PROCESSED CSMIP STRONG-MOTION RECORDS FROM THE LANDERS, CALIFORNIA EARTHQUAKE OF 28 JUNE 1992: RELEASE NO. 2

R. DARRAGH

T. CAO

C. CRAMER

F. SU

M. HUANG

A. SHAKAL

Report No. OSMS 92-13

California Strong Motion Instrumentation Program

California Department of Conservation

Division of Mines and Geology

Office of Strong Motion Studies

801 K Street, MS 13-35, Sacramento, California 95814-3531

December 28, 1992

INTRODUCTION

Strong-motion records were recovered from 144 stations of the California Strong Motion Instrumentation Program (CSMIP) following the Landers earthquake of June 28, 1992. The records from these 144 stations are presented in the CSMIP data report on the earthquake (Shakal and others, 1992).

Digitization and processing of the records recovered by CSMIP started after the data report was completed and is continuing. The preliminary results of digitizing and processing for the first release of 6 records were announced on October 9, 1992 and were included in the first release report (CSMIP, 1992). The second release of 8 stations, including 6 ground-response and 2 instrumented buildings, has been completed and the results are presented in this report. The plots for these records are arranged as follows:

- o Ground-Response Stations:
  1. Amboy
  2. Baker - Fire Station
  3. Hemet - Stetson Ave. Fire Station
  4. Indio - Coachella Canal
  5. Silent Valley - Poppet Flat
  6. Twentynine Palms - Park Maintenance Bldg.

- o Instrumented Buildings:
  7. Pasadena - 6-story Steel/URM Bldg. (16 channels; 2 recorders)
  8. Pomona - 6-story Commercial Bldg. (12 channels; 1 recorder)

Information on the earthquake and recording stations are given in Shakal and others (1992). Details on accelerogram digitizing and processing will be presented in the forthcoming final CSMIP processed data report.

PLOTS OF PROCESSED DATA

The set of plots for each station is identified by the above index number at the upper corner of each page. For each station, four sets of plots are presented in the following order:

The order of the plots for each station is as follows:

1. Phase 1 (Vol. 1) data: uncorrected accelerations. Acceleration for the first 22 seconds is plotted with a common scaling factor for all channels; three channels are plotted on one page. This plot is followed by a second plot of the full processed length (80 seconds for ground-response stations and about 60 seconds for the instrumented buildings) with each channel individually scaled. In addition, for the two instrumented buildings the sensor location diagram and the raw record for the first 44 seconds with all channels from a recorder on a single page are presented.

2. Phase 2 (Vol. 2) data: instrument and baseline-corrected acceleration, velocity and displacement. The data for the full processed length are plotted with equal scaling for all channels. The filter frequencies used in the processing are indicated on the plots (see Usable Data Bandwidth).

3. Phase 3 (Vol. 3) data: response spectra. The pseudo-velocity spectra (PSV), the pseudo-acceleration spectra (PSA), the displacement spectra (SD) and the Fourier amplitude spectra (FS) are presented on a tripartite logarithmic plot for each channel for 0%, 2%, 5%, 10%, and 20% dampings. The spectra are plotted for periods within the Usable Data Bandwidth.

4. Phase 3 (Vol. 3) data: response spectra. The absolute acceleration spectra (SA) for 0%, 2%, 5%, 10% and 20% dampings are plotted against period with linear-linear scaling.

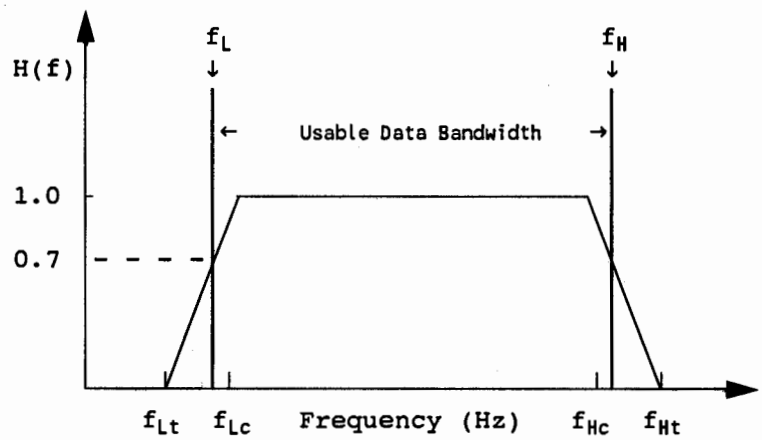
REFERENCE

CSMIP Staff (1992). Preliminary processed strong-motion data for the Landers earthquake of 28 June 1992, Calif. Div. Mines and Geology, Office of Strong Motion Studies, Report No. OSMS 92-11, 60 p.

Shakal, A., M. Huang, T. Cao, R. Sherburne, R. Sydnor, P. Fung, P. Malhotra, C. Cramer, F. Su, R. Darragh and J. Wampole (1992). CSMIP strong-motion records from the Landers, California earthquake of 28 June 1992, Calif. Div. Mines and Geology, Office of Strong Motion Studies, Report No. OSMS 92-09, 330 p.

DEFINITION OF USABLE DATA BANDWIDTH

The filter bands for each record are indicated on the plots for the Phase 2 and Phase 3 data. The digitized data are processed and filtered using Ormsby filters. The data are first low-pass filtered using a high-frequency filter with a corner frequency of 23 Hz and a roll-off termination frequency of 25 Hz. Then the data are high-pass filtered using a low-frequency filter with a corner frequency of 0.07 Hz and a roll-off termination of 0.05 Hz. Therefore, the Phase 2 data is the result of the digitized data being filtered by the bandpass filter H(f) with ramps as shown in the figure:



The usable data bandwidth is defined as the band between frequencies f_H and f_L, where f_H and f_L are the -3 dB points on the high-frequency and low-frequency ramps, respectively. The value of H(f) is approximately equal to 0.7 for -3 dB (see Notes). The user should only use these data for analyses within this bandwidth.

Notes:

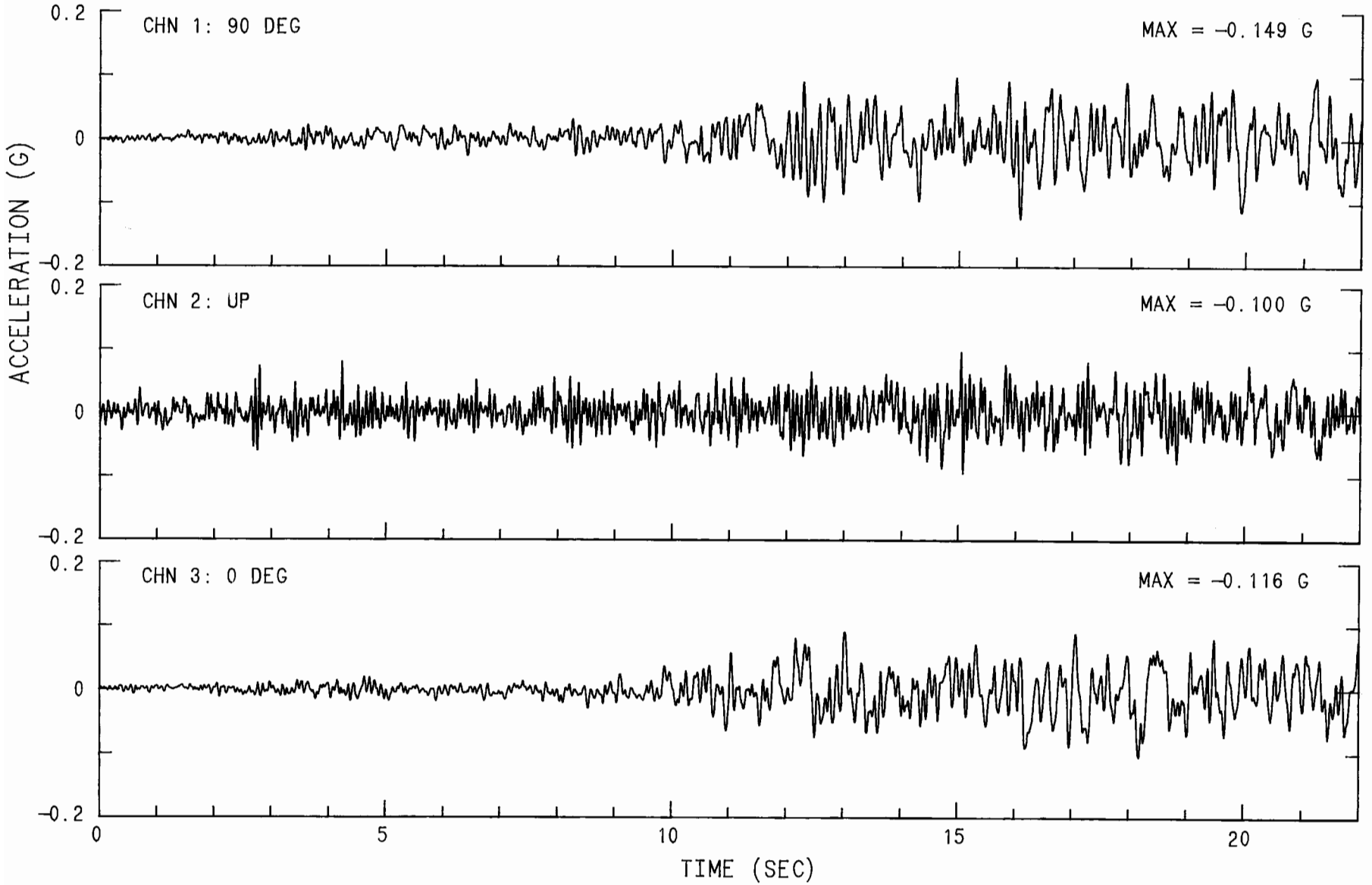
1) The values of f_H and f_L can be calculated from the corner frequencies (f_{Hc}, f_{Lc}) and the roll-off termination frequencies (f_{Ht}, f_{Lt}) used in the processing by using the formulas $f_H = f_{Hc} + 0.3 * (f_{Ht} - f_{Hc})$ and $f_L = f_{Lc} - 0.3 * (f_{Lc} - f_{Lt})$. For example, the usable data bandwidth for data bandpass-filtered with ramps at 0.05 to 0.10 Hz and 23.0 to 25.0 Hz is 0.085 Hz to 23.6 Hz (0.04 to 12 seconds period).

2) It is common in signal processing to plot 20 $\log_{10}[H(f)]$ versus frequency, and express the ordinate value in decibels (abbreviated dB). Accordingly, 0 dB corresponds to a value of H(f) equal to 1; 20 dB is equivalent to H(f) = 10, and -20 dB corresponds to H(f) = 0.1. Thus, at the -3 dB frequency point, the amplitude of the transfer function, H(f) is reduced to 0.7, while the power transmitted by the filter, $H^2(f)$, is reduced to 0.5.

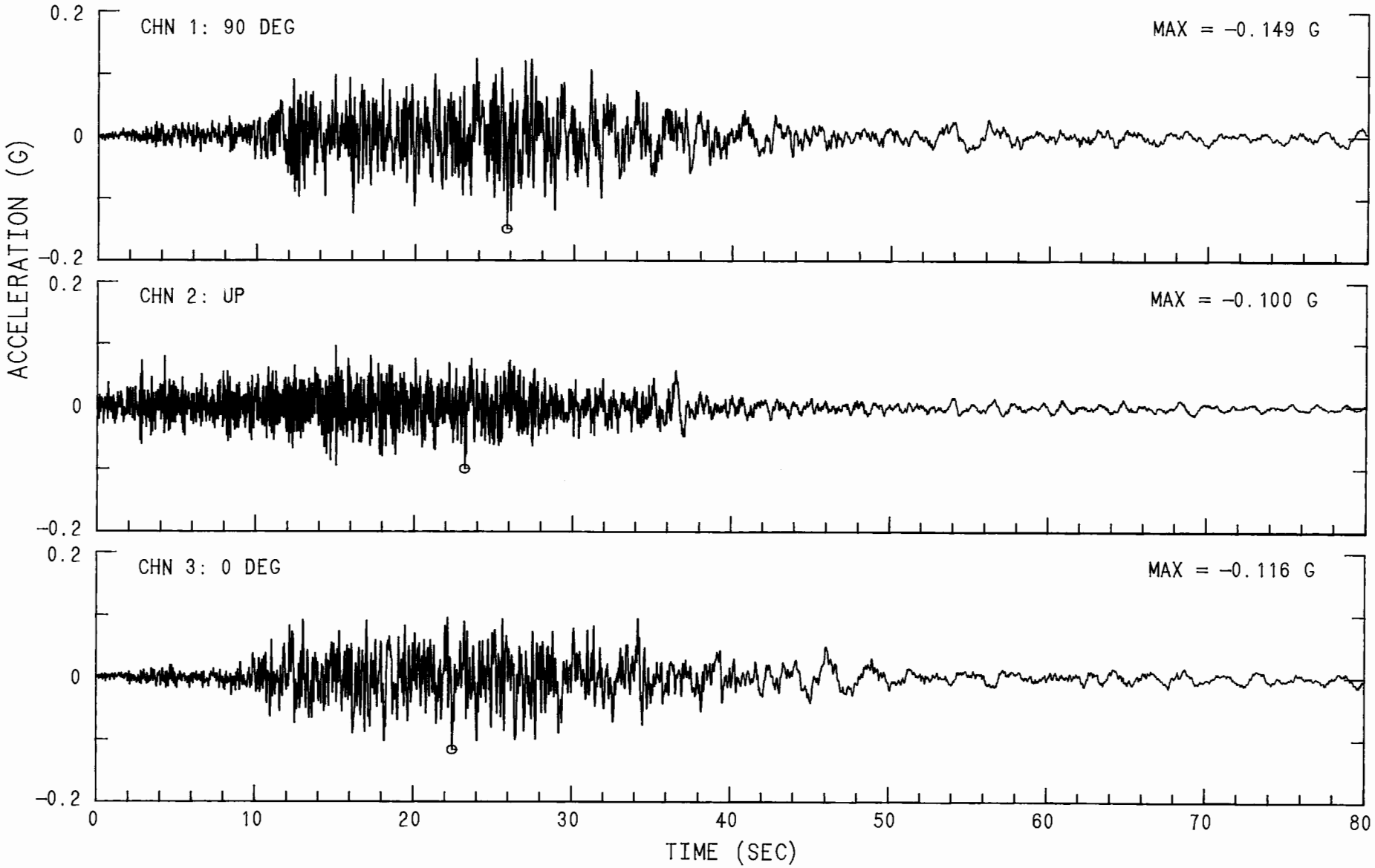
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT

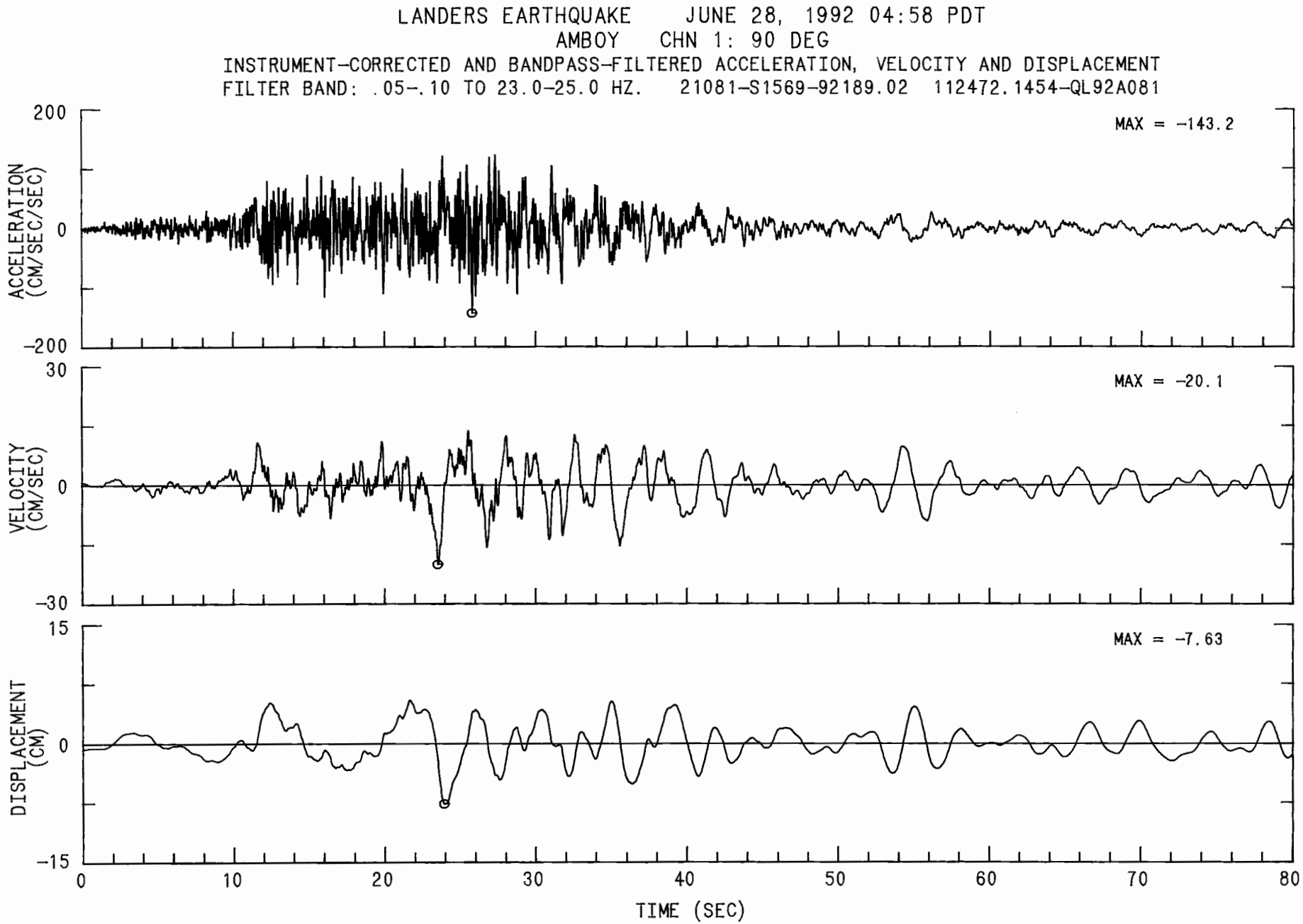
AMBOY

UNCORRECTED ACCELEROGRAM 21081-S1569-92189.02 112472.1415-QL92A081

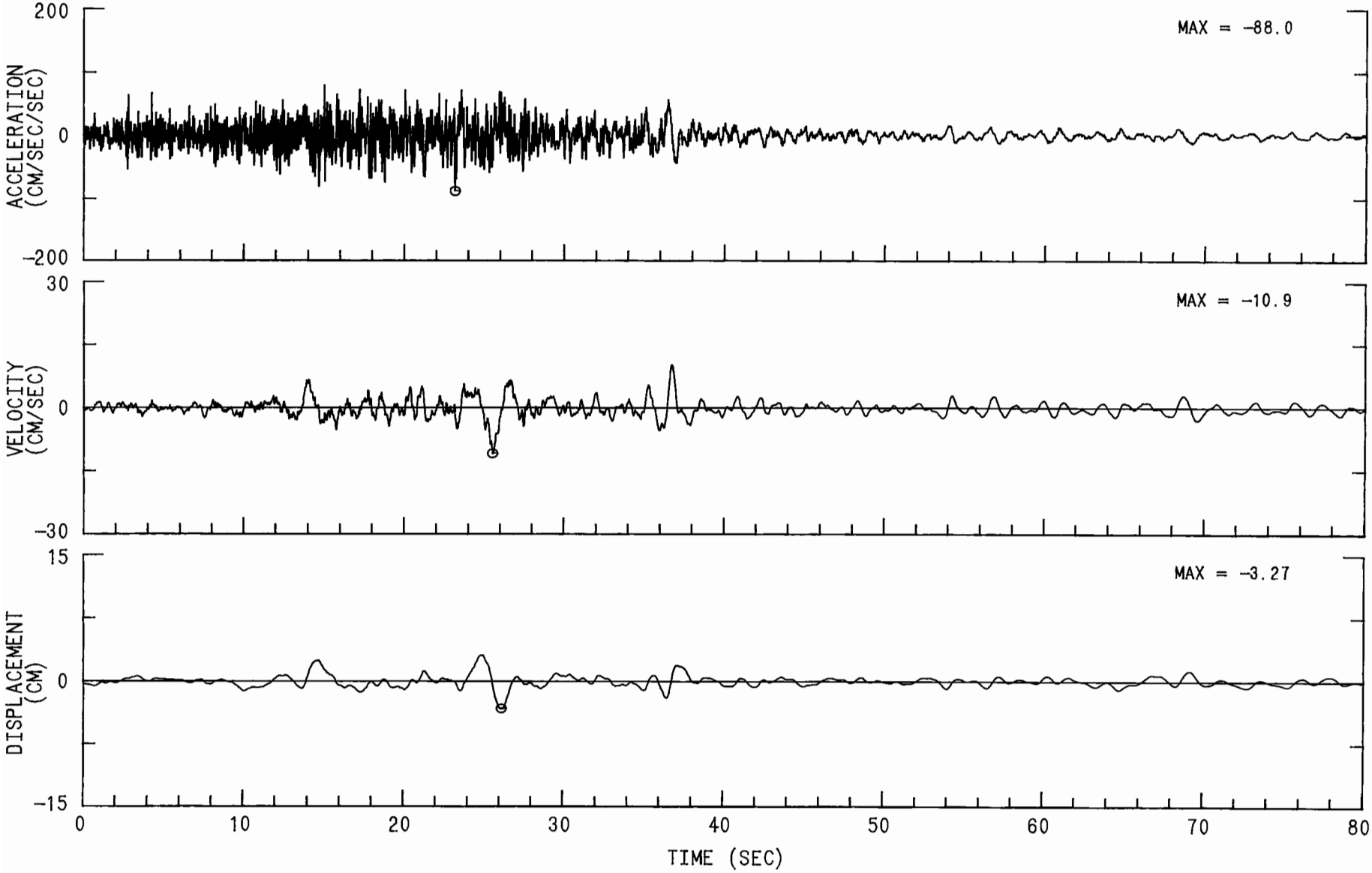


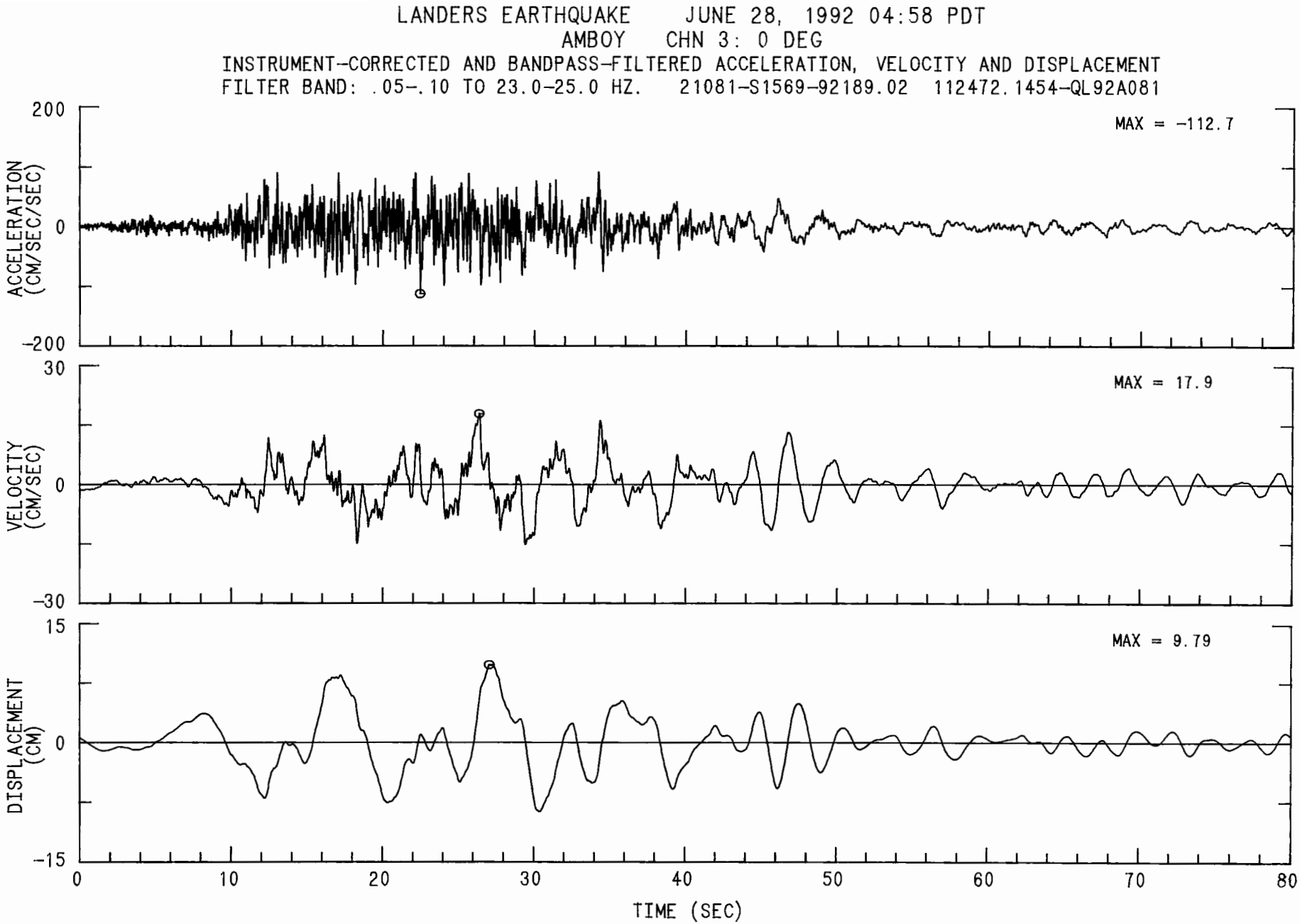
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
AMBOY
UNCORRECTED ACCELEROGRAM 21081-S1569-92189.02 112472.1415-QL92A081



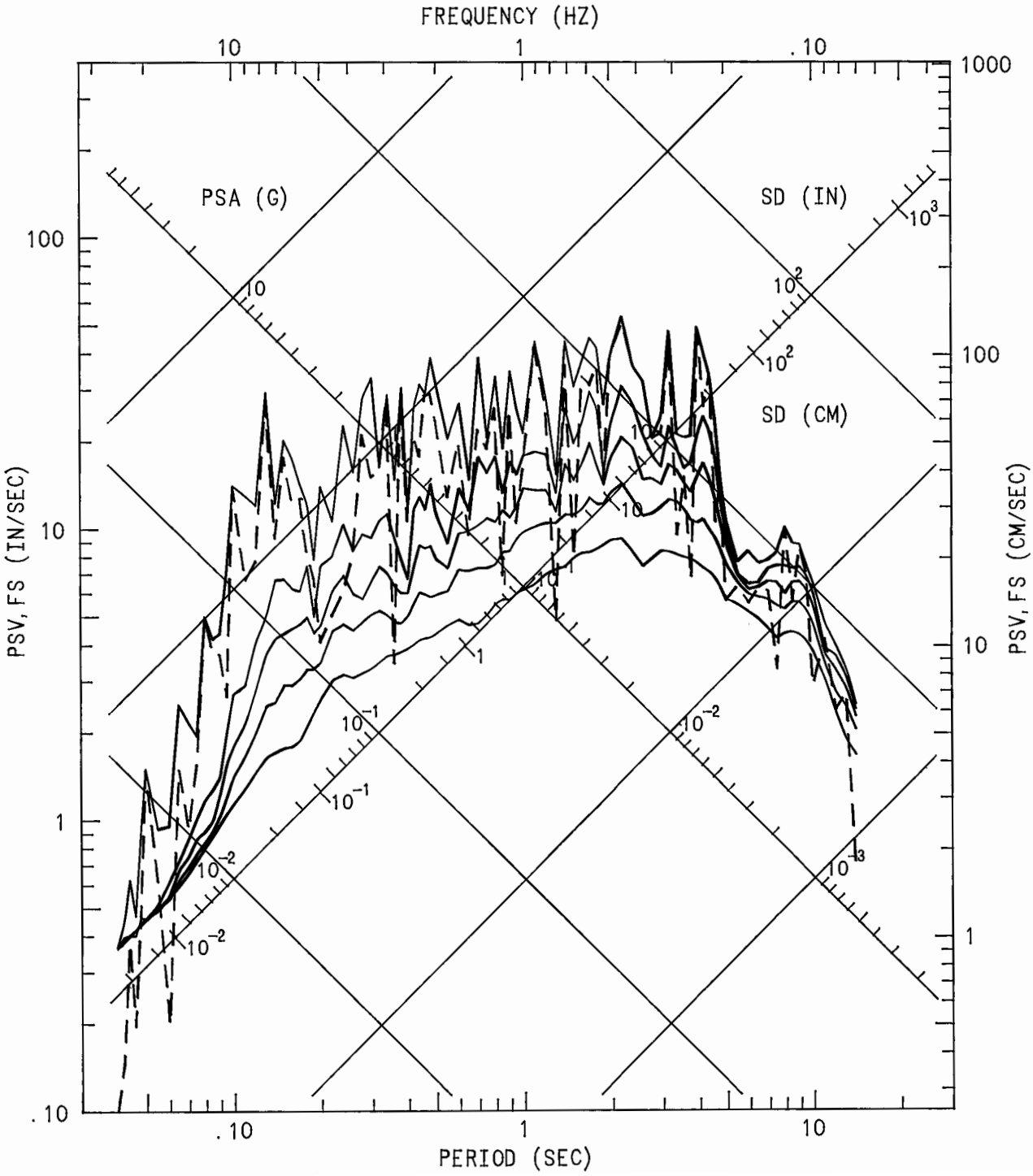

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
AMBOY CHN 1: 90 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.10 TO 23.0-25.0 HZ. 21081-S1569-92189.02 112472.1454-QL92A081
ACCELERATION (CM/SEC/SEC)
200
0
-200
MAX = -143.2
VELOCITY (CM/SEC)
30
0
-30
MAX = -20.1
DISPLACEMENT (CM)
15
0
-15
MAX = -7.63
0
10
20
30
40
50
60
70
80
TIME (SEC)

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
AMBOY CHN 2: UP
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.10 TO 23.0-25.0 HZ. 21081-S1569-92189.02 112472.1454-QL92A081

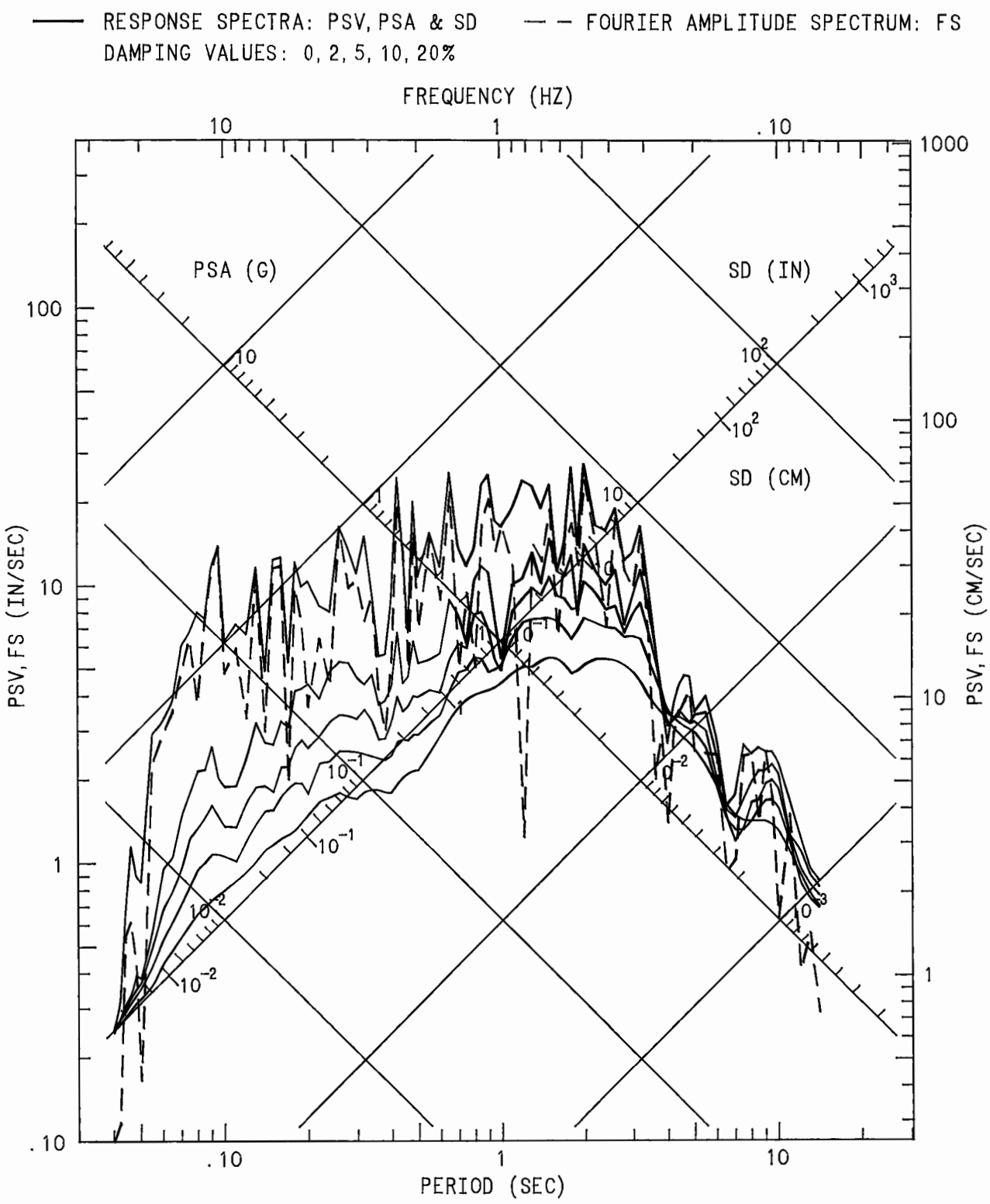



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
AMBOY CHN 3: 0 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.10 TO 23.0-25.0 HZ. 21081-S1569-92189.02 112472.1454-QL92A081
ACCELERATION (CM/SEC/SEC)
200
0
-200
MAX = -112.7
VELOCITY (CM/SEC)
30
0
-30
MAX = 17.9
DISPLACEMENT (CM)
15
0
-15
MAX = 9.79
0
10
20
30
40
50
60
70
80
TIME (SEC)

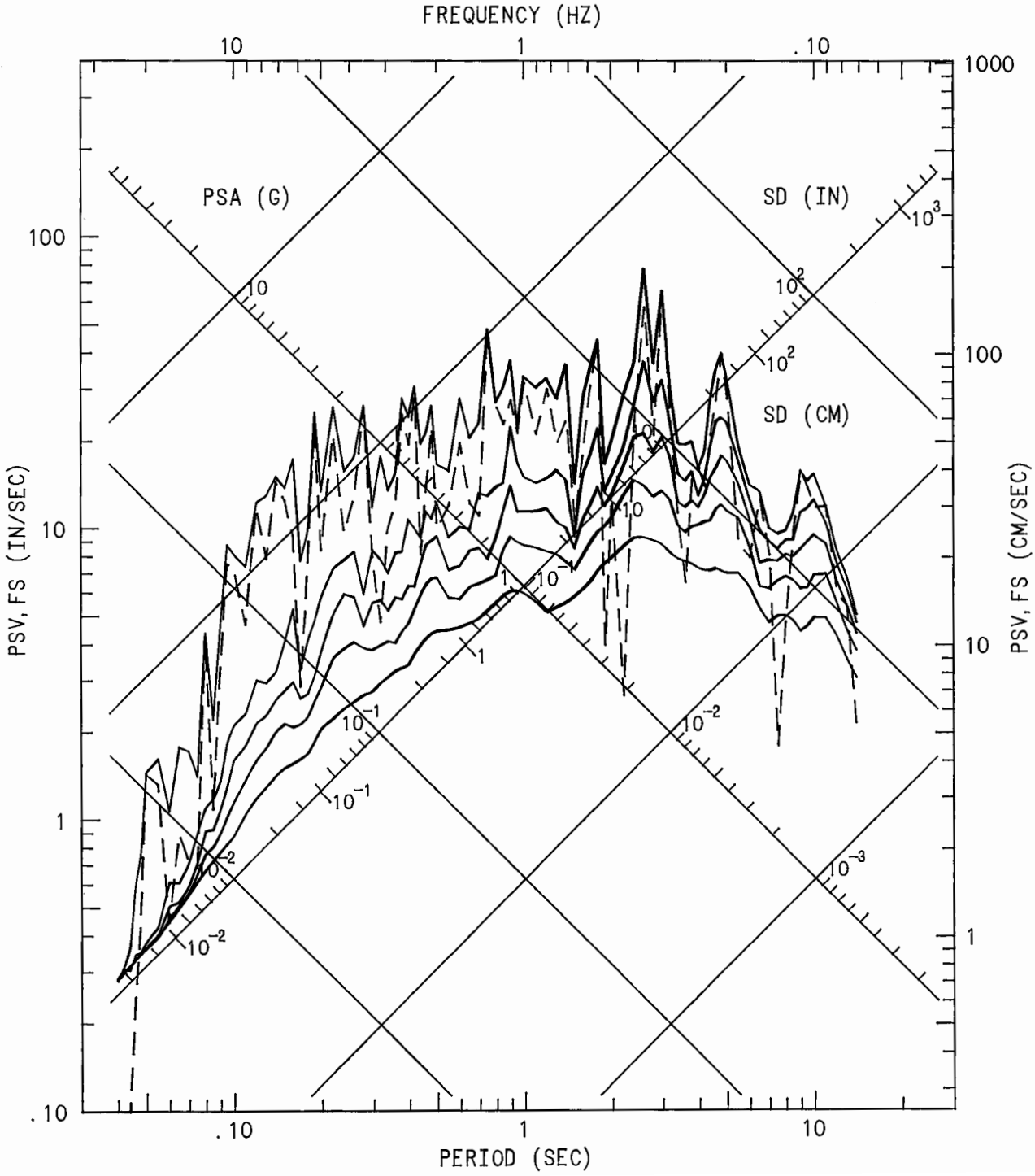
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
AMBOY
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
21081-S1569-92189.02 112572.1522-QL92A081



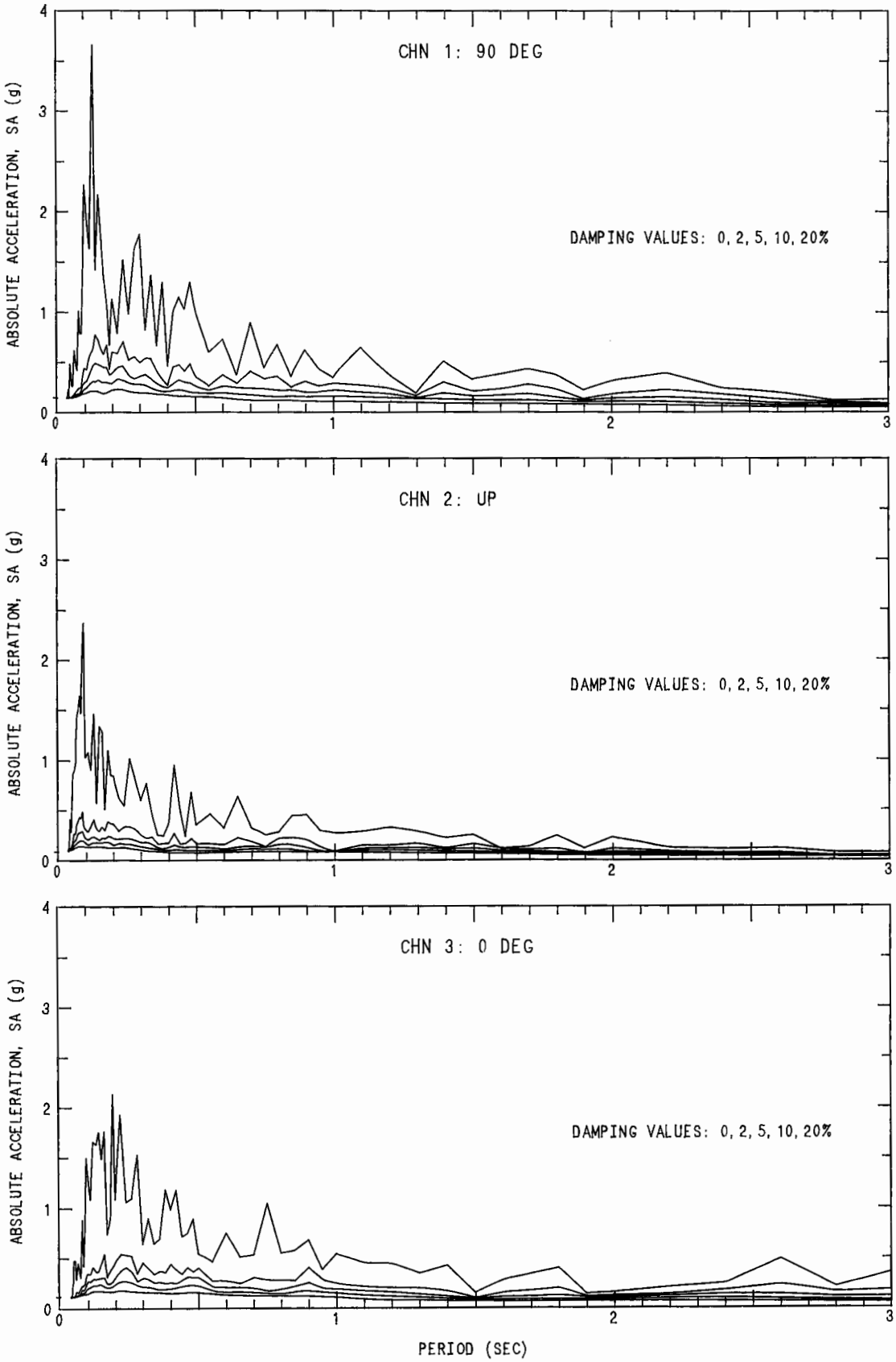
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
AMBOY
CHN 2: UP
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
21081-S1569-92189.02 112572.1522-QL92A081

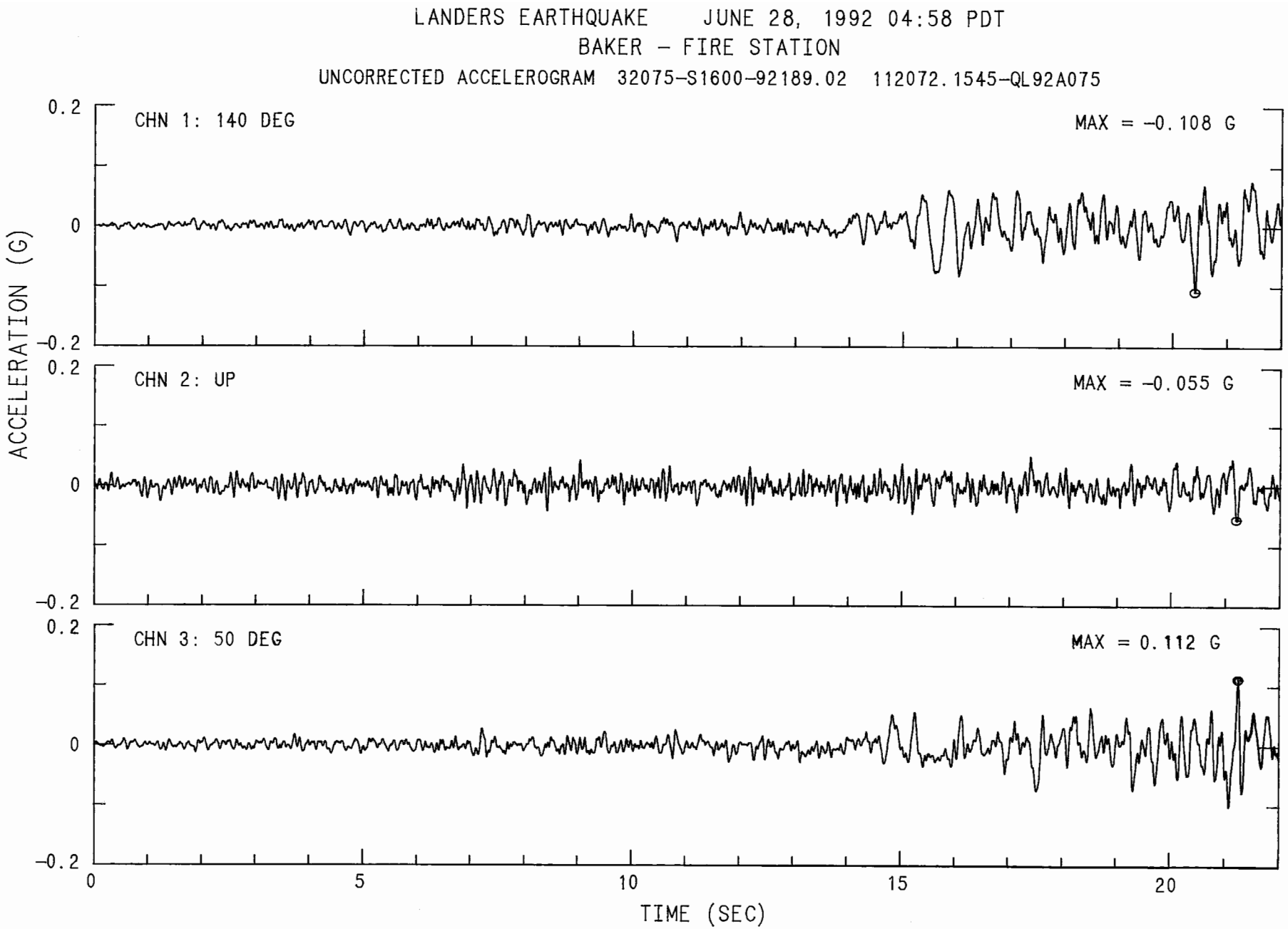


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
AMBOY
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
21081-S1569-92189.02 112572.1522-QL92A081

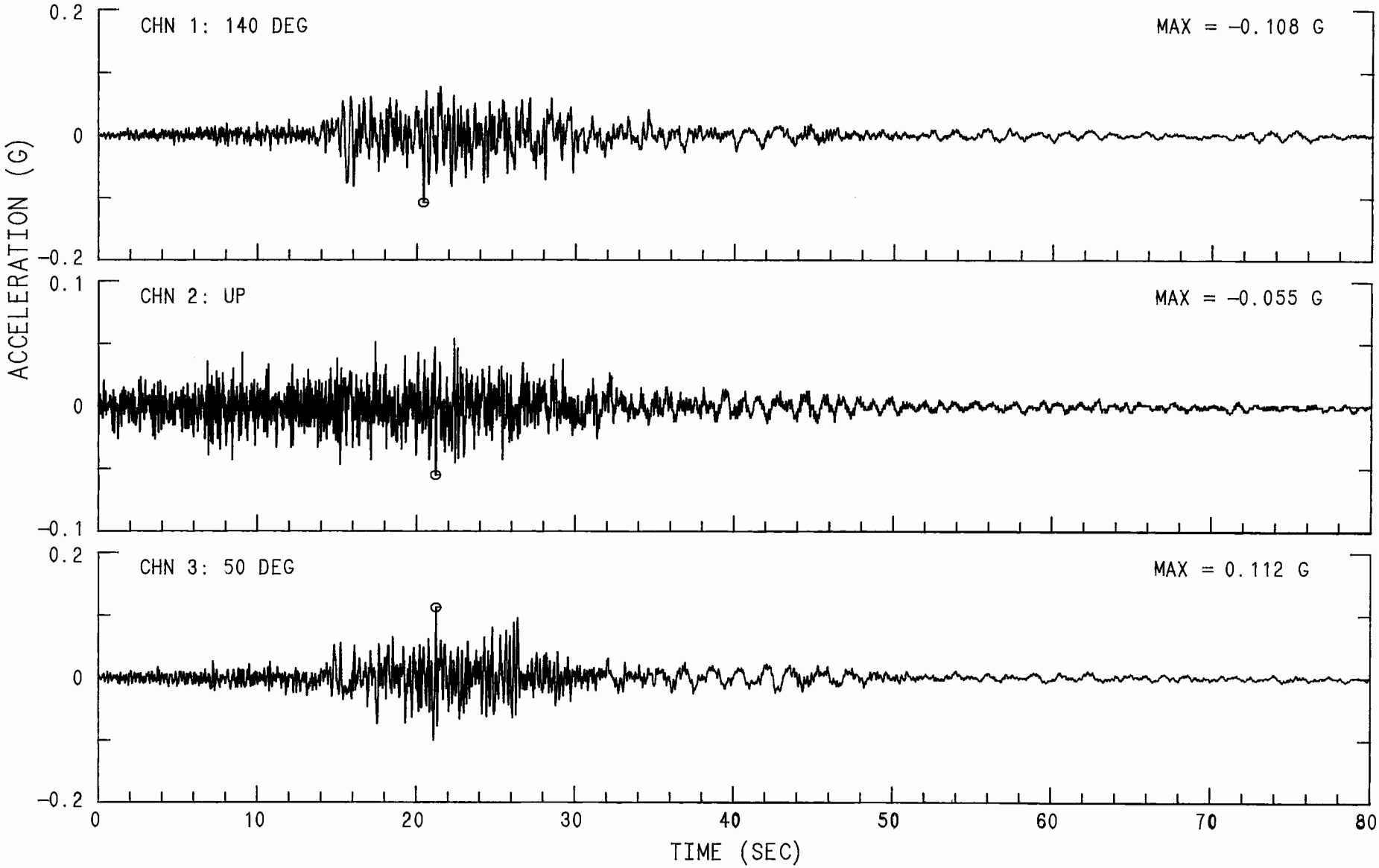


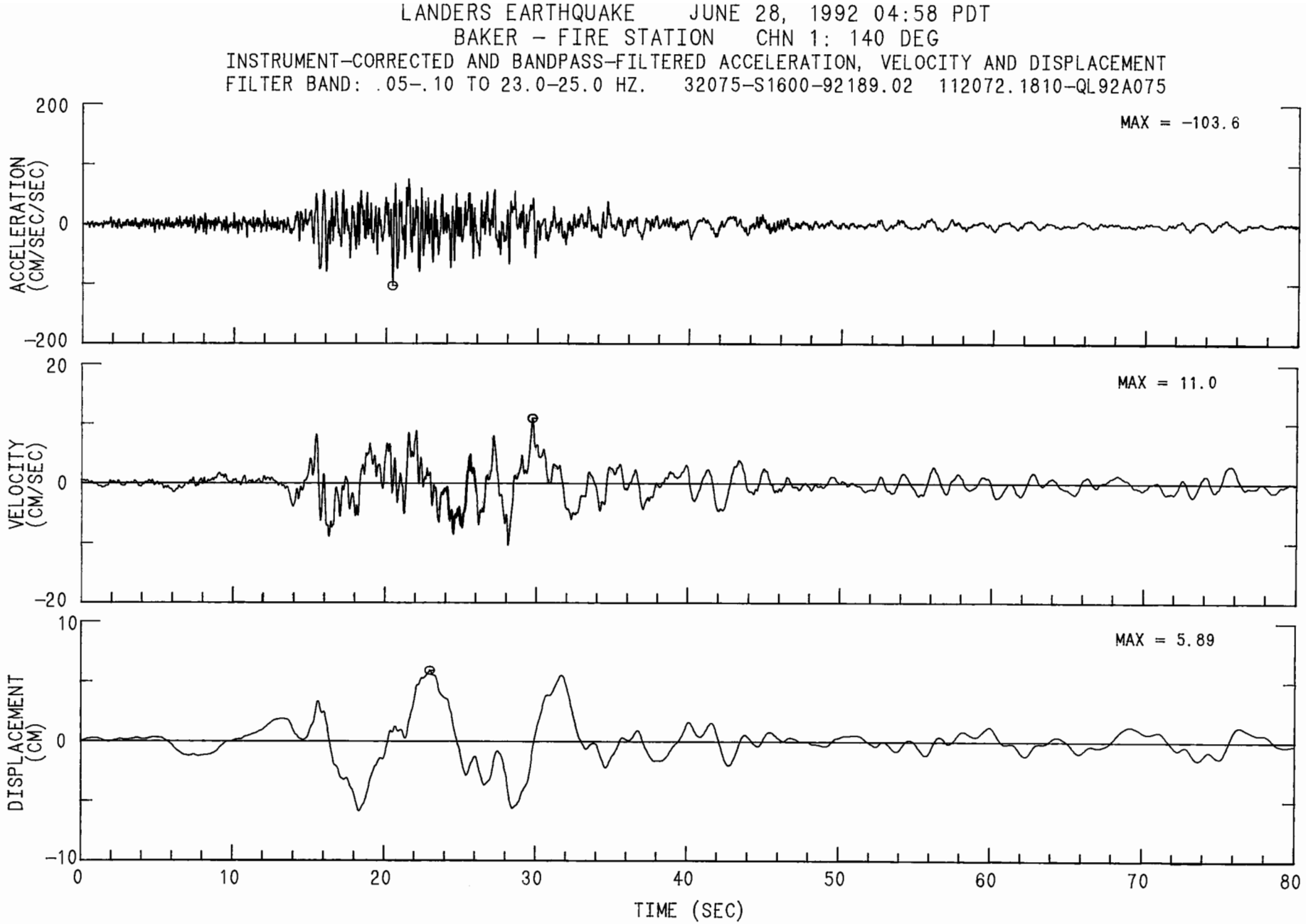
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
AMBOY
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
21081-S1569-92189.02 112472.1522-QL92A081



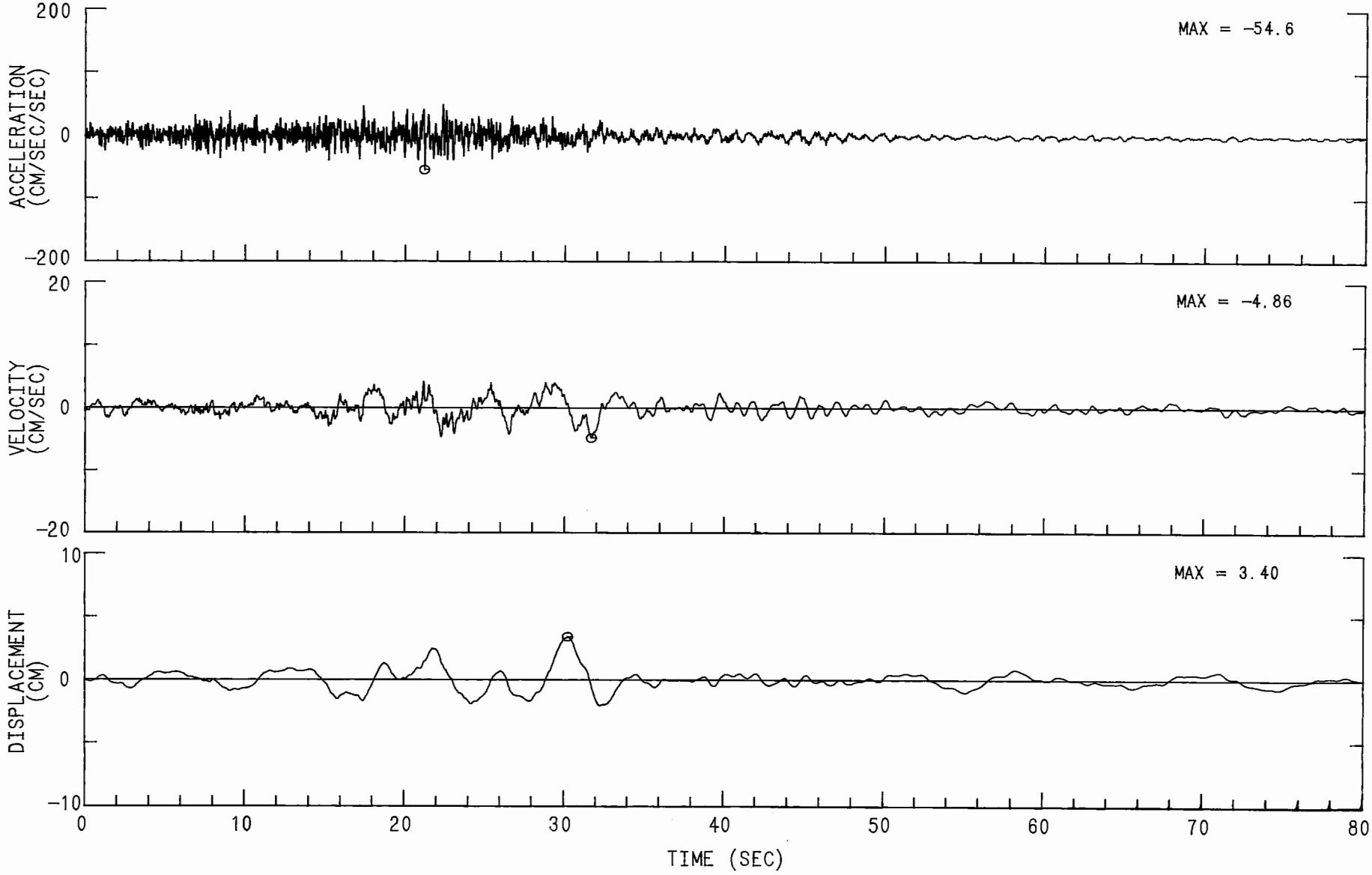

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
BAKER - FIRE STATION
UNCORRECTED ACCELEROGRAM 32075-S1600-92189.02 112072.1545-QL92A075
CHN 1: 140 DEG
MAX = -0.108 G
CHN 2: UP
MAX = -0.055 G
CHN 3: 50 DEG
MAX = 0.112 G
ACCELERATION (G)
0.2
0
-0.2
0
5
10
15
20
TIME (SEC)

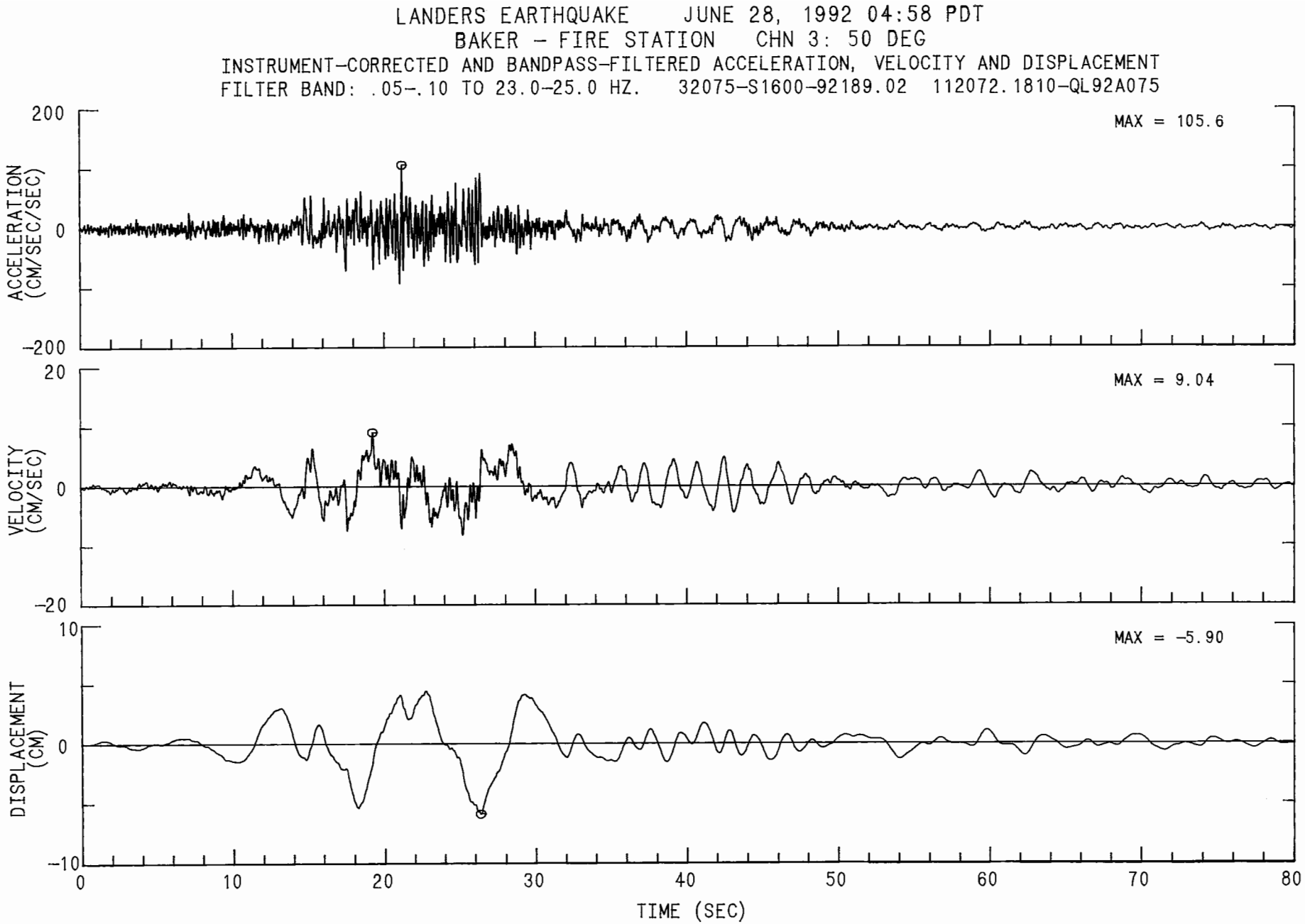
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
BAKER - FIRE STATION
UNCORRECTED ACCELEROGRAM 32075-S1600-92189.02 112072.1545-QL92A075



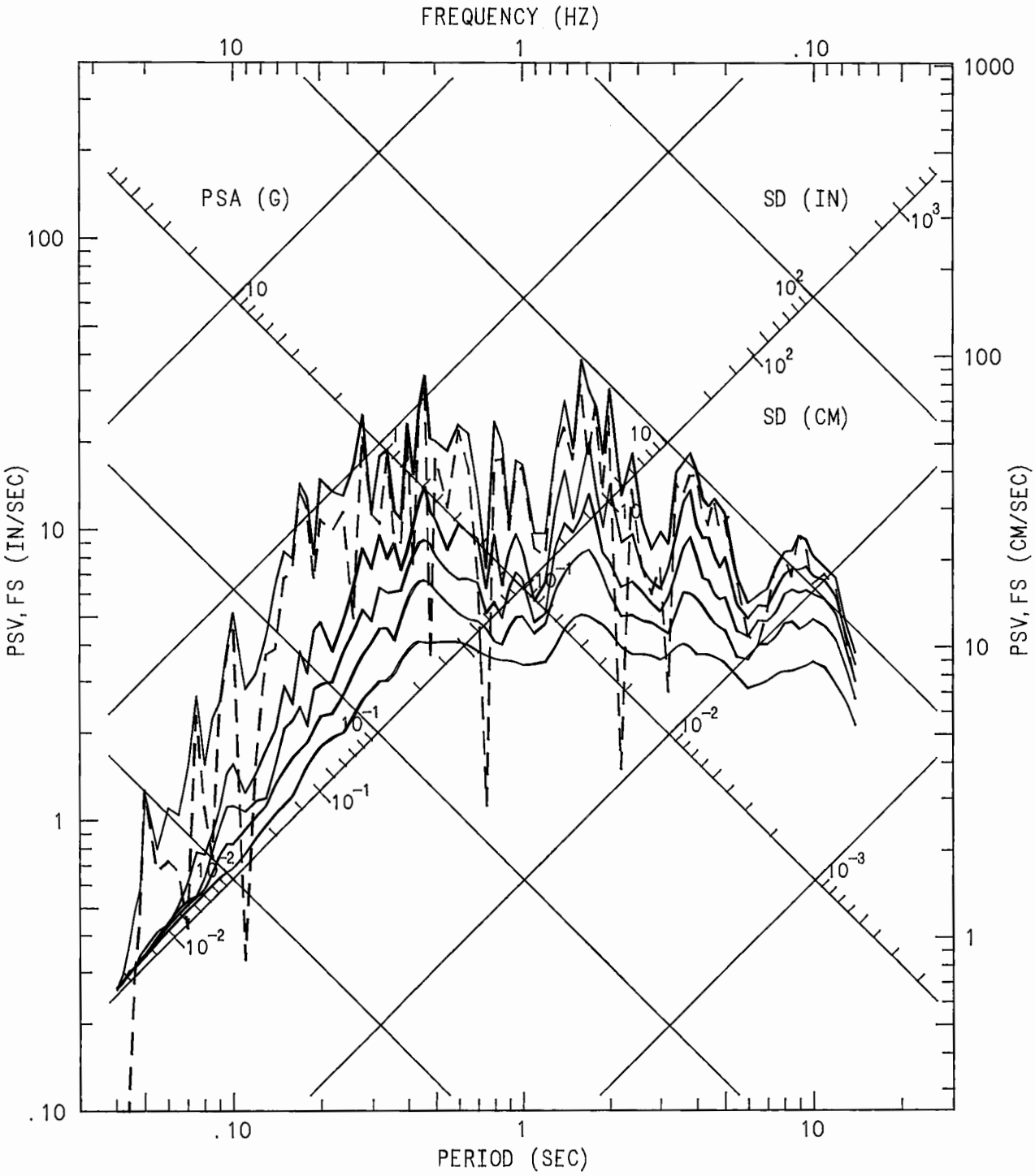

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
BAKER - FIRE STATION CHN 1: 140 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.10 TO 23.0-25.0 HZ. 32075-S1600-92189.02 112072.1810-QL92A075
ACCELERATION (CM/SEC/SEC)
MAX = -103.6
VELOCITY (CM/SEC)
MAX = 11.0
DISPLACEMENT (CM)
MAX = 5.89
TIME (SEC)

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
BAKER - FIRE STATION CHN 2: UP
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.10 TO 23.0-25.0 HZ. 32075-S1600-92189.02 112072.1810-QL92A075

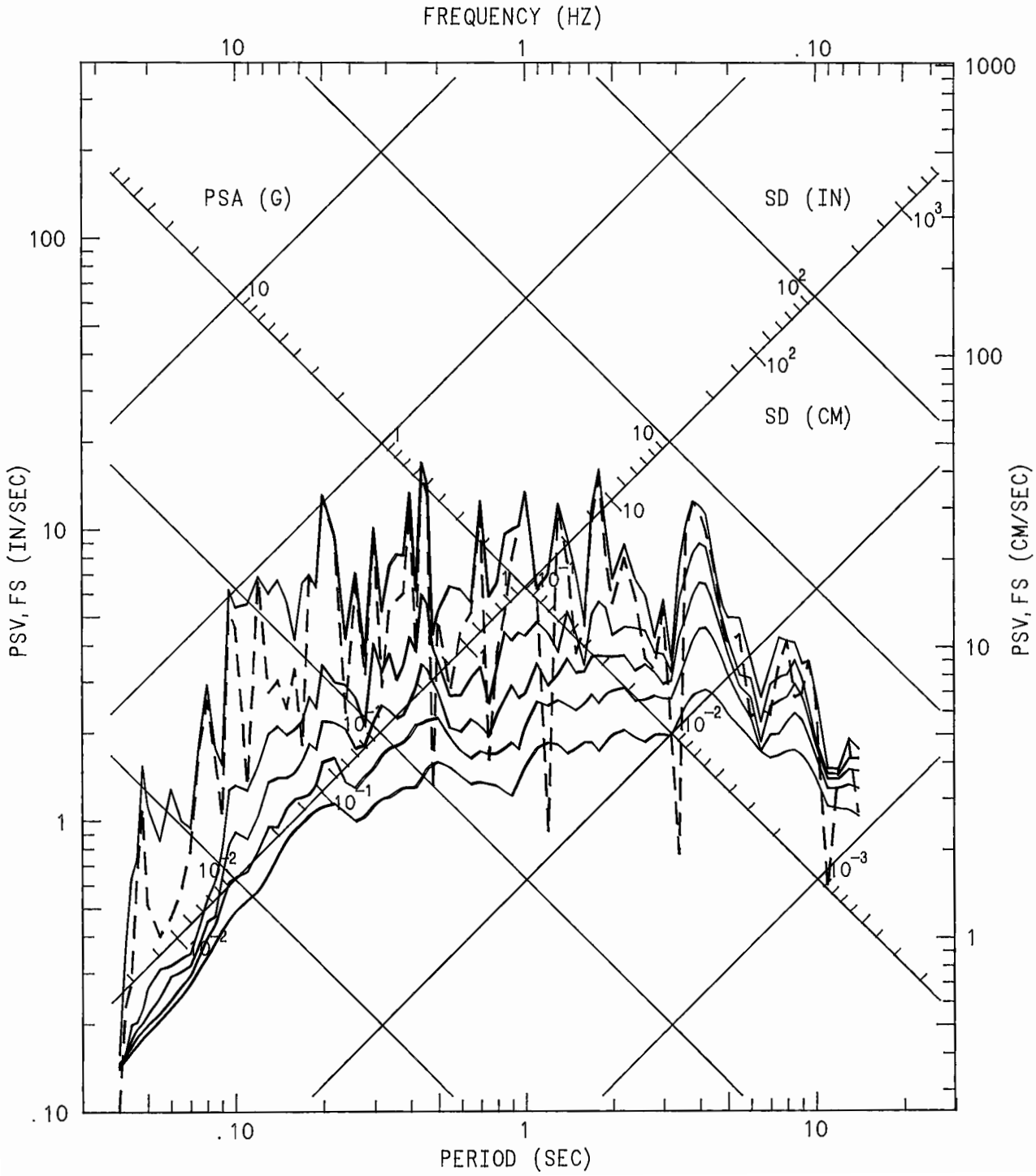



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
BAKER - FIRE STATION CHN 3: 50 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.10 TO 23.0-25.0 HZ. 32075-S1600-92189.02 112072.1810-QL92A075
ACCELERATION (CM/SEC/SEC)
200
0
-200
MAX = 105.6
VELOCITY (CM/SEC)
20
0
-20
MAX = 9.04
DISPLACEMENT (CM)
10
0
-10
MAX = -5.90
0
10
20
30
40
50
60
70
80
TIME (SEC)

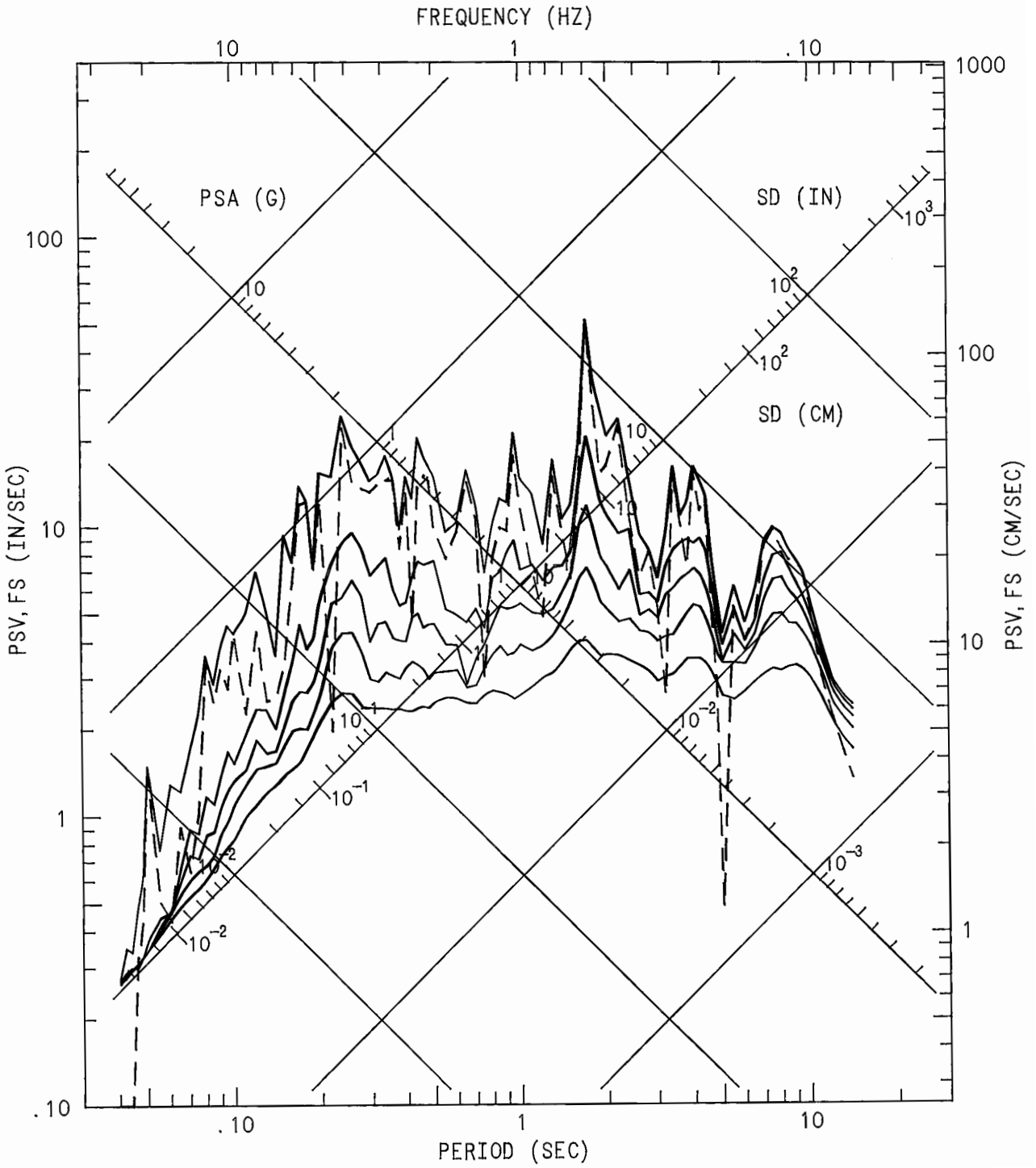
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
BAKER - FIRE STATION
CHN 1: 140 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
32075-S1600-92189.02 112172.1838-QL92A075



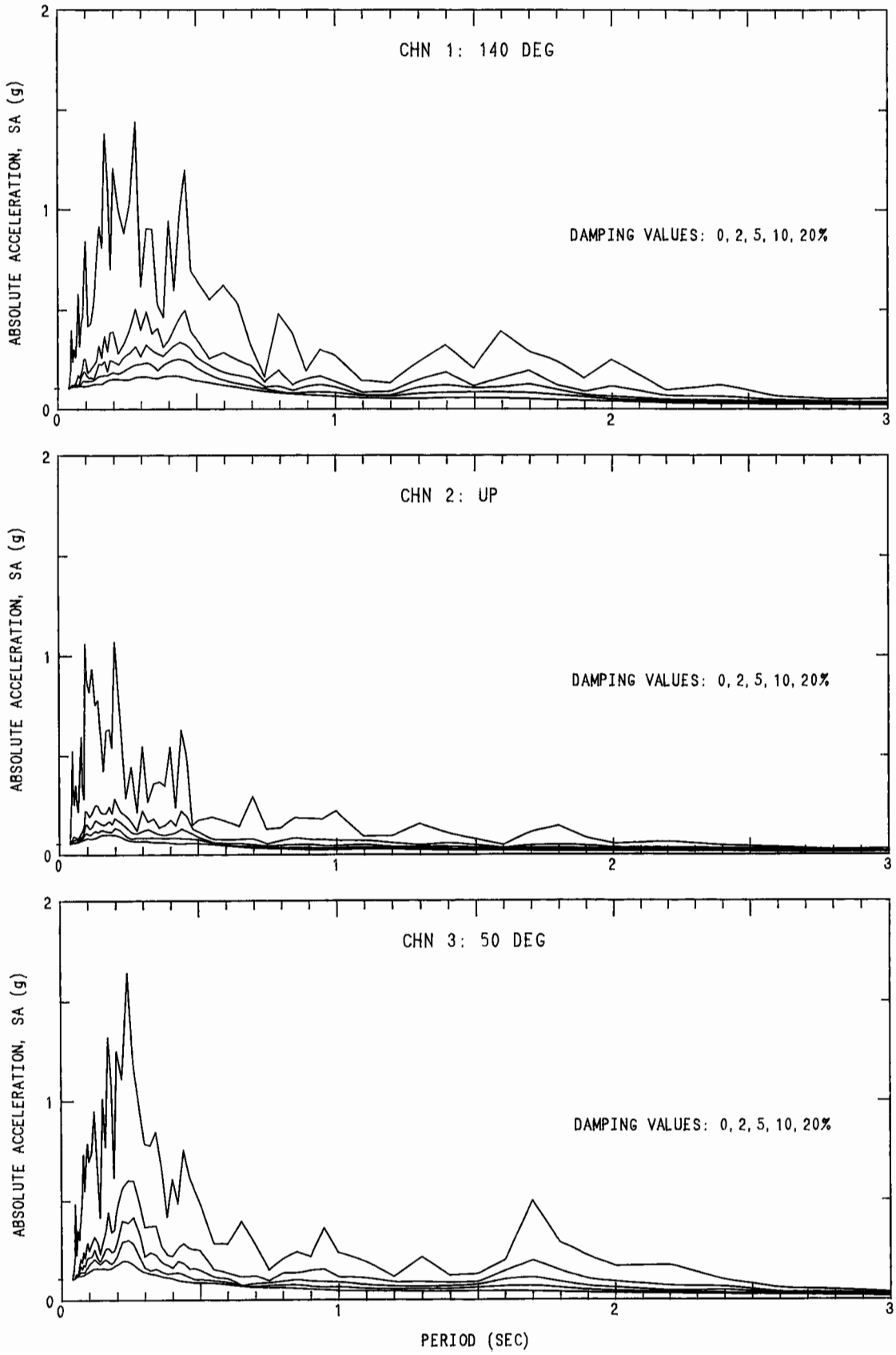
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
BAKER - FIRE STATION
CHN 2: UP
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
32075-S1600-92189.02 112172.1838-QL92A075

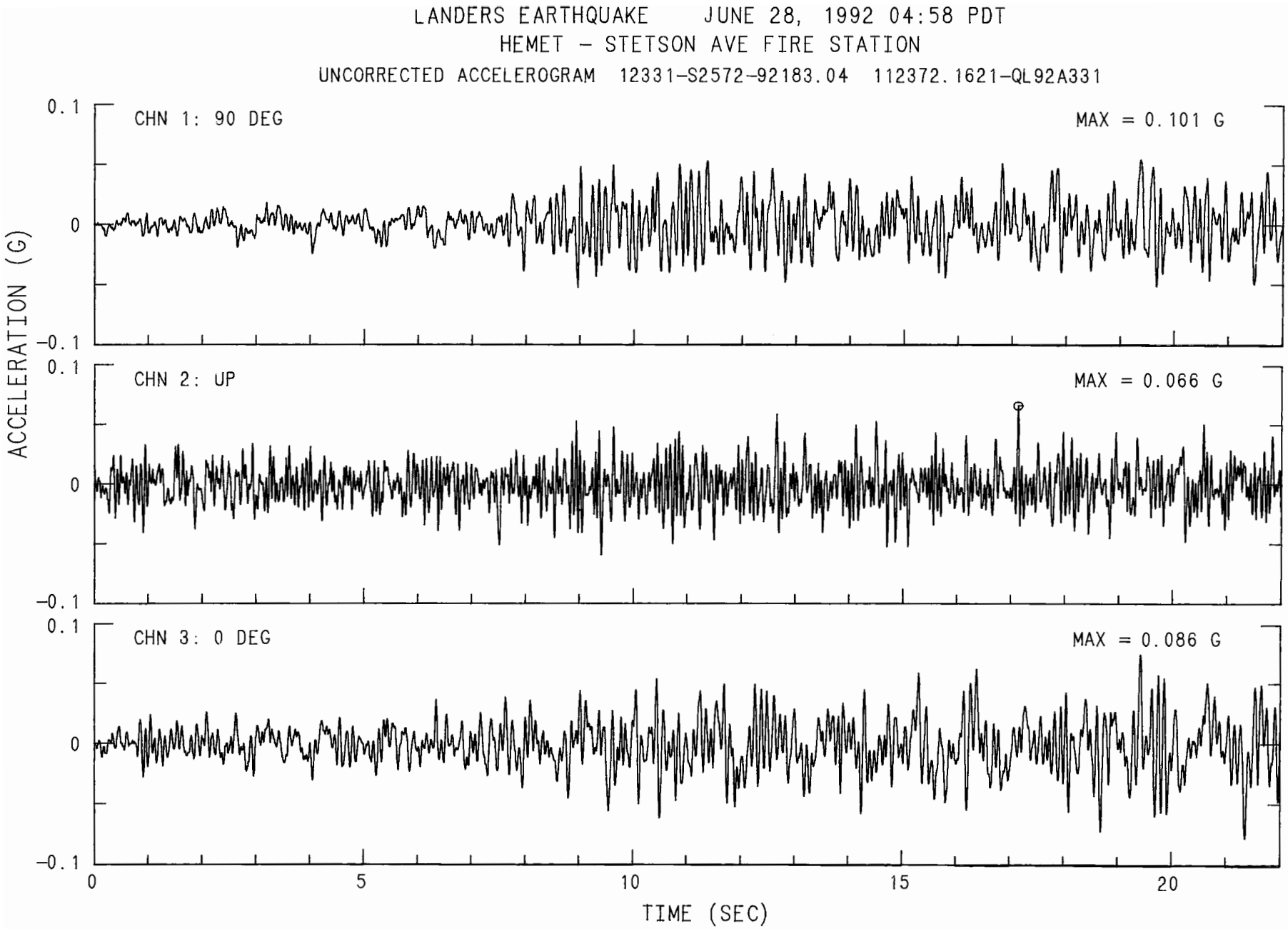


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
BAKER - FIRE STATION
CHN 3: 50 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
32075-S1600-92189.02 112172.1838-QL92A075

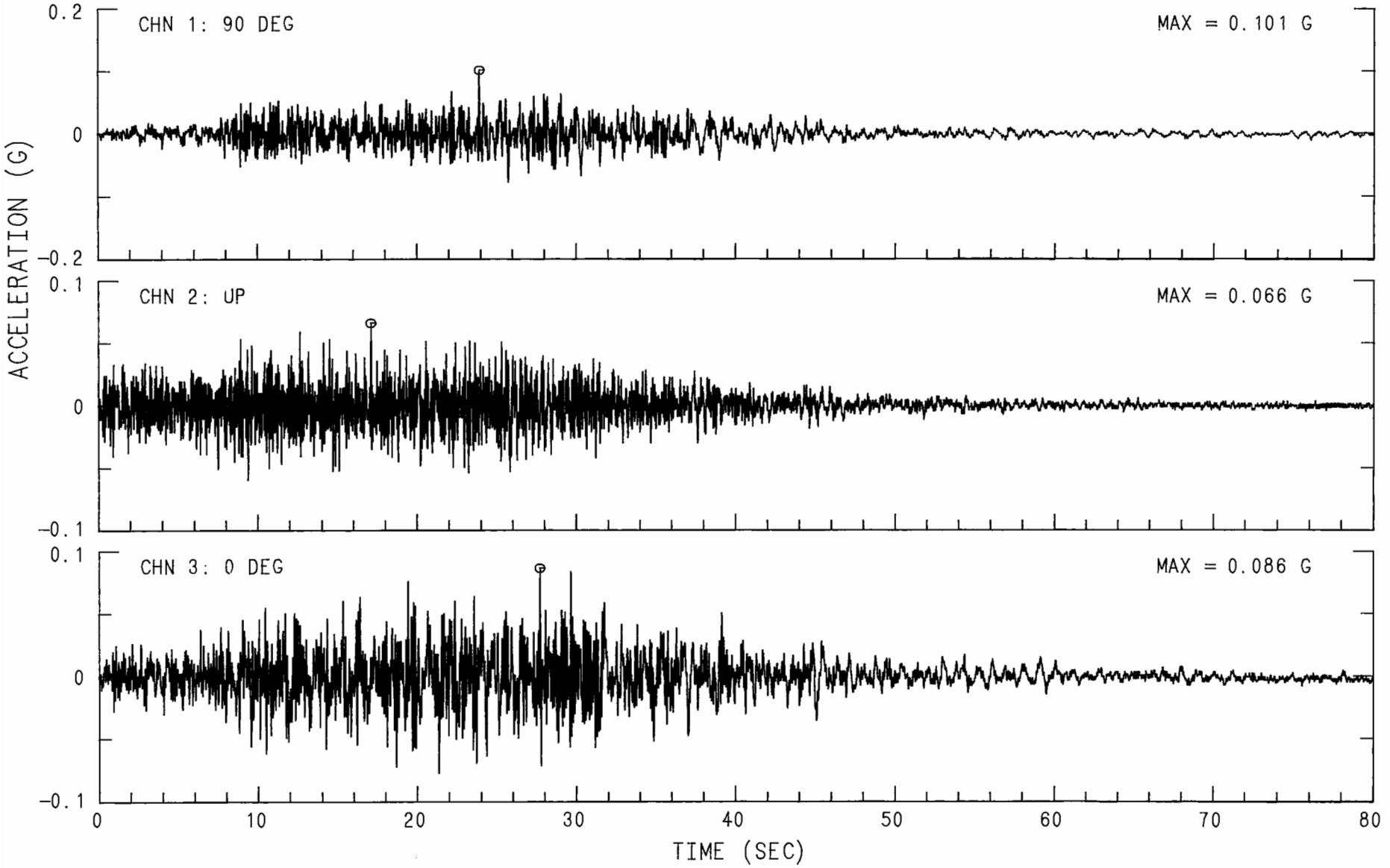


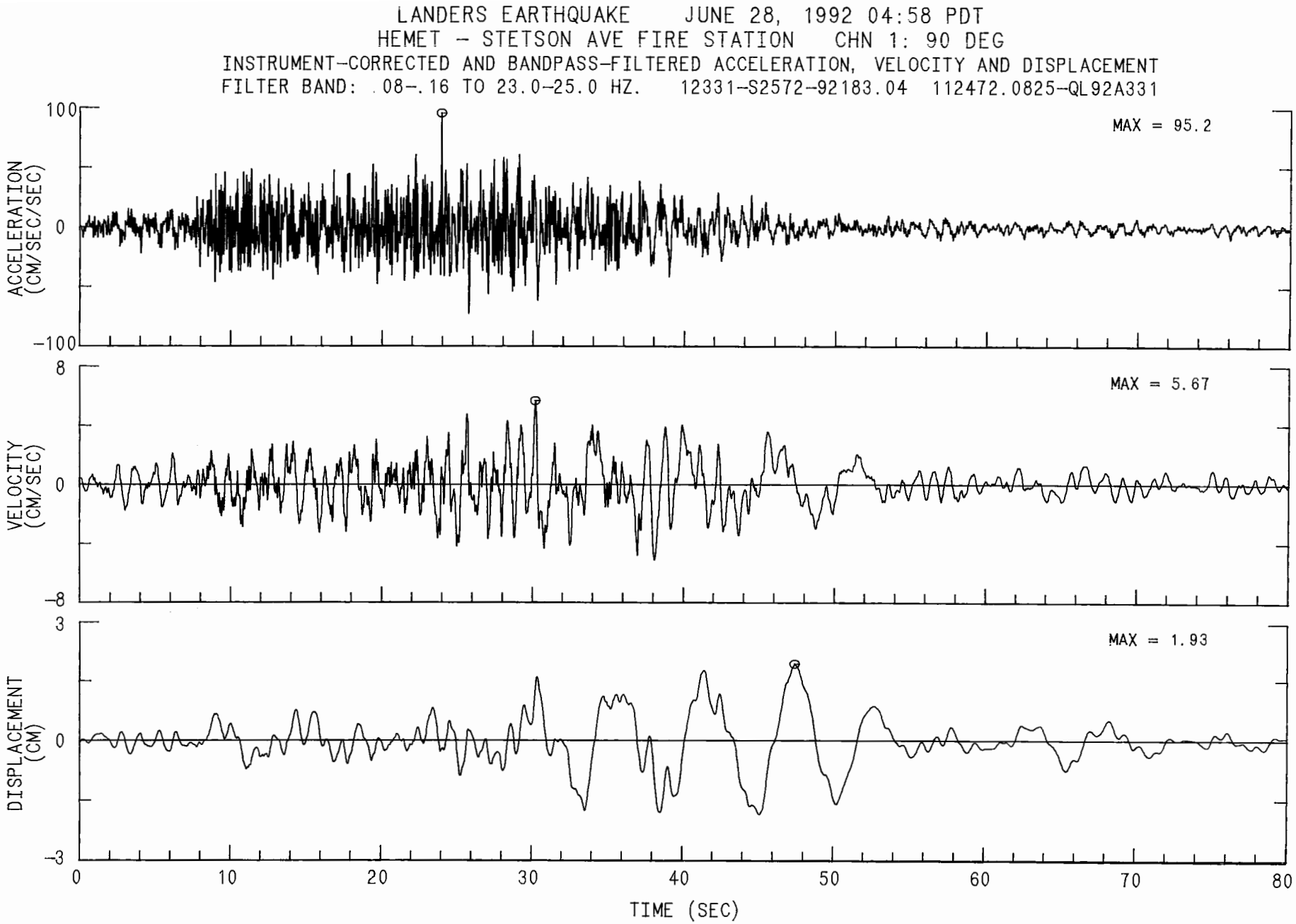
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
BAKER - FIRE STATION
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
32075-S1600-92189.02 112072.1838-QL92A075



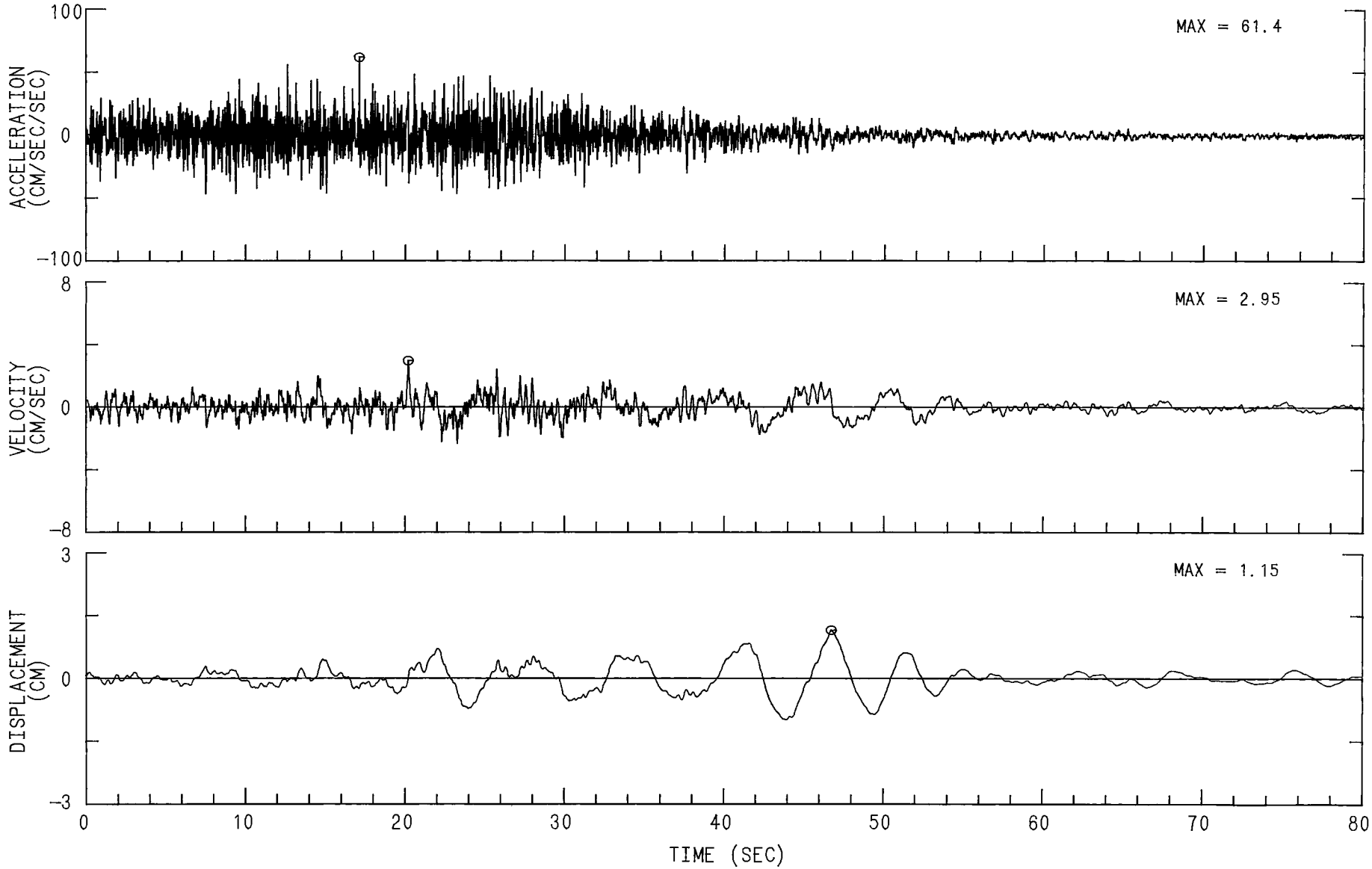

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
HEMET - STETSON AVE FIRE STATION
UNCORRECTED ACCELEROGRAM 12331-S2572-92183.04 112372.1621-QL92A331
CHN 1: 90 DEG
MAX = 0.101 G
CHN 2: UP
MAX = 0.066 G
CHN 3: 0 DEG
MAX = 0.086 G
ACCELERATION (G)
0.1
0
-0.1
0
5
10
15
20
TIME (SEC)

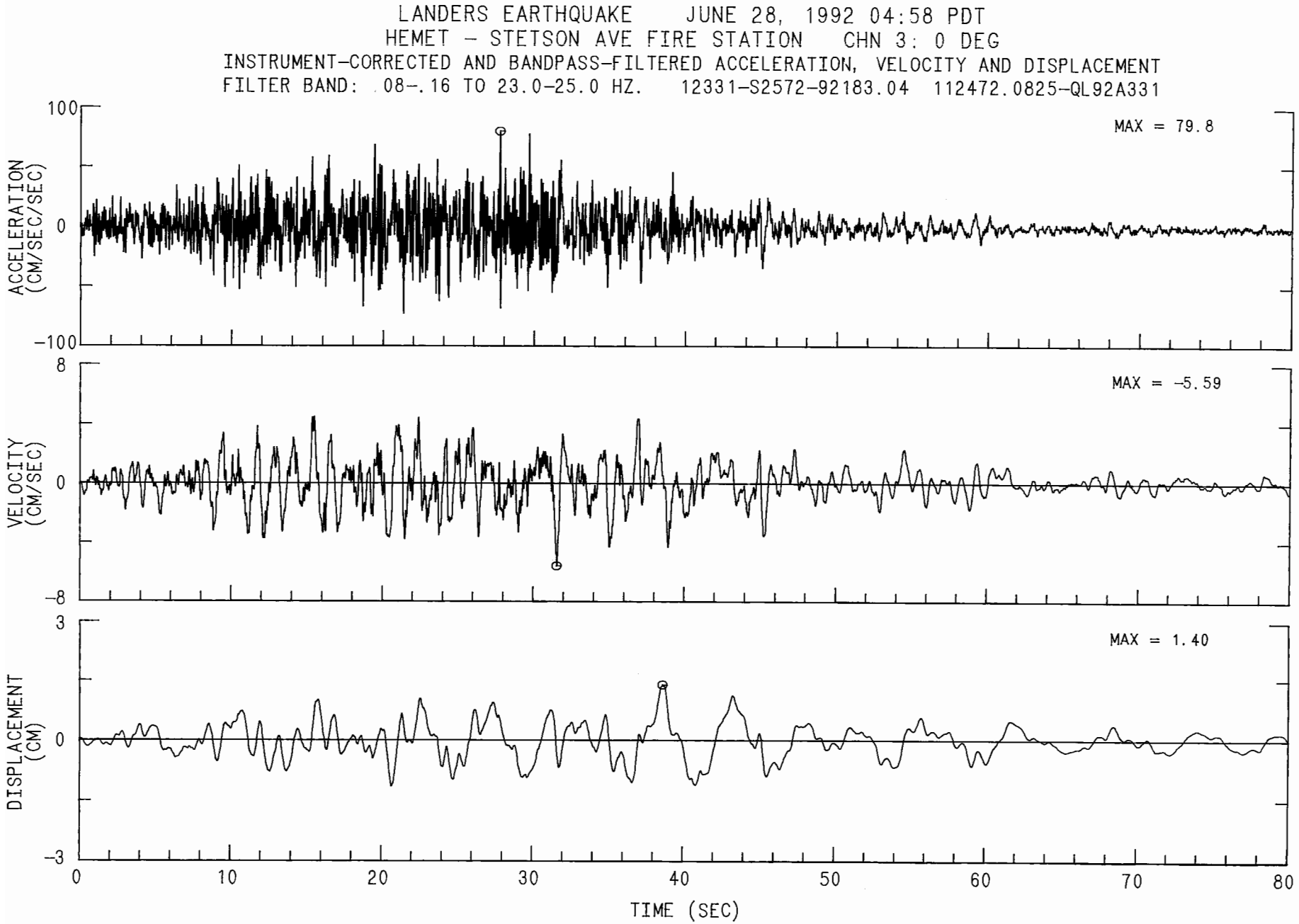
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
HEMET - STETSON AVE FIRE STATION
UNCORRECTED ACCELEROGRAM 12331-S2572-92183.04 112372.1621-QL92A331



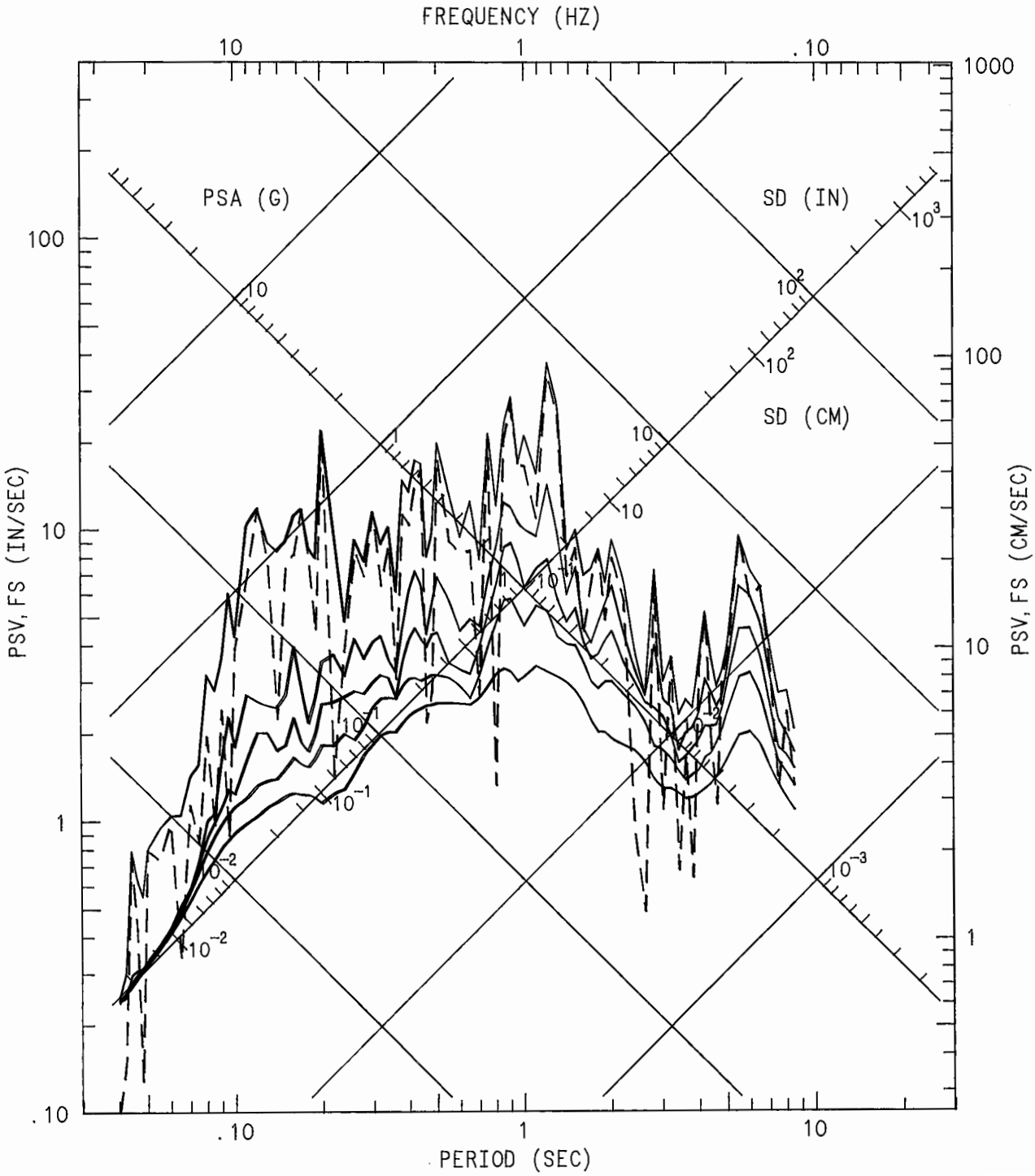

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
HEMET - STETSON AVE FIRE STATION CHN 1: 90 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .08-.16 TO 23.0-25.0 HZ. 12331-S2572-92183.04 112472.0825-QL92A331
ACCELERATION (CM/SEC/SEC)
100
0
-100
MAX = 95.2
VELOCITY (CM/SEC)
8
0
-8
MAX = 5.67
DISPLACEMENT (CM)
3
0
-3
MAX = 1.93
0
10
20
30
40
50
60
70
80
TIME (SEC)

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
HEMET - STETSON AVE FIRE STATION CHN 2: UP
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .08-.16 TO 23.0-25.0 HZ. 12331-S2572-92183.04 112472.0825-QL92A331

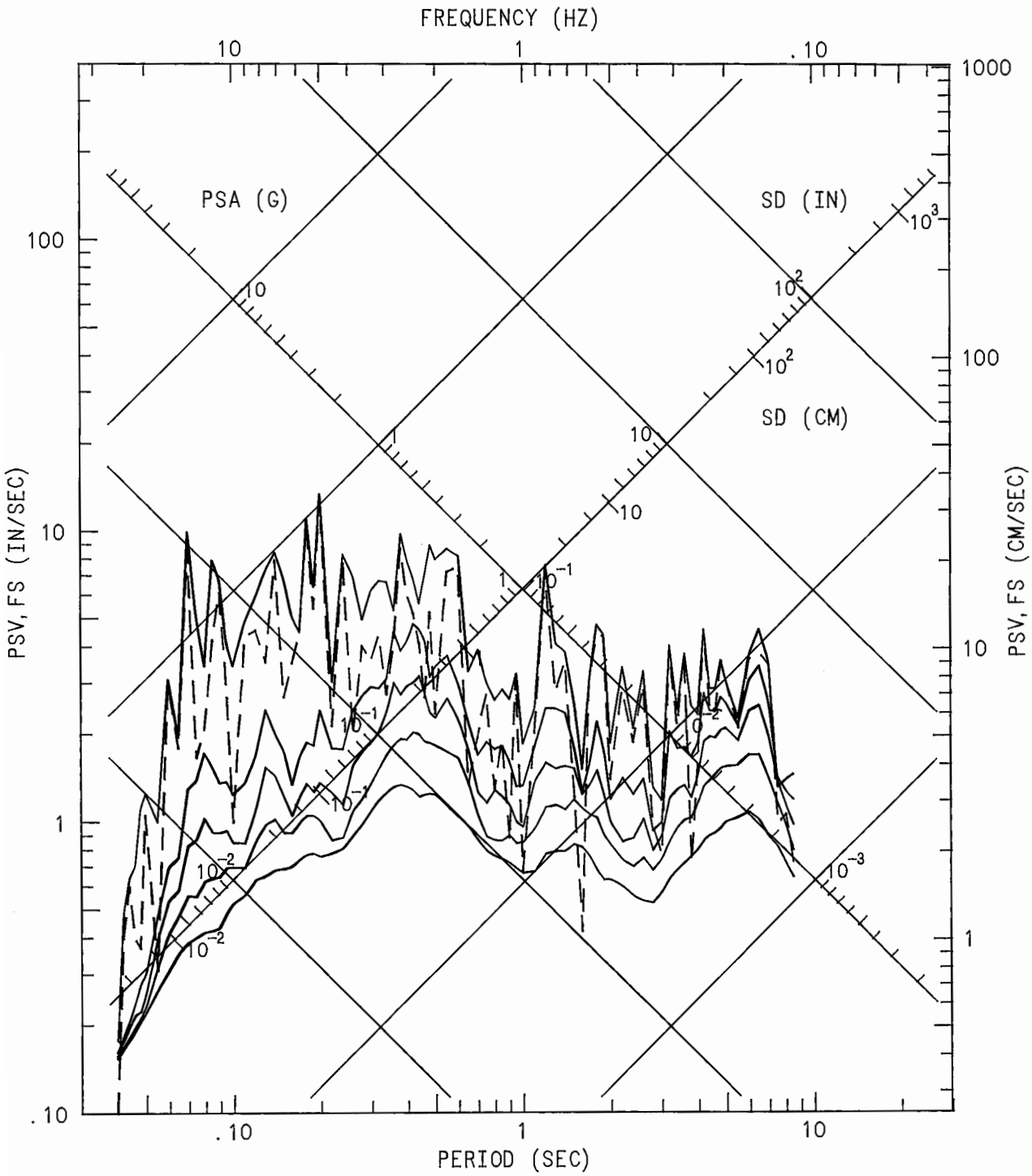



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
HEMET - STETSON AVE FIRE STATION CHN 3: 0 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .08-.16 TO 23.0-25.0 HZ. 12331-S2572-92183.04 112472.0825-QL92A331
ACCELERATION (CM/SEC/SEC)
100
0
-100
MAX = 79.8
VELOCITY (CM/SEC)
8
0
-8
MAX = -5.59
DISPLACEMENT (CM)
3
0
-3
MAX = 1.40
0
10
20
30
40
50
60
70
80
TIME (SEC)

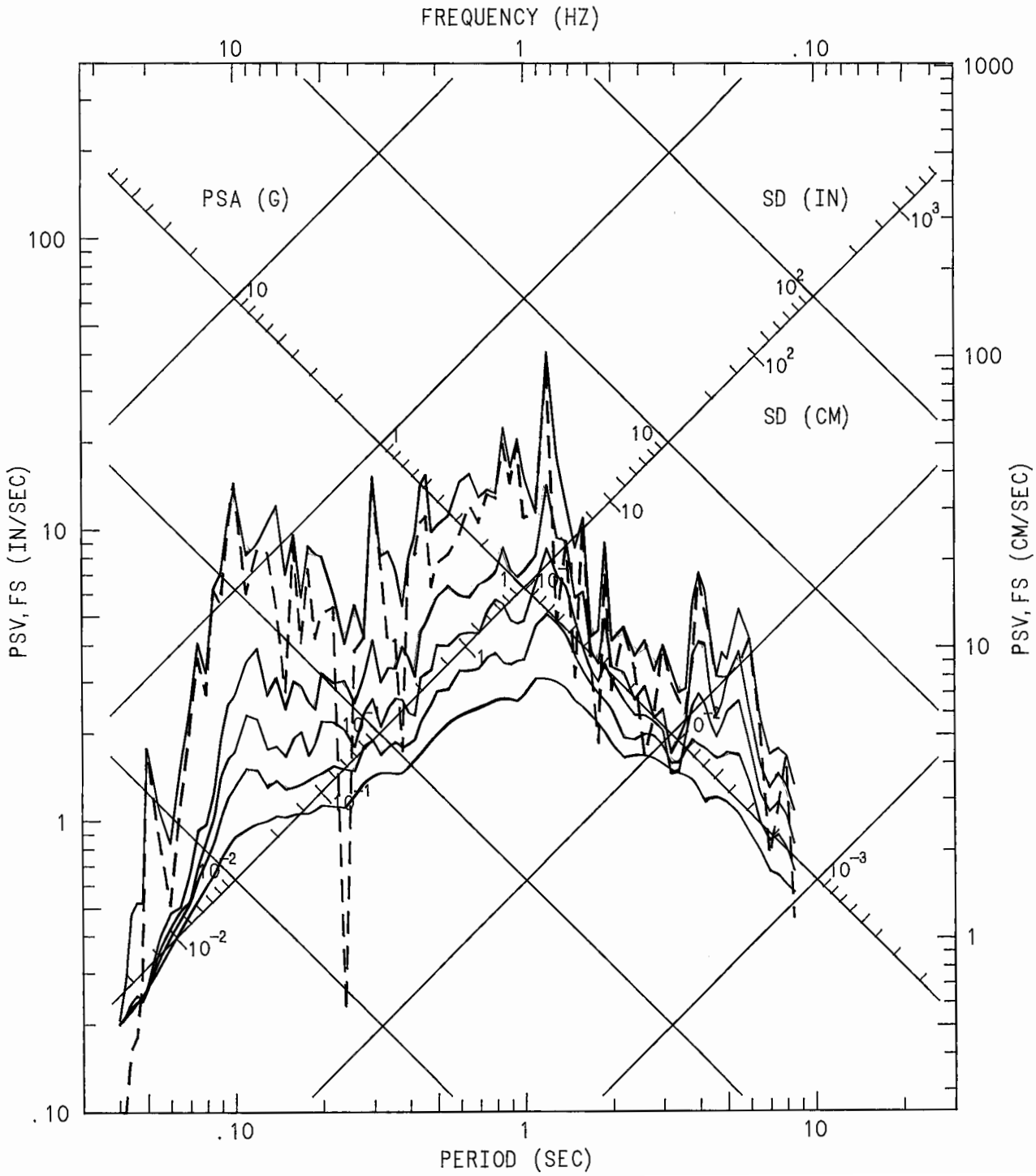
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
HEMET - STETSON AVE FIRE STATION
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .08-.16 TO 23.0-25.0 HZ.
12331-S2572-92183.04 112572.0851-QL92A331



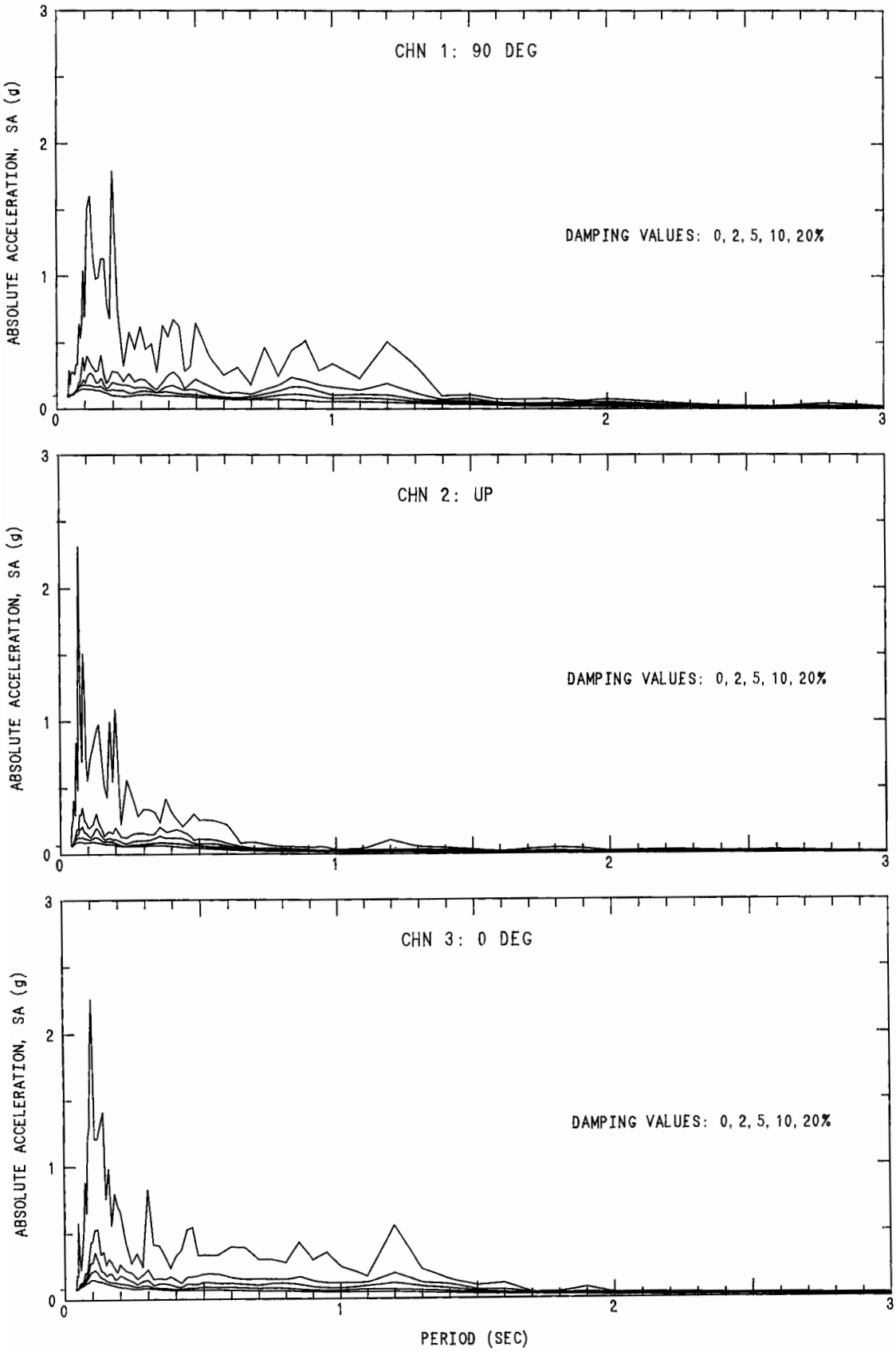
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
HEMET - STETSON AVE FIRE STATION
CHN 2: UP
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .08-.16 TO 23.0-25.0 HZ.
12331-S2572-92183.04 112572.0851-QL92A331



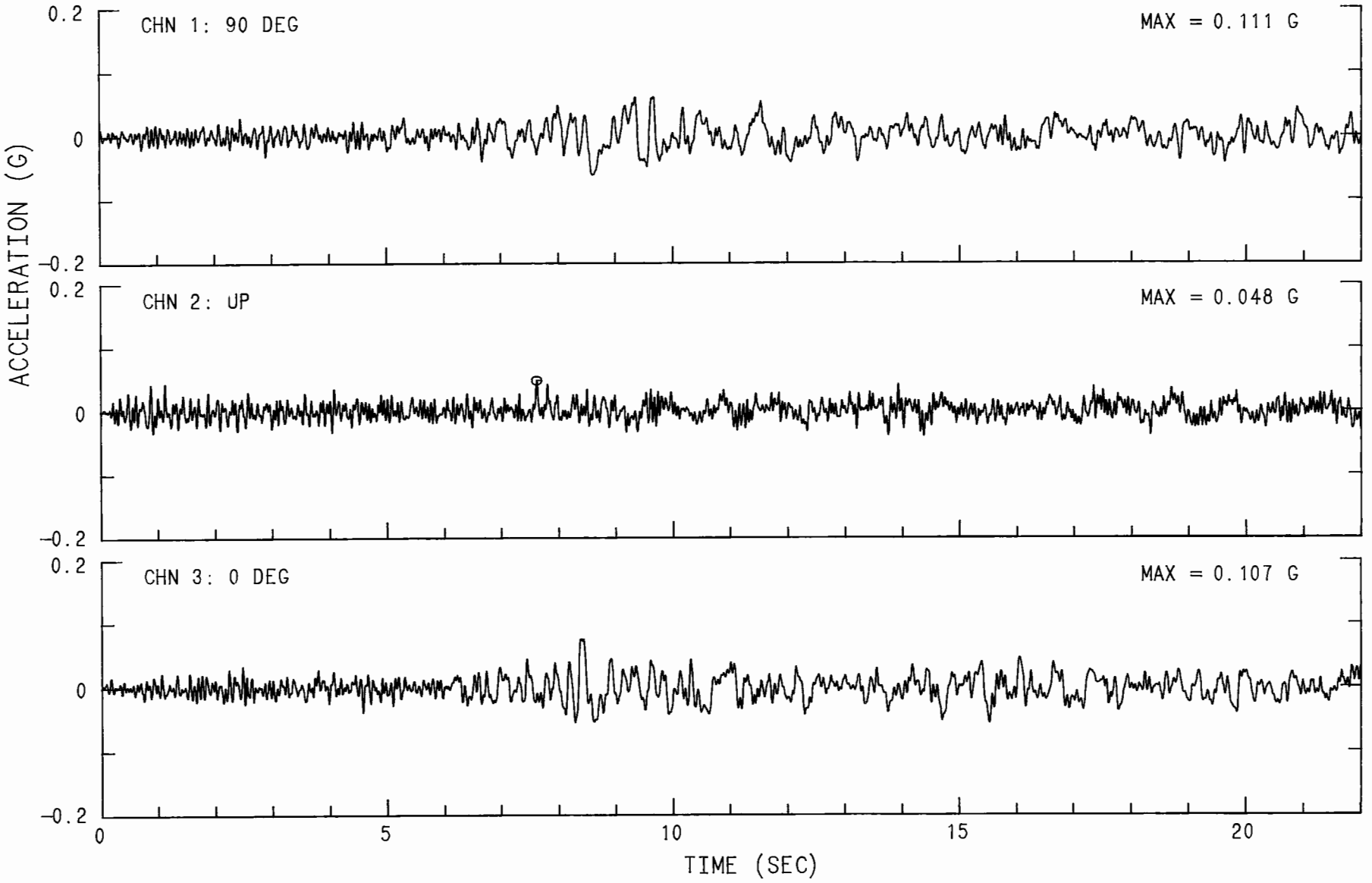
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
HEMET - STETSON AVE FIRE STATION
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .08-.16 TO 23.0-25.0 HZ.
12331-S2572-92183.04 112572.0851-QL92A331



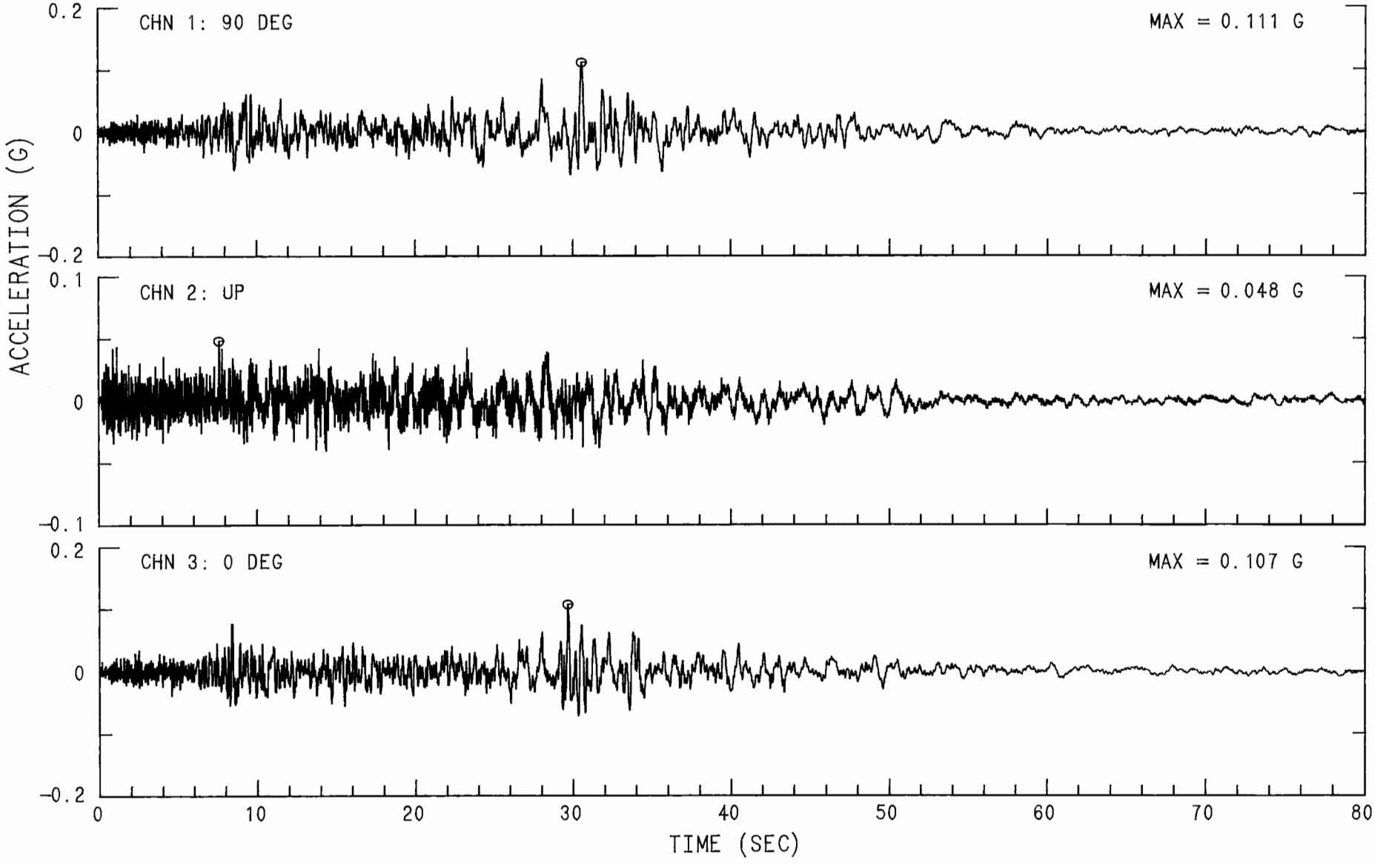
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
HEMET - STETSON AVE FIRE STATION
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .08-.16 TO 23.0-25.0 HZ.
12331-S2572-92183.04 112472.0851-QL92A331

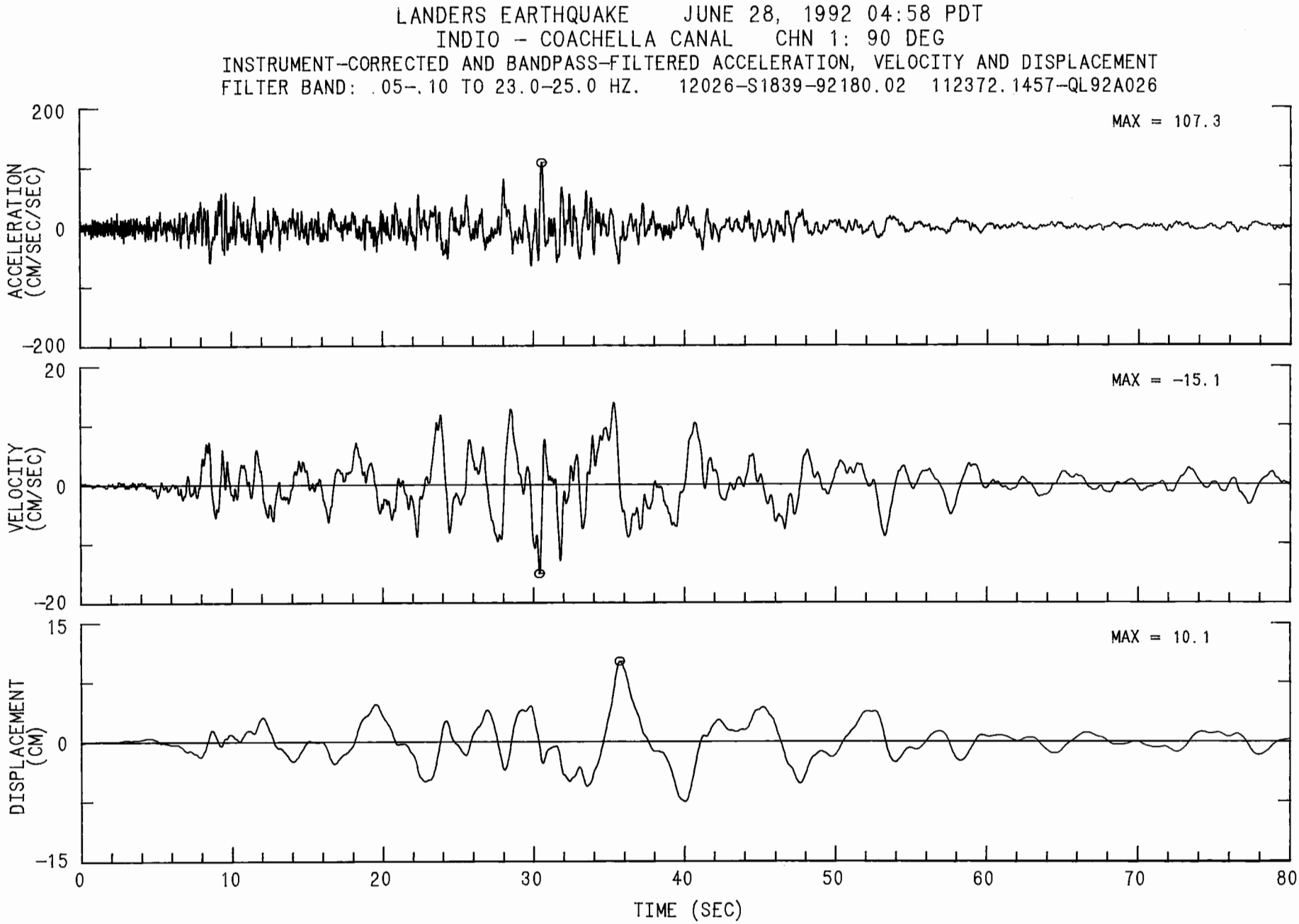


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
INDIO - COACHELLA CANAL
UNCORRECTED ACCELEROGRAM 12026-S1839-92180.02 102272.1317-QL92A026

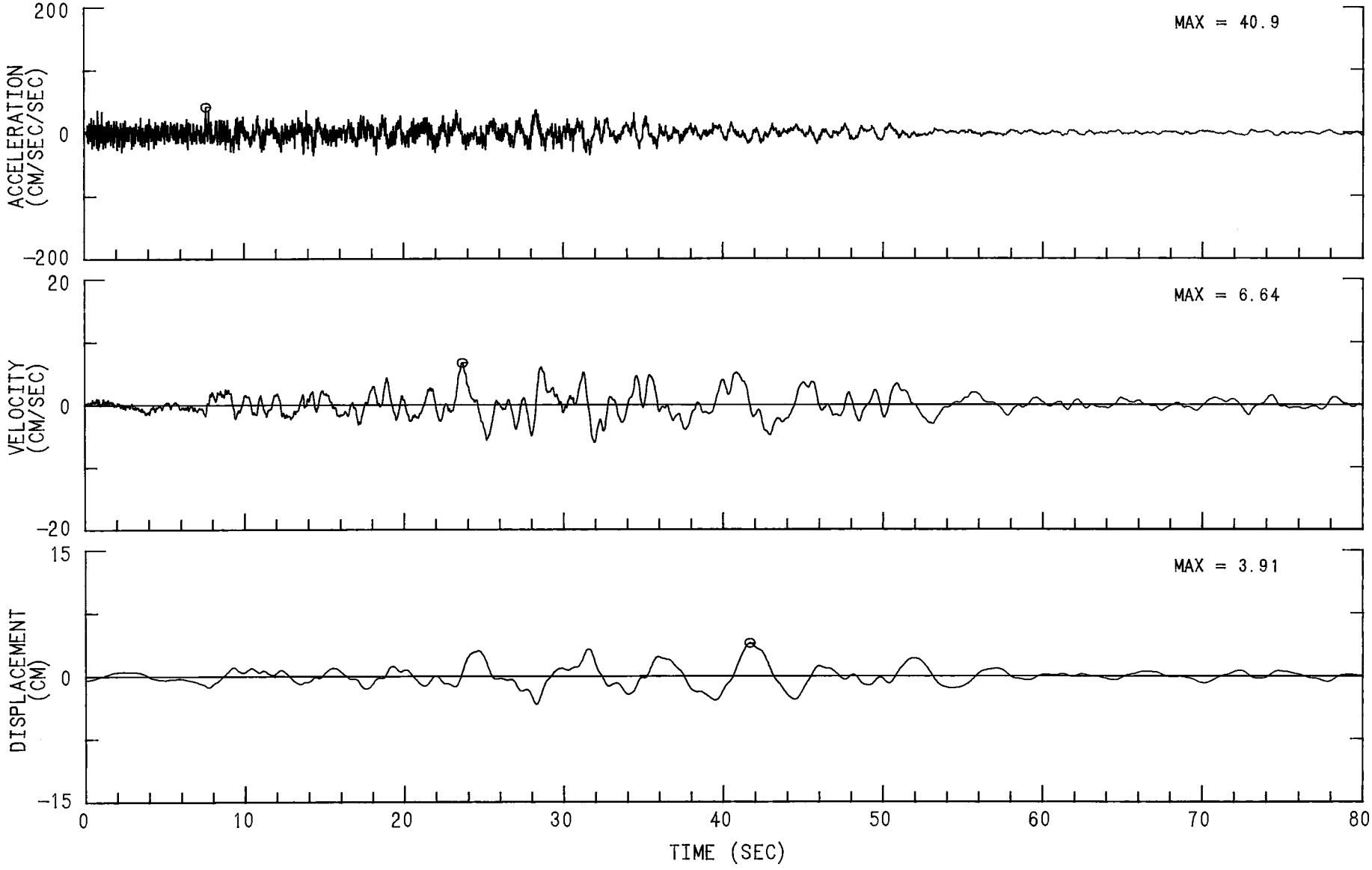


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
INDIO - COACHELLA CANAL
UNCORRECTED ACCELEROGRAM 12026-S1839-92180.02 102272.1317-QL92A026

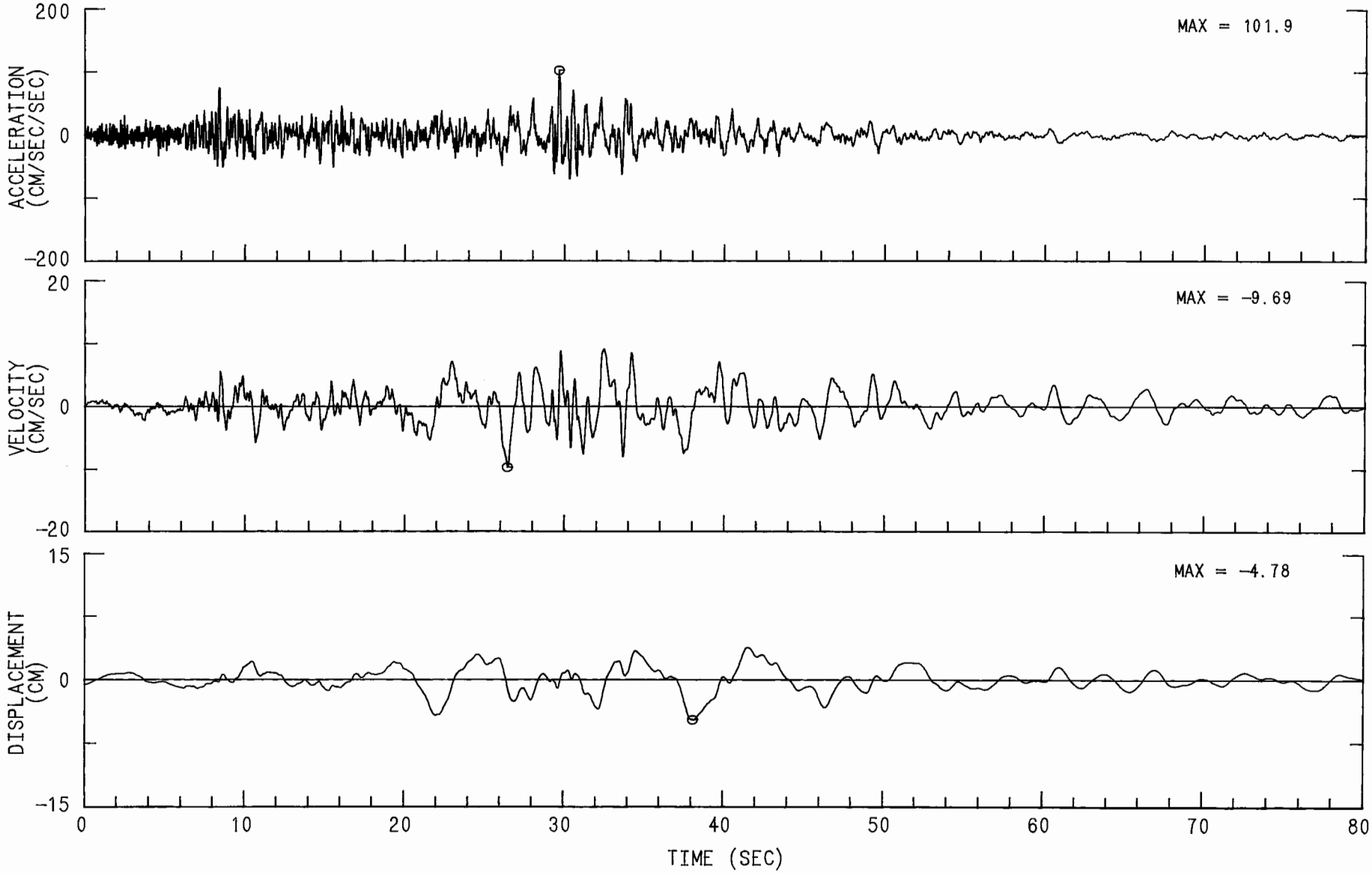



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
INDIO - COACHELLA CANAL CHN 1: 90 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.10 TO 23.0-25.0 HZ. 12026-S1839-92180.02 112372.1457-QL92A026
ACCELERATION (CM/SEC/SEC)
200
0
-200
MAX = 107.3
VELOCITY (CM/SEC)
20
0
-20
MAX = -15.1
DISPLACEMENT (CM)
15
0
-15
MAX = 10.1
0
10
20
30
40
50
60
70
80
TIME (SEC)

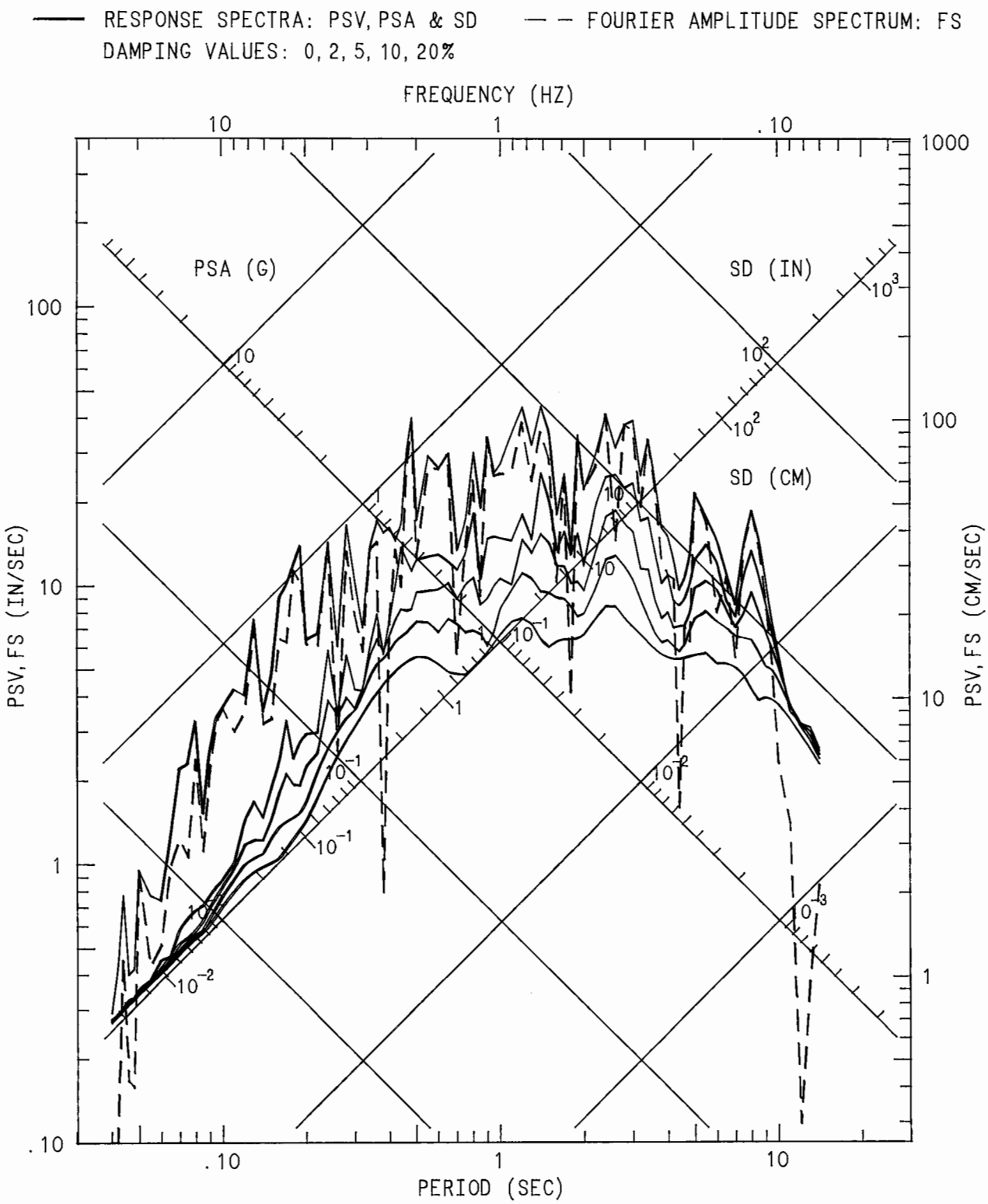
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
INDIO - COACHELLA CANAL CHN 2: UP
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.10 TO 23.0-25.0 HZ. 12026-S1839-92180.02 112372.1457-QL92A026



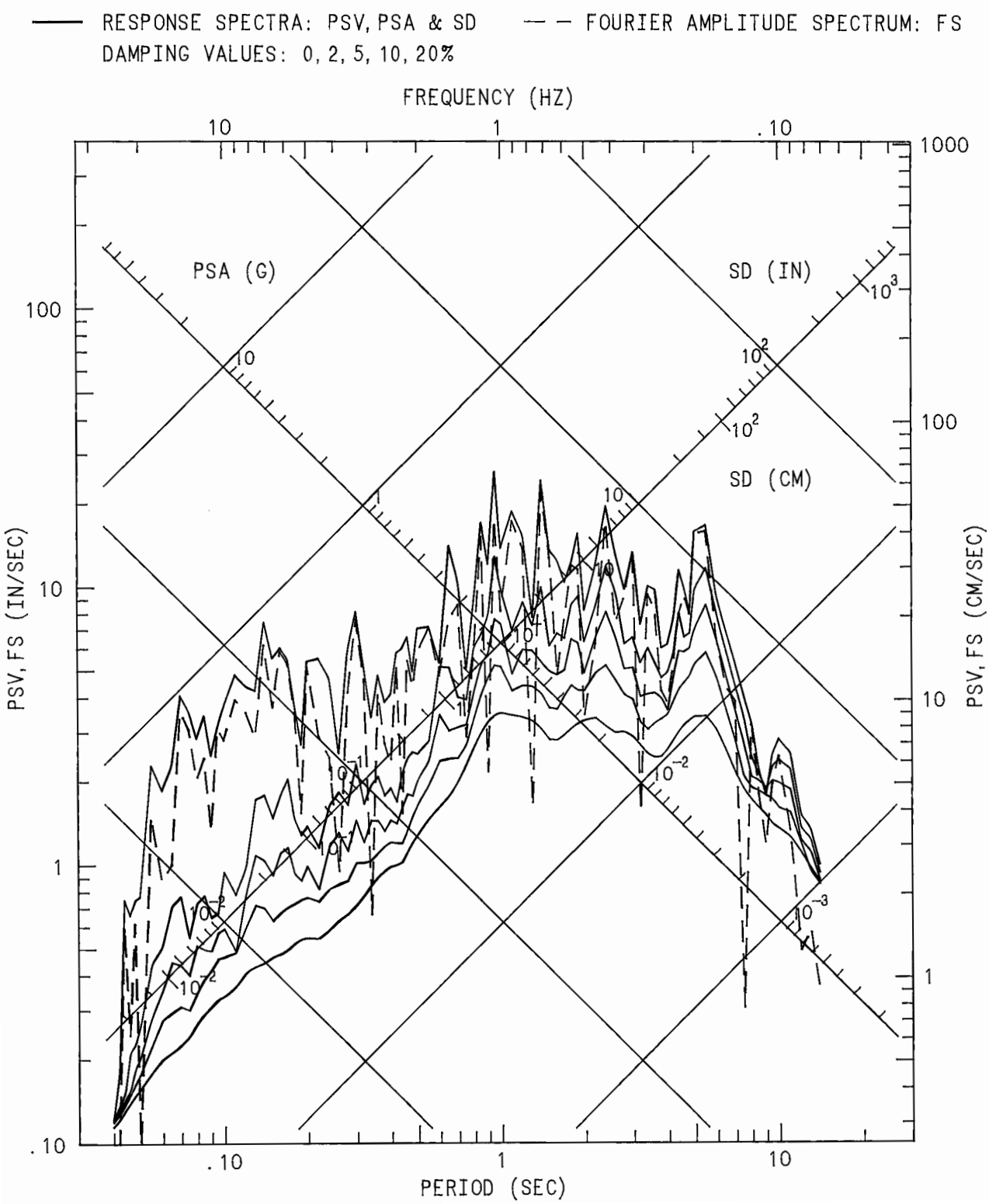
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
INDIO - COACHELLA CANAL CHN 3: 0 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.10 TO 23.0-25.0 HZ. 12026-S1839-92180.02 112372.1457-QL92A026



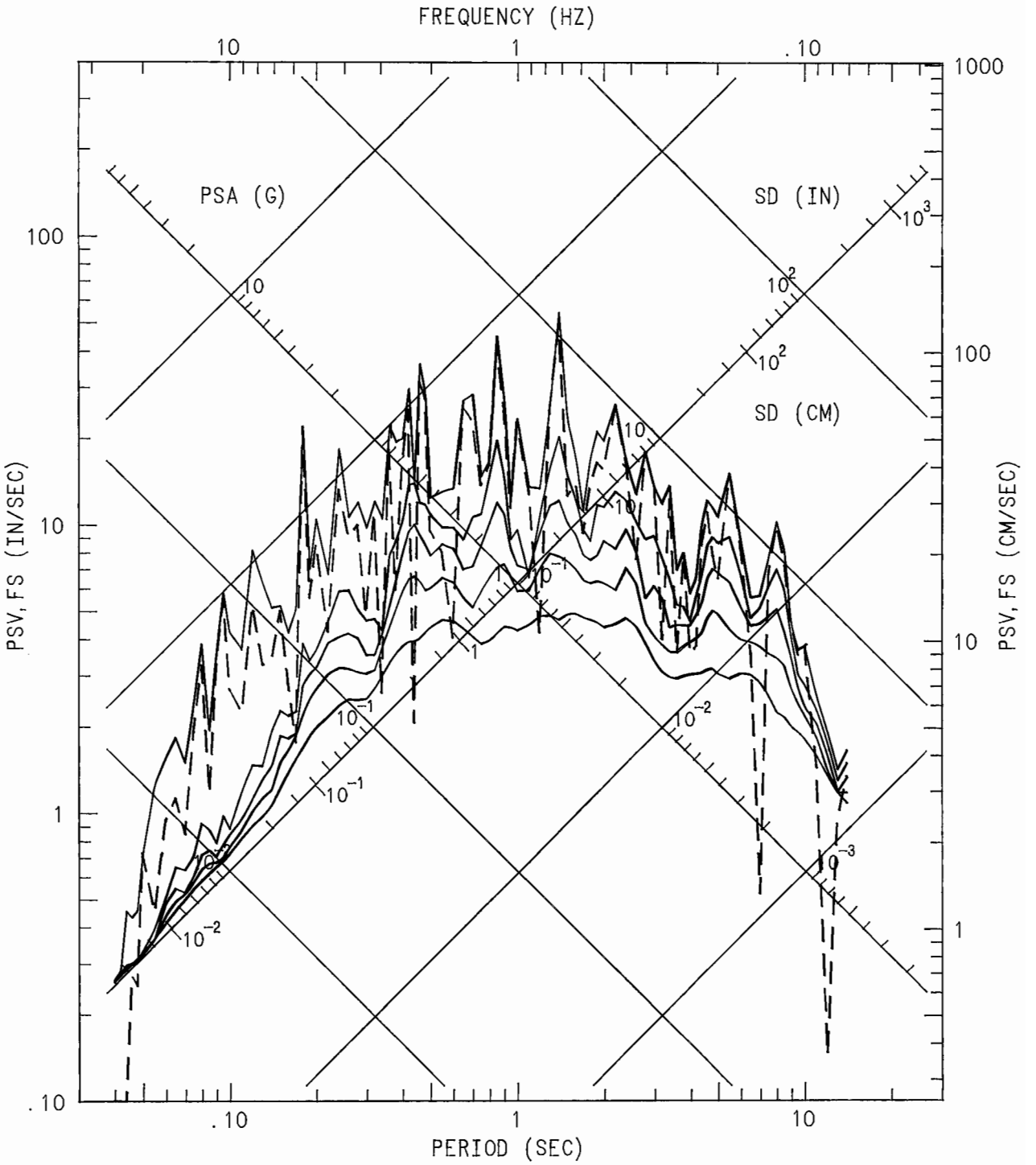
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
INDIO - COACHELLA CANAL
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
12026-S1839-92180.02 112472.1528-QL92A026



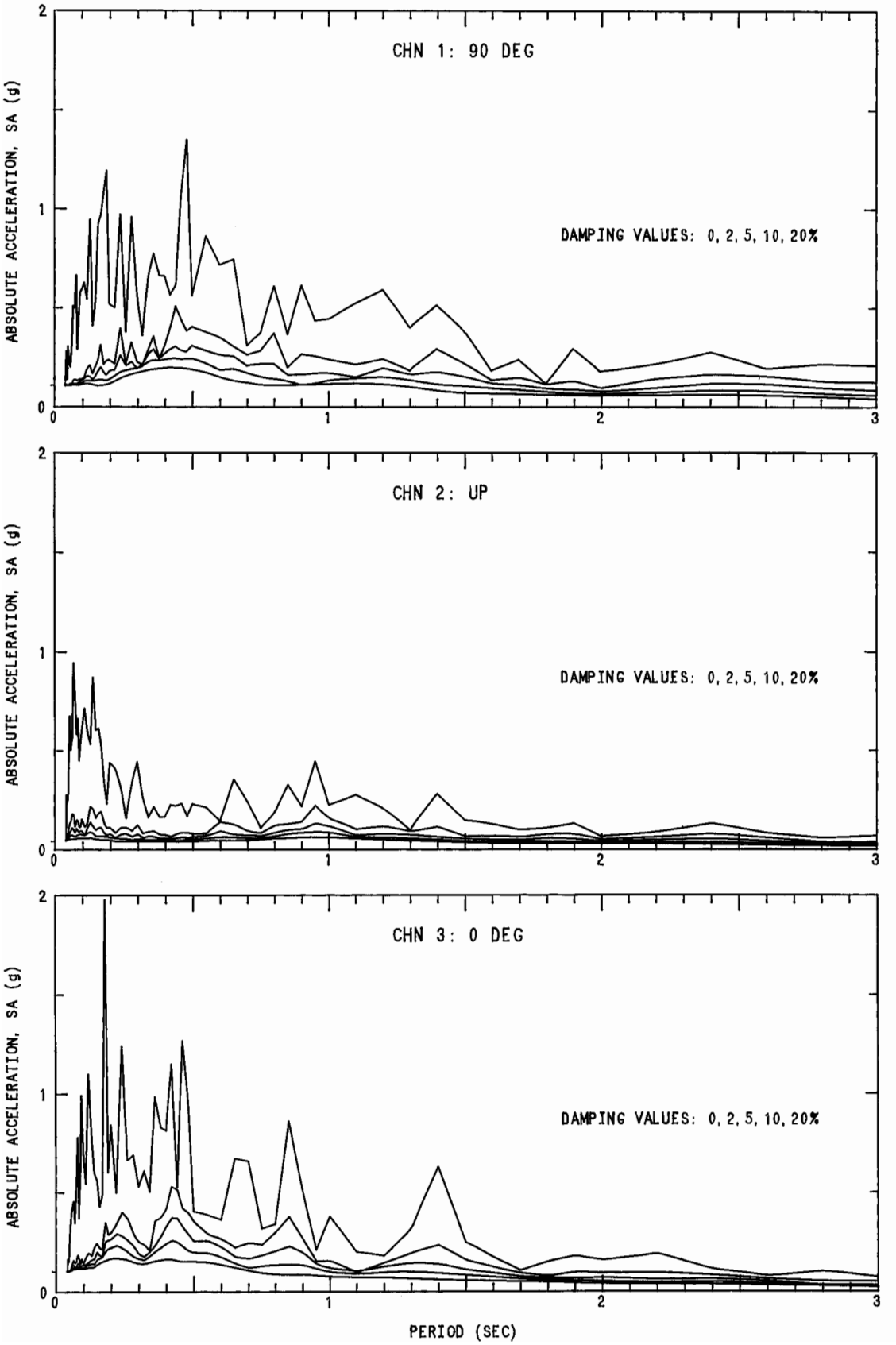
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
INDIO - COACHELLA CANAL
CHN 2: UP
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
12026-S1839-92180.02 112472.1528-QL92A026



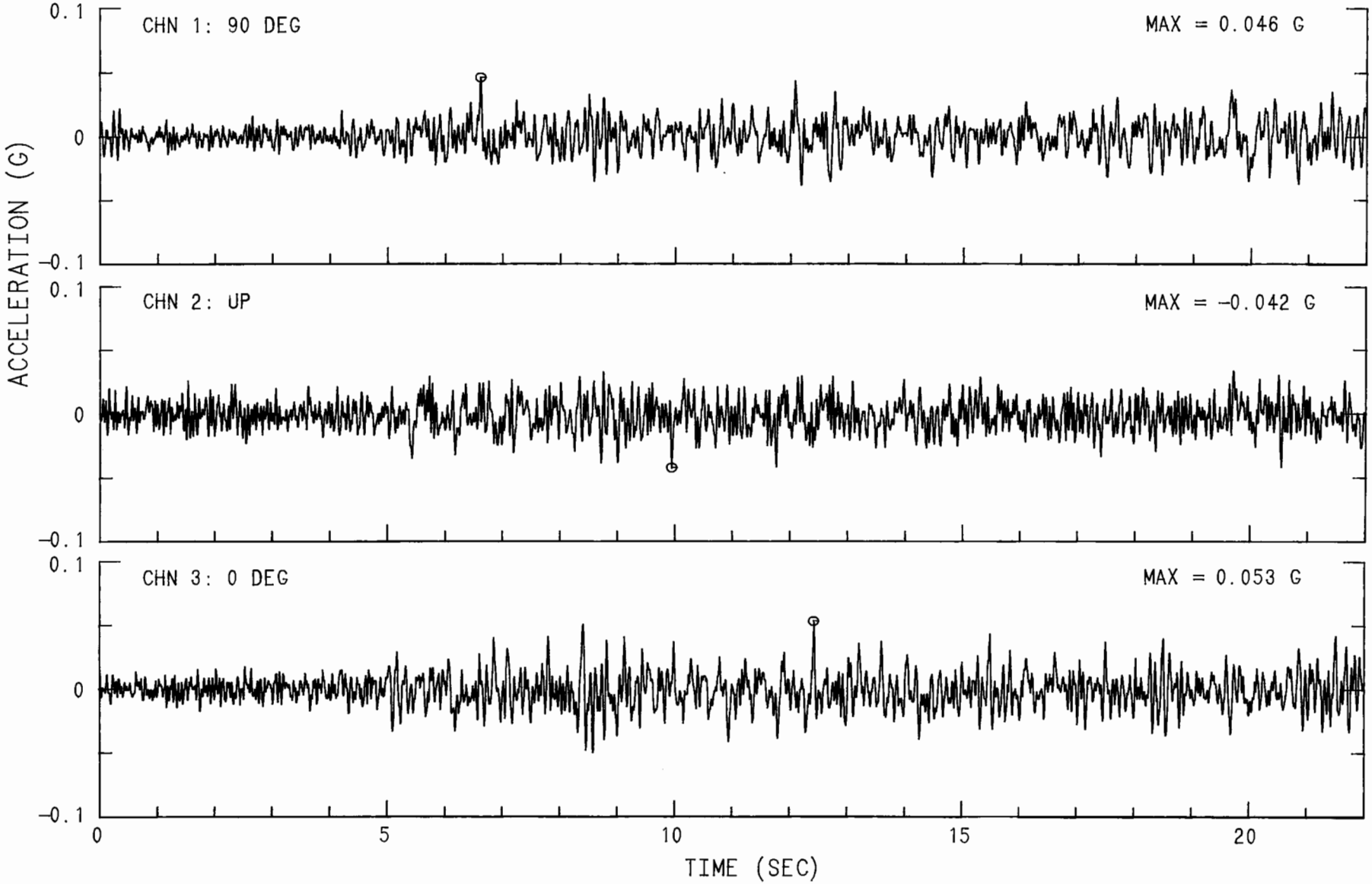
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
INDIO - COACHELLA CANAL
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
12026-S1839-92180.02 112472.1528-QL92A026



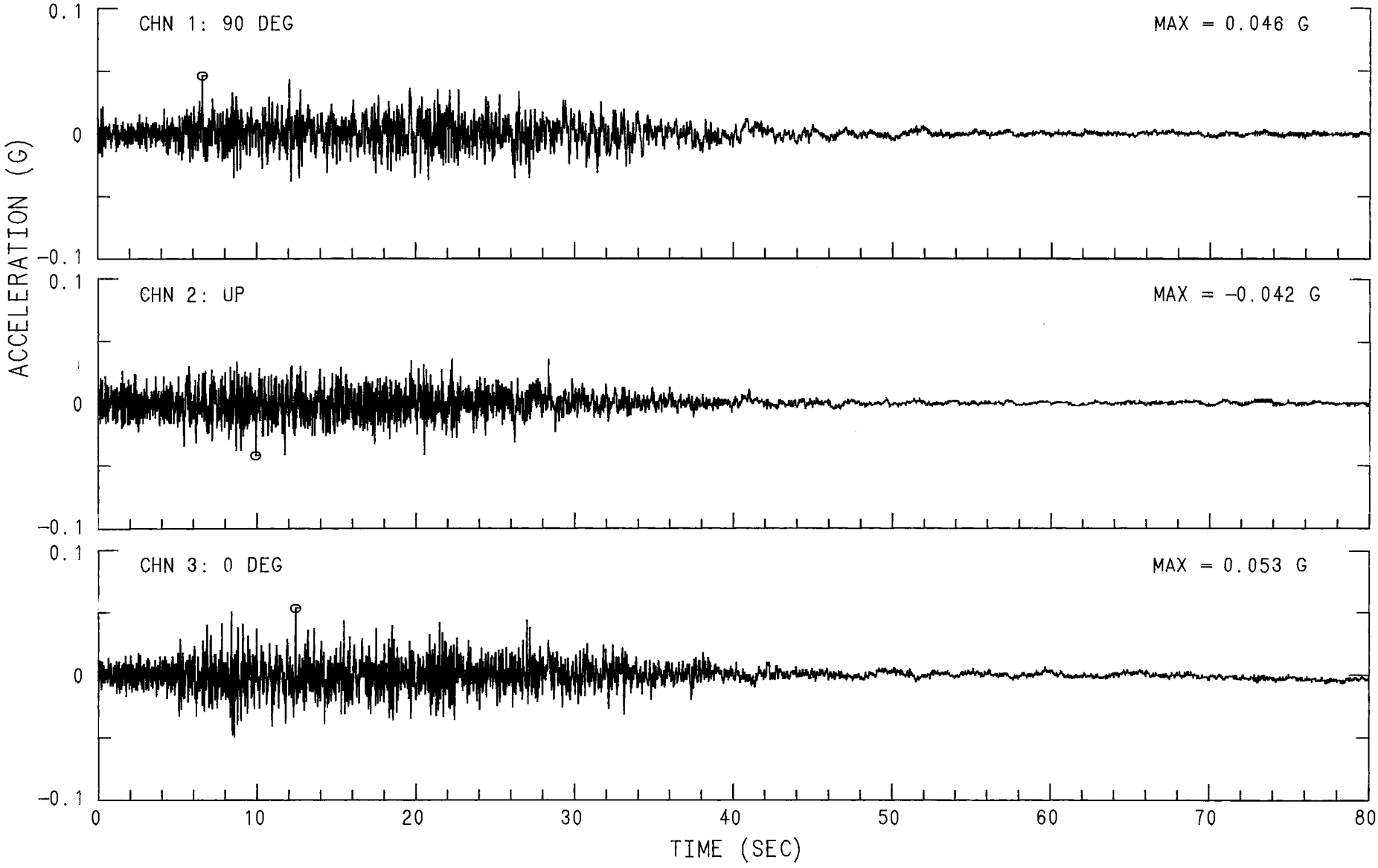
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
INDIO - COACHELLA CANAL
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
12026-S1839-92180.02 112372.1528-QL92A026

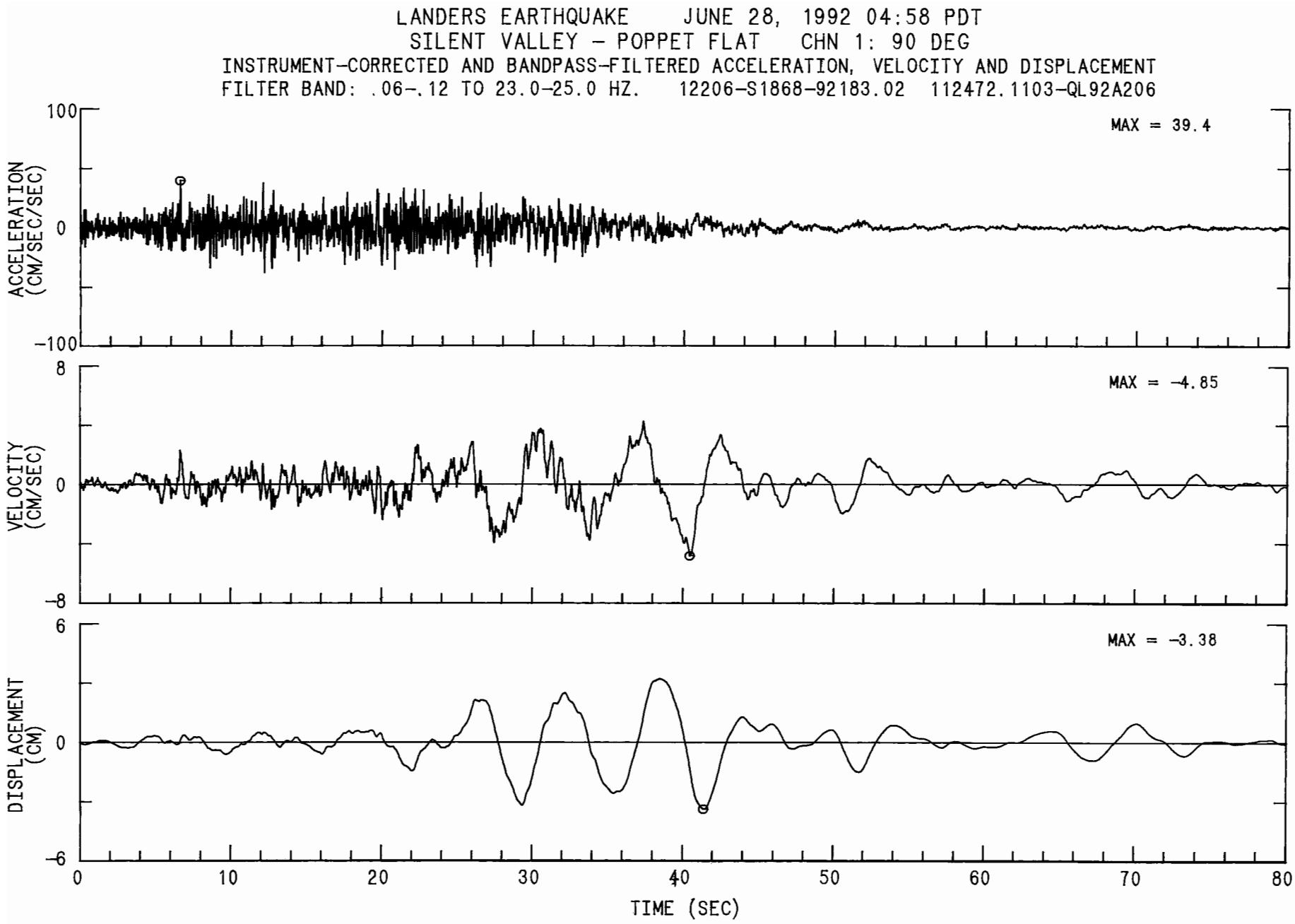


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
SILENT VALLEY - POPPET FLAT
UNCORRECTED ACCELEROGRAM 12206-S1868-92183.02 112472.1022-QL92A206

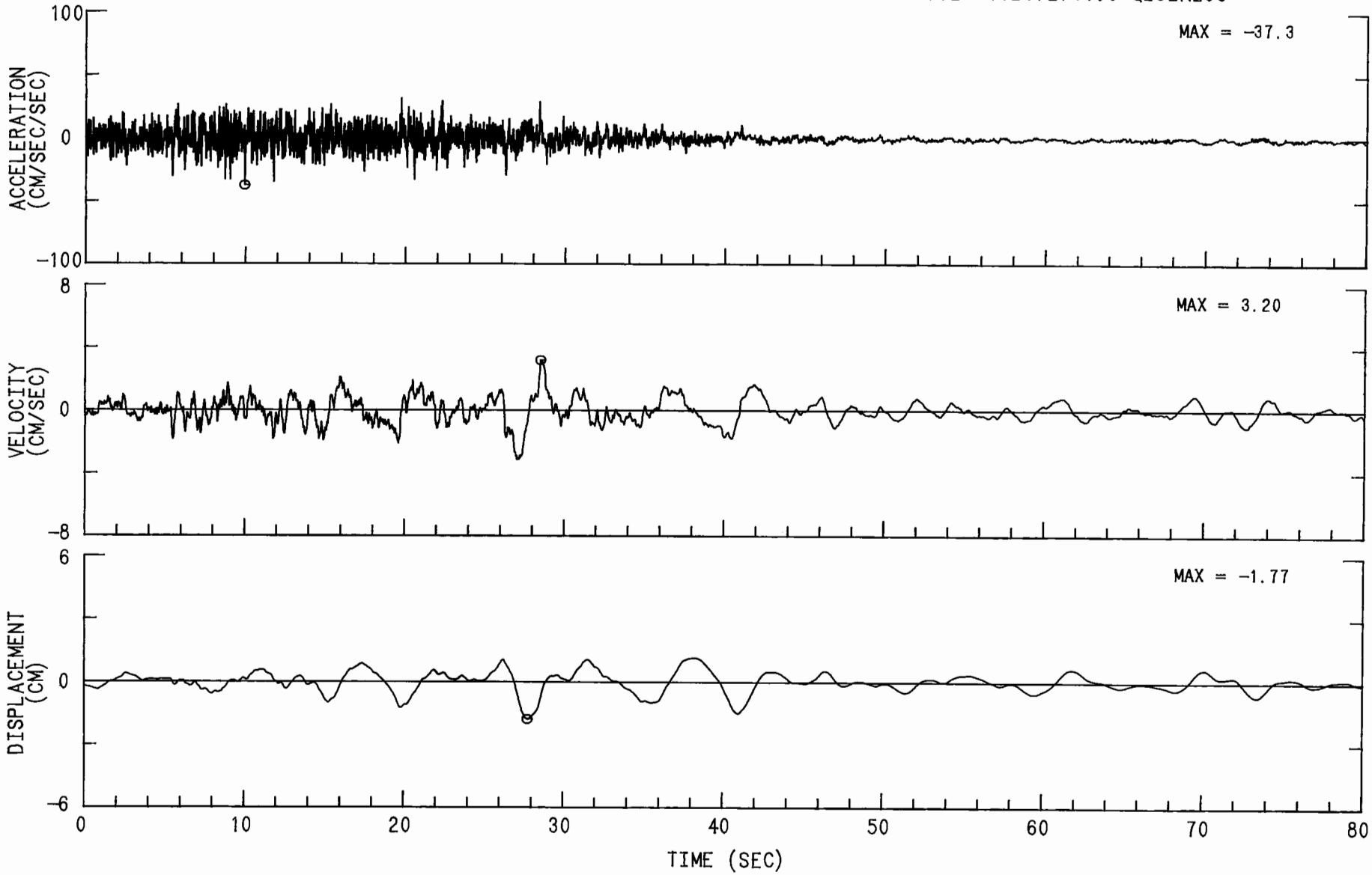


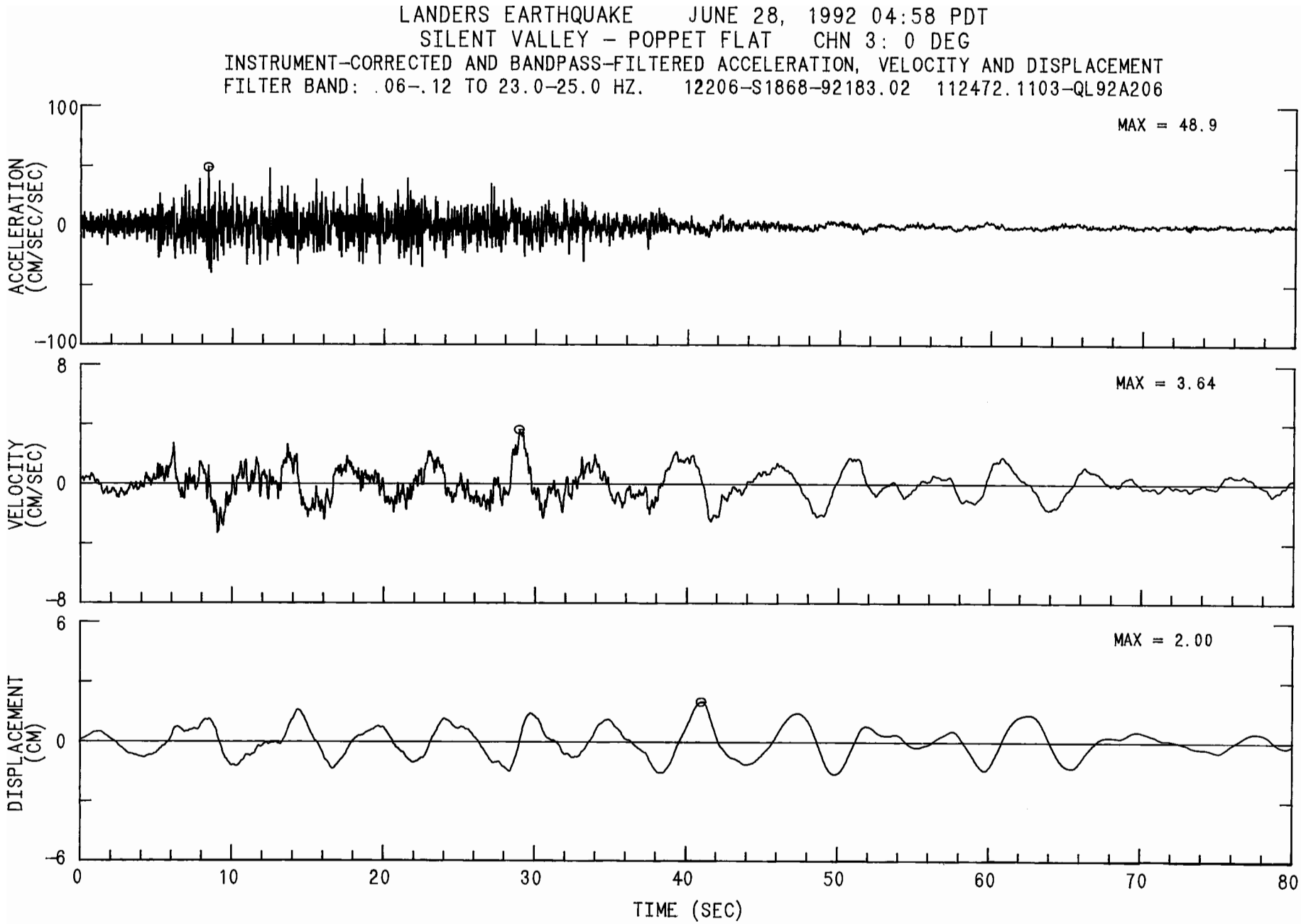
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
SILENT VALLEY - POPPET FLAT
UNCORRECTED ACCELEROGRAM 12206-S1868-92183.02 112472.1022-QL92A206



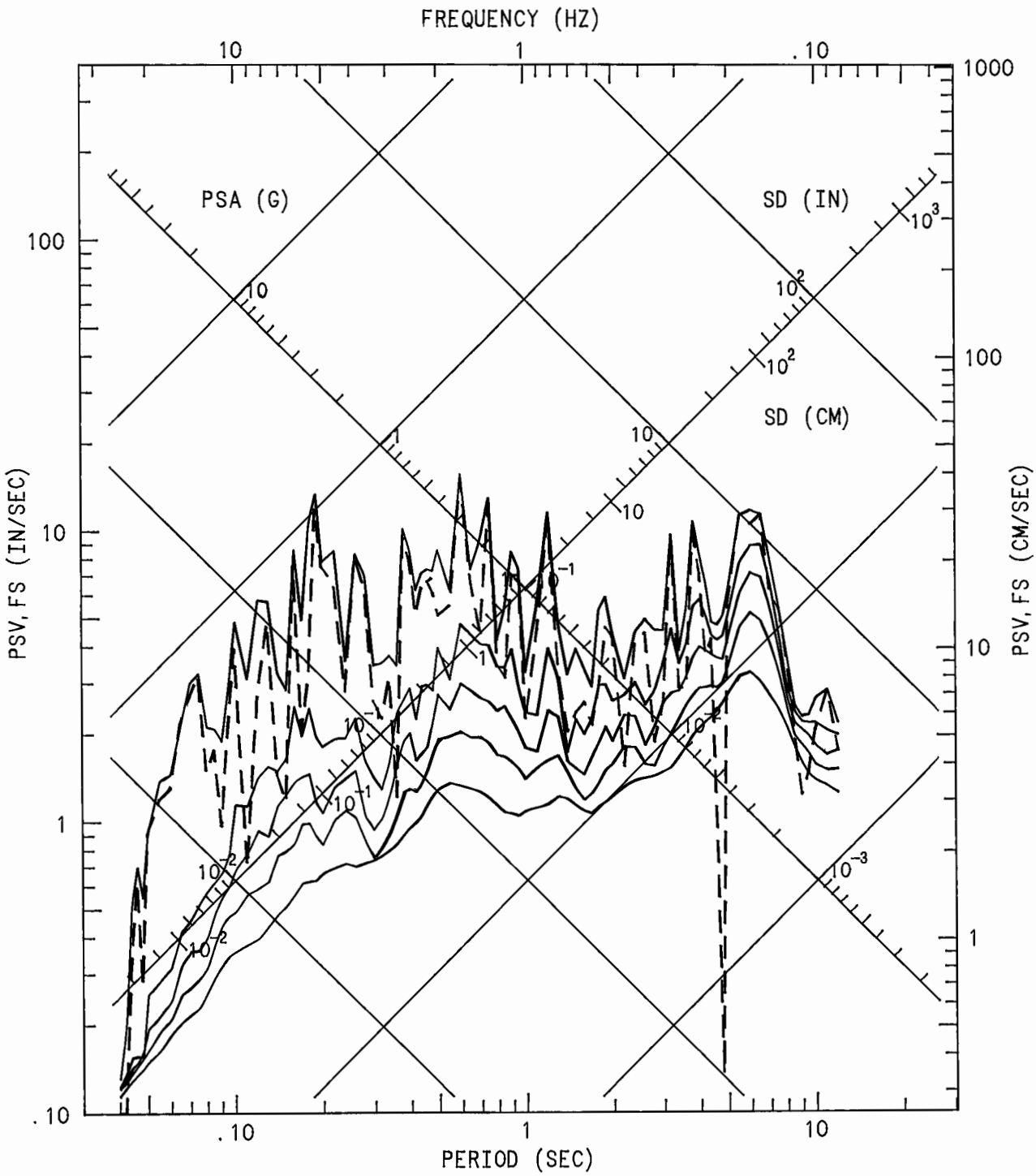

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
SILENT VALLEY - POPPET FLAT CHN 1: 90 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .06-.12 TO 23.0-25.0 HZ. 12206-S1868-92183.02 112472.1103-QL92A206
ACCELERATION (CM/SEC/SEC)
100
0
-100
MAX = 39.4
VELOCITY (CM/SEC)
8
0
-8
MAX = -4.85
DISPLACEMENT (CM)
6
0
-6
MAX = -3.38
0
10
20
30
40
50
60
70
80
TIME (SEC)

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
SILENT VALLEY - POPPET FLAT CHN 2: UP
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .06-.12 TO 23.0-25.0 HZ. 12206-S1868-92183.02 112472.1103-QL92A206

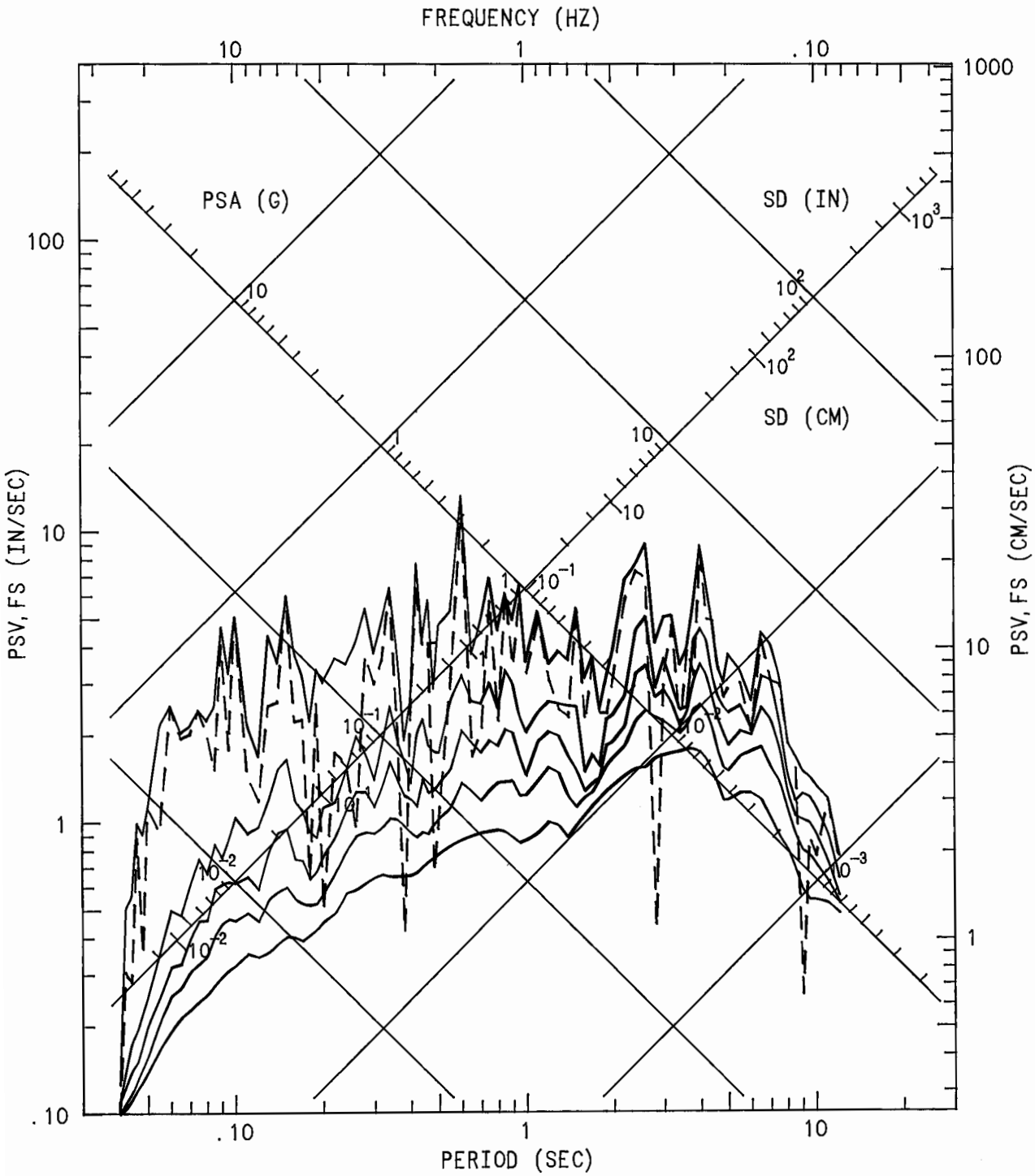



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
SILENT VALLEY - POPPET FLAT CHN 3: 0 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .06-.12 TO 23.0-25.0 HZ. 12206-S1868-92183.02 112472.1103-QL92A206
ACCELERATION (CM/SEC/SEC)
100
0
-100
MAX = 48.9
VELOCITY (CM/SEC)
8
0
-8
MAX = 3.64
DISPLACEMENT (CM)
6
0
-6
MAX = 2.00
0
10
20
30
40
50
60
70
80
TIME (SEC)

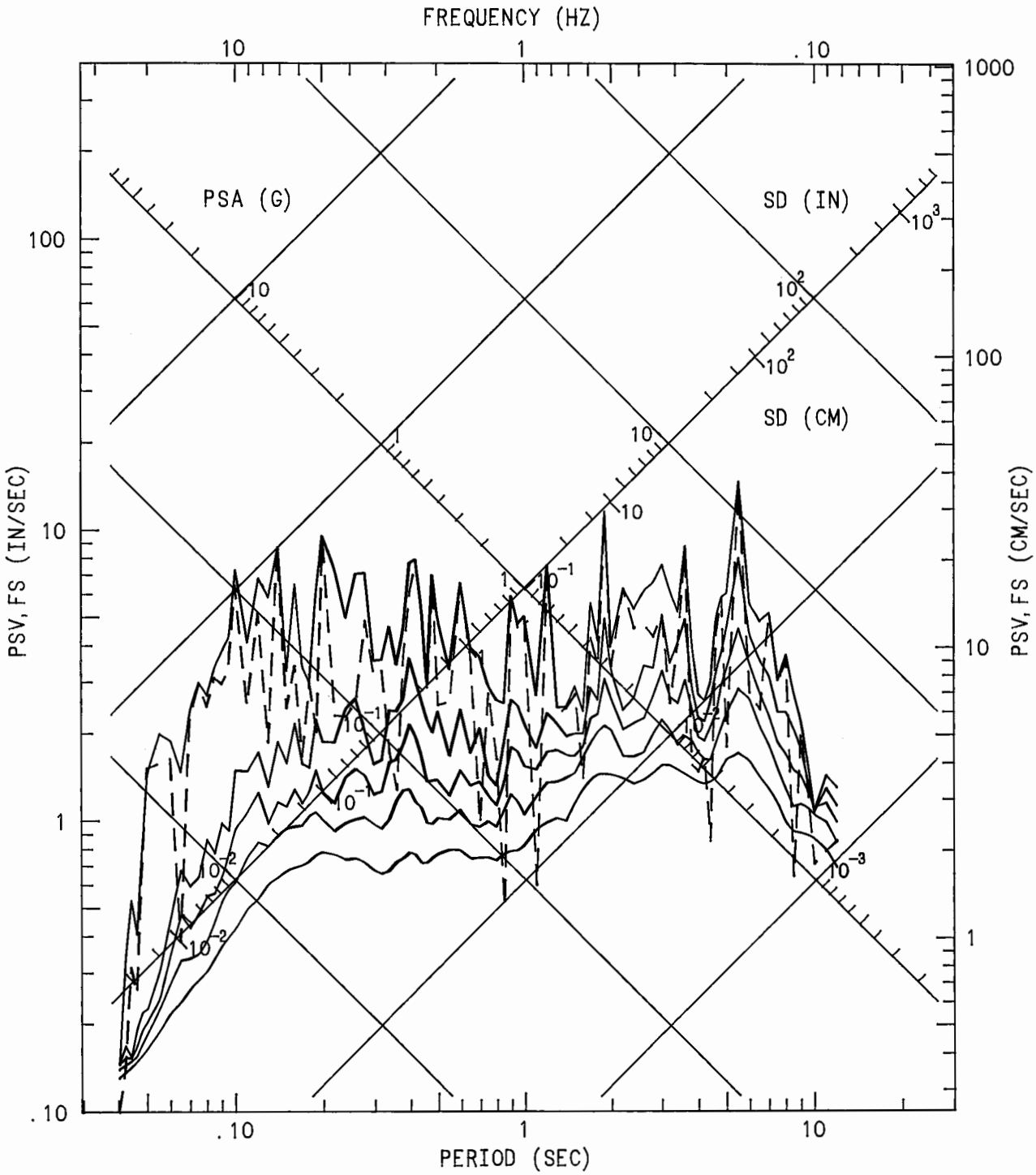
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
SILENT VALLEY - POPPET FLAT
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .06-.12 TO 23.0-25.0 HZ.
12206-S1868-92183.02 112572.1142-QL92A206



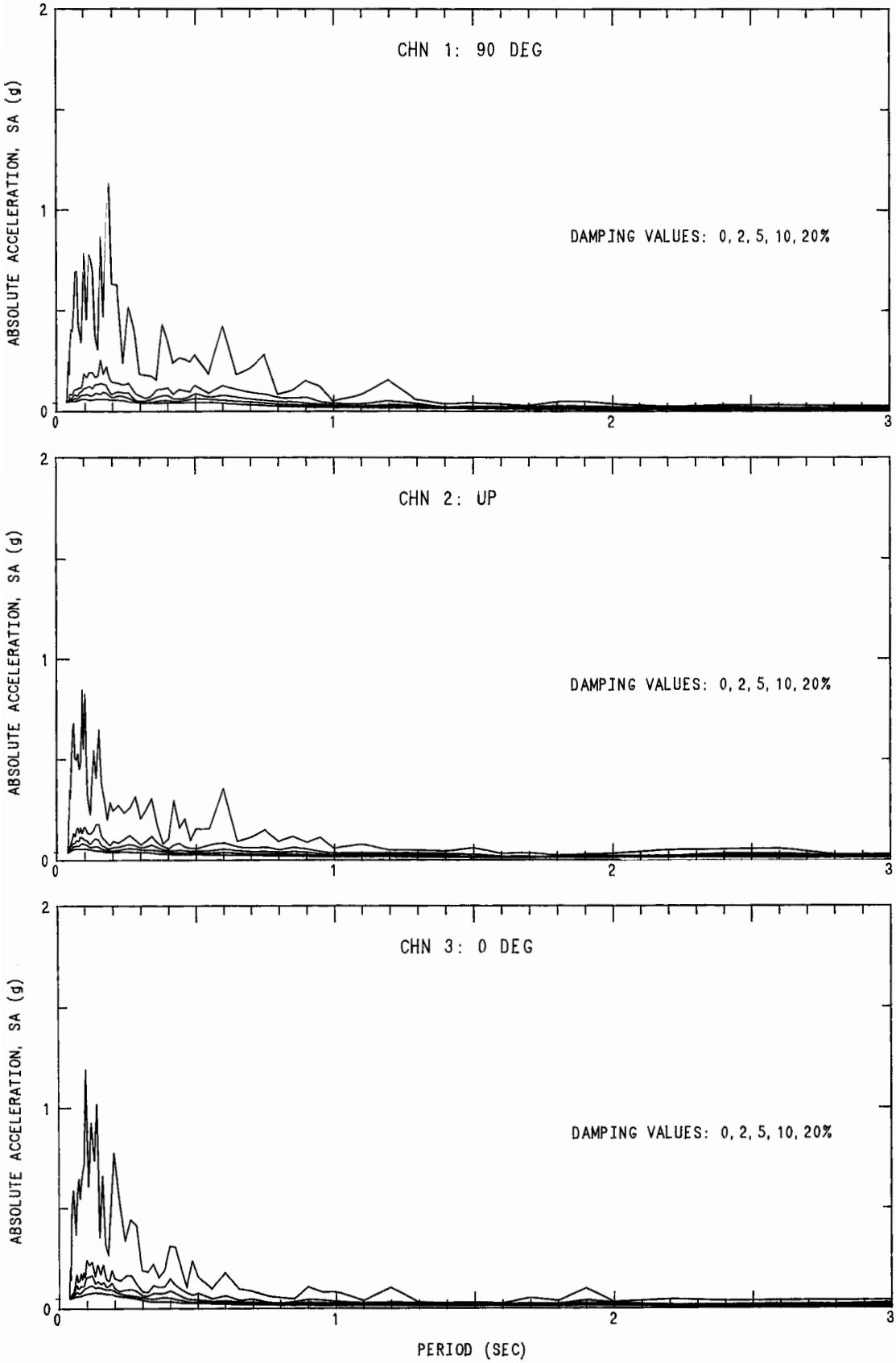
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
SILENT VALLEY - POPPET FLAT
CHN 2: UP
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .06-.12 TO 23.0-25.0 HZ.
12206-S1868-92183.02 112572.1142-QL92A206



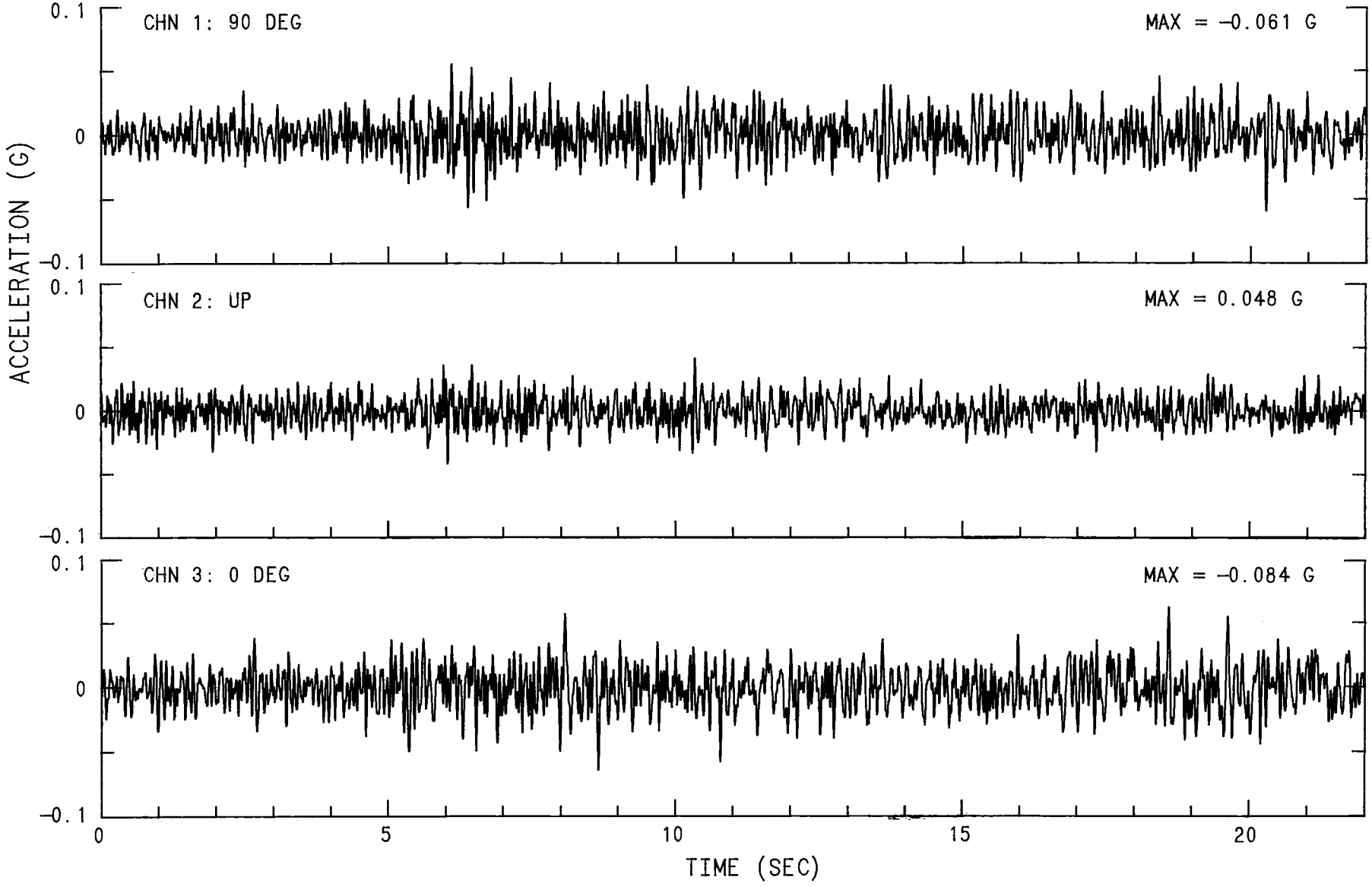
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
SILENT VALLEY - POPPET FLAT
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .06-.12 TO 23.0-25.0 HZ.
12206-S1868-92183.02 112572.1142-QL92A206



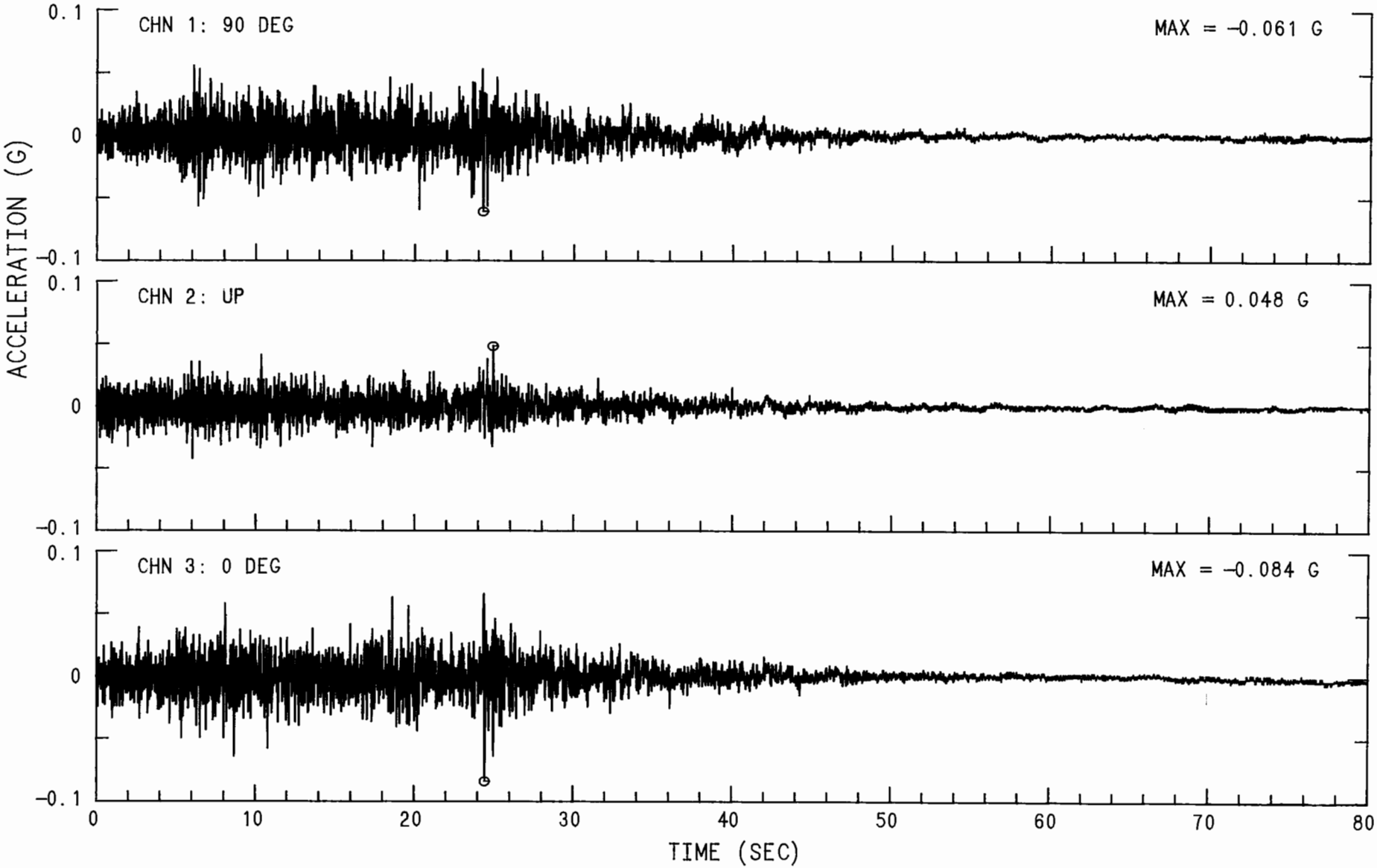
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
SILENT VALLEY - POPPET FLAT
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .06-.12 TO 23.0-25.0 HZ.
12206-S1868-92183.02 112472.1142-QL92A206

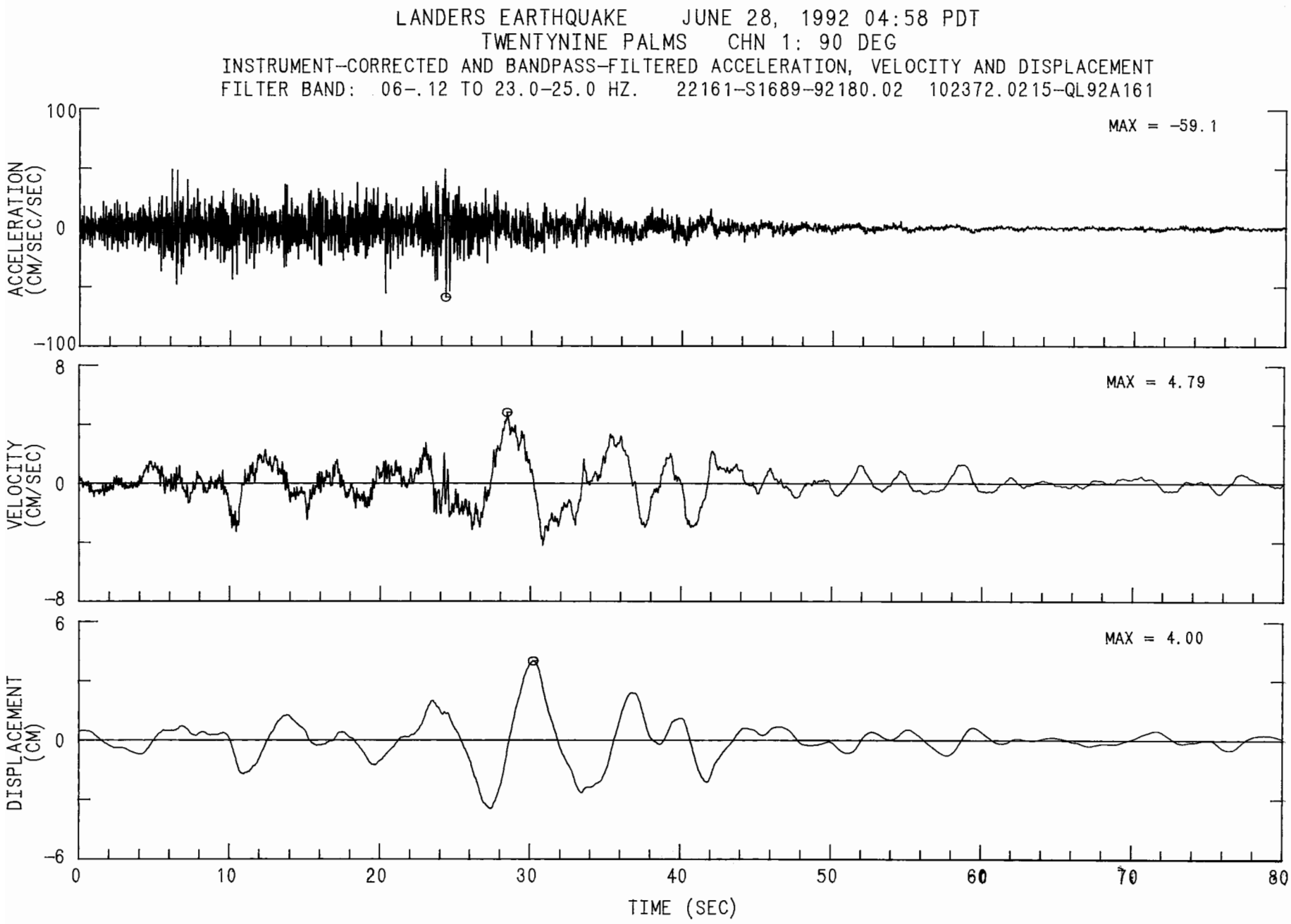


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
TWENTYNINE PALMS
UNCORRECTED ACCELEROGRAM 22161-S1689-92180.02 102272.0942-QL92A161

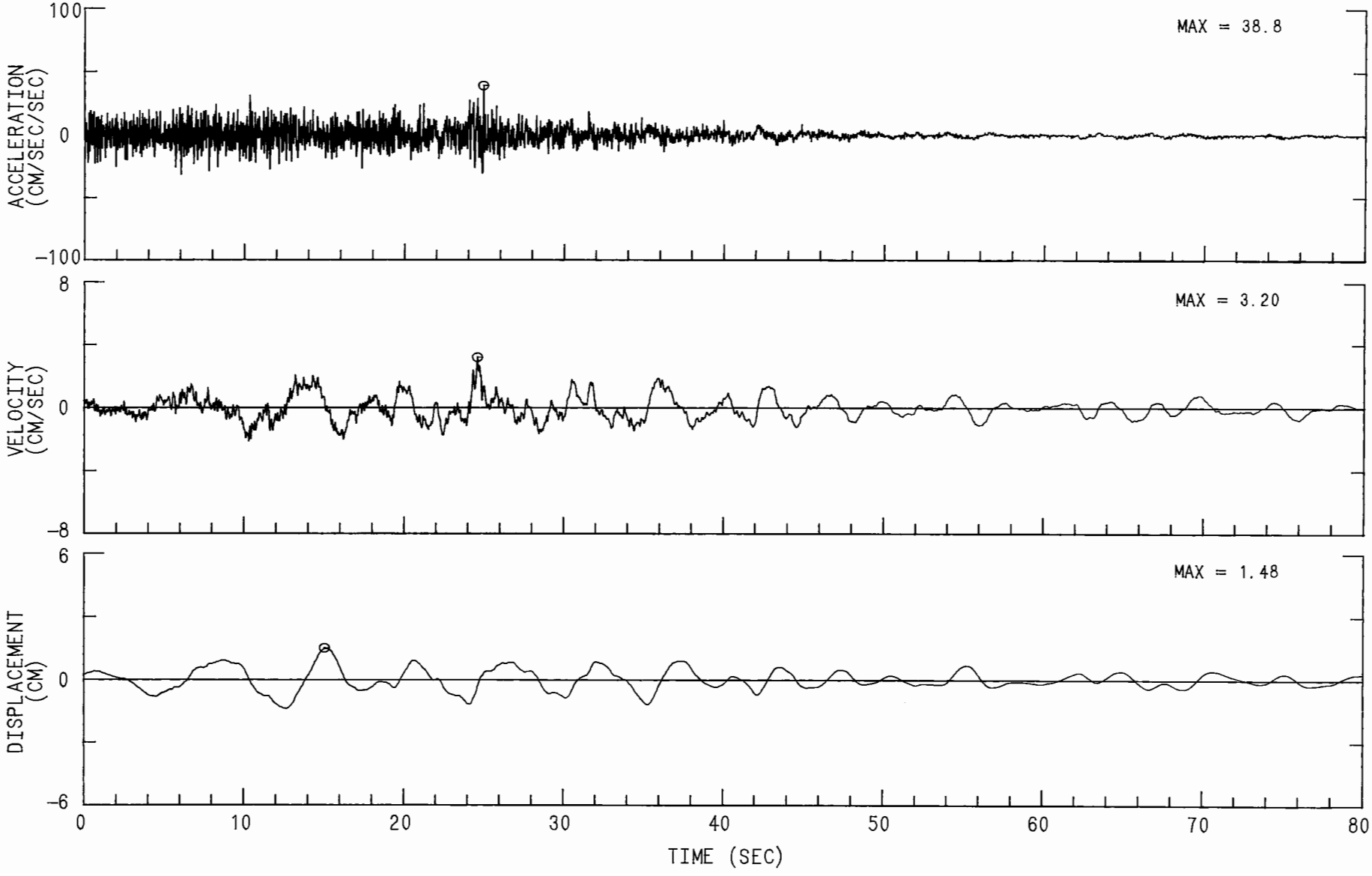


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
TWENTYNINE PALMS
UNCORRECTED ACCELEROGRAM 22161-S1689-92180.02 102272.0942-QL92A161

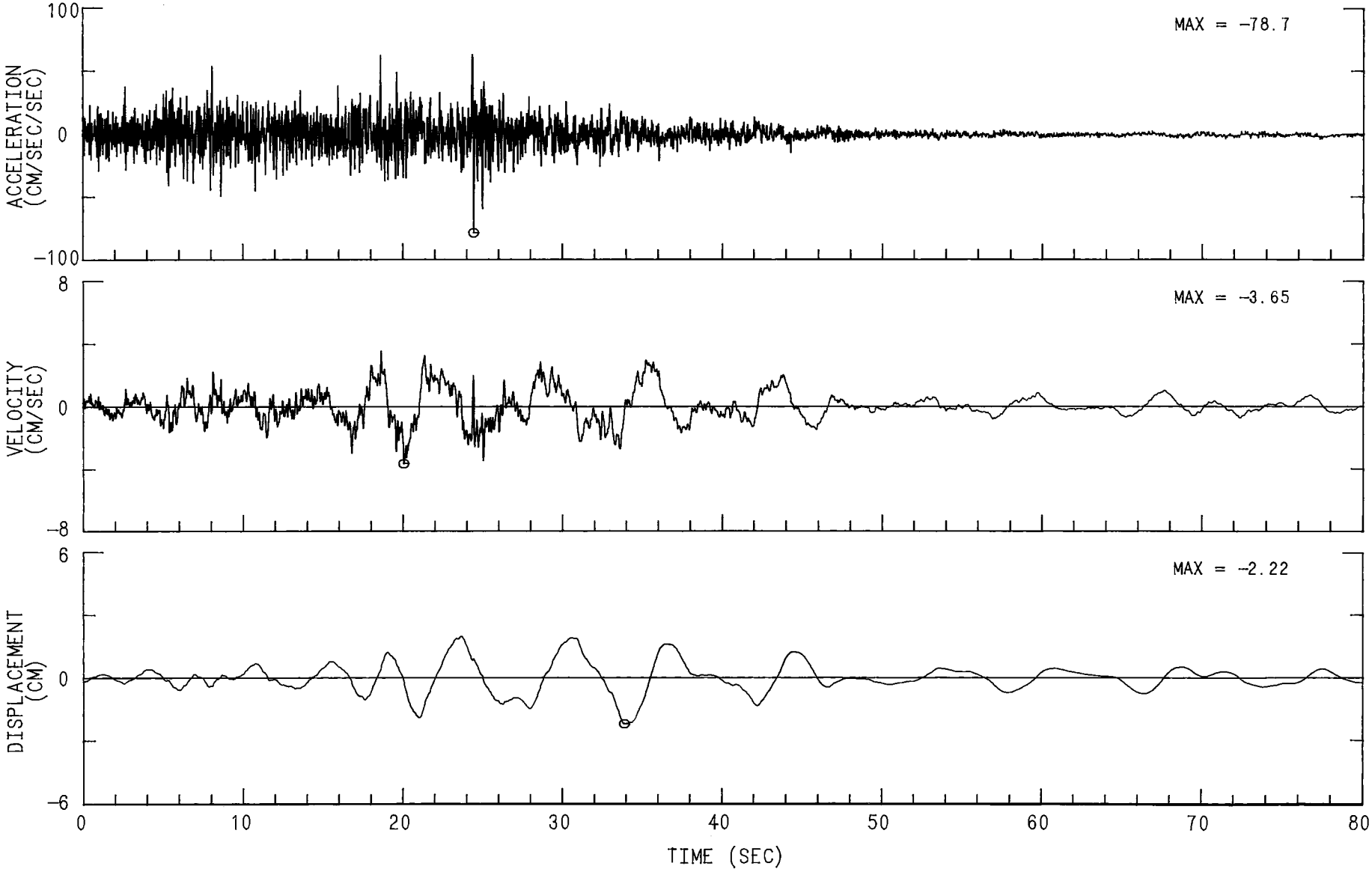



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
TWENTYNINE PALMS CHN 1: 90 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .06-.12 TO 23.0-25.0 HZ. 22161-S1689-92180.02 102372.0215-QL92A161
ACCELERATION (CM/SEC/SEC)
100
0
-100
MAX = -59.1
VELOCITY (CM/SEC)
8
0
-8
MAX = 4.79
DISPLACEMENT (CM)
6
0
-6
MAX = 4.00
0
10
20
30
40
50
60
70
80
TIME (SEC)

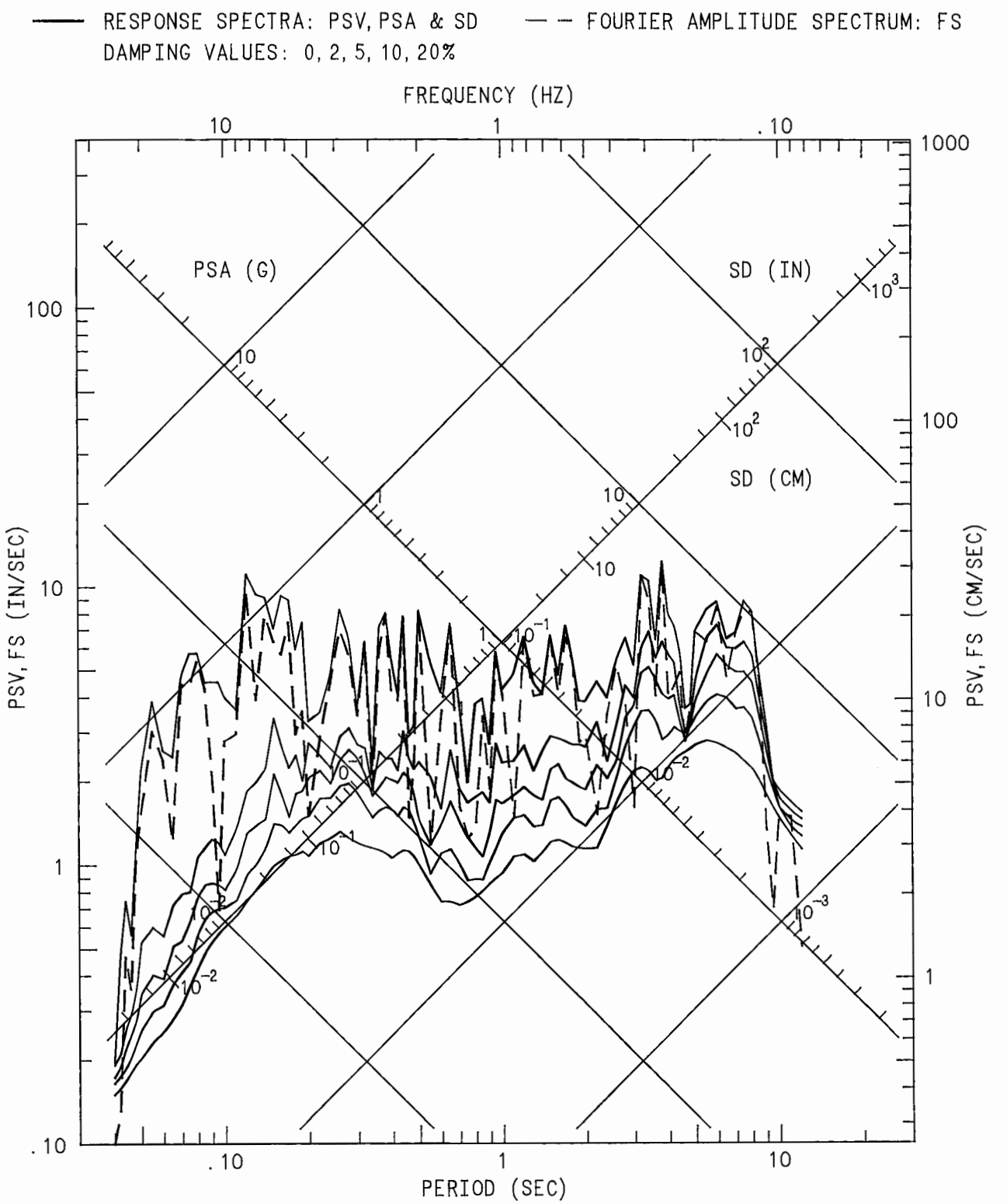
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
TWENTYNINE PALMS CHN 2: UP
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .06-.12 TO 23.0-25.0 HZ. 22161-S1689-92180.02 102372.0215-QL92A161



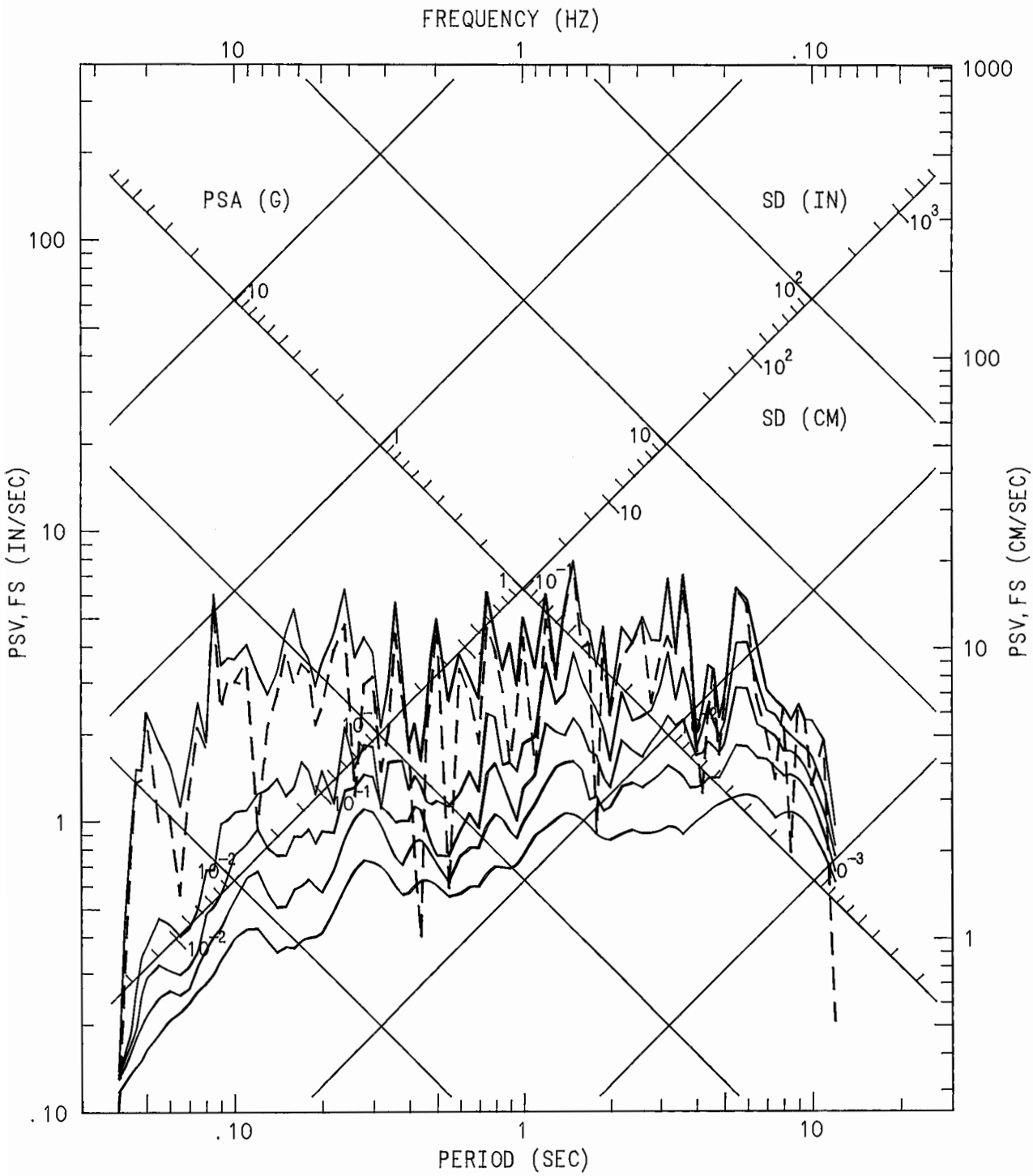
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
TWENTYNINE PALMS CHN 3: 0 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .06-.12 TO 23.0-25.0 HZ. 22161-S1689-92180.02 102372.0215-QL92A161



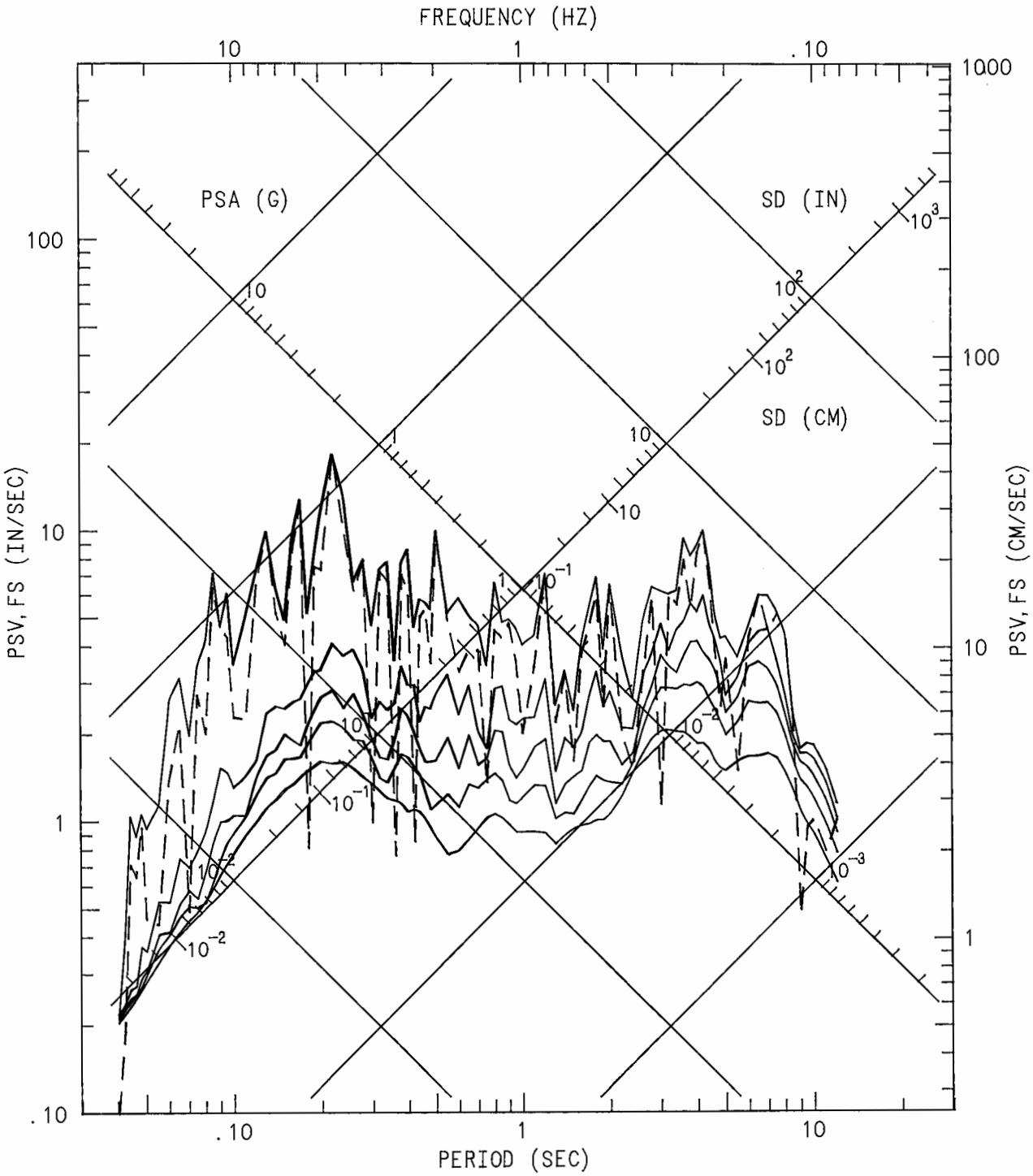
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
TWENTYNINE PALMS
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .06-.12 TO 23.0-25.0 HZ.
22161-S1689-92180.02 112472.1403-QL92A161



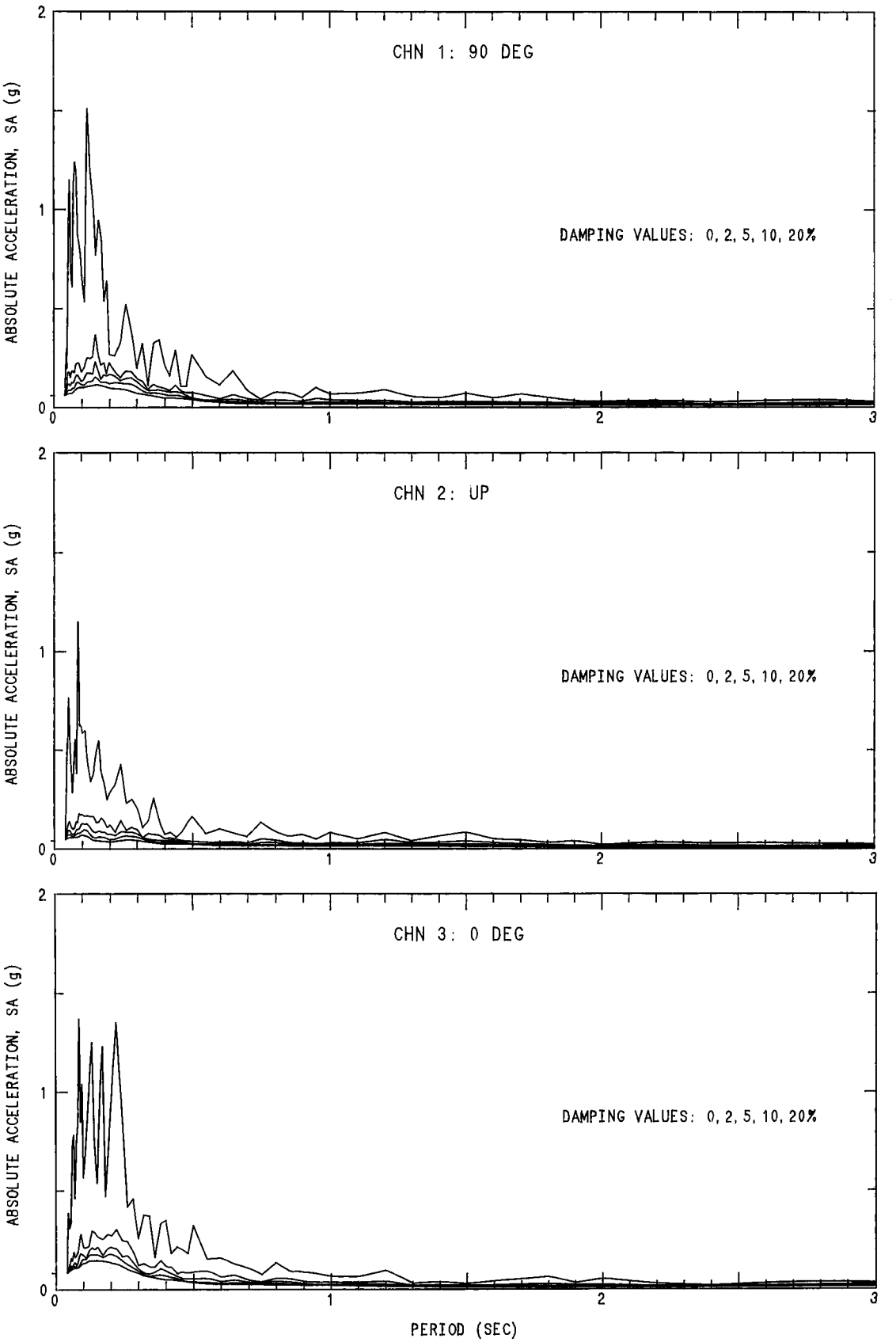
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
TWENTYNINE PALMS
CHN 2: UP
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .06-.12 TO 23.0-25.0 HZ.
22161-S1689-92180.02 112472.1403-QL92A161



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
TWENTYNINE PALMS
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .06-.12 TO 23.0-25.0 HZ.
22161-S1689-92180.02 112472.1403-QL92A161

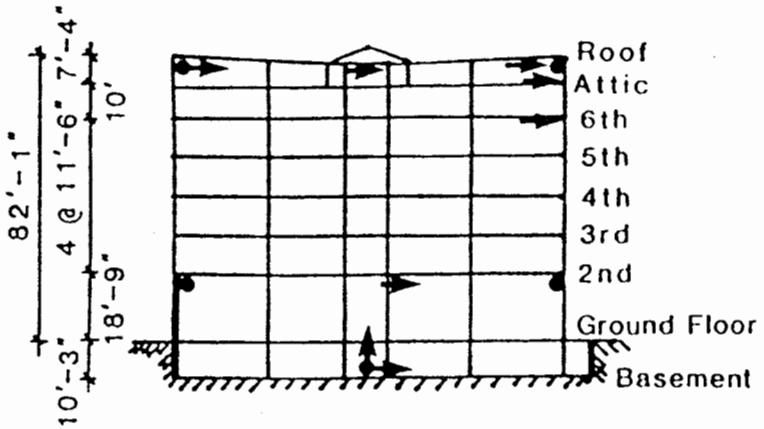


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
TWENTYNINE PALMS
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .06-.12 TO 23.0-25.0 HZ.
22161-S1689-92180.02 112372.1403-QL92A161



Pasadena - 6-story Office Bldg.
(CSMIP Station No. 24541)

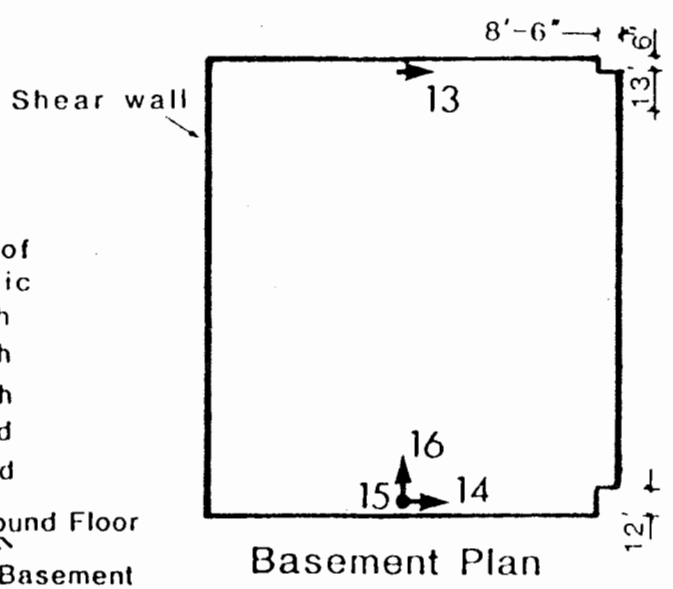
SENSOR LOCATION



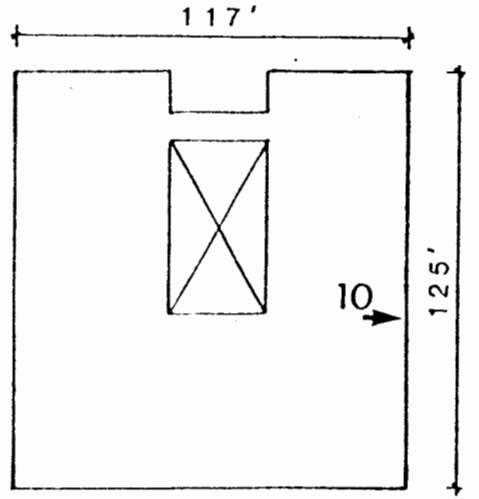
W/E Elevation

Steel frames with URM infill walls.
Design date: 1906

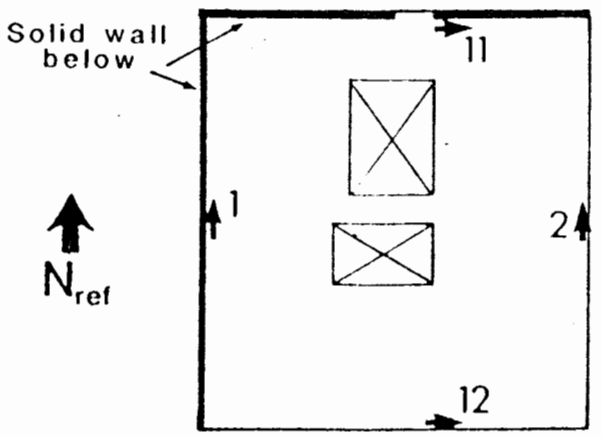
Structure Reference
Orientation: N= 0°



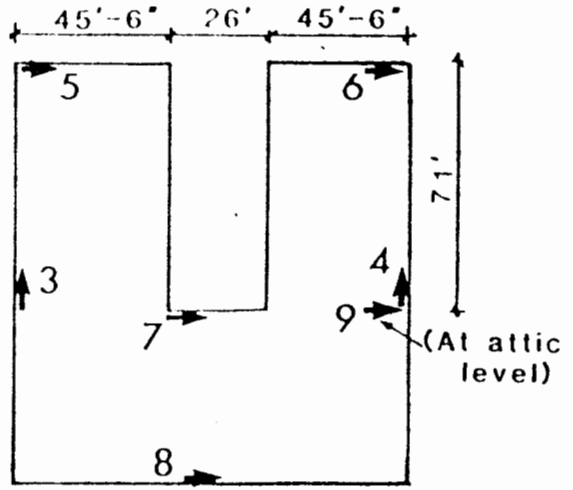
Basement Plan



6th Floor Plan

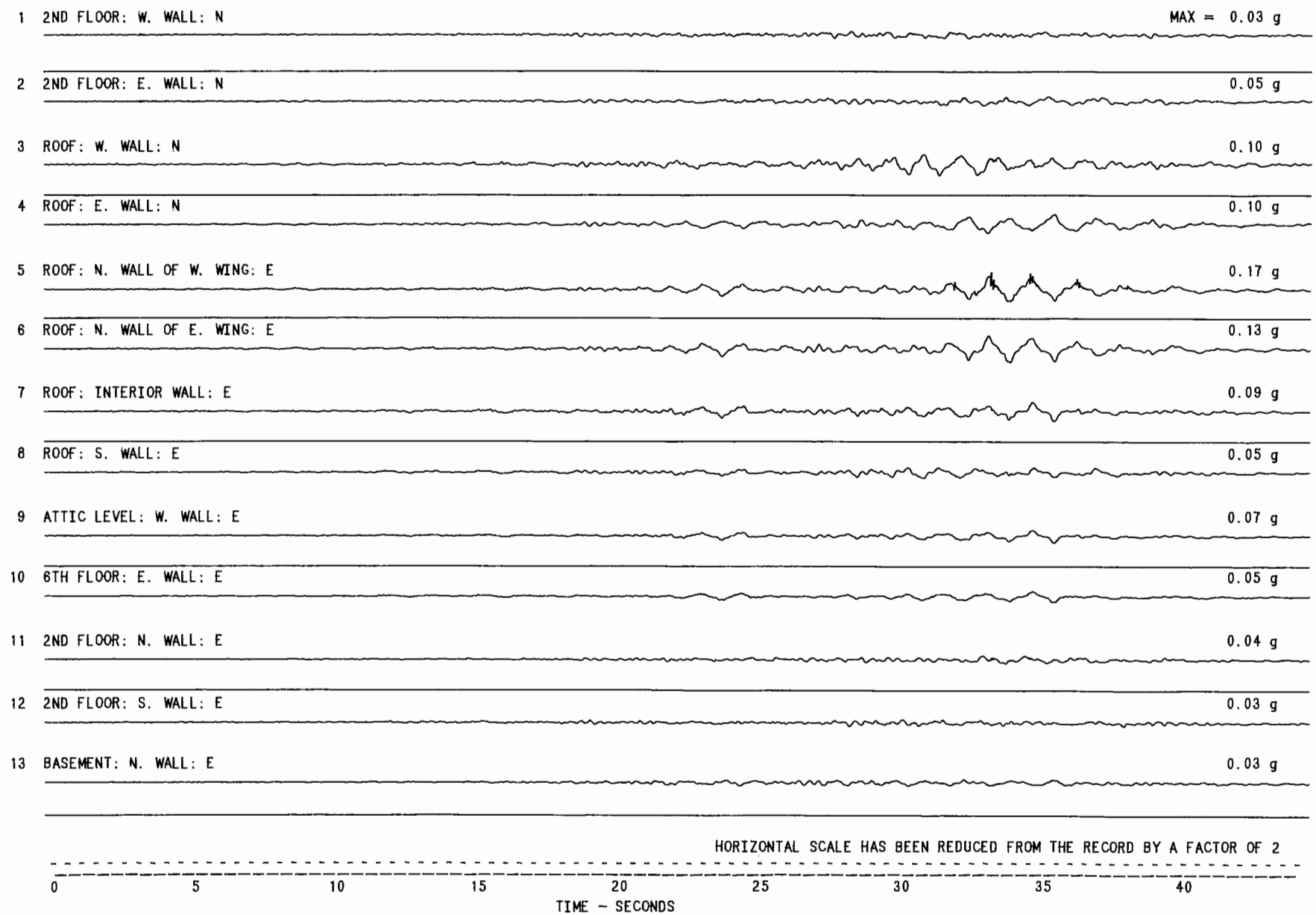


2nd Floor Plan

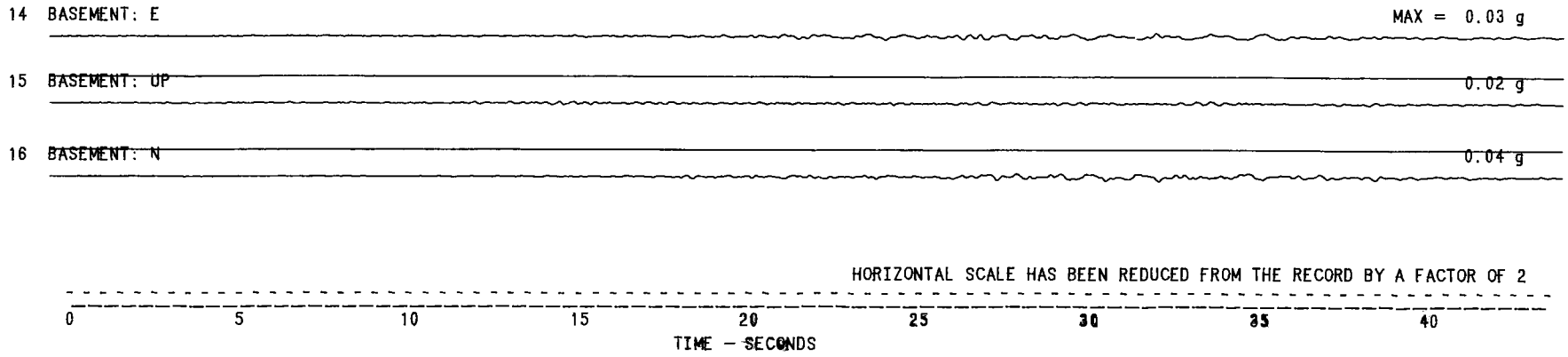


Roof Plan

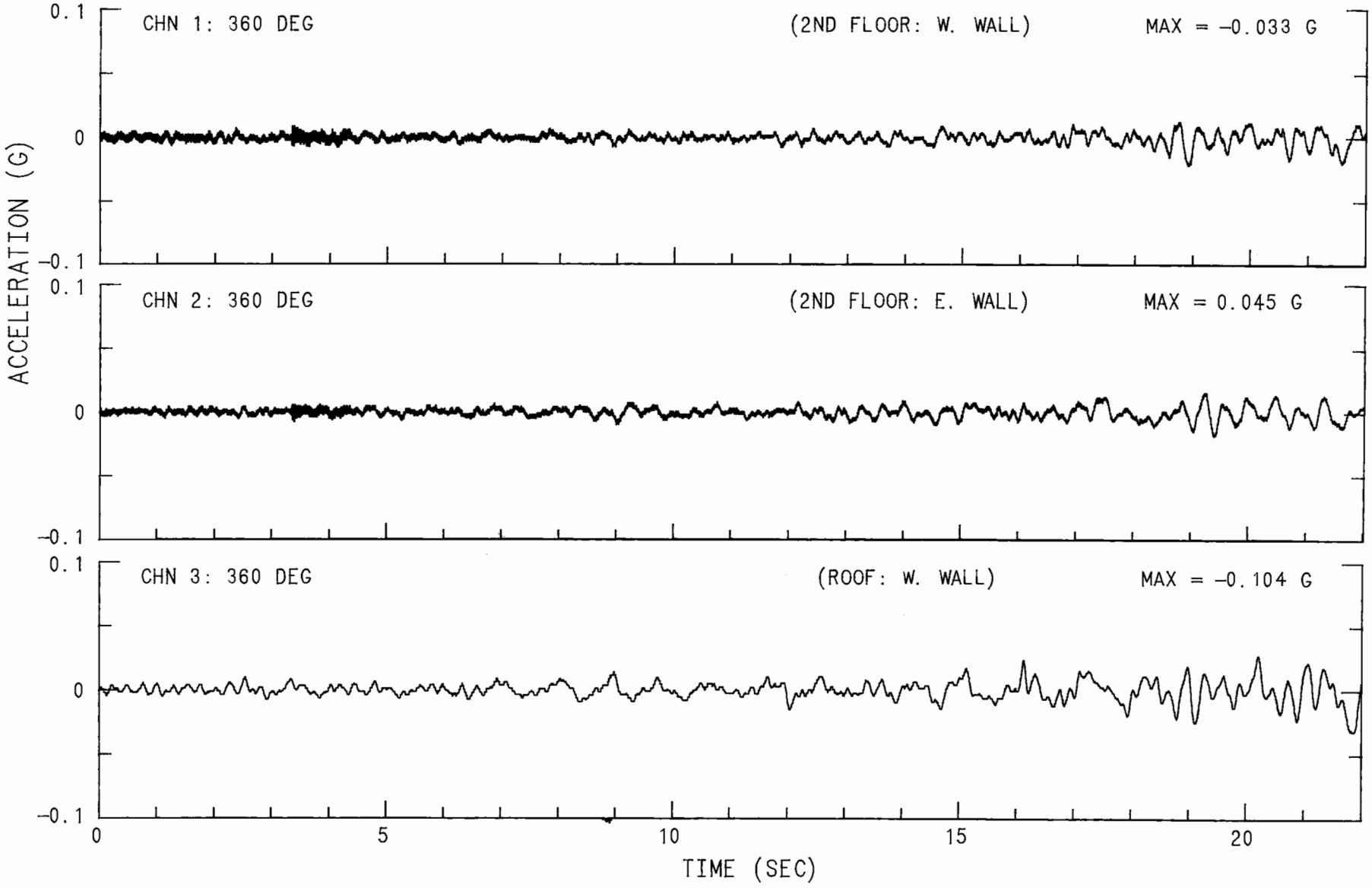
PASADENA - 6-STORY OFFICE BLDG. RECORD 24541-C0281-92183.02 LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT



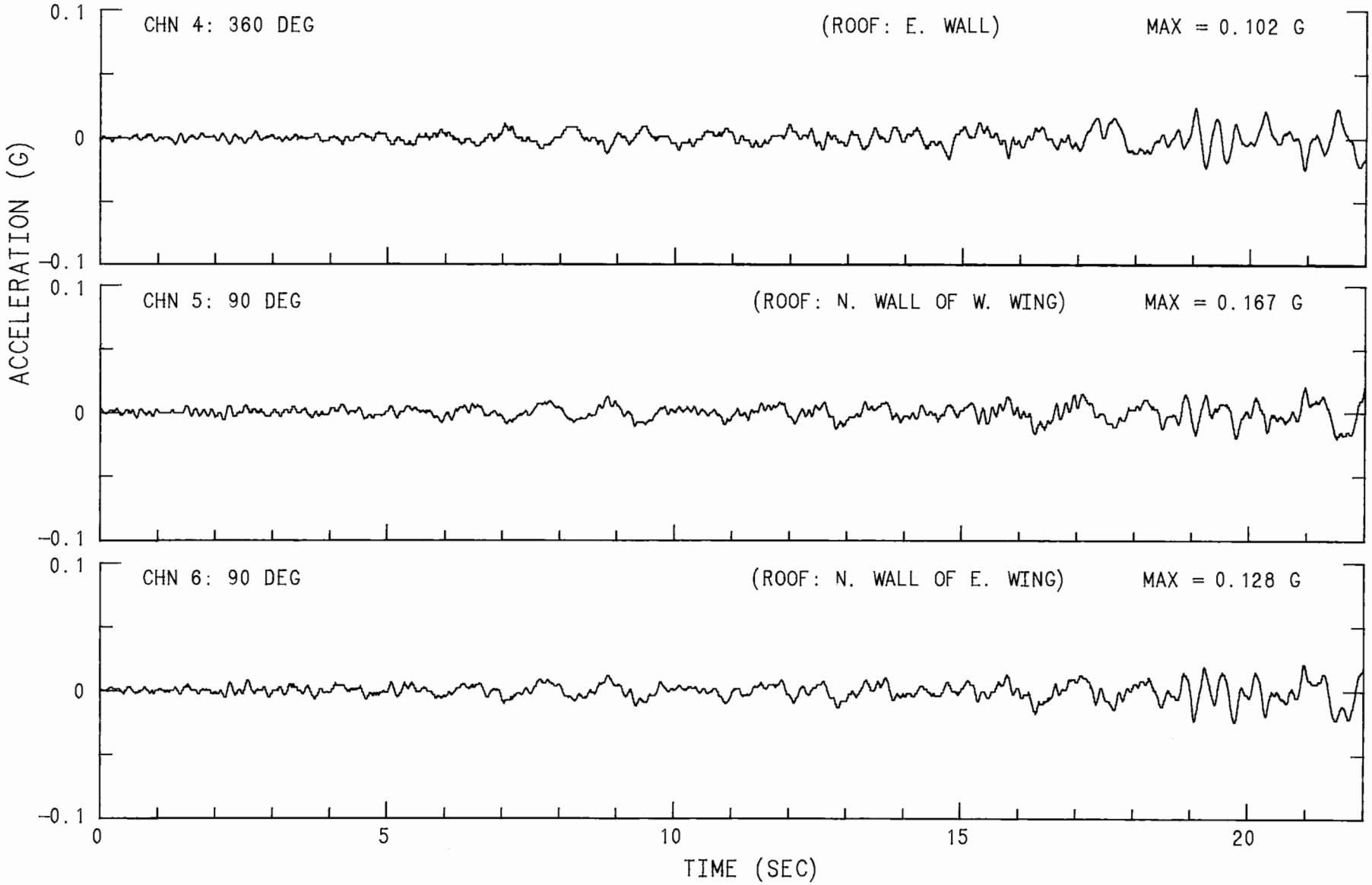
PASADENA - 6-STORY OFFICE BLDG. RECORD 24541-S1869-92183.02 LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT



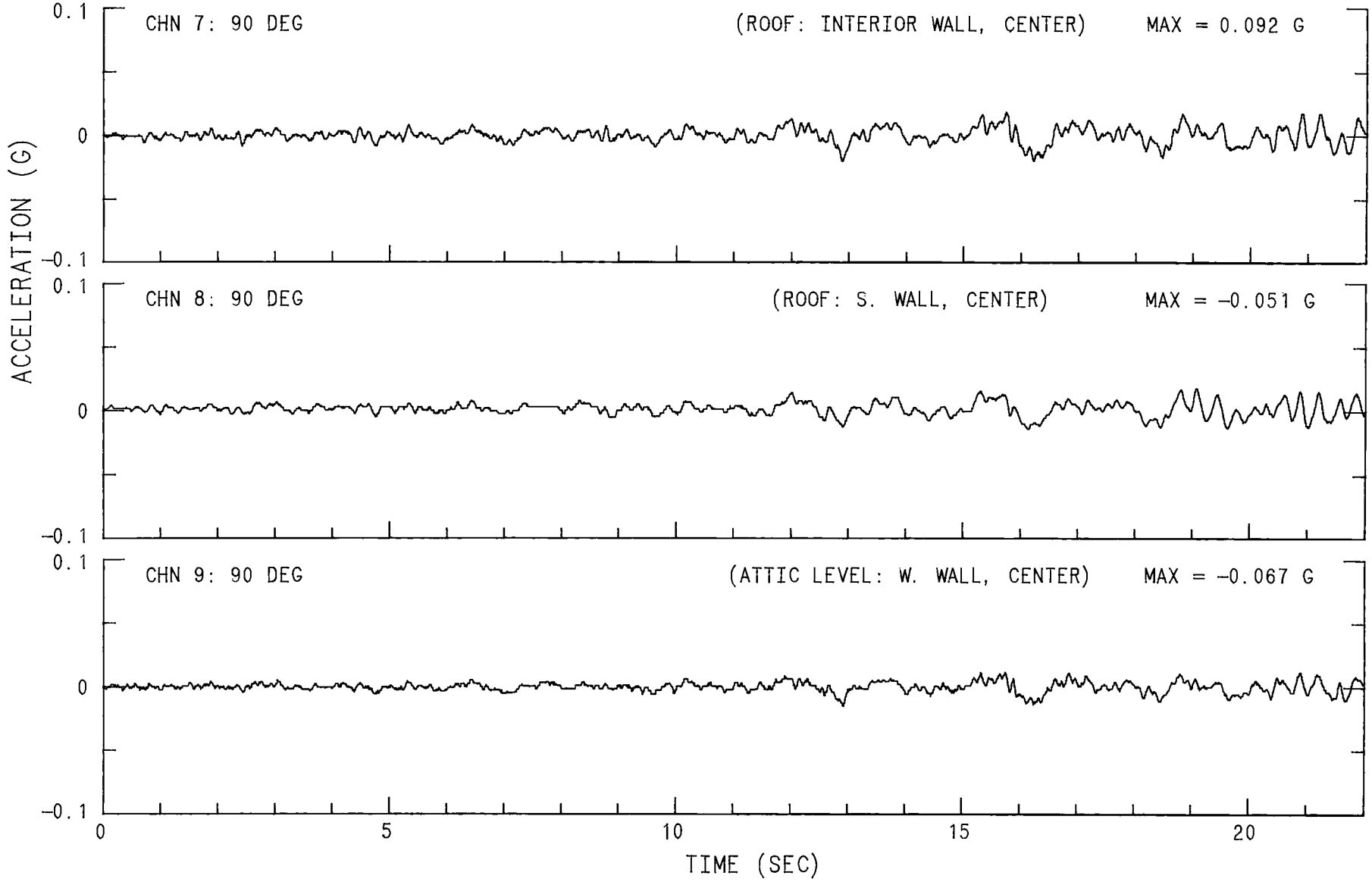
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-C0281-92183.02 122372.1446-QL92A541



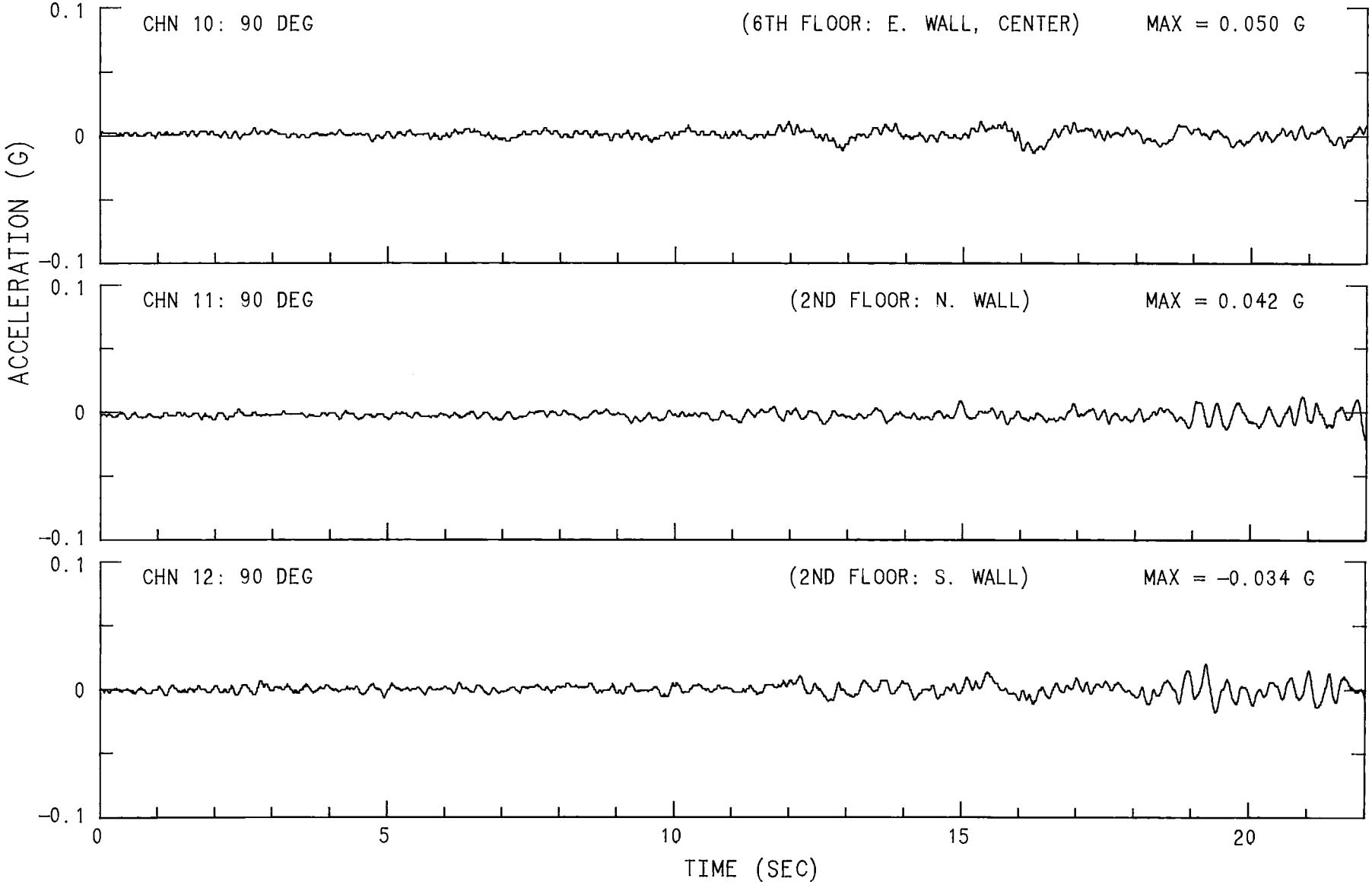
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-C0281-92183.02 122372.1446-QL92A541



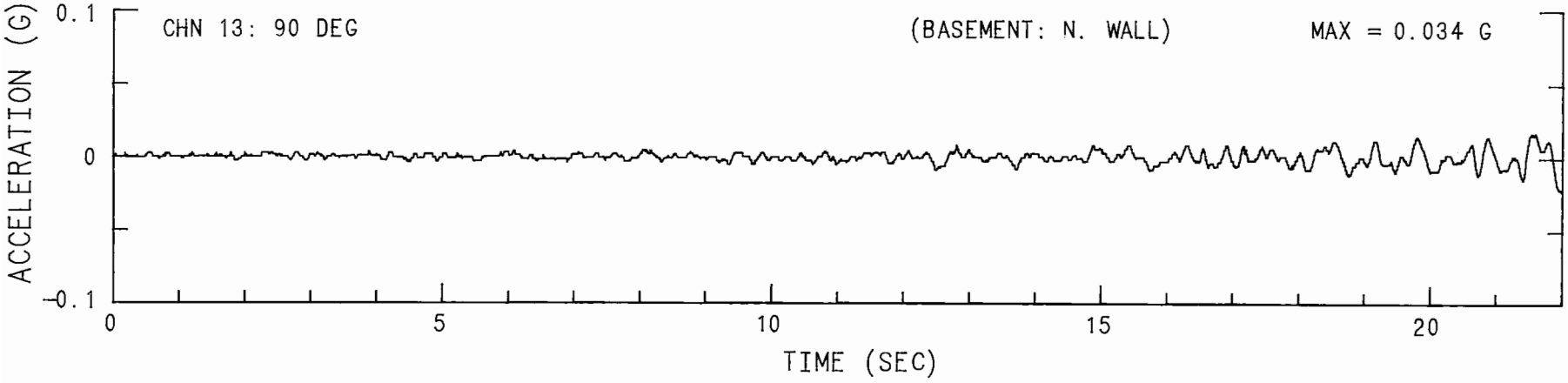
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-C0281-92183.02 122372.1446-QL92A541



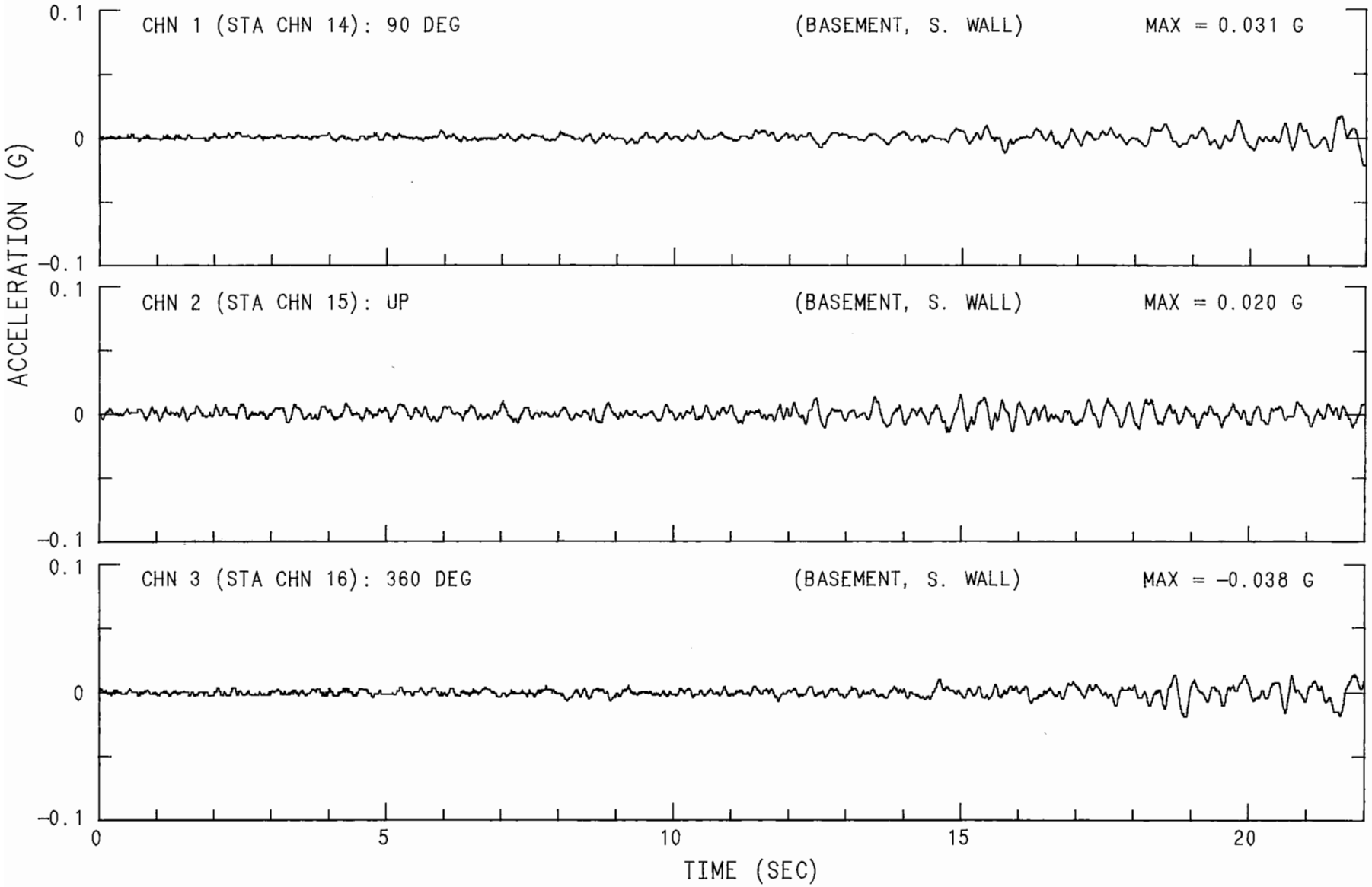
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-C0281-92183.02 122372.1446-QL92A541

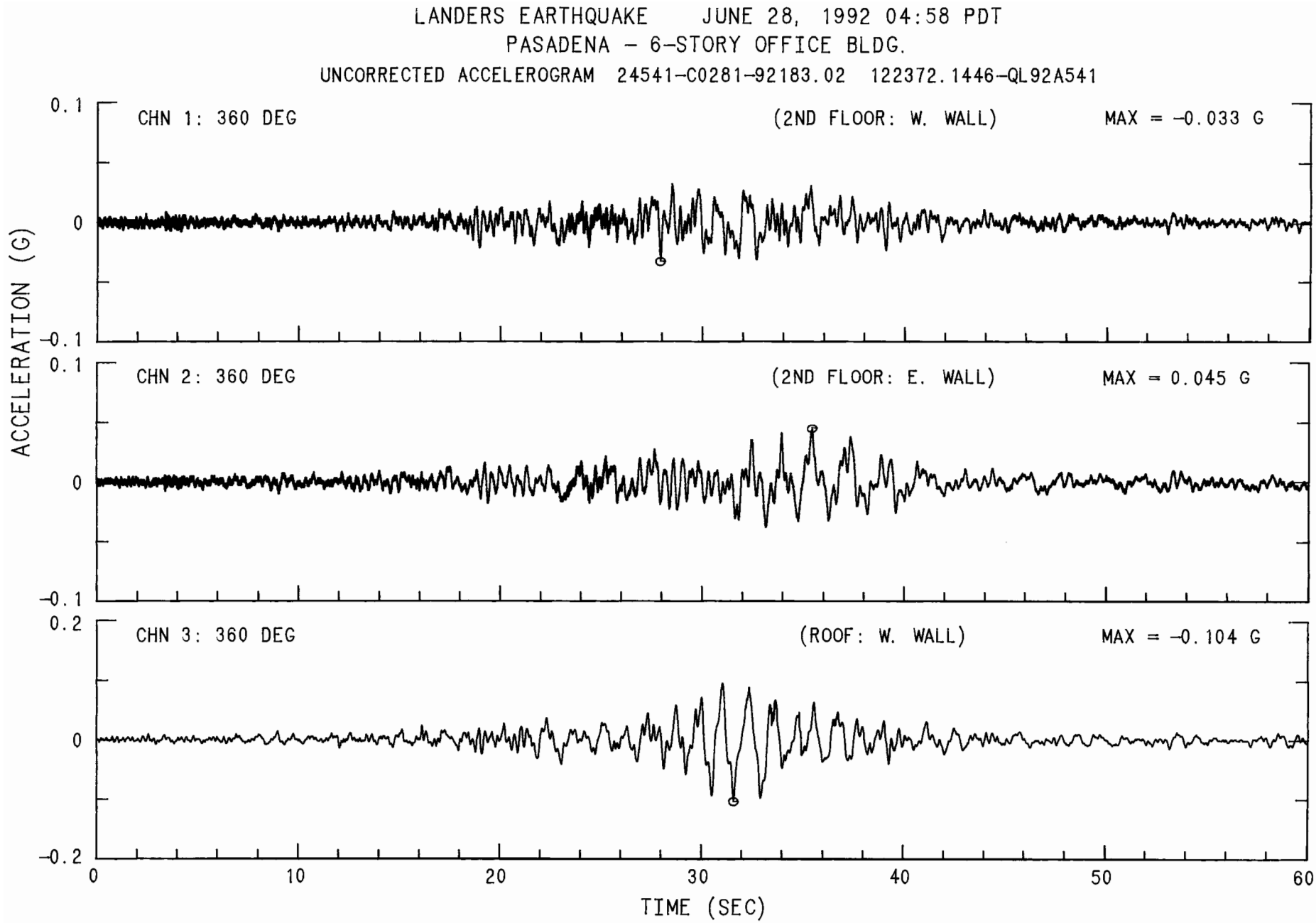


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-C0281-92183.02 122372.1446-QL92A541

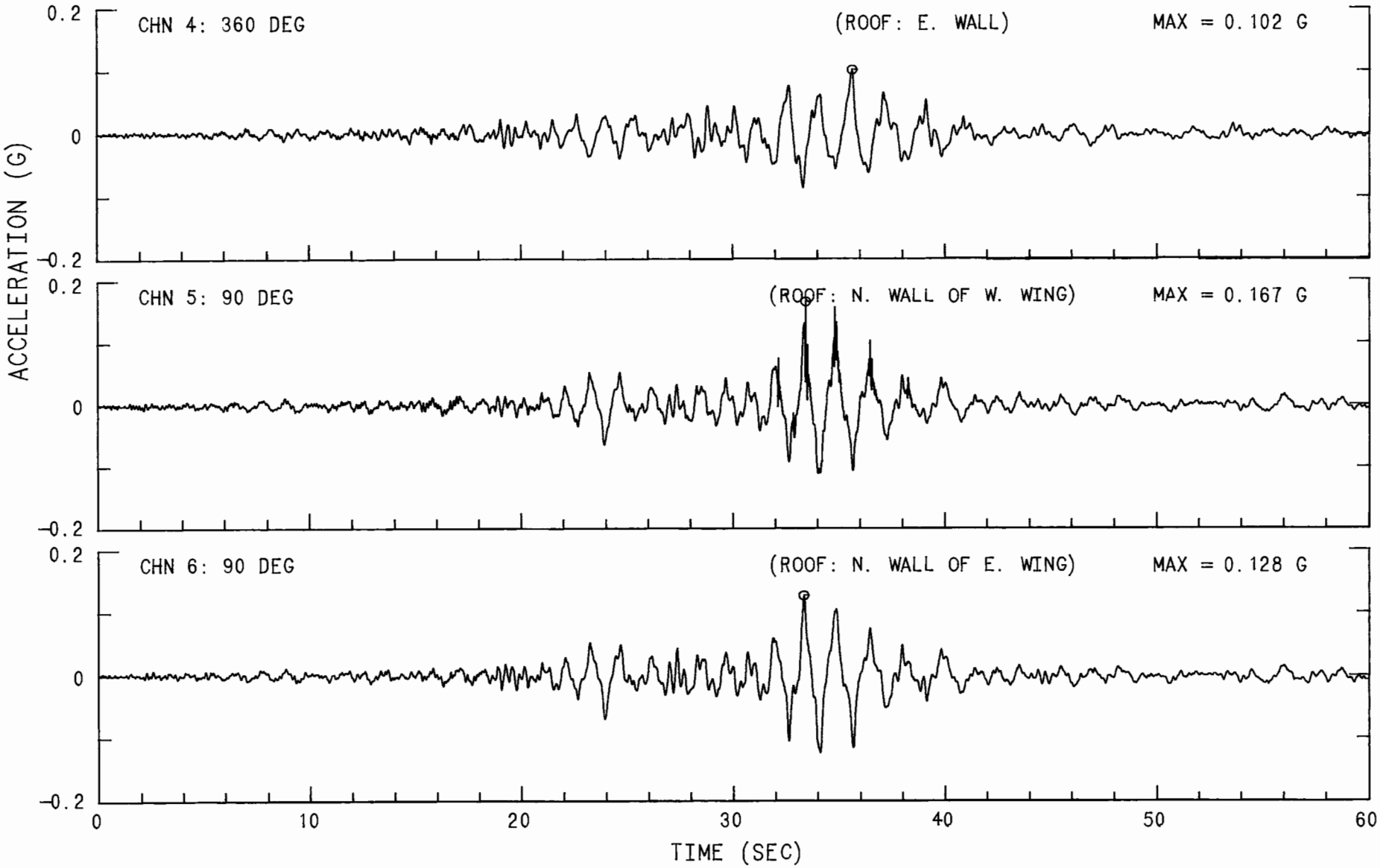


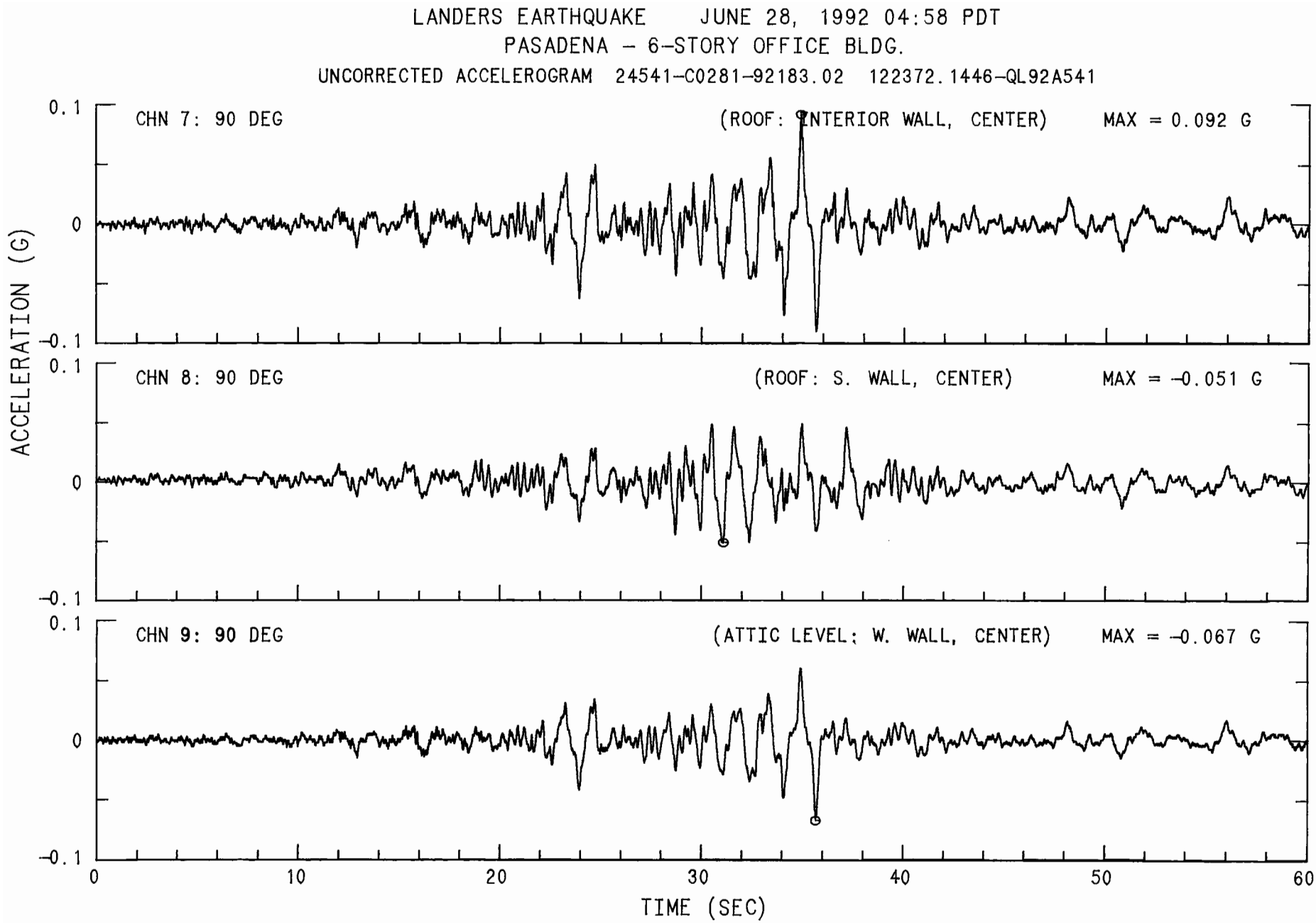
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA – 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-S1869-92183.02 122472.1202-QL92A541FF



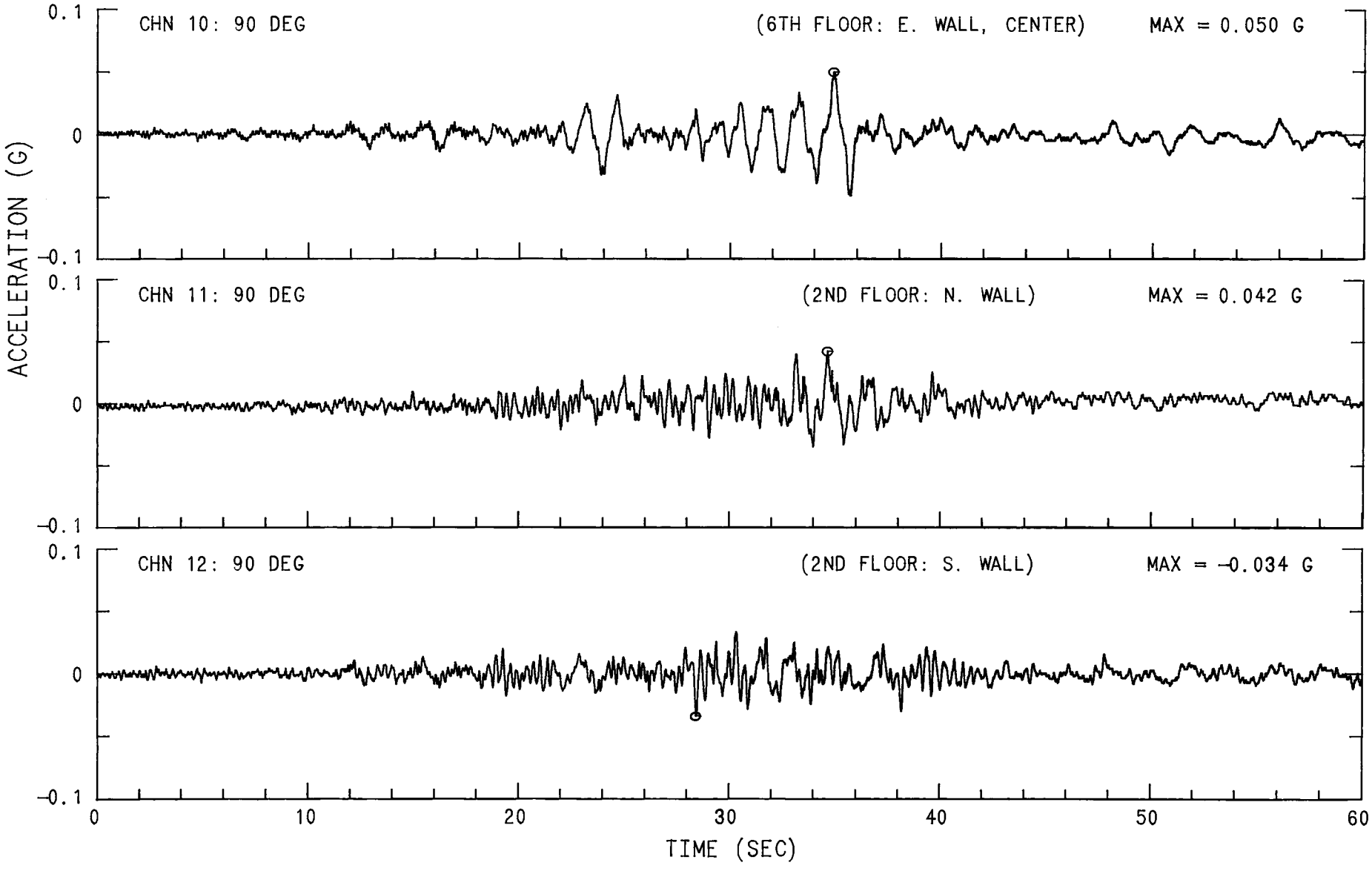

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-C0281-92183.02 122372.1446-QL92A541
CHN 1: 360 DEG
(2ND FLOOR: W. WALL)
MAX = -0.033 G
CHN 2: 360 DEG
(2ND FLOOR: E. WALL)
MAX = 0.045 G
CHN 3: 360 DEG
(ROOF: W. WALL)
MAX = -0.104 G
ACCELERATION (G)
0.1
0
-0.1
0.2
-0.2
0
10
20
30
40
50
60
TIME (SEC)

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-C0281-92183.02 122372.1446-QL92A541

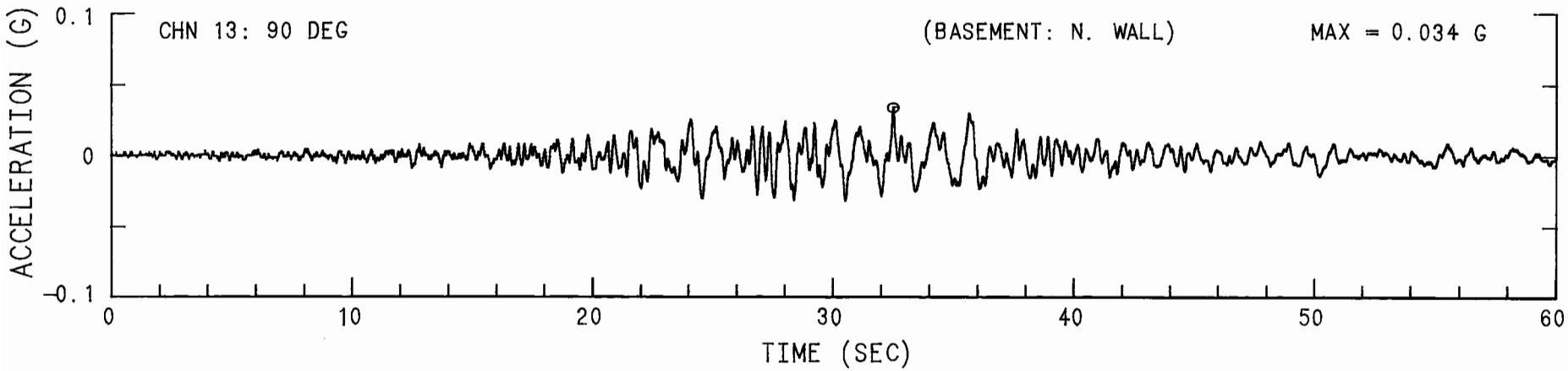



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-C0281-92183.02 122372.1446-QL92A541
CHN 7: 90 DEG
(ROOF: INTERIOR WALL, CENTER)
MAX = 0.092 G
CHN 8: 90 DEG
(ROOF: S. WALL, CENTER)
MAX = -0.051 G
CHN 9: 90 DEG
(ATTIC LEVEL: W. WALL, CENTER)
MAX = -0.067 G
ACCELERATION (G)
0.1
0
-0.1
0
10
20
30
40
50
60
TIME (SEC)

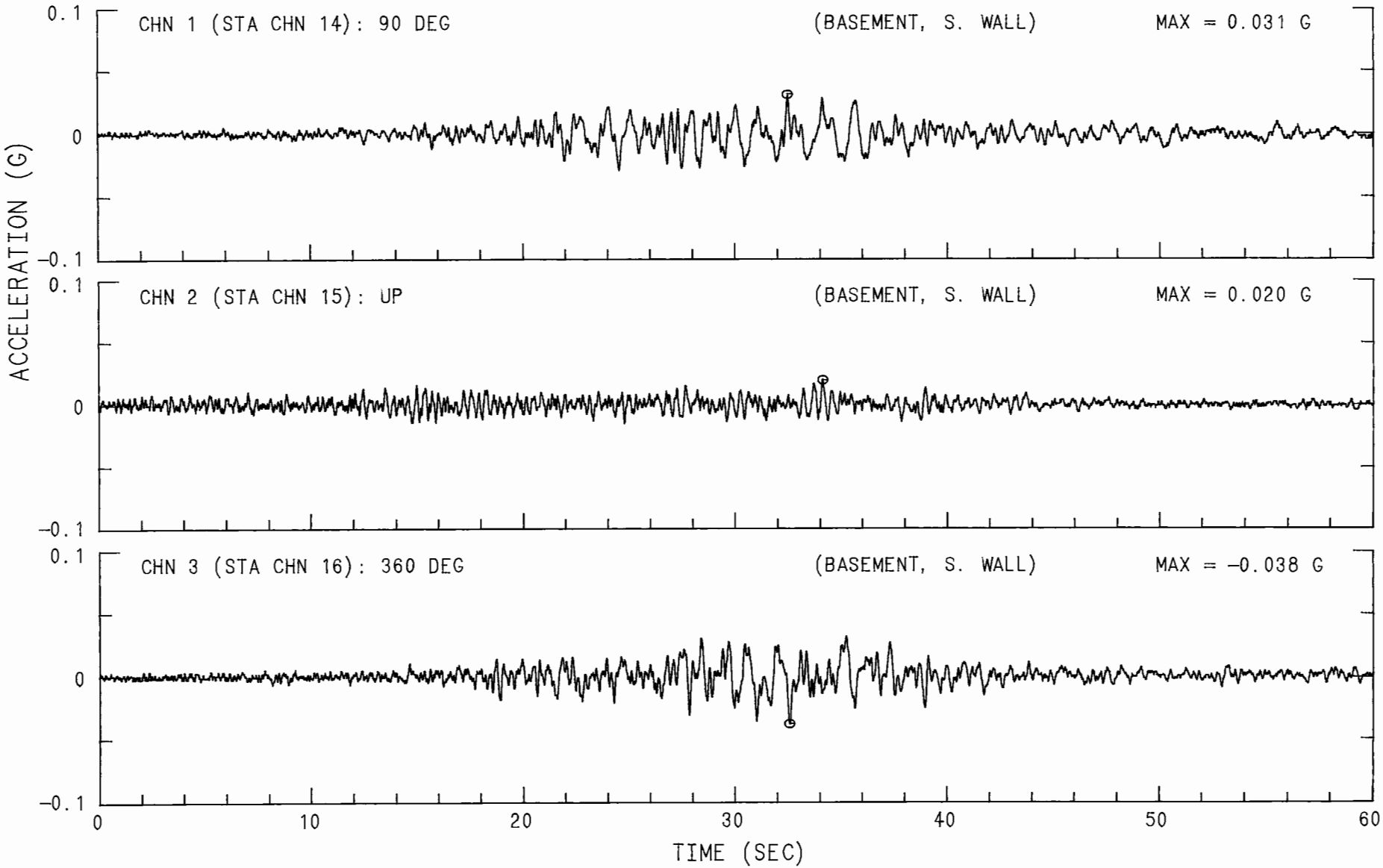
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-C0281-92183.02 122372.1446-QL92A541



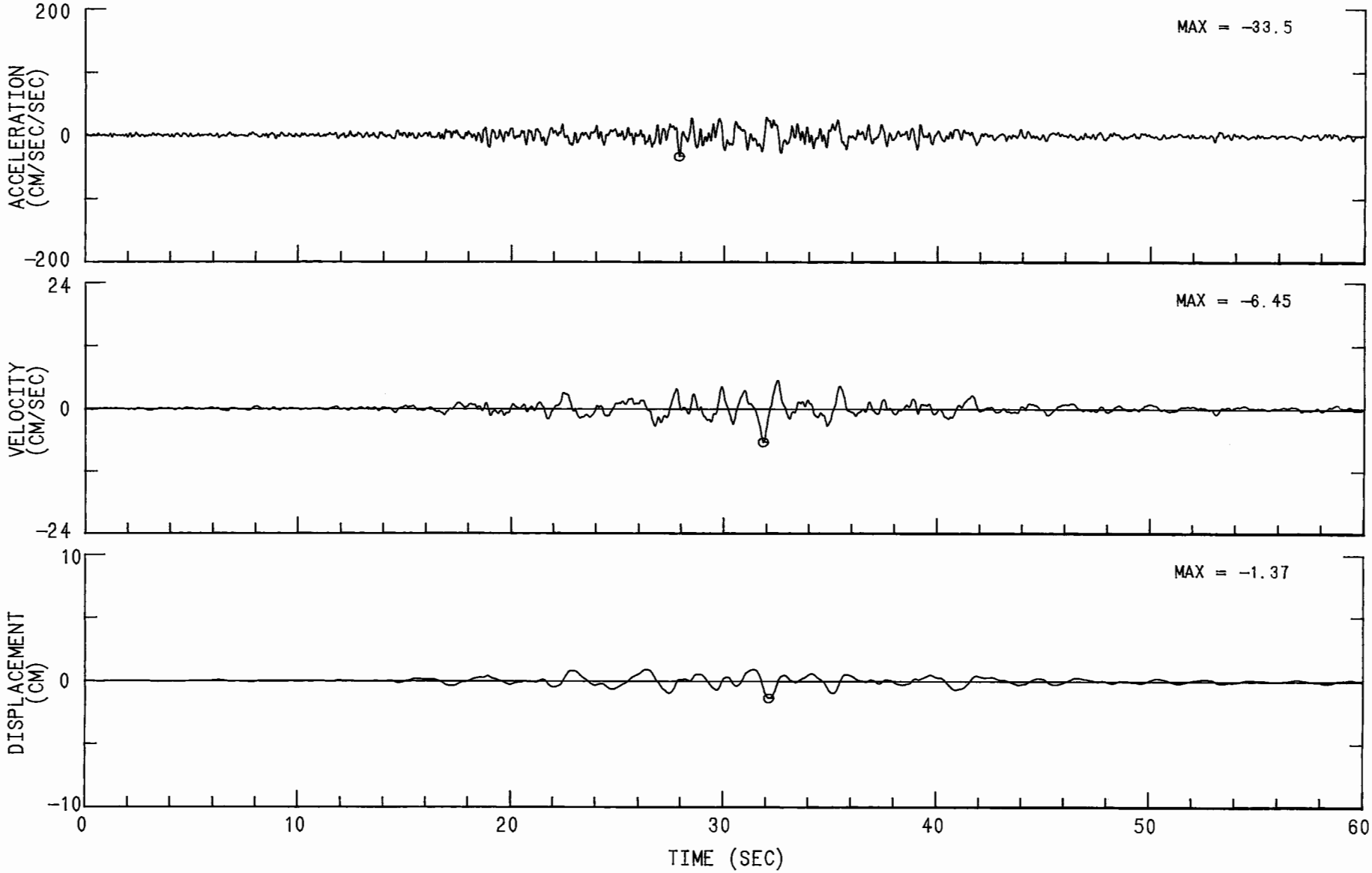
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-C0281-92183.02 122372.1446-QL92A541



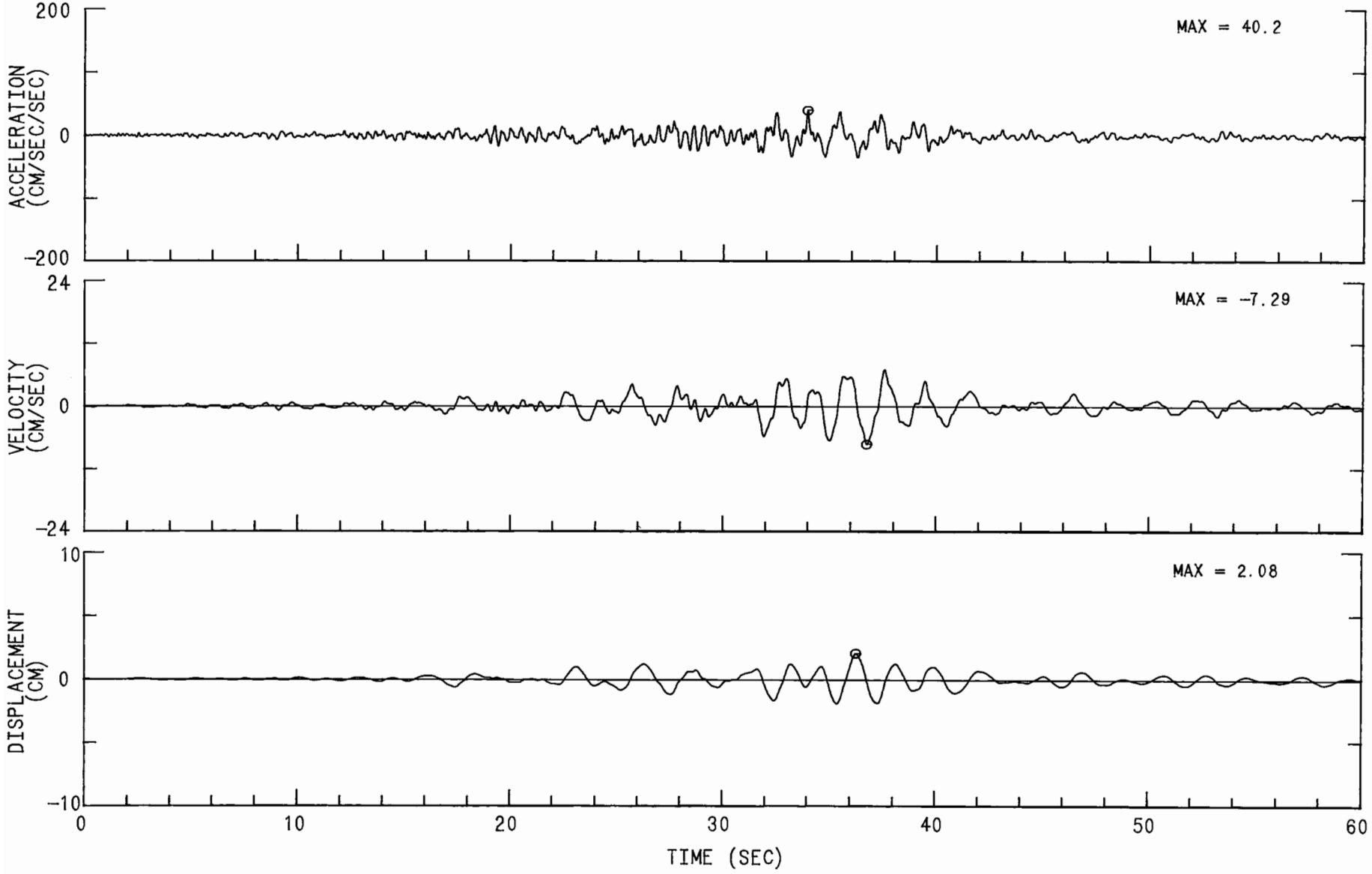
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
UNCORRECTED ACCELEROGRAM 24541-S1869-92183.02 122472.1202-QL92A541FF



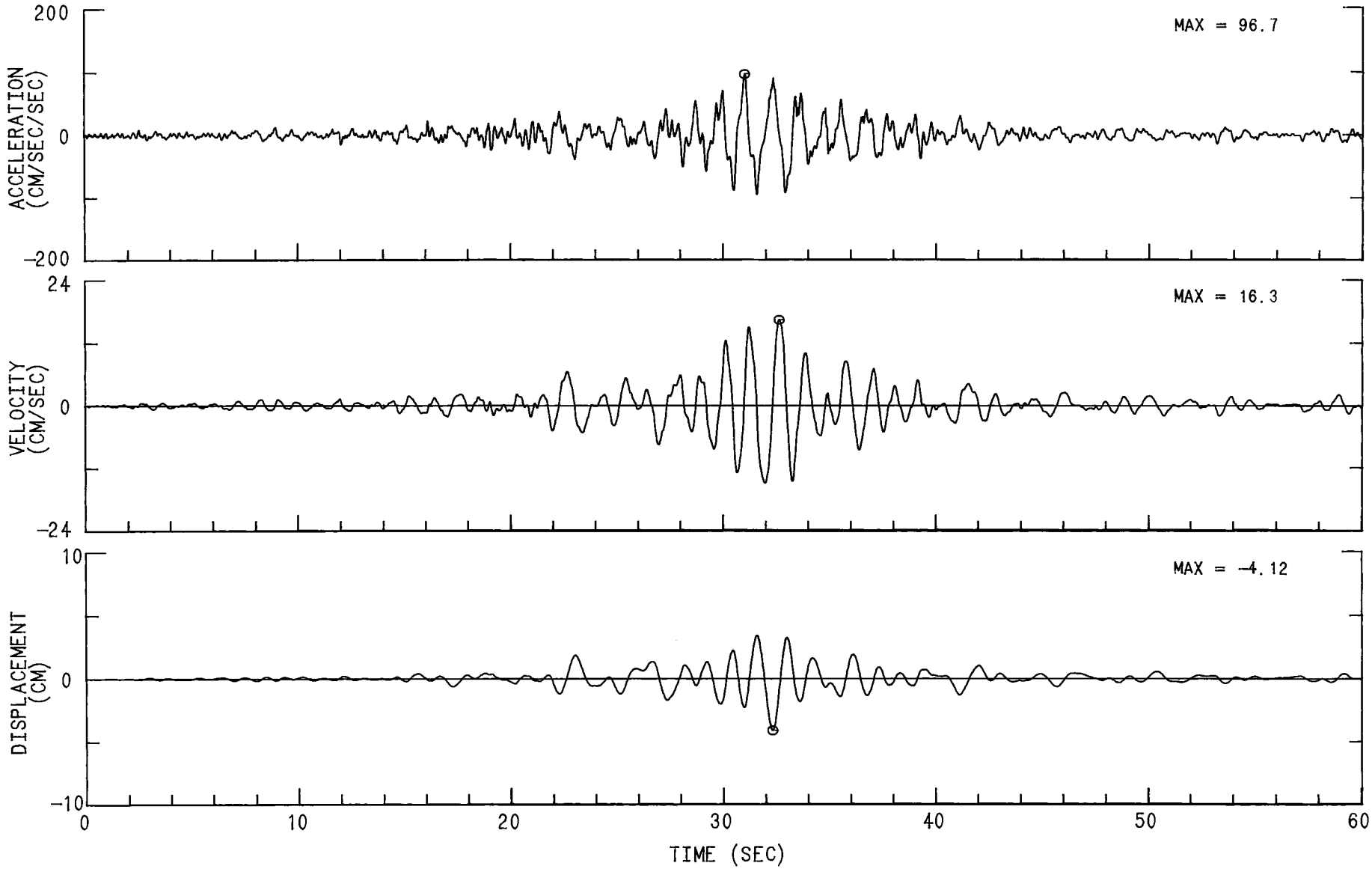
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 1: 360 DEG (2ND FLOOR: W. WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541



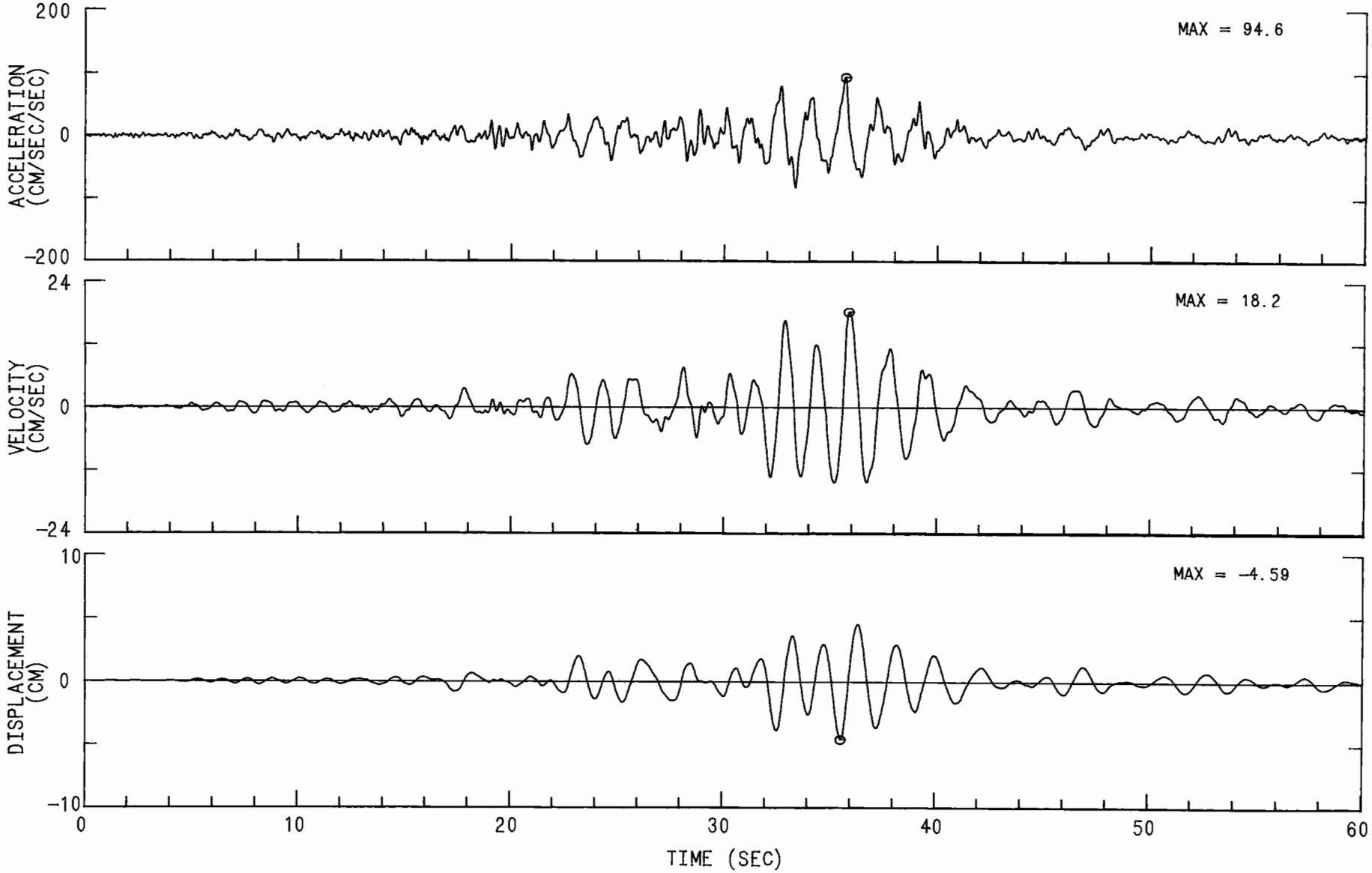
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 2: 360 DEG (2ND FLOOR: E. WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541

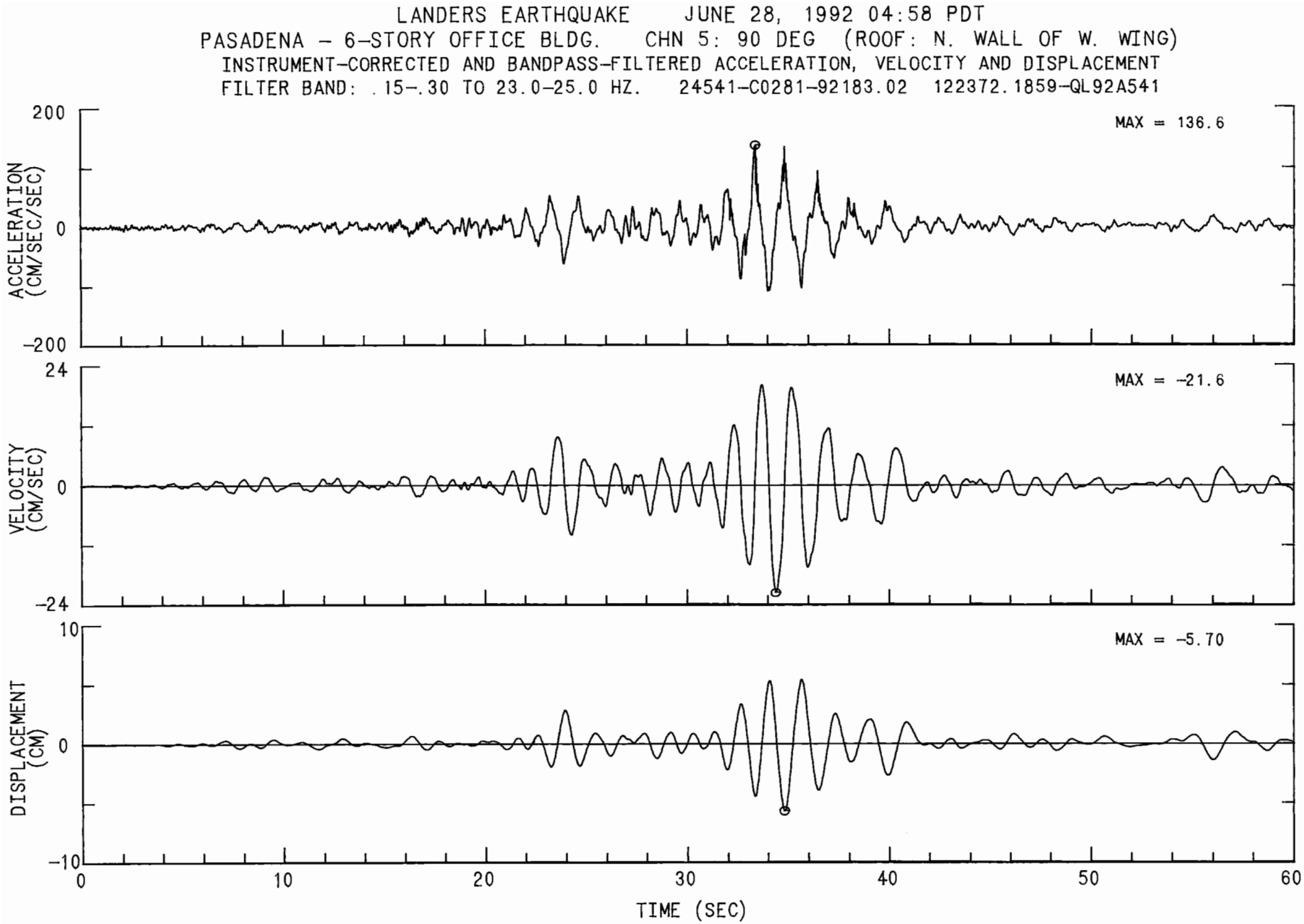


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 3: 360 DEG (ROOF: W. WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541

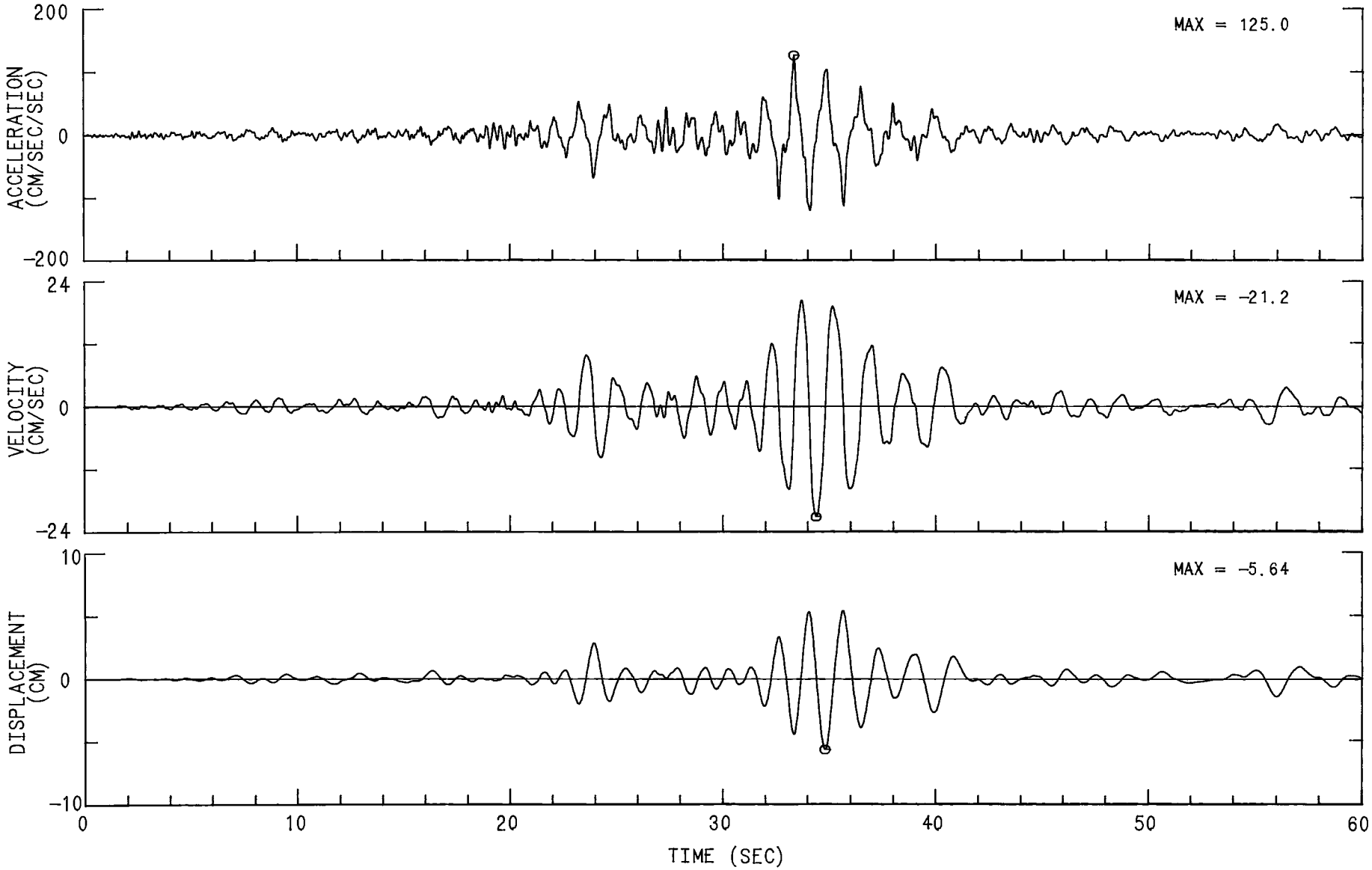


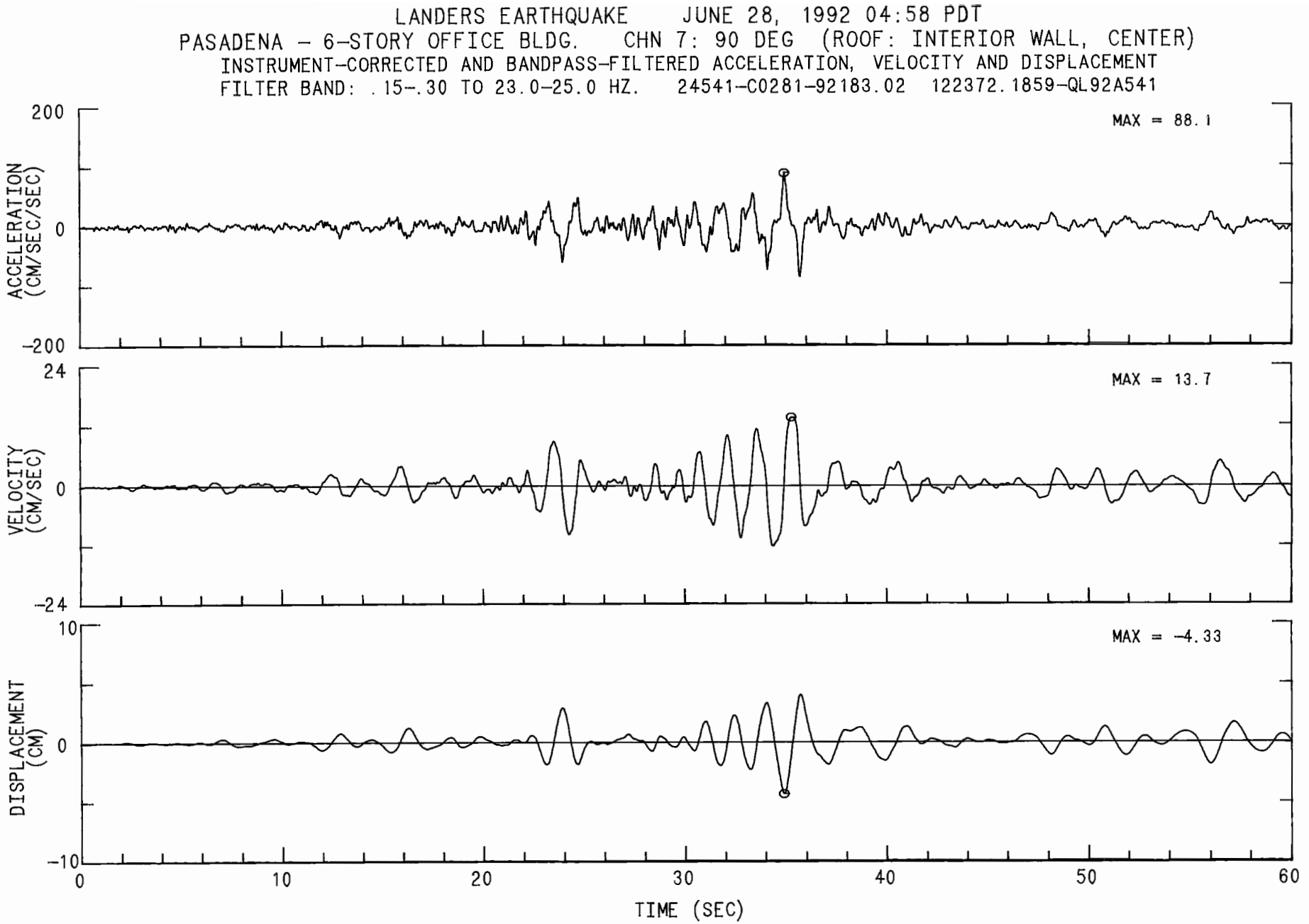
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 4: 360 DEG (ROOF: E. WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541

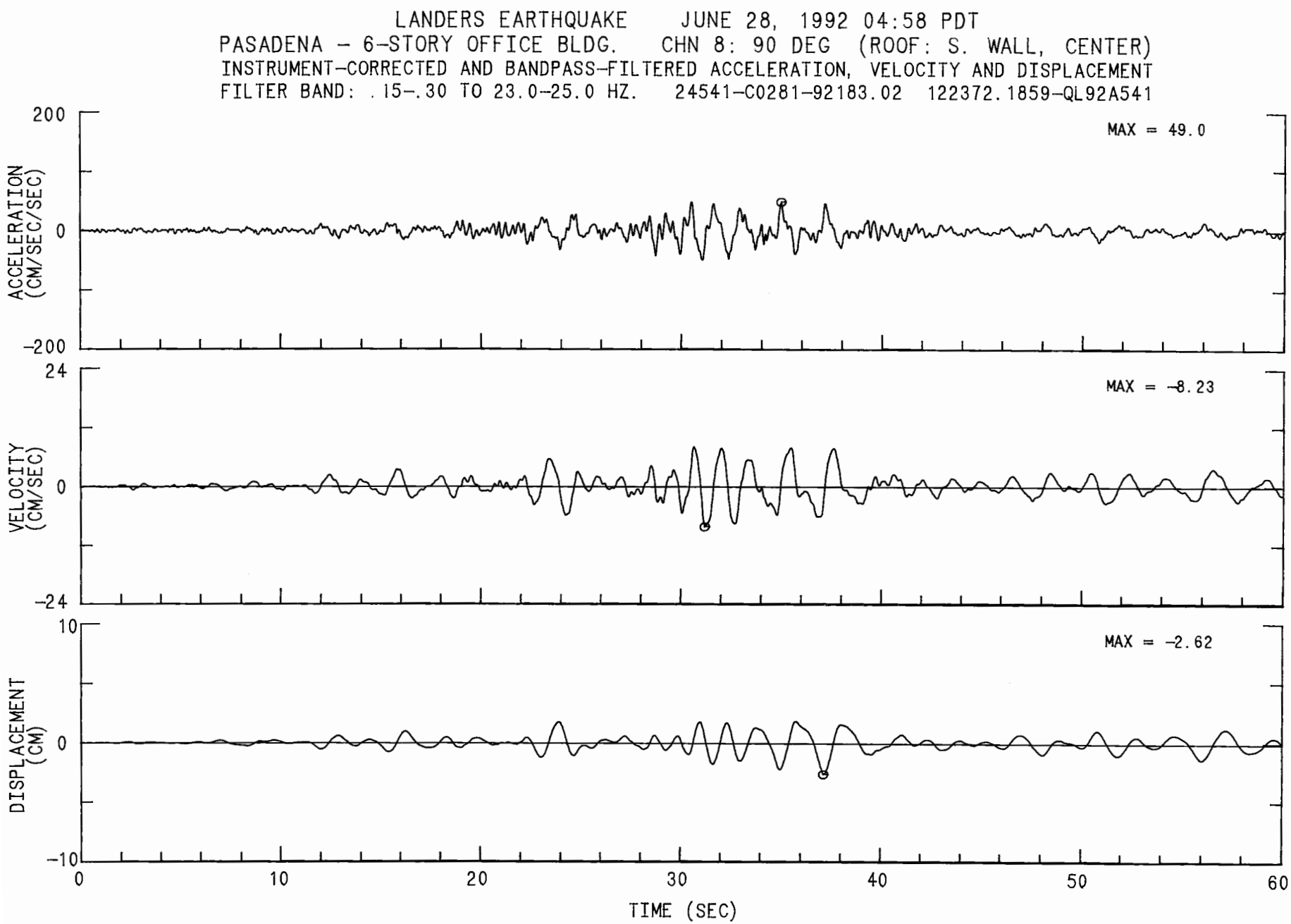



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 5: 90 DEG (ROOF: N. WALL OF W. WING)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541
ACCELERATION (CM/SEC/SEC)
200
0
-200
MAX = 136.6
VELOCITY (CM/SEC)
24
0
-24
MAX = -21.6
DISPLACEMENT (CM)
10
0
-10
MAX = -5.70
0
10
20
30
40
50
60
TIME (SEC)

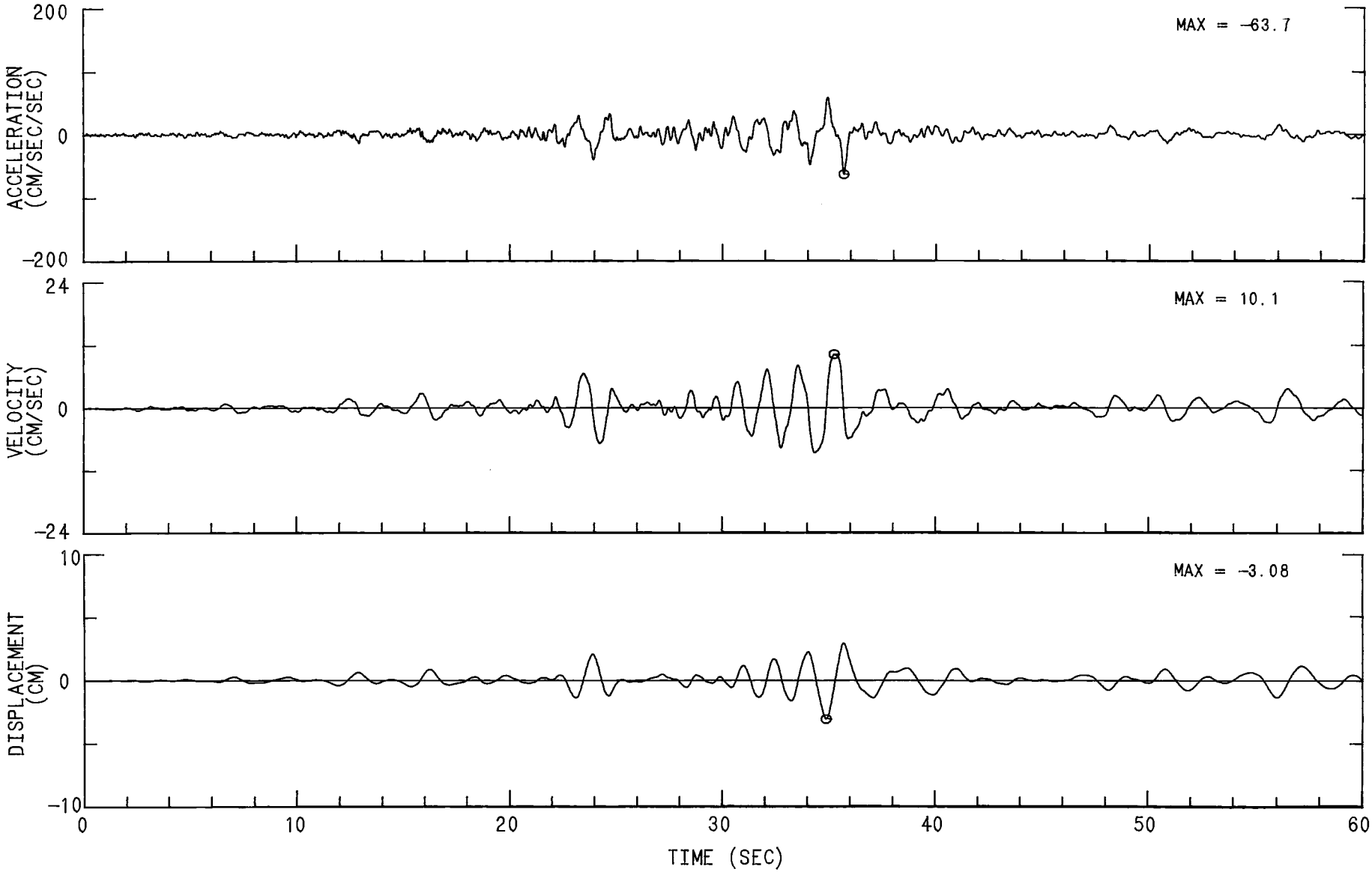
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 6: 90 DEG (ROOF: N. WALL OF E. WING)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541



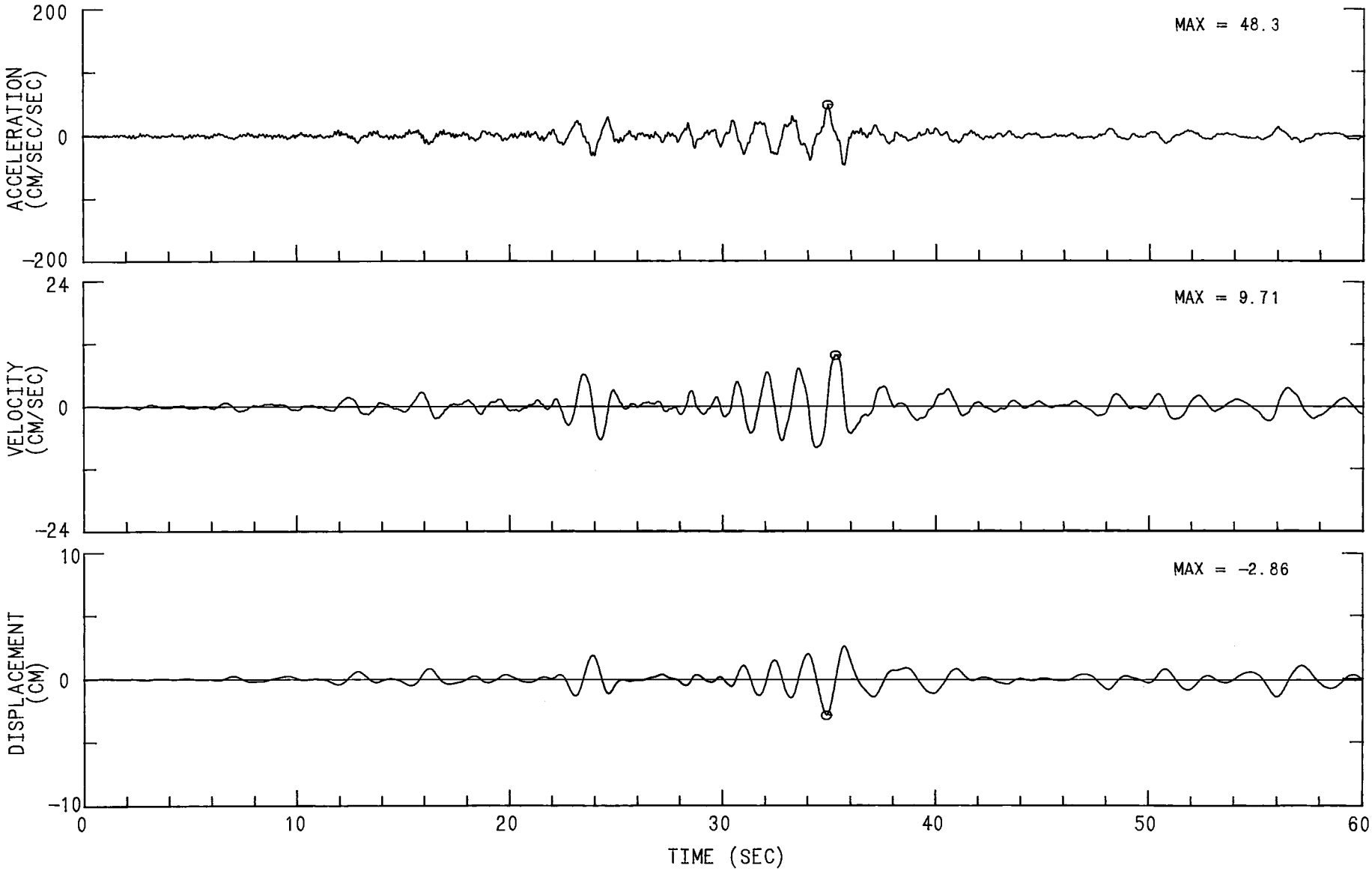

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 7: 90 DEG (ROOF: INTERIOR WALL, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541
ACCELERATION (CM/SEC/SEC)
200
0
-200
MAX = 88.1
VELOCITY (CM/SEC)
24
0
-24
MAX = 13.7
DISPLACEMENT (CM)
10
0
-10
MAX = -4.33
0
10
20
30
40
50
60
TIME (SEC)


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 8: 90 DEG (ROOF: S. WALL, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541
ACCELERATION (CM/SEC/SEC)
200
0
-200
MAX = 49.0
VELOCITY (CM/SEC)
24
0
-24
MAX = -8.23
DISPLACEMENT (CM)
10
0
-10
MAX = -2.62
0
10
20
30
40
50
60
TIME (SEC)

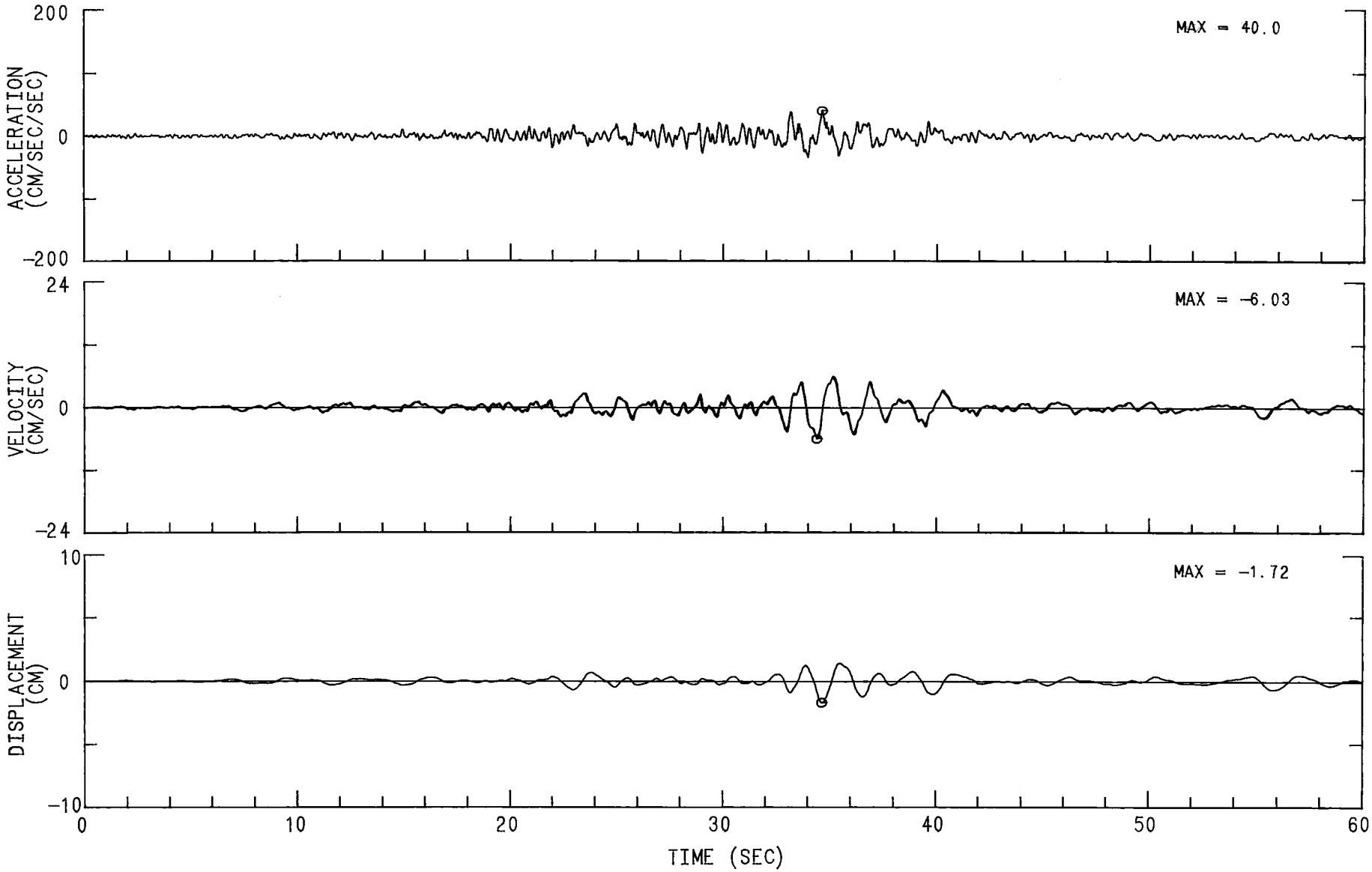
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 9: 90 DEG (ATTIC LEVEL: W. WALL, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541



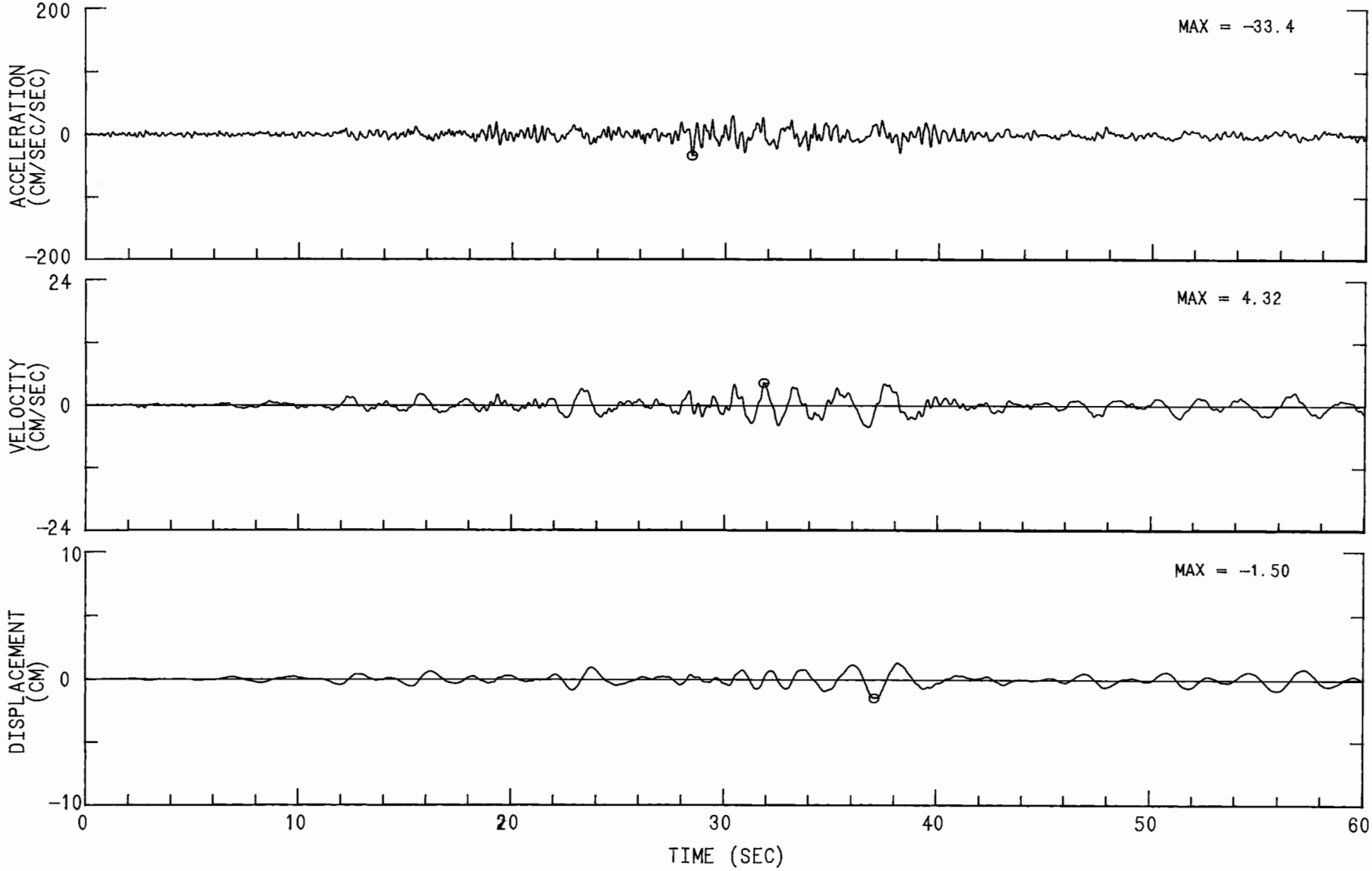
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 10: 90 DEG (6TH FLOOR: E. WALL, CENTER)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541



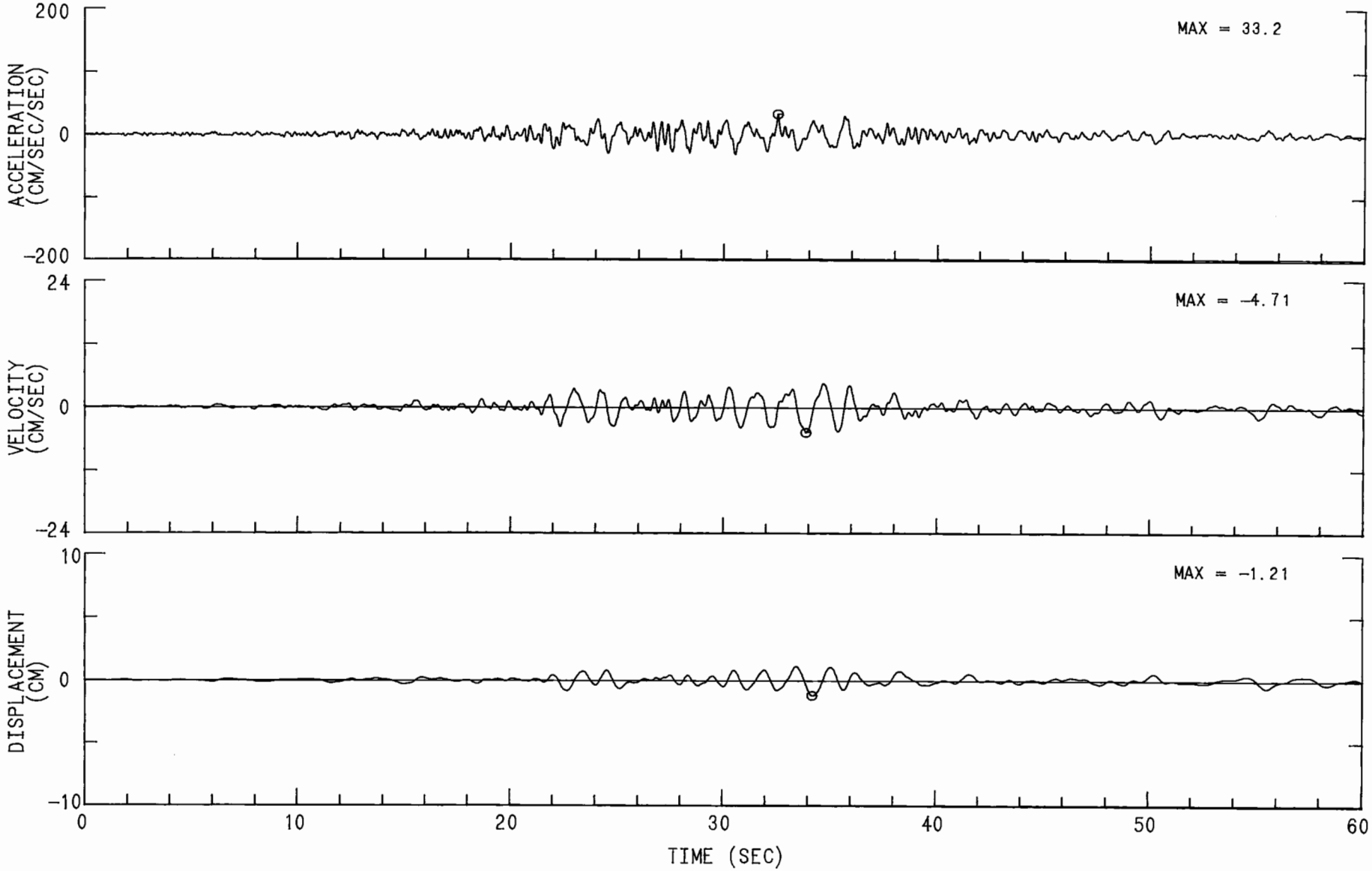
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 11: 90 DEG (2ND FLOOR: N. WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541



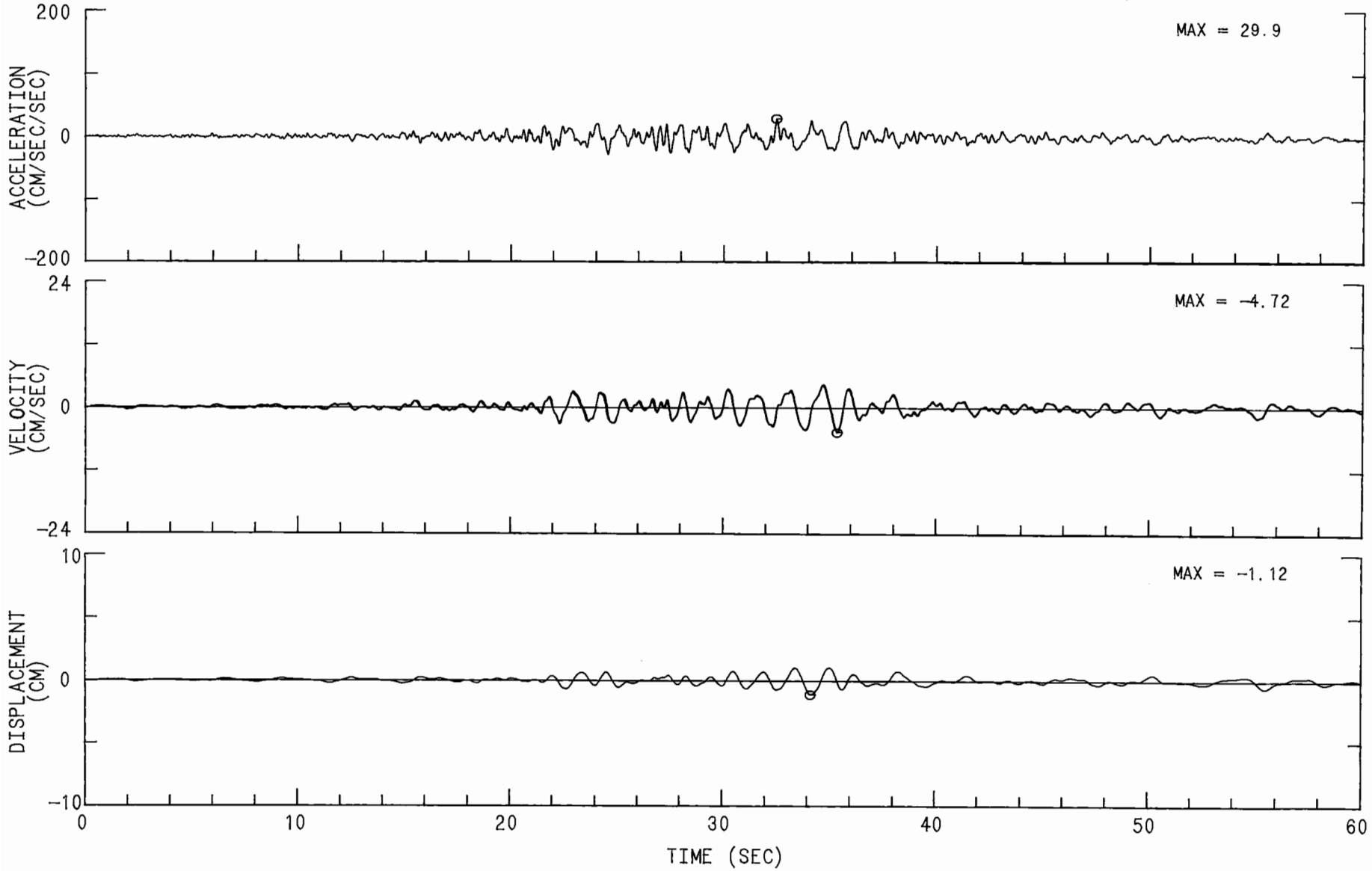
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 12: 90 DEG (2ND FLOOR: S. WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541



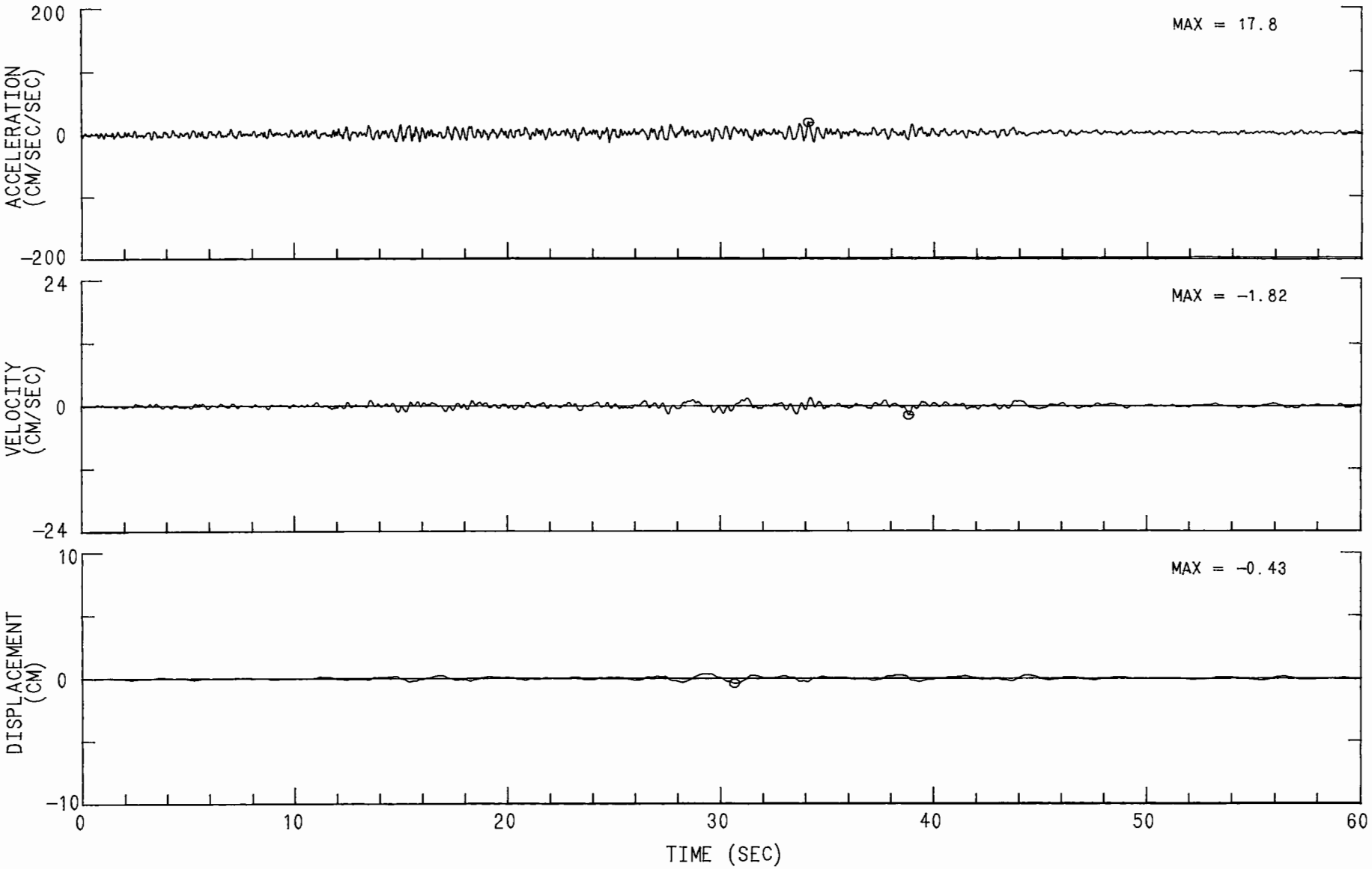
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 13: 90 DEG (BASEMENT: N. WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-C0281-92183.02 122372.1859-QL92A541

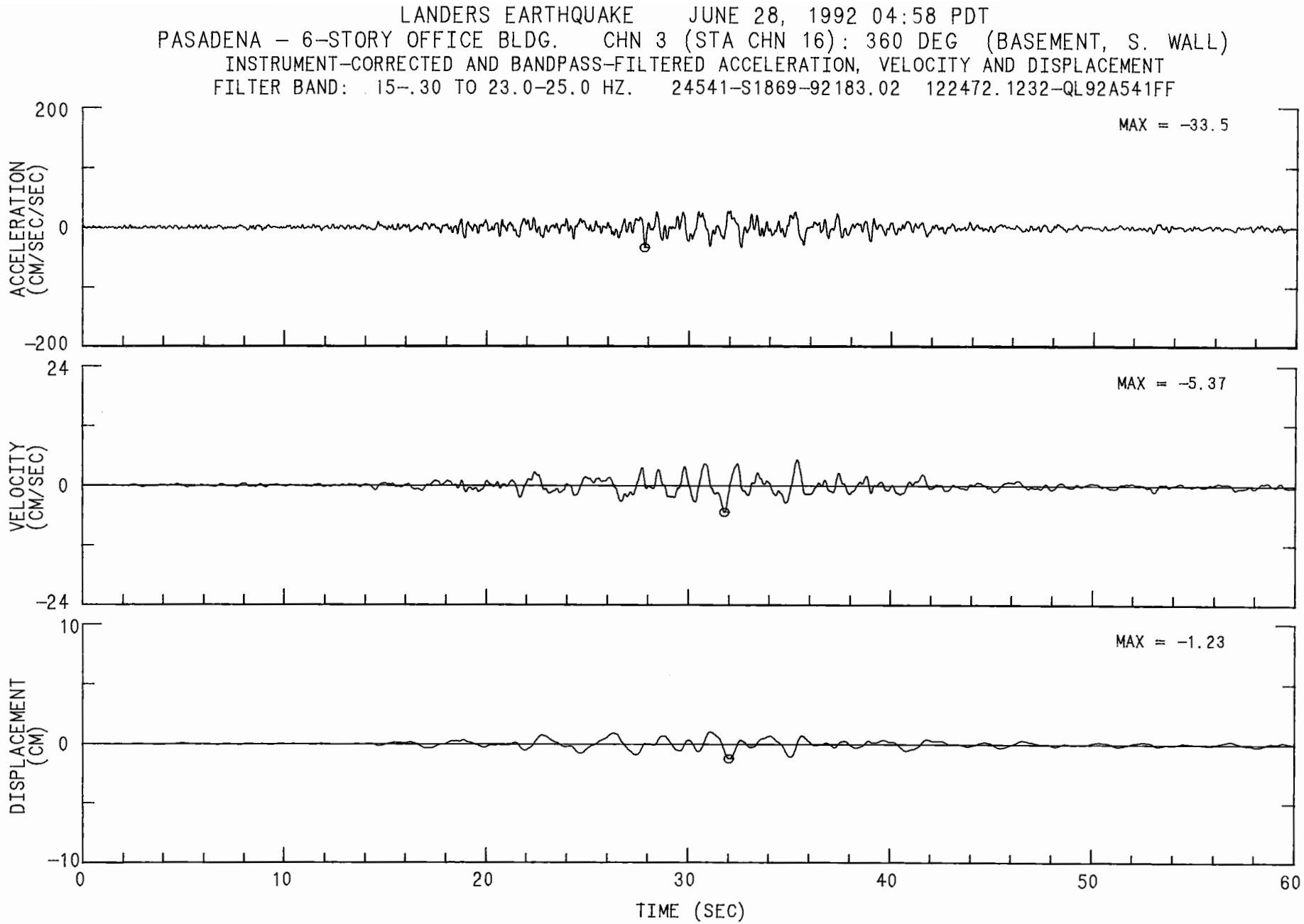


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 1 (STA CHN 14): 90 DEG (BASEMENT, S. WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-S1869-92183.02 122472.1232-QL92A541FF

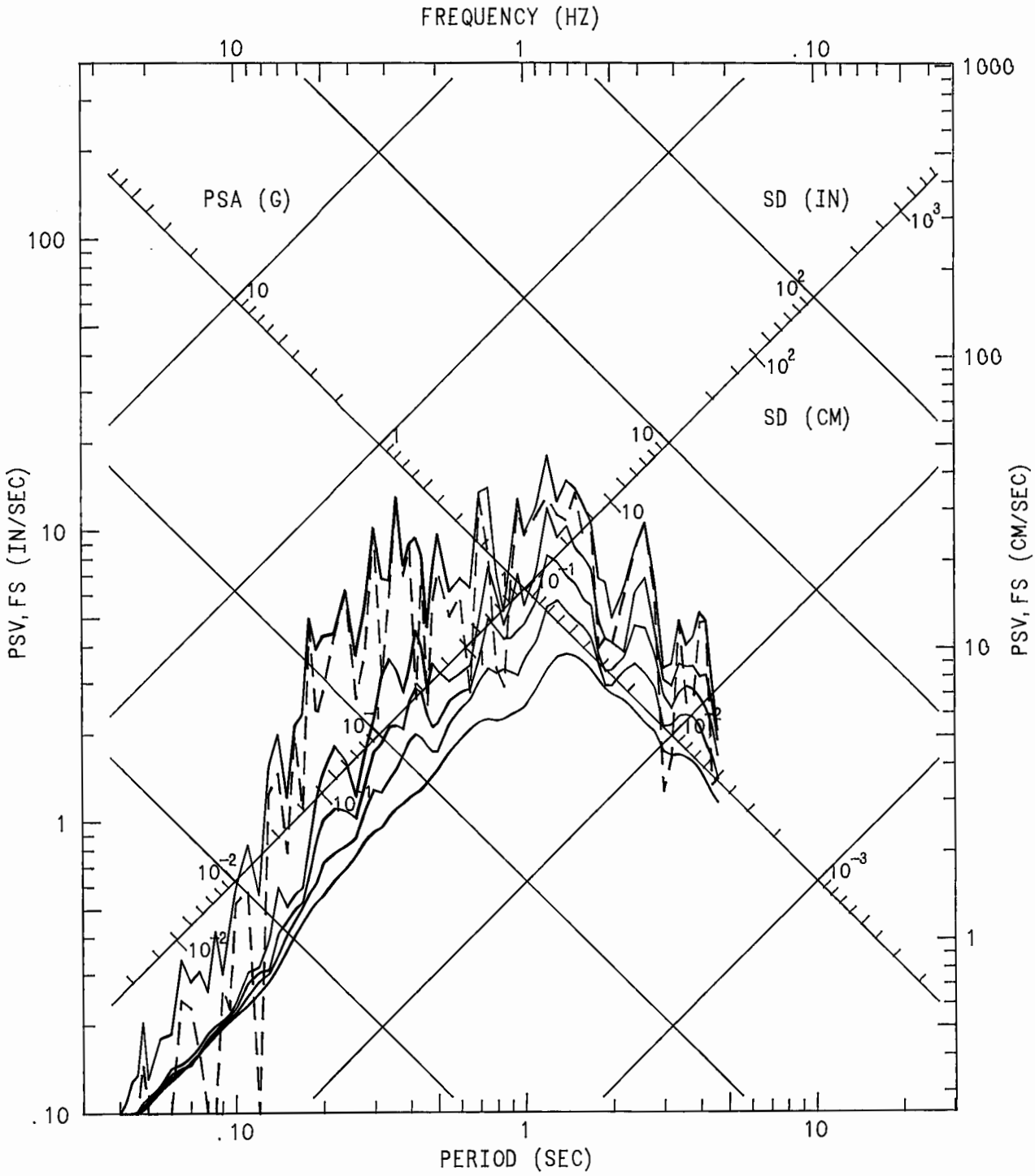


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 2 (STA CHN 15): UP (BASEMENT, S. WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-S1869-92183.02 122472.1232-QL92A541FF

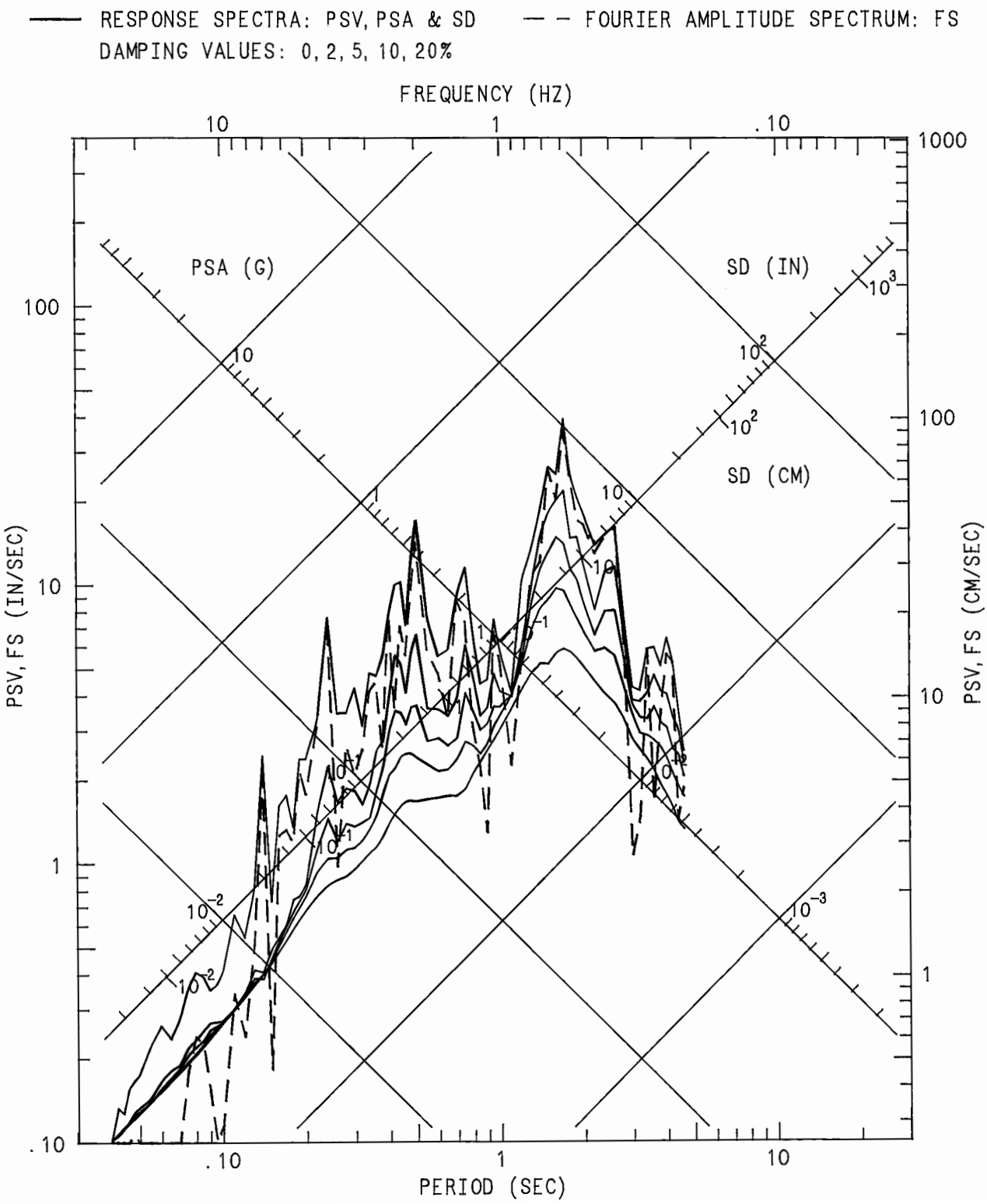



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG. CHN 3 (STA CHN 16): 360 DEG (BASEMENT, S. WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 24541-S1869-92183.02 122472.1232-QL92A541FF
ACCELERATION (CM/SEC/SEC)
200
0
-200
MAX = -33.5
VELOCITY (CM/SEC)
24
0
-24
MAX = -5.37
DISPLACEMENT (CM)
10
0
-10
MAX = -1.23
0
10
20
30
40
50
60
TIME (SEC)

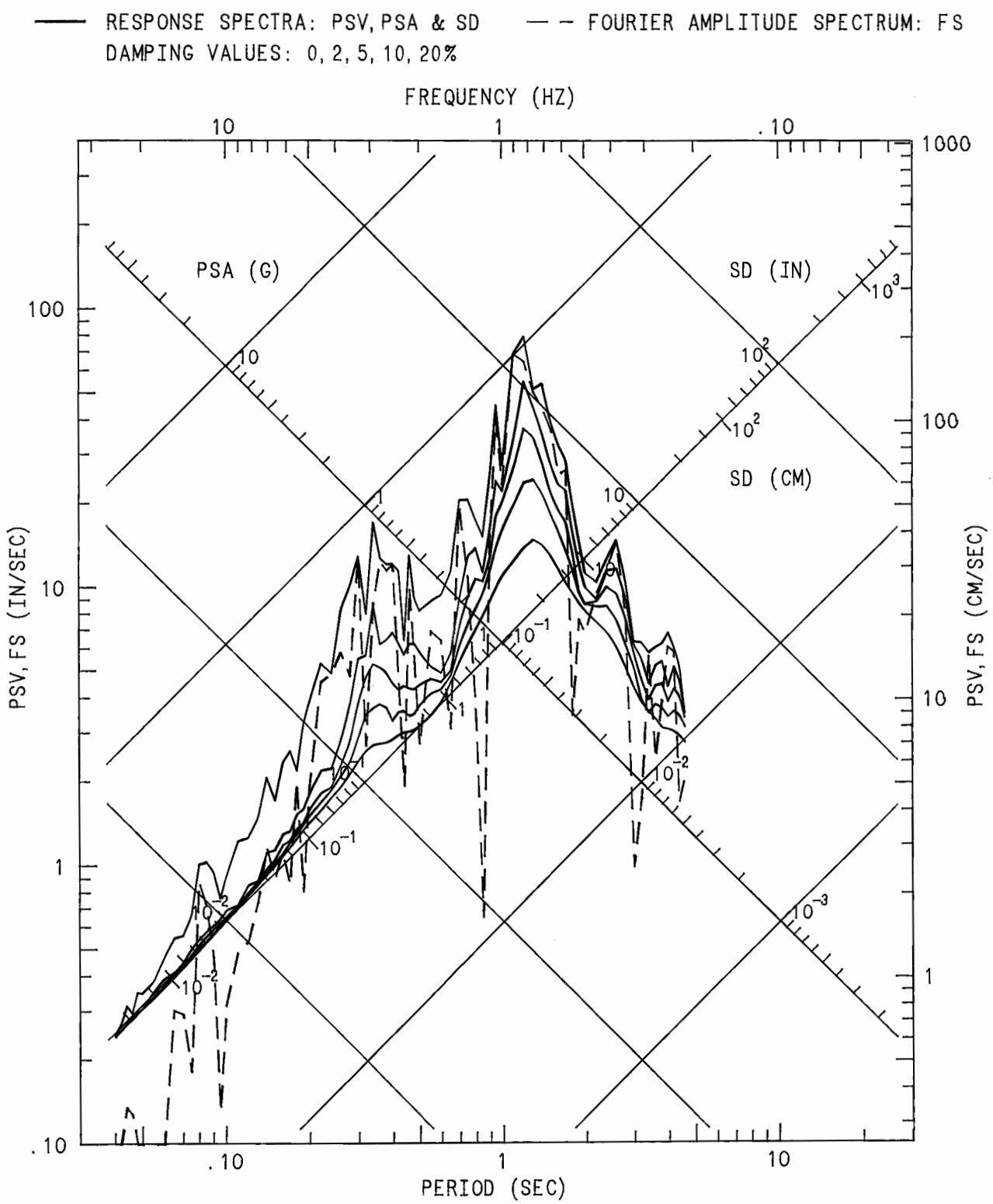
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 1: 360 DEG (2ND FLOOR: W. WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



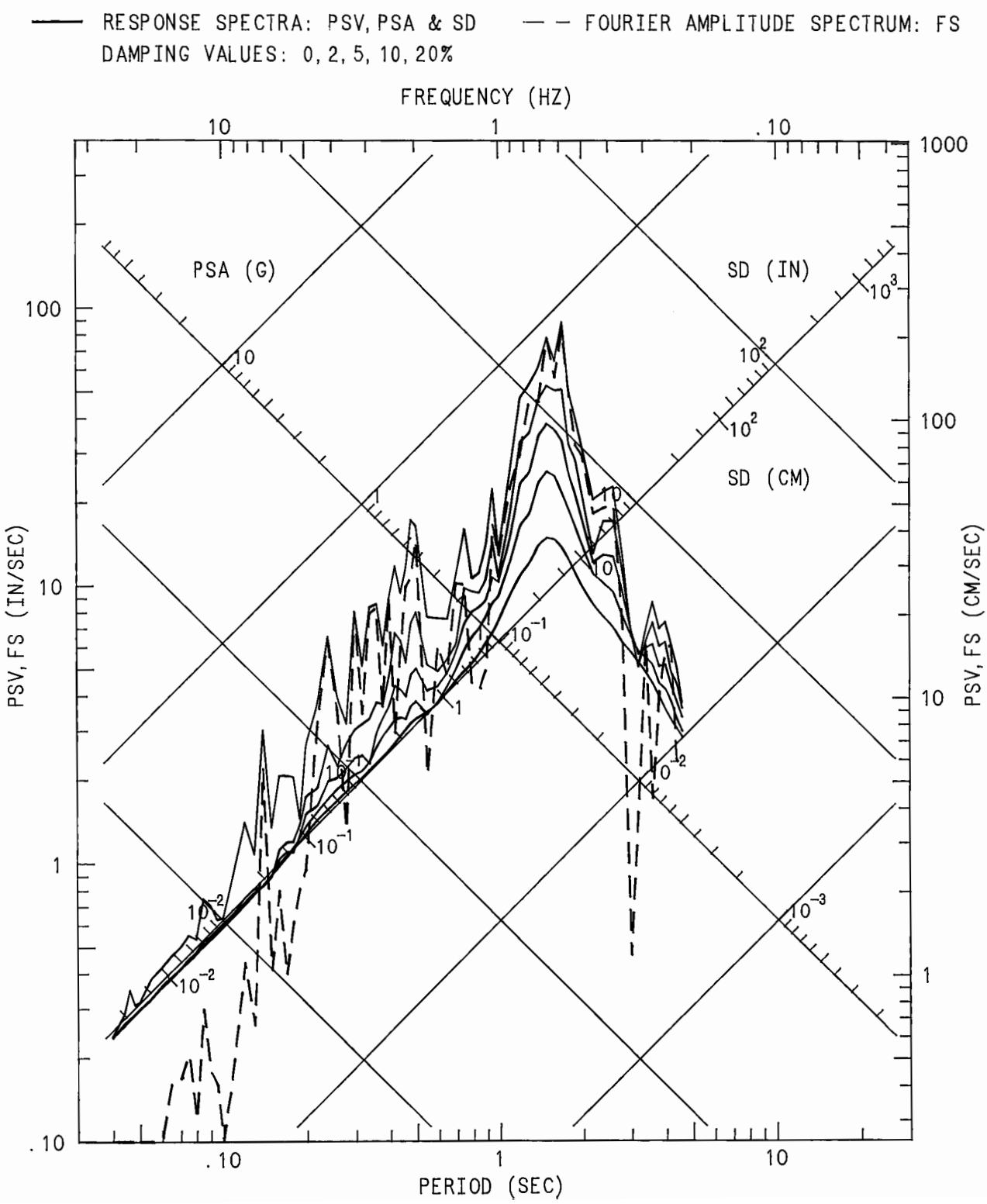
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 2: 360 DEG (2ND FLOOR: E. WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



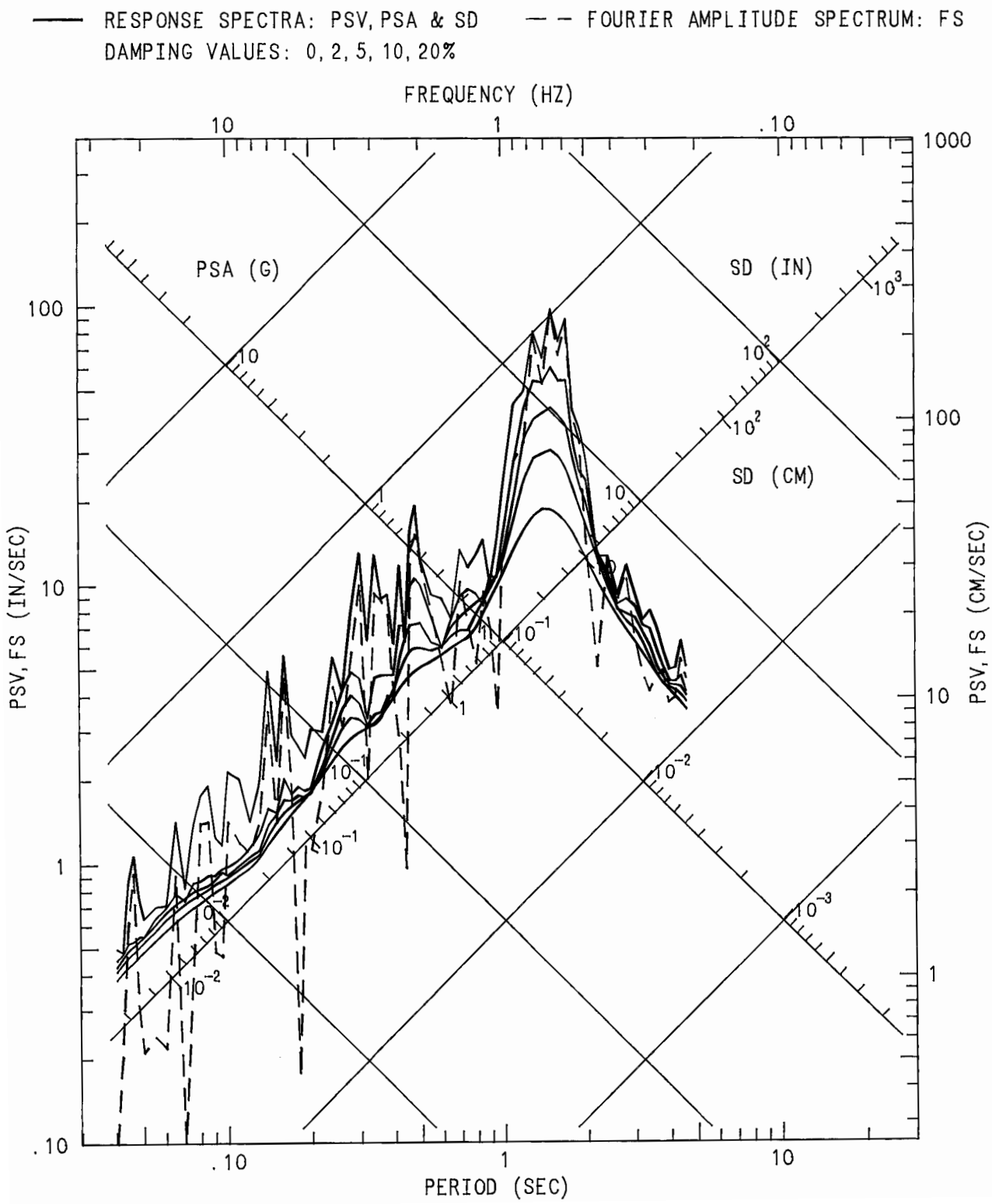
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 3: 360 DEG (ROOF: W. WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



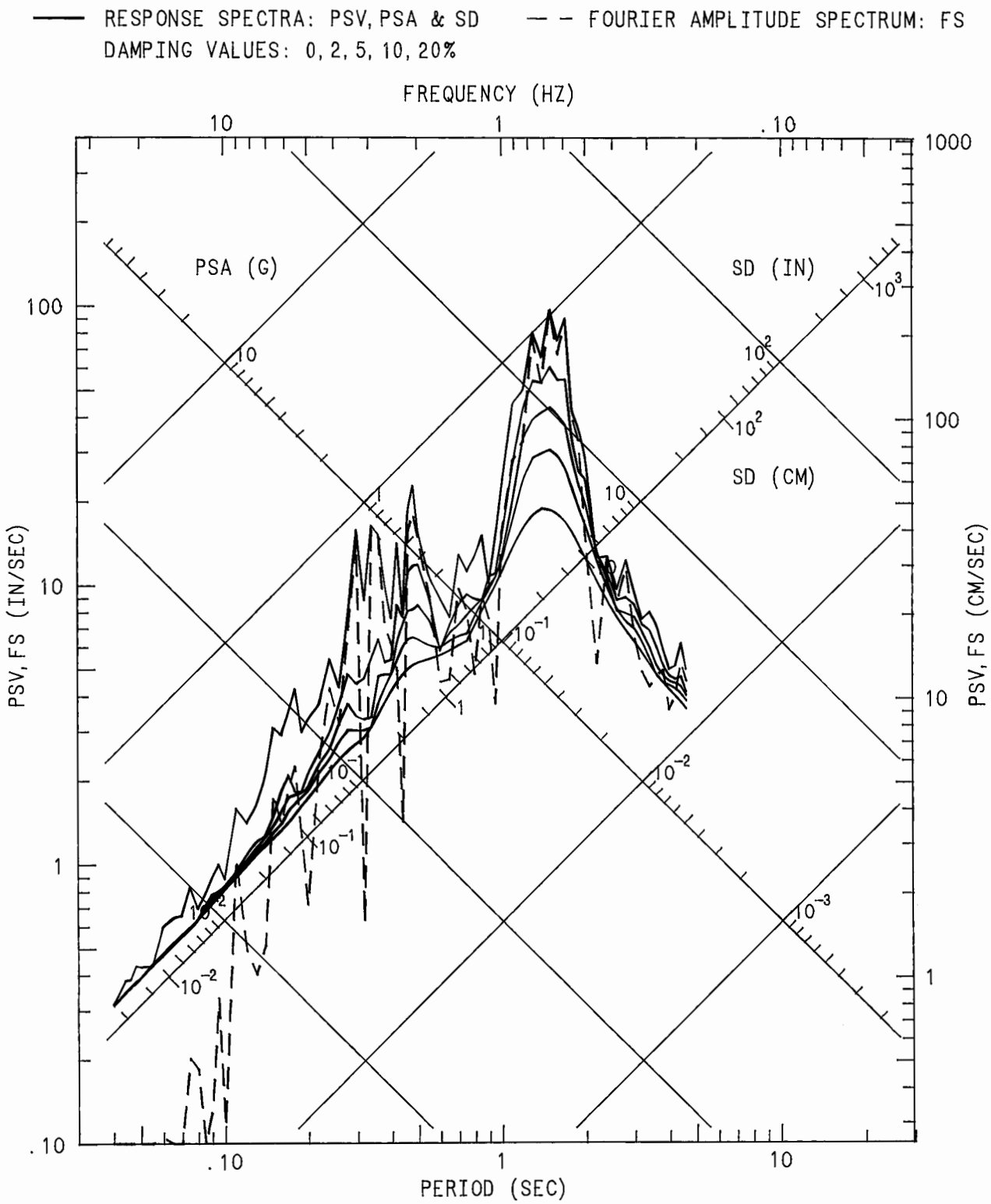
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 4: 360 DEG (ROOF: E. WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



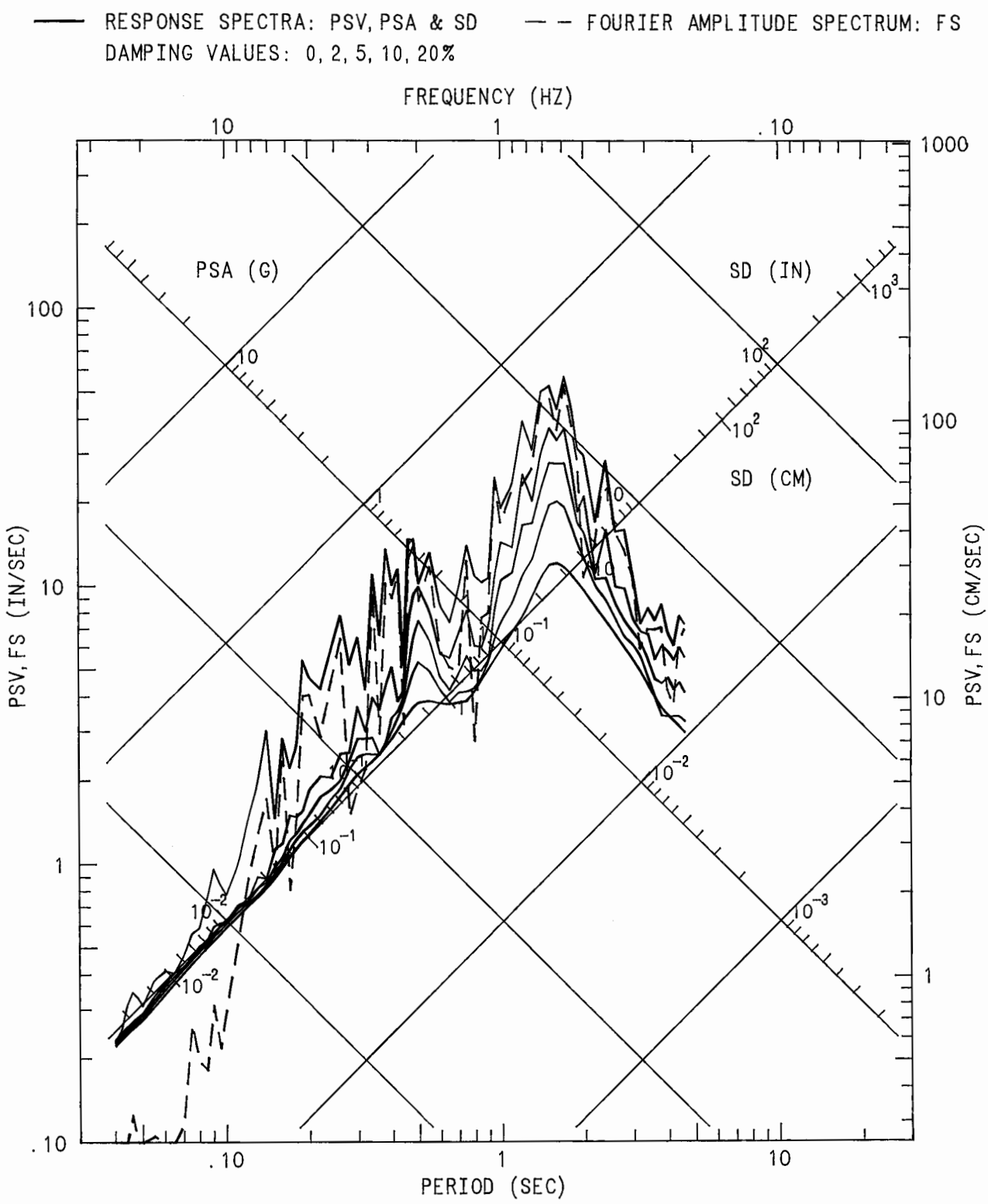
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 5: 90 DEG (ROOF: N. WALL OF W. WING)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



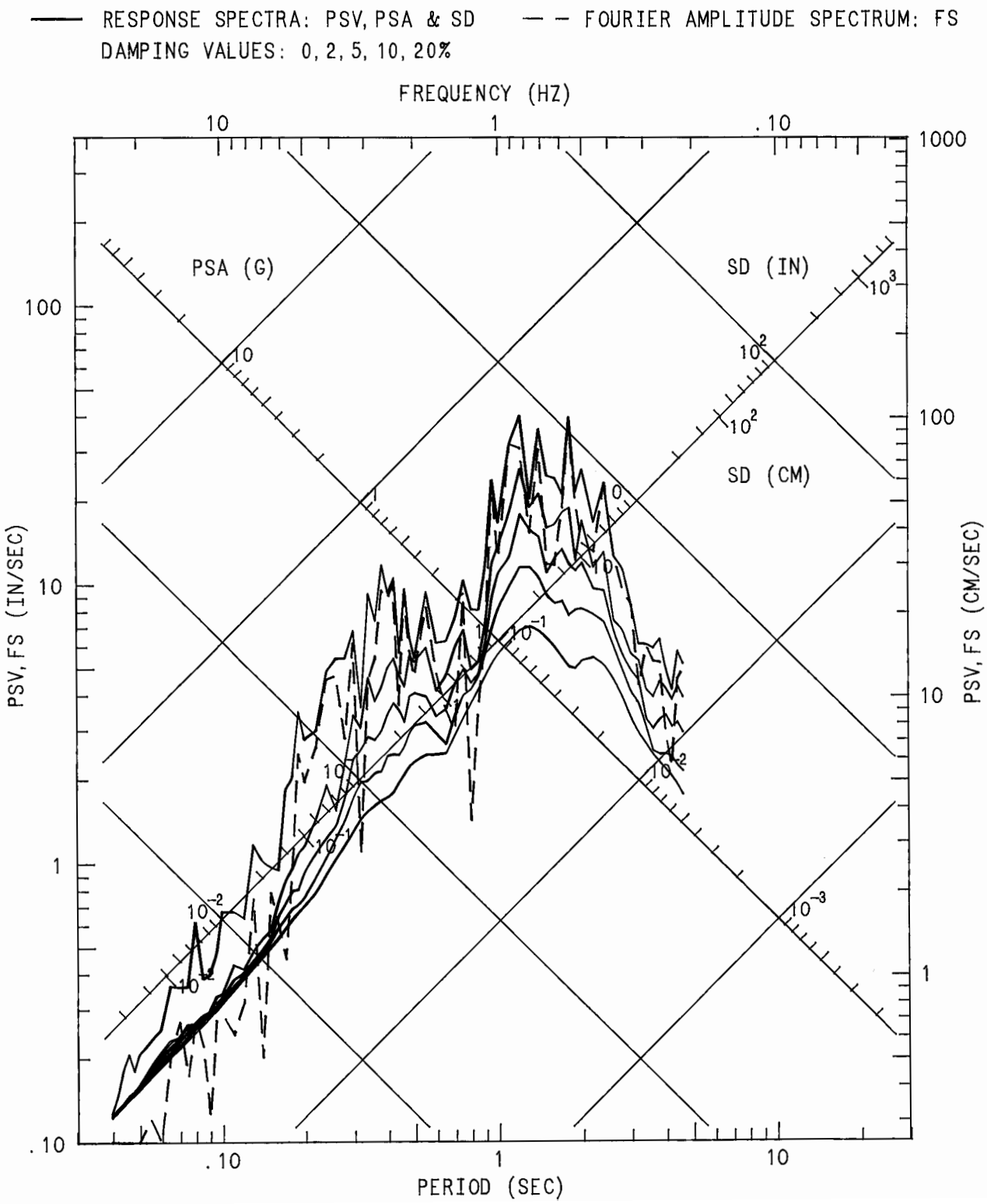
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 6: 90 DEG (ROOF: N. WALL OF E. WING)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



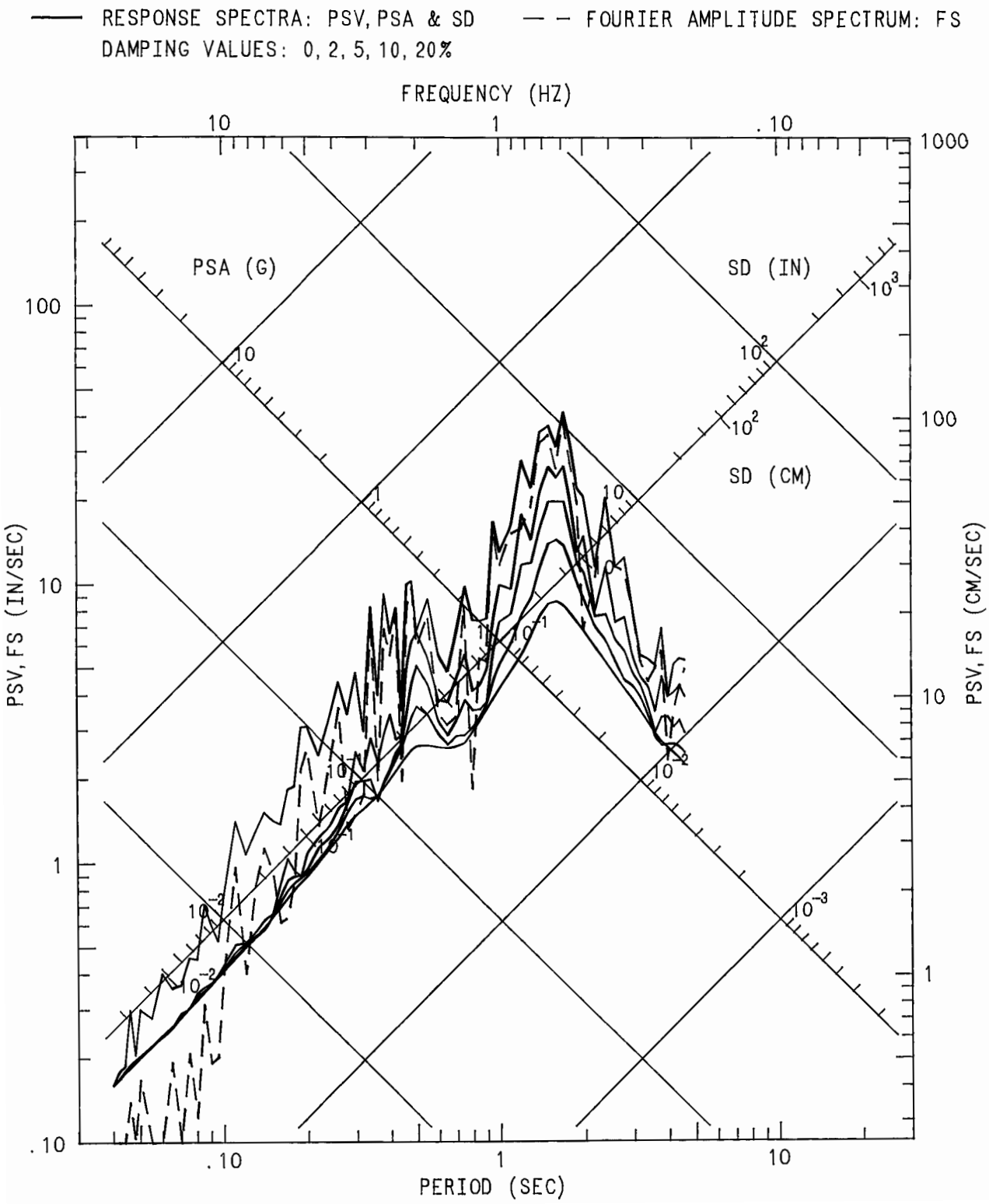
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 7: 90 DEG (ROOF: INTERIOR WALL, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



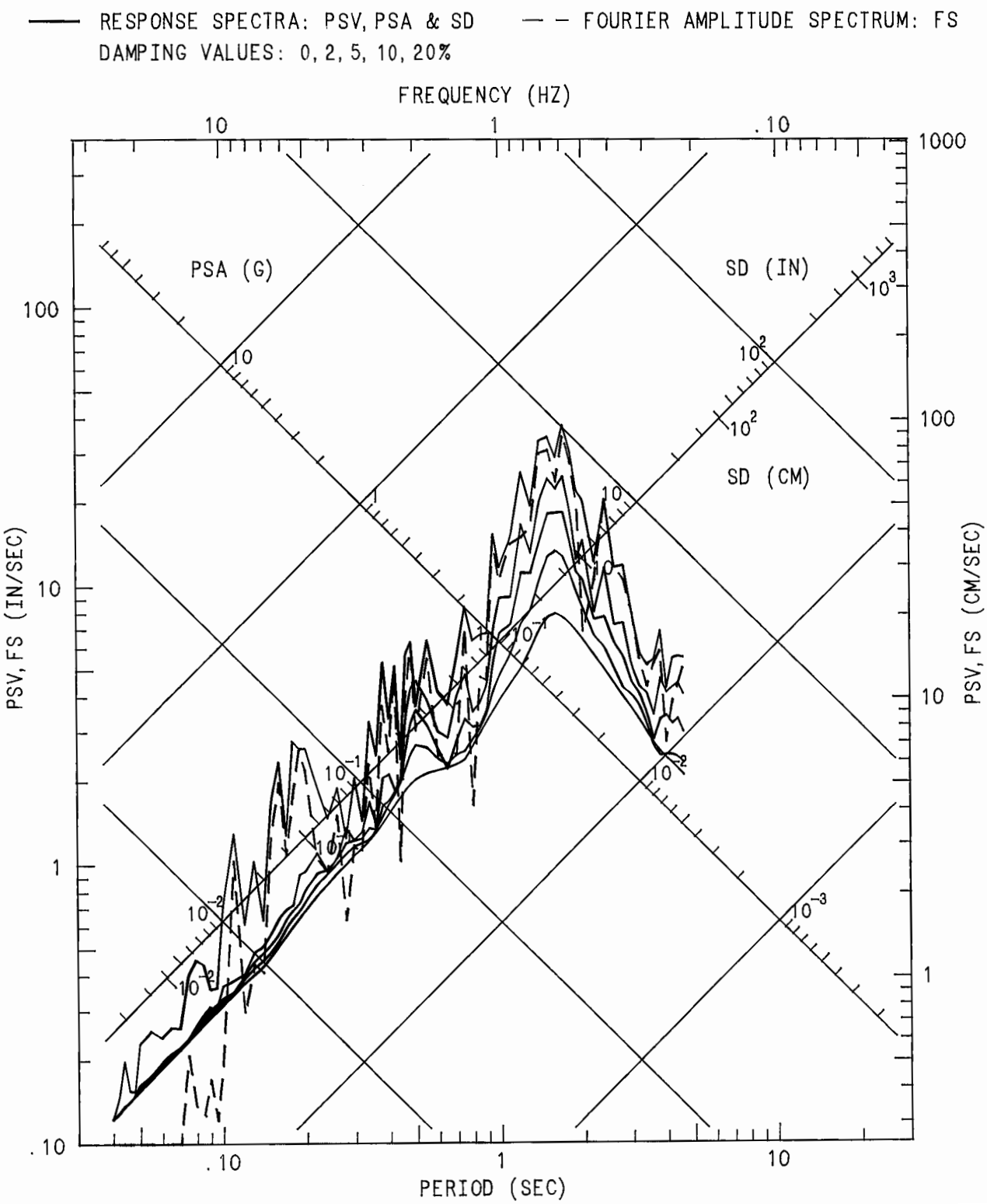
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 8: 90 DEG (ROOF: S. WALL, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



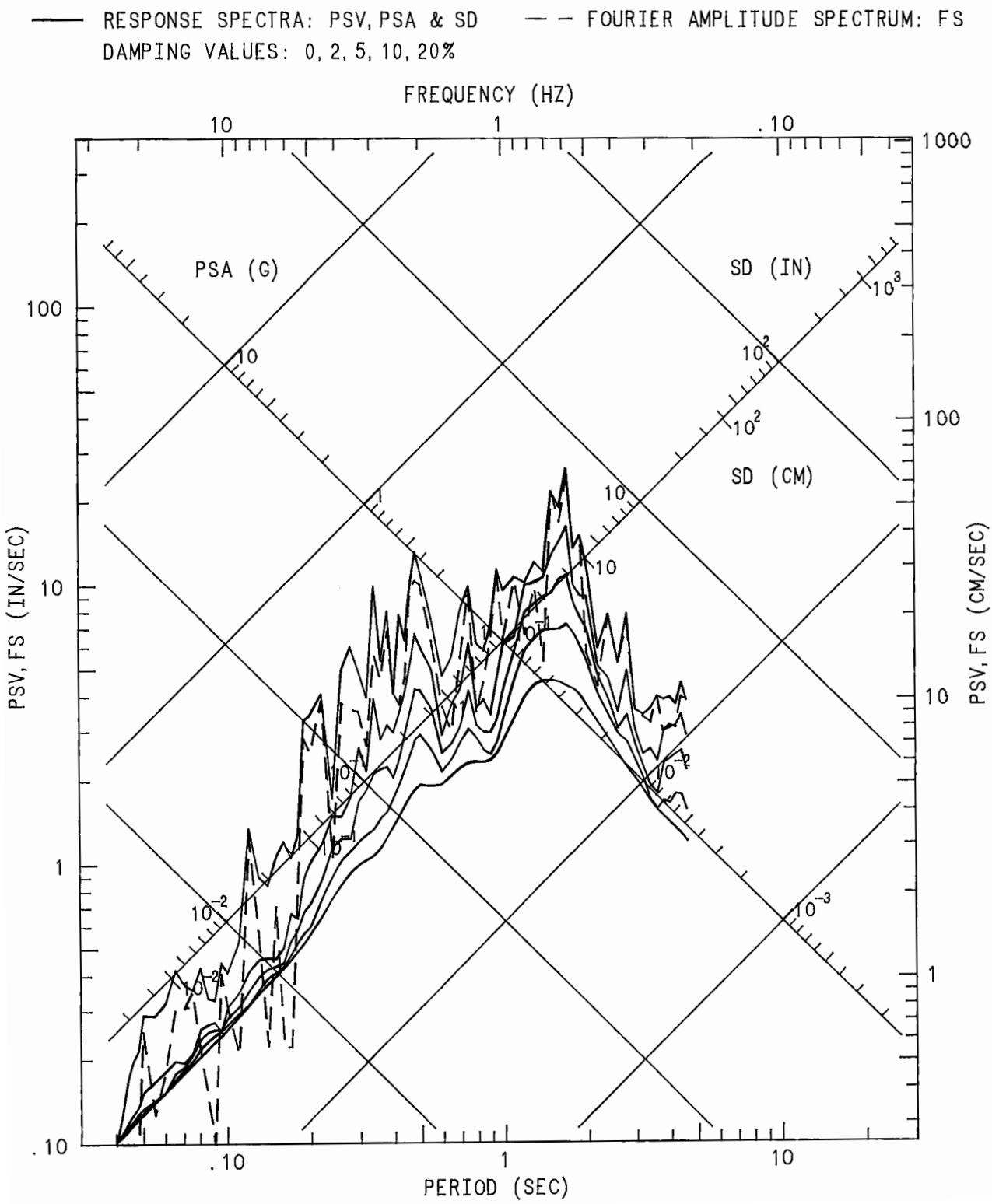
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 9: 90 DEG (ATTIC LEVEL: W. WALL, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



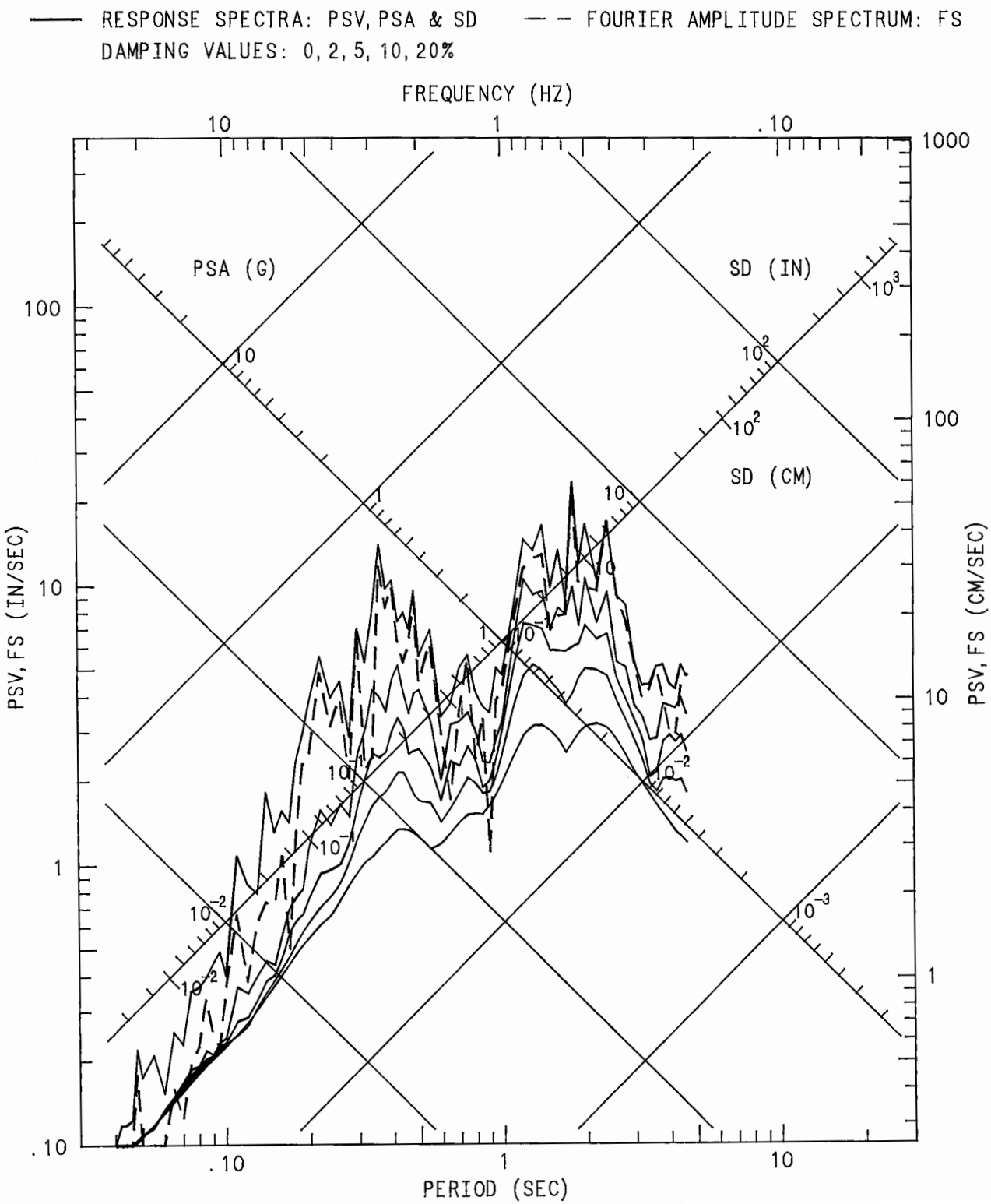
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 10: 90 DEG (6TH FLOOR: E. WALL, CENTER)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



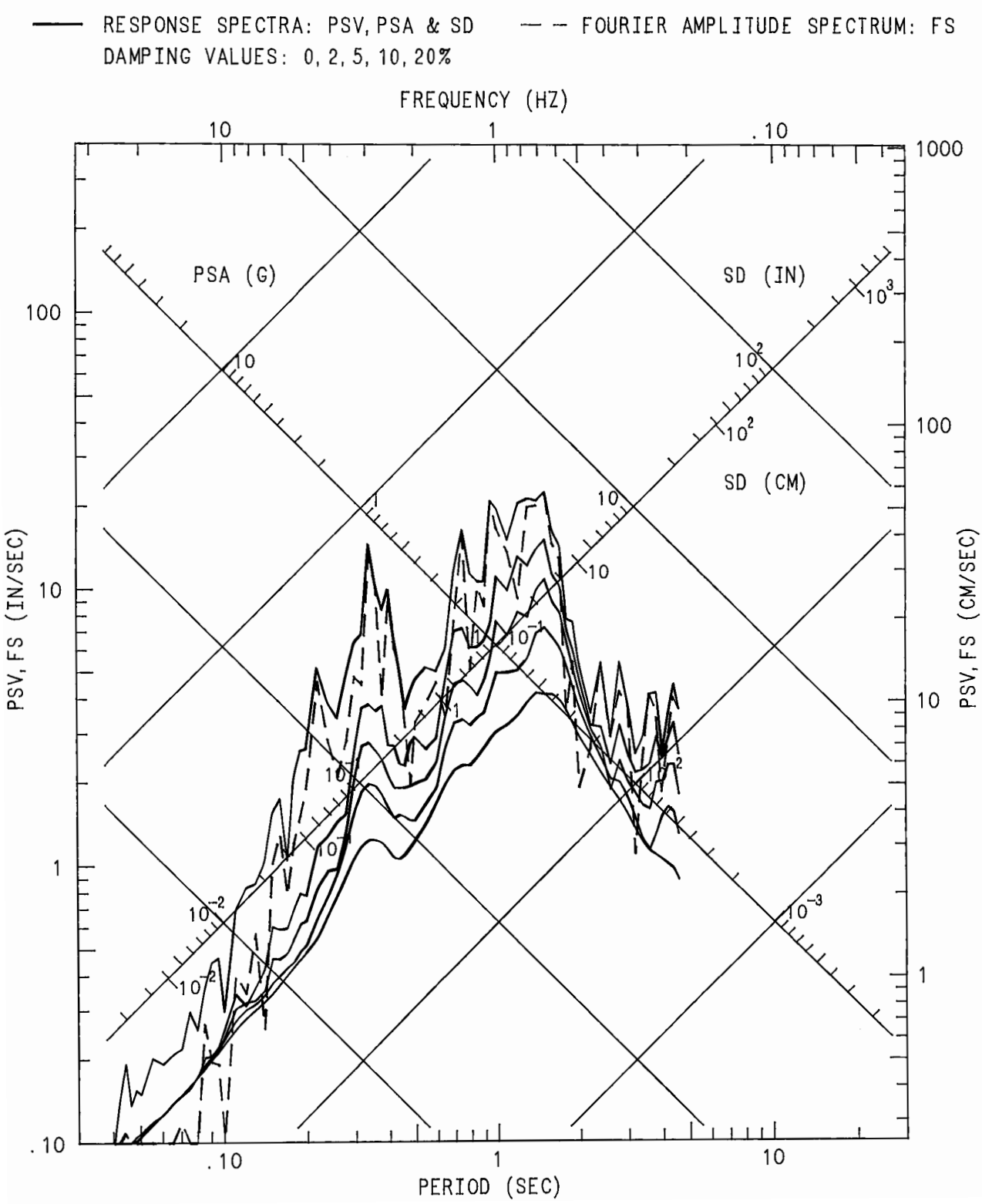
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 11: 90 DEG (2ND FLOOR: N. WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



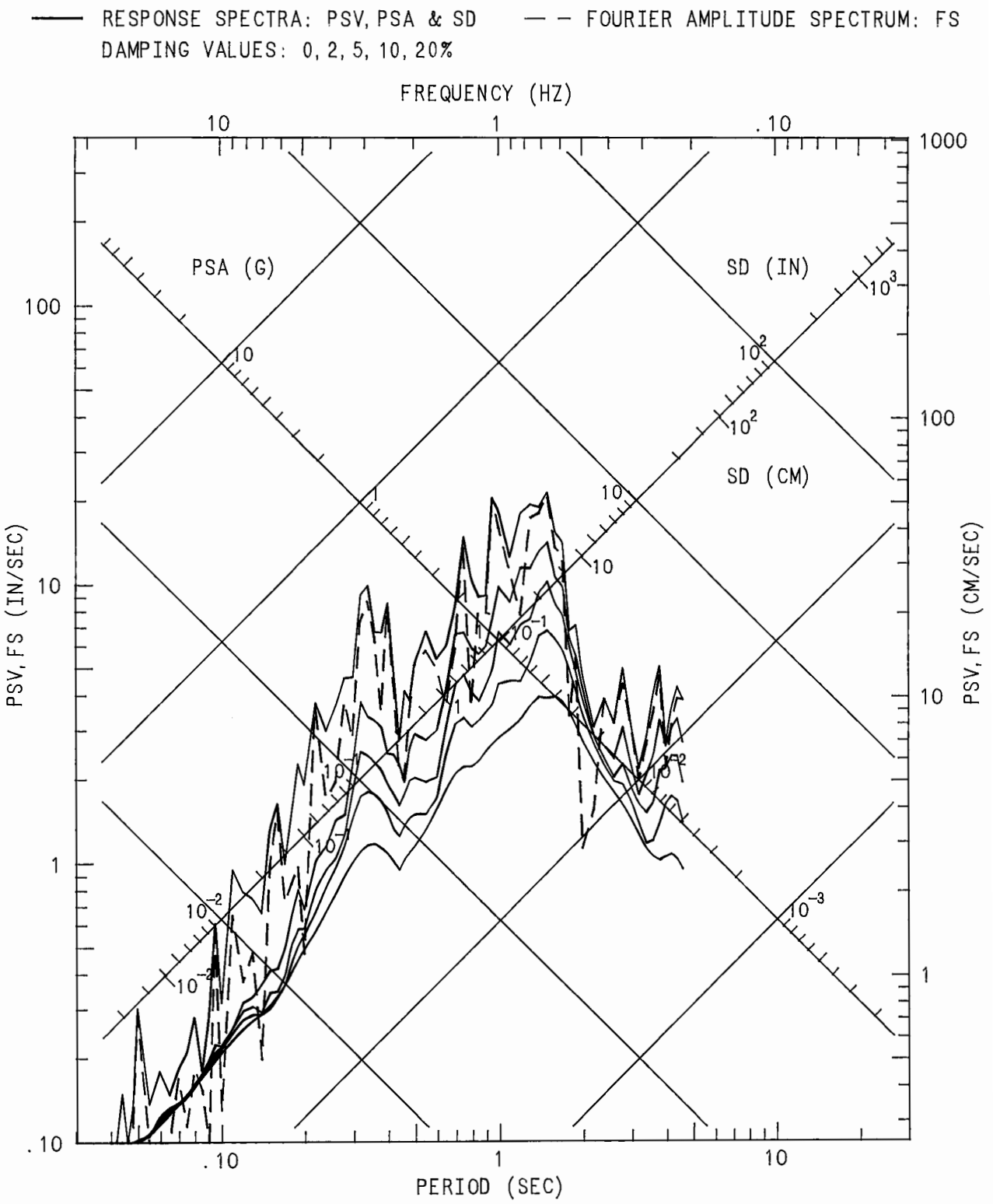
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 12: 90 DEG (2ND FLOOR: S. WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



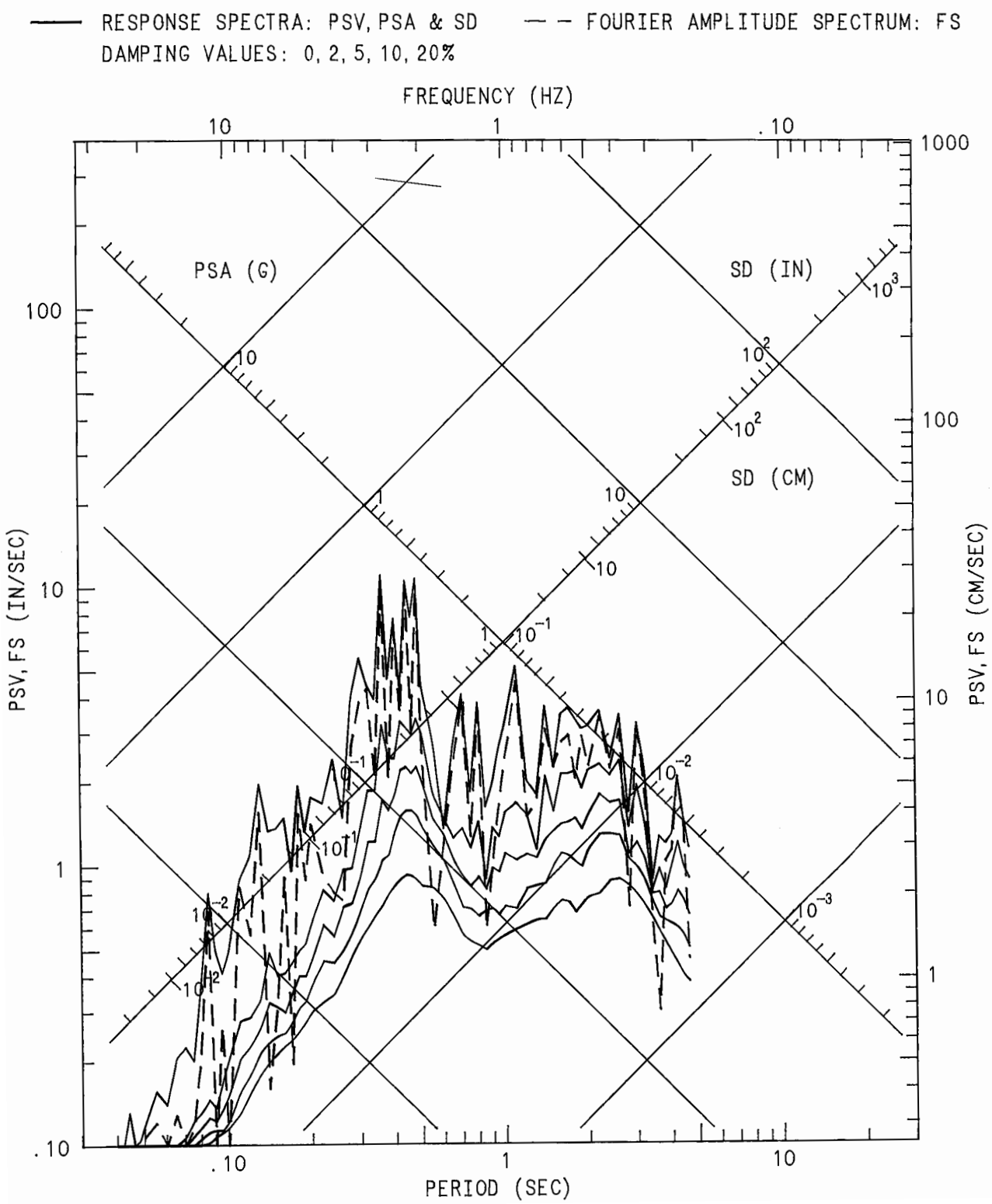
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 13: 90 DEG (BASEMENT: N. WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122472.2024-QL92A541



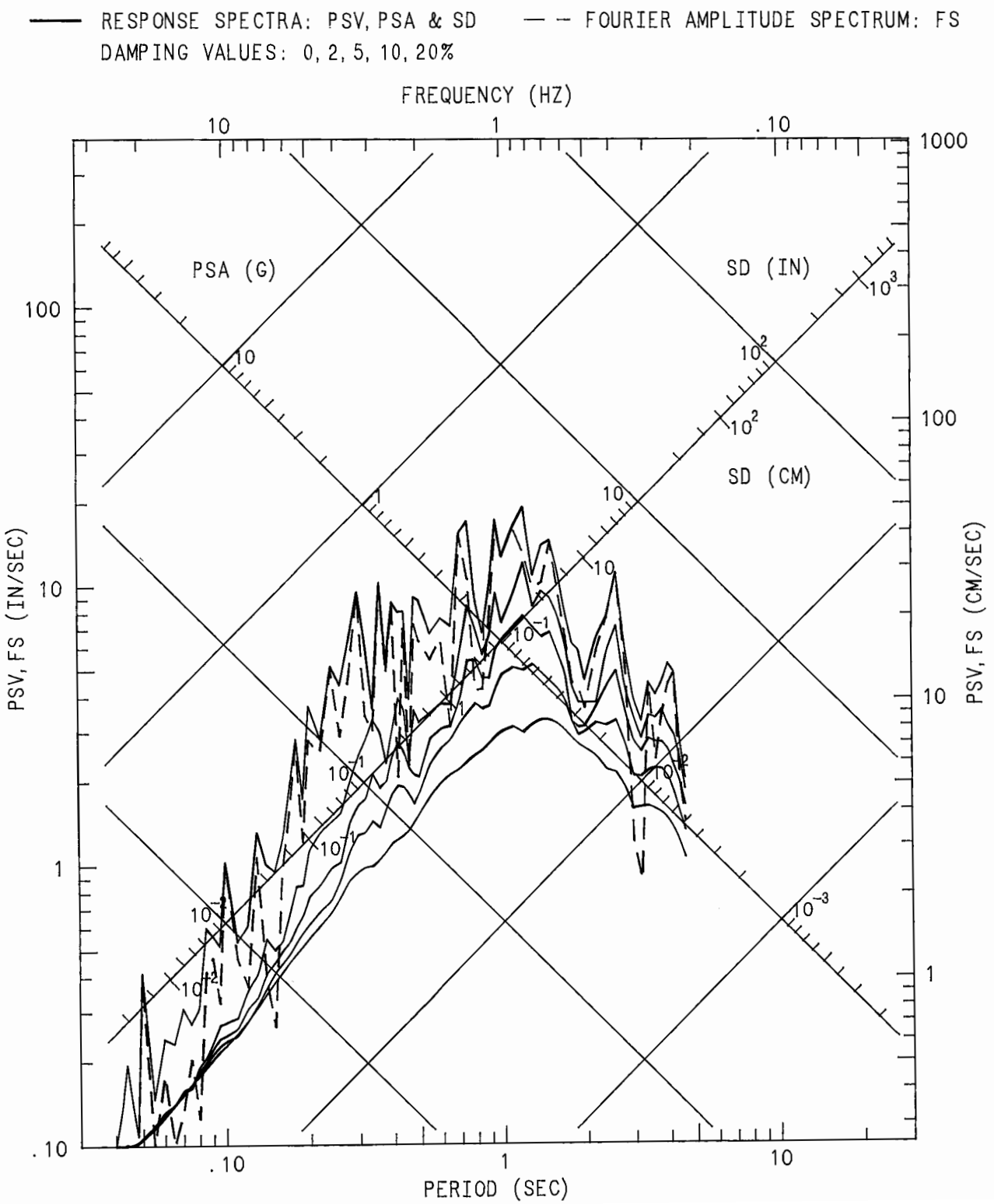
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 1 (STA CHN 14): 90 DEG (BASEMENT, S. WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-S1869-92183.02 122572.1251-QL92A541FF



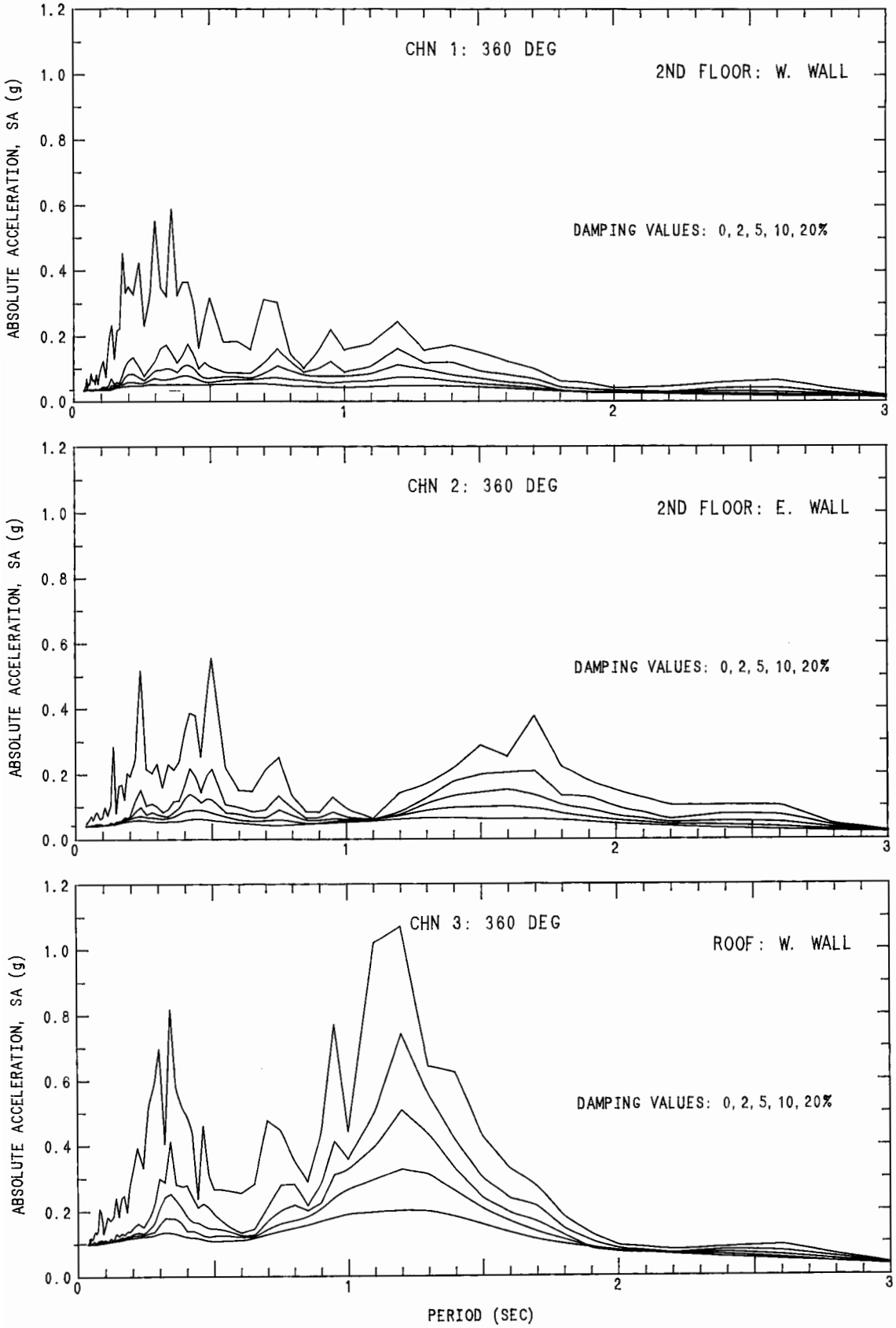
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 2 (STA CHN 15): UP (BASEMENT, S. WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-S1869-92183.02 122572.1251-QL92A541FF



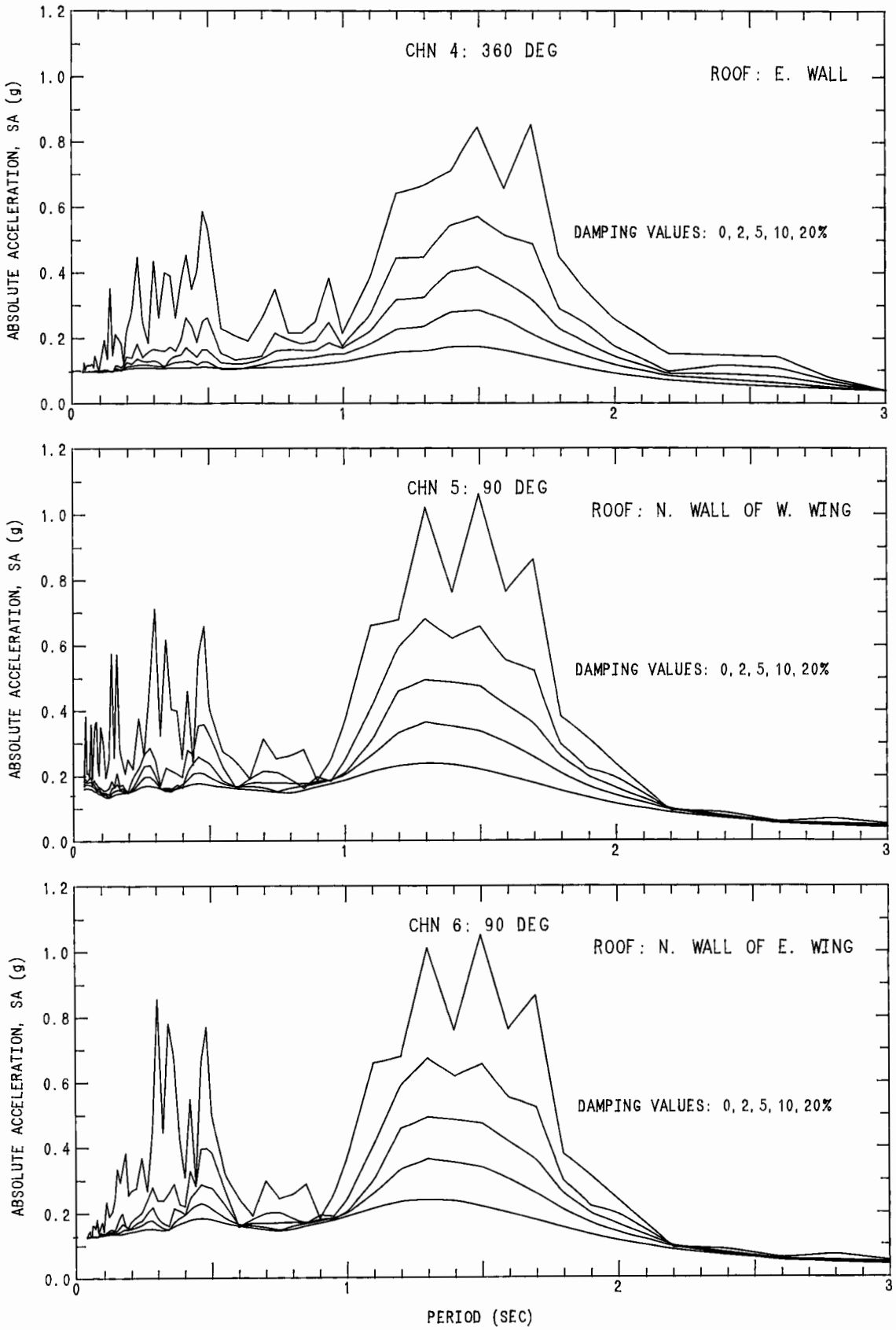
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
CHN 3 (STA CHN 16): 360 DEG (BASEMENT, S. WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-S1869-92183.02 122572.1251-QL92A541FF



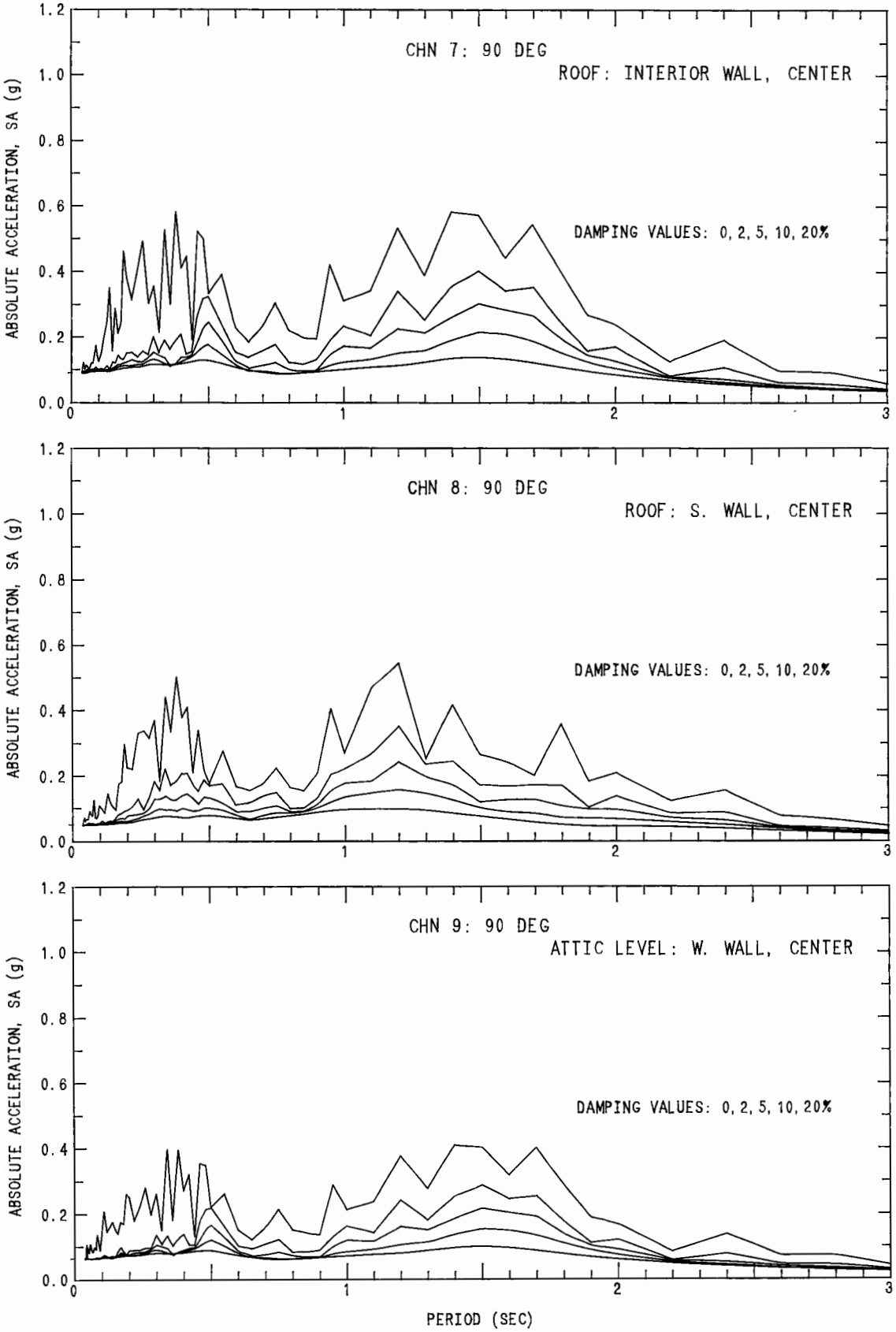
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122372.2024-QL92A541



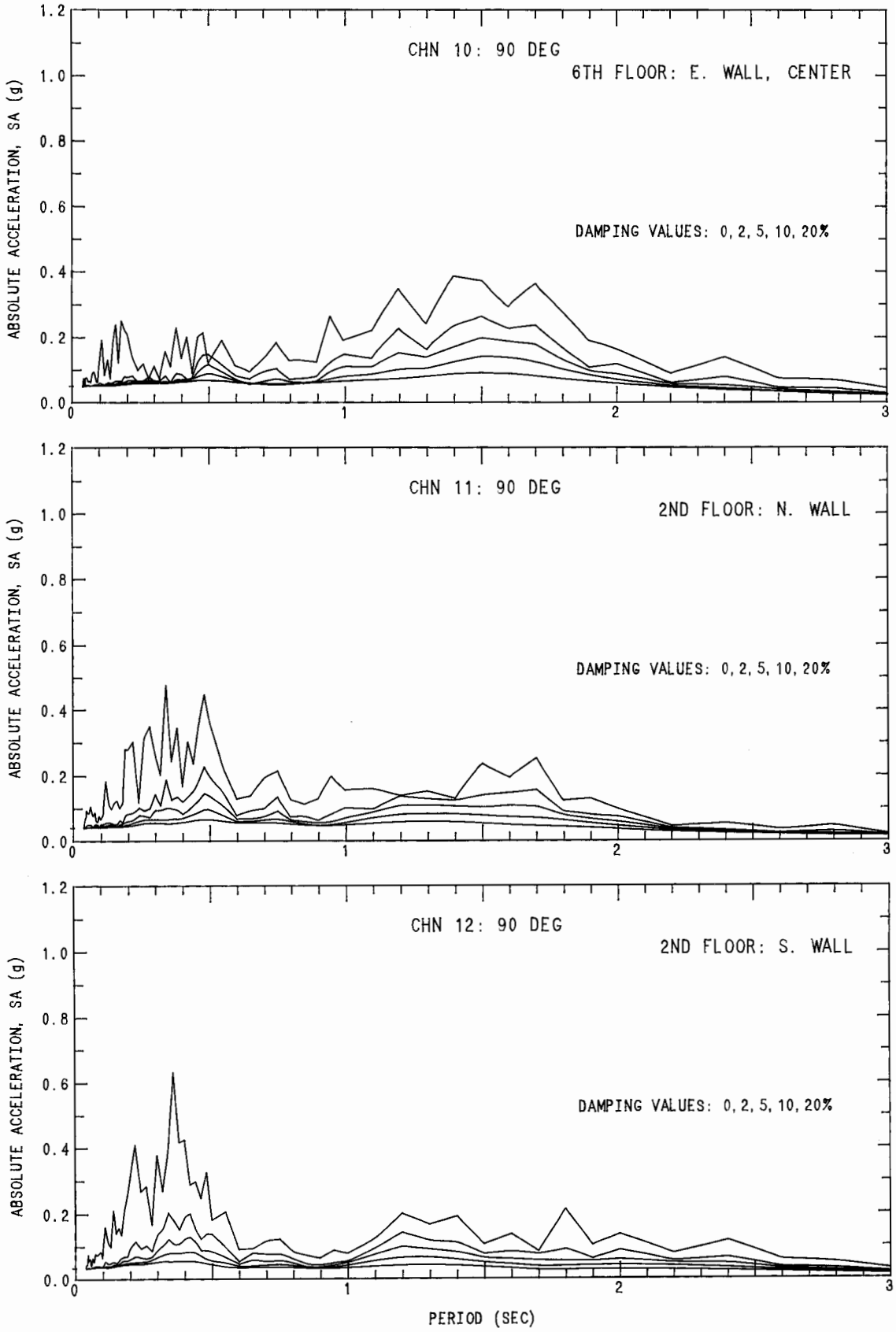
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122372.2024-QL92A541



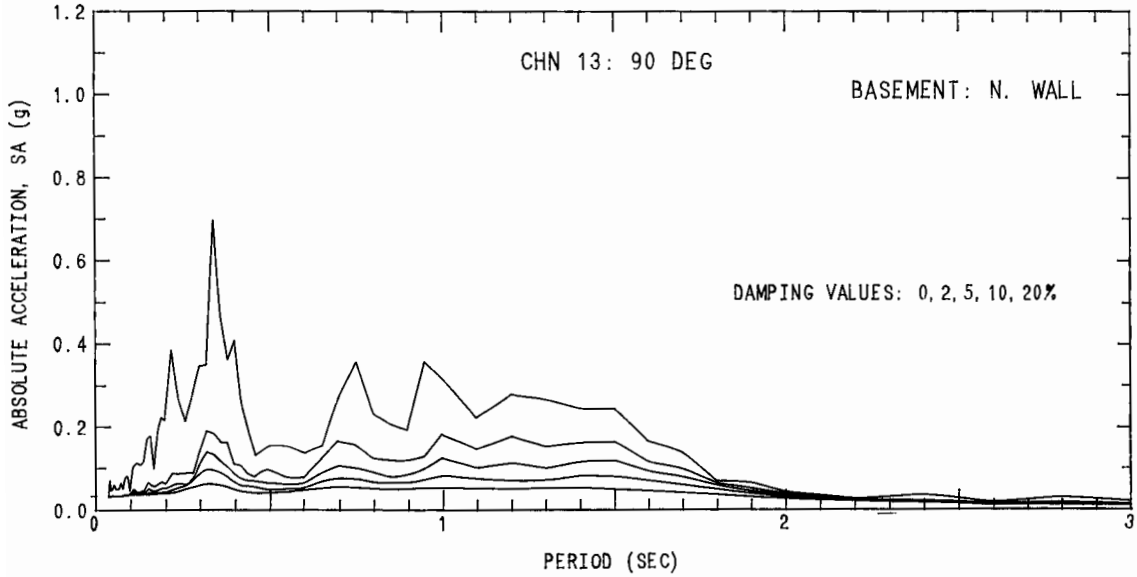
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122372.2024-QL92A541



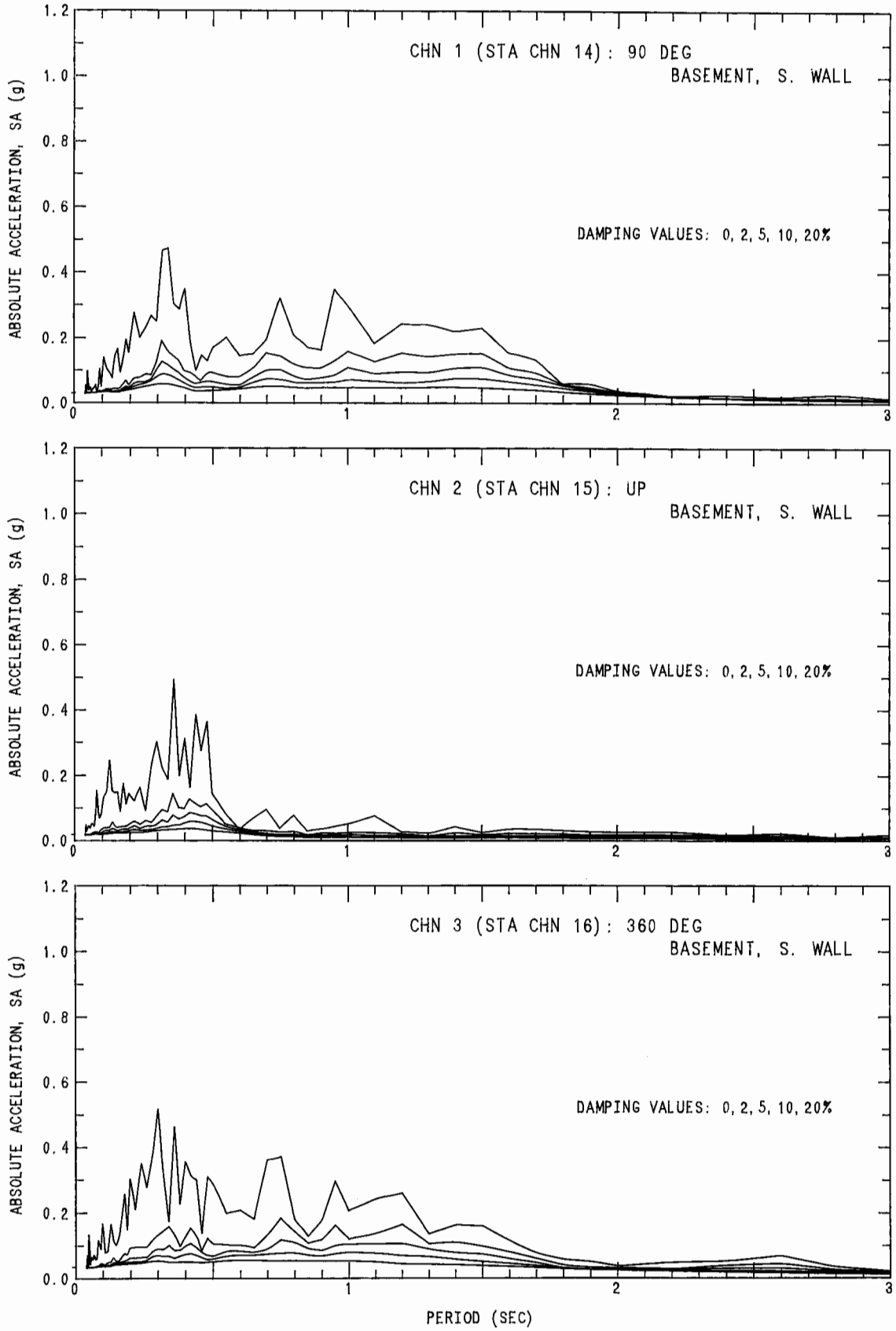
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122372.2024-QL92A541



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-C0281-92183.02 122372.2024-QL92A541

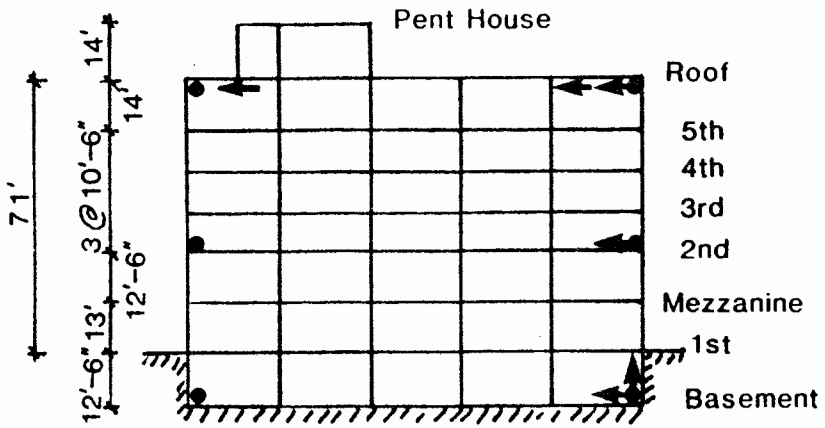


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
PASADENA - 6-STORY OFFICE BLDG.
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
24541-S1869-92183.02 122472.1251-QL92A541FF



Pomona - 6-story Commercial Bldg.
(CSMIP Station No. 23544)

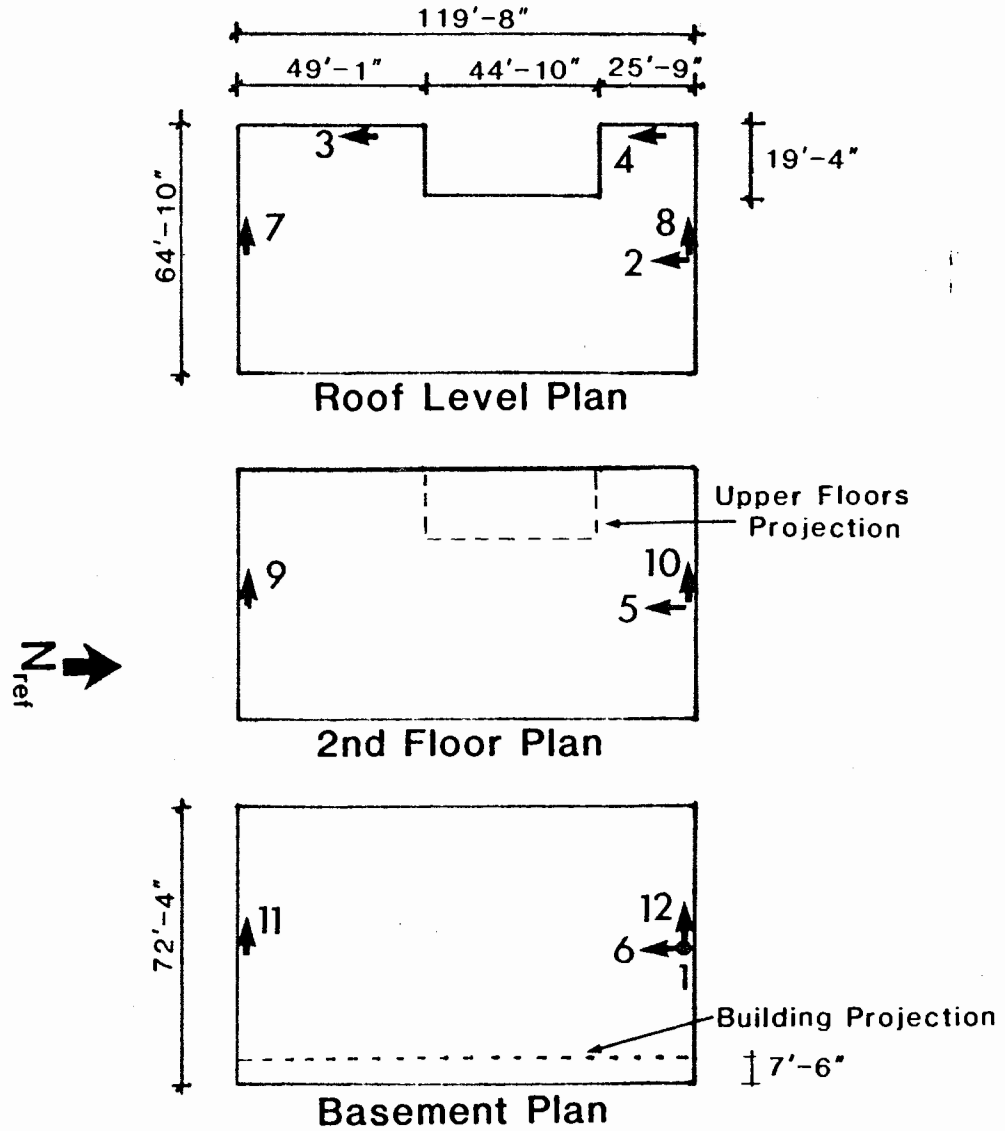
SENSOR LOCATIONS



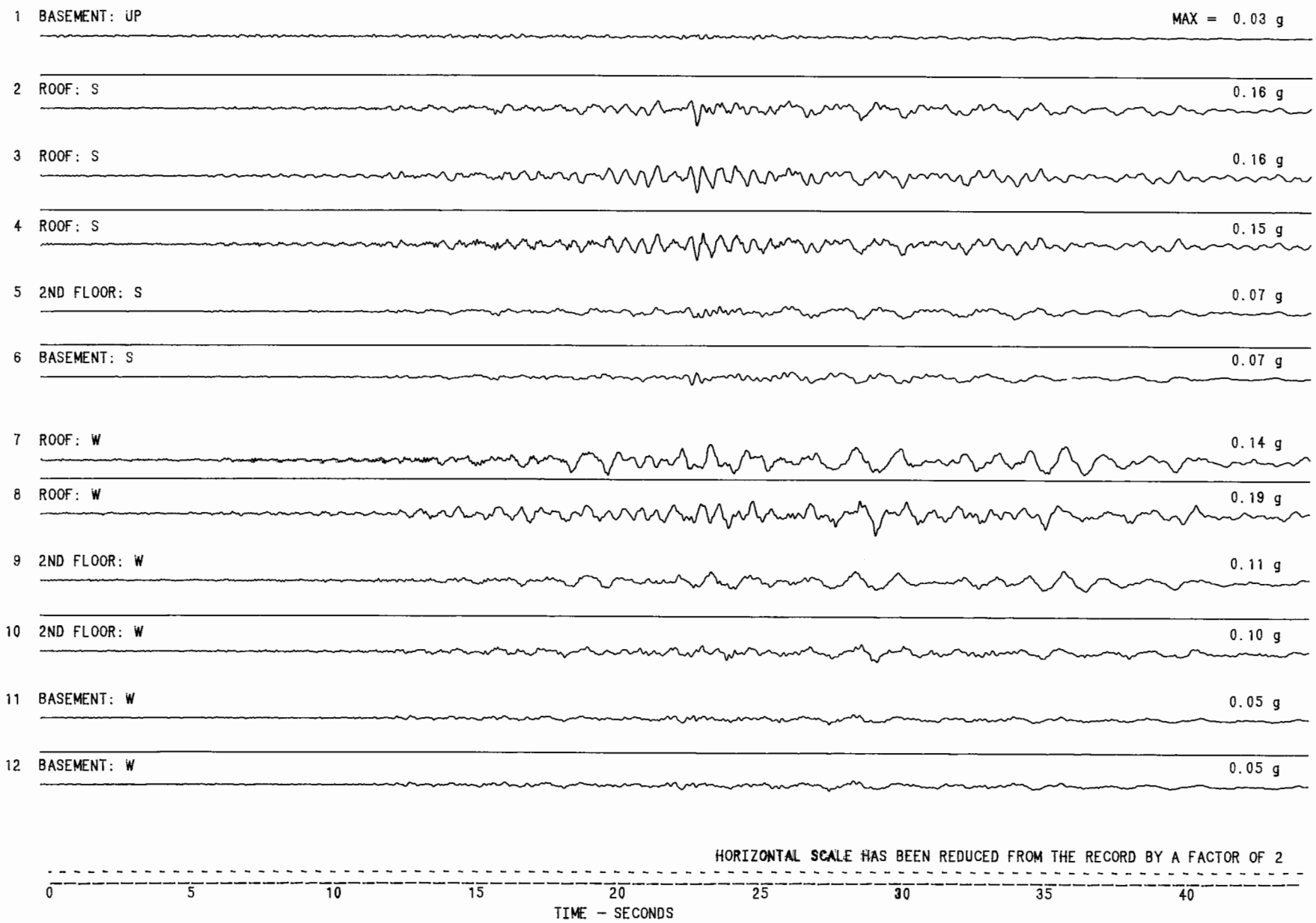
S/N Elevation

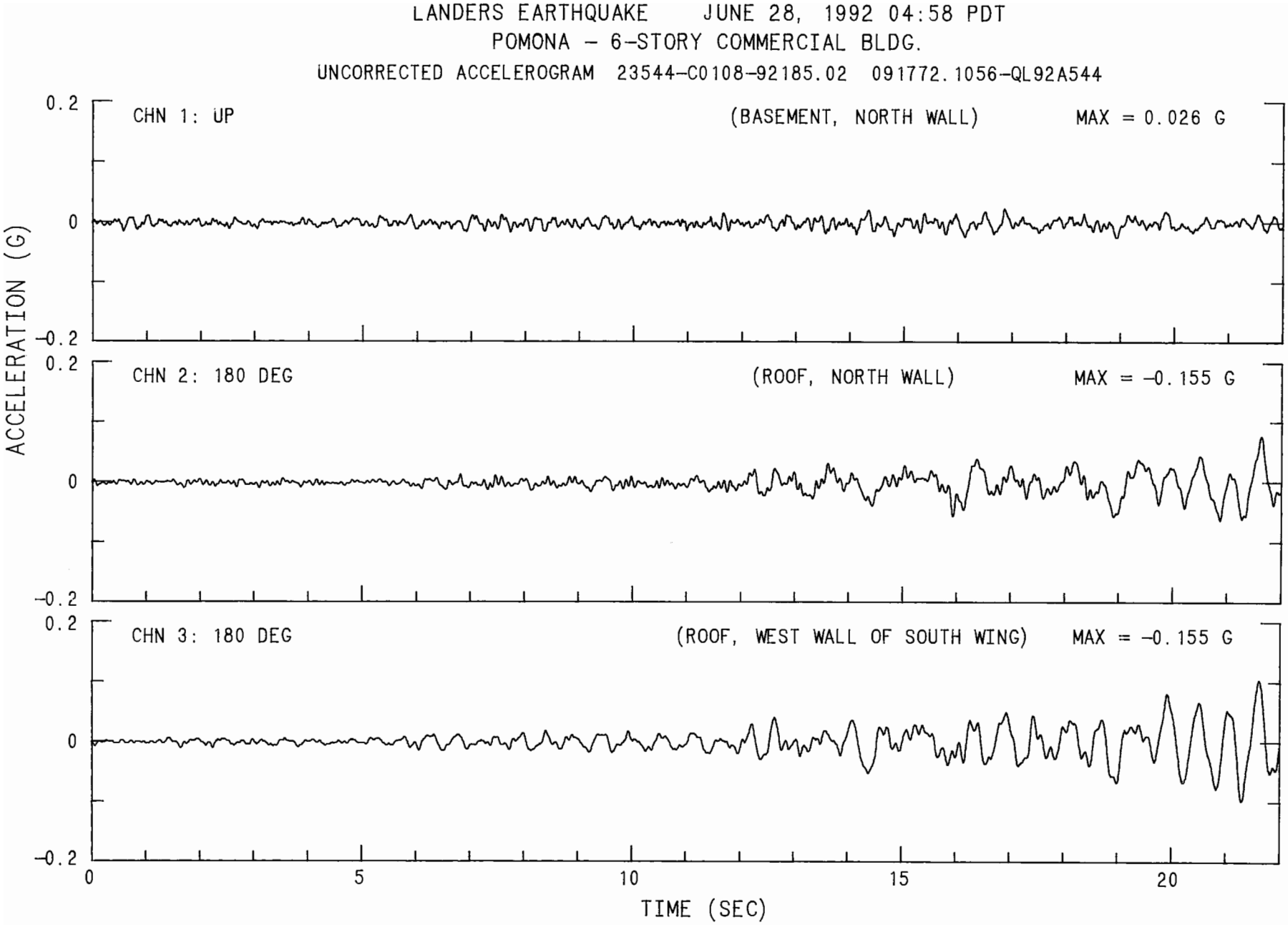
Reinforced concrete frames
with URM infill walls.
Design date: 1923

Structure Reference
Orientation: N= 0 °

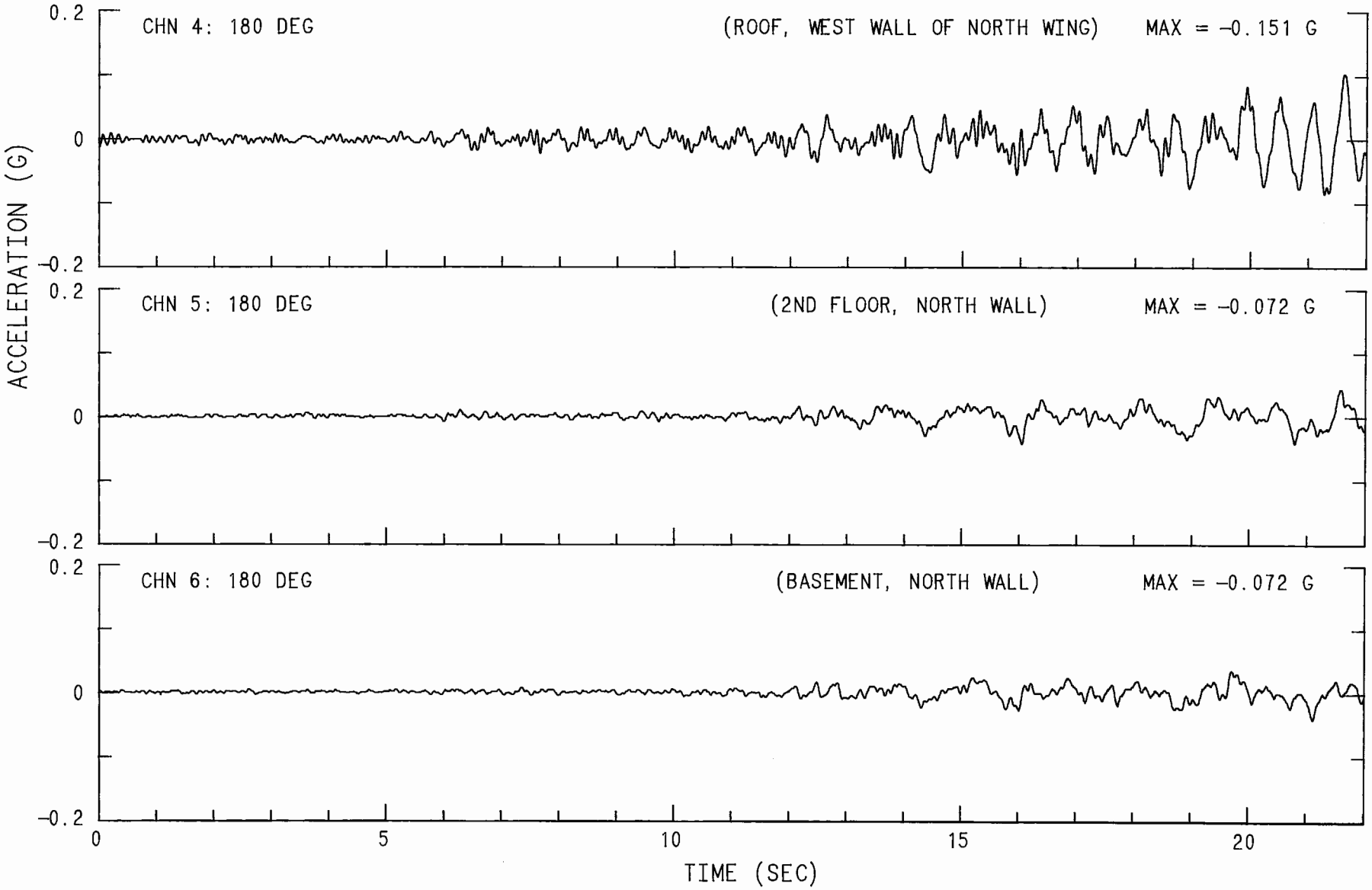


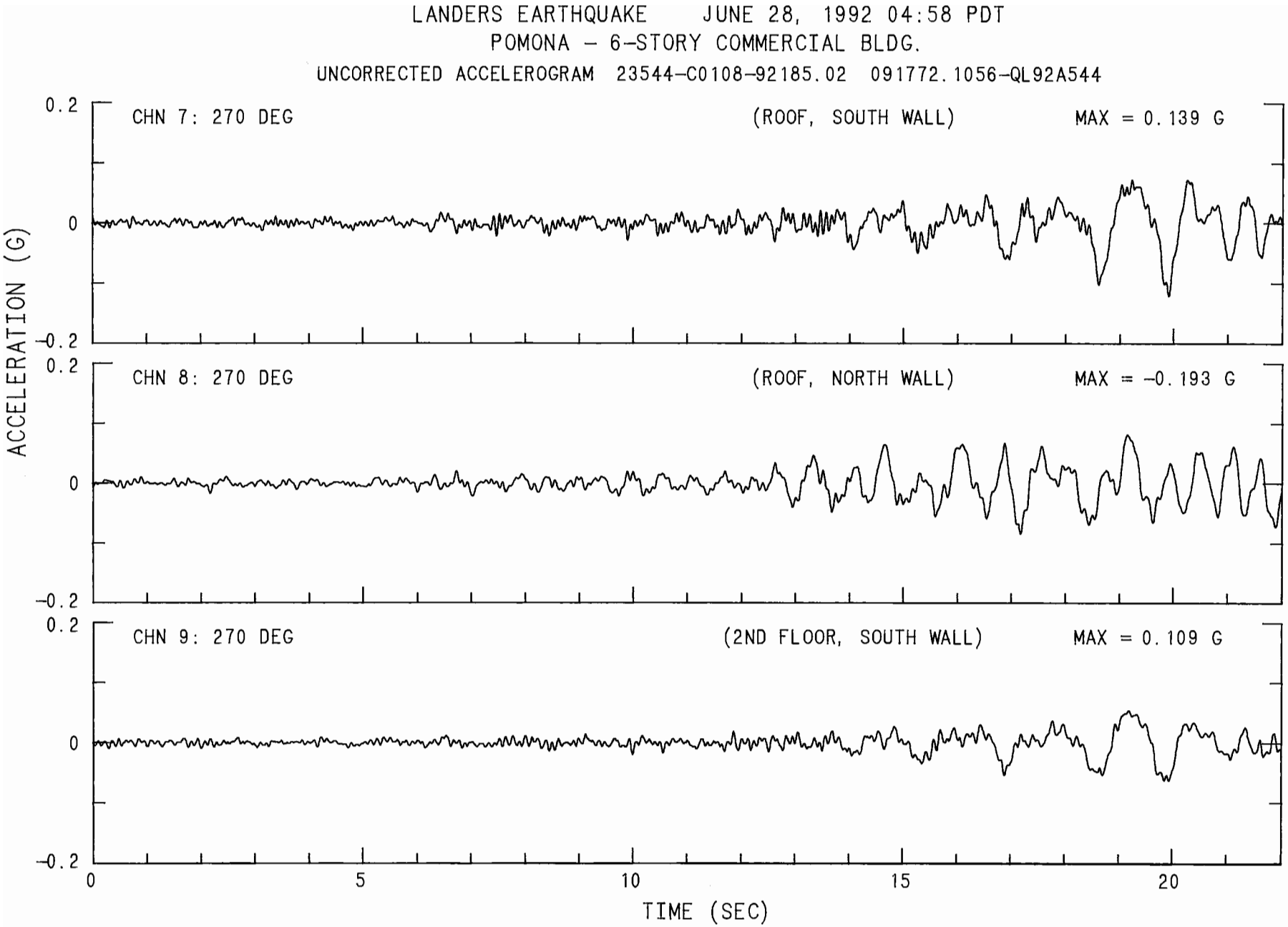
POMONA – 6-STORY COMMERCIAL BLDG. RECORD 23544-C0108-92185.02 LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT



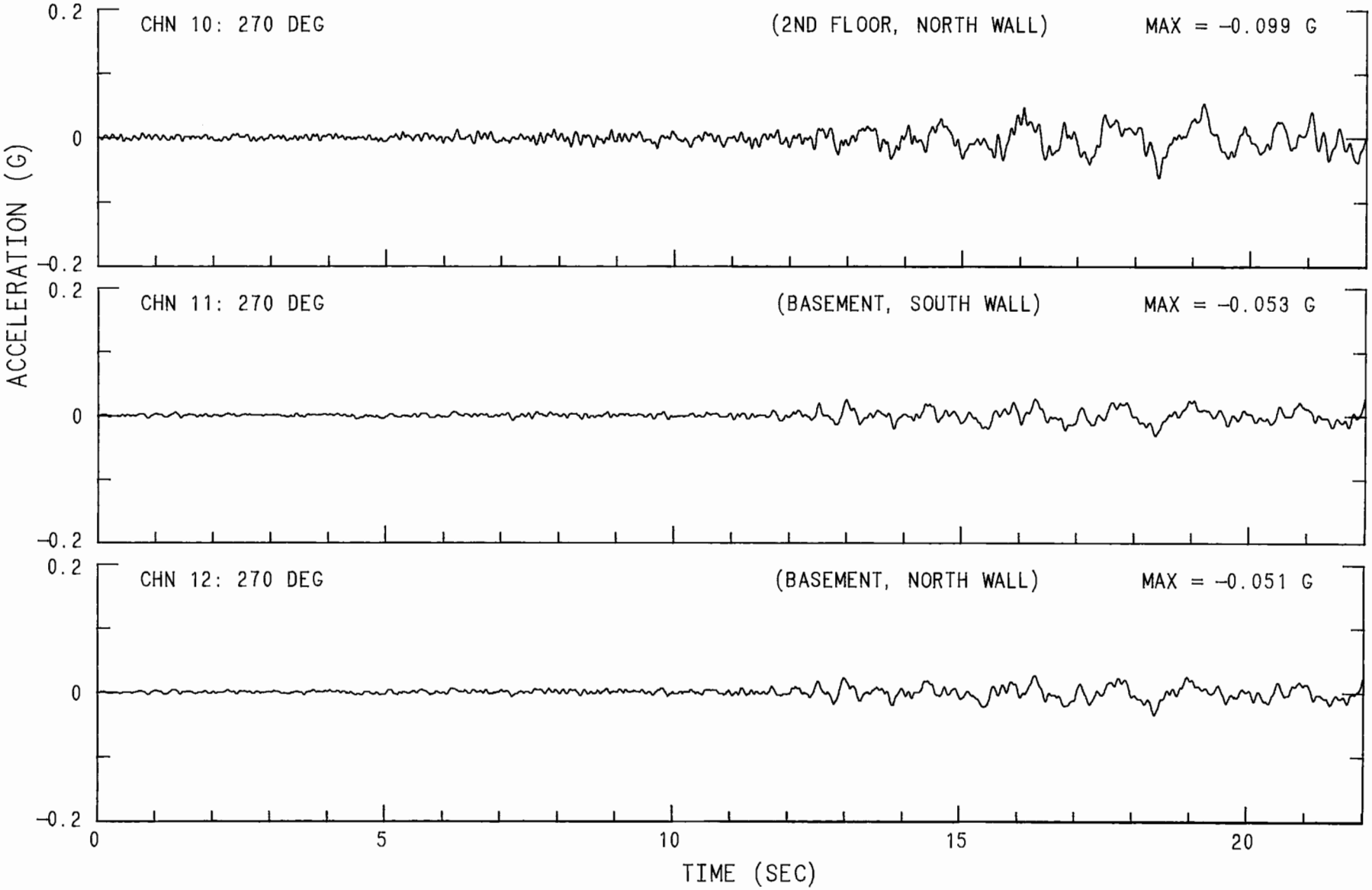

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
UNCORRECTED ACCELEROGRAM 23544-C0108-92185.02 091772.1056-QL92A544
CHN 1: UP
(BASEMENT, NORTH WALL)
MAX = 0.026 G
CHN 2: 180 DEG
(ROOF, NORTH WALL)
MAX = -0.155 G
CHN 3: 180 DEG
(ROOF, WEST WALL OF SOUTH WING)
MAX = -0.155 G
ACCELERATION (G)
0.2
0
-0.2
0
5
10
15
20
TIME (SEC)

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
UNCORRECTED ACCELEROGRAM 23544-C0108-92185.02 091772.1056-QL92A544

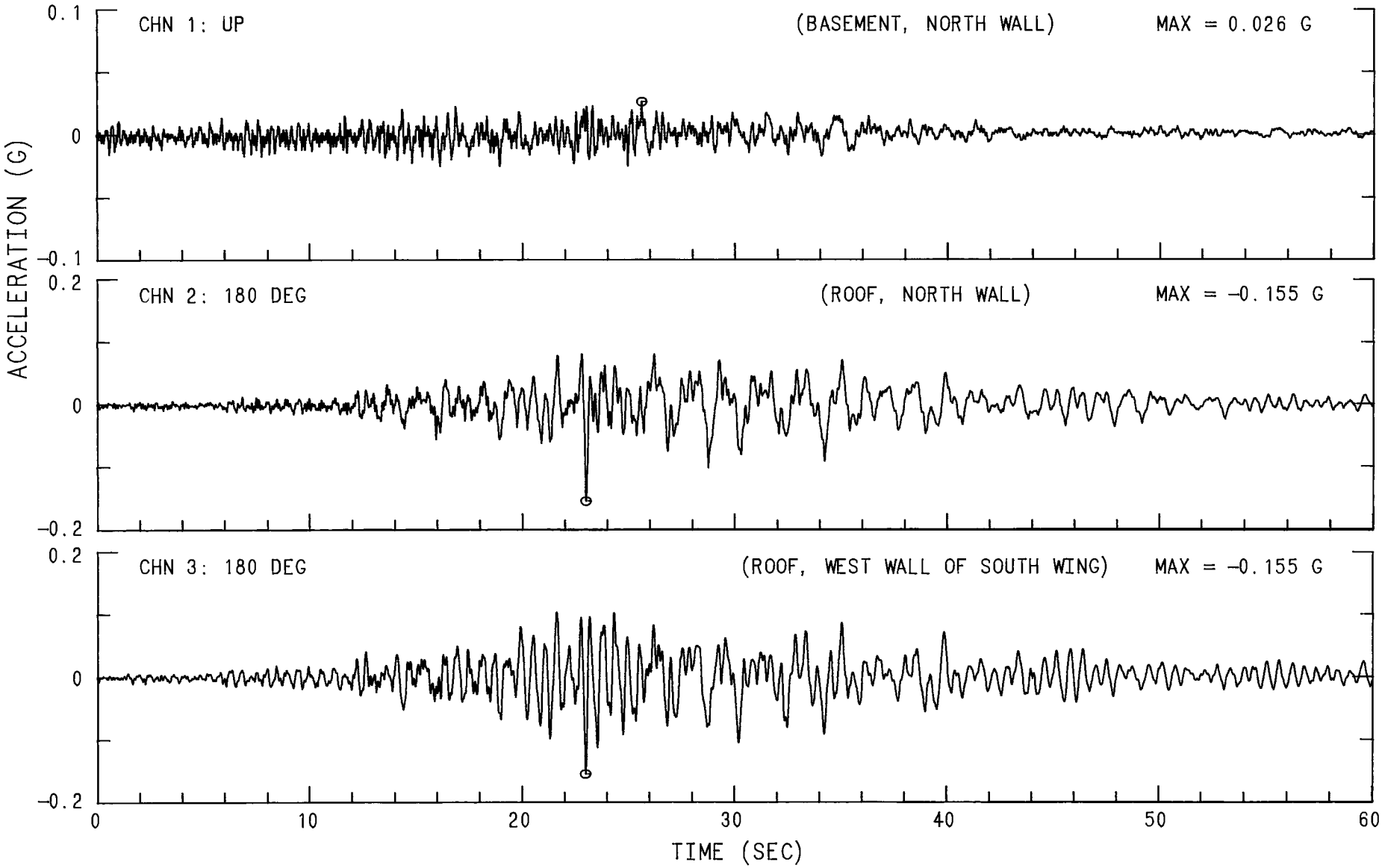



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
UNCORRECTED ACCELEROGRAM 23544-C0108-92185.02 091772.1056-QL92A544
CHN 7: 270 DEG
(ROOF, SOUTH WALL)
MAX = 0.139 G
CHN 8: 270 DEG
(ROOF, NORTH WALL)
MAX = -0.193 G
CHN 9: 270 DEG
(2ND FLOOR, SOUTH WALL)
MAX = 0.109 G
ACCELERATION (G)
0.2
0
-0.2
0
5
10
15
20
TIME (SEC)

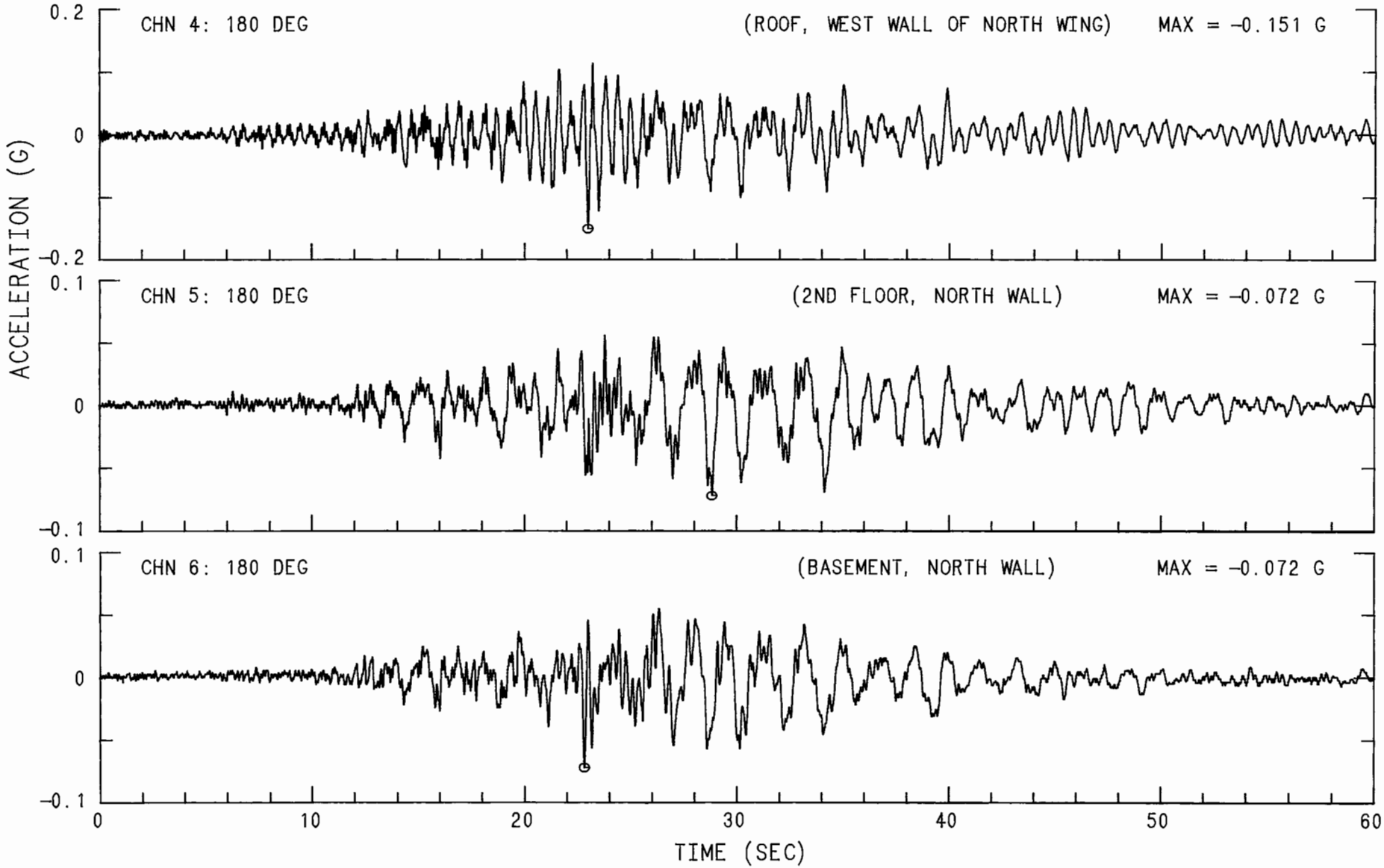
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
UNCORRECTED ACCELEROGRAM 23544-C0108-92185.02 091772.1056-QL92A544

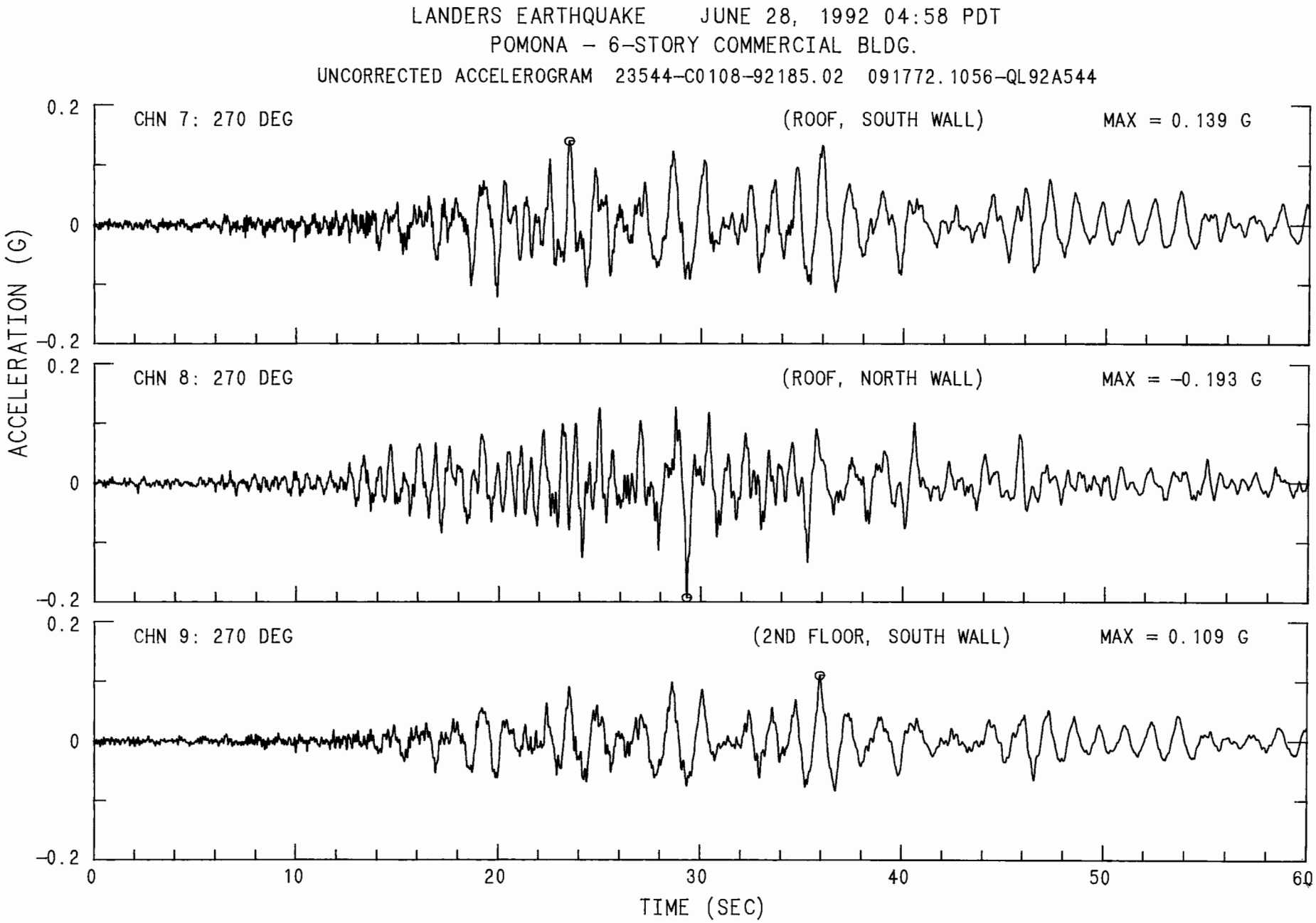


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
UNCORRECTED ACCELEROGRAM 23544-C0108-92185.02 091772.1056-QL92A544

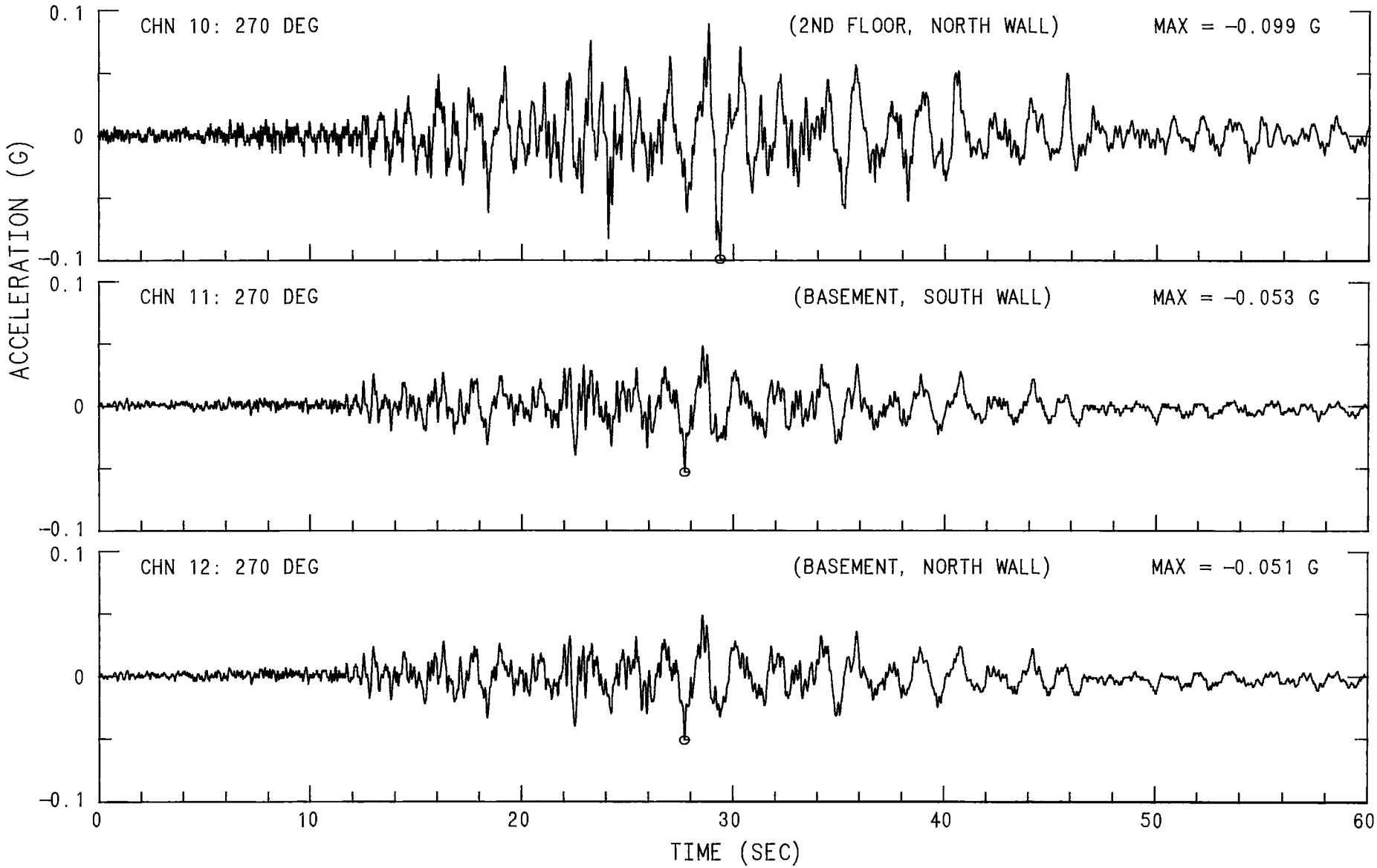


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
UNCORRECTED ACCELEROGRAM 23544-C0108-92185.02 091772.1056-QL92A544

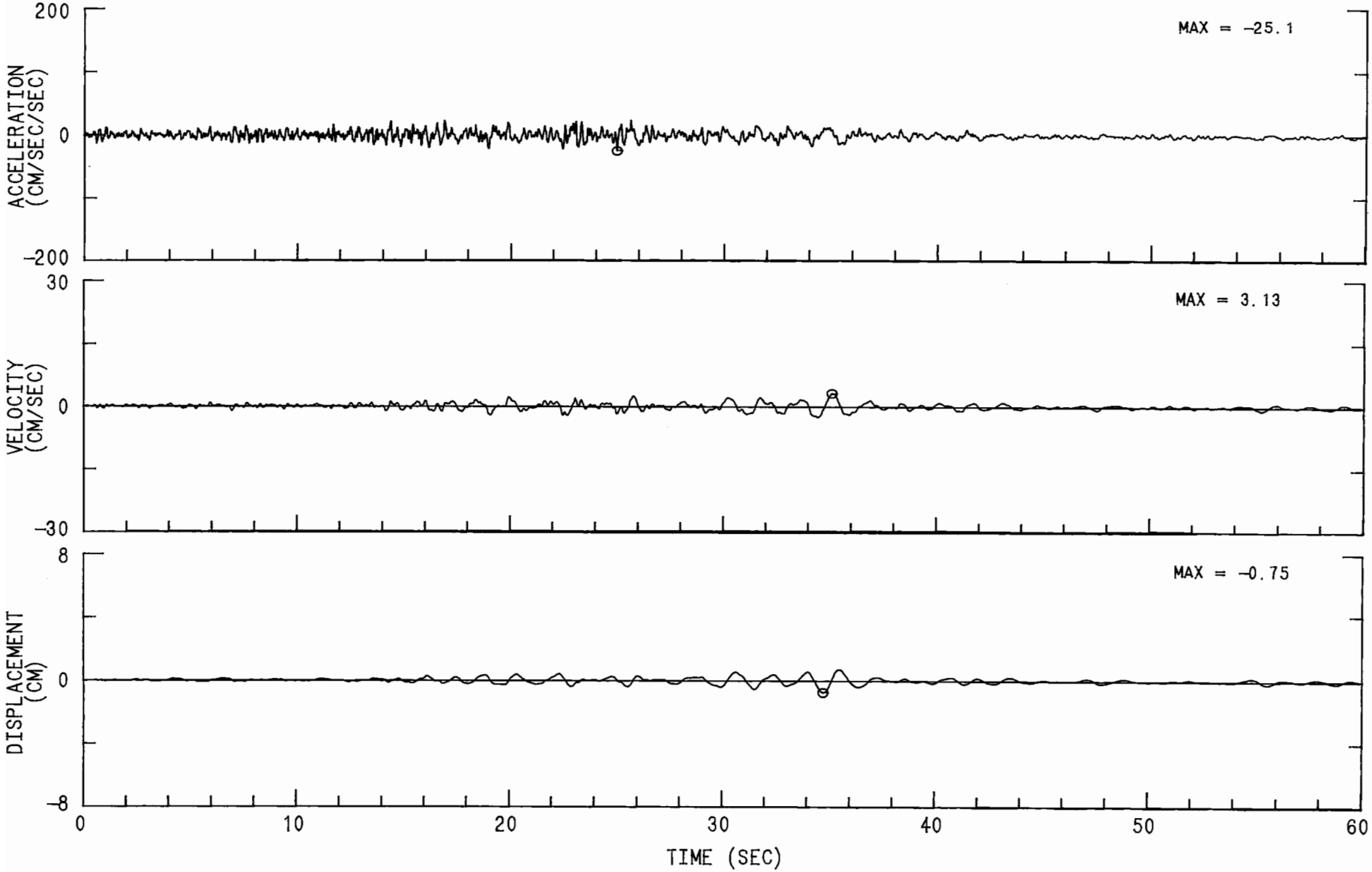



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
UNCORRECTED ACCELEROGRAM 23544-C0108-92185.02 091772.1056-QL92A544
CHN 7: 270 DEG
(ROOF, SOUTH WALL)
MAX = 0.139 G
CHN 8: 270 DEG
(ROOF, NORTH WALL)
MAX = -0.193 G
CHN 9: 270 DEG
(2ND FLOOR, SOUTH WALL)
MAX = 0.109 G
ACCELERATION (G)
0.2
0
-0.2
0
10
20
30
40
50
60
TIME (SEC)

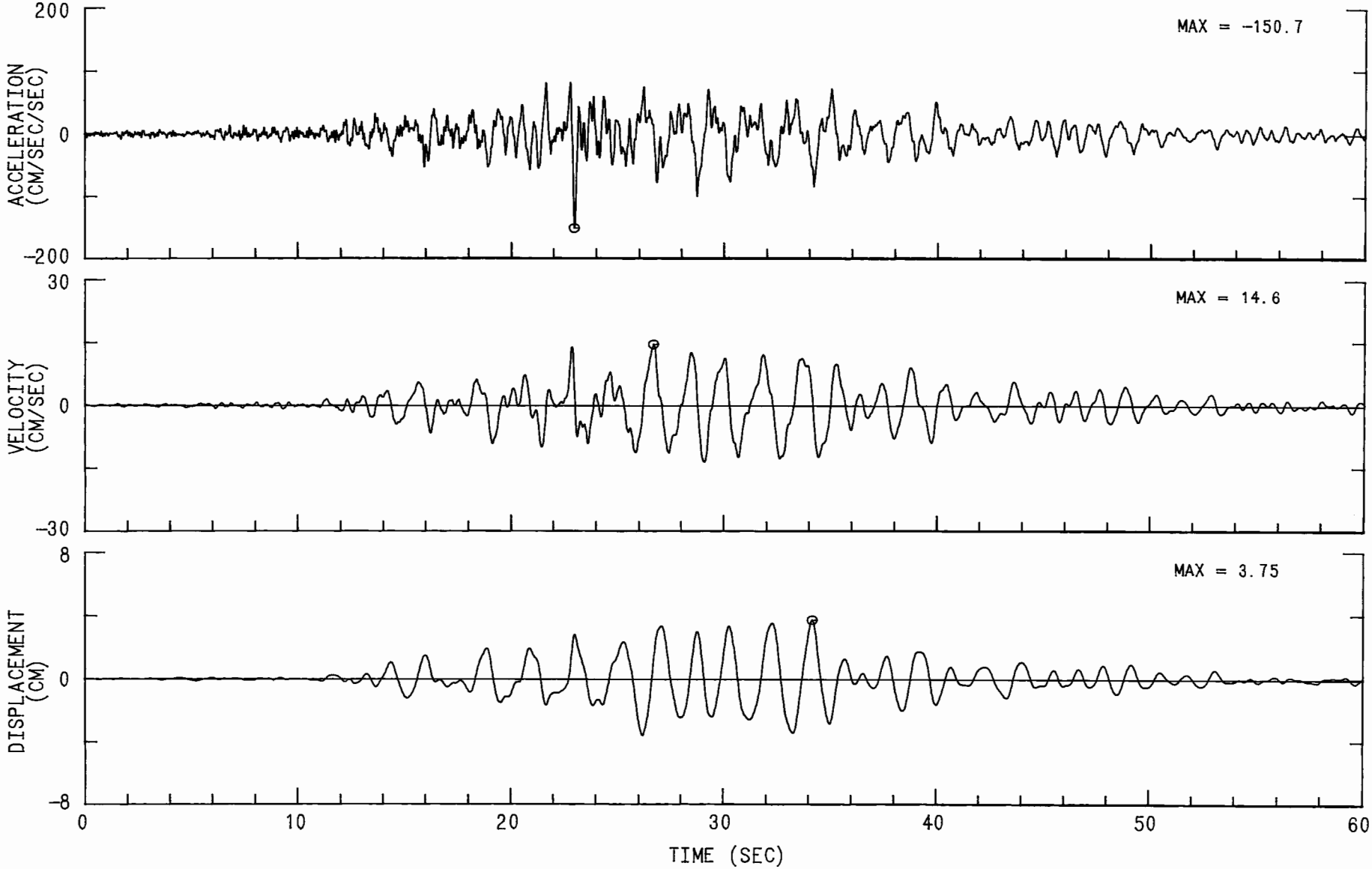
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
UNCORRECTED ACCELEROGRAM 23544-C0108-92185.02 091772.1056-QL92A544



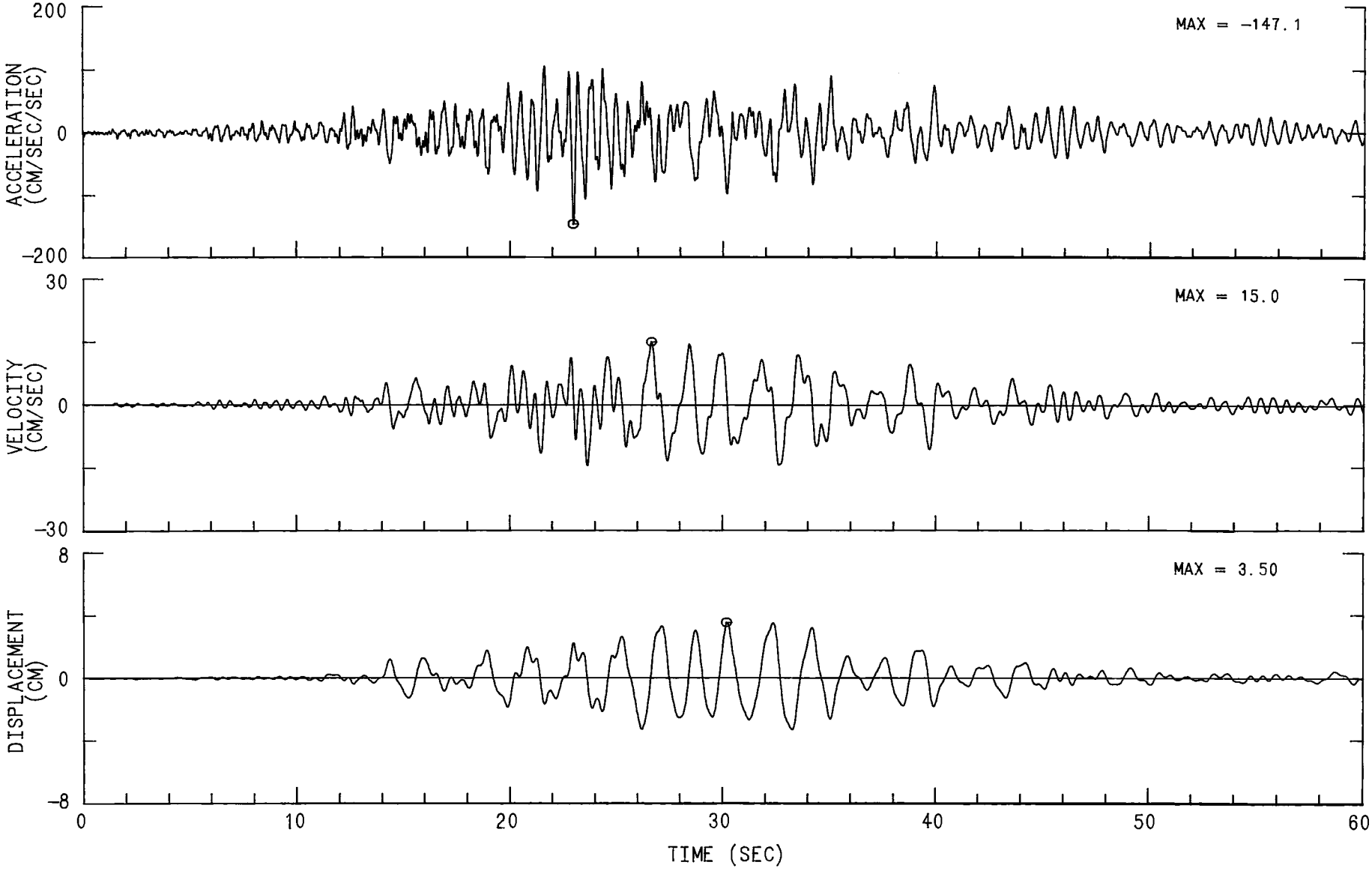
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA – 6-STORY COMMERCIAL BLDG. CHN 1: UP (BASEMENT, NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544



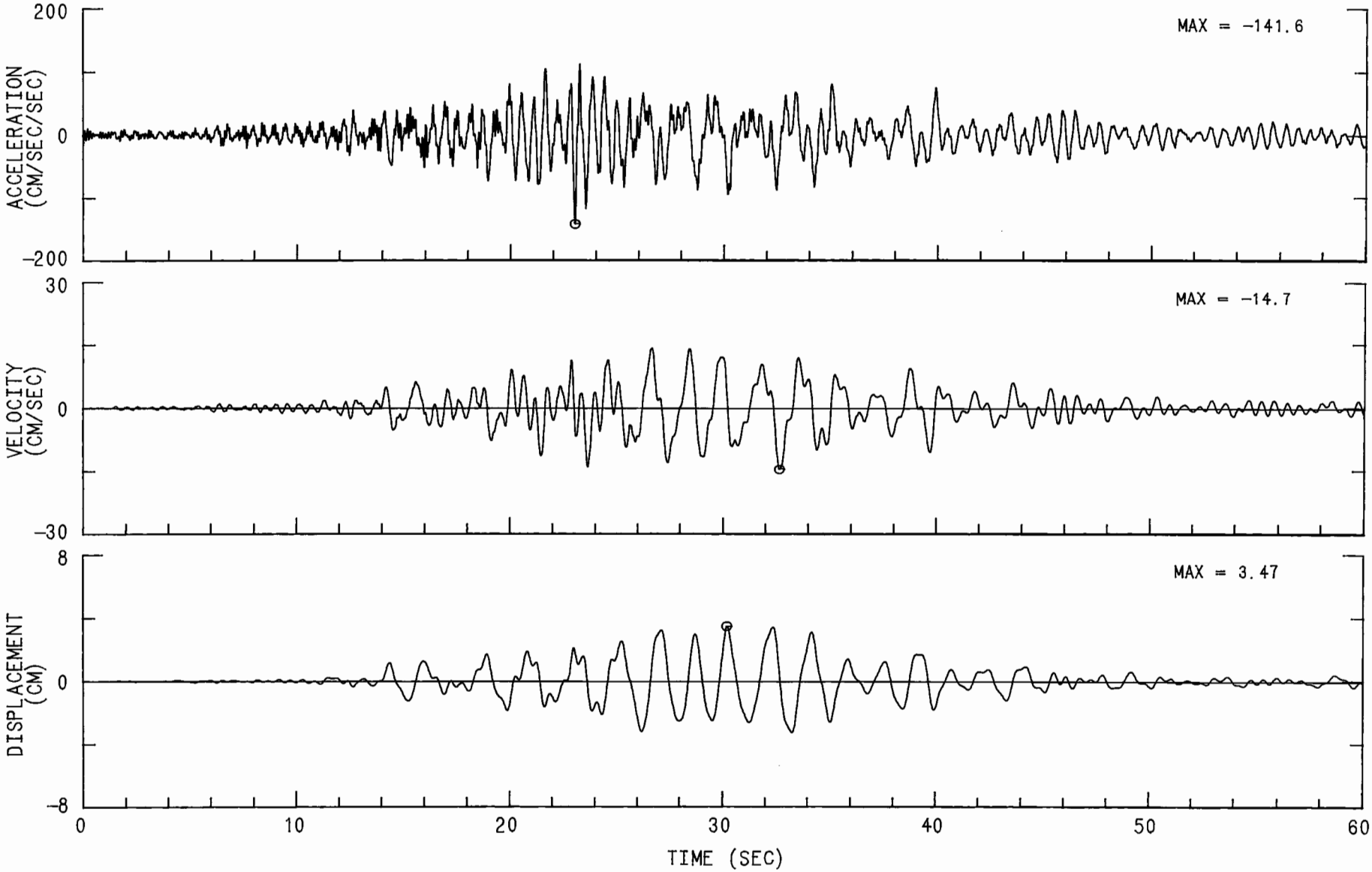
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA – 6-STORY COMMERCIAL BLDG. CHN 2: 180 DEG (ROOF, NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544



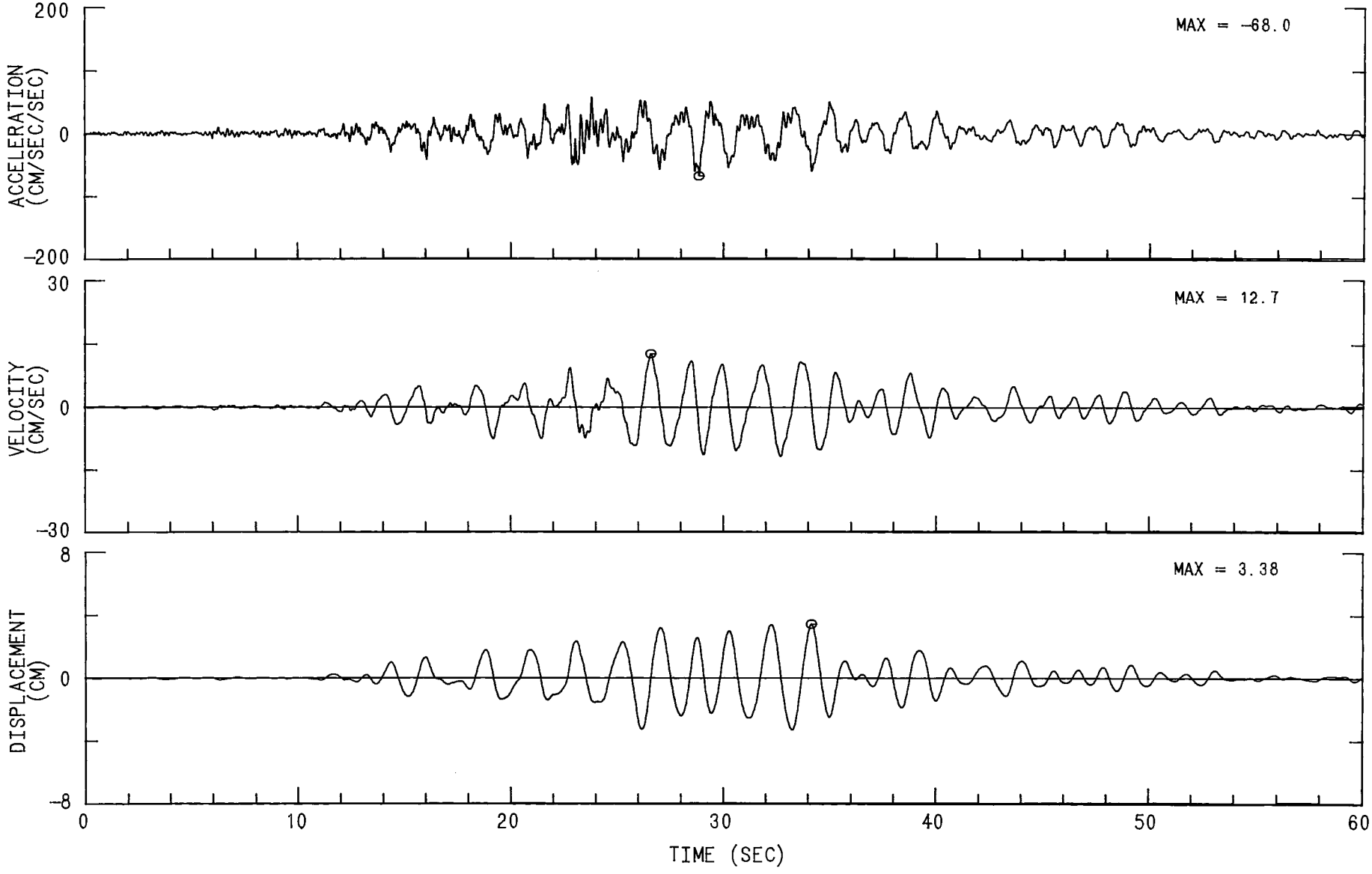
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG. CHN 3: 180 DEG (ROOF, WEST WALL OF SOUTH WING)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544



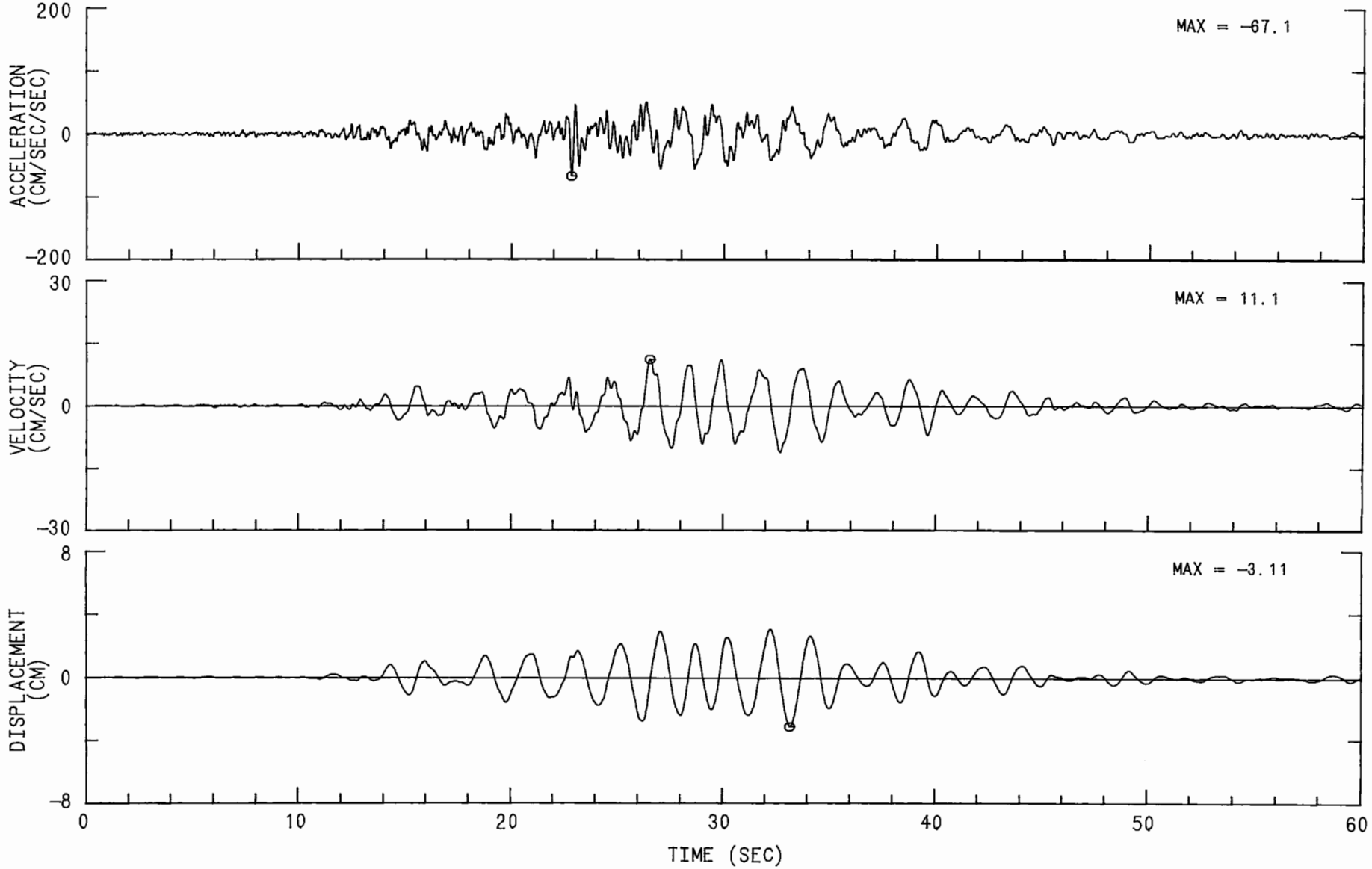
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG. CHN 4: 180 DEG (ROOF, WEST WALL OF NORTH WING)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544



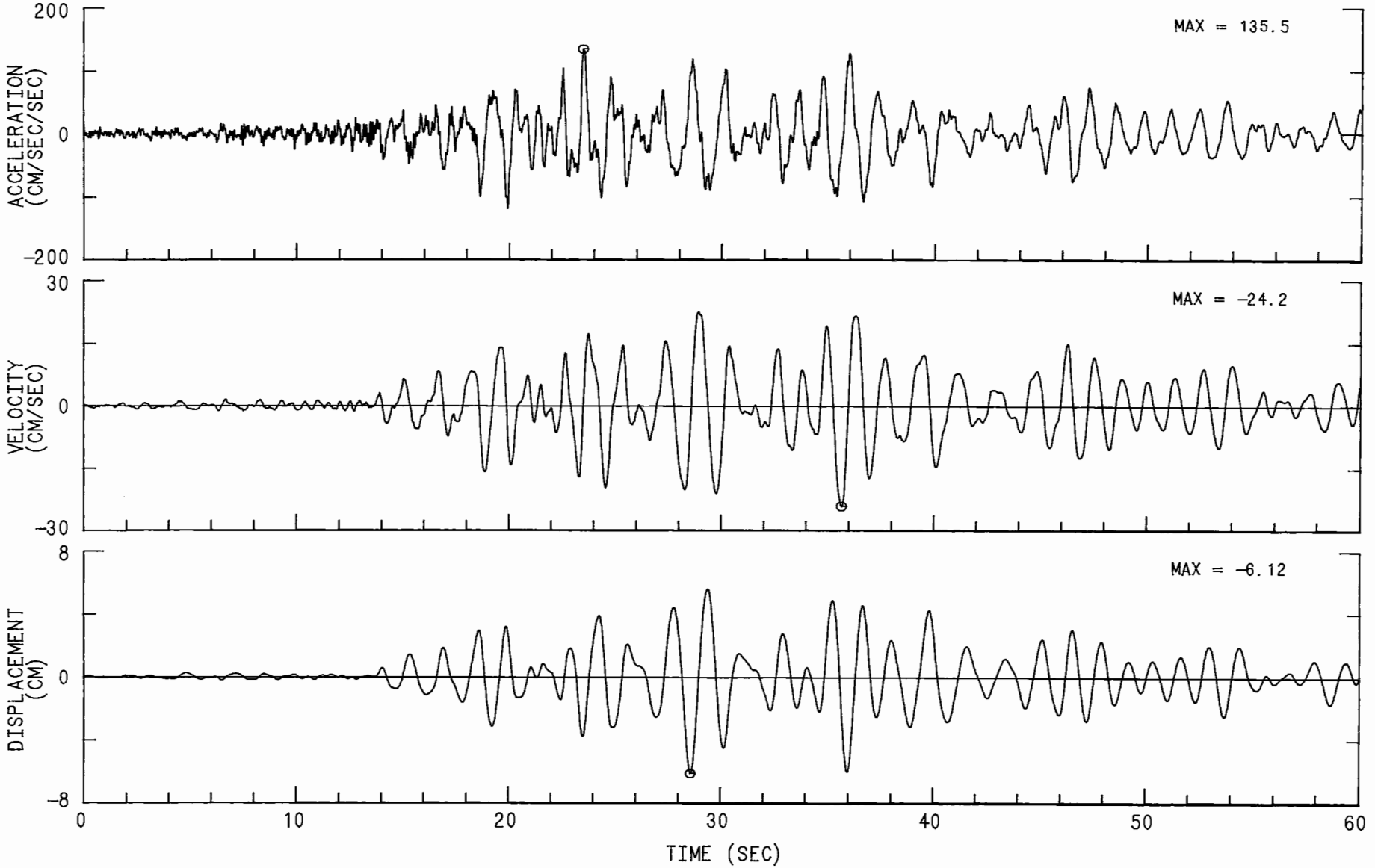
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG. CHN 5: 180 DEG (2ND FLOOR, NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544



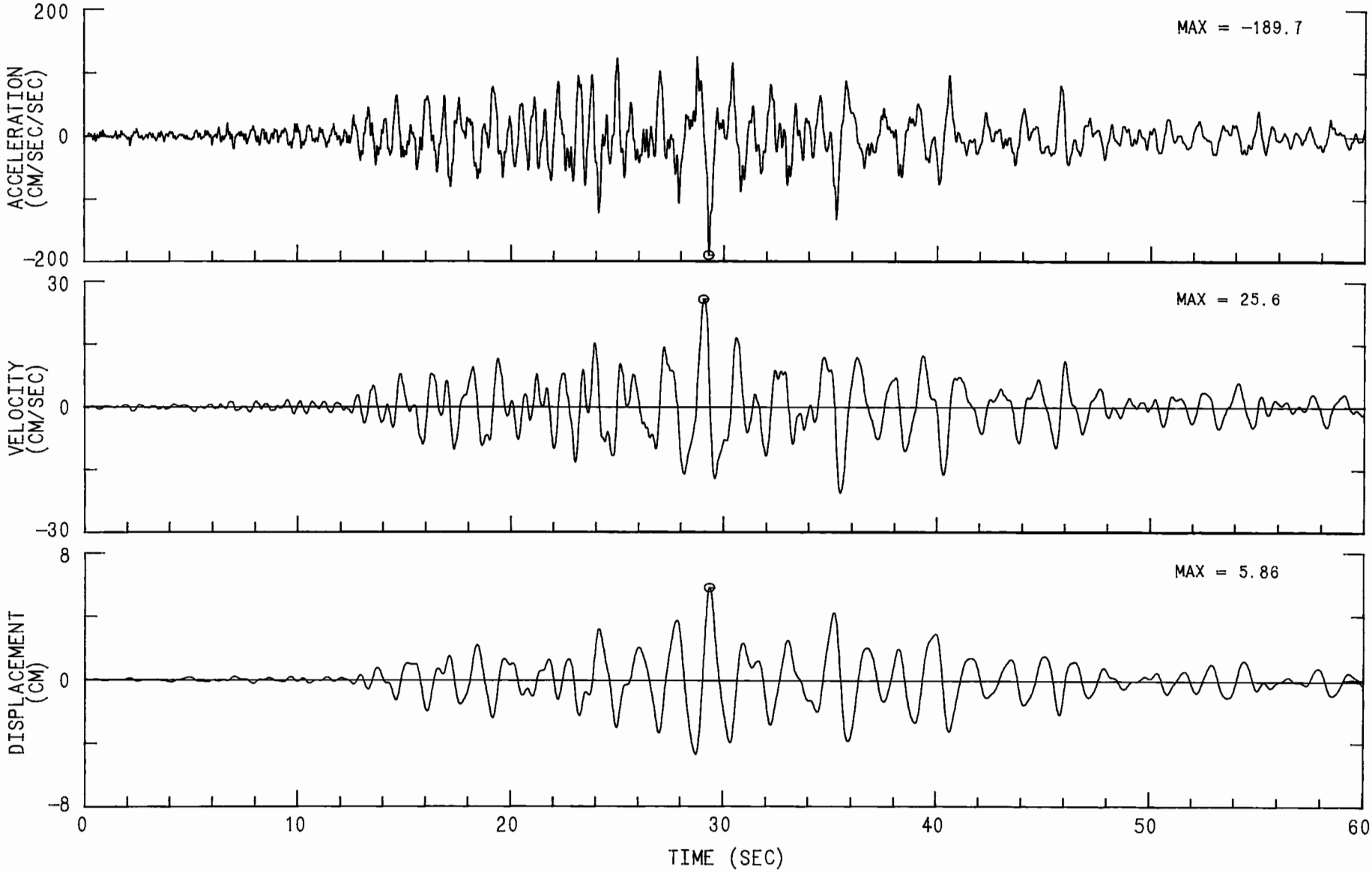
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG. CHN 6: 180 DEG (BASEMENT, NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544

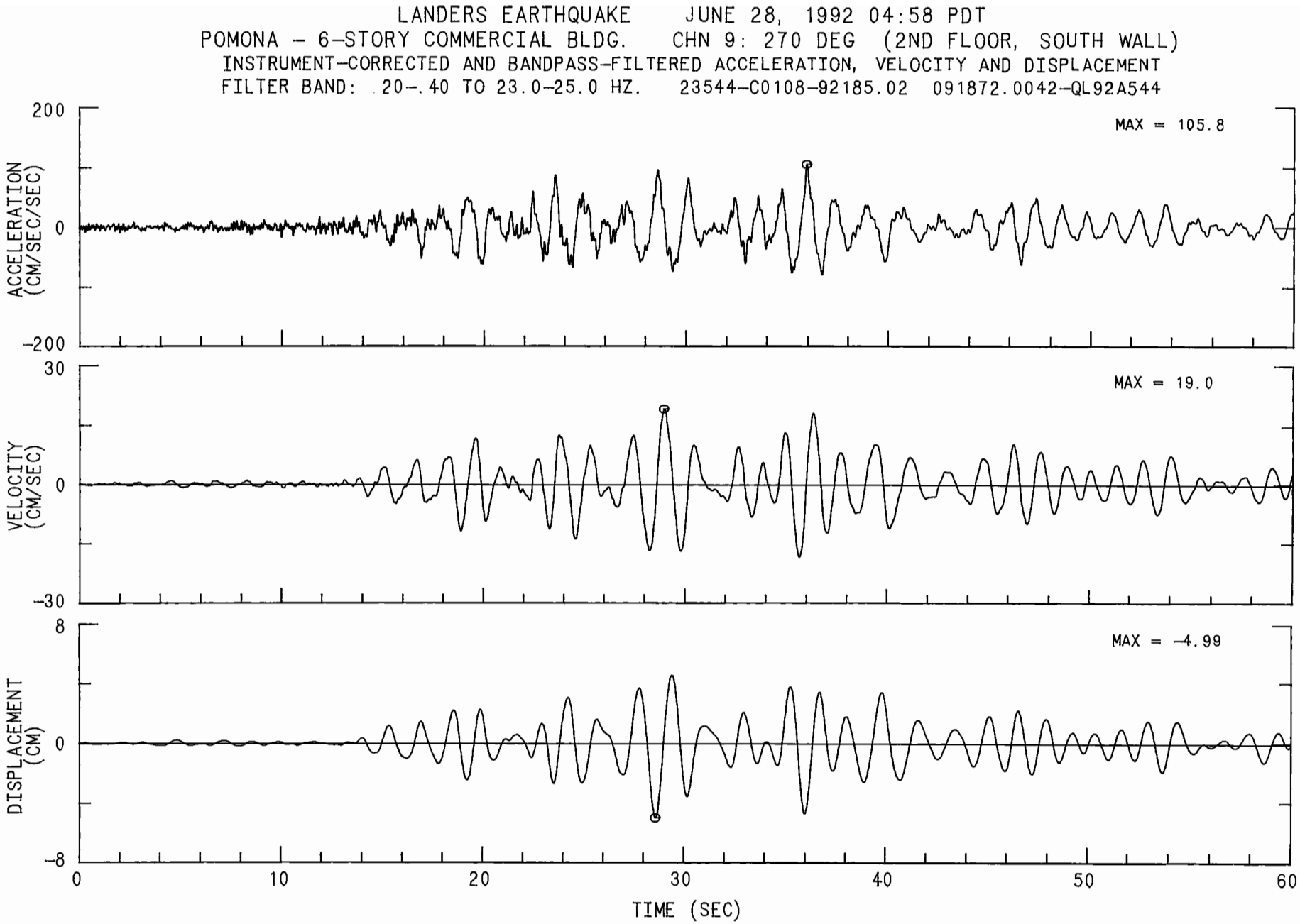


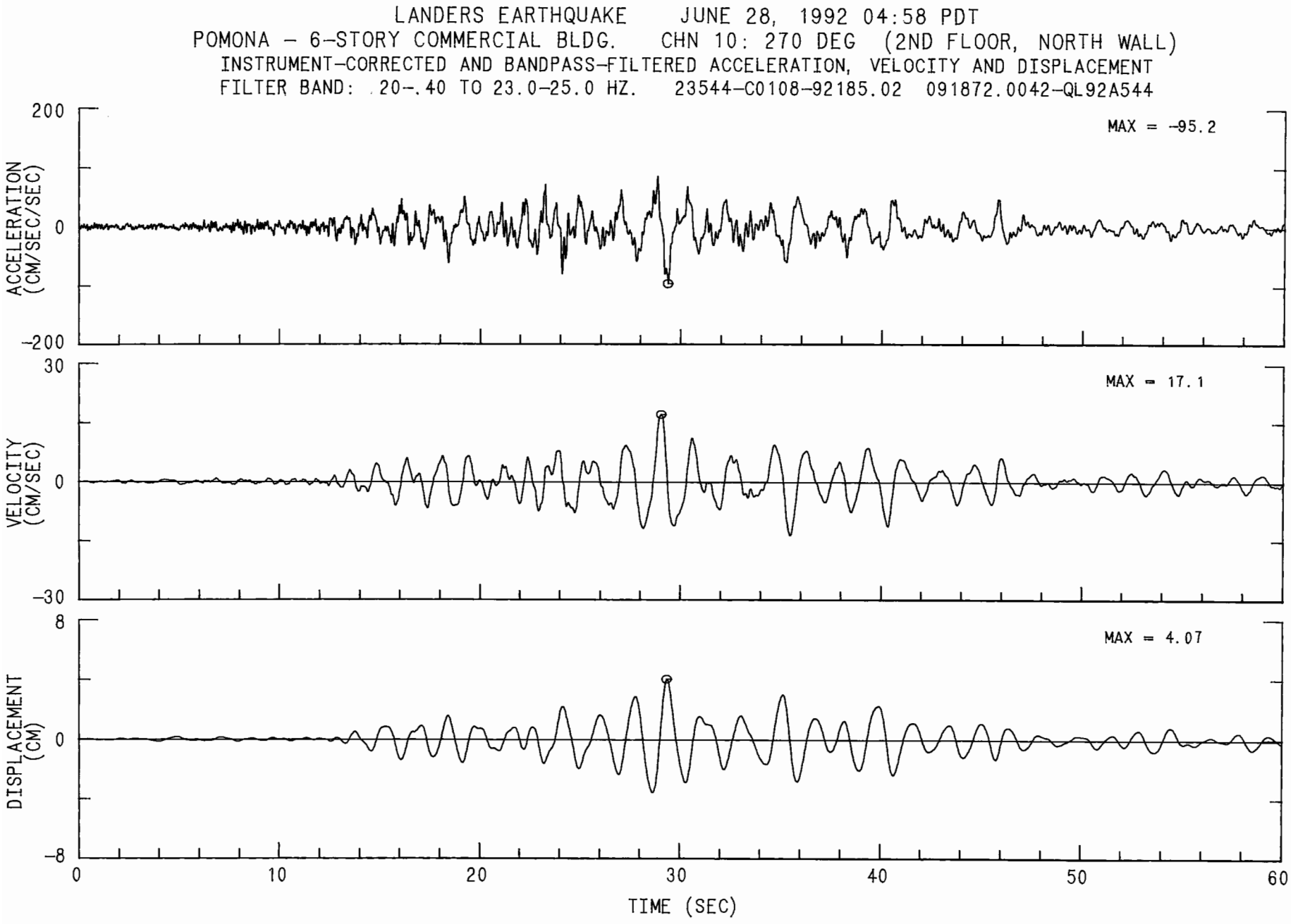
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG. CHN 7: 270 DEG (ROOF, SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544



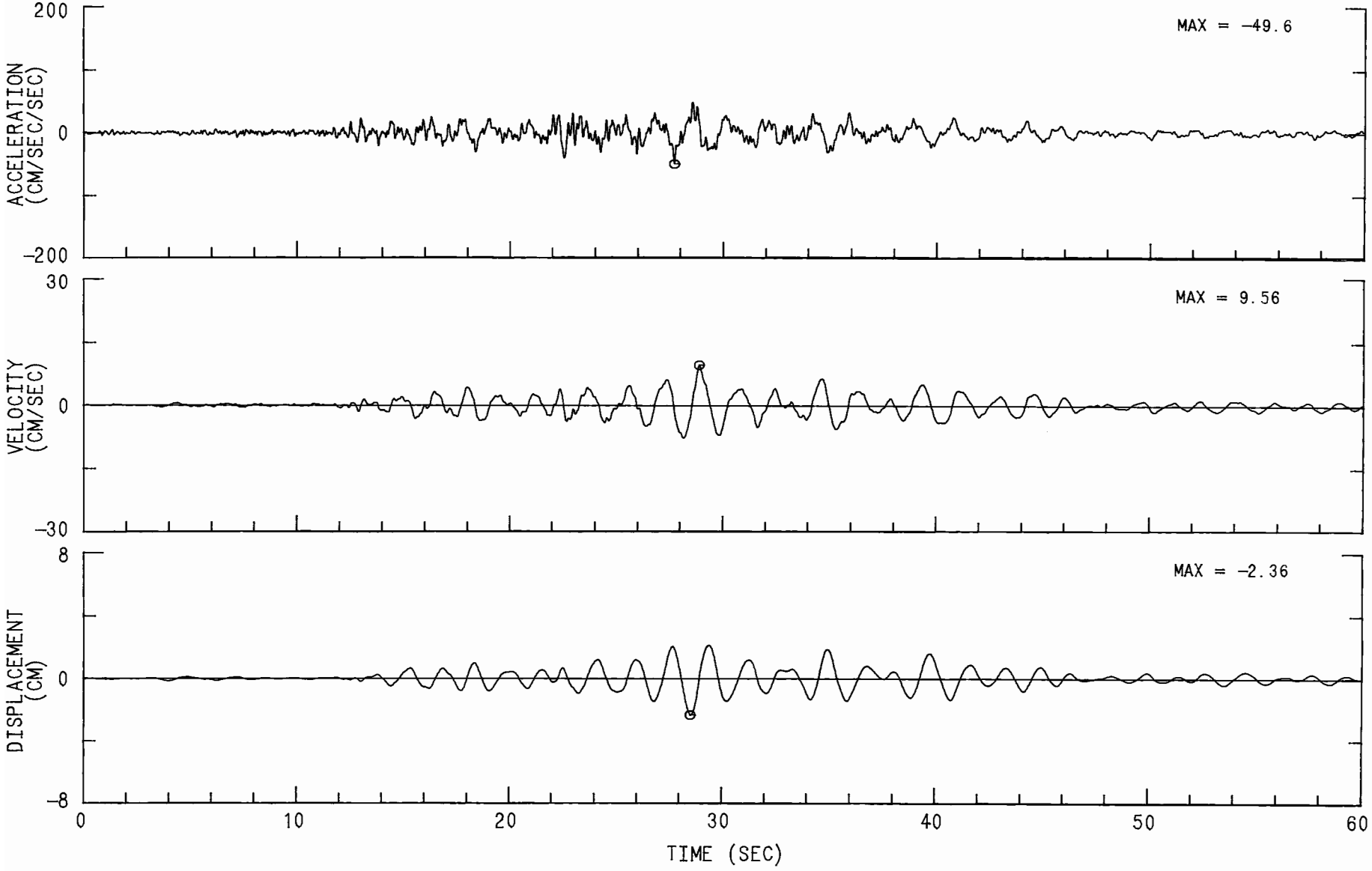
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG. CHN 8: 270 DEG (ROOF, NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544



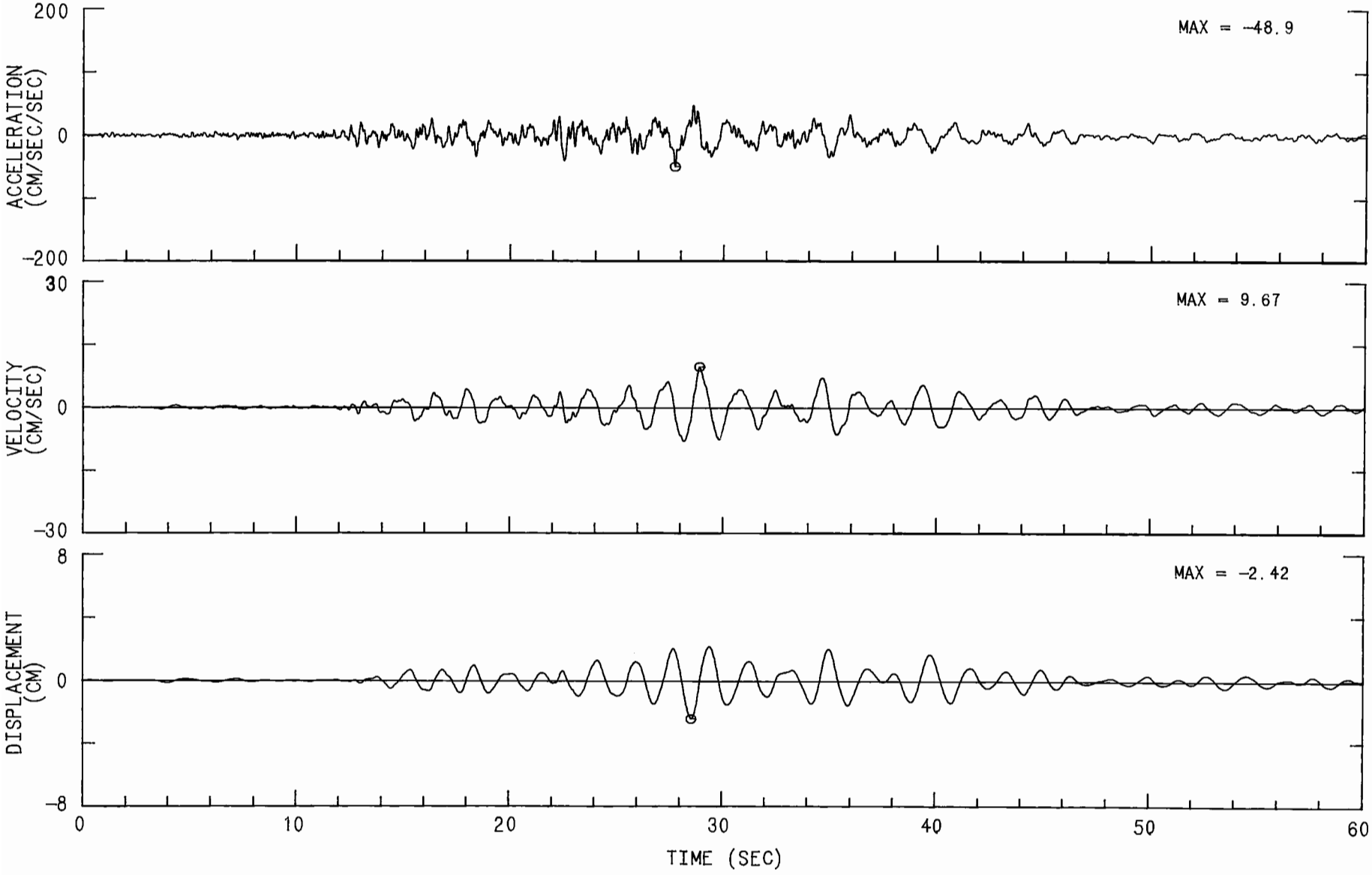

LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG. CHN 9: 270 DEG (2ND FLOOR, SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544
ACCELERATION (CM/SEC/SEC)
200
0
-200
MAX = 105.8
VELOCITY (CM/SEC)
30
0
-30
MAX = 19.0
DISPLACEMENT (CM)
8
0
-8
MAX = -4.99
0
10
20
30
40
50
60
TIME (SEC)


LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG. CHN 10: 270 DEG (2ND FLOOR, NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544
ACCELERATION (CM/SEC/SEC)
200
0
-200
MAX = -95.2
VELOCITY (CM/SEC)
30
0
-30
MAX = 17.1
DISPLACEMENT (CM)
8
0
-8
MAX = 4.07
0
10
20
30
40
50
60
TIME (SEC)

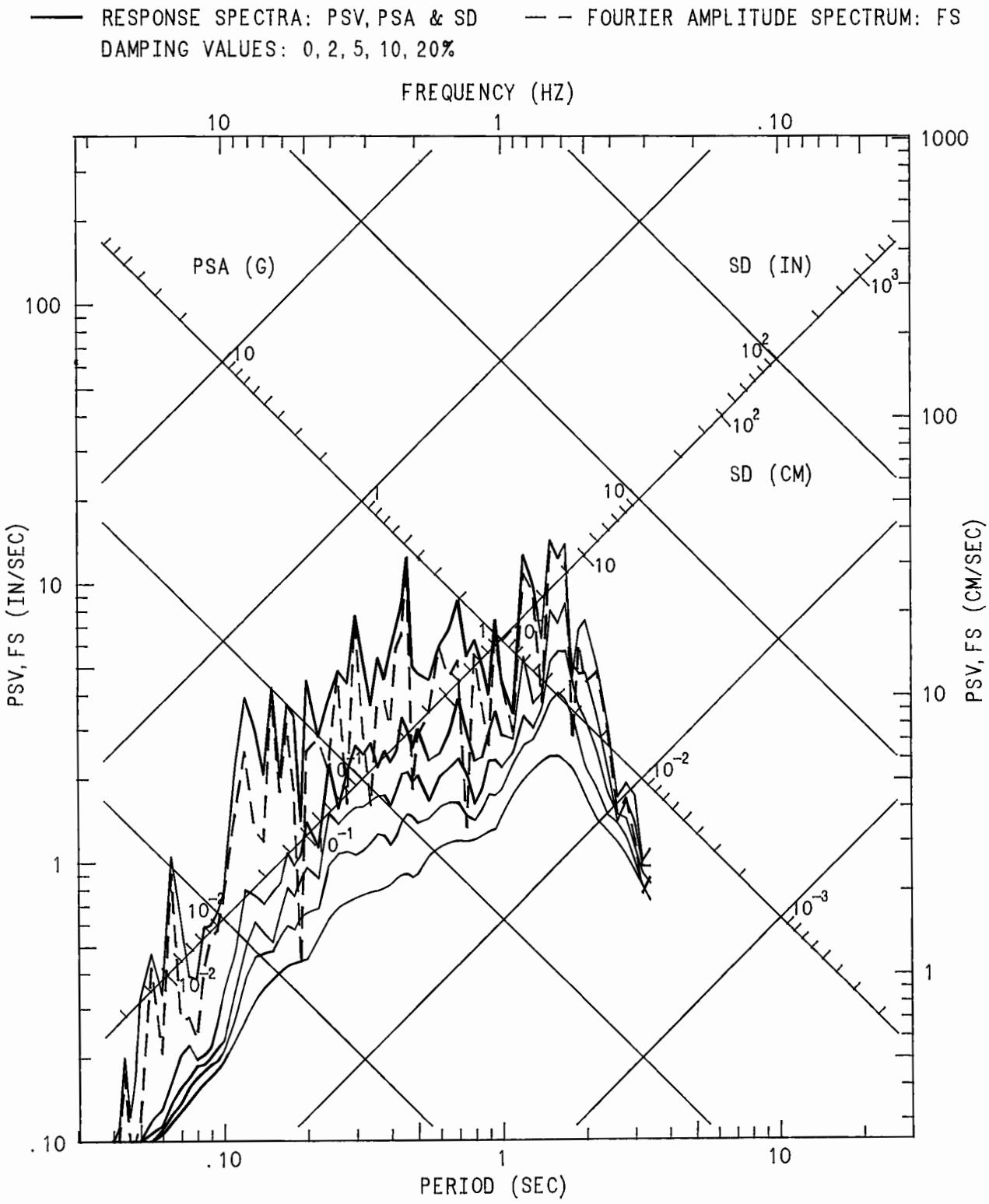
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG. CHN 11: 270 DEG (BASEMENT, SOUTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544



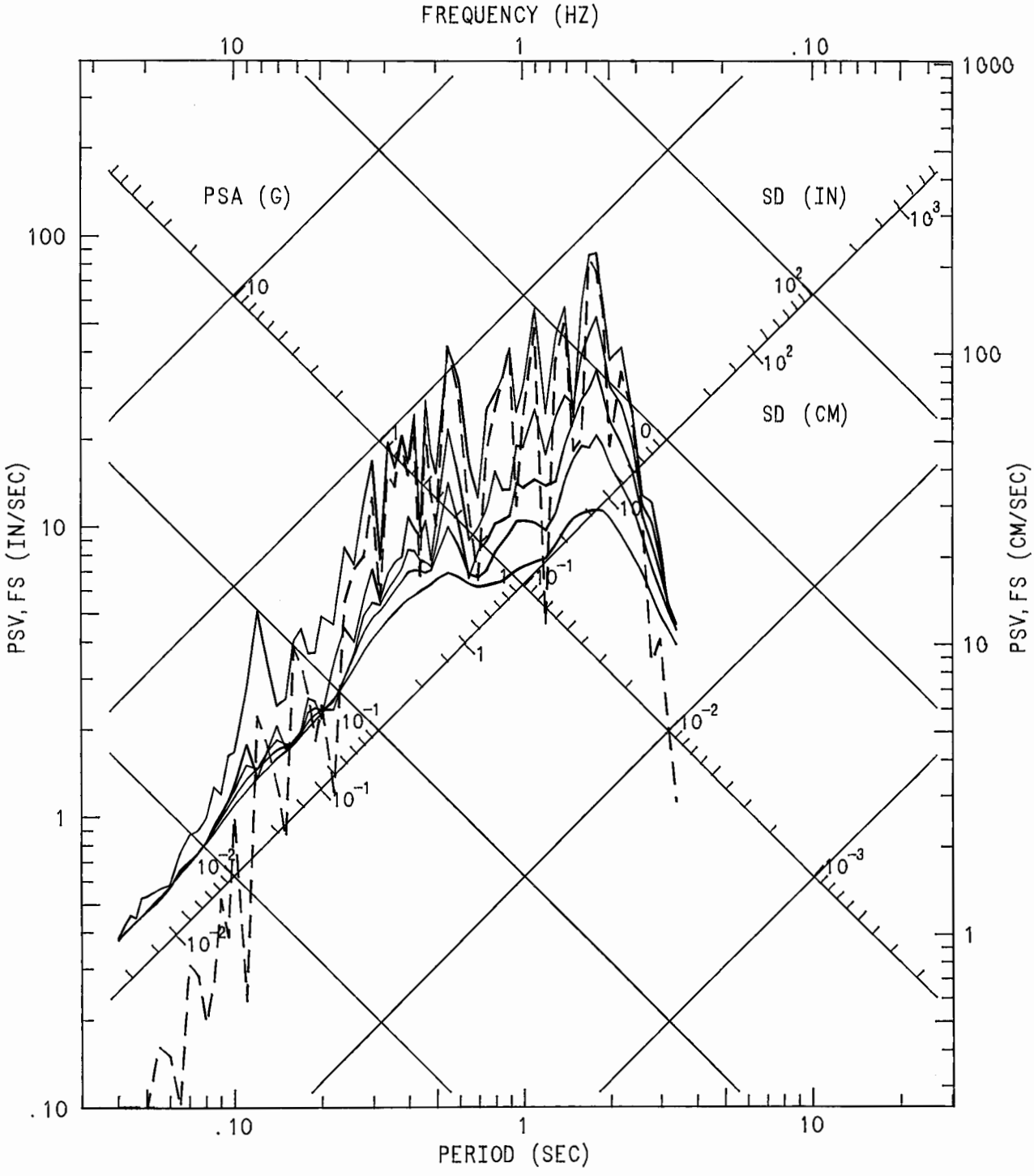
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG. CHN 12: 270 DEG (BASEMENT, NORTH WALL)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: 20-.40 TO 23.0-25.0 HZ. 23544-C0108-92185.02 091872.0042-QL92A544



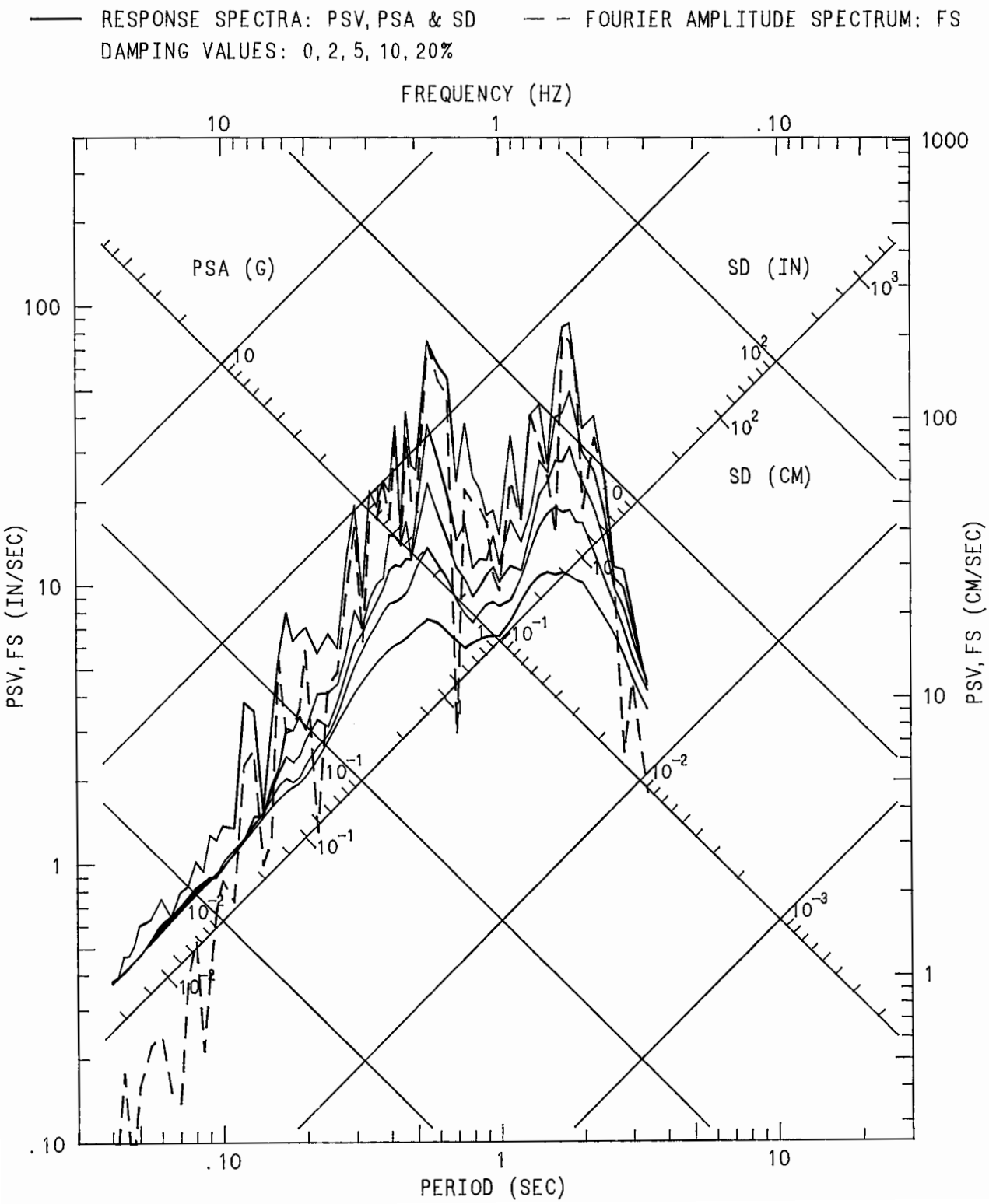
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 1: UP (BASEMENT, NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



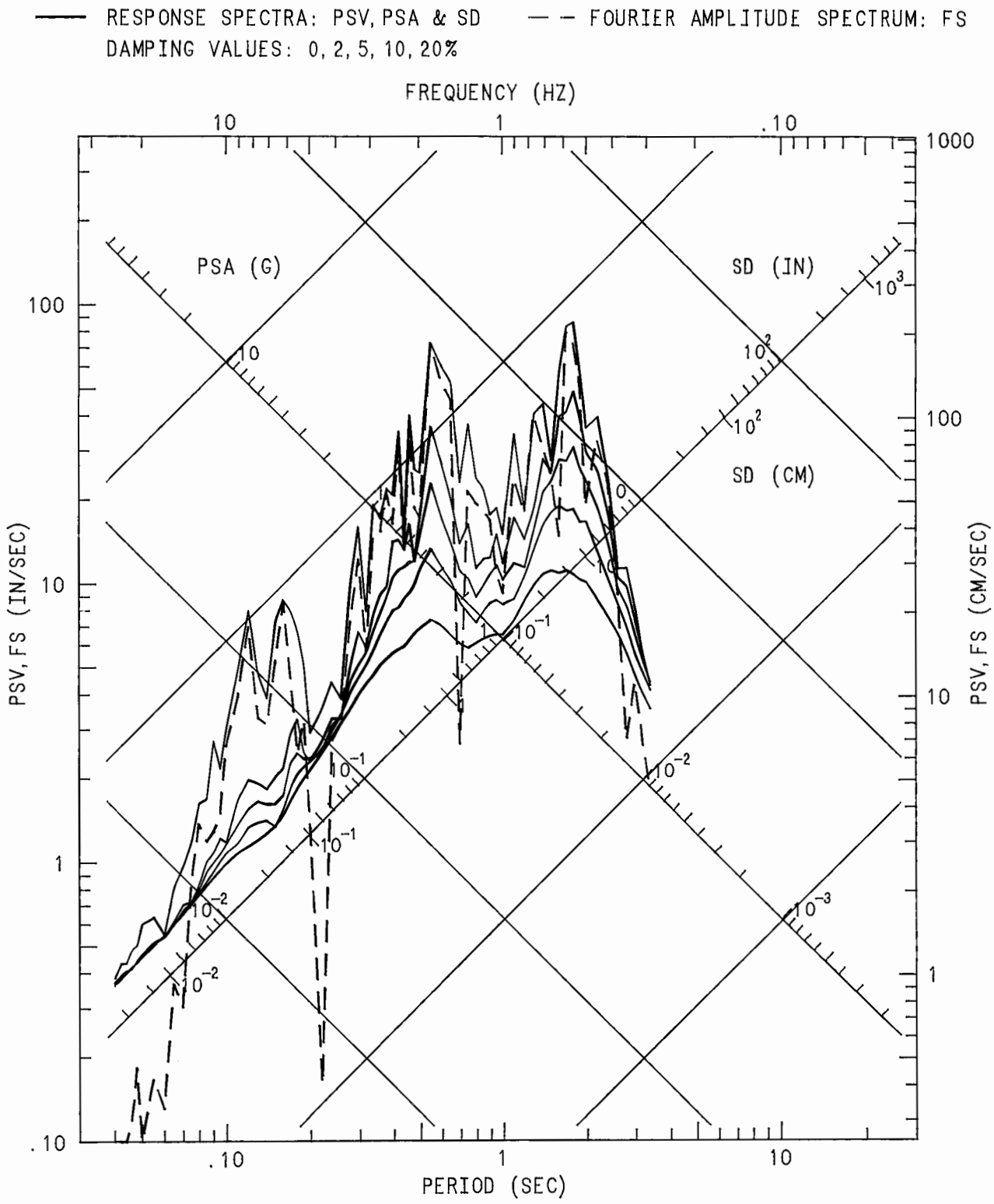
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 2: 180 DEG (ROOF, NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



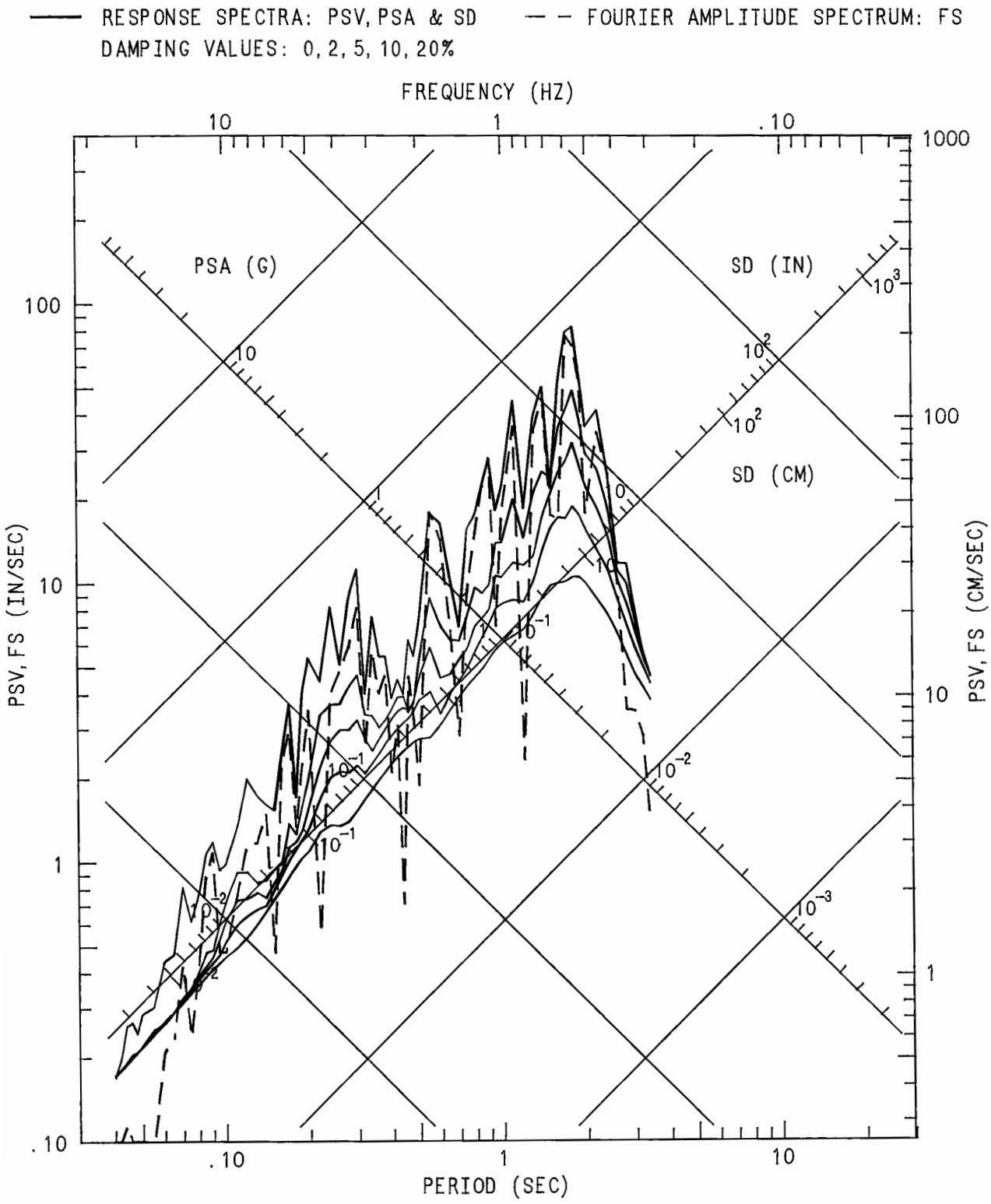
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 3: 180 DEG (ROOF, WEST WALL OF SOUTH WING)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



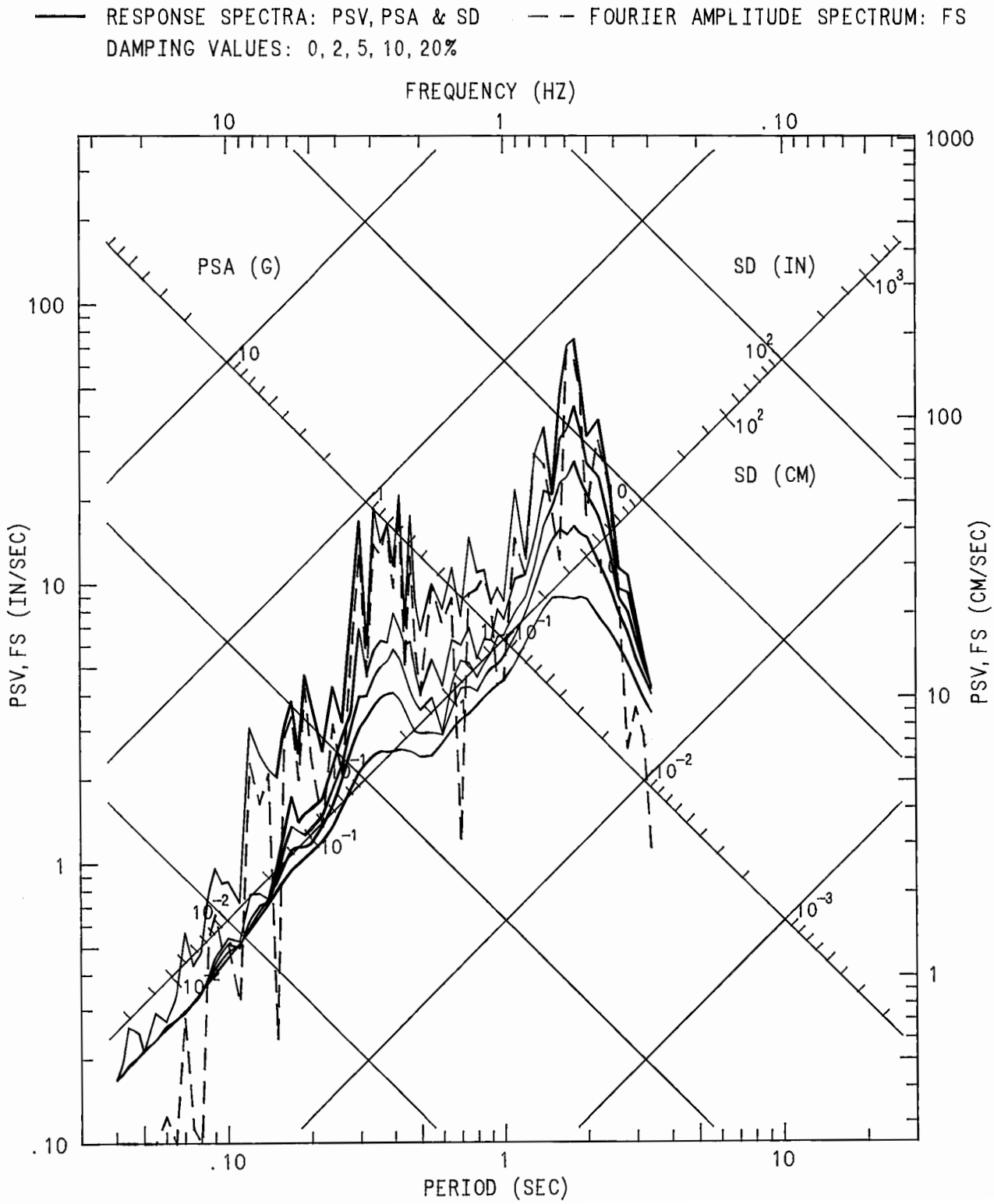
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 4: 180 DEG (ROOF, WEST WALL OF NORTH WING)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



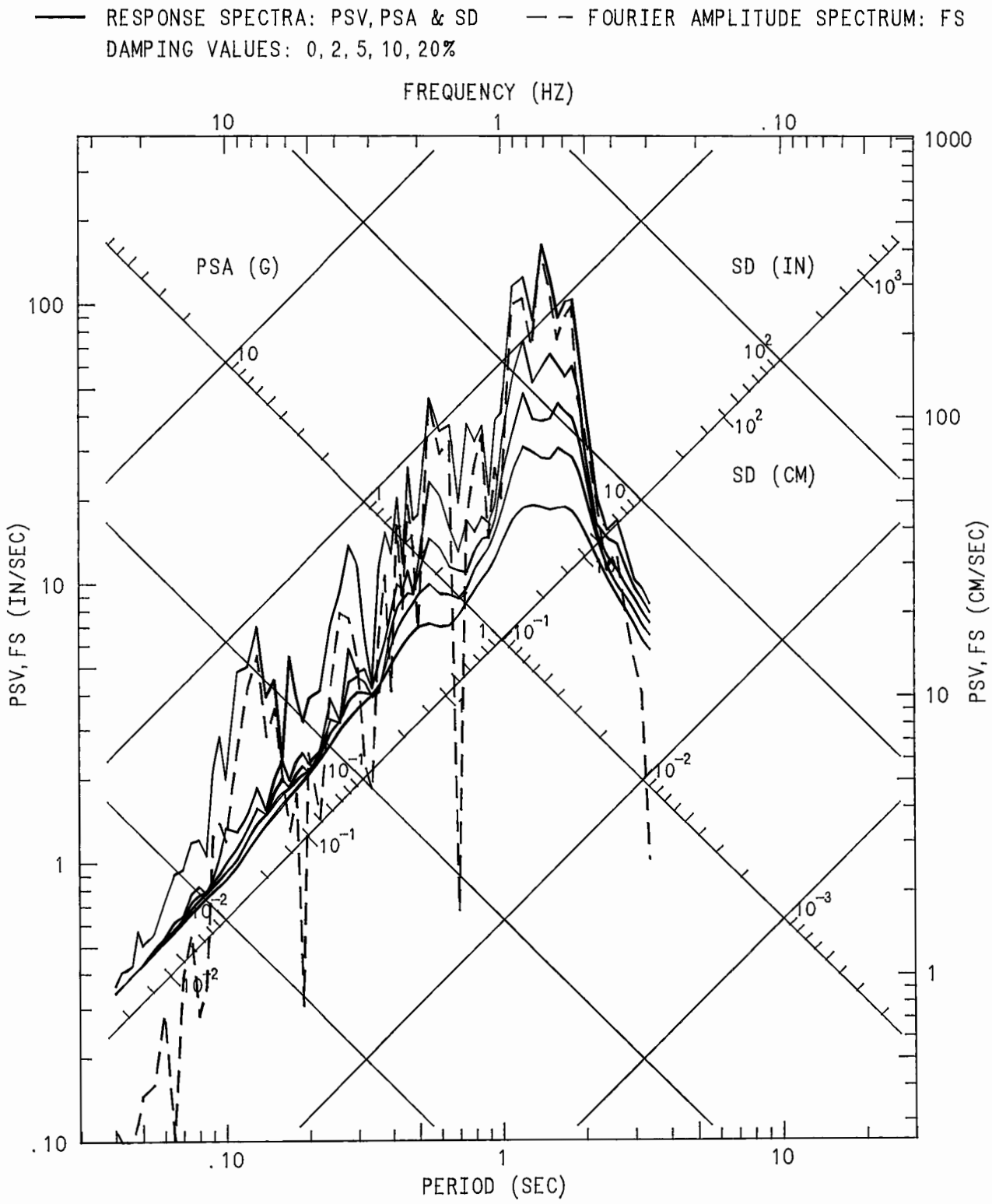
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 5: 180 DEG (2ND FLOOR, NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



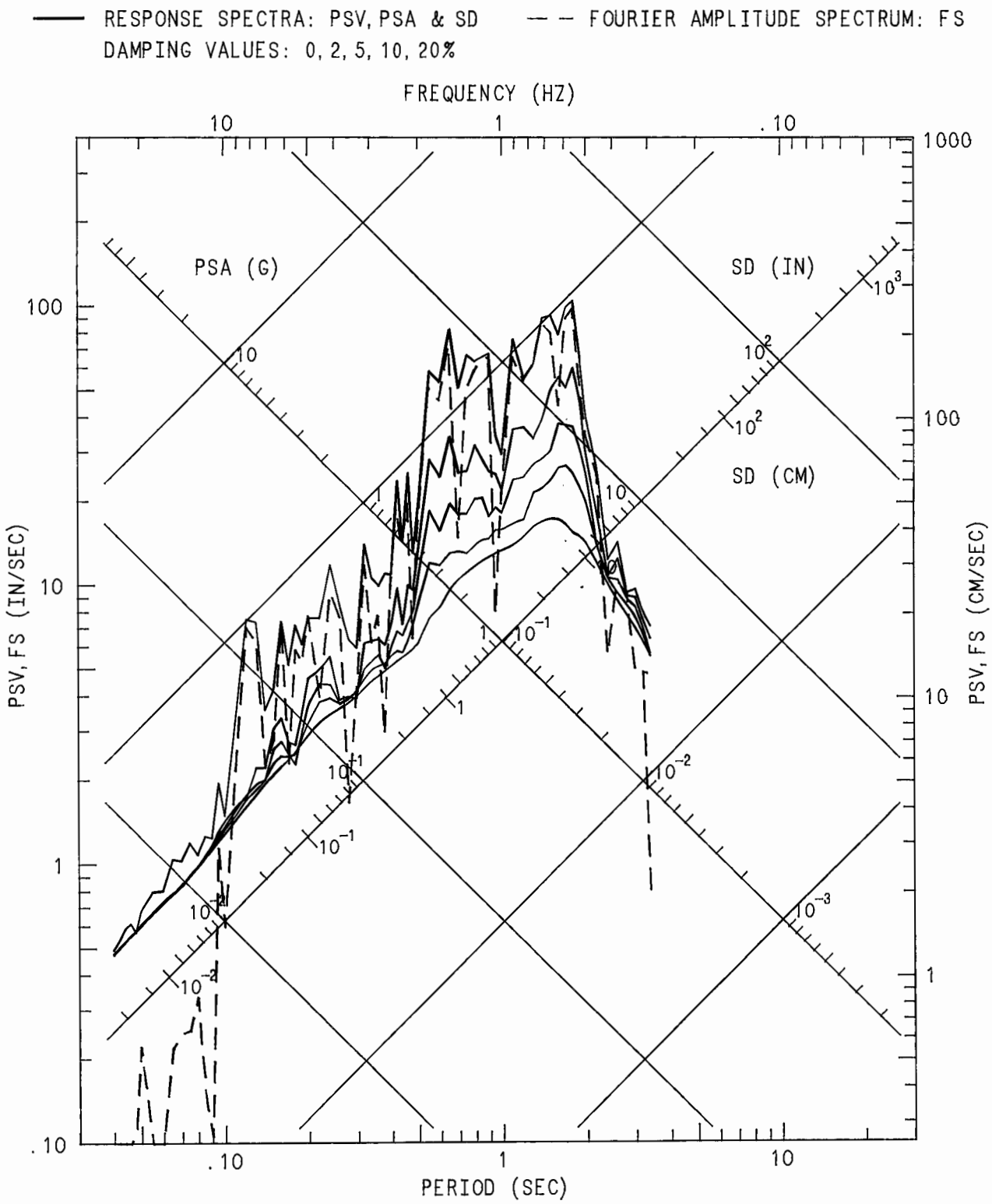
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 6: 180 DEG (BASEMENT, NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



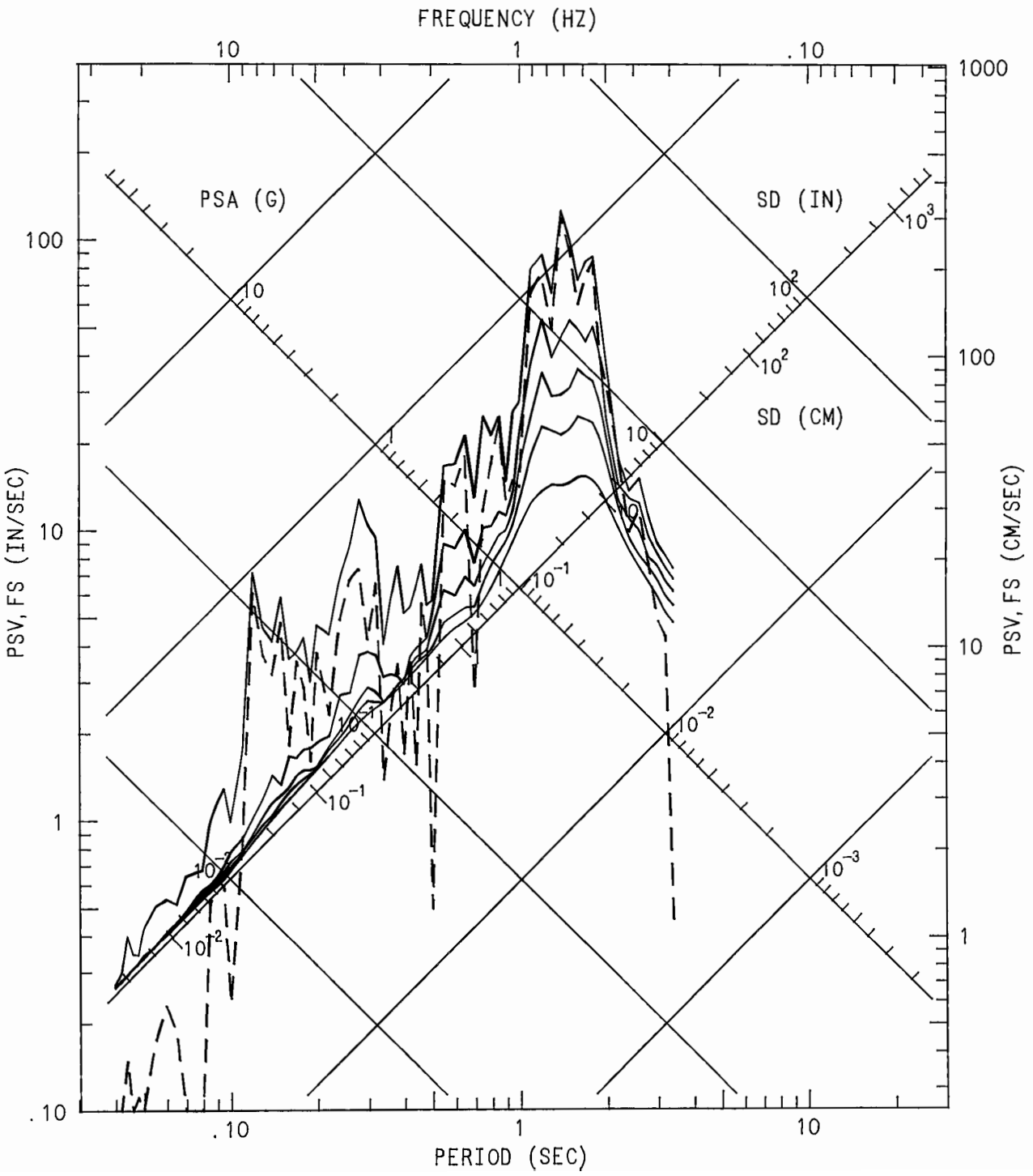
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 7: 270 DEG (ROOF, SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



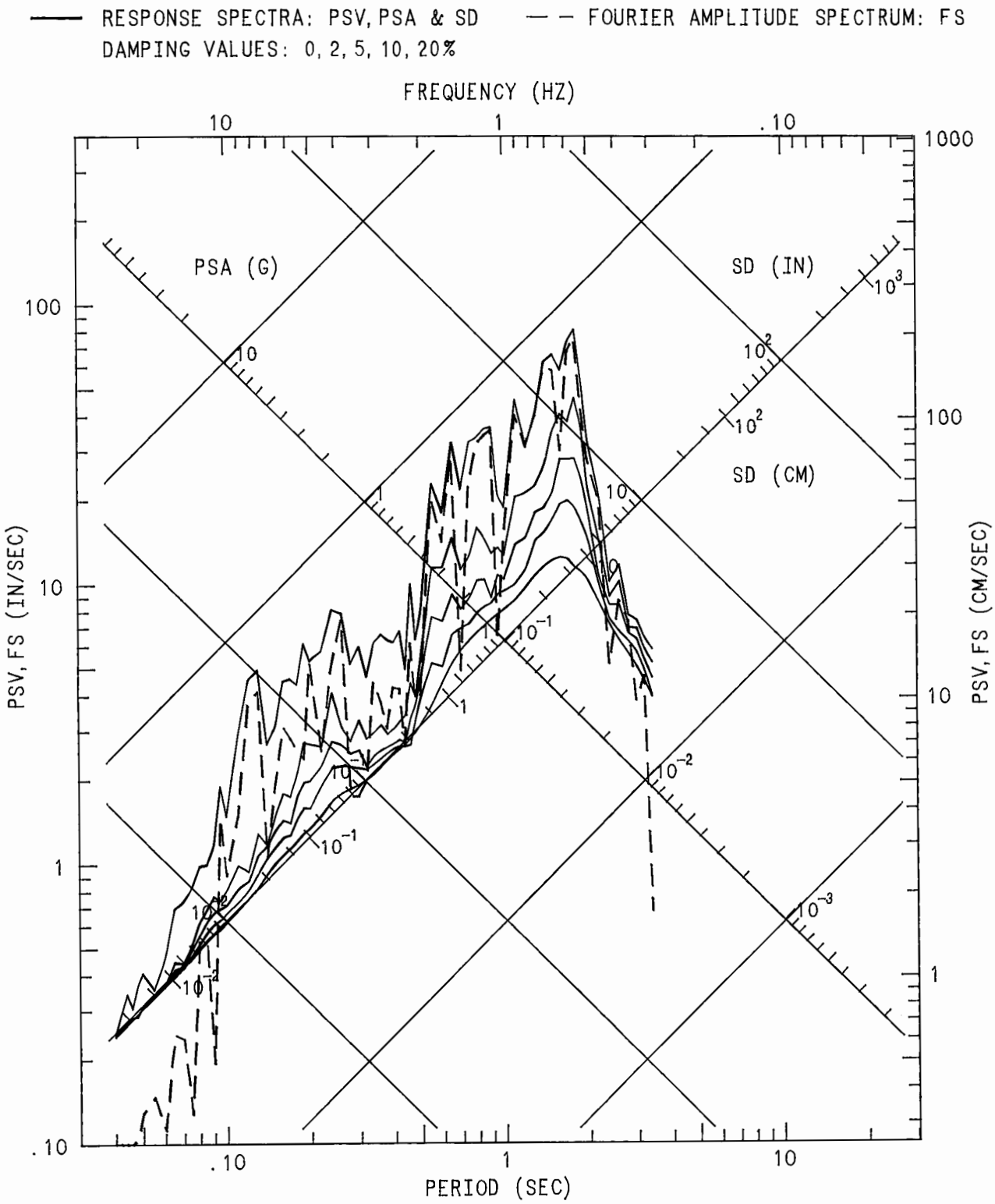
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 8: 270 DEG (ROOF, NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



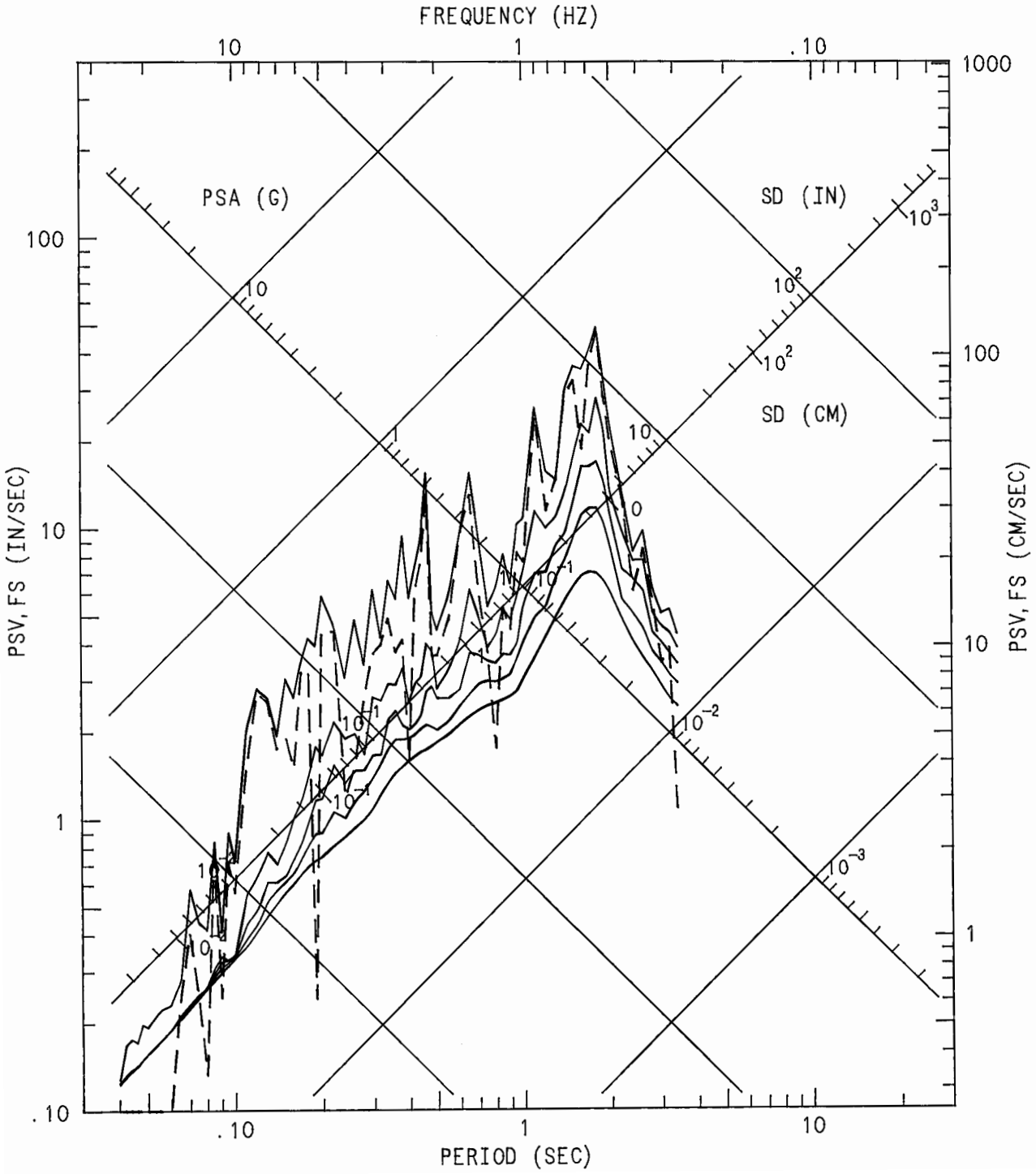
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 9: 270 DEG (2ND FLOOR, SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



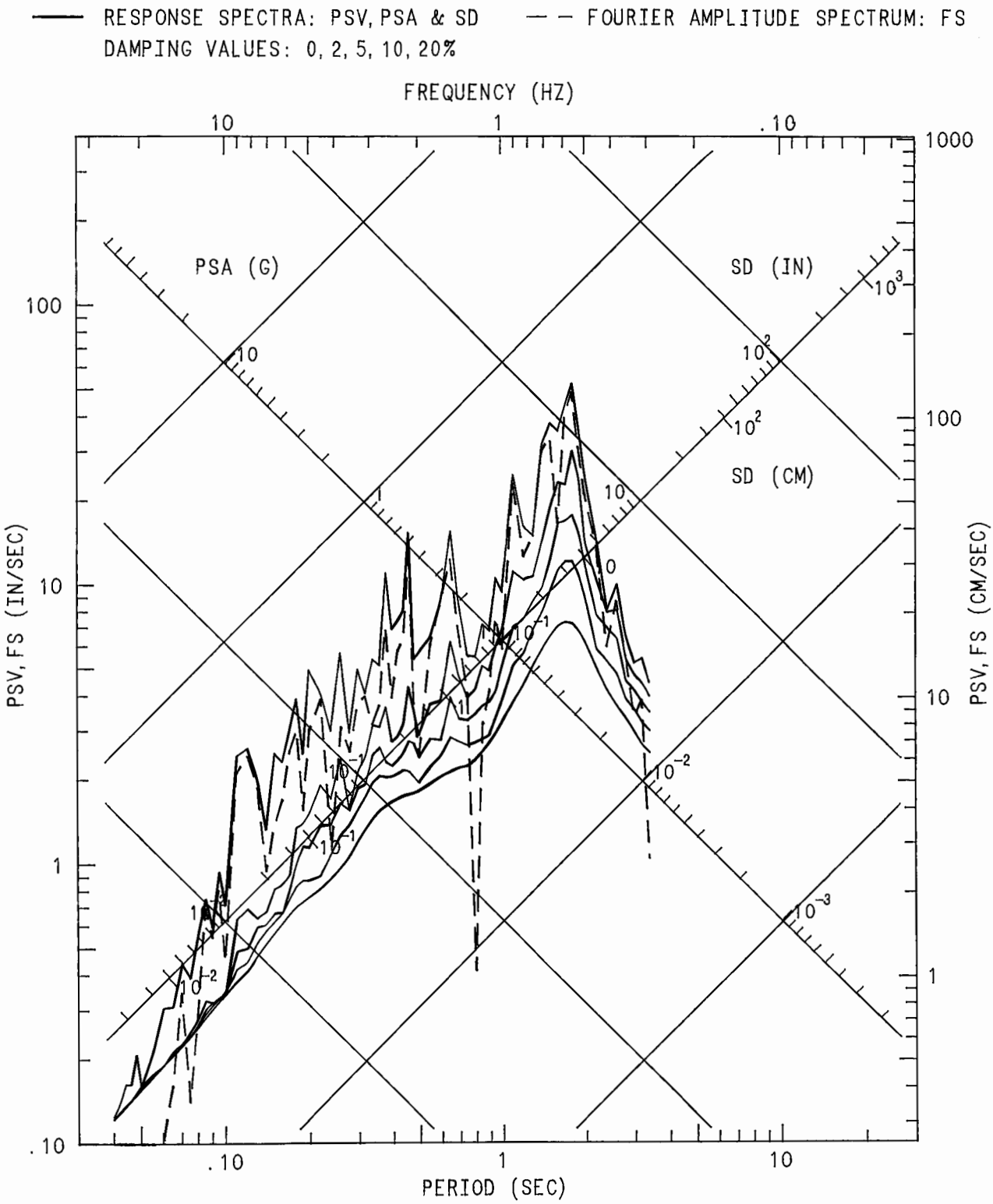
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 10: 270 DEG (2ND FLOOR, NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



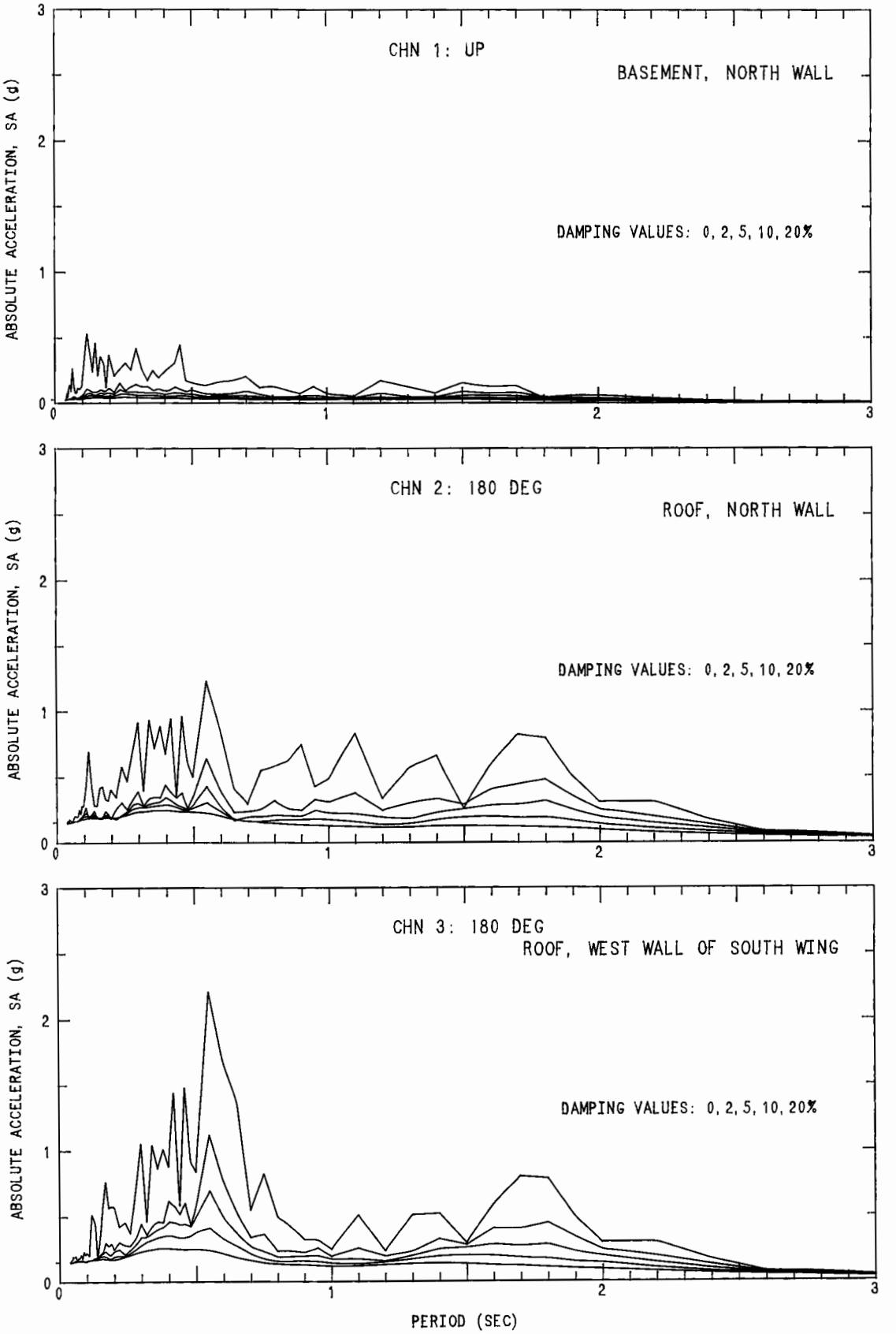
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 11: 270 DEG (BASEMENT, SOUTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



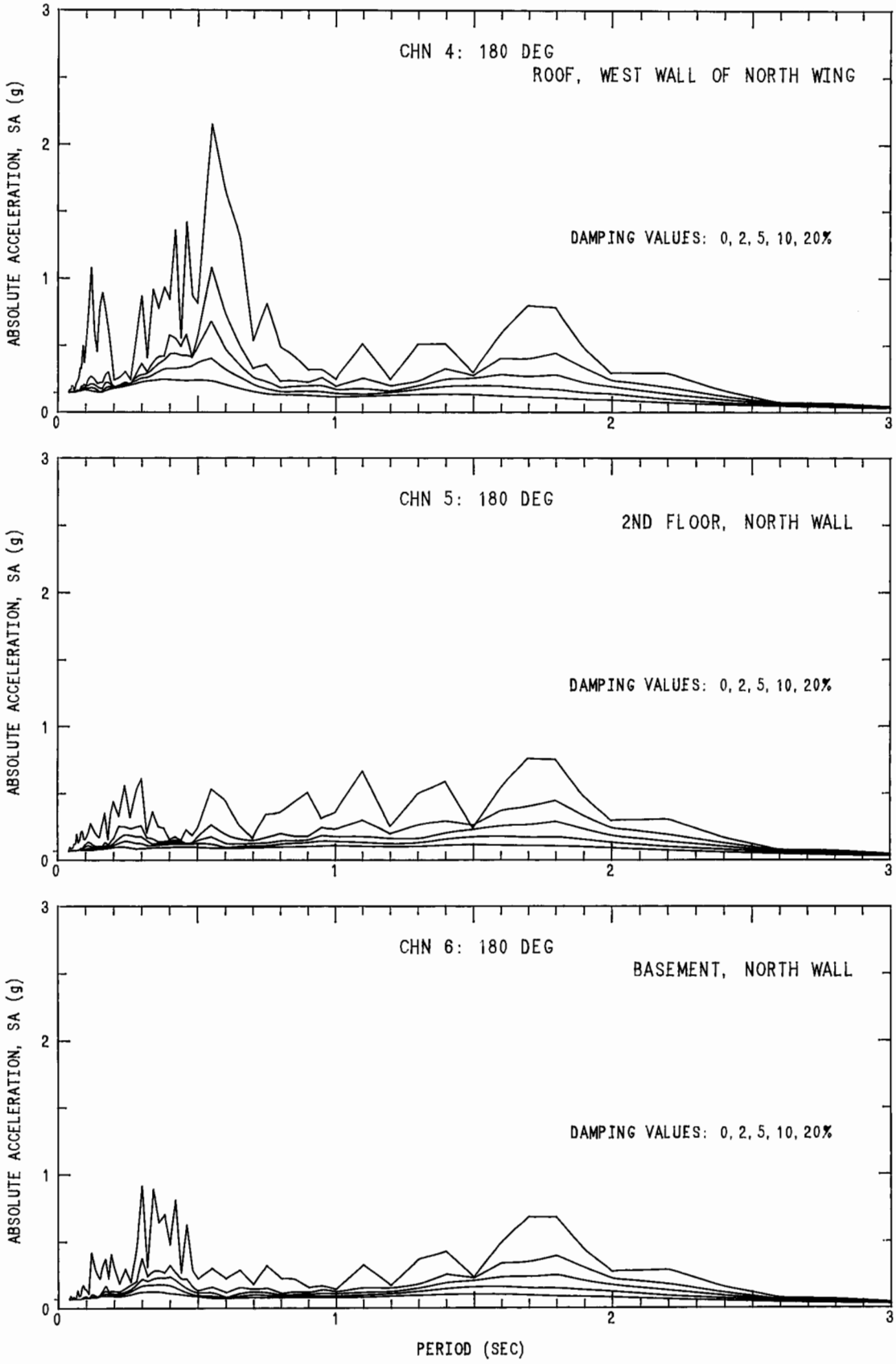
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
CHN 12: 270 DEG (BASEMENT, NORTH WALL)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121772.1744-QL92A544



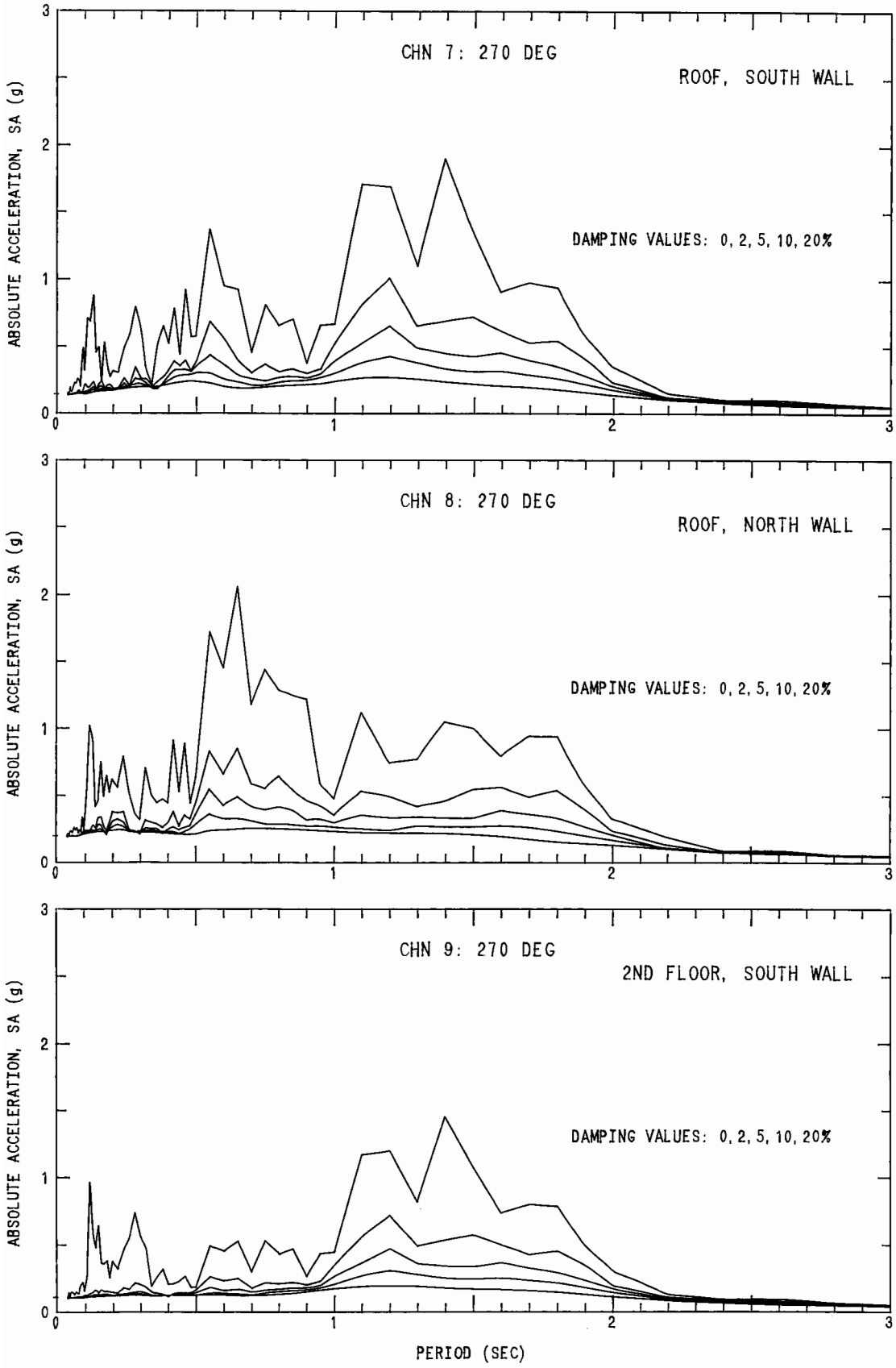
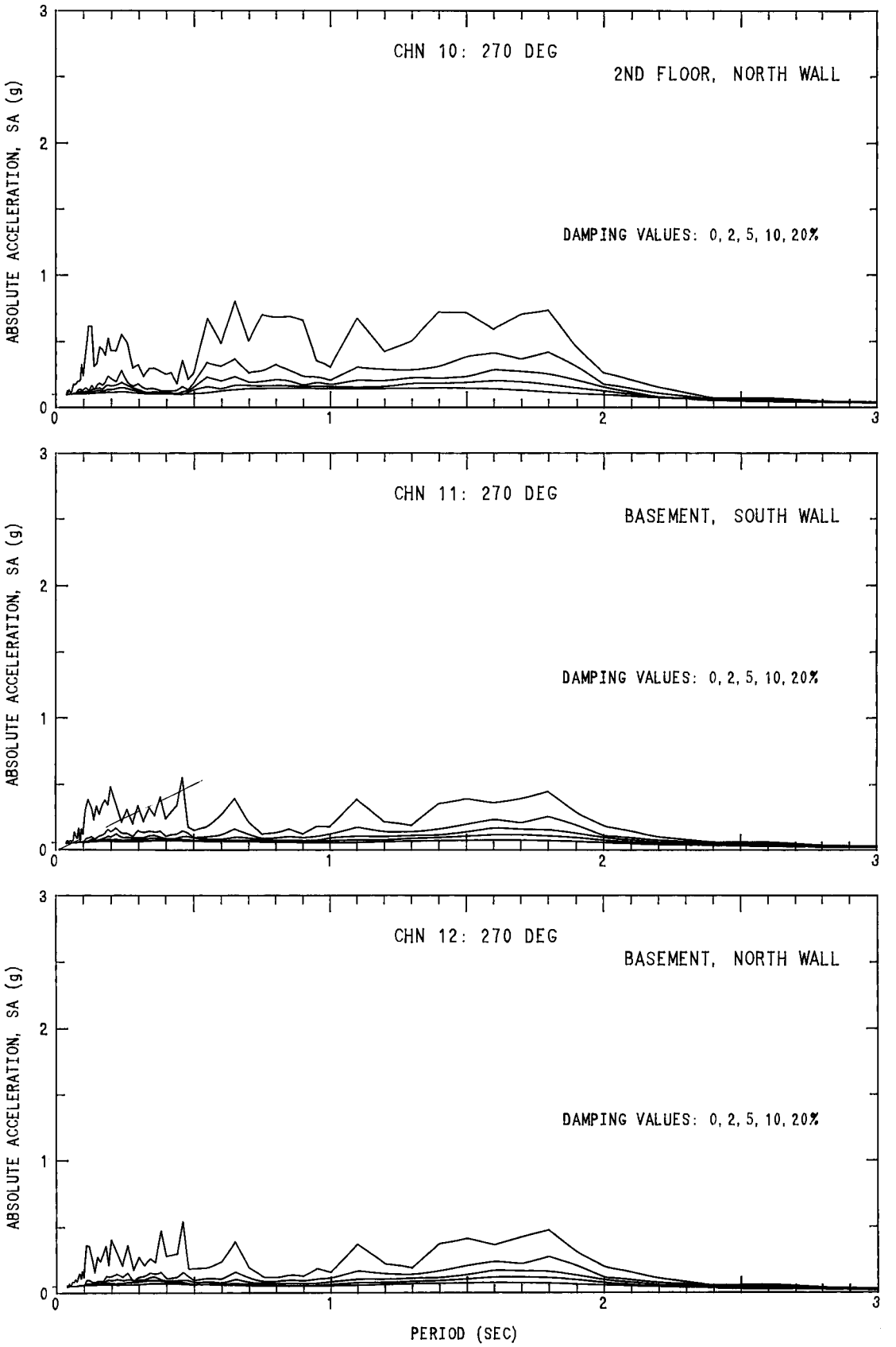
LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121672.1744-QL92A544



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121672.1744-QL92A544



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121672.1744-QL92A544



LANDERS EARTHQUAKE JUNE 28, 1992 04:58 PDT
POMONA - 6-STORY COMMERCIAL BLDG.
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
23544-C0108-92185.02 121672.1744-QL92A544