STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, *Governor*

DEPARTMENT OF CONSERVATION
DIVISION OF MINES AND GEOLOGY
OFFICE OF STRONG MOTION STUDIES
630 BERCUT DRIVE
SACRAMENTO, CA 95814-0189
(PHONE 916—322-3105)

Plots To Accompany Tape: LEXINGTON8889

Processed Strong-Motion Data from Lexington Dam for the Lake Elsman Earthquakes of 27 June 1988 and 8 August 1989

California Strong Motion Instrumentation Program (CSMIP)

Report No. OSMS 91-14

The processed data plots for Lexington Dam are presented in the following order for each earthquake:

1. The raw record for the first 22 seconds with all channels from a recorder shown on a single page. Three recorders are in the lifeline.

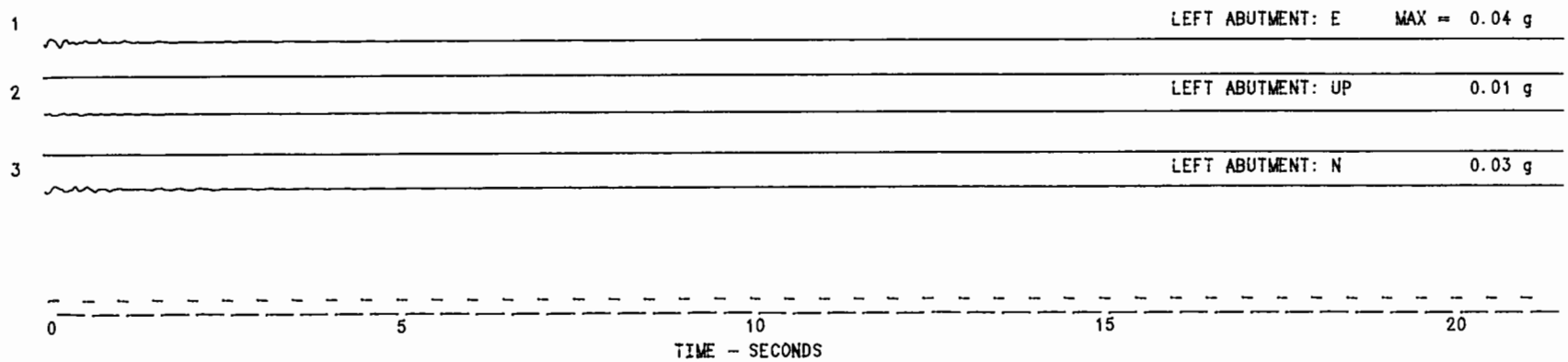
2. Phase 1 (Vol. 1) data: uncorrected accelerations. Acceleration for the first 22 seconds is plotted with a common scaling factor for all channels; three channels are plotted on one page. This plot is followed by another plot of the full processed length (22 seconds) with each channel individually scaled.

3. 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 bandwidth, determined during processing, is indicated on the plots.

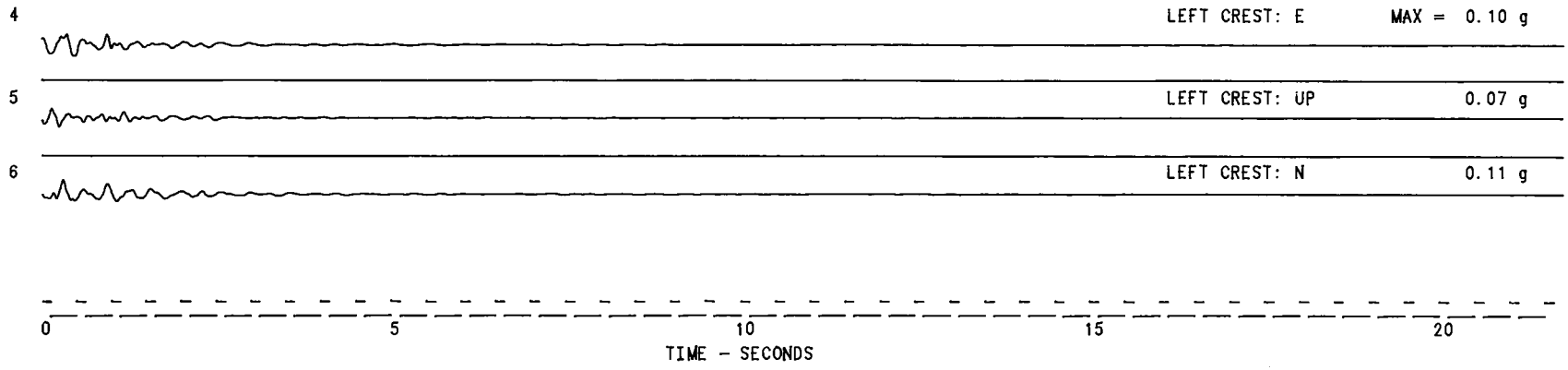
4. Phase 3 (Vol. 3) data: response spectra. The pseudo-velocity spectra (PSV), the pseudo-acceleration spectra (PSA), the displacement spectra (SD), and the Fourier amplitude spectra (FS) are presented on a tripartite logarithmic plot for each channel. The spectra are plotted for periods within the filter bandwidth used in the Vol. 2 processing. In addition, the absolute acceleration spectra (SA) for 0%, 2%, 5%, 10%, and 20% dampings are plotted against period for periods from 0 to 2 seconds with linear-linear scaling.

Note: a). Structure Reference Orientation N=0°.
b). The three recorders are <u>not</u> interconnected to begin recording simultaneously.

LEXINGTON DAM RECORD 57180-S2130-88181.01 LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT



LEXINGTON DAM RECORD 57180-S2131-88181.01 LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT



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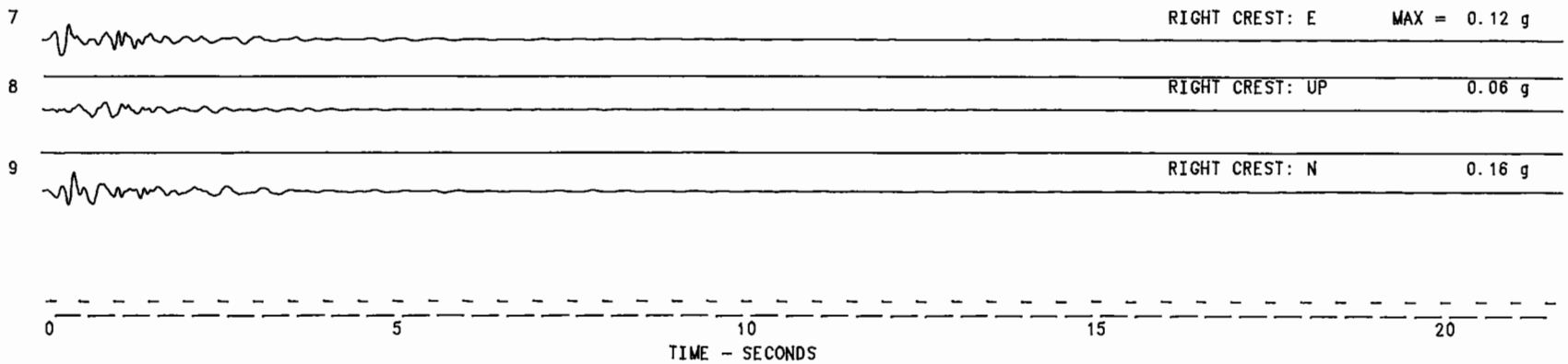
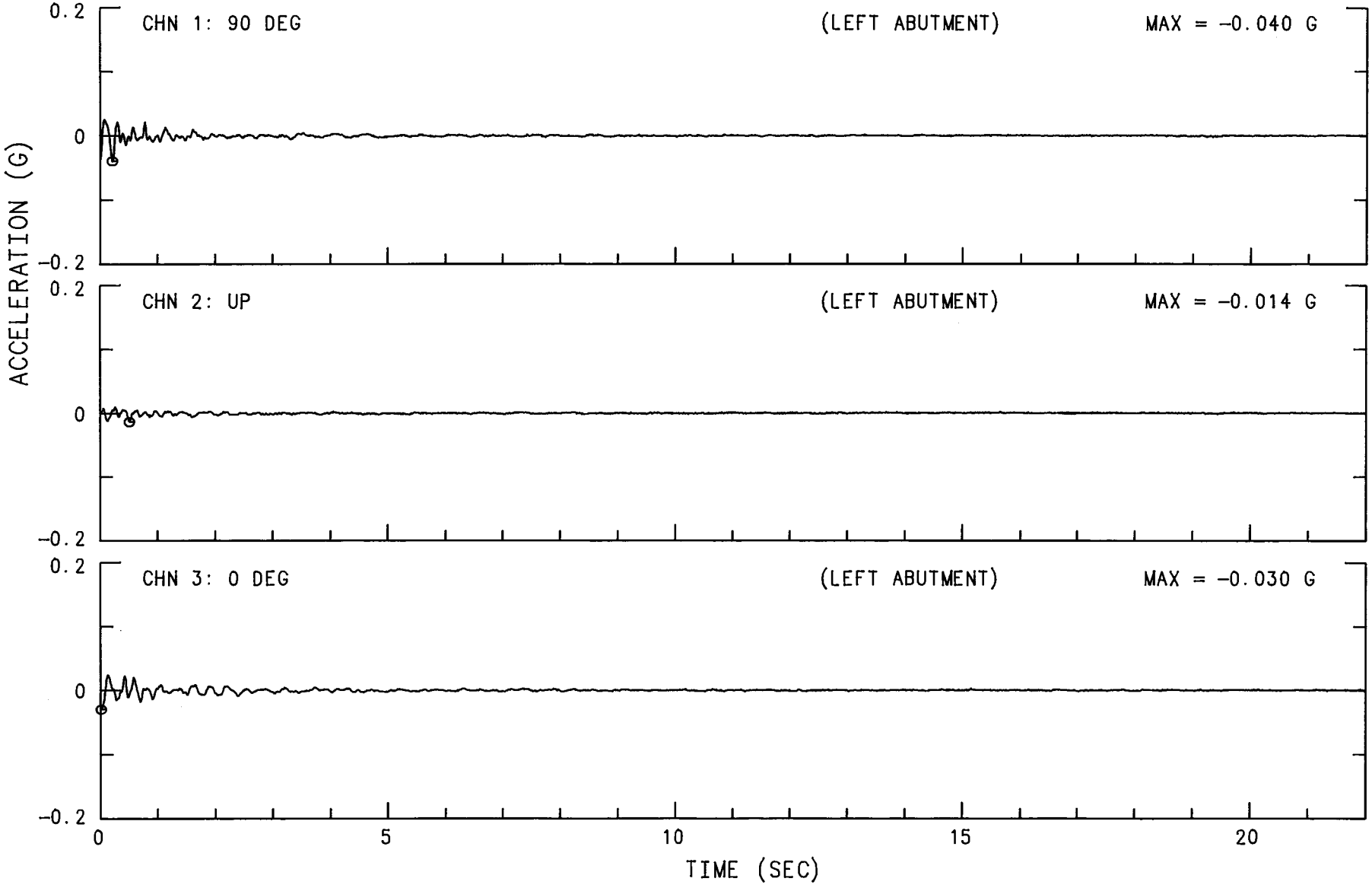


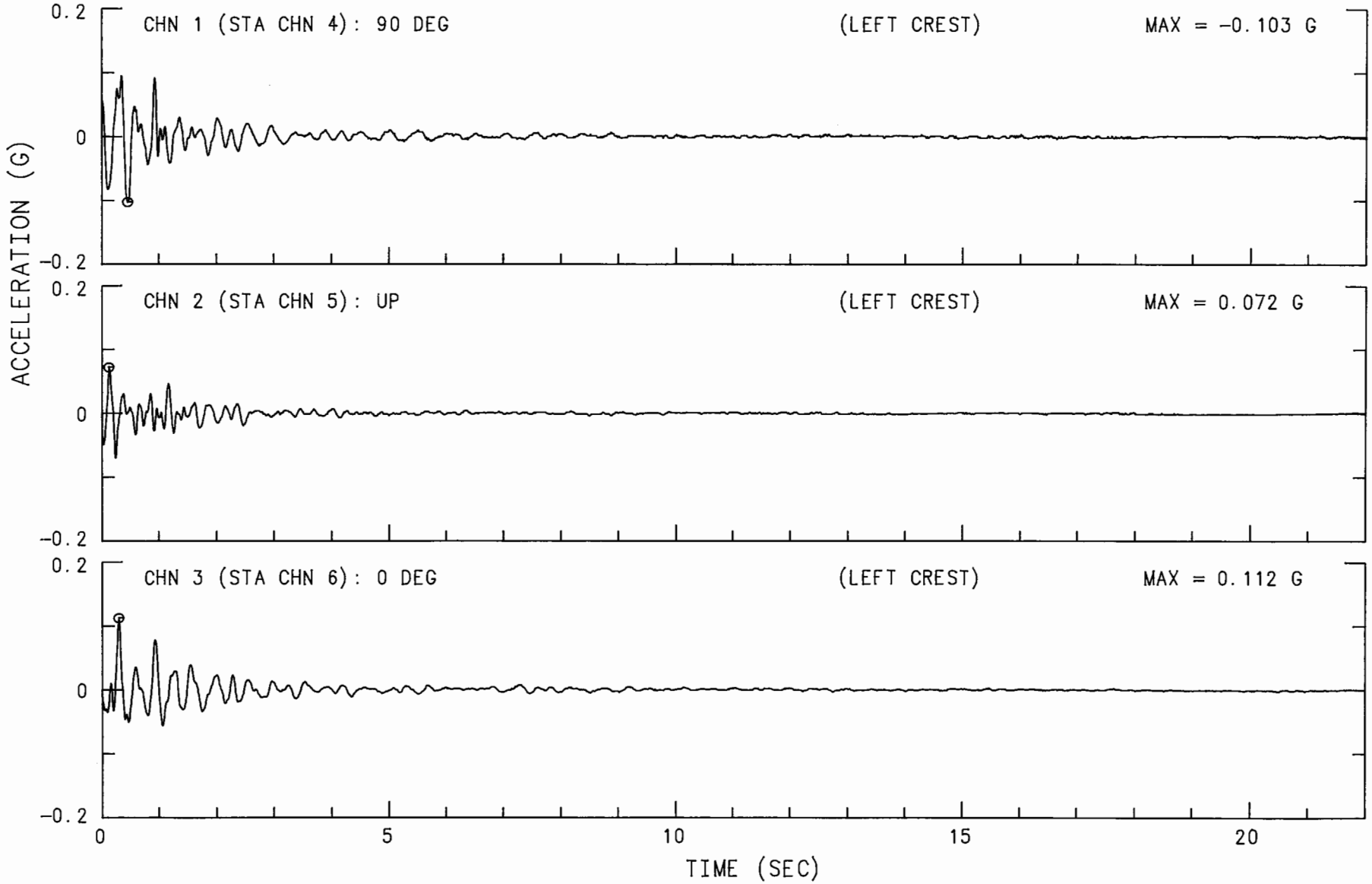
LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM
UNCORRECTED ACCELEROGRAM 57180-S2130-88181.01 030871.0426-QL88A180A



LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT

LEXINGTON DAM

UNCORRECTED ACCELEROGRAM 57180-S2131-88181.01 030871.0442-QL88A180B



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LEXINGTON DAM
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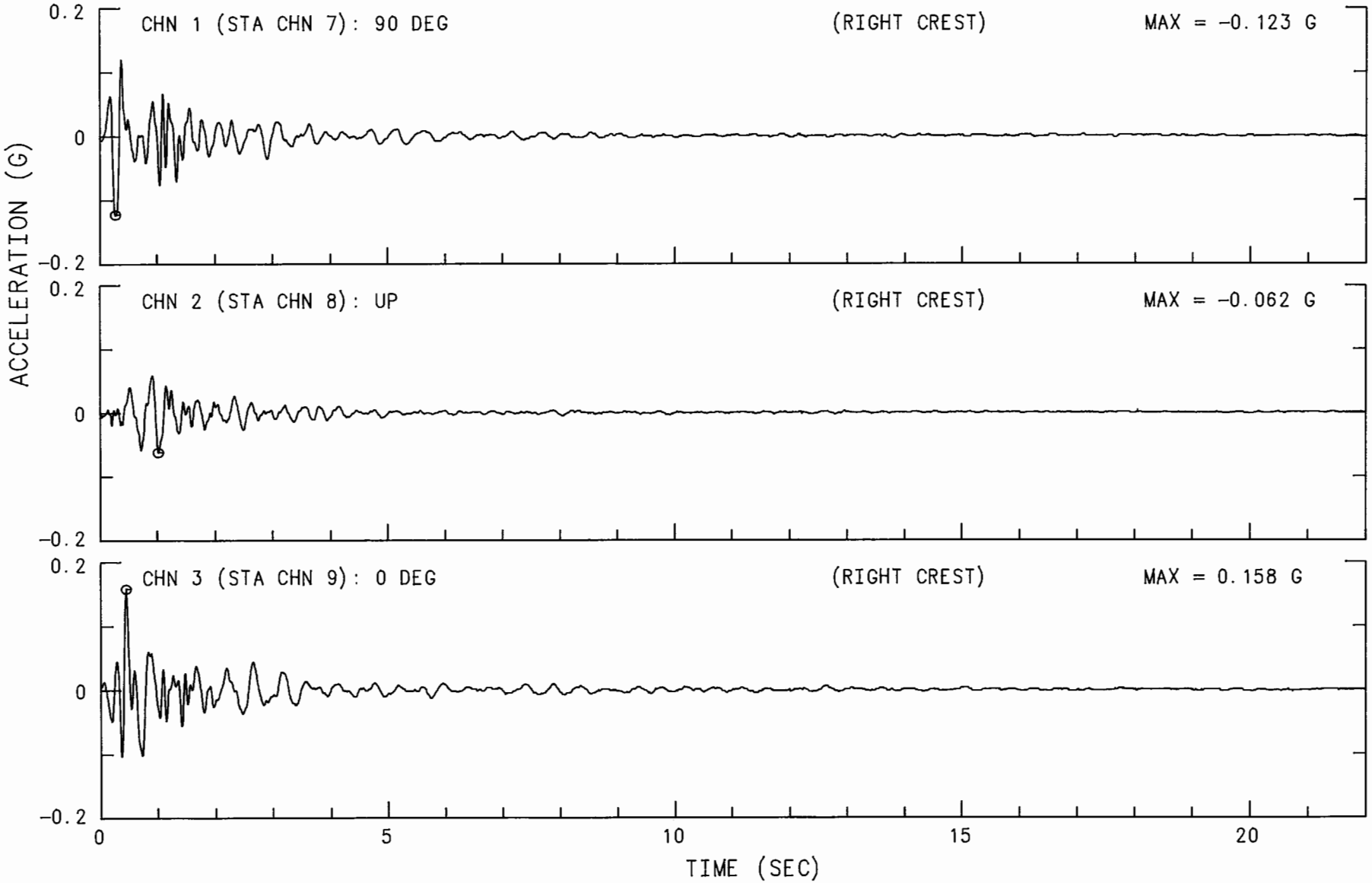

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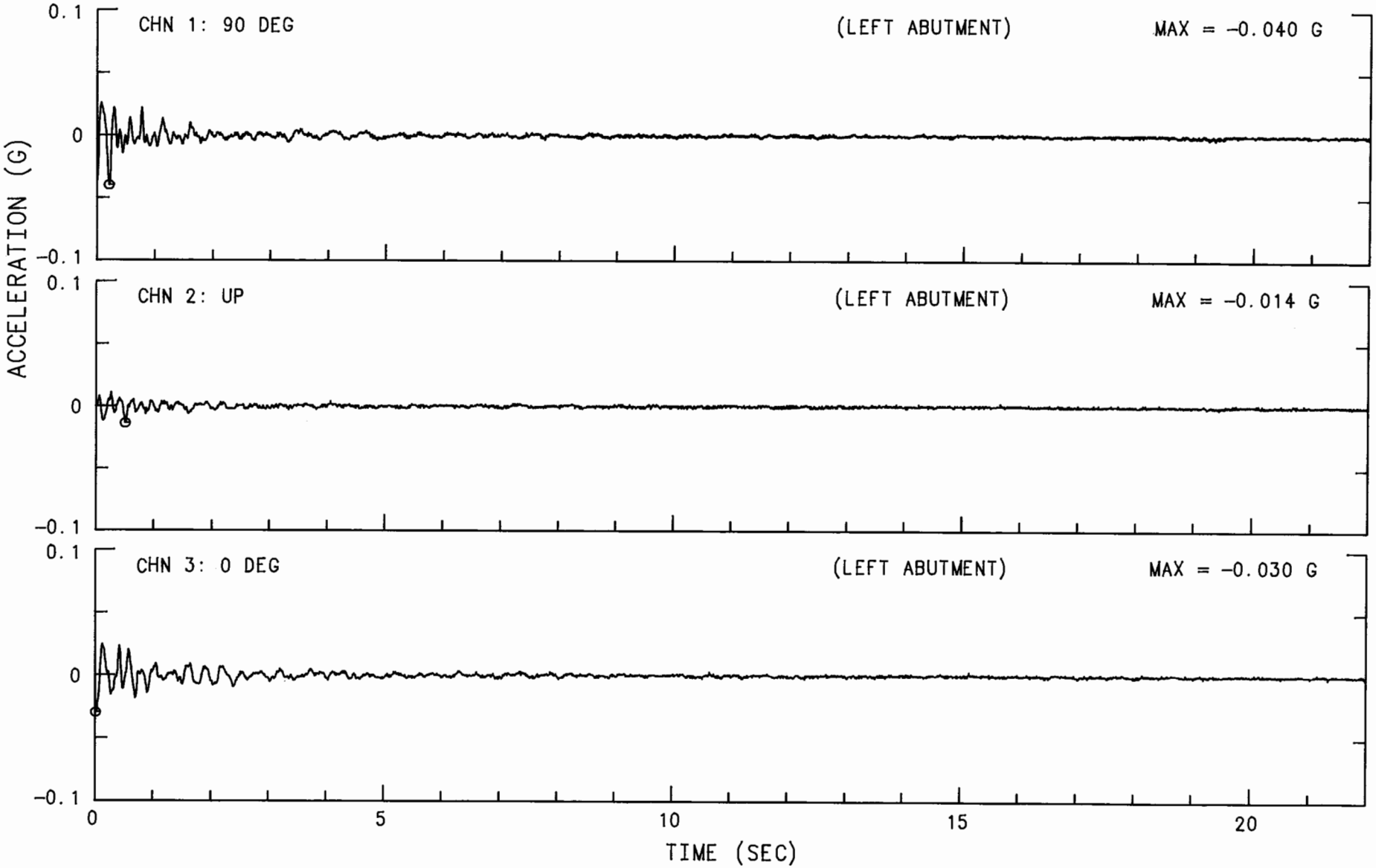
LEXINGTON DAM
UNCORRECTED ACCELEROGRAM 57180-S2130-88181.01 030871.0426-QL88A180A



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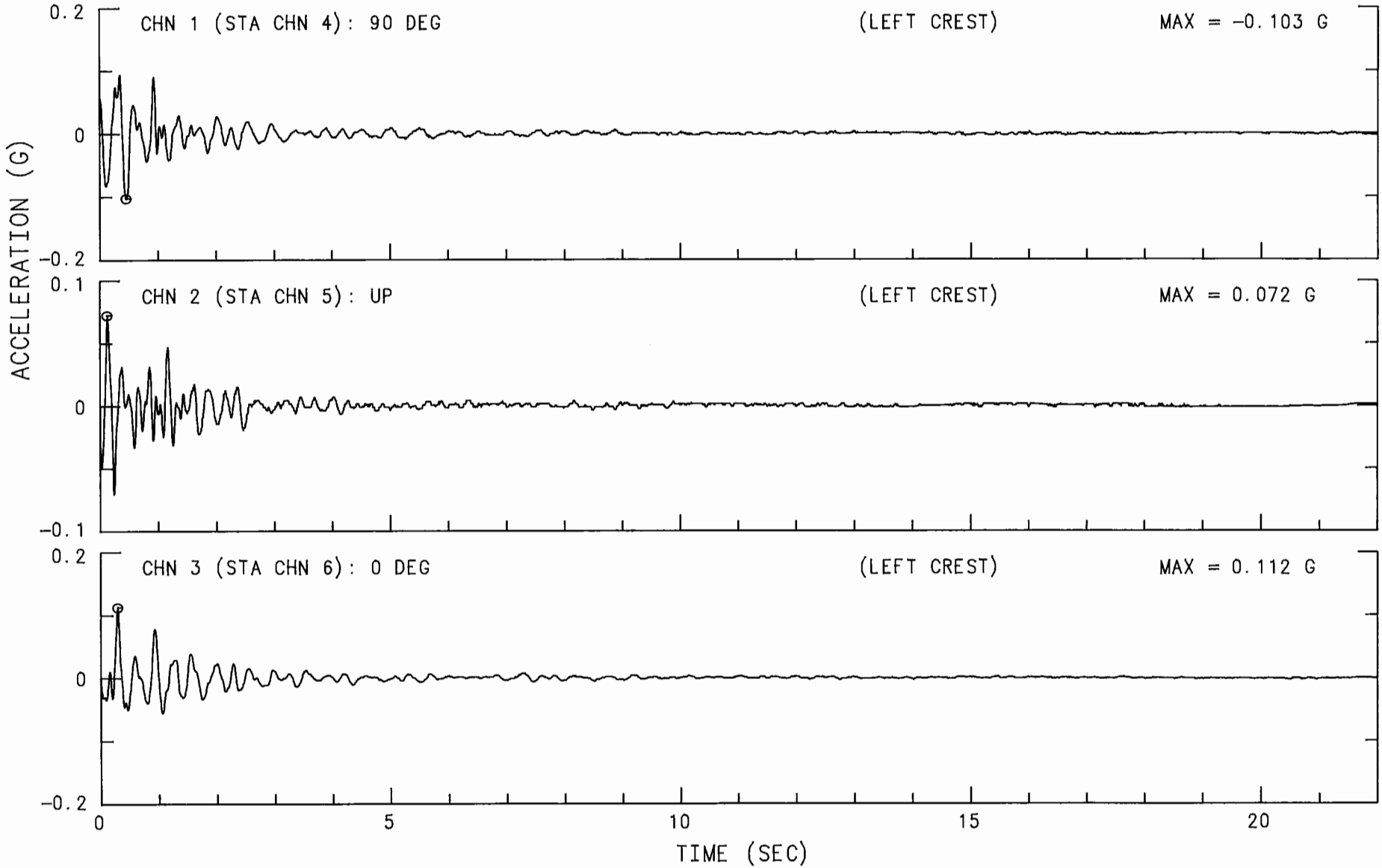
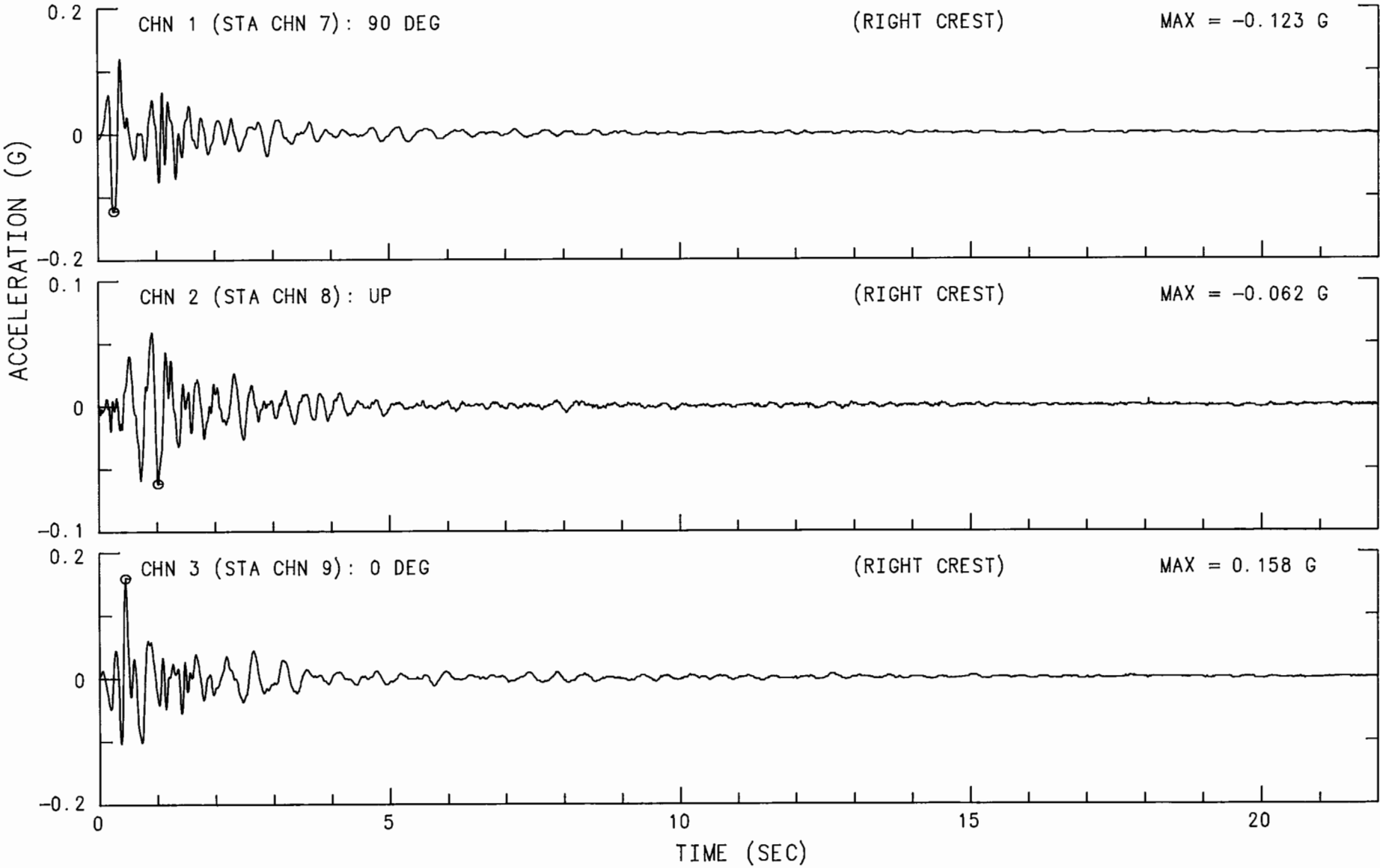
LEXINGTON DAM
UNCORRECTED ACCELEROGRAM 57180-S2131-88181.01 030871.0442-QL88A180B



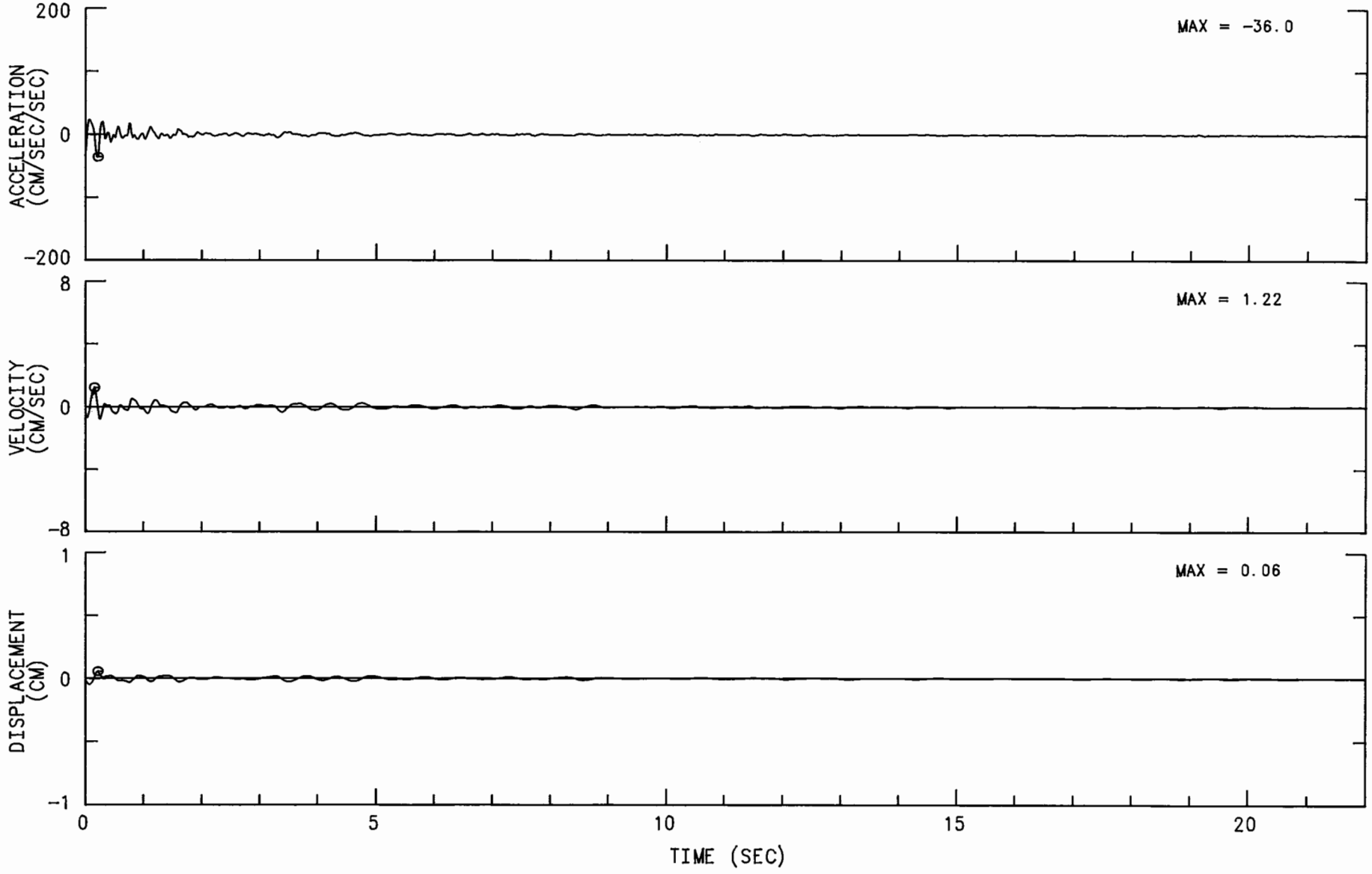
LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT

LEXINGTON DAM

UNCORRECTED ACCELEROGRAM 57180-S2132-88181.02 030871.0453-QL88A180C



LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM CHN 1: 90 DEG (LEFT ABUTMENT)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .50-1.00 TO 23.0-25.0 HZ. 57180-S2130-88181.01 030871.0548-QL88A180A



LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM CHN 2: UP (LEFT ABUTMENT)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
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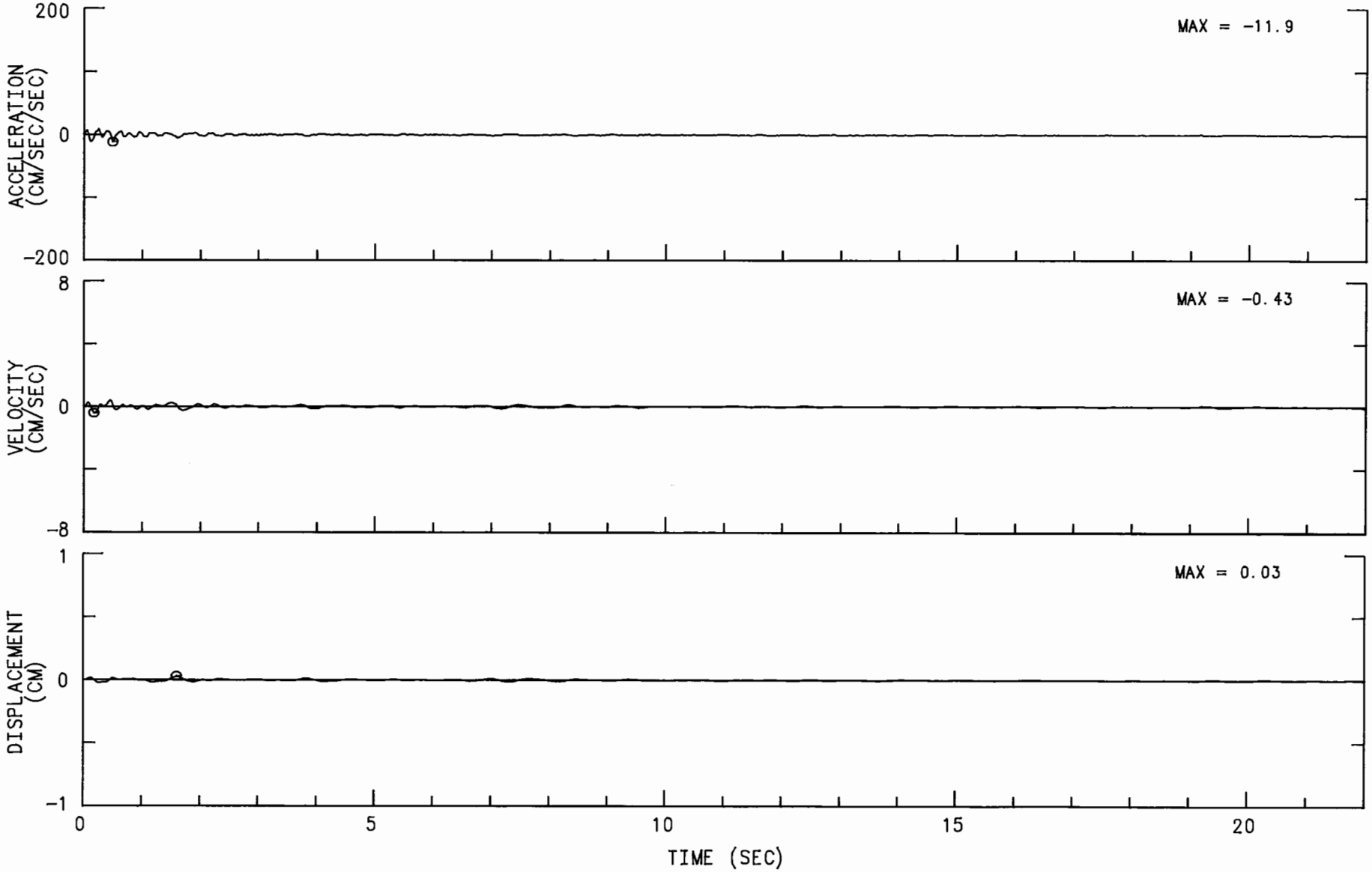

LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM CHN 3: 0 DEG (LEFT ABUTMENT)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
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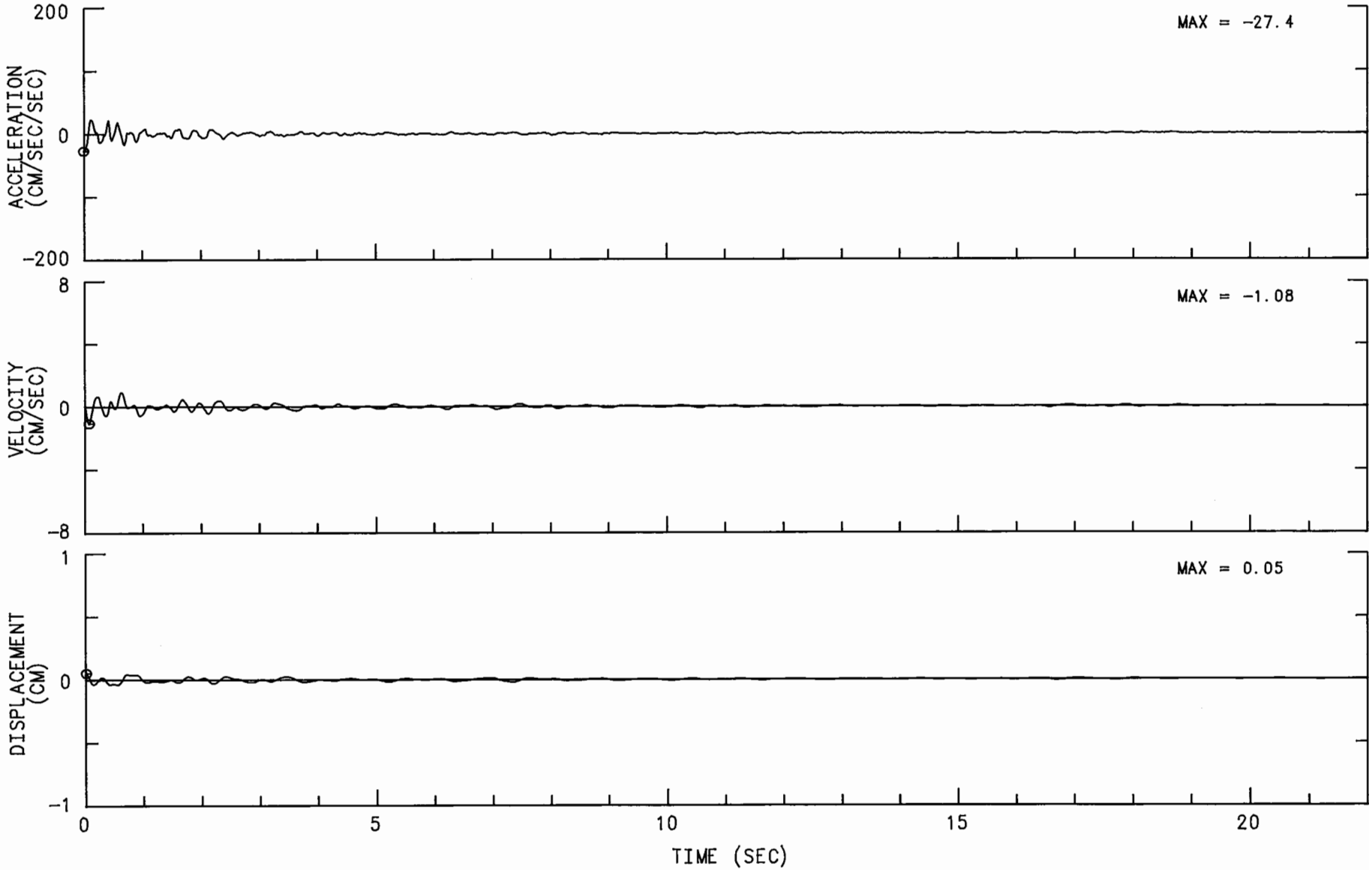
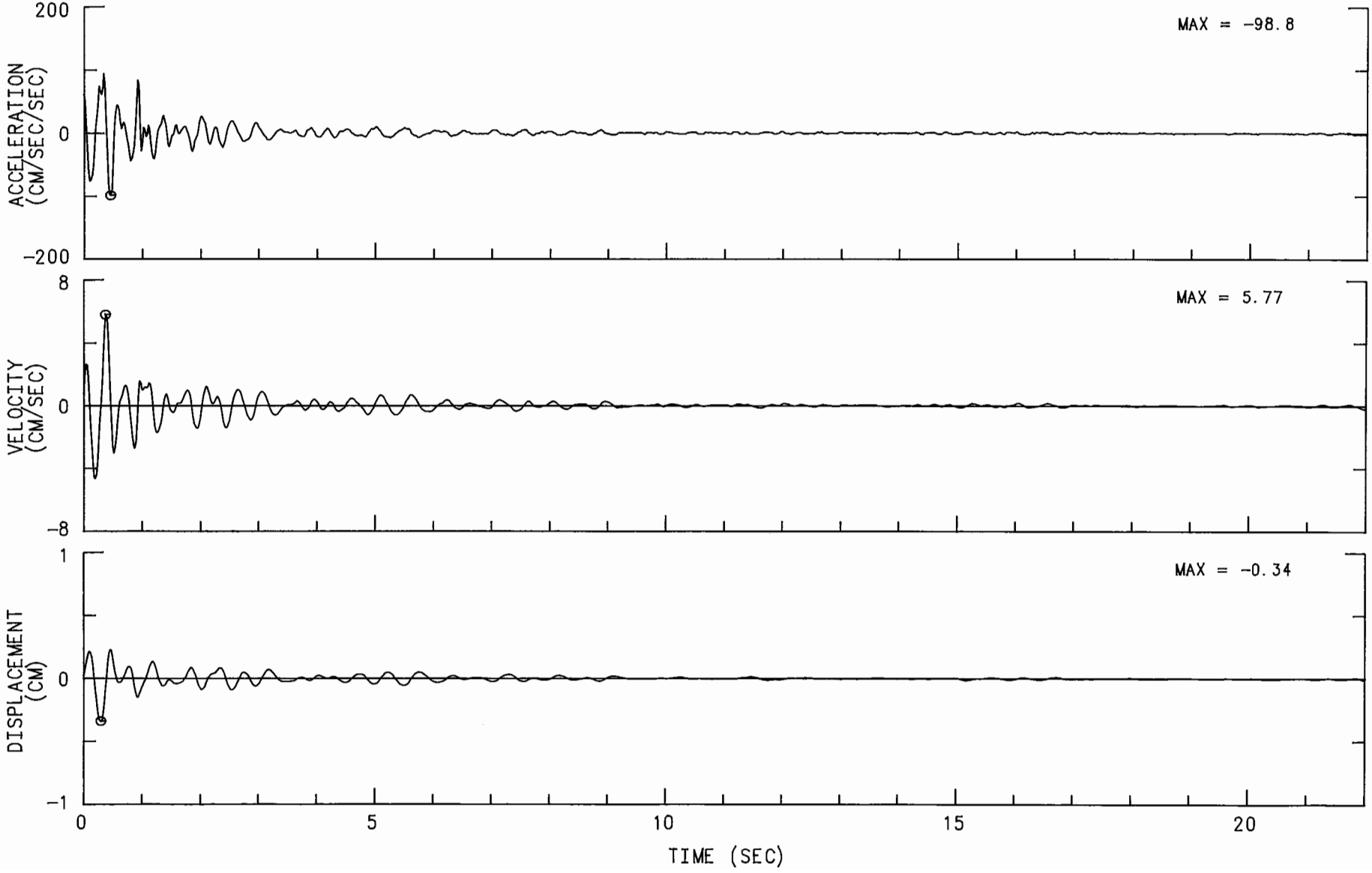
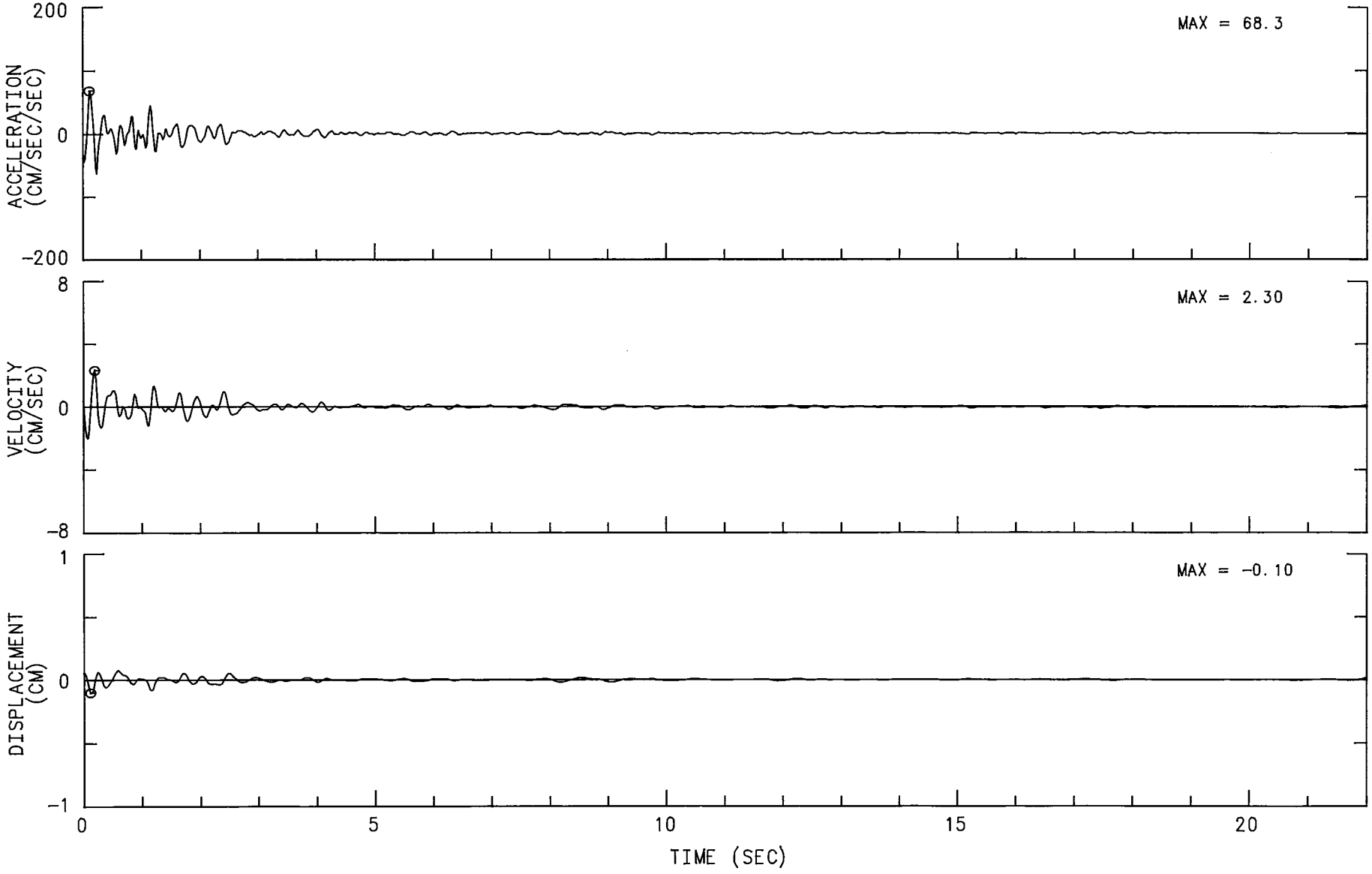


LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM CHN 1 (STA CHN 4): 90 DEG (LEFT CREST)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .50-1.00 TO 23.0-25.0 HZ. 57180-S2131-88181.01 030871.0527-QL88A180B



LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM CHN 2 (STA CHN 5): UP (LEFT CREST)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .50-1.00 TO 23.0-25.0 HZ. 57180-S2131-88181.01 030871.0527-QL88A180B



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LEXINGTON DAM CHN 3 (STA CHN 6): 0 DEG (LEFT CREST)
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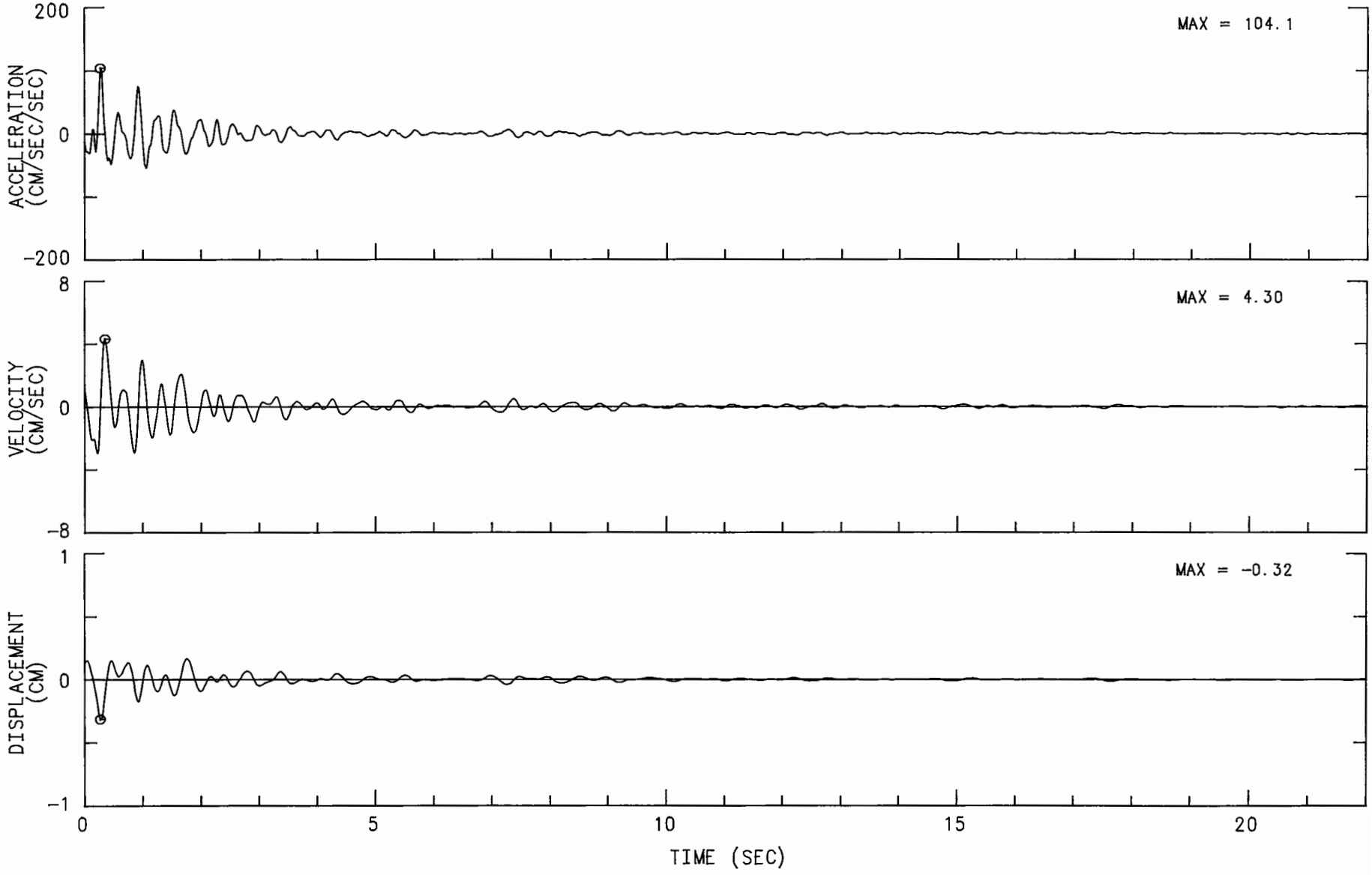
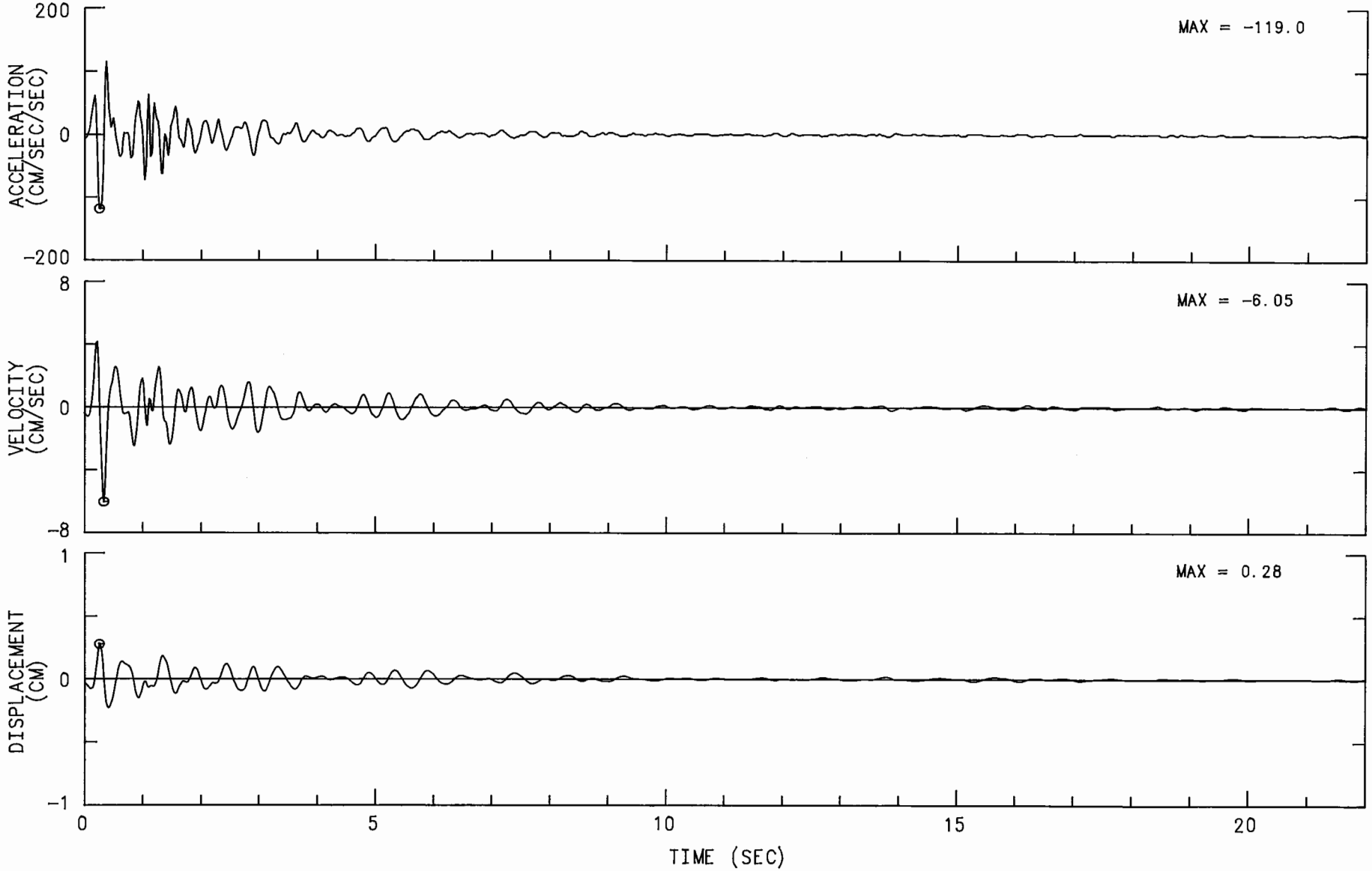
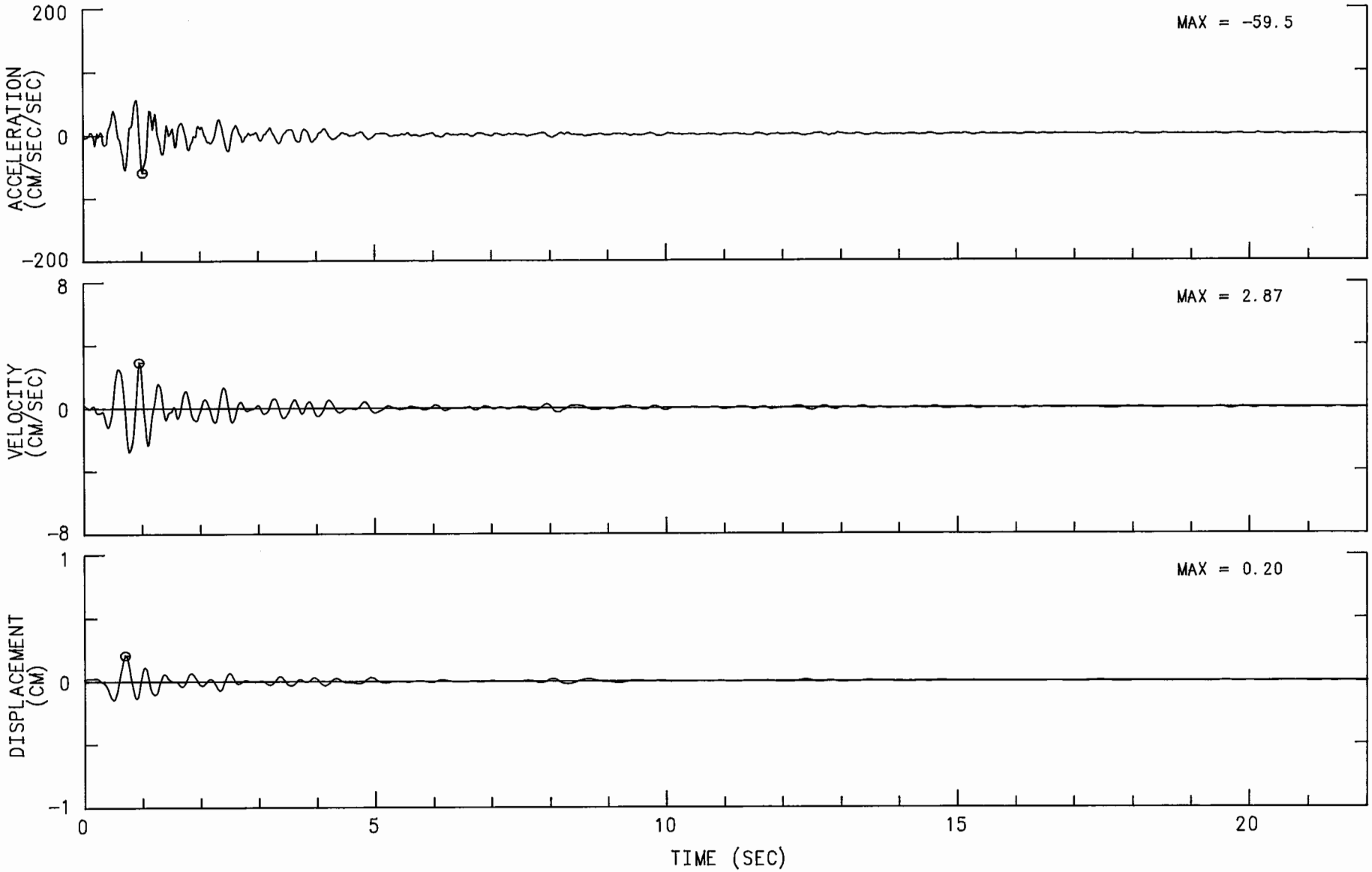


LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM CHN 1 (STA CHN 7): 90 DEG (RIGHT CREST)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .50-1.00 TO 23.0-25.0 HZ. 57180-S2132-88181.02 030871.0506-QL88A180C



LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM CHN 2 (STA CHN 8): UP (RIGHT CREST)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .50-1.00 TO 23.0-25.0 HZ. 57180-S2132-88181.02 030871.0506-QL88A180C



LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM CHN 3 (STA CHN 9): 0 DEG (RIGHT CREST)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
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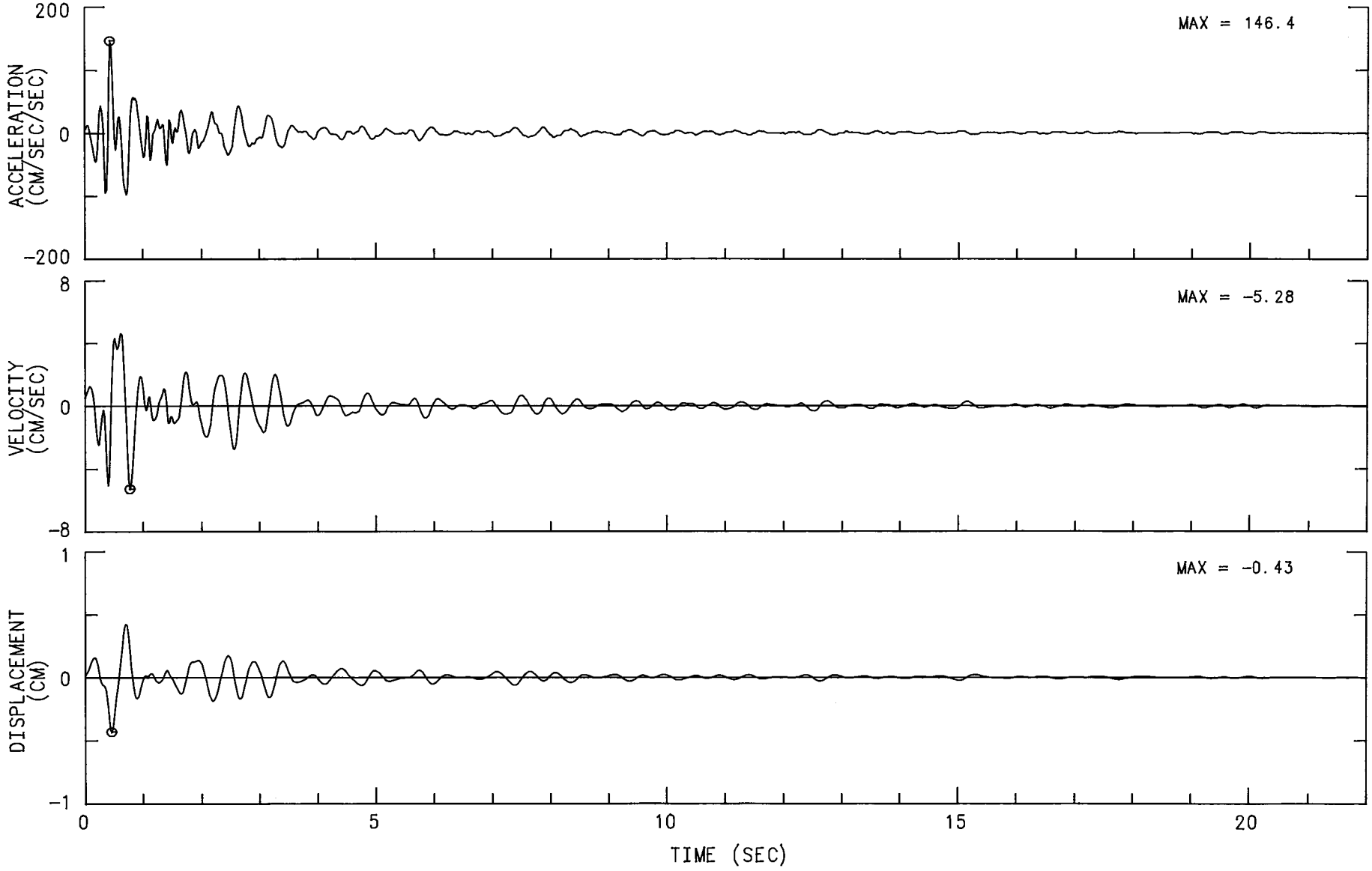
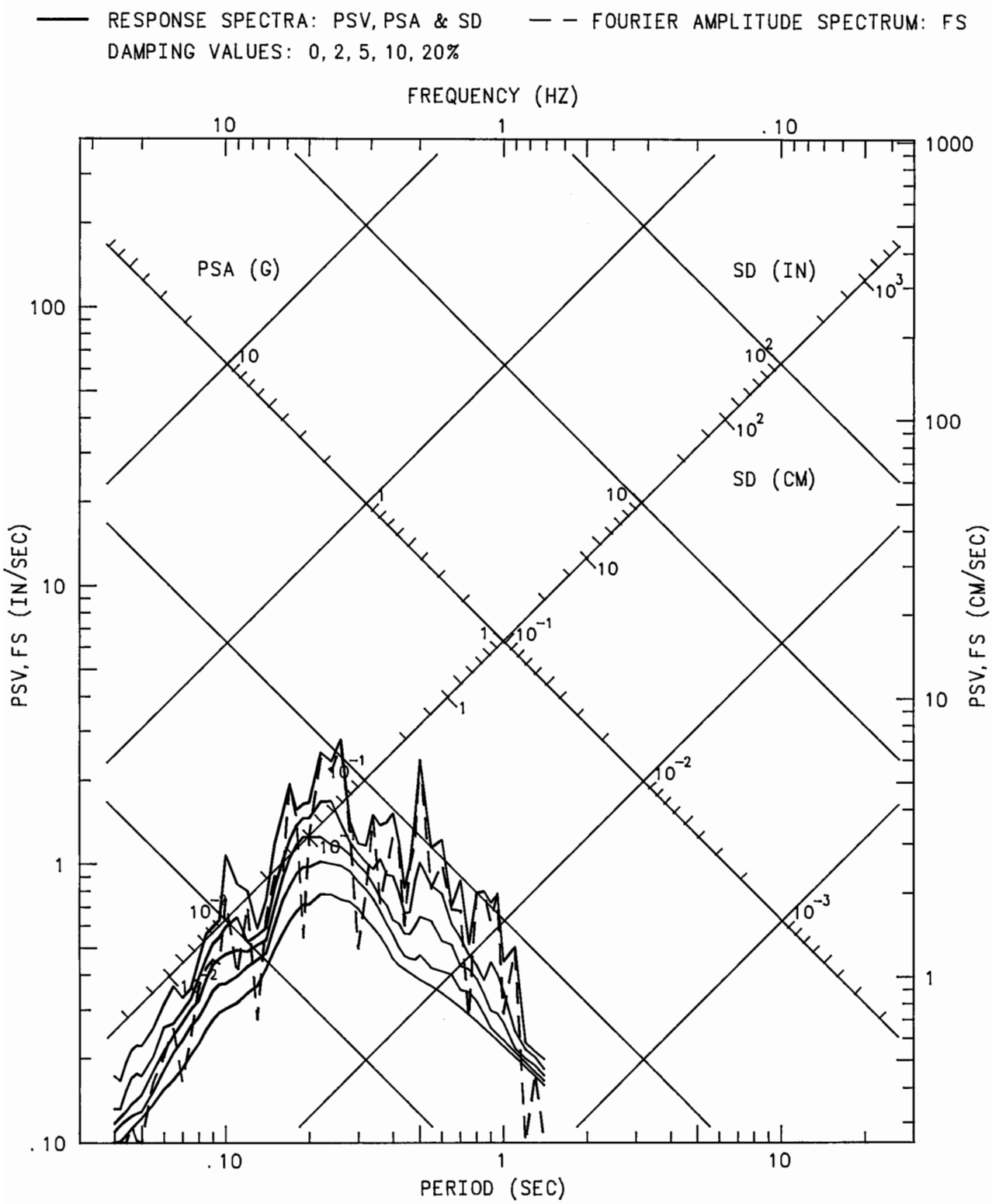


LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM
CHN 1: 90 DEG (LEFT ABUTMENT)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .50-1.00 TO 23.0-25.0 HZ.
57180-S2130-88181.01 030871.0555-QL88A180A



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LEXINGTON DAM
CHN 2: UP (LEFT ABUTMENT)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .50-1.00 TO 23.0-25.0 HZ.
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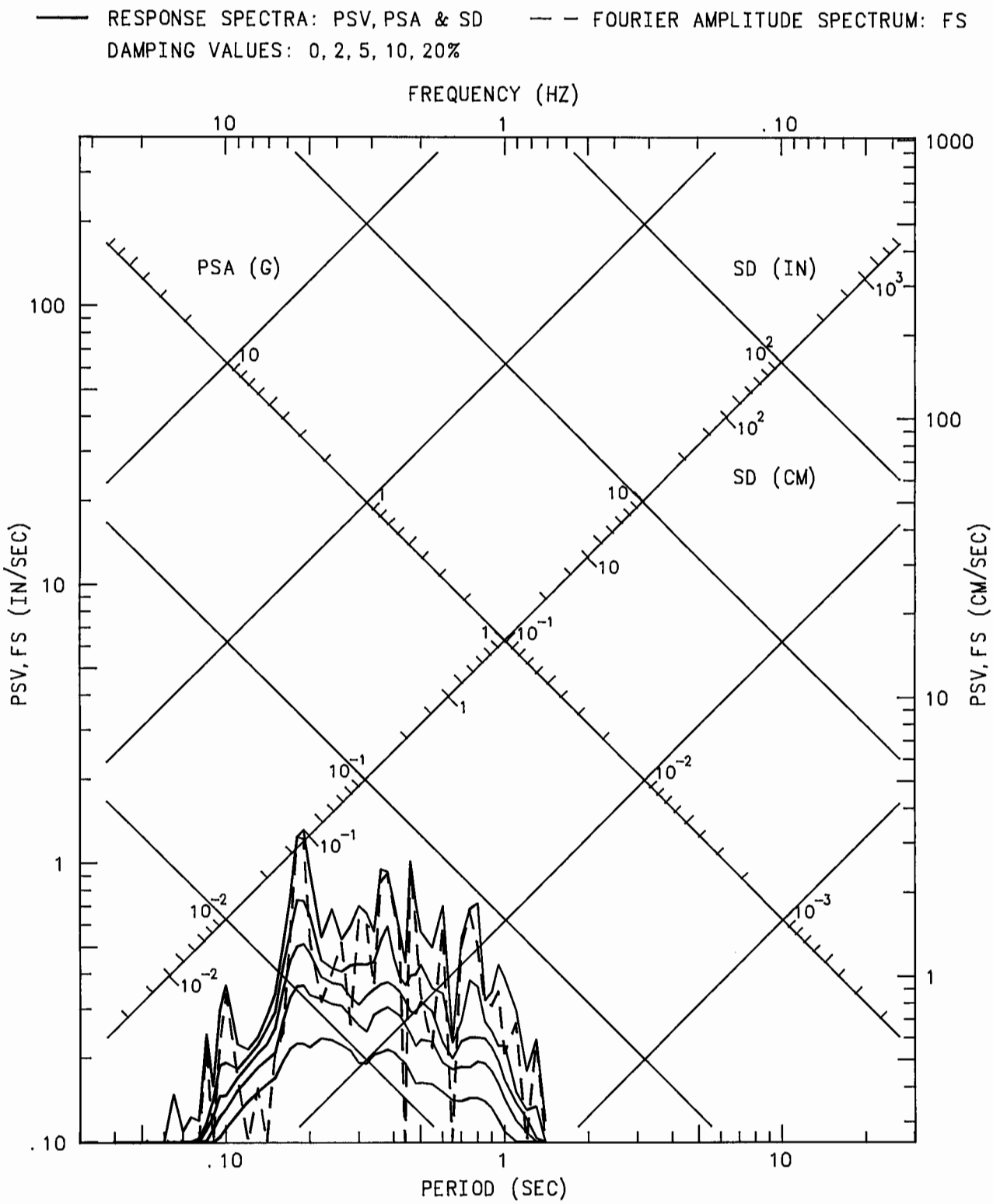

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LEXINGTON DAM
CHN 3: 0 DEG (LEFT ABUTMENT)
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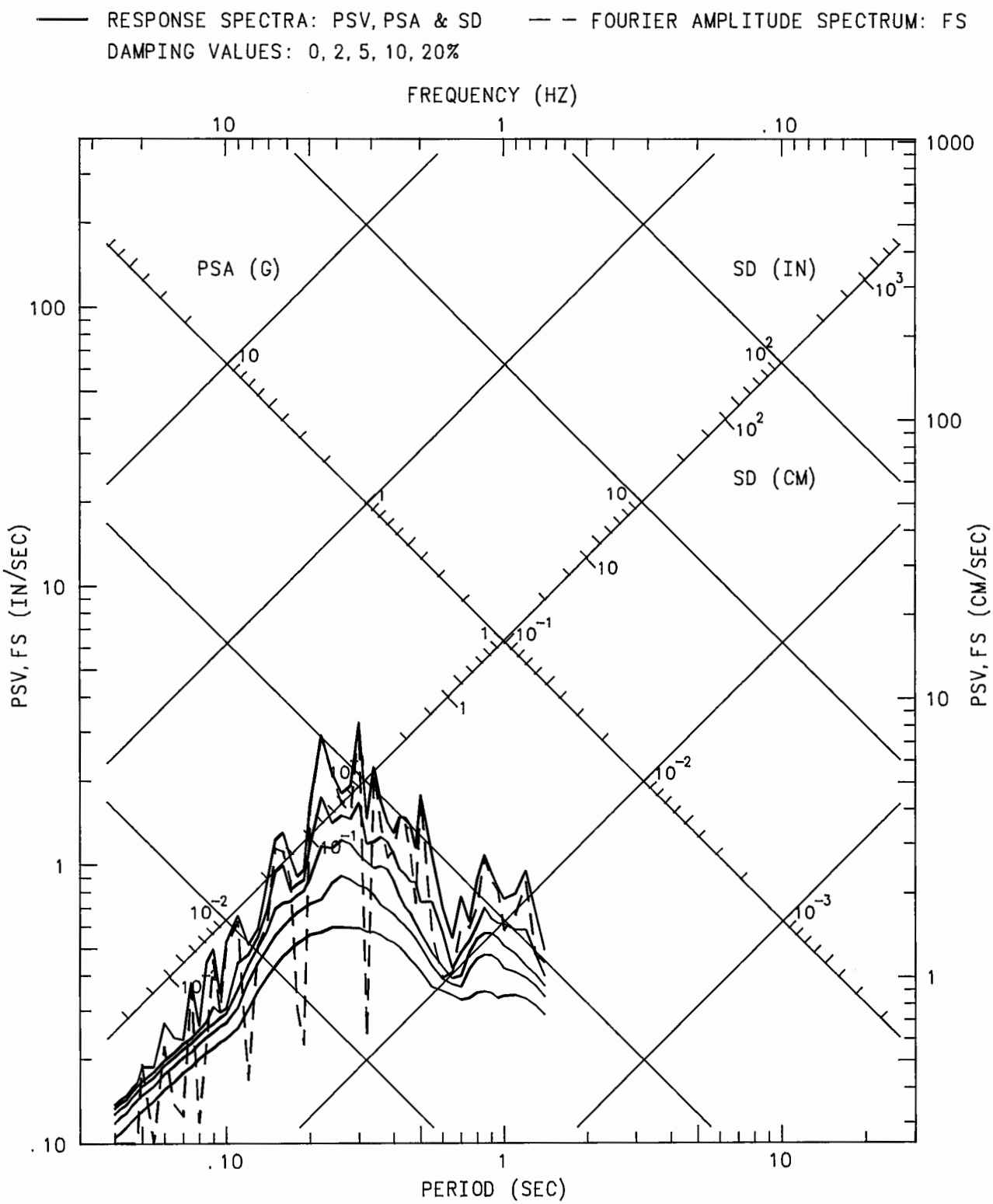
57180-S2130-88181.01 030871.0555-QL88A180A



LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM
CHN 1 (STA CHN 4): 90 DEG (LEFT CREST)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .50-1.00 TO 23.0-25.0 HZ.
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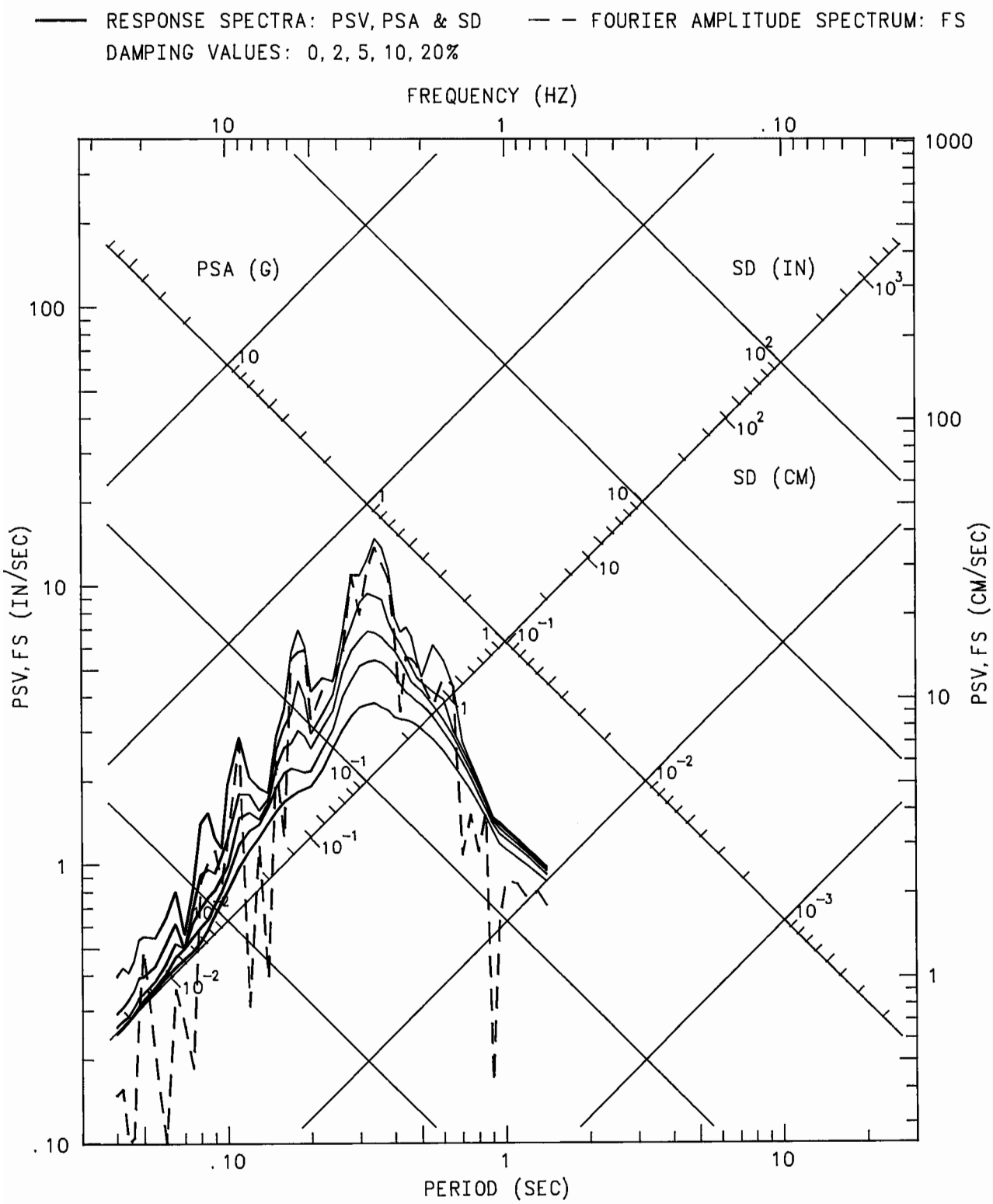

LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM
CHN 2 (STA CHN 5): UP (LEFT CREST)
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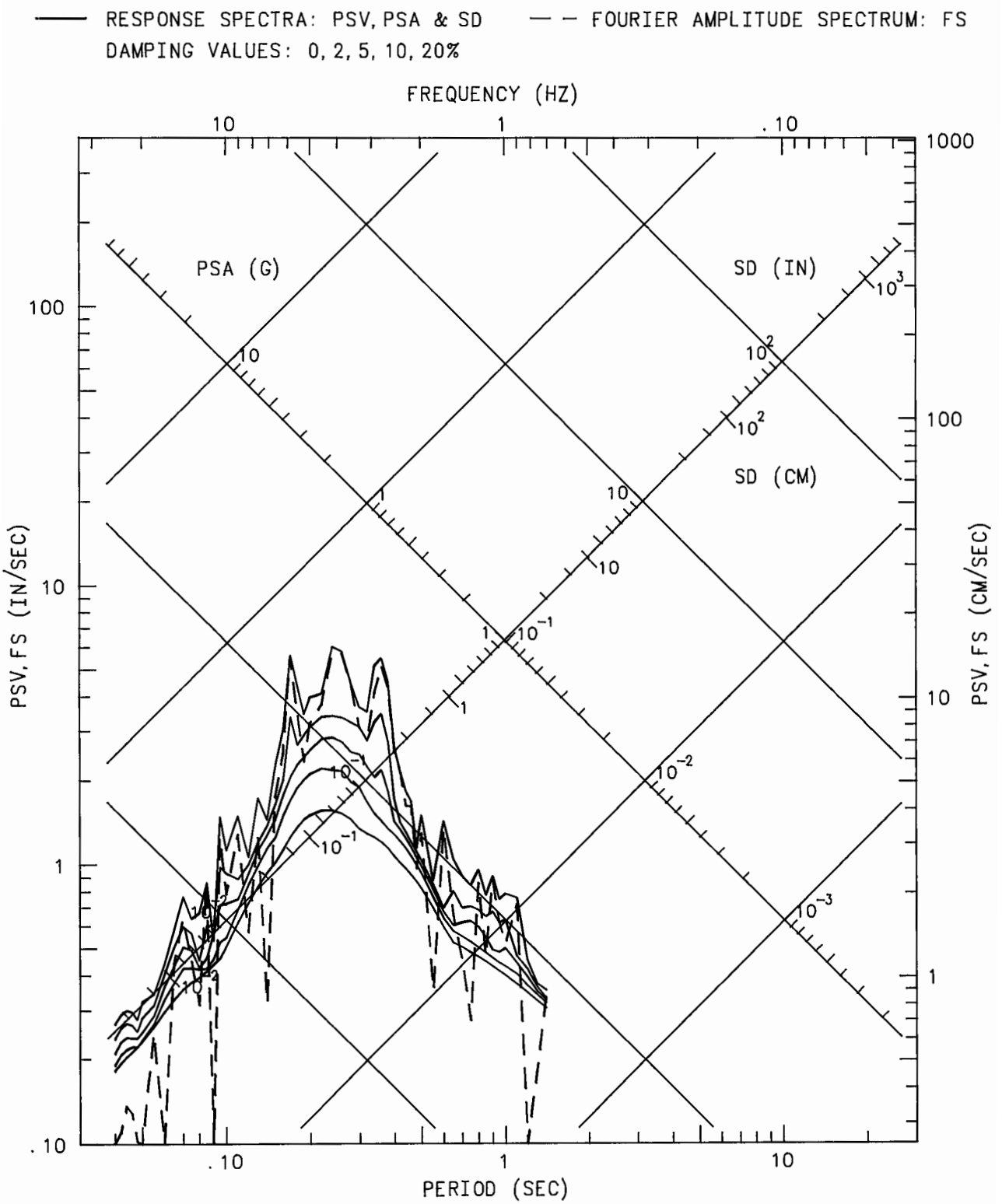
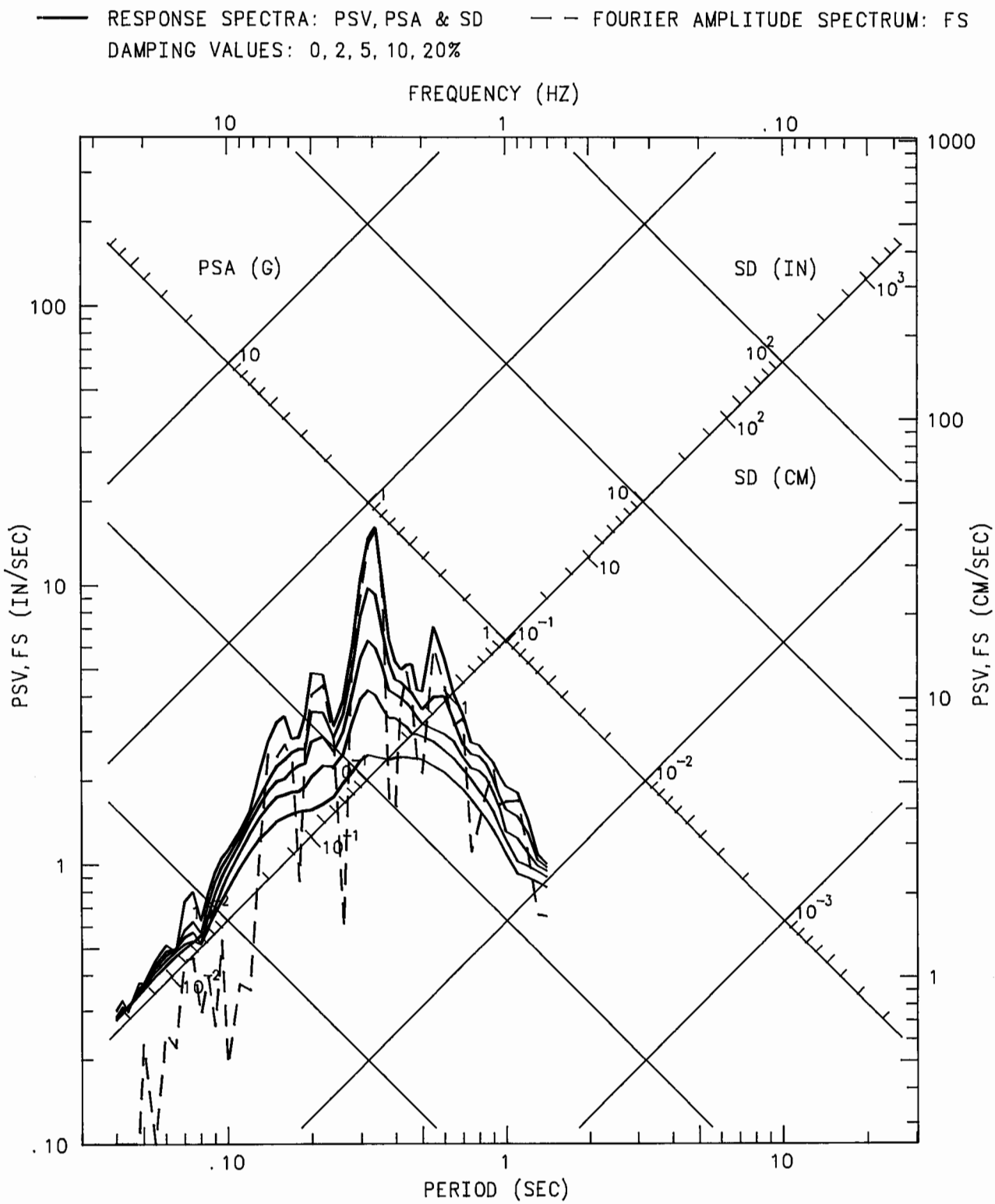


LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM
CHN 3 (STA CHN 6): 0 DEG (LEFT CREST)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .50-1.00 TO 23.0-25.0 HZ.
57180-S2131-88181.01 030871.0534-QL88A180B



LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM
CHN 1 (STA CHN 7): 90 DEG (RIGHT CREST)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .50-1.00 TO 23.0-25.0 HZ.
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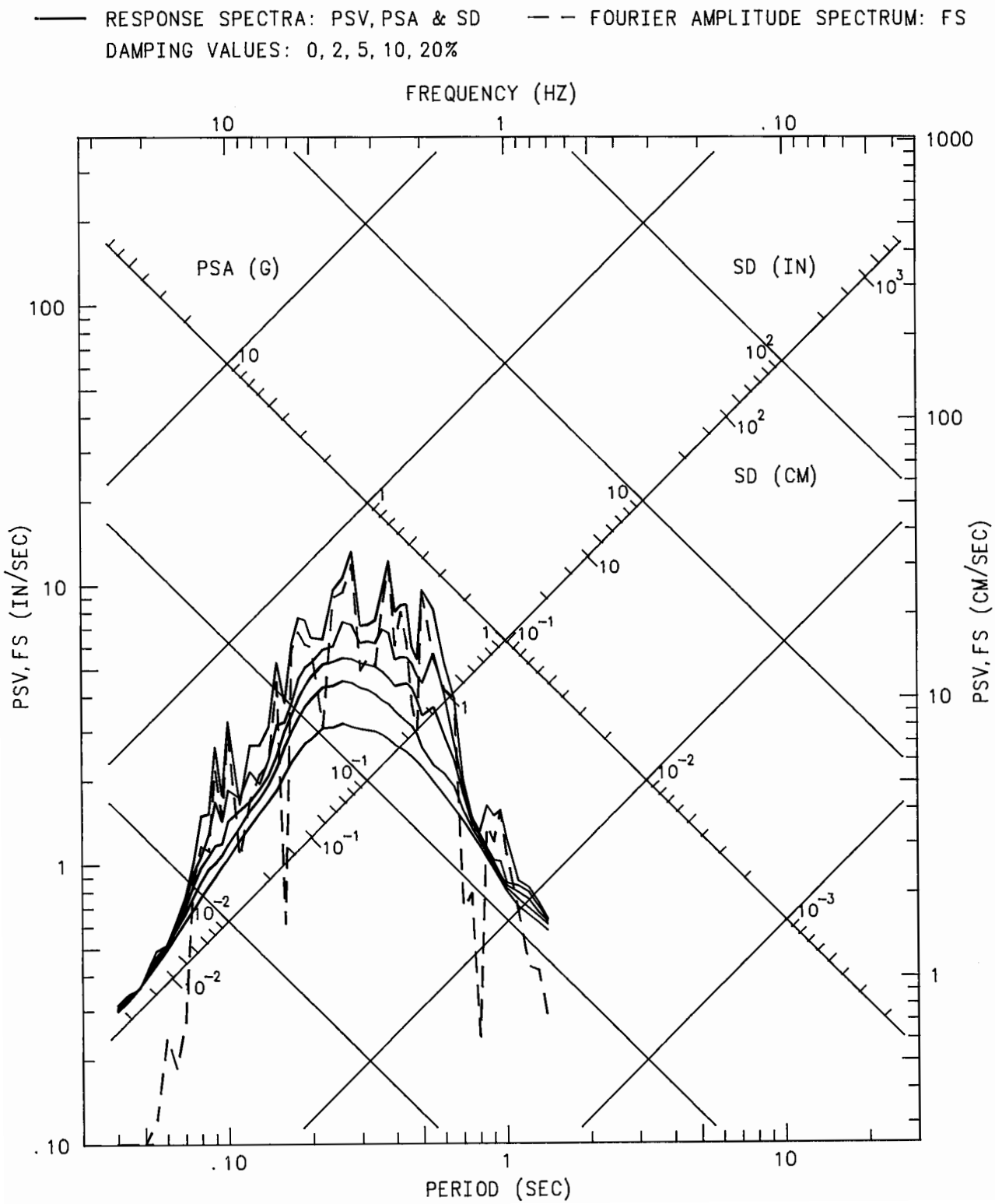
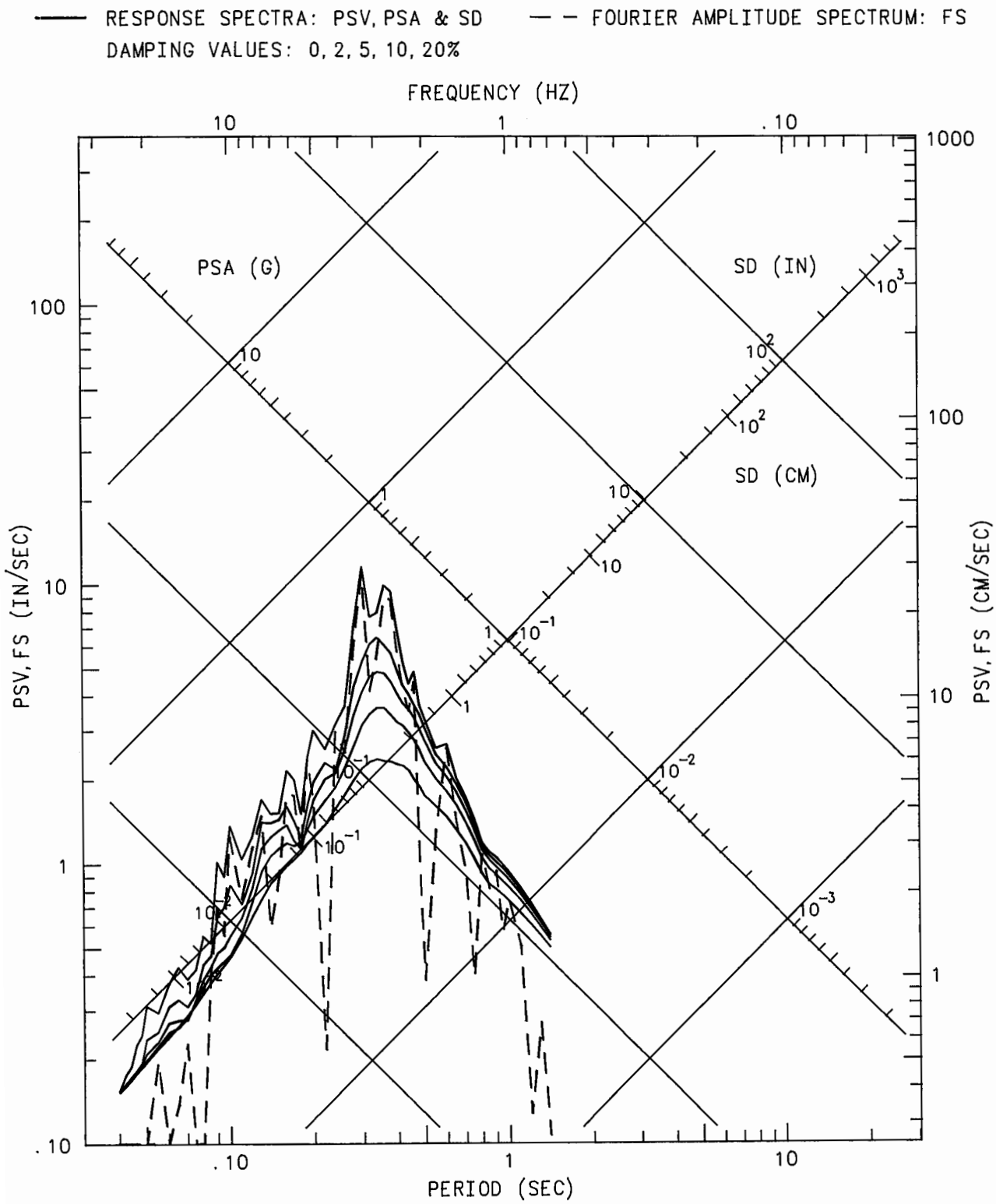


LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM
CHN 2 (STA CHN 8): UP (RIGHT CREST)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .50-1.00 TO 23.0-25.0 HZ.
57180-S2132-88181.02 030871.0513-QL88A180C



LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM
CHN 3 (STA CHN 9): 0 DEG (RIGHT CREST)
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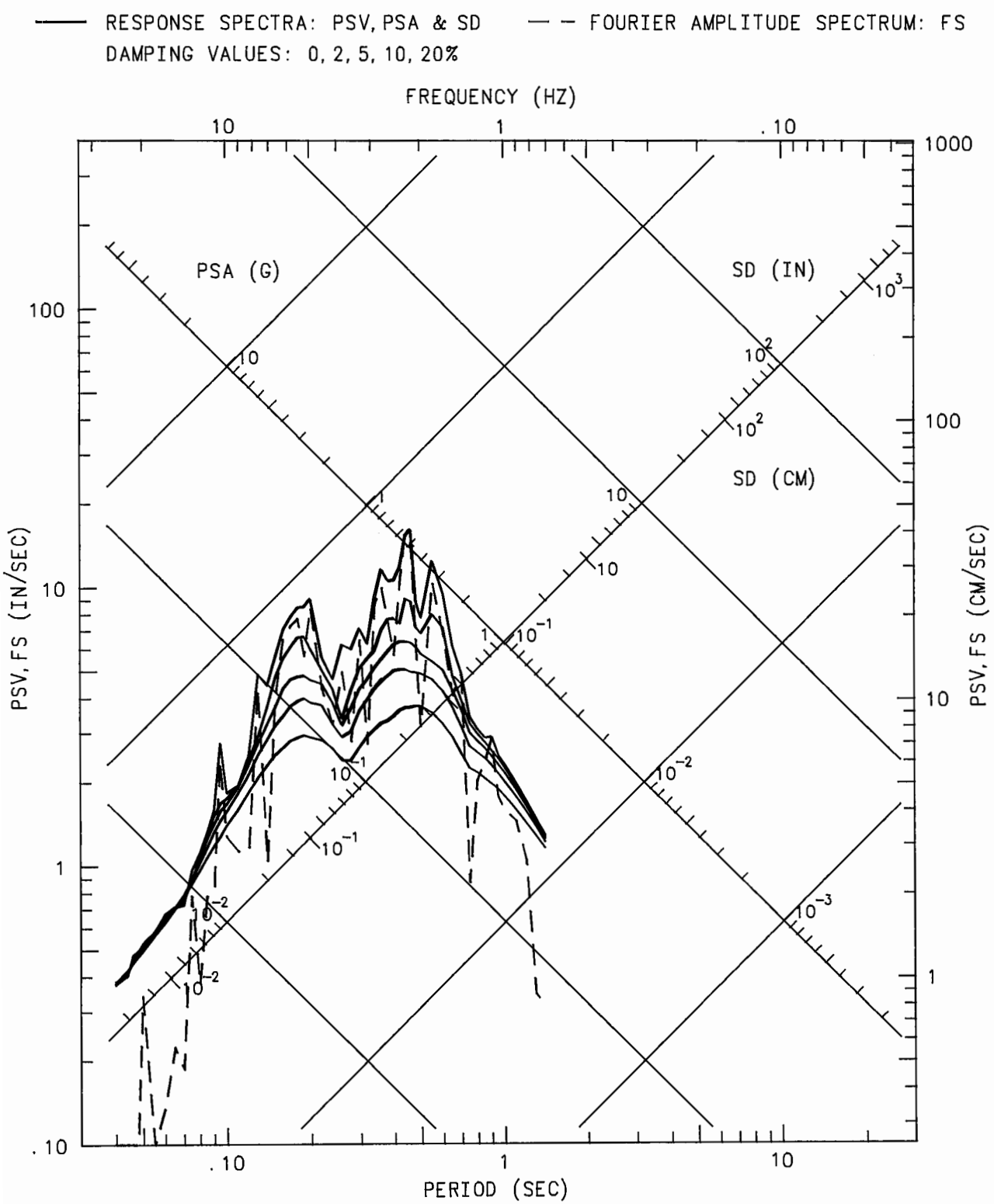
57180-S2132-88181.02 030871.0513-QL88A180C



LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .50-1.00 TO 23.0-25.0 HZ.
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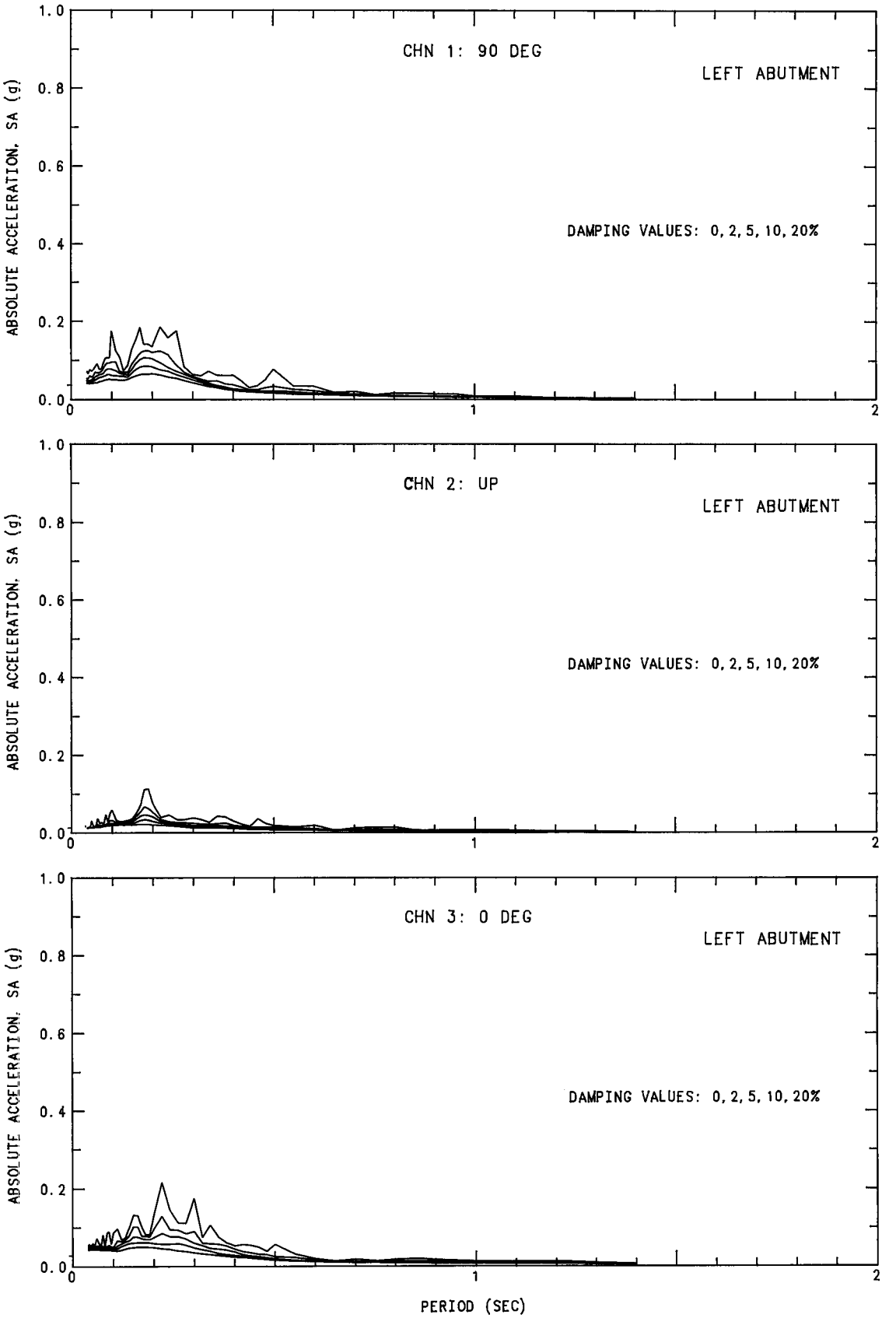

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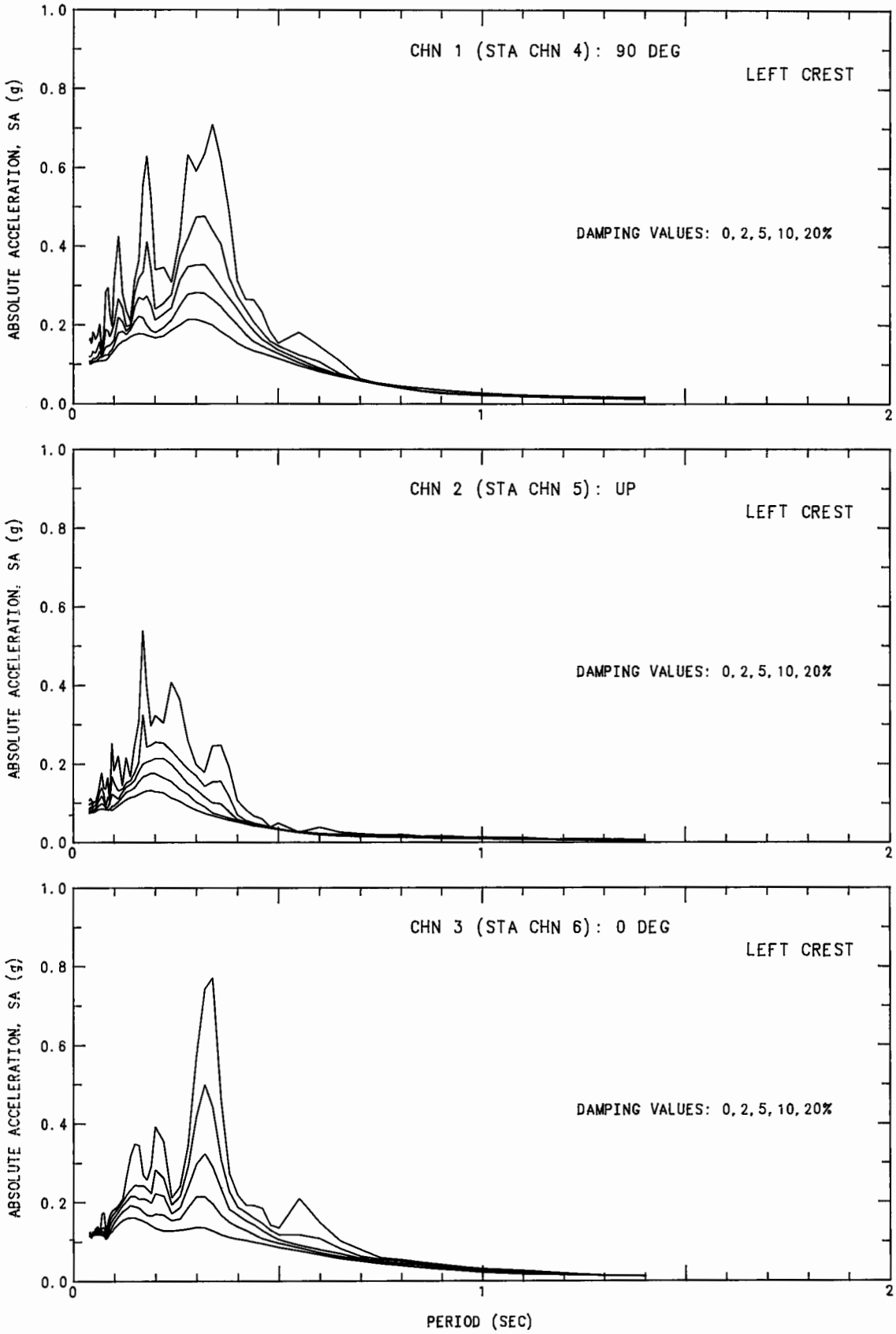
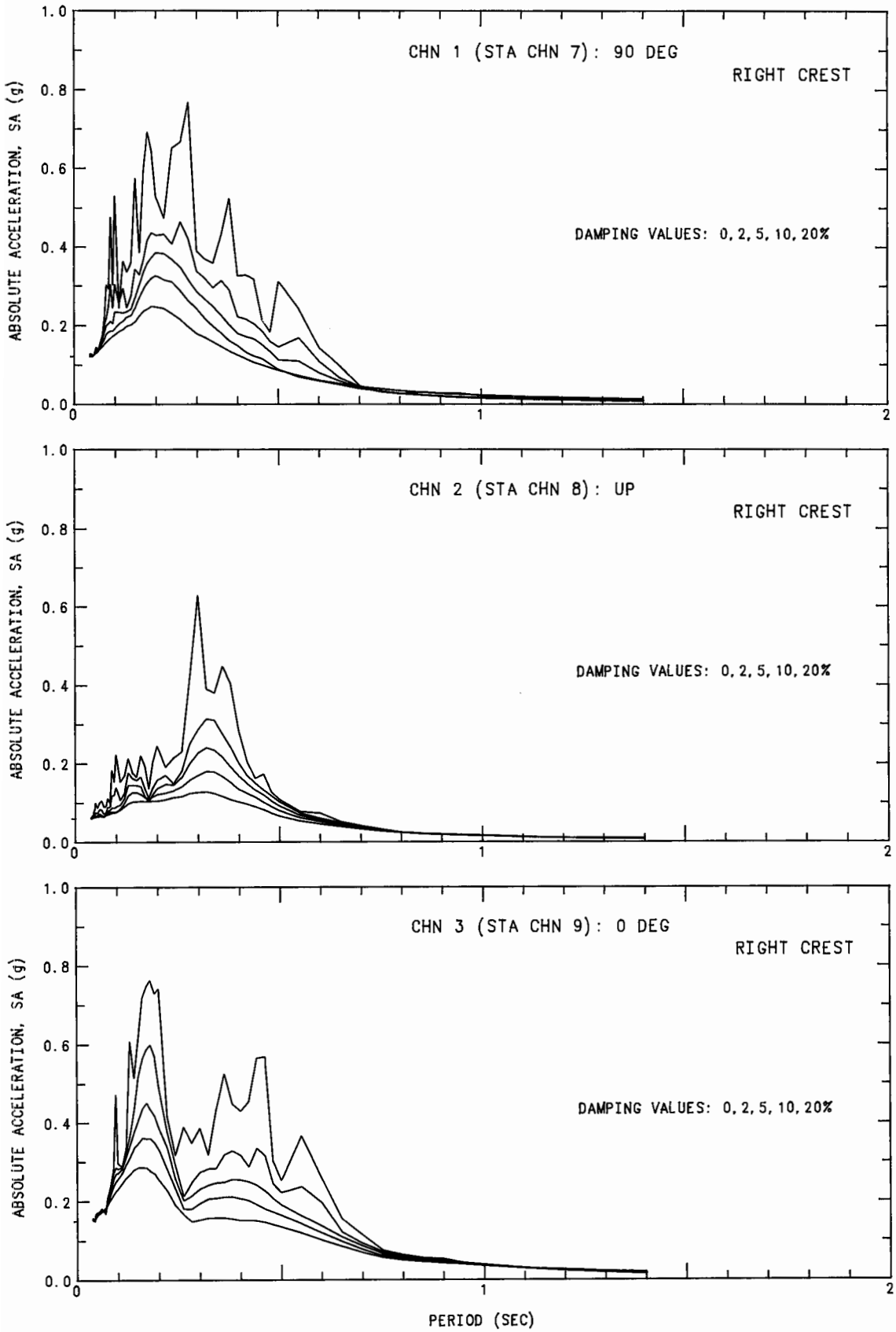
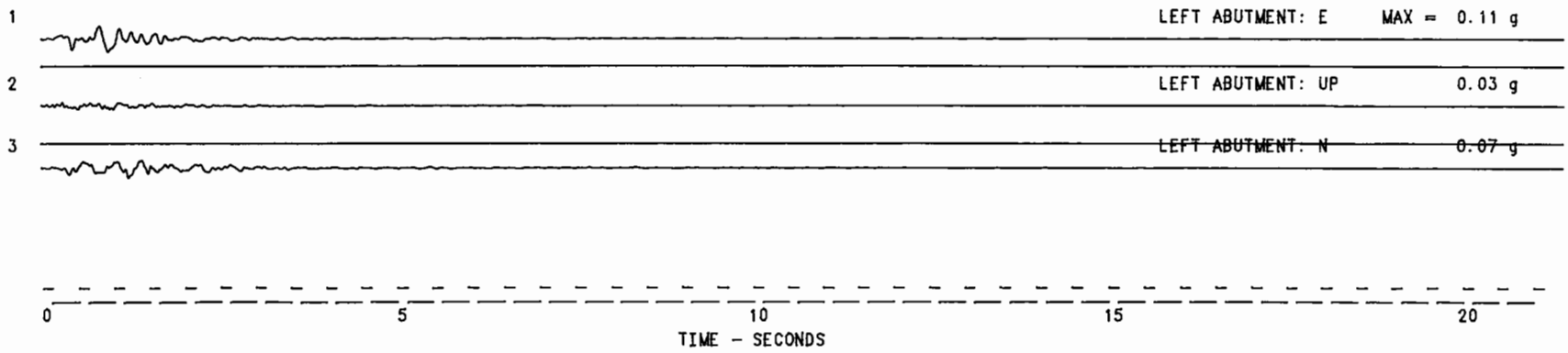
LEXINGTON DAM
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .50-1.00 TO 23.0-25.0 HZ.
57180-S2131-88181.01 030871.0534-QL88A180B



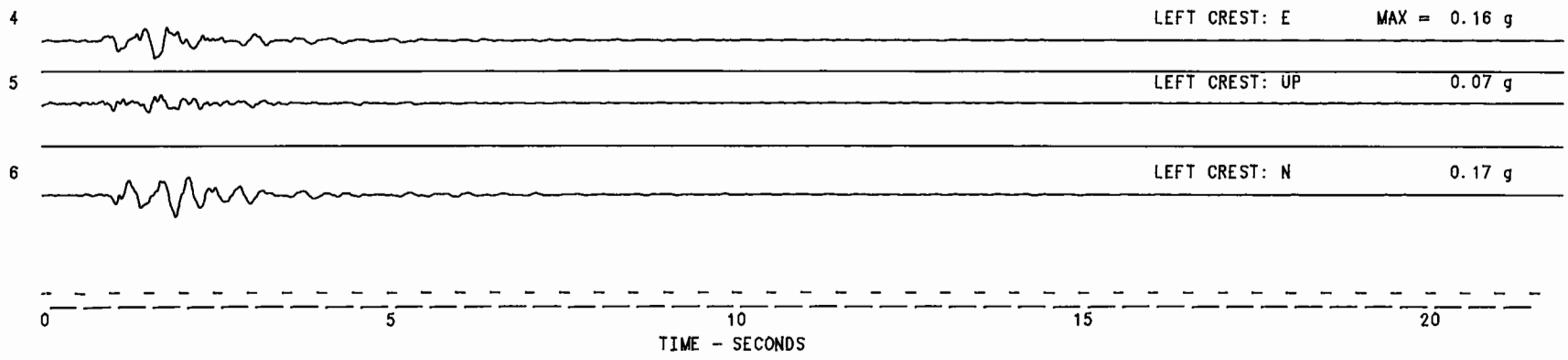
LAKE ELSMAN EARTHQUAKE JUNE 27, 1988 11:43 PDT
LEXINGTON DAM
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .50-1.00 TO 23.0-25.0 HZ.
57180-S2132-88181.02 030871.0513-QL88A180C



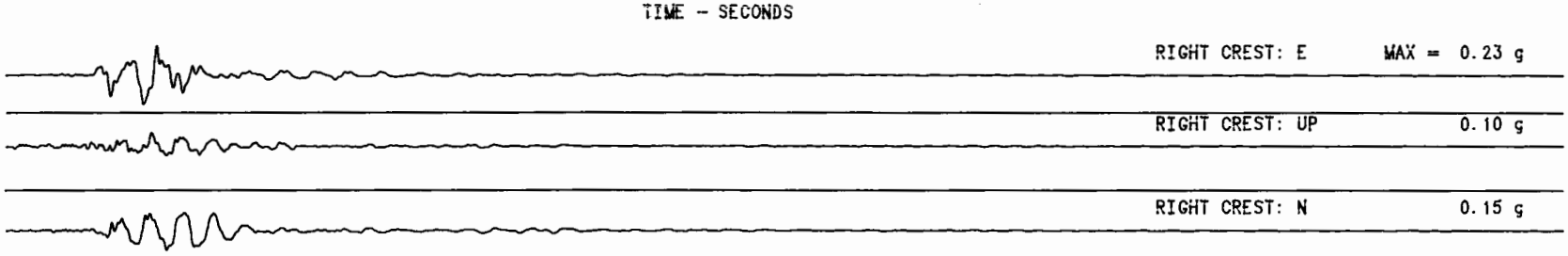
LEXINGTON DAM RECORD 57180-S2130-89292.01 LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT



LEXINGTON DAM RECORD 57180-S2131-89292.01 LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT



LEXINGTON DAM - - - - - - - - - - RECORD 57180-S2132-89292.01 - - - LAKE ELSMAN EARTHQUAKE - AUGUST 8, 1989 01:13 PDT



LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
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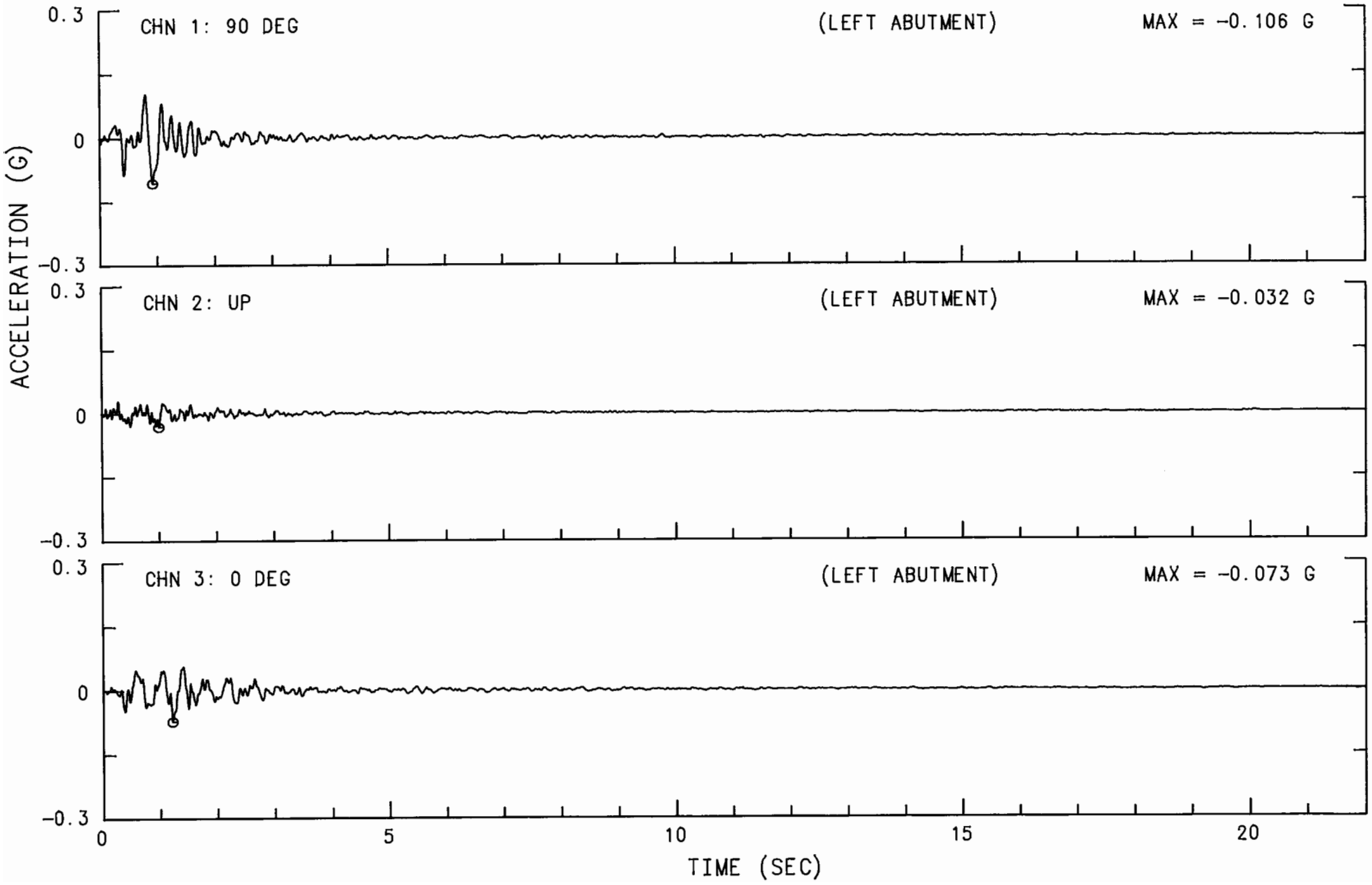

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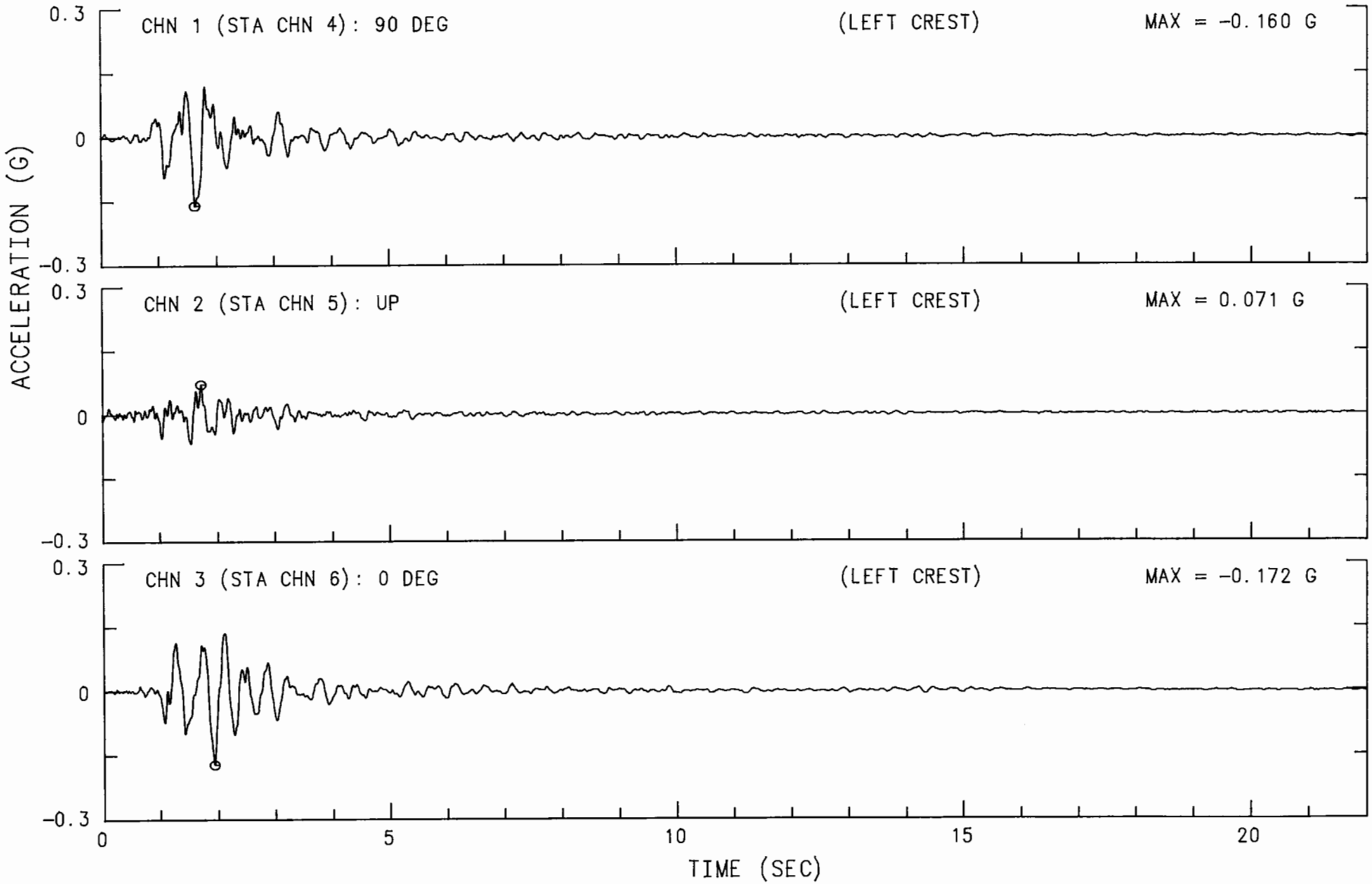
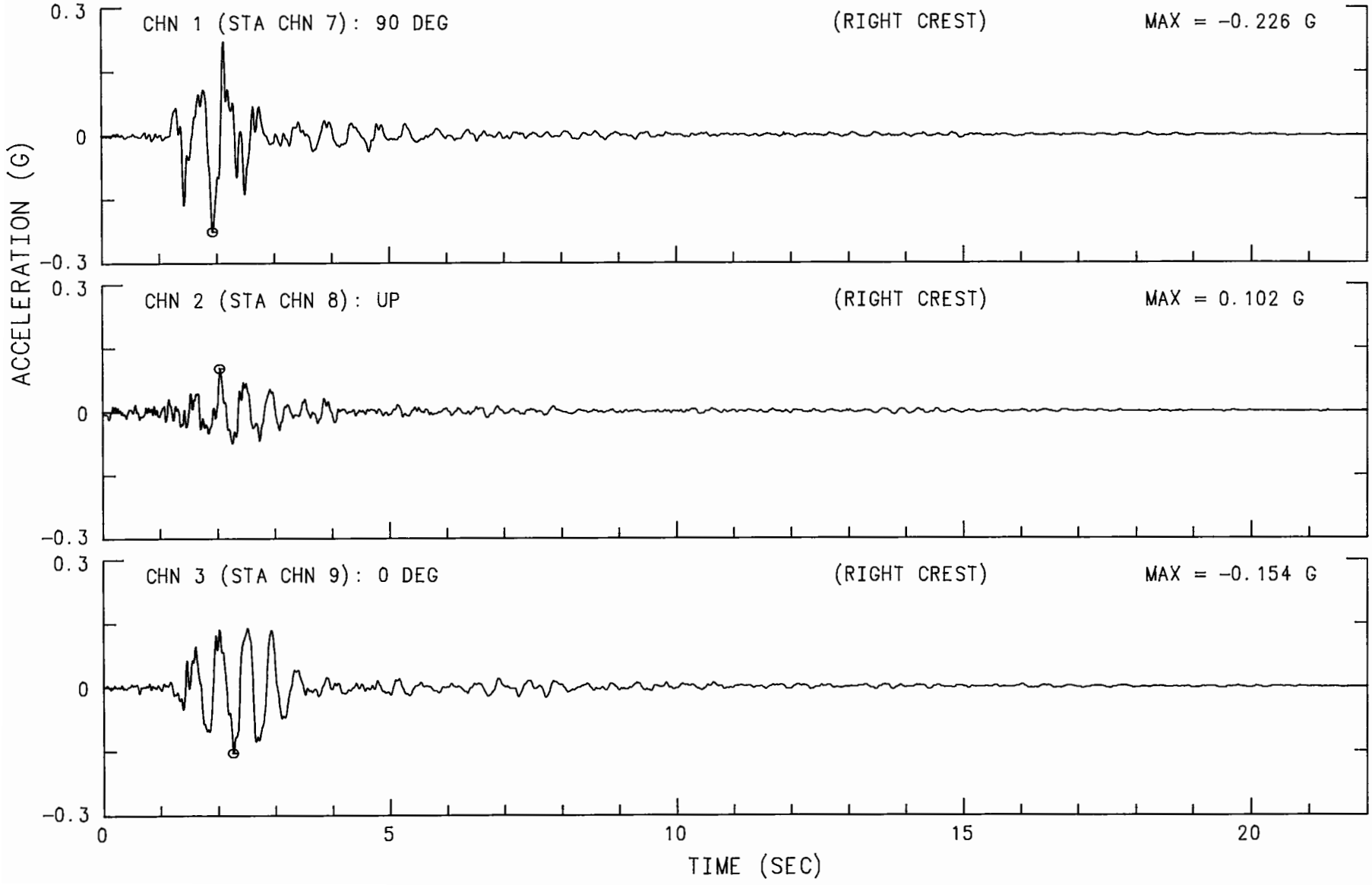


LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT

LEXINGTON DAM

UNCORRECTED ACCELEROGRAM 57180-S2132-89292.01 031071.2244-QL89A180C



LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT

LEXINGTON DAM

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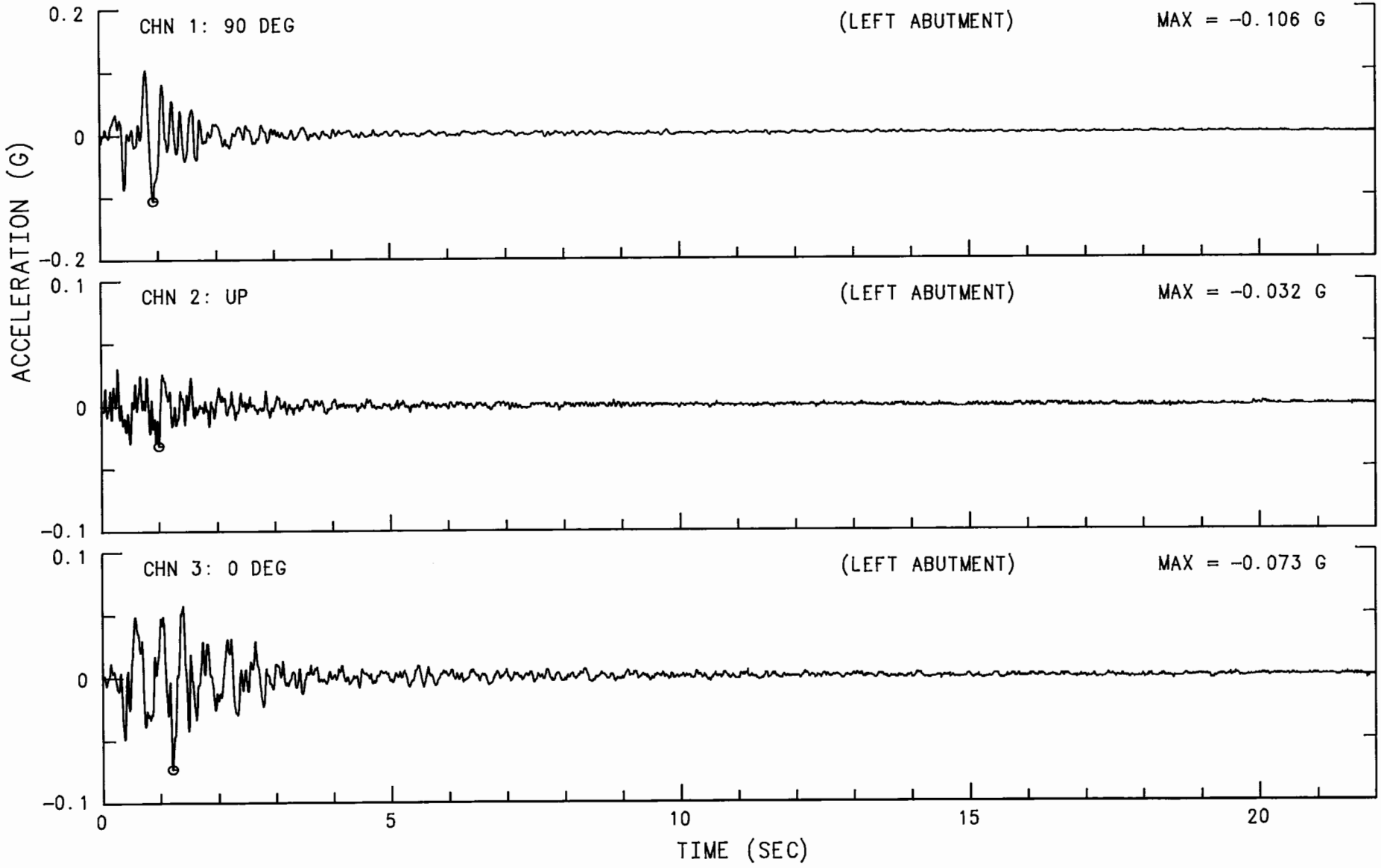
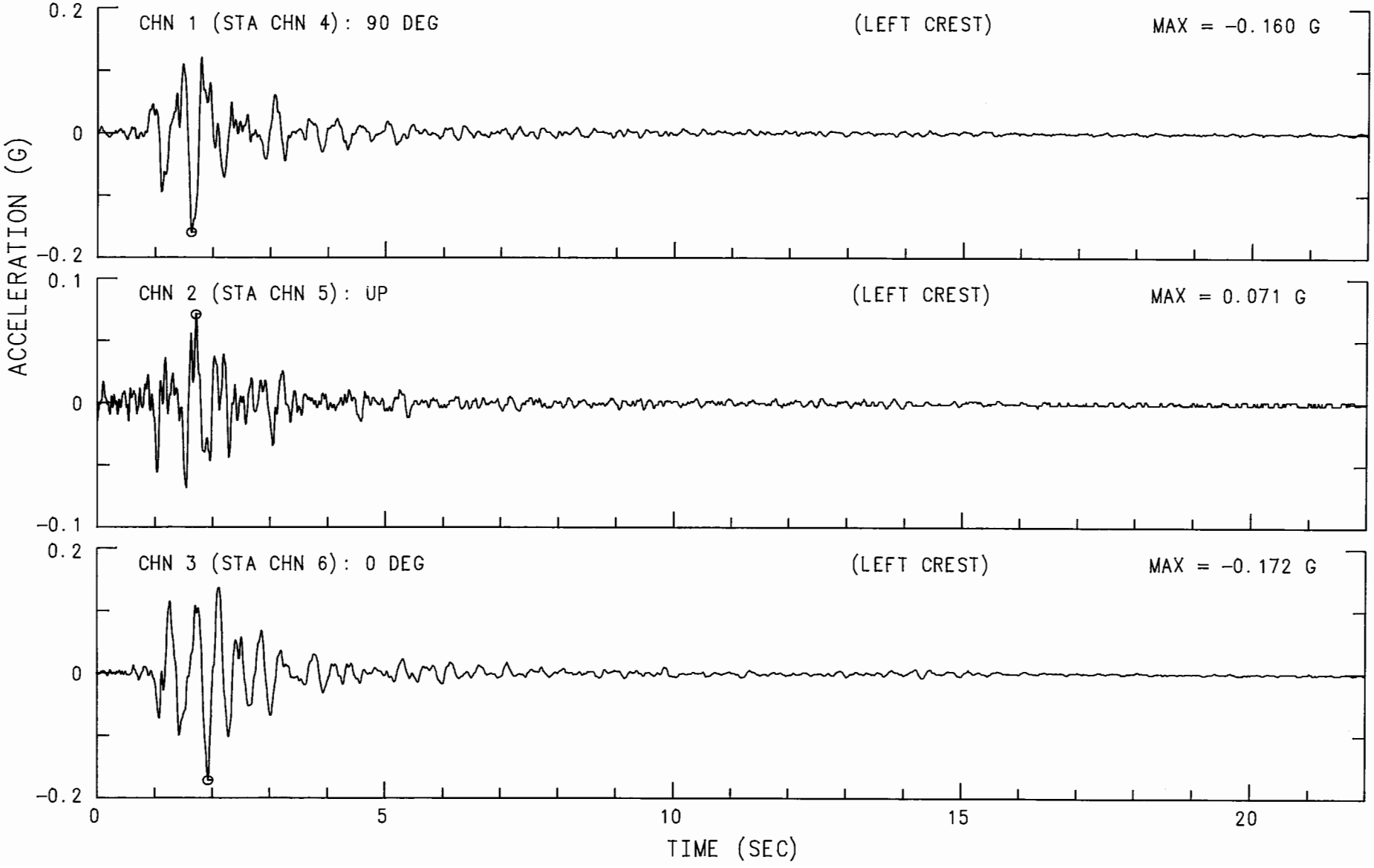


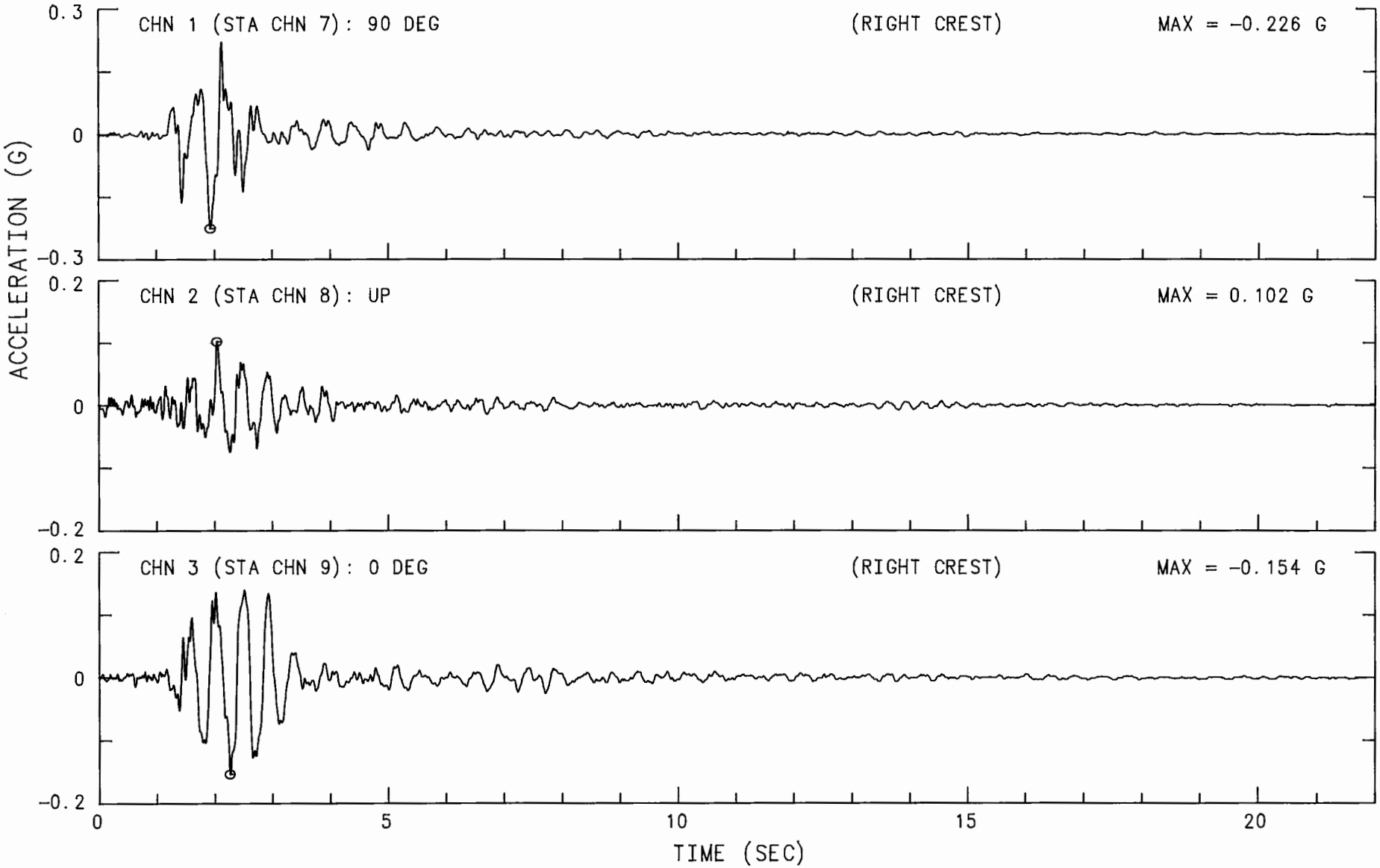
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT

LEXINGTON DAM

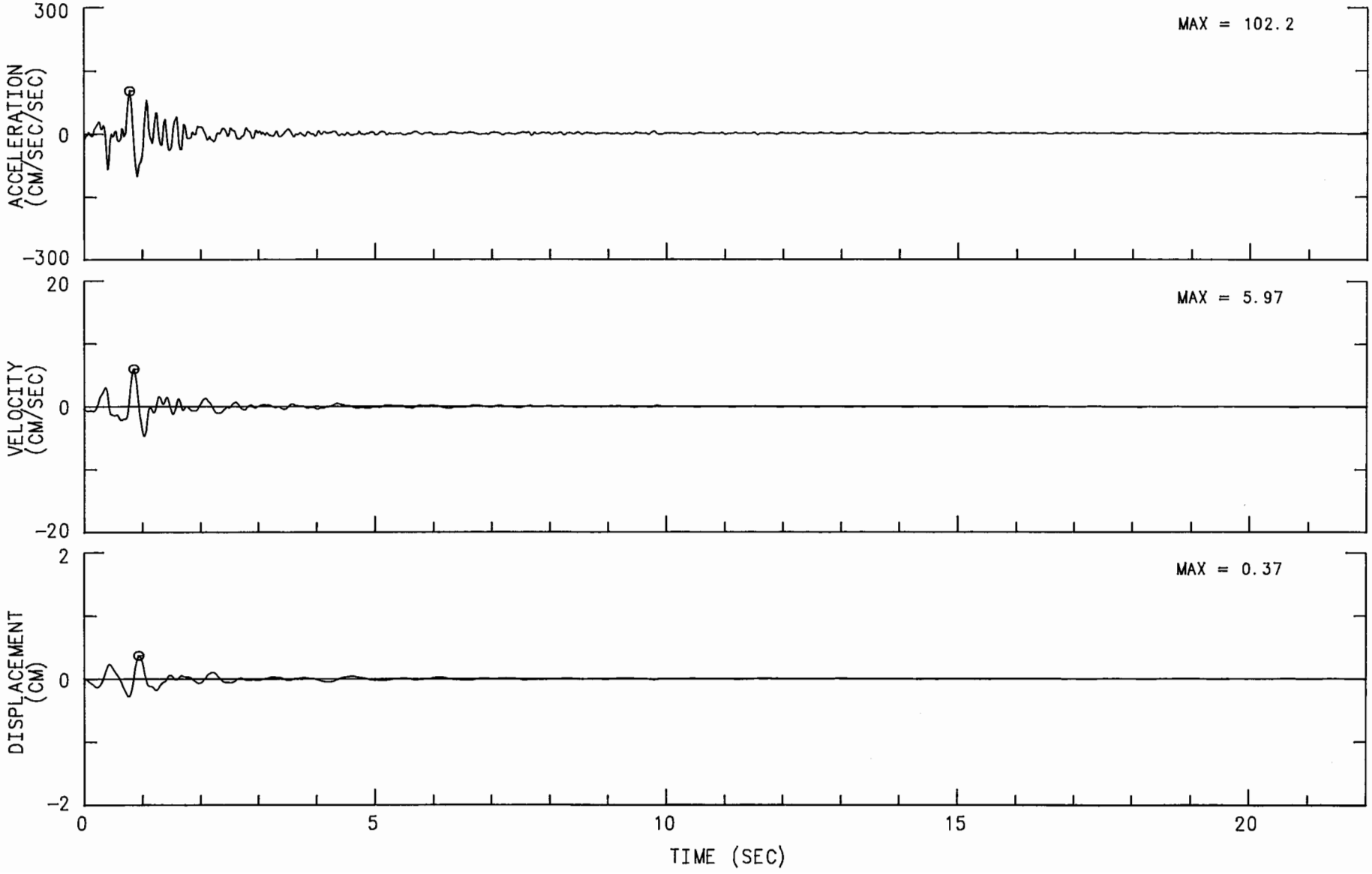
UNCORRECTED ACCELEROGRAM 57180-S2131-89292.01 031071.2224-QL89A180B



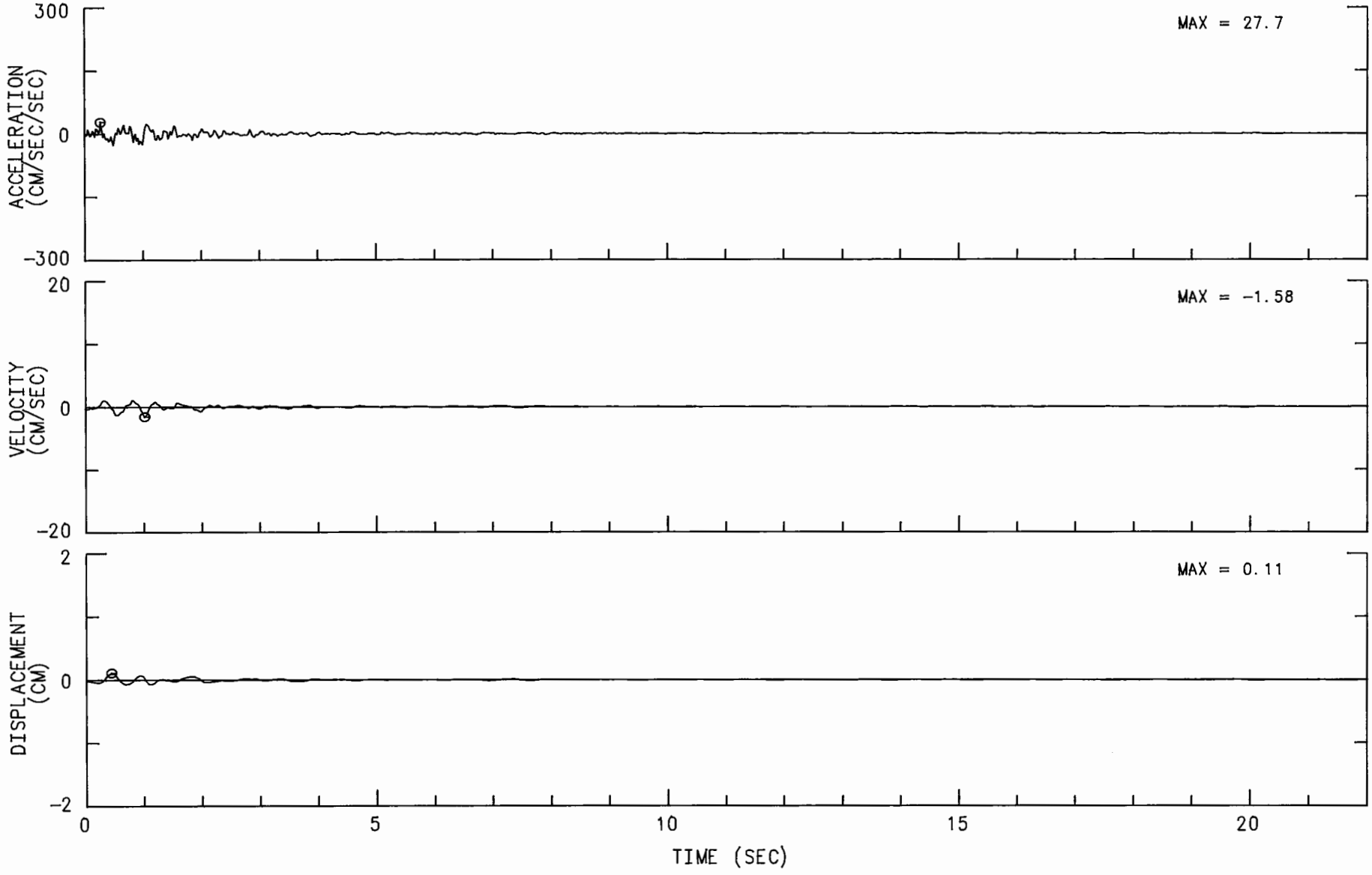
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
UNCORRECTED ACCELEROGRAM 57180-S2132-89292.01 031071.2244-QL89A180C



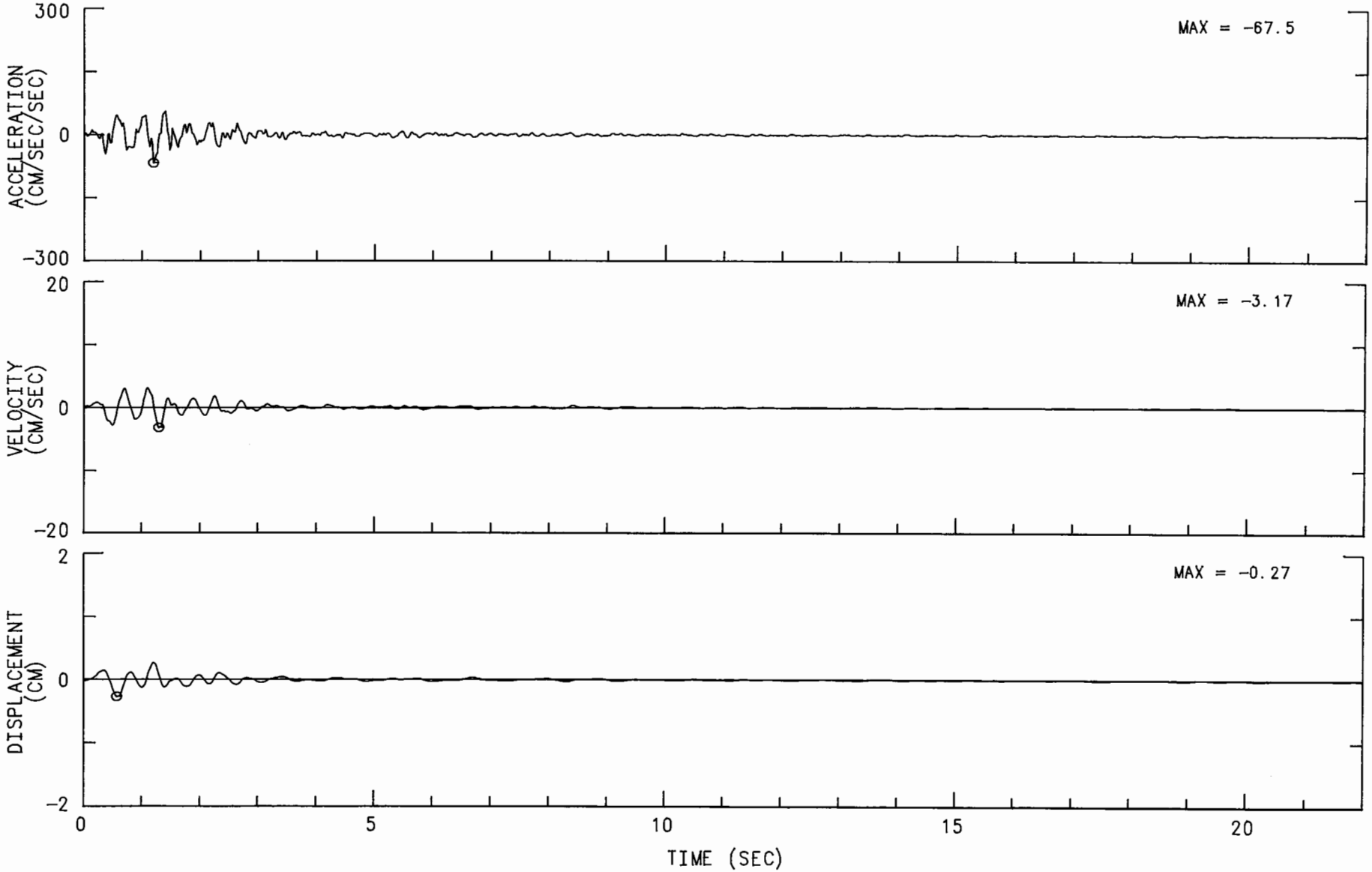
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM CHN 1: 90 DEG (LEFT ABUTMENT)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .40-.80 TO 23.0-25.0 HZ. 57180-S2130-89292.01 031071.2300-QL89A180A



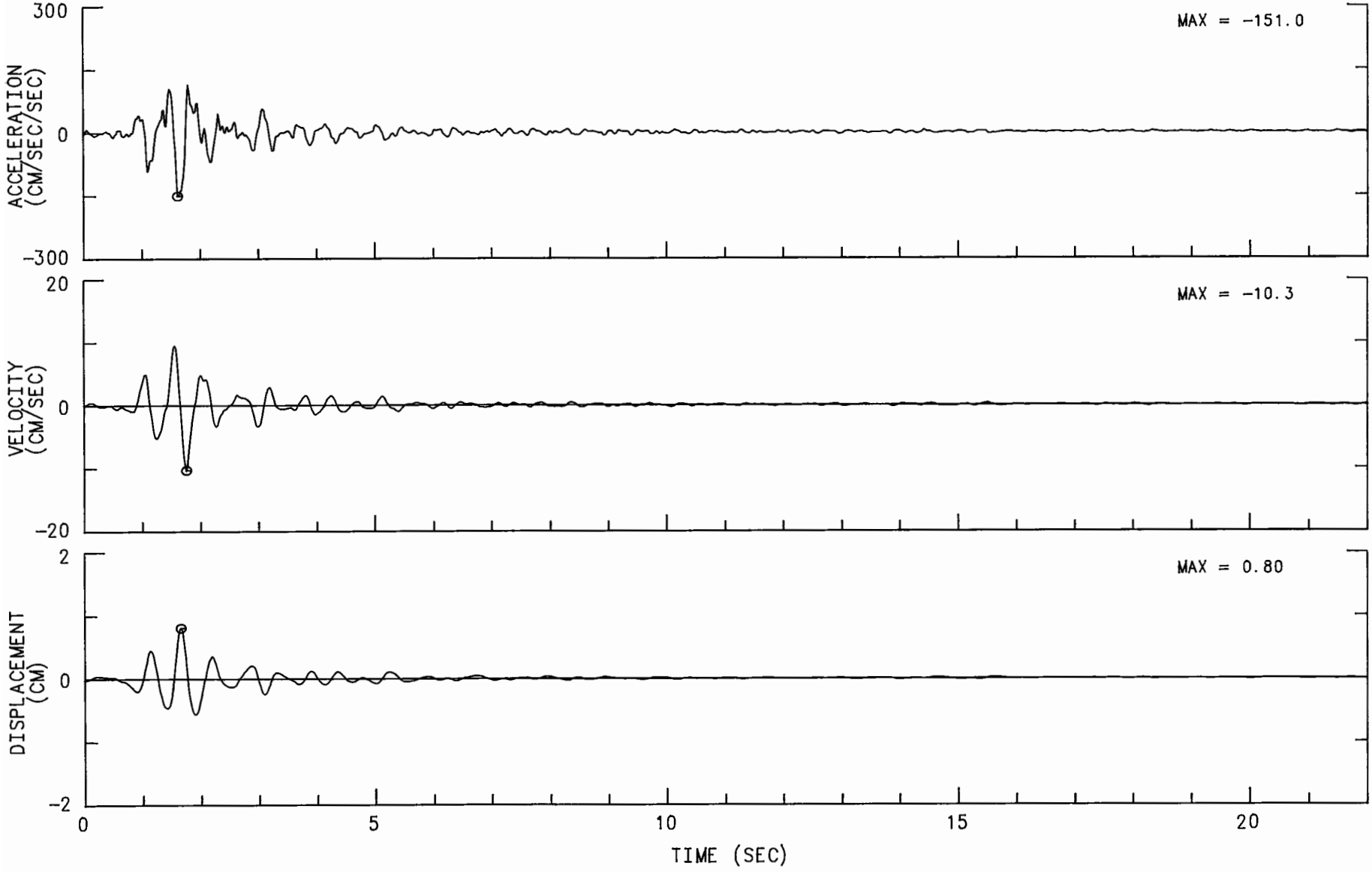
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM CHN 2: UP (LEFT ABUTMENT)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .40-.80 TO 23.0-25.0 HZ. 57180-S2130-89292.01 031071.2300-QL89A180A



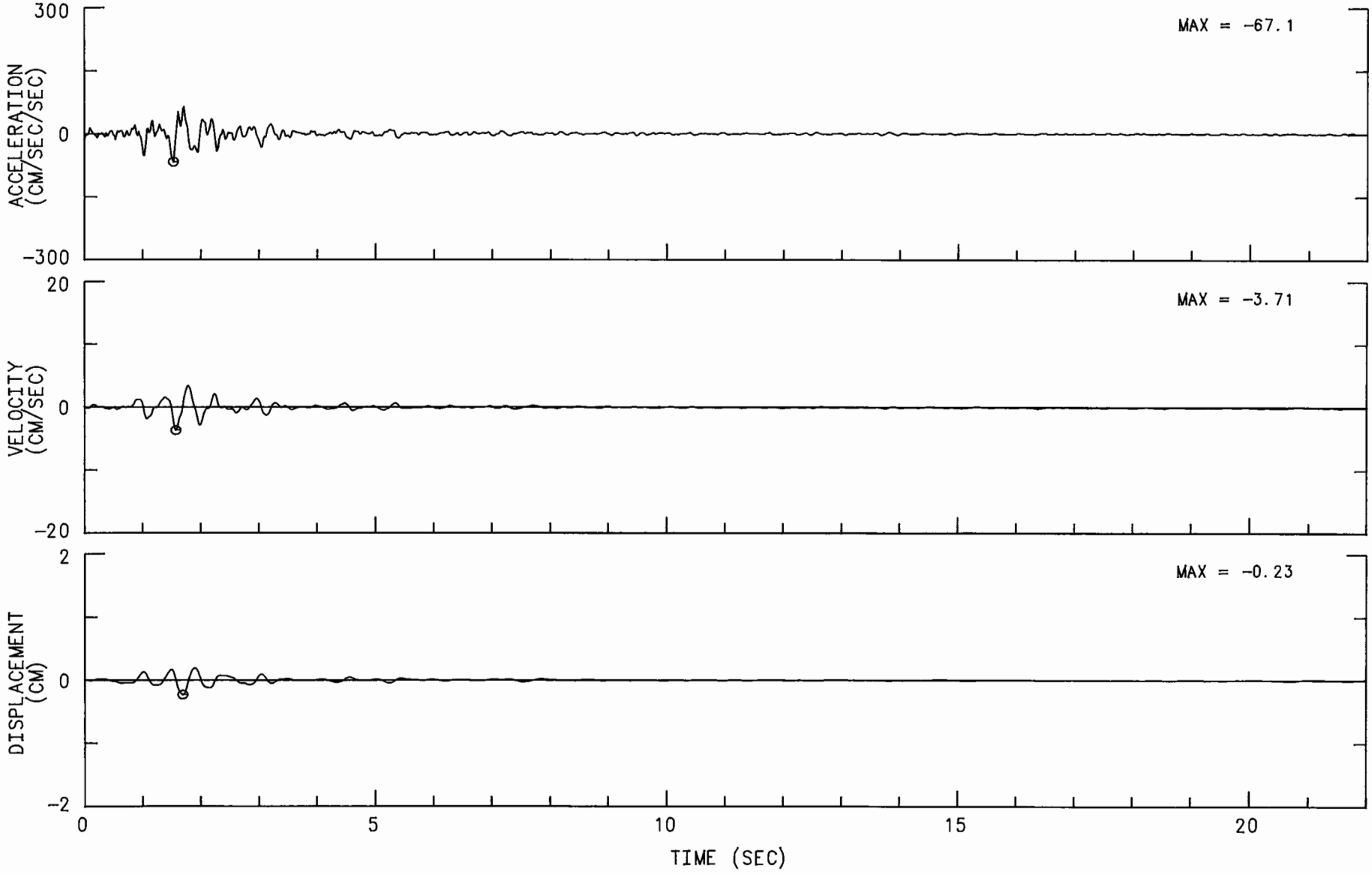
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM CHN 3: 0 DEG (LEFT ABUTMENT)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .40-.80 TO 23.0-25.0 HZ. 57180-S2130-89292.01 031071.2300-QL89A180A



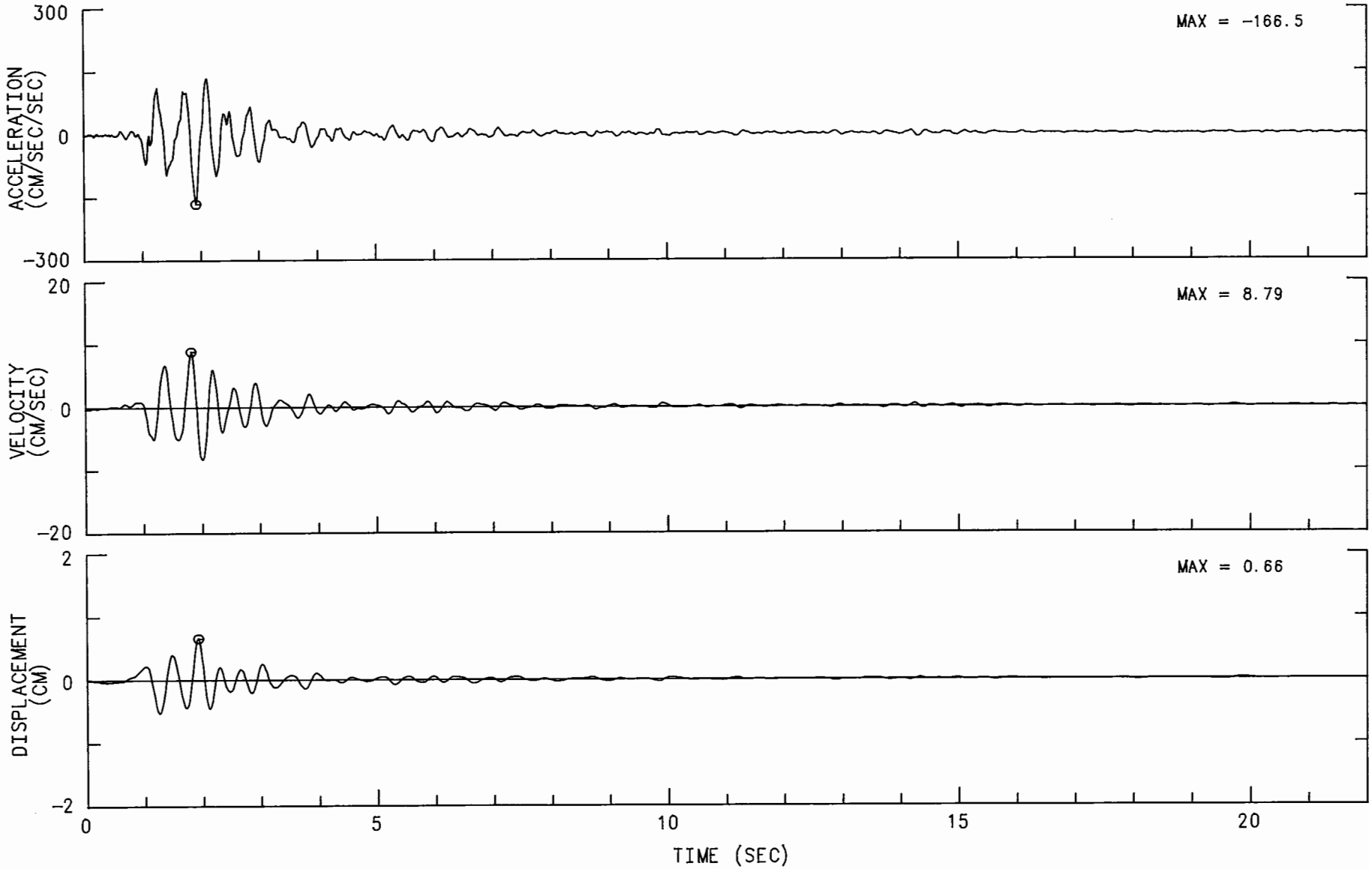
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM CHN 1 (STA CHN 4): 90 DEG (LEFT CREST)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .40-.80 TO 23.0-25.0 HZ. 57180-S2131-89292.01 031071.2321-QL89A180B



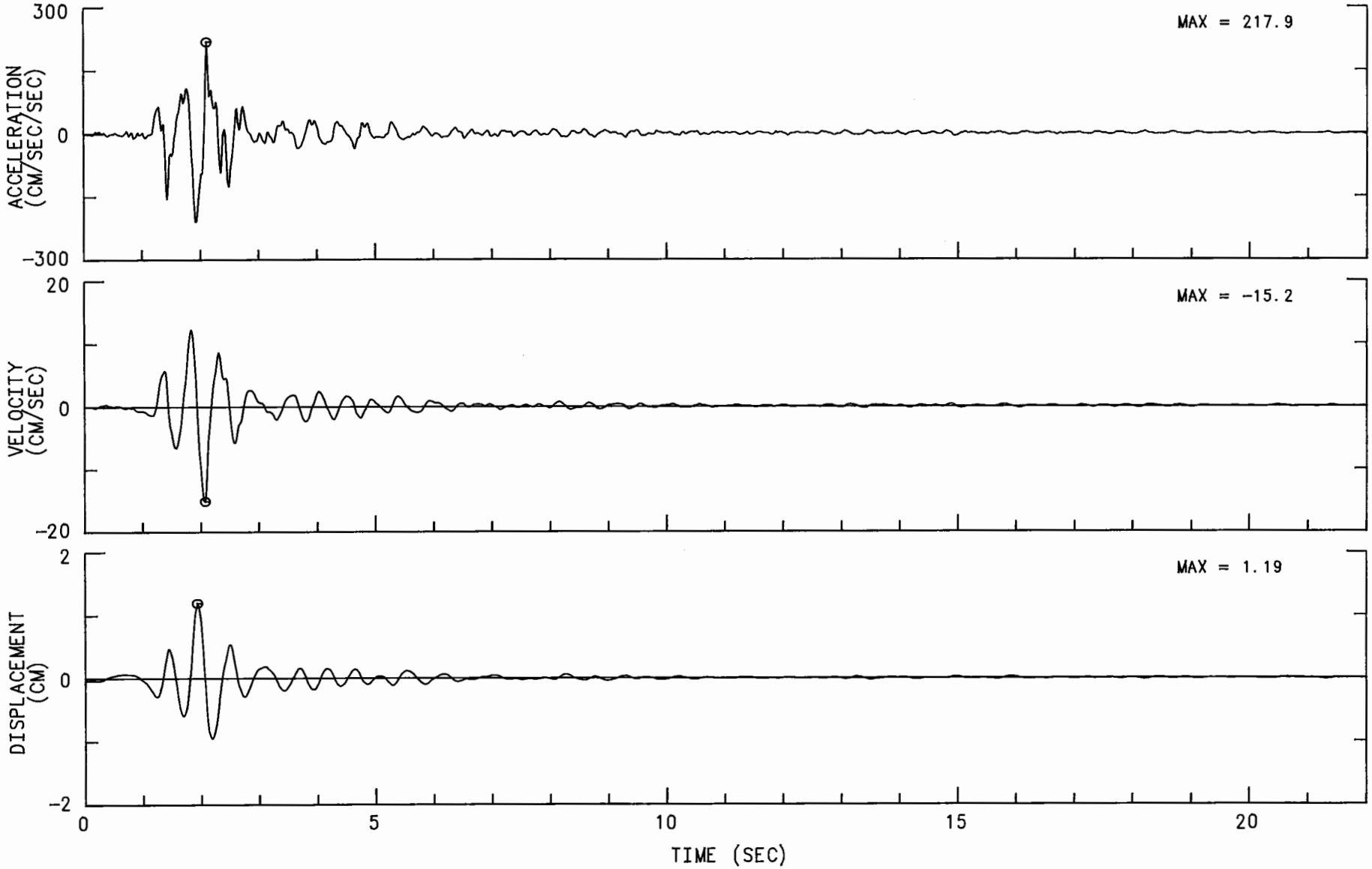
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM CHN 2 (STA CHN 5): UP (LEFT CREST)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .40-.80 TO 23.0-25.0 HZ. 57180-S2131-89292.01 031071.2321-QL89A180B



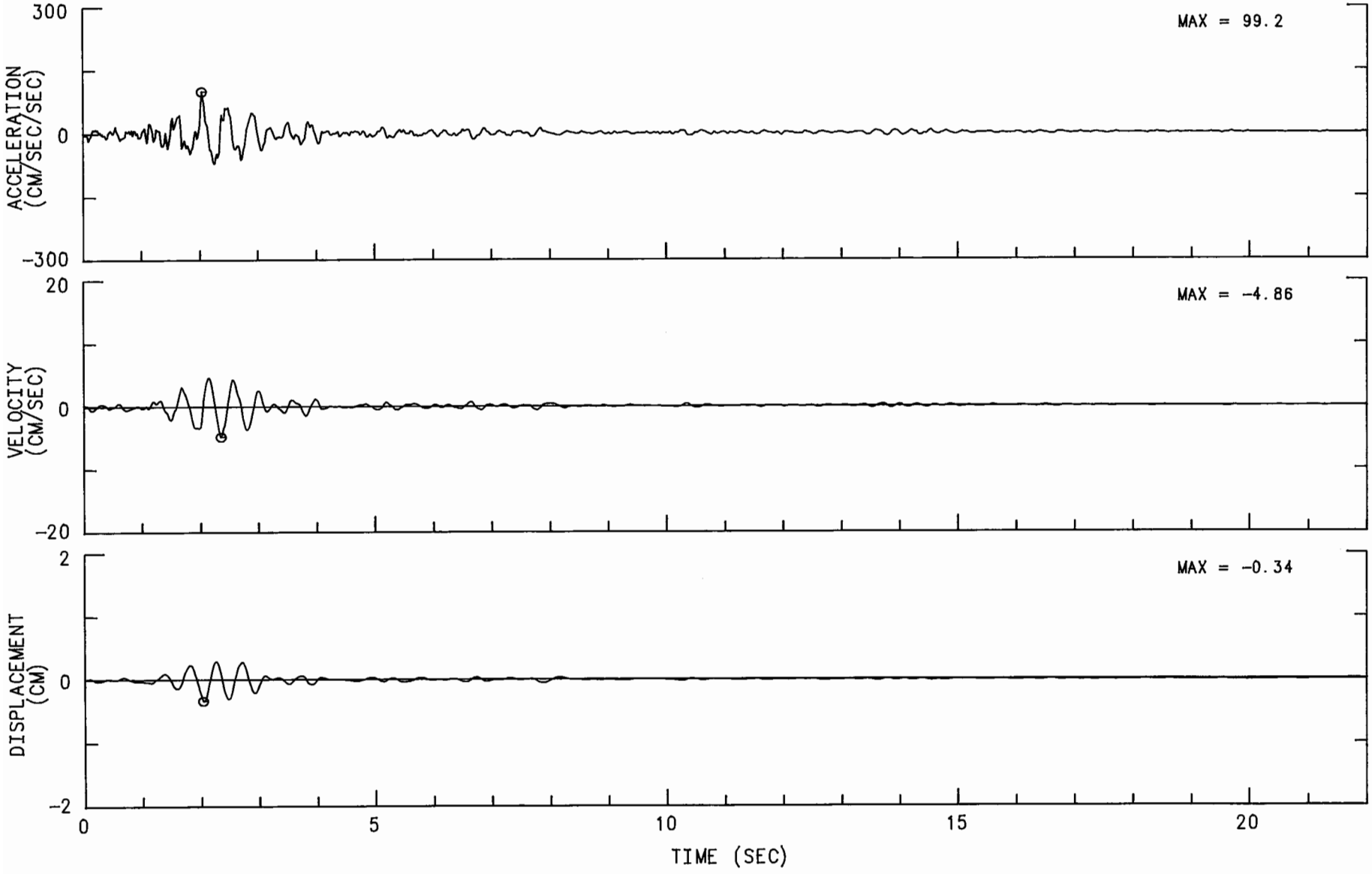
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM CHN 3 (STA CHN 6): 0 DEG (LEFT CREST)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .40-.80 TO 23.0-25.0 HZ. 57180-S2131-89292.01 031071.2321-QL89A180B



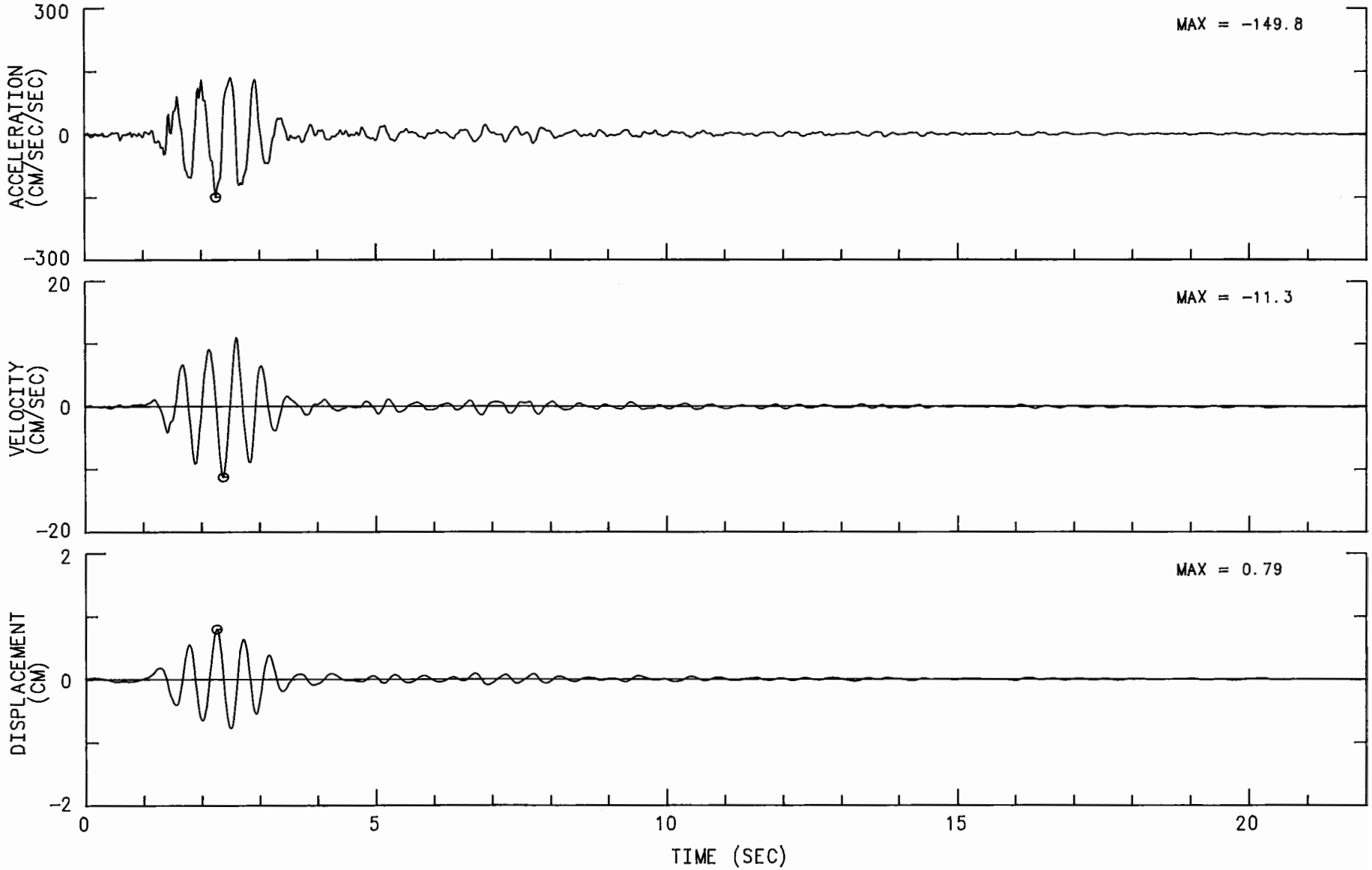
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM CHN 1 (STA CHN 7): 90 DEG (RIGHT CREST)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .40-.80 TO 23.0-25.0 HZ. 57180-S2132-89292.01 031071.2343-QL89A180C



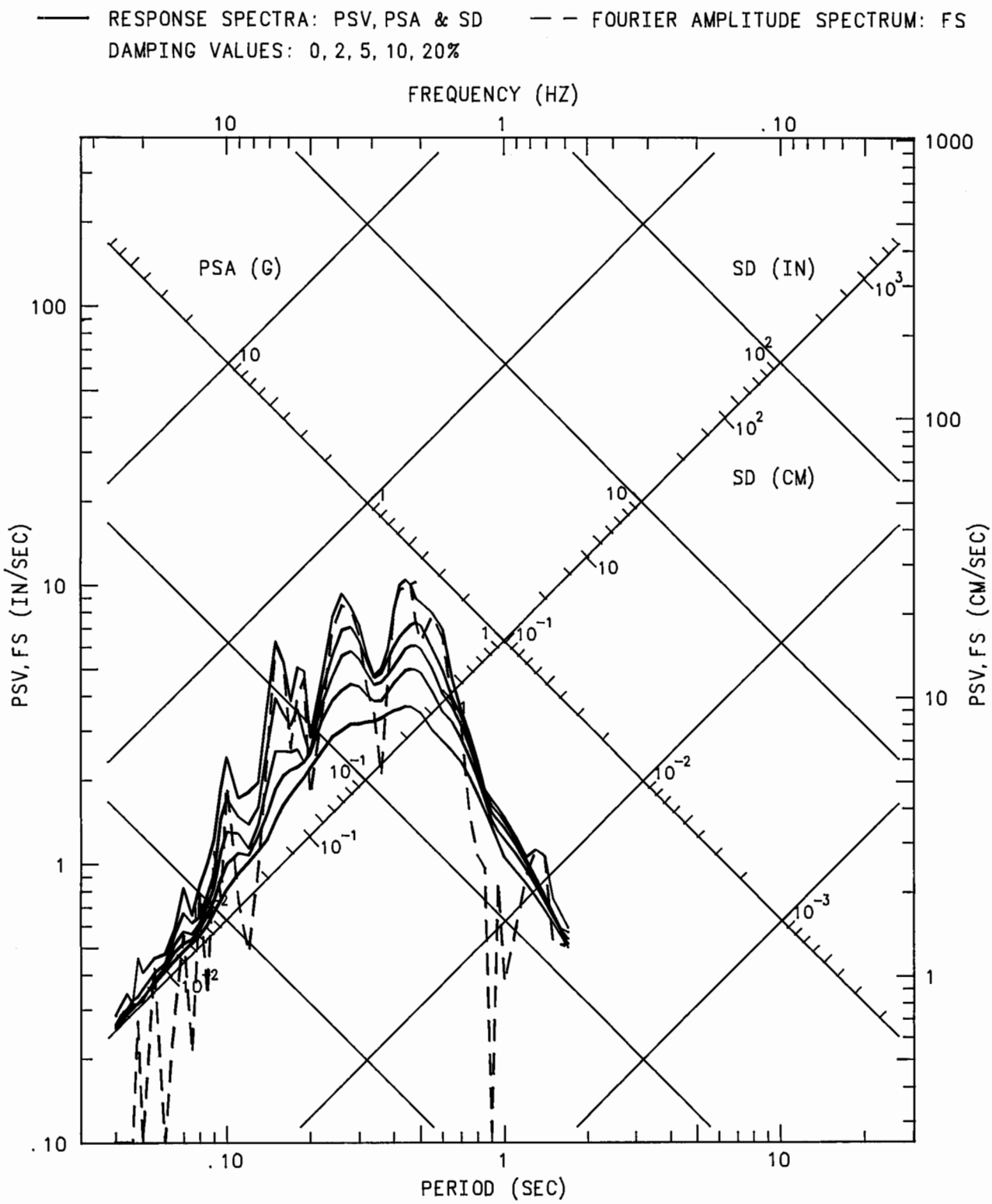
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM CHN 2 (STA CHN 8): UP (RIGHT CREST)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .40-.80 TO 23.0-25.0 HZ. 57180-S2132-89292.01 031071.2343-QL89A180C



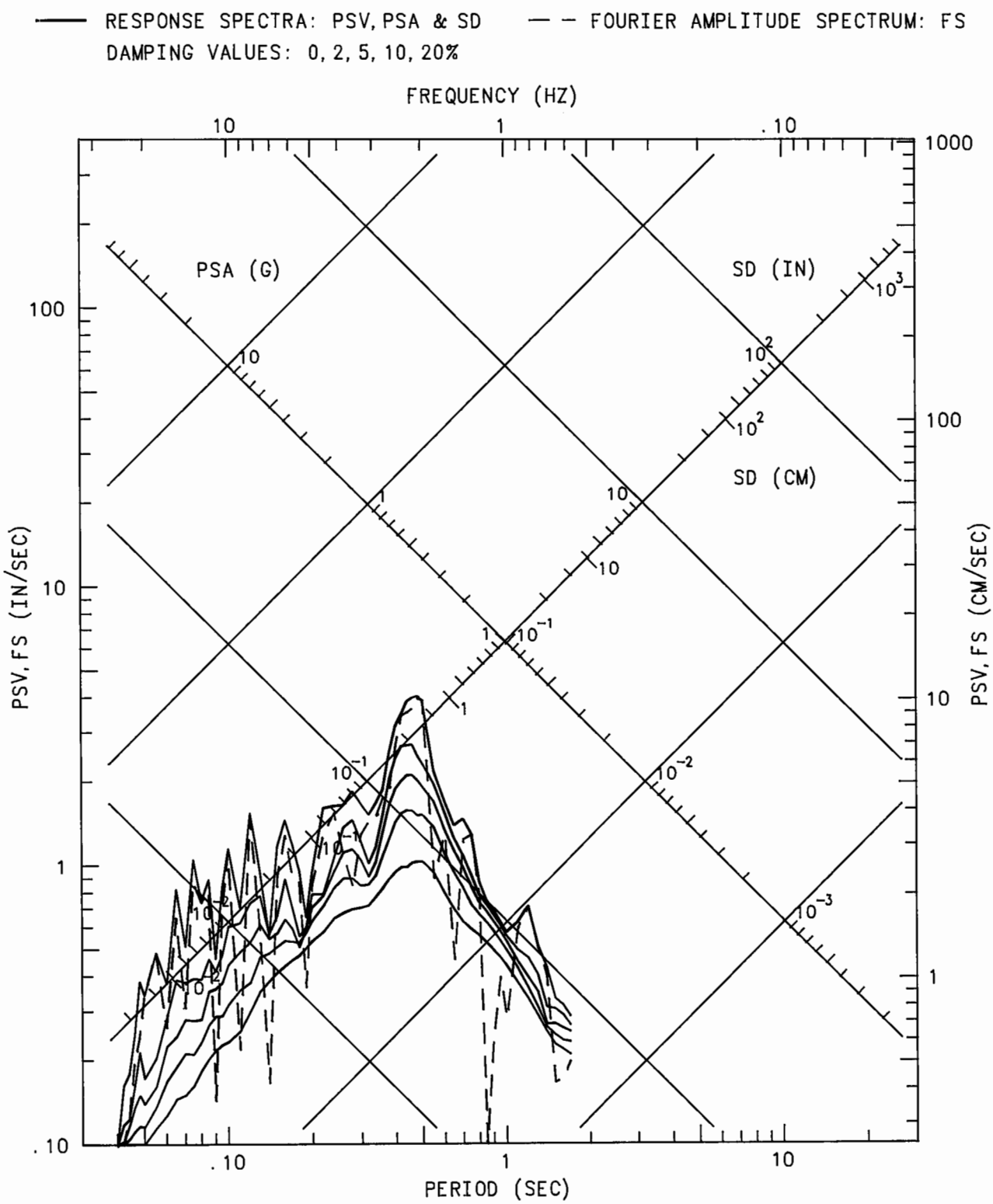
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM CHN 3 (STA CHN 9): 0 DEG (RIGHT CREST)
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .40-.80 TO 23.0-25.0 HZ. 57180-S2132-89292.01 031071.2343-QL89A180C



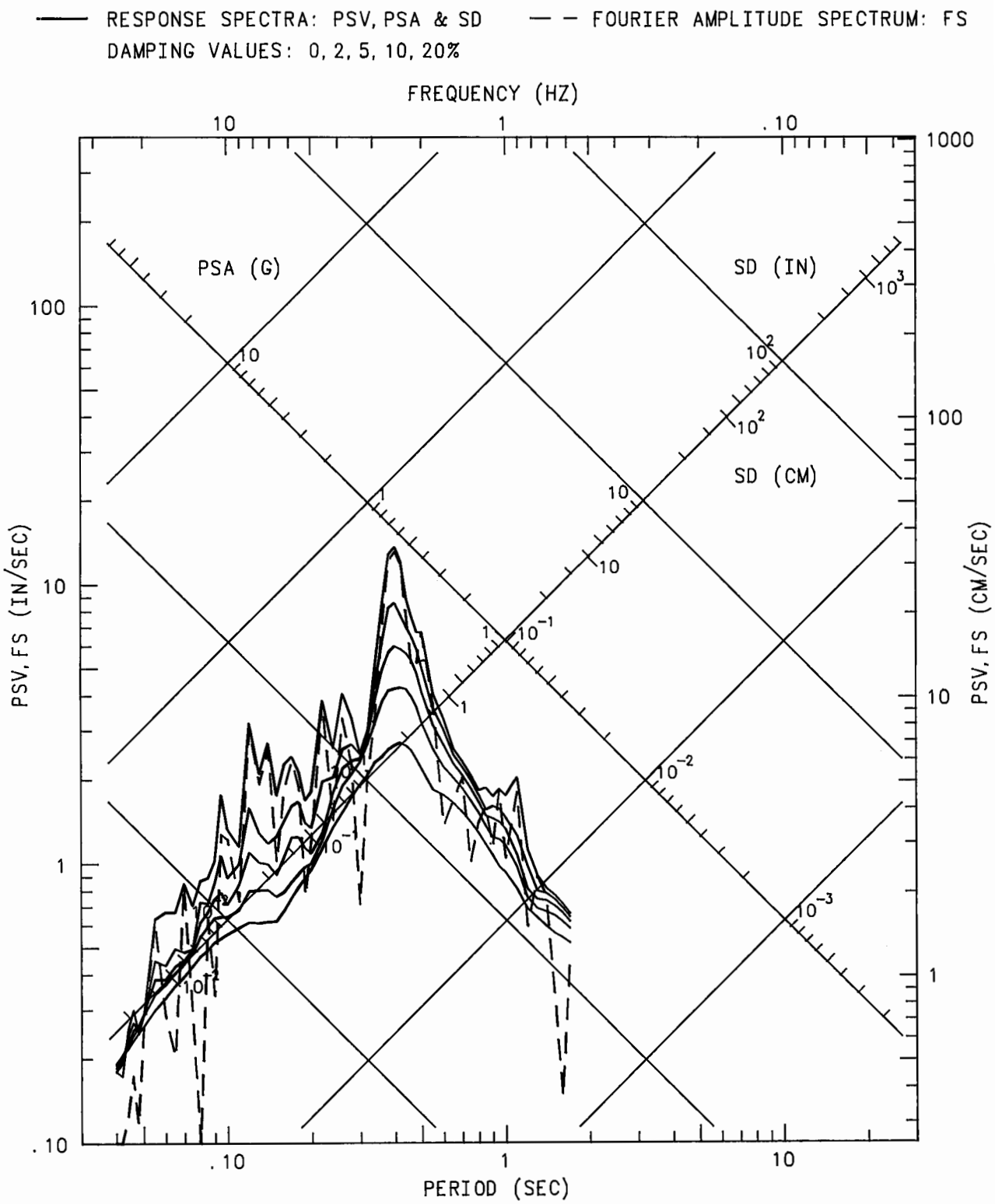
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
CHN 1: 90 DEG (LEFT ABUTMENT)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2130-89292.01 031071.2307-QL89A180A



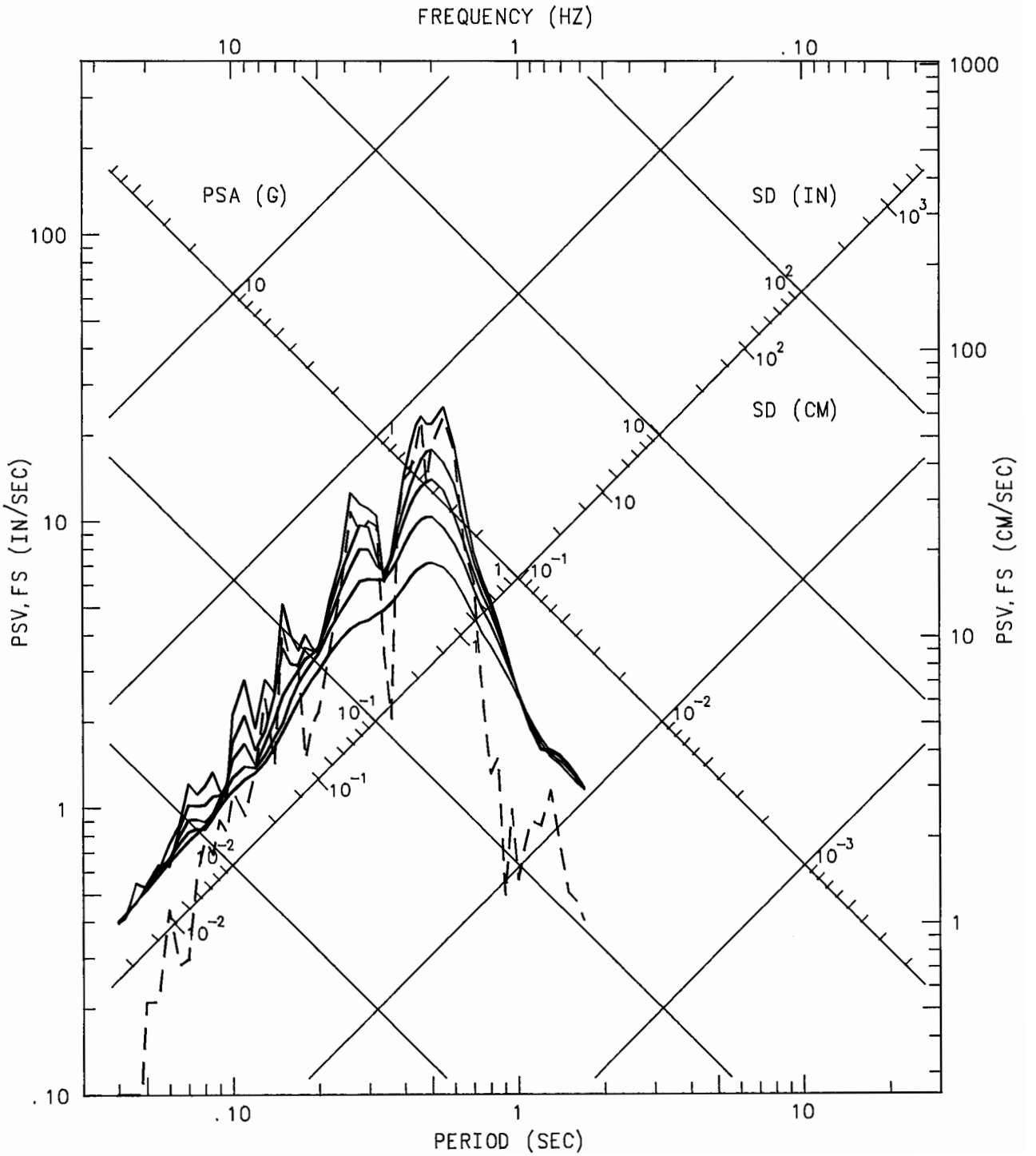
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
CHN 2: UP (LEFT ABUTMENT)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2130-89292.01 031071.2307-QL89A180A



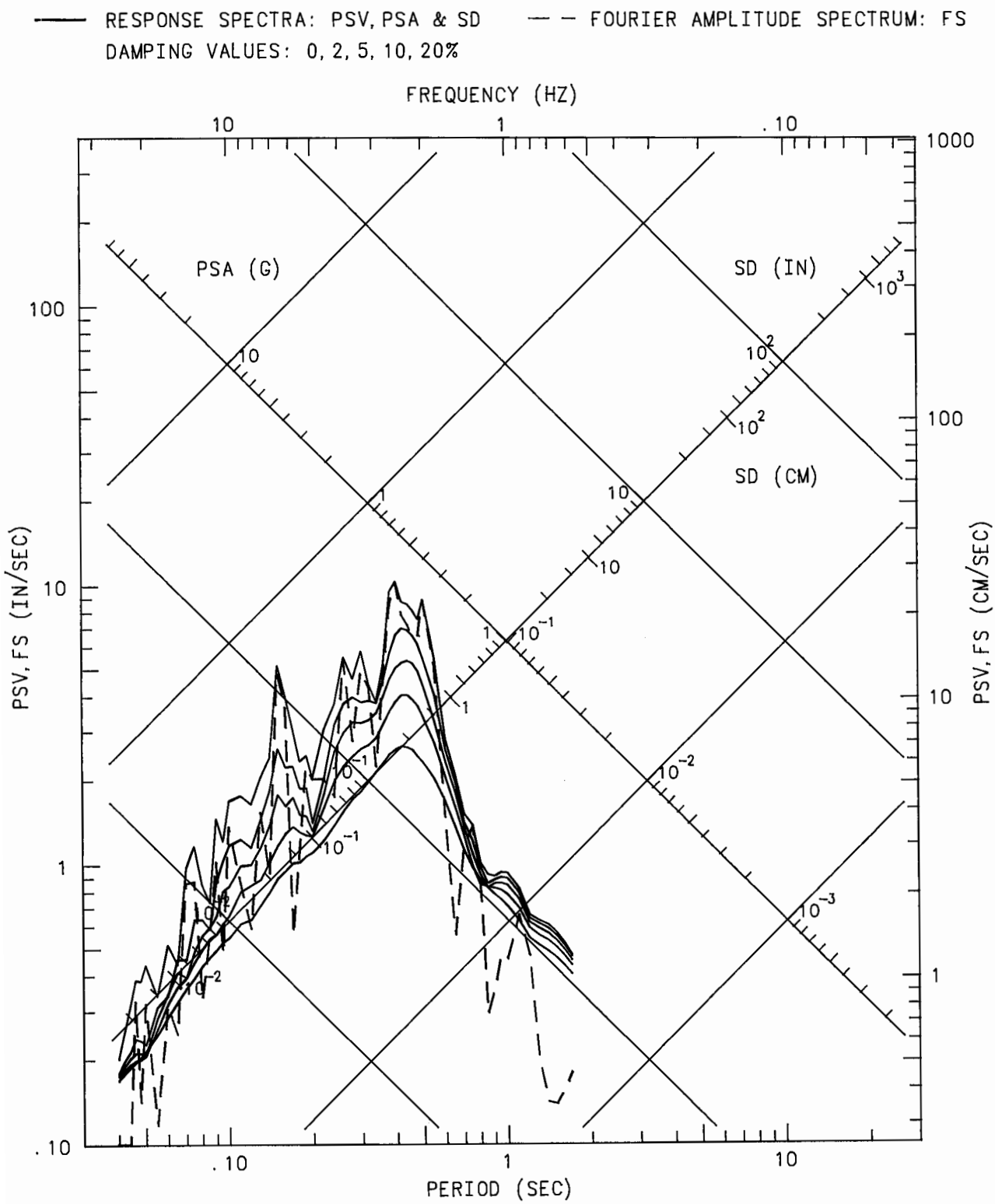
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
CHN 3: 0 DEG (LEFT ABUTMENT)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2130-89292.01 031071.2307-QL89A180A



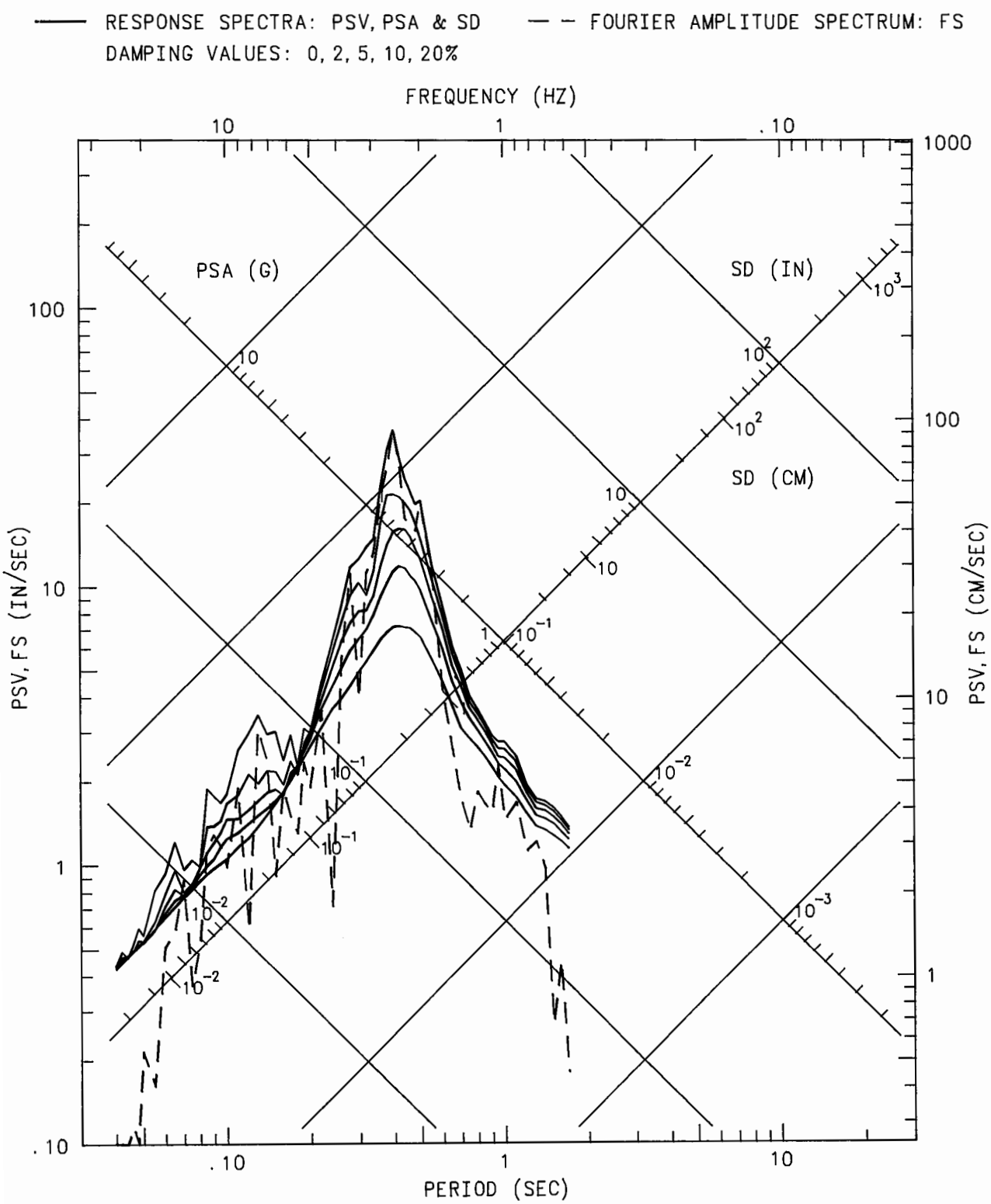
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
CHN 1 (STA CHN 4): 90 DEG (LEFT CREST)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2131-89292.01 031071.2329-QL89A180B



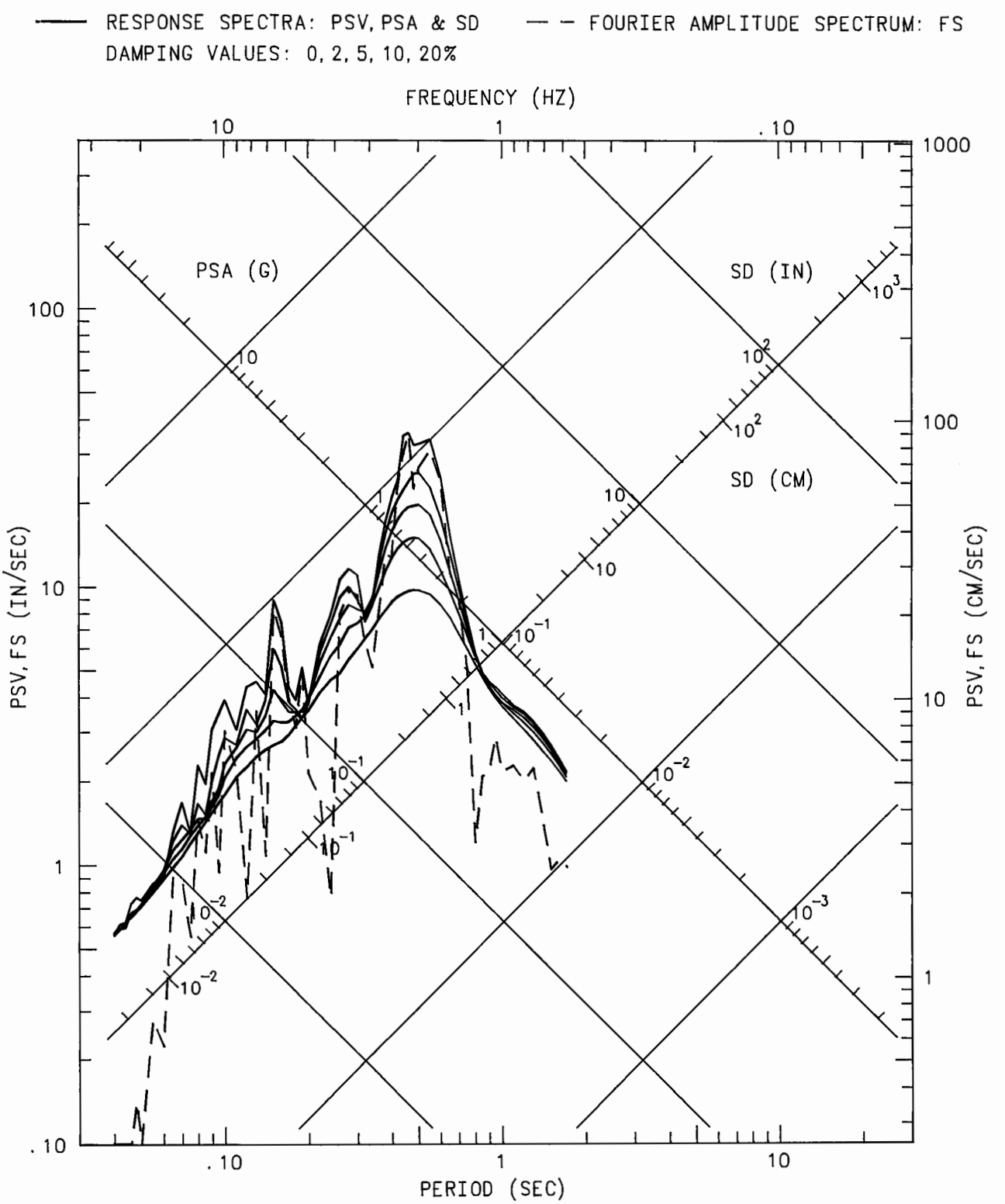
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
CHN 2 (STA CHN 5): UP (LEFT CREST)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2131-89292.01 031071.2329-QL89A180B



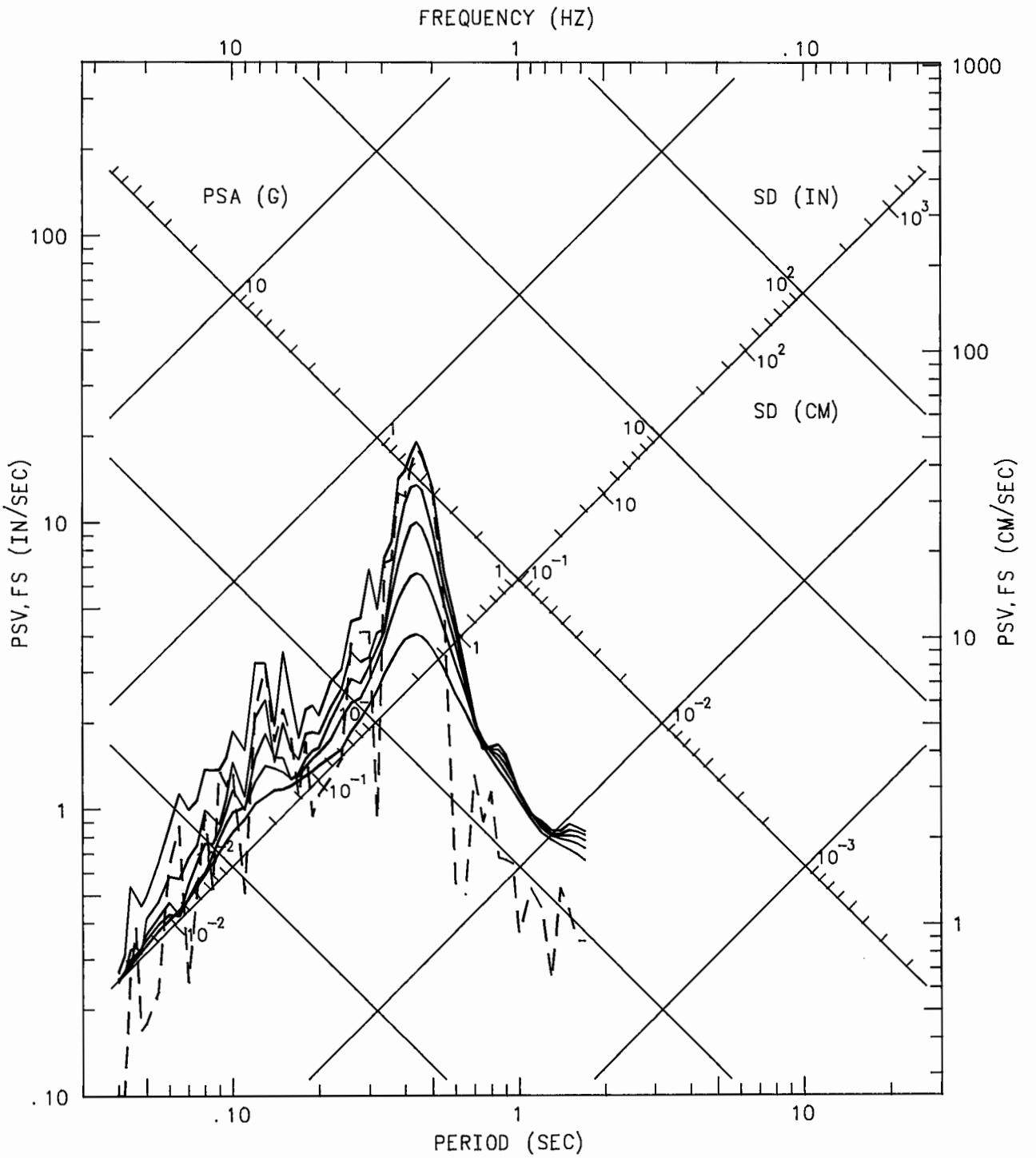
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
CHN 3 (STA CHN 6): 0 DEG (LEFT CREST)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2131-89292.01 031071.2329-QL89A180B



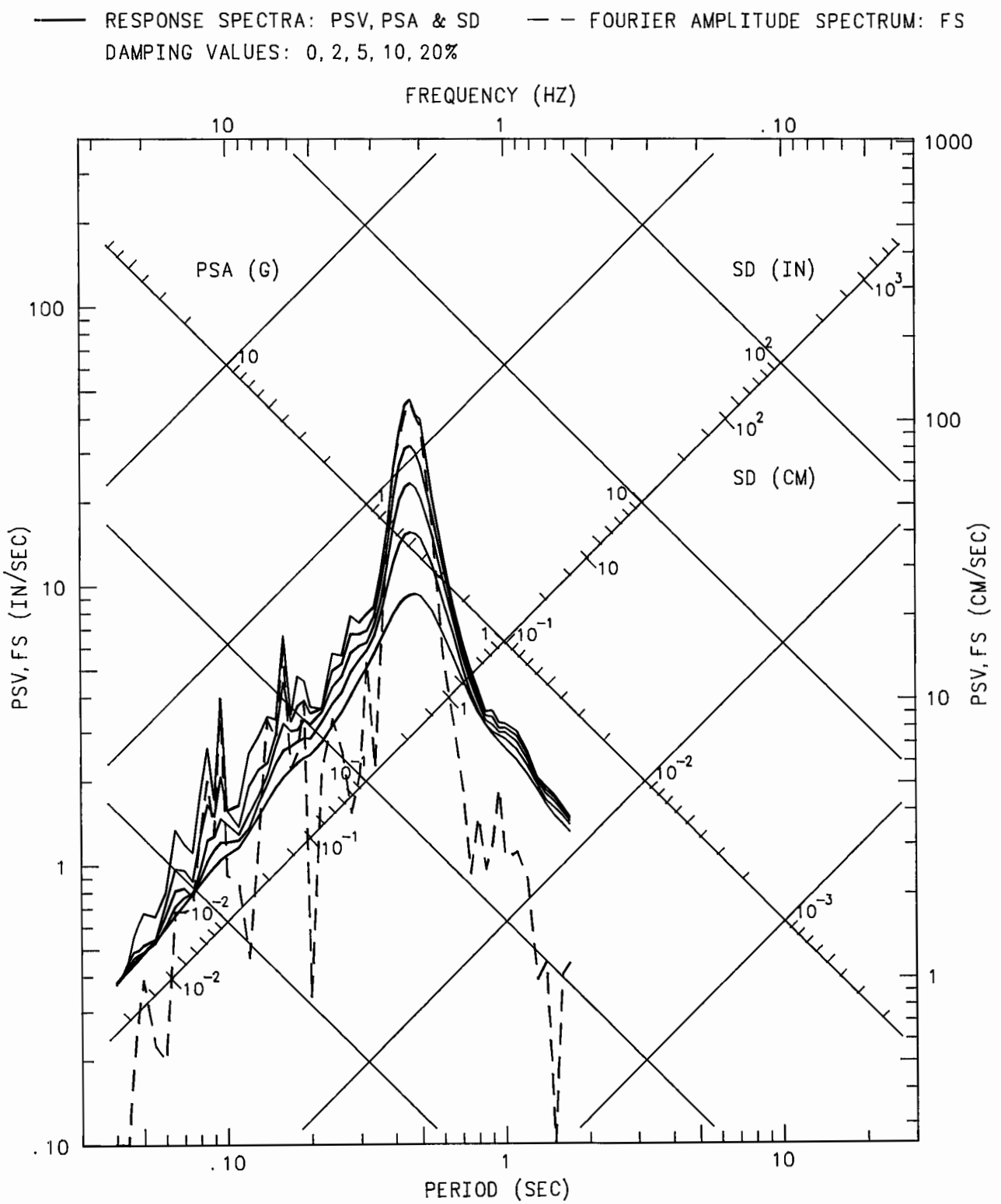
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
CHN 1 (STA CHN 7): 90 DEG (RIGHT CREST)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2132-89292.01 031071.2350-QL89A180C



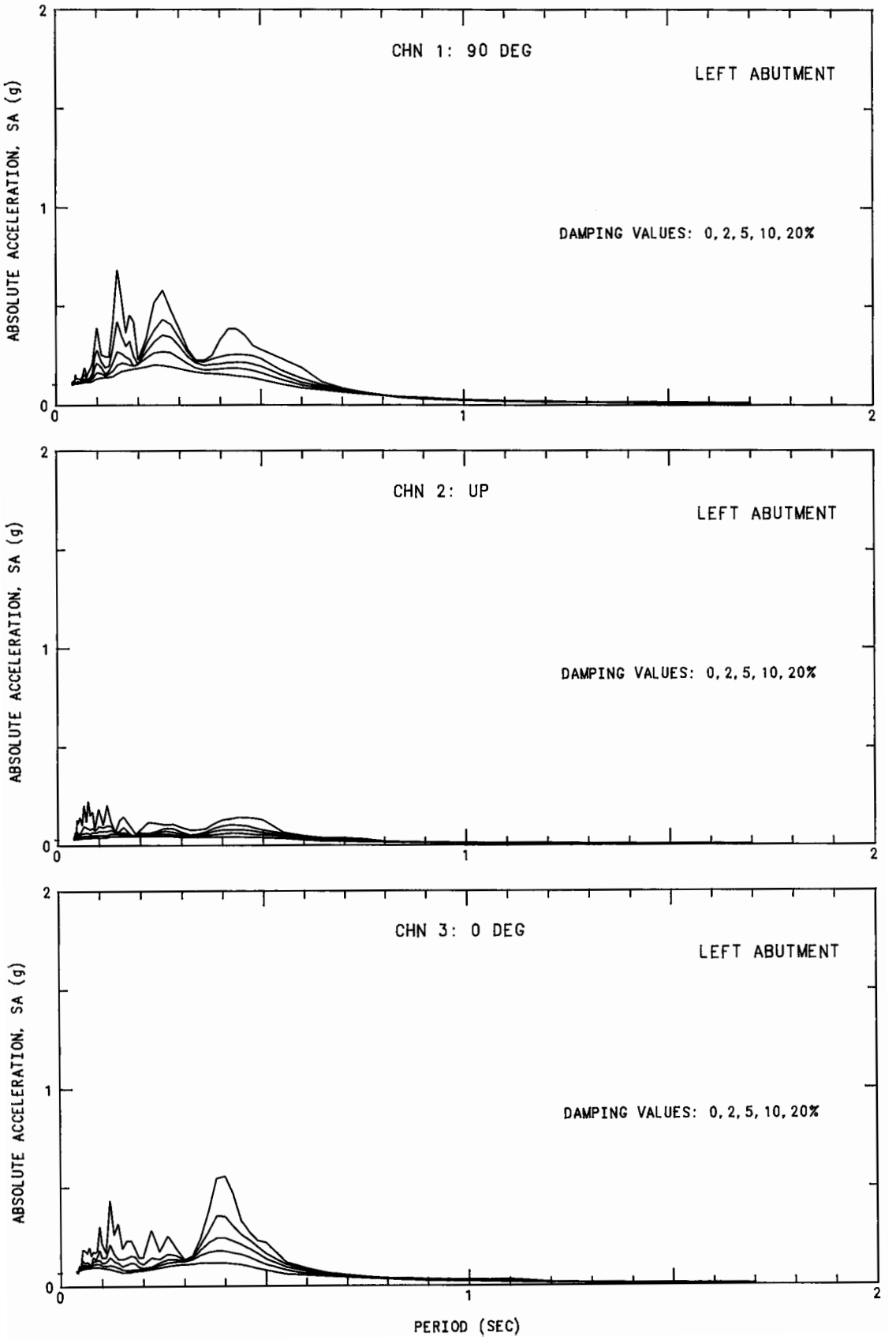
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
CHN 2 (STA CHN 8): UP (RIGHT CREST)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2132-89292.01 031071.2350-QL89A180C



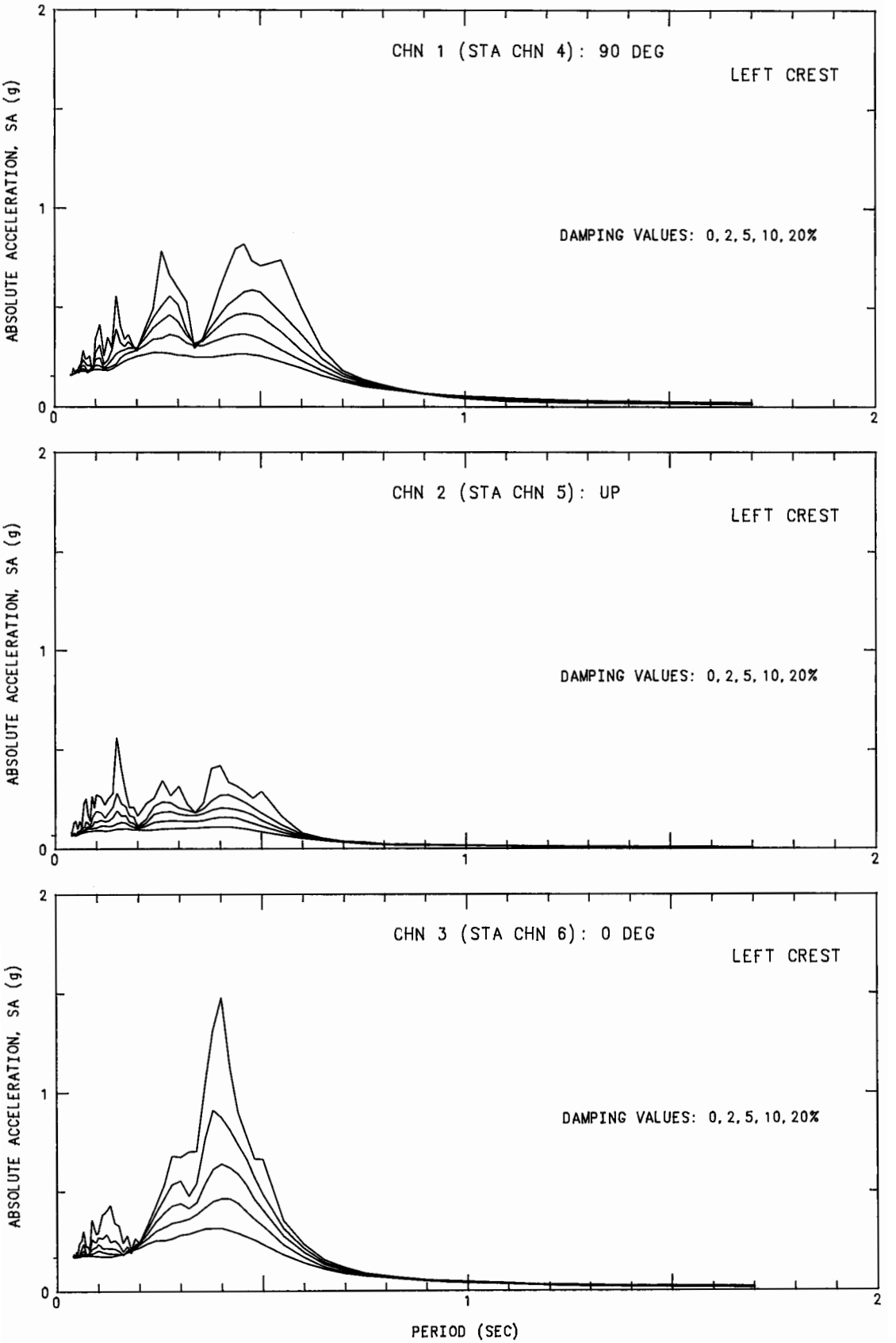
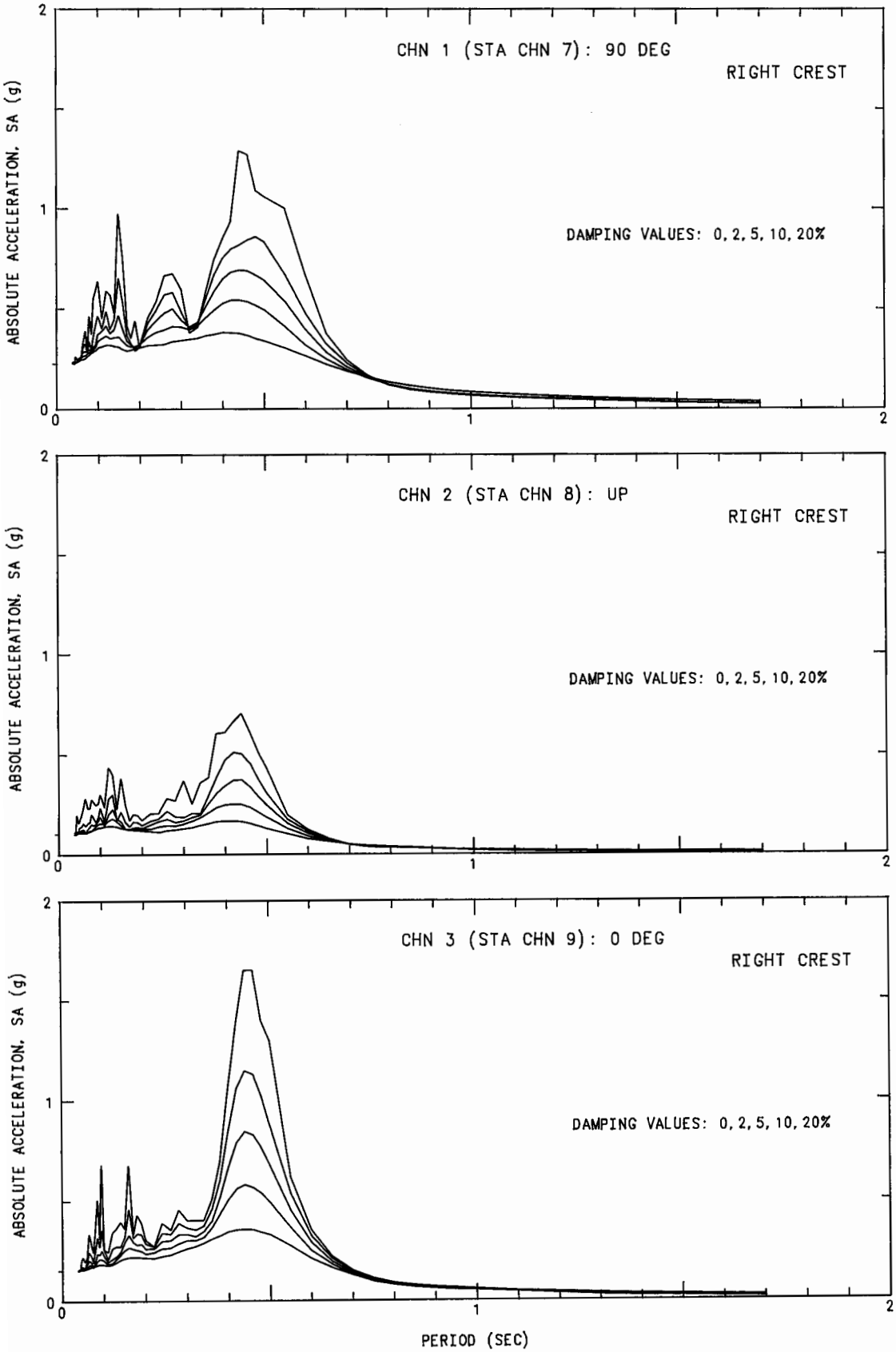
LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
CHN 3 (STA CHN 9): 0 DEG (RIGHT CREST)
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2132-89292.01 031071.2350-QL89A180C



LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2130-89292.01 031071.2307-QL89A180A



LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2131-89292.01 031071.2329-QL89A180B



LAKE ELSMAN EARTHQUAKE AUGUST 8, 1989 01:13 PDT
LEXINGTON DAM
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .40-.80 TO 23.0-25.0 HZ.
57180-S2132-89292.01 031071.2350-QL89A180C