PROCESSED DATA FROM THE STRONG-MOTION RECORDS OF THE MORGAN HILL EARTHQUAKE OF 24 APRIL 1984

PART II.
STRUCTURAL-RESPONSE RECORDS

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF MINES AND GEOLOGY
OFFICE OF STRONG MOTION STUDIES
REPORT OSMS 85-05

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN
GOVERNOR

THE RESOURCES AGENCY
GORDON K. VAN VLECK
SECRETARY FOR RESOURCES

DEPARTMENT OF CONSERVATION
DON L. BLUBAUGH
DIRECTOR

DIVISION OF MINES AND GEOLOGY
JAMES F. DAVIS
STATE GEOLOGIST

PROCESSED DATA FROM THE STRONG-MOTION RECORDS OF THE MORGAN HILL EARTHQUAKE OF 24 APRIL 1984

PART II. STRUCTURAL-RESPONSE RECORDS

M.J. Huang

A.F. Shakal

D.L. Parke

R.W. Sherburne

R.V. Nutt

Report No. OSMS 85-05

California Strong Motion Instrumentation Program

California Department of Conservation

Division of Mines and Geology

Office of Strong Motion Studies

630 Bercut Drive, Sacramento, California 95814

December 1985

CONTENTS

Page

Introduction 1

Earthquake Characteristics 1

CSMIP Stations and Instrumentation 2

Accelerogram Digitization and Processing 6

References 13

Data Availability 15

Appendix - Plots of Processed Data 17

Organization and Order of Plots 17

San Jose - Town Park Towers Apartment Bldg. 19

San Jose - Great Western S & L Bldg. 55

San Jose - Santa Clara County Office Bldg. 91

Saratoga - West Valley College Gym 151

Watsonville - Telephone Bldg. 183

Hollister - Glorietta Warehouse 219

South San Francisco - Kaiser Medical Center 255

San Juan Bautista - 101/156 Overpass Bridge 287

List of CSMIP Reports and Data Tapes 317

INTRODUCTION

Strong motion records were recovered from nearly fifty stations of the California Strong Motion Instrumentation Program (CSMIP) following the Morgan Hill earthquake of April 24, 1984. Twenty-three of those stations were extensively-instrumented structures. This report presents results of the digitization and processing performed on the records obtained from eight of these structures, including seven buildings and one bridge. The unprocessed records for the remaining structures typically had maximum accelerations of 10% g or less, as shown in the data report by Shakal et al. (1984), and were not digitized. The results for the digitization of strong-motion records obtained at CSMIP ground-response stations are presented in an accompanying Part I report (Sherburne et al., 1985). Strong-motion records obtained by other agencies such as the U.S. Geological Survey (USGS) are described in the paper by Brady and Shakal (1985); the digitization results obtained by the USGS for those records are given in Brady et al. (1984).

EARTHQUAKE CHARACTERISTICS

The Morgan Hill earthquake occurred on April 24, 1984 on the Calaveras fault southeast of San Jose. Bakun et al. (1984) infer that the rupture propagated from the epicenter near Halls Valley (southeast of San Jose) to the southeast, terminating in the vicinity of Morgan Hill. Most of the residential damage was confined to an unincorporated area of Morgan Hill near the southern end of Anderson Lake. A maximum intensity of VIII (MMI) was assigned to this localized area. However, MMI VII more generally

characterizes the intensity of the Morgan Hill earthquake (Stover, 1984). Specific reports on the earthquake damage and other aspects of the event are included in the compilation by Bennett and Sherburne (1984), and in a special issue of Earthquake Spectra (1985).

Using the USGS seismic network data, Cockerham and Eaton (1984) estimated the earthquake origin time and hypocenter given below. The local magnitude and the seismic moment obtained by Uhrhammer and Darragh (1984) are also given.

Origin Time:	21:15:19 GMT, 24 April 1984 (13:15:19 PST) (USGS)
Epicenter:	37.31 N, 121.68 W (USGS)
Focal Depth:	8.4 Km (USGS)
Magnitude:	ML = 6.2 (BRK)
Moment:	Mo = 1.1 x 10**25 dyne-cm (BRK)

CSMIP STATIONS AND INSTRUMENTATION

The locations of the earthquake epicenter and of the 8 SMIP instrumented structures for which data are included in this report are shown in the map of Figure 1. The 19 ground-response stations for which data are included in the Part I report are also shown. The 8 structures are within the distance range of 19 to 78 km from the epicenter. A listing of structures and of the maximum shaking amplitude at the base and at the top of each structure is given in Table 1. Table 1 also lists the number of stories in each structure and the distance of the structure from the epicenter and from the nearest point on the fault.

The instrumentation of these structures consists of from 11 to 22 acceleration sensors located at key points throughout the structure, all connected to a centrally-located recorder. The

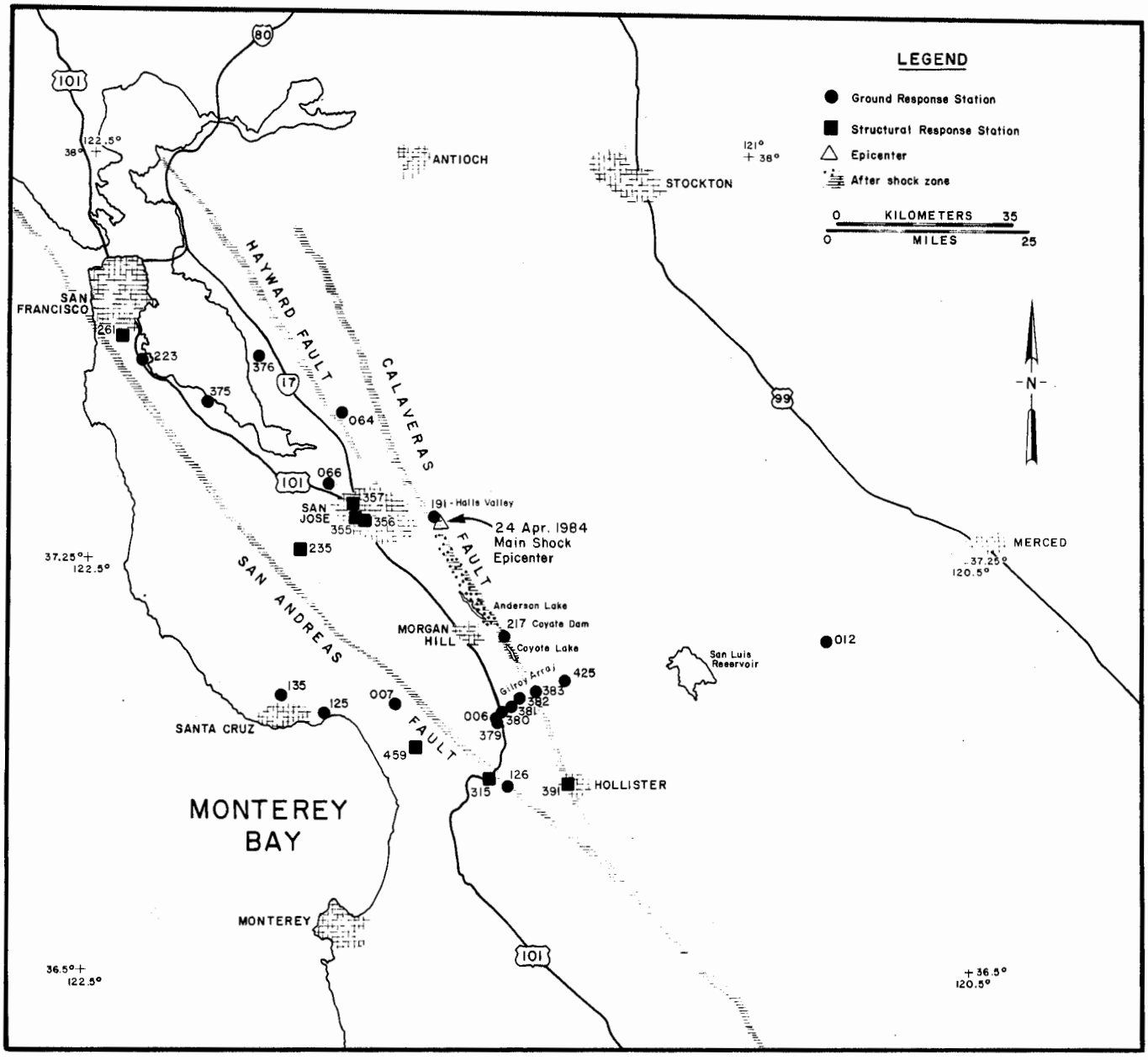


Fig. 1. Location of major faults in the San Francisco Bay area, the Morgan Hill earthquake epicenter, and the aftershock zone (stipled). Solid squares indicate the location of CSMIP structural-response stations for which digitized records are presented in this report. (The adjacent 3-digit code corresponds to the last three digits of the station numbers in Table 1.) The solid circles indicate the location of ground-response stations for which digitized records are presented in the Part I report accompanying this report.

Table 1 - Summary of processed structural-response records from the 1984 Morgan Hill earthquake.

Station Number	Structure	Type of Structure	No. Stories (above/below ground)	No. of Sensors	Epicentral Distance* (km)
57356	San Jose - Town Park Tower Apartment Bldg.	RC Shear Walls	10/0	13	19 [19]
57355	San Jose - Great Western S & L	RC Frame & Shear Walls	10/1	13	19 [19]
57357	San Jose - Santa Clara County Bldg.	Steel Frame	12/1	22	21 [21]
58235	Saratoga - West Valley College Gym	RC Columns & Shear Walls	1/0	11	30 [30]
47459	Watsonville - Telephone Bldg.	RC Shear Walls	4/0	13	45 [30]
47391	Hollister - Glorietta Warehouse	Perimeter Shear Walls	1/0	13	57 [37]
58261	So. San Francisco - Kaiser Medical Center	Steel Frame	4/0	11	78 [78]
47315	San Juan Bautista - 101/156 Overpass	Bridge	-	12	51 [36]

* - Distance given relative to the epicenter at 37.309 N, 121.678 W. Bracketed number is the distance to the nearest point on the fault inferred from the aftershock distribution.

** - Corrected (Vol. 2) acceleration, H - horizontal component, V - vertical component.

Peak Acceleration** (g)		Peak Velocity (cm/sec)		Peak Displacement (cm)		Processed Record Length	Long-Period Filter Limit
Ground	Structure	Ground	Structure	Ground	Structure		
0.06g H 0.04g V	0.21g H	11.5 H 3.5 V	23.6 H	3.0 H 1.1 V	5.2 H	40 secs	6.25 secs (0.16 Hz)
0.06g H 0.03g V	0.22g H	11.9 H 3.9 V	27.4 H	3.6 H 0.9 V	6.4 H	40 secs	6.25 secs (0.16 Hz)
0.04g H 0.02g V	0.17g H	9.2 H 3.4 V	57.4 H	3.2 H 1.0 V	19.2 H	80 secs	6.25 secs (0.16 Hz)
0.10g H 0.03g V	0.41g H	5.8 H 2.5 V	18.2 H	1.0 H 0.6 V	1.1 H	40 secs	4.00 secs (0.25 Hz)
0.11g H 0.08g V	0.33g H	9.1 H 3.9 V	16.2 H	1.8 H 0.7 V	2.2 H	40 secs	4.00 secs (0.25 Hz)
0.08g H 0.30g V	0.25g H	7.3 H 11.7 V	22.4 H	3.1 H 0.8 V	3.5 H	40 secs	6.25 secs (0.16 Hz)
0.03g H 0.02g V	0.26g H	3.9 H 1.3 V	19.5 H	0.7 H 0.3 V	2.4 H	60 secs	4.00 secs (0.25 Hz)
0.04g H 0.03g V	0.15g H 0.04g V	2.5 H 1.7 V	5.2 H 1.8 V	0.4 H 0.4 V	0.5 H 0.4 V	22 secs	3.33 secs (0.30 Hz)

signals from each of the sensors are recorded with a common time base by the central recorder. This is in contrast with the three independent, triaxial accelerographs in most buildings during the 1971 San Fernando earthquake, which was the last event to generate a large number of structural-response records.

The 5.9 ML Coyote Lake earthquake of August 6, 1979 also generated records at five of the eight structures considered here. These include the Great Western S & L Bldg. and the Town Park Towers Apartment Bldg. in San Jose, the West Valley College Gym in Saratoga, the Kaiser Medical Center in South San Francisco and the Hwy 101/156 Overpass near San Juan Bautista. The records are shown in the data report by Porcella et al. (1979). Only the record from the San Juan Bautista overpass was digitized; the digitization results for that record are available in the report by Porter et al. (1983).

ACCELEROGRAM DIGITIZATION AND PROCESSING

The digitization results presented in this report were obtained using a computer-driven optical scanning system. This facility is patterned after the system developed at the University of Southern California (Trifunac and Lee, 1979; Lee and Trifunac, 1979). In these systems, a direct photographic negative copy of the film accelerogram is mounted on a rotating drum which is scanned by a photodensitometer. The photodensitometer is mounted on a carriage moving perpendicular to the rotational direction. The resulting x-y array of optical density values is converted to raw time series through several trace-reconstruction steps. Baseline and other corrections are then applied to this raw data to obtain acceleration

data for further processing and spectral analysis. The subsequent post-digitization processing is similar to that first developed at the California Institute of Technology (Trifunac and Lee, 1973). To improve the instrument correction procedure at high frequencies a change of operators was made as discussed in Shakal and Ragsdale (1984). Shakal and Ragsdale (1984) also give the results of noise floor analyses which guide the selection of filter corner frequencies in CSMIP processing.

The accelerograms digitized for this report are from central-recording accelerographs having from 11 to 13 channels of data recorded on a 7-inch wide film. Each of the structures had one such recorder except the Santa Clara County Office Building which had two, for a total of 22 channels. For each recorder, the 7-inch film contains acceleration traces, straight-line reference traces, and timing-pulse traces.

The sequence of steps in processing these records is summarized in the following:

1. The film record is contact-copied onto several panels of film negatives, each approximately 22 cm (22 seconds) in length. The number of panels needed depends on the duration of shaking in the record being digitized. Adjacent panels are copied so they have a 2-second overlap.

2. Each panel is digitized into x and y coordinates by the optical scanner. The scanner sampling rate used for these records is 200 samples per centimeter in x and y. This is nominally equal to a time step of 0.005 second (200 samples/sec) and an acceleration increment of 0.003 g.

3. The raw x,y data from the individual panels are

concatenated to form continuous acceleration traces, straight-line reference traces and timing traces.

4. Vol. I Processing. The digitized reference traces are subtracted from the acceleration traces to remove any spurious film-movement effects. The axis of zero acceleration is determined. The digitized half-second time-mark traces are used to obtain an accurate time scale. The starting times of the acceleration channels are adjusted so any time phasing error from one channel to another is less than 0.02 sec (i.e., less than one time increment in the Vol. II data). The instrument sensitivities are used to scale ordinate values to accelerations.

5. Vol. II Processing. The Vol. I acceleration data are interpolated to obtain exactly 200 pts/sec sampling (100 Hz Nyquist frequency). The instrumental data are corrected to true acceleration using a simple finite-difference based instrument correction operator. A high-frequency Ormsby filter with a corner frequency of 23 Hz and a roll-off termination frequency of 25 Hz is applied. The data are then decimated to 50 pts/sec (25 Hz Nyquist). As discussed in Shakal and Ragsdale (1984), this order (instrument correction prior decimation) improves the accuracy of the instrument correction procedure at high frequencies while still using the same simple operator used in the original Caltech code (Trifunac and Lee, 1973). The acceleration data are corrected for long-period errors by using a low-frequency Ormsby filter with a ramp from 0.05 to 0.07 Hz. Velocity and displacement are integrated from acceleration and filtered using the same low-frequency Ormsby filter as for the acceleration. To prevent the introduction of spurious long-period energy through aliasing, an Ormsby filter rather than a running mean

filter is used prior to the decimation associated with the long period filtering (Shakal, 1982; Shakal and Ragsdale, 1984).

6. Vol. III Processing. The response spectra for periods from 0.04 to 15 seconds and damping values of 0, 2, 5, 10 and 20 per cent of critical are calculated from the accelerations obtained in Step 5. The Fourier amplitude spectral values are also computed for these periods. The pseudo-velocity response spectrum (PSV), the relative displacement response spectrum (SD), the pseudo-acceleration response spectrum (PSA), and the Fourier amplitude spectrum (FS) are plotted on tripartite logarithmic paper and presented in this report.

7. The Vol. II Processing of Step 5 is repeated, but with a new low-frequency Ormsby filter to remove long-period noise in the record. The corner frequency of the filter used depends on the signal-to-noise ratio in the record and the noise level of the digitizing system. The long-period intersection of the PSV spectrum obtained in Step 6 and the CSMIP system average noise spectrum shown in Fig. 2 (from Shakal and Ragsdale, 1984) indicates the long-period limit of useful information. An iterative procedure is used, with the filter corner being set at progressively shorter periods in order to remove the long period noise while preserving as much of the signal as possible. The final value of the filter corner used is shown by an arrow on the response spectrum plots produced in Step 6. The final acceleration, velocity and displacement time histories obtained using this filter are the Vol. II data written on a magnetic tape and presented in this report.

Note that the optimal filter corner is obtained for each record; all records from a single earthquake are not restricted to

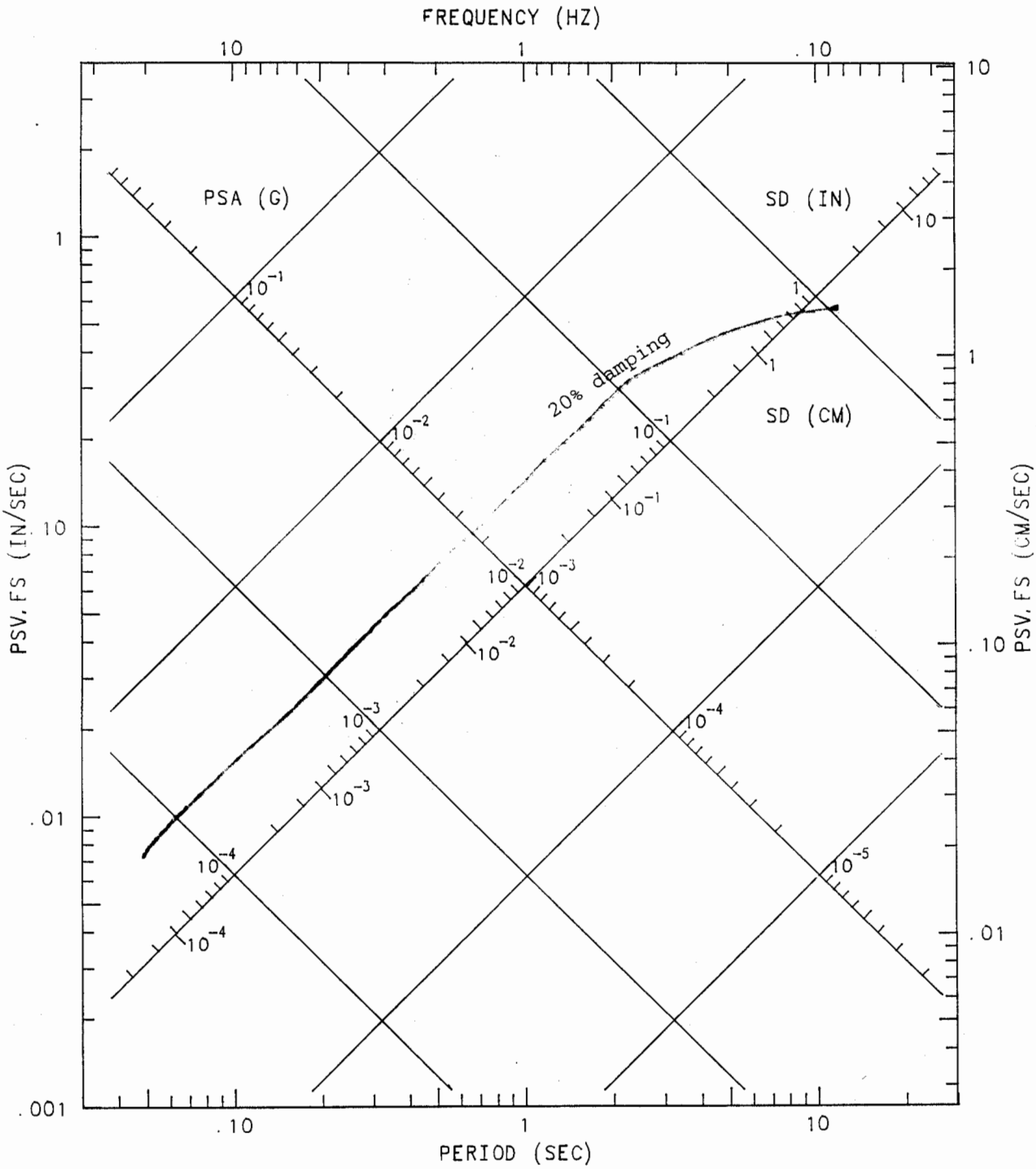


Fig. 2. Noise-level spectra (PSV, 20% damping) for the CSMIP digitization system (from Shakal and Ragsdale, 1984).

have a single filter corner frequency. However, the same filter corner is used for all channels from a single record to make channel-to-channel comparisons convenient.

As discussed above, Fig. 2 shows the average noise spectrum for the CSMIP digitization system. It is also useful to consider the noise characteristics in terms of actual time-domain amplitudes. Fig. 3 shows typical noise amplitudes present in acceleration, in velocity, and in displacement time histories obtained for different long-period filter cutoff settings. For example, Fig. 3 indicates that for an accelerogram filter cutoff near 10 seconds, the expected noise level is near 0.002 g in acceleration, 1 cm/sec in velocity, and 1 cm in displacement.

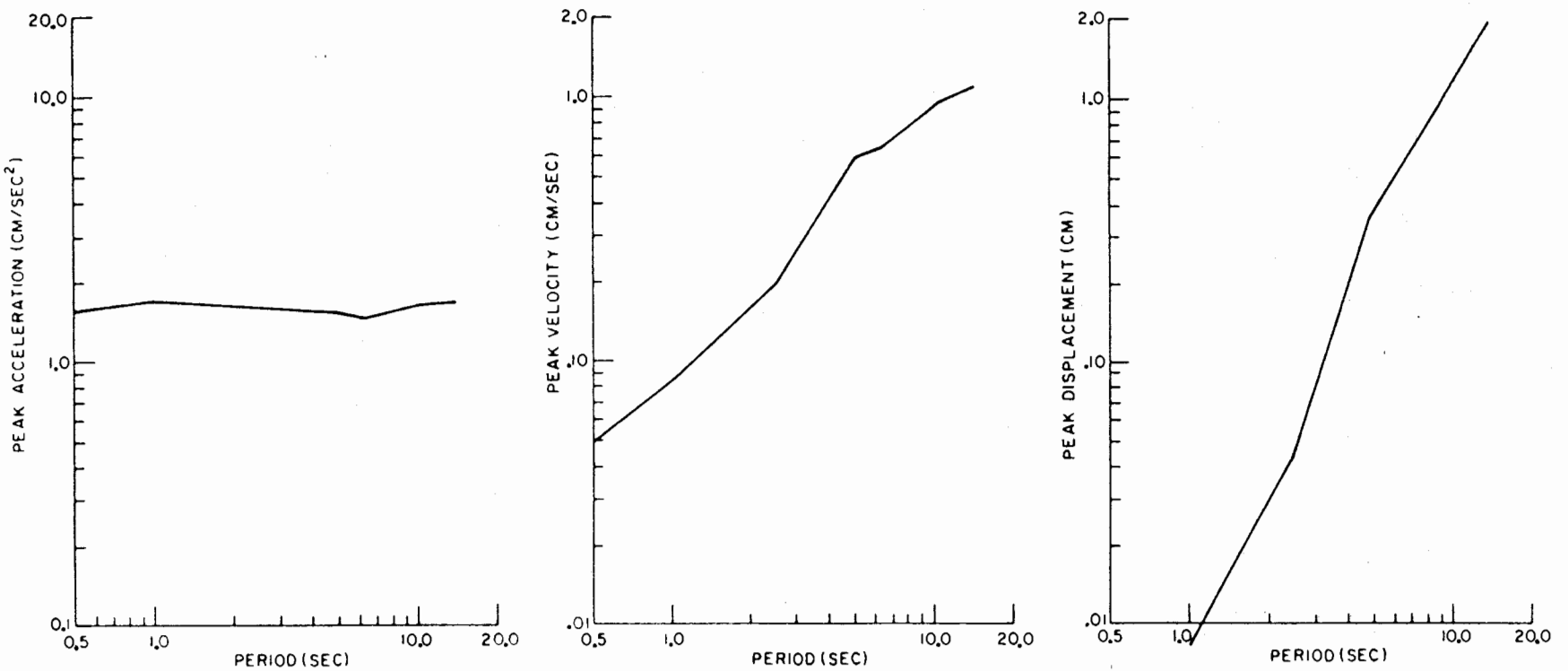


Fig. 3. Processing noise present in a typical acceleration (left), velocity (middle) and displacement (right) record processed with a long-period filter cut-off period ranging from 0.5 sec to 15 secs (from Shakal and Ragsdale, 1984).

REFERENCES

Bakun, W.H., M. Clark, R. Cockerham, W. Ellsworth, A. Lindh, W. Prescott, A. Shakal and P. Spudich, 1984, The 1984 Morgan Hill, California, earthquake, Science, Vol. 225, pp. 288-291.

Bennett, J.H. and R.W. Sherburne, editors, 1984, The 1984 Morgan Hill, California earthquake, Calif. Div. of Mines and Geology, Special Publication 68, 271 pp.

Brady, A.G., R. Porcella, G. Bycroft, E. Etheridge, P. Mork, B. Silverstein and A. Shakal, 1984, Strong-motion results from the mainshock of April 24, 1984, in Hoose, S.N. (compiler), The Morgan Hill, California earthquake of April 24, 1984 (a preliminary report), U.S. Geological Survey Open-File Report 84-498.

Brady, A.G. and A.F. Shakal, 1985, The Morgan Hill earthquake of April 24, 1984 - strong-motion records, Earthquake Spectra, Vol. 1, No. 3, pp. 419-443.

Cockerham, R.S. and J.P. Eaton, 1984, The April 24, 1984 Morgan Hill earthquake and its aftershocks: April 24 through September 30, 1984, in The Morgan Hill, California Earthquake, J. Bennett and R. Sherburne, (eds.), Calif. Div. of Mines and Geology, Special Publication 68, pp. 215-236.

Earthquake Spectra, issue devoted to Morgan Hill earthquake, 1985, Vol. 1, No. 3, Earthq. Engineering Research Inst., Berkeley.

Lee, V.W. and M.D. Trifunac, 1979, Automatic digitization and processing of strong-motion accelerograms, Part II: Computer processing of accelerograms, Report No. 79-15 II, Dept. of Civil Engineering, Univ. of Southern Calif., Los Angeles.

Porcella, R.L., R.B. Matthiesen, R.D. McJunkin and J.T. Ragsdale, 1979, Compilation of strong-motion records from the August 6, 1979 Coyote Lake earthquake, Calif. Div. Mines and Geology, Report PR-25 and U.S. Geological Survey, Open File Report 79-385, 71 pp.

Porter, L.D., A.G. Brady, P.N. Mork and V. Perez, 1983, Processed data from the San Juan Bautista 101/156 separation bridge and the San Juan Bautista freefield records from the Coyote Lake earthquake 6 August 1979, Calif. Div. Mines and Geology, Special Publication 64, 151 pp.

Shakal, A.F., 1982, Spectral folding in the processing of strong-motion accelerograms, (abstr.), Trans. Amer. Geophys. Union, Vol. 63, p. 1037.

Shakal, A.F. and M.J. Huang, 1985, Standard tape format for CSMIP strong-motion data tapes, Calif. Div. Mines and Geology, Report OSMS 85-03.

Shakal, A.F. and J.T. Ragsdale, 1984, Acceleration, velocity and displacement noise analysis for the CSMIP accelerogram digitization system, Proc. 8th World Conference on Earthquake Engineering, Vol. 2, pp. 111-118.

Shakal, A.F., R.W. Sherburne and D.L. Parke, 1984, CDMG strong-motion records from the Morgan Hill, California, earthquake of 24 April 1984, Calif. Div. Mines and Geology, Report OSMS 84-7, 101 pp.

Sherburne, R.W, A.F. Shakal, D.L. Parke and M.J. Huang, 1985, Processed data from the strong-motion records of the Morgan Hill earthquake of 24 April 1984, Part I. Ground-response records, Calif. Div. Mines and Geology, Report OSMS 85-04.

Stover, C.W., 1984, Intensity distribution and isoseismal map for the Morgan Hill, California, earthquake of April 24, 1984, in The Morgan Hill, California Earthquake, J. Bennett and R. Sherburne, (eds.), Calif. Div. Mines and Geology, Special Publication SP-68, pp. 1-4.

Trifunac, M.D. and V.W. Lee, 1973, Routine computer processing of strong-motion accelerograms, Earthquake Engineering Research Lab., Report EERL 73-03, Calif. Inst. of Technology, Pasadena.

Trifunac, M.D. and V.W. Lee, 1979, Automatic digitization and processing of strong-motion accelerograms, Part I: Automatic digitization, Report No. 79-15 I, Dept. of Civil Engineering, Univ. of Southern Calif., Los Angeles.

Uhrhammer, R.A. and R.B. Darragh, 1984, The 1984 Halls Valley ("Morgan Hill") earthquake sequence: April 24 through June 30, in The Morgan Hill, California Earthquake, J. Bennett and R. Sherburne, (eds.), Calif. Div. Mines and Geology, Special Publication 68, pp. 191-208.

DATA AVAILABILITY

The processed data for the CSMIP structural-response records presented in this report are available on two magnetic tapes, one containing Vol. I data (named MORGANHILL84-IS) and the other Vol. II and III data (MORGANHILL84-S). They are written in a standard CSMIP format similar to that of the Caltech tapes, documented in Shakal and Huang (1985). They are available in standard ASCII or EBCDIC blocked (unlabeled) tapes. These two tapes, as well as copies of structural drawings and detailed locations of the sensors for each structure, can be obtained at nominal cost from this office:

Office of Strong Motion Studies
Division of Mines and Geology
California Department of Conservation
630 Bercut Drive, Sacramento, California 95814

APPENDIX

PLOTS OF PROCESSED DATA

Organization and Order of Plots

In this appendix, the processed data plots and related information for each structure are presented in the following order:

1. Colored title page followed by special notes (if any) on the overleaf page.

2. Brief description and pictures of the structure.

3. Sensor layout in the structure. Locations of the sensors are indicated on the structural plans. Arrows show the location and the positive direction of accelerometers. Dots indicate positive direction perpendicular to (out of) the plane of the figure. Sensor numbers are shown adjacent to the arrows or dots on the floor plans.

4. A plot of the raw record with all channels from an instrument shown on a single page. (Note that, as indicated, the plotted horizontal time scale may be different for different records depending on the digitized record length.)

5. Uncorrected accelerograms (Vol. I data). Plots of full digitized length with components individually scaled.

6. Instrument and baseline-corrected acceleration, velocity and displacement (Vol. II data). The filters used are indicated on the plots. One plot per component, plotted with equal scaling for all components of a record unless otherwise indicated.

7. Response and Fourier amplitude spectra (Vol. III data). One spectral plot per component. The full spectrum 0.07-25.0 Hz (0.04 - 15 seconds period) is plotted, although the long-period filter has filtered out energy with periods longer than the filter limit (indicated by an arrow) in the final Vol. II processing.

SAN JOSE - TOWN PARK TOWERS APARTMENT BUILDING

Special Notes: None

San Jose - Town Park Towers Apartment Bldg.

East Side View

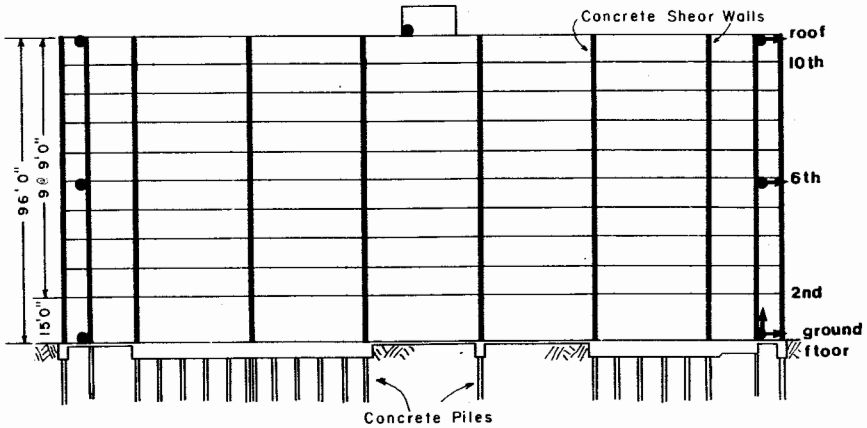
Southwest Side View

Address: 60 Third Street
San Jose, California
Coordinates: 37.338° N, 121.888° W
No. of Stories above/below ground: 10 / 0
Plan Type: Rectangular
Base Dimensions: 210' x 64'
Typical Floor Dimensions: Same as Base
Design Date: 1971
Construction Date: 1971-72

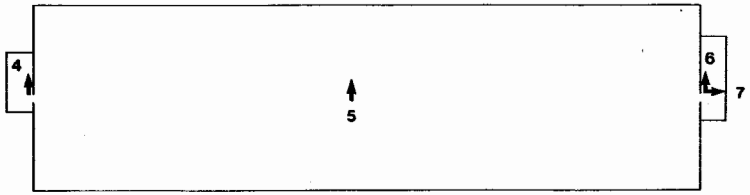
Vertical Load Carrying System:
One-way post-tensioned flat slabs on rc (reinforced-concrete) bearing walls.
Lateral Force Resisting System:
RC shear walls at regular intervals in transverse direction; rc shear walls along interior corridors in longitudinal direction (stepped at 6th floor).
Foundation Type:
Precast-prestressed concrete piles under all walls.

SENSOR LAYOUT

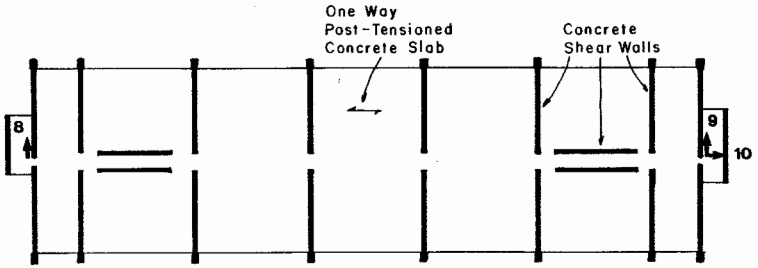
San Jose-Town Park Towers Apartment Bldg.
CSMIP Station No. 57356



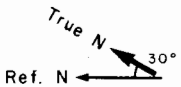
N-S Section

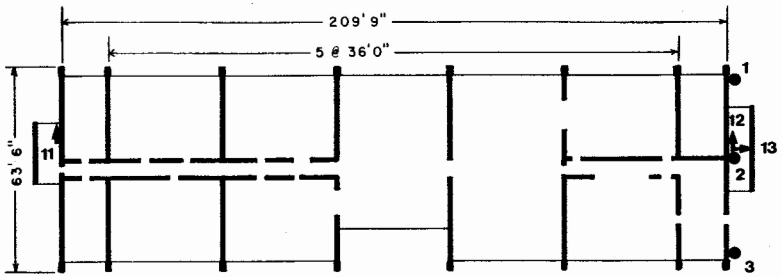


Roof Plan



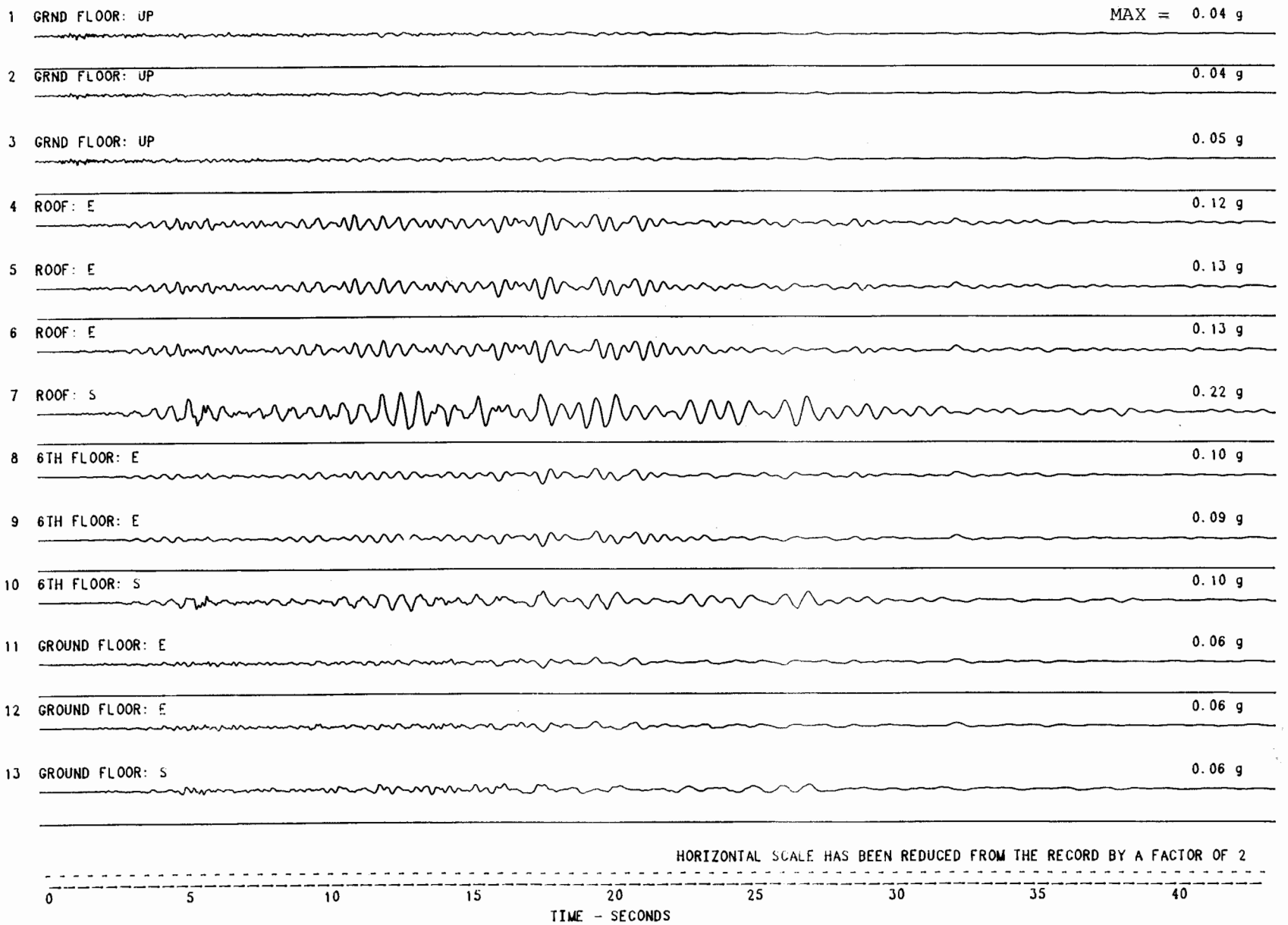
6th Floor Plan



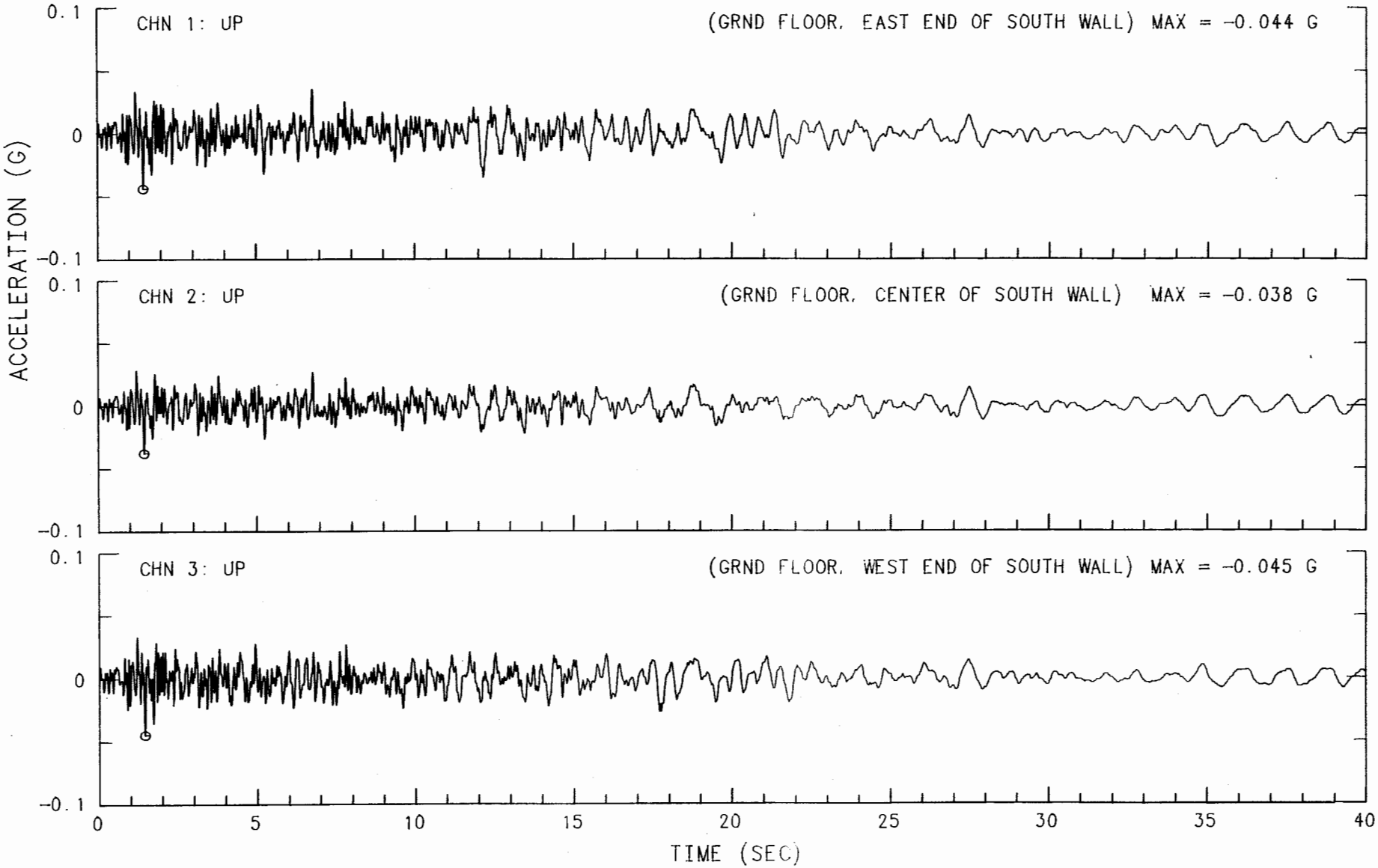


Ground Floor Plan

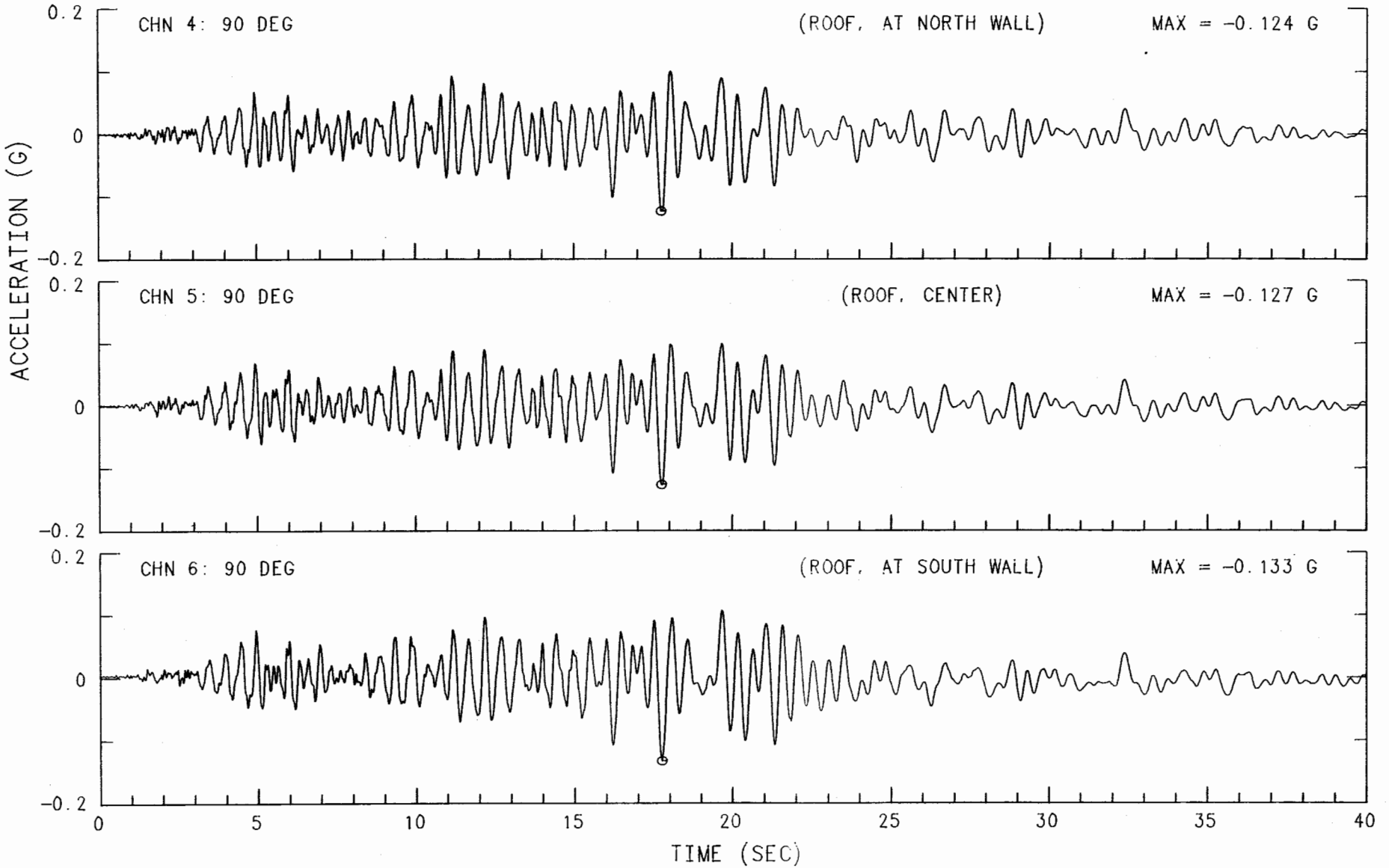
SAN JOSE - TOWN PARK TOWERS RECORD 57356-C0189-84115.02 MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST



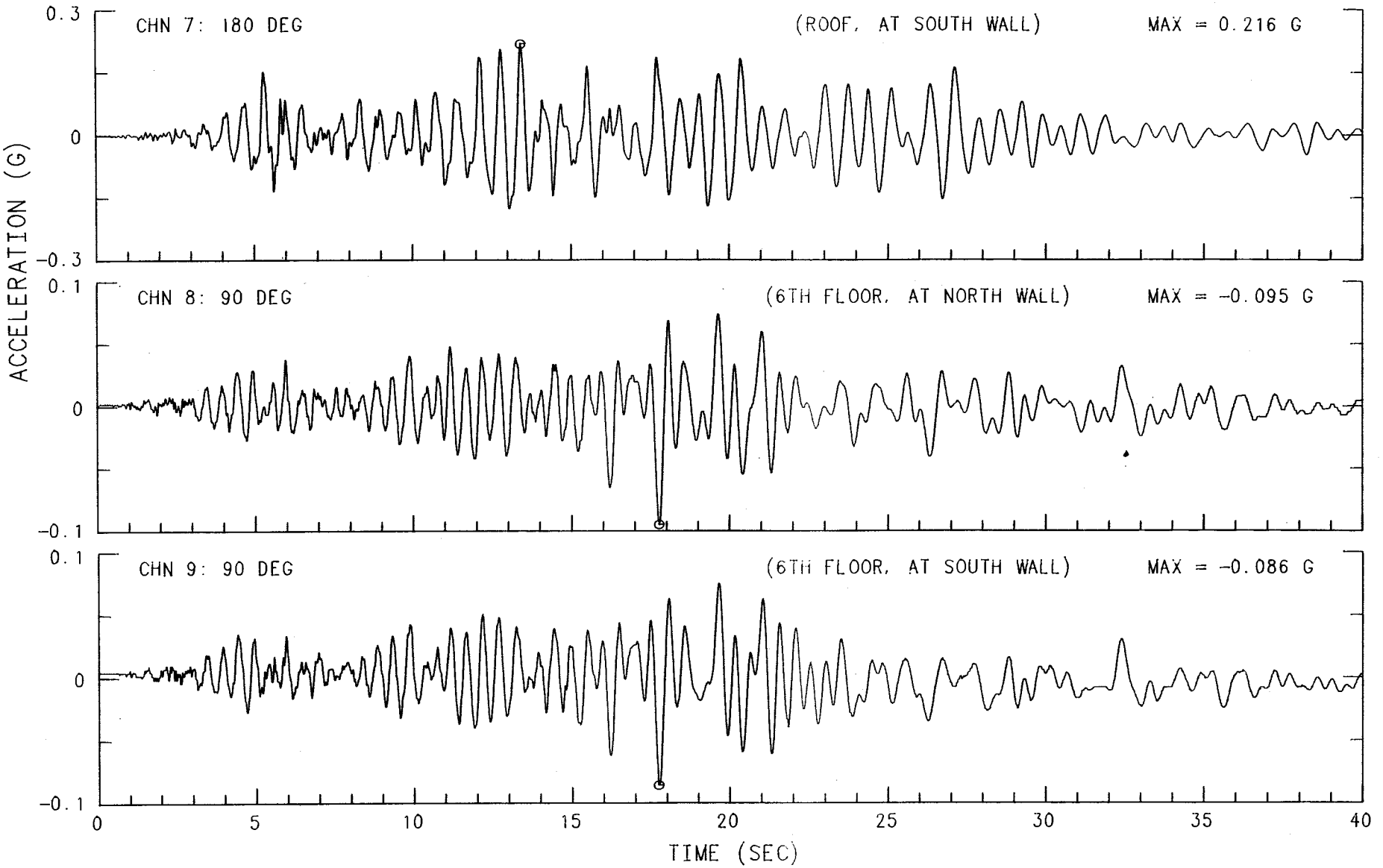
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
UNCORRECTED ACCELEROGRAM 57356-C0189-84115.02 022785.1841-QM84A356



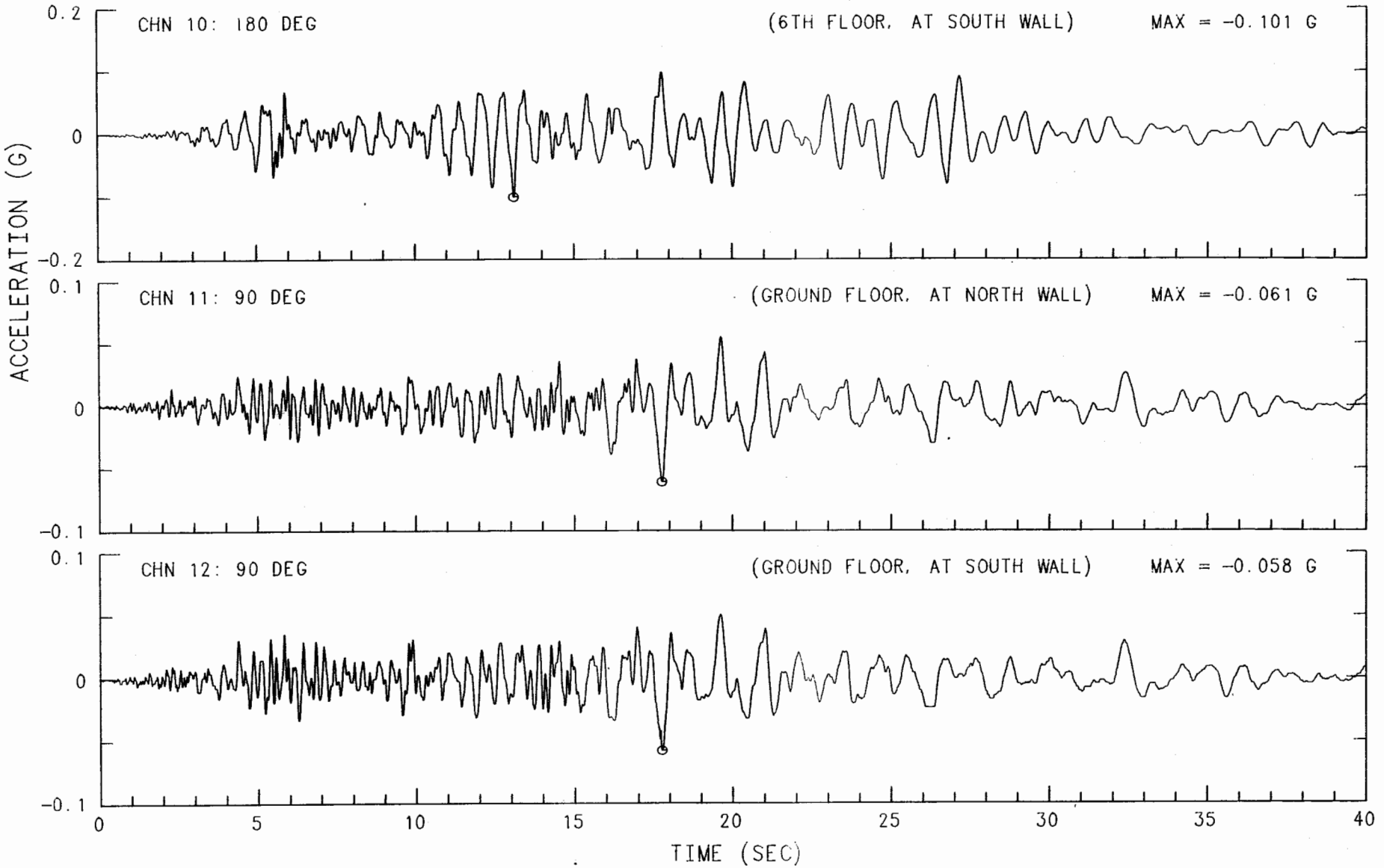
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
UNCORRECTED ACCELEROGRAM 57356-C0189-84115.02 022785.1841-QM84A356



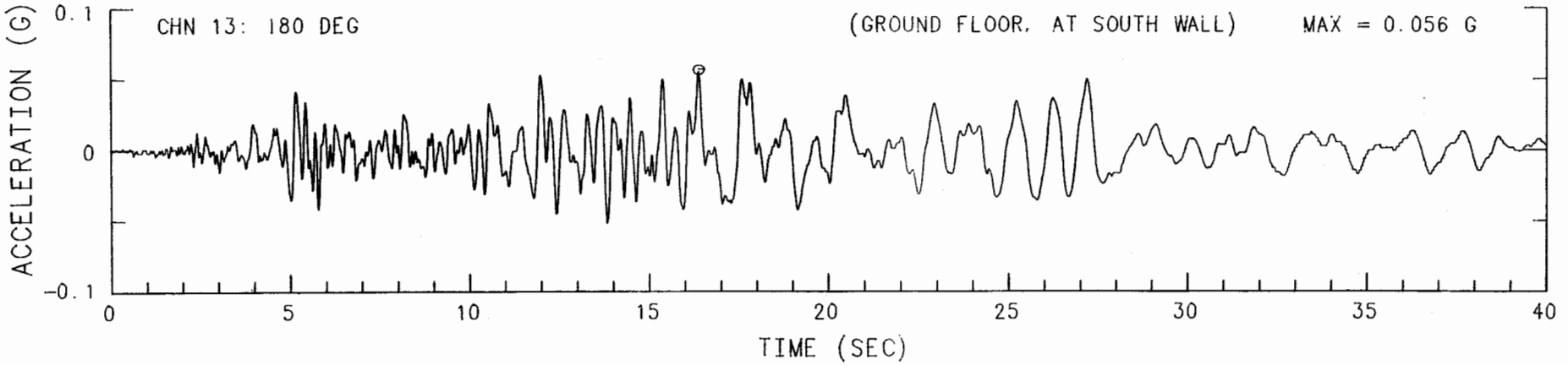
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
UNCORRECTED ACCELEROGRAM 57356-C0189-84115.02 022785.1841-QM84A356



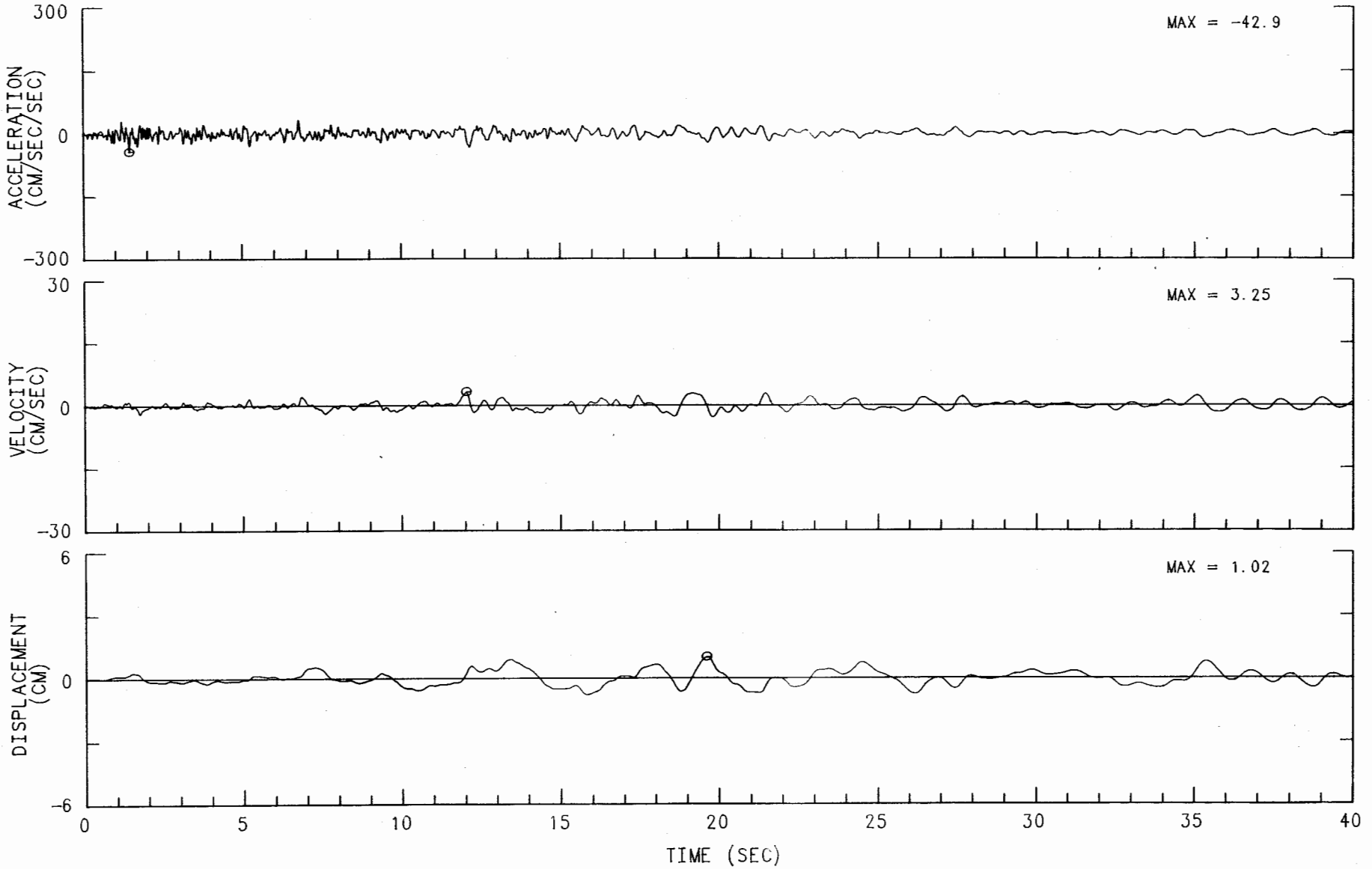
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
UNCORRECTED ACCELEROGRAM 57356-C0189-84115.02 022785.1841-QM84A356



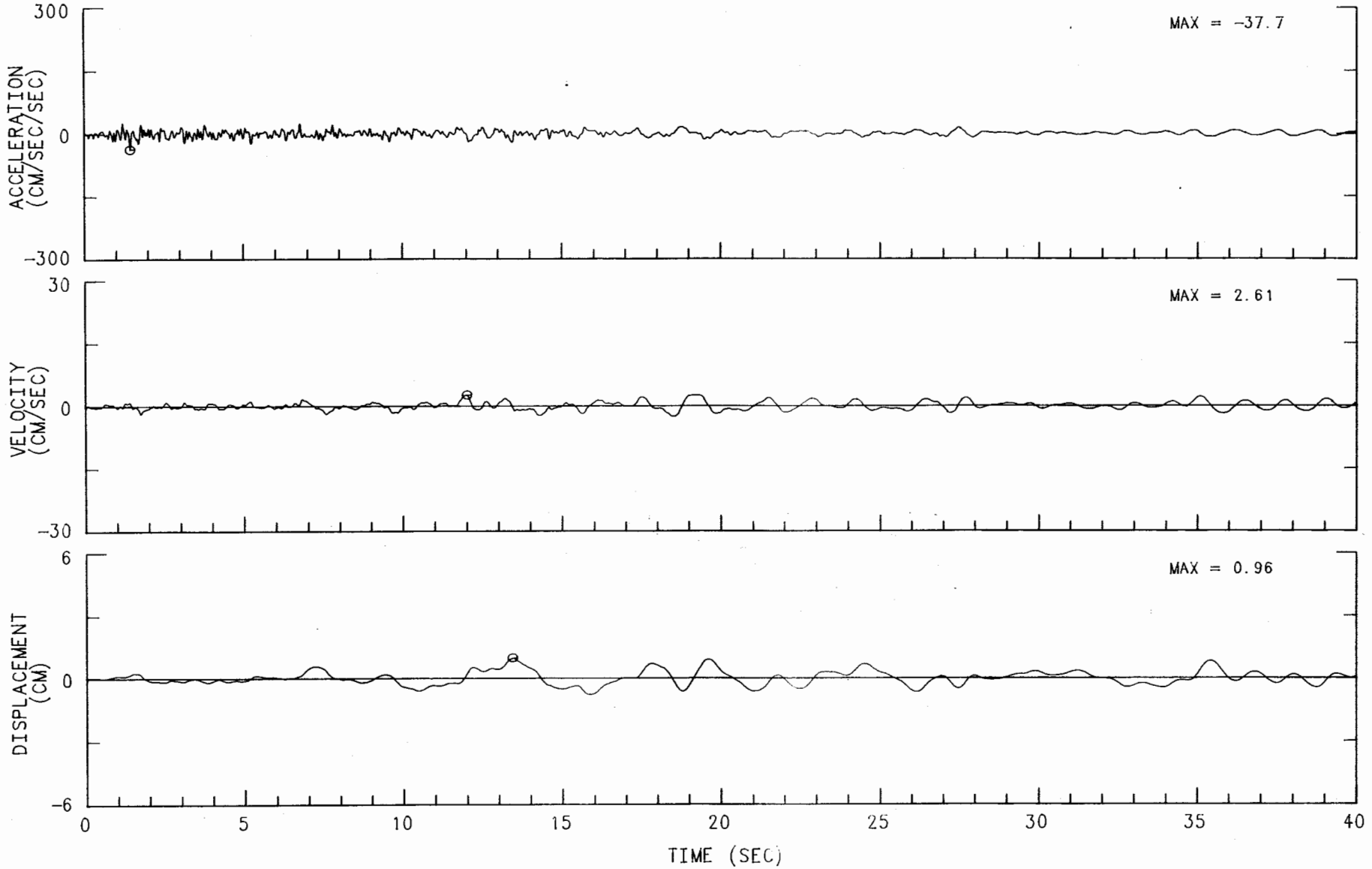
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
UNCORRECTED ACCELEROGRAM 57356-C0189-84115.02 022785.1841-QM84A356



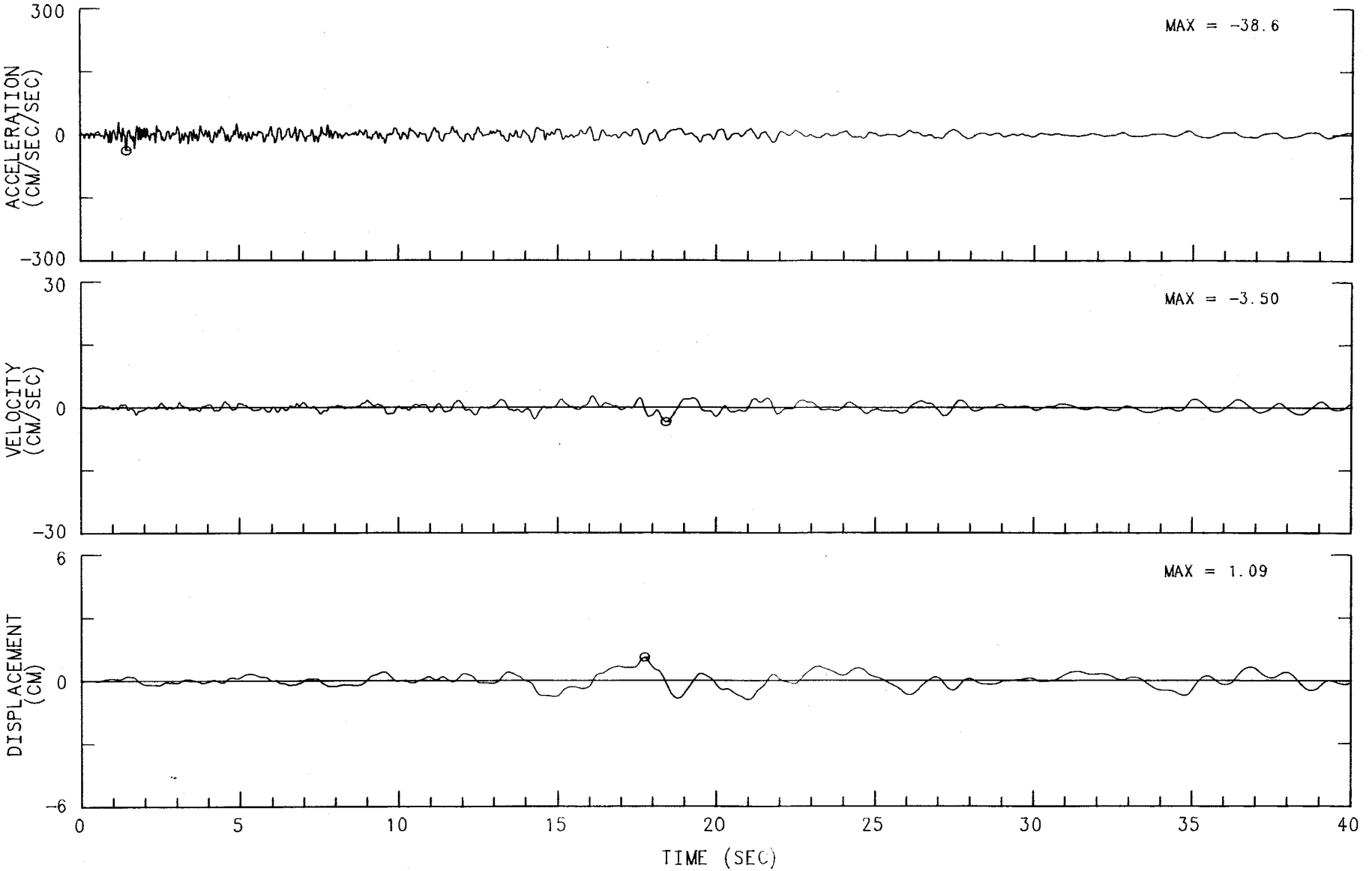
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 1: UP (GRND FLOOR, EAST END OF SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



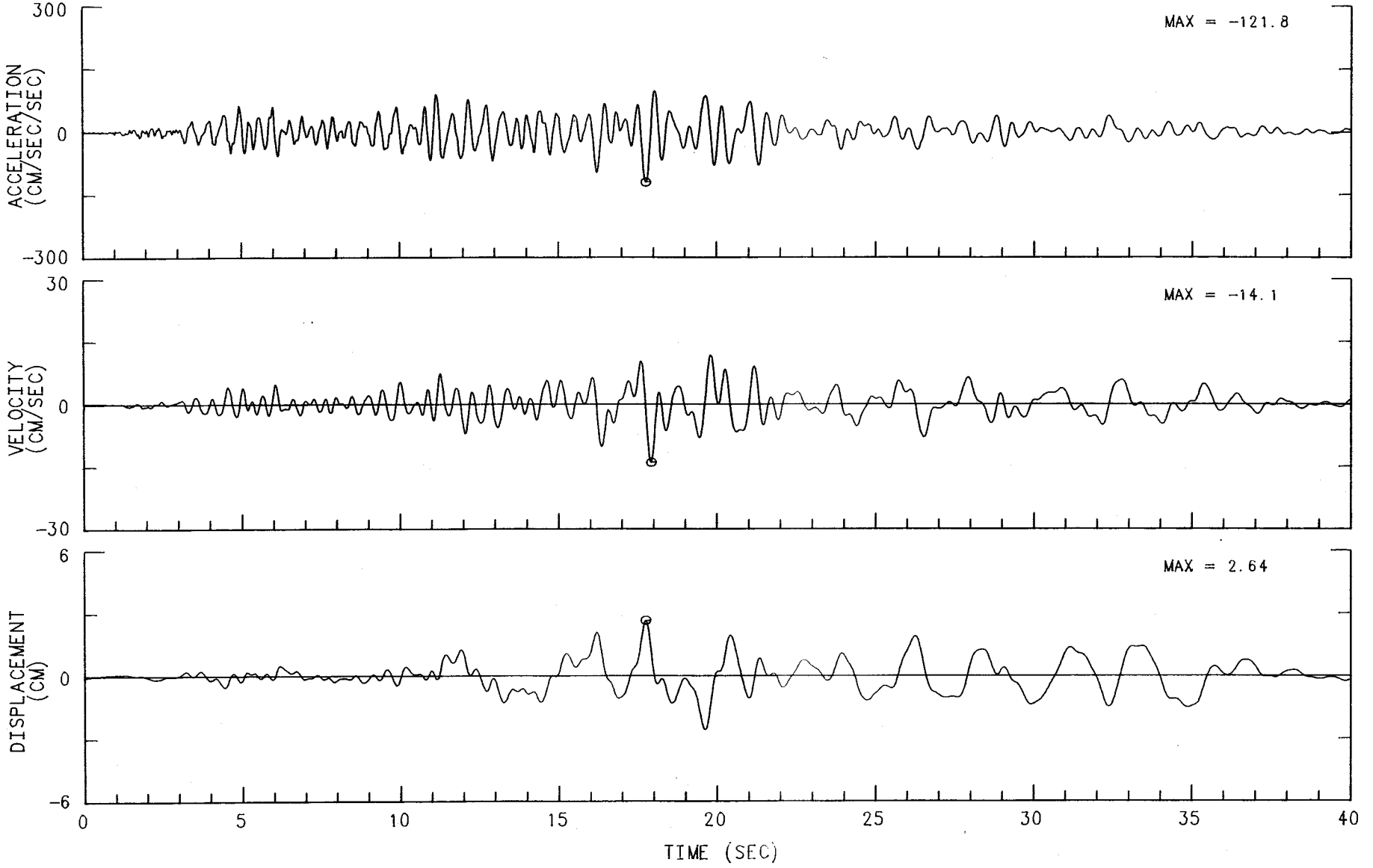
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 2: UP (GRND FLOOR, CENTER OF SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



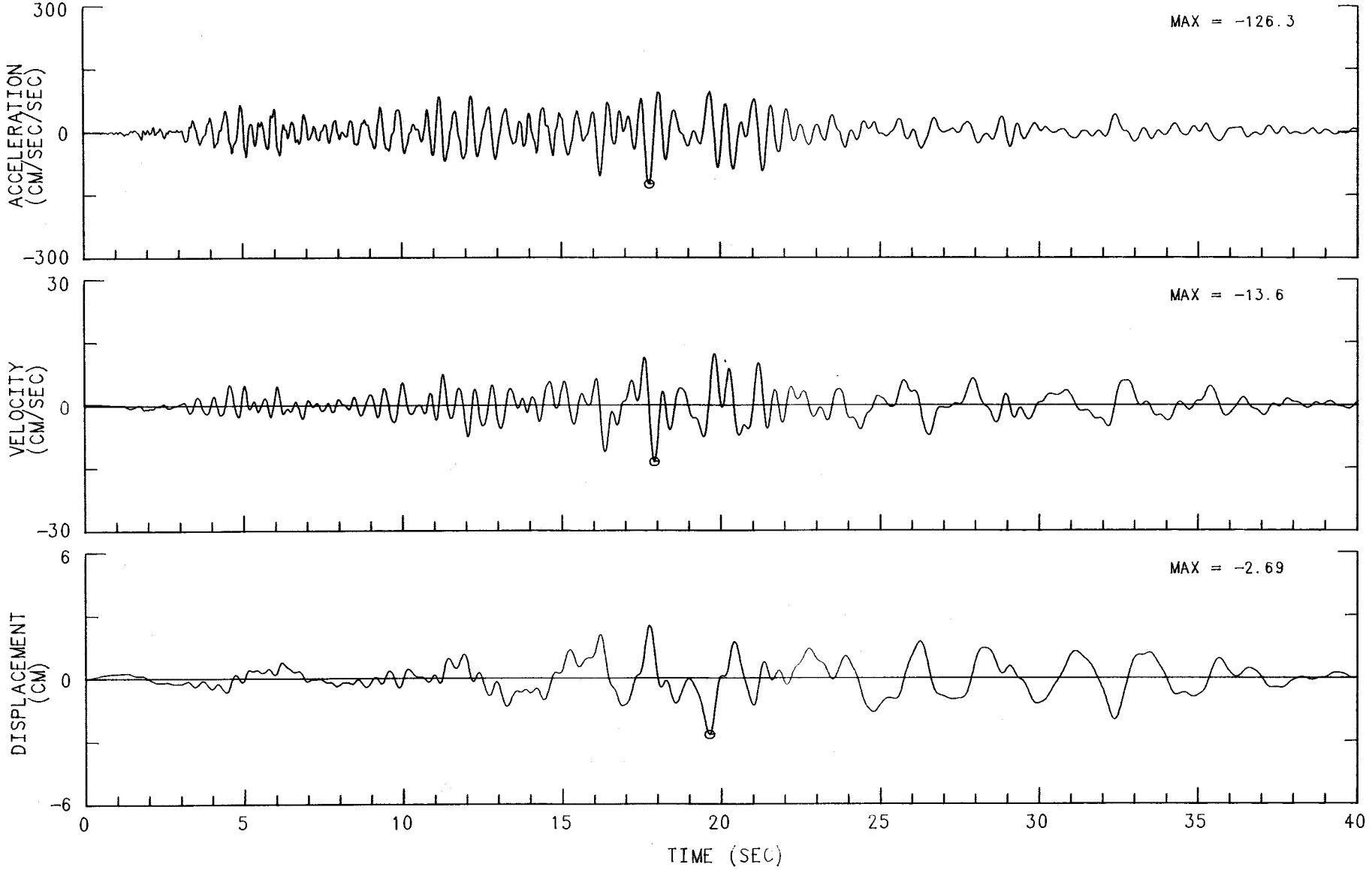
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 3: UP (GRND FLOOR, WEST END OF SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



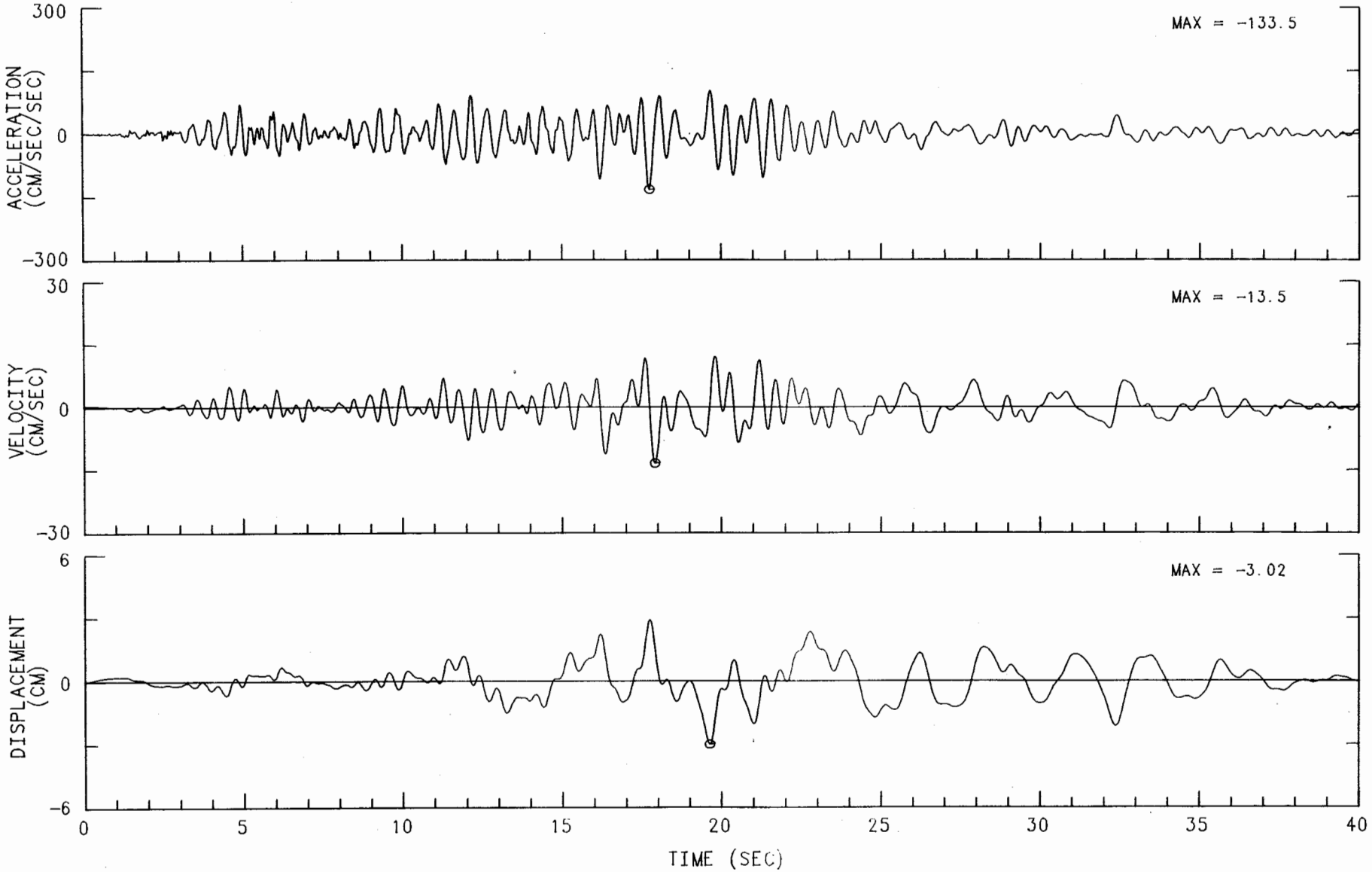
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 4: 90 DEG (ROOF, AT NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



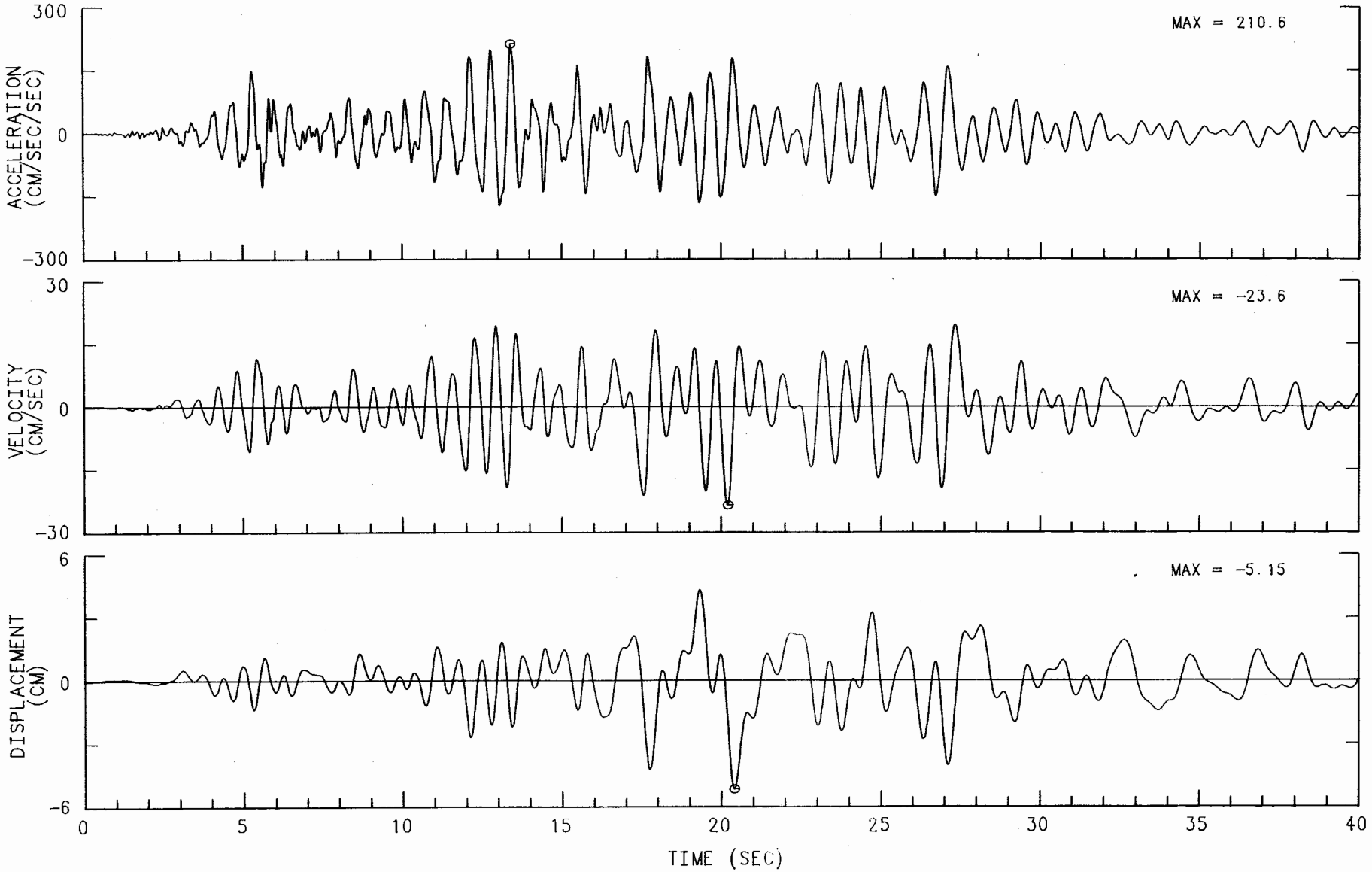
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 5: 90 DEG (ROOF, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



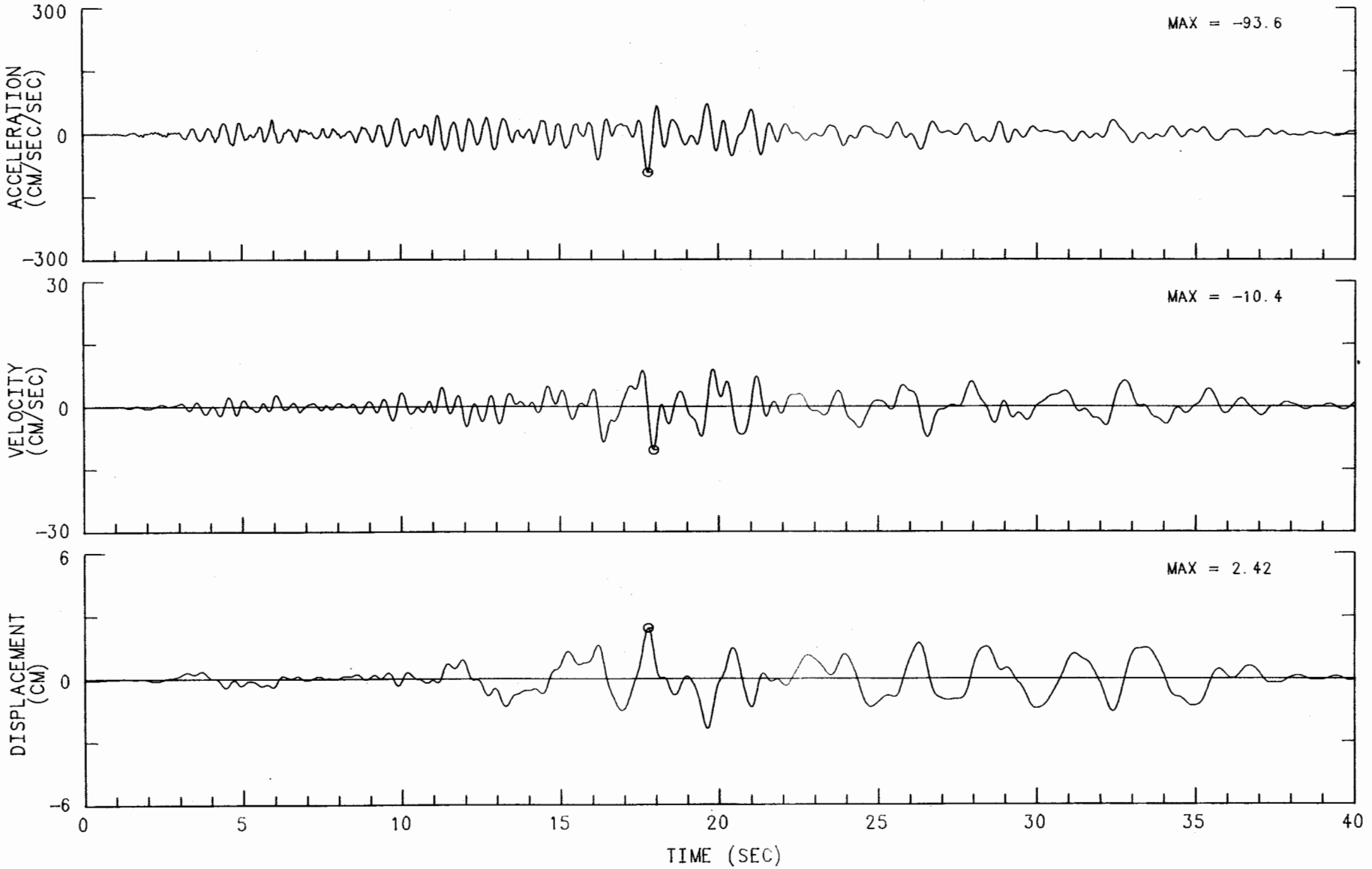
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 6: 90 DEG (ROOF, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



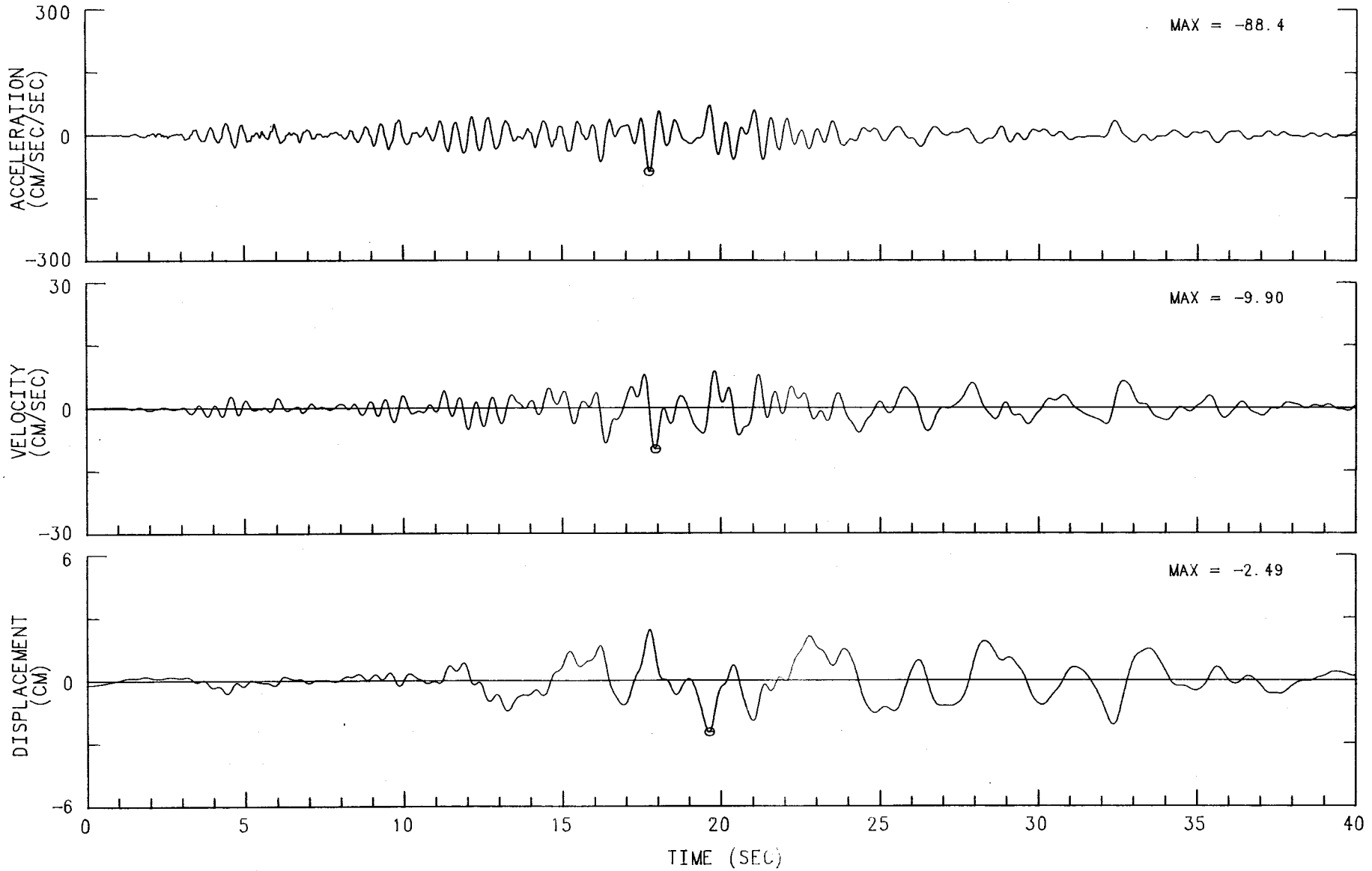
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 7: 180 DEG (ROOF, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



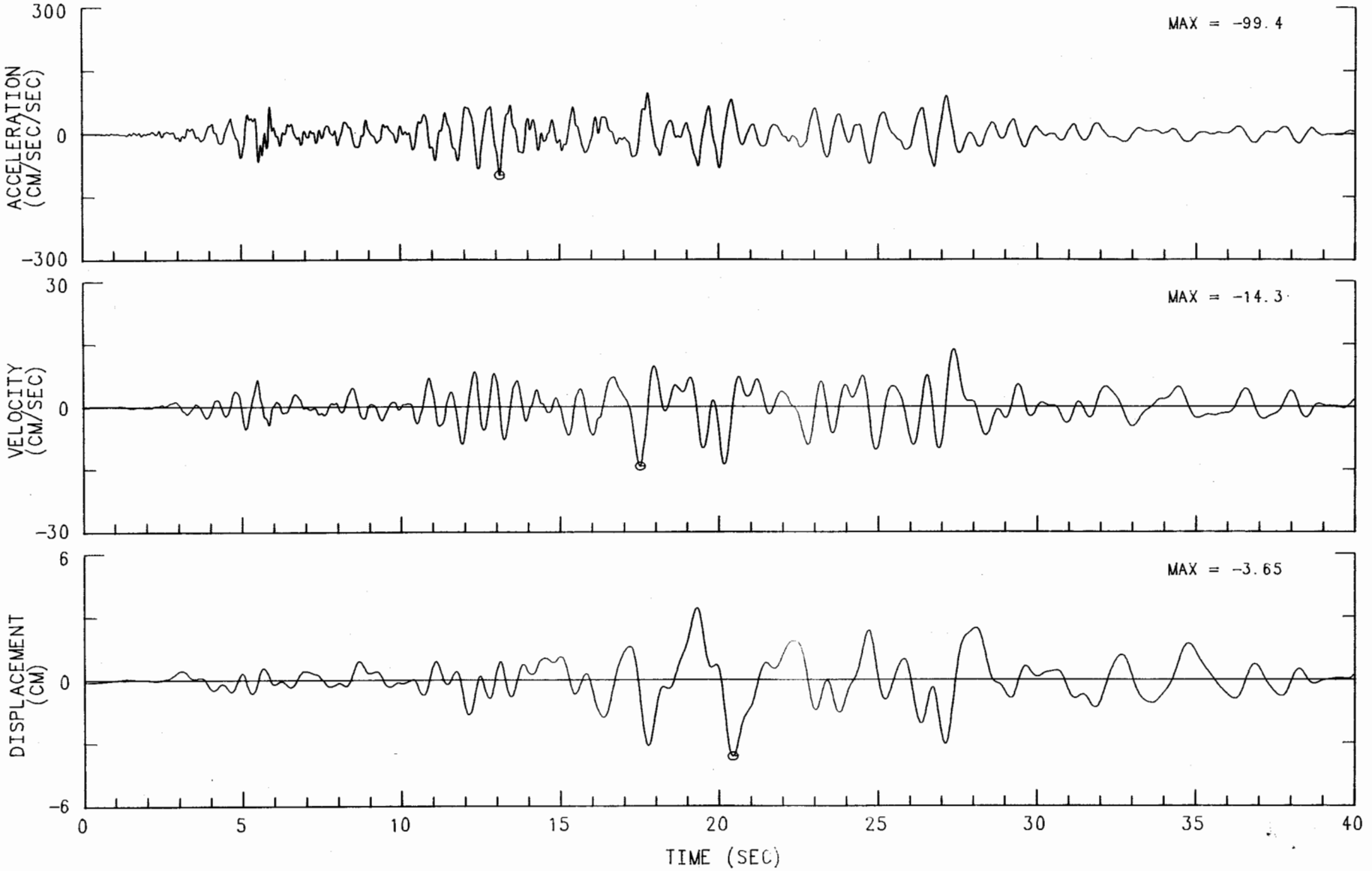
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 8: 90 DEG (6TH FLOOR, AT NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



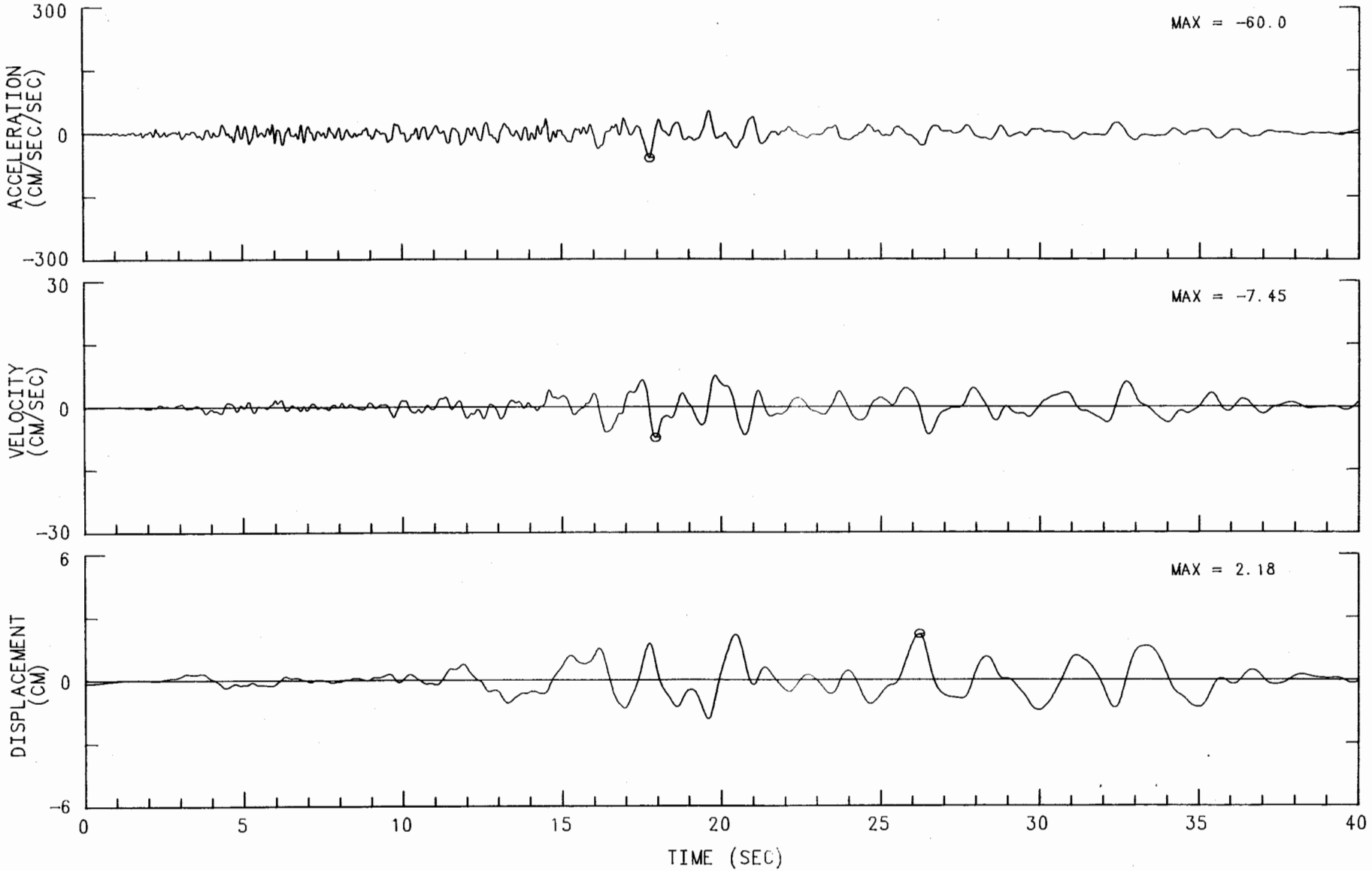
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 9: 90 DEG (6TH FLOOR, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



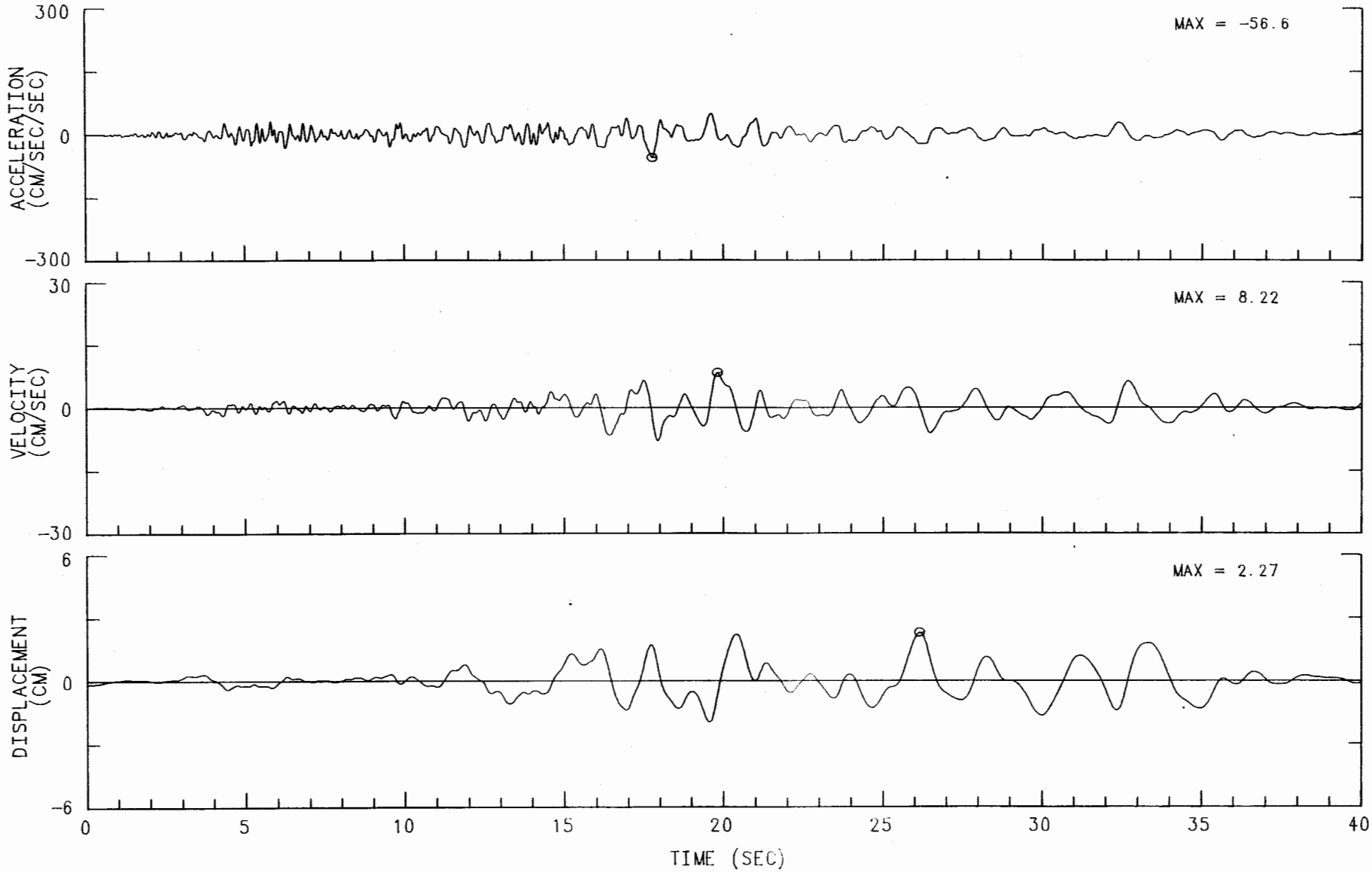
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 10: 180 DEG (6TH FLOOR, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



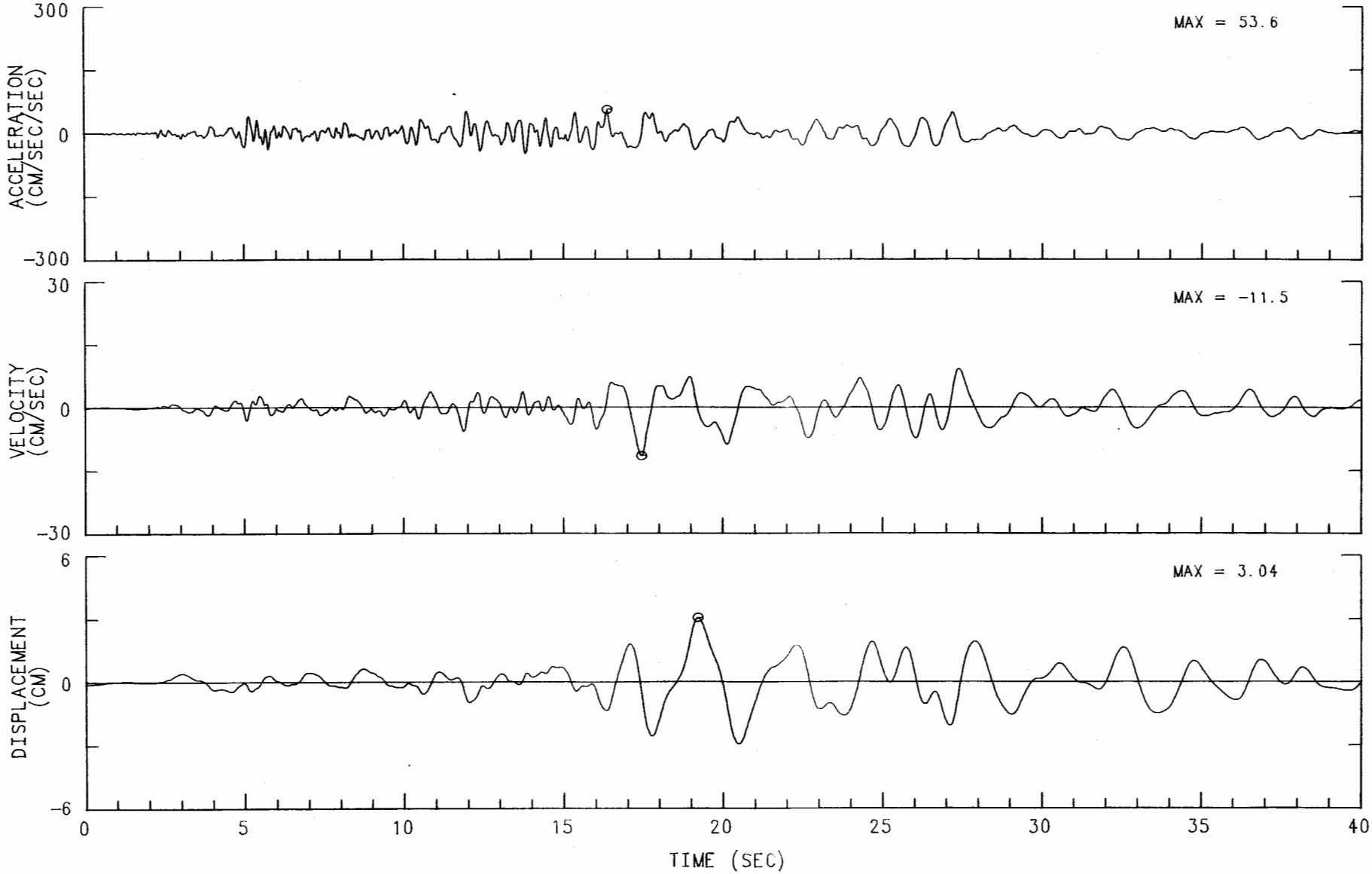
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 11: 90 DEG (GROUND FLOOR, AT NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



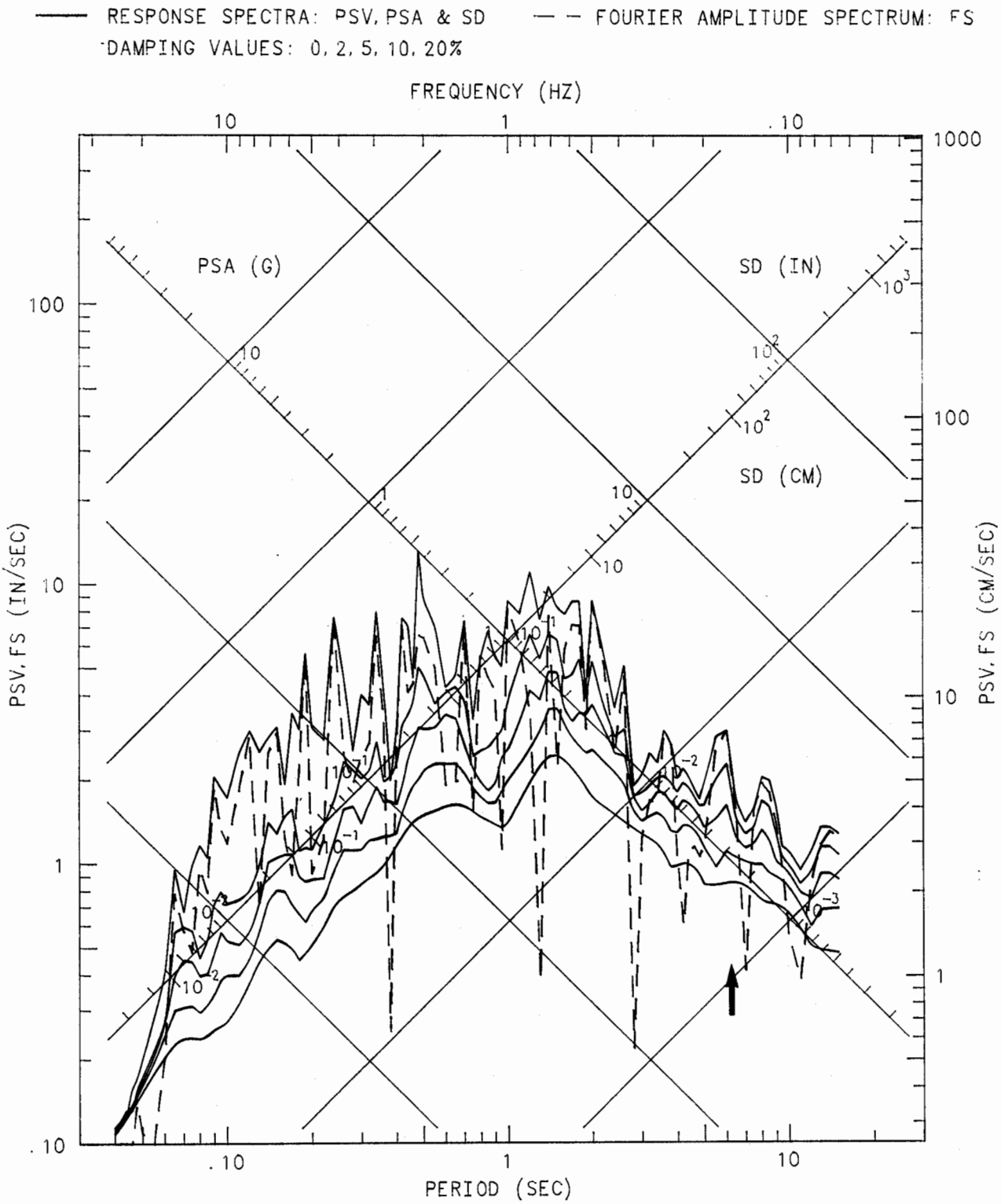
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 12: 90 DEG (GROUND FLOOR, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



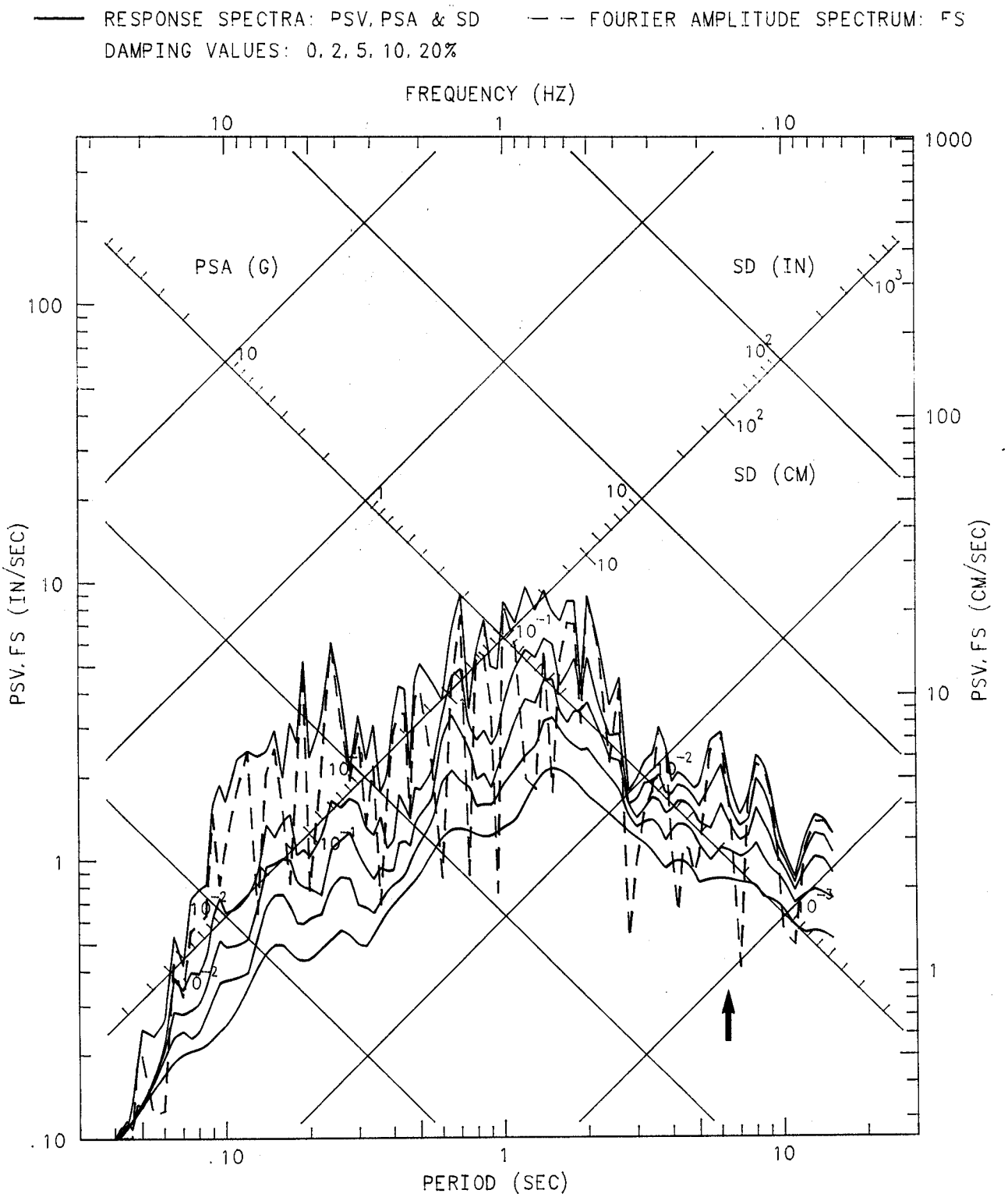
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS CHN 13: 180 DEG (GROUND FLOOR, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57356-C0189-84115.02 030185.1224-QM84A356



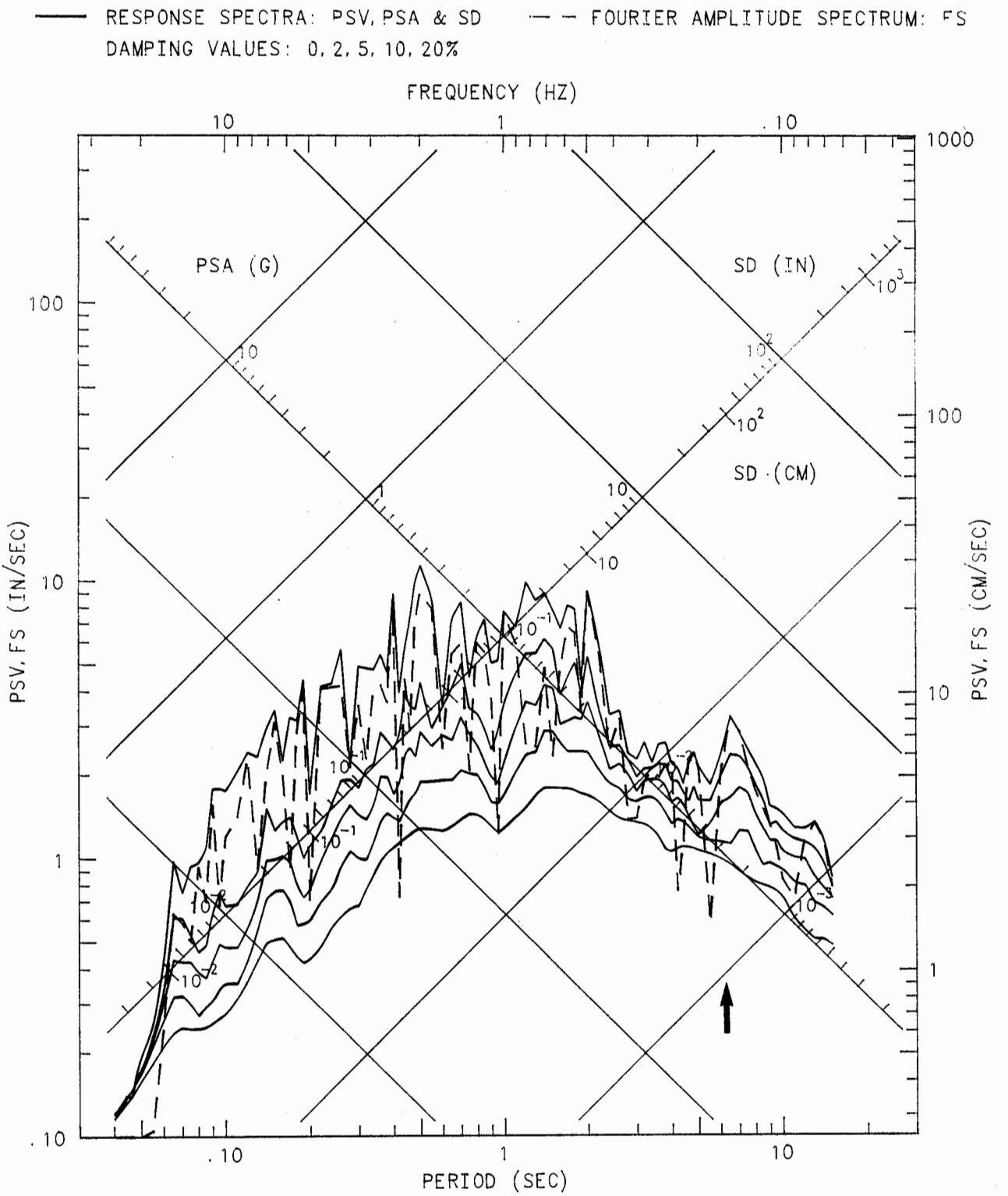
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 1: UP (GRND FLOOR, EAST END OF SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



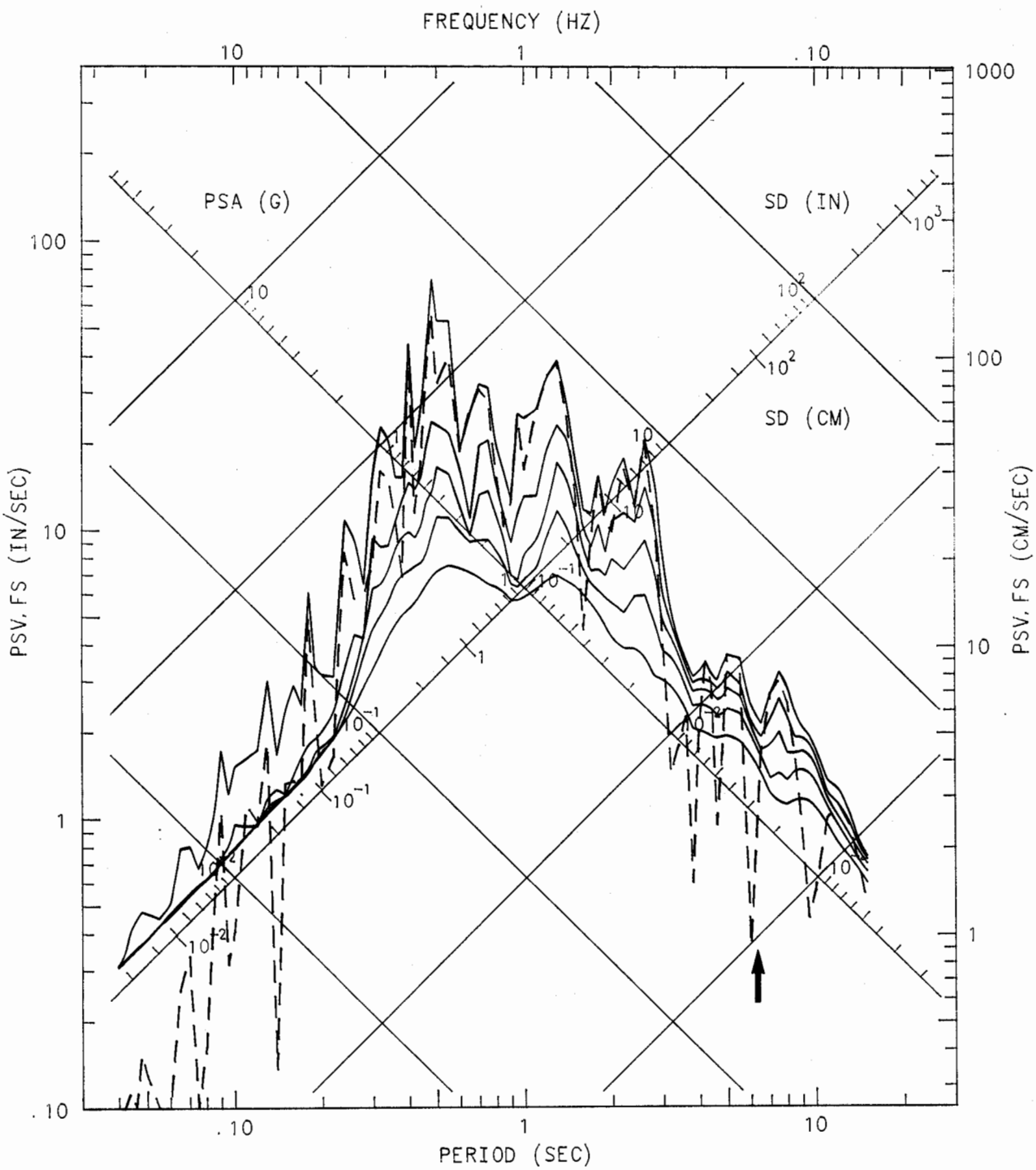
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 2: UP (GRND FLOOR, CENTER OF SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



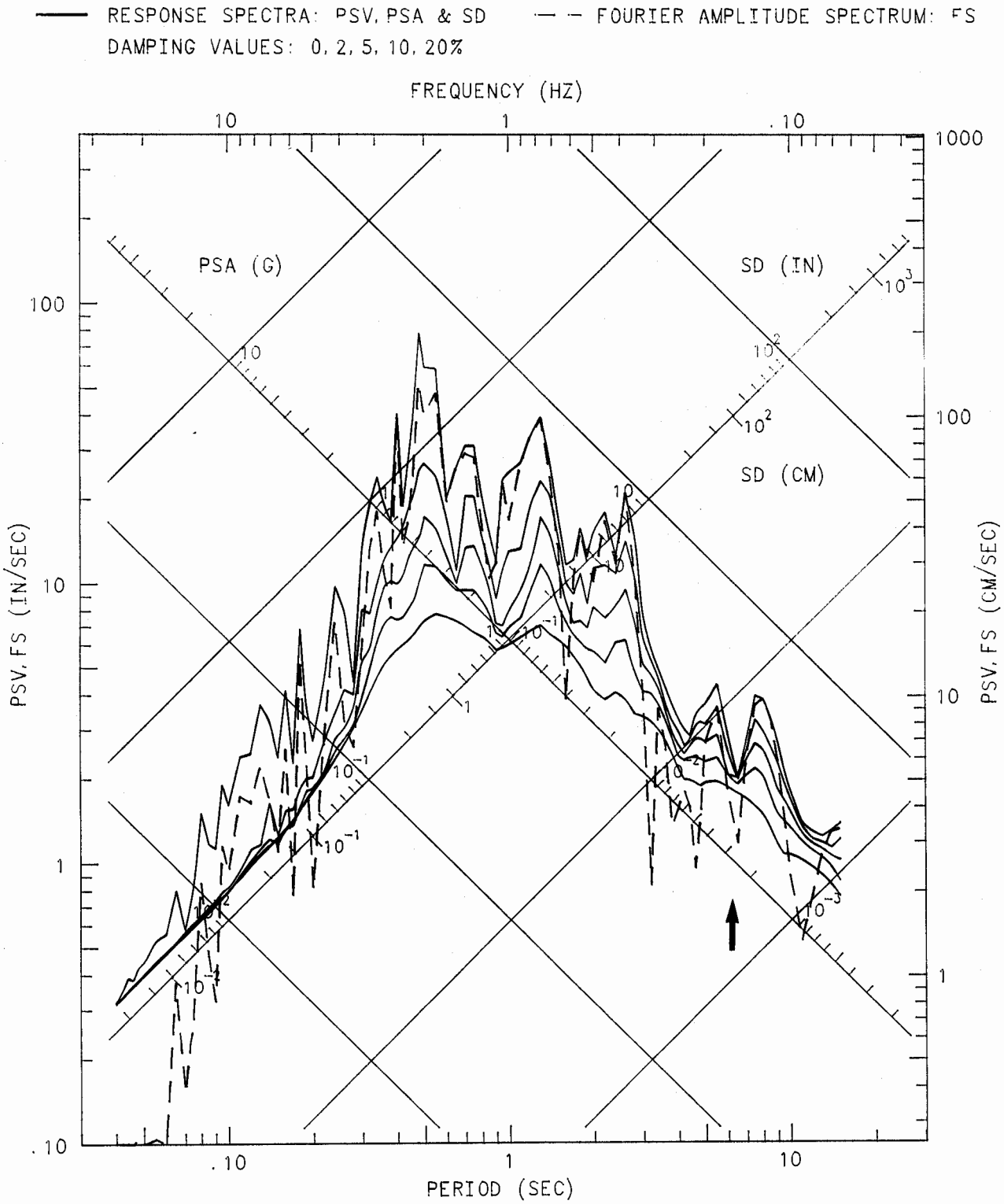
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 3: UP (GRND FLOOR, WEST END OF SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



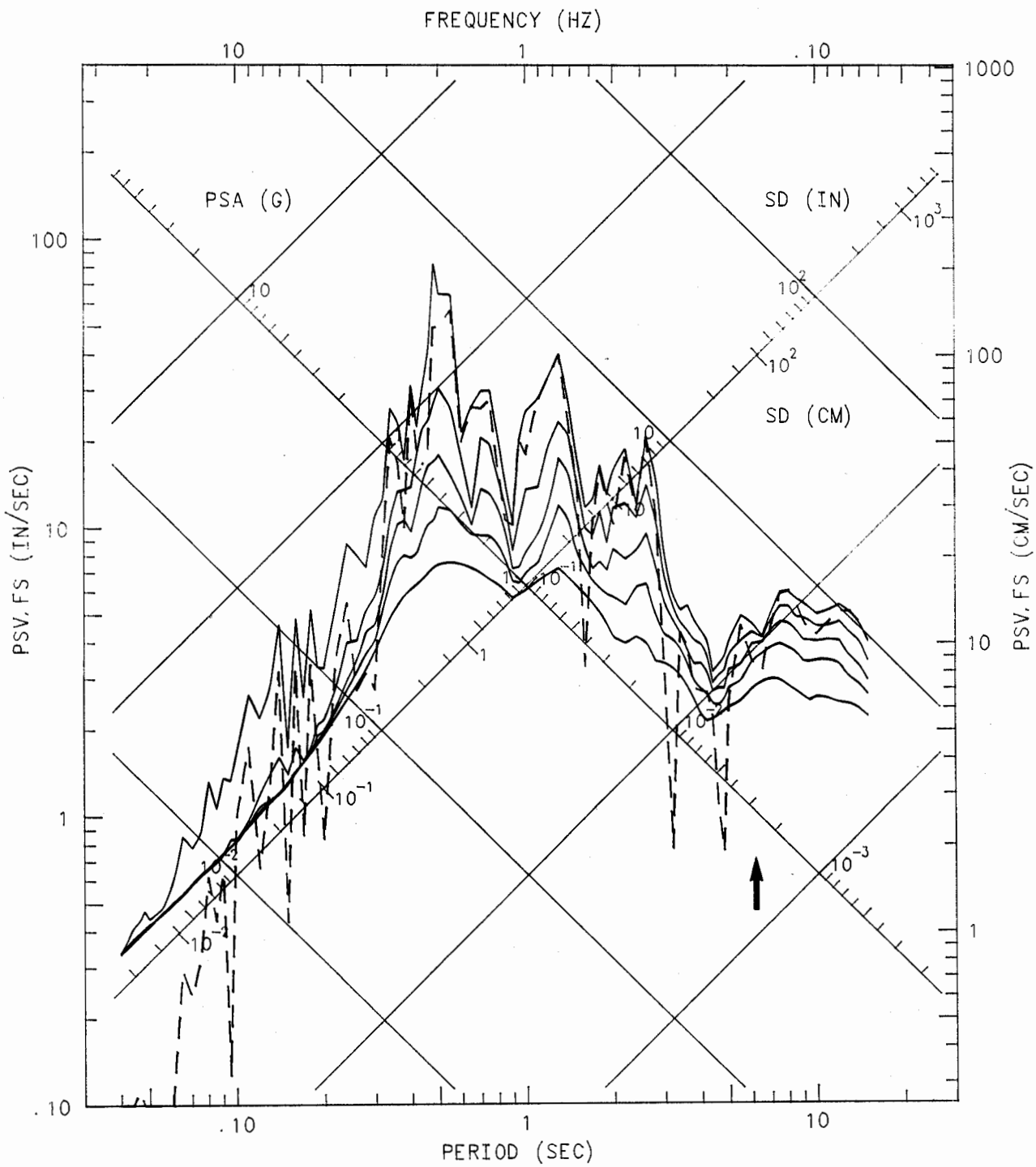
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 4: 90 DEG (ROOF, AT NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



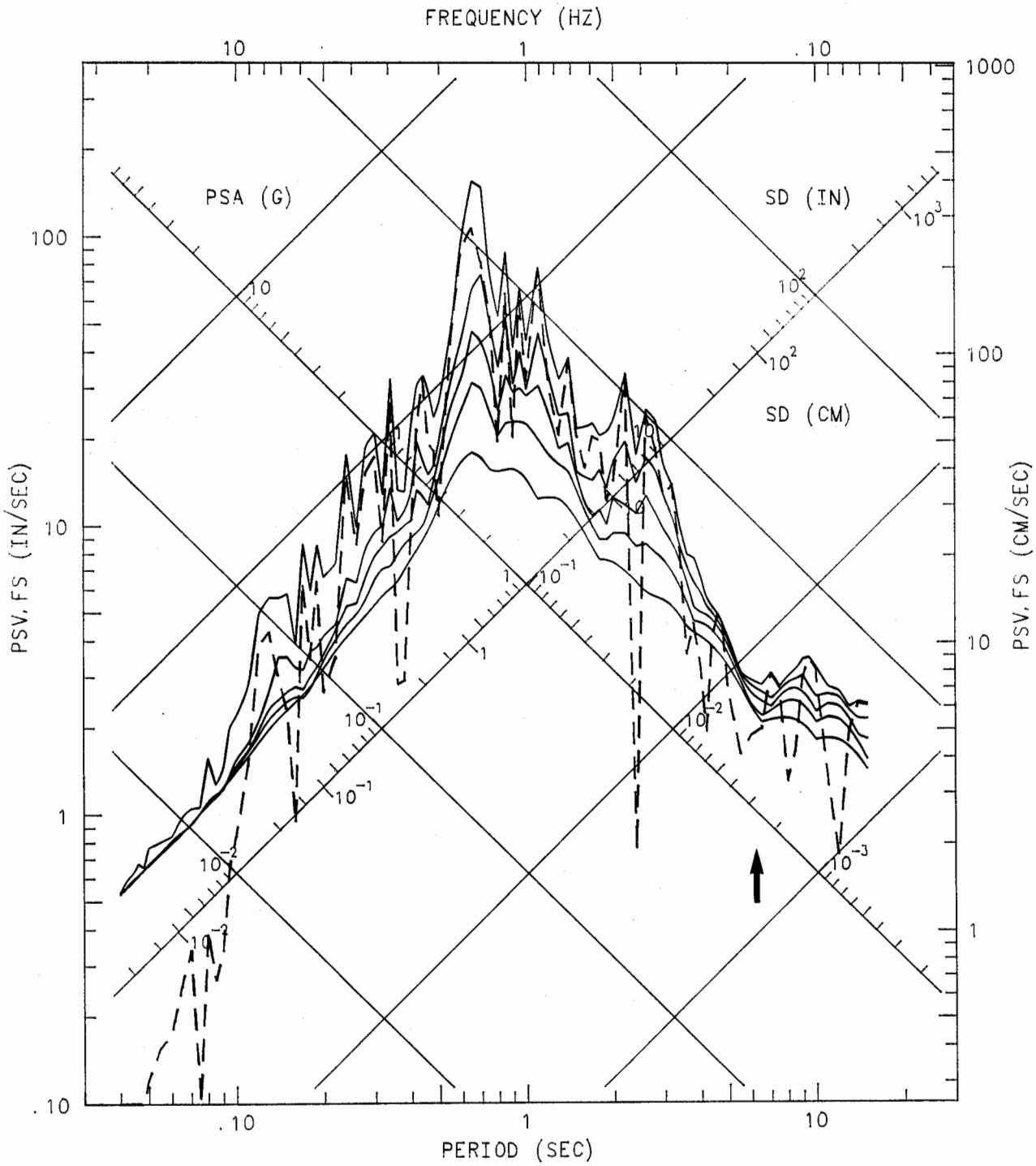
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 5: 90 DEG (ROOF, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



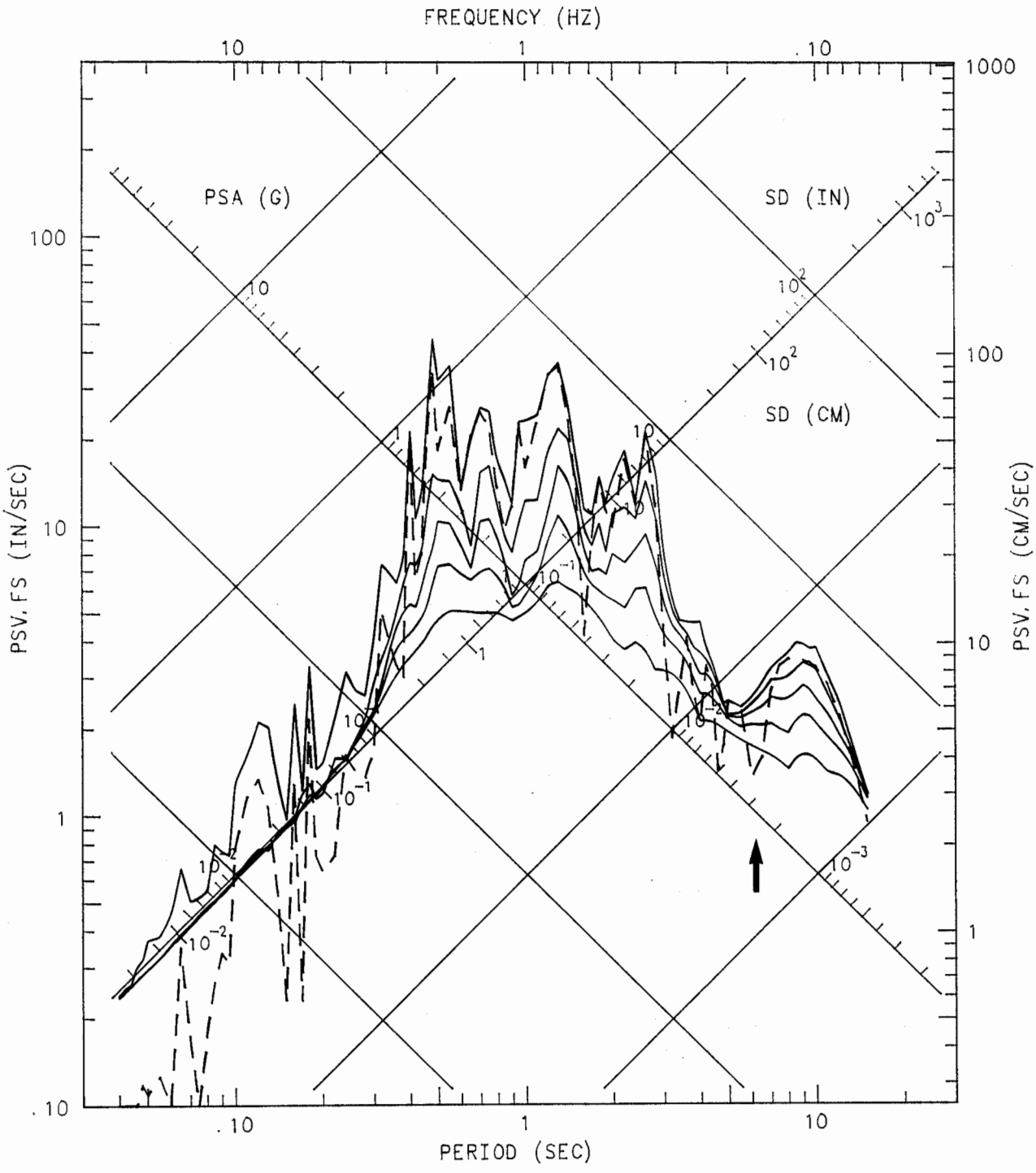
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 6: 90 DEG (ROOF, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



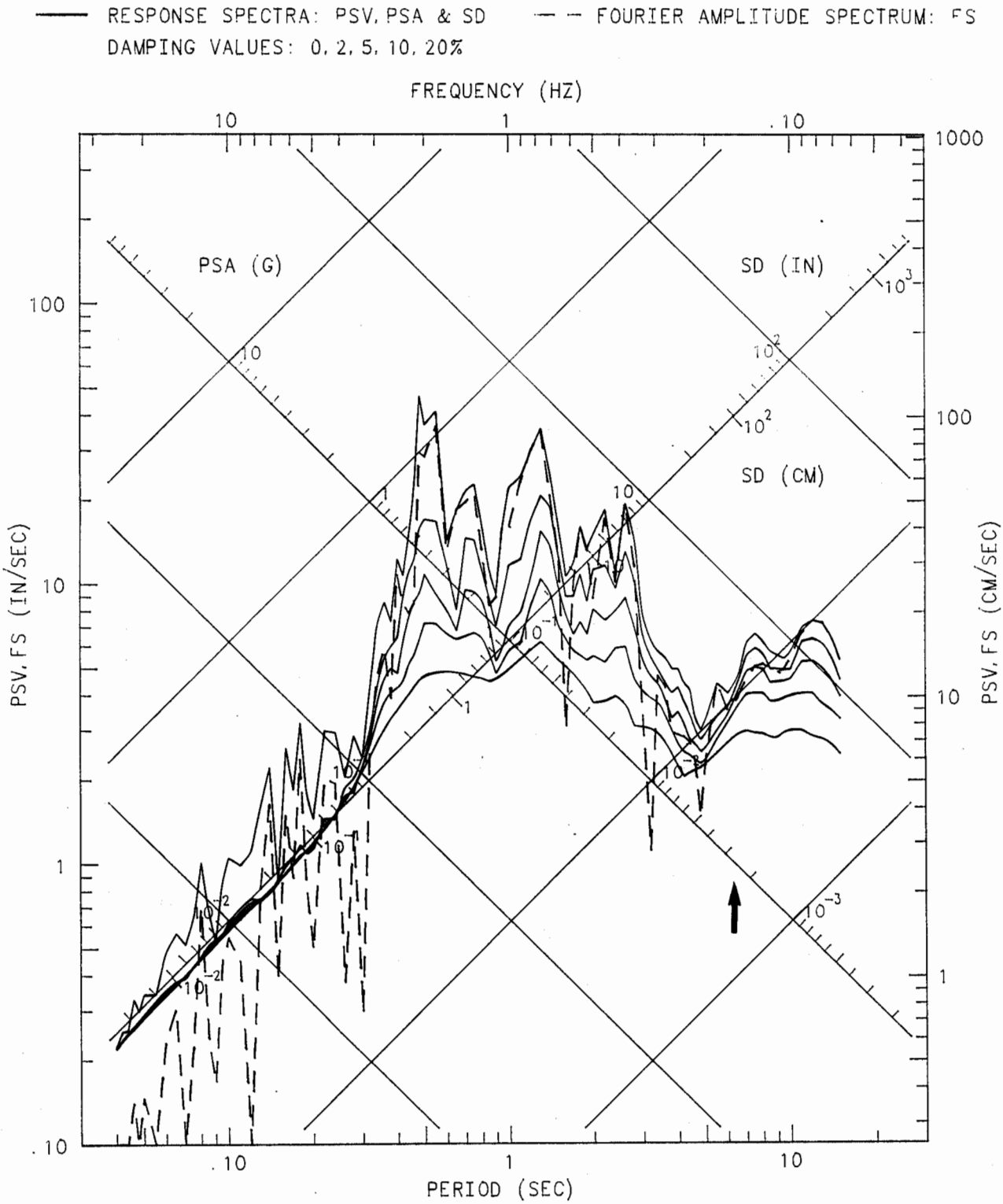
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 7: 180 DEG (ROOF, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



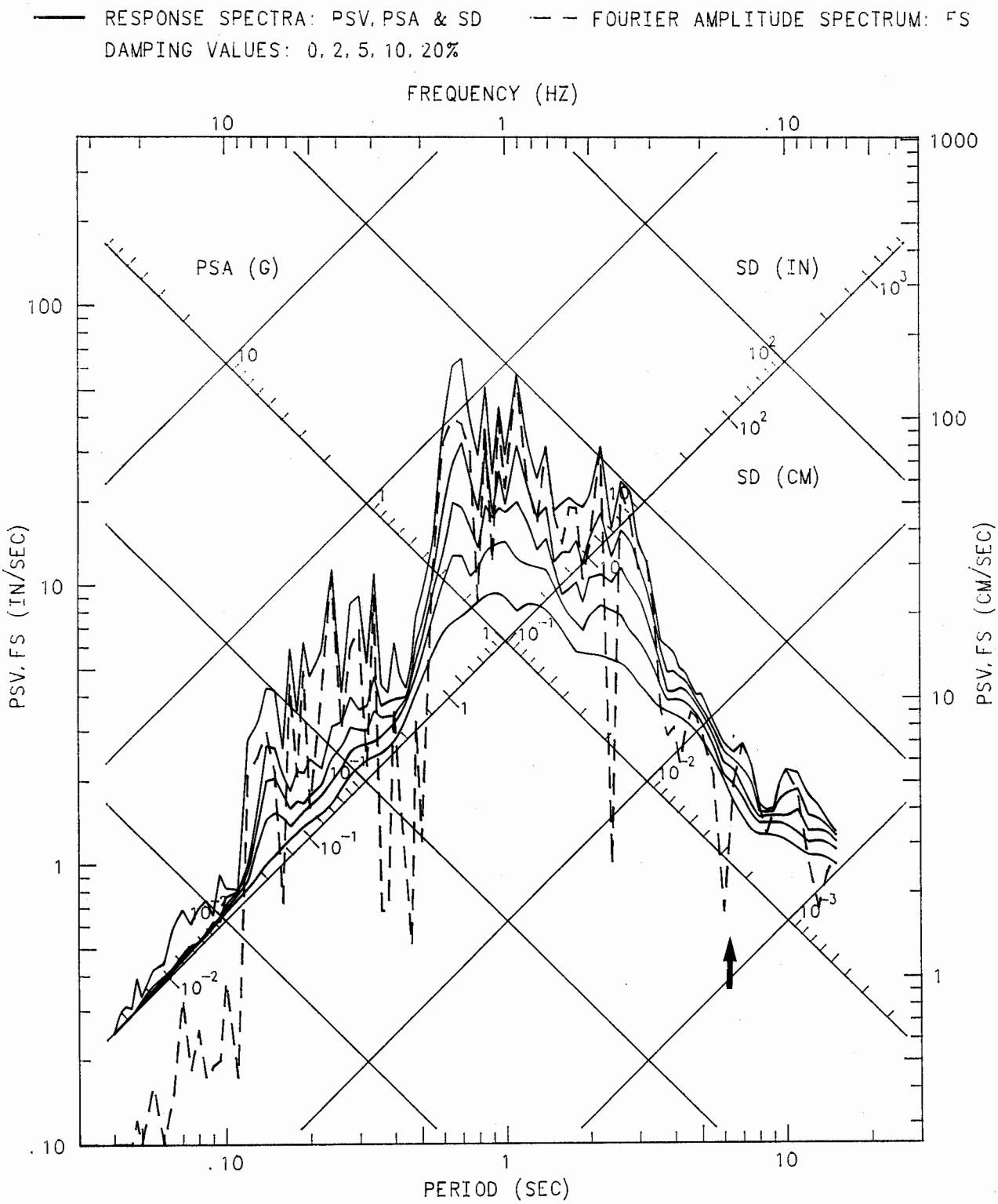
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE -- TOWN PARK TOWERS
CHN 8: 90 DEG (6TH FLOOR, AT NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



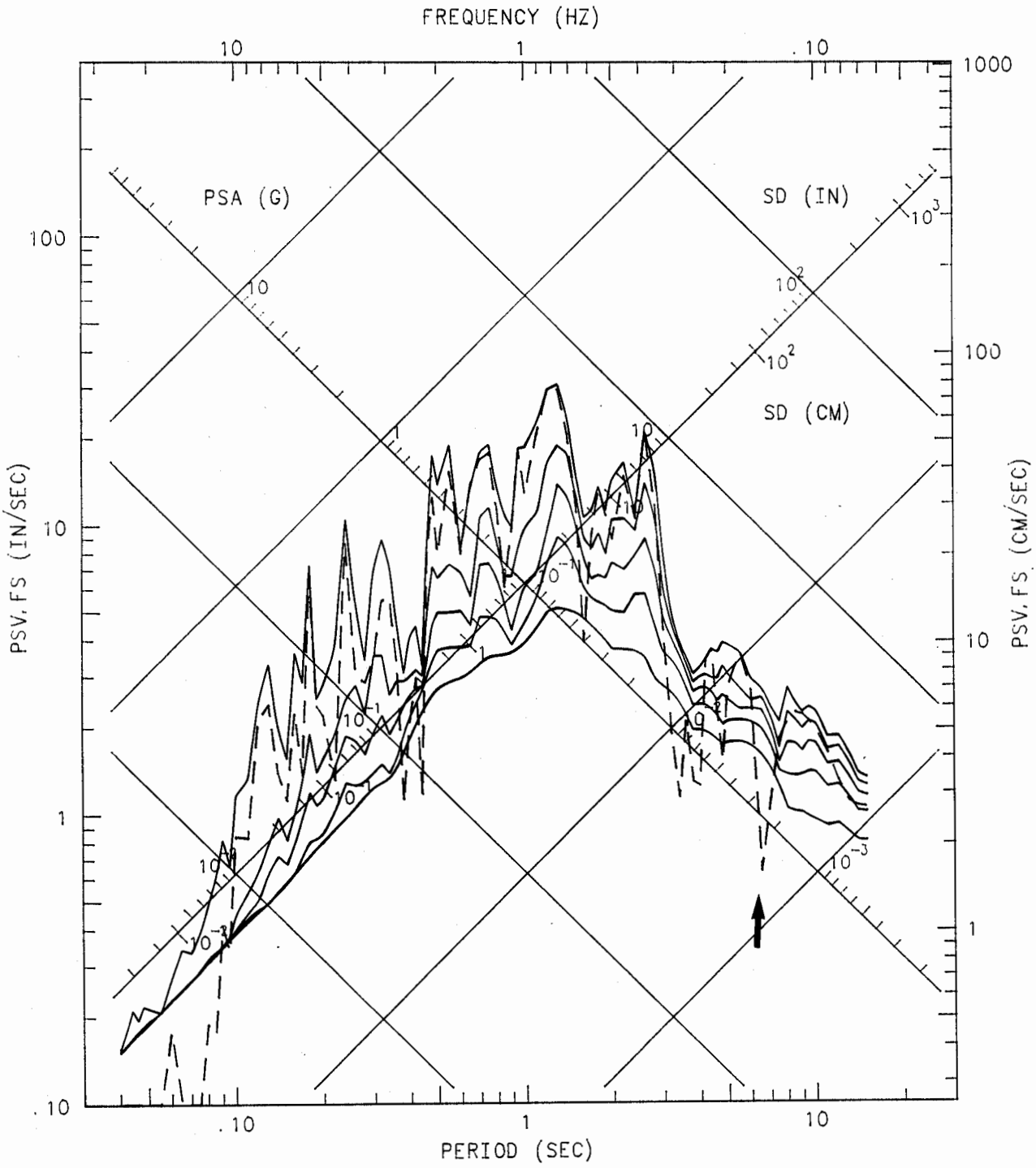
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 9: 90 DEG (6TH FLOOR, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



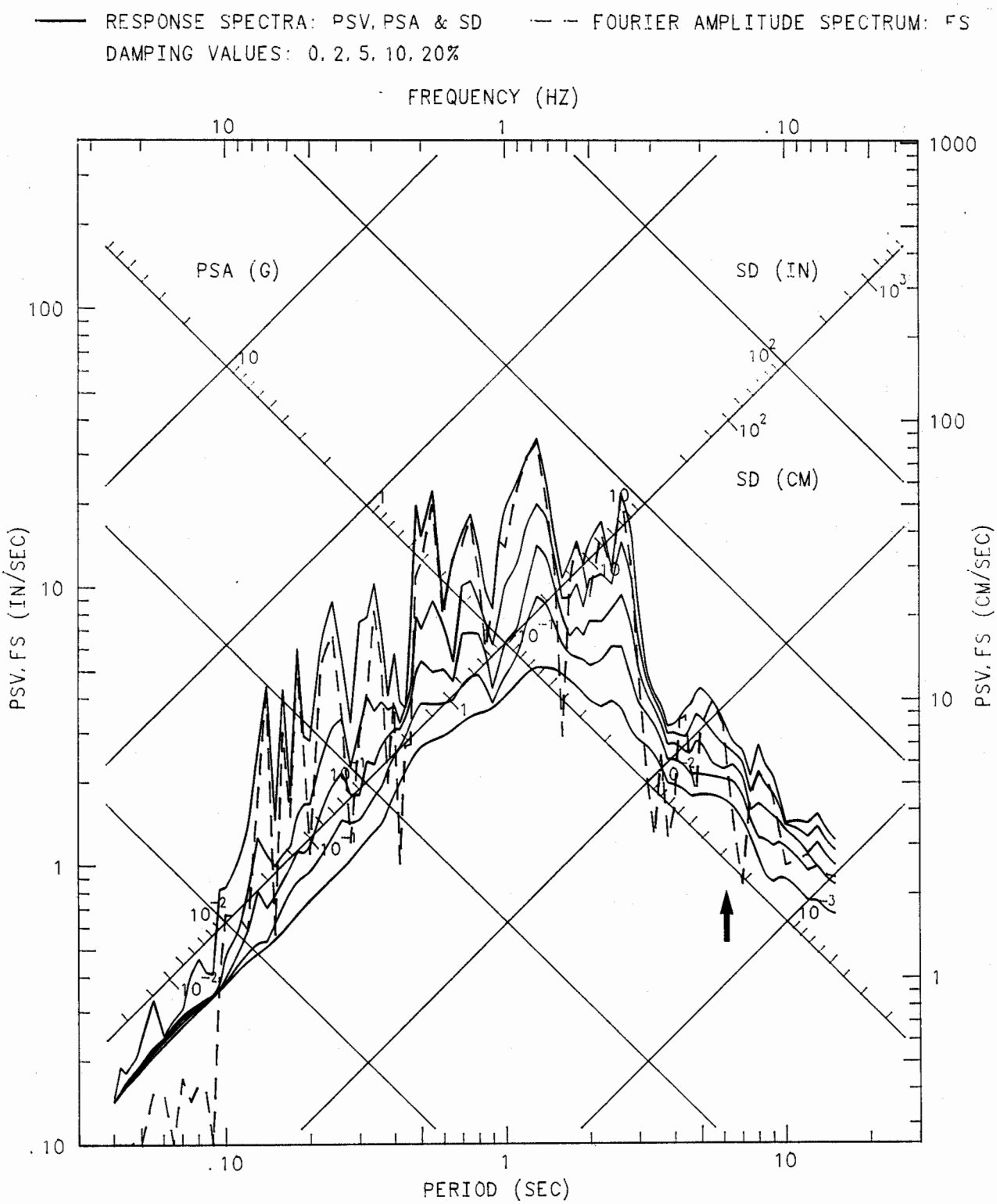
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 10: 180 DEG (6TH FLOOR, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



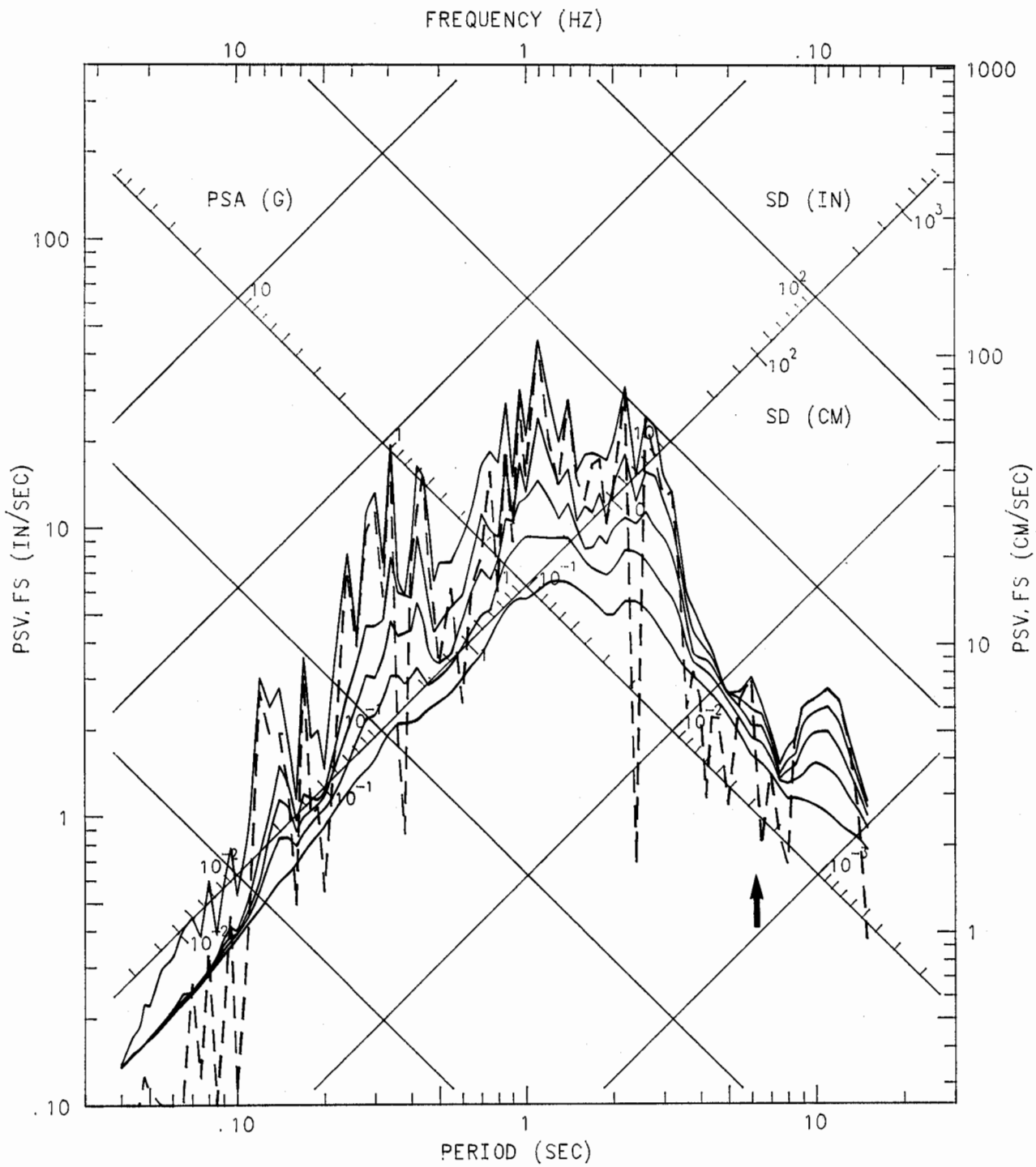
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 11: 90 DEG (GROUND FLOOR, AT NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 12: 90 DEG (GROUND FLOOR, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - TOWN PARK TOWERS
CHN 13: 180 DEG (GROUND FLOOR, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57356-C0189-84115.02 022785.2145-QM84A356



SAN JOSE - GREAT WESTERN S & L BUILDING

Special Notes: None

San Jose - Great Western S & L Bldg.

Northeast Side View

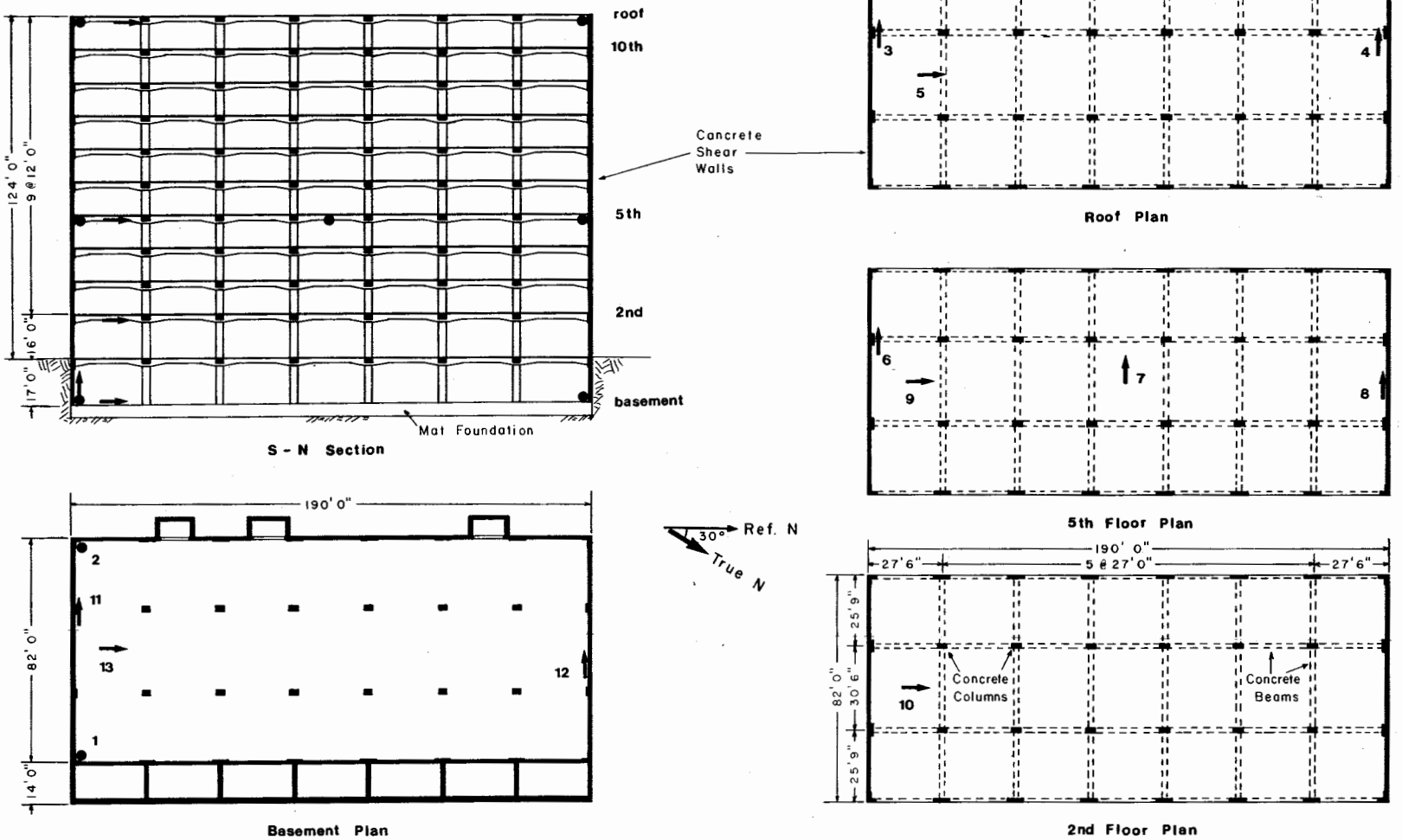
Northwest Side View

Address: 111 N. Market Street
San Jose, California
Coordinates: 37.338°N, 121.893°W
No. of Stories above/below ground: 10 / 1
Plan Type: Rectangular
Base Dimensions: 190' x 96'
Typical Floor Dimensions: 190' x 82'
Design Date: 1964
Construction Date: 1967

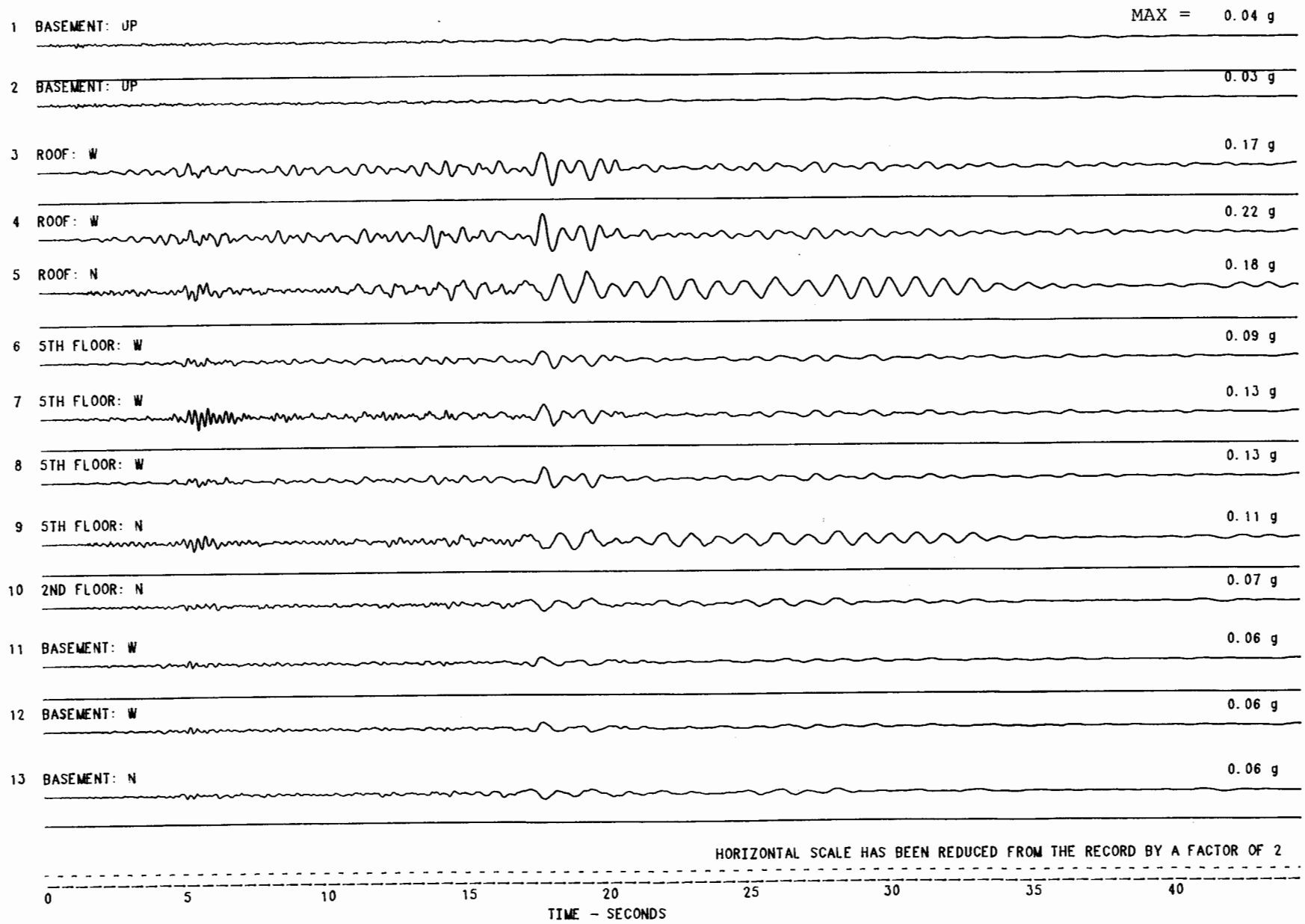
Vertical Load Carrying System:
RC floor slabs supported by rc pan joists supported by rc frame.
Lateral Force Resisting System:
End rc shear walls in transverse direction; moment-resistant rc frame in longitudinal direction.
Foudation Type:
Mat foundation.

SENSOR LAYOUT

San Jose-Great Western S&L Bldg.
CSMIP Station No. 57355



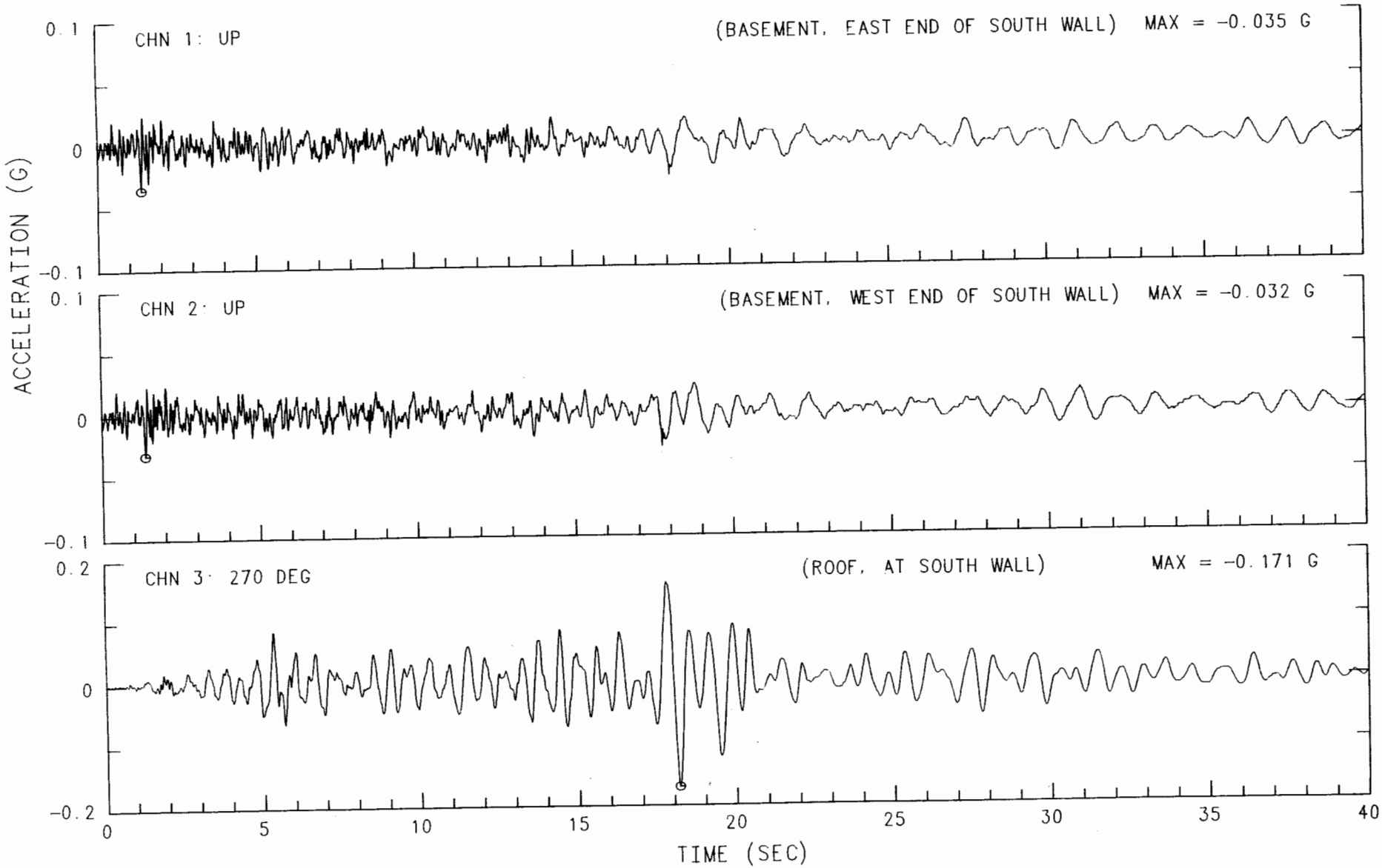
SAN JOSE - G. W. SAVINGS RECORD 57355-C0112-84116.01 MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

SAN JOSE - G. W. SAVINGS

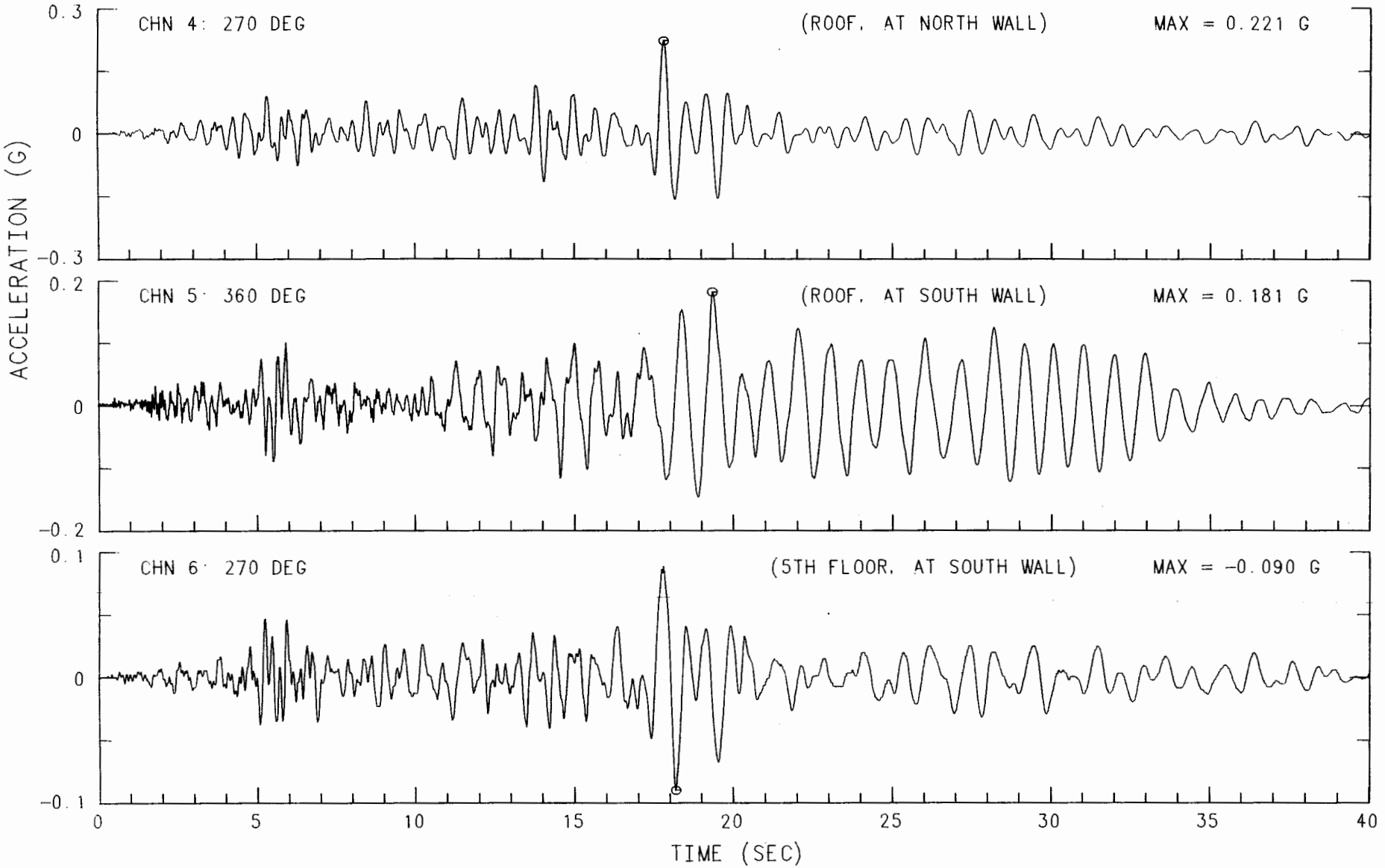
UNCORRECTED ACCELEROGRAM 57355-C0112-84116.01 020285.1552-QM84A355



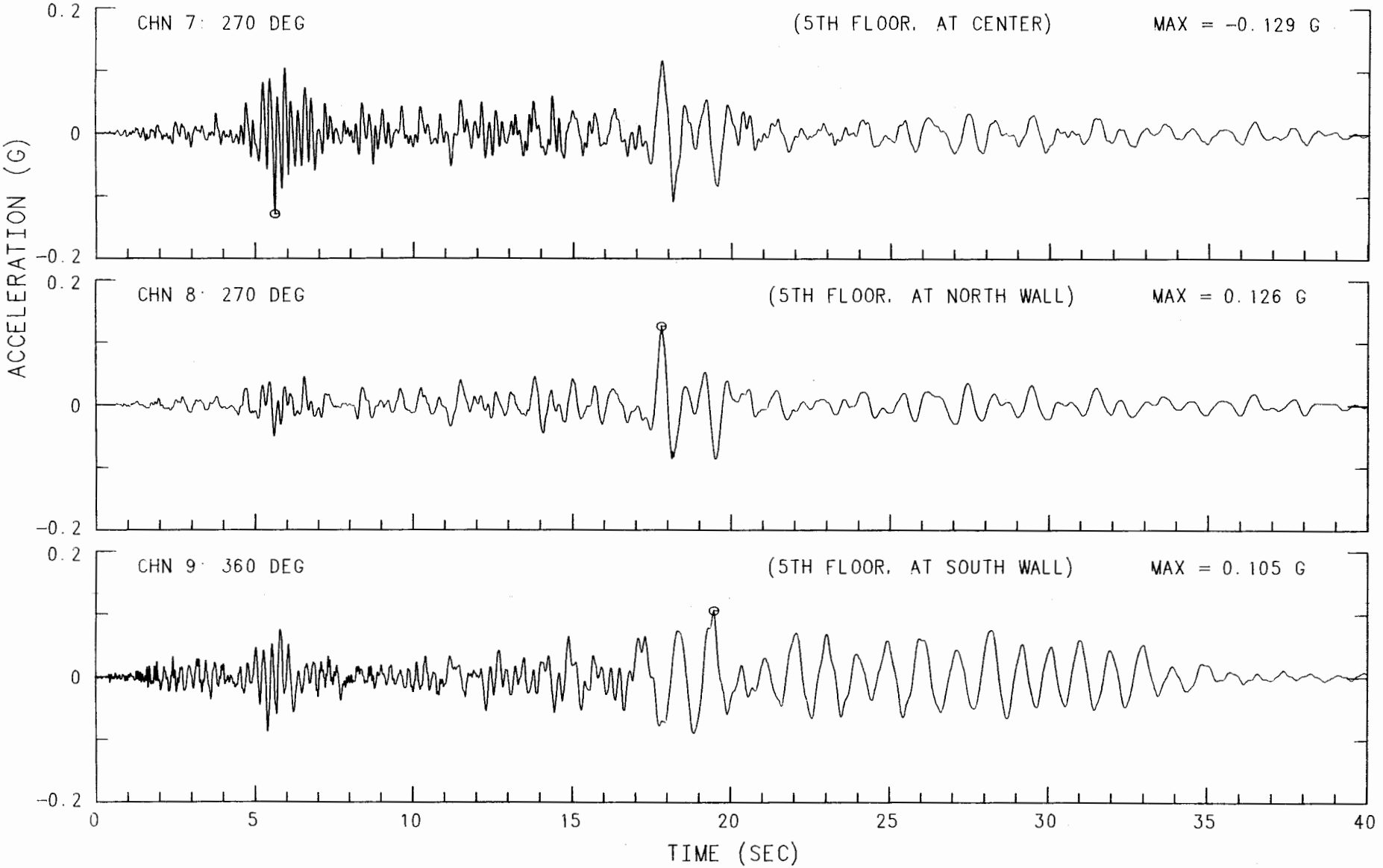
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

SAN JOSE - G. W. SAVINGS

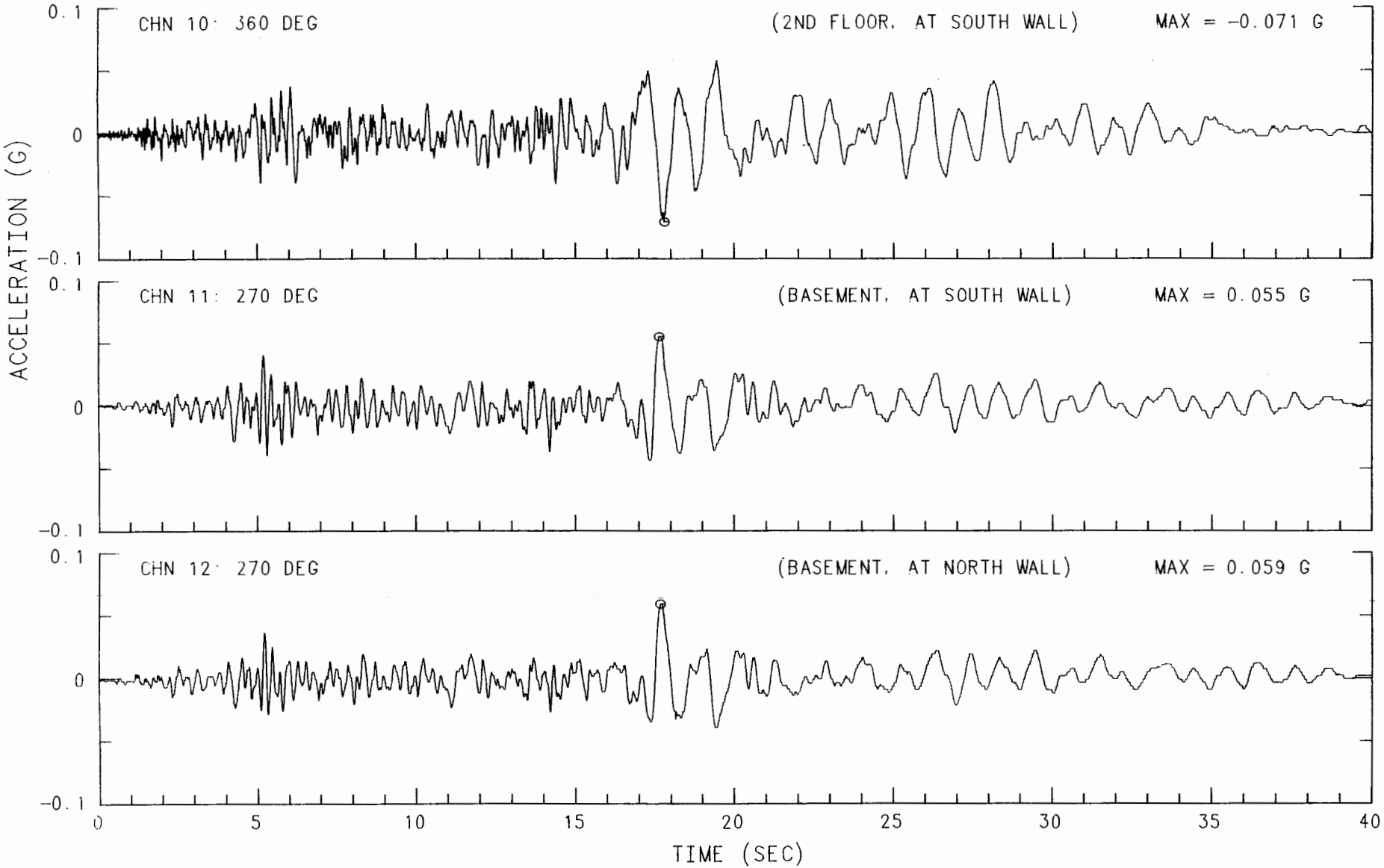
UNCORRECTED ACCELEROGRAM 57355-C0112-84116.01 020285.1552-QM84A355



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
UNCORRECTED ACCELEROGRAM 57355-C0112-84116.01 020285.1552-QM84A355



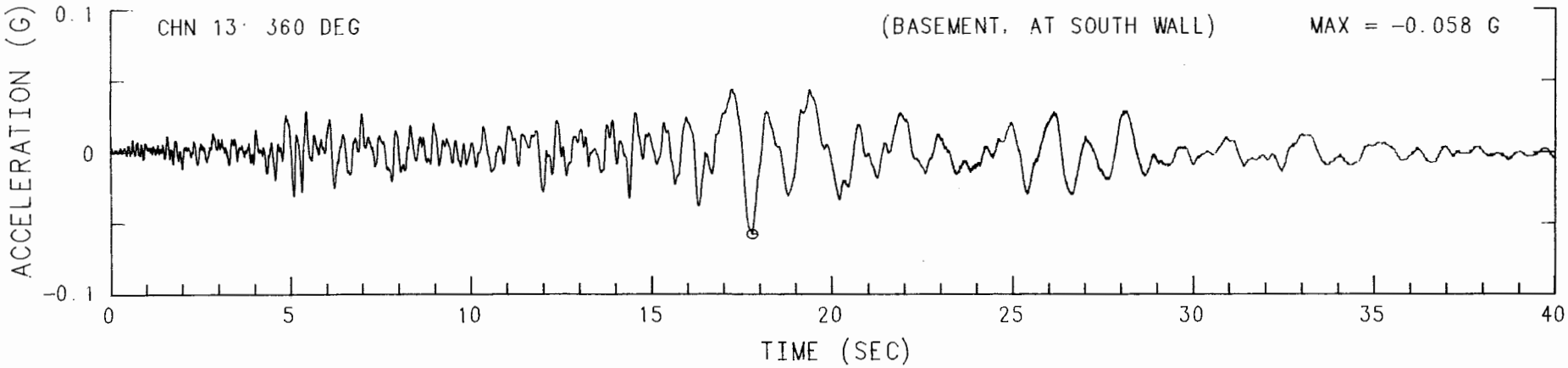
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
UNCORRECTED ACCELEROGRAM 57355-C0112-84116.01 020285.1552-QM84A355



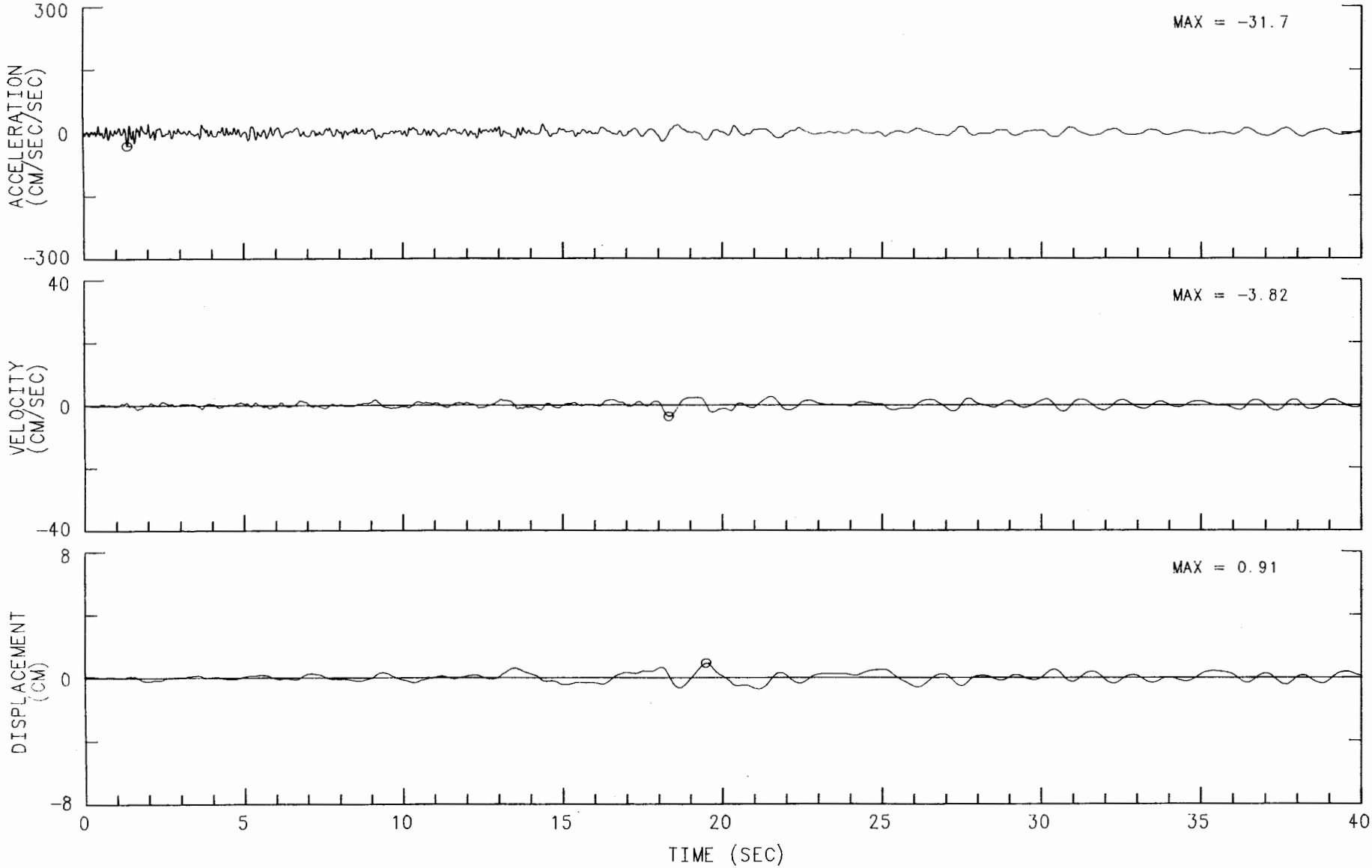
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

SAN JOSE - G. W. SAVINGS

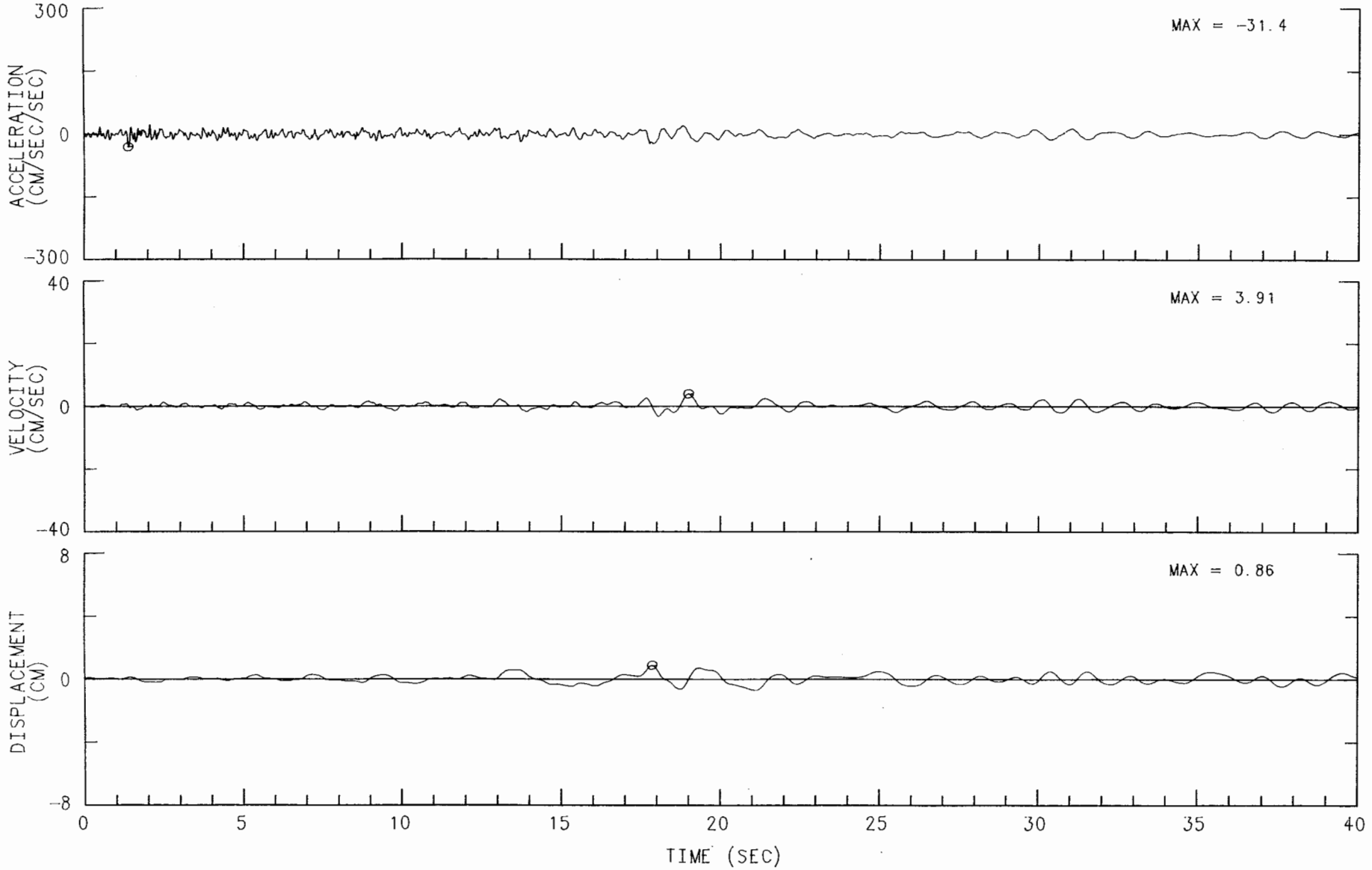
UNCORRECTED ACCELEROGRAM 57355-C0112-84116.01 020285.1552-QM84A355



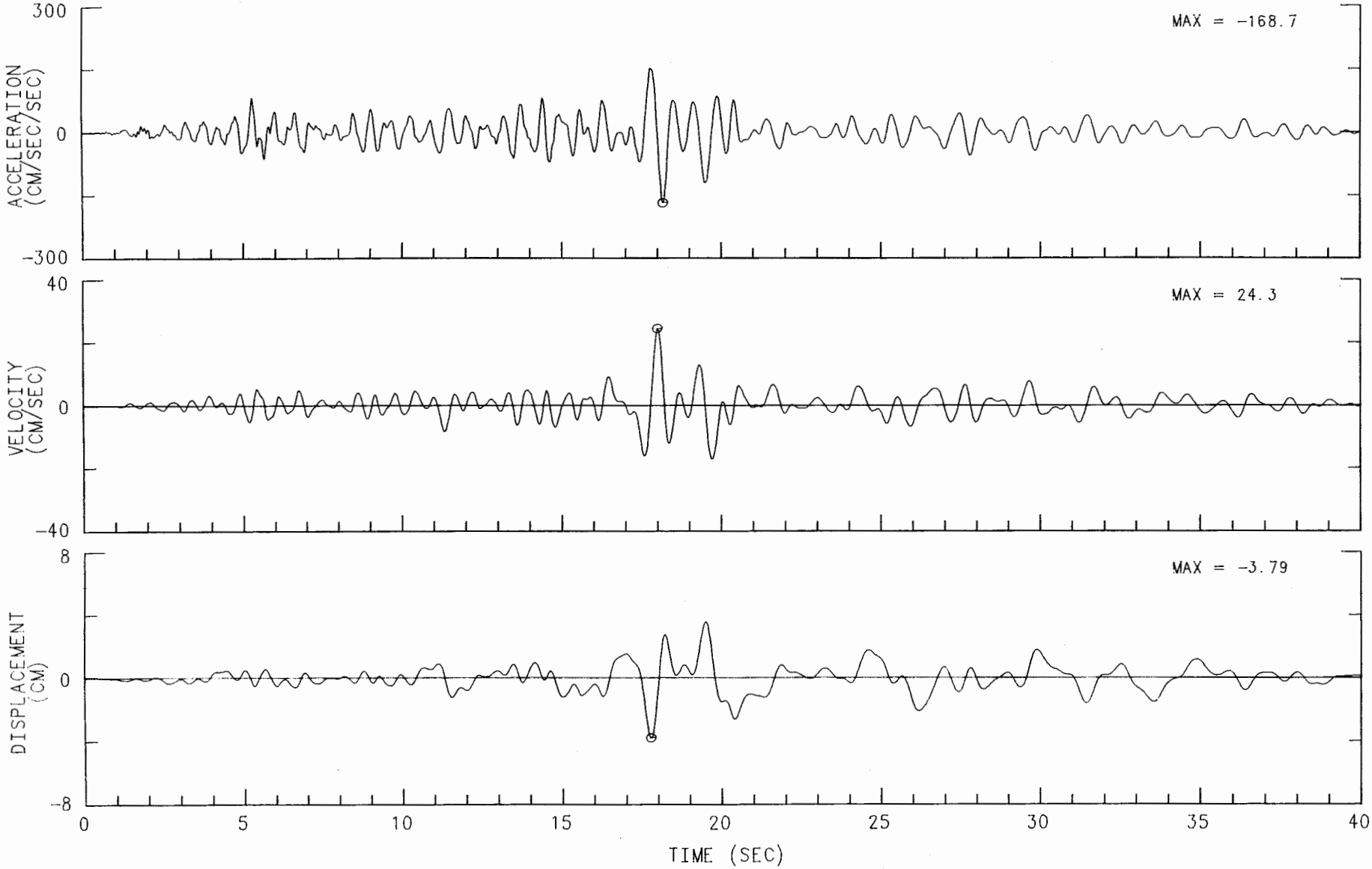
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 1: UP (BASEMENT, EAST END OF SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



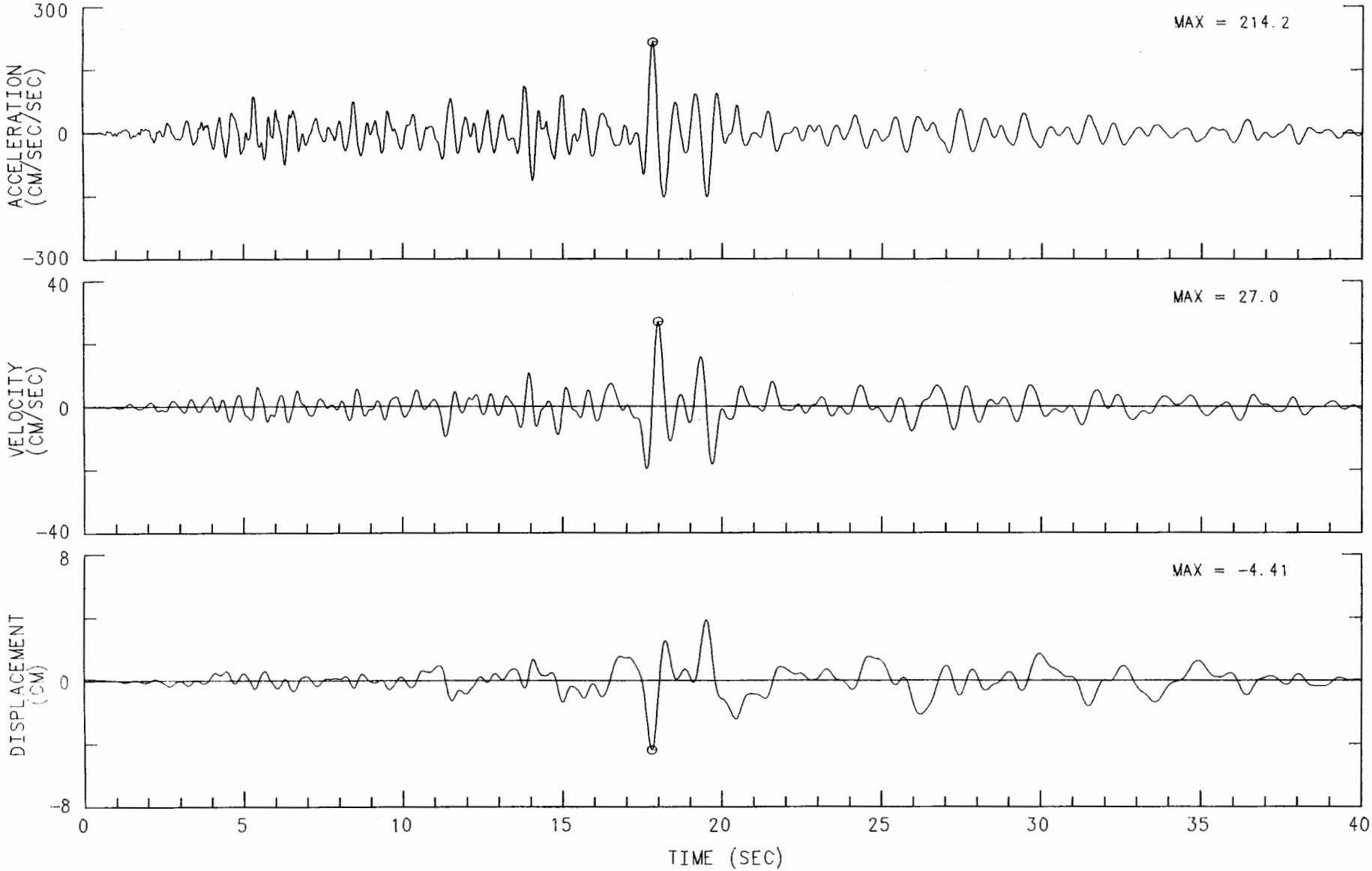
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 2: UP (BASEMENT, WEST END OF SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



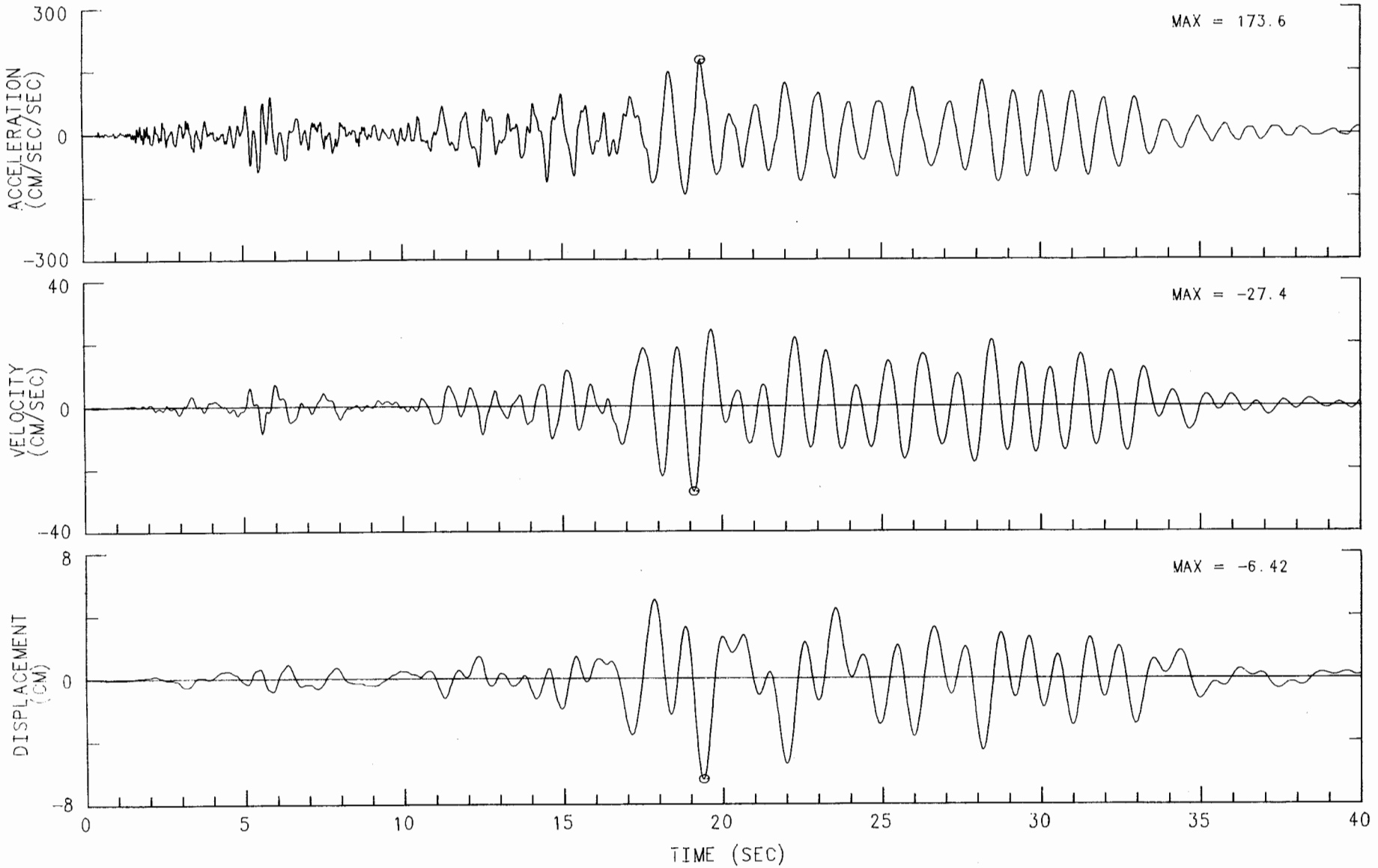
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 3: 270 DEG (ROOF, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



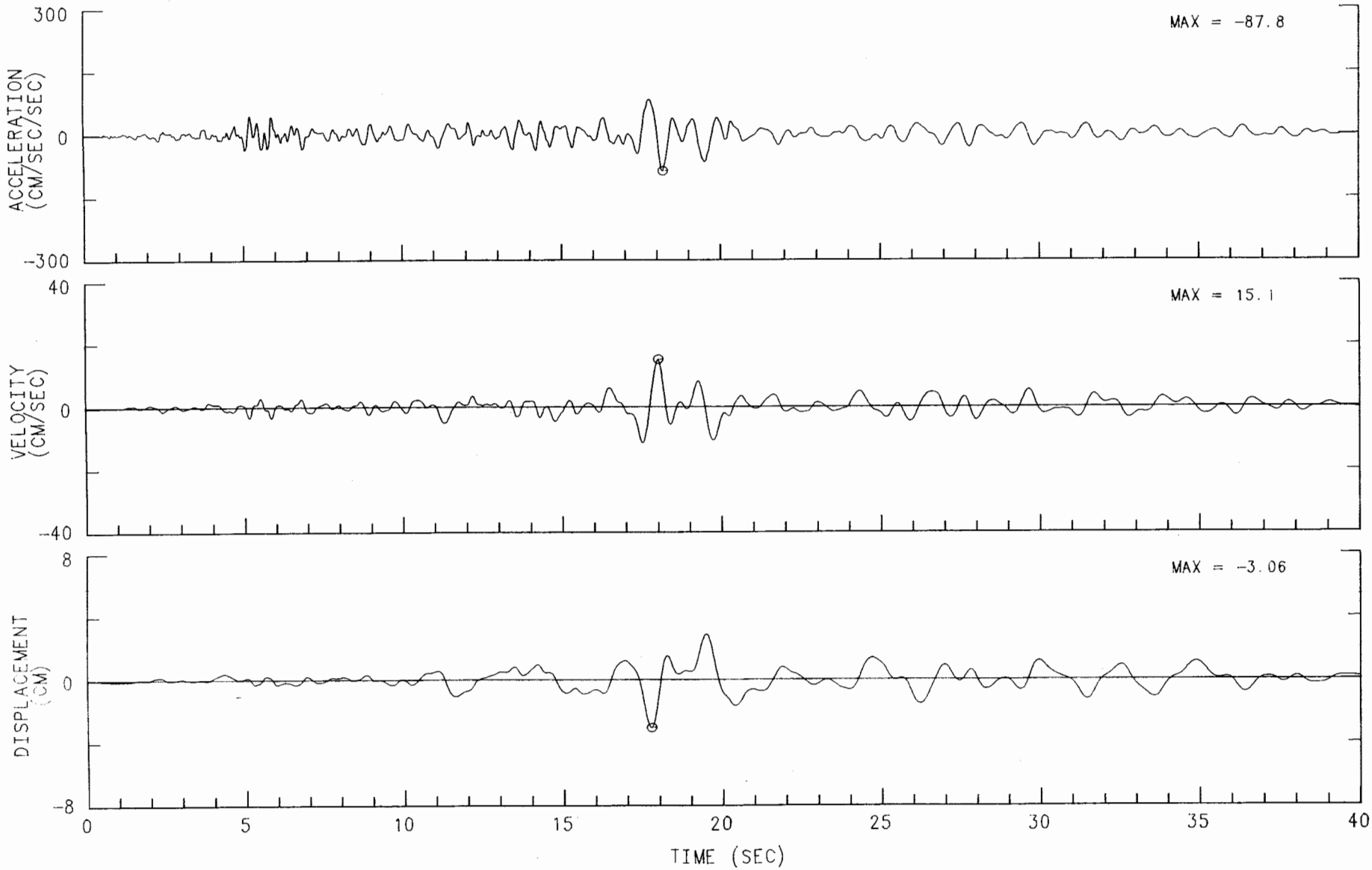
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 4: 270 DEG (ROOF, AT NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



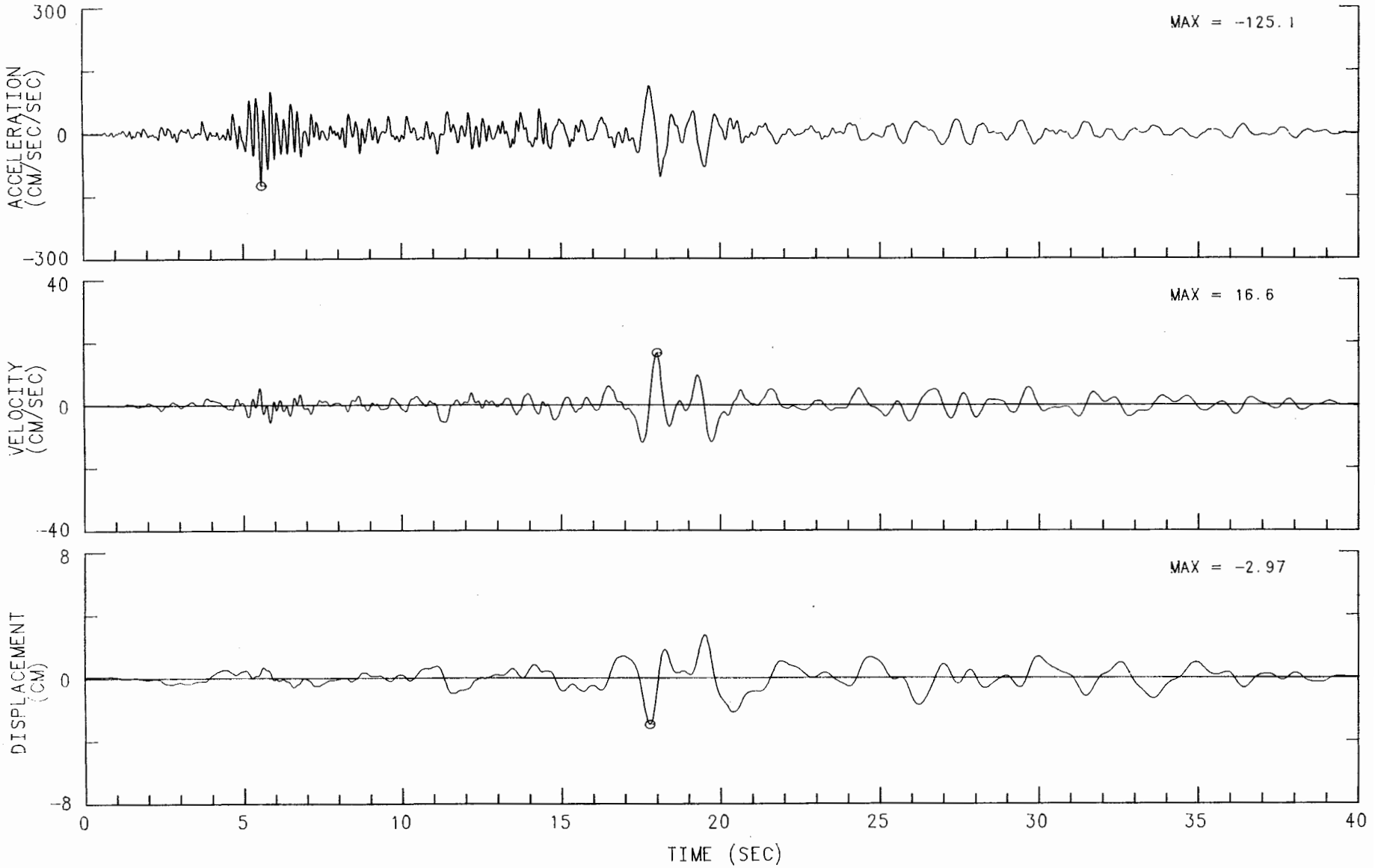
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 5: 360 DEG (ROOF, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



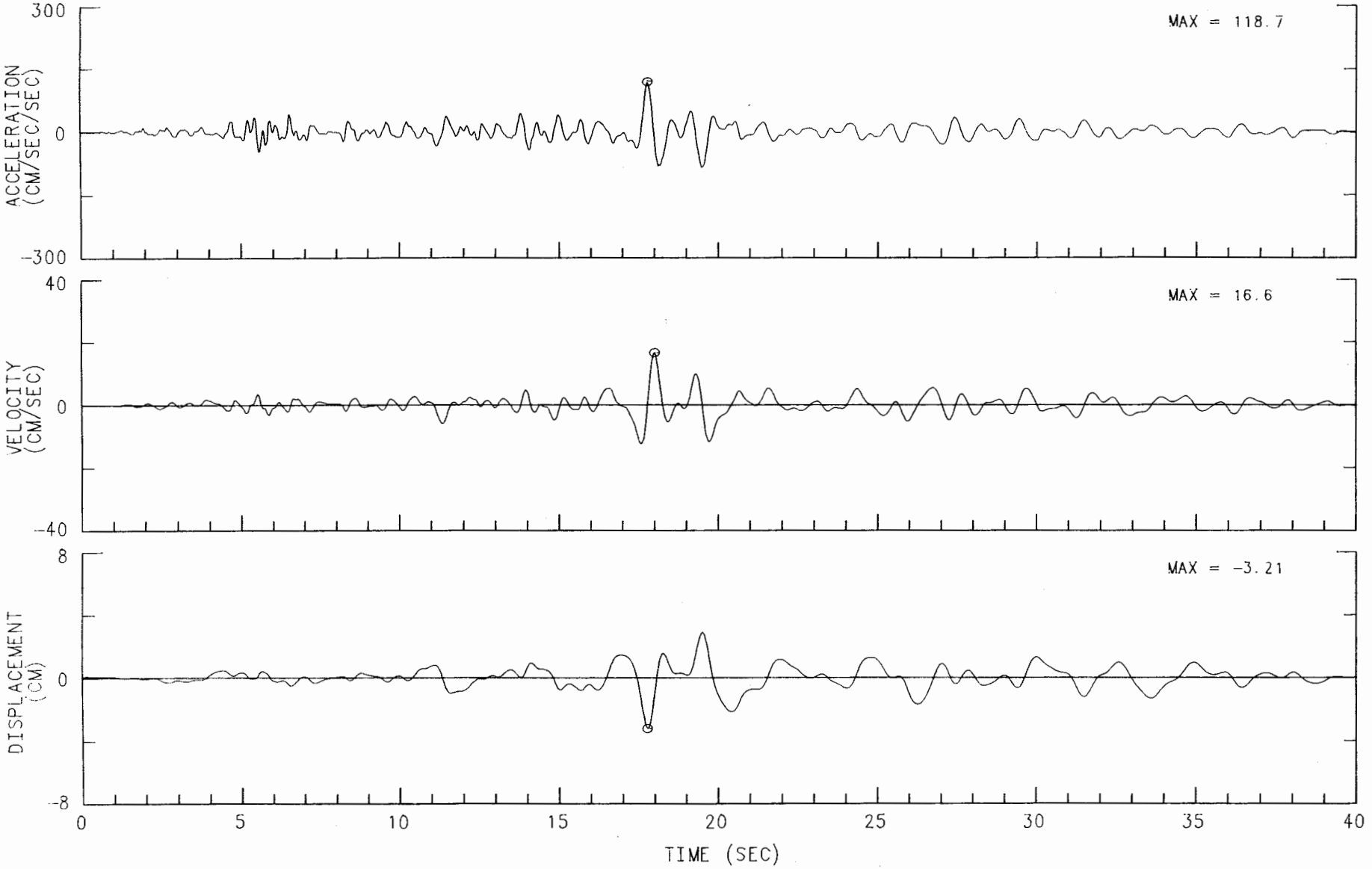
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 6: 270 DEG (5TH FLOOR, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



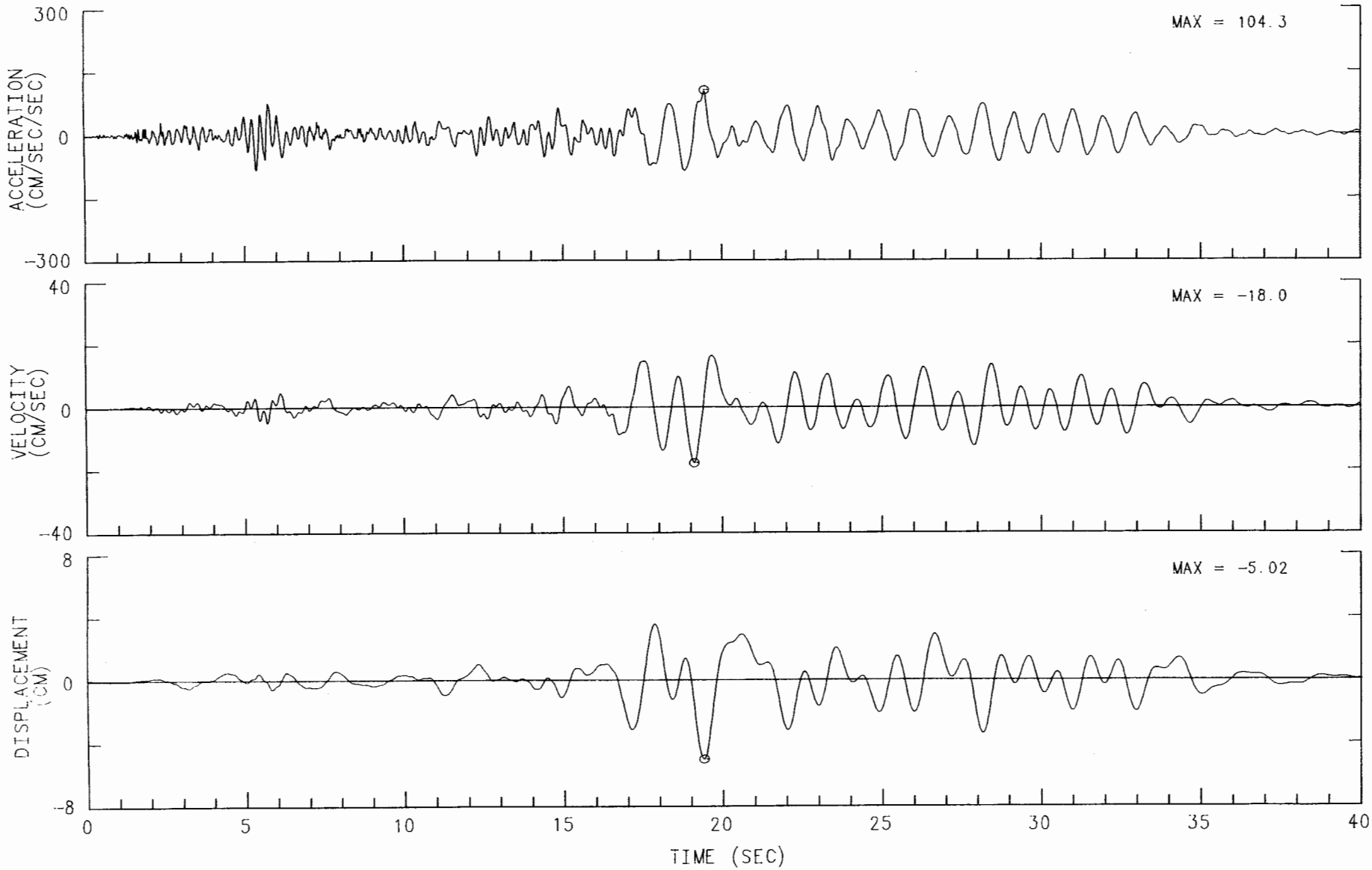
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 7: 270 DEG (5TH FLOOR, AT CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



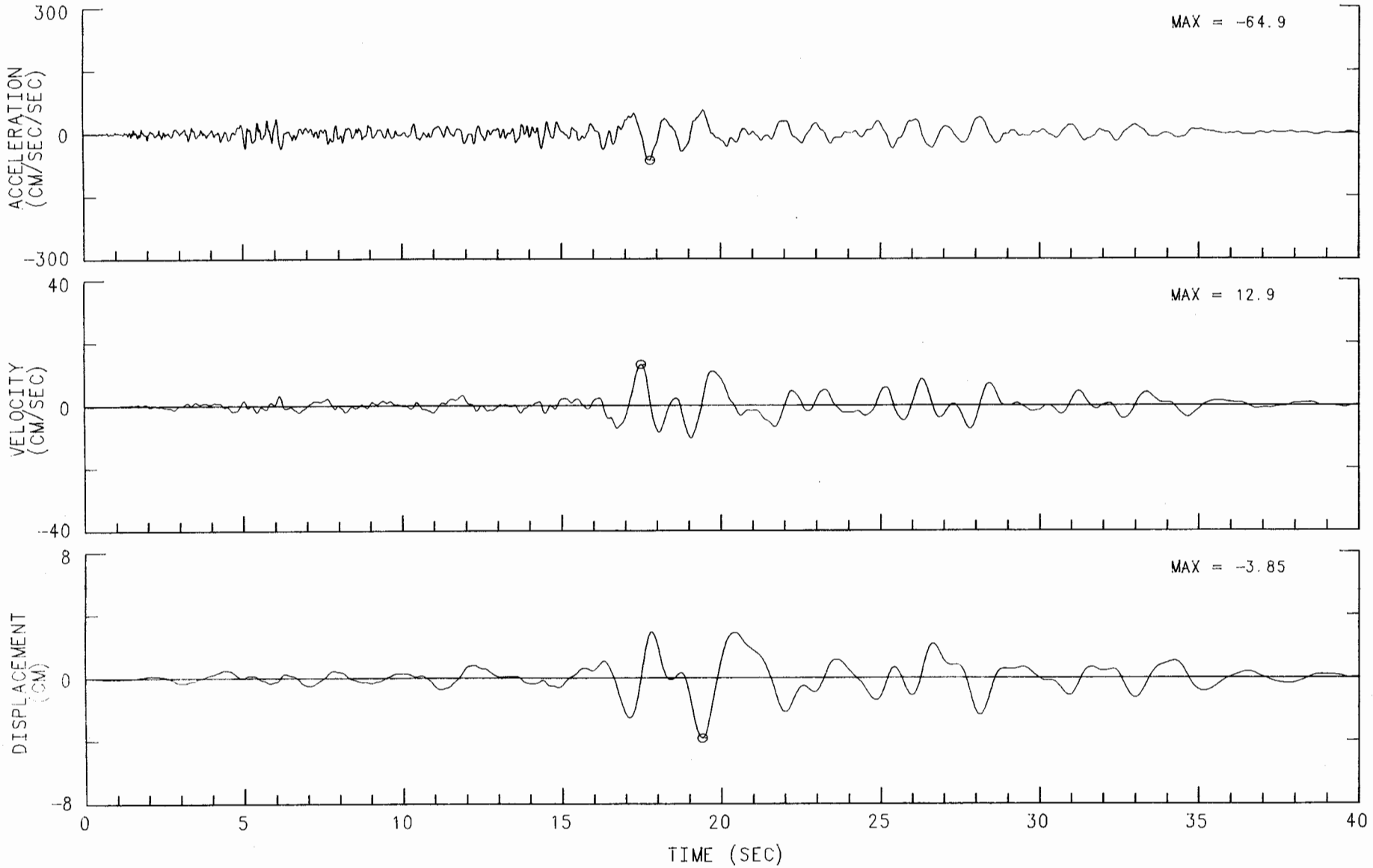
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 8: 270 DEG (5TH FLOOR, AT NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



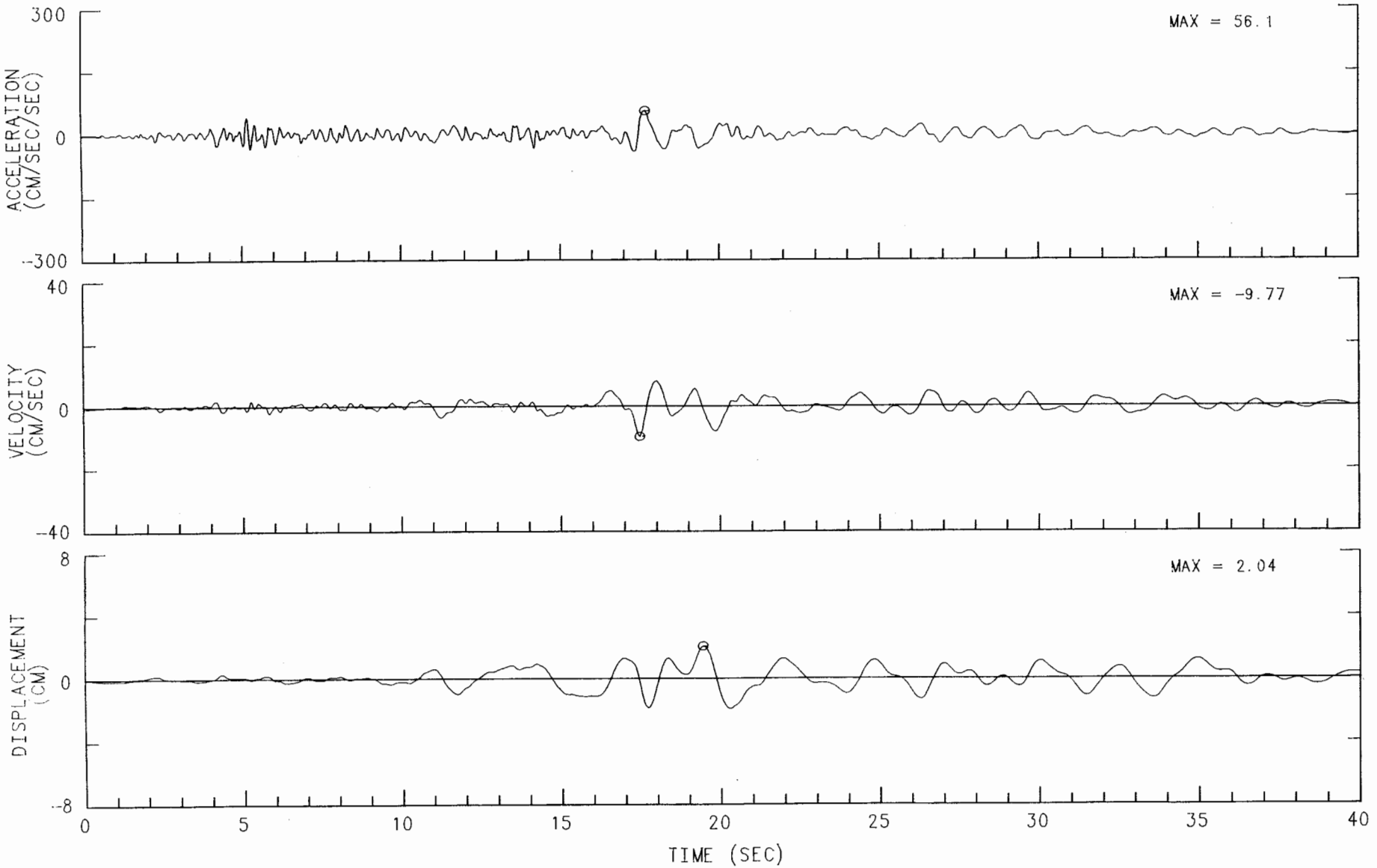
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 9: 360 DEG (5TH FLOOR, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



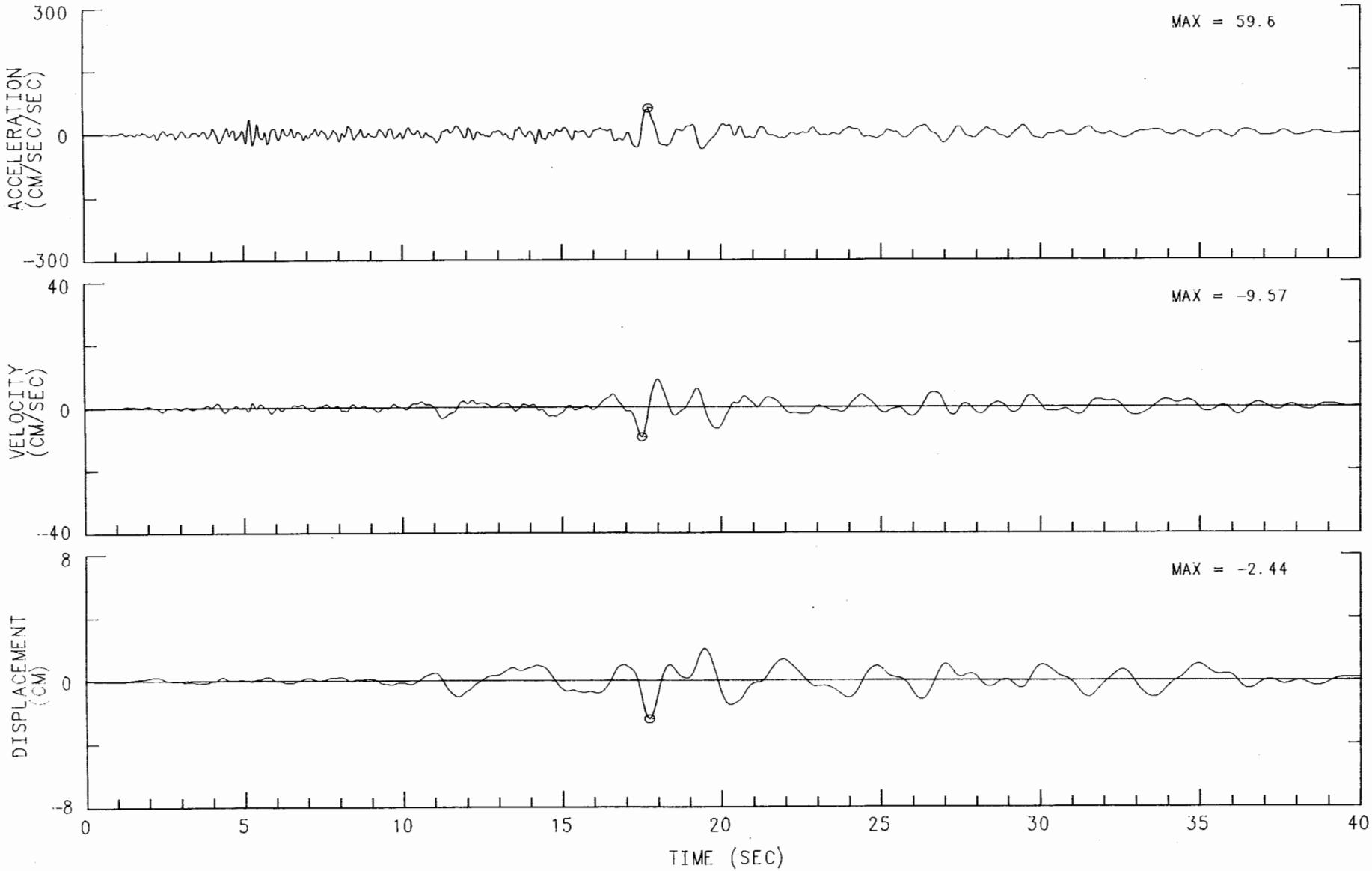
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 10: 360 DEG (2ND FLOOR, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



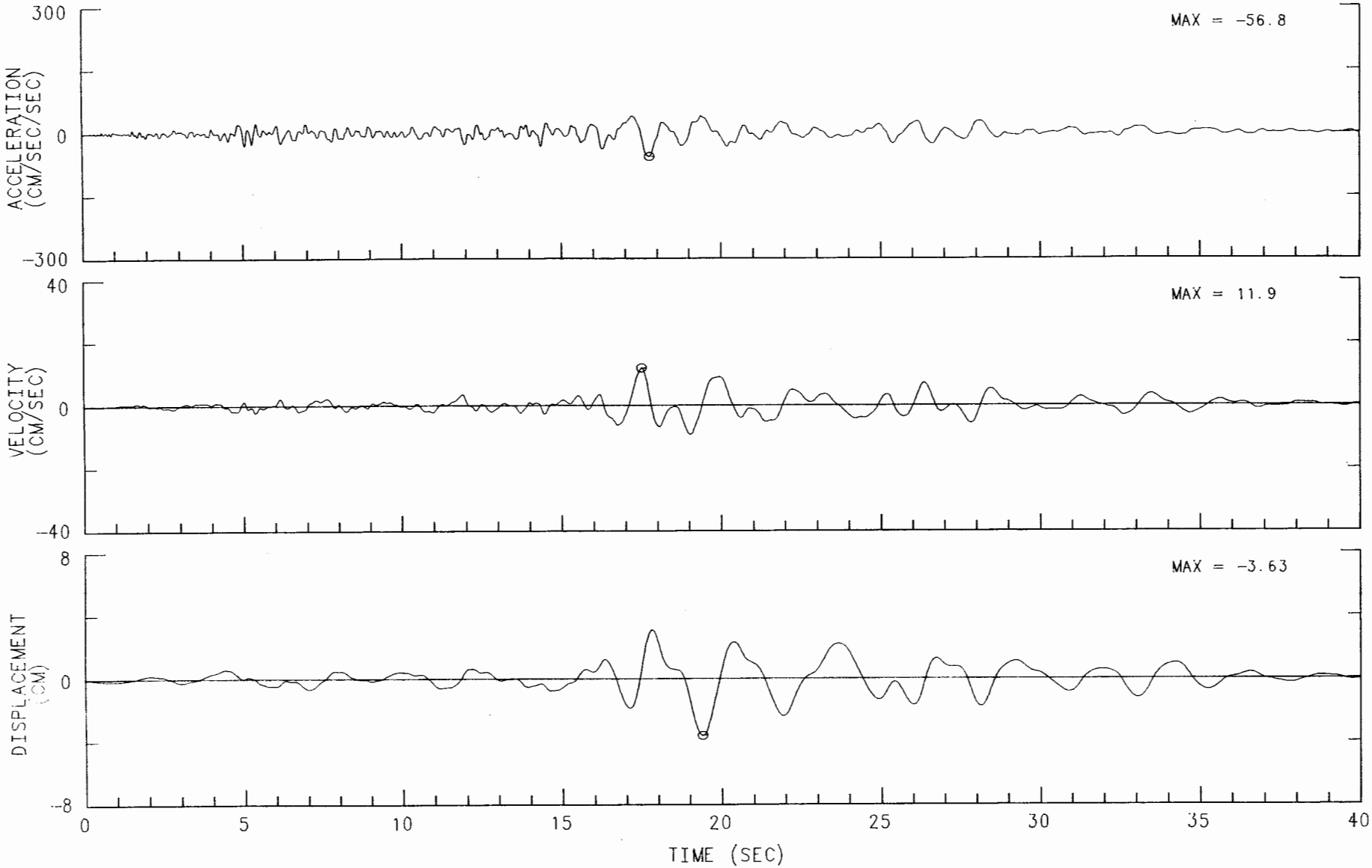
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 11: 270 DEG (BASEMENT, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



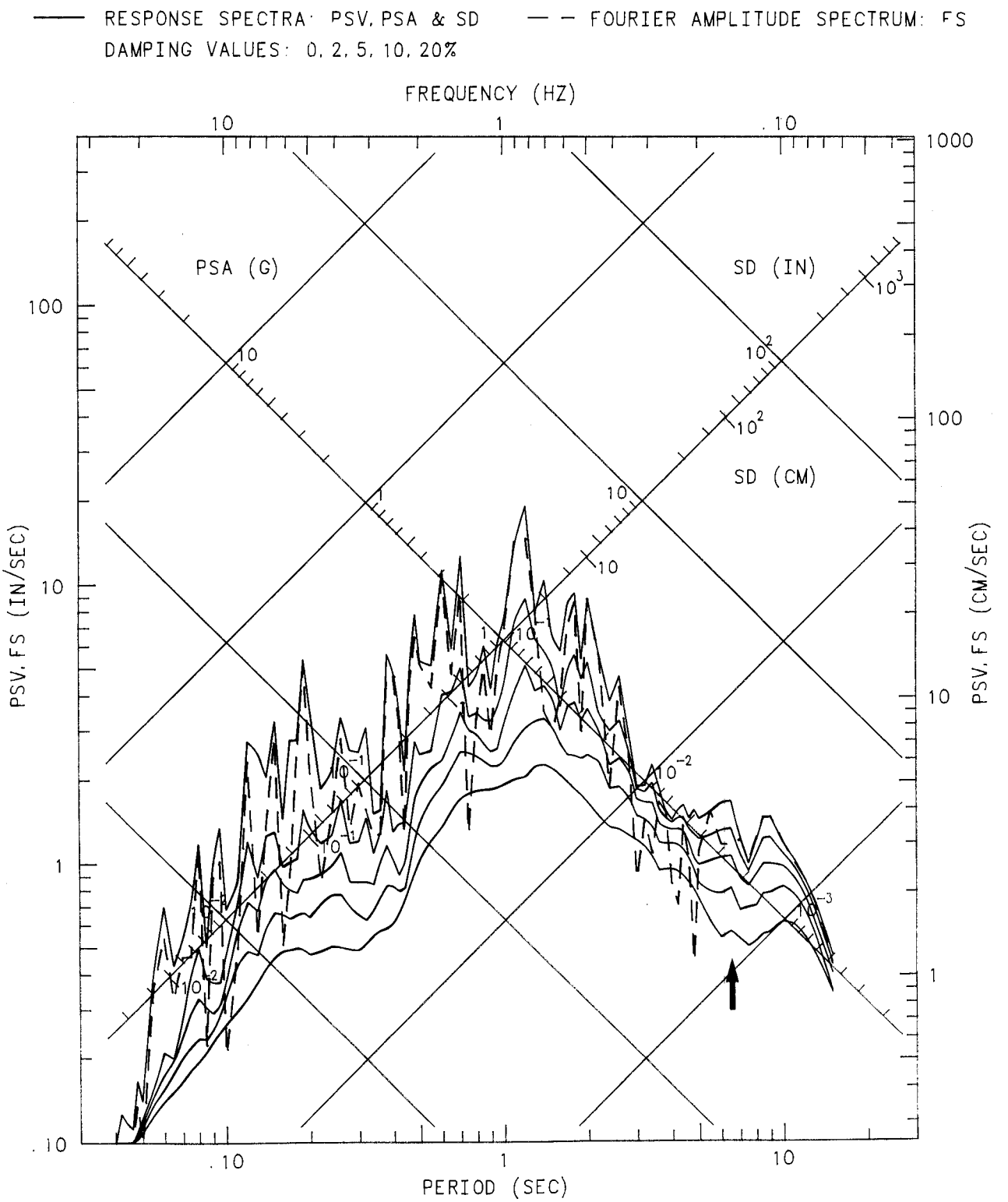
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 12: 270 DEG (BASEMENT, AT NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



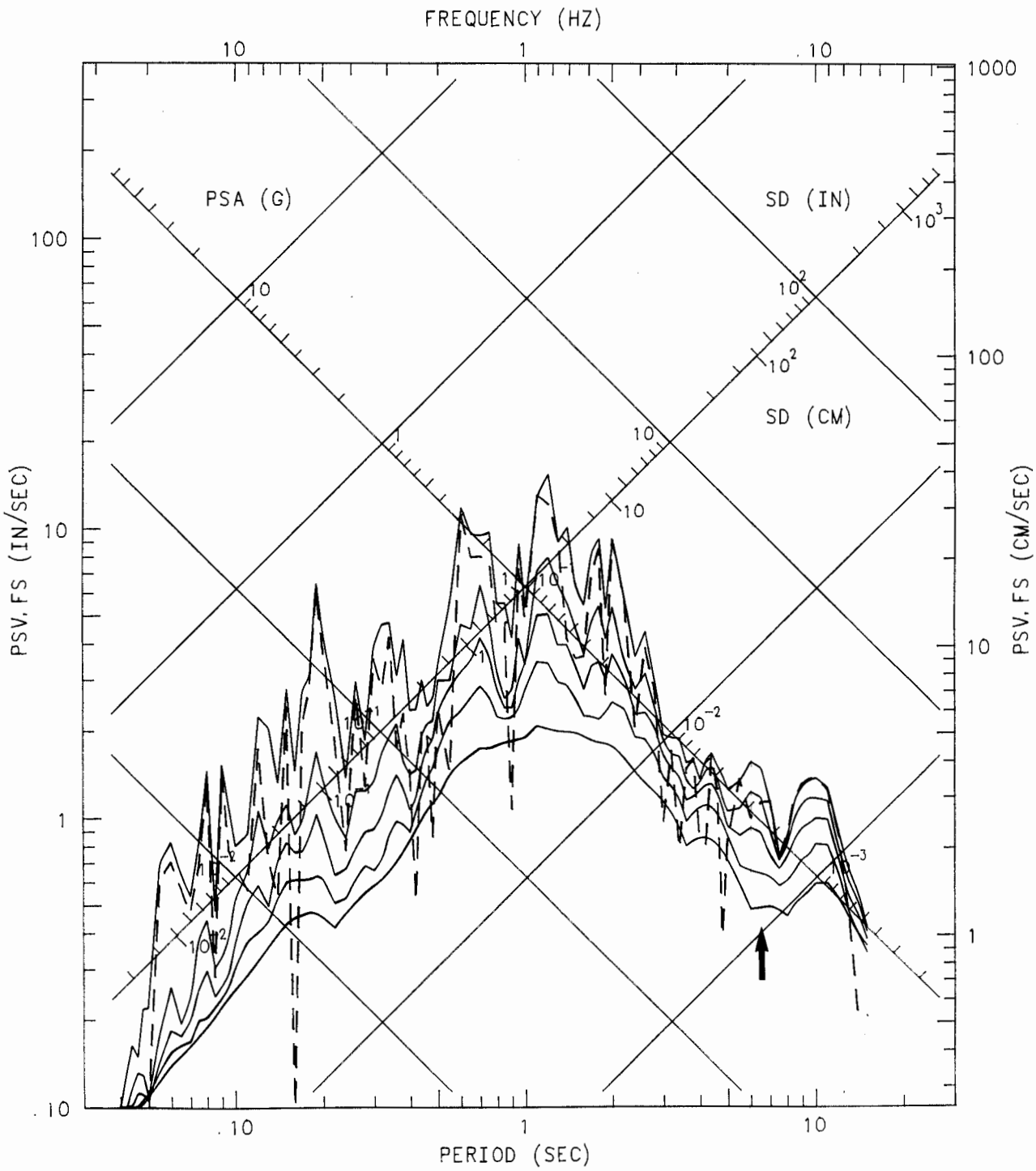
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS CHN 13: 360 DEG (BASEMENT, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57355-C0112-84116.01 020485.1222-QM84A355



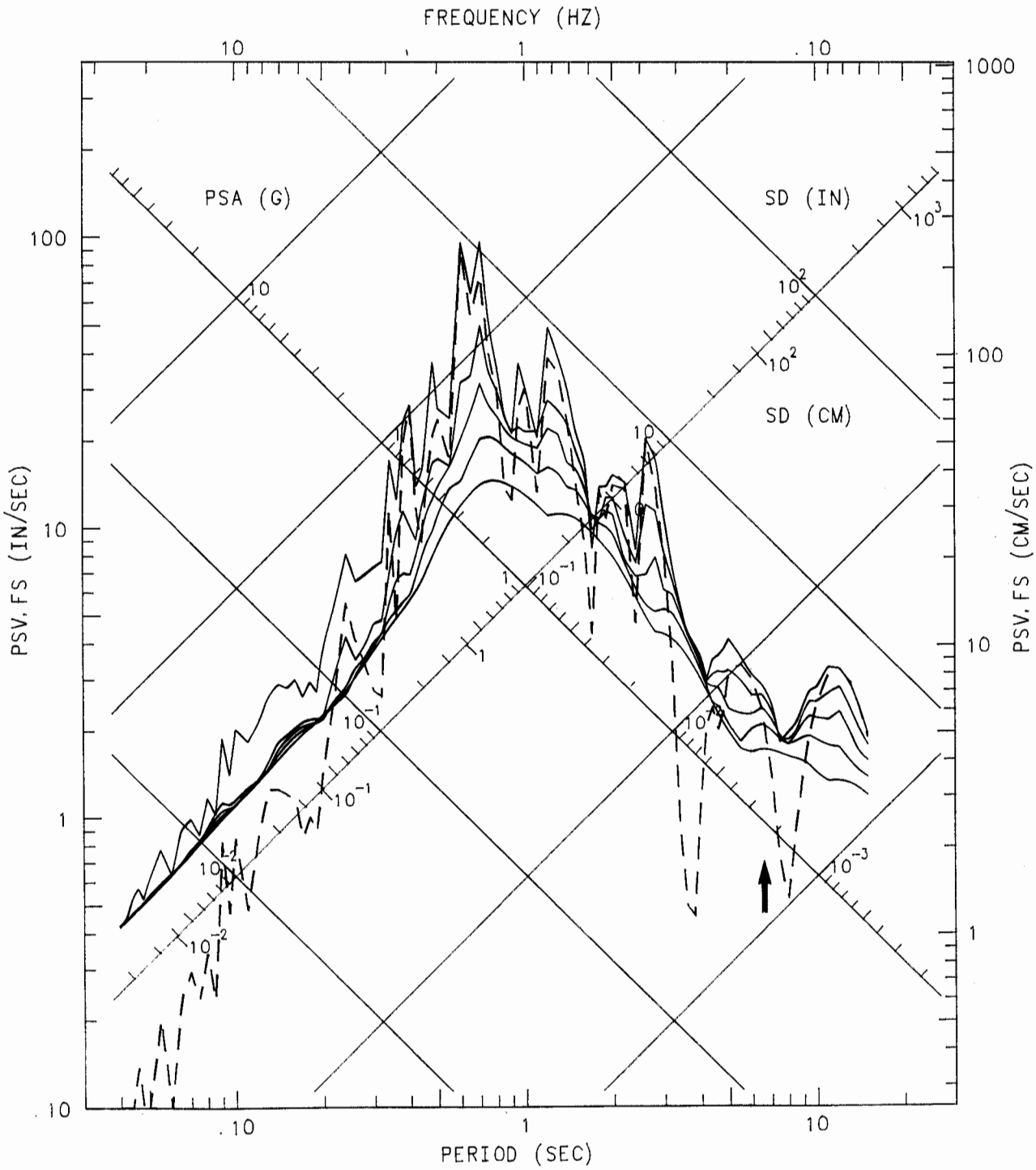
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 1: UP (BASEMENT, EAST END OF SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



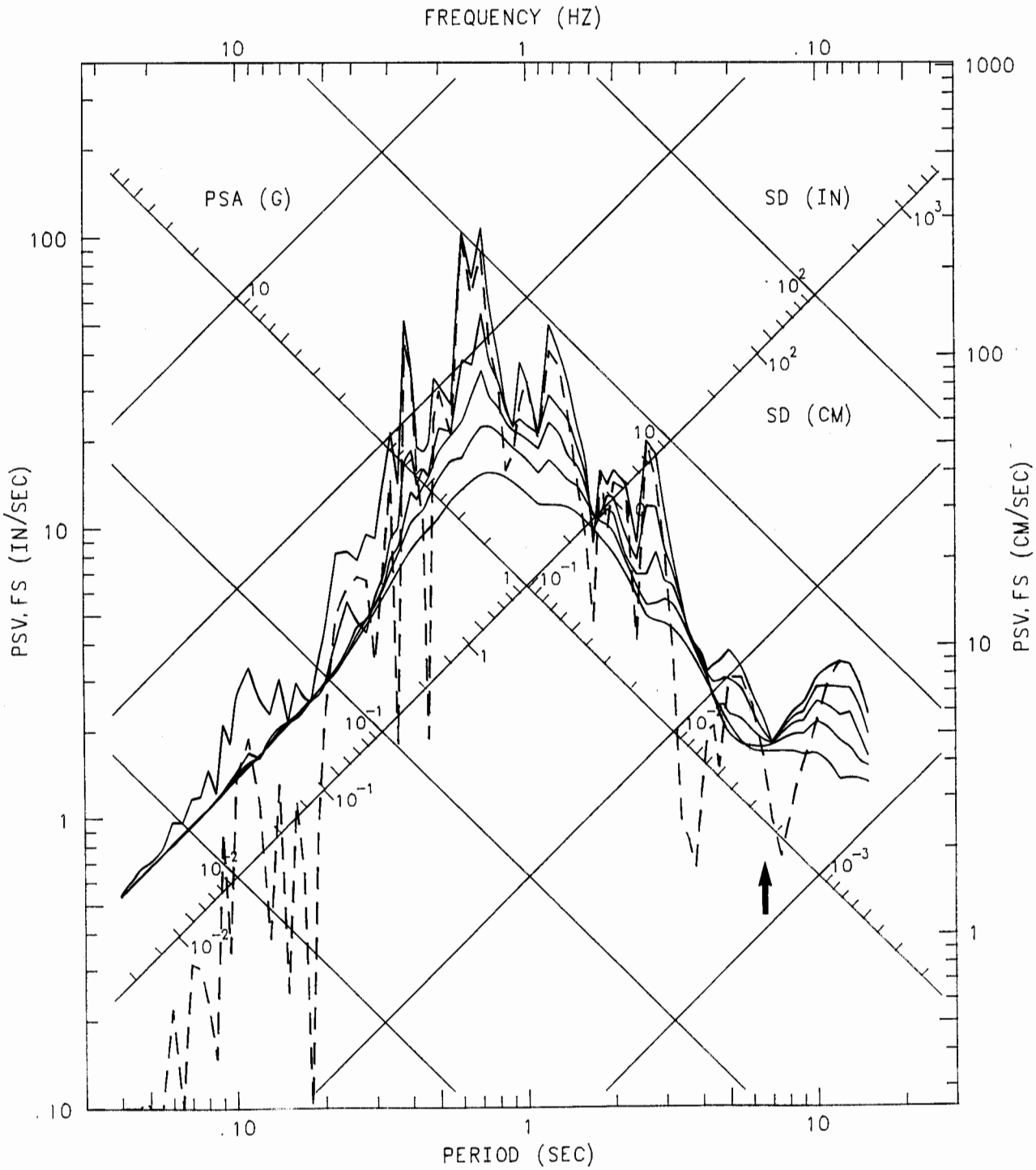
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 2: UP (BASEMENT, WEST END OF SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



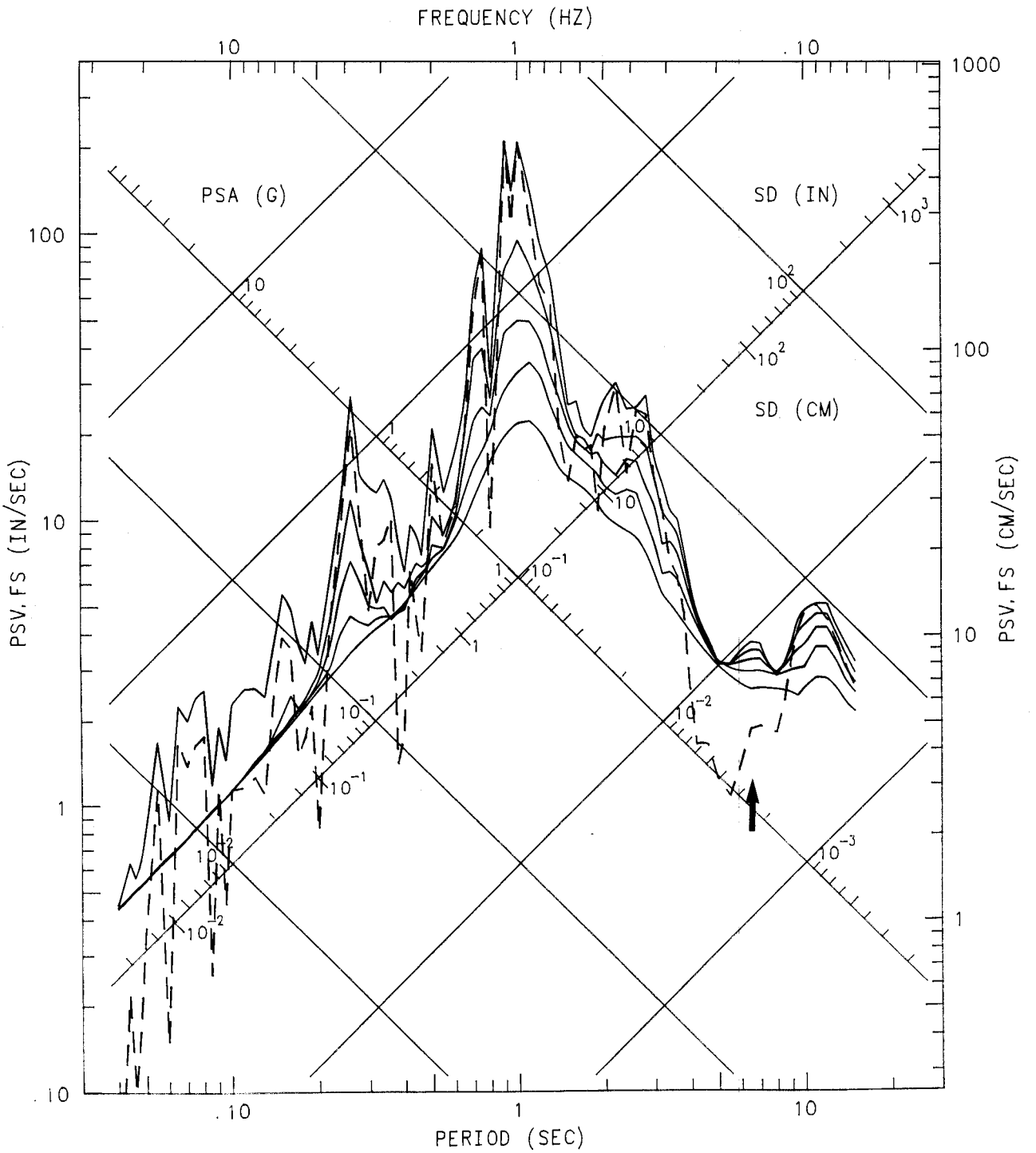
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 3: 270 DEG (ROOF, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



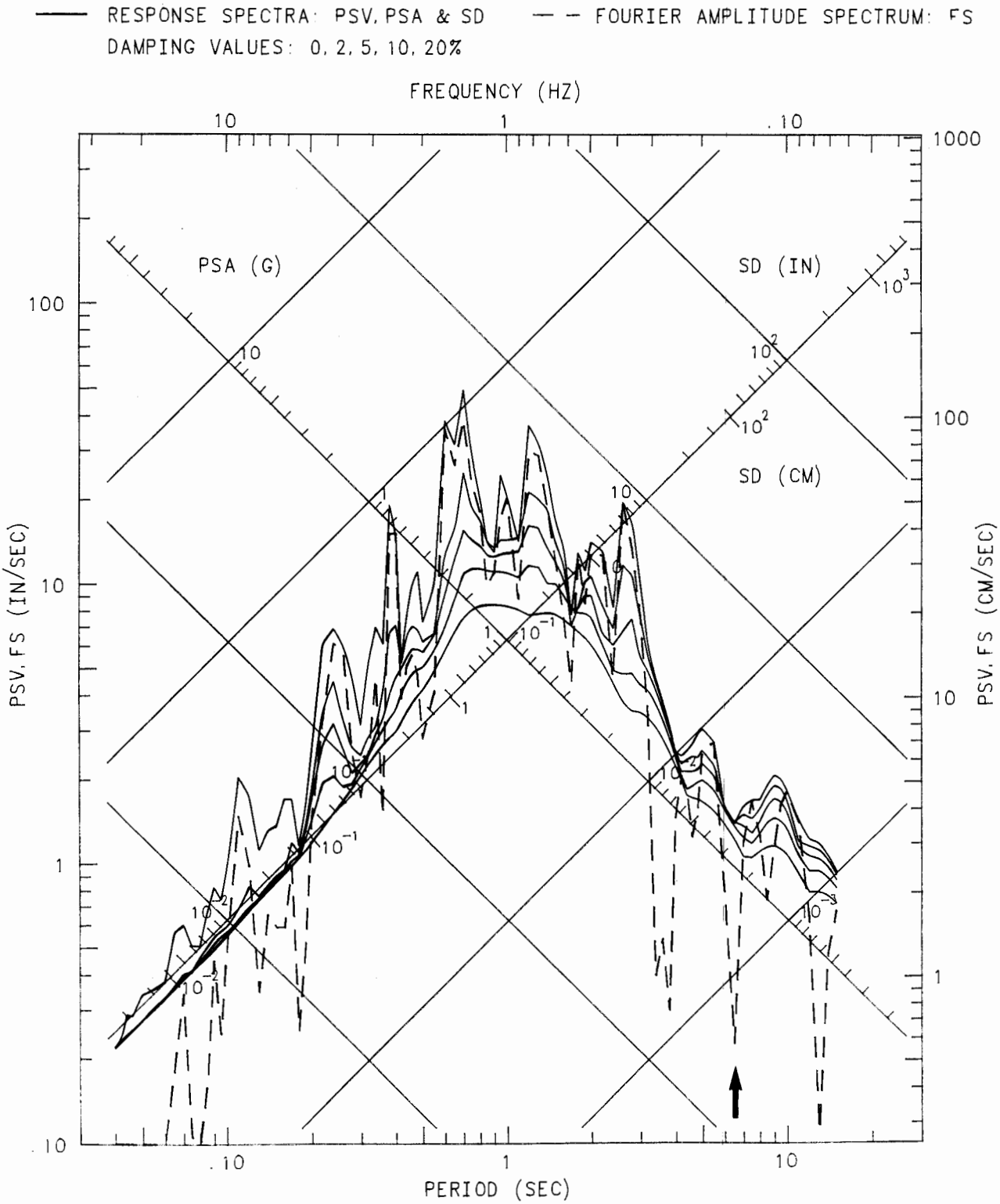
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 4: 270 DEG (ROOF, AT NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



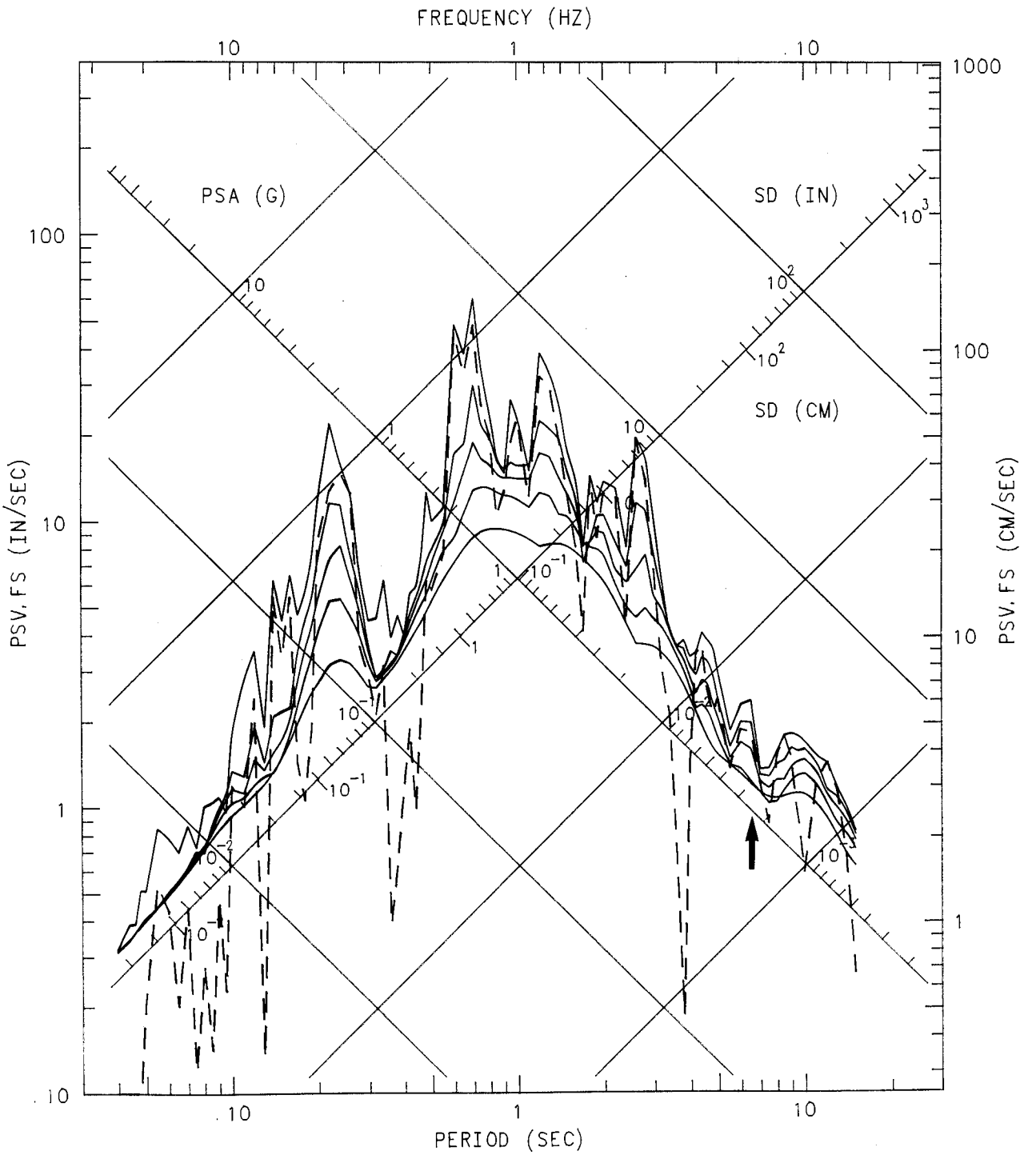
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 5: 360 DEG (ROOF, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



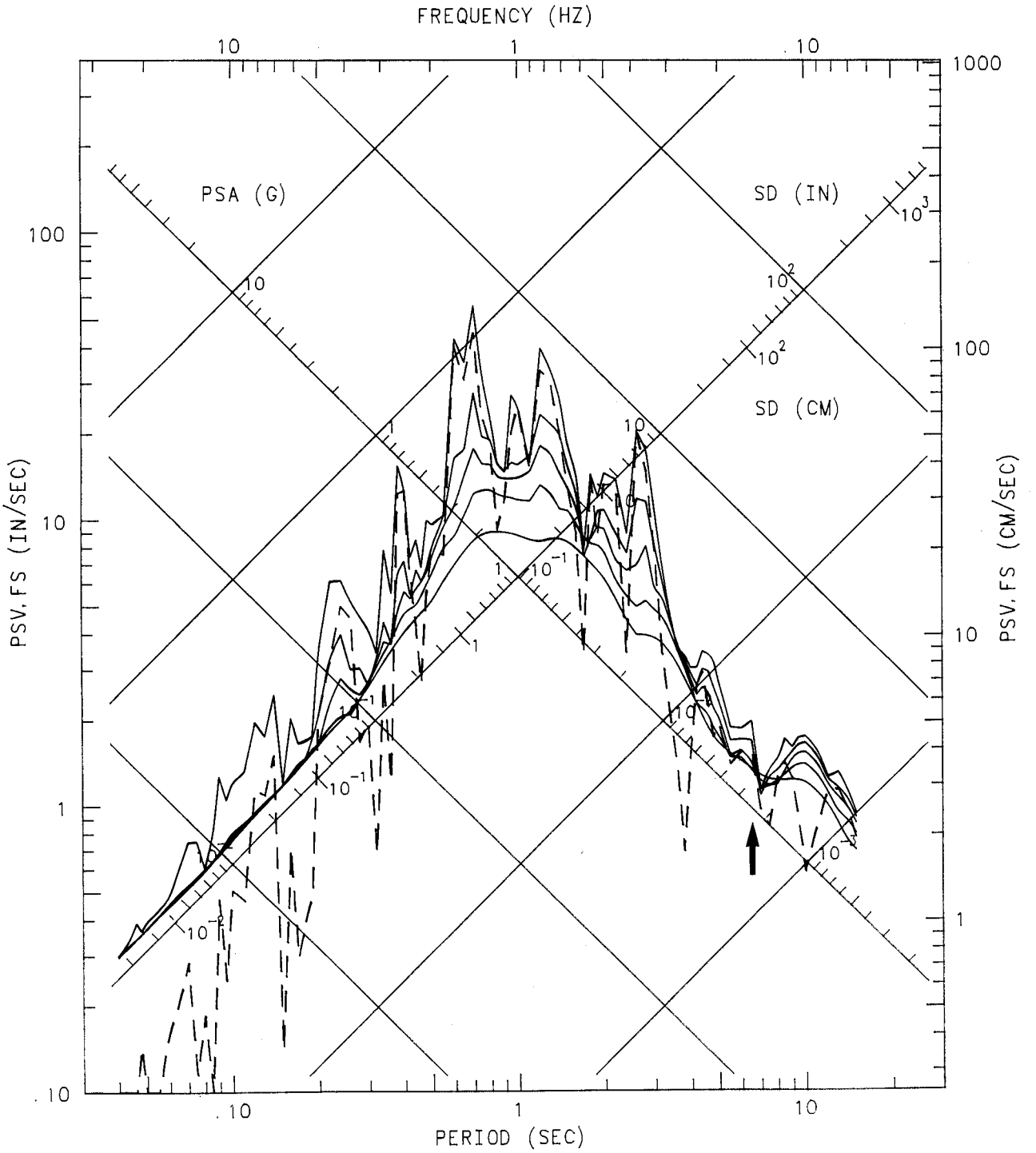
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 6: 270 DEG (5TH FLOOR, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



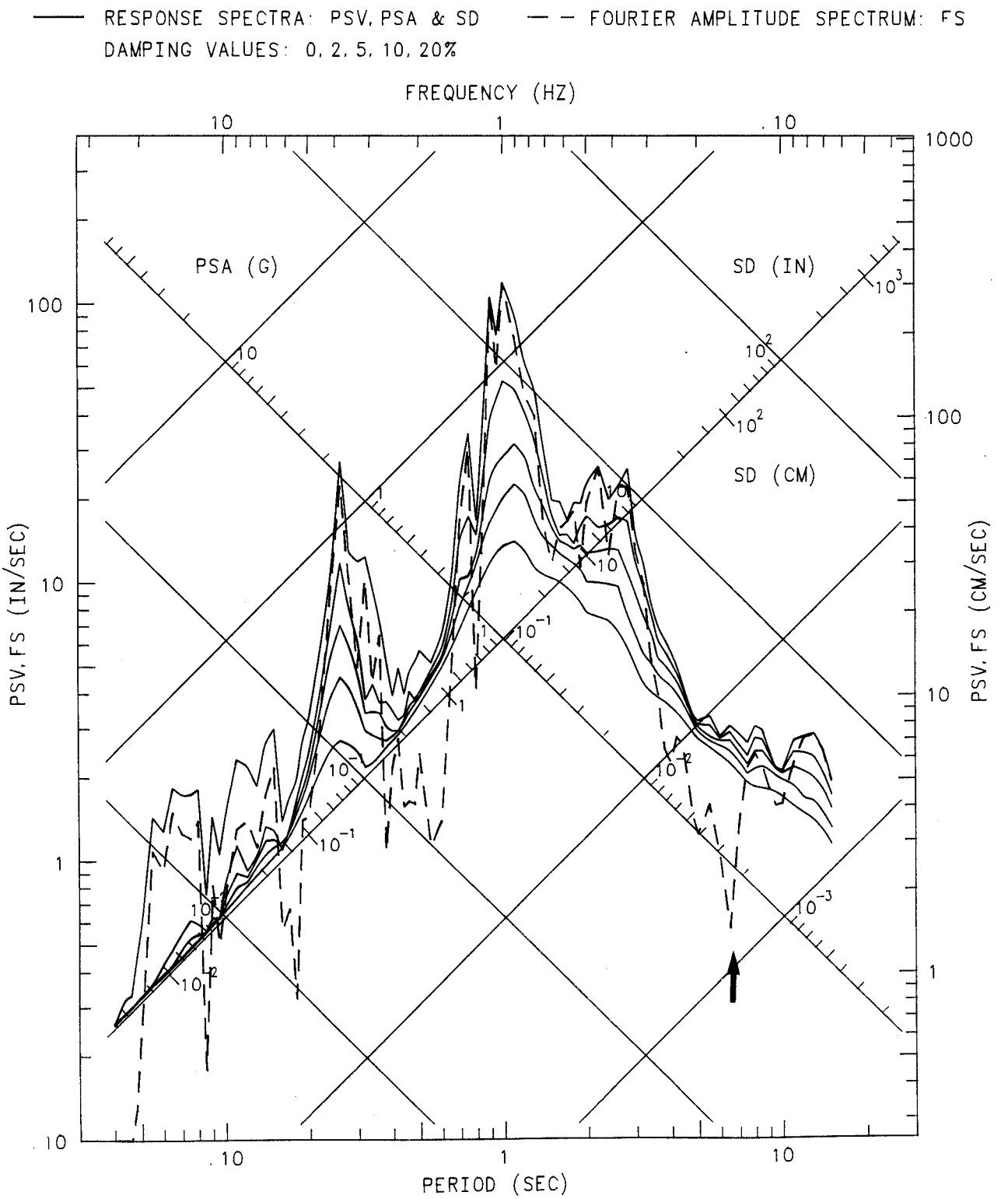
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 7: 270 DEG (5TH FLOOR, AT CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



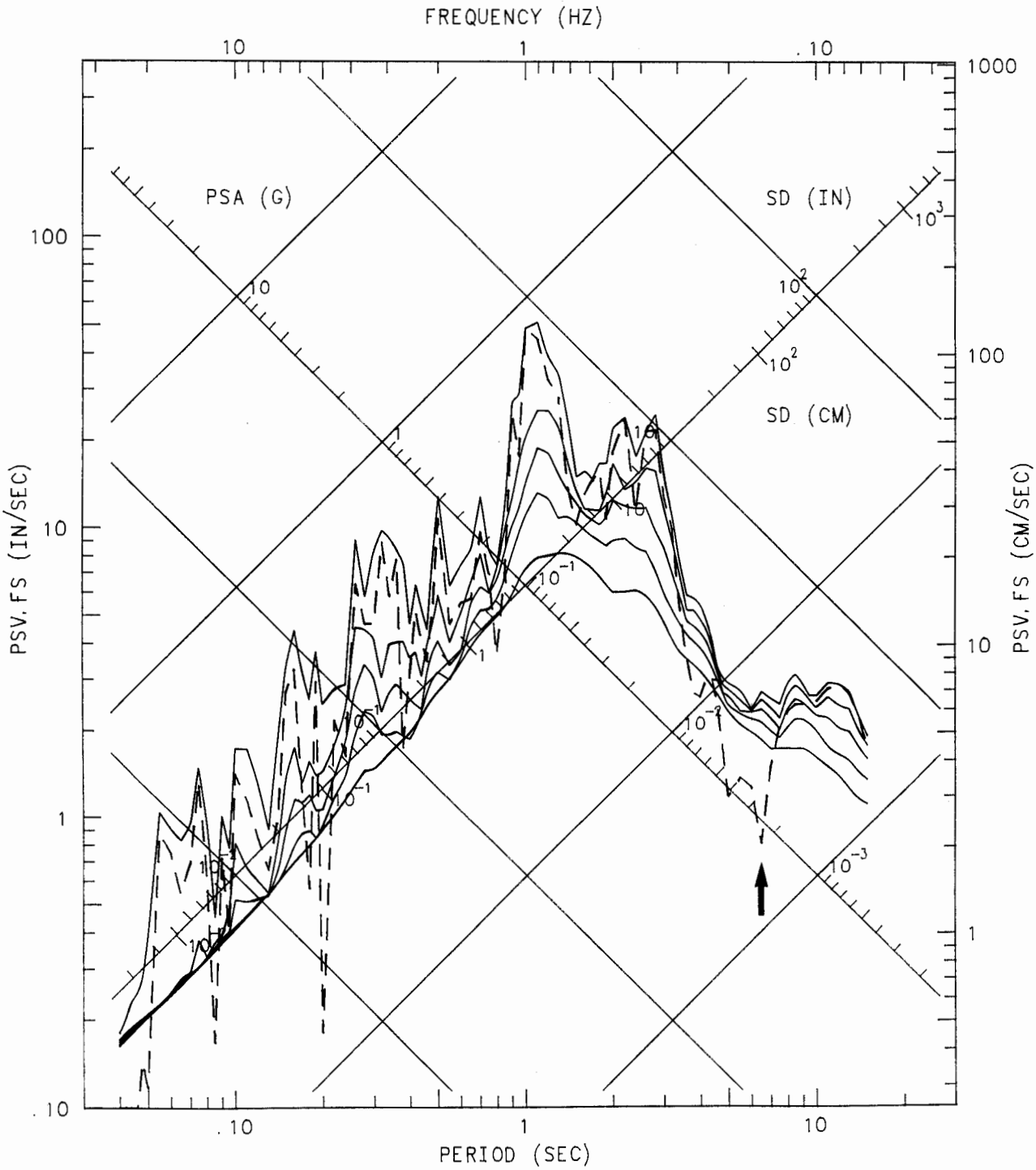
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 8: 270 DEG (5TH FLOOR, AT NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



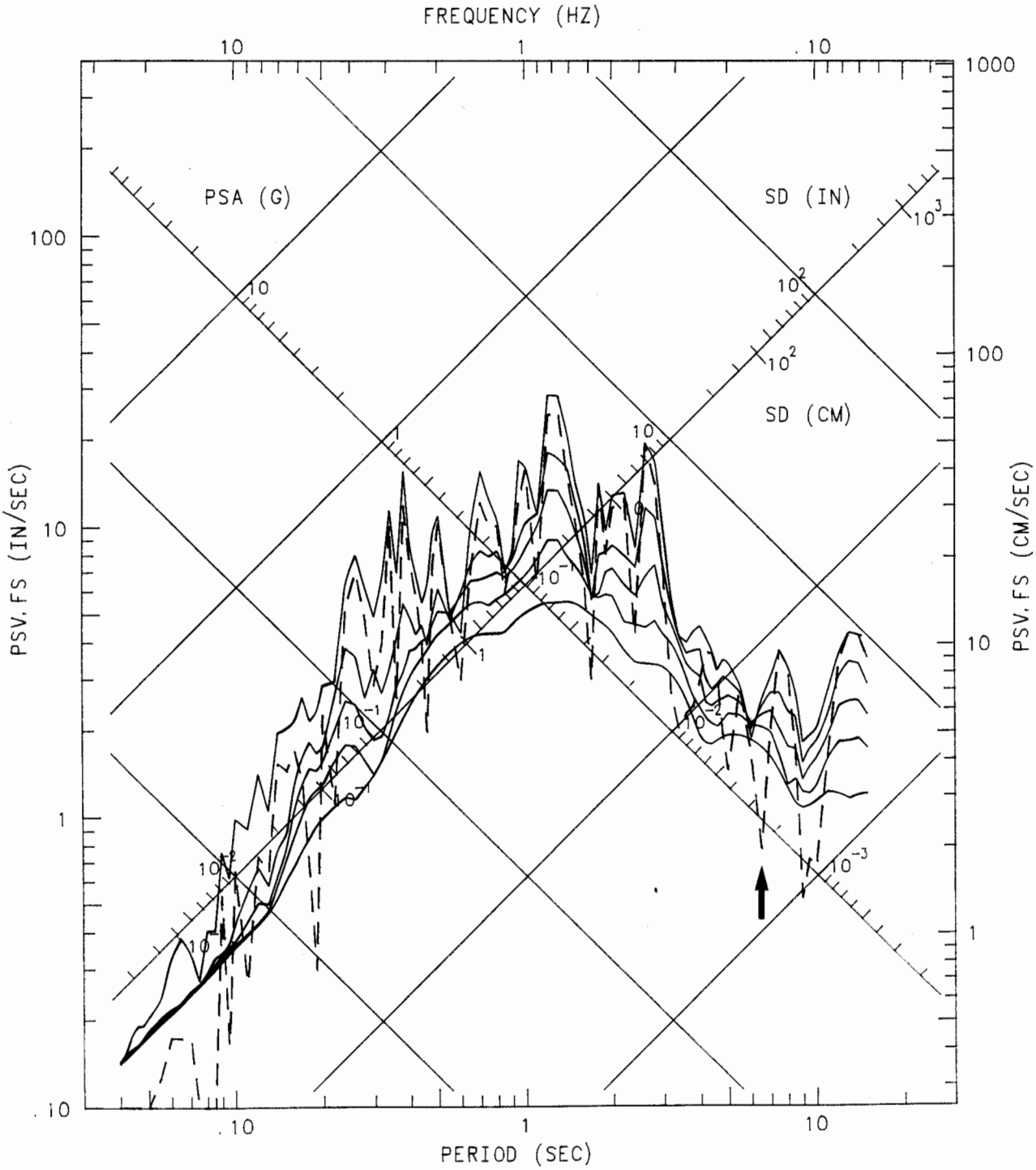
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 9: 360 DEG (5TH FLOOR, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



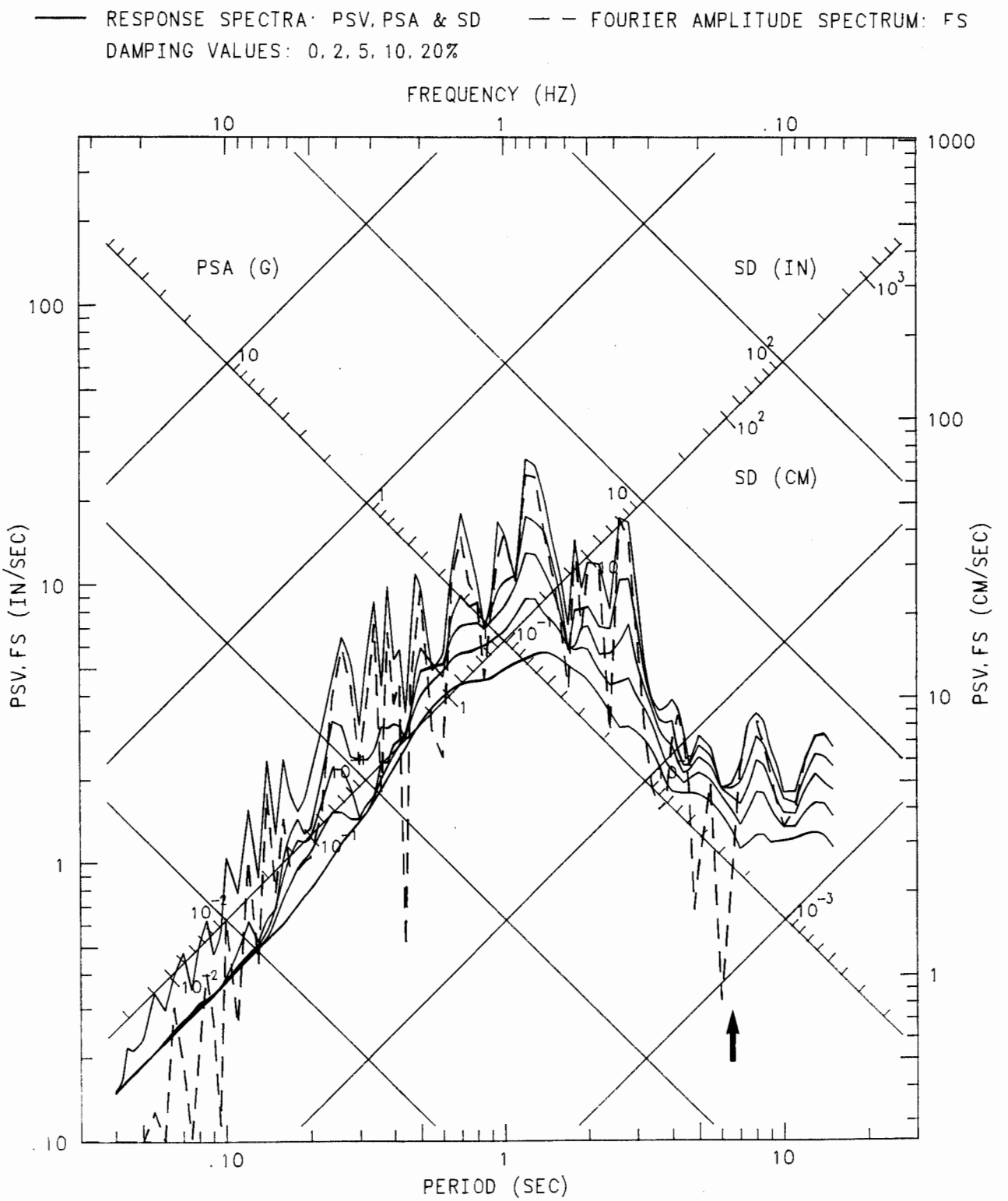
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 10: 360 DEG (2ND FLOOR, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



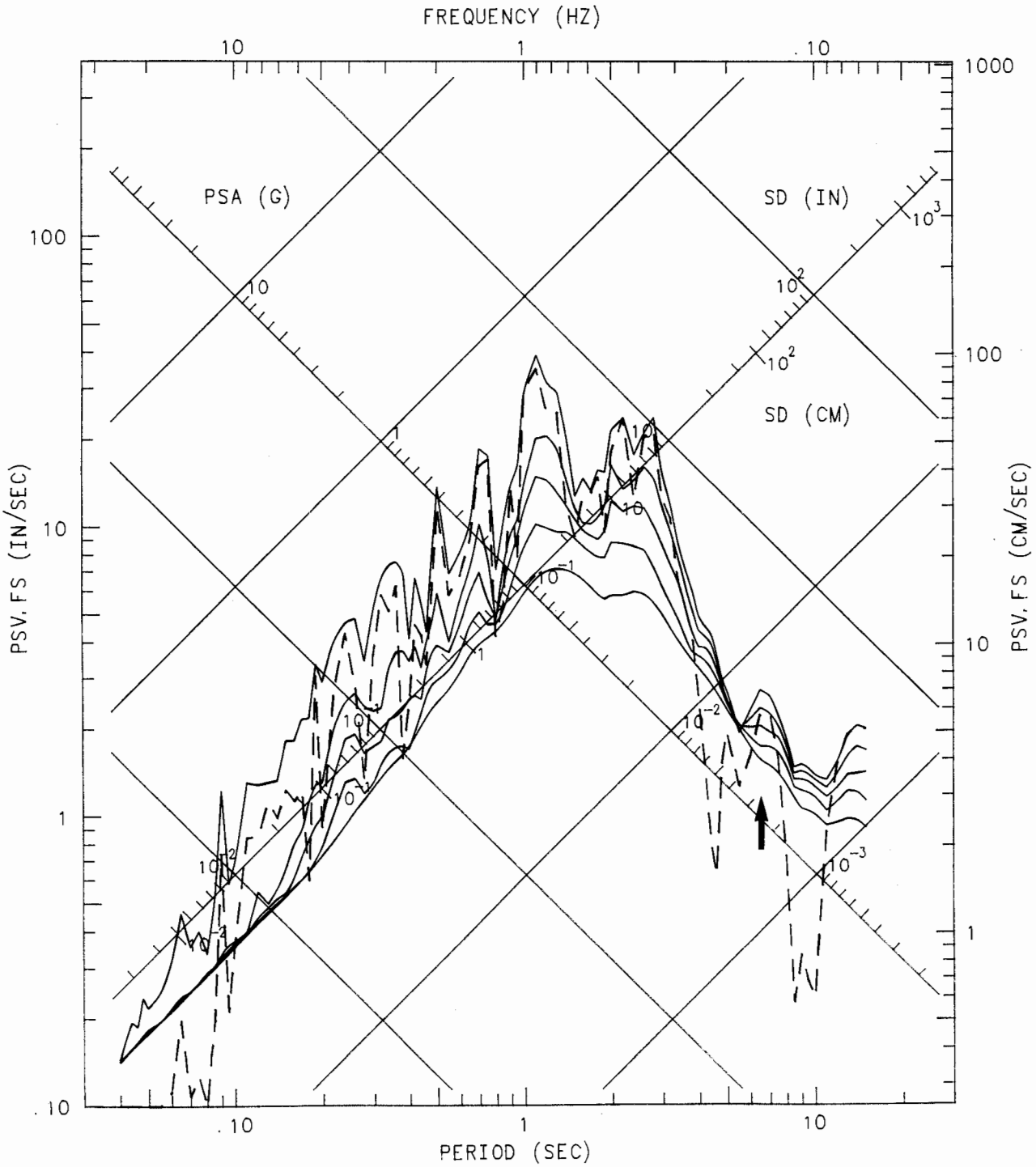
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 11: 270 DEG (BASEMENT, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 12: 270 DEG (BASEMENT, AT NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - G. W. SAVINGS
CHN 13: 360 DEG (BASEMENT, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57355-C0112-84116.01 020485.0028-QM84A355



SAN JOSE - SANTA CLARA COUNTY OFFICE BUILDING

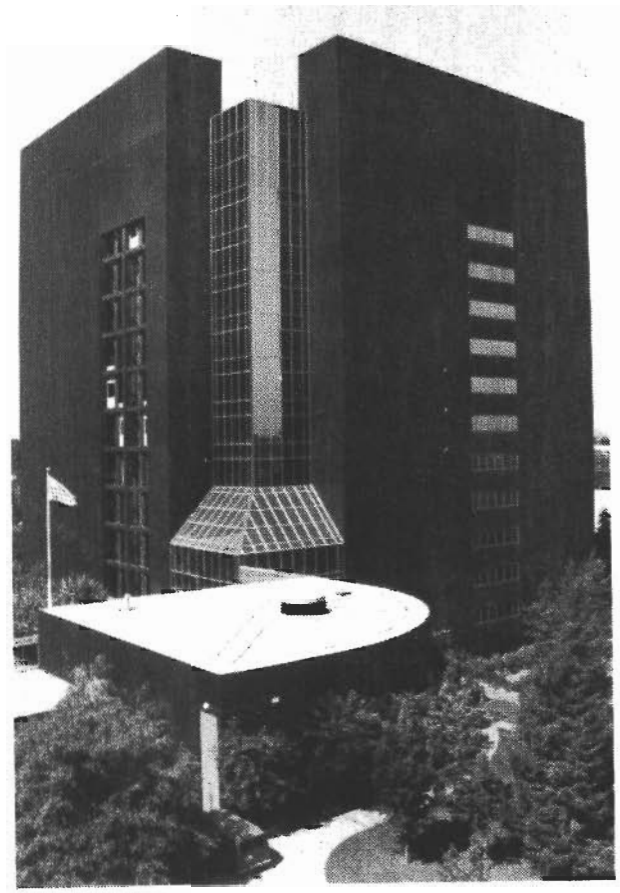
Special Notes:

The signals from the 22 sensors in this building were recorded with a common time base on two separate recorders. Sensors 1 through 12 are connected to one recorder and 13 through 22 are connected to the second recorder. The two recorders are interconnected to begin recording simultaneously (within 0.1 second, nominal).

A free field instrument was deployed in the parking lot near the building. Unfortunately, it was removed at the request of the building owner prior to the earthquake.

San Jose - Santa Clara County Office Bldg.

Northeast Side View



Southwest Side View

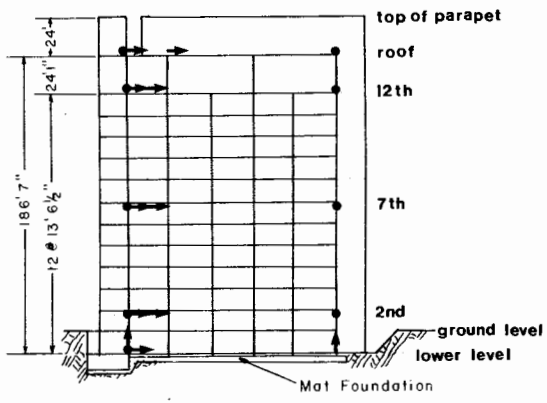
San Jose - Santa Clara County Office Bldg.

Address: 70 West Hedding Street
San Jose, California
Coordinates: 37.353°N, 121.903°W
No. of Stories above/below ground: 12 / 1
Plan Type: Rectangular
Base Dimensions: 173' x 167'
Typical Floor Dimensions: 167' x 167'
Design Date: 1972
Construction Date: 1975-76

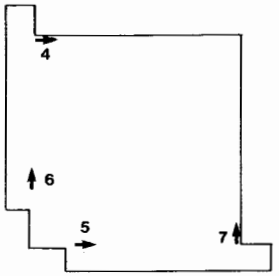
Vertical Load Carrying System:
3 1/2" concrete slab on metal deck; steel columns, beams and joists.
Lateral Force Resisting System:
Moment-resistant steel frame.
Foundation Type:
Mat foundation.

SENSOR LAYOUT

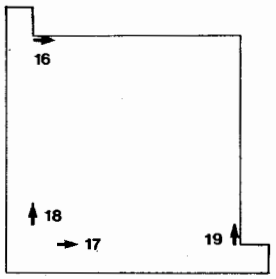
San Jose-Santa Clara County Bldg.
CSMIP Station No. 57357



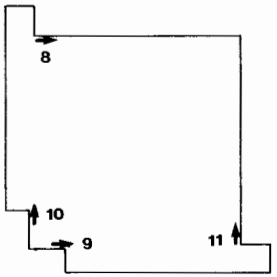
E-W Section



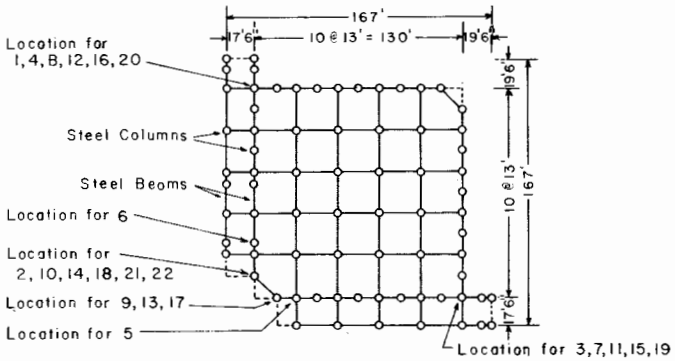
Roof Plan



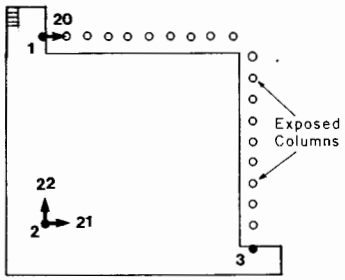
2nd Floor Plan



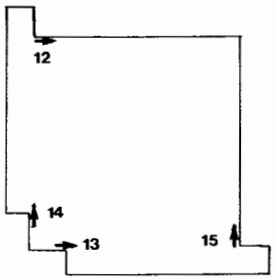
12th Floor Plan



Typical Floor Plan

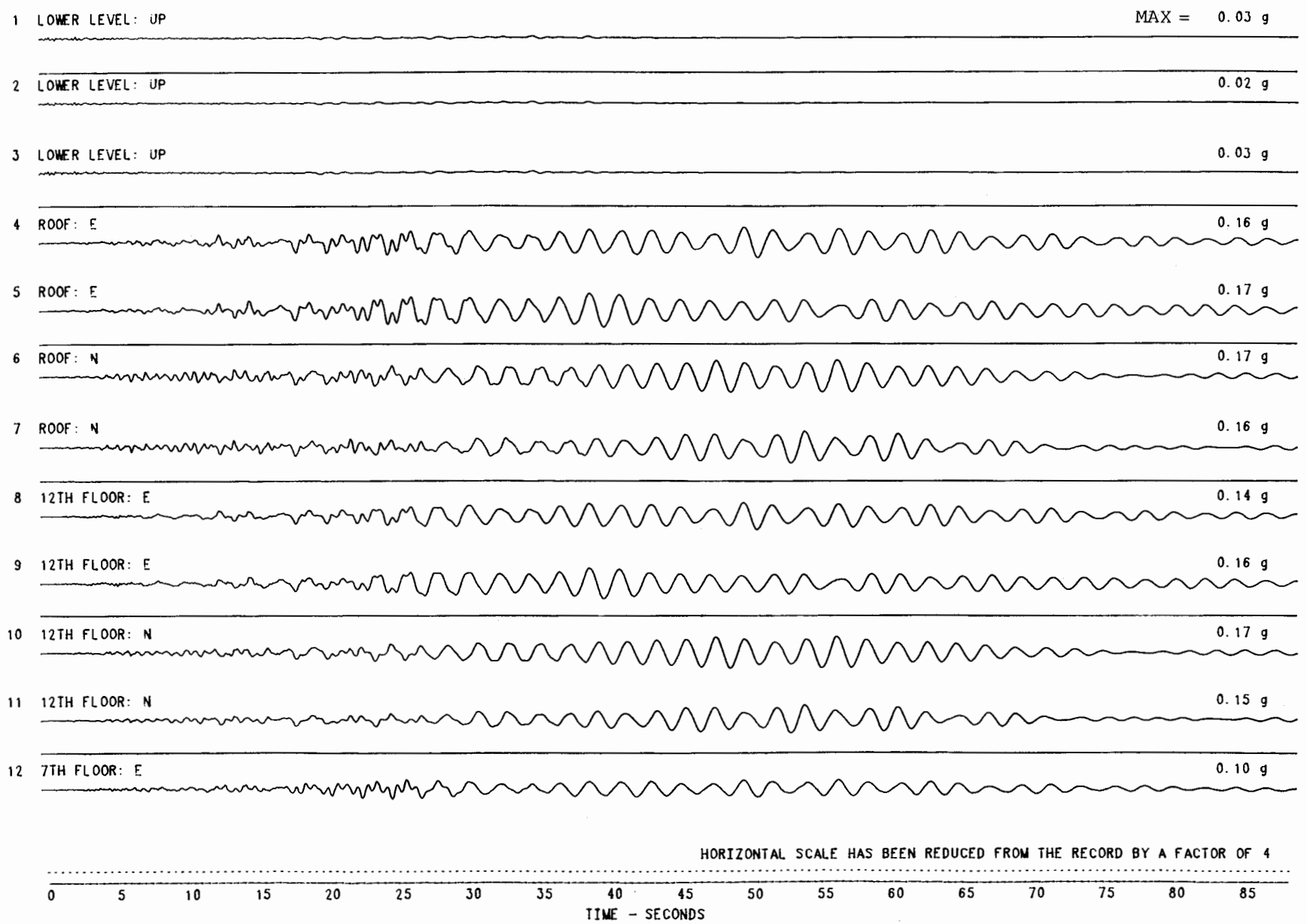


Lower Level Plan

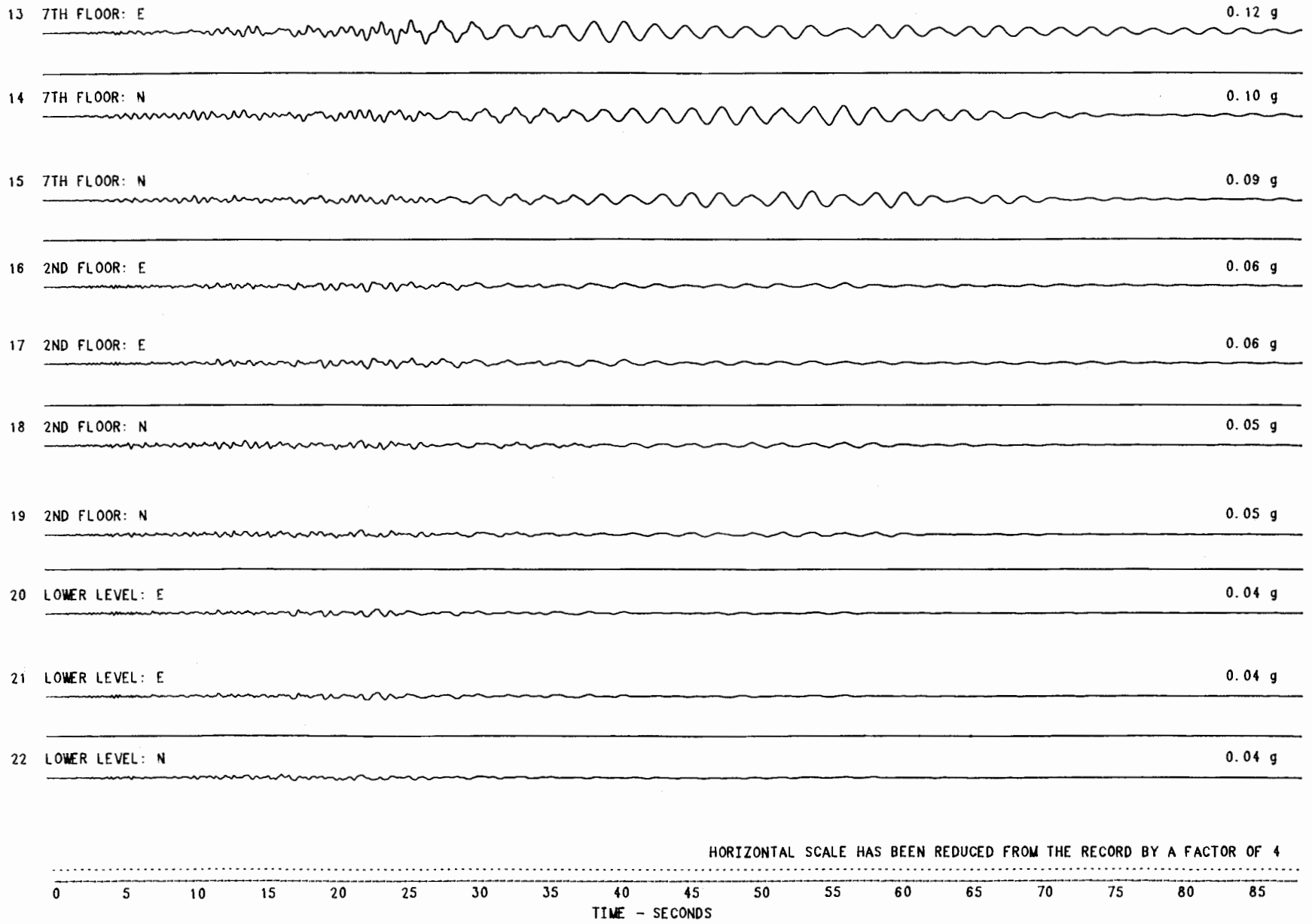


7th Floor Plan

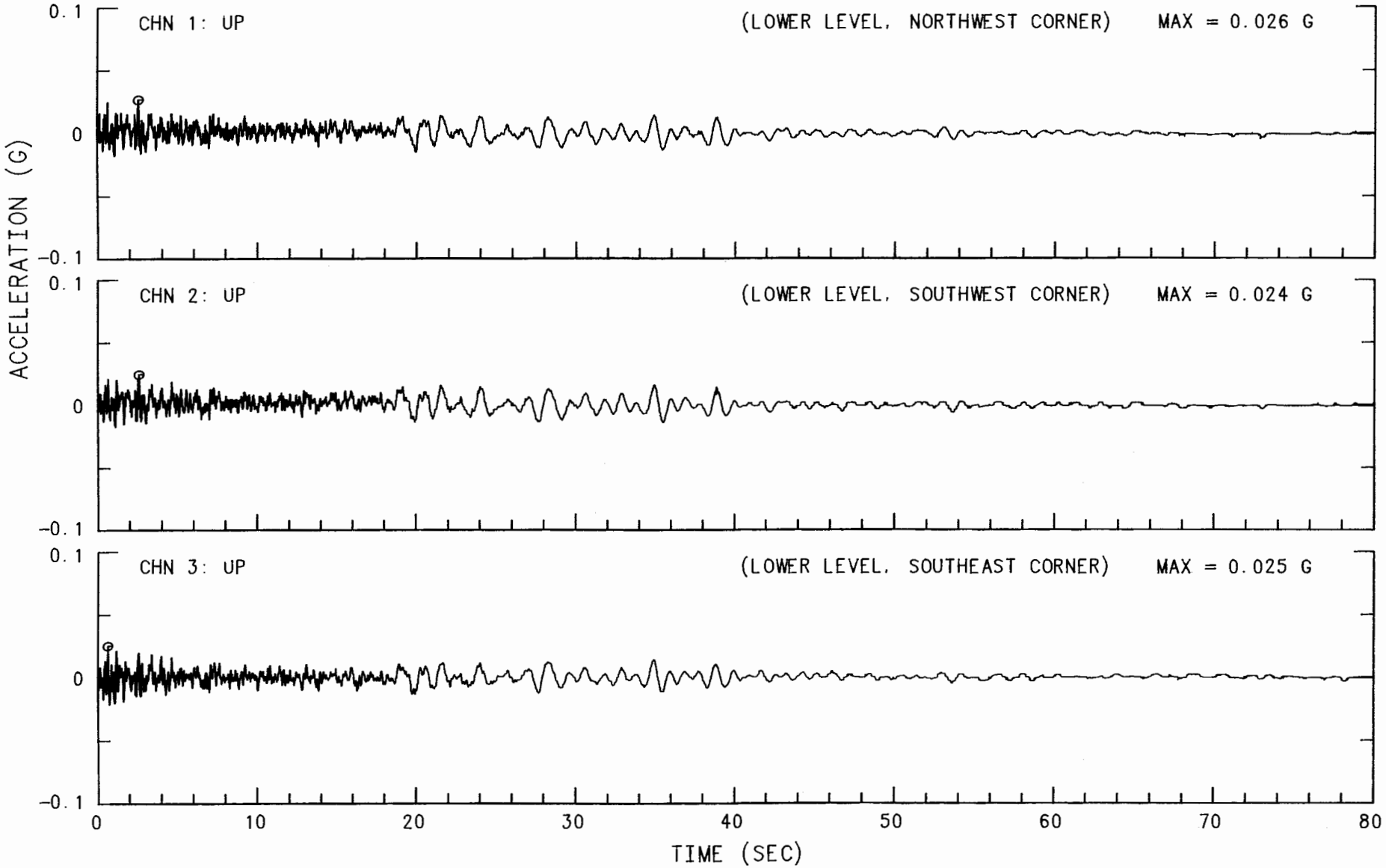
SAN JOSE - SANTA CLARA CO. BLDG. RECORD 57357-C0185-84115.01 MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST



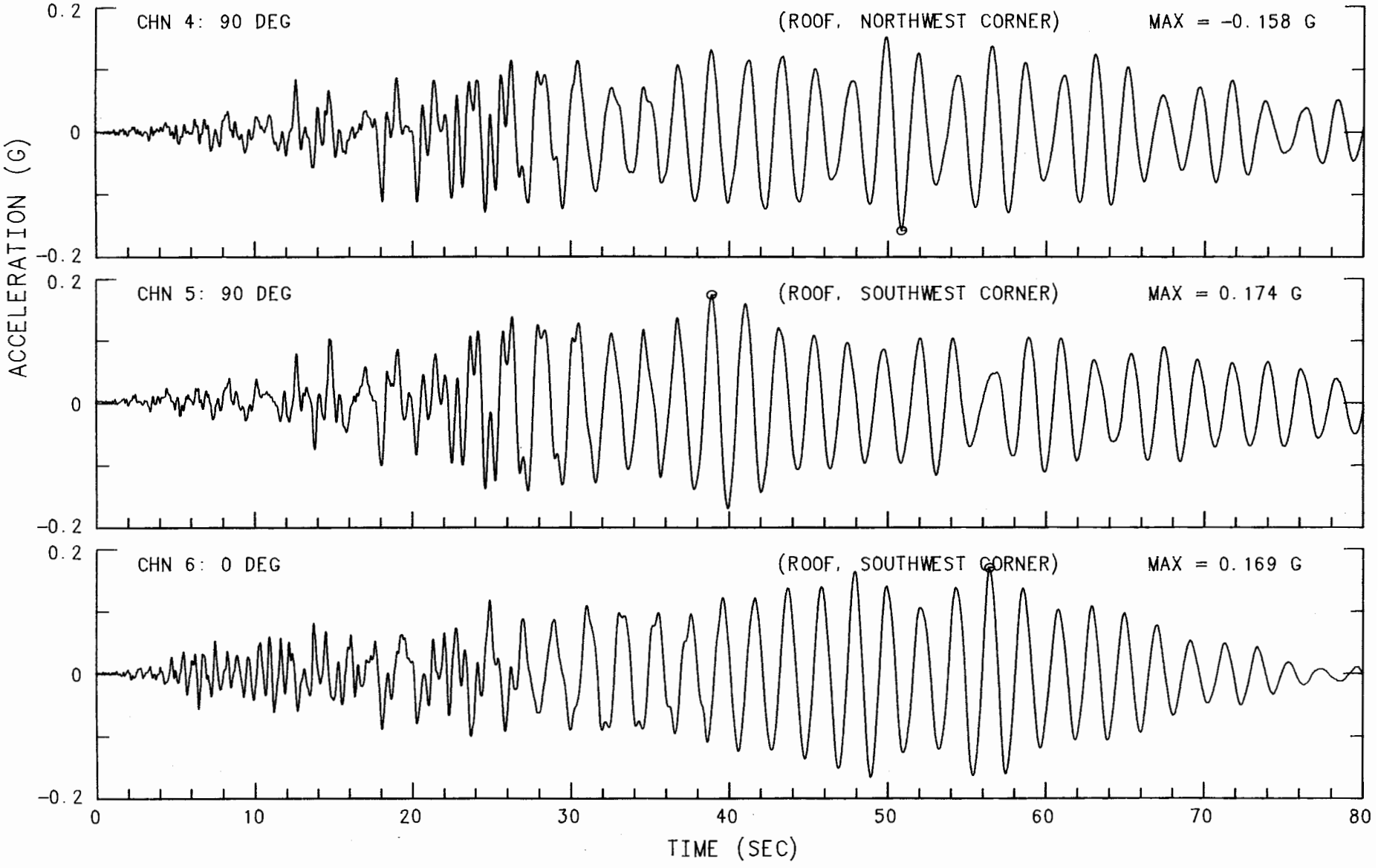
SAN JOSE - SANTA CLARA CO. BLDG. RECORD 57357-C0145-84115.01 MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST



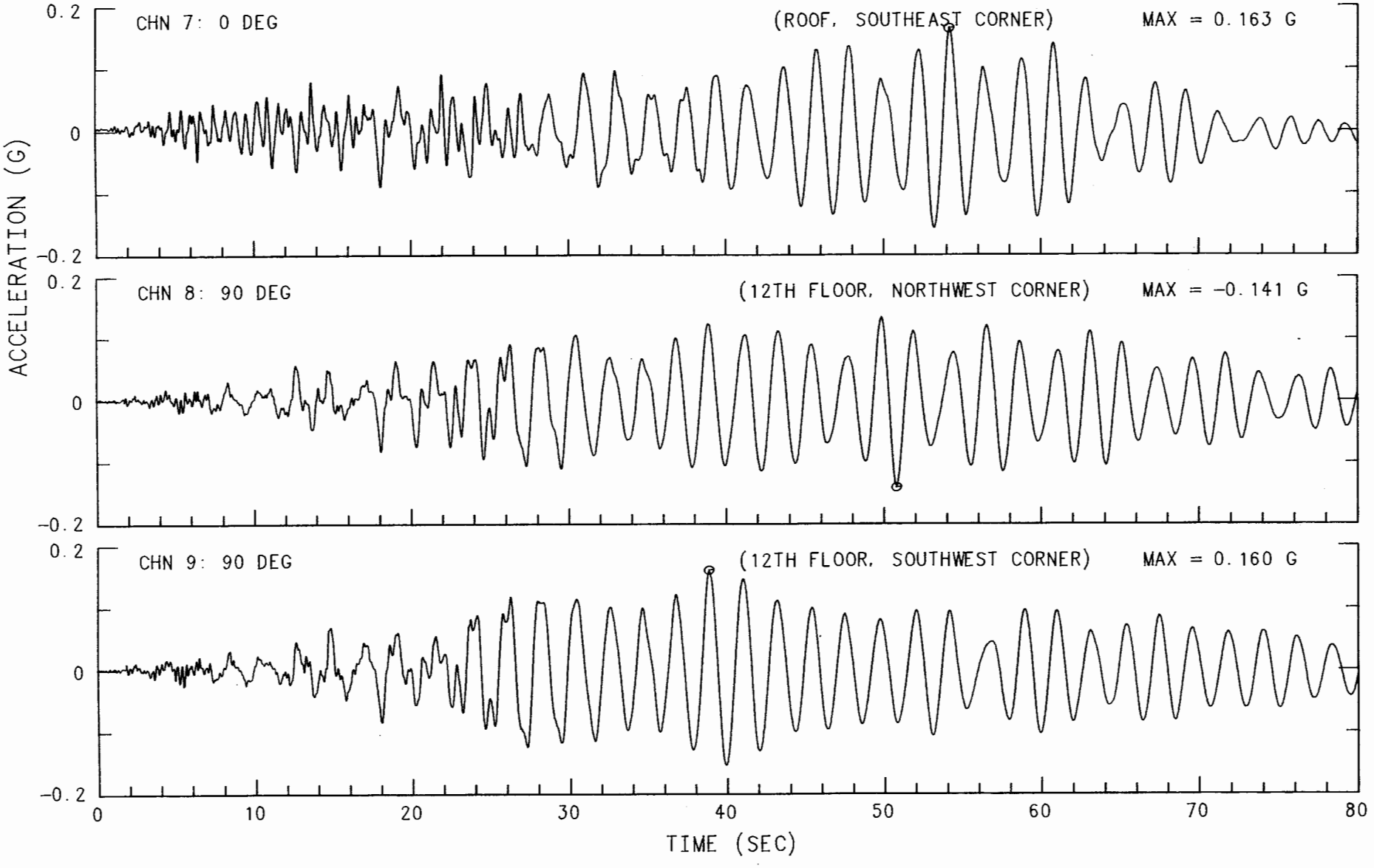
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
UNCORRECTED ACCELEROGRAM 57357-C0185-84115.01 032985.2243-QM84A357



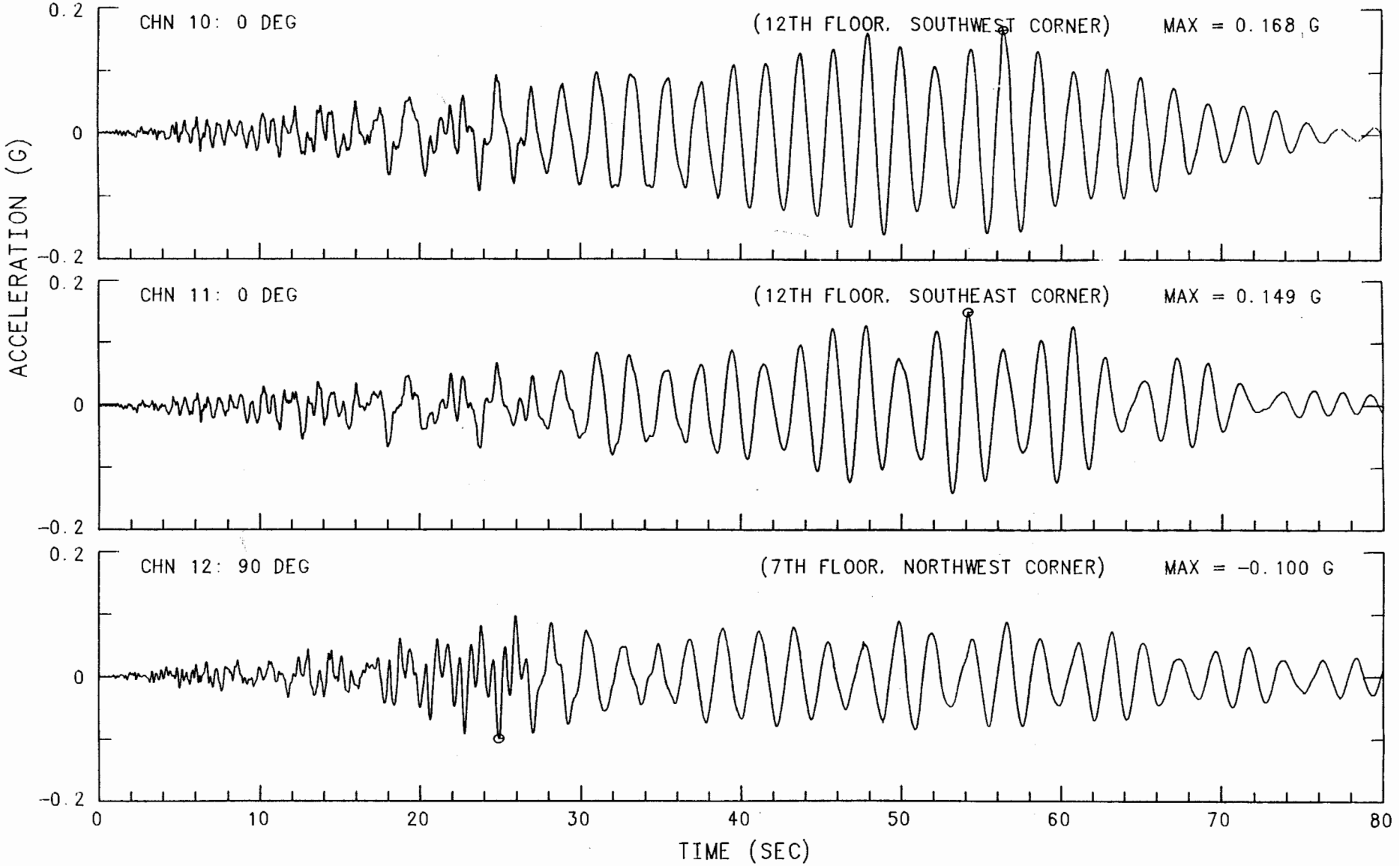
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
UNCORRECTED ACCELEROGRAM 57357-C0185-84115.01 032985.2243-QM84A357



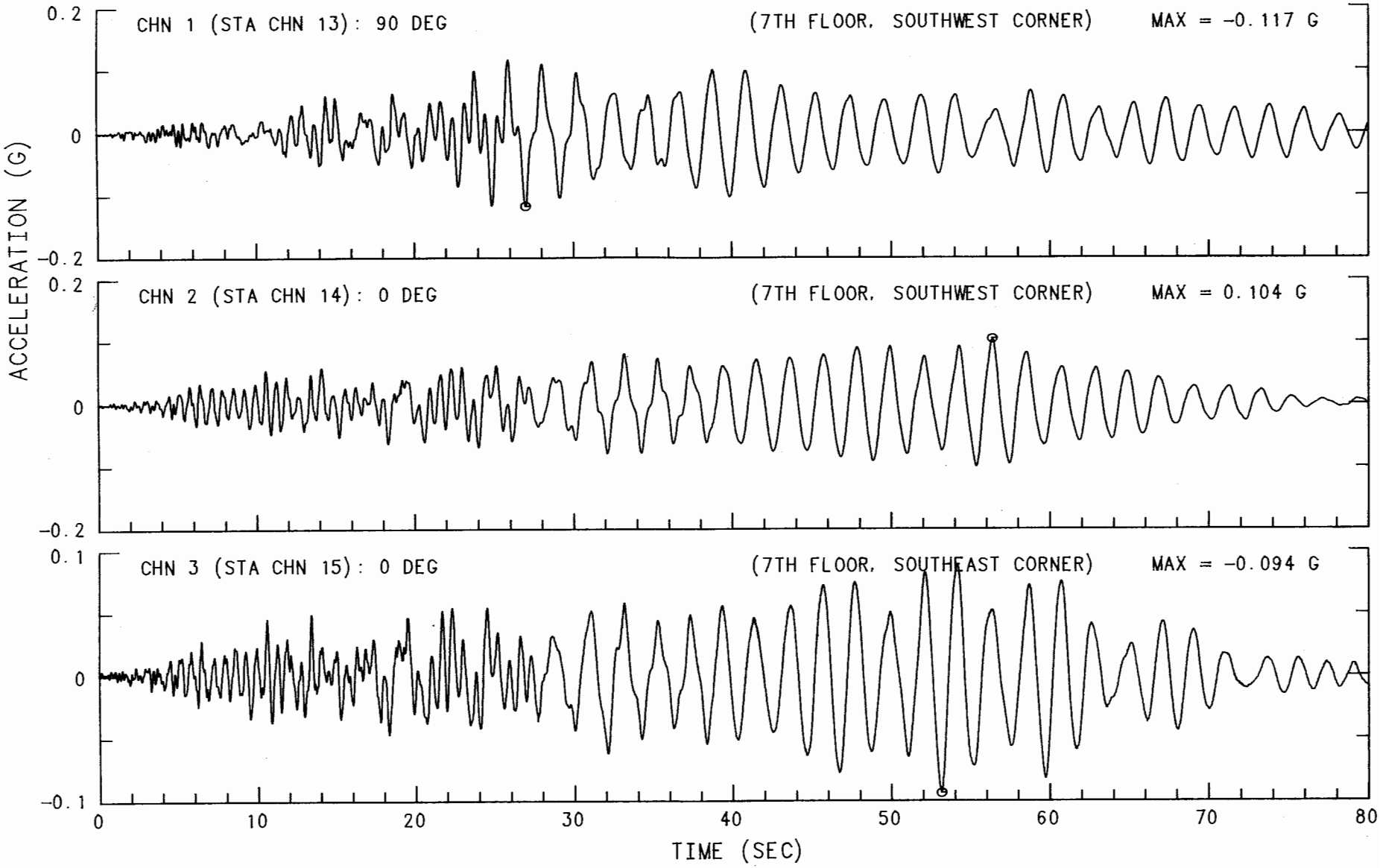
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
UNCORRECTED ACCELEROGRAM 57357-C0185-84115.01 032985.2243-QM84A357



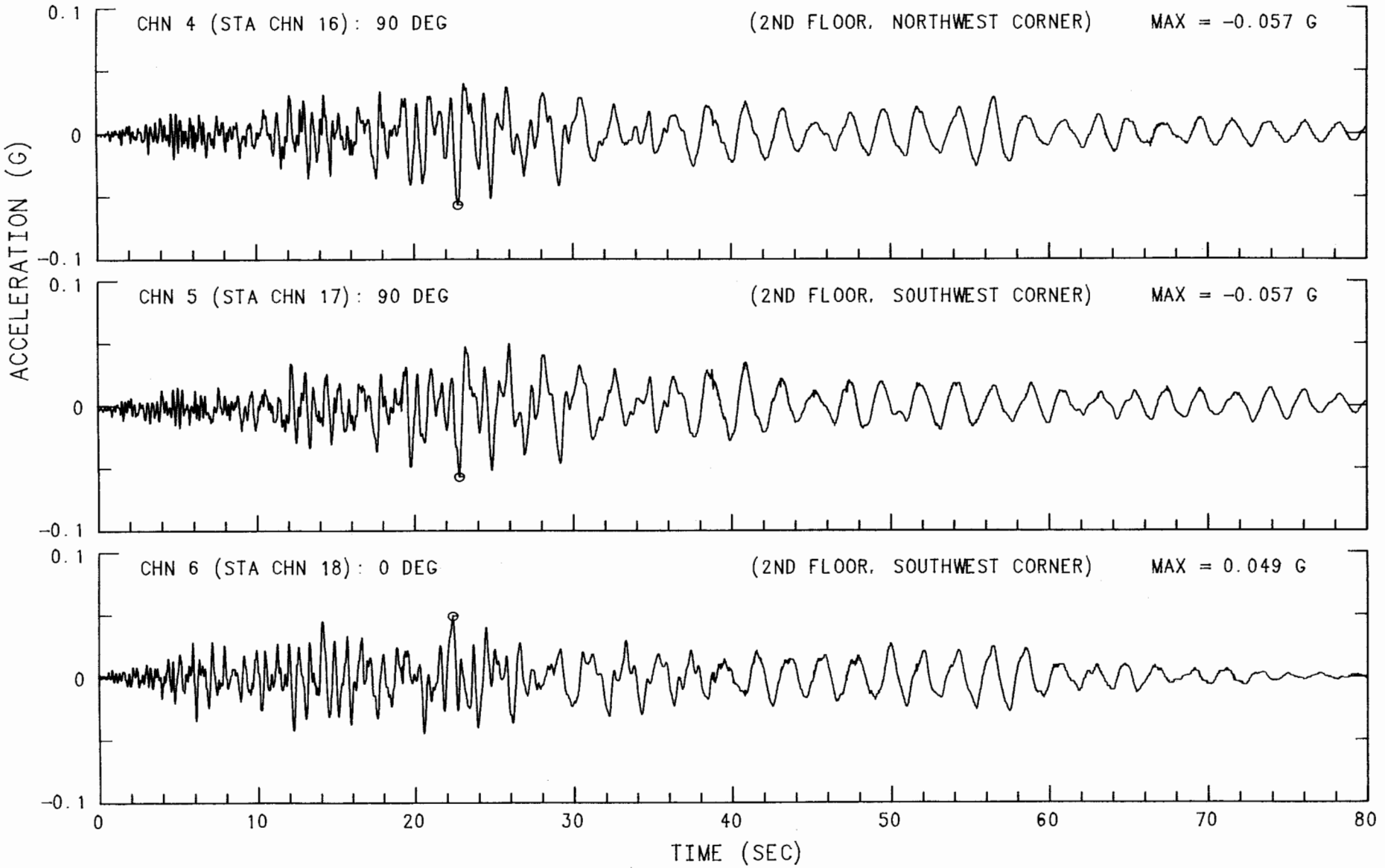
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
UNCORRECTED ACCELEROGRAM 57357-C0185-84115.01 032985.2243-QM84A357



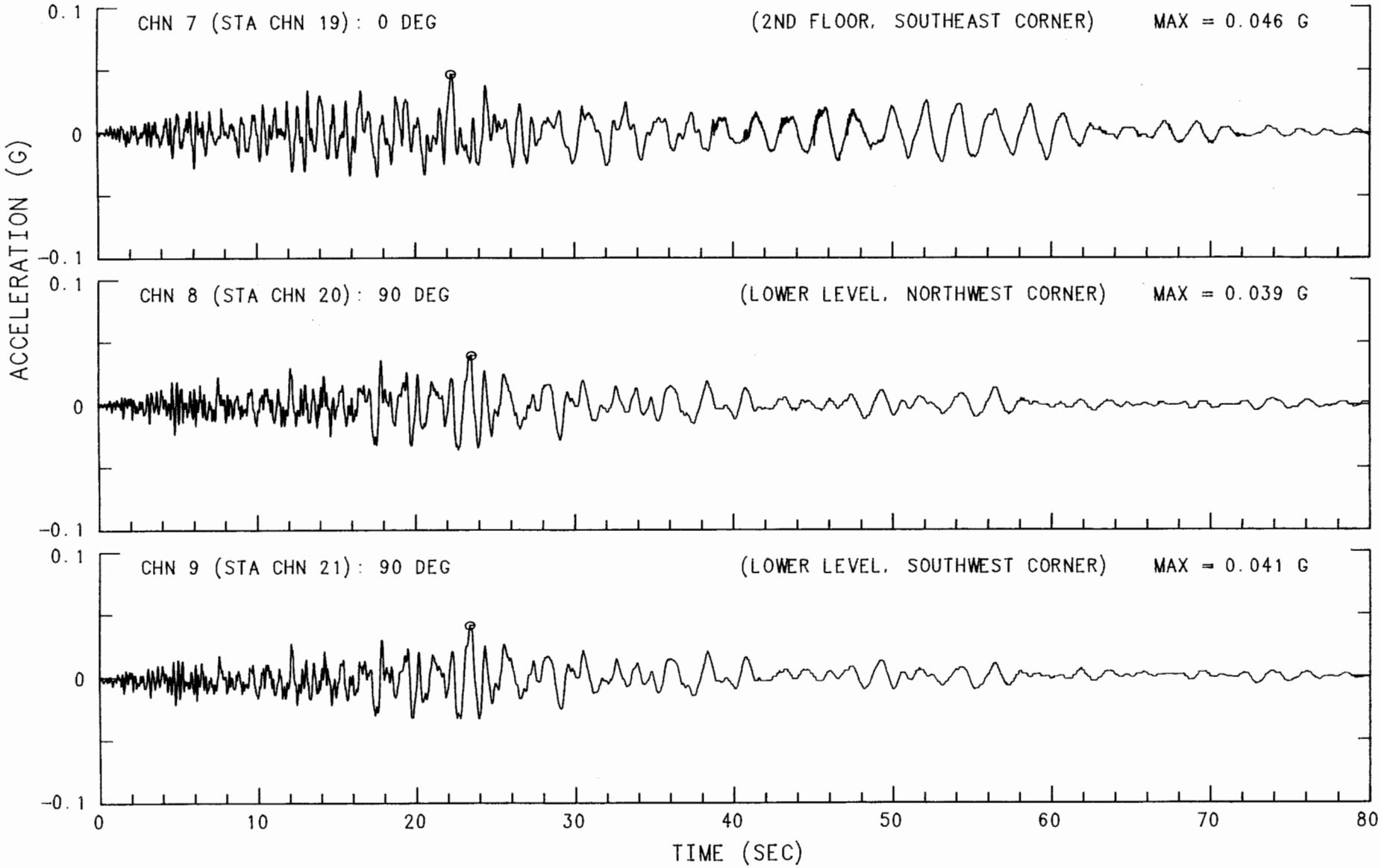
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
UNCORRECTED ACCELEROGRAM 57357-C0145-84115.01 041285.1706-QM84A357A2



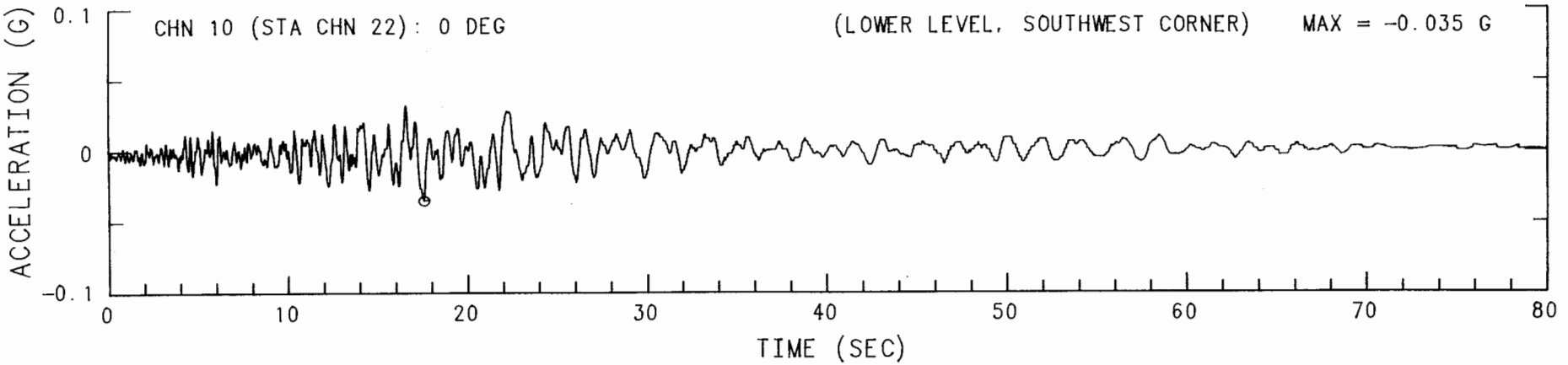
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
UNCORRECTED ACCELEROGRAM 57357-C0145-84115.01 041285.1706-QM84A357A2



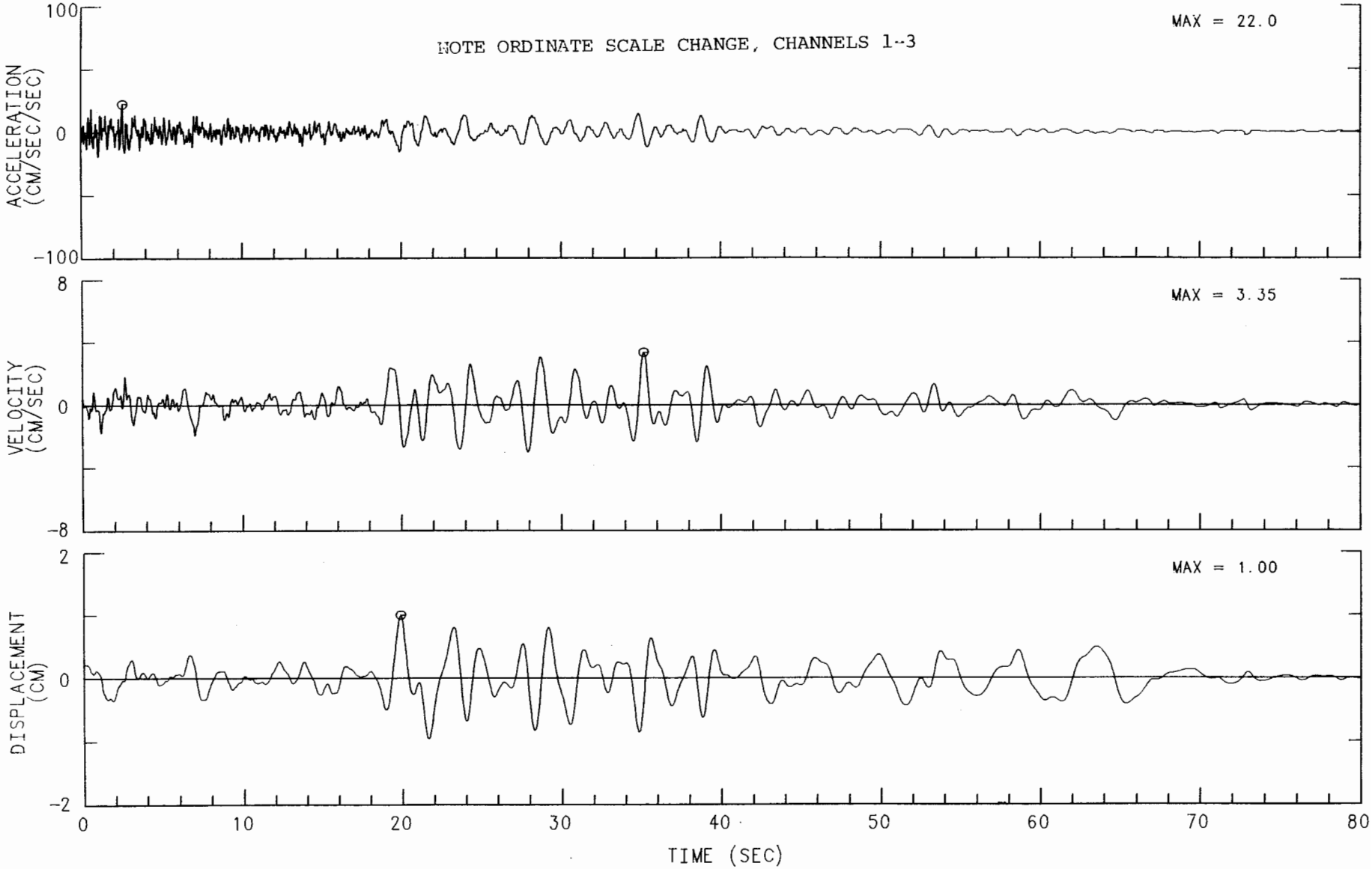
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
UNCORRECTED ACCELEROGRAM 57357-C0145-84115.01 041285.1706-QM84A357A2



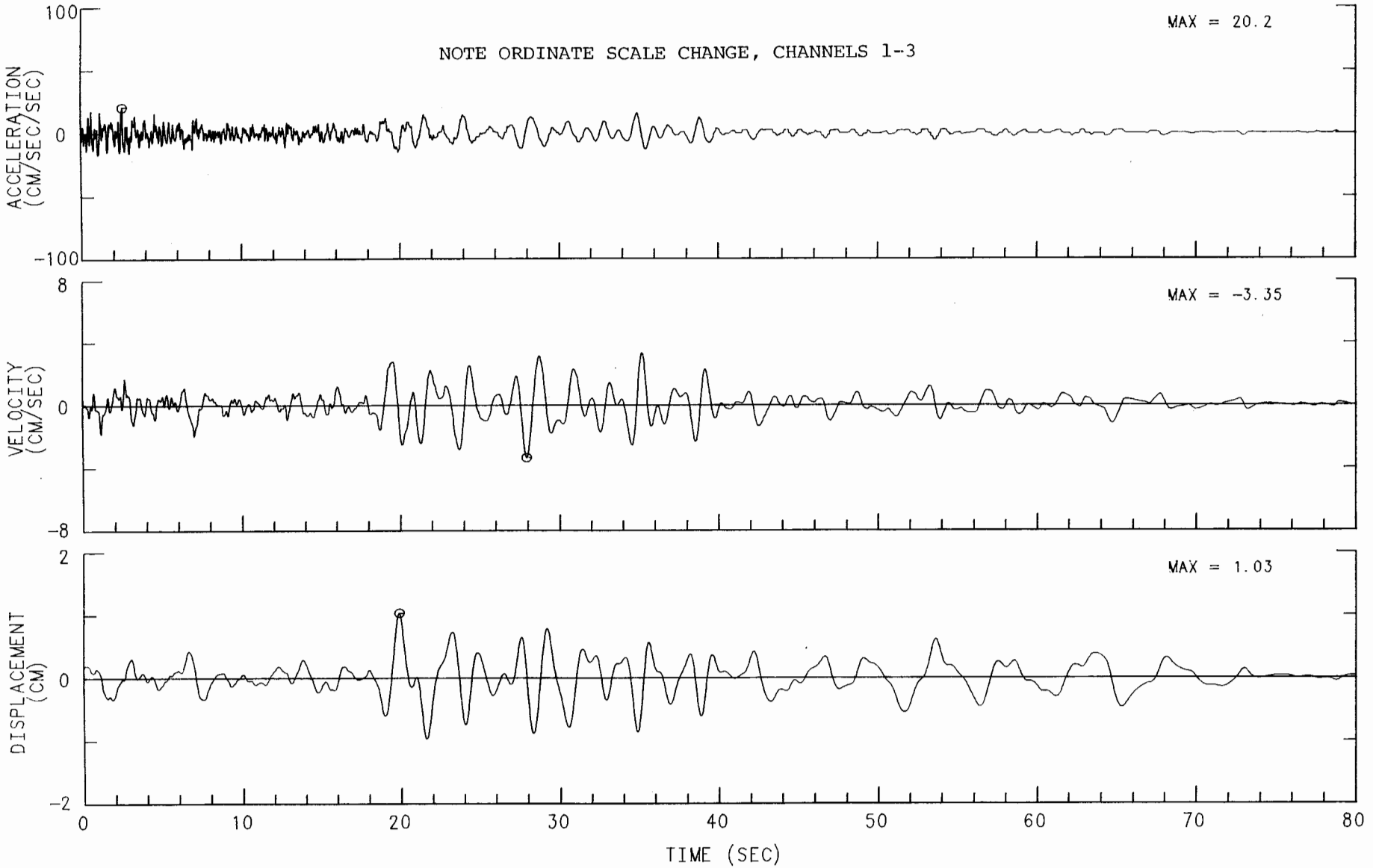
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
UNCORRECTED ACCELEROGRAM 57357-C0145-84115.01 041285.1706-QM84A357A2



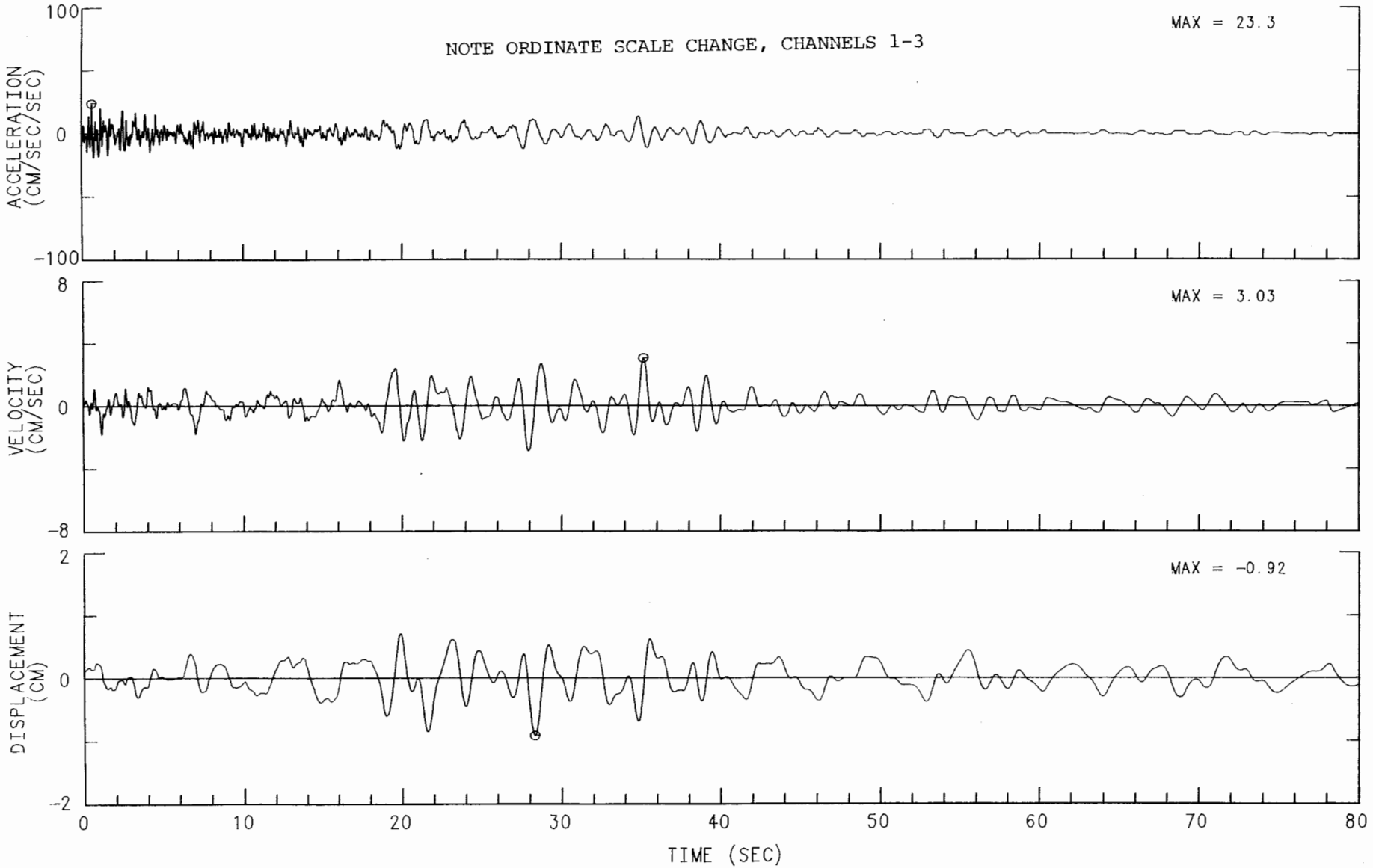
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 1: UP (LOWER LEVEL, NORTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357



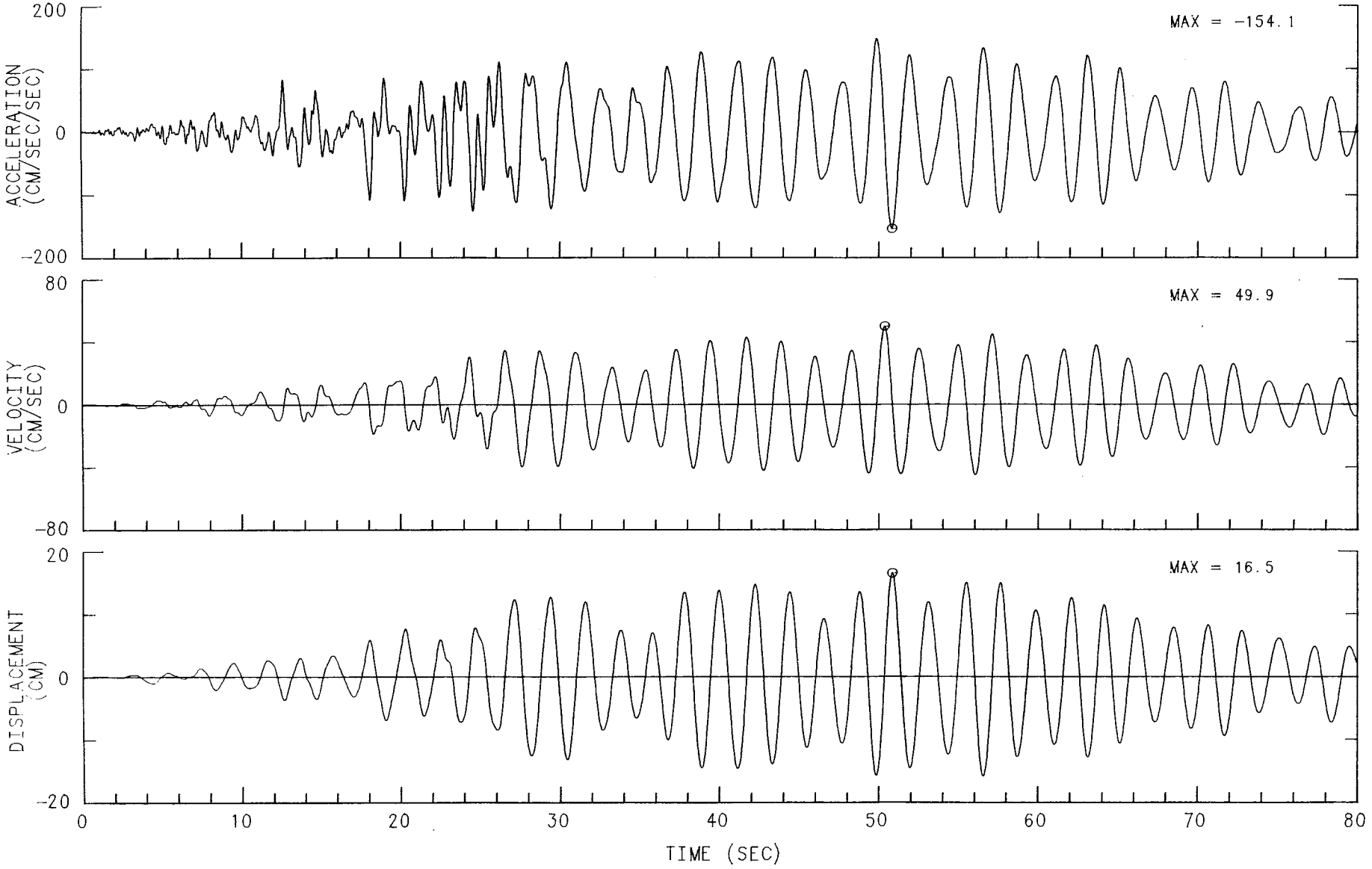
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 2: UP (LOWER LEVEL, SOUTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357



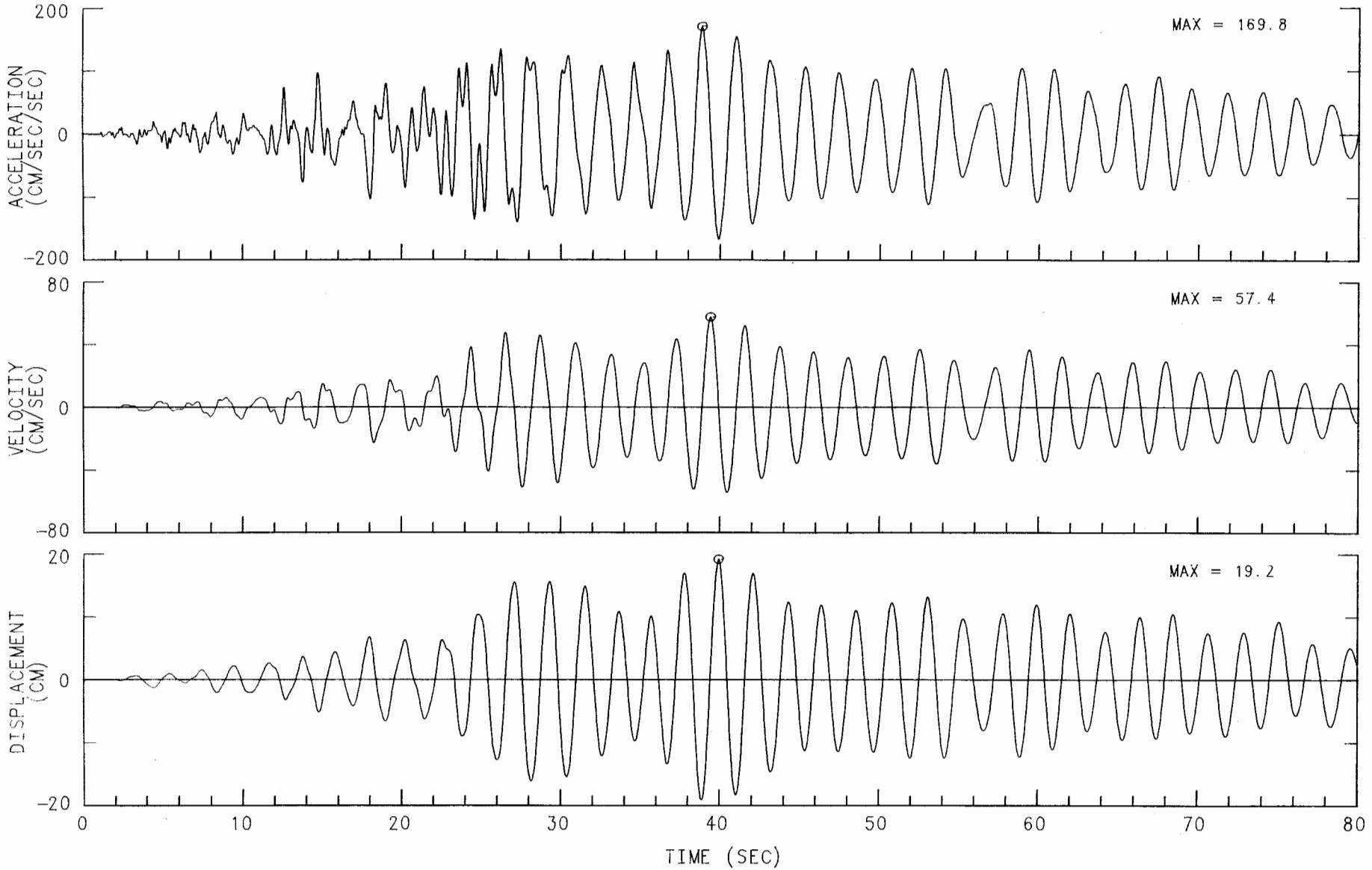
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 3: UP (LOWER LEVEL, SOUTHEAST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357



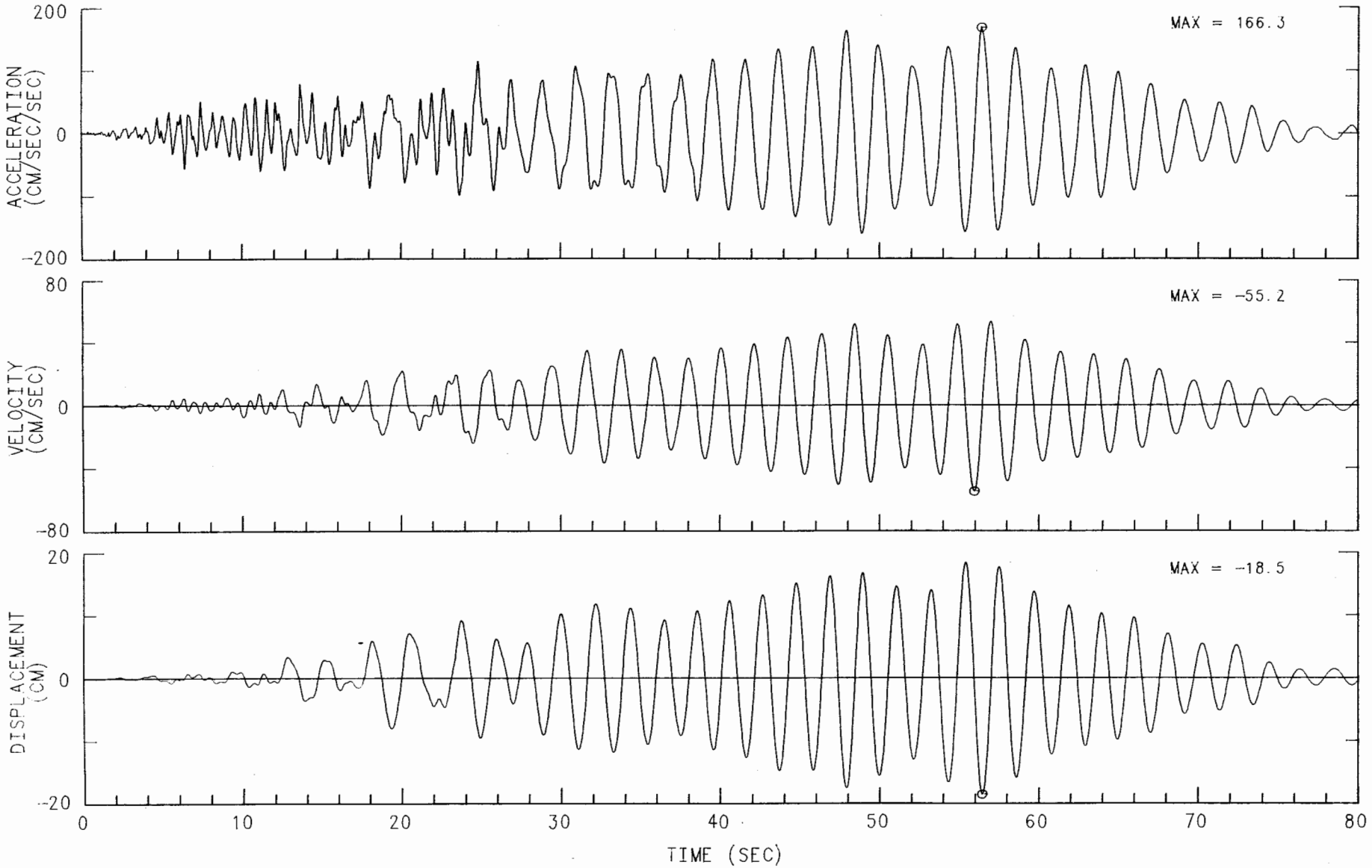
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 4: 90 DEG (ROOF, NORTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357



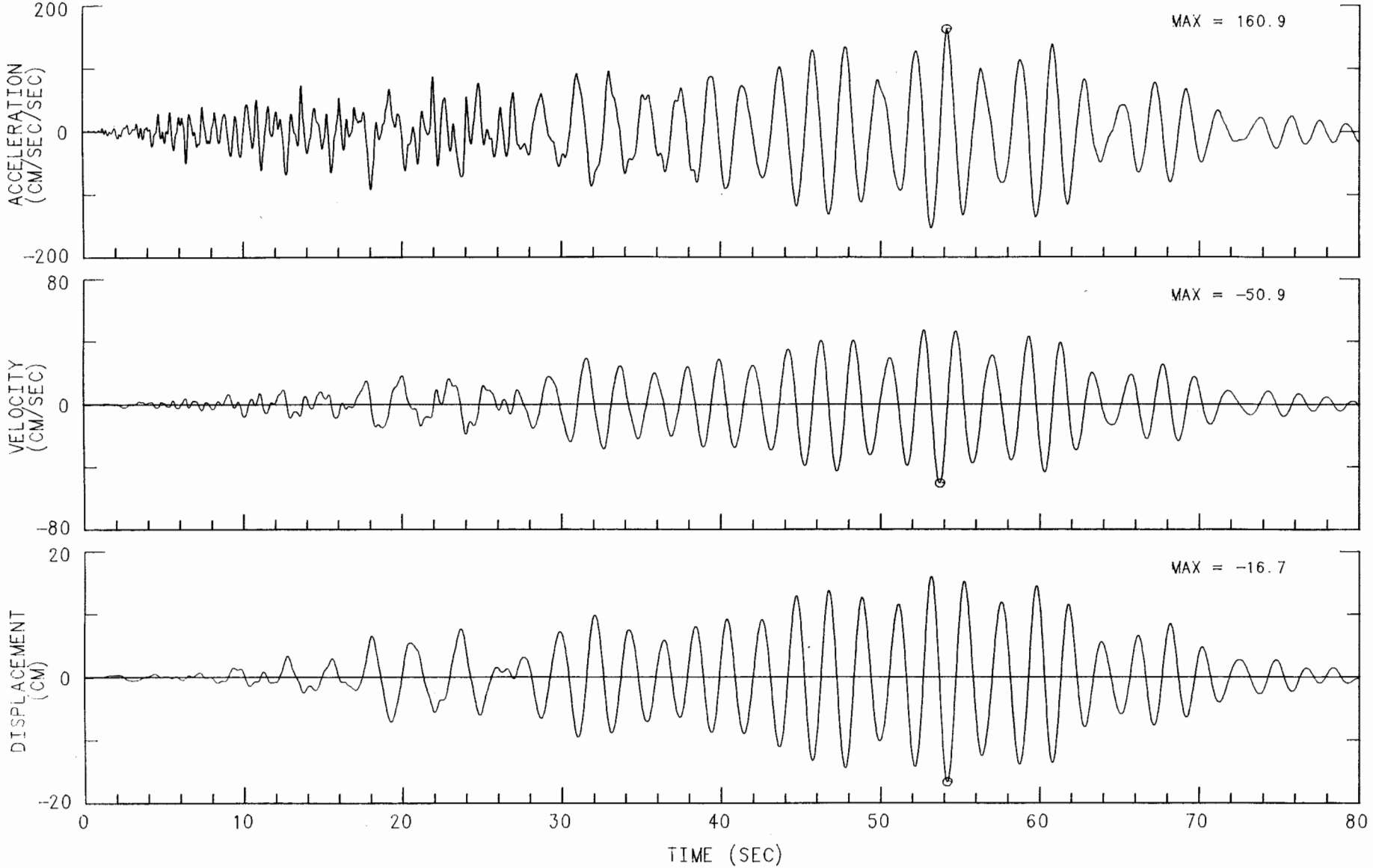
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13·15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 5· 90 DEG (ROOF, SOUTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND· 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357



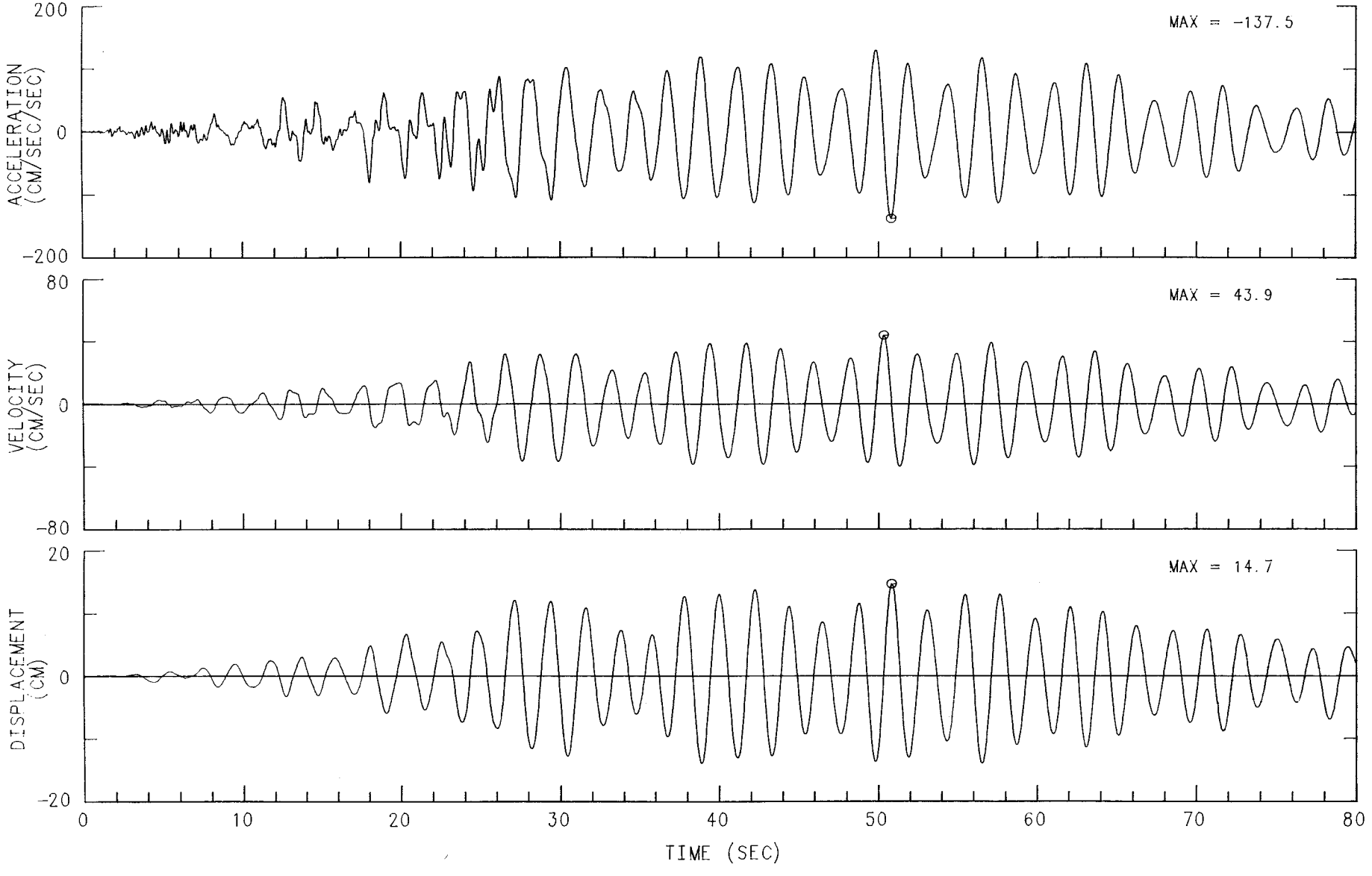
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 6: 0 DEG (ROOF, SOUTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357



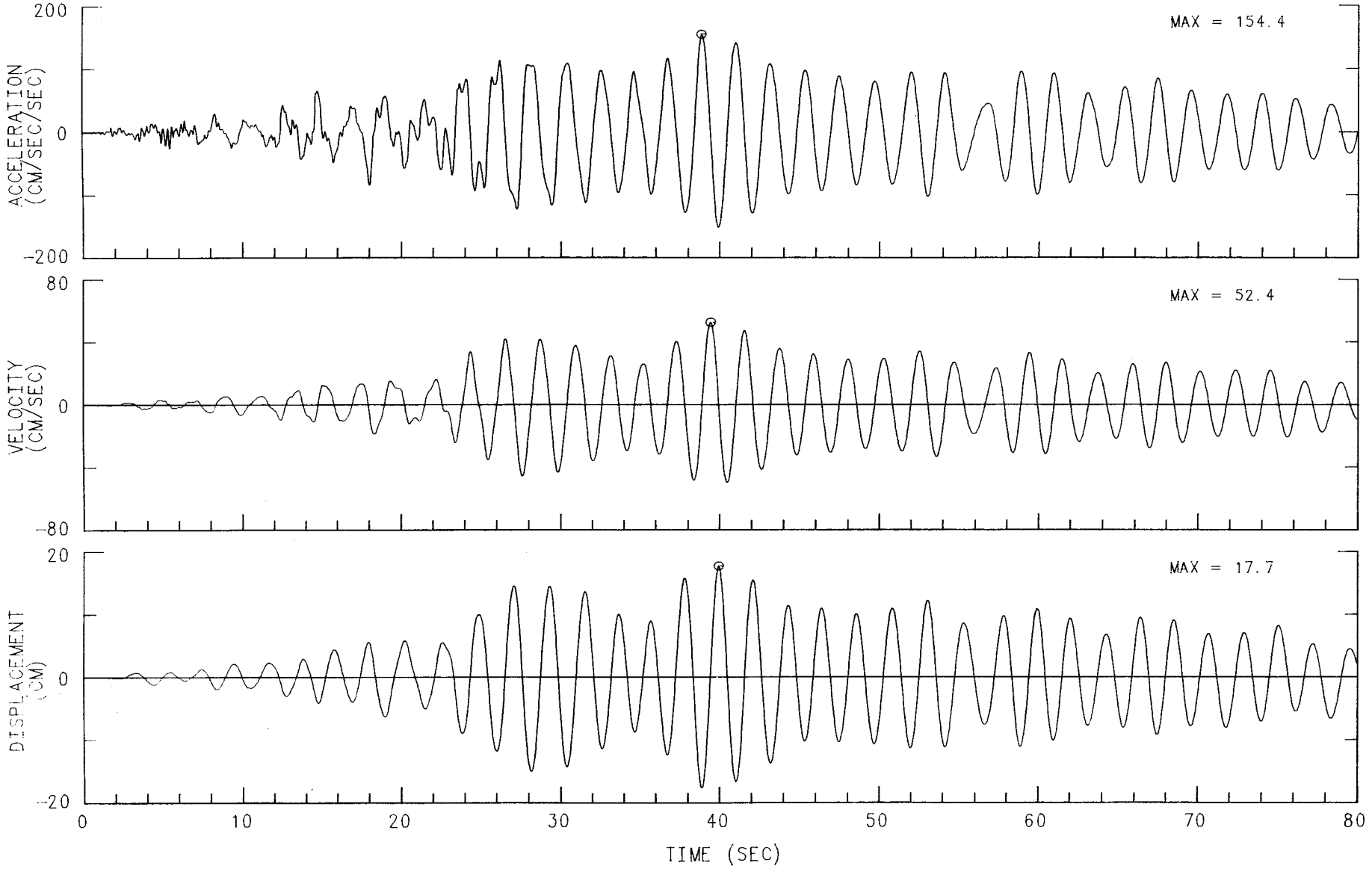
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 7: 0 DEG (ROOF, SOUTHEAST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357



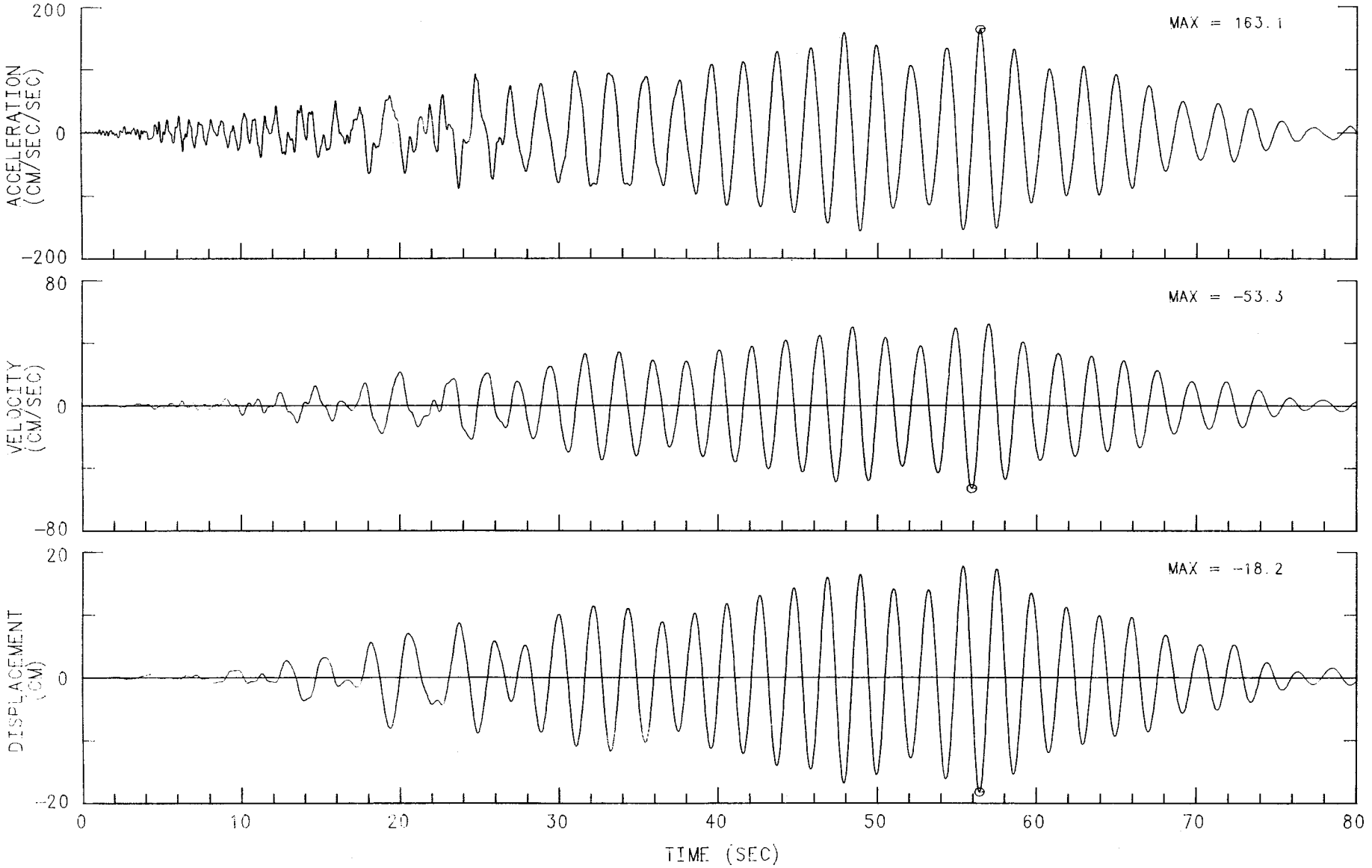
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 8: 90 DEG (12TH FLOOR, NORTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357



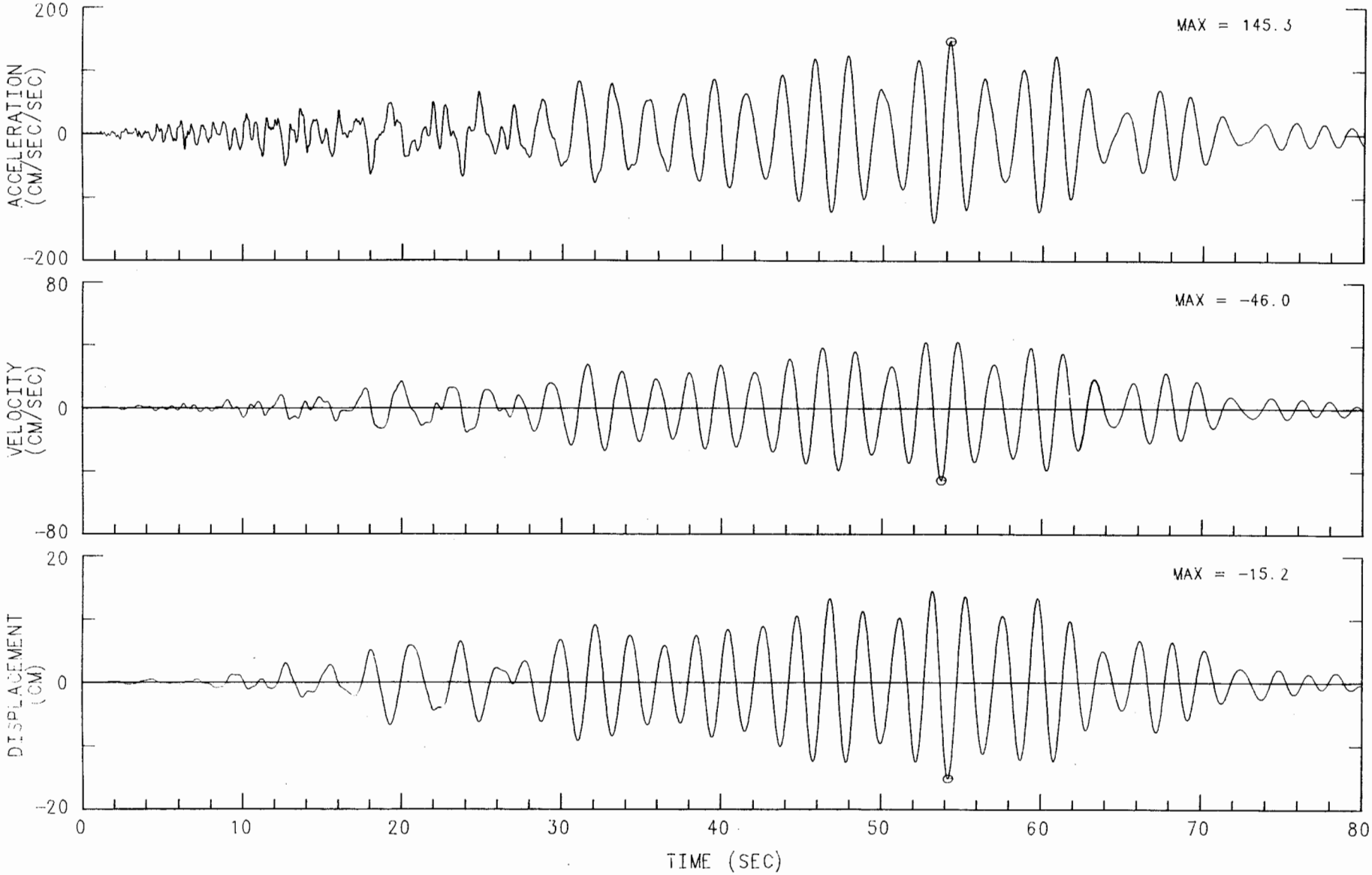
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 9: 90 DEG (12TH FLOOR, SOUTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357



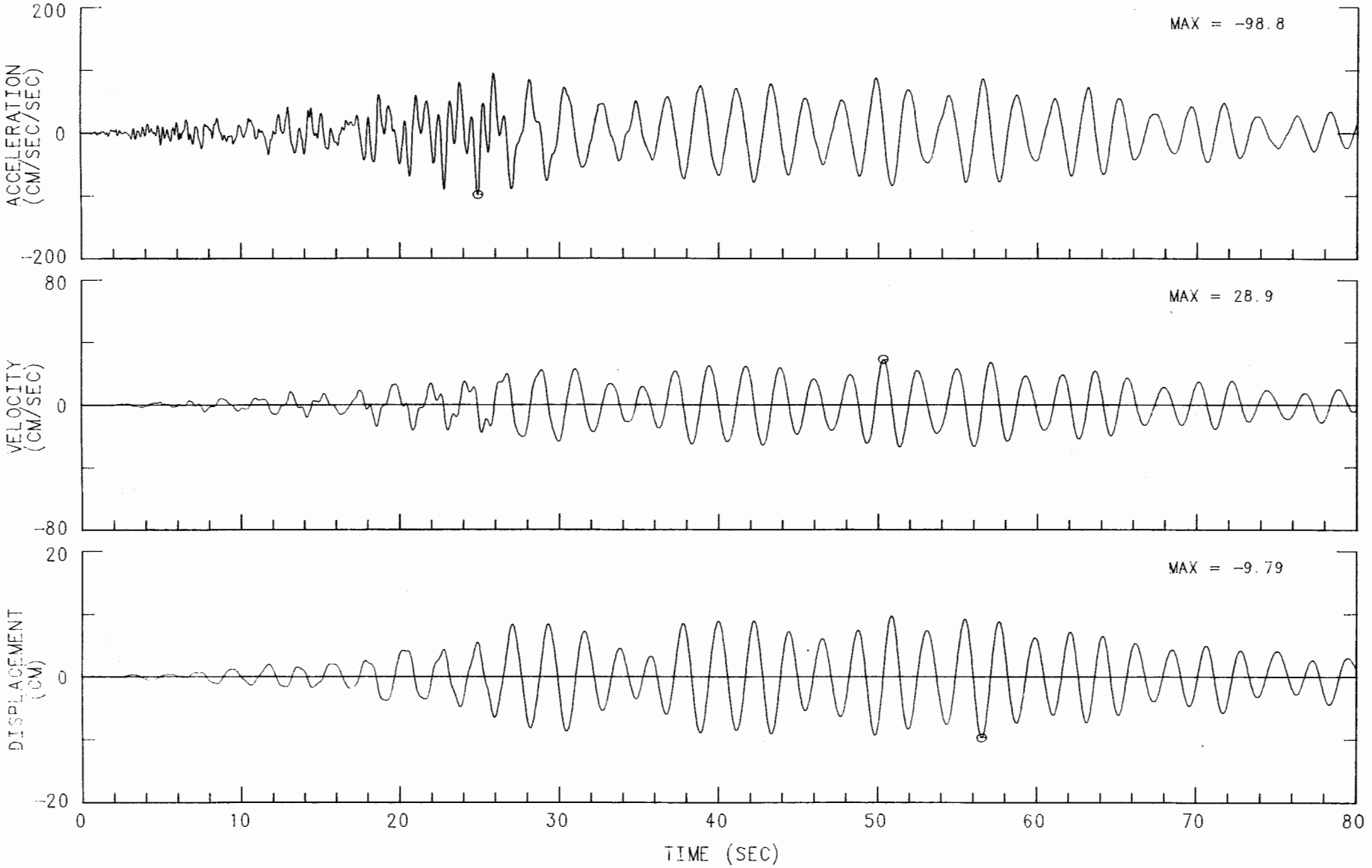
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 10: 0 DEG (12TH FLOOR, SOUTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 11: 0 DEG (12TH FLOOR, SOUTHEAST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 12: 90 DEG (7TH FLOOR, NORTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0185-84115.01 040185.2119-QM84A357

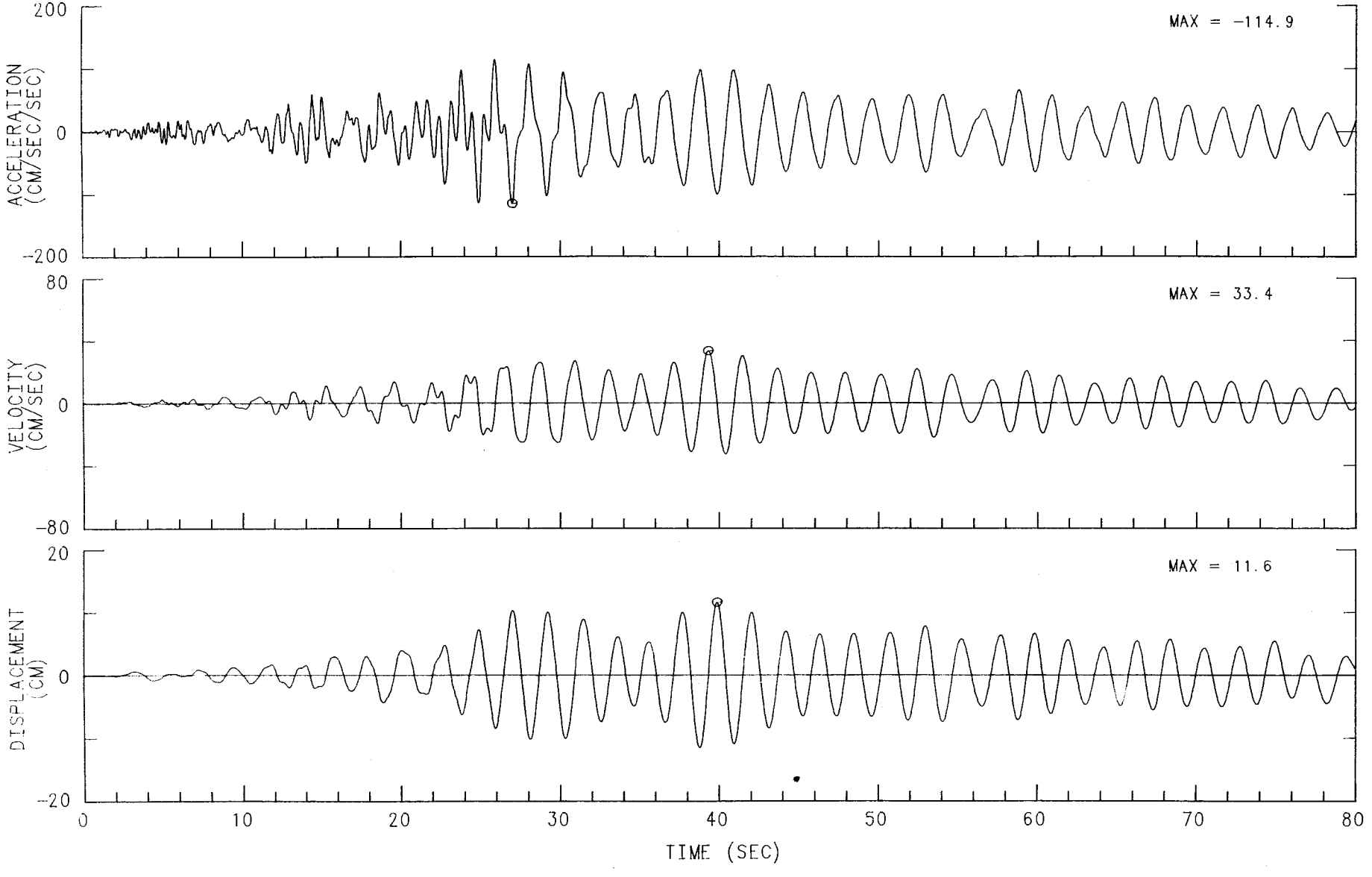


MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

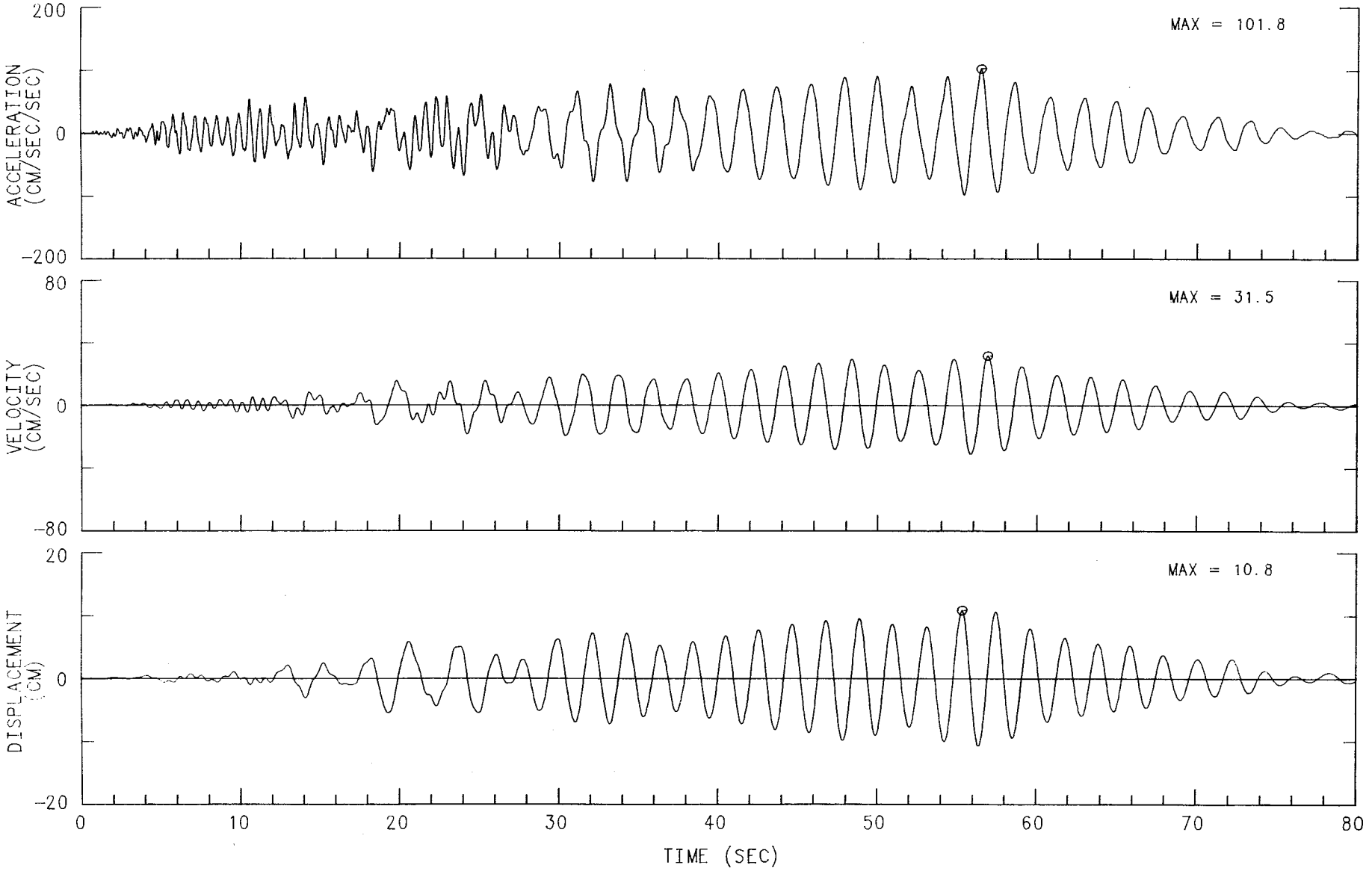
SAN JOSE - SANTA CLARA CO. BLDG. CHN 1 (STA CHN 13): 90 DEG (7TH FLOOR, SOUTHWEST CORNER)

INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT

FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0145-84115.01 041585.1210-QM84A357A2



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 2 (STA CHN 14): 0 DEG (7TH FLOOR, SOUTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0145-84115.01 041585.1210-QM84A357A2

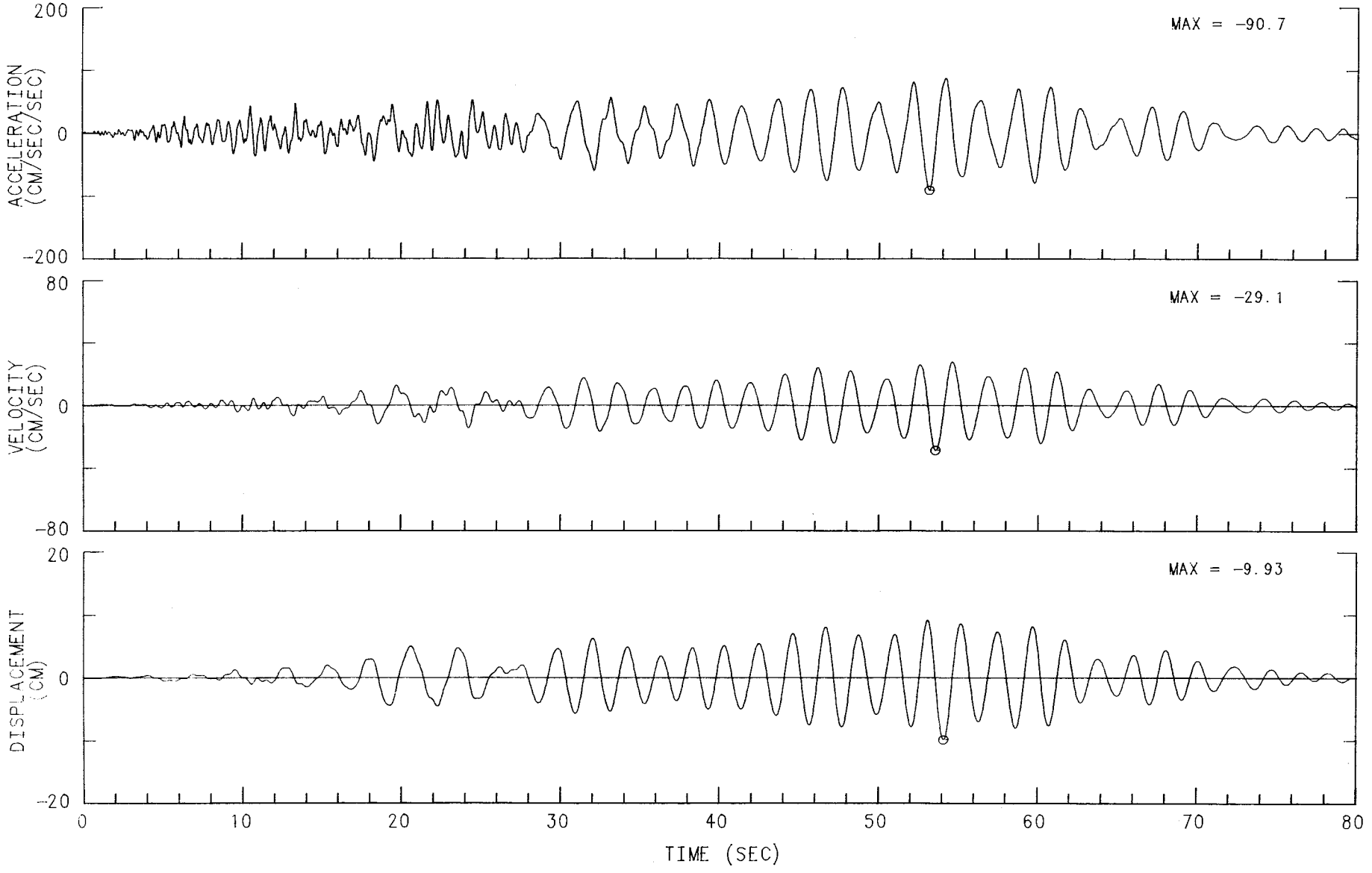


MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

SAN JOSE - SANTA CLARA CO. BLDG. CHN 3 (STA CHN 15): 0 DEG (7TH FLOOR, SOUTHEAST CORNER)

INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT

FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0145-84115.01 041585.1210-QM84A357A2

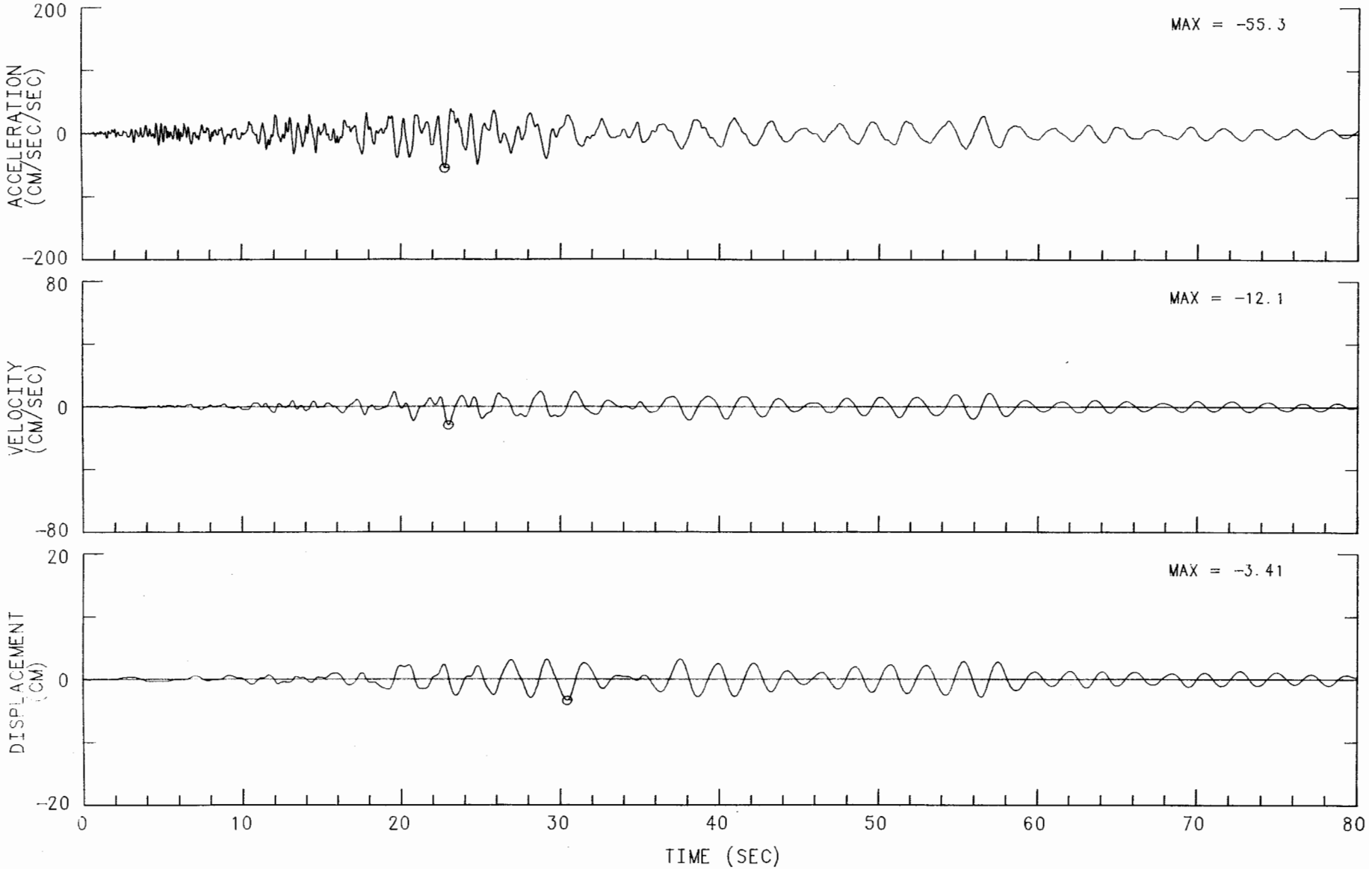


MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

SAN JOSE - SANTA CLARA CO. BLDG. CHN 4 (STA CHN 16): 90 DEG (2ND FLOOR, NORTHWEST CORNER)

INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT

FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0145-84115.01 041585.1210-QM84A357A2

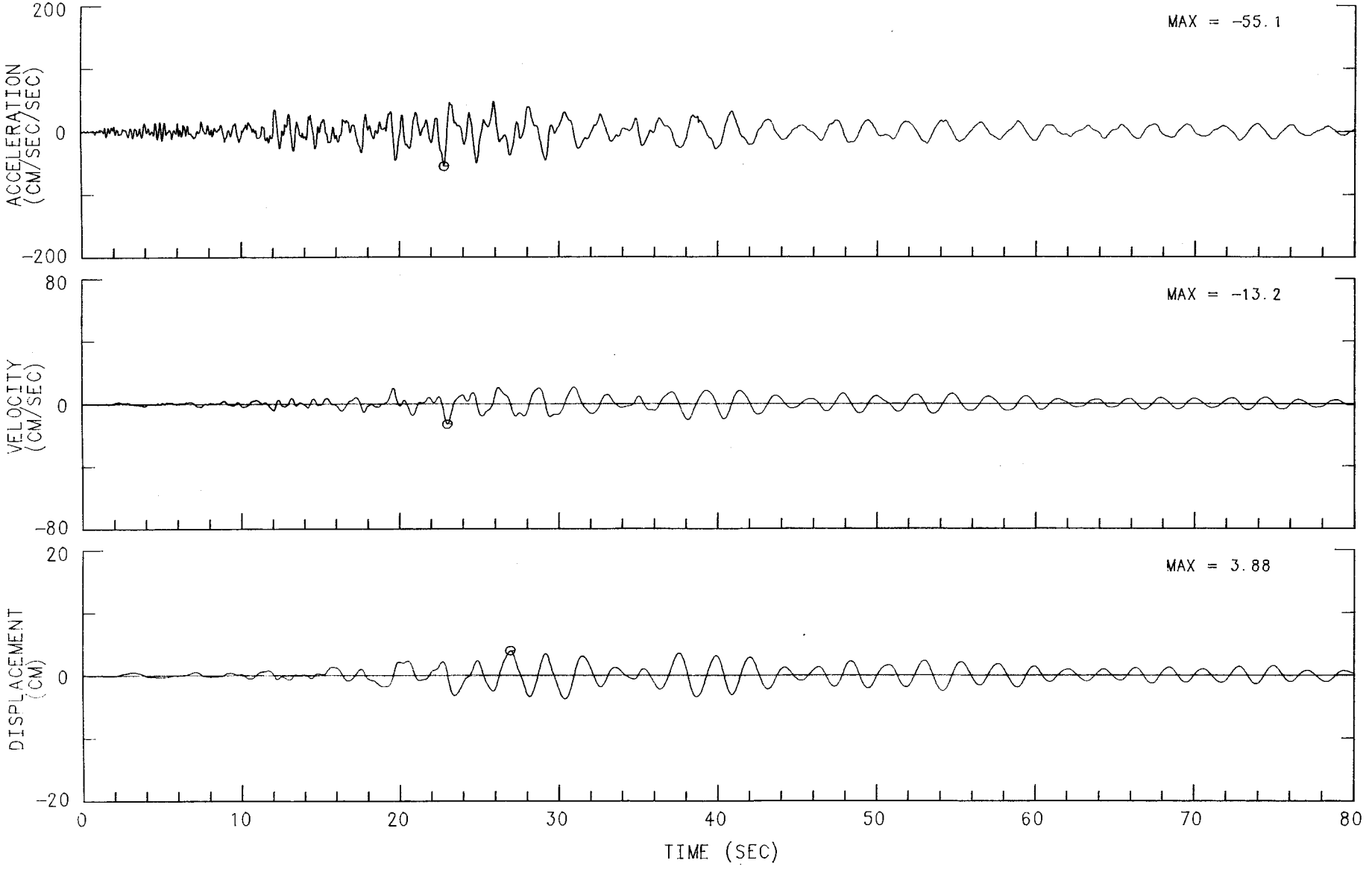


MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

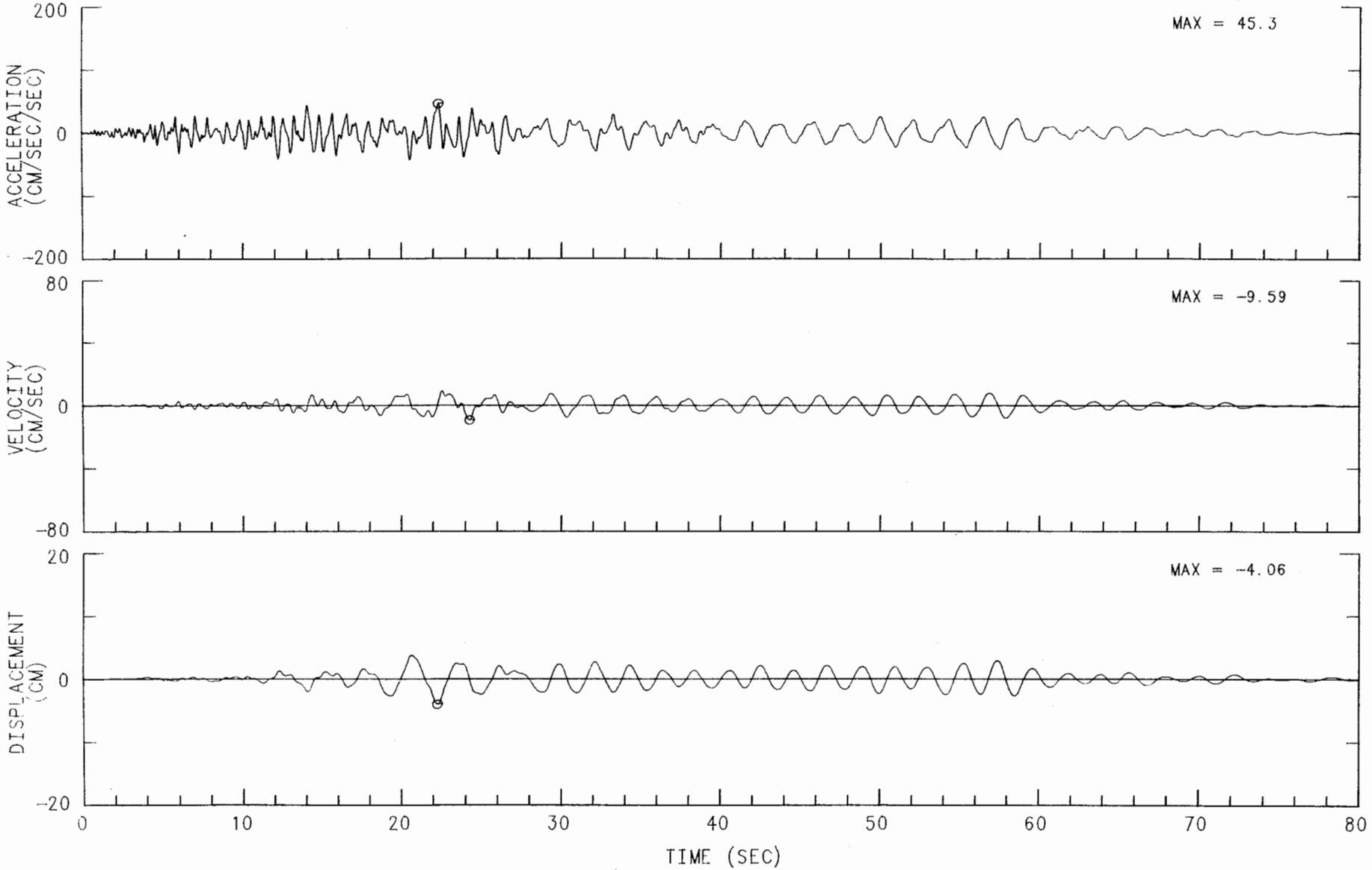
SAN JOSE - SANTA CLARA CO. BLDG. CHN 5 (STA CHN 17): 90 DEG (2ND FLOOR, SOUTHWEST CORNER)

INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT

FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0145-84115.01 041585.1210-QM84A357A2



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG. CHN 6 (STA CHN 18): 0 DEG (2ND FLOOR, SOUTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0145-84115.01 041585.1210-QM84A357A2

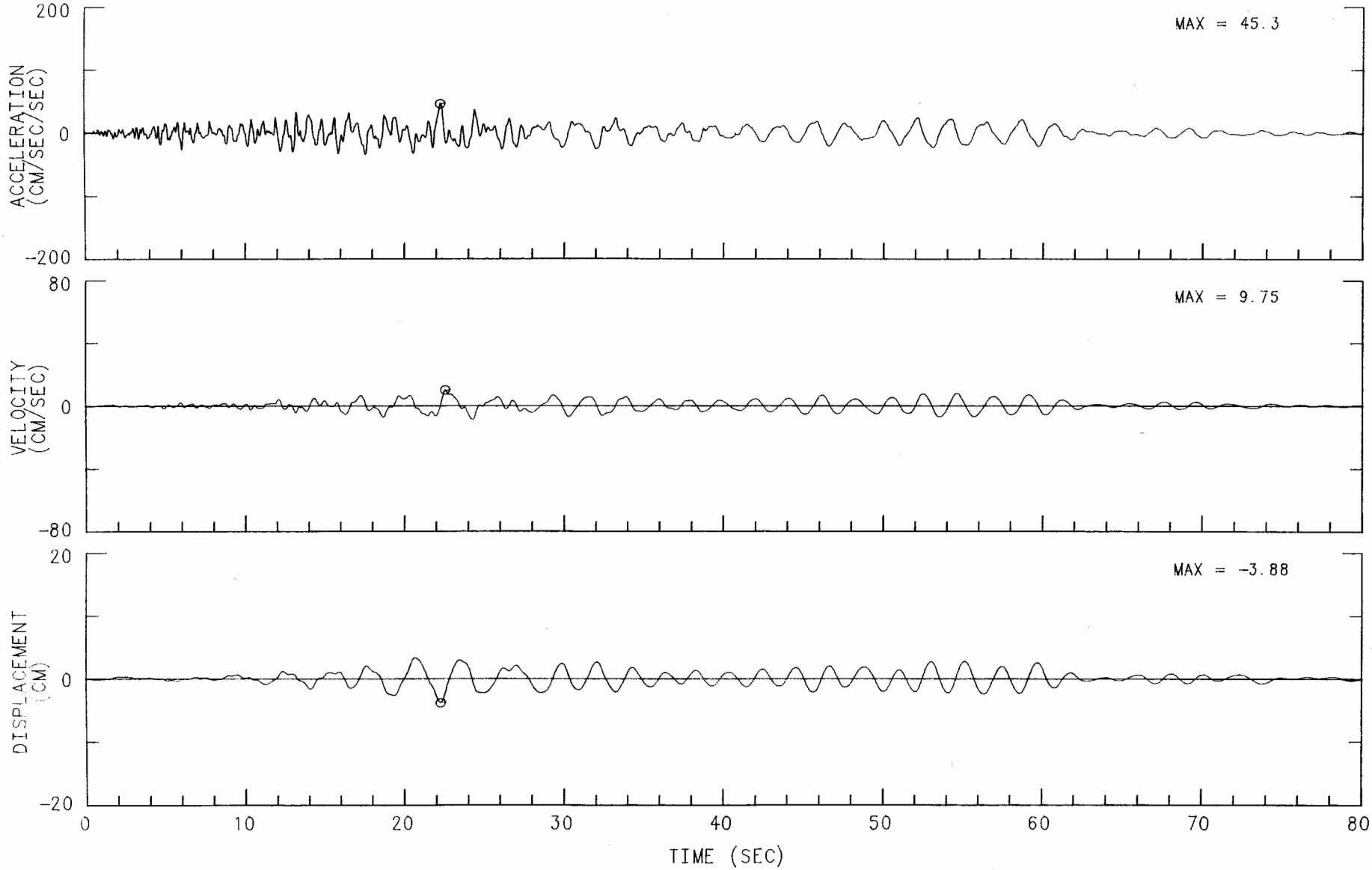


MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

SAN JOSE - SANTA CLARA CO. BLDG. CHN 7 (STA CHN 19): 0 DEG (2ND FLOOR, SOUTHEAST CORNER)

INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT

FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0145-84115.01 041585.1210-QM84A357A2

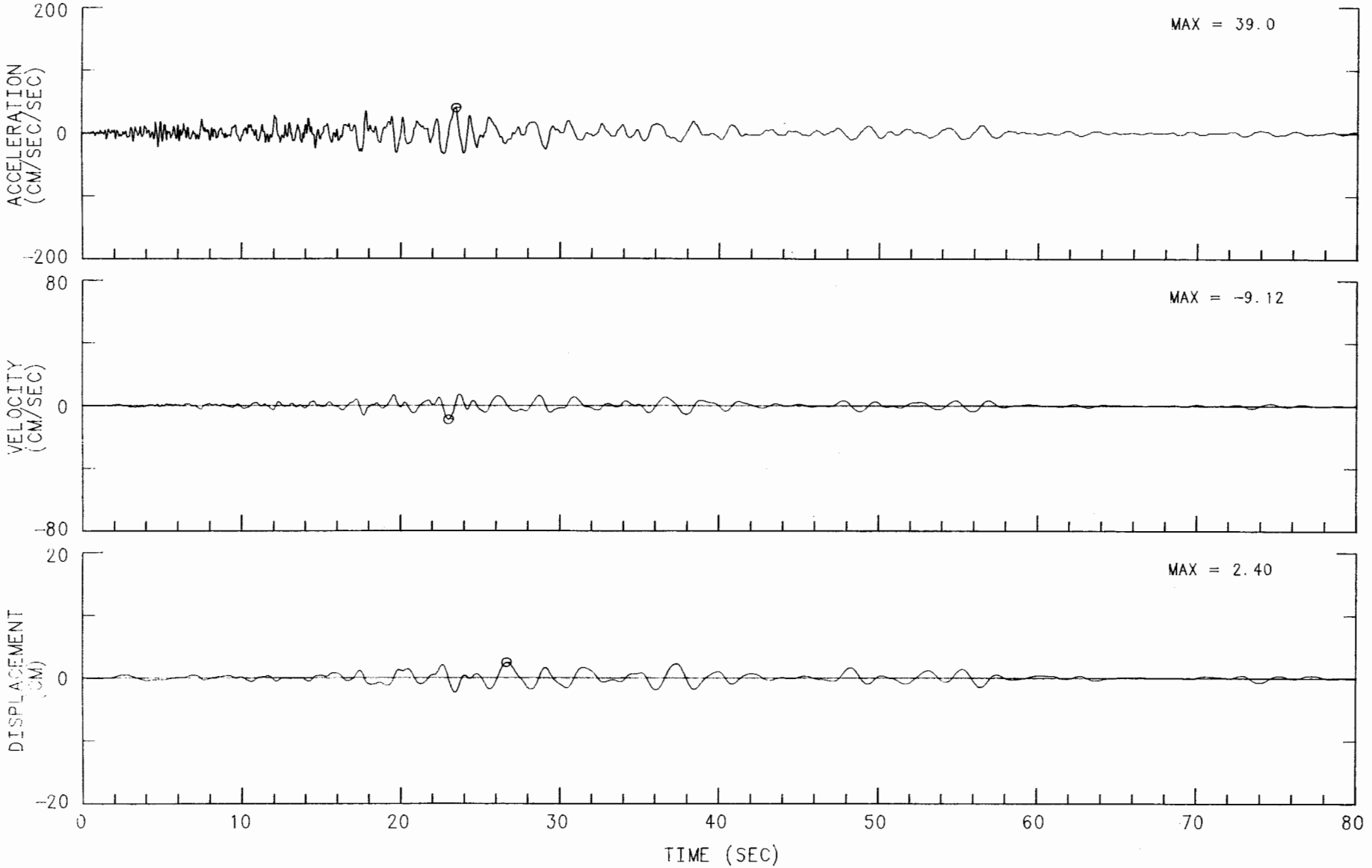


MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

SAN JOSE - SANTA CLARA CO. BLDG. CHN 8 (STA CHN 20): 90 DEG (LOWER LEVEL, NORTHWEST CORNER)

INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT

FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0145-84115.01 041585.1210-QM84A357A2

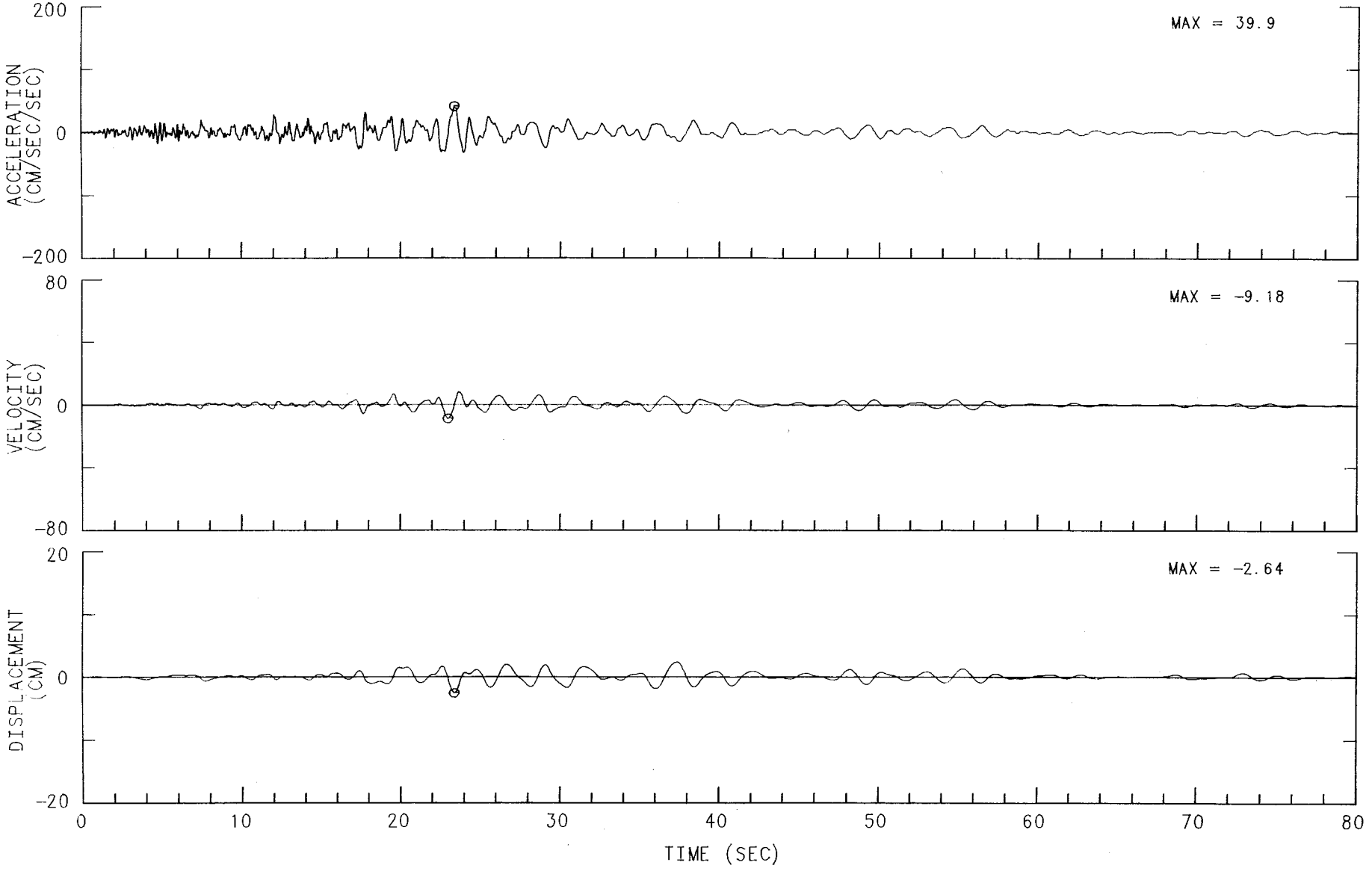


MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

SAN JOSE - SANTA CLARA CO. BLDG. CHN 9 (STA CHN 21): 90 DEG (LOWER LEVEL, SOUTHWEST CORNER)

INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT

FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0145-84115.01 041585.1210-QM84A357A2

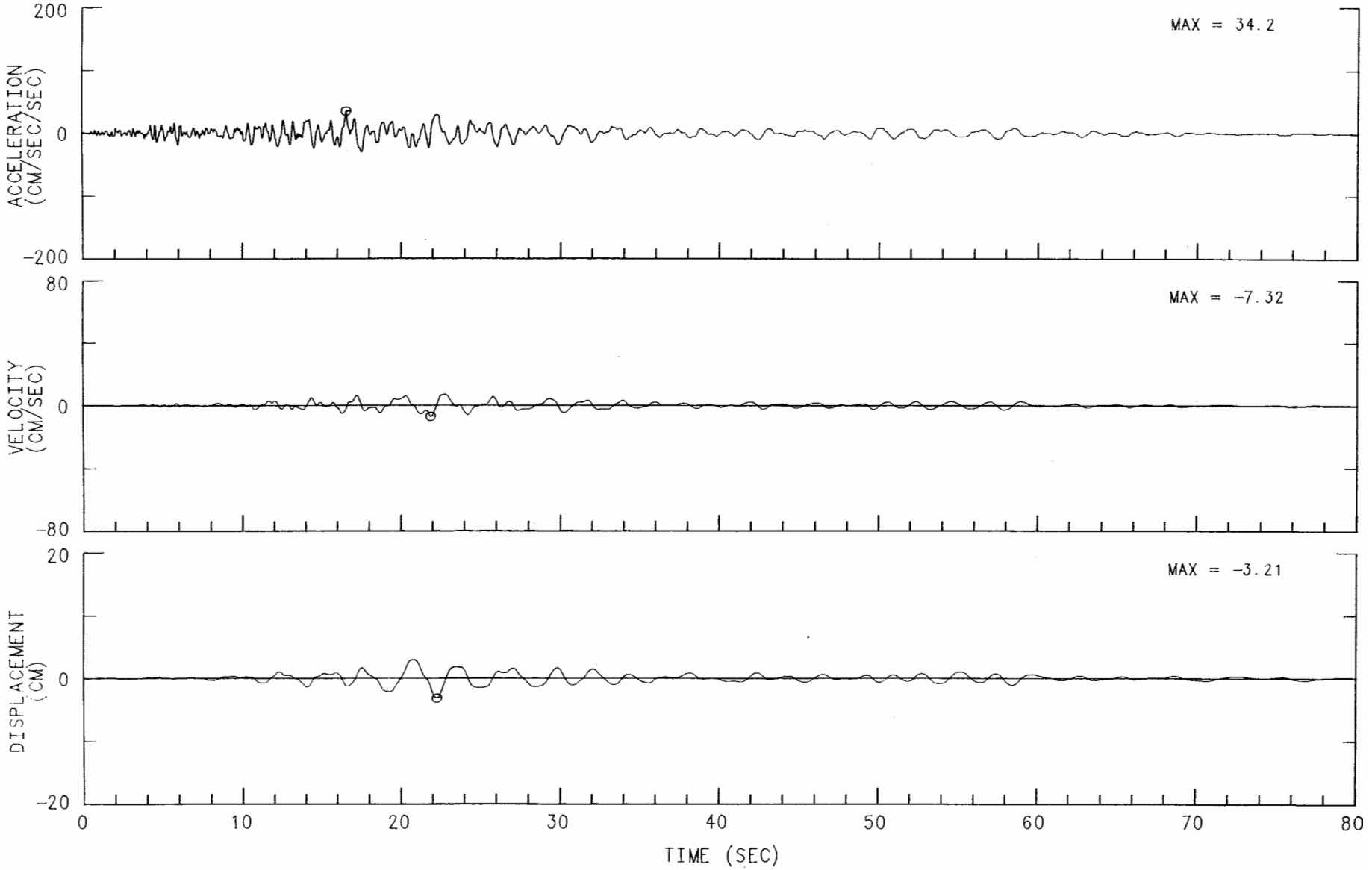


MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

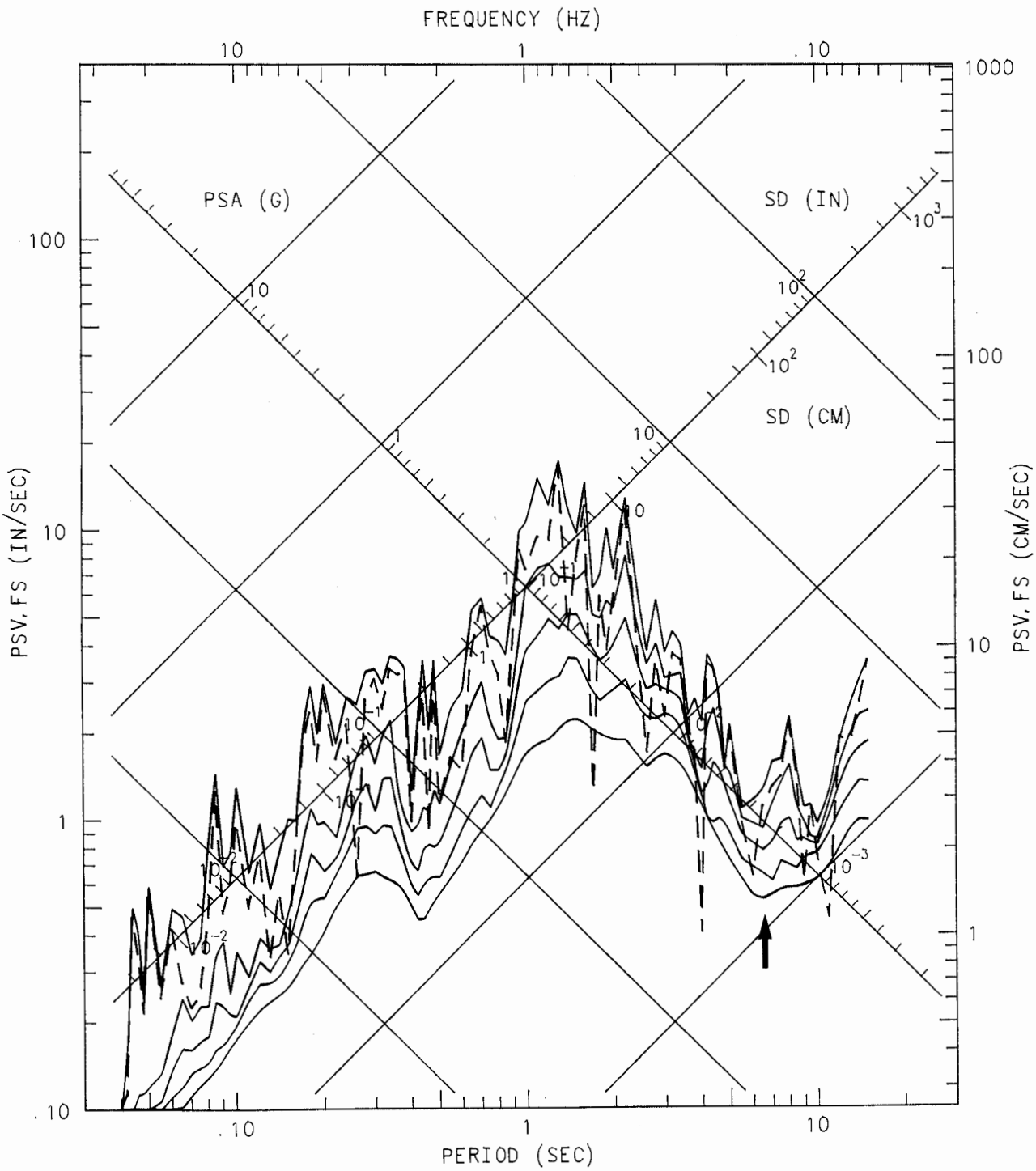
SAN JOSE - SANTA CLARA CO. BLDG. CHN 10 (STA CHN 22): 0 DEG (LOWER LEVEL, SOUTHWEST CORNER)

INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT

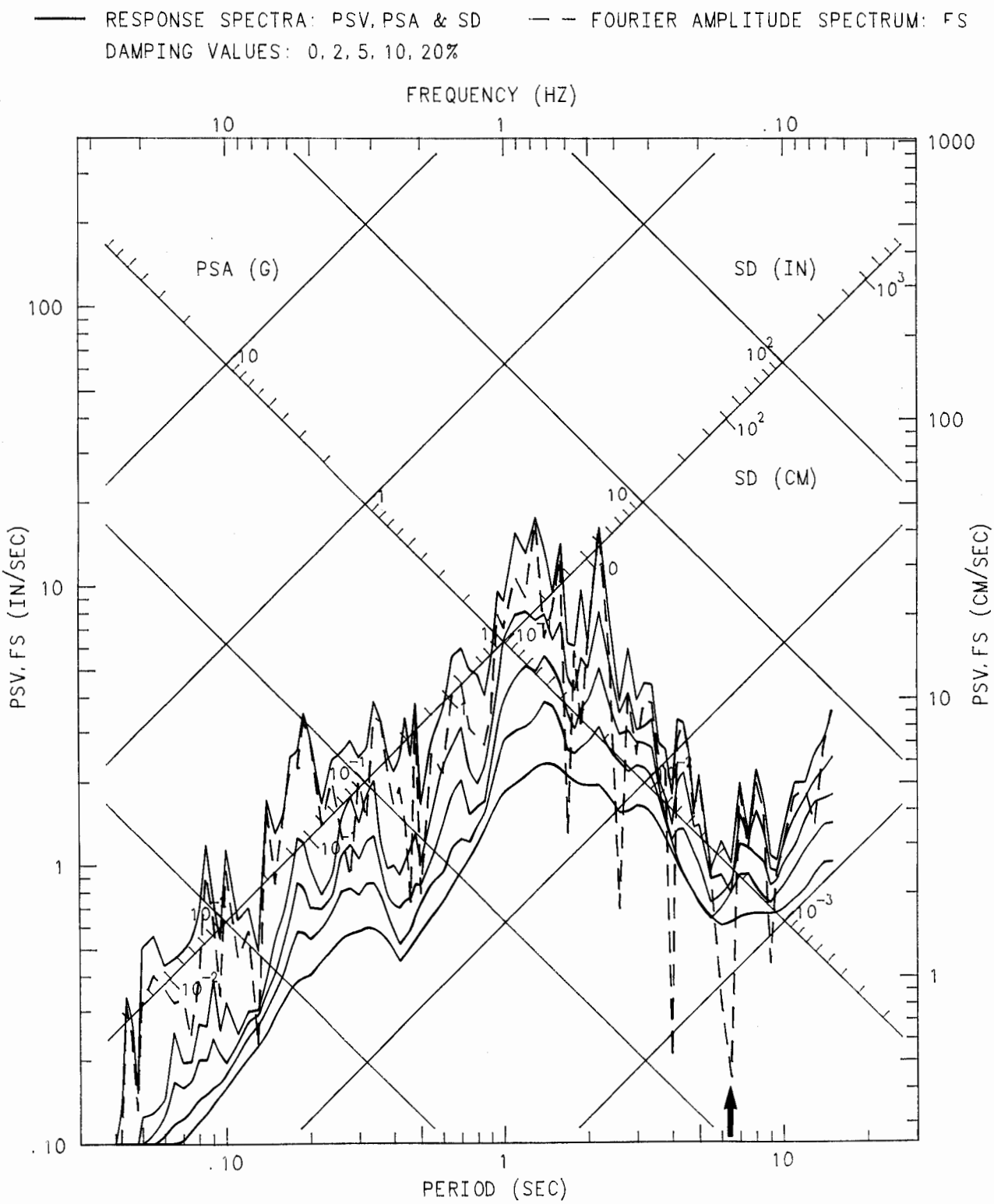
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 57357-C0145-84115.01 041585.1210-QM84A357A2



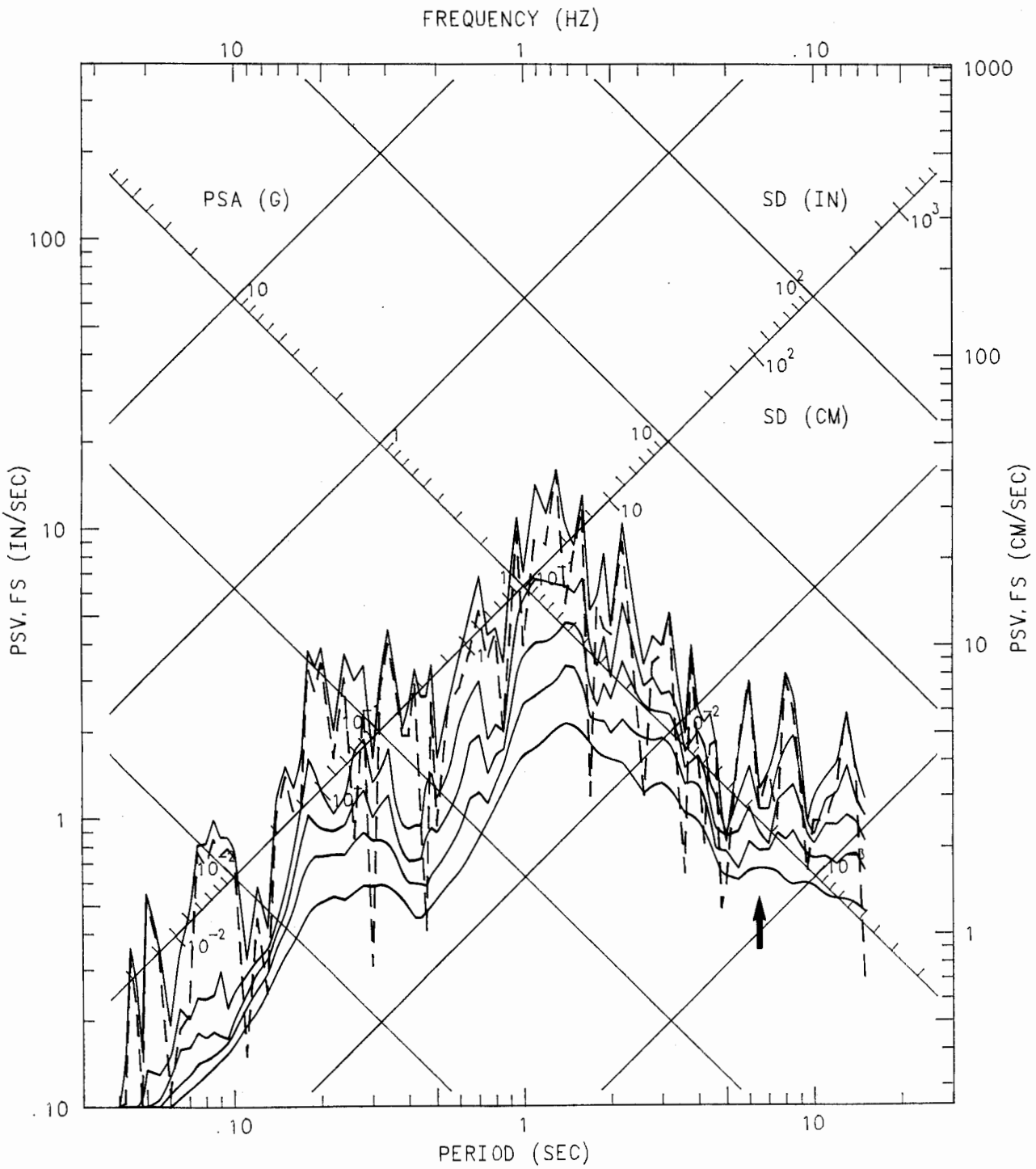
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 1: UP (LOWER LEVEL, NORTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



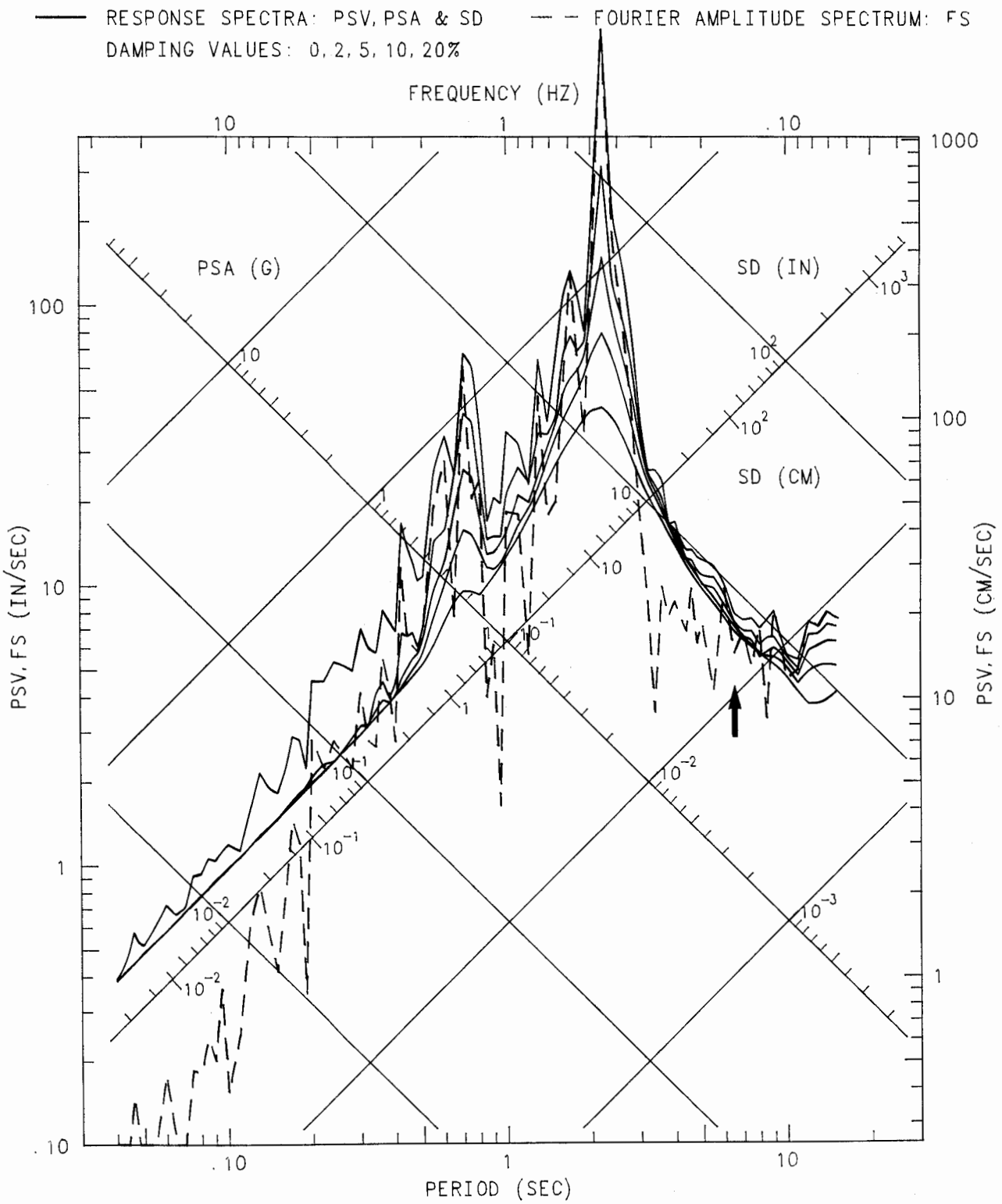
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 2: UP (LOWER LEVEL, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



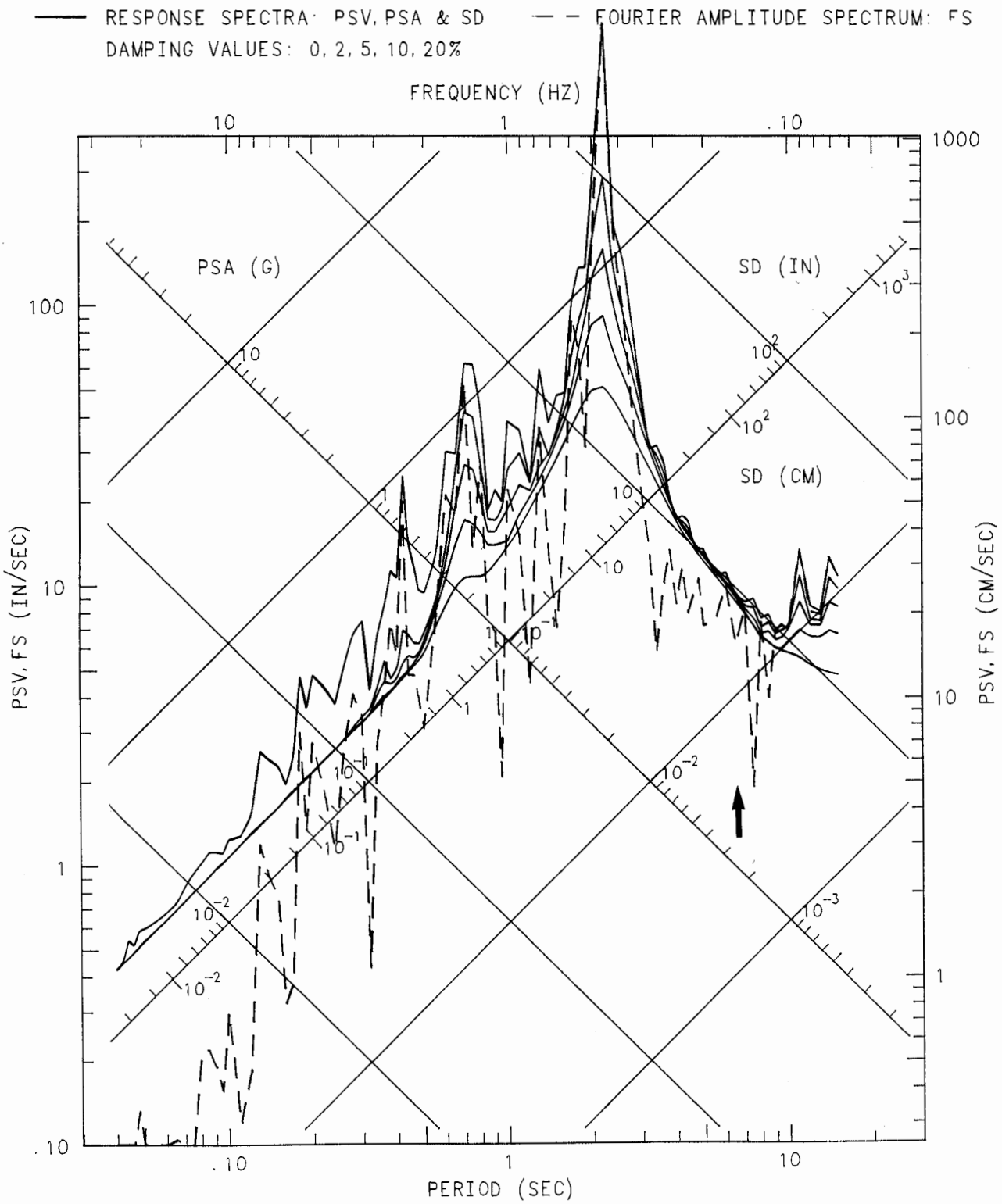
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 3: UP (LOWER LEVEL, SOUTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



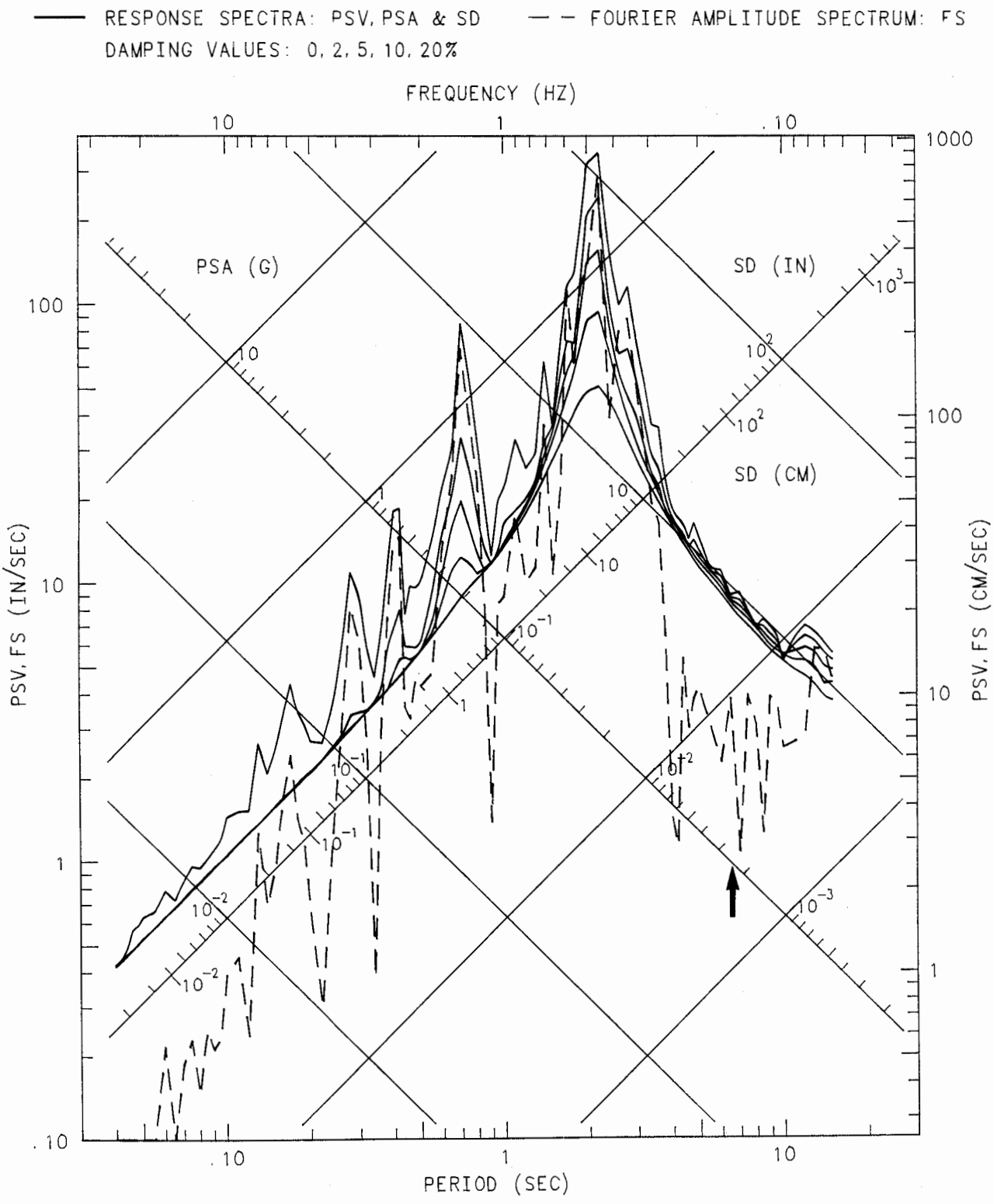
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 4: 90 DEG (ROOF, NORTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



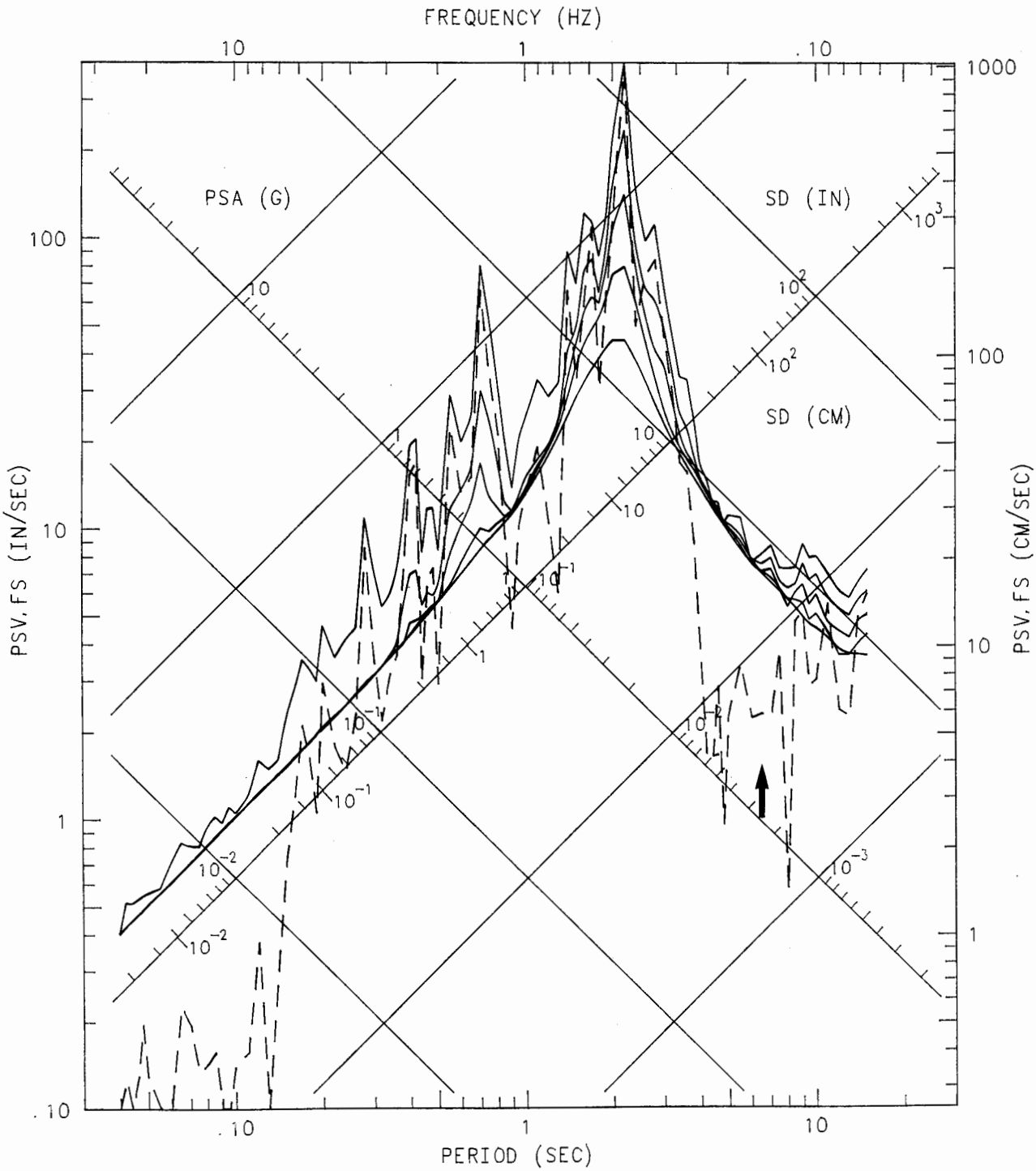
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 5: 90 DEG (ROOF, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



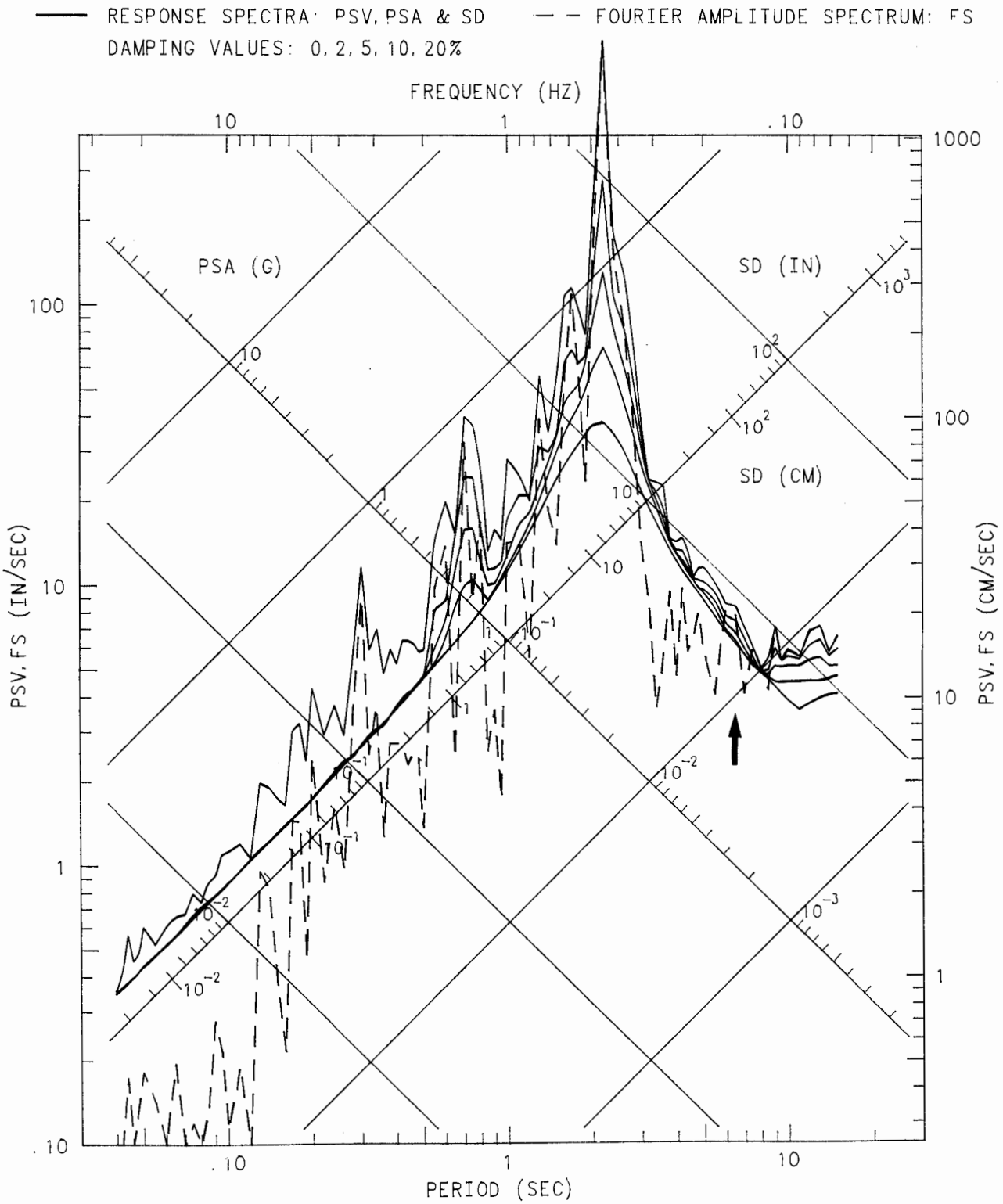
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 6: 0 DEG (ROOF, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



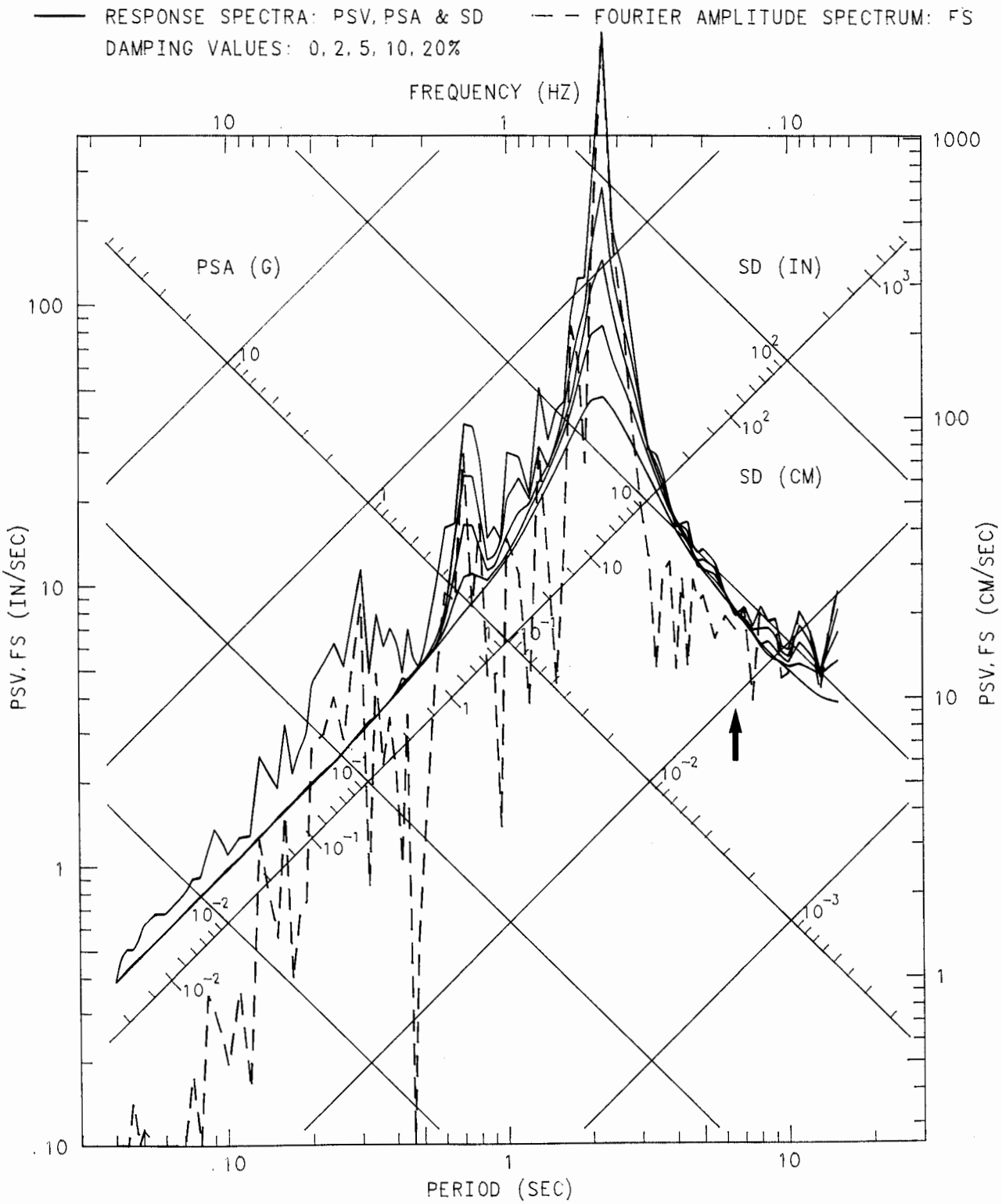
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 7: 0 DEG (ROOF, SOUTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



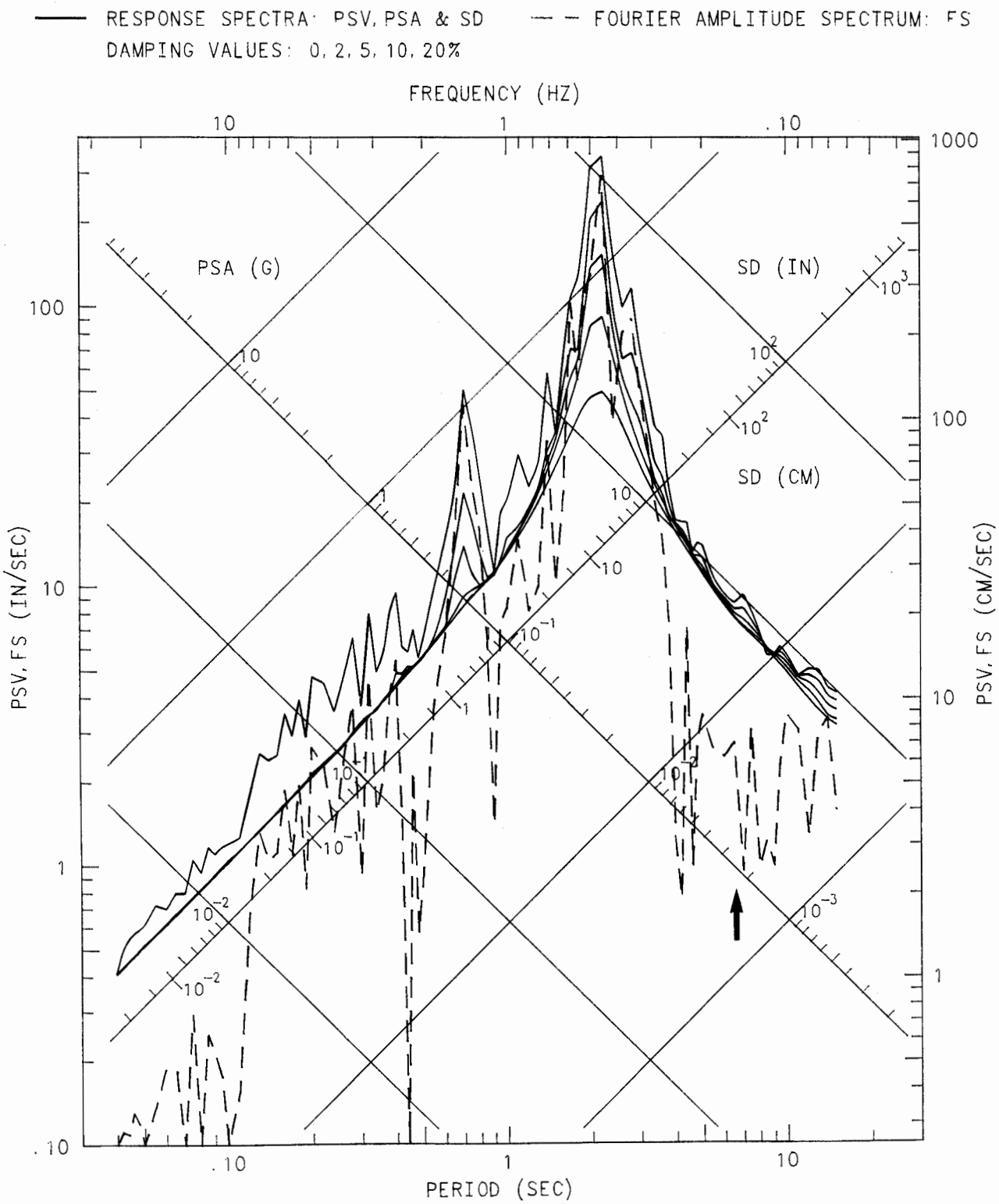
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 8: 90 DEG (12TH FLOOR, NORTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



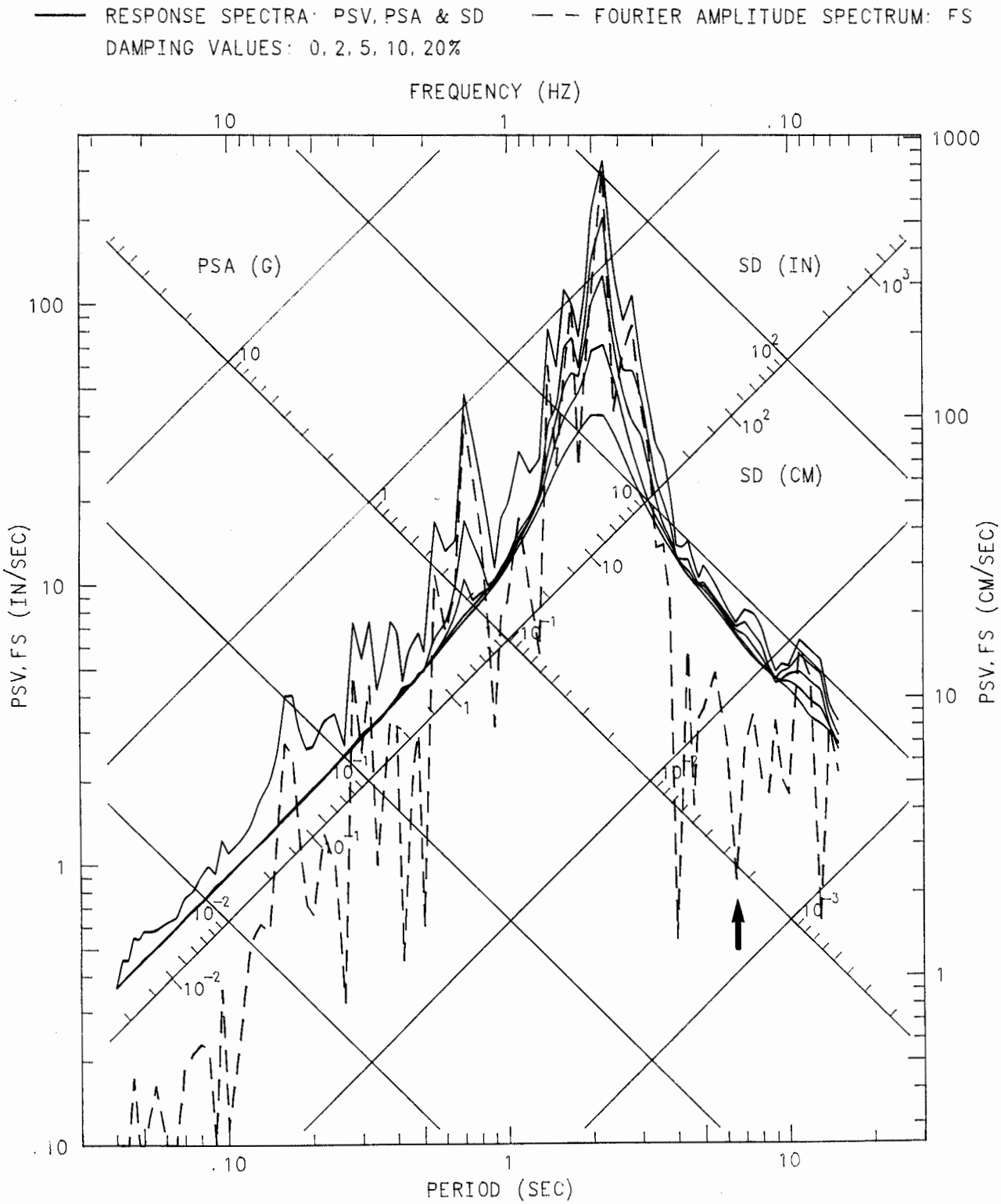
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 9: 90 DEG (12TH FLOOR, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



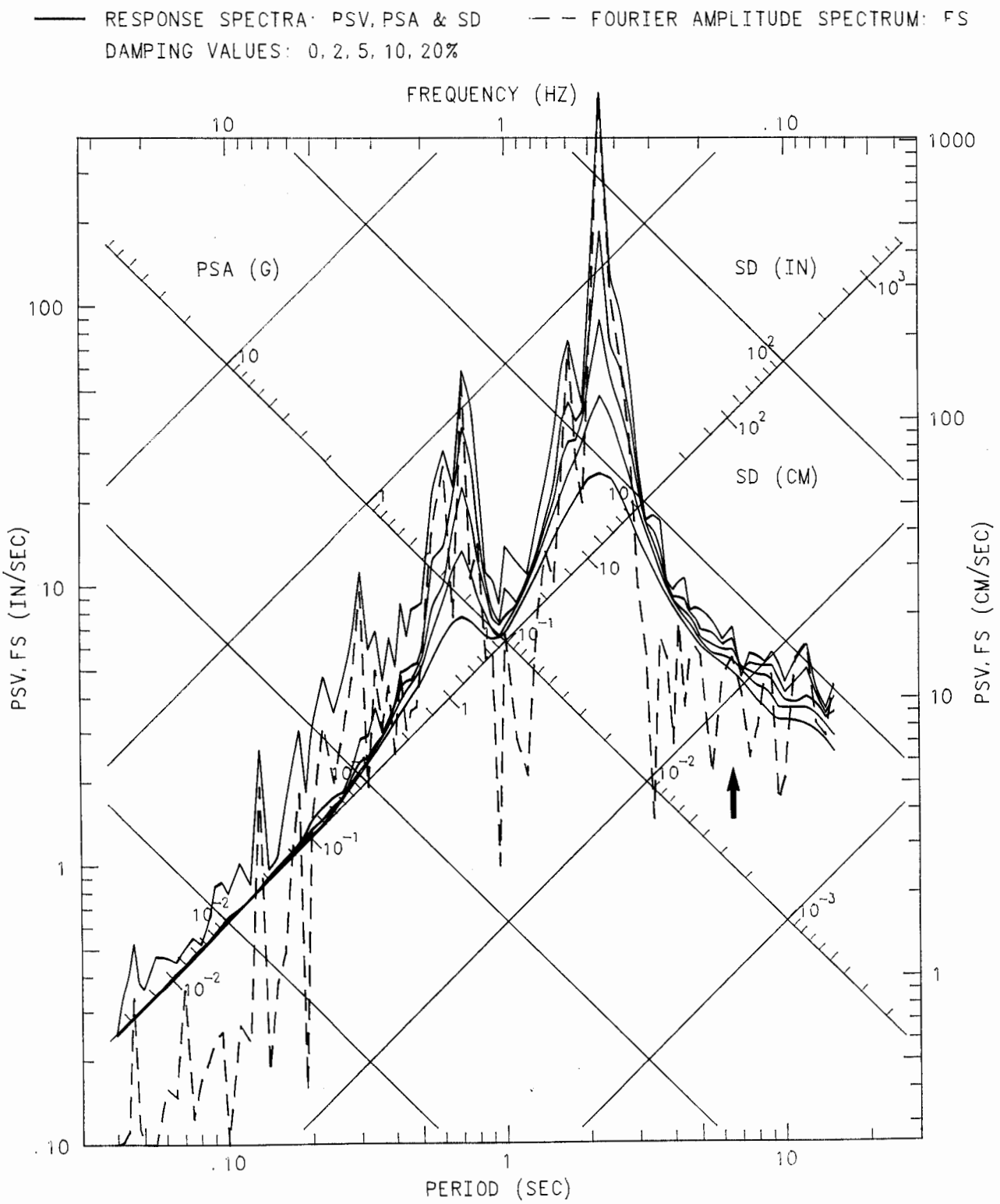
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 10: 0 DEG (12TH FLOOR, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



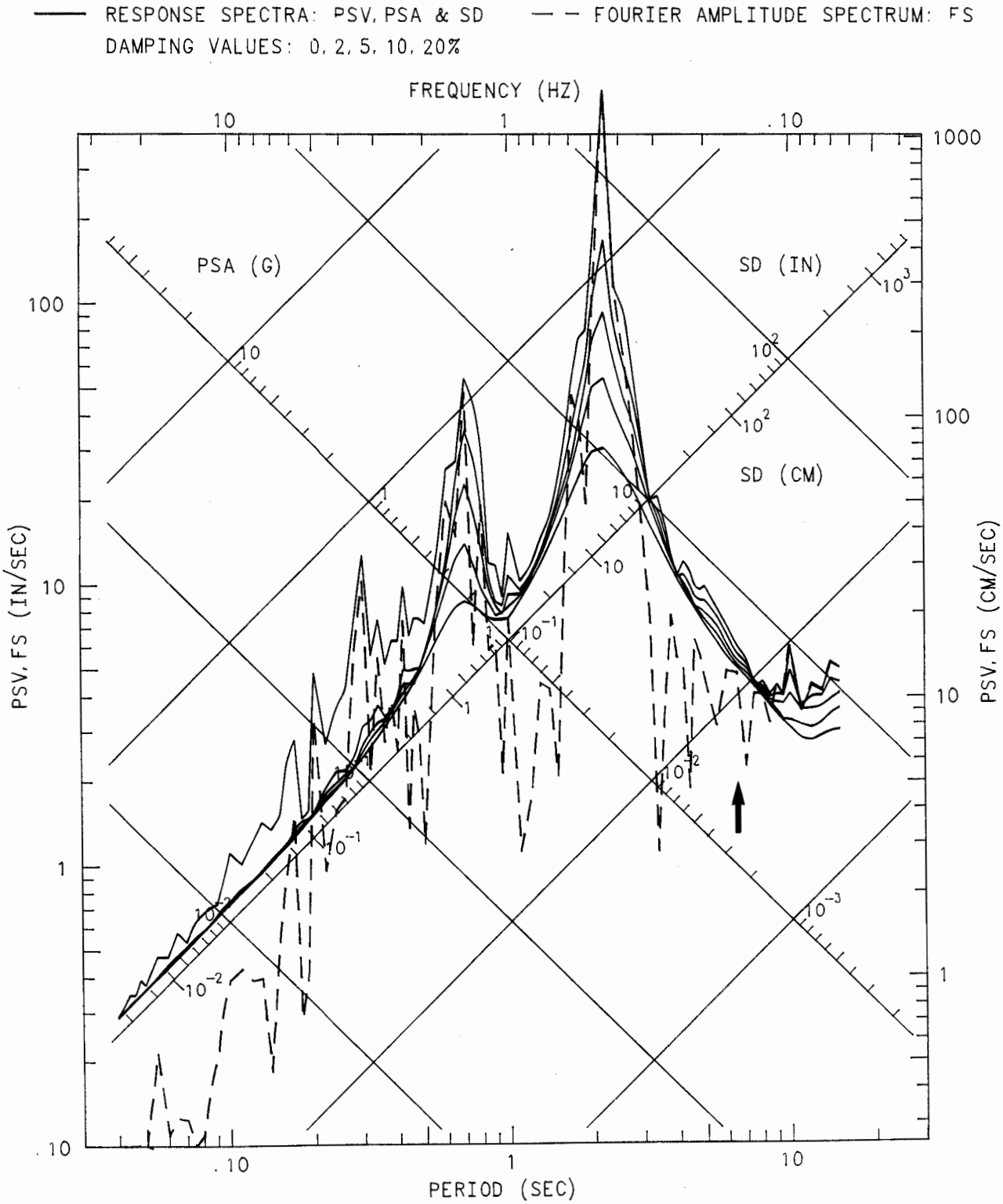
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 11: 0 DEG (12TH FLOOR, SOUTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



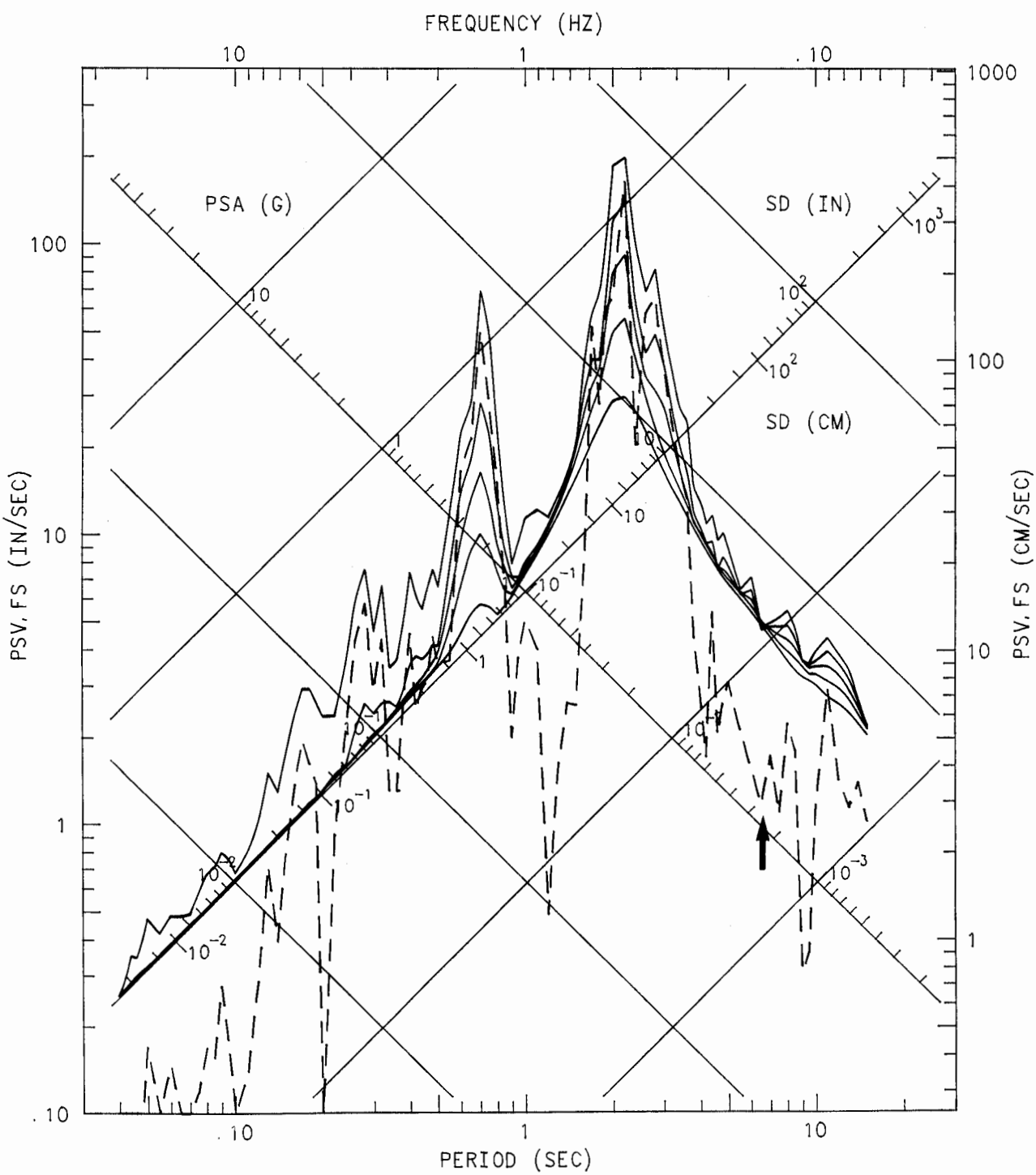
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 12: 90 DEG (7TH FLOOR, NORTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0185-84115.01 033085.0353-QM84A357



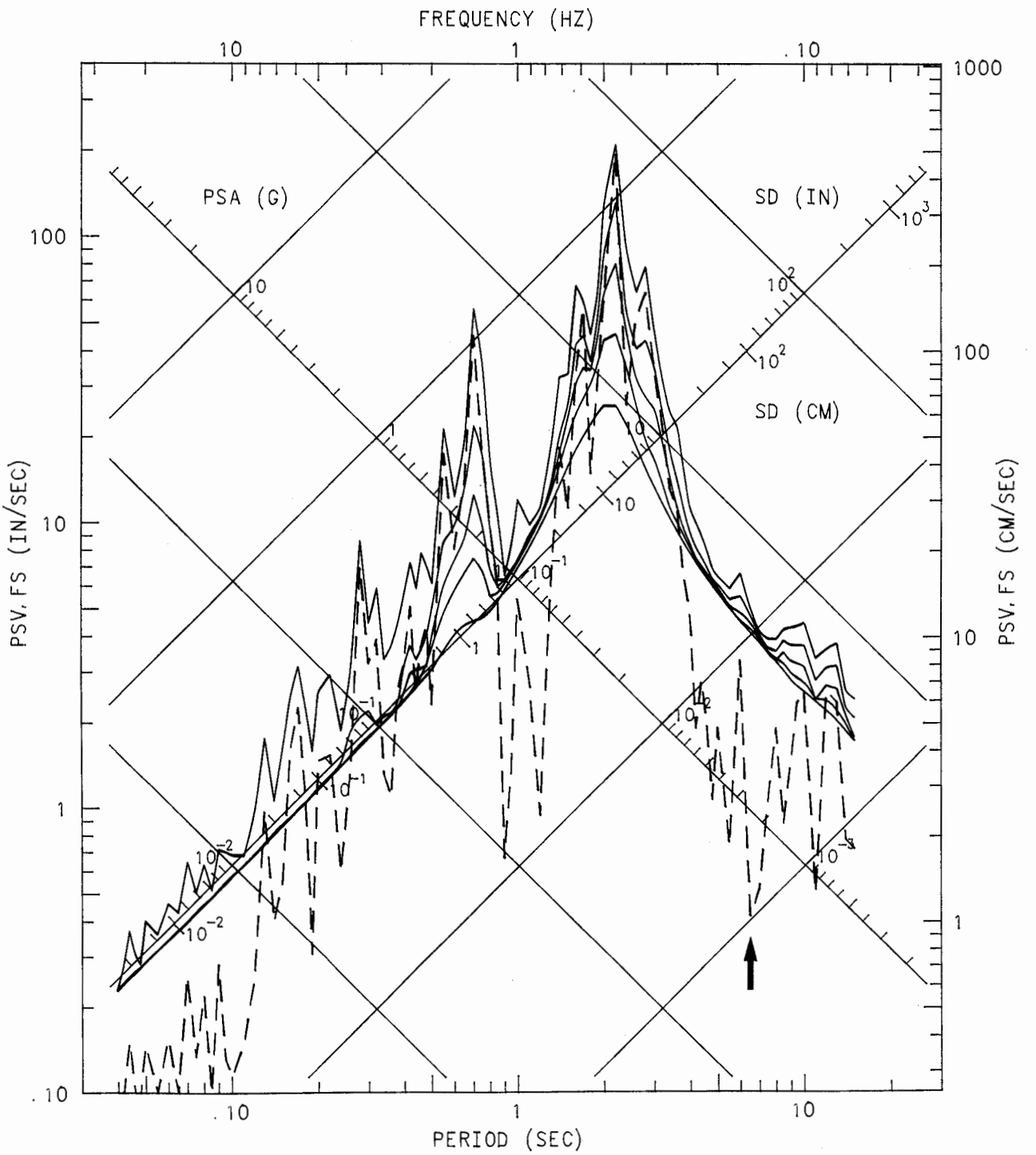
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 1 (STA CHN 13): 90 DEG (7TH FLOOR, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0145-84115.01 041285.2125-QM84A357A2



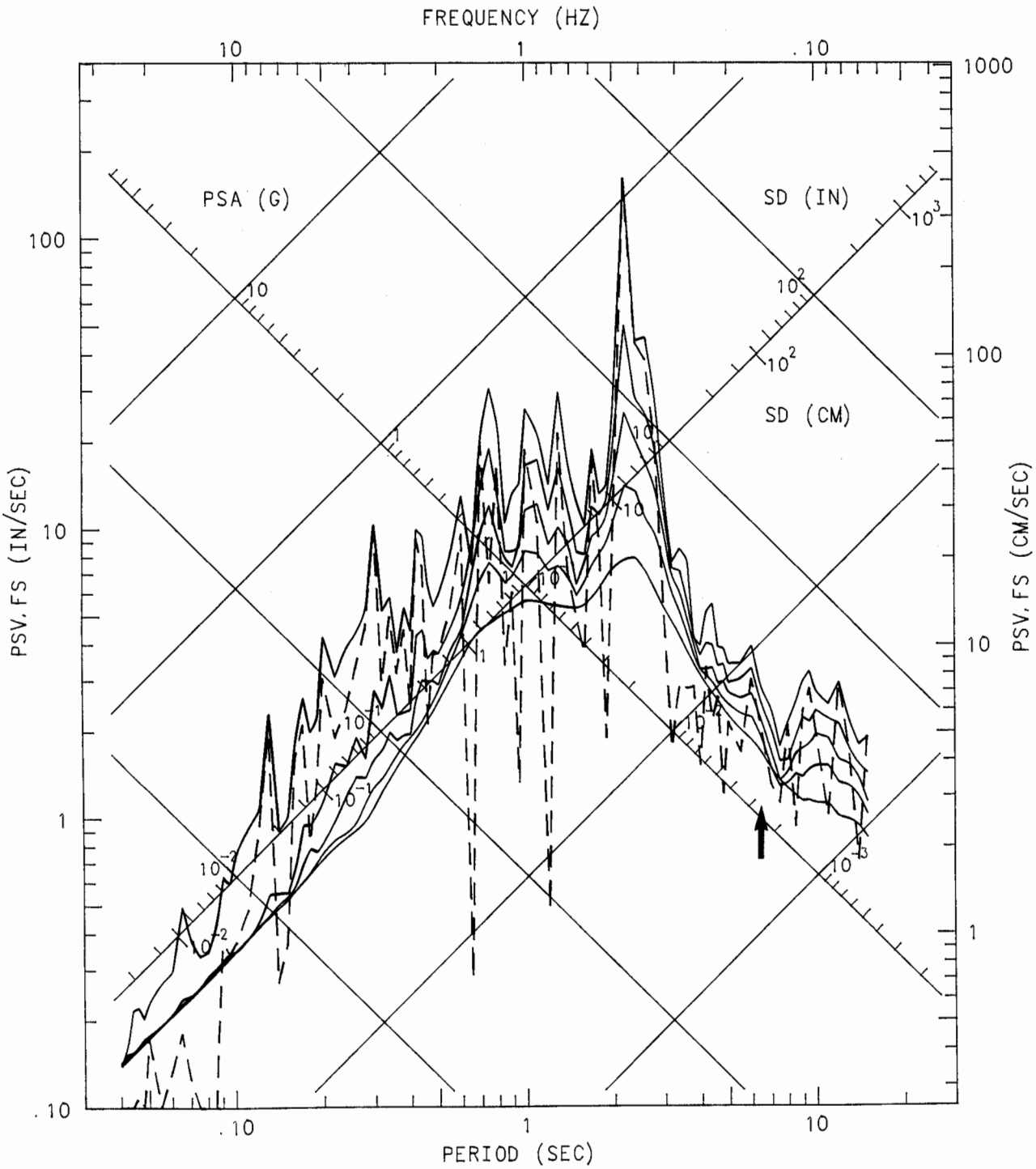
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 2 (STA CHN 14): 0 DEG (7TH FLOOR, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0145-84115.01 041285.2125-QM84A357A2



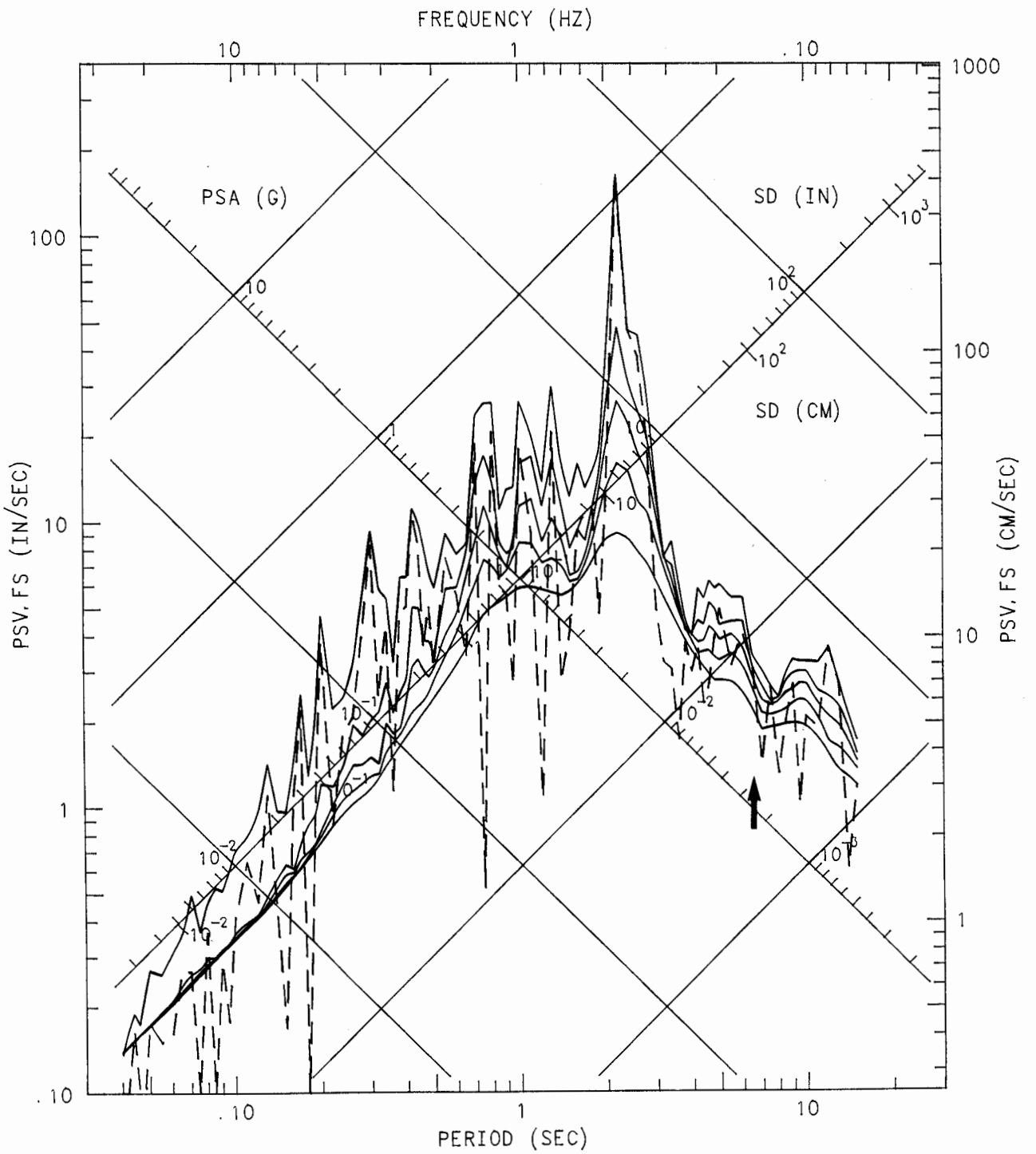
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 3 (STA CHN 15): 0 DEG (7TH FLOOR, SOUTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0145-84115.01 041285.2125-QM84A357A2



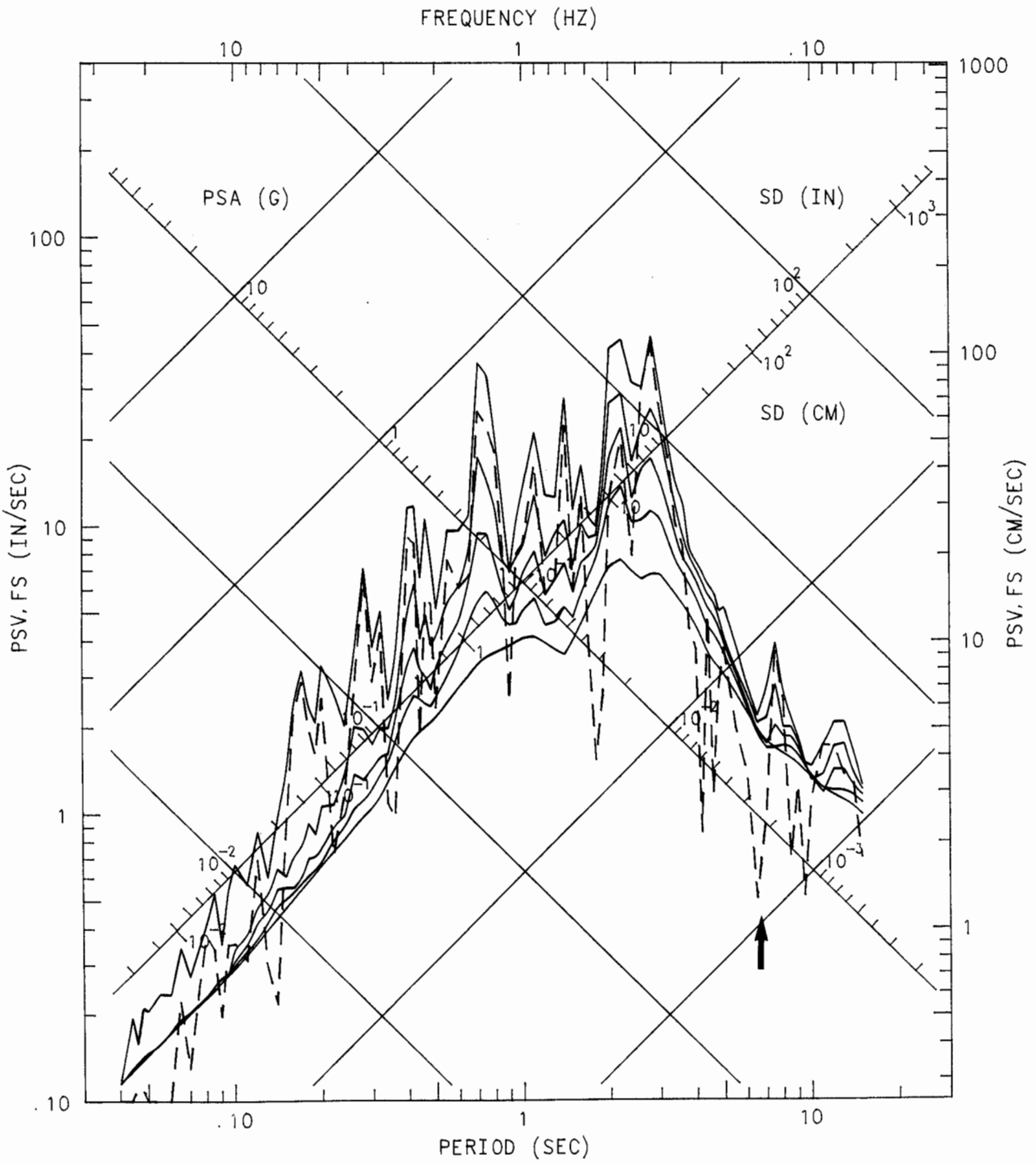
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 4 (STA CHN 16): 90 DEG (2ND FLOOR, NORTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0145-84115.01 041285.2125-QM84A357A2



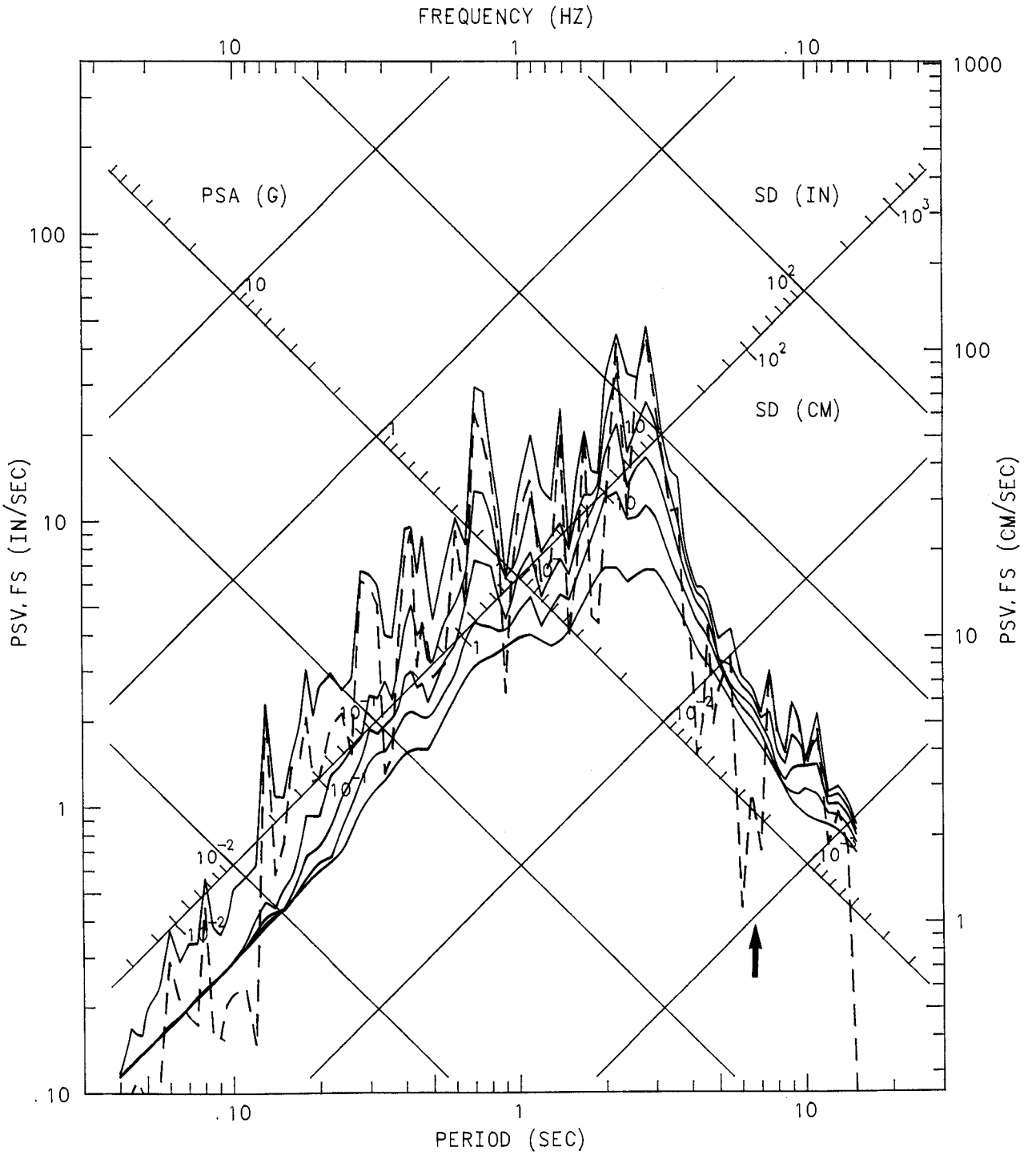
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 5 (STA CHN 17): 90 DEG (2ND FLOOR, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0145-84115.01 041285.2125-QM84A357A2



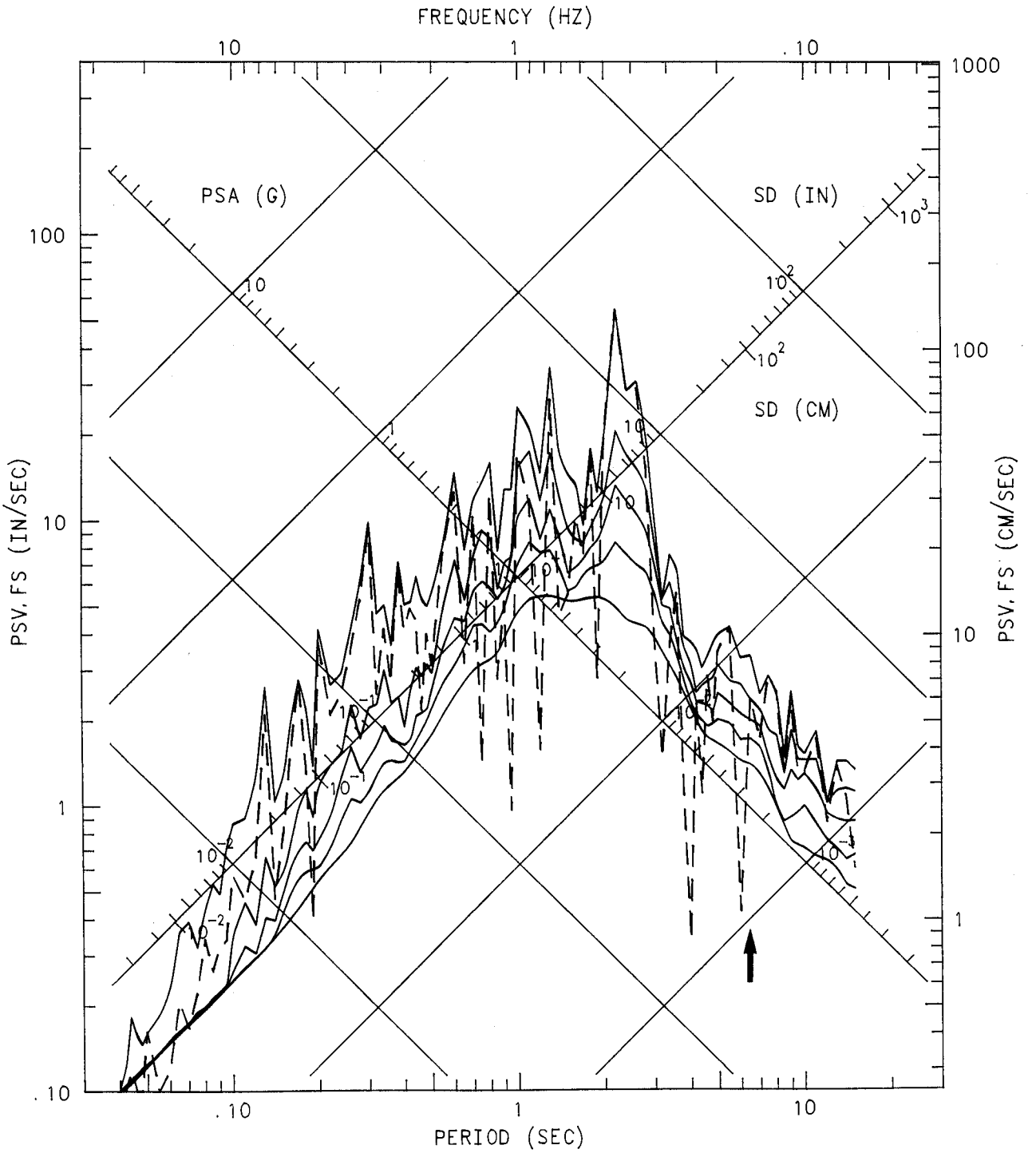
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 6 (STA CHN 18): 0 DEG (2ND FLOOR, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0145-84115.01 041285.2125-QM84A357A2



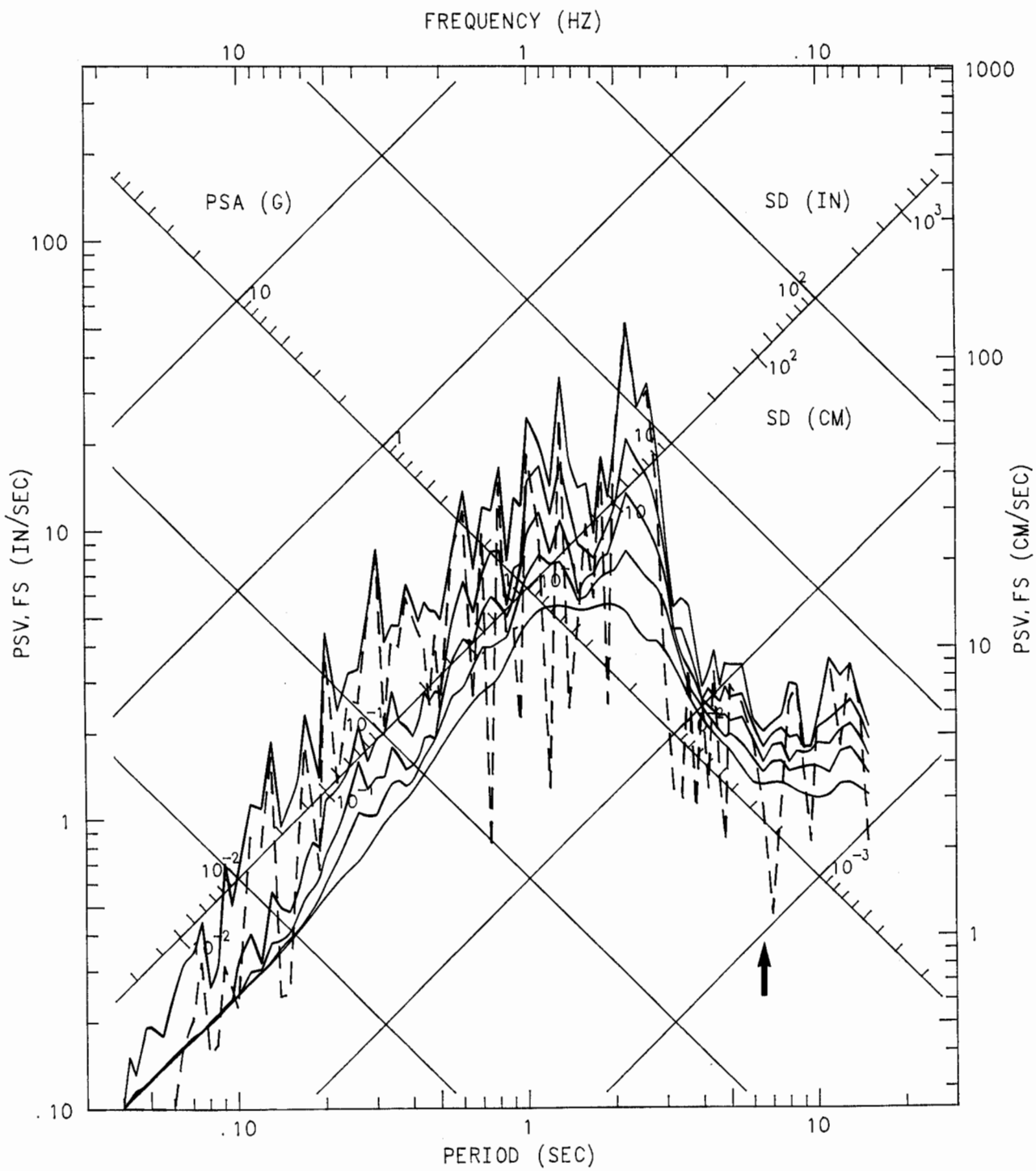
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 7 (STA CHN 19): 0 DEG (2ND FLOOR, SOUTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0145-84115.01 041285.2125-QM84A357A2



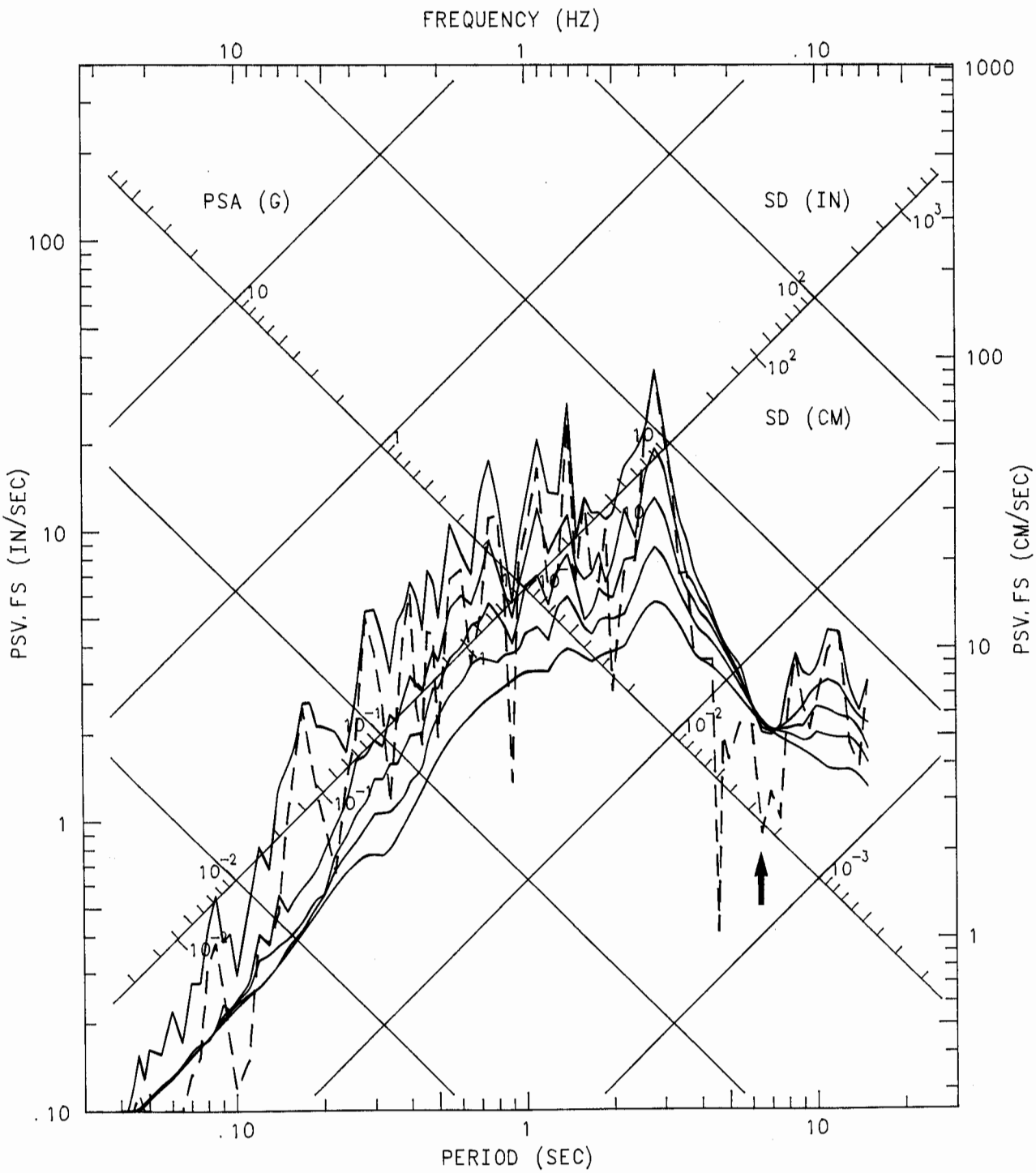
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 8 (STA CHN 20): 90 DEG (LOWER LEVEL, NORTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0145-84115.01 041285.2125-QM84A357A2



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 9 (STA CHN 21): 90 DEG (LOWER LEVEL, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0145-84115.01 041285.2125-QM84A357A2



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JOSE - SANTA CLARA CO. BLDG.
CHN 10 (STA CHN 22): 0 DEG (LOWER LEVEL, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57357-C0145-84115.01 041285.2125-QM84A357A2



SARATOGA - WEST VALLEY COLLEGE GYM

Special Notes: None

Saratoga - West Valley College Gym

Northwest Side View

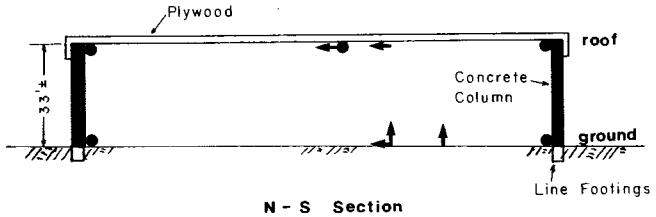
Southwest Side View

Address: 14000 Fruitvale Avenue
Saratoga, California
Coordinates: 37.262°N, 122.009°W
No. of Stories above/below ground: 1 / 0
Plan Type: Rectangular
Base Dimensions: 154' x 122'
Typical Floor Dimensions: Same as Base
Design Date: 1971

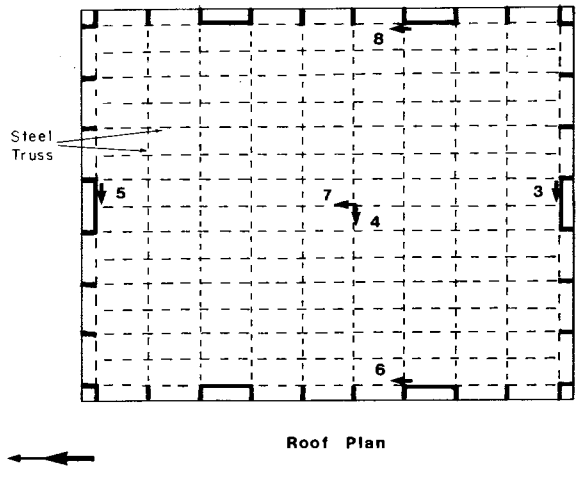
Vertical Load Carrying System:
3/8" plywood over tongue & groove sheathing; steel trusses on concrete columns.
Lateral Force Resisting System:
Isolated perimeter rc shear walls and columns.
Foundation Type:
Spread footings.

SENSOR LAYOUT

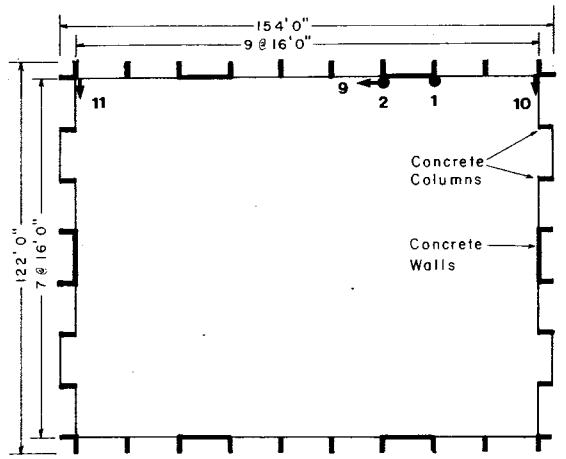
Saratoga-West Valley College Gym
CSMIP Station No. 58235



N - S Section



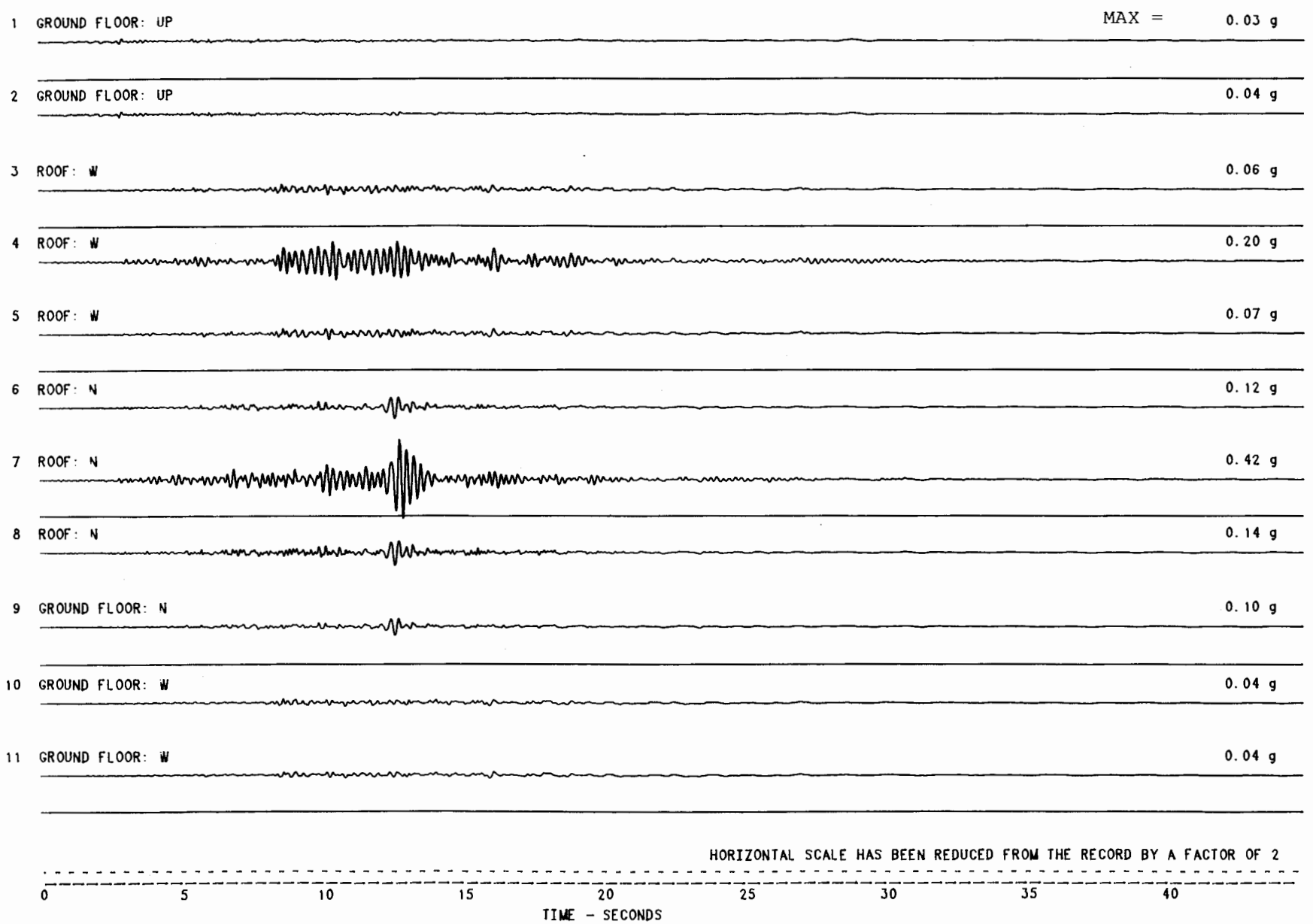
Roof Plan



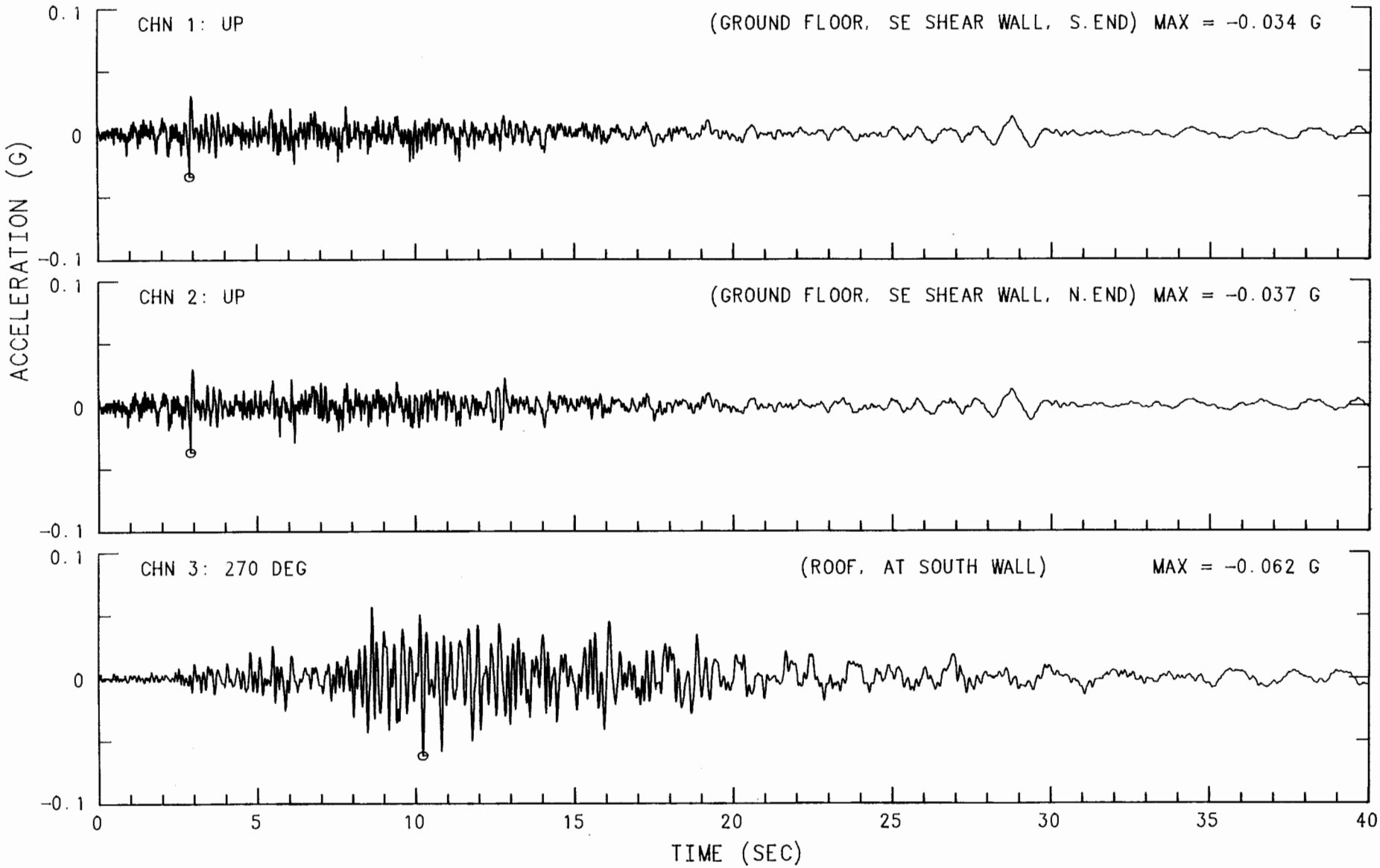
Sensors 4,7 Mounted on Steel Truss
Sensors 10,11 Mounted on Conrete Column
Other Sensors Mounted on Concrete Wall

Ground Floor Plan

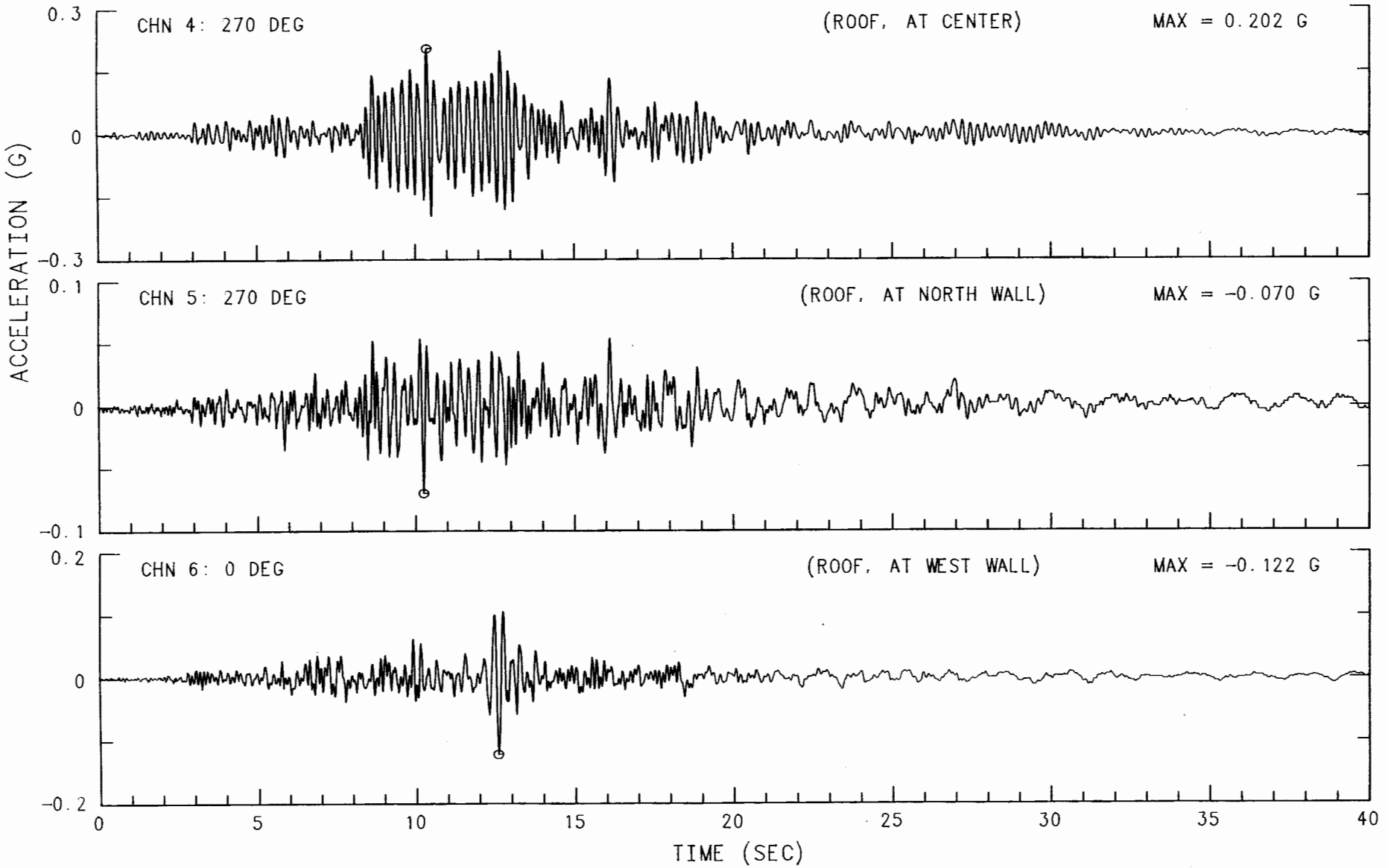
SARATOGA - WEST VALLEY COLLEGE GYM RECORD 58235-C0184-84117.01 MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST



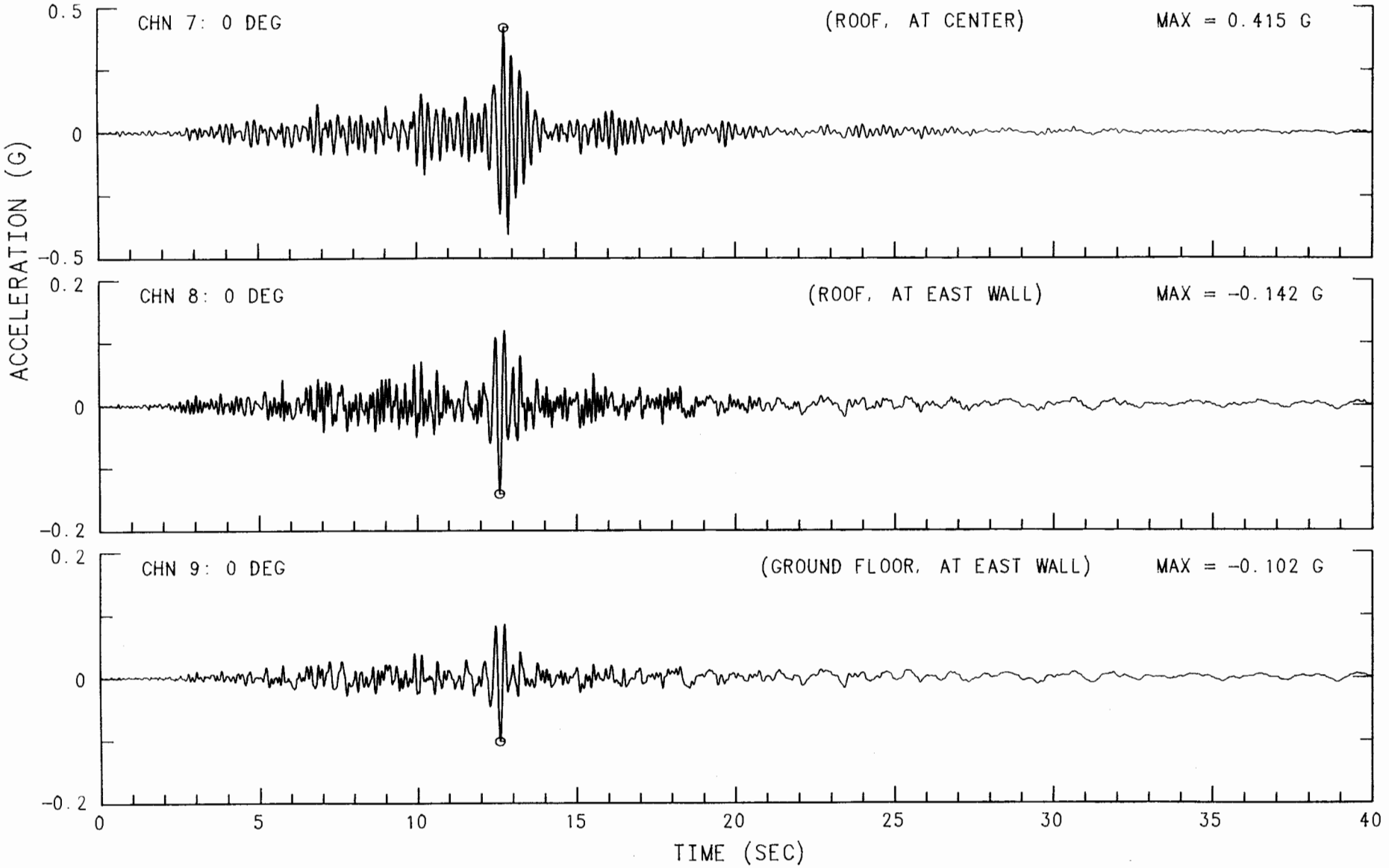
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
UNCORRECTED ACCELEROGRAM 58235-C0184-84117.01 050785.1846-QM84A235



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
UNCORRECTED ACCELEROGRAM 58235-C0184-84117.01 050785.1846-QM84A235



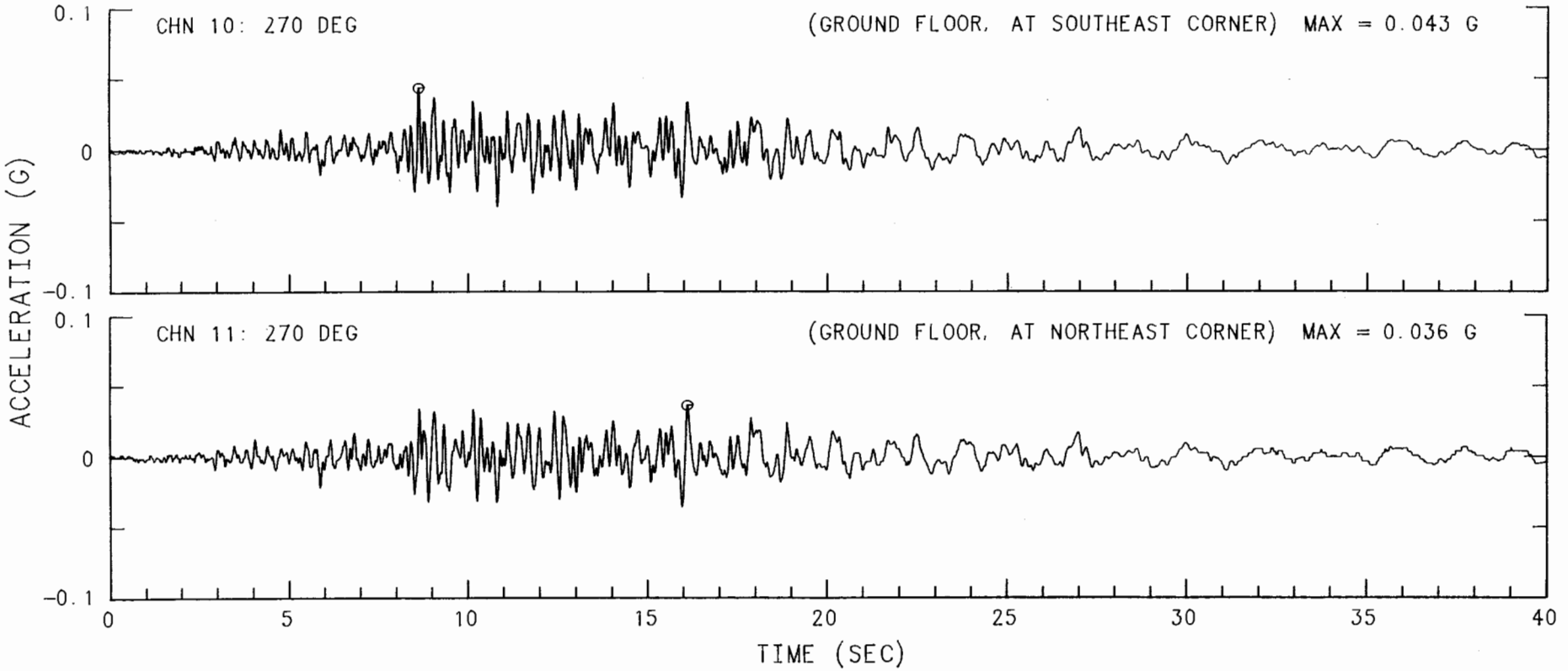
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
UNCORRECTED ACCELEROGRAM 58235-C0184-84117.01 050785.1846-QM84A235



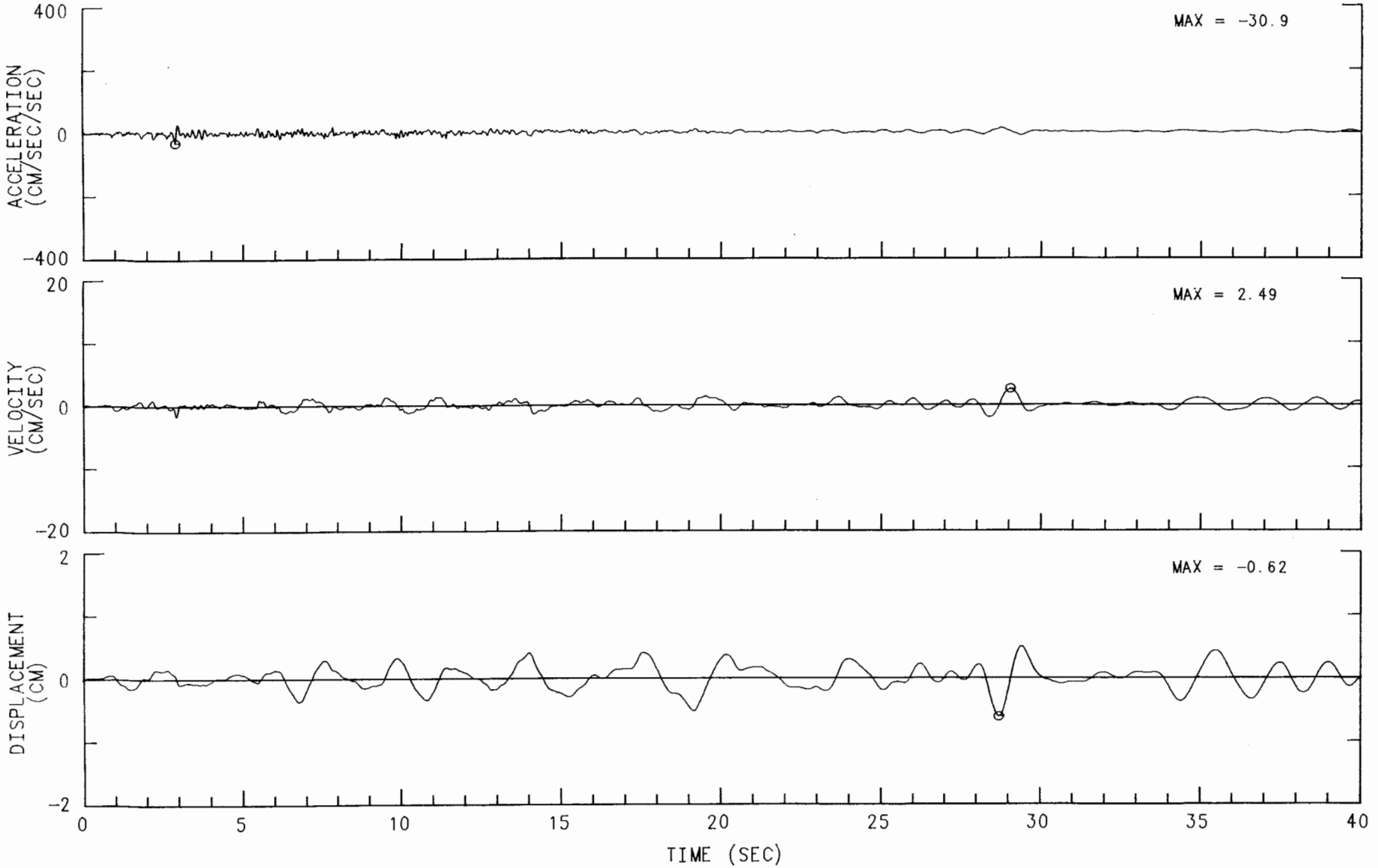
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

SARATOGA - WEST VALLEY COLLEGE GYM

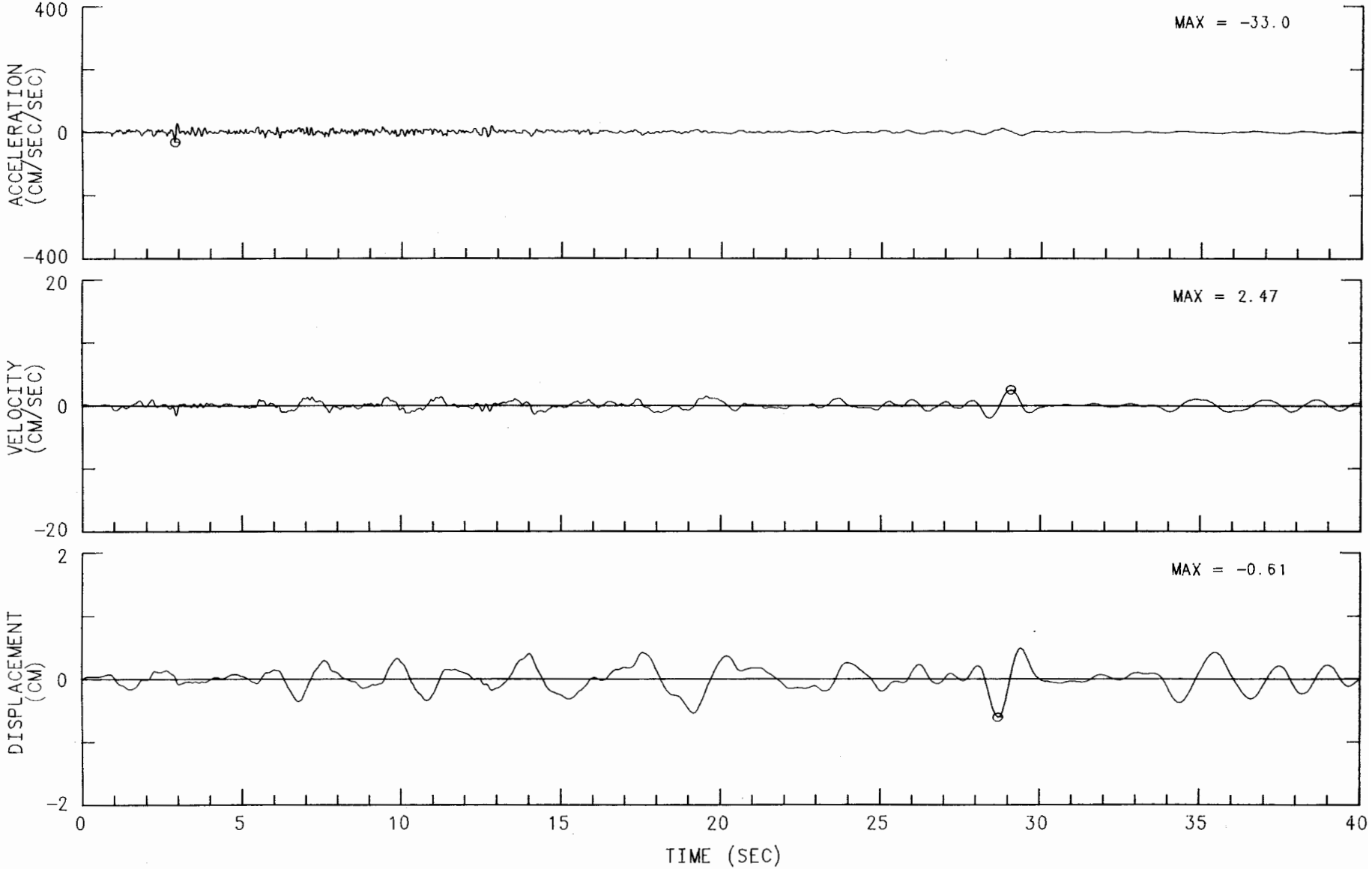
UNCORRECTED ACCELEROGRAM 58235-C0184-84117.01 050785.1846-QM84A235



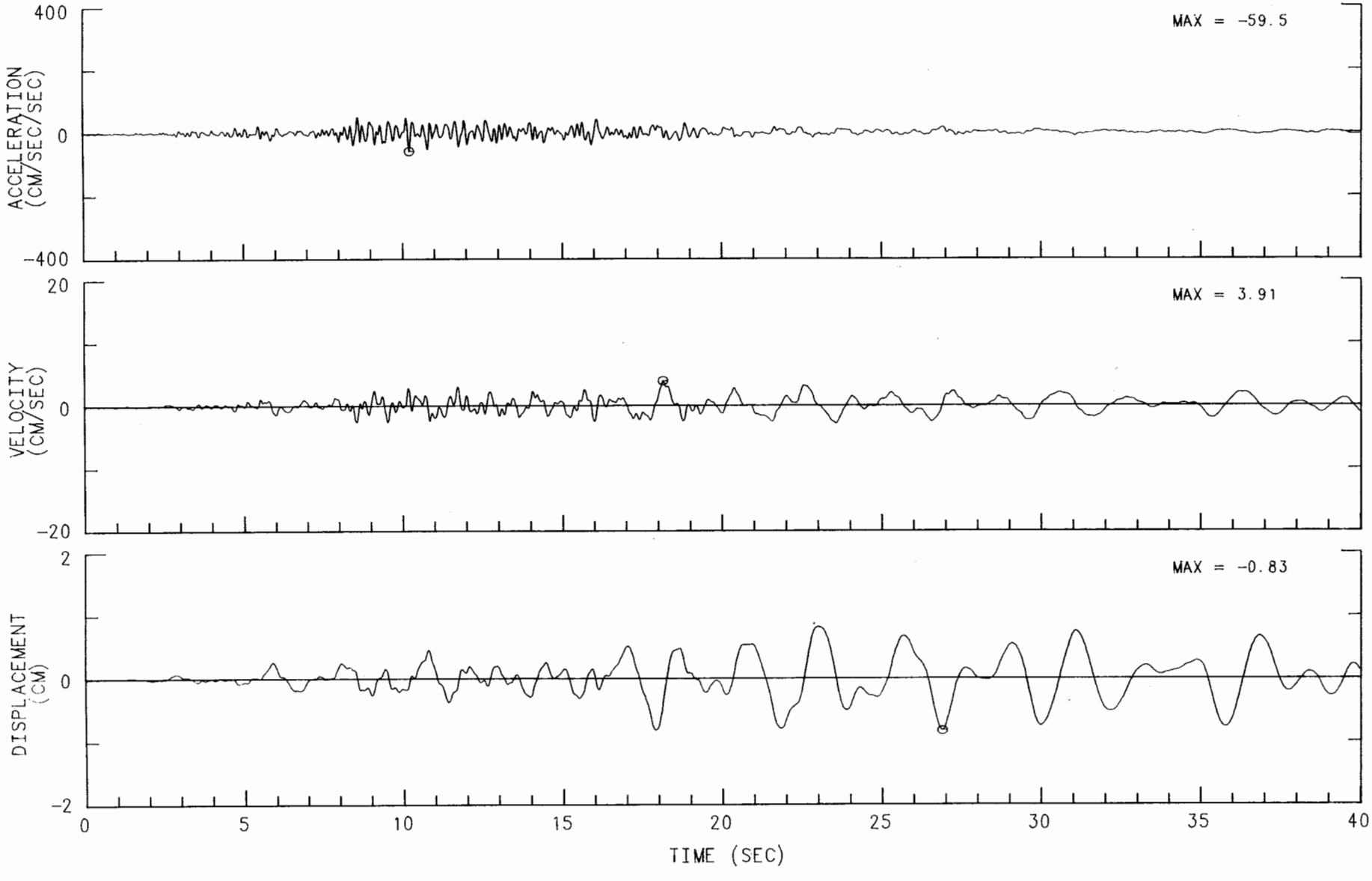
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM CHN 1: UP (GROUND FLOOR, SE SHEAR WALL, S.END)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .12-.25 TO 23.0-25.0 HZ. 58235-C0184-84117.01 050785.2226-QM84A235



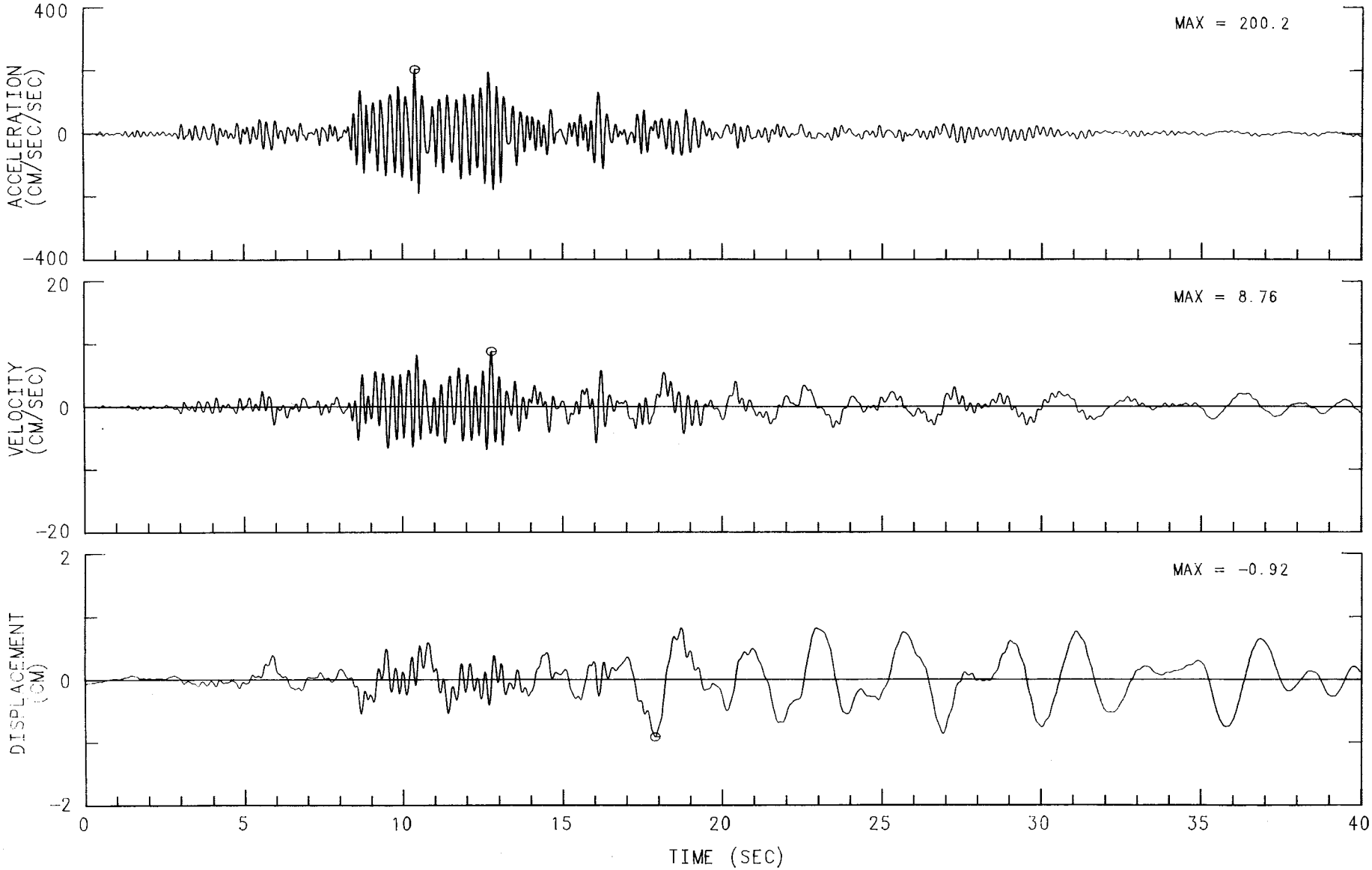
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM CHN 2: UP (GROUND FLOOR, SE SHEAR WALL, N.END)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58235-C0184-84117.01 050785.2226-QM84A235



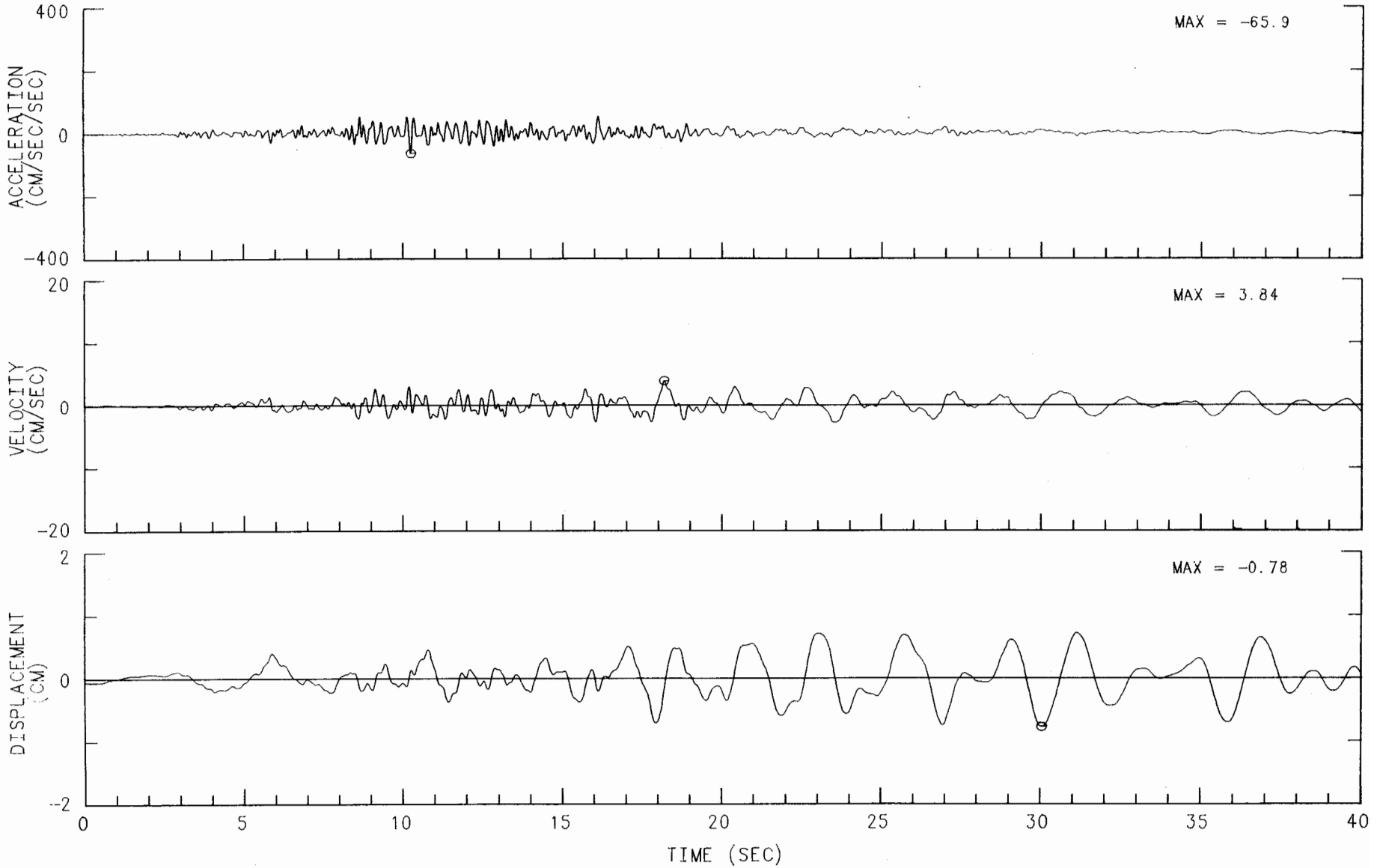
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM CHN 3: 270 DEG (ROOF, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58235-C0184-84117.01 050785.2226-QM84A235



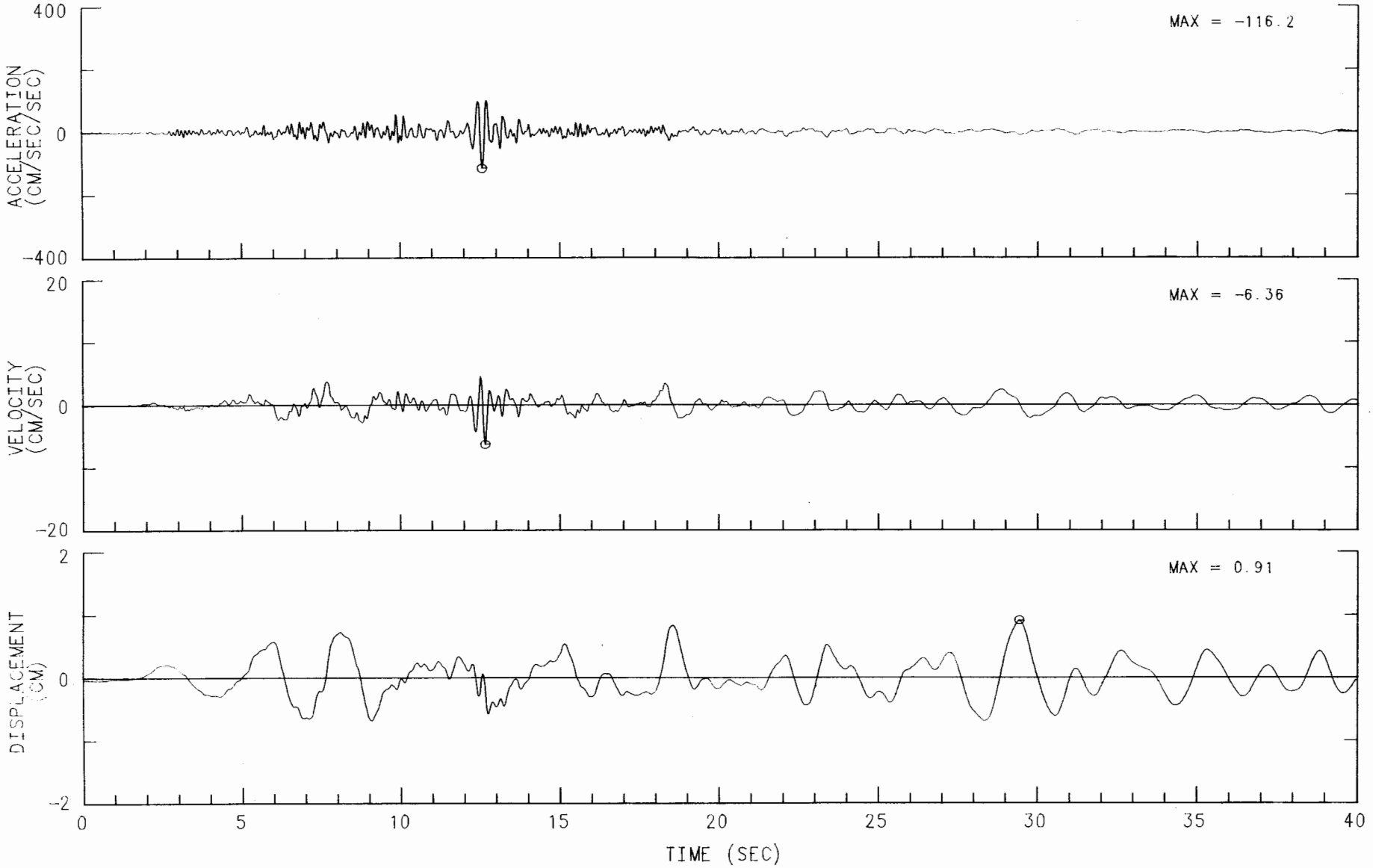
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM CHN 4: 270 DEG (ROOF, AT CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58235-C0184-84117.01 050785.2226-QM84A235



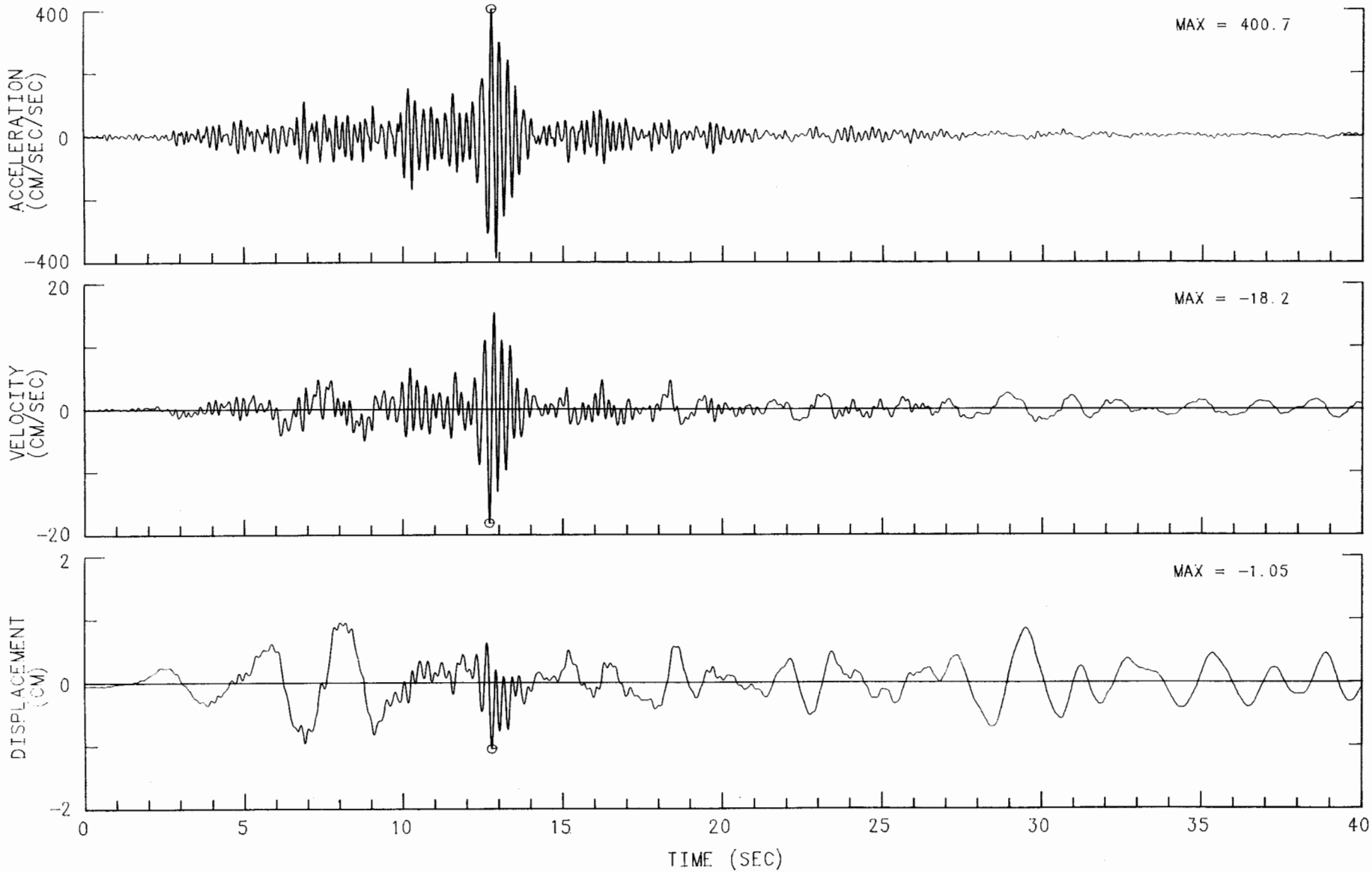
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM CHN 5: 270 DEG (ROOF, AT NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58235-C0184-84117.01 050785.2226-QM84A235



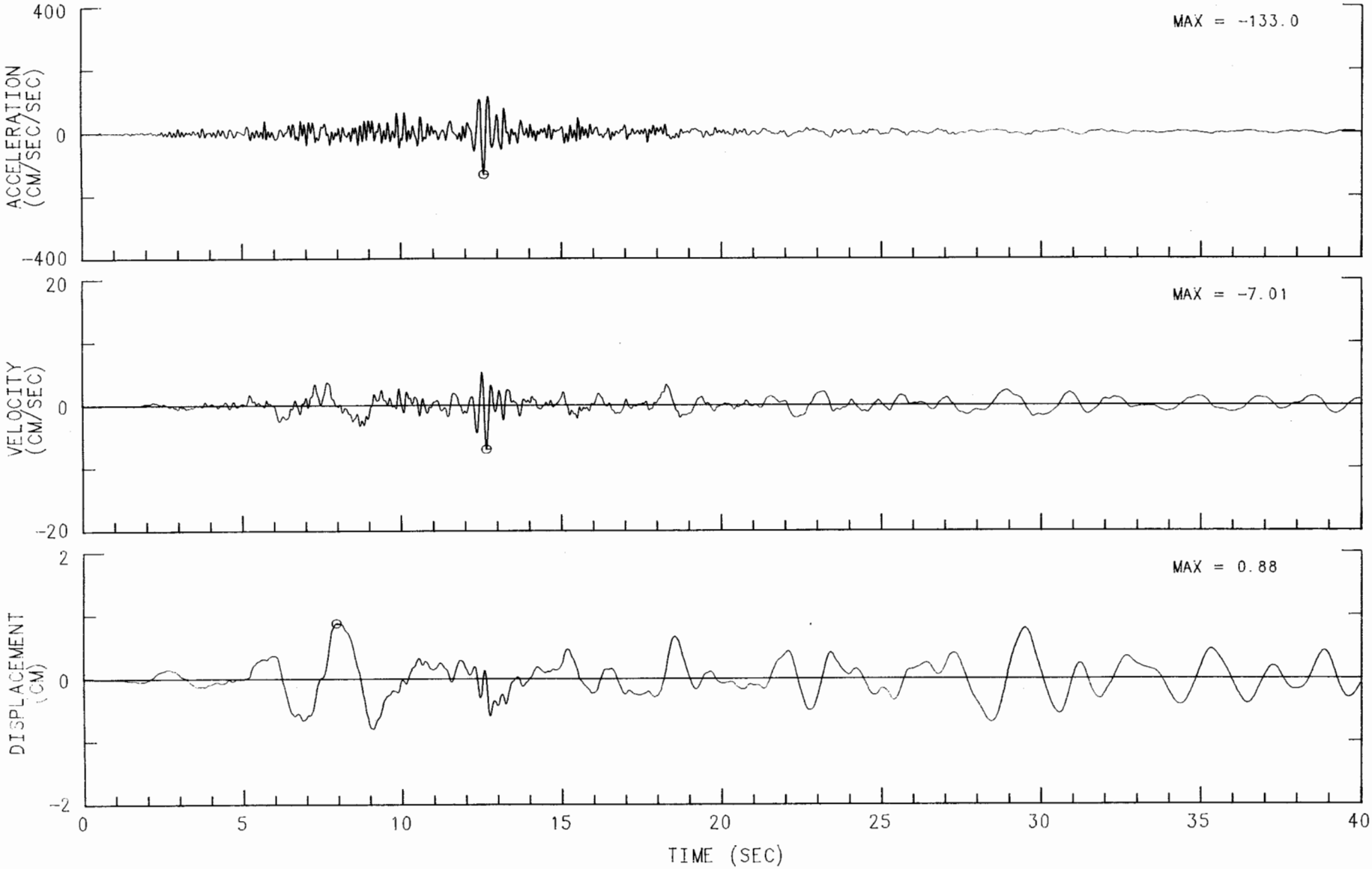
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM CHN 6: 0 DEG (ROOF, AT WEST WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58235-C0184-84117.01 050785.2226-QM84A235



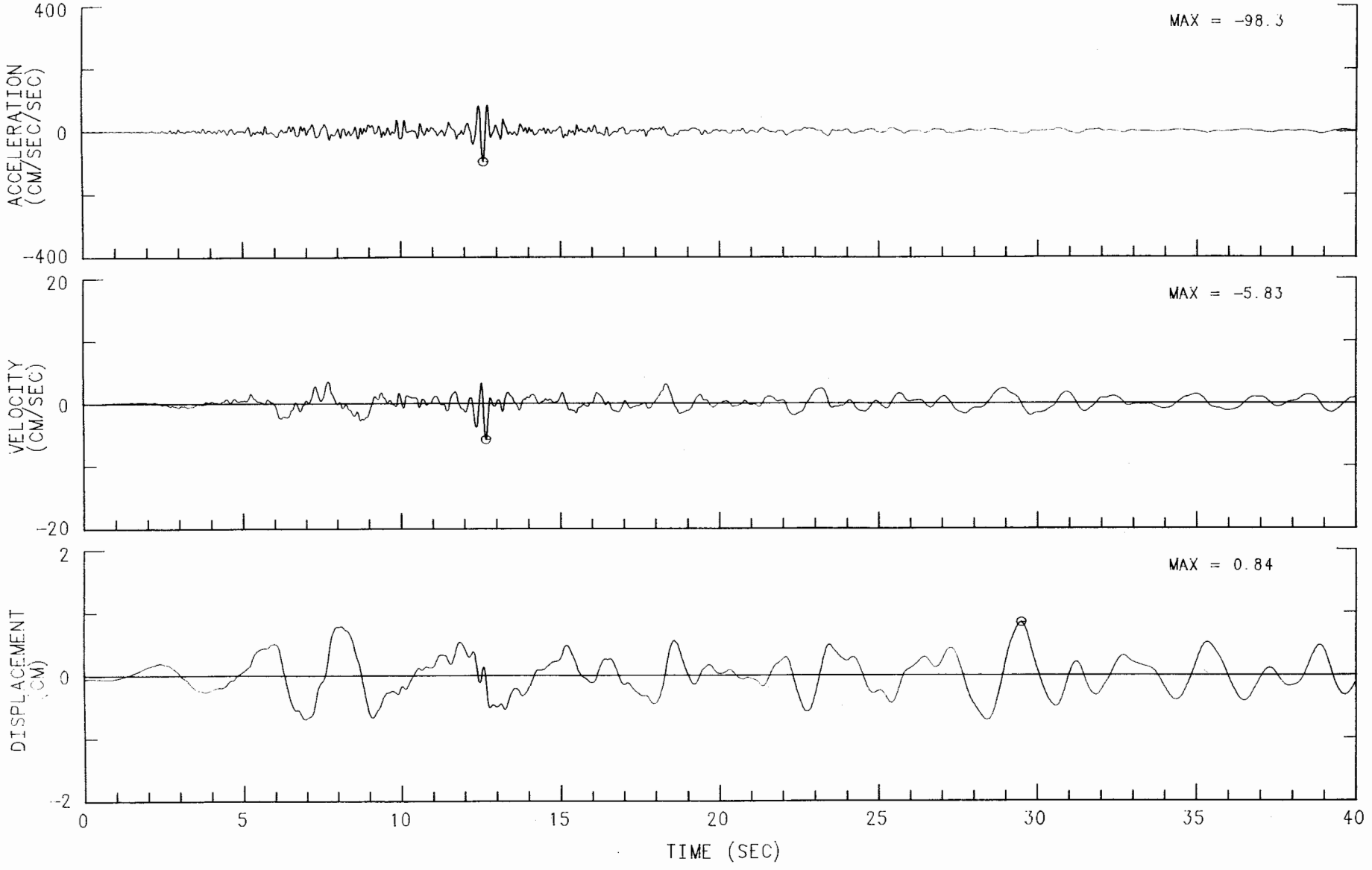
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM CHN 7: 0 DEG (ROOF, AT CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58235-C0184-84117.01 050785.2226-QM84A235



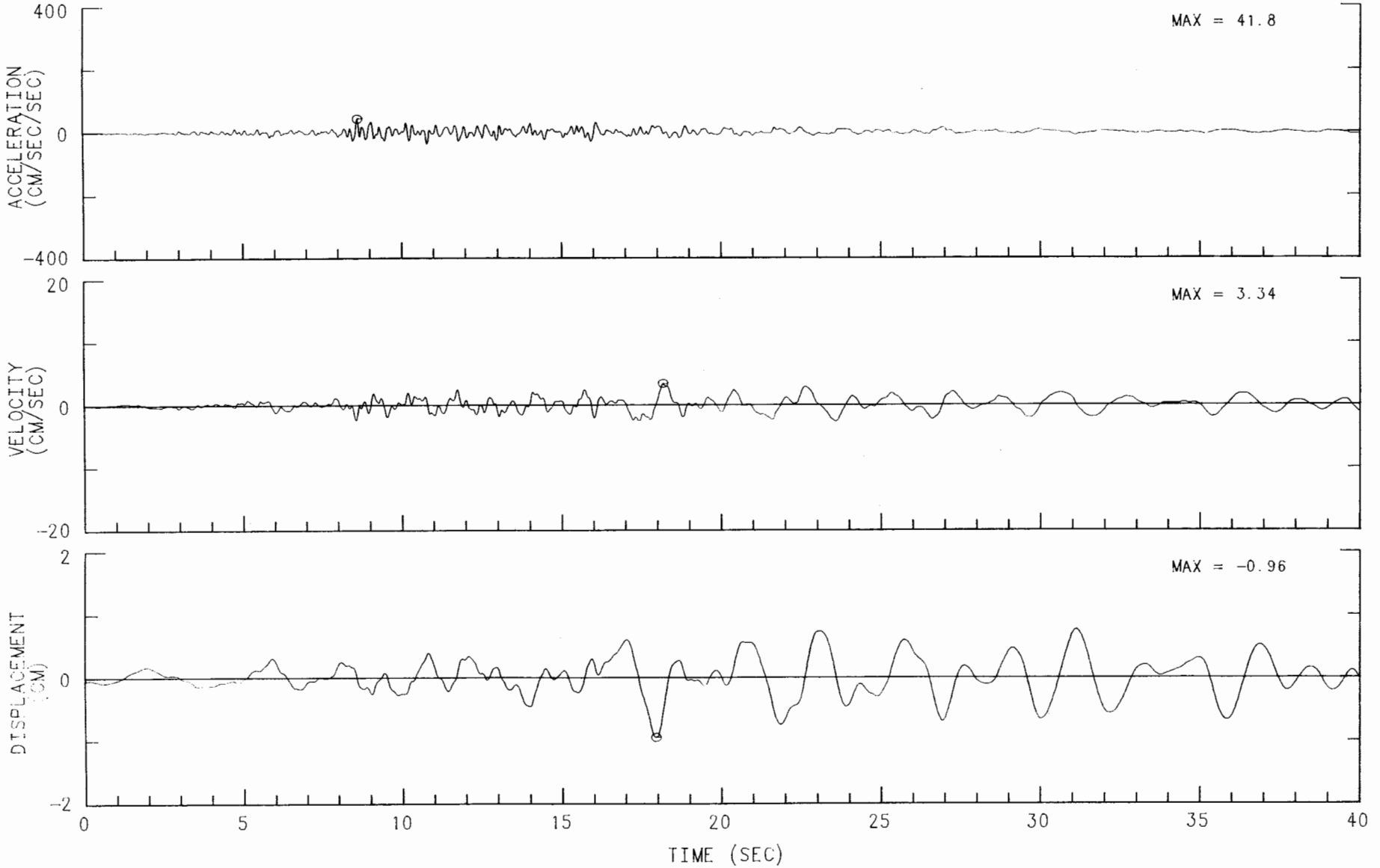
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM CHN 8: 0 DEG (ROOF, AT EAST WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .12-.25 TO 23.0-25.0 HZ. 58235-C0184-84117.01 050785.2226-QM84A235



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM CHN 9: 0 DEG (GROUND FLOOR, AT EAST WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58235-C0184-84117.01 050785.2226-QM84A235



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM CHN 10: 270 DEG (GROUND FLOOR, AT SOUTHEAST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58235-C0184-84117.01 050785.2226-QM84A235

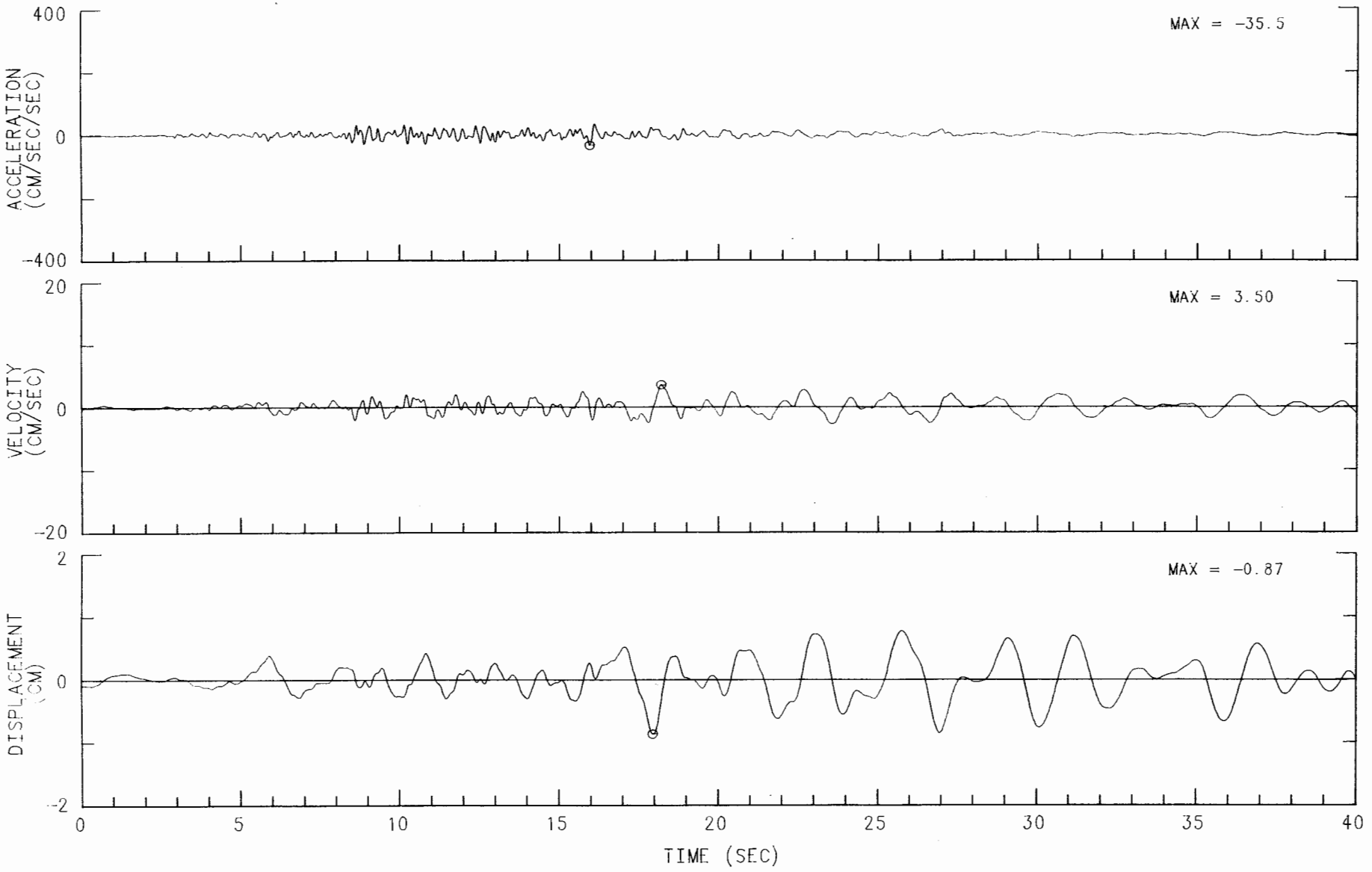


MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

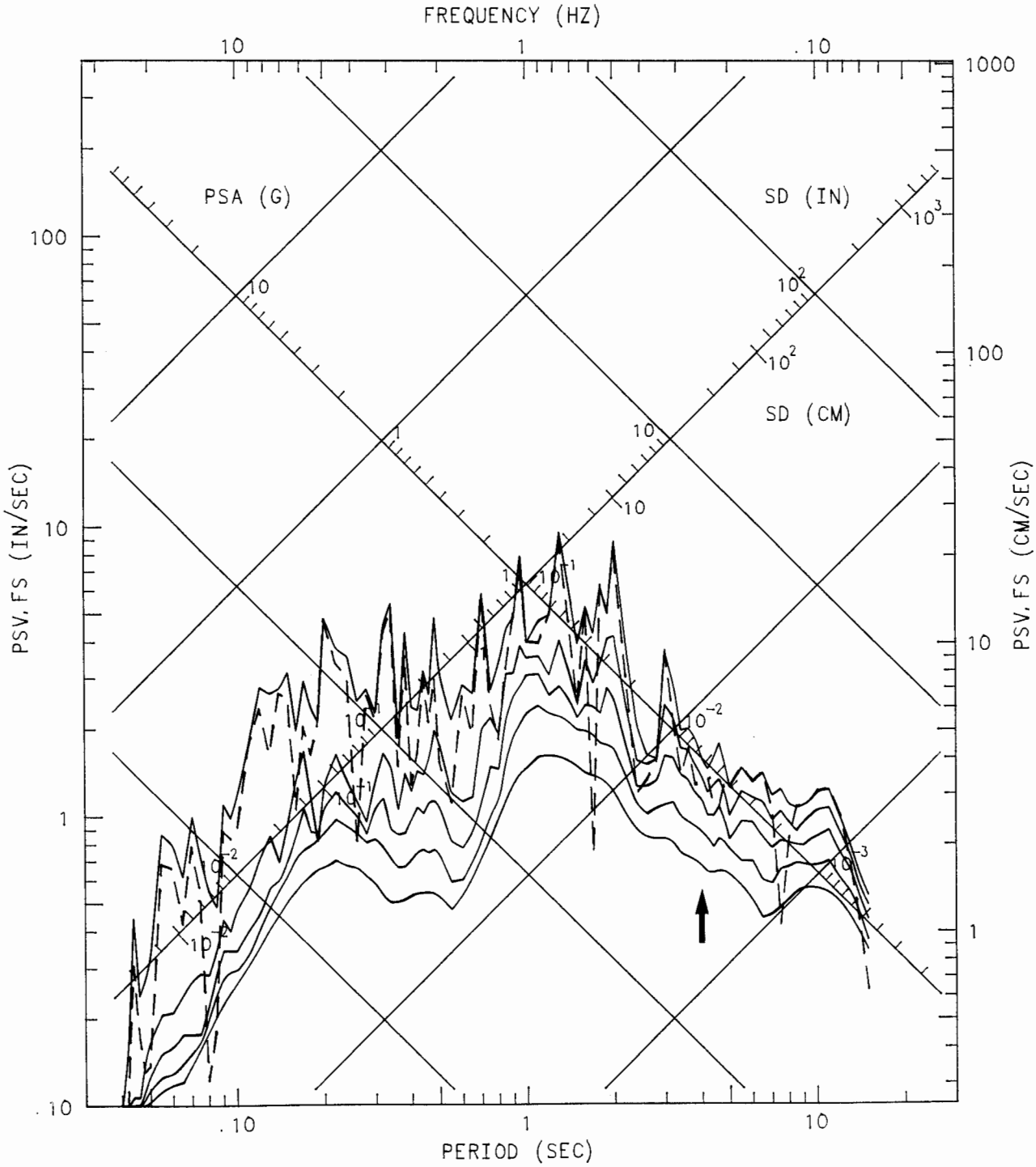
SARATOGA - WEST VALLEY COLLEGE GYM CHN 11: 270 DEG (GROUND FLOOR, AT NORTHEAST CORNER)

INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT

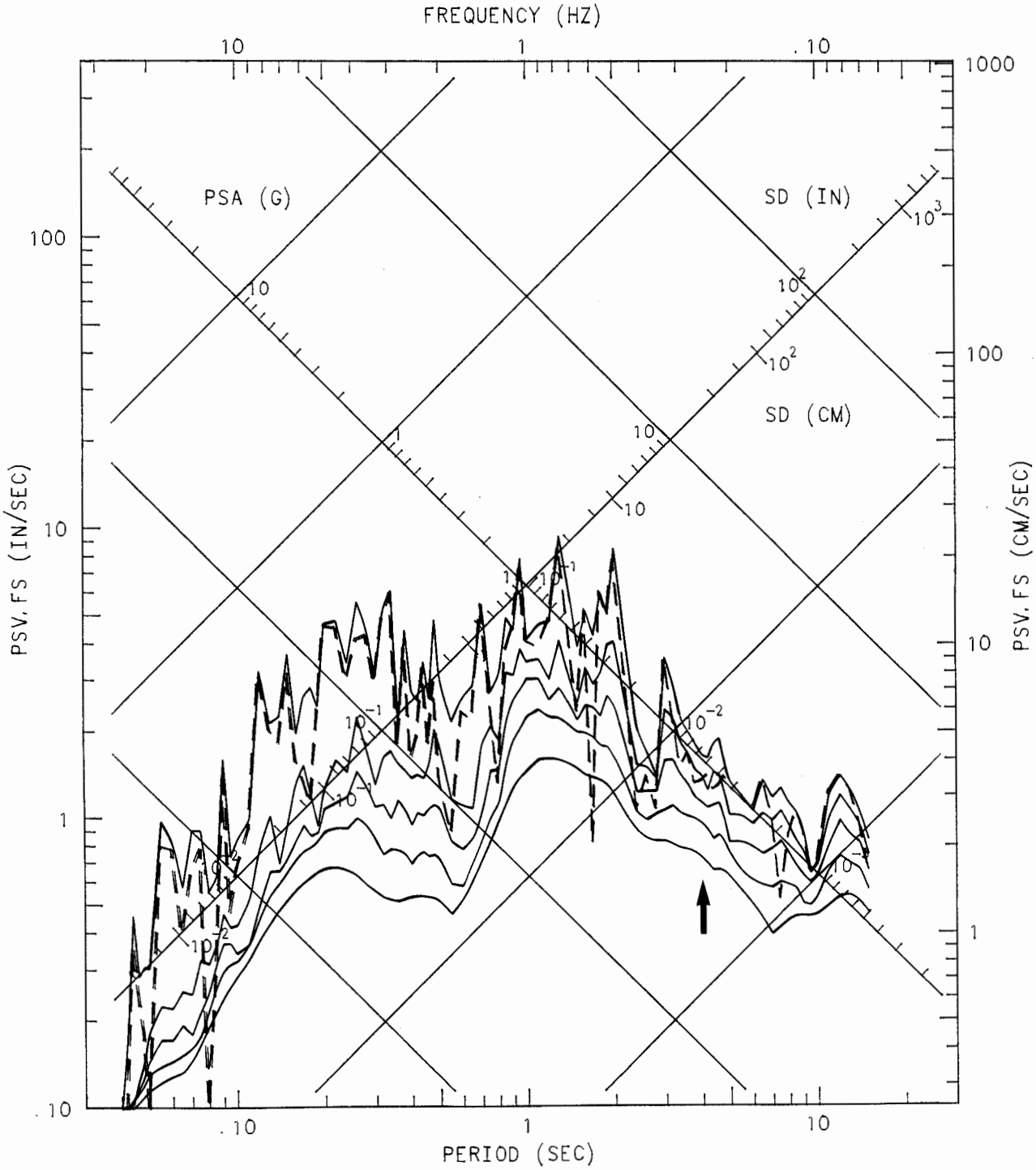
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58235-C0184-84117.01 050785.2226-QM84A235



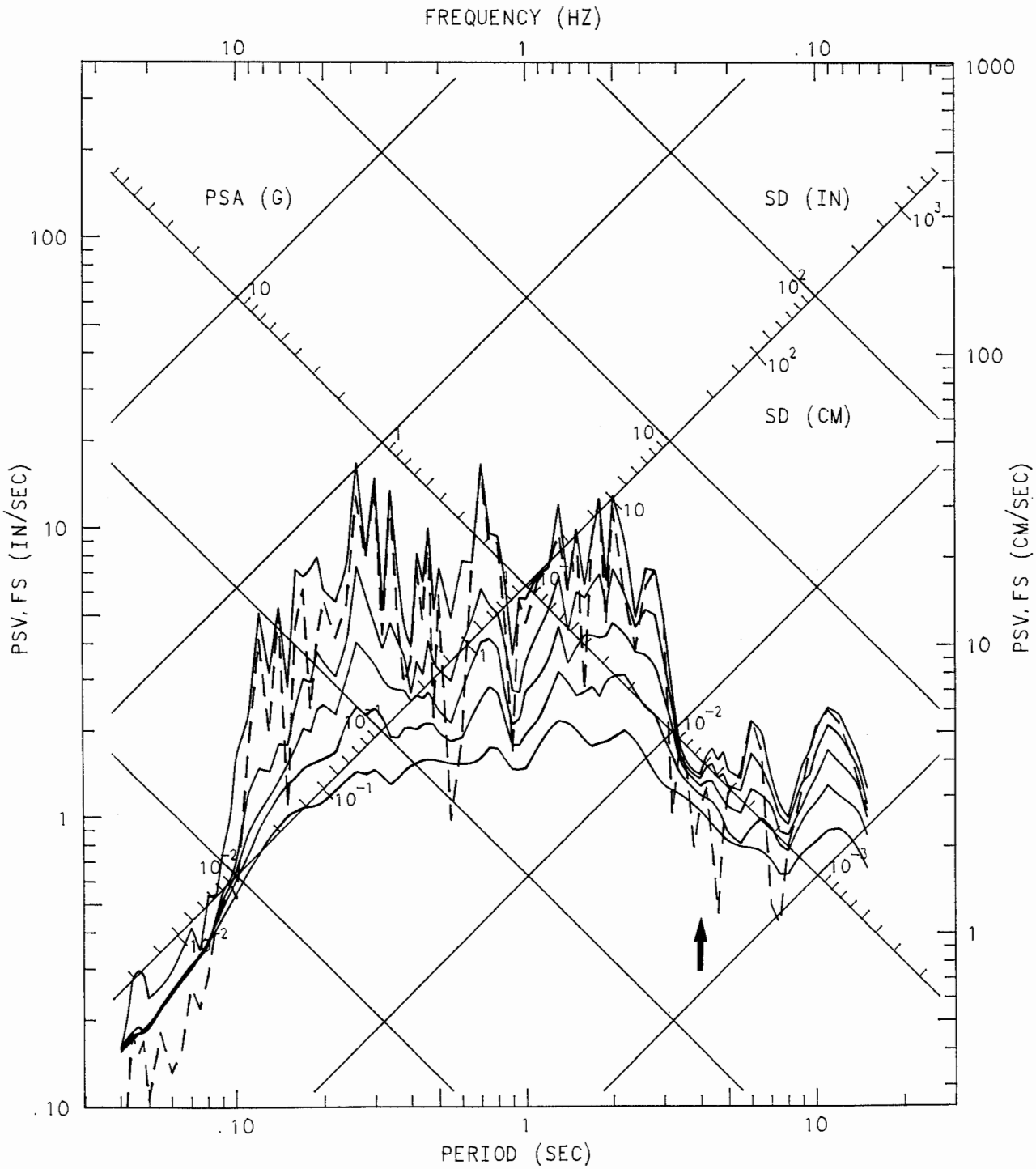
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
CHN 1: UP (GROUND FLOOR, SE SHEAR WALL, S.END)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58235-C0184-84117.01 050785.2110-QM84A235



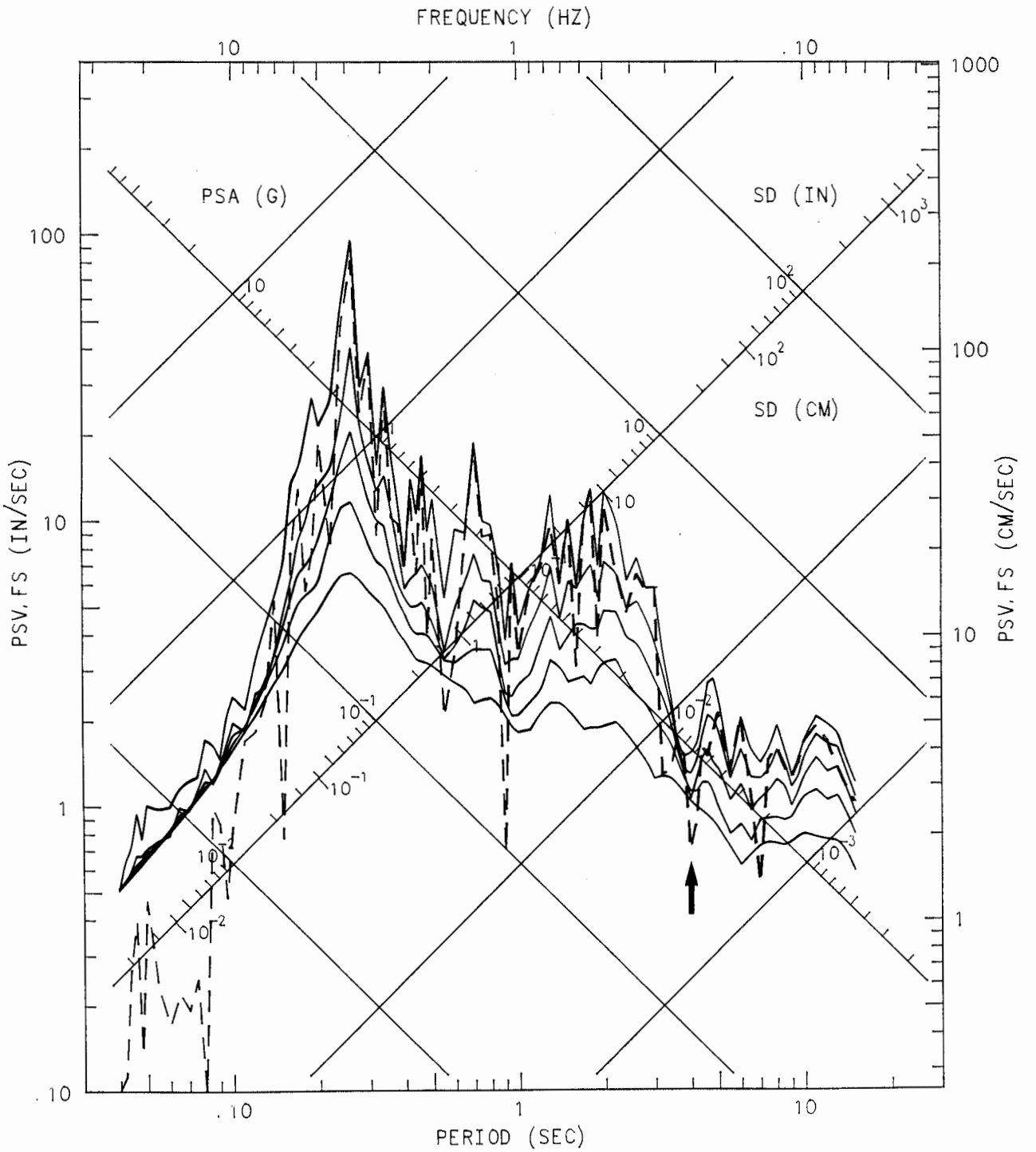
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
CHN 2: UP (GROUND FLOOR, SE SHEAR WALL, N.END)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58235-C0184-84117.01 050785.2110-QM84A235



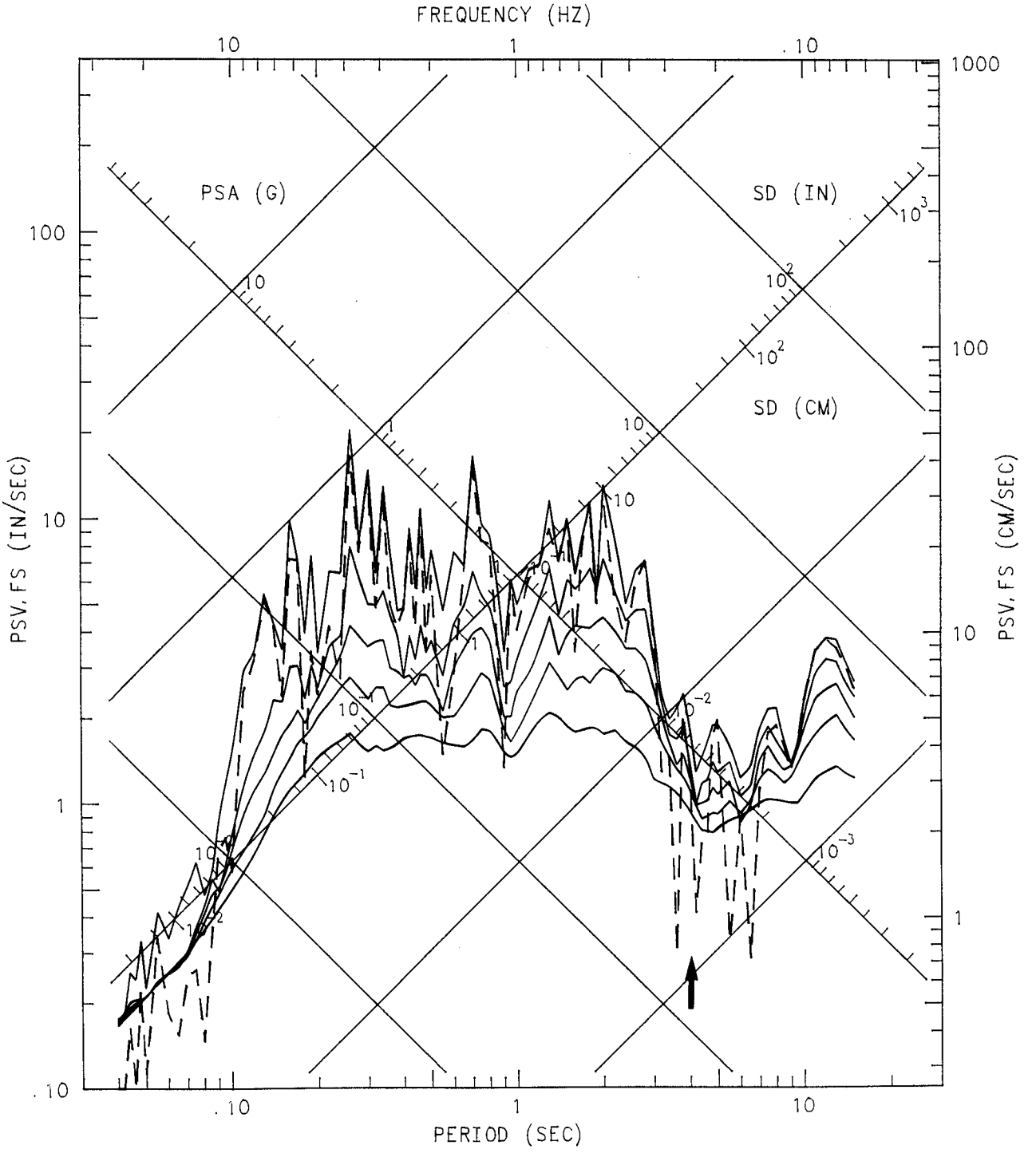
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
CHN 3: 270 DEG (ROOF, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58235-C0184-84117.01 050785.2110-QM84A235



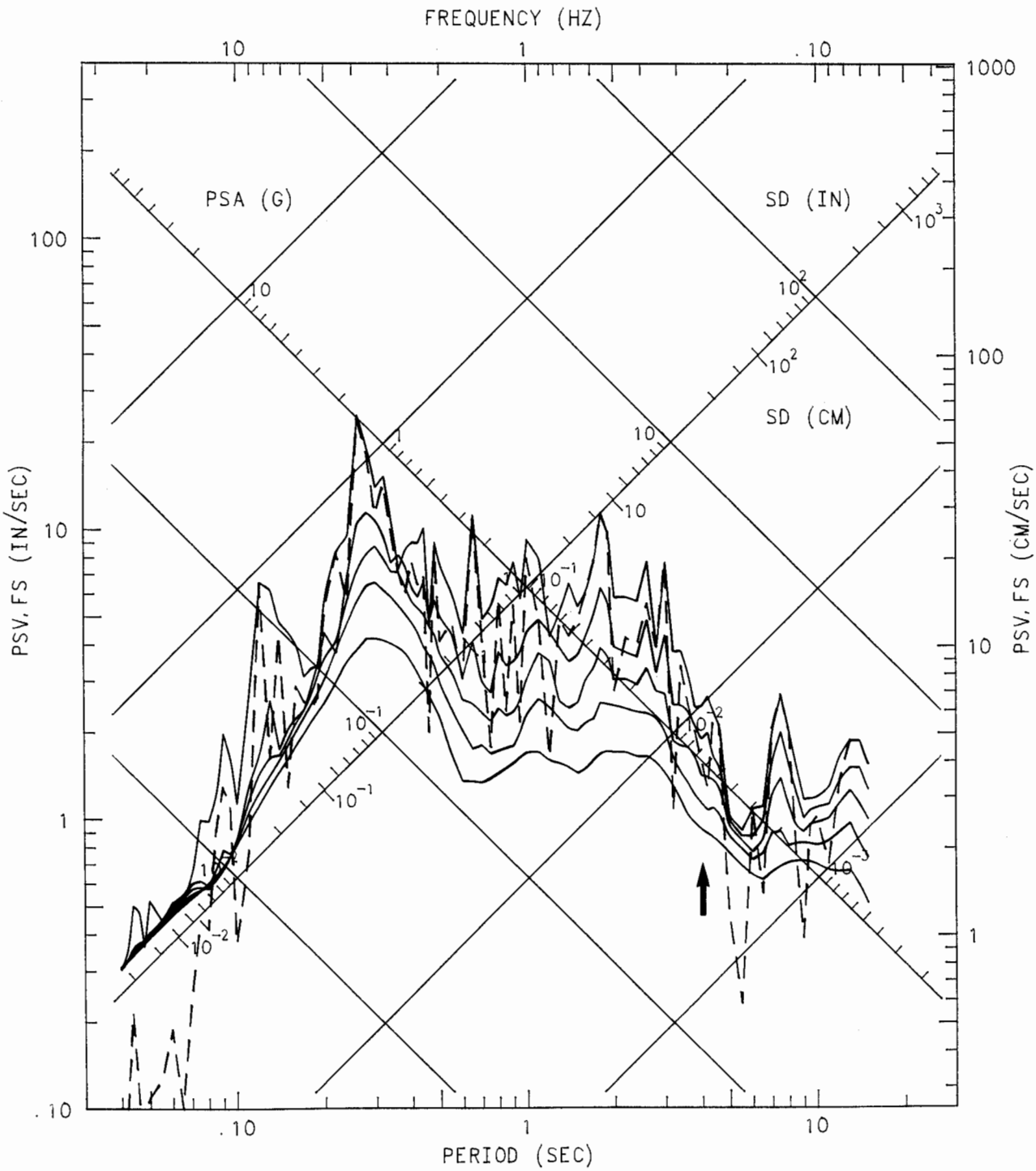
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
CHN 4: 270 DEG (ROOF, AT CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58235-C0184-84117.01 050785.2110-QM84A235



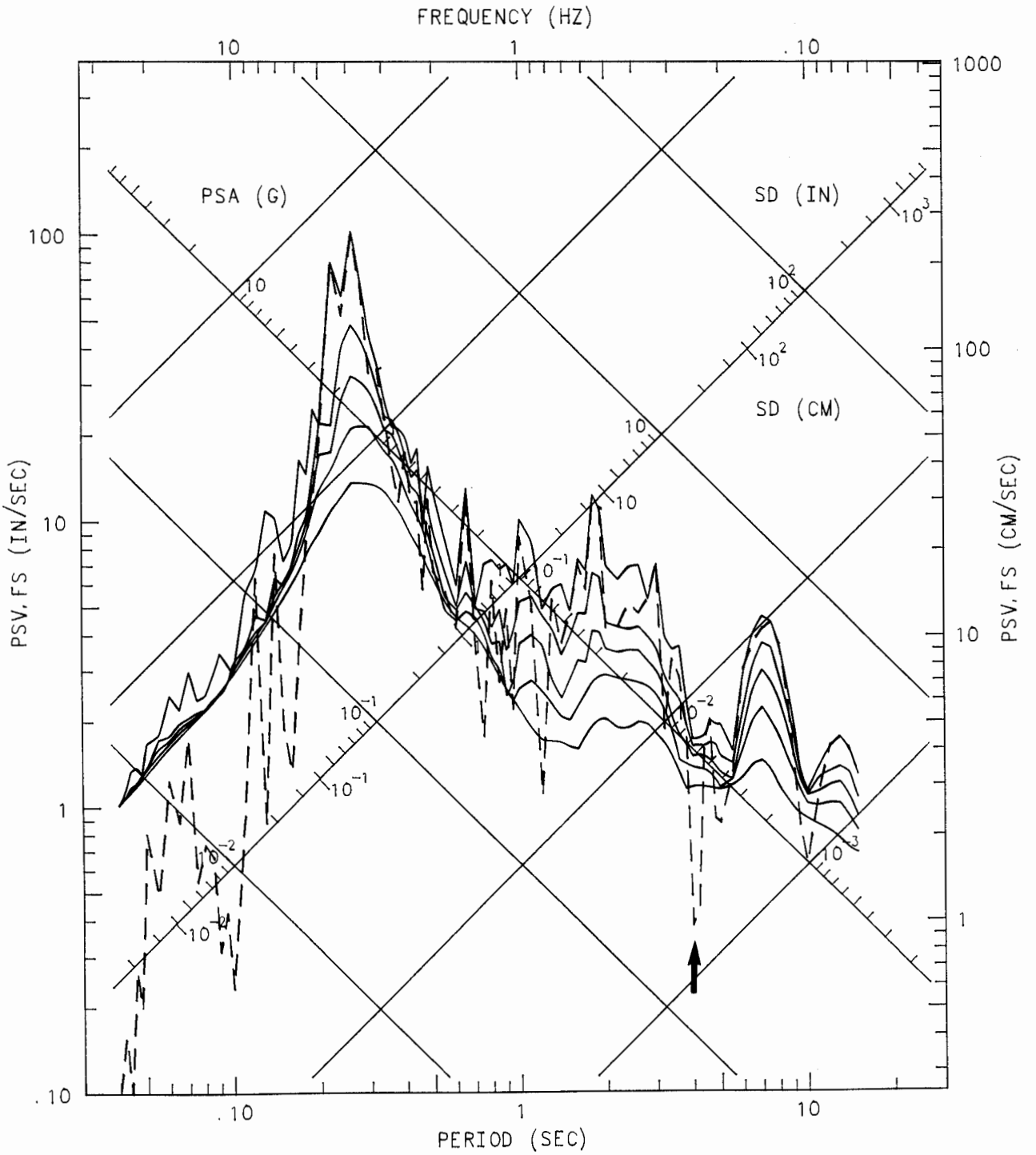
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
CHN 5: 270 DEG (ROOF, AT NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58235-C0184-84117.01 050785.2110-QM84A235



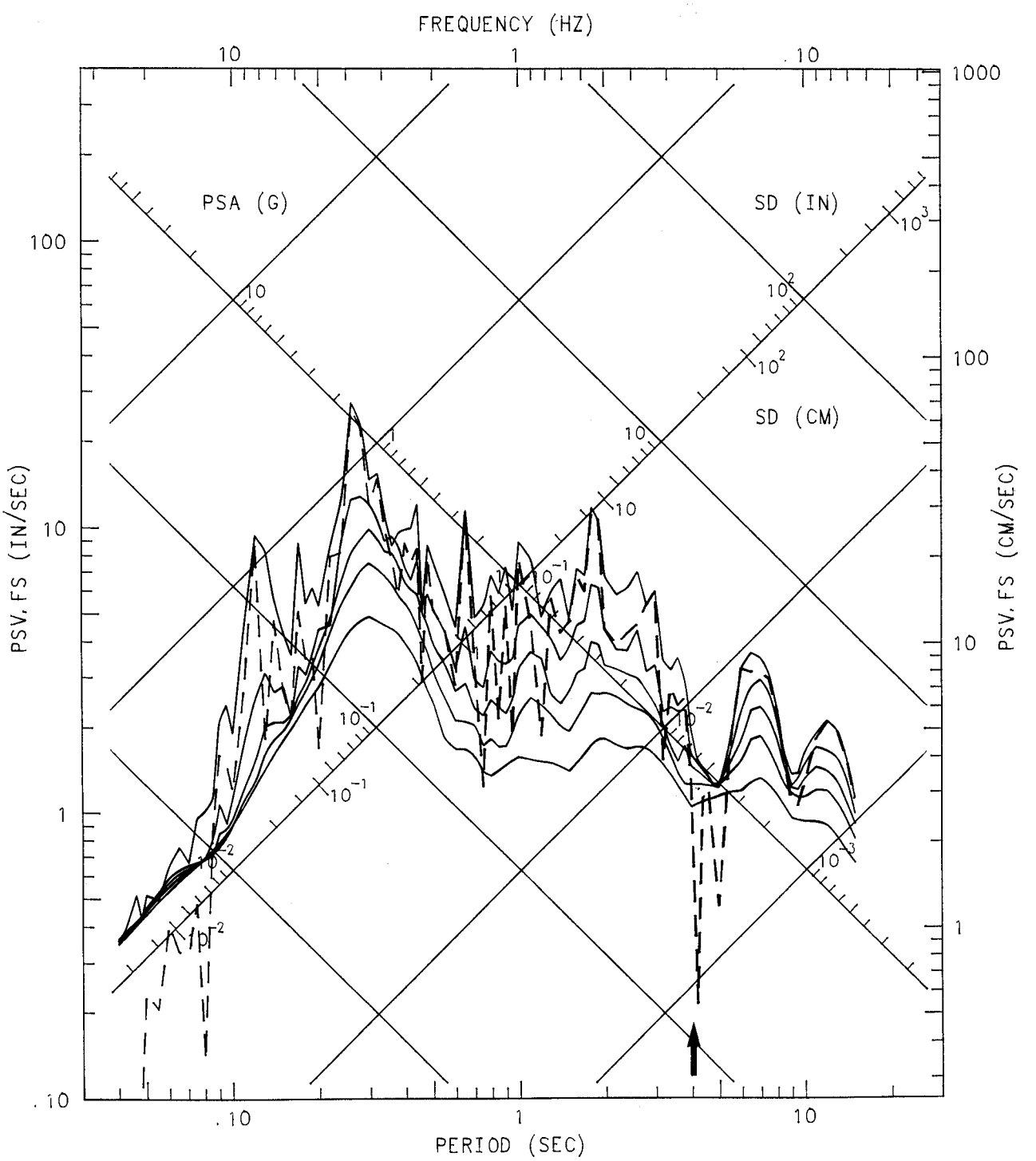
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
CHN 6: 0 DEG (ROOF, AT WEST WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58235-C0184-84117.01 050785.2110-QM84A235



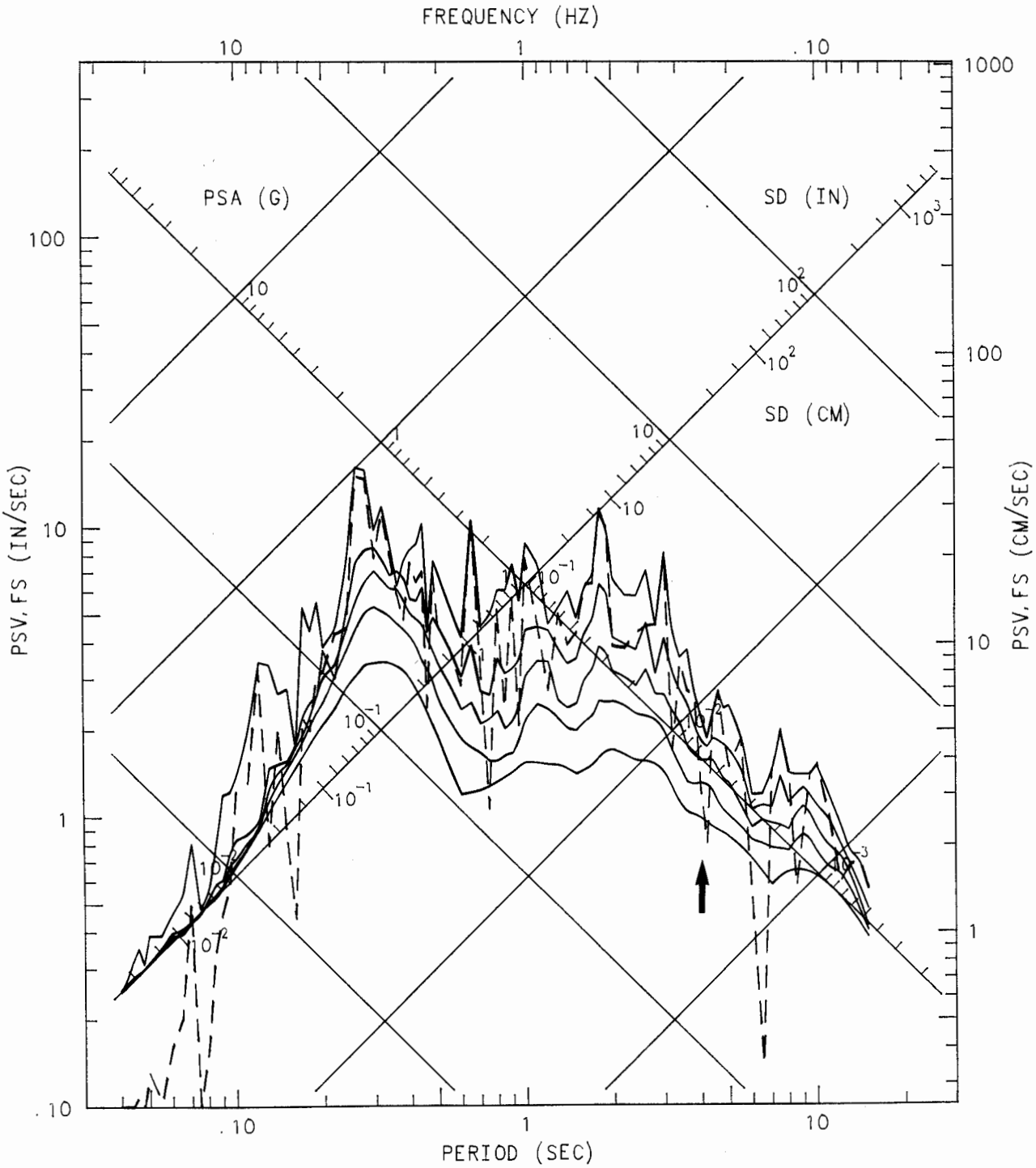
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
CHN 7: 0 DEG (ROOF, AT CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58235-C0184-84117.01 050785.2110-QM84A235



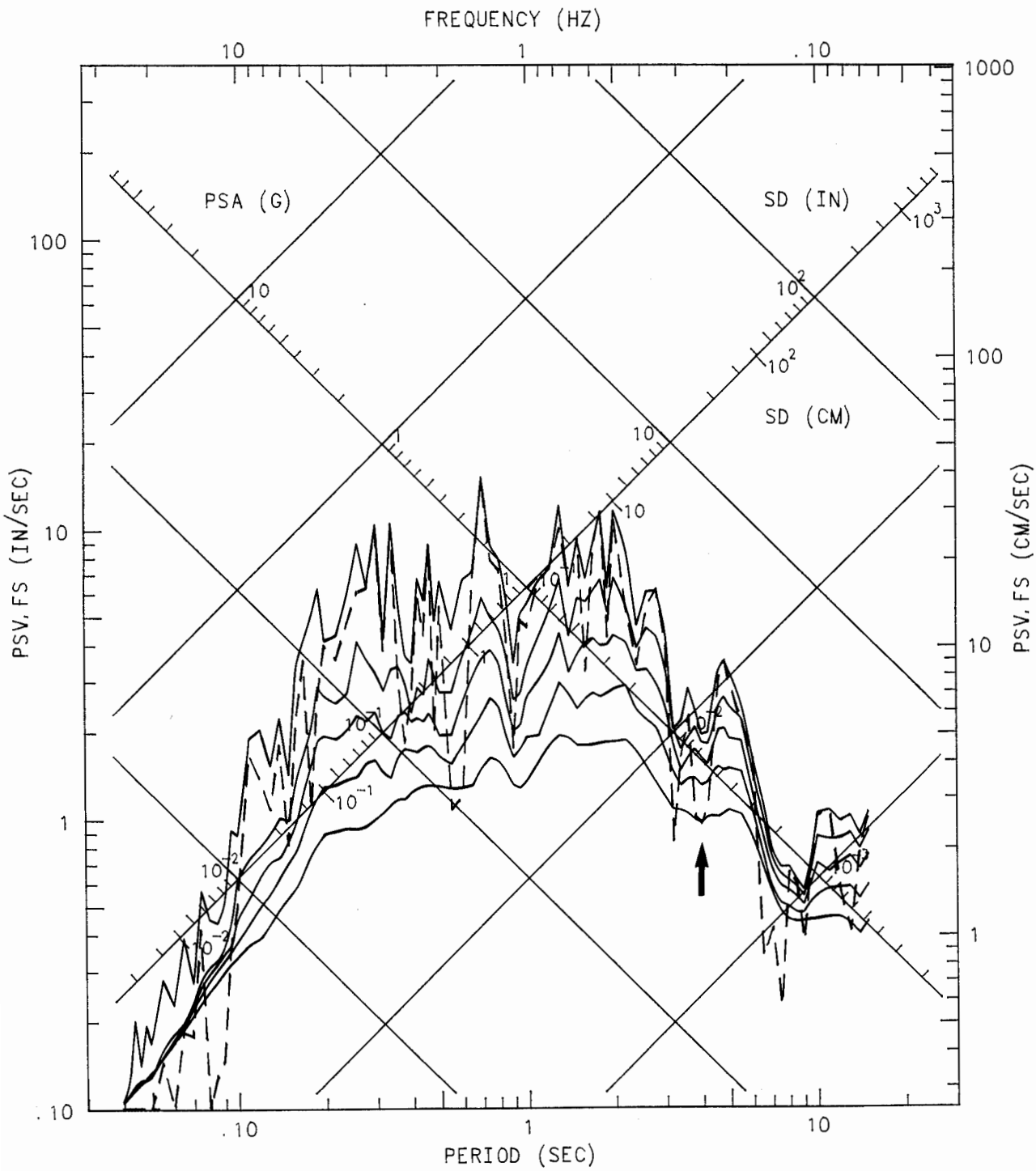
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
CHN 8: 0 DEG (ROOF, AT EAST WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58235-C0184-84117.01 050785.2110-QM84A235



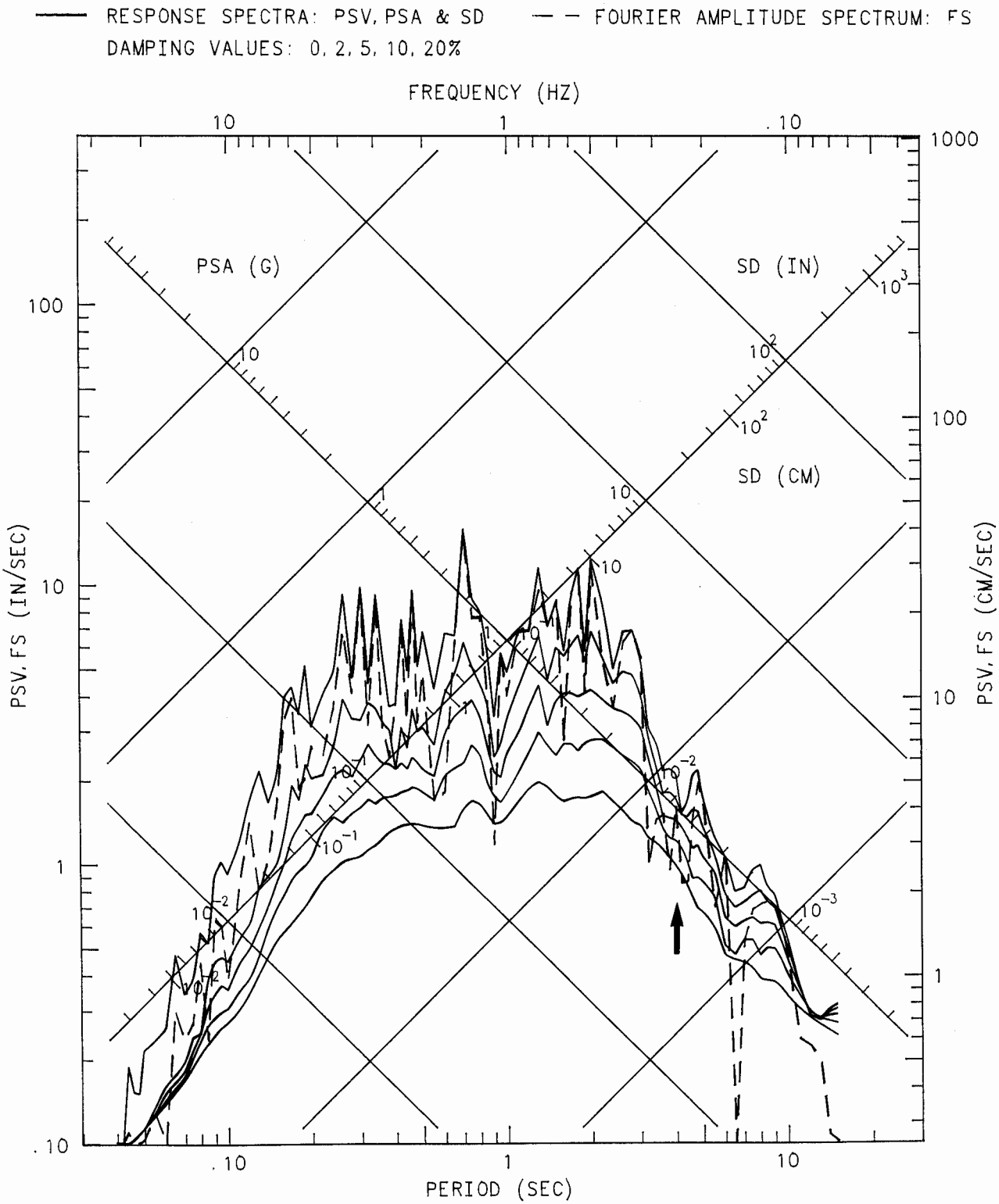
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
CHN 9: 0 DEG (GROUND FLOOR, AT EAST WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58235-C0184-84117.01 050785.2110-QM84A235



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
CHN 10: 270 DEG (GROUND FLOOR, AT SOUTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58235-C0184-84117.01 050785.2110-QM84A235



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SARATOGA - WEST VALLEY COLLEGE GYM
CHN 11: 270 DEG (GROUND FLOOR, AT NORTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58235-C0184-84117.01 050785.2110-QM84A235



WATSONVILLE - TELEPHONE BUILDING

Special Notes: None

Watsonville - Telephone Bldg.

Southwest Side View

Southeast Side View

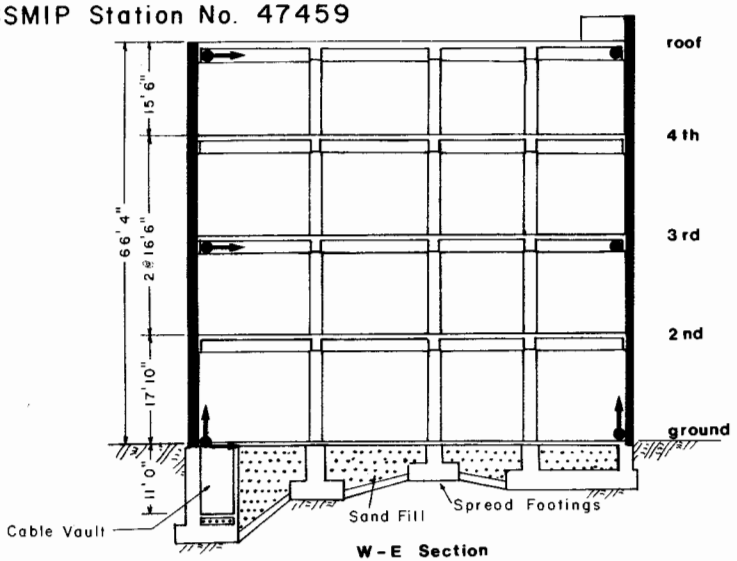
Address: 340 Rodriguez Street
Watsonville, California
Coordinates: 36.909°N, 121.756°W
No. of Stories above/below ground: 4 / 0
Plan Type: Rectangular
Base Dimensions: 75' x 71'
Typical Floor Dimensions: Same as Base
Design Date: 1948 & 1955
Construction Date: 1948 & 1955

Vertical Load Carrying System:
Composite concrete/steel beams, girders and columns; concrete slabs.
Lateral Force Resisting System:
Concrete shear walls.
Foundation Type:
Spread footings.

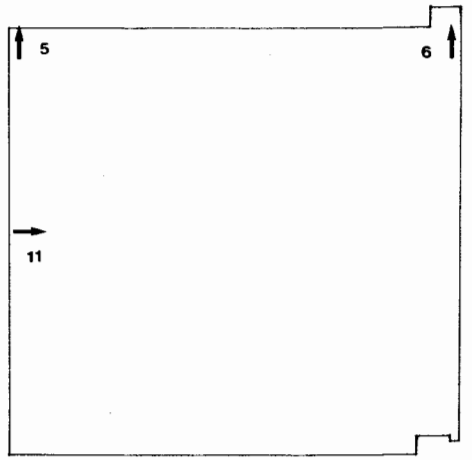
Note: 4th story was added in 1955.

SENSOR LAYOUT

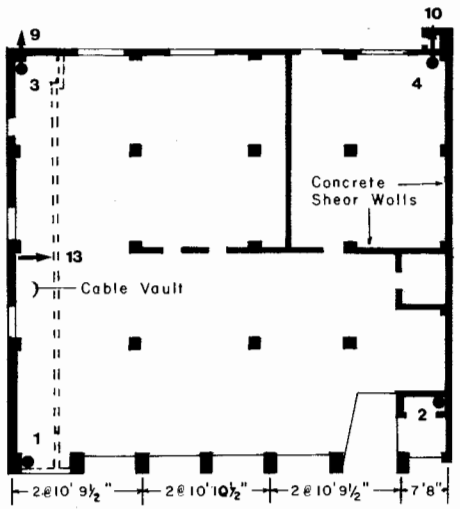
Watsonville - Telephone Building
CSMIP Station No. 47459



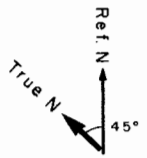
W - E Section

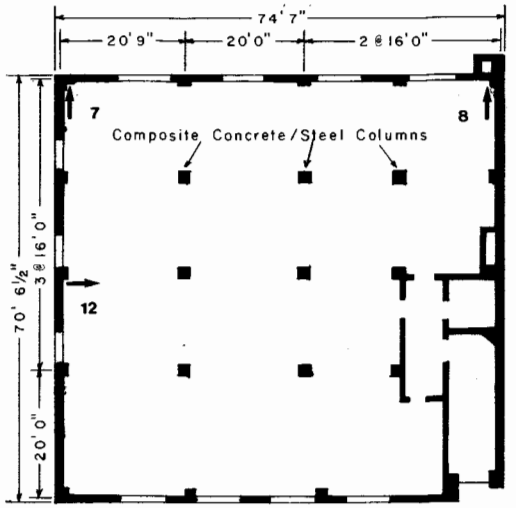


Roof Plan



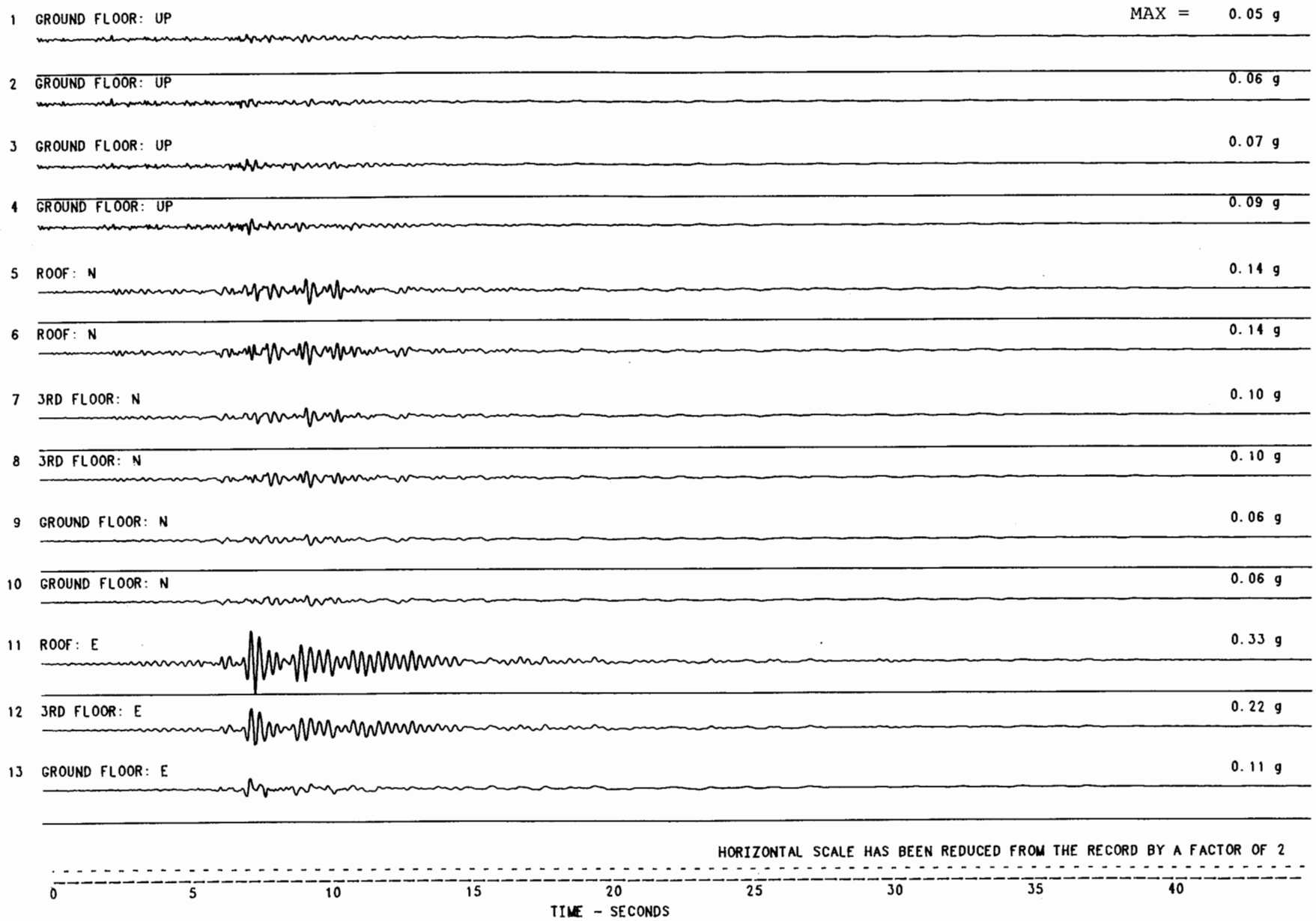
Ground Floor Plan



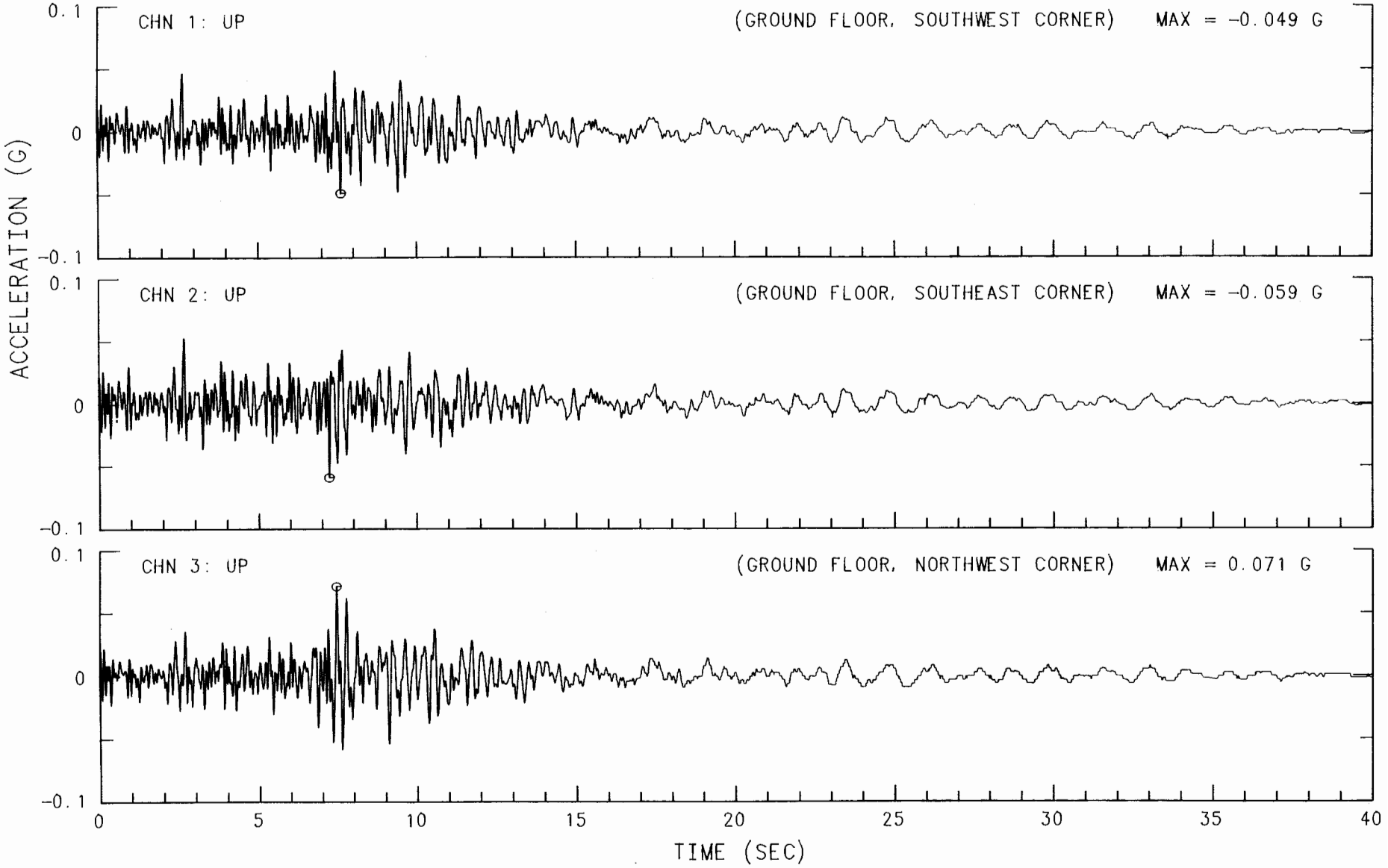


3rd Floor Plan

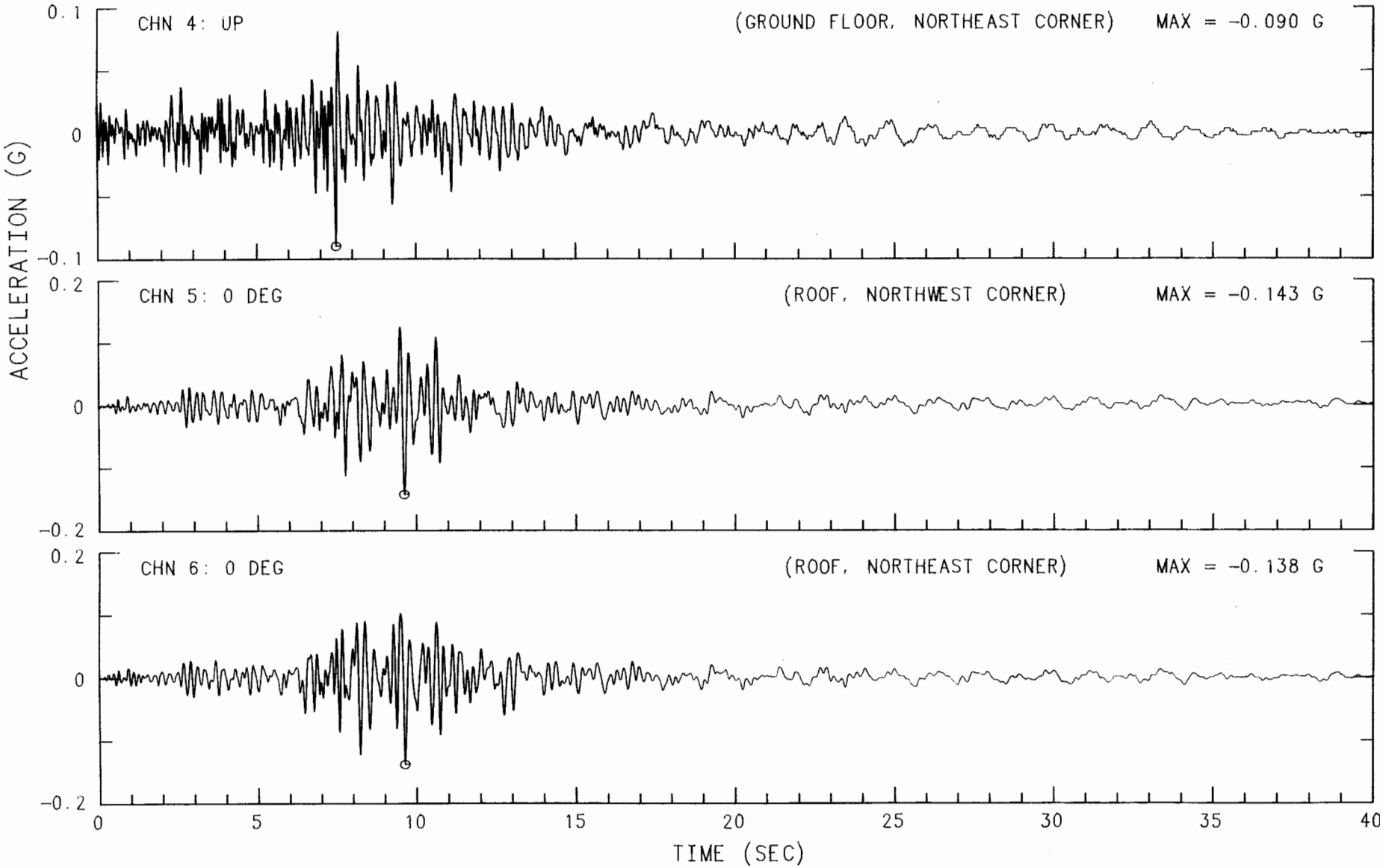
WATSONVILLE - TELEPHONE BLDG. RECORD 47459-C0215-84117.01 MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST



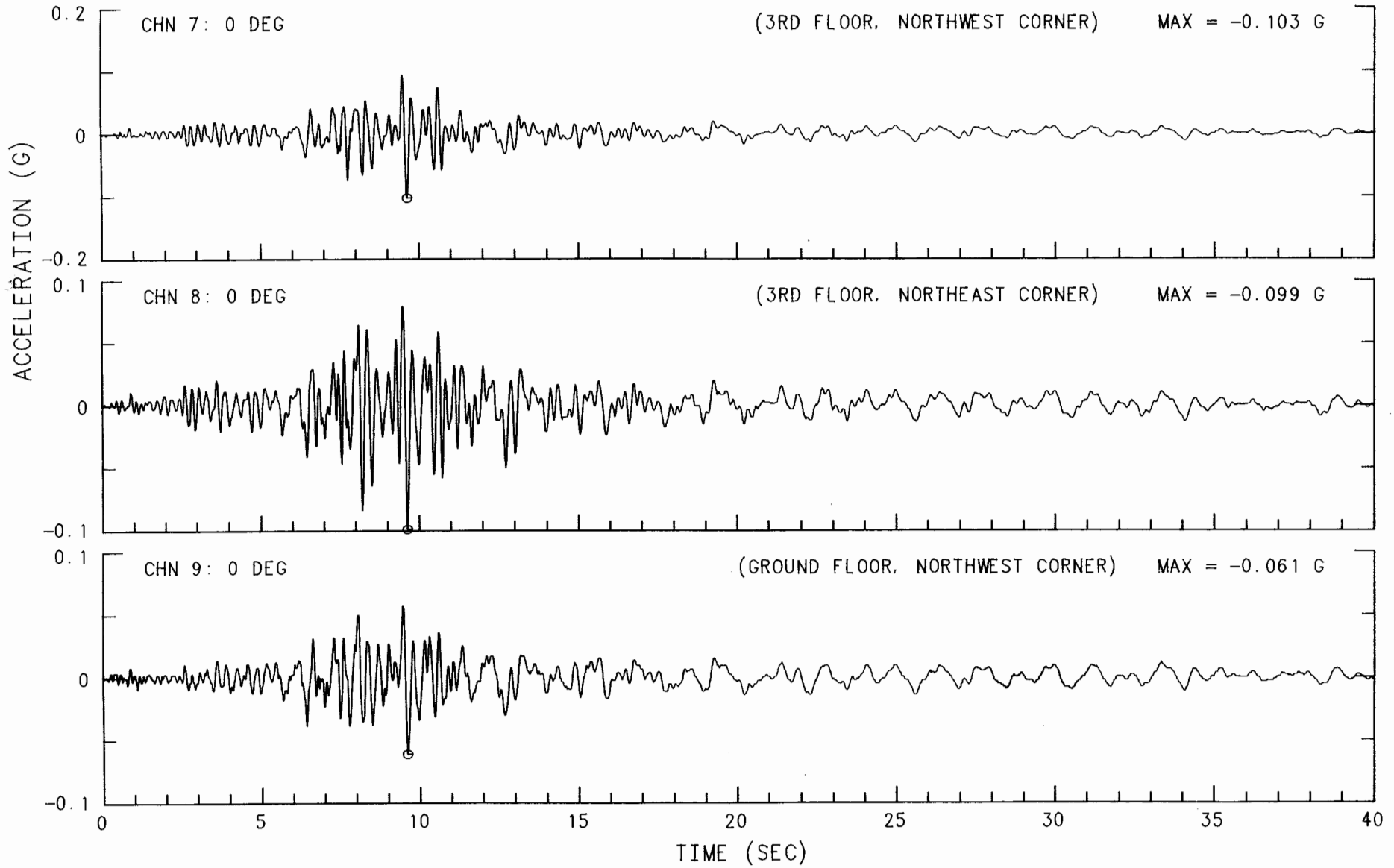
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
UNCORRECTED ACCELEROGRAM 47459-C0215-84117.01 050785.2340-QM84A459



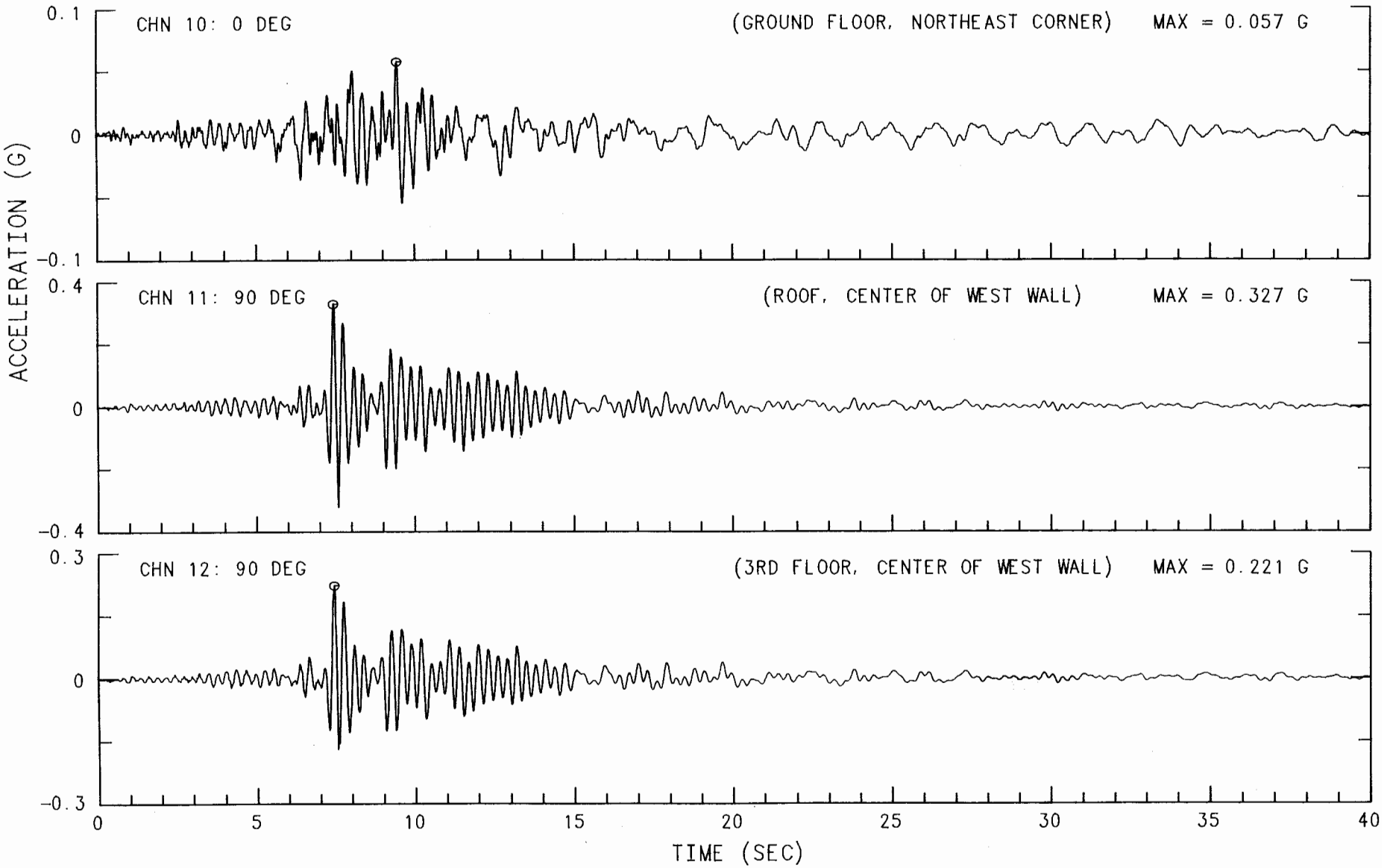
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
UNCORRECTED ACCELEROGRAM 47459-C0215-84117.01 050785.2340-QM84A459



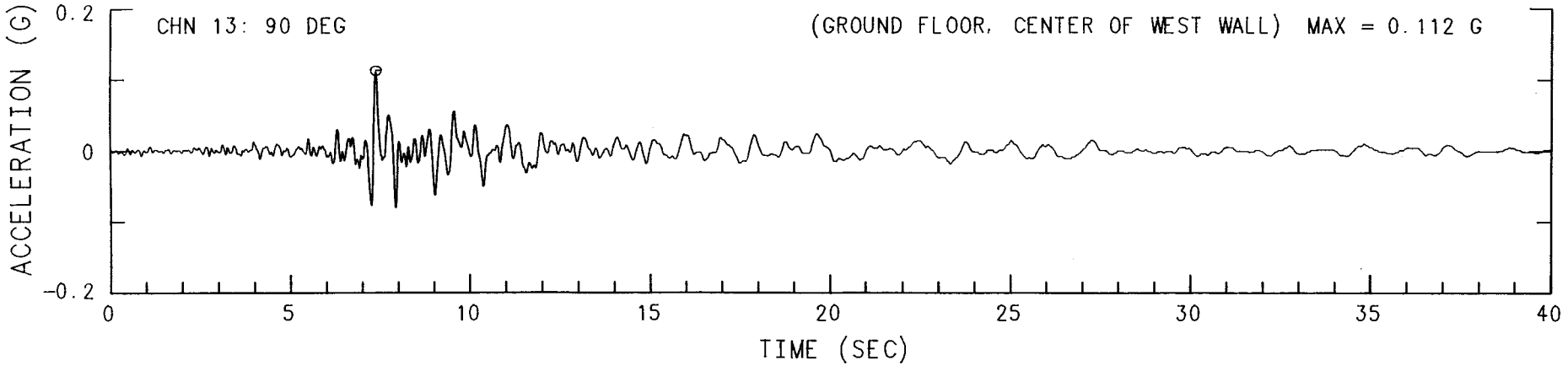
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
UNCORRECTED ACCELEROGRAM 47459-C0215-84117.01 050785.2340-QM84A459



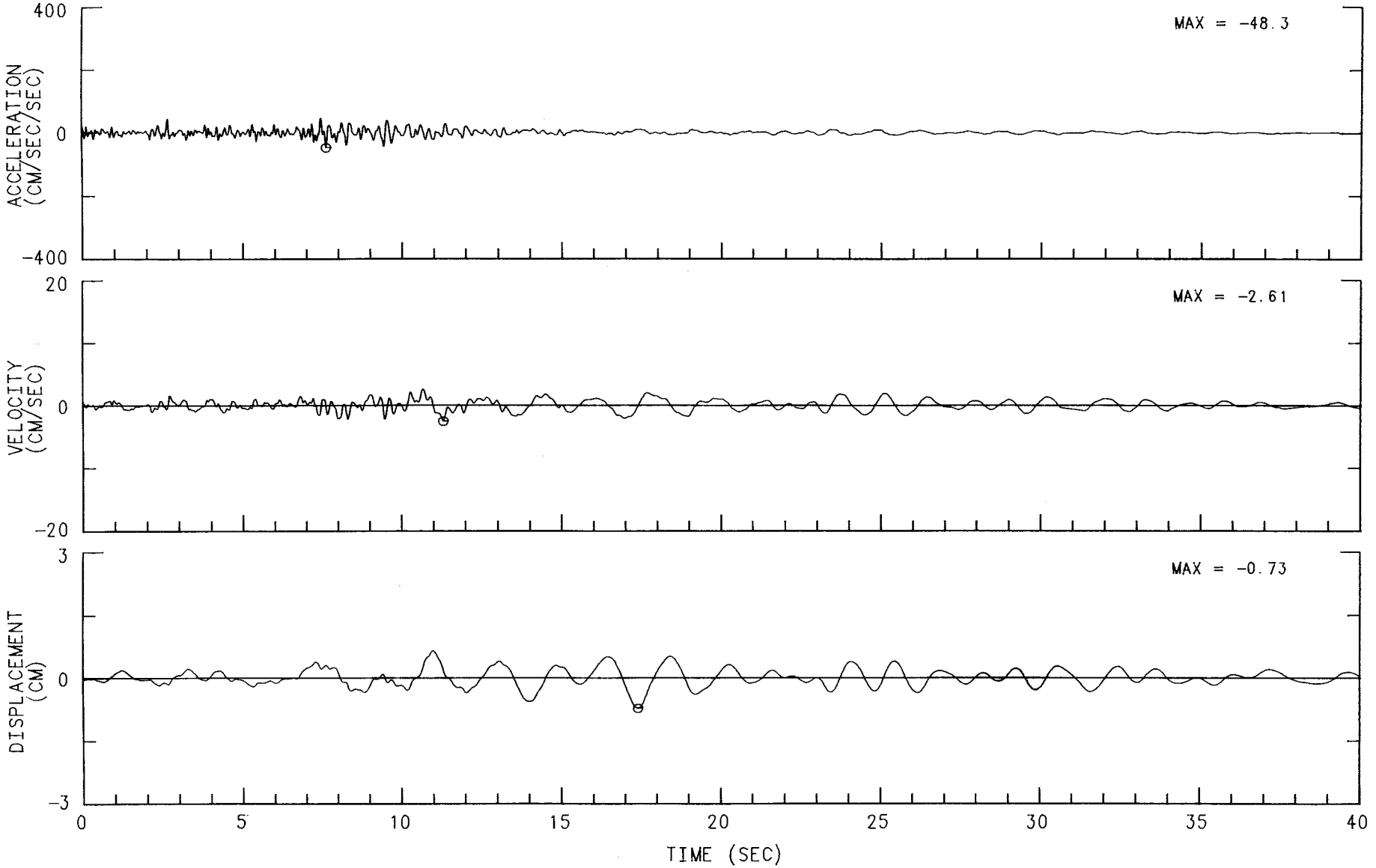
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
UNCORRECTED ACCELEROGRAM 47459-C0215-84117.01 050785.2340-QM84A459



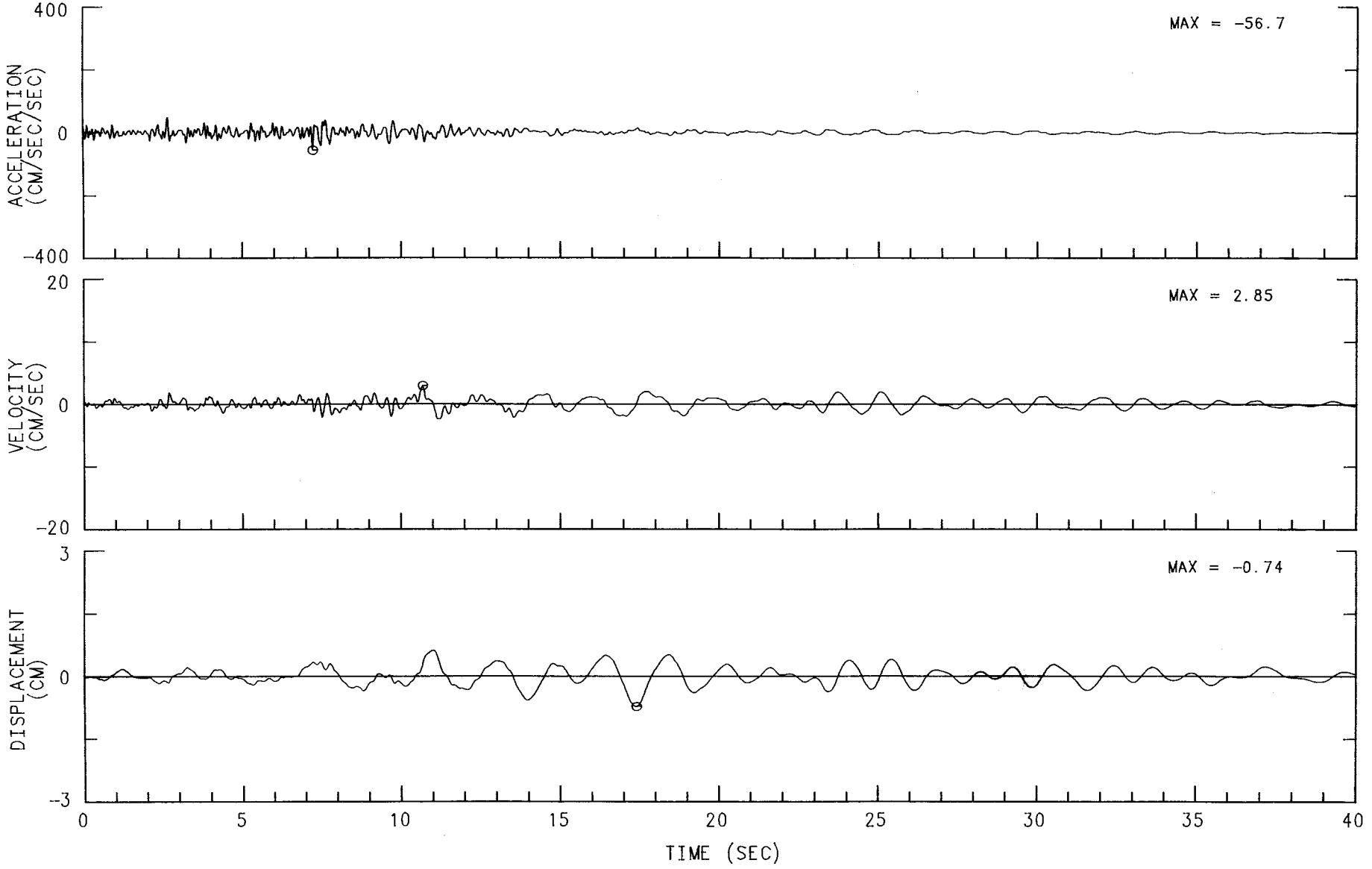
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
UNCORRECTED ACCELEROGRAM 47459-C0215-84117.01 050785.2340-QM84A459



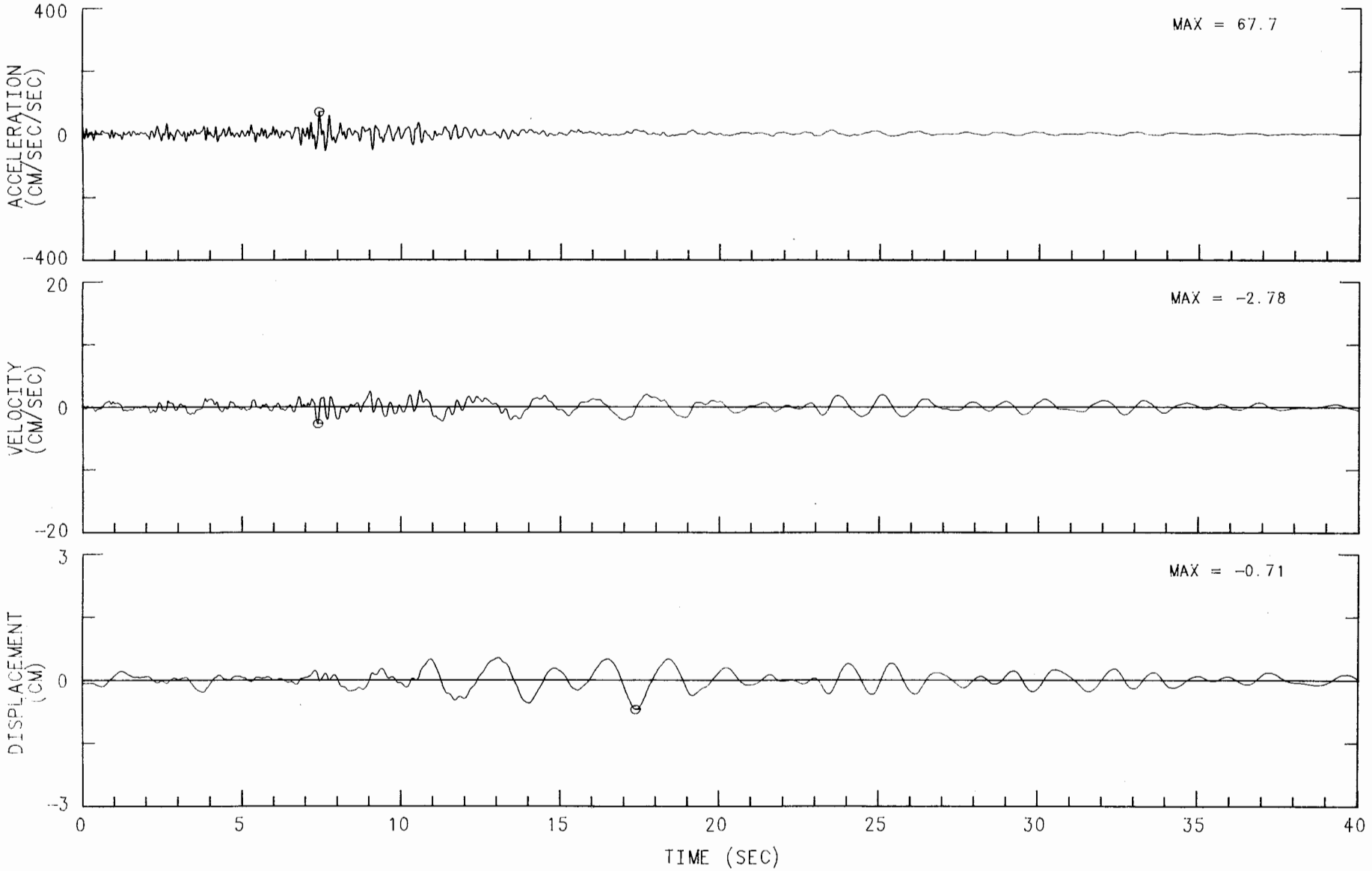
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 1: UP (GROUND FLOOR, SOUTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



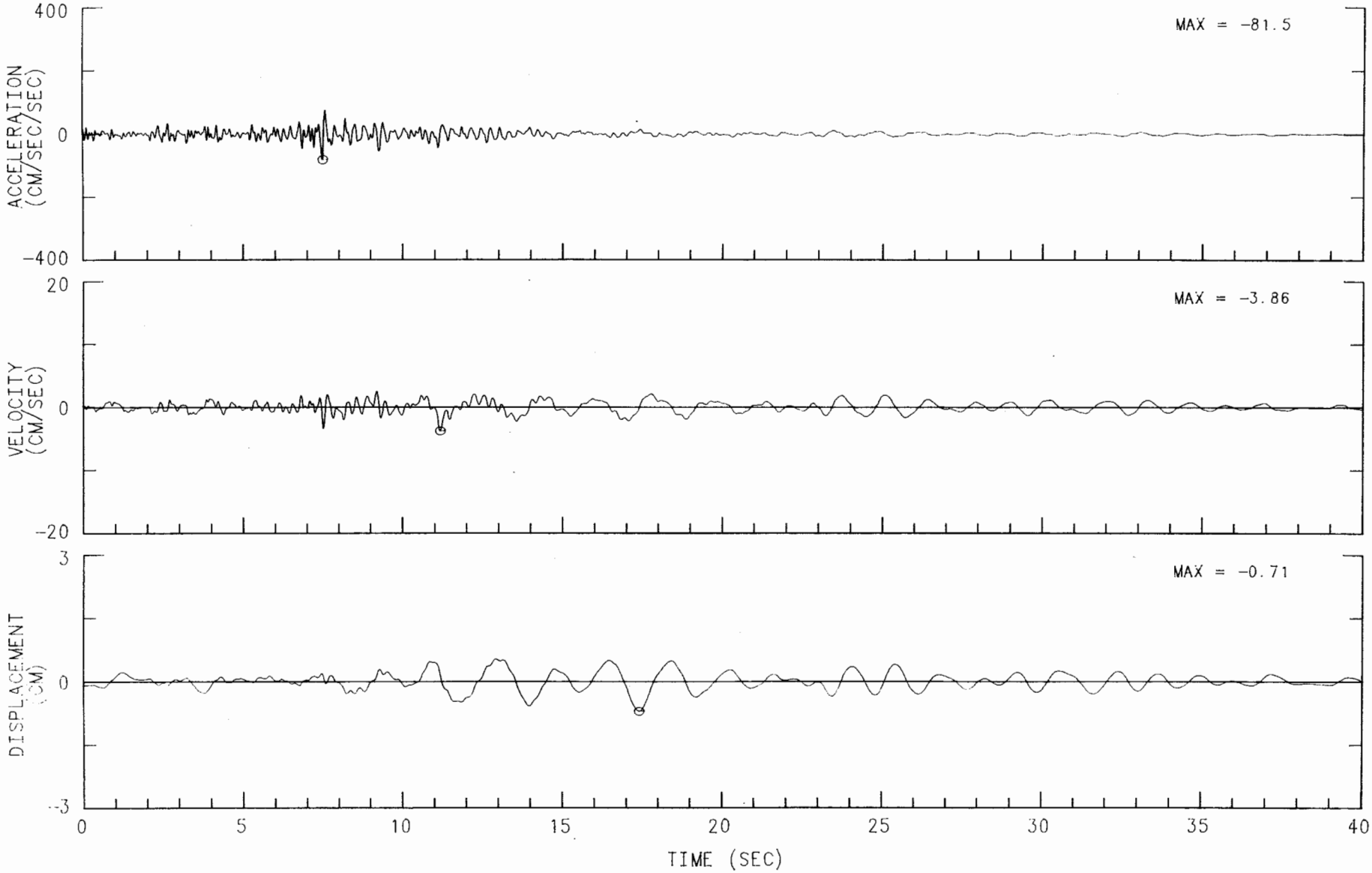
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 2: UP (GROUND FLOOR, SOUTHEAST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



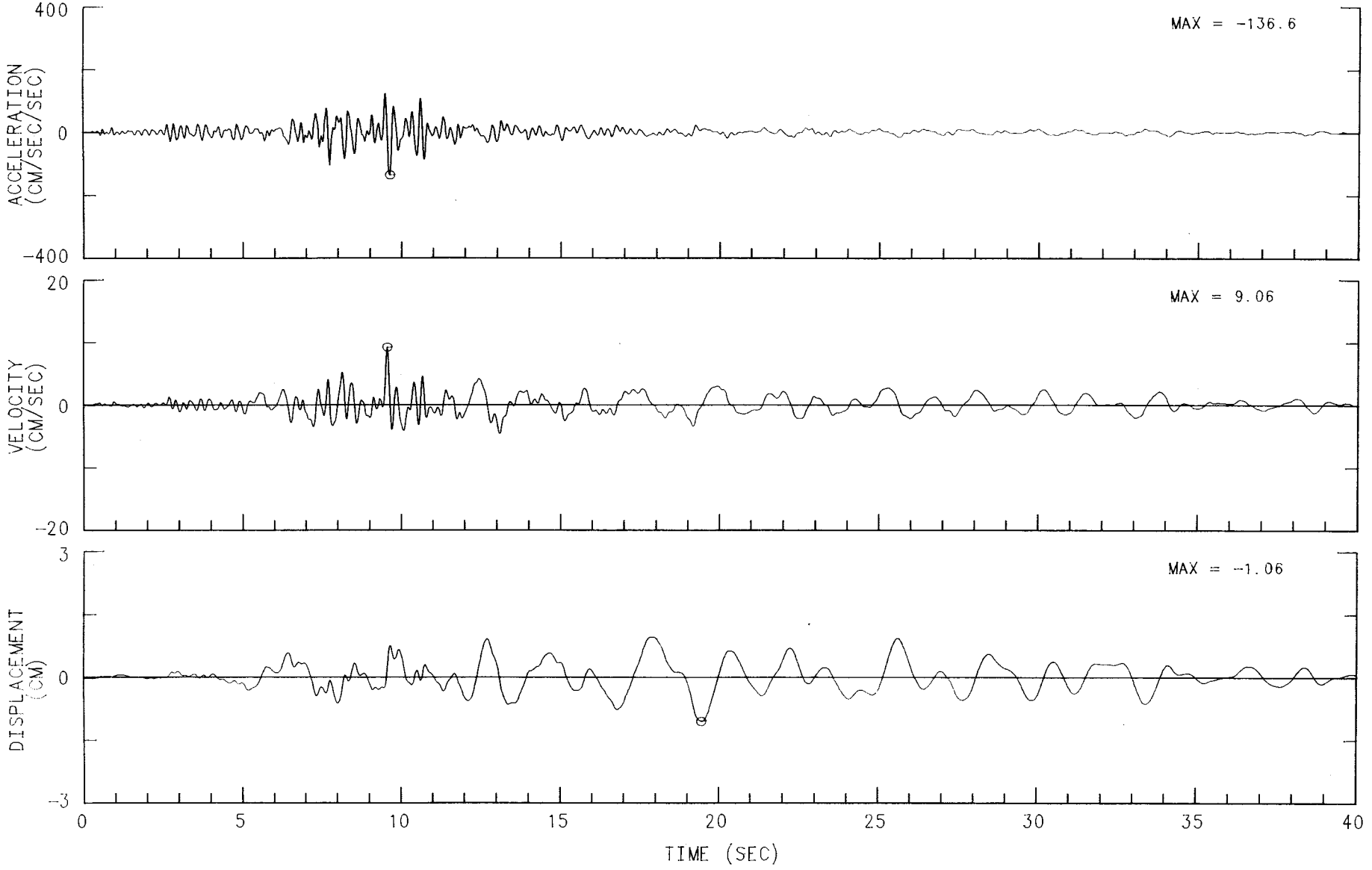
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 3: UP (GROUND FLOOR, NORTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



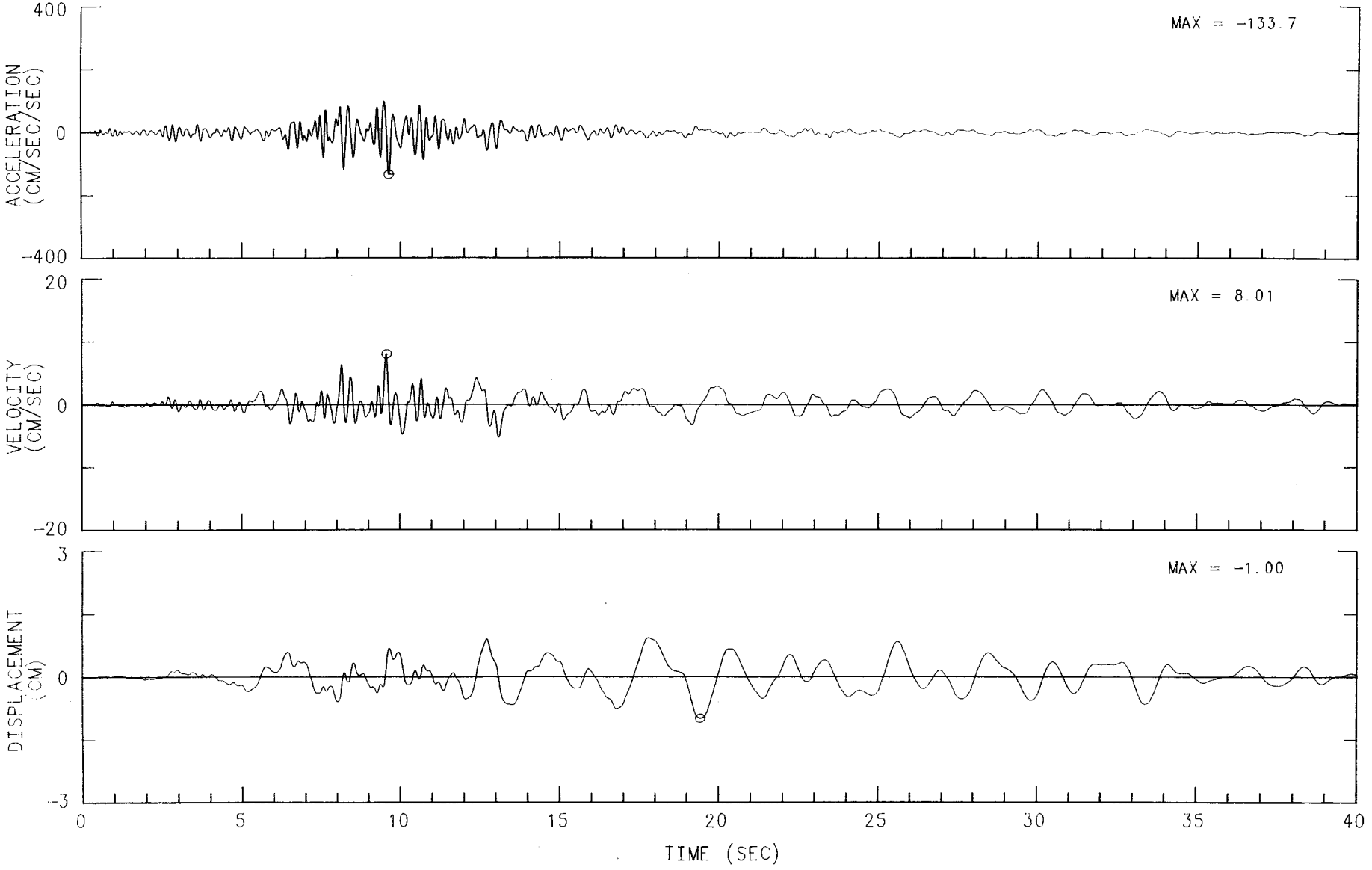
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 4: UP (GROUND FLOOR, NORTHEAST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



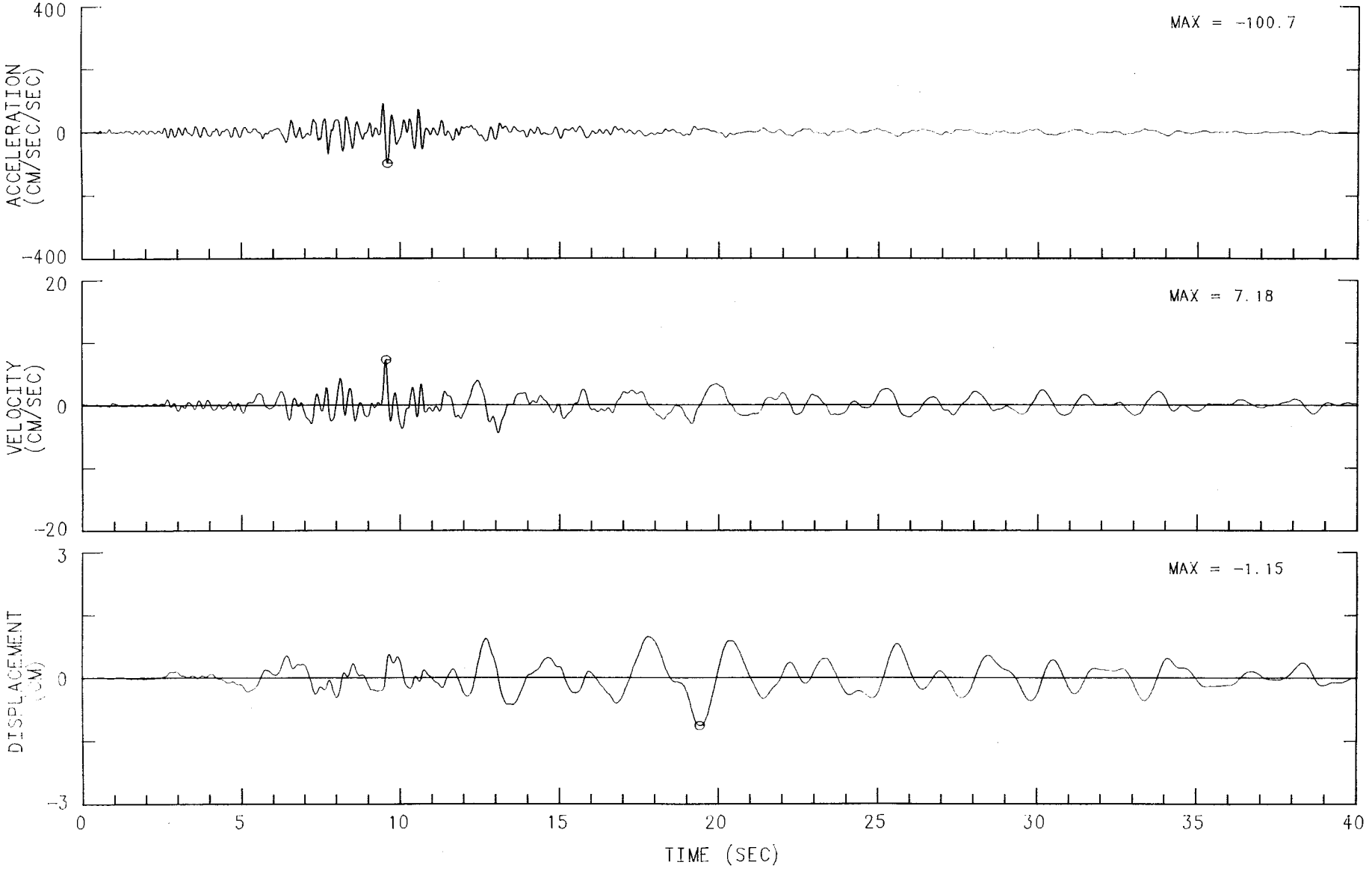
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 5: 0 DEG (ROOF, NORTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



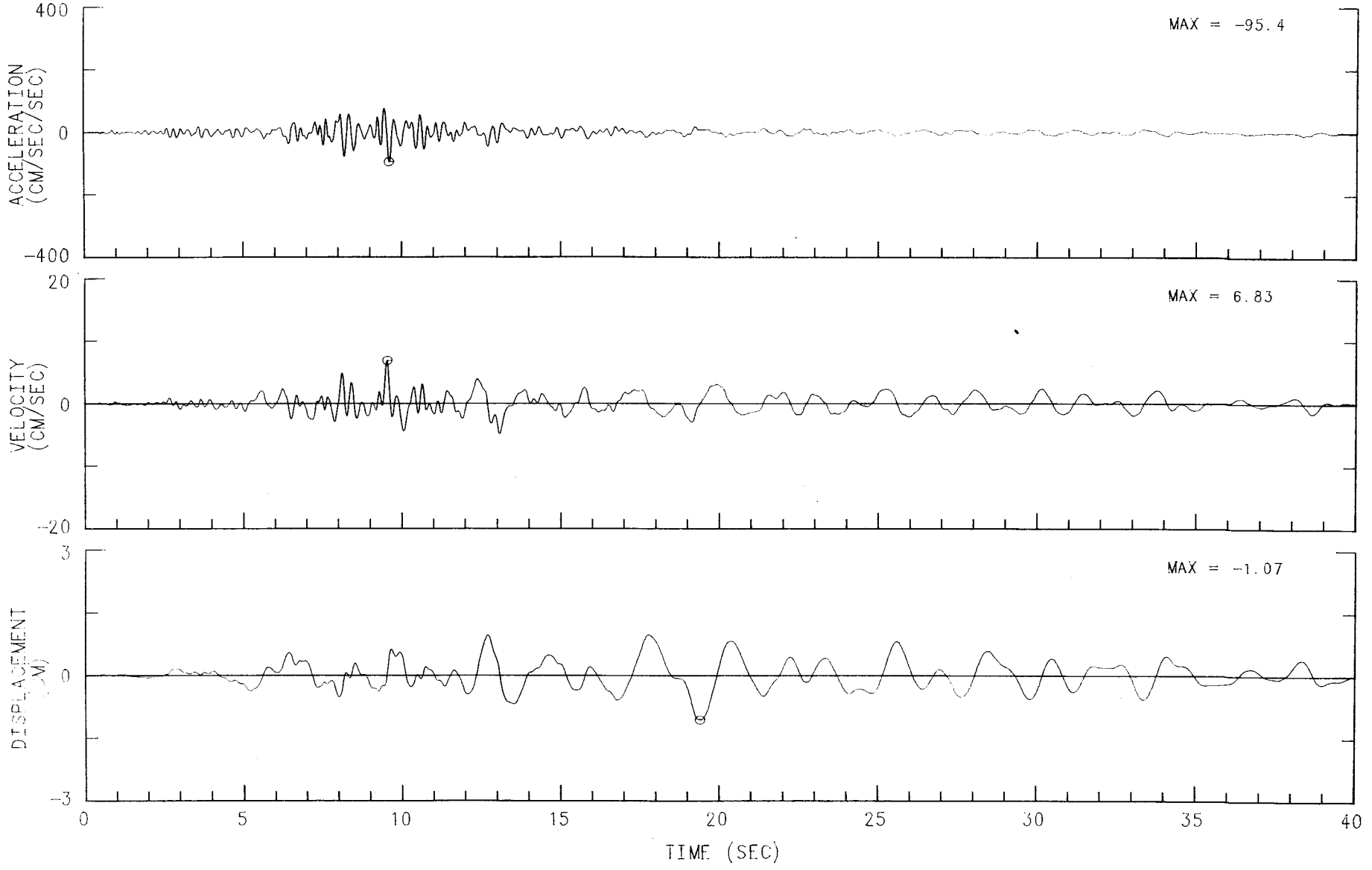
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 6: 0 DEG (ROOF, NORTHEAST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



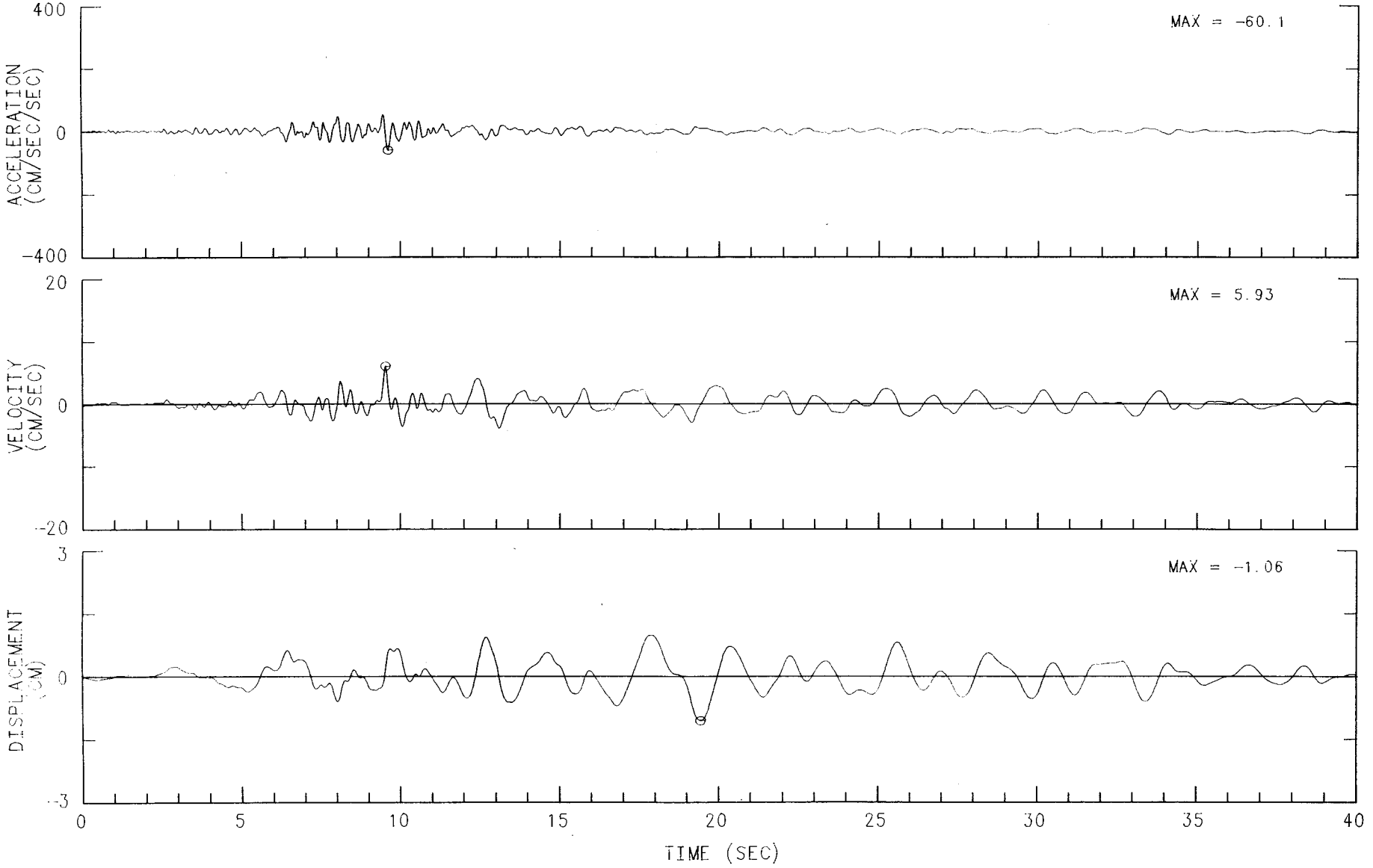
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 7: 0 DEG (3RD FLOOR, NORTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



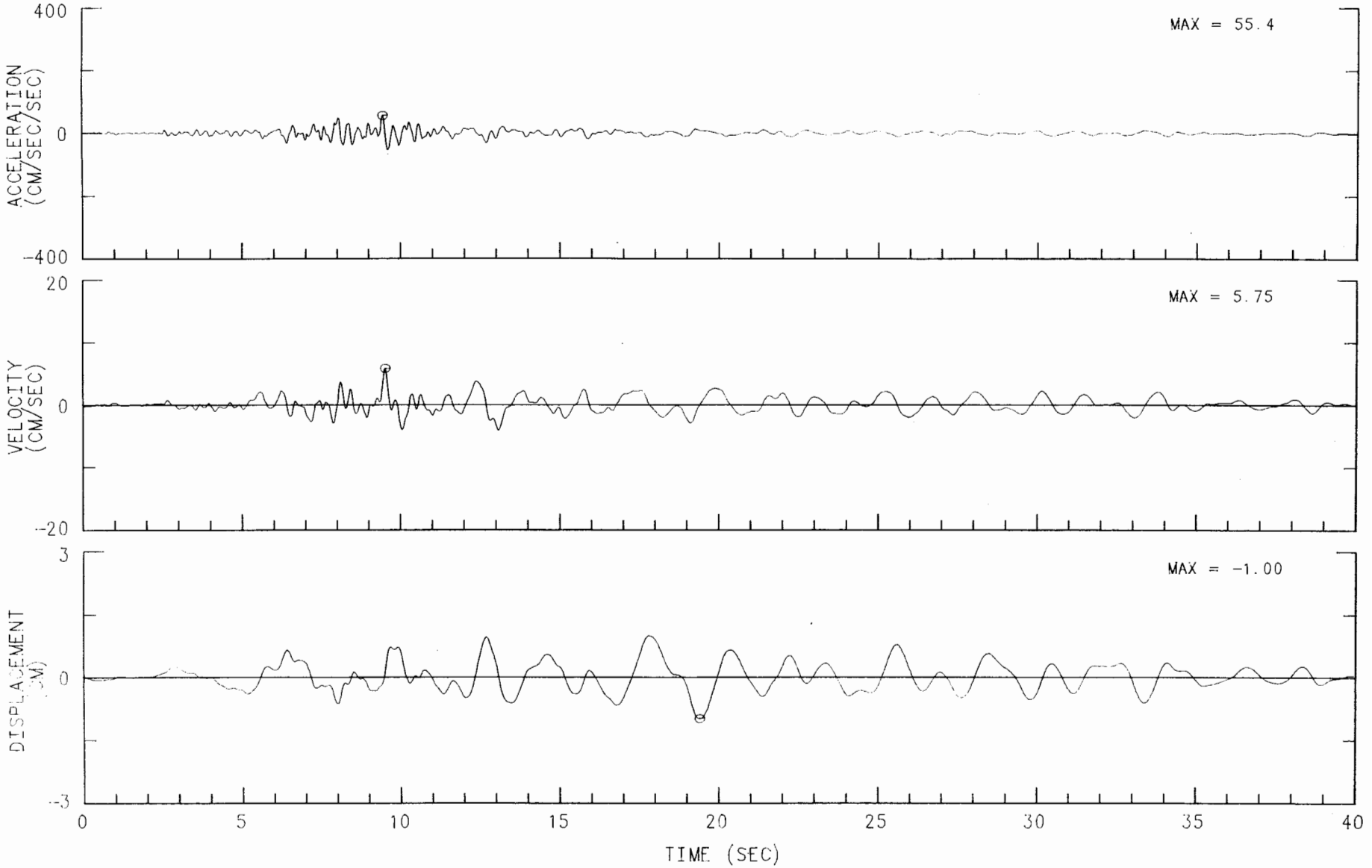
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 8: 0 DEG (3RD FLOOR, NORTHEAST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



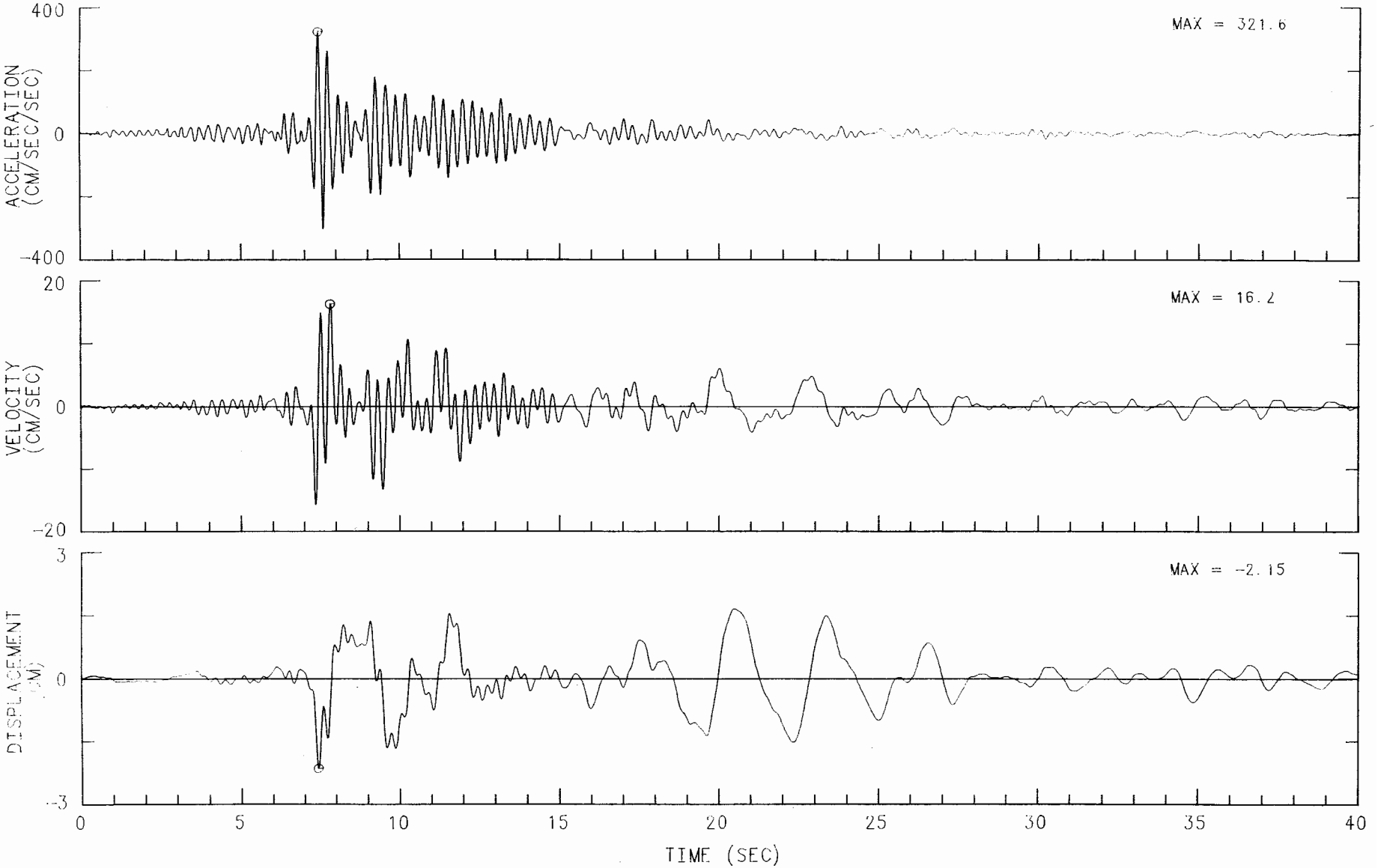
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 9: 0 DEG (GROUND FLOOR, NORTHWEST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



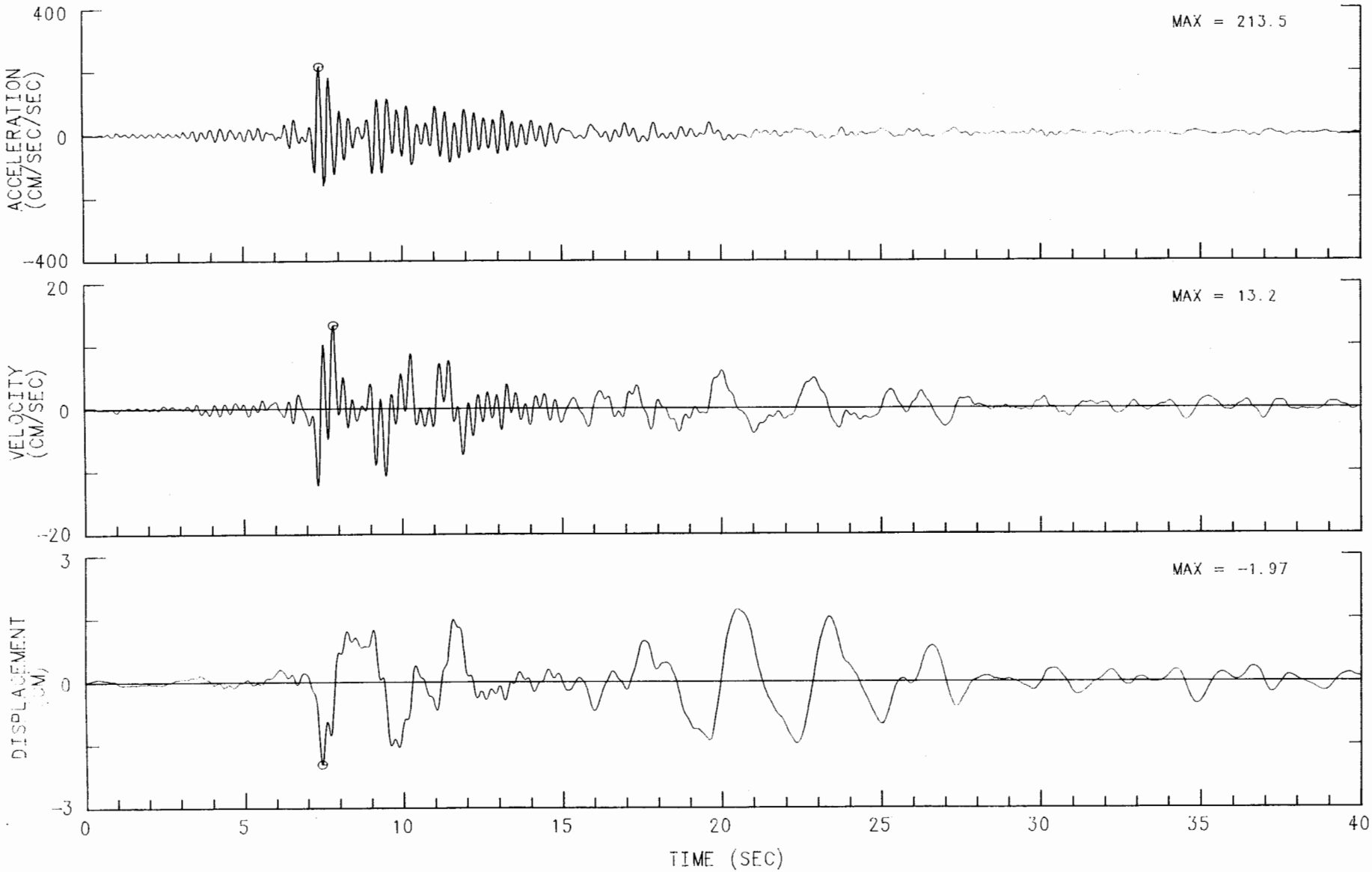
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 10: 0 DEG (GROUND FLOOR, NORTHEAST CORNER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



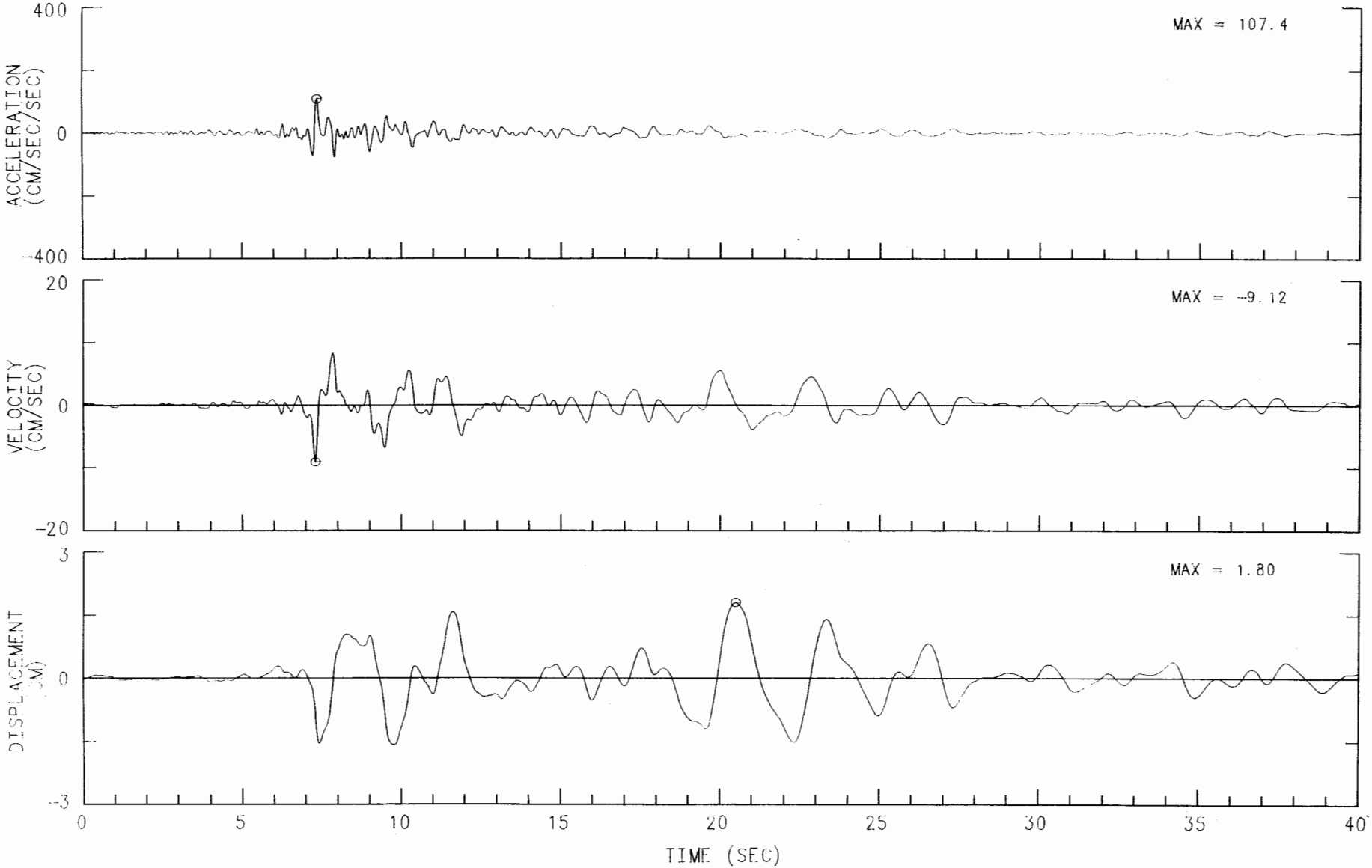
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 11: 90 DEG (ROOF, CENTER OF WEST WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



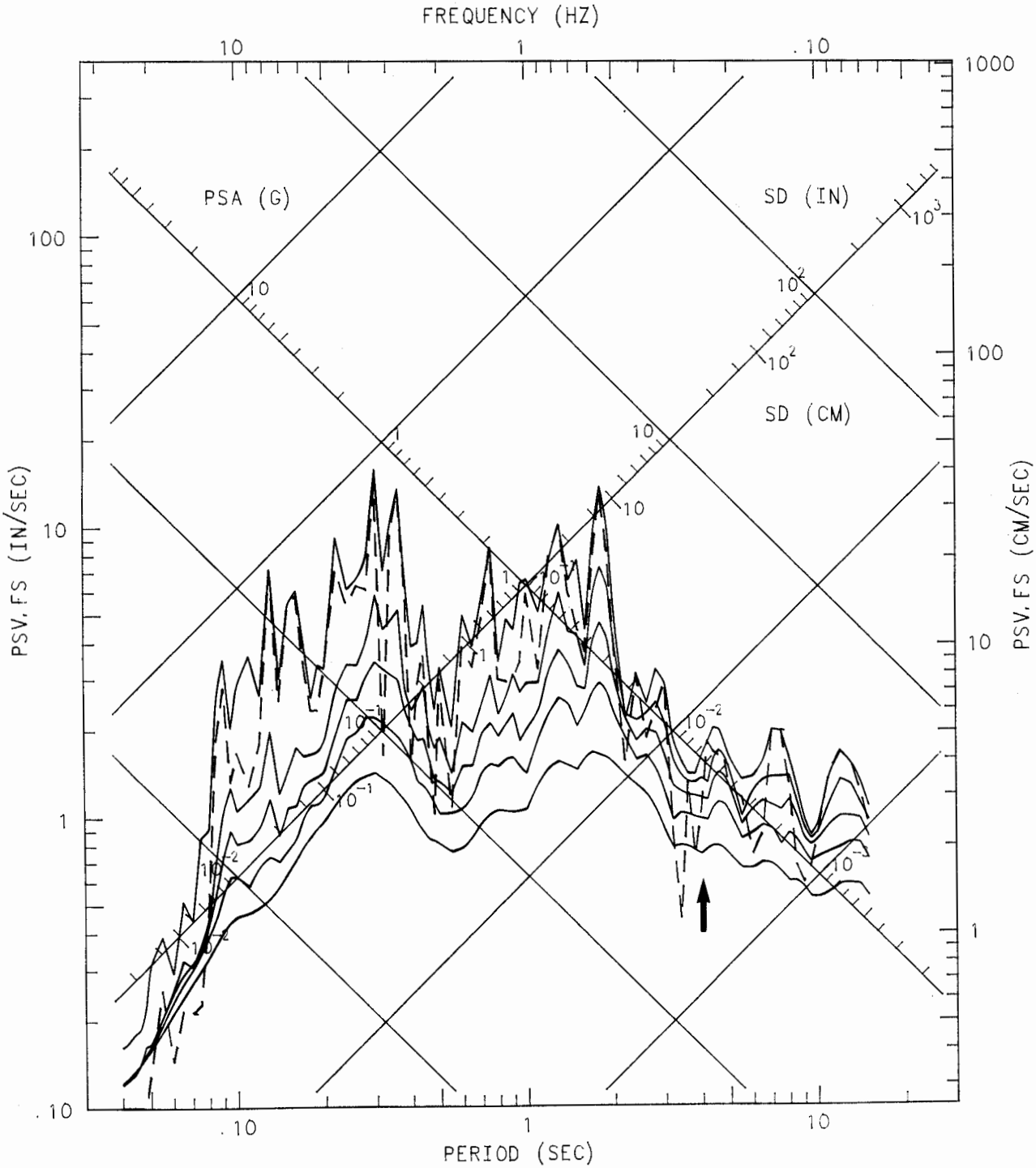
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 12: 90 DEG (3RD FLOOR, CENTER OF WEST WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



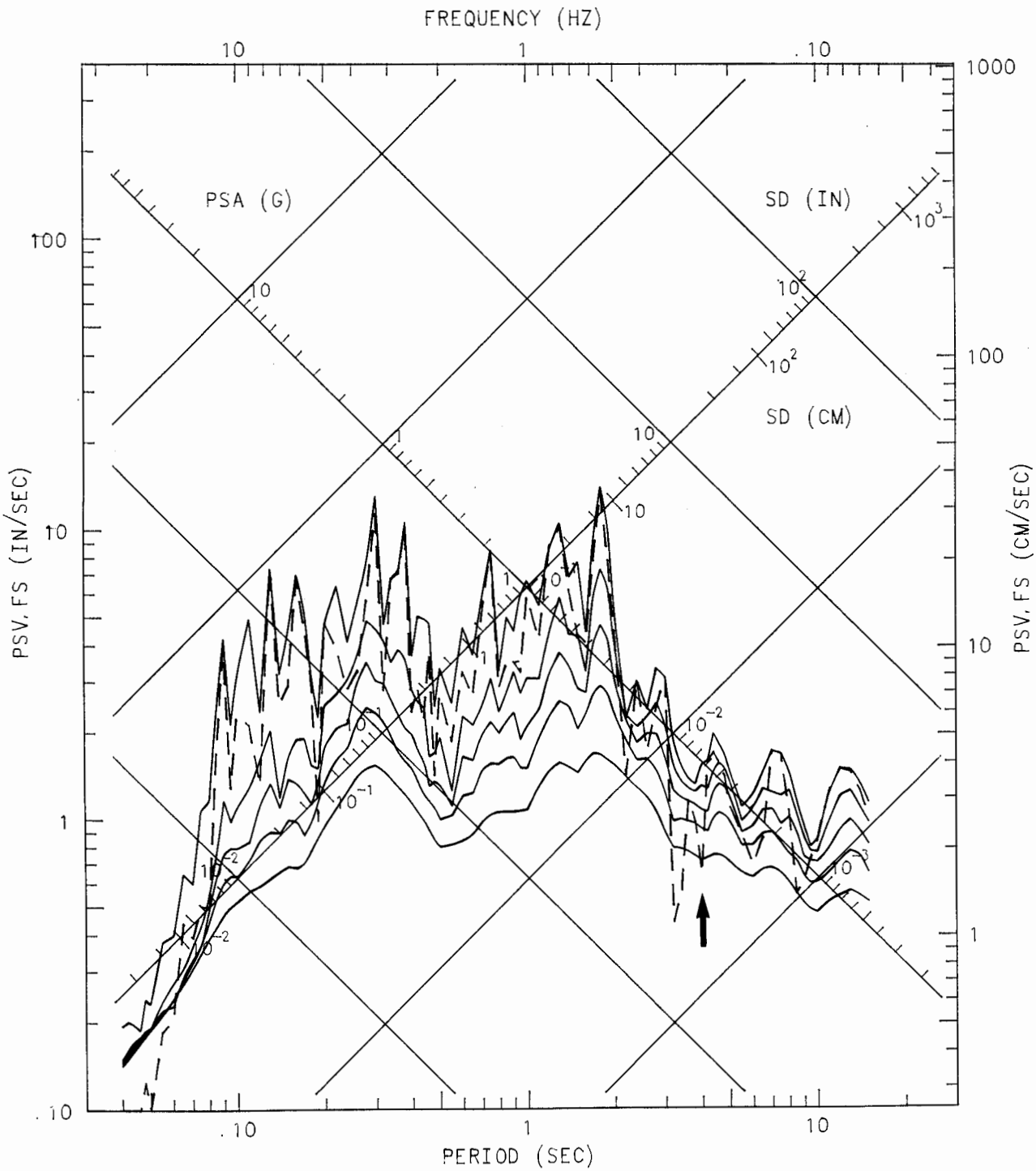
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG. CHN 13: 90 DEG (GROUND FLOOR, CENTER OF WEST WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 47459-C0215-84117.01 050885.0401-QM84A459



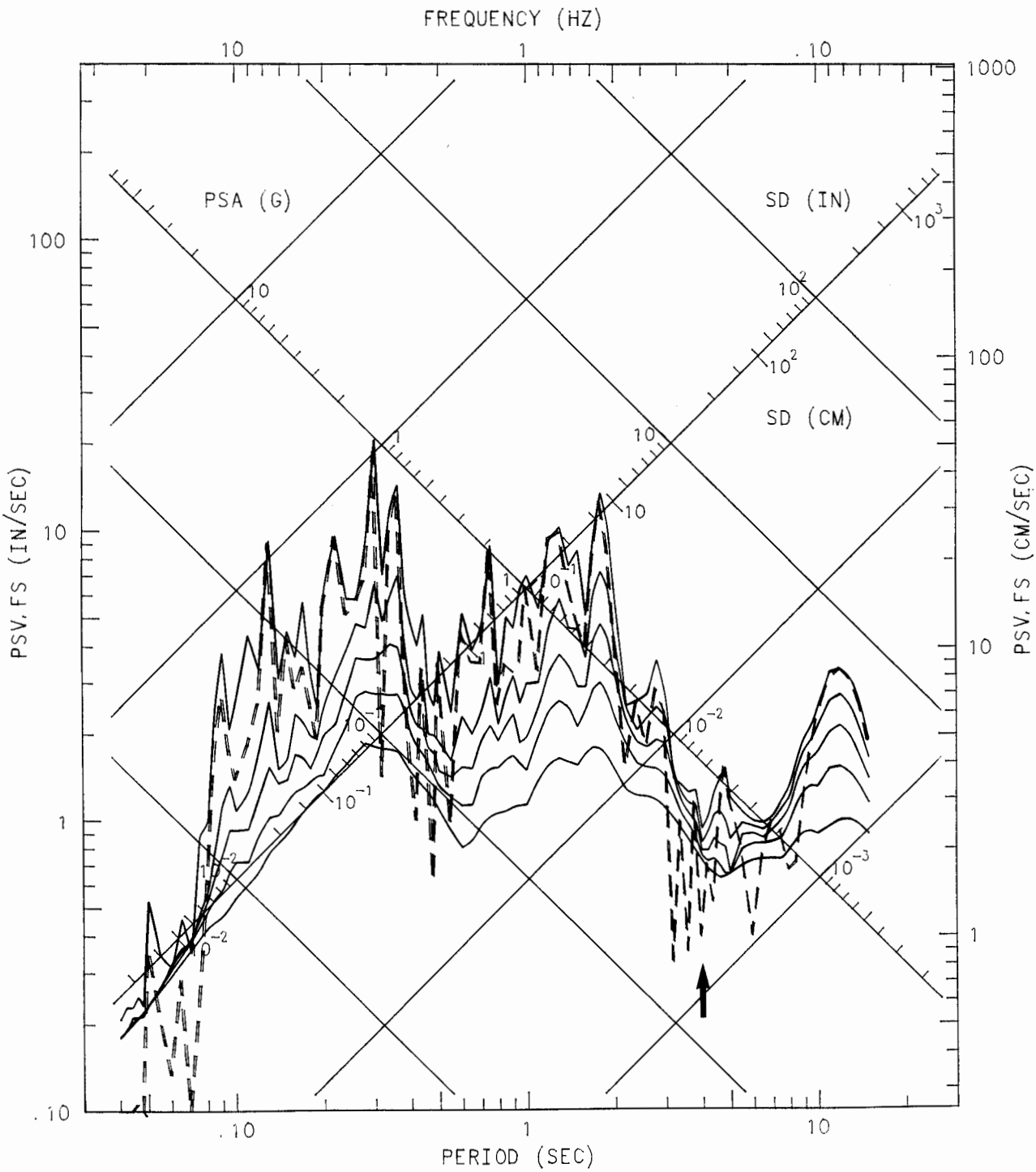
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 1: UP (GROUND FLOOR, SOUTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



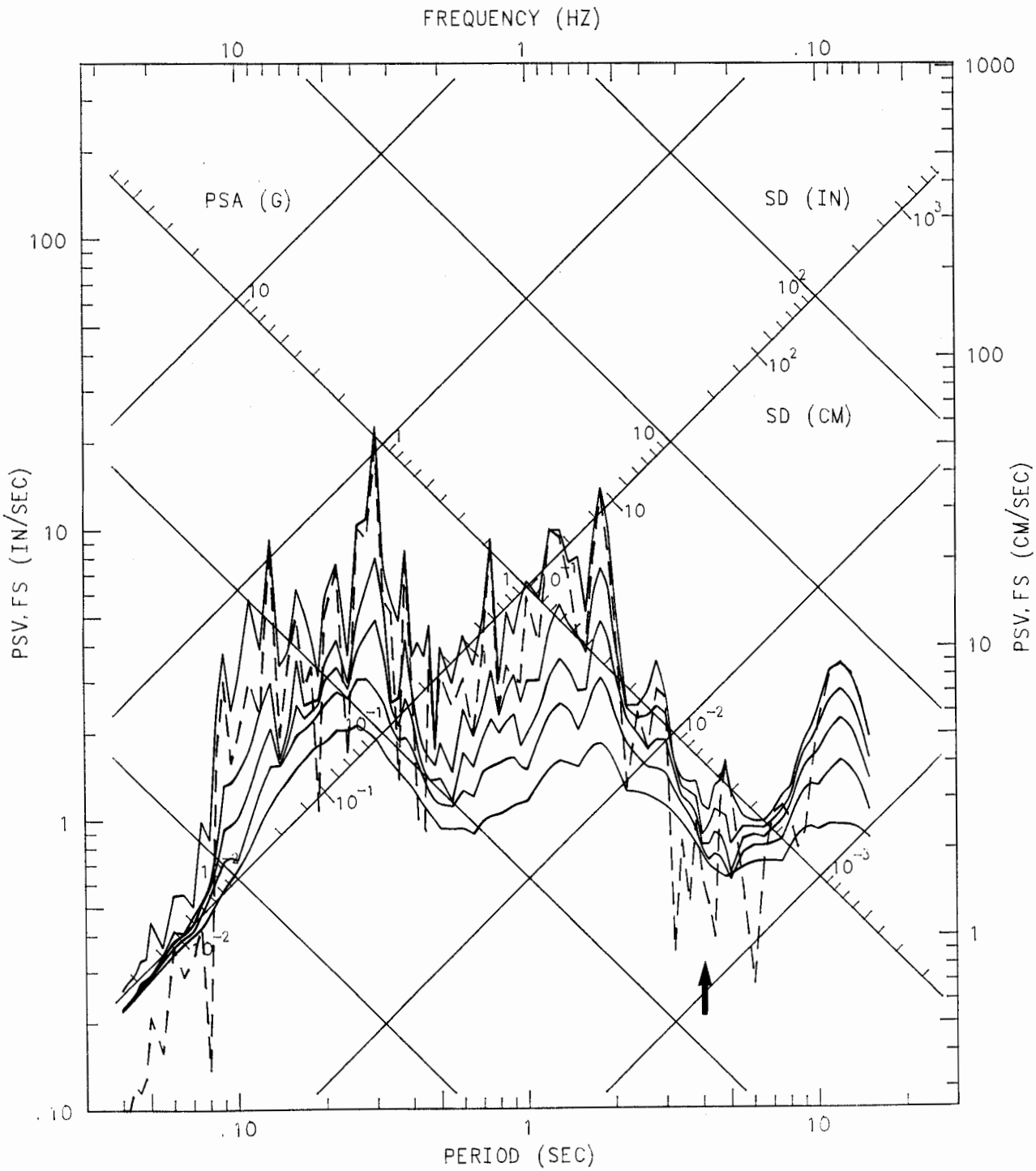
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 2: UP (GROUND FLOOR, SOUTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



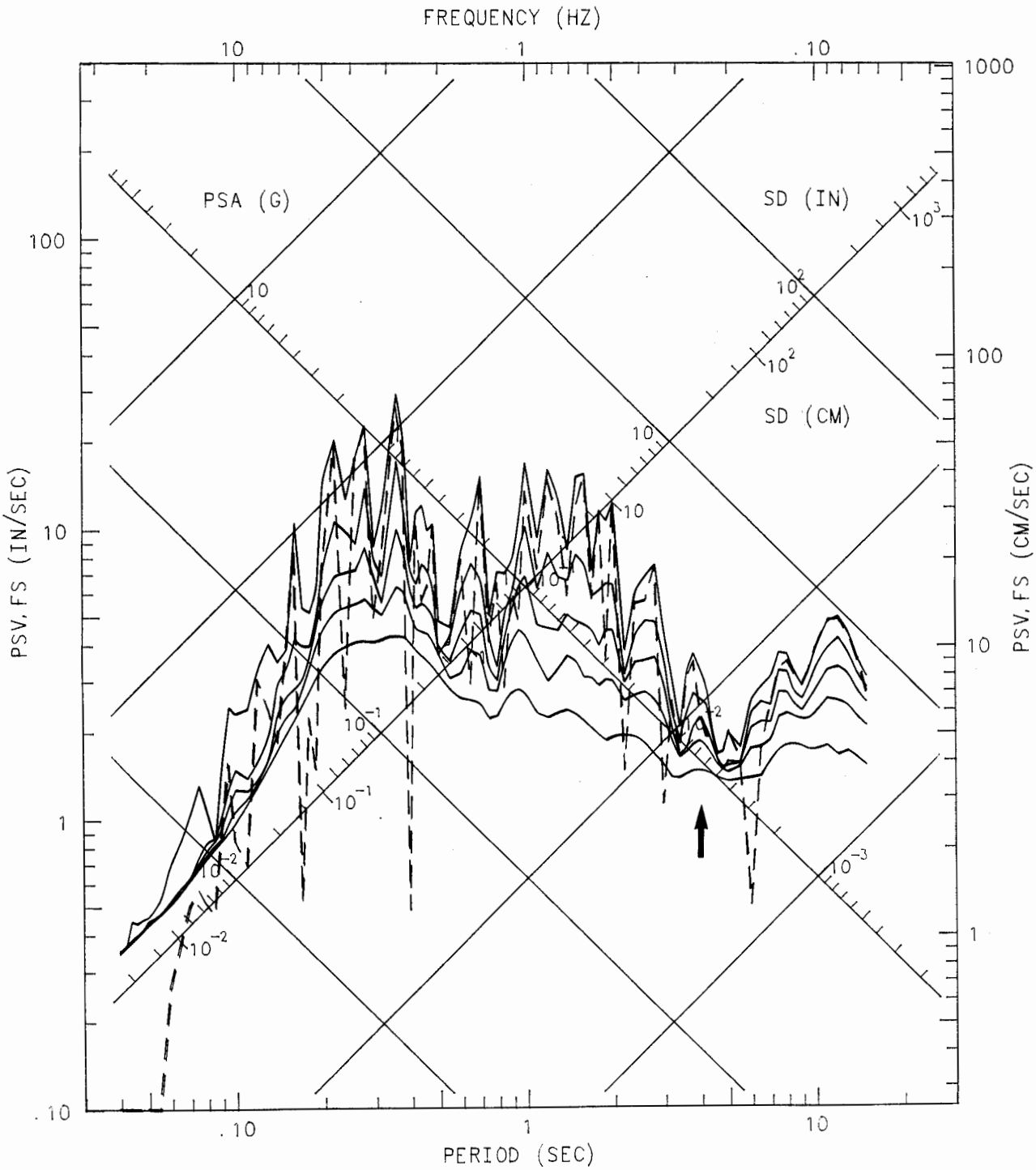
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 3: UP (GROUND FLOOR, NORTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



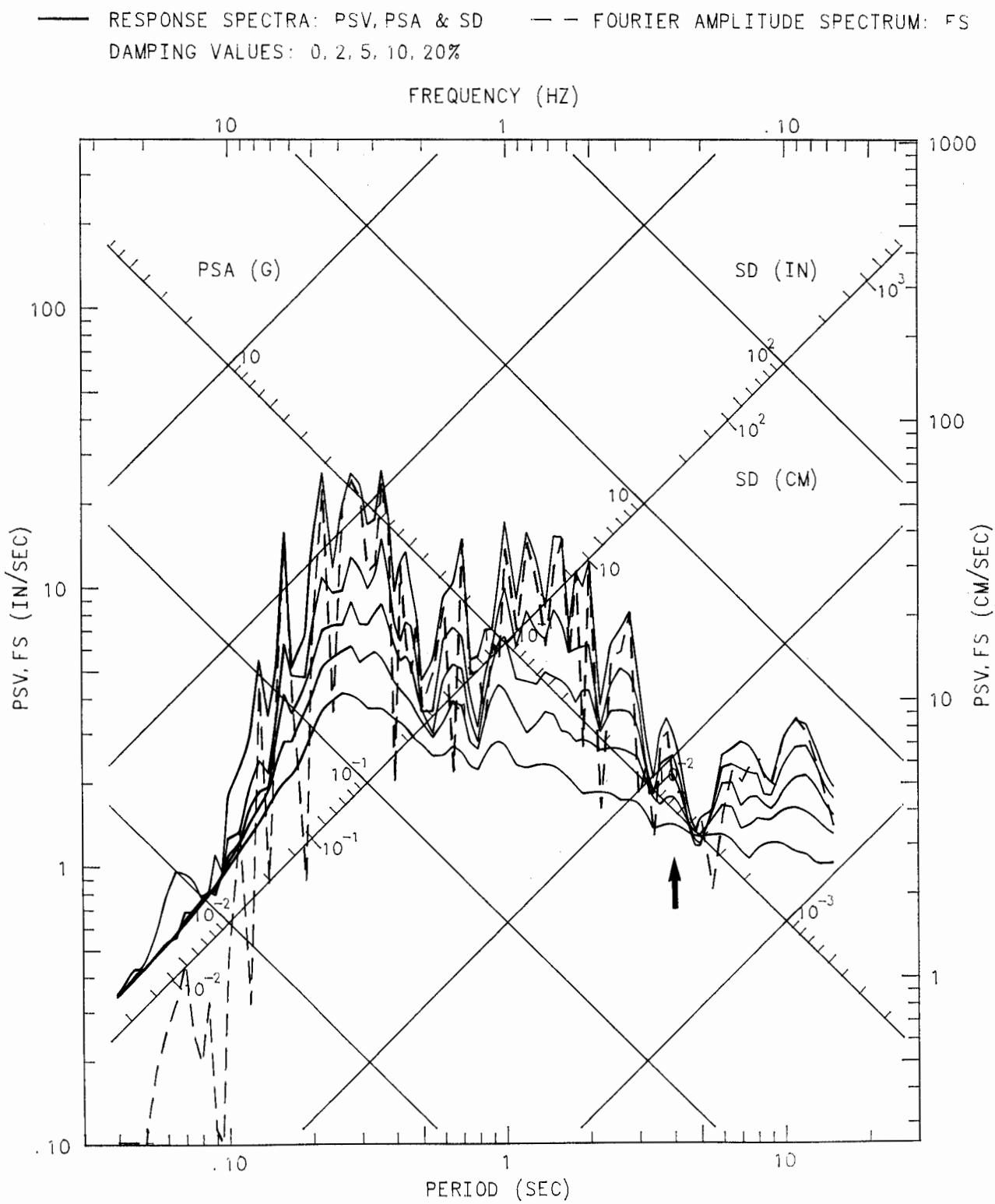
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 4: UP (GROUND FLOOR, NORTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



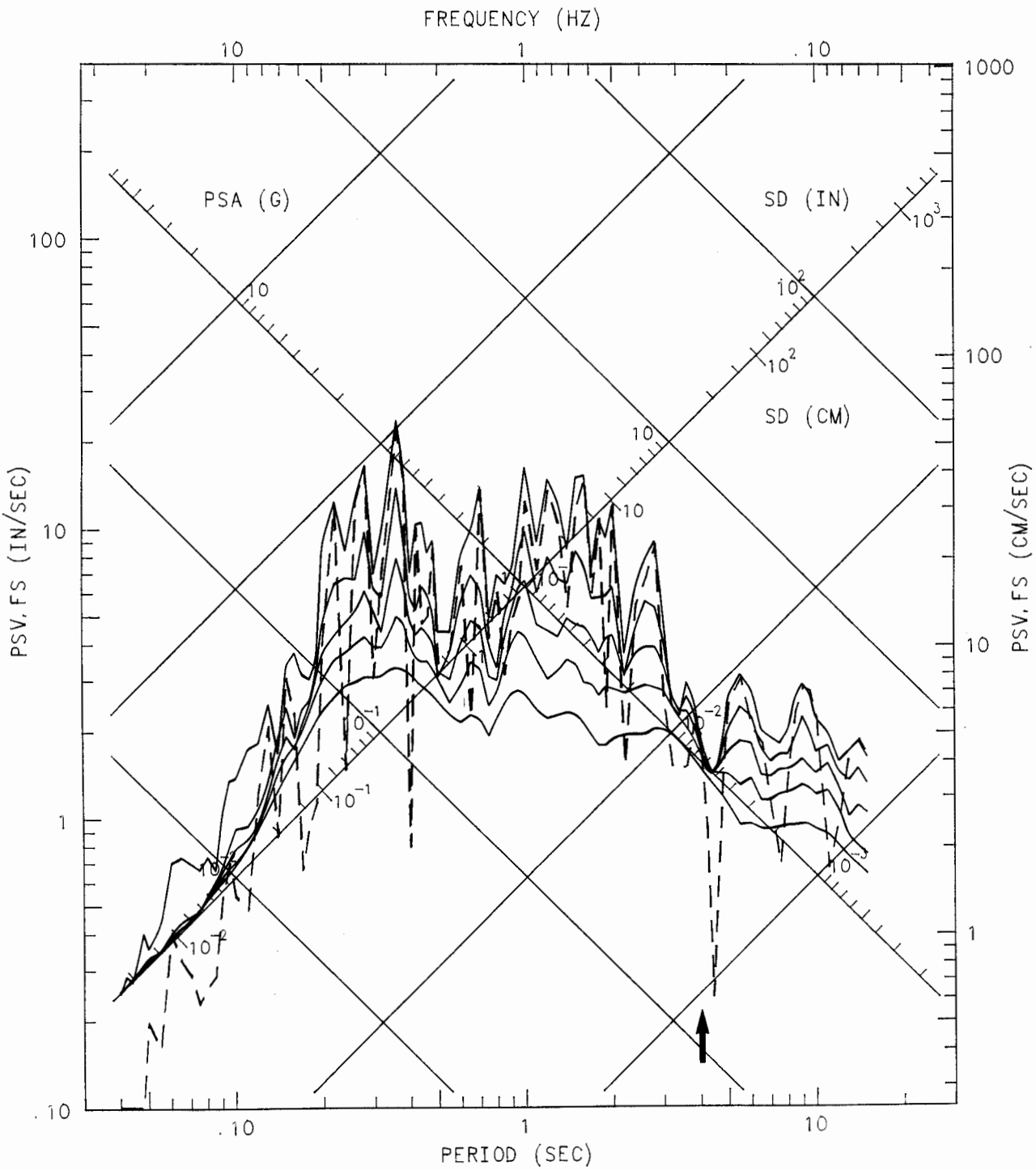
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 5: 0 DEG (ROOF, NORTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



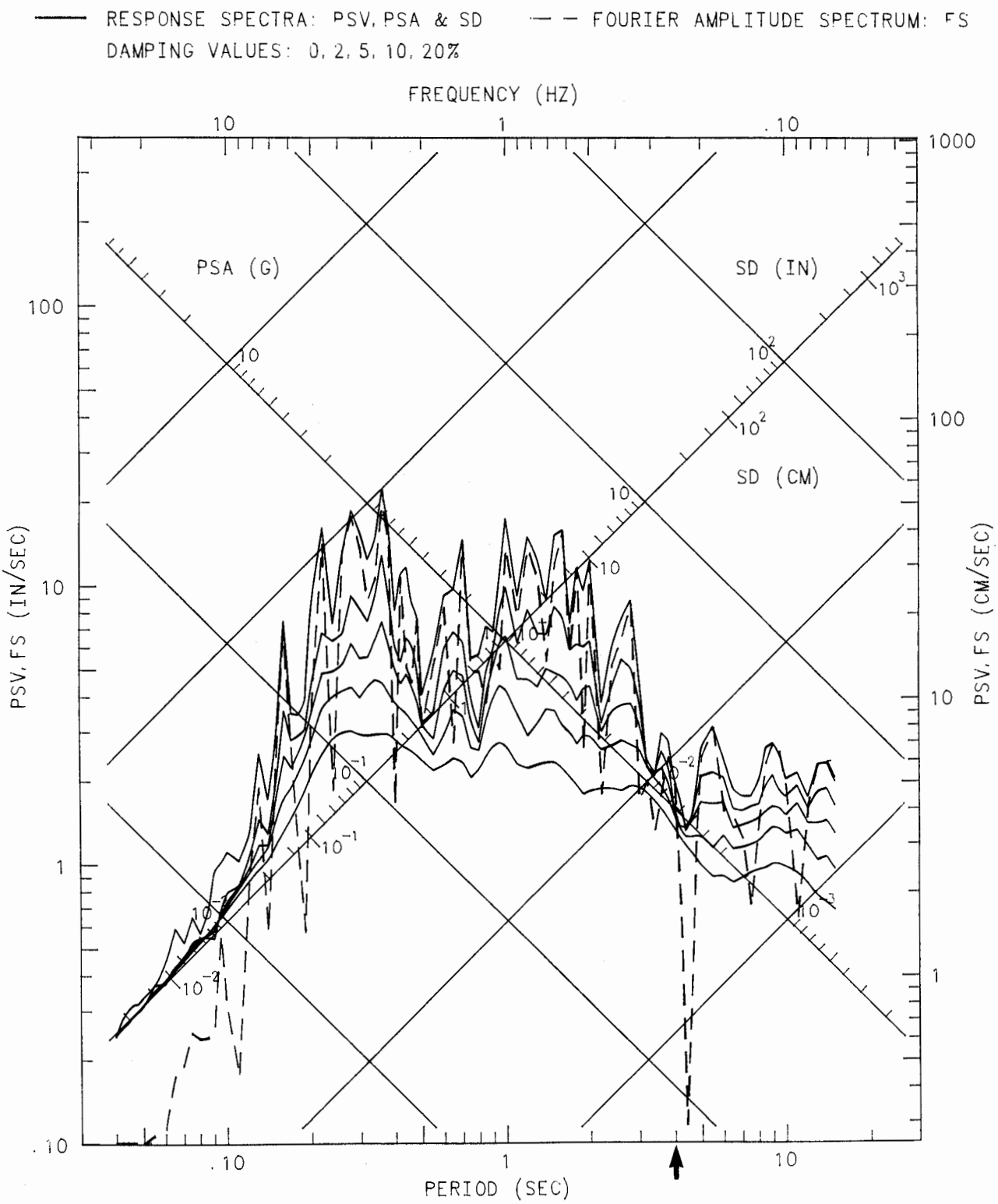
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 6: 0 DEG (ROOF, NORTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



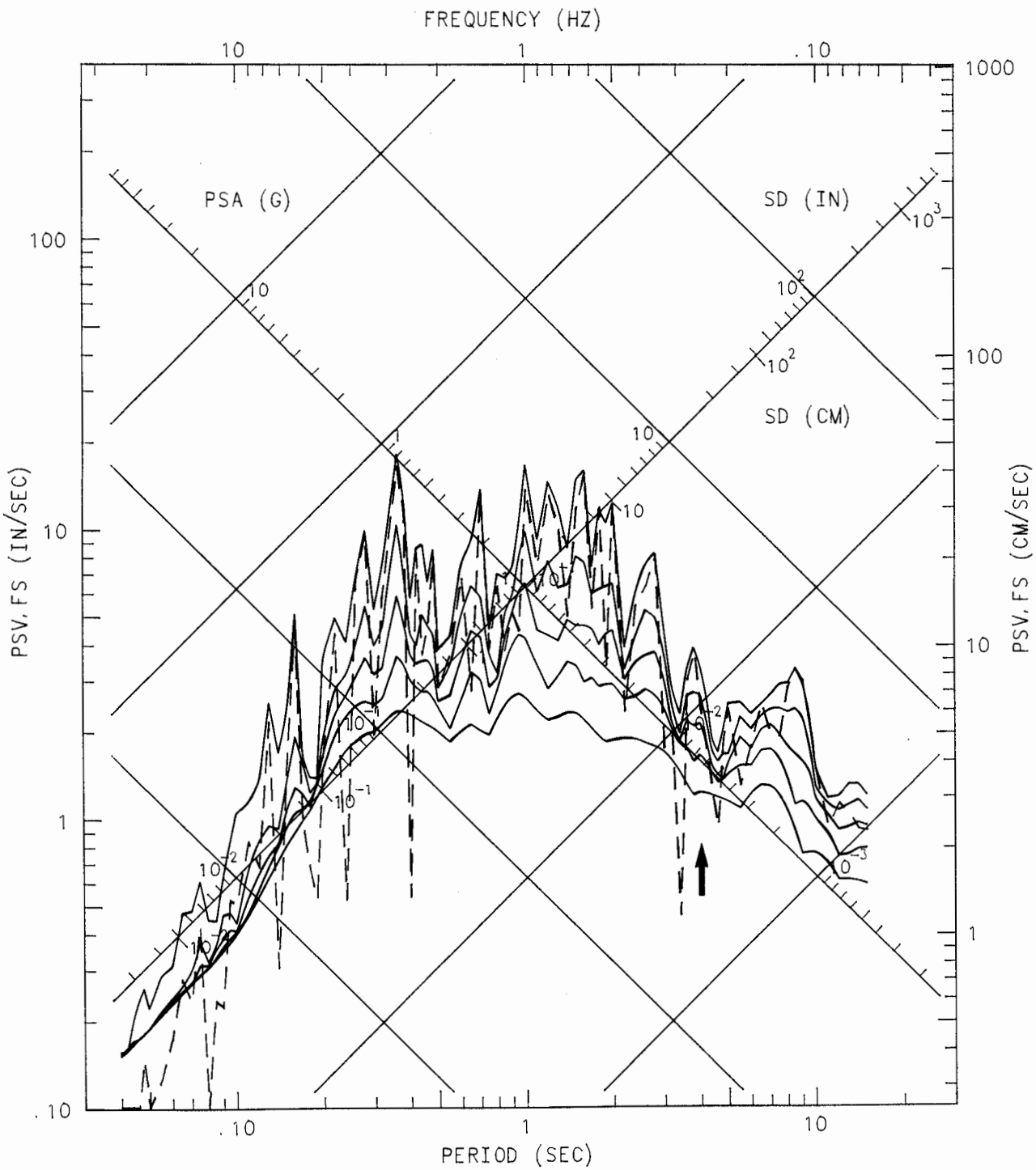
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 7: 0 DEG (3RD FLOOR, NORTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



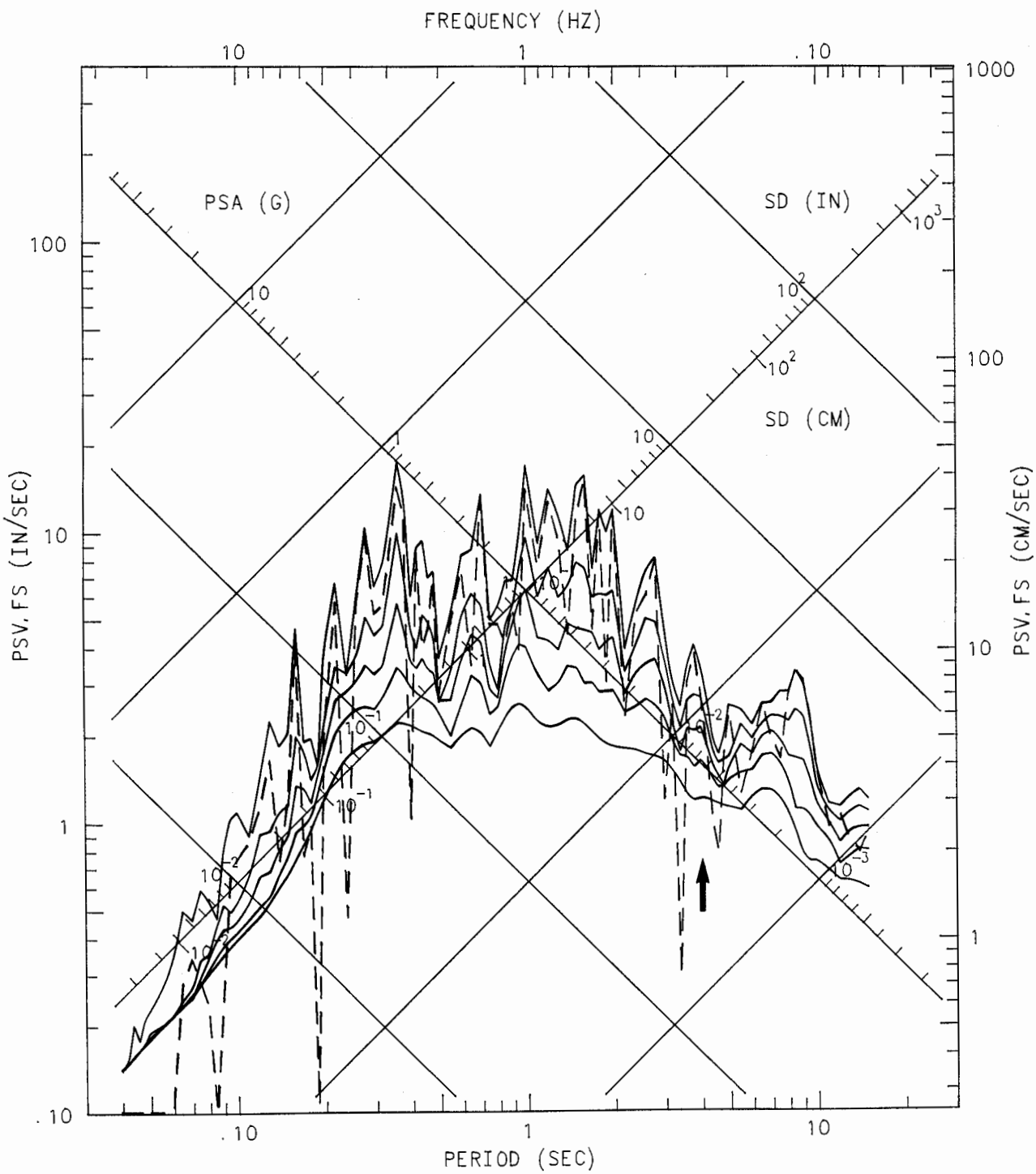
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 8: 0 DEG (3RD FLOOR, NORTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



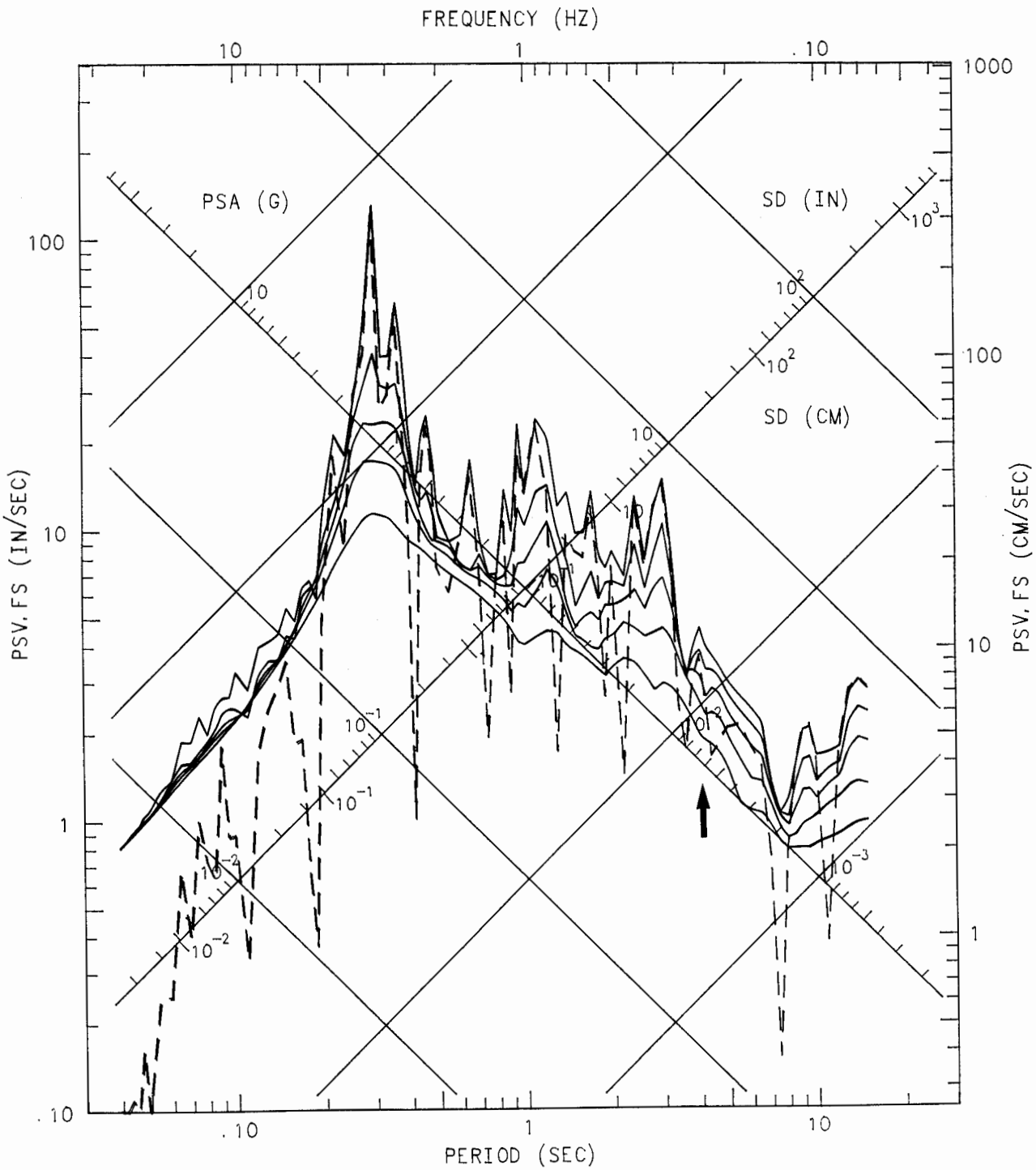
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 9: 0 DEG (GROUND FLOOR, NORTHWEST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



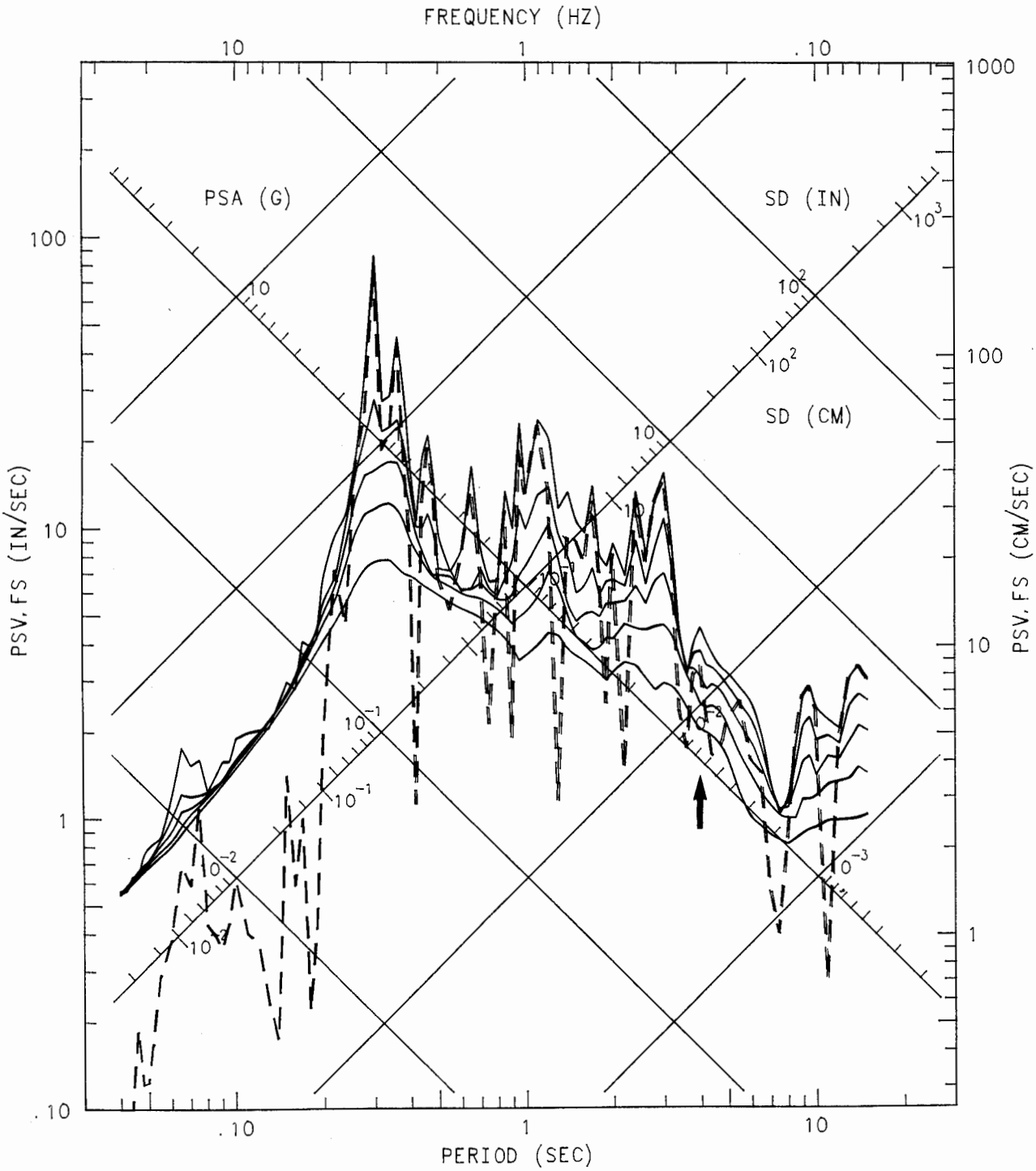
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 10: 0 DEG (GROUND FLOOR, NORTHEAST CORNER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



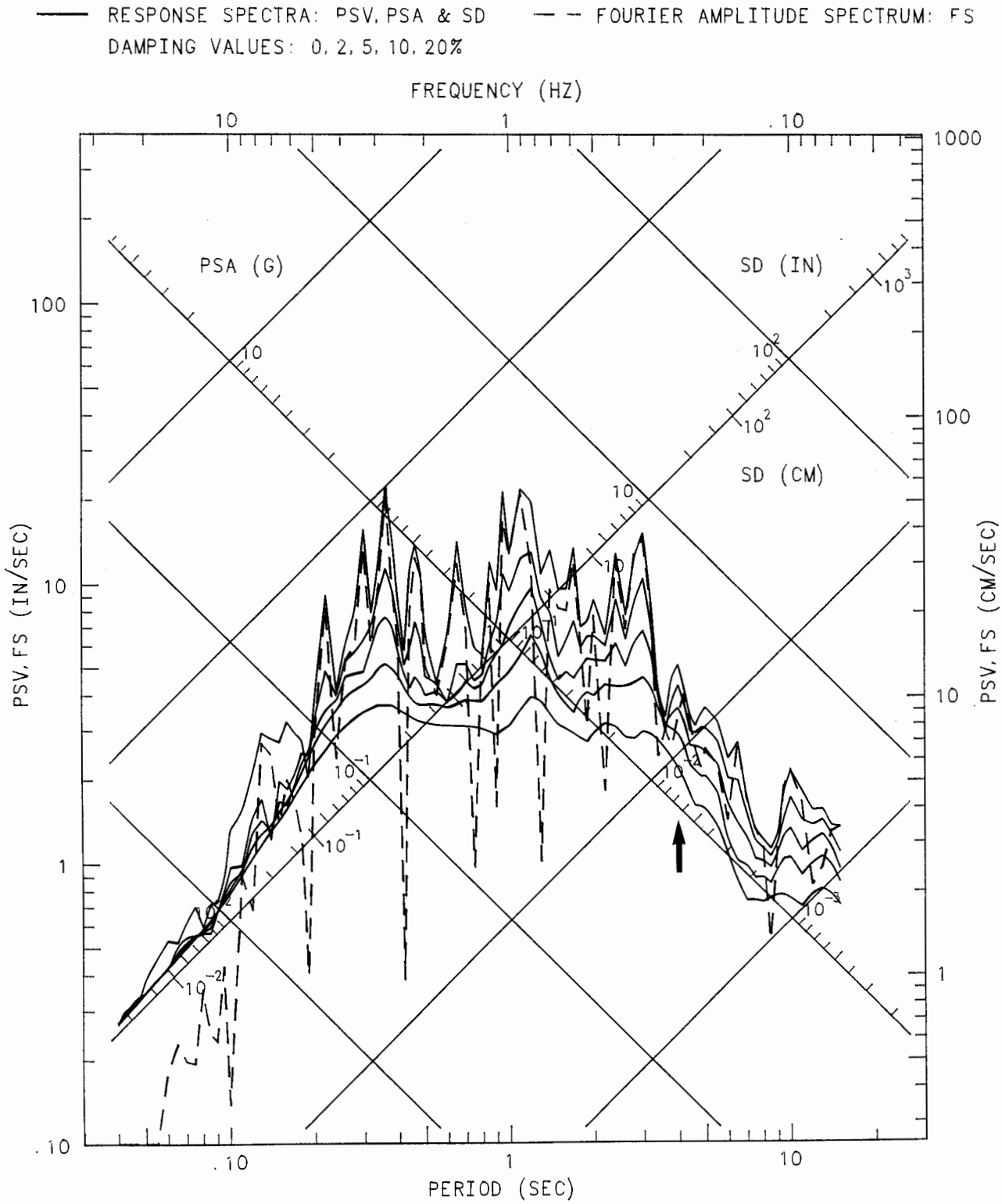
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 11: 90 DEG (ROOF, CENTER OF WEST WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG.
CHN 12: 90 DEG (3RD FLOOR, CENTER OF WEST WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



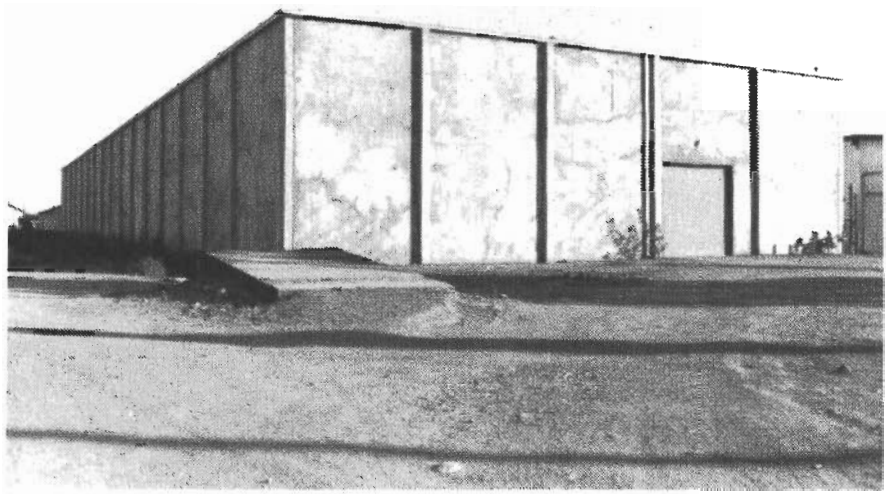
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
WATSONVILLE - TELEPHONE BLDG:
CHN 13: 90 DEG (GROUND FLOOR, CENTER OF WEST WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47459-C0215-84117.01 050885.0231-QM84A459



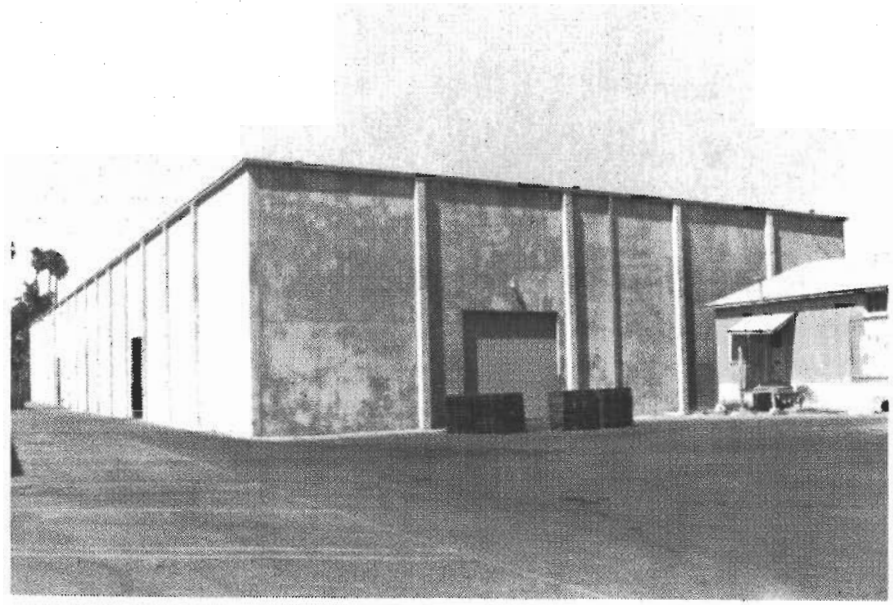
HOLLISTER - GLORIETTA WAREHOUSE

Special Notes: None

Hollister - Glorietta Warehouse



Northeast Side View



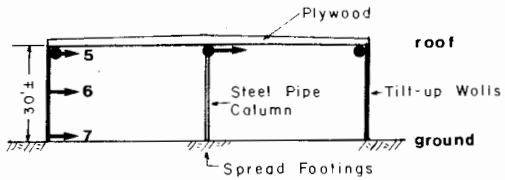
Southwest Side View

Address: 711 Sally Street
Hollister, California
Coordinates: 36.851° N, 121.398° W
No. of Stories above/below ground: 1 / 0
Plan Type: Rectangular
Base Dimensions: 300' x 100'
Typical Floor Dimensions: Same as Base
Design Date: 1979
Construction Date: 1979

Vertical Load Carrying System:
Glu lam Beams, wood joists, interior steel columns and tilt-up concrete bearing walls.
Lateral Force Resisting System:
Concrete shear walls on perimeter; plywood roof diaphragm.
Foundation Type:
Spread footings.

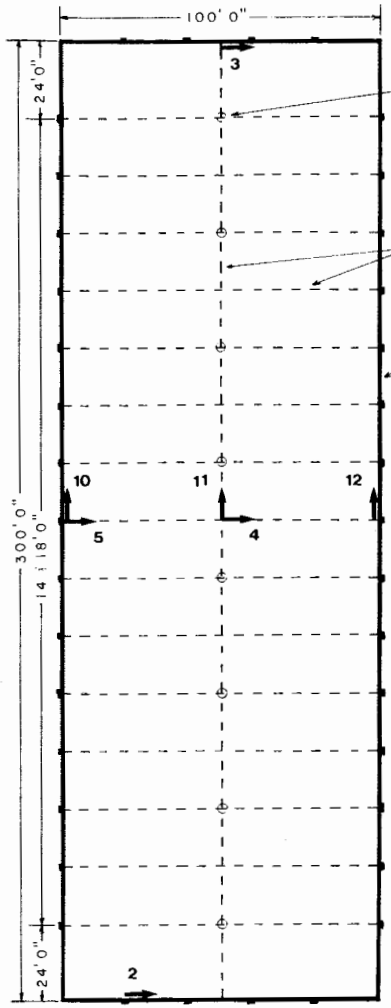
SENSOR LAYOUT

Hollister-Glorietta Warehouse
CSMIP Station No. 47391

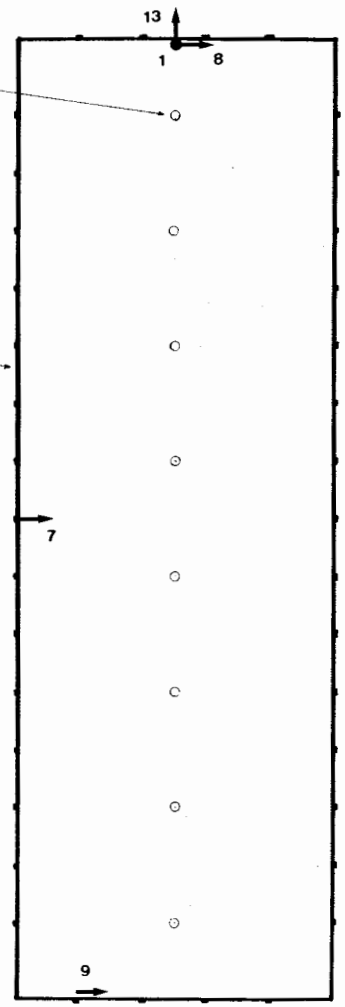


W - E Section at Center

Sensors 4, 11 Mounted on Glu Lam Beam
Sensor 13 Mounted on Floor Slab
Other Sensors Mounted on Wall

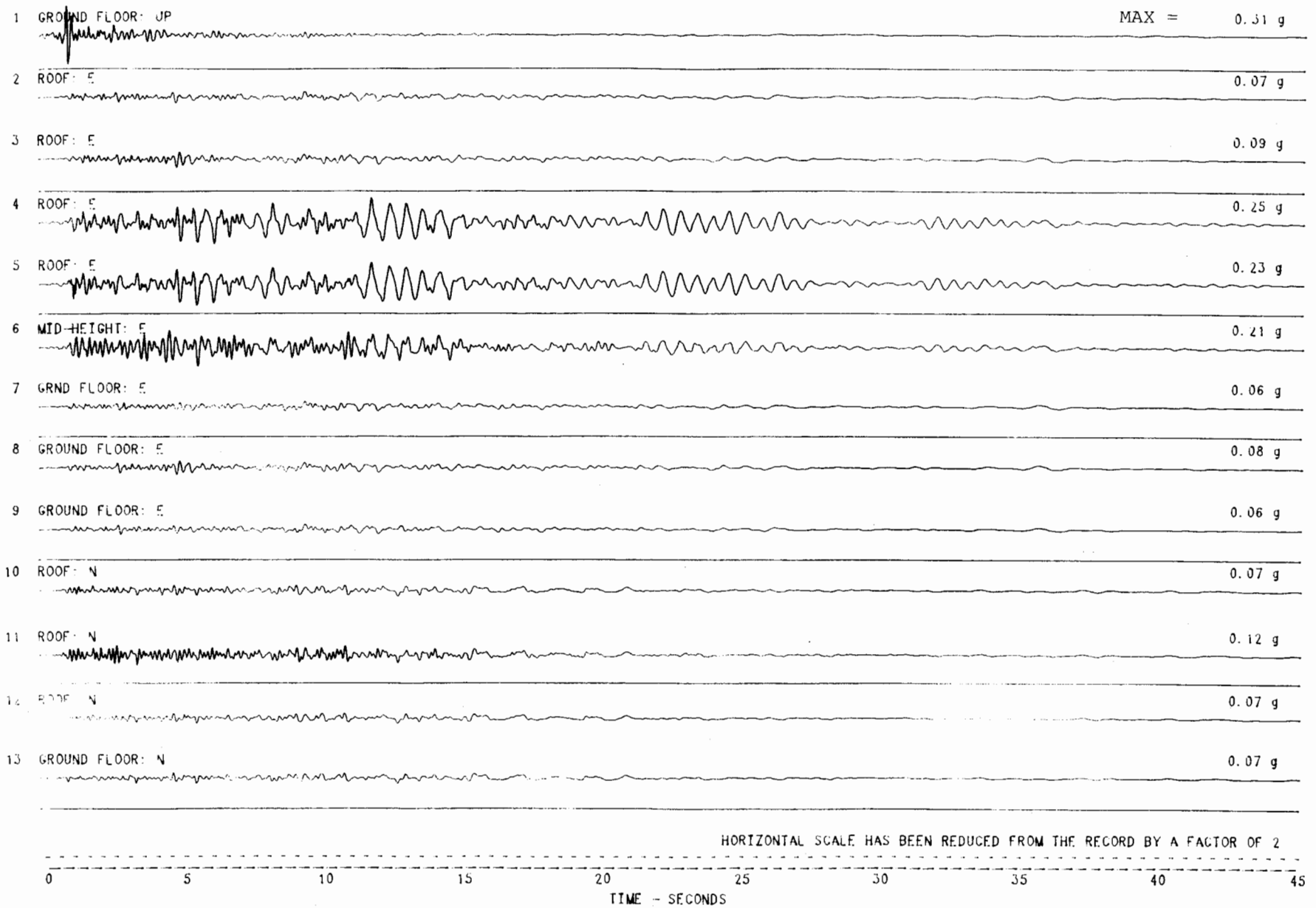


Roof Plan

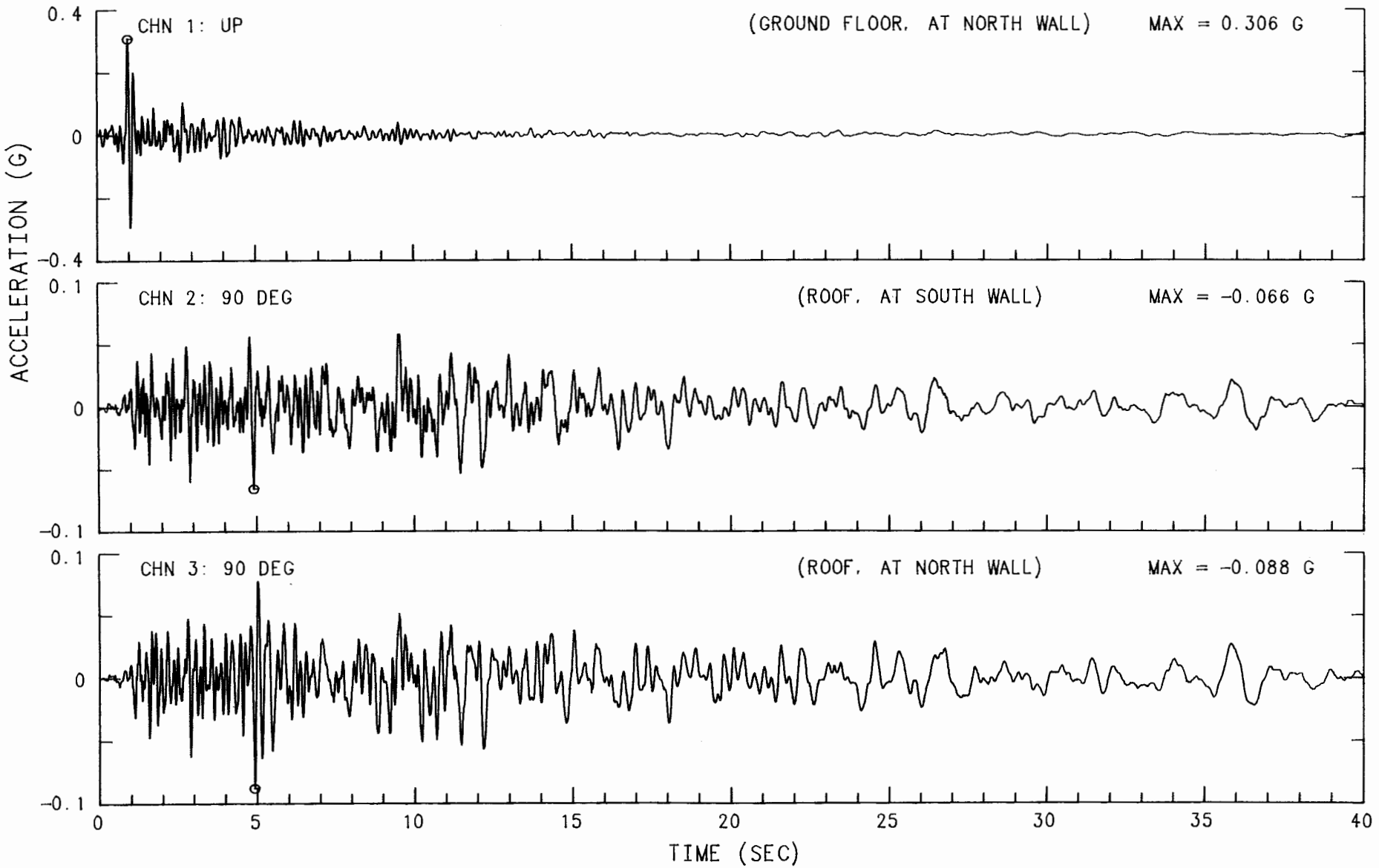


Ground Floor Plan

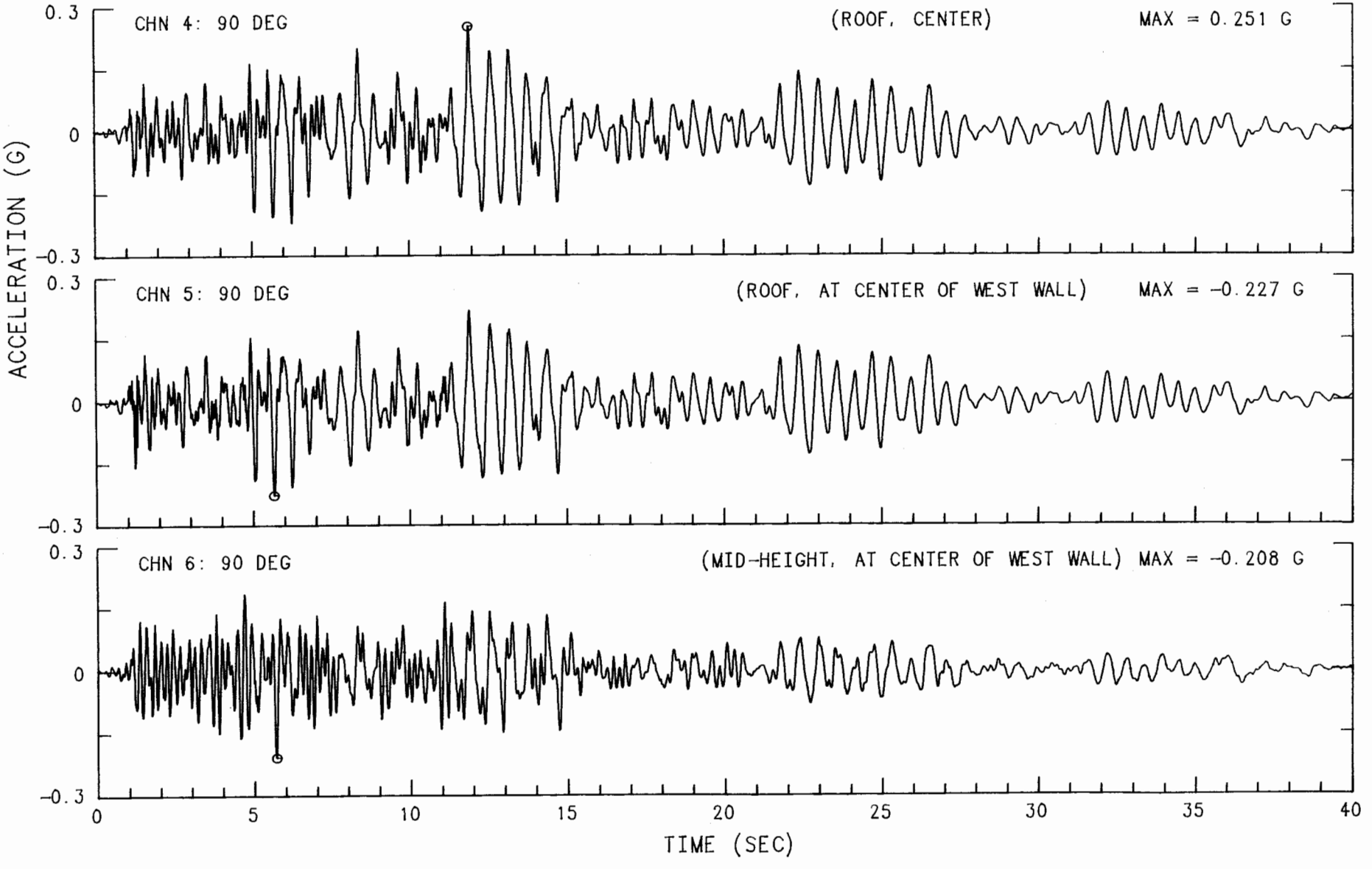
HOLLISTER - GLORIETTA WAREHOUSE RECORD 47391-C0182-84118.02 MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST



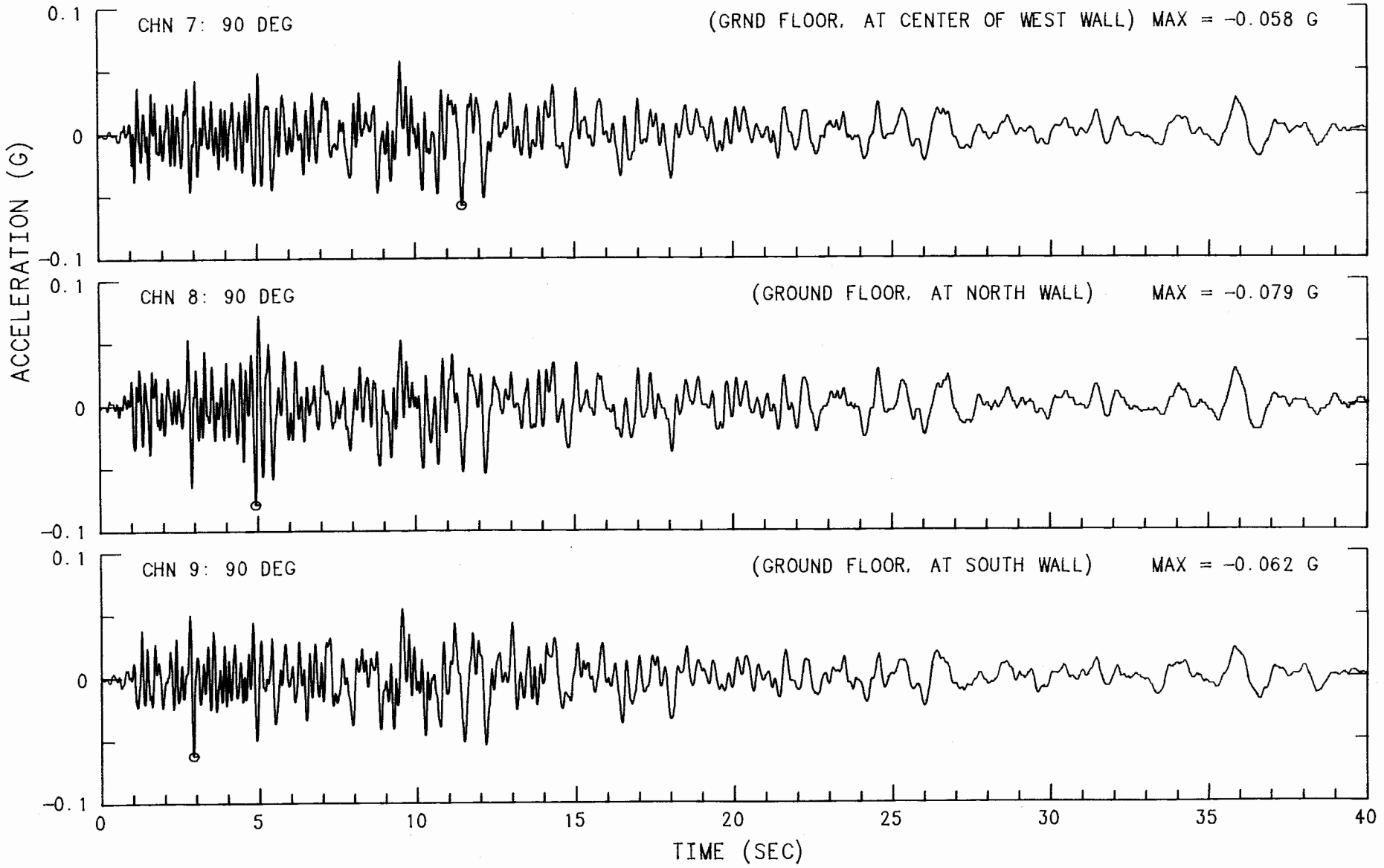
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
UNCORRECTED ACCELEROGRAM 47391-C0182-84118.02 032185.1926-QM84A391



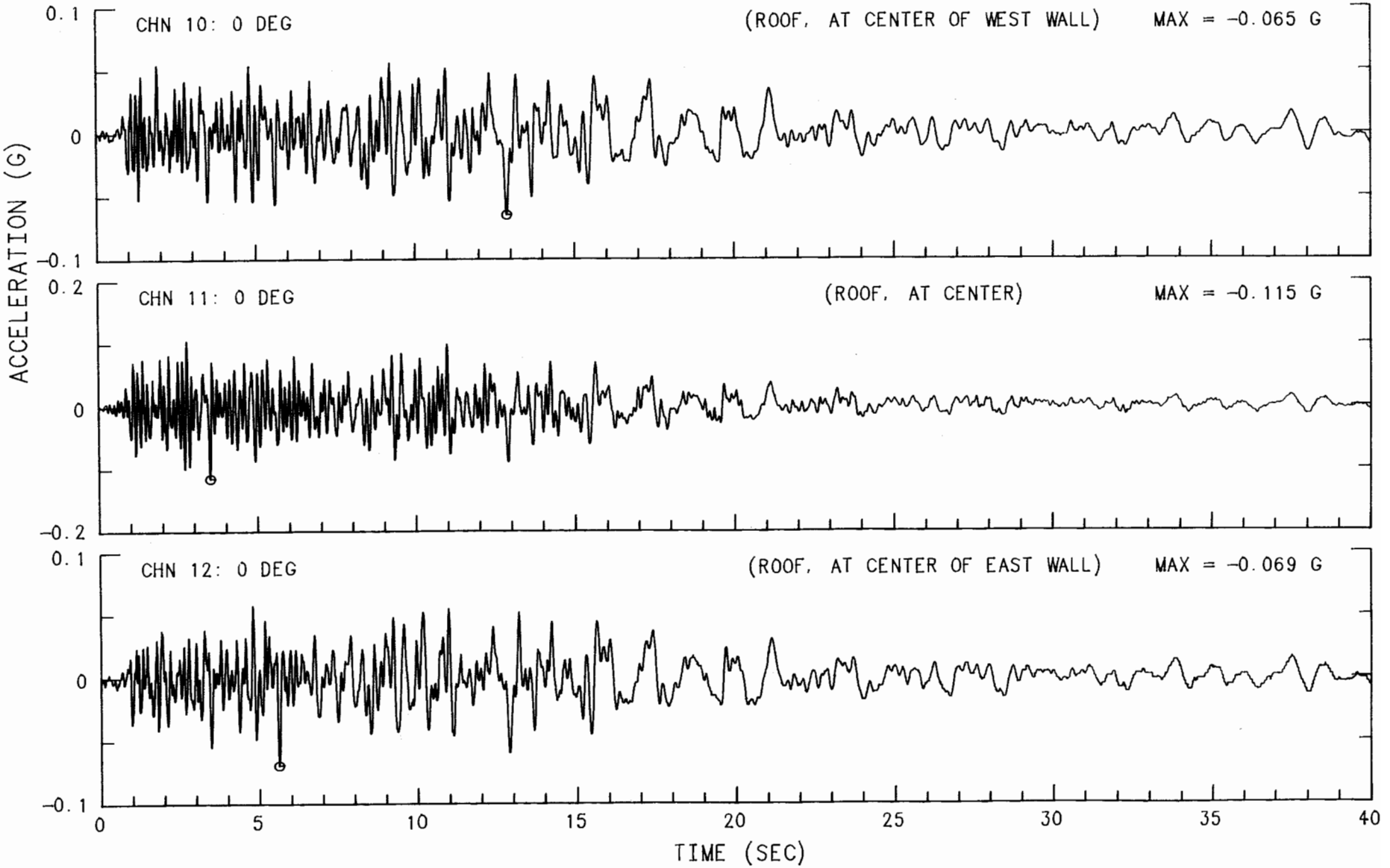
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
UNCORRECTED ACCELEROGRAM 47391-C0182-84118.02 032185.1926-QM84A391



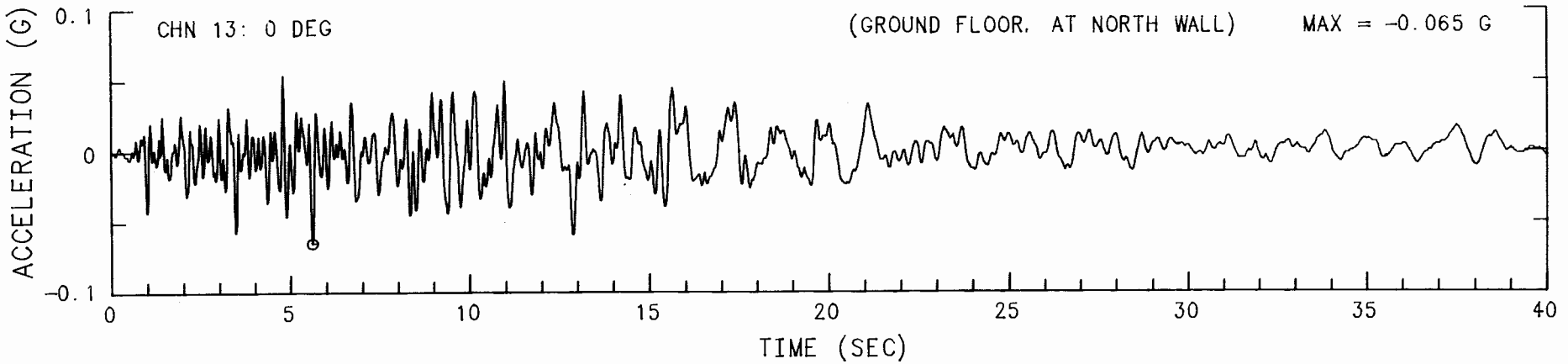
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
UNCORRECTED ACCELEROGRAM 47391-C0182-84118.02 032185.1926-QM84A391



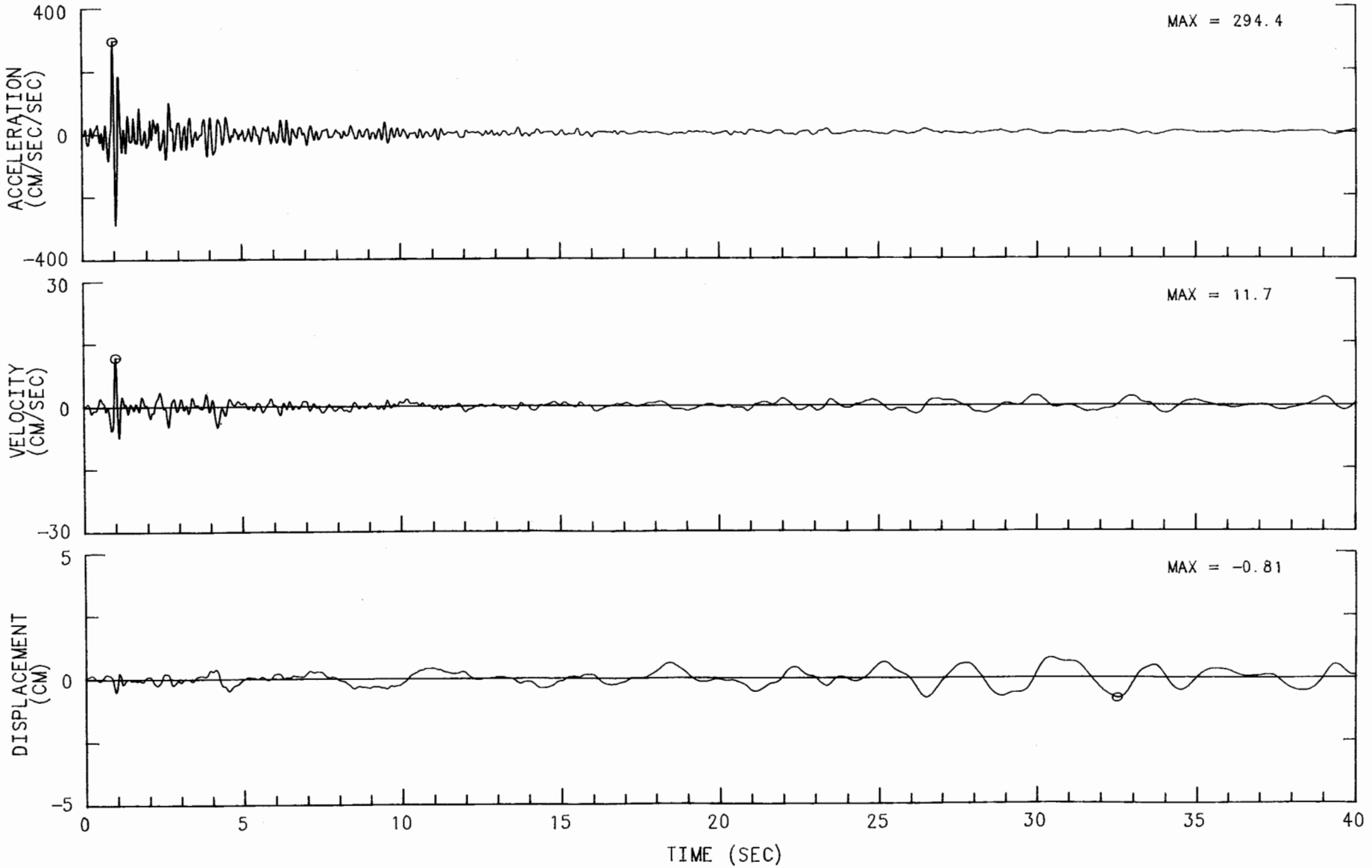
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
UNCORRECTED ACCELEROGRAM 47391-C0182-84118.02 032185.1926-QM84A391



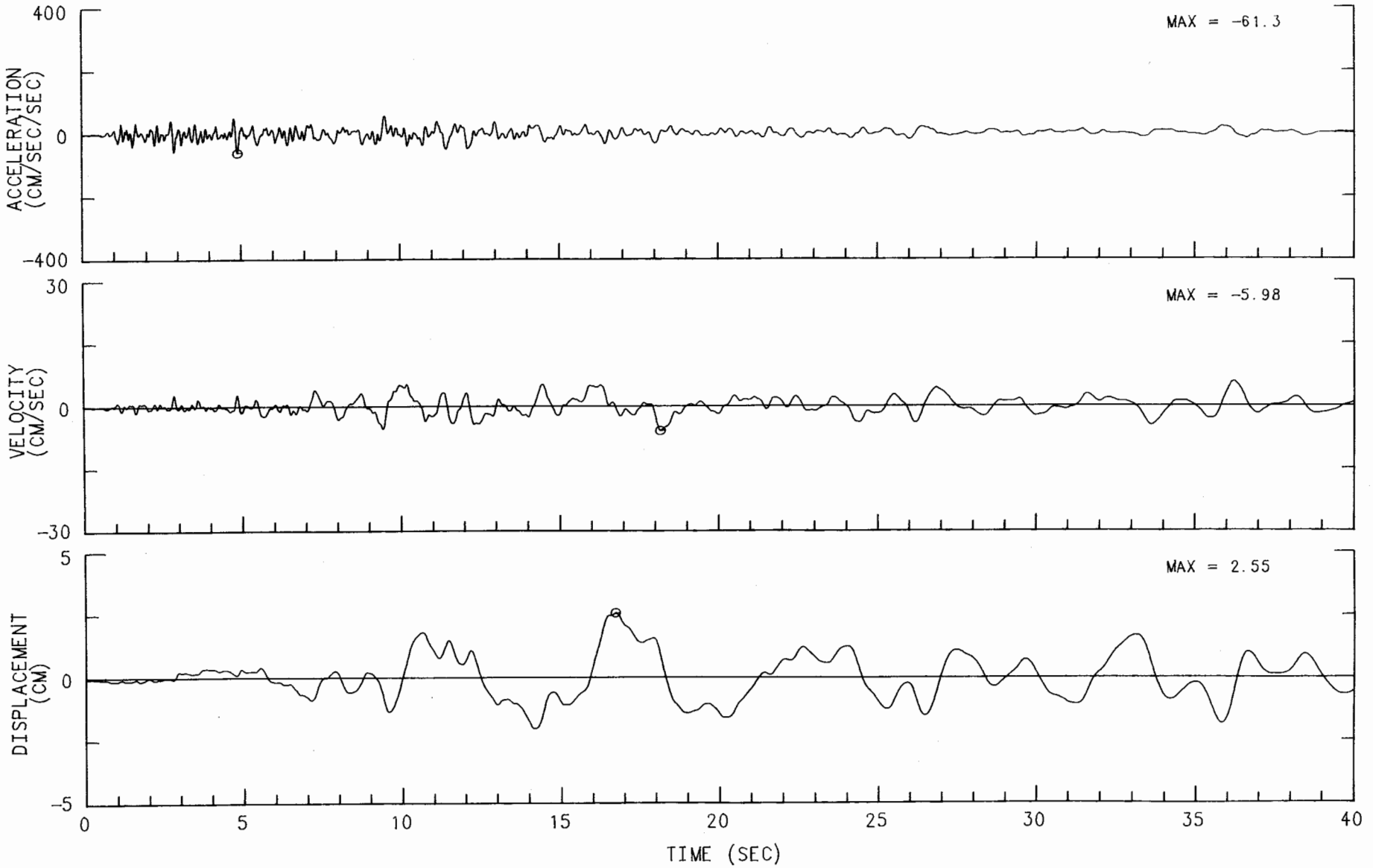
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
UNCORRECTED ACCELEROGRAM 47391-C0182-84118.02 032185.1926-QM84A391



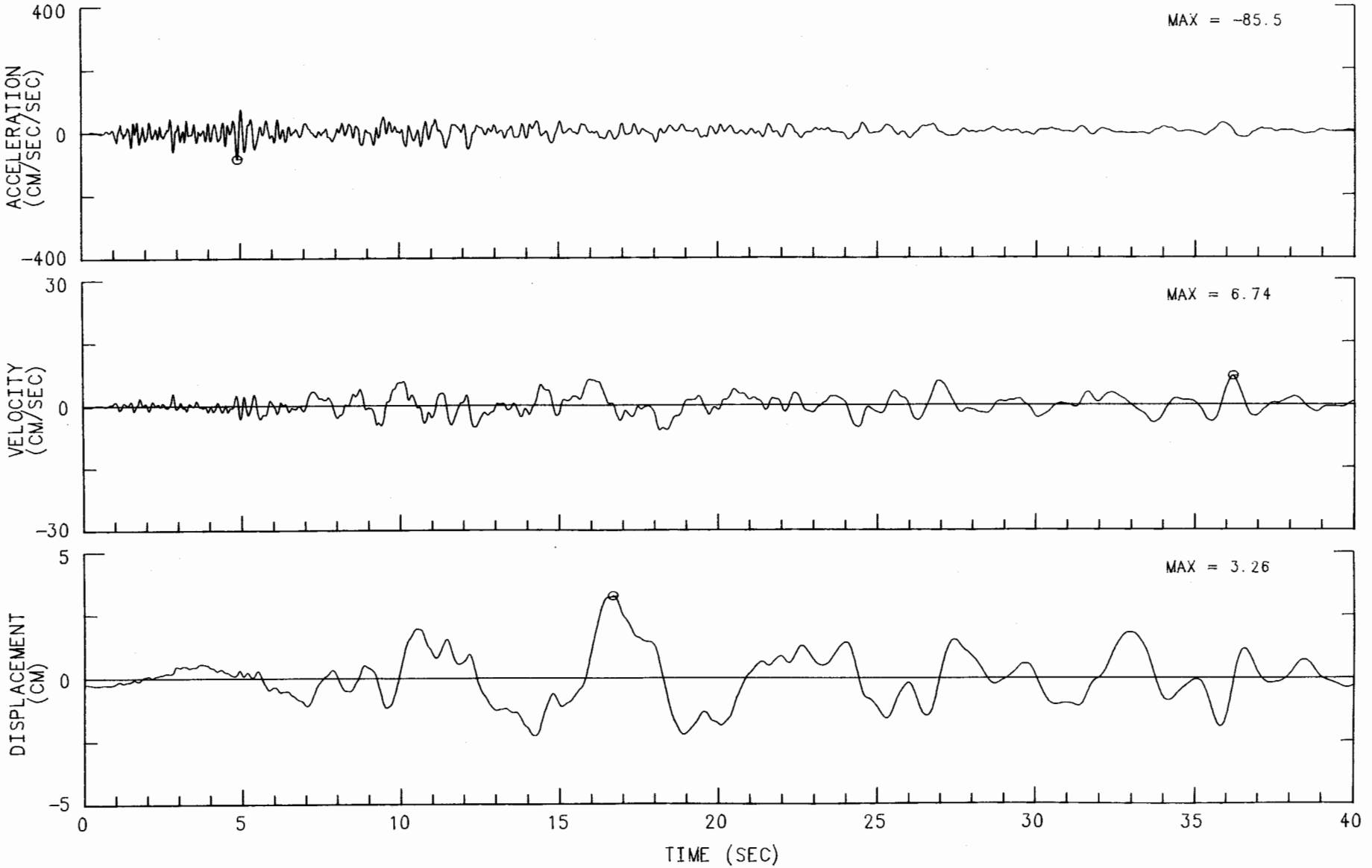
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 1: UP (GROUND FLOOR, AT NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



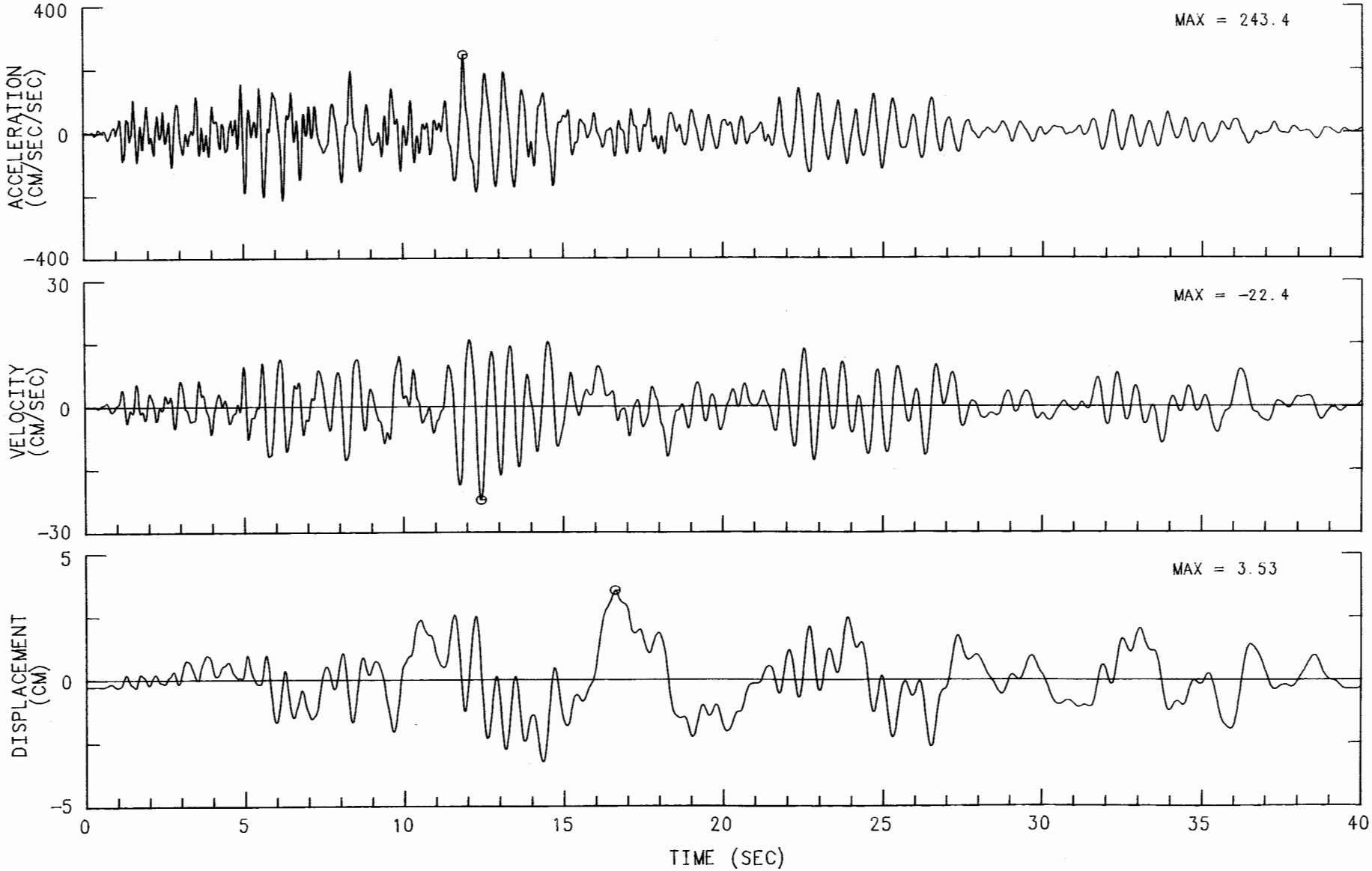
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 2: 90 DEG (ROOF, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



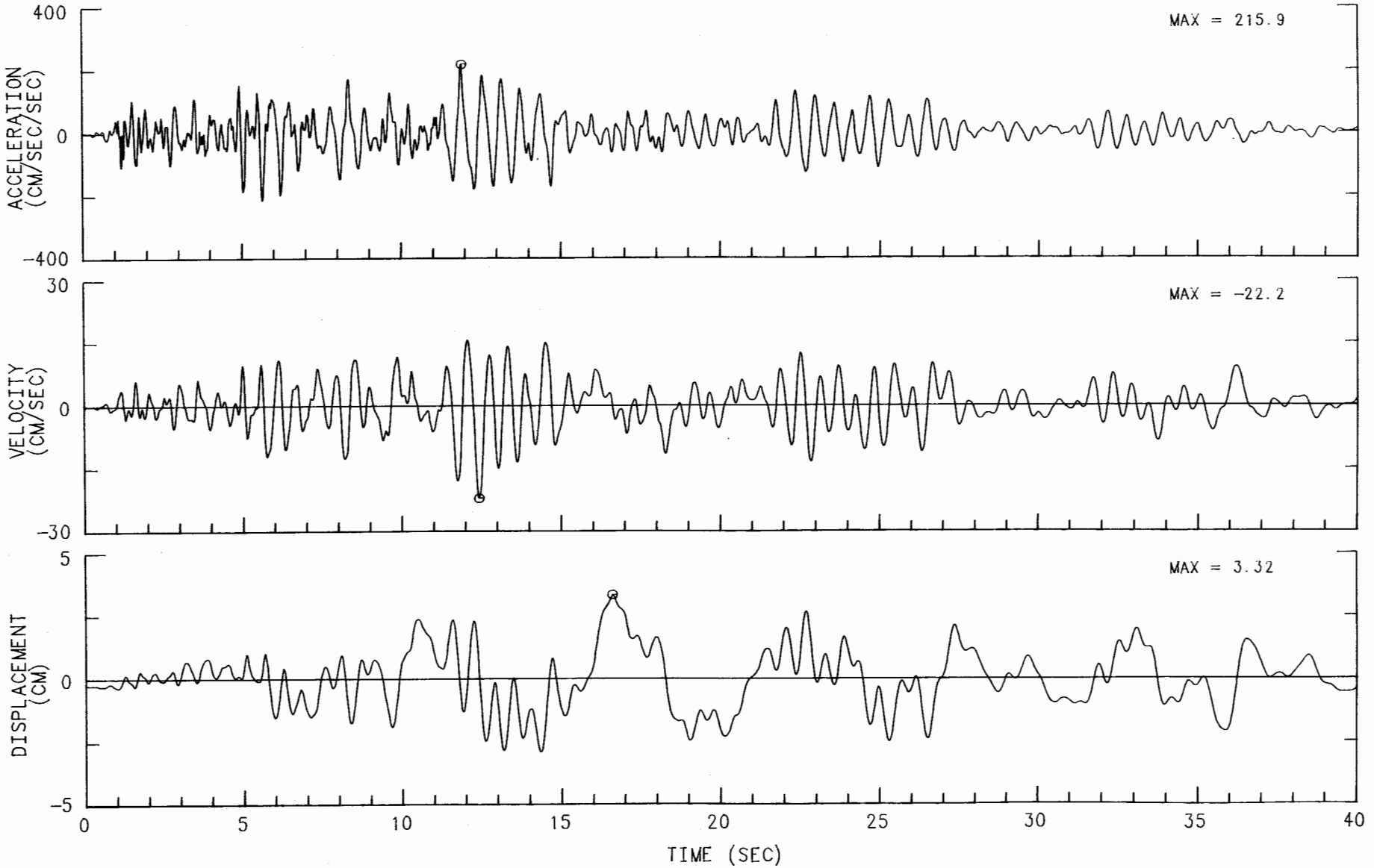
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 3: 90 DEG (ROOF, AT NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



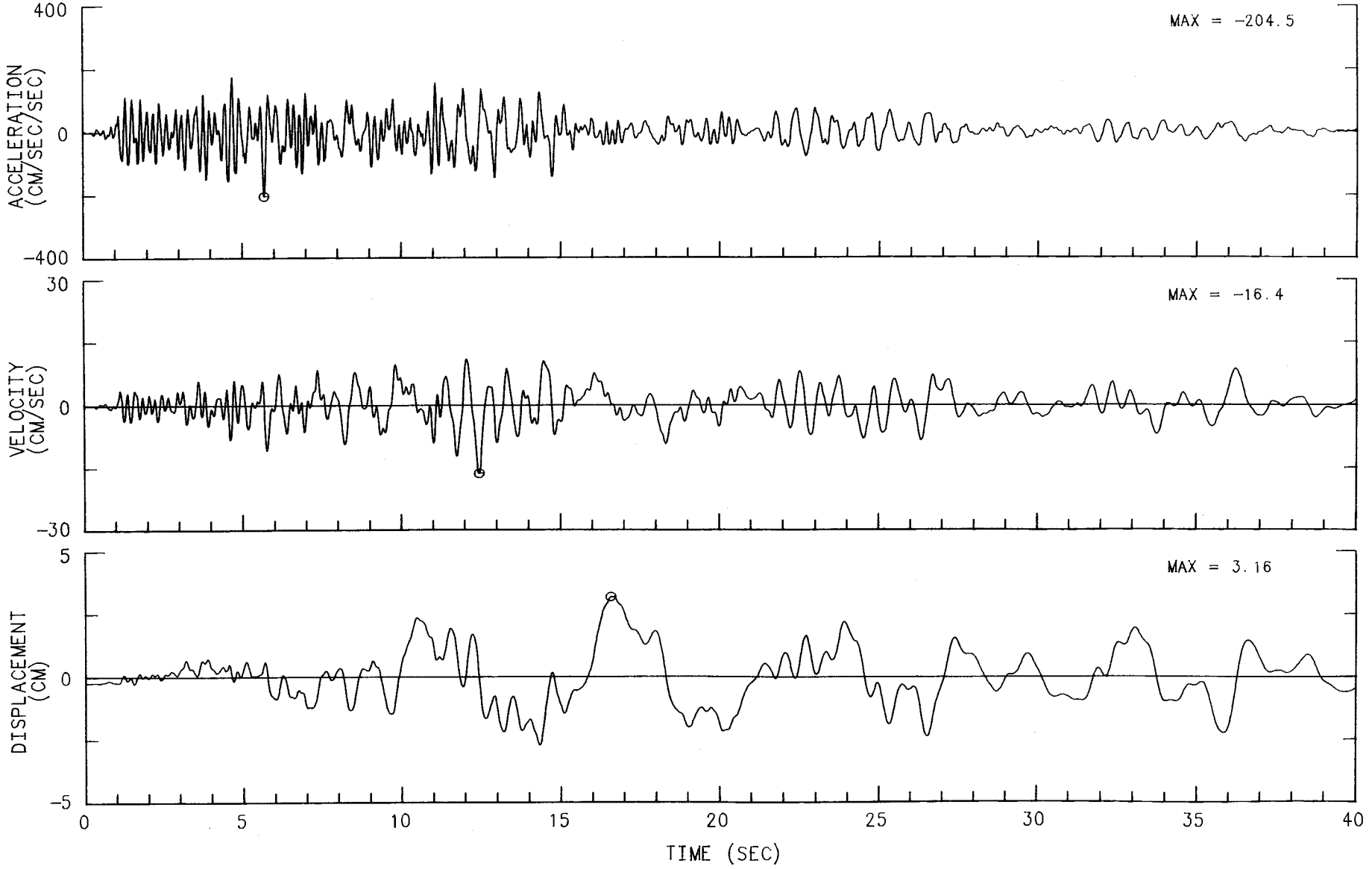
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 4: 90 DEG (ROOF, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



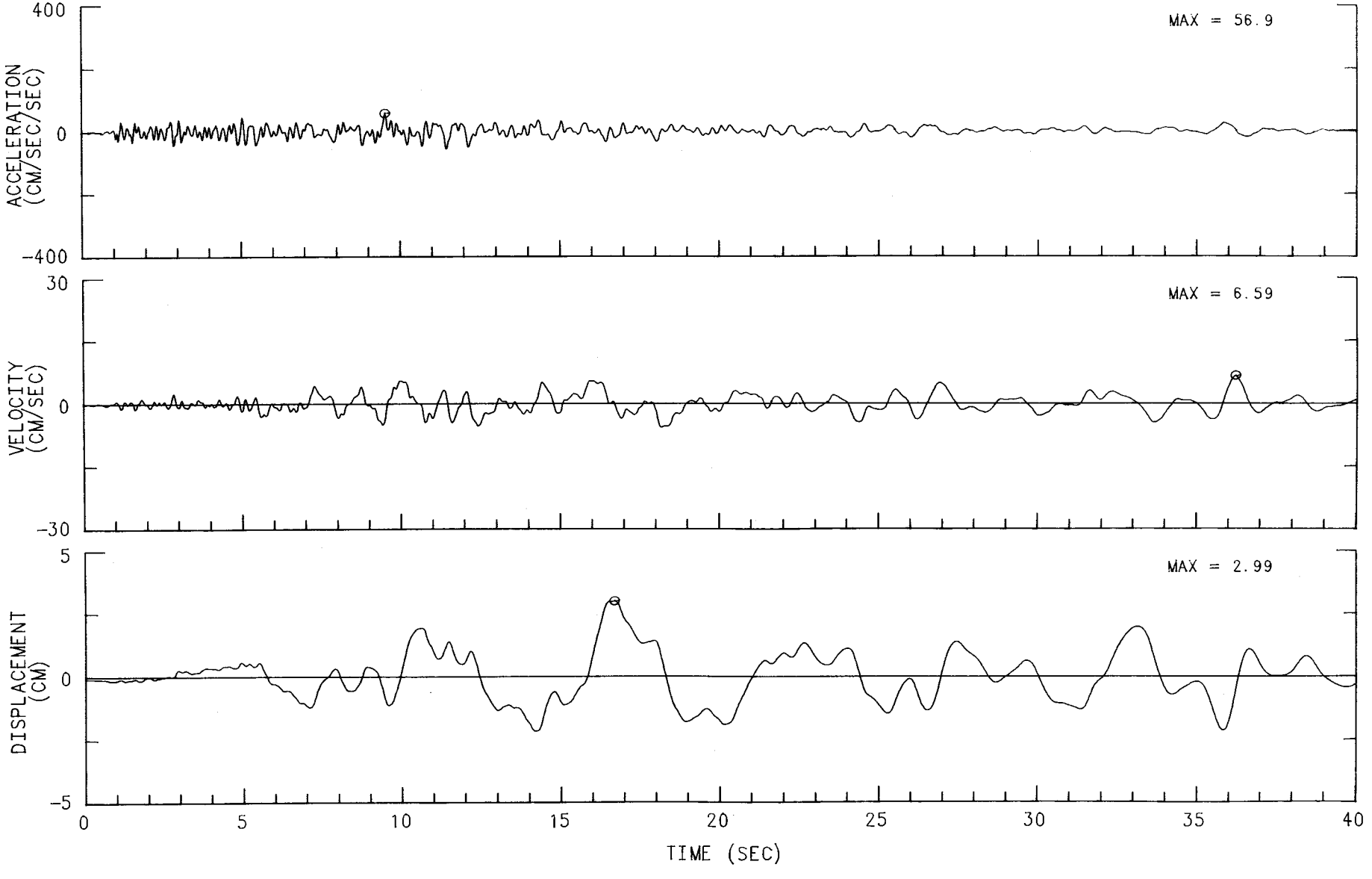
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 5: 90 DEG (ROOF, AT CENTER OF WEST WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



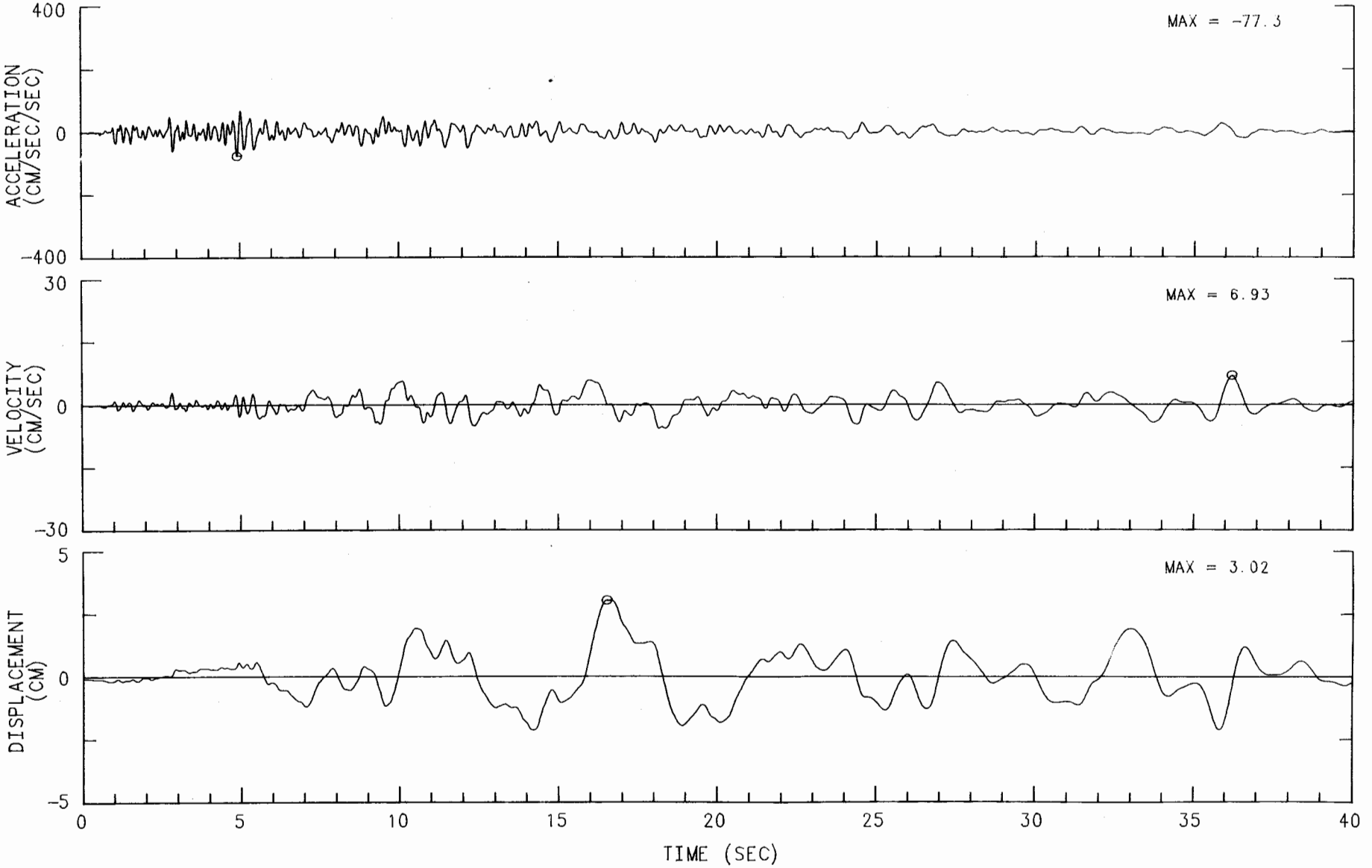
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 6: 90 DEG (MID-HEIGHT, AT CENTER OF WEST WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



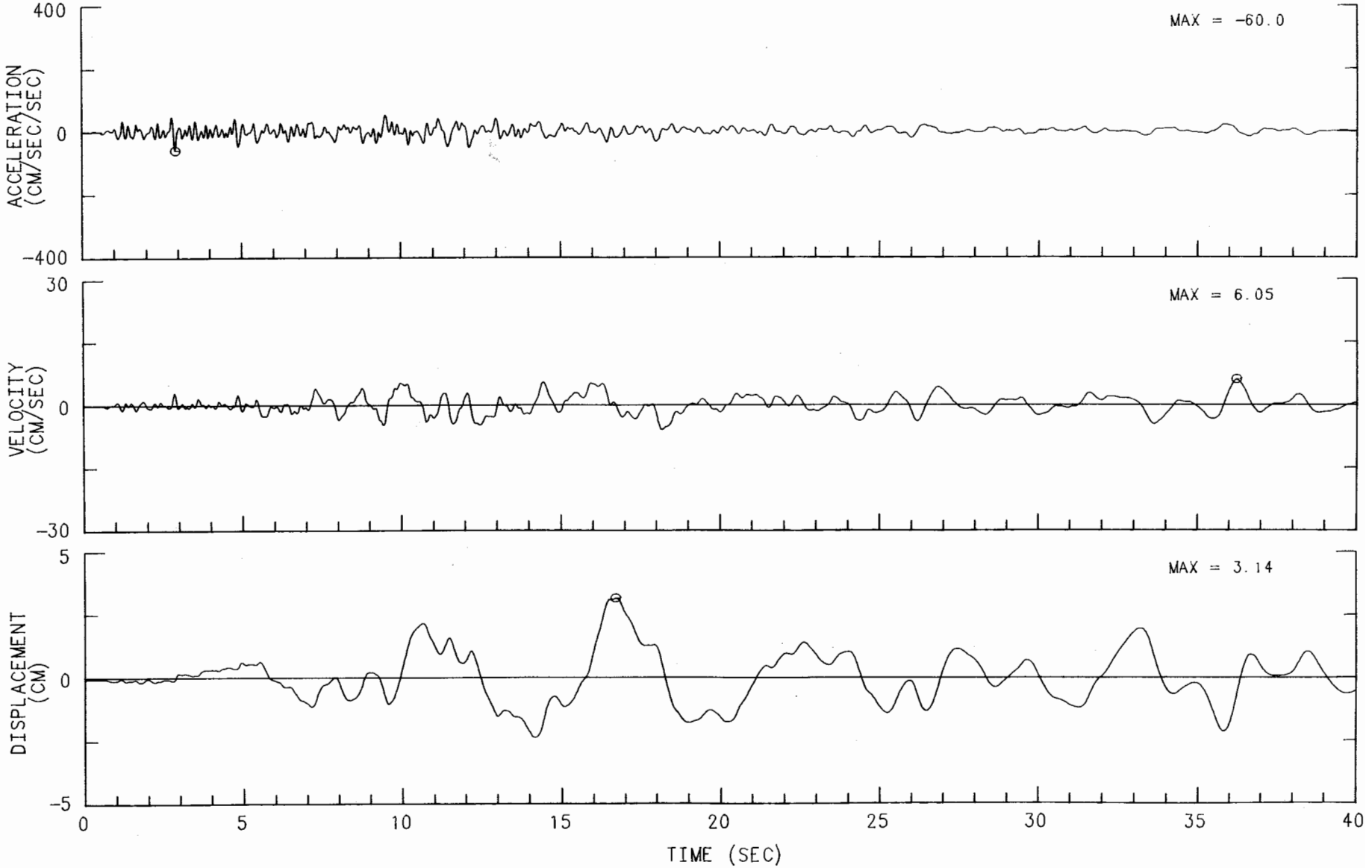
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 7: 90 DEG (GRND FLOOR, AT CENTER OF WEST WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



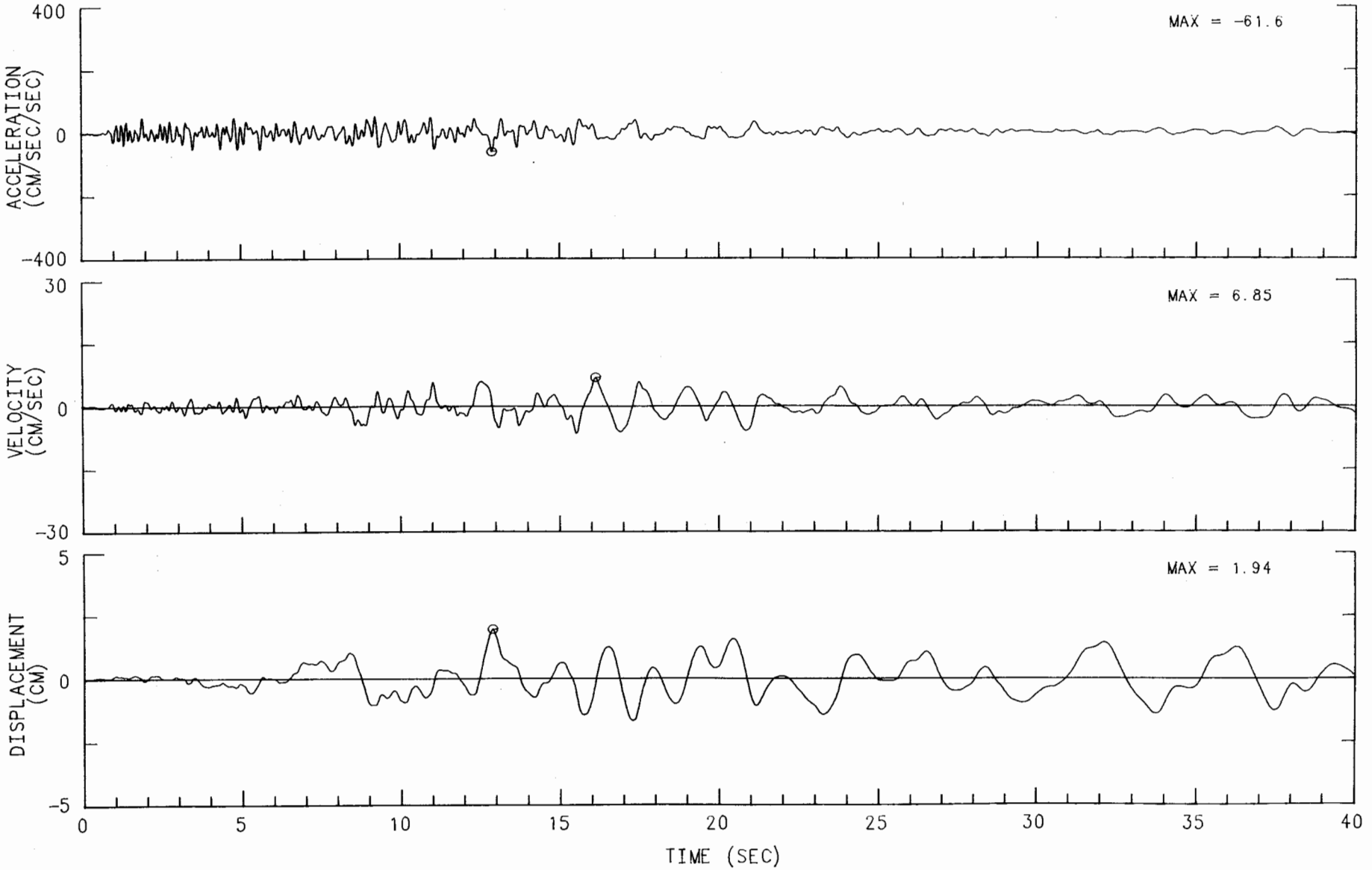
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 8: 90 DEG (GROUND FLOOR, AT NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



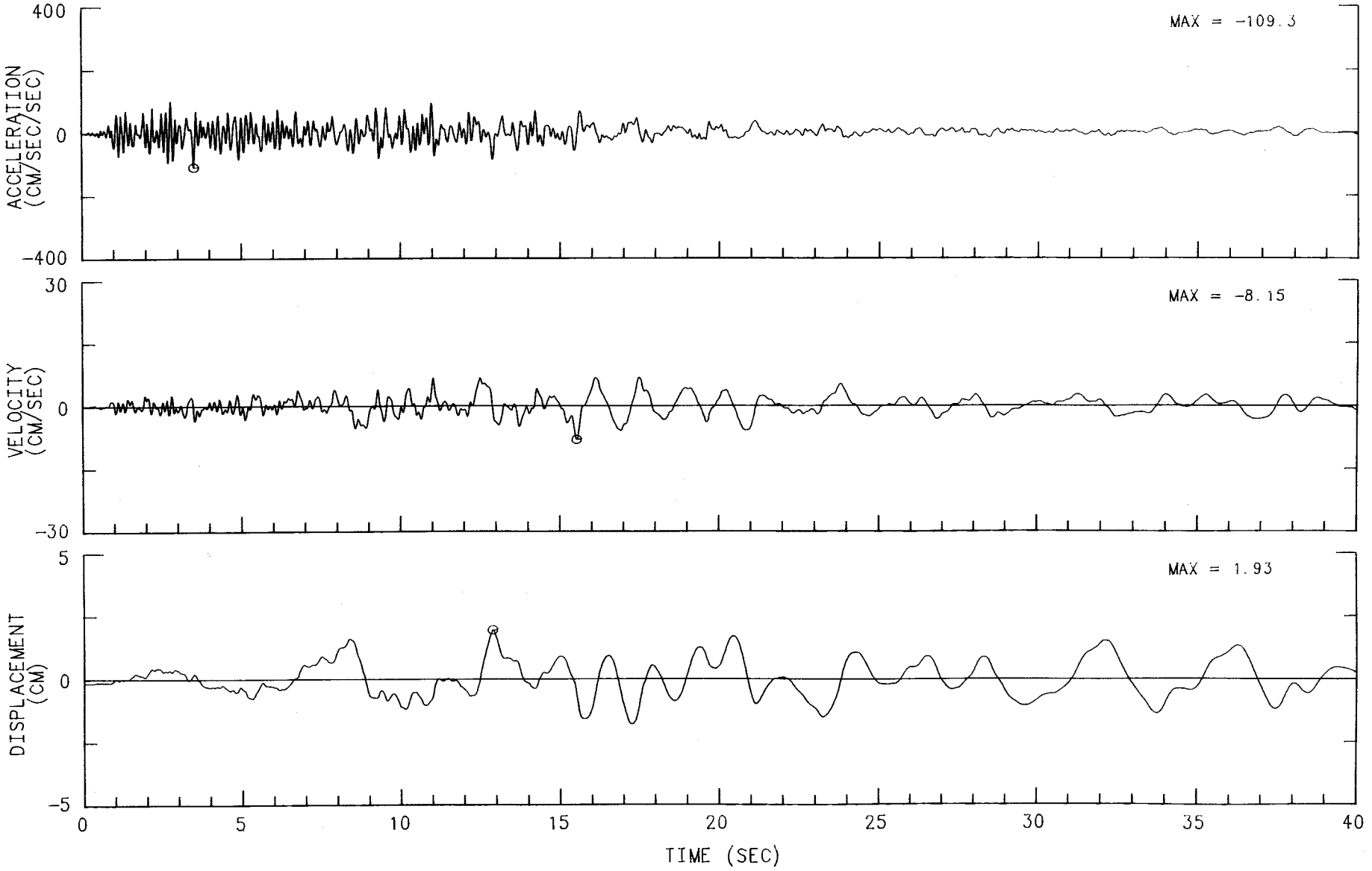
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 9: 90 DEG (GROUND FLOOR, AT SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



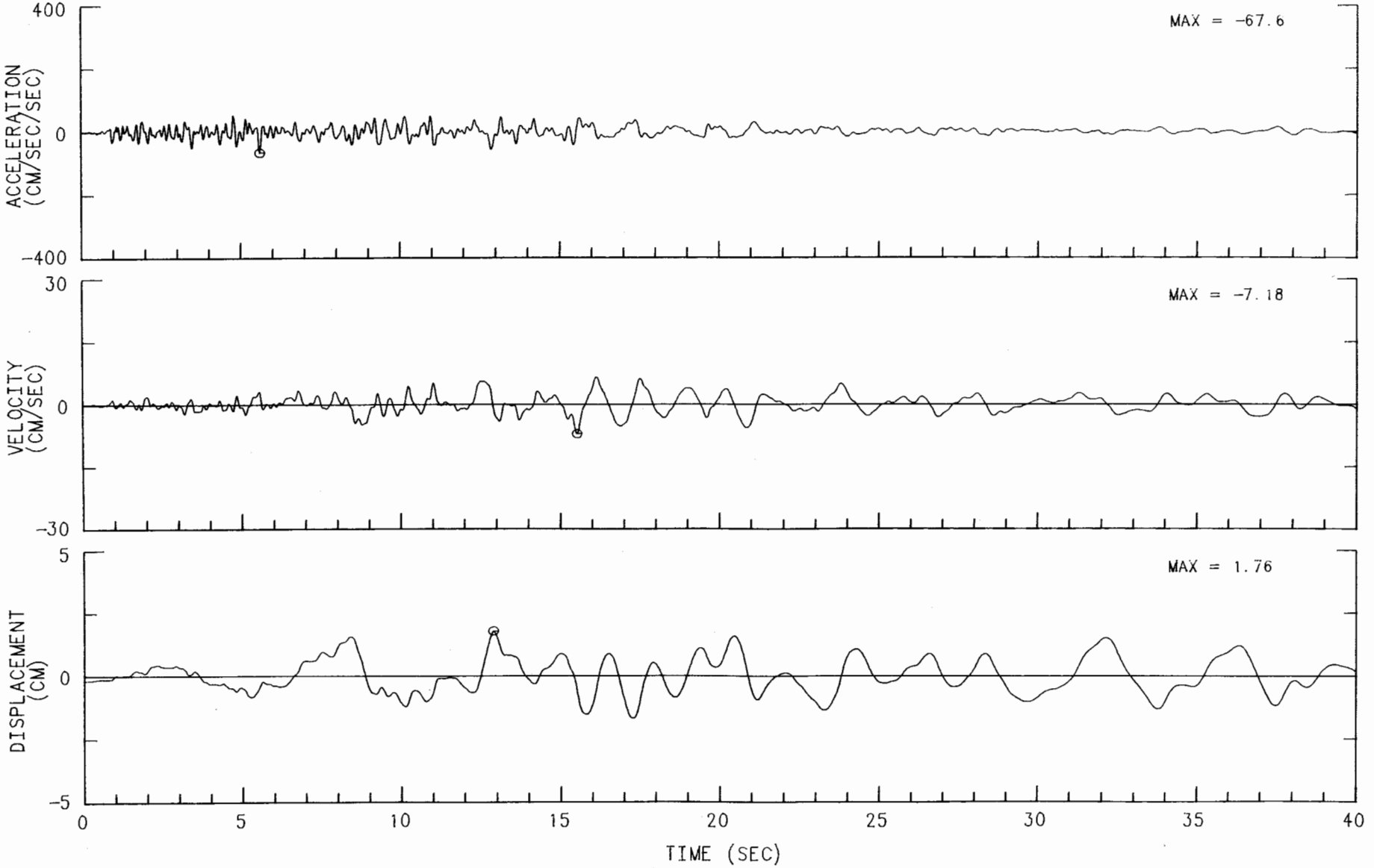
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 10: 0 DEG (ROOF, AT CENTER OF WEST WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



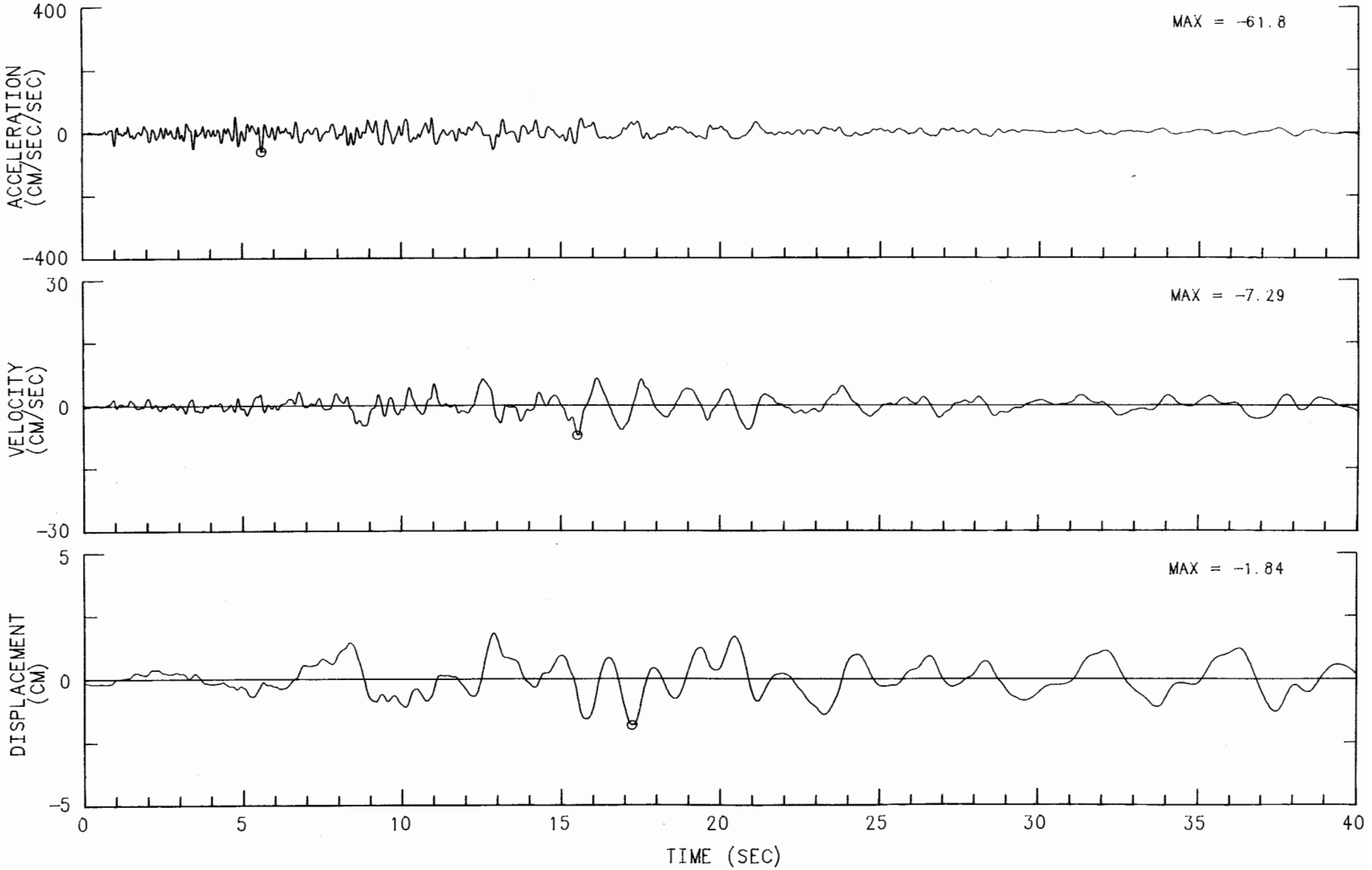
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 11: 0 DEG (ROOF, AT CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



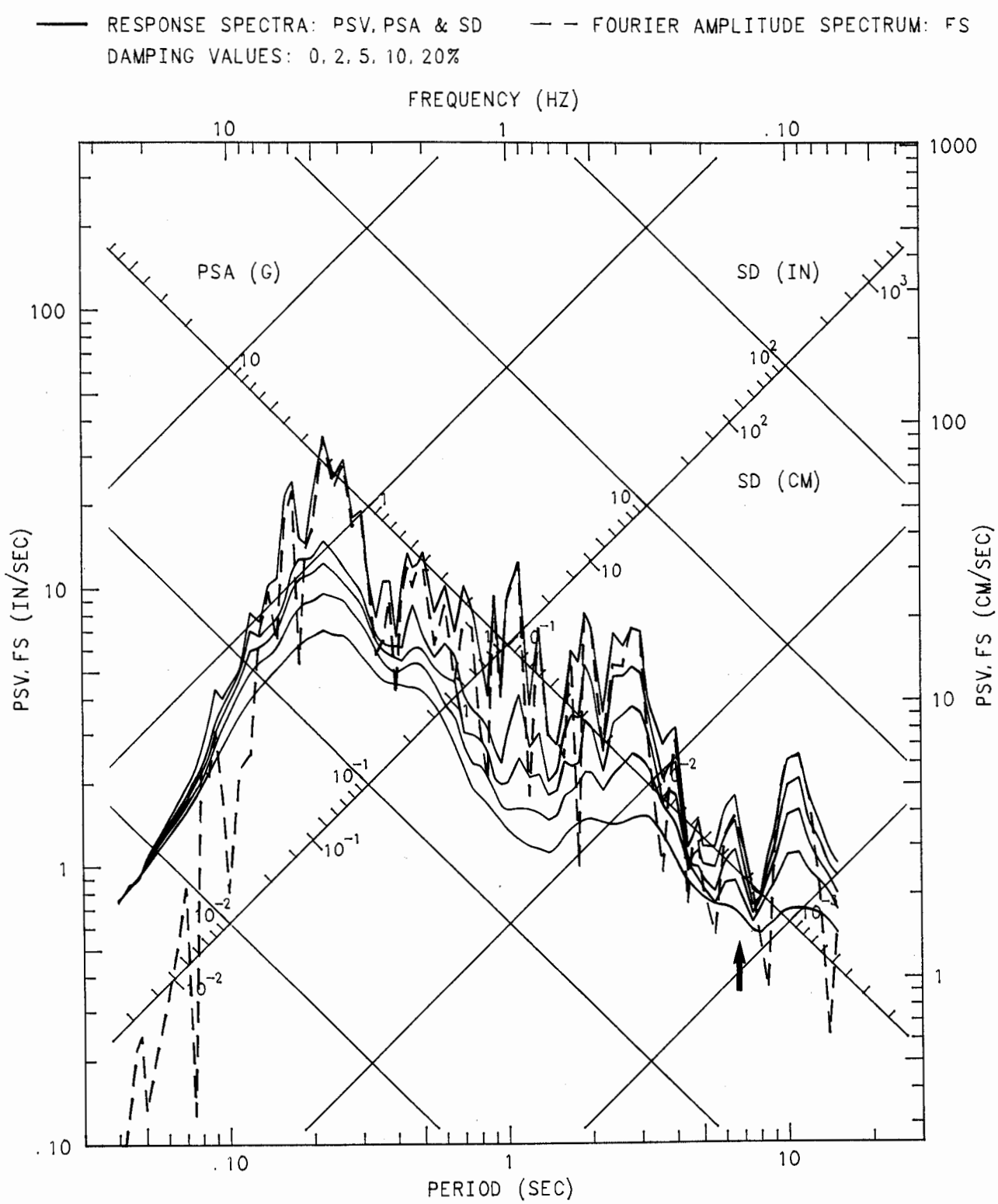
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 12: 0 DEG (ROOF, AT CENTER OF EAST WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



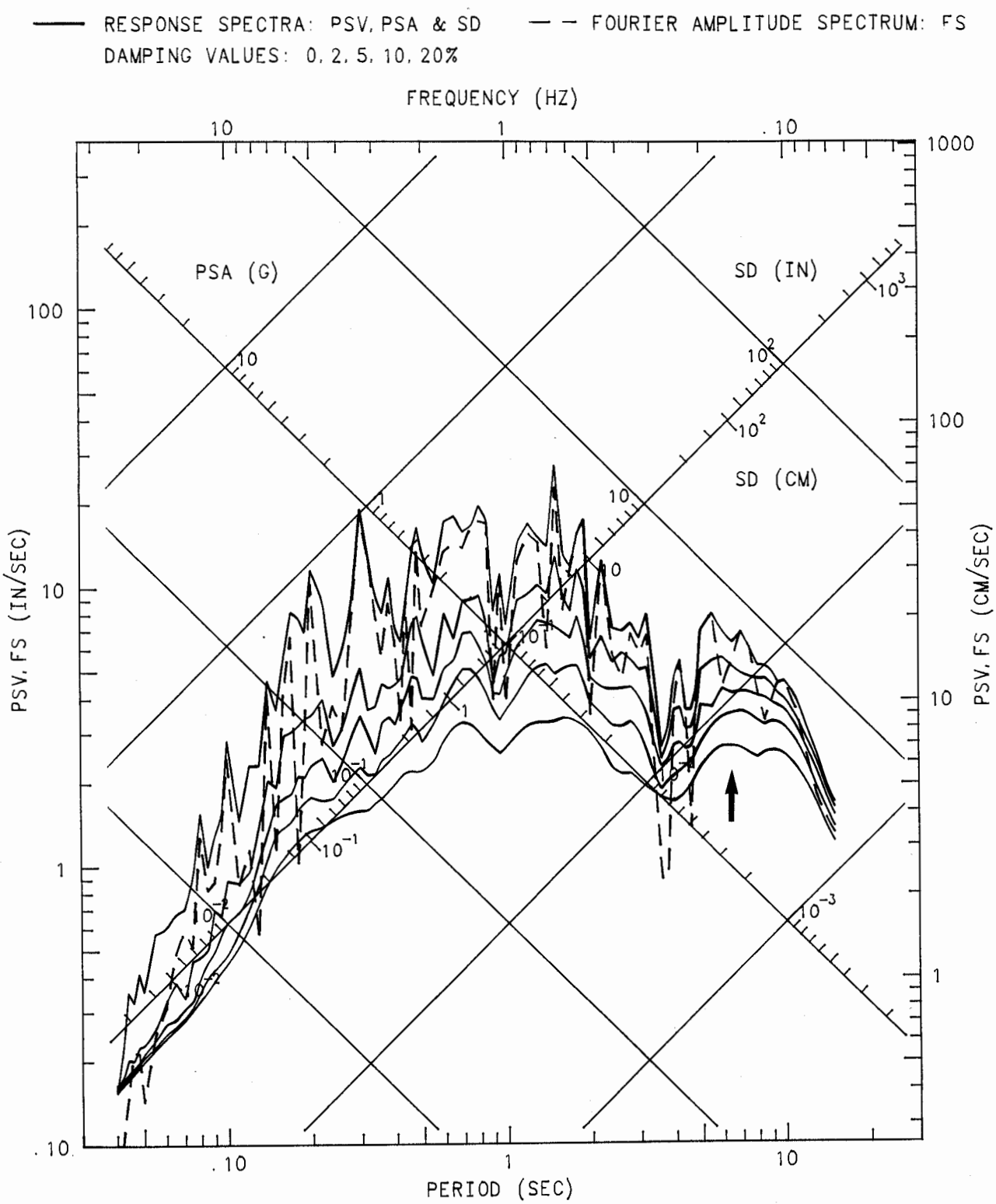
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE CHN 13: 0 DEG (GROUND FLOOR, AT NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 08-.16 TO 23.0-25.0 HZ. 47391-C0182-84118.02 032285.1103-QM84A391



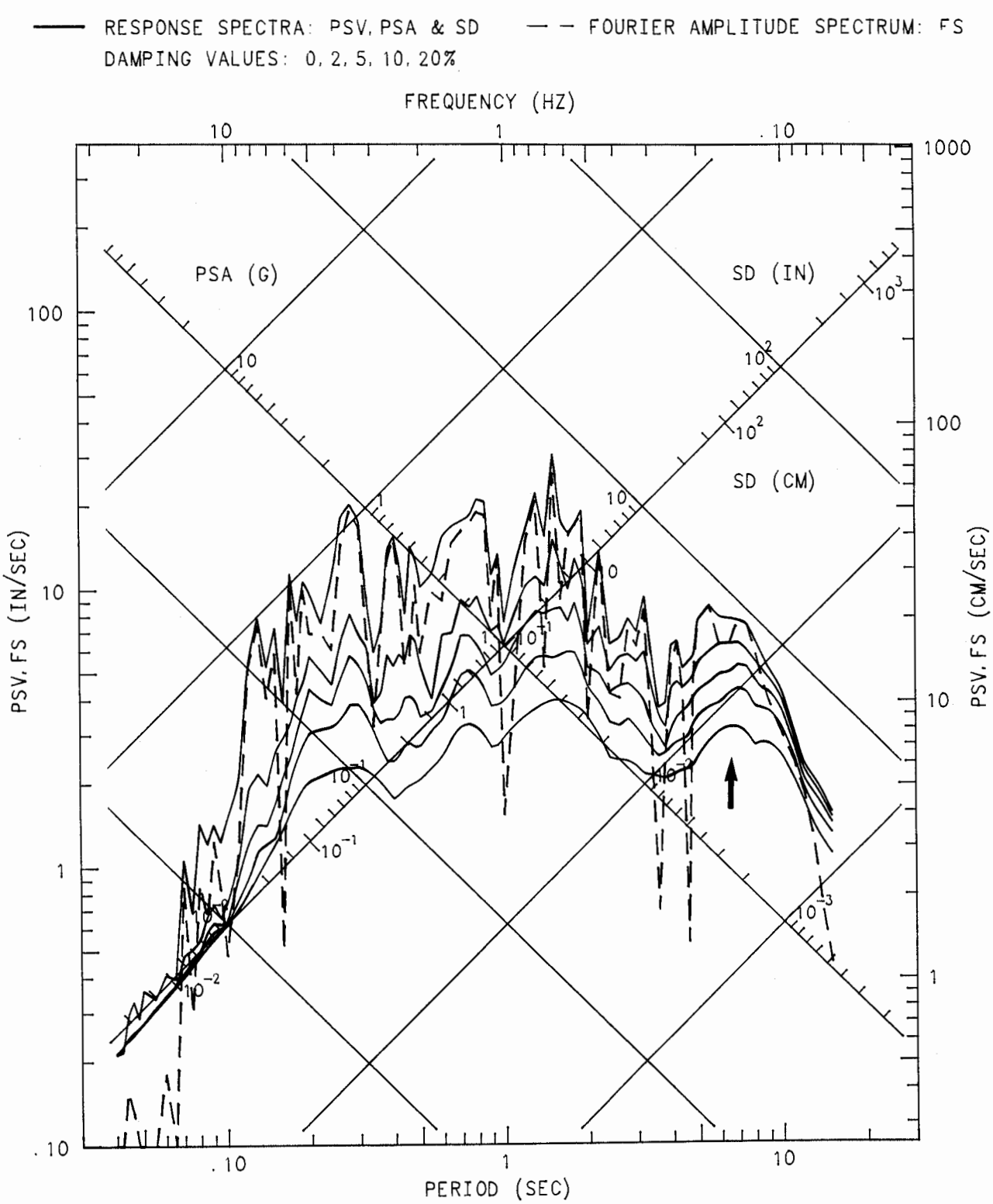
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 1: UP (GROUND FLOOR, AT NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



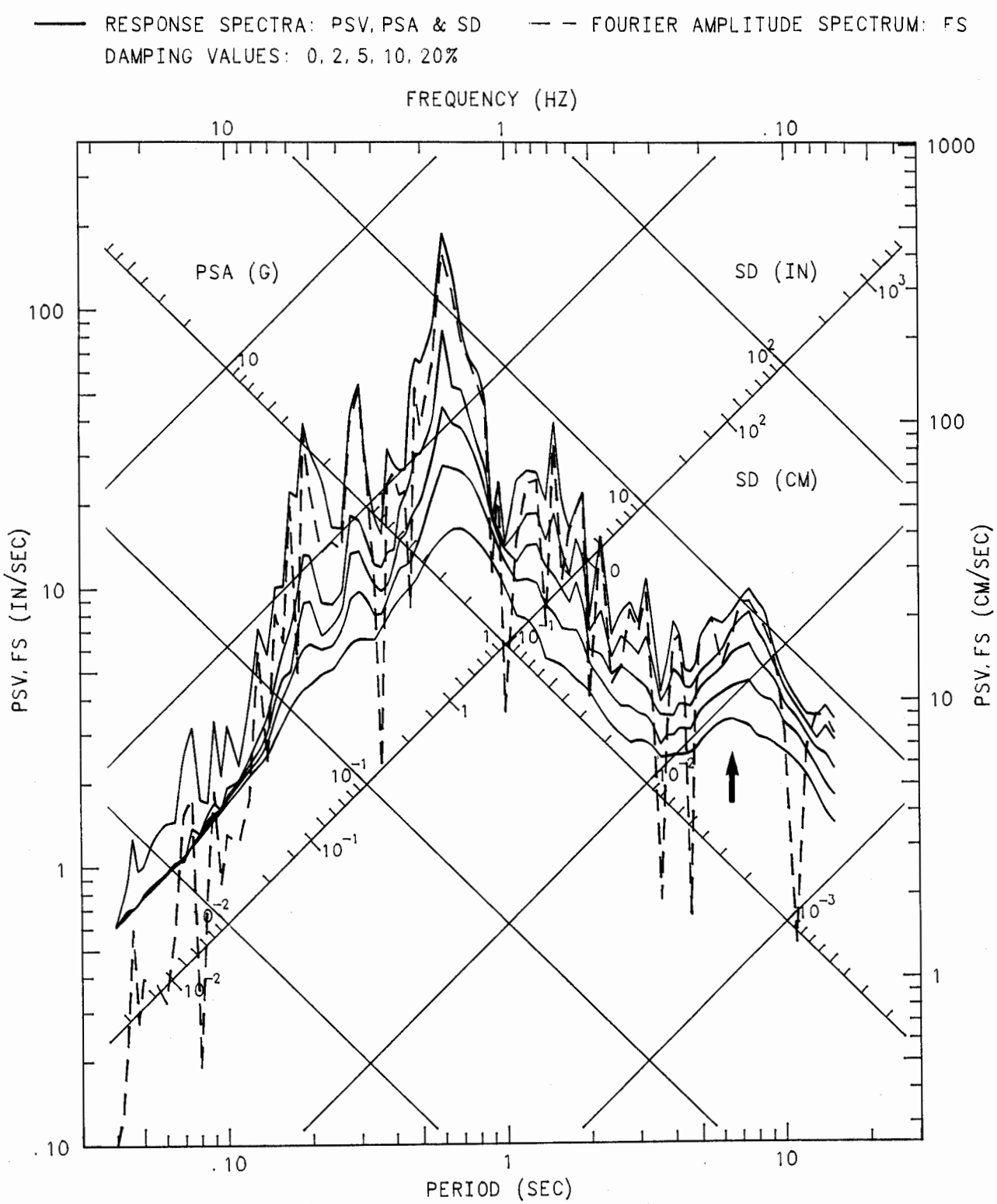
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 2: 90 DEG (ROOF, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



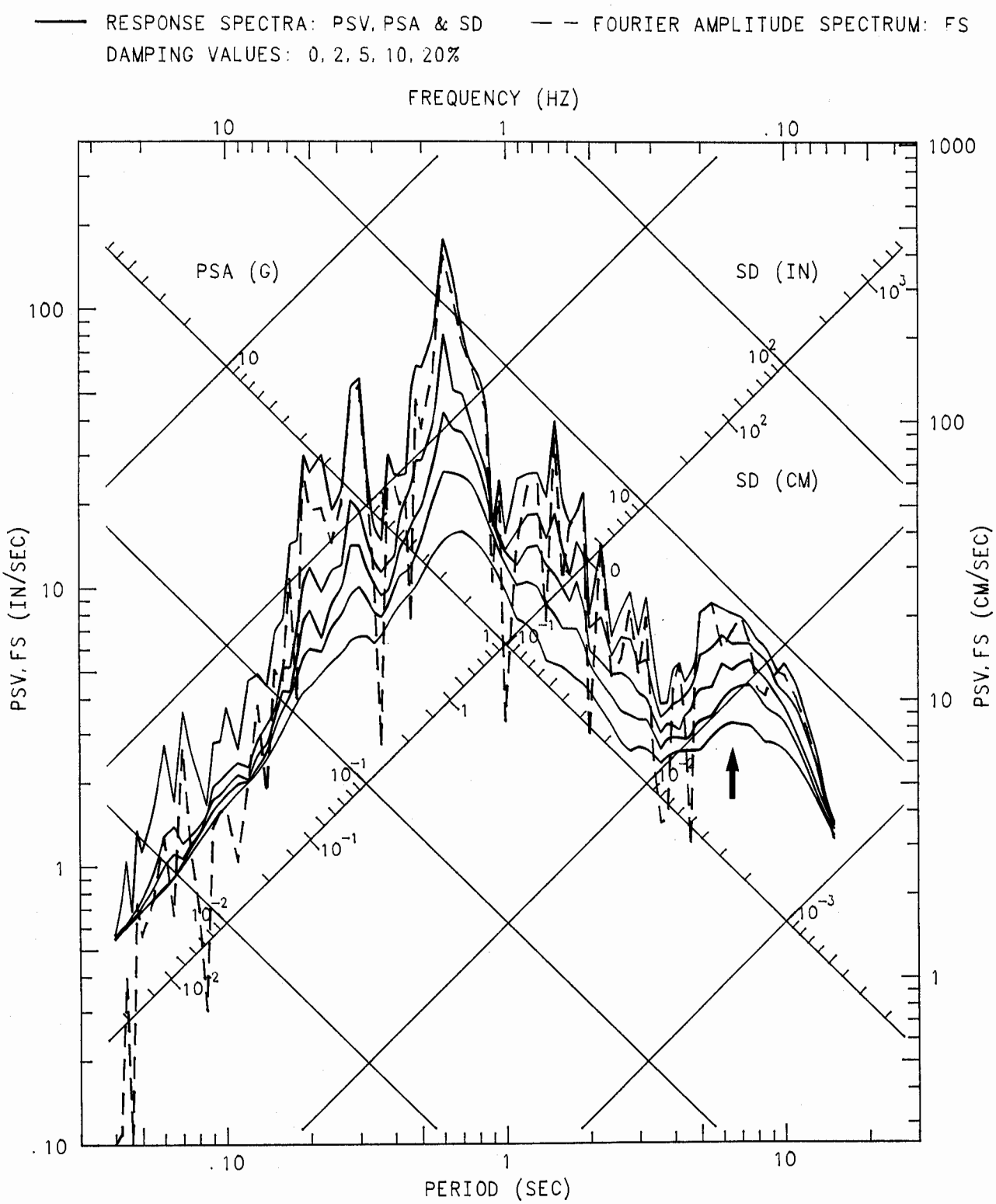
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 3: 90 DEG (ROOF, AT NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



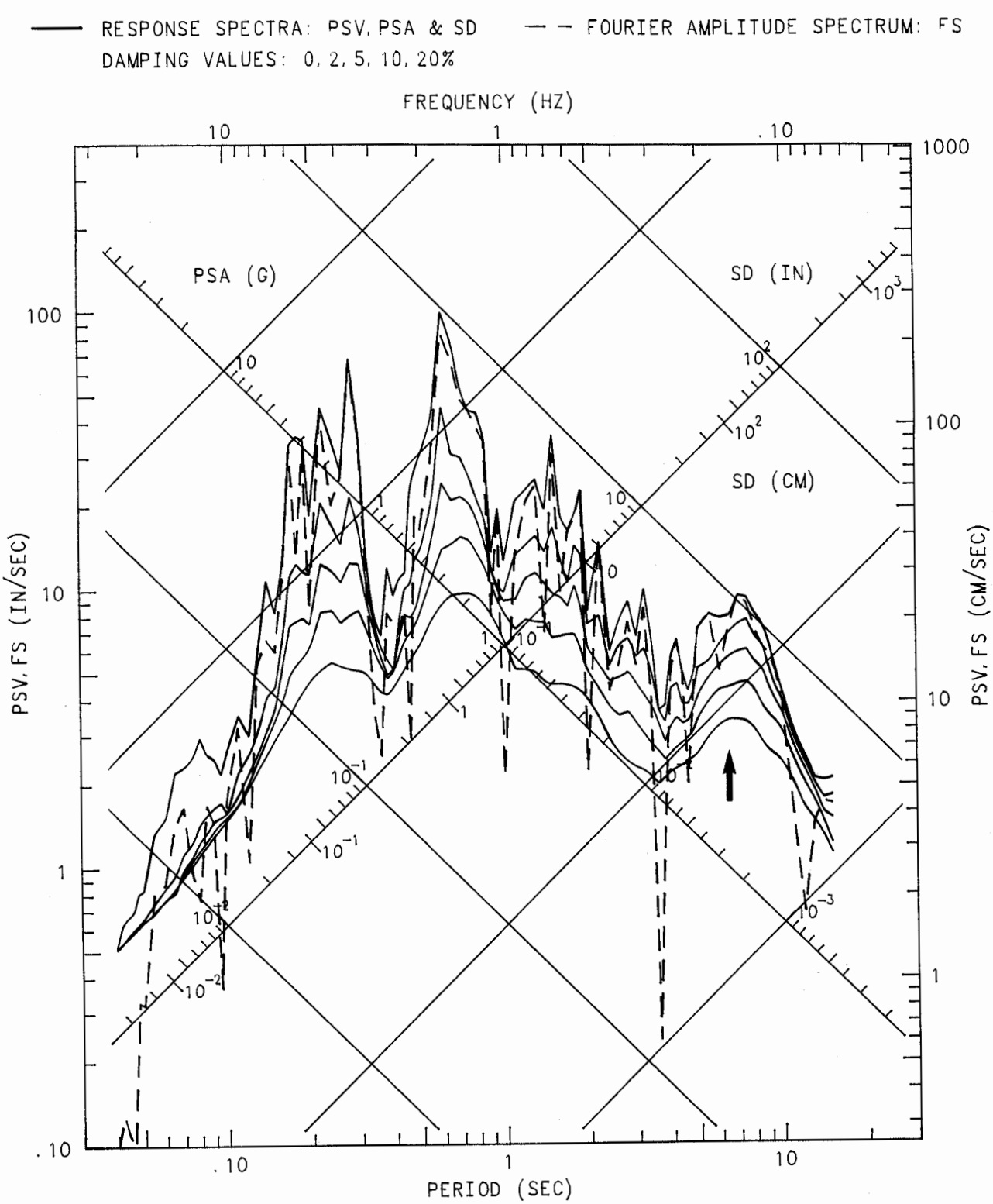
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 4: 90 DEG (ROOF, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



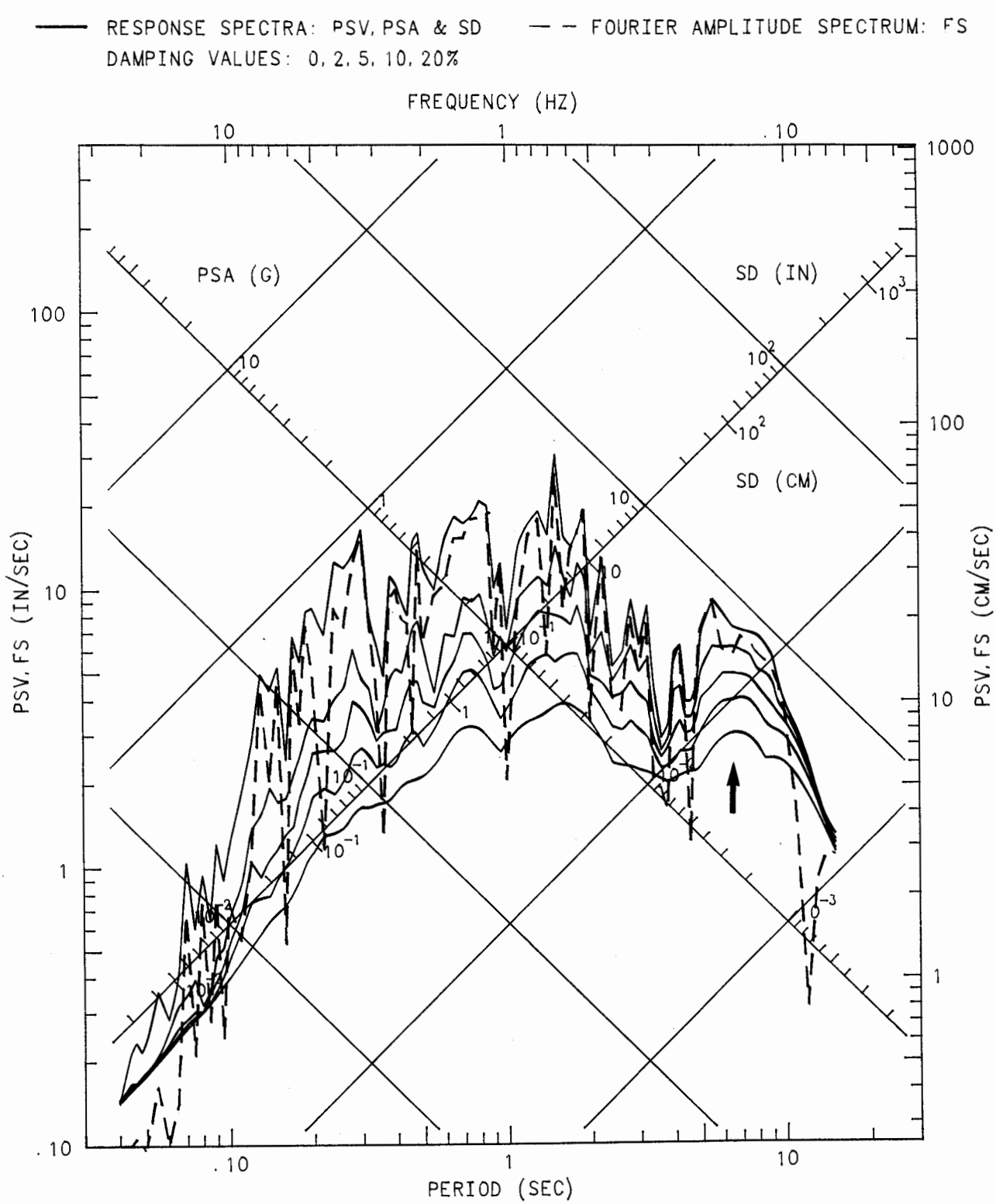
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 5: 90 DEG (ROOF, AT CENTER OF WEST WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



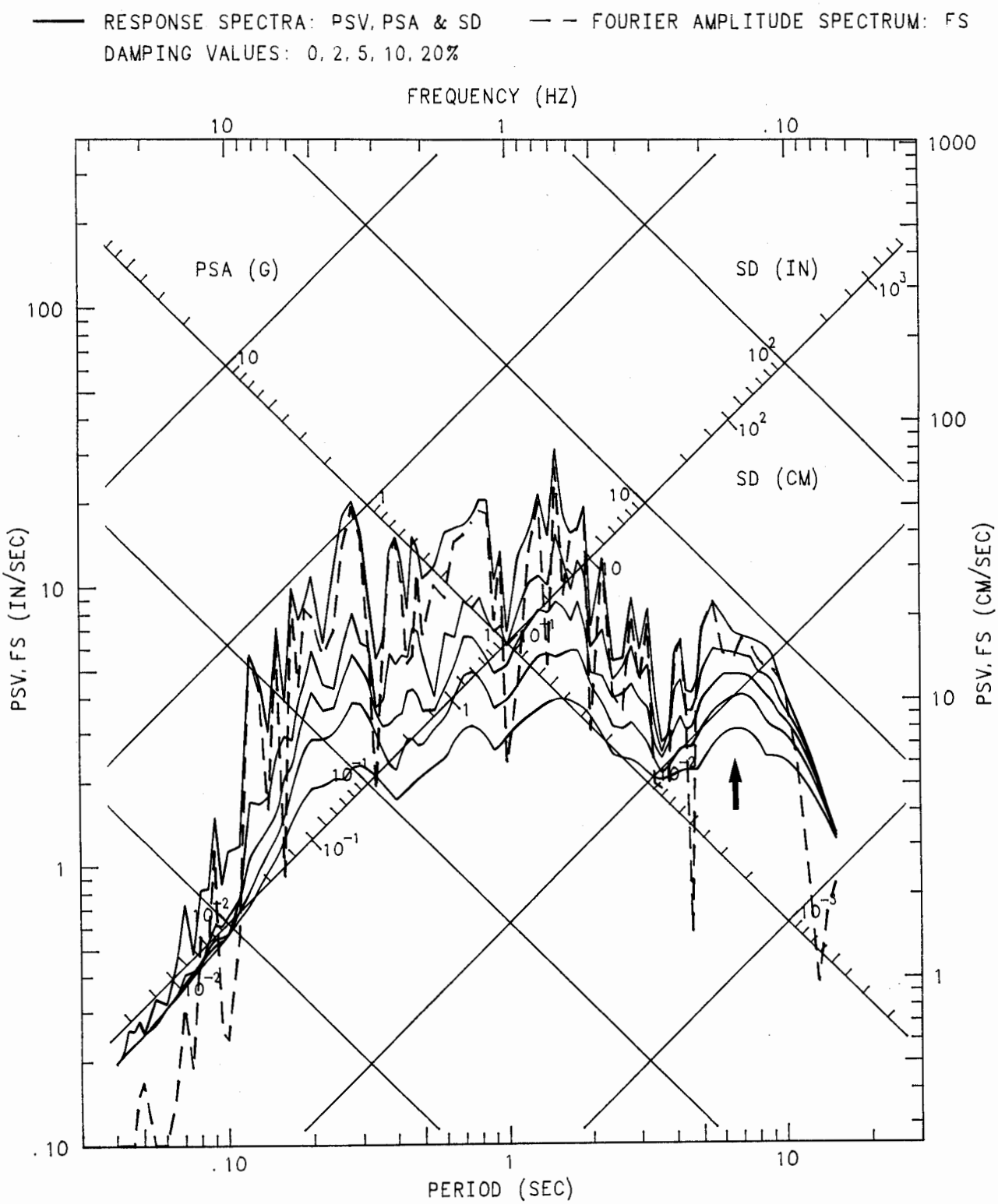
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 6: 90 DEG (MID-HEIGHT, AT CENTER OF WEST WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



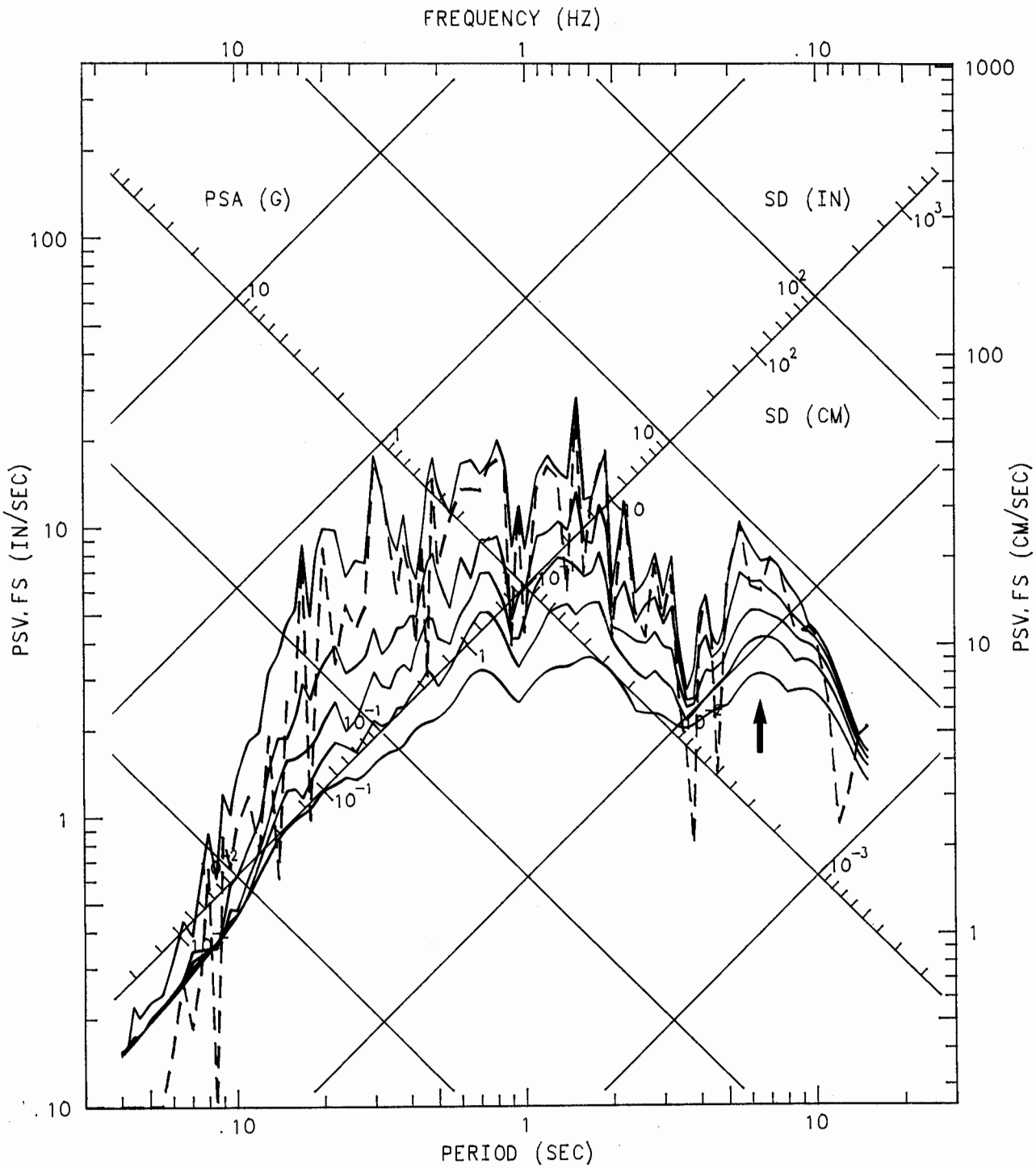
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 7: 90 DEG (GRND FLOOR, AT CENTER OF WEST WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



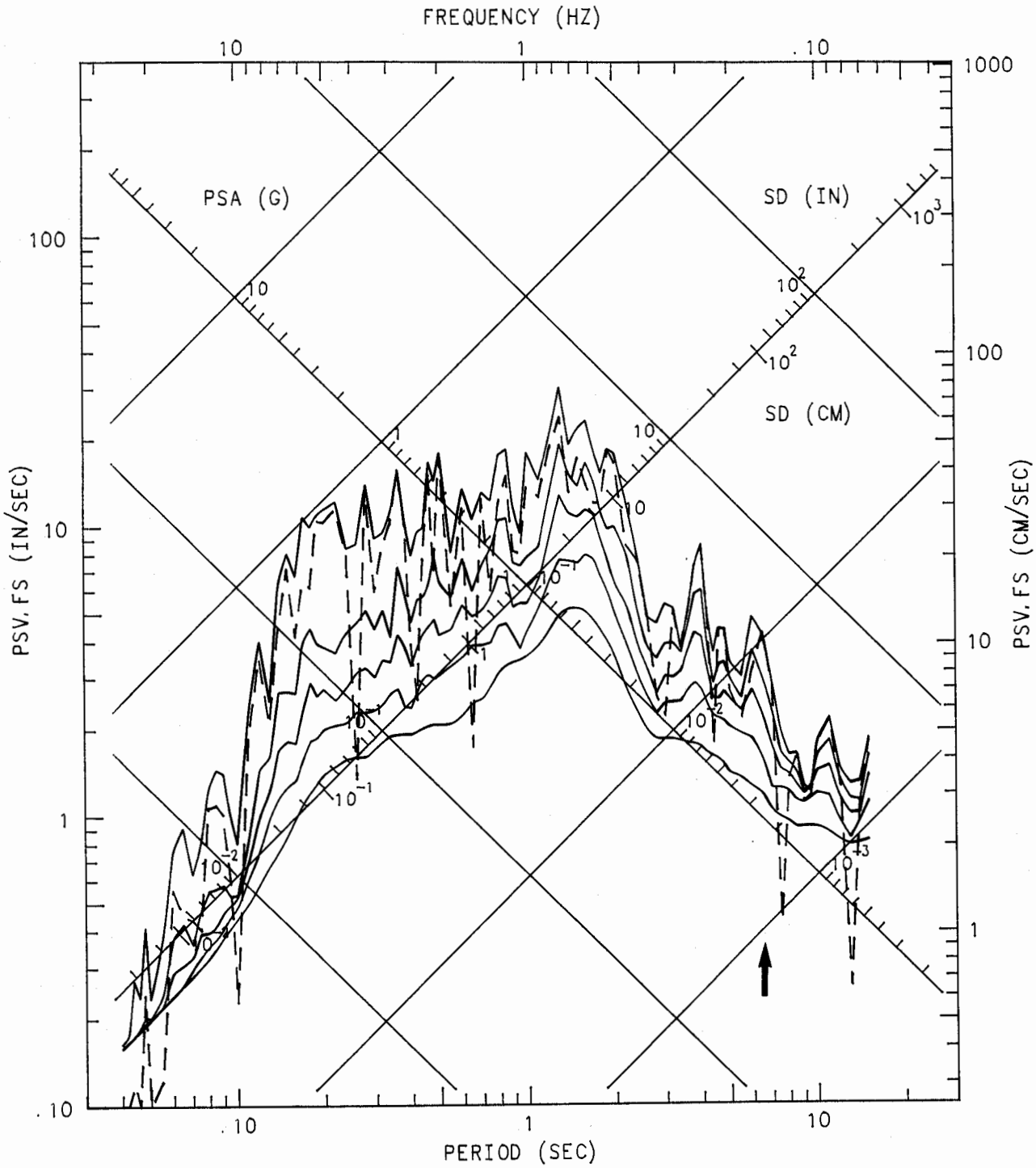
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 8: 90 DEG (GROUND FLOOR, AT NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



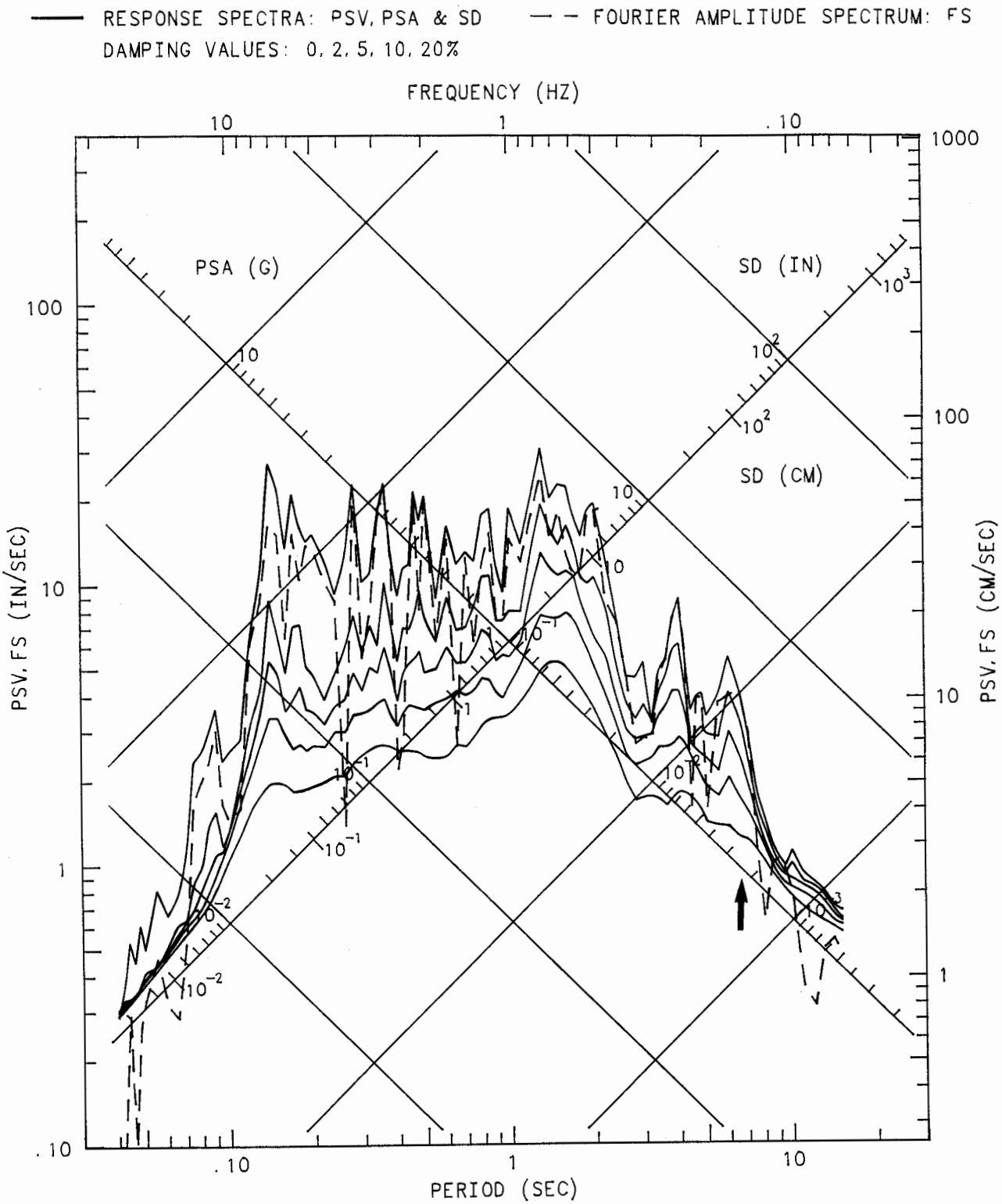
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 9: 90 DEG (GROUND FLOOR, AT SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



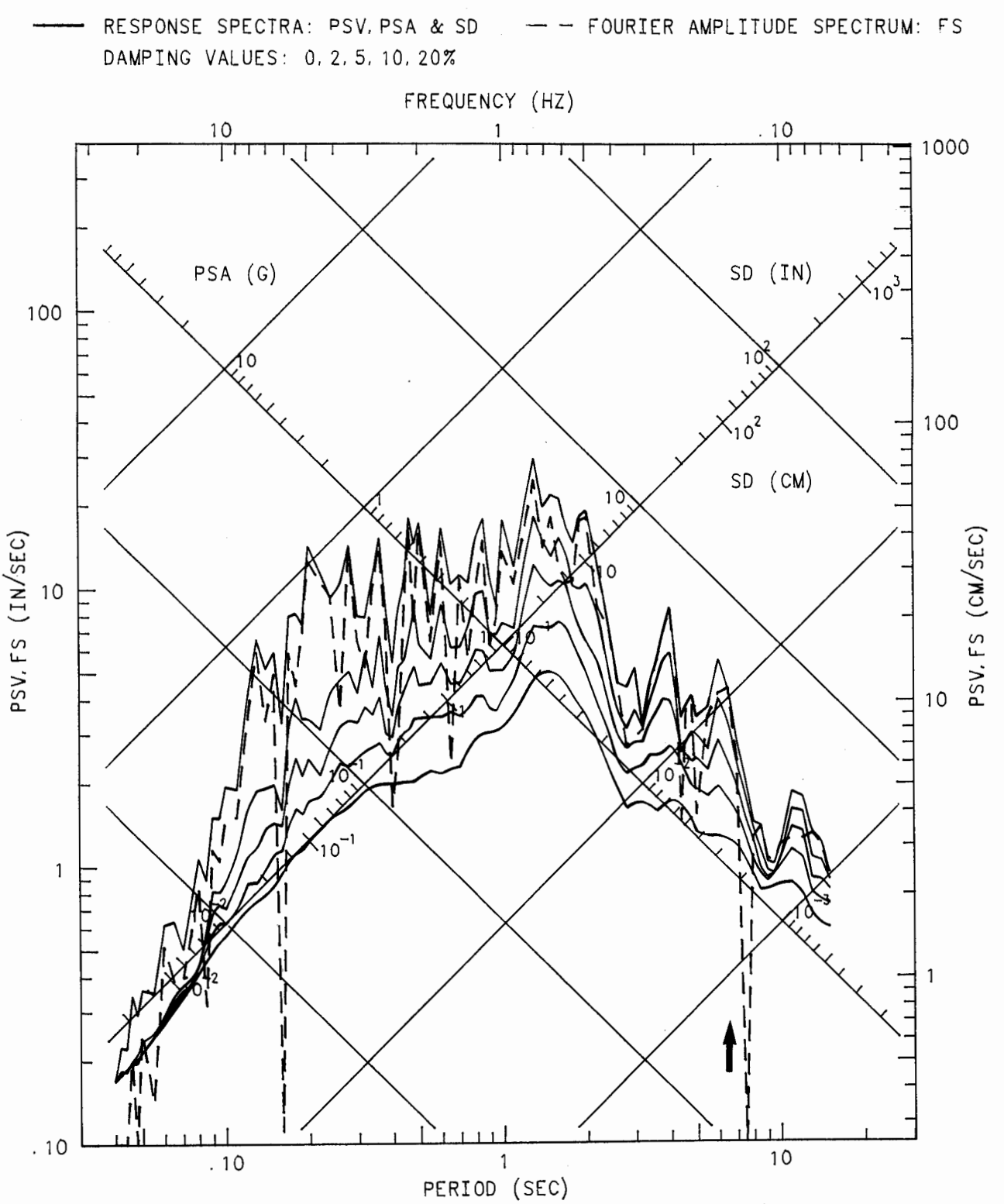
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 10: 0 DEG (ROOF, AT CENTER OF WEST WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



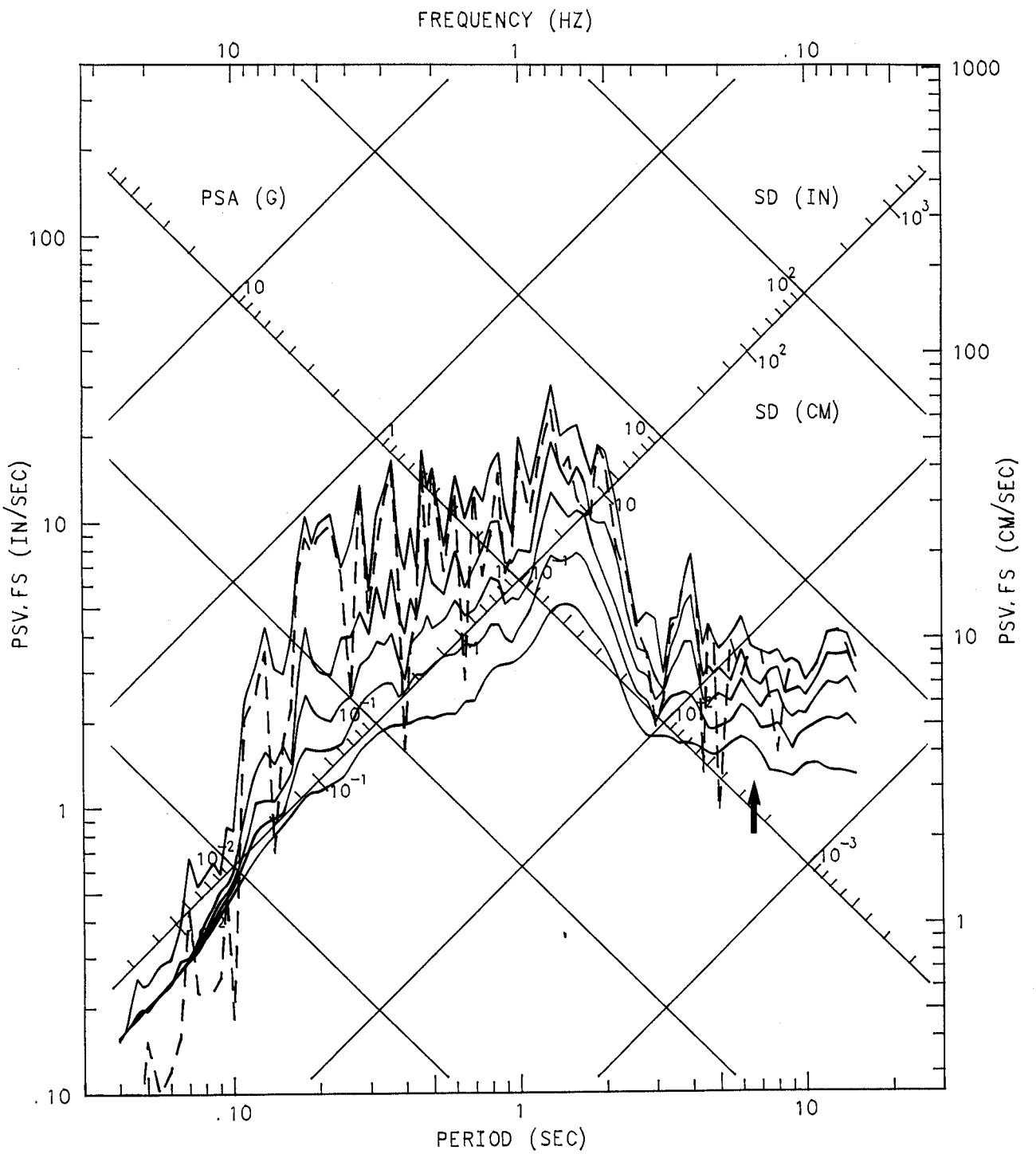
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 11: 0 DEG (ROOF, AT CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 12: 0 DEG (ROOF, AT CENTER OF EAST WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
HOLLISTER - GLORIETTA WAREHOUSE
CHN 13: 0 DEG (GROUND FLOOR, AT NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47391-C0182-84118.02 032185.2217-QM84A391

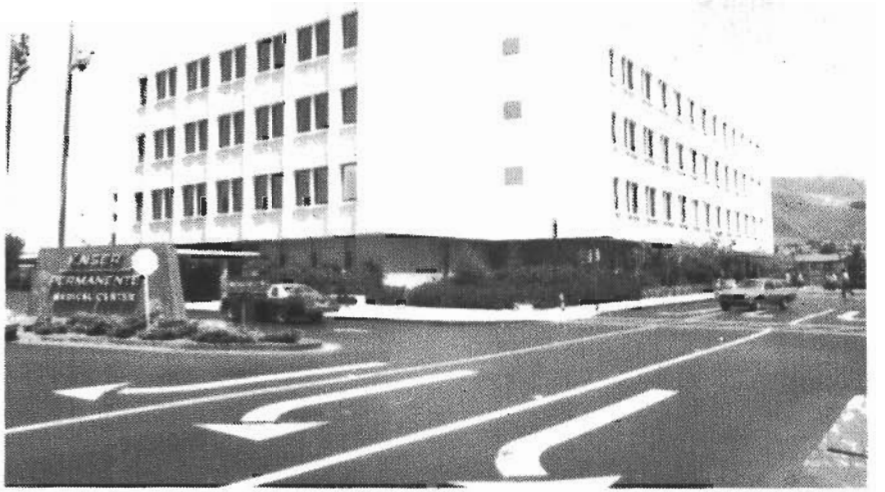


SOUTH SAN FRANCISCO - KAISER MEDICAL CENTER

Special Notes: None

South San Francisco - Kaiser Medical Center

Southwest Side View



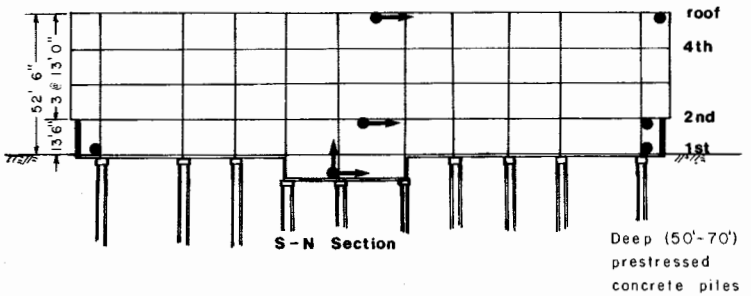
Southeast Side View

Address: 1200 El Camino Real
South San Francisco, California
Coordinates: 37.660° N, 122.439° W
No. of Stories above/below ground: 4 / 0
Plan Type: Rectangular with Corner Setbacks
Base Dimensions: 219' x 144'
Typical Floor Dimensions: 219' x 117'
Design Date: 1972
Construction Date: 1973-75

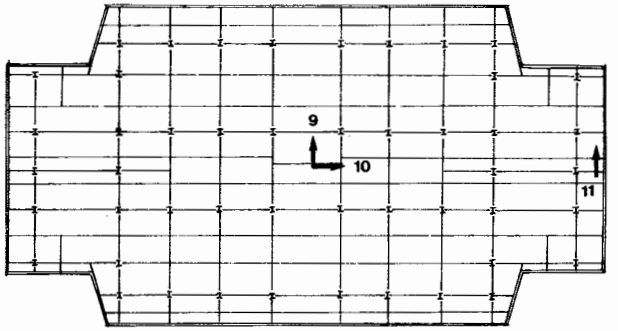
Vertical Load Carrying System:
3 1/2" light weight concrete fill metal decking; moment-resistant steel frame.
Lateral Force Resisting System:
Concrete shear walls at 1st floor; moment-resistant steel frame.
Foundation Type:
Pile foundations (50-70 feet deep piles); 8" rc slab on grade.

SENSOR LAYOUT

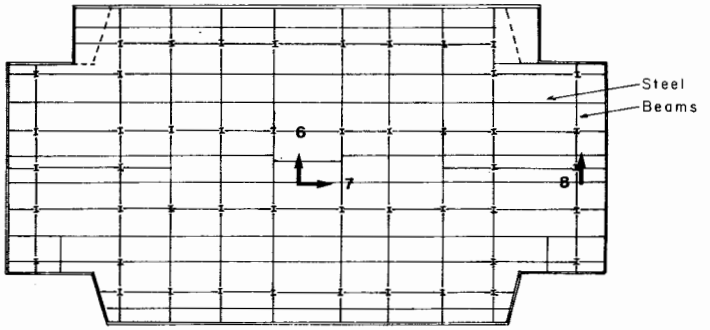
South San Francisco–Kaiser Medical Center
CSMIP Station No. 58261



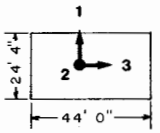
S-N Section



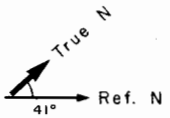
Roof Plan

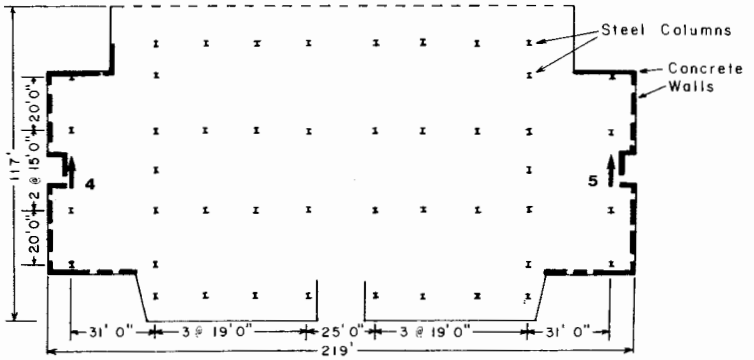


2nd Floor Plan



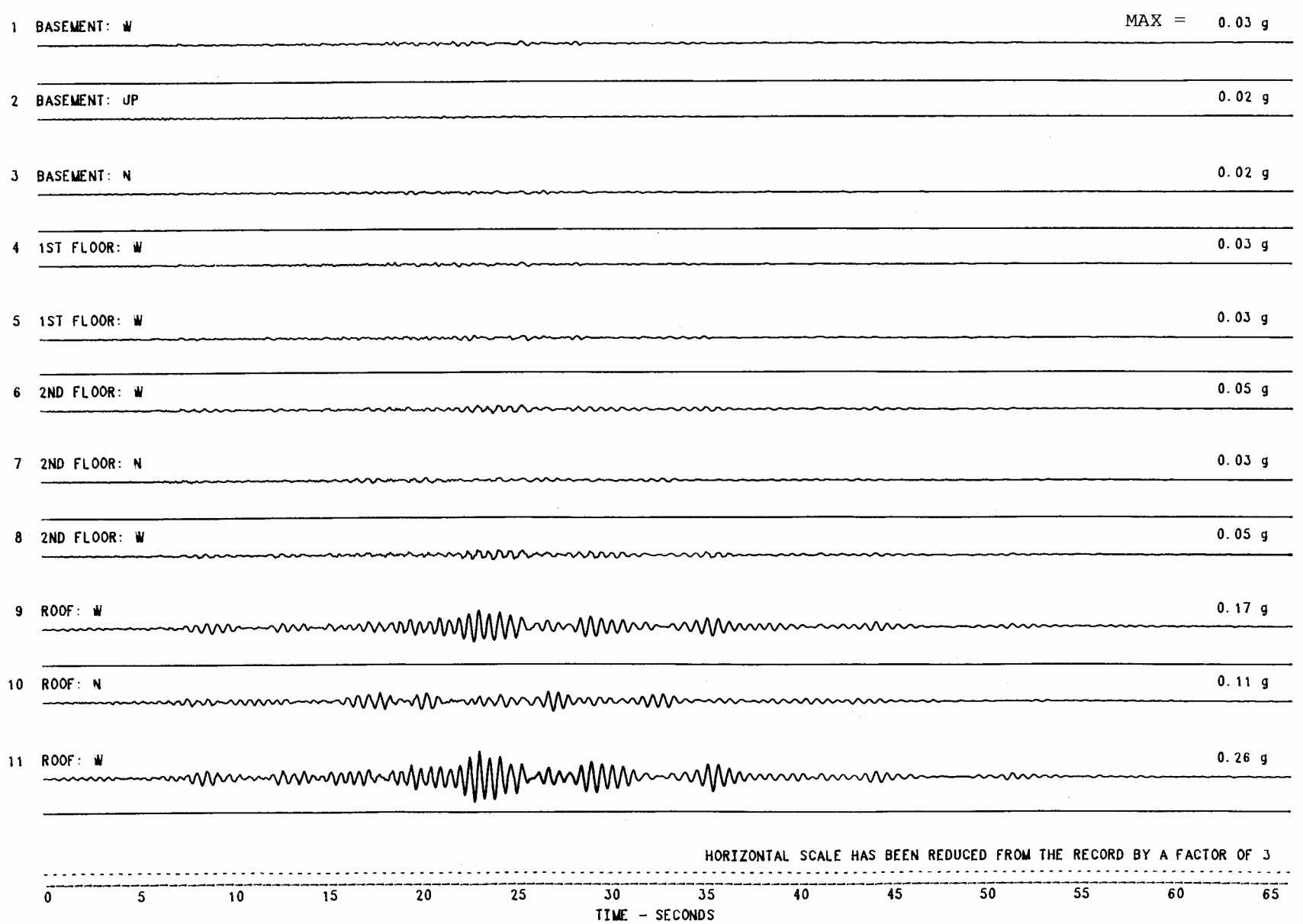
Basement Plan



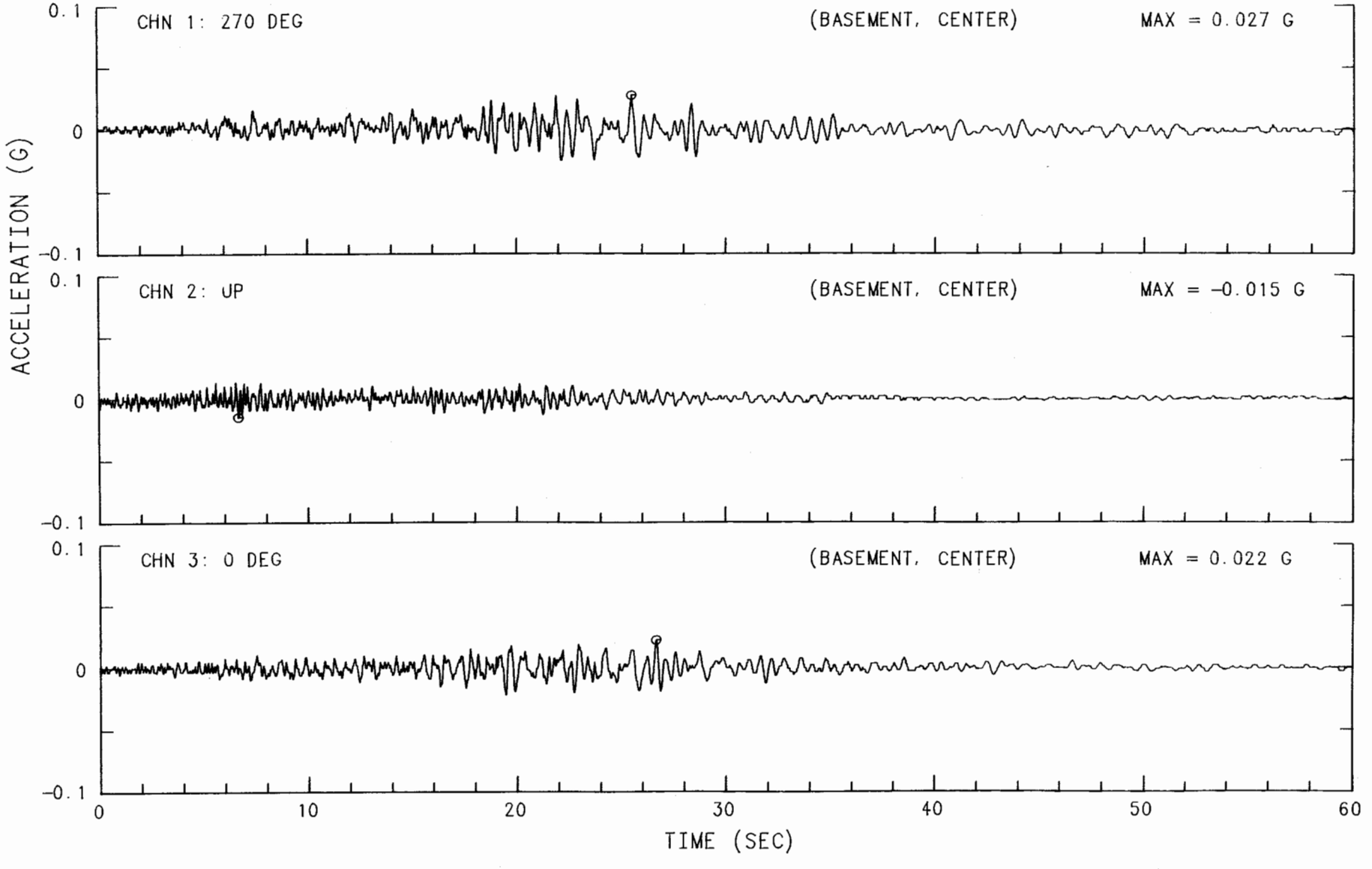


1st Floor Plan

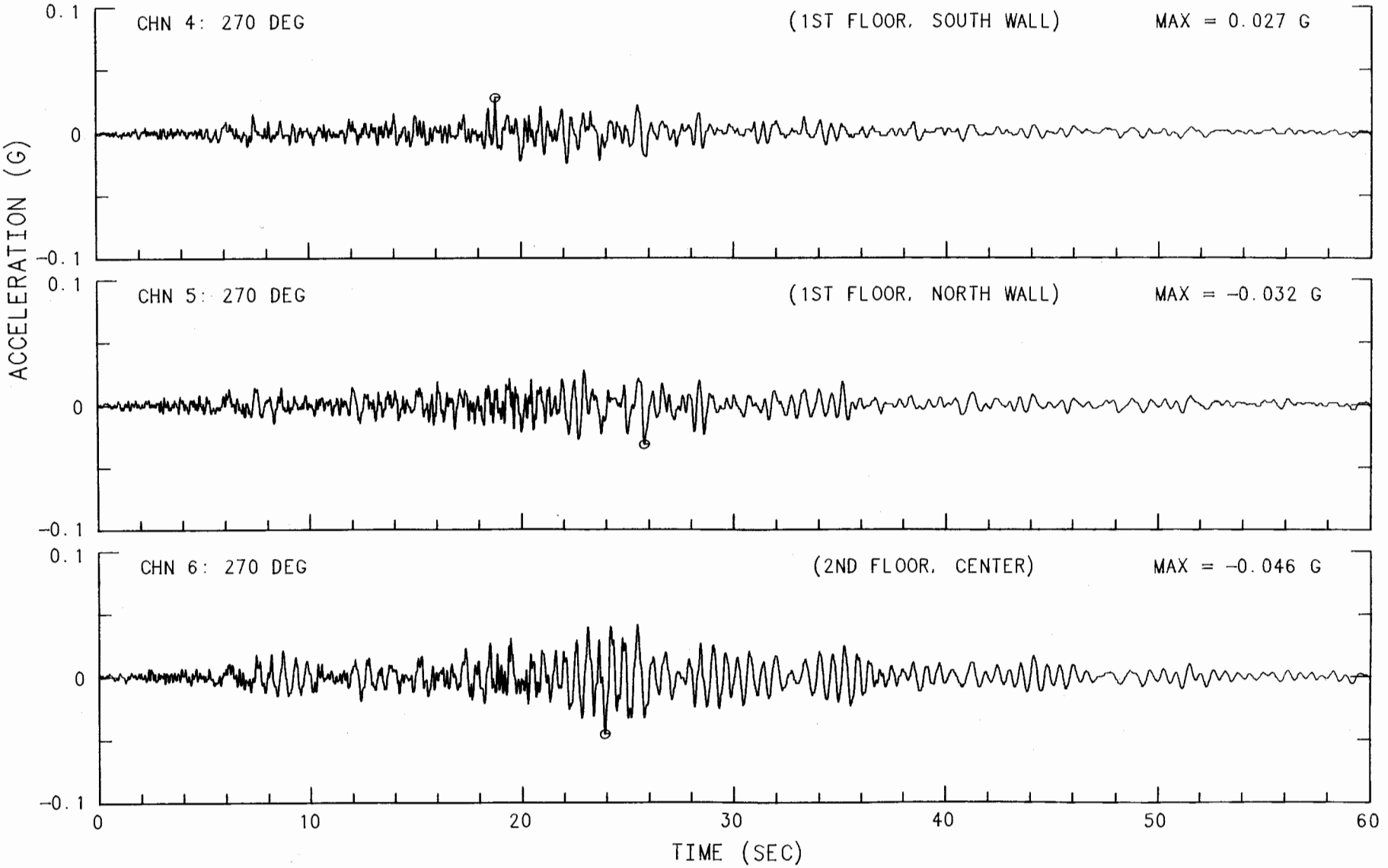
SO. SAN FRANCISCO - KAISER MED CENTER RECORD 58261-C0150-84123.10 MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST



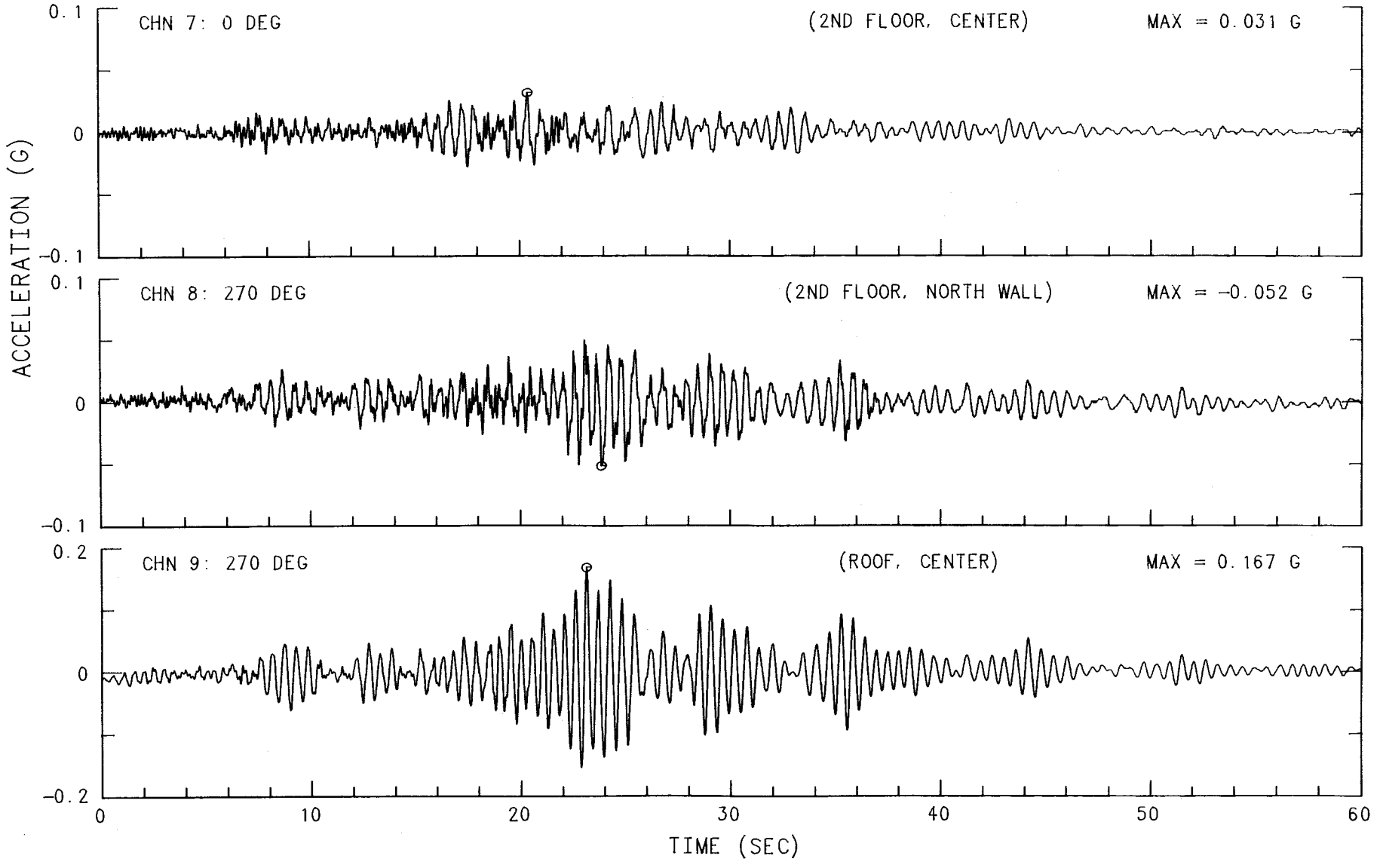
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
UNCORRECTED ACCELEROGRAM 58261-C0150-84123.10 051485.1128-QM84A261



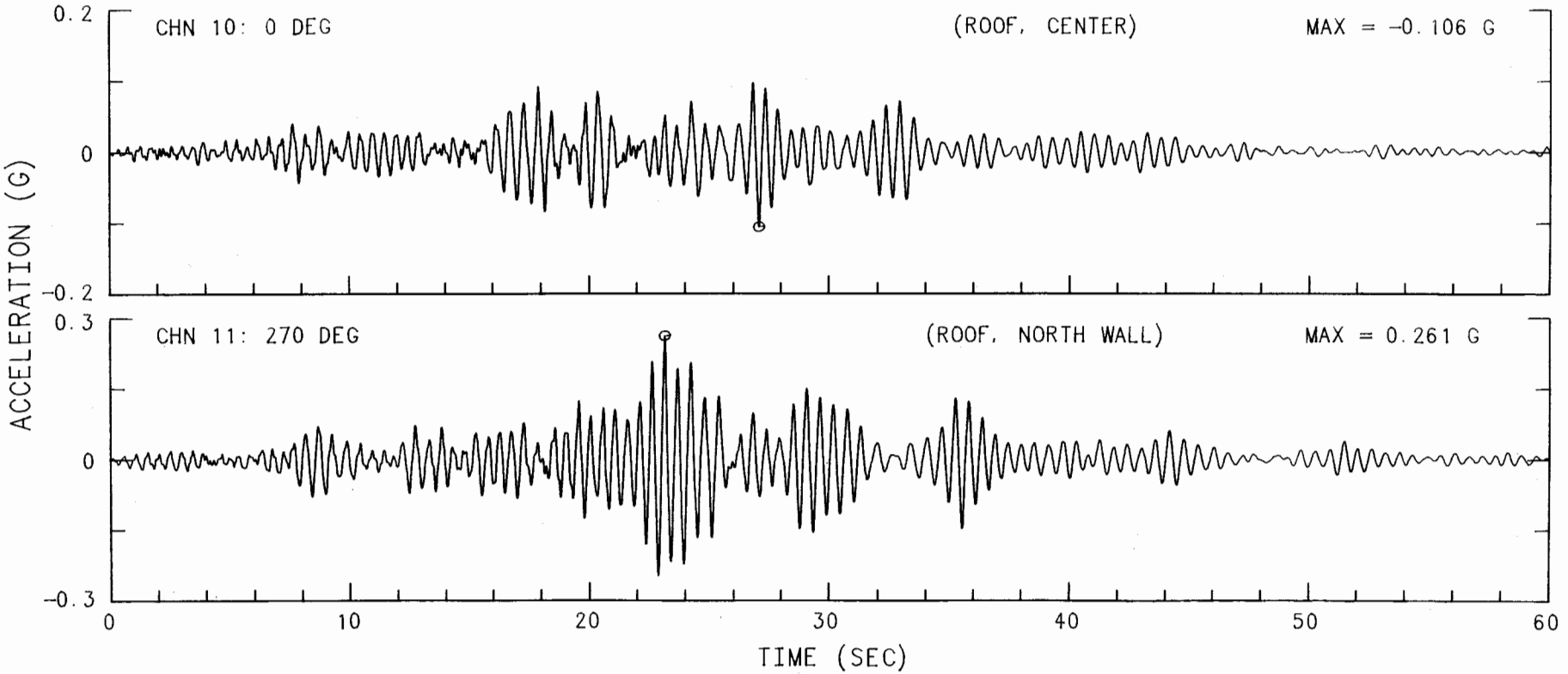
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
UNCORRECTED ACCELEROGRAM 58261-C0150-84123.10 051485.1128-QM84A261



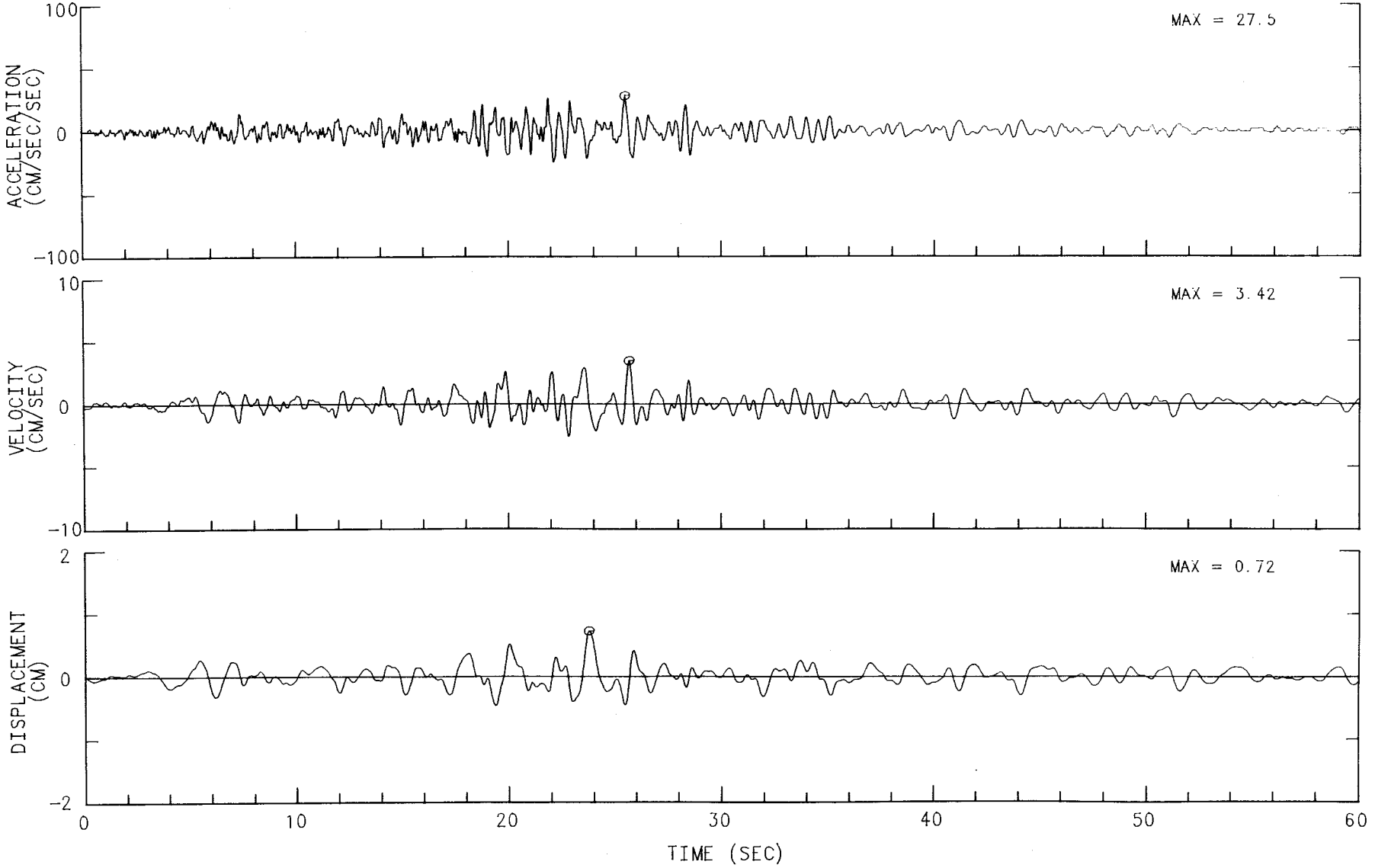
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
UNCORRECTED ACCELEROGRAM 58261-C0150-84123.10 051485.1128-QM84A261



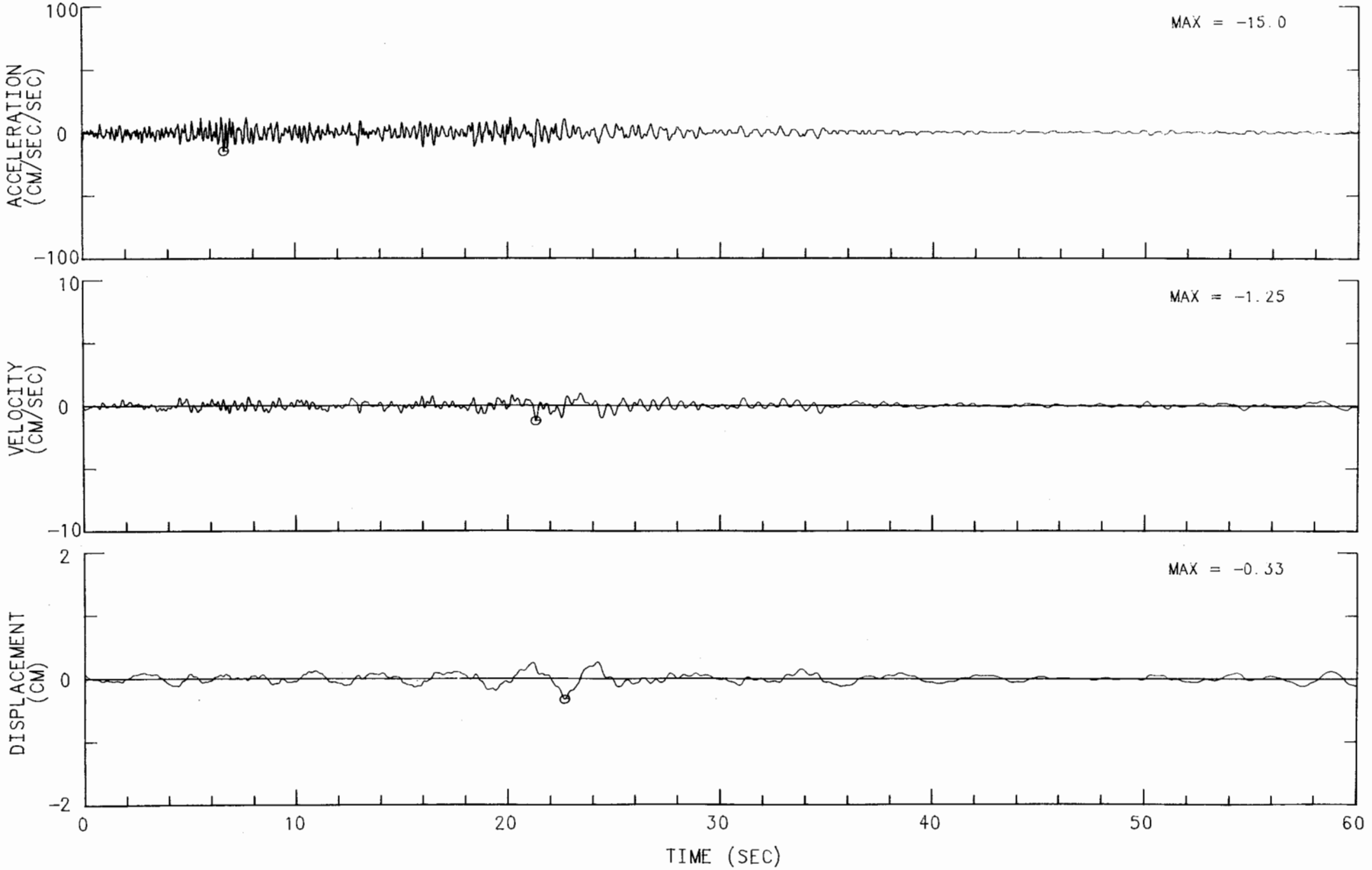
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
UNCORRECTED ACCELEROGRAM 58261-C0150-84123.10 051485.1128-QM84A261



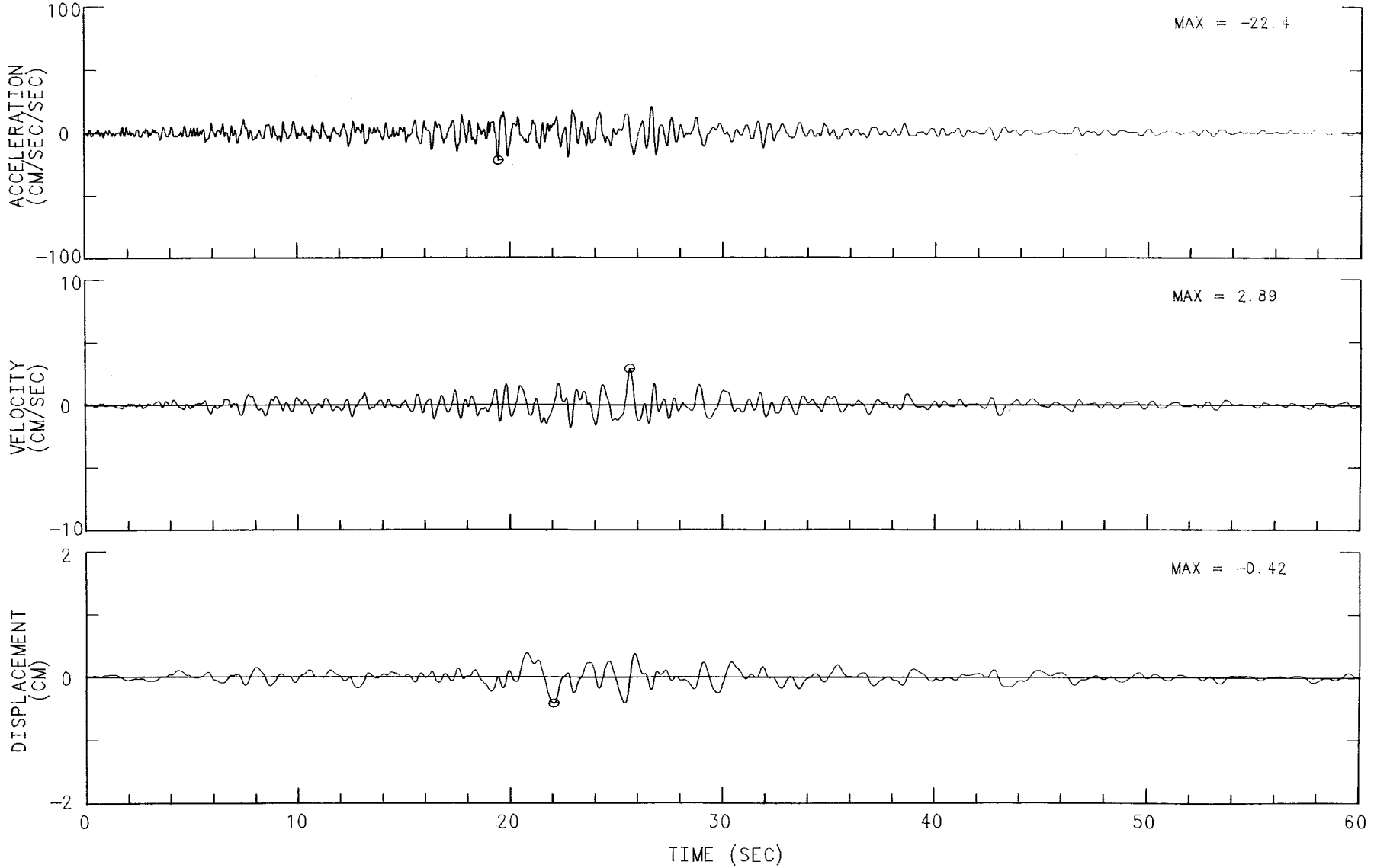
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER CHN 1: 270 DEG (BASEMENT, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58261-C0150-84123.10 051585.1630-QM84A261



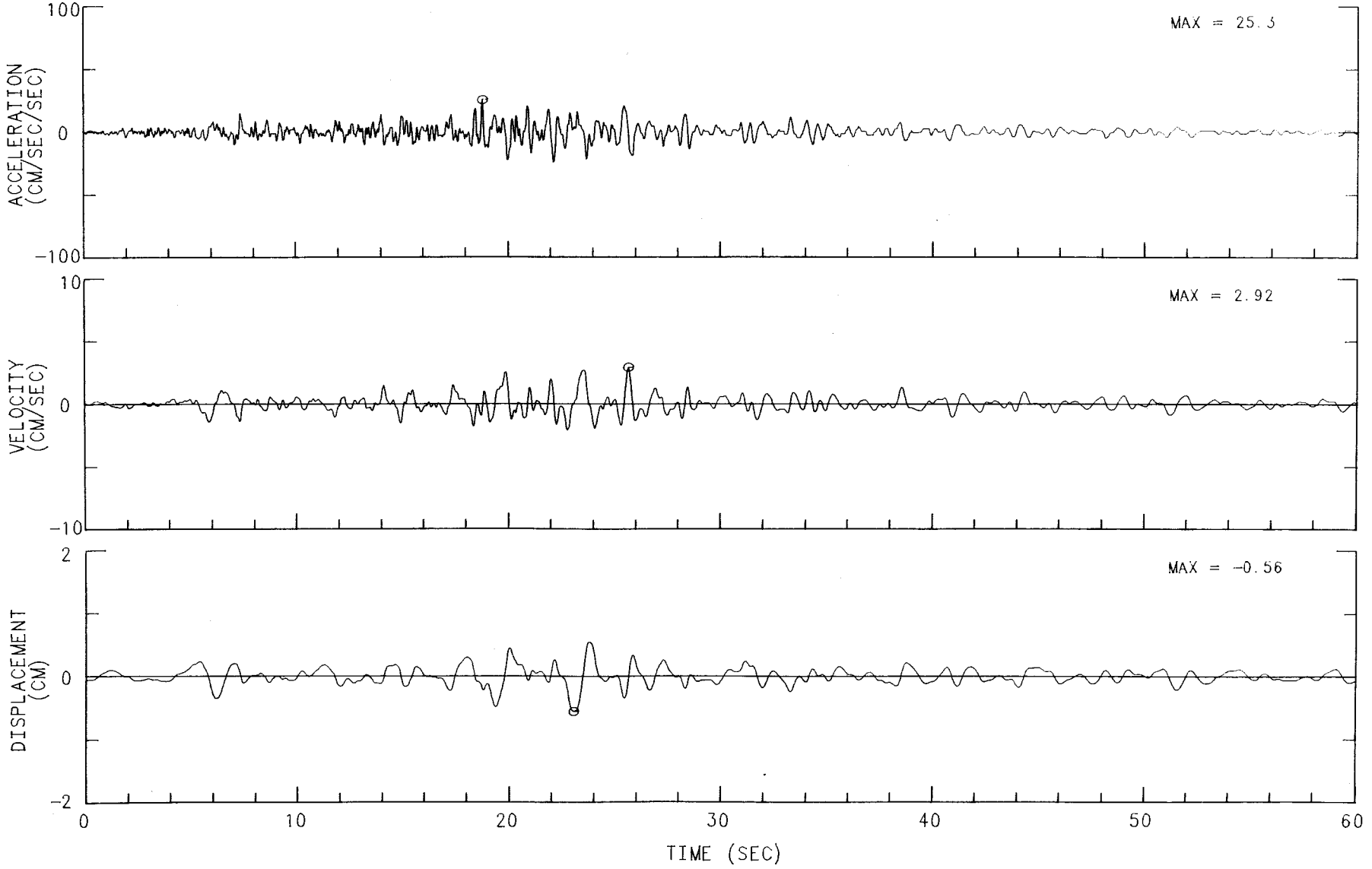
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER CHN 2: UP (BASEMENT, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58261-C0150-84123.10 051585.1630-QM84A261



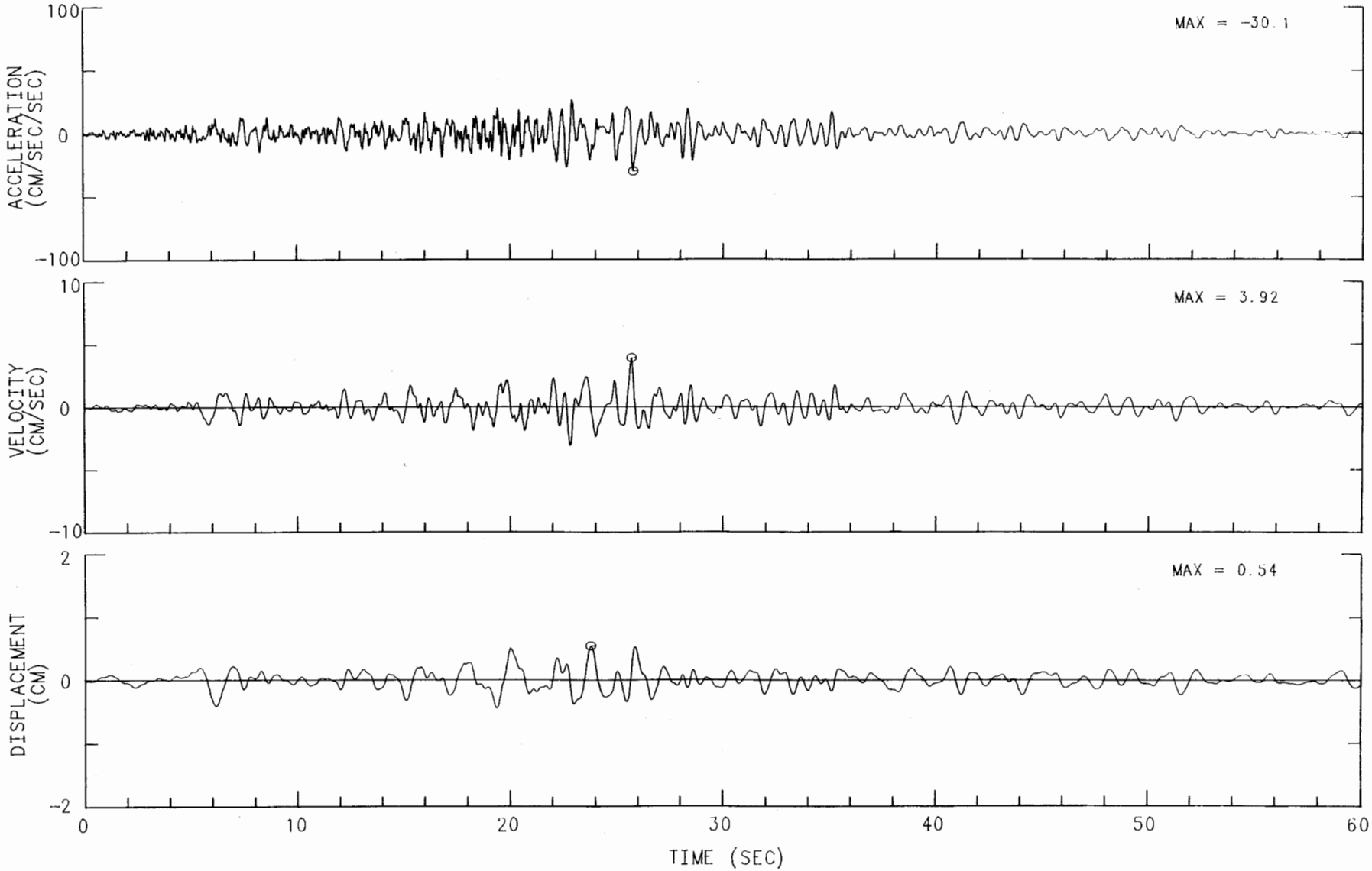
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER CHN 3: 0 DEG (BASEMENT, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58261-C0150-84123.10 051585.1630-QM84A261



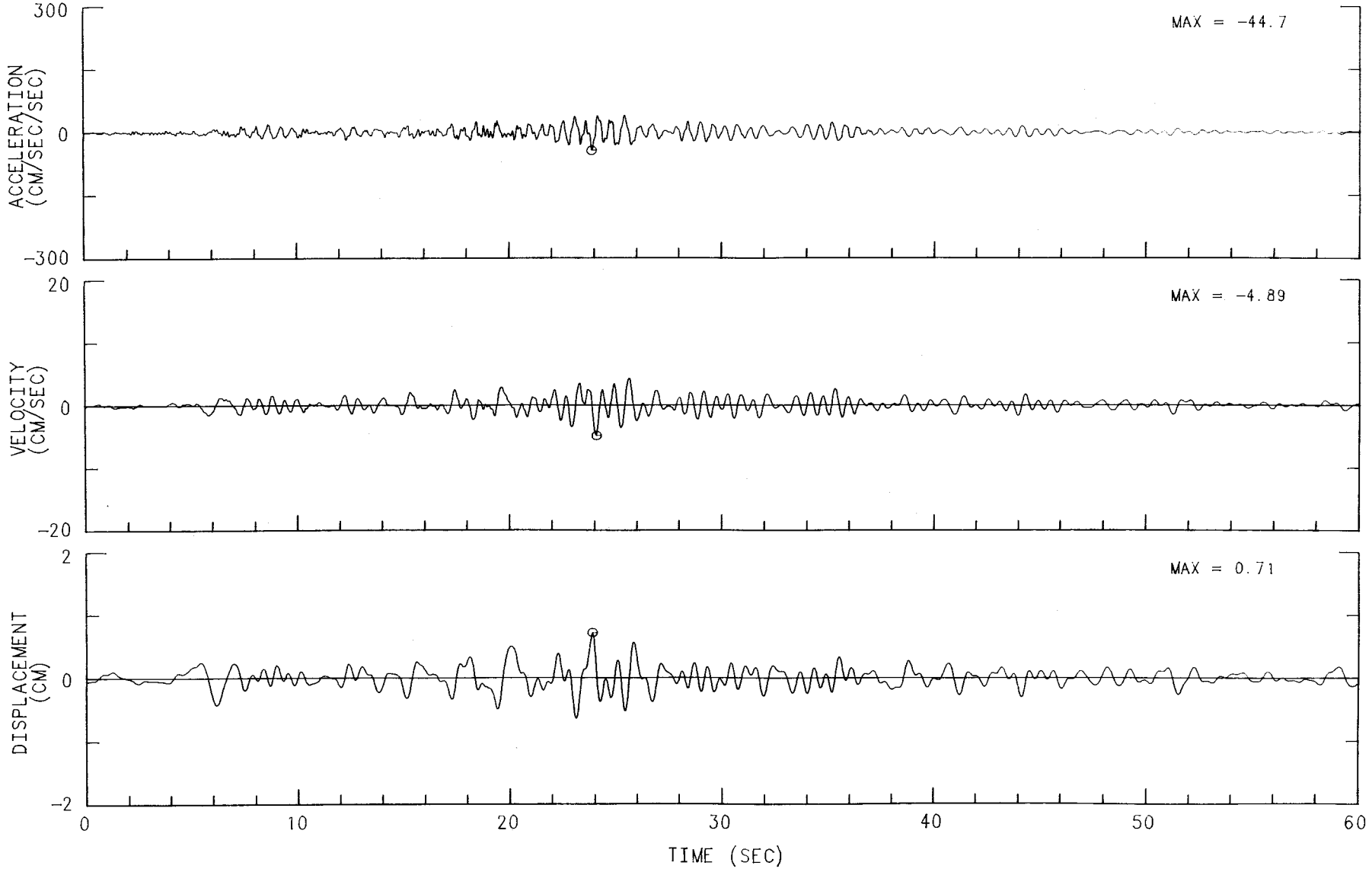
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER CHN 4: 270 DEG (1ST FLOOR, SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58261-C0150-84123.10 051585.1630-QM84A261



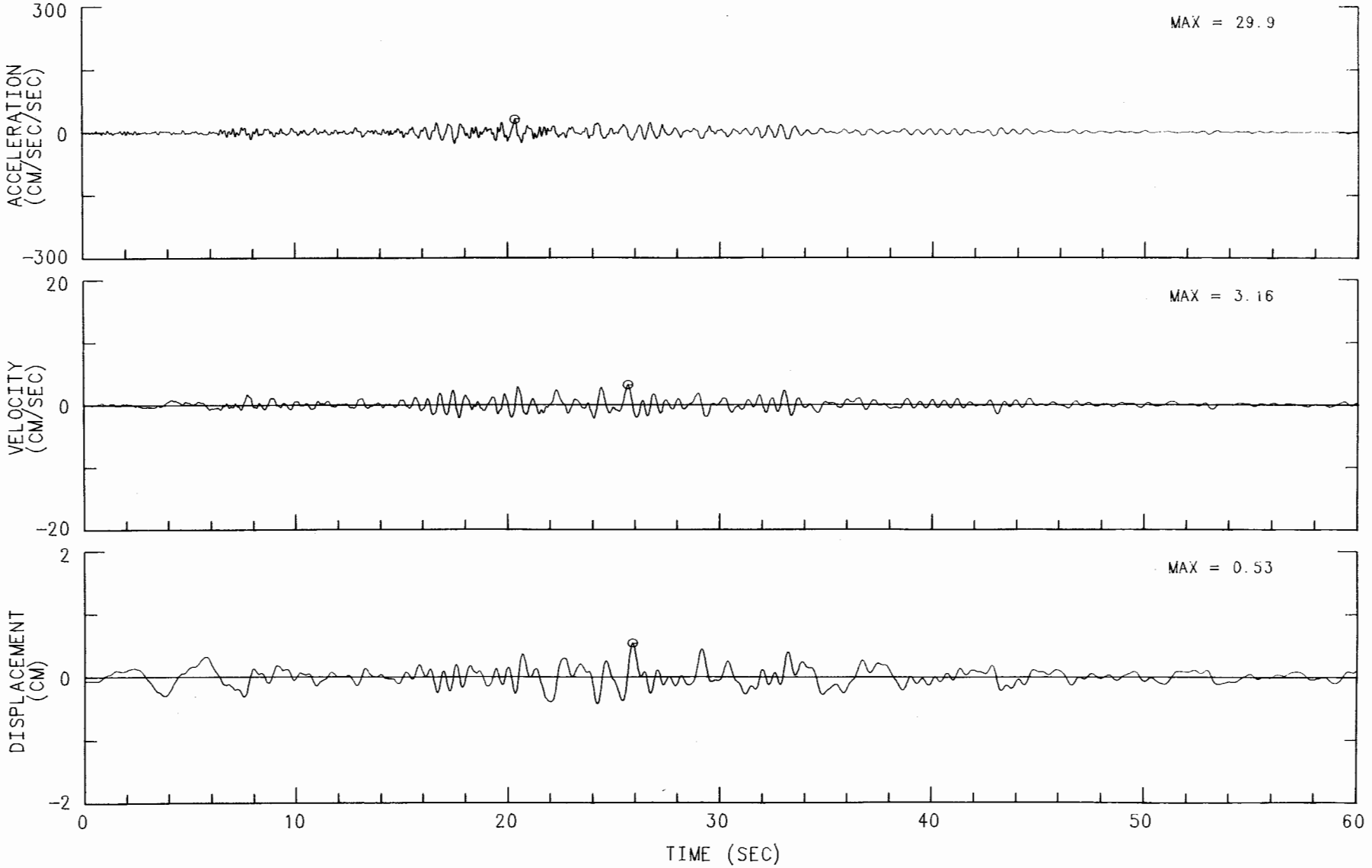
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER CHN 5: 270 DEG (1ST FLOOR, NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58261-C0150-84123.10 051585.1630-QM84A261



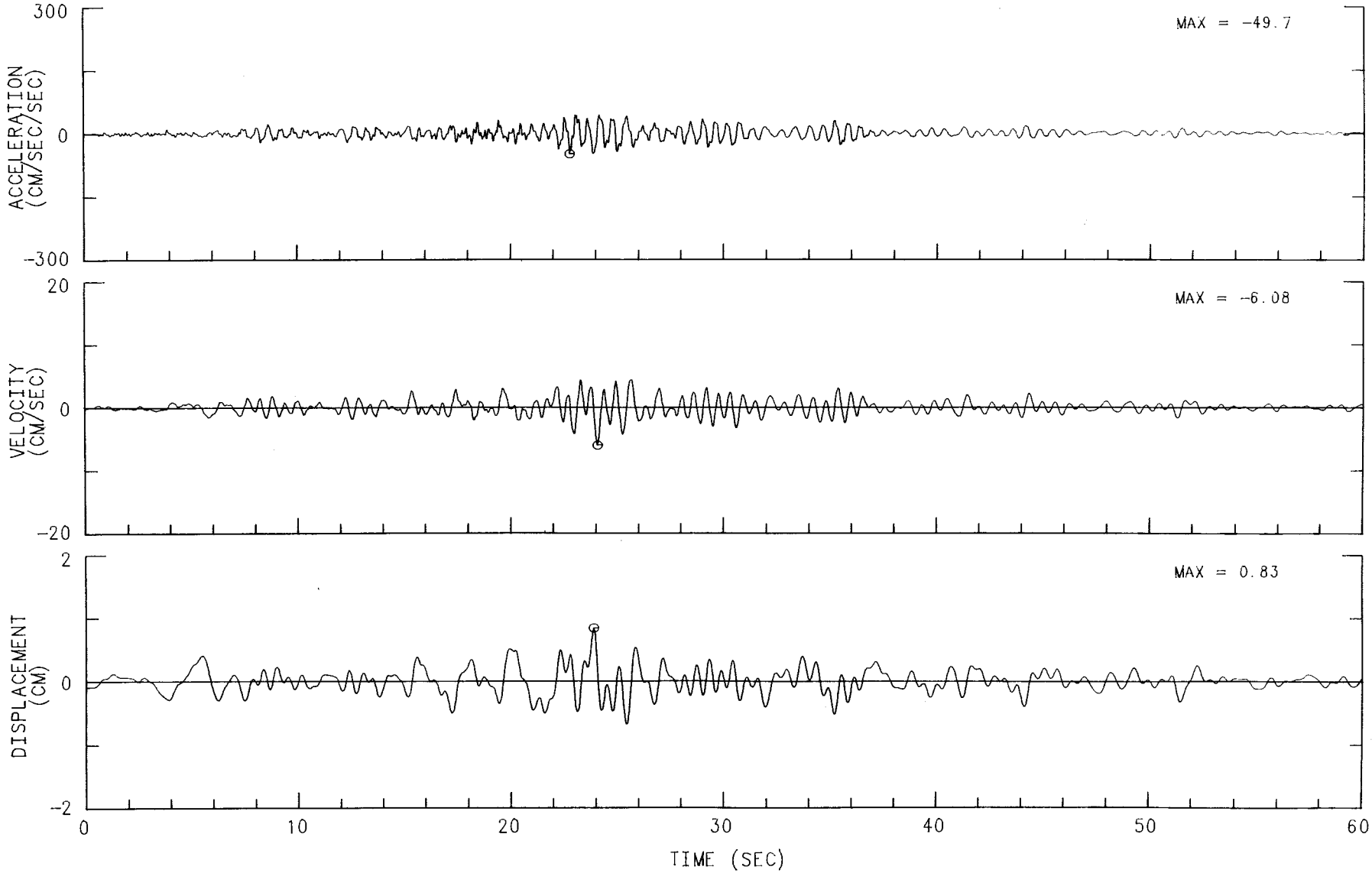
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER CHN 6: 270 DEG (2ND FLOOR, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58261-C0150-84123.10 051585.1630-QM84A261



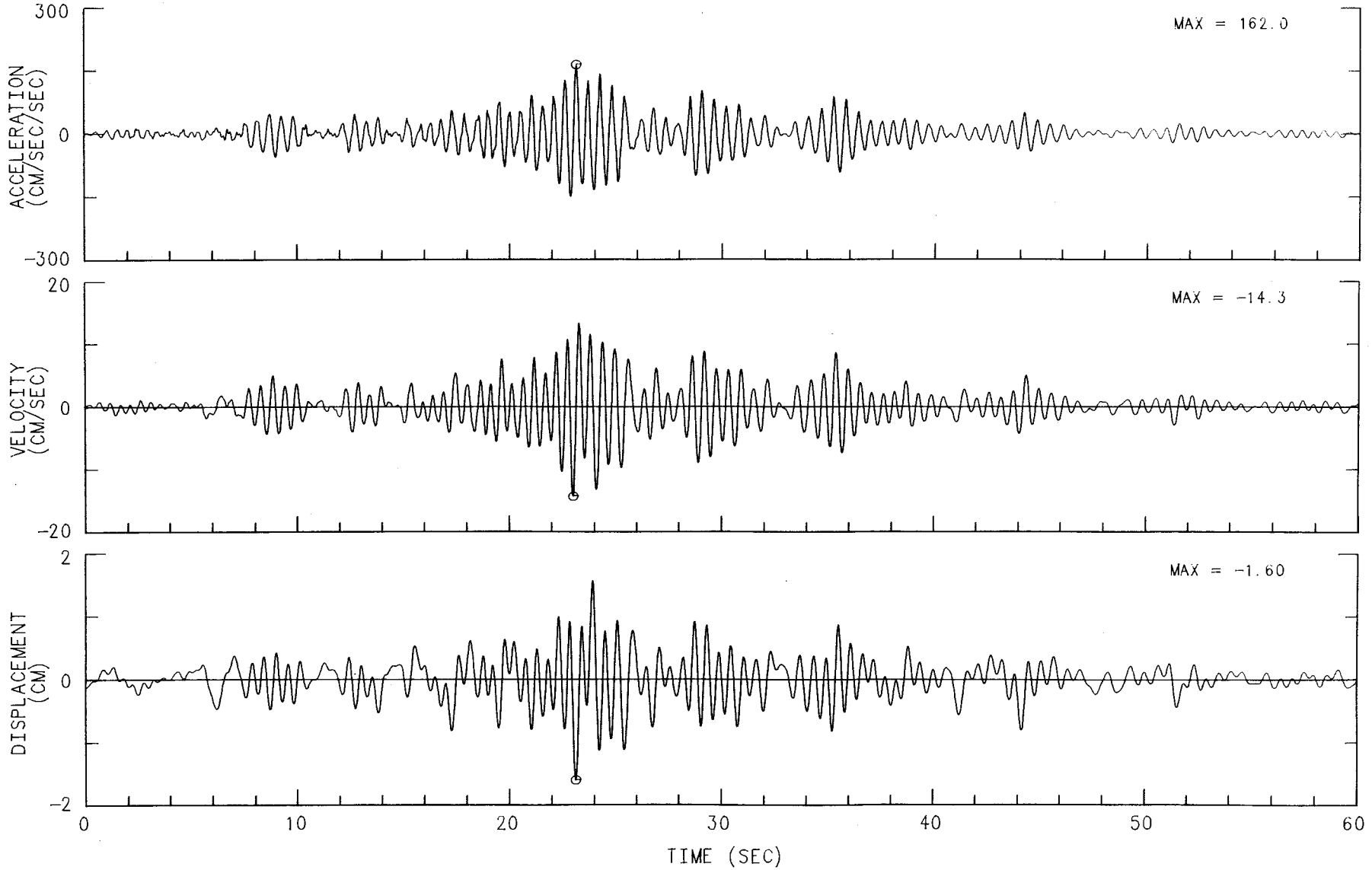
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER CHN 7: 0 DEG (2ND FLOOR, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58261-C0150-84123.10 051585.1630-QM84A261



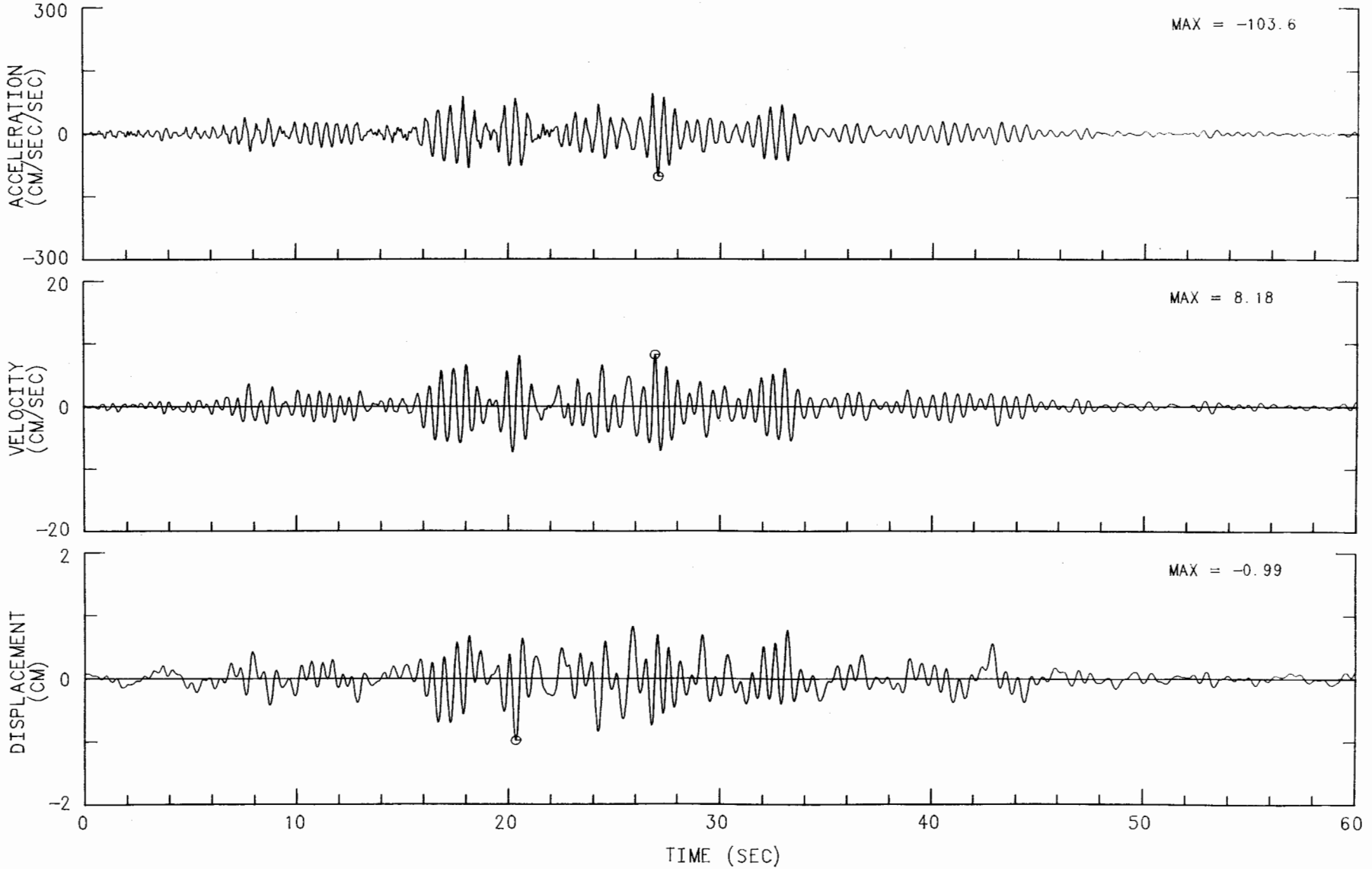
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER CHN 8: 270 DEG (2ND FLOOR, NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58261-C0150-84123.10 051585.1630-QM84A261



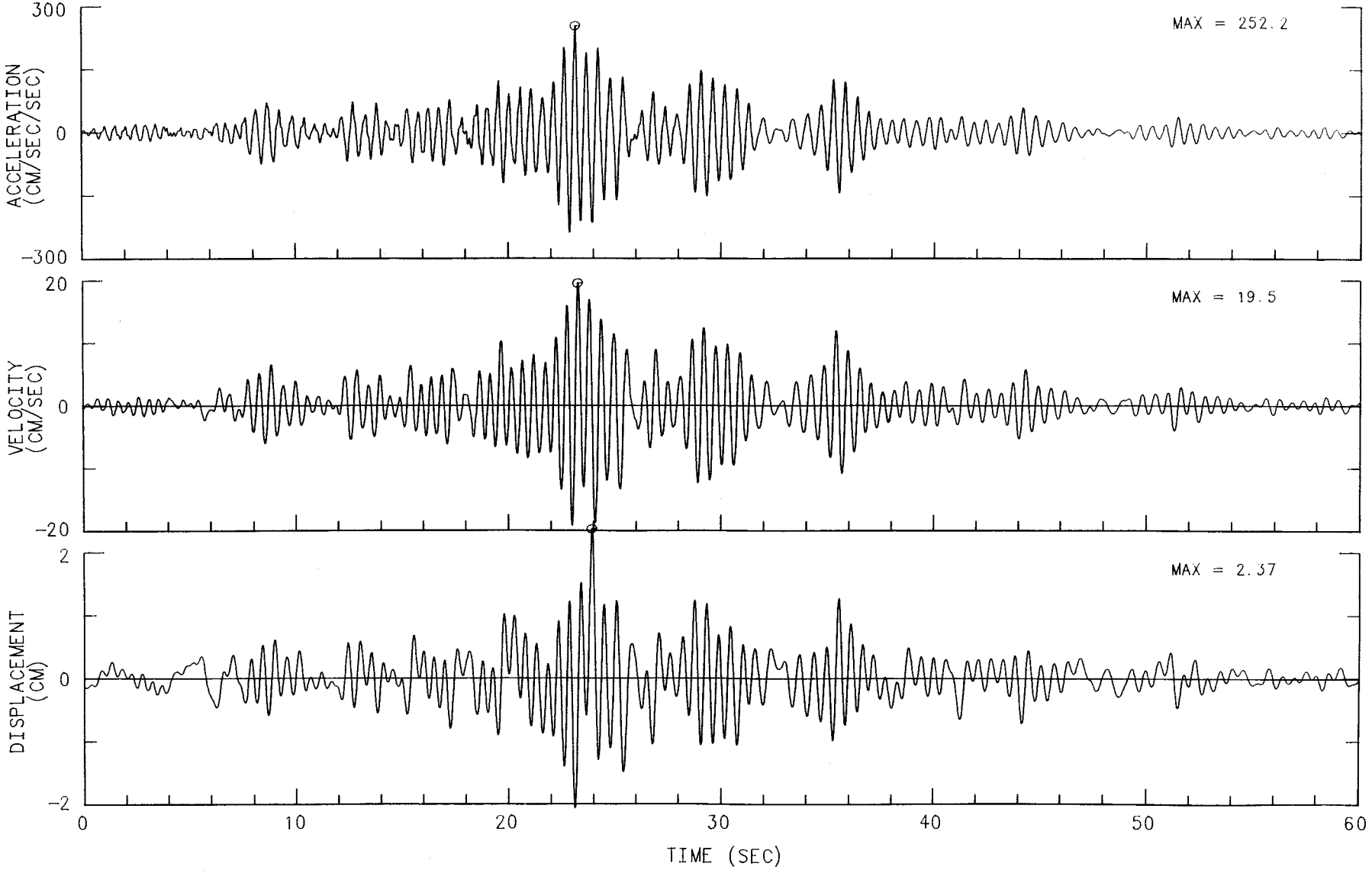
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER CHN 9: 270 DEG (ROOF, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58261-C0150-84123.10 051585.1630-QM84A261



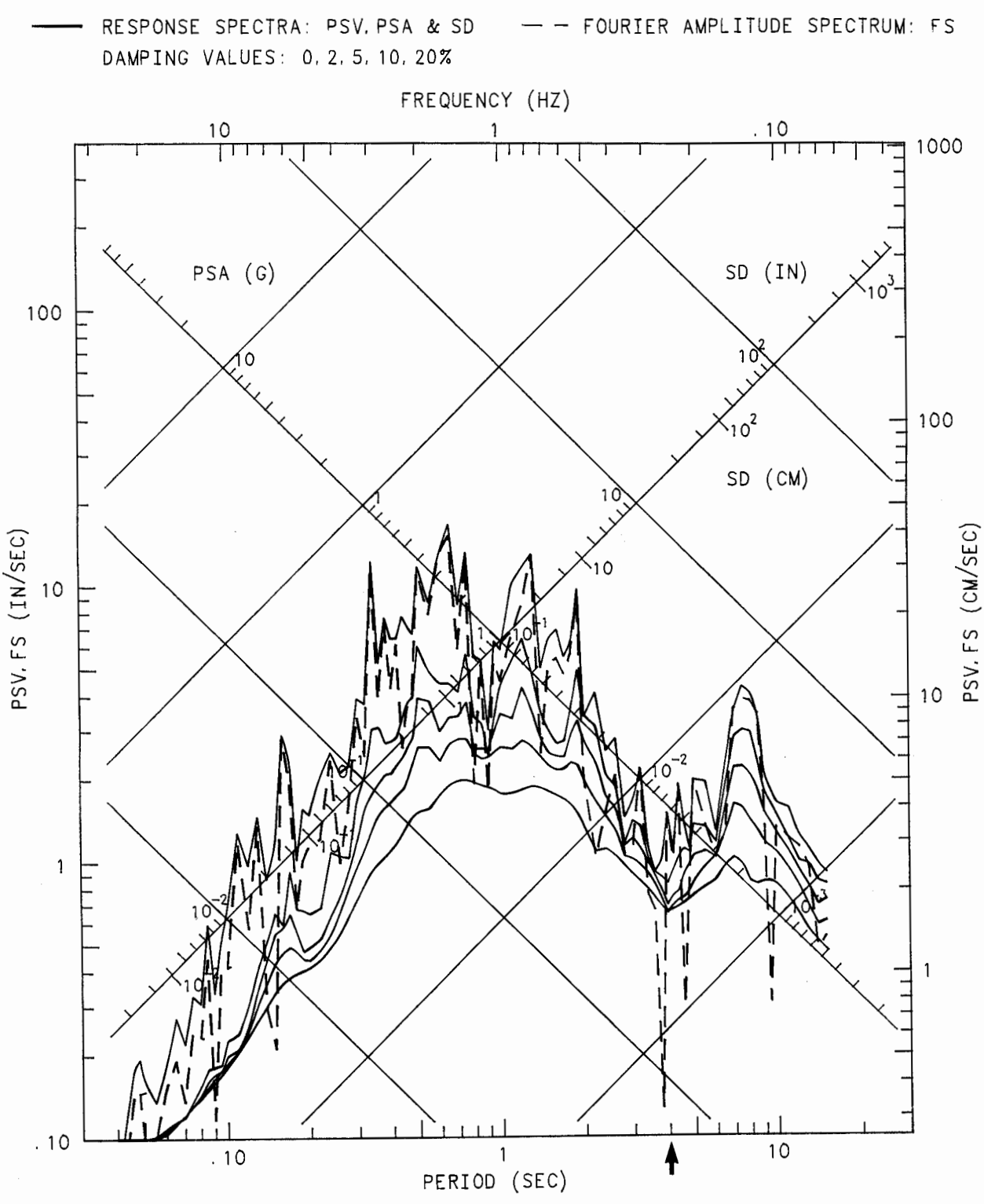
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER CHN 10: 0 DEG (ROOF, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58261-C0150-84123.10 051585.1630-QM84A261



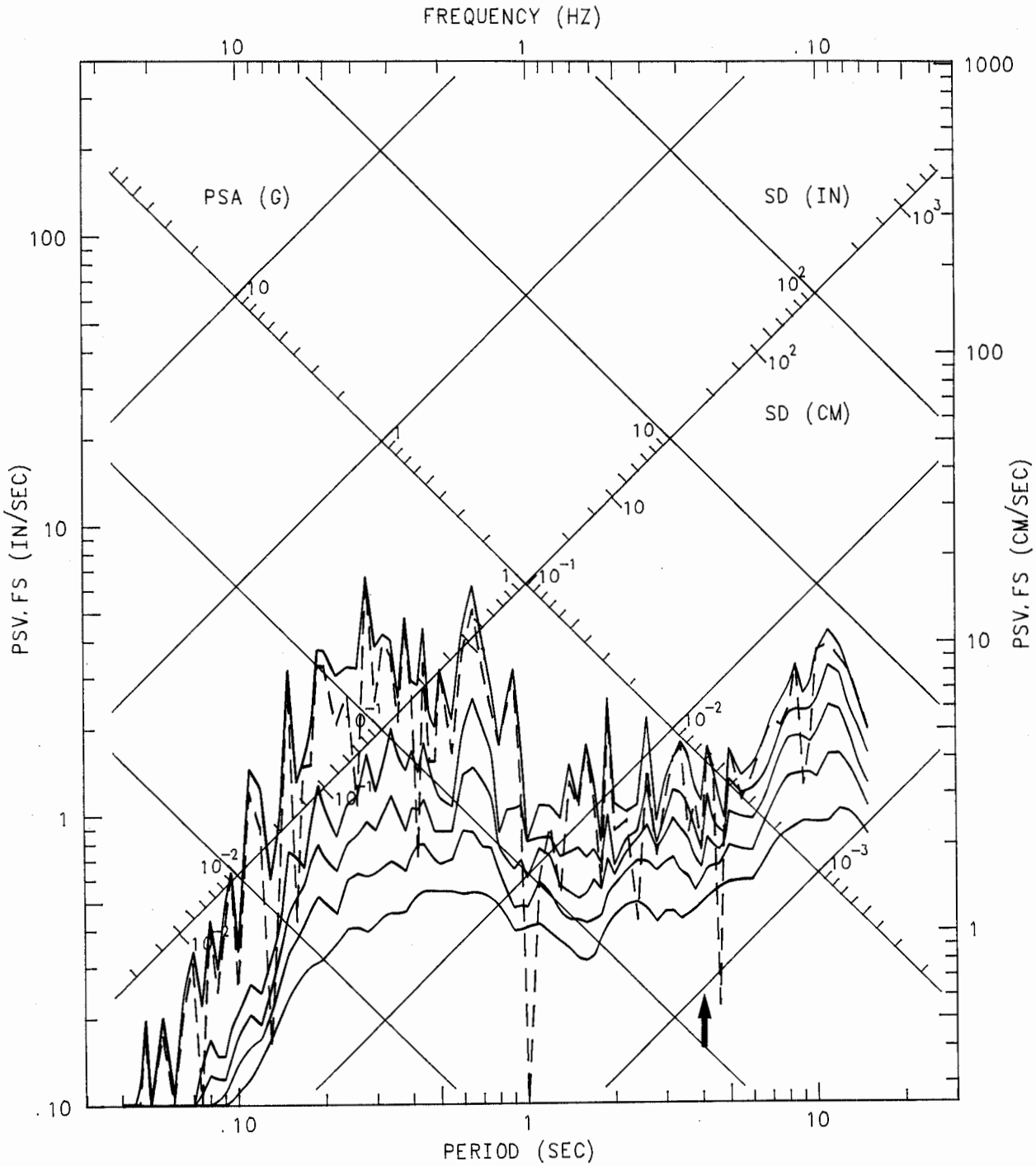
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER CHN 11: 270 DEG (ROOF, NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 12-.25 TO 23.0-25.0 HZ. 58261-C0150-84123.10 051585.1630-QM84A261



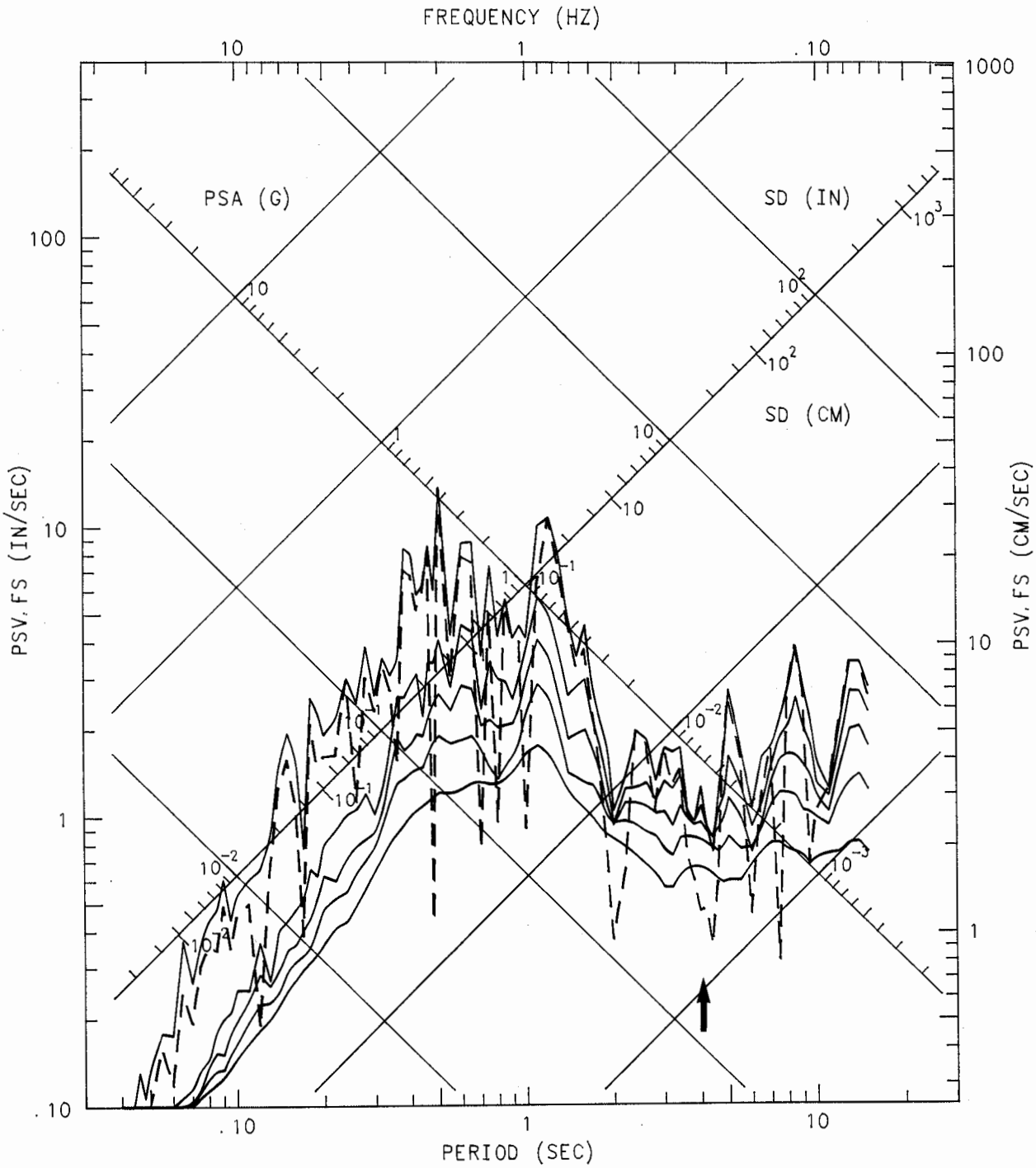
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
CHN 1: 270 DEG (BASEMENT, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58261-C0150-84123.10 051485.1956-QM84A261



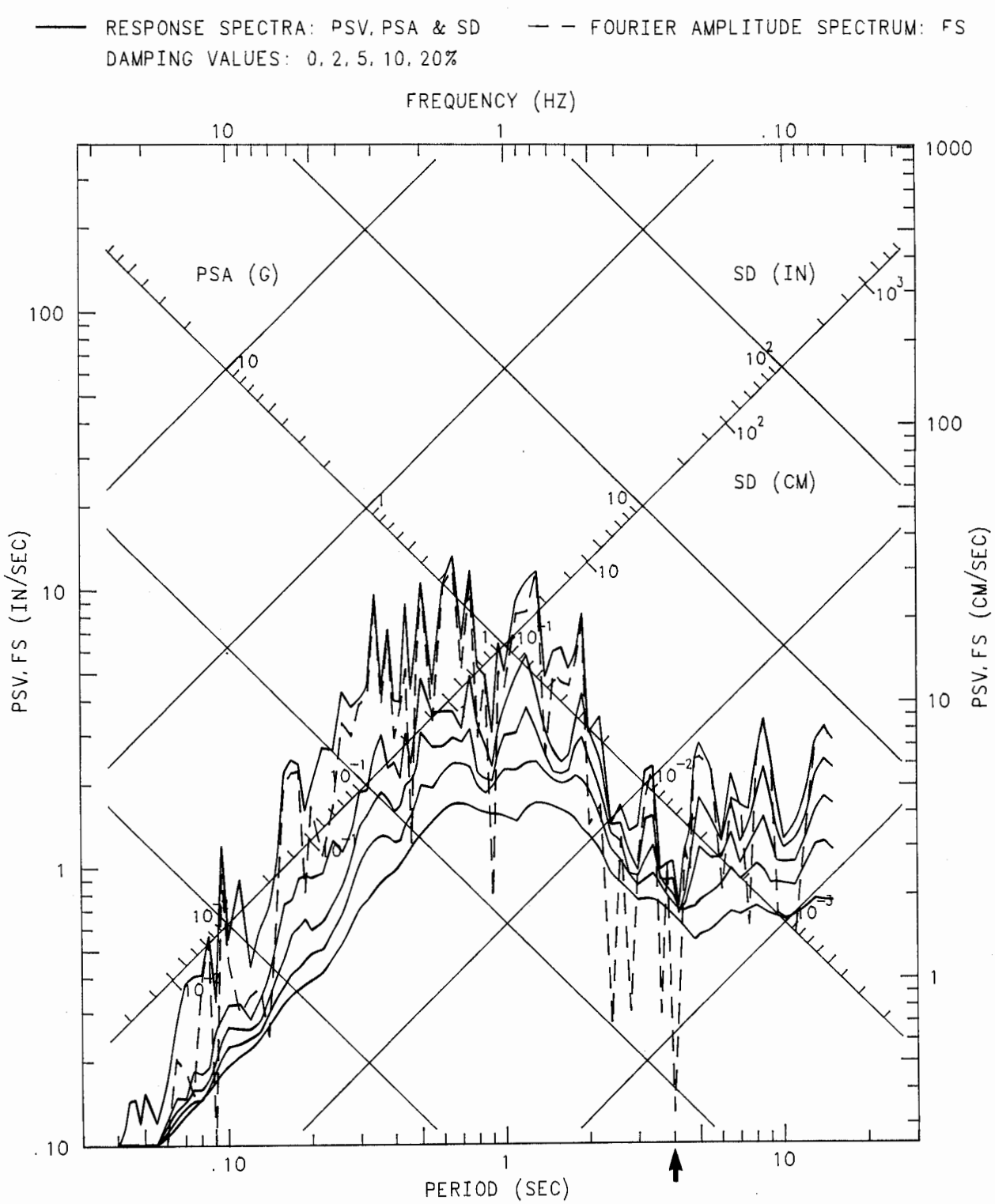
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
CHN 2: UP (BASEMENT, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58261-C0150-84123.10 051485.1956-QM84A261



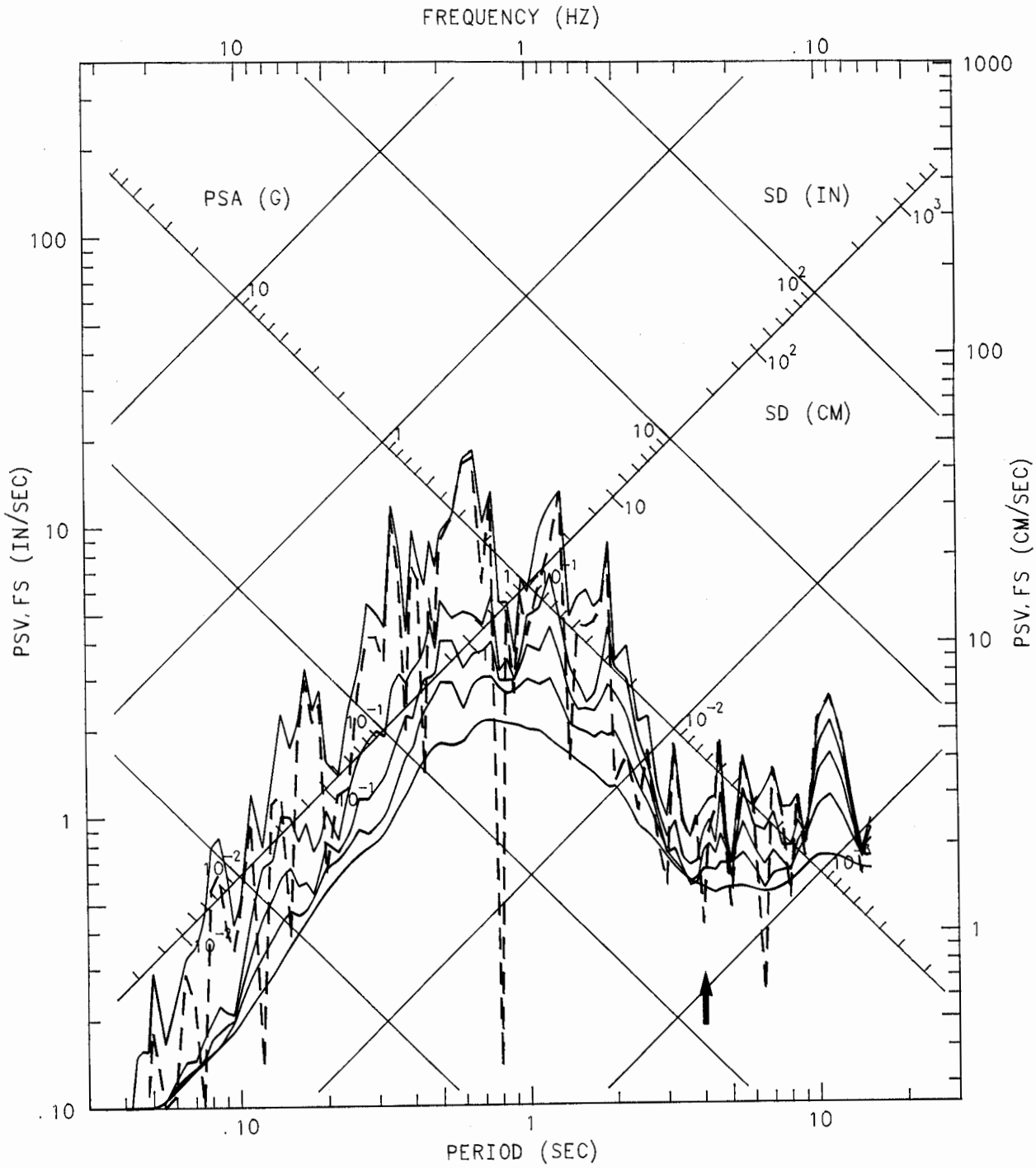
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
CHN 3: 0 DEG (BASEMENT, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58261-C0150-84123.10 051485.1956-QM84A261



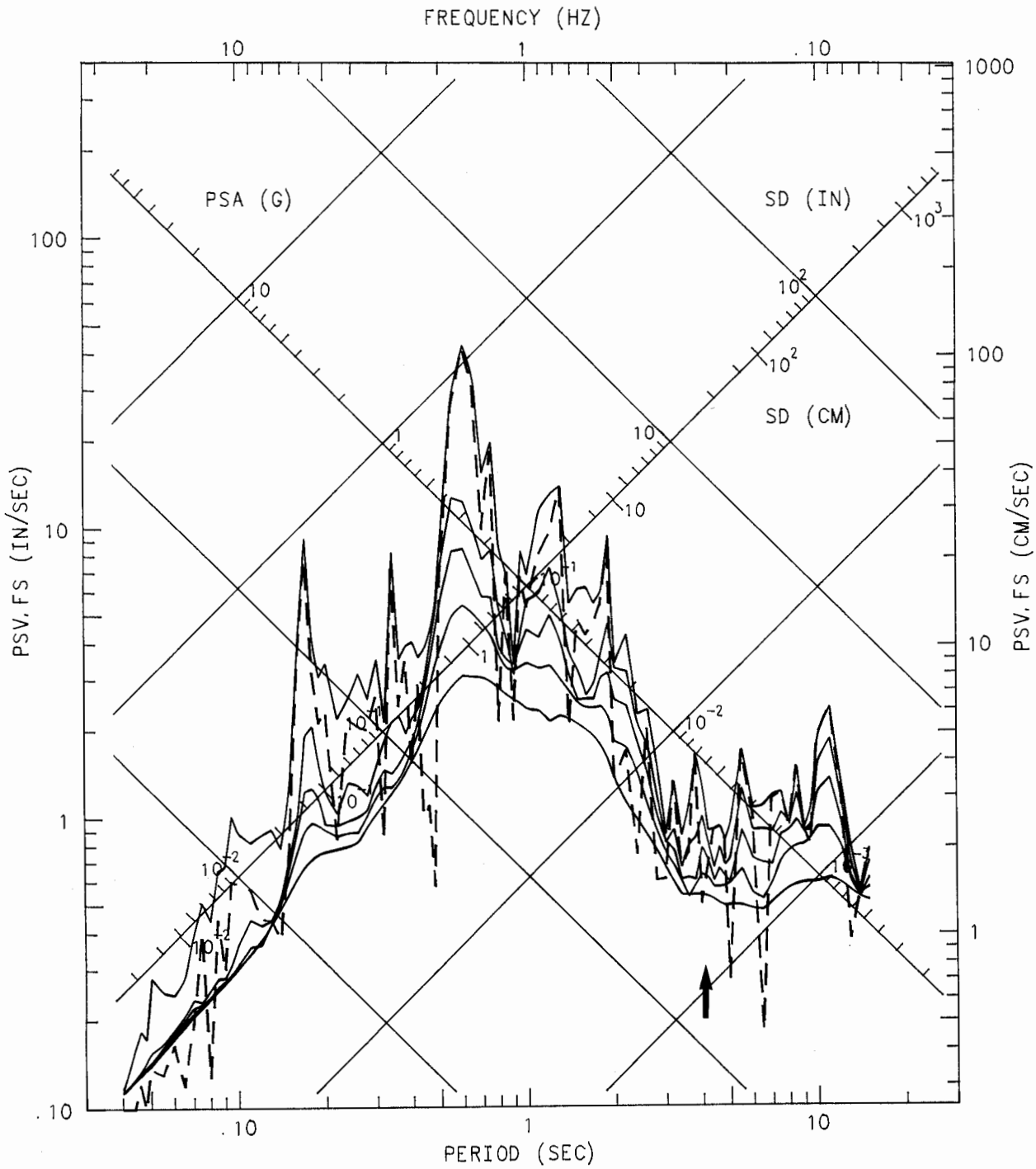
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
CHN 4: 270 DEG (1ST FLOOR, SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58261-C0150-84123.10 051485.1956-QM84A261



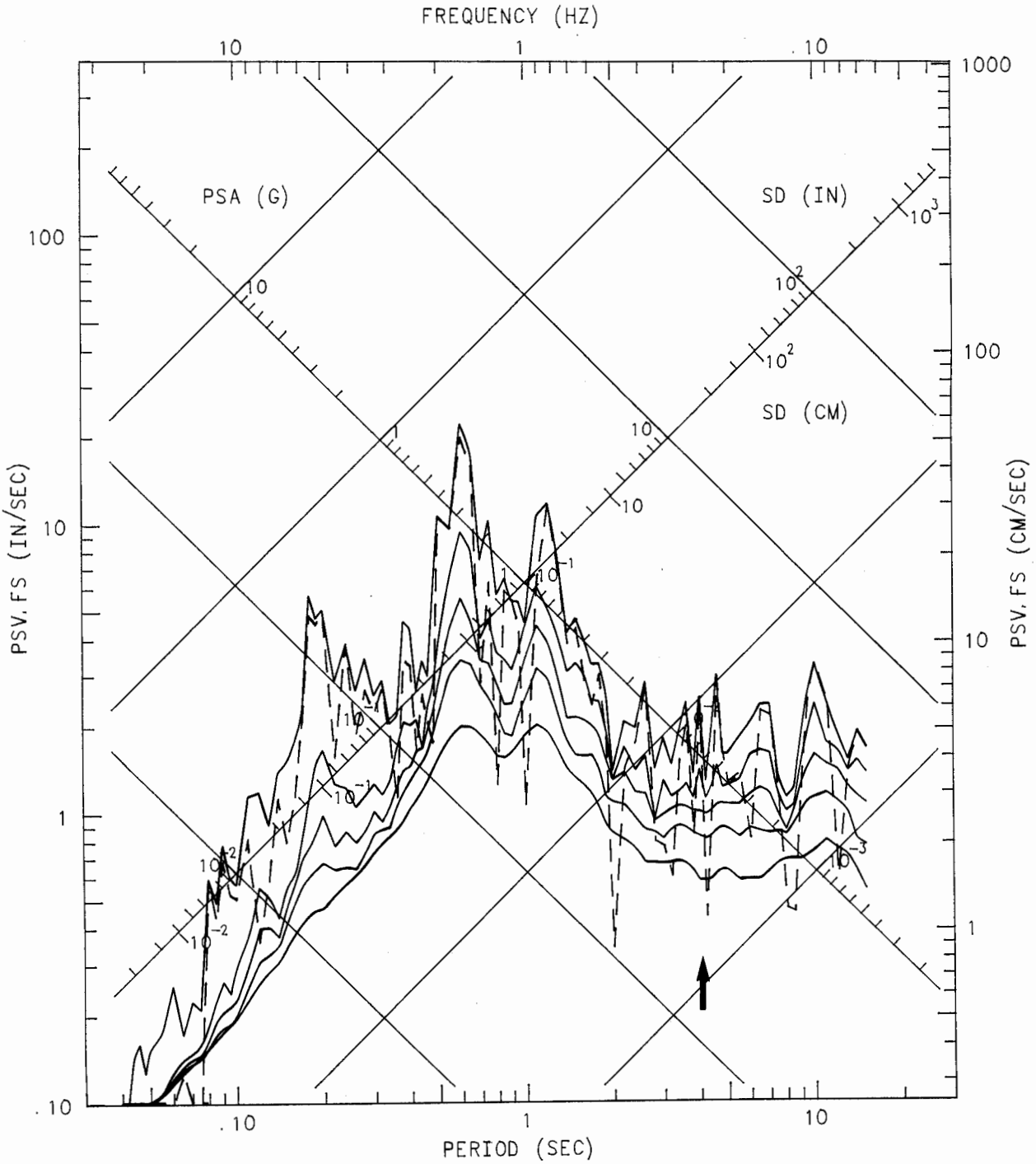
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
CHN 5: 270 DEG (1ST FLOOR, NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58261-C0150-84123.10 051485.1956-QM84A261



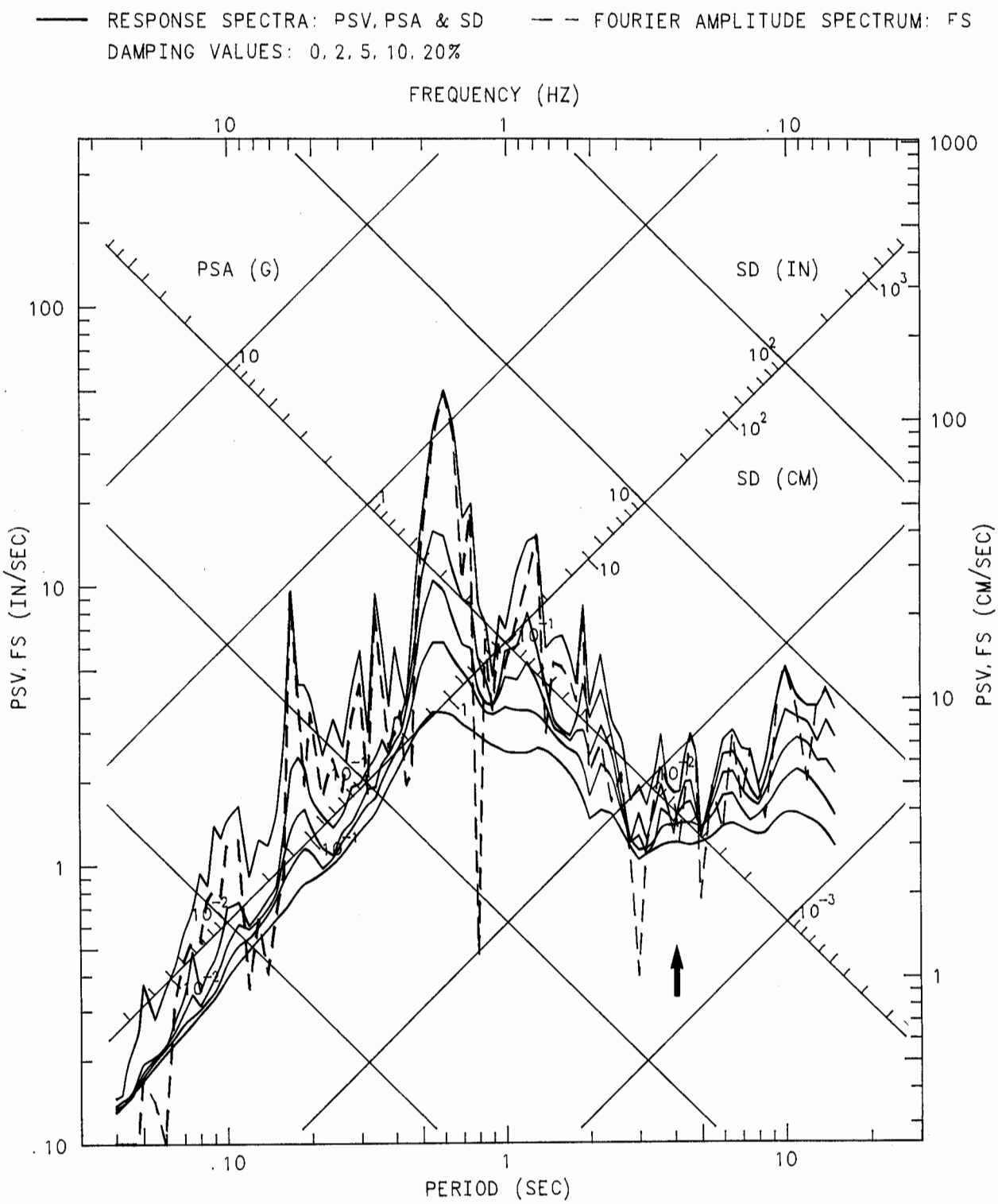
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
CHN 6: 270 DEG (2ND FLOOR, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58261-C0150-84123.10 051485.1956-QM84A261



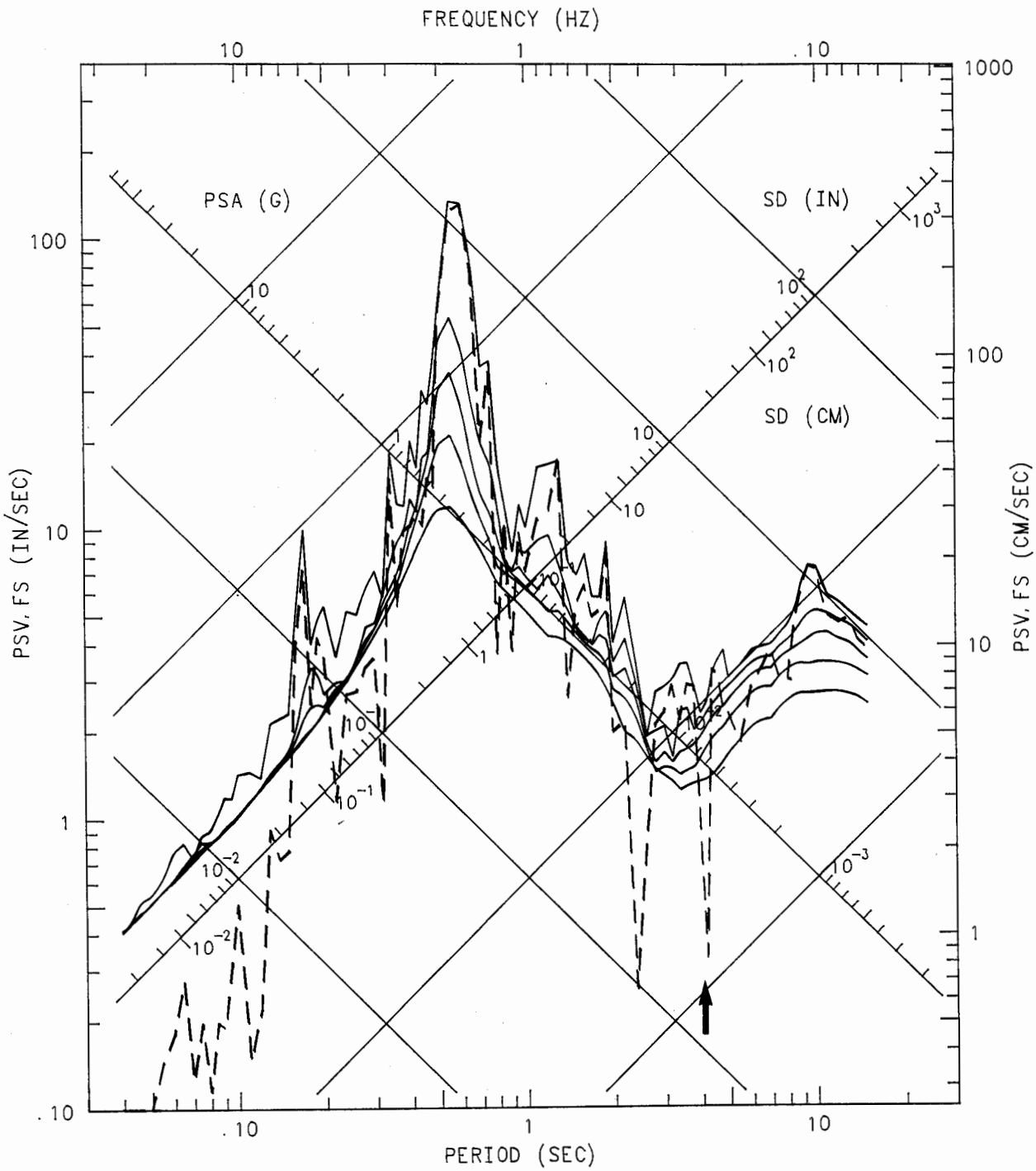
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
CHN 7: 0 DEG (2ND FLOOR, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58261-C0150-84123.10 051485.1956-QM84A261



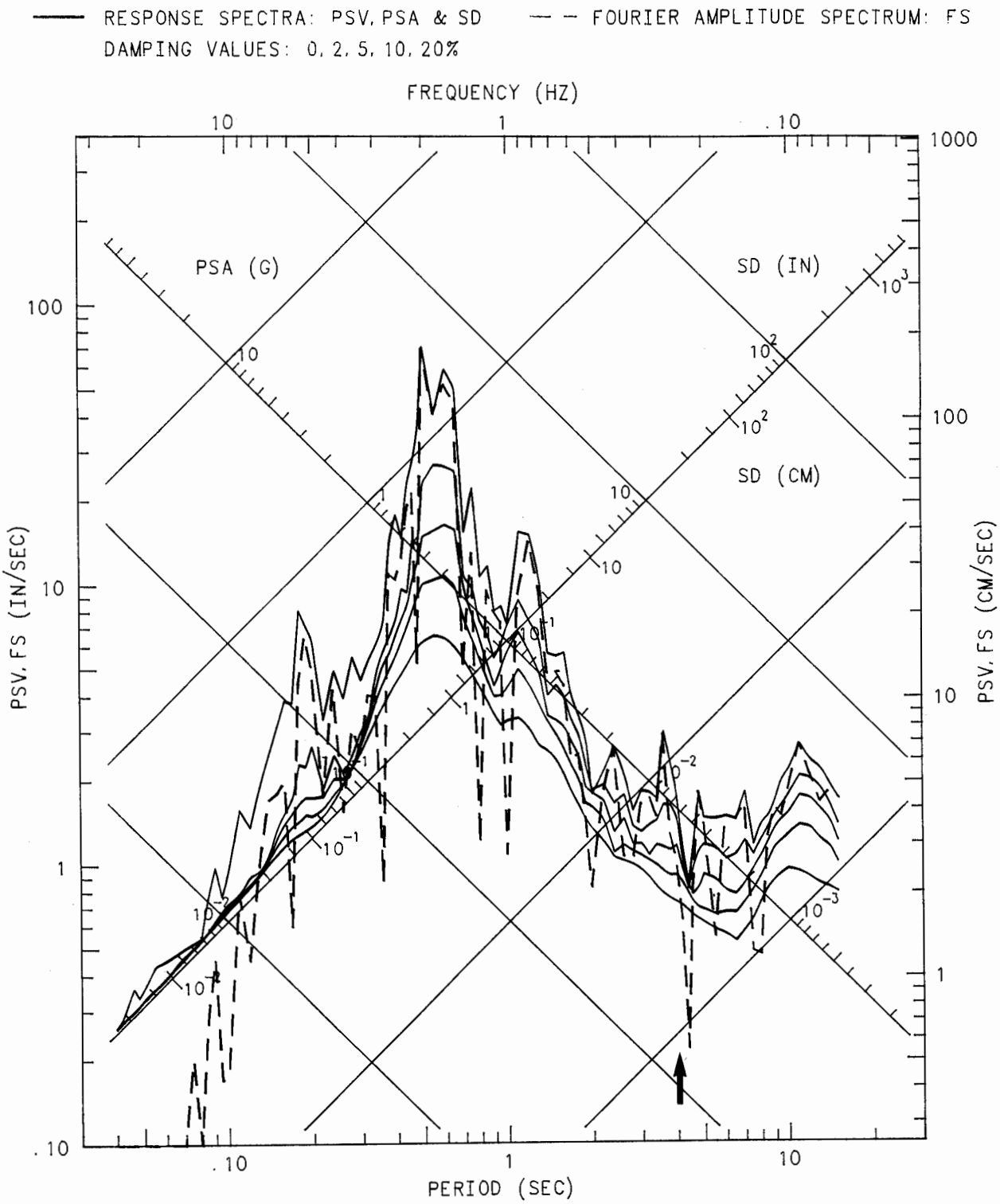
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
CHN 8: 270 DEG (2ND FLOOR, NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58261-C0150-84123.10 051485.1956-QM84A261



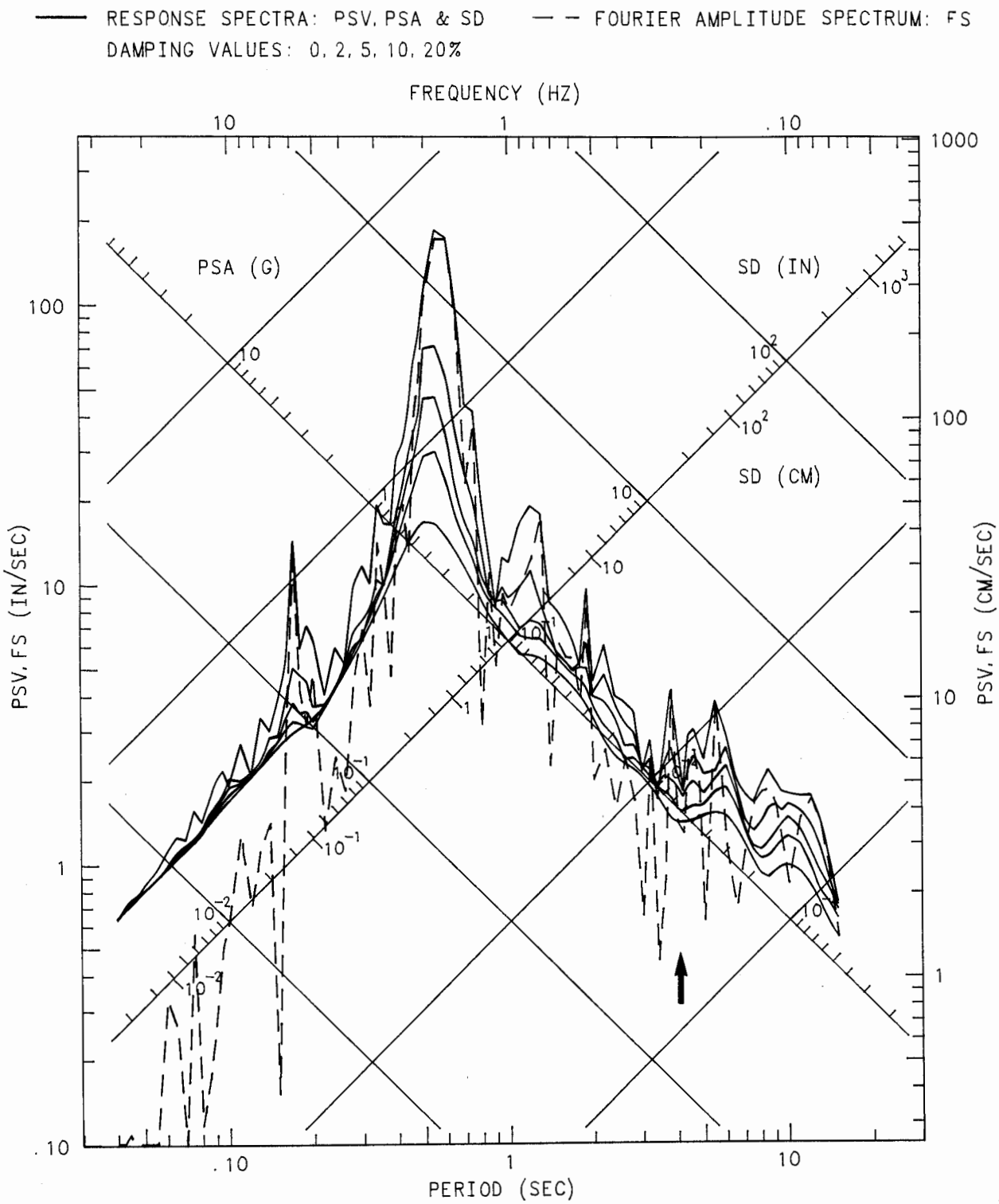
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
CHN 9: 270 DEG (ROOF, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58261-C0150-84123.10 051485.1956-QM84A261



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
CHN 10: 0 DEG (ROOF, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58261-C0150-84123.10 051485.1956-QM84A261



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SO. SAN FRANCISCO - KAISER MED CENTER
CHN 11: 270 DEG (ROOF, NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
58261-C0150-84123.10 051485.1956-QM84A261



SAN JUAN BAUTISTA - 101/156 OVERPASS

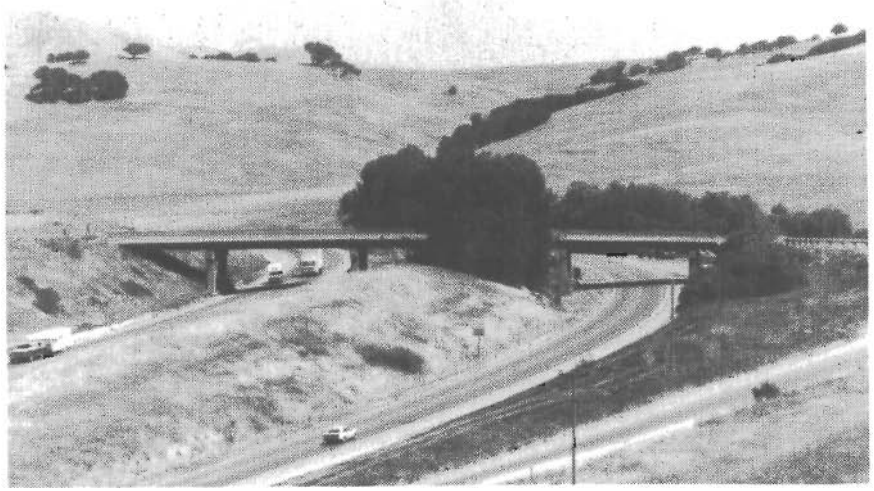
Special Notes:

The California Department of Transportation retrofitted the San Juan Bautista 101/156 overpass with steel cable restrainers to increase the seismic resistance of the bridge. During the retrofit, the contractor removed sensor 5 and inadvertently remounted it in the same direction as sensor 4. Consequently, during the 1984 Morgan Hill earthquake the signal from sensor 5 was identical to that from sensor 4. Note that a strong motion record was obtained from this bridge during the 1979 Coyote Lake earthquake, prior to the retrofit, and these data have been digitized and processed.

Sensor 10 malfunctioned during the Morgan Hill earthquake. The signals from sensors 5 and 10 were not processed.

This record was not available for publication at the time data report OSMS 84-7 was released.

San Juan Bautista - 101/156 Overpass



Southwest Side View

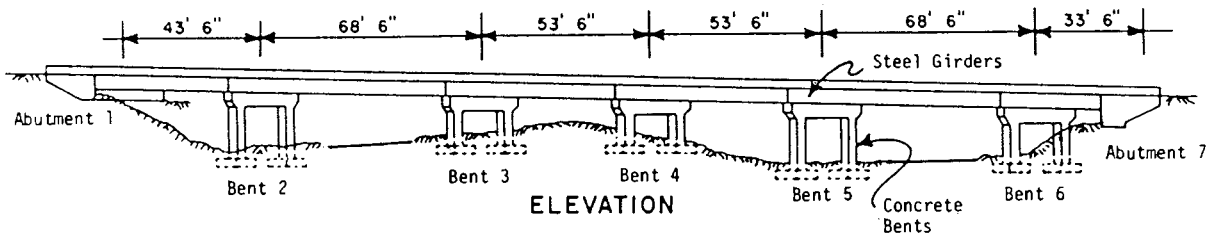
Bent 5 (Looking North)

Address: 2 miles west of San Juan Bautista
San Benito County, California
Coordinates: 36.862°N, 121.578°W
Length: 326'
Width: 32'
Number of Spans: 6
Design Date: 1956
Construction Date: 1958
Seismically Retrofitted: Steel Restrainers

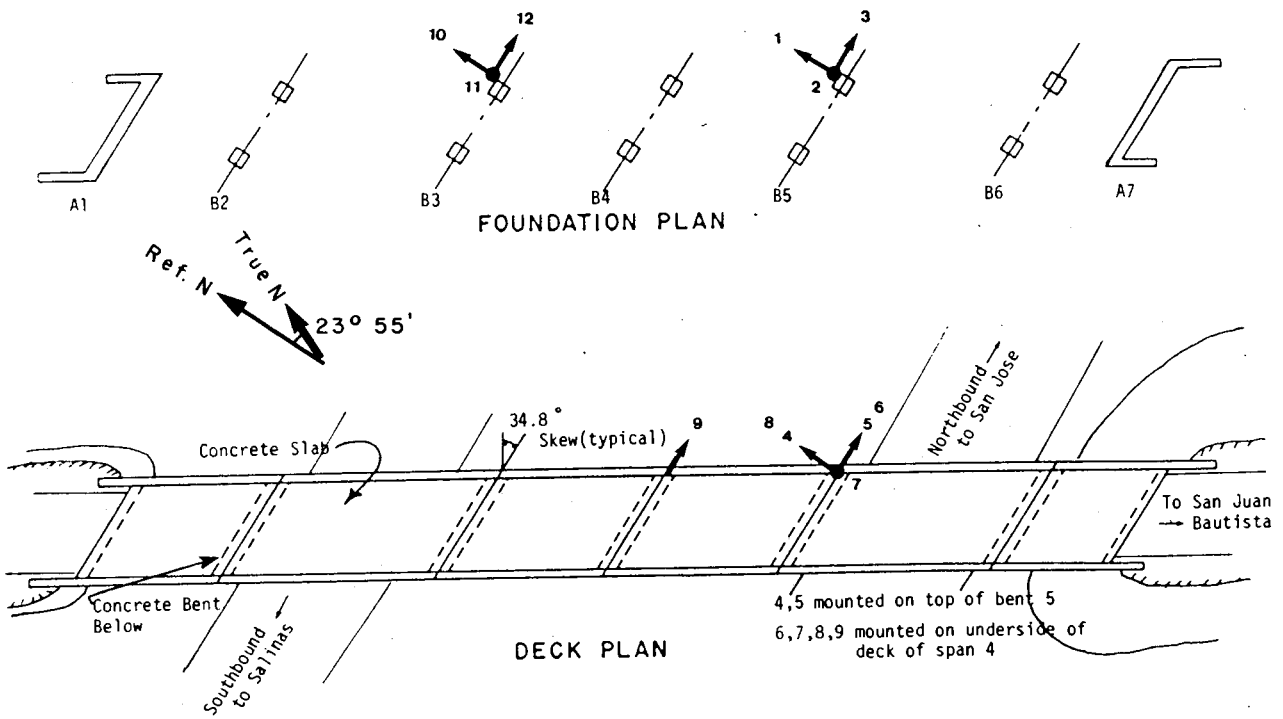
Superstructure Type:
Welded steel girders supported on rocker bearings.
Substructure Type:
Two-column reinforced concrete bents; seat type abutments with integral wingwalls.
Foundation Type:
Spread footings.

SENSOR LAYOUT

San Juan Bautista-101/156 Overpass
CSMIP Station No. 47315

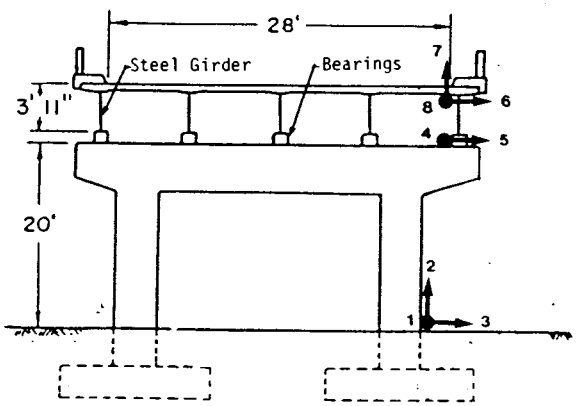


ELEVATION



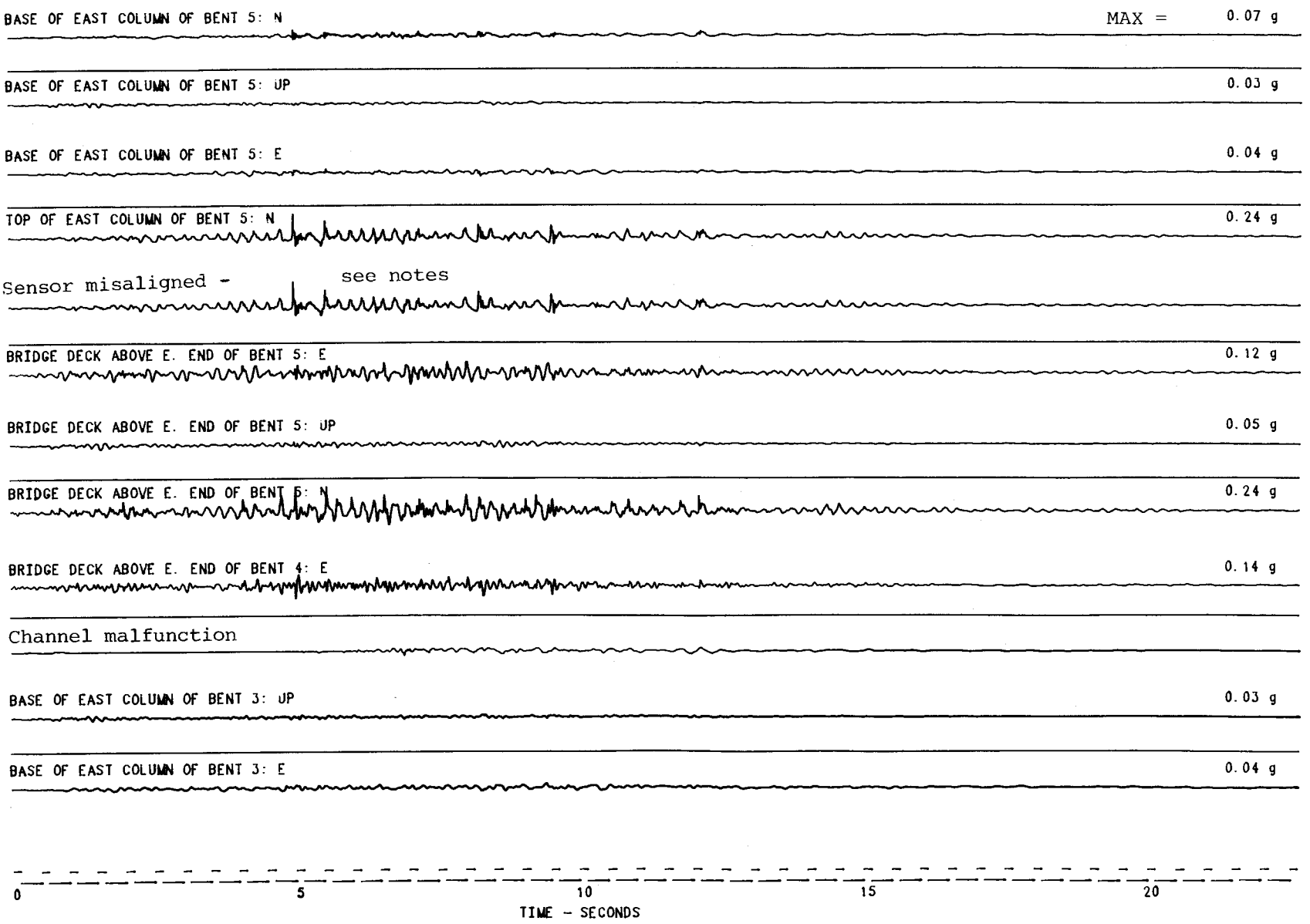
FOUNDATION PLAN

DECK PLAN

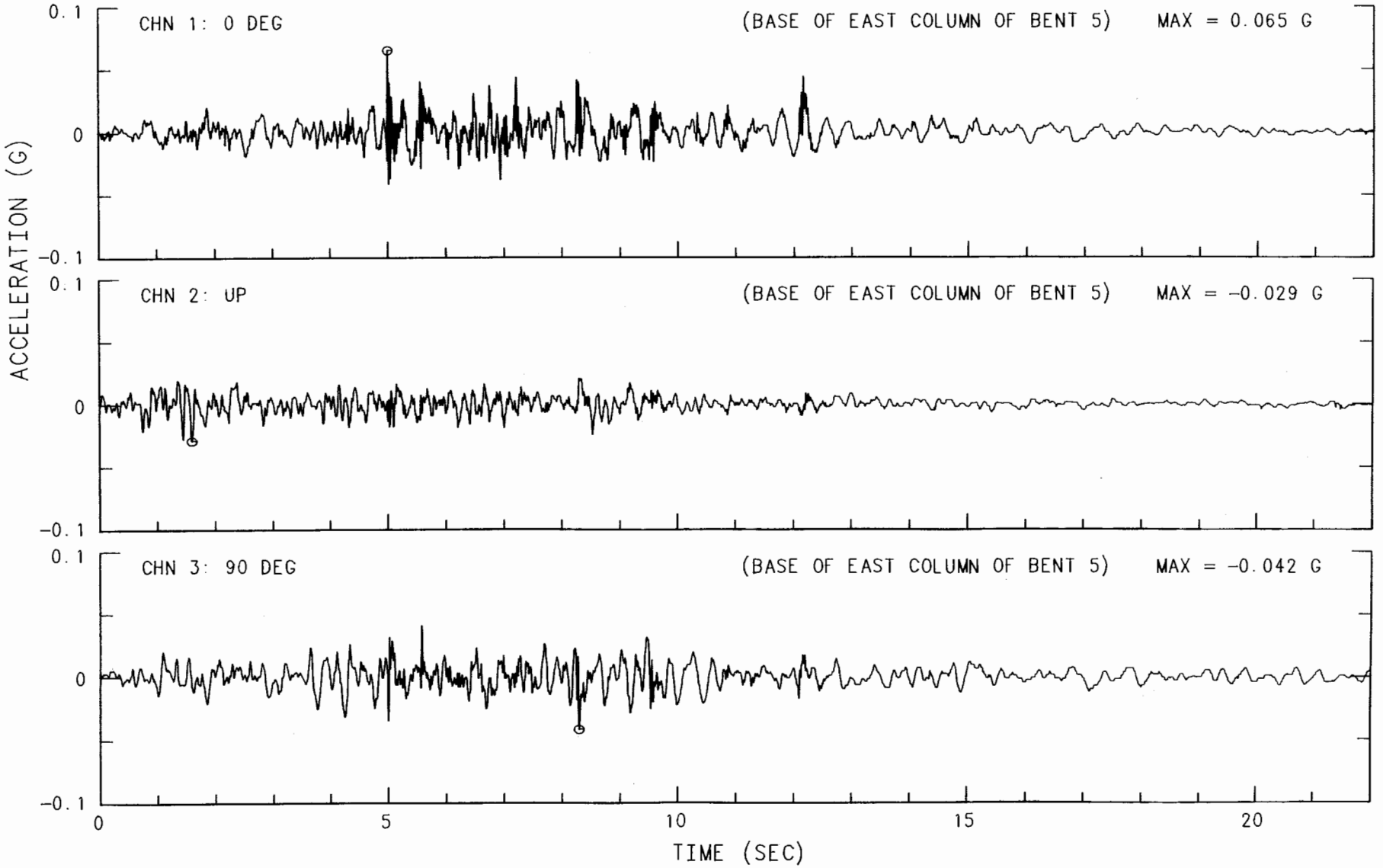


W.-E Section of Bent 5

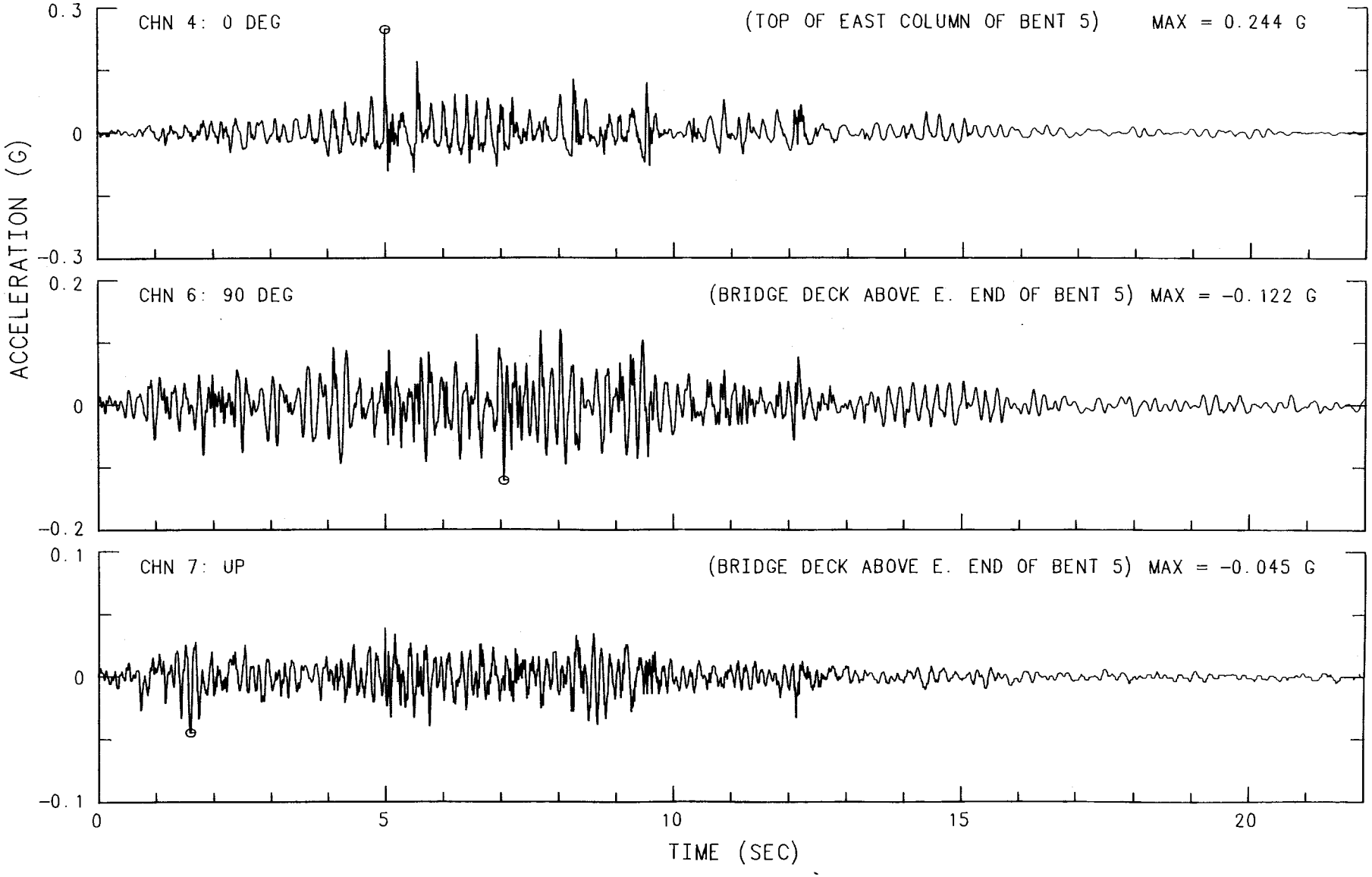
SAN JUAN BAUTISTA - 101/156 OVERPASS RECORD 47315-C0139-85066.01 MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST



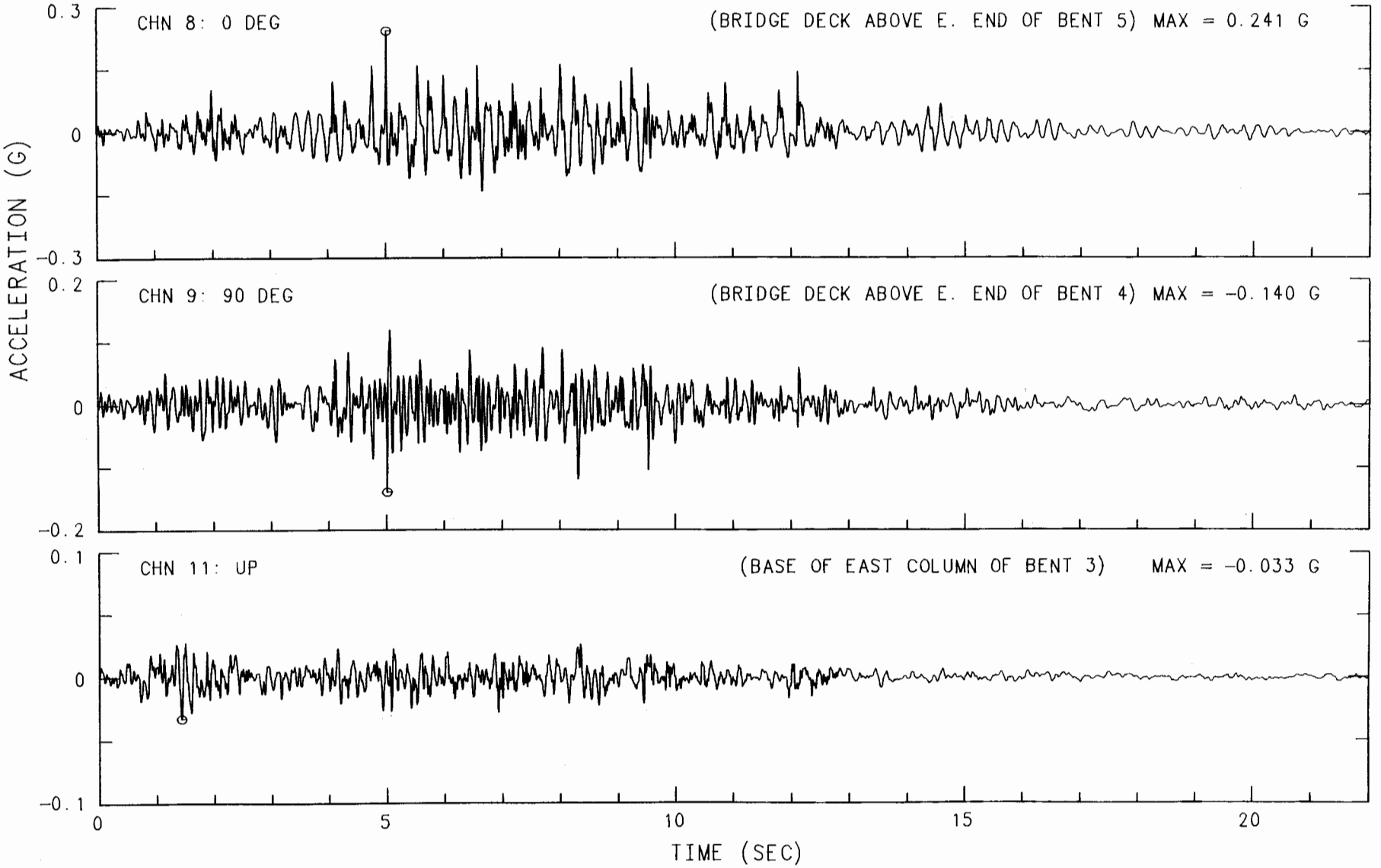
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
UNCORRECTED ACCELEROGRAM 47315-C0139-85066.01 061285.1252-QM84A315



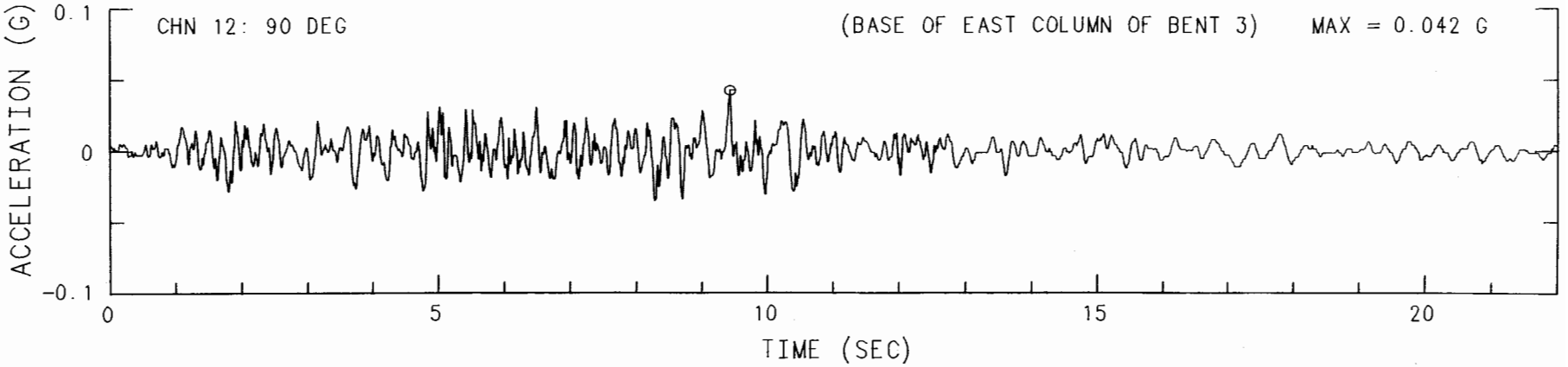
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
UNCORRECTED ACCELEROGRAM 47315-C0139-85066.01 061285.1252-QM84A315



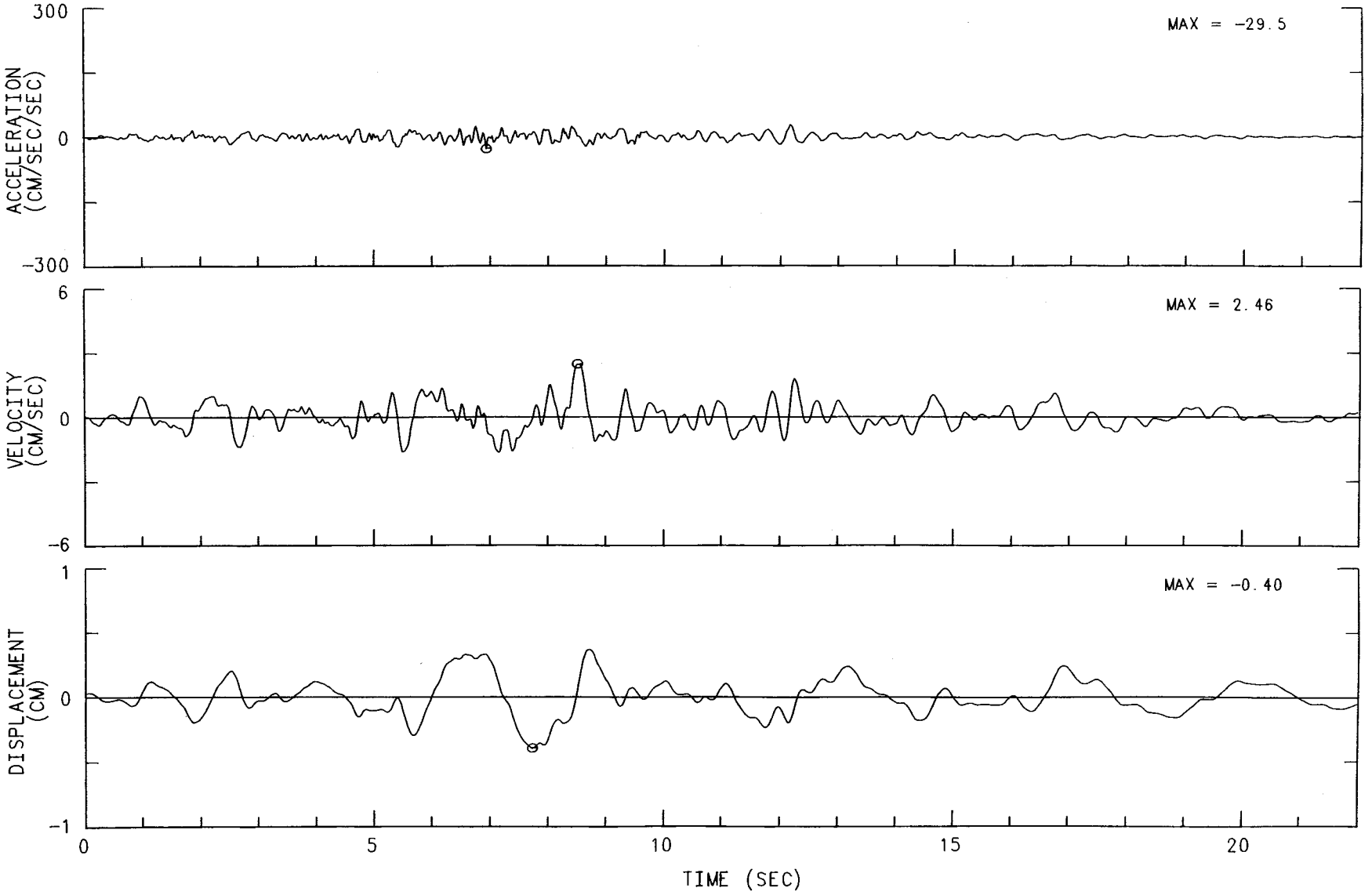
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
UNCORRECTED ACCELEROGRAM 47315-C0139-85066.01 061285.1252-QM84A315



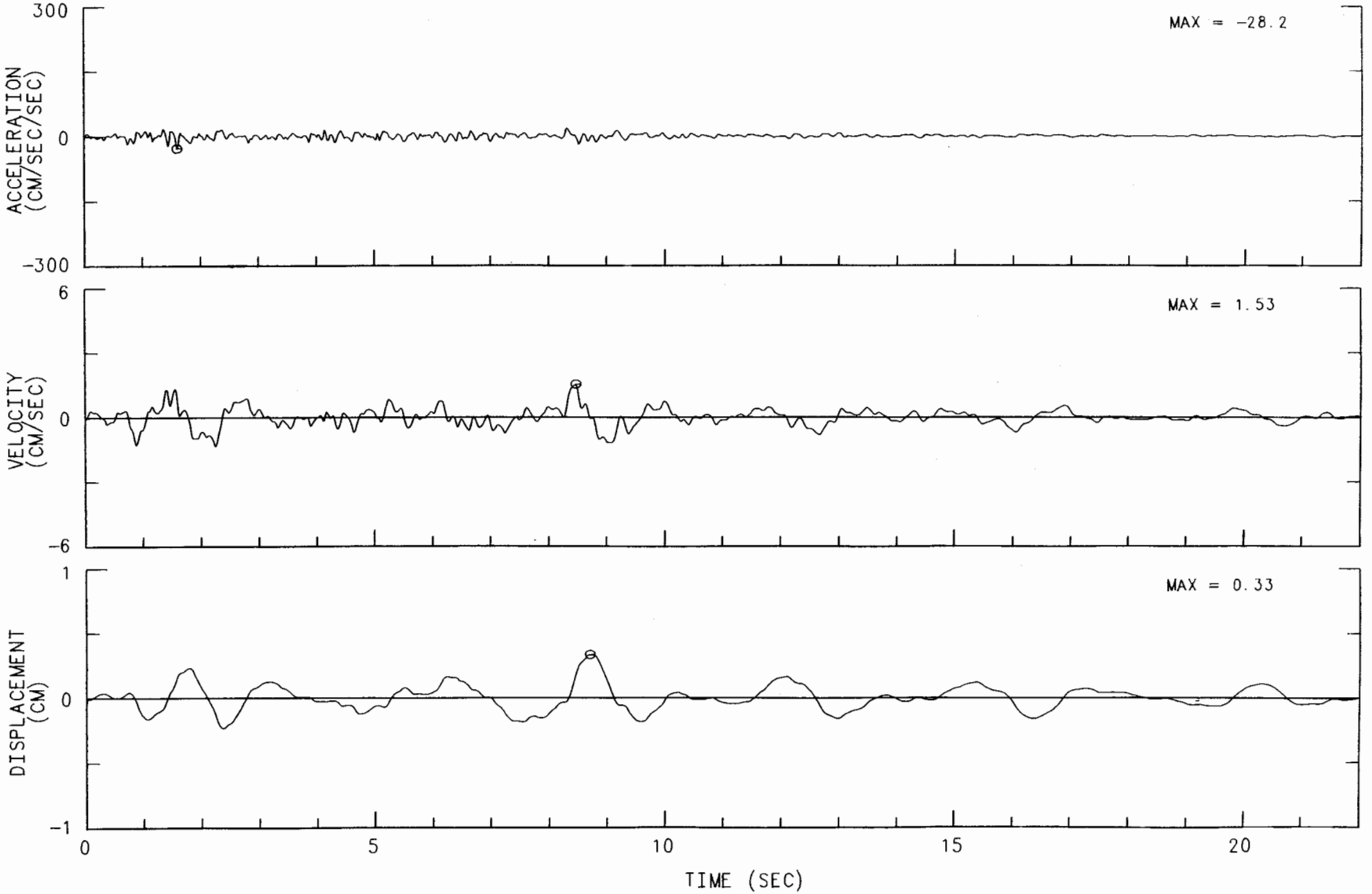
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
UNCORRECTED ACCELEROGRAM 47315-C0139-85066.01 061285.1252-QM84A315



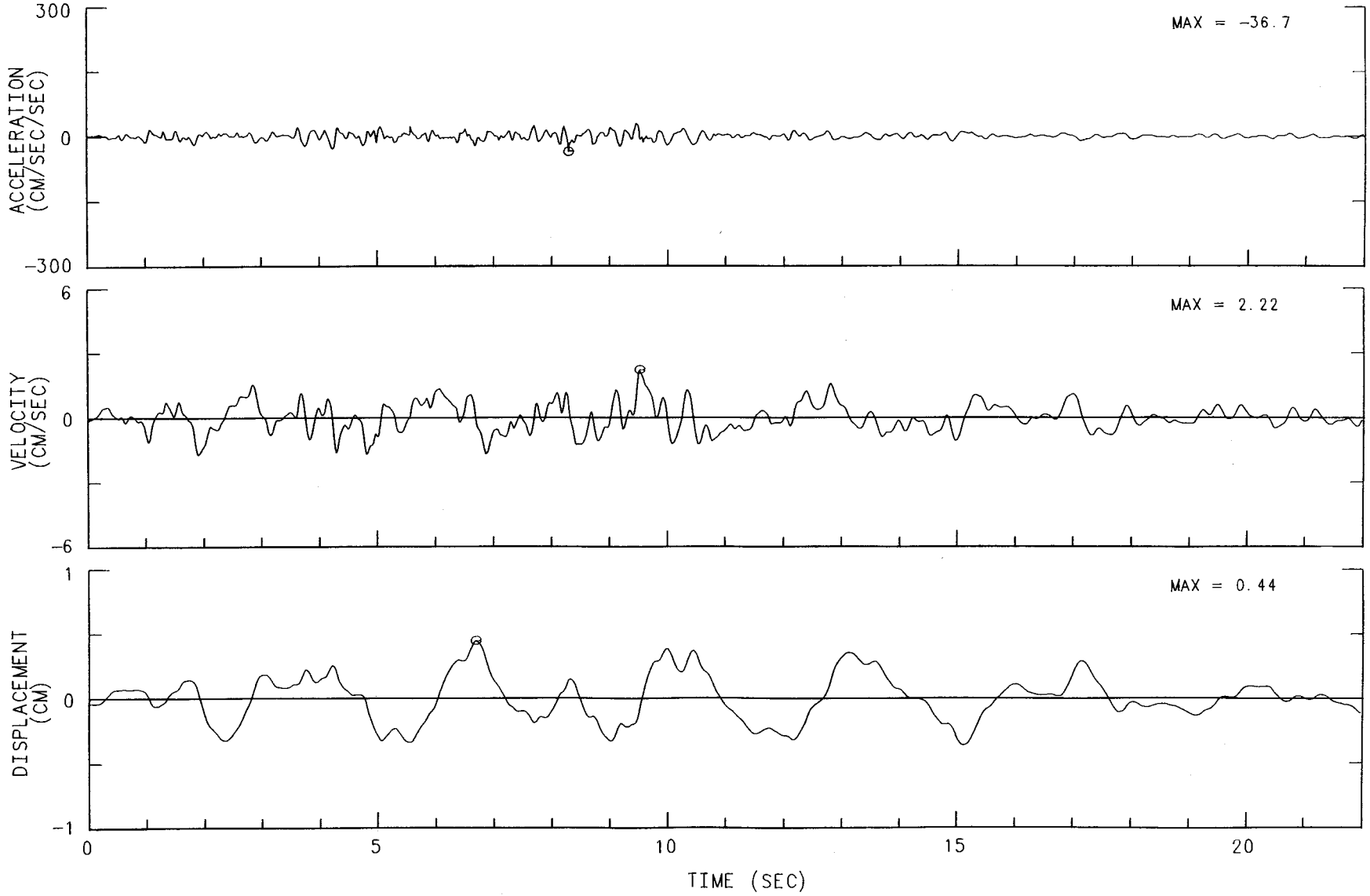
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS CHN 1: 0 DEG (BASE OF EAST COLUMN OF BENT 5)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 47315-C0139-85066.01 061485.1551-QM84A315



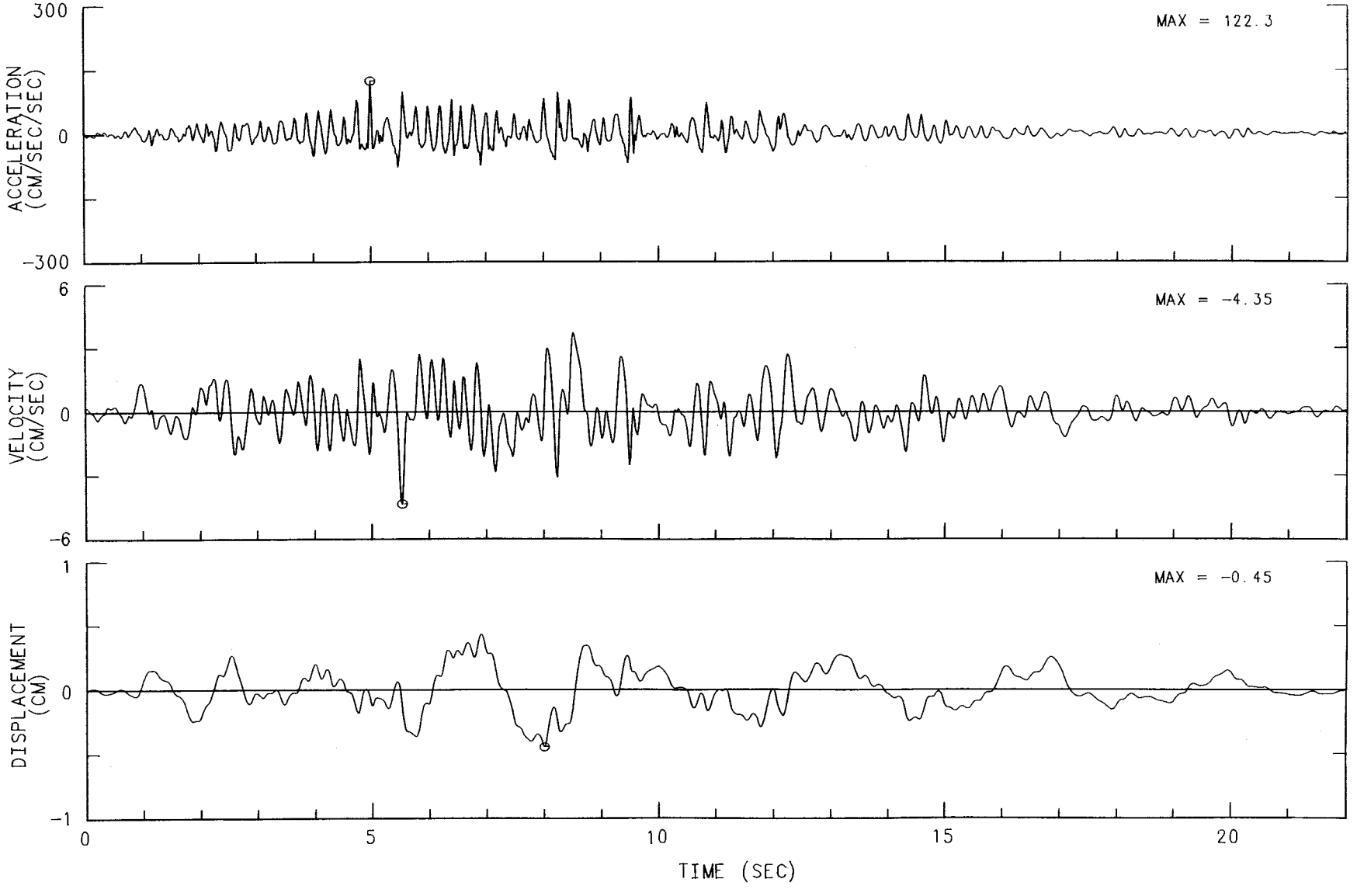
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA – 101/156 OVERPASS CHN 2: UP (BASE OF EAST COLUMN OF BENT 5)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 47315-C0139-85066.01 061485.1551-QM84A315



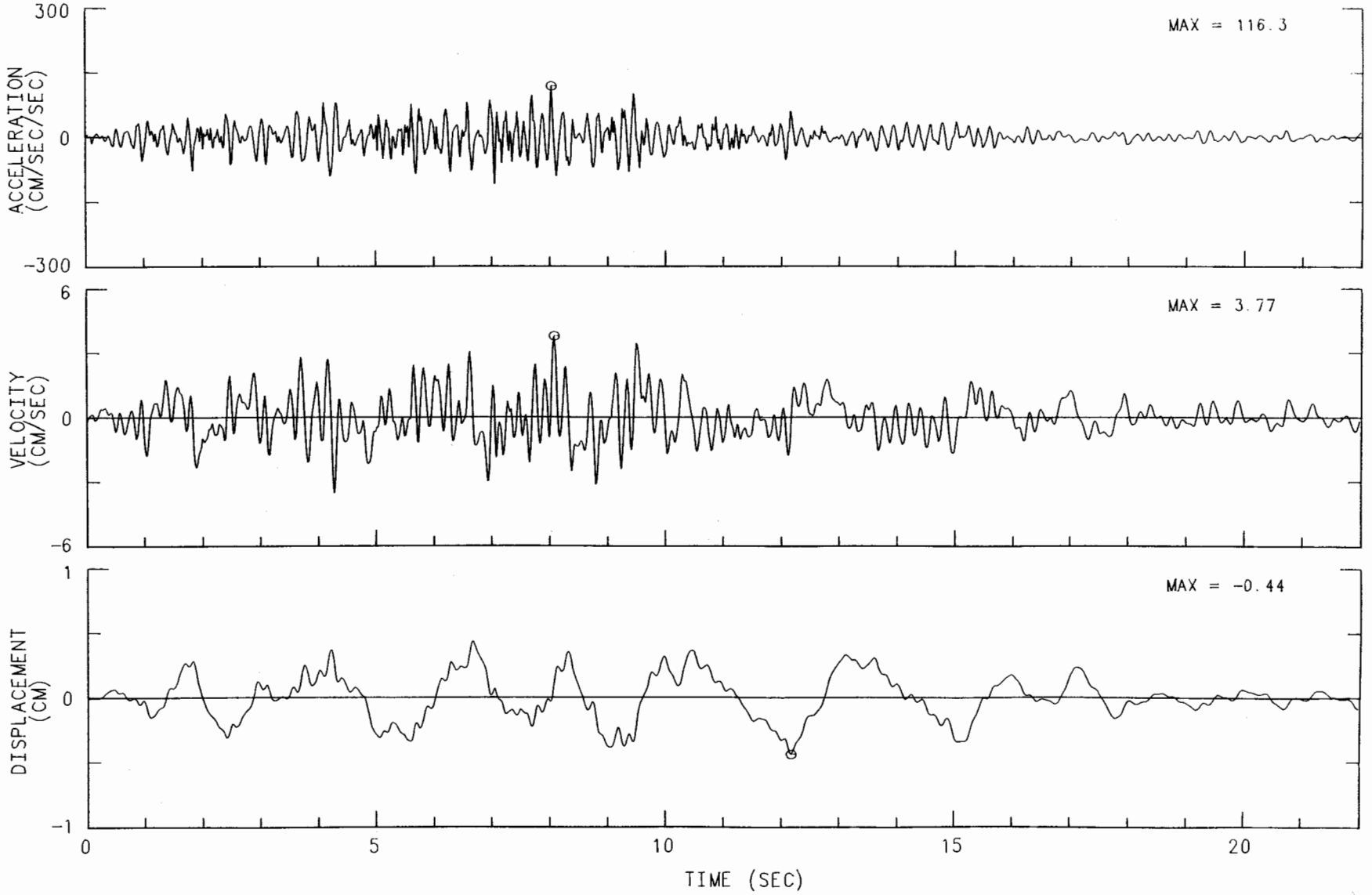
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS CHN 3: 90 DEG (BASE OF EAST COLUMN OF BENT 5)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 47315-C0139-85066.01 061485.1551-QM84A315



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS CHN 4: 0 DEG (TOP OF EAST COLUMN OF BENT 5)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 47315-C0139-85066.01 061485.1551-QM84A315



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS CHN 6: 90 DEG (BRIDGE DECK ABOVE E. END OF BENT 5)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 47315-C0139-85066.01 061485.1551-QM84A315

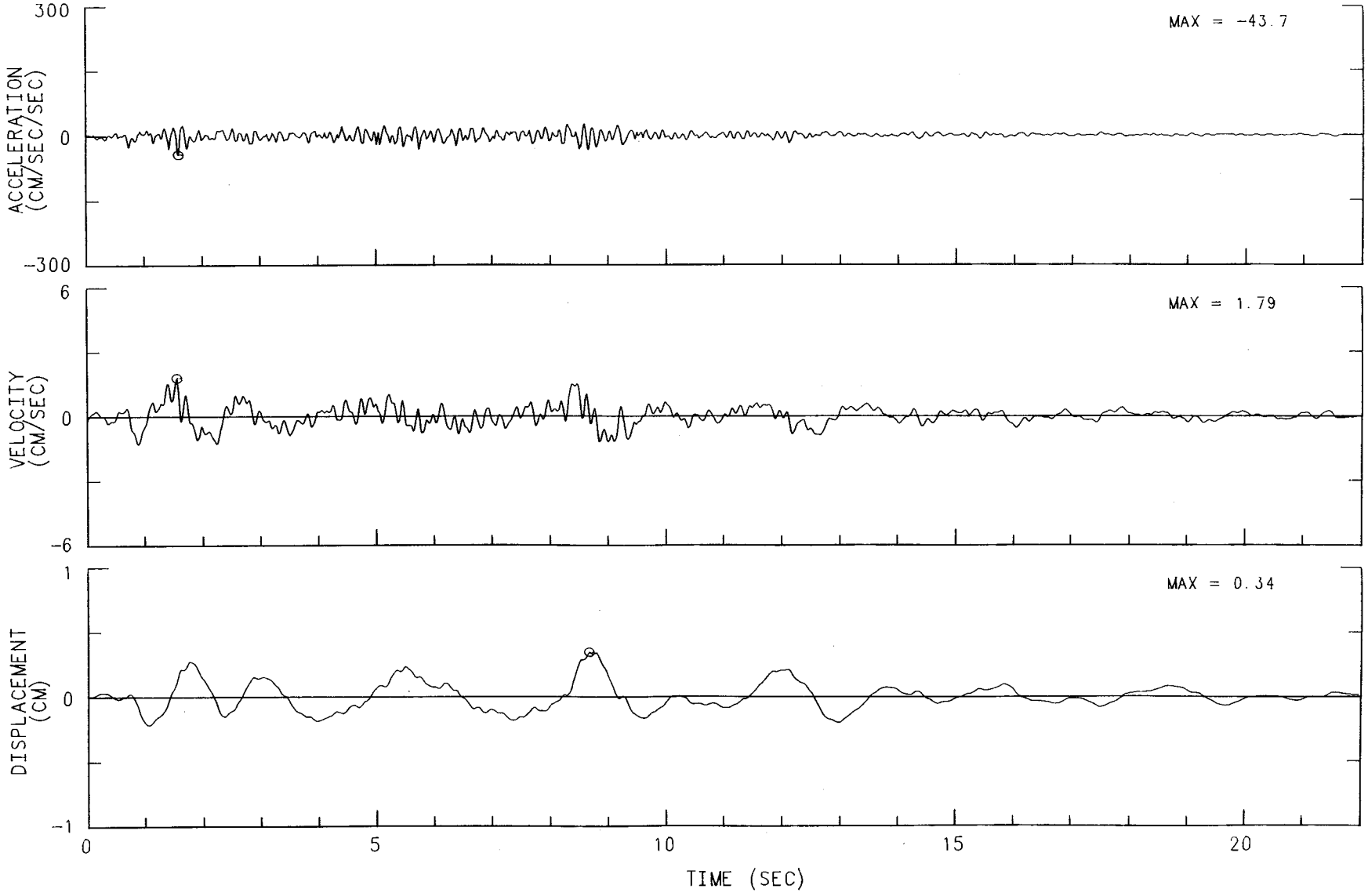


MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST

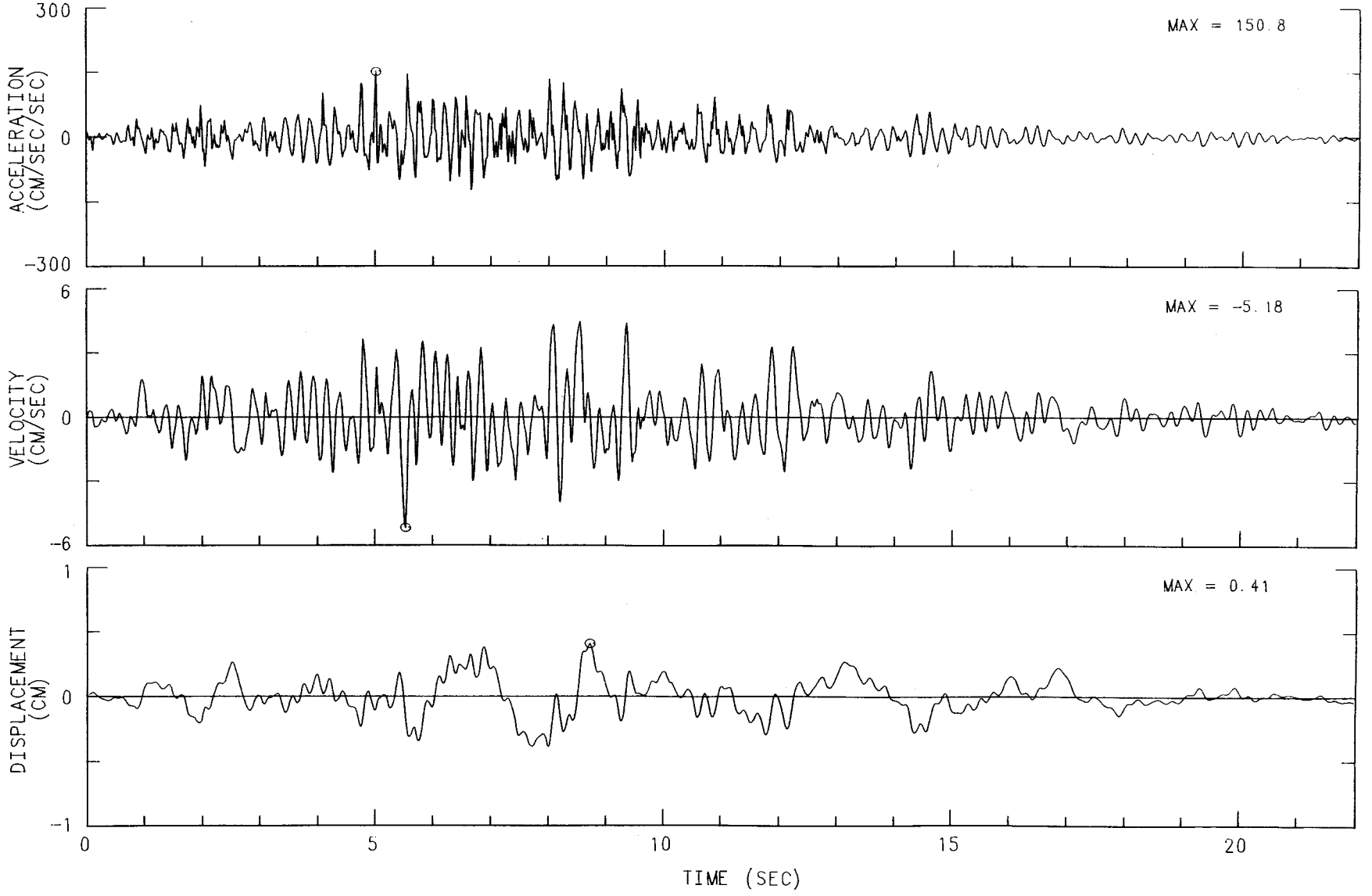
SAN JUAN BAUTISTA - 101/156 OVERPASS CHN 7: UP (BRIDGE DECK ABOVE E. END OF BENT 5)

INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT

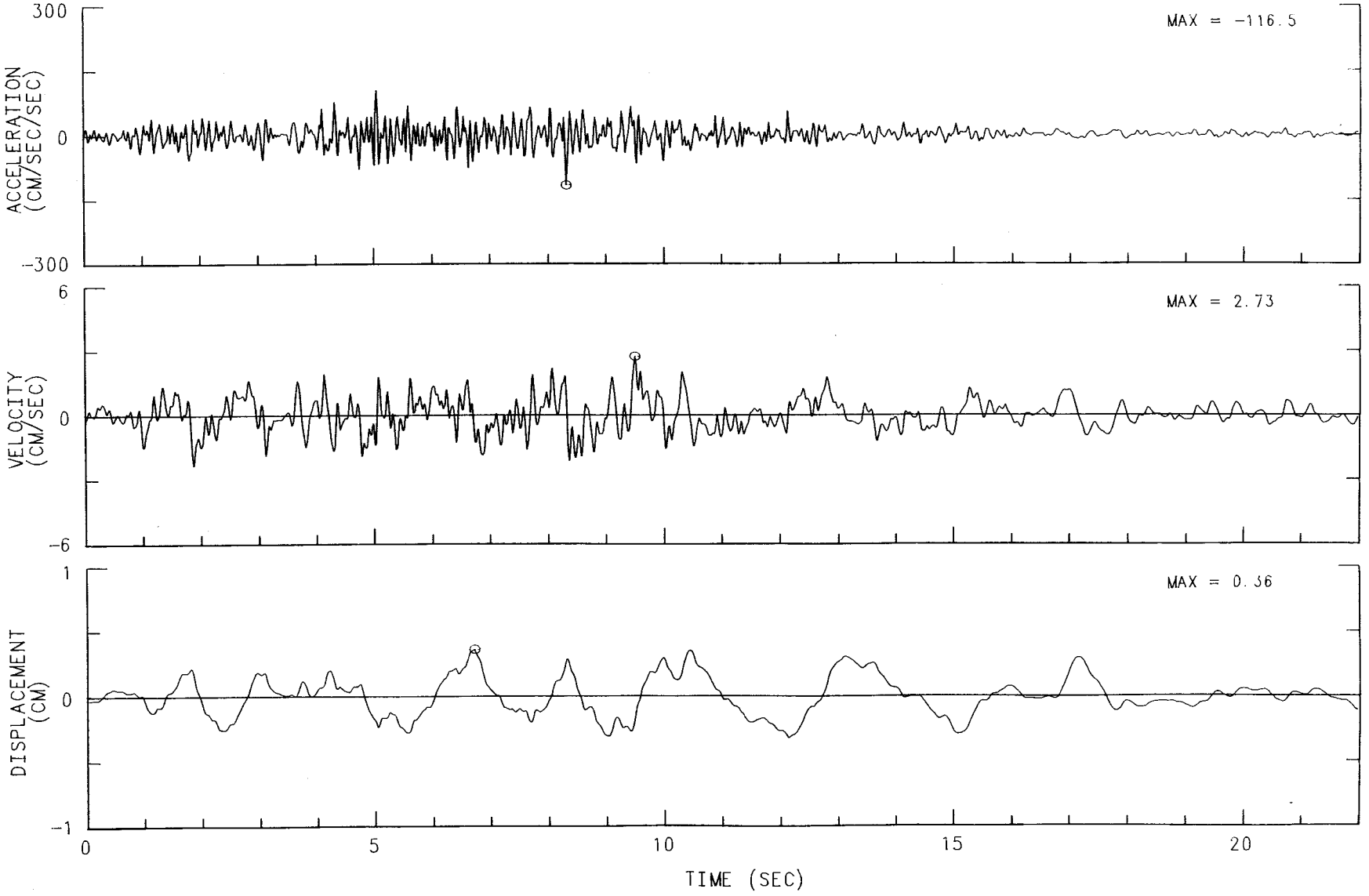
FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 47315-C0139-85066.01 061485.1551-QM84A315



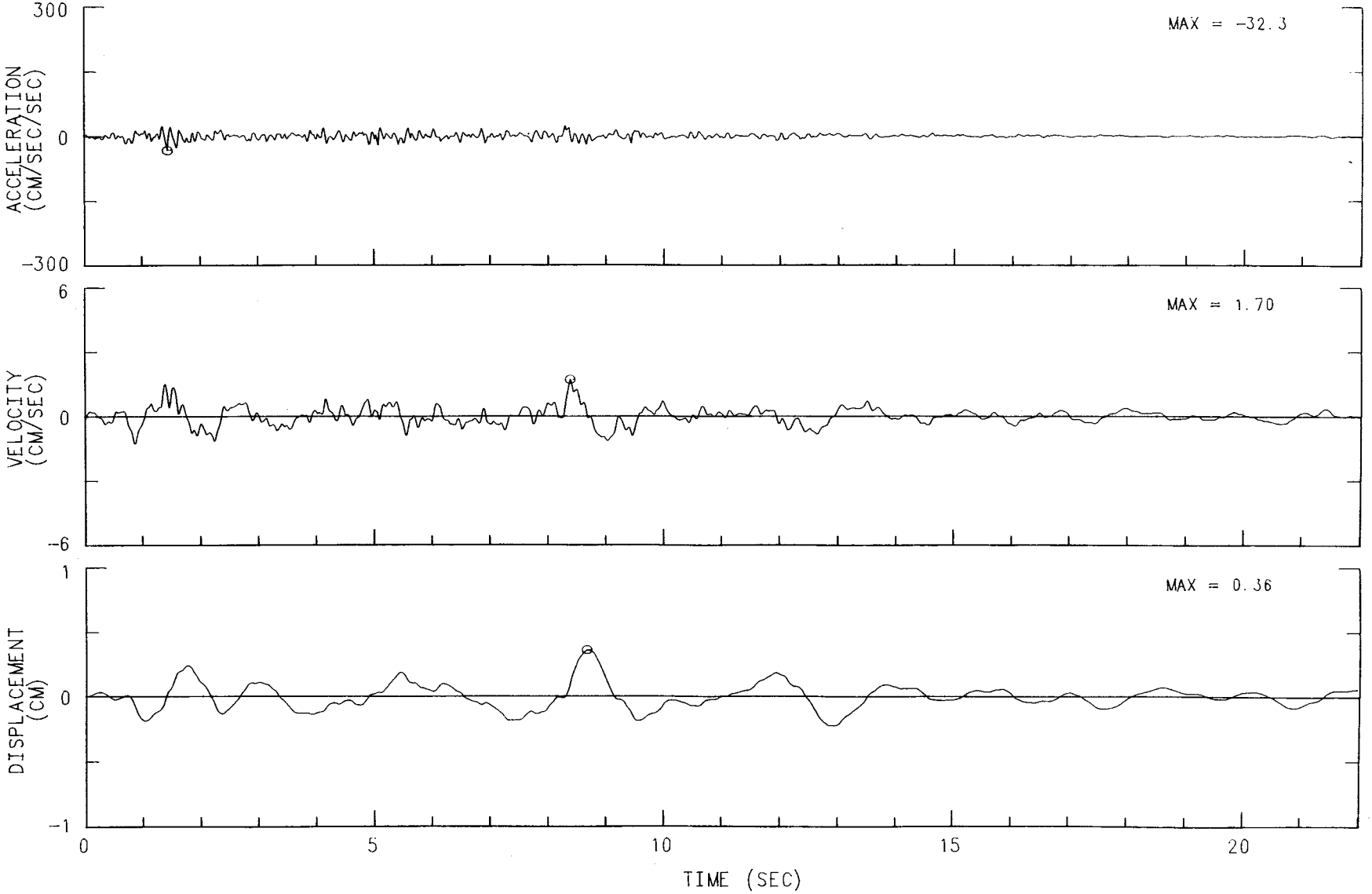
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS CHN 8: 0 DEG (BRIDGE DECK ABOVE E. END OF BENT 5)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 47315-C0139-85066.01 061485.1551-QM84A315



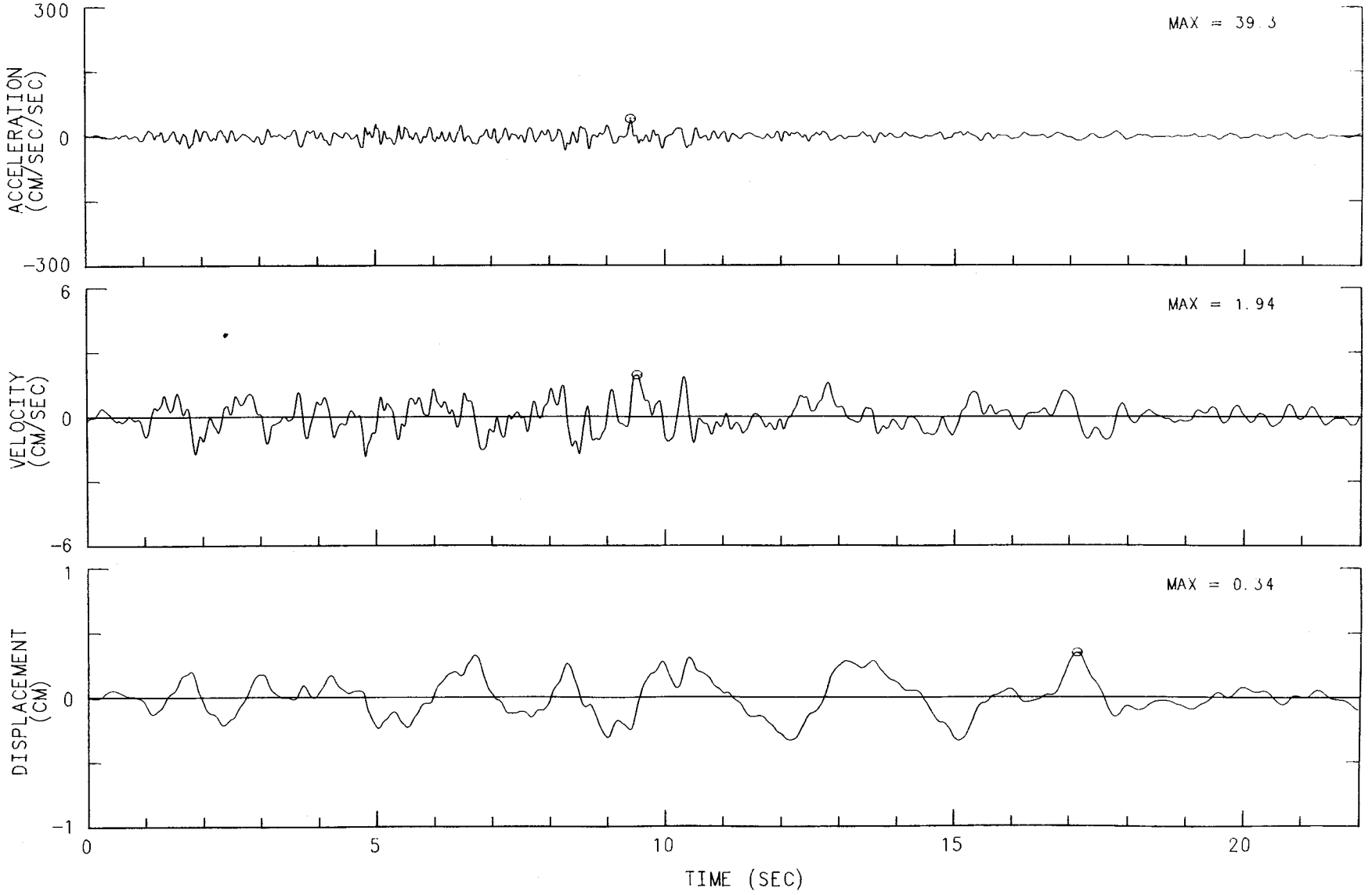
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS CHN 9: 90 DEG (BRIDGE DECK ABOVE E. END OF BENT 4)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 47315-C0139-85066.01 061485.1551-QM84A315



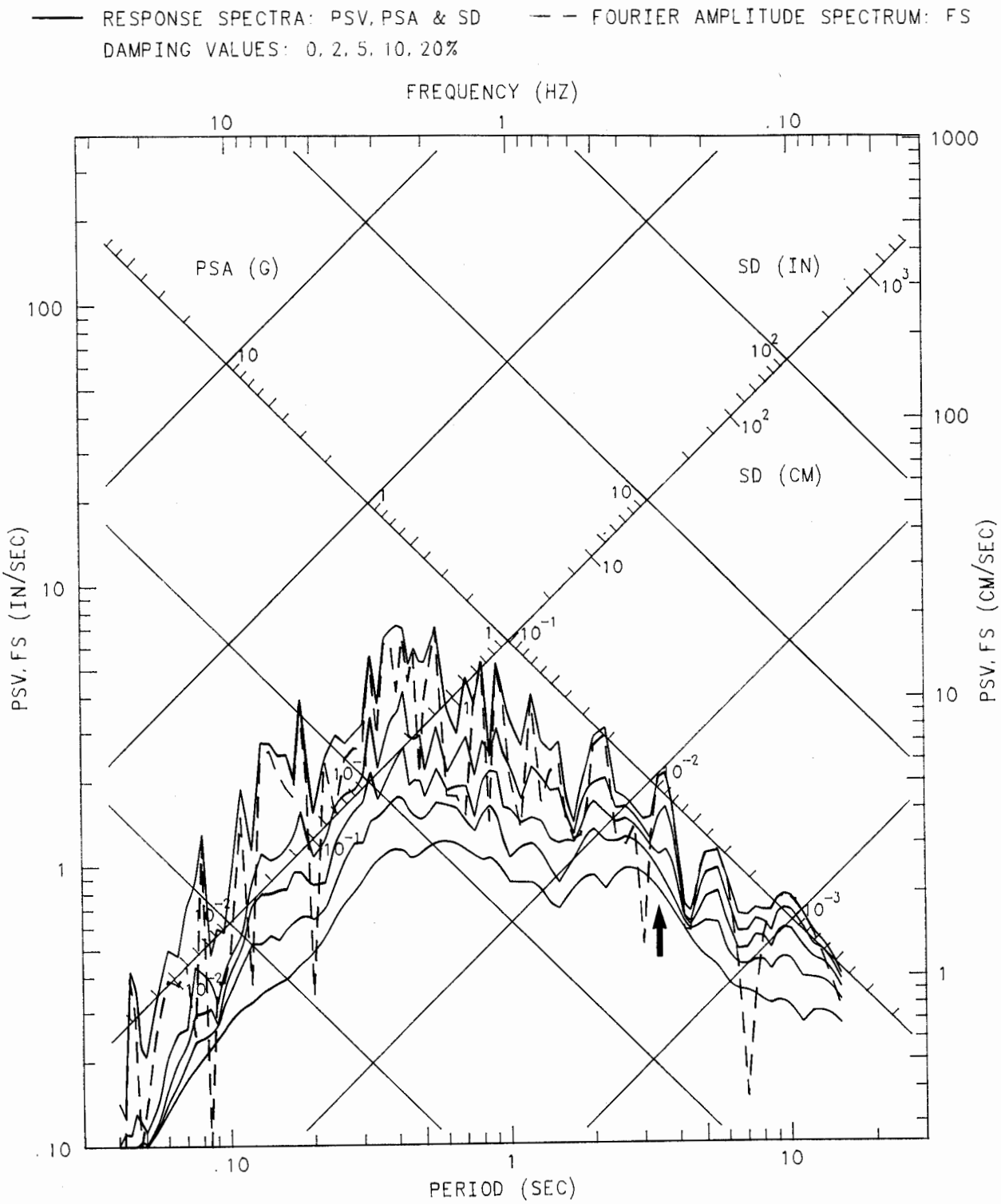
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS CHN 11: UP (BASE OF EAST COLUMN OF BENT 3)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 47315-C0139-85066.01 061485.1551-QM84A315



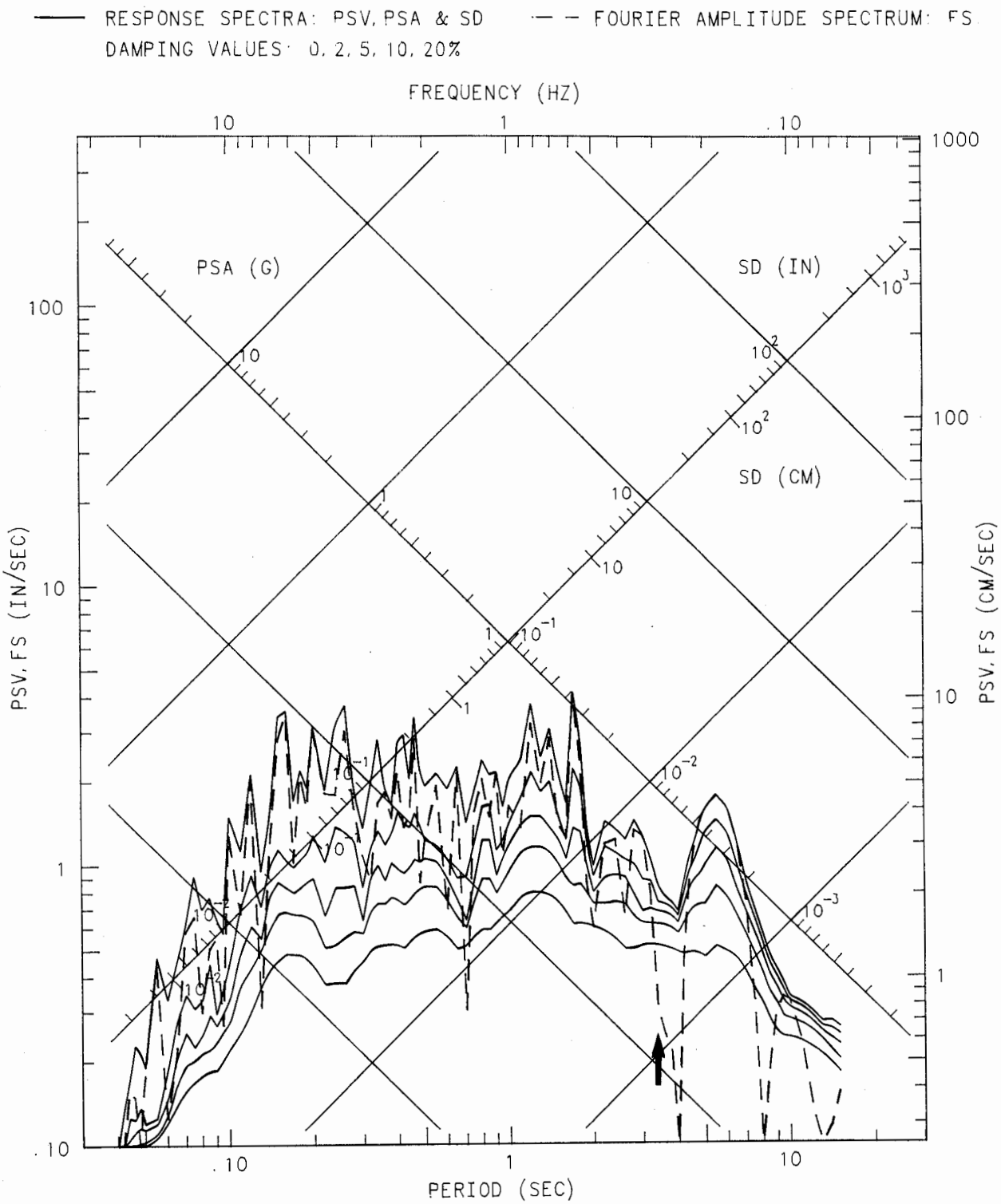
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS CHN 12: 90 DEG (BASE OF EAST COLUMN OF BENT 3)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 47315-C0139-85066.01 061485.1551-QM84A315



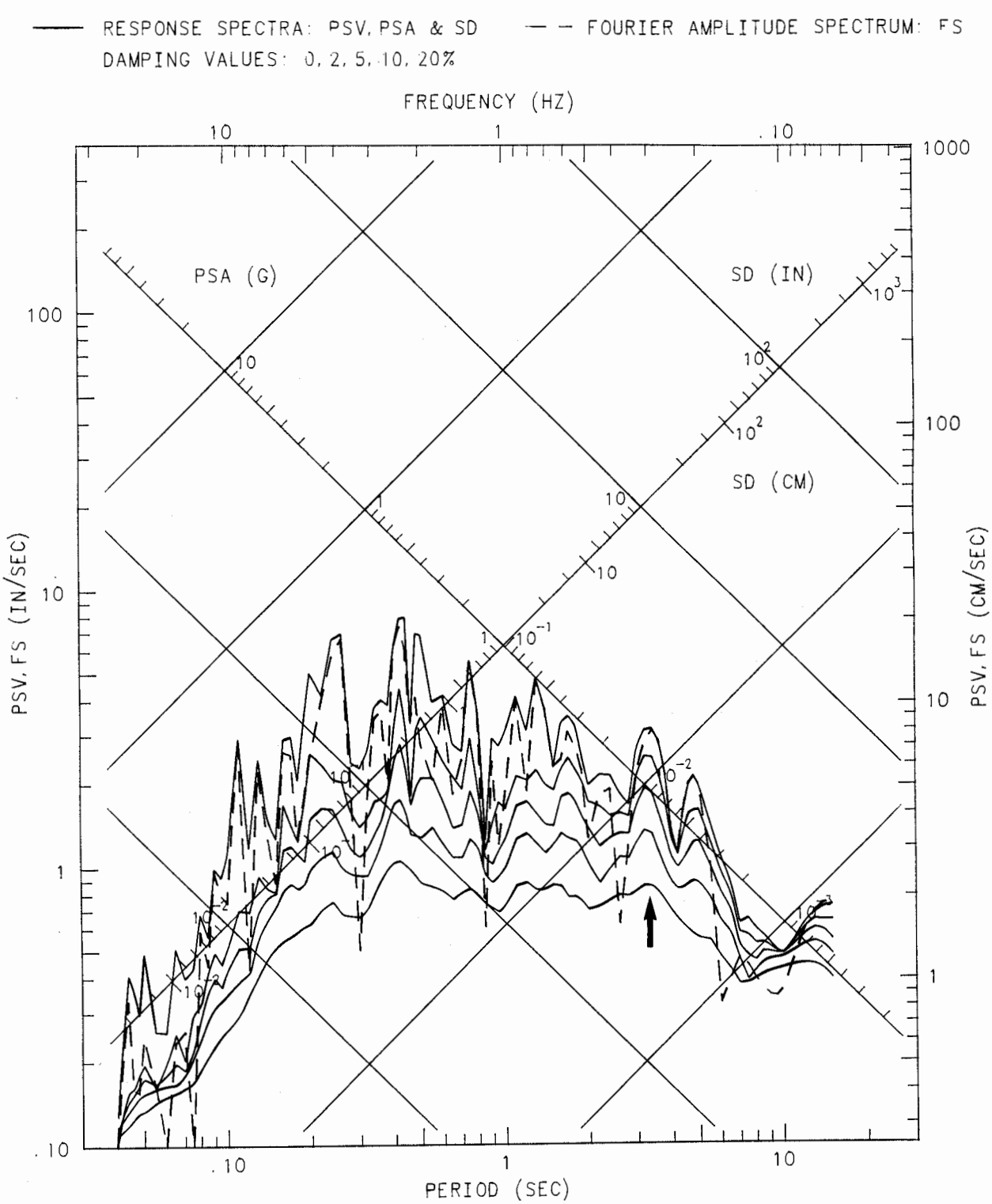
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
CHN 1: 0 DEG (BASE OF EAST COLUMN OF BENT 5)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47315-C0139-85066.01 061385.1031-QM84A315



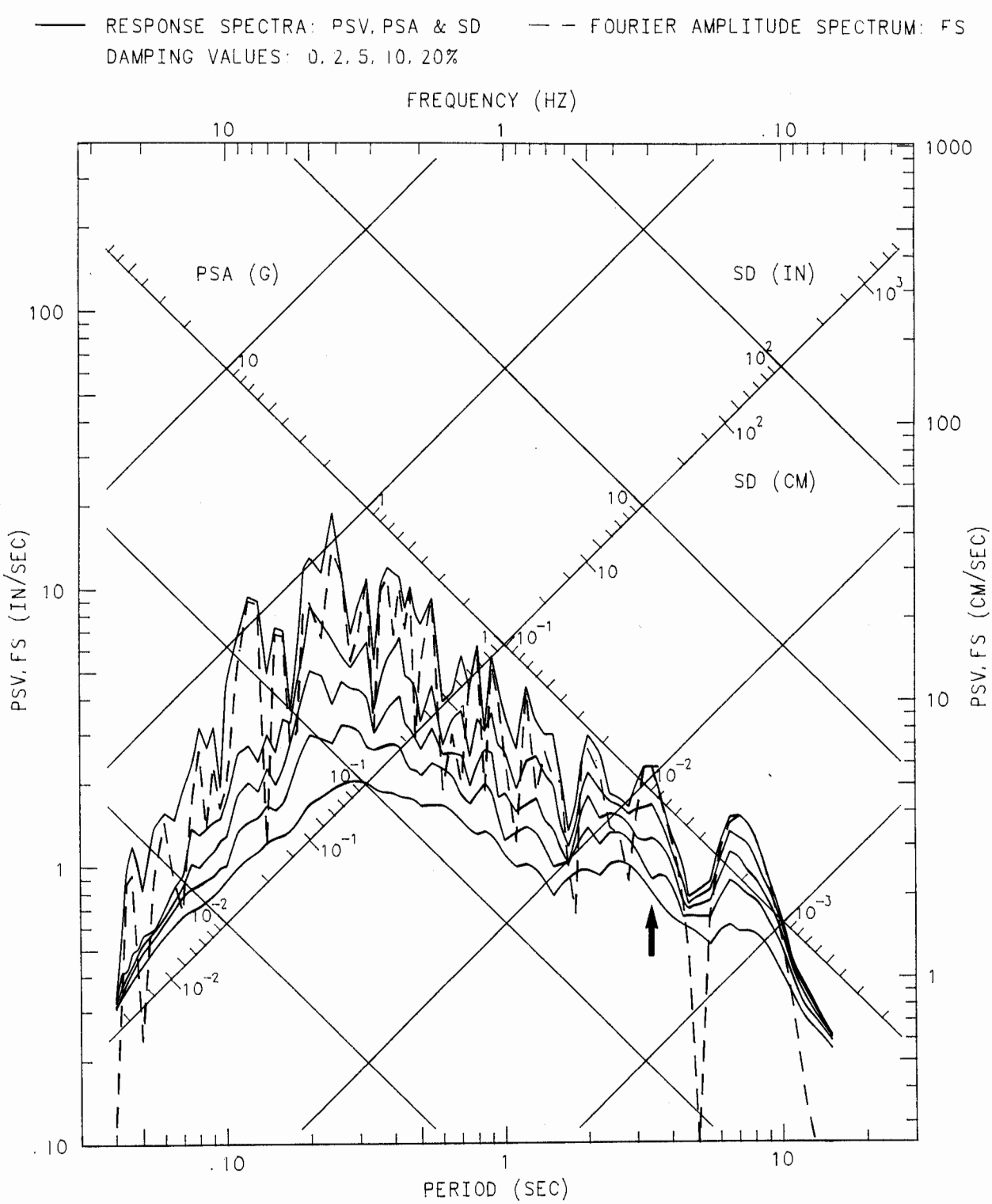
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
CHN 2: UP (BASE OF EAST COLUMN OF BENT 5)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47315-C0139-85066.01 061385.1031-QM84A315



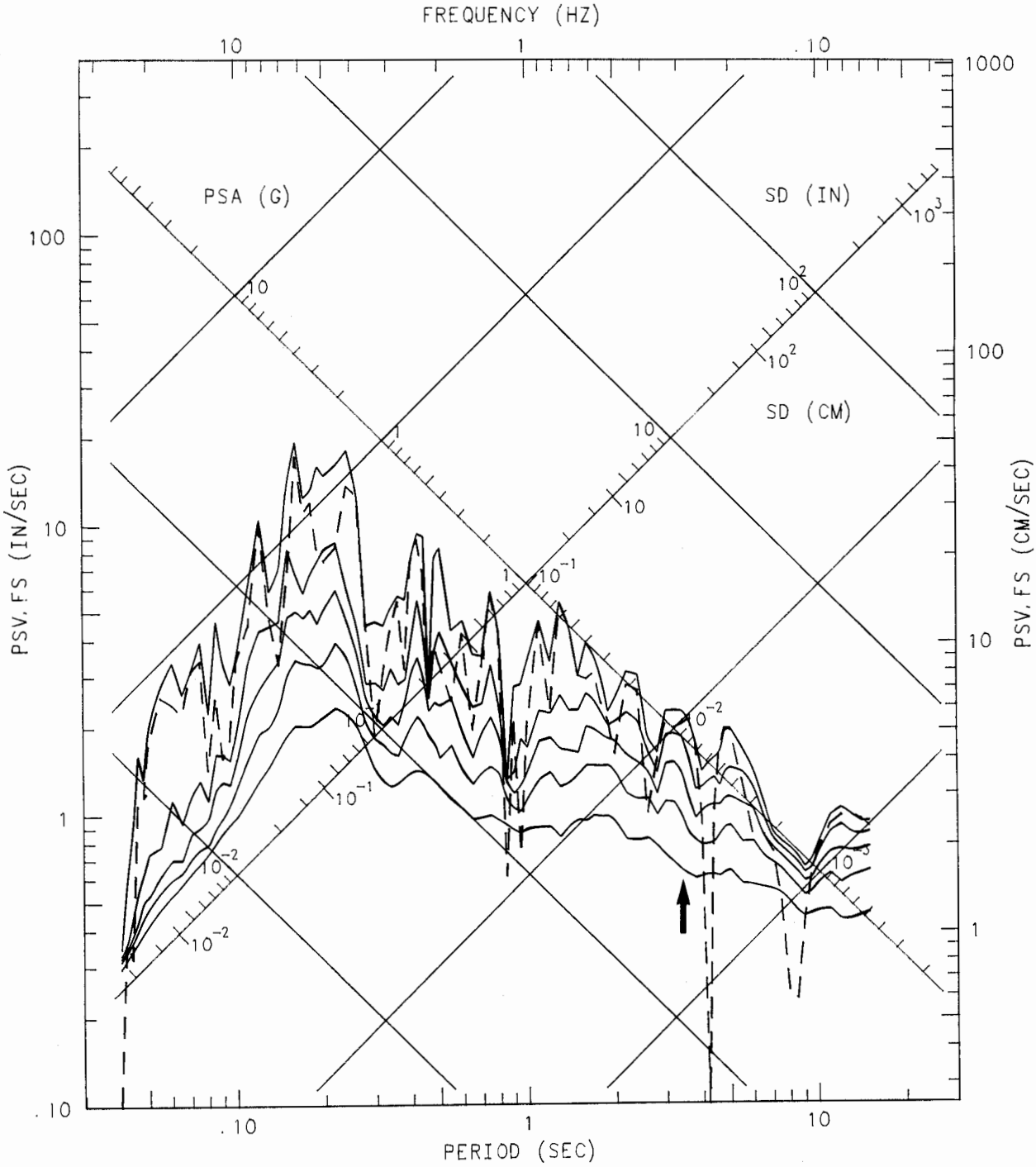
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
CHN 3: 90 DEG (BASE OF EAST COLUMN OF BENT 5)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47315-C0139-85066.01 061385.1031-QM84A315



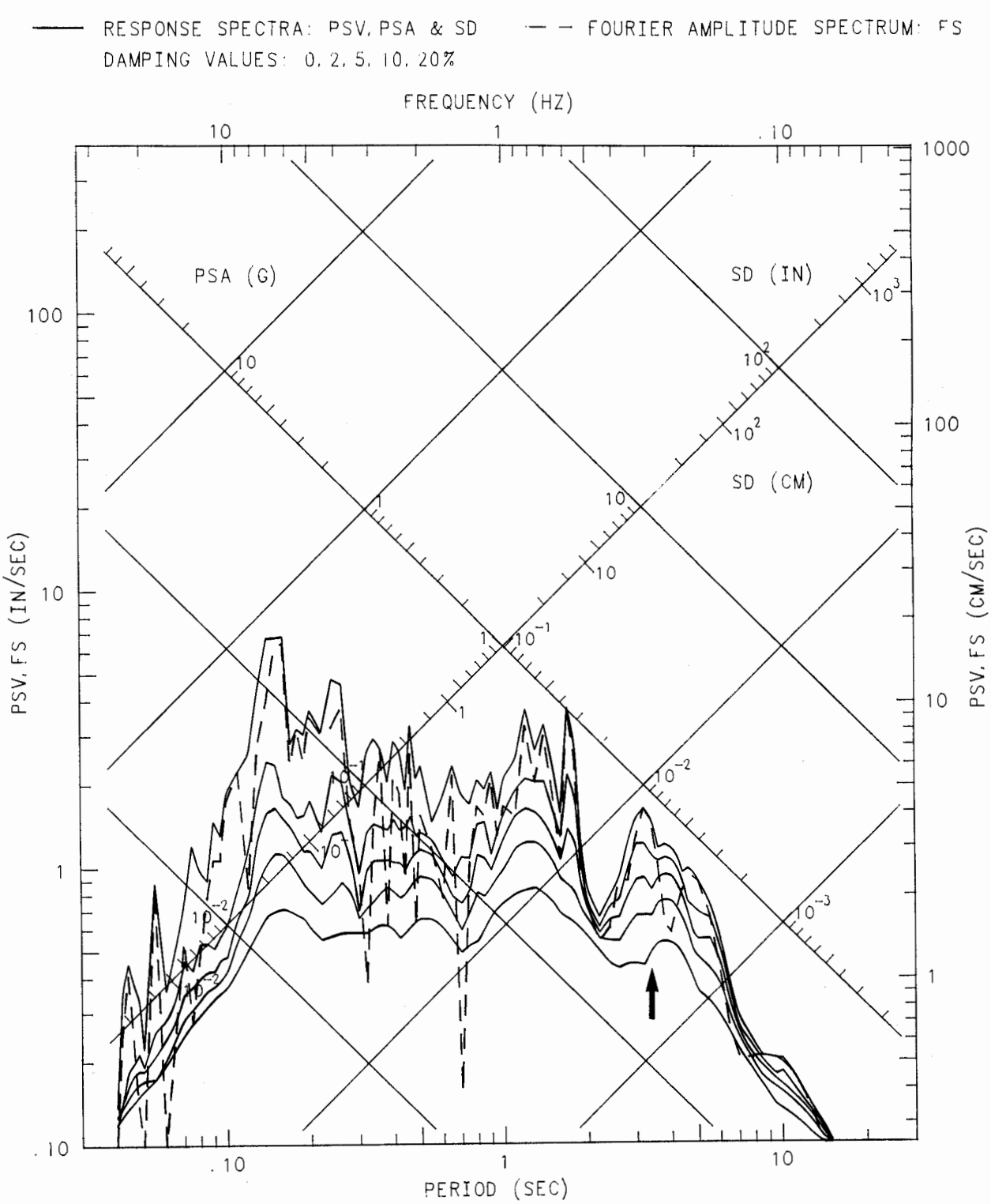
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
CHN 4: 0 DEG (TOP OF EAST COLUMN OF BENT 5)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47315-C0139-85066.01 061385.1031-QM84A315



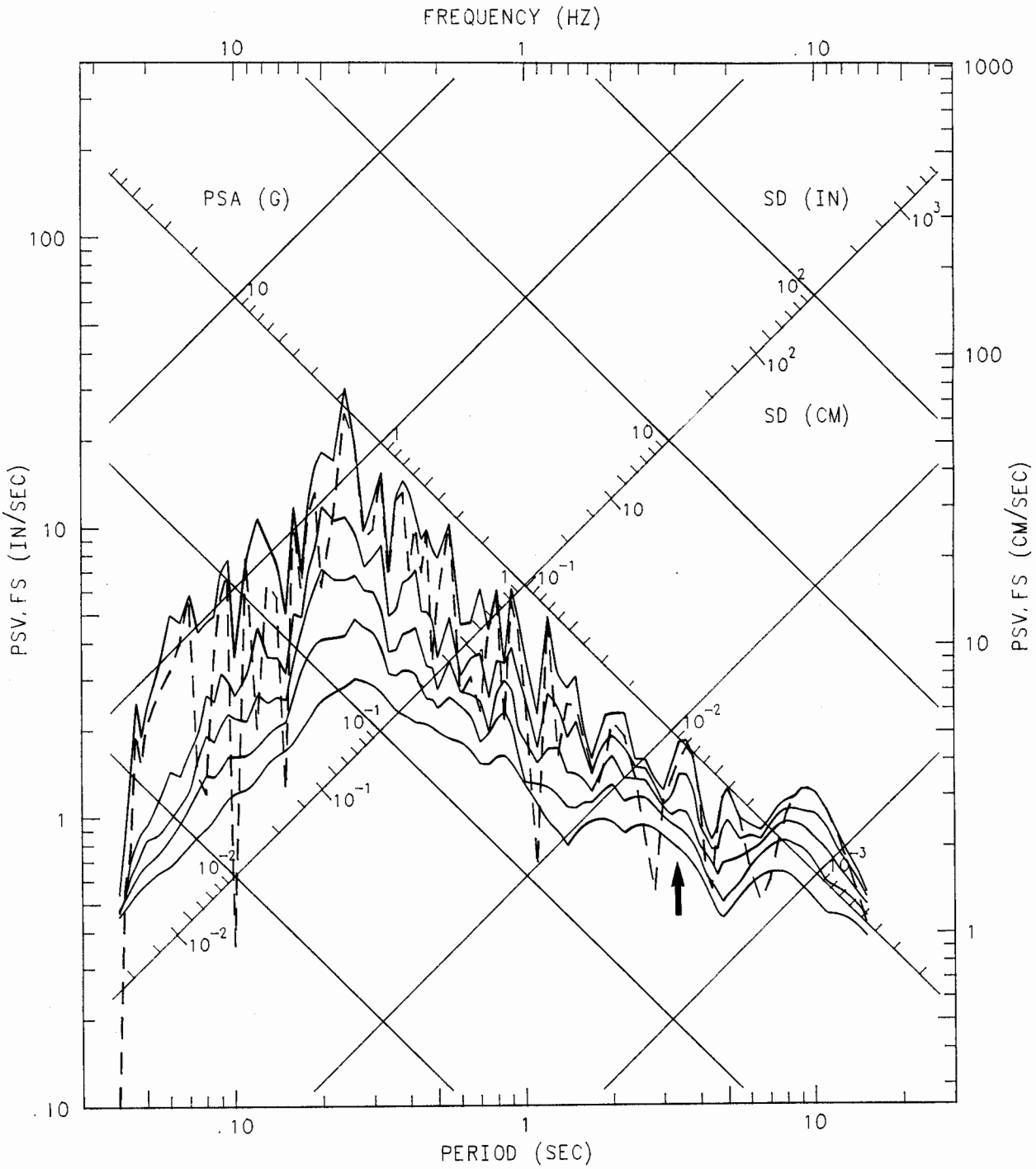
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
CHN 6: 90 DEG (BRIDGE DECK ABOVE E. END OF BENT 5)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47315-C0139-85066.01 061385.1031-QM84A315



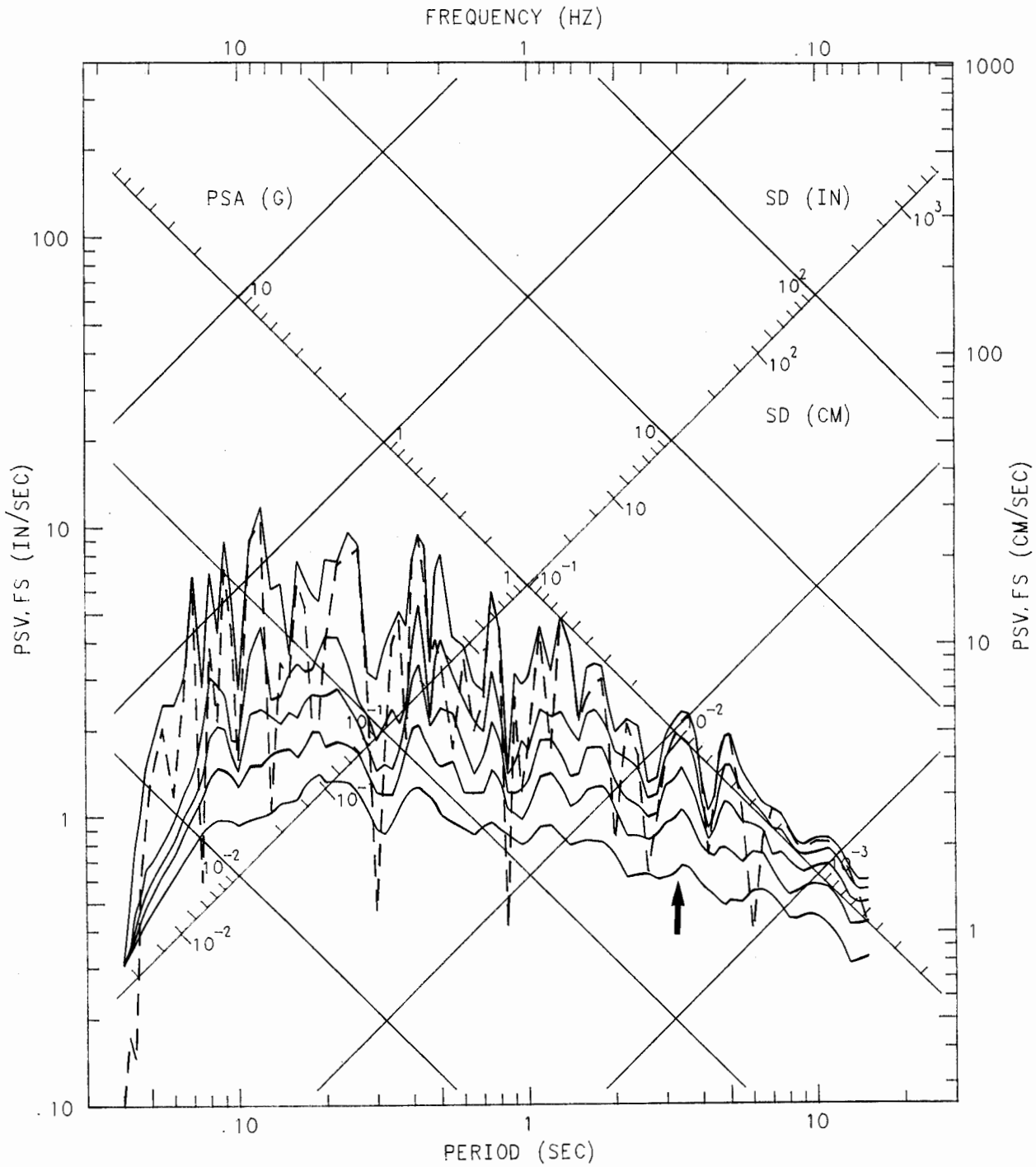
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
CHN 7: UP (BRIDGE DECK ABOVE E. END OF BENT 5)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47315-C0139-85066.01 061385.1031-QM84A315



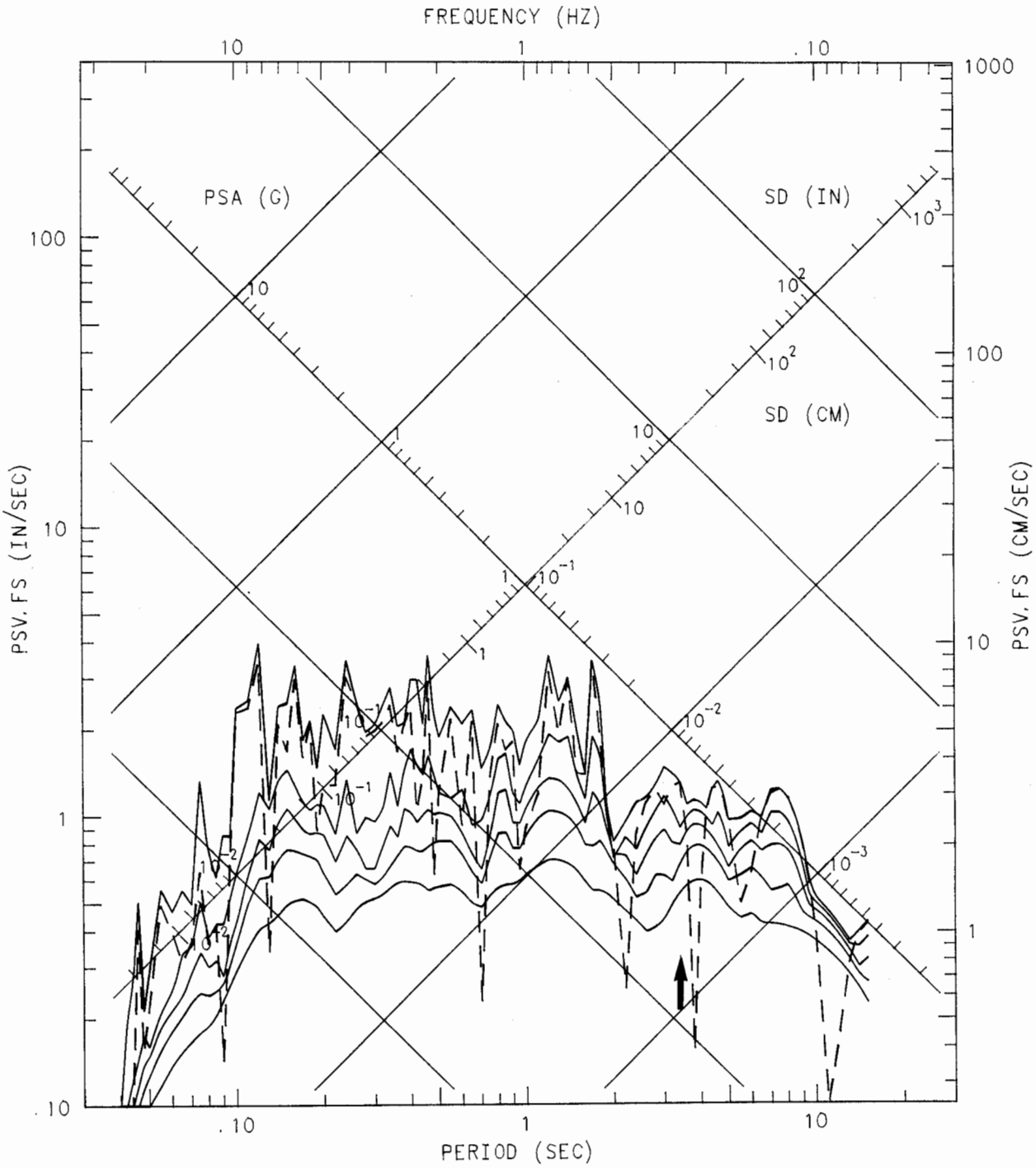
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
CHN 8: 0 DEG (BRIDGE DECK ABOVE E. END OF BENT 5)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47315-C0139-85066.01 061385.1031-QM84A315



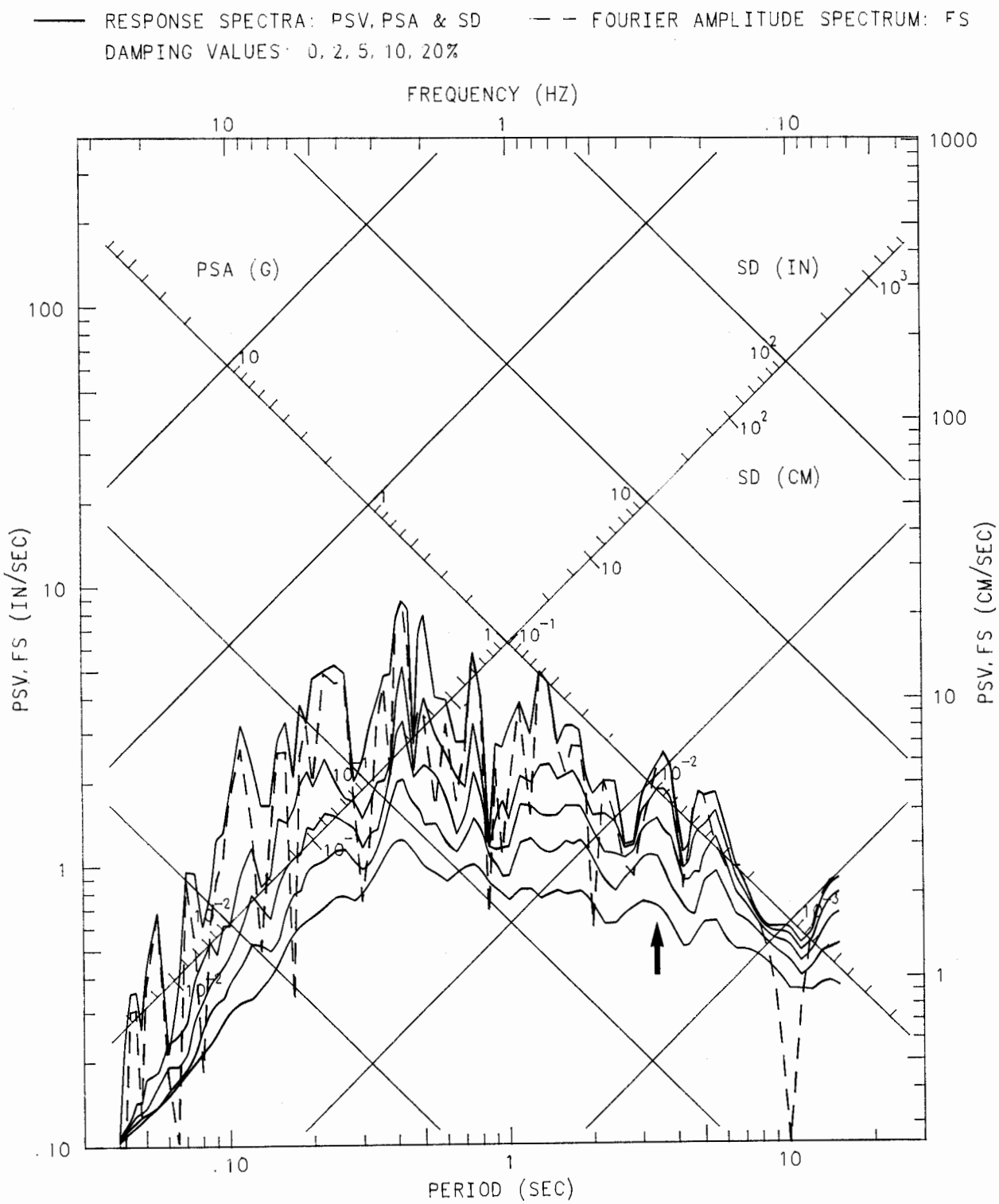
MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
CHN 9: 90 DEG (BRIDGE DECK ABOVE E. END OF BENT 4)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47315-C0139-85066.01 061385.1031-QM84A315



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
CHN 11: UP (BASE OF EAST COLUMN OF BENT 3)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47315-C0139-85066.01 061385.1031-QM84A315



MORGAN HILL EARTHQUAKE APRIL 24, 1984 13:15 PST
SAN JUAN BAUTISTA - 101/156 OVERPASS
CHN 12: 90 DEG (BASE OF EAST COLUMN OF BENT 3)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47315-C0139-85066.01 061385.1031-QM84A315



LIST OF CSMIP REPORTS AND DATA TAPES

California Department of Conservation
Division of Mines and Geology
Office of Strong Motion Studies
California Strong Motion Instrumentation Program (CSMIP)

AVAILABLE REPORTS:

Title	Number
I. Earthquake Data Reports:	
Selected Accelerograms from the Redlands, California Earthquake of October 2, 1985 (Including first records from a Base-Isolated Building)	OSMS 85-02
CSMIP Strong-Motion Records from the Bishop, California Earthquake of 23 November 1984	OSMS 84-12
CDMG Strong-Motion Records from the Morgan Hill, California Earthquake of 24 April 1984	OSMS 84-7
Preliminary Summary of CDMG Strong-Motion Records from the 2 May 1983 Coalinga, California, Earthquake	OSMS 83-5.2
Strong-Motion Records from the Mammoth Lakes, California Earthquake of 6 January 1983	OSMS 83-1.1
Strong-Motion Records Recovered from the Mammoth Lakes, California, Earthquake of 30 September 1981	OSMS 81-10.1
Strong-Motion Records Recovered from the Westmorland, California, Earthquake of 25 April 1981	OSMS 81-5.1
Strong-Motion Records Recovered from the Trindad-Offshore, California, Earthquake of 25 April 1981	OSMS 80-11.1
Strong-Motion Records from the Livermore Earthquakes of 24 and 26 January 1980	PR 28
Strong-Motion Records from the Mammoth Lakes Earthquakes of May 1980	PR 27
Compilation of Strong-Motion Records and Preliminary Data from the Imperial Valley Earthquake of 15 October 1979	PR 26
Compilation of Strong-Motion Records from the Coyote Lake Earthquake of 6 August 1979	PR 25
Compilation of Strong-Motion Records Recovered from the Bishop, California, Earthquake of 4 October 1978	OSMS 78-7.1

Title	Number
Compilation of Strong-Motion Records Recovered from the Santa Barbara Earthquake of 13 August 1978	PR 22
Catalog of Strong Motion Accelerograph Records Recovered by Office of Strong Motion Studies During 1982	SR 154A
Catalog of Strong Motion Accelerograph Records Recovered by Office of Strong Motion Studies before January 1, 1982	SR 154
II. Processed Data Reports:	
Processed Data from Strong-Motion Records of the Morgan Hill Earthquake of 24 April 1984: Part I Ground-Response Records (in preparation)	OSMS 85-04
Processed Data from the Strong-Motion Records of the Imperial Valley Earthquake of 15 October 1979. Final Results	SP 65
Processed Data from the San Juan Bautista 101/156 Separation Bridge and the San Juan Bautista Freefield Records from the Coyote Lake Earthquake 6 August 1979	SP 64
Processed Data from the Gilroy Array and Coyote Creek Records, Coyote Lake, California, Earthquake 6 August 1979 (Note: Does not include San Juan Bautista records)	PR 24
Processed Data from the Strong-Motion Records of the Santa Barbara Earthquake of 13 August 1978. Final Results (in three volumes)	SR 144
III. Other Reports:	
Standard Tape Format of CSMIP Strong-Motion Data Tapes	OSMS 85-03
California Strong-Motion Instrumentation Program: Construction and Installation Notes for a Ground-Response Station.	OSMS 85-01

There is a nominal charge for these reports.

AVAILABLE STRONG-MOTION DATA TAPES:

Tape Name	Description
SANTBARB78	Santa Barbara earthquake of 13 August 1978; Vol. 1, 2, and 3 data.
IMPERIAL79	Imperial Valley earthquake of 15 October 1979 (County Services Bldg. and other CSMIP stations); Vol. 1, 2, and 3 data.
COYOTE79A	Coyote Lake earthquake of 6 August 1979, Gilroy Array stations; Vol. 1, 2, and 3 data.
COYOTE79B	Coyote Lake earthquake of 6 August 1979, San Juan Bautista overpass and nearest free-field station; Vol. 1, 2, and 3 data.
COYOTE79C	Coyote Lake earthquake of 6 August 1979, Halls Valley station; Vol. 1, 2, and 3 data.
MAMMOTH80A	Mammoth Lakes earthquakes of 25 May 1980 at 09:34 and 09:49 PDT; Vol. 1, 2, and 3 data.
MAMMOTH80B	Mammoth Lakes earthquakes of 25 May 1980 at 12:45 and 13:36 PDT; Vol. 1, 2, and 3 data.
MAMMOTH80C	Mammoth Lakes earthquakes of 26 May 1980 at 11:58 PDT and 27 May 1980 at 07:51 PDT, Vol. 1, 2, and 3 data.
WESTMOR81	Westmorland earthquake of 26 April 1981; Vol. 1, 2, and 3 data.
MAMMOTH83	Mammoth Lakes earthquakes of 7 Jan 1983 at 01:38 and 03:24 GMT; Vol. 1, 2, and 3 data.
COALINGA83	Coalinga earthquake of 2 May 1983, 16:43 PDT; Vol. 2 and 3 data for 47 records.
COALINGA83-IA	Coalinga earthquake of 2 May 1983, Vol. 1 data for first 22 records.
COALINGA83-IB	Coalinga earthquake of 2 May 1983, Vol. 1 data for remaining 25 records.
COALINGA83AS	Vol. 2 and 3 data for eight aftershocks of the Coalinga 2 May 1983 earthquake. The aftershocks occurred between 8 May and 11 September 1983, and were of magnitude (ML) 4.3 - 6.0.
COALINGA83AS-I	Uncorrected acceleration data (Vol. 1) for the Coalinga aftershock records included on the tape COALINGA83AS.
RIODEL8083	Processed data from the Highway 101 Overpass at Rio Dell for the earthquakes of: 8 Nov 1980 (6.9ML Trinidad-Offshore); 16 Dec 1982 (4.4ML local earthquake) and 24 Aug 1983 (5.5ML Cape Mendicino Offshore); Vol. 1, 2, and 3 data.

Tape Name	Description
MORGANHILL84-IG	Morgan Hill earthquake of 24 April 1984; Vol. 1 data for 19 ground-response records.
MORGANHILL84-G	Morgan Hill earthquake of 24 April 1984; Vol. 2 and 3 data for 19 ground-response records.
MORGANHILL84-IS	Morgan Hill earthquake of 24 April 1984; Vol. 1 data for 9 structural-response records.
MORGANHILL84-S	Morgan Hill earthquake of 24 April 1984; Vol. 2 and 3 data for 9 structural-response records.

Footnotes:

Vol. 1 data - uncorrected accelerations.
Vol. 2 data - instrument and baseline-corrected acceleration, velocity, and displacement.
Vol. 3 data - Response and Fourier amplitude spectra.

The magnetic tapes are provided at cost. Included with each tape is a copy of either the processed data report (if available) or the plots of the data.