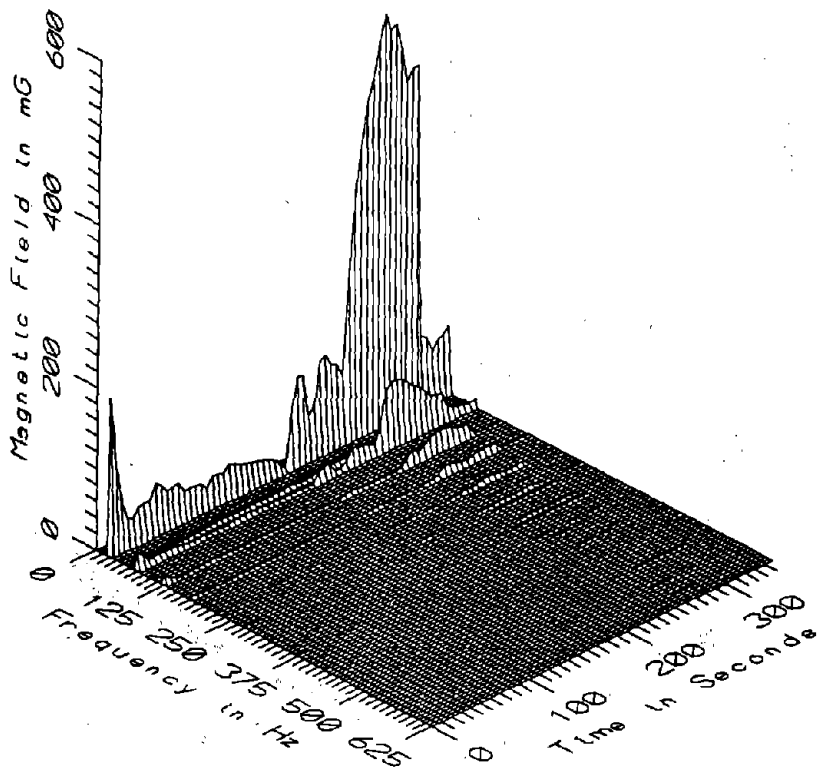
NEC007 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



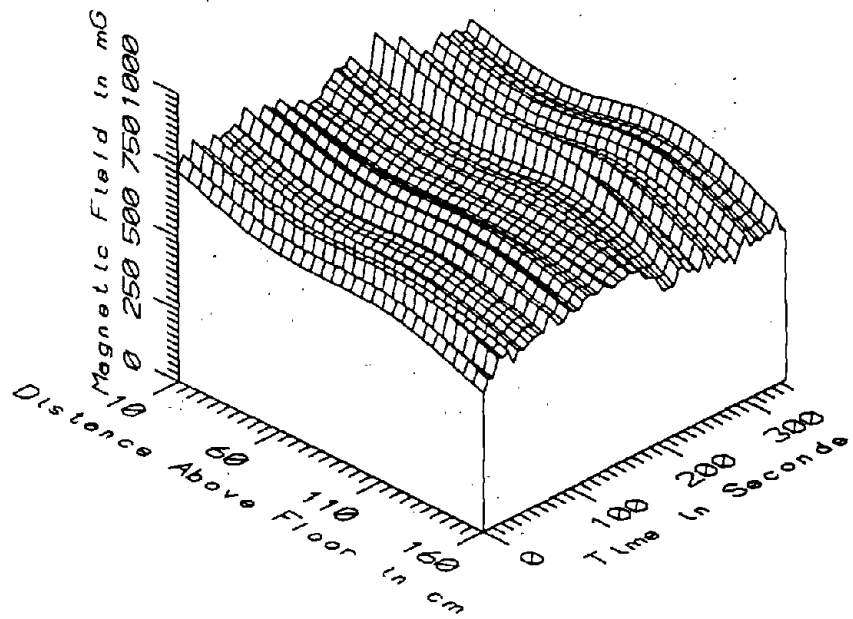
NEC007 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



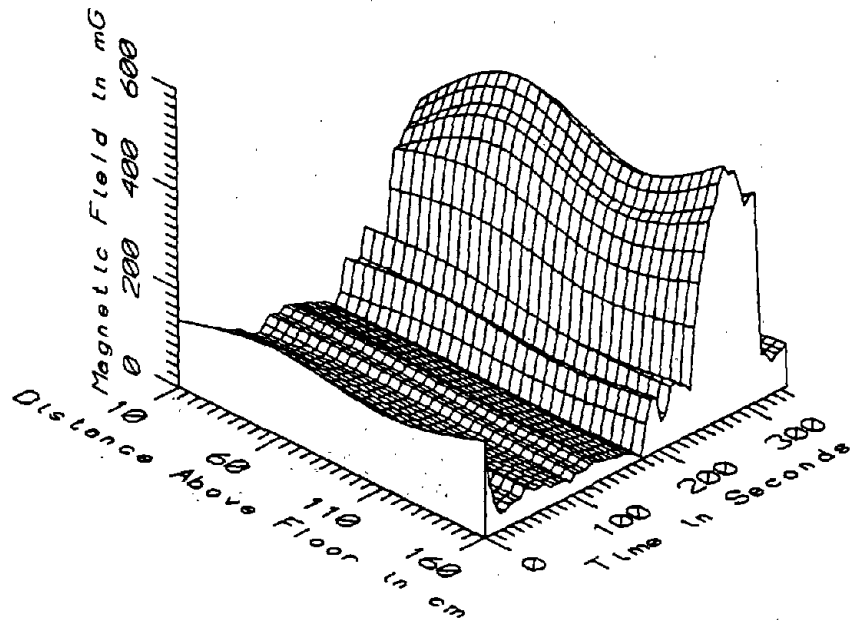
NEC007 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



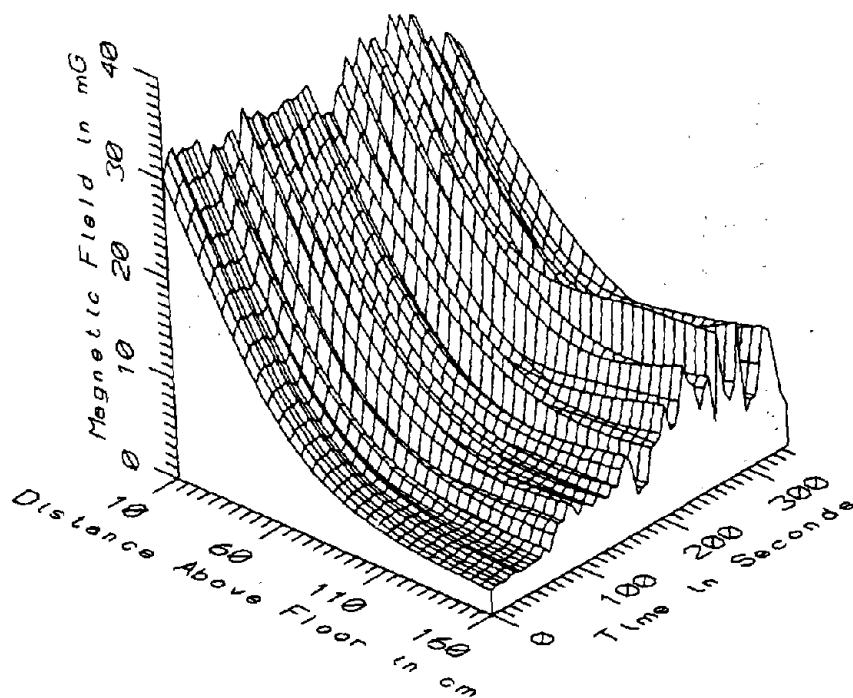
NEC007 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



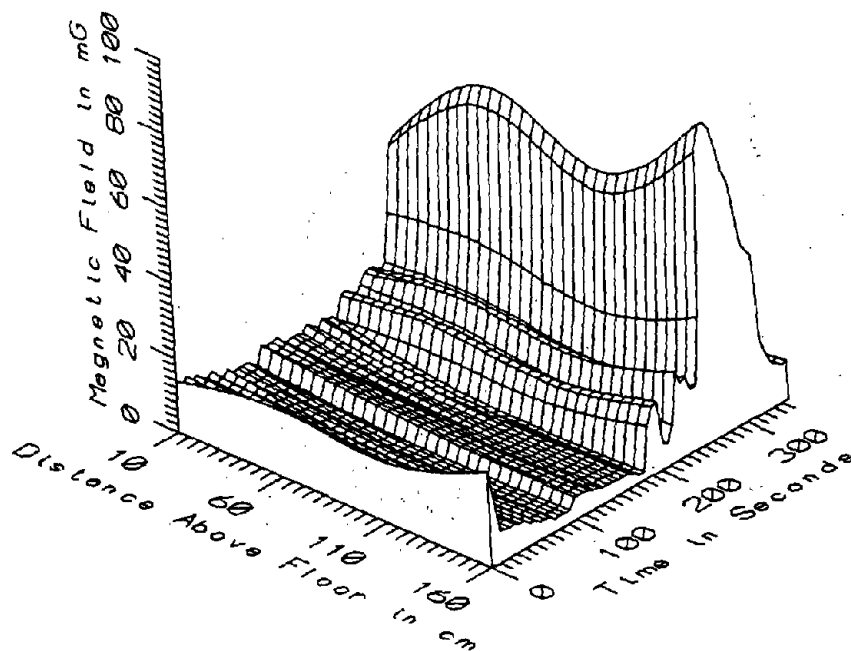
NEC007 - EDGE OF AISLE IN THE FIRST COACH - STATIC



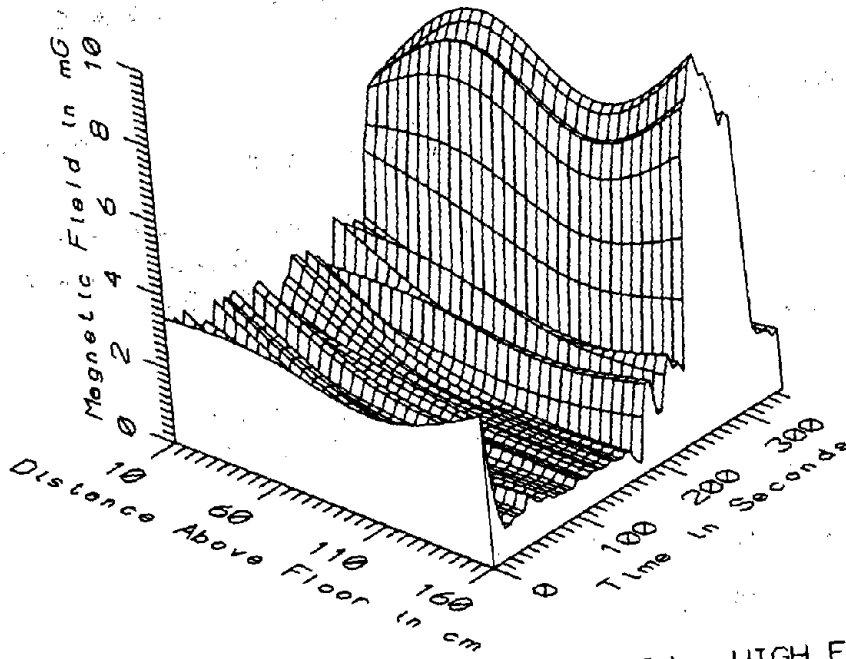
NEC007 - EDGE OF AISLE IN THE FIRST COACH - LOW FREQ. 5-45Hz



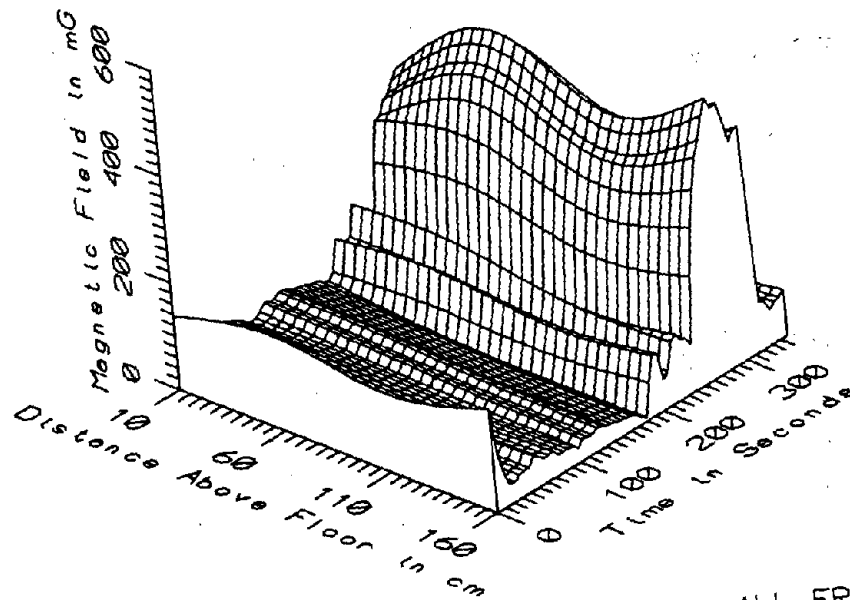
NEC007 - EDGE OF AISLE IN THE FIRST COACH - POWER FREQ, 50-60Hz



NEC007 - EDGE OF AISLE IN THE FIRST COACH - POWER HARM, 65-300Hz



NEC007 - EDGE OF AISLE IN THE FIRST COACH - HIGH FREQ, 305-2560Hz



NEC007 - EDGE OF AISLE IN THE FIRST COACH - ALL FREQ, 5-2560Hz

APPENDIX I

DATASET NEC008
FRONT OF FIRST COACH AT AISLE, 25 HZ NEC

Measurement Setup Code: Staff: 9 Reference: None
 Drawing: A-1

Vehicle Status: Train running between stations,
 passing Frankfort Substation 3
 minutes into sample

Measurement Date: March 30, 1992

Measurement Time: Start: 12:30:07
 End: 12:39:07

Number of Samples: 10

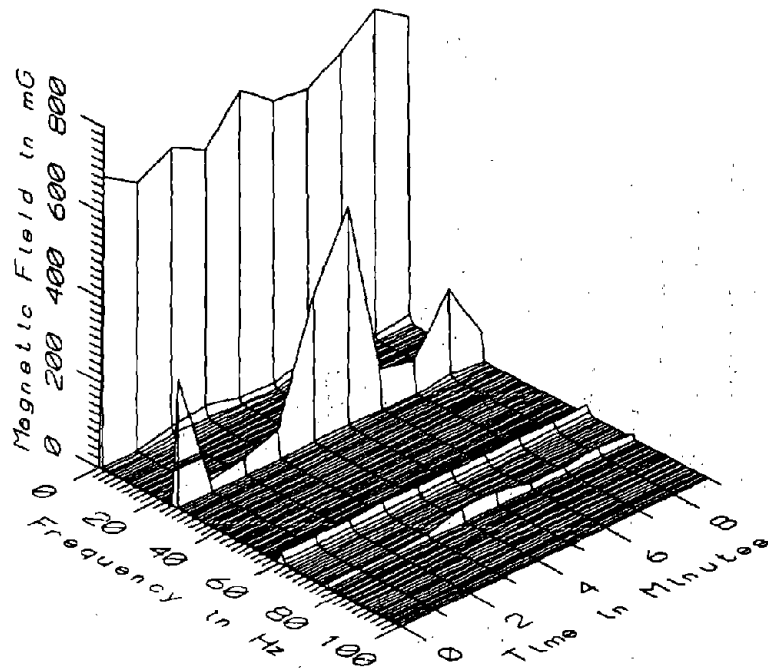
Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

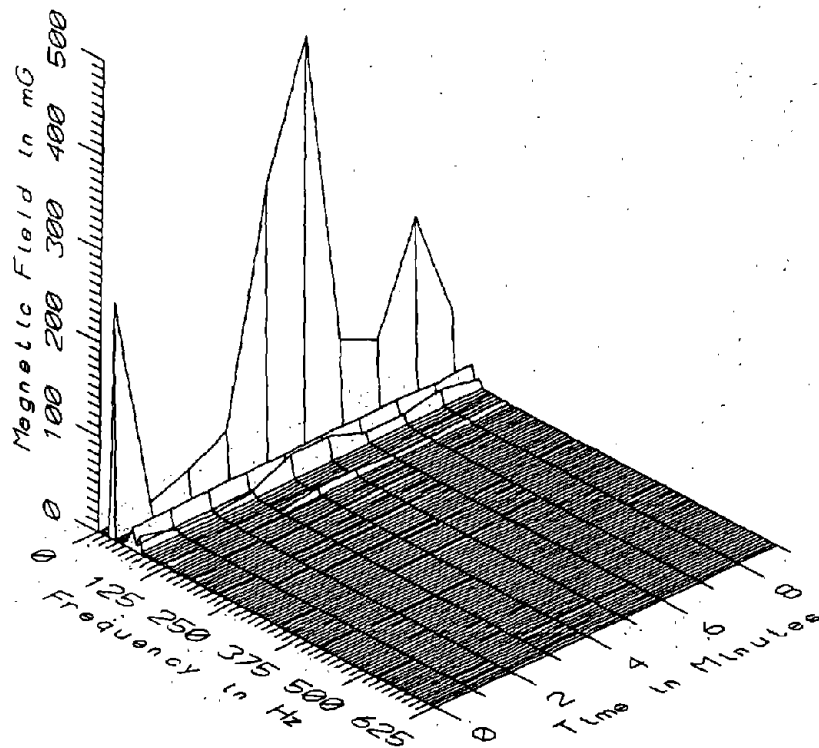
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

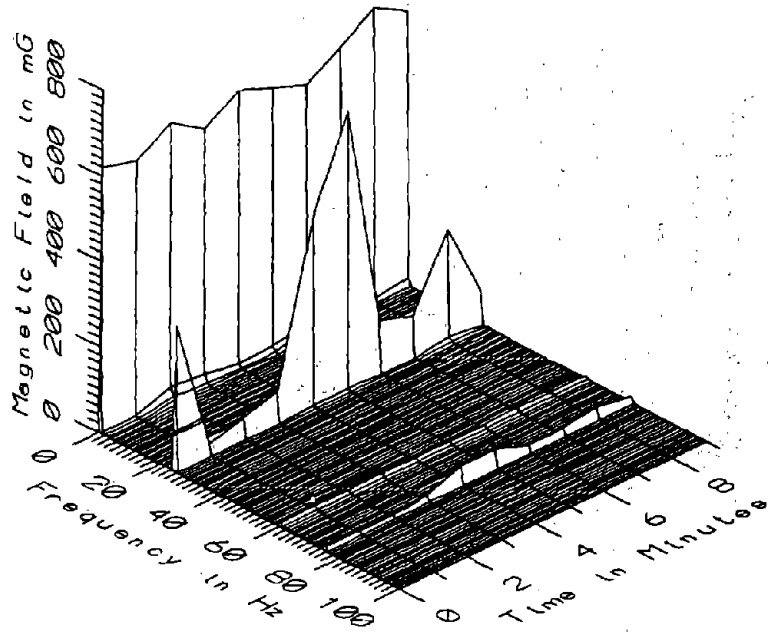
Missing or Suspect Data: None



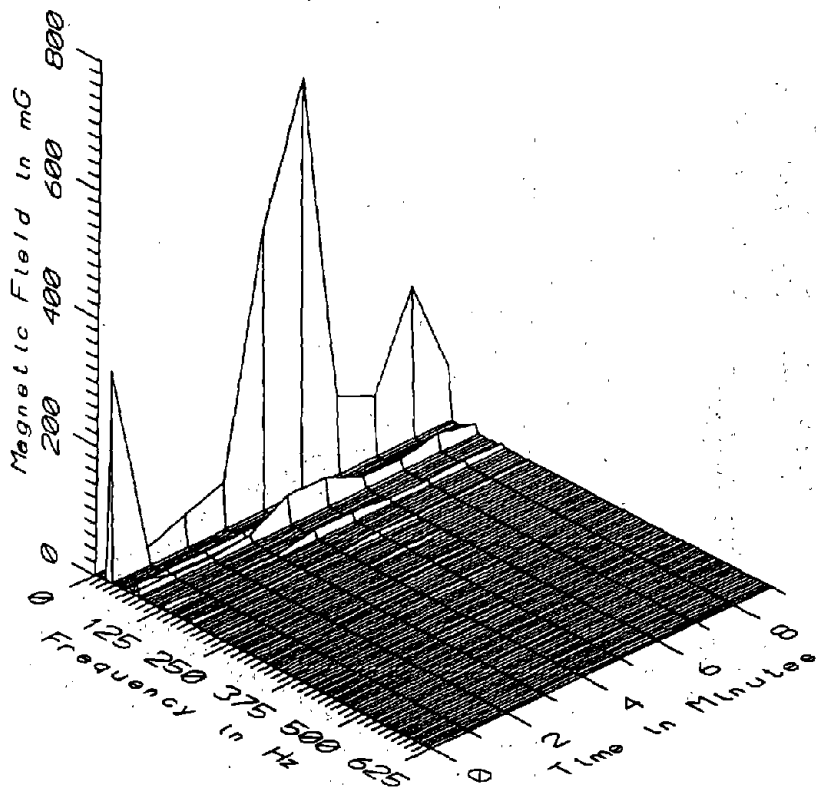
NEC008 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



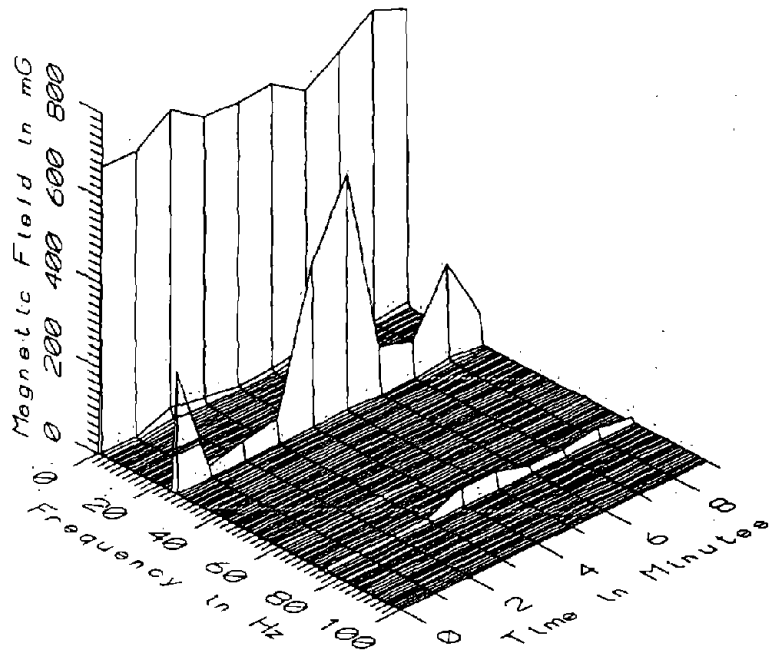
NEC008 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



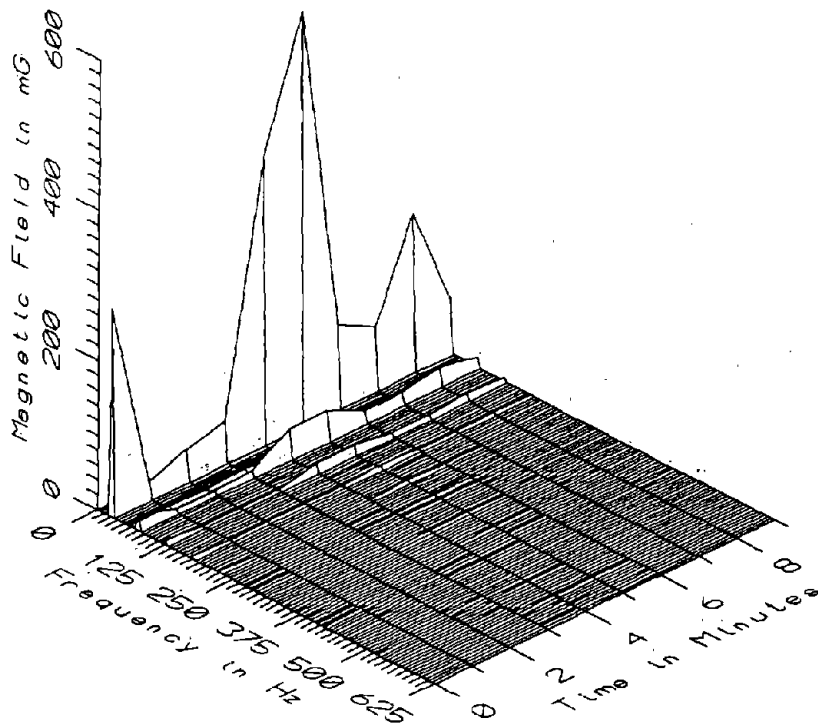
NEC008 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



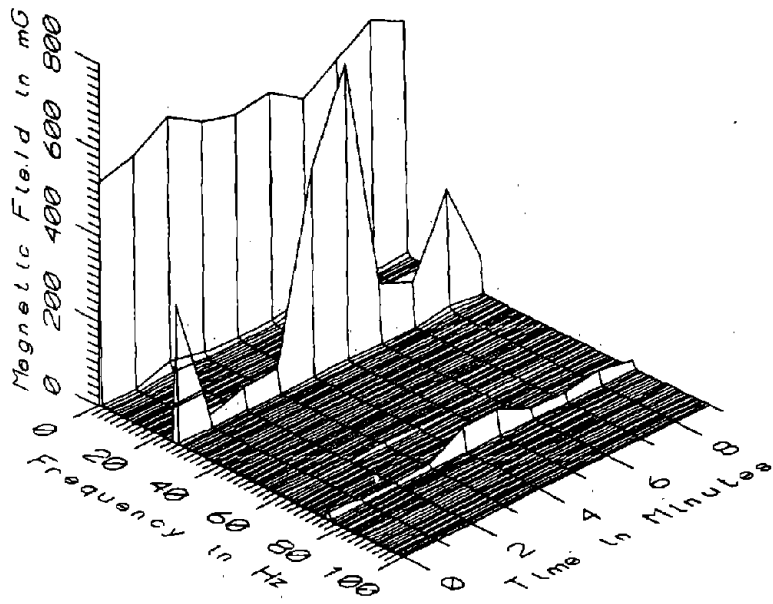
NEC008 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



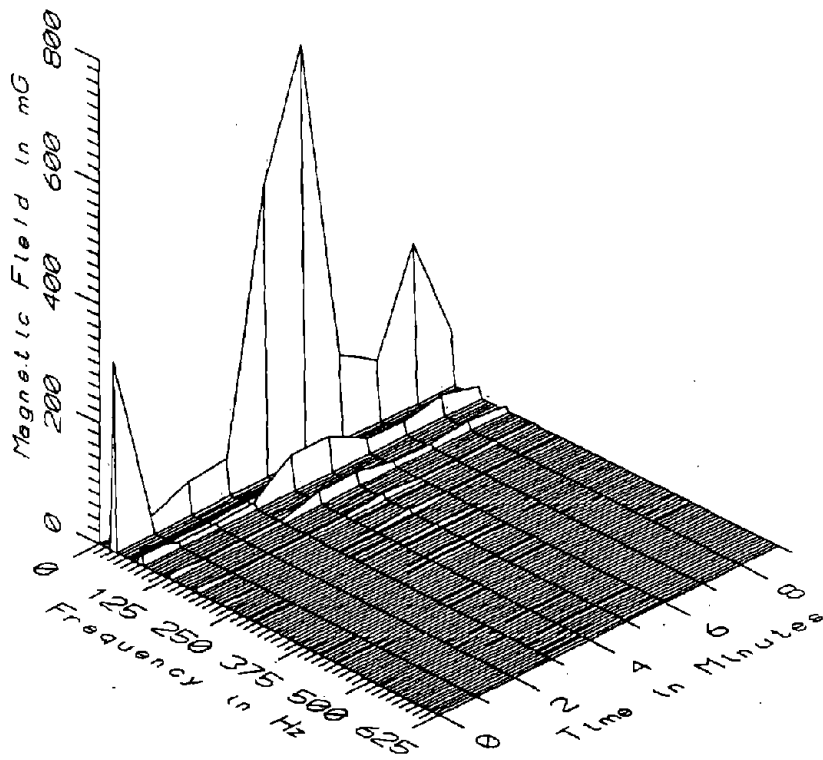
NEC008 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



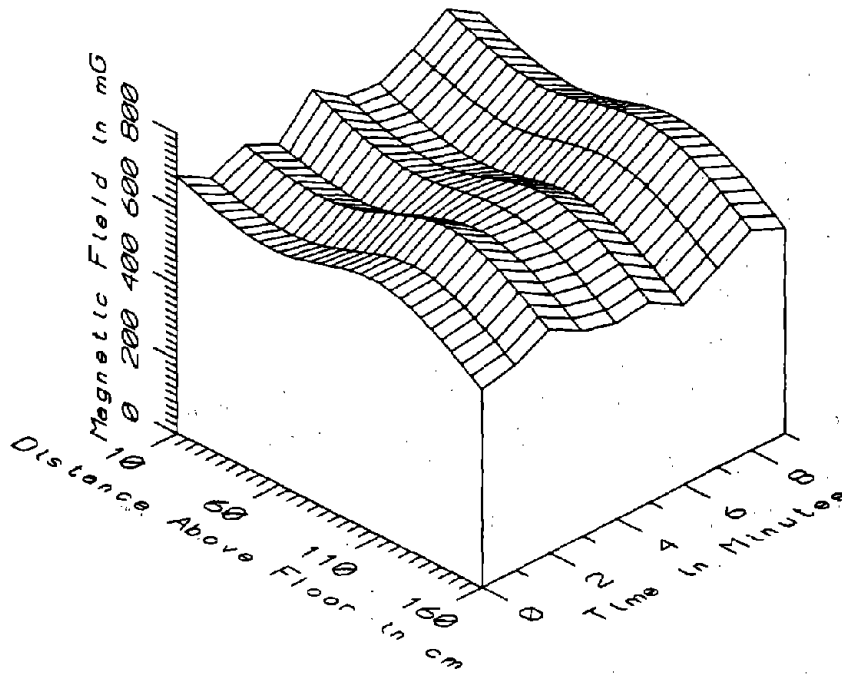
NEC008 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



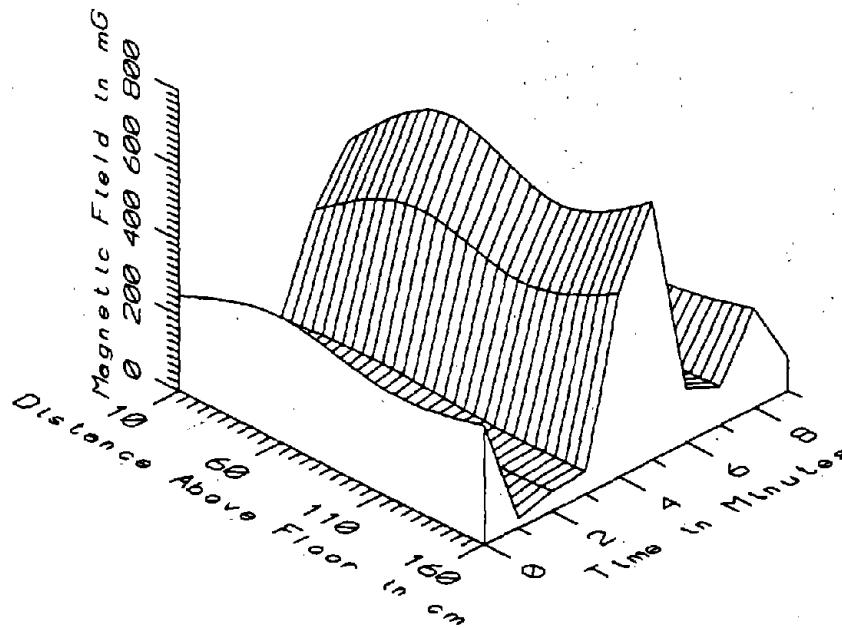
NEC008 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



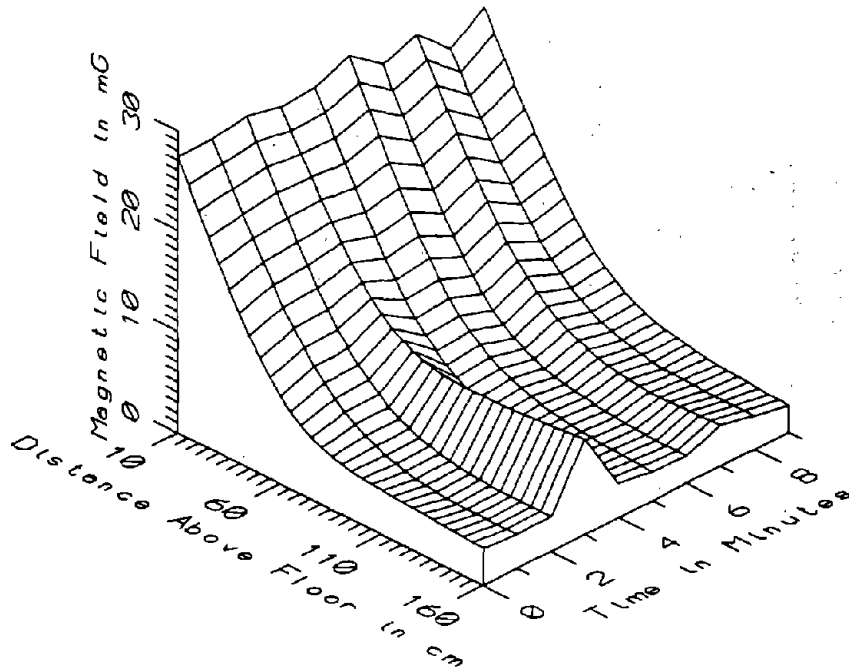
NEC008 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



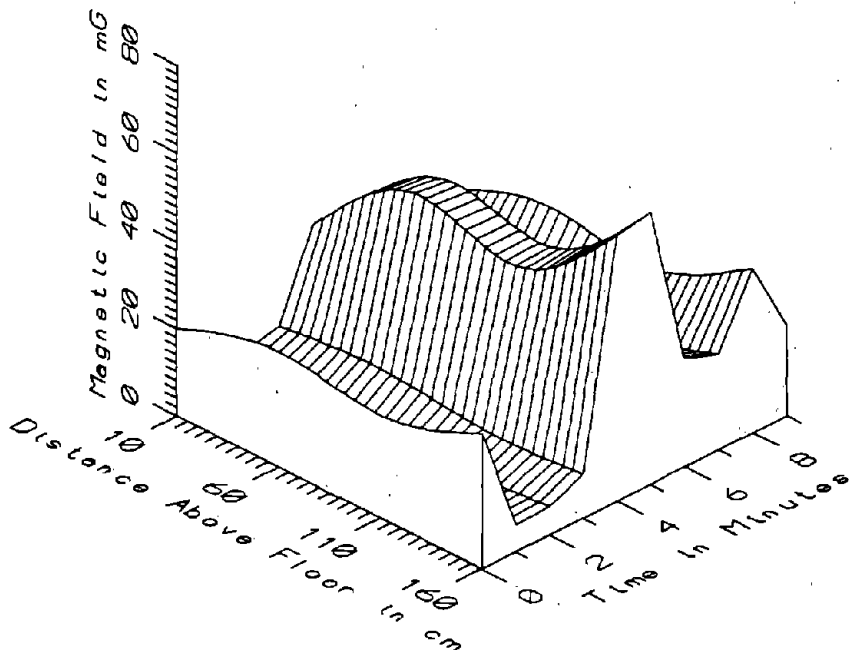
NEC008 - EDGE OF AISLE IN THE FIRST COACH - STATIC



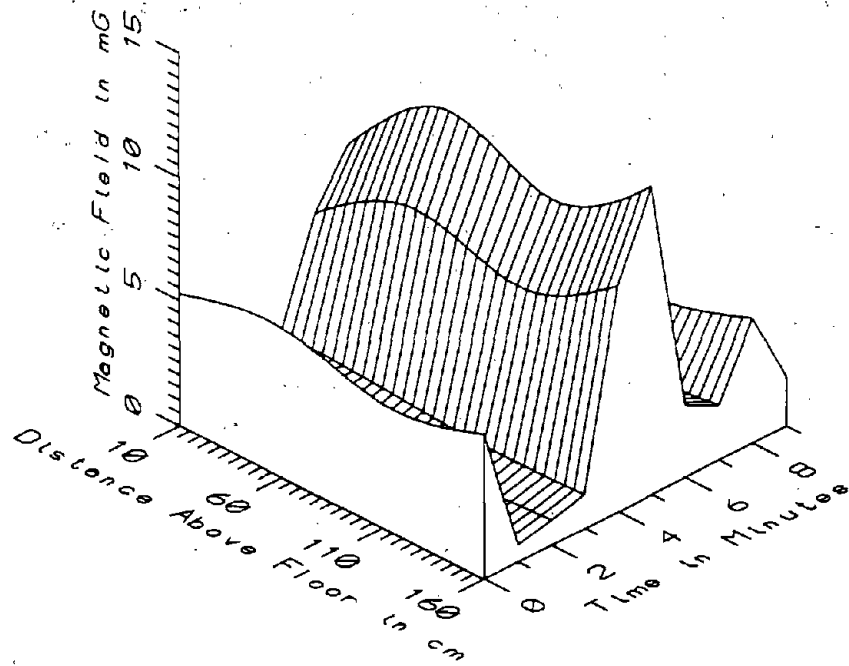
NEC008 - EDGE OF AISLE IN THE FIRST COACH - LOW FREQ. 5-45Hz



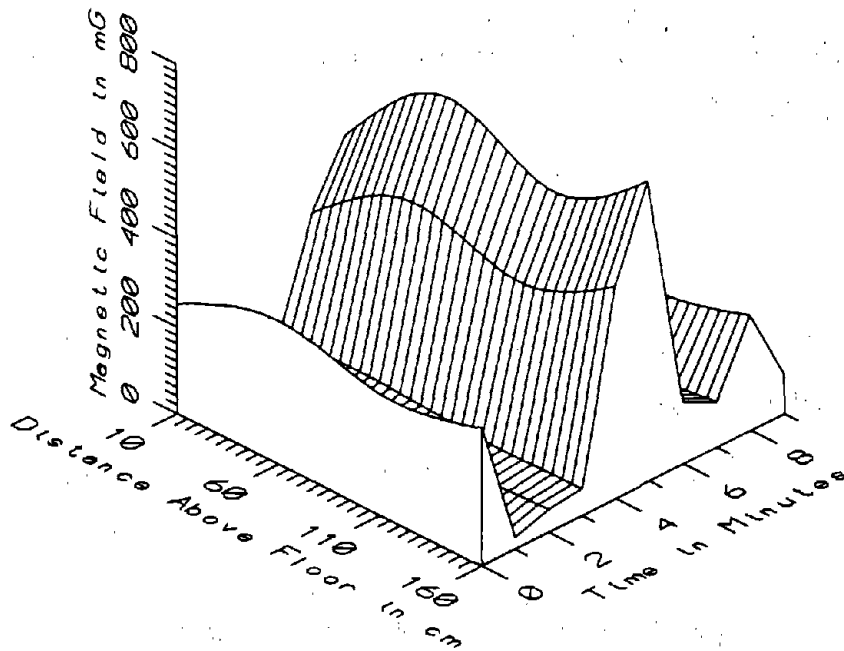
NEC008 - EDGE OF AISLE IN THE FIRST COACH - POWER FREQ, 50-60Hz



NEC008 - EDGE OF AISLE IN THE FIRST COACH - POWER HARM, 65-300Hz



NEC008 - EDGE OF AISLE IN THE FIRST COACH - HIGH FREQ, 305-2560Hz



NEC008 - EDGE OF AISLE IN THE FIRST COACH - ALL FREQ, 5-2560Hz

APPENDIX J

DATASET NEC009
REAR OF FIRST COACH AT AISLE, 25 HZ NEC

Measurement Setup Code: Staff: 7 Reference: None
 Drawing: A-1

Vehicle Status: Train running at speed, Eddington to
 Morrisville

Measurement Date: March 30, 1992

Measurement Time: Start: 12:45:43
 End: 12:55:36

Number of Samples: 102

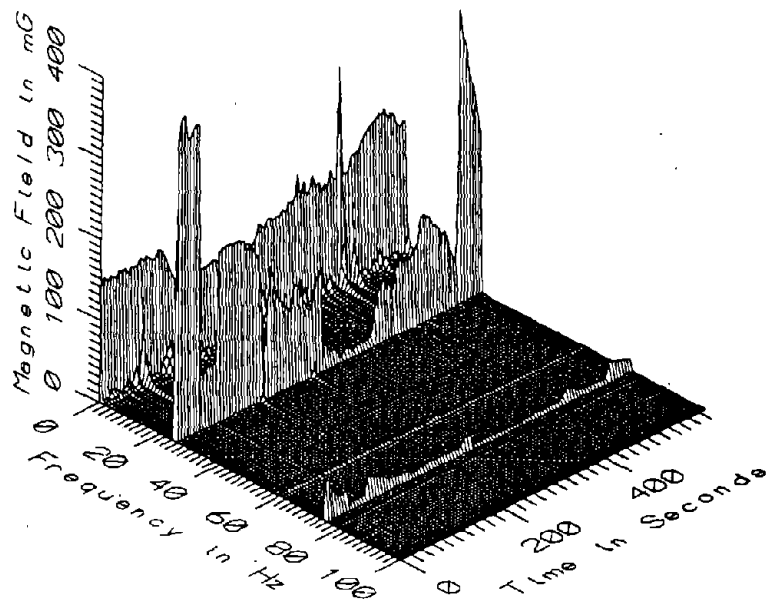
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.9 sec

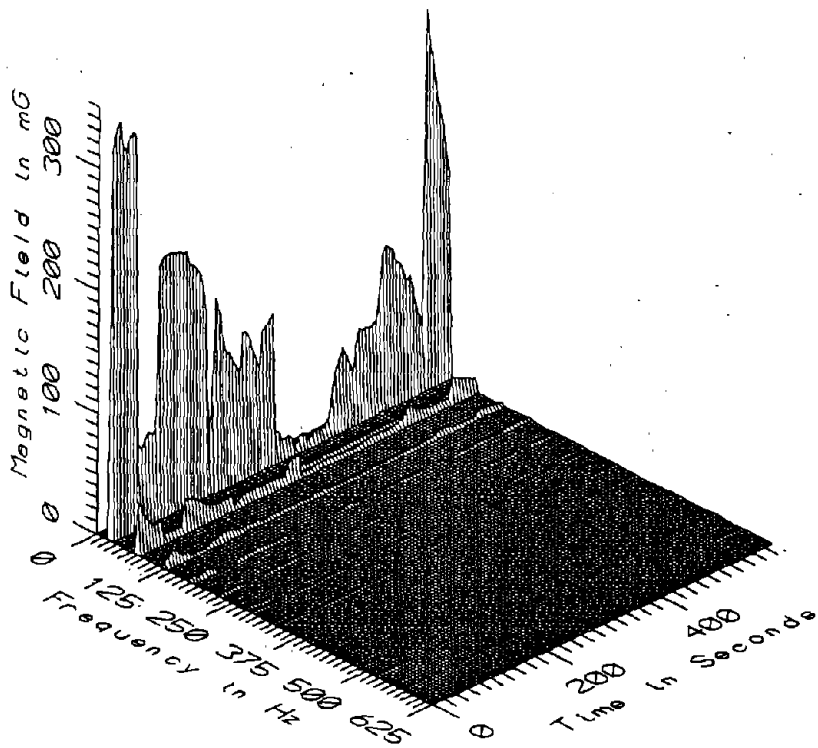
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

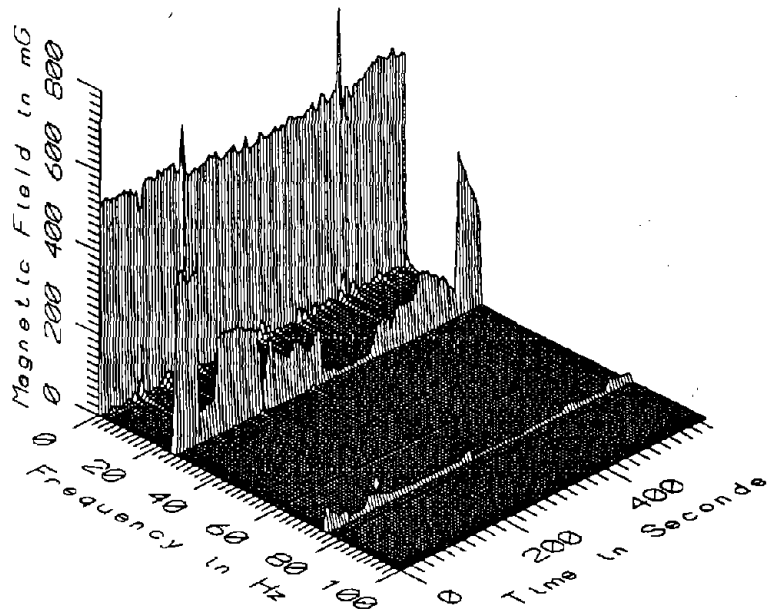
Missing or Suspect Data: None



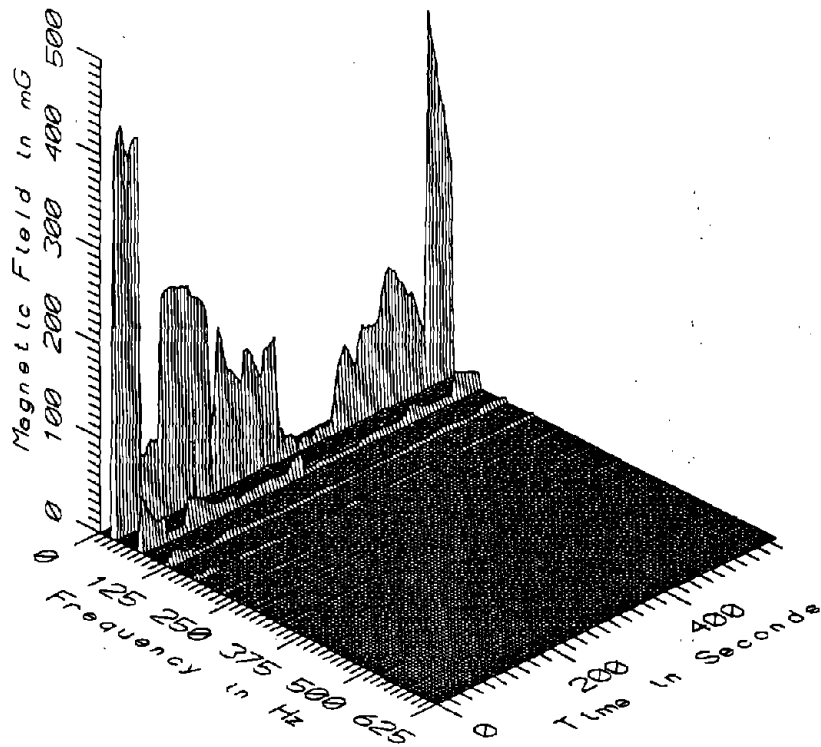
NEC009 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN REAR OF 1ST COACH



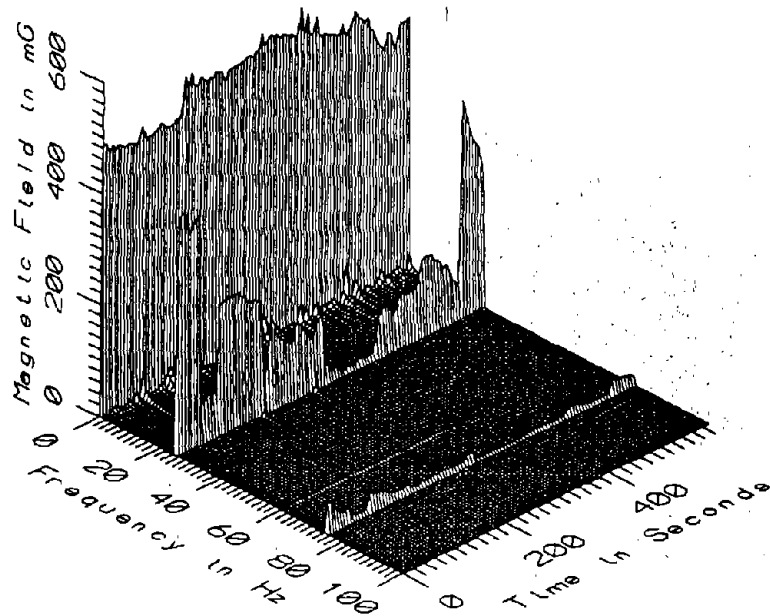
NEC009 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN REAR OF 1ST COACH



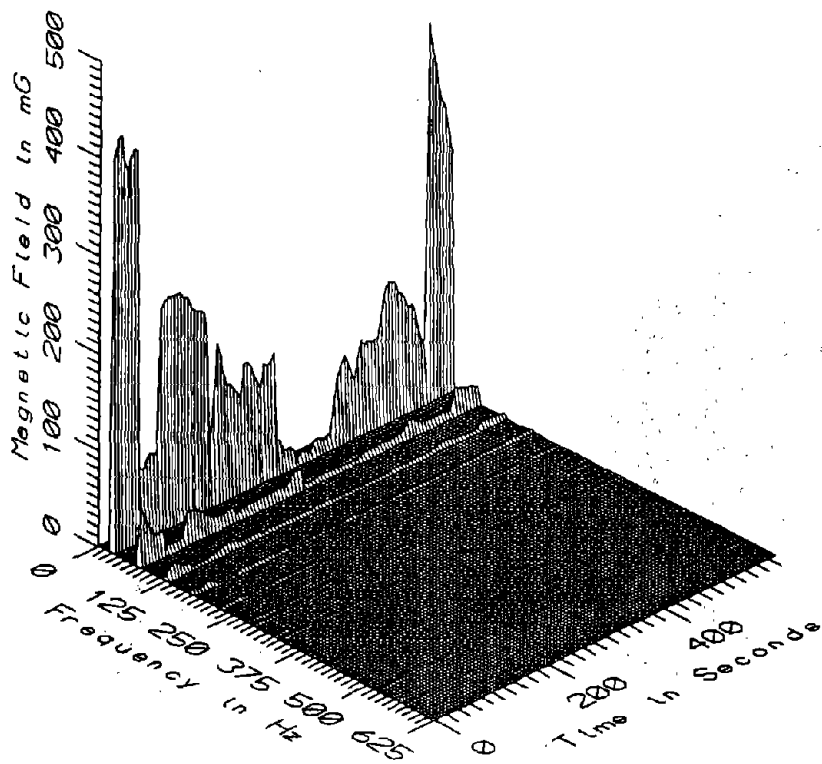
NEC009 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN REAR OF 1ST COACH



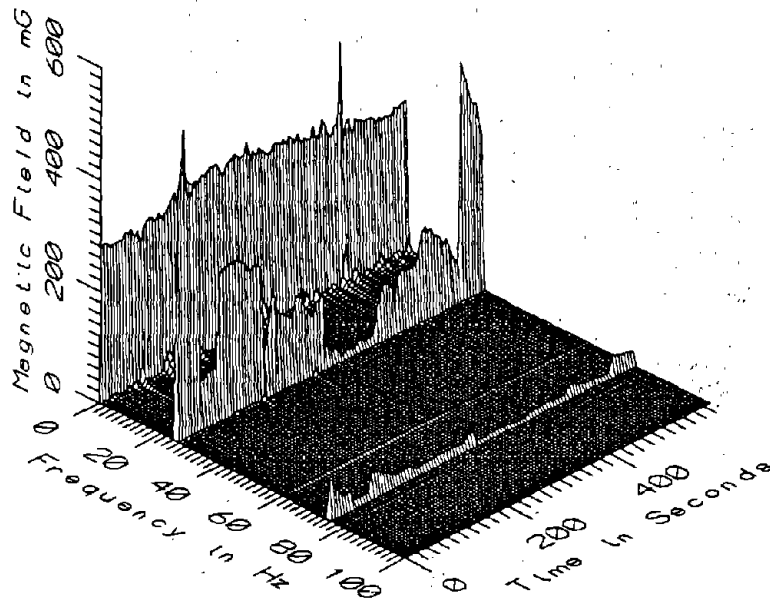
NEC009 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN REAR OF 1ST COACH



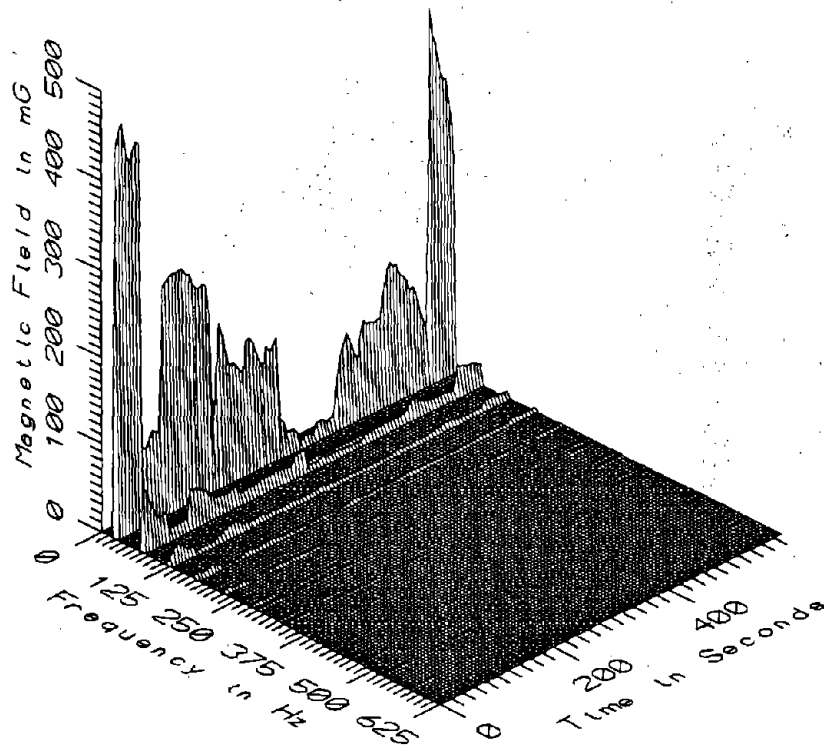
NEC009 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN REAR OF 1ST COACH



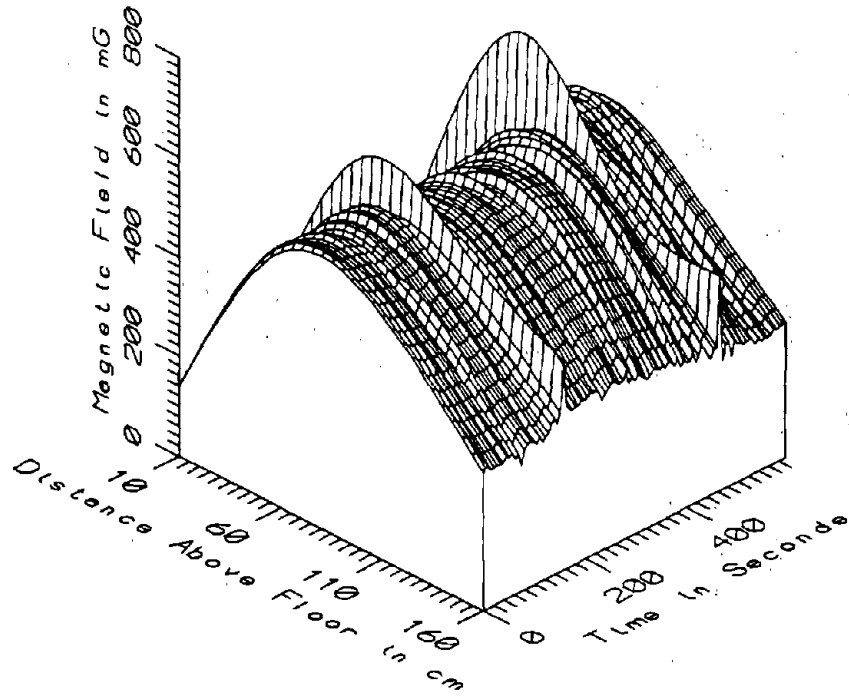
NEC009 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN REAR OF 1ST COACH



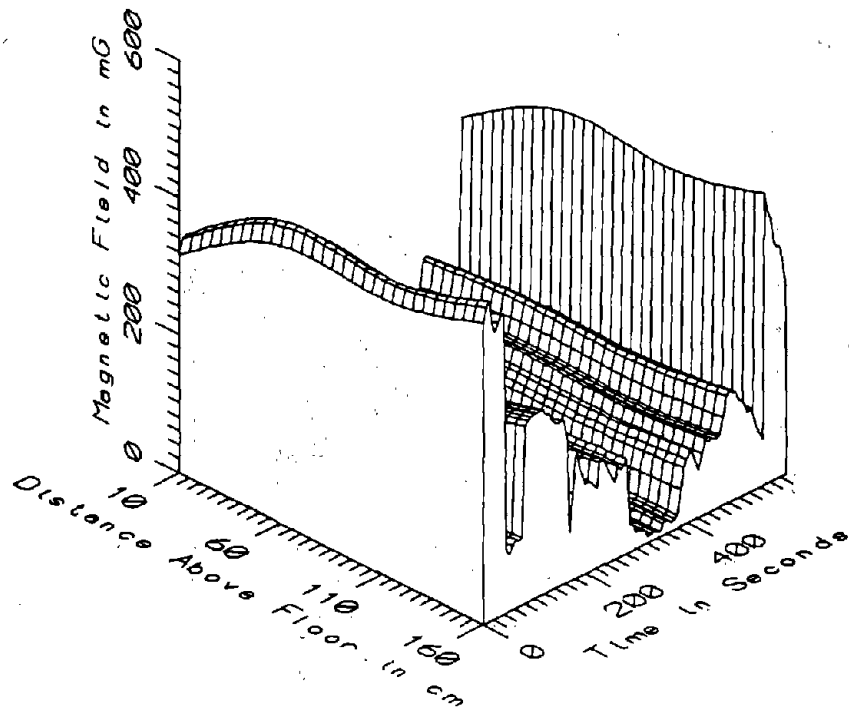
NEC009 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN REAR OF 1ST COACH



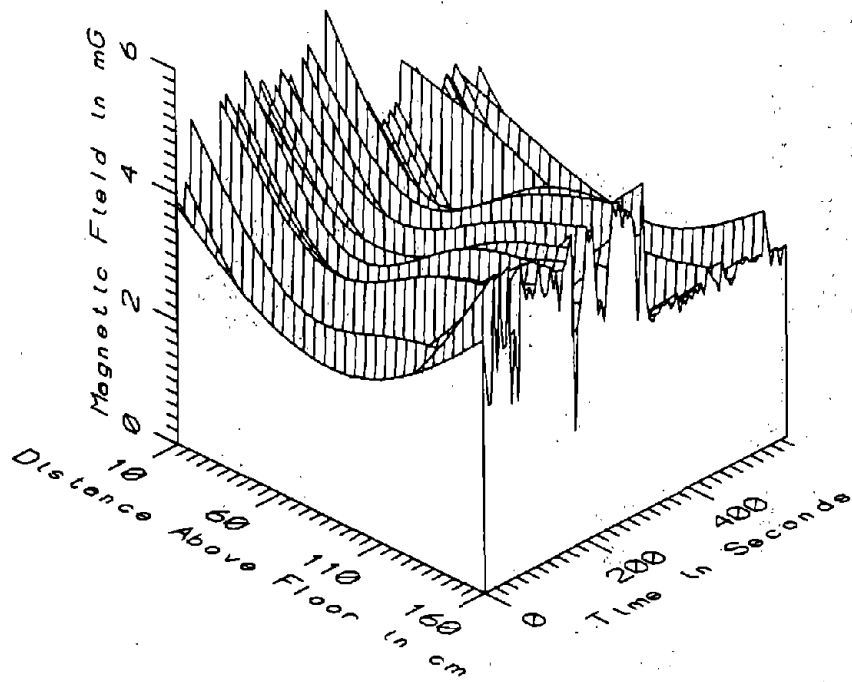
NEC009 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN REAR OF 1ST COACH



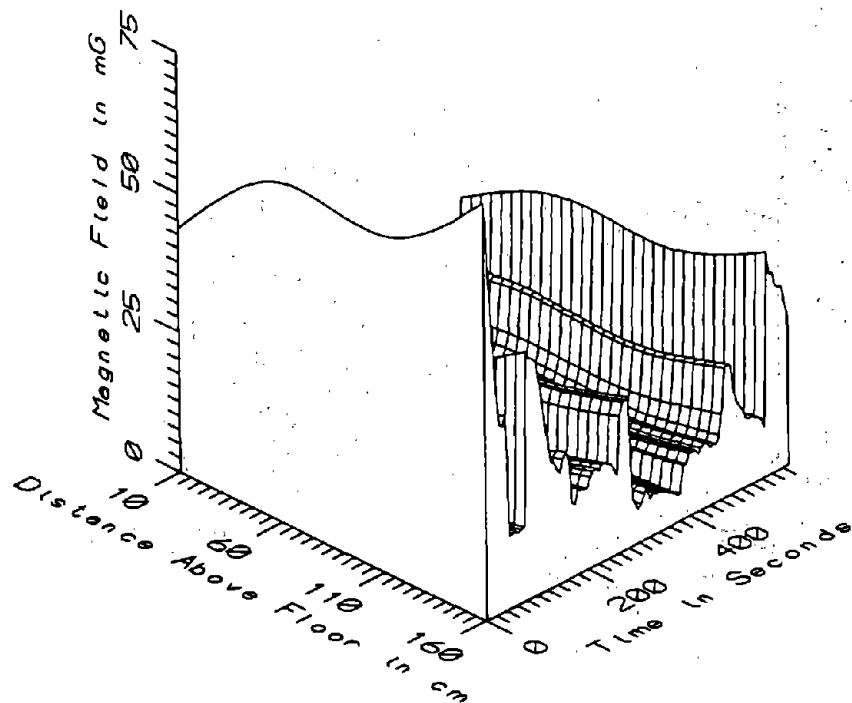
NEC009 - EDGE OF AISLE IN REAR OF 1ST COACH - STATIC



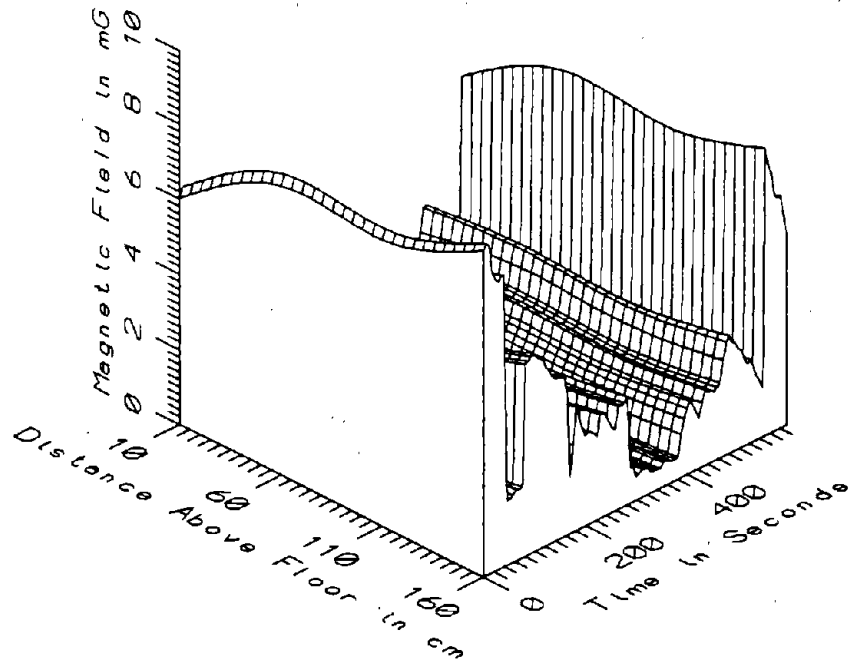
NEC009 - EDGE OF AISLE IN REAR OF 1ST COACH - LOW FREQ. 5-45Hz



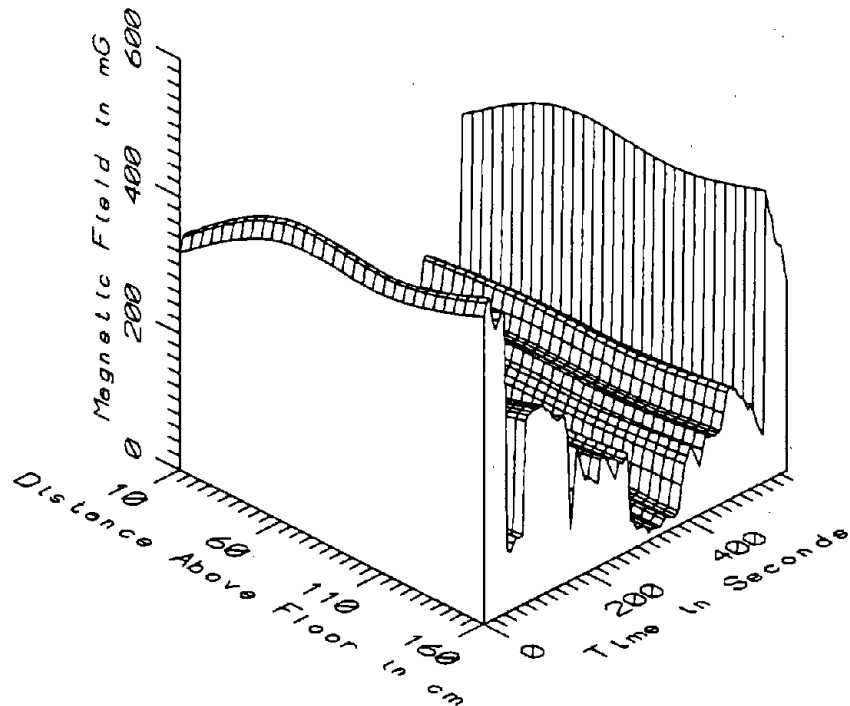
NEC009 - EDGE OF AISLE IN REAR OF 1ST COACH - POWER FREQ, 50-60Hz



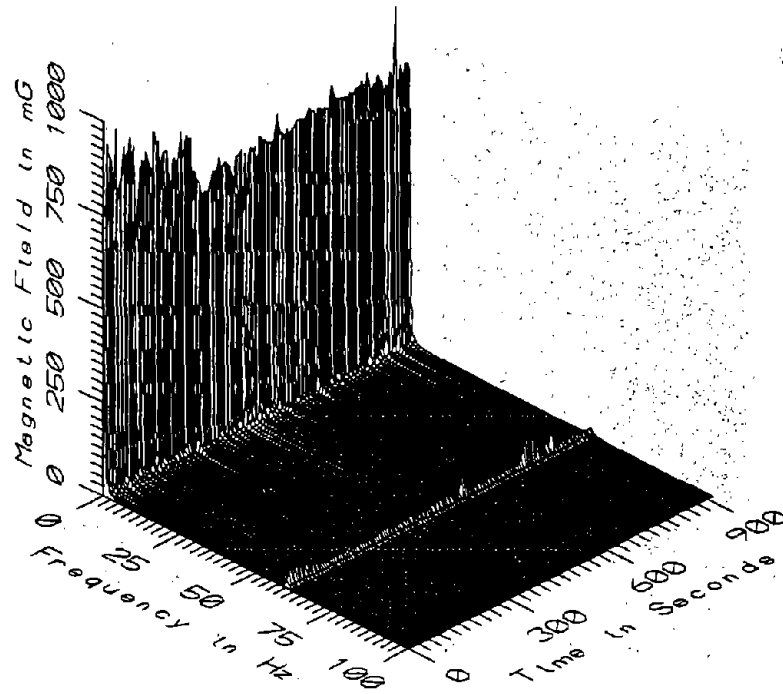
NEC009 - EDGE OF AISLE IN REAR OF 1ST COACH - POWER HARM, 65-300Hz



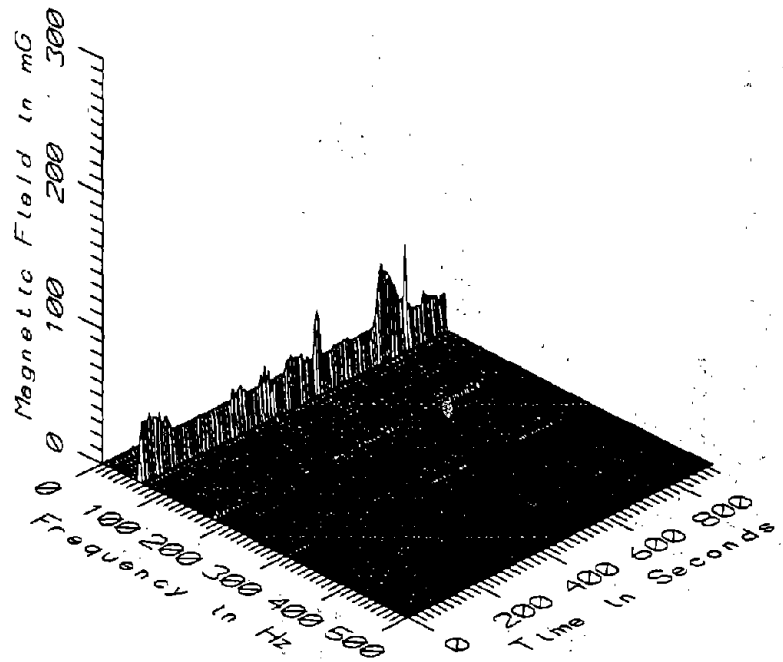
NEC009 - EDGE OF AISLE IN REAR OF 1ST COACH - HIGH FREQ, 305-2560Hz



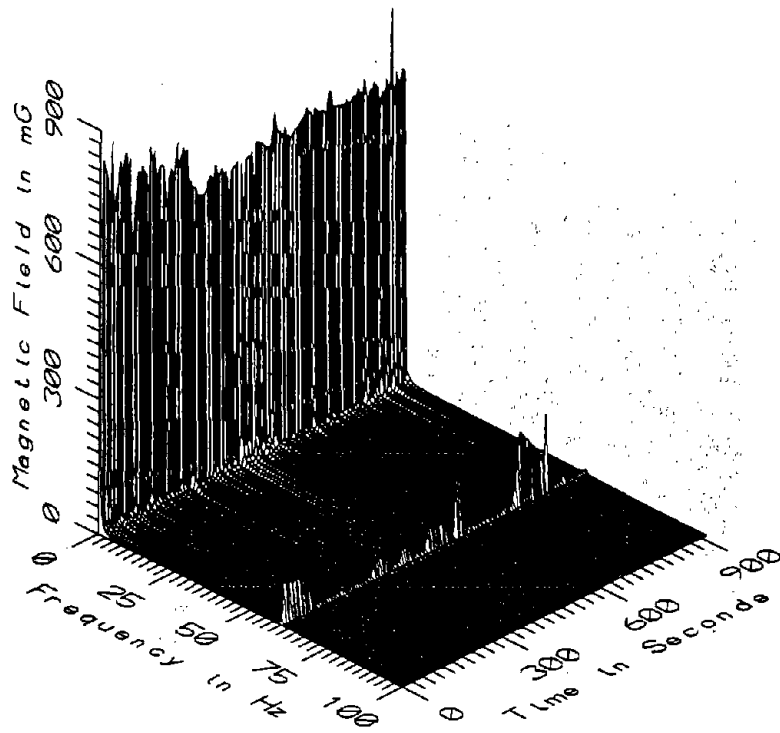
NEC009 - EDGE OF AISLE IN REAR OF 1ST COACH - ALL FREQ, 5-2560Hz



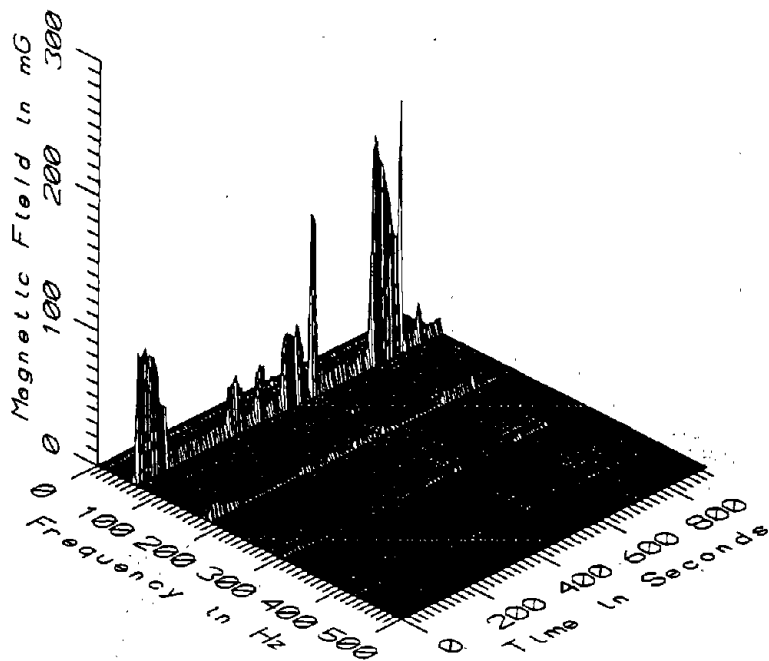
NEC010 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



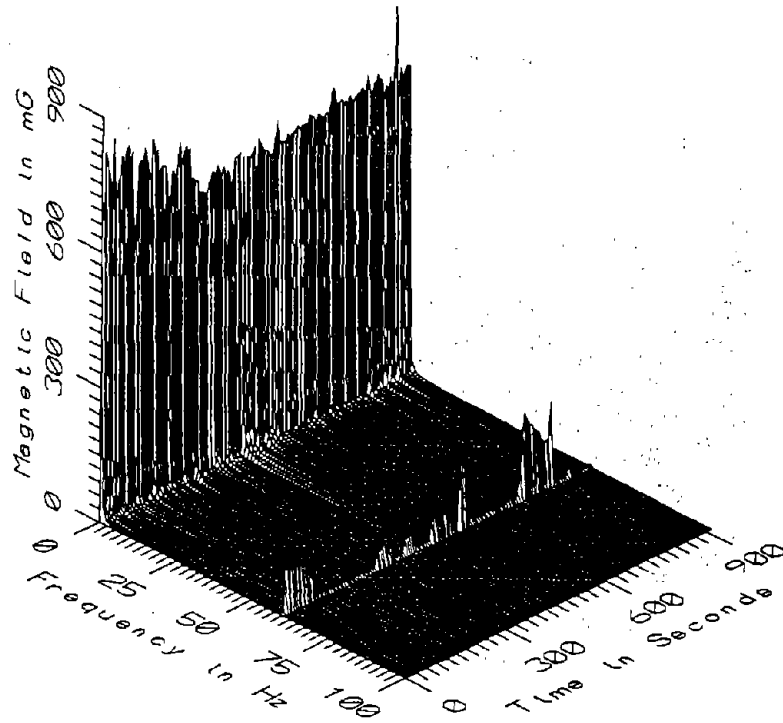
NEC010 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



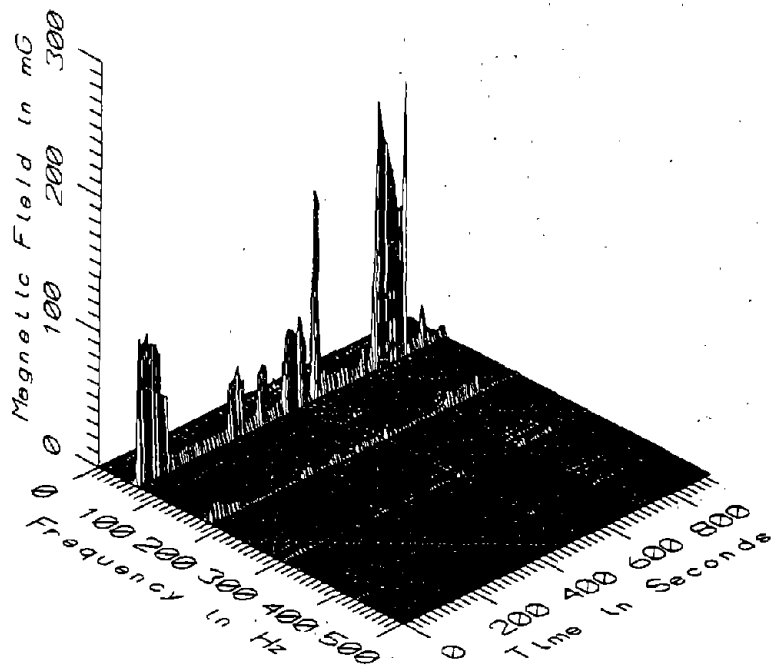
NEC010 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



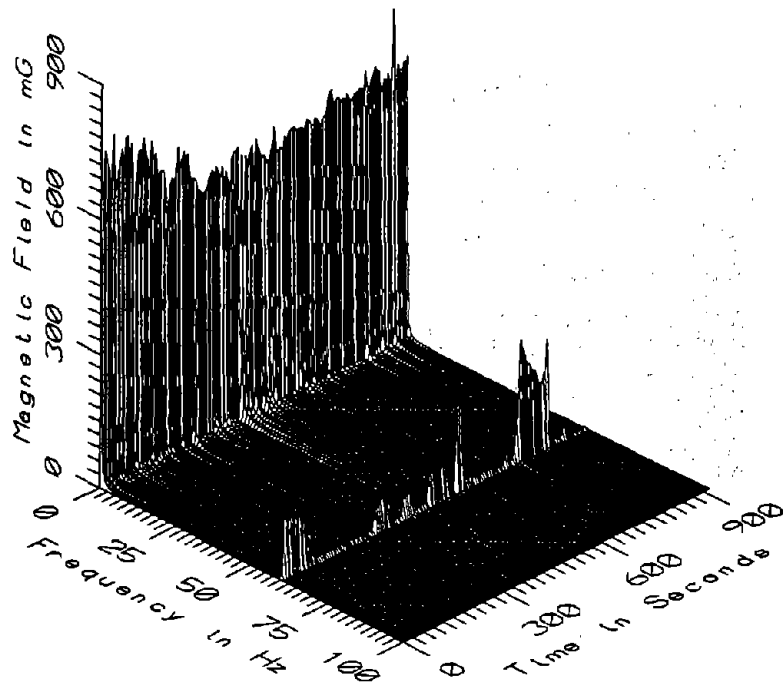
NEC010 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



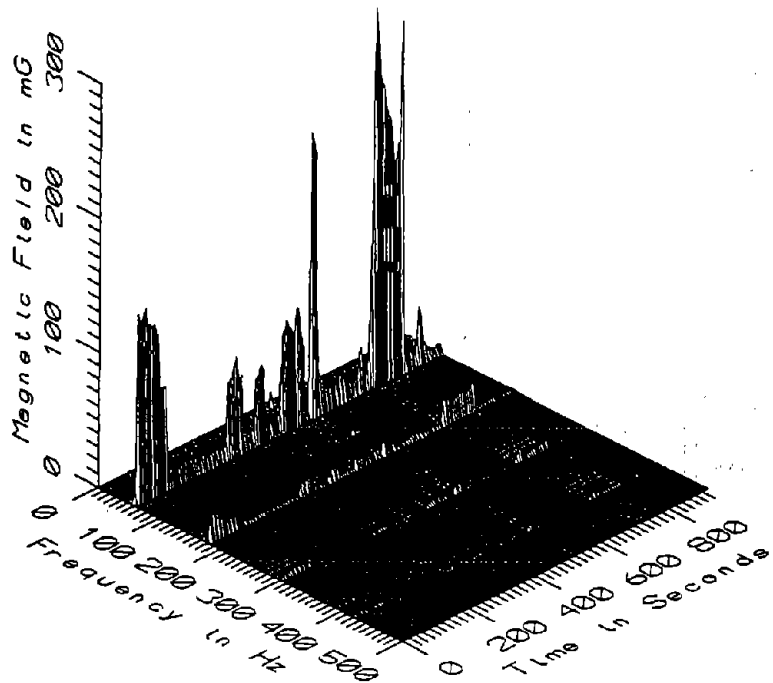
NEC010 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



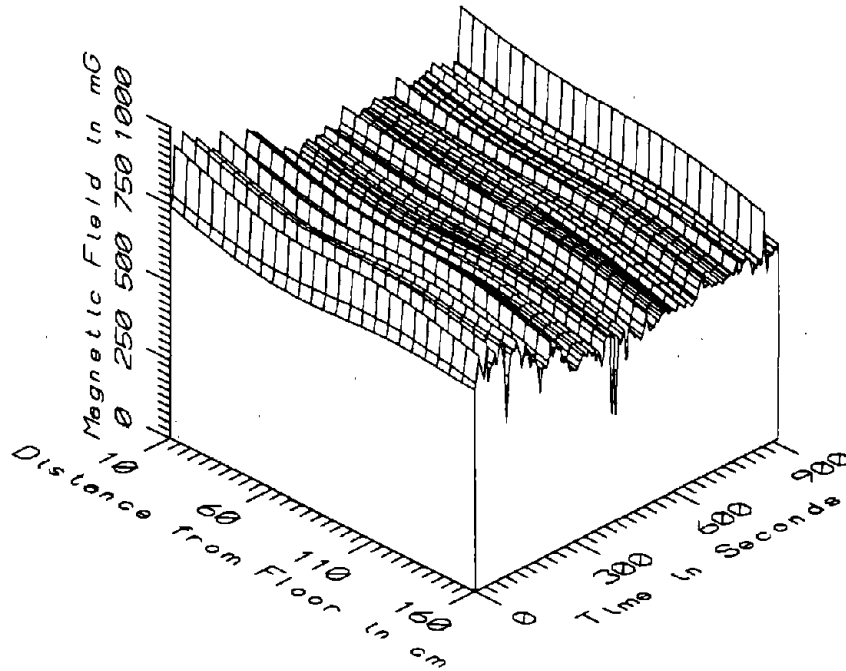
NEC010 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



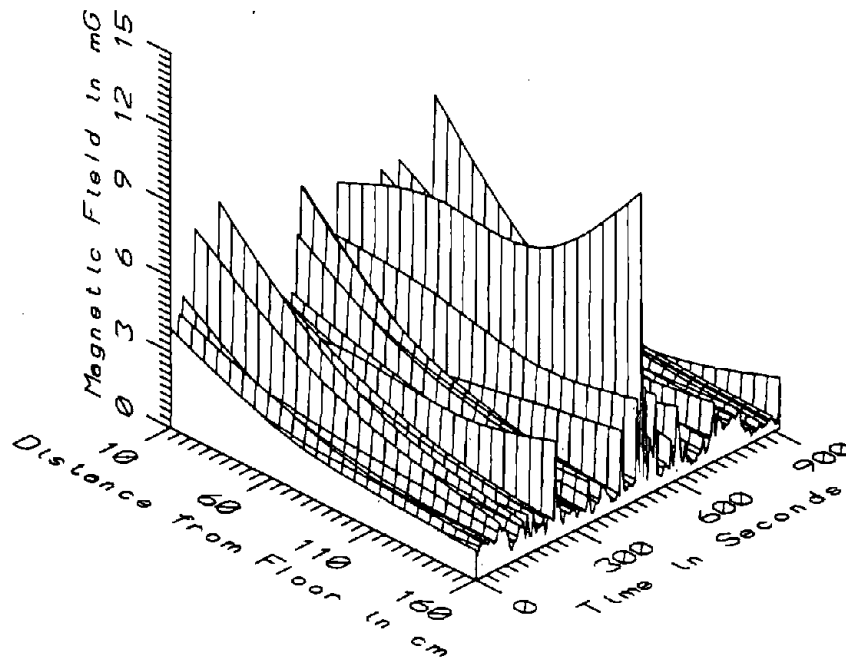
NEC010 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



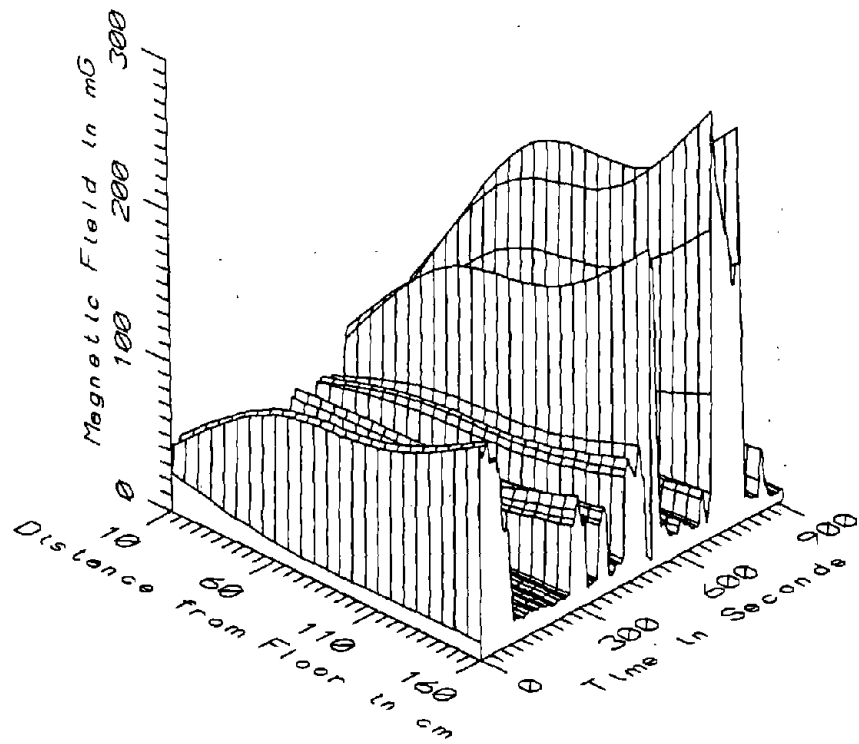
NEC010 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE FIRST COACH



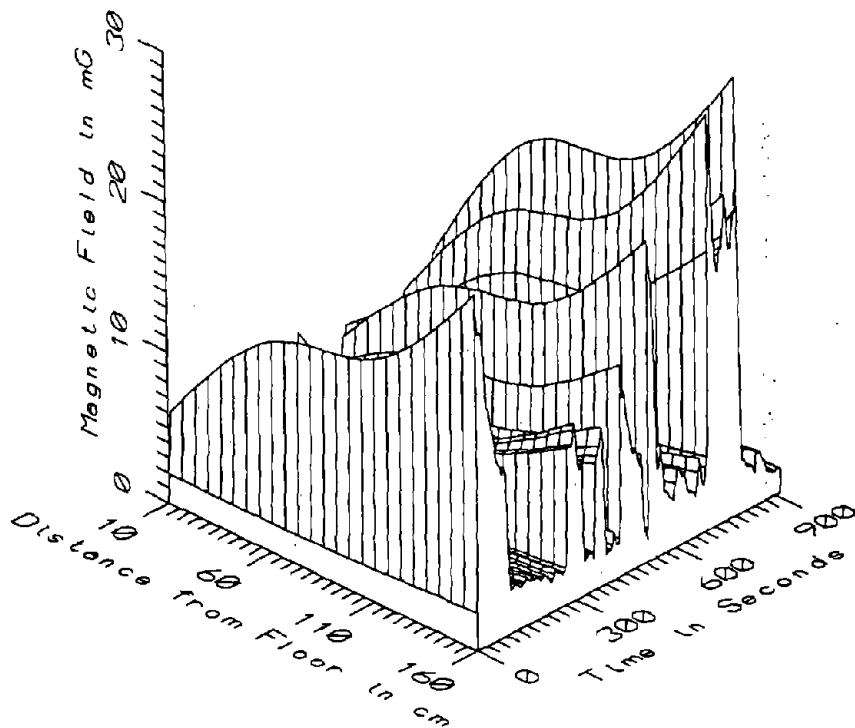
NEC010 - EDGE OF AISLE IN THE FIRST COACH - STATIC



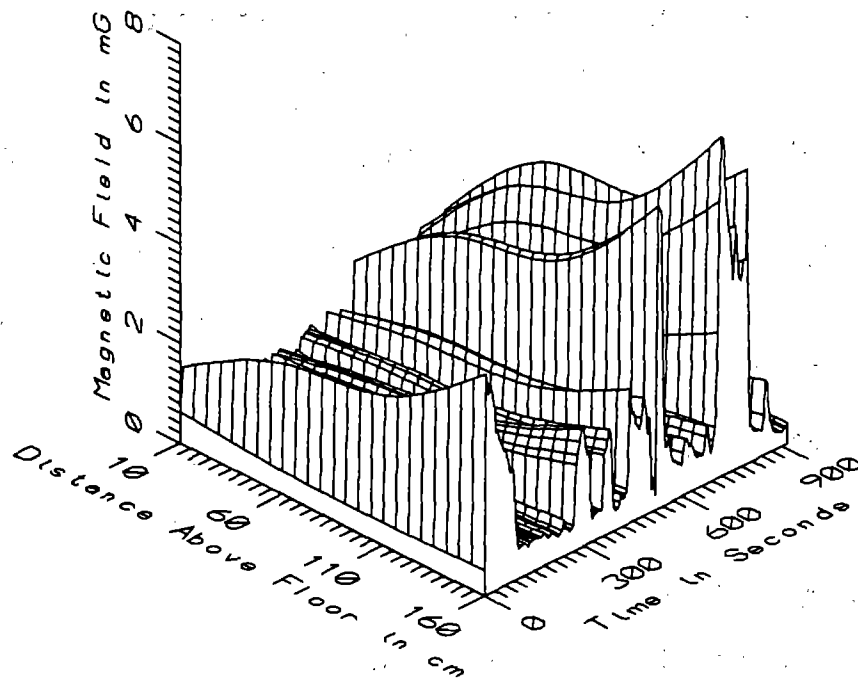
NEC010 - EDGE OF AISLE IN THE FIRST COACH - LOW FREQUENCY, 5-45Hz



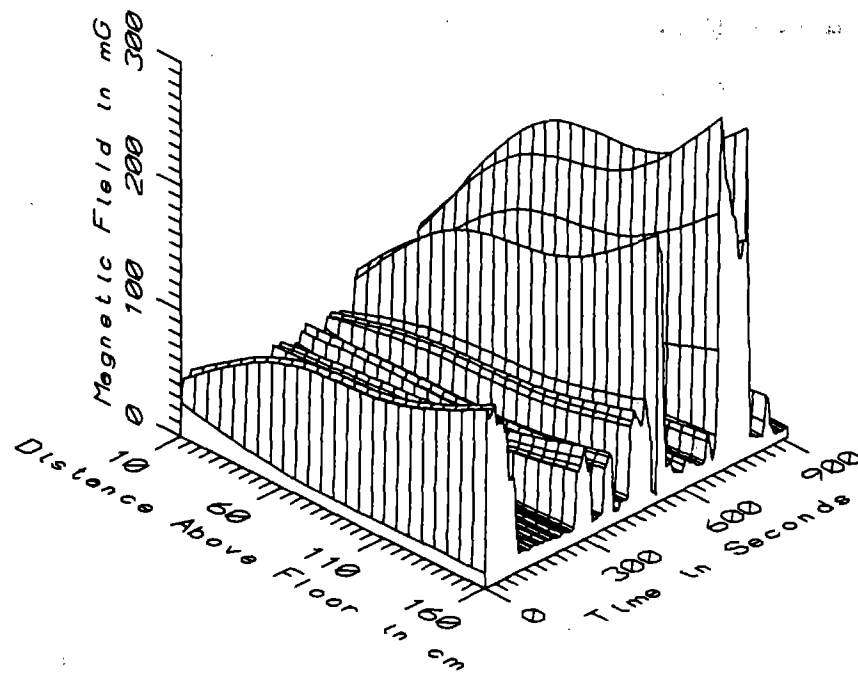
NEC010 - EDGE OF AISLE IN THE FIRST COACH - POWER FREQUENCY, 50-60Hz



NEC010 - EDGE OF AISLE IN THE FIRST COACH - POWER HARMONICS, 65-300Hz



NEC010 - EDGE OF AISLE IN FIRST COACH - HIGH FREQUENCY 305-2560Hz



NEC010 - EDGE OF AISLE IN FIRST COACH - ALL FREQUENCIES 5-2560Hz

APPENDIX L

DATASET NEC011
HOME (7TH) COACH AT AISLE, 60 HZ NEC

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

Vehicle Status: Mile post 31 to Stamford - Stop at
 Stamford at the 150 second point and
 depart at the 250 second point

Measurement Date: March 30, 1992

Measurement Time: Start: 14:55:55
 End: 15:03:58

Number of Samples: 71

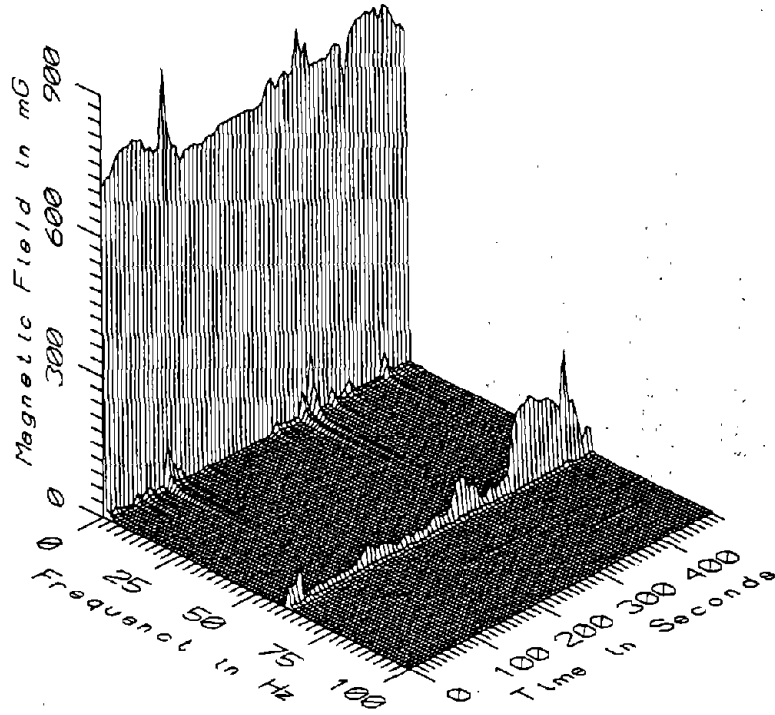
Programmed Sample Interval: 5 sec

Actual Sample Interval: 6.9 sec

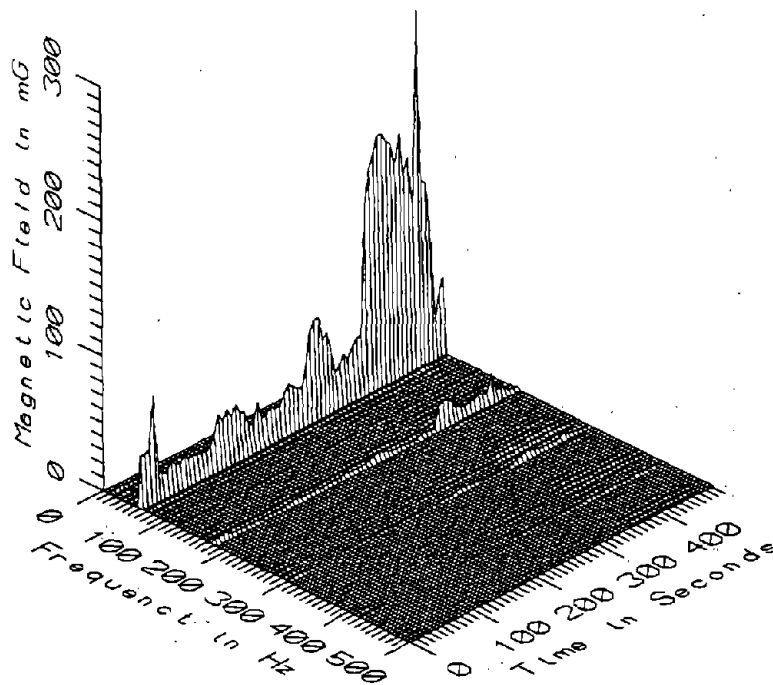
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

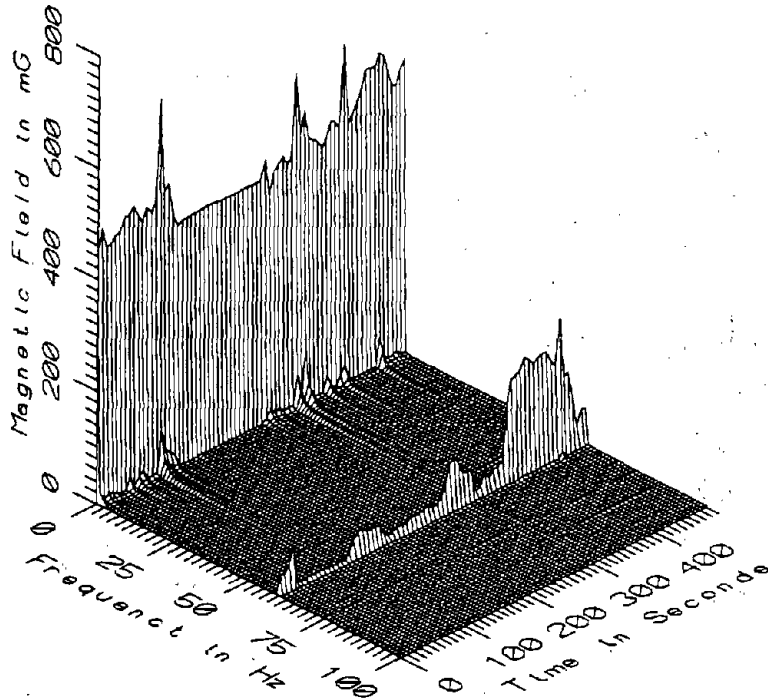
Missing or Suspect Data: None



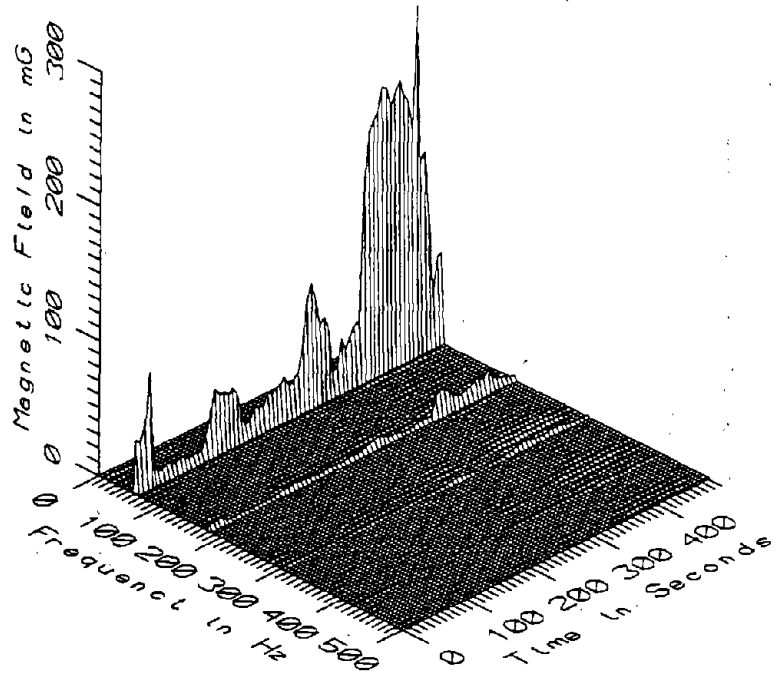
NEC011 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



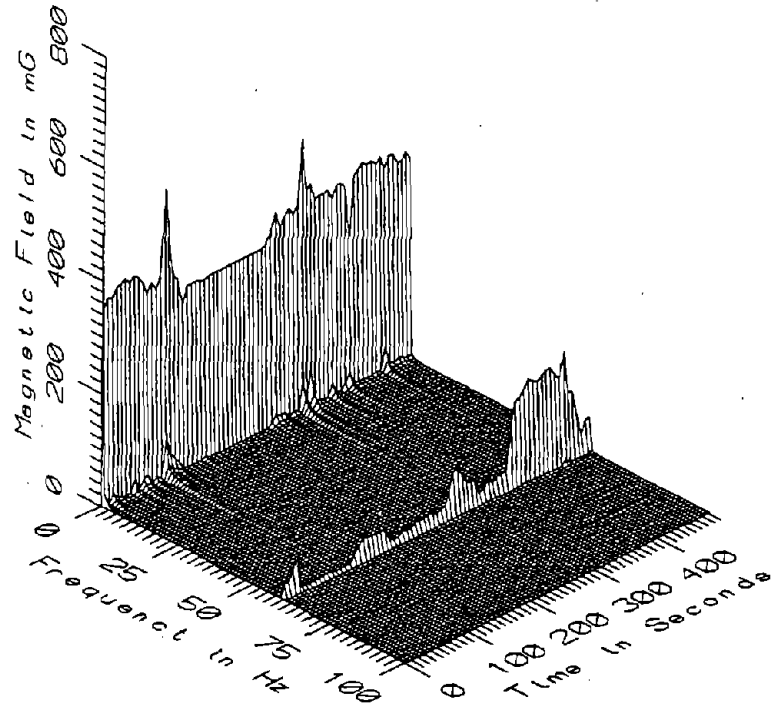
NEC011 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



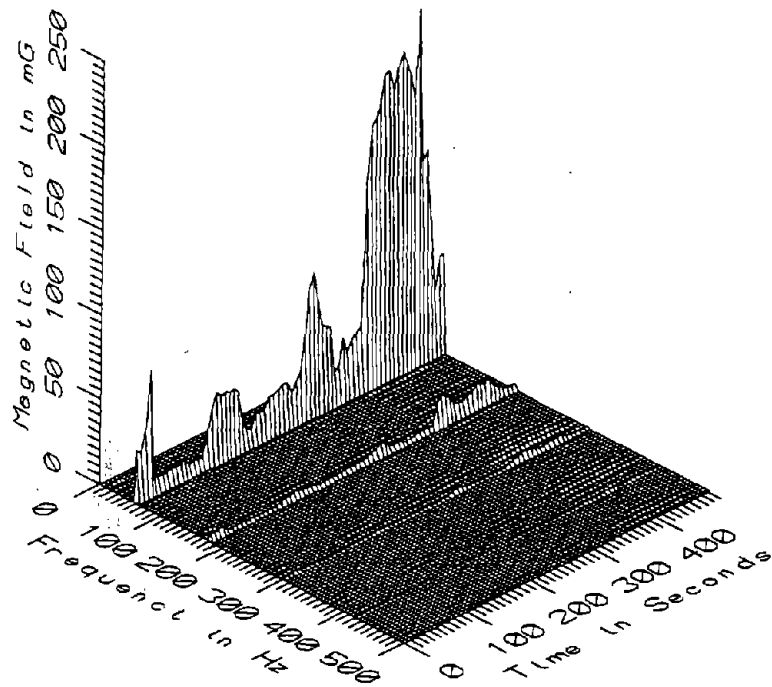
NEC011 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



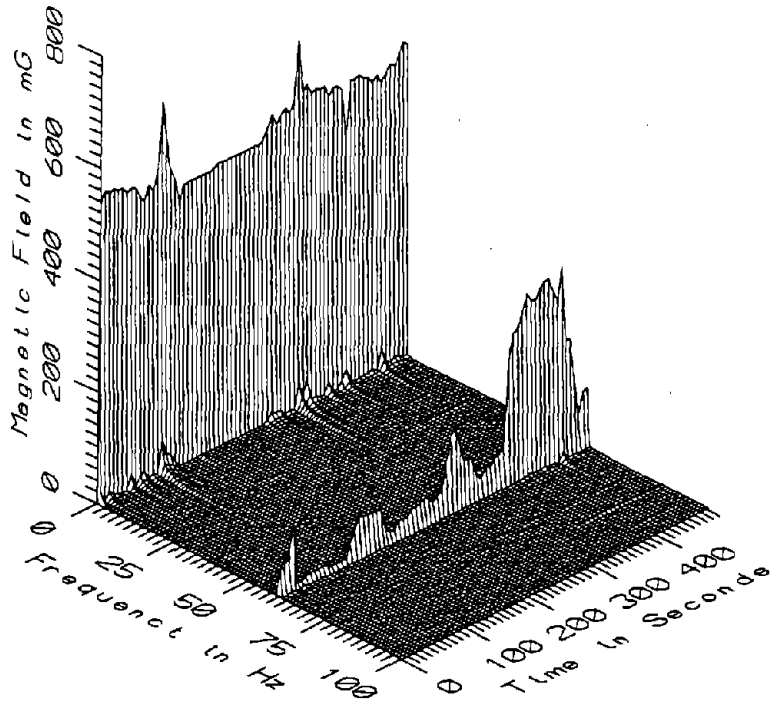
NEC011 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



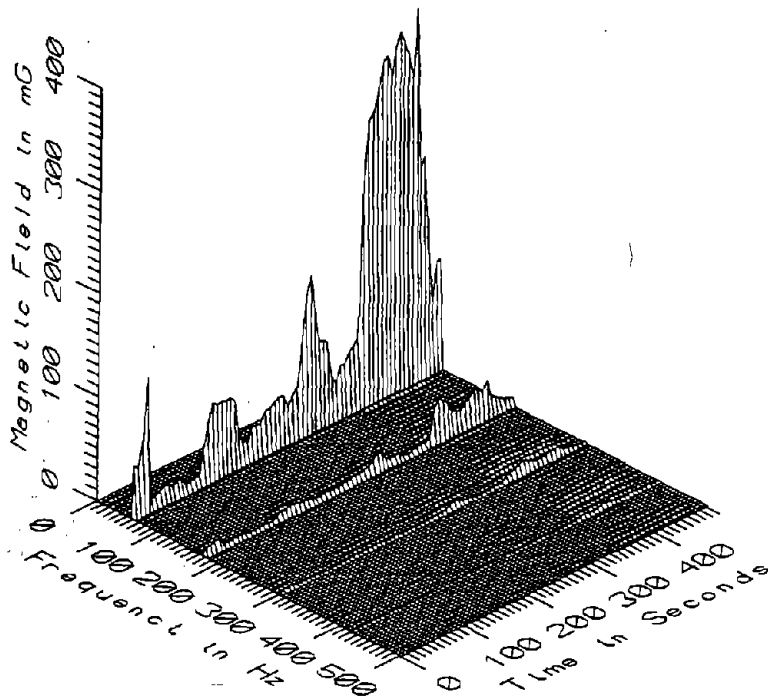
NEC011 - 110_{cm} ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



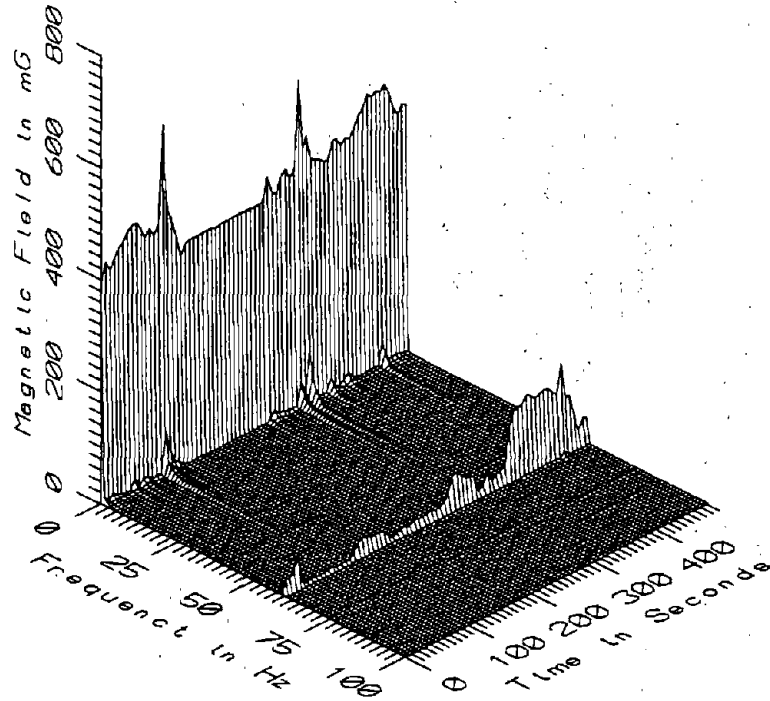
NEC011 - 110_{cm} ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



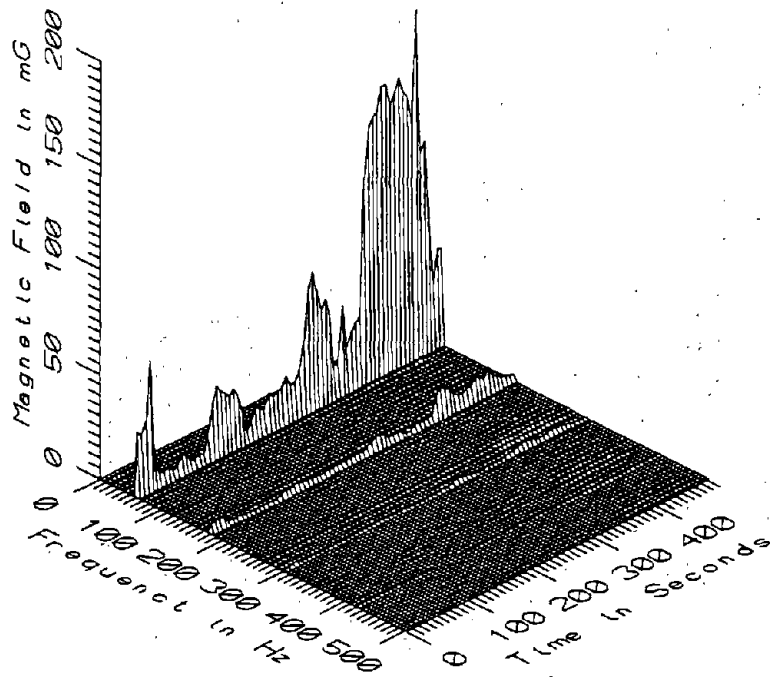
NEC011 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



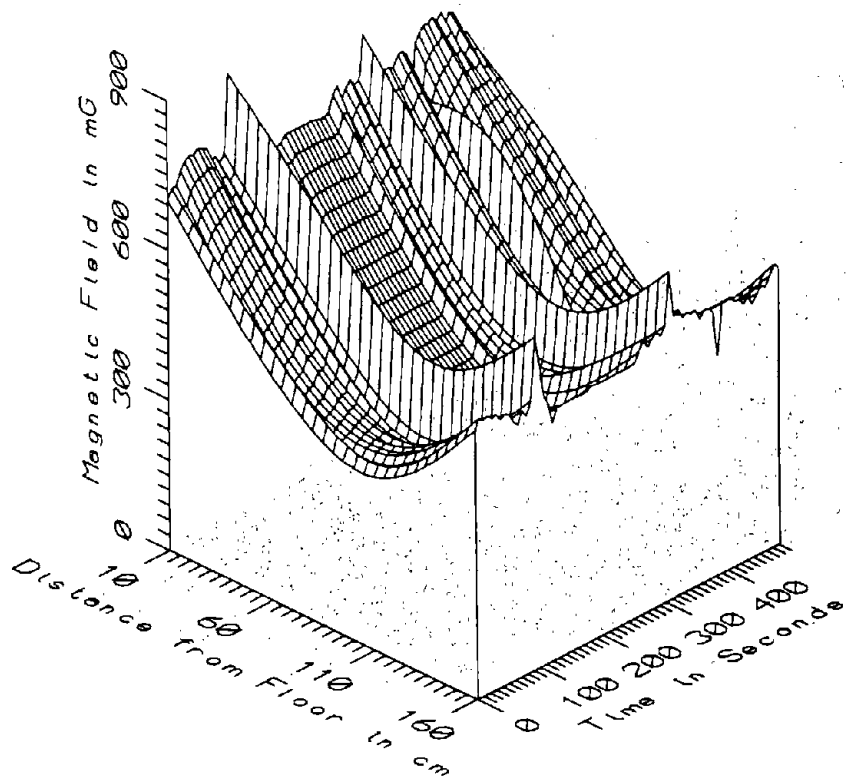
NEC011 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



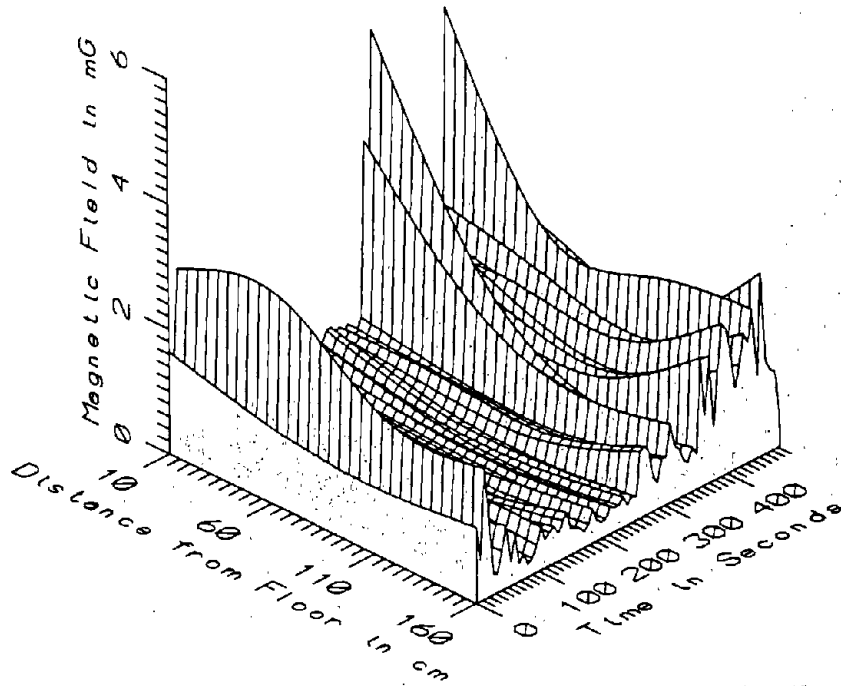
NEC011 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



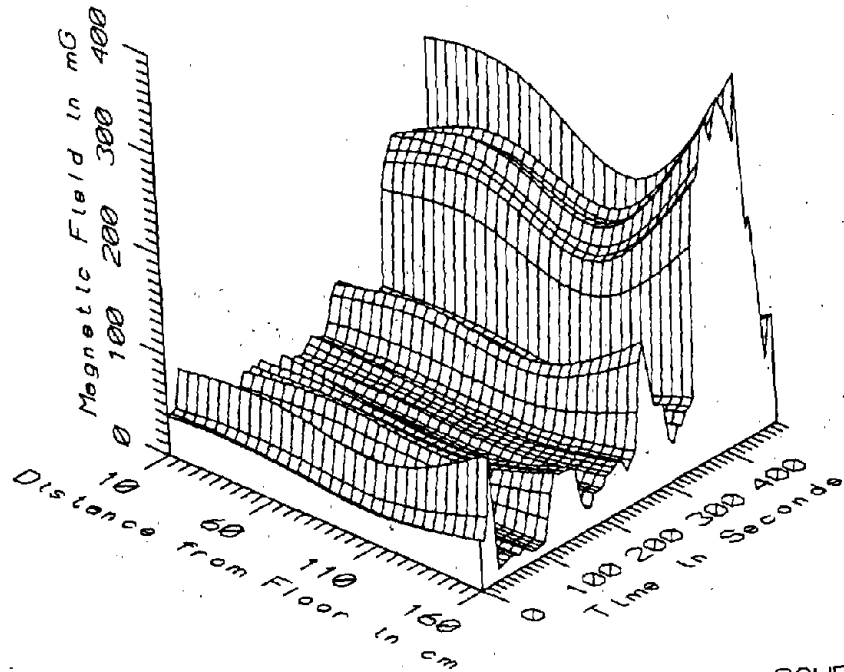
NEC011 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



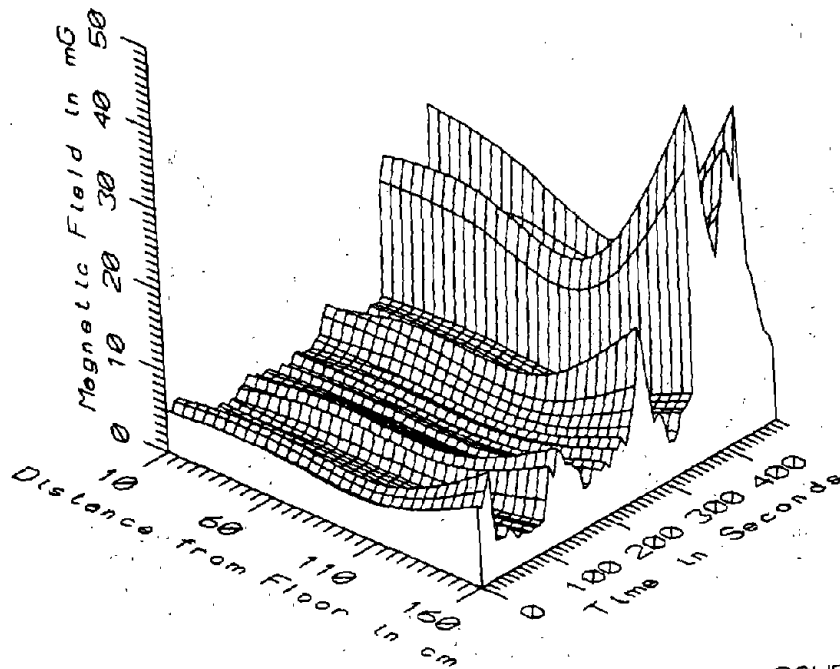
NEC011 - EDGE OF AISLE IN THE SEVENTH COACH - STATIC



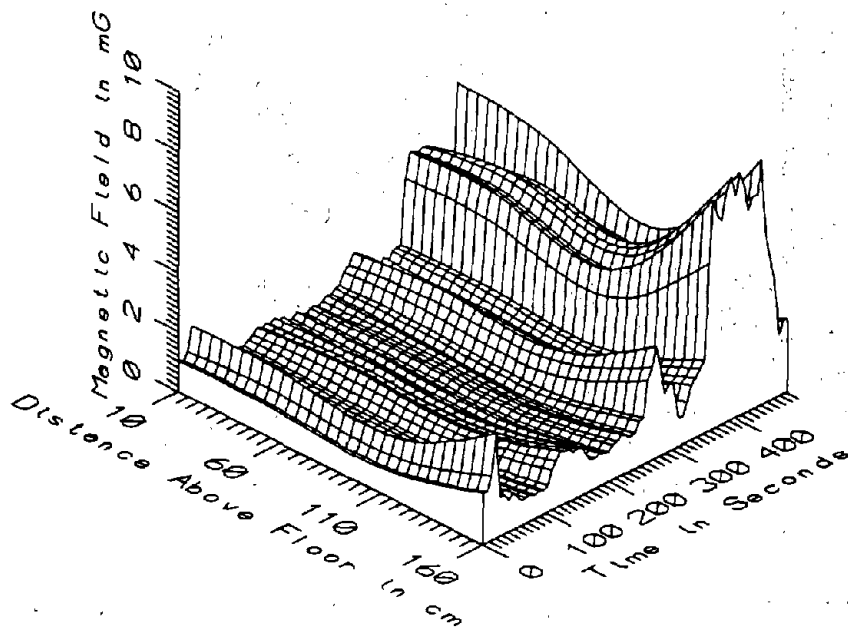
NEC011 - EDGE OF AISLE IN THE SEVENTH COACH - LOW FREQUENCY, 5-45Hz



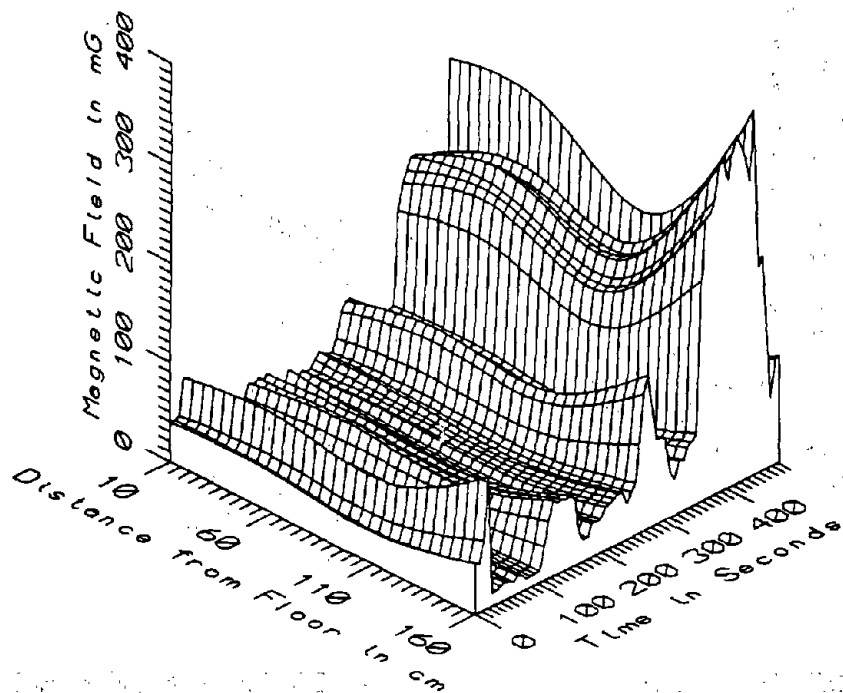
NEC011 - EDGE OF AISLE IN THE SEVENTH COACH - POWER FREQUENCY, 50-60Hz



NEC011 - EDGE OF AISLE IN THE SEVENTH COACH - POWER HARMONICS, 65-300Hz



NEC011 - EDGE OF AISLE IN SEVENTH COACH - HIGH FREQUENCY 305-2560Hz



NEC011 - EDGE OF AISLE IN THE SEVENTH COACH - ALL FREQUENCIES, 5-2560Hz

APPENDIX M

DATASET NEC012
HOME (7TH) COACH AT AISLE, 60 HZ NEC

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

Vehicle Status: Travel north from Norton Heights to
 Bridgeport, CT

Measurement Date: March 30, 1992

Measurement Time: Start: 15:06:05
 End: 15:32:07

Number of Samples: 27

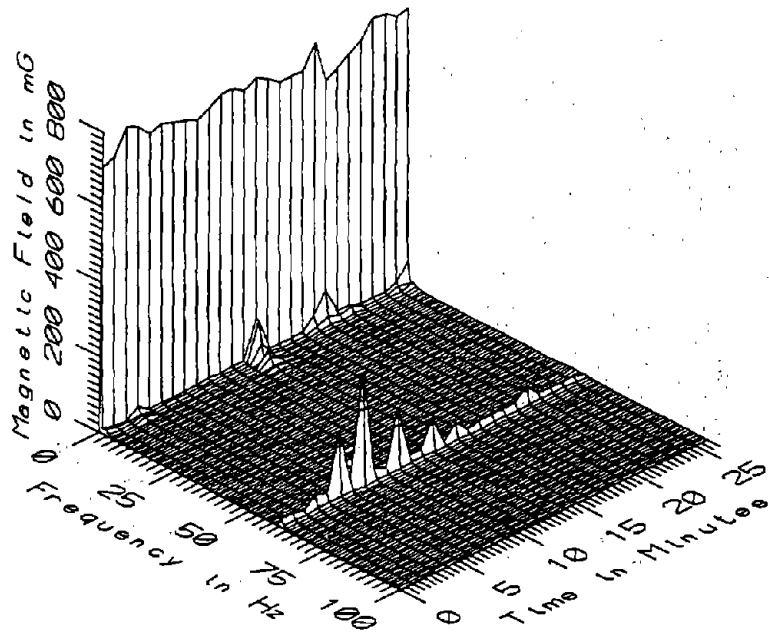
Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

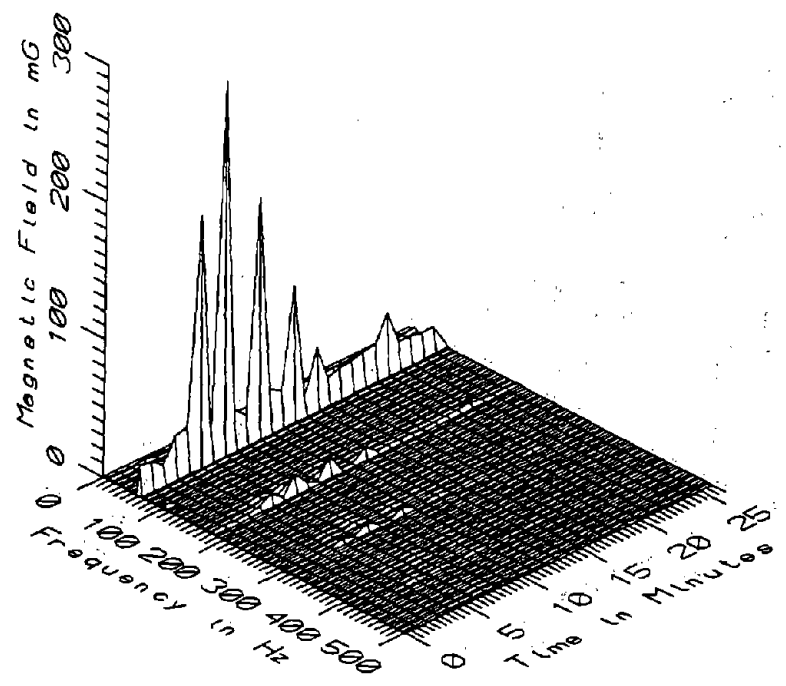
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

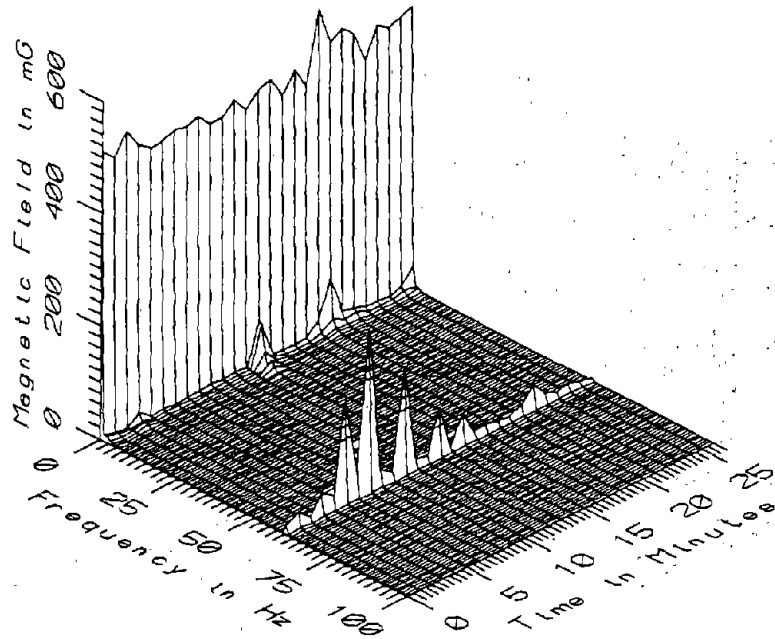
Missing or Suspect Data: None



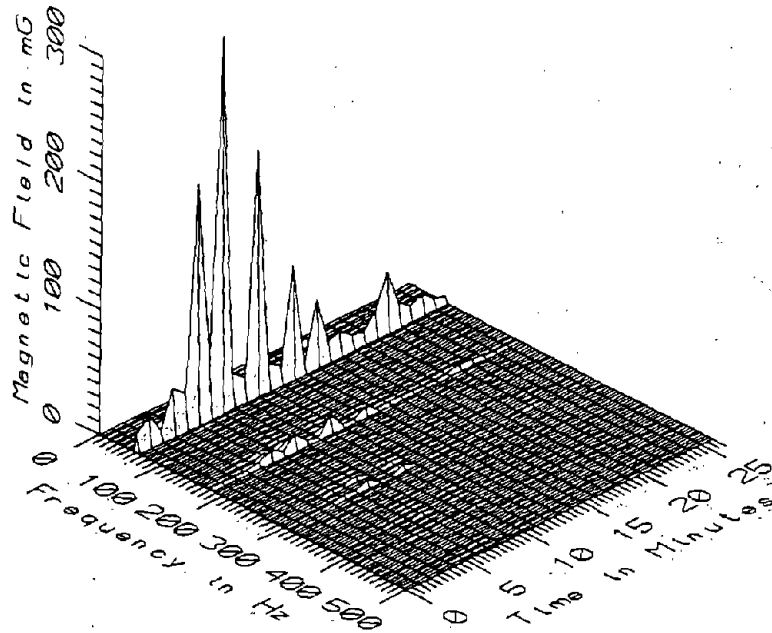
NEC012 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



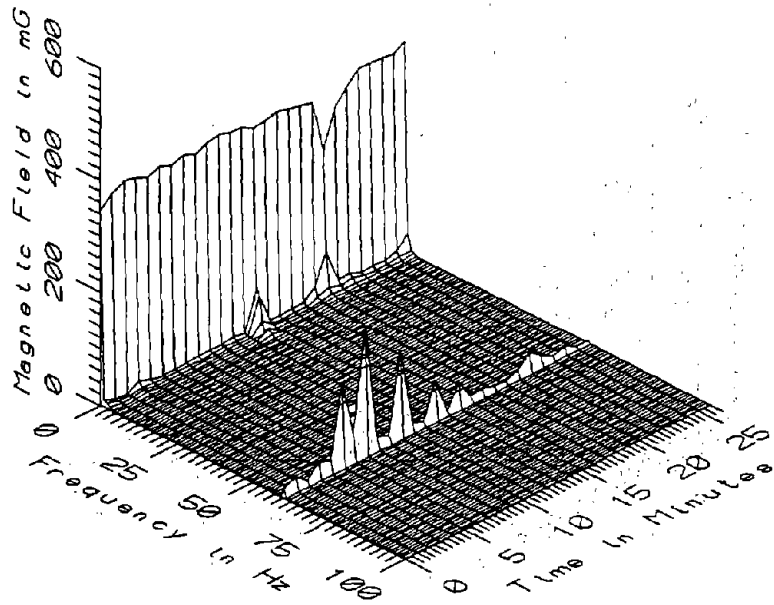
NEC012 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



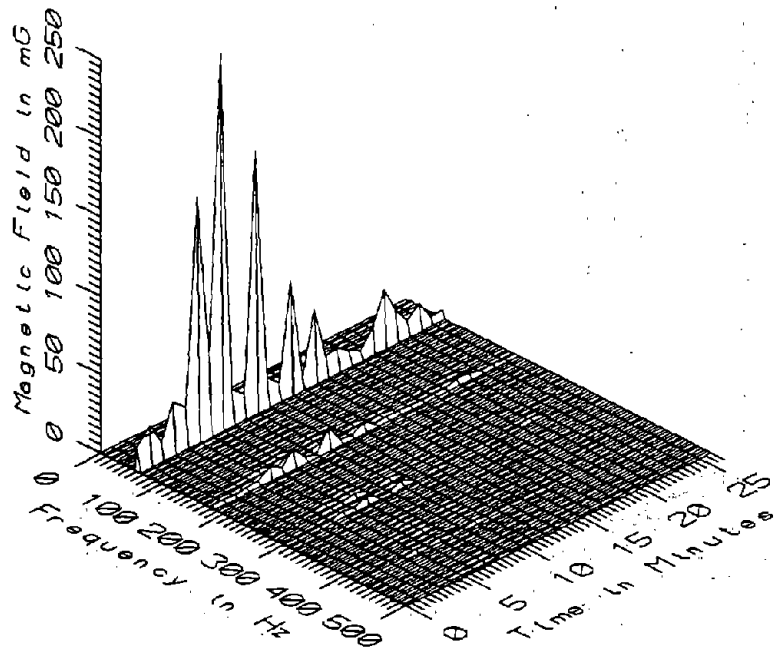
NEC012 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



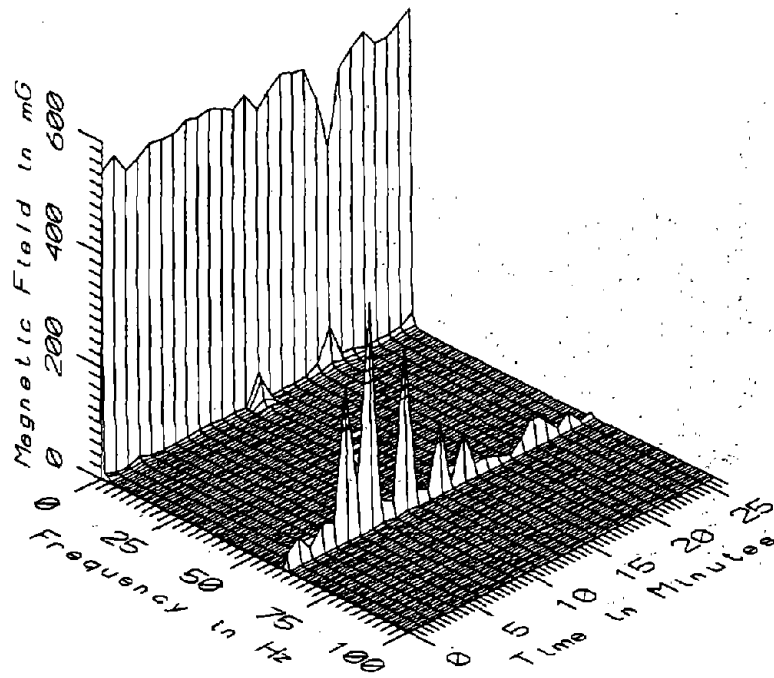
NEC012 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



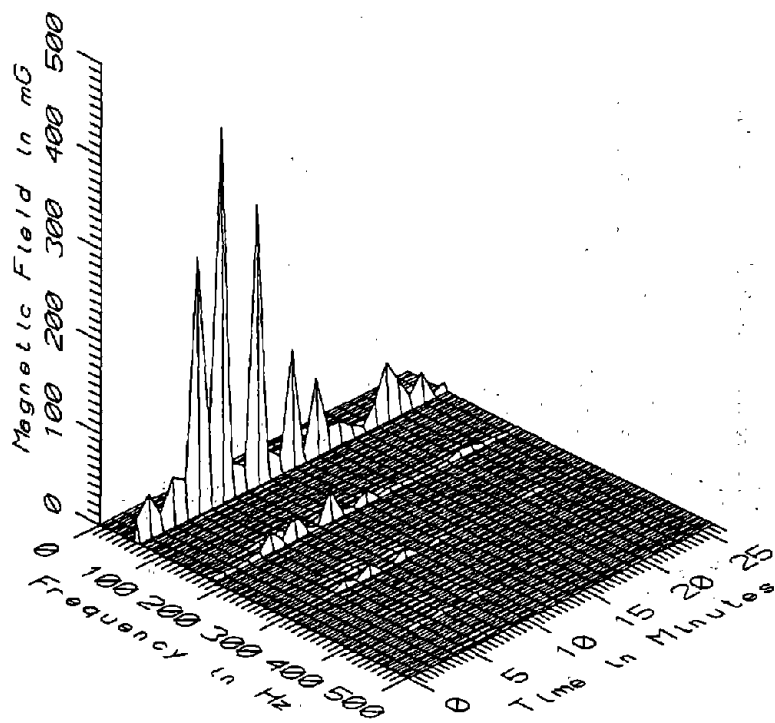
NEC012 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



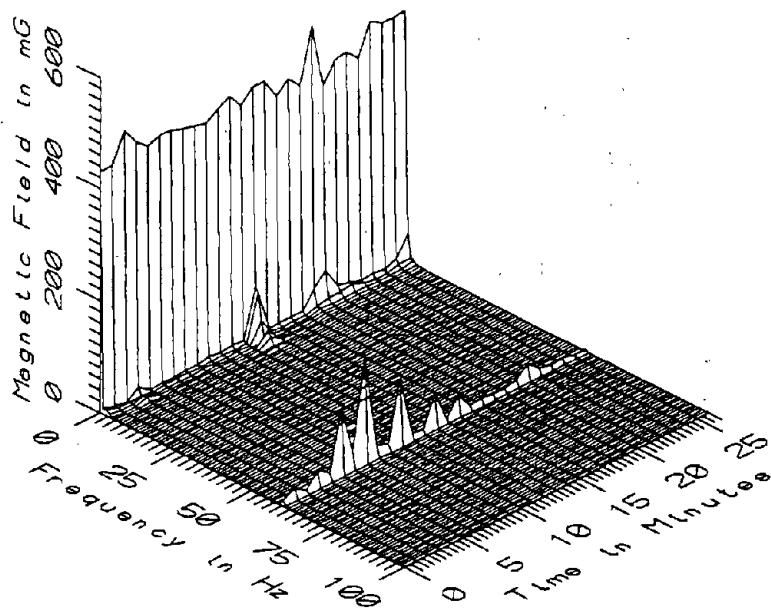
NEC012 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



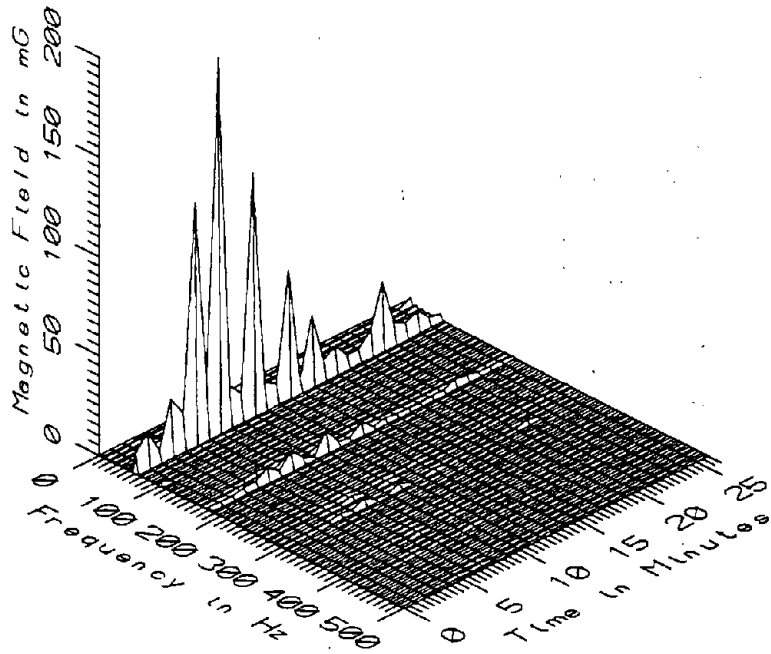
NEC012 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



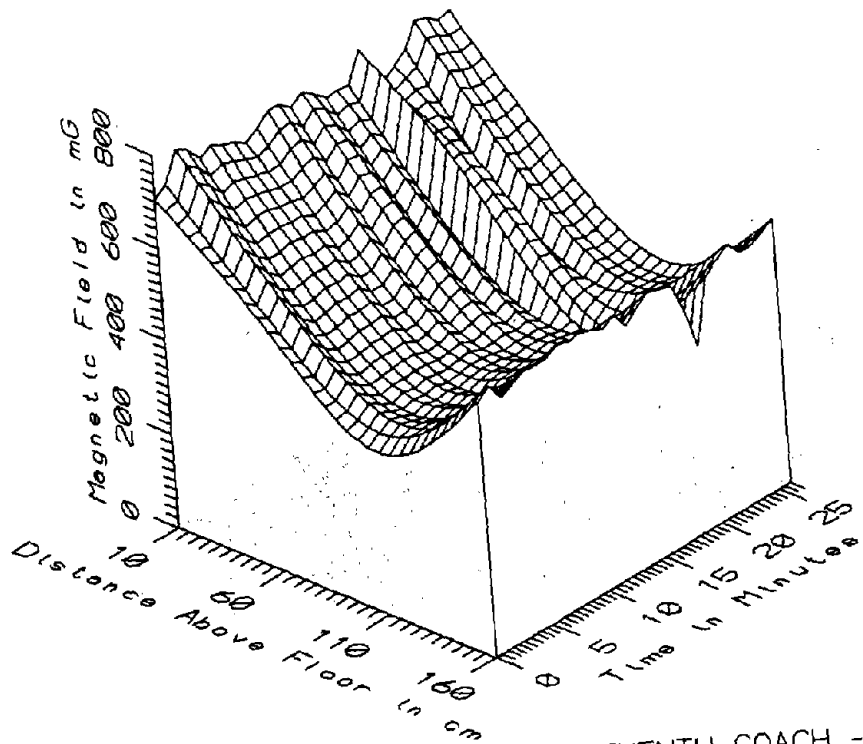
NEC012 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



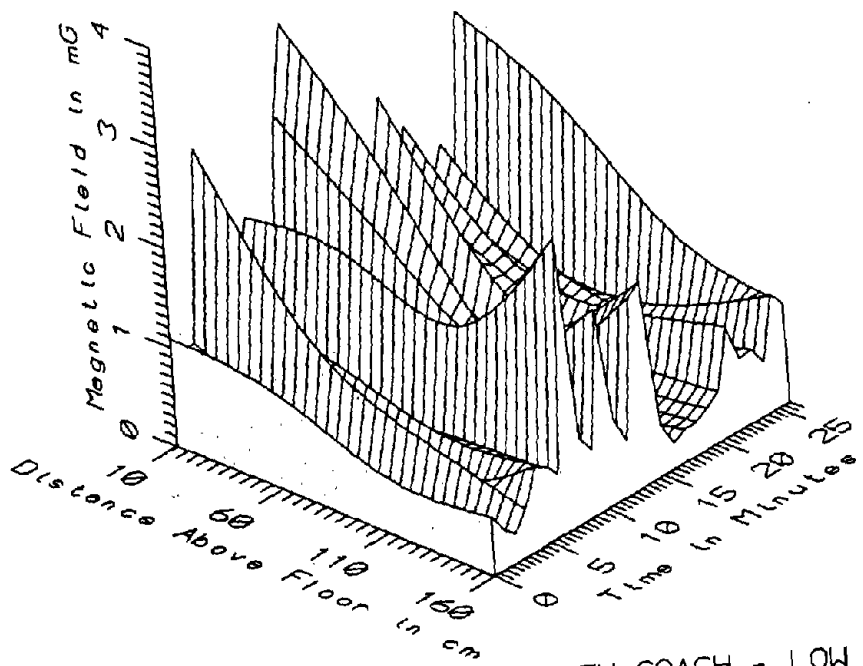
NEC012 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



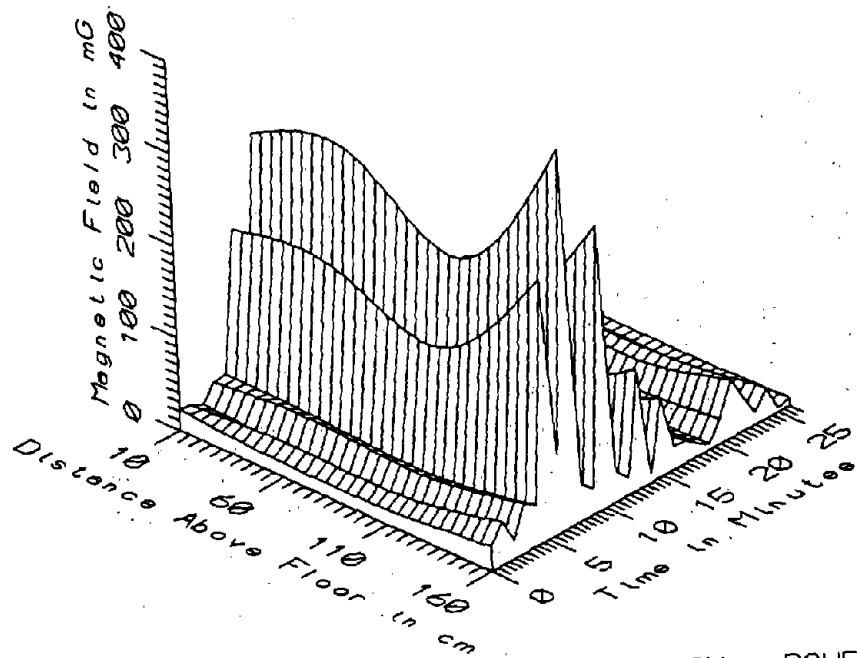
NEC012 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



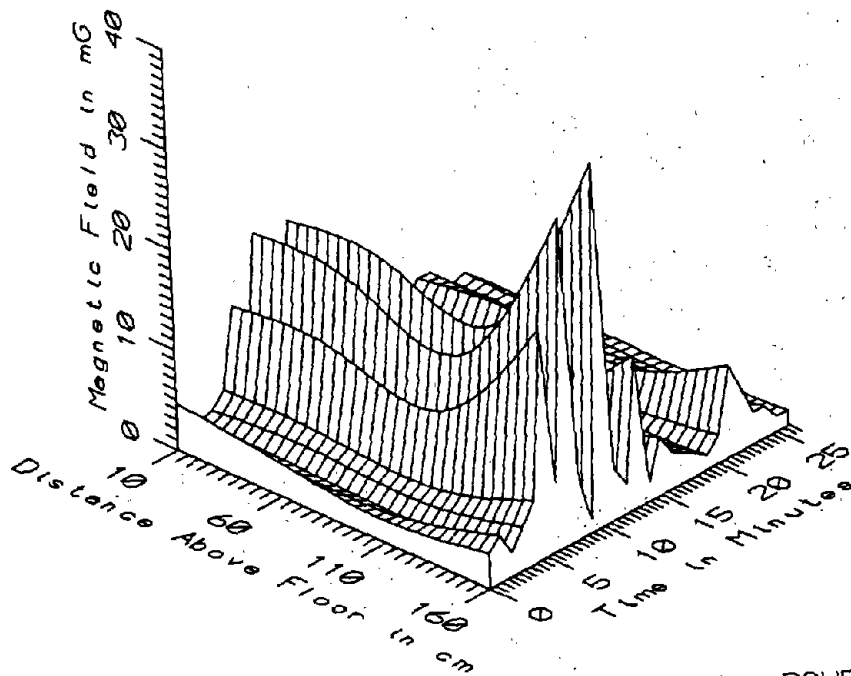
NEC012 - EDGE OF AISLE IN THE SEVENTH COACH - STATIC



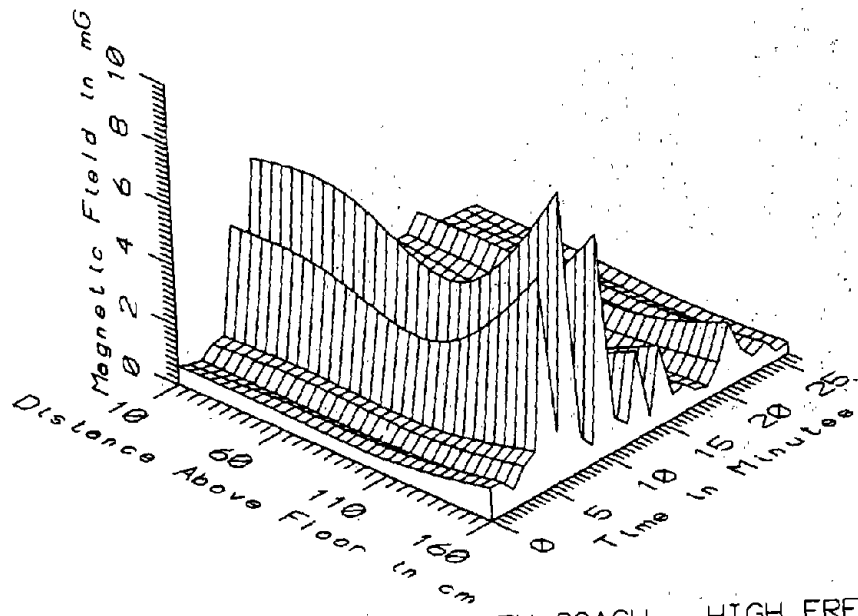
NEC012 - EDGE OF AISLE IN THE SEVENTH COACH - LOW FREQUENCY, 5-45Hz



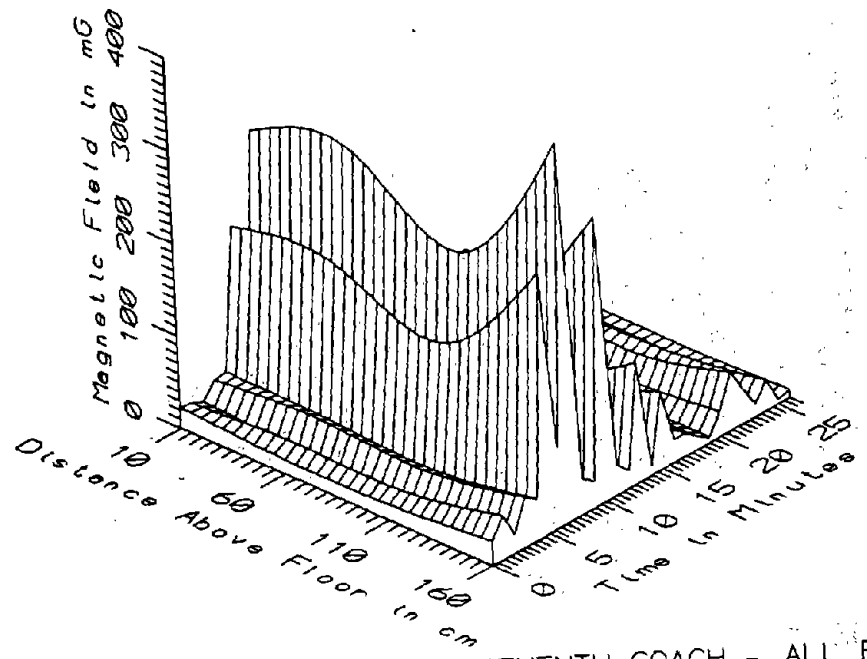
NEC012 - EDGE OF AISLE IN THE SEVENTH COACH - POWER FREQUENCY, 50-60Hz



NEC012 - EDGE OF AISLE IN THE SEVENTH COACH - POWER HARMONICS, 65-300Hz



NEC012 - EDGE OF AISLE IN SEVENTH COACH - HIGH FREQUENCY 305-2560Hz



NEC012 - EDGE OF AISLE IN THE SEVENTH COACH - ALL FREQUENCIES, 5-2560Hz

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APPENDIX N

DATASET NEC013
HOME (7TH) COACH AT WINDOW, TRANSITION FROM
60 HZ TO NON-ELECTRIFIED PORTION OF NEC

Measurement Setup Code: Staff: 5 Reference: 3
 Drawing: A-1

Vehicle Status: Arrive New Haven at the 13 minute
 time point and depart at the 35
 minute time point

Measurement Date: March 30, 1992

Measurement Time: Start: 15:34:01
 End: 16:12:24

Number of Samples: 39

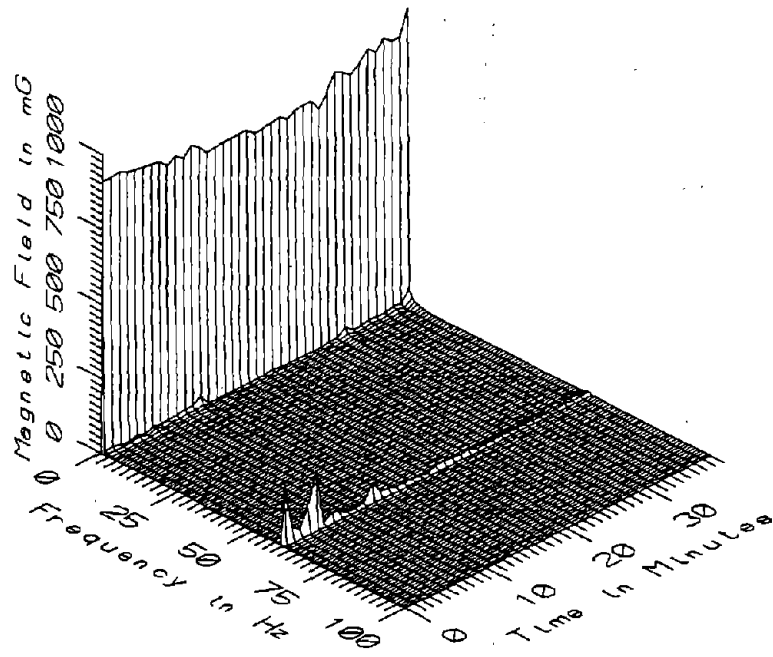
Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

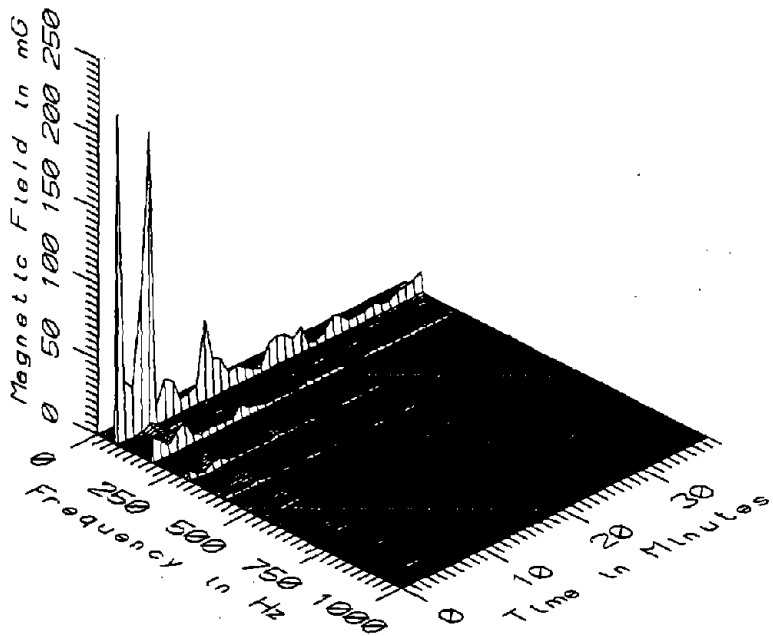
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

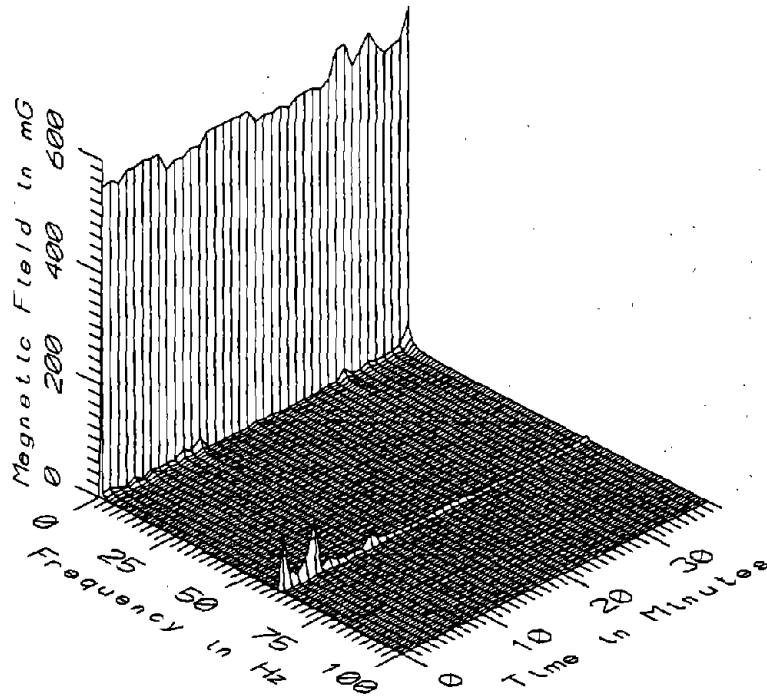
Missing or Suspect Data: None



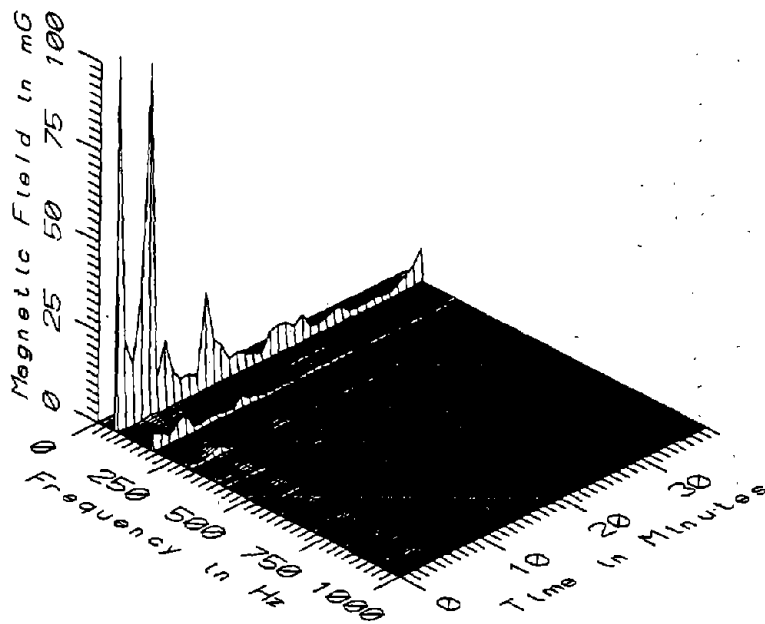
NEC013 - 10cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE SEVENTH COACH



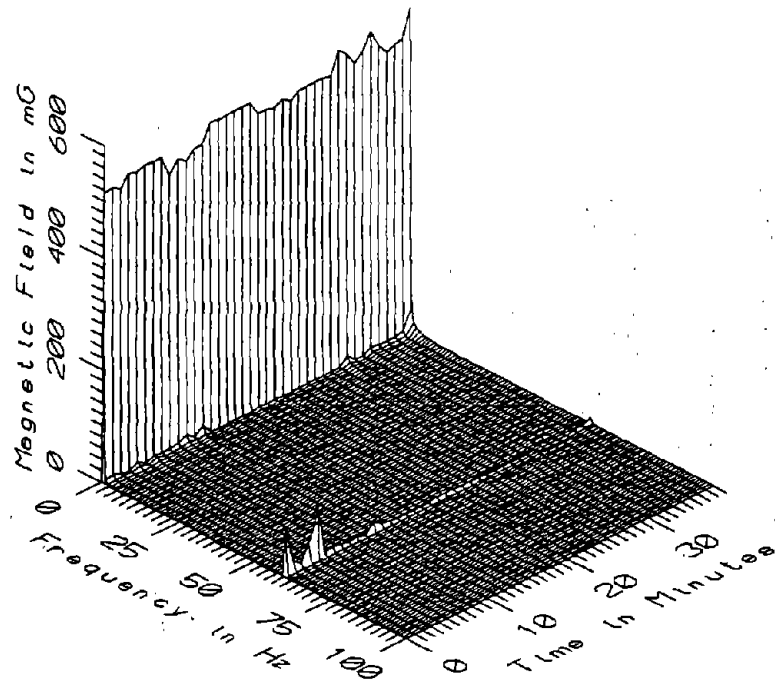
NEC013 - 10 cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE SEVENTH COACH



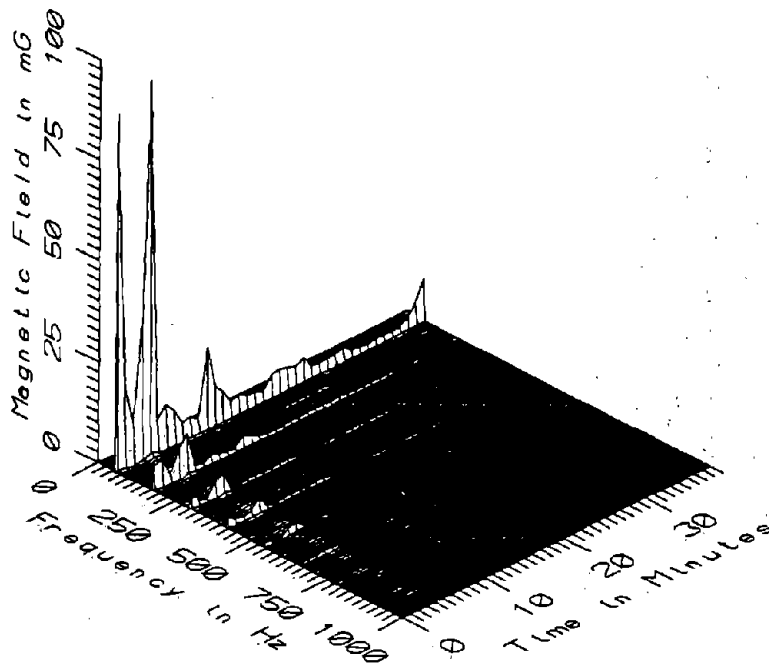
NEC013 - 60cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE SEVENTH COACH



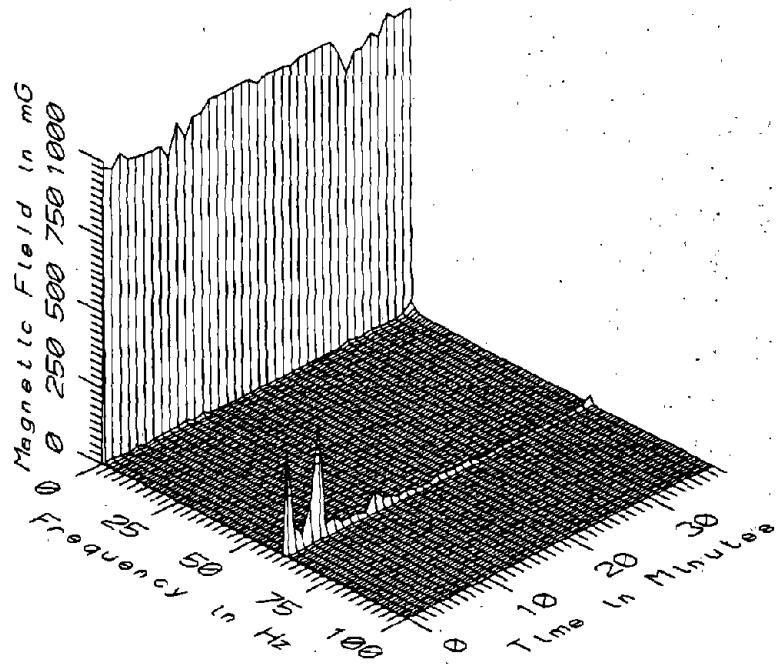
NEC013 - 60 cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE SEVENTH COACH



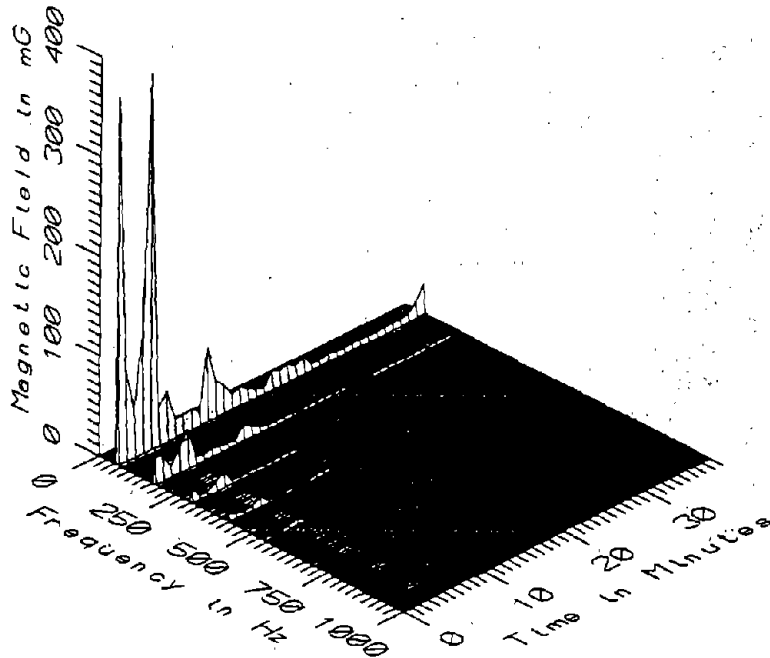
NEC013 - 110cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE SEVENTH COACH



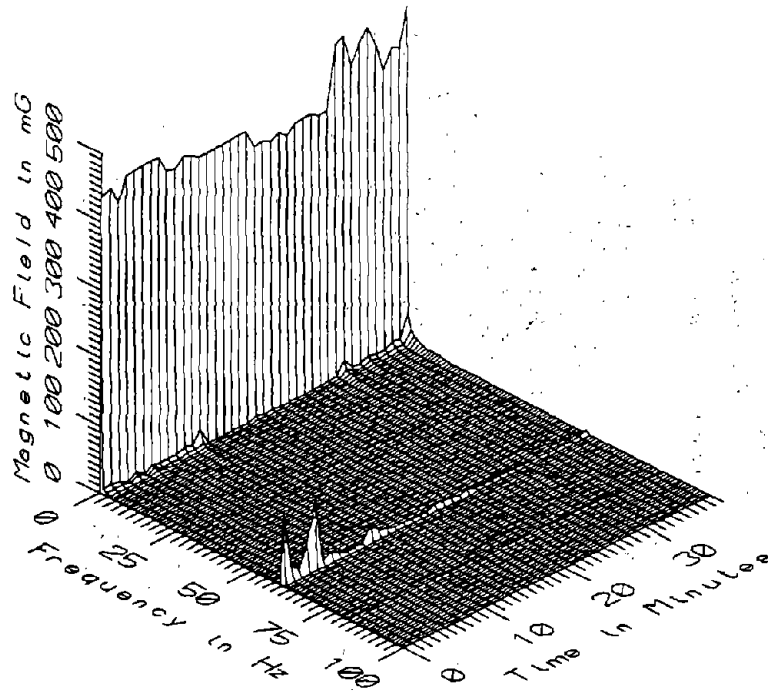
NEC013 - 110 cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE SEVENTH COACH



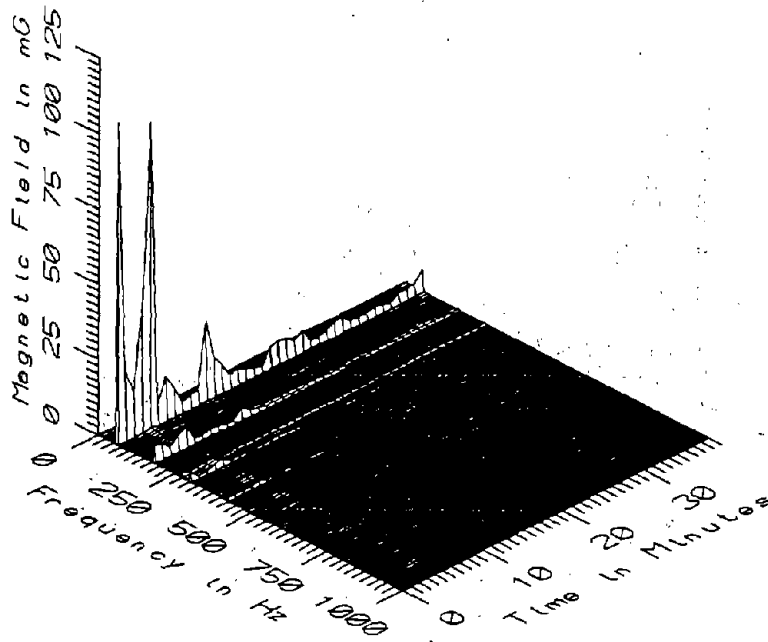
NEC013 - 160cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE SEVENTH COACH



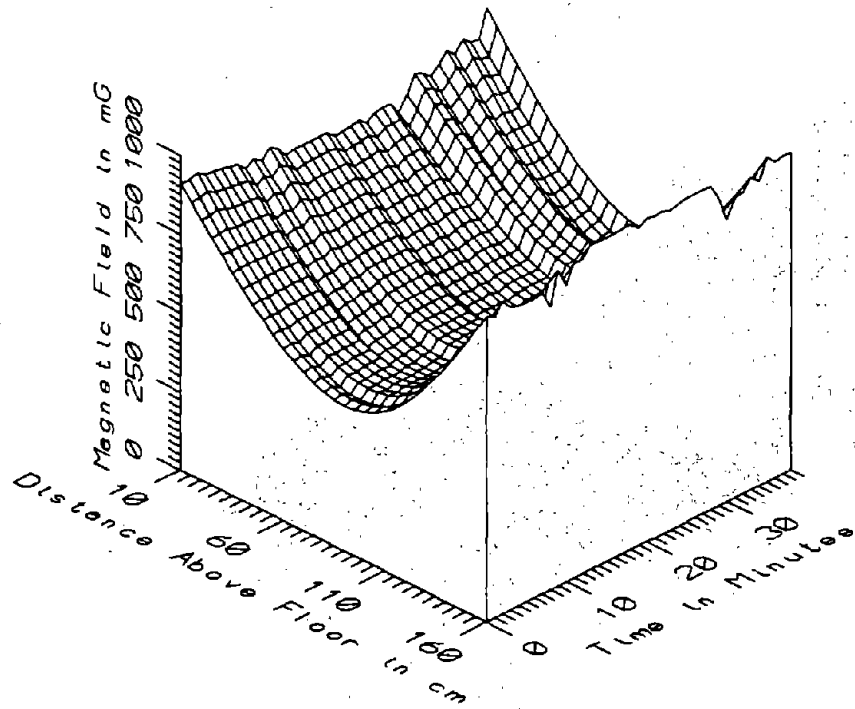
NEC013 - 160 cm ABOVE FLOOR AGAINST SIDE BULKHEAD IN THE SEVENTH COACH



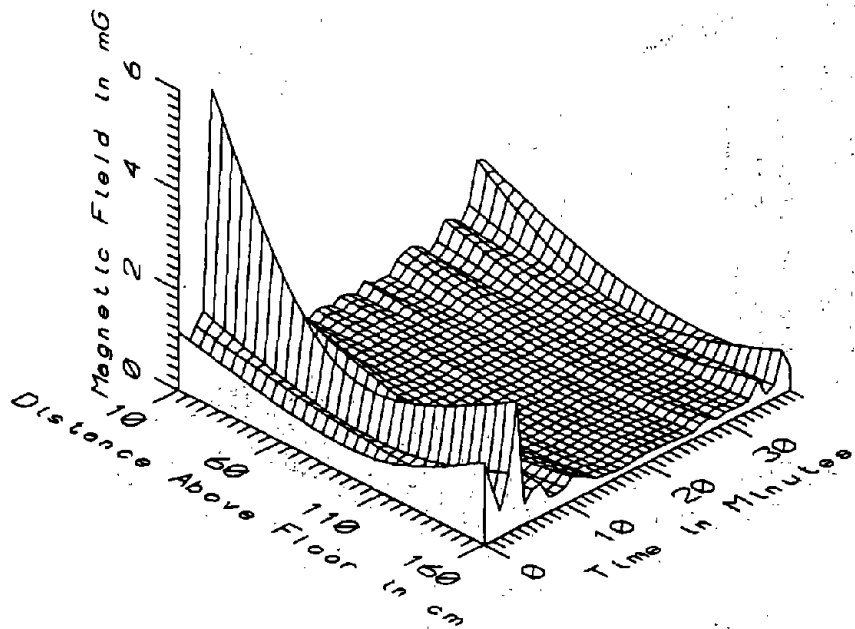
NEC013 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



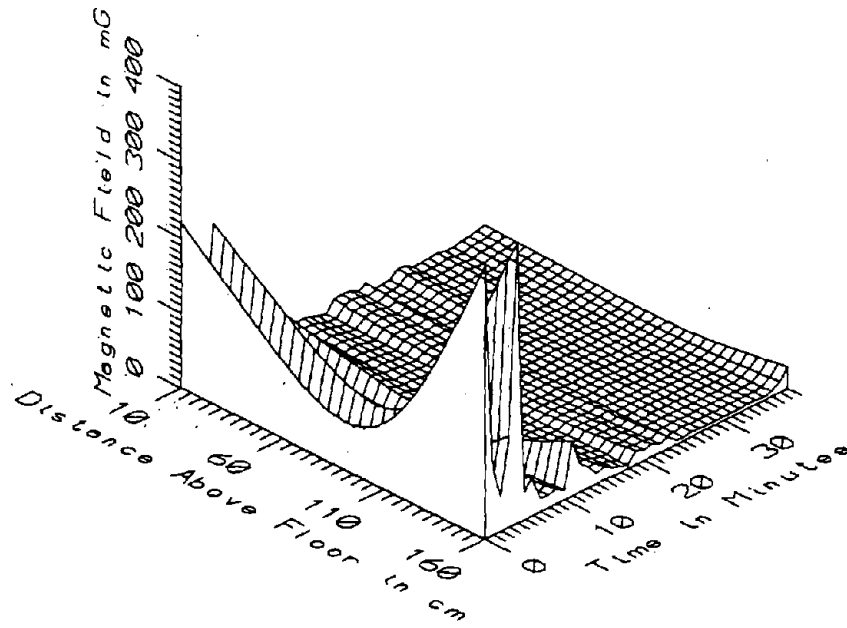
NEC013 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



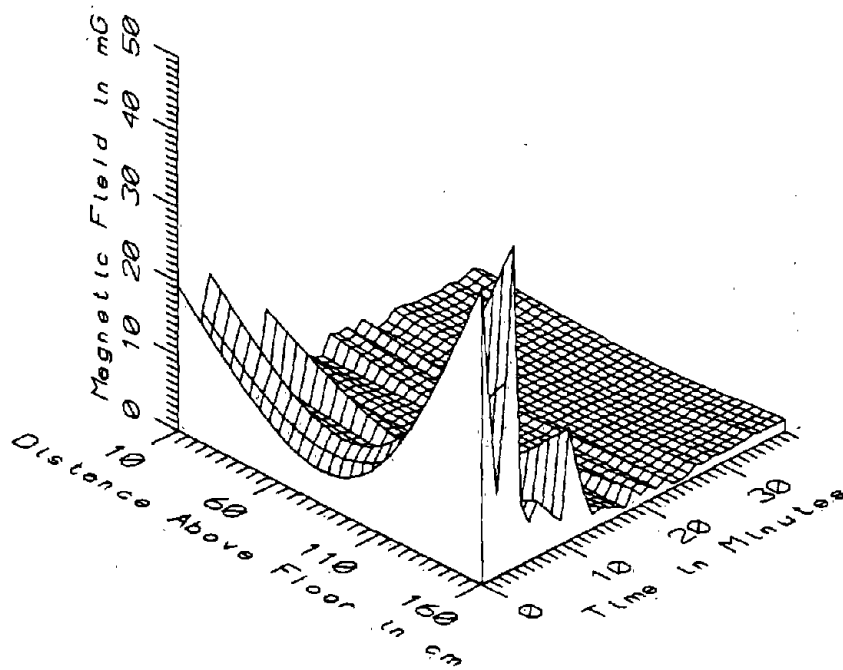
NEC013 - AGAINST SIDE BULKHEAD IN THE SEVENTH COACH - STATIC



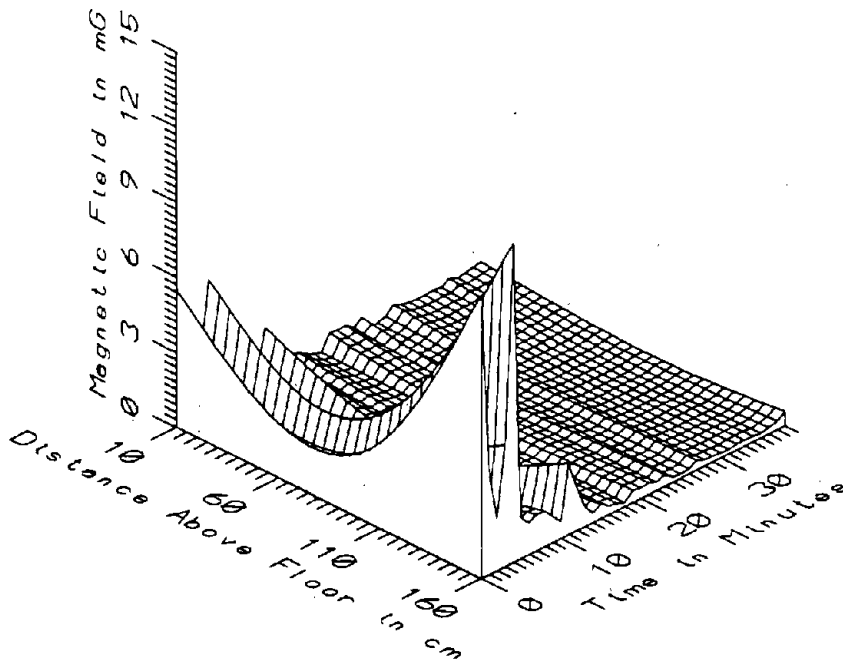
NEC013 - AGAINST SIDE BULKHEAD IN SEVENTH COACH - LOW FREQ. 5-45Hz



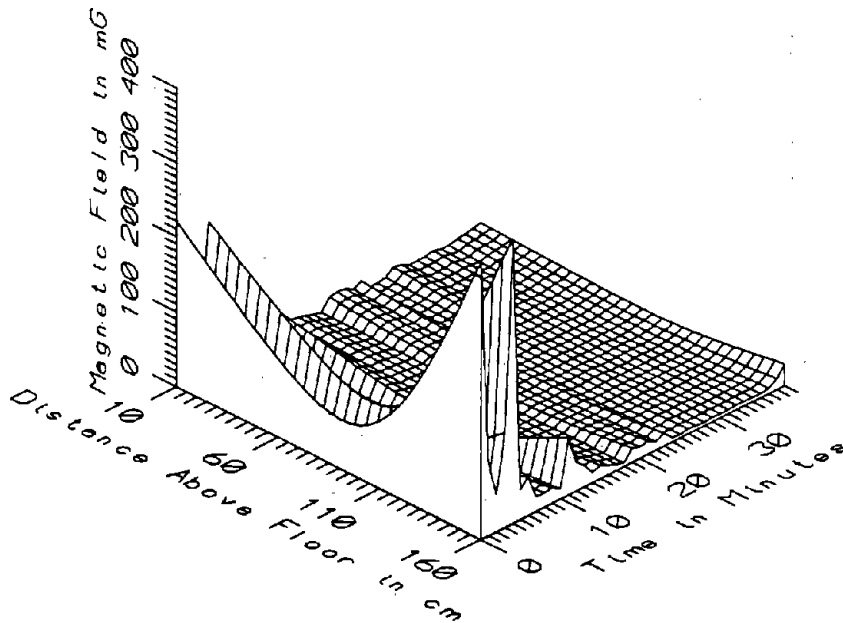
NEC013 - AGAINST SIDE BULKHEAD IN SEVENTH COACH, POWER FREQ 50-60Hz



NEC013 - AGAINST SIDE BULKHEAD IN SEVENTH COACH, POWER HARM 65-300Hz

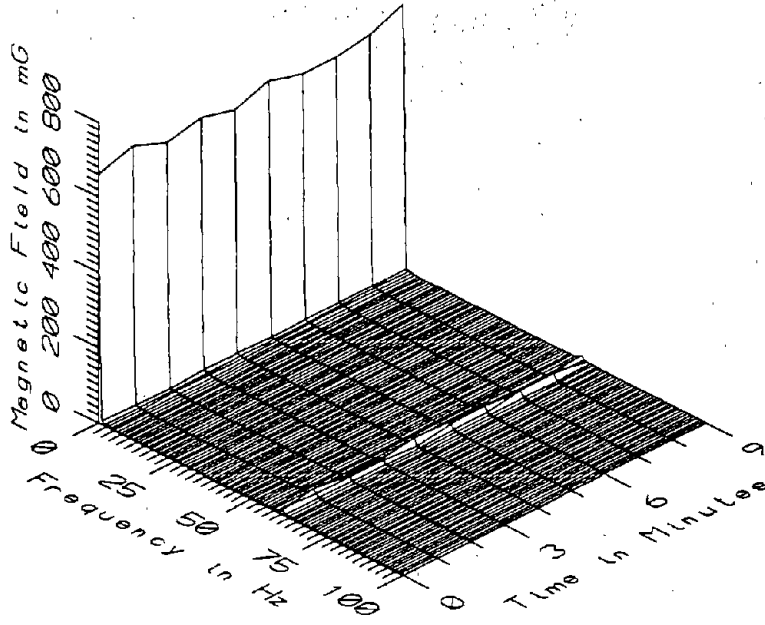


NEC013 - AGAINST SIDE BULKHEAD IN SEVENTH COACH, HIGH FREQ 305-2560Hz

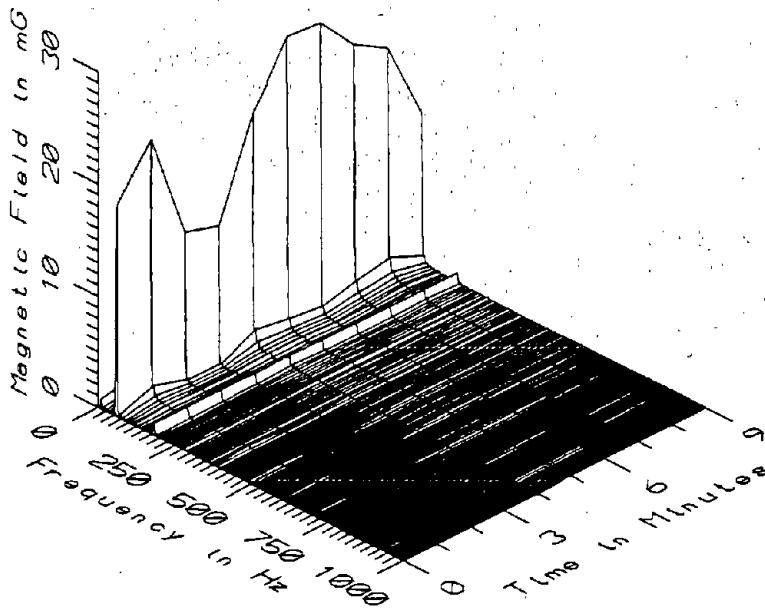


NEC013 - AGAINST SIDE BULKHEAD IN SEVENTH COACH, ALL FREQ 5-2560Hz

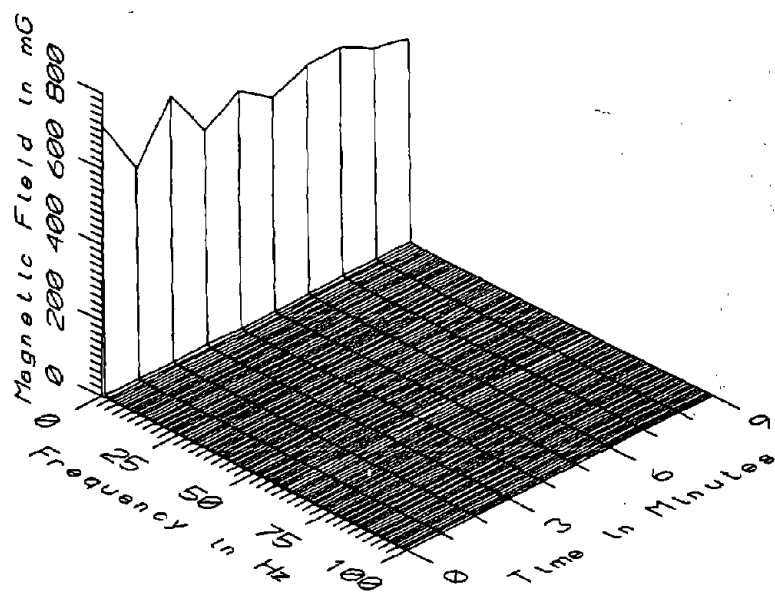
Handwritten text, likely bleed-through from the reverse side of the page. The text is extremely faint and illegible due to low contrast and blurring. It appears to be organized into several paragraphs or sections, but the specific content cannot be discerned.



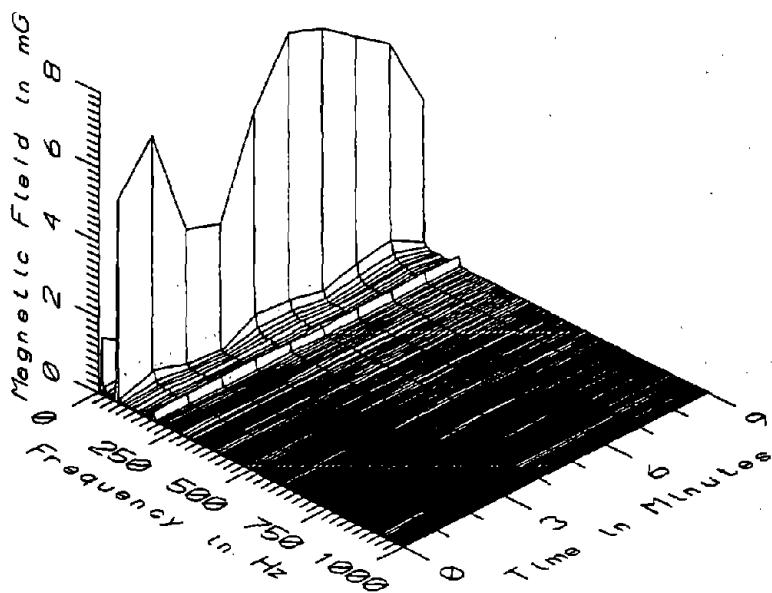
NEC014 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



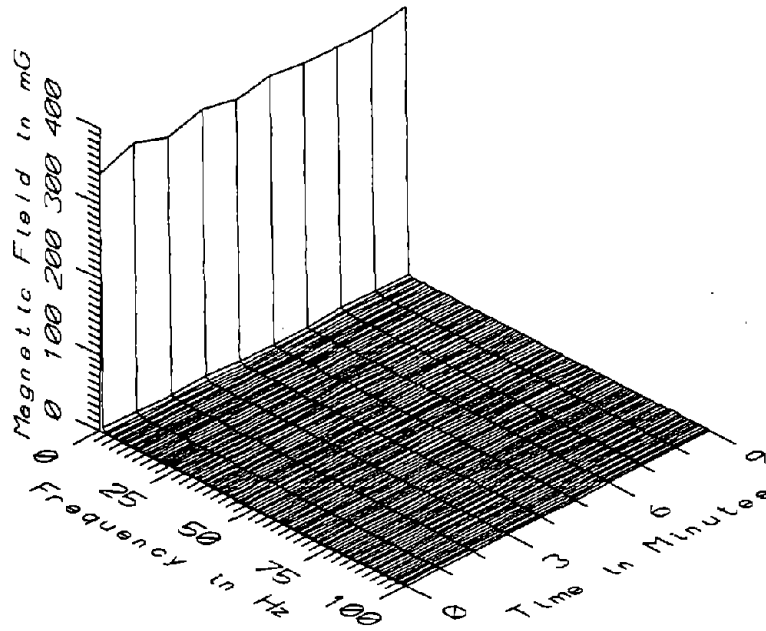
NEC014 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



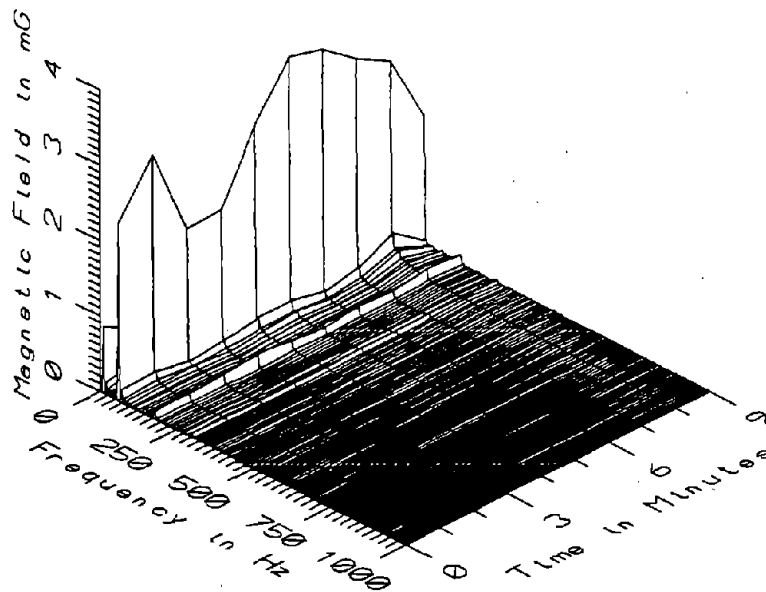
NEC014 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



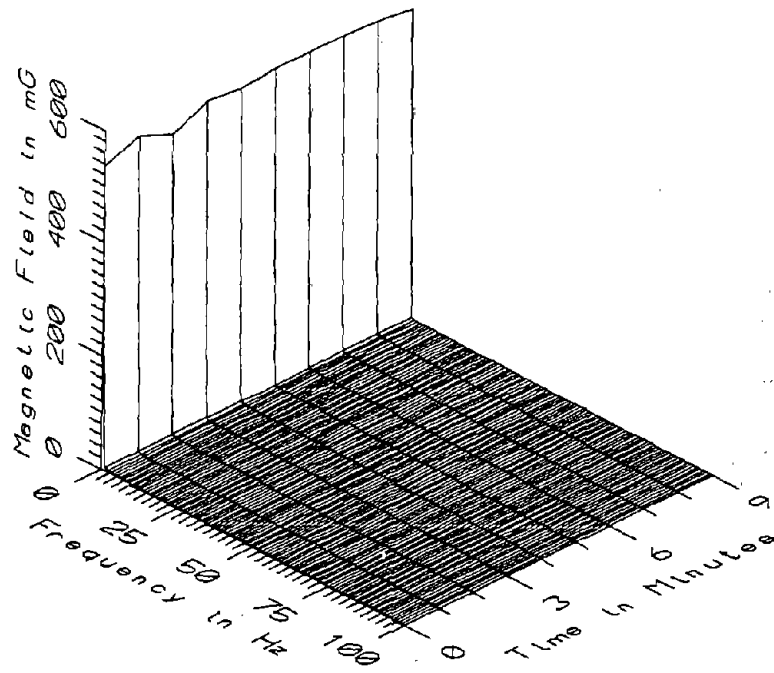
NEC014 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



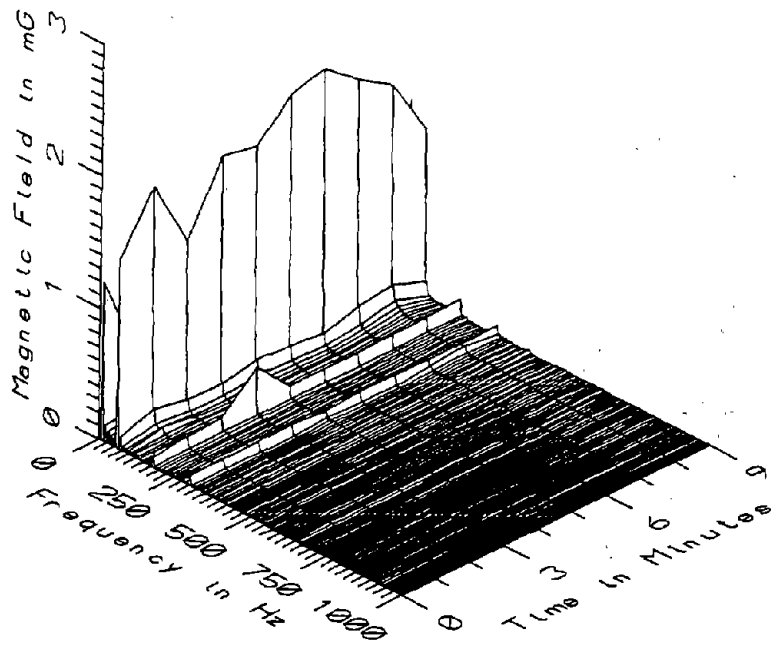
NEC014 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



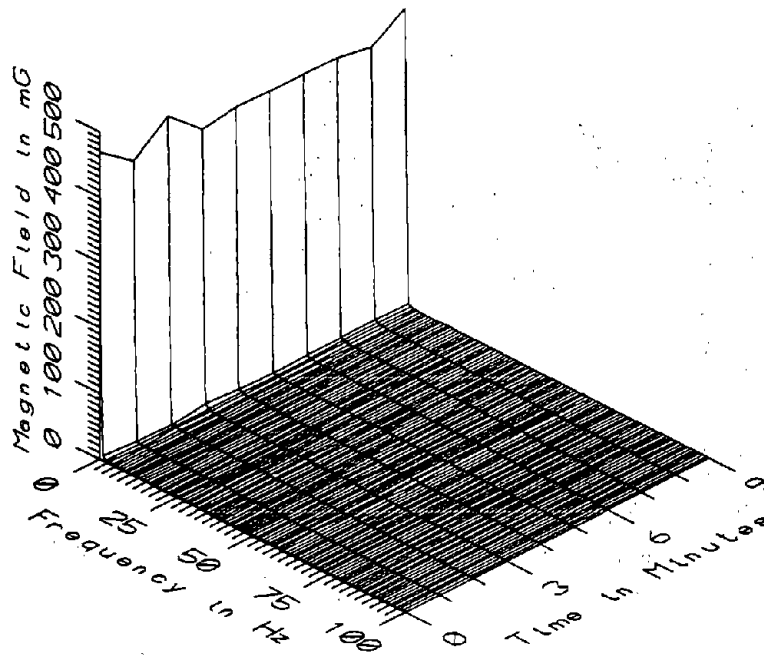
NEC014 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



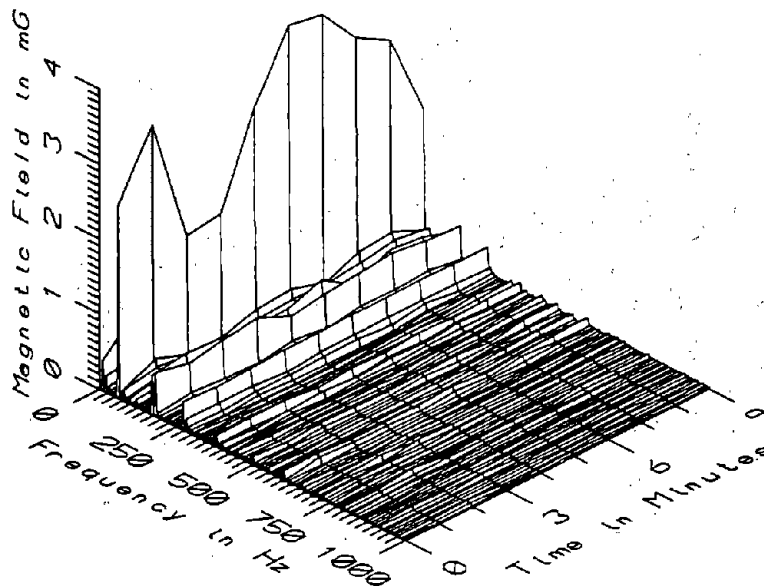
NEC014 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



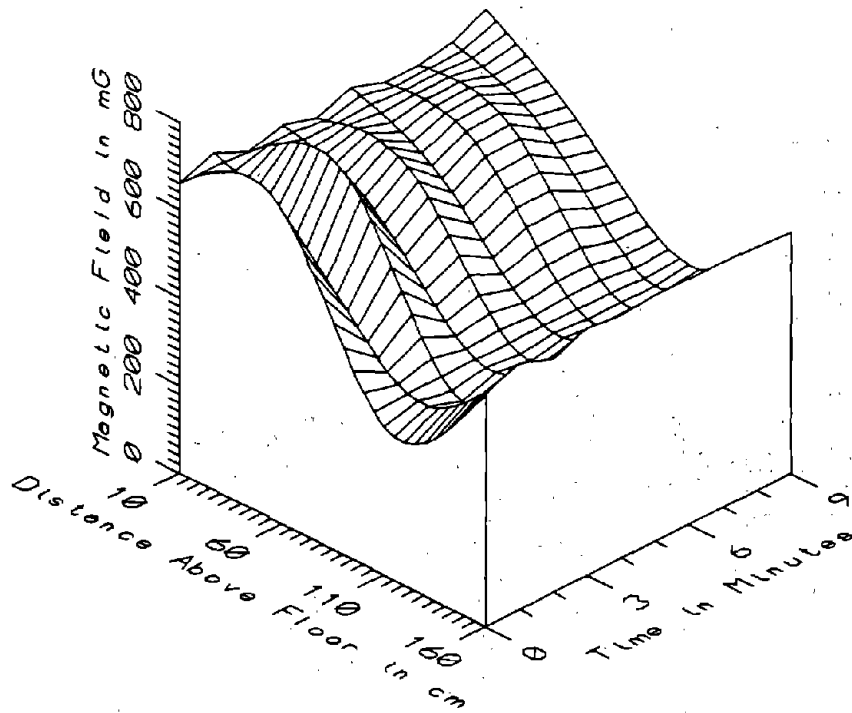
NEC014 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN THE SEVENTH COACH



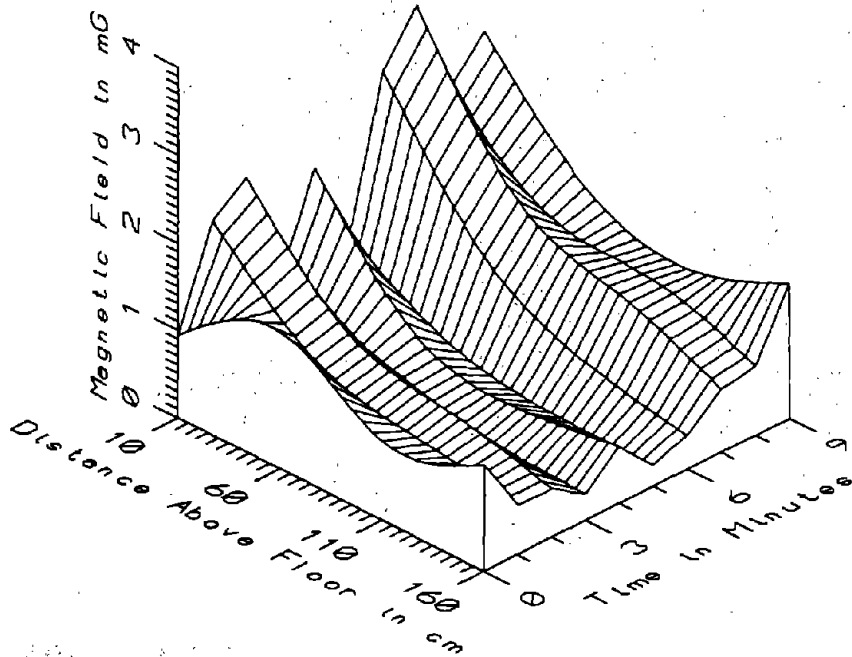
NEC014 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



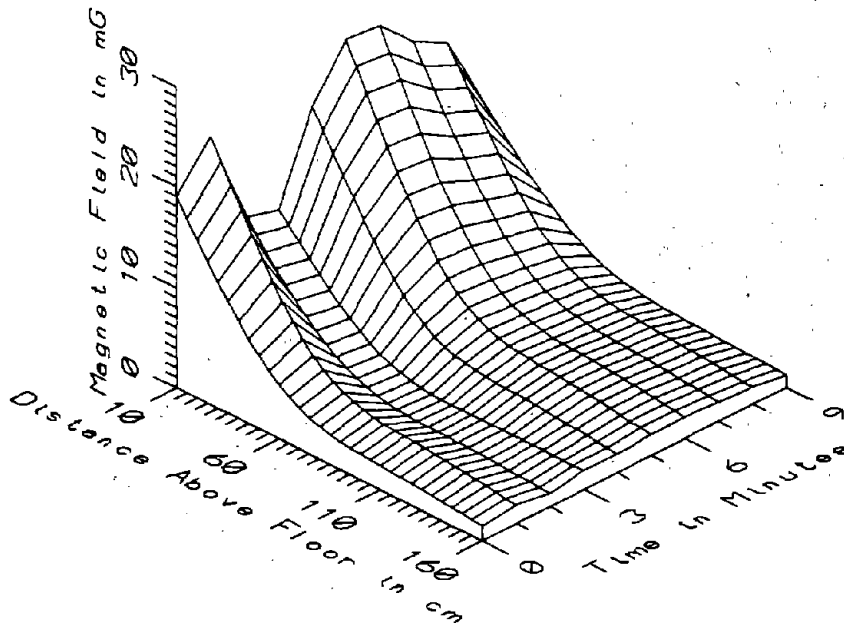
NEC014 - REFERENCE PROBE - WINDOW SEAT IN THE SEVENTH COACH



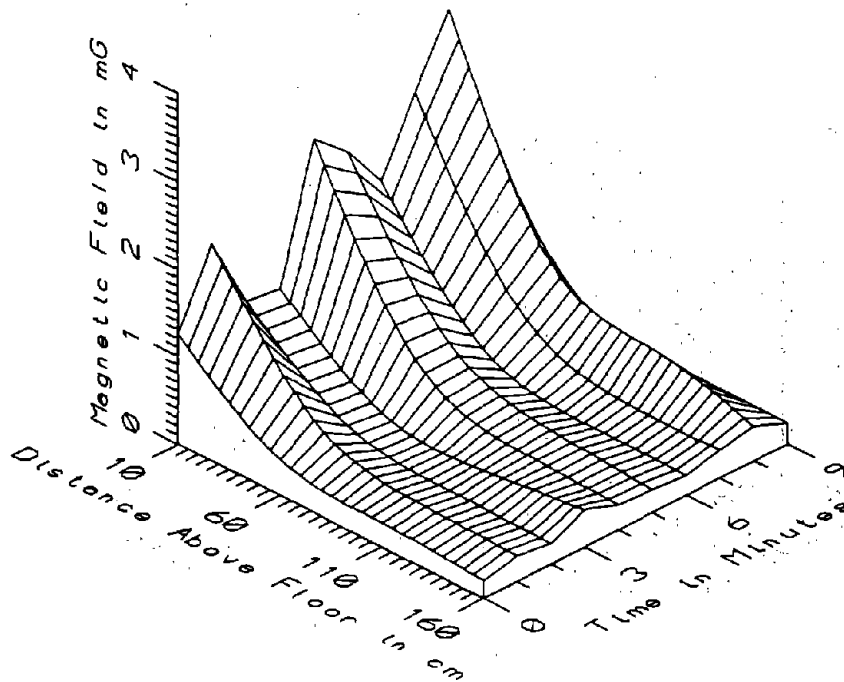
NEC014 - EDGE OF AISLE IN THE SEVENTH COACH - STATIC



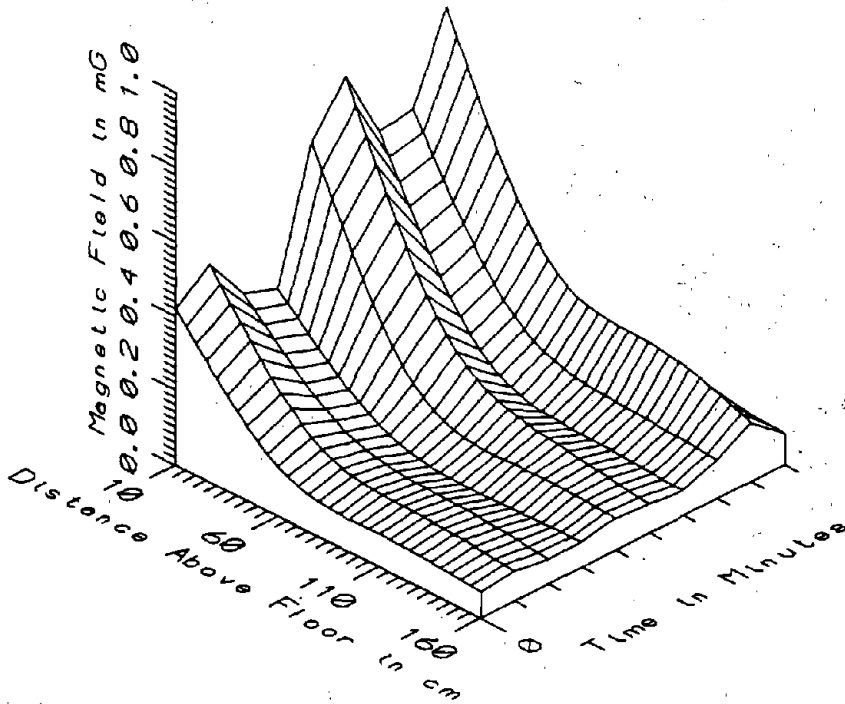
NEC014 - EDGE OF AISLE IN THE SEVENTH COACH - LOW FREQUENCY; 5-45Hz



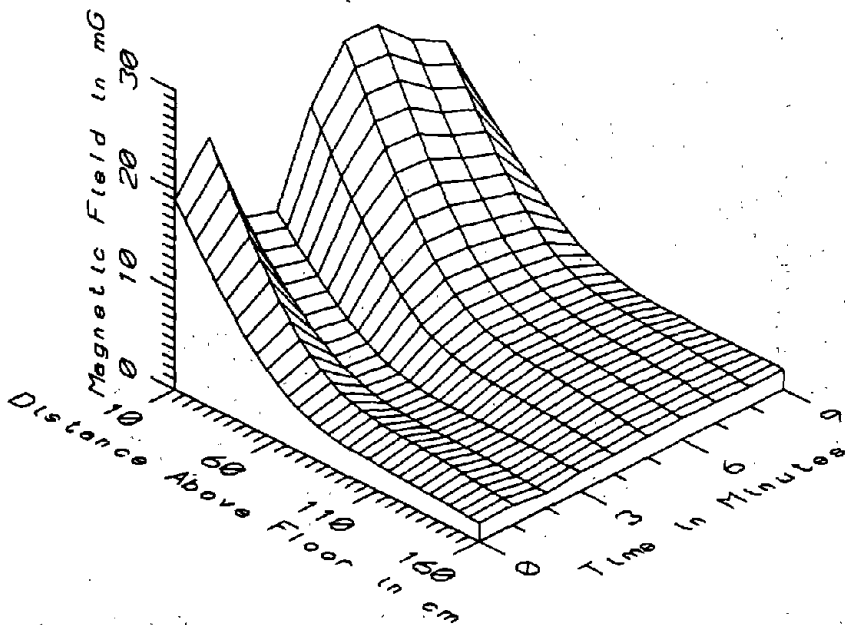
NEC014 - EDGE OF AISLE IN THE SEVENTH COACH - POWER FREQUENCY, 50-60Hz



NEC014 - EDGE OF AISLE IN THE SEVENTH COACH - POWER HARMONICS, 65-300Hz



NEC014 - EDGE OF AISLE IN SEVENTH COACH - HIGH FREQUENCY 305-2560Hz



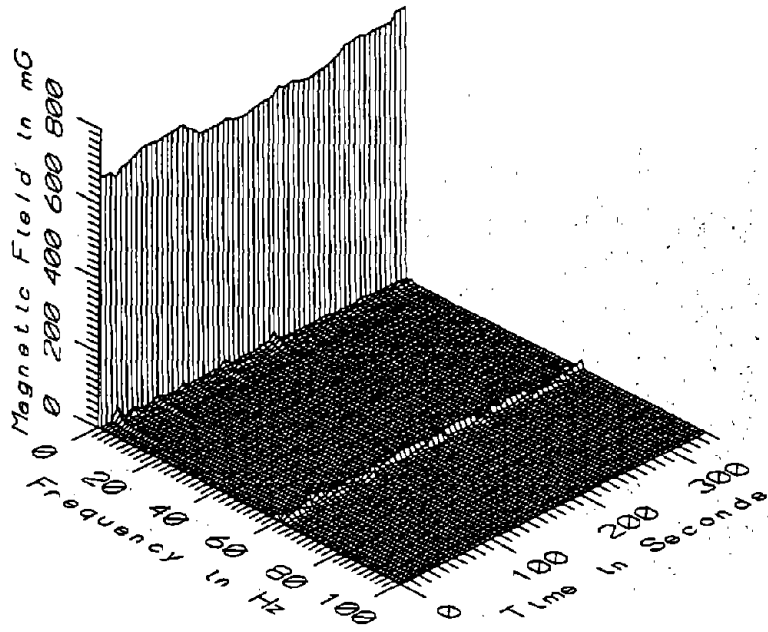
NEC014 - EDGE OF AISLE IN THE SEVENTH COACH - ALL FREQUENCIES, 5-2560Hz

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

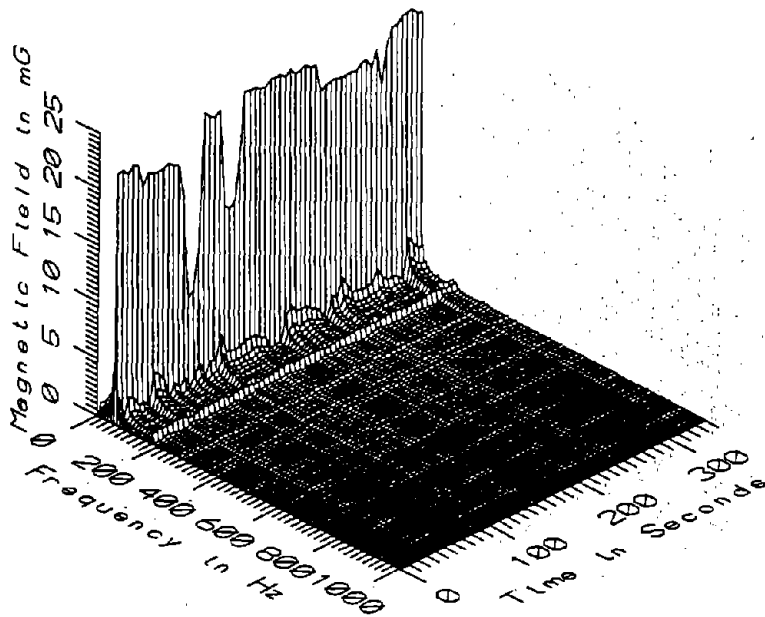
In the second section, the author outlines the various methods used to collect and analyze the data. This includes both primary and secondary data collection techniques. The primary data was gathered through direct observation and interviews, while secondary data was obtained from existing reports and databases.

The third section provides a detailed description of the data analysis process. This involves identifying patterns, trends, and anomalies within the dataset. Statistical tools and software were used to facilitate this process, ensuring that the results are both accurate and reliable.

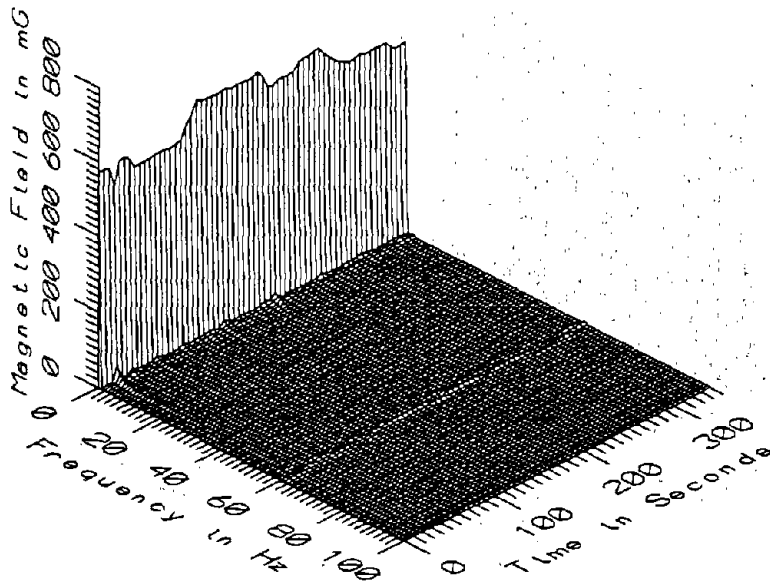
Finally, the document concludes with a summary of the findings and their implications. It highlights the key insights gained from the study and offers recommendations for future research and practice. The author notes that while the current study provides valuable information, there are still several areas that require further investigation.



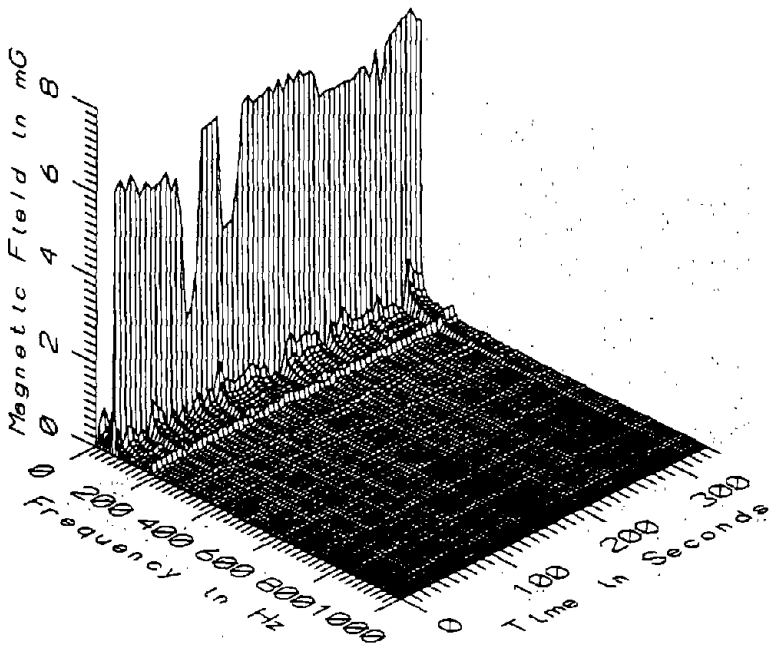
NEC015 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



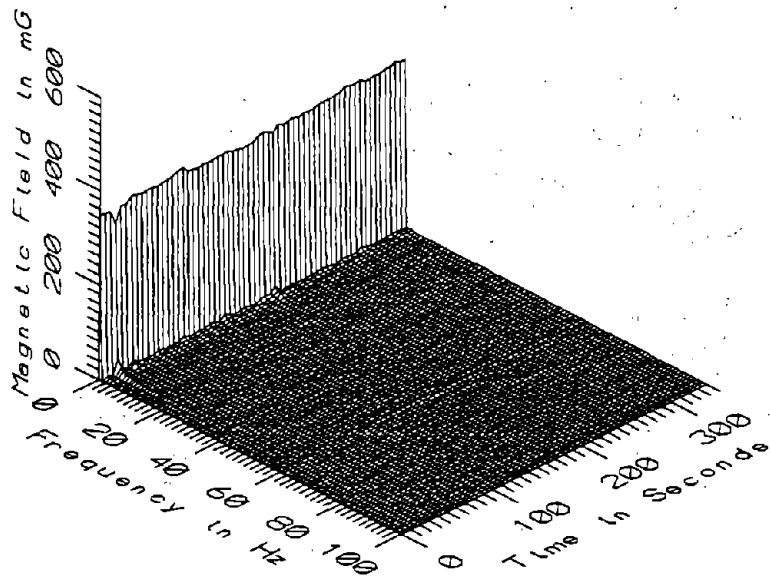
NEC015 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



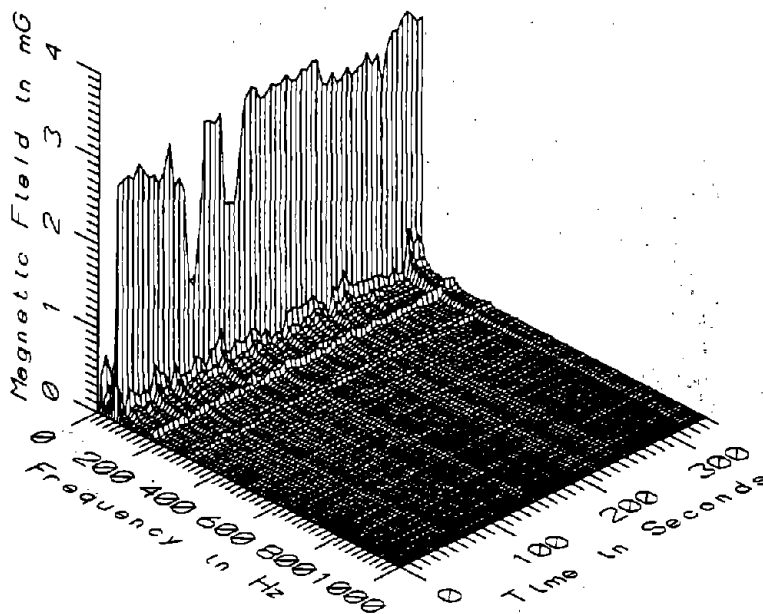
NEC015 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



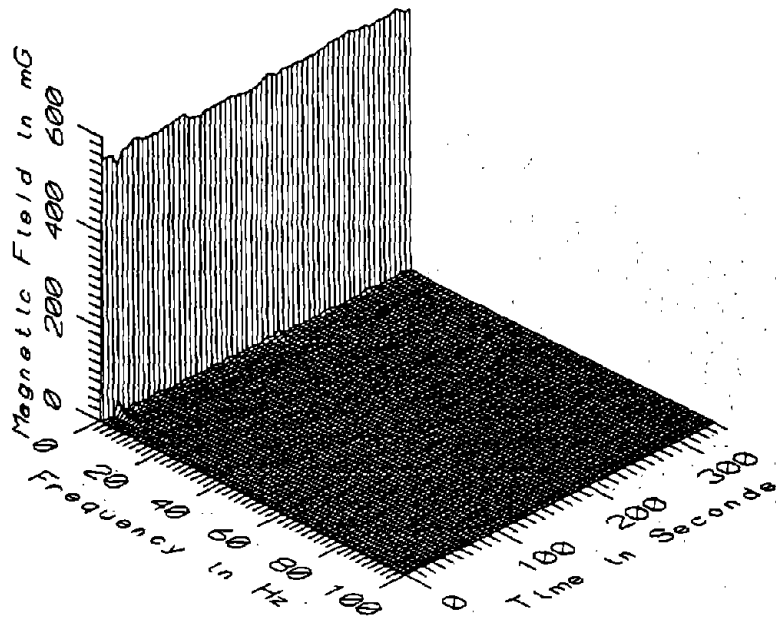
NEC015 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



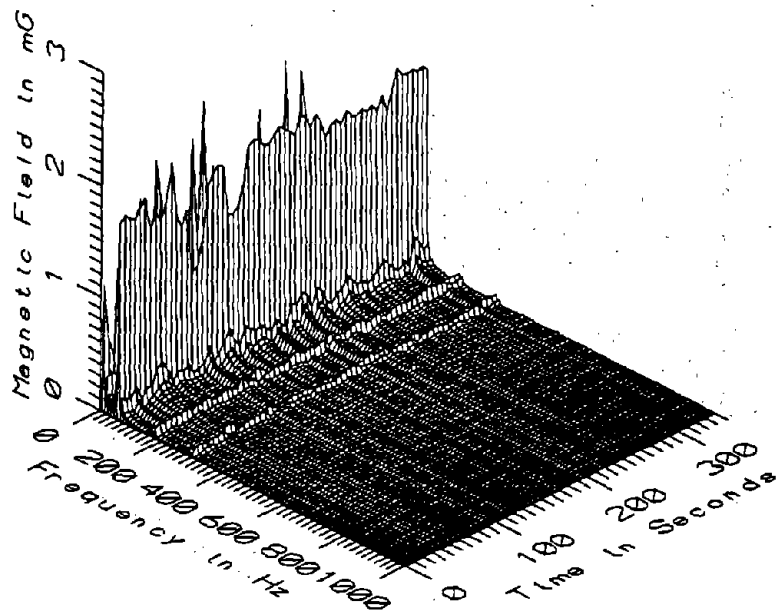
NEC015 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



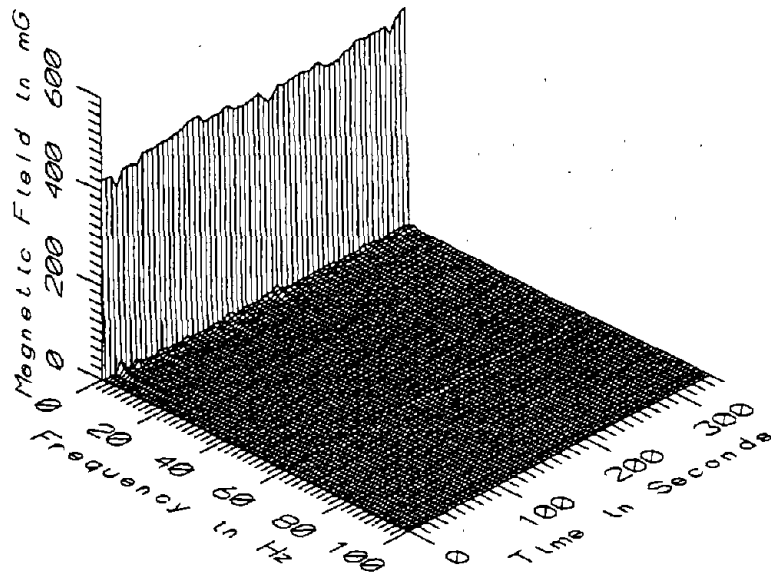
NEC015 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



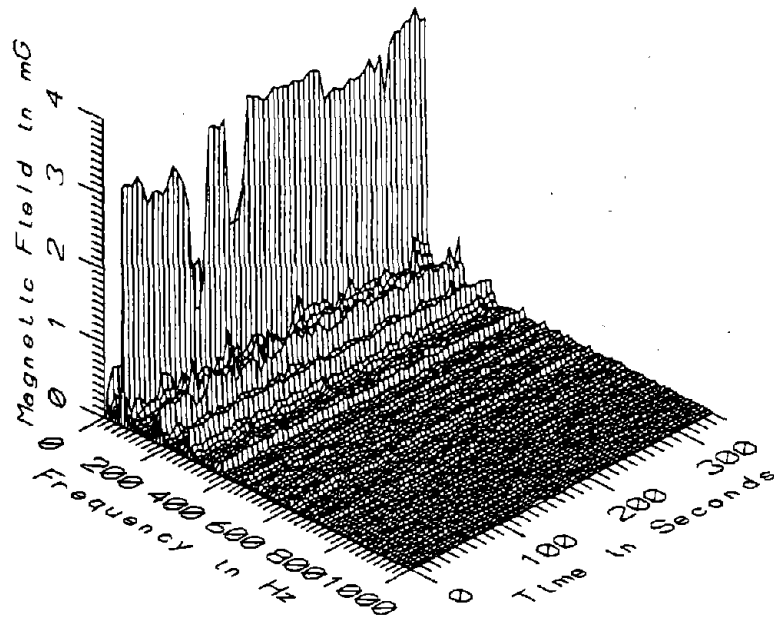
NEC015 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



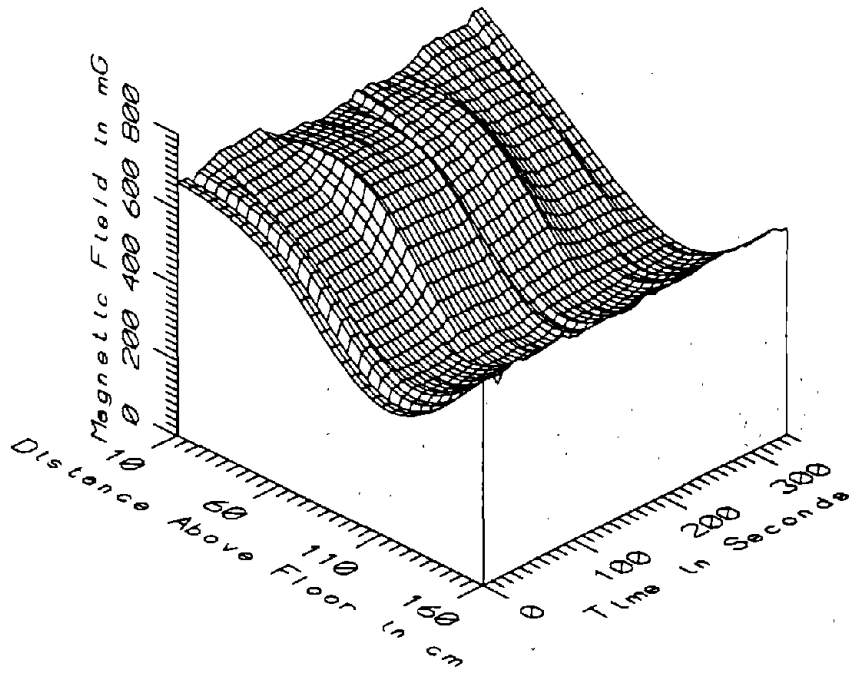
NEC015 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



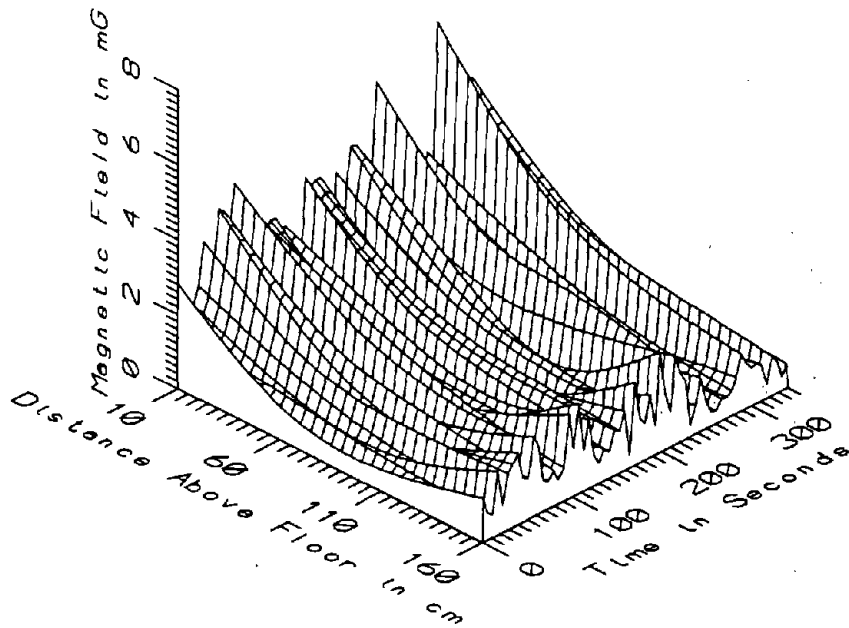
NEC015 - REFERENCE PROBE - WINDOW SEAT IN FIFTH COACH



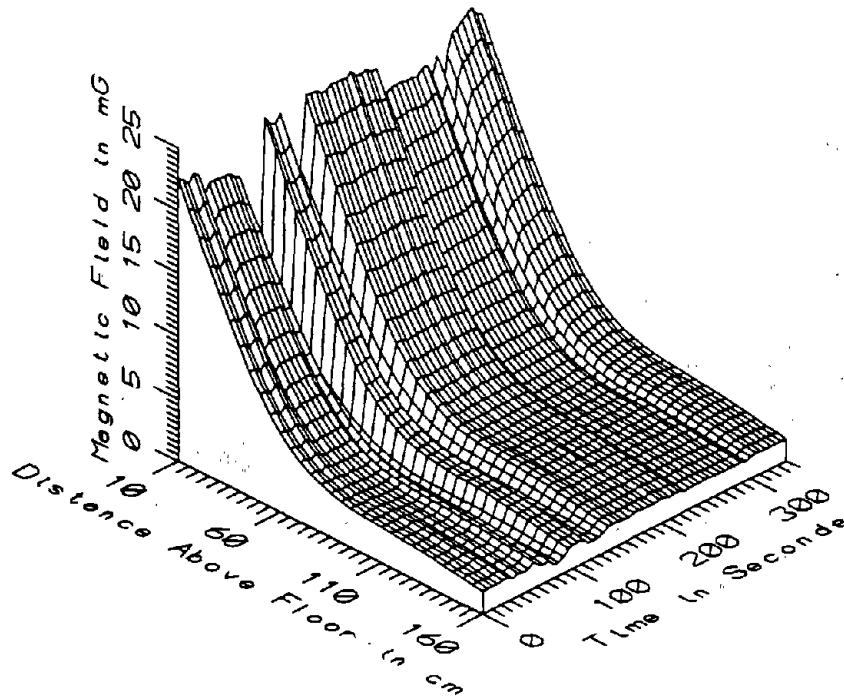
NEC015 - REFERENCE PROBE - WINDOW SEAT IN FIFTH COACH



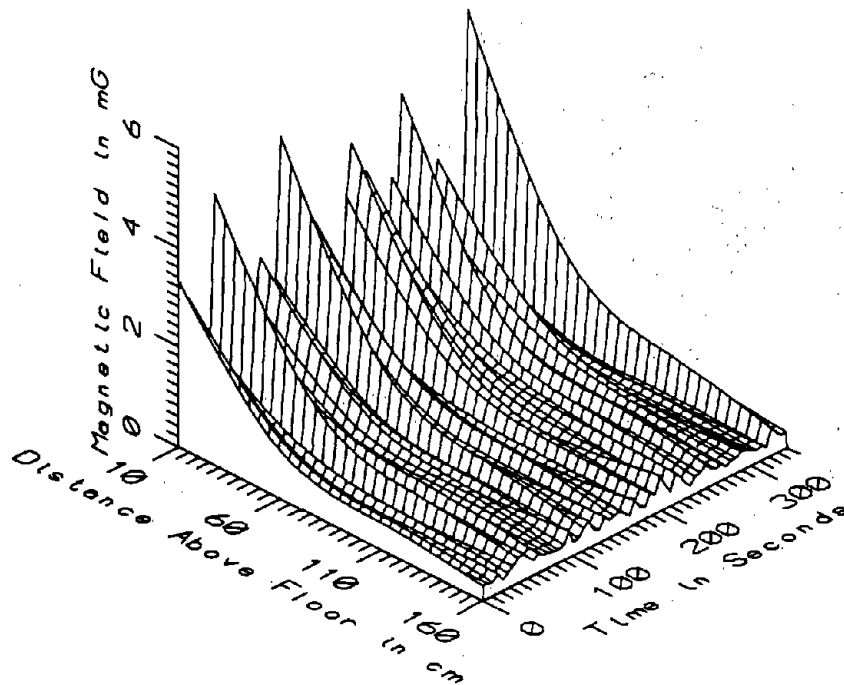
NEC015 - EDGE OF AISLE IN FIFTH COACH - STATIC



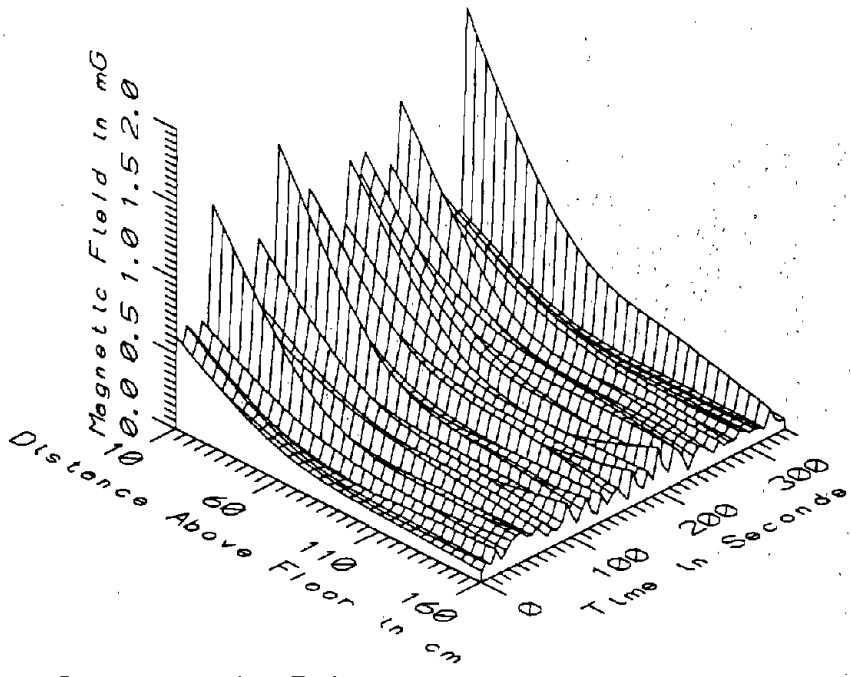
NEC015 - EDGE OF AISLE IN FIFTH COACH - LOW FREQUENCY, 5-45Hz



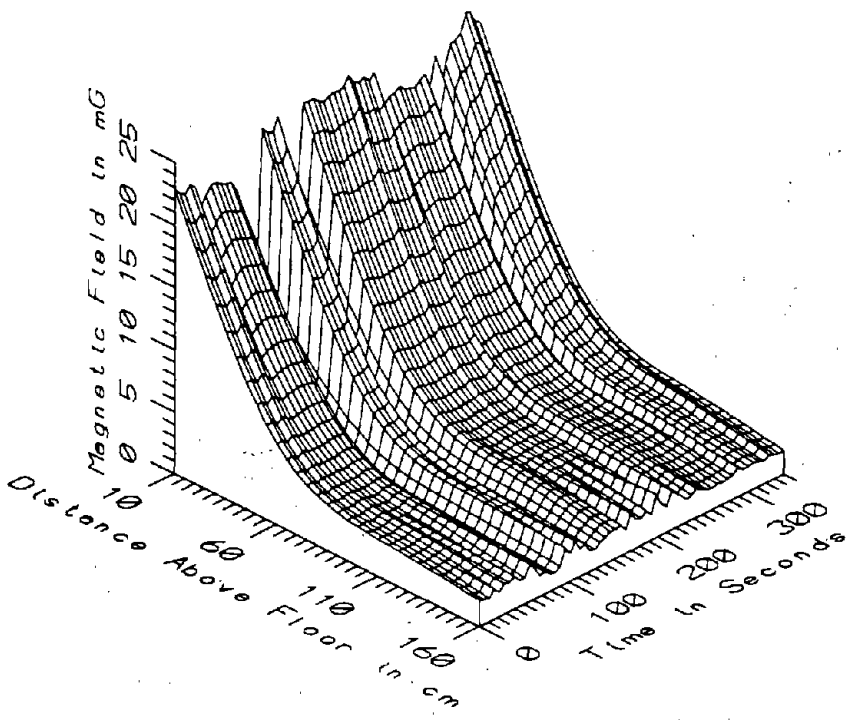
NEC015 - EDGE OF AISLE IN FIFTH COACH - POWER FREQUENCY, 50-60Hz



NEC015 - EDGE OF AISLE IN FIFTH COACH - POWER HARMONICS, 65-300Hz



NEC015 - EDGE OF AISLE IN FIFTH COACH - HIGH FREQUENCY, 305-2560Hz



NEC015 - EDGE OF AISLE IN FIFTH COACH - ALL FREQUENCIES, 5-2560Hz

MEMORANDUM

TO: THE PRESIDENT

FROM: THE SECRETARY OF STATE

SUBJECT: [Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

APPENDIX Q

DATASET NEC016
FRONT OF FIRST COACH AT AISLE, NON-ELECTRIFIED NEC

Measurement Setup Code: Staff: 8 Reference: None
 Drawing: A-1

Vehicle Status: Traveling north toward New London
 transmission lines and substation at
 the 306 second time point

Measurement Date: March 30, 1992

Measurement Time: Start: 16:45:43
 End: 16:52:40

Number of Samples: 76

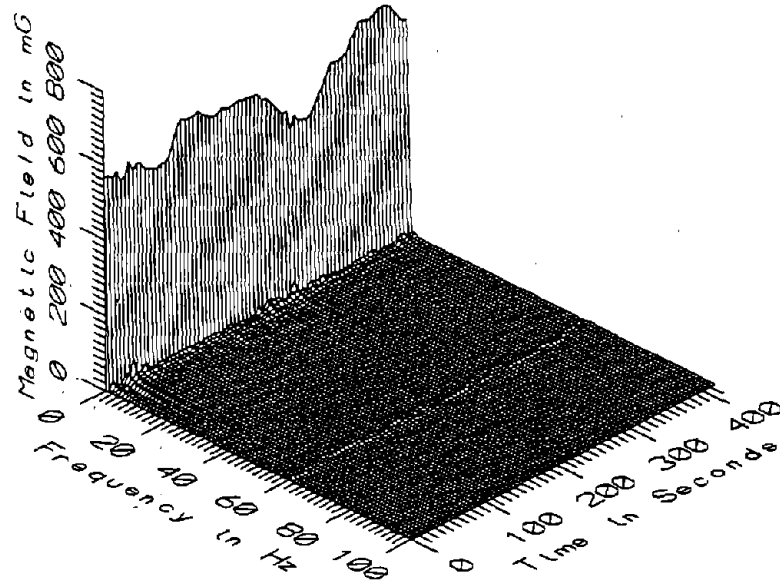
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.6 sec

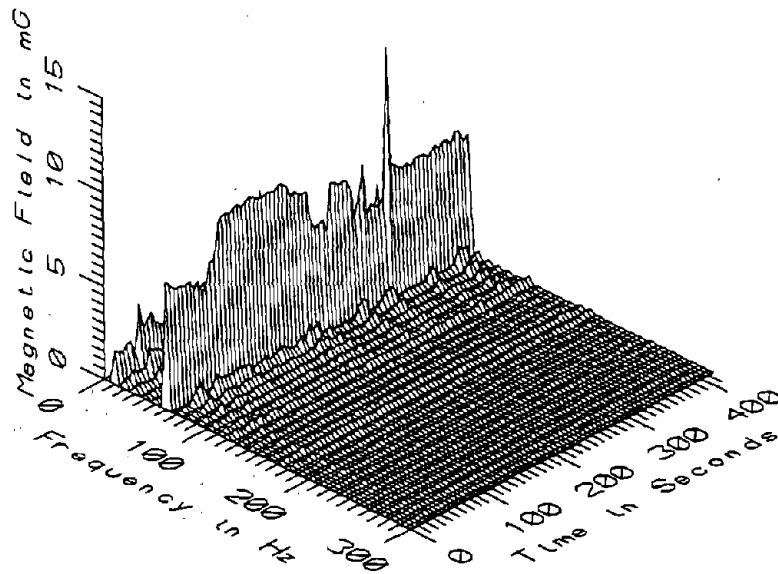
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

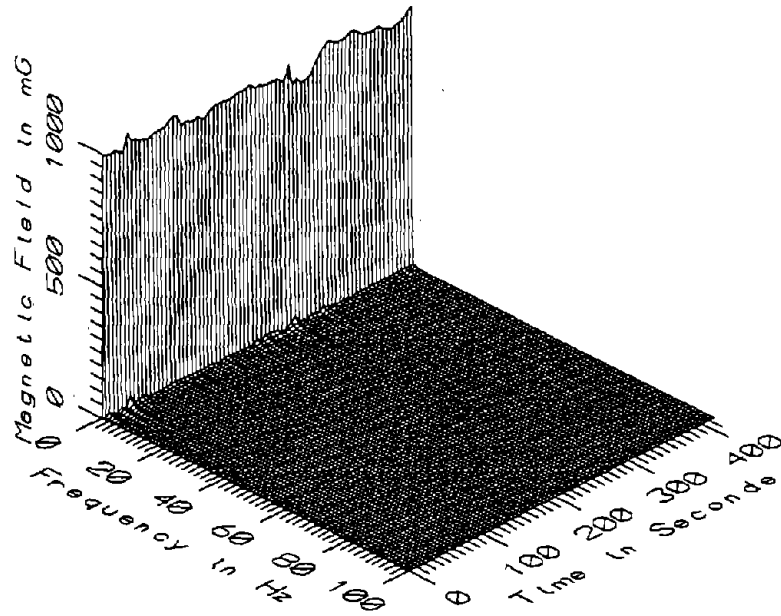
Missing or Suspect Data: None



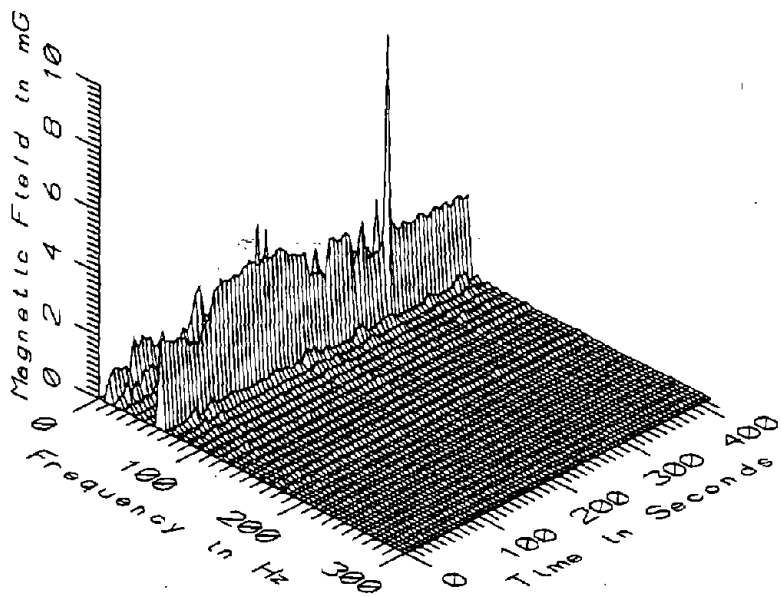
NEC016 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN FIRST COACH



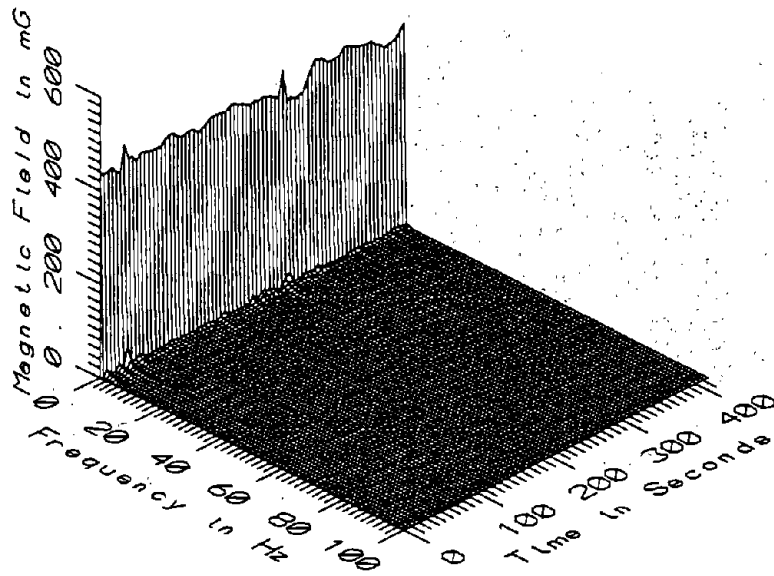
NEC016 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN FIRST COACH



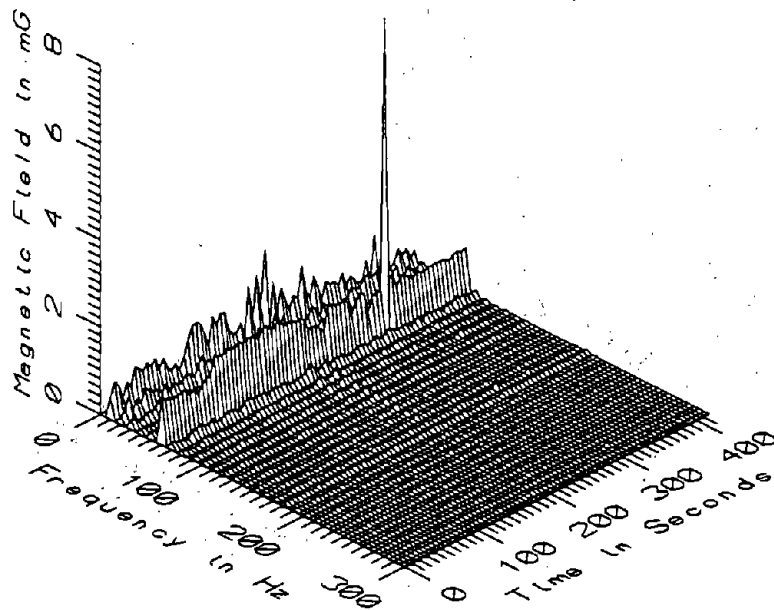
NEC016 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN FIRST COACH



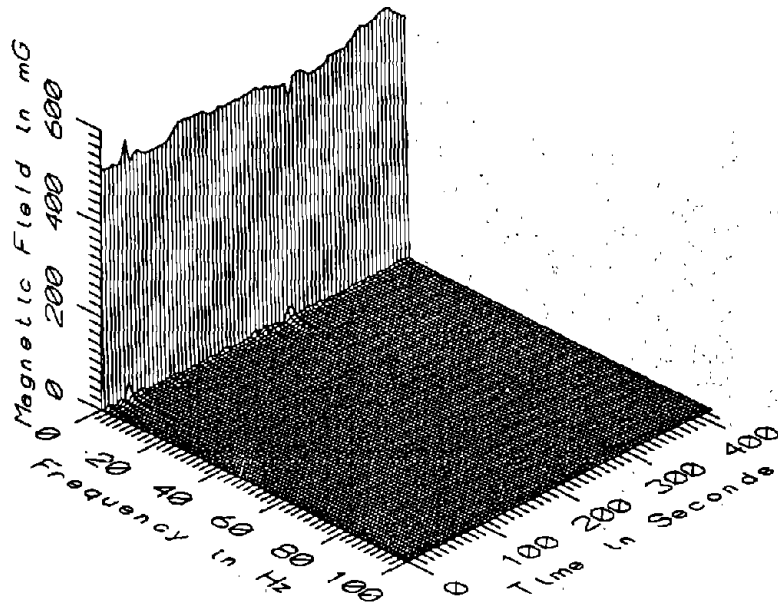
NEC016 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN FIRST COACH



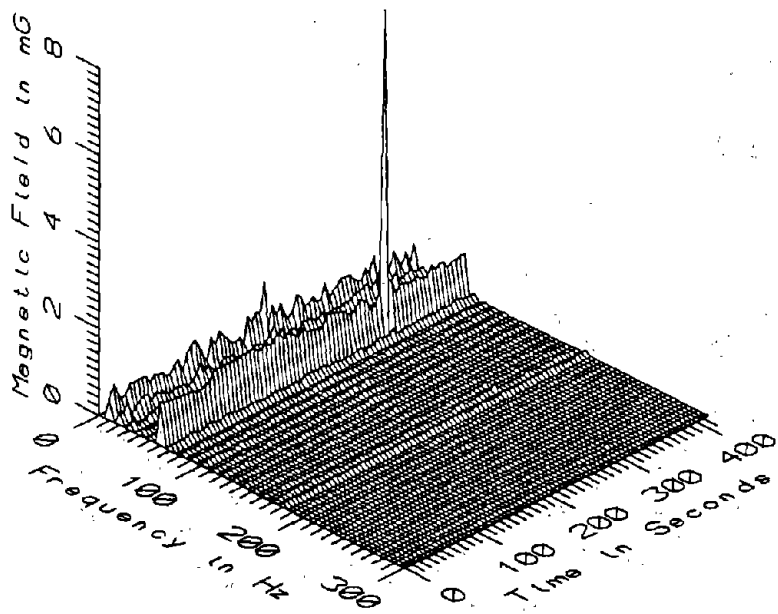
NEC016 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN FIRST COACH



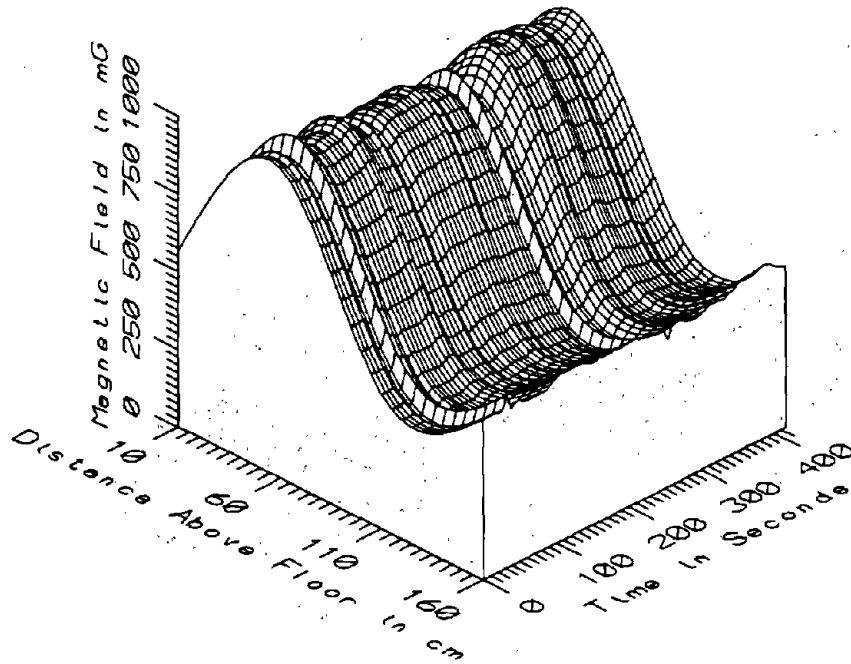
NEC016 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN FIRST COACH



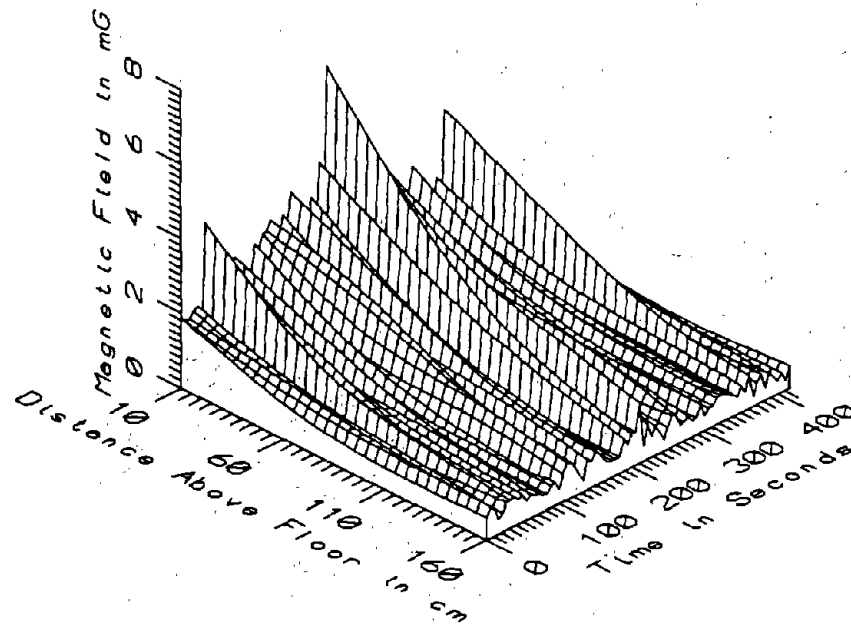
NEC016 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN FIRST COACH



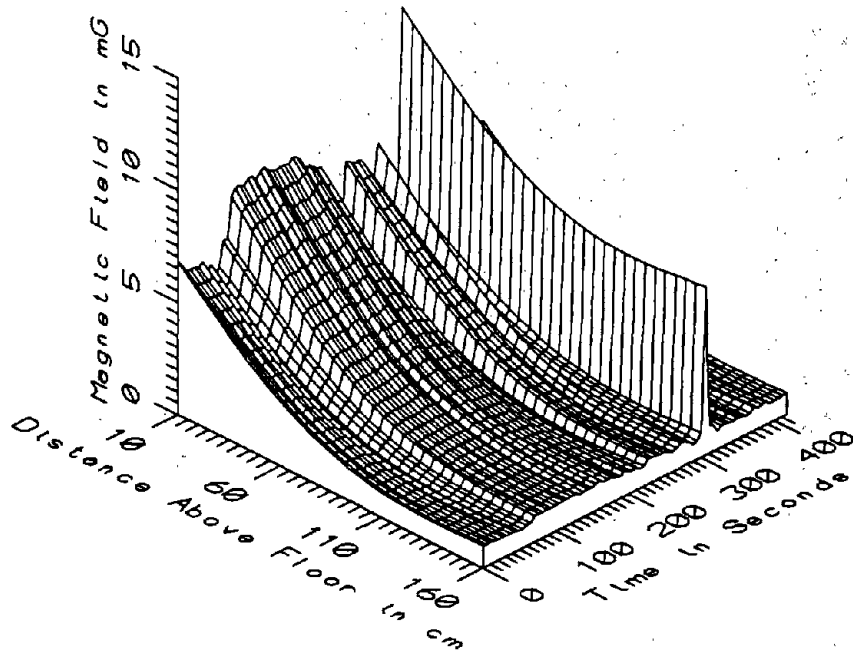
NEC016 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN FIRST COACH



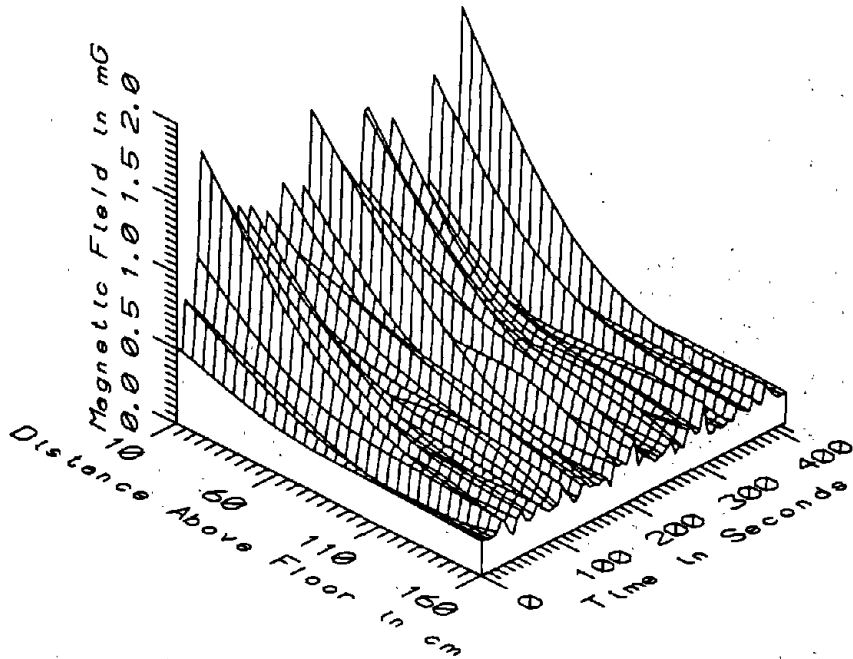
NEC016 - EDGE OF AISLE IN FIRST COACH - STATIC



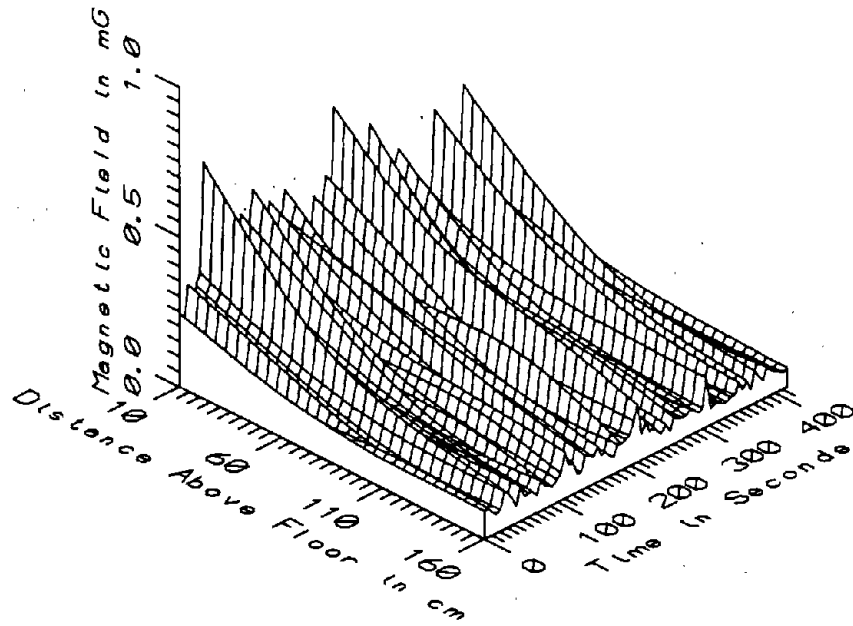
NEC016 - EDGE OF AISLE IN FIRST COACH - LOW FREQUENCY, 5-45Hz



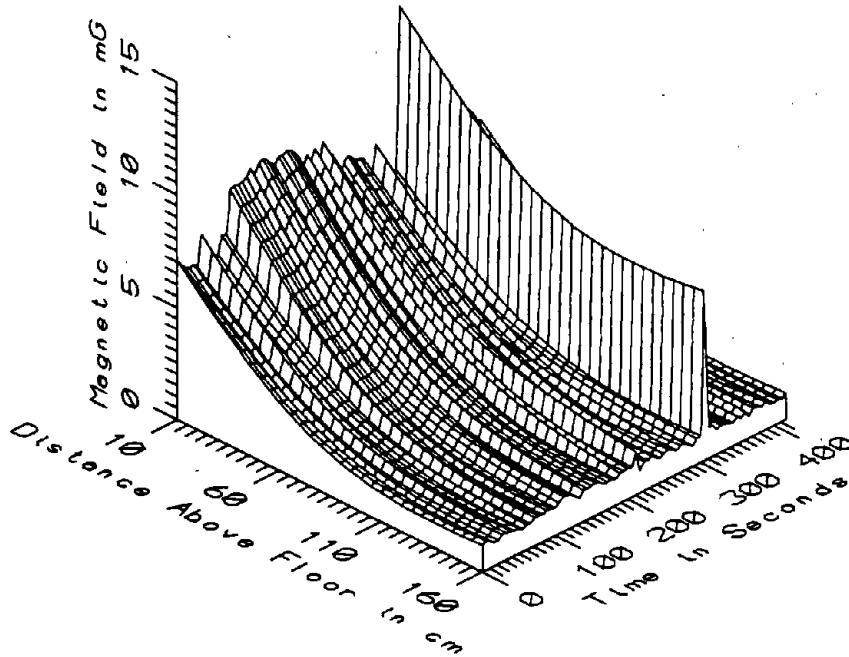
NEC016 - EDGE OF AISLE IN FIRST COACH - POWER FREQUENCY, 50-60Hz



NEC016 - EDGE OF AISLE IN FIRST COACH - POWER HARMONICS, 65-300Hz



NEC016 - EDGE OF AISLE IN FIRST COACH - HIGH FREQUENCY, 305-2560Hz



NEC016 - EDGE OF AISLE IN FIRST COACH - ALL FREQUENCIES, 5-2560Hz

APPENDIX R

DATASET NEC017
HOME (5TH) COACH AT AISLE, NON-ELECTRIFIED NEC

Measurement Setup Code: Staff: 6 Reference: 3
 Drawing: A-1

Vehicle Status: Traveling north, stop briefly at
 Mystic at the 5 minute point

Measurement Date: March 30, 1992

Measurement Time: Start: 17:06:03
 End: 17:34:08

Number of Samples: 29

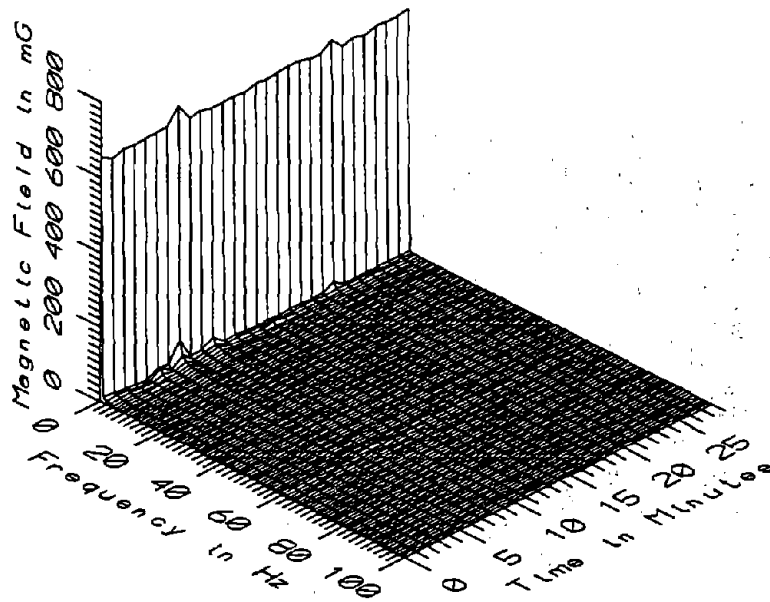
Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

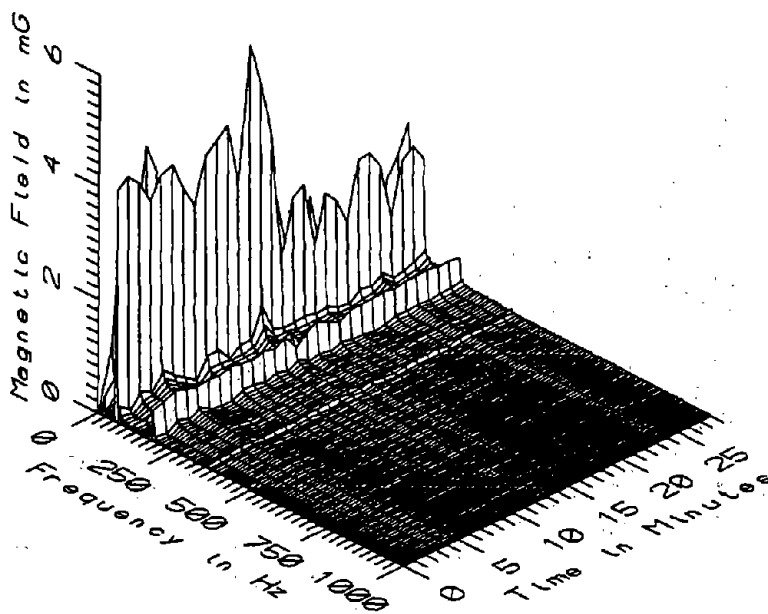
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

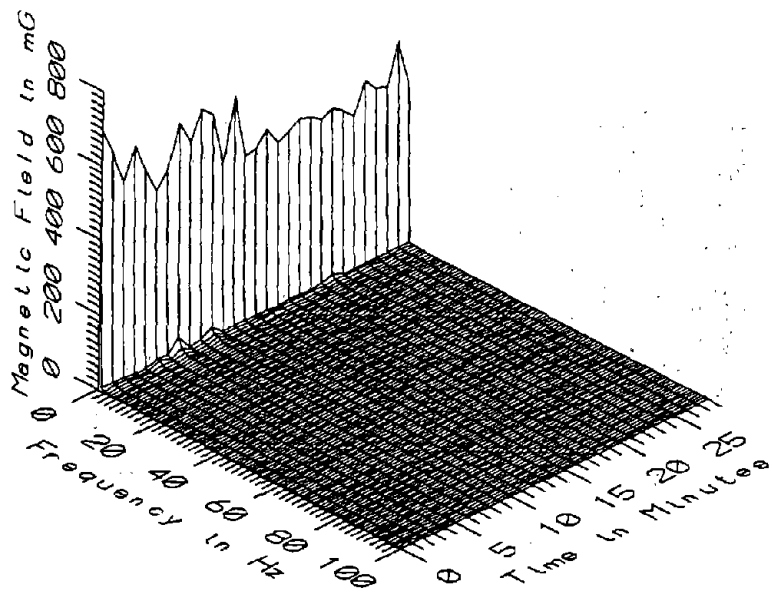
Missing or Suspect Data: None



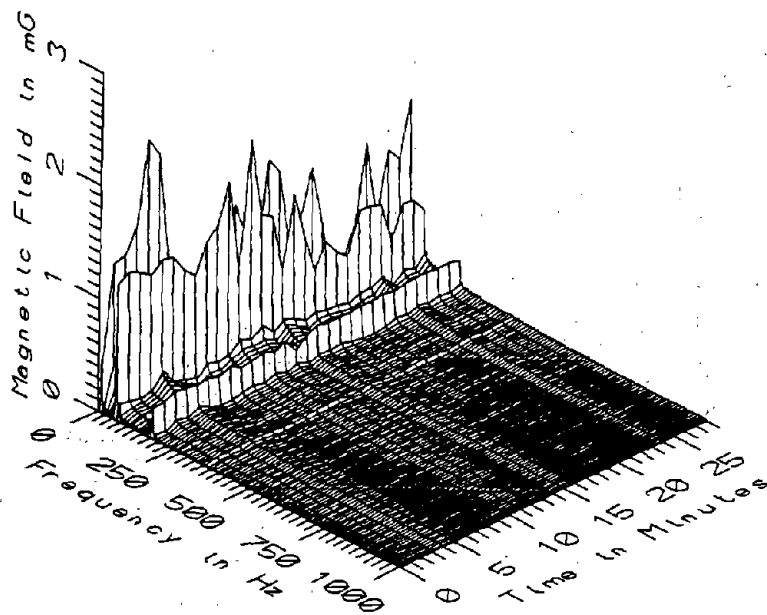
NEC017 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



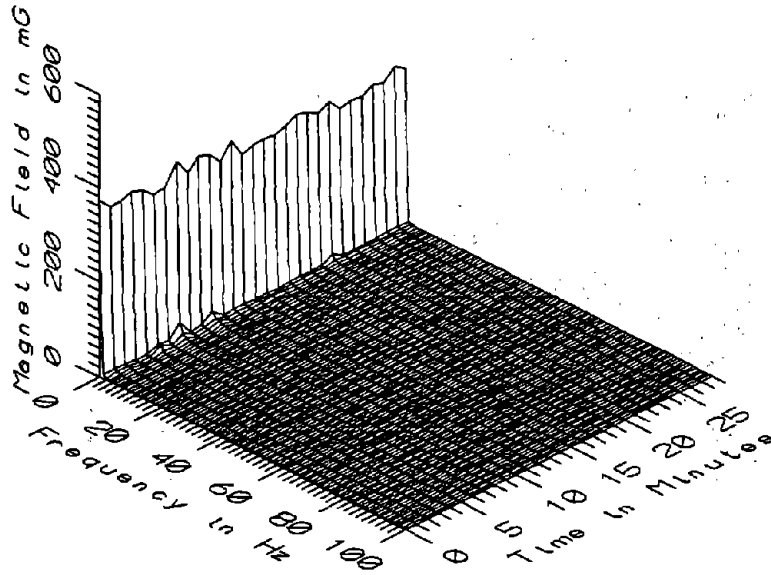
NEC017 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



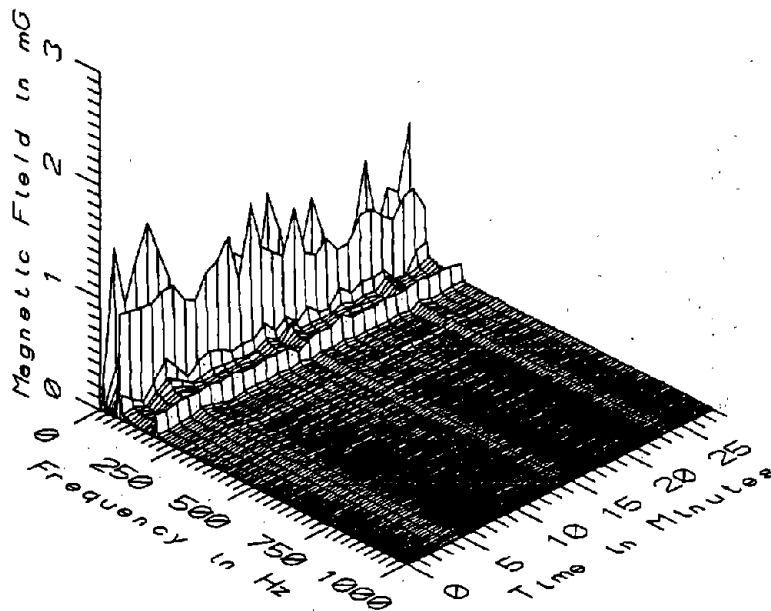
NEC017 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



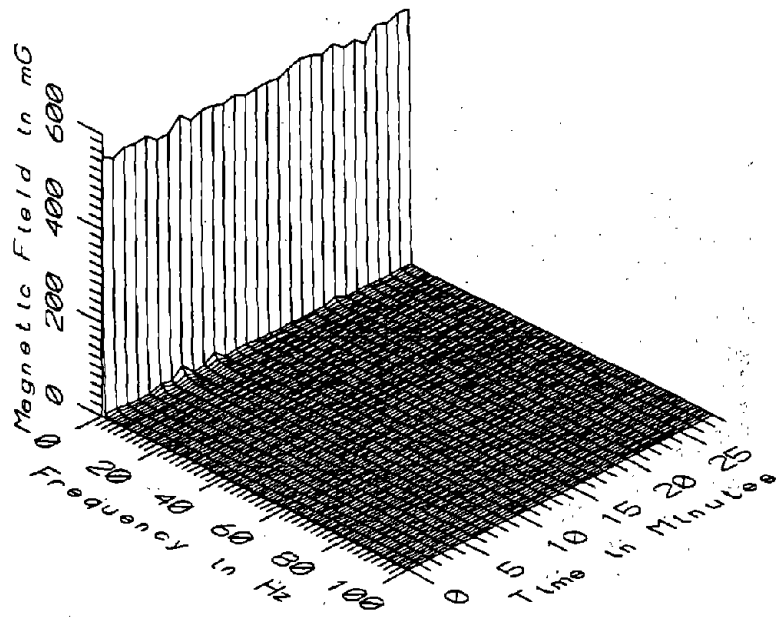
NEC017 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



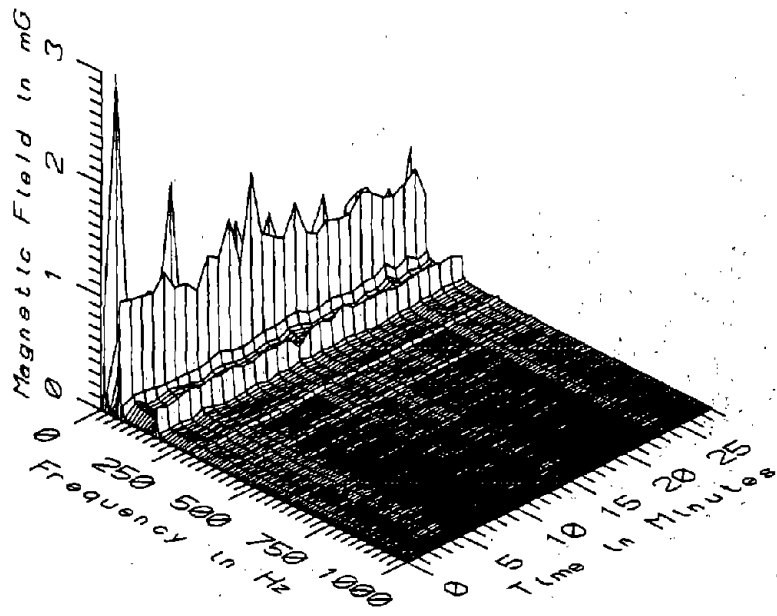
NEC017 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



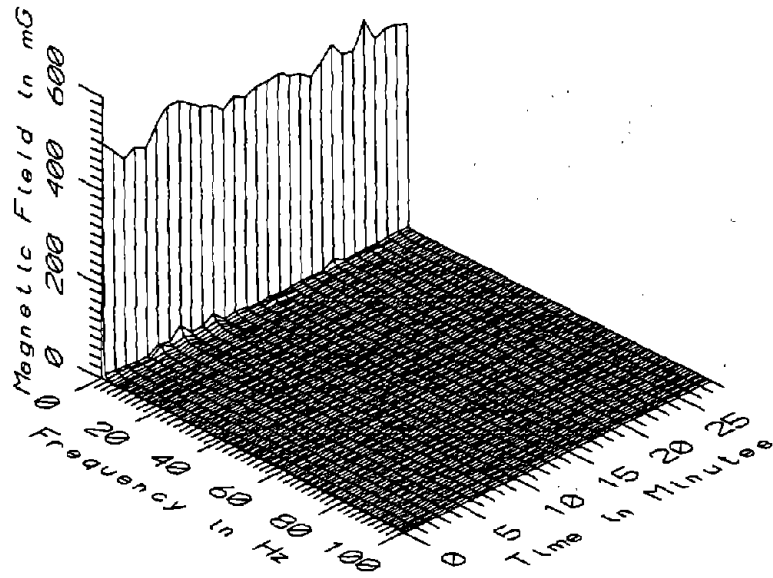
NEC017 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



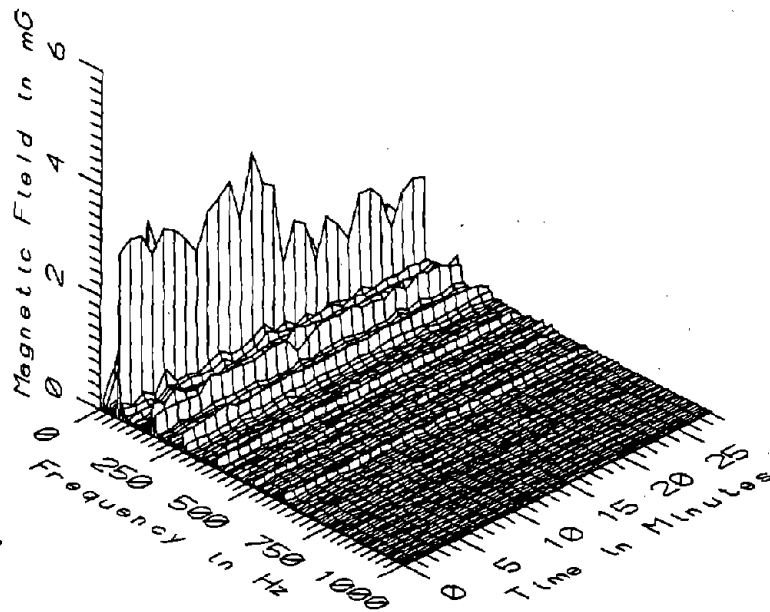
NEC017 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



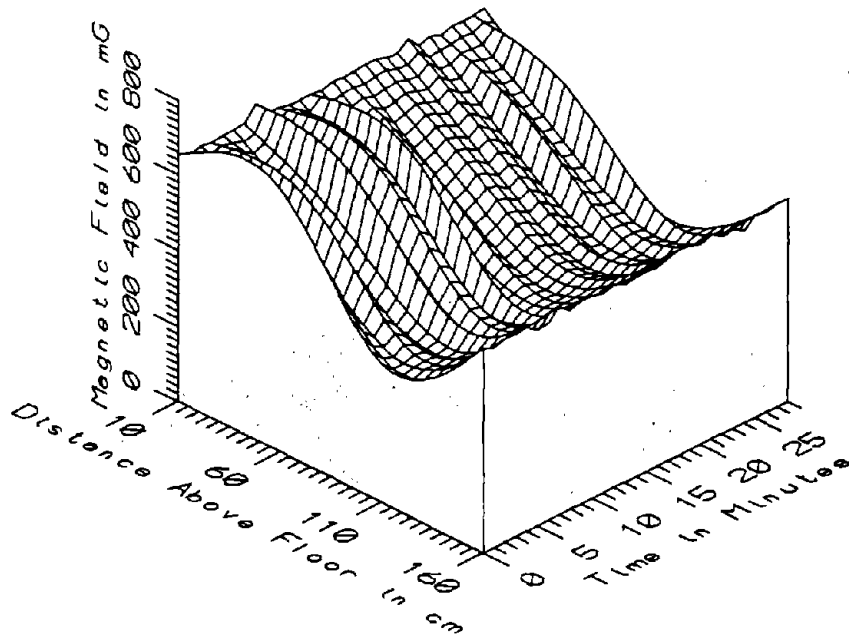
NEC017 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN FIFTH COACH



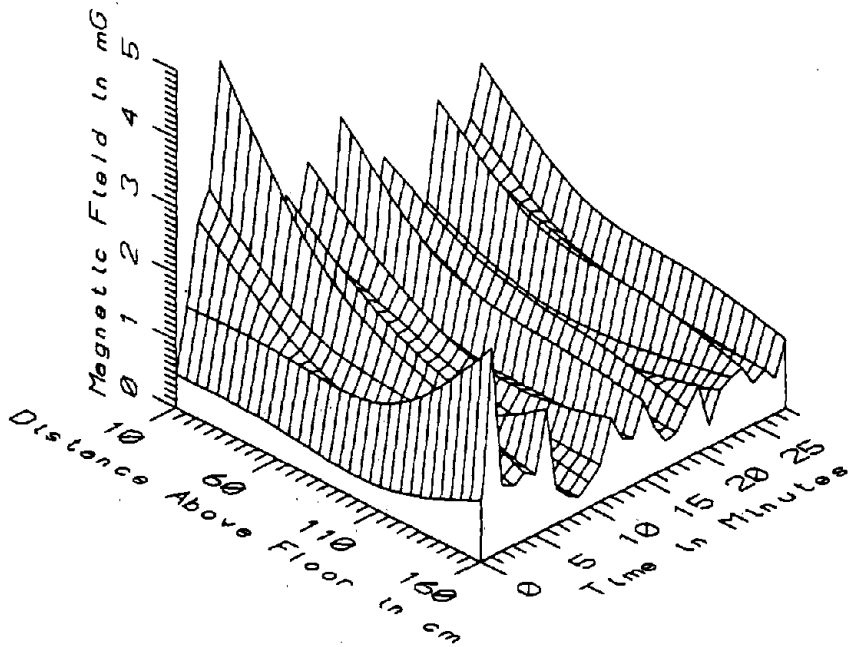
NEC017 - REFERENCE PROBE - WINDOW SEAT IN FIFTH COACH



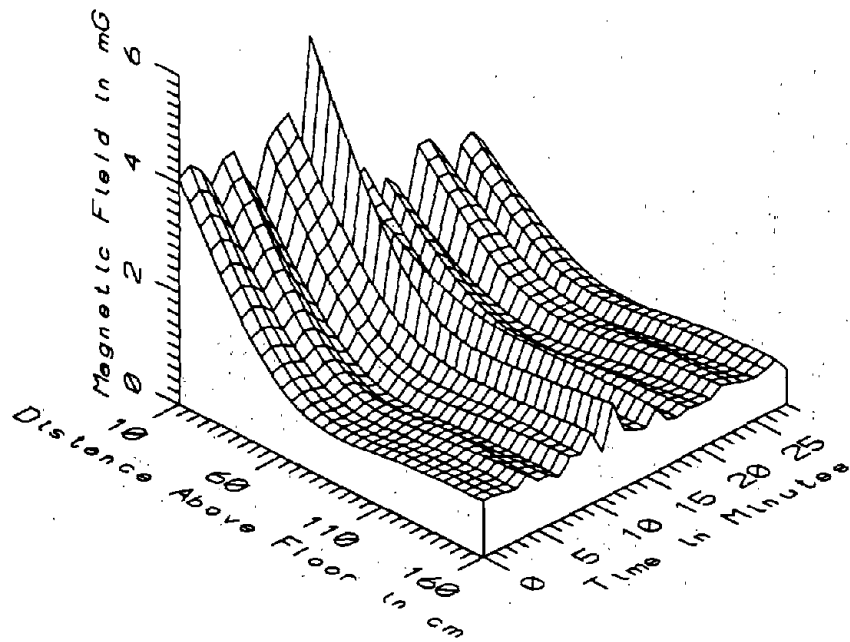
NEC017 - REFERENCE PROBE - WINDOW SEAT IN FIFTH COACH



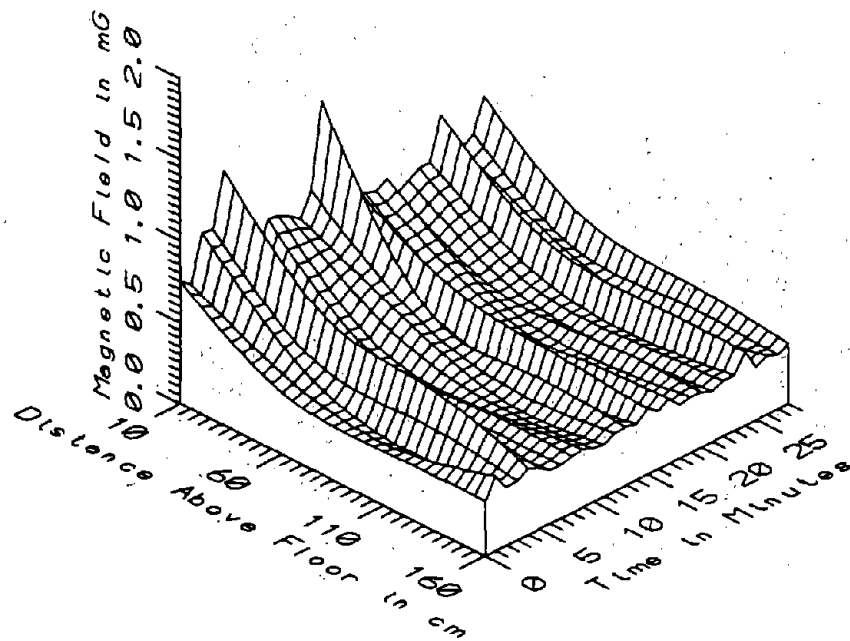
NEC017 - EDGE OF AISLE IN FIFTH COACH - STATIC



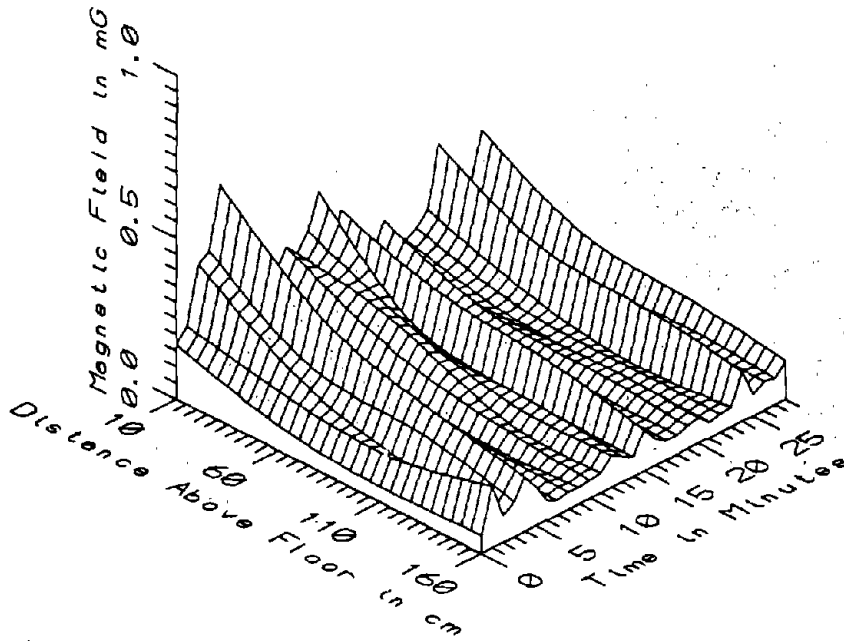
NEC017 - EDGE OF AISLE IN FIFTH COACH - LOW FREQUENCY, 5-45Hz



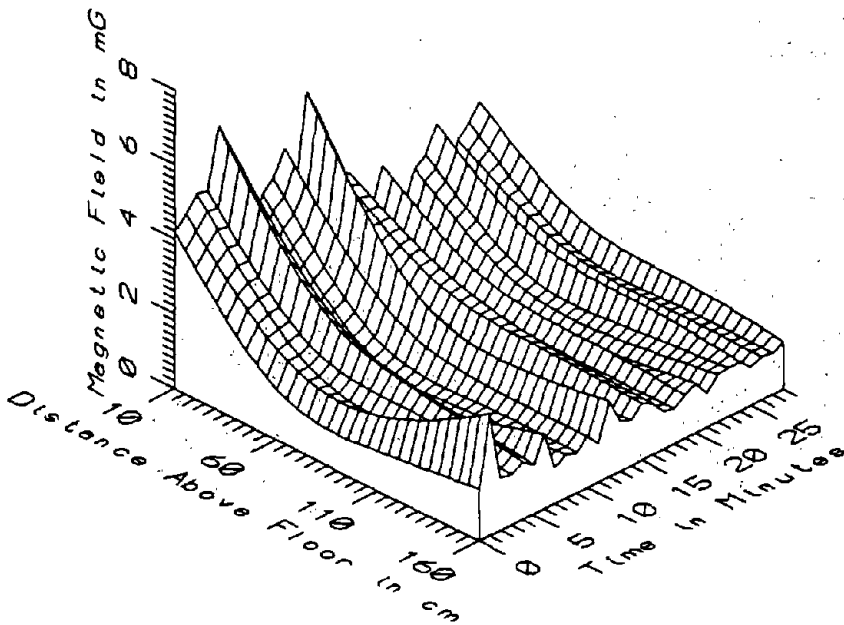
NEC017 - EDGE OF AISLE IN FIFTH COACH - POWER FREQUENCY, 50-60Hz



NEC017 - EDGE OF AISLE IN FIFTH COACH - POWER HARMONICS, 65-300Hz



NEC017 - EDGE OF AISLE IN FIFTH COACH - HIGH FREQUENCY, 305-2560Hz



NEC017 - EDGE OF AISLE IN FIFTH COACH - ALL FREQUENCIES, 5-2560Hz

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 230

LECTURE NOTES

BY

PROFESSOR

JOHN H. COOPER

AND

ASSISTANT PROFESSOR

DAVID J. MORSE

CHICAGO, ILLINOIS

1963

APPENDIX 8

DATASET NEC018
VERTICAL PROFILE AT DISPATCHER'S SEAT

Measurement Setup Code: Staff: 48 Reference: None
 Drawing: A-2

Vehicle Status: Not applicable

Measurement Date: March 31, 1992

Measurement Time: Start: 7:55:35
 End: 7:58:55

Number of Samples: 39

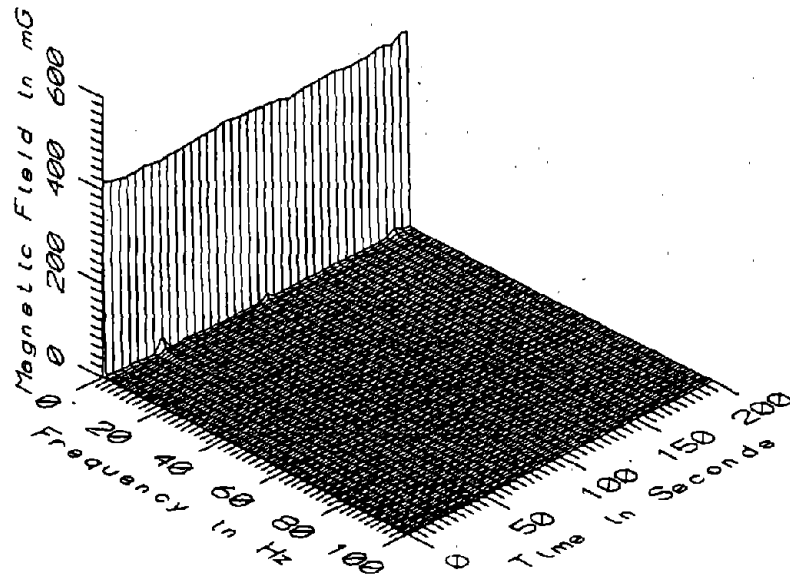
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.3 sec

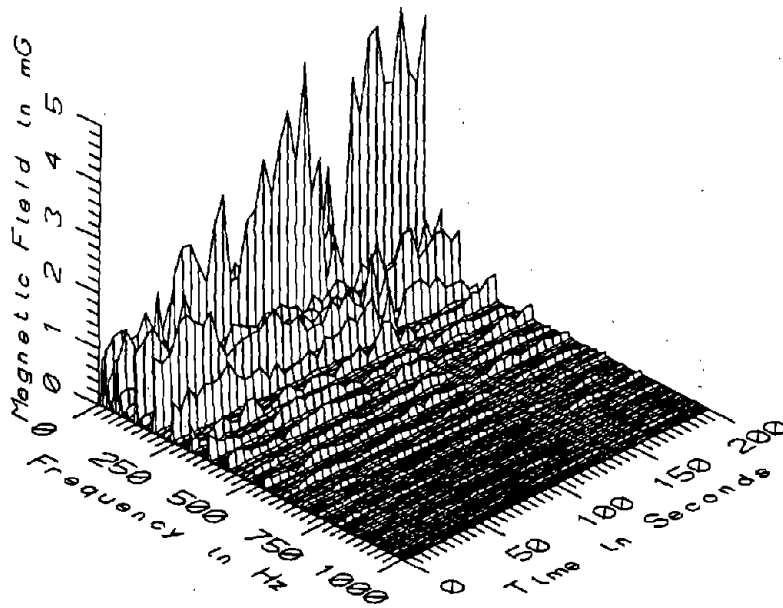
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

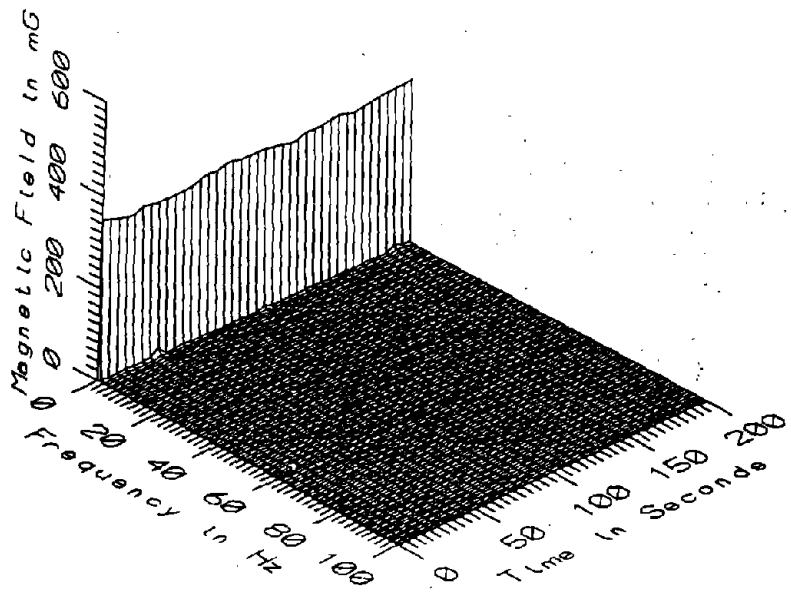
Missing or Suspect Data: None



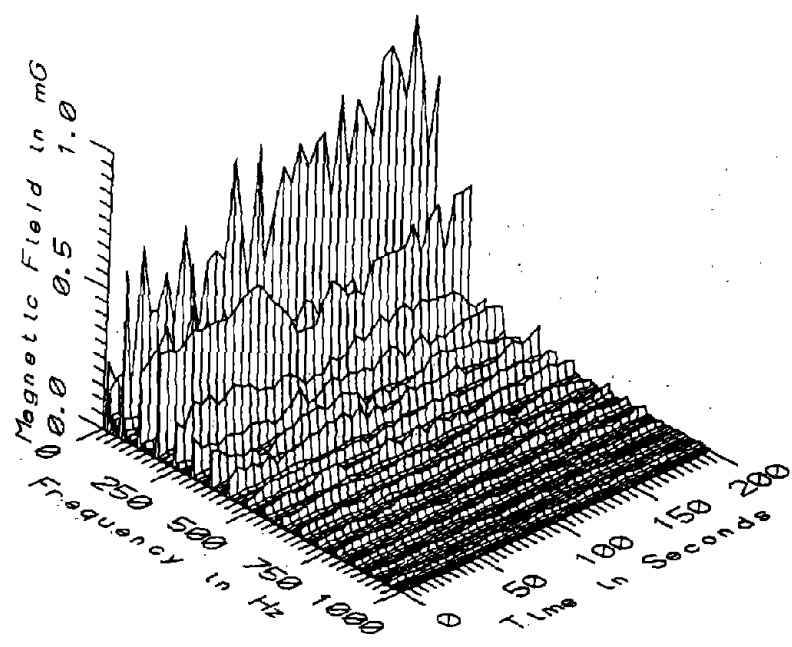
NEC018 - 10cm ABOVE FLOOR AT MAC MANAGER'S SEAT



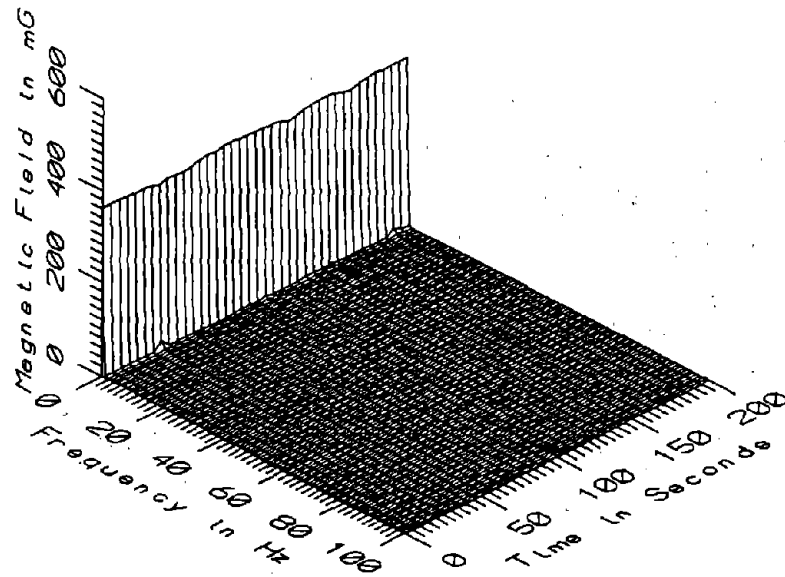
NEC018 - 10cm ABOVE FLOOR AT MAC MANAGER'S SEAT



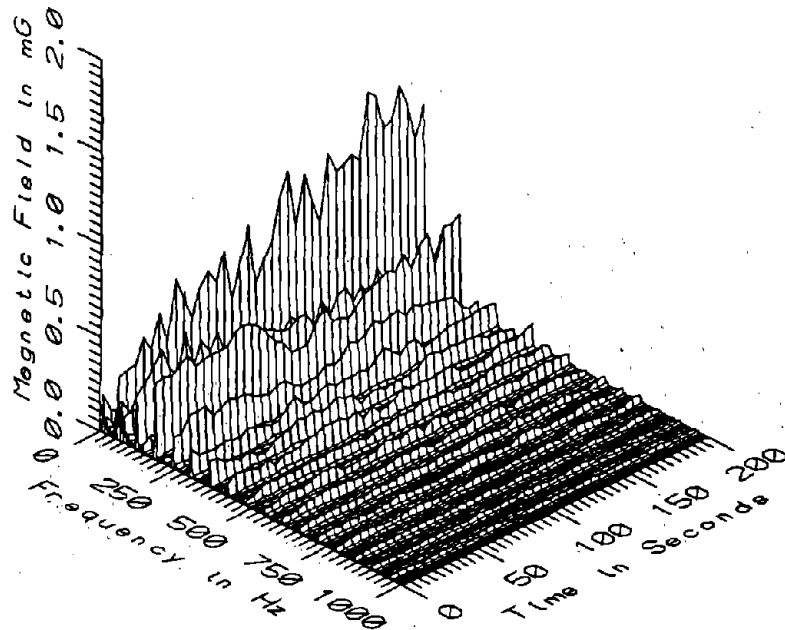
NEC018 - 60cm ABOVE FLOOR AT MAC MANAGER'S SEAT



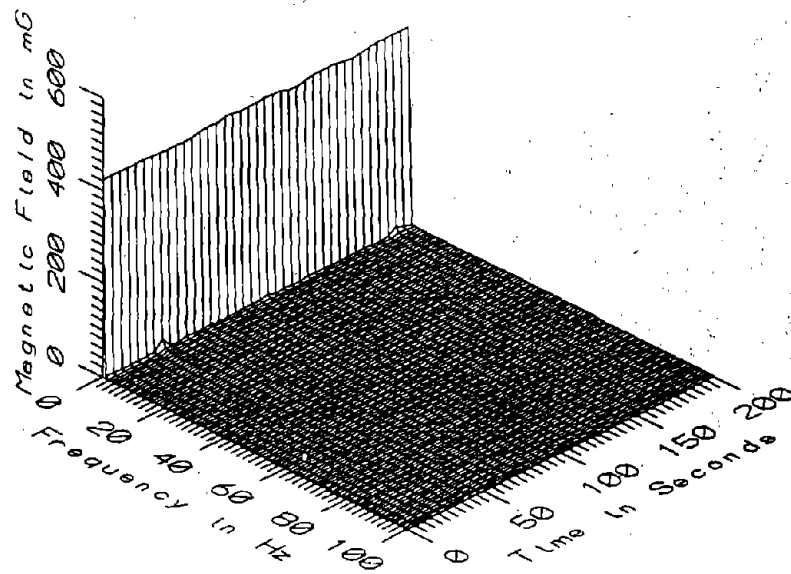
NEC018 - 60cm ABOVE FLOOR AT MAC MANAGER'S SEAT



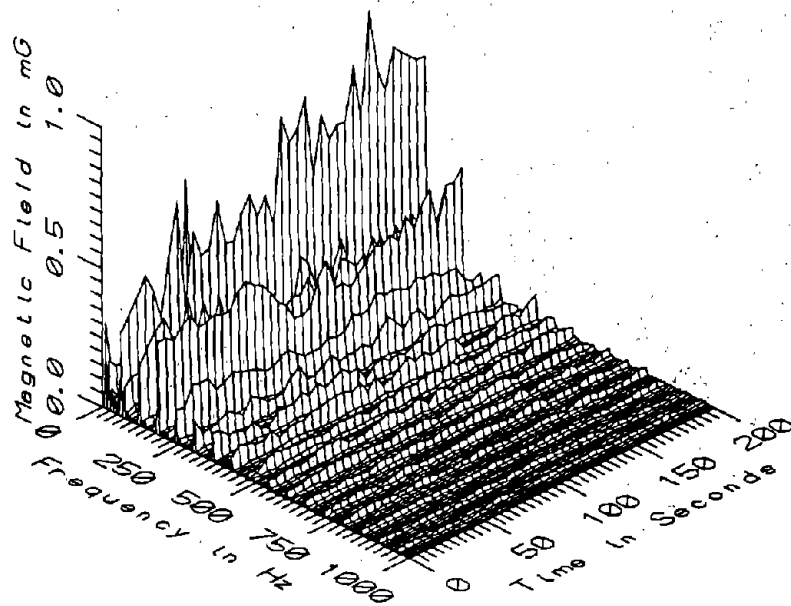
NEC018 - 110cm ABOVE FLOOR AT MAC MANAGER'S SEAT.



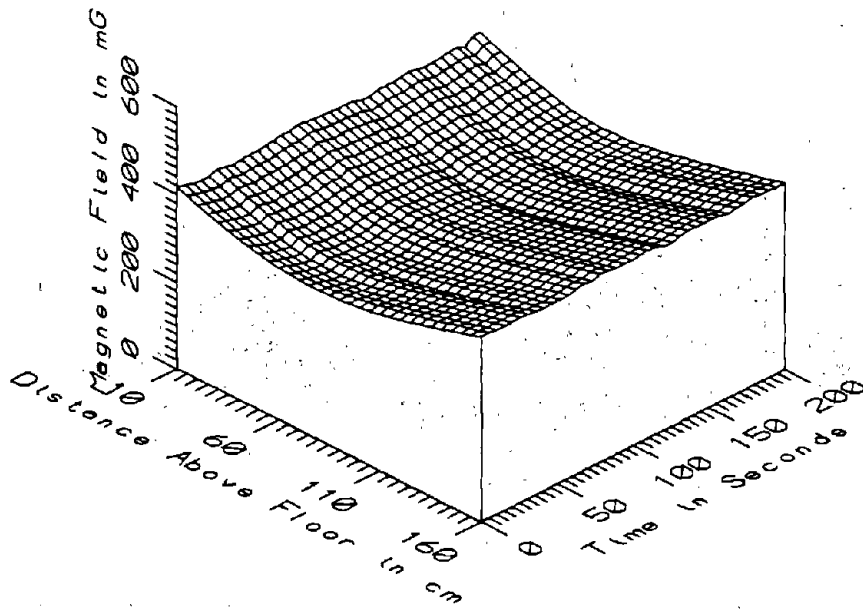
NEC018 - 110cm ABOVE FLOOR AT MAC MANAGER'S SEAT



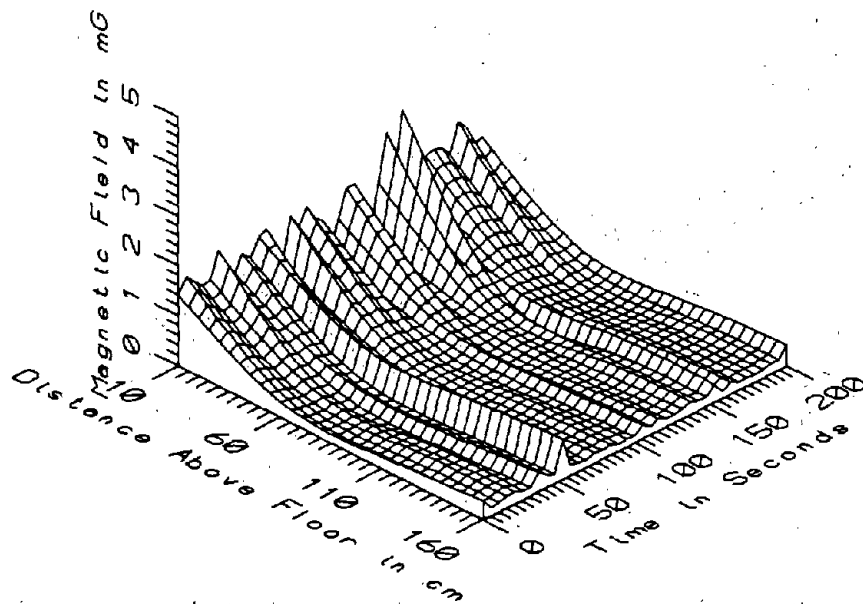
NEC018 - 160cm ABOVE FLOOR AT MAC MANAGER'S SEAT



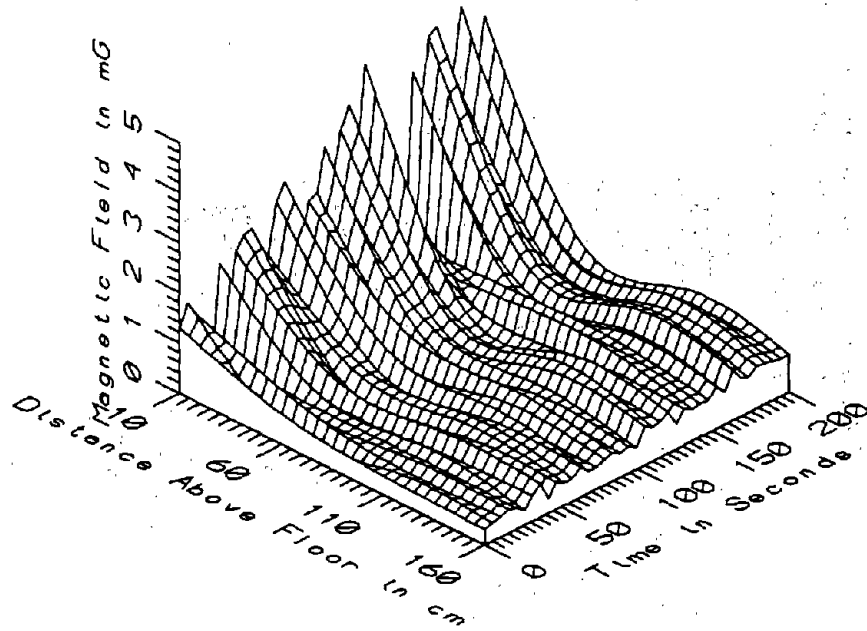
NEC018 - 160cm ABOVE FLOOR AT MAC MANAGER'S SEAT



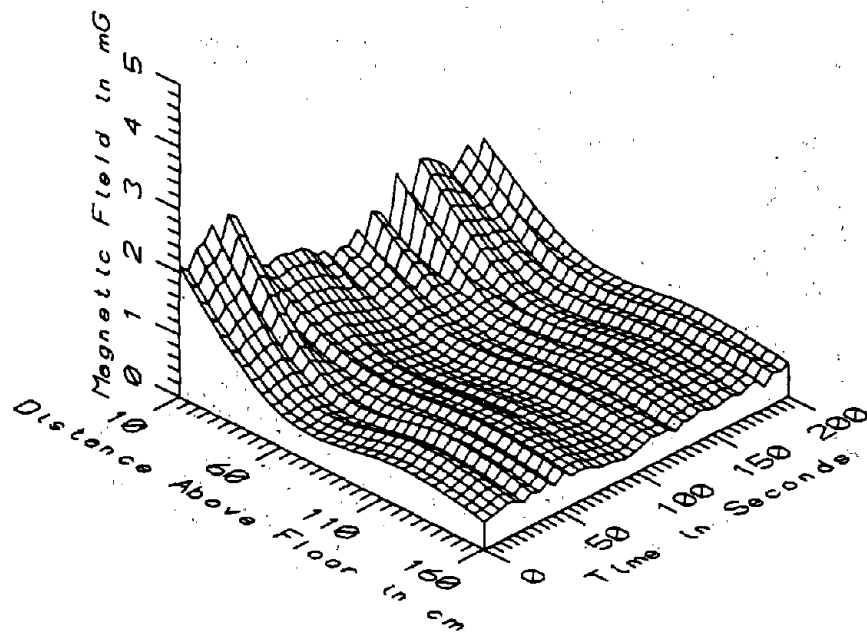
NEC01B - MAC MANAGER'S SEAT - STATIC



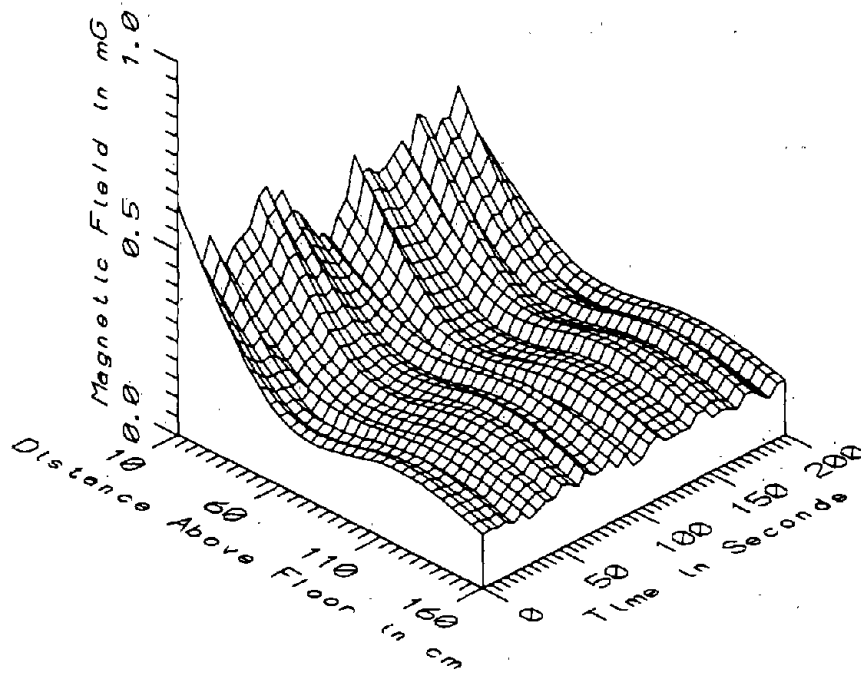
NEC01B - MAC MANAGER'S SEAT - LOW FREQUENCY, 5-45Hz



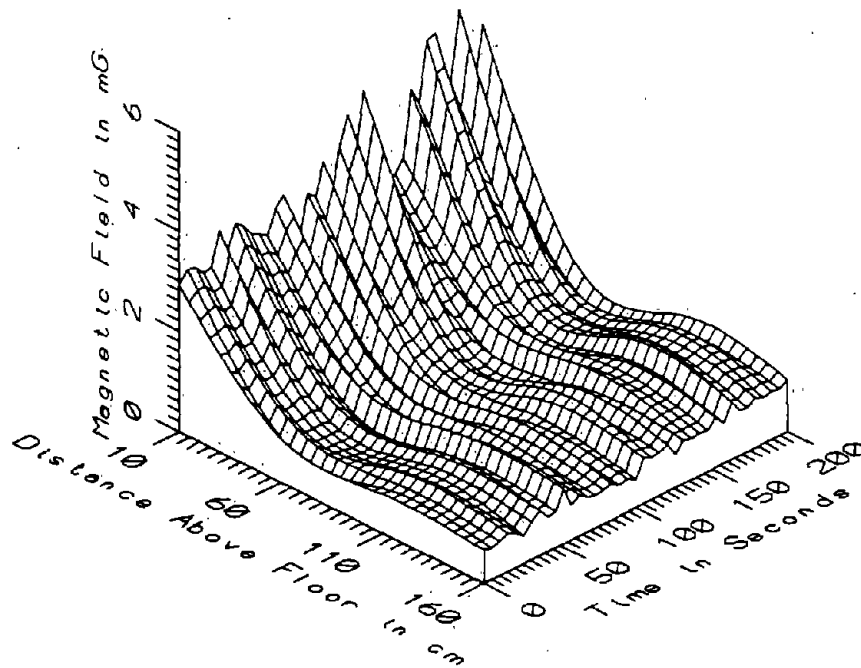
NEC018 - MAC MANAGER'S SEAT - POWER FREQUENCY, 50-60Hz



NEC018 - MAC MANAGER'S SEAT - POWER HARMONICS, 65-305Hz



NEC018 - MAC MANAGER'S SEAT - HIGH FREQUENCY, 305-2560Hz



NEC018 - MAC MANAGER'S SEAT - ALL FREQUENCIES, 5-2560Hz

APPENDIX T

DATASET NEC019
HORIZONTAL PROFILE AT DISPATCHER'S SEAT

Measurement Setup Code: Staff: 49 Reference: None
 Drawing: A-2

Vehicle Status: Not applicable

Measurement Date: March 31, 1992

Measurement Time: Start: 8:00:07
 End: 8:02:05

Number of Samples: 24

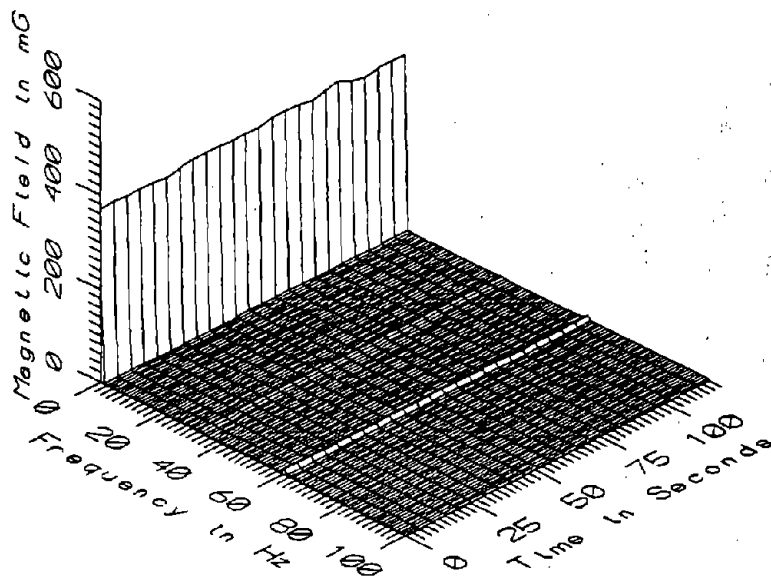
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.1 sec

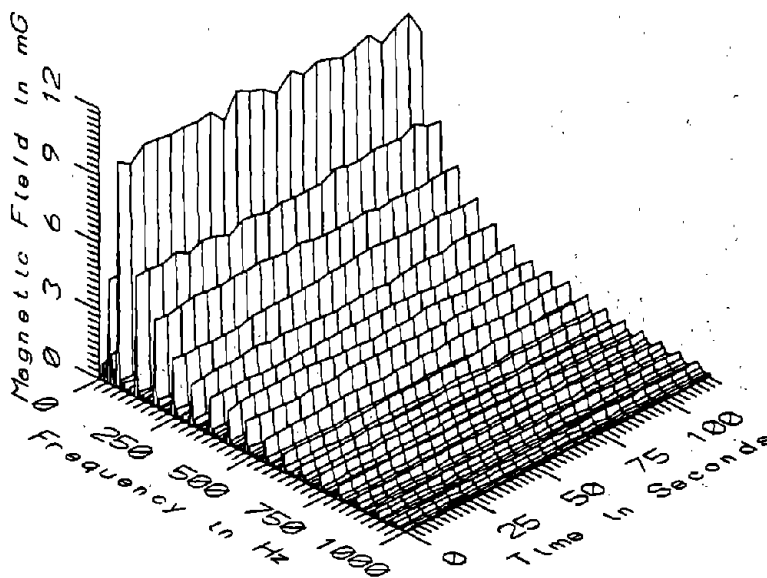
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

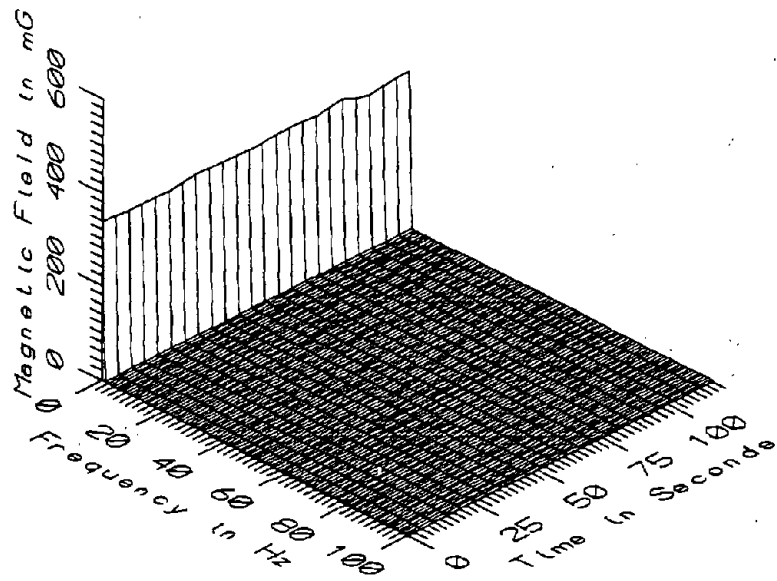
Missing or Suspect Data: None



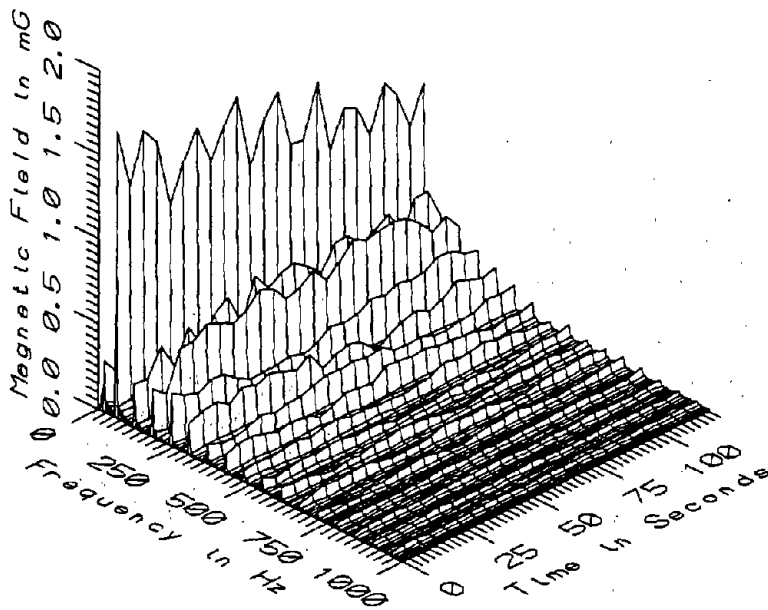
NEC019 - 10cm FROM CENTER MONITOR ON MAC MANAGER'S CONSOLE



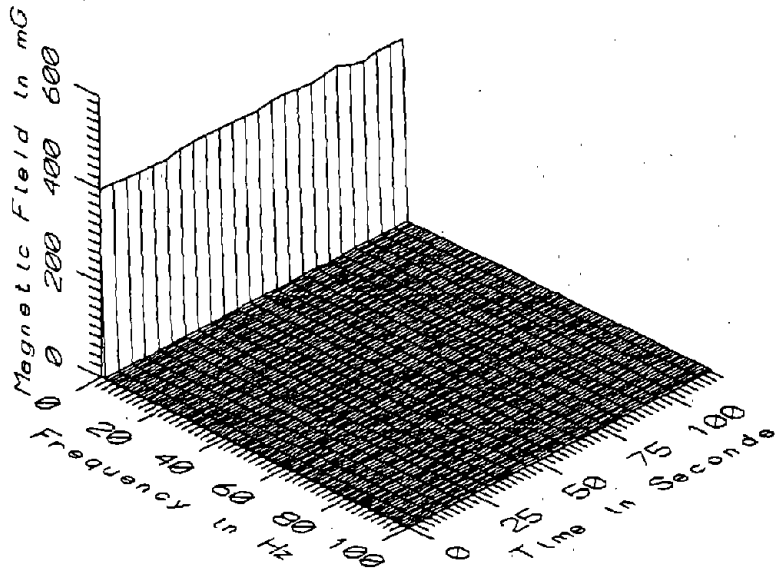
NEC019 - 10cm FROM CENTER MONITOR ON MAC MANAGER'S CONSOLE



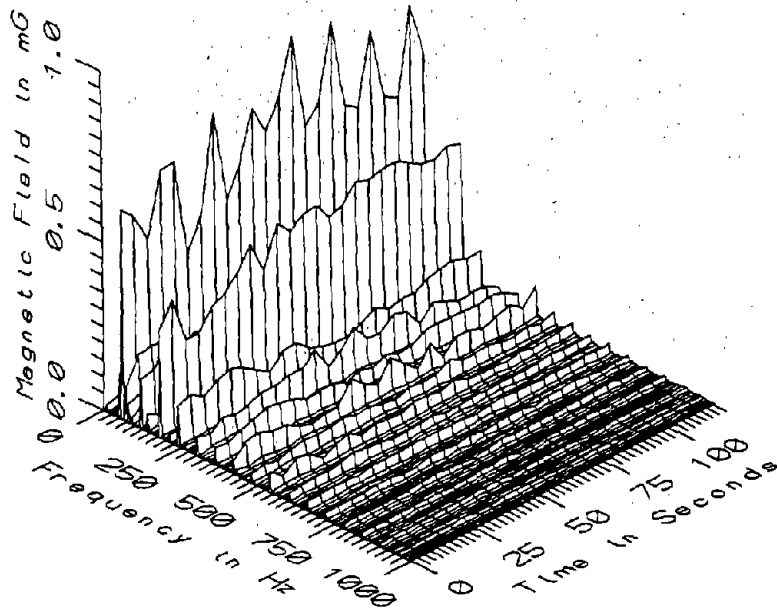
NEC019 - 60cm FROM CENTER MONITOR ON MAC MANAGER'S CONSOLE



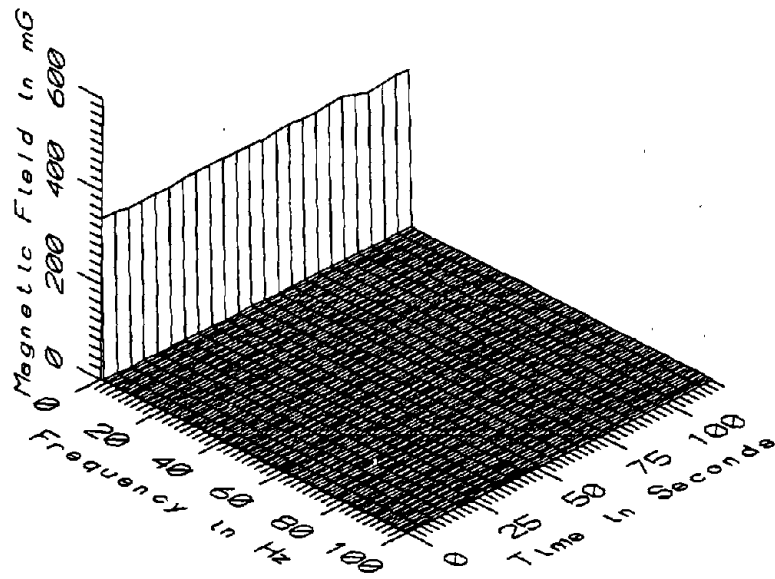
NEC019 - 60cm FROM CENTER MONITOR ON MAC MANAGER'S CONSOLE



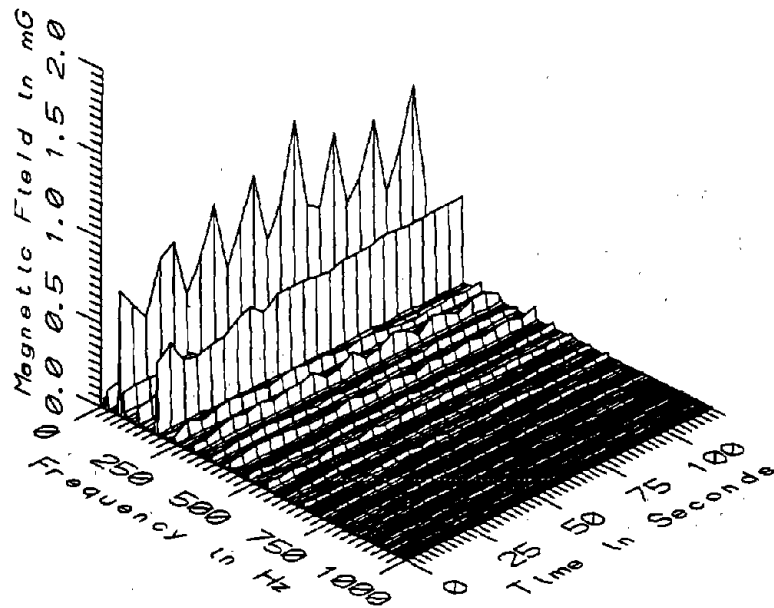
NEC019 - 110cm FROM CENTER MONITOR ON MAC MANAGER'S CONSOLE



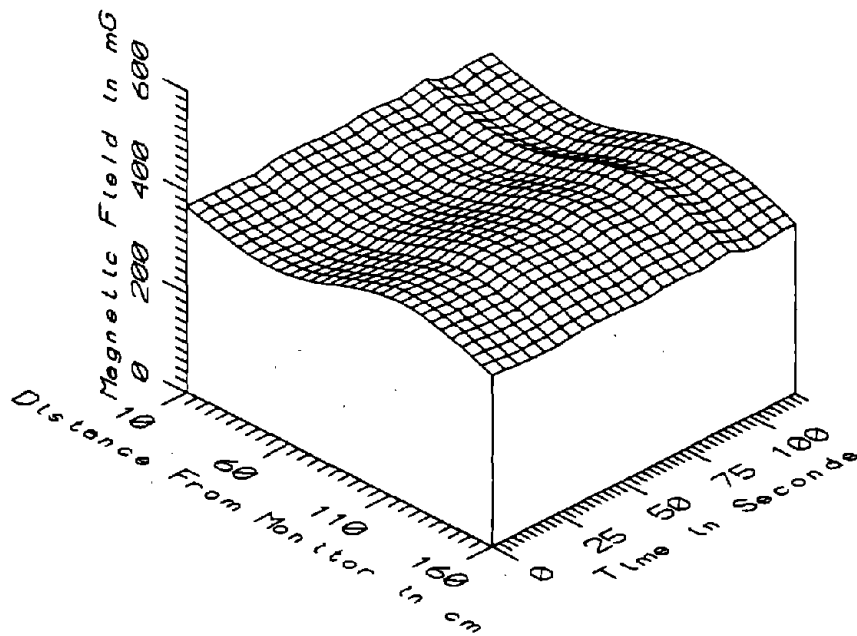
NEC019 - 110cm FROM CENTER MONITOR ON MAC MANAGER'S CONSOLE



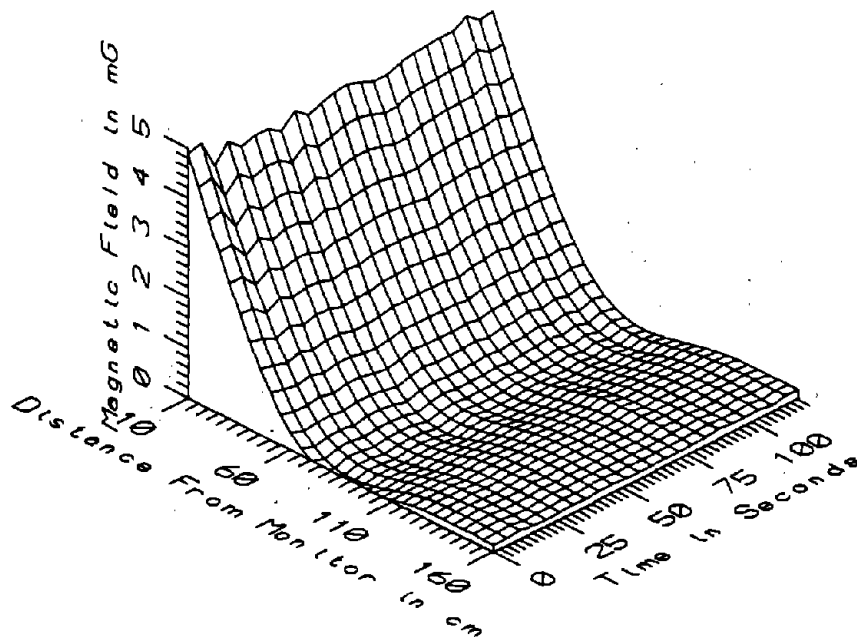
NEC019 - 160cm FROM CENTER MONITOR ON MAC MANAGER'S CONSOLE



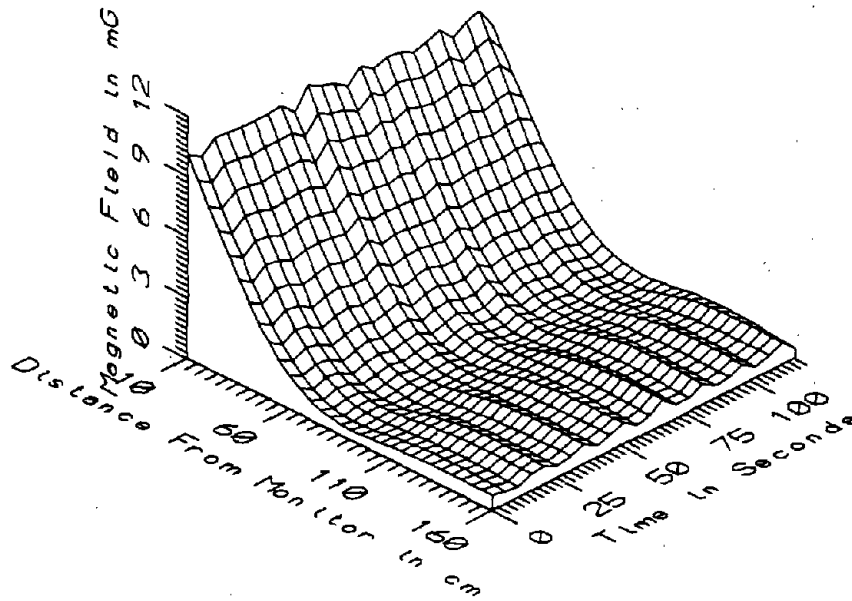
NEC019 - 160cm FROM CENTER MONITOR ON MAC MANAGER'S CONSOLE



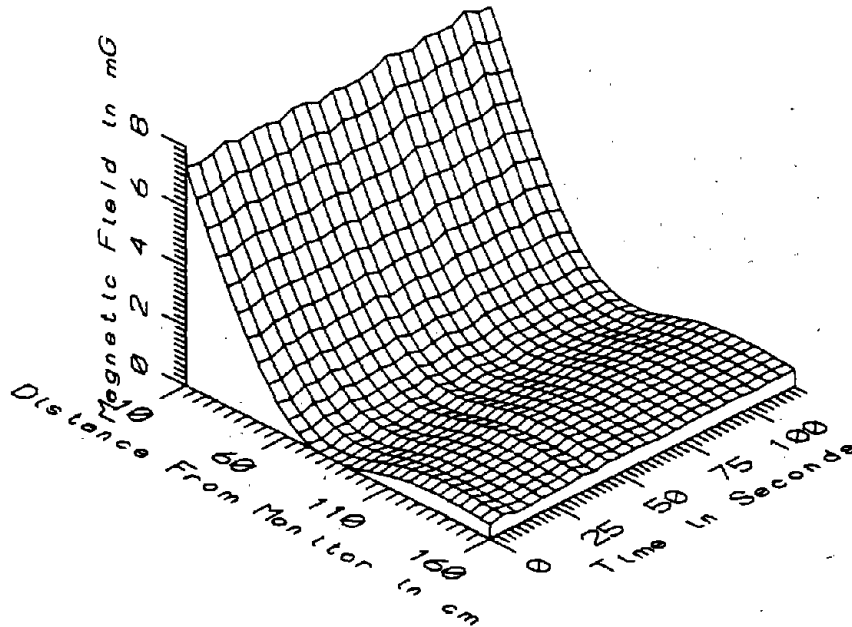
NEC019 - CENTER MONITOR ON MAC MANAGER'S CONSOLE - STATIC



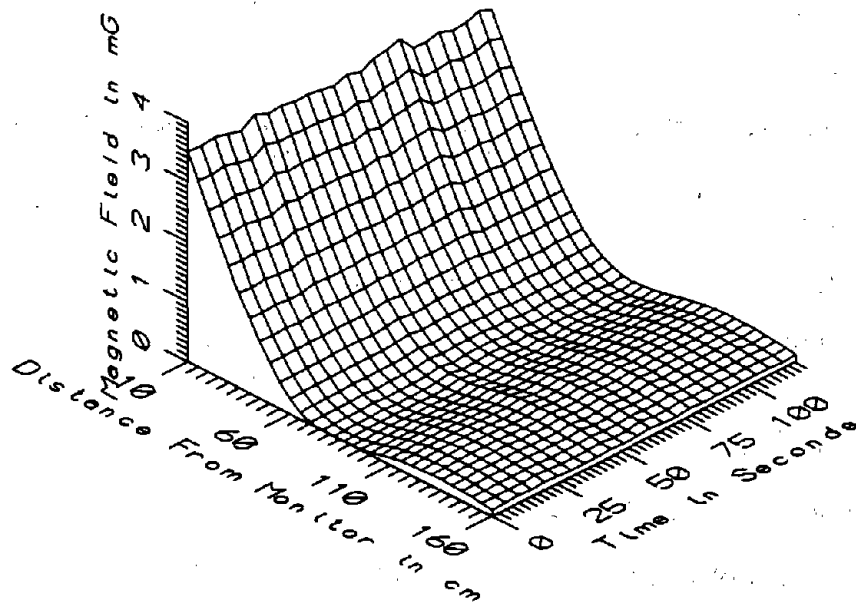
NEC019 - CENTER MONITOR ON MAC MGR'S CONSOLE, LOW FREQ 5-45Hz



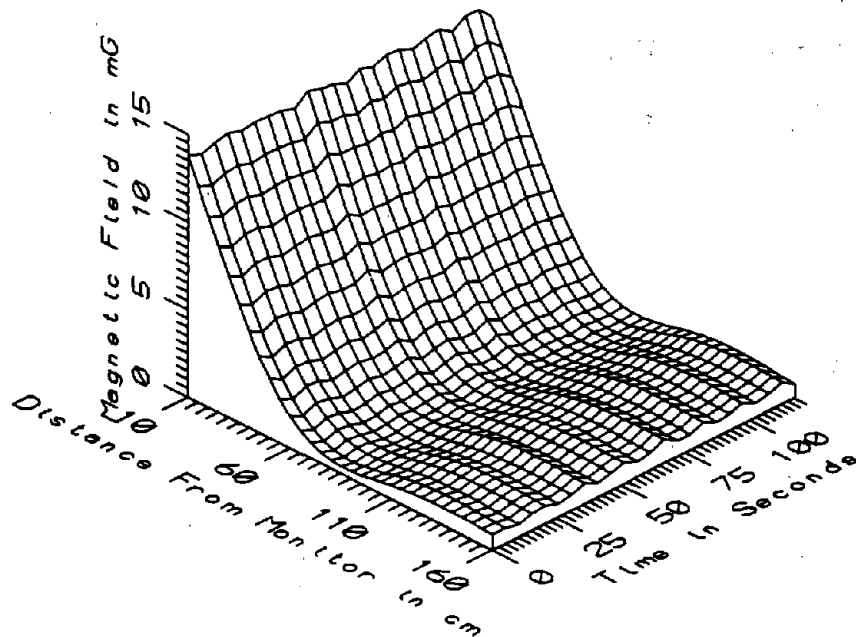
NEC019 - CENTER MONITOR ON MAC MGR'S CONSOLE, POWER FREQ 50-60Hz



NEC019 - CENTER MONITOR ON MAC MGR'S CONSOLE, POWER HARM. 65-300Hz



NEC019 - CENTER MONITOR ON MAC MGR'S CONSOLE, HIGH FREQ 305-2560Hz



NEC019 - CENTER MONITOR ON MAC MGR'S CONSOLE, ALL FREQ 5-2560Hz

APPENDIX U

DATASET NEC020
VERTICAL PROFILE IN UNINTERRUPTABLE POWER SUPPLY ROOM

Measurement Setup Code: Staff: 50 Reference: None
 Drawing: A-3

Vehicle Status: Not applicable

Measurement Date: March 31, 1992

Measurement Time: Start: 8:06:52
 End: 8:08:50

Number of Samples: 24

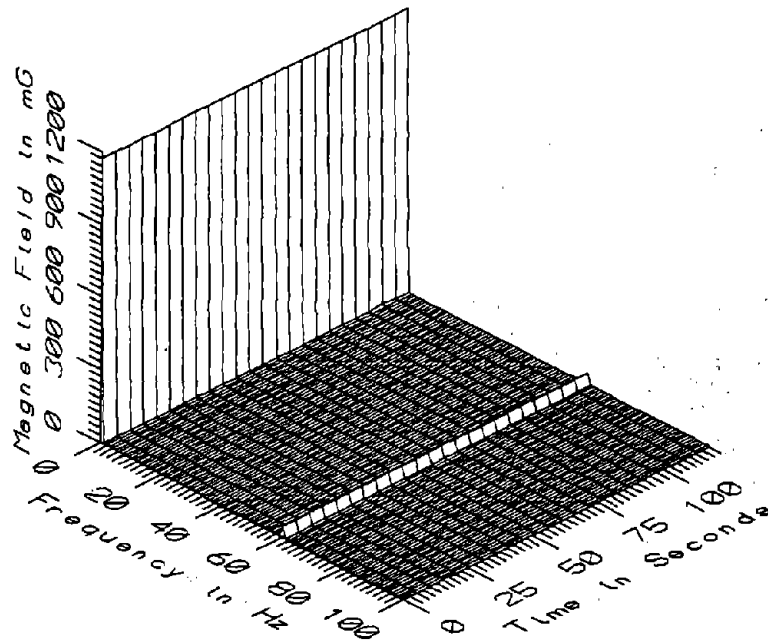
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.1 sec

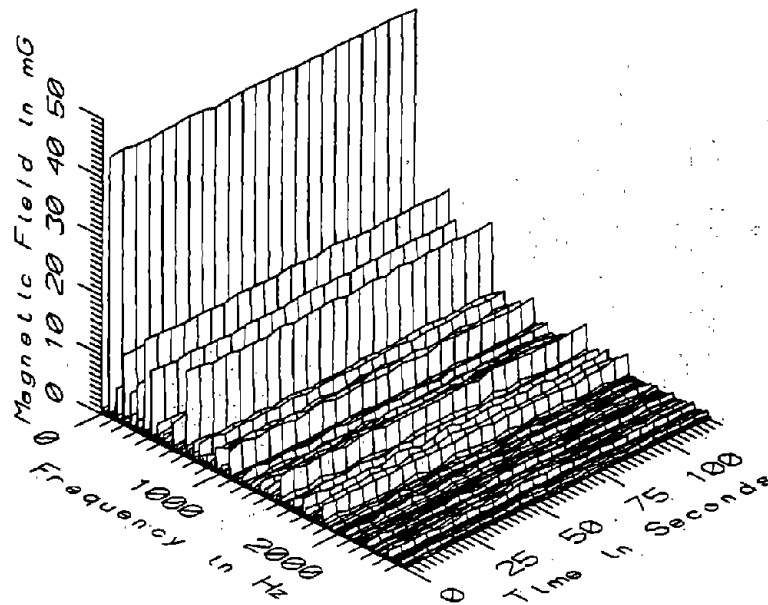
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

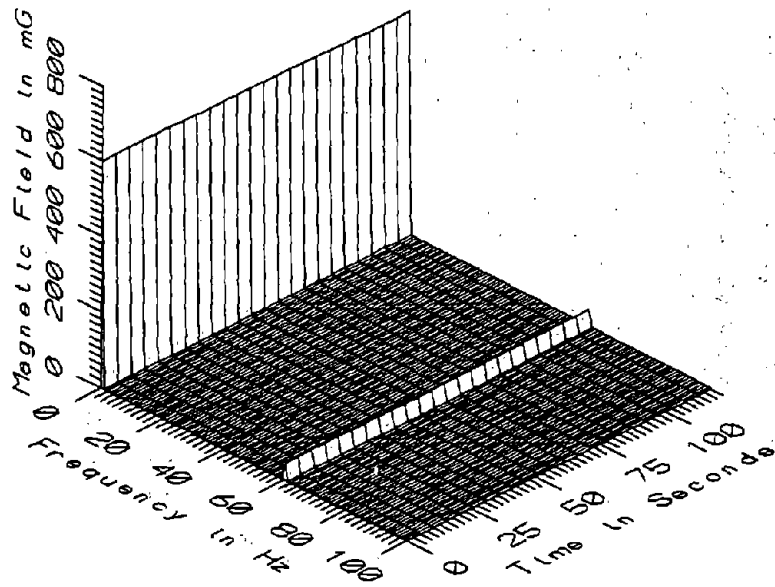
Missing or Suspect Data: None



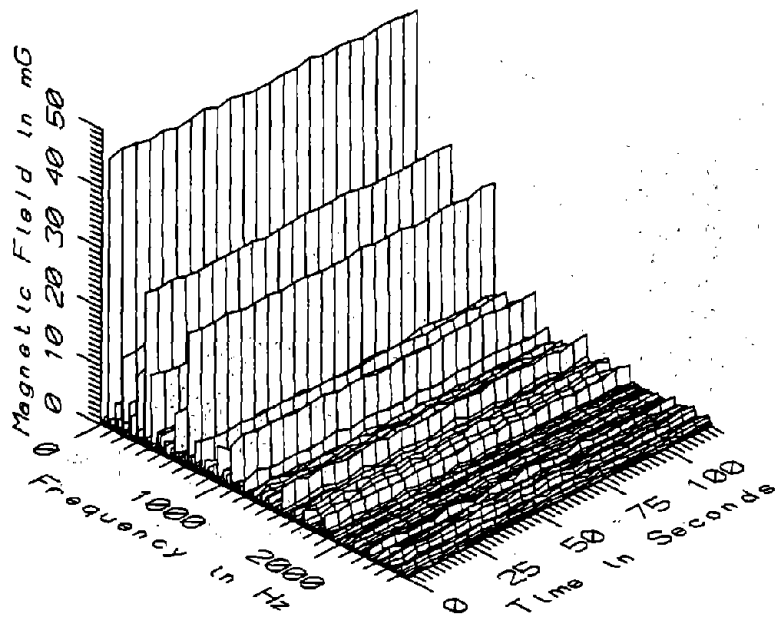
NEC020 - 10cm ABOVE FLOOR, 2' IN FRONT OF UPS UNIT



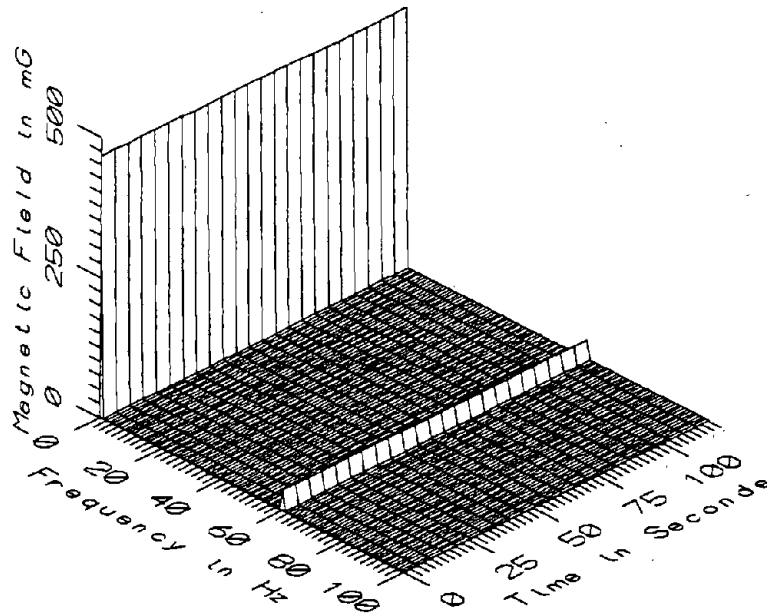
NEC020 - 10cm ABOVE FLOOR, 2' IN FRONT OF UPS UNIT



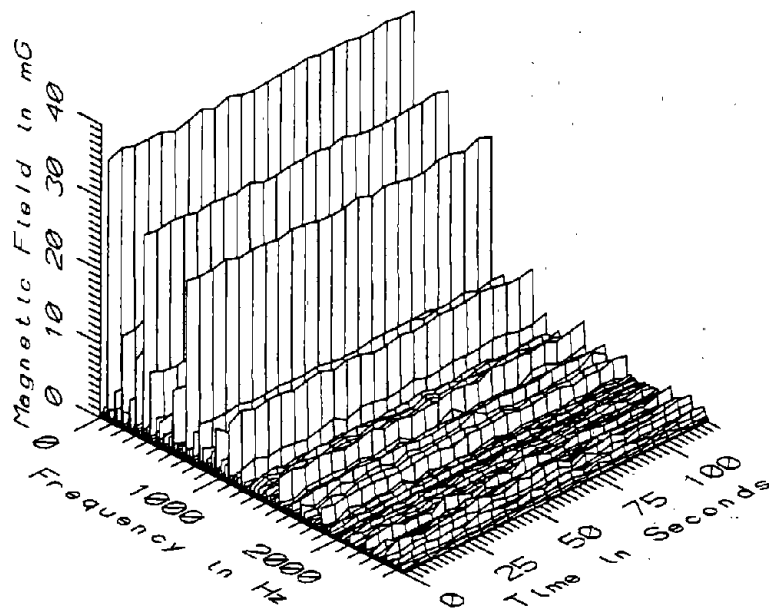
NEC020 - 60cm ABOVE FLOOR, 2' IN FRONT OF UPS UNIT



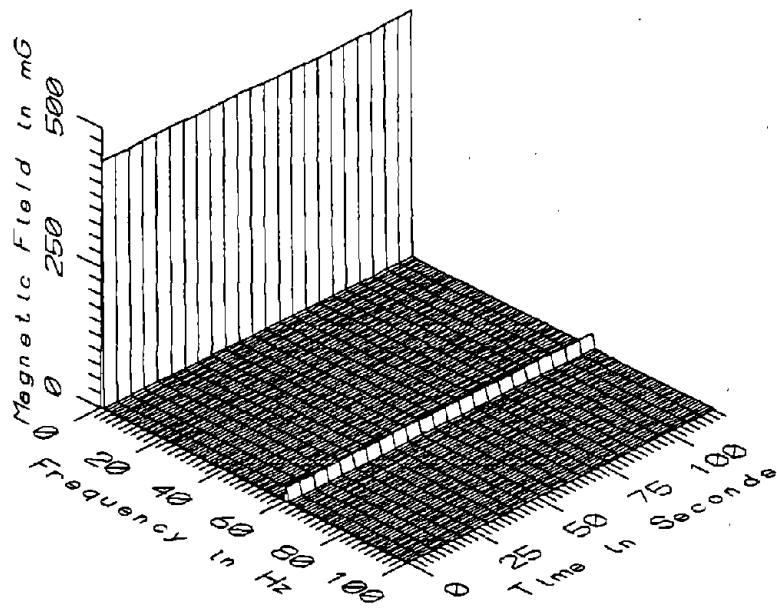
NEC020 - 60cm ABOVE FLOOR, 2' IN FRONT OF UPS UNIT



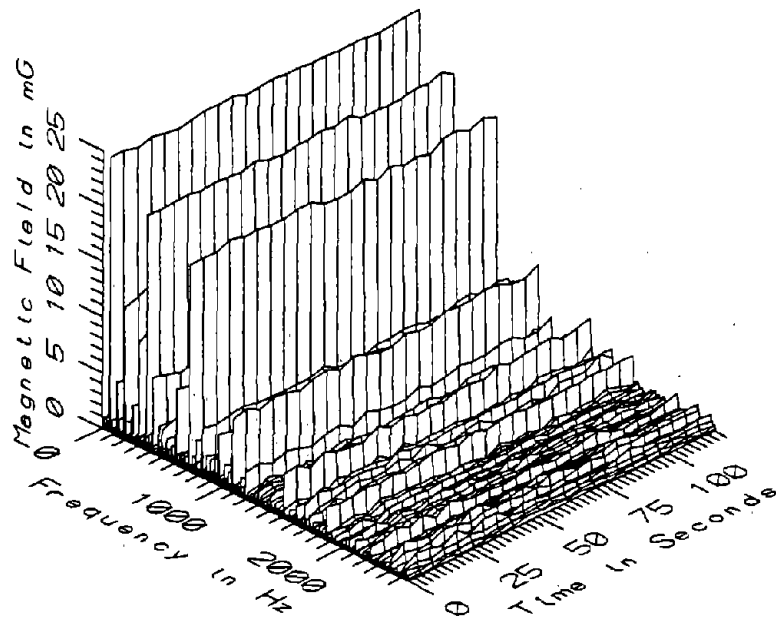
NEC020 - 110cm ABOVE FLOOR, 2' IN FRONT OF UPS UNIT



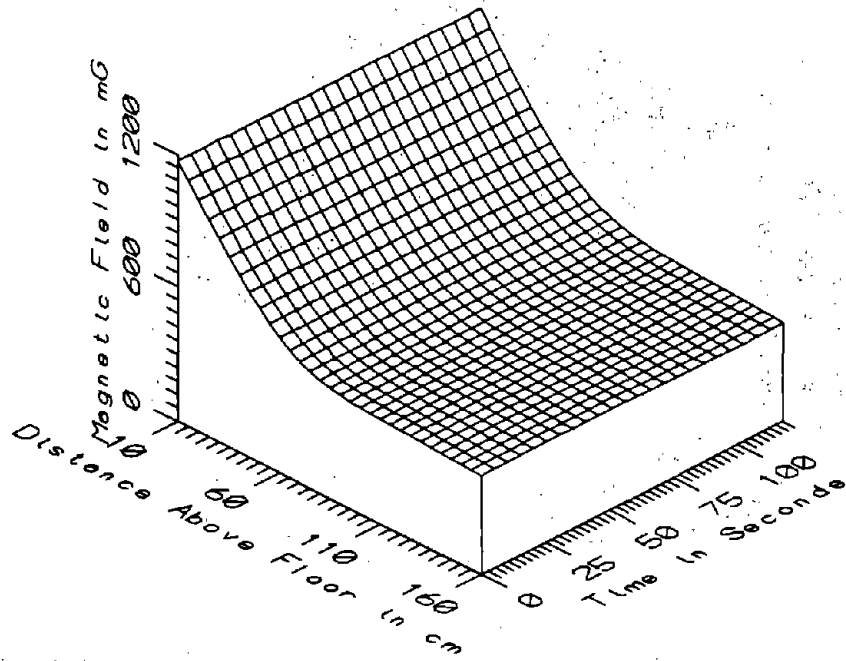
NEC020 - 110cm ABOVE FLOOR, 2' IN FRONT OF UPS UNIT



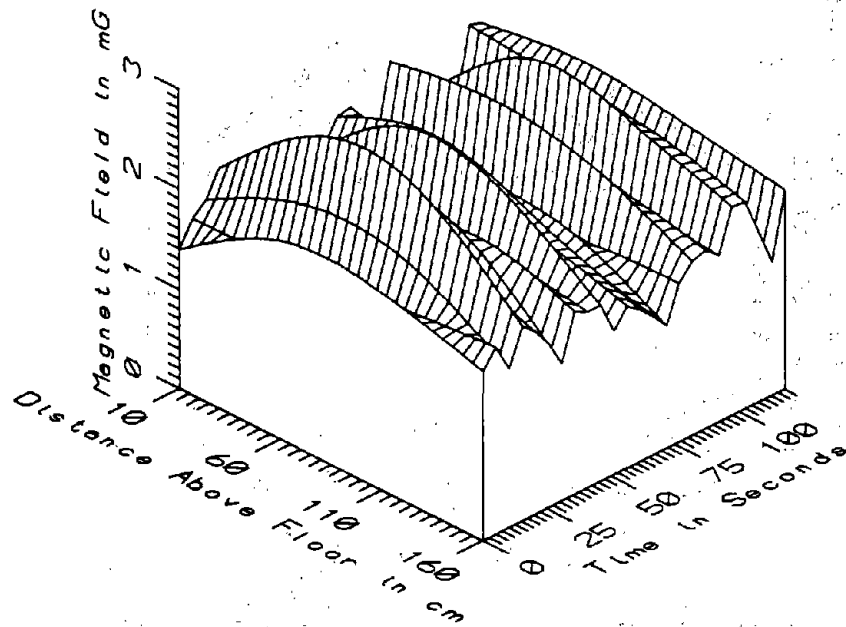
NEC020 - 160cm ABOVE FLOOR, 2' IN FRONT OF UPS UNIT



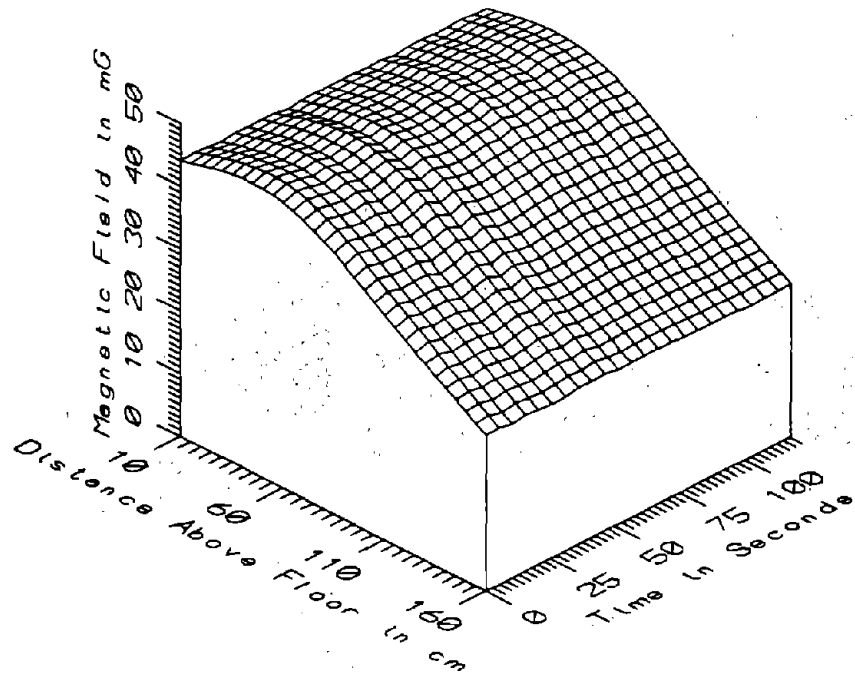
NEC020 - 160cm ABOVE FLOOR, 2' IN FRONT OF UPS UNIT



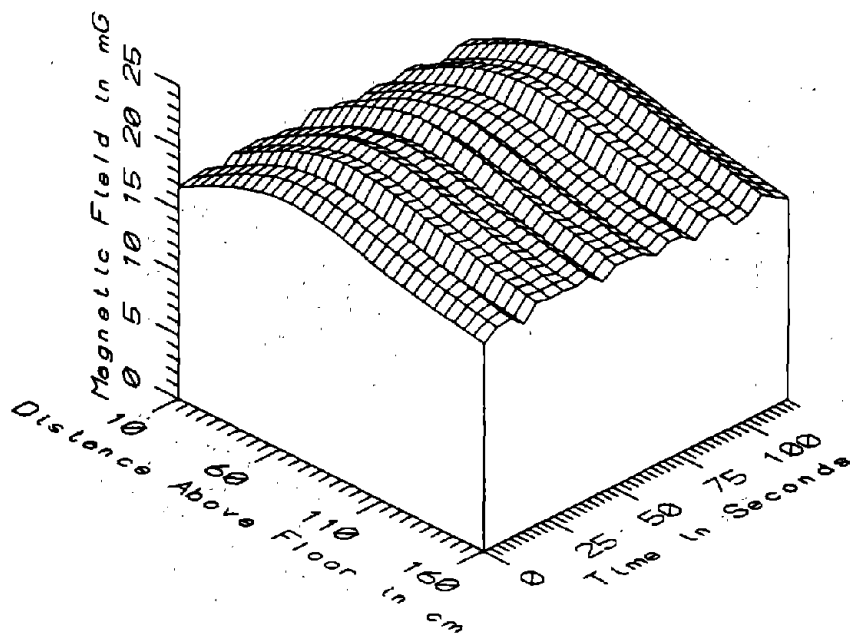
NEC020 - 2' IN FRONT OF UPS UNIT - STATIC



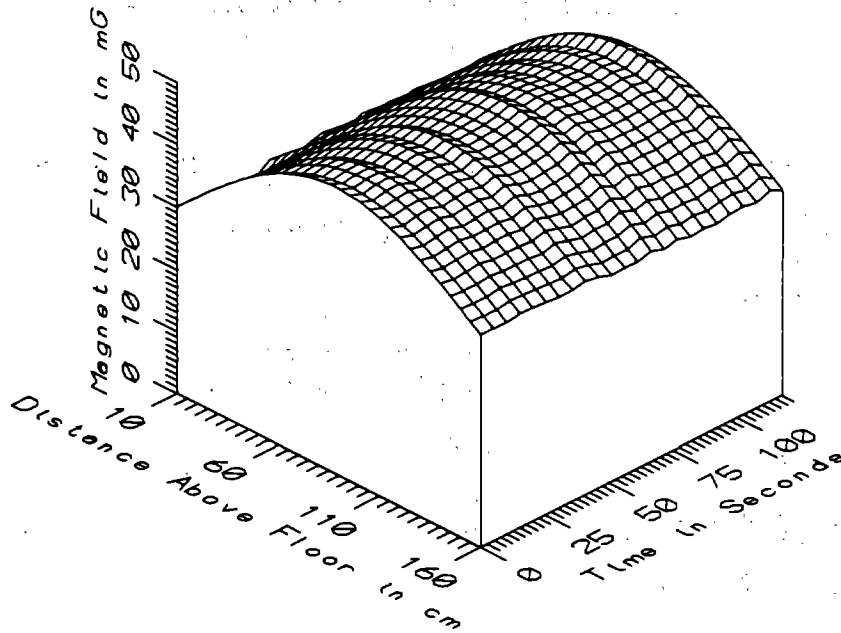
NEC020 - 2' IN FRONT OF UPS UNIT - LOW FREQUENCY, 5-45Hz



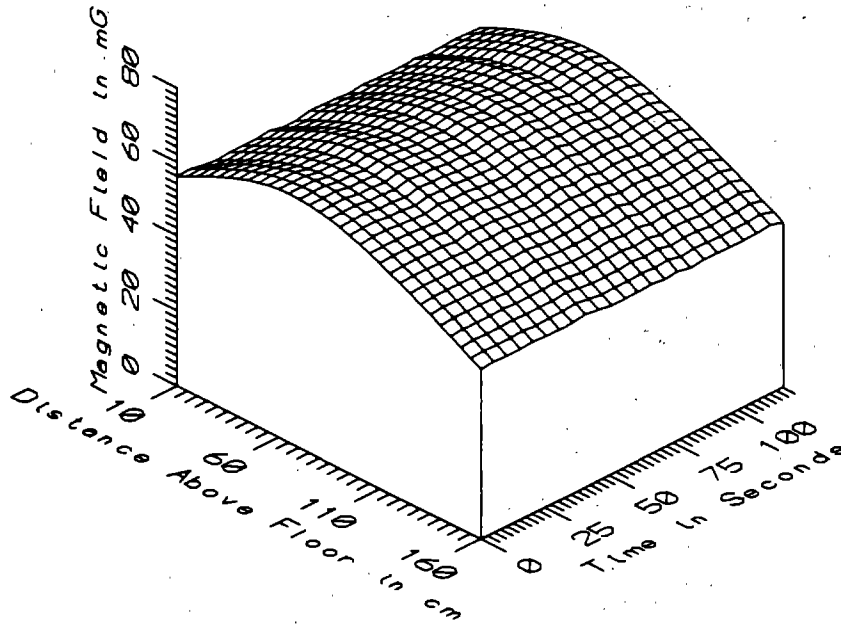
NEC020 - 2' IN FRONT OF UPS UNIT - POWER FREQUENCY, 50-60Hz



NEC020 - 2' IN FRONT OF UPS UNIT - POWER HARMONICS, 65-300Hz



NEC020 - 2' IN FRONT OF UPS UNIT - HIGH FREQUENCY, 305-2560Hz



NEC020 - 2' IN FRONT OF UPS UNIT - ALL FREQUENCIES, 5-2560Hz

APPENDIX V

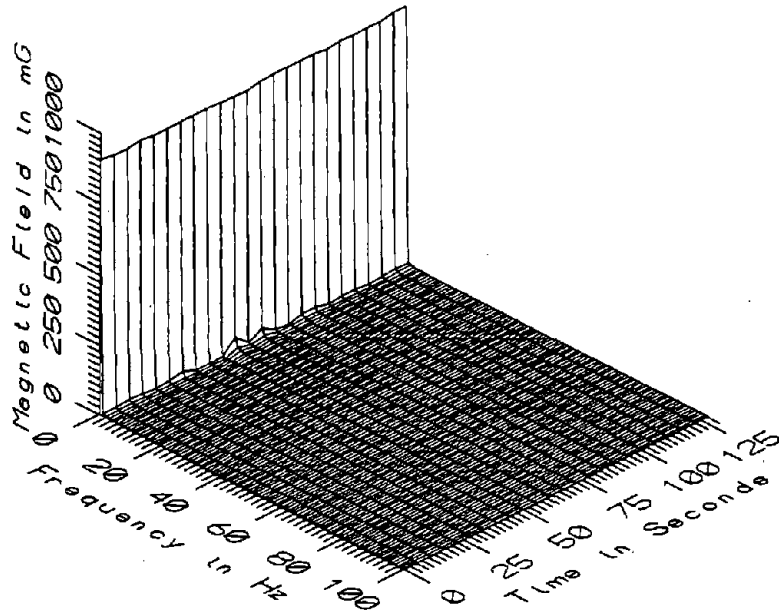
DATASET NEC021
VERTICAL PROFILE AT THE PASSENGER WAITING AREA AT THE
SOUTH STATION, NON-ELECTRIFIED NEC

Measurement Setup Code: Staff: N/A Reference: None
Vehicle Status: Not applicable
Measurement Date: March 31, 1992
Measurement Time: Start: 8:25:38
End: 8:27:46
Number of Samples: 24
Programmed Sample Interval: 5 sec
Actual Sample Interval: 5.6 sec

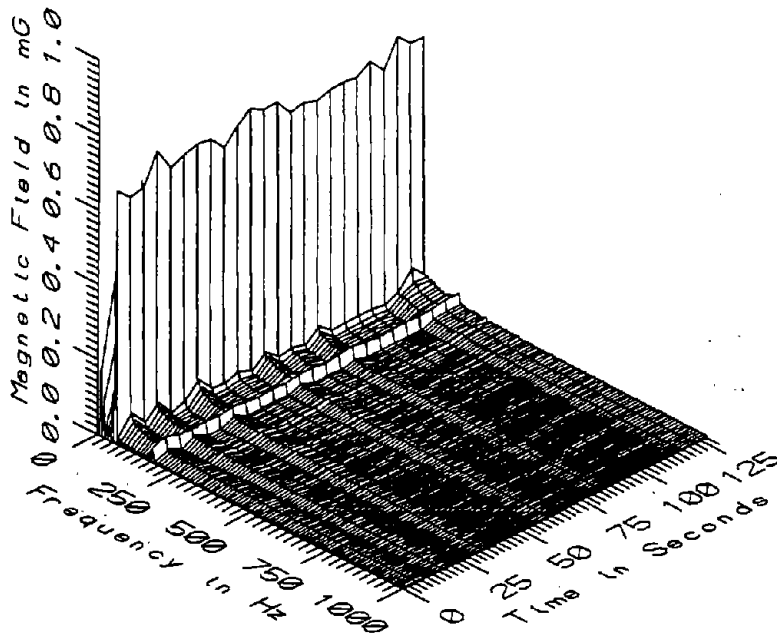
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

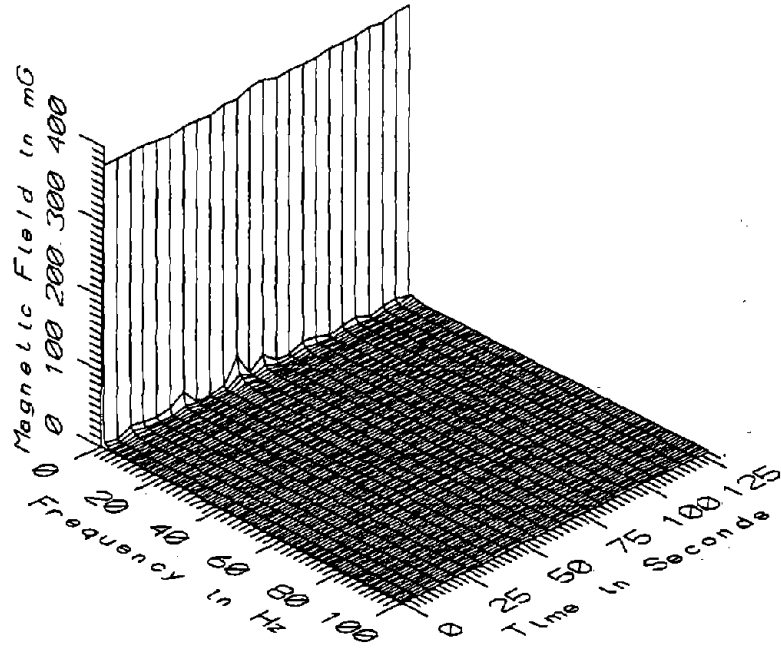
Missing or Suspect Data: None



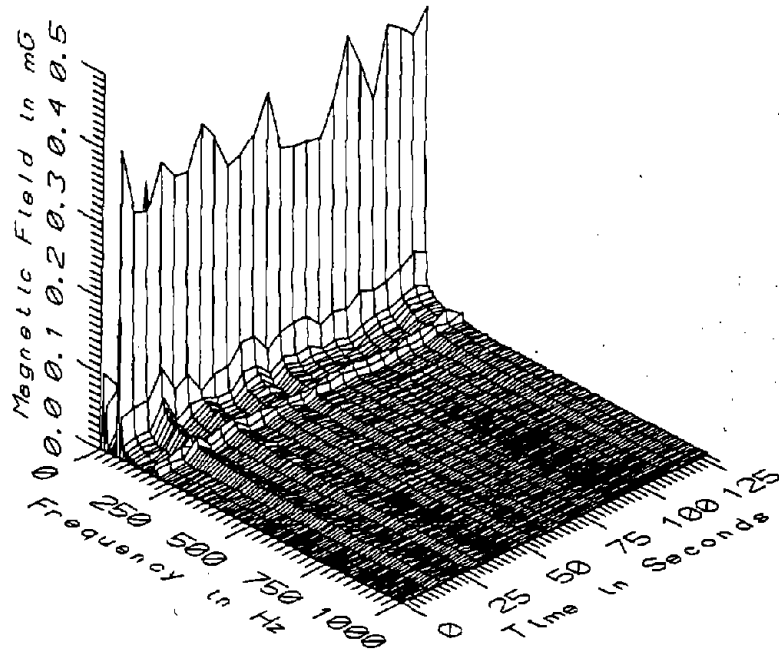
NEC021 - 10cm ABOVE FLOOR IN WAITING AREA, SOUTH STATION



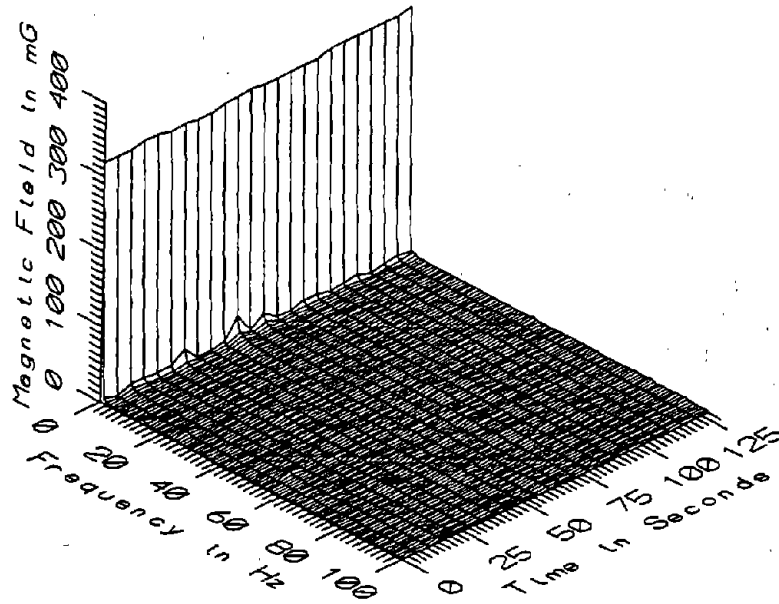
NEC021 - 10cm ABOVE FLOOR IN WAITING AREA, SOUTH STATION



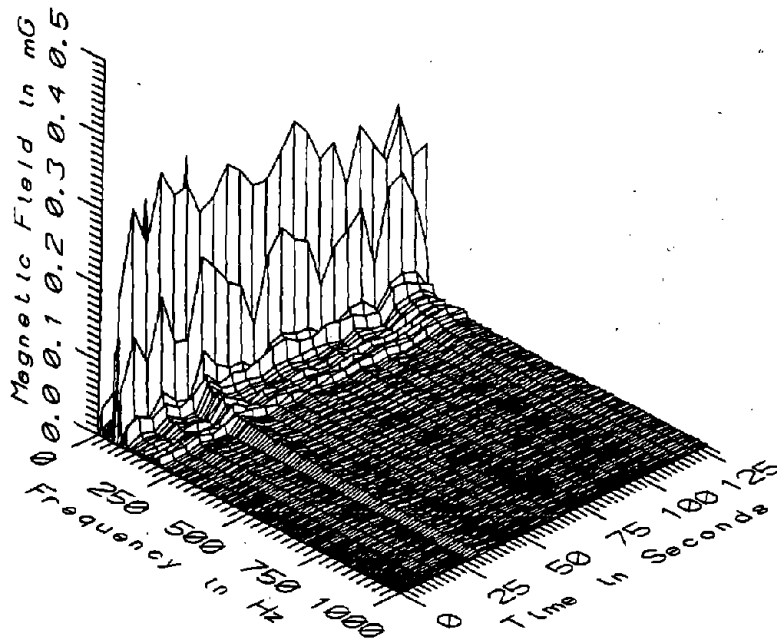
NEC021 - 60cm ABOVE FLOOR IN WAITING AREA, SOUTH STATION



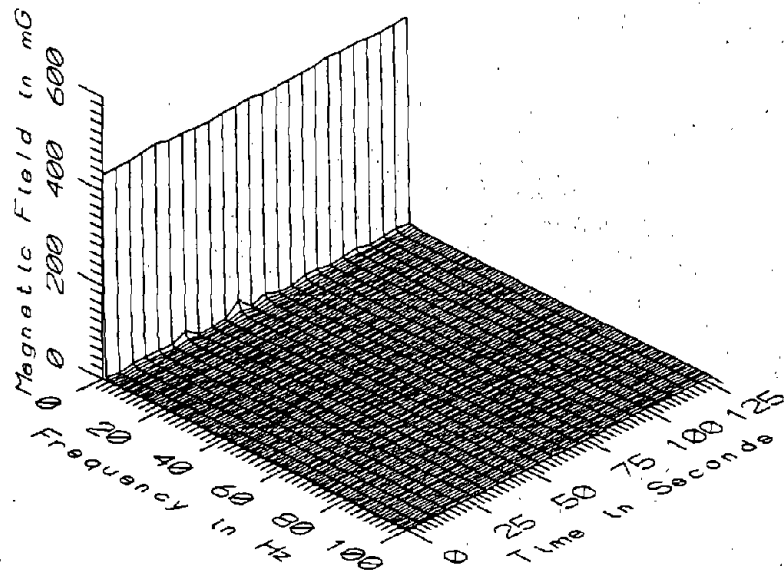
NEC021 - 60cm ABOVE FLOOR IN WAITING AREA, SOUTH STATION



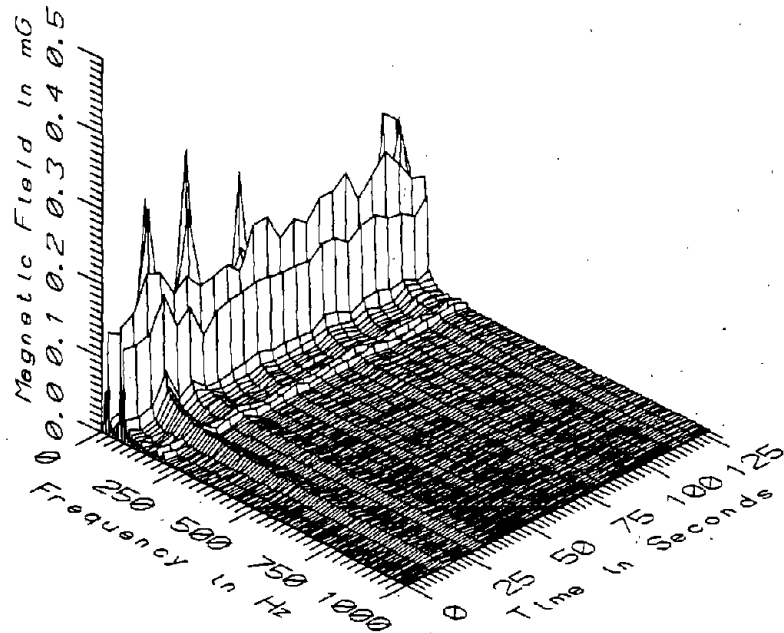
NEC021 - 110cm ABOVE FLOOR IN WAITING AREA, SOUTH STATION



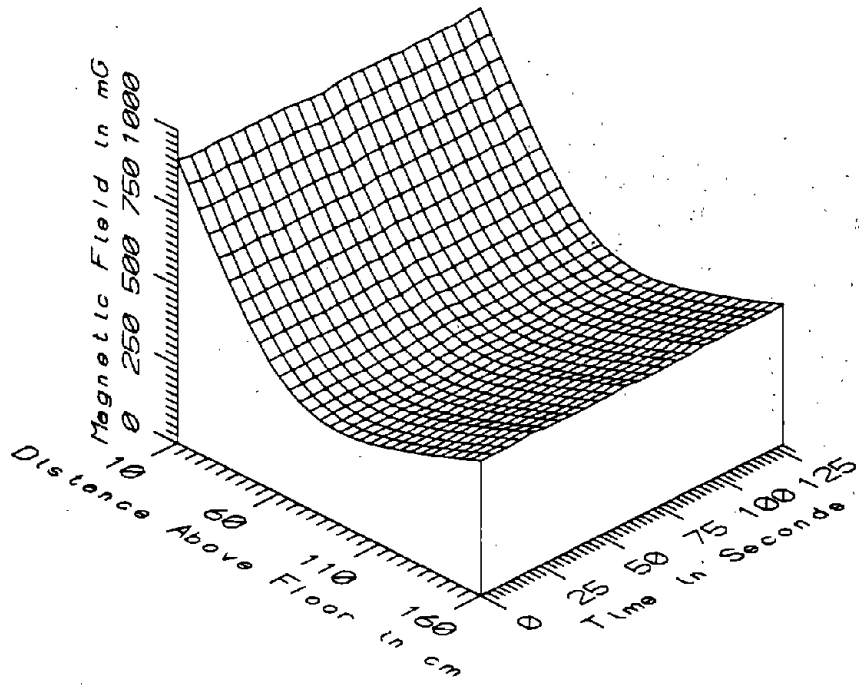
NEC021 - 110cm ABOVE FLOOR IN WAITING AREA, SOUTH STATION



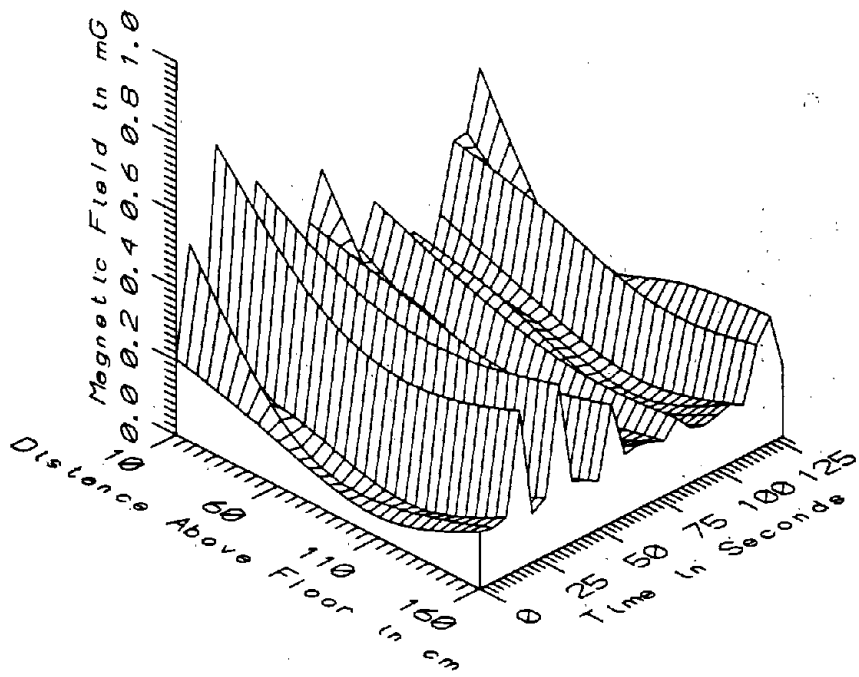
NEC021 - 160cm ABOVE FLOOR IN WAITING AREA, SOUTH STATION



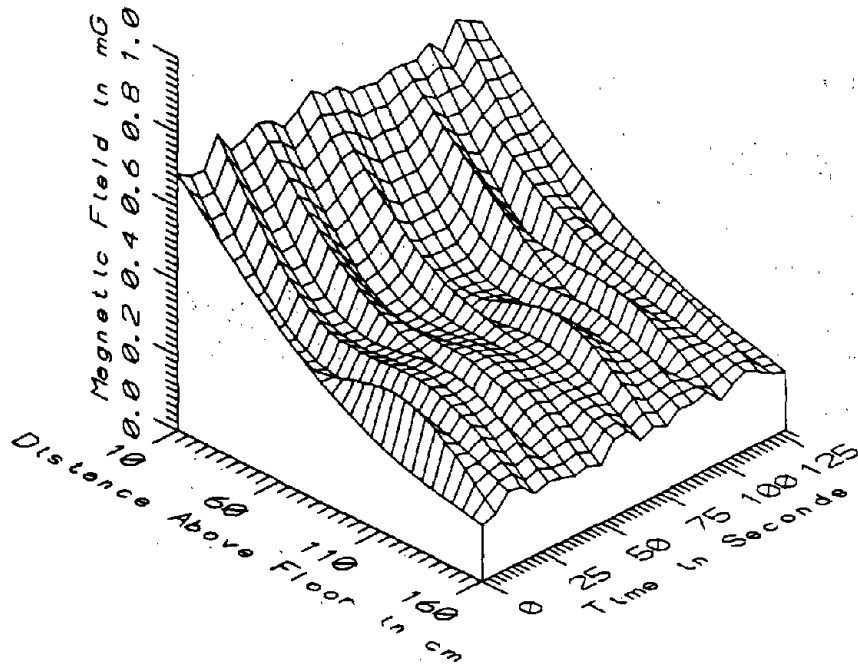
NEC021 - 160cm ABOVE FLOOR IN WAITING AREA, SOUTH STATION



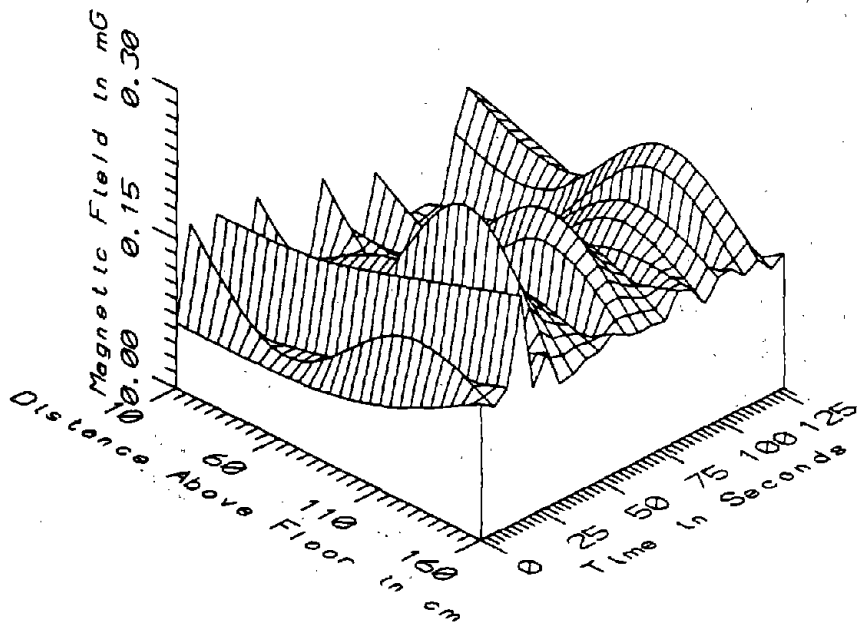
NEC021 - WAITING AREA, SOUTH STATION - STATIC



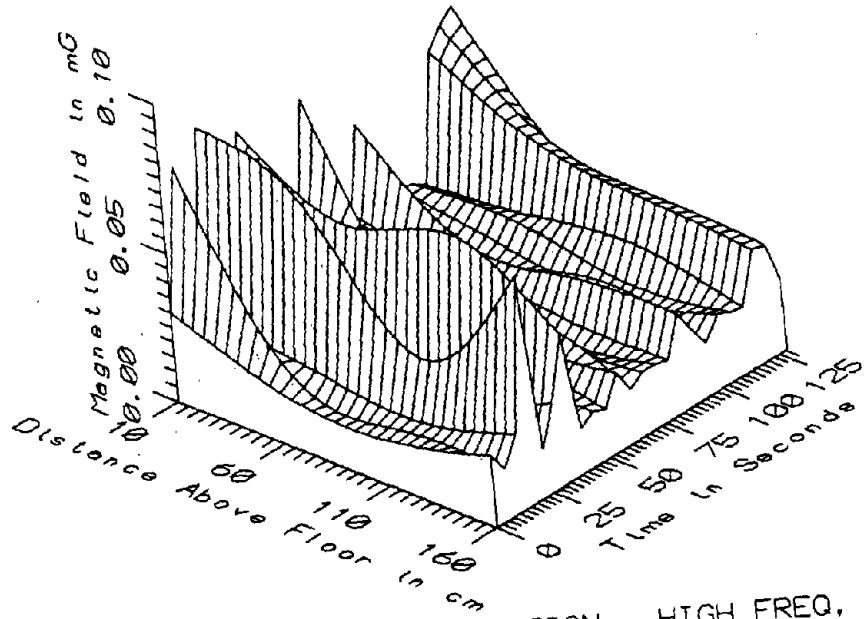
NEC021 - WAITING AREA, SOUTH STATION - LOW FREQ, 5-45Hz



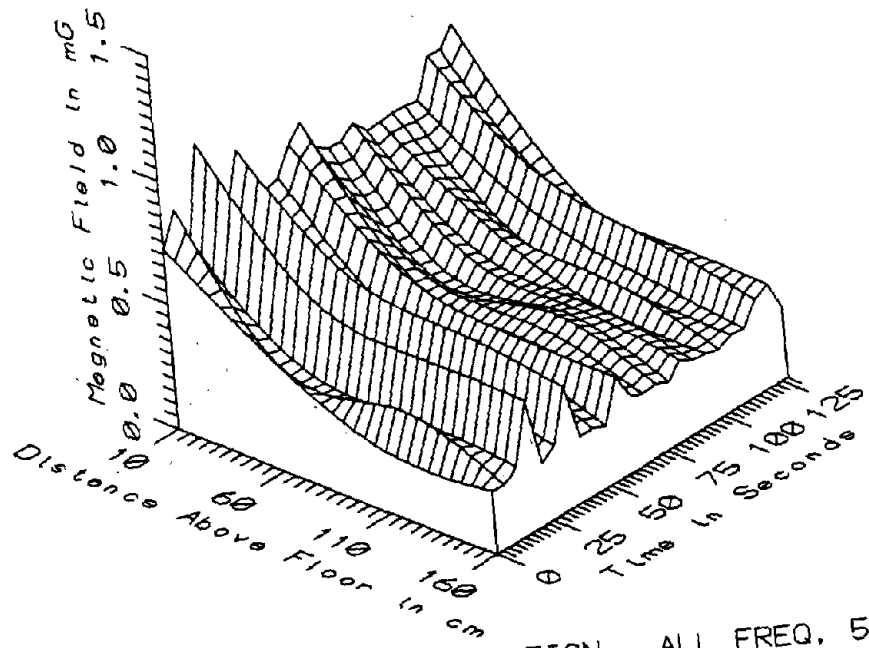
NEC021 - WAITING AREA, SOUTH STATION - POWER FREQ, 50-60Hz



NEC021 - WAITING AREA, SOUTH STATION - POWER HARM, 65-300Hz



NEC021 - WAITING AREA, SOUTH STATION - HIGH FREQ, 305-2560Hz



NEC021 - WAITING AREA, SOUTH STATION - ALL FREQ, 5-2560Hz

APPENDIX W

DATASET NEC022
VERTICAL PROFILE AT ENGINEER'S SEAT
DIESEL-ELECTRIC LOCOMOTIVE

Measurement Setup Code: Staff: 20 Reference: None
 Drawing: A-4

Vehicle Status: Departing Back Bay Station and
 stopping at Rte. 128 Station at the
 180 second time point

Measurement Date: March 31, 1992

Measurement Time: Start: 9:23:34
 End: 9:28:05

Number of Samples: 49

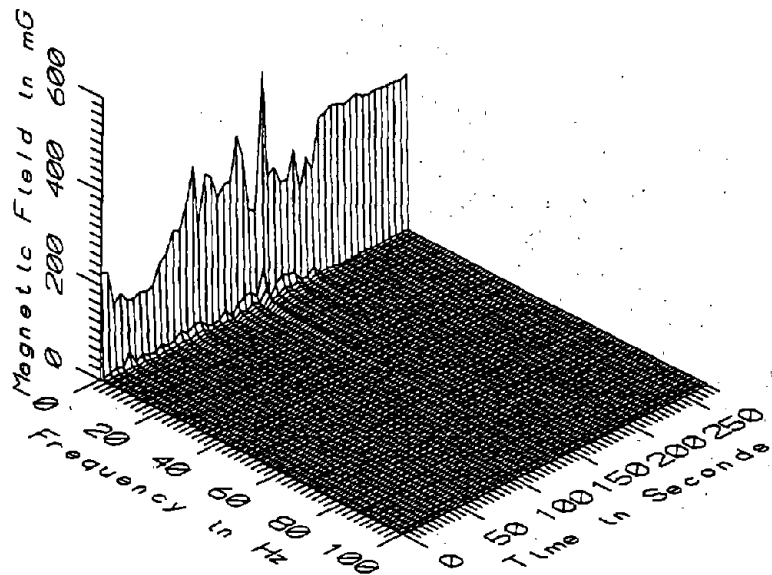
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.6 sec

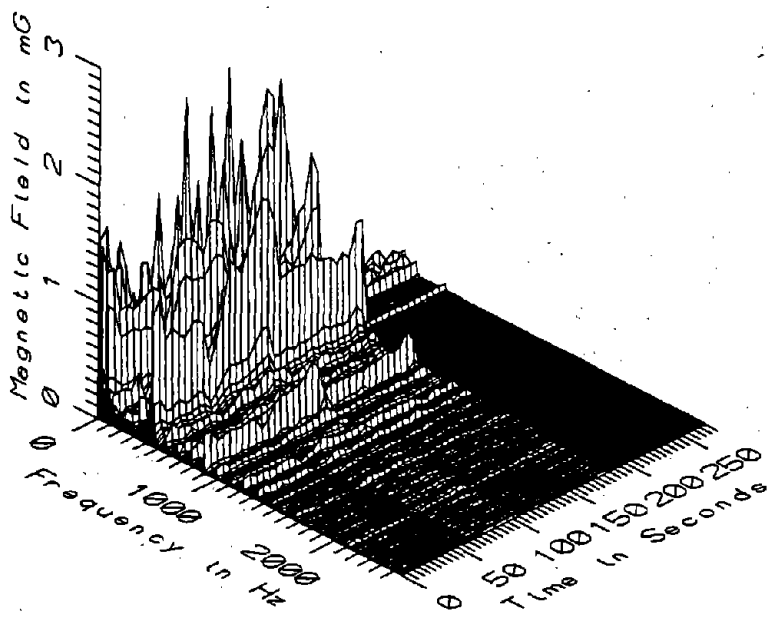
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

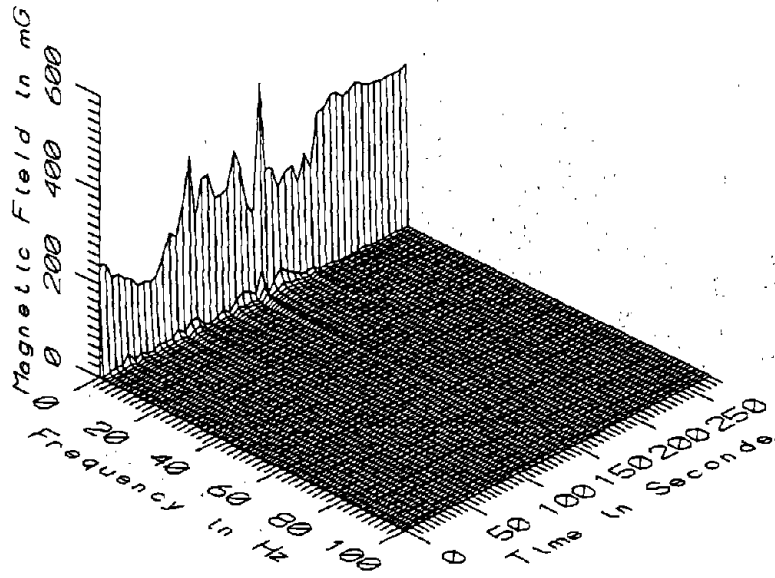
Missing or Suspect Data: None



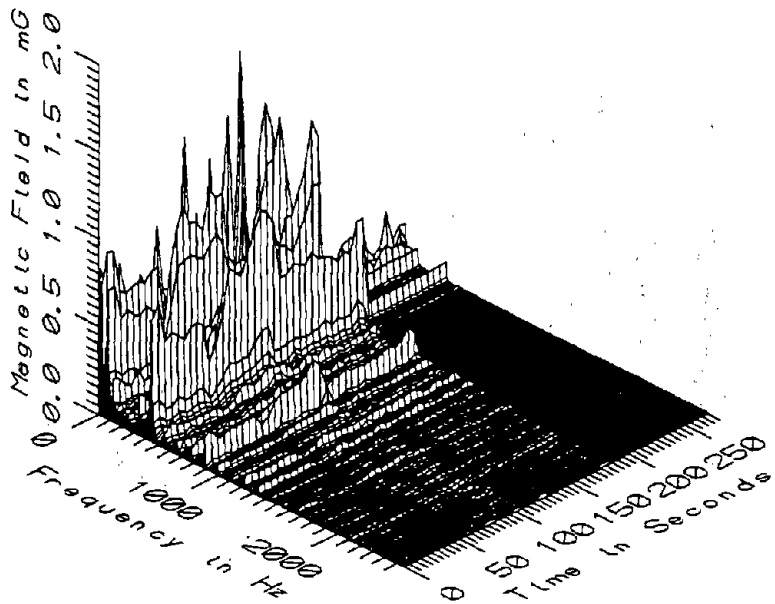
NEC022 - 10cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



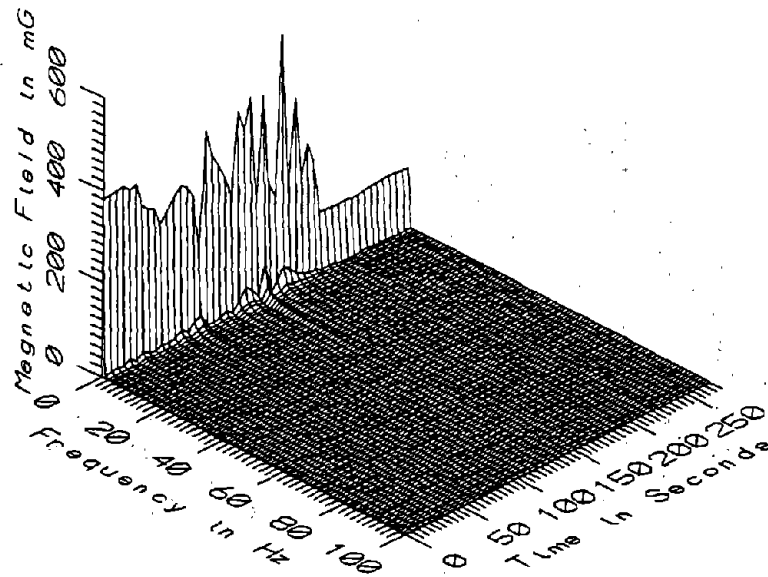
NEC022 - 10cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



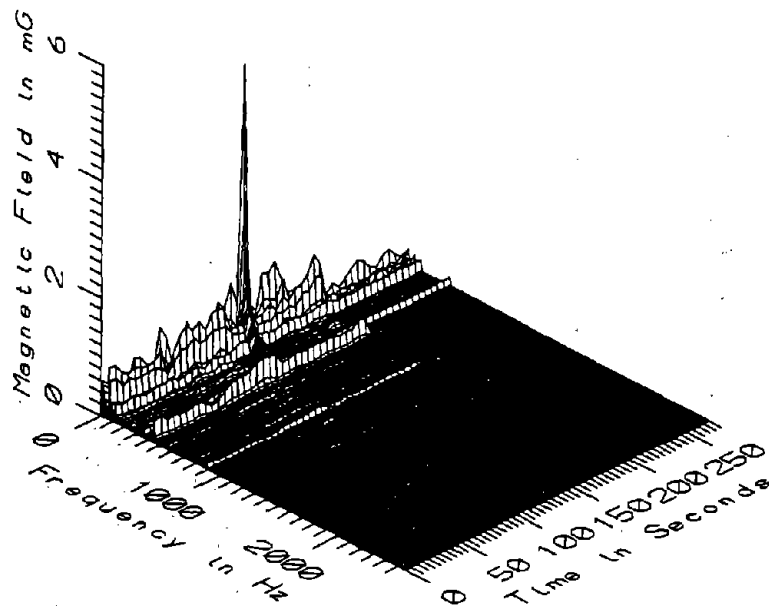
NEC022 - 60cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



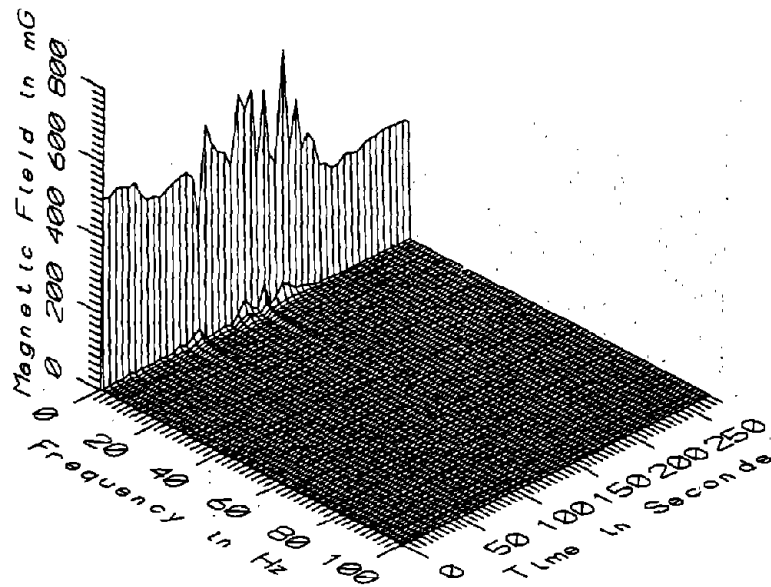
NEC022 - 60cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



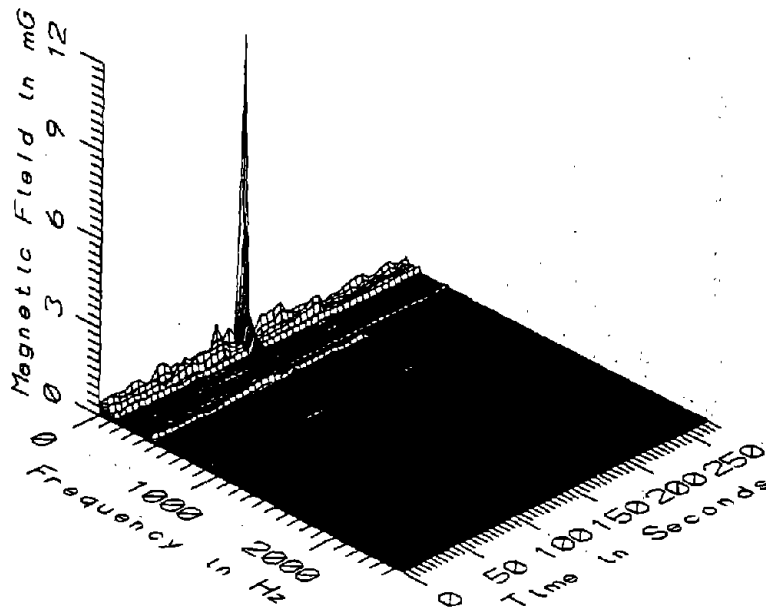
NEC022 - 110cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



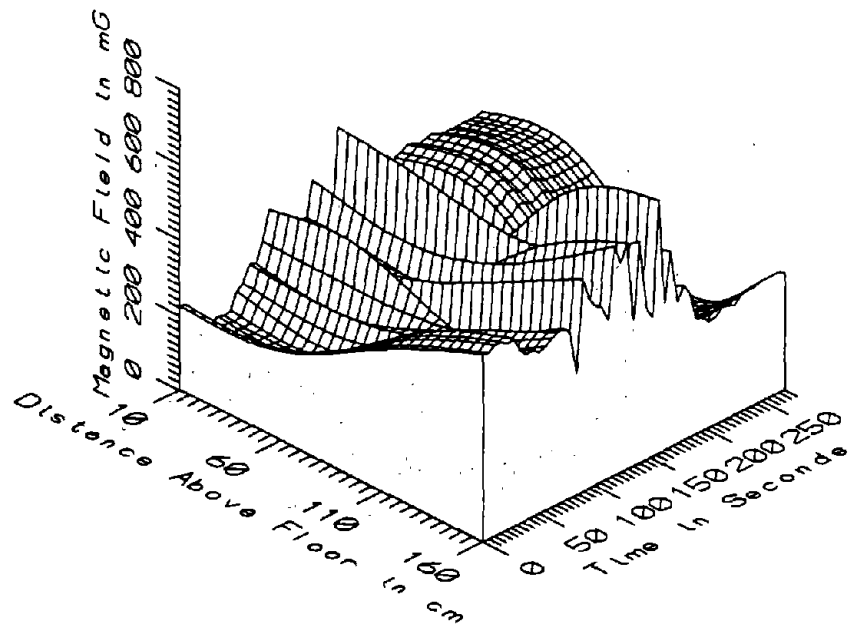
NEC022 - 110cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



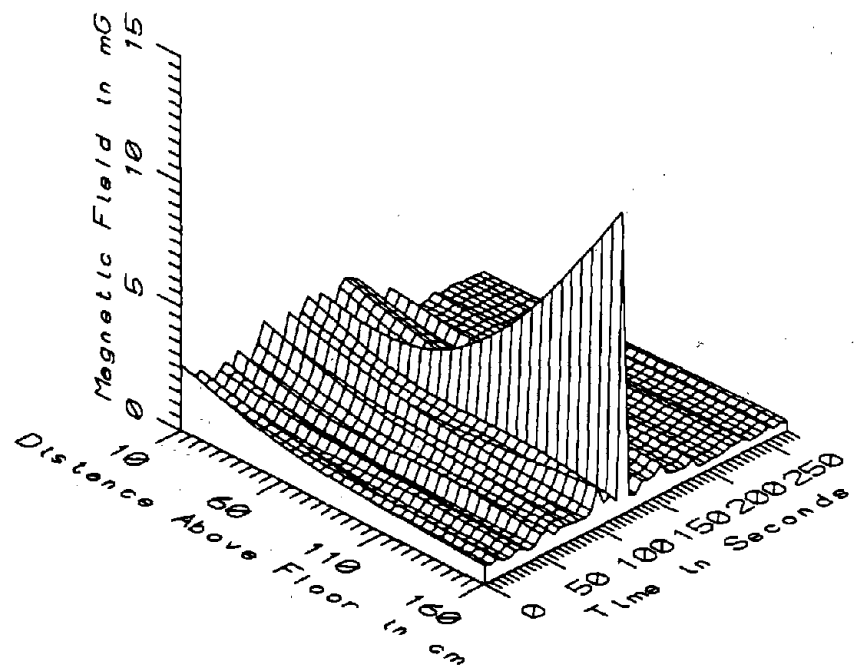
NEC022 - 160cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



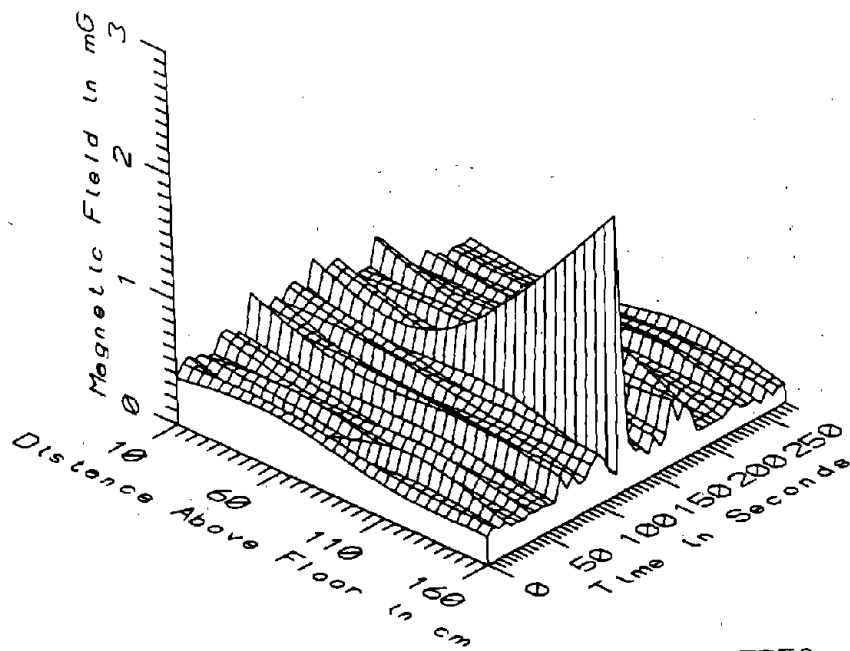
NEC022 - 160cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



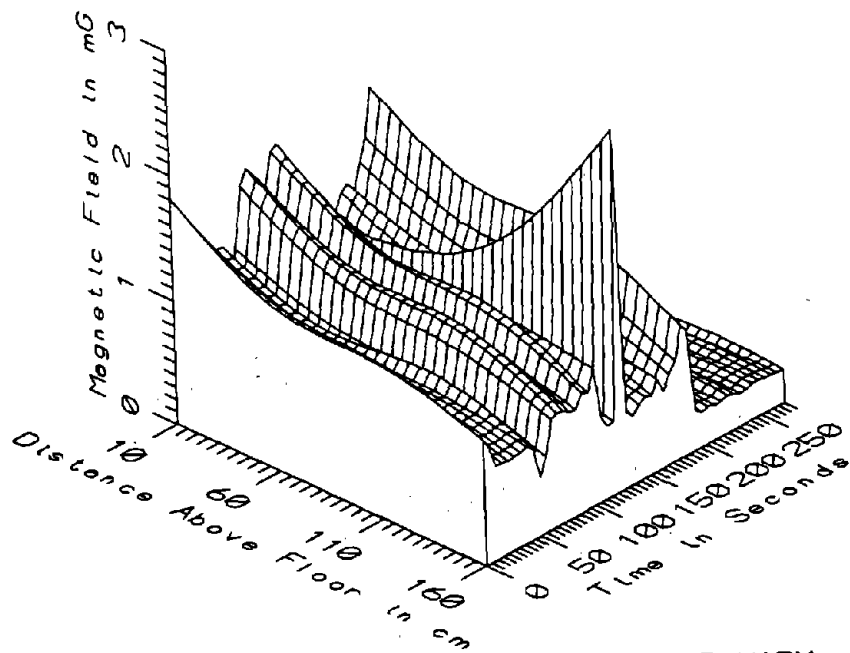
NEC022 - LEFT OF ENGINEER IN D.E.C. - STATIC



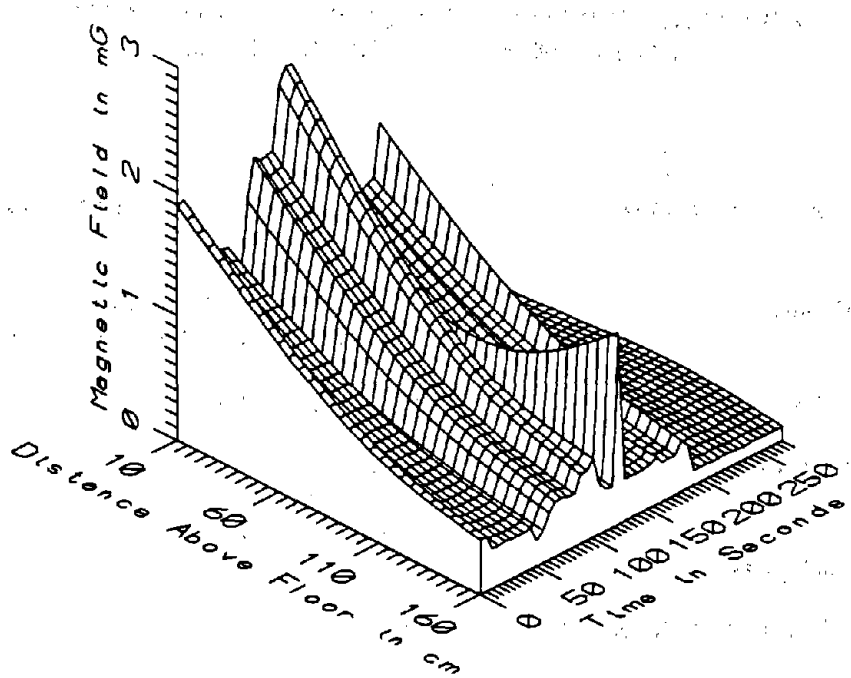
NEC022 - LEFT OF ENGINEER IN D.E.C. - LOW FREQ, 5-45Hz



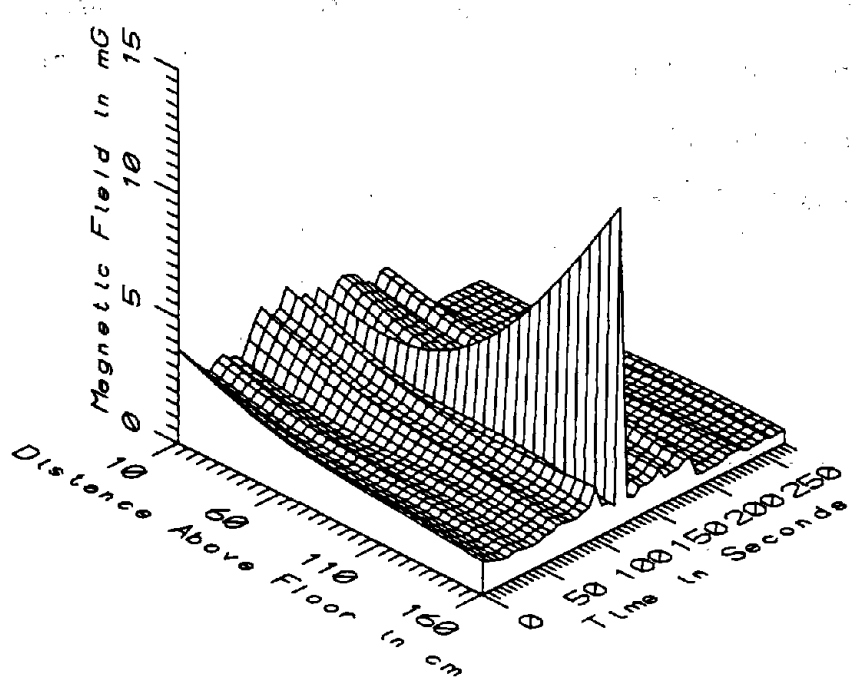
NEC022 - LEFT OF ENGINEER IN D.E.C. - POWER FREQ, 50-60Hz



NEC022 - LEFT OF ENGINEER IN D.E.C. - POWER HARM, 65-300Hz



NEC022 - LEFT OF ENGINEER IN D.E.C. - HIGH FREQ, 305-2560Hz



NEC022 - LEFT OF ENGINEER IN D.E.C. - ALL FREQ, 5-2560Hz

APPENDIX X

DATASET NEC023
VERTICAL PROFILE AT THE ENGINEER'S SEAT
DIESEL-ELECTRIC LOCOMOTIVE

Measurement Setup Code: Staff: 20 Reference: None
Drawing: A-4

Vehicle Status: Station stop at Providence at the 12
and 13 minute points

Measurement Date: March 31, 1992

Measurement Time: Start: 9:30:19
End: 9:49:11

Number of Samples: 20

Programmed Sample Interval: 60 sec

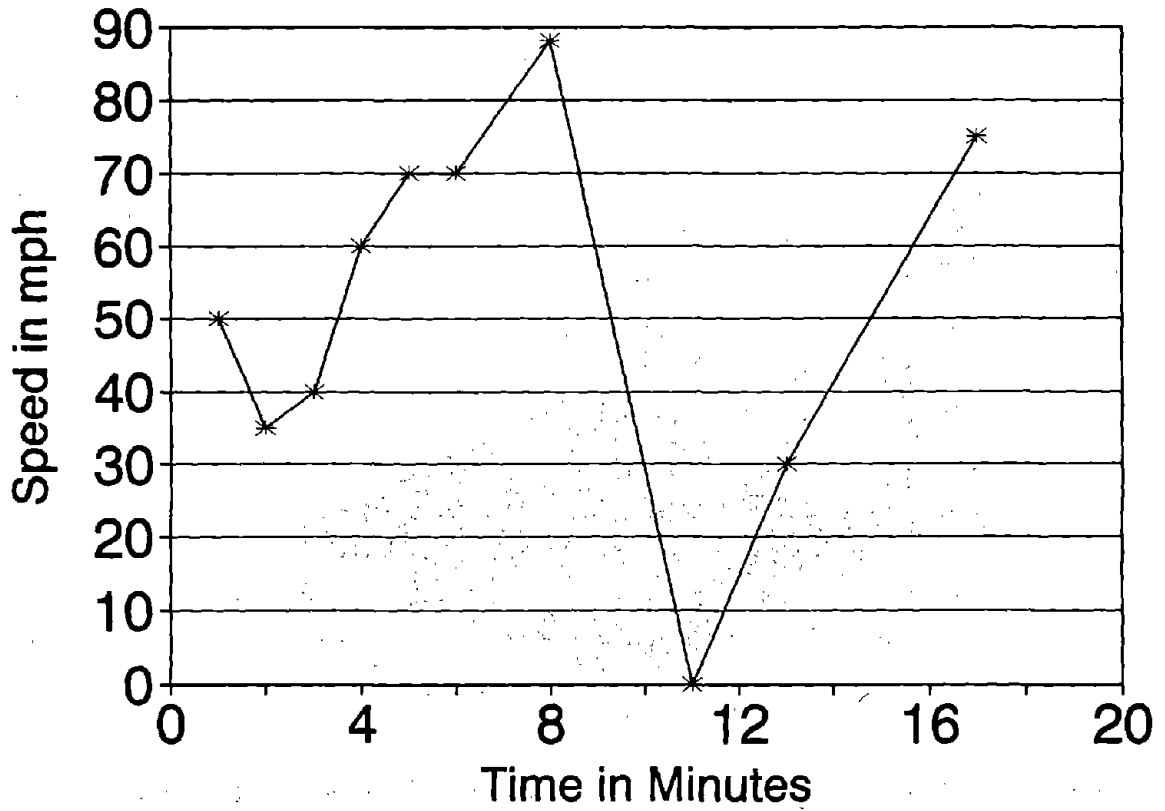
Actual Sample Interval: 60 sec

Frequency Spectrum Parameters

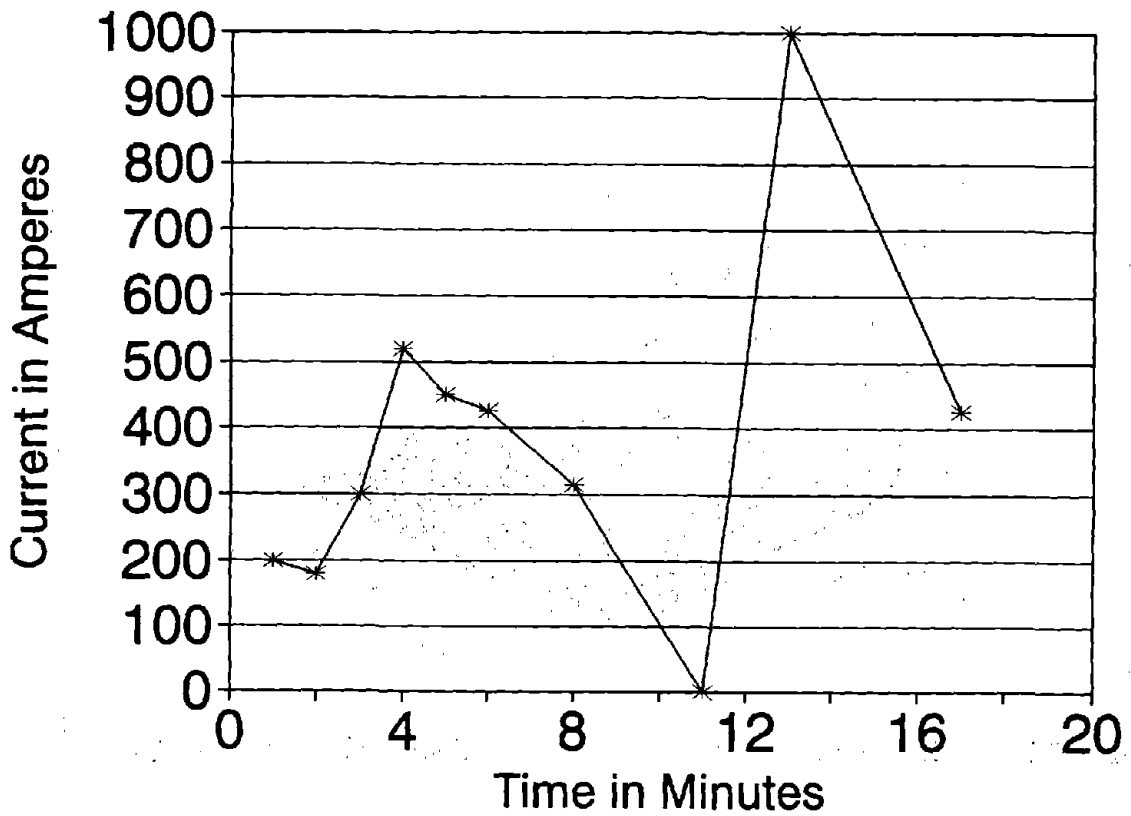
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

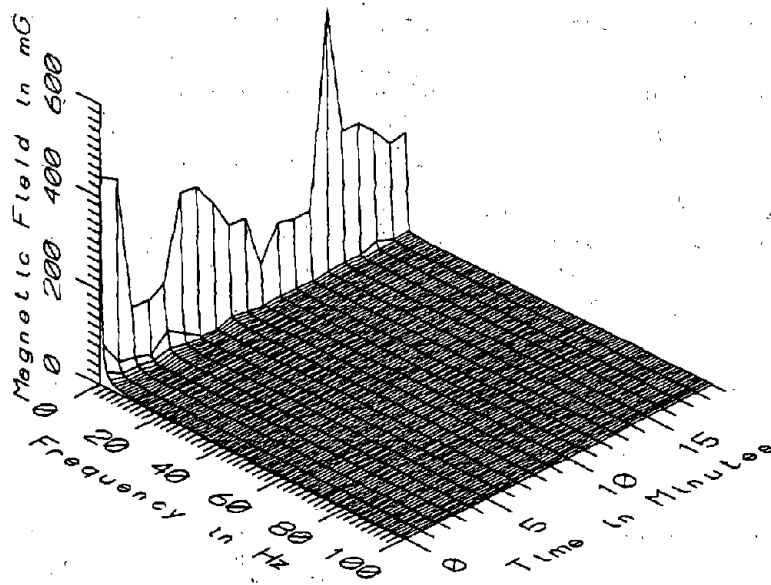
Missing or Suspect Data: None

VEHICLE SPEED - NEC023

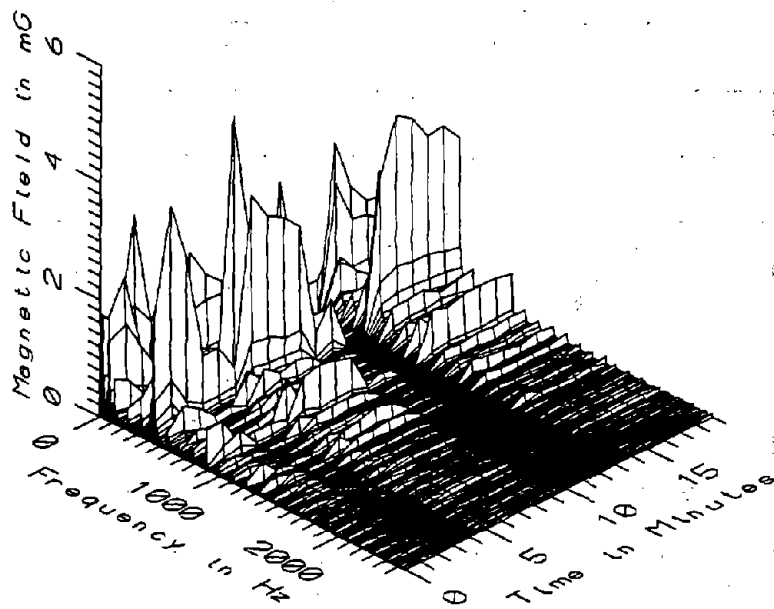


VEHICLE CURRENT - NEC023

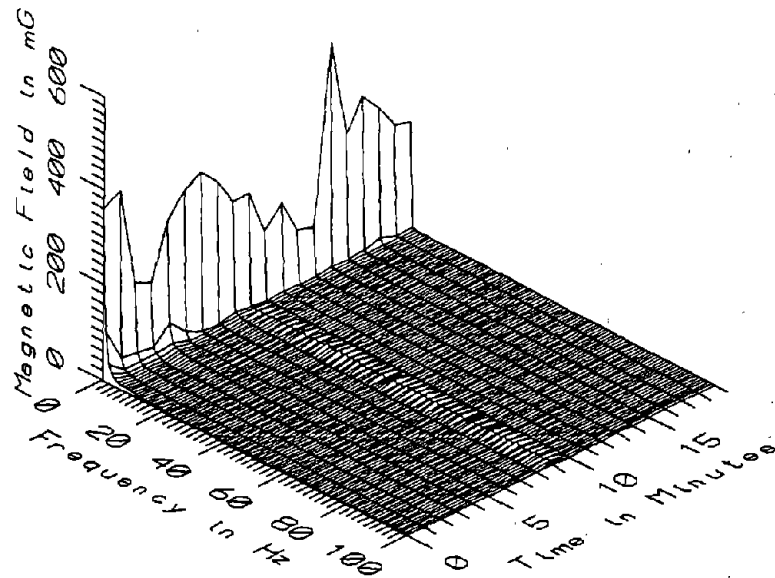




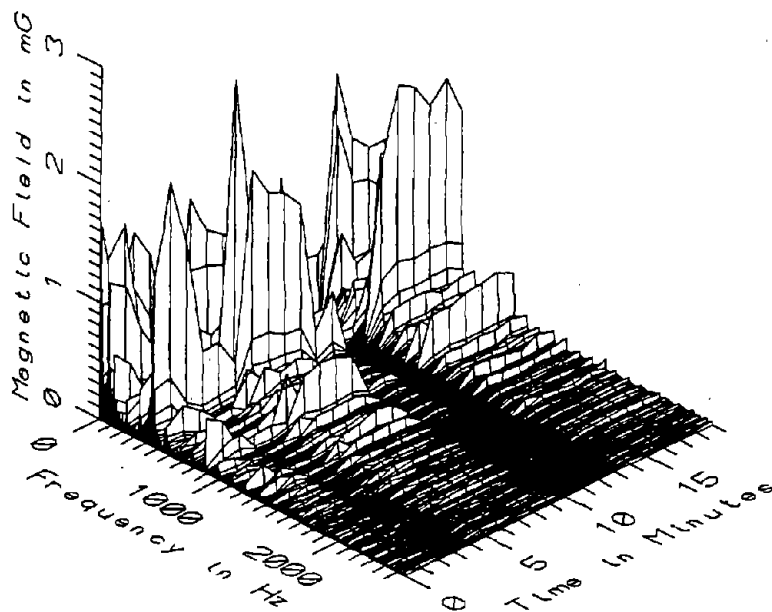
NEC023 - 10cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



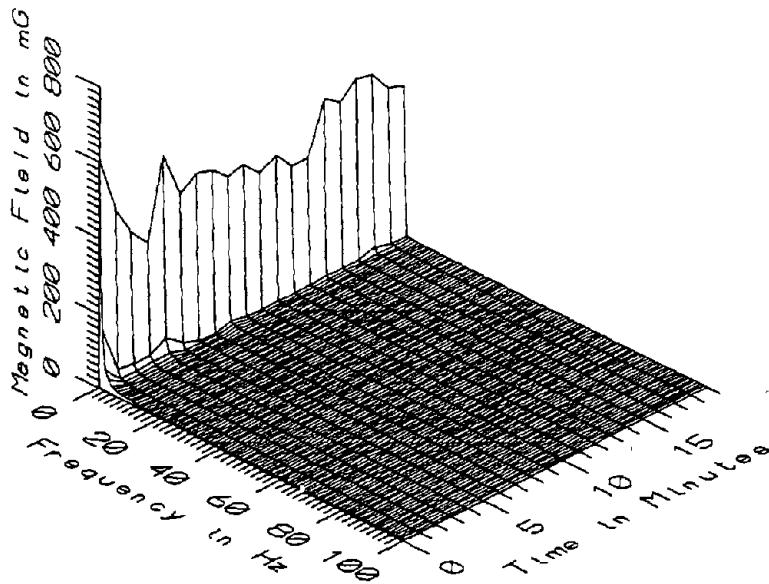
NEC023 - 10cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



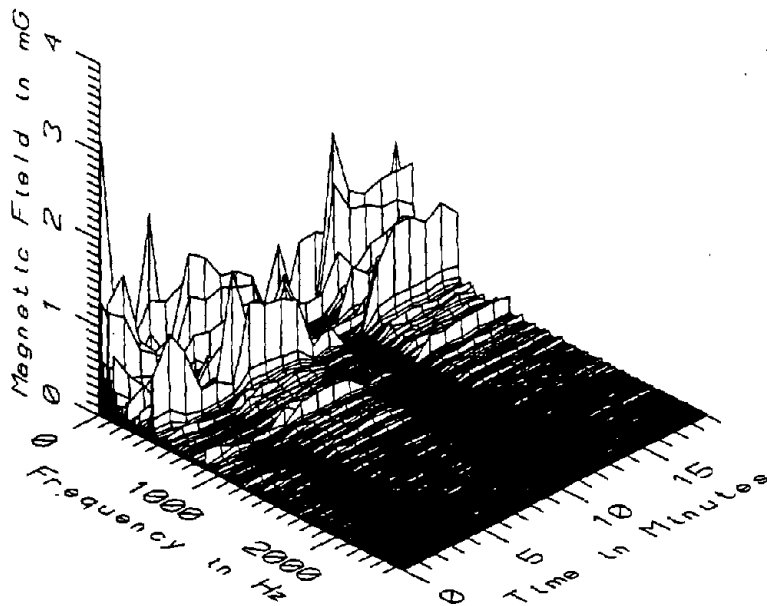
NEC023 - 60cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



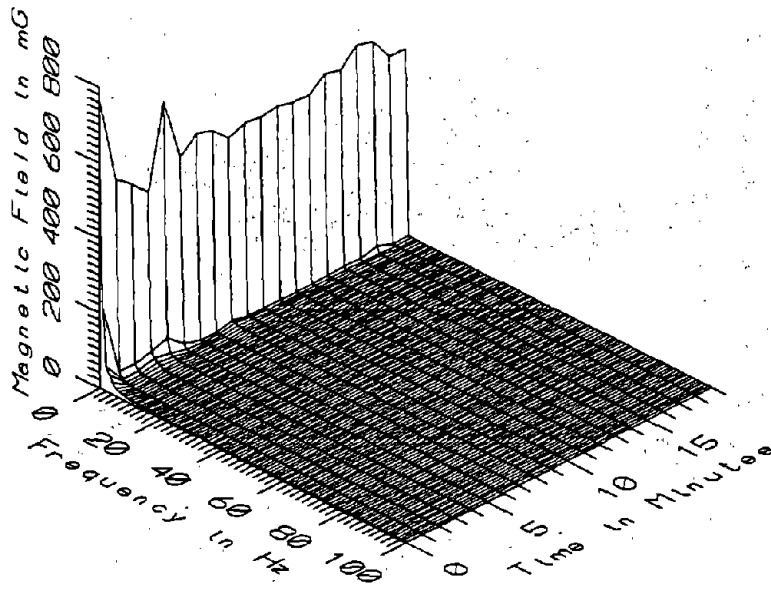
NEC023 - 60cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



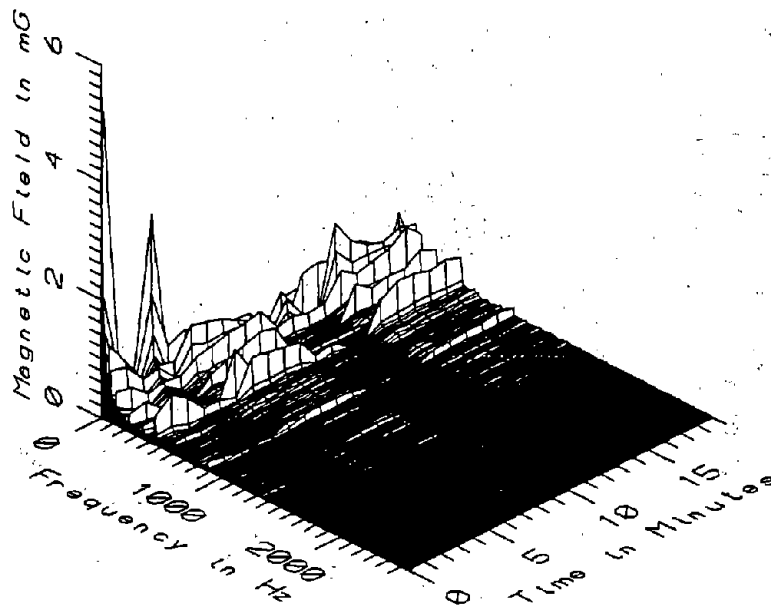
NEC023 - 110cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



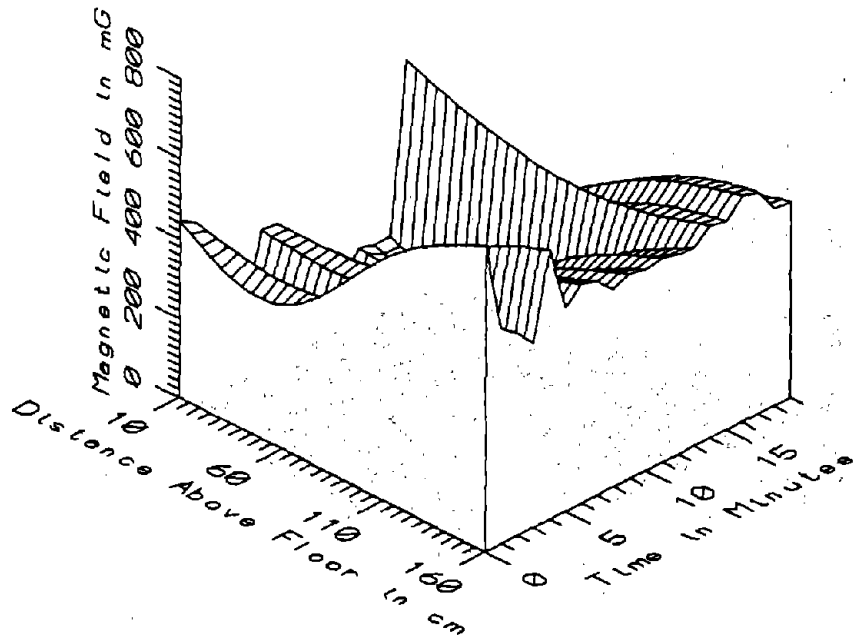
NEC023 - 110cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



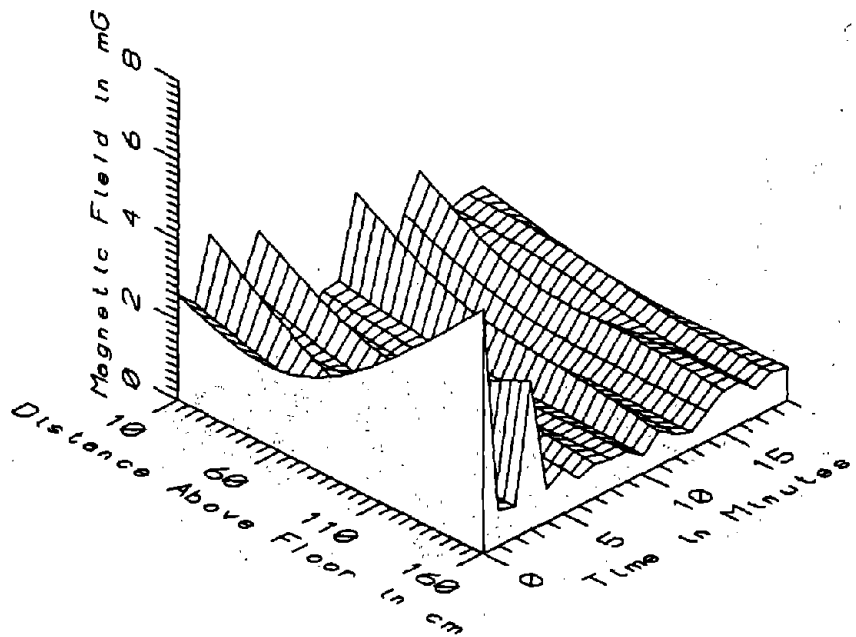
NEC023 - 160cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



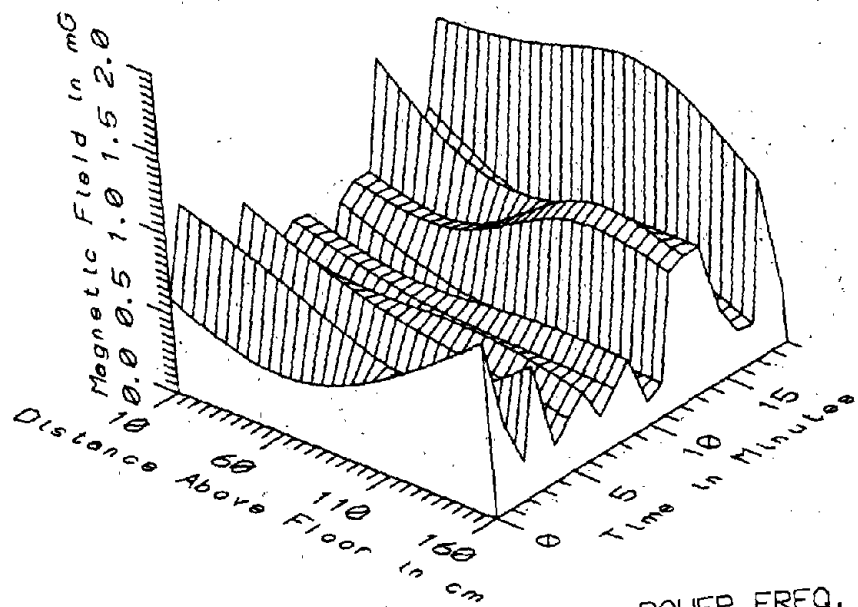
NEC023 - 160cm ABOVE FLOOR, LEFT OF ENGINEER IN D.E.C.



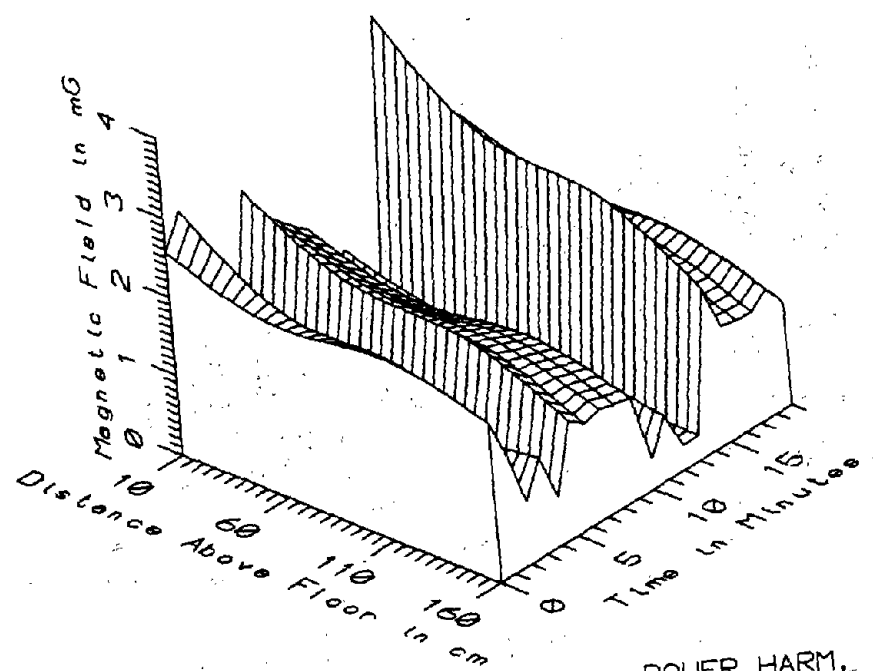
NEC023 - LEFT OF ENGINEER IN D.E.C. - STATIC



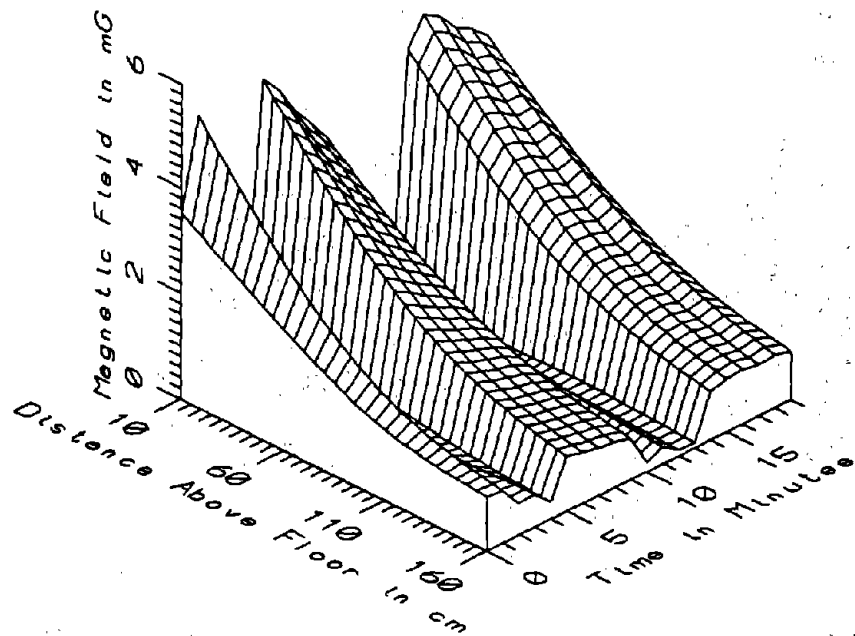
NEC023 - LEFT OF ENGINEER IN D.E.C. - LOW FREQ. 5-45Hz



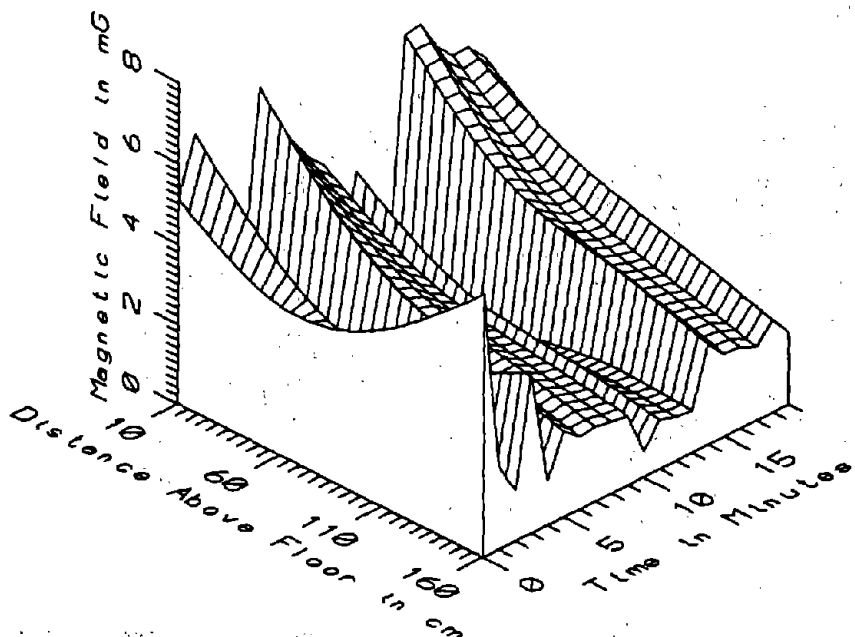
NEC023 - LEFT OF ENGINEER IN D.E.C. - POWER FREQ, 50-60Hz



NEC023 - LEFT OF ENGINEER IN D.E.C. - POWER HARM, 65-300Hz



NEC023 - LEFT OF ENGINEER IN D.E.C. - HIGH FREQ, 305-2560Hz



NEC023 - LEFT OF ENGINEER IN D.E.C. - ALL FREQ, 5-2560Hz

APPENDIX Y

DATASET NEC024
HORIZONTAL PROFILE ALONG CENTERLINE OF CAB
DIESEL-ELECTRIC LOCOMOTIVE

Measurement Setup Code: Staff: 22 Reference: None
 Drawing: A-4

Vehicle Status: Train traveling south at constant
 speed

Measurement Date: March 31, 1992

Measurement Time: Start: 9:57:10
 End: 9:59:44

Number of Samples: 10

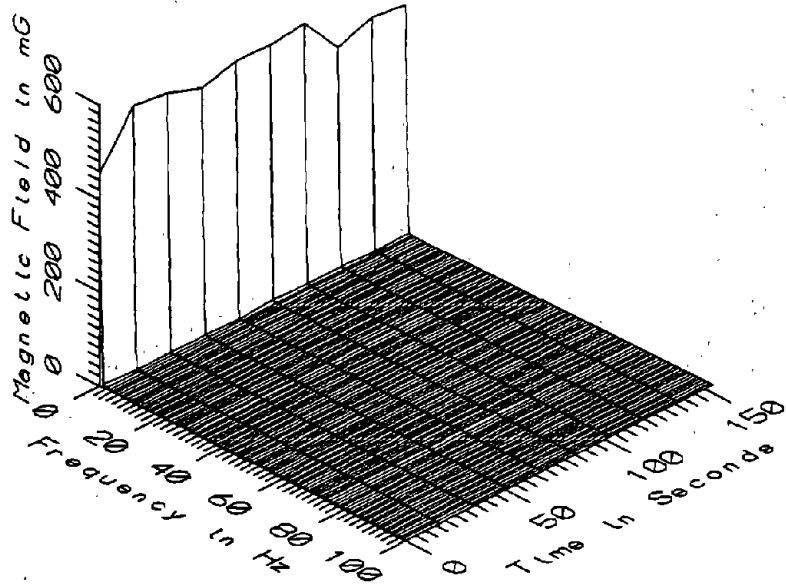
Programmed Sample Interval: 5 sec

Actual Sample Interval: 17.1 sec

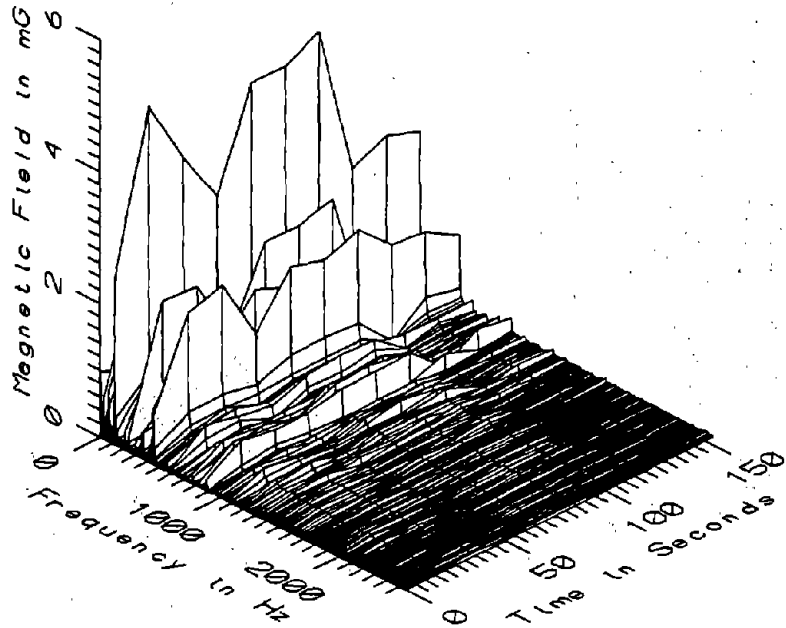
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

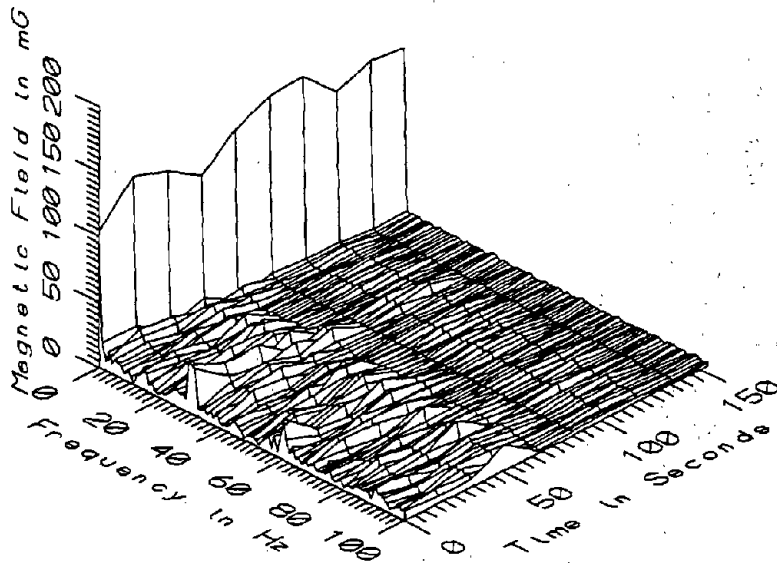
Missing or Suspect Data: None



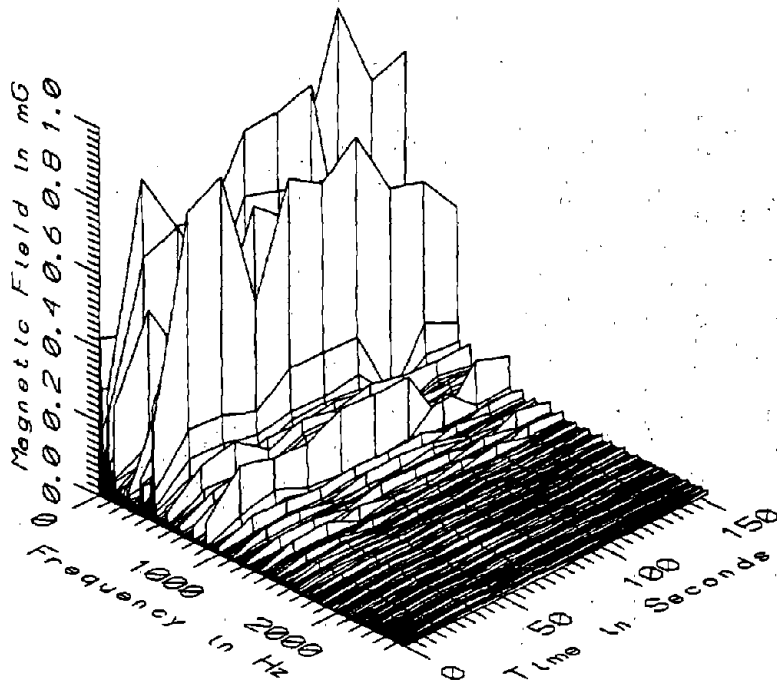
NEC024 - 10cm FROM ELECTRICAL CABINET IN D.E.C., 1M ABOVE FLOOR



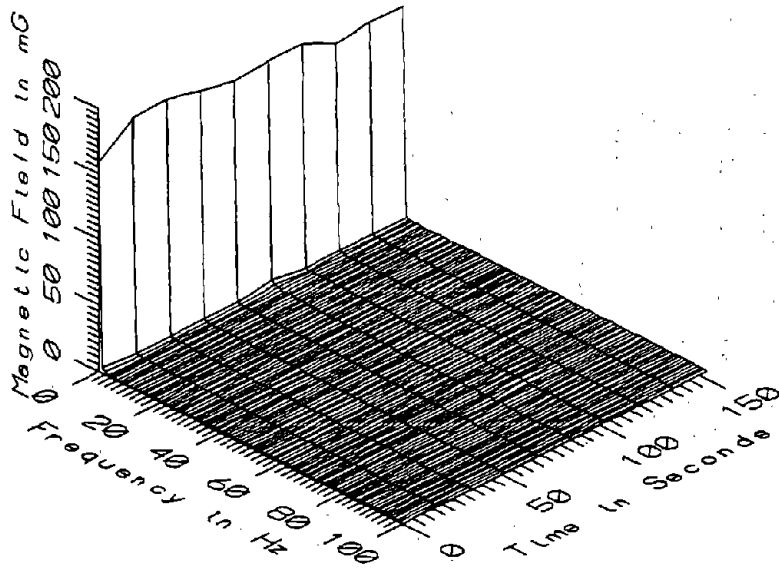
NEC024 - 10cm FROM ELECTRICAL CABINET IN D.E.C., 1M ABOVE FLOOR



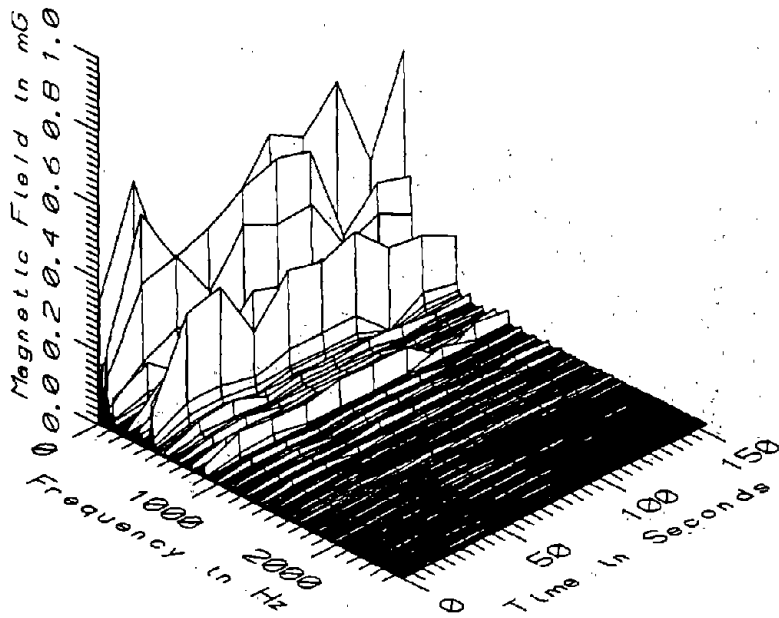
NEC024 - 60cm FROM ELECTRICAL CABINET IN D.E.C., 1M ABOVE FLOOR



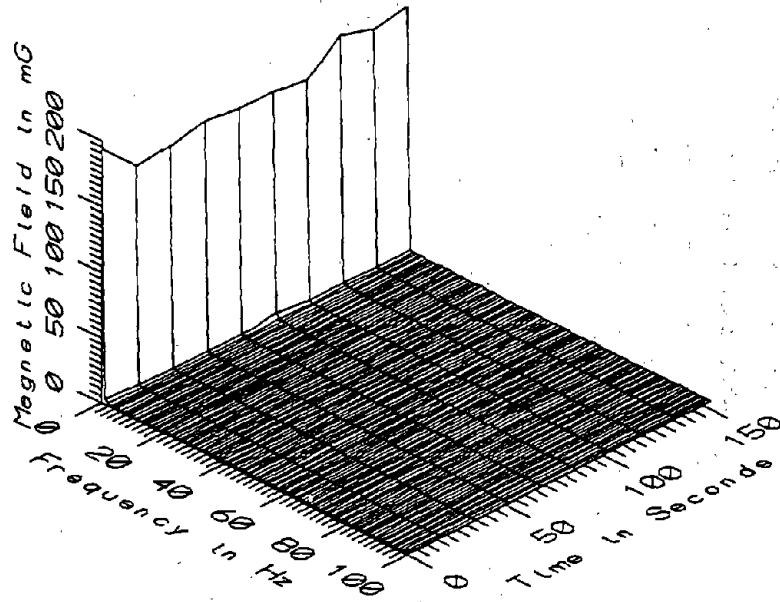
NEC024 - 60cm FROM ELECTRICAL CABINET IN D.E.C., 1M ABOVE FLOOR



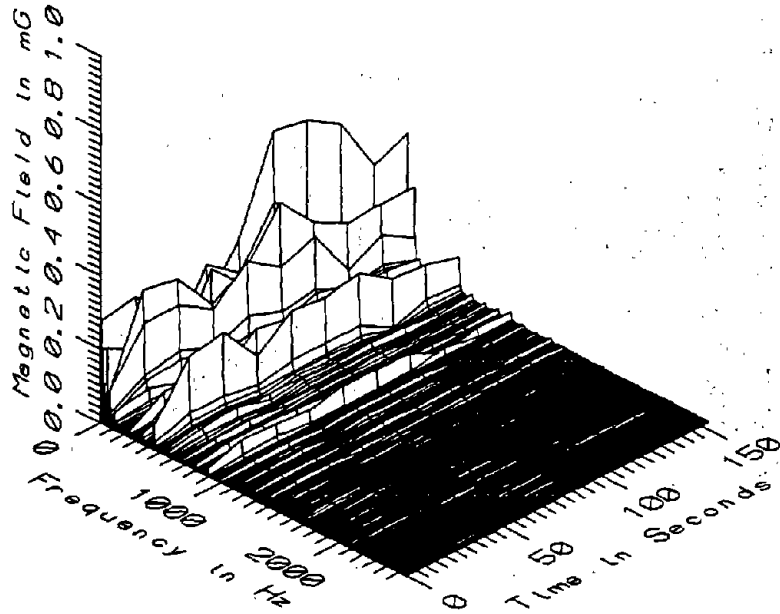
NEC024 - 110cm FROM ELECTRICAL CABINET IN D.E.C., 1M ABOVE FLOOR



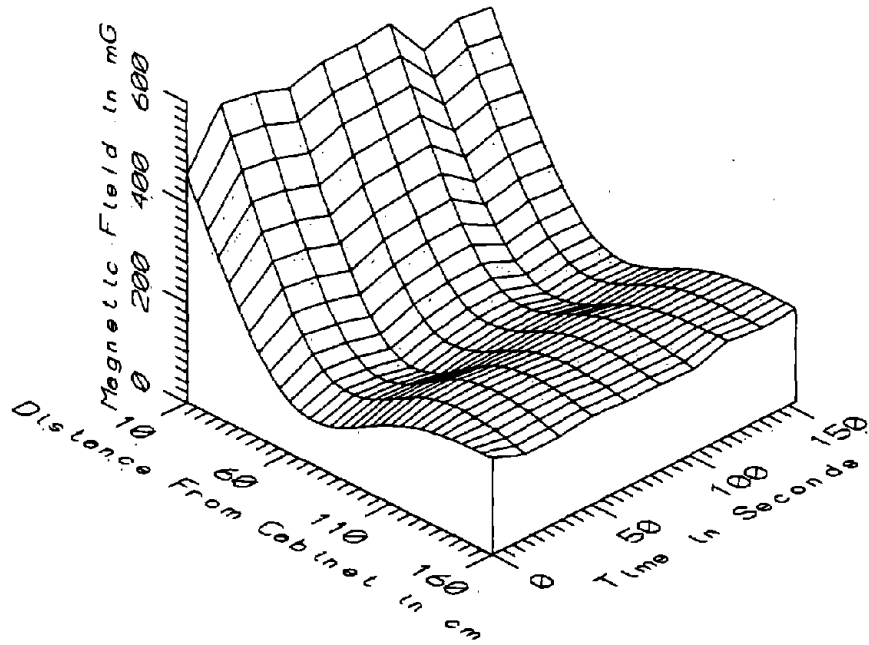
NEC024 - 110cm FROM ELECTRICAL CABINET IN D.E.C., 1M ABOVE FLOOR



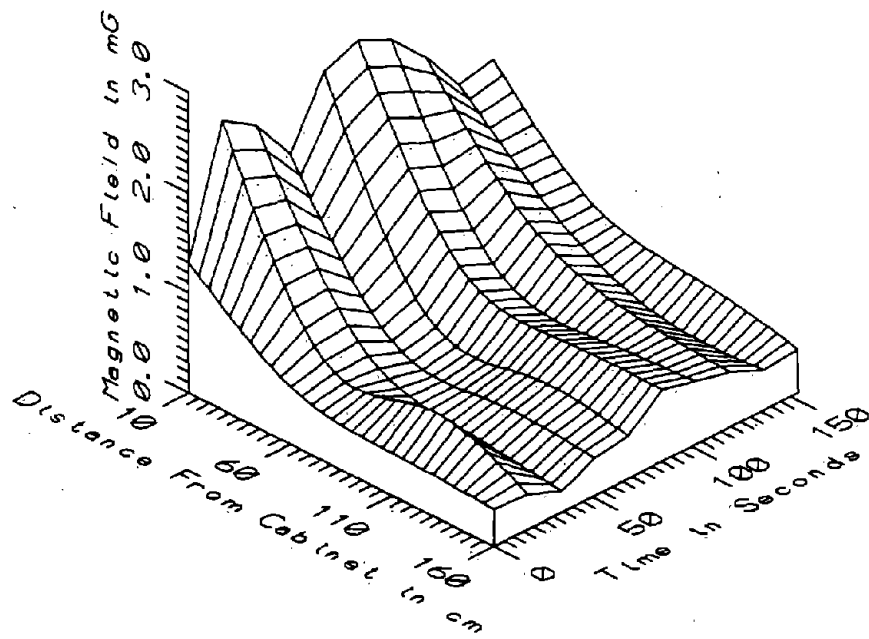
NEC024 - 160cm FROM ELECTRICAL CABINET IN D.E.C., 1M ABOVE FLOOR



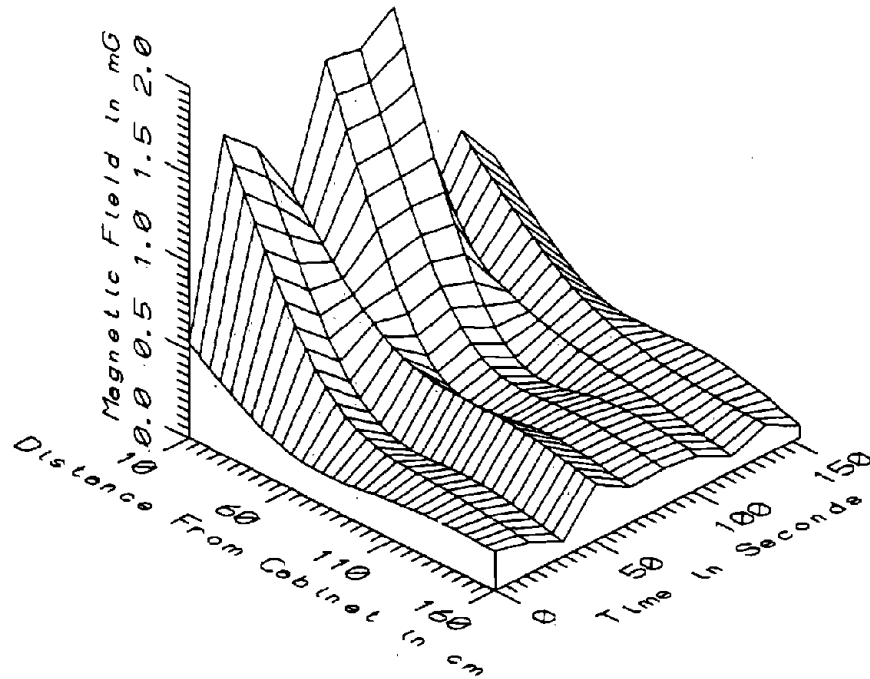
NEC024 - 160cm FROM ELECTRICAL CABINET IN D.E.C., 1M. ABOVE FLOOR



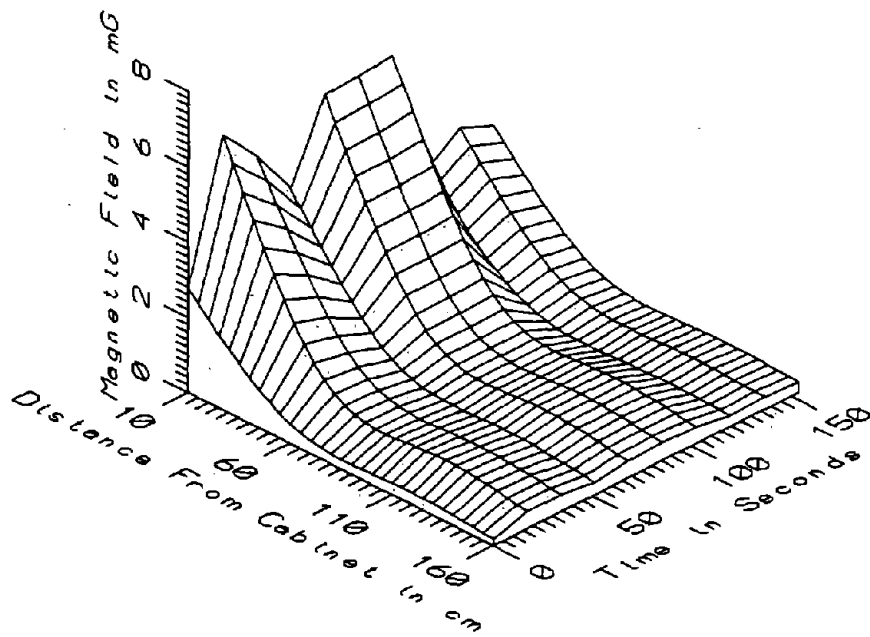
NEC024 - CABINET IN D.E.C., 1M ABOVE FLOOR - STATIC



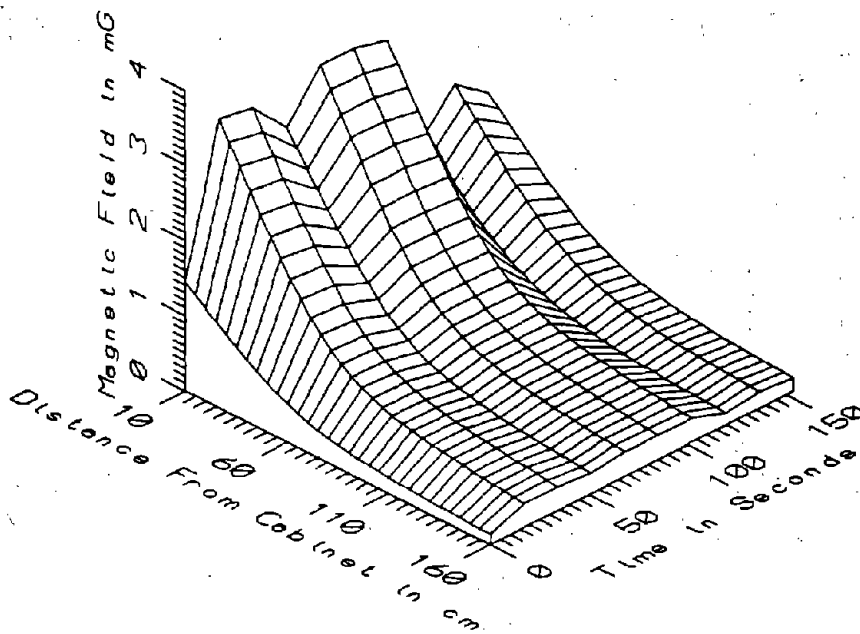
NEC024 - CABINET IN D.E.C., 1M ABOVE FLOOR - LOW FREQ, 5-45Hz



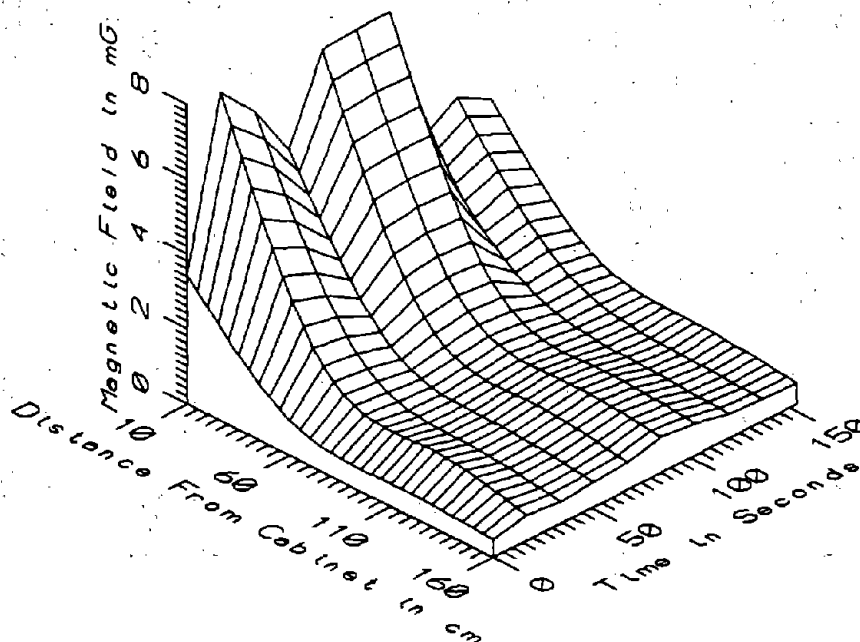
NEC024 - CABINET IN D.E.C., 1M ABOVE FLOOR - POWER FREQ, 50-60Hz



NEC024 - CABINET IN D.E.C., 1M ABOVE FLOOR - POWER HARM, 65-300Hz



NEC024 - CABINET IN D.E.C., 1M ABOVE FLOOR - HIGH FREQ, 305-2560Hz

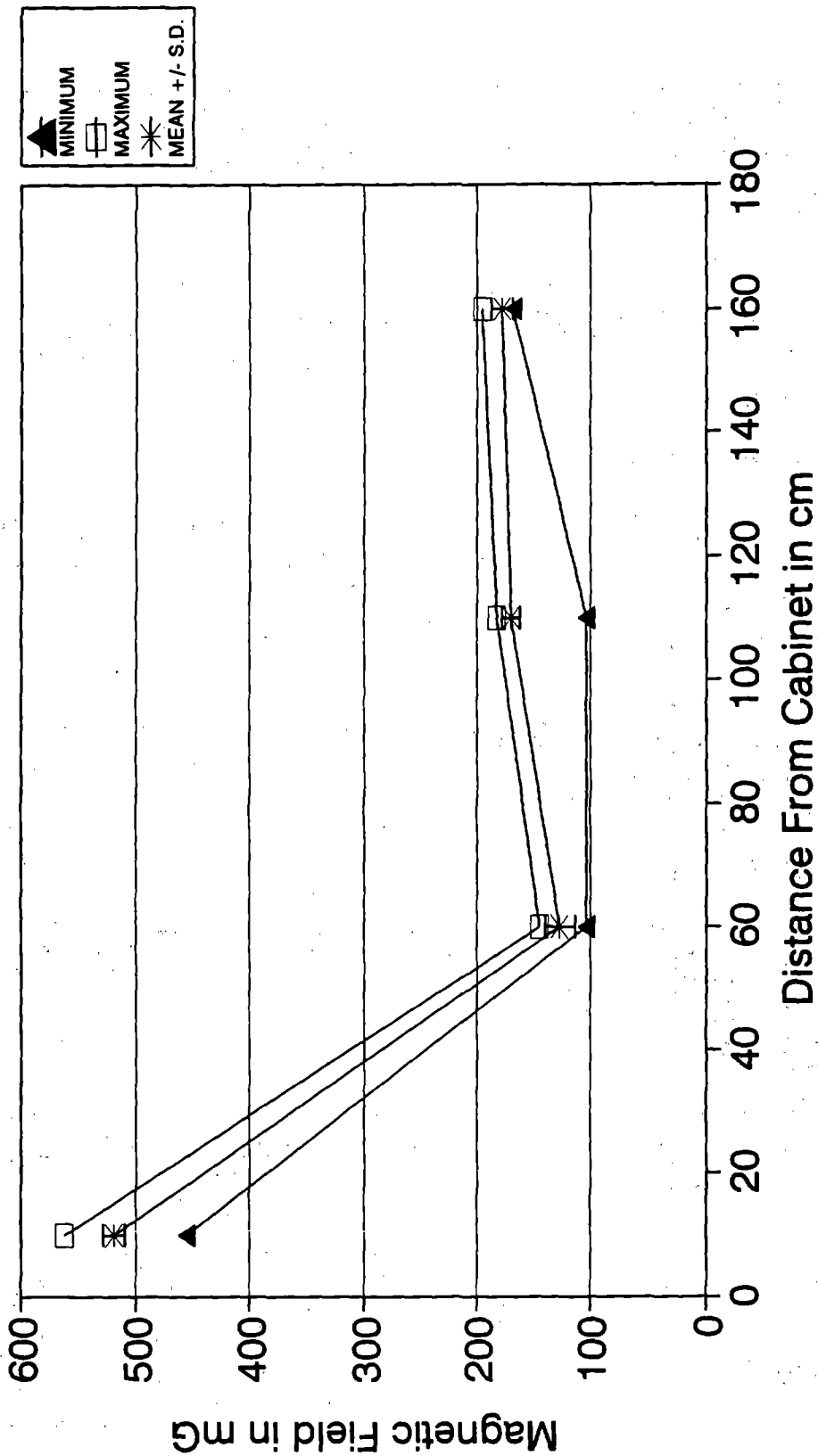


NEC024 - CABINET IN D.E.C., 1M ABOVE FLOOR - ALL FREQ, 5-2560Hz

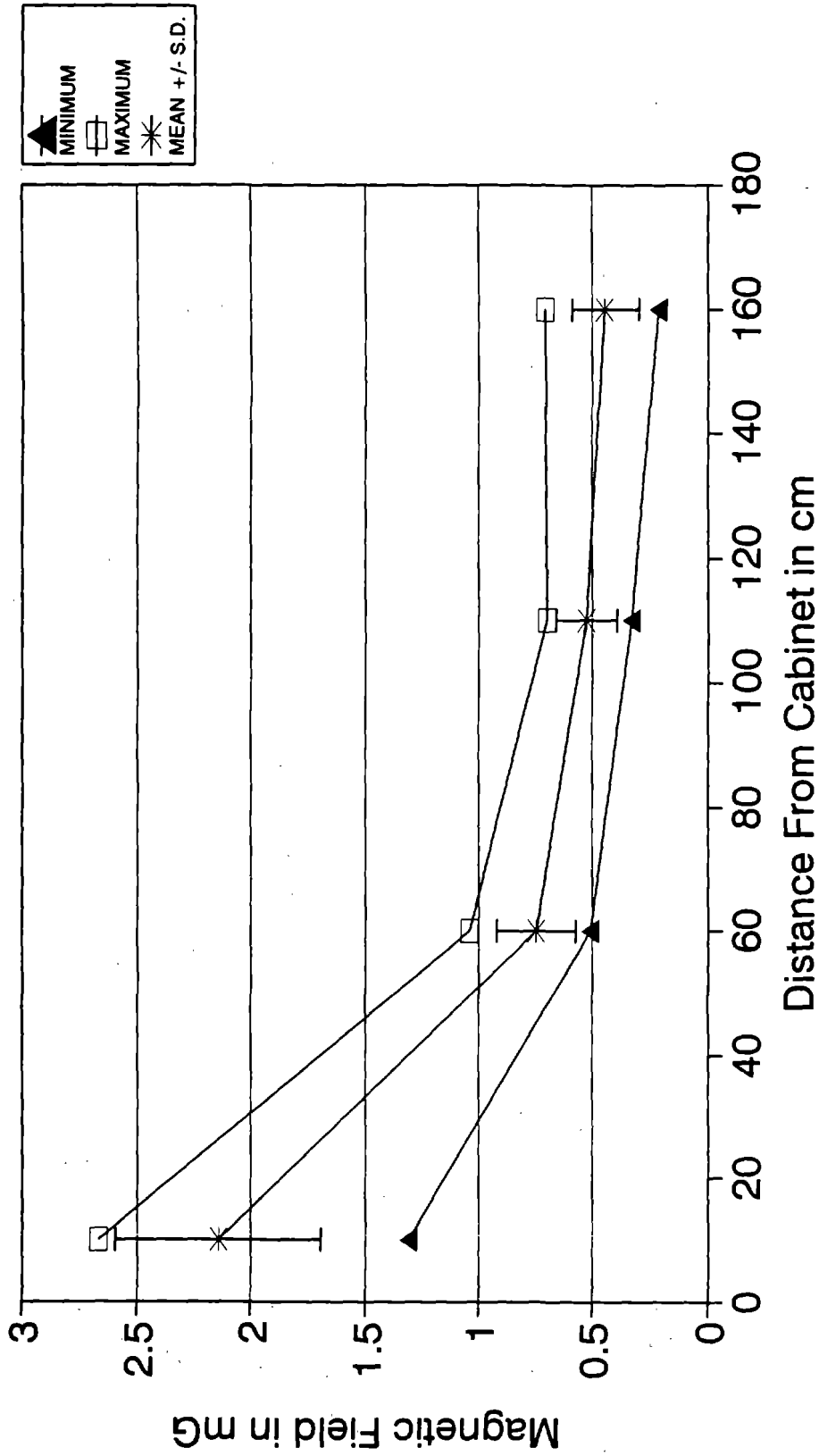
DIESEL - ELEC		CABINET IN ENGINEER'S COMPARTMENT				TOTAL OF 10 SAMPLES	
FREQUENCY BAND	DIST. FROM CAB. (cm)	MINIMUM MAGNETIC FIELD (mG)	MAXIMUM MAGNETIC FIELD (mG)	AVERAGE MAGNETIC FIELD (mG)	STANDARD DEVIATION (mG)	COEFFICIENT OF VARIATION (%)	
STATIC	10	455.30	561.85	518.78	9.45	1.82	
	60	104.13	145.26	126.93	13.35	10.52	
	110	104.13	181.75	169.93	8.04	4.73	
	160	168.30	194.71	178.27	9.45	5.30	
5-45Hz	10	1.31	2.66	2.14	0.45	20.97	
	60	0.51	1.04	0.75	0.17	22.89	
LOW FREQ	110	0.33	0.70	0.53	0.13	25.01	
	160	0.21	0.71	0.44	0.14	32.71	
50-60Hz	10	0.54	1.87	1.24	0.51	40.66	
	60	0.20	0.51	0.37	0.10	27.92	
PWR FREQ	110	0.19	0.42	0.25	0.07	26.62	
	160	0.07	0.32	0.17	0.08	43.68	
65-300Hz	10	2.75	6.40	4.63	1.57	33.90	
	60	0.51	1.25	0.92	0.32	34.46	
PWR HARM	110	0.30	0.71	0.52	0.16	31.36	
	160	0.17	0.47	0.36	0.10	27.84	
305-2560Hz	10	1.44	3.43	2.71	0.79	29.07	
	60	0.51	1.20	0.96	0.27	27.65	
HIGH FREQ	110	0.21	0.51	0.40	0.12	29.43	
	160	0.13	0.32	0.25	0.08	29.87	
5-2560Hz	10	3.44	7.85	5.92	1.82	30.68	
	60	0.93	1.98	1.60	0.34	21.44	
ALL FREQ	110	0.60	1.15	0.89	0.18	19.86	
	160	0.48	0.94	0.66	0.14	20.57	

DIESEL - ELEC		CABINET IN ENGINEER'S COMPARTMENT				TOTAL OF 10 SAMPLES	
FREQUENCY BAND	DIST. FROM CAB. (cm)	MINIMUM MAGNETIC FIELD (mG)	MAXIMUM MAGNETIC FIELD (mG)	AVERAGE MAGNETIC FIELD (mG)	STANDARD DEVIATION (mG)	COEFFICIENT OF VARIATION (%)	
STATIC	10	455.30	561.85	518.78	9.45	1.82	
	60	104.13	145.26	126.93	13.35	10.52	
	110	104.13	181.75	169.93	8.04	4.73	
	160	168.30	194.71	178.27	9.45	5.30	
5-45Hz LOW FREQ	10	1.31	2.66	2.14	0.45	20.97	
	60	0.51	1.04	0.75	0.17	22.89	
	110	0.33	0.70	0.53	0.13	25.01	
50-60Hz PWR FREQ	160	0.21	0.71	0.44	0.14	32.71	
	10	0.54	1.87	1.24	0.51	40.66	
	60	0.20	0.51	0.37	0.10	27.92	
65-300Hz PWR HARM	110	0.19	0.42	0.25	0.07	26.62	
	160	0.07	0.32	0.17	0.08	43.68	
	10	2.75	6.40	4.63	1.57	33.90	
305-2560Hz HIGH FREQ	60	0.51	1.25	0.92	0.32	34.46	
	110	0.30	0.71	0.52	0.16	31.36	
	160	0.17	0.47	0.36	0.10	27.84	
5-2560Hz ALL FREQ	10	1.44	3.43	2.71	0.79	29.07	
	60	0.51	1.20	0.96	0.27	27.65	
	110	0.21	0.51	0.40	0.12	29.43	
160	160	0.13	0.32	0.25	0.08	29.87	
	10	3.44	7.85	5.92	1.82	30.68	
	60	0.93	1.98	1.60	0.34	21.44	
110	110	0.60	1.15	0.89	0.18	19.86	
	160	0.48	0.94	0.66	0.14	20.57	

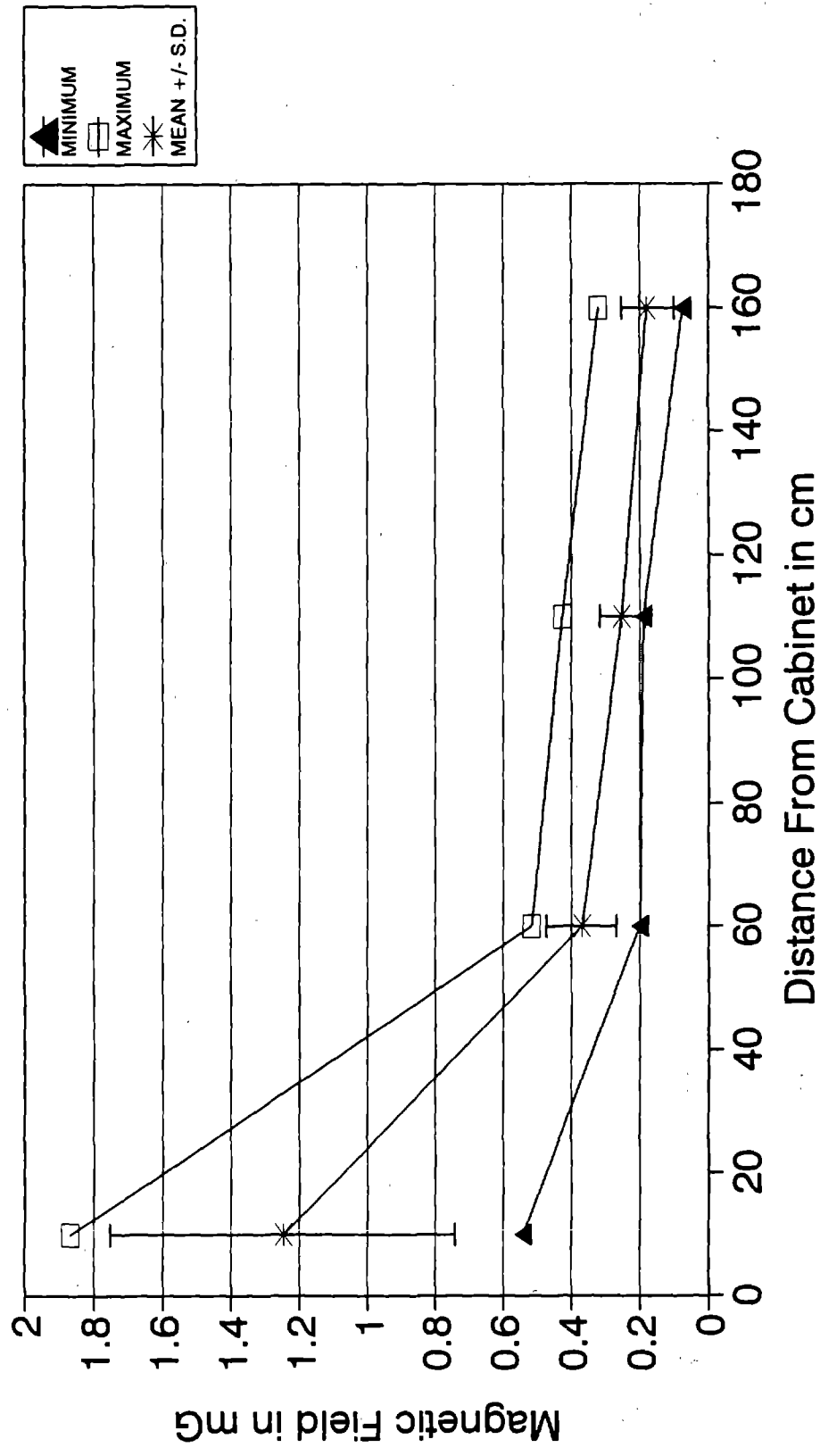
DIESEL - ELECTRICAL CABINET IN D.E.C. STATIC



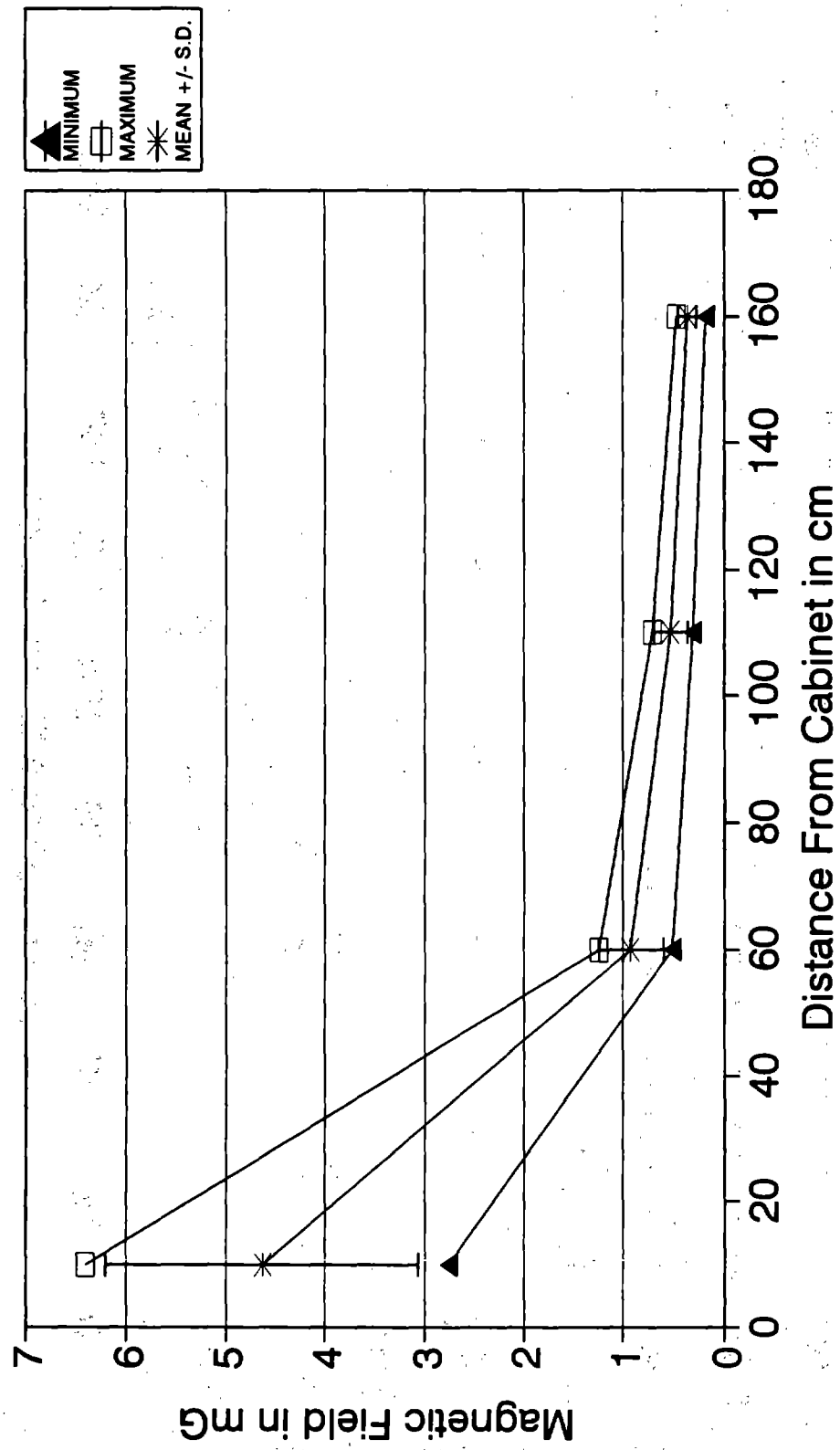
DIESEL - ELECTRICAL CABINET IN D.E.C. LOW FREQUENCY (5-45 Hz)



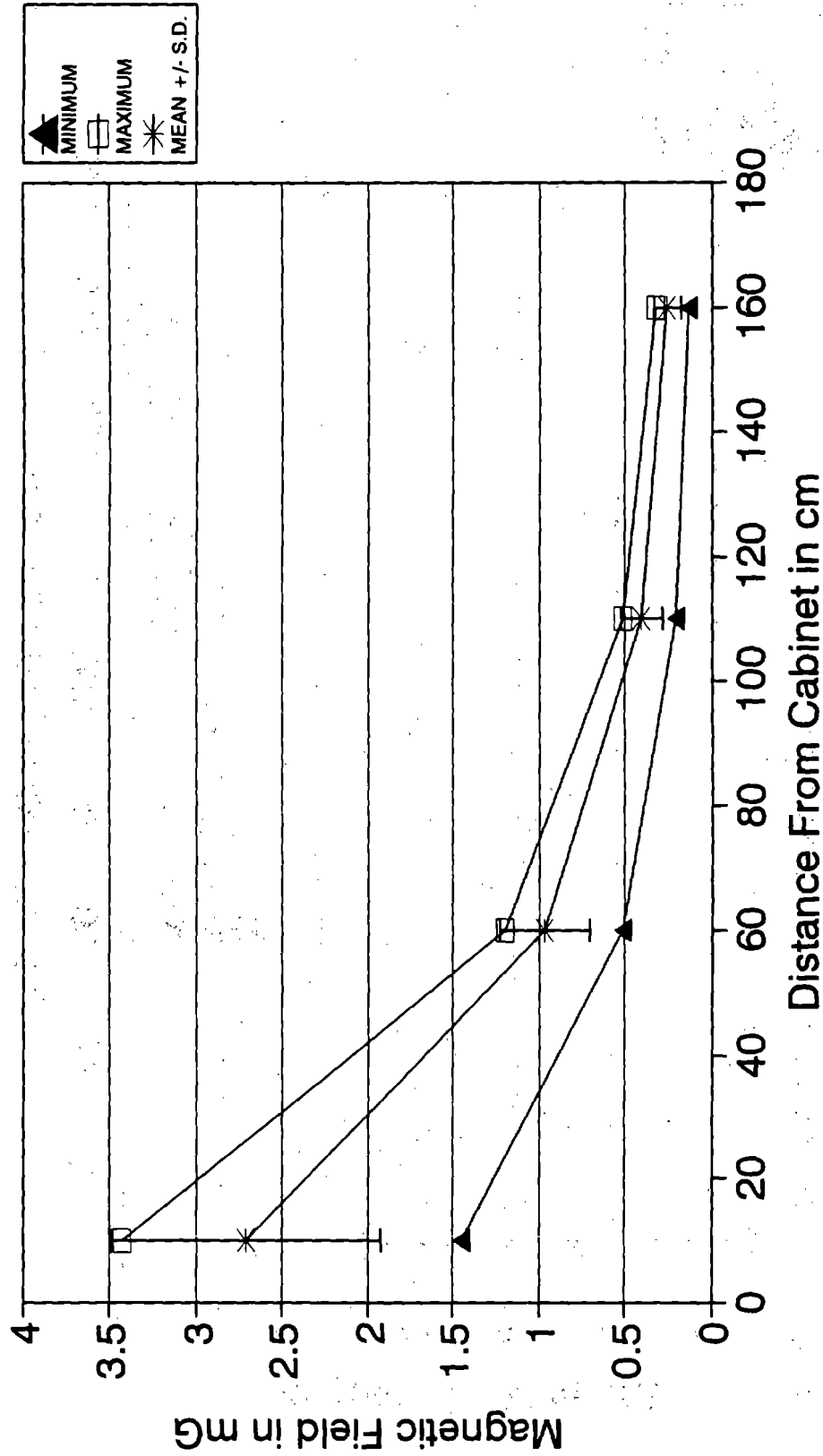
DIESEL - ELECTRICAL CABINET IN D.E.C. POWER FREQUENCY (50-60 Hz)



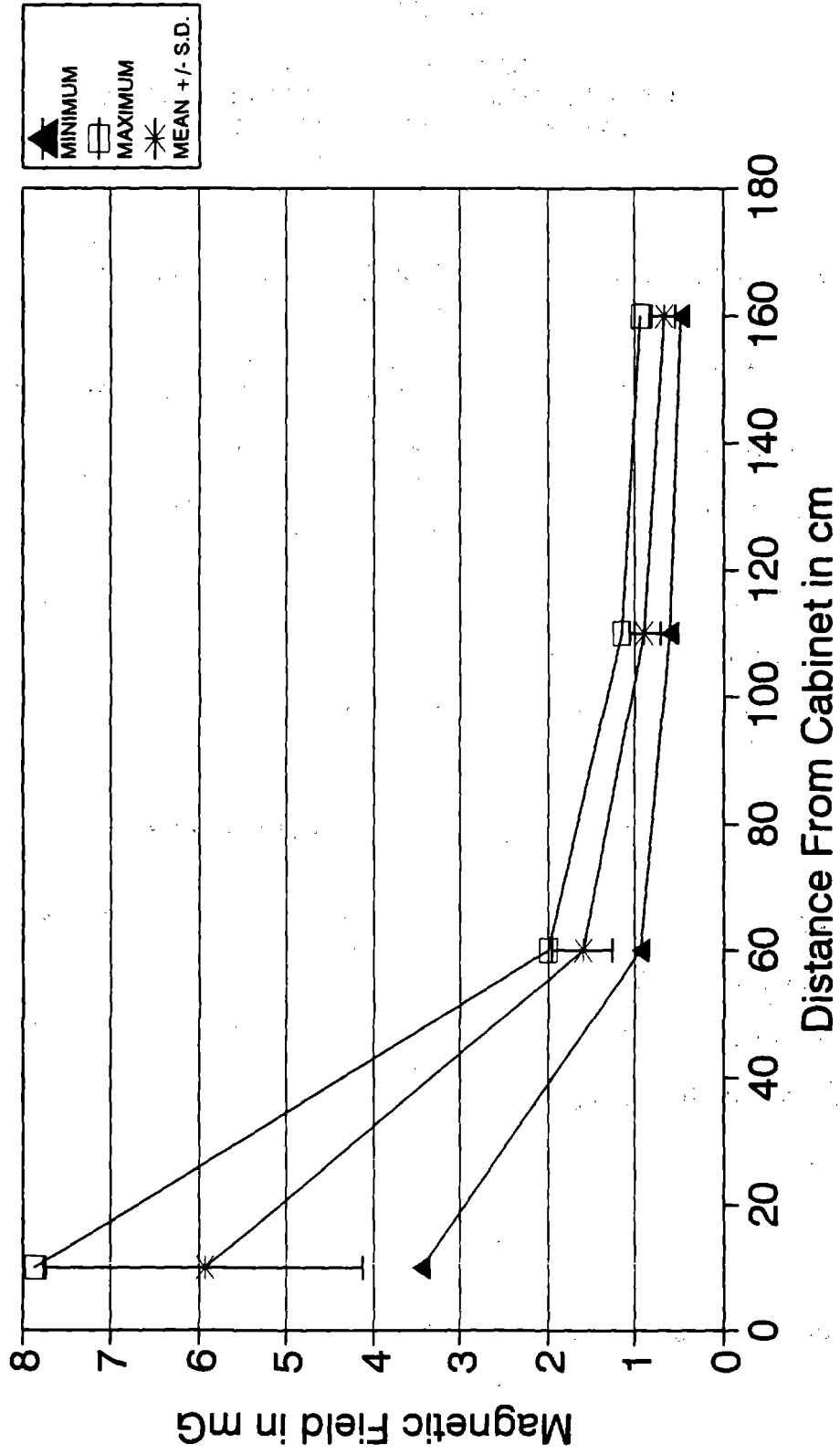
DIESEL - ELECTRICAL CABINET IN D.E.C. POWER HARMONICS (65-300 Hz)



DIESEL - ELECTRICAL CABINET IN D.E.C. HIGH FREQUENCY (305-2560 Hz)



DIESEL - ELECTRICAL CABINET IN D.E.C. ALL FREQUENCIES (5-2560 Hz)



APPENDIX Z

DATASET NEC025
VERTICAL PROFILE AT FIREMAN'S SEAT
DIESEL-ELECTRIC LOCOMOTIVE

Measurement Setup Code: Staff: 23 Reference: None
 Drawing: A-4

Vehicle Status: Train traveling south at
 approximately constant speed

Measurement Date: March 31, 1992

Measurement Time: Start: 10:01:25
 End: 10:04:19

Number of Samples: 11

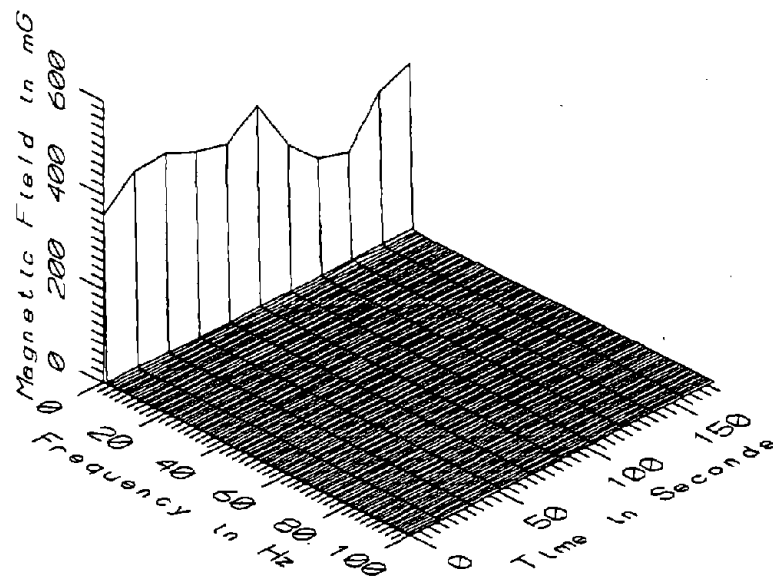
Programmed Sample Interval: 5 sec

Actual Sample Interval: 17.4 sec

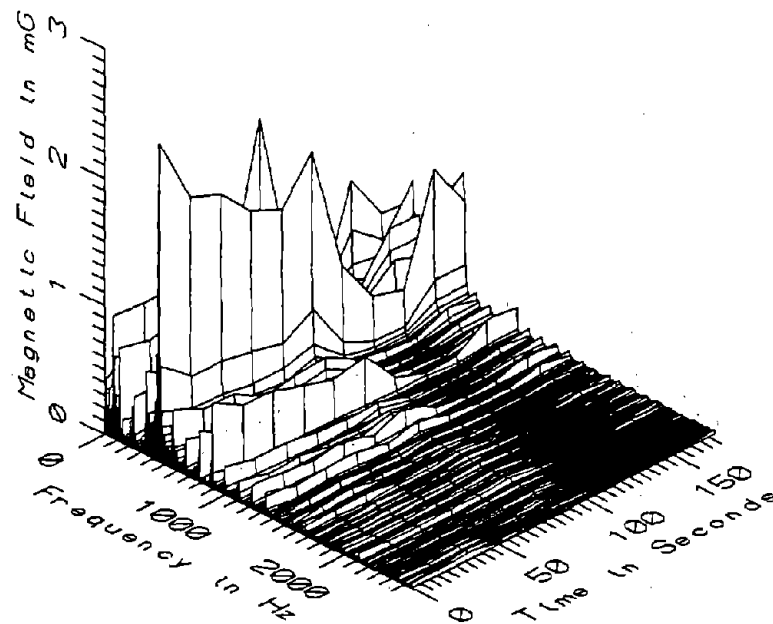
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

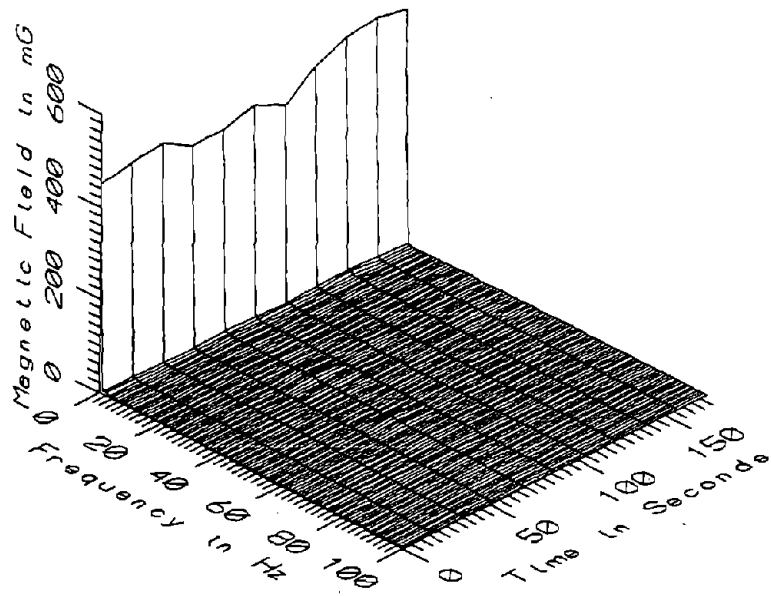
Missing or Suspect Data: None



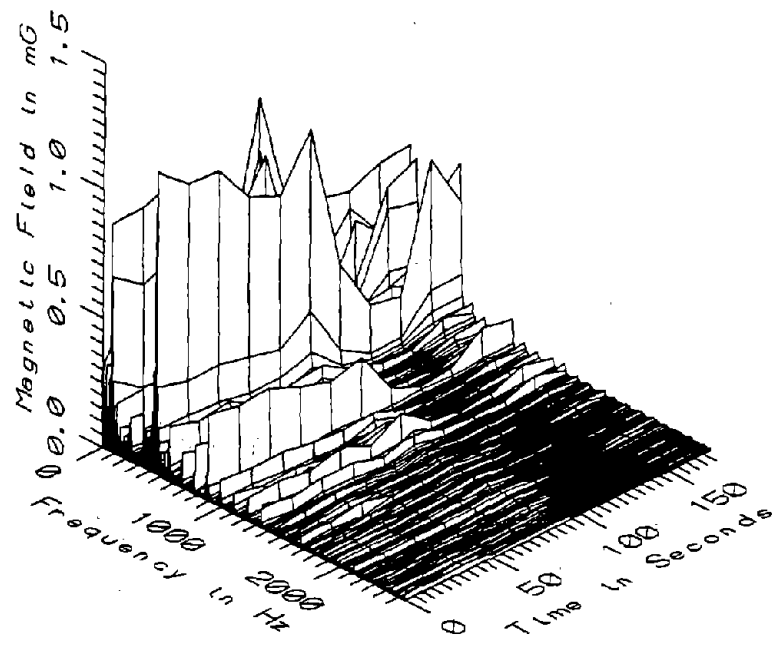
NEC025 - 10cm ABOVE FLOOR RIGHT OF FIREMAN IN D.E.C.



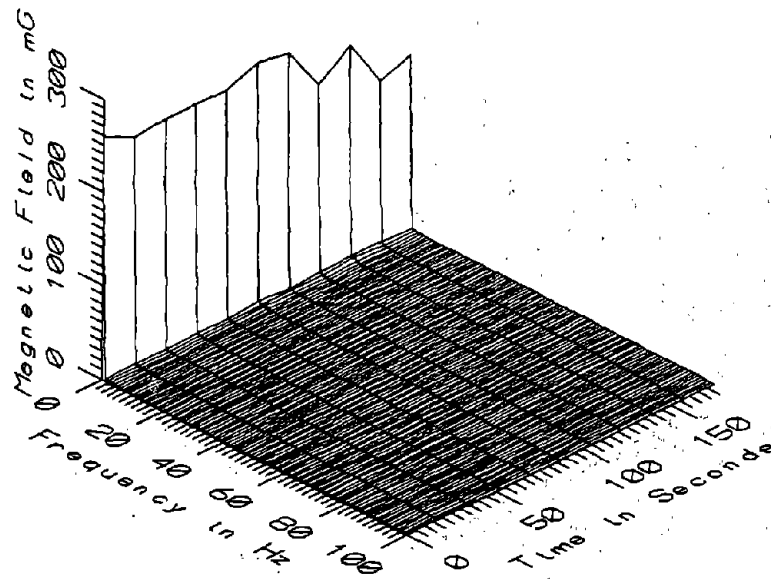
NEC025 - 10cm ABOVE FLOOR RIGHT OF FIREMAN IN D.E.C.



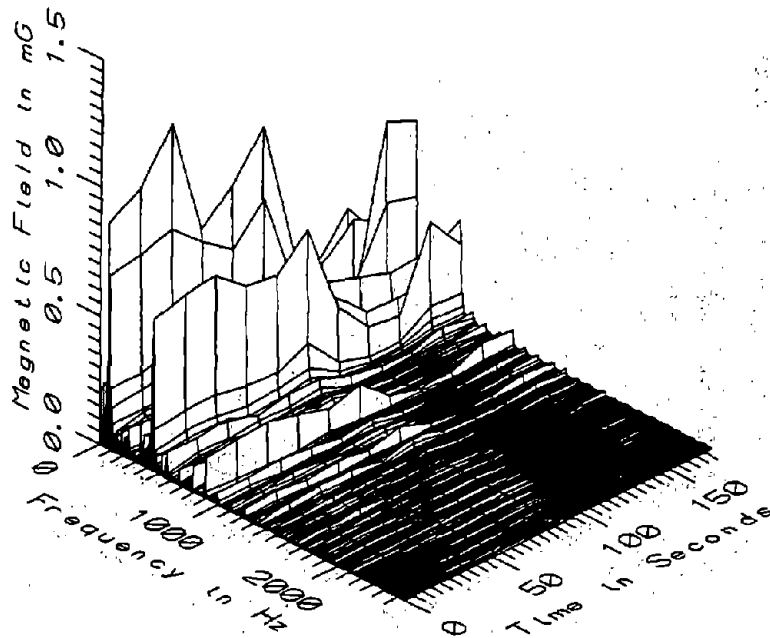
NEC025 - 60cm ABOVE FLOOR RIGHT OF FIREMAN IN D.E.C.



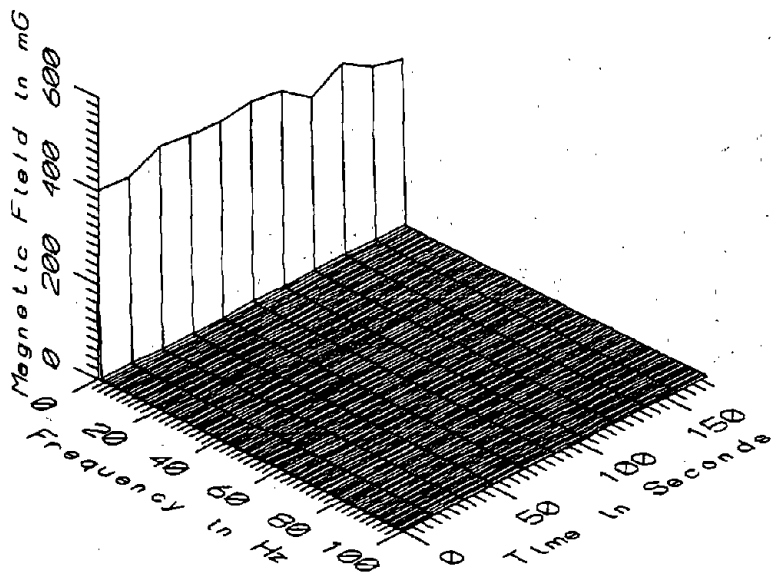
NEC025 - 60cm ABOVE FLOOR RIGHT OF FIREMAN IN D.E.C.



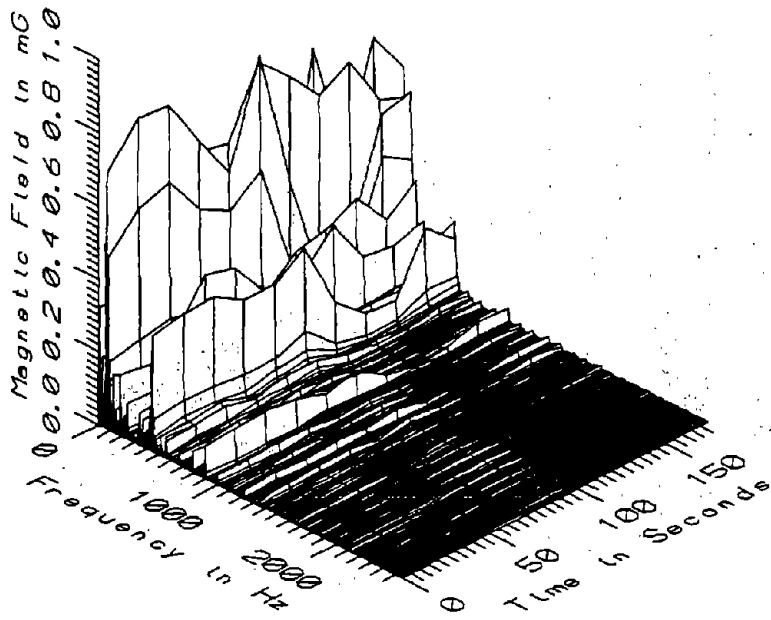
NEC025 - 110cm ABOVE FLOOR RIGHT OF FIREMAN IN D.E.C.



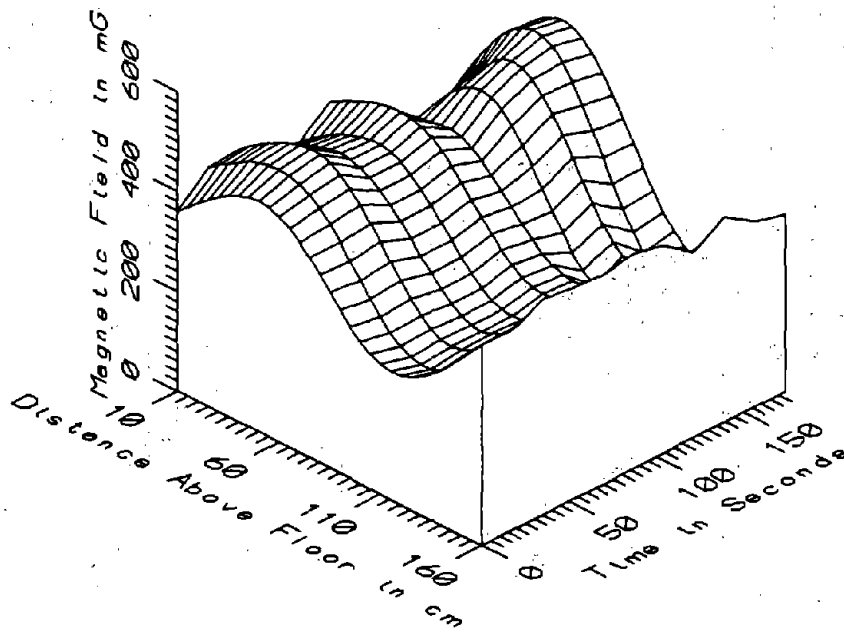
NEC025 - 110cm ABOVE FLOOR RIGHT OF FIREMAN IN D.E.C.



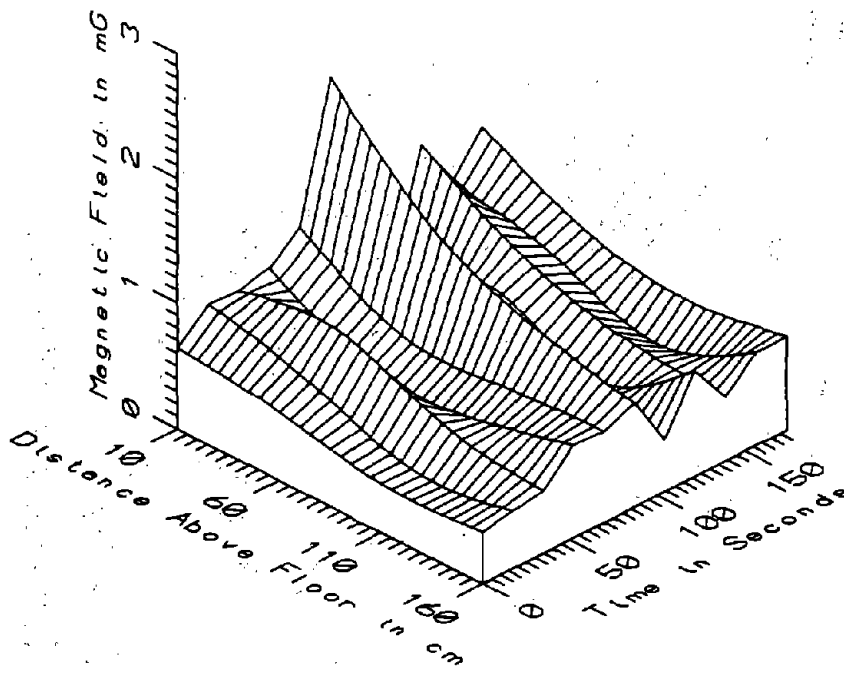
NEC025 - 160cm ABOVE FLOOR RIGHT OF FIREMAN IN D.E.C.



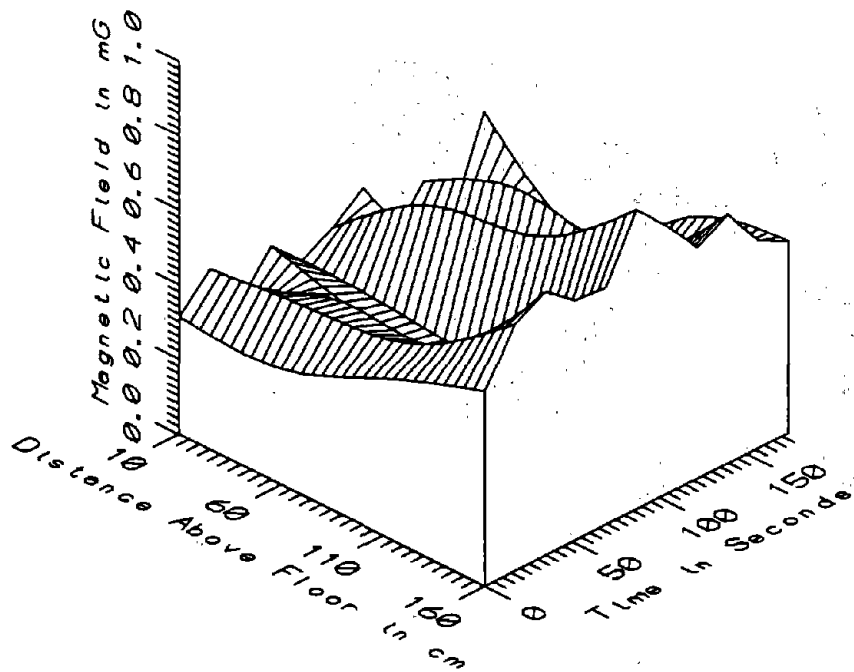
NEC025 - 160cm ABOVE FLOOR RIGHT OF FIREMAN IN D.E.C.



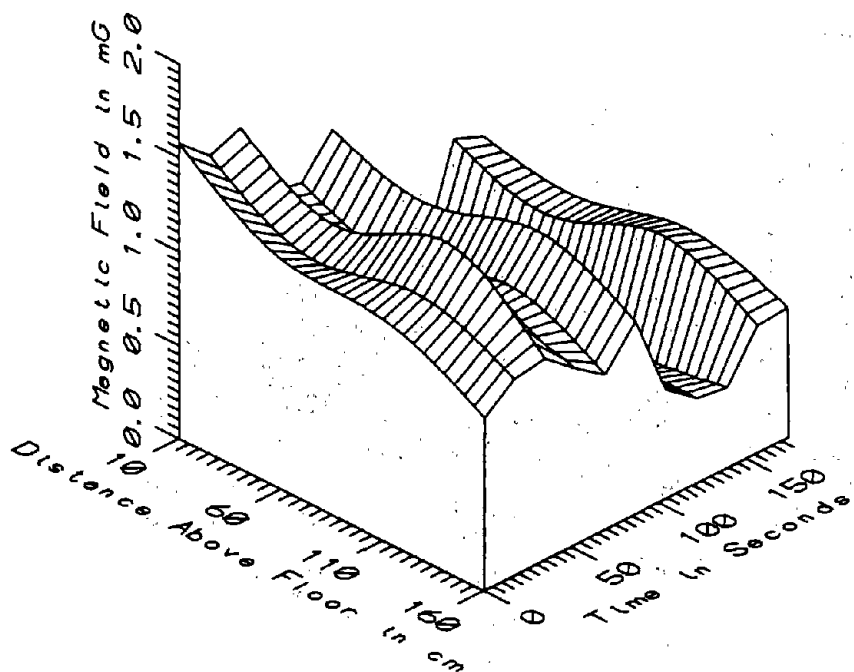
NEC025 - RIGHT OF FIREMAN IN D.E.C. - STATIC



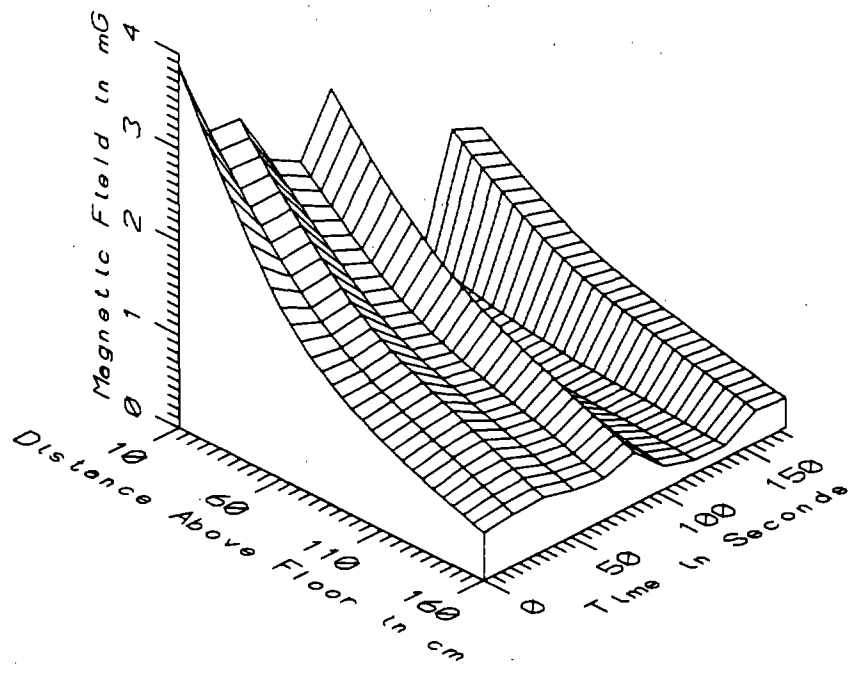
NEC025 - RIGHT OF FIREMAN IN D.E.C. - LOW FREQ, 5-45Hz



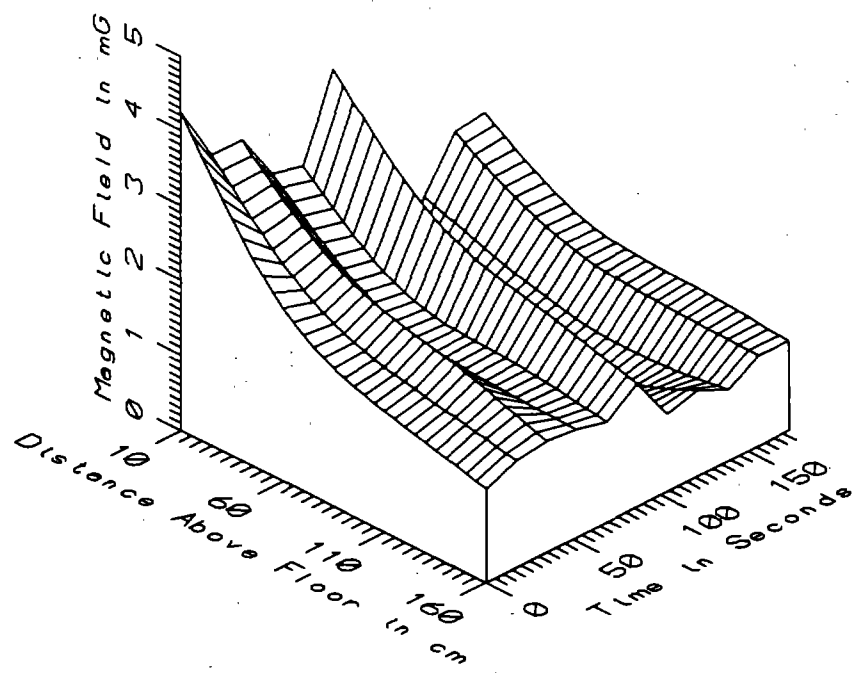
NEC025 - RIGHT OF FIREMAN IN D.E.C. - POWER FREQ, 50-60Hz



NEC025 - RIGHT OF FIREMAN IN D.E.C. - POWER HARM, 65-300Hz



NEC025 - RIGHT OF FIREMAN IN D.E.C. - HIGH FREQ, 305-2560Hz



NEC025 - RIGHT OF FIREMAN IN D.E.C. - ALL FREQ, 5-2560Hz

APPENDIX AA

DATASET NEC026
VERTICAL PROFILE AT ENGINEER'S SEAT
ELECTRIC LOCOMOTIVE, 60 HZ NEC

Measurement Setup Code: Staff: 24 Reference: 25
 Drawing: A-4

Vehicle Status: Train departing New Haven headed
 west

Measurement Date: March 31, 1992

Measurement Time: Start: 12:29:37
 End: 12:34:30

Number of Samples: 56

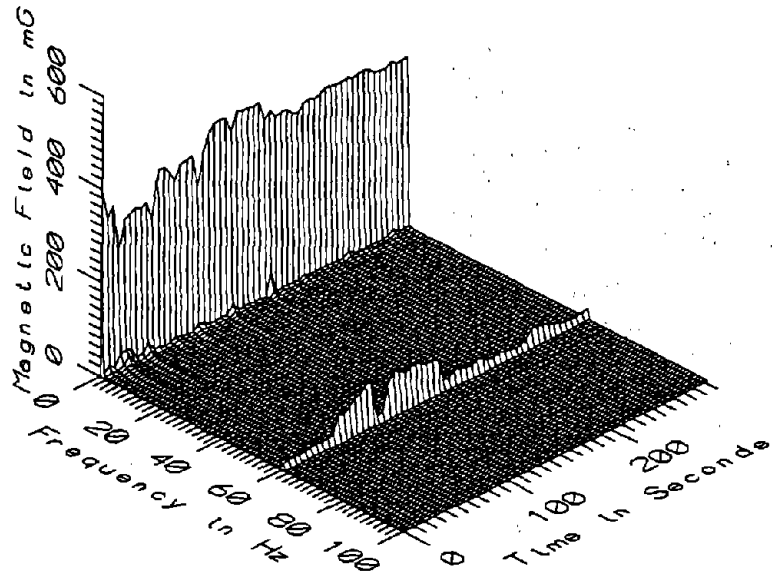
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.3 sec

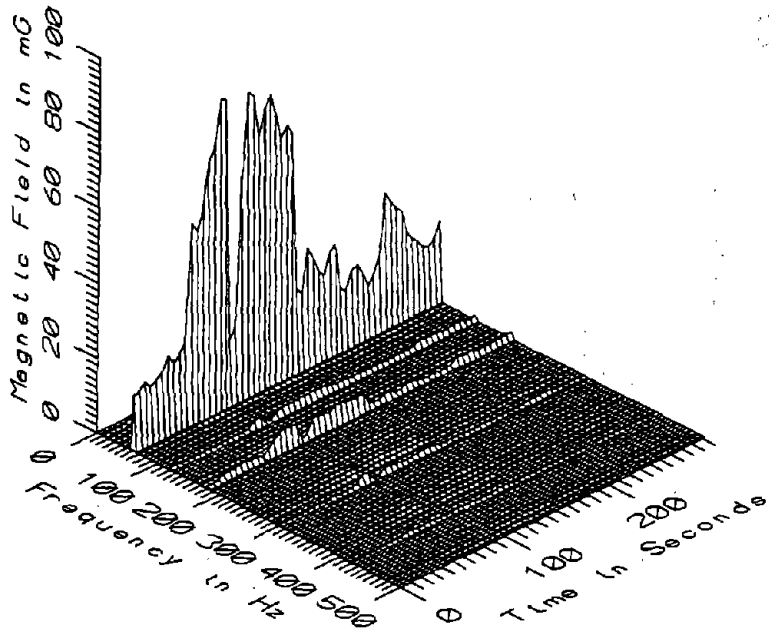
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

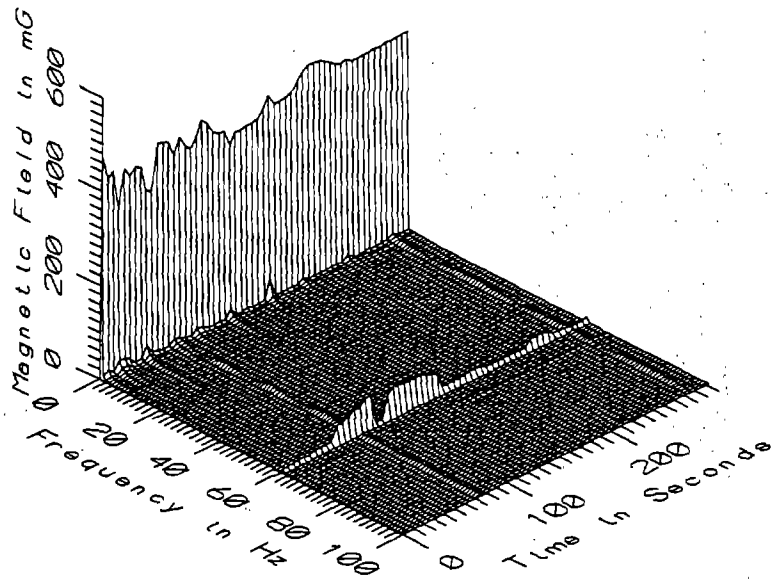
Missing or Suspect Data: None



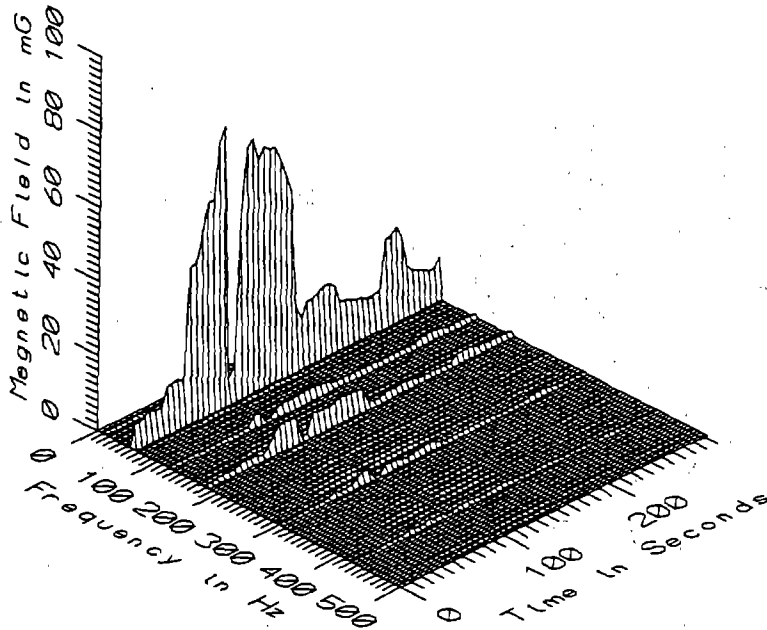
NEC026 - 10cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT IN R.E.C.



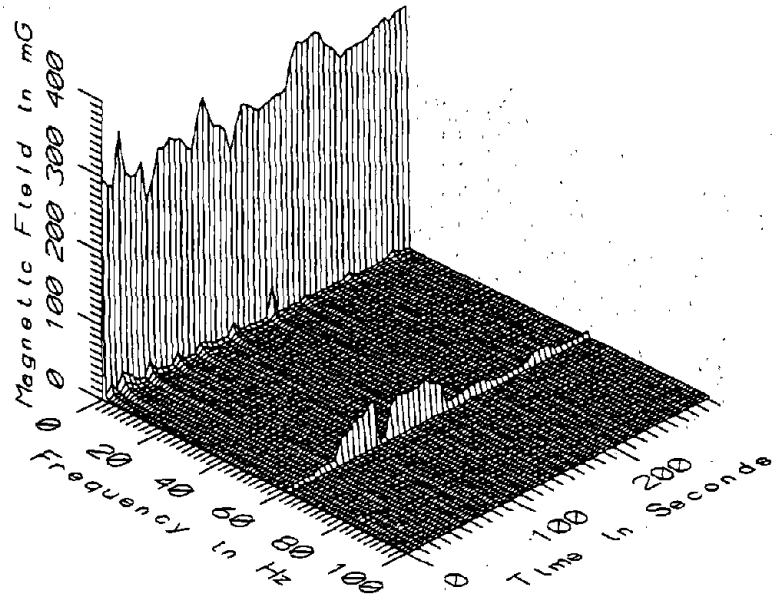
NEC026 - 10cm ABOVE FLOOR LEFT OF ENGINEER IN R.E.C.



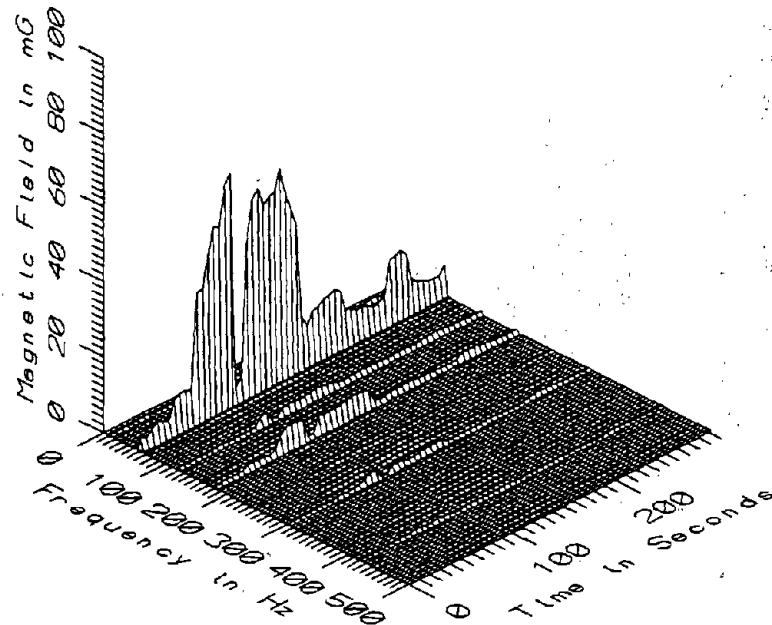
NEC026 - 60cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT IN R.E.C.



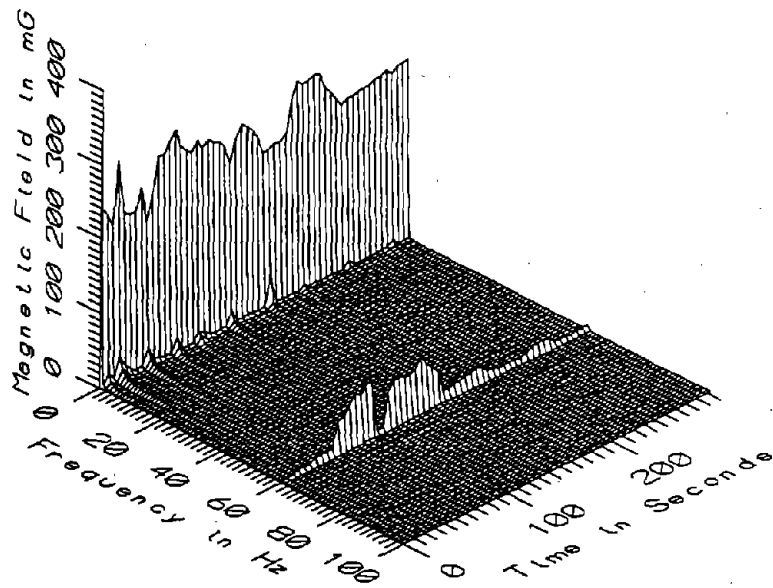
NEC026 - 60cm ABOVE FLOOR LEFT OF ENGINEER IN R.E.C.



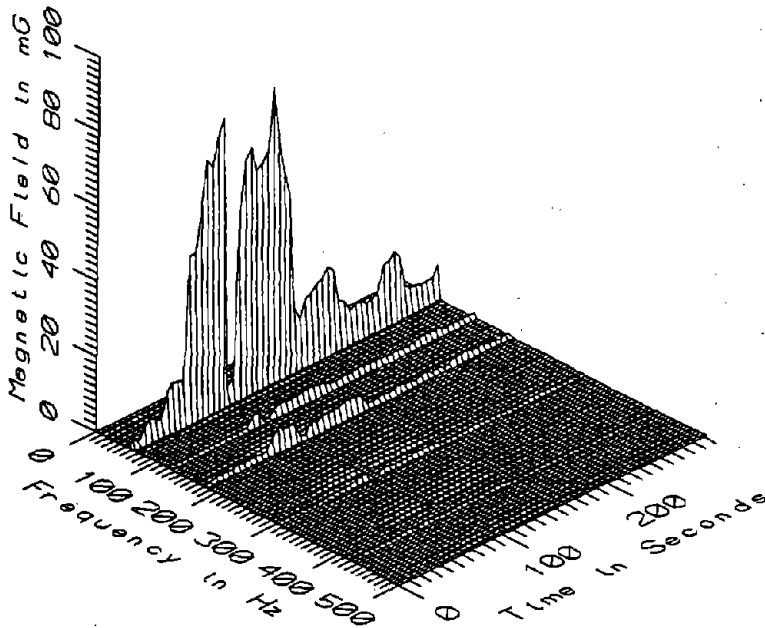
NEC026 - 110cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT IN R.E.C.



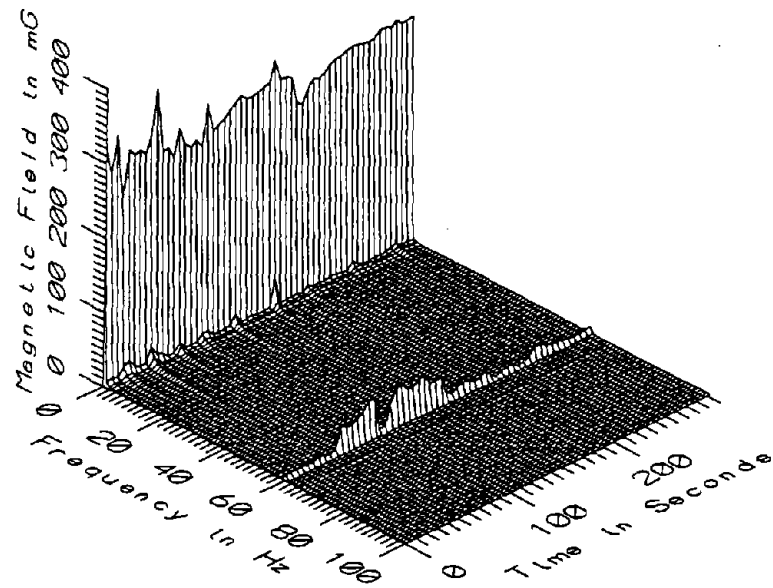
NEC026 - 110cm ABOVE FLOOR LEFT OF ENGINEER IN R.E.C.



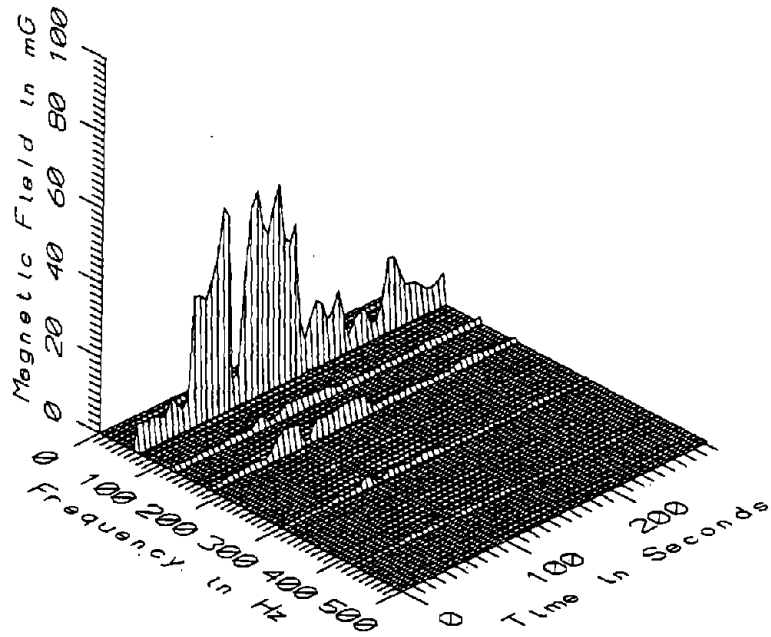
NEC026 - 160cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT IN R.E.C.



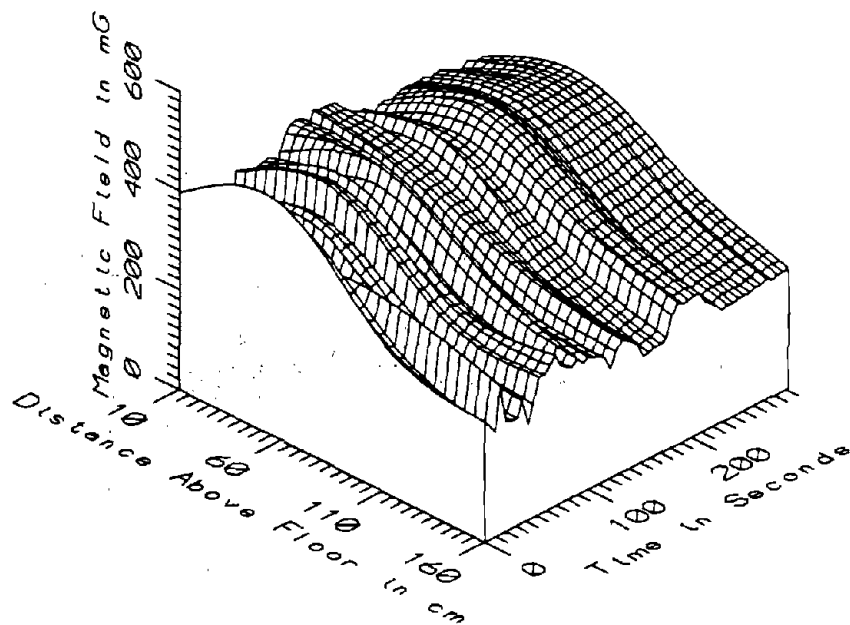
NEC026 - 160cm ABOVE FLOOR LEFT OF ENGINEER IN R.E.C.



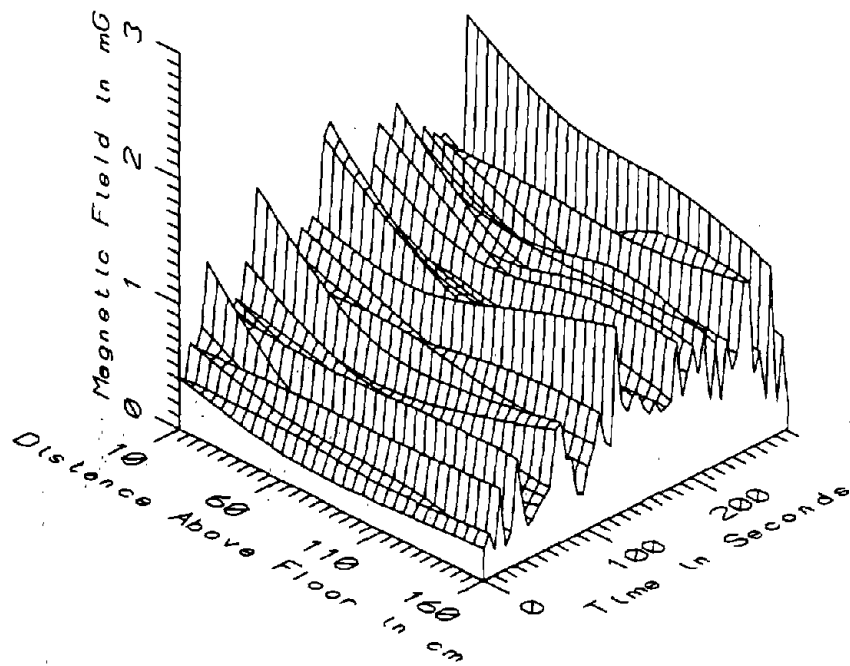
NEC026 - REFERENCE PROBE - FIREMAN'S SEAT IN R.E.C.



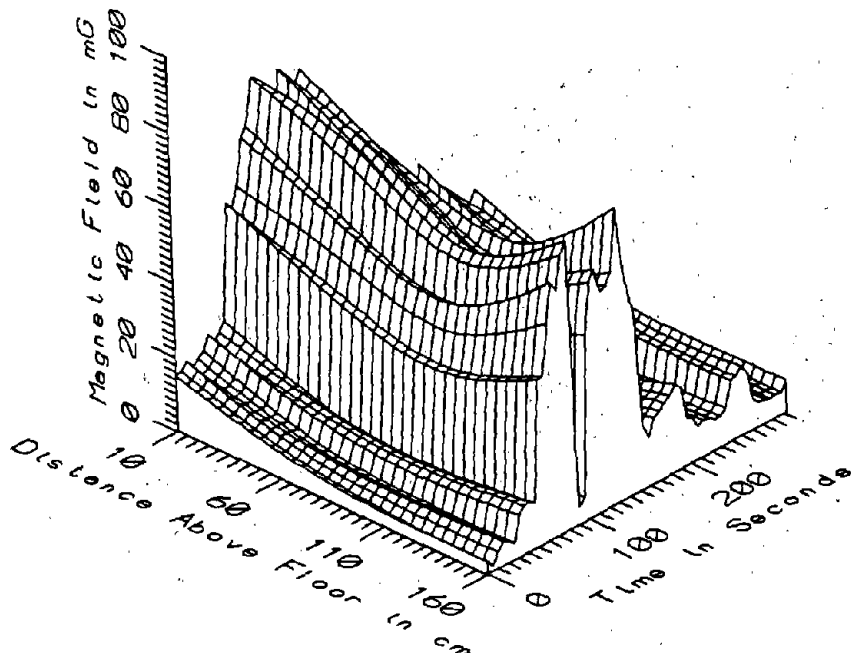
NEC026 - REFERENCE PROBE - FIREMAN'S SEAT IN R.E.C.



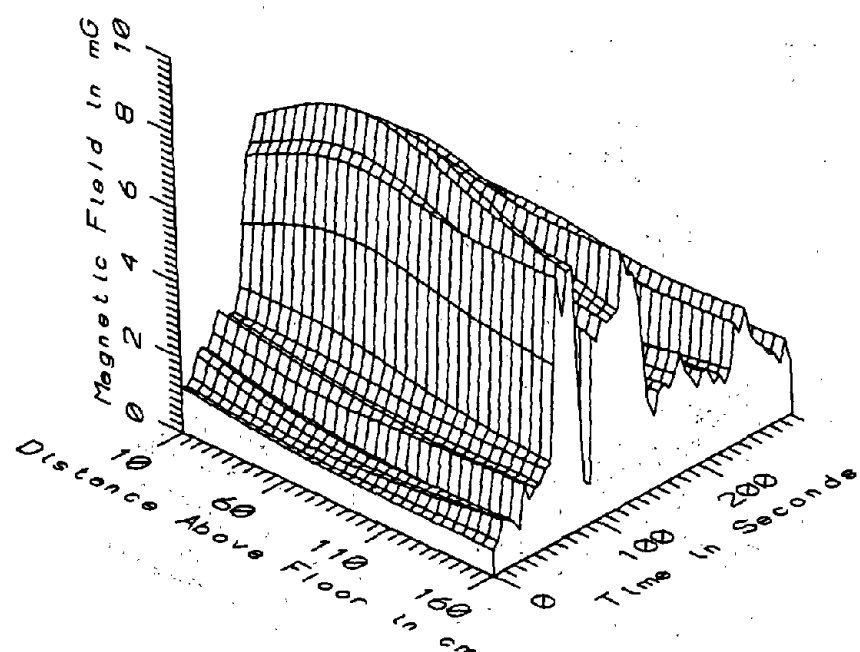
NEC026 - LEFT OF ENGINEER IN R.E.C. - STATIC



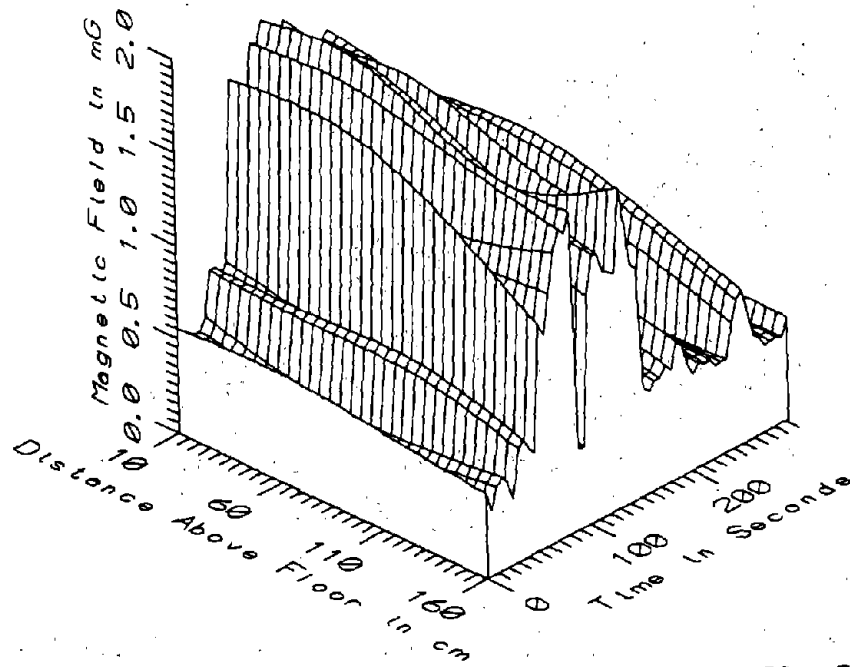
NEC026 - LEFT OF ENGINEER IN R.E.C. - LOW FREQ, 5-45Hz



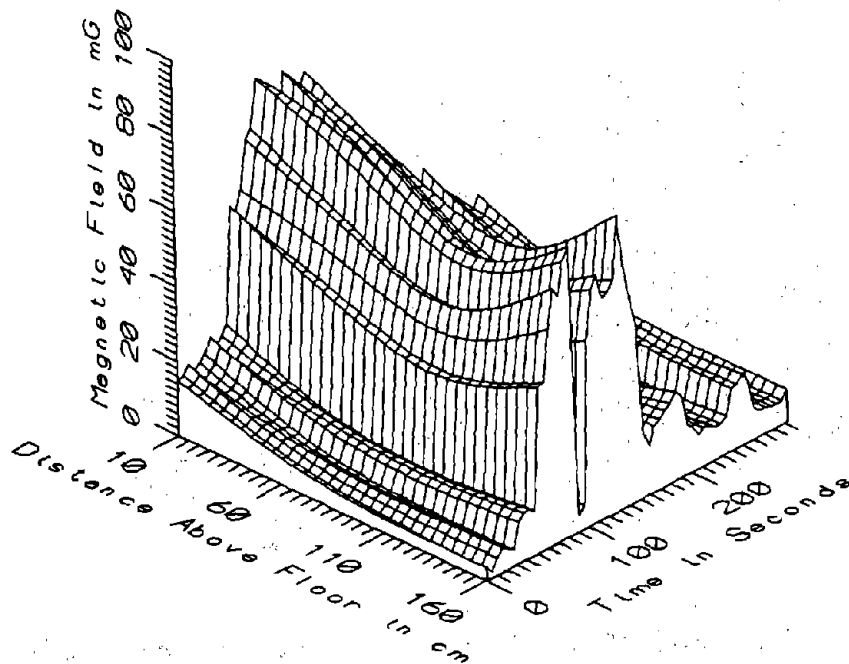
NEC026 - LEFT OF ENGINEER IN R.E.C. - POWER FREQ, 50-60Hz



NEC026 - LEFT OF ENGINEER IN R.E.C. - POWER HARM, 65-300Hz



NEC026 - LEFT OF ENGINEER IN R.E.C. - HIGH FREQ, 305-2560Hz



NEC026 - LEFT OF ENGINEER IN R.E.C. - ALL FREQ, 5-2560Hz

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APPENDIX AB

DATASET NEC027
VERTICAL PROFILE AT THE FIREMAN'S SEAT
ELECTRIC LOCOMOTIVE, 60 HZ NEC

Measurement Setup Code: Staff: 26 Reference: 25
 Drawing: A-4

Vehicle Status: Train traveling west without stops

Measurement Date: March 31, 1992

Measurement Time: Start: 12:37:10
 End: 12:42:37

Number of Samples: 60

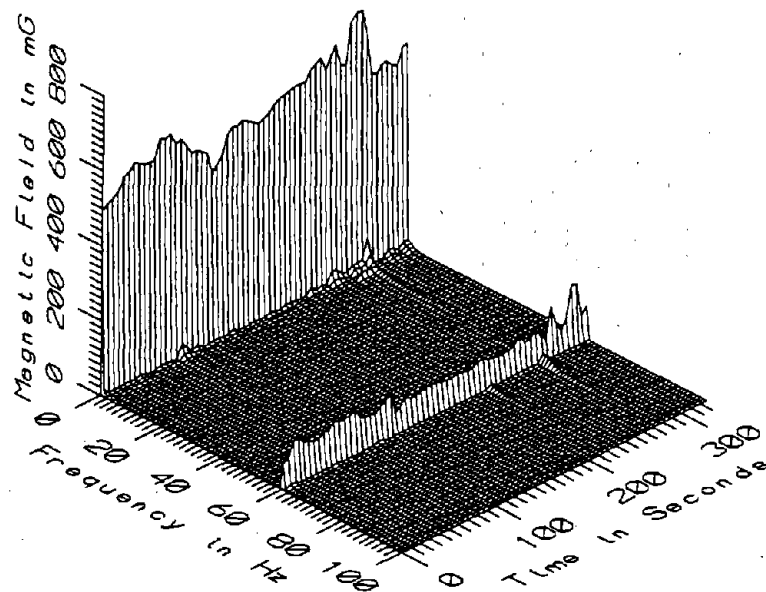
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.5 sec

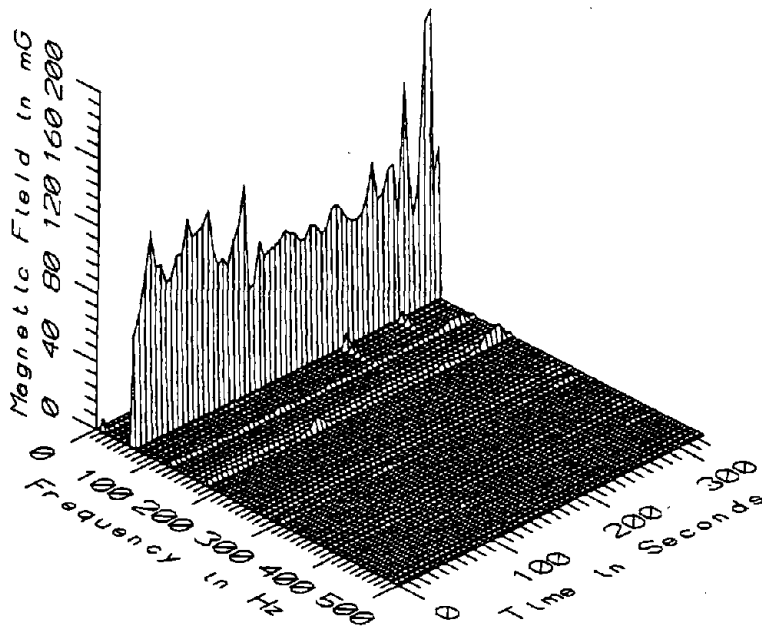
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

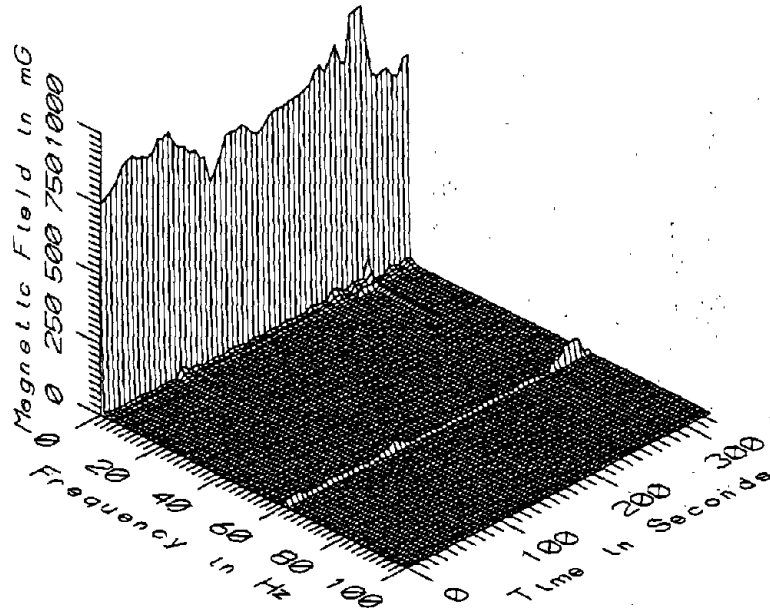
Missing or Suspect Data: None



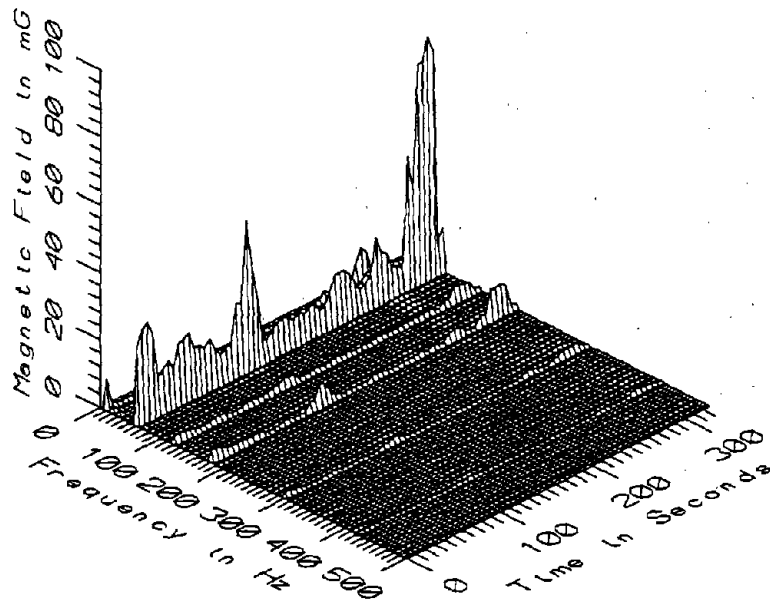
NEC027 - 10cm ABOVE FLOOR RIGHT OF FIREMAN IN R.E.C.



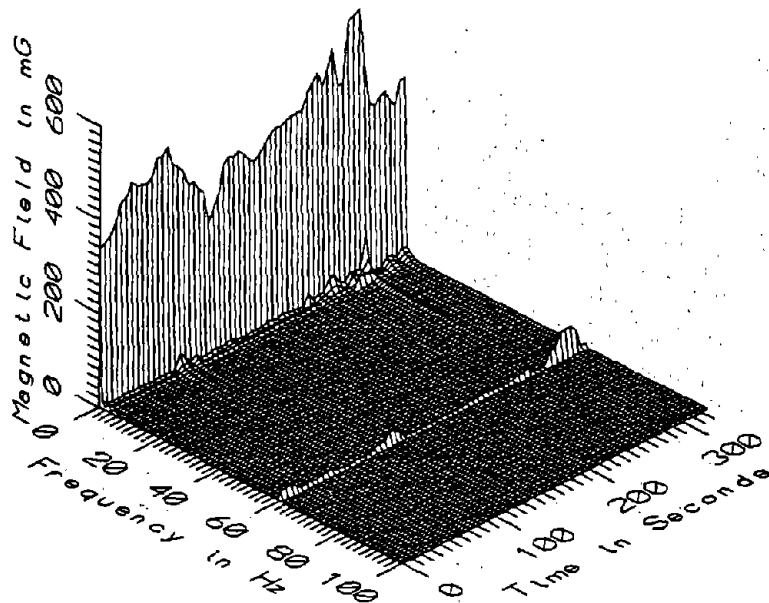
NEC027 - 10cm ABOVE FLOOR RIGHT OF FIREMAN IN R.E.C.



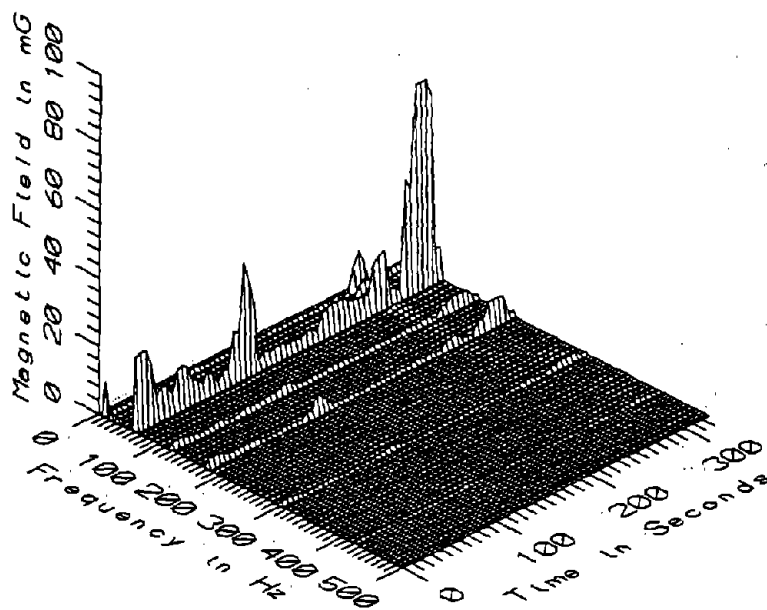
NEC027 - 60cm ABOVE FLOOR RIGHT OF FIREMAN IN R.E.C.



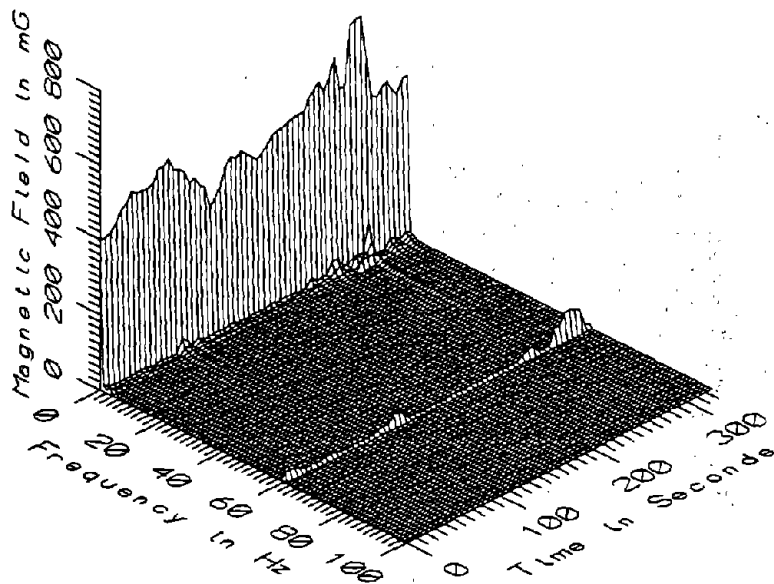
NEC027 - 60cm ABOVE FLOOR RIGHT OF FIREMAN IN R.E.C.



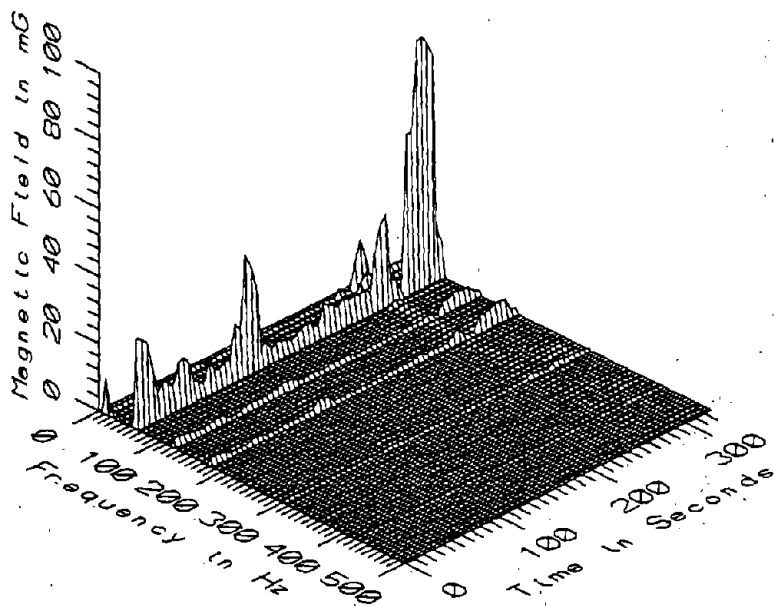
NEC027 - 110cm ABOVE FLOOR RIGHT OF FIREMAN IN R.E.C.



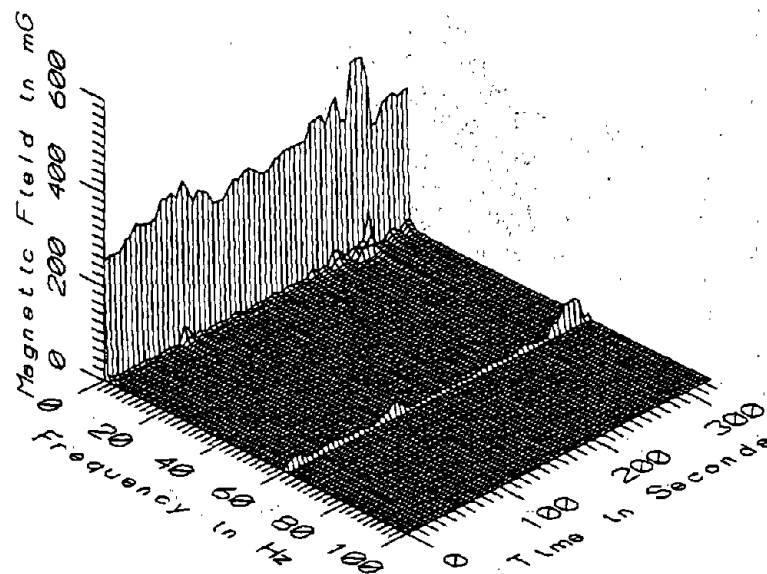
NEC027 - 110cm ABOVE FLOOR RIGHT OF FIREMAN IN R.E.C.



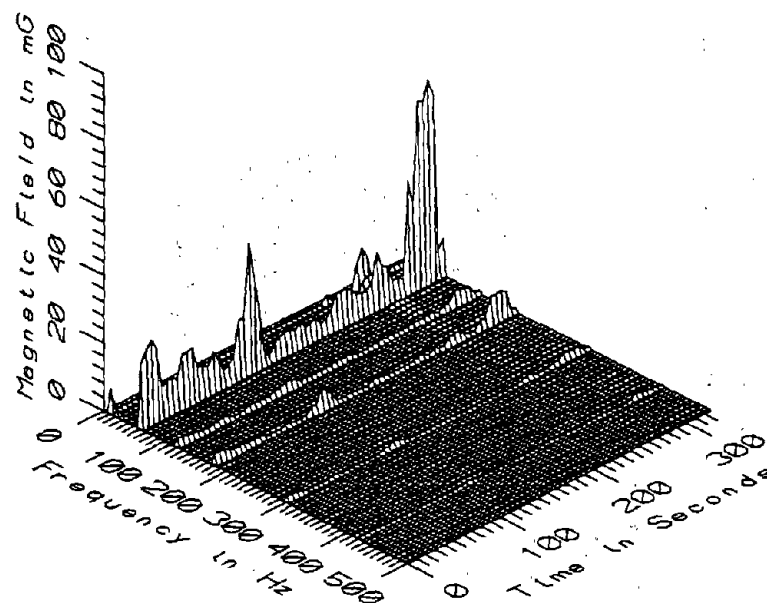
NEC027 - 160cm ABOVE FLOOR RIGHT OF FIREMAN IN R.E.C.



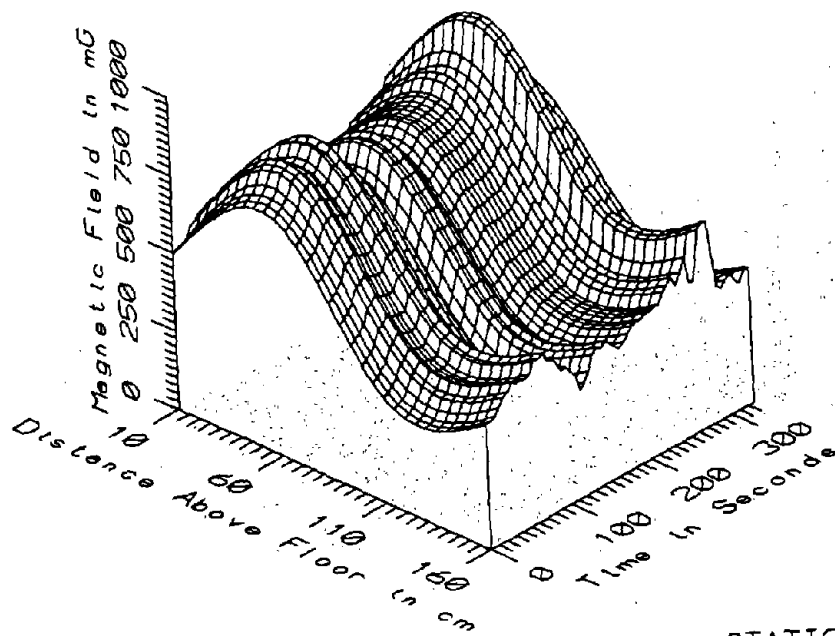
NEC027 - 160cm ABOVE FLOOR RIGHT OF FIREMAN IN R.E.C.



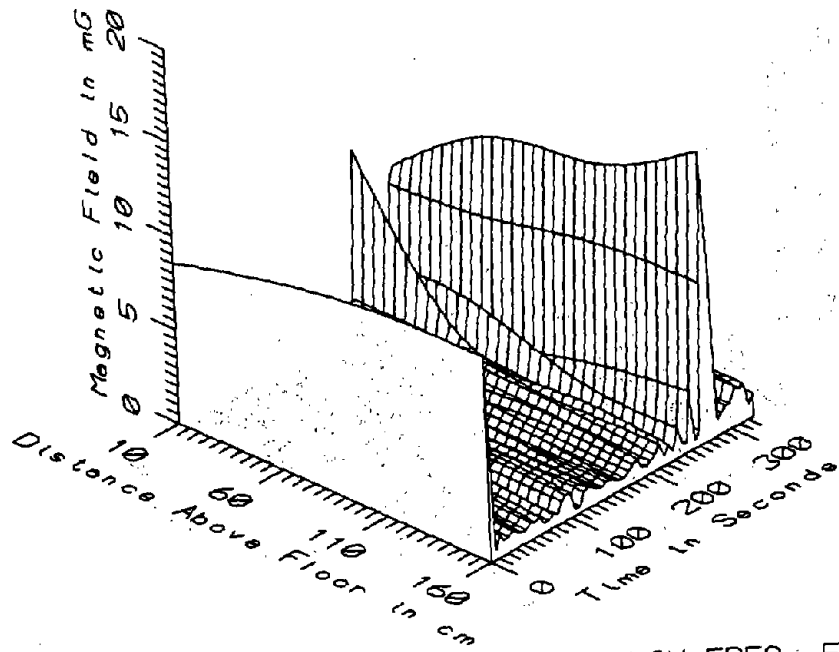
NEC027 - REFERENCE PROBE - FIREMAN'S SEAT IN R.E.C.



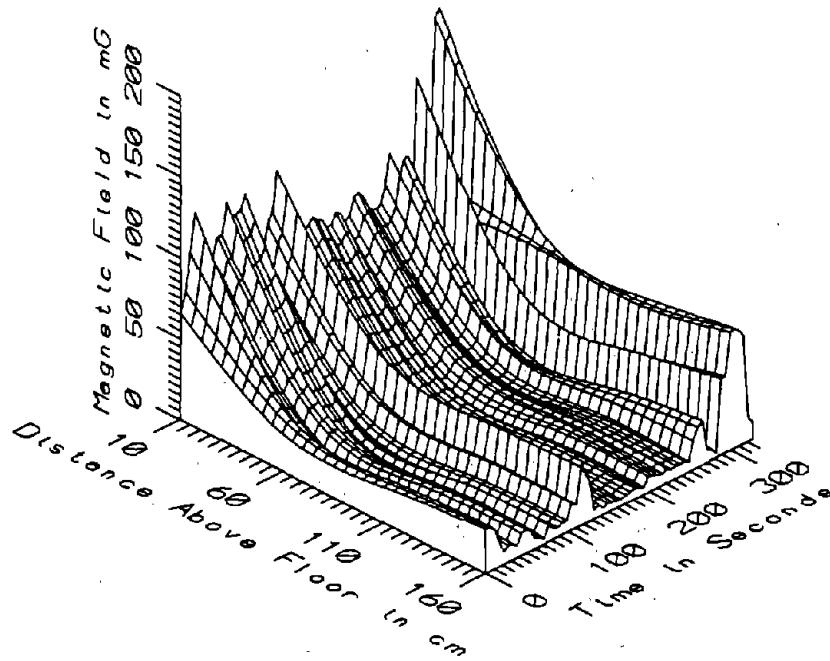
NEC027 - REFERENCE PROBE - FIREMAN'S SEAT IN R.E.C.



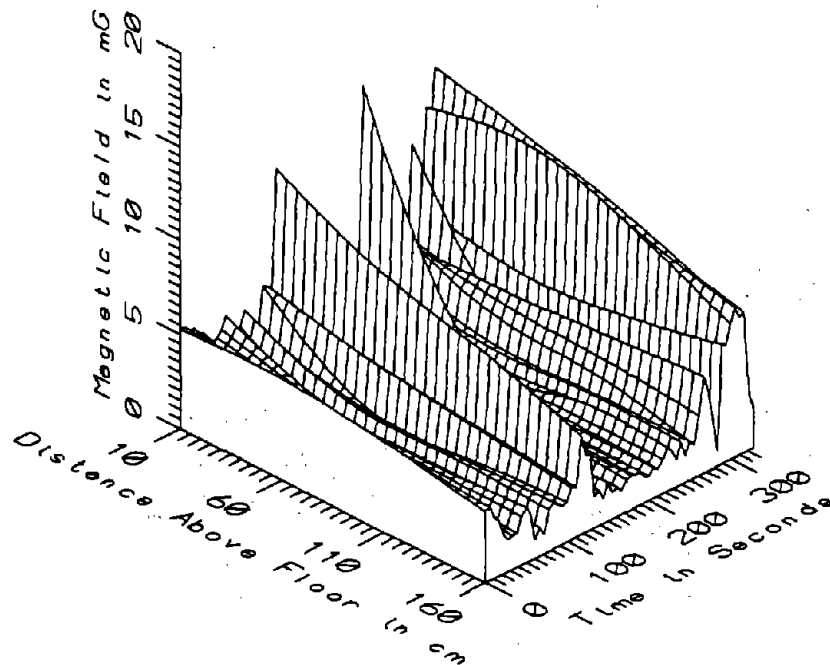
NEC027 - RIGHT OF FIREMAN IN R.E.C. - STATIC



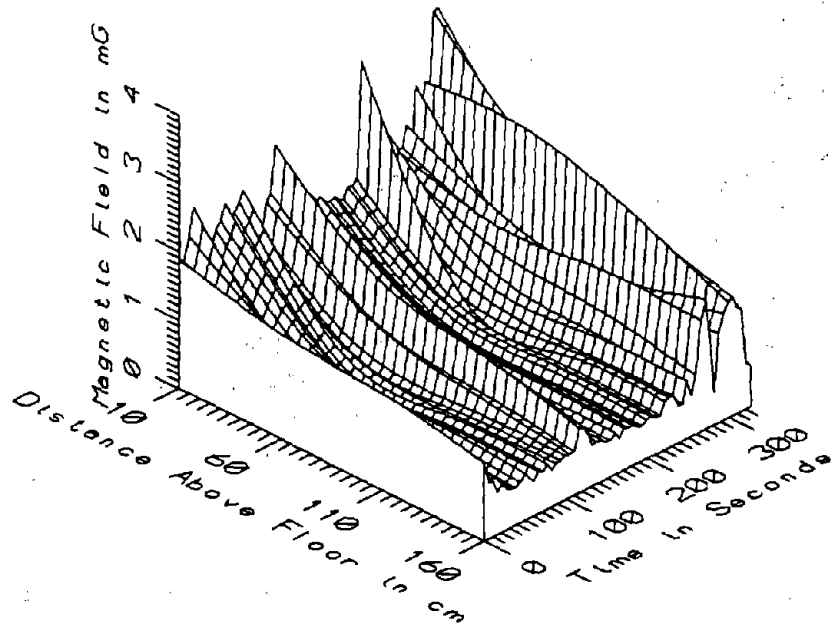
NEC027 - RIGHT OF FIREMAN IN R.E.C. - LOW FREQ. 5-45Hz



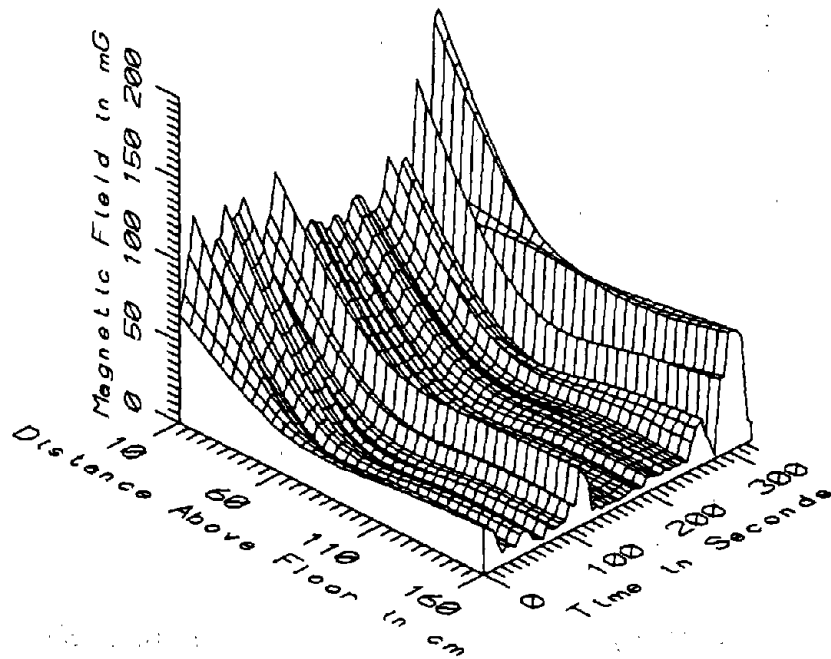
NEC027 - RIGHT OF FIREMAN IN R.E.C. - POWER FREQ, 50-60Hz



NEC027 - RIGHT OF FIREMAN IN R.E.C. - POWER HARM, 65-300Hz



NEC027 - RIGHT OF FIREMAN IN R.E.C. - HIGH FREQ, 305-2560Hz



NEC027 - RIGHT OF FIREMAN IN R.E.C. - ALL FREQ, 5-2560Hz

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is essential for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to ensure the validity of the results. The document also discusses the importance of data security and privacy in handling sensitive information.

3. The third part of the document focuses on the analysis and interpretation of the collected data. It describes the various statistical and analytical techniques used to identify trends, patterns, and correlations in the data. The document also discusses the importance of clear and concise reporting of the findings to the relevant stakeholders.

4. The fourth part of the document discusses the implications of the findings and the potential for future research. It highlights the need for ongoing monitoring and evaluation of the organization's performance to ensure that the identified trends and patterns are sustained and improved upon. The document also discusses the potential for using the findings to inform decision-making and strategic planning.

5. The fifth part of the document provides a summary of the key findings and conclusions. It emphasizes the importance of the data and the need for continued attention to the issues identified. The document also provides a list of references and a glossary of terms used throughout the document.

APPENDIX AC

DATASET NEC028
HORIZONTAL PROFILE AT THE CENTERLINE OF THE CAB
ELECTRIC LOCOMOTIVE, 60 HZ NEC

Measurement Setup Code: Staff: 27 Reference: 25
 Drawing: A-4

Vehicle Status: Continuous travel without stops

Measurement Date: March 31, 1992

Measurement Time: Start: 12:45:01
 End: 12:47:32

Number of Samples: 28

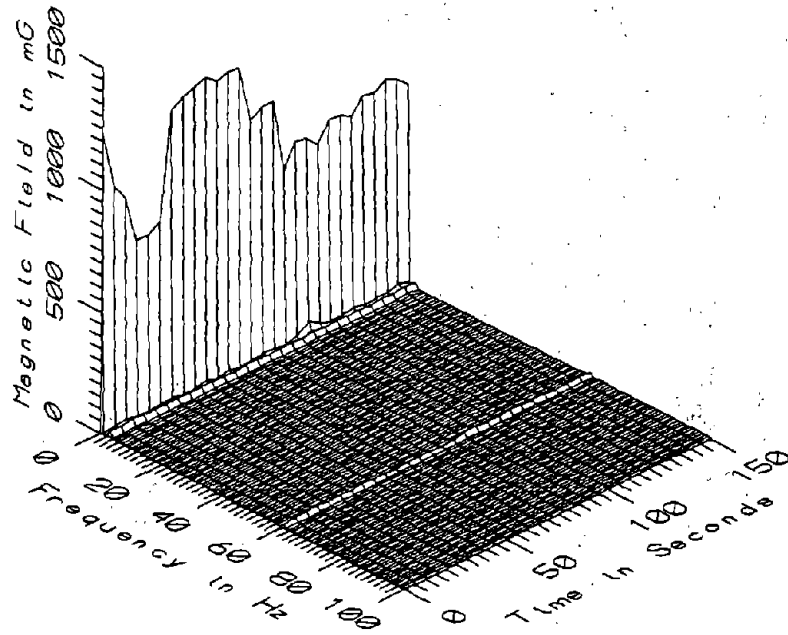
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.6 sec

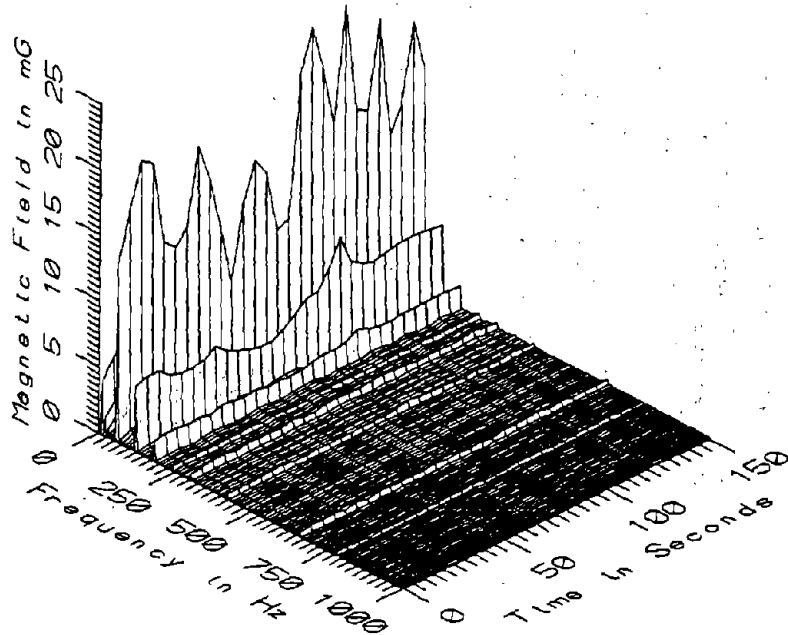
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

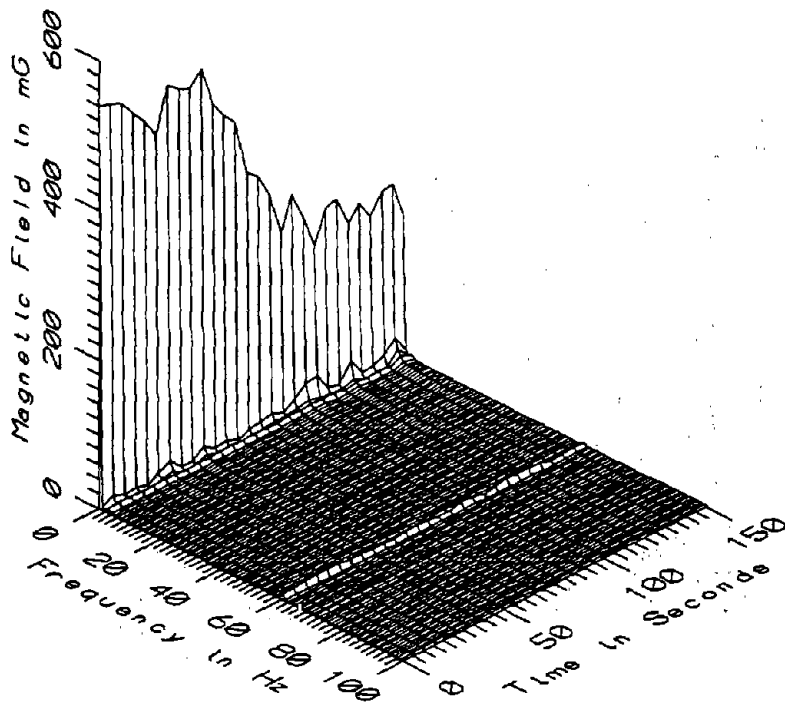
Missing or Suspect Data: None



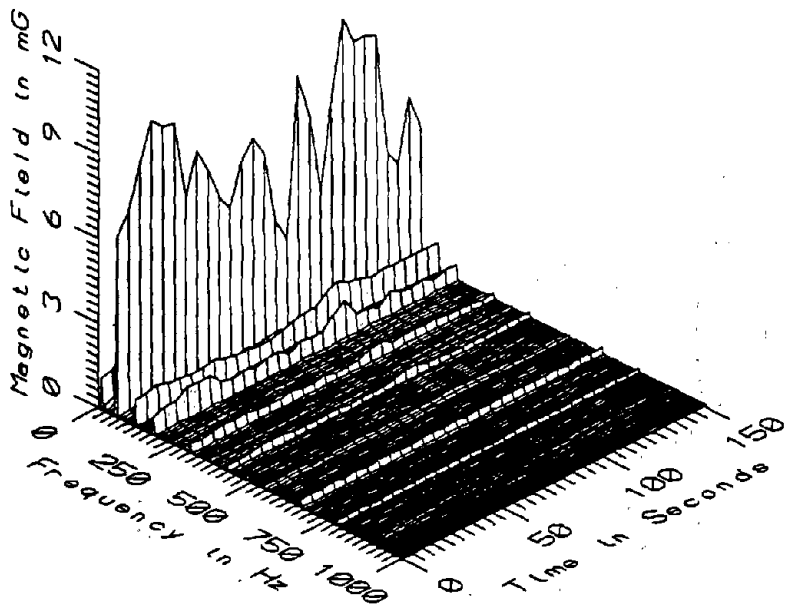
NEC028 - 10cm FROM ATC CABINET IN R.E.C., 1.2M ABOVE FLOOR



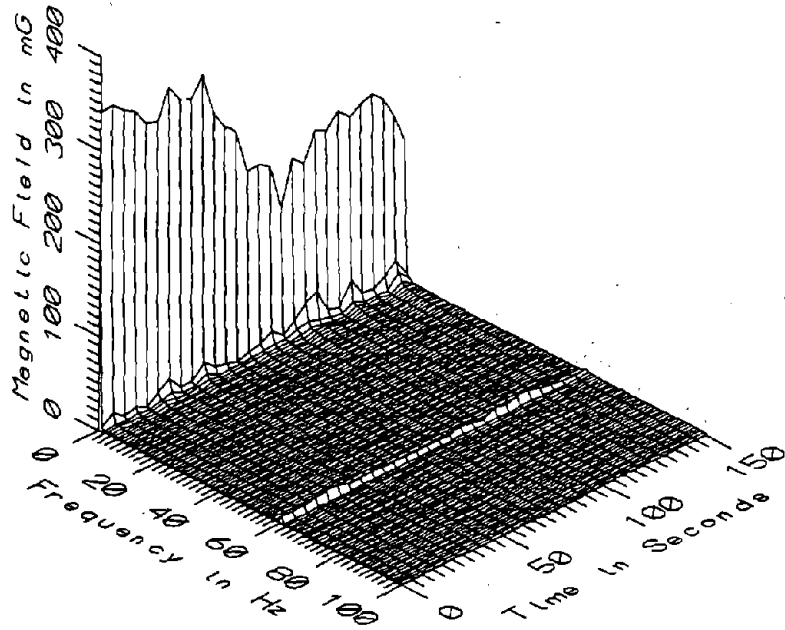
NEC028 - 10cm FROM ATC CABINET IN R.E.C., 1.2M ABOVE FLOOR



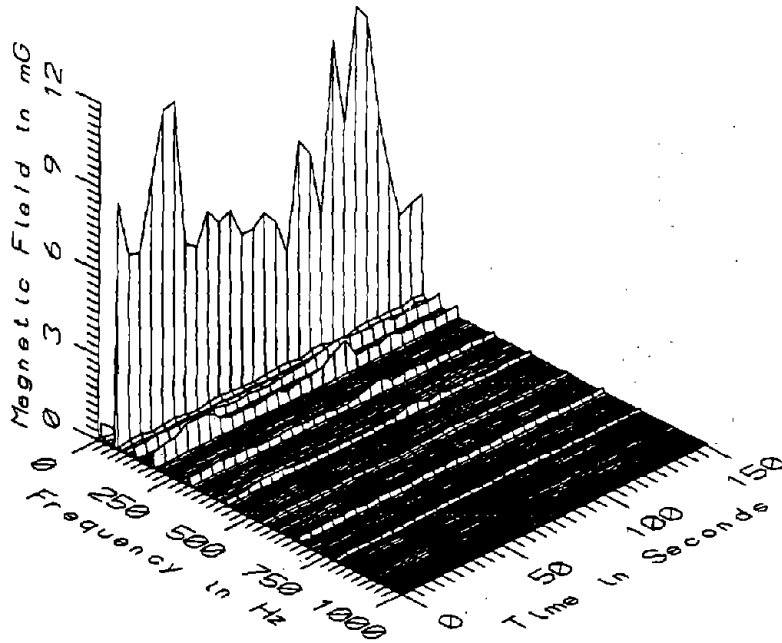
NEC028 - 60cm FROM ATC CABINET IN R.E.C., 1.2M ABOVE FLOOR



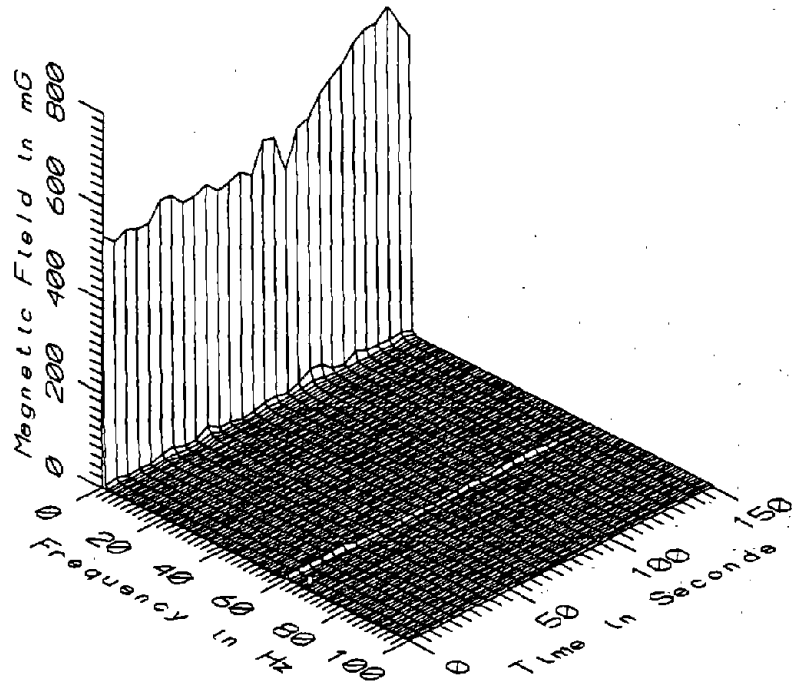
NEC028 - 60cm FROM ATC CABINET IN R.E.C., 1.2M ABOVE FLOOR



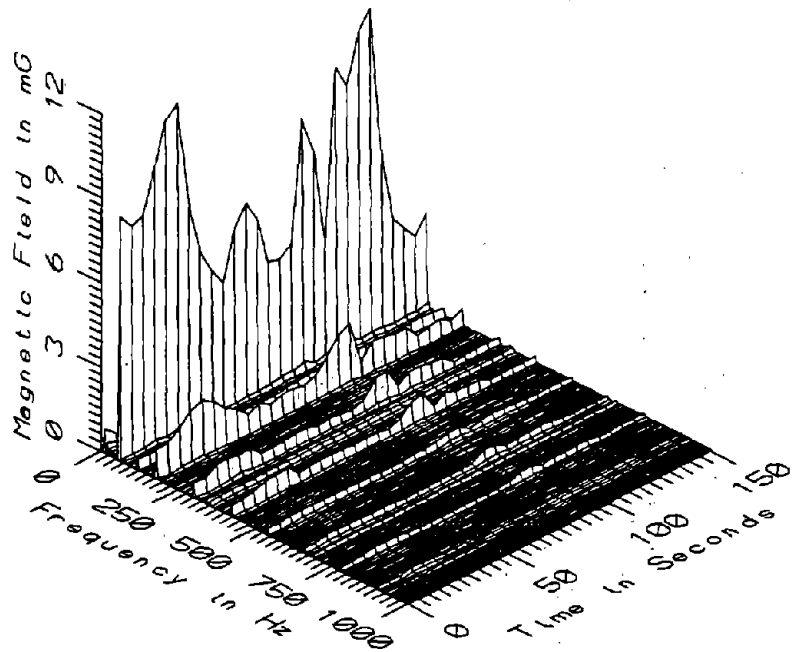
NEC028 - 110cm FROM ATC CABINET IN R.E.C., 1.2M ABOVE FLOOR



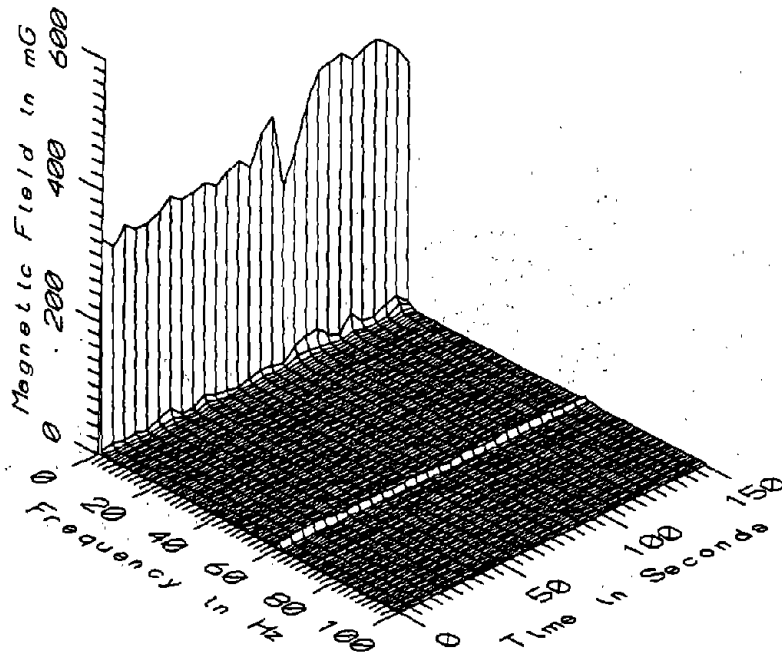
NEC028 - 110cm FROM ATC CABINET IN R.E.C., 1.2M ABOVE FLOOR



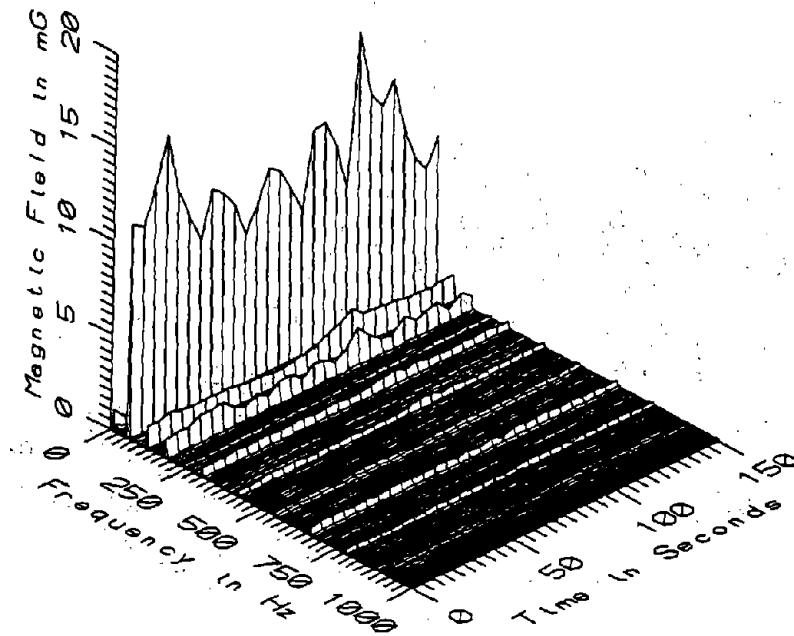
NEC028 - 160cm FROM ATC CABINET IN R.E.C., 1.2M ABOVE FLOOR



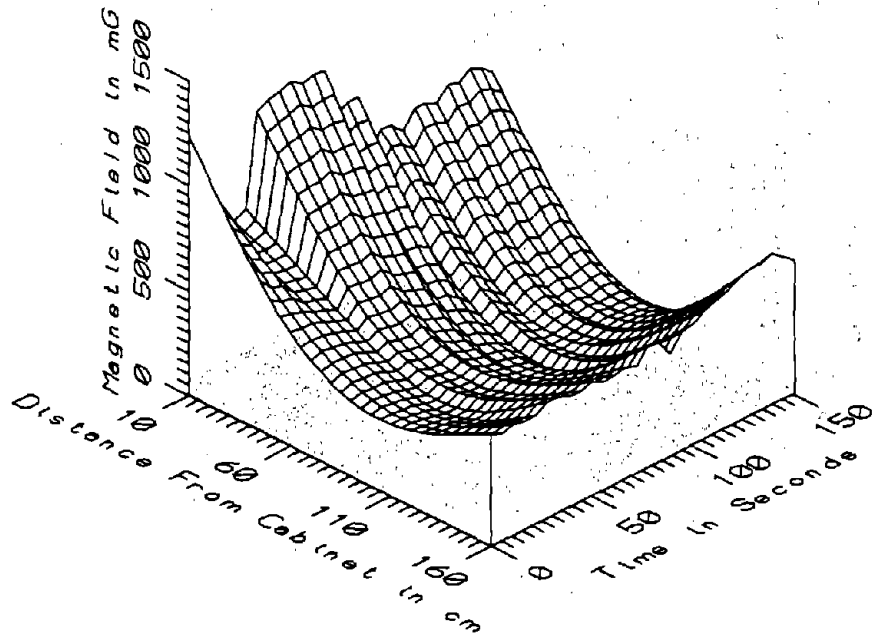
NEC028 - 160cm FROM ATC CABINET IN R.E.C., 1.2M ABOVE FLOOR



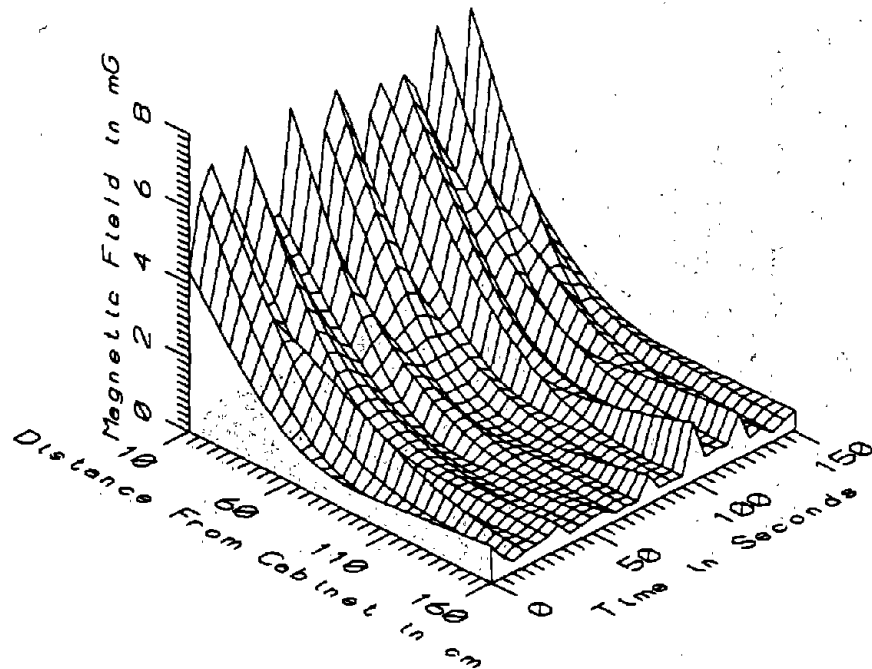
NEC028 - REFERENCE PROBE - FIREMAN'S SEAT IN R.E.C.



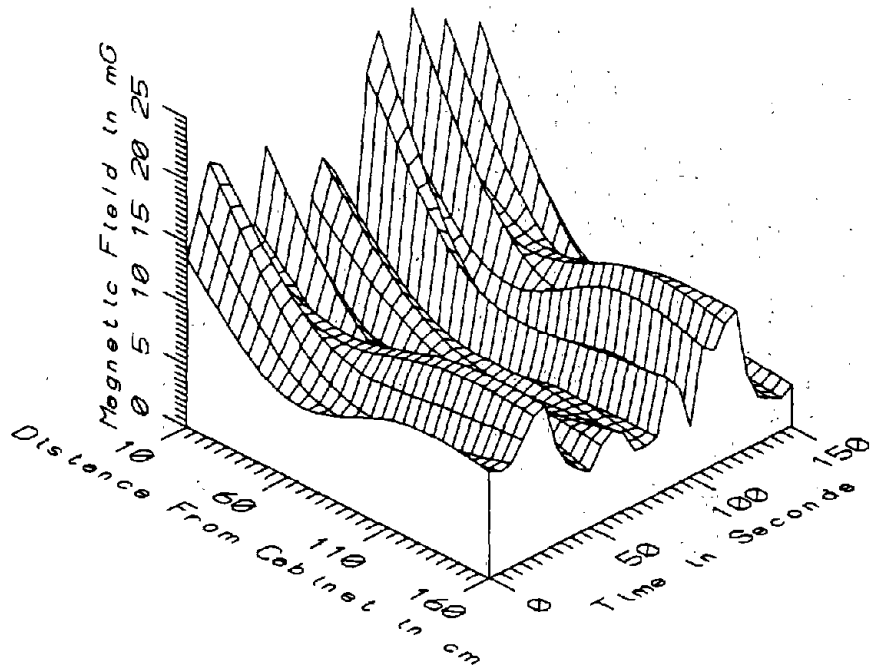
NEC028 - REFERENCE PROBE - FIREMAN'S SEAT IN R.E.C.



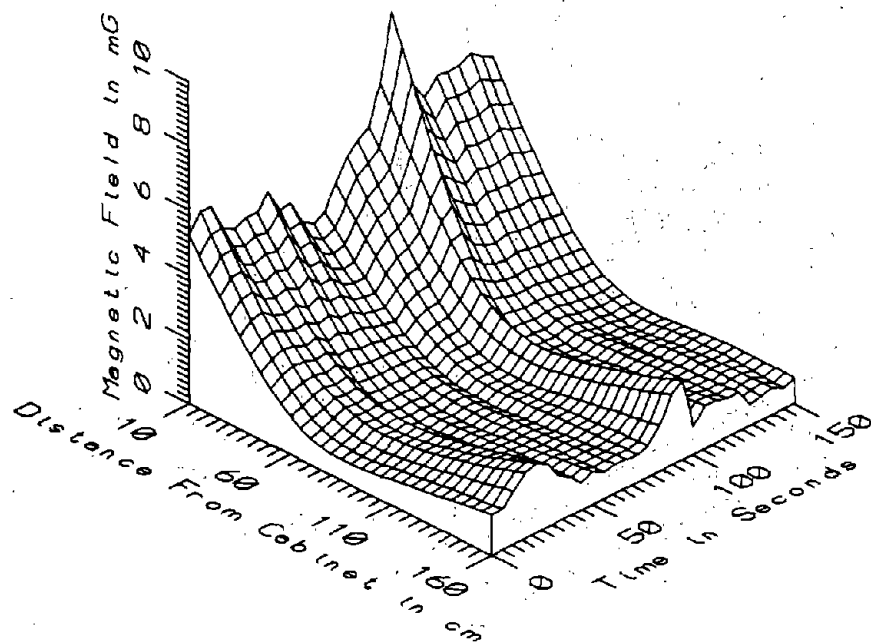
NEC028 - ATC CABINET IN R.E.C. - STATIC



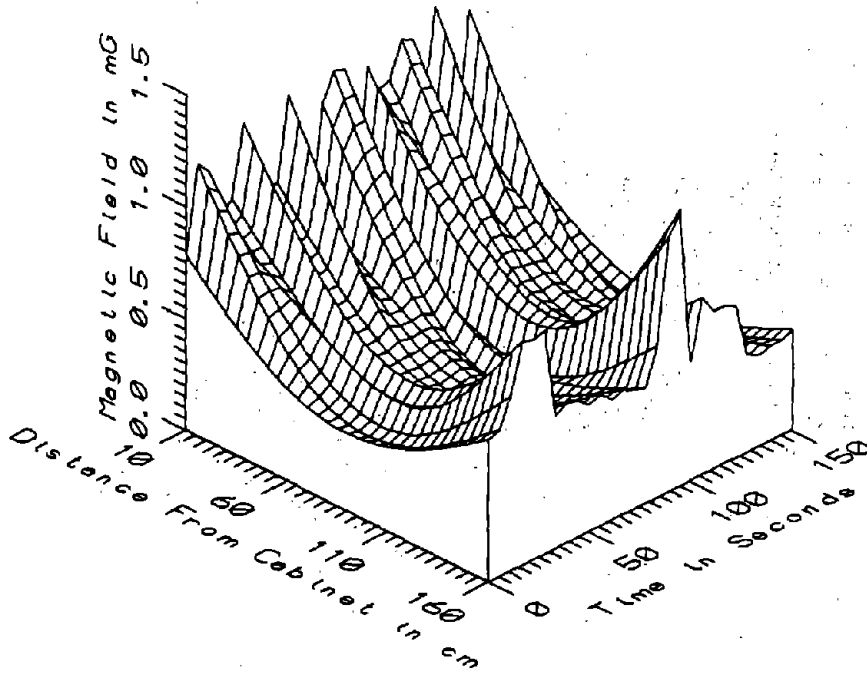
NEC028 - ATC CABINET IN R.E.C. - LOW FREQUENCY, 5-45Hz



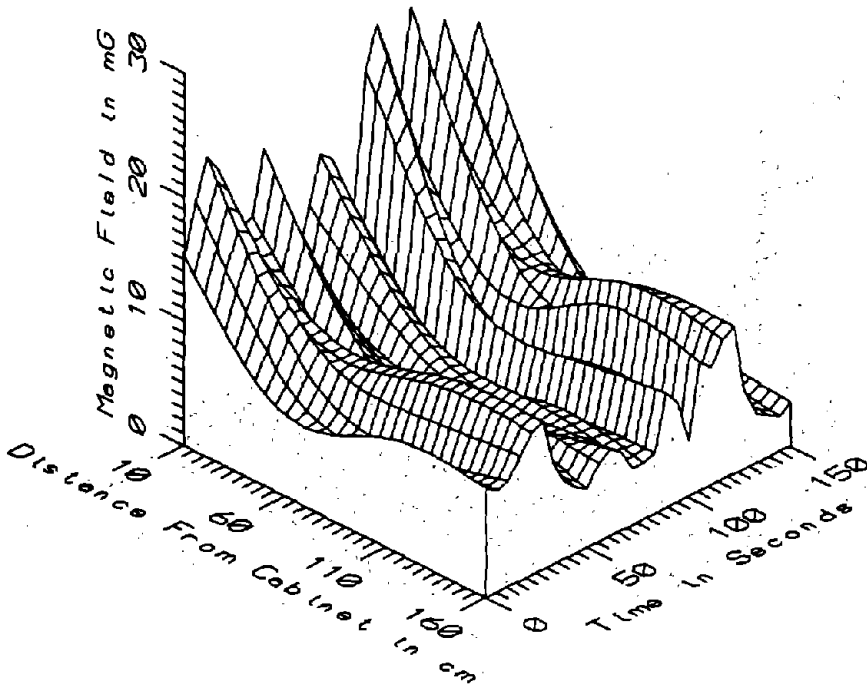
NEC028 - ATC CABINET IN R.E.C. - POWER FREQUENCY, 50-60Hz



NEC028 - ATC CABINET IN R.E.C. - POWER HARMONICS, 65-300Hz



NEC028 - ATC CABINET IN R.E.C. - HIGH FREQUENCY, 305-2560Hz

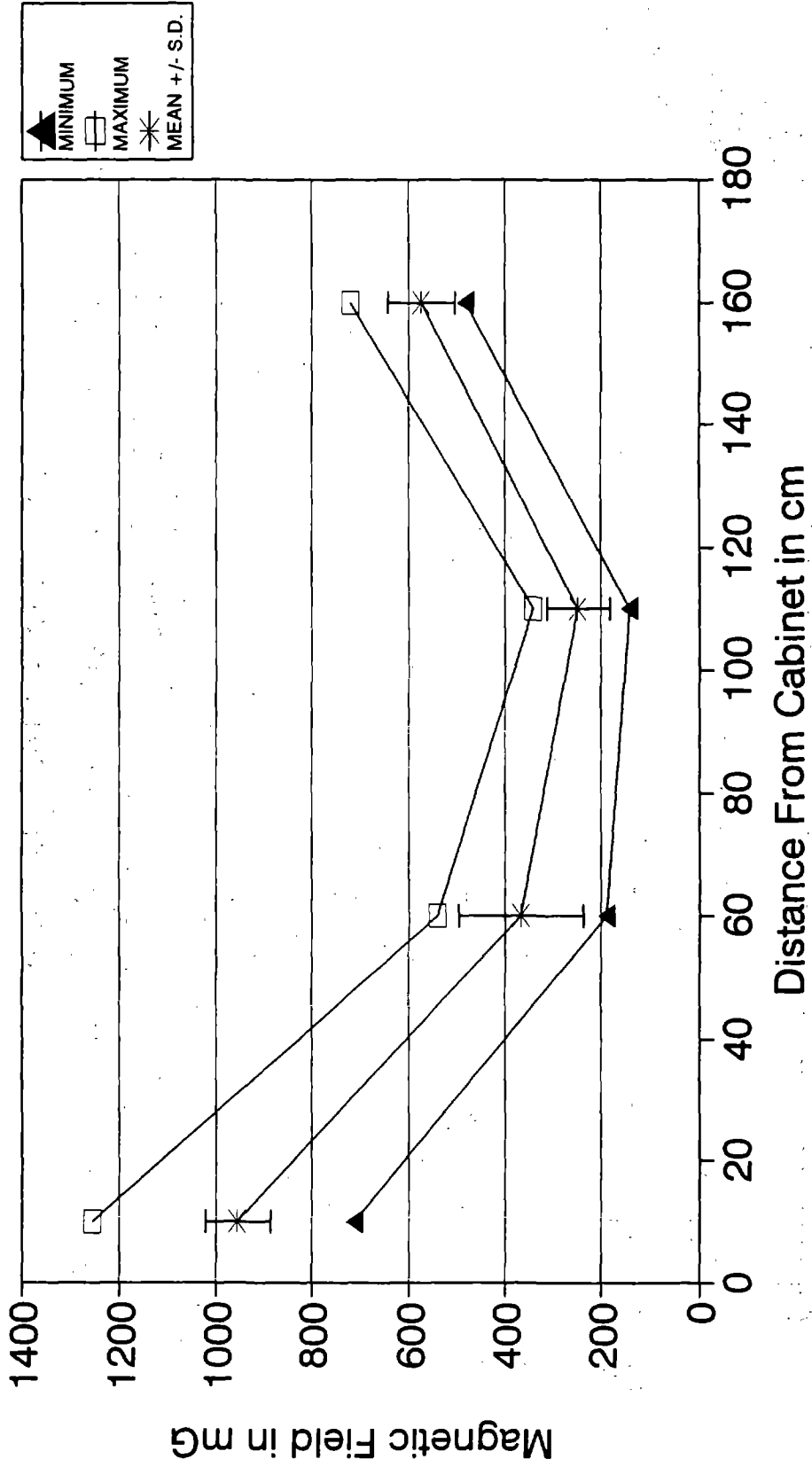


NEC028 - ATC CABINET IN R.E.C. - ALL FREQUENCIES, 5-2560Hz

60Hz - ATC CABINET IN ENGINEER'S COMPARTMENT		TOTAL OF 28 SAMPLES				
FREQUENCY BAND	DISTANCE FROM CAB. (cm)	MINIMUM MAGNETIC FIELD (mG)	MAXIMUM MAGNETIC FIELD (mG)	AVERAGE MAGNETIC FIELD (mG)	STANDARD DEVIATION (mG)	COEFFICIENT OF VARIATION (%)
STATIC	10	714.15	1253.19	954.36	69.48	7.28
	60	189.96	538.75	366.90	129.55	35.31
	110	142.62	342.00	247.15	63.71	25.78
	160	482.17	720.71	574.21	69.48	12.10
5-45Hz	10	3.64	7.61	5.66	1.23	21.80
LOW FREQ	60	1.10	2.52	1.58	0.38	24.24
	110	0.23	0.99	0.49	0.21	42.65
	160	0.22	1.58	0.51	0.31	61.37
50-60Hz	10	7.86	24.68	16.46	4.26	25.90
PWR FREQ	60	3.25	10.09	7.02	1.98	28.18
	110	3.36	11.65	6.98	2.47	35.36
	160	2.68	11.70	6.99	2.78	39.77
65-300Hz	10	3.65	9.00	5.56	1.12	20.22
PWR HARM	60	0.87	2.02	1.32	0.23	17.83
	110	0.55	1.43	0.85	0.21	25.24
	160	0.62	2.44	1.25	0.51	40.67
305-2560Hz	10	0.69	1.34	1.03	0.21	20.40
HIGH FREQ	60	0.36	0.65	0.48	0.07	15.44
	110	0.28	0.51	0.37	0.07	19.35
	160	0.41	1.24	0.67	0.22	32.58
5-2560Hz	10	10.21	26.26	18.42	4.05	22.01
ALL FREQ	60	3.76	10.35	7.36	1.93	26.25
	110	3.46	11.72	7.07	2.46	34.85
	160	2.81	11.92	7.17	2.79	38.91

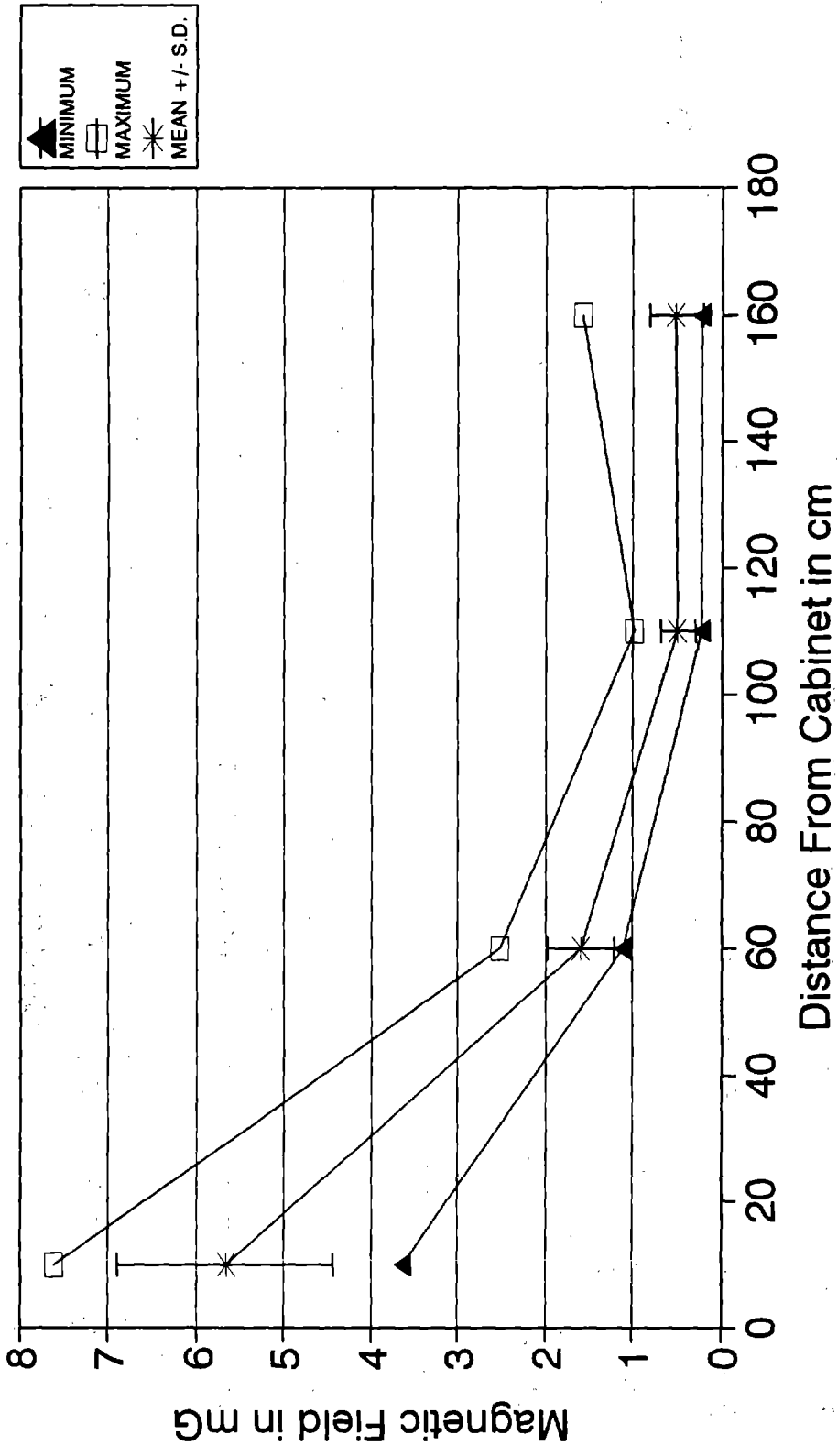
60Hz - ATC CABINET IN ENGINEER'S COMPARTMENT							TOTAL OF 28 SAMPLES	
FREQUENCY BAND	DISTANCE FROM CAB. (cm)	MINIMUM MAGNETIC FIELD (mG)	MAXIMUM MAGNETIC FIELD (mG)	AVERAGE MAGNETIC FIELD (mG)	STANDARD DEVIATION (mG)	COEFFICIENT OF VARIATION (%)		
STATIC	10	714.15	1253.19	954.36	69.48	7.28		
	60	189.96	538.75	366.90	129.55	35.31		
	110	142.62	342.00	247.15	63.71	25.78		
	160	482.17	720.71	574.21	69.48	12.10		
5-45Hz	10	3.64	7.61	5.66	1.23	21.80		
LOW FREQ	60	1.10	2.52	1.58	0.38	24.24		
	110	0.23	0.99	0.49	0.21	42.65		
	160	0.22	1.58	0.51	0.31	61.37		
50-60Hz	10	7.86	24.68	16.46	4.26	25.90		
PWR FREQ	60	3.25	10.09	7.02	1.98	28.18		
	110	3.36	11.65	6.98	2.47	35.36		
	160	2.68	11.70	6.99	2.78	39.77		
65-300Hz	10	3.65	9.00	5.56	1.12	20.22		
PWR HARM	60	0.87	2.02	1.32	0.23	17.83		
	110	0.55	1.43	0.85	0.21	25.24		
	160	0.62	2.44	1.25	0.51	40.67		
305-2560Hz	10	0.69	1.34	1.03	0.21	20.40		
HIGH FREQ	60	0.36	0.65	0.48	0.07	15.44		
	110	0.28	0.51	0.37	0.07	19.35		
	160	0.41	1.24	0.67	0.22	32.58		
5-2560Hz	10	10.21	26.26	18.42	4.05	22.01		
ALL FREQ	60	3.76	10.35	7.36	1.93	26.25		
	110	3.46	11.72	7.07	2.46	34.85		
	160	2.81	11.92	7.17	2.79	38.91		

60HZ - ATC CABINET IN ENG. COMPARTMENT STATIC



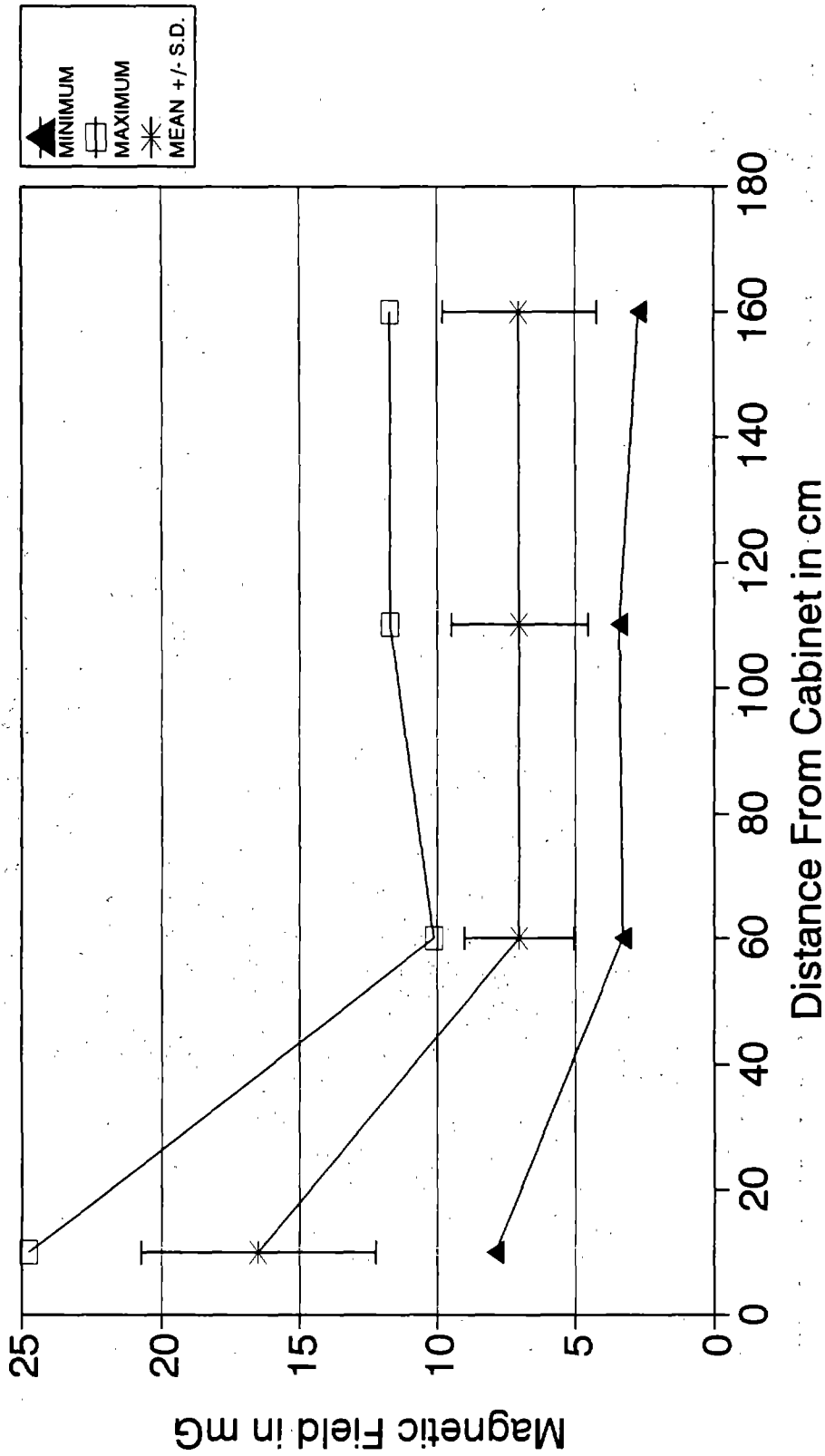
60HZ - ATC CABINET IN ENG. COMPARTMENT

LOW FREQUENCY (5-45 Hz)



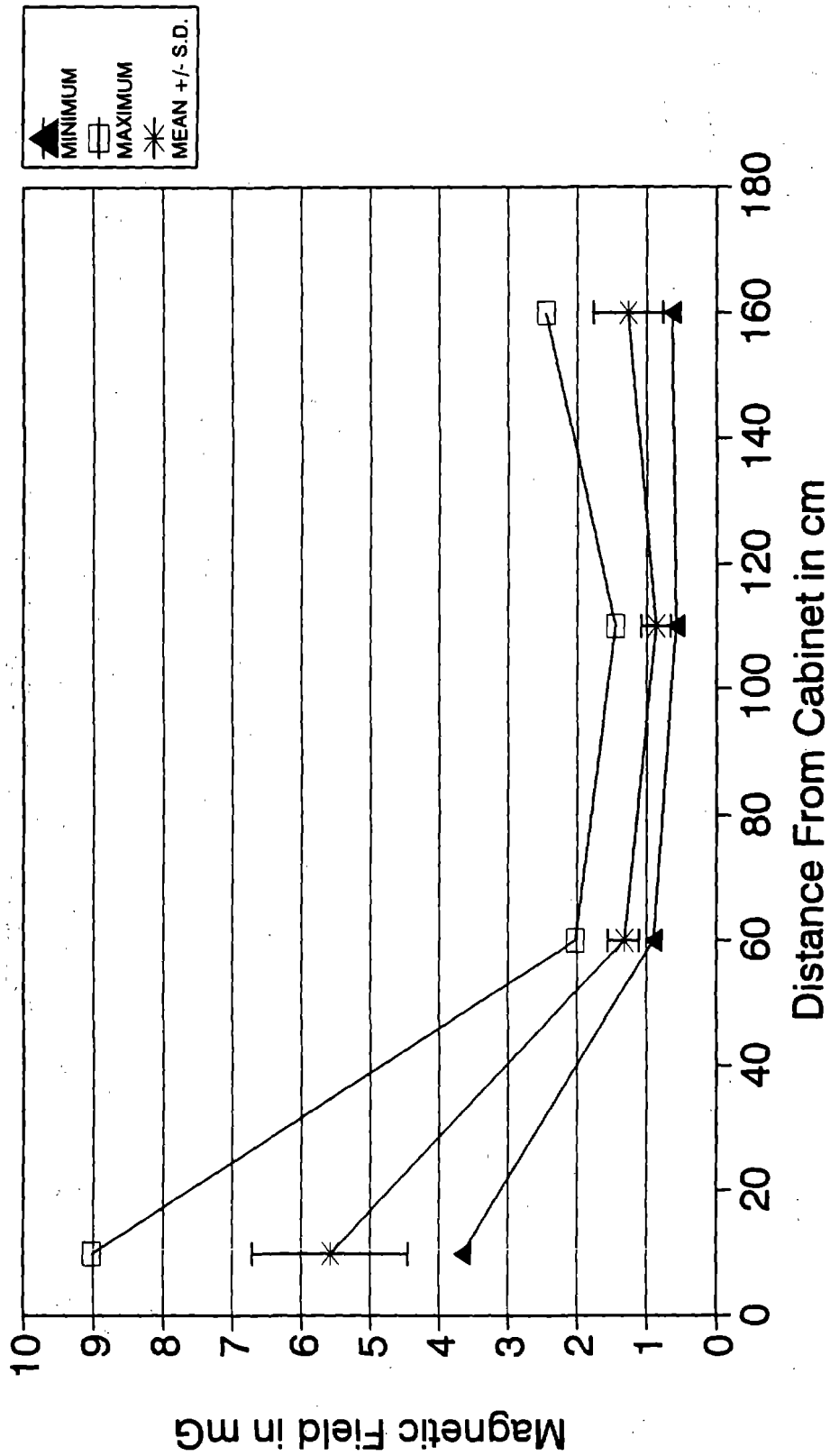
60HZ - ATC CABINET IN ENG. COMPARTMENT

POWER FREQUENCY (50-60 Hz)



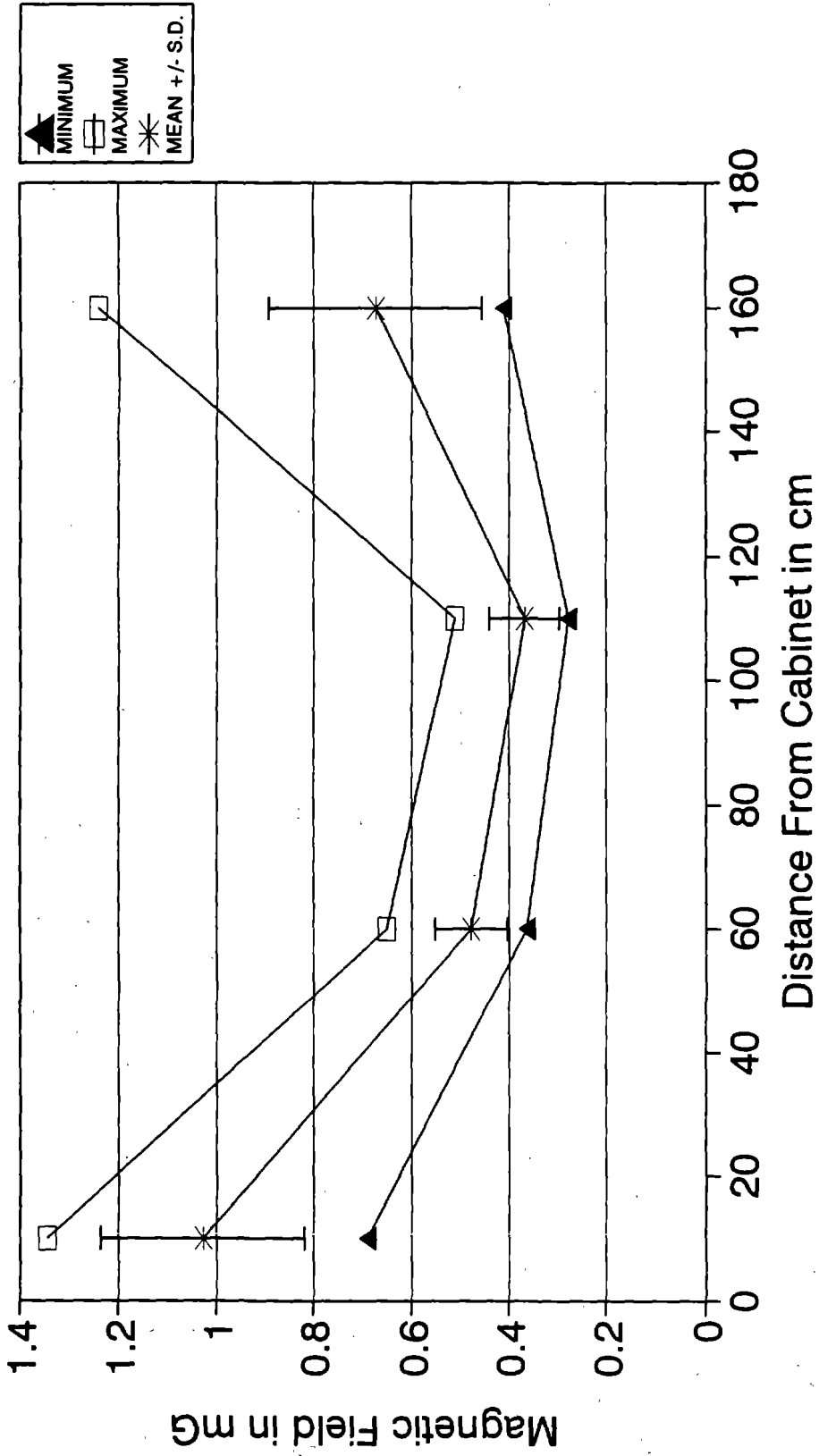
60HZ - ATC CABINET IN ENG. COMPARTMENT

POWER HARMONICS (65-300 Hz)



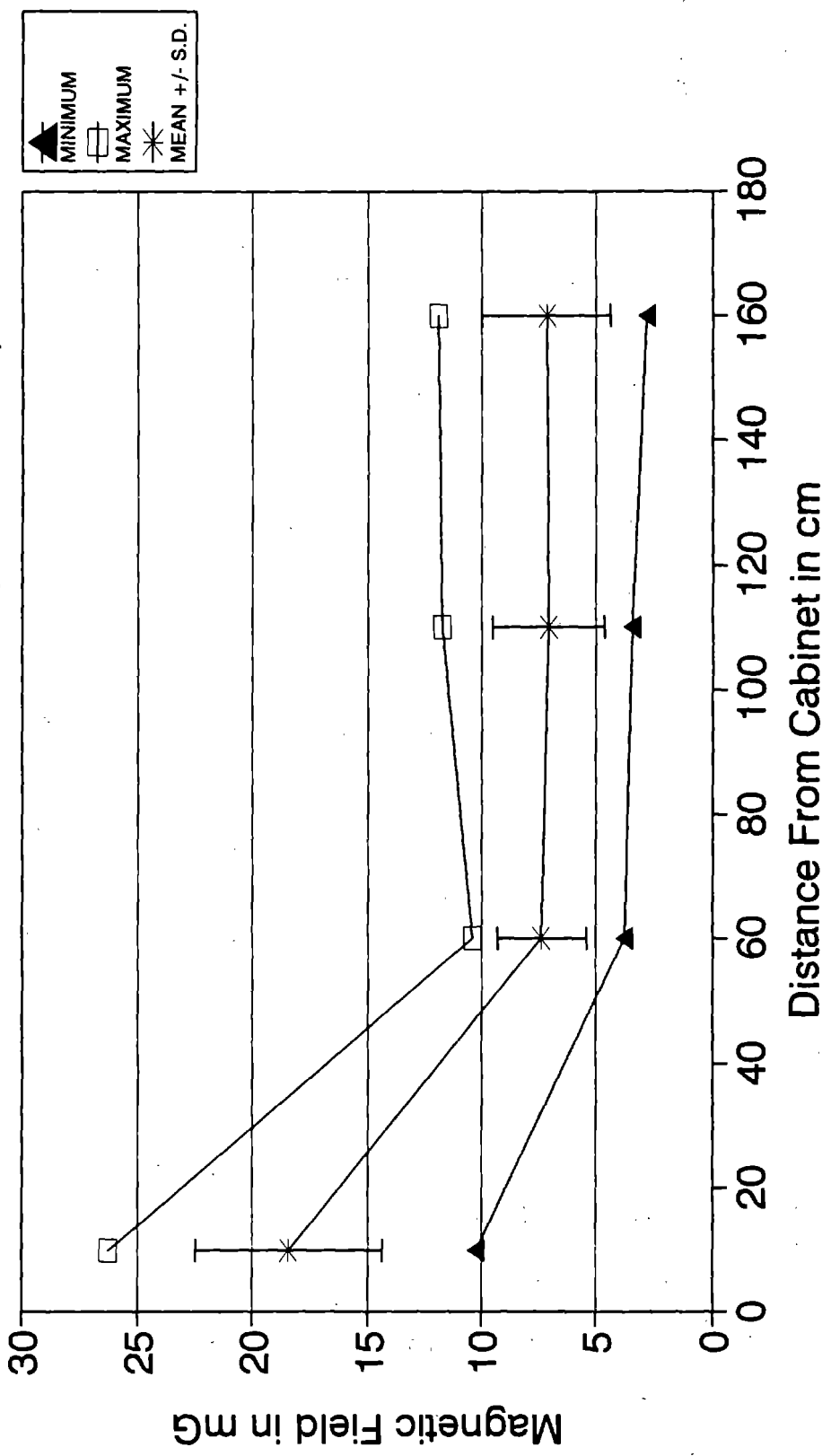
60HZ - ATC CABINET IN ENG. COMPARTMENT

HIGH FREQUENCY (305-2560 HZ)



60HZ - ATC CABINET IN ENG. COMPARTMENT

ALL FREQUENCIES (5-2560 Hz)



Section 1

1. The first part of the document discusses the importance of maintaining accurate records.

2. It is essential to ensure that all data is properly documented and stored in a secure location.

3. The following table provides a summary of the key findings from the study.

4. The results indicate a significant correlation between the variables studied.

Section 2

5. The second part of the document details the methodology used in the research.

6. The study was conducted over a period of six months, involving a sample of 100 participants.

7. The data was analyzed using statistical software to determine the significance of the results.

8. The findings suggest that there is a strong relationship between the variables investigated.

APPENDIX AD

DATASET NEC029
VERTICAL PROFILE AT THE ENGINEER'S SEAT
ELECTRIC LOCOMOTIVE, 60 HZ NEC

Measurement Setup Code: Staff: 24 Reference: 25
Drawing: A-4

Vehicle Status: Traveling west, stop at Stamford at
the 21 minute point, phase breaks
at the 26 and 34 minute points

Measurement Date: March 31, 1992

Measurement Time: Start: 12:49:06
End: 13:23:03

Number of Samples: 34

Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

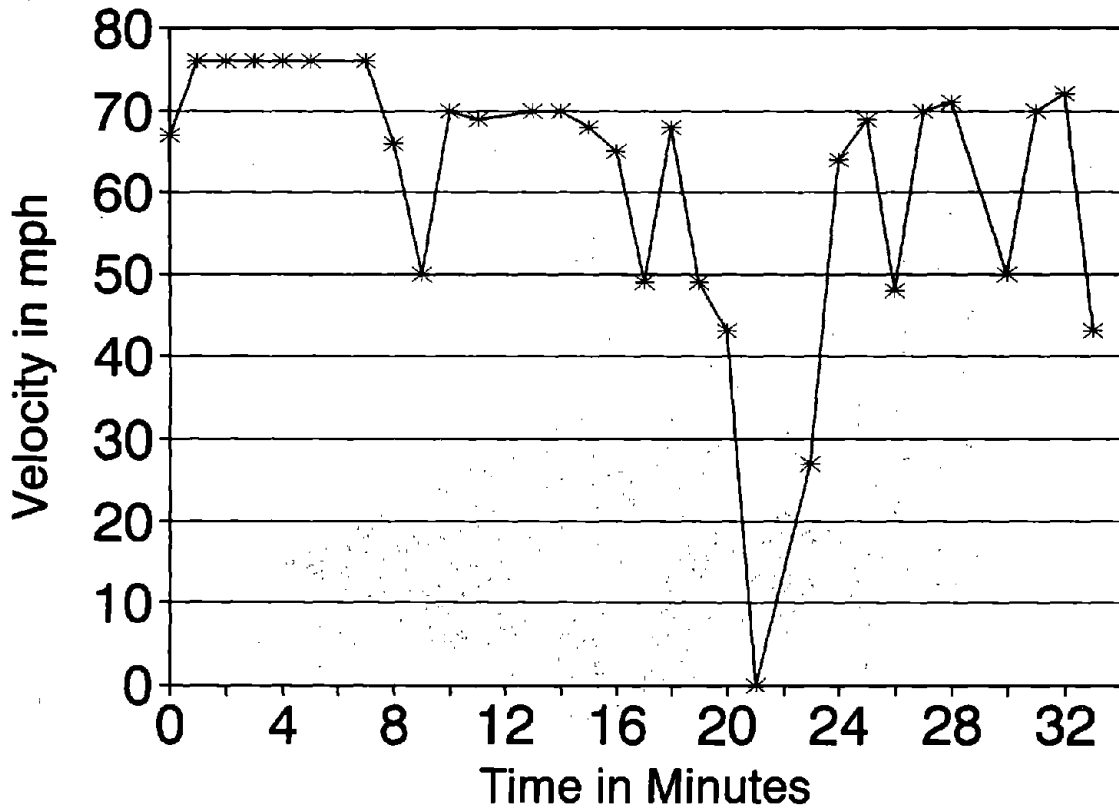
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

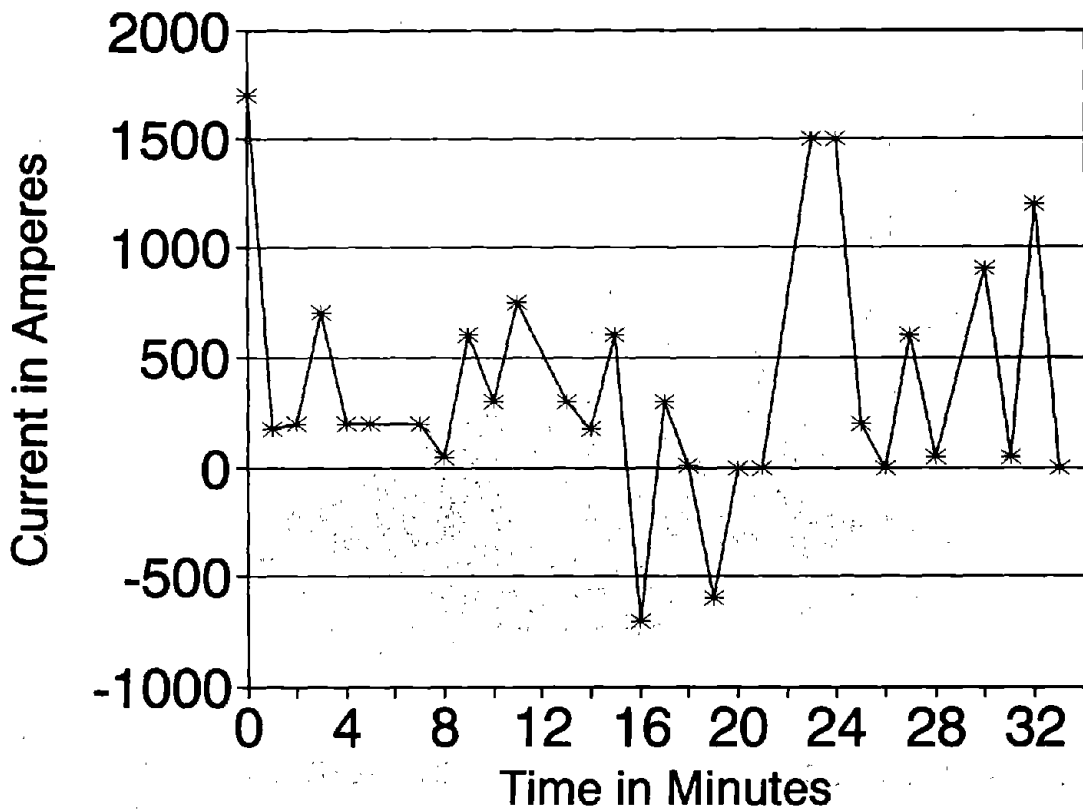
Missing or Suspect Data: None

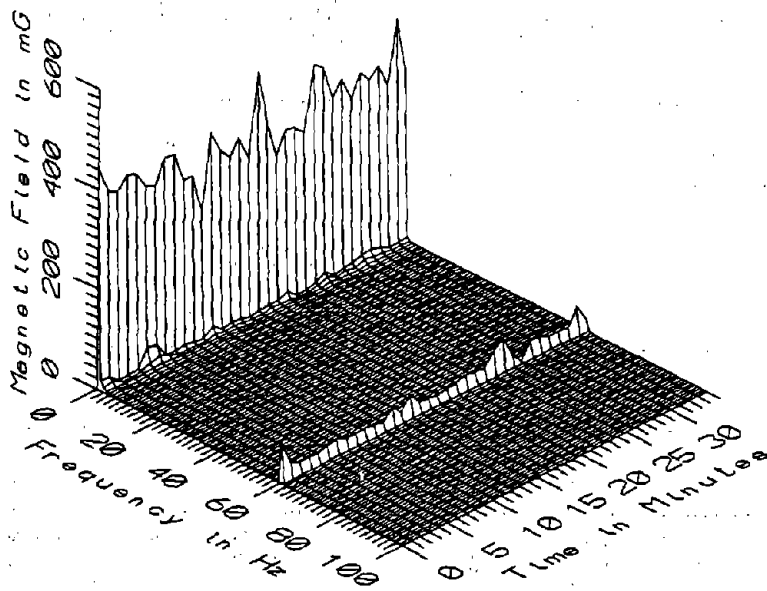
* Recording was suspended while the train was stopped at Stamford.

VEHICLE VELOCITY - NEC029

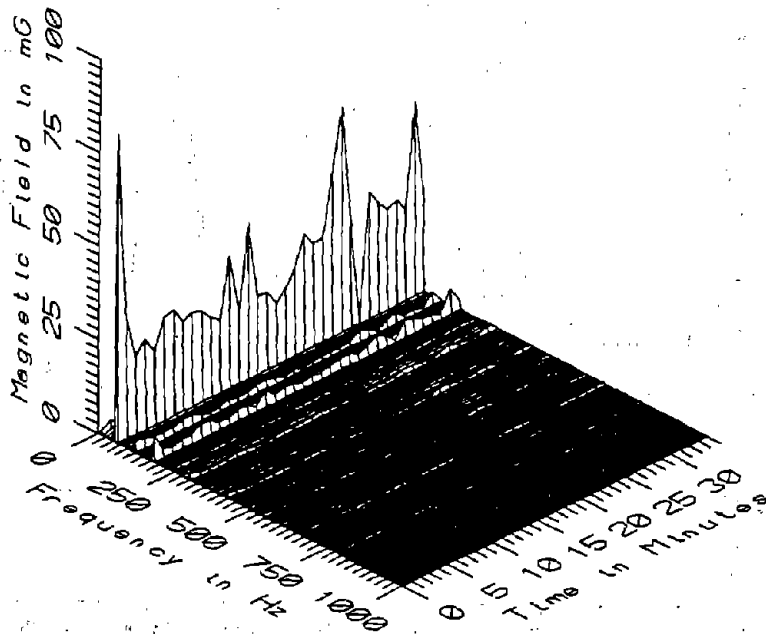


VEHICLE CURRENT - NEC029

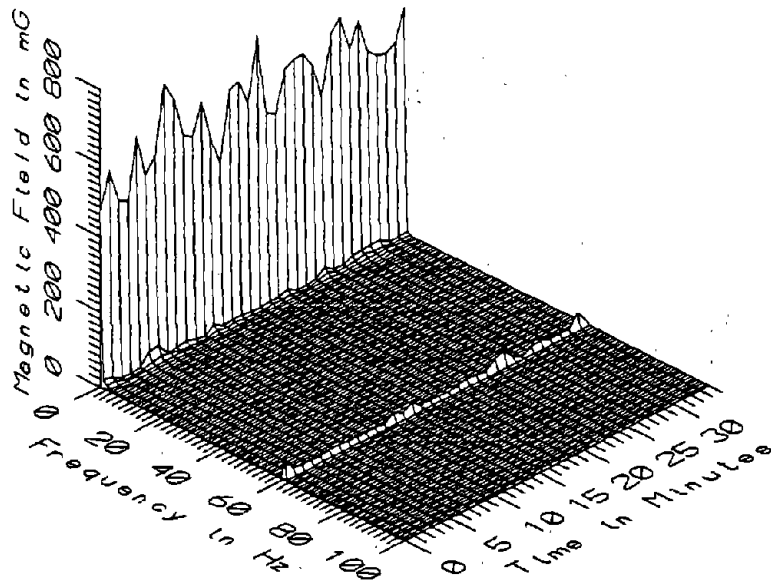




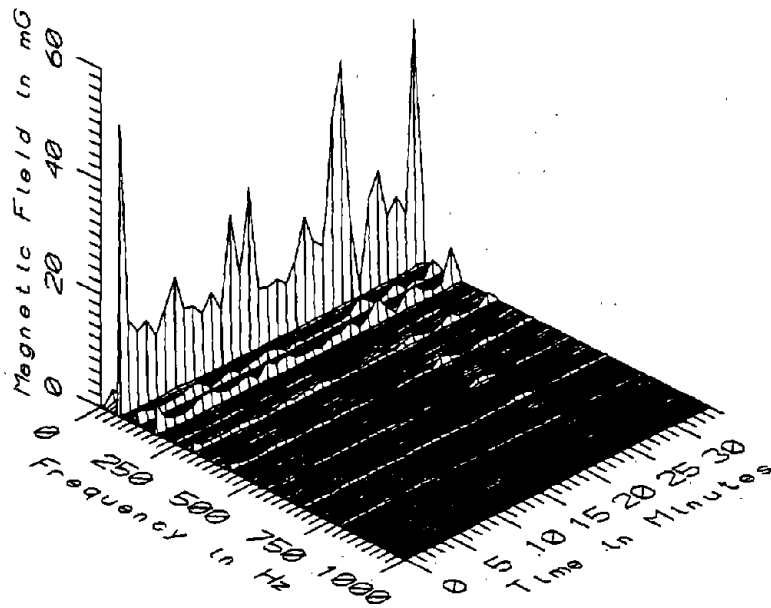
NEC029 - 10cm ABOVE FLOOR, LEFT OF ENGINEER IN R.E.C.



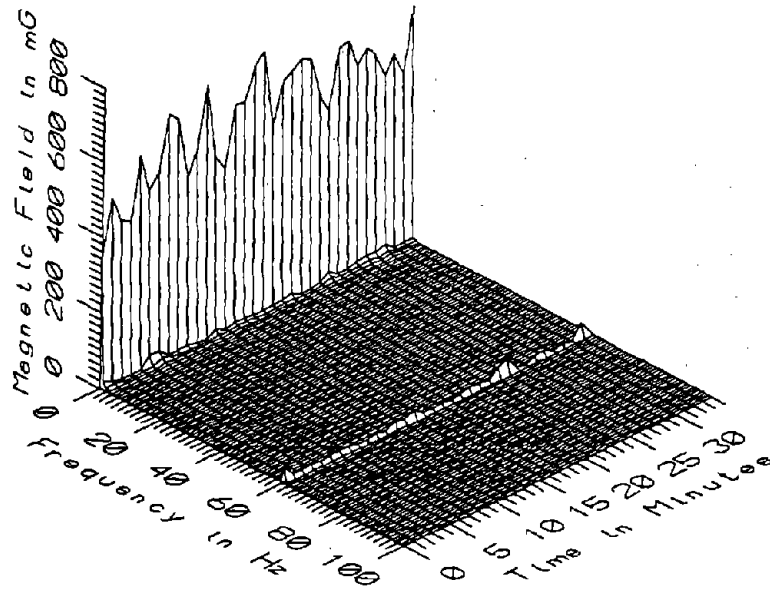
NEC029 - 10cm ABOVE FLOOR, LEFT OF ENGINEER IN R.E.C.



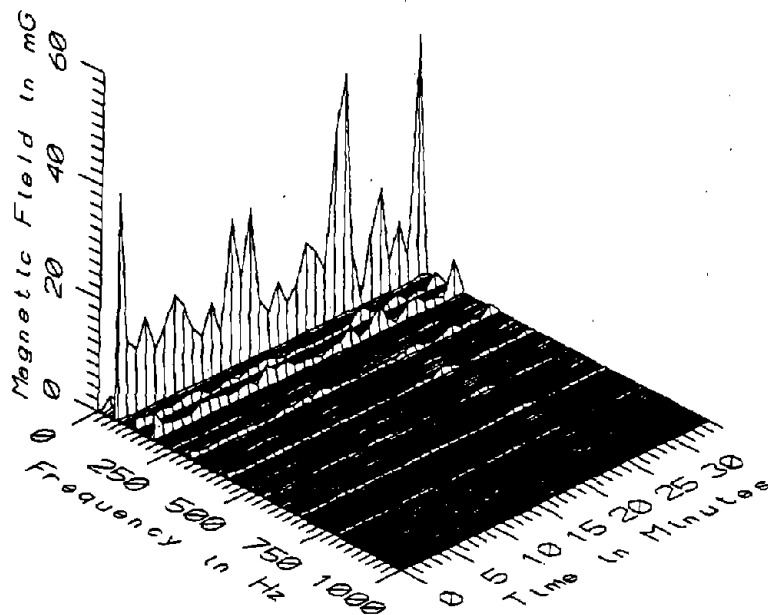
NEC029 - 60cm ABOVE FLOOR, LEFT OF ENGINEER IN R.E.C.



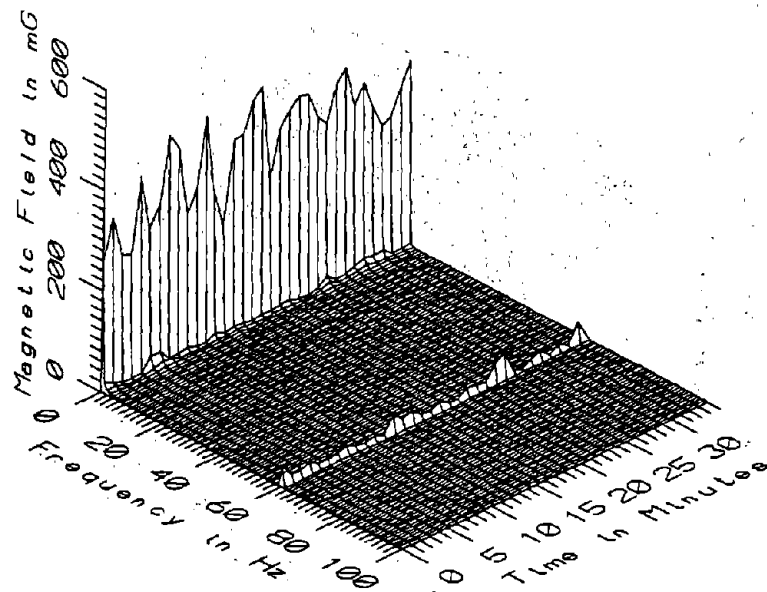
NEC029 - 60cm ABOVE FLOOR, LEFT OF ENGINEER IN R.E.C.



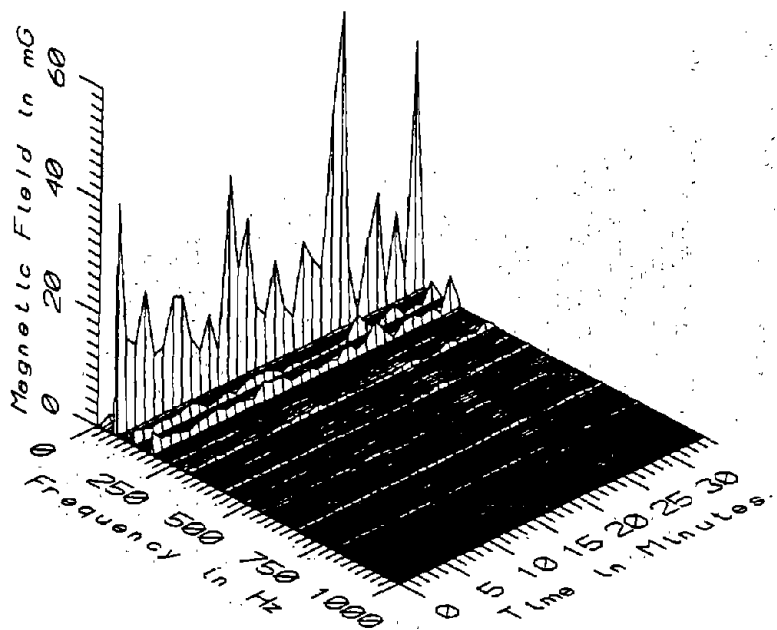
NEC029 - 110cm ABOVE FLOOR, LEFT OF ENGINEER IN R.E.C.



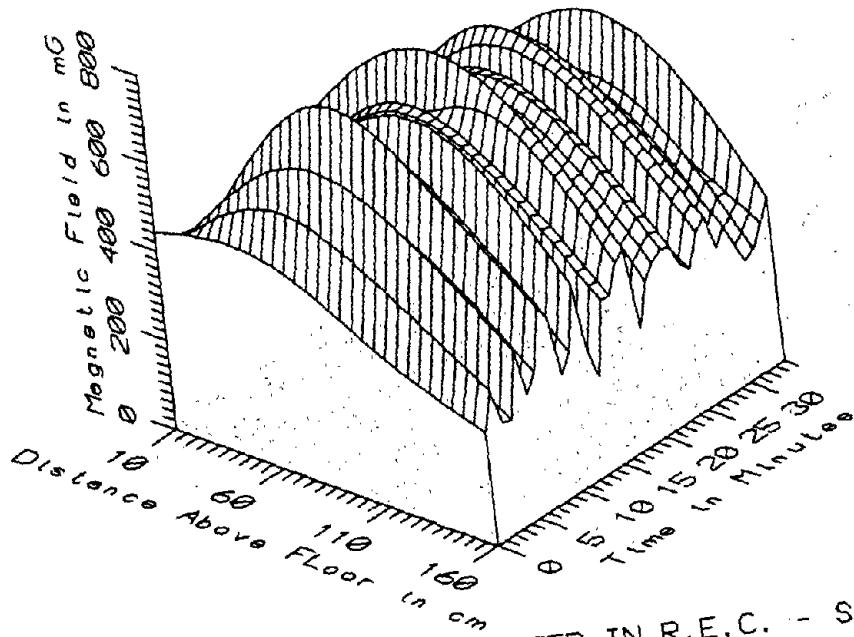
NEC029 - 110cm ABOVE FLOOR, LEFT OF ENGINEER IN R.E.C.



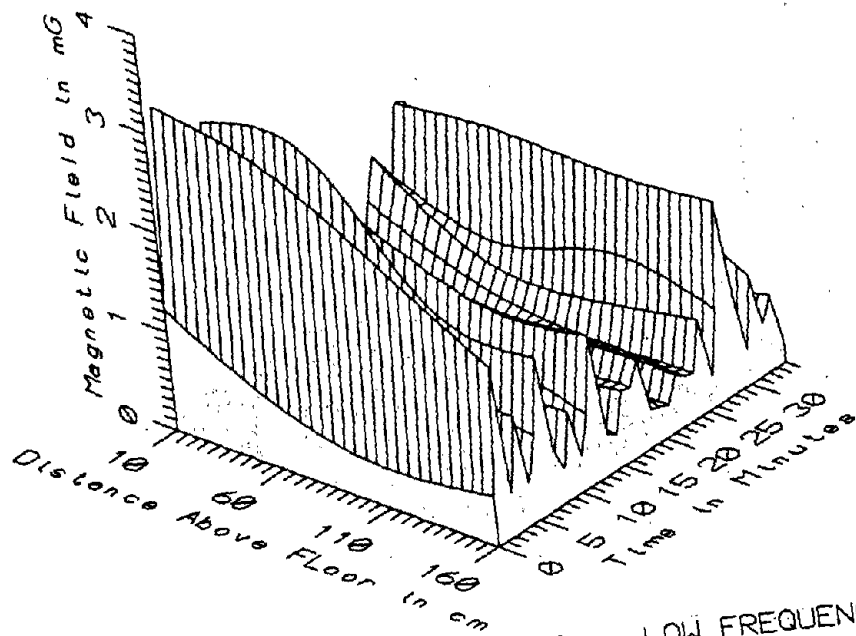
NEC029 - 160cm ABOVE FLOOR, LEFT OF ENGINEER IN R.E.C.



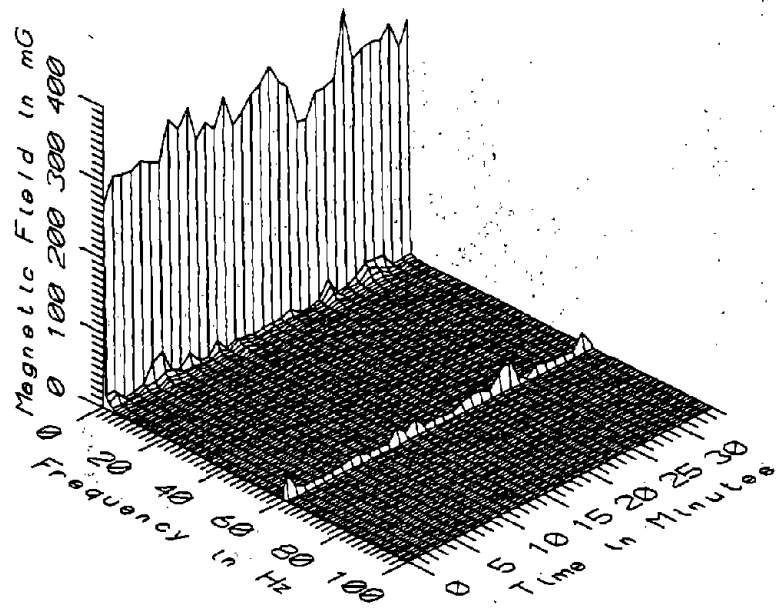
NEC029 - 160cm ABOVE FLOOR, LEFT OF ENGINEER IN R.E.C.



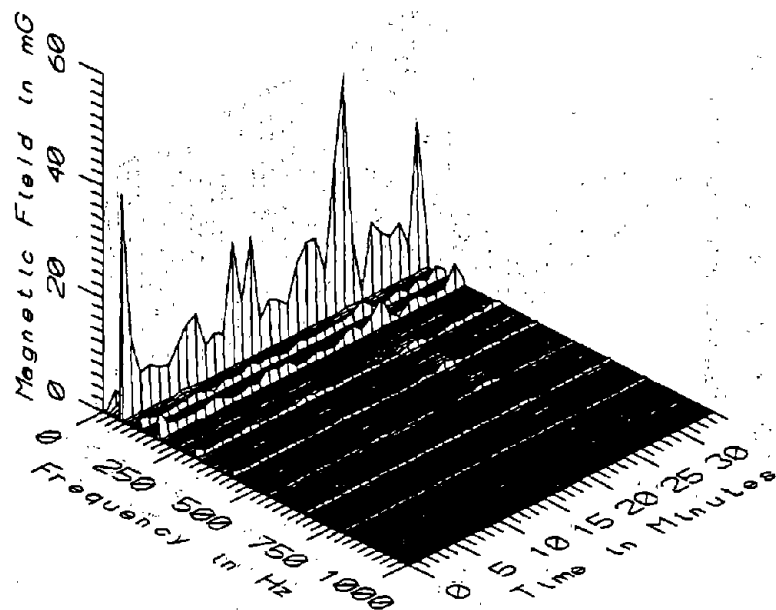
NEC029 - LEFT OF ENGINEER IN R.E.C. - STATIC



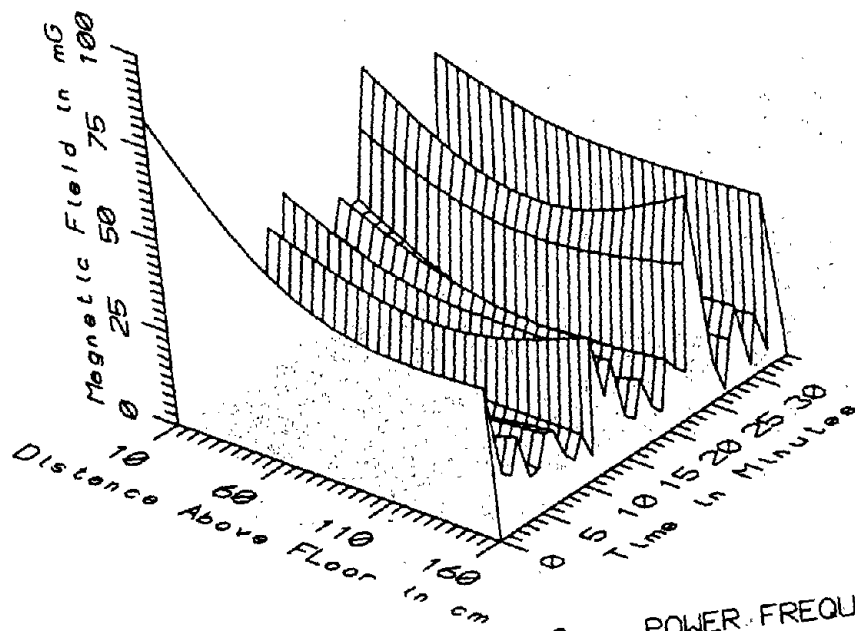
NEC029 - LEFT OF ENGINEER IN R.E.C. - LOW FREQUENCY, 5-45Hz



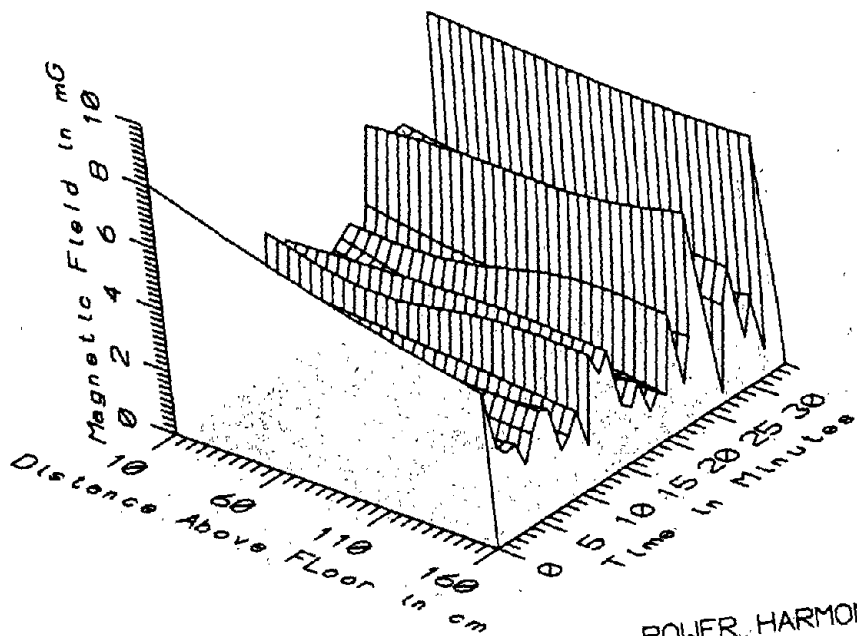
NEC029 - REFERENCE PROBE - FIREMAN'S SEAT IN R.E.C.



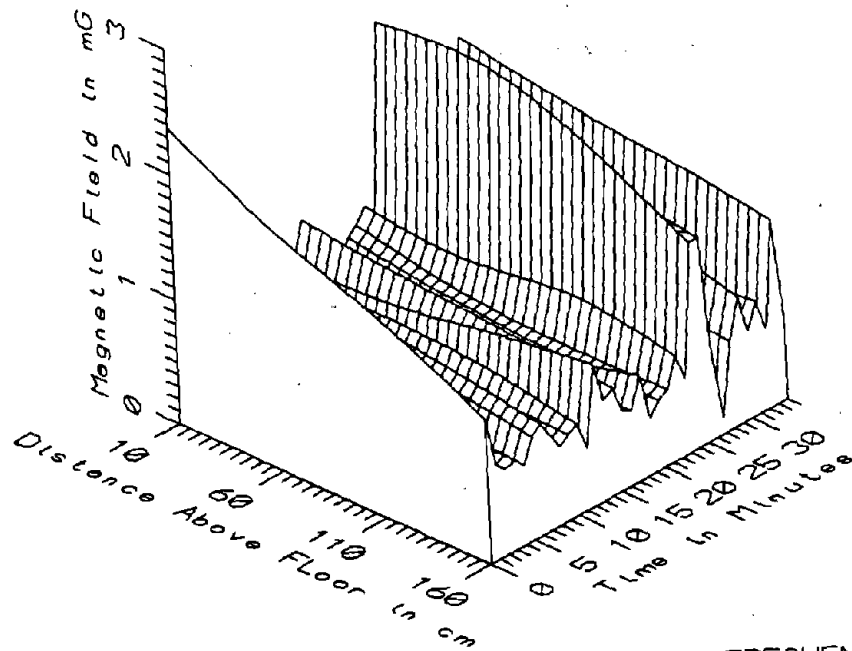
NEC029 - REFERENCE PROBE - FIREMAN'S SEAT IN R.E.C.



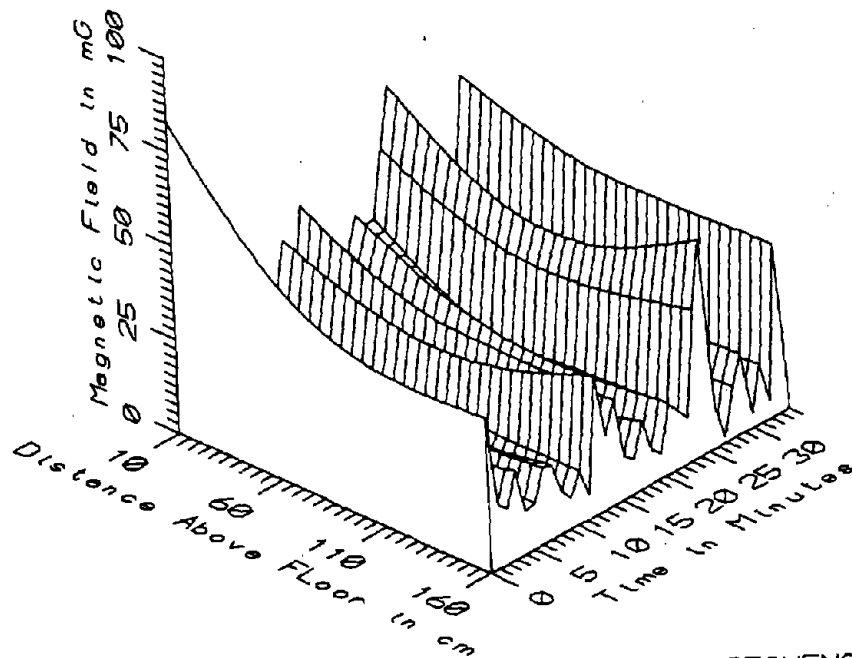
NEC029 - LEFT OF ENGINEER IN R.E.C. - POWER FREQUENCY, 50-60Hz



NEC029 - LEFT OF ENGINEER IN R.E.C. - POWER HARMONICS, 65-300Hz



NEC029 - LEFT OF ENGINEER IN R.E.C. - HIGH FREQUENCY, 305-2560Hz



NEC029 - LEFT OF ENGINEER IN R.E.C. - ALL FREQUENCIES, 5-2560Hz

APPENDIX AE

DATASET NEC030
VERTICAL PROFILE AT THE ENGINEER'S SEAT OF THE
ELECTRIC LOCOMOTIVE AT THE TRANSITION FROM THE
60 HZ TO 25 HZ SECTIONS OF THE NEC

Measurement Setup Code: Staff: 24 Reference: 25
 Drawing: A-4

Vehicle Status: Cross from 60 Hz to 25 Hz system at
 285 second point.

Measurement Date: March 31, 1992

Measurement Time: Start: 13:48:55
 End: 13:57:40

Number of Samples: 100

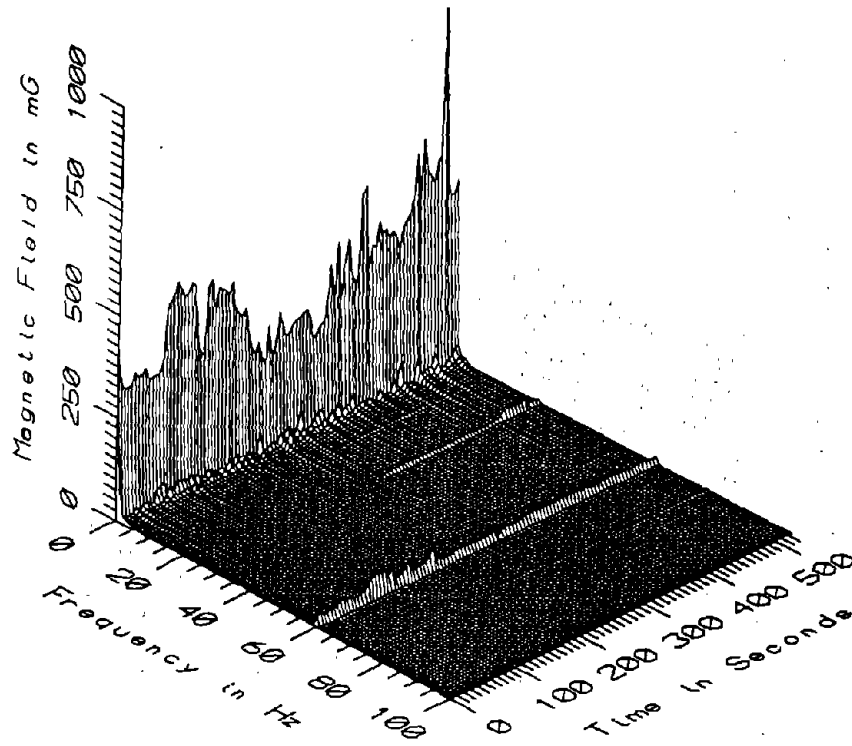
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.3 sec

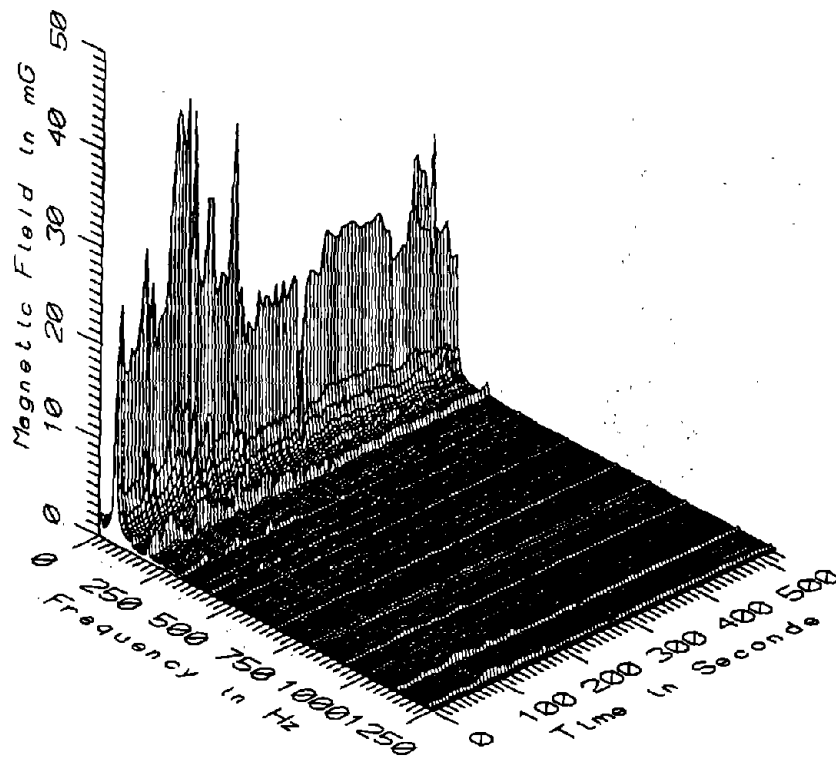
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

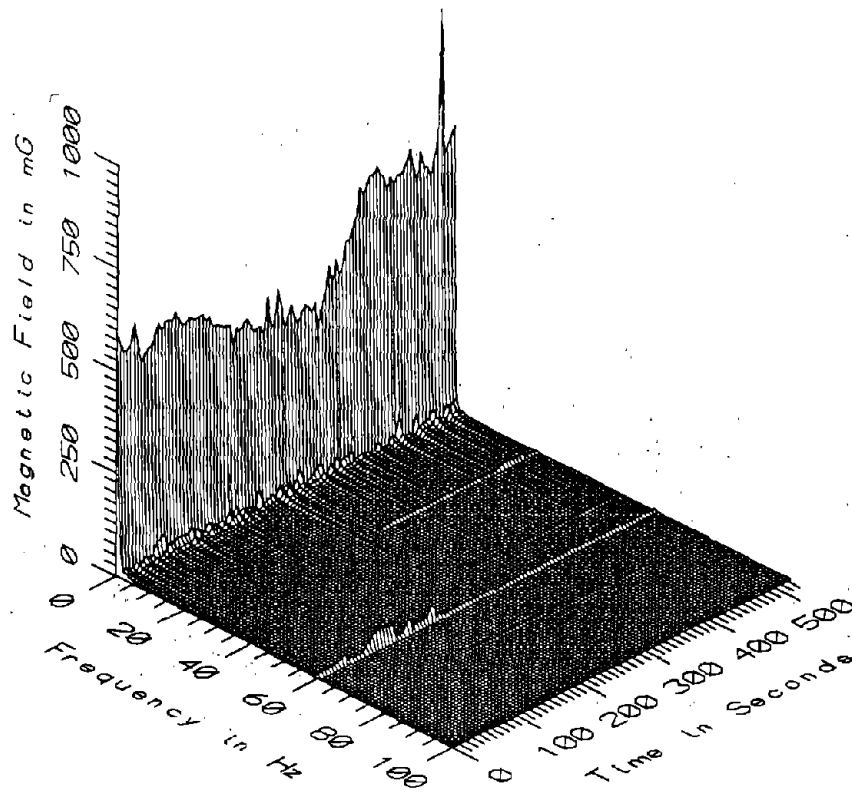
Missing or Suspect Data: None



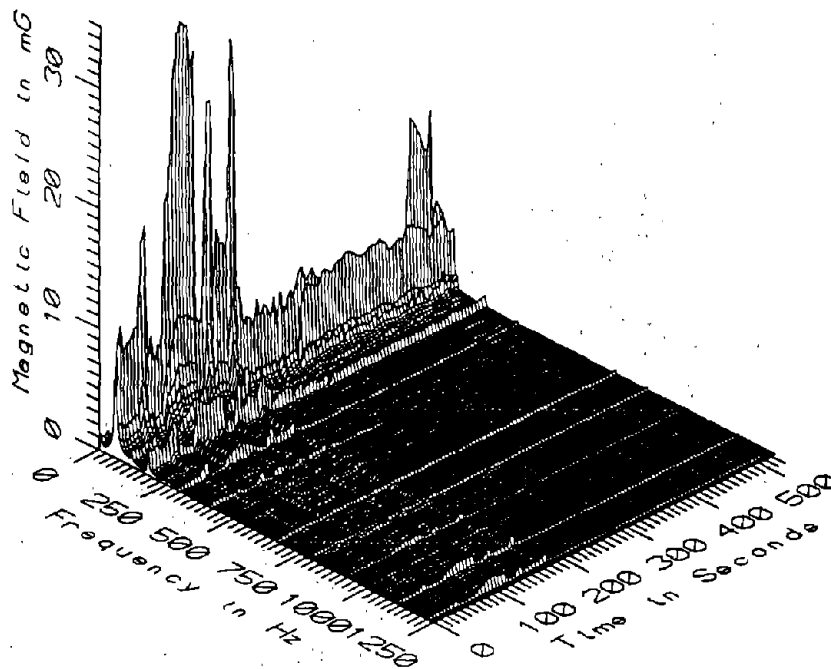
NEC030 - 10cm ABOVE FLOOR, LEFT OF ENGINEER



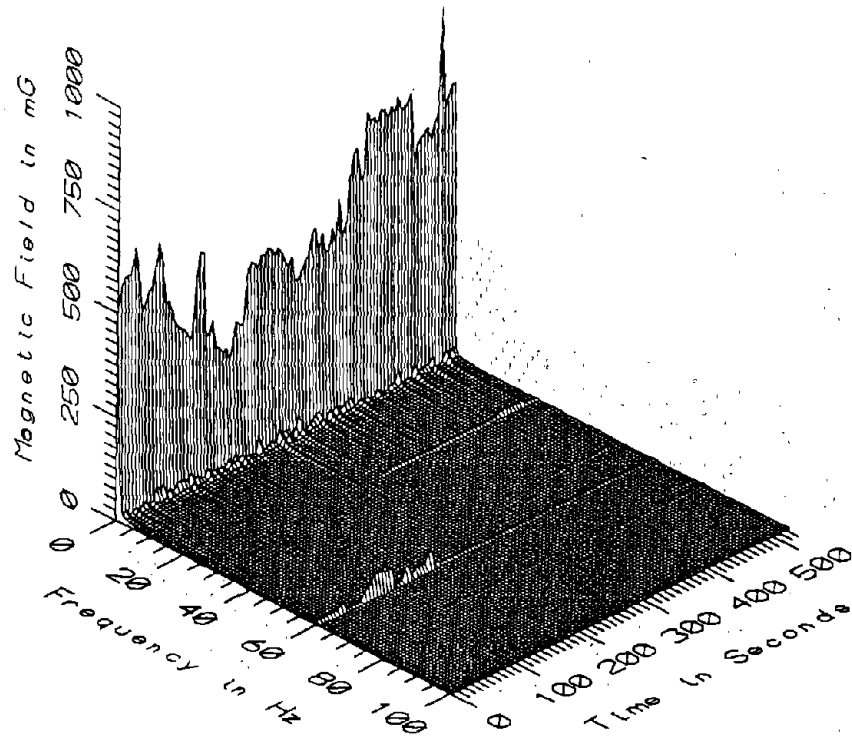
NEC030 - 10cm ABOVE FLOOR, LEFT OF ENGINEER



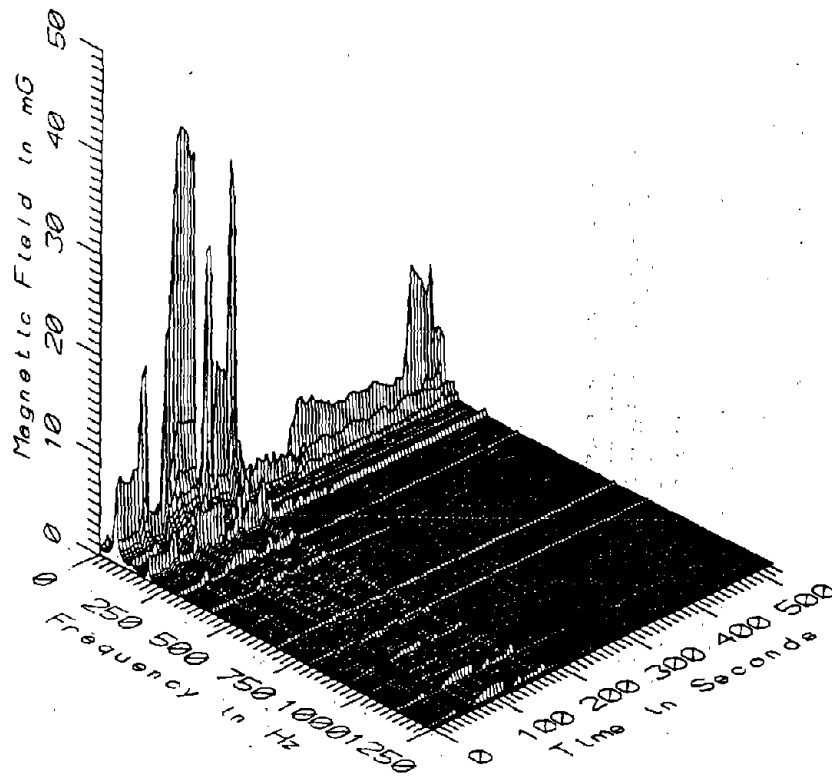
NEC030 - 60cm ABOVE FLOOR, LEFT OF ENGINEER



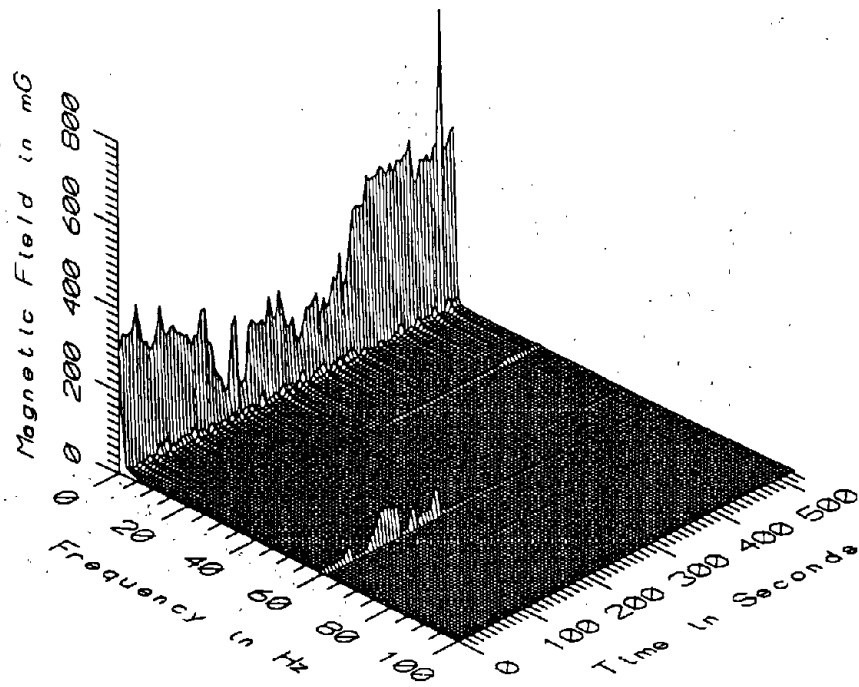
NEC030 - 60cm ABOVE FLOOR, LEFT OF ENGINEER



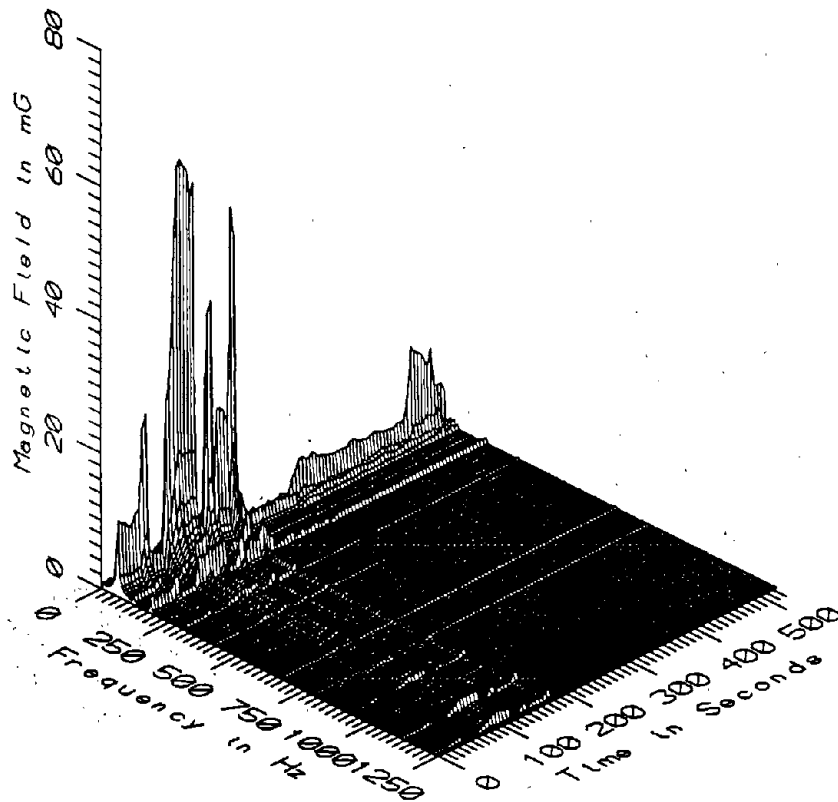
NEC030 - 110cm ABOVE FLOOR, LEFT OF ENGINEER



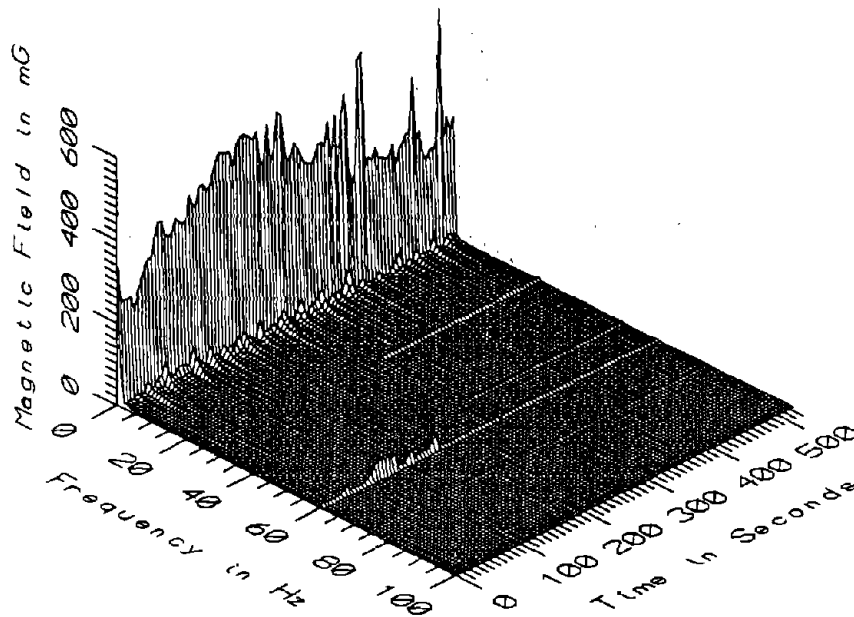
NEC030 - 110cm ABOVE FLOOR, LEFT OF ENGINEER



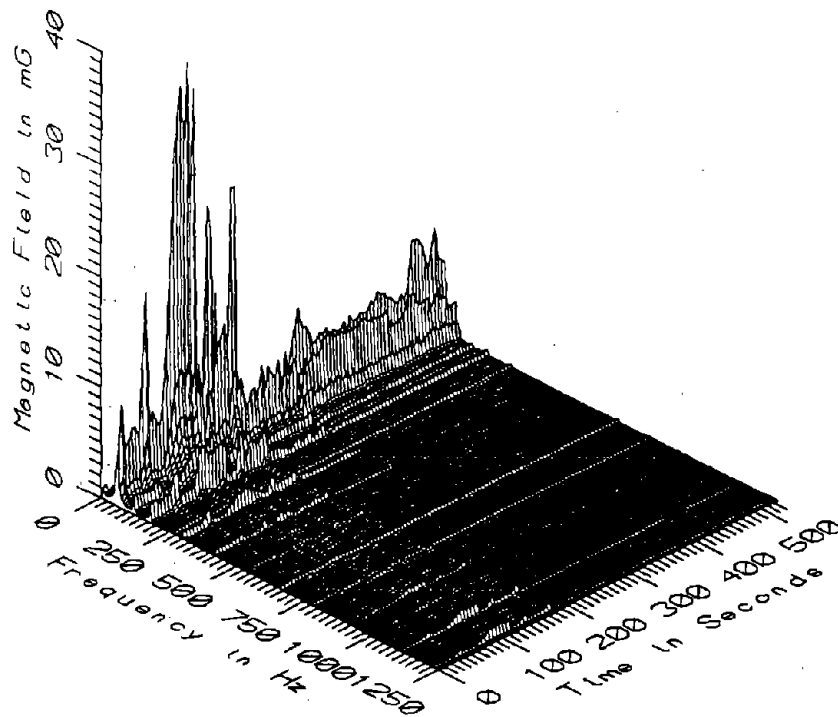
NEC030 - 160cm ABOVE FLOOR, LEFT OF ENGINEER



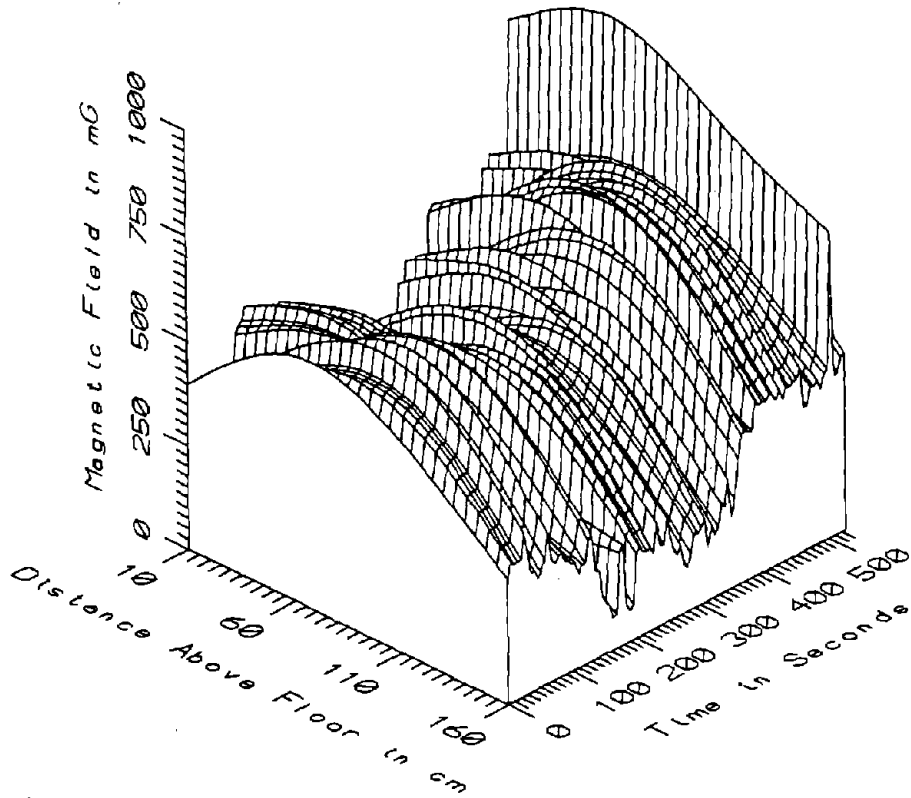
NEC030 - 1.60cm ABOVE FLOOR, LEFT OF ENGINEER



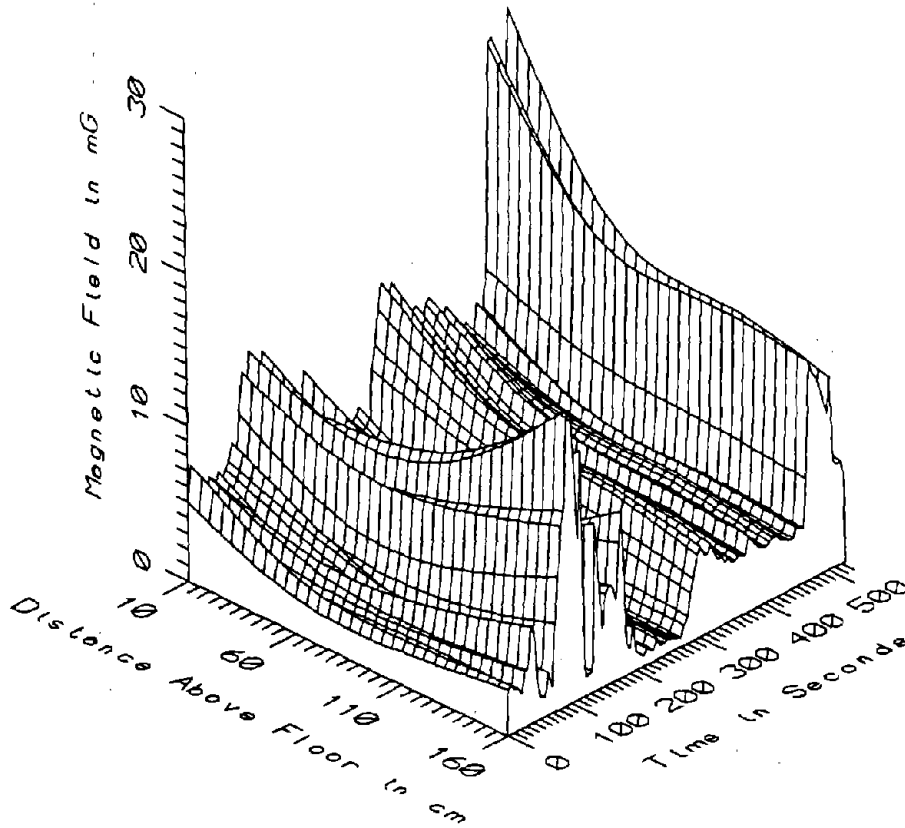
NEC030 - REFERENCE PROBE - FIREMAN'S SEAT



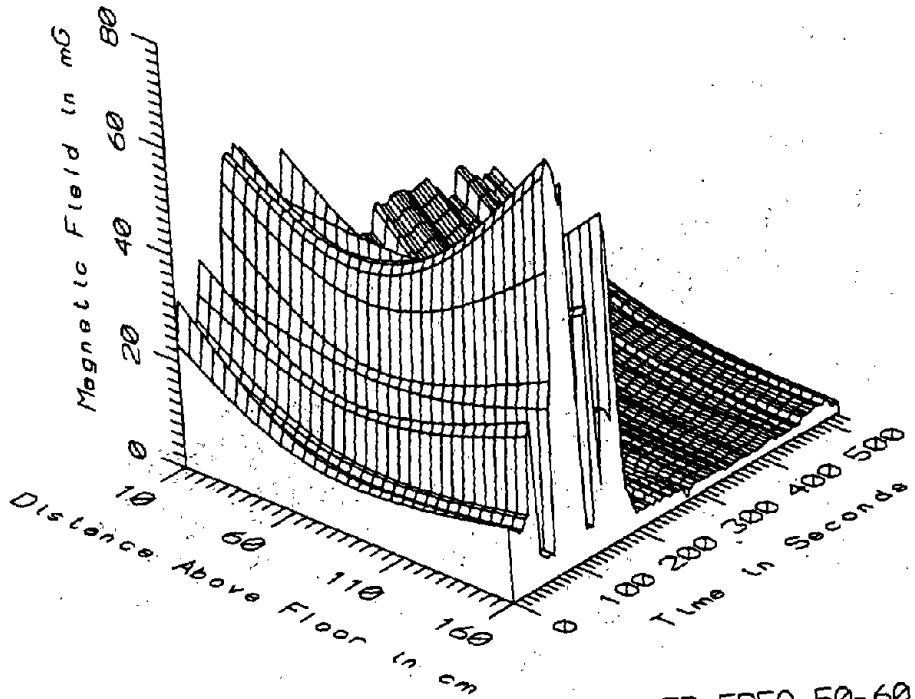
NEC030 - REFERENCE PROBE - FIREMAN'S SEAT



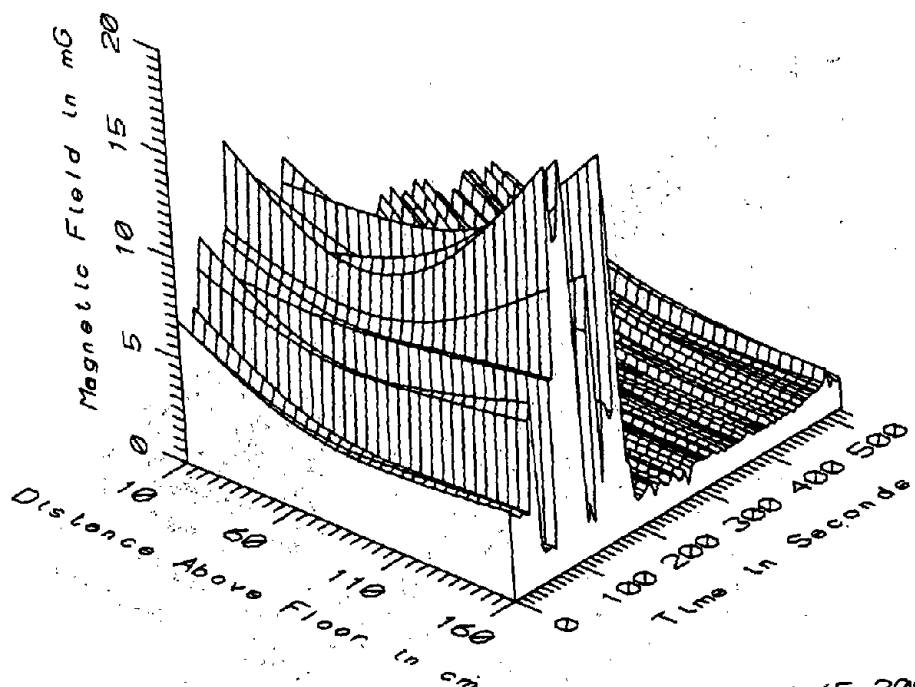
NEC030 - LEFT OF ENGINEER - STATIC



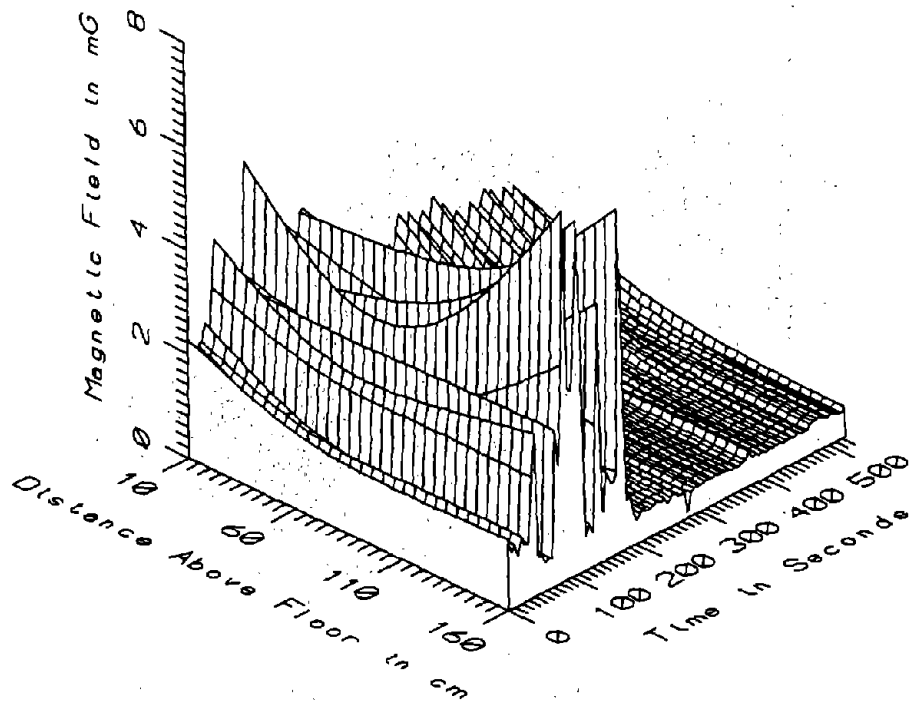
NEC030 - LEFT OF ENGINEER - LOW FREQ 5-45 Hz



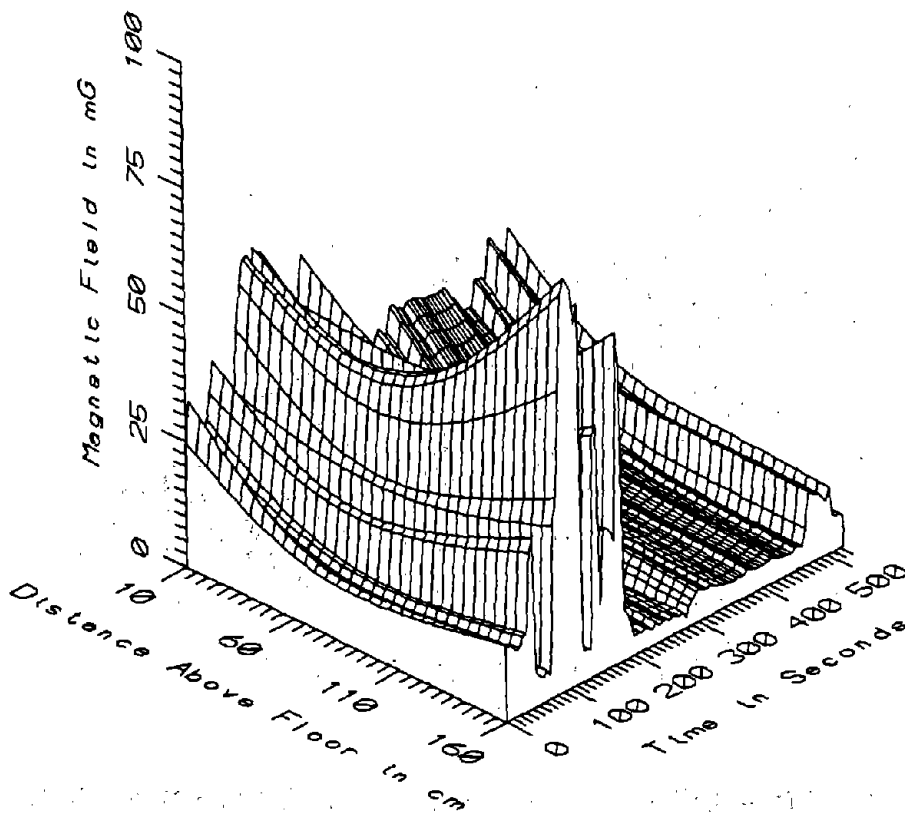
NEC030 - LEFT OF ENGINEER - POWER FREQ 50-60 Hz



NEC030 - LEFT OF ENGINEER - POWER HARM 65-300 Hz



NEC030 - LEFT OF ENGINEER - HIGH FREQ 305-2560 Hz



NEC030 - LEFT OF ENGINEER - ALL FREQ 5-2560 Hz

1944

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APPENDIX AF

DATASET NEC031

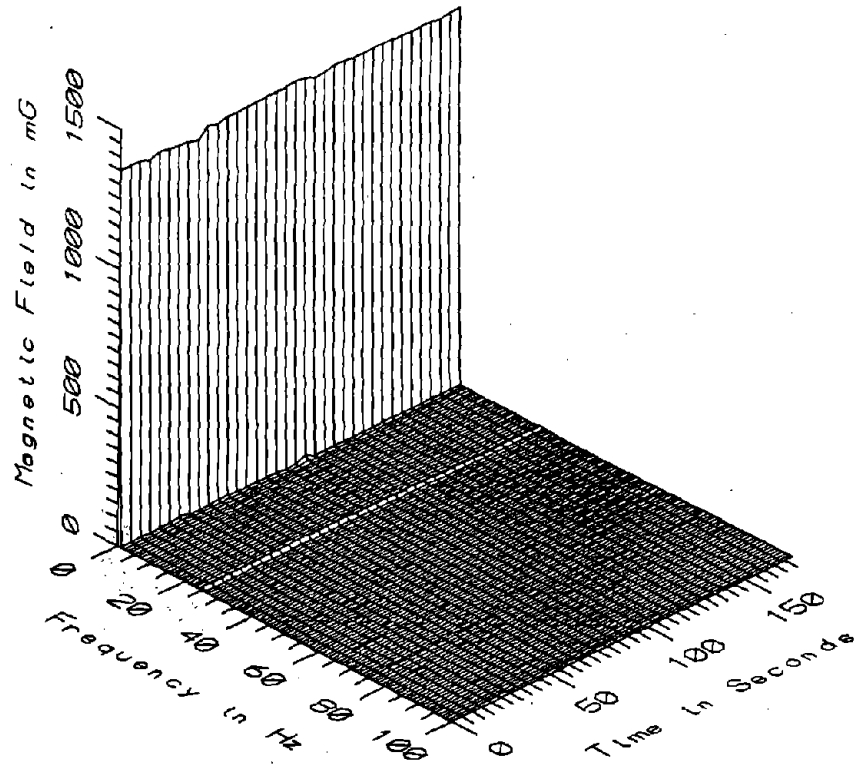
VERTICAL PROFILE AT THE PASSENGER WAITING AREA
OF NEW YORK'S PENN STATION - 25 HZ NEC

Measurement Setup Code: Staff: N/A Reference: N/A
Vehicle Status: Train activity at the platform level
 below waiting area
Measurement Date: March 31, 1992
Measurement Time: Start: 15:03:46
 End: 15:06:40
Number of Samples: 36
Programmed Sample Interval: 5 sec
Actual Sample Interval: 5 sec

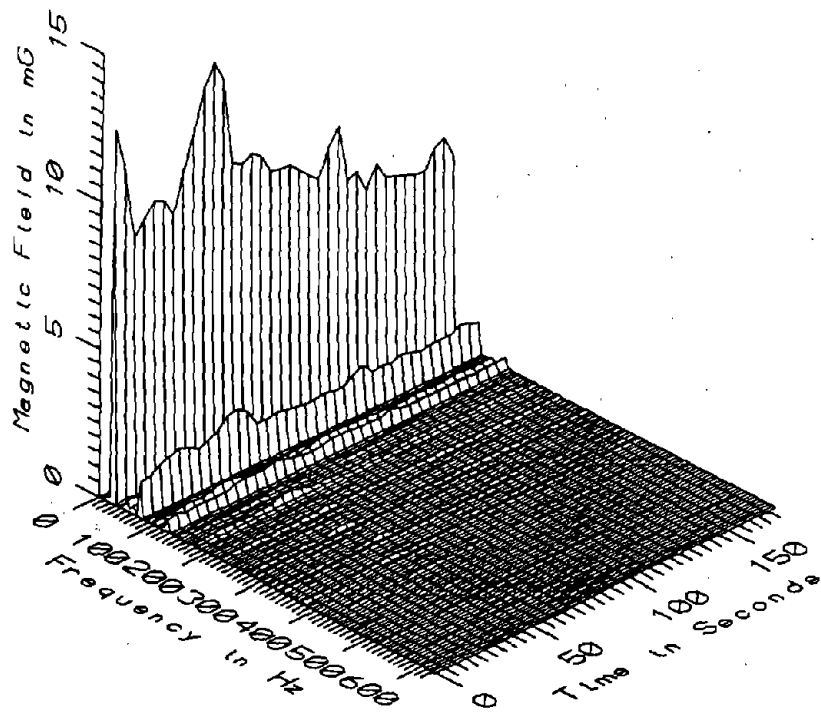
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

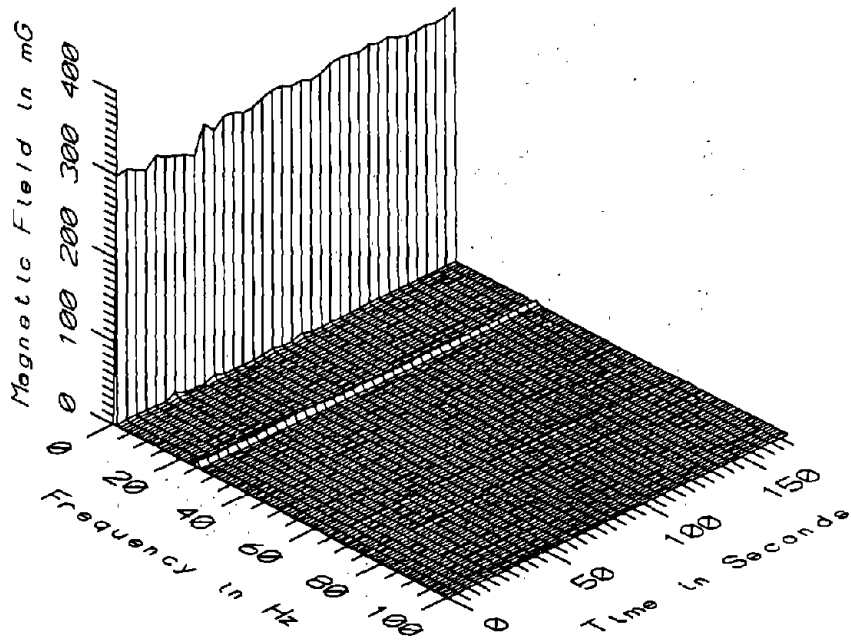
Missing or Suspect Data: None



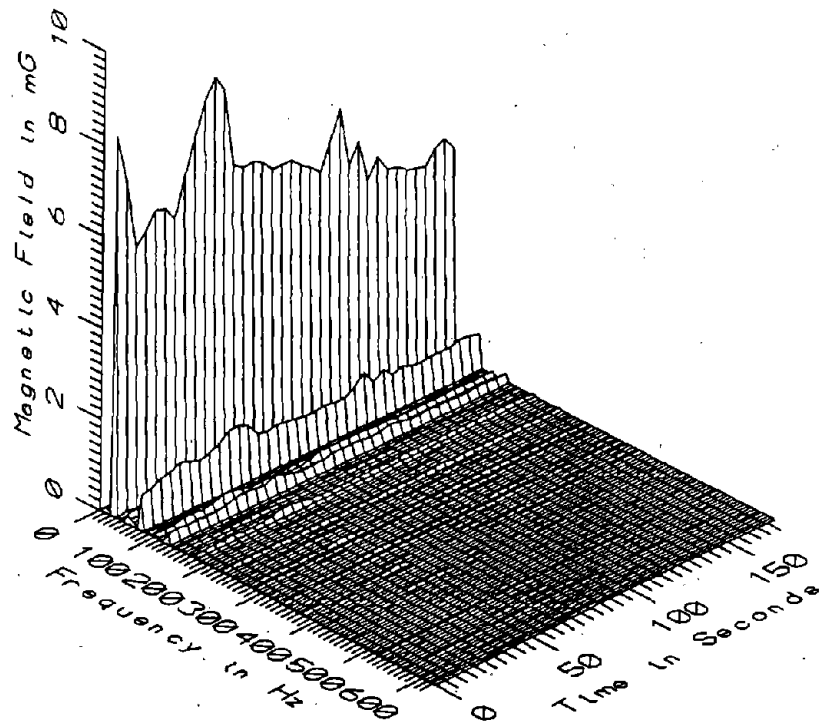
NEC031 - 10cm ABOVE FLOOR, WAITING AREA OF PENN STATION



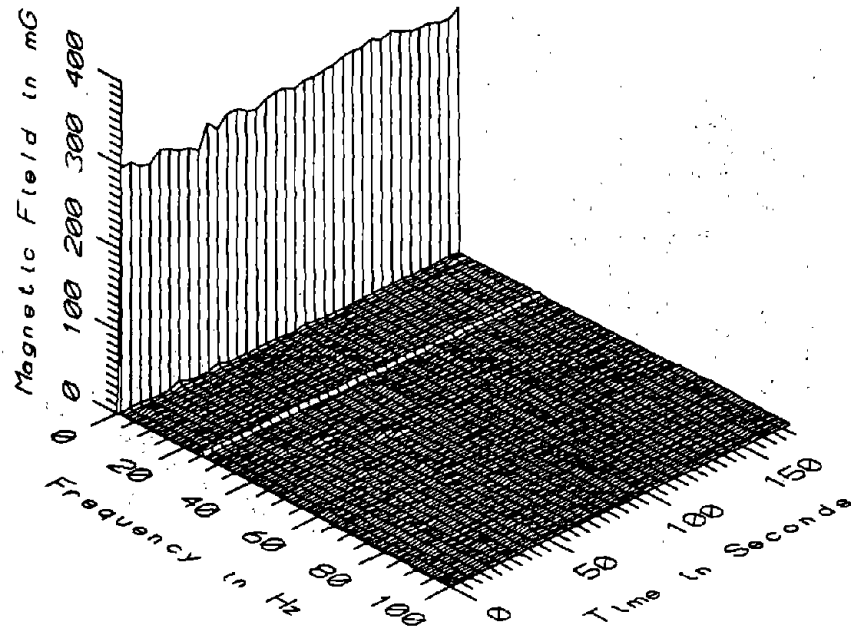
NEC031 - 10cm ABOVE FLOOR, WAITING AREA OF PENN STATION



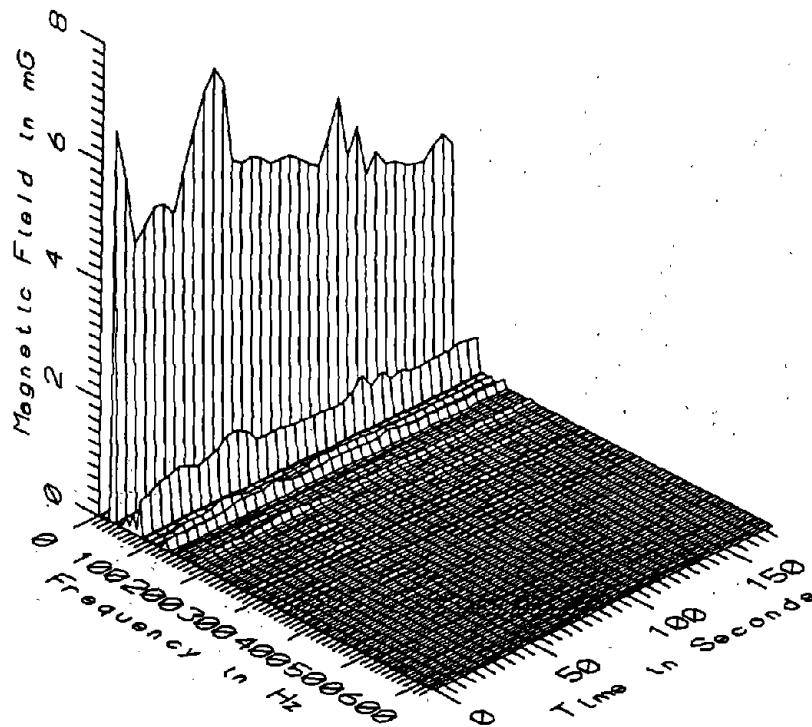
NEC031 - 60cm ABOVE FLOOR, WAITING AREA OF PENN STATION



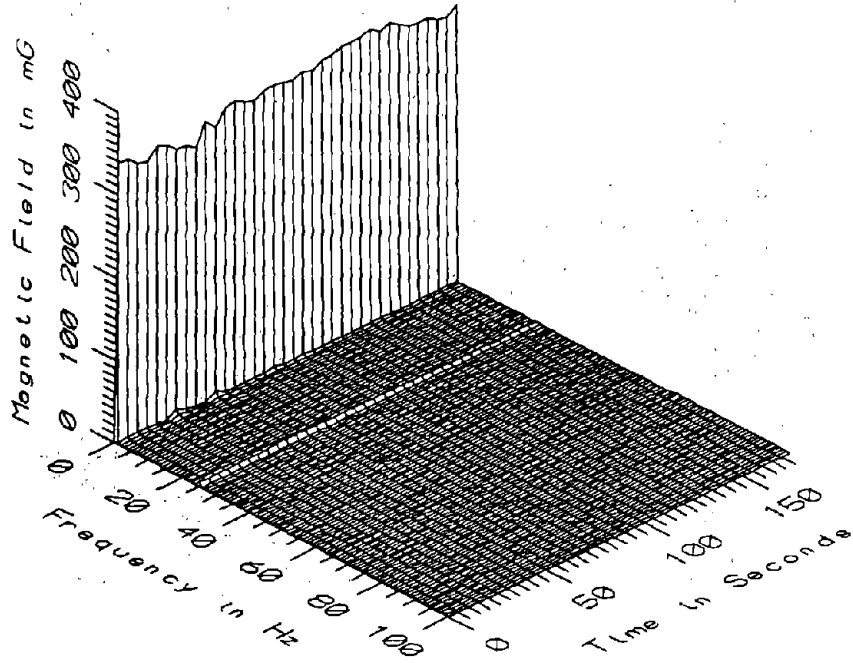
NEC031 - 60cm ABOVE FLOOR, WAITING AREA OF PENN STATION



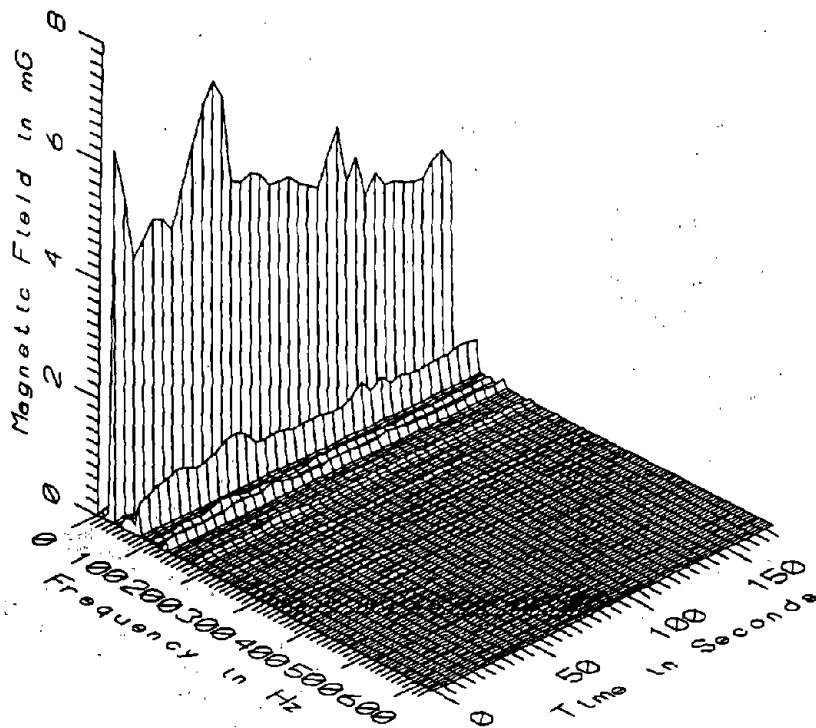
NEC031 - 110cm ABOVE FLOOR, WAITING AREA OF PENN STATION



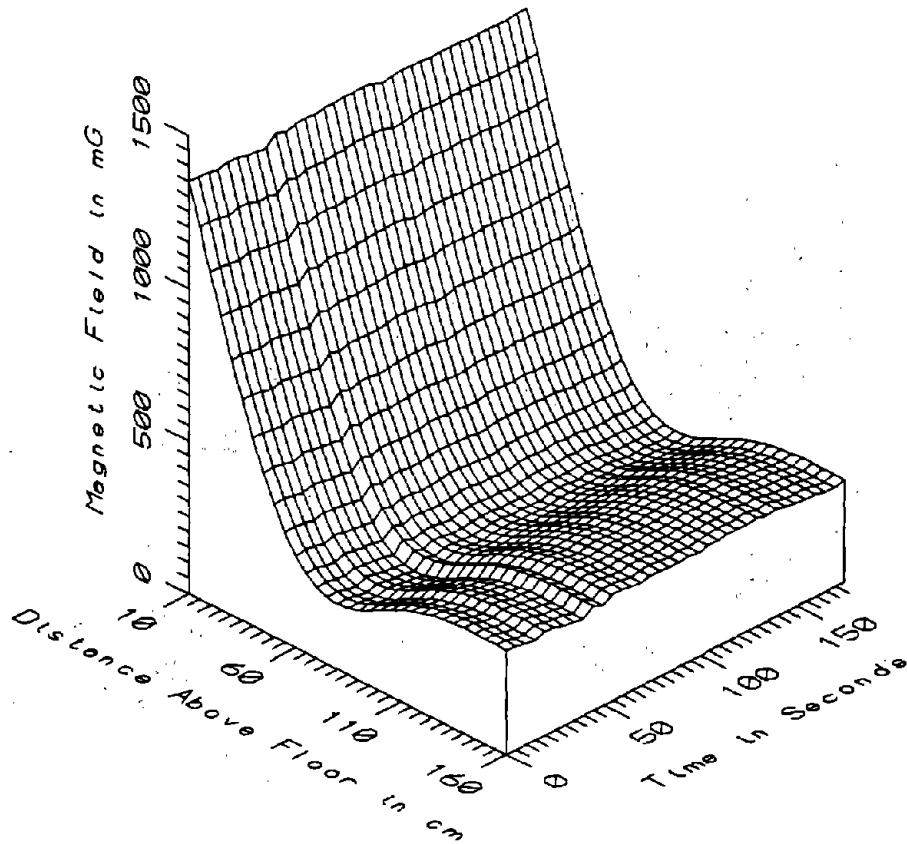
NEC031 - 110cm ABOVE FLOOR, WAITING AREA OF PENN STATION



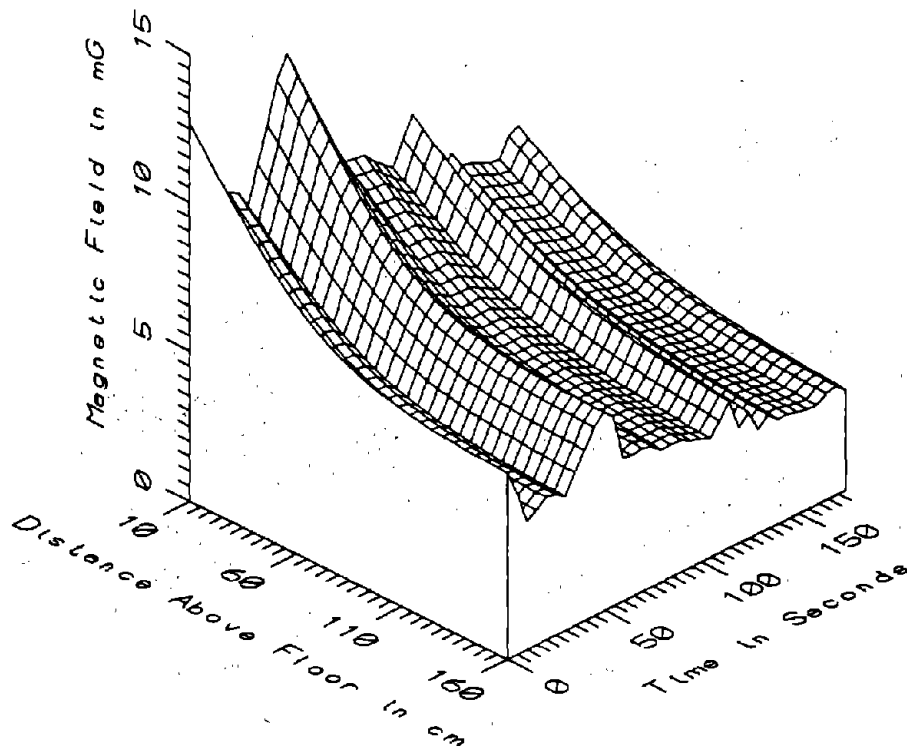
NEC031 - 160cm ABOVE FLOOR, WAITING AREA OF PENN STATION



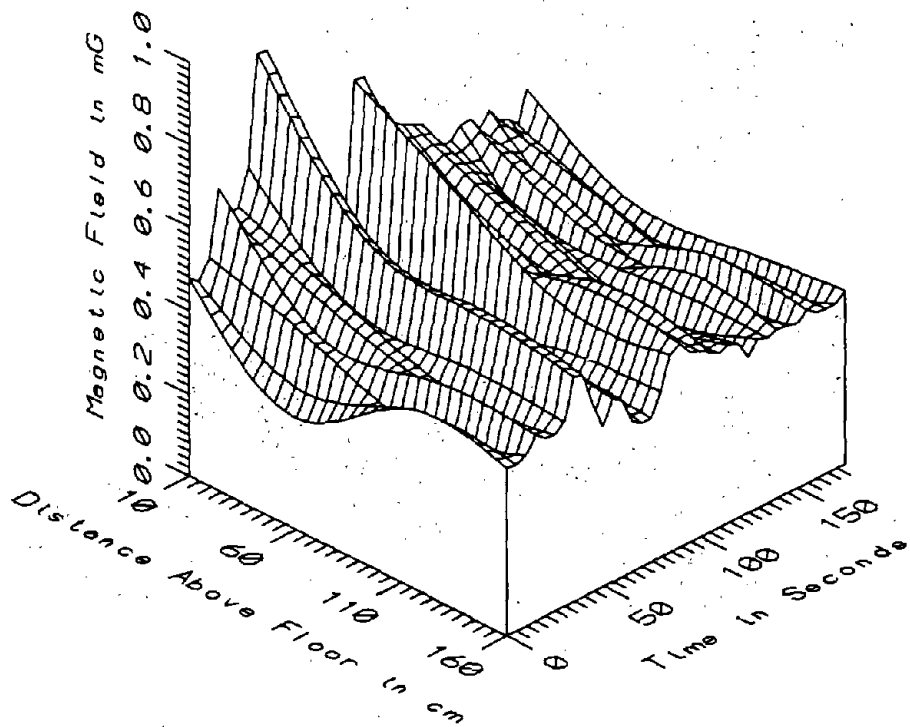
NEC031 - 160cm ABOVE FLOOR, WAITING AREA OF PENN STATION



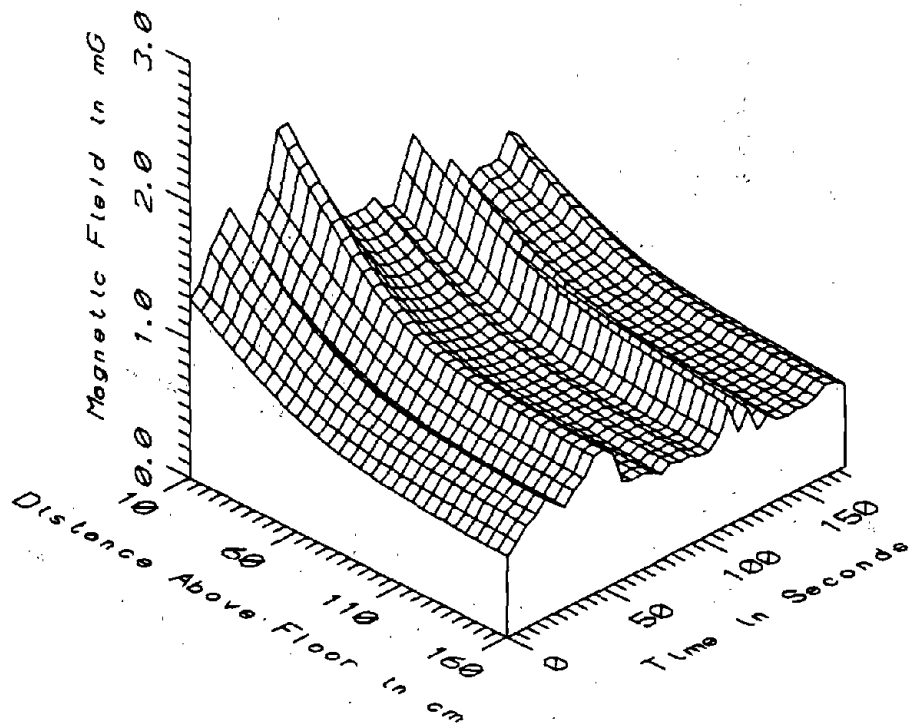
NEC031 - WAITING AREA OF PENN STATION - STATIC



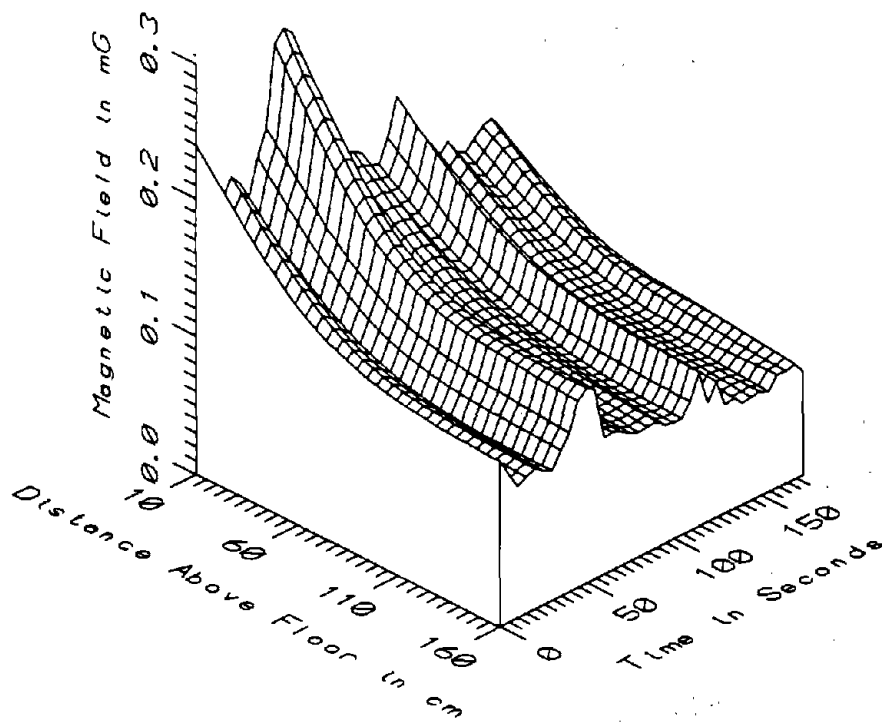
NEC031 - WAITING AREA OF PENN STATION - LOW FREQ 5-45 Hz



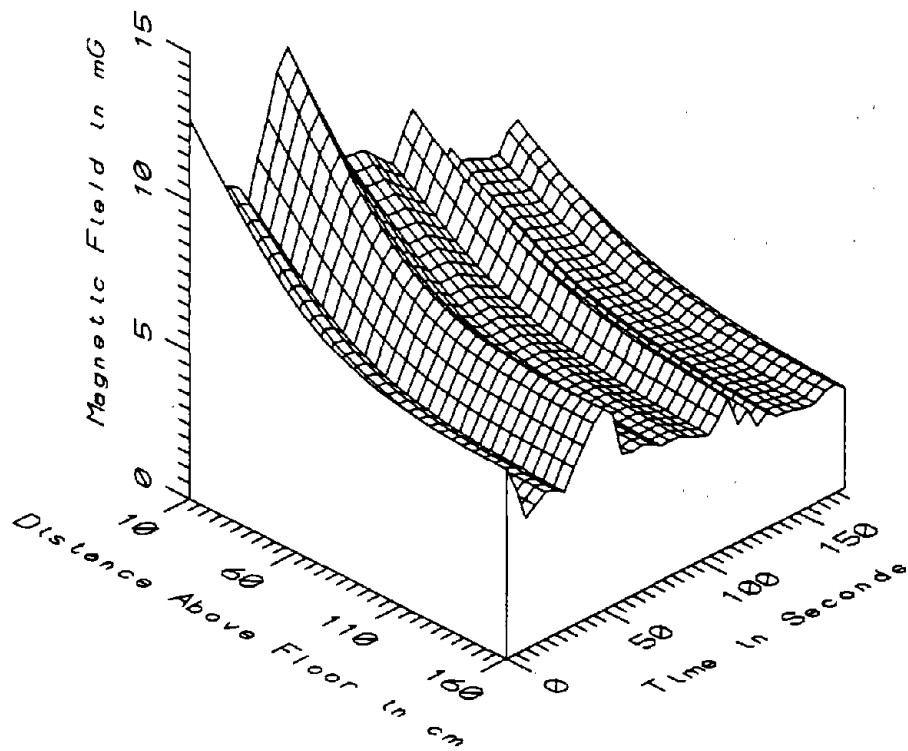
NEC031 - WAITING AREA OF PENN STATION - POWER FREQ 50-60 Hz



NEC031 - WAITING AREA OF PENN STATION - POWER HARM 65-300 Hz



NEC031 - WAITING AREA OF PENN STATION - HIGH FREQ, 305-2560Hz



NEC031 - WAITING AREA OF PENN STATION - ALL FREQ 5-2560 Hz

APPENDIX AG

DATASET NEC032
VERTICAL PROFILE AT ENGINEER'S SEAT
ELECTRIC LOCOMOTIVE, 25 HZ NEC

Measurement Setup Code: Staff: 24 Reference: 25
 Drawing: A-4

Vehicle Status: Train departing Penn Station

Measurement Date: March 31, 1992

Measurement Time: Start: 15:21:25
 End: 15:28:31

Number of Samples: 79

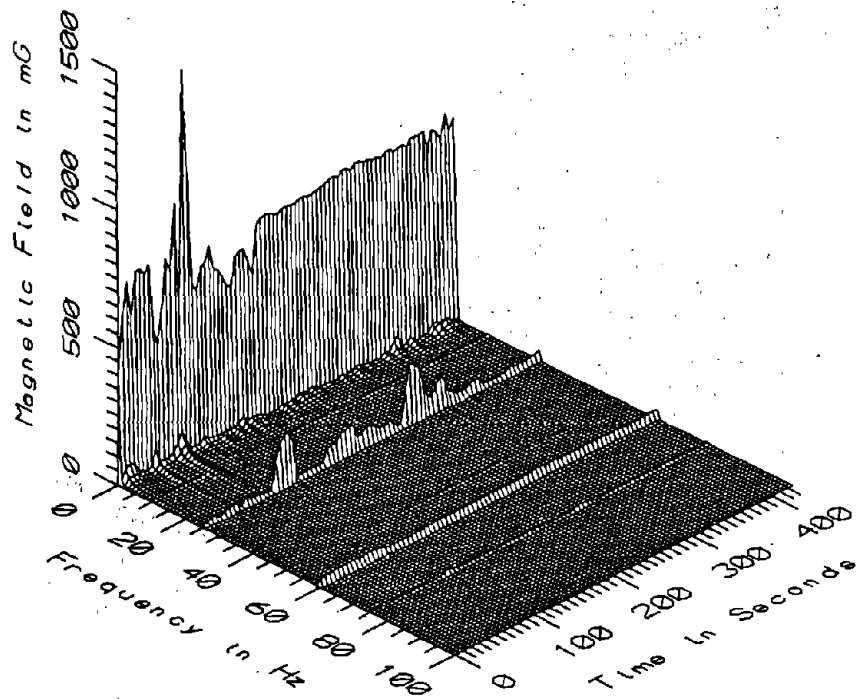
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.5 sec

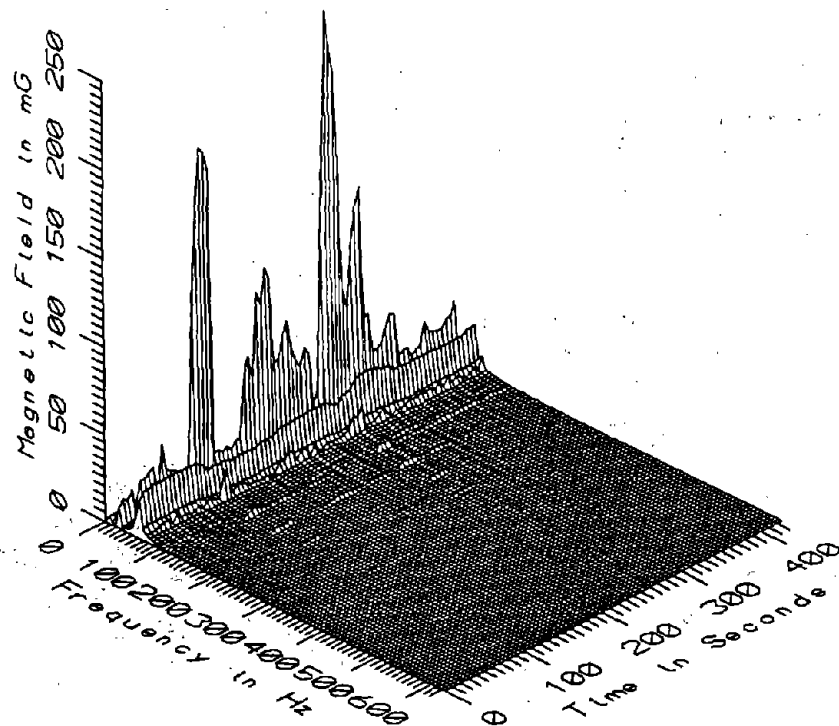
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

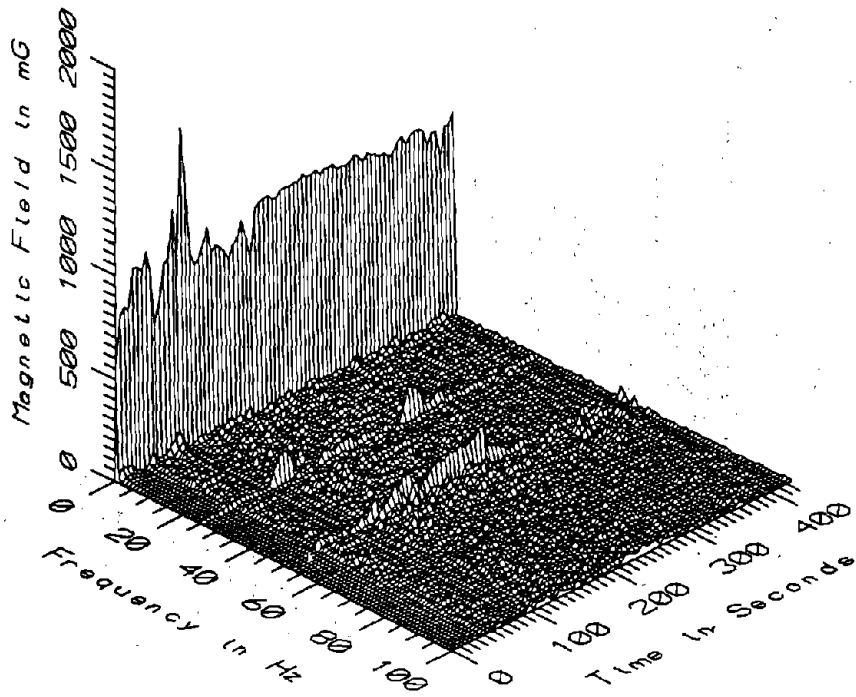
Missing or Suspect Data: None



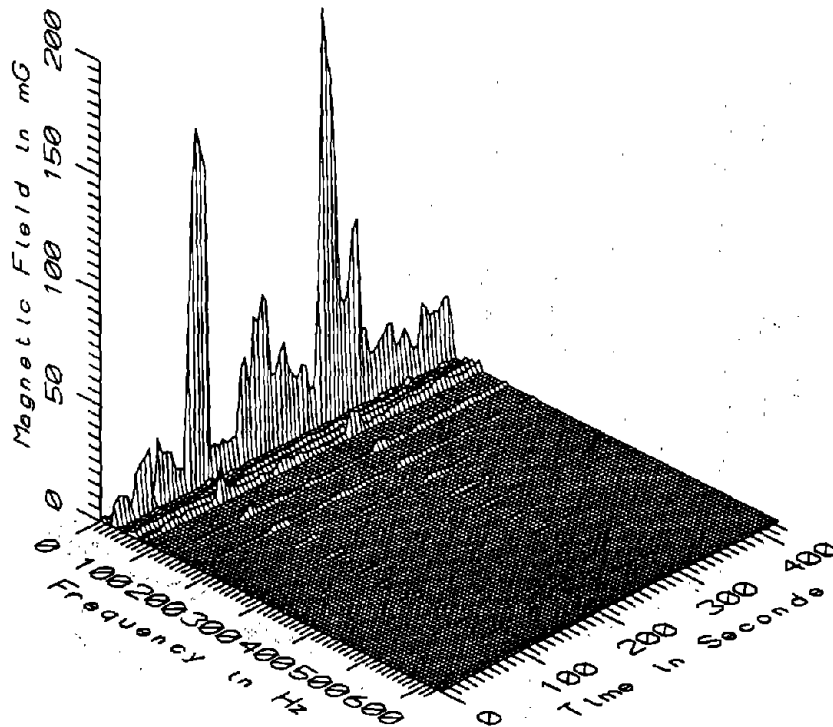
NEC032 - 10cm ABOVE FLOOR, LEFT OF ENGINEER



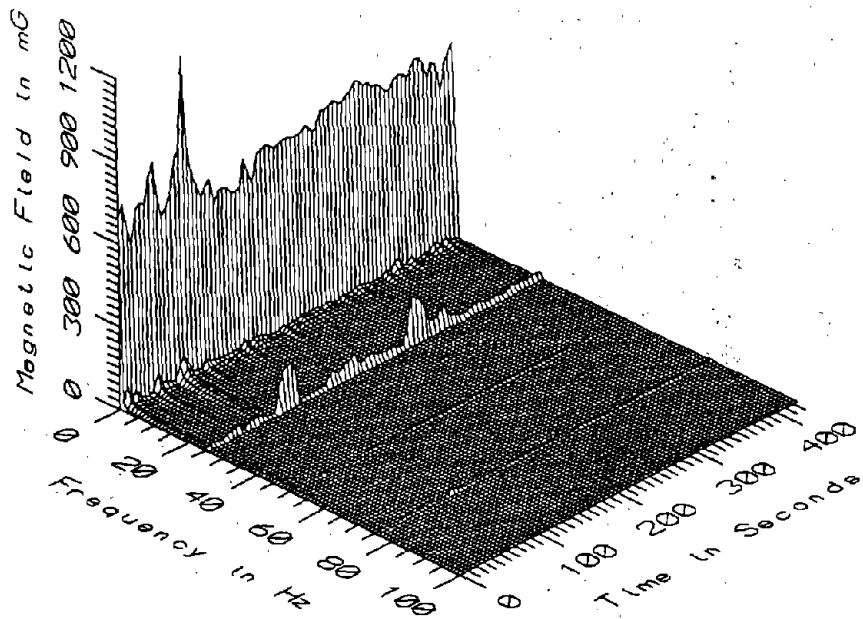
NEC032 - 10cm ABOVE FLOOR, LEFT OF ENGINEER



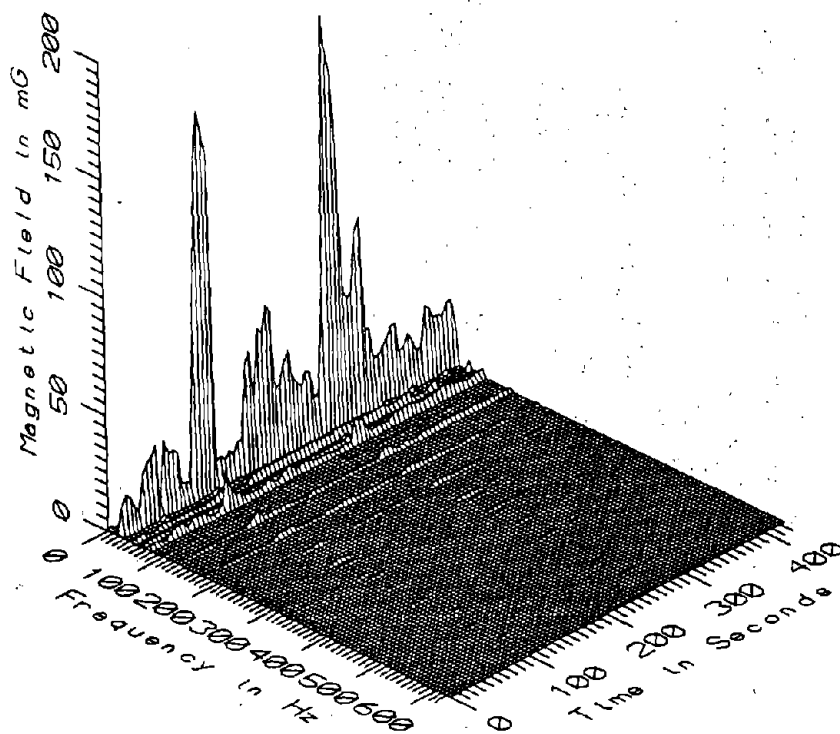
NEC032 - 60cm ABOVE FLOOR, LEFT OF ENGINEER



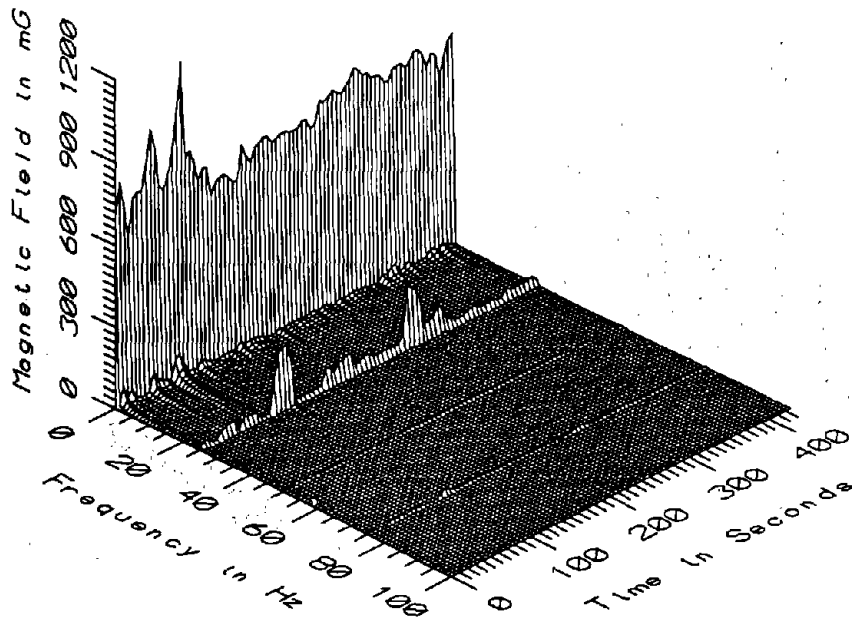
NEC032 - 60cm ABOVE FLOOR, LEFT OF ENGINEER



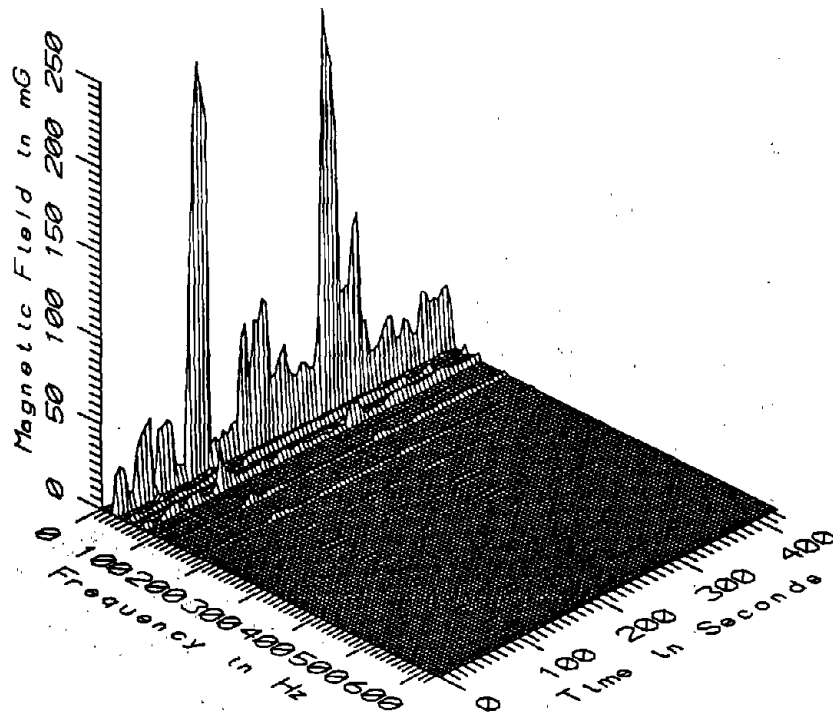
NEC032 - 110cm ABOVE FLOOR, LEFT OF ENGINEER



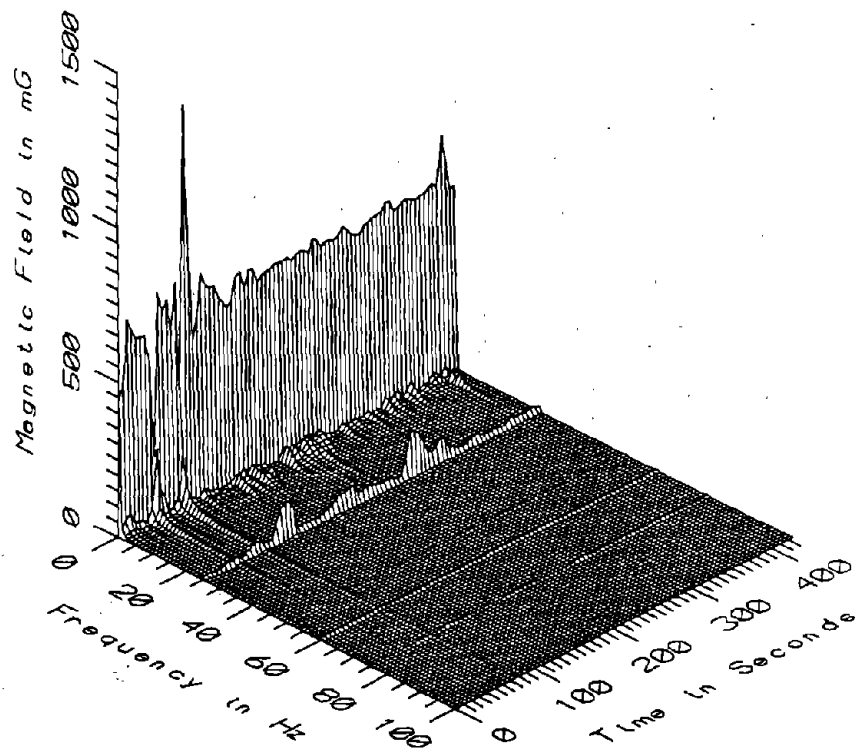
NEC032 - 110cm ABOVE FLOOR, LEFT OF ENGINEER



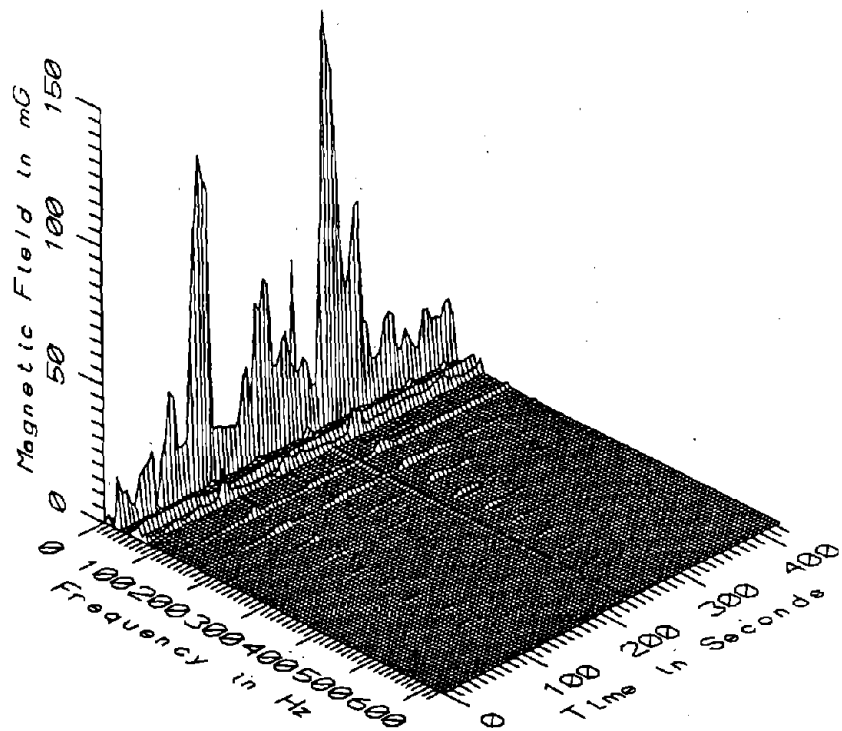
NEC032 - 160cm ABOVE FLOOR, LEFT OF ENGINEER



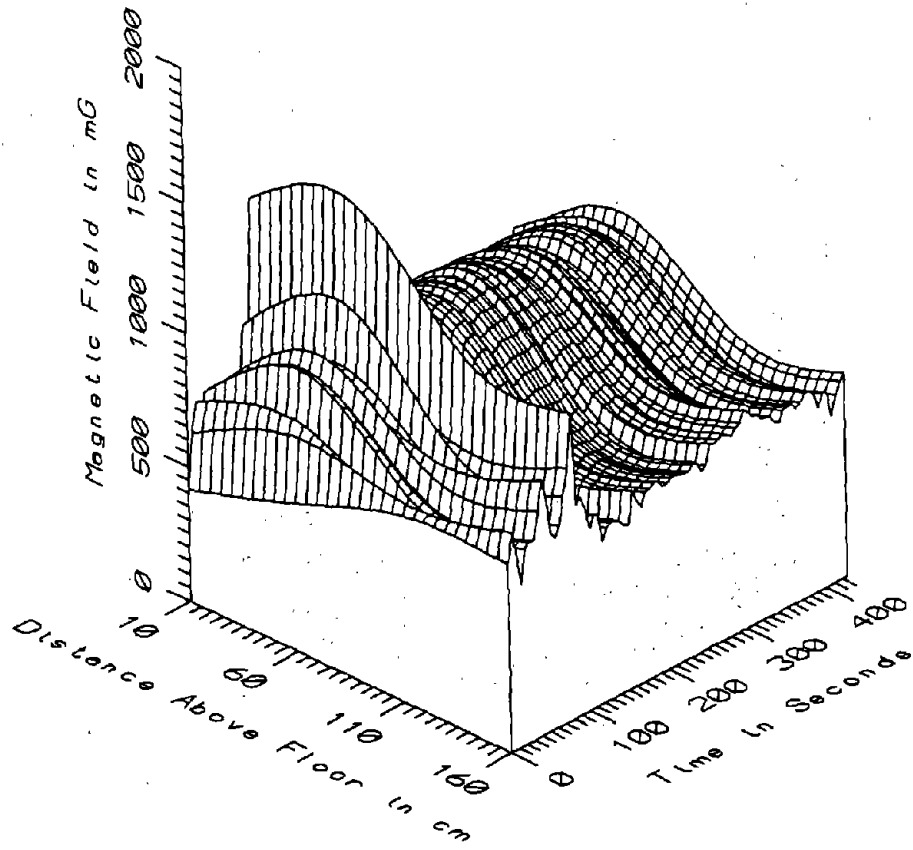
NEC032 - 160cm ABOVE FLOOR, LEFT OF ENGINEER



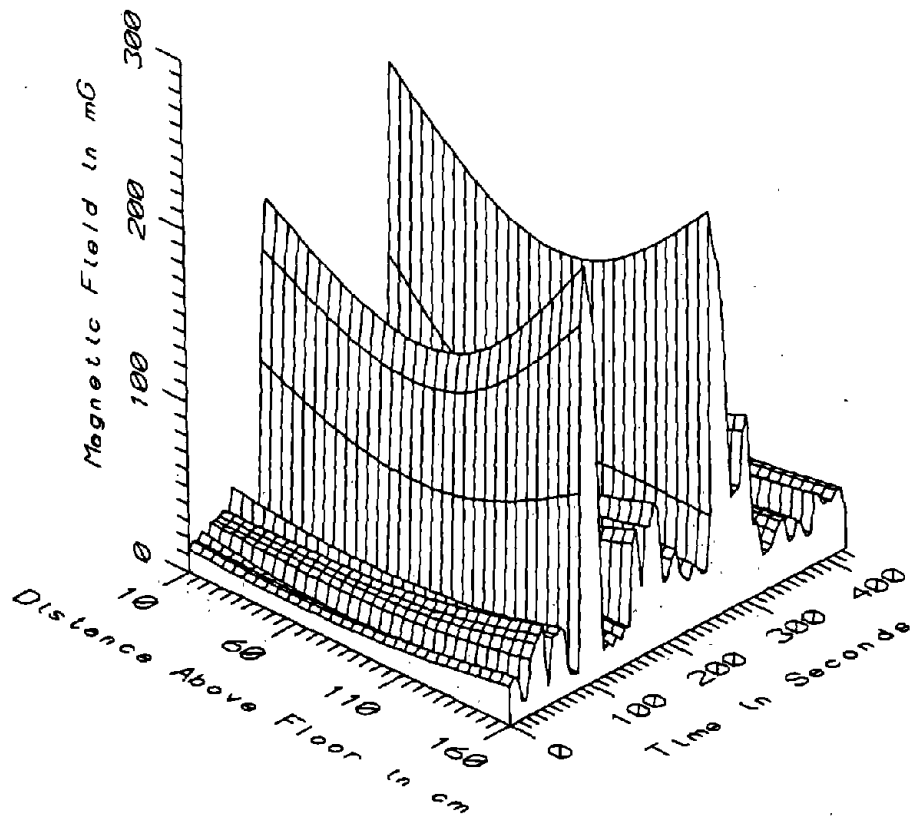
NEC032 - REFERENCE PROBE - FIREMAN'S SEAT



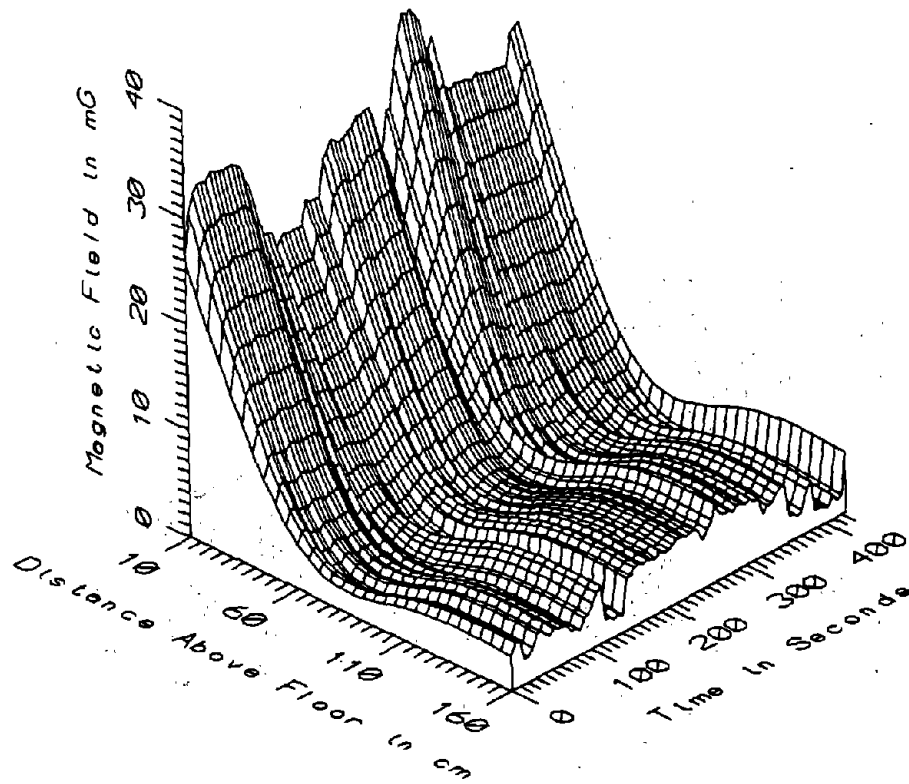
NEC032 - REFERENCE PROBE - FIREMAN'S SEAT



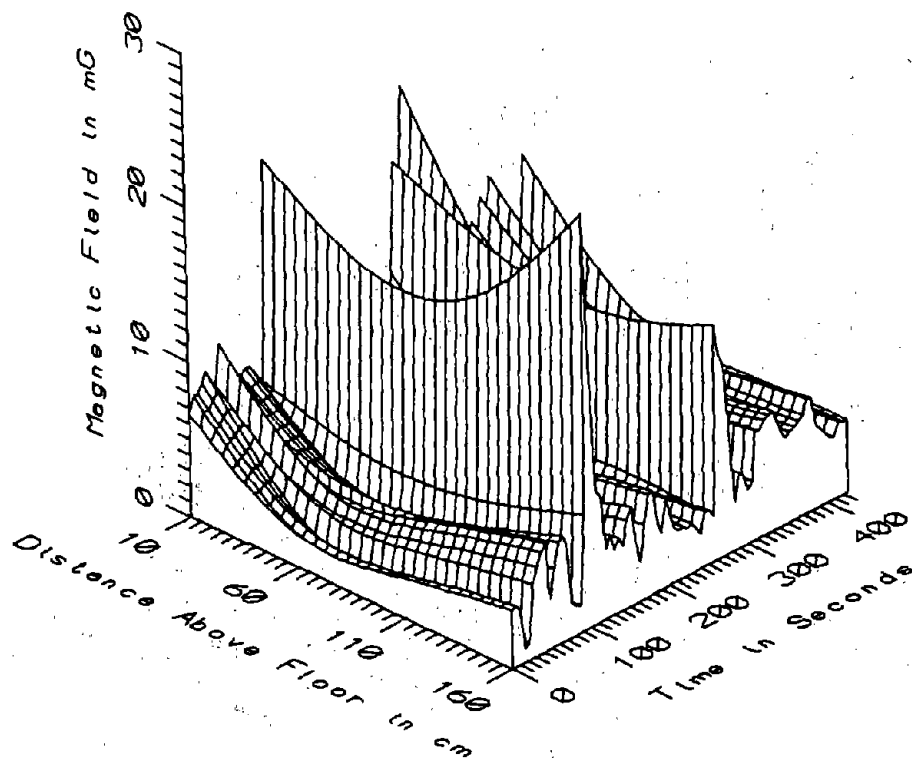
NEC032 - LEFT OF ENGINEER - STATIC



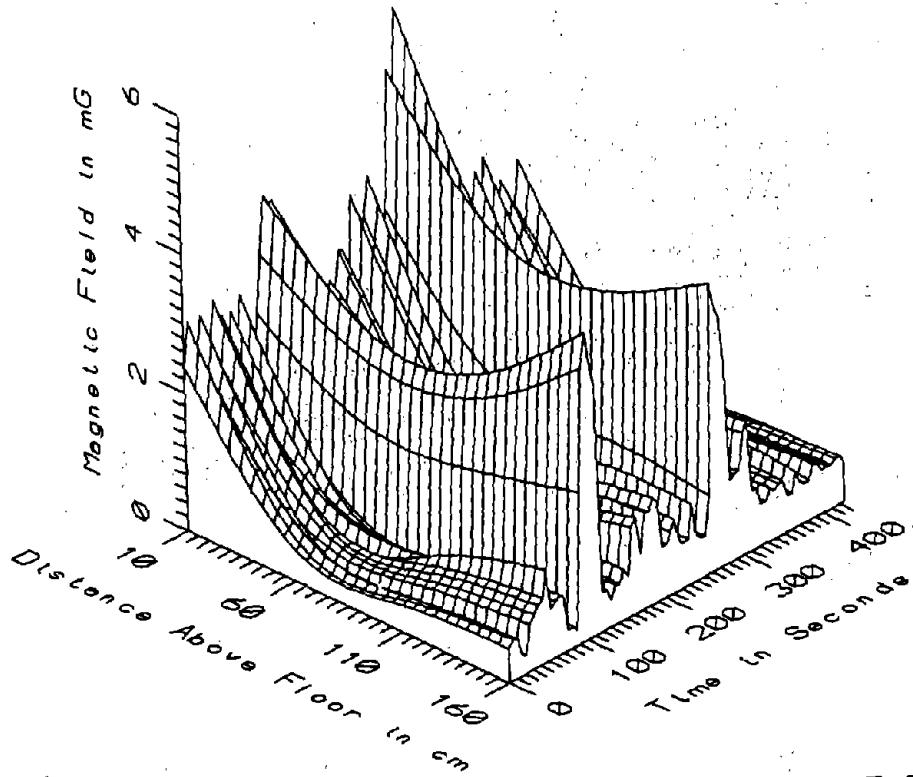
NEC032 - LEFT OF ENGINEER - LOW FREQ 5-45 Hz



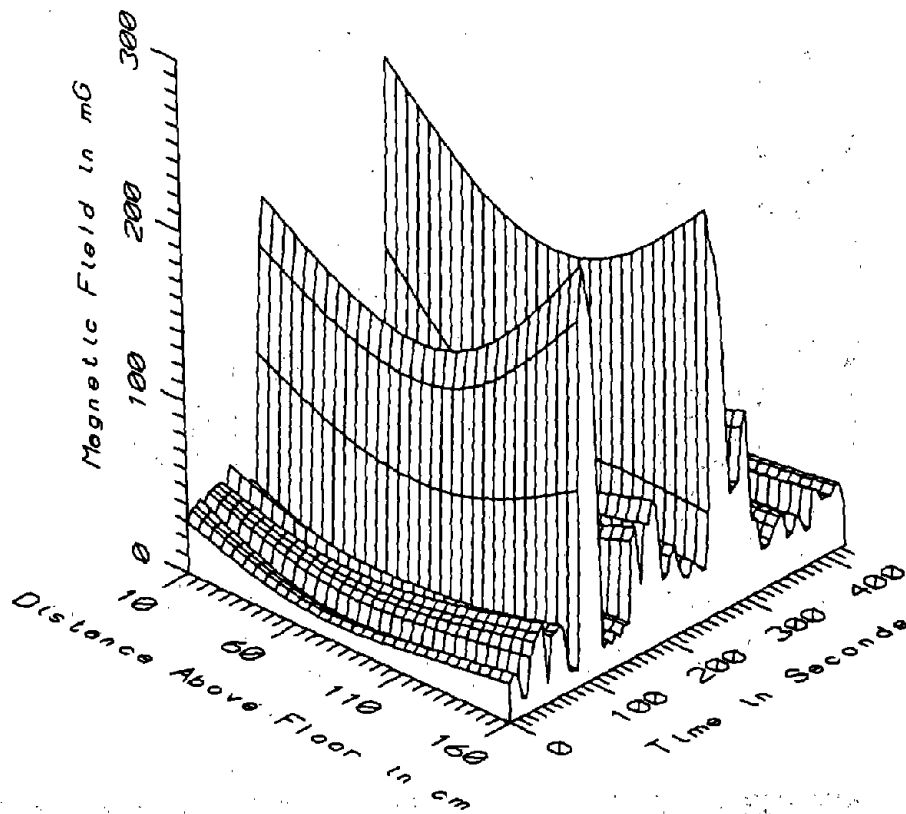
NEC032 - LEFT OF ENGINEER - POWER FREQ 50-60 Hz



NEC032 - LEFT OF ENGINEER - POWER HARM 65-300 Hz



NEC032 - LEFT OF ENGINEER - HIGH FREQ 305-2560 Hz



NEC032 - LEFT OF ENGINEER - ALL FREQ 5-2560 Hz

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
5800 S. UNIVERSITY AVENUE
CHICAGO, ILLINOIS 60637

TO: [Name] [Address] [City] [State] [Zip]

FROM: [Name] [Address] [City] [State] [Zip]

SUBJECT: [Subject]

[Text]

[Text]

[Text]

[Text]

[Text]

[Text]

[Text]

APPENDIX AH

DATASET NEC033
VERTICAL PROFILE AT FIREMAN'S SEAT
ELECTRIC LOCOMOTIVE CAB, 25 HZ NEC

Measurement Setup Code: Staff: 26 Reference: 25
 Drawing: A-4

Vehicle Status: Enter Newark and stop at the 192
 second point

Measurement Date: March 31, 1992

Measurement Time: Start: 15:29:22
 End: 15:33:05

Number of Samples: 38

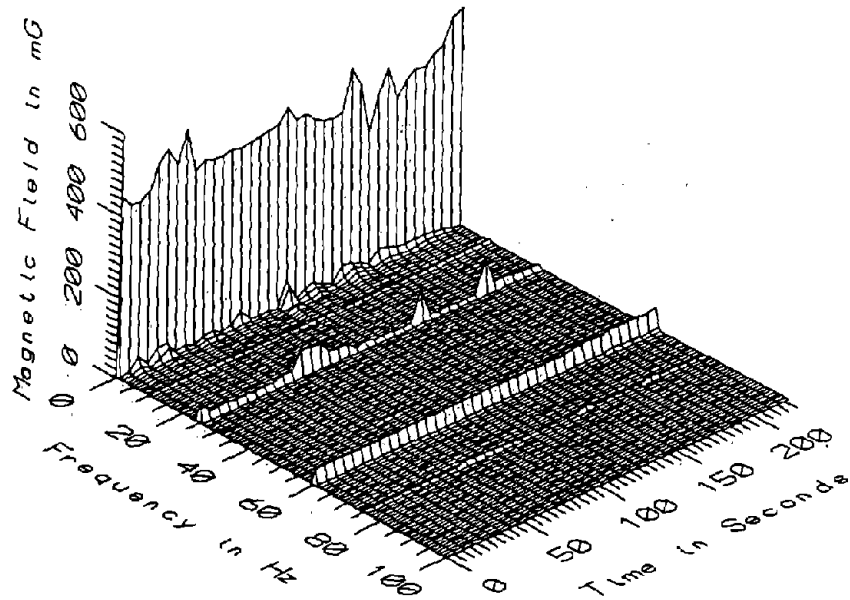
Programmed Sample Interval: 5 sec

Actual Sample Interval: 6.0 sec

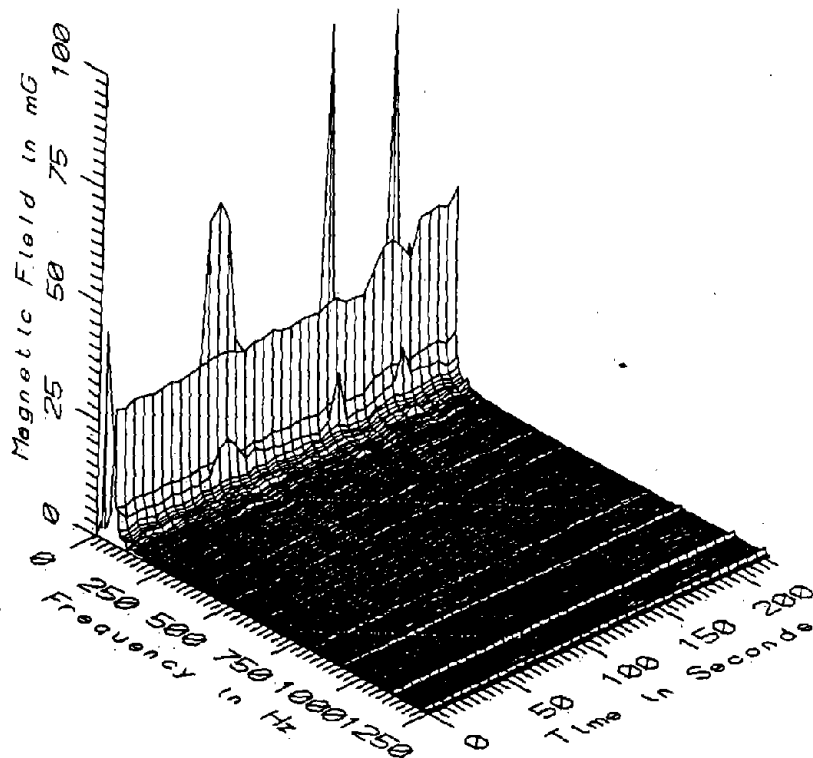
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

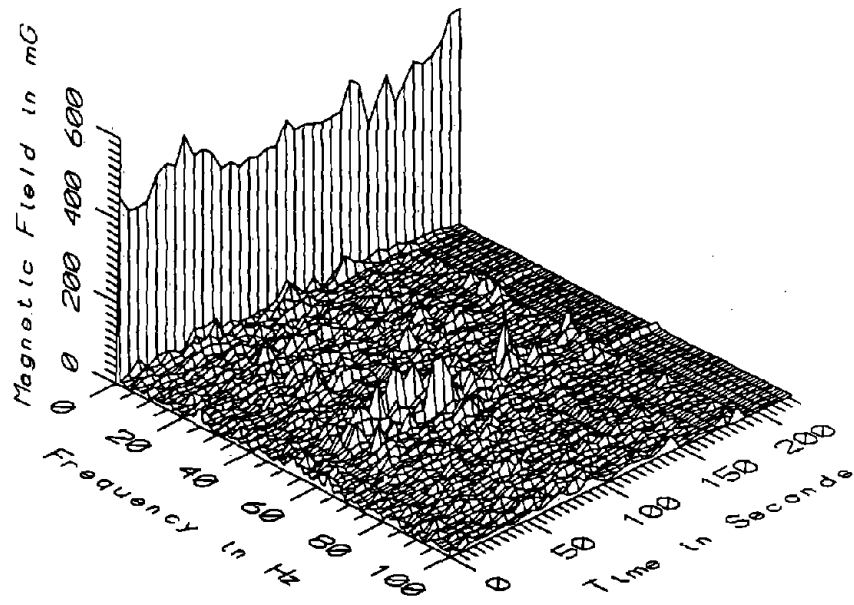
Missing or Suspect Data: None



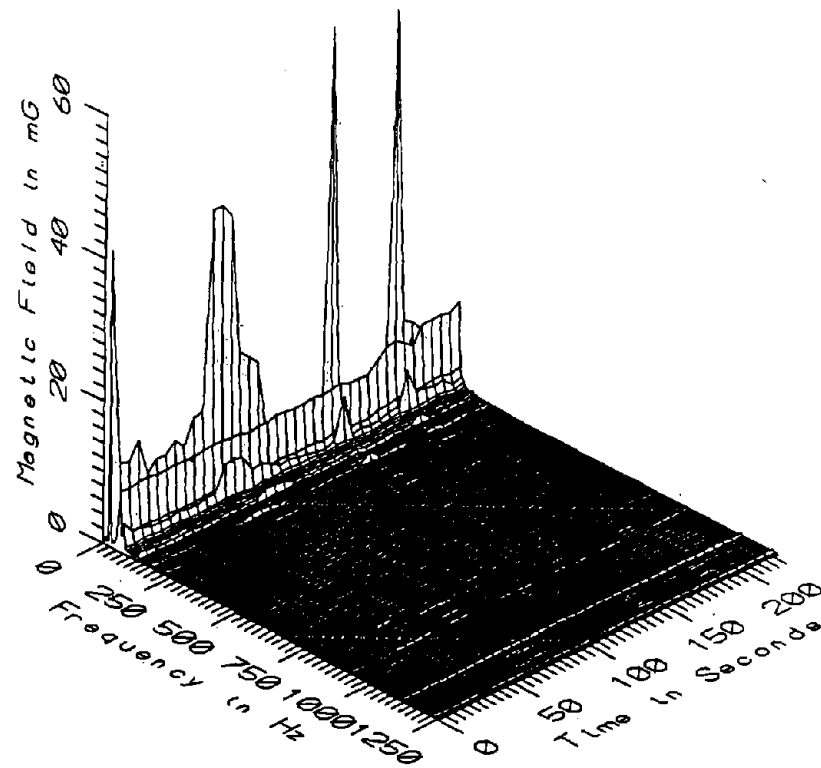
NEC033 - 10cm ABOVE FLOOR, RIGHT OF FIREMAN



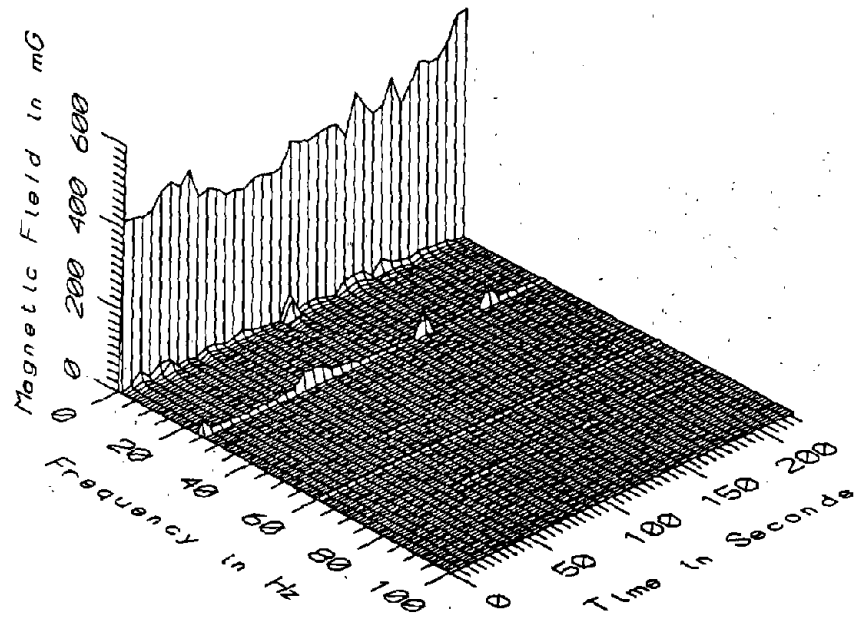
NEC033 - 10cm ABOVE FLOOR, RIGHT OF FIREMAN



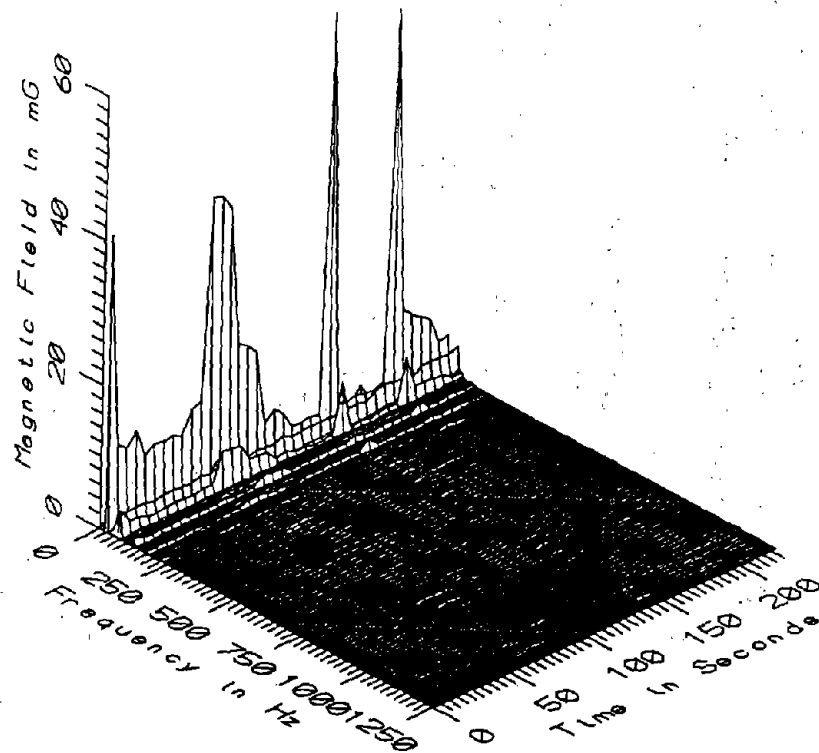
NEC033 - 60cm ABOVE FLOOR, RIGHT OF FIREMAN



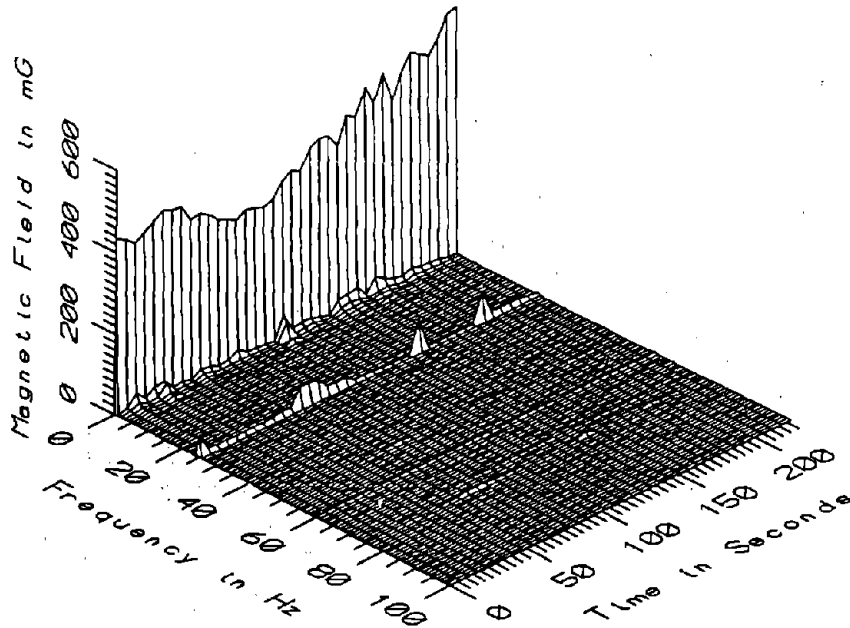
NEC033 - 60cm ABOVE FLOOR, RIGHT OF FIREMAN



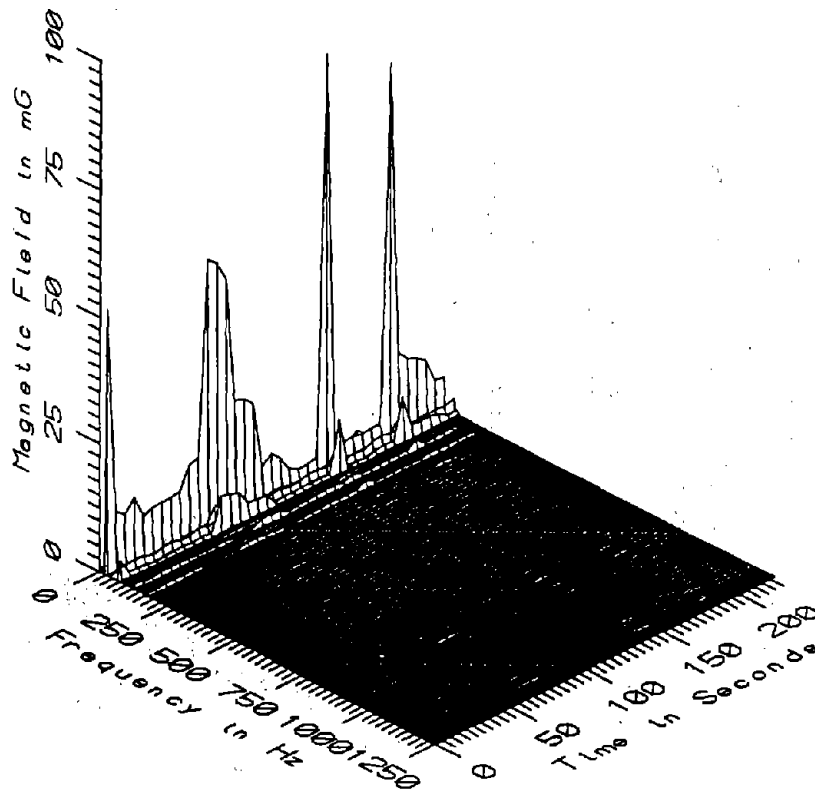
NEC033 - 110cm ABOVE FLOOR, RIGHT OF FIREMAN



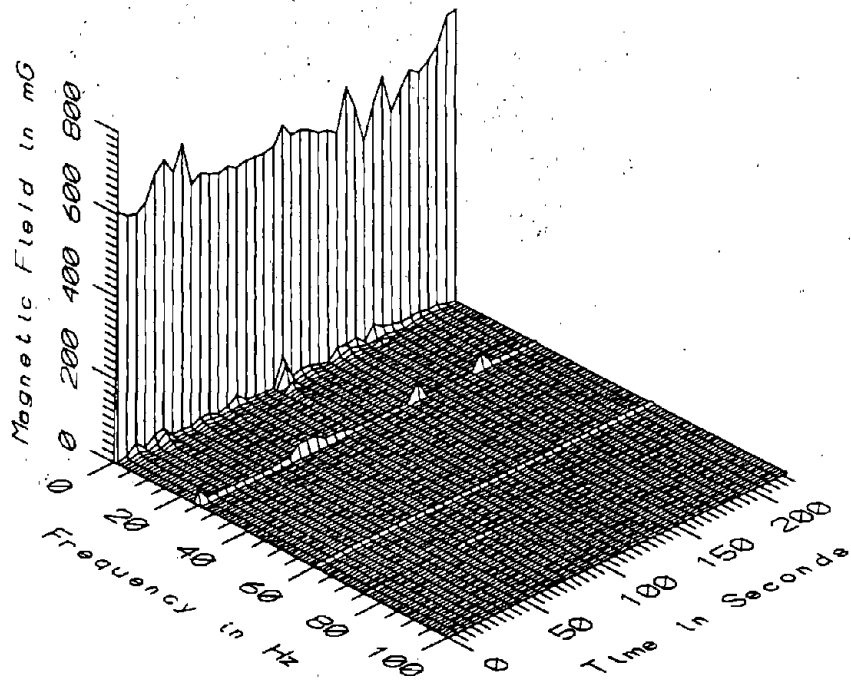
NEC033 - 110cm ABOVE FLOOR, RIGHT OF FIREMAN



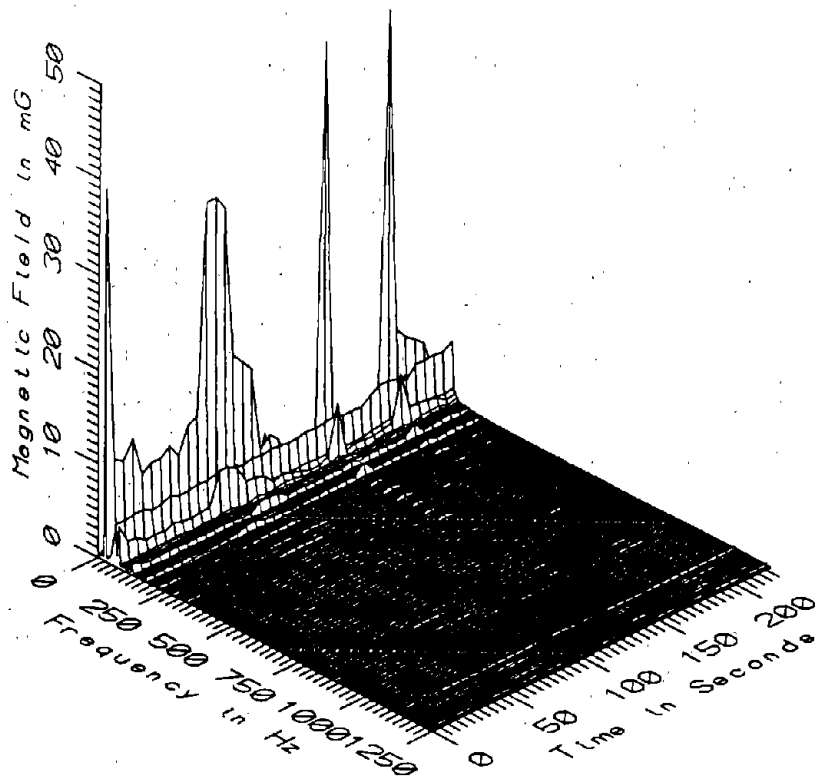
NEC033 - 160cm ABOVE FLOOR, RIGHT OF FIREMAN



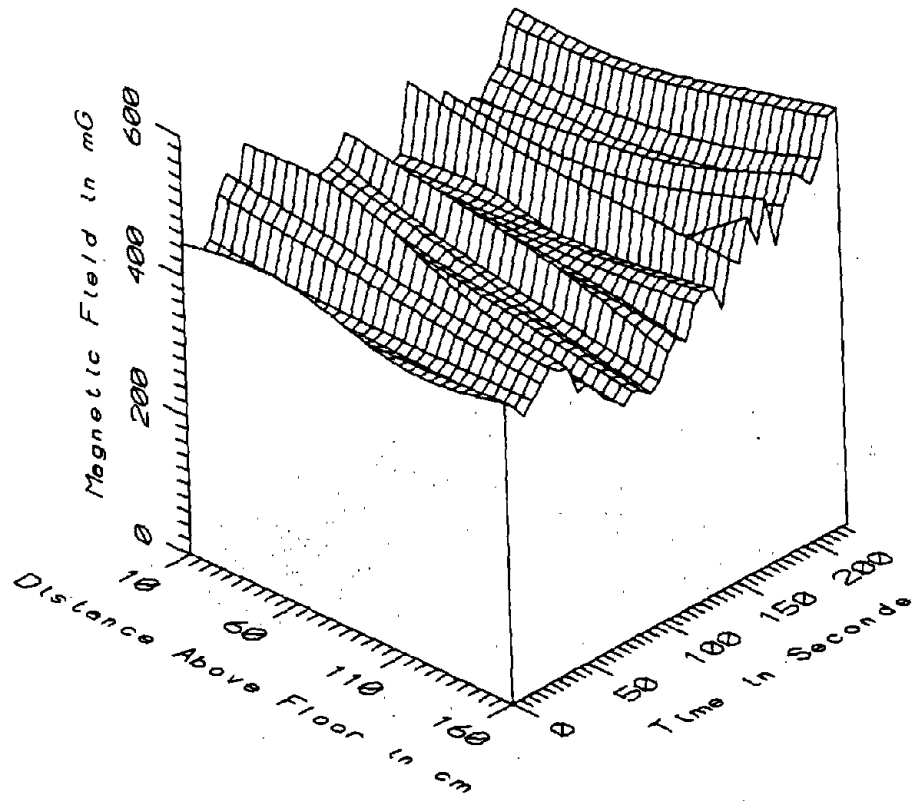
NEC033 - 160cm ABOVE FLOOR, RIGHT OF FIREMAN



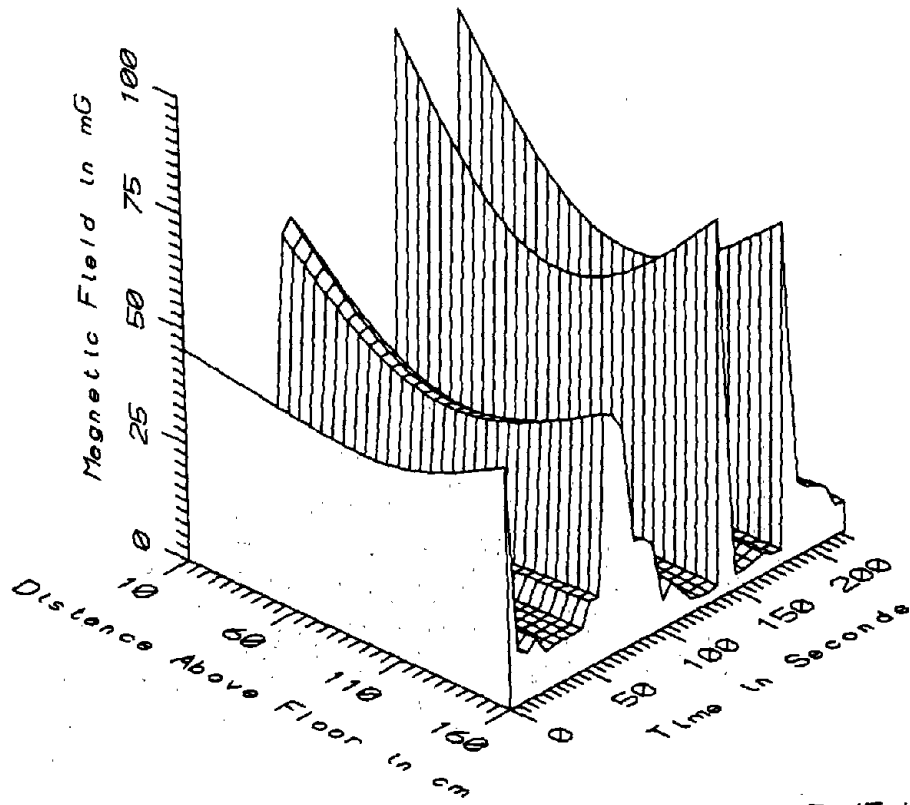
NEC033 - REFERENCE PROBE - FIREMAN'S SEAT



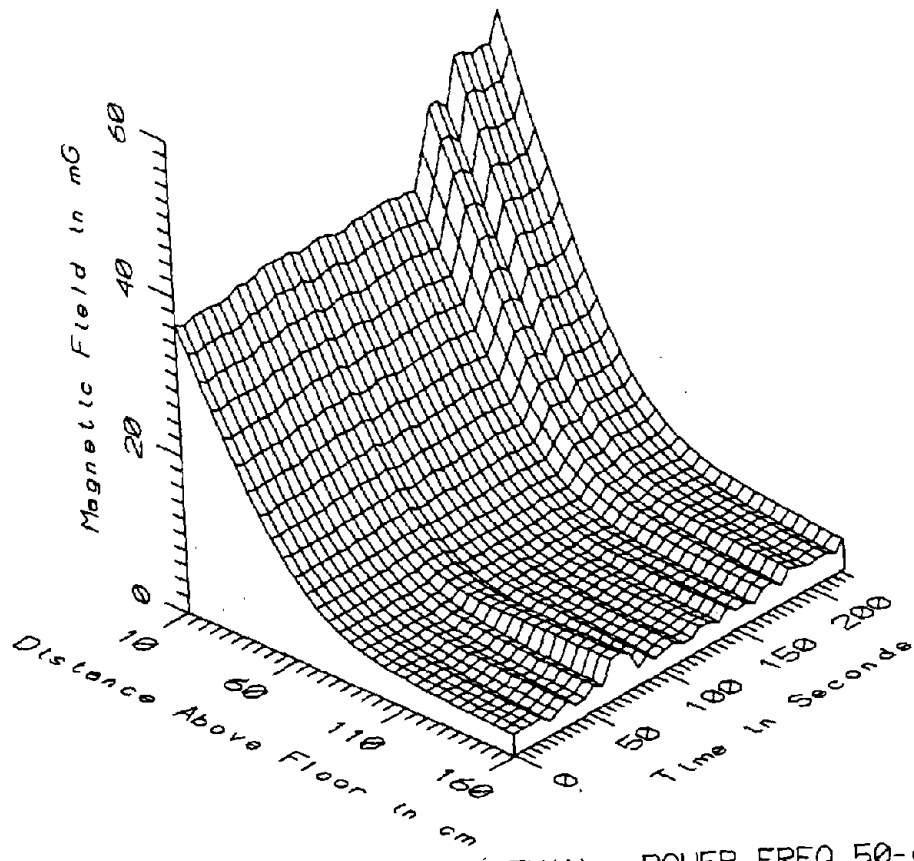
NEC033 - REFERENCE PROBE - FIREMAN'S SEAT



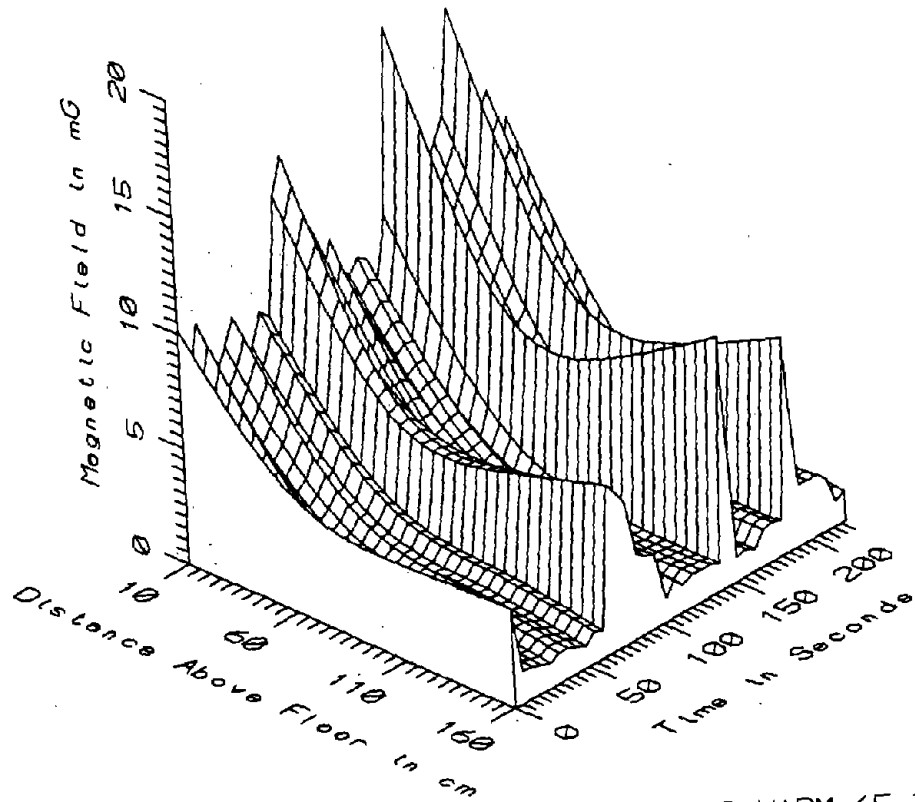
NEC033 - RIGHT OF FIREMAN - STATIC



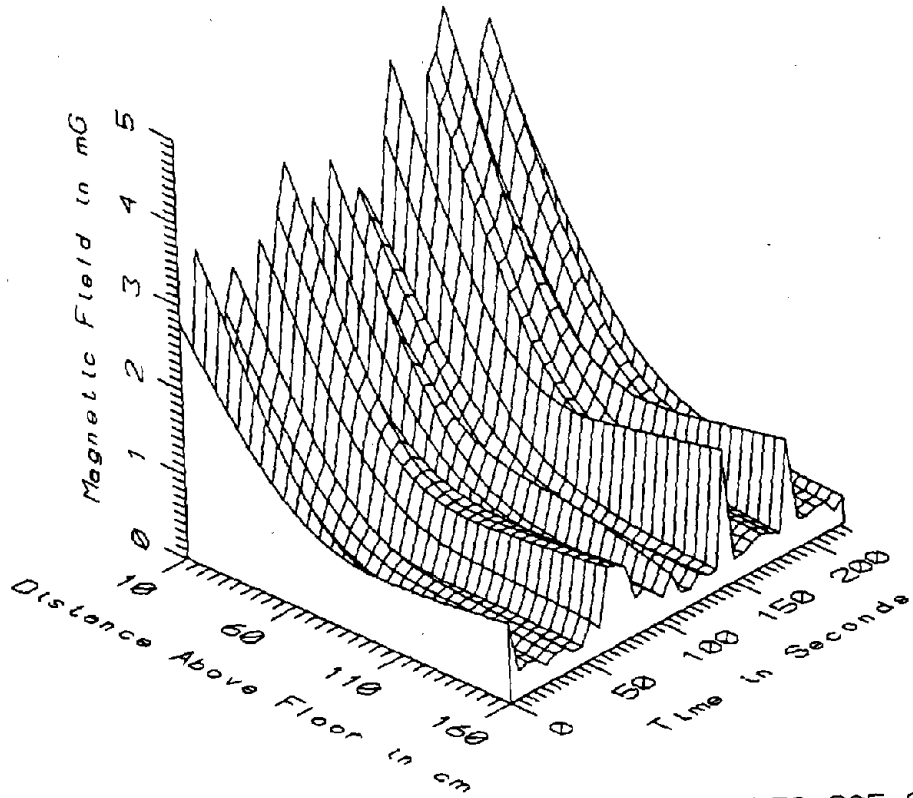
NEC033 - RIGHT OF FIREMAN - LOW FREQ 5-45 Hz



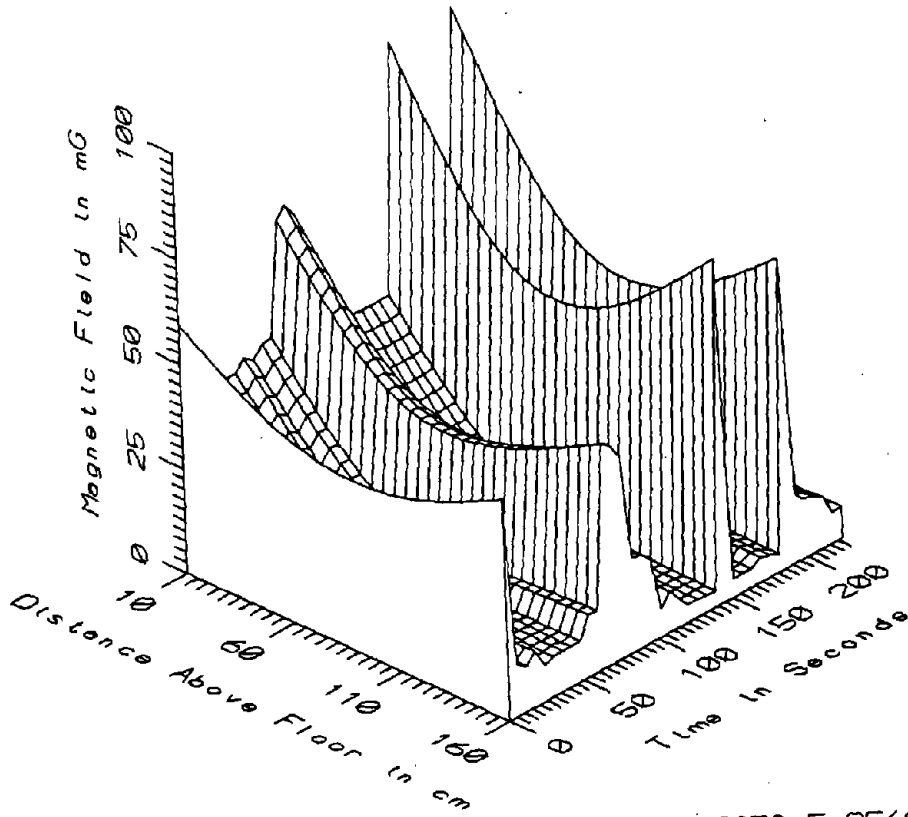
NEC033 - RIGHT OF FIREMAN - POWER FREQ 50-60 Hz



NEC033 - RIGHT OF FIREMAN - POWER HARM 65-300 Hz



NEC033 - RIGHT OF FIREMAN - HIGH FREQ 305-2560 Hz



NEC033 - RIGHT OF FIREMAN - ALL FREQ 5-2560 Hz

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APPENDIX AI

DATASET NEC034
HORIZONTAL PROFILE ALONG CENTERLINE OF CAB
ELECTRIC LOCOMOTIVE, 25 HZ NEC

Measurement Setup Code: Staff: 27 Reference: 25
 Drawing: A-4

Vehicle Status: Departing Newark and accelerating to
 105 mph

Measurement Date: March 31, 1992

Measurement Time: Start: 15:34:22
 End: 15:39:30

Number of Samples: 60

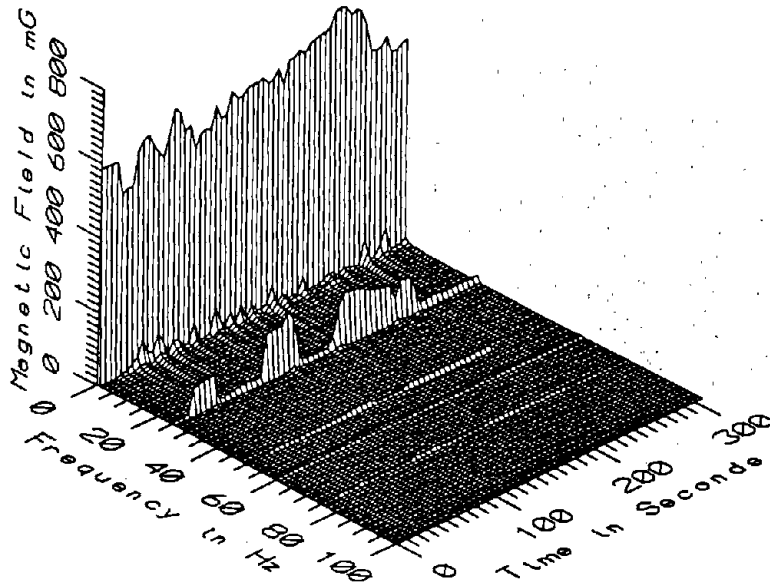
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.2 sec

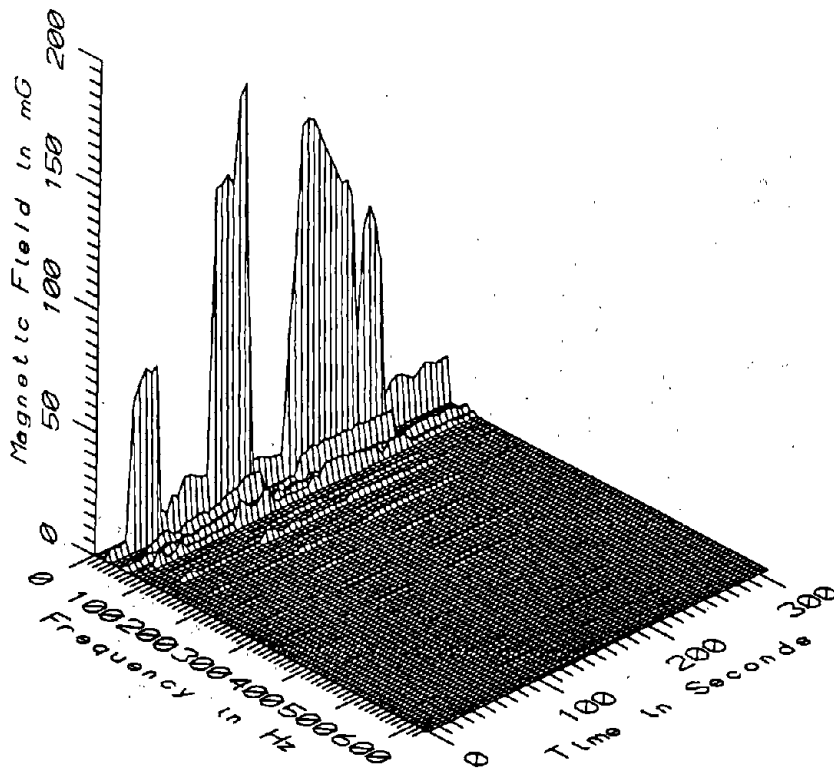
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

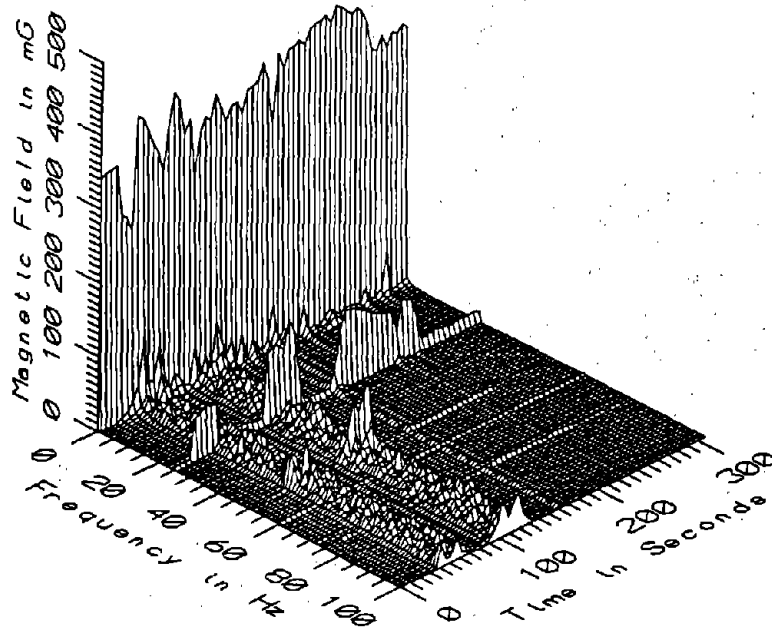
Missing or Suspect Data: None



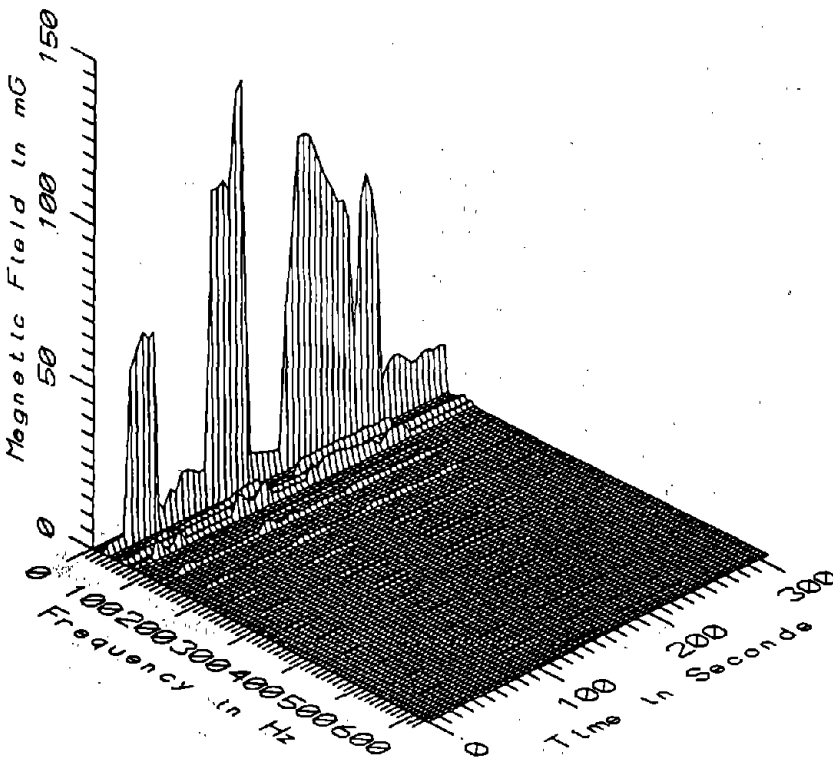
NEC034 - 10cm FROM REAR BULKHEAD IN ENGR'S COMPARTMENT, 1.4M HIGH



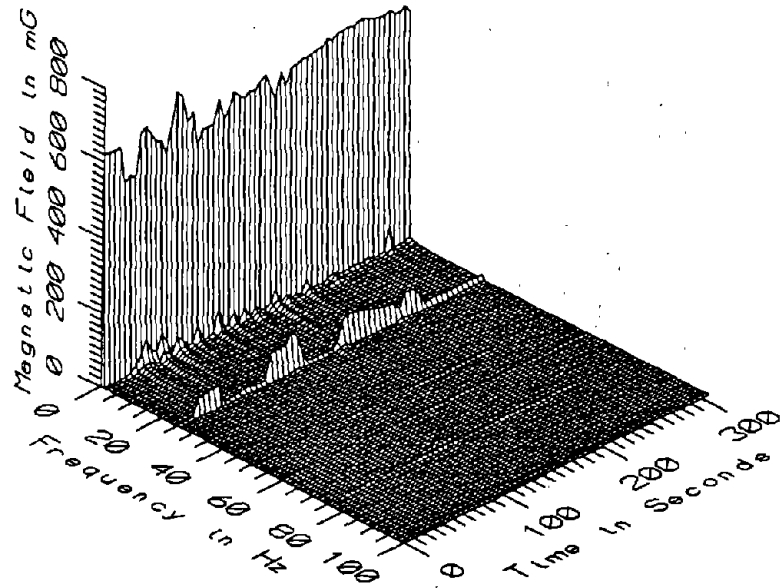
NEC034 - 10cm FROM REAR BULKHEAD IN ENGR'S COMPARTMENT, 1.4M HIGH



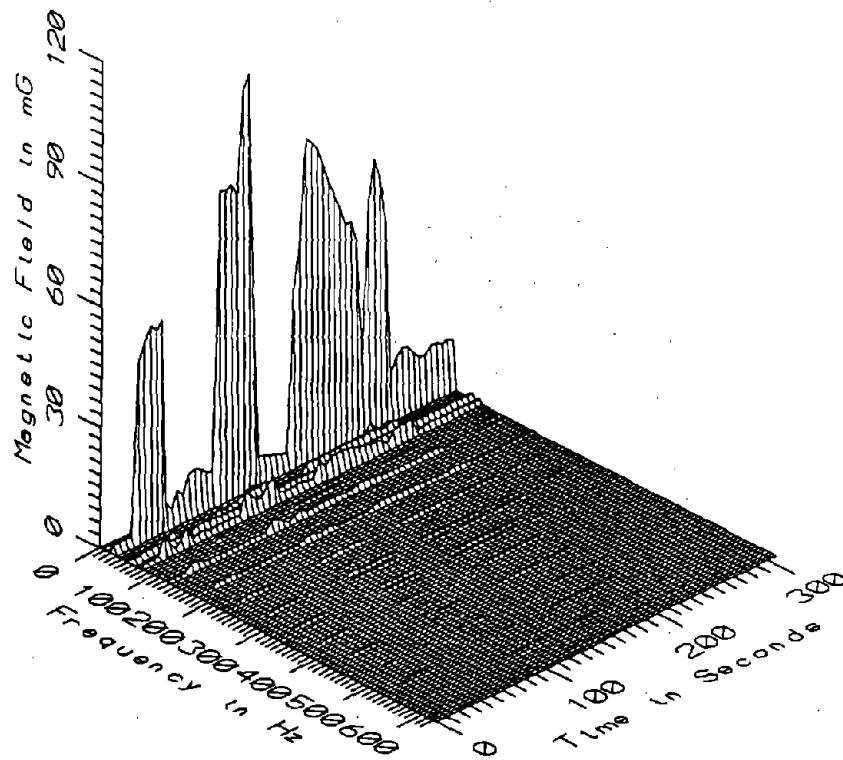
NEC034 - 60cm FROM REAR BULKHEAD IN ENGR'S COMPARTMENT, 1.4M HIGH



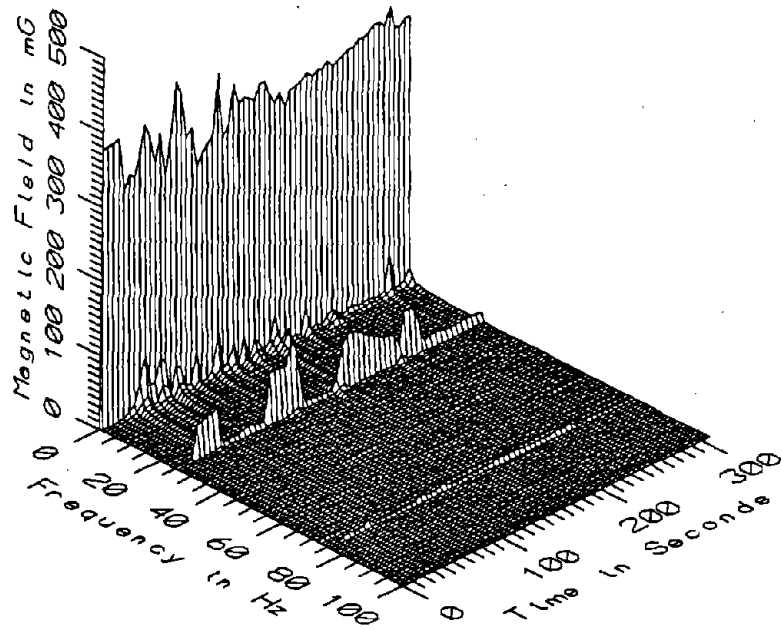
NEC034 - 60cm FROM REAR BULKHEAD IN ENGR'S COMPARTMENT, 1.4M HIGH



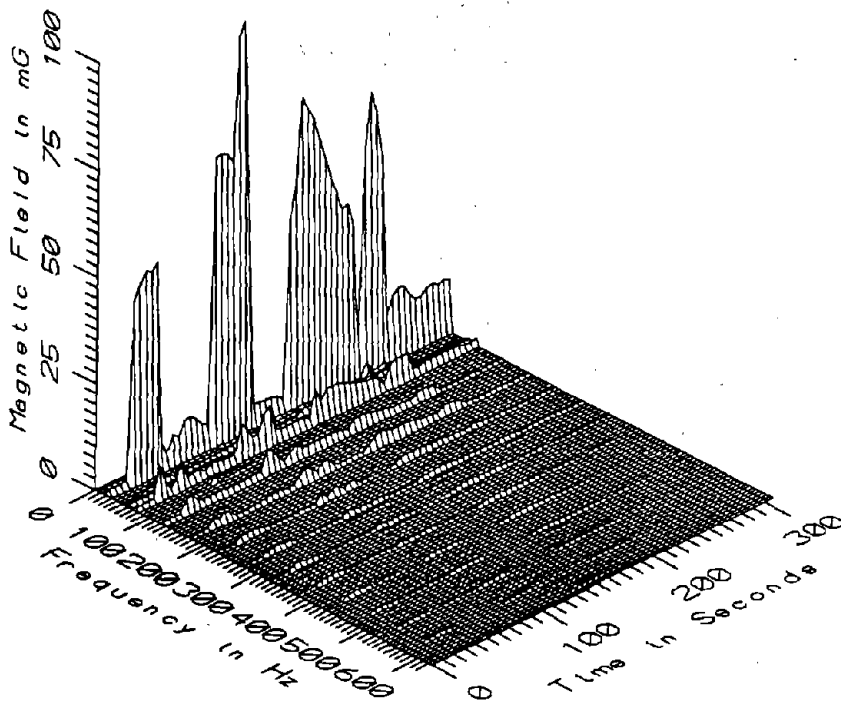
NEC034 - 110cm FROM REAR BULKHEAD IN ENGR'S COMPARTMENT, 1.4M HIGH



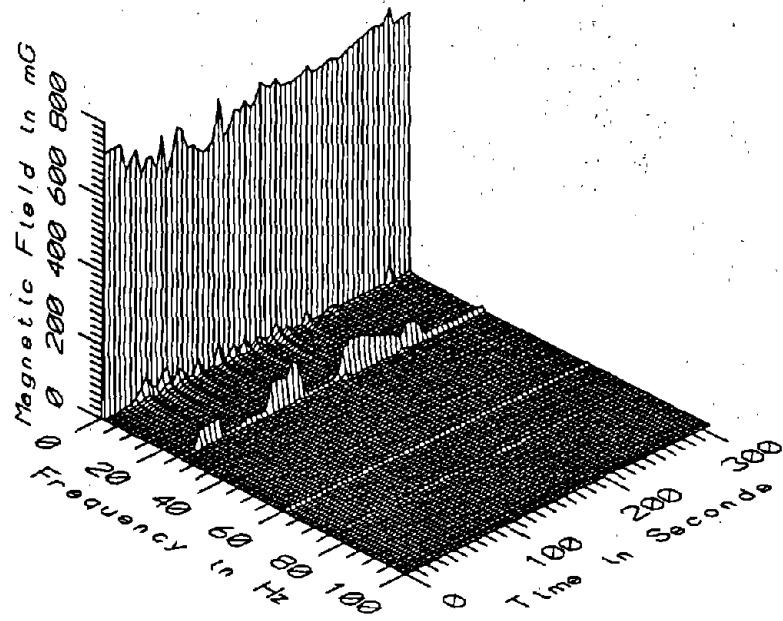
NEC034 - 110cm FROM REAR BULKHEAD IN ENGR'S COMPARTMENT, 1.4M HIGH



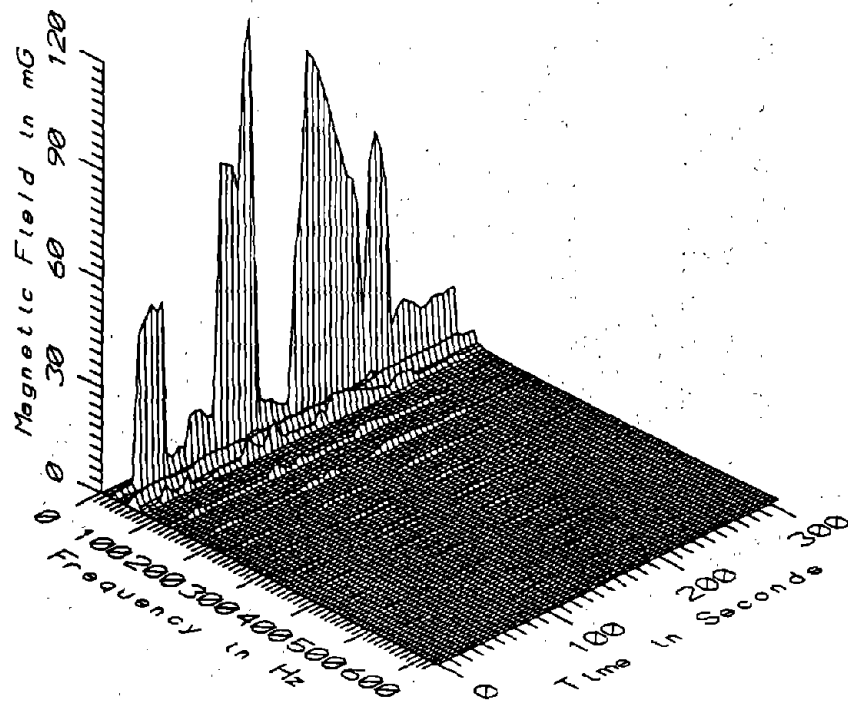
NEC034 - 160cm FROM REAR BULKHEAD IN ENGR'S COMPARTMENT, 1.4M HIGH



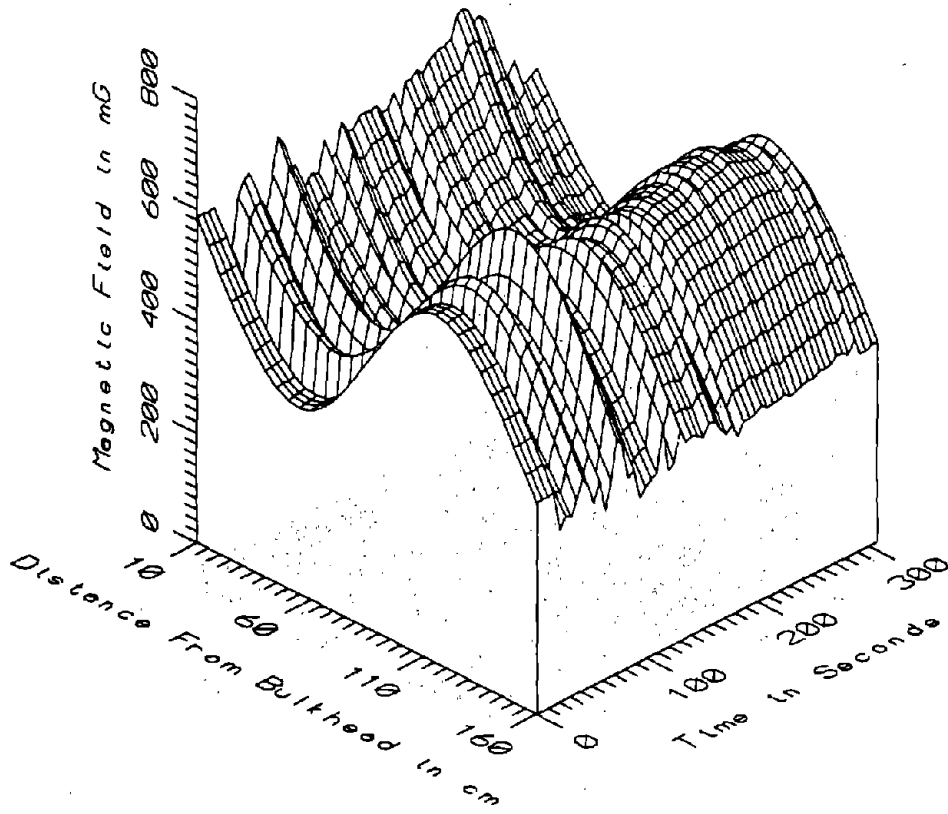
NEC034 - 160cm FROM REAR BULKHEAD IN ENGR'S COMPARTMENT, 1.4M HIGH



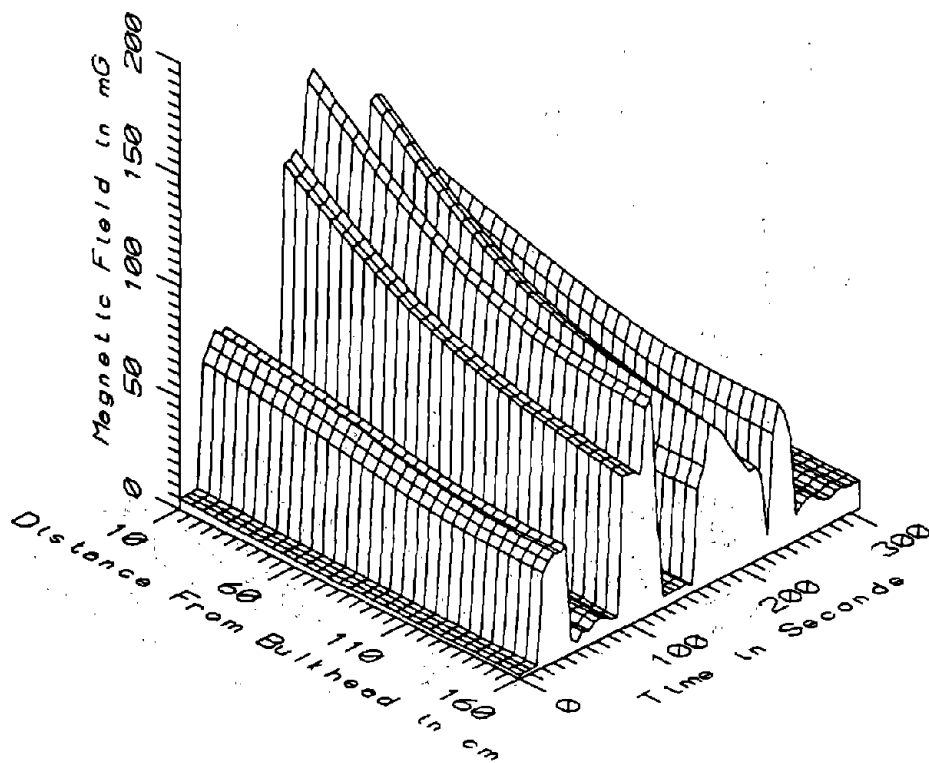
NEC034 - REFERENCE PROBE - FIREMAN'S SEAT



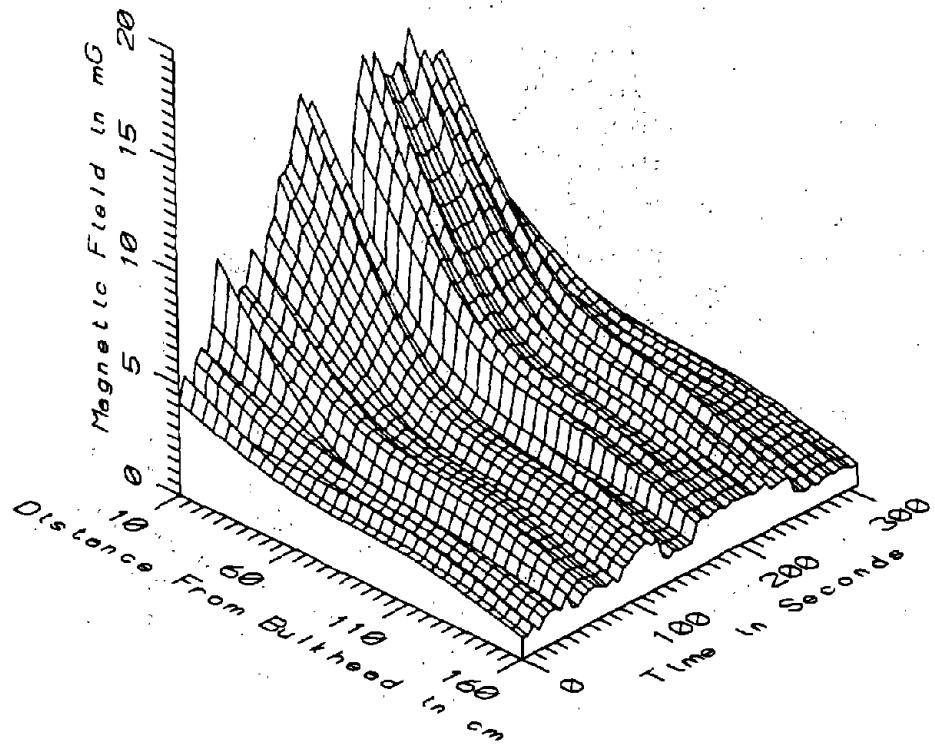
NEC034 - REFERENCE PROBE - FIREMAN'S SEAT



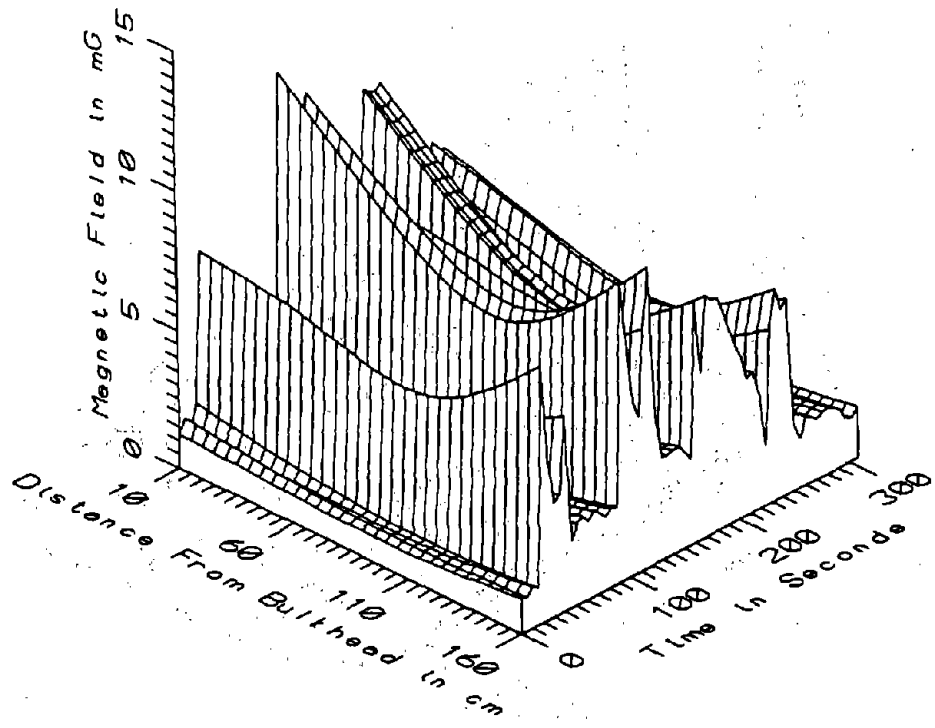
NEC034 - REAR BULKHEAD IN E.C., 1.4M ABOVE FLOOR - STATIC



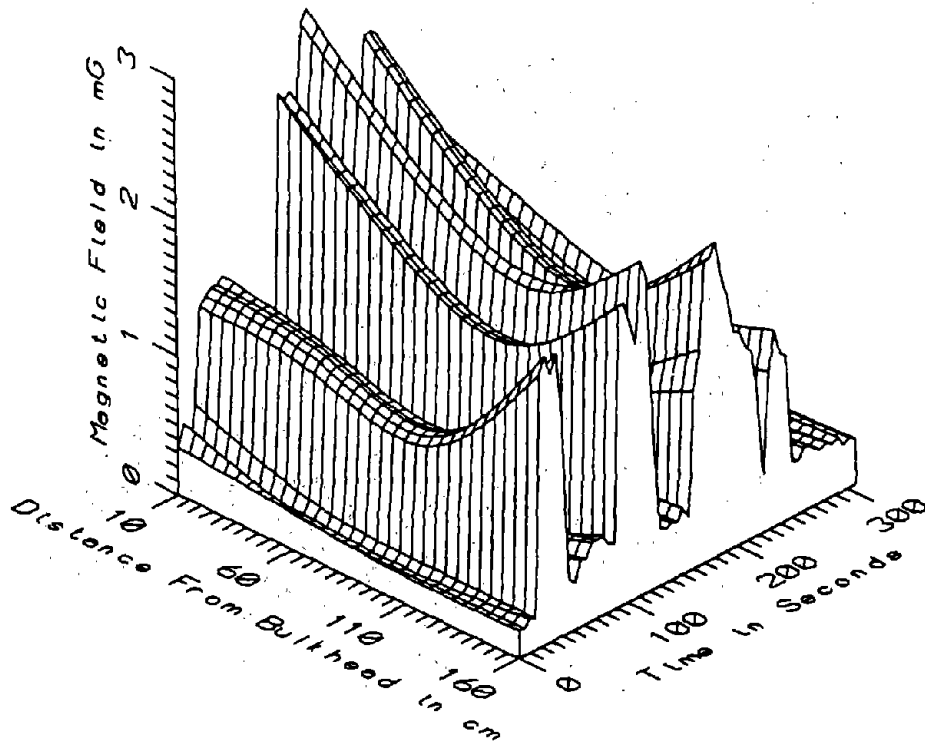
NEC034 - REAR BULKHEAD IN E.C., 1.4M ABOVE FLOOR - LOW FREQ. 5-45Hz



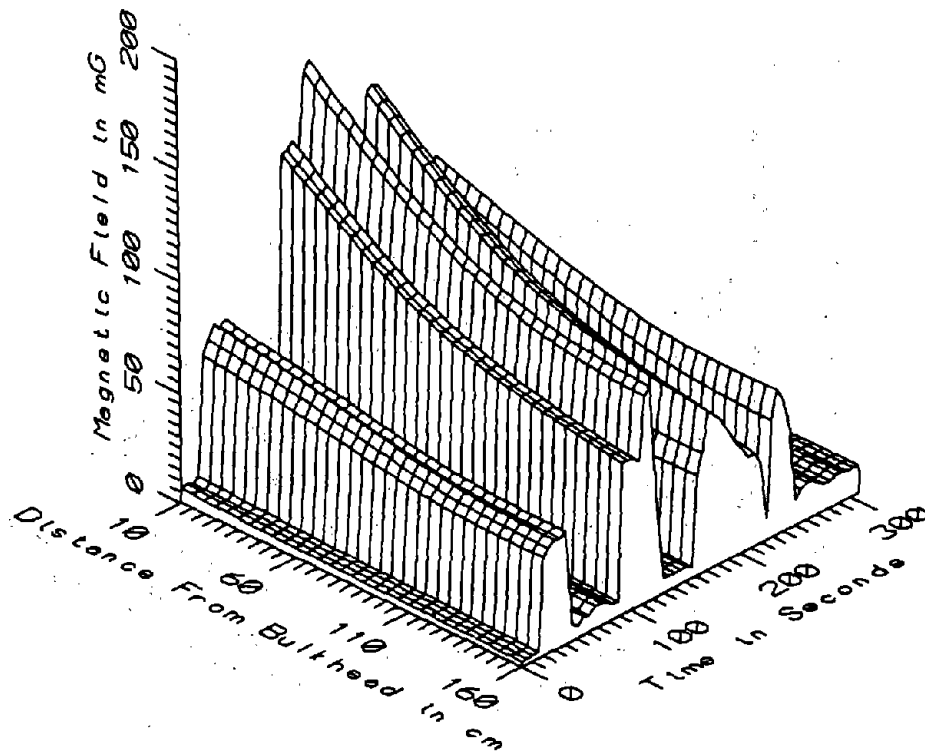
NEC034 -- REAR BULKHEAD IN E.C., 1.4M HIGH - POWER FREQ, 50-60Hz



NEC034 -- REAR BULKHEAD IN E.C., 1.4M HIGH - POWER HARM, 65-300Hz



NEC034 - REAR BULKHEAD IN E.C., 1.4M HIGH - HIGH FREQ, 305-2560Hz

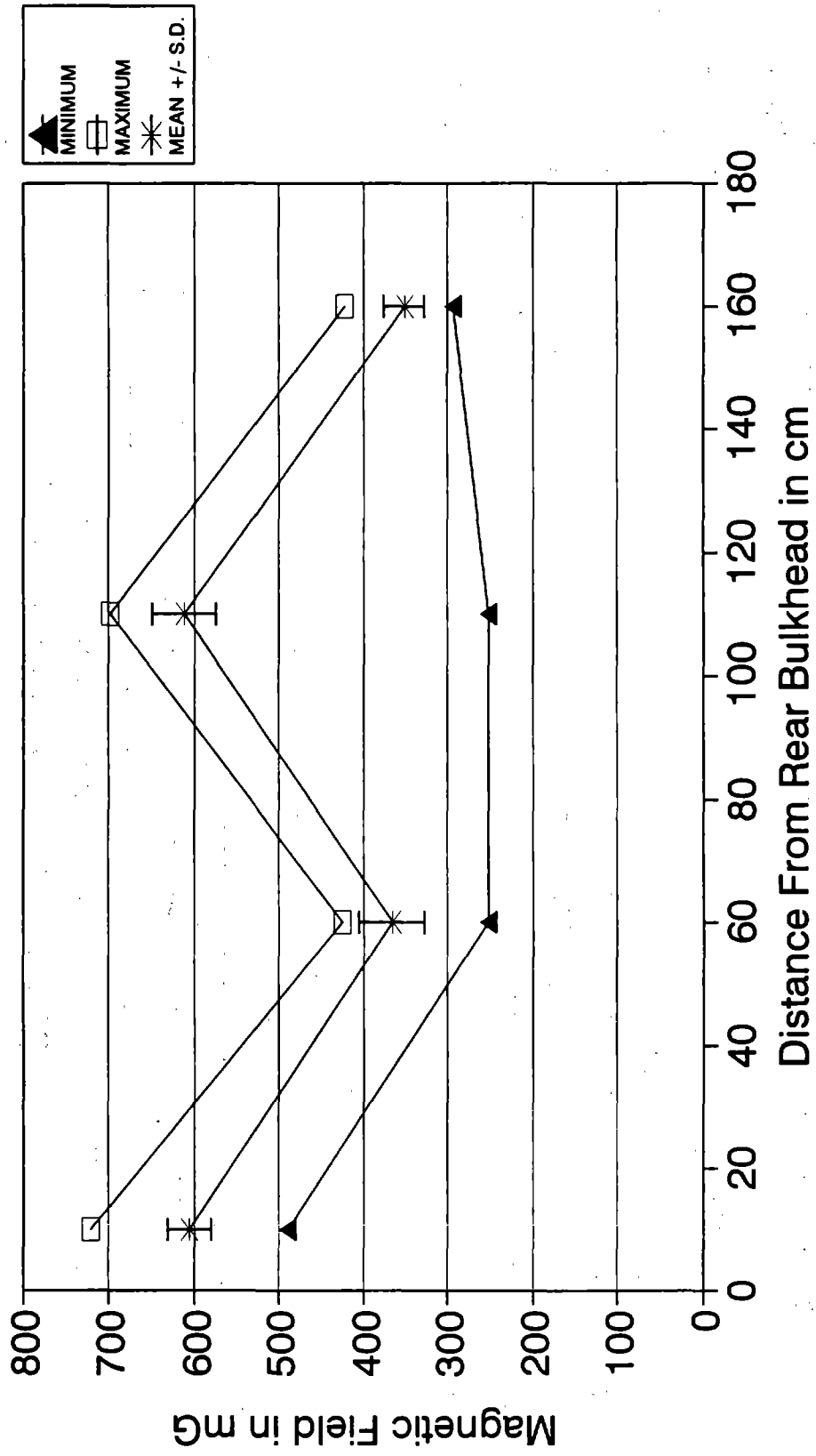


NEC034 - REAR BULKHEAD IN E.C., 1.4M HIGH - ALL FREQ, 5-2560Hz

25Hz - REAR BULKHEAD IN ENGINEER'S COMPARTMENT		TOTAL OF 60 SAMPLES				
FREQUENCY BAND	DISTAN FROM R.B. (cm)	MINIMUM MAGNETIC FIELD (mG)	MAXIMUM MAGNETIC FIELD (mG)	AVERAGE MAGNETIC FIELD (mG)	STANDARD DEVIATION (mG)	COEFFICIENT OF VARIATION (%)
STATIC	10	490.34	721.61	605.13	25.22	4.17
	60	251.94	424.86	366.12	38.72	10.57
	110	251.94	697.74	611.91	38.02	6.21
	160	293.87	421.46	351.56	25.22	7.17
5-45Hz LOW FREQ	10	4.79	167.94	58.62	51.38	87.65
	60	3.26	126.13	44.08	37.25	84.50
	110	2.41	102.67	35.11	29.42	83.79
	160	1.69	96.14	31.20	26.58	85.20
50-60Hz PWR FREQ	10	3.27	15.49	9.55	3.81	39.86
	60	2.63	6.26	4.39	1.19	27.16
	110	2.14	4.25	3.05	0.62	20.21
	160	0.91	2.35	1.55	0.47	30.04
65-300Hz PWR HARM	10	1.16	12.32	4.91	2.95	60.03
	60	0.99	8.93	3.64	2.09	57.48
	110	0.92	7.39	3.12	1.75	56.21
	160	1.21	10.77	4.56	2.64	57.91
305-2560Hz HIGH FREQ	10	0.25	3.01	1.24	0.82	66.00
	60	0.21	2.26	0.90	0.61	67.99
	110	0.18	1.86	0.74	0.50	67.33
	160	0.20	2.40	1.02	0.73	71.60
5-2560Hz ALL FREQ	10	6.10	168.92	60.09	51.04	84.94
	60	4.31	126.54	44.69	37.04	82.89
	110	3.38	103.00	35.59	29.24	82.16
	160	2.35	96.79	31.76	26.52	83.49

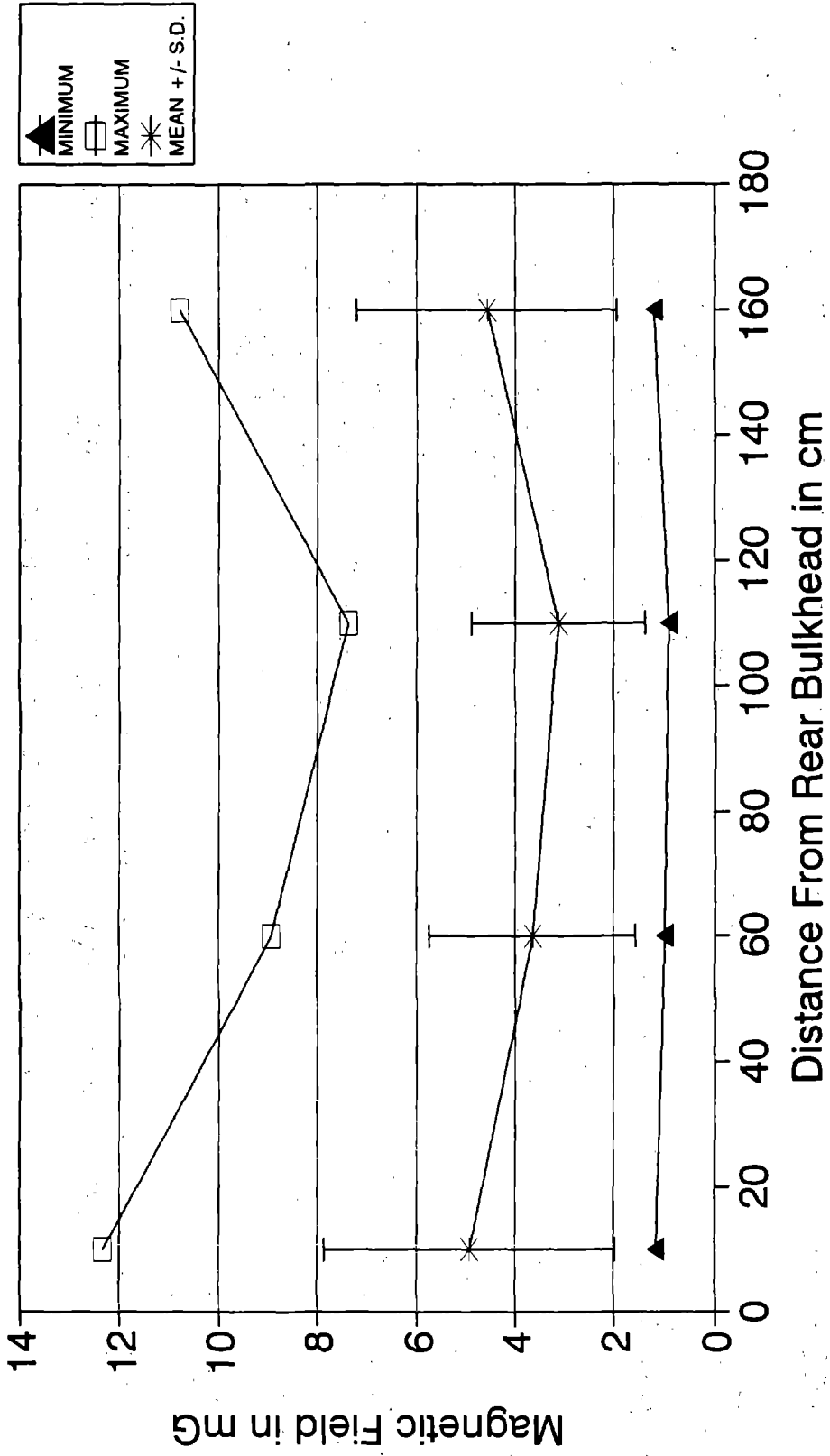
25Hz - REAR BULKHEAD IN ENGINEER'S COMPARTMENT		TOTAL OF 60 SAMPLES				
FREQUENCY BAND	DISTAN FROM R.B. (cm)	MINIMUM MAGNETIC FIELD (mG)	MAXIMUM MAGNETIC FIELD (mG)	AVERAGE MAGNETIC FIELD (mG)	STANDARD DEVIATION (mG)	COEFFICIENT OF VARIATION (%)
STATIC	10	490.34	721.61	605.13	25.22	4.17
	60	251.94	424.86	366.12	38.72	10.57
	110	251.94	697.74	611.91	38.02	6.21
	160	293.87	421.46	351.56	25.22	7.17
5-45Hz LOW FREQ	10	4.79	167.94	58.62	51.38	87.65
	60	3.26	126.13	44.08	37.25	84.50
	110	2.41	102.67	35.11	29.42	83.79
50-60Hz PWR FREQ	160	1.69	96.14	31.20	26.58	85.20
	10	3.27	15.49	9.55	3.81	39.86
	60	2.63	6.26	4.39	1.19	27.16
	110	2.14	4.25	3.05	0.62	20.21
65-300Hz PWR HARM	160	0.91	2.35	1.55	0.47	30.04
	10	1.16	12.32	4.91	2.95	60.03
	60	0.99	8.93	3.64	2.09	57.48
	110	0.92	7.39	3.12	1.75	56.21
305-2560Hz HIGH FREQ	160	1.21	10.77	4.56	2.64	57.91
	10	0.25	3.01	1.24	0.82	66.00
	60	0.21	2.26	0.90	0.61	67.99
	110	0.18	1.86	0.74	0.50	67.33
5-2560Hz ALL FREQ	160	0.20	2.40	1.02	0.73	71.60
	10	6.10	168.92	60.09	51.04	84.94
	60	4.31	126.54	44.69	37.04	82.89
	110	3.38	103.00	35.59	29.24	82.16
160	2.35	96.79	31.76	26.52	83.49	

25HZ - REAR BULKHEAD, ENG. COMPARTMENT STATIC



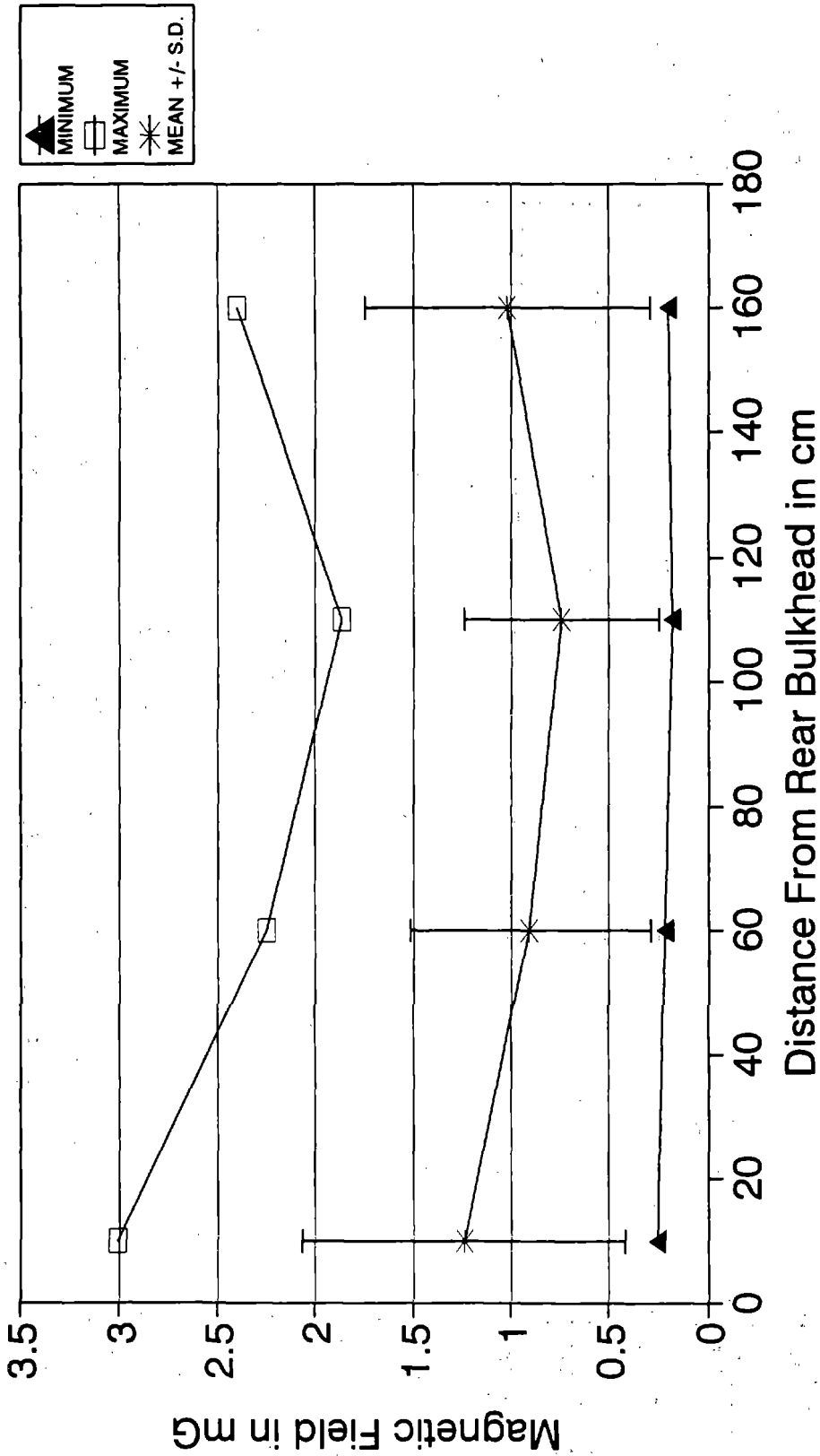
25HZ - REAR BULKHEAD, ENG. COMPARTMENT

POWER HARMONICS (65-300 Hz)



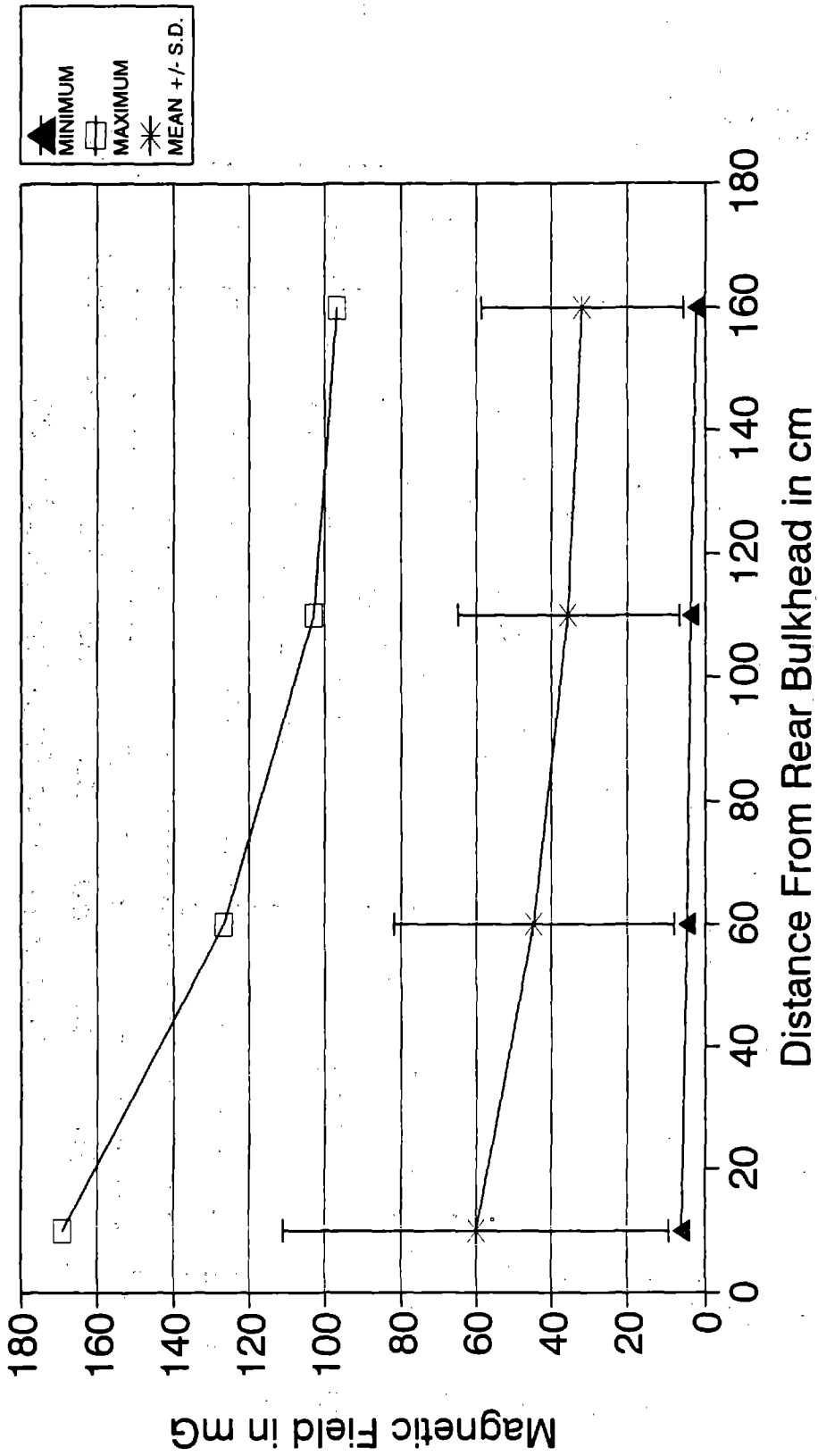
25HZ - REAR BULKHEAD, ENG. COMPARTMENT

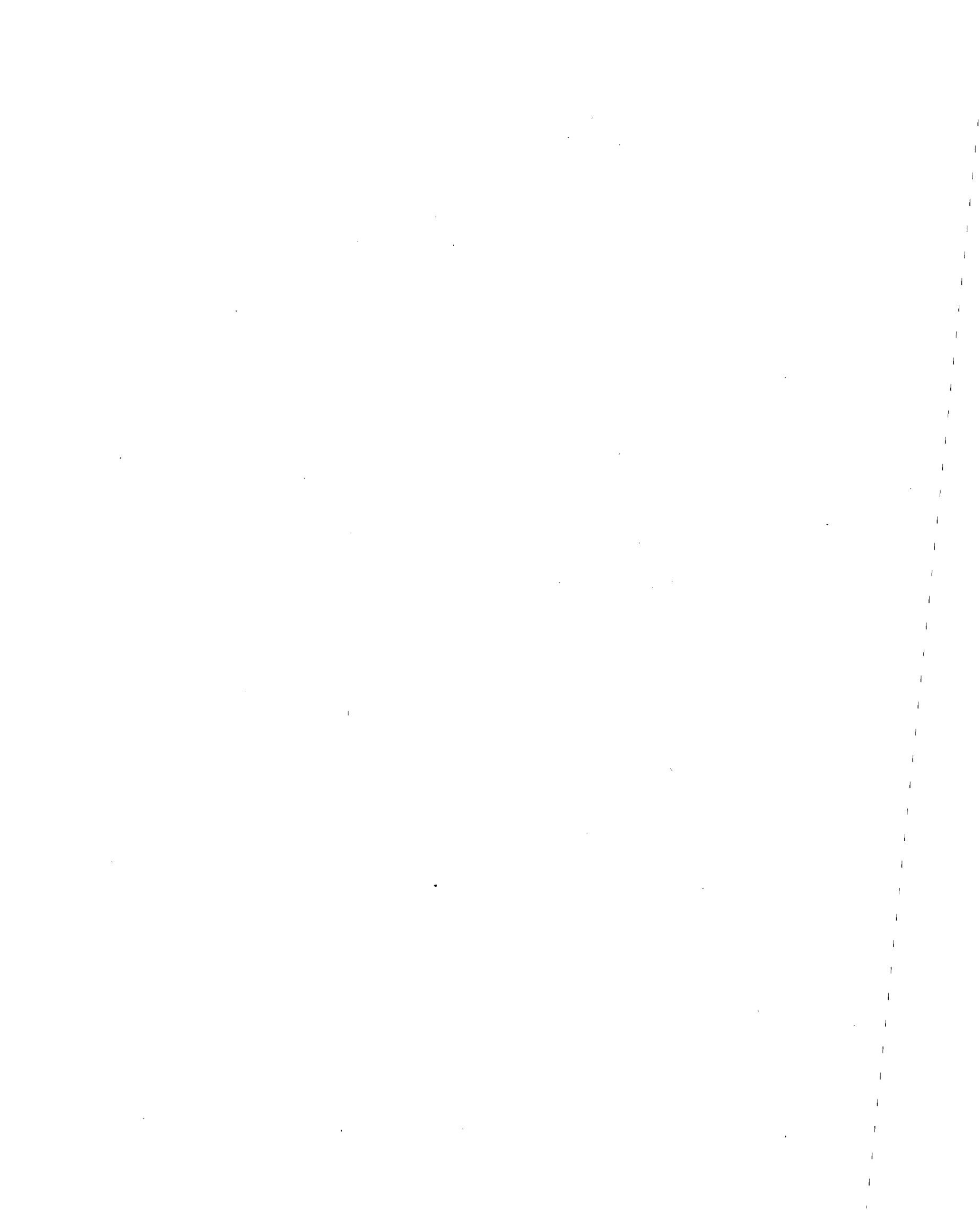
HIGH FREQUENCY (305-2560 Hz)



25HZ - REAR BULKHEAD, ENG. COMPARTMENT

ALL FREQUENCIES (5-2560 HZ)





APPENDIX AJ

DATASET NEC035
VERTICAL PROFILE AT THE ENGINEER'S SEAT
ELECTRIC LOCOMOTIVE, 25 HZ NEC

Measurement Setup Code: Staff: 24 Reference: 25
 Drawing: A-4

Vehicle Status: Train traveling south with a stop at
 Metro Park at the 5 minute point and
 at Trenton at the 25 minute point

Measurement Date: March 31, 1992

Measurement Time: Start: 15:43:31
 End: 15:12:31

Number of Samples: 30

Programmed Sample Interval: 60 sec

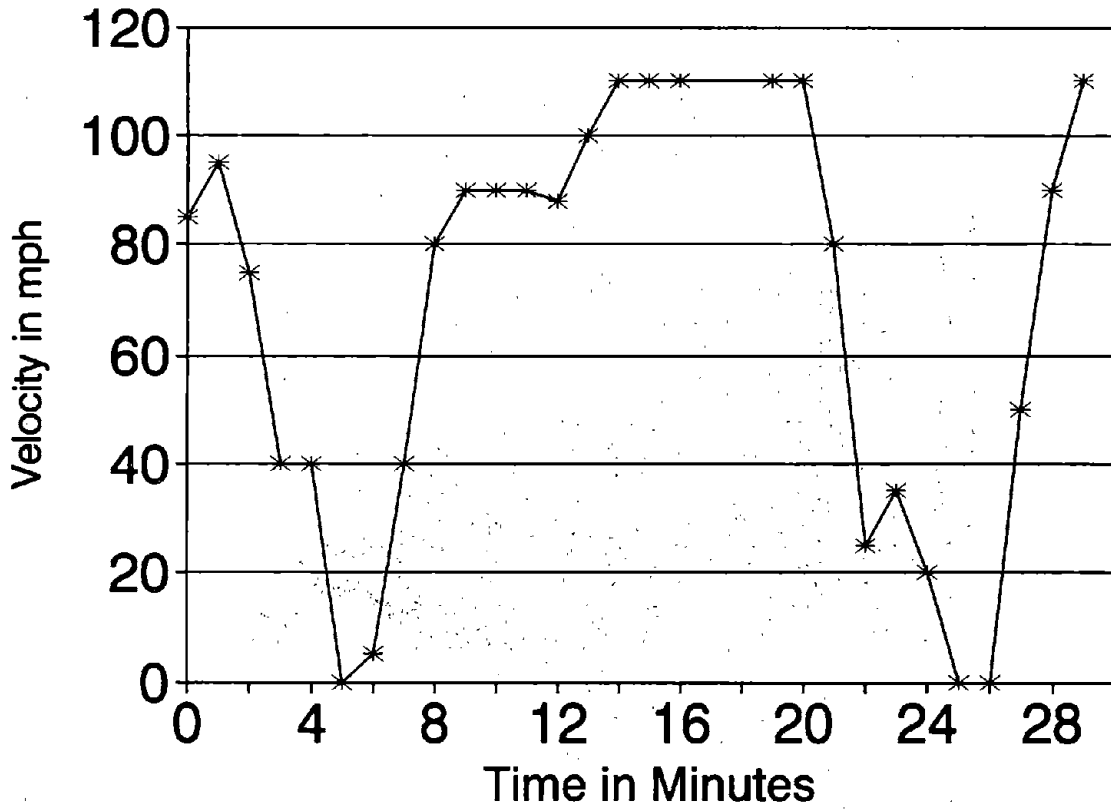
Actual Sample Interval: 60 sec

Frequency Spectrum Parameters

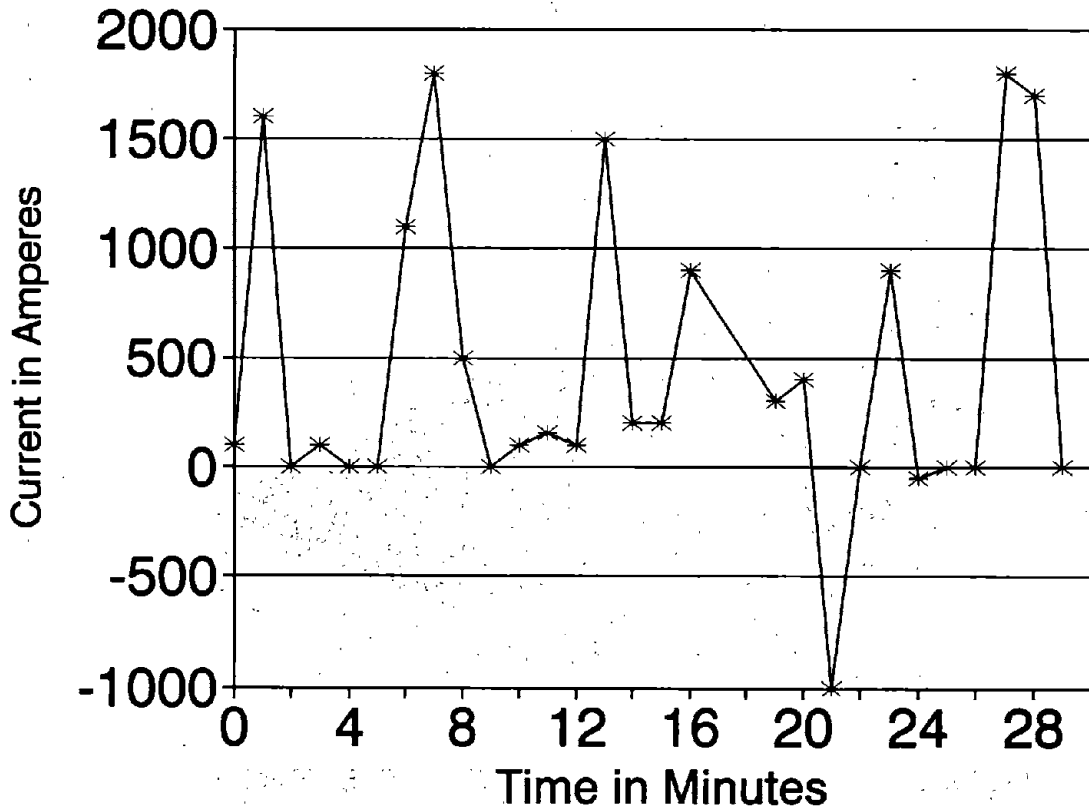
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

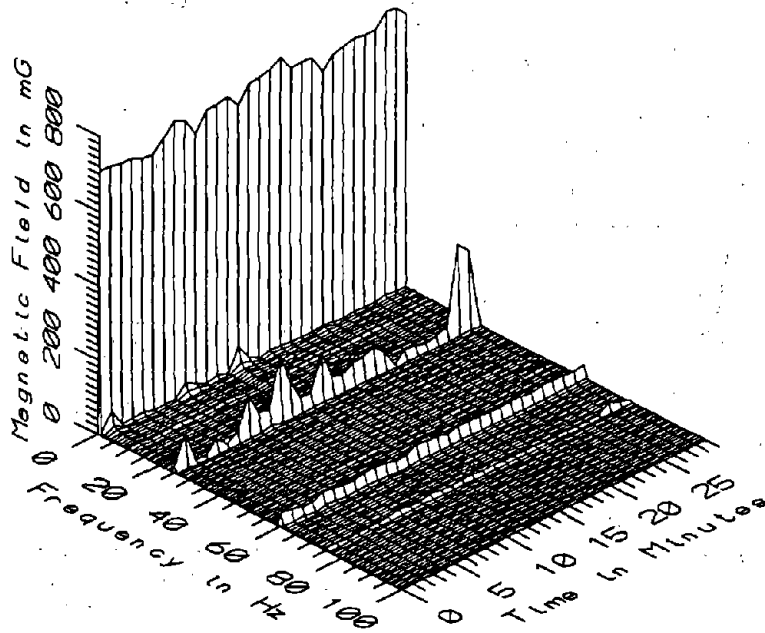
Missing or Suspect Data: None

VEHICLE VELOCITY - NEC035

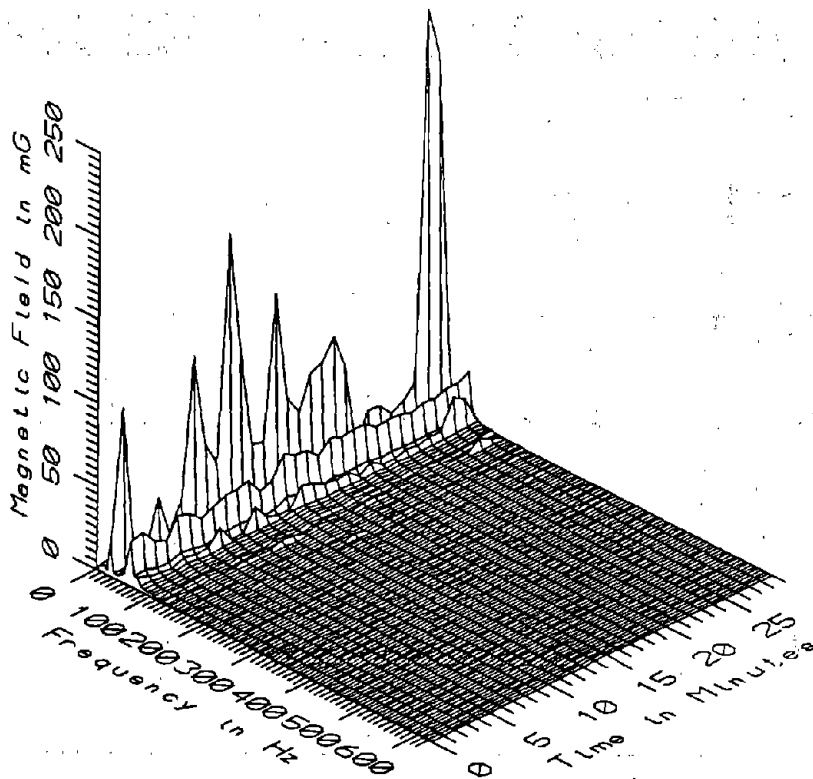


VEHICLE CURRENT - NEC035

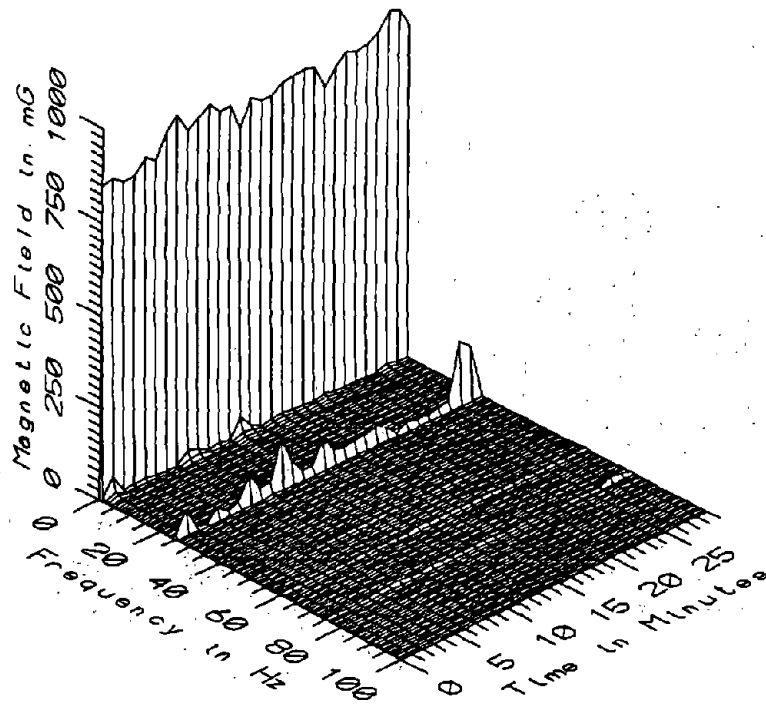




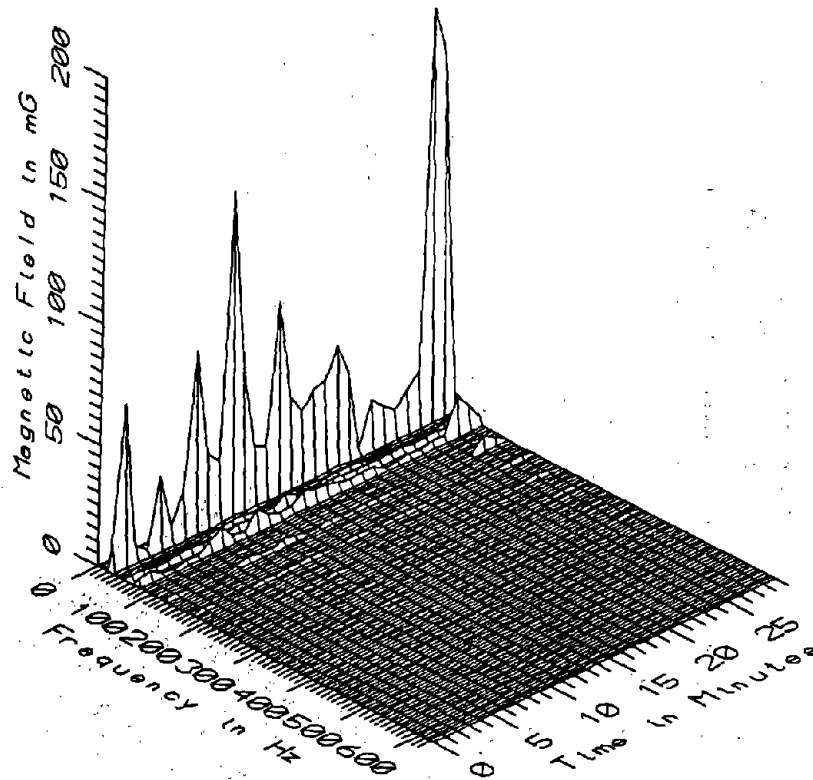
NEC035 - 10cm ABOVE FLOOR, LEFT OF ENGINEER



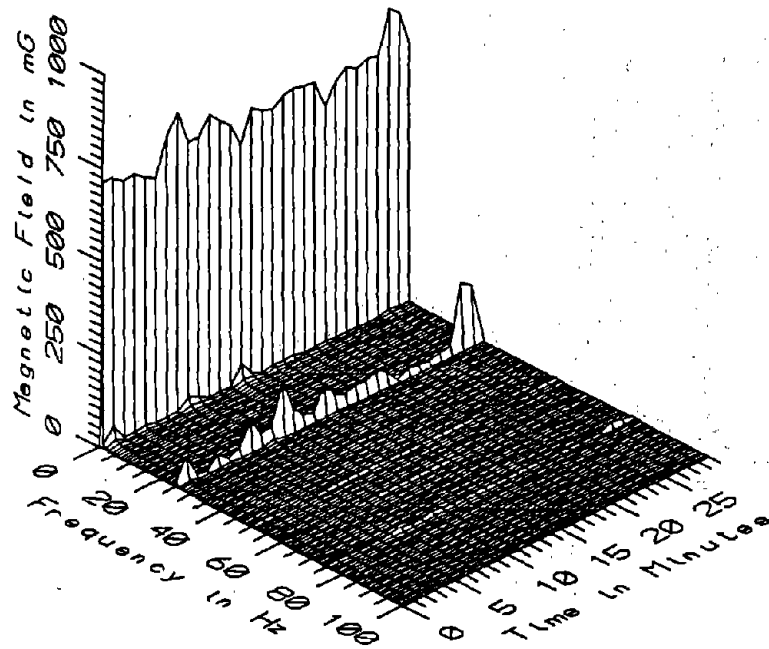
NEC035 - 10cm ABOVE FLOOR, LEFT OF ENGINEER



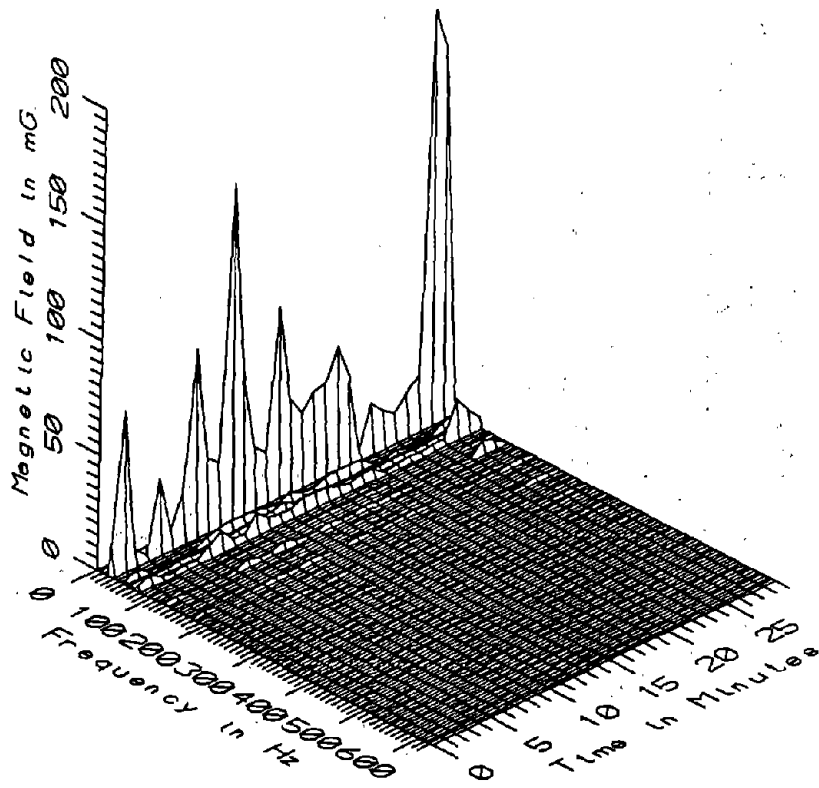
NEC035 - 60cm ABOVE FLOOR, LEFT OF ENGINEER



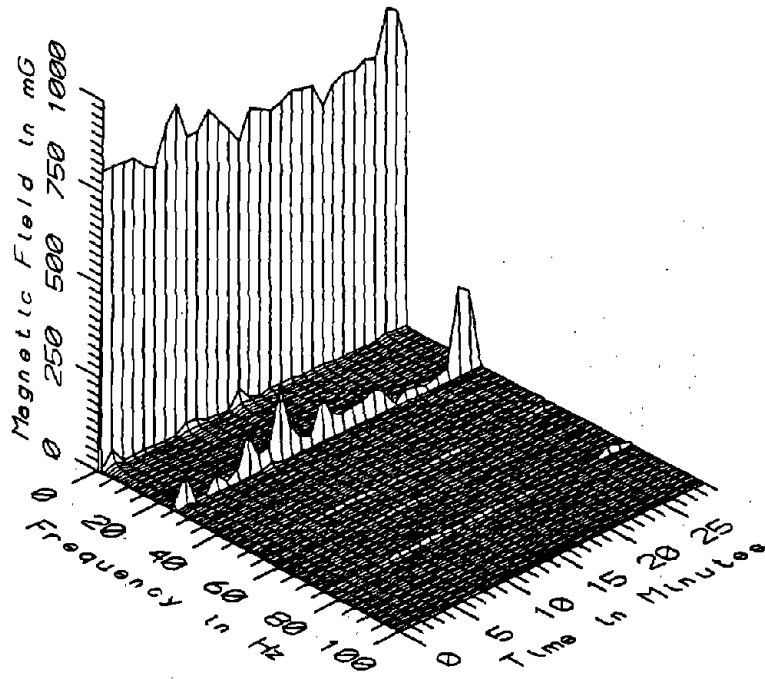
NEC035 - 60cm ABOVE FLOOR, LEFT OF ENGINEER



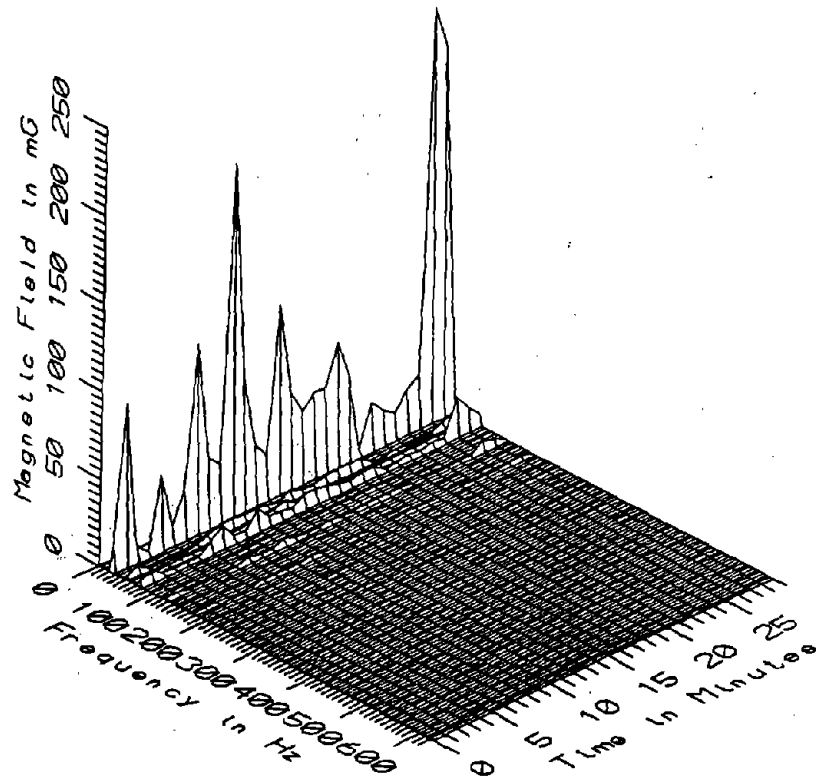
NEC035 - 110cm ABOVE FLOOR, LEFT OF ENGINEER



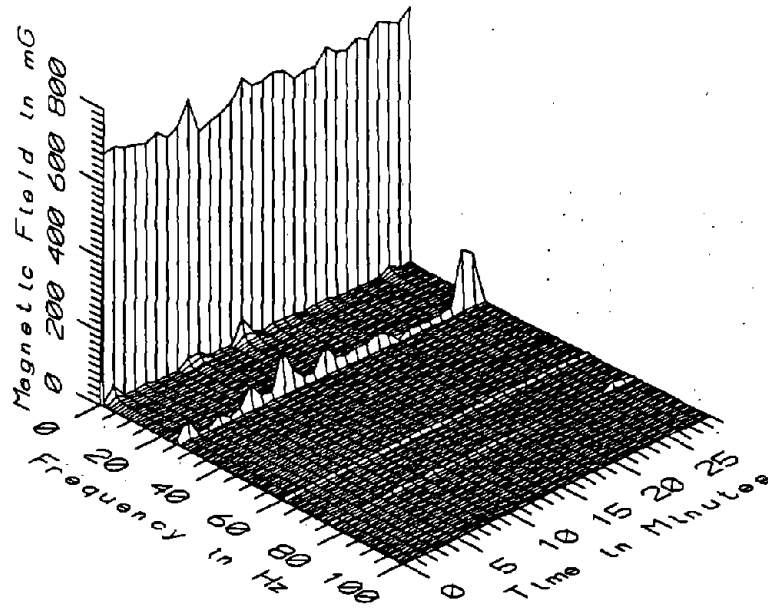
NEC035 - 110cm ABOVE FLOOR, LEFT OF ENGINEER



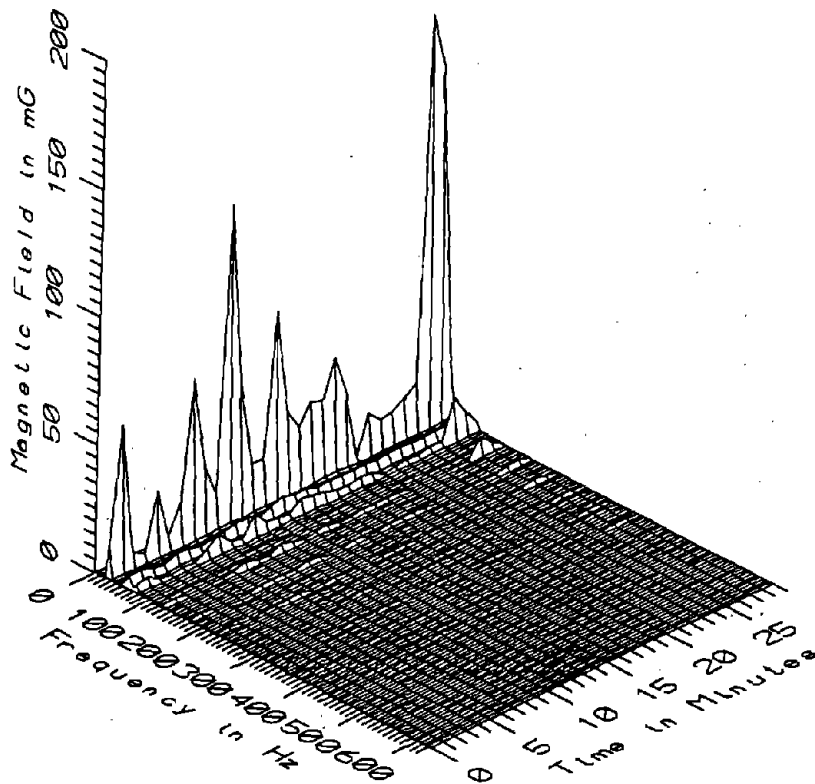
NEC035 - 160cm ABOVE FLOOR, LEFT OF ENGINEER



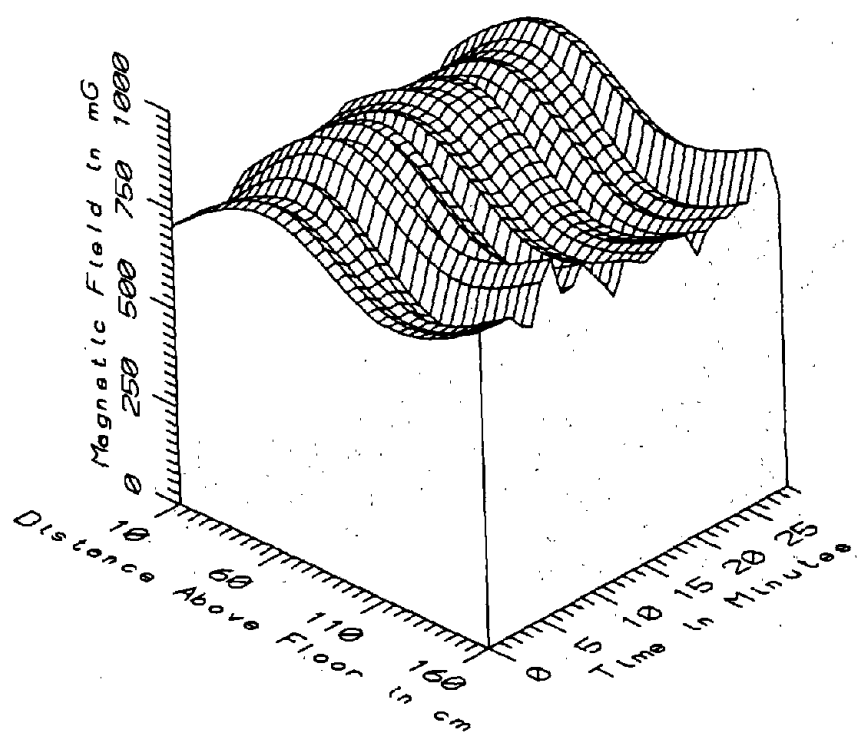
NEC035 - 160cm ABOVE FLOOR, LEFT OF ENGINEER



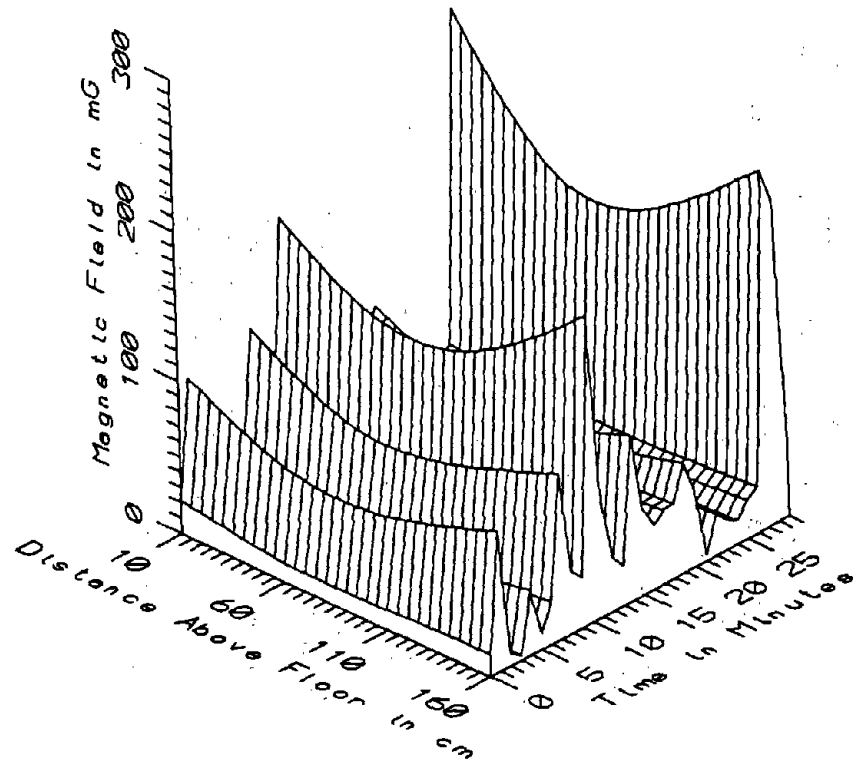
NEC035 - REFERENCE PROBE - FIREMAN'S SEAT



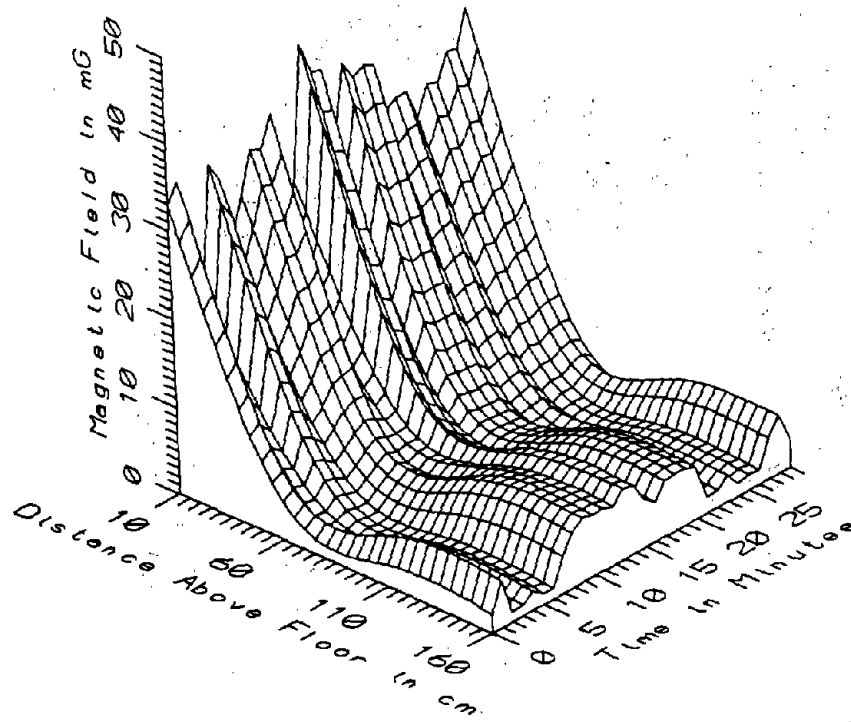
NEC035 - REFERENCE PROBE - FIREMAN'S SEAT



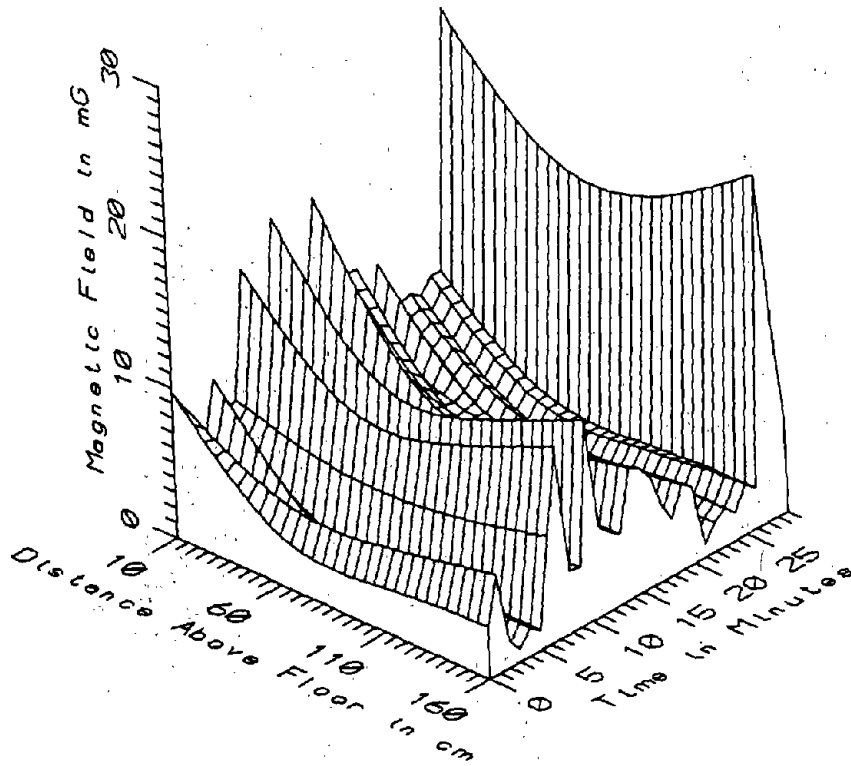
NEC035 - LEFT OF ENGINEER - STATIC



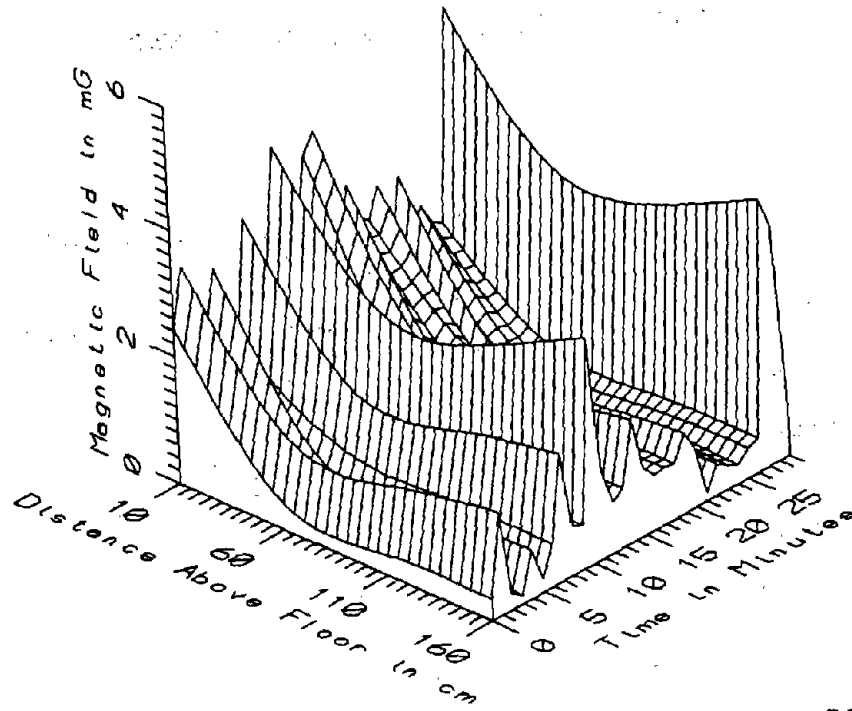
NEC035 - LEFT OF ENGINEER - LOW FREQ., 5-45Hz



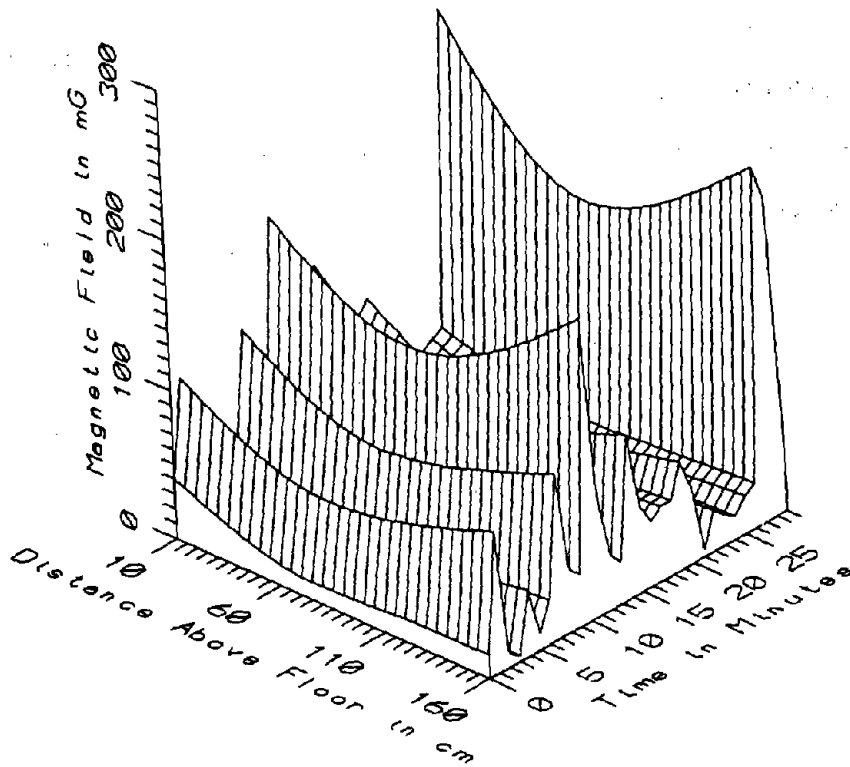
NEC035 - LEFT OF ENGINEER - POWER FREQ., 50-60Hz



NEC035 - LEFT OF ENGINEER - POWER HARM., 65-300Hz



NEC035 - LEFT OF ENGINEER - HIGH FREQ, 305-2560Hz



NEC035 - LEFT OF ENGINEER - ALL FREQ, 5-2560Hz

APPENDIX AK

DATASET NEC036
FIRST COACH AT AISLE, 25 HZ NEC

Measurement Setup Code: Staff: 11 Reference: 12
Drawing: A-1

Vehicle Status: Travel south from Philadelphia

Measurement Date: March 31, 1992

Measurement Time: Start: 17:02:11
End: 17:23:11

Number of Samples: 22

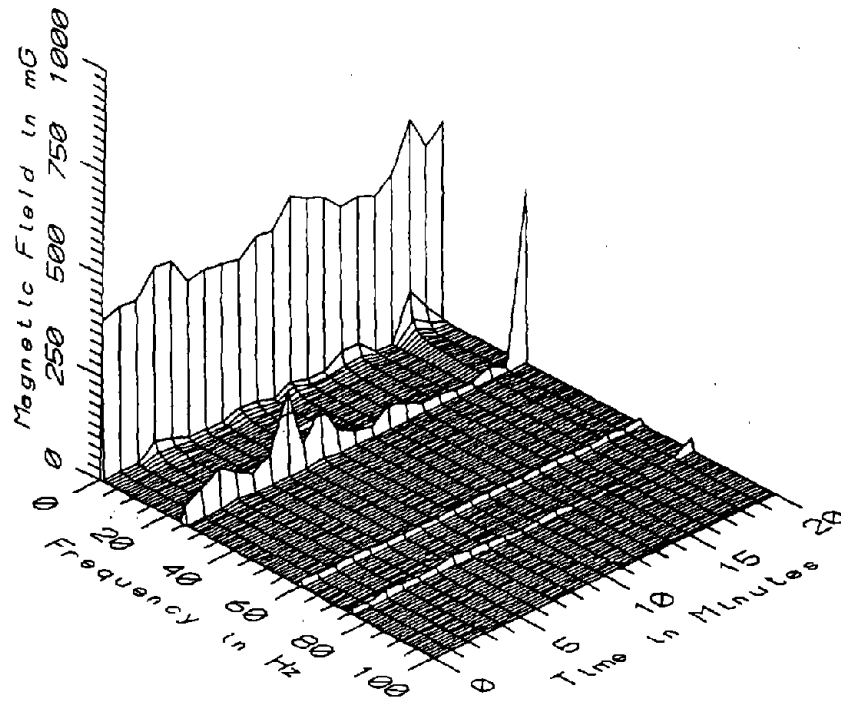
Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

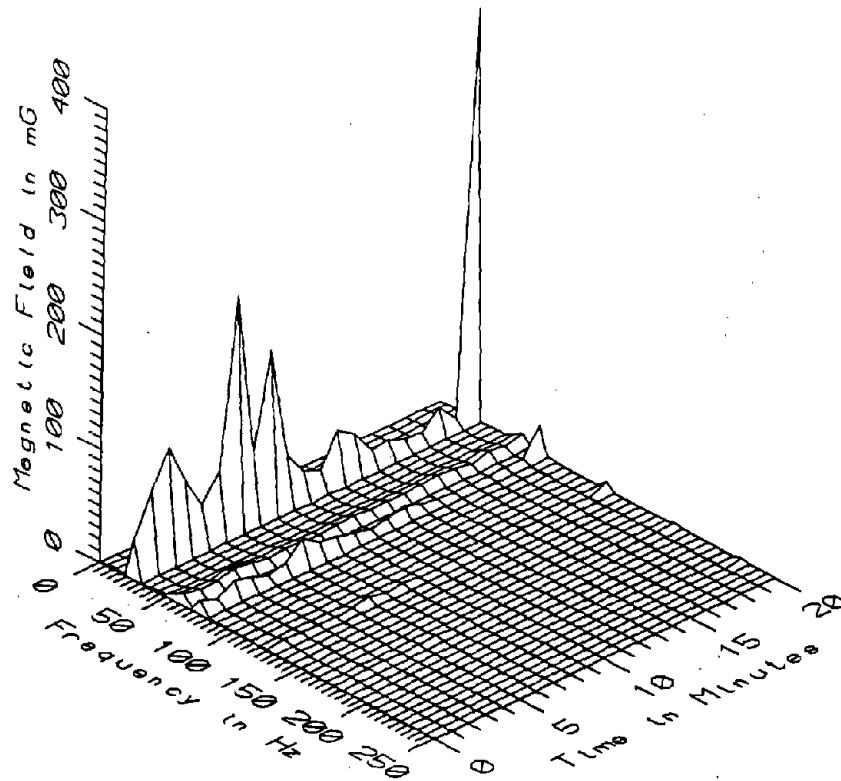
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

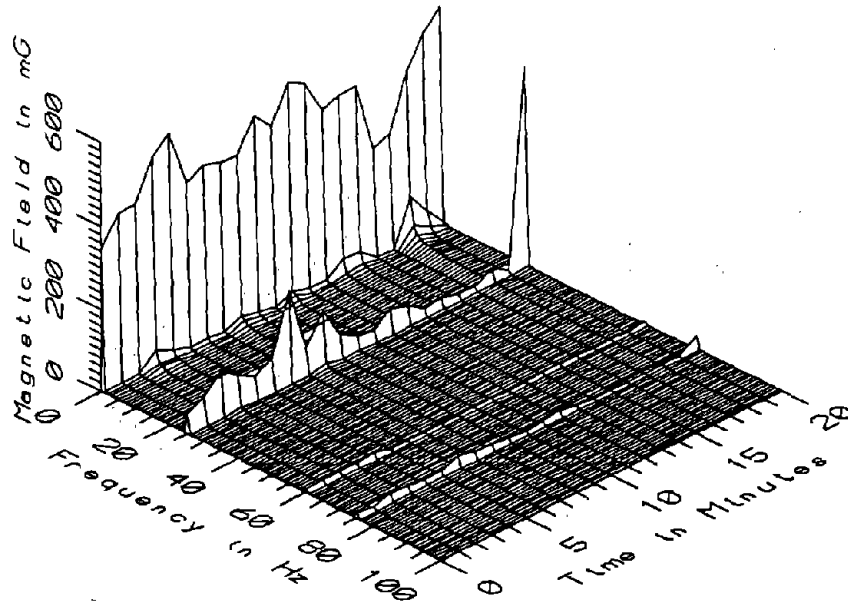
Missing or Suspect Data: None



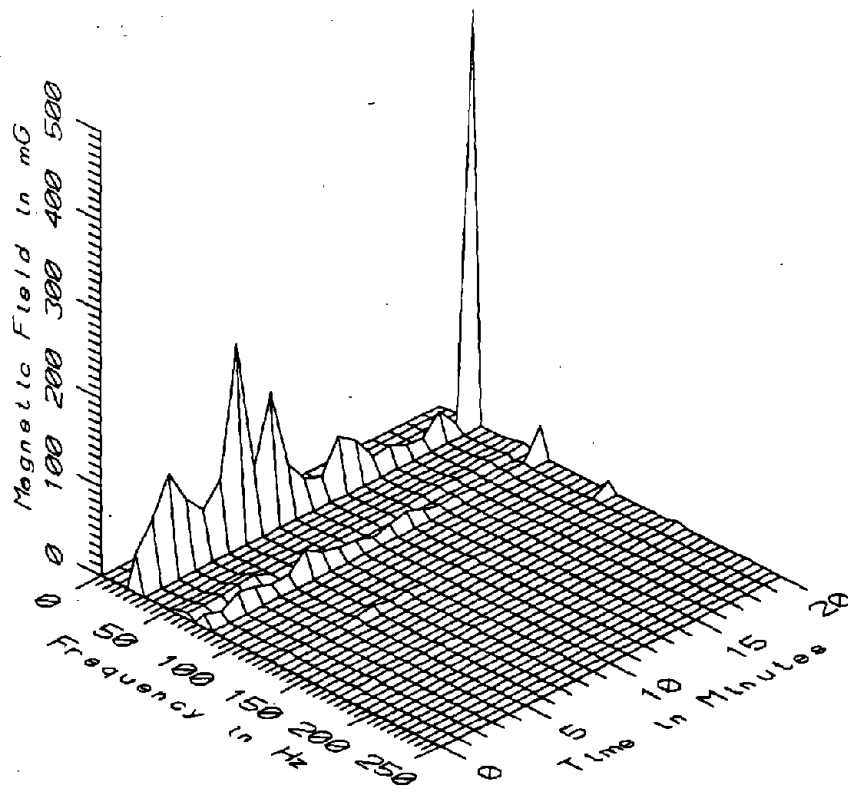
NEC036 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN MIDDLE OF FIRST COACH



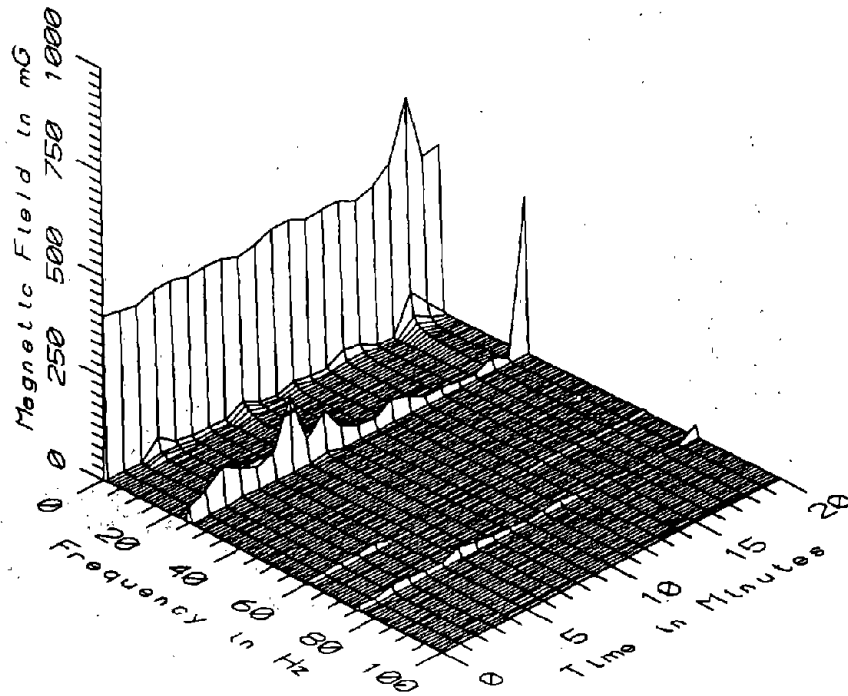
NEC036 - 10cm ABOVE FLOOR AT EDGE OF AISLE IN MIDDLE OF FIRST COACH



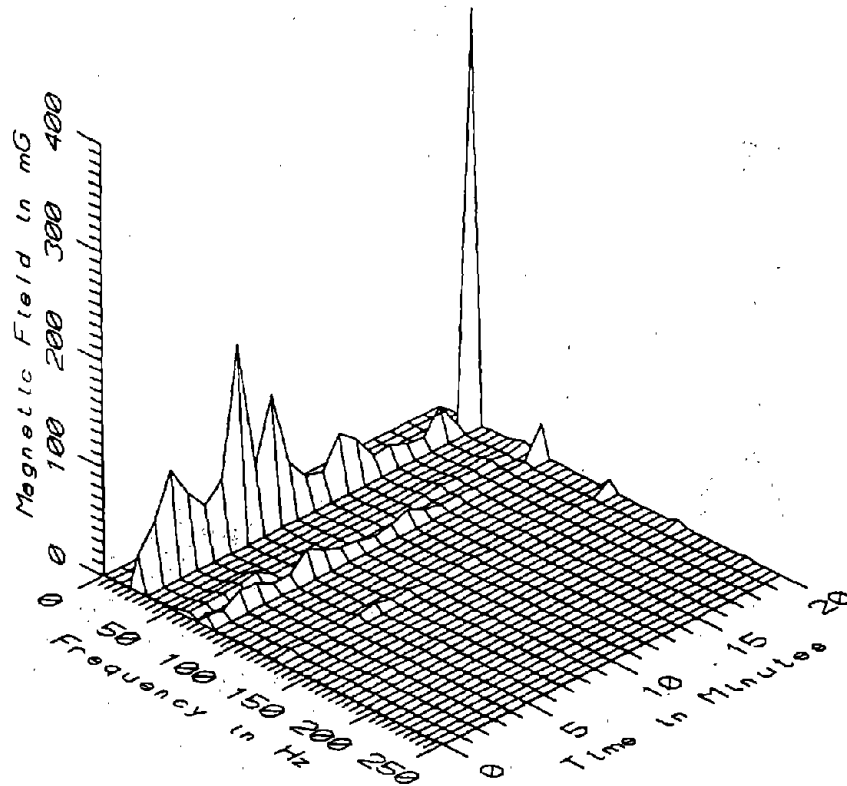
NEC036 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN MIDDLE OF FIRST COACH



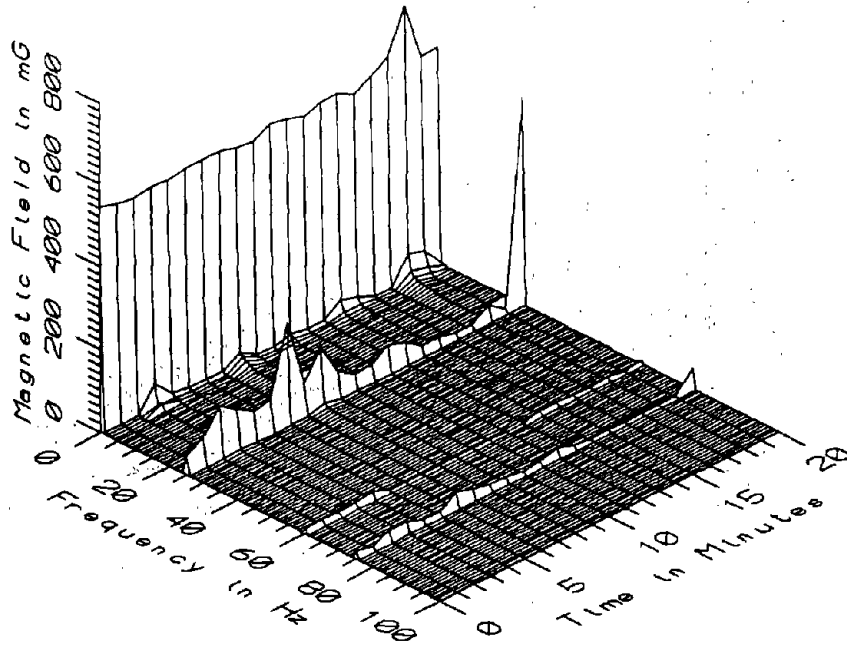
NEC036 - 60cm ABOVE FLOOR AT EDGE OF AISLE IN MIDDLE OF FIRST COACH



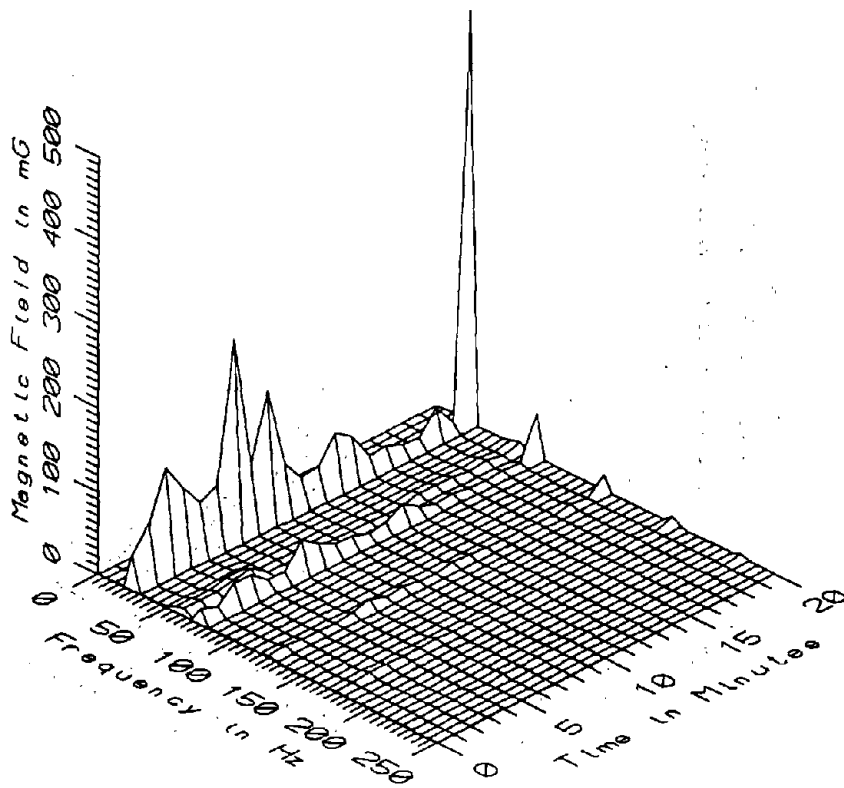
NEC036 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN MIDDLE OF FIRST COACH



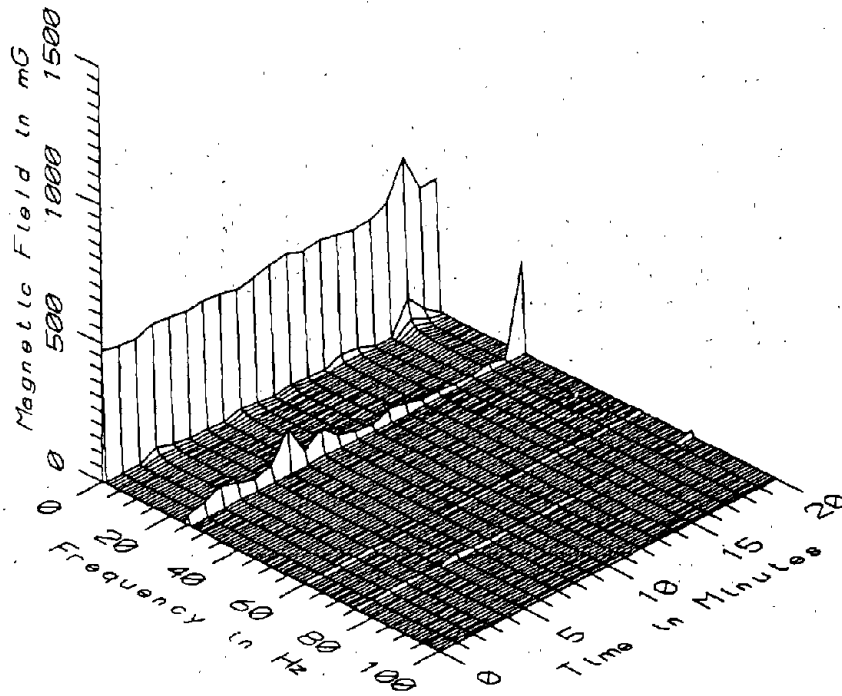
NEC036 - 110cm ABOVE FLOOR AT EDGE OF AISLE IN MIDDLE OF FIRST COACH



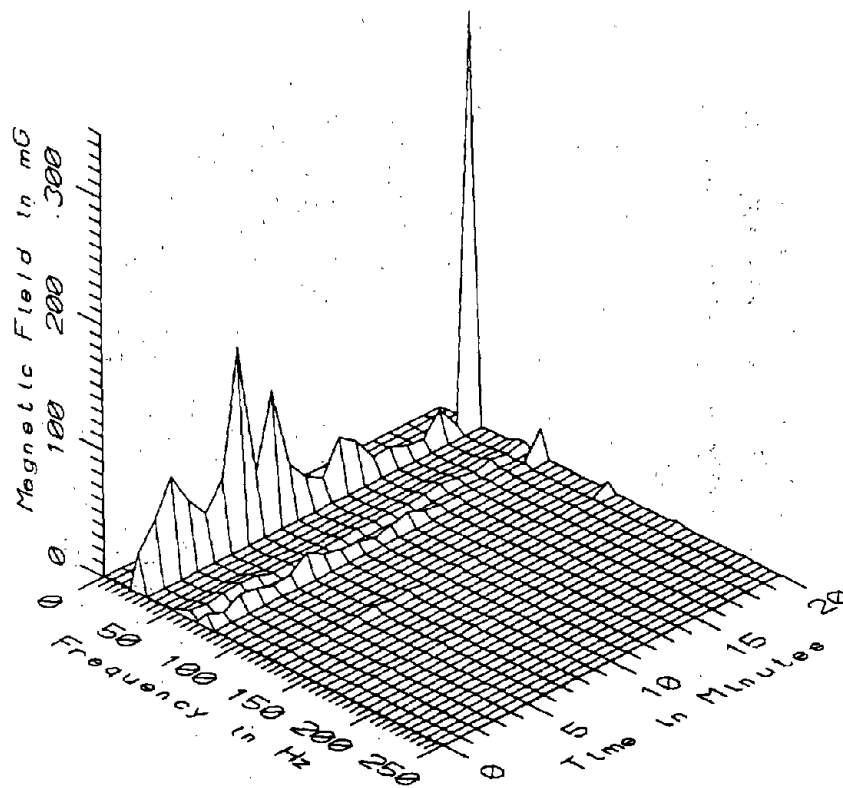
NEC036 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN MIDDLE OF FIRST COACH



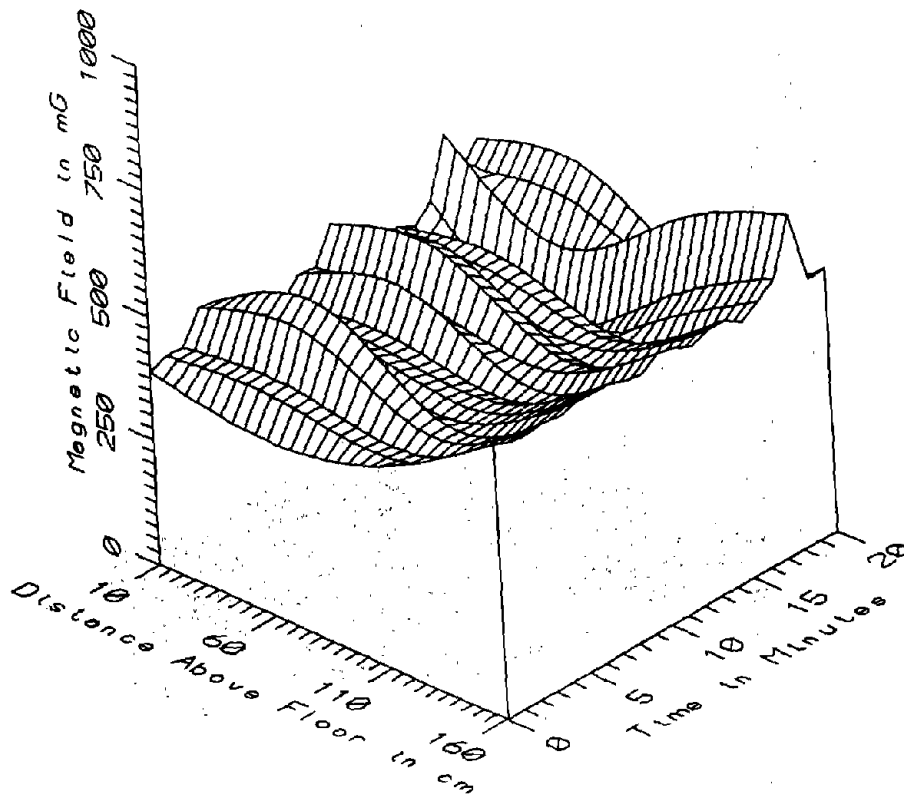
NEC036 - 160cm ABOVE FLOOR AT EDGE OF AISLE IN MIDDLE OF FIRST COACH



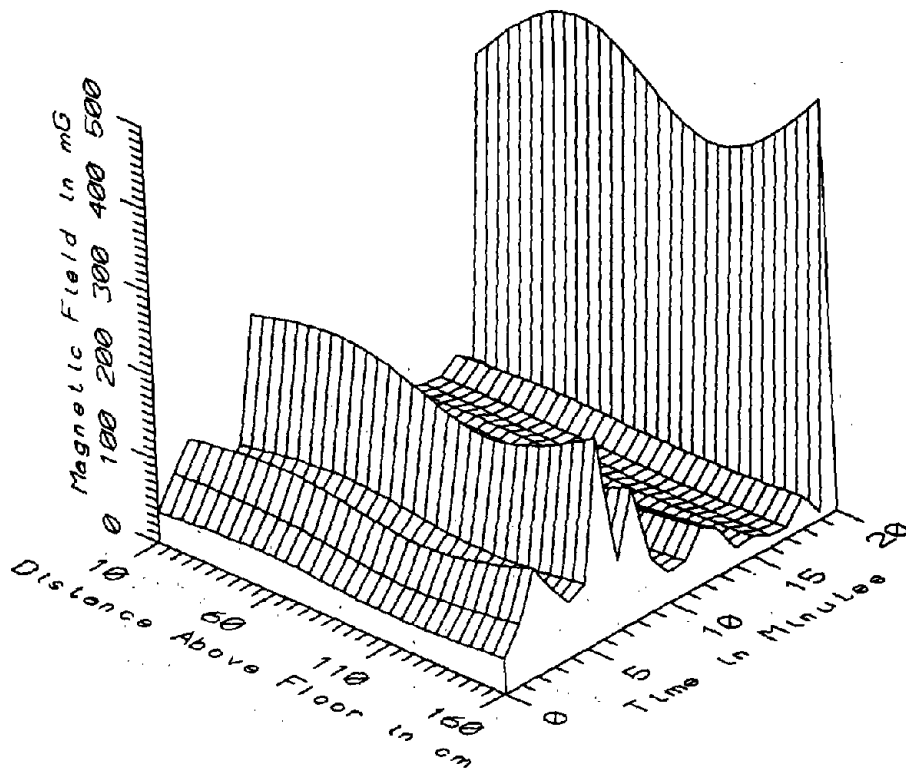
NEC036 - REFERENCE PROBE - WINDOW SEAT IN MIDDLE OF FIRST COACH



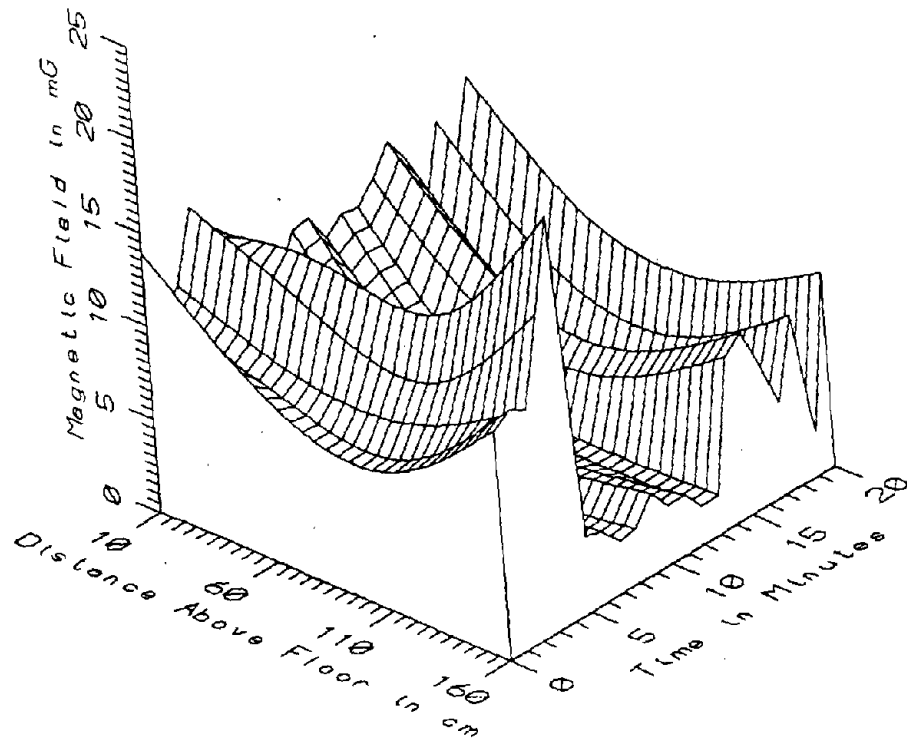
NEC036 - REFERENCE PROBE - WINDOW SEAT IN MIDDLE OF FIRST COACH



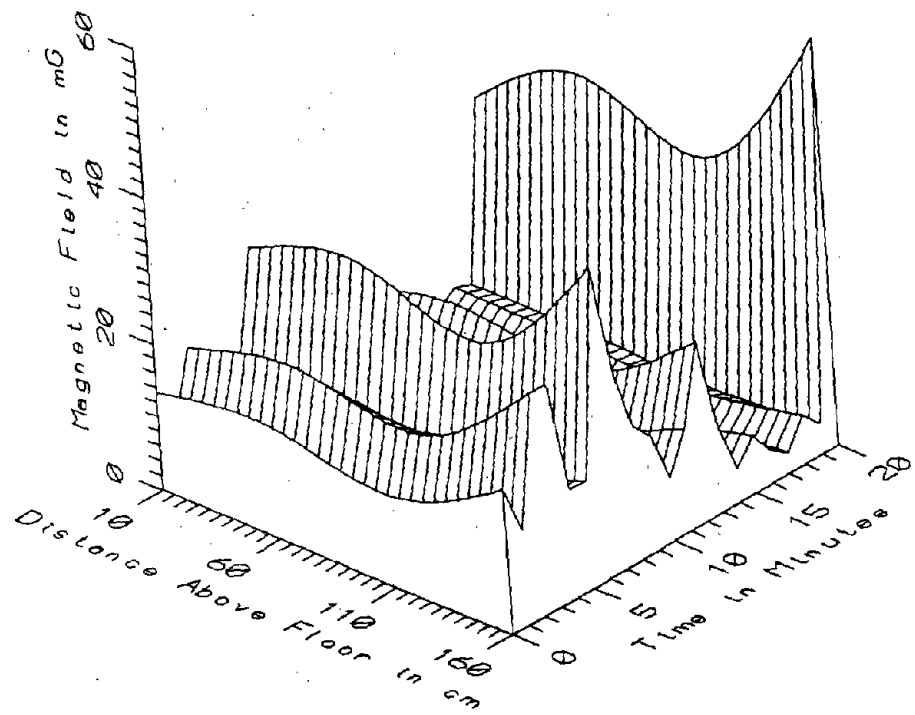
NEC036 - EDGE OF AISLE IN MIDDLE OF 1ST COACH - STATIC



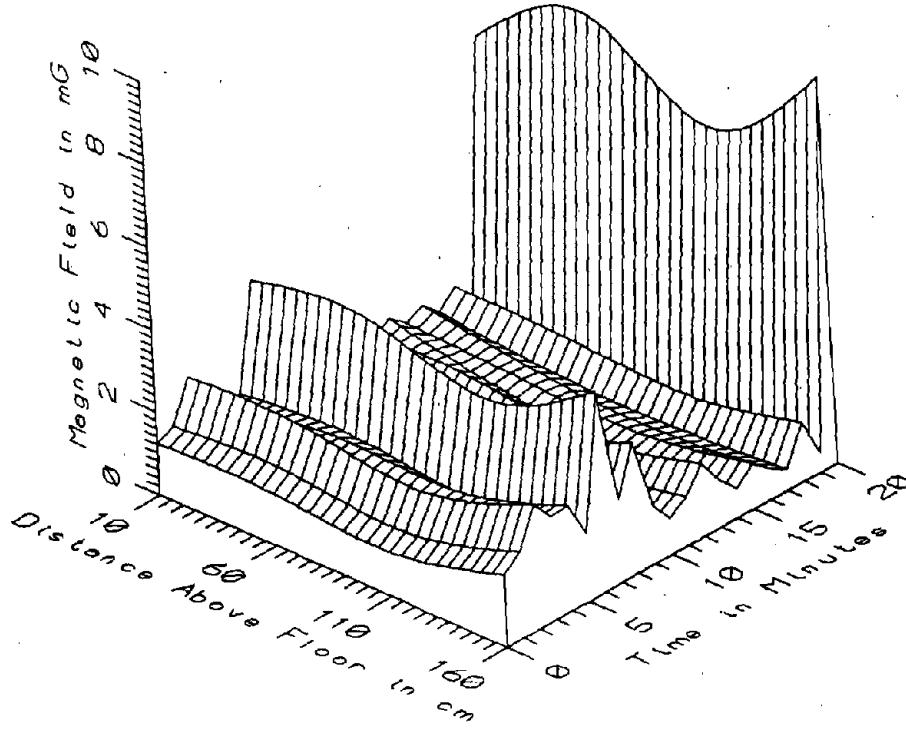
NEC036 - EDGE OF AISLE IN MIDDLE OF 1ST COACH - LOW FREQ. 5-45Hz



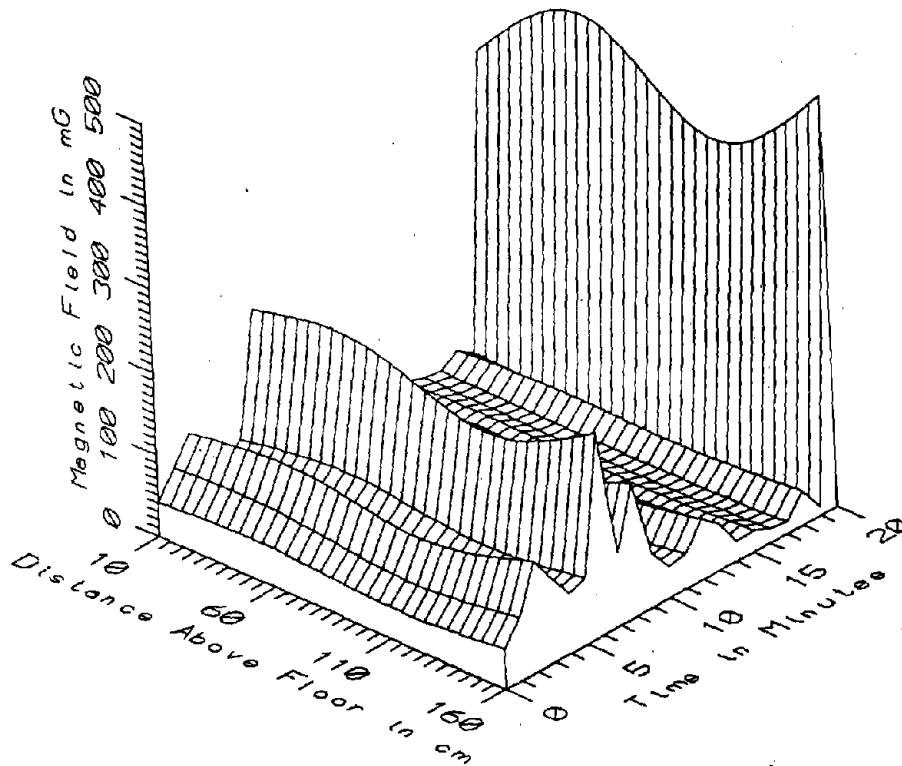
NEC036 - EDGE OF AISLE IN MIDDLE OF 1ST COACH - POWER FREQ. 50-60Hz



NEC036 - EDGE OF AISLE IN MIDDLE OF 1ST COACH - POWER HARM, 65-300Hz



NEC036 - EDGE OF AISLE IN MIDDLE OF 1ST COACH - HIGH FREQ, 305-2560Hz



NEC036 - EDGE OF AISLE IN MIDDLE OF 1ST COACH - ALL FREQ, 5-2560Hz

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The text notes that without reliable records, it would be difficult to track the flow of funds and identify any irregularities.

2. The second part of the document outlines the specific procedures for recording transactions. It details the steps involved in entering data into the system, including the use of standardized codes and the requirement for double-checking entries. The text also mentions the importance of regular audits to ensure that the records are up-to-date and accurate.

3. The third part of the document discusses the role of the accounting department in maintaining these records. It highlights the need for clear communication and collaboration between different departments to ensure that all transactions are properly recorded. The text also mentions the importance of training staff to ensure they are familiar with the recording procedures.

4. The fourth part of the document addresses the issue of data security. It stresses the need to protect the financial records from unauthorized access and to implement robust security measures. The text also mentions the importance of having a backup plan in case of a system failure or data loss.

5. The fifth part of the document discusses the importance of transparency and accountability in the financial reporting process. It notes that clear and concise reporting is essential for stakeholders to understand the organization's financial performance. The text also mentions the need for regular communication and updates to keep everyone informed.

6. The final part of the document provides a summary of the key points and reiterates the importance of following the outlined procedures. It concludes by stating that a strong financial record-keeping system is a cornerstone of a successful organization.

APPENDIX AL

DATASET NEC037
VERTICAL PROFILE ON SIDEWALK OUTSIDE
PRINCETON JUNCTION 25 HZ SUBSTATION

Measurement Setup Code: Staff: 54 Reference: 55
 Drawing: A-5

Vehicle Status: Trains passing at the 4 minute and 8
 minute points. Commuter train
 departing station at the 11 minute
 point

Measurement Date: April 1, 1992

Measurement Time: Start: 12:58:01
 End: 13:17:01

Number of Samples: 20

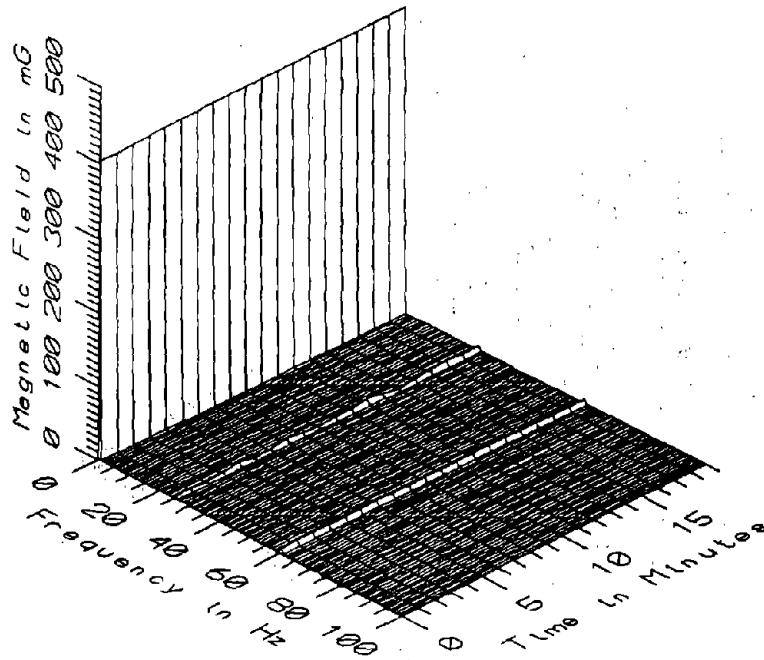
Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

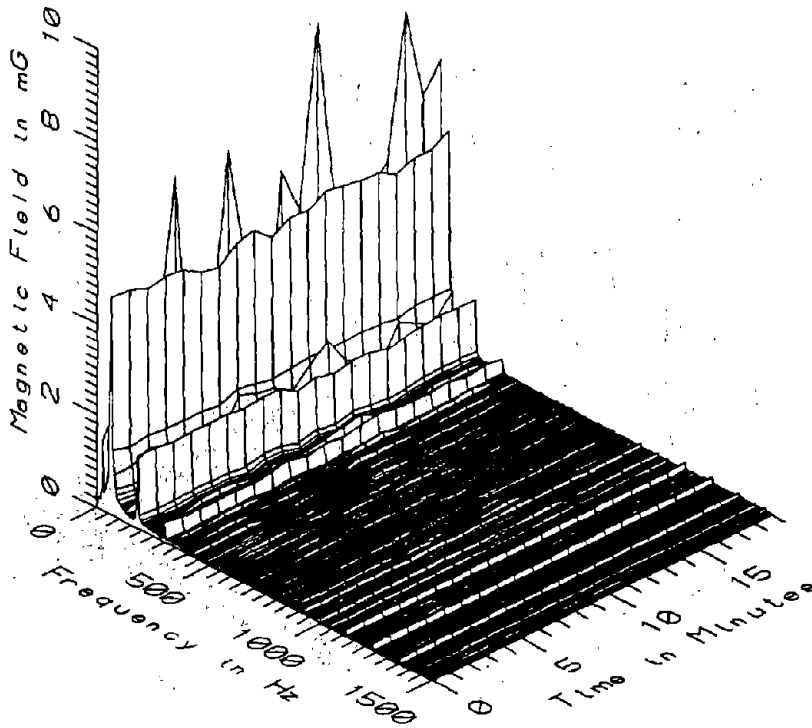
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

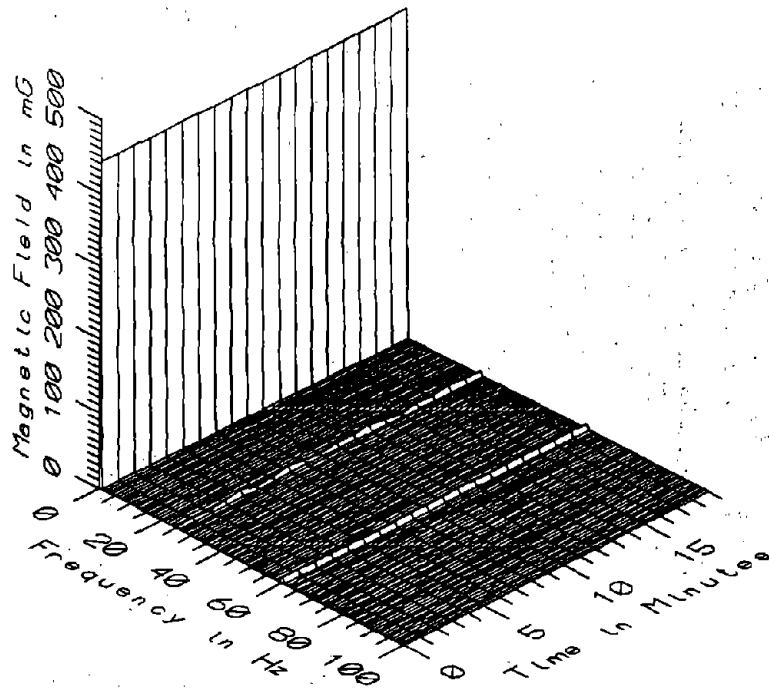
Missing or Suspect Data: None



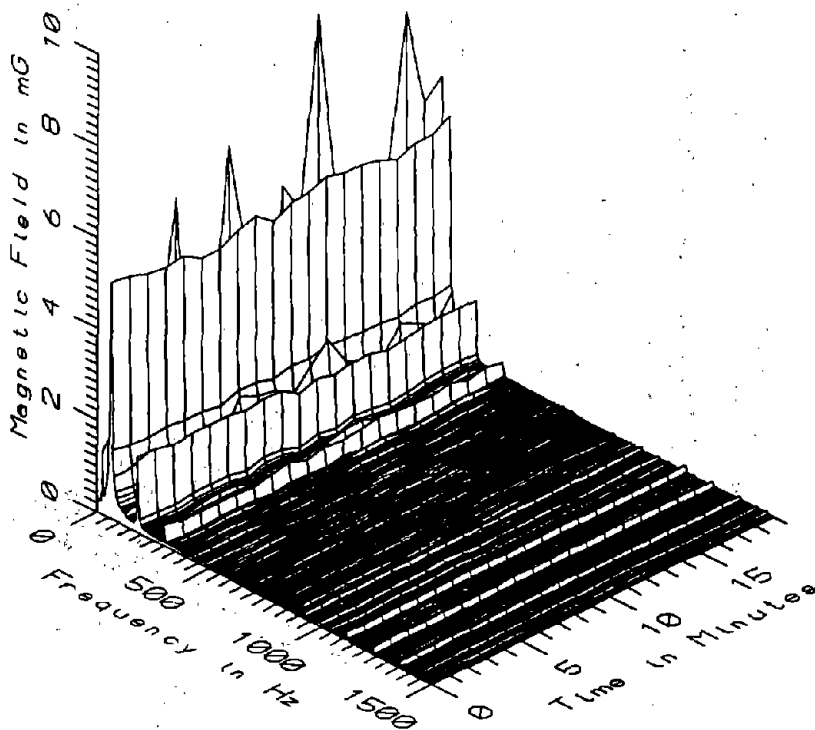
NEC037 - 10cm ABOVE GROUND IN FRONT OF PRINCETON JUNCTION SUBSTATION



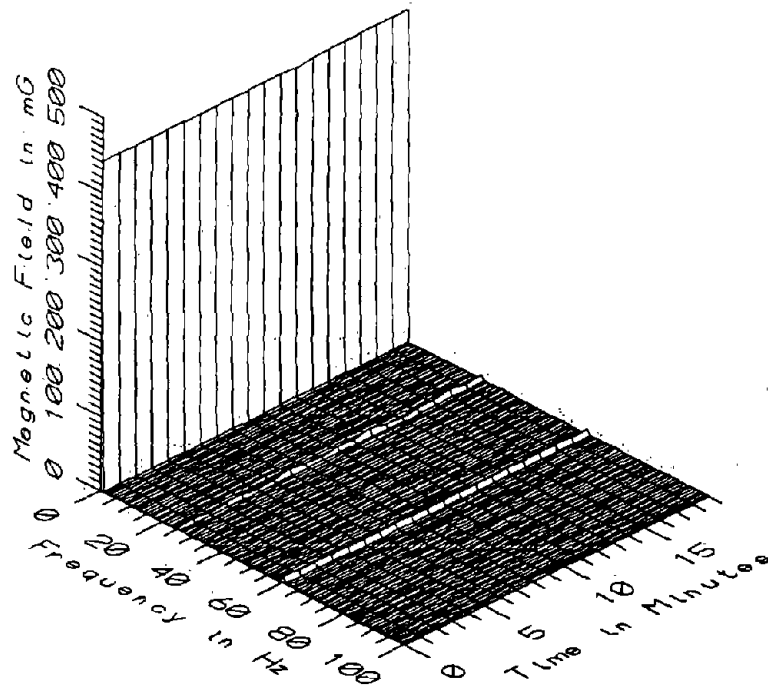
NEC037 - 10cm ABOVE GROUND IN FRONT OF PRINCETON JUNCTION SUBSTATION



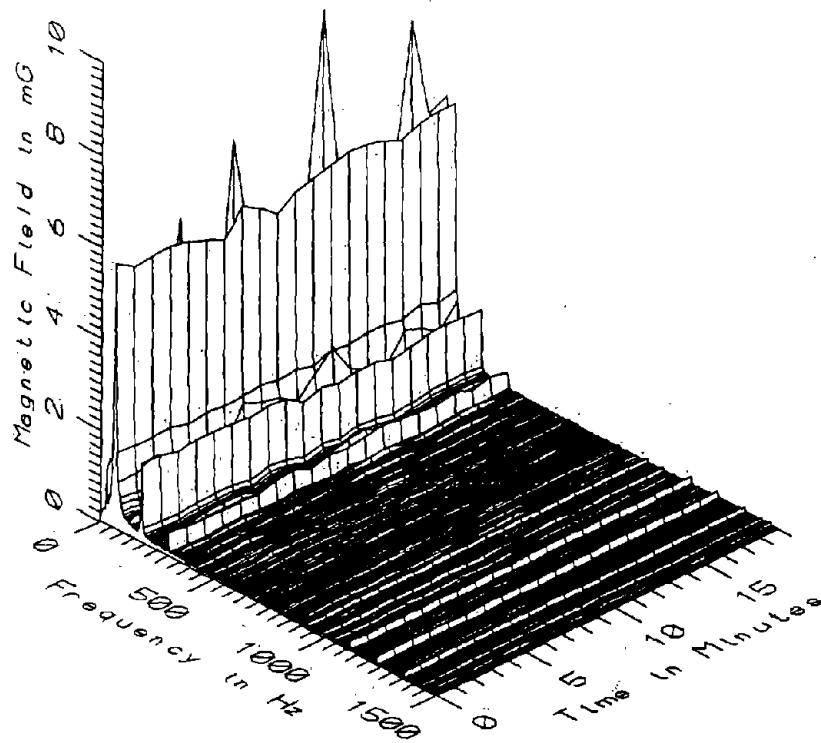
NEC037 - 60cm ABOVE GROUND IN FRONT OF PRINCETON JUNCTION SUBSTATION



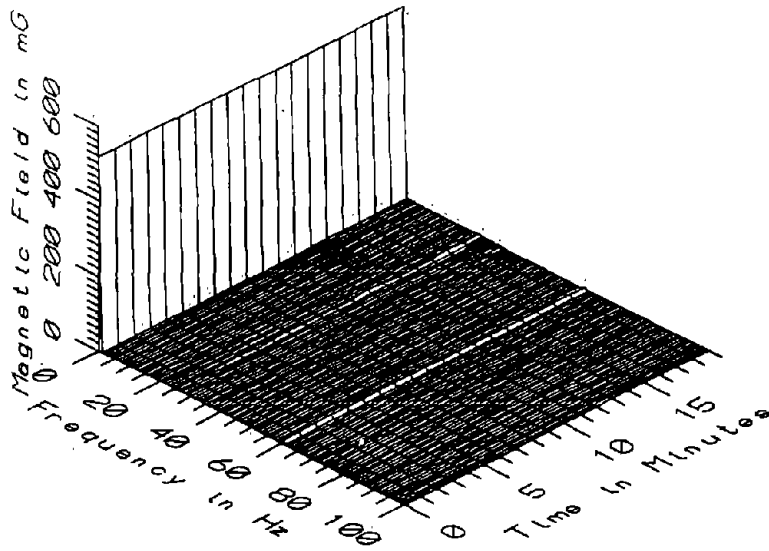
NEC037 - 60cm ABOVE GROUND IN FRONT OF PRINCETON JUNCTION SUBSTATION



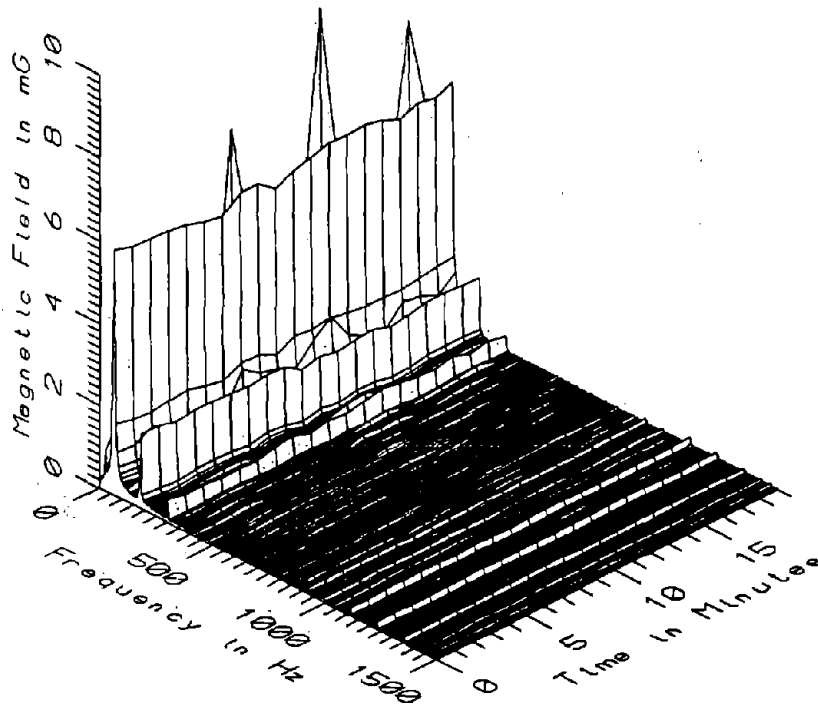
NEC037 - 110cm ABOVE GROUND IN FRONT OF PRINCETON JUNCTION SUBSTATION



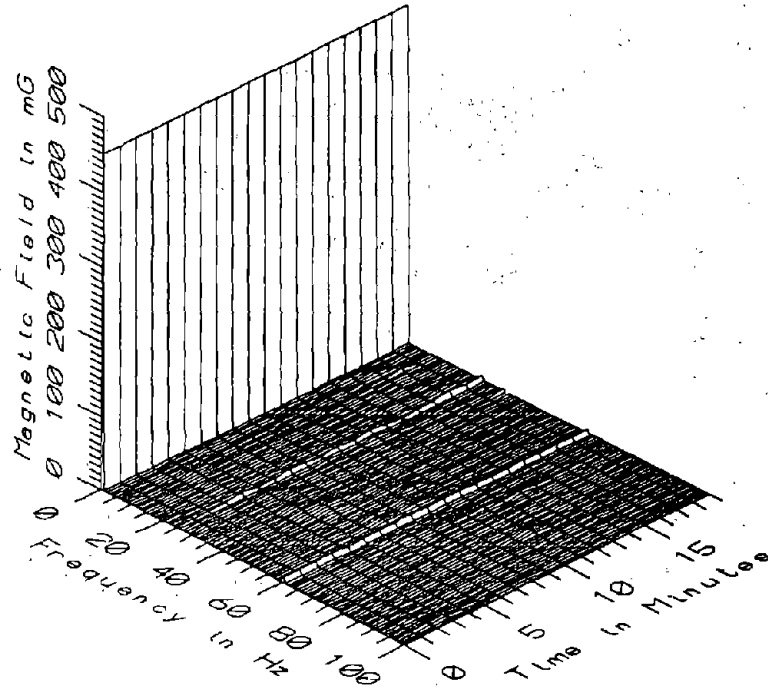
NEC037 - 110cm ABOVE GROUND IN FRONT OF PRINCETON JUNCTION SUBSTATION



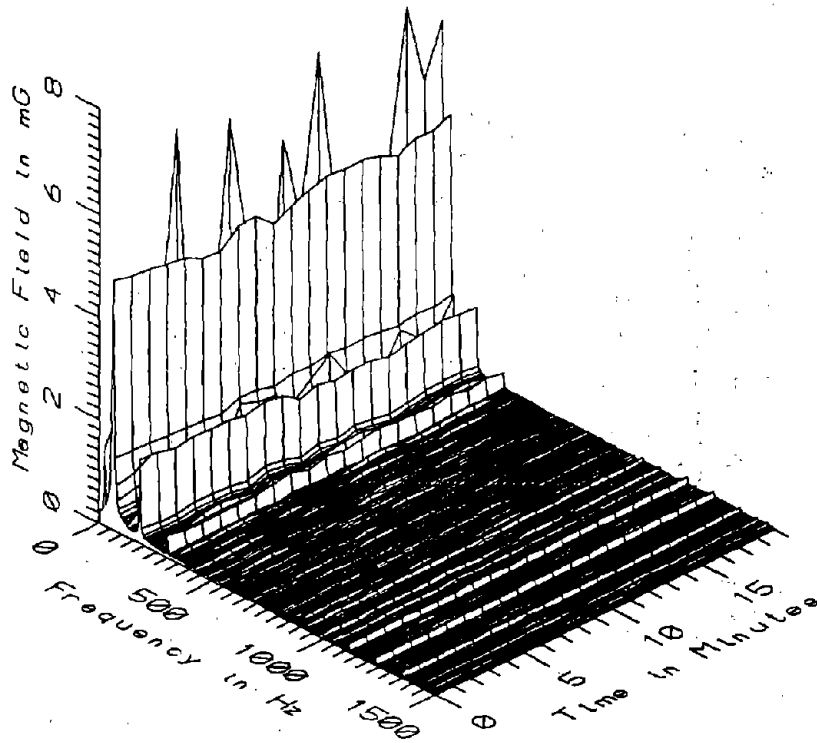
NEC037 - 160cm ABOVE GROUND IN FRONT OF PRINCETON JUNCTION SUBSTATION



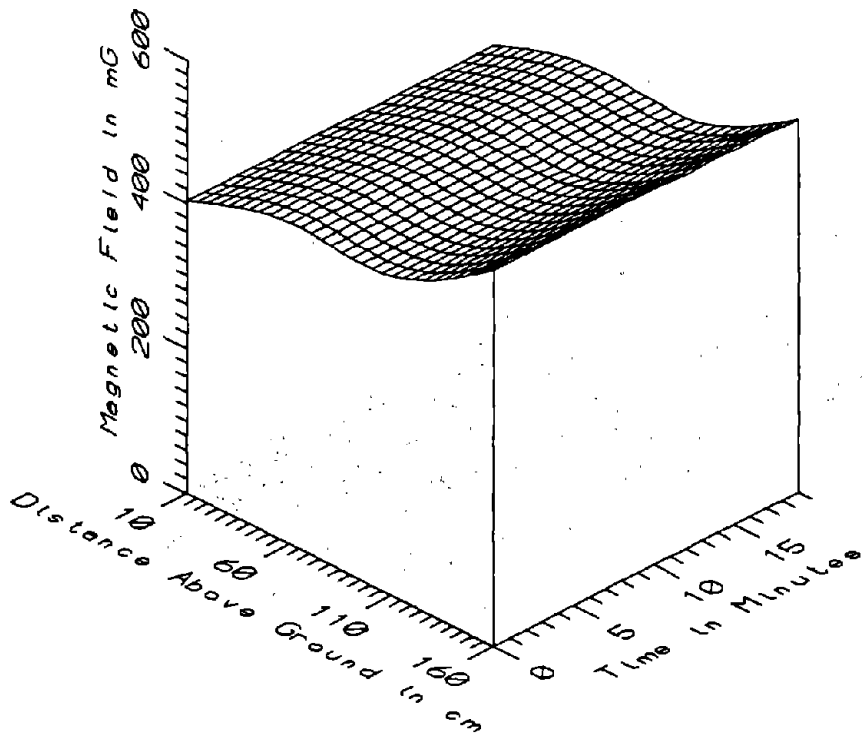
NEC037 - 160cm ABOVE GROUND IN FRONT OF PRINCETON JUNCTION SUBSTATION



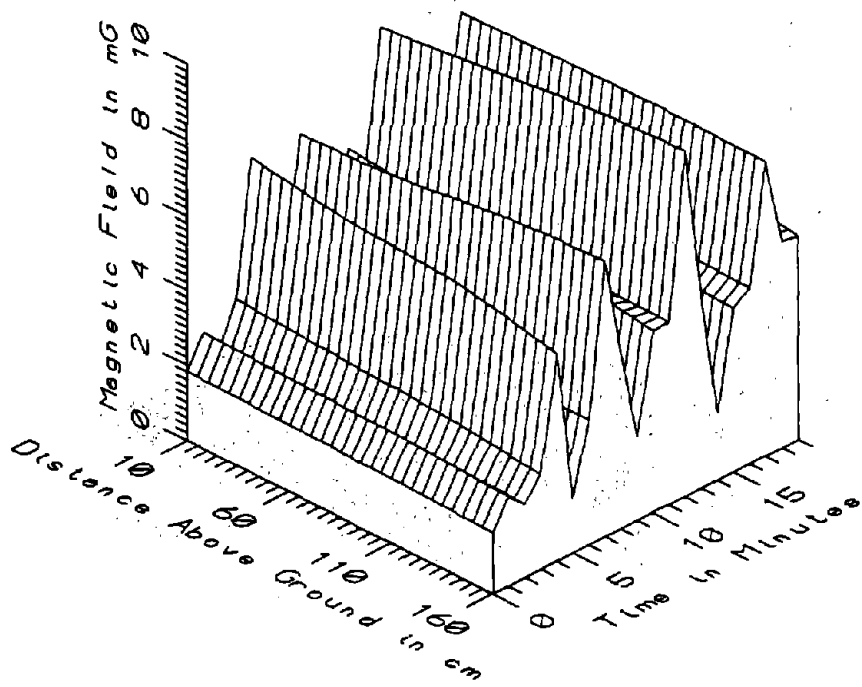
NEC037R - 10cm ABOVE GROUND IN FRONT OF PRINCETON JUNCTION SUBSTATION



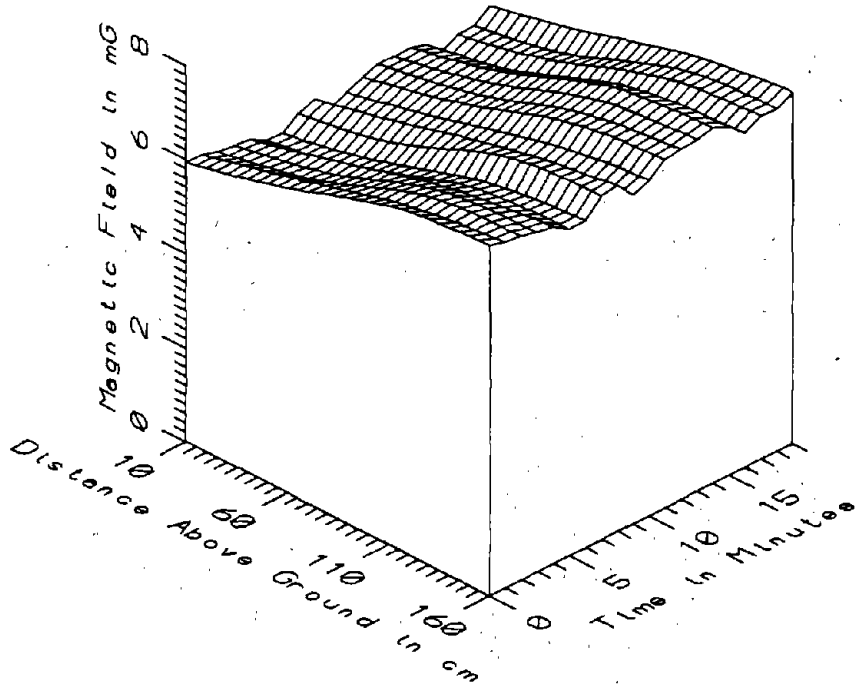
NEC037R - 10cm ABOVE GROUND IN FRONT OF PRINCETON JUNCTION SUBSTATION



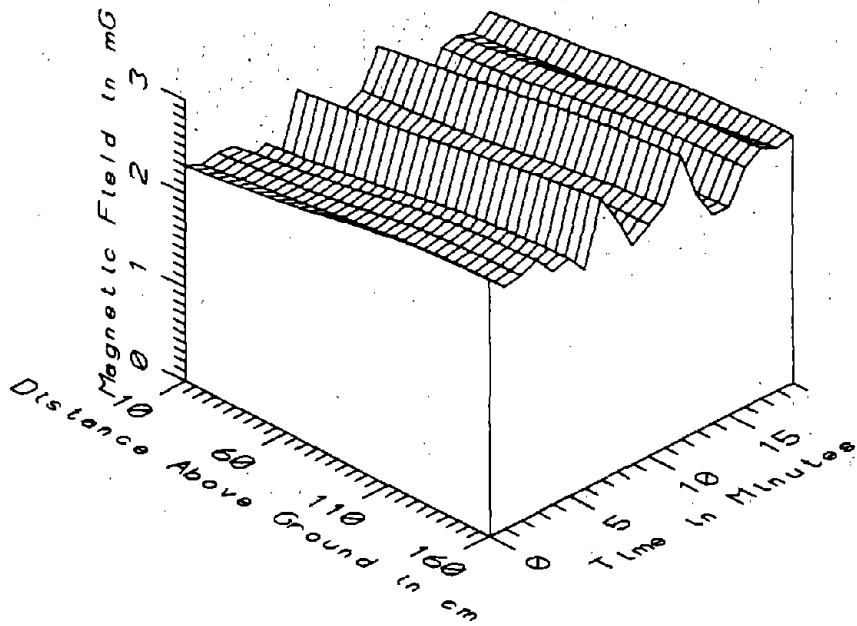
NEC037 - IN FRONT OF PRINCETON JUNCTION SUBSTATION - STATIC



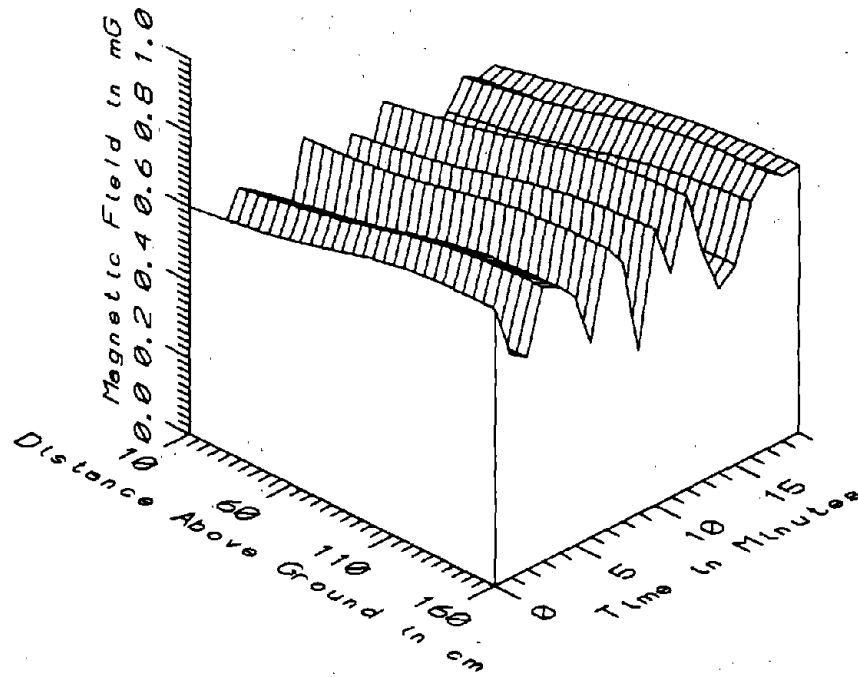
NEC037 - IN FRONT OF PRINCETON JUNCTION SUBSTATION - LOW FREQ, 5-45Hz



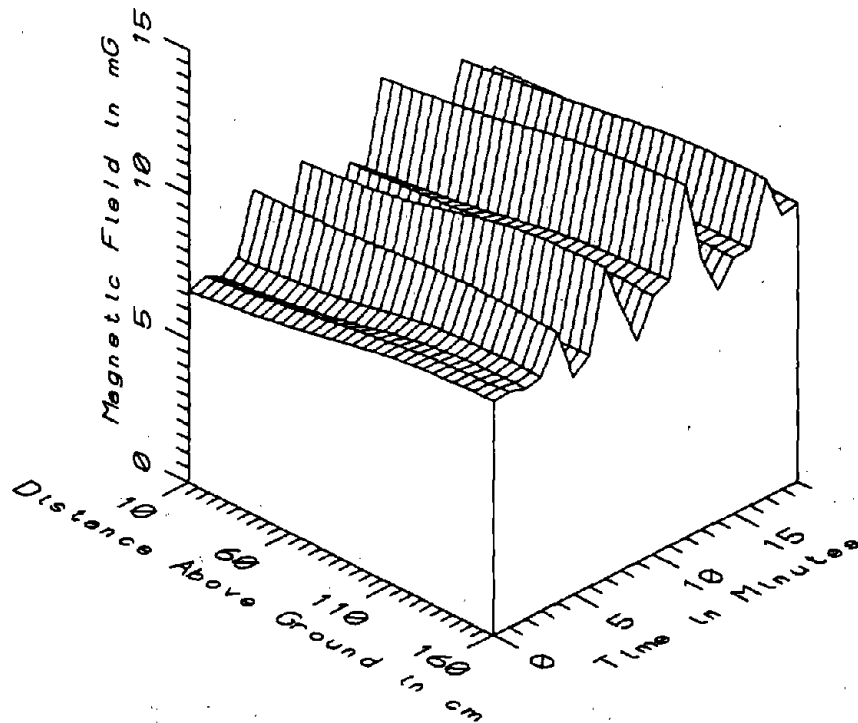
NEC037 - IN FRONT OF PRINCETON JUNCTION SUBSTATION - POWER FREQ, 50-60Hz



NEC037 - IN FRONT OF PRINCETON JUNCTION SUBSTATION - POWER HARM, 65-300Hz



NEC037 - IN FRONT OF PRINCETON JUNCTION SUBSTATION - HIGH FREQ, 305-2560Hz



NEC037 - IN FRONT OF PRINCETON JUNCTION SUBSTATION - ALL FREQ, 5-2560Hz

APPENDIX AM

DATASET NEC038
VERTICAL PROFILE ON STATION PLATFORM
PRINCETON JUNCTION, 25 HZ NEC

Measurement Setup Code: Staff: 37 Reference: 38
 Drawing: A-6

Vehicle Status: Six trains pass (one AMTRAK at 1350
 seconds) three of which stop at
 station. Large field at the 600
 second point is a train leaving the
 station

Measurement Date: April 1, 1992

Measurement Time: Start: 13:42:36
 End: 14:16:15

Number of Samples: 317

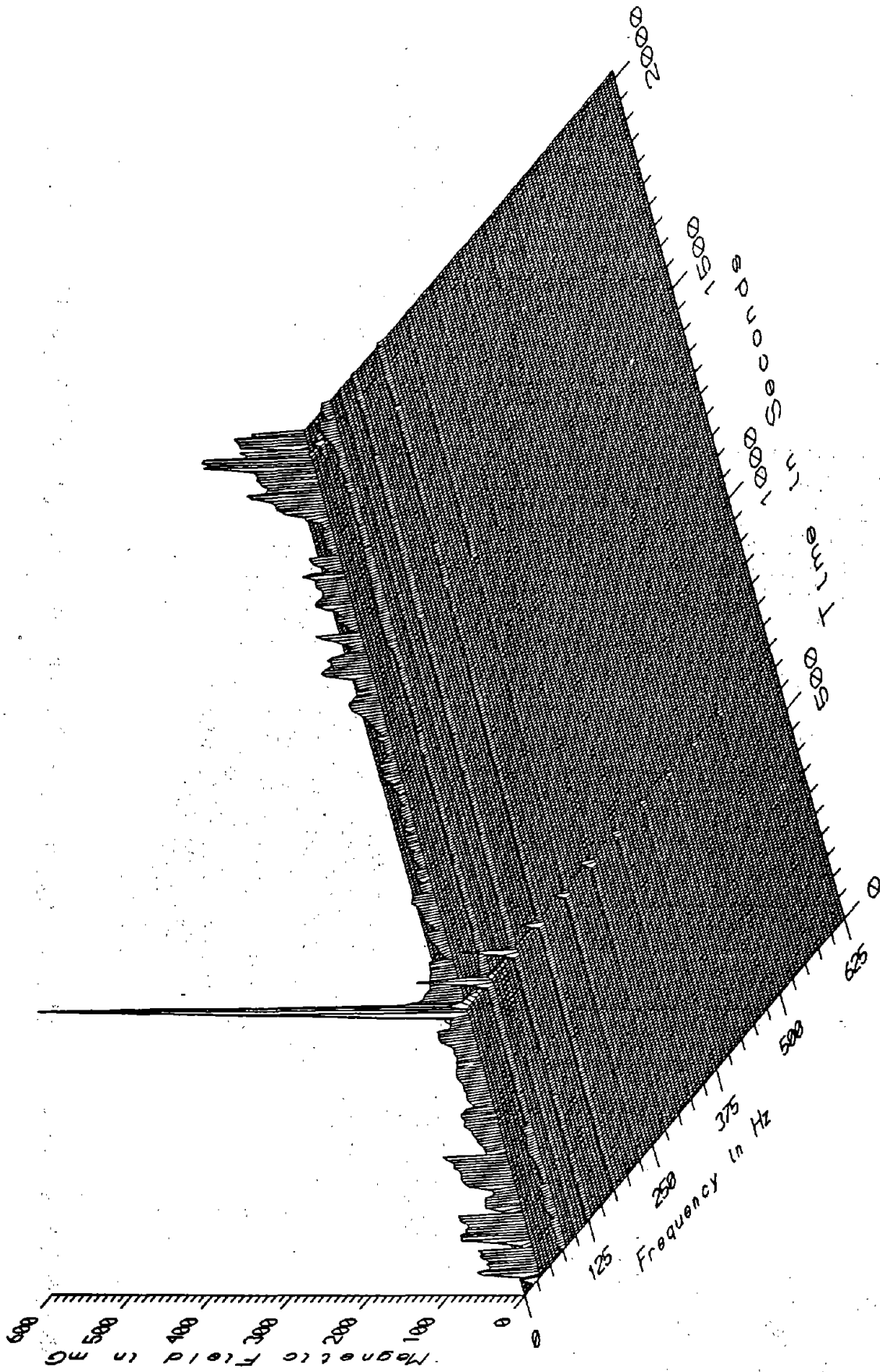
Programmed Sample Interval: 5 sec

Actual Sample Interval: 6.4 sec

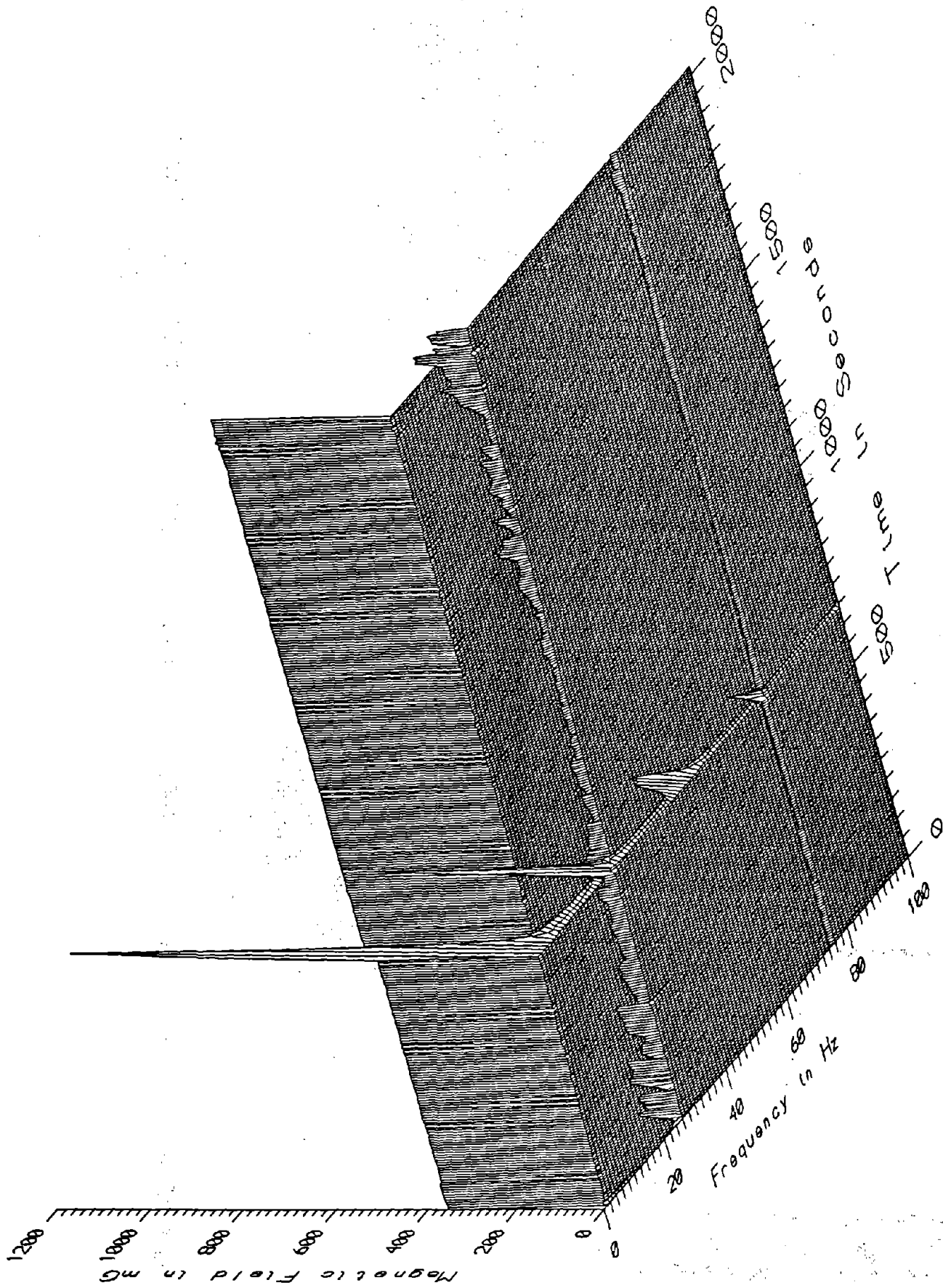
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

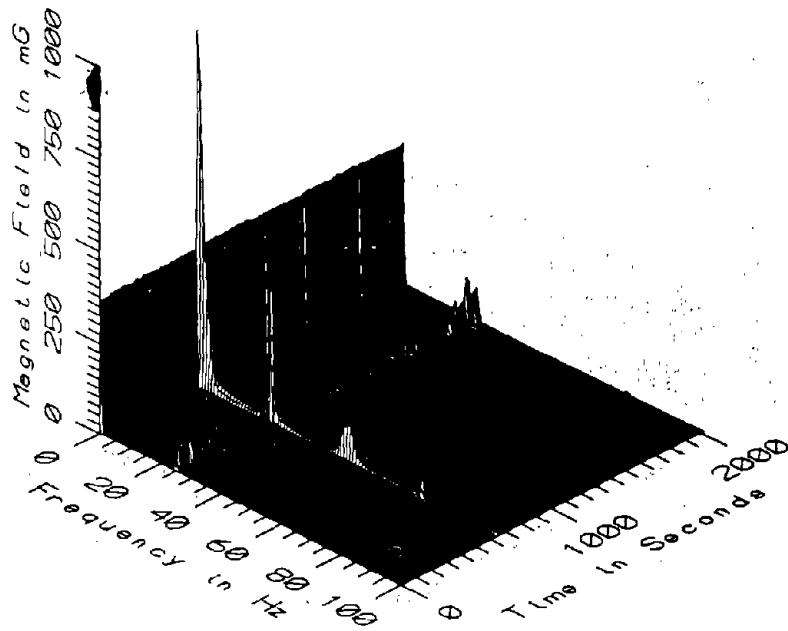
Missing or Suspect Data: None



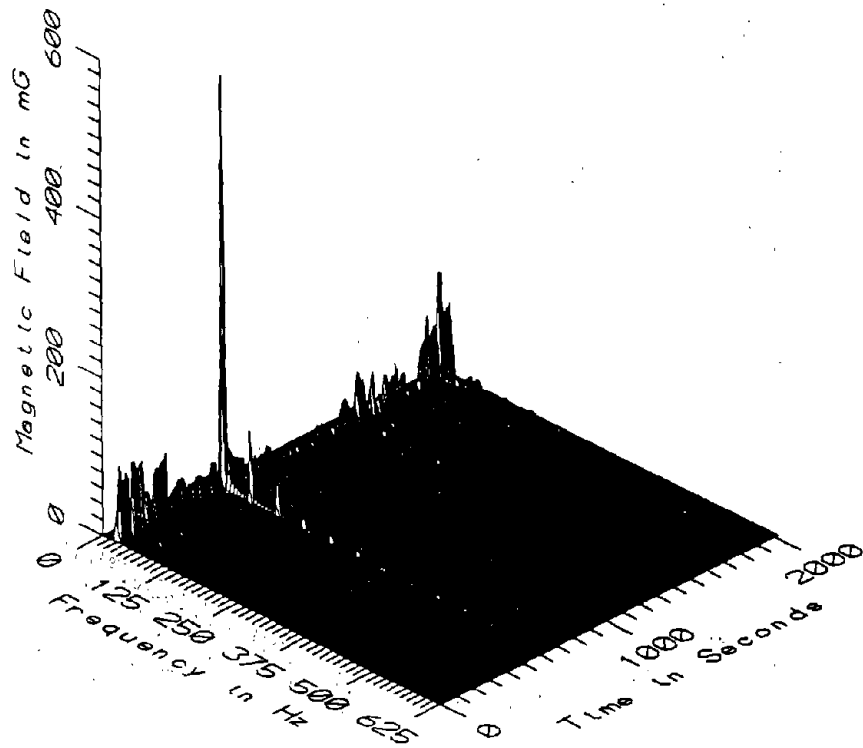
NEC038 - 10cm ABOVE EDGE OF PRINCETON JUNCTION PLATFORM



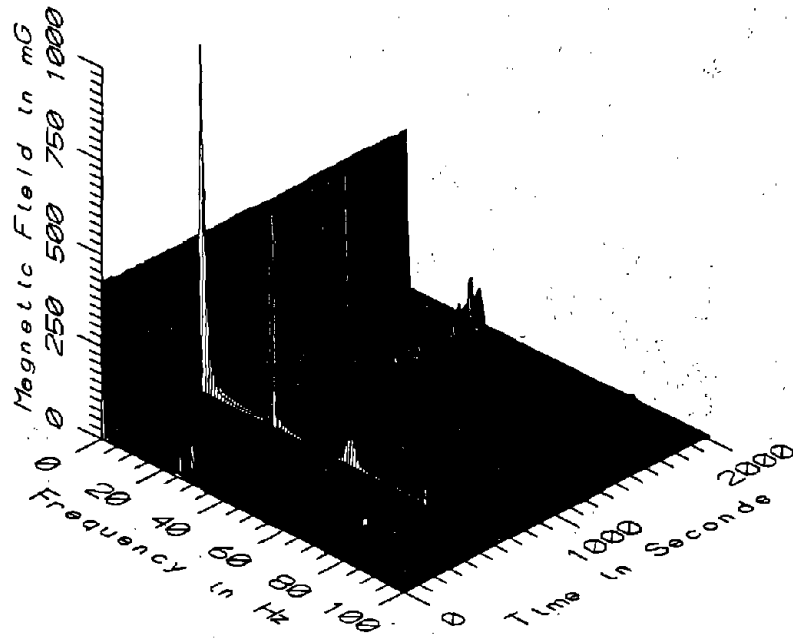
NEC038 - 10cm ABOVE EDGE OF PRINCETON JUNCTION PLATFORM



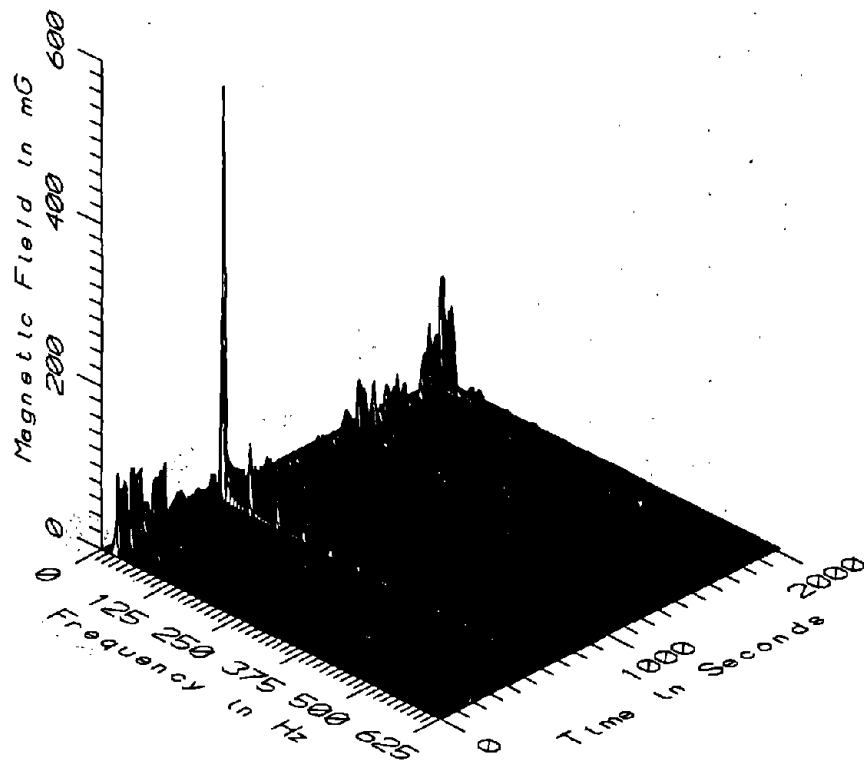
NEC038 - 60cm ABOVE EDGE OF PRINCETON JUNCTION PLATFORM



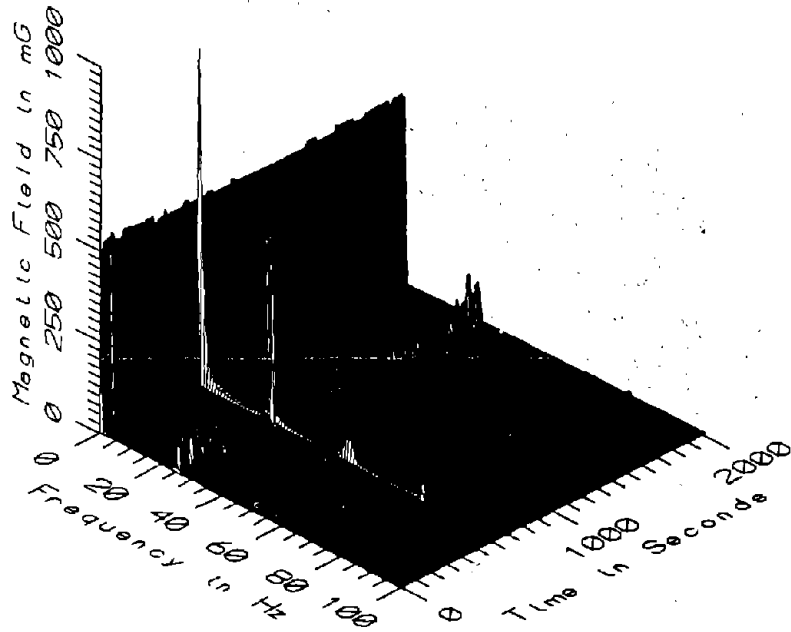
NEC038 - 60cm ABOVE EDGE OF PRINCETON JUNCTION PLATFORM



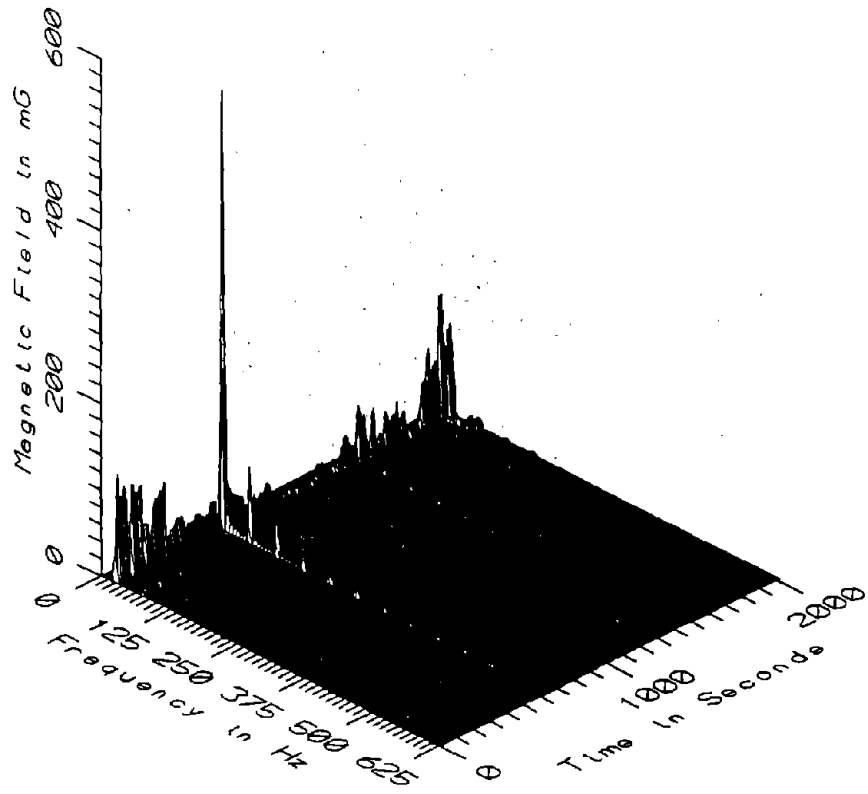
NEC038 - 110cm ABOVE EDGE OF PRINCETON JUNCTION PLATFORM



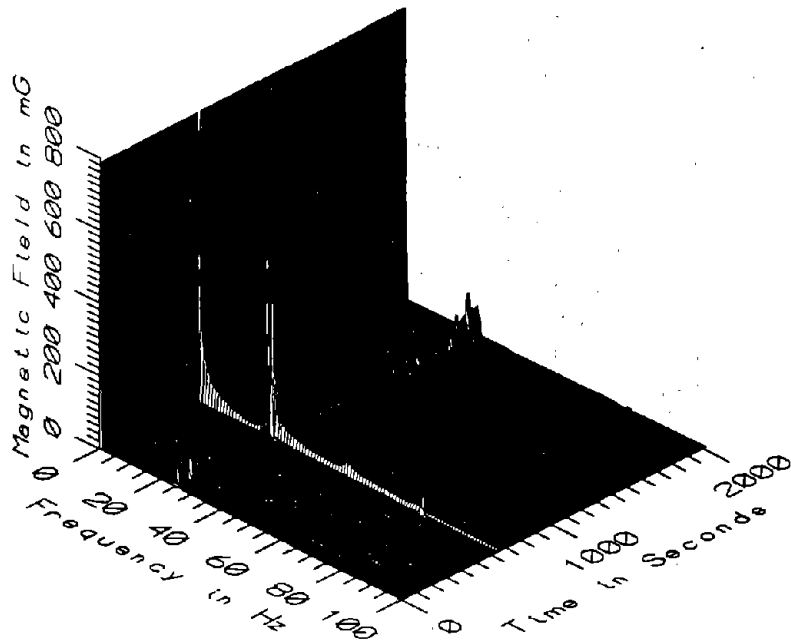
NEC038 - 110cm ABOVE EDGE OF PRINCETON JUNCTION PLATFORM



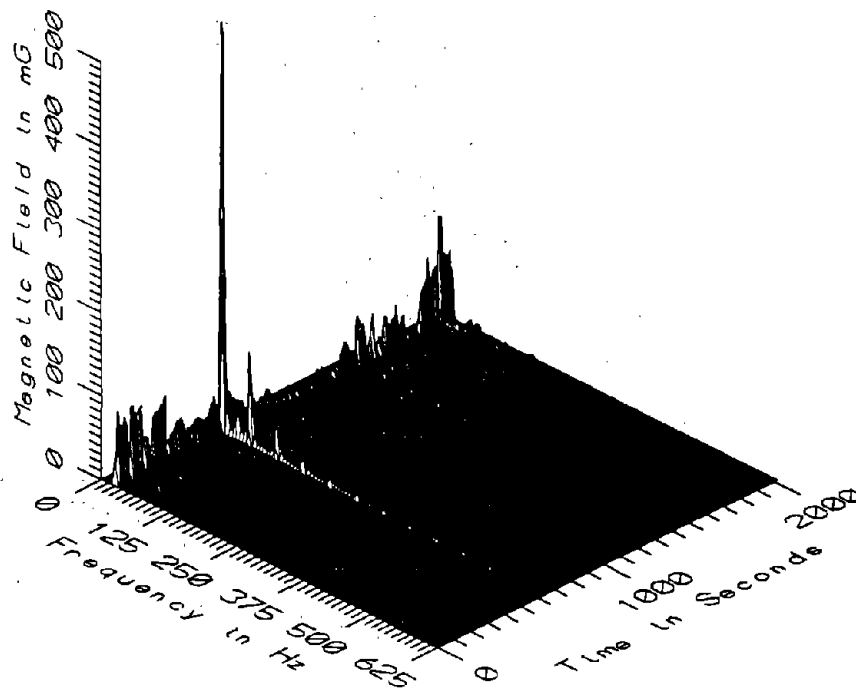
NEC038 - 160cm ABOVE EDGE OF PRINCETON JUNCTION PLATFORM



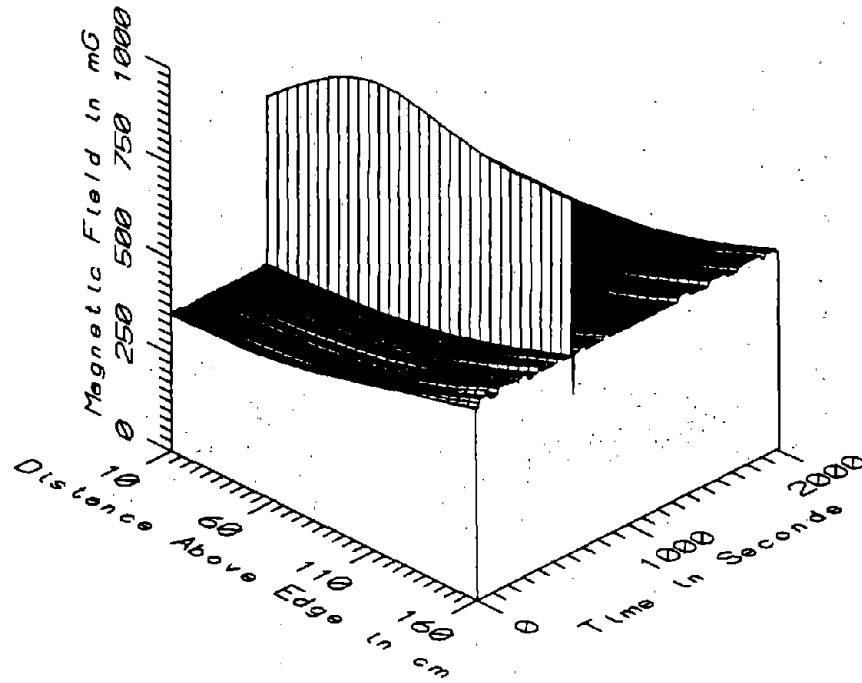
NEC038 - 160cm ABOVE EDGE OF PRINCETON JUNCTION PLATFORM



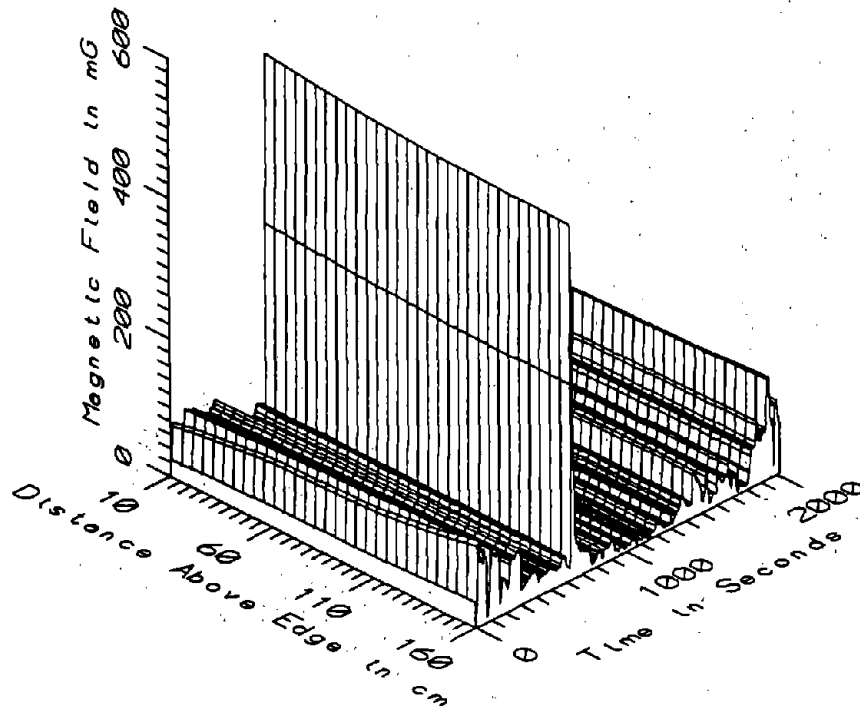
NEC038R - 10cm ABOVE EDGE OF PRINCETON JUNCTION PLATFORM



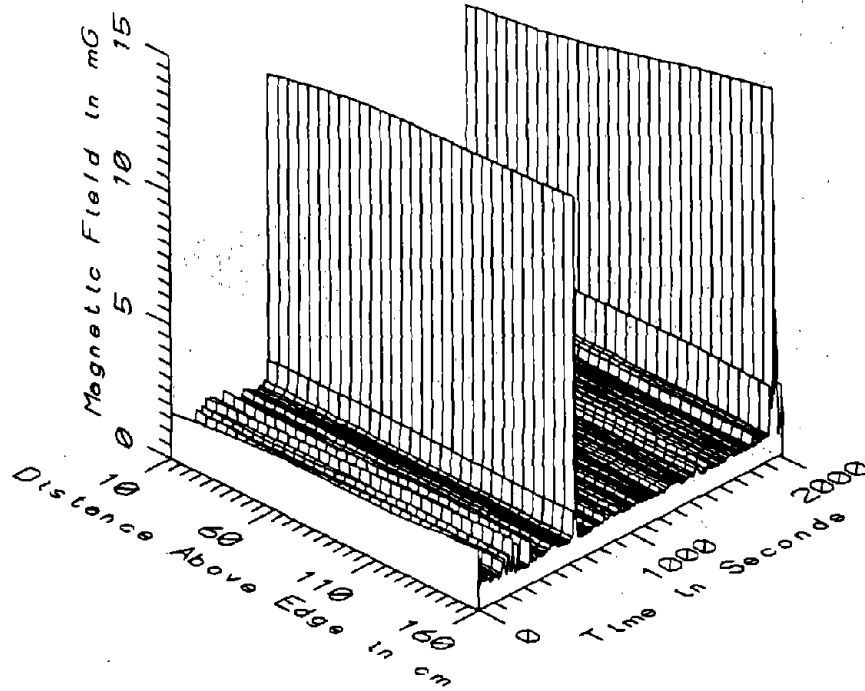
NEC038R - 10cm ABOVE EDGE OF PRINCETON JUNCTION PLATFORM



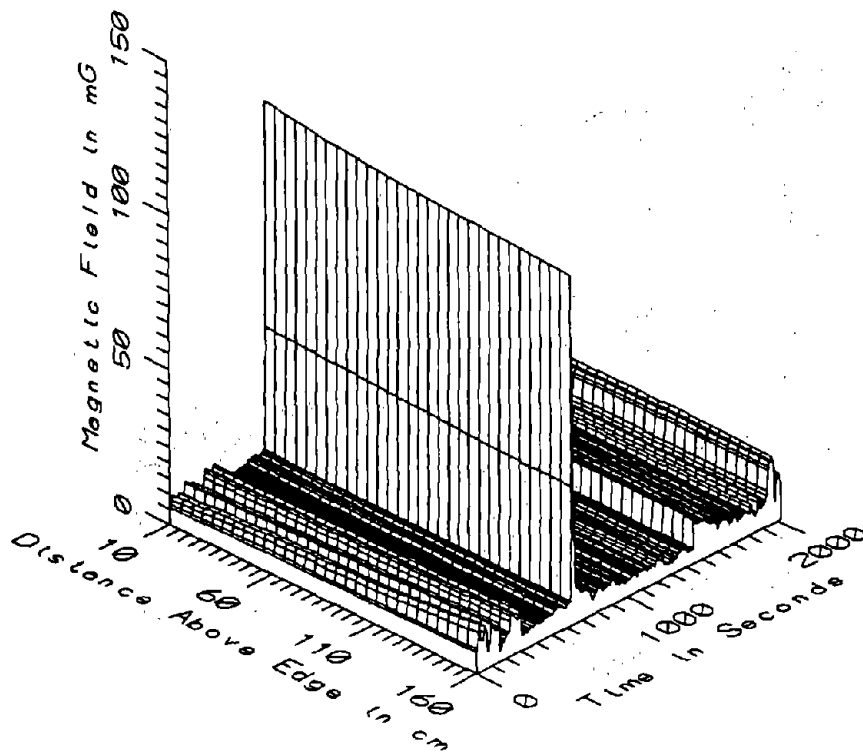
NEC038 - PRINCETON JUNCTION PLATFORM - STATIC



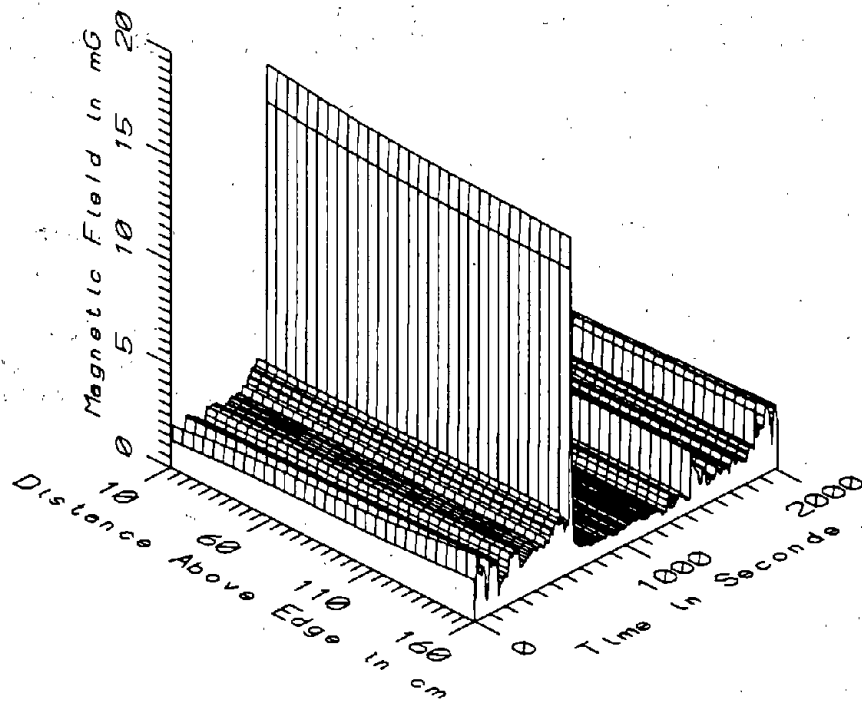
NEC038 - PRINCETON JUNCTION PLATFORM - LOW FREQ, 5-45Hz



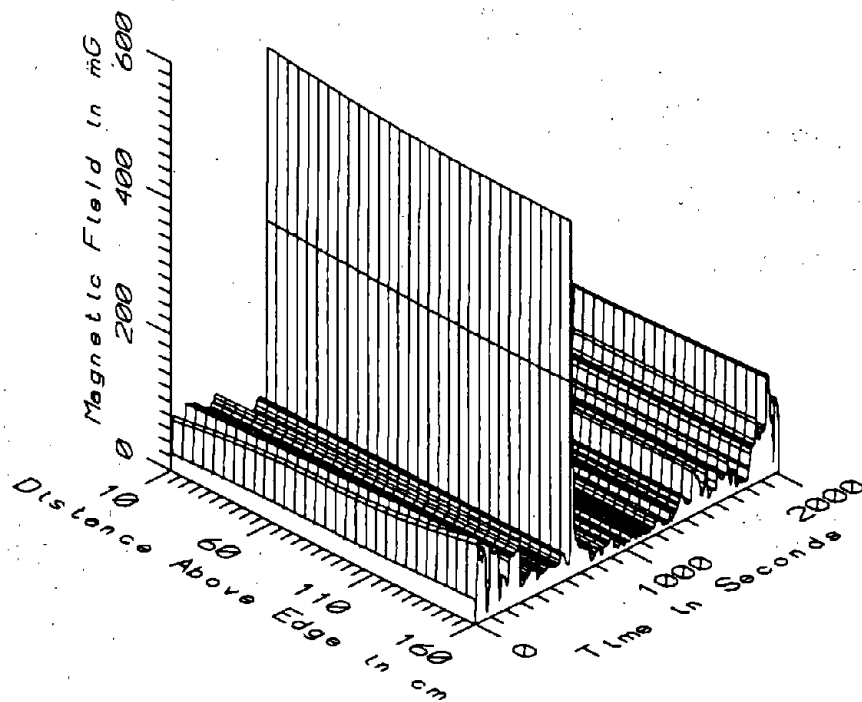
NEC038 - PRINCETON JUNCTION PLATFORM - POWER FREQ, 50-60Hz



NEC038 - PRINCETON JUNCTION PLATFORM - POWER HARM, 65-300Hz



NEC038 - PRINCETON JUNCTION PLATFORM - HIGH FREQ, 305-2560Hz



NEC038 - PRINCETON JUNCTION PLATFORM - ALL FREQ, 5-2560Hz

APPENDIX AN

DATASET NEC039
VERTICAL PROFILE AT THE WAYSIDE, 25 HZ NEC

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

Vehicle Status: AMTRAK passing from the north at 50
 seconds and commuter approaching
 from the north at 200 seconds

Measurement Date: April 1, 1992

Measurement Time: Start: 14:37:34
 End: 14:40:56

Number of Samples: 29

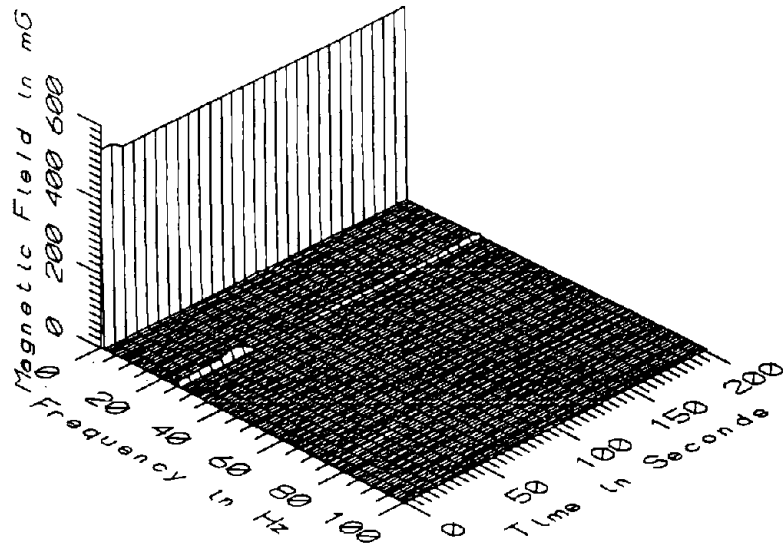
Programmed Sample Interval: 5 sec

Actual Sample Interval: 7.2 sec

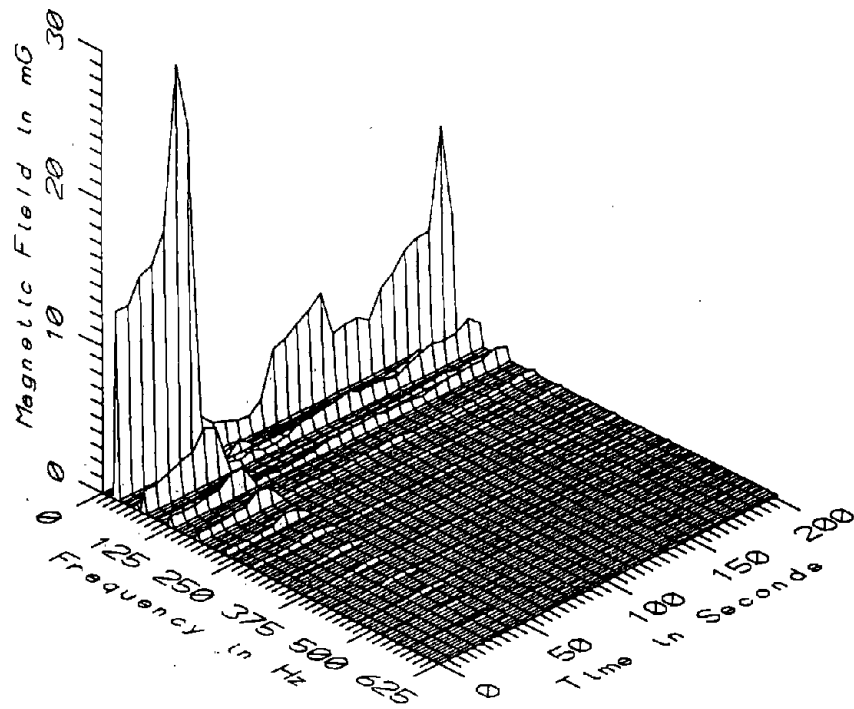
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

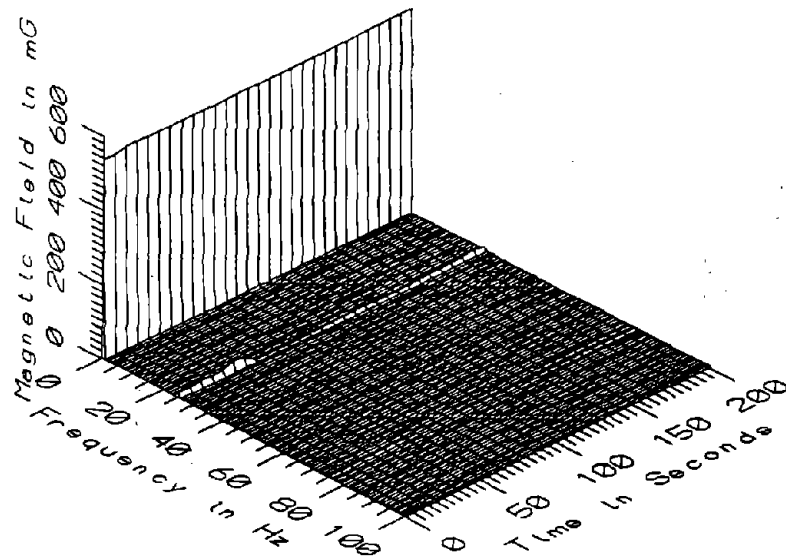
Missing or Suspect Data: The staff was lying on the ground
 for the first two samples.



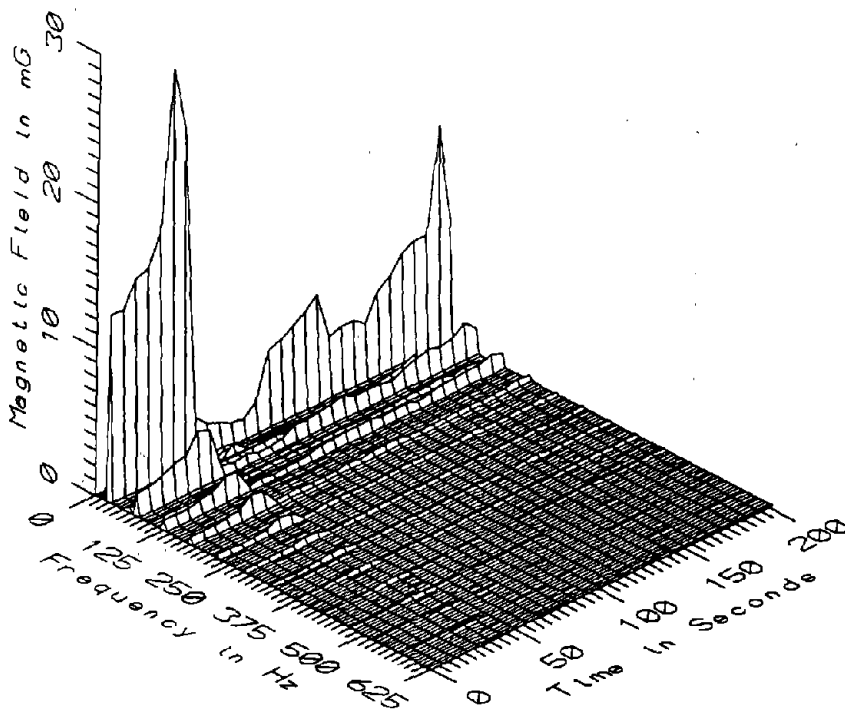
NEC039 - 10cm ABOVE GROUND, 40' WEST OF TRACK #4



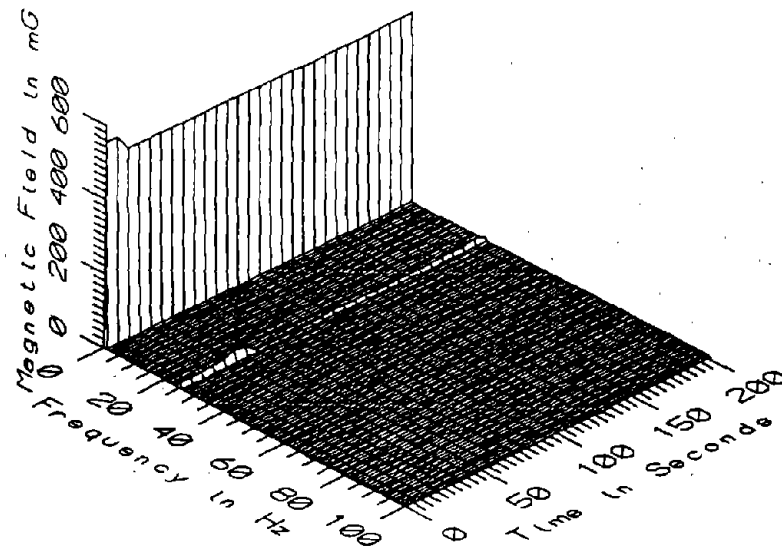
NEC039 - 10cm ABOVE GROUND, 40' WEST OF TRACK #4



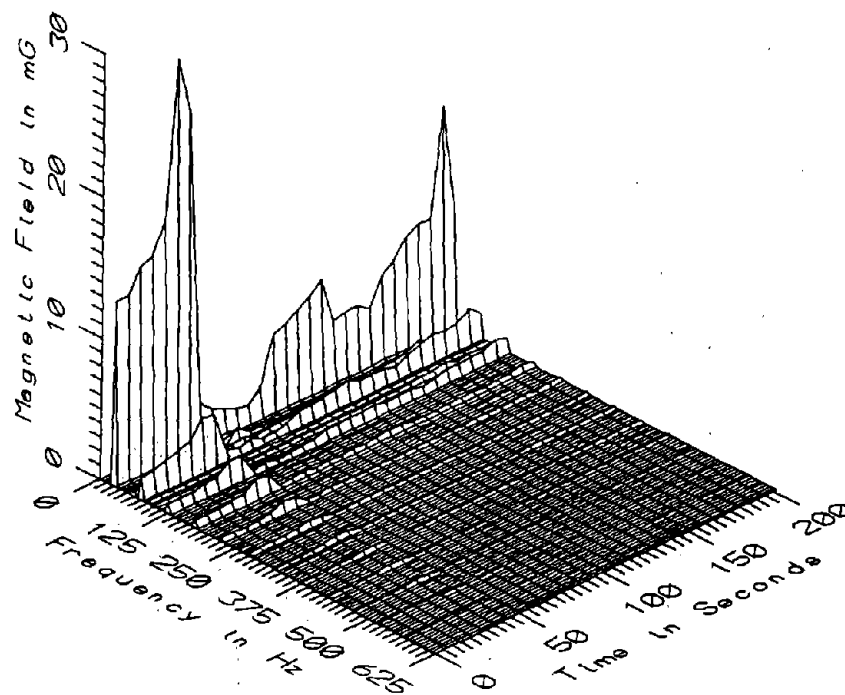
NEC039 - 60cm ABOVE GROUND, 40' WEST OF TRACK #4



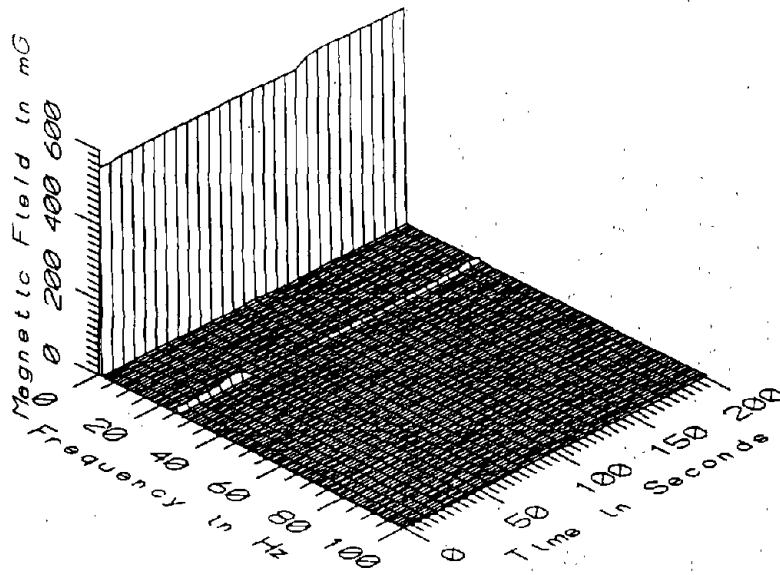
NEC039 - 60cm ABOVE GROUND, 40' WEST OF TRACK #4



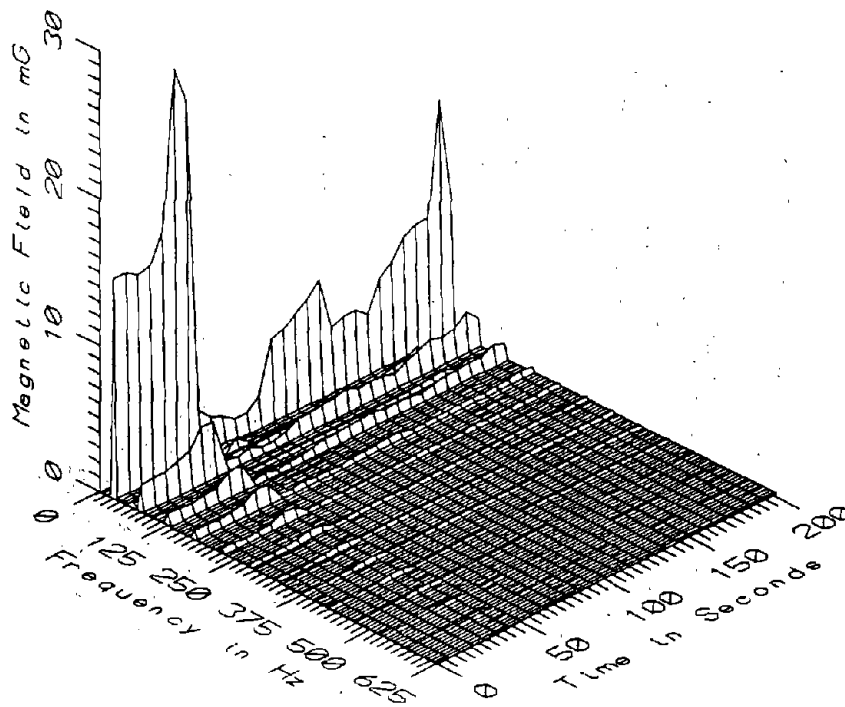
NEC039 - 110cm ABOVE GROUND, 40' WEST OF TRACK #4



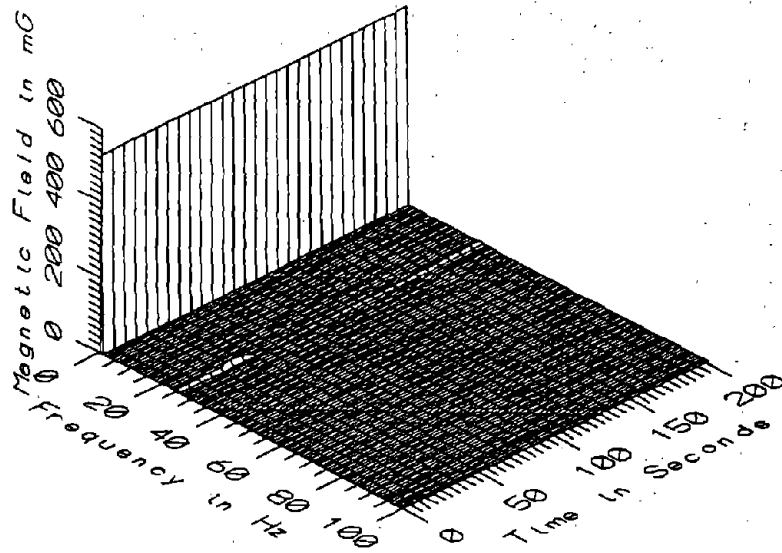
NEC039 - 110cm ABOVE GROUND, 40' WEST OF TRACK #4



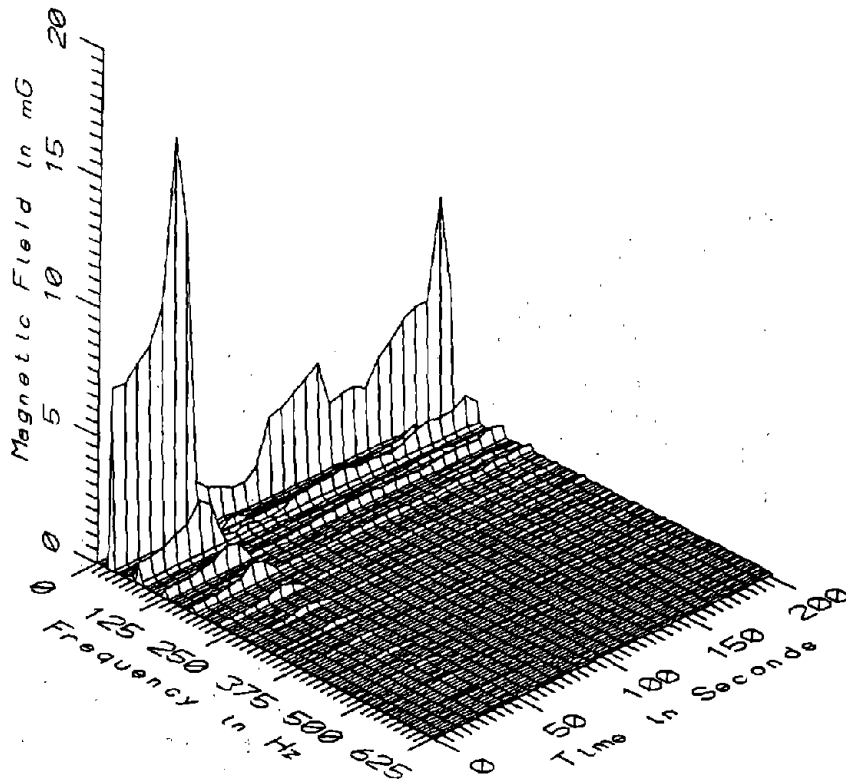
NEC039 - 160cm ABOVE GROUND, 40' WEST OF TRACK #4



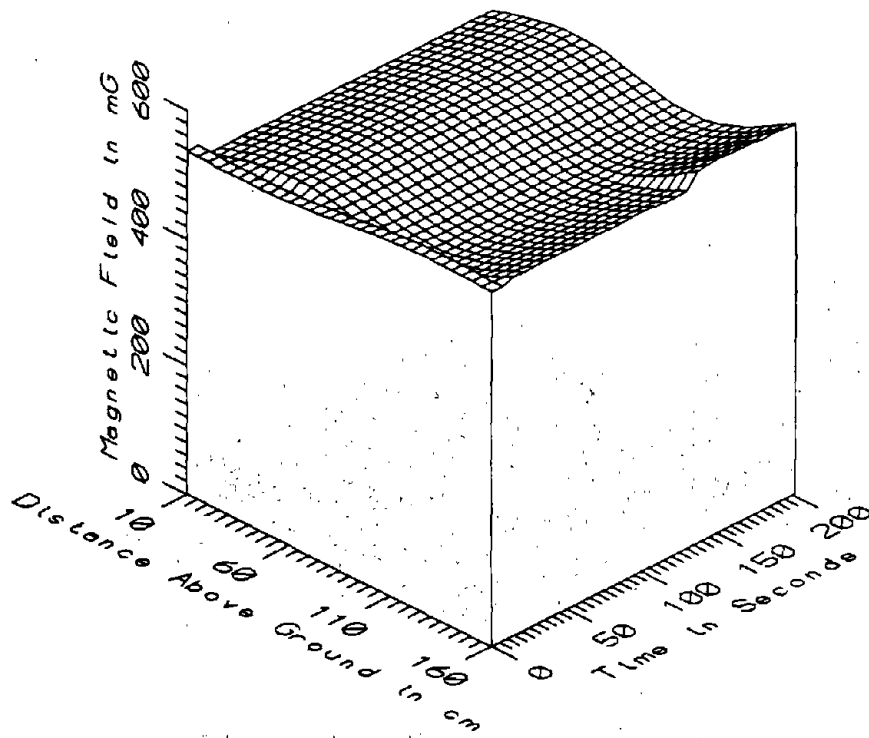
NEC039 - 160cm ABOVE GROUND, 40' WEST OF TRACK #4



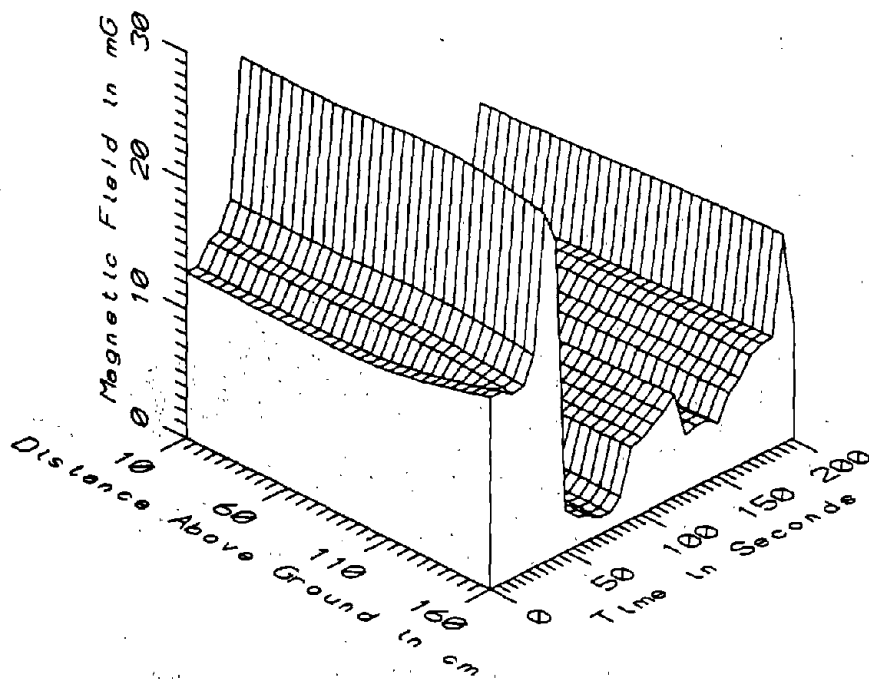
NEC039 - 10cm ABOVE GROUND, 60' WEST OF TRACK #4



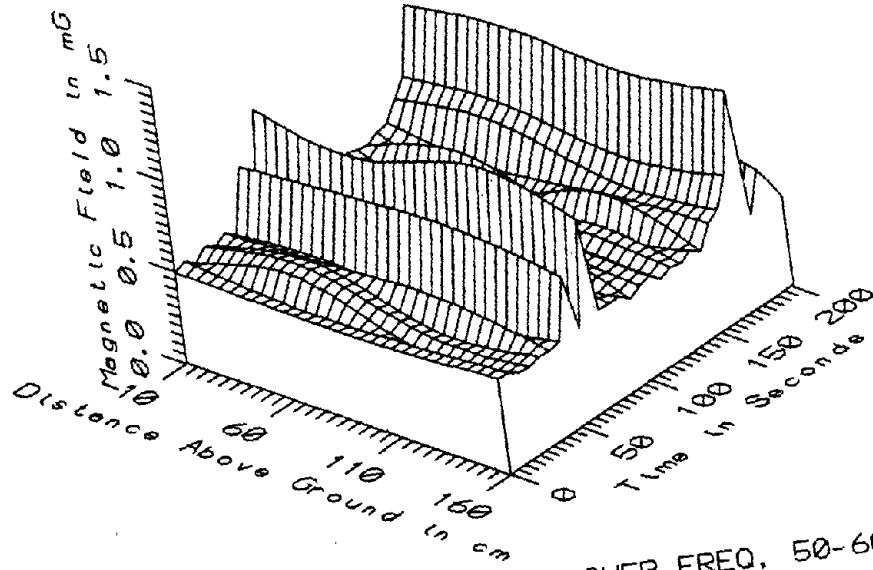
NEC039 - 10cm ABOVE GROUND, 60' WEST OF TRACK #4



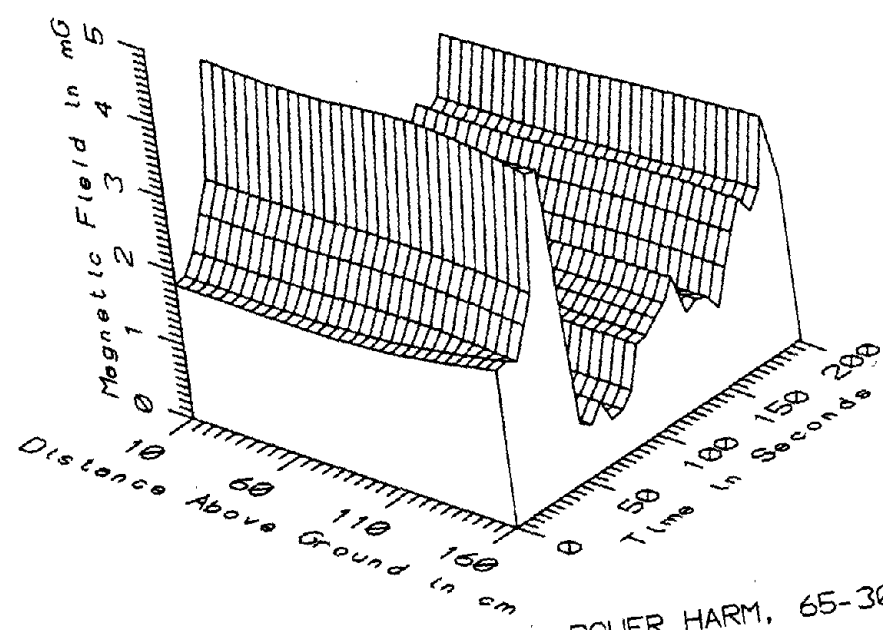
NEC039 - 40' WEST OF TRACK #4 - STATIC



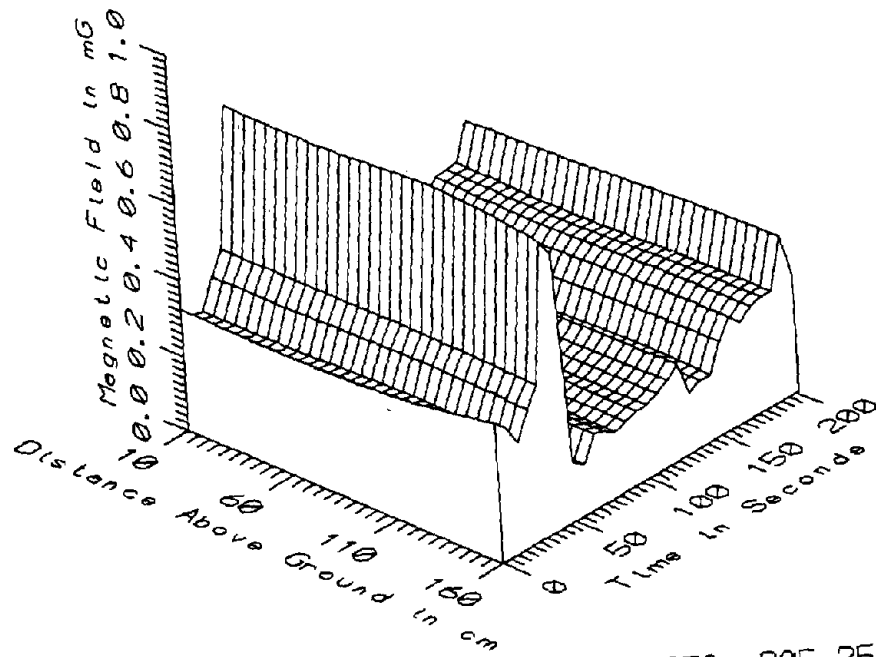
NEC039 - 40' WEST OF TRACK #4 - LOW FREQ, 5-45Hz



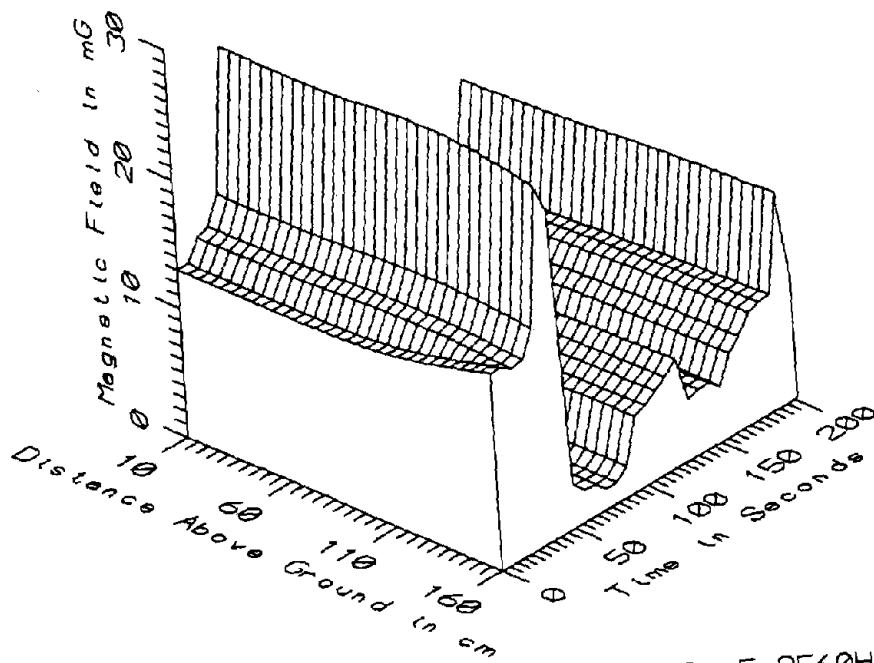
NEC039 - 40' WEST OF TRACK #4 - POWER FREQ. 50-60Hz



NEC039 - 40' WEST OF TRACK #4 - POWER HARM. 65-300Hz



NEC039 - 40' WEST OF TRACK #4 - HIGH FREQ, 305-2560Hz



NEC039 - 40' WEST OF TRACK #4 - ALL FREQ, 5-2560Hz

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
530 CHICAGO DRIVE
CHICAGO, ILLINOIS 60637

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CLASSIFICATION	DESCRIPTION	APPLICABLE PROVISIONS
A	General	Section 101
B	Special	Section 102
C	Other	Section 103

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APPENDIX AO

DATASET NEC040
VERTICAL PROFILE AT THE WAYSIDE, 25 HZ NEC

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

Vehicle Status: Commuter stop at station and depart
 at 140 seconds - a second passes
 later

Measurement Date: April 1, 1992

Measurement Time: Start: 14:42:37
 End: 14:52:31

Number of Samples: 44

Programmed Sample Interval: 5 sec

Actual Sample Interval: 13.8 sec**

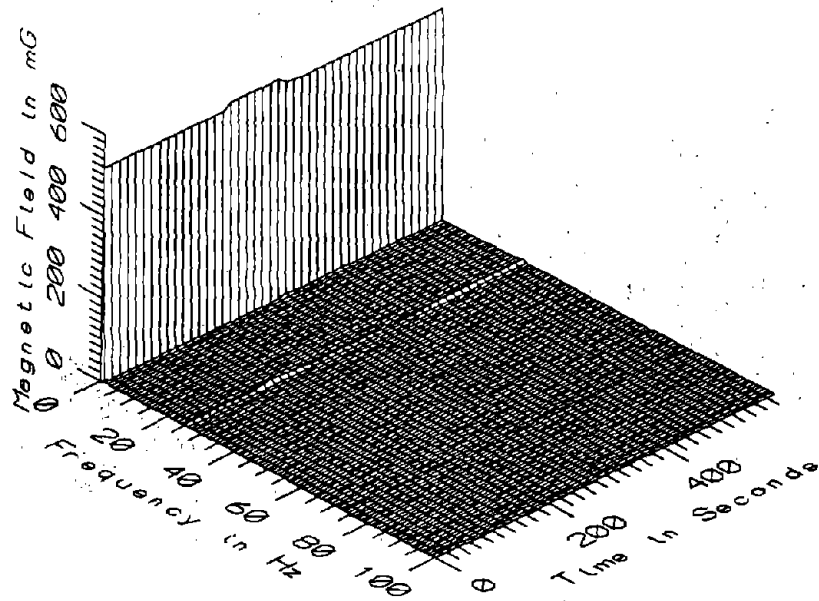
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

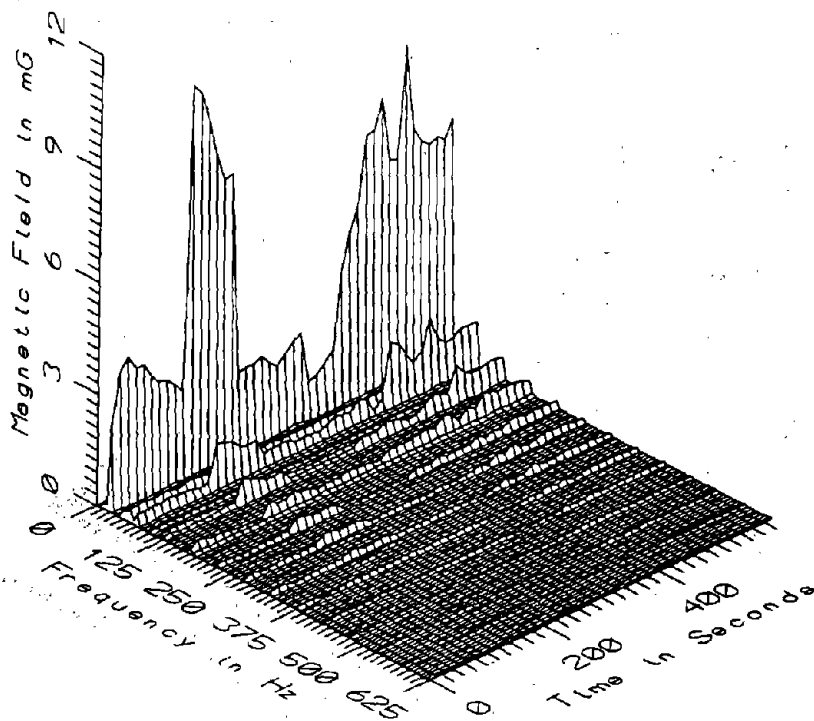
Missing or Suspect Data: None

* Staff was horizontal and perpendicular to the tracks, 1 m (3.3 ft) above ground for part of the record between 210 and 300 seconds.

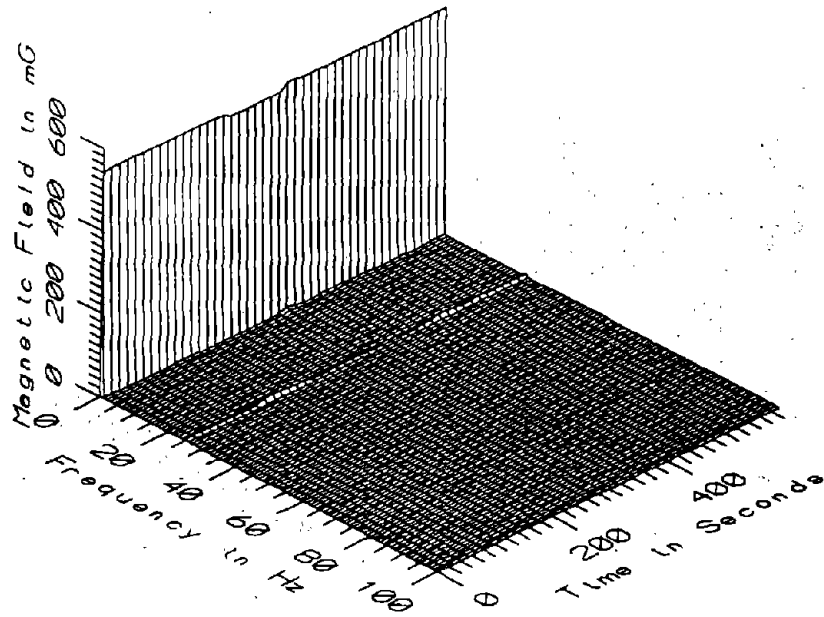
** Recording was discontinued for two periods to conserve disk space while awaiting train traffic. Hence the longer than normal average sample interval.



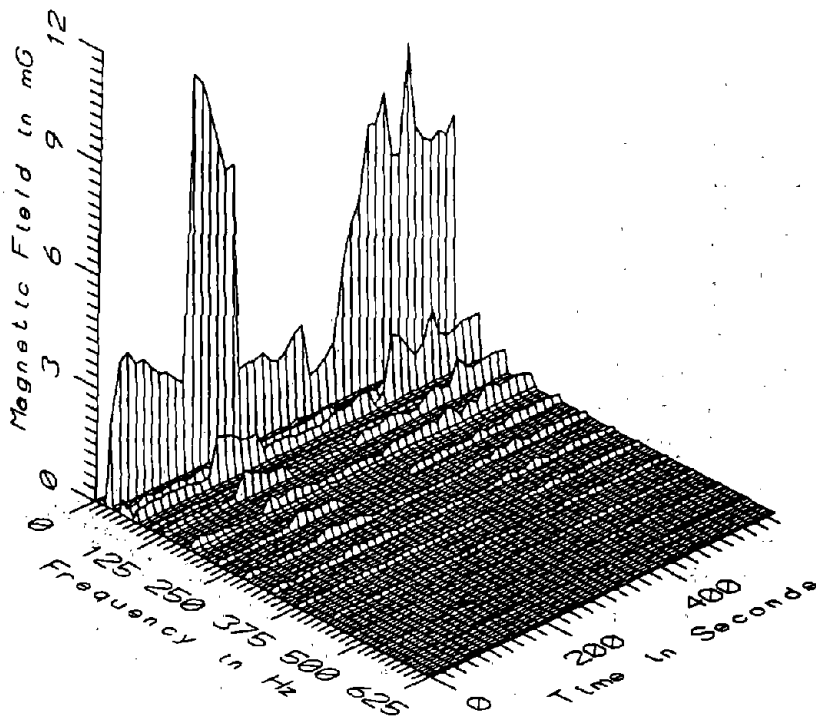
NEC040 - 10cm ABOVE GROUND, 40' WEST OF TRACK #4



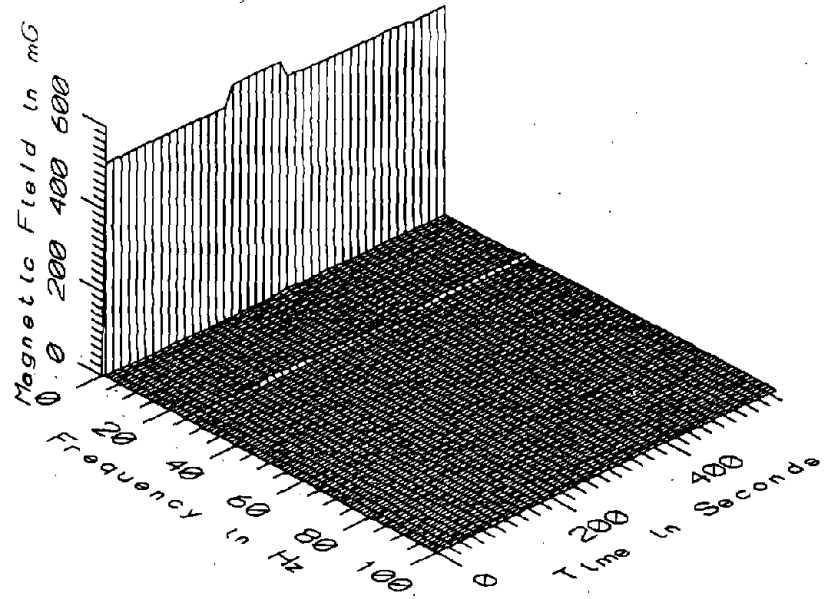
NEC040 - 10cm ABOVE GROUND, 40' WEST OF TRACK #4



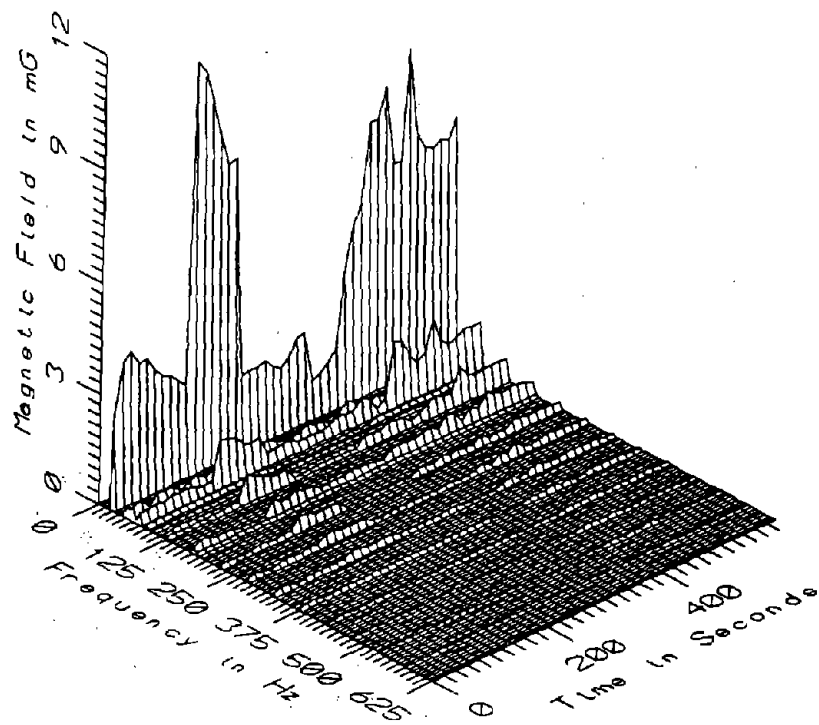
NEC040 - 60cm ABOVE GROUND, 40' WEST OF TRACK #4



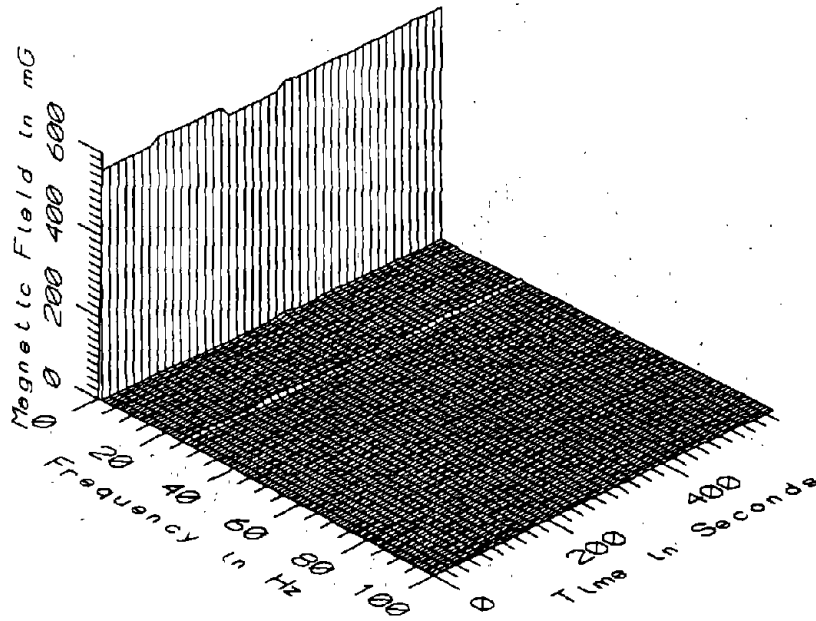
NEC040 - 60cm ABOVE GROUND, 40' WEST OF TRACK #4



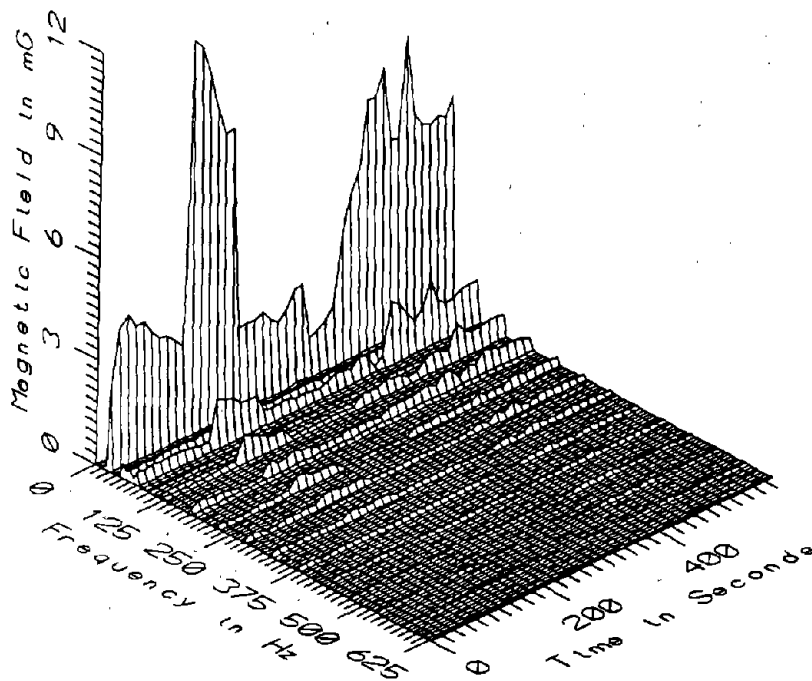
NEC040 - 110cm ABOVE GROUND, 40' WEST OF TRACK #4



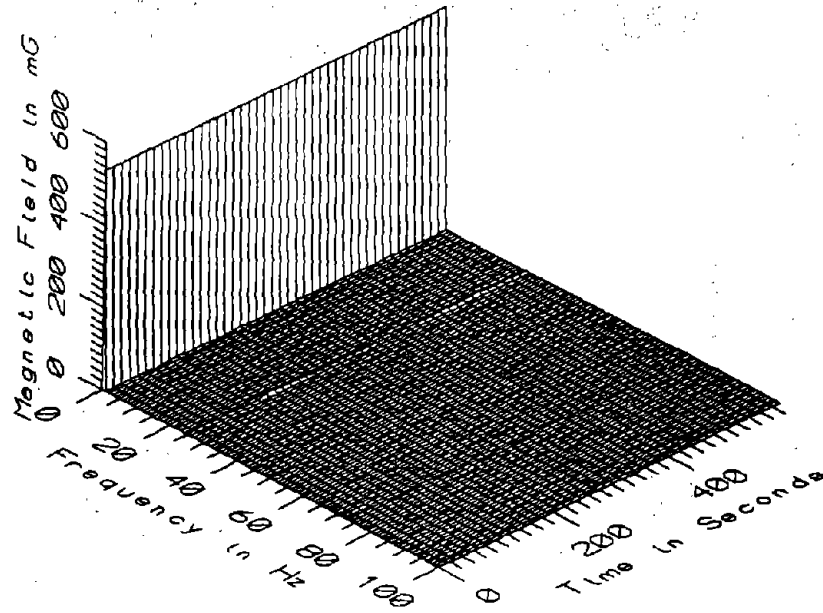
NEC040 - 110cm ABOVE GROUND, 40' WEST OF TRACK #4



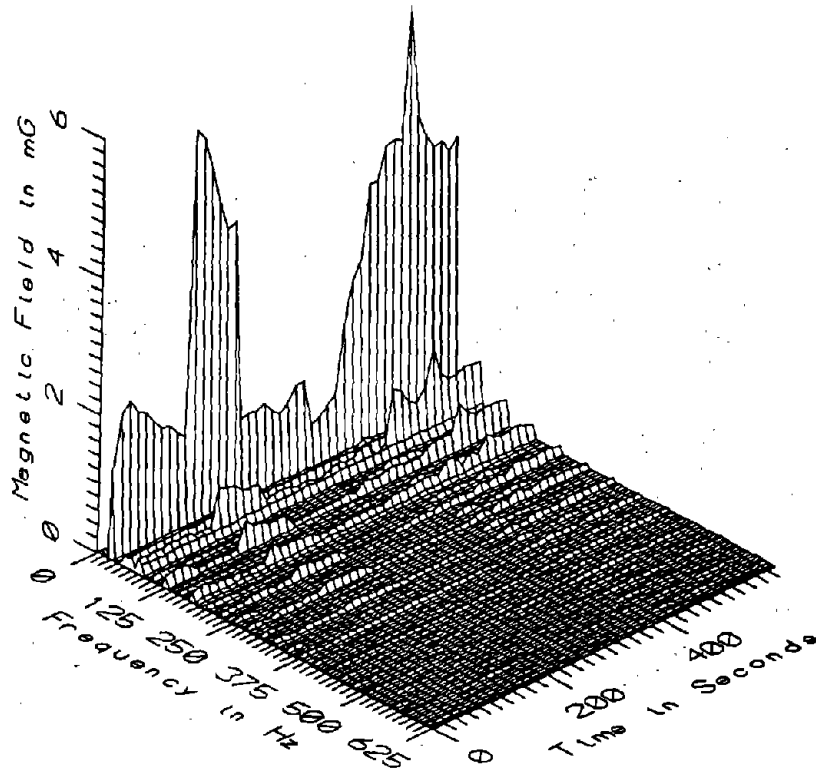
NEC040 - 160cm ABOVE GROUND, 40' WEST OF TRACK #4



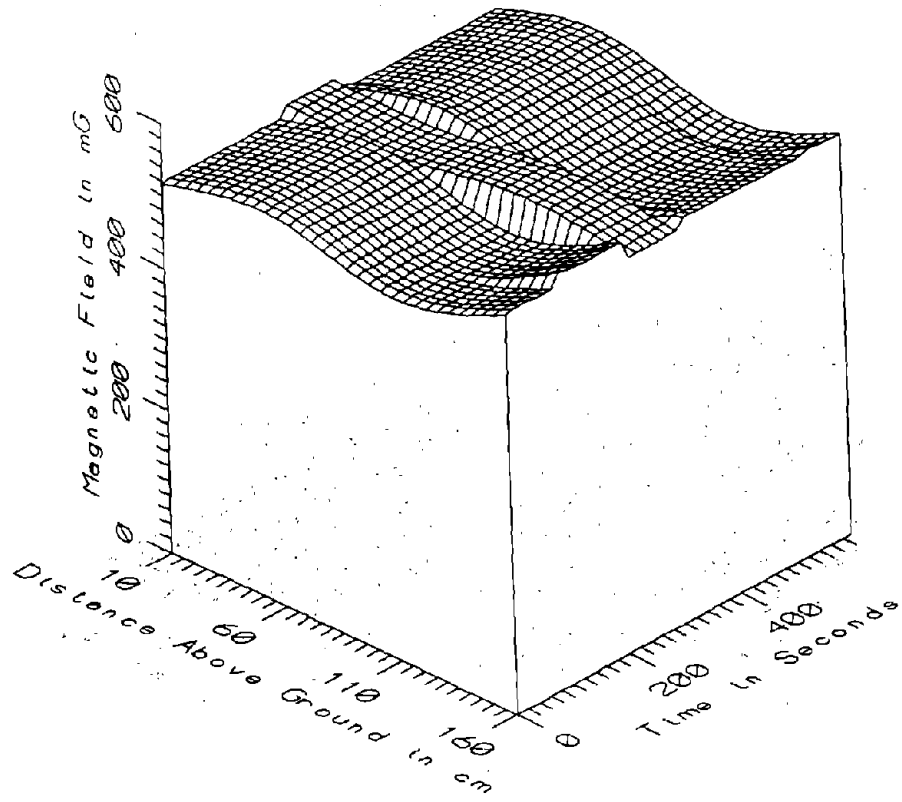
NEC040 - 160cm ABOVE GROUND, 40' WEST OF TRACK #4



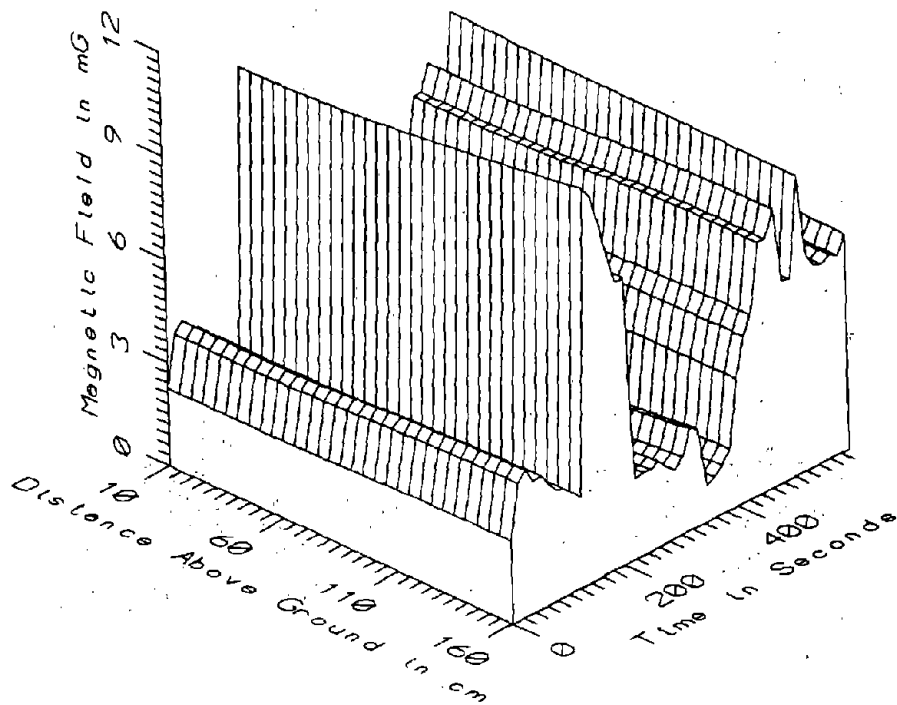
NEC040 - 10cm ABOVE GROUND, 60' WEST OF TRACK #4



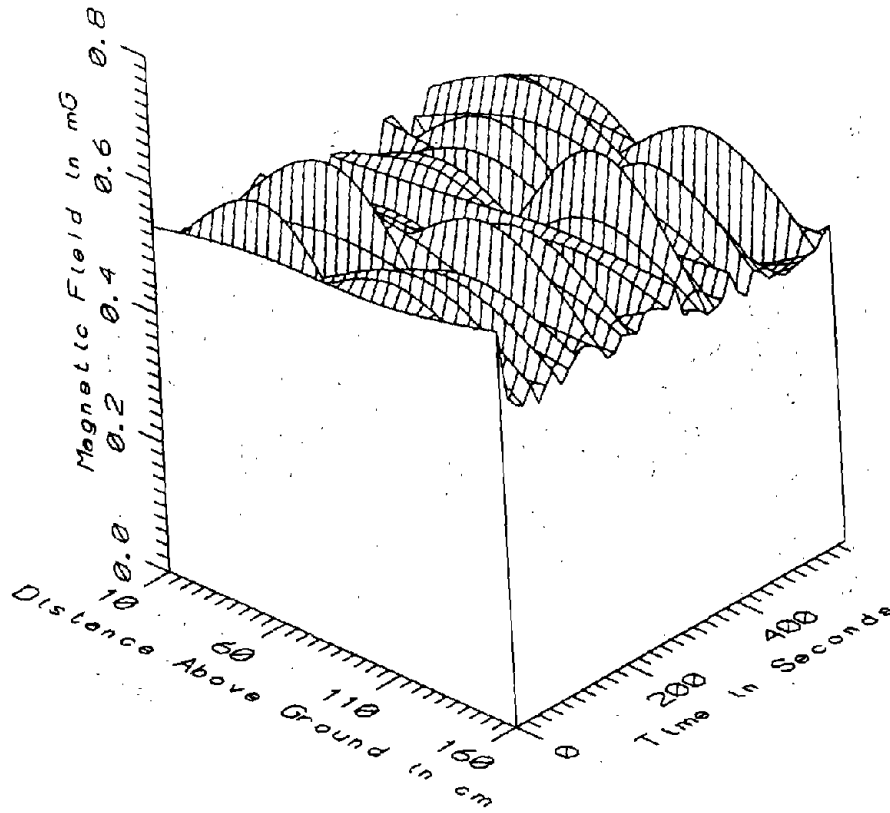
NEC040 - 10cm ABOVE GROUND, 60' WEST OF TRACK #4



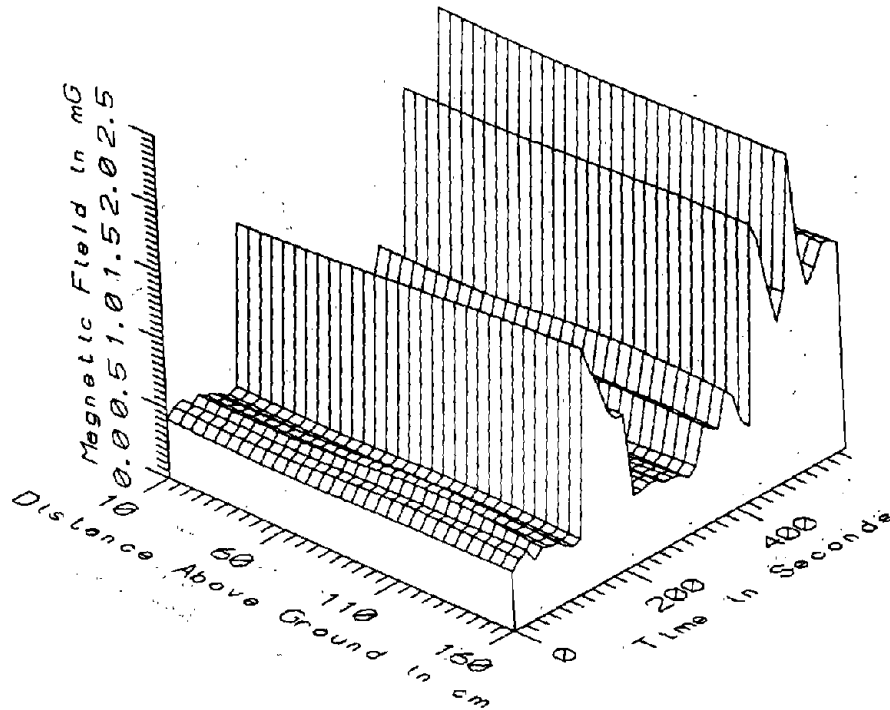
NEC040 - 40' WEST OF TRACK #4 - STATIC



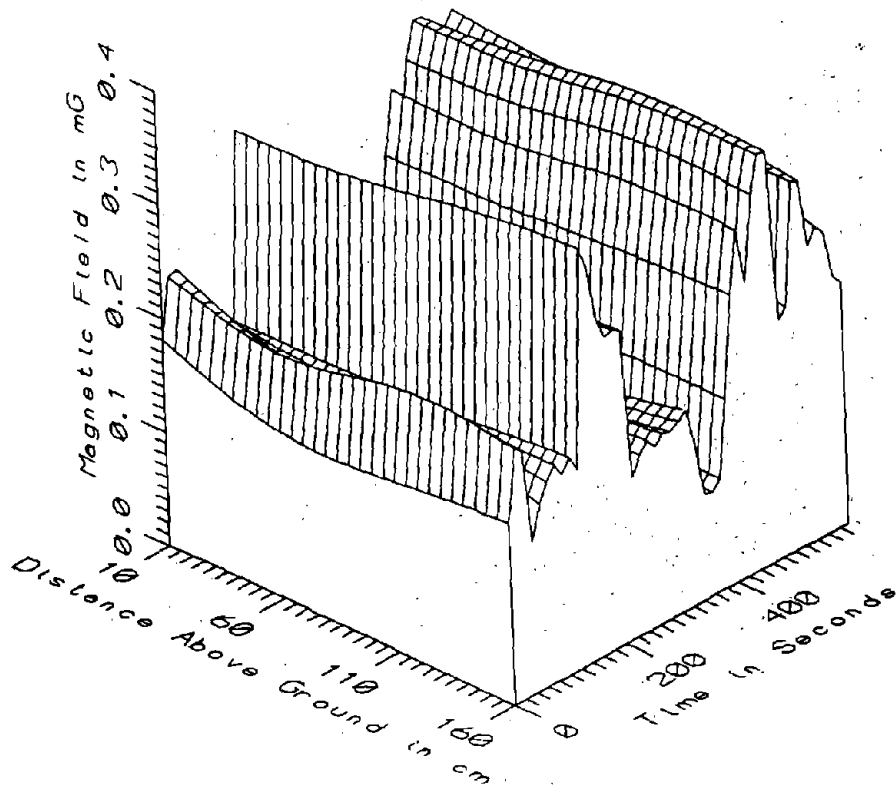
NEC040 - 40' WEST OF TRACK #4 - LOW FREQ. 5-45Hz



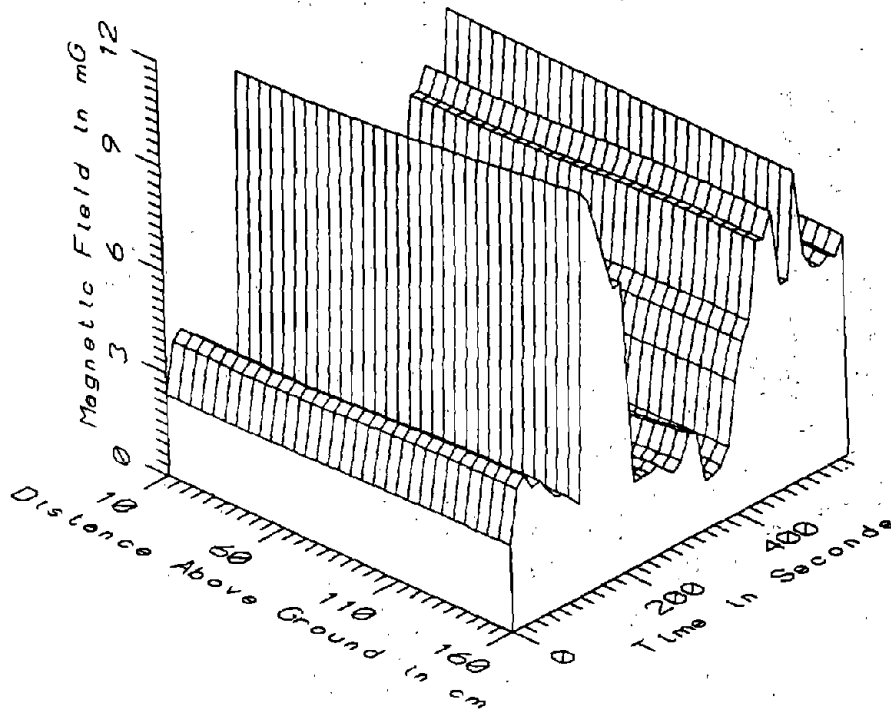
NEC040 - 40' WEST OF TRACK #4 - POWER FREQ, 50-60Hz



NEC040 - 40' WEST OF TRACK #4 - POWER HARM, 65-300Hz



NEC040 - 40' WEST OF TRACK #4 - HIGH FREQ. 305-2560Hz



NEC040 - 40' WEST OF TRACK #4 - ALL FREQ. 5-2560Hz

APPENDIX AP

DATASET NEC041
VERTICAL PROFILE AT WAYSIDE, 60 HZ NEC

Measurement Setup Code: Staff: 31 Reference: 32
 Drawing: A-7

Vehicle Status: Four commuter trains pass at 380,
 410, 850, and 980 second time points

Measurement Date: April 2, 1992

Measurement Time: Start: 9:26:41
 End: 9:43:24

Number of Samples: 196

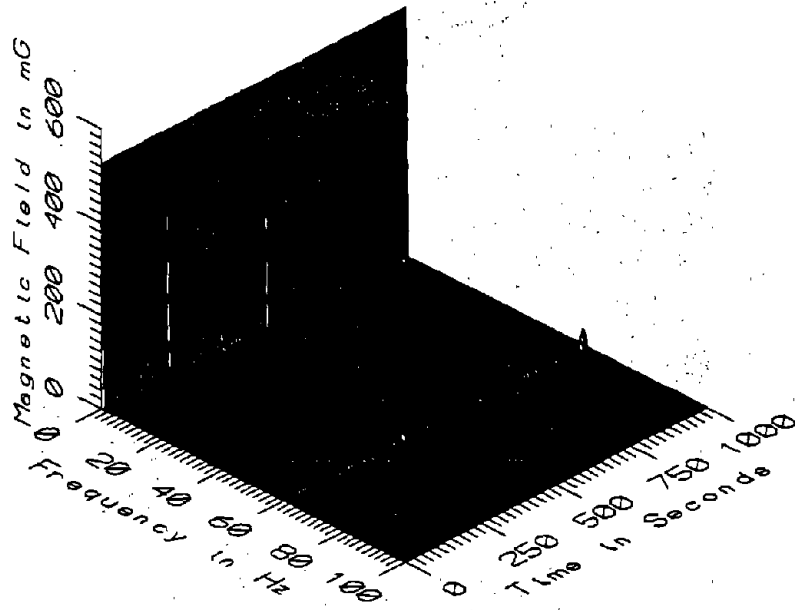
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.1 sec

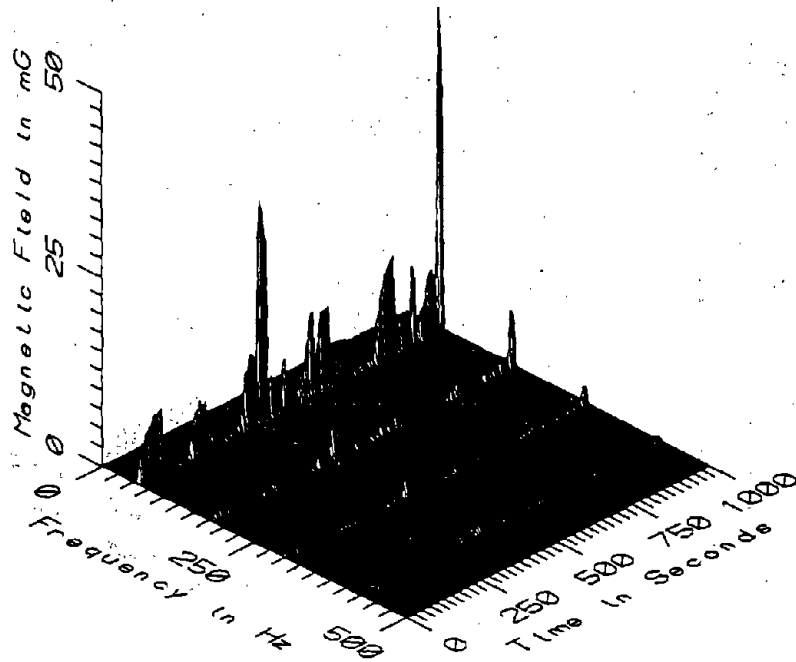
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

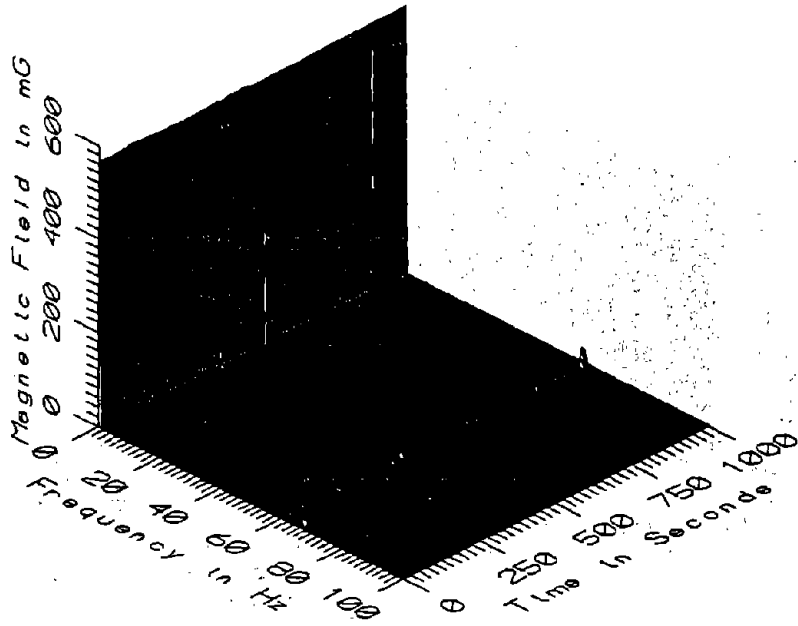
Missing or Suspect Data: None



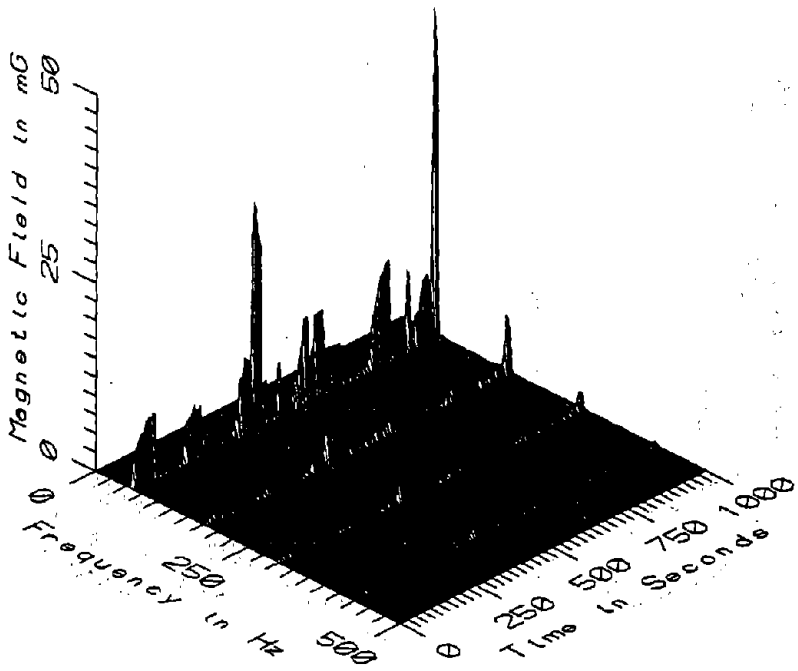
NEC041 - 10cm ABOVE GROUND, 38' EAST OF TRACK #1



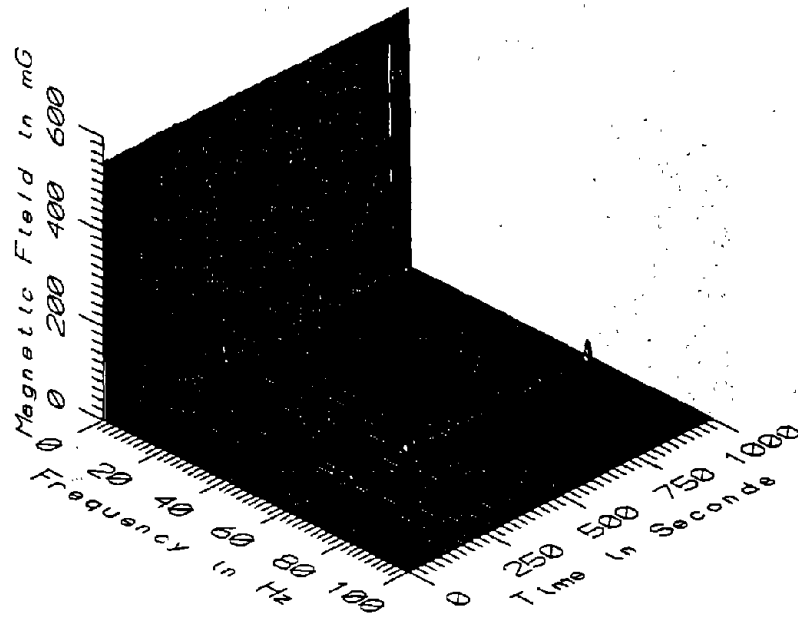
NEC041 - 10cm ABOVE GROUND, 38' EAST OF TRACK #1



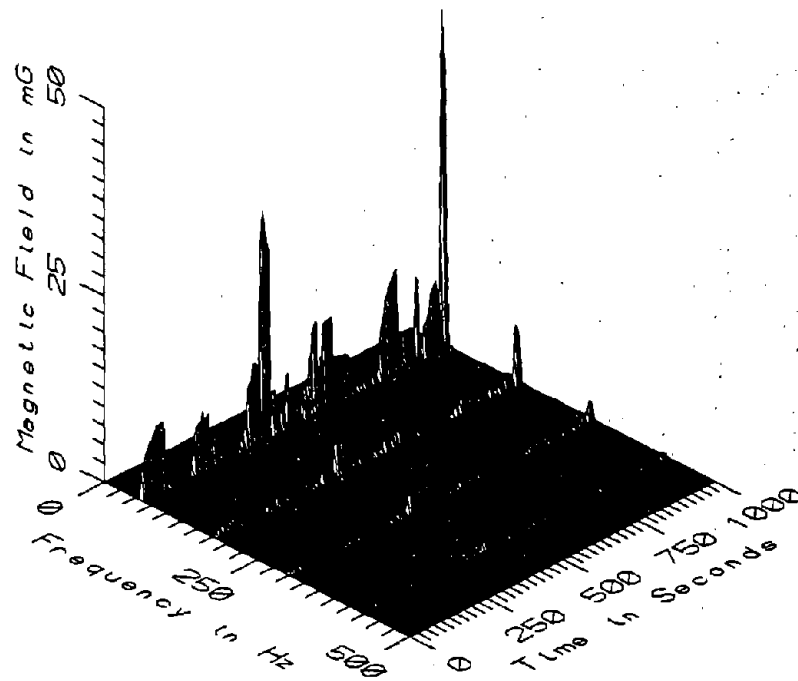
NEC041 - 60cm ABOVE GROUND, 38' EAST OF TRACK #1



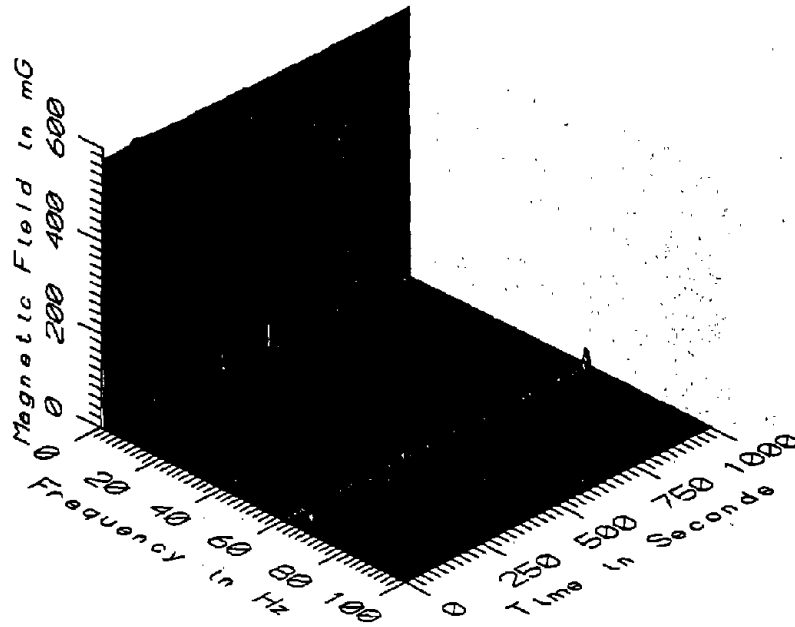
NEC041 - 60cm ABOVE GROUND, 38' EAST OF TRACK #1



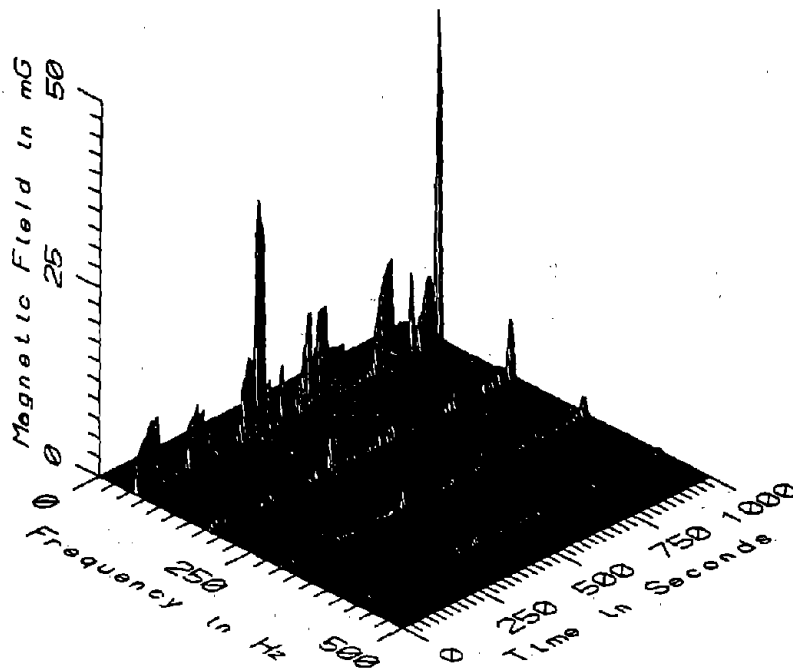
NEC041 - 110cm ABOVE GROUND, 38' EAST OF TRACK #1



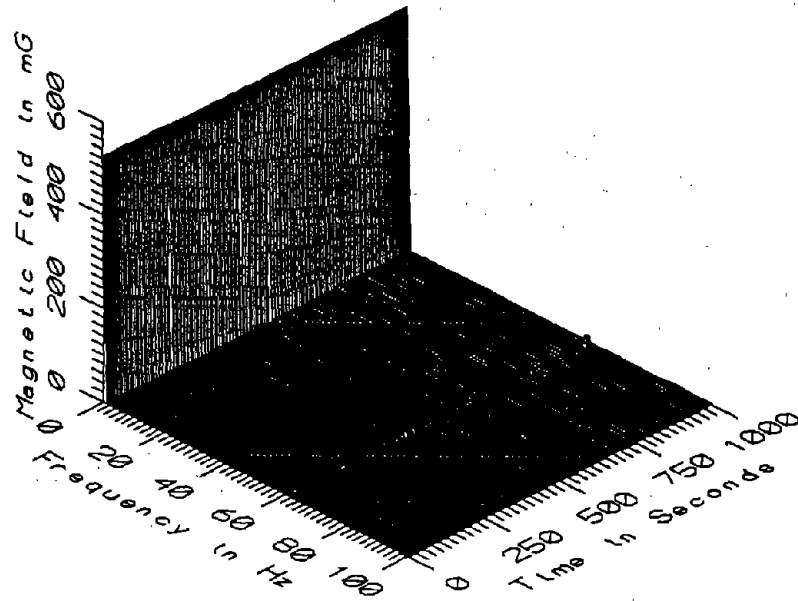
NEC041 - 110cm ABOVE GROUND, 38' EAST OF TRACK #1



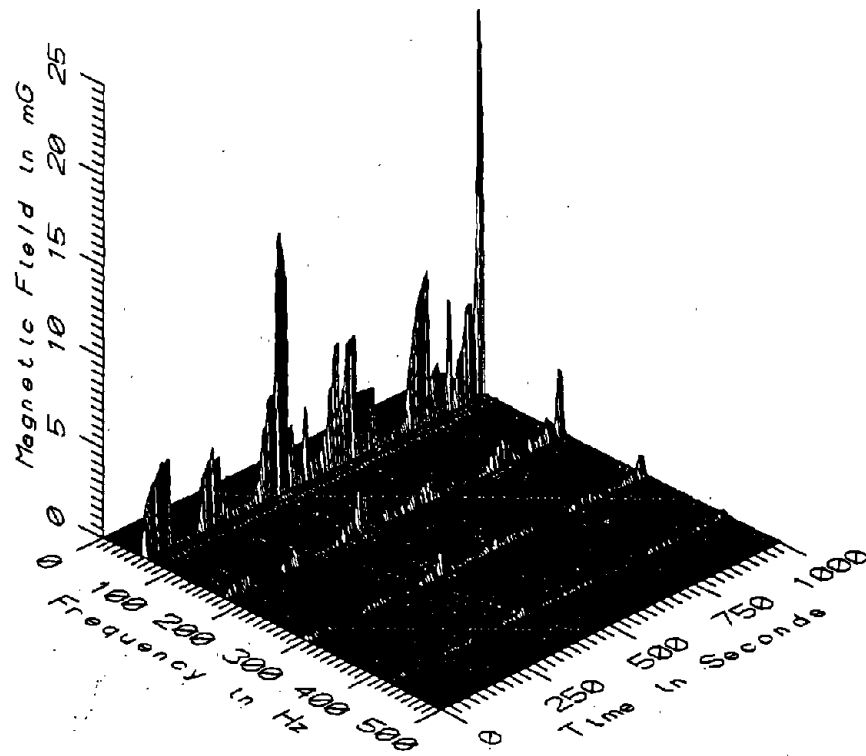
NEC041 - 160cm ABOVE GROUND, 38' EAST OF TRACK #1



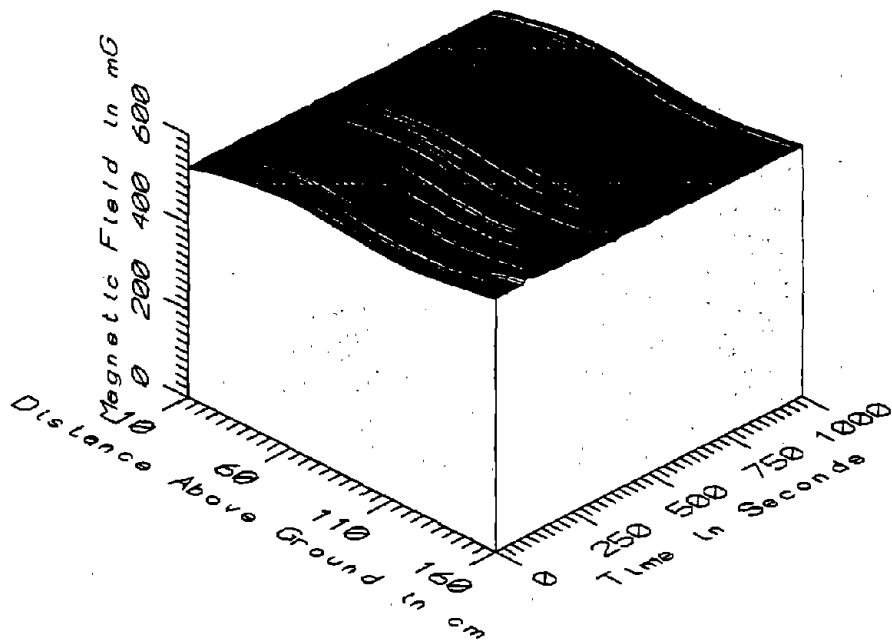
NEC041 - 160cm ABOVE GROUND, 38' EAST OF TRACK #1



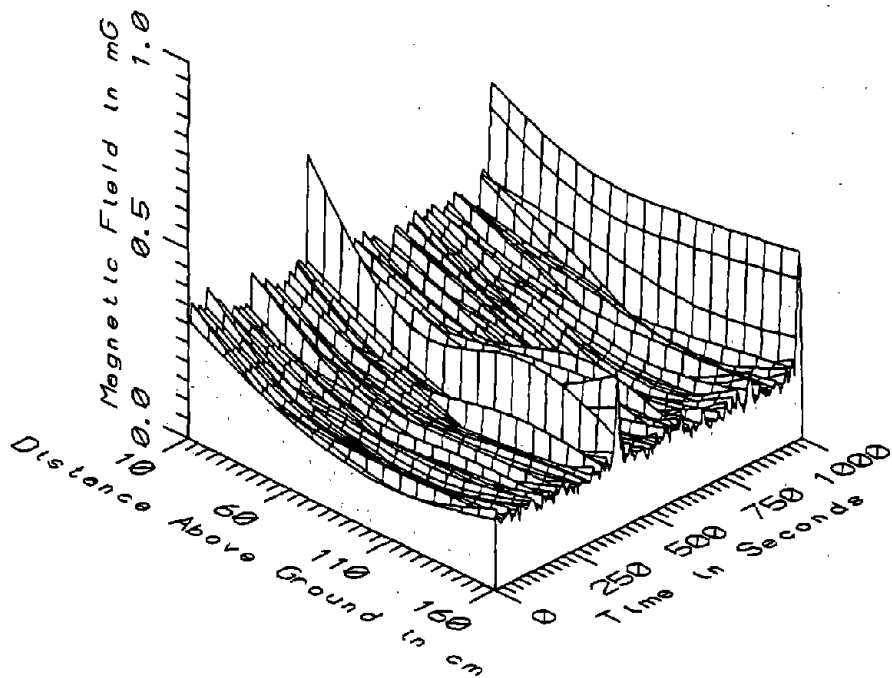
NEC041 - 10cm ABOVE GROUND, 58' EAST OF TRACK #1



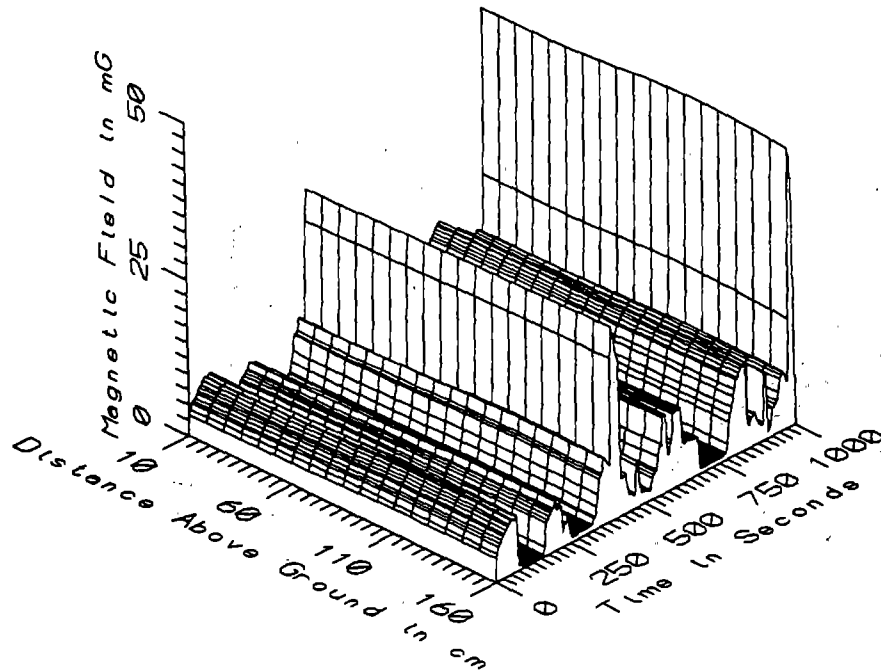
NEC041 - 10cm ABOVE GROUND, 58' EAST OF TRACK #1



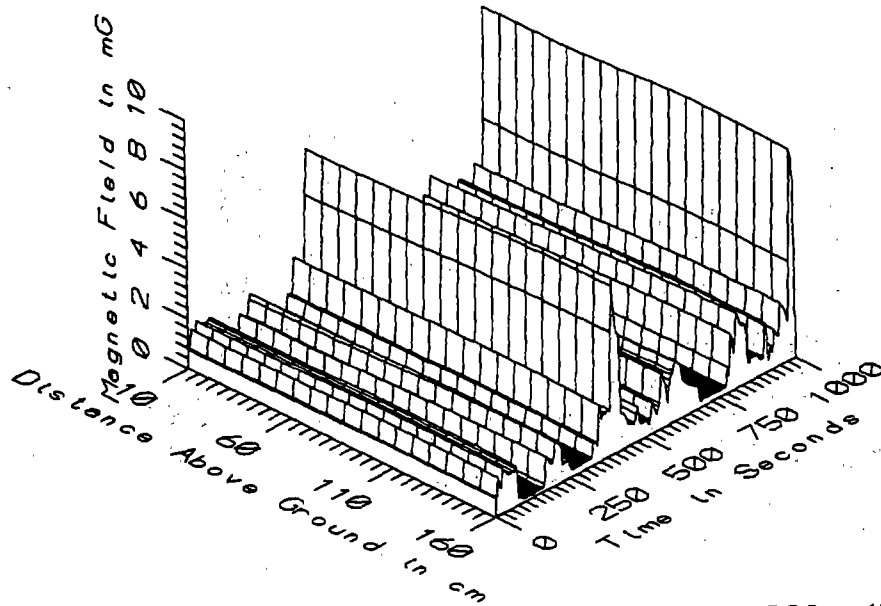
NEC041 - 38' EAST OF TRACK #1 - STATIC



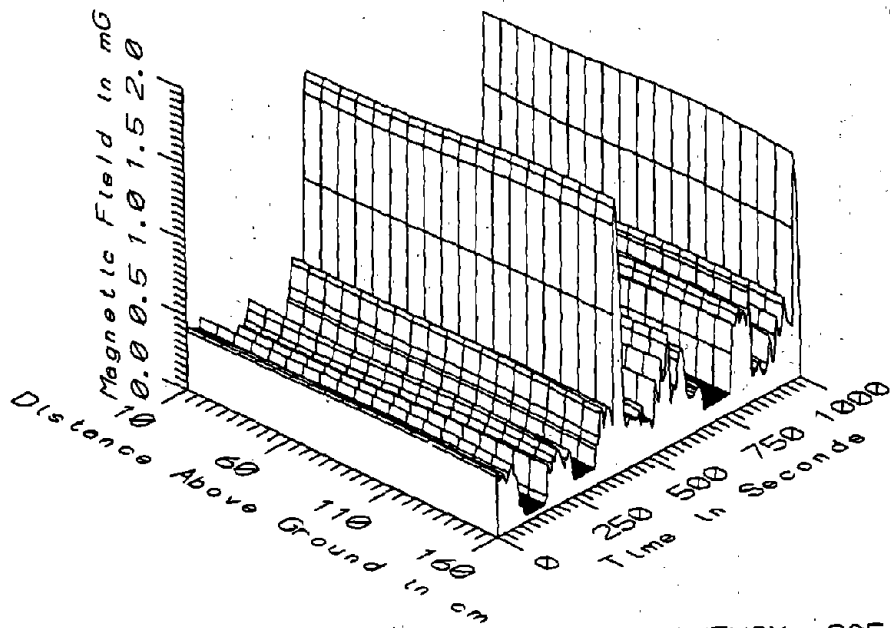
NEC041 - 38' EAST OF TRACK #1 - LOW FREQUENCY, 5-45Hz



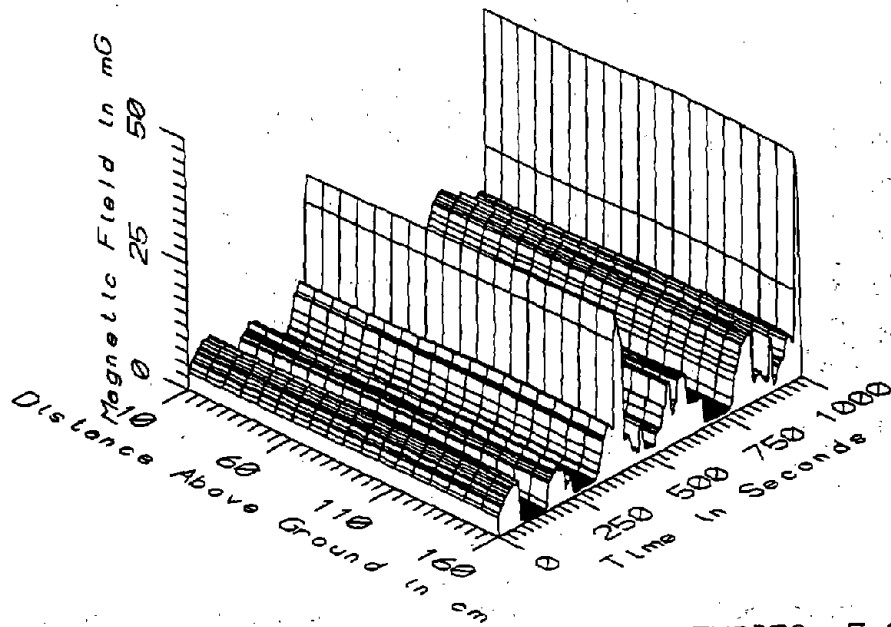
NEC041 - 38' EAST OF TRACK #1 - POWER FREQUENCY, 50-60Hz



NEC041 - 38' EAST OF TRACK #1 - POWER HARMONICS, 65-300Hz



NEC041 - 38' EAST OF TRACK #1 - HIGH FREQUENCY, 305-2560Hz



NEC041 - 38' EAST OF TRACK #1 - ALL FREQUENCIES, 5-2560Hz

The City of New York
Department of Social Services
Office of Family Services

On this day, the undersigned, a duly qualified and licensed social worker, has interviewed the child and the parents and has observed the child's behavior and the parents' interaction with the child. The child is a [age] year old male/female, and the parents are [names]. The child's behavior is [description], and the parents' interaction with the child is [description].

The child's behavior is consistent with the diagnosis of [diagnosis], and the parents' interaction with the child is consistent with the diagnosis of [diagnosis]. The child's behavior is [description], and the parents' interaction with the child is [description].

The child's behavior is consistent with the diagnosis of [diagnosis], and the parents' interaction with the child is consistent with the diagnosis of [diagnosis]. The child's behavior is [description], and the parents' interaction with the child is [description].

The child's behavior is consistent with the diagnosis of [diagnosis], and the parents' interaction with the child is consistent with the diagnosis of [diagnosis]. The child's behavior is [description], and the parents' interaction with the child is [description].

The child's behavior is consistent with the diagnosis of [diagnosis], and the parents' interaction with the child is consistent with the diagnosis of [diagnosis]. The child's behavior is [description], and the parents' interaction with the child is [description].

The child's behavior is consistent with the diagnosis of [diagnosis], and the parents' interaction with the child is consistent with the diagnosis of [diagnosis]. The child's behavior is [description], and the parents' interaction with the child is [description].

Very truly yours,
[Signature]
[Name]
[Title]

APPENDIX AQ

DATASET NEC042
VERTICAL PROFILE ON STATION PLATFORM
NEW ROCHELLE, 60 HZ NEC

Measurement Setup Code: Staff: 39 Reference: 40
 Drawing: A-6

Vehicle Status: Various commuter trains pass or stop
 at station while awaiting an AMTRAK
 train

Measurement Date: April 2, 1992

Measurement Time: Start: 10:26:05
 End: 10:47:30

Number of Samples: 169

Programmed Sample Interval: 5 sec

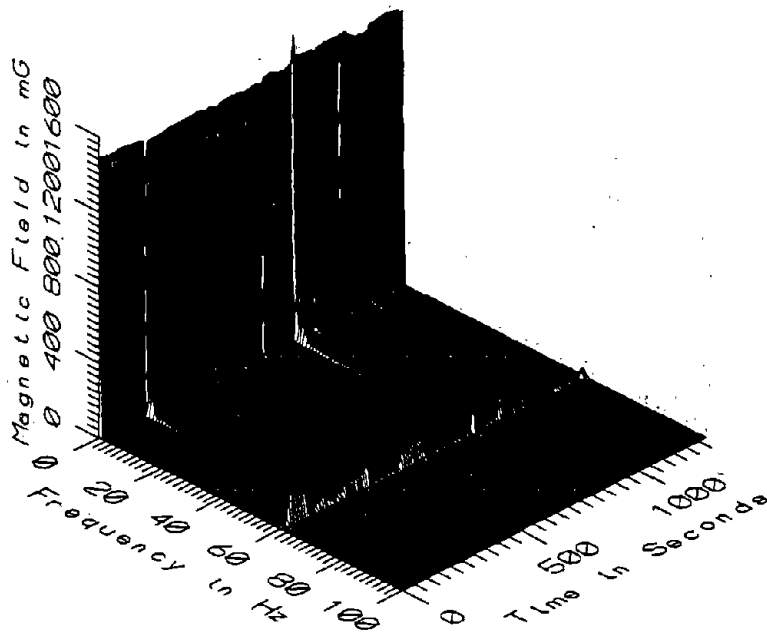
Actual Sample Interval: 7.6 sec*

Frequency Spectrum Parameters

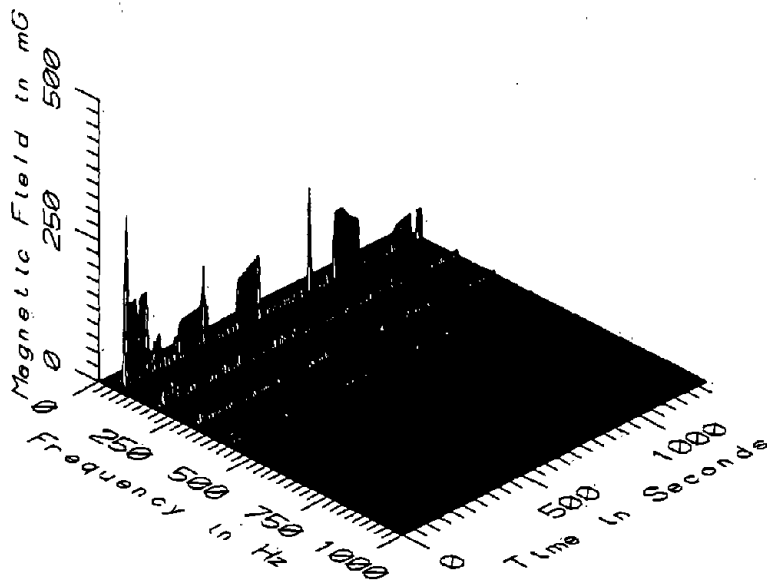
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

Missing or Suspect Data: None

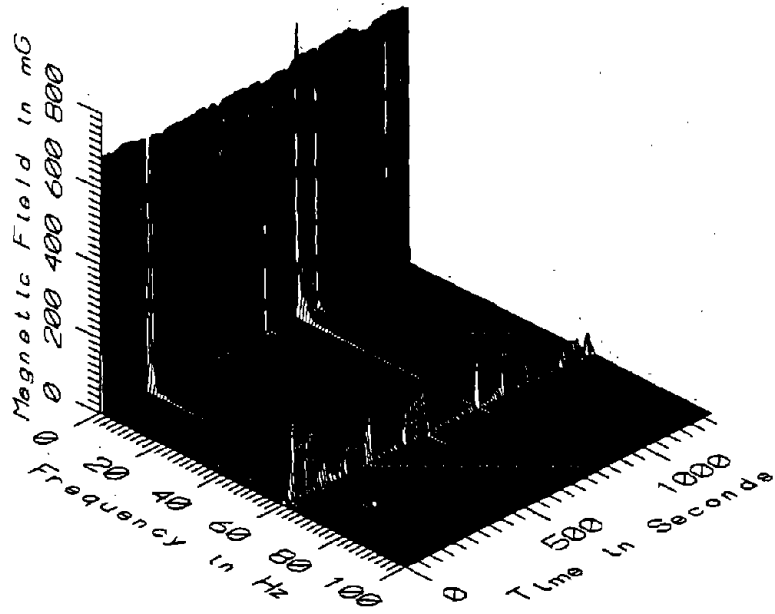
* Recording was discontinued briefly to conserve disk space while awaiting train traffic. Hence, the longer than normal average sample interval.



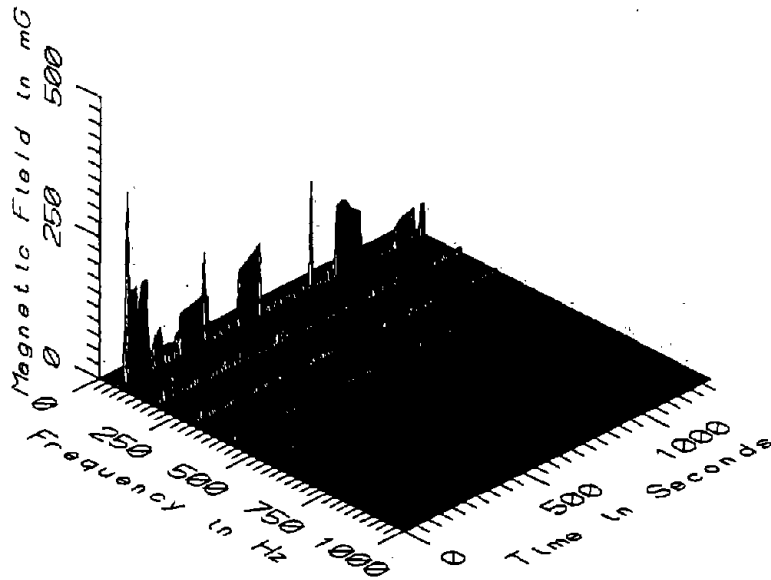
NEC042 - 10cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



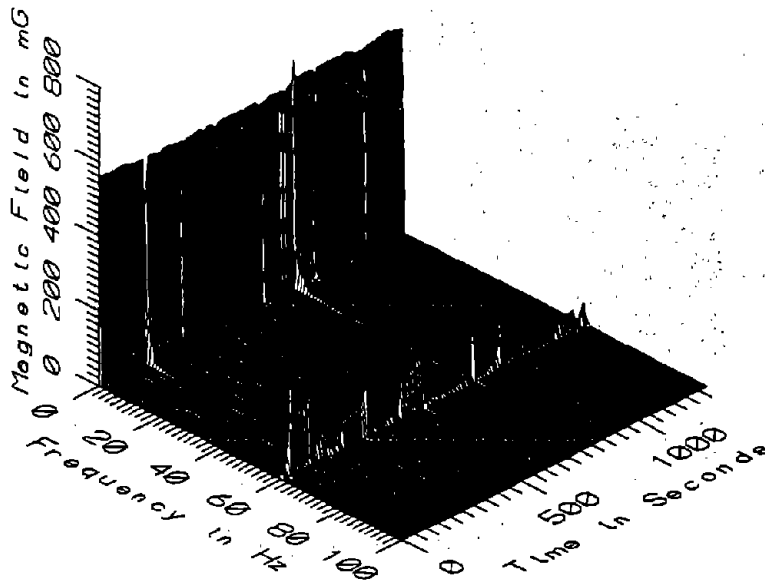
NEC042 - 10cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



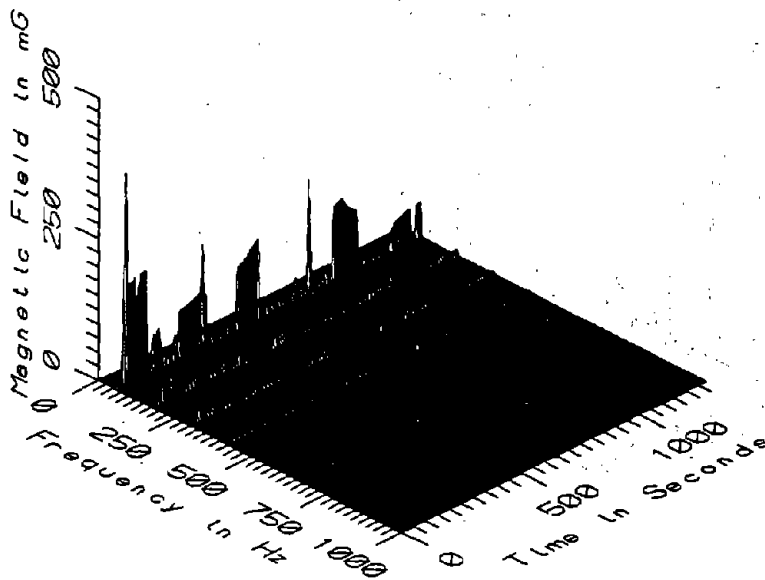
NEC042 - 60cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



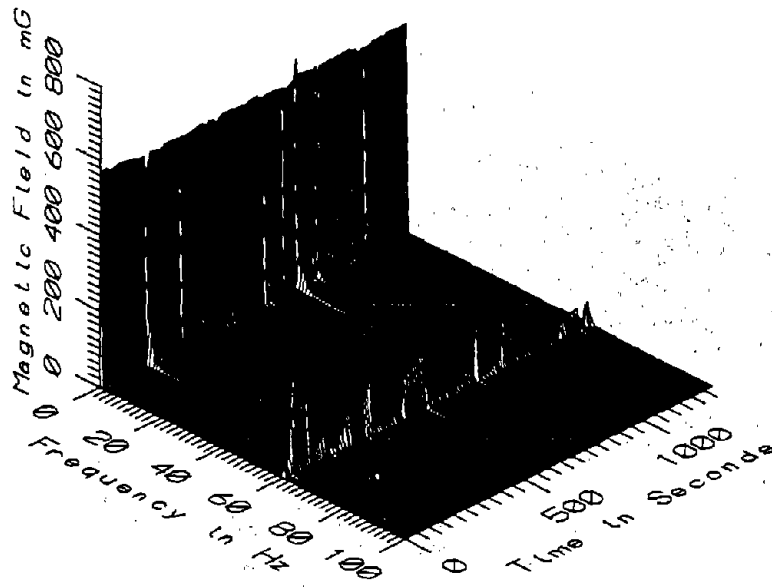
NEC042 - 60cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



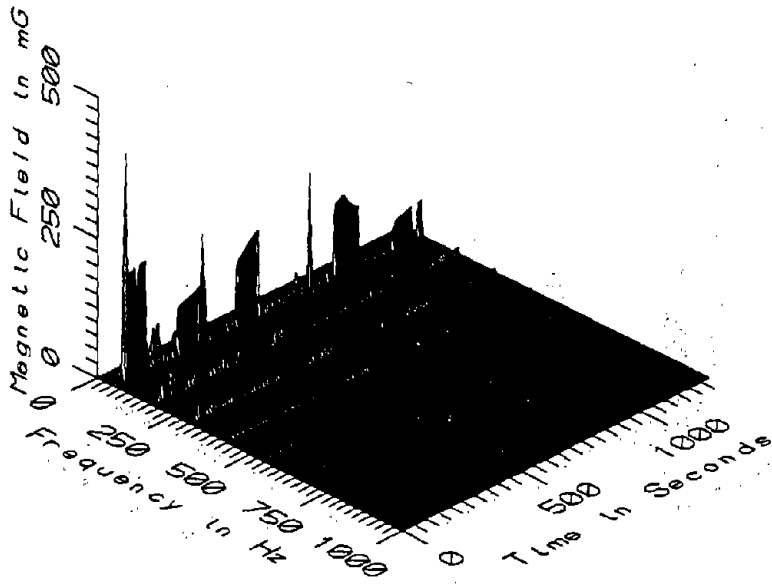
NEC042 - 110cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



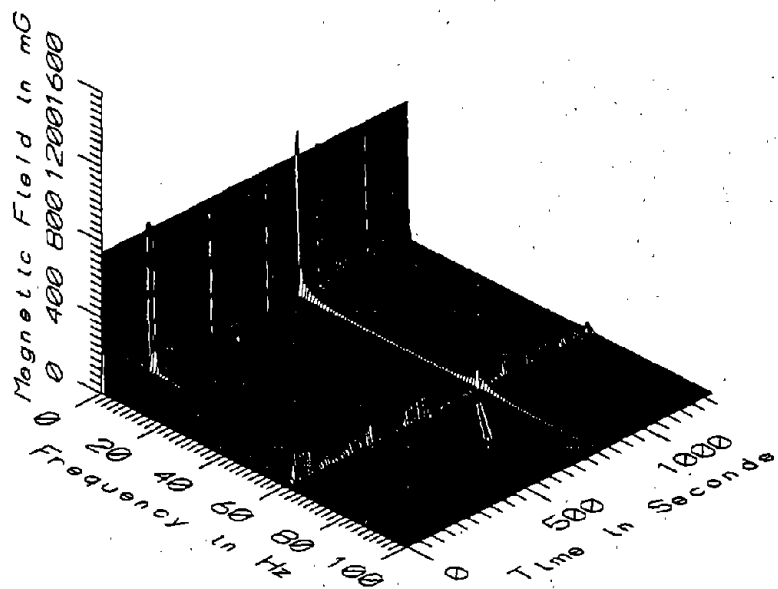
NEC042 - 110cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



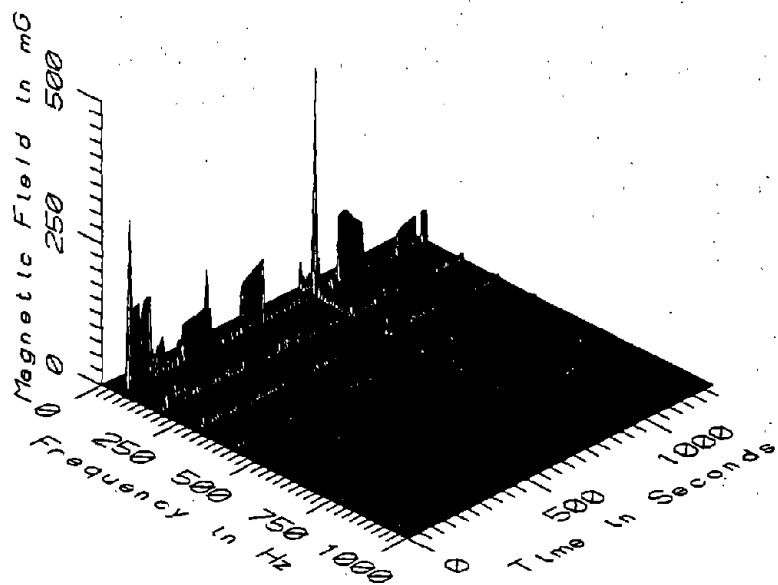
NEC042 - 160cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



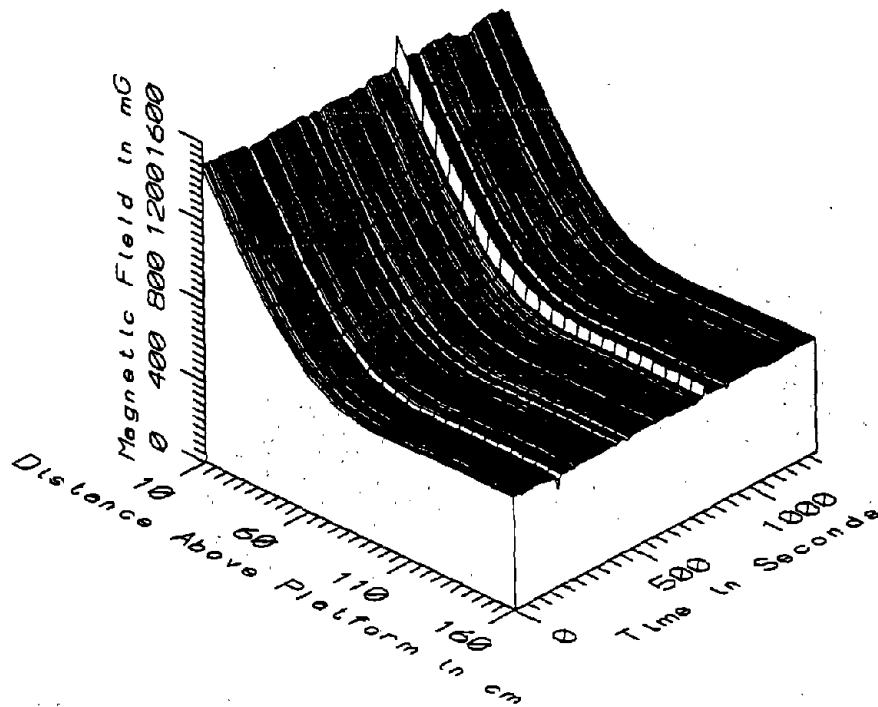
NEC042 - 160cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



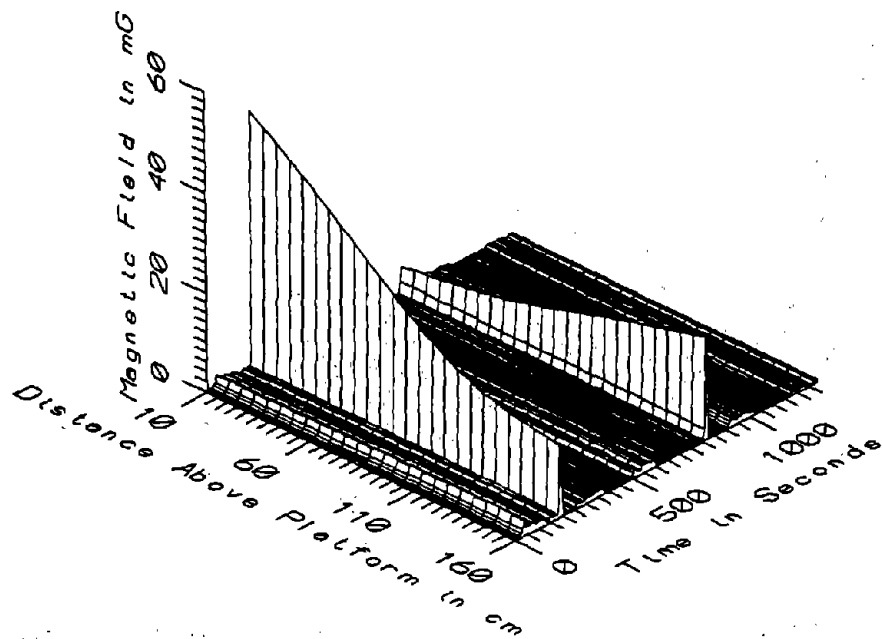
NEC042 - 10cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM - R



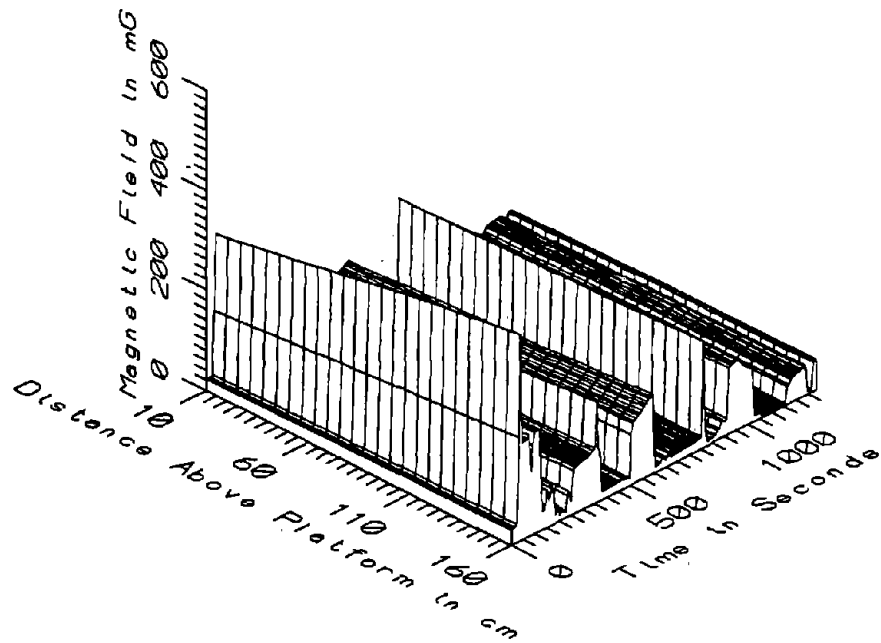
NEC042 - 10cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM - R



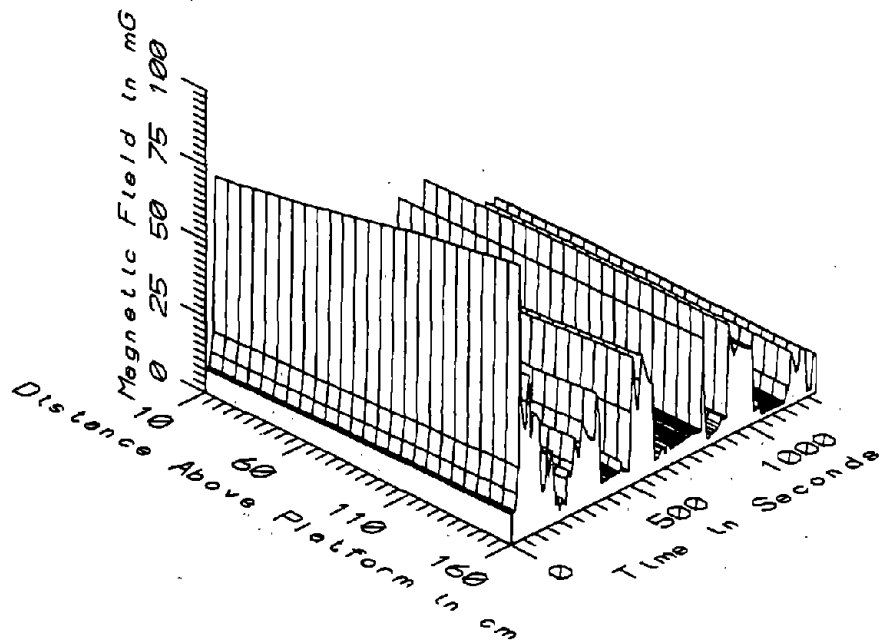
NEC042 - EDGE OF NEW ROCHELLE STATION PLATFORM - STATIC



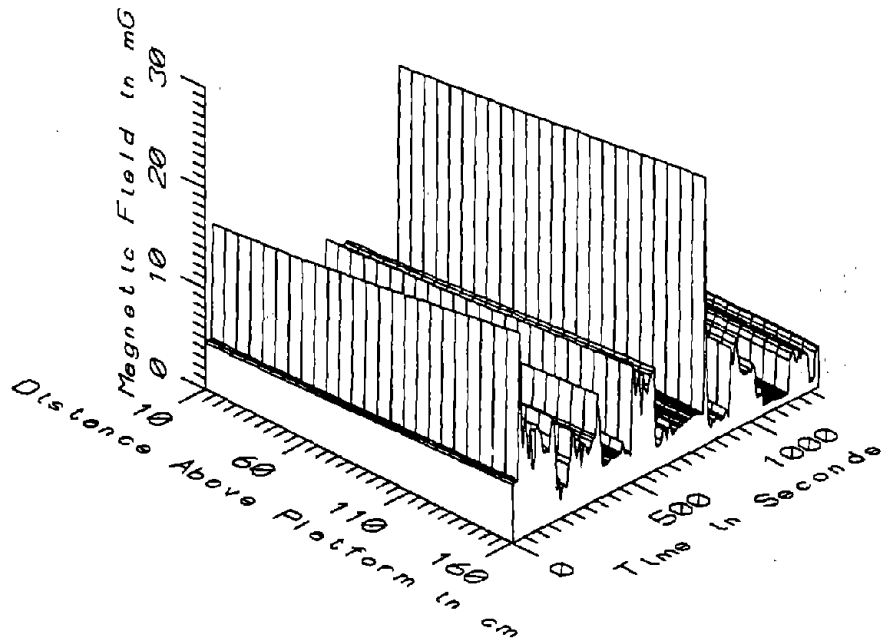
NEC042 - EDGE OF N.R. STATION PLATFORM - LOW FREQ 5-45Hz



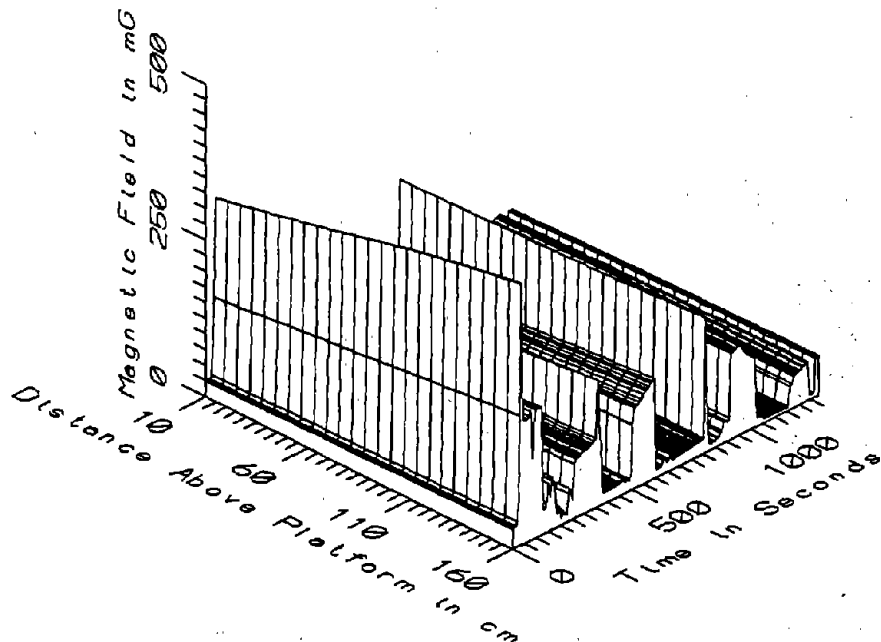
NEC042 - EDGE OF N.R. STATION PLATFORM - POWER FREQ 50-60Hz



NEC042 - EDGE OF N.R. STATION PLATFORM - POWER HARM 65-300Hz



NEC042 - EDGE OF N.R. STATION PLATFORM - HIGH FREQ 305-2560Hz



NEC042 - EDGE OF N.R. STATION PLATFORM - ALL FREQ 5-2560Hz

APPENDIX AR

DATASET NEC043
VERTICAL PROFILE ON STATION PLATFORM
NEW ROCHELLE, 60 HZ NEC

Measurement Setup Code: Staff: 39 Reference: 40
 Drawing: A-6

Vehicle Status: AMTRAK enters station from the south
 then departs near the end of the
 record. Two commuters stop earlier

Measurement Date: April 2, 1992

Measurement Time: Start: 11:16:59
 End: 11:59:50

Number of Samples: 168

Programmed Sample Interval: 5 sec

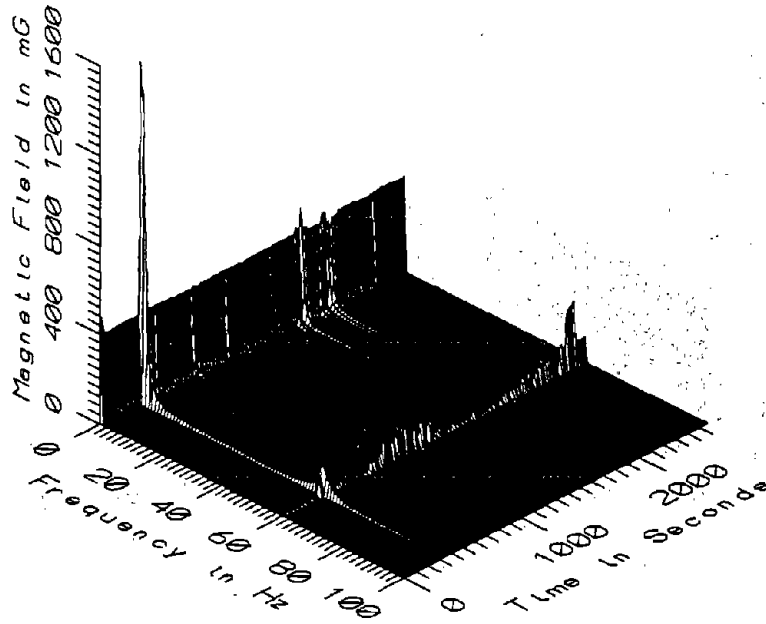
Actual Sample Interval: 15.4 sec*

Frequency Spectrum Parameters

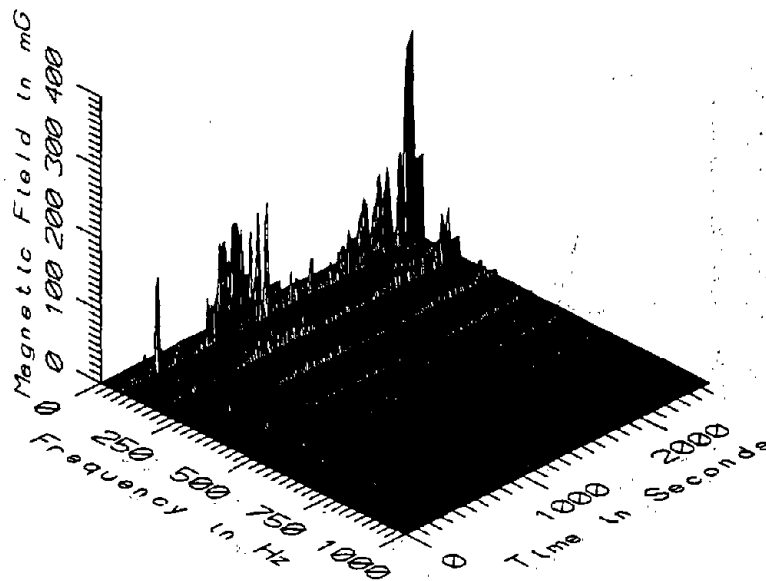
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

Missing or Suspect Data: The staff was lying on the platform
 for the first two samples.

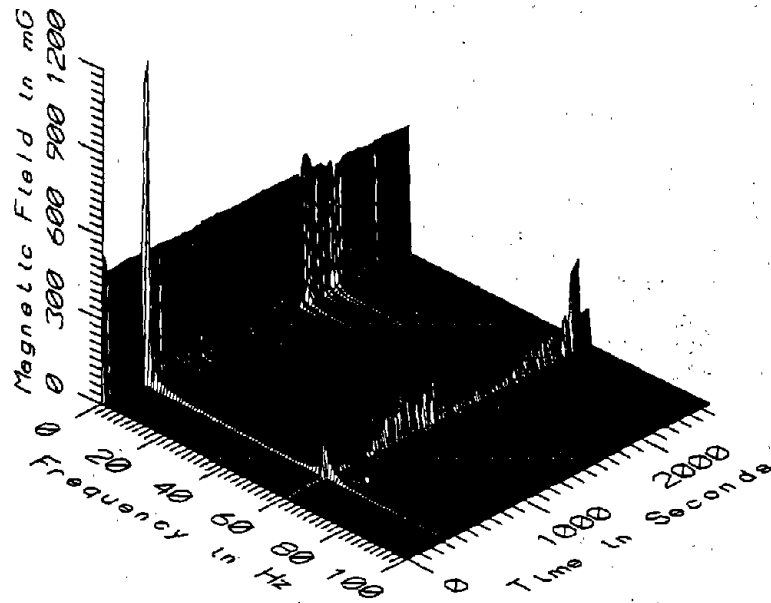
* Recording was suspended for approximately 28 minutes to conserve disk space while awaiting a delayed AMTRAK train. Hence, the longer than normal sample interval.



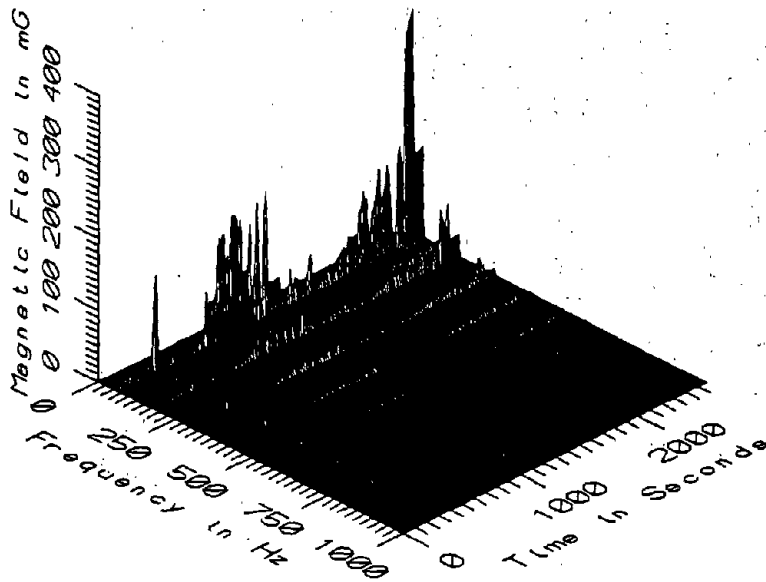
NEC043 - 10cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



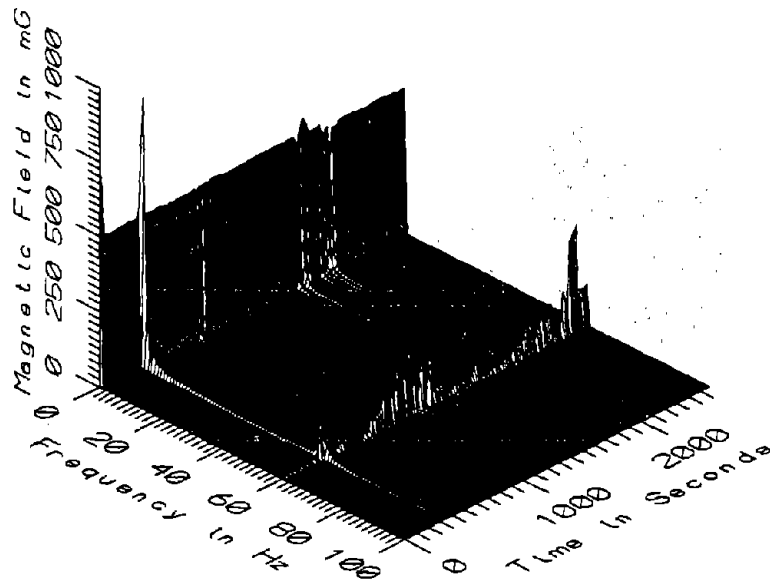
NEC043 - 10cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



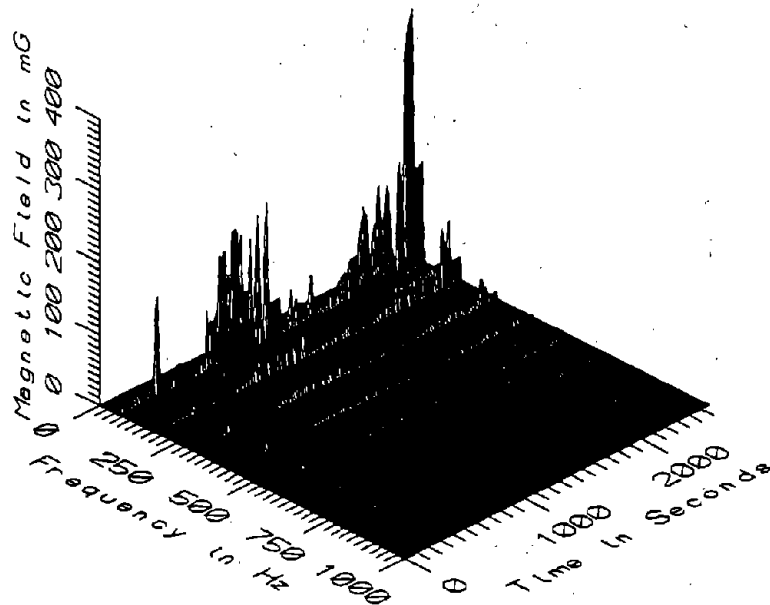
NEC043 - 60cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



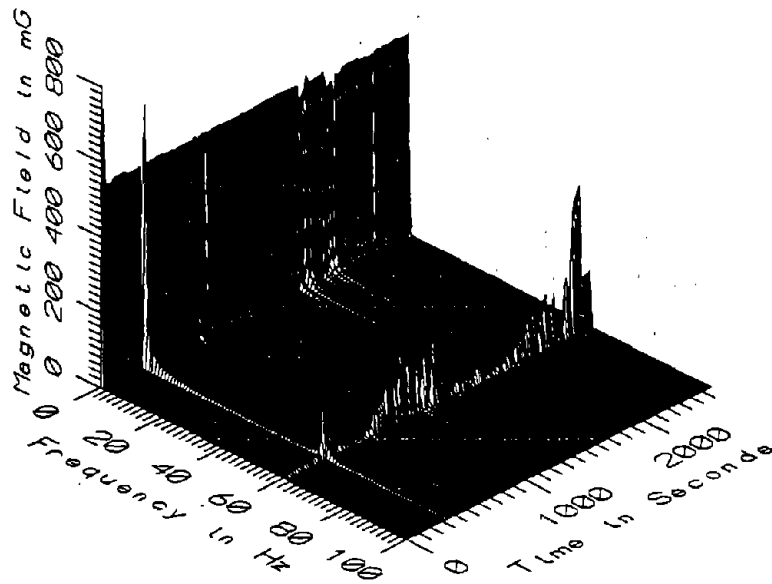
NEC043 - 60cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



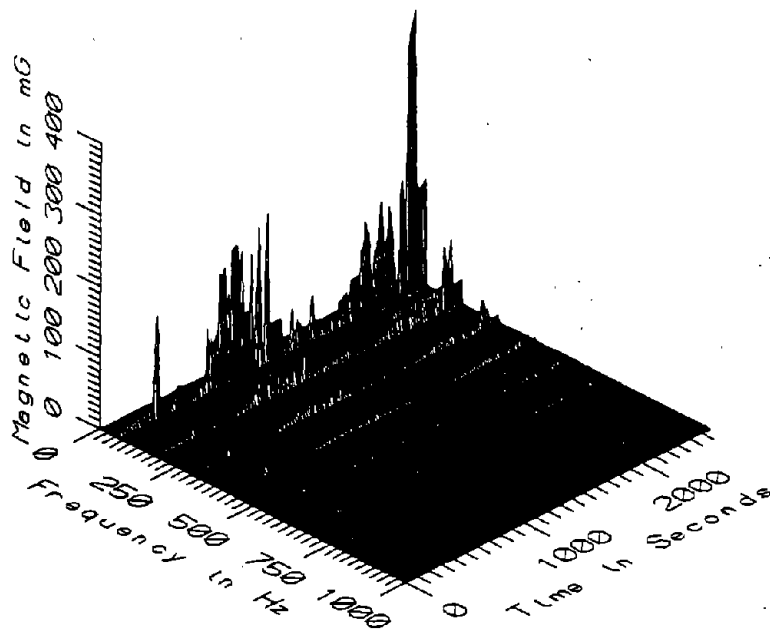
NEC043 - 110cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



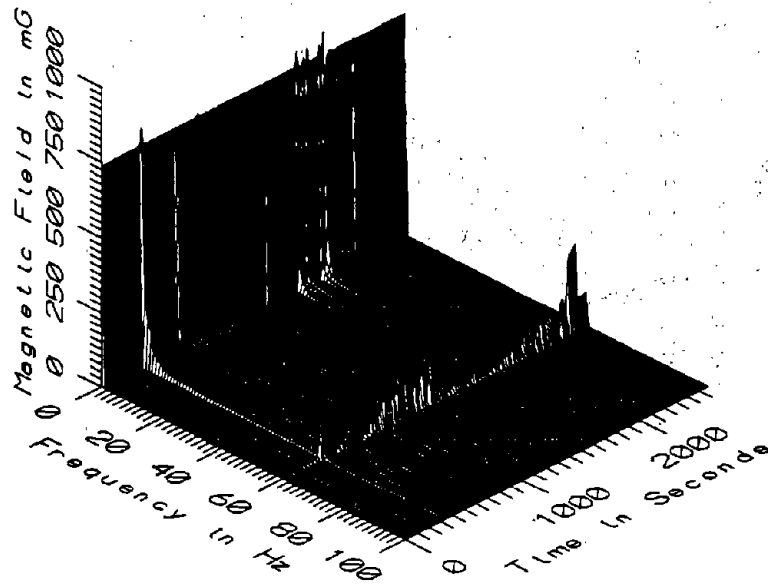
NEC043 - 110cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



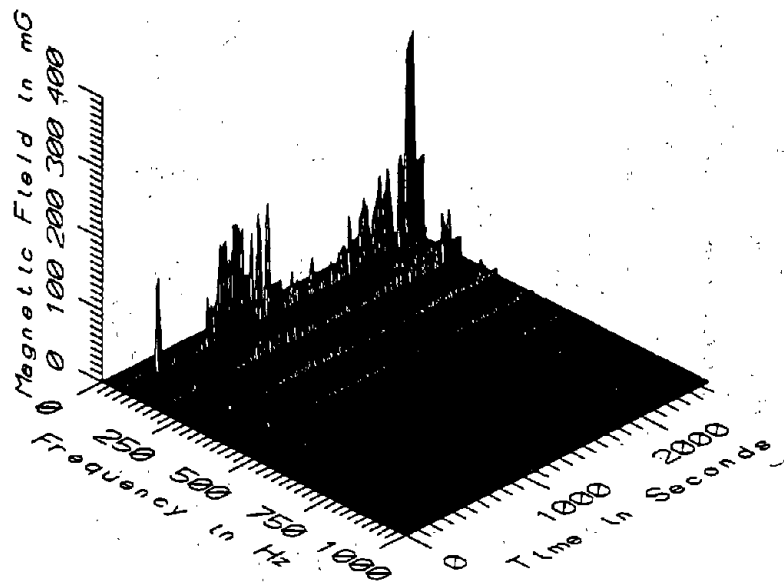
NEC043 - 160cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



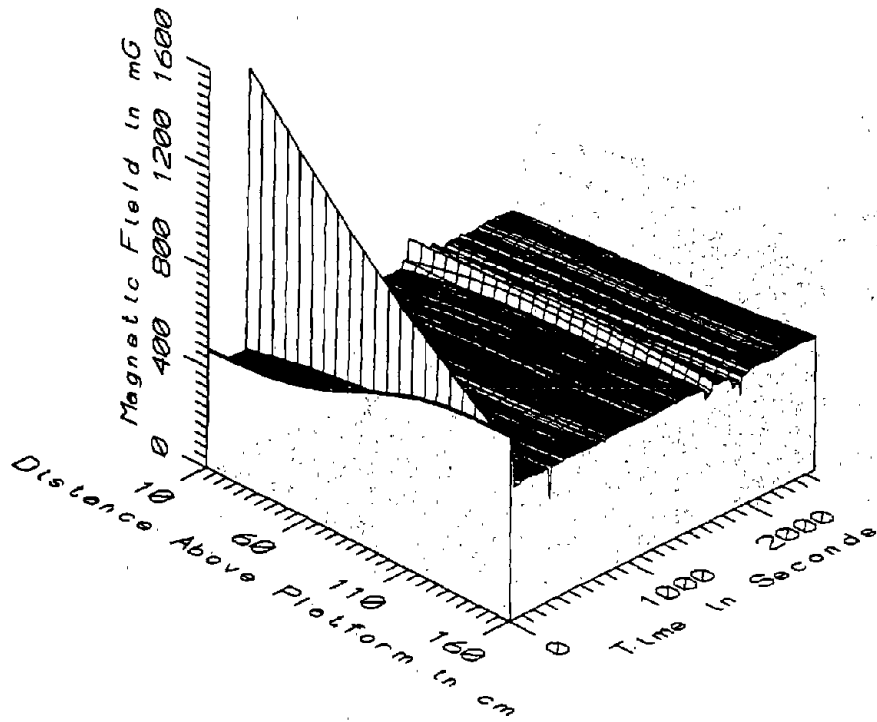
NEC043 - 160cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM



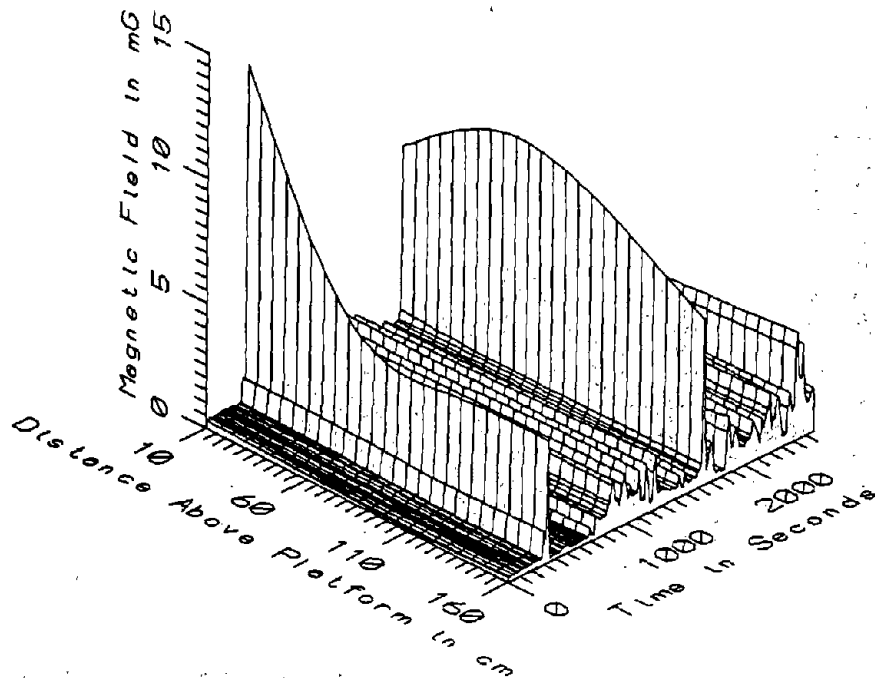
NEC043 - 10cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM - R



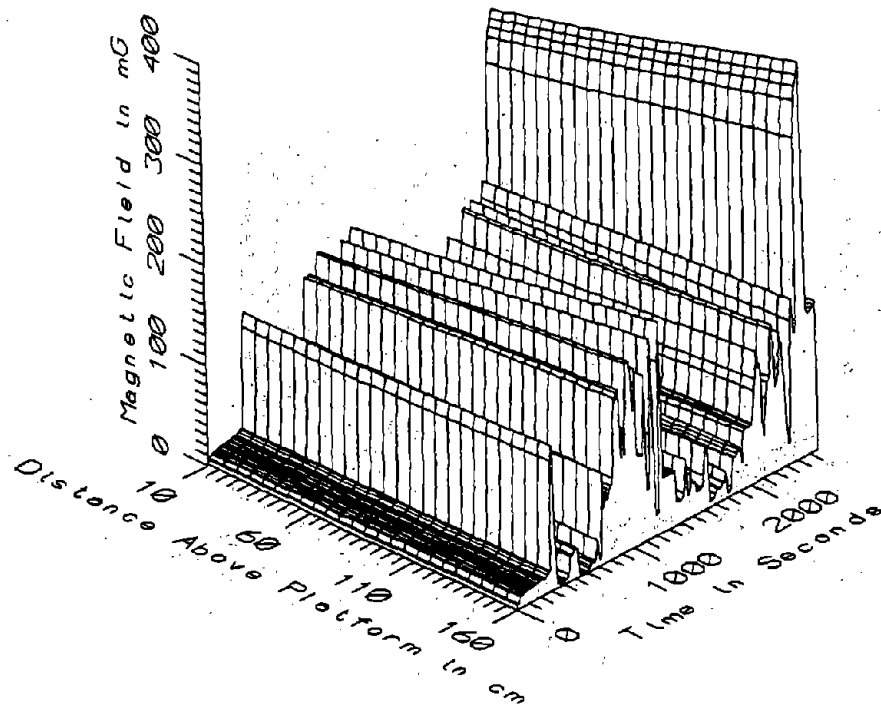
NEC043 - 10cm ABOVE EDGE OF NEW ROCHELLE STATION PLATFORM - R



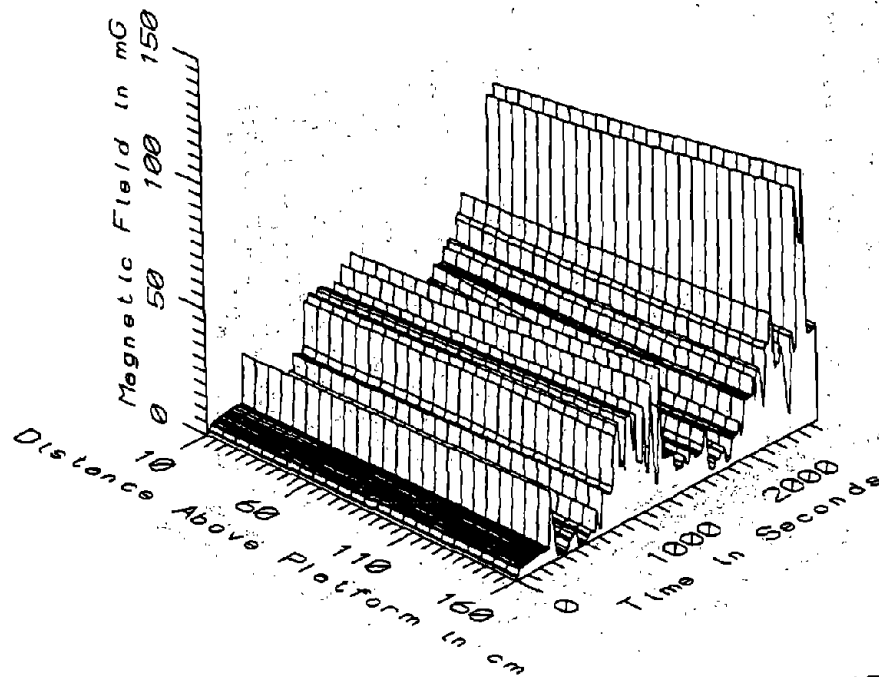
NEC043 - EDGE OF N.R. STATION PLATFORM - STATIC



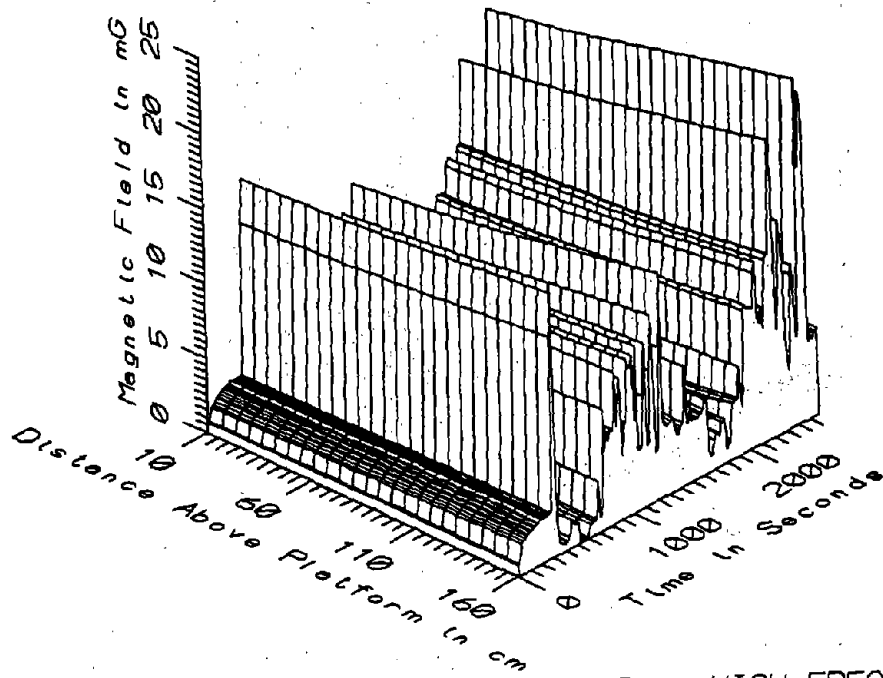
NEC043 - EDGE OF N.R. STATION PLATFORM - LOW FREQ, 5-45Hz



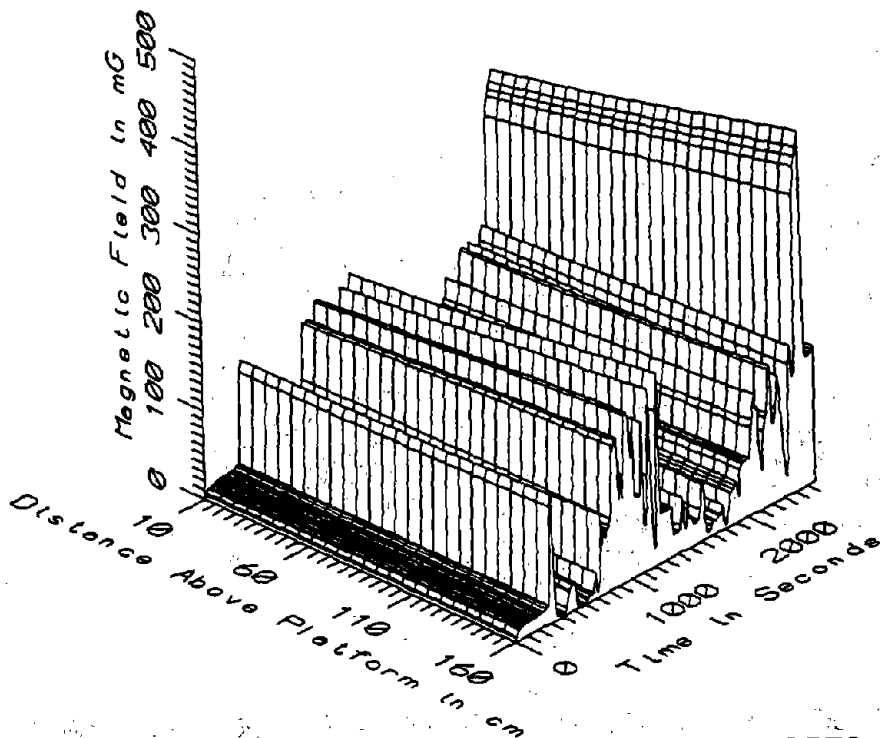
NEC043 - EDGE OF N.R. STATION PLATFORM - POWER FREQ, 50-60Hz



NEC043 - EDGE OF N.R. STATION PLATFORM - POWER HARM, 65-300Hz



NEC043 - EDGE OF N.R. STATION PLATFORM - HIGH FREQ, 305-2560Hz



NEC043 - EDGE OF N.R. STATION PLATFORM - ALL FREQ, 5-2560Hz

APPENDIX AS

DATASET NEC044
HORIZONTAL PROFILE AWAY FROM SUBSTATION FENCE
MT. VERNON STATION AND 60 HZ SUBSTATION

Measurement Setup Code: Staff: 41 Reference: None
 Drawing: A-8

Vehicle Status: No trains passed during the test

Measurement Date: April 2, 1992

Measurement Time: Start: 12:40:30
 End: 12:41:25

Number of Samples: 12

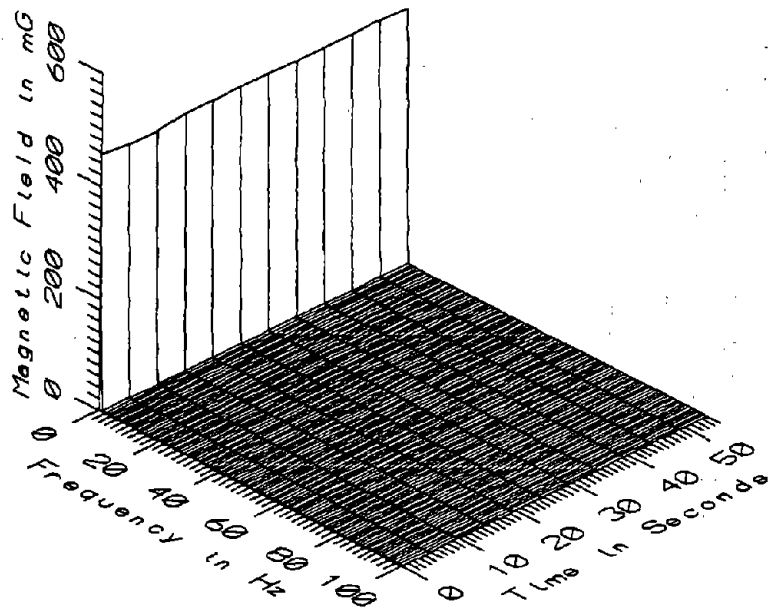
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5 sec

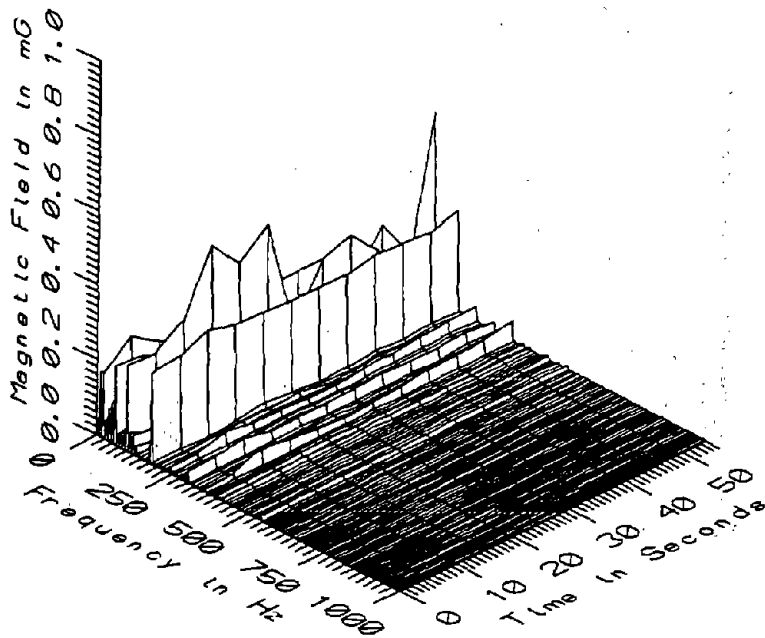
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

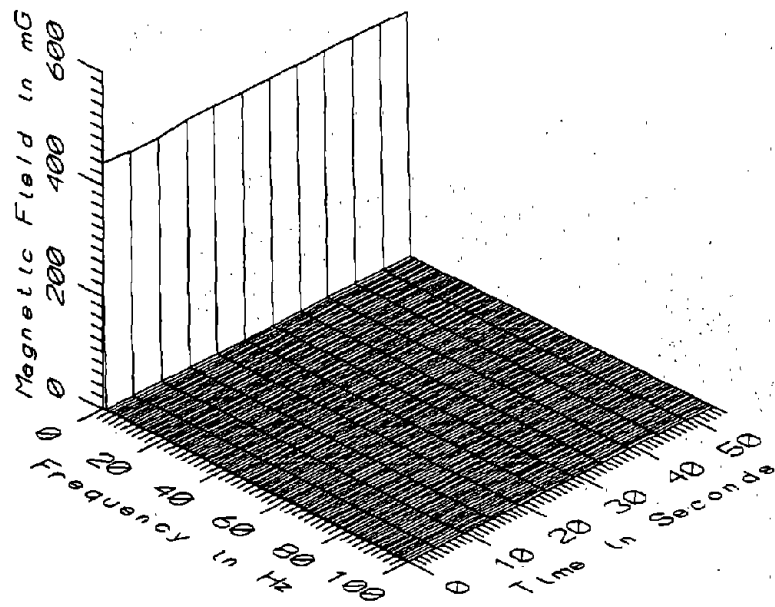
Missing or Suspect Data: None



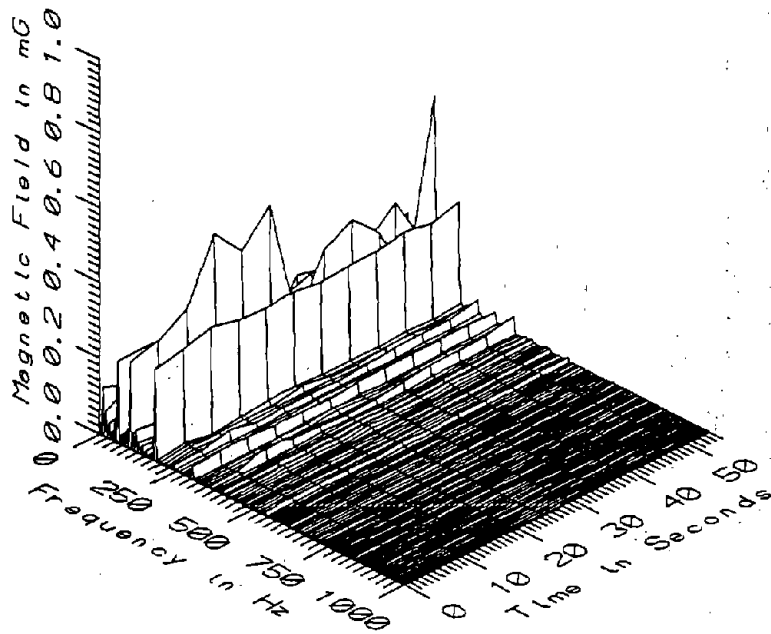
NEC044 - 10cm FROM MT VERNON SUBSTATION FENCE, 1.5M ABOVE GROUND



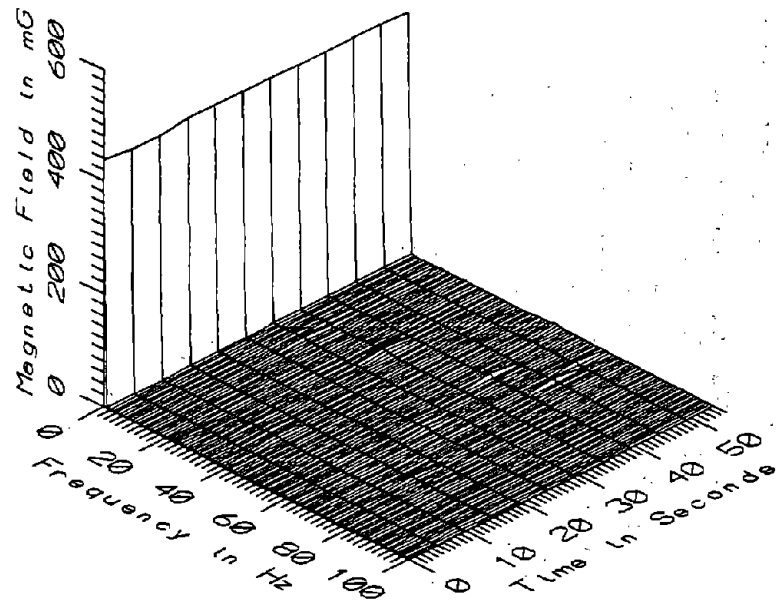
NEC044 - 10cm FROM MT VERNON SUBSTATION FENCE, 1.5M ABOVE GROUND



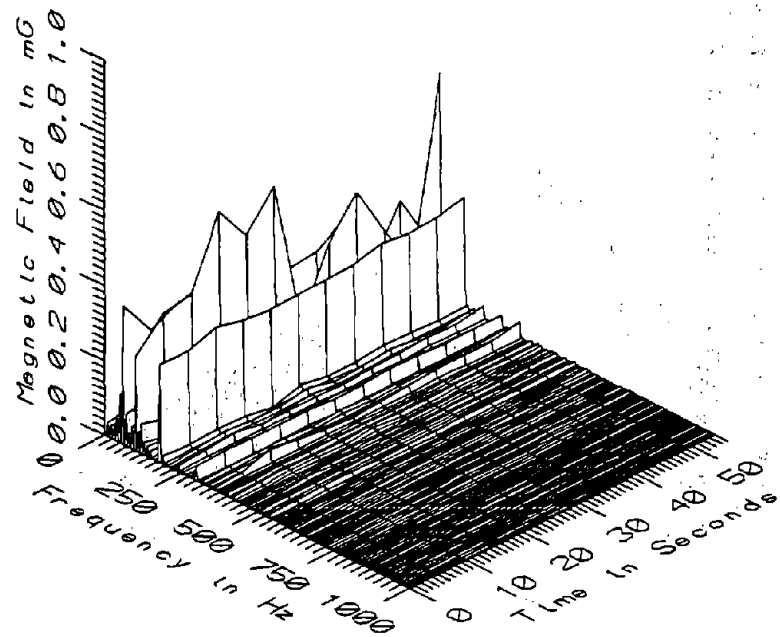
NEC044 - 60cm FROM MT VERNON SUBSTATION FENCE, 1.5M ABOVE GROUND



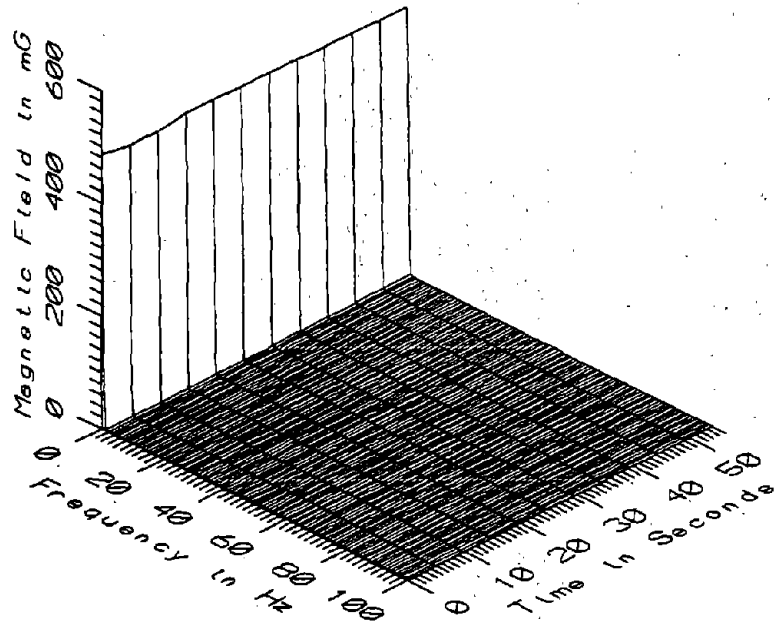
NEC044 - 60cm FROM MT VERNON SUBSTATION FENCE, 1.5M ABOVE GROUND



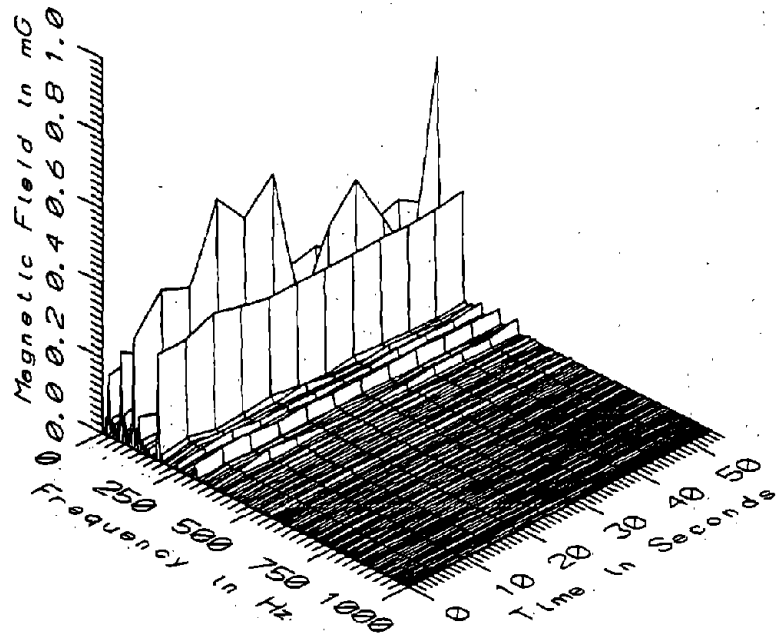
NEC044 - 110cm FROM MT VERNON SUBSTATION FENCE, 1.5M ABOVE GROUND



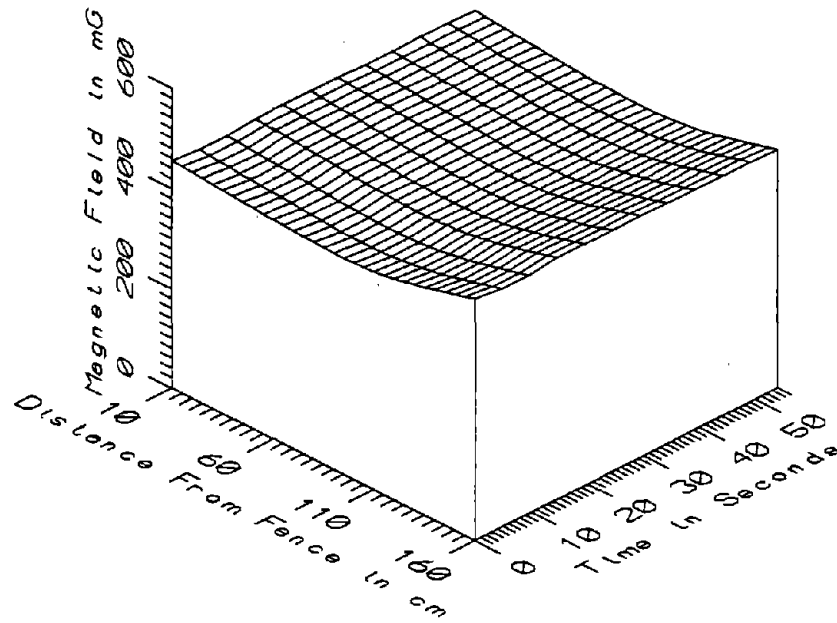
NEC044 - 110cm FROM MT VERNON SUBSTATION FENCE, 1.5M ABOVE GROUND



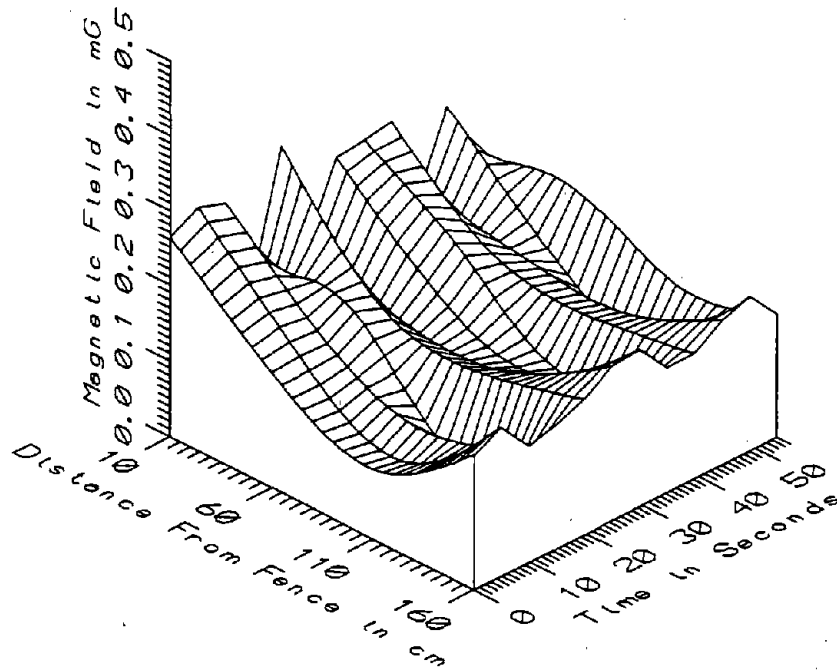
NEC044 - 160cm FROM MT VERNON SUBSTATION FENCE, 1.5M ABOVE GROUND



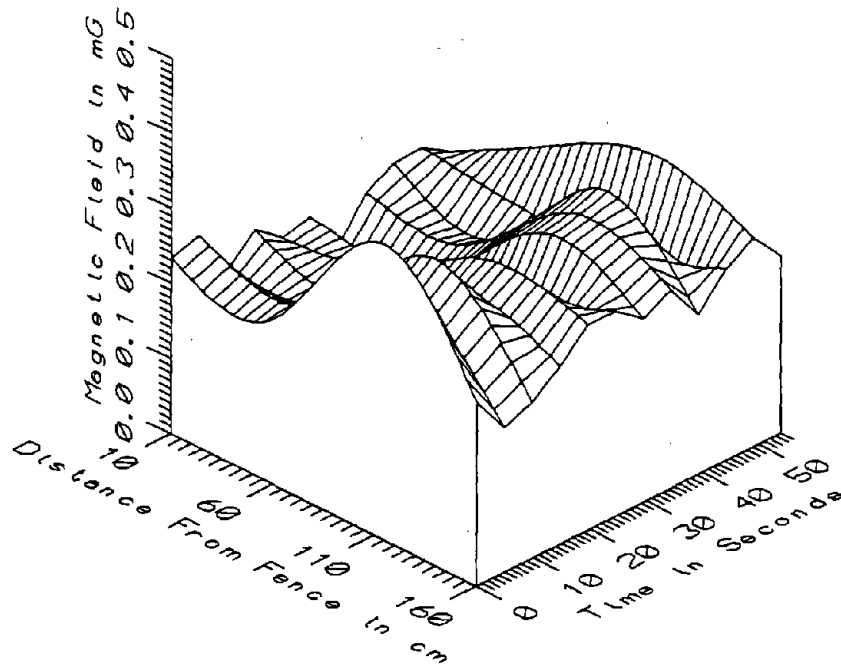
NEC044 - 160cm FROM MT VERNON SUBSTATION FENCE, 1.5M ABOVE GROUND



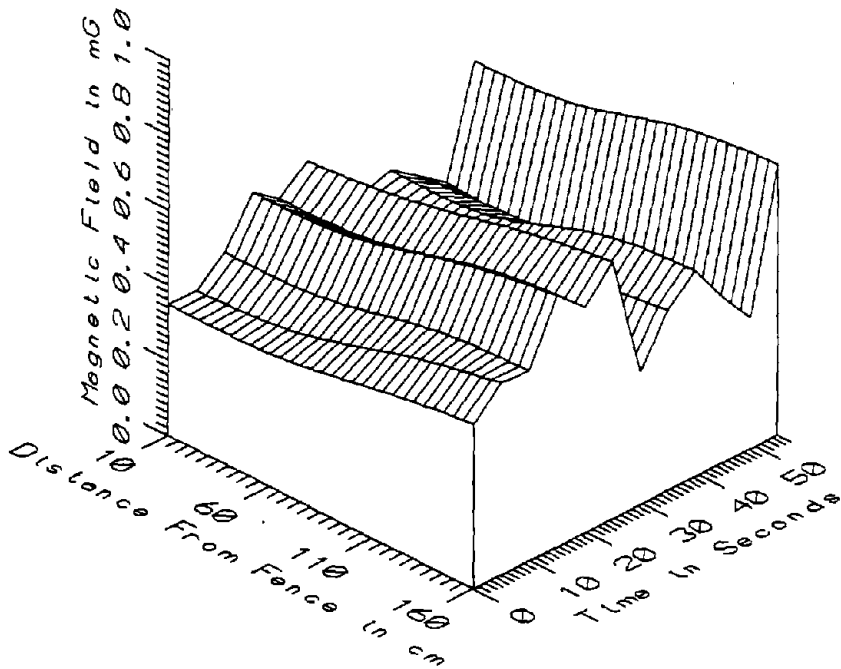
NEC044 - MT VERNON SUBSTATION FENCE, 1.5M ABOVE GROUND - STATIC



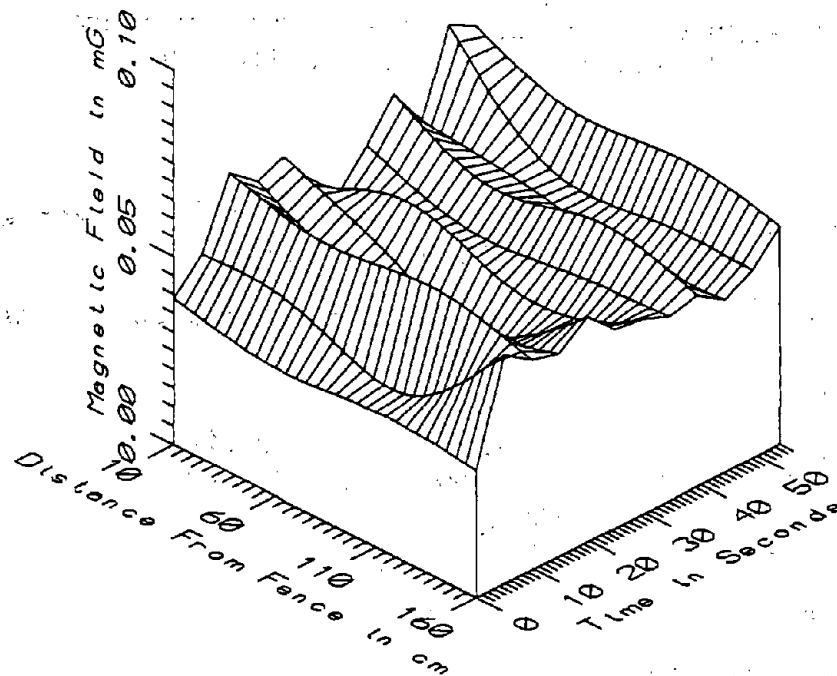
NEC044 - MT VERNON SUB FENCE, 1.5M ABOVE GROUND - LOW FREQ, 5-45Hz



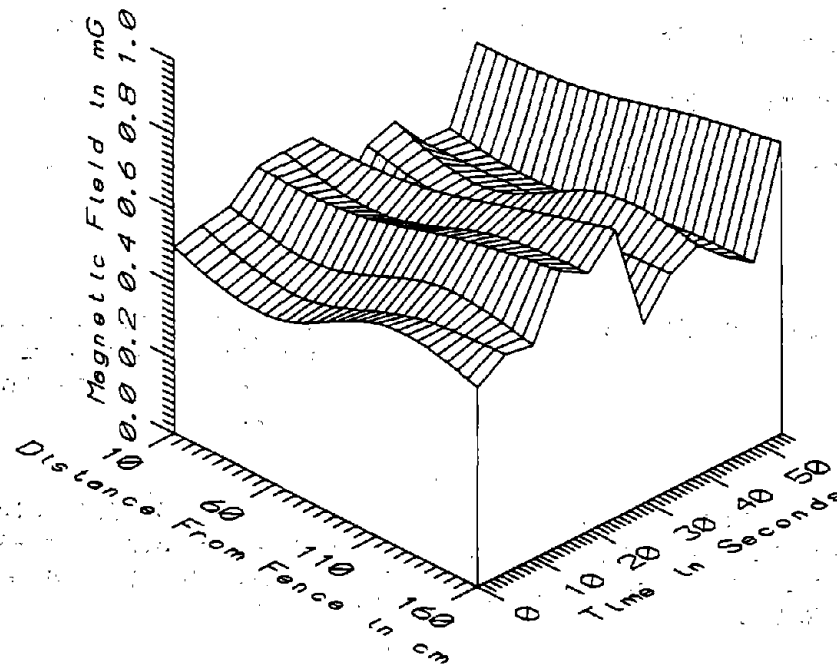
NEC044 - MT VERNON SUB FENCE, 1.5M ABOVE GND - POWER FREQ 50-60Hz



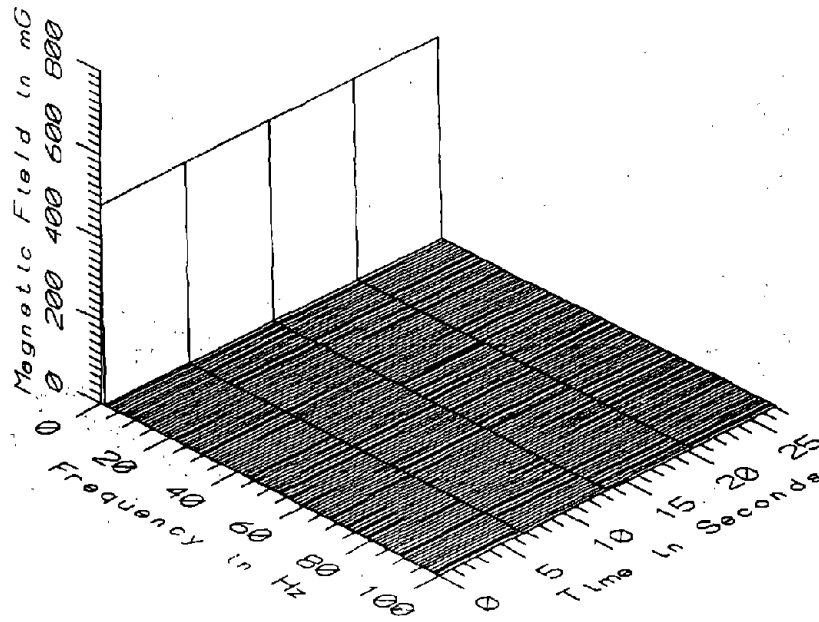
NEC044 - MT VERNON SUB FENCE, 1.5M ABOVE GND - POWER HARM 65-300Hz



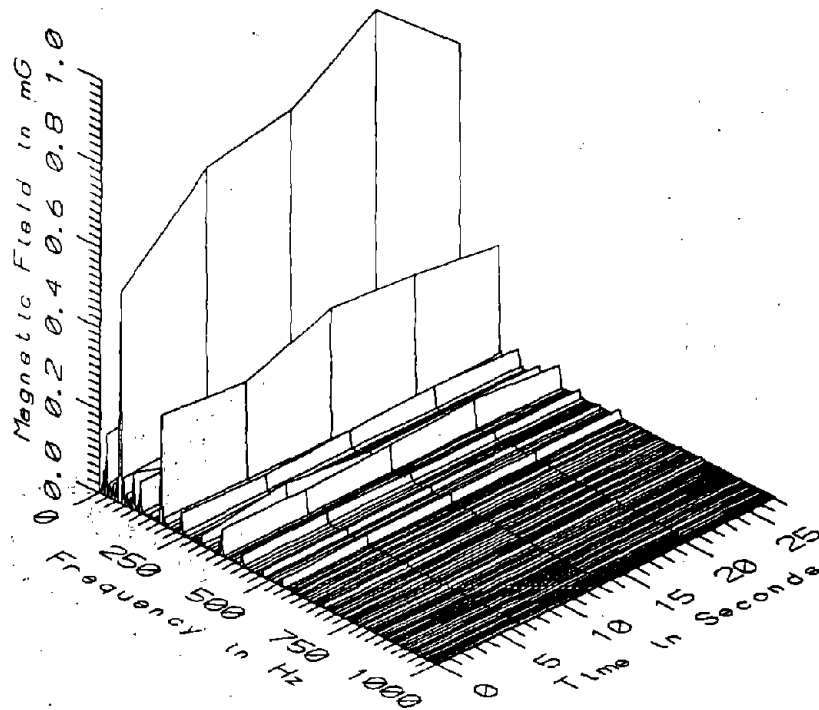
NEC044 - MT VERNON SUB FENCE, 1.5M ABOVE GND - HIGH FREQ 305-2560Hz



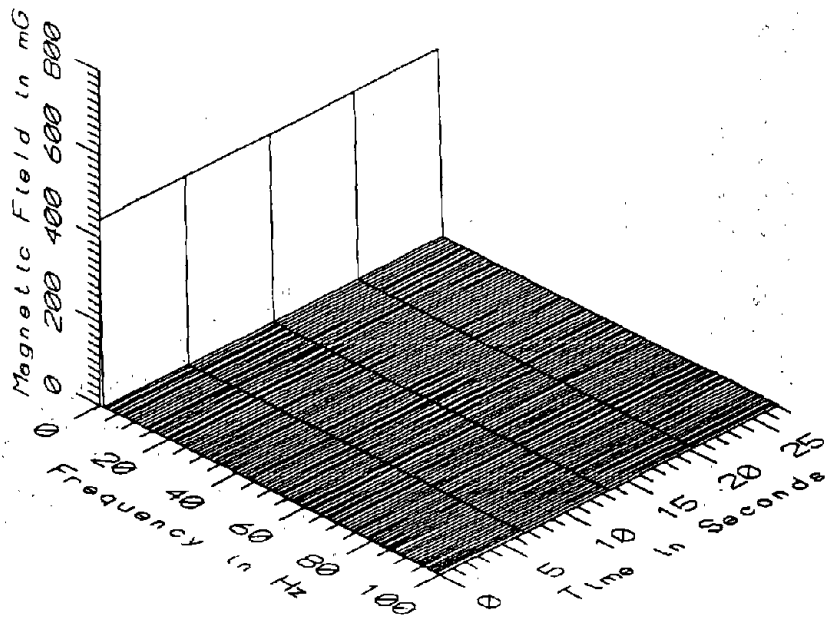
NEC044 - MT VERNON SUB FENCE, 1.5M ABOVE GND - ALL FREQ 5-2560Hz



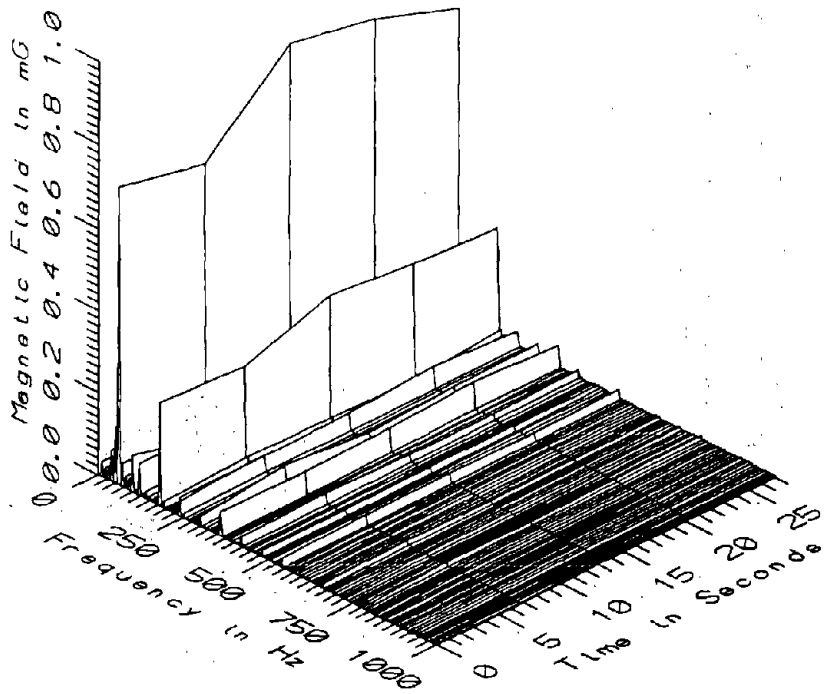
NEC045, SET 1, 75cm FROM CENTER OF GATE, 2M FROM MT VERNON SUBSTATION



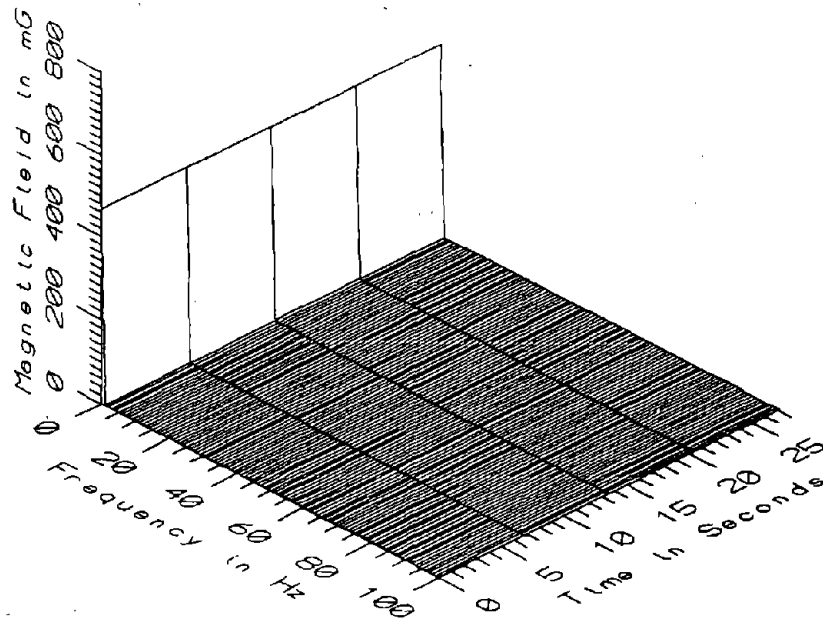
NEC045, SET 1, 75cm FROM CENTER OF GATE, 2M FROM MT VERNON SUBSTATION



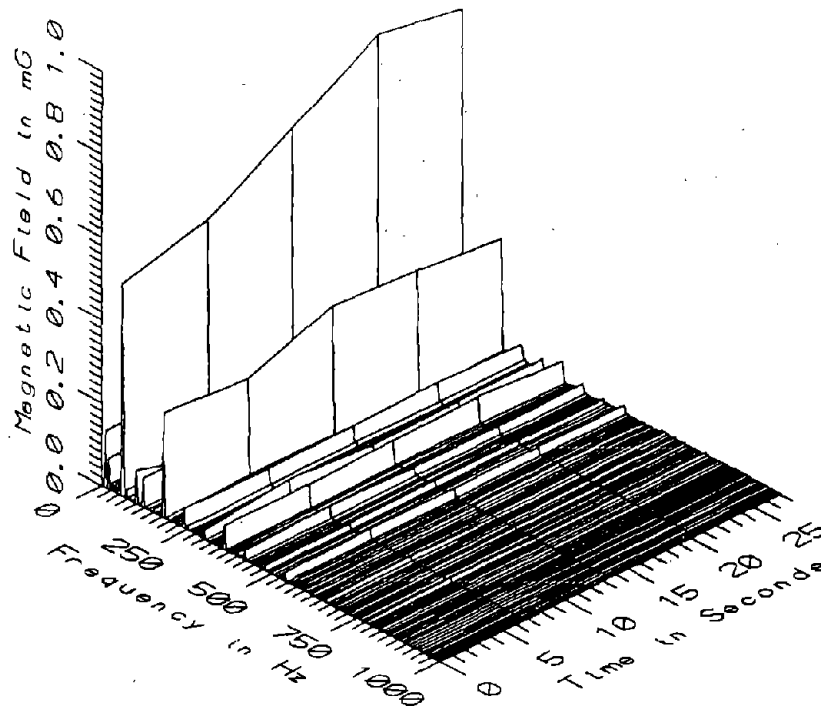
NEC045, SET 1, 25cm FROM CENTER OF GATE, 2M FROM MT VERNON SUBSTATION



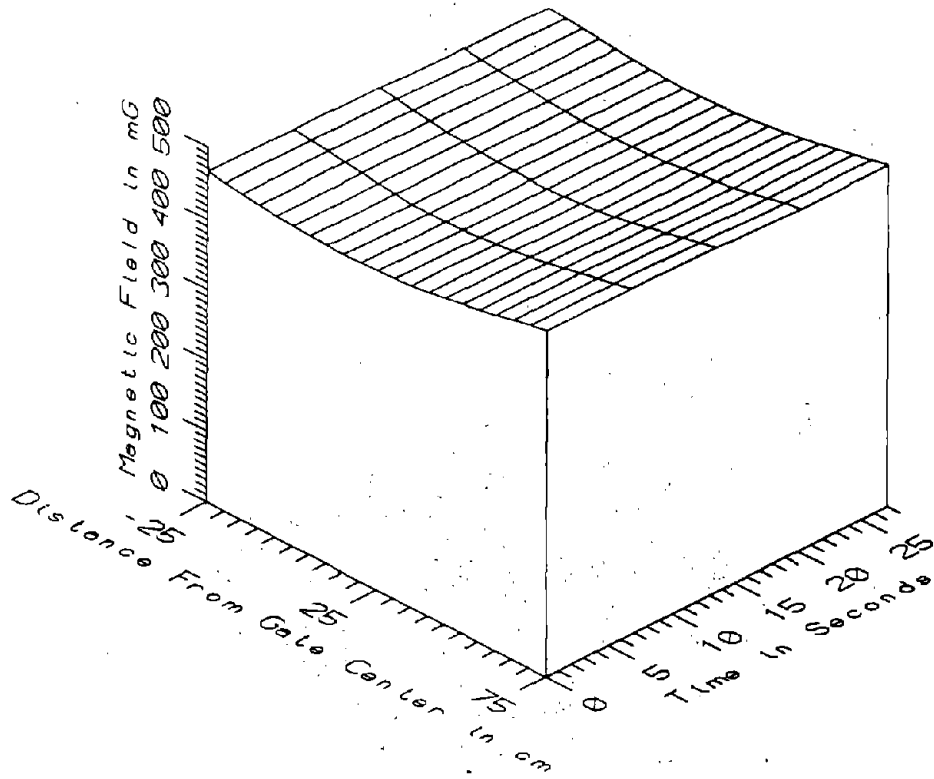
NEC045, SET 1, 25cm FROM CENTER OF GATE, 2M FROM MT VERNON SUBSTATION



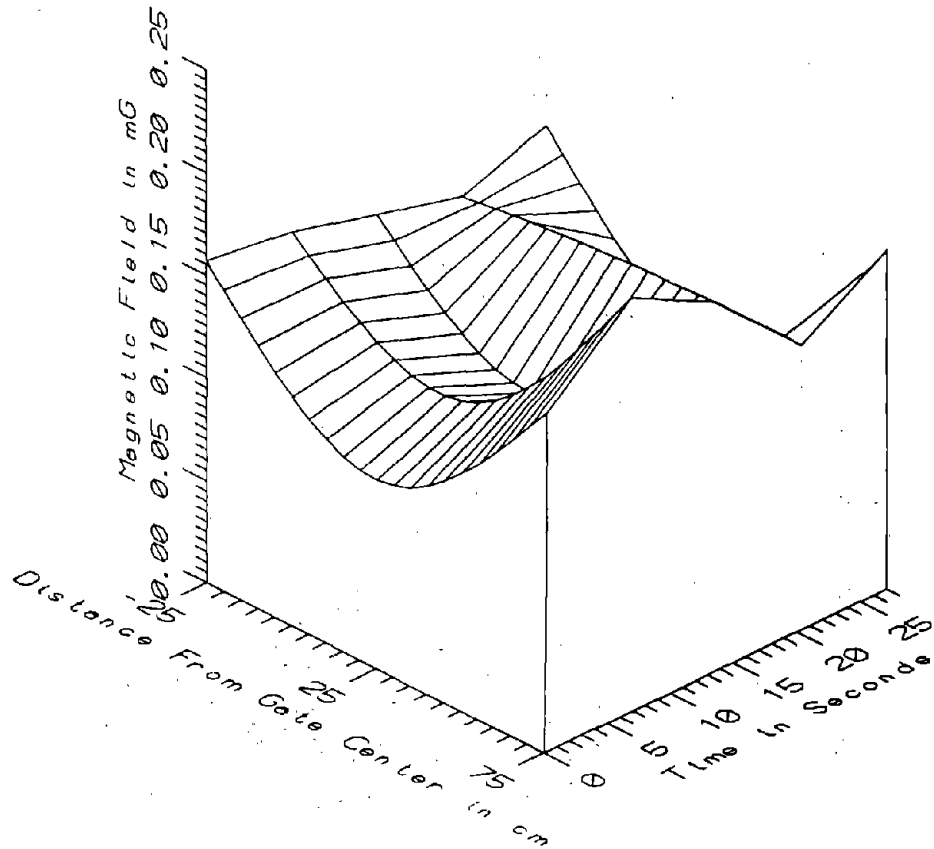
NEC045, SET 1, -25cm FROM CENTER OF GATE, 2M FROM MT VERNON SUBSTATION



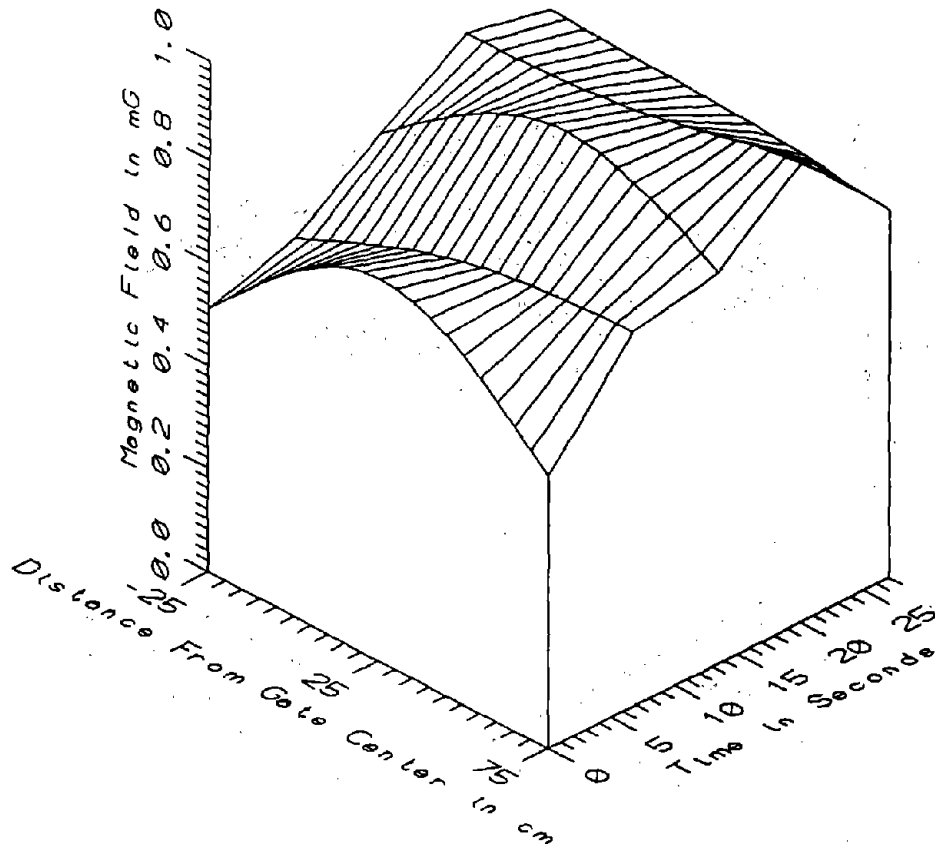
NEC045, SET 1, -25cm FROM CENTER OF GATE, 2M FROM MT VERNON SUBSTATION



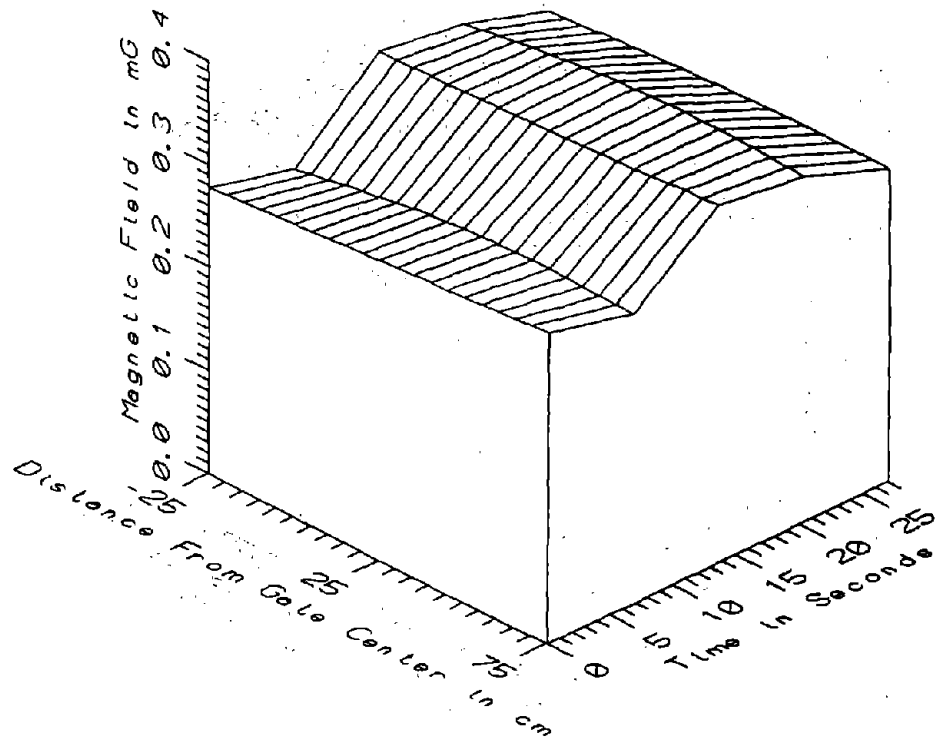
NEC045, SET 1 - 2M IN FROM OF MT VERNON SUBSTATION - STATIC



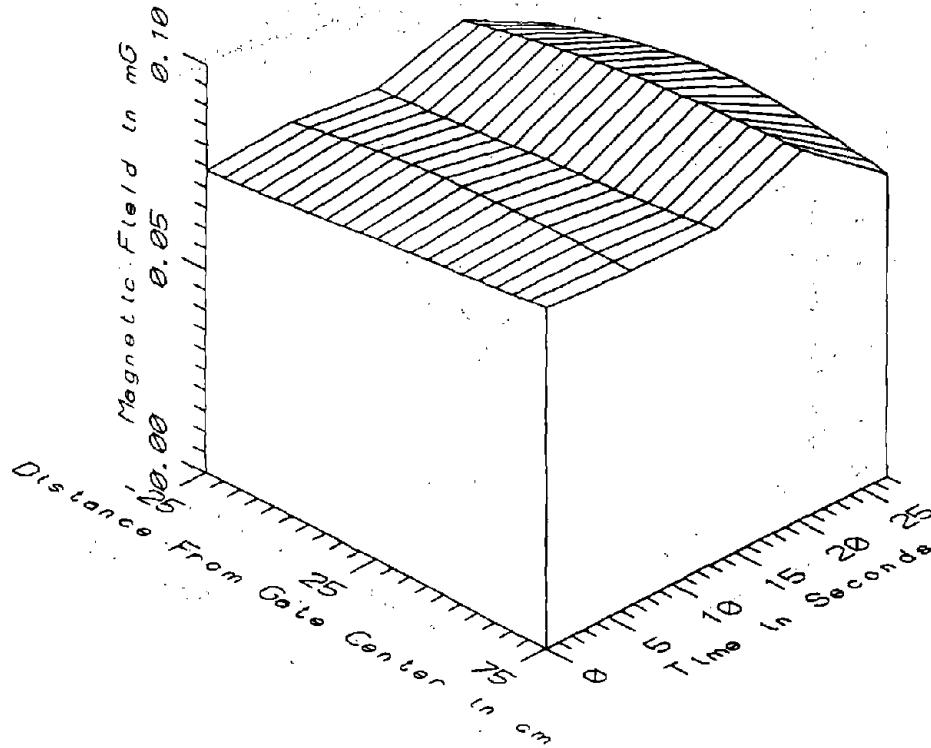
NEC045, SET 1 - 2M IN FROM OF MT VERNON SUBSTATION - LOW FREQ. 5-45Hz



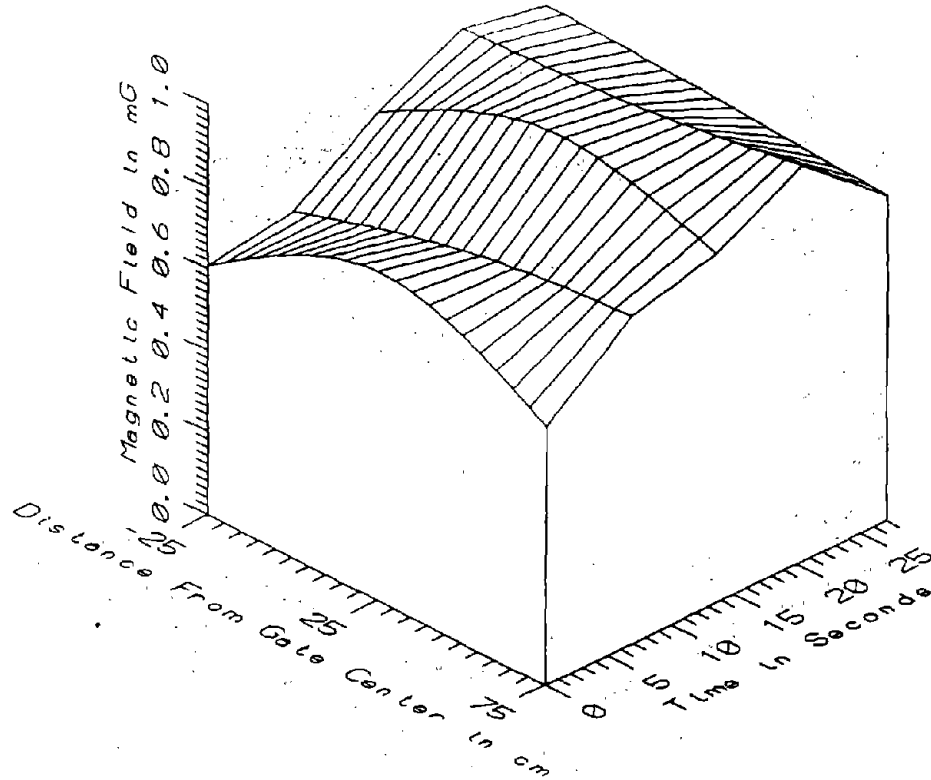
NEC045, SET 1 - 2M IN FROM OF MT VERNON SUBSTATION - POWER FREQ, 50-60Hz



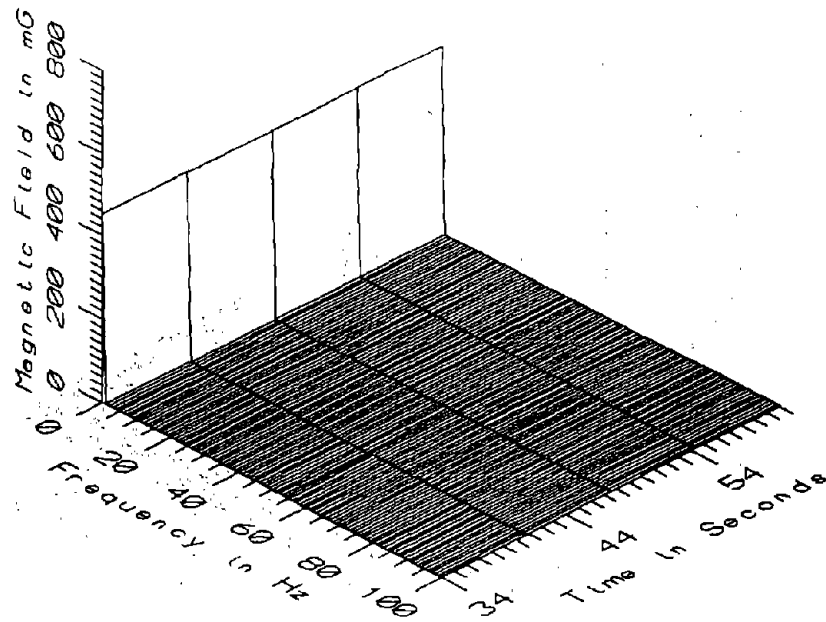
NEC045, SET 1, 2M IN FROM OF MT VERNON SUBSTATION - POWER HARM, 65-300Hz



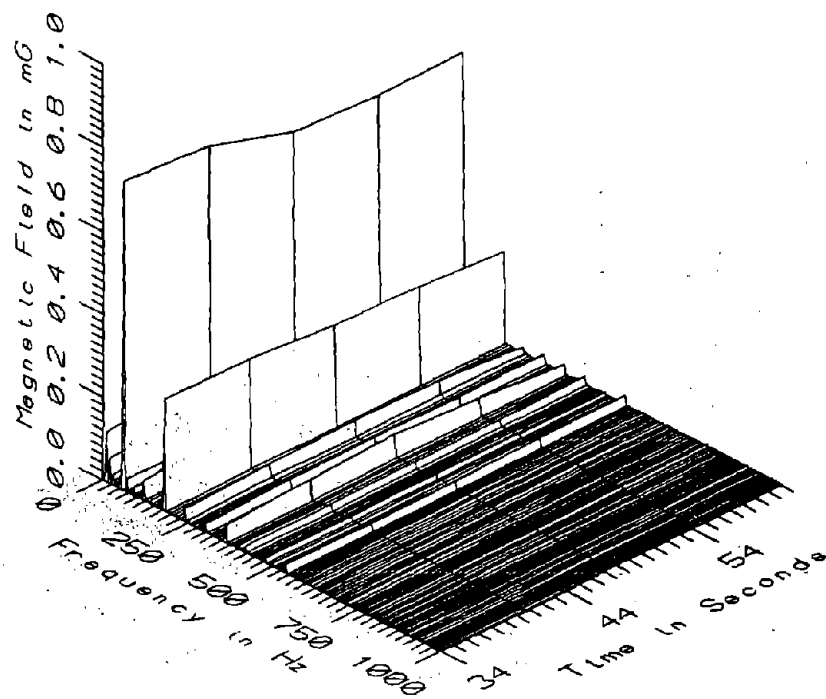
NEC045, SET 1, 2M IN FROM OF MT. VERNON SUBSTATION - HIGH FREQ, 305-2560 Hz



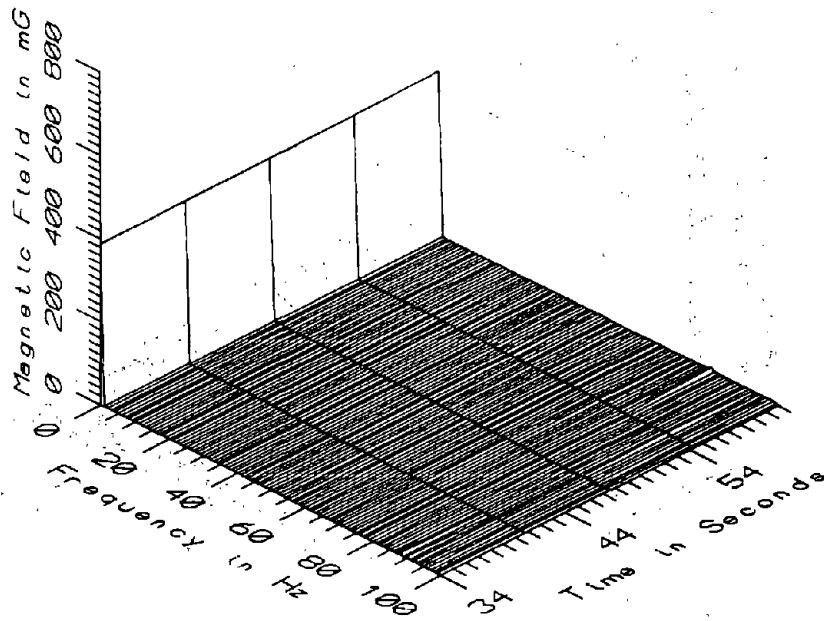
NEC045, SET 1, 2M IN FROM OF MT. VERNON SUBSTATION - ALL FREQ, 5-2560 Hz



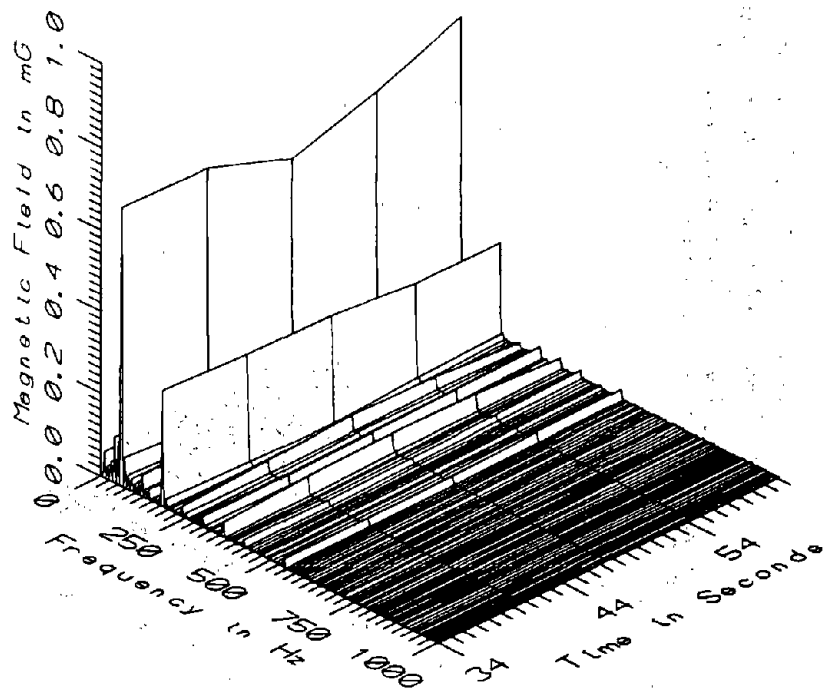
NEC045, SET 2, 60cm FROM MT VERNON SUBSTATION FENCE NEXT TO GATE



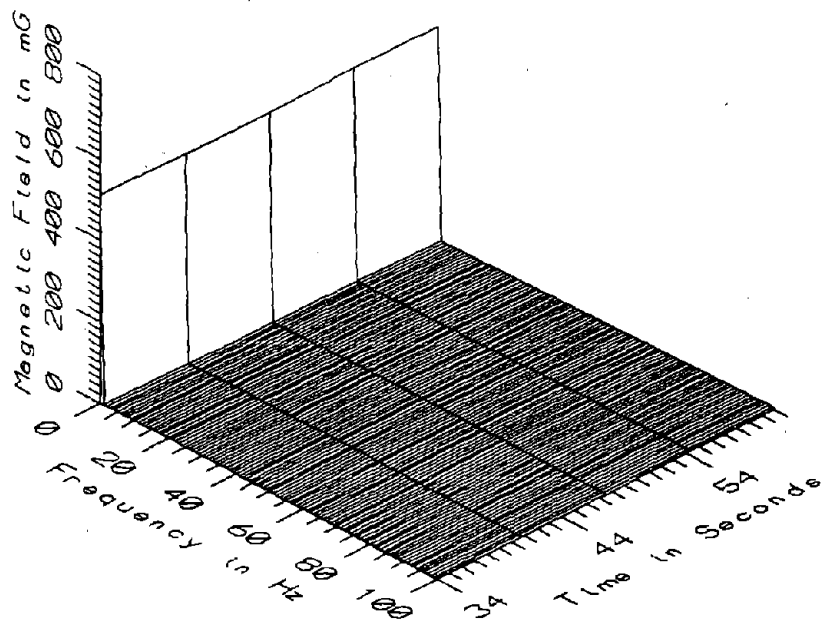
NEC045, SET 2, 60cm FROM MT VERNON SUBSTATION FENCE NEXT TO GATE



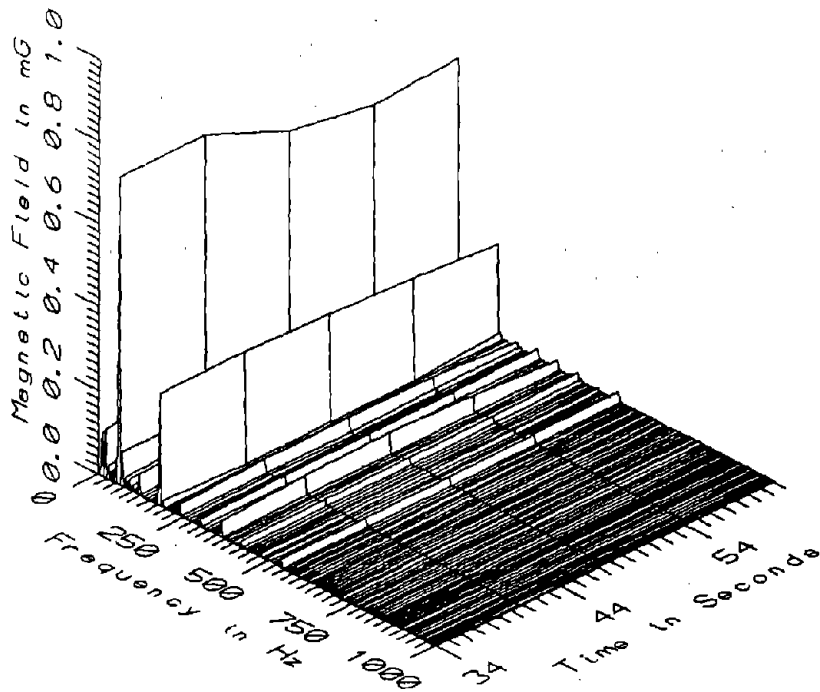
NEC045, SET 2, 110cm FROM MT VERNON SUBSTATION FENCE NEXT TO GATE



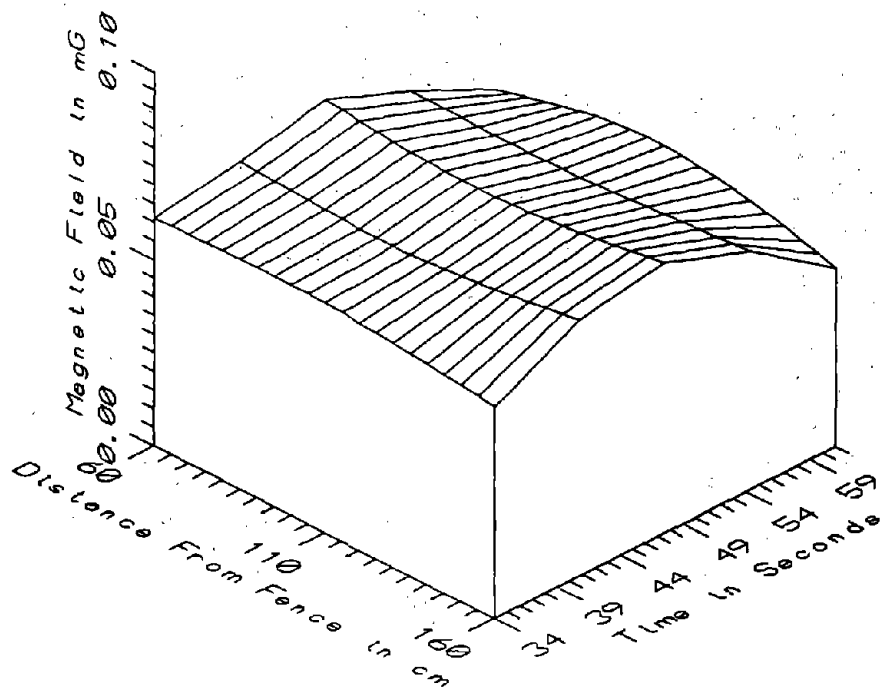
NEC045, SET 2, 110cm FROM MT VERNON SUBSTATION FENCE NEXT TO GATE



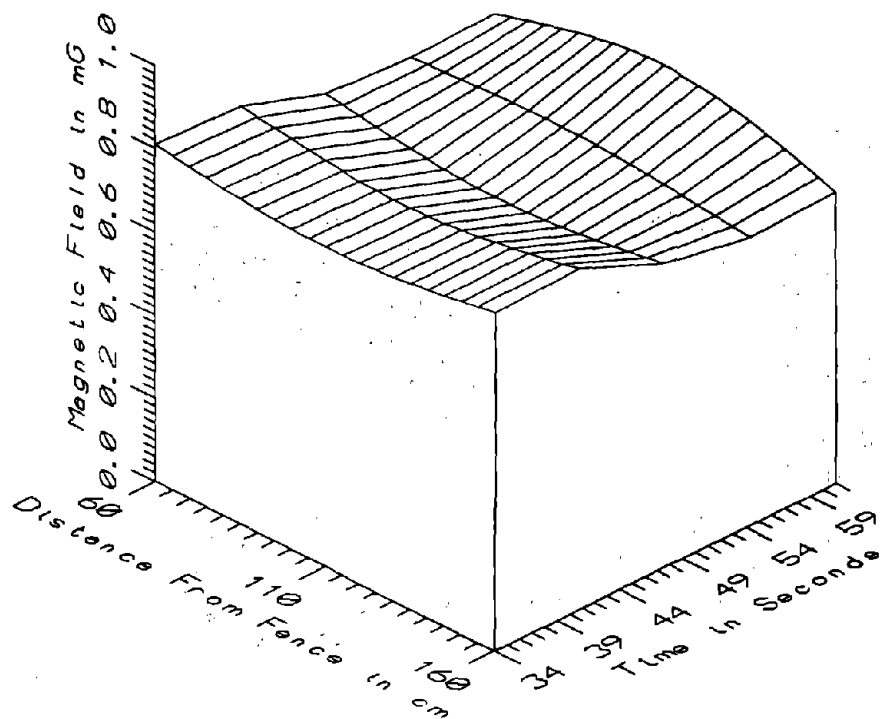
NEC045, SET 2, 160cm FROM MT VERNON SUBSTATION FENCE NEXT TO GATE



NEC045, SET 2, 160cm FROM MT VERNON SUBSTATION FENCE NEXT TO GATE



NEC045, SET 2, MT VERNON SUBSTATION NEXT TO GATE - HIGH FREQ 305-2560Hz



NEC045, SET 2, MT VERNON SUBSTATION NEXT TO GATE - ALL FREQ 5-2560Hz

Section 1

1. The first part of the document discusses the importance of maintaining accurate records of all transactions.

2. It is essential to ensure that all entries are clearly legible and include the date, amount, and a brief description of the transaction.

3. Regularly reconciling the records with bank statements helps to identify any discrepancies or errors.

4. Keeping receipts and supporting documents for each entry provides a clear audit trail and is necessary for tax purposes.

5. Consistent record-keeping is the foundation for accurate financial reporting.

6. This section concludes with a reminder to review the records periodically to ensure their accuracy.

7. The next section will discuss the various methods used to collect and analyze financial data.

Section 2

8. The second part of the document focuses on the different methods used to collect and analyze financial data.

9. These methods include direct observation, interviews, and the use of various data collection tools.

10. Each method has its own strengths and weaknesses, and the choice of method depends on the specific requirements of the study.

11. Understanding these methods is crucial for designing a robust data collection strategy.

12. The final section of the document provides a summary of the key points discussed and offers recommendations for further research.

APPENDIX AU

DATASET NEC046
VERTICAL PROFILES ON STATION PLATFORM
RED BANK, NORTH JERSEY COAST LINE

Measurement Setup Code: Staff:43,42,44* Reference:46,45,47*
Drawing: A-9

Vehicle Status: Four trains stopped at the station,
one of which was diesel-electric

Measurement Date: April 2, 1992

Measurement Time: Start: 17:31:59
End: 18:00:00

Number of Samples: 162

Programmed Sample Interval: 5 sec

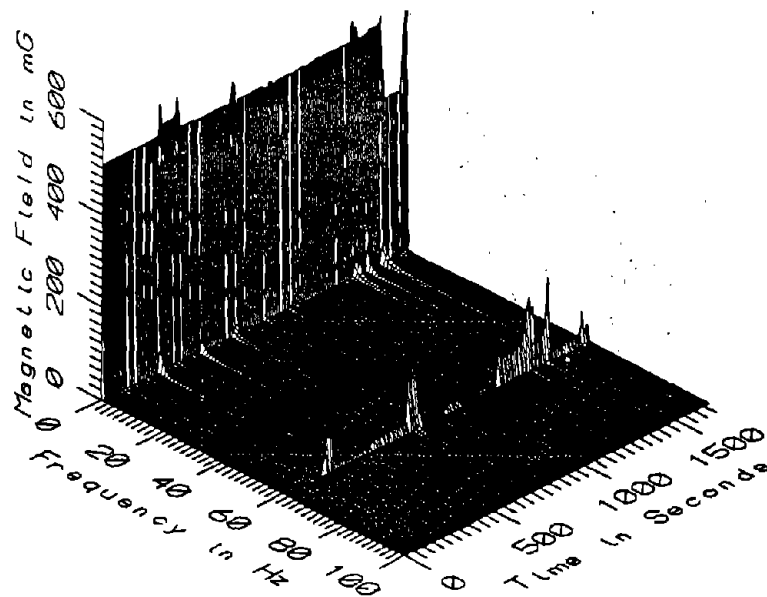
Actual Sample Interval: 10.4 sec*

Frequency Spectrum Parameters

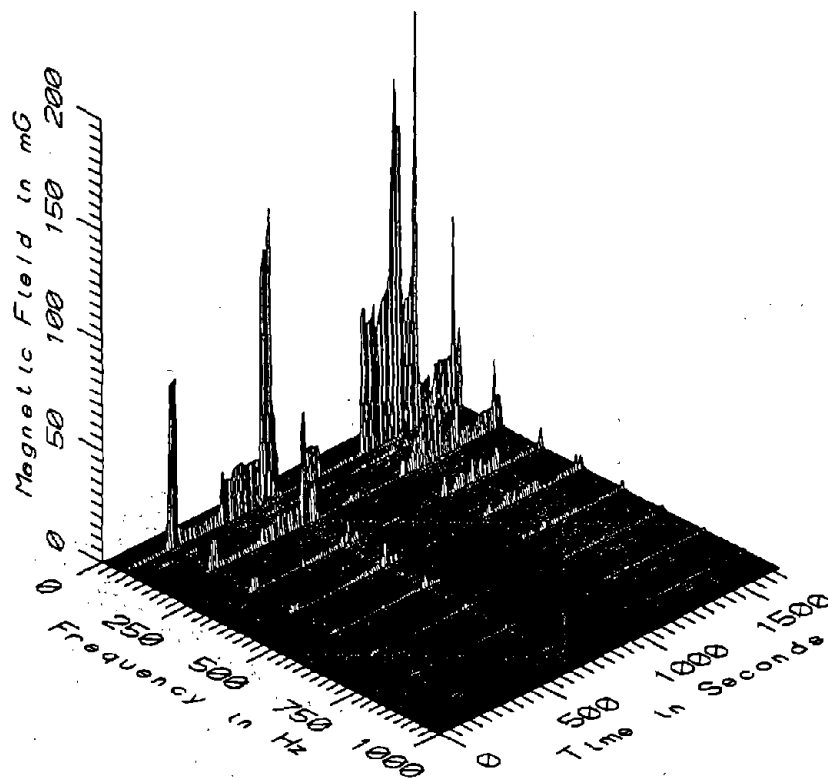
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

Missing or Suspect Data: None

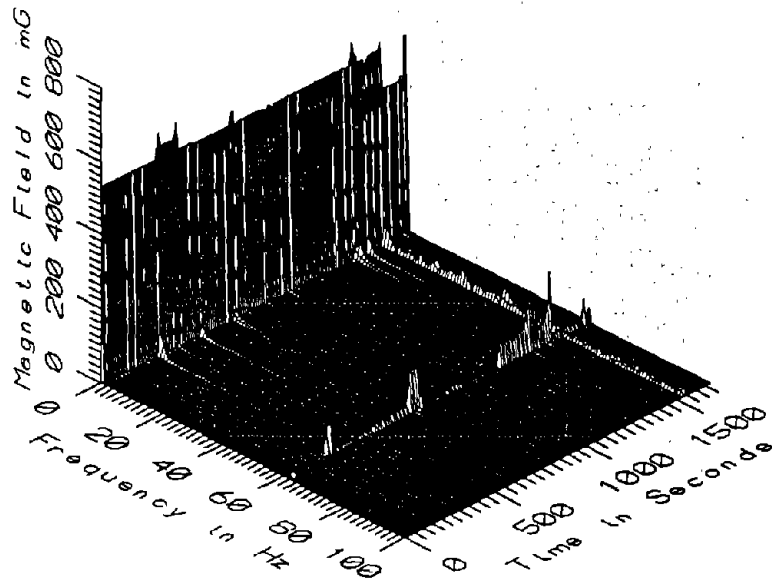
* Measurements were made at the center, east end, and west end of the station platform as part of the same dataset. Recording was interrupted while the equipment was moved, giving rise to larger than normal average sample intervals.



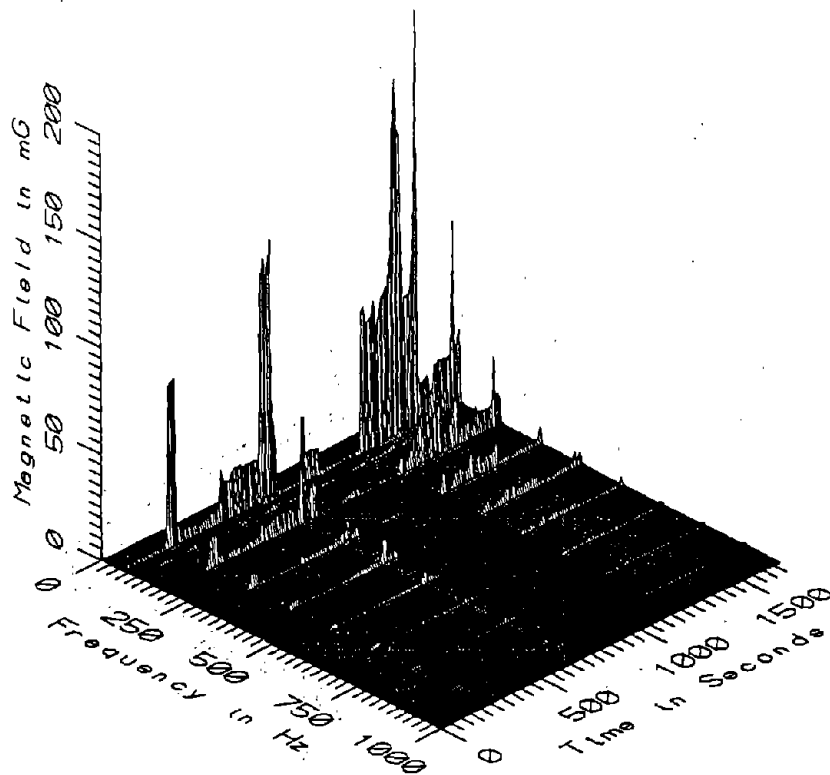
NEC046 - 10cm ABOVE EDGE OF RED BANK STATION PLATFORM



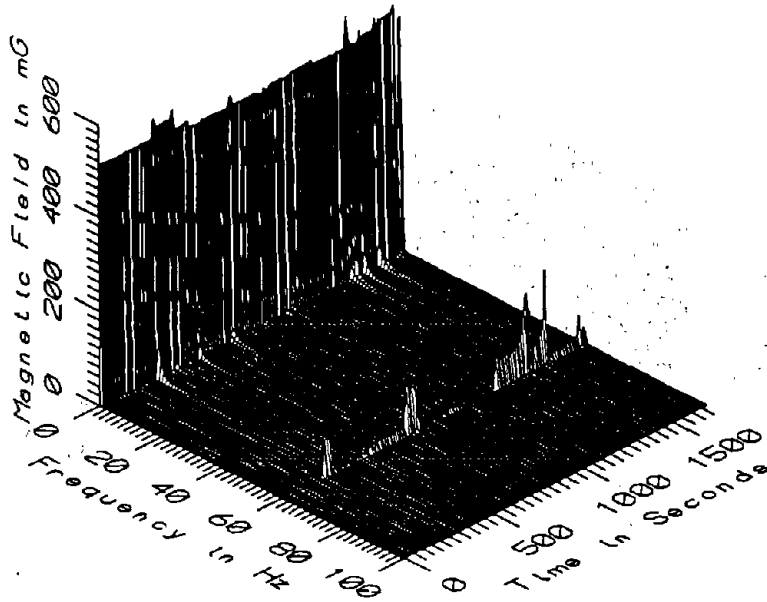
NEC046 - 10cm ABOVE EDGE OF RED BANK STATION PLATFORM



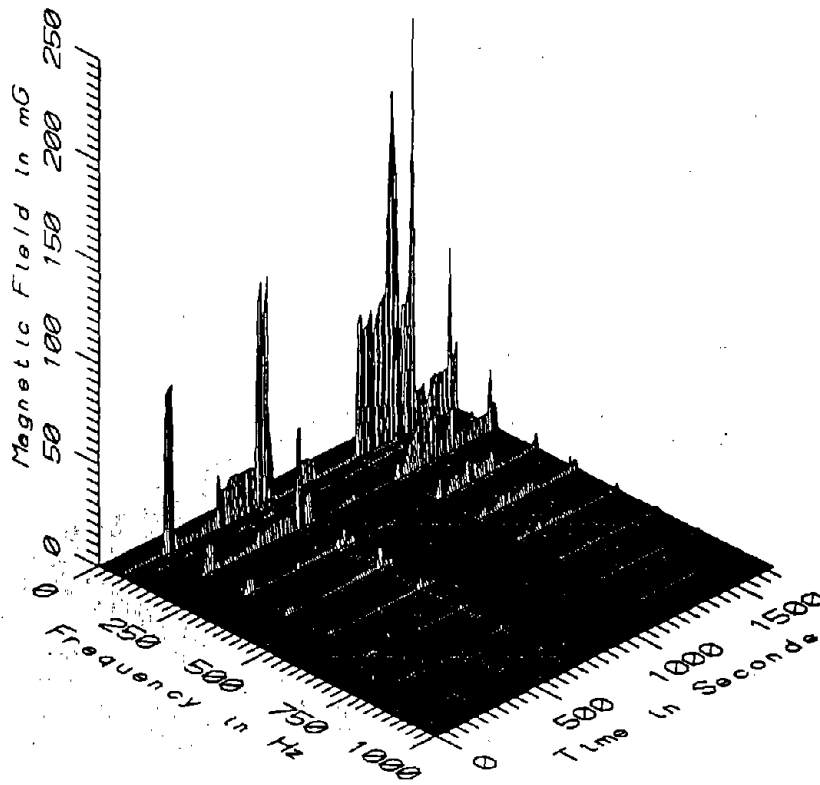
NEC046 - 60cm ABOVE EDGE OF RED BANK STATION PLATFORM



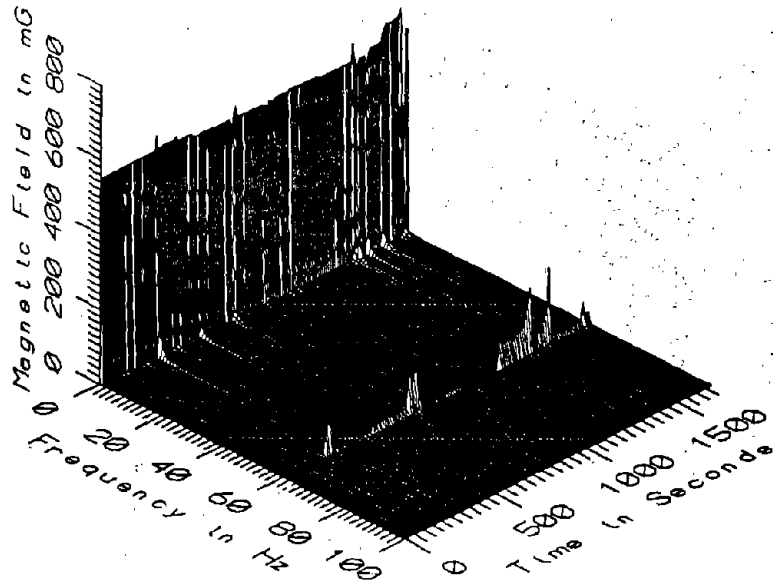
NEC046 - 60cm ABOVE EDGE OF RED BANK STATION PLATFORM



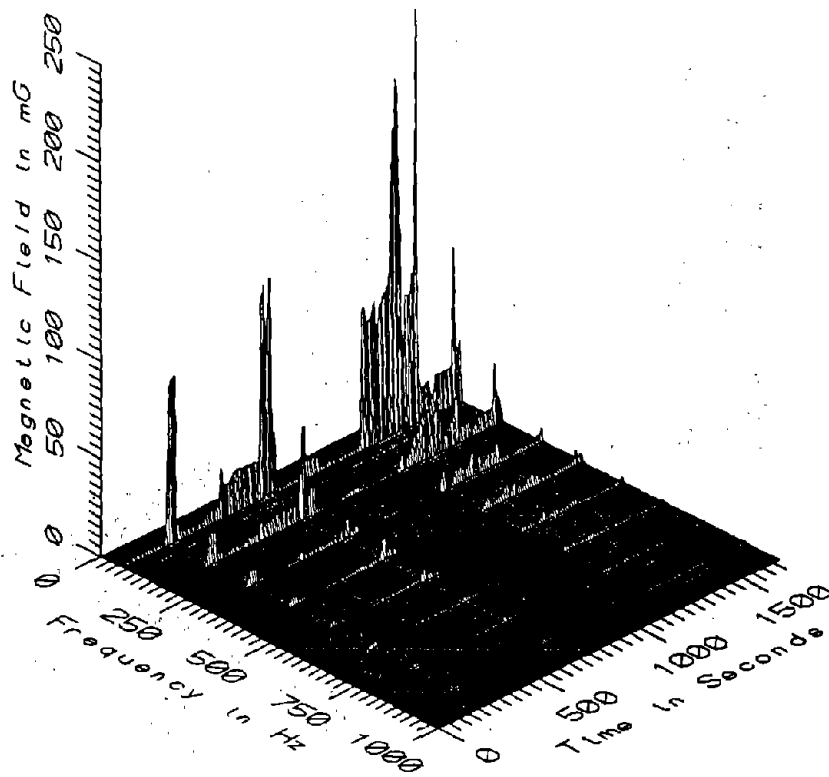
NEC046 - 110cm ABOVE EDGE OF RED BANK STATION PLATFORM



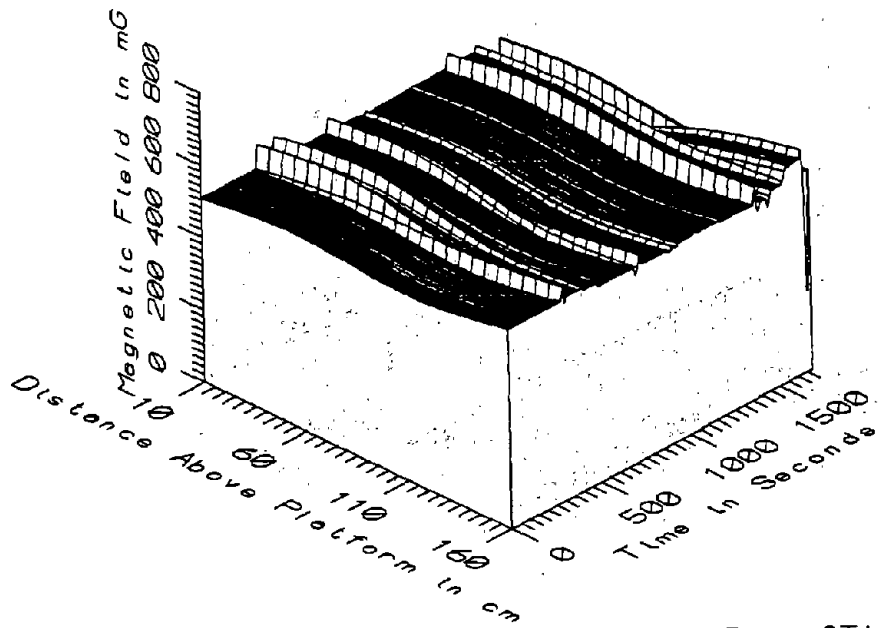
NEC046 - 110cm. ABOVE EDGE OF RED BANK STATION PLATFORM



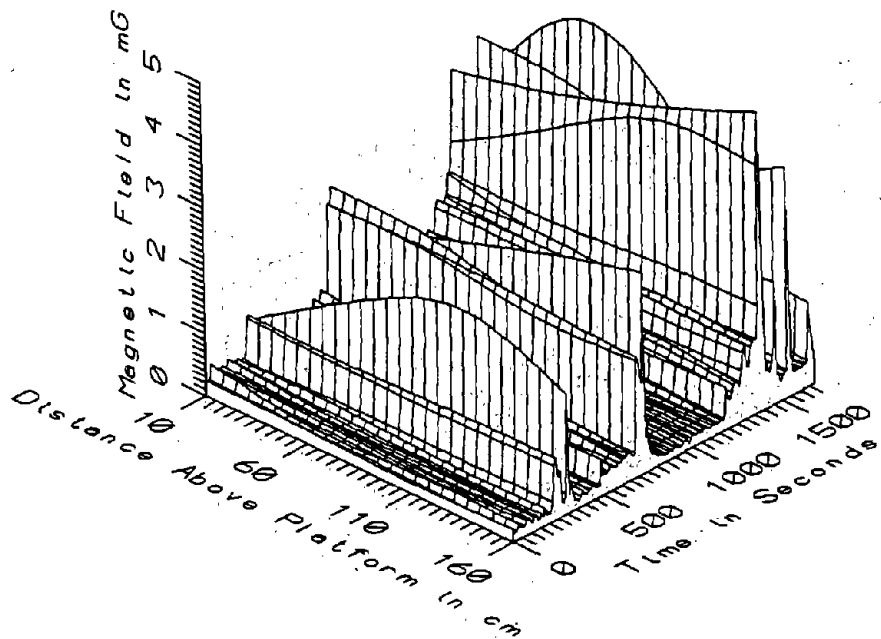
NEC046 - 160cm ABOVE EDGE OF RED BANK STATION PLATFORM



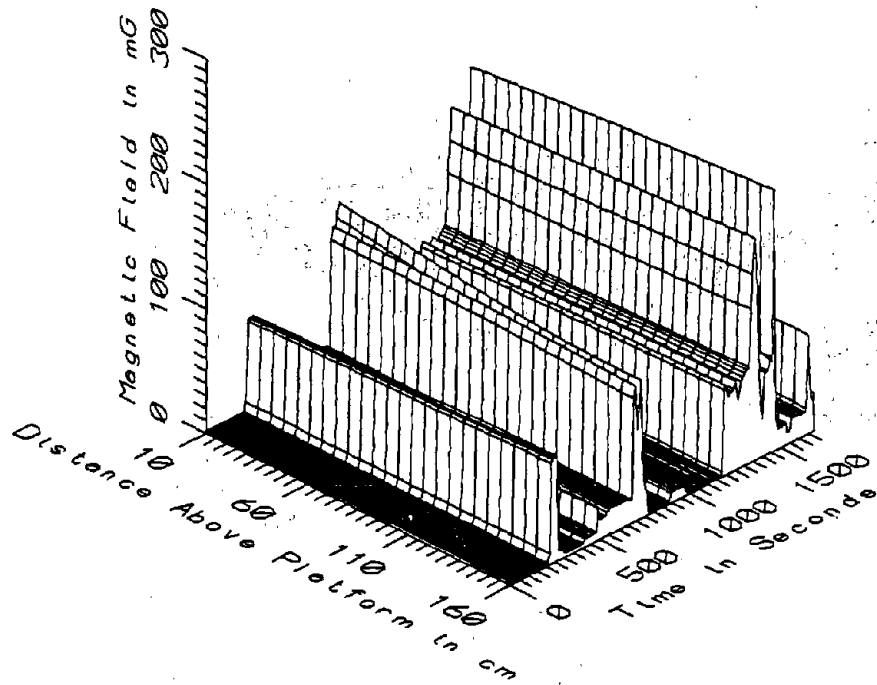
NEC046 - 160cm ABOVE EDGE OF RED BANK STATION PLATFORM



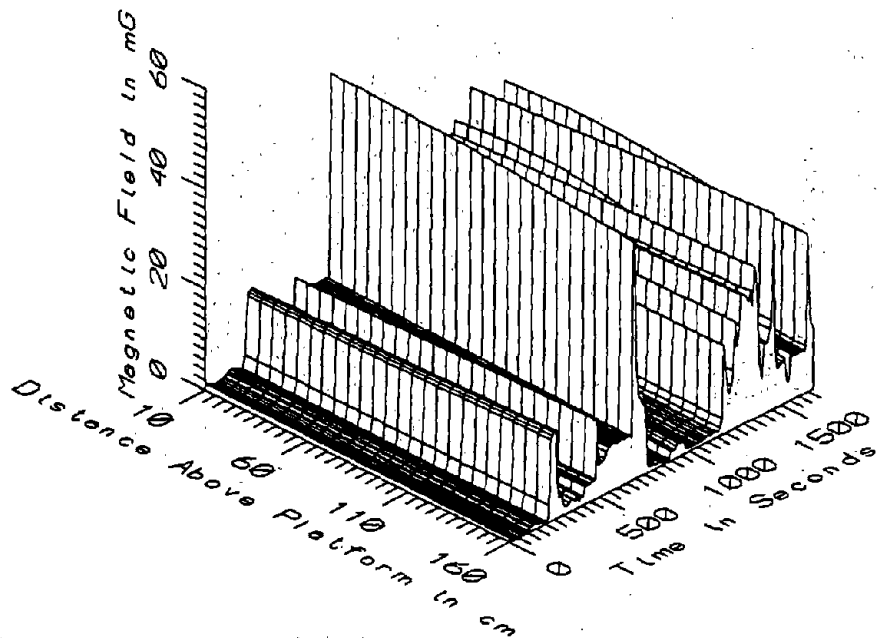
NEC046 - EDGE OF RED BANK STATION PLATFORM - STATIC



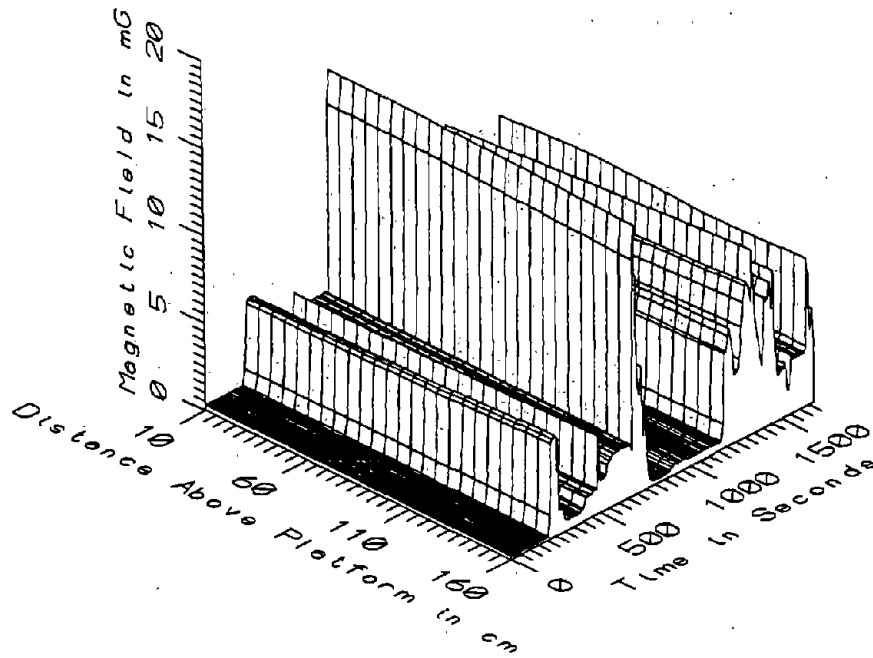
NEC046 - EDGE OF RED BANK STATION PLATFORM - LOW FREQ. 5-45Hz



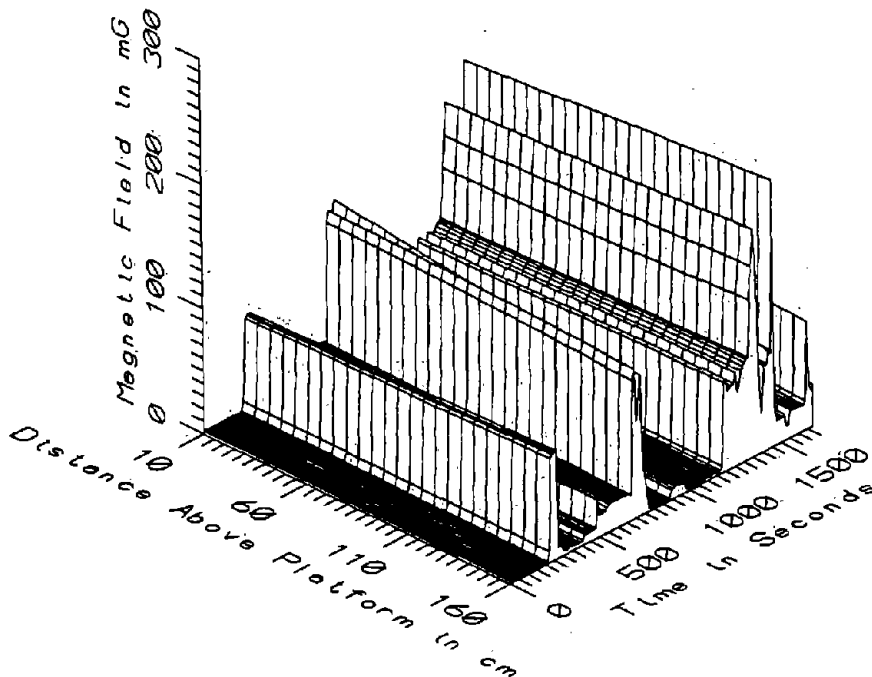
NEC046 - EDGE OF RED BANK STATION PLATFORM - POWER FREQ, 50-60Hz



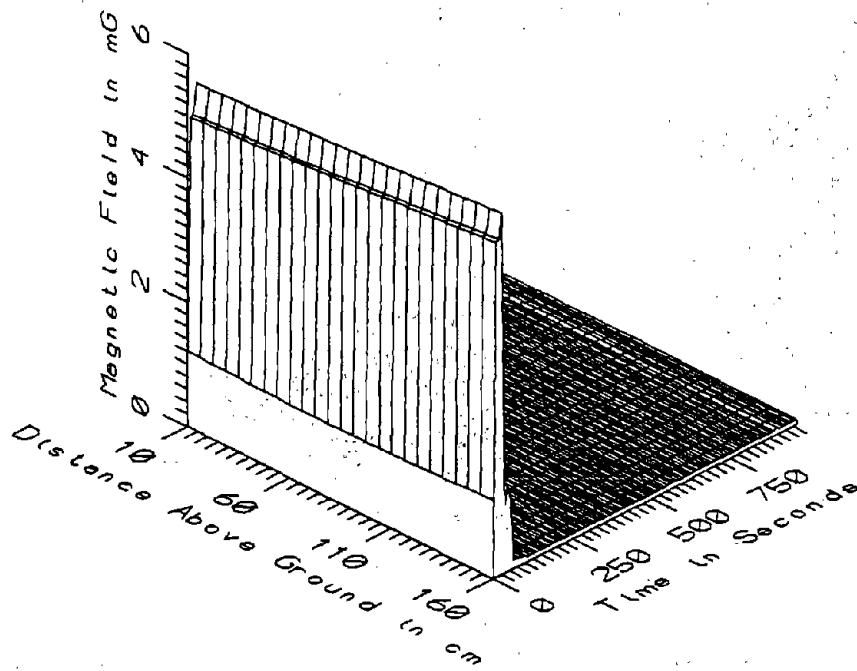
NEC046 - EDGE OF RED BANK STATION PLATFORM - POWER HARM, 65-300Hz



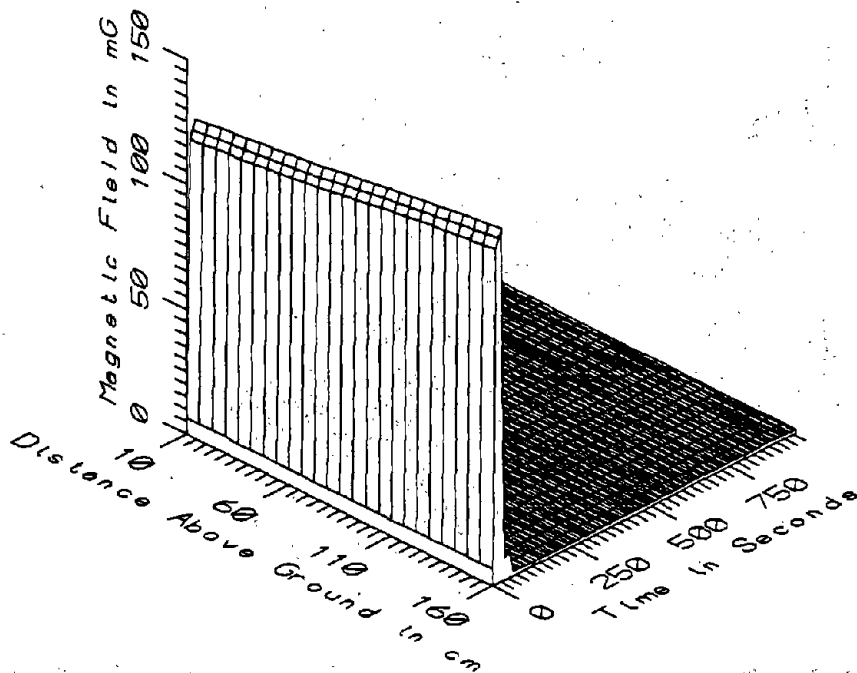
NEC046 - EDGE OF RED BANK STATION PLATFORM - HIGH FREQ, 305-2560Hz



NEC046 - EDGE OF RED BANK STATION PLATFORM - ALL FREQ, 5-2560Hz



NEC047 - 20' SOUTH OF TRACK, NJ LONG BRANCH - HIGH FREQ, 305-2560Hz



NEC047 - 20' SOUTH OF TRACK, NJ LONG BRANCH - ALL FREQ, 5-2560Hz

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
RESEARCH REPORT NO. 1000

THE EFFECT OF TEMPERATURE ON THE RATE OF REACTION OF
HYDROGEN PEROXIDE WITH FERROUS SULFATE

BY
J. H. COLEMAN AND
R. W. BENTLEY

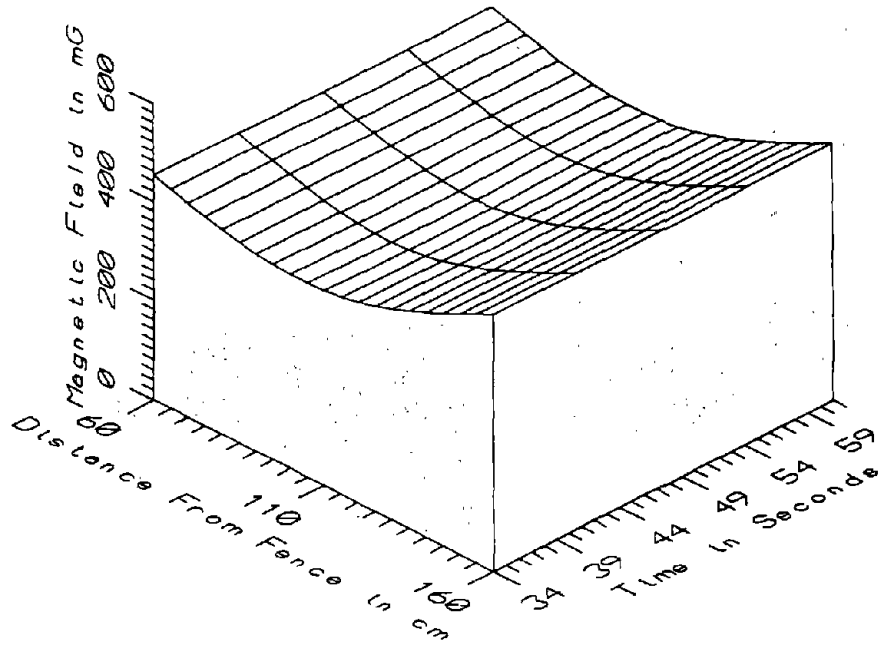
RECEIVED JANUARY 15, 1954
REVISION RECEIVED MARCH 10, 1954

ABSTRACT

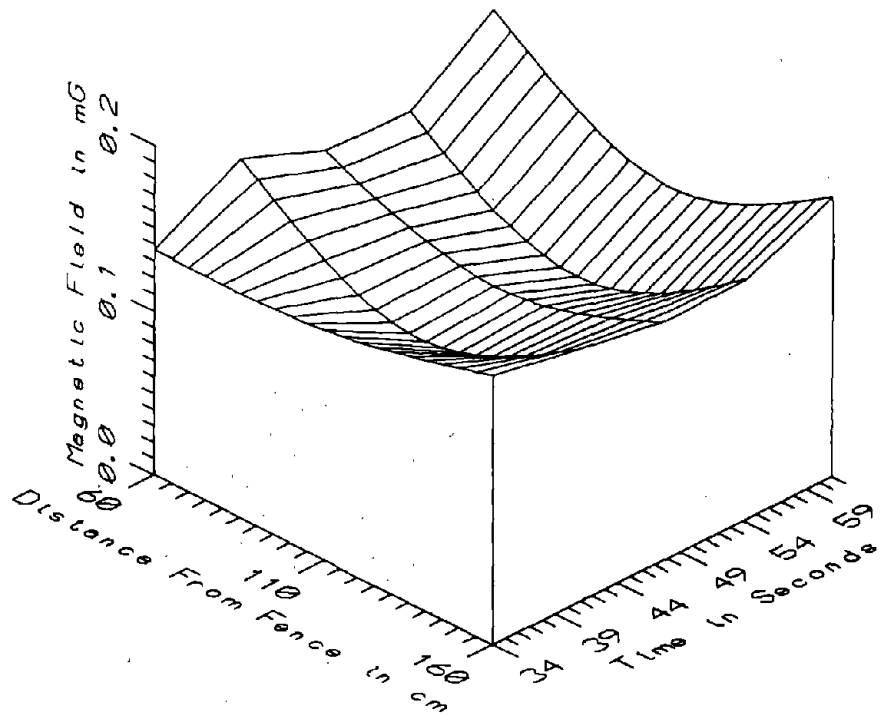
The reaction of hydrogen peroxide with ferrous sulfate in sulfuric acid solution has been studied at various temperatures. The rate of reaction is first order in ferrous sulfate and first order in hydrogen peroxide. The activation energy of the reaction is 14.5 kcal/mole. The rate constant at 25°C is 1.5×10^4 liter/mole-sec.

INTRODUCTION

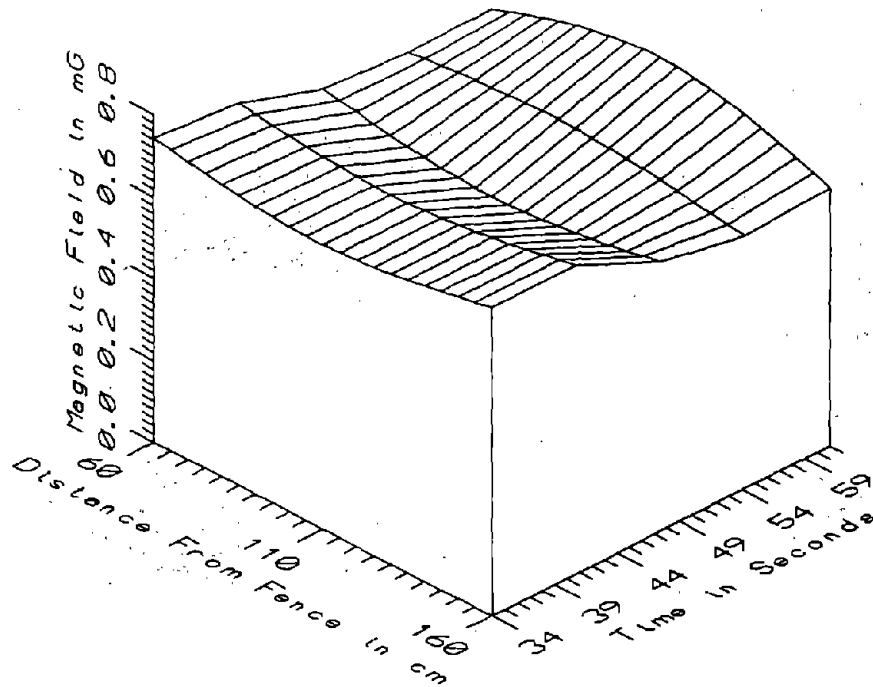
The reaction of hydrogen peroxide with ferrous sulfate in sulfuric acid solution has been studied at various temperatures. The rate of reaction is first order in ferrous sulfate and first order in hydrogen peroxide. The activation energy of the reaction is 14.5 kcal/mole. The rate constant at 25°C is 1.5×10^4 liter/mole-sec.



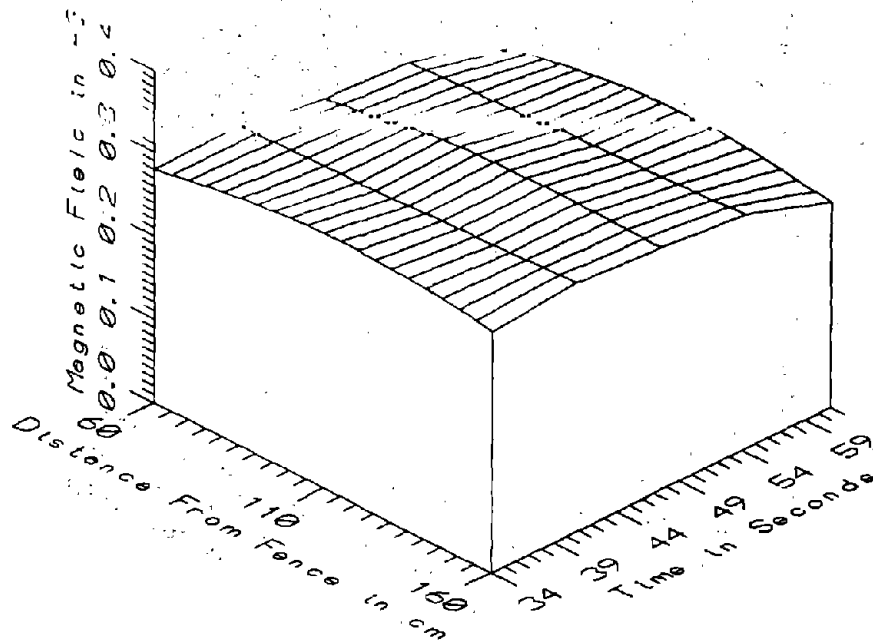
NEC045, SET 2, MT VERNON SUBSTATION NEXT TO GATE - STATIC



NEC045, SET 2, MT VERNON SUBSTATION NEXT TO GATE - LOW FREQ, 5-45Hz



NEC045, SET 2, MT VERNON SUBSTATION NEXT TO GATE - POWER FREQ. 50-60Hz



NEC045, SET 2, MT VERNON SUBSTATION NEXT TO GATE - POWER HARM 65-300Hz

APPENDIX AV

DATASET NEC047
VERTICAL PROFILE AT THE WAYSIDE
NORTH JERSEY COAST LINE (60 HZ)

Measurement Setup Code: Staff: 33 Reference: 34
 Drawing: A-7

Vehicle Status: One train from the west passed at 40
 seconds into record with no later
 traffic

Measurement Date: April 2, 1992

Measurement Time: Start: 18:25:59
 End: 18:42:00

Number of Samples: 105

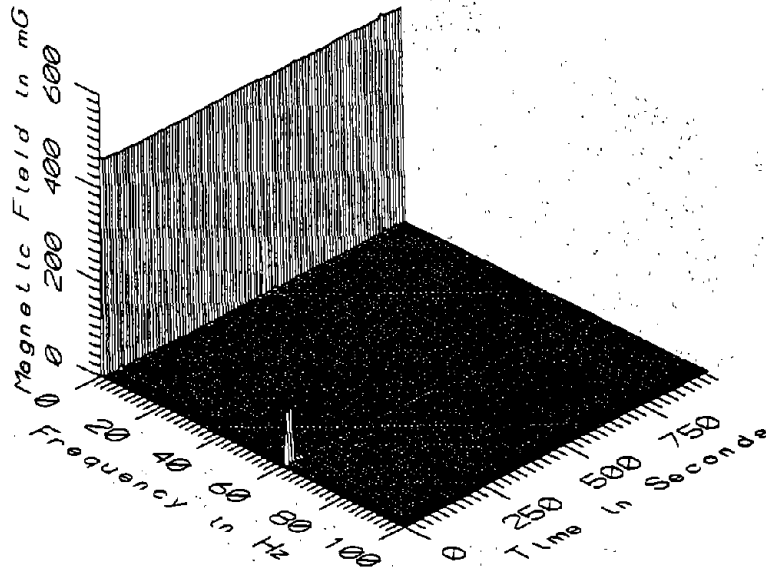
Programmed Sample Interval: 5 sec

Actual Sample Interval: 9.2 sec

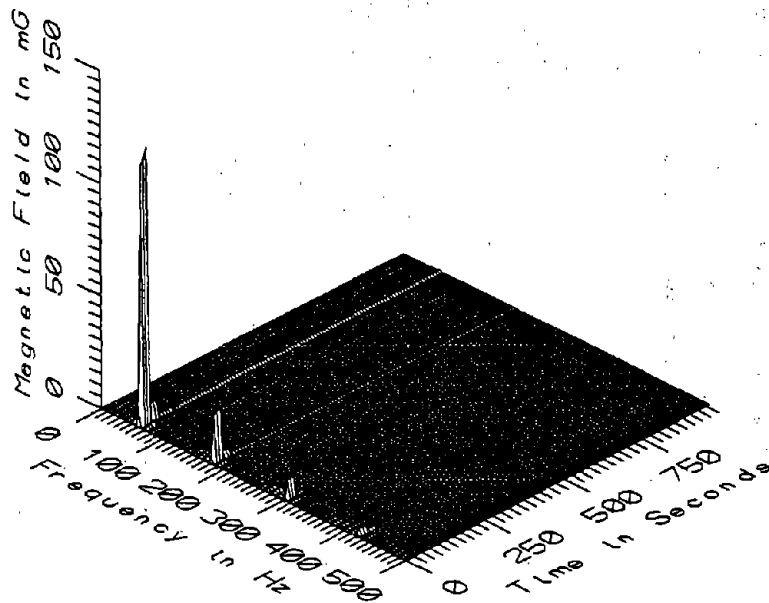
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

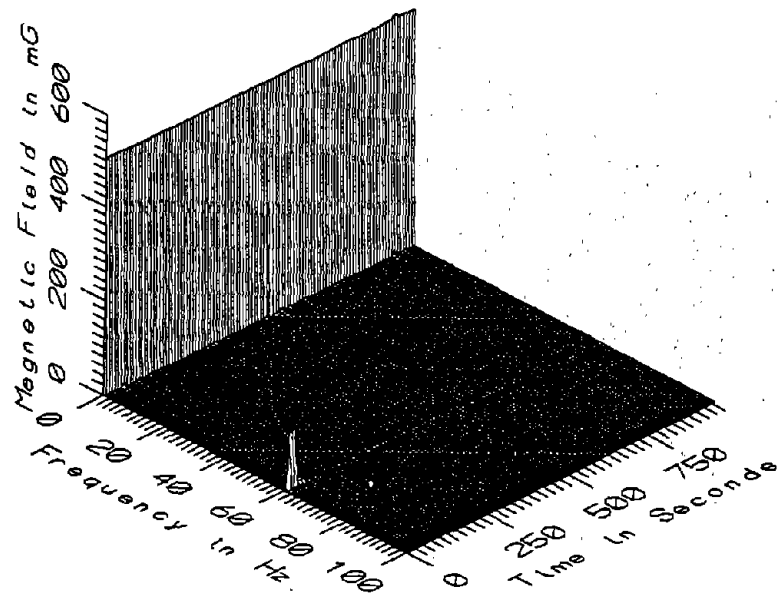
Missing or Suspect Data: None



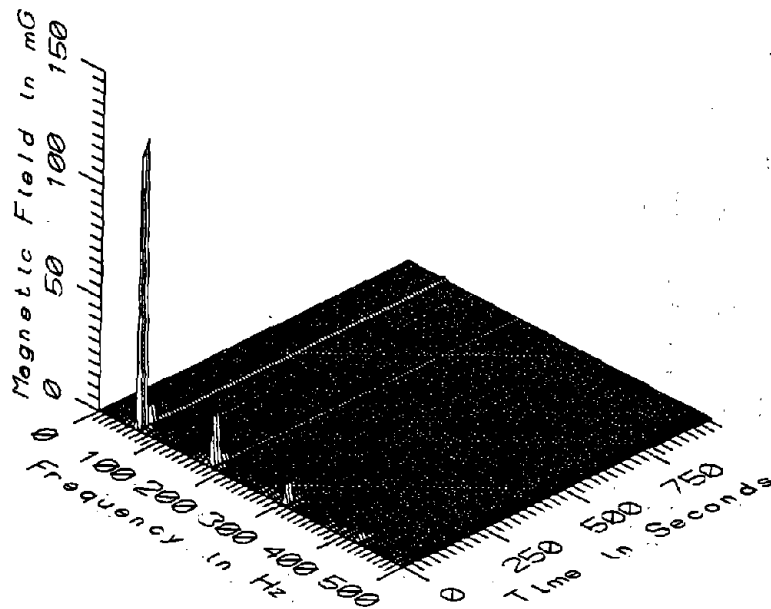
NEC047 - 10cm ABOVE GROUND, 20' SOUTH OF TRACK, NJ LONG BRANCH



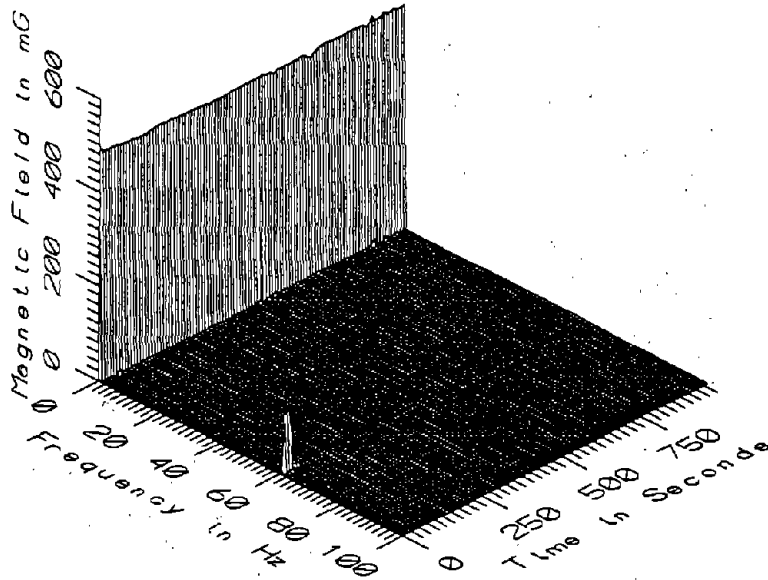
NEC047 - 10cm ABOVE GROUND, 20' SOUTH OF TRACK, NJ LONG BRANCH



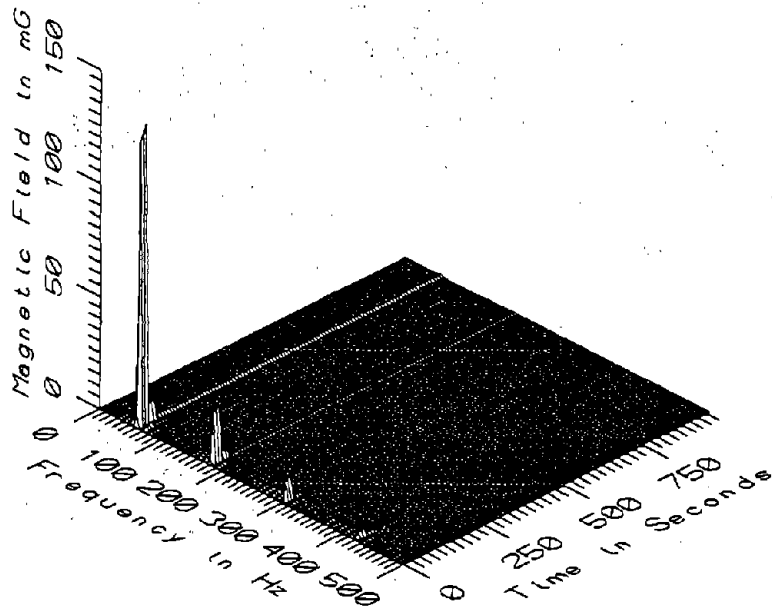
NEC047 - 60cm ABOVE GROUND, 20' SOUTH OF TRACK, NJ LONG BRANCH



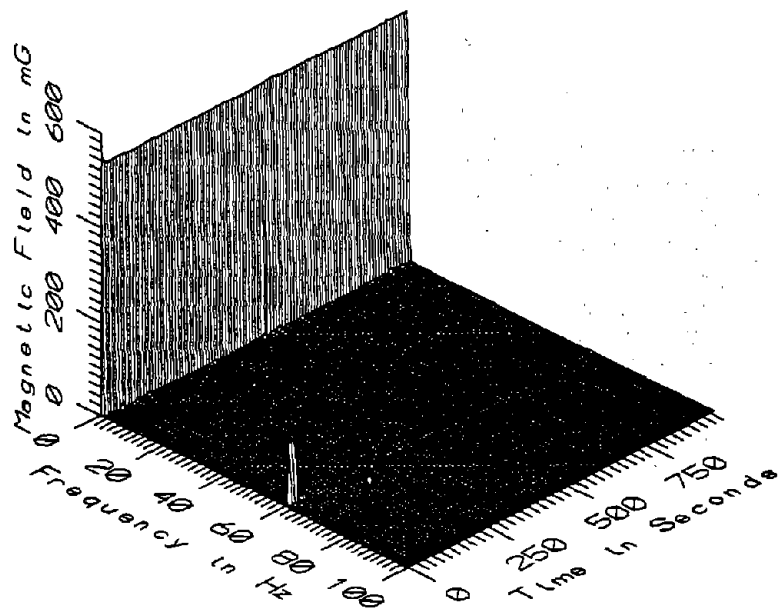
NEC047 - 60cm ABOVE GROUND, 20' SOUTH OF TRACK, NJ LONG BRANCH



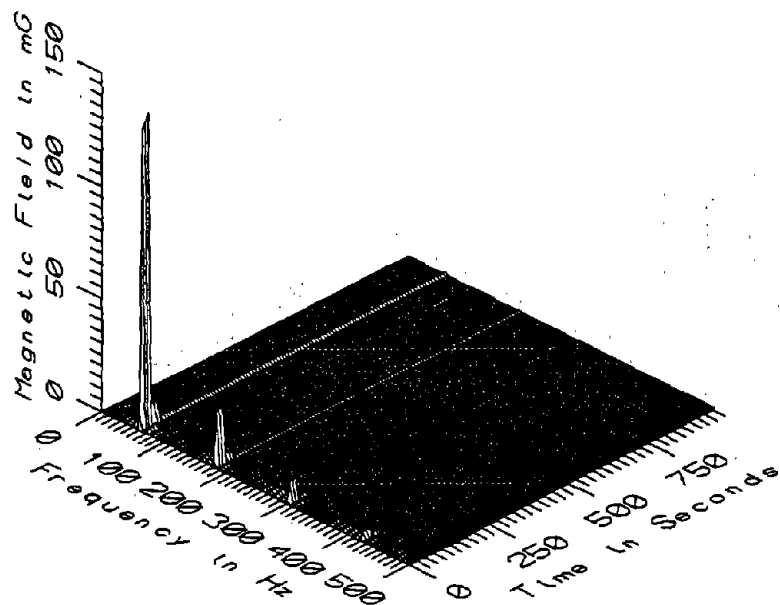
NEC047 - 110cm ABOVE GROUND, 20' SOUTH OF TRACK, NJ LONG BRANCH



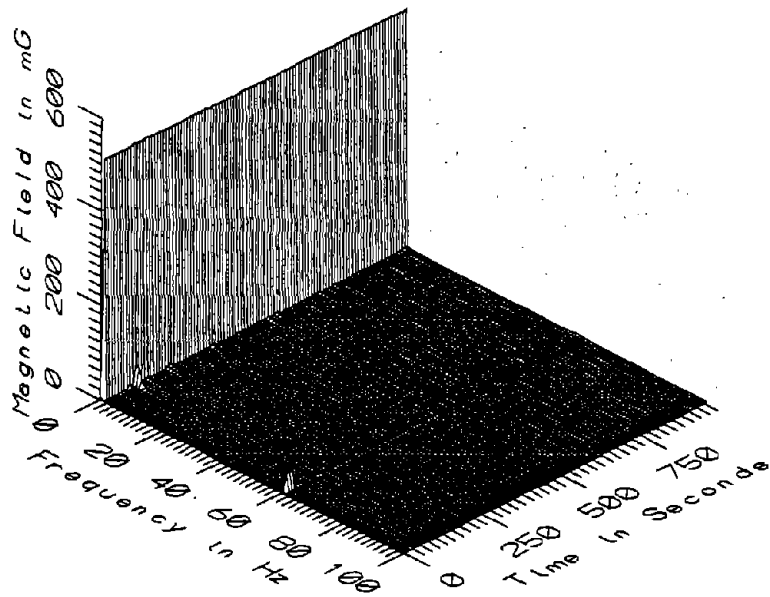
NEC047 - 110cm ABOVE GROUND, 20' SOUTH OF TRACK, NJ LONG BRANCH



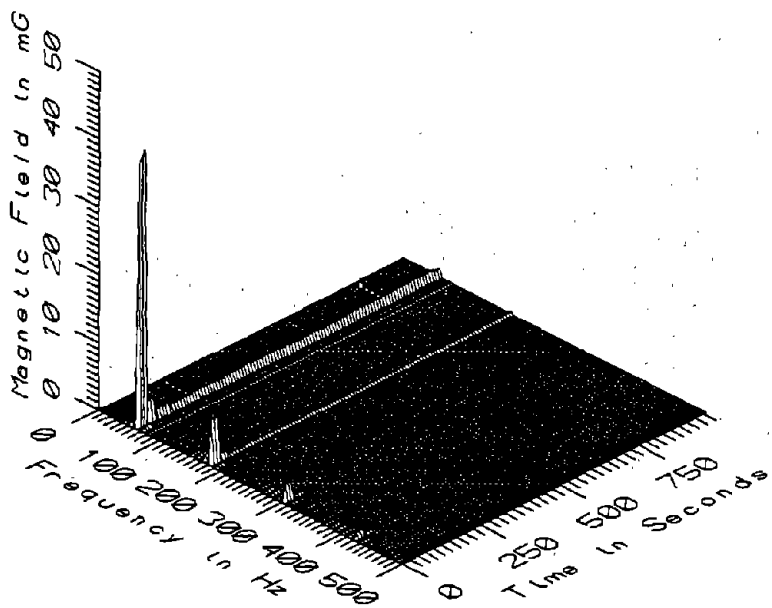
NEC047 - 160cm ABOVE GROUND, 20' SOUTH OF TRACK, NJ LONG BRANCH



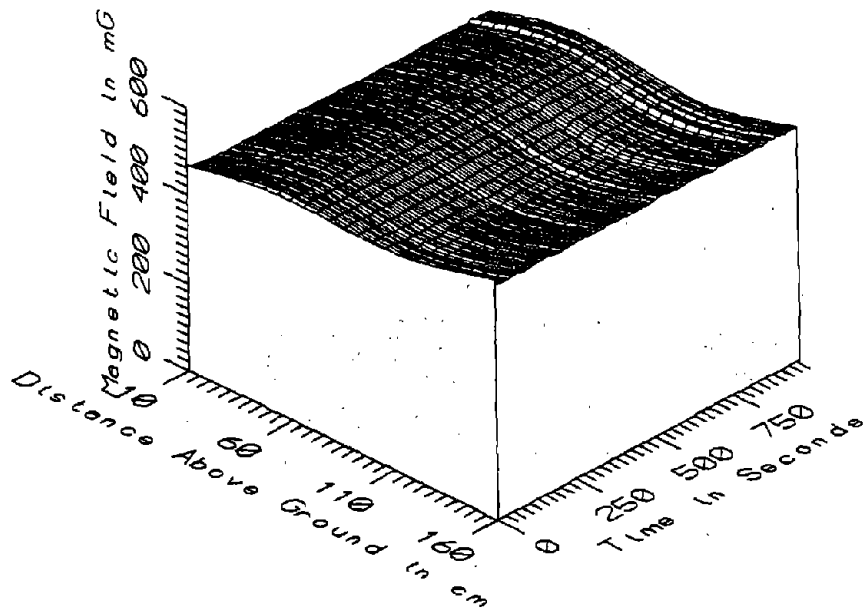
NEC047 - 160cm ABOVE GROUND, 20' SOUTH OF TRACK, NJ LONG BRANCH



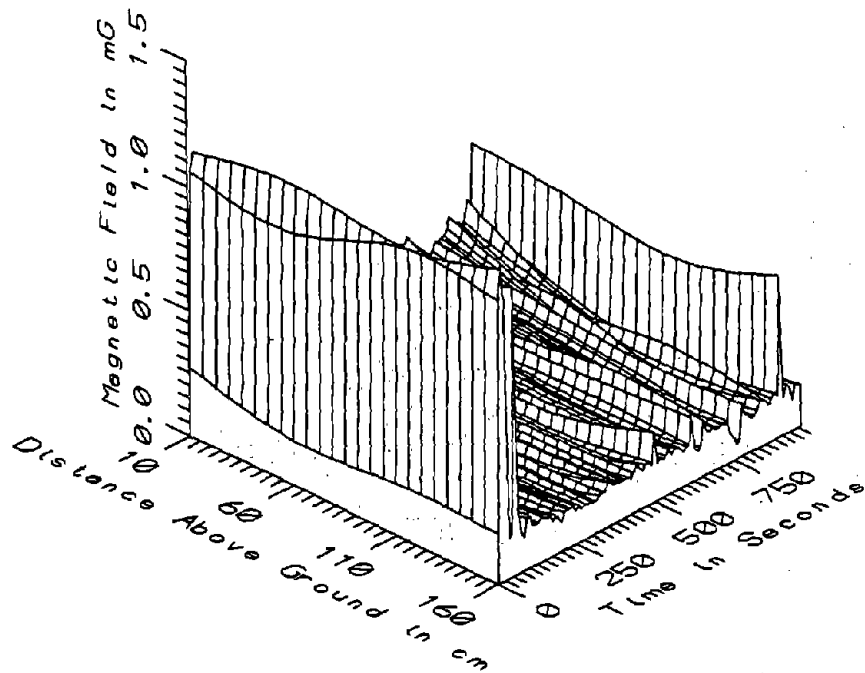
NEC047 - 10cm ABOVE GROUND, 40' SOUTH OF TRACK, NJ LONG BRANCH



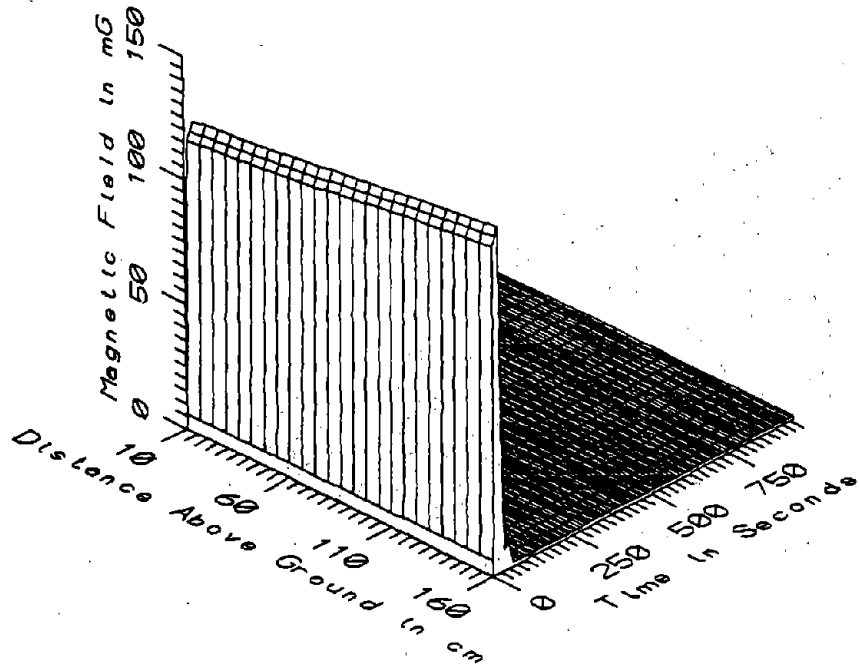
NEC047 - 10cm ABOVE GROUND, 40' SOUTH OF TRACK, NJ LONG BRANCH



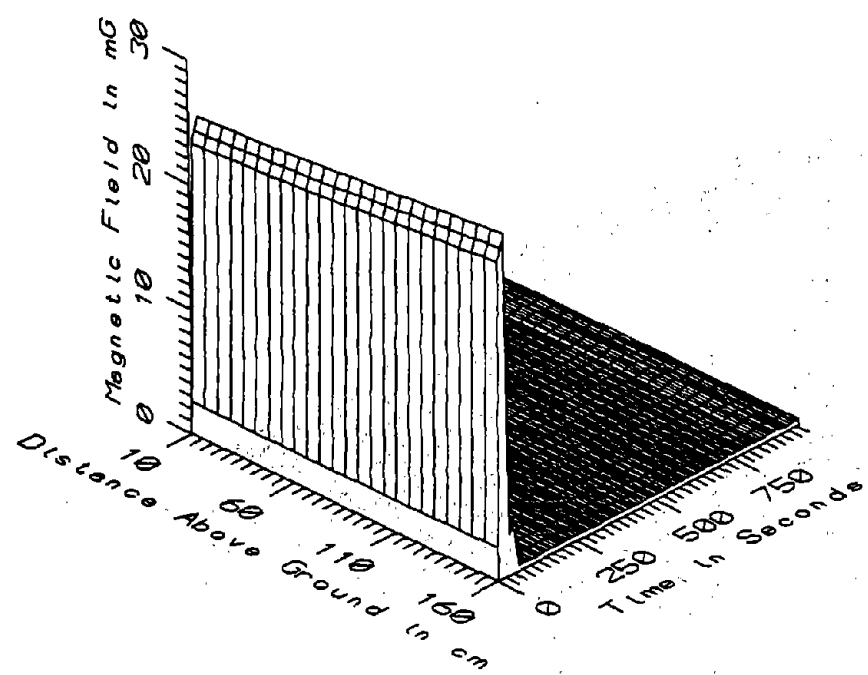
NEC047 - 20' SOUTH OF TRACK, NJ LONG BRANCH - STATIC



NEC047 - 20' SOUTH OF TRACK, NJ LONG BRANCH - LOW FREQ, 5-45Hz



NEC047 - 20' SOUTH OF TRACK, NJ LONG BRANCH - POWER FREQ, 50-60Hz



NEC047 - 20' SOUTH OF TRACK, NJ LONG BRANCH - POWER HARM, 65-300Hz

APPENDIX AW, SET 1

DATASET NEC048, SET 1
VERTICAL PROFILE AT THE FRONT OF THE FIRST COACH
NORTH JERSEY COAST LINE (60 HZ)

Measurement Setup Code: Staff: 17 Reference: 19
 Drawing: A-10

Vehicle Status: Travel toward Long Branch, brief
 stop at Middletown from 220 to 300
 second time points, phase break at
 105 seconds, passing another train
 at 355 seconds

Measurement Date: April 3, 1992

Measurement Time: Start: 7:04:58
 End: 7:11:36

Number of Samples: 46

Programmed Sample Interval: 5 sec

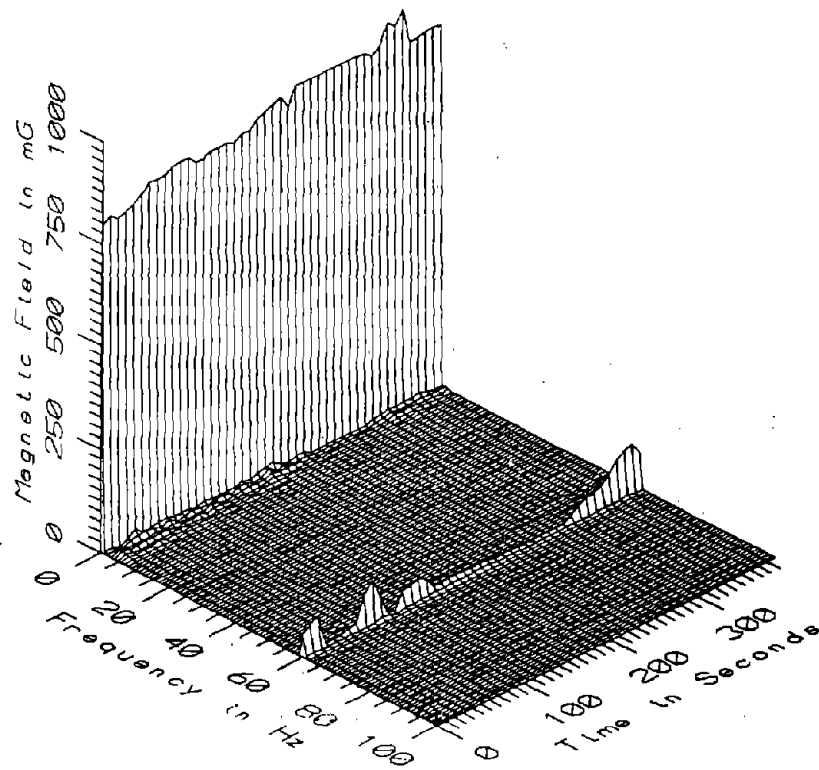
Actual Sample Interval: 8.8 sec*

Frequency Spectrum Parameters

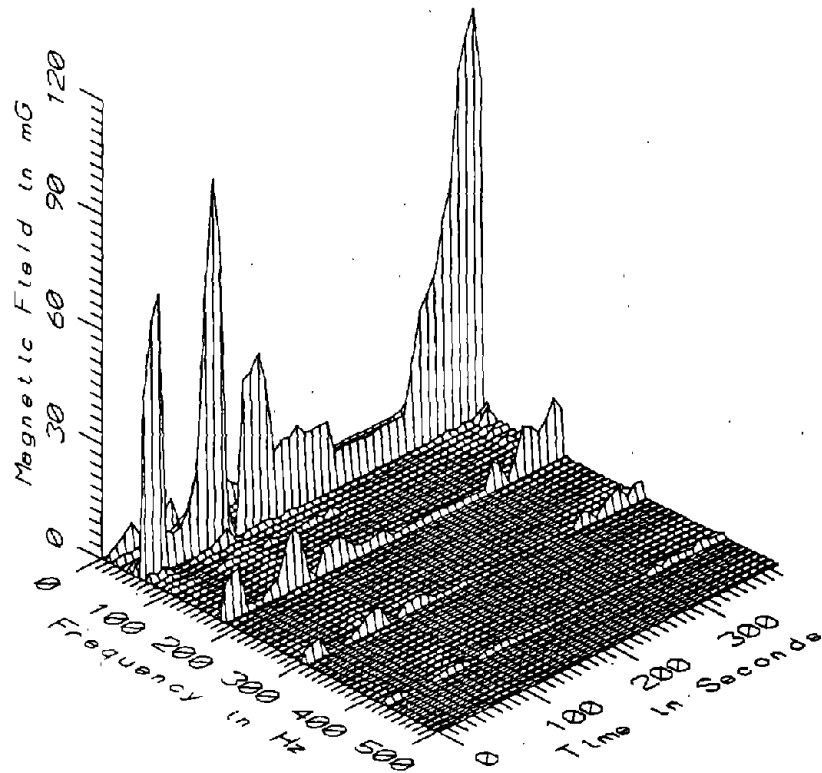
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

Missing or Suspect Data: The top sensor on the staff (160 cm)
 was inoperative.

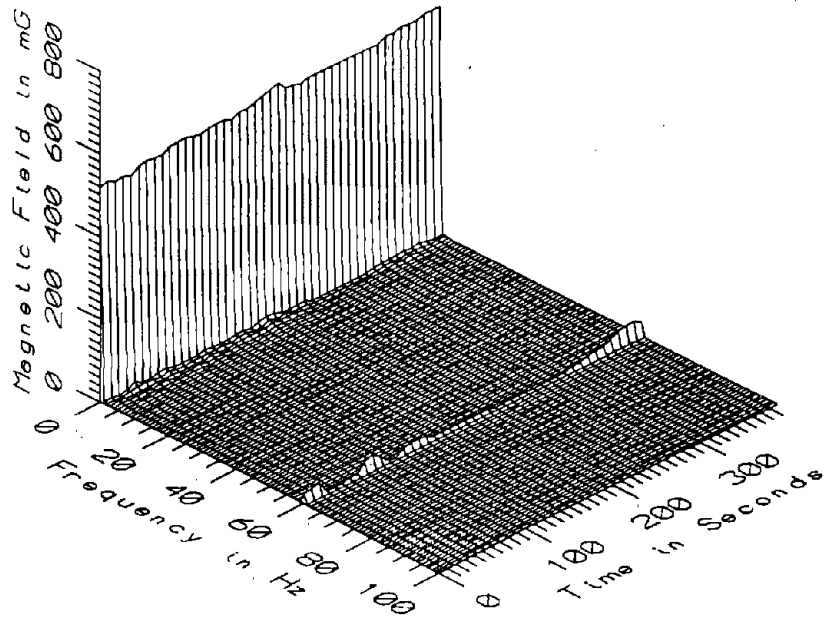
* Recording was discontinued while the sensor was moved between recording locations producing longer than normal average sample intervals.



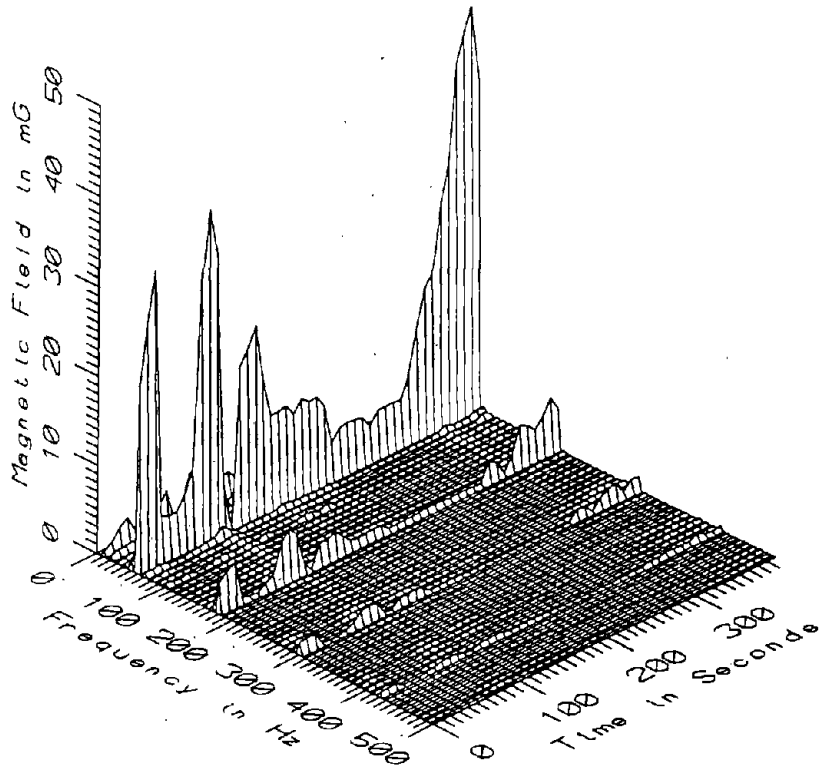
NEC048, SET 1, 10cm ABOVE FLOOR IN FIRST COACH



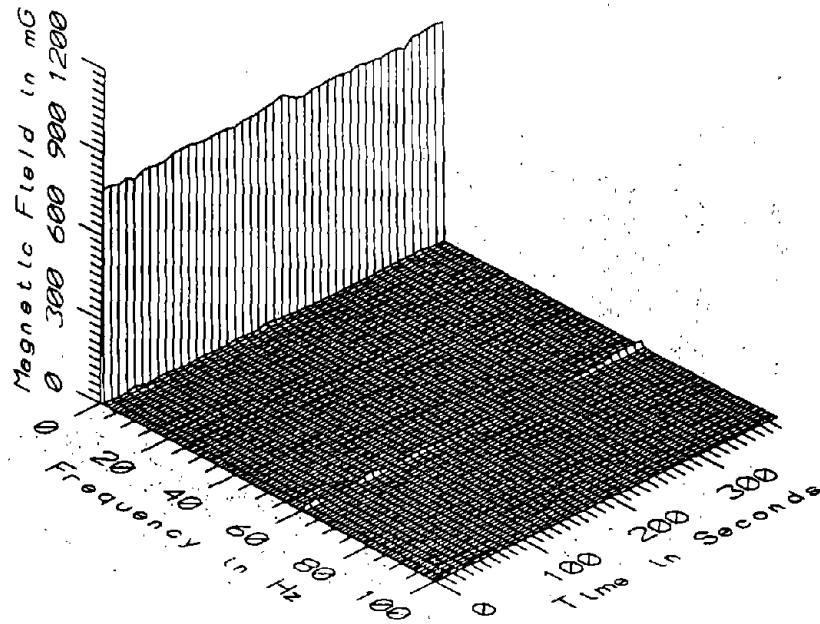
NEC048, SET 1, 10cm ABOVE FLOOR IN FIRST COACH



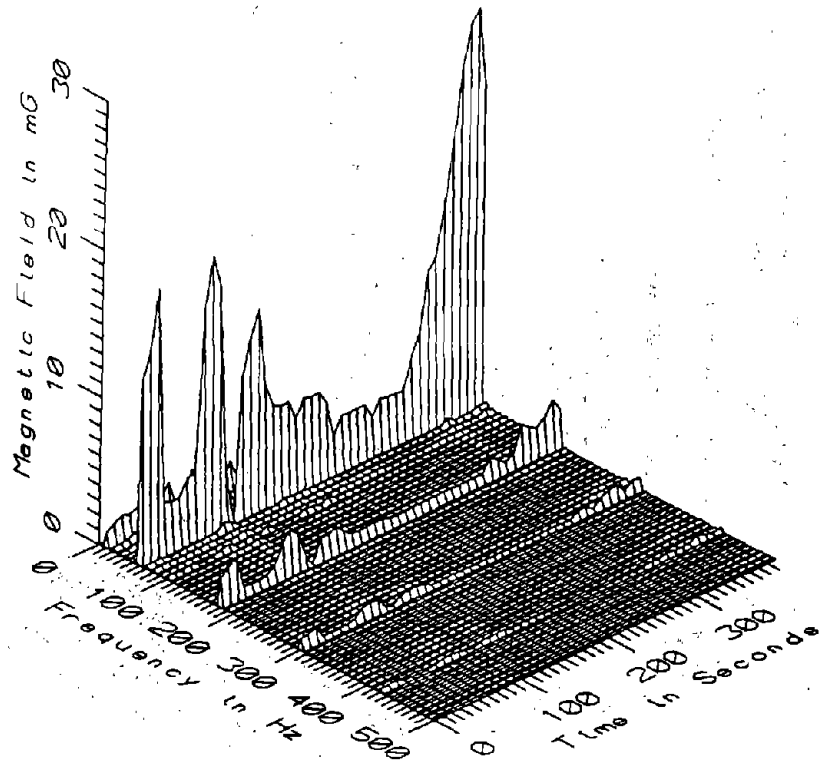
NEC048, SET 1, 60cm ABOVE FLOOR IN FIRST COACH



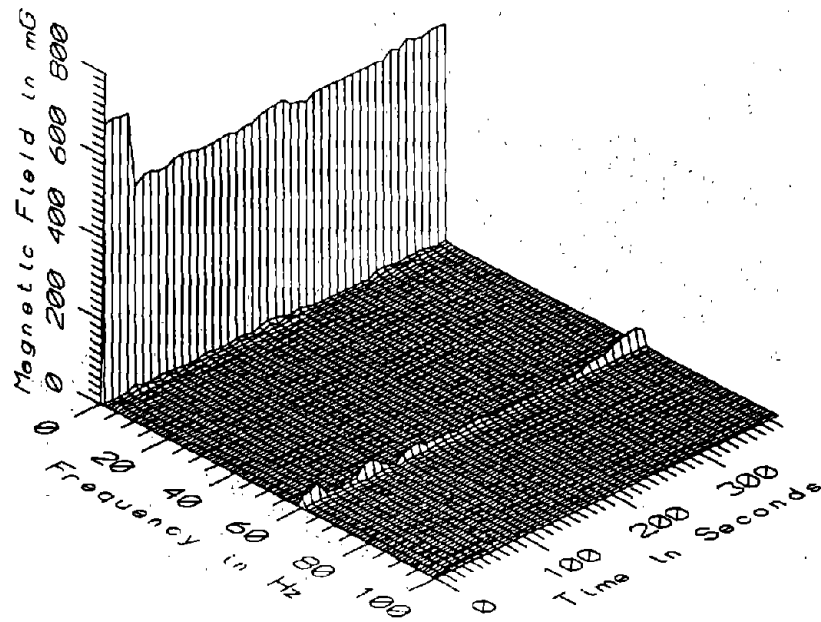
NEC048, SET 1, 60cm ABOVE FLOOR IN FIRST COACH



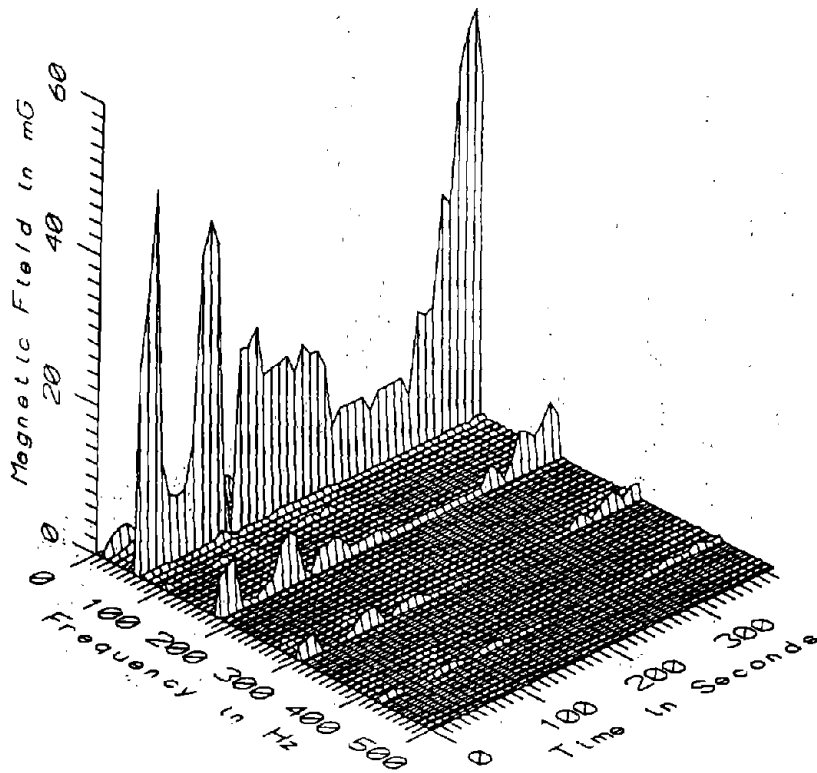
NEC048, SET 1, 110cm ABOVE FLOOR IN FIRST COACH



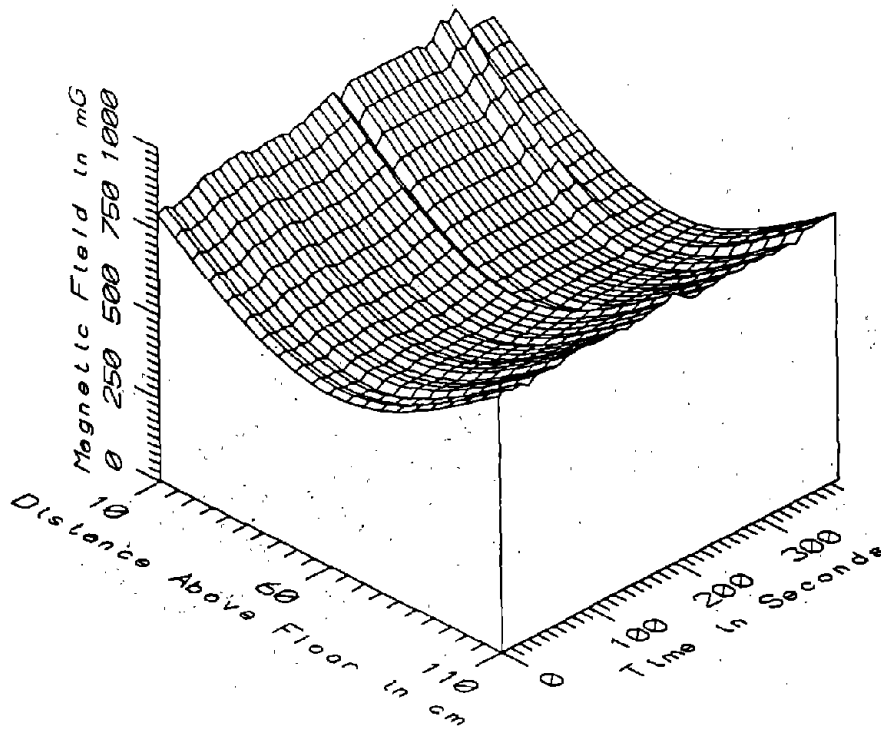
NEC048, SET 1, 110cm ABOVE FLOOR IN FIRST COACH



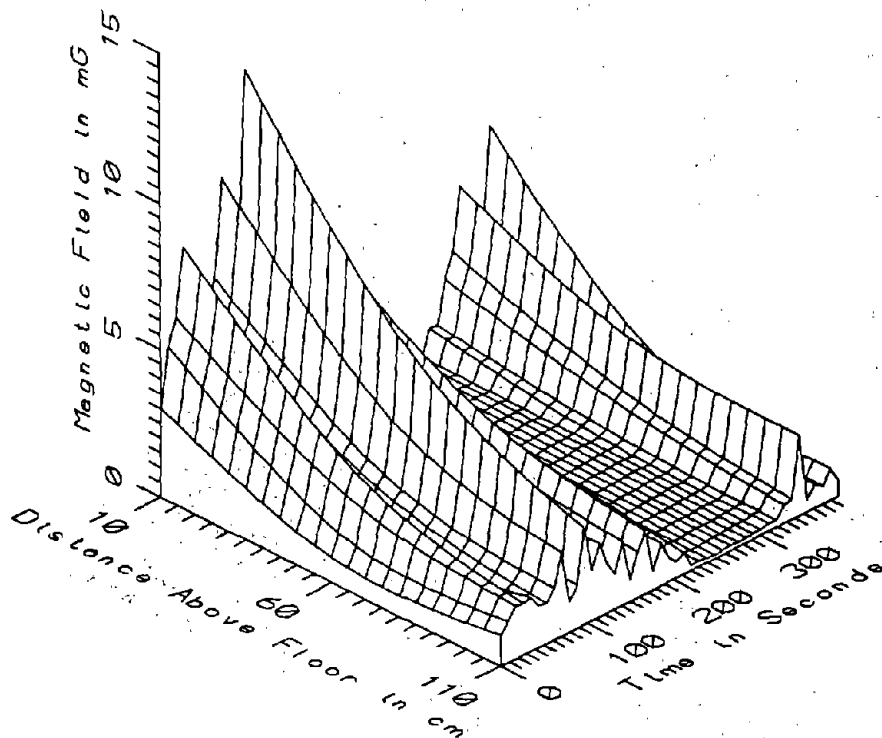
NEC048. SET 1, AISLE SEAT IN FIRST COACH



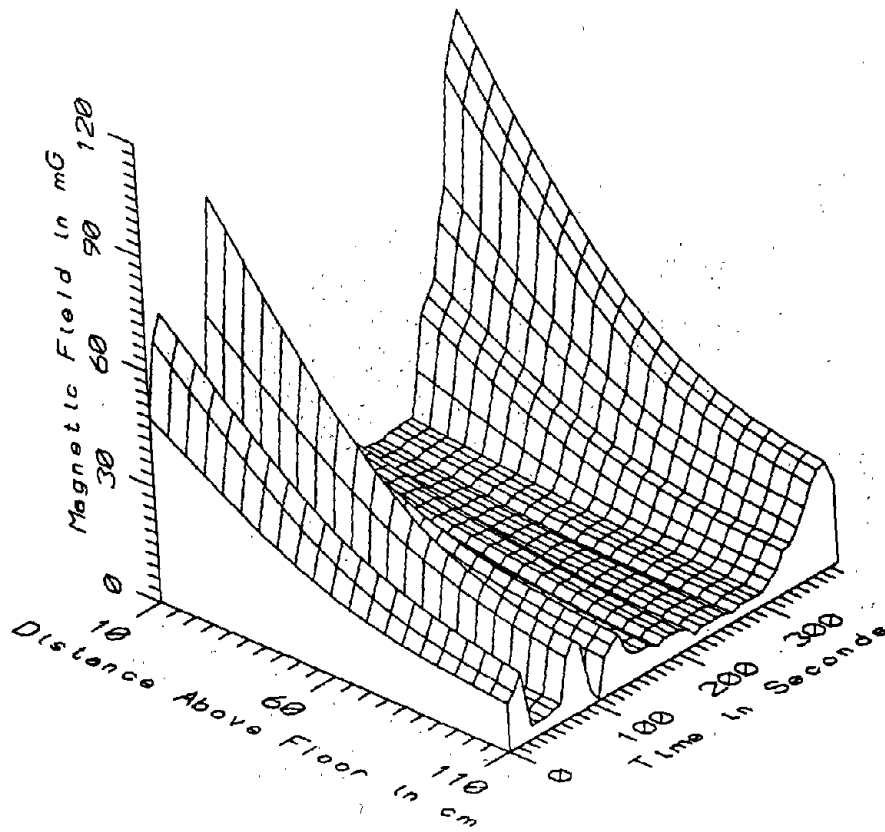
NEC048. SET 1, AISLE SEAT IN FIRST COACH



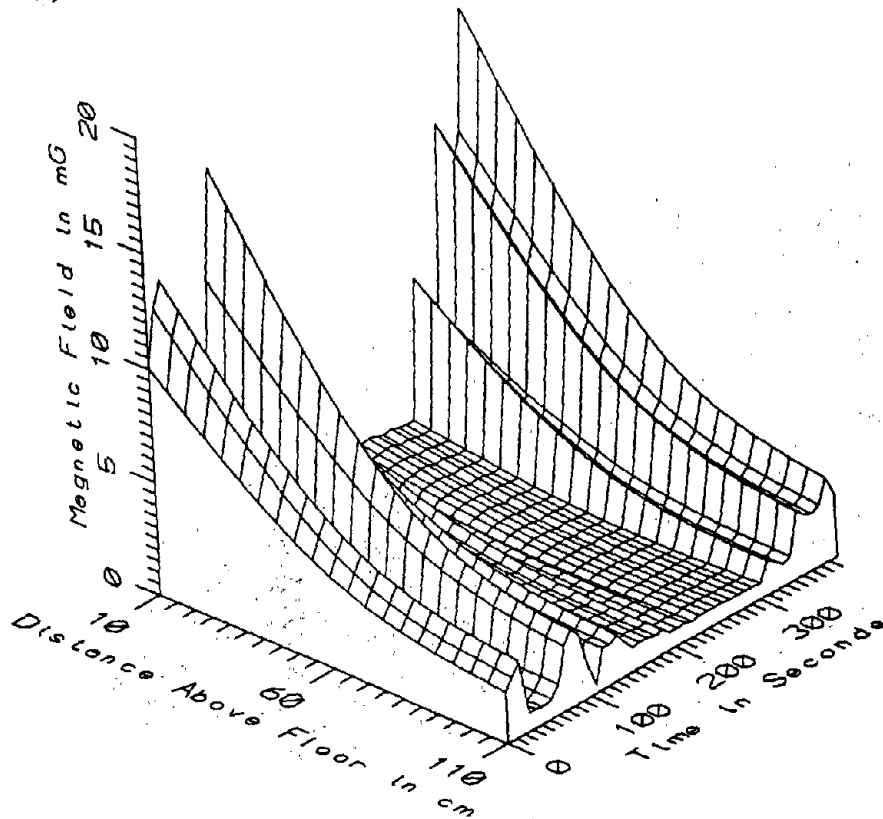
NEC048, SET 1, VERTICAL PROFILE IN FIRST COACH - STATIC



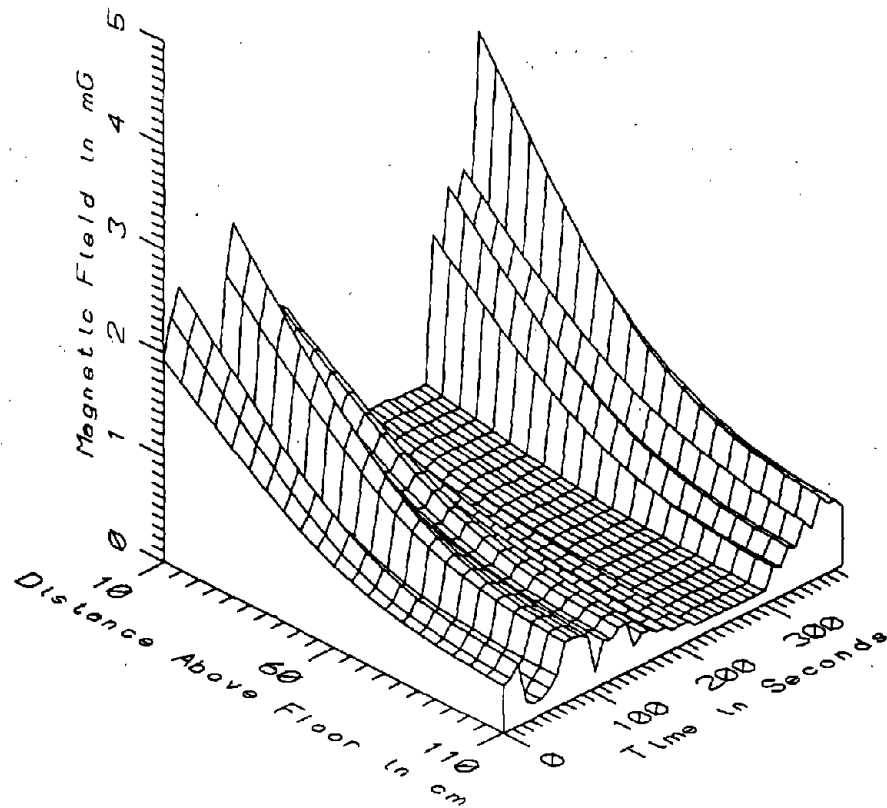
NEC048, SET 1, VERTICAL PROFILE IN FIRST COACH - LOW FREQ. 5-45Hz



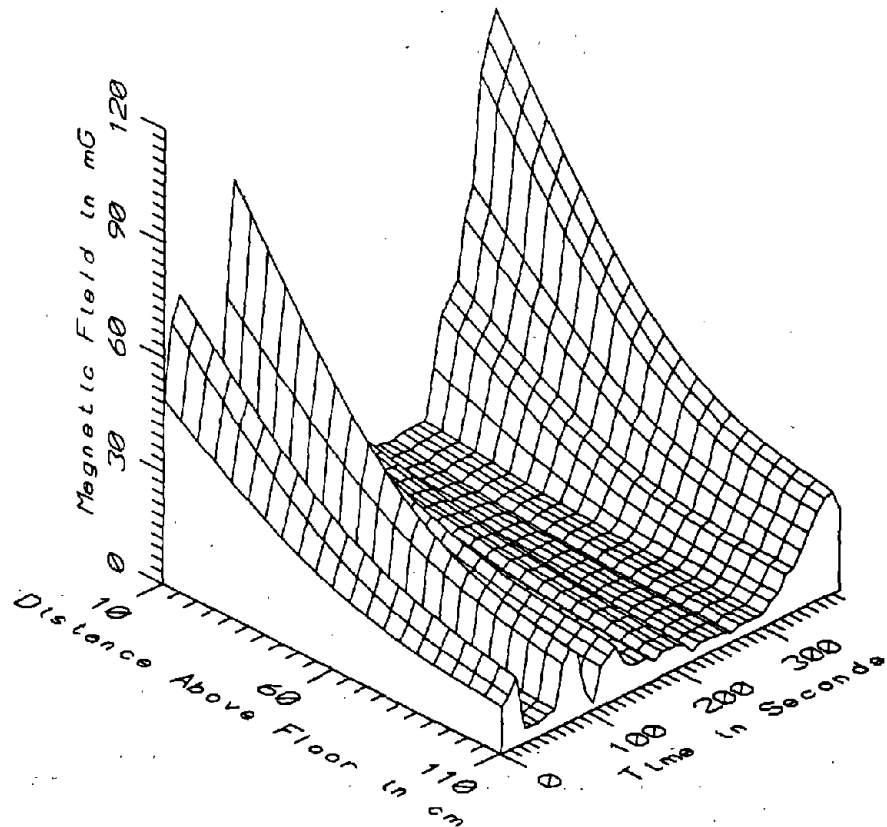
NEC048, SET 1, VERTICAL PROFILE IN FIRST COACH - POWER FREQ, 50-60Hz



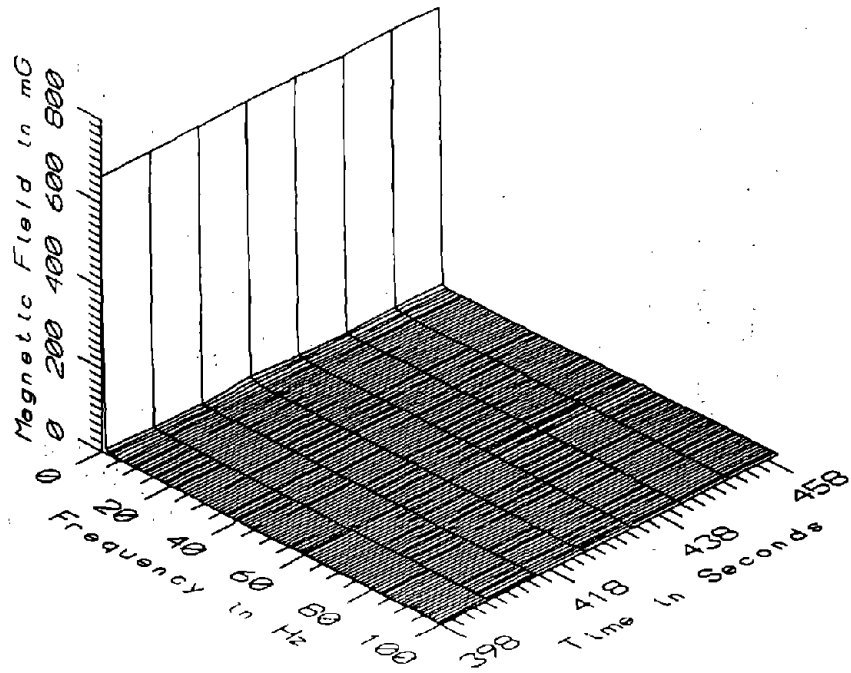
NEC048, SET 1, VERTICAL PROFILE IN FIRST COACH - POWER HARM, 65-300Hz



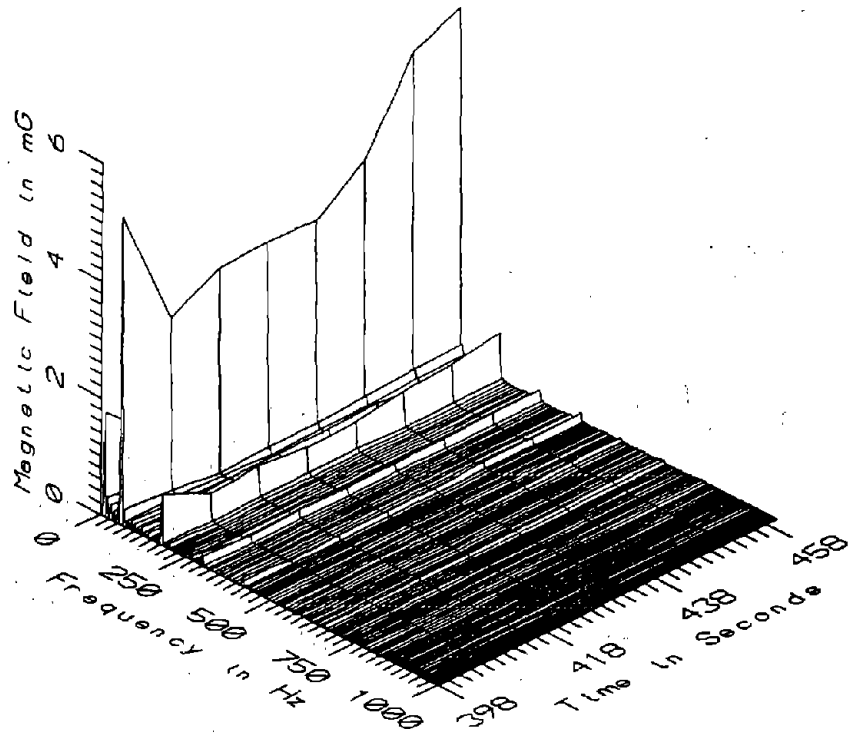
NEC048, SET 1, VERTICAL PROFILE IN FIRST COACH - HIGH FREQ, 305-2560Hz



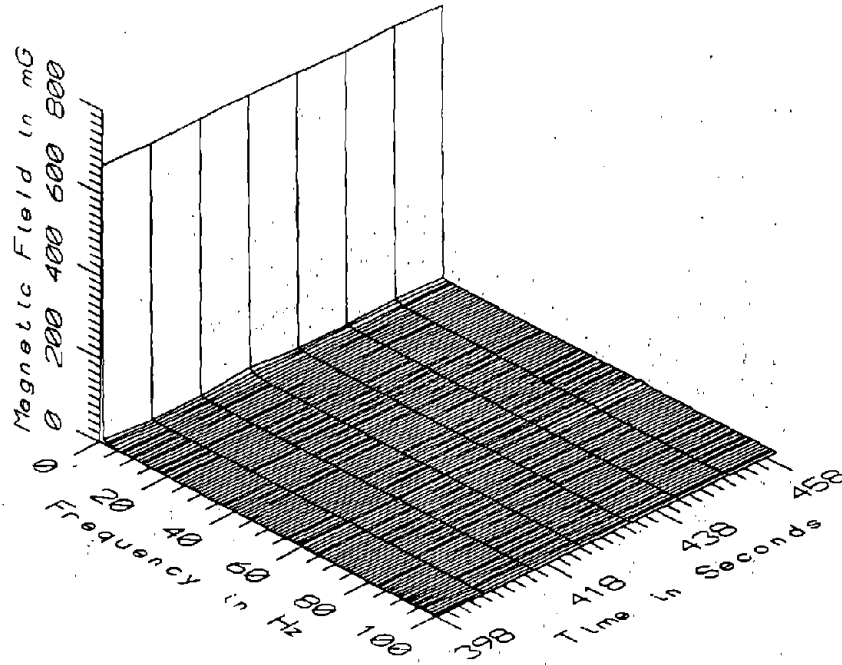
NEC048, SET 1, VERTICAL PROFILE IN FIRST COACH - ALL FREQ, 5-2560Hz



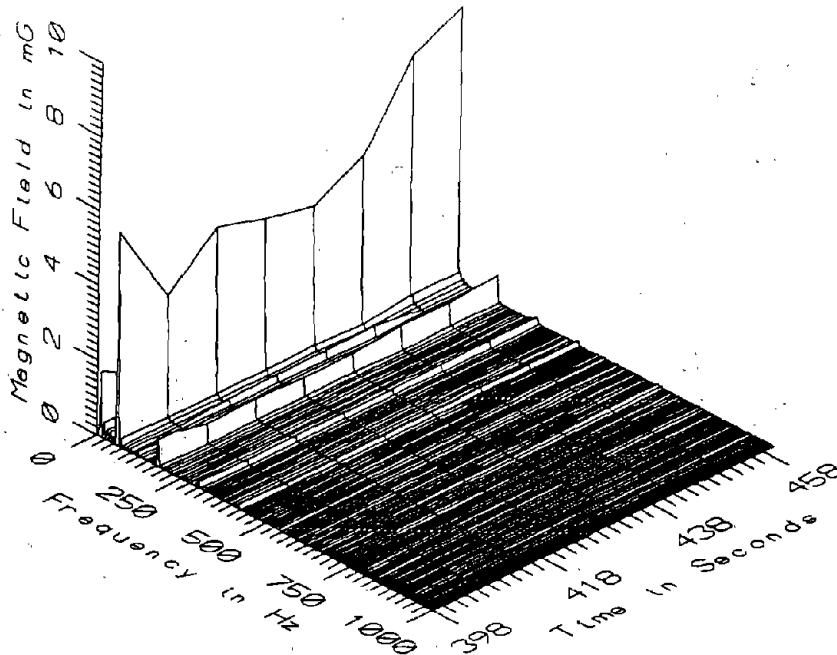
NEC048, SET 2, 10cm FROM SIDE BULKHEAD IN FIRST COACH



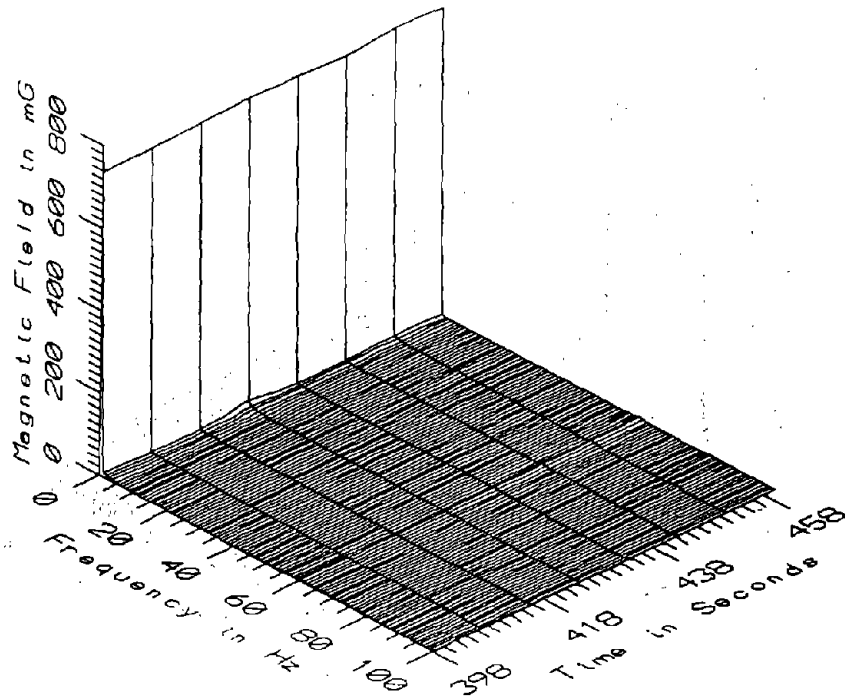
NEC048, SET 2, 10cm FROM SIDE BULKHEAD IN FIRST COACH



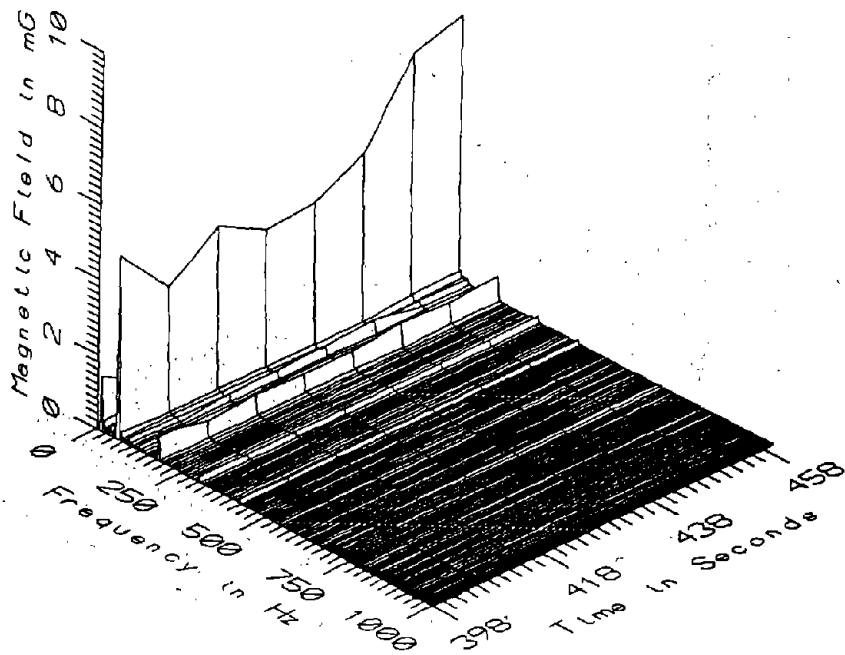
NEC048, SET 2, 60cm FROM SIDE BULKHEAD IN FIRST COACH



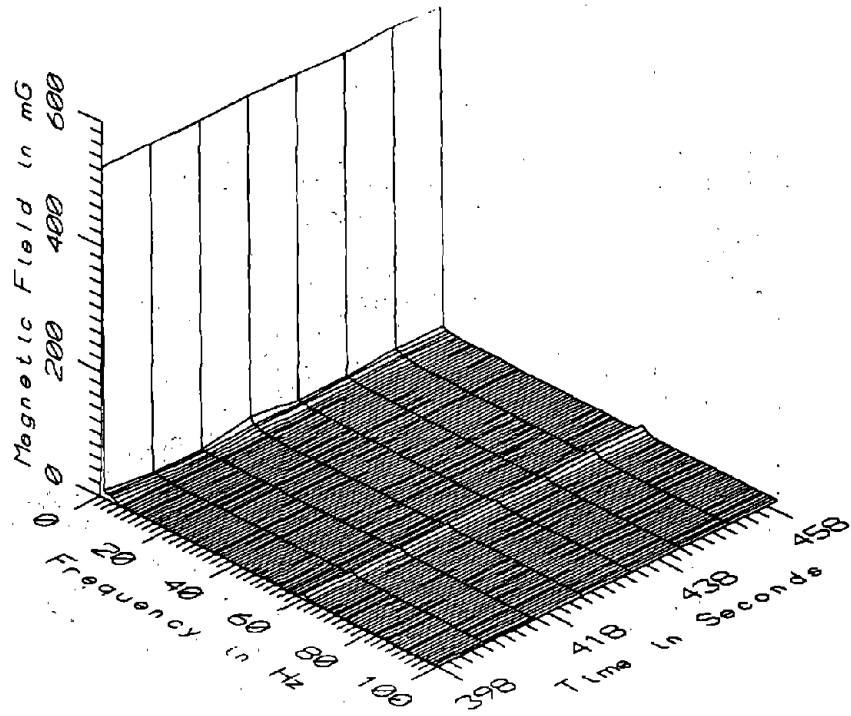
NEC048, SET 2, 60cm FROM SIDE BULKHEAD IN FIRST COACH



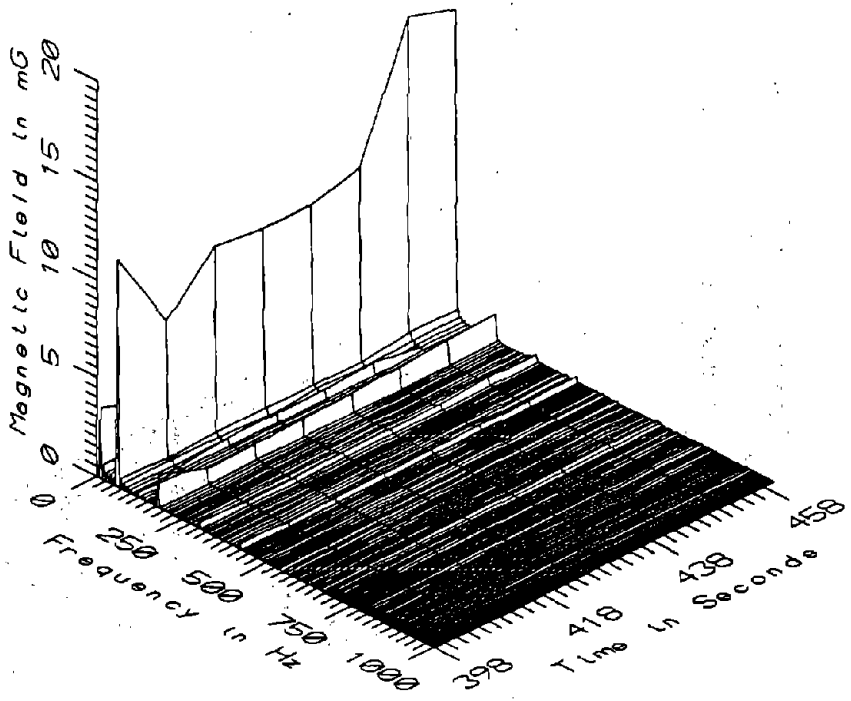
NEC048, SET 2, 110cm FROM SIDE BULKHEAD IN FIRST COACH



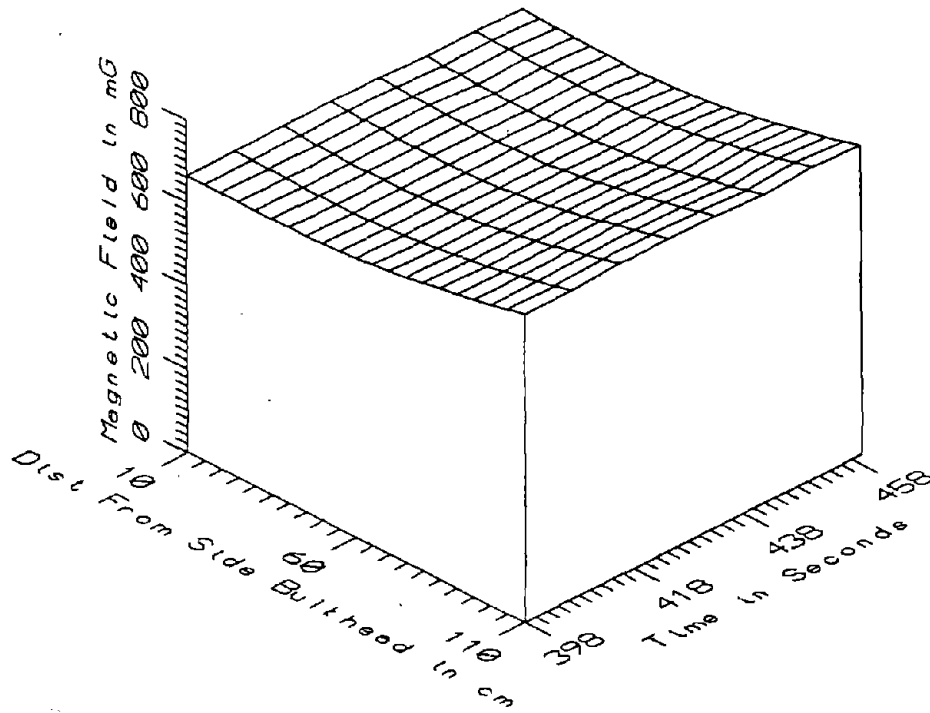
NEC048, SET 2, 110cm FROM SIDE BULKHEAD IN FIRST COACH



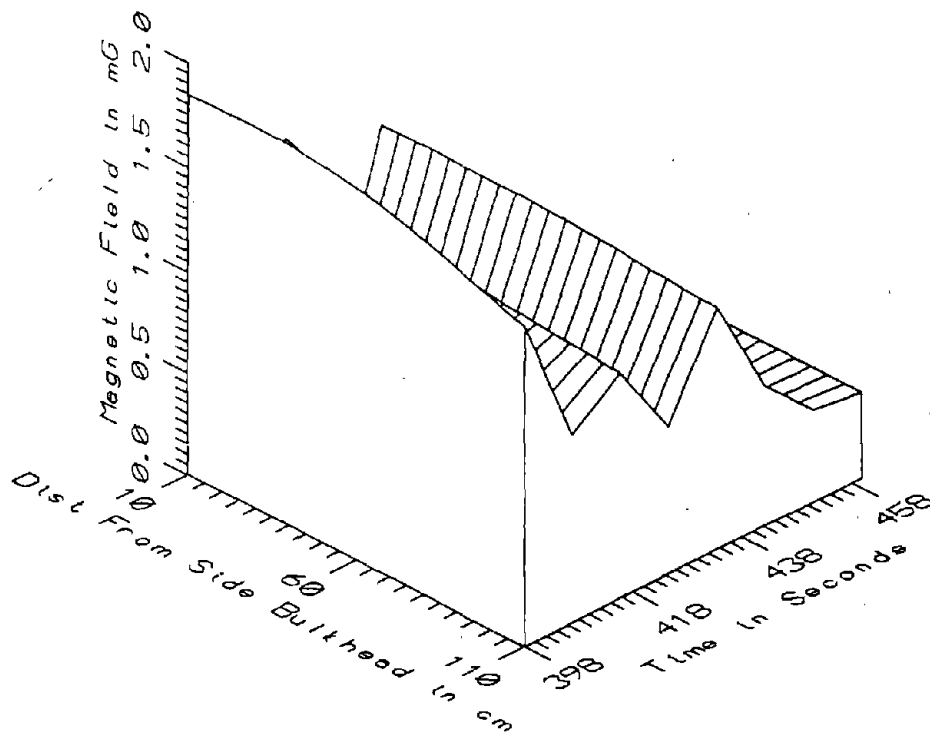
NEC048, SET 2, AISLE SEAT IN FIRST COACH



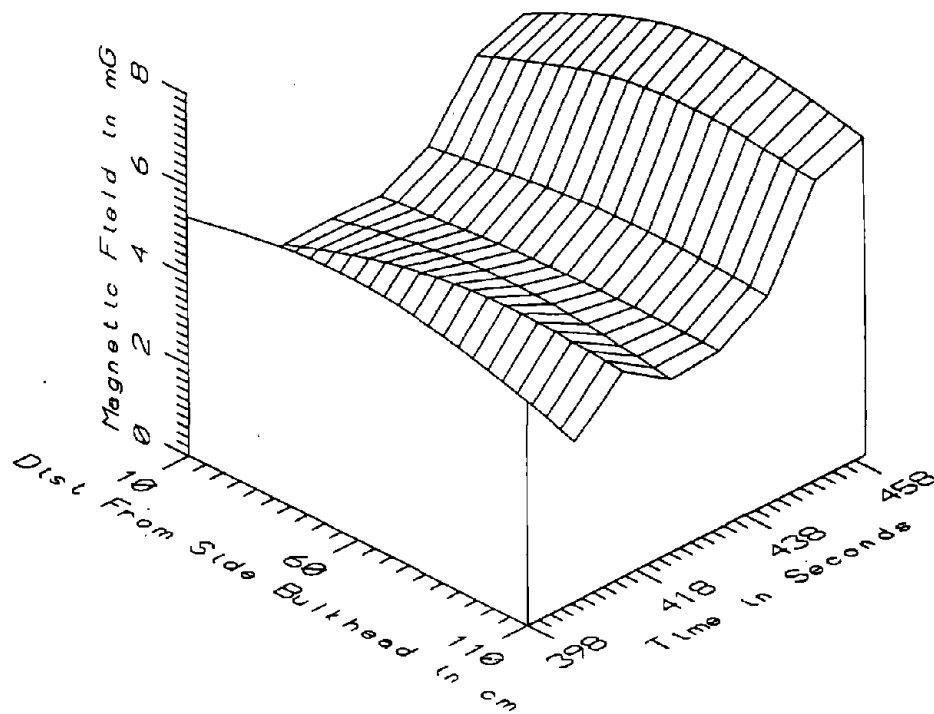
NEC048, SET 2, AISLE SEAT IN FIRST COACH



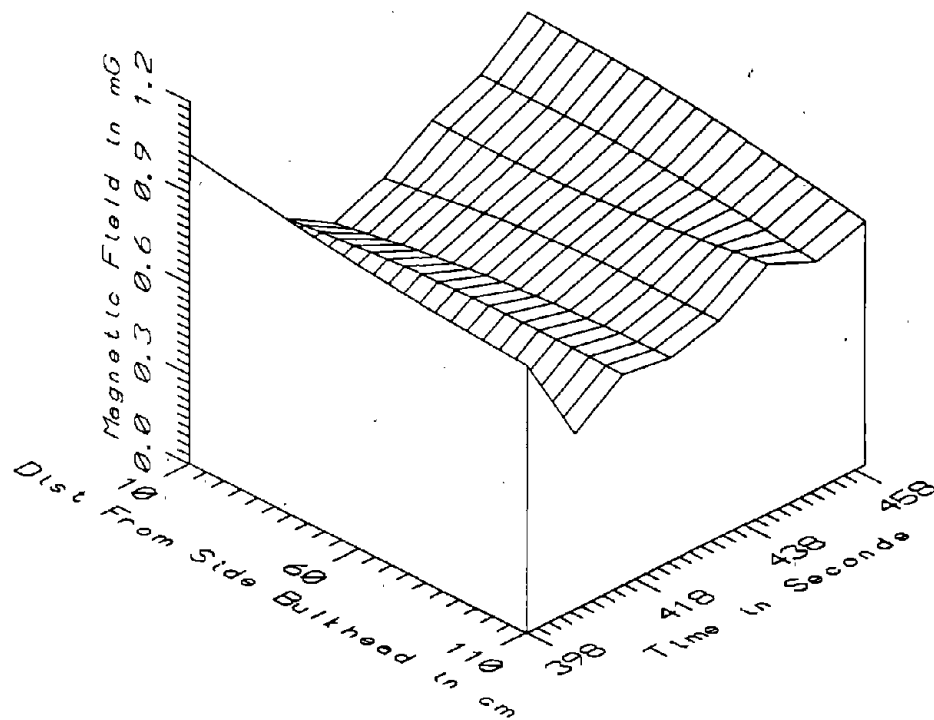
NEC048, SET 2, HORIZONTAL PROFILE IN 1ST COACH - STATIC



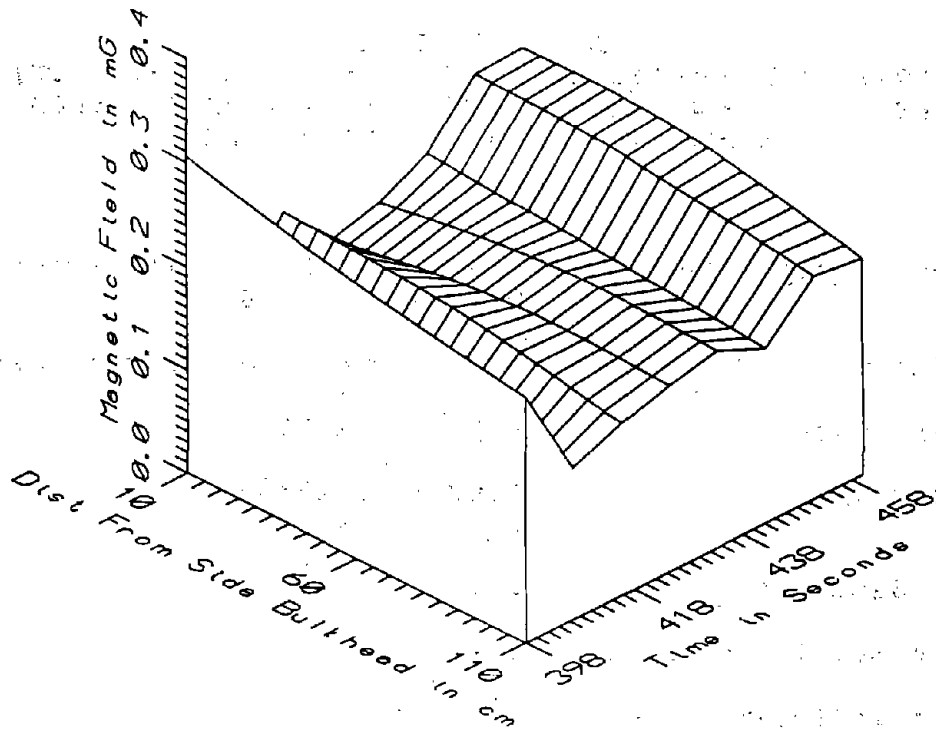
NEC048, SET 2, HORIZONTAL PROFILE IN 1ST COACH - LOW FREQ, 5-45Hz



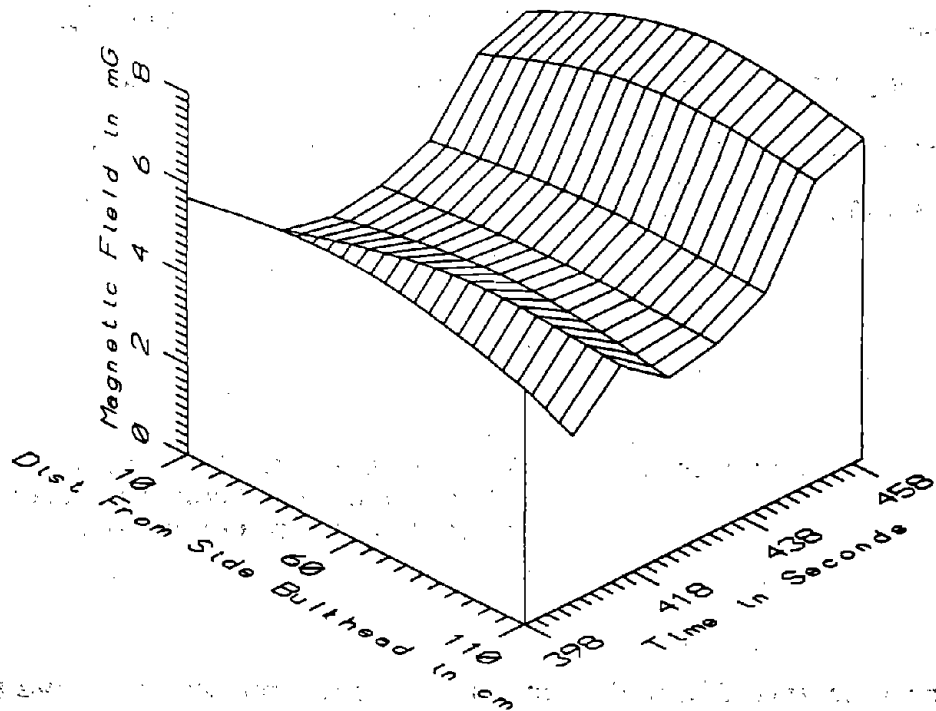
NEC048, SET 2, HORIZONTAL PROFILE IN 1ST COACH - POWER FREQ, 50-60Hz



NEC048, SET 2, HORIZONTAL PROFILE IN 1ST COACH - POWER HARM, 65-300Hz



NEC048, SET 2, HORIZONTAL PROFILE IN 1ST COACH - HIGH FREQ, 305-2560Hz



NEC048, SET 2, HORIZONTAL PROFILE IN 1ST COACH - ALL FREQ, 15-2560Hz

APPENDIX AW, SET 3

DATASET NEC048, SET 3
HORIZONTAL PROFILE ALONG THE AISLE 1.1 M (3.6 FT)
ABOVE THE FLOOR AT THE FRONT OF THE FIRST COACH
NORTH JERSEY COAST LINE (60 HZ)

Measurement Setup Code: Staff: 16 Reference: 19
 Drawing: A-10

Vehicle Status: Train running at normal speed

Measurement Date: April 3, 1992

Measurement Time: Start: 7:12:56
 End: 7:13:32

Number of Samples: 5

Programmed Sample Interval: 5 sec

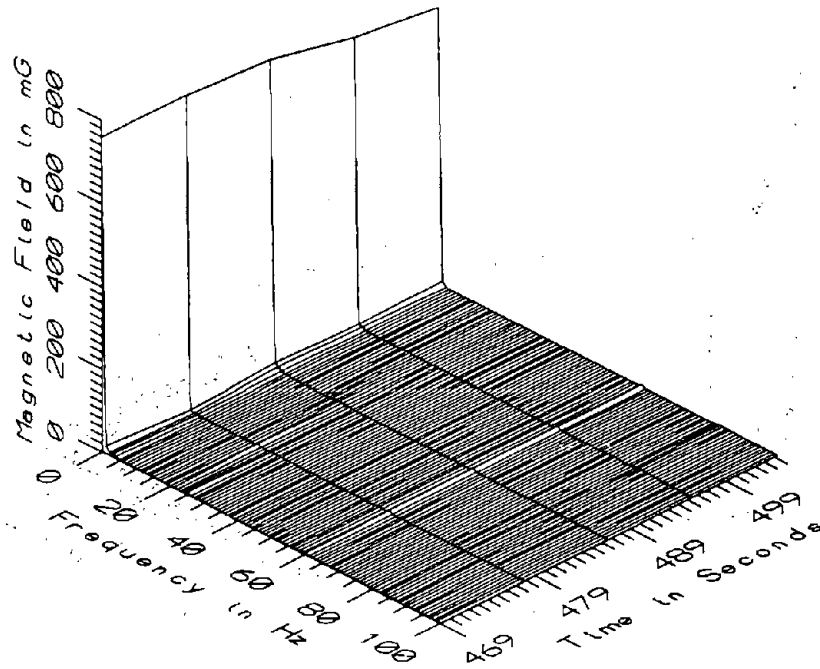
Actual Sample Interval: 8.8 sec*

Frequency Spectrum Parameters

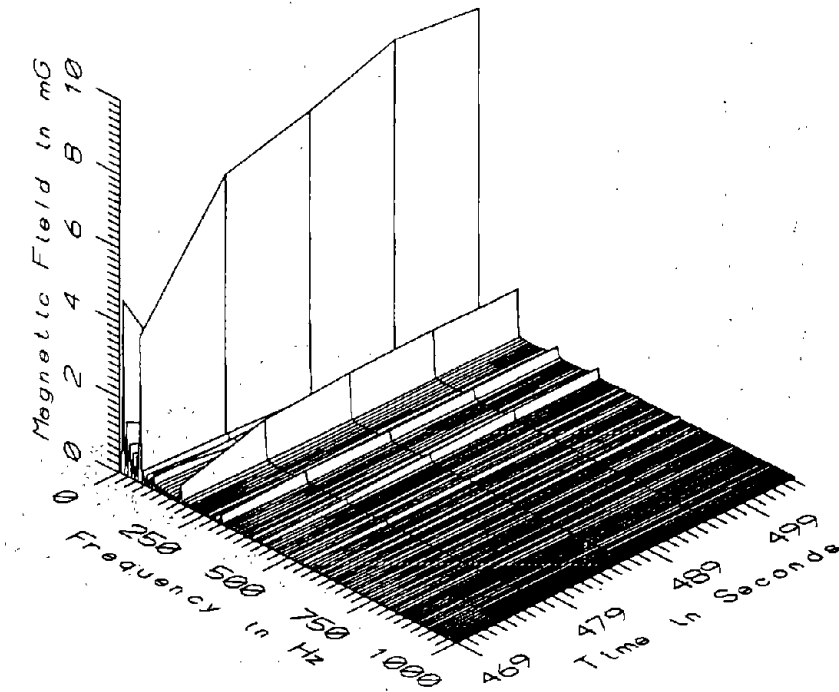
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

Missing or Suspect Data: The sensor at the top of the staff
 (3 m (9.8 ft) from the front of the
 coach) was inoperative.

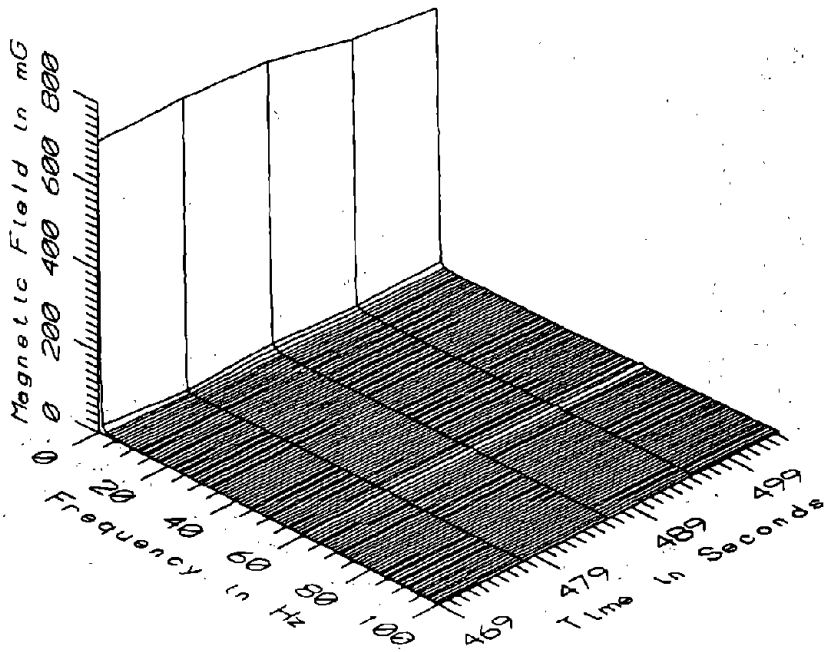
* Recording was discontinued while the sensor was moved between recording locations producing longer than normal average sample intervals.



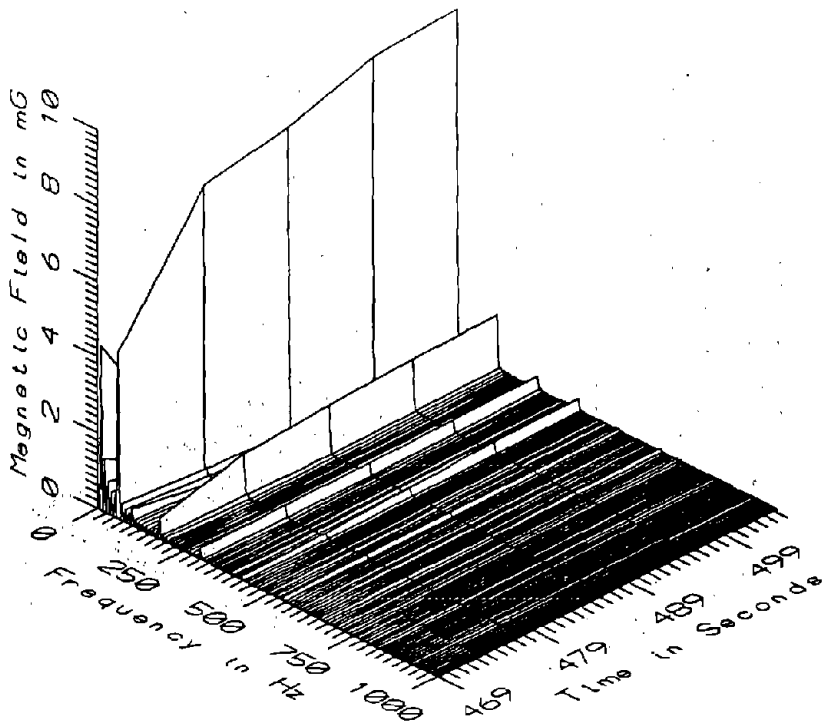
NEC048, SET 3, 350cm FROM FRONT OF FIRST COACH



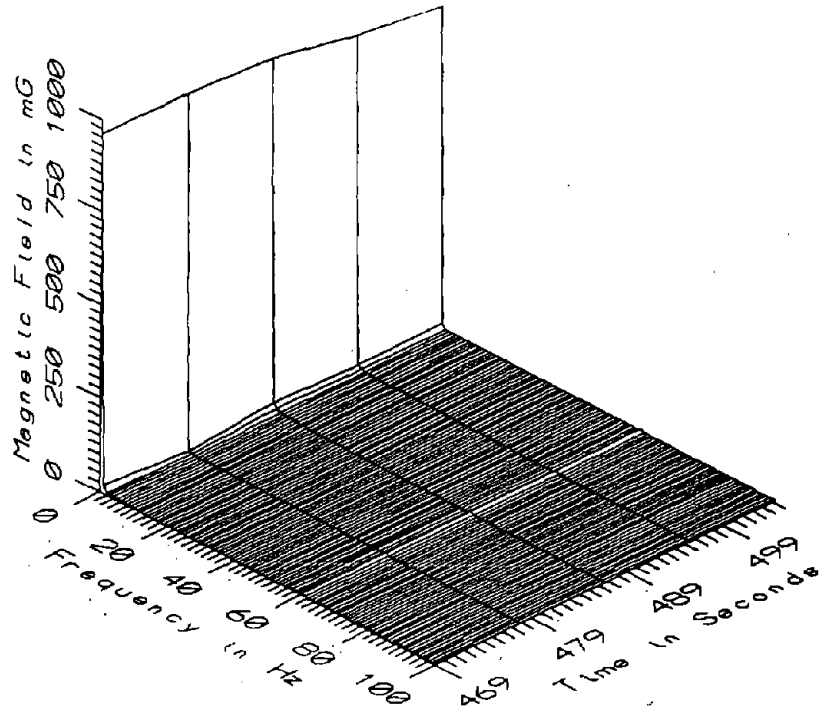
NEC048, SET 3, 350cm FROM FRONT OF FIRST COACH



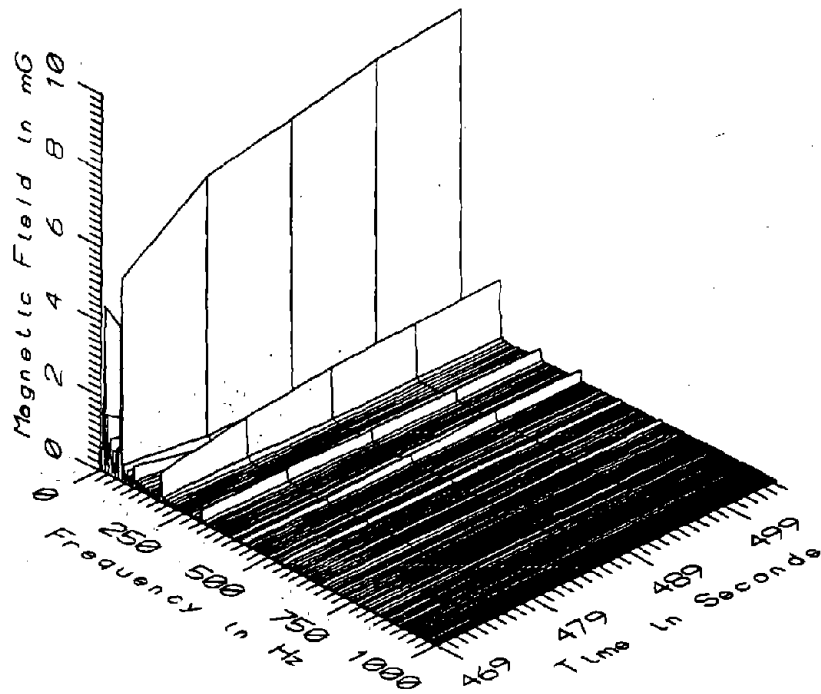
NEC048, SET 3, 400cm FROM FRONT OF FIRST COACH



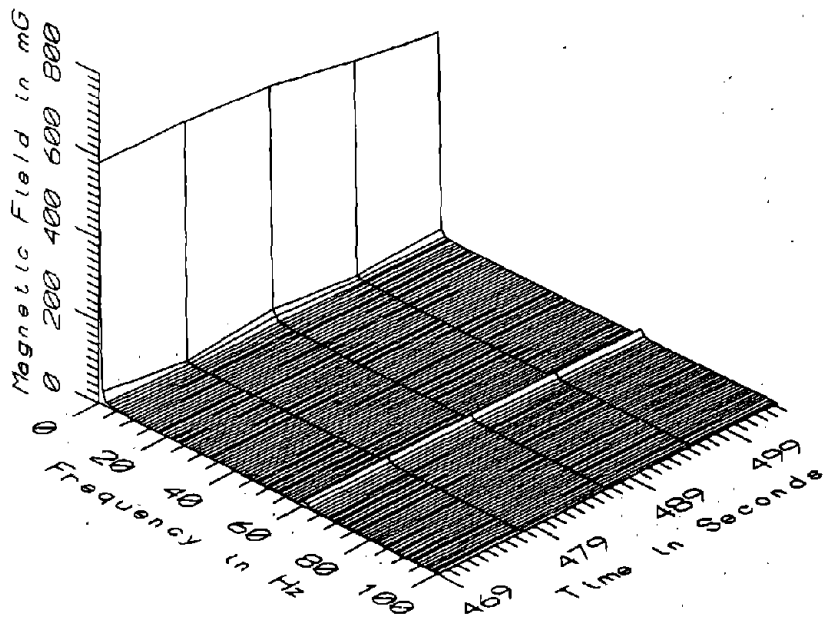
NEC048, SET 3, 400cm FROM FRONT OF FIRST COACH



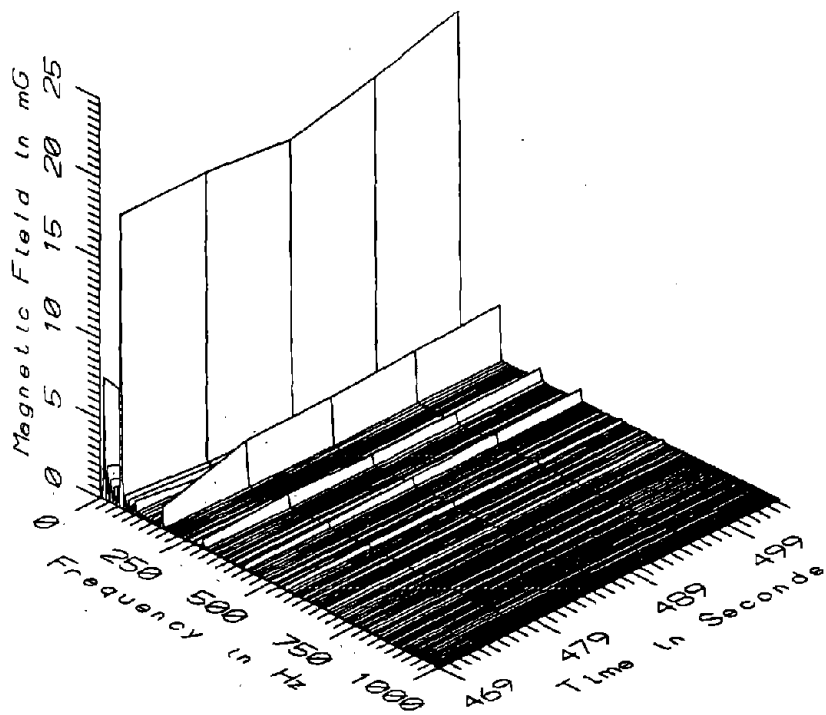
NEC048, SET 3, 450cm FROM FRONT OF FIRST COACH



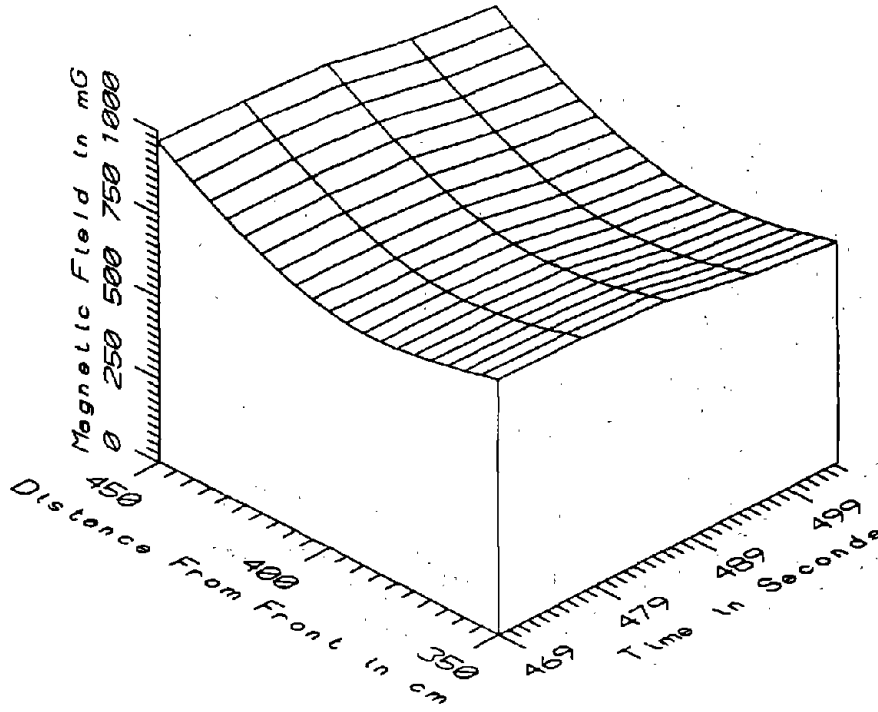
NEC048, SET 3, 450cm FROM FRONT OF FIRST COACH



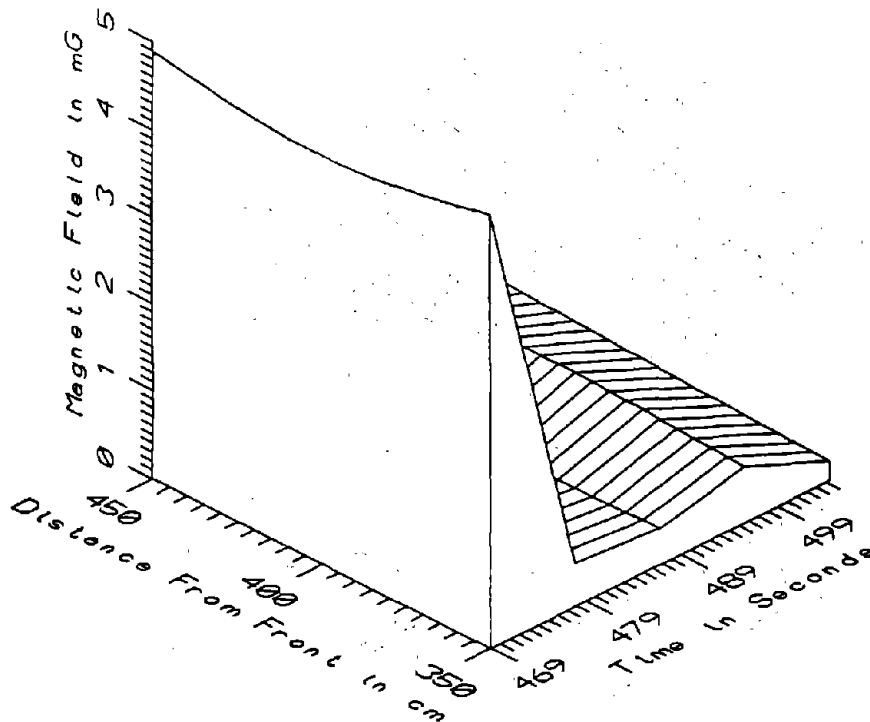
NEC048, SET 3, AISLE SEAT IN FIRST COACH



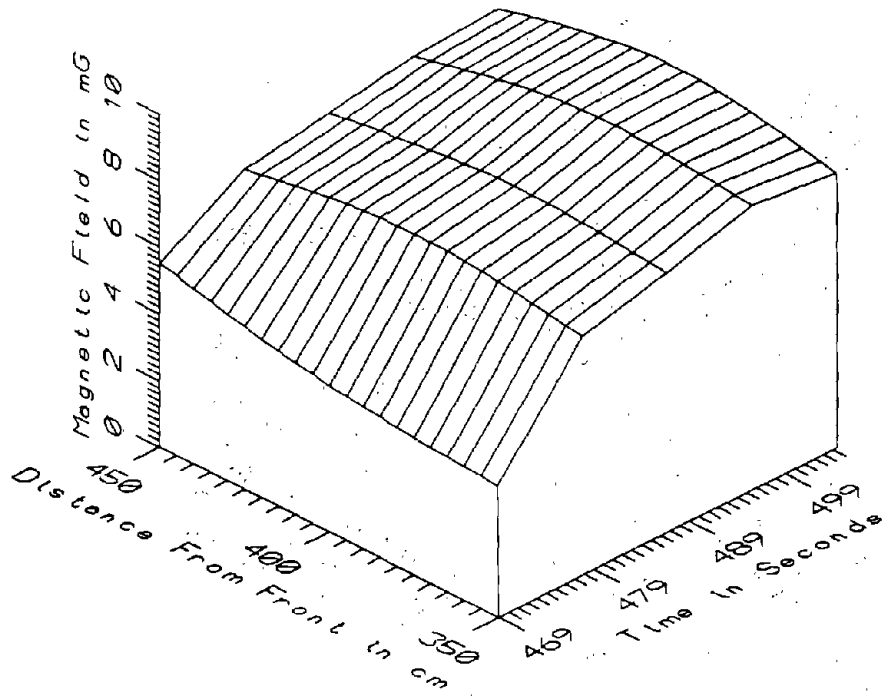
NEC048, SET 3, AISLE SEAT IN FIRST COACH



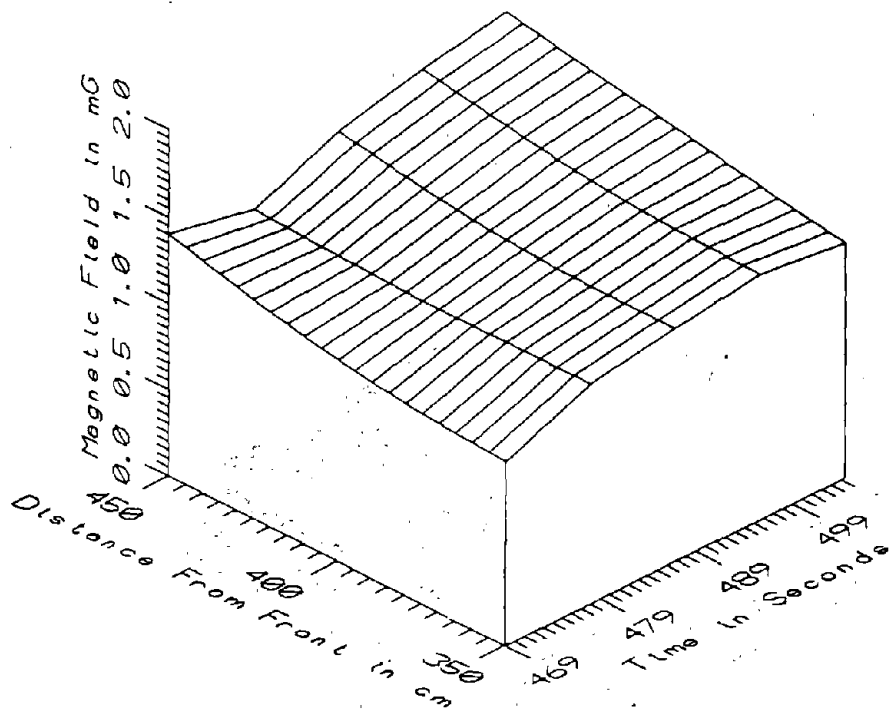
NEC048, SET 3, LONGITUDINAL PROFILE IN 1ST COACH - STATIC



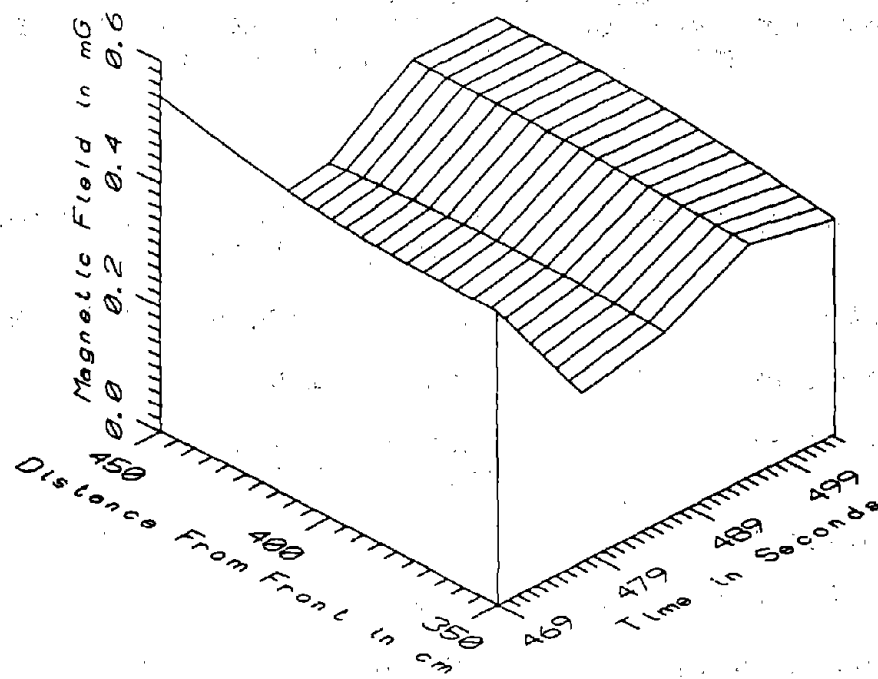
NEC048, SET 3, LONGITUDINAL PROFILE IN 1ST COACH - LOW FREQ. 5-45Hz



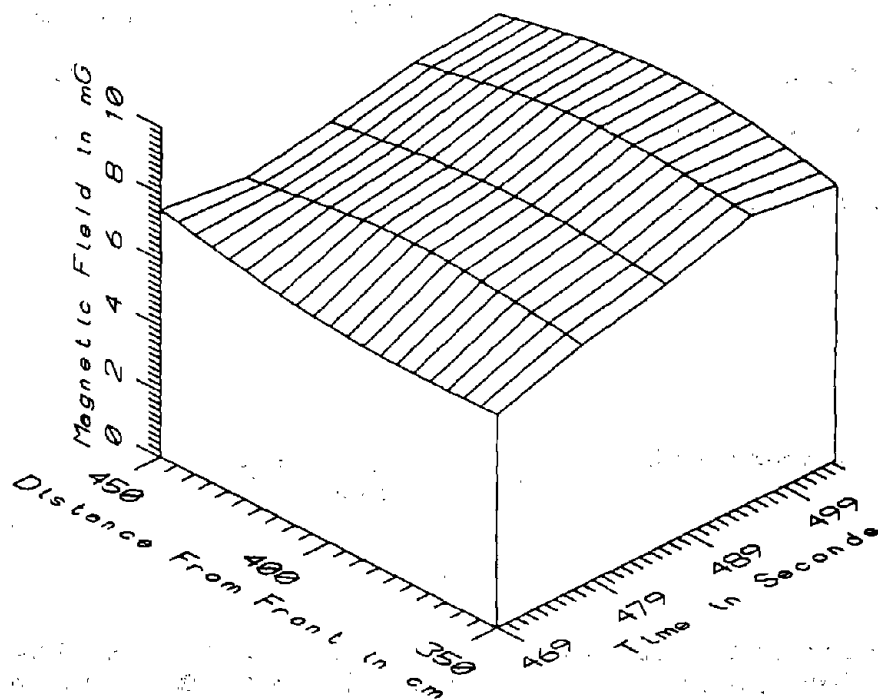
NEC048, SET 3, LONGITUDINAL PROFILE IN 1ST COACH - POWER FREQ, 50-60Hz



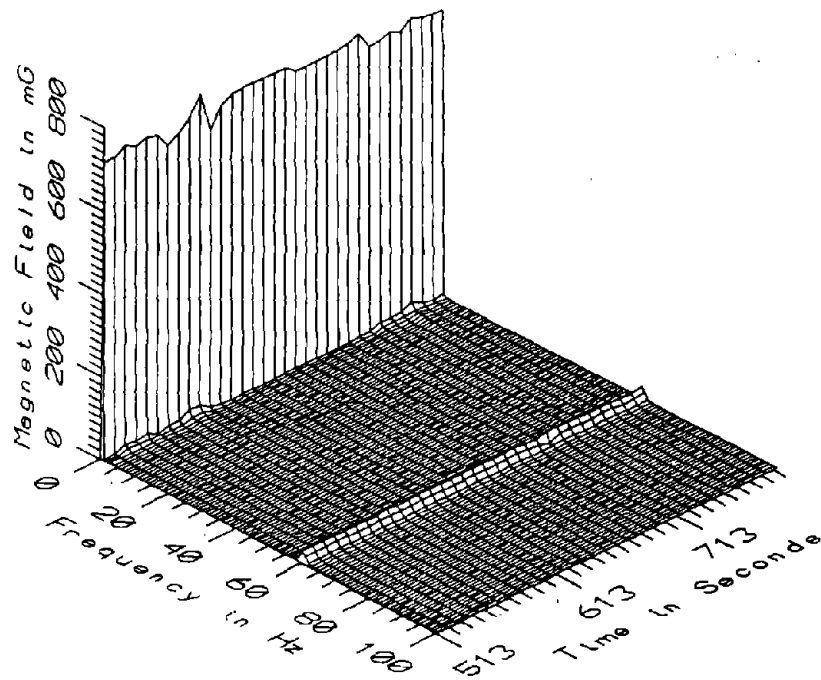
NEC048, SET 3, LONGITUDINAL PROFILE IN 1ST COACH - POWER HARM, 65-300Hz



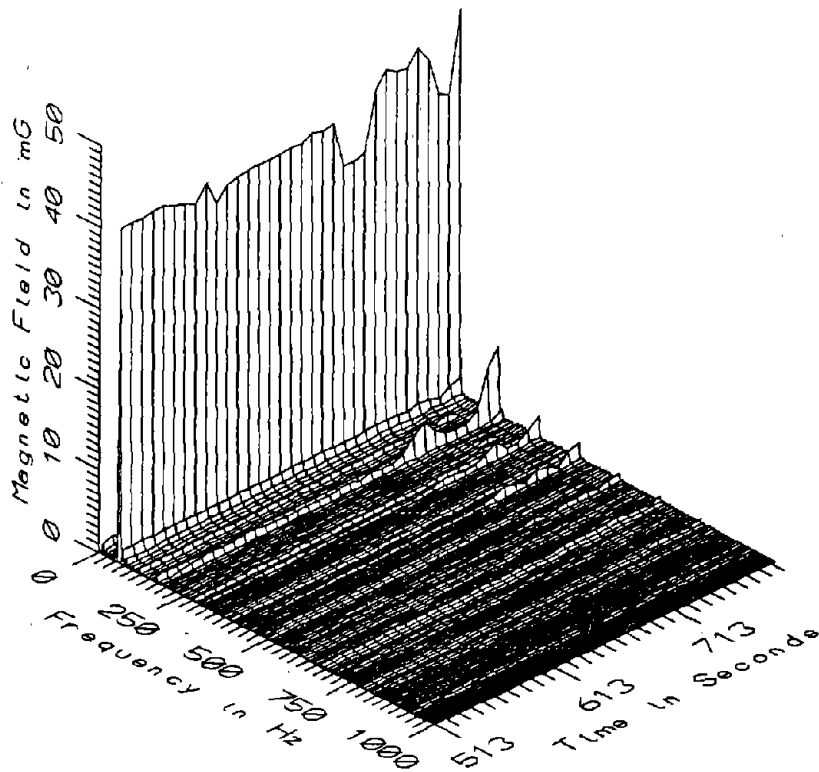
NEC048, SET 3, LONGITUDINAL PROFILE IN 1ST COACH - HIGH FREQ, 305-2560Hz



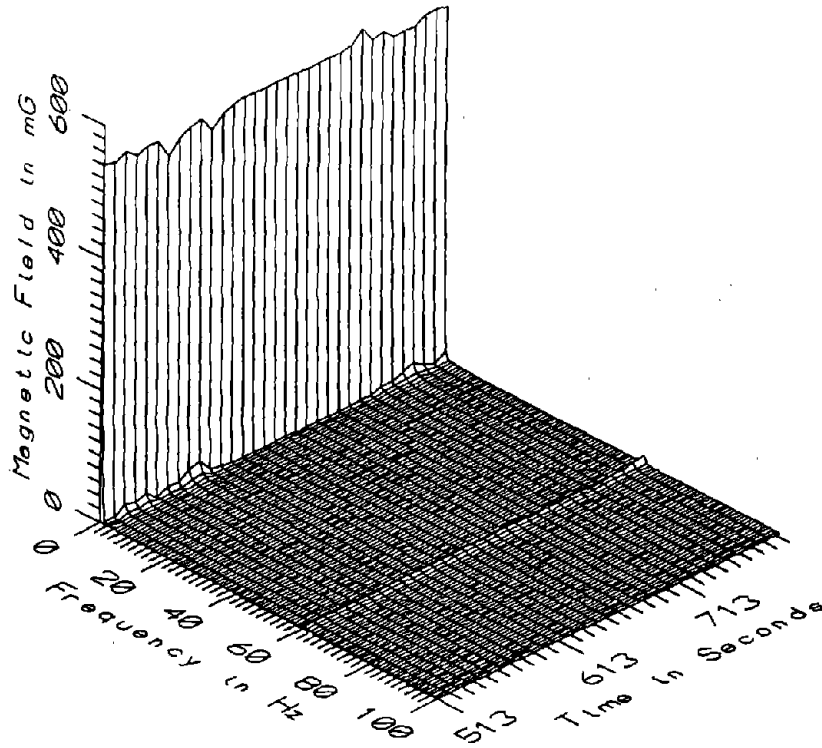
NEC048, SET 3, LONGITUDINAL PROFILE IN 1ST COACH - ALL FREQ, 5-2560Hz



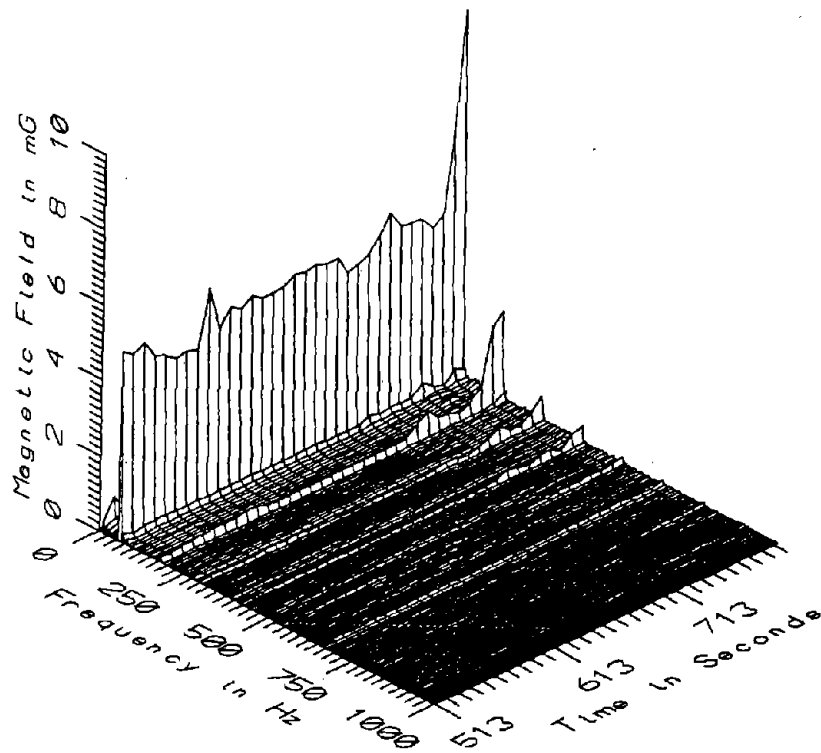
NEC048, SET 4, 10cm ABOVE FLOOR IN LAST COACH



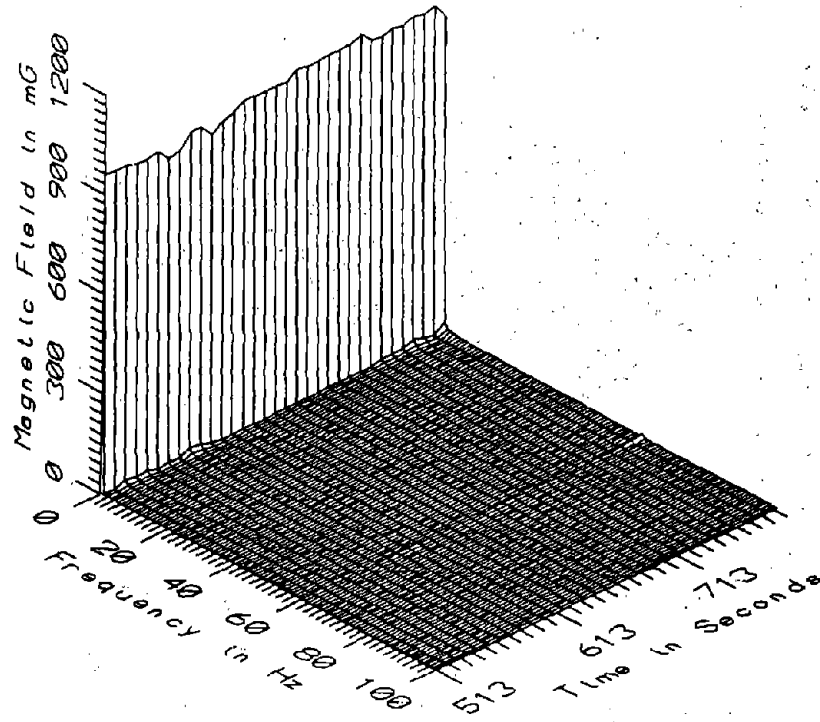
NEC048, SET 4, 10cm ABOVE FLOOR IN LAST COACH



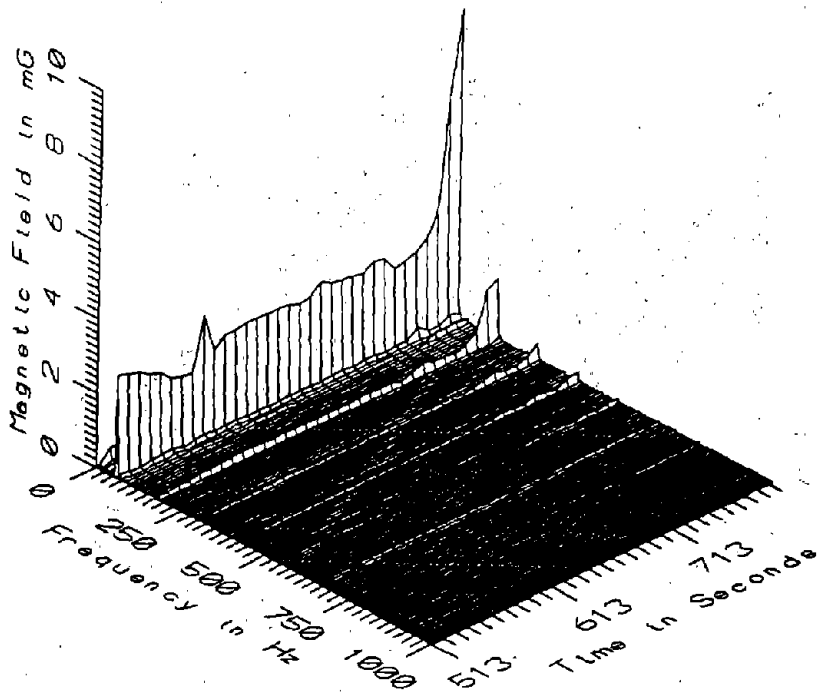
NEC048, SET 4, 60cm ABOVE FLOOR IN LAST COACH



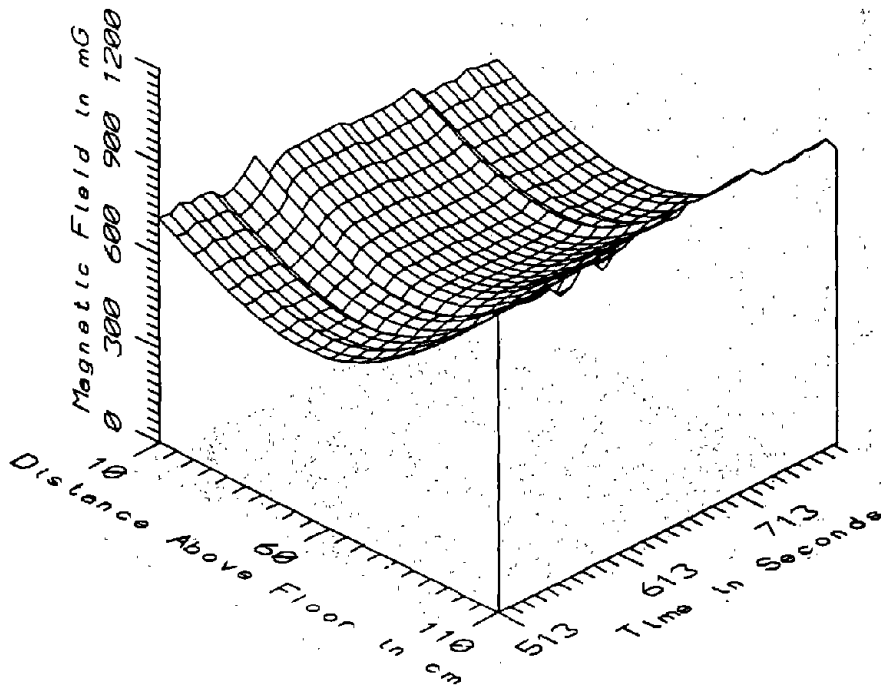
NEC048, SET 4, 60cm ABOVE FLOOR IN LAST COACH



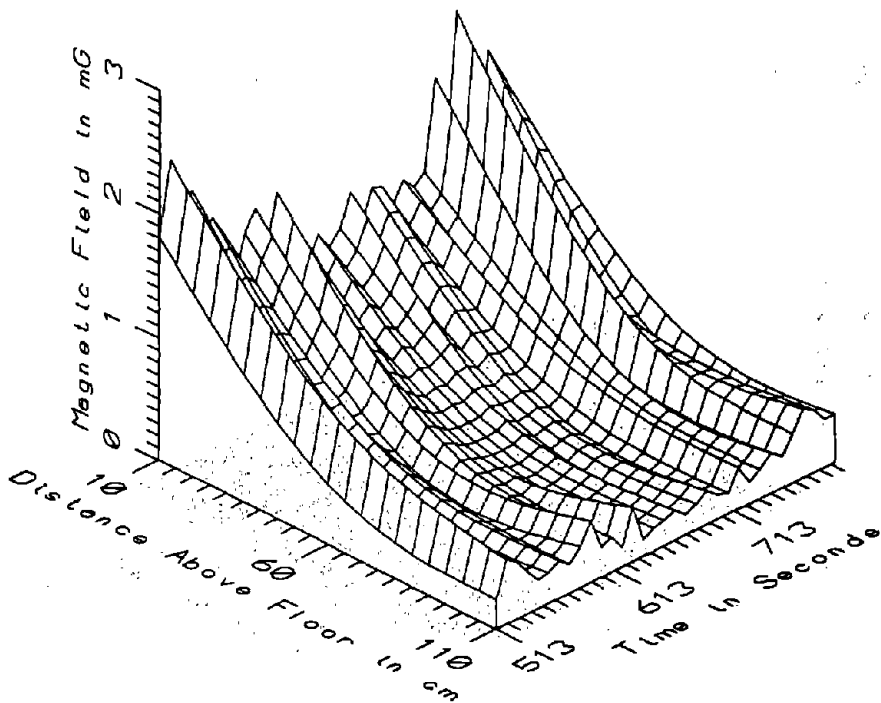
NEC048, SET 4, 110cm ABOVE FLOOR IN LAST COACH



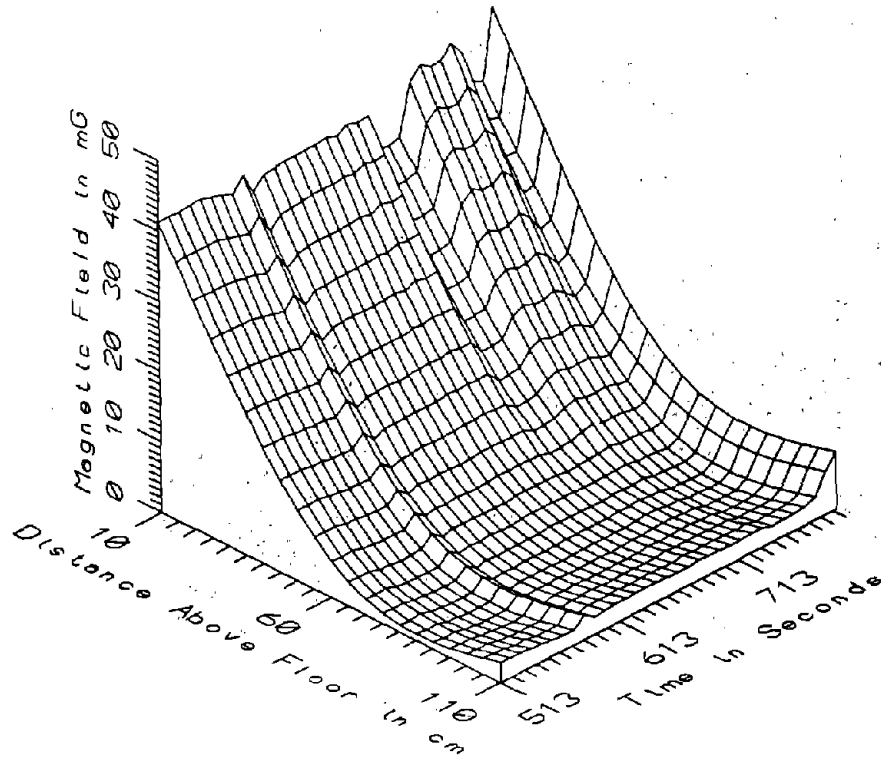
NEC048, SET 4, 110cm ABOVE FLOOR IN LAST COACH



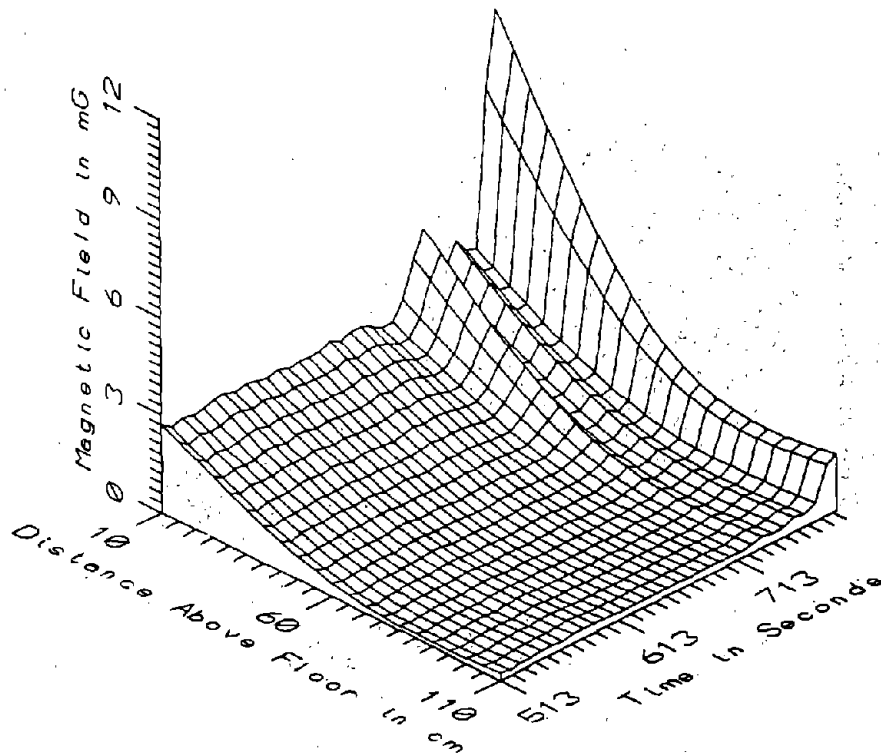
NEC048, SET 4, VERTICAL PROFILE IN LAST COACH - STATIC



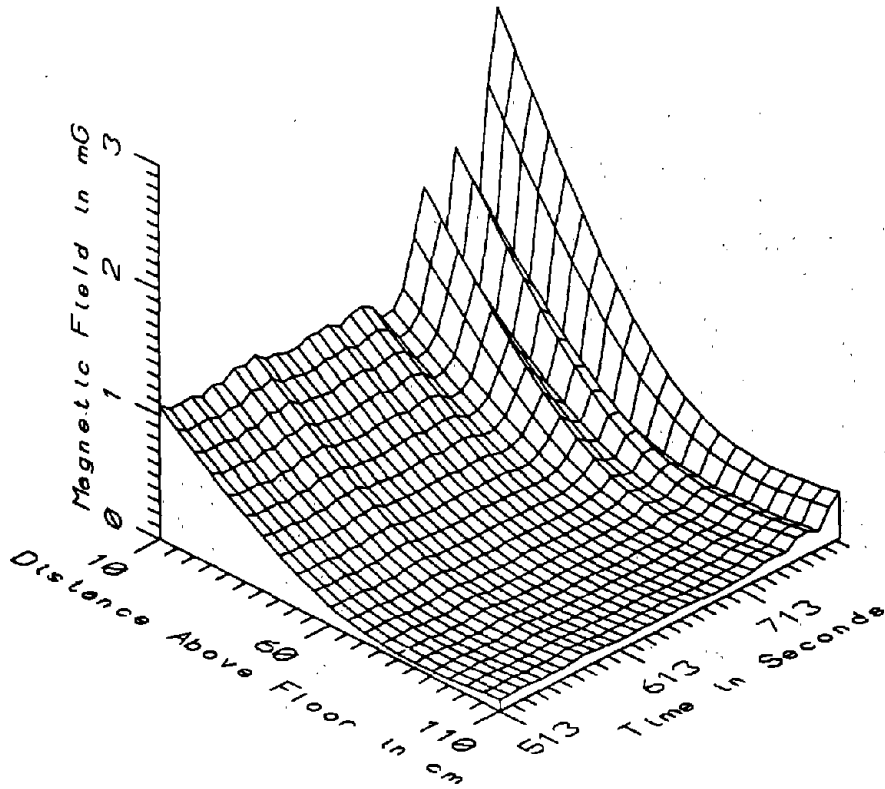
NEC048, SET 4, VERTICAL PROFILE IN LAST COACH - LOW FREQ, 5-45Hz



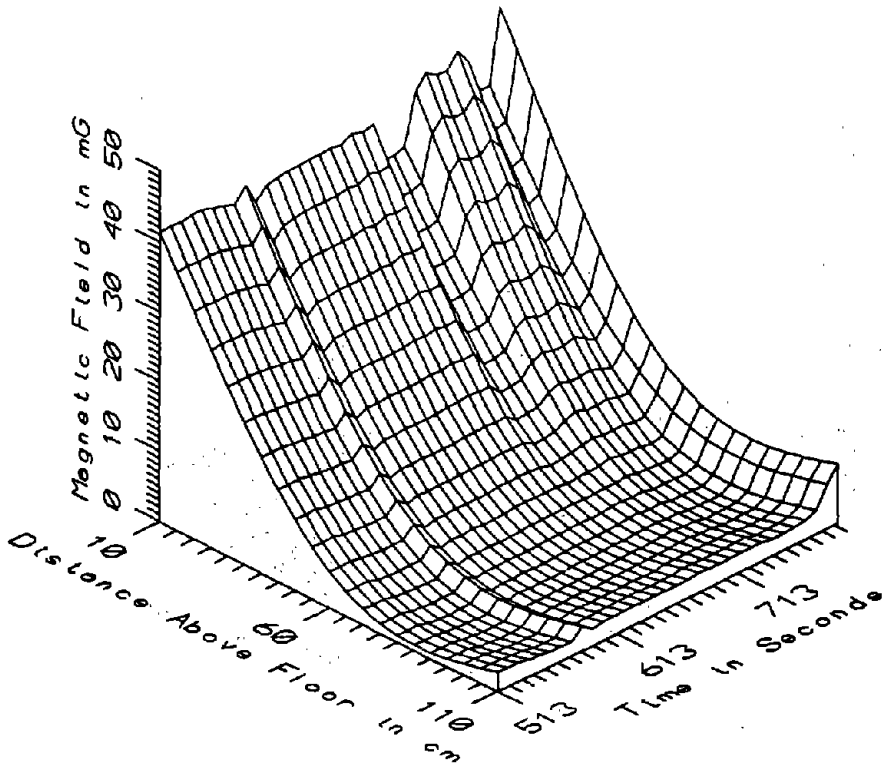
NEC048, SET 4, VERTICAL PROFILE IN LAST COACH - POWER FREQ, 50-60Hz



NEC048, SET 4, VERTICAL PROFILE IN LAST COACH - POWER HARM, 65-300Hz



NEC048, SET 4, VERTICAL PROFILE IN LAST COACH - HIGH FREQ, 305-2560Hz



NEC048, SET 4, VERTICAL PROFILE IN LAST COACH - ALL FREQ, 5-2560Hz

APPENDIX AW, SET 5

DATASET NEC048, SET 5
HORIZONTAL PROFILE FROM THE SIDE WALL 1.1 M (3.6 FT)
ABOVE THE FLOOR AT THE END OF THE LAST COACH
NORTH JERSEY COAST LINE (60 HZ)

Measurement Setup Code: Staff: 13 Reference: None
 Drawing: A-10

Vehicle Status: Vehicle running at normal speed

Measurement Date: April 3, 1992

Measurement Time: Start: 17:18:33
 End: 17:21:04

Number of Samples: 18

Programmed Sample Interval: 5 sec

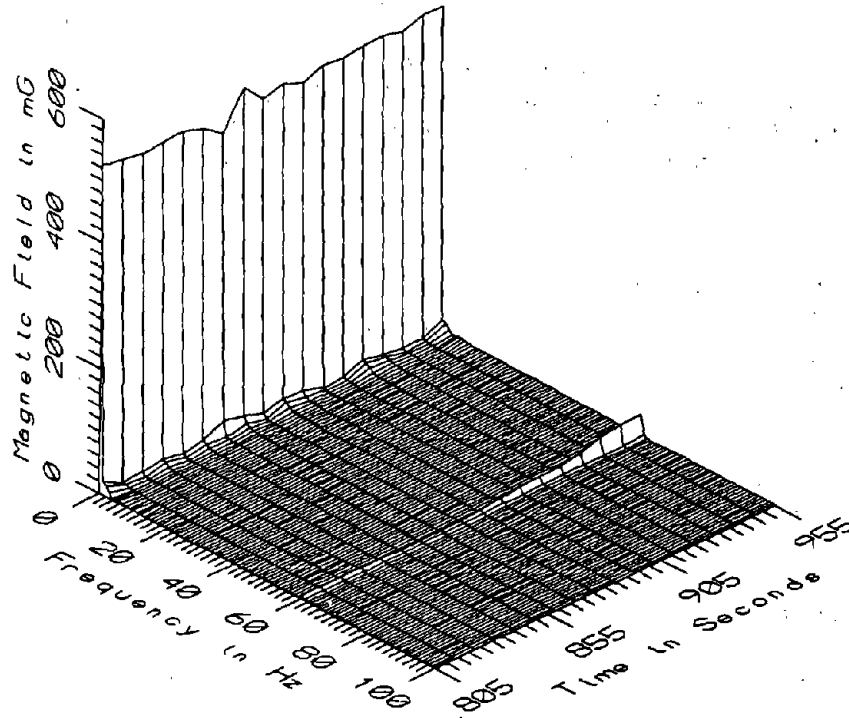
Actual Sample Interval: 8.8 sec*

Frequency Spectrum Parameters

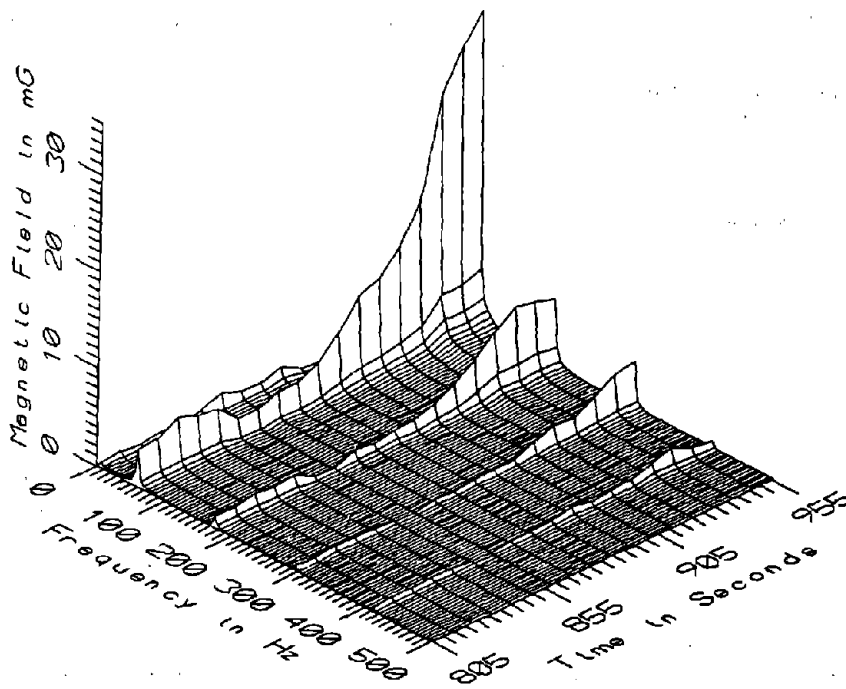
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

Missing or Suspect Data: The end sensor on the staff (160 cm
 from the bulkhead) was inoperative.

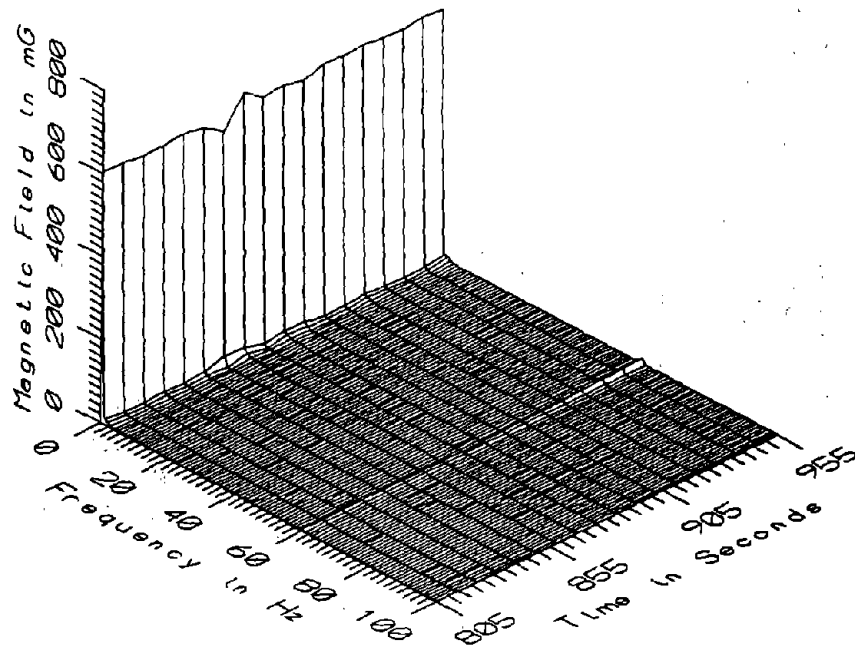
* Recording was discontinued while the sensor was moved between recording locations producing longer than normal average sample intervals.



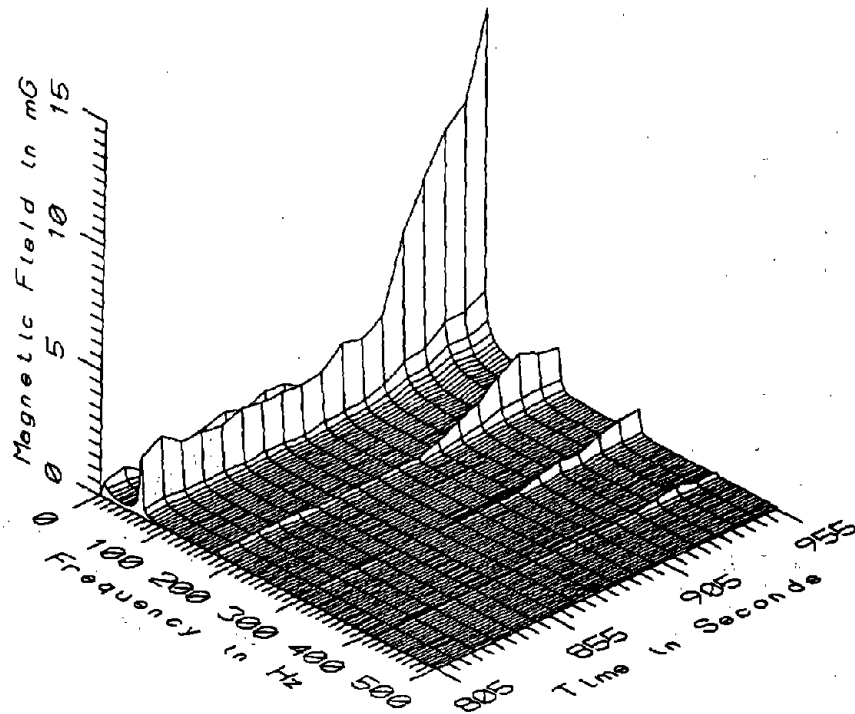
NEC048, SET 5, 10cm FROM SIDE BULKHEAD IN LAST COACH



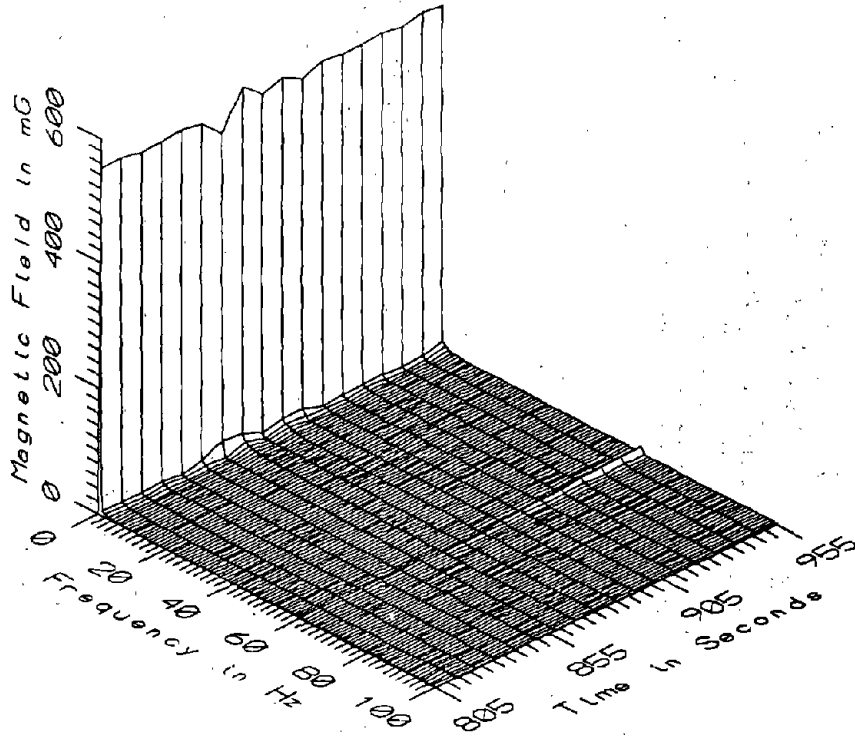
NEC048, SET 5, 10cm FROM SIDE BULKHEAD IN LAST COACH



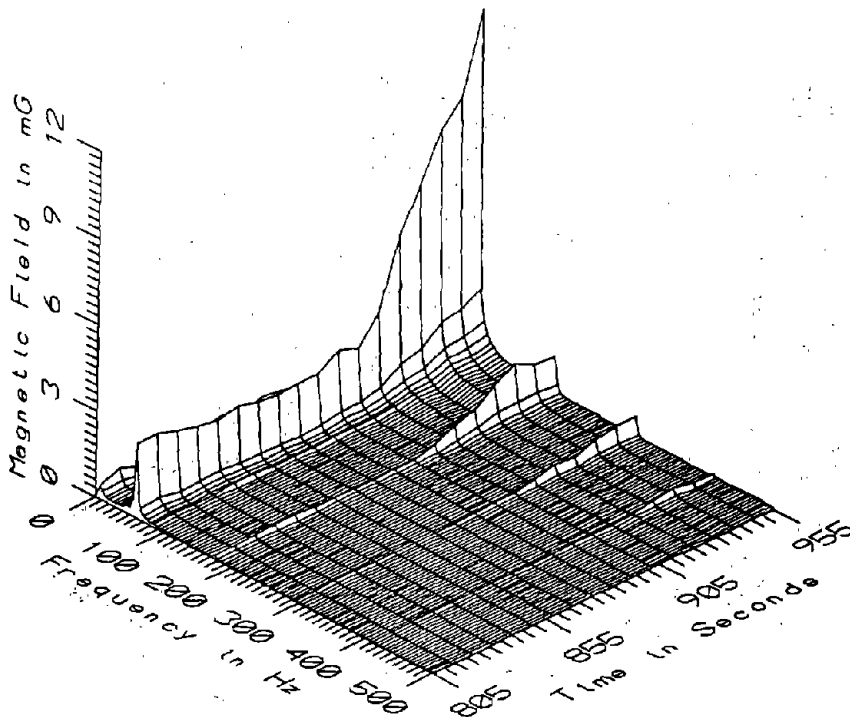
NEC048, SET 5, 60cm FROM SIDE BULKHEAD IN LAST COACH



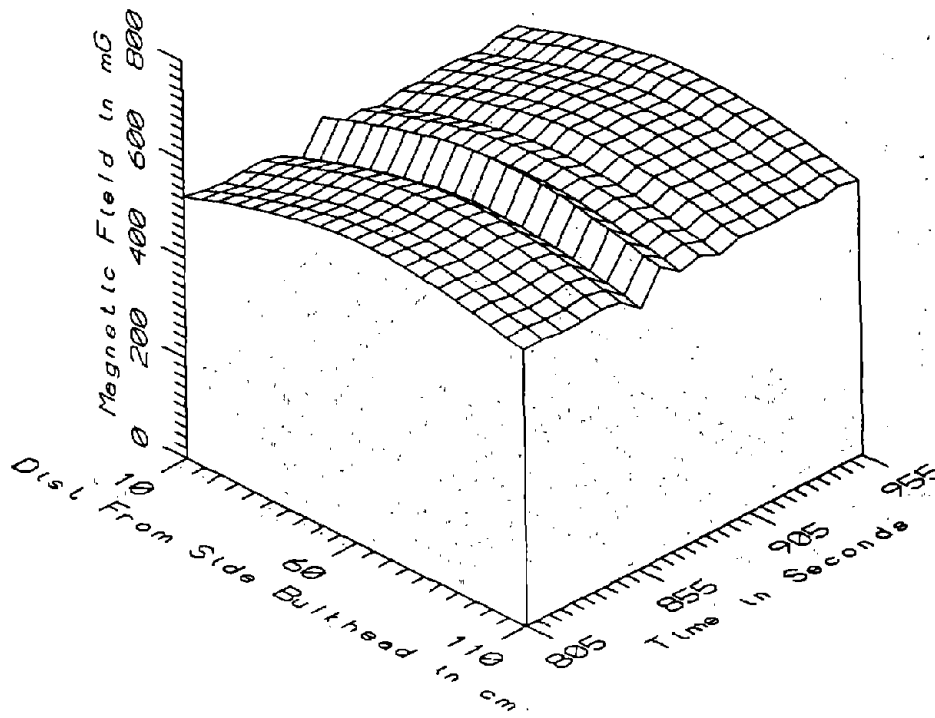
NEC048, SET 5, 60cm FROM SIDE BULKHEAD IN LAST COACH



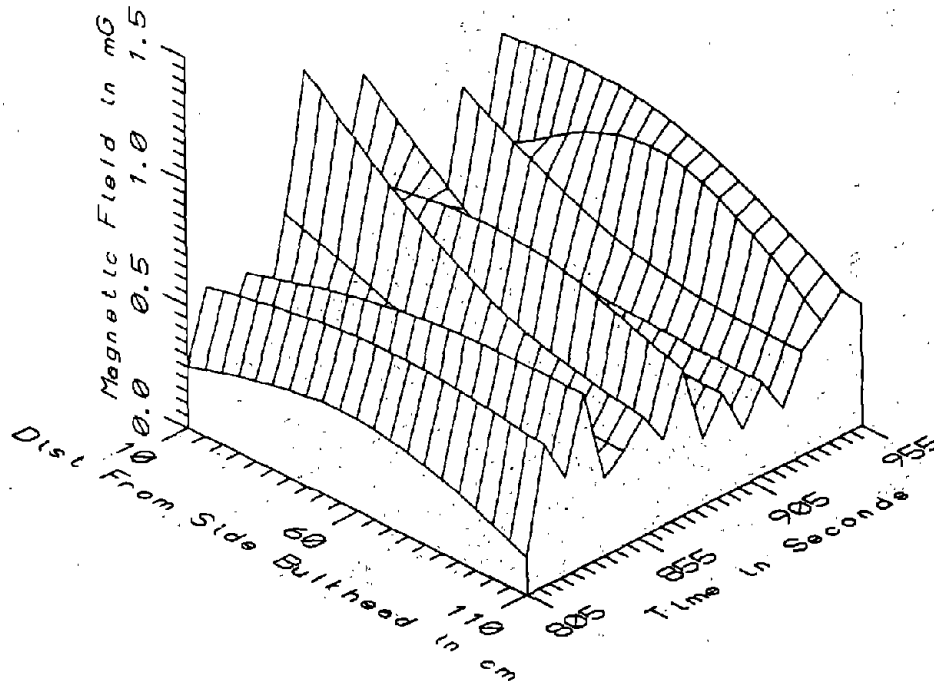
NEC048, SET 5, 110cm FROM SIDE BULKHEAD IN LAST COACH



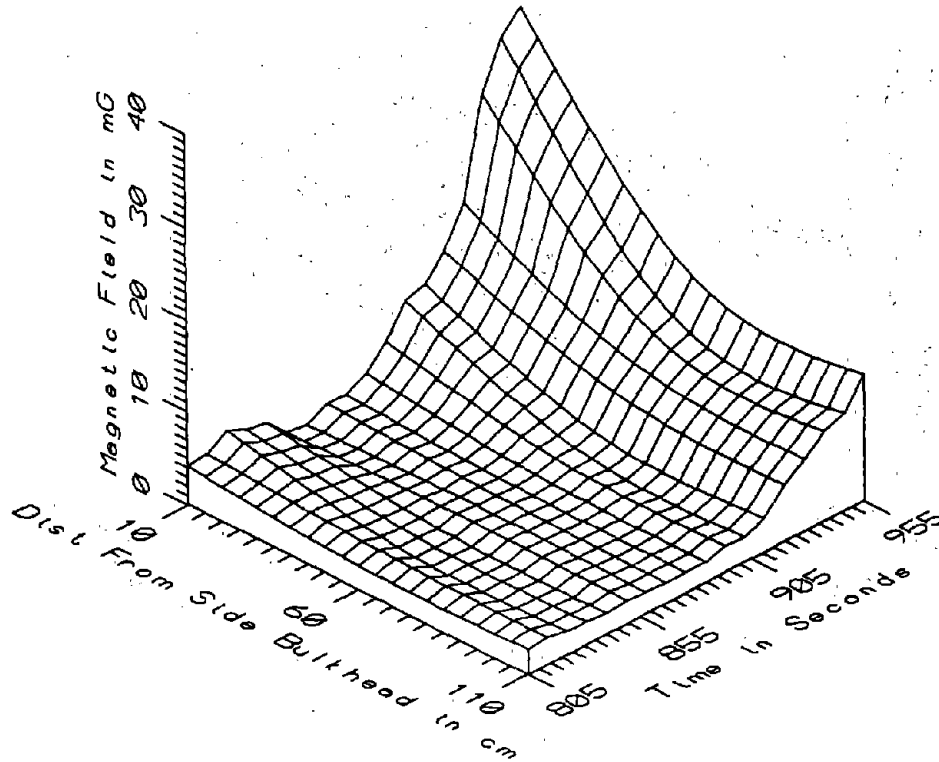
NEC048, SET 5, 110cm FROM SIDE BULKHEAD IN LAST COACH



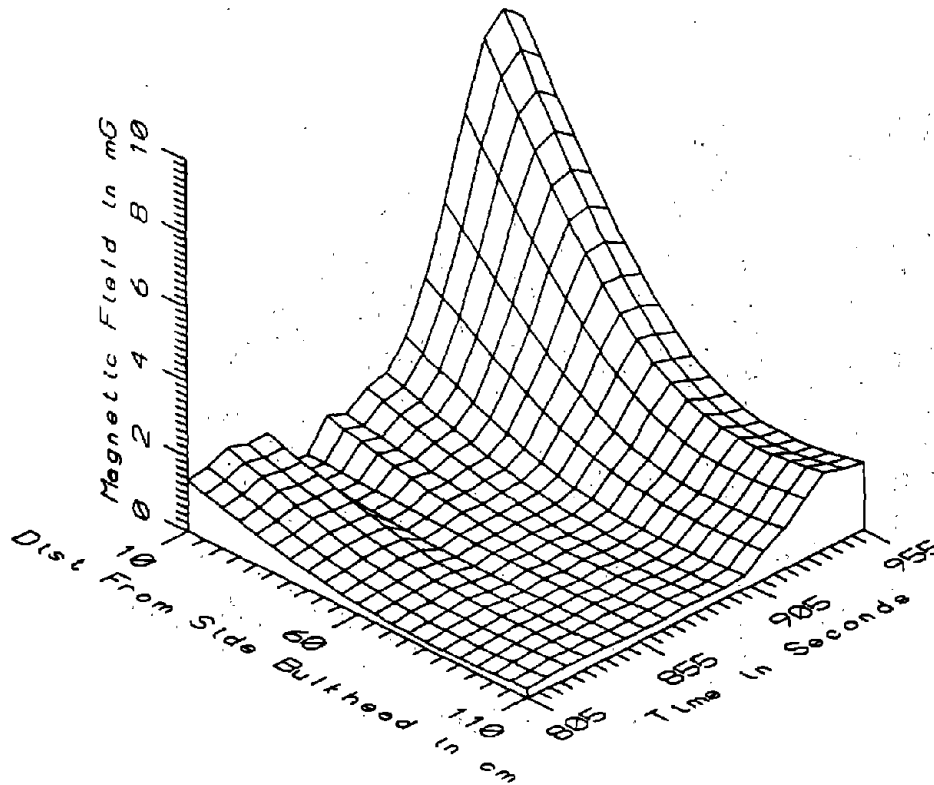
NEC048, SET. 5, HORIZONTAL PROFILE IN LAST COACH - STATIC



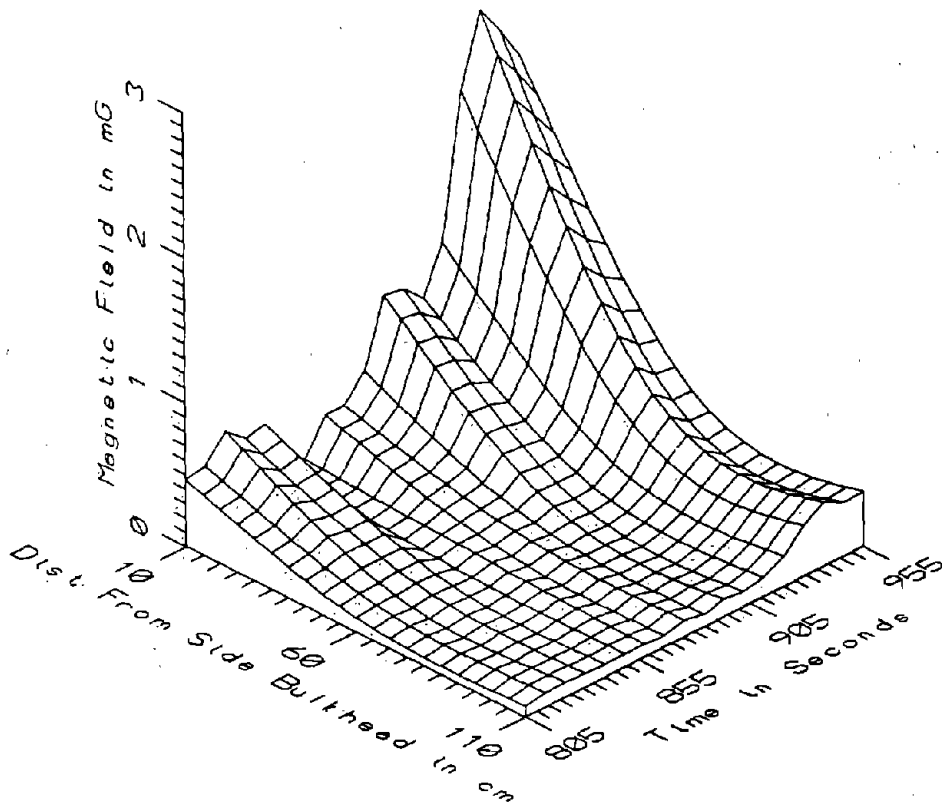
NEC048, SET. 5, HORIZONTAL PROFILE IN LAST COACH - LOW FREQ. 5-45Hz



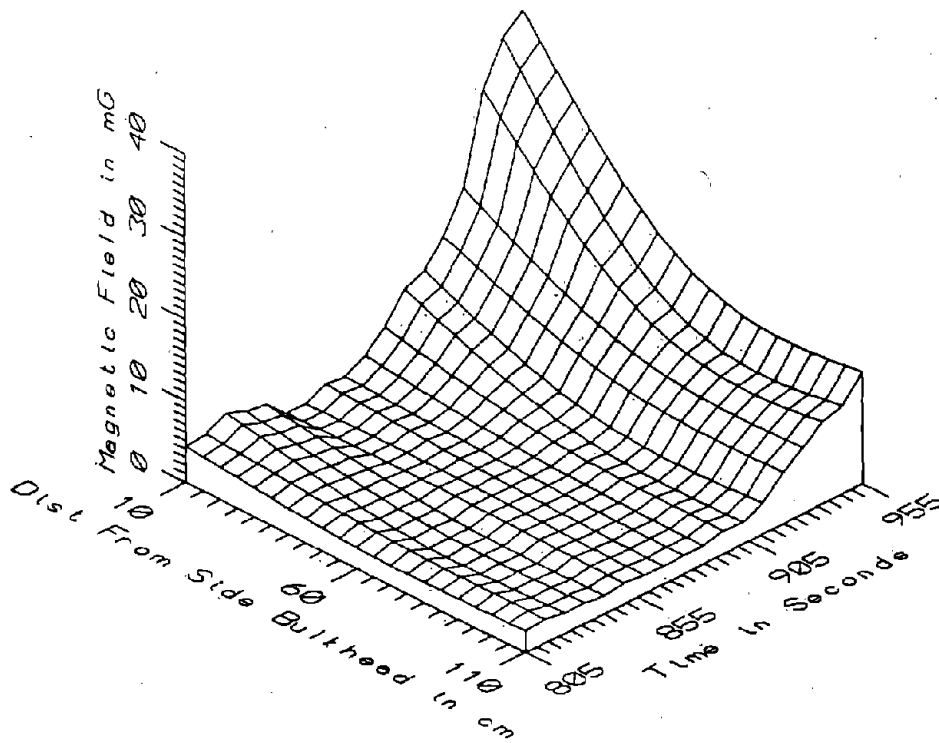
NEC048, SET 5, HORIZONTAL PROFILE IN LAST COACH - POWER FREQ, 50-60Hz



NEC048, SET 5, HORIZONTAL PROFILE IN LAST COACH - POWER HARM, 65-300Hz



NEC048, SET 5, HORIZONTAL PROFILE IN LAST COACH - HIGH FREQ, 305-2560Hz



NEC048, SET 5, HORIZONTAL PROFILE IN LAST COACH - ALL FREQ, 5-2560Hz

APPENDIX AW, SET 6

DATASET NEC048, SET 6
HORIZONTAL PROFILE ALONG THE AISLE 1.1 M ABOVE THE FLOOR
AT THE END OF THE LAST COACH
NORTH JERSEY COAST LINE (60 HZ)

Measurement Setup Code: Staff: 15 Reference: None
 Drawing: A-10

Vehicle Status: Train running at constant speed

Measurement Date: April 3, 1992

Measurement Time: Start: 17:21:13
 End: 17:25:12

Number of Samples: 28

Programmed Sample Interval: 5 sec

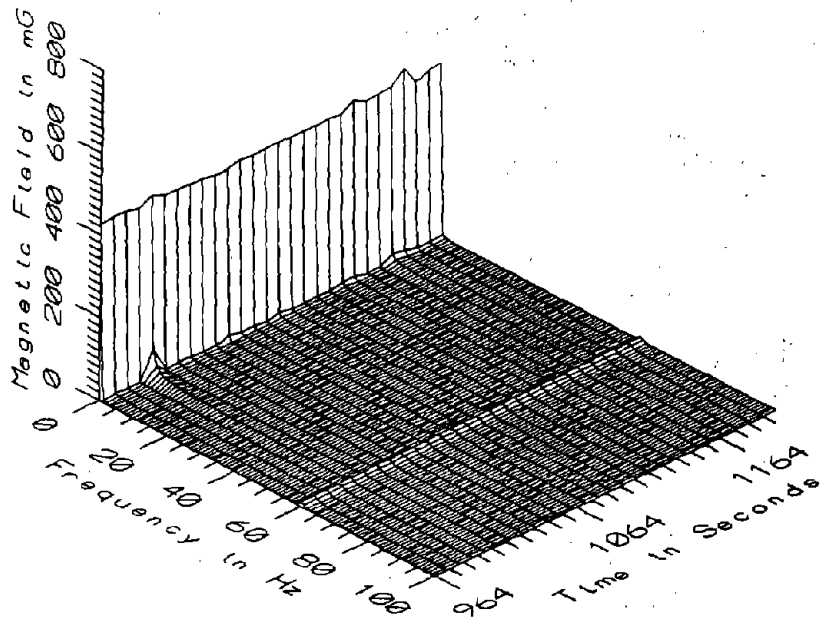
Actual Sample Interval: 8.8 sec*

Frequency Spectrum Parameters

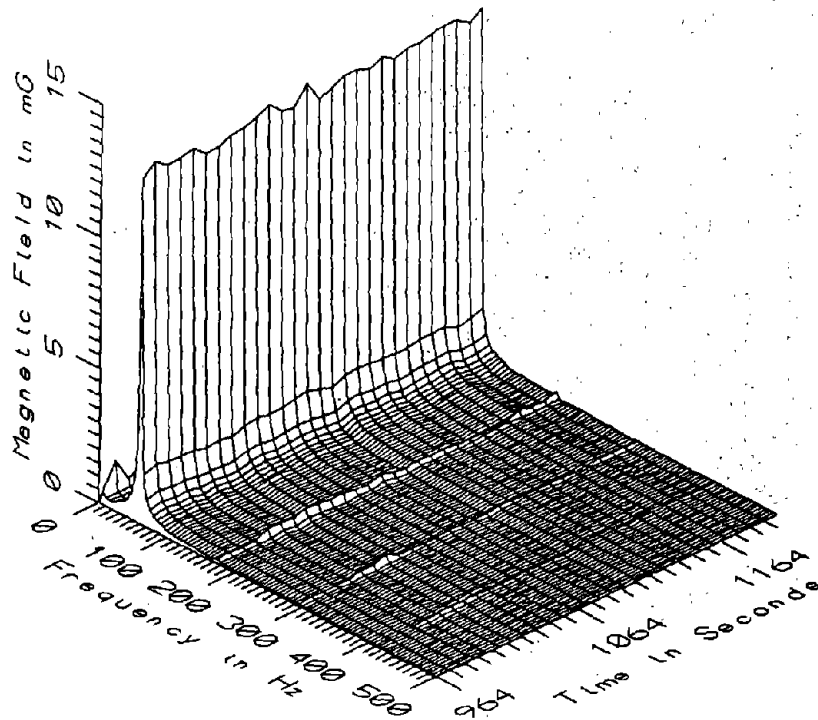
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

Missing or Suspect Data: The sensor at the end of the staff
 (160 cm from the end of the coach)
 was inoperative.

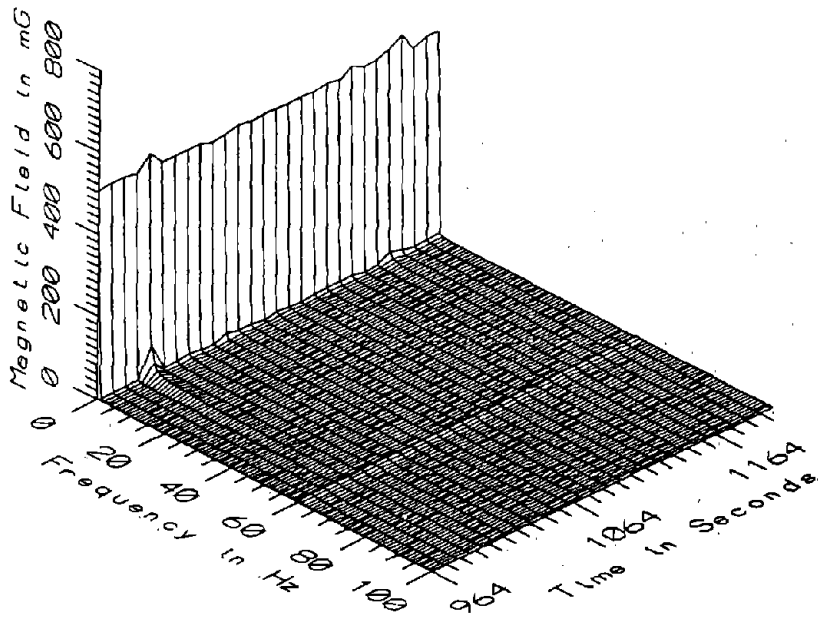
* Recording was discontinued while the sensor was moved between recording locations producing longer than normal average sample intervals.



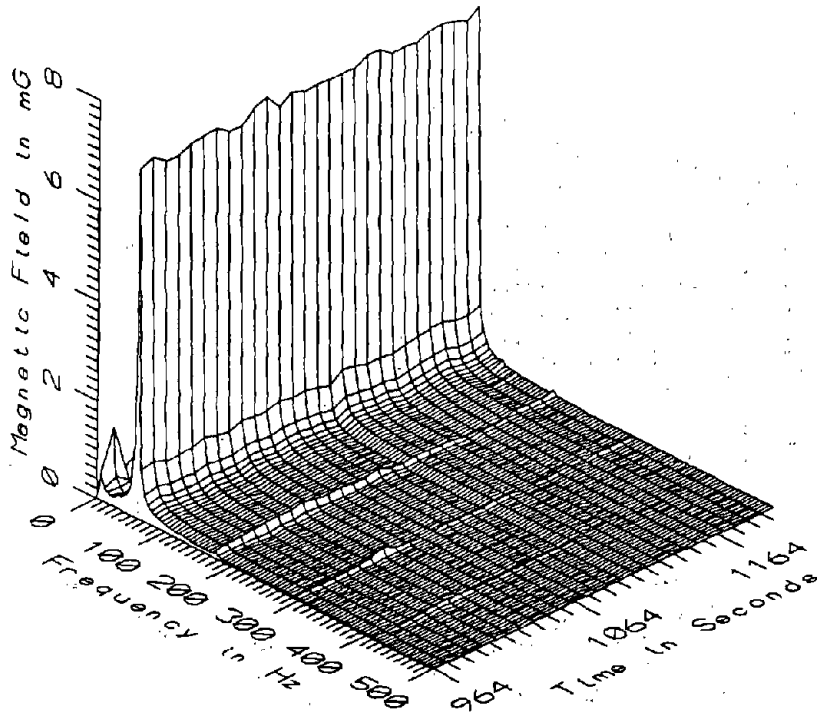
NEC048, SET 6, 10cm FROM BACK OF LAST COACH



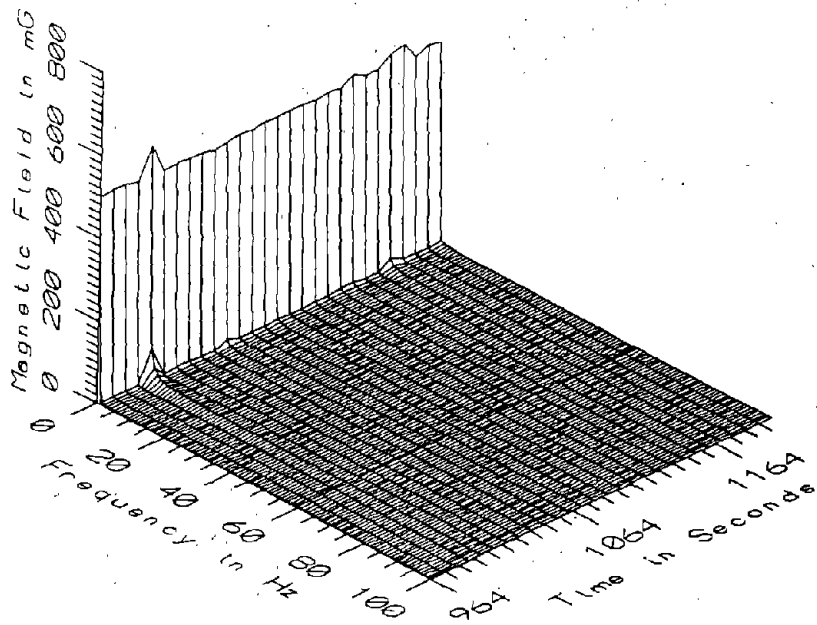
NEC048, SET 6, 10cm FROM BACK OF LAST COACH



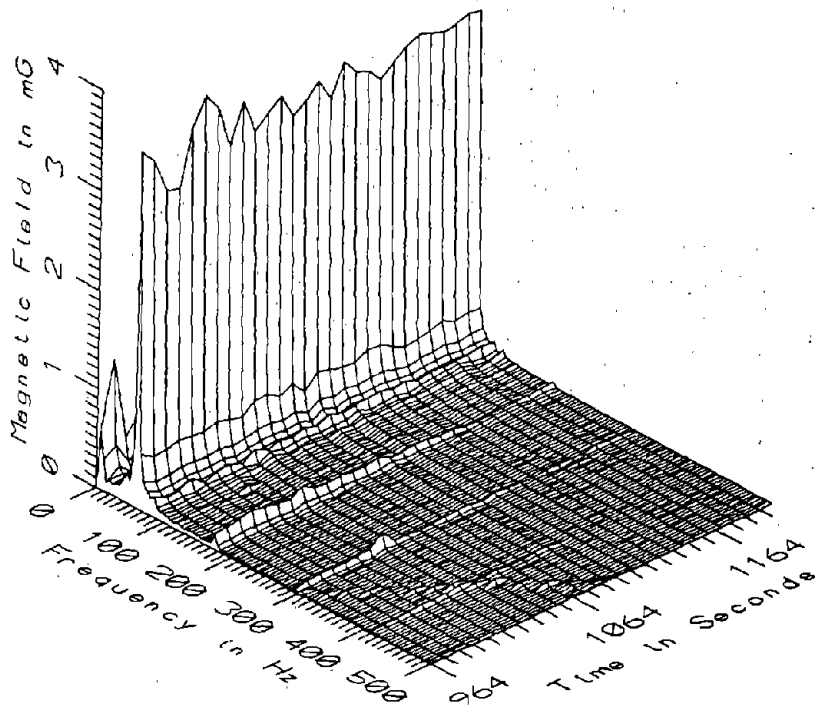
NEC048, SET 6, 60cm FROM BACK OF LAST COACH



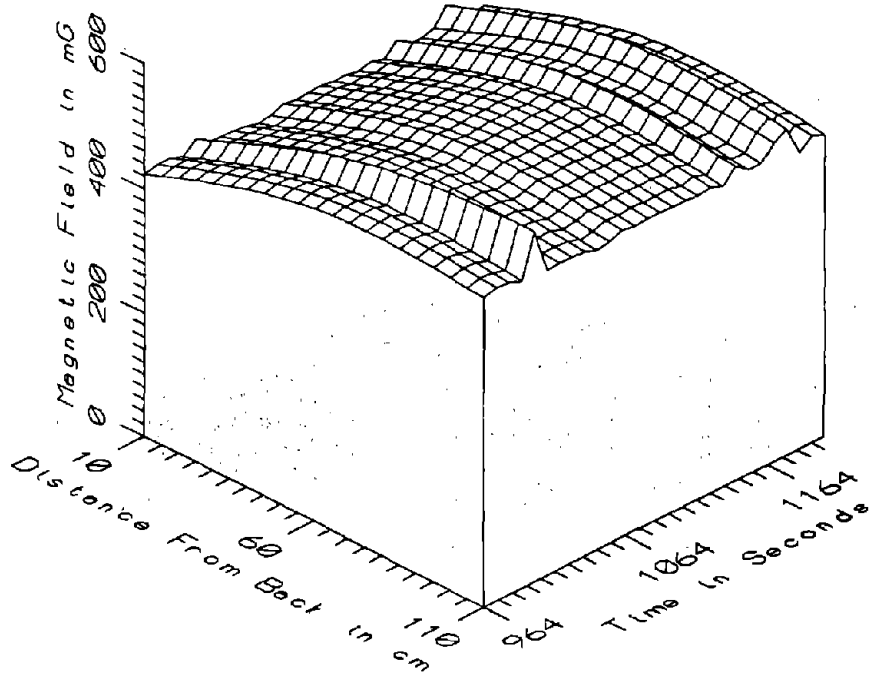
NEC048, SET 6, 60cm FROM BACK OF LAST COACH



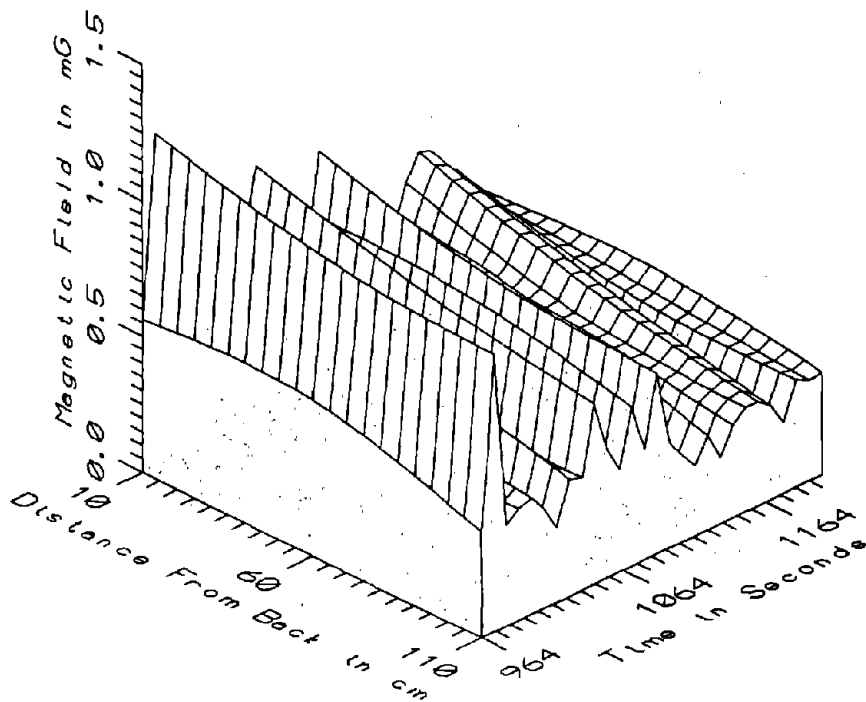
NEC048, SET 6, 110cm FROM BACK OF LAST COACH



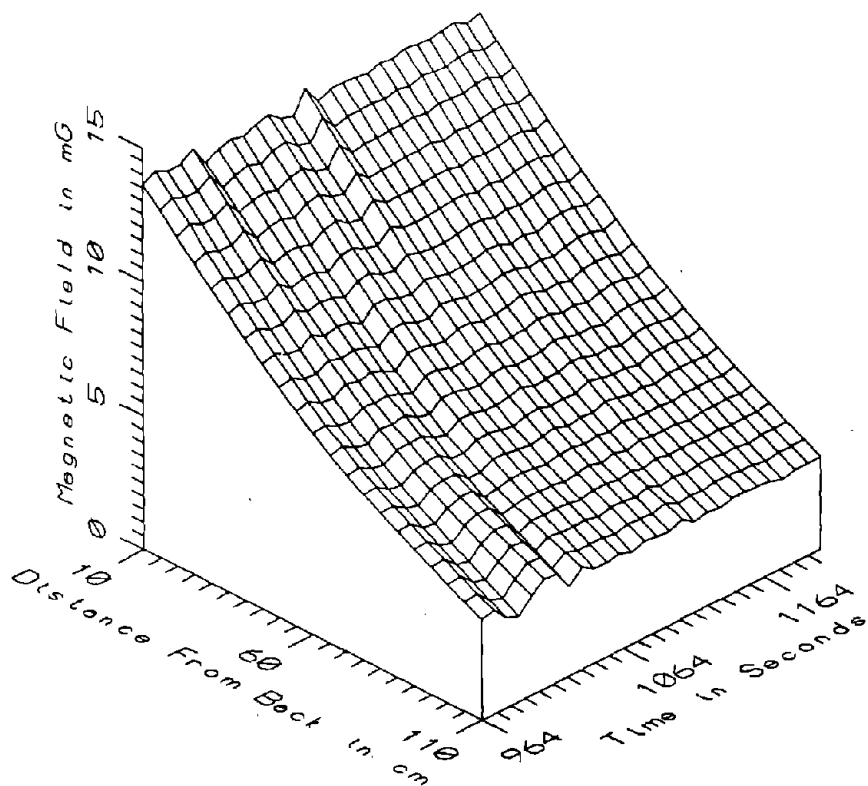
NEC048, SET 6, 110cm FROM BACK OF LAST COACH



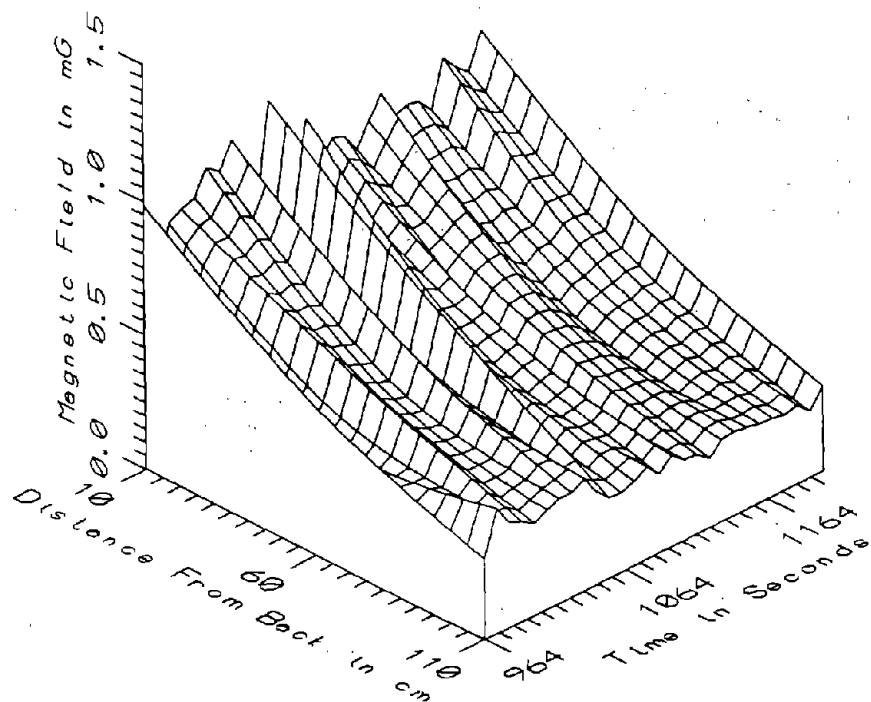
NEC048, SET 6, LONGITUDINAL PROFILE IN LAST COACH - STATIC



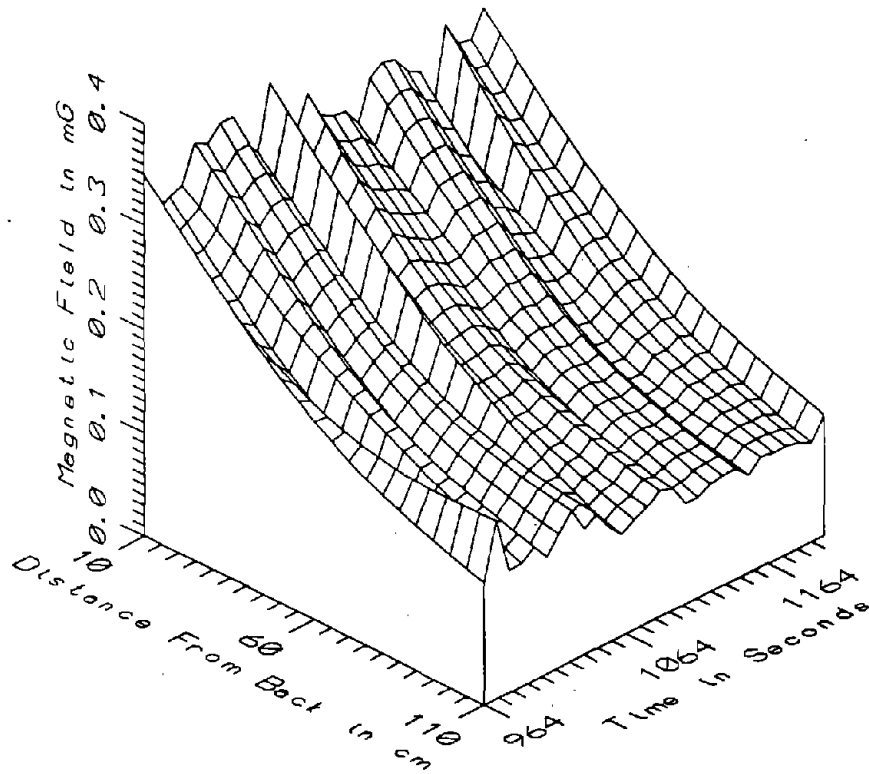
NEC048, SET 6, LONGITUDINAL PROFILE IN LAST COACH - LOW FREQ, 5-45Hz



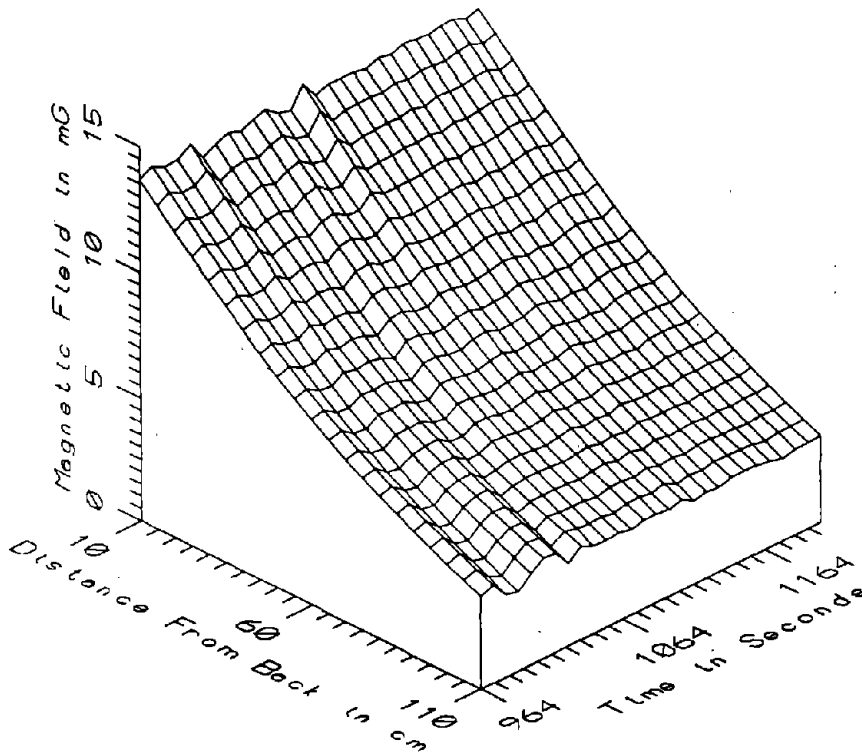
NEC048, SET 6, LONGITUDINAL PROFILE IN LAST COACH - POWER FREQ, 50-60Hz



NEC048, SET 6, LONGITUDINAL PROFILE IN LAST COACH - POWER HARM, 65-300Hz



NEC048, SET 6, LONGITUDINAL PROFILE IN LAST COACH - HIGH FREQ, 305-2560Hz



NEC048, SET 6, LONGITUDINAL PROFILE IN LAST COACH - ALL FREQ, 5-2560Hz

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to ensure the validity of the results.

3. The third part of the document describes the different types of data that are collected and analyzed. It includes information on both quantitative and qualitative data, as well as the specific variables being measured.

4. The fourth part of the document discusses the various statistical techniques used to analyze the data. It covers both descriptive and inferential statistics, as well as the use of regression analysis and other advanced methods.

5. The fifth part of the document describes the different ways in which the results of the analysis are presented and communicated. It includes information on the use of tables, graphs, and other visual aids to make the data more accessible and understandable.

6. The sixth part of the document discusses the various factors that can influence the results of the analysis. It includes information on the potential for bias and error, as well as the importance of controlling for these factors.

7. The seventh part of the document describes the different ways in which the results of the analysis can be used to inform decision-making. It includes information on the use of the data to identify trends and patterns, as well as to evaluate the effectiveness of different strategies and interventions.

8. The eighth part of the document discusses the various challenges and limitations of the analysis. It includes information on the potential for incomplete or missing data, as well as the limitations of the statistical methods used.

9. The ninth part of the document describes the different ways in which the results of the analysis can be used to inform future research. It includes information on the use of the data to identify areas for further investigation, as well as to develop new theories and models.

APPENDIX AX

DATASET NEC049
VERTICAL PROFILE AT THE ENGINEER'S SEAT
ELECTRIC LOCOMOTIVE, NORTH JERSEY COAST LINE

Measurement Setup Code: Staff: 24 Reference: 25
 Drawing: A-4

Vehicle Status: Train moving slowly from the yard to
 the platform

Measurement Date: April 3, 1992

Measurement Time: Start: 8:16:00
 End: 8:21:22

Number of Samples: 6

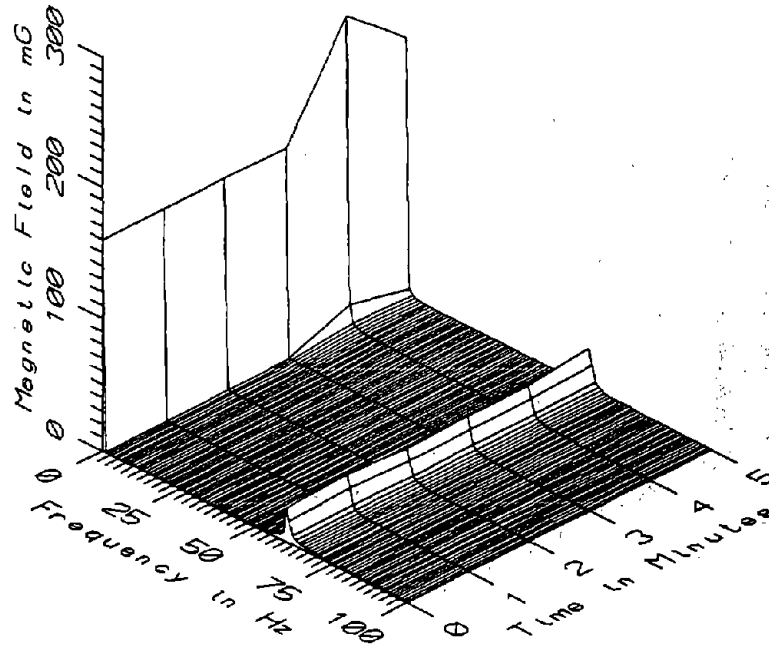
Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

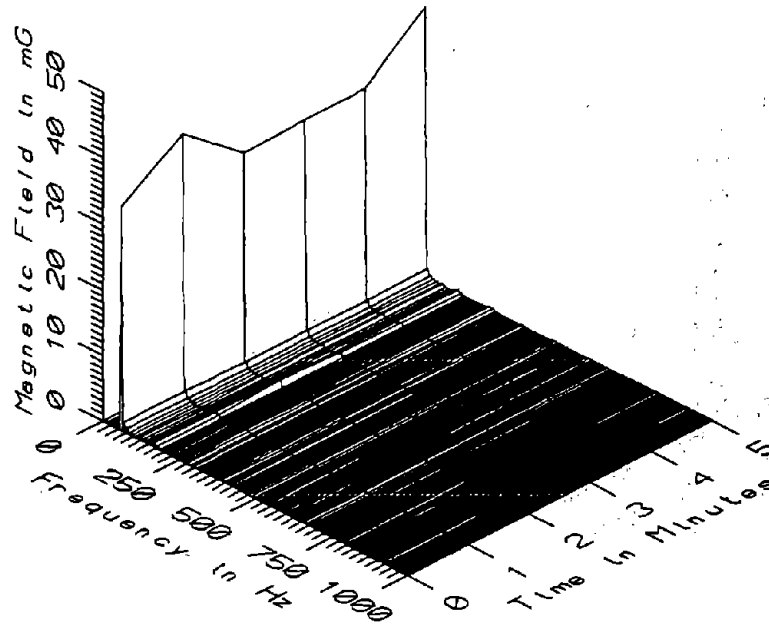
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

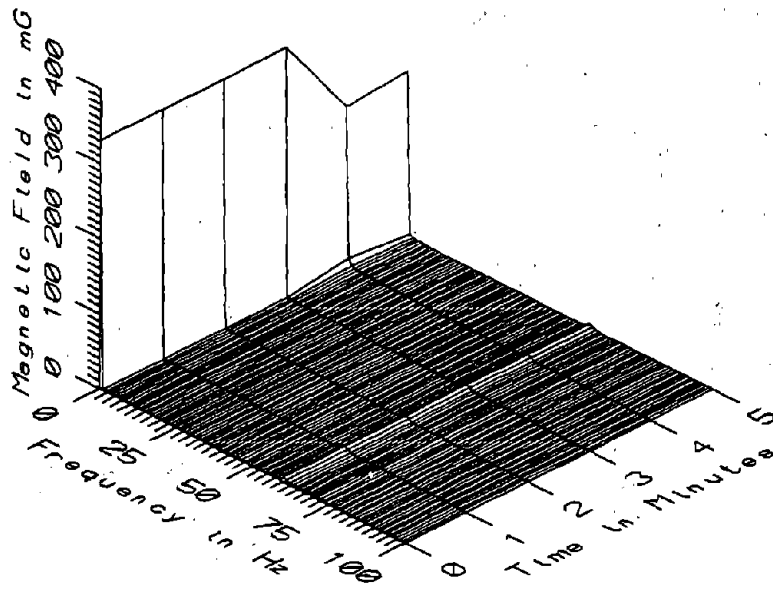
Missing or Suspect Data: None



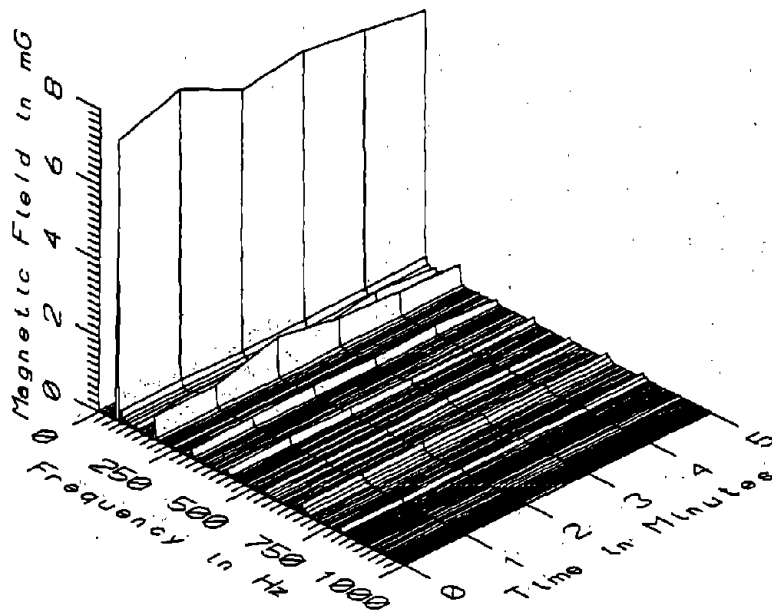
NEC049 - 10cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT



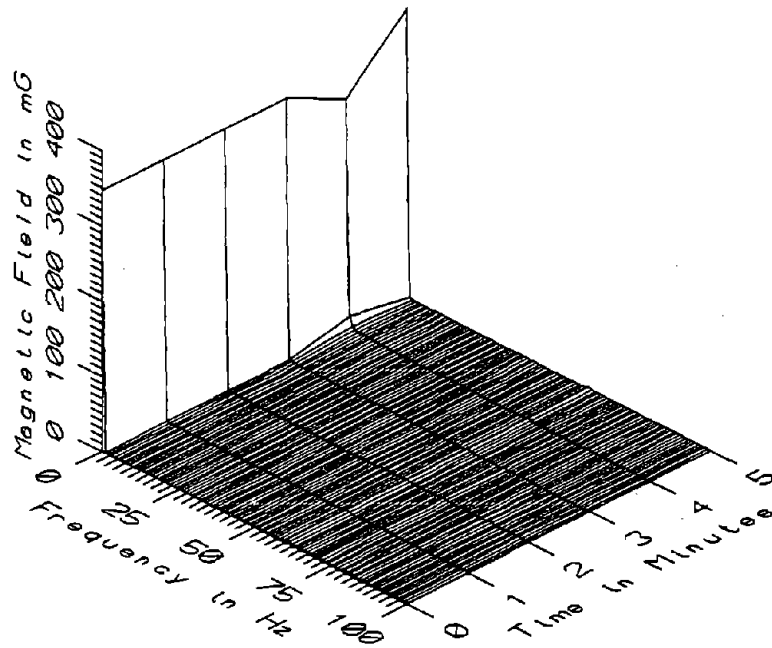
NEC049 - 10cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT



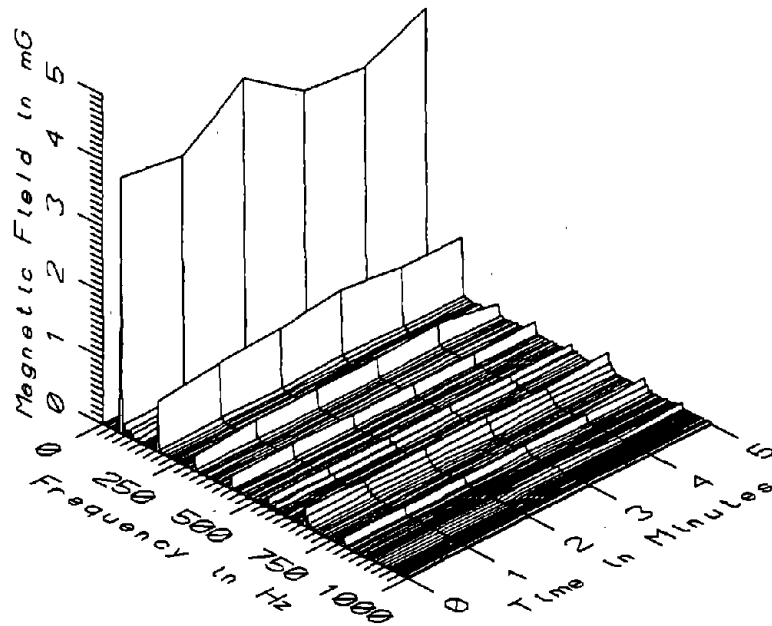
NEC049 - 60cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT



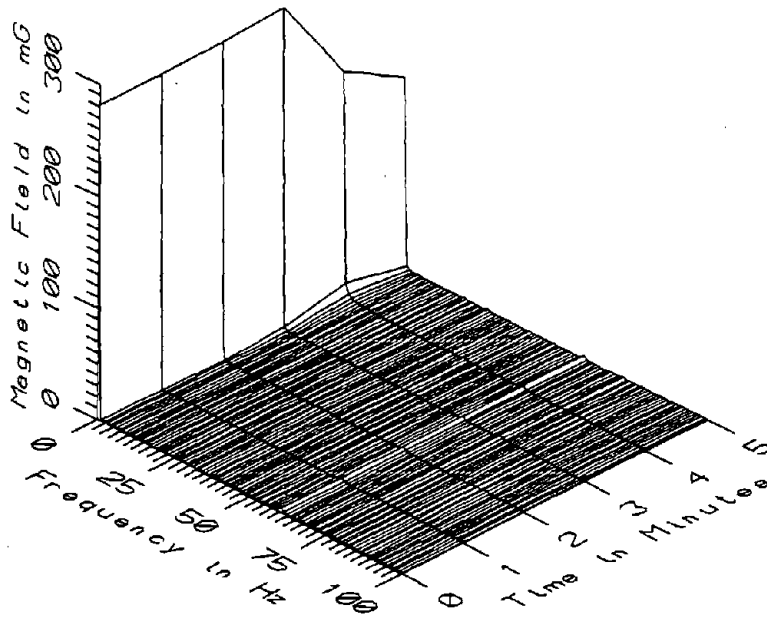
NEC049 - 60cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT



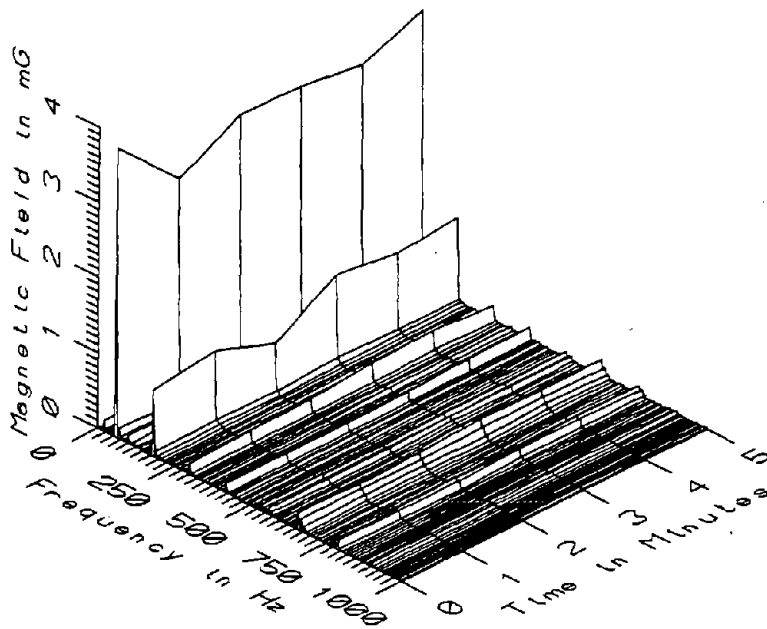
NEC049 - 110cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT



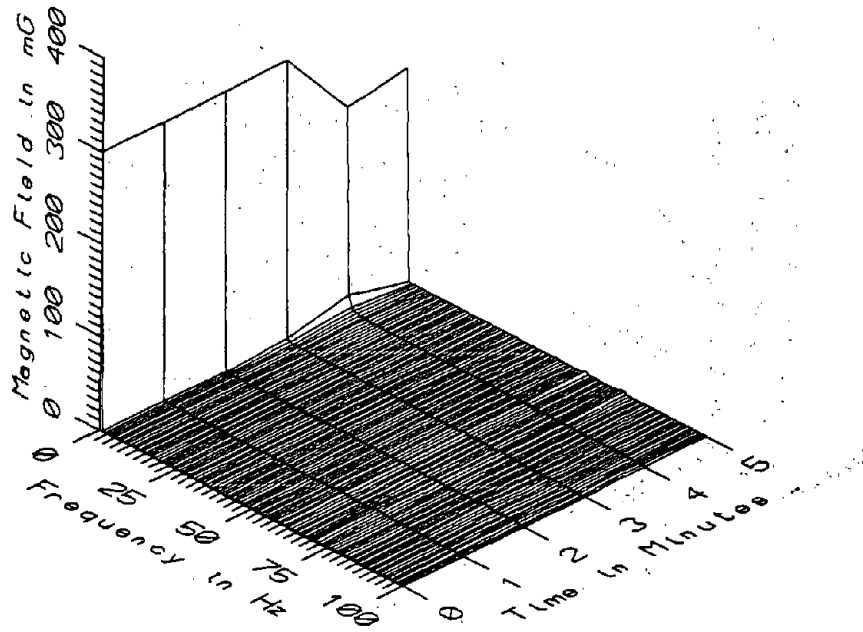
NEC049 - 110cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT



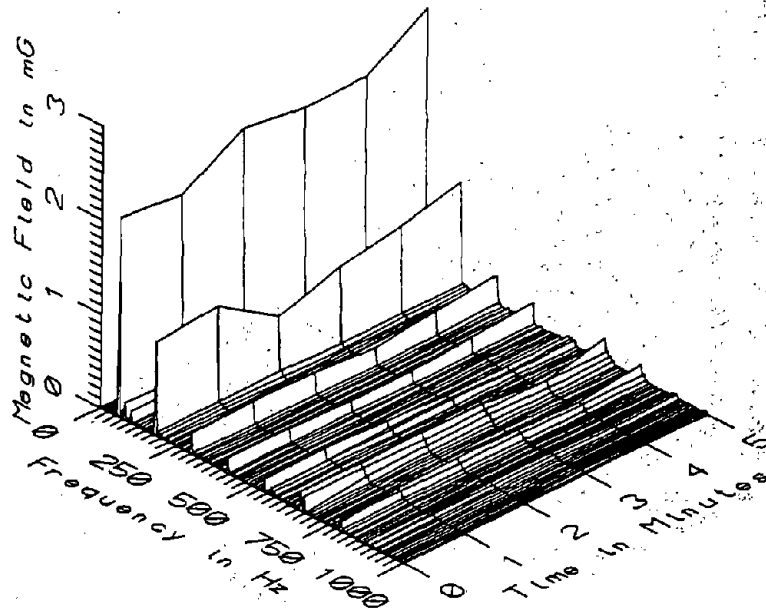
NEC049 - 160cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT



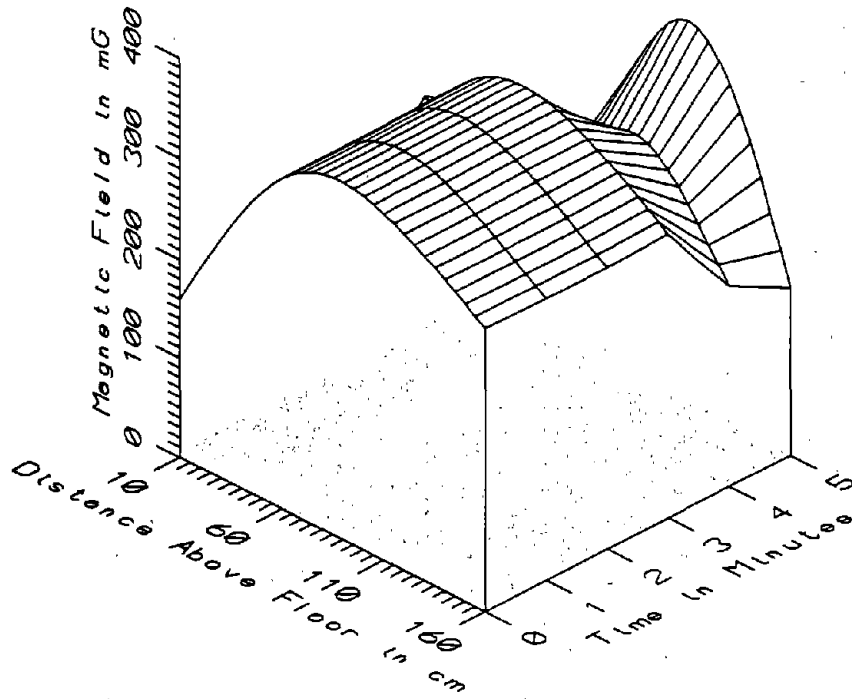
NEC049 - 160cm ABOVE FLOOR LEFT OF ENGINEER'S SEAT



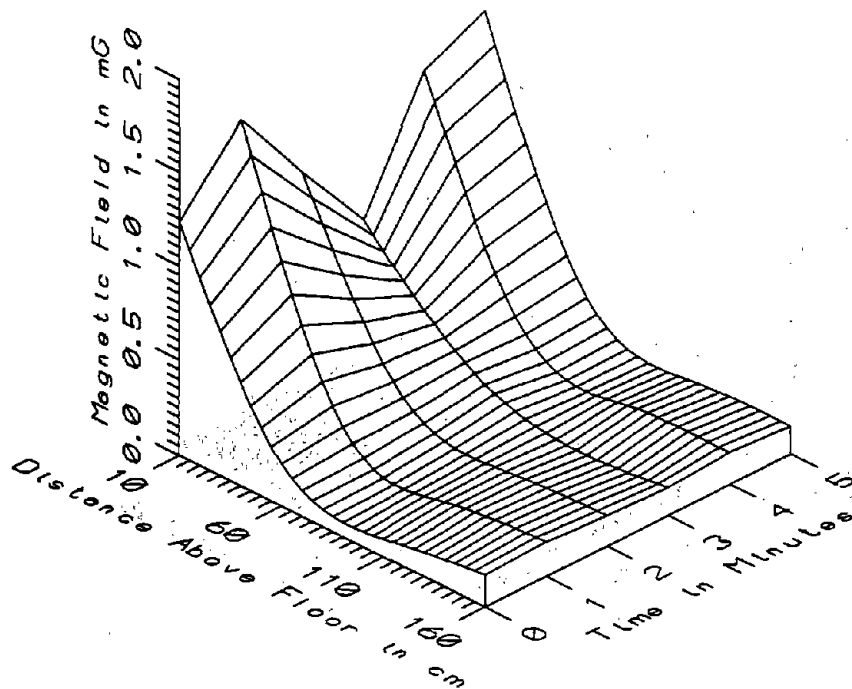
NEC049 - REFERENCE PROBE - FIREMAN'S SEAT



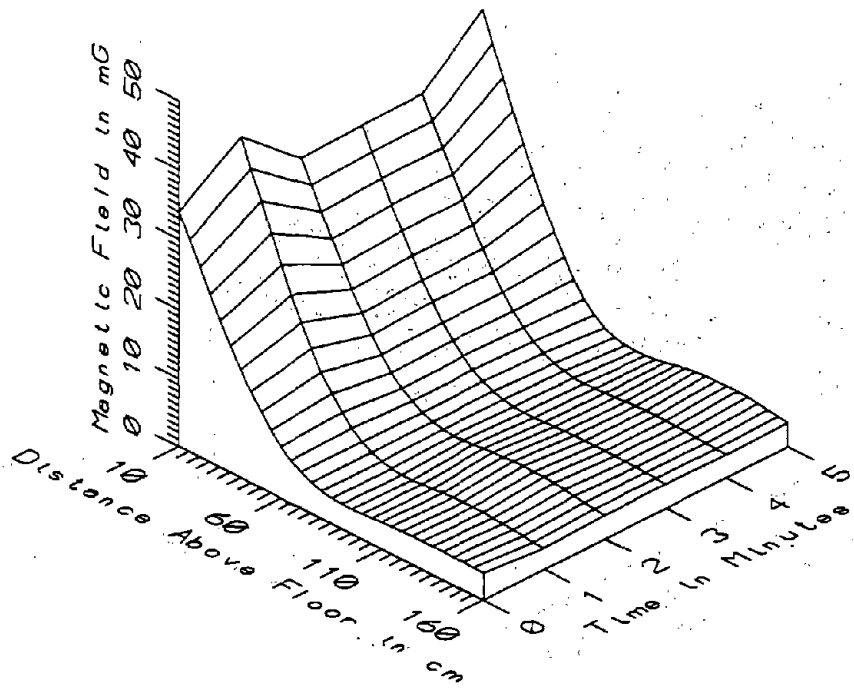
NEC049 - REFERENCE PROBE - FIREMAN'S SEAT



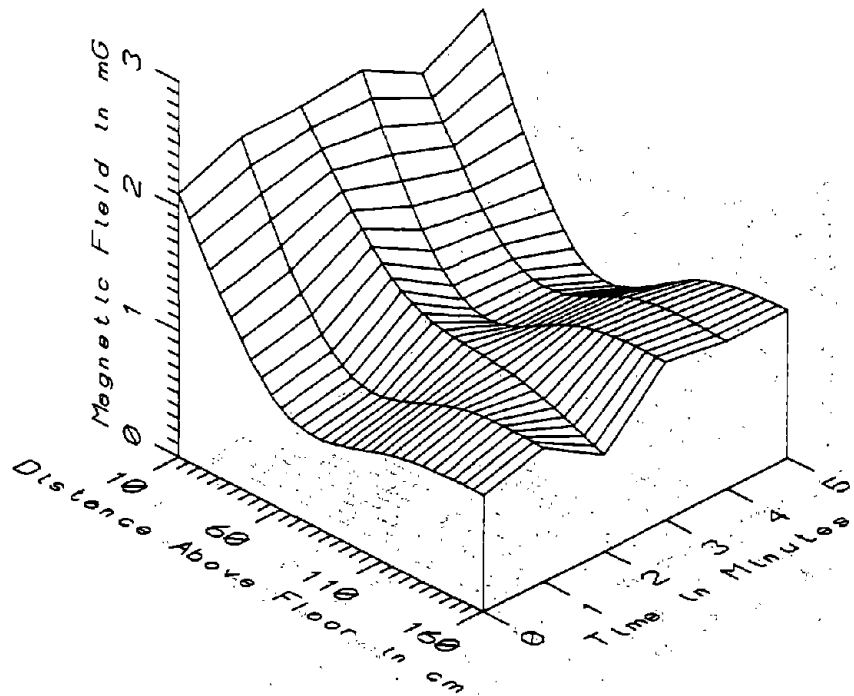
NEC049 - LEFT OF ENGINEER'S SEAT - STATIC



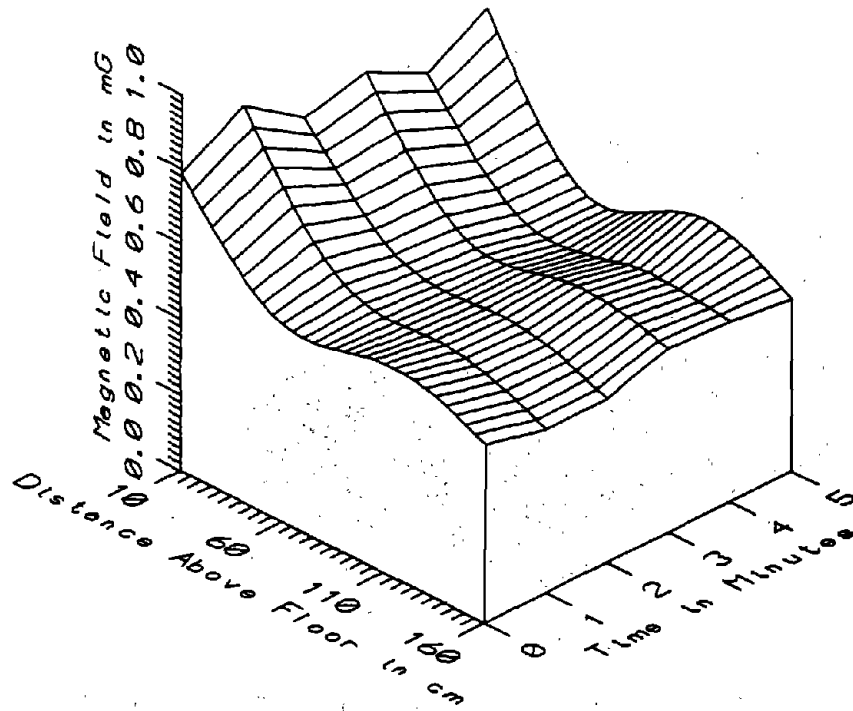
NEC049 - LEFT OF ENGINEER'S SEAT - LOW FREQUENCY, 5-45Hz



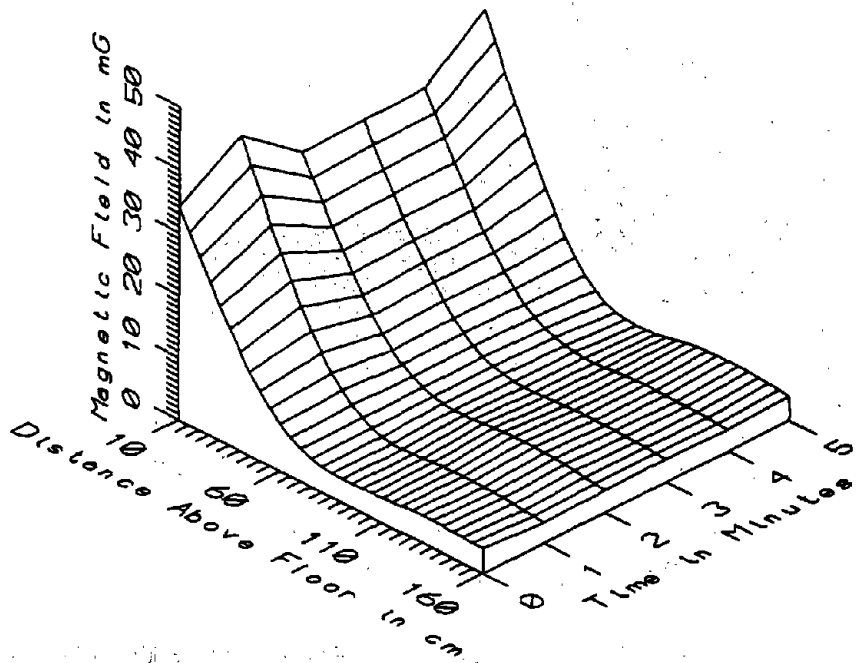
NEC049 - LEFT OF ENGINEER'S SEAT - POWER FREQUENCY, 50-60Hz



NEC049 - LEFT OF ENGINEER'S SEAT - POWER HARMONICS, 65-300Hz



NEC049 - LEFT OF ENGINEER'S SEAT - HIGH FREQUENCY, 305-2560Hz



NEC049 - LEFT OF ENGINEER'S SEAT - ALL FREQUENCIES, 5-2560Hz

APPENDIX AY

DATASET NEC050
VERTICAL PROFILE AT THE ENGINEER'S SEAT
ELECTRIC LOCOMOTIVE, NORTH JERSEY COAST LINE

Measurement Setup Code: Staff: 24 Reference: 25
 Drawing: A-4

Vehicle Status: Train standing at station until 290
 seconds then begins a slow
 acceleration to 50 mph (81 kph) at
 445 seconds. Braking at 535 seconds

Measurement Date: April 3, 1992

Measurement Time: Start: 8:22:02
 End: 8:34:10

Number of Samples: 86

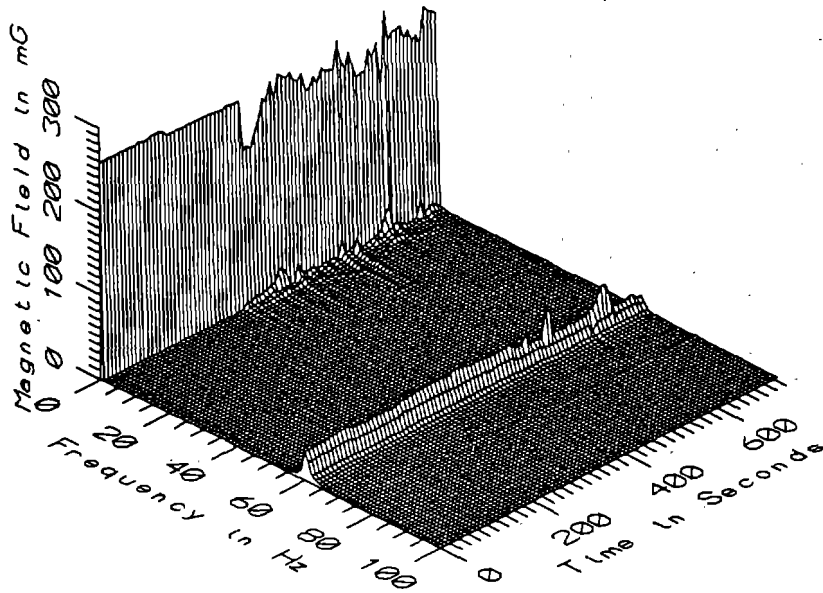
Programmed Sample Interval: 5 sec

Actual Sample Interval: 8.6 sec

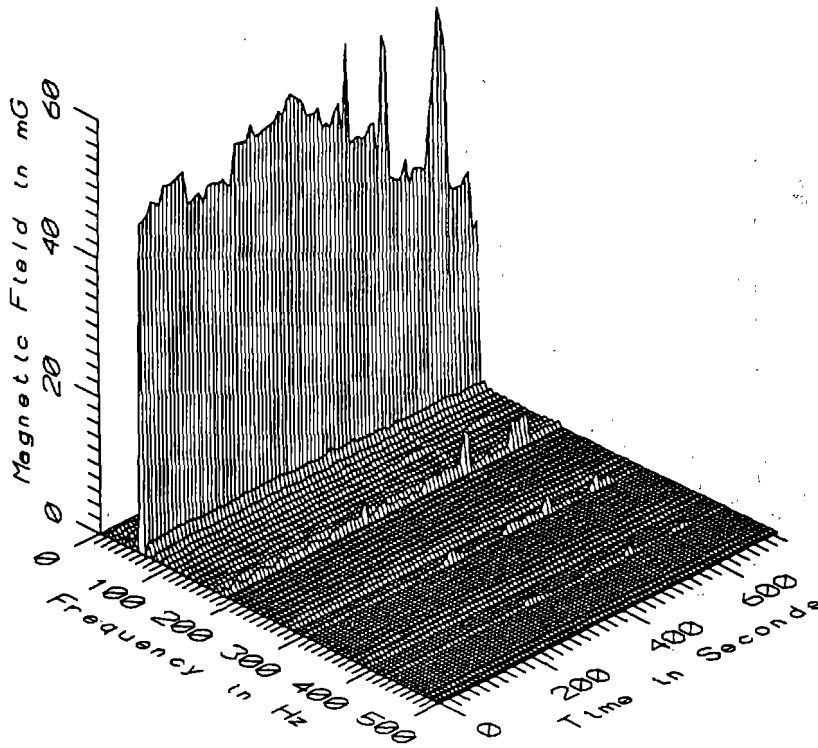
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

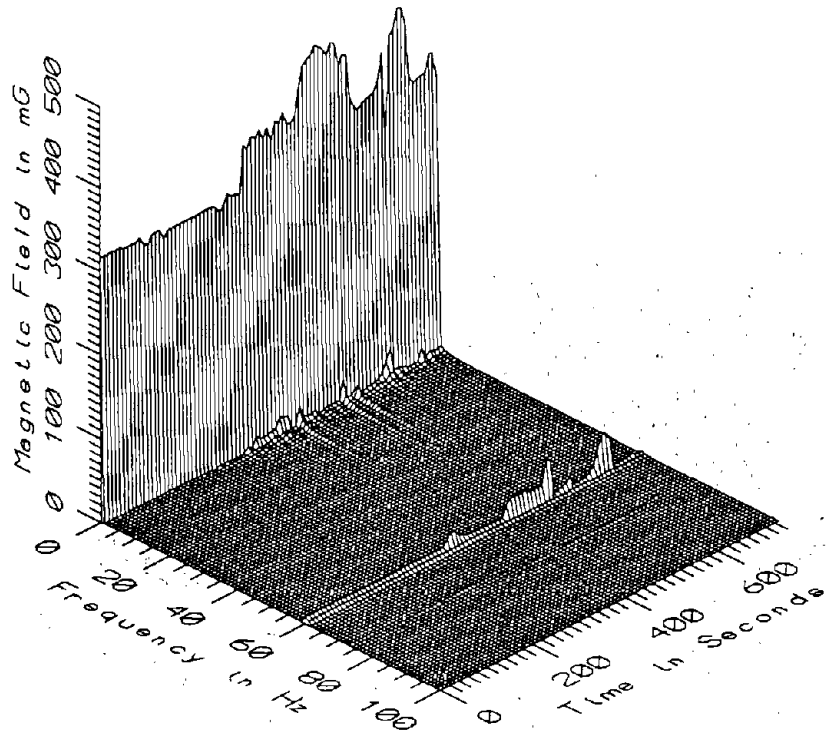
Missing or Suspect Data: None



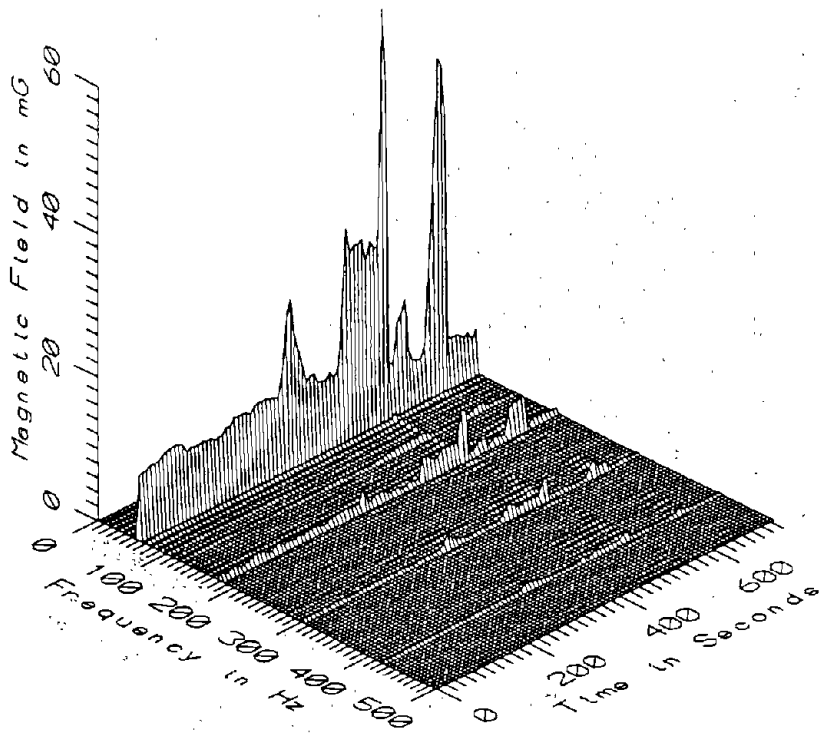
NEC050 - 10cm ABOVE FLOOR, LEFT OF ENGINEER'S SEAT



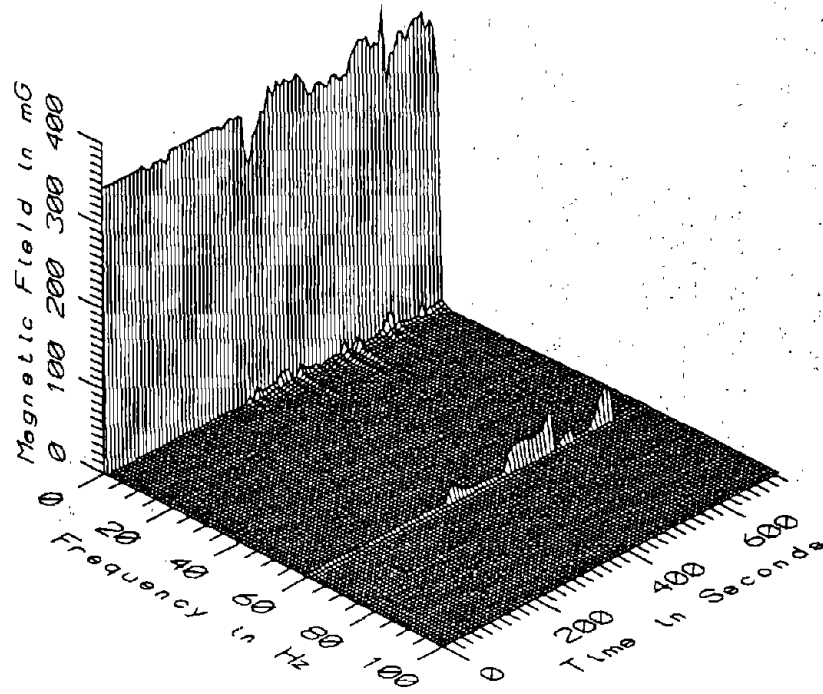
NEC050 - 10cm ABOVE FLOOR, LEFT OF ENGINEER'S SEAT



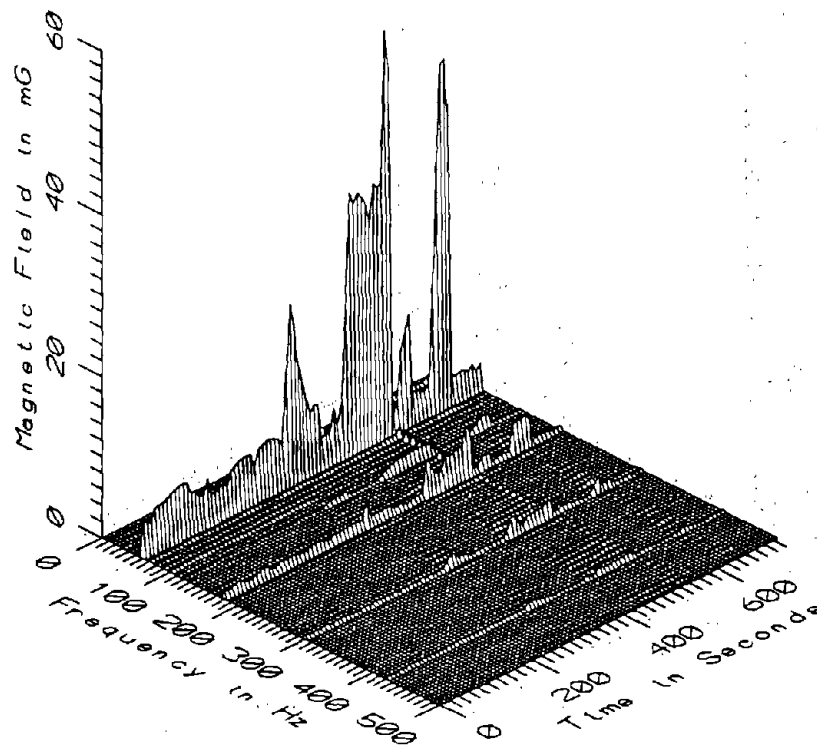
NEC050 - 60cm ABOVE FLOOR, LEFT OF ENGINEER'S SEAT



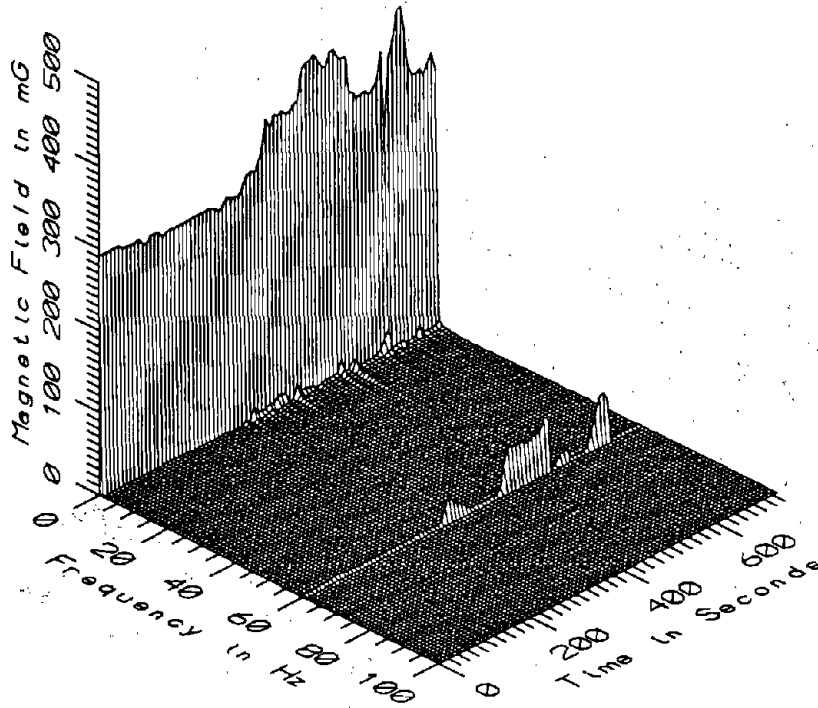
NEC050 - 60cm ABOVE FLOOR, LEFT OF ENGINEER'S SEAT



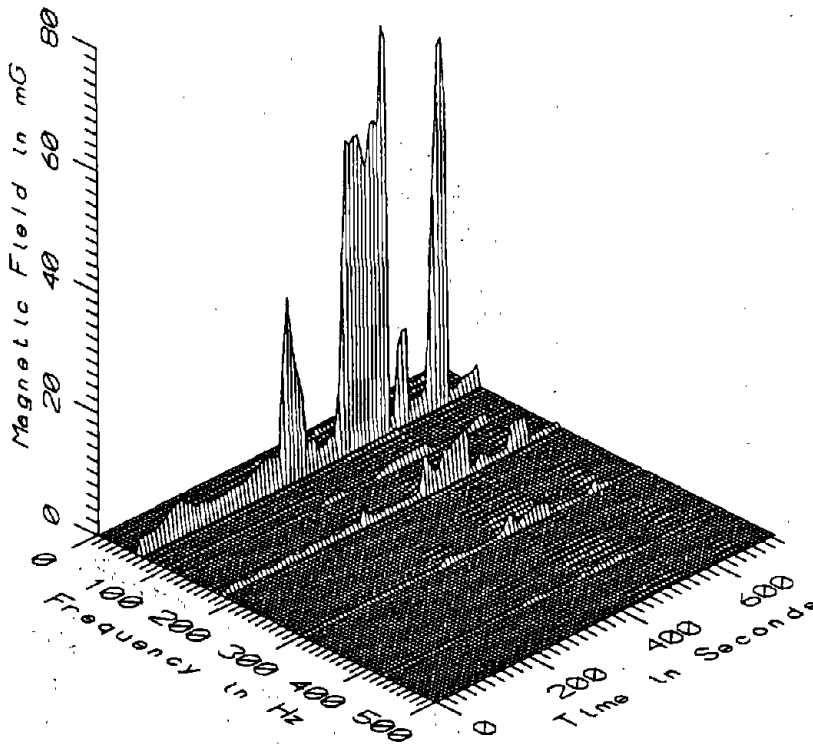
NEC050 - 110cm ABOVE FLOOR, LEFT OF ENGINEER'S SEAT



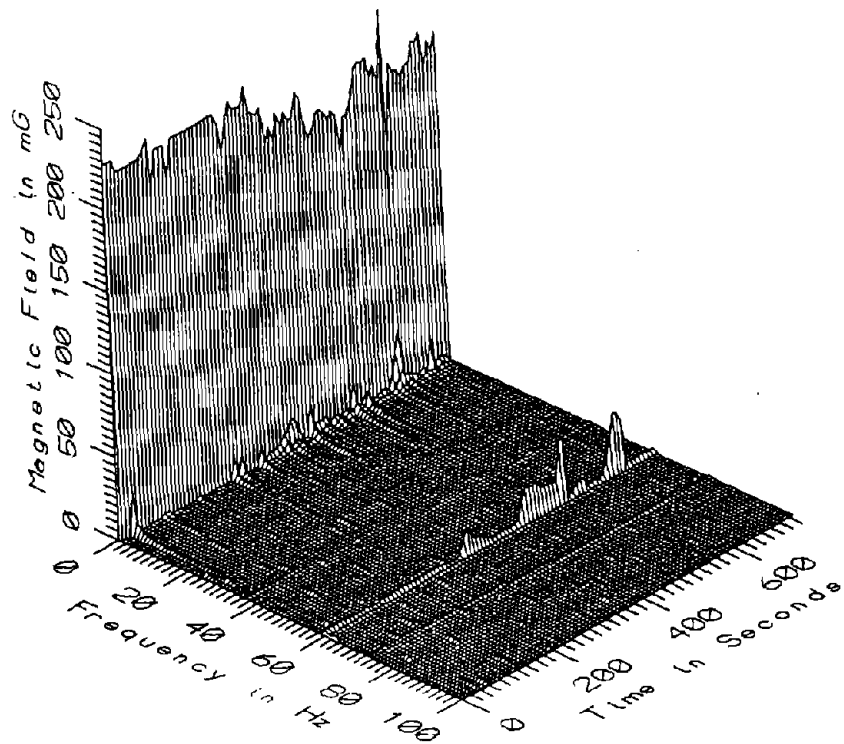
NEC050 - 110cm ABOVE FLOOR, LEFT OF ENGINEER'S SEAT



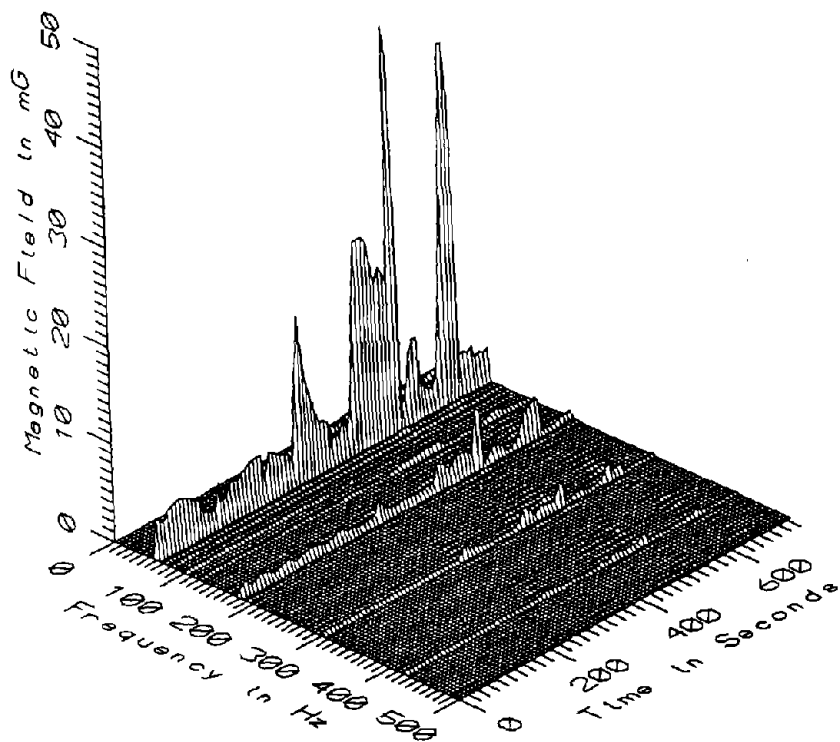
NEC050 - 160cm ABOVE FLOOR, LEFT OF ENGINEER'S SEAT



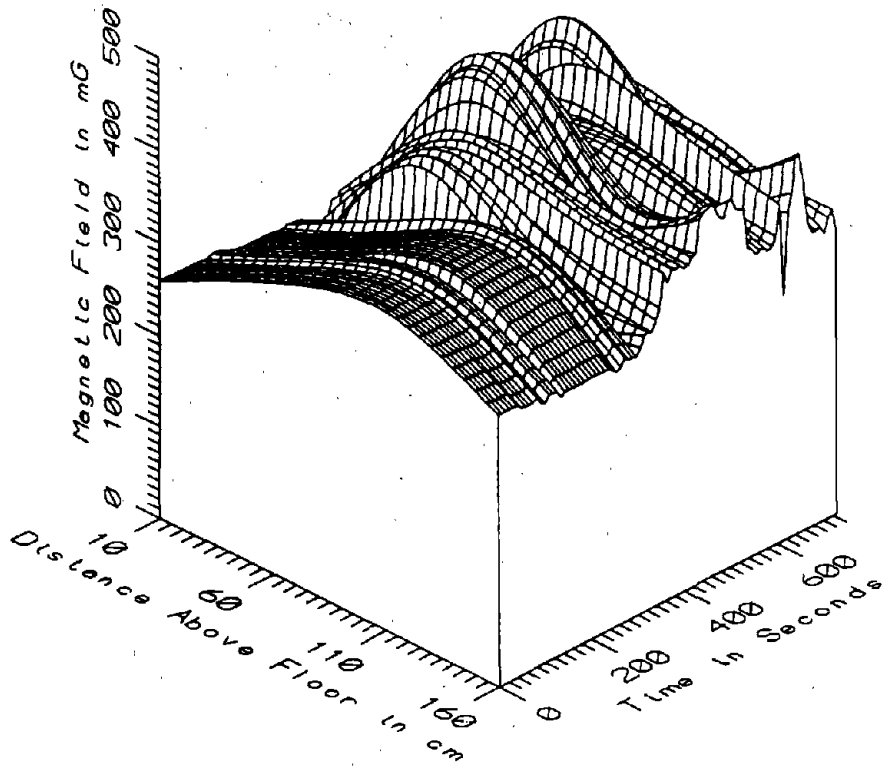
NEC050 - 160cm ABOVE FLOOR, LEFT OF ENGINEER'S SEAT



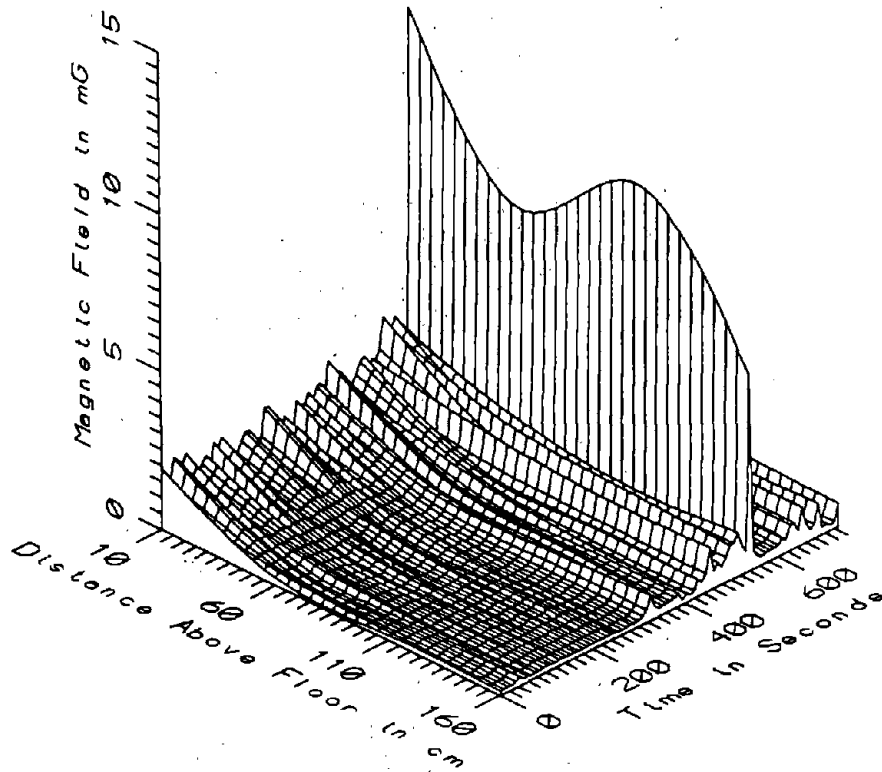
NEC050 - REFERENCE PROBE - FIREMAN'S SEAT



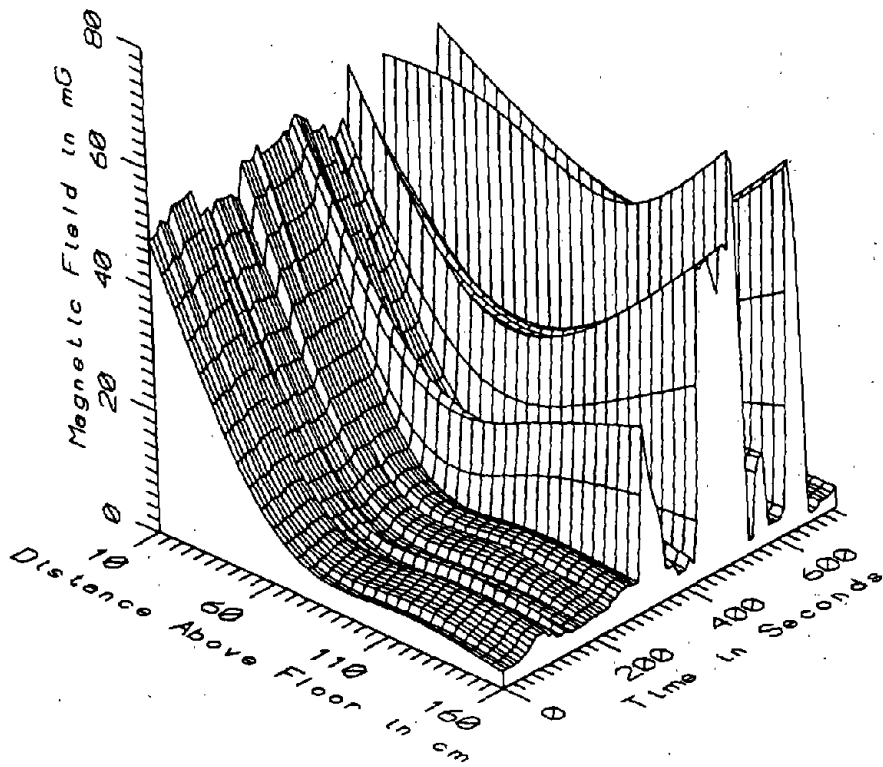
NEC050 - REFERENCE PROBE - FIREMAN'S SEAT



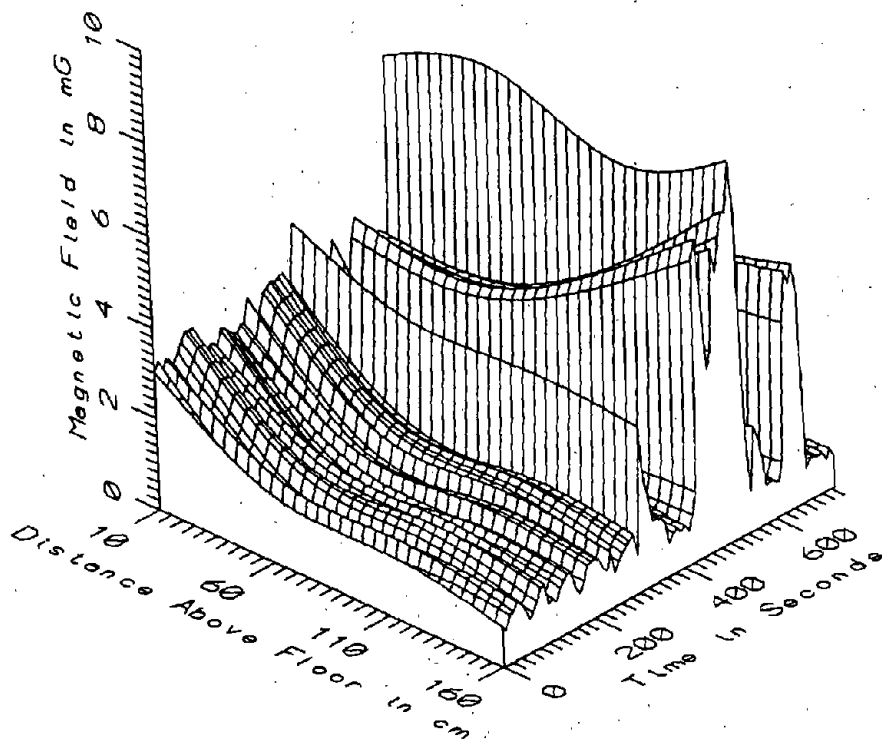
NEC050 - LEFT OF ENGINEER'S SEAT - STATIC



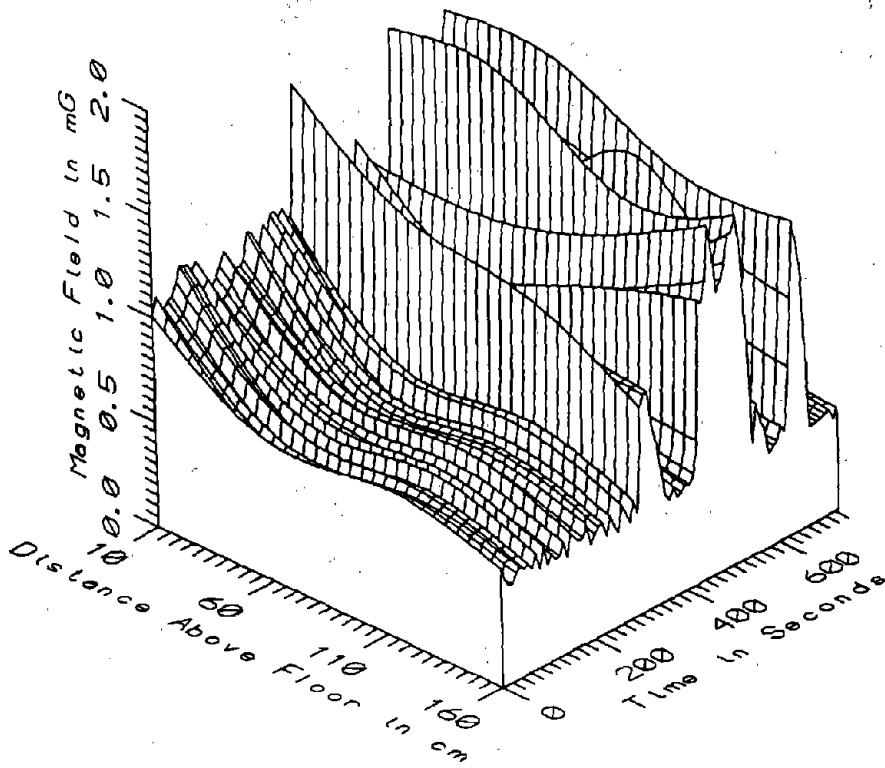
NEC050 - LEFT OF ENGINEER'S SEAT - LOW FREQ, 5-45Hz



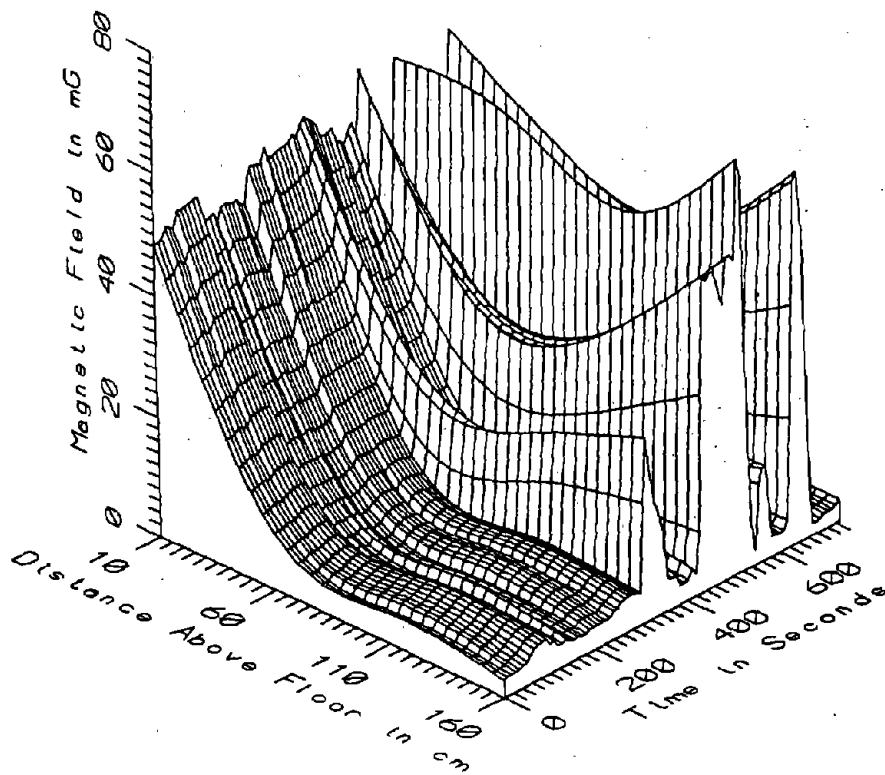
NEC050 - LEFT OF ENGINEER'S SEAT - POWER FREQ, 50-60Hz



NEC050 - LEFT OF ENGINEER'S SEAT - POWER HARM, 65-300Hz



NEC050 - LEFT OF ENGINEER'S SEAT - HIGH FREQ, 305-2560Hz



NEC050 - LEFT OF ENGINEER'S SEAT - ALL FREQ, 5-2560Hz

APPENDIX AZ, SET 1

DATASET NEC051, SET 1
HORIZONTAL PROFILE THROUGH CENTER OF THE CAB
ELECTRIC LOCOMOTIVE, NORTH JERSEY COAST LINE

Measurement Setup Code: Staff: 27 Reference: 25
 Drawing: A-4

Vehicle Status: Train departing Red Bank toward
 Matawan at the 35 second point

Measurement Date: April 3, 1992

Measurement Time: Start: 8:34:54
 End: 8:37:40

Number of Samples: 22

Programmed Sample Interval: 5 sec

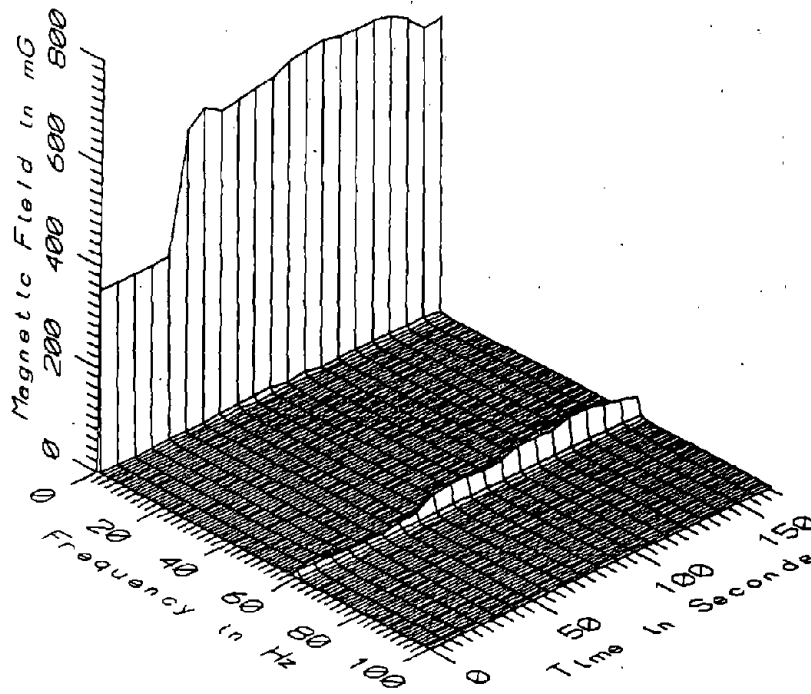
Actual Sample Interval: 8.3 sec*

Frequency Spectrum Parameters

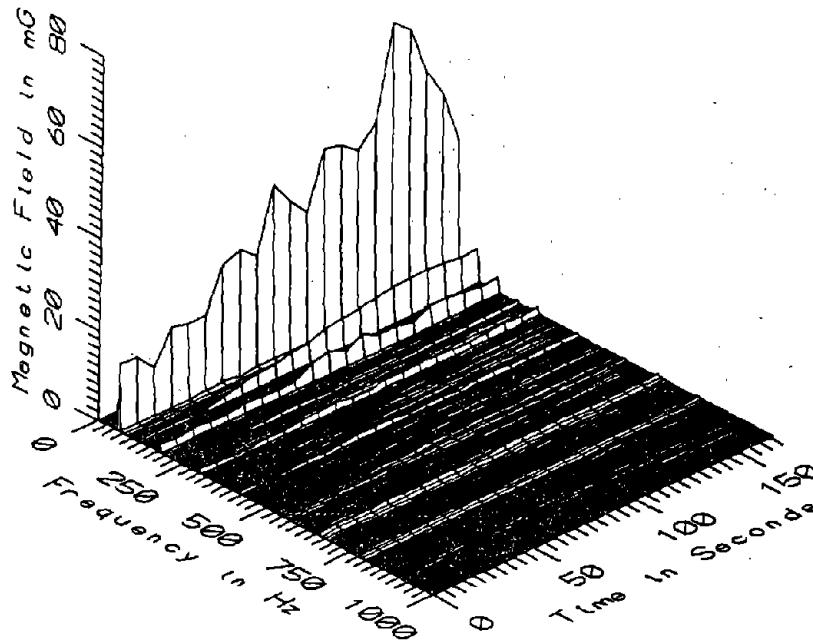
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

Missing or Suspect Data: None

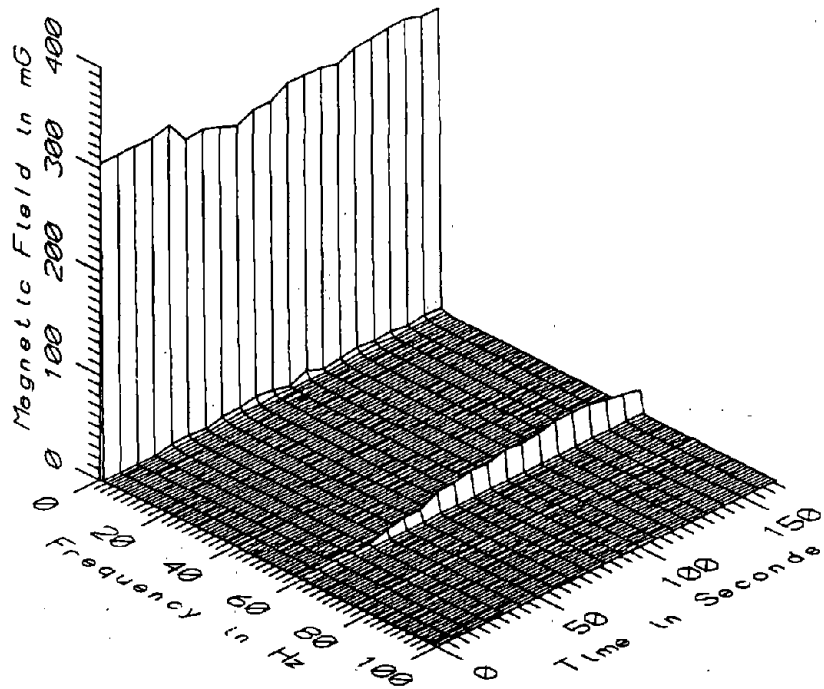
* Recording was discontinued while the sensor was moved between recording locations producing longer than normal average sample intervals.



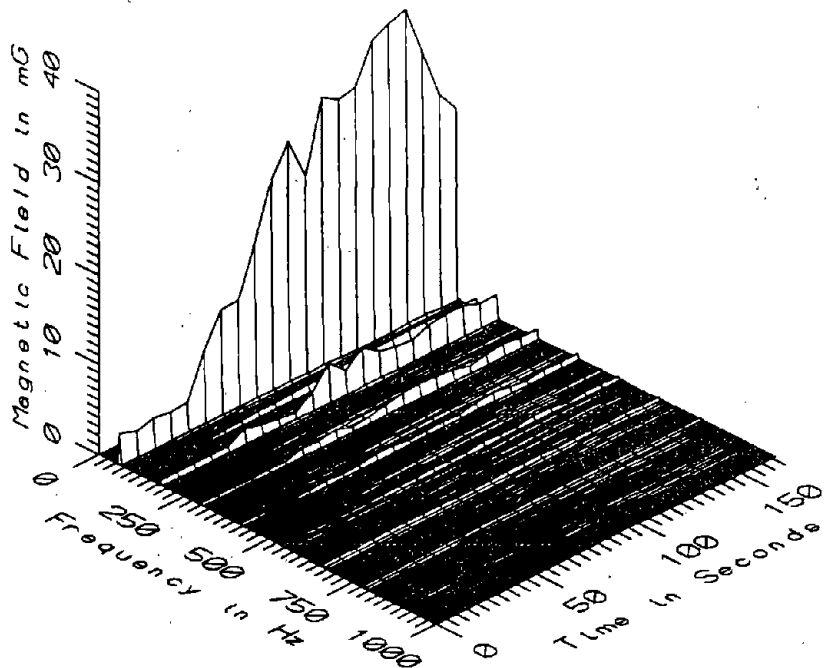
NEC051 - SET 1 - 10cm FROM REAR BULKHEAD IN ENGINEER'S COMPARTMENT



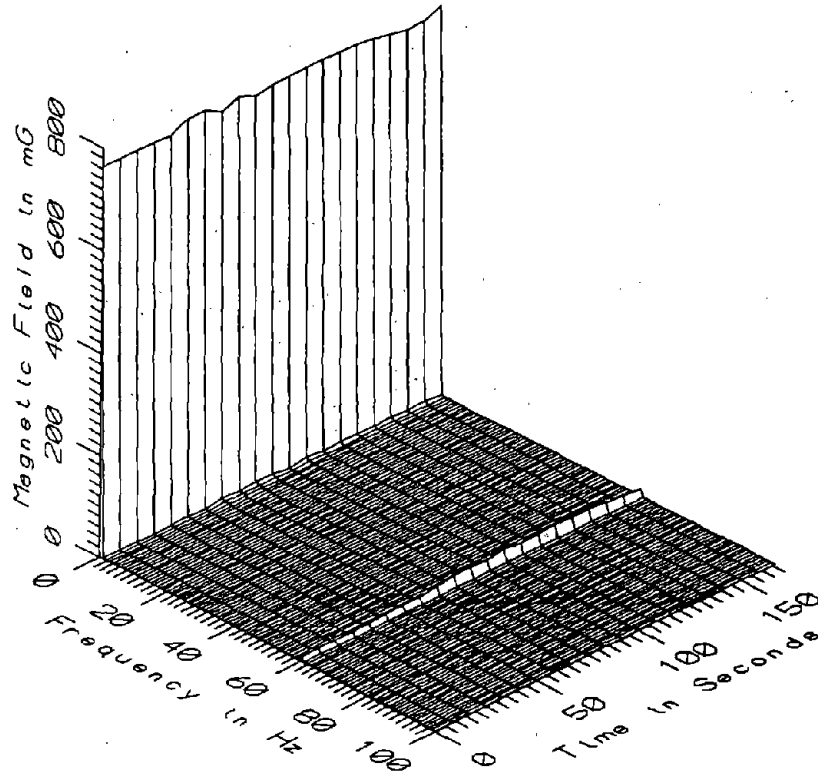
NEC051 - SET 1 - 10cm FROM REAR BULKHEAD IN ENGINEER'S COMPARTMENT



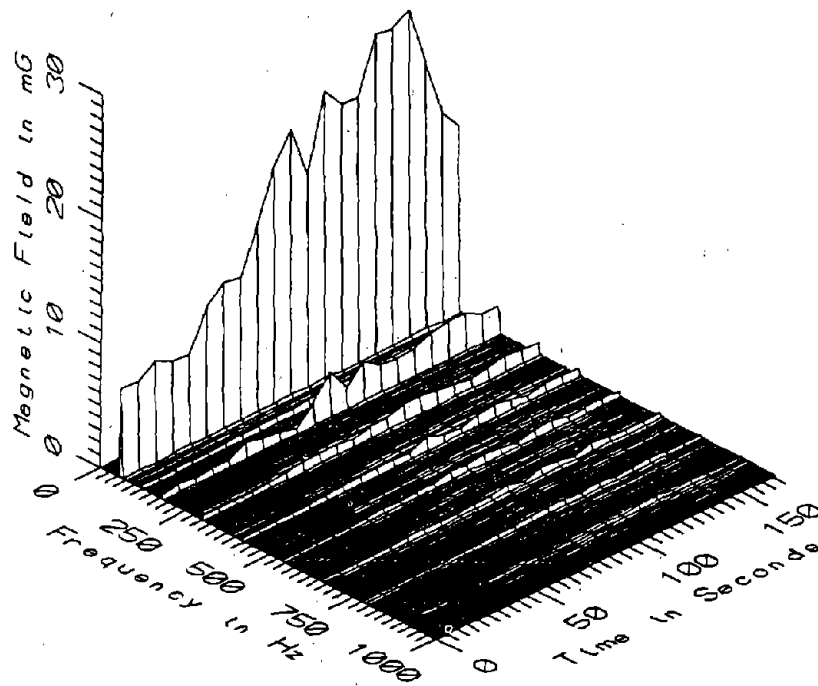
NEC051 - SET 1 - 60cm FROM REAR BULKHEAD IN ENGINEER'S COMPARTMENT



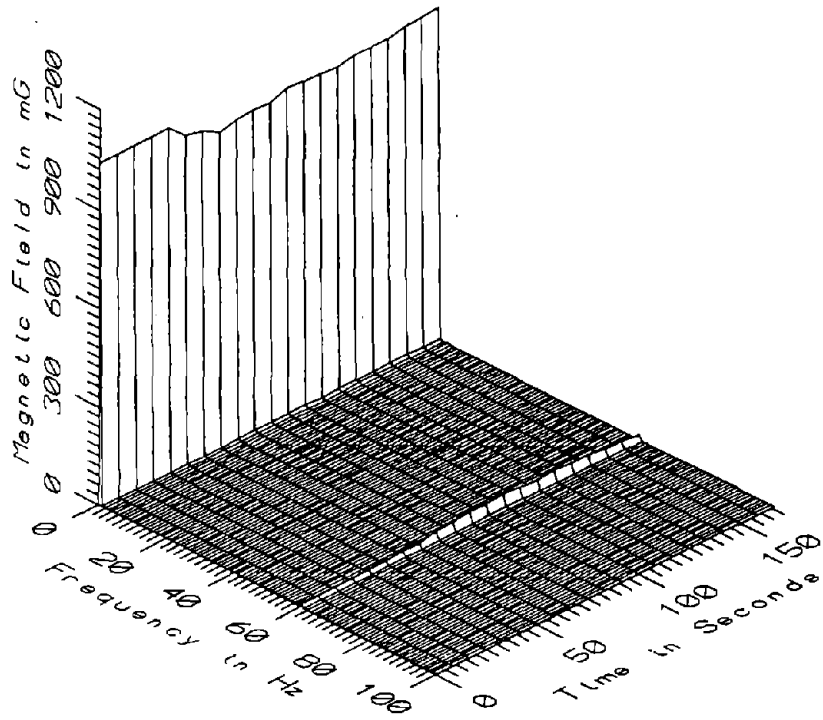
NEC051 - SET 1 - 60cm FROM REAR BULKHEAD IN ENGINEER'S COMPARTMENT



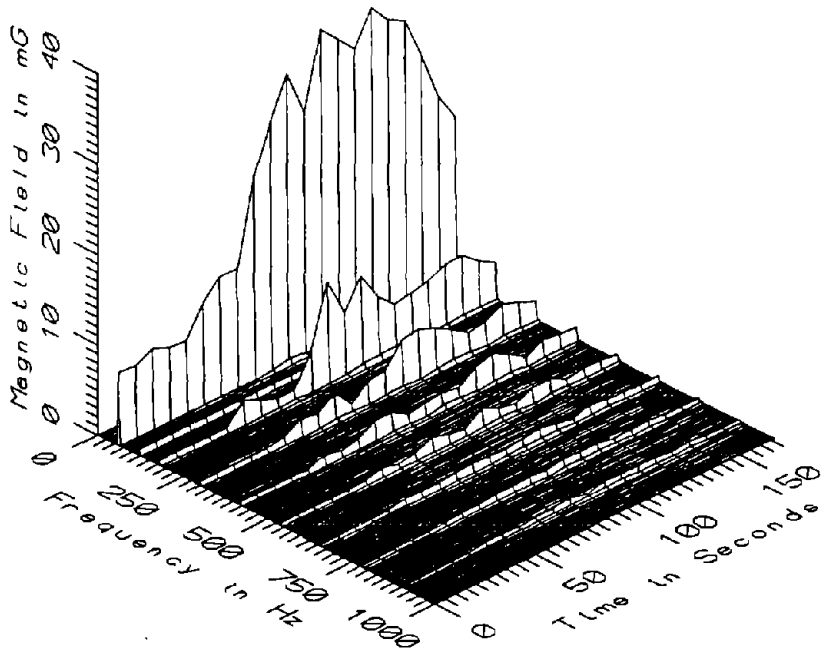
NEC051 - SET 1 - 110cm FROM REAR BULKHEAD IN ENGINEER'S COMPARTMENT



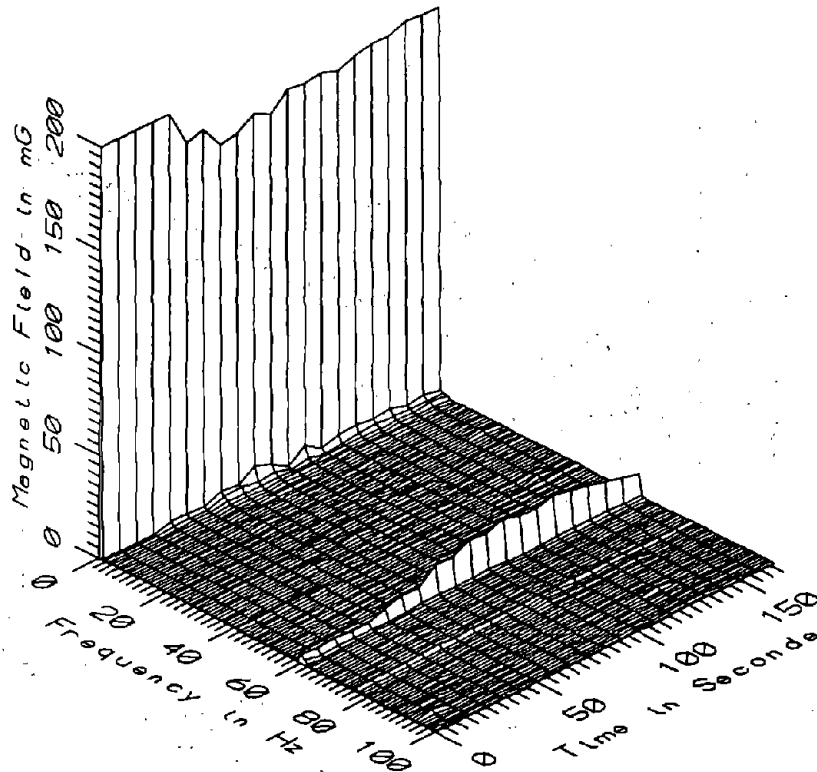
NEC051 - SET 1 - 110cm FROM REAR BULKHEAD IN ENGINEER'S COMPARTMENT



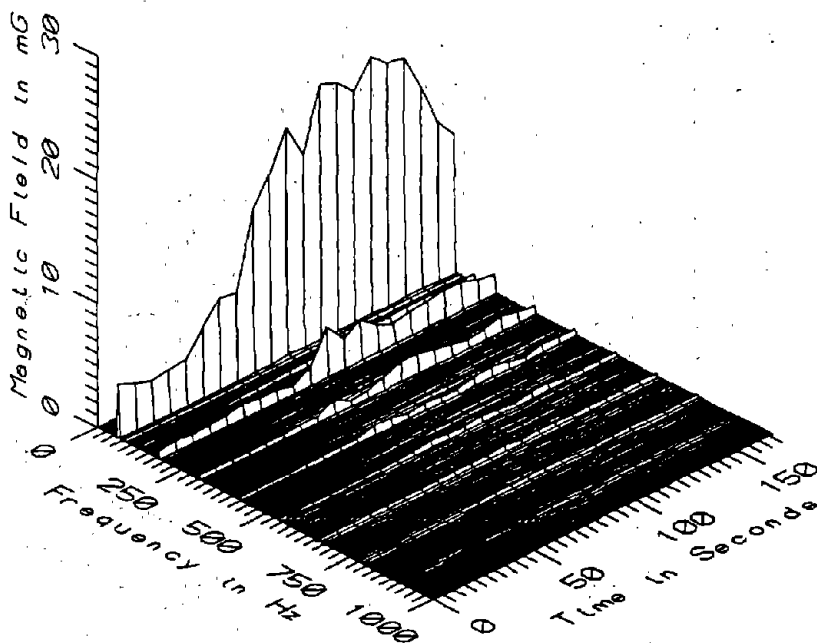
NEC051 - SET 1 - 160cm FROM REAR BULKHEAD IN ENGINEER'S COMPARTMENT



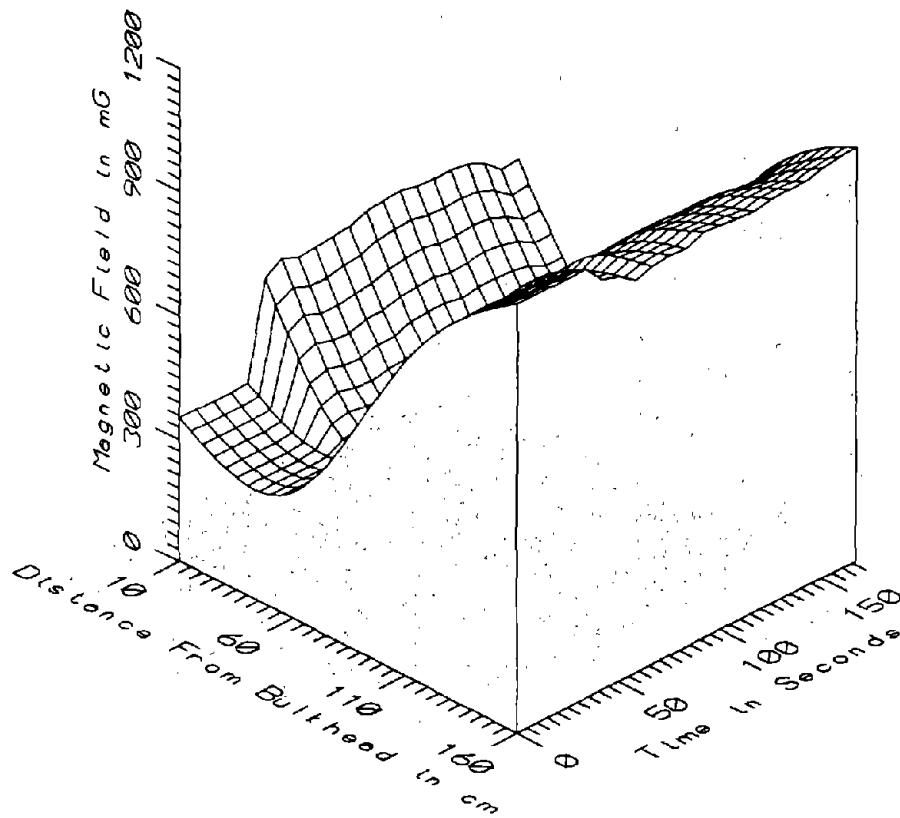
NEC051 - SET 1 - 160cm FROM REAR BULKHEAD IN ENGINEER'S COMPARTMENT



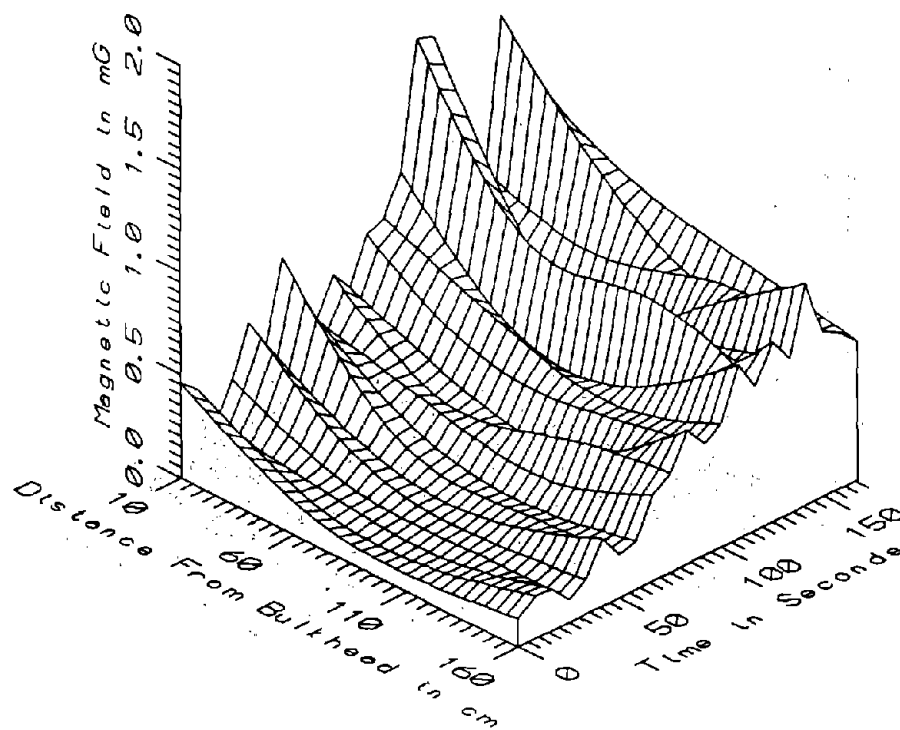
NEC051 - SET 1 - REFERENCE PROBE - FIREMAN'S SEAT



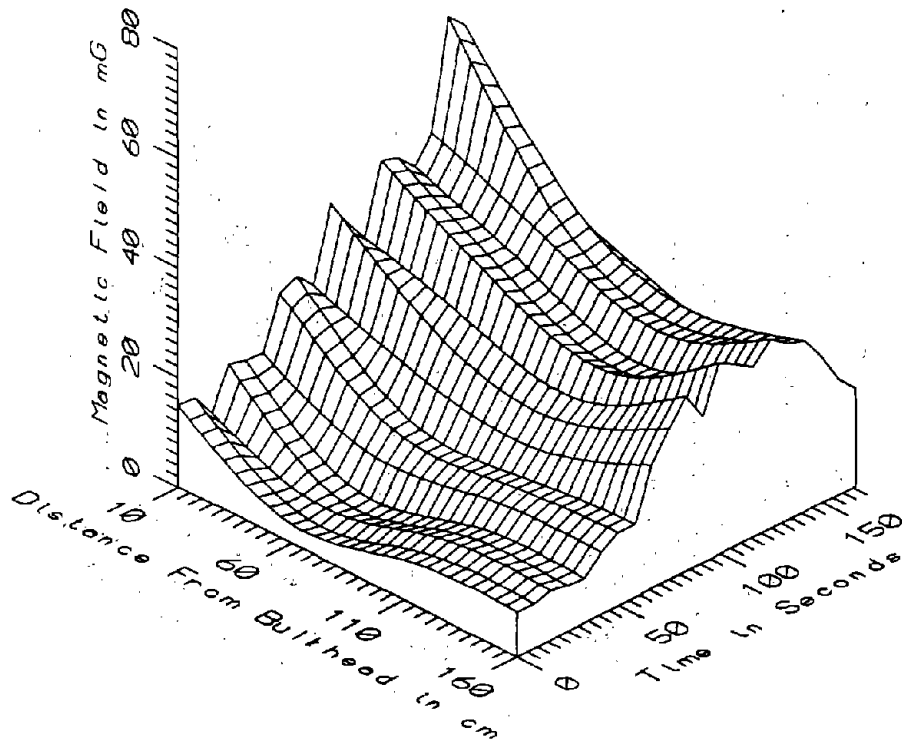
NEC051 - SET 1 - REFERENCE PROBE - FIREMAN'S SEAT



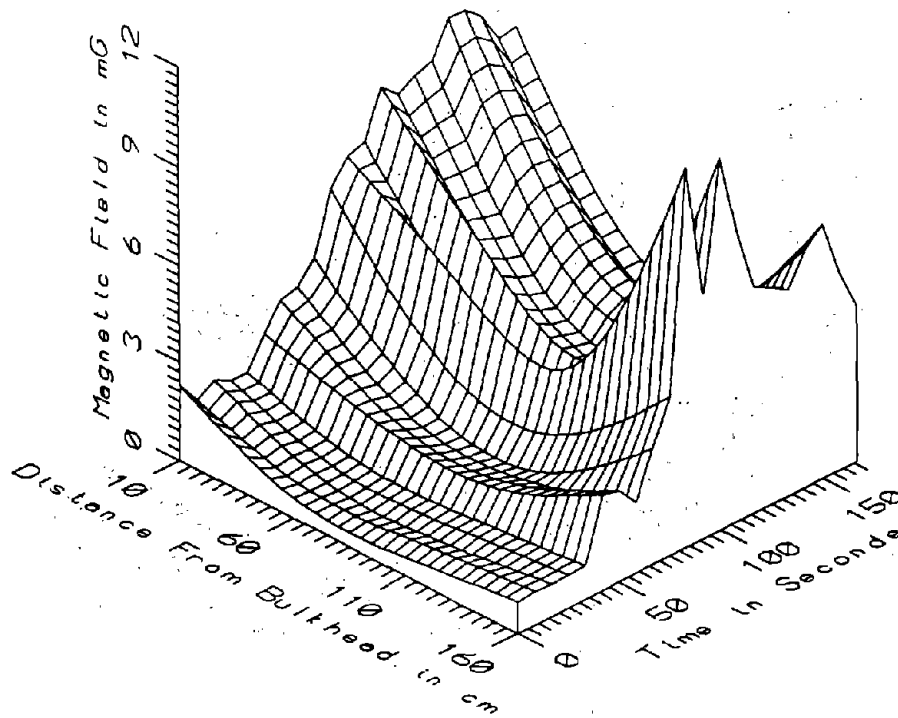
NEC051 - SET 1 - REAR BULKHEAD IN ENGINEER'S COMPARTMENT - STATIC



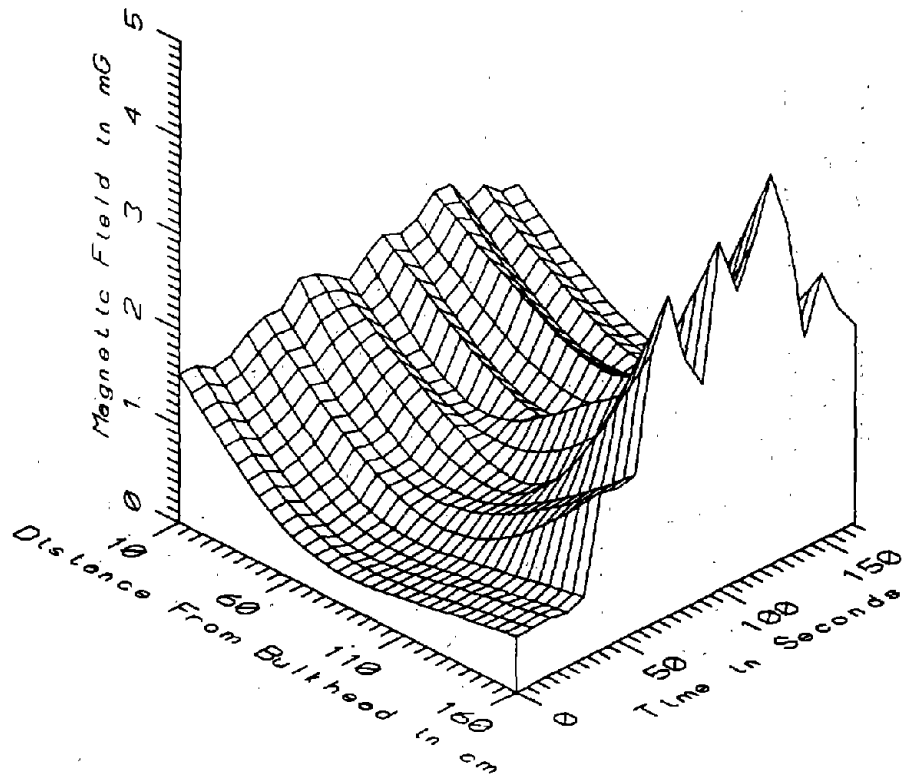
NEC051, SET 1, REAR BULKHEAD IN ENGR'S COMPARTMENT - LOW FREQ, 5-45Hz



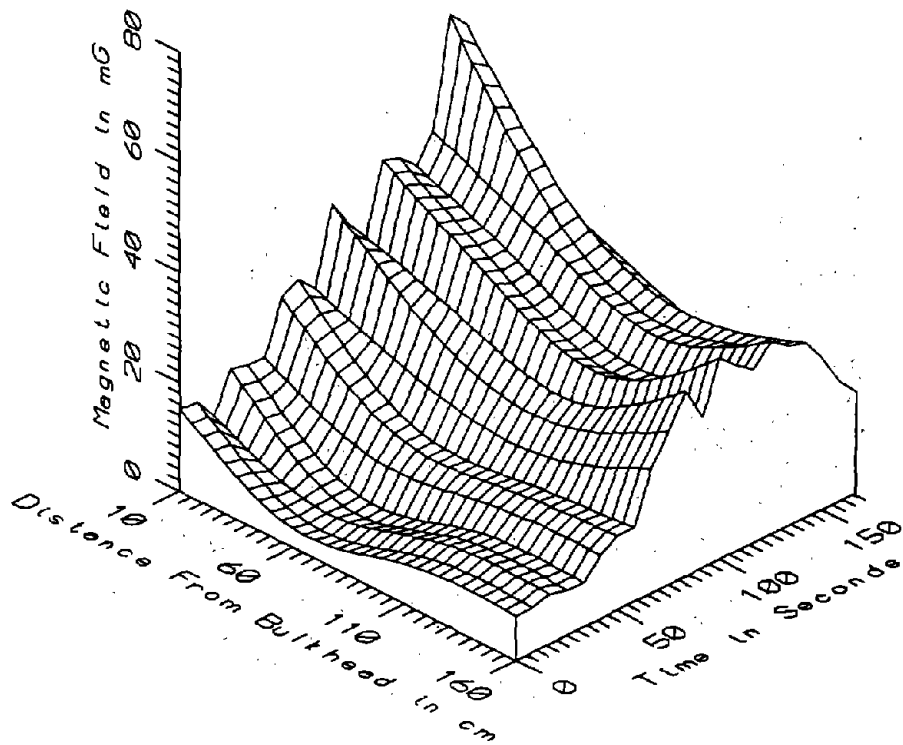
NEC051, SET 1, REAR BULKHEAD IN ENGR'S COMPARTMENT - POWER FREQ, 50-60Hz



NEC051, SET 1, REAR BULKHEAD IN ENGR'S COMPARTMENT - POWER HARM, 65-300Hz



NEC051, SET 1, REAR BULKHEAD IN ENGR'S COMPARTMENT - HIGH FREQ; 305-2560 Hz

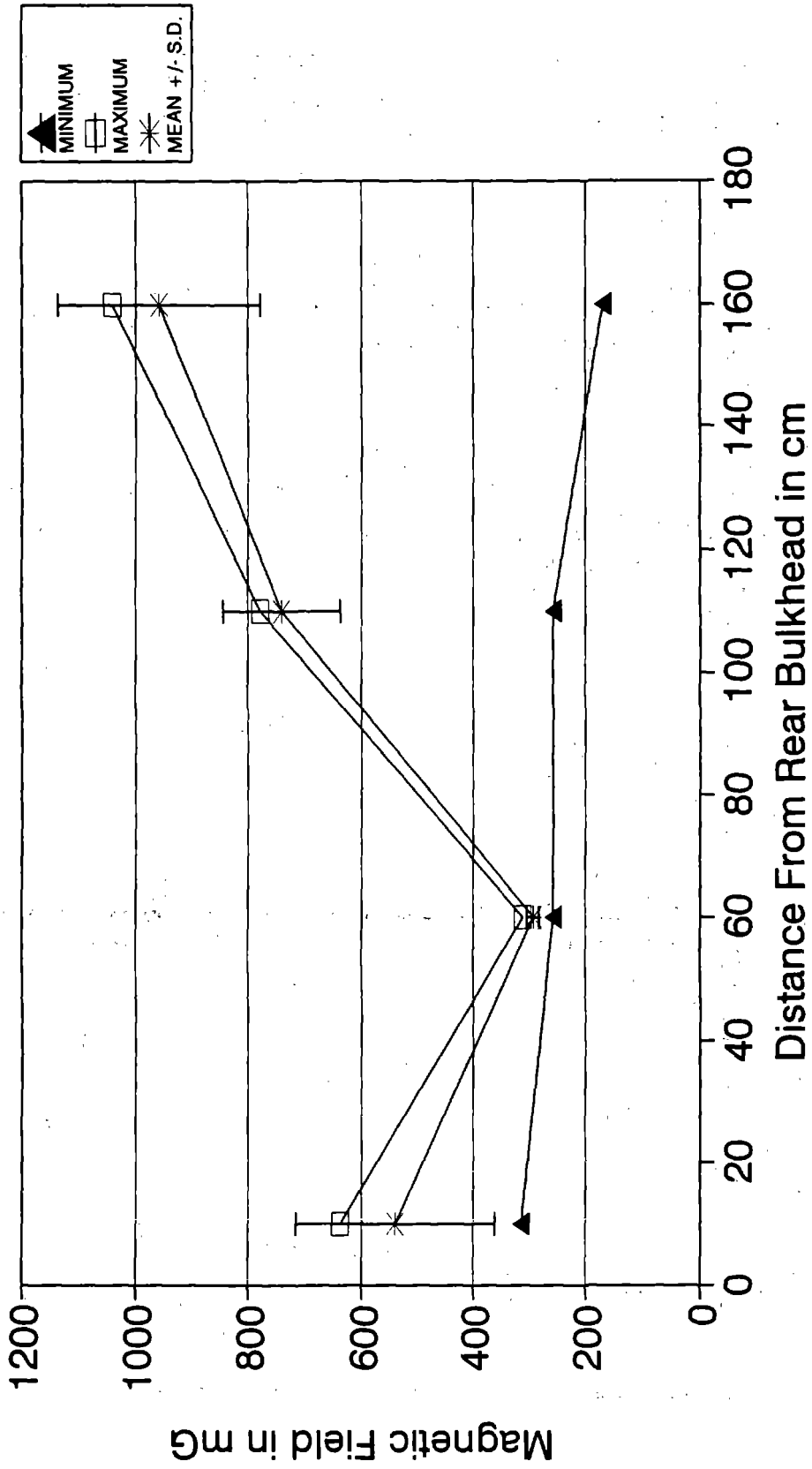


NEC051, SET 1, REAR BULKHEAD IN ENGR'S COMPARTMENT - ALL FREQ; 5-2560 Hz

LONG BRANCH - REAR BULKHEAD IN ENGINEER'S COMPARTMENT TOTAL OF 22 SAMPLES						
FREQUENCY BAND	DISTAN FROM R.B. (cm)	MINIMUM MAGNETIC FIELD (mG)	MAXIMUM MAGNETIC FIELD (mG)	AVERAGE MAGNETIC FIELD (mG)	STANDARD DEVIATION (mG)	COEFFICIENT OF VARIATION (%)
STATIC	10	314.05	636.61	538.17	177.98	33.07
	60	258.28	310.19	293.38	11.53	3.93
	110	258.28	777.05	740.05	104.91	14.18
	160	169.55	1039.42	956.91	177.98	18.60
5-45HZ LOW FREQ	10	0.18	2.94	0.86	0.60	69.86
	60	0.12	0.91	0.42	0.26	61.97
	110	0.08	0.87	0.39	0.26	68.05
50-60HZ PWR FREQ	160	0.11	1.07	0.52	0.28	54.18
	10	7.98	61.40	30.61	14.69	48.00
	60	2.69	34.37	18.23	11.58	63.51
	110	4.94	26.45	15.71	7.03	44.77
65-300HZ PWR HARM	160	4.81	34.86	20.63	10.66	51.68
	10	1.59	9.38	5.49	2.99	54.56
	60	0.55	4.65	2.34	1.44	61.49
	110	0.52	3.74	1.93	1.12	57.89
305-2560HZ HIGH FREQ	160	0.79	11.52	4.83	3.40	70.52
	10	0.97	2.13	1.74	0.25	14.67
	60	0.38	1.36	0.78	0.28	35.58
	110	0.25	1.45	0.86	0.38	44.79
5-2560HZ ALL FREQ	160	0.27	4.05	2.08	1.17	56.22
	10	8.72	62.16	31.22	14.89	47.71
	60	2.79	34.61	18.41	11.65	63.27
	110	5.03	26.69	15.87	7.11	44.84
160	4.93	36.83	21.34	11.16	52.28	

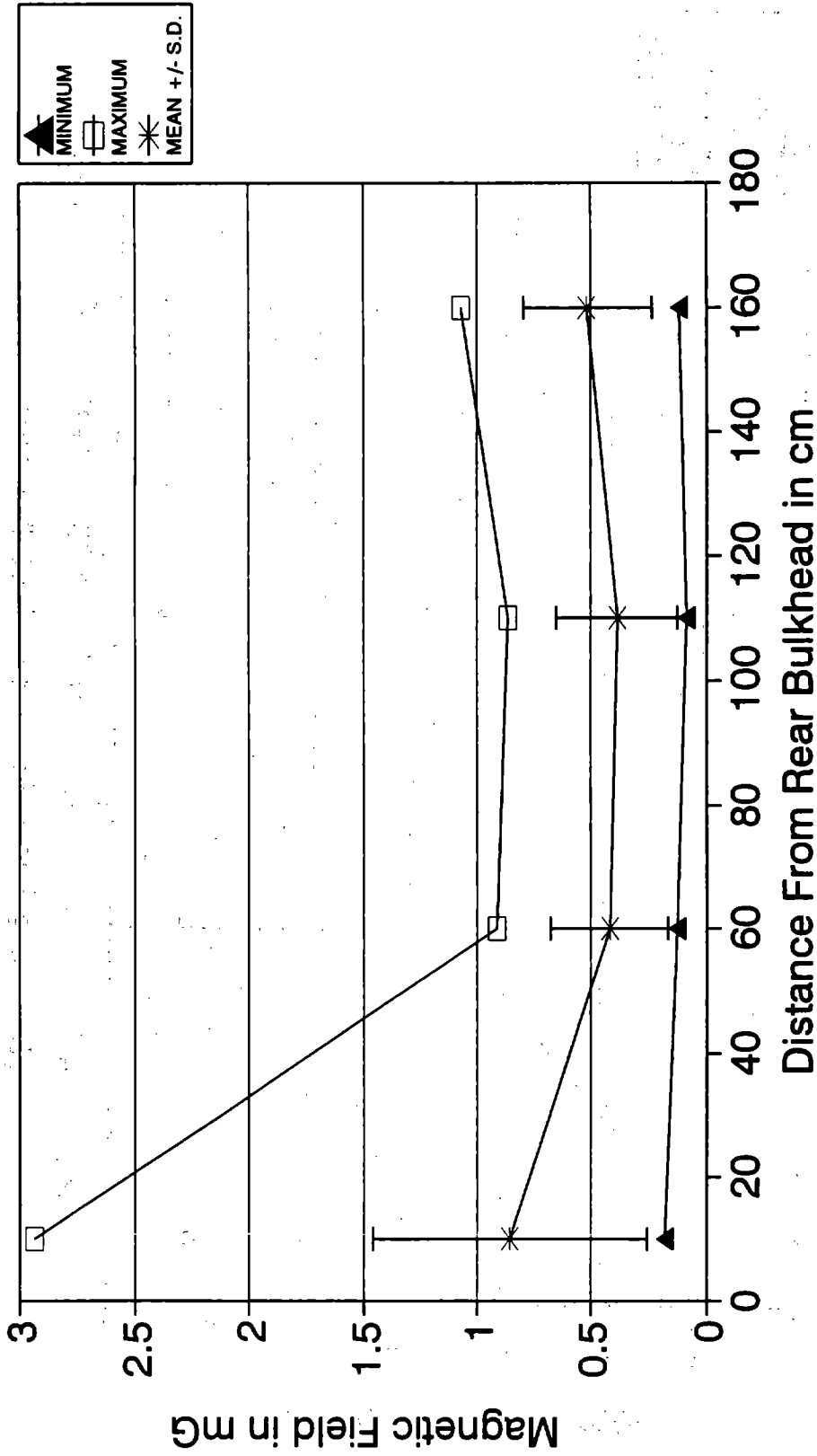
L.B. - REAR BULKHEAD, ENG. COMPARTMENT

STATIC



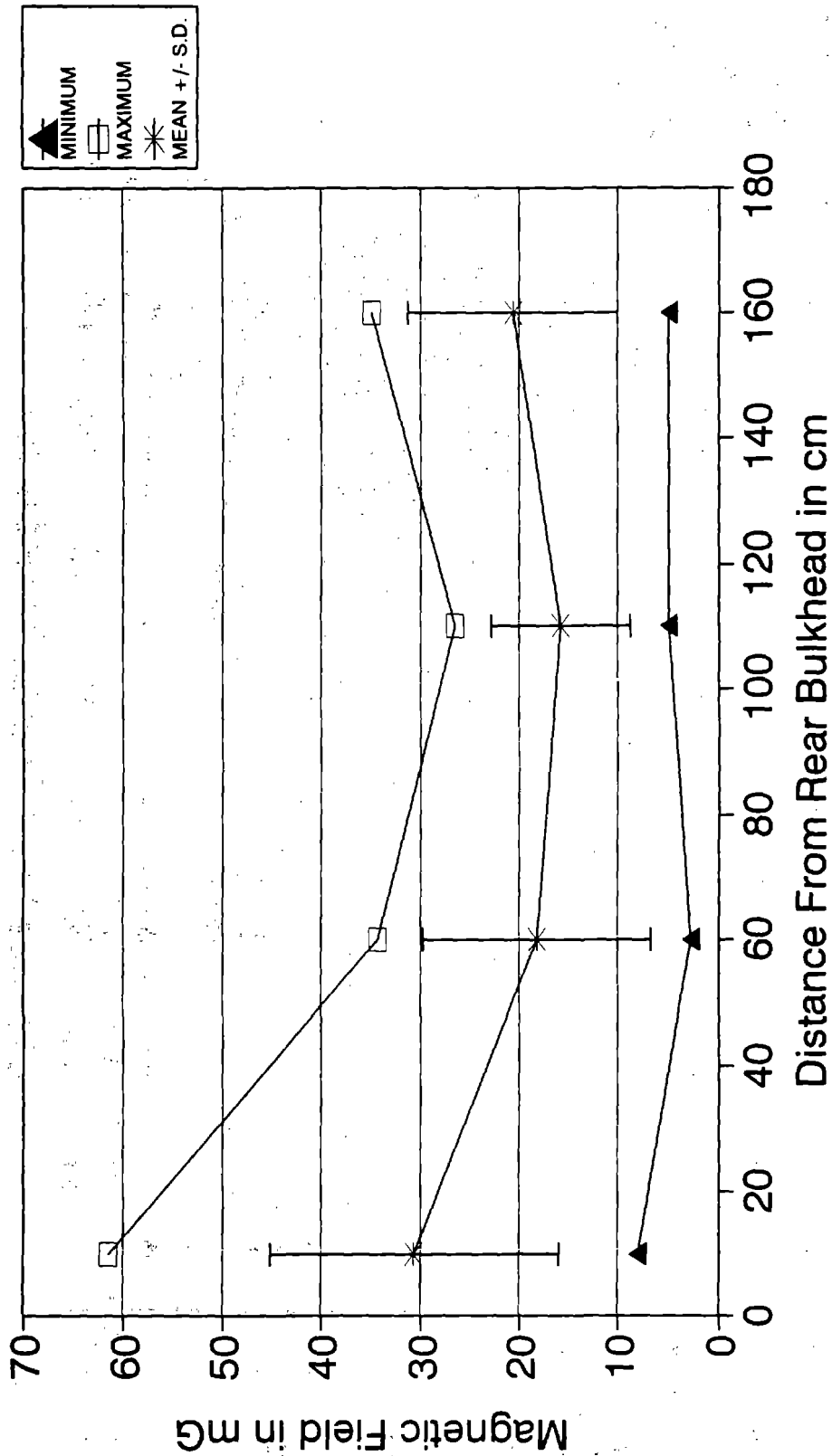
L.B. - REAR BULKHEAD, ENG. COMPARTMENT

LOW FREQUENCY (5-45 Hz)



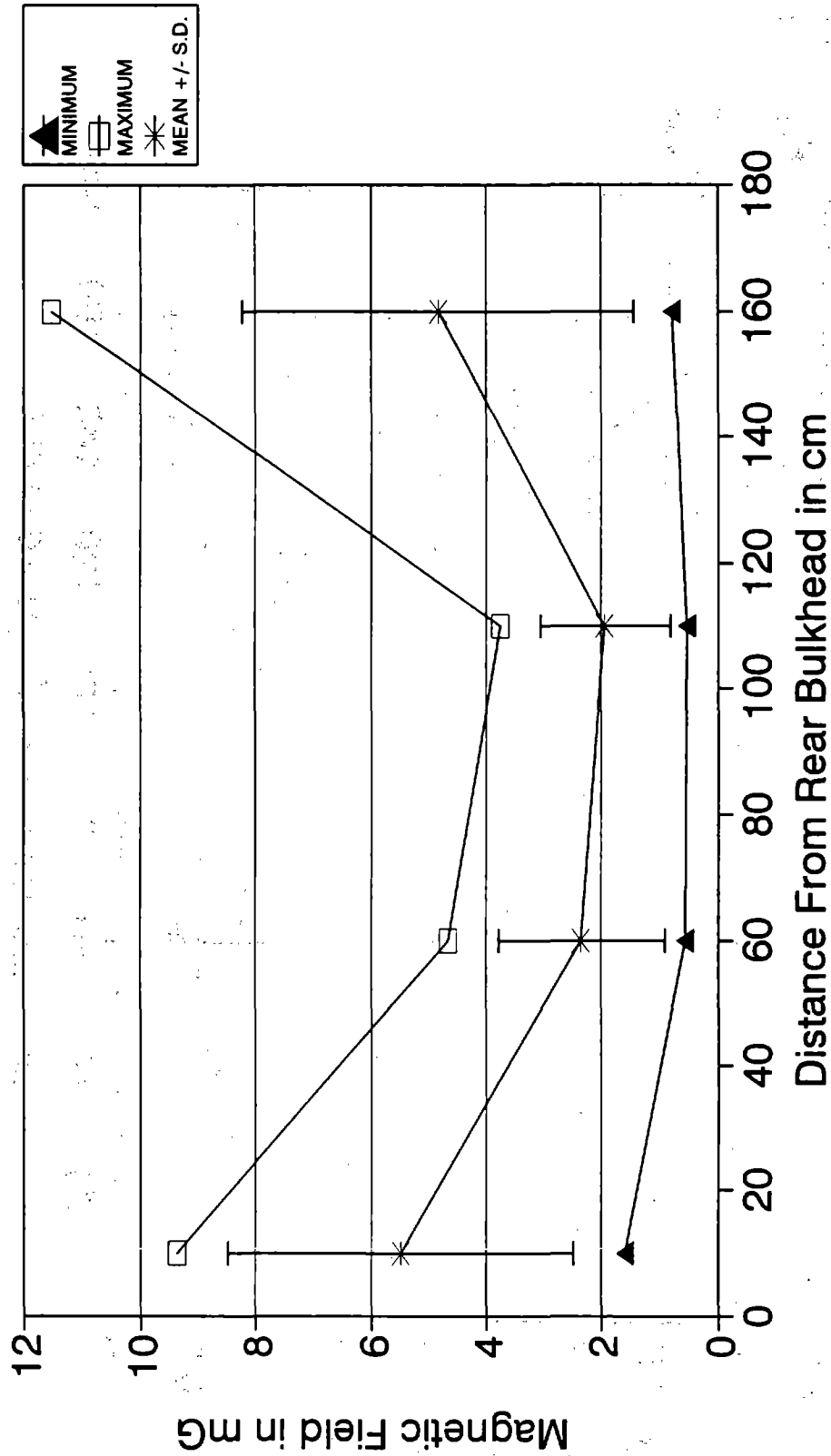
L.B. - REAR BULKHEAD, ENG. COMPARTMENT

POWER FREQUENCY (50-60 Hz)



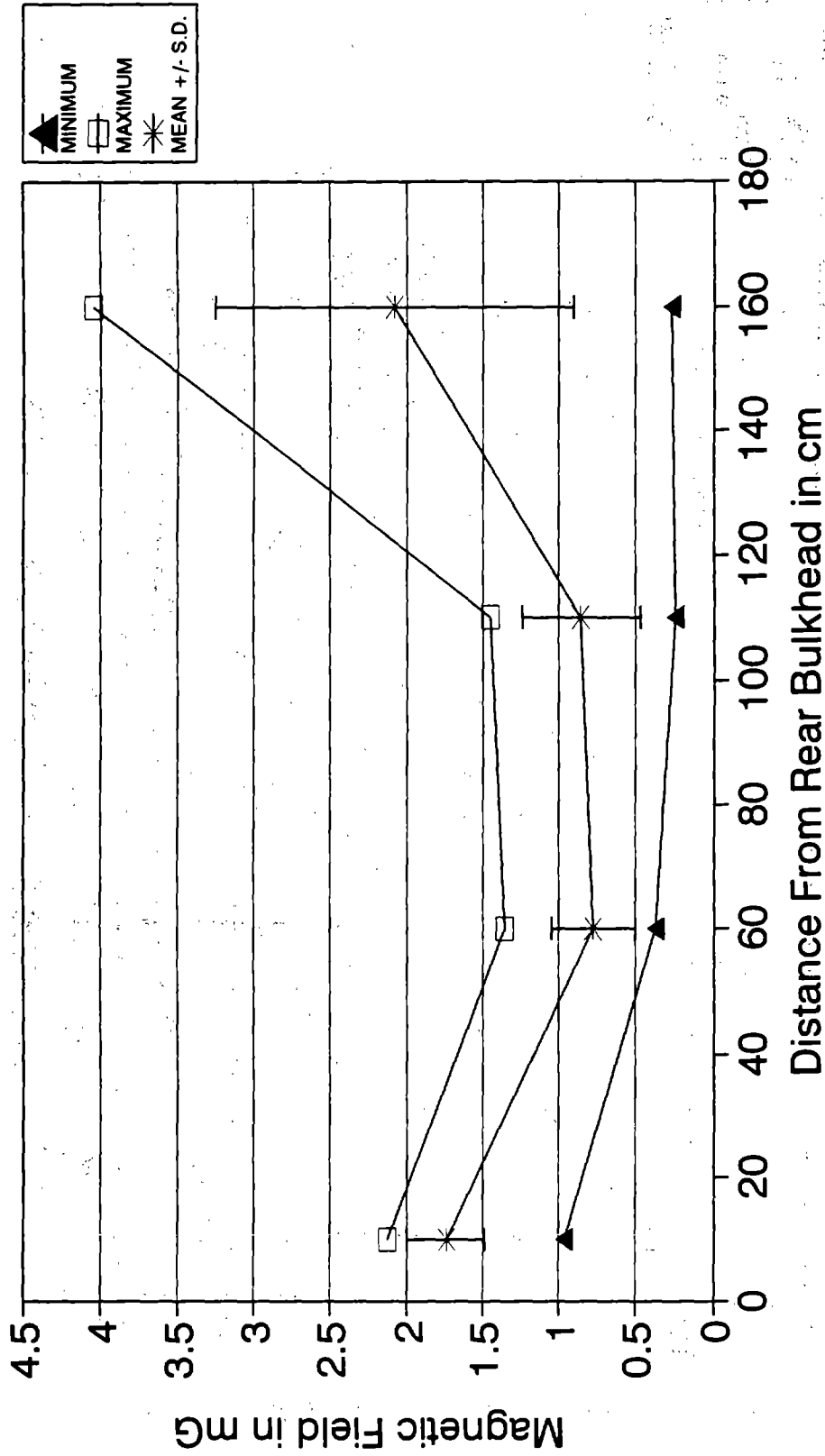
L.B. - REAR BULKHEAD, ENG. COMPARTMENT

POWER HARMONICS (65-300 Hz)



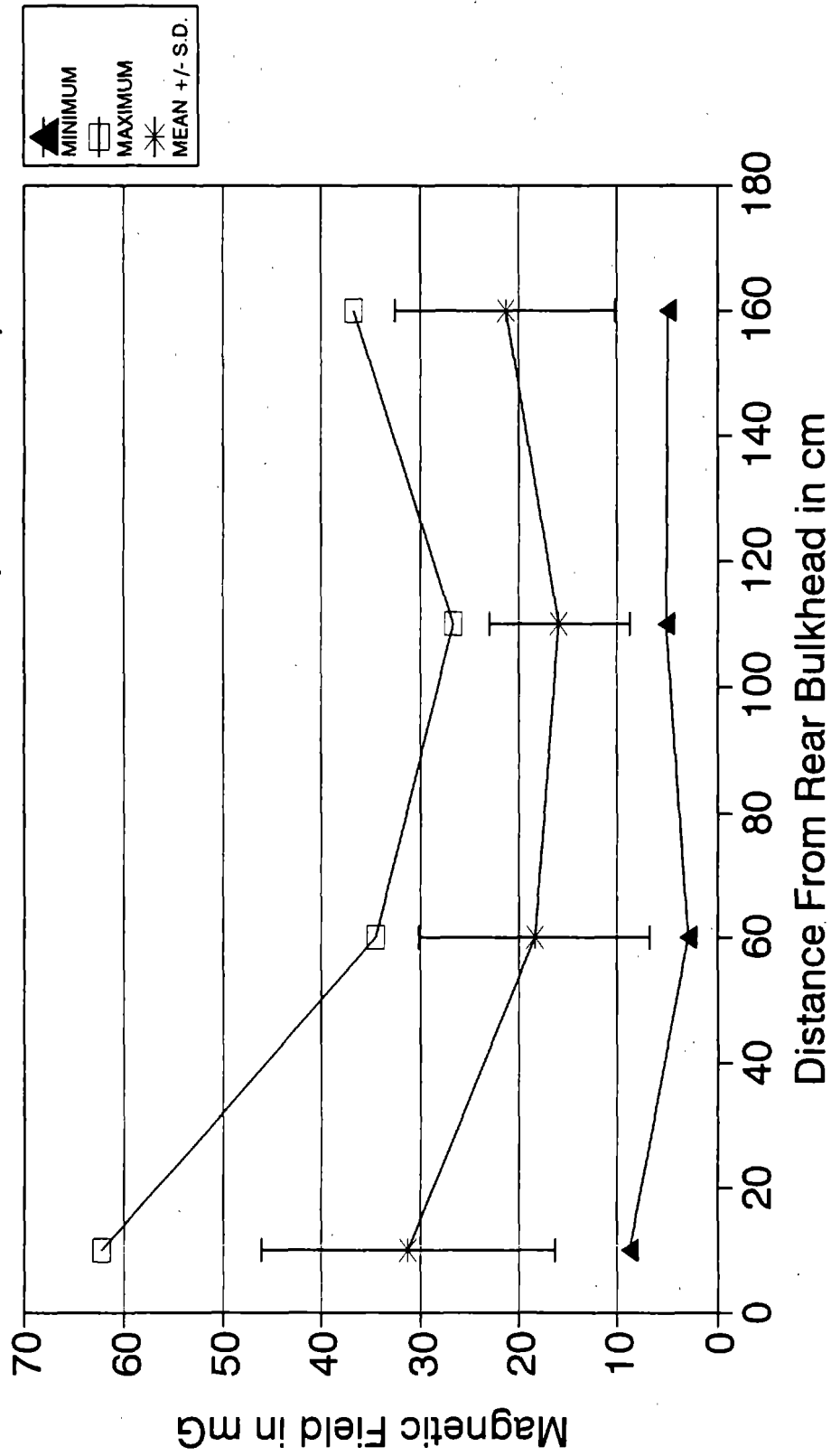
L.B. - REAR BULKHEAD, ENG. COMPARTMENT

HIGH FREQUENCY (305-2560 Hz)



L.B. - REAR BULKHEAD, ENG. COMPARTMENT

ALL FREQUENCIES (5-2560 Hz)



APPENDIX AZ, SET 2

DATASET NEC051, SET 2
HORIZONTAL PROFILE ACROSS THE ENGINEER'S SEAT
ELECTRIC LOCOMOTIVE, NORTH JERSEY COAST LINE

Measurement Setup Code: Staff: 28 Reference: 25
 Drawing: A-4

Vehicle Status: Train running at normal speed

Measurement Date: April 3, 1992

Measurement Time: Start: 8:37:57
 End: 8:38:05

Number of Samples: 2

Programmed Sample Interval: 5 sec

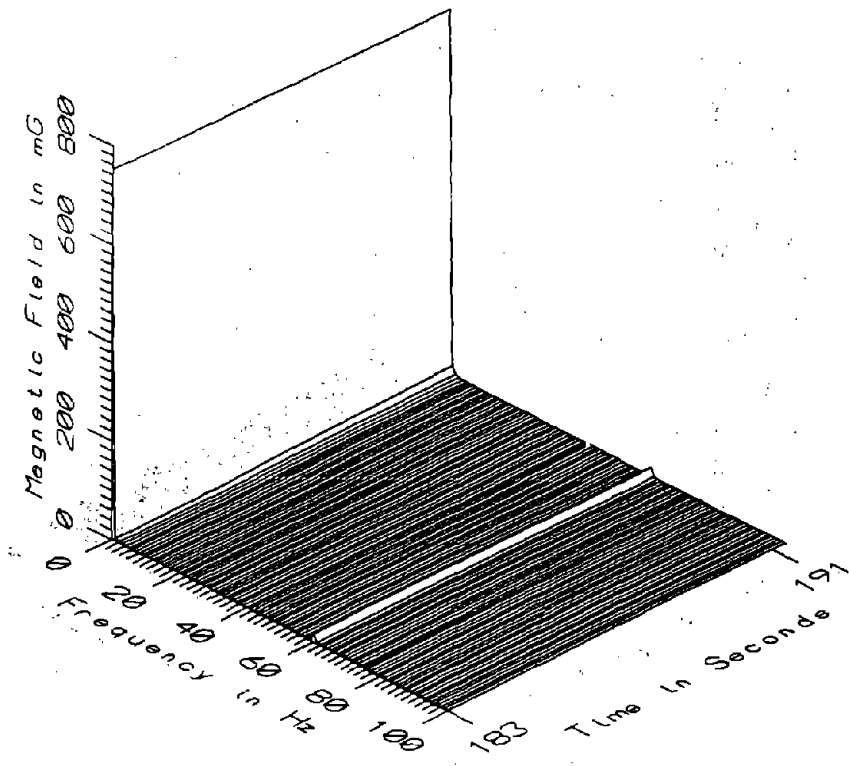
Actual Sample Interval: 8.3 sec*

Frequency Spectrum Parameters

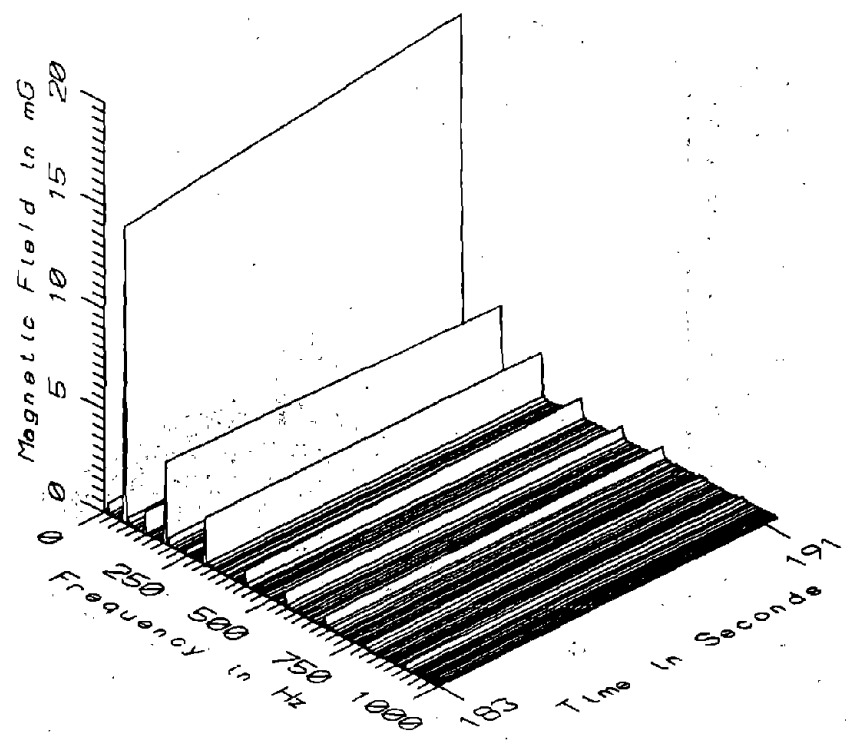
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

Missing or Suspect Data: None

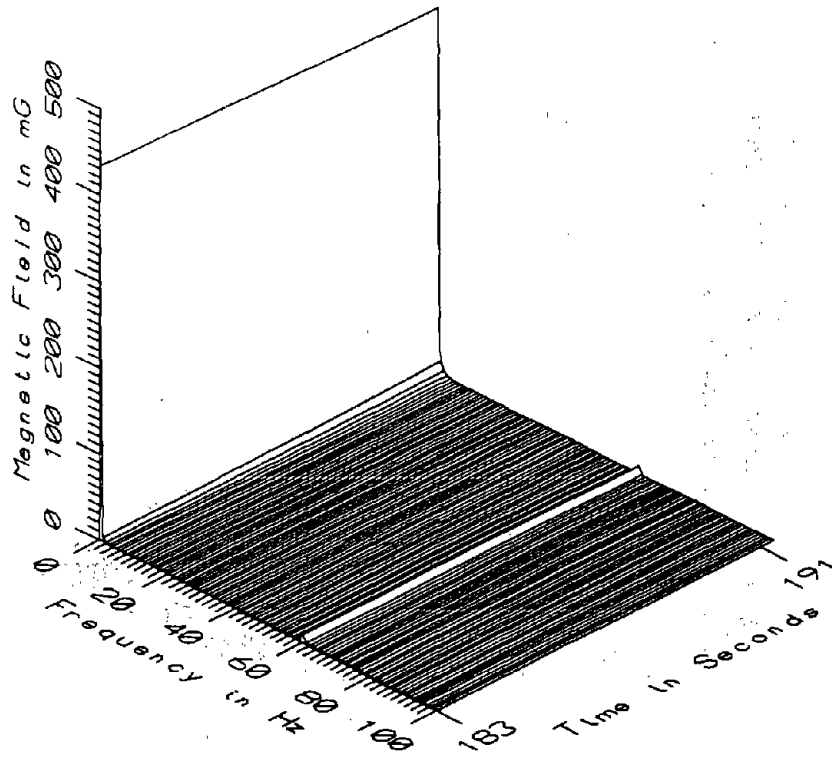
* Recording was discontinued while the sensor was moved between recording locations producing longer than normal average sample intervals.



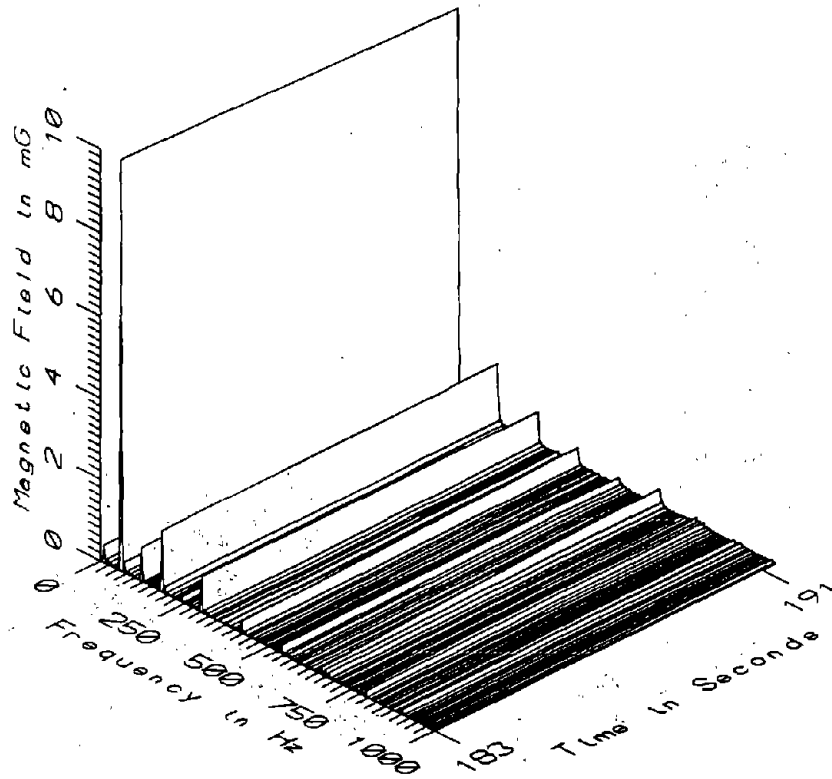
NEC051 - SET 2 - 10cm FROM CENTER OF TRAIN ACROSS ENGINEER'S SEAT



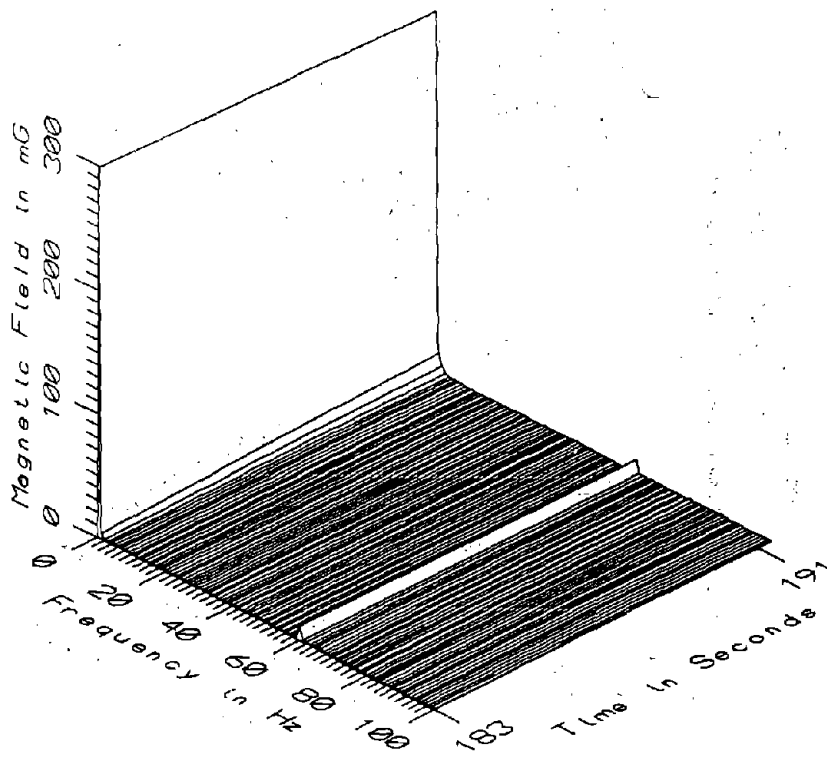
NEC051 - SET 2 - 10cm FROM CENTER OF TRAIN ACROSS ENGINEER'S SEAT



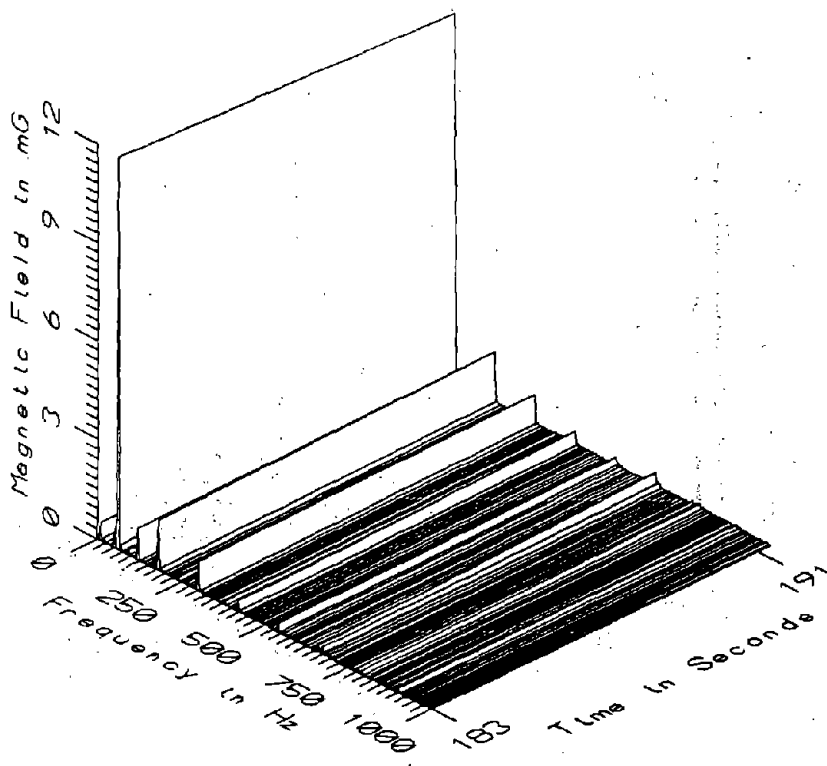
NEC051 - SET 2 - 60cm FROM CENTER OF TRAIN ACROSS ENGINEER'S SEAT



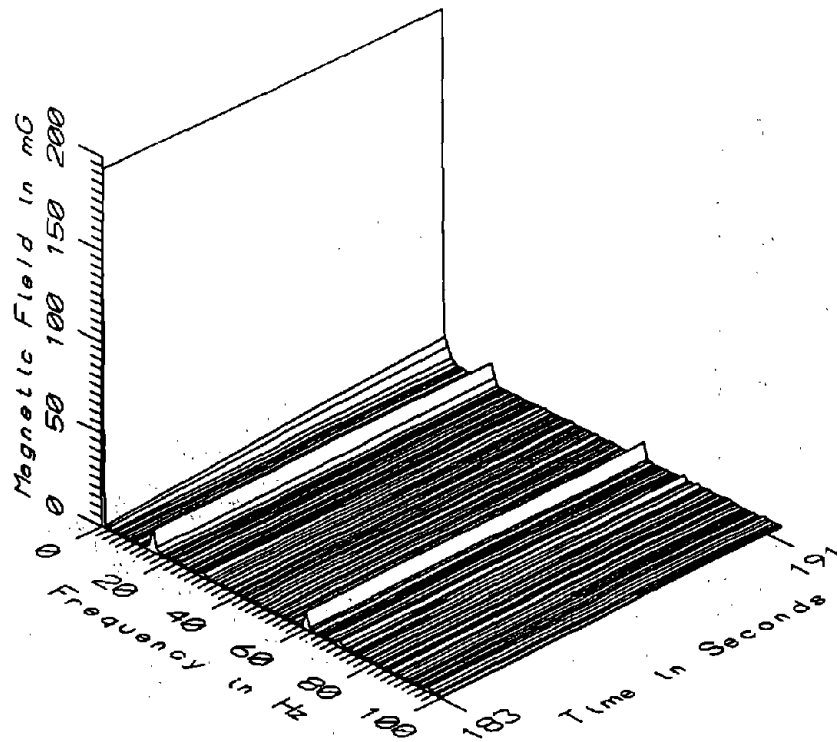
NEC051 - SET 2 - 60cm FROM CENTER OF TRAIN ACROSS ENGINEER'S SEAT



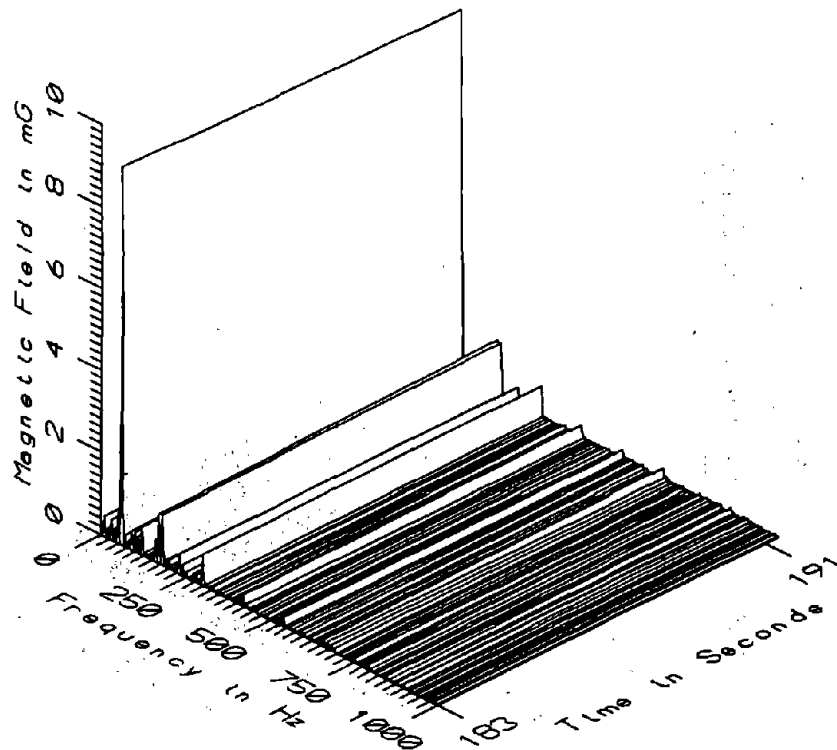
NEC051 - SET 2 - 110cm FROM CENTER OF TRAIN ACROSS ENGINEER'S SEAT



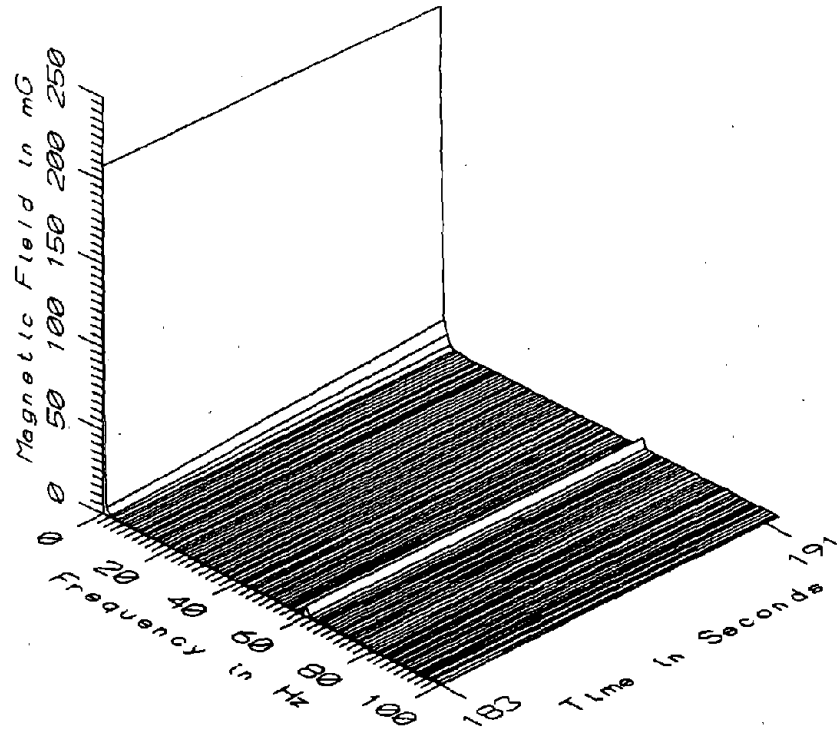
NEC051 - SET 2 - 110cm FROM CENTER OF TRAIN ACROSS ENGINEER'S SEAT



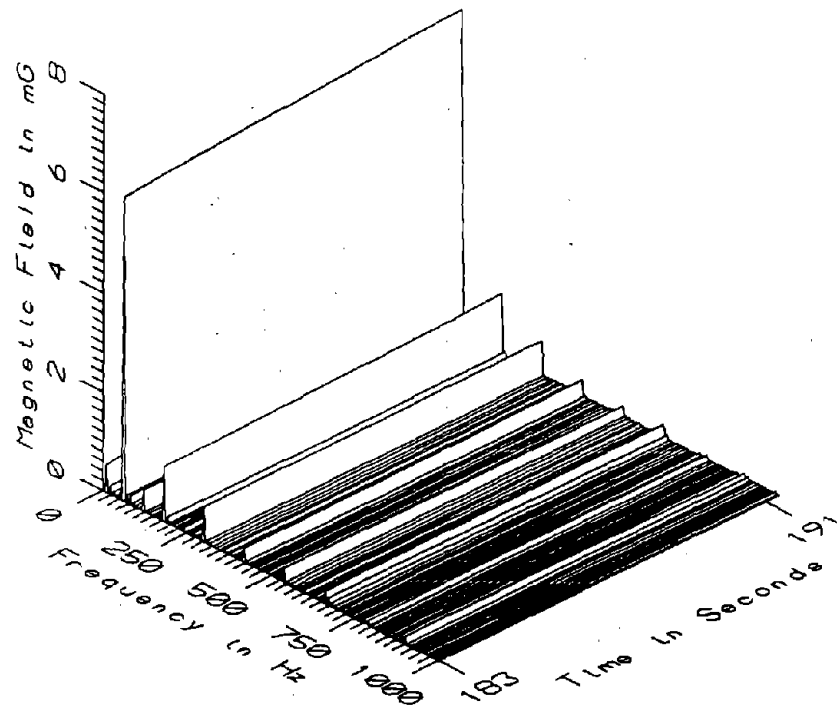
NEC051 - SET 2 - 160cm FROM CENTER OF TRAIN ACROSS ENGINEER'S SEAT



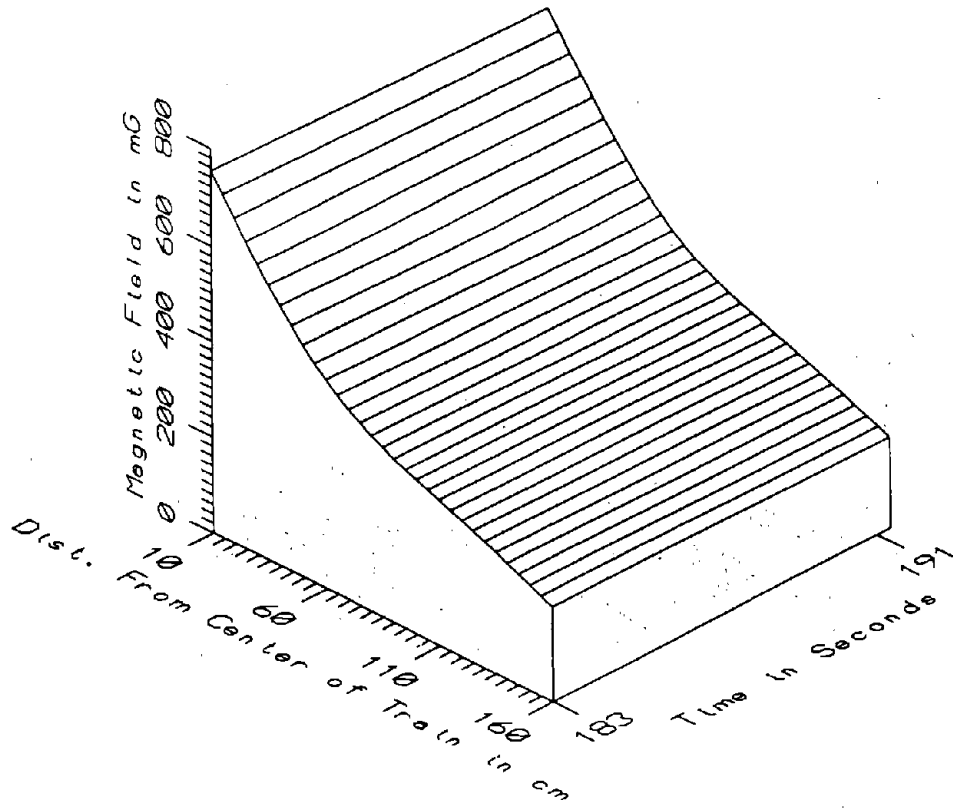
NEC051 - SET 2 - 160cm FROM CENTER OF TRAIN ACROSS ENGINEER'S SEAT



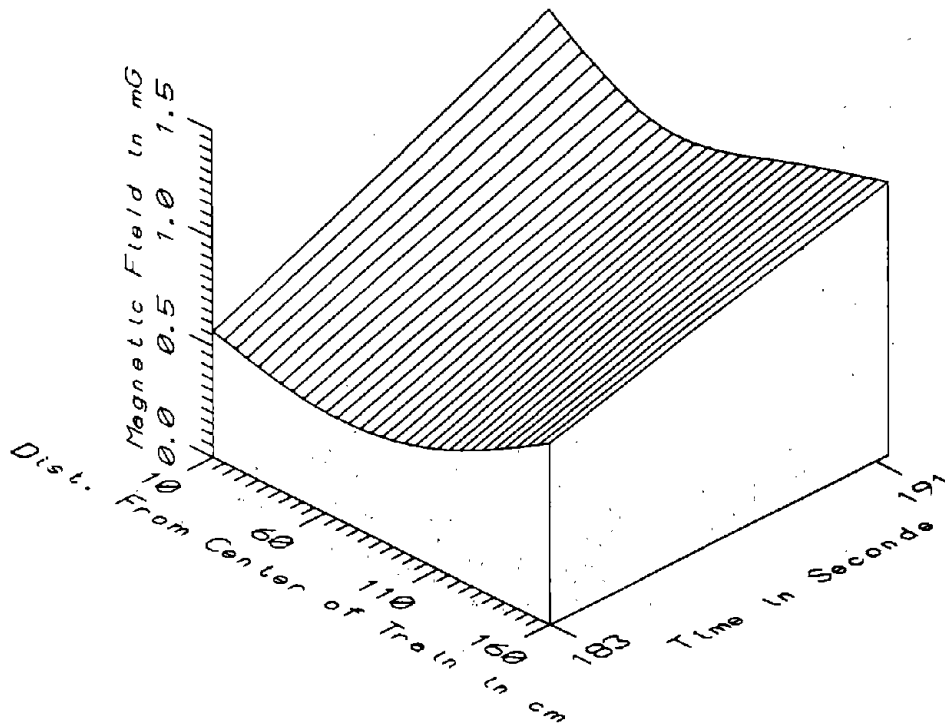
NEC051 - SET 2 - REFERENCE PROBE - FIREMAN'S SEAT



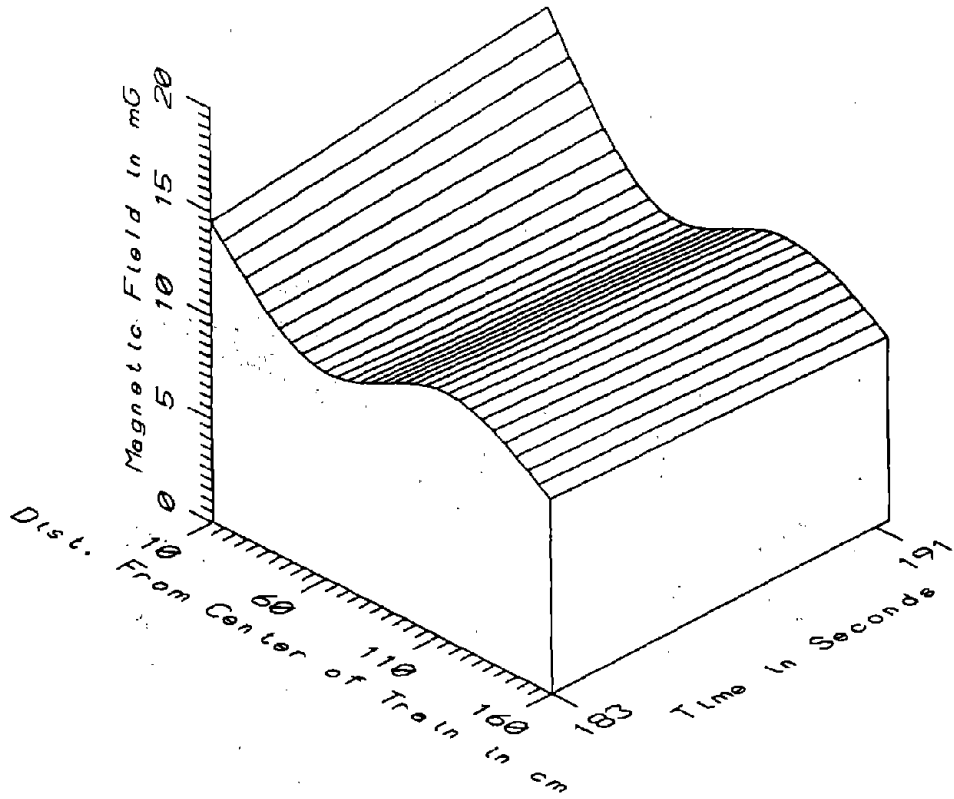
NEC051 - SET 2 - REFERENCE PROBE - FIREMAN'S SEAT



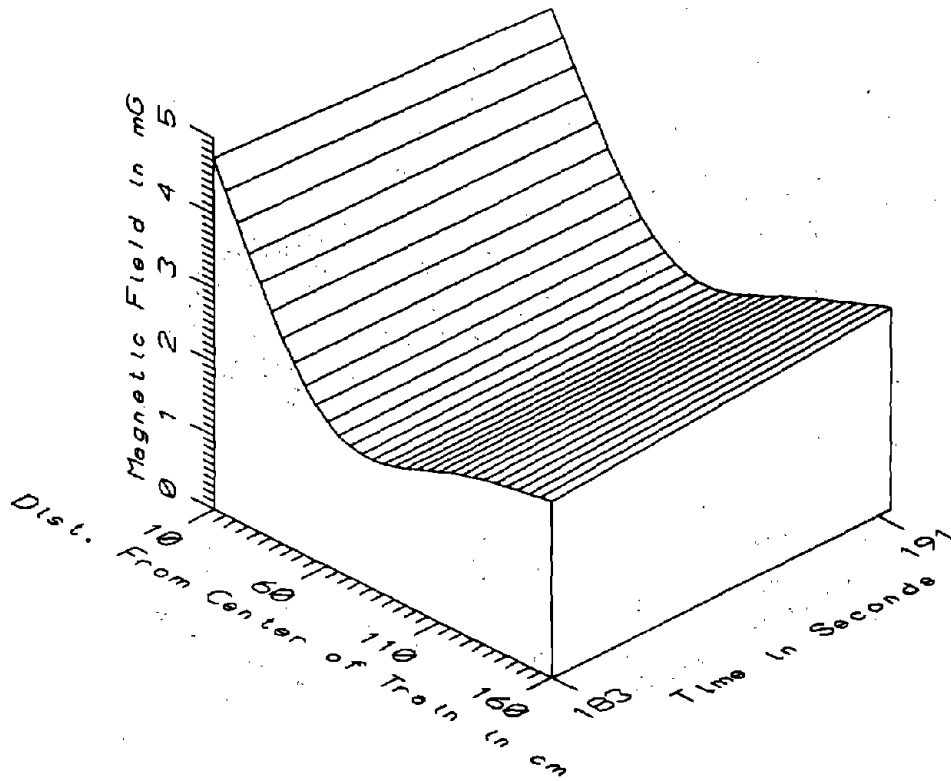
NEC051 - SET 2 - PROFILE ACROSS ENGINEER'S SEAT - STATIC



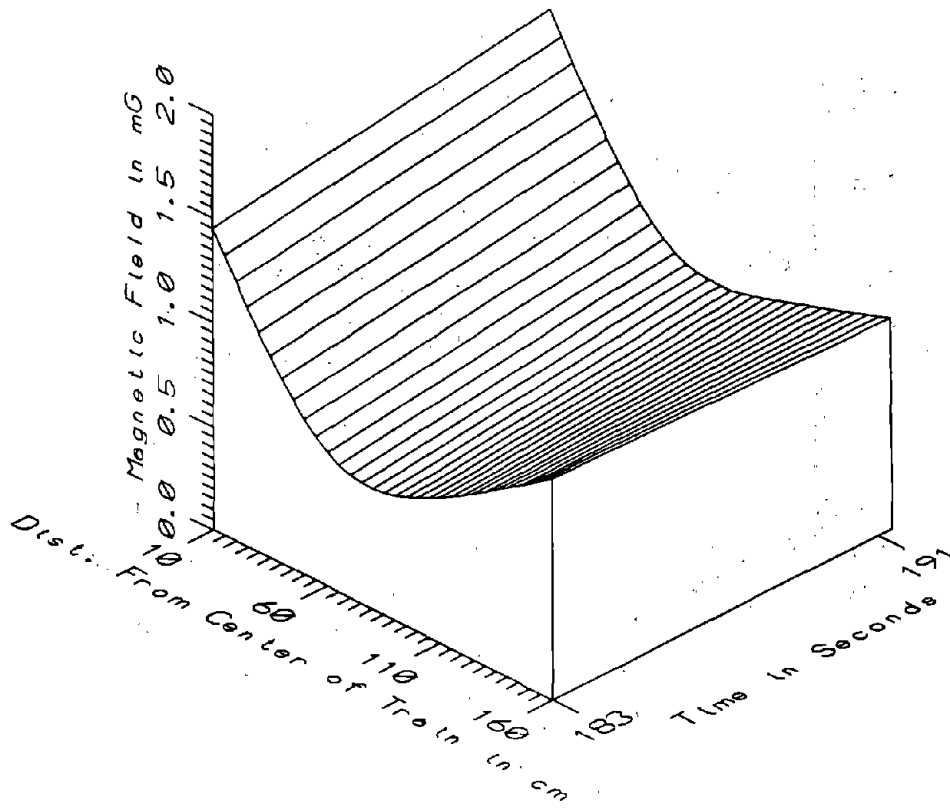
NEC051 - SET 2 - PROFILE ACROSS ENGINEER'S SEAT - LOW FREQ, 5-45Hz



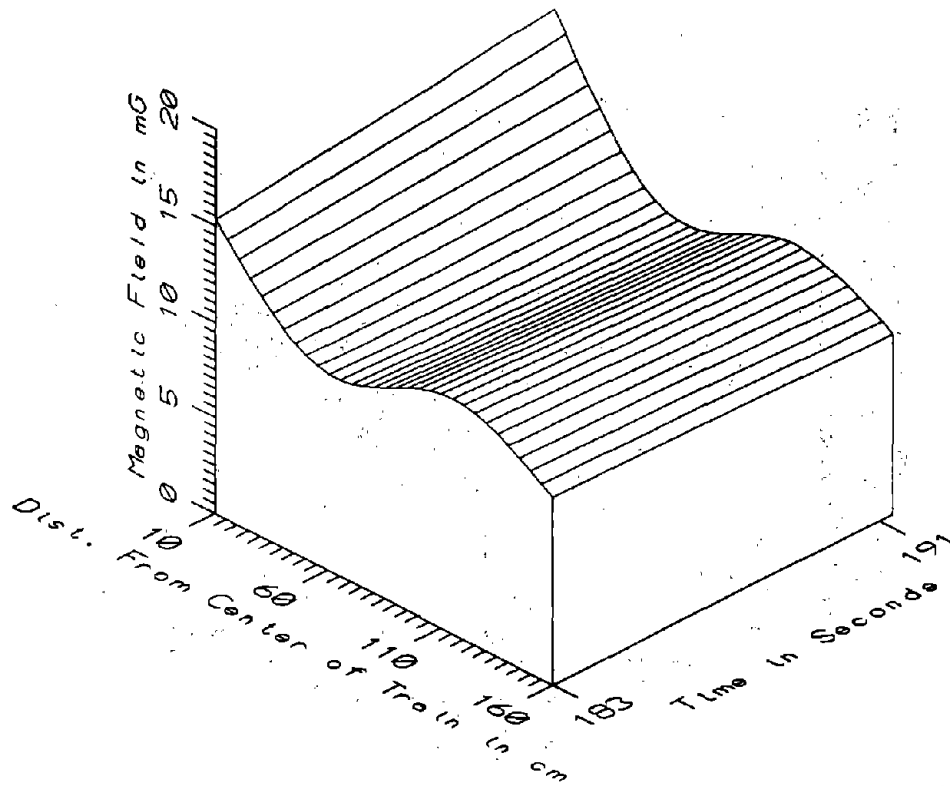
NEC051 - SET 2 - PROFILE ACROSS ENGINEER'S SEAT - POWER FREQ, 50-60Hz



NEC051 - SET 2 - PROFILE ACROSS ENGINEER'S SEAT - POWER HARM, 65-300Hz



NEC051 - SET 2 - PROFILE ACROSS ENGINEER'S SEAT - HIGH FREQ, 305-2560Hz



NEC051 - SET 2 - PROFILE ACROSS ENGINEER'S SEAT - ALL FREQ, 5-2560Hz

APPENDIX AZ, SET 3

DATASET NEC051, SET 3
VERTICAL PROFILE AT THE ENGINEER'S SEAT
ELECTRIC LOCOMOTIVE, NORTH JERSEY COAST LINE

Measurement Setup Code: Staff: 24 Reference: 25
Drawing: A-4

Vehicle Status: Train goes through periods of
acceleration and coasting

Measurement Date: April 3, 1992

Measurement Time: Start: 8:38:39
End: 8:43:22

Number of Samples: 35

Programmed Sample Interval: 5 sec

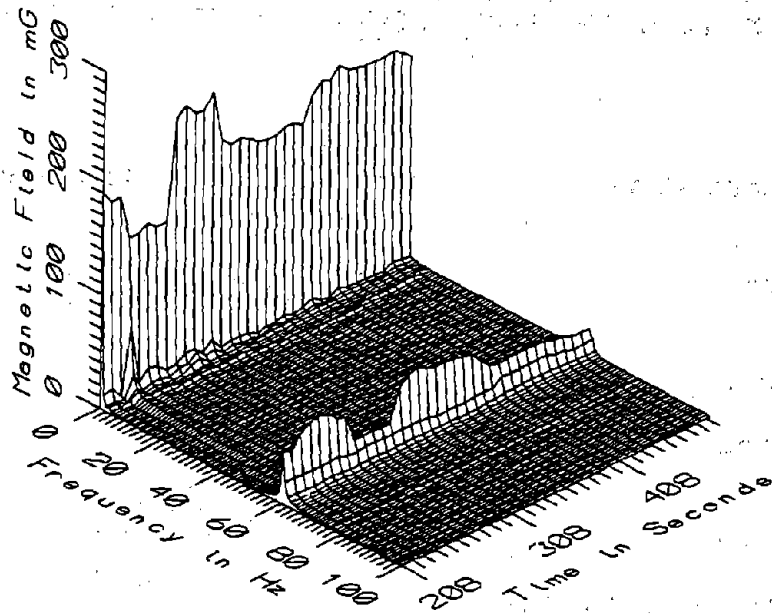
Actual Sample Interval: 8.3 sec*

Frequency Spectrum Parameters

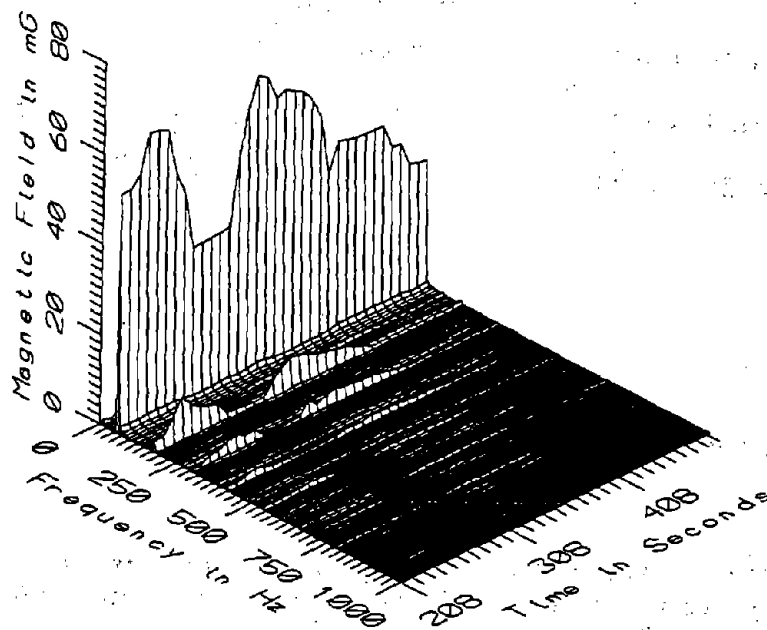
<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

Missing or Suspect Data: None

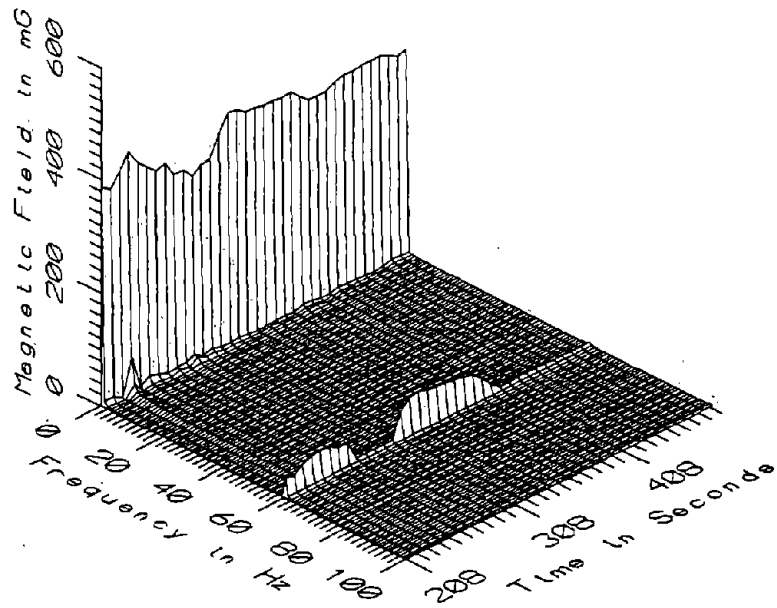
* Recording was discontinued while the sensor was moved between recording locations producing longer than normal average sample intervals.



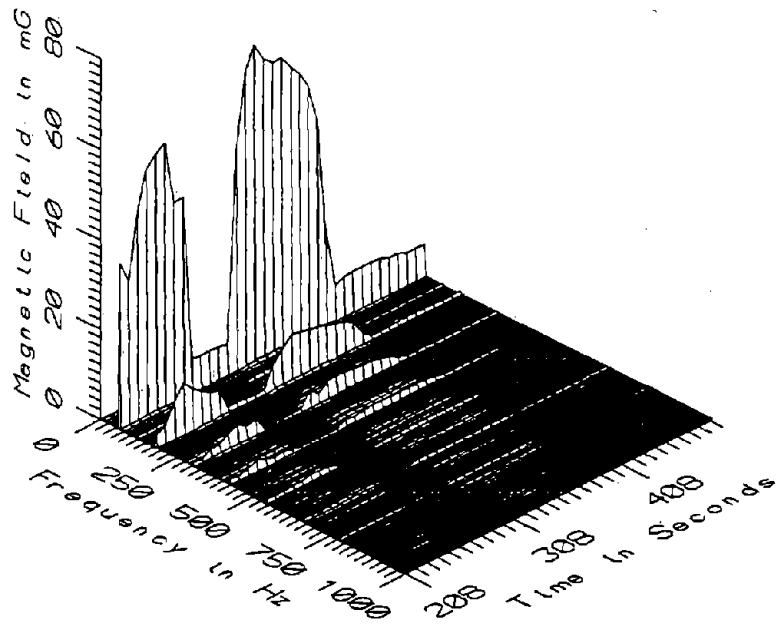
NEC051 - SET 3 - 10cm ABOVE FLOOR, LEFT OF ENGINEER



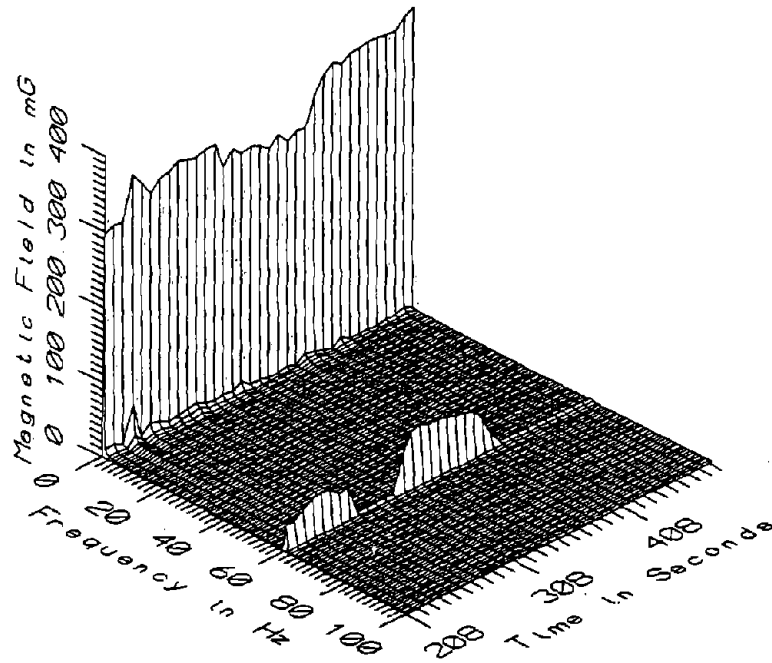
NEC051 - SET 3 - 10cm ABOVE FLOOR, LEFT OF ENGINEER



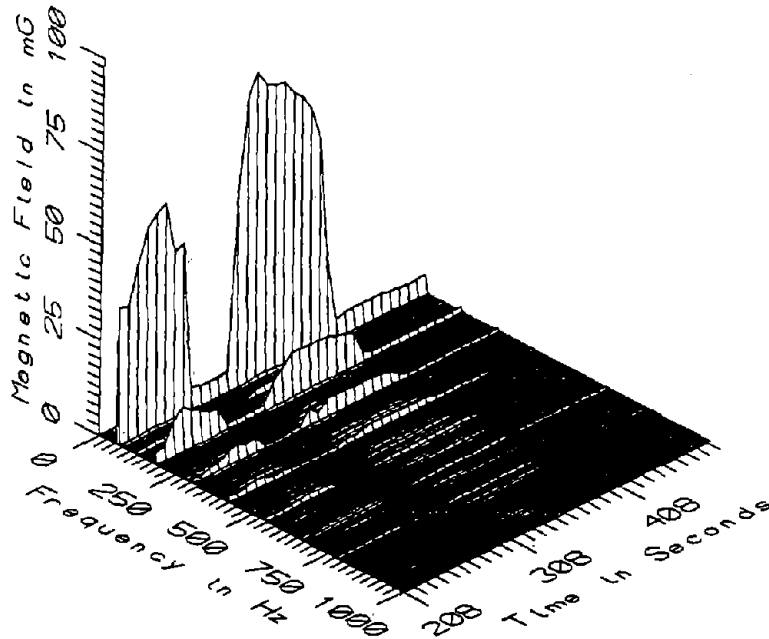
NEC051 - SET 3 - 60cm ABOVE FLOOR, LEFT OF ENGINEER



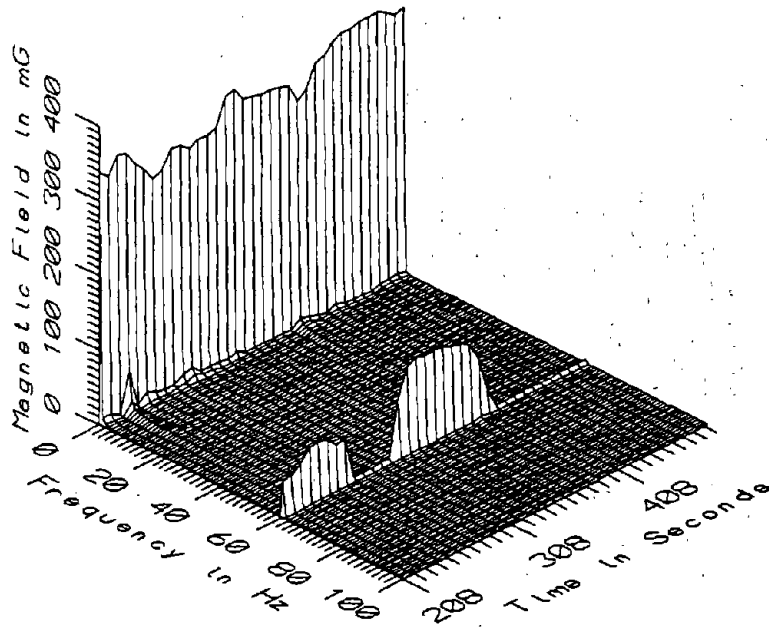
NEC051 - SET 3 - 60cm ABOVE FLOOR, LEFT OF ENGINEER



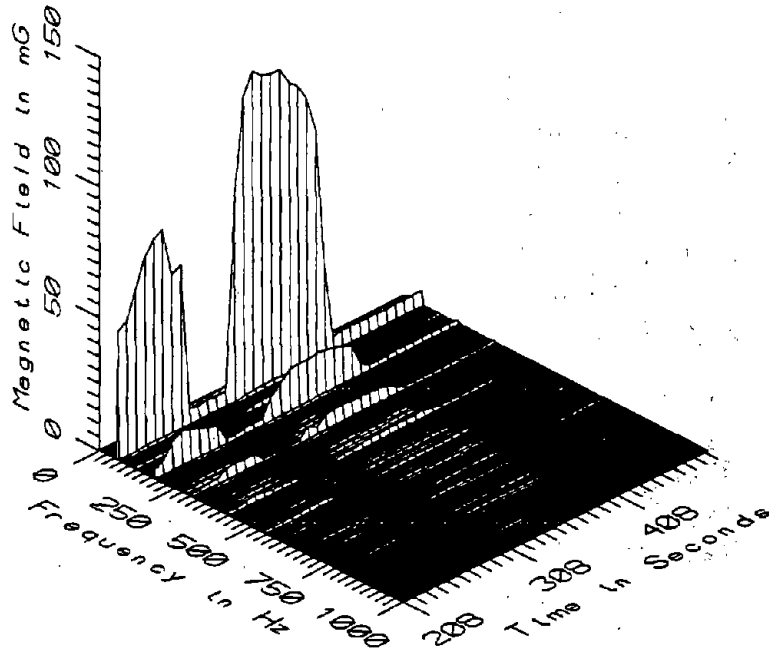
NEC051 - SET 3 - 110cm ABOVE FLOOR, LEFT OF ENGINEER



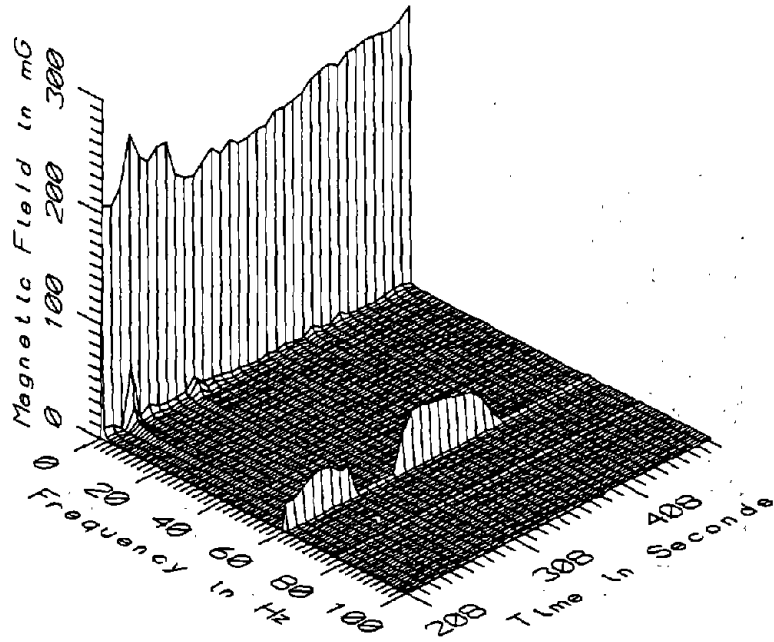
NEC051 - SET 3 - 110cm ABOVE FLOOR, LEFT OF ENGINEER



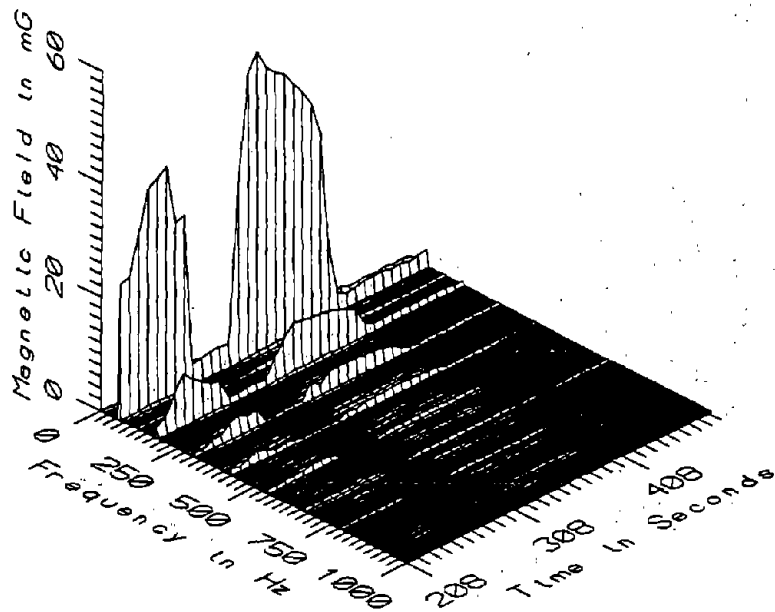
NEC051 - SET 3 - 160cm ABOVE FLOOR, LEFT OF ENGINEER



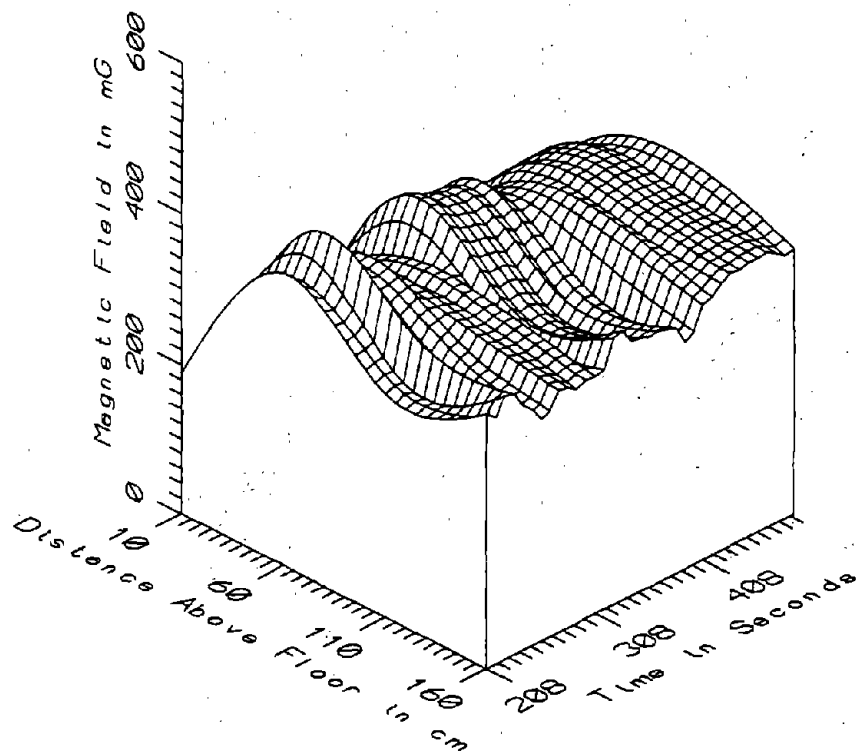
NEC051 - SET 3 - 160cm ABOVE FLOOR, LEFT OF ENGINEER



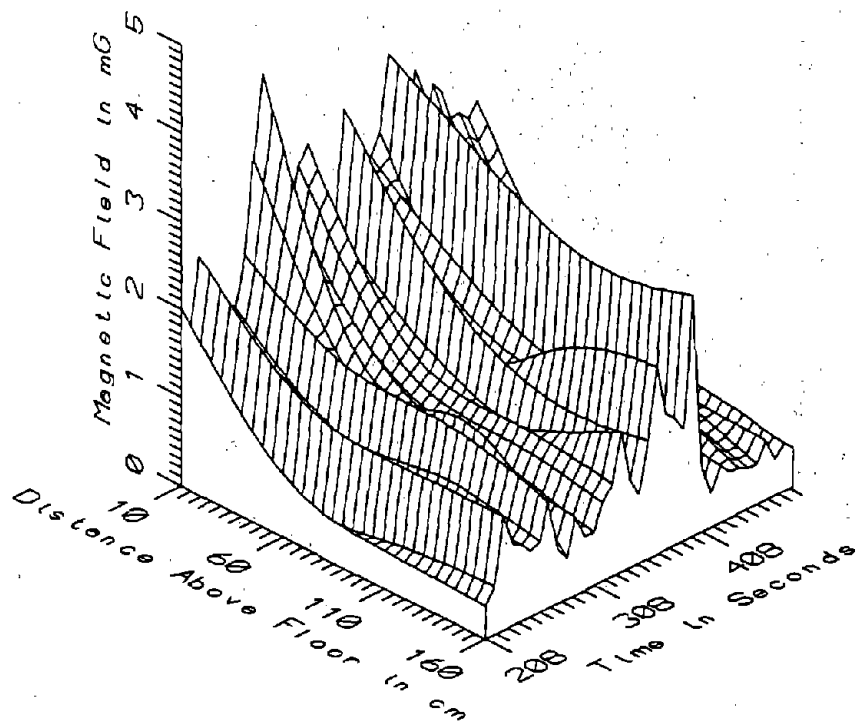
NEC051 - SET 3 - REFERENCE PROBE - FIREMAN'S SEAT



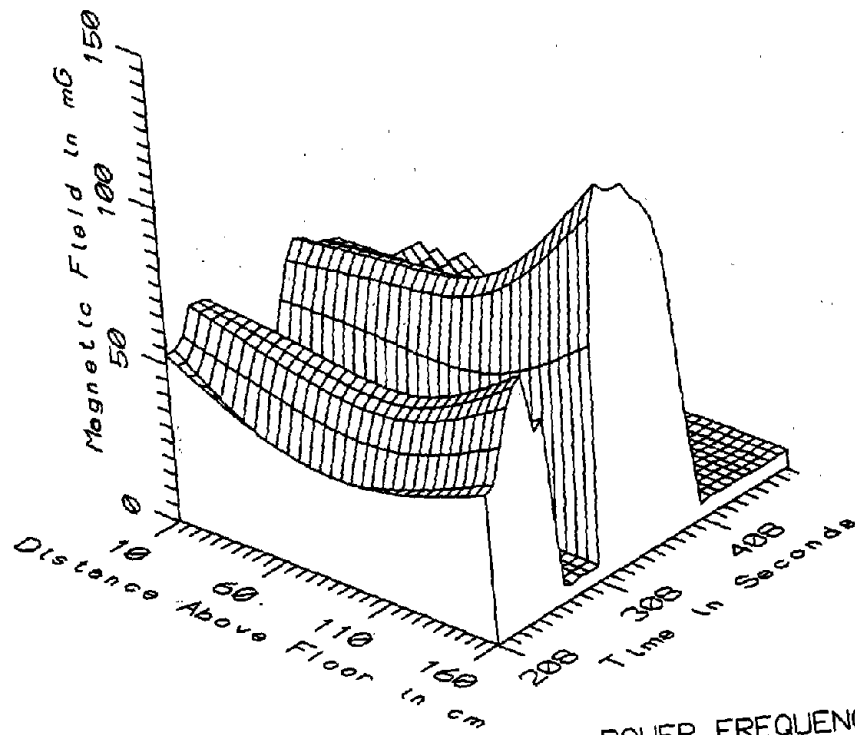
NEC051 - SET 3 - REFERENCE PROBE - FIREMAN'S SEAT



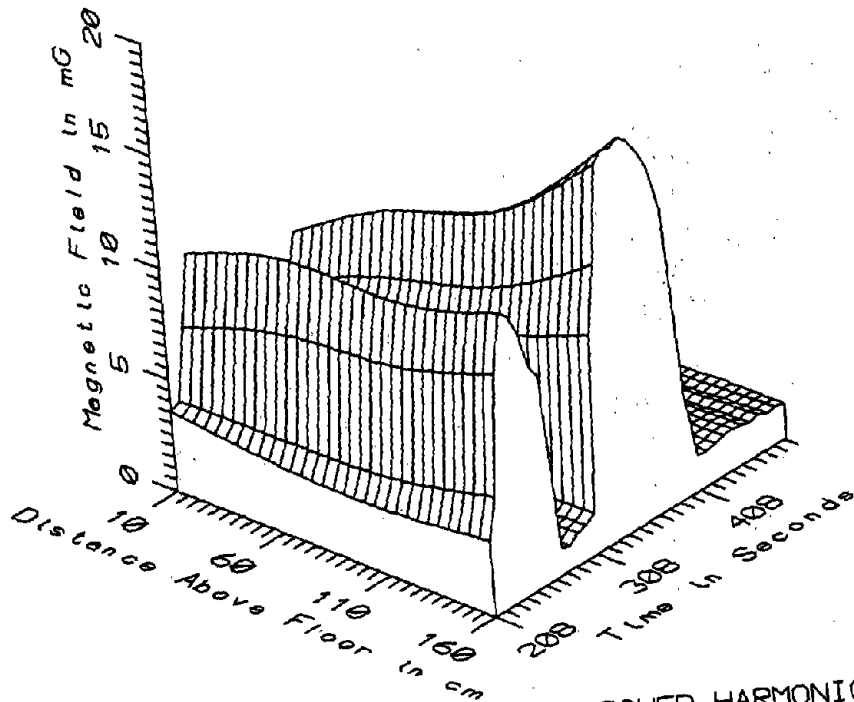
NEC051 - SET 3 - LEFT OF ENGINEER - STATIC



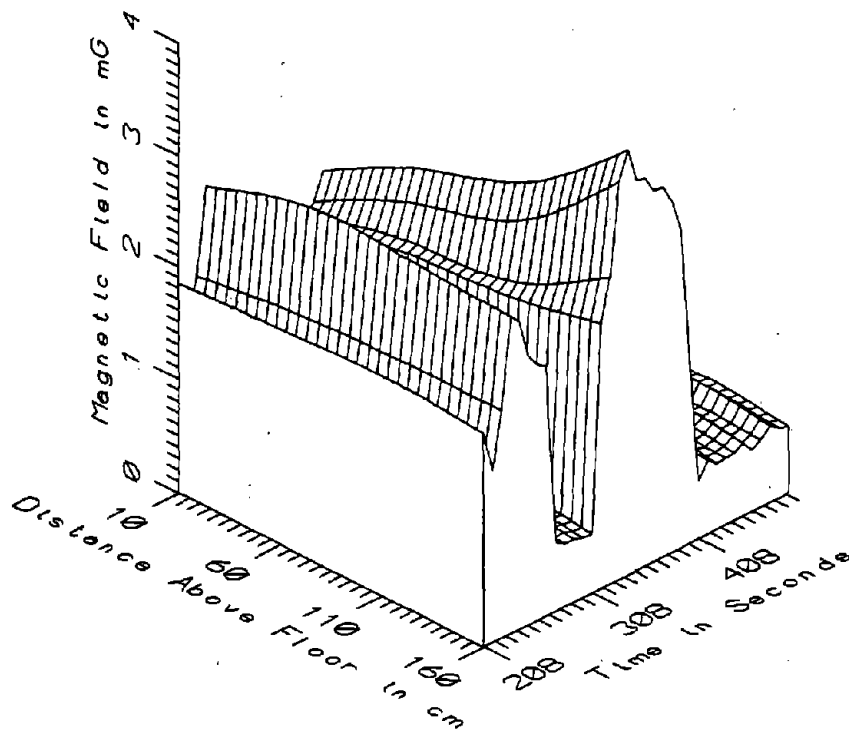
NEC051 - SET 3 - LEFT OF ENGINEER - LOW FREQUENCY, 5-45Hz



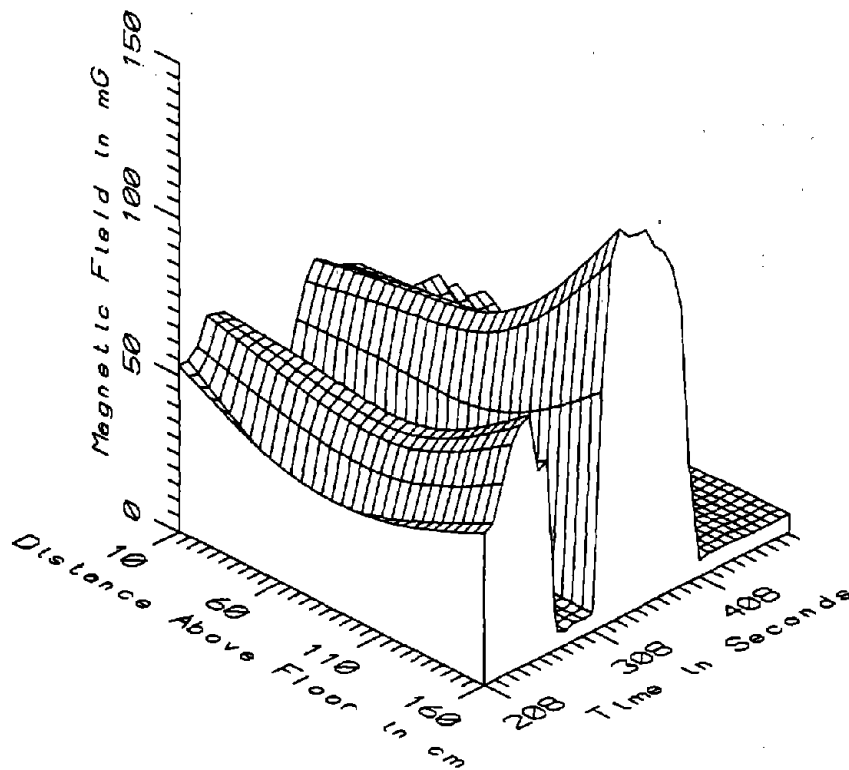
NEC051 - SET 3 - LEFT OF ENGINEER - POWER FREQUENCY, 50-60Hz



NEC051 - SET 3 - LEFT OF ENGINEER - POWER HARMONICS, 65-300Hz



NEC051 - SET 3 - LEFT OF ENGINEER - HIGH FREQUENCY, 305-2560Hz



NEC051 - SET 3 - LEFT OF ENGINEER - ALL FREQUENCIES, 5-2560Hz

APPENDIX BA

DATASET NEC052
VERTICAL PROFILE OUTSIDE THE RED BANK SUBSTATION
BENEATH THE ENTERING TRANSMISSION LINE

Measurement Setup Code: Staff: 53 Reference: None
 Drawing: A-11

Vehicle Status: Trains running on the power block

Measurement Date: April 3, 1992

Measurement Time: Start: 9:52:05
 End: 10:14:27

Number of Samples: 23

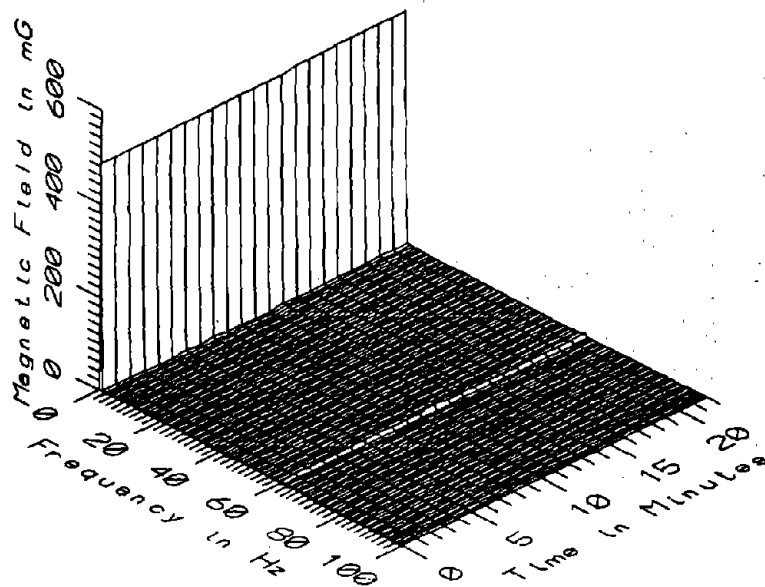
Programmed Sample Interval: 60 sec

Actual Sample Interval: 60 sec

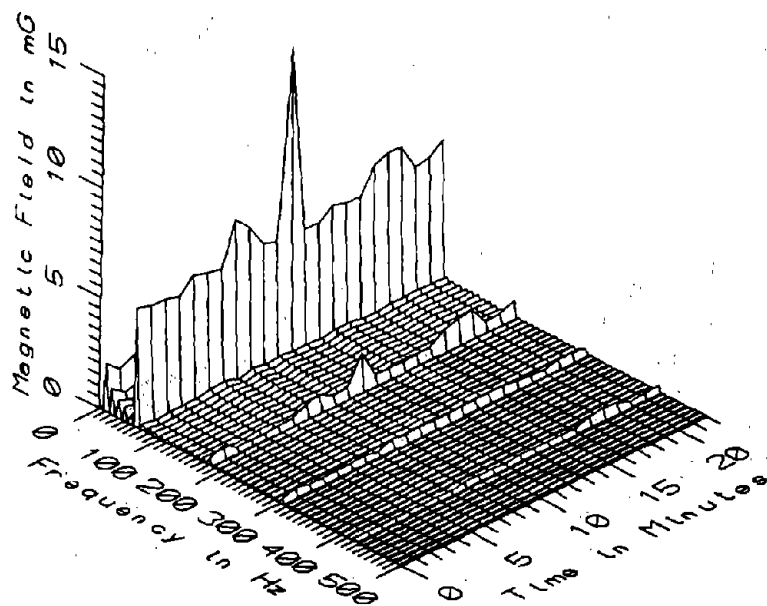
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

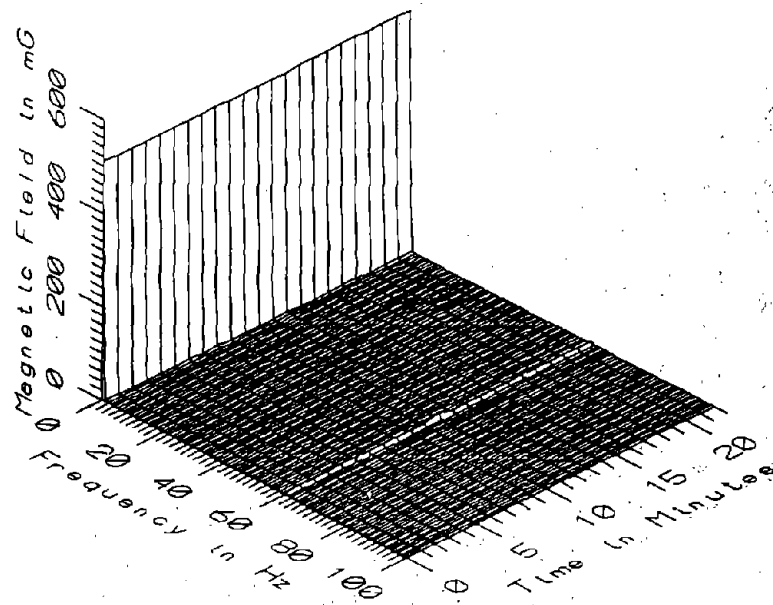
Missing or Suspect Data: None



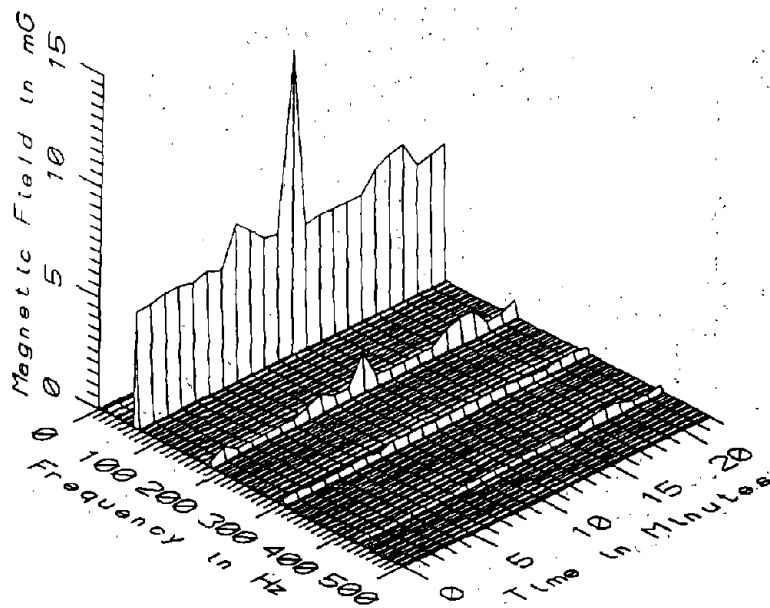
NEC052 - 10cm ABOVE GROUND, OUTSIDE REDBANK SUBSTATION



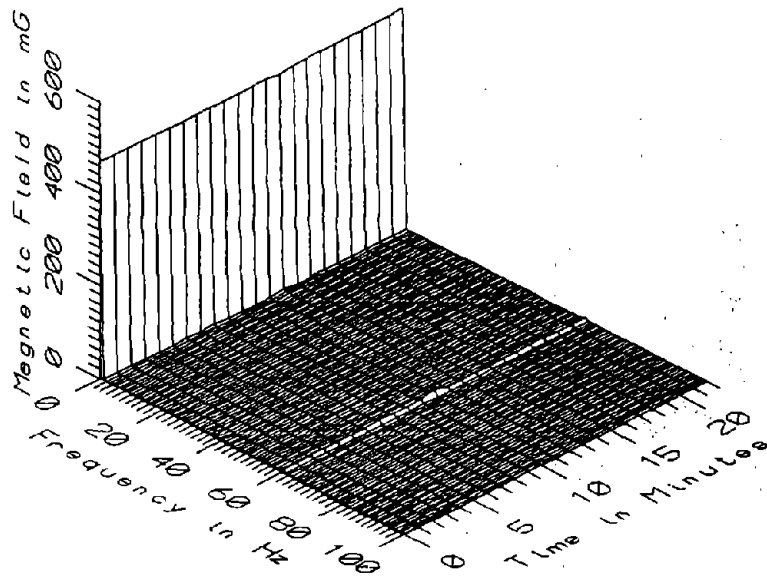
NEC052 - 10cm ABOVE GROUND, OUTSIDE REDBANK SUBSTATION



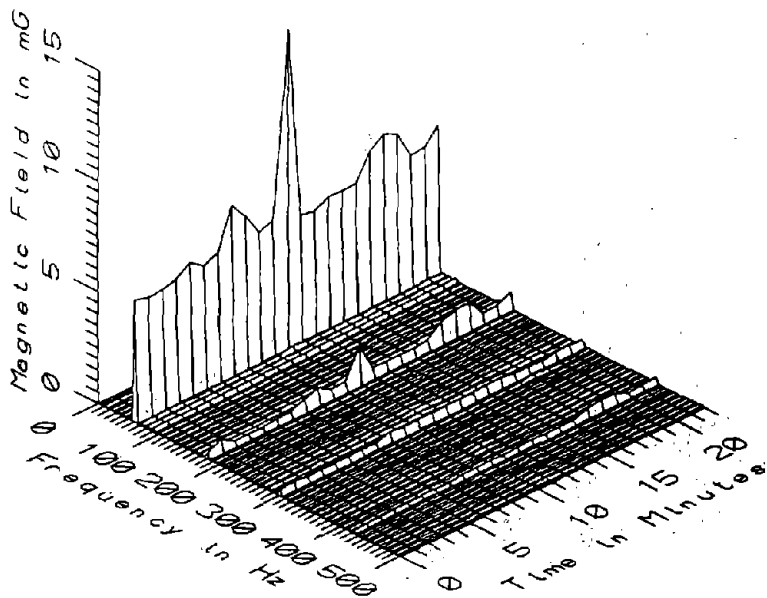
NEC052 - 60cm ABOVE GROUND, OUTSIDE REDBANK SUBSTATION



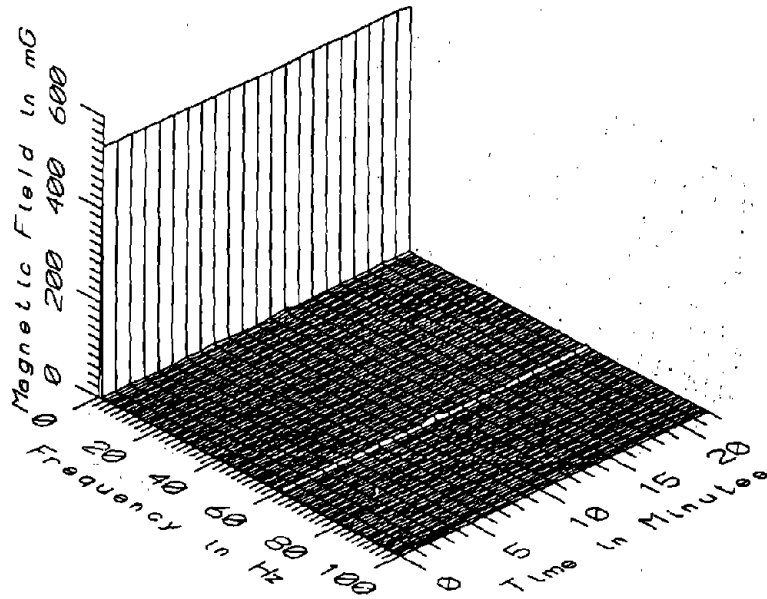
NEC052 - 60cm ABOVE GROUND, OUTSIDE REDBANK SUBSTATION



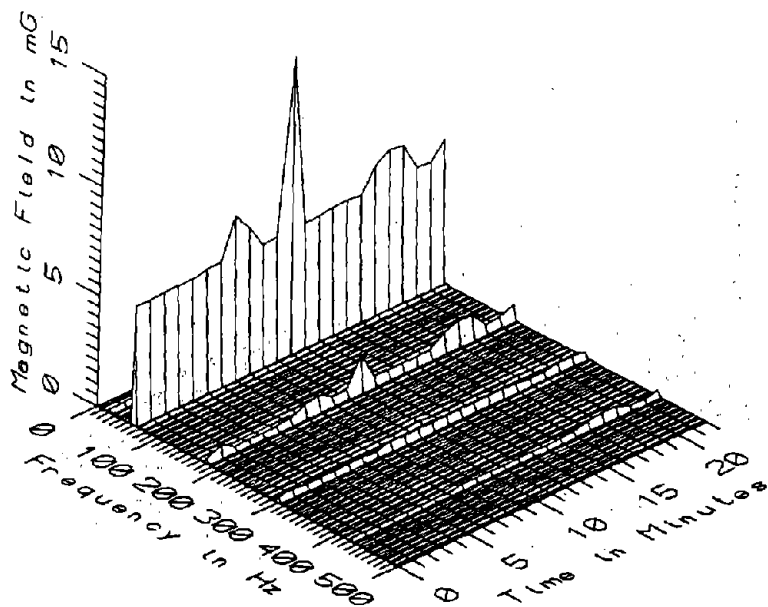
NEC052 - 110cm ABOVE GROUND, OUTSIDE REDBANK SUBSTATION



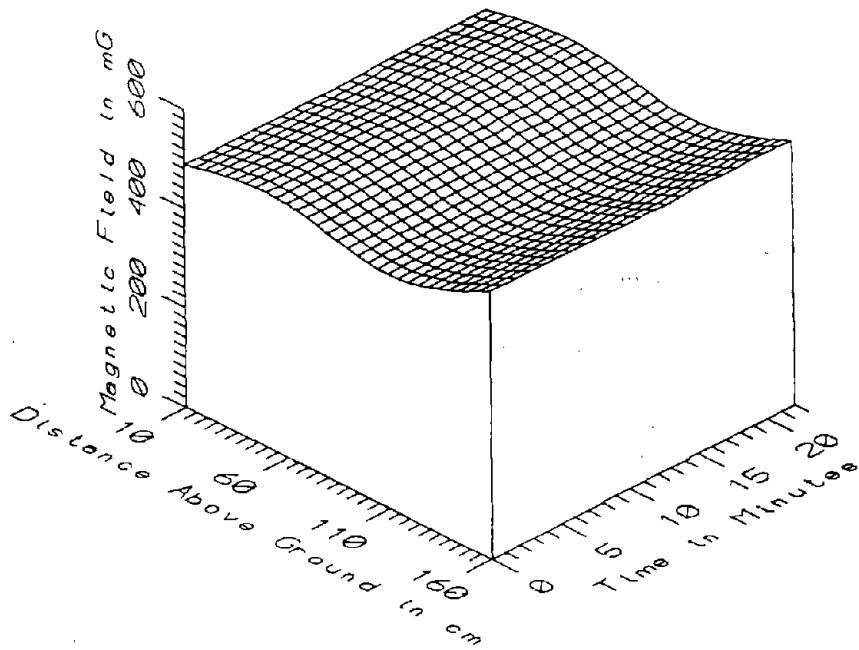
NEC052 - 110cm ABOVE GROUND, OUTSIDE REDBANK SUBSTATION



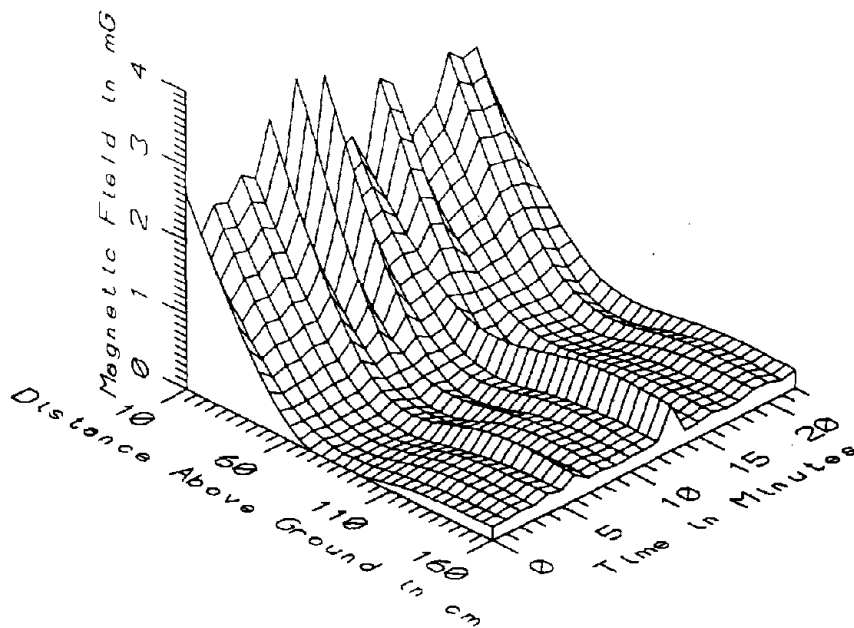
NEC052 - 160cm ABOVE GROUND, OUTSIDE REDBANK SUBSTATION



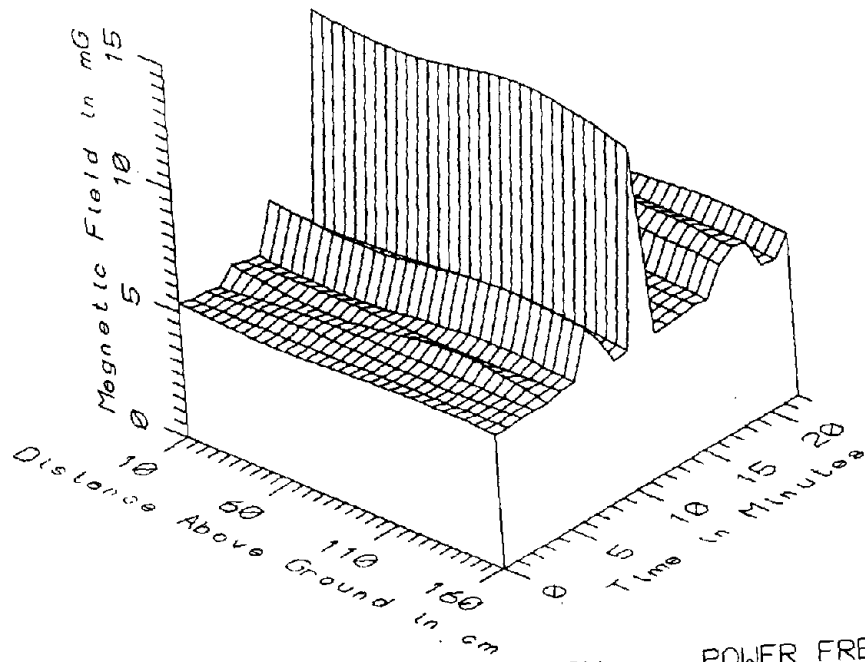
NEC052 - 160cm ABOVE GROUND, OUTSIDE REDBANK SUBSTATION



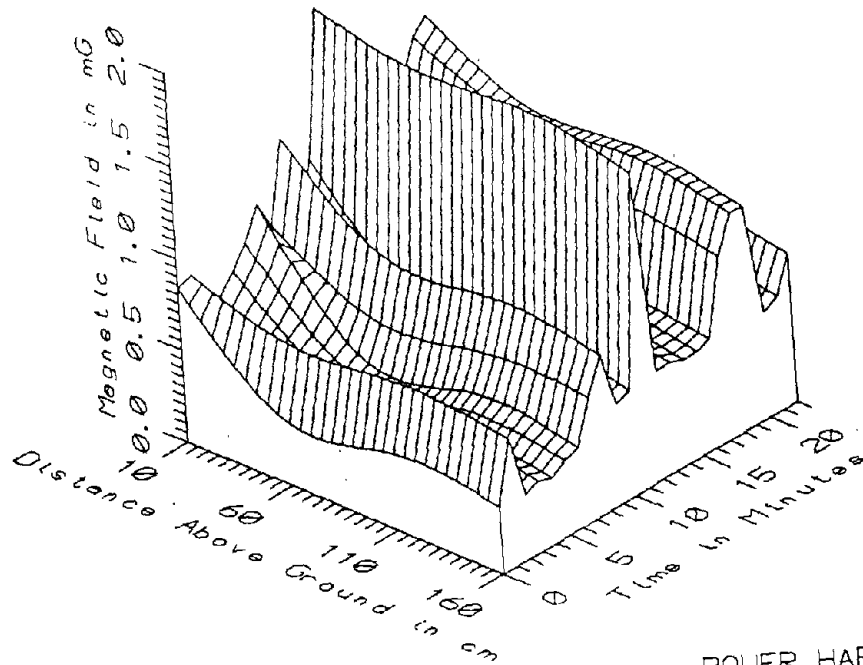
NEC052 - OUTSIDE REDBANK SUBSTATION - STATIC



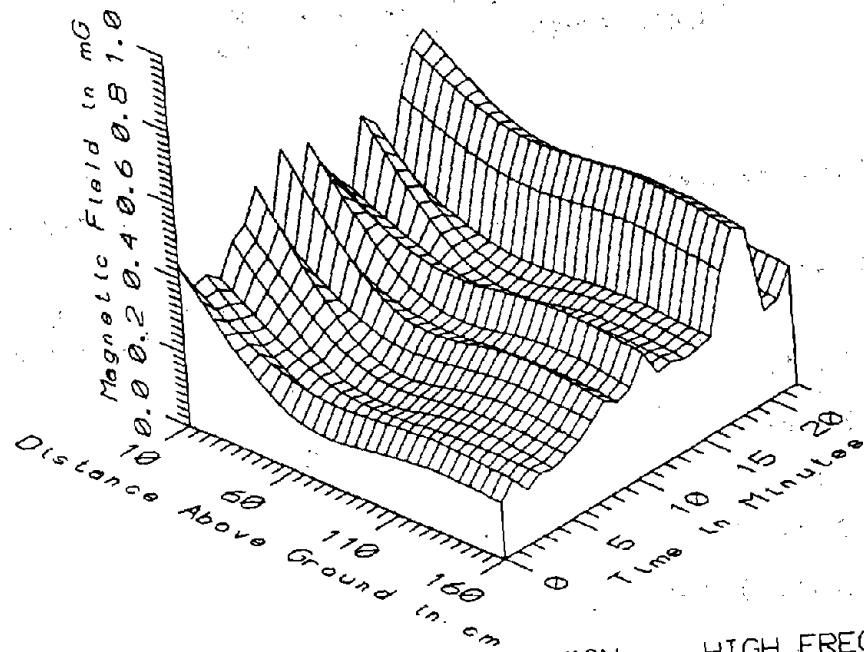
NEC052 - OUTSIDE REDBANK SUBSTATION - LOW FREQUENCY, 5-45Hz



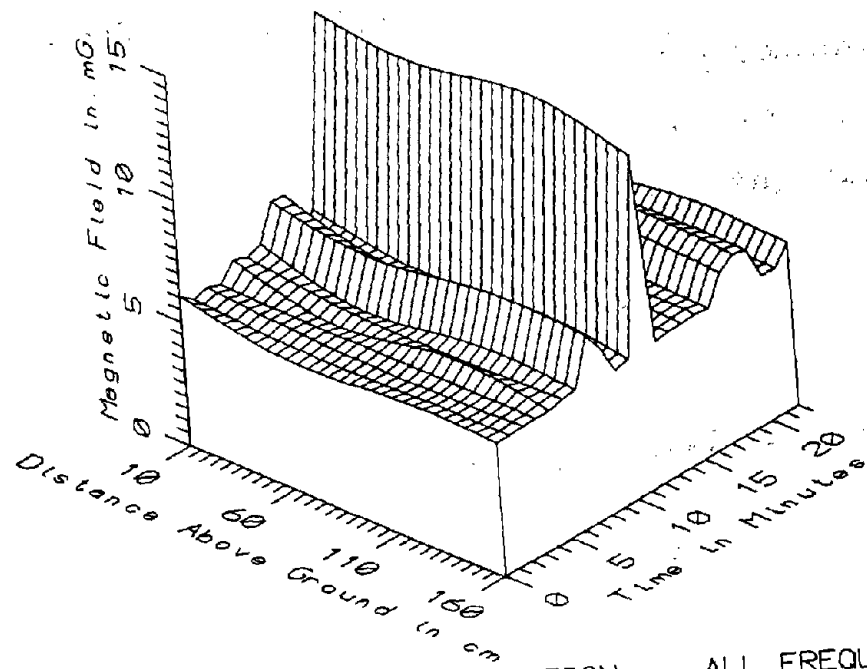
NEC052 - OUTSIDE REDBANK SUBSTATION - POWER FREQUENCY, 50-60Hz



NEC052 - OUTSIDE REDBANK SUBSTATION - POWER HARMONICS, 65-300Hz



NEC052 - OUTSIDE REDBANK SUBSTATION - HIGH FREQUENCY, 305-2560Hz



NEC052 - OUTSIDE REDBANK SUBSTATION - ALL FREQUENCIES, 5-2560Hz

APPENDIX BB

DATASET NEC053
VERTICAL PROFILE AT THE WAYSIDE
NORTH JERSEY COAST LINE (60 HZ)

Measurement Setup Code: Staff: 35 Reference: 36
 Drawing: A-7

Vehicle Status: Train from the east (Long Branch)
 passed 35 seconds into the record

Measurement Date: April 3, 1992

Measurement Time: Start: 11:22:25
 End: 11:24:15

Number of Samples: 23

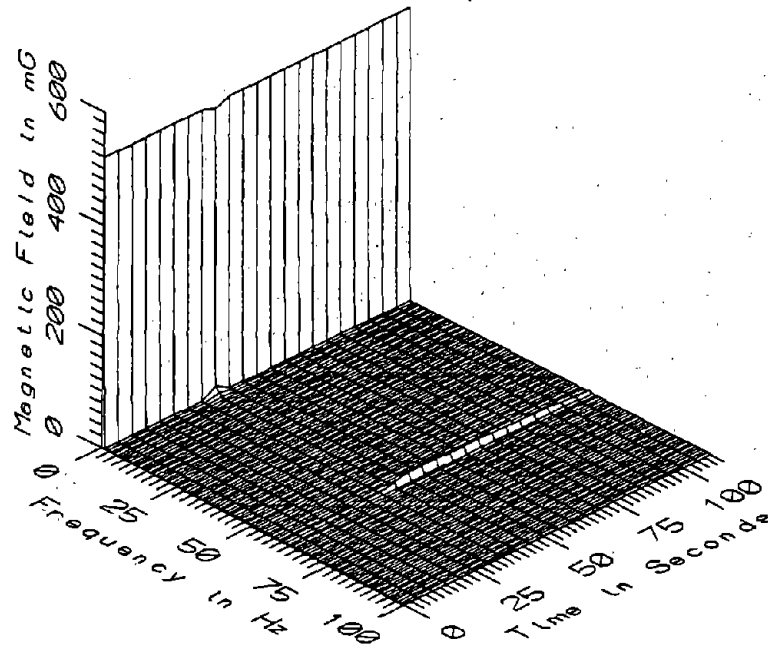
Programmed Sample Interval: 5 sec

Actual Sample Interval: 5.0 sec

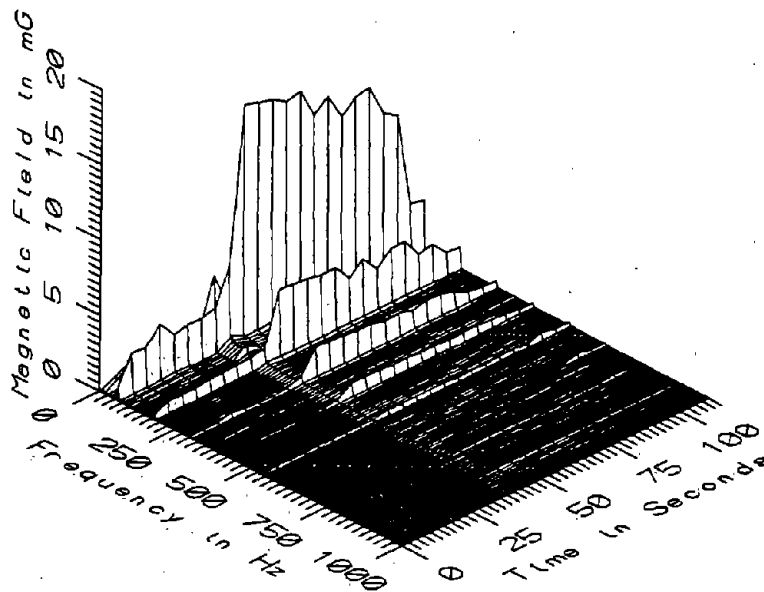
Frequency Spectrum Parameters

<u>Probe Type:</u>	<u>Wideband</u>	<u>Static</u>
Maximum Frequency (Hz)	2560	100
Minimum Frequency (Hz)	5	0
Spectral Bandwidth (Hz)	5	1

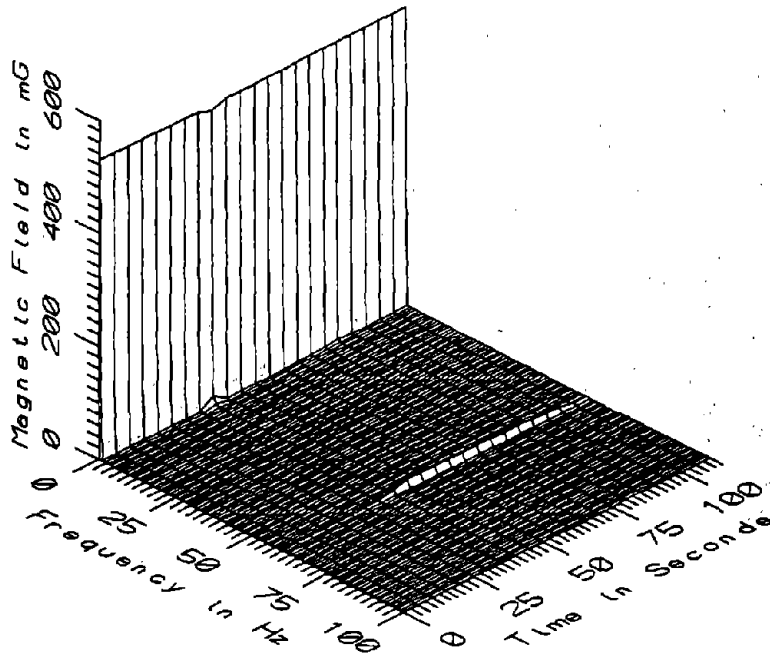
Missing or Suspect Data: None



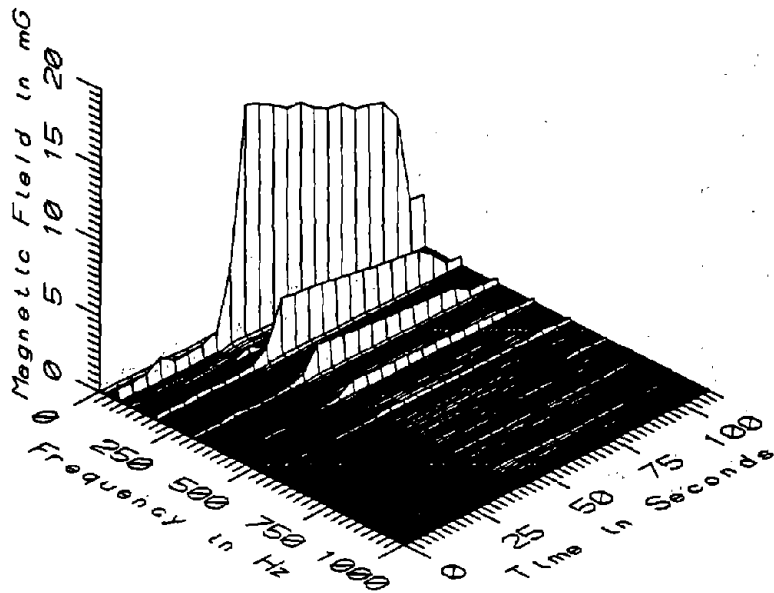
NEC053 - 10cm ABOVE GROUND, 20FT FROM CENTERLINE OF TRACK



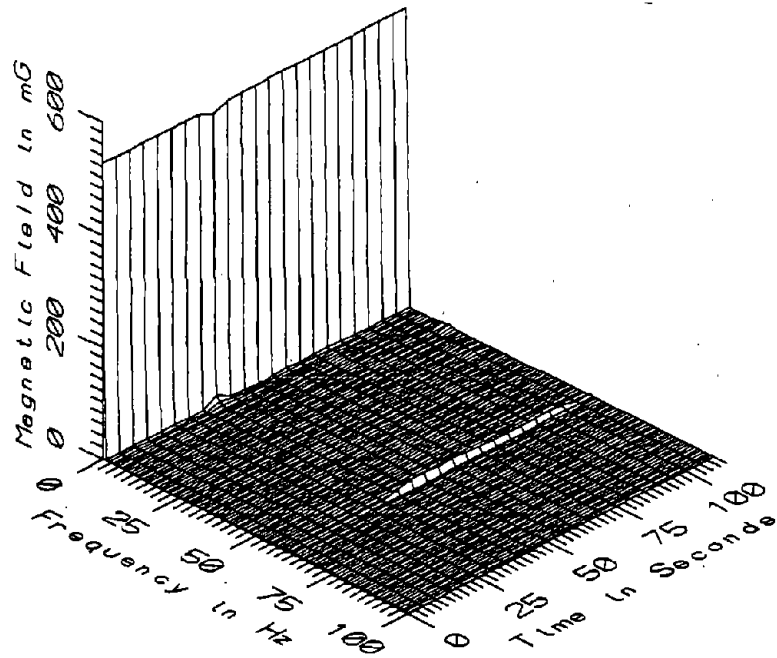
NEC053 - 10cm ABOVE GROUND, 20FT FROM CENTERLINE OF TRACK



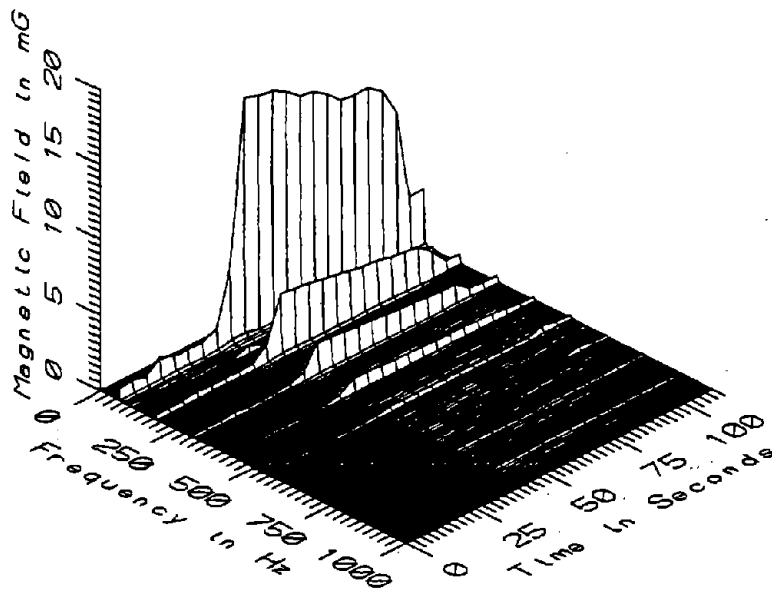
NEC053 - 60cm ABOVE GROUND, 20FT FROM CENTERLINE OF TRACK



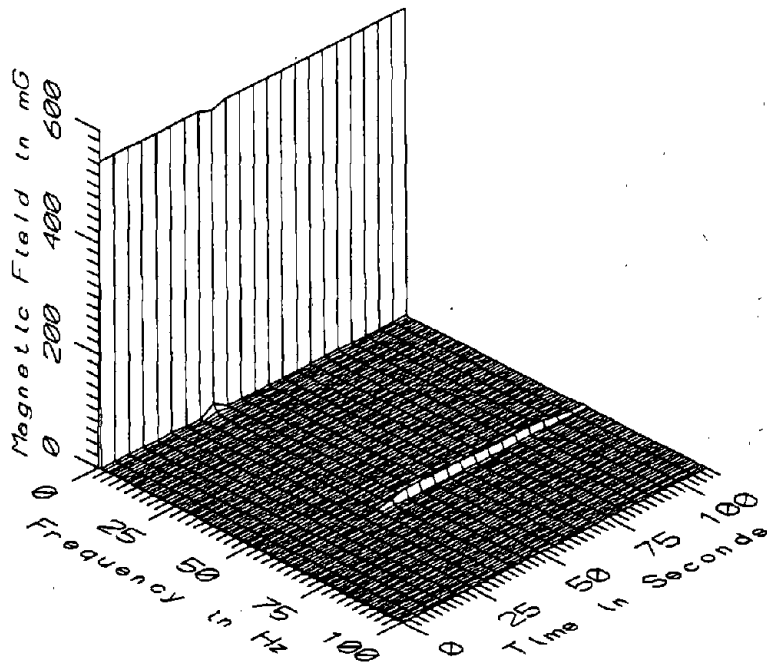
NEC053 - 60cm ABOVE GROUND, 20FT FROM CENTERLINE OF TRACK



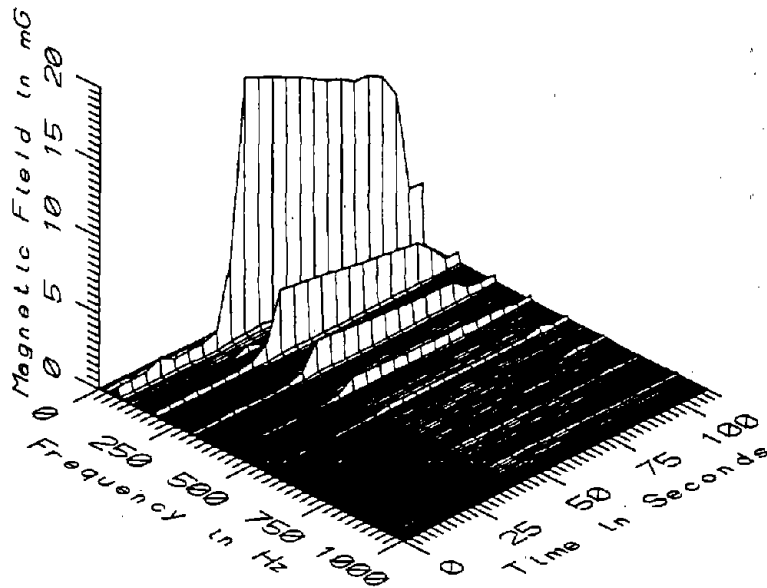
NEC053 - 110cm ABOVE GROUND, 20FT FROM CENTERLINE OF TRACK



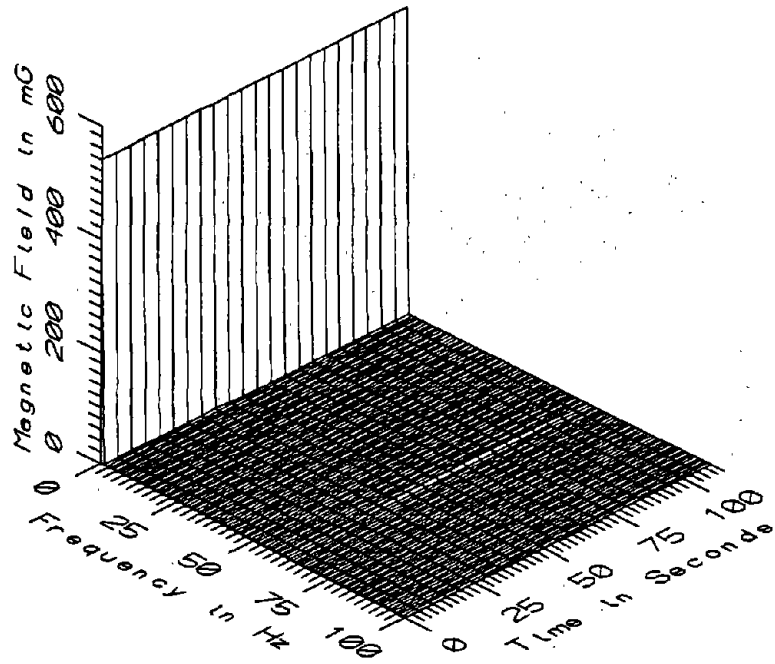
NEC053 - 110cm ABOVE GROUND, 20FT FROM CENTERLINE OF TRACK



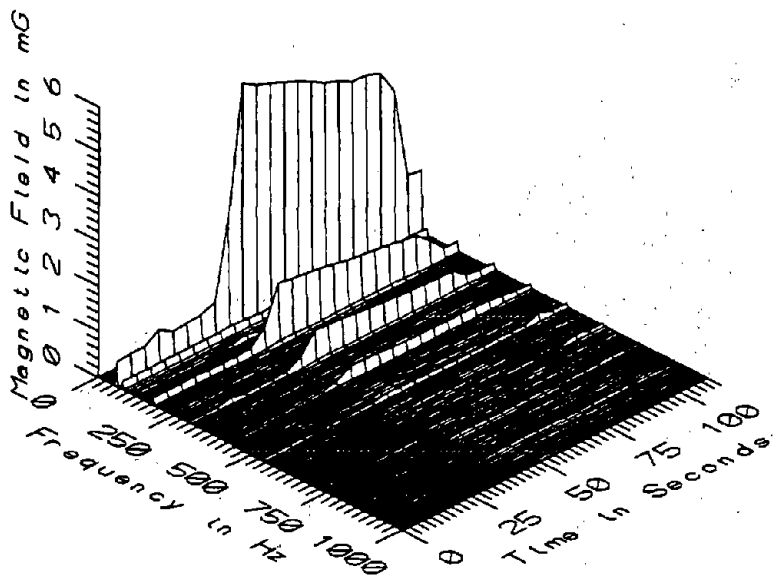
NEC053 - 160cm ABOVE GROUND, 20FT FROM CENTERLINE OF TRACK



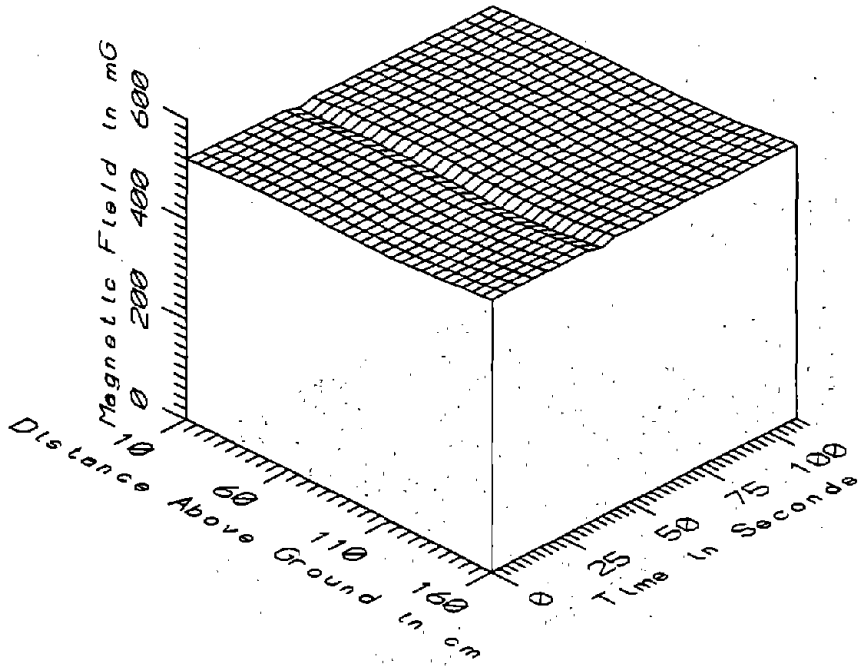
NEC053 - 160cm ABOVE GROUND, 20FT FROM CENTERLINE OF TRACK



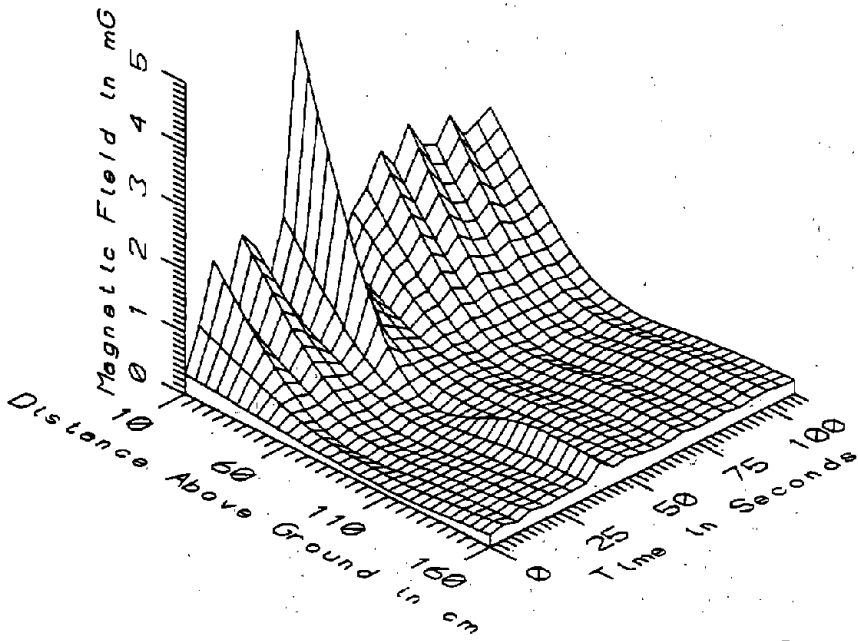
NEC053 - 10cm ABOVE GROUND, 40FT FROM CENTERLINE OF TRACK



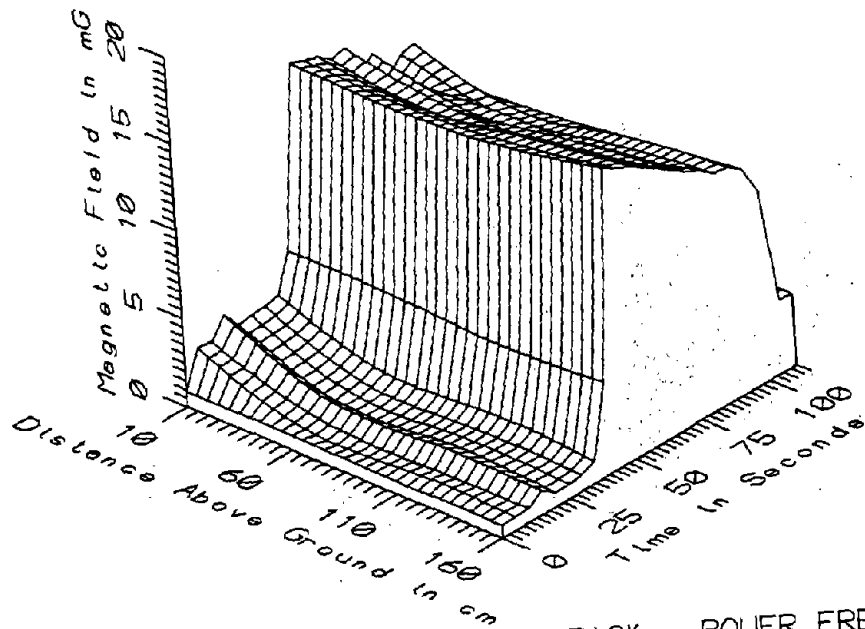
NEC053 - 10cm ABOVE GROUND, 40FT FROM CENTERLINE OF TRACK



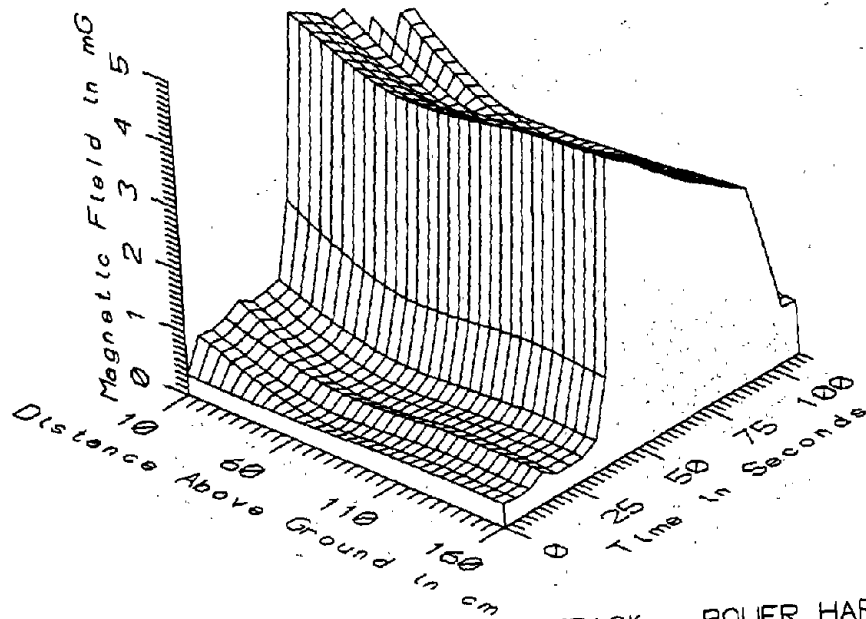
NEC053 - 20FT FROM CENTERLINE OF TRACK - STATIC



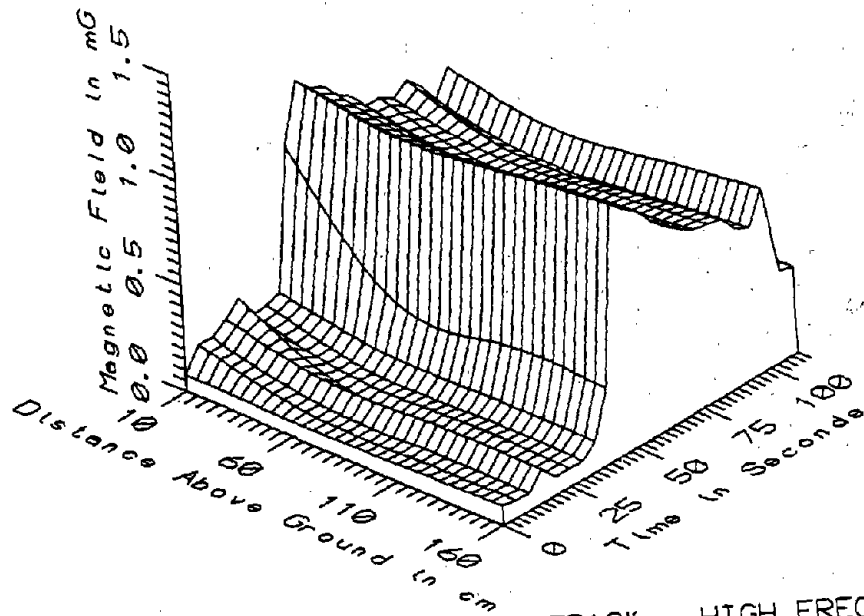
NEC053 - 20FT FROM CENTERLINE OF TRACK - LOW FREQUENCY, 5-45Hz



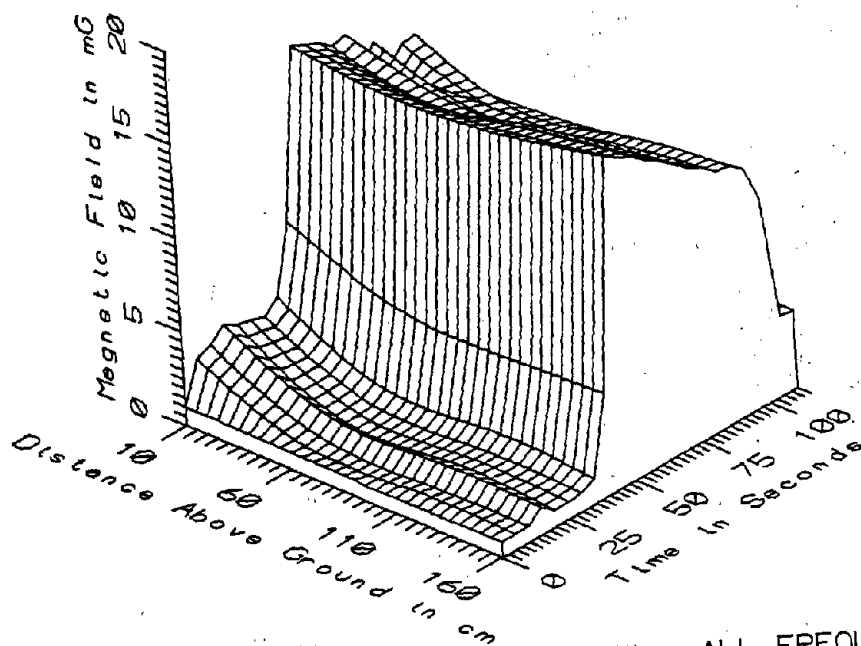
NEC053 - 20FT FROM CENTERLINE OF TRACK - POWER FREQUENCY, 50-60Hz



NEC053 - 20FT FROM CENTERLINE OF TRACK - POWER HARMONICS, 65-300Hz



NEC053 - 20FT FROM CENTERLINE OF TRACK - HIGH FREQUENCY, 305-2560Hz



NEC053 - 20FT FROM CENTERLINE OF TRACK - ALL FREQUENCIES, 5-2560Hz

