UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Processed strong-motion records from the southern Alaska earthquake of January 1, 1975, 0355 GMT

by

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In column 1 each plot contains all three components. For columns 2 through 6, the indicated page number refers to the first of three components for this record.

INTRODUCTION

The U.S. Geological Survey Permanent Strong-Motion Network

In a continuing effort to present processed strong-motion earthquake data to the engineering and seismological communities and the general public, the U.S. Geological Survey (USGS) maintains a nation-wide network of federally-owned permanent strong-motion earthquake recorders, and routinely processes and reports on significant records obtained from them. The network also includes instruments owned by other federal agencies, but maintained by the USGS. The production of reports is sometimes made jointly, for example with the California Division of Mines and Geology (CDMG), to coordinate records obtained simultaneously from the recorders of various other federal, state, and local agencies.

The main reasons for these reports are to present the computer plots of corrected accelerograms and their spectra, and to provide sufficient additional information on the earthquakes, stations, records, and results so that the reader may make an intelligent decision whether further study is warranted. Lists of completed reports and their contents are given in Appendix II. Digital data is usually available on tape from the National Geophysical Data Center (NGDC), NOAA, Mail Stop E/GC11, 325 Broadway, Boulder, Colorado 80303.

Cooperative Endeavors

The permanent strong-motion network is managed by several projects within the USGS. The program and its predecessors have been involved with strong-motion accelerogram recording and processing since the early 1930's. As procedures and techniques have improved within the areas of network planning, instrument maintenance, record processing, and associated research, the program has been able to exchange knowledge in cooperative efforts with other agencies in the field of strong-motion earthquake engineering and engineering seismology.

Cooperative efforts have included those with:

a) Federal agencies such as the Bureau of Reclamation, the Army Corps of Engineers, the Veterans Administration, the Federal Highways Administration, and others.

b) State agencies such as the California Division of Mines and Geology, the California Department of Water Resources, the Washington State Highways Administration, and others.

c) Universities such as the California Institute of Technology, the University of Southern California, Columbia University, and others.

d) Foreign and domestic agencies sometimes jointly responsible for strong-motion networks in Fiji, Greece, Italy, Papua New Guinea, The Soviet Union, Yugoslavia, and others.

PROCESSED RECORDS FROM THE JANUARY 1, 1975, 0355 GMT SOUTHERN ALSAKAN EARTHQUAKE

Four stations from the slowly developing network in Anchorage, plus the station in Talkeetna, provided records from this MB 5.9 event. Previous Anchorage records had been lone ones, dating back to the aftershocks of the 1964 Prince William Sound, Alaska, earthquake. Under normal circumstances, this set, with peak values less than 0.1 g, would not have been digitized. Interest, and a request from the USGS in Golden, Colorado resulted in the processing of three ground level records in Anchorage, and the Talkeetna record. The fourth Anchorage record, from the Post Office, was not suitable for digitizing.

Description of Records

The peak accelerations (Seismic Engineering Branch, 1975) recorded were: Talkeetna (approx. 49 km epicentral distance) with a peak of 0.09 g; and of the stations in Anchorage (approx. 79 km epicentral distance) the largest peak was 0.09 g at the Methodist University. A complete list of peak values and other information for this event are in Table II.

Seismological Data

The January 1, 1975, 0355:12.0 GMT event occurred at a depth of 66 km and at a location of 61.9 degrees N. and 149.7 degrees W. This location is N of Anchorage and SE of Talkeetna. The magnitude was MB 5.9 (see Table I).

Station and Geologic Data

The following information (Switzer and others, 1981) briefly describes the accelerograph sites pertinent to this report:

Anchorage Stations:

500 West Third Street: A 22-story building with instruments in the basement and on the roof. Surficial geology is glacial outwash.

Alaskan Methodist University: A two-story building with the instrument located at ground level. Located on approximately 120 m of glacial till.

Government Hospital: A three-story building with the instrument located in the basement. Surficial geology is glacial outwash.

Talkeetna:

FAA-VOR Building: A one-story building with the instrument located at ground level.

DIGITIZATION AND PROCESSING

Current USGS Processing

1. A commercial digitizing firm (IOM-TOWILL in Santa Clara, California) digitizes the records on a trace-following, computer-controlled laser scanner. The data is digitized at unequal time intervals, (although close to equispaced in time when clear of sharp peaks), at an average of 600 samples per second (sps). Those records on 12" wide photographic paper are photographically reduced to 1/4 original size so that all three traces and the time marks can be digitized in one horizontal panel. Although the acceleration and time scales are reduced proportionately, a full-scale check of the digitized version matches perfectly with the original 12" record.
2. If more than 10 cm of a strong-motion record is digitized (film speed is 1 cm/s), the digitized portion is divided into approximately 10-cm frames and each frame is digitized separately with one inch overlaps. The frames are reassembled using specially inserted vertical lines; the lines mark the beginning and end of each frame. Each vertical line is digitized twice, once in each adjacent frame, and then used in reassembling the record.
3. The uncorrected data are prepared by subtracting the digitized reference traces from the data traces, by using the digitized time marks to determine the time scale, and by subtracting the mean. The instrument sensitivities scale the ordinates to acceleration.
4. The data are passed through a correction algorithm that applies a high-frequency, 50 Hz, low-pass filter; an instrument correction; a base-line correction in the form of a long-period (or low-frequency, high-pass) filter; and decimation to 200 sps. Plots of the corrected

acceleration, velocity, and displacement for the three components of each record are included.

Initial selection of long-period filters is based on the convention of retaining a period content greater than or equal to the strong-motion duration of the records. The final Butterworth filter parameters are chosen to eliminate any visible serious noise content still remaining in the calculated displacements, taking into account the guidelines described in Basili and Brady (1978).

In some instances a frequency domain filter with a transition band of 25-50 Hz is applied to eliminate high frequency noise that sometimes occurs during the digitization of low-amplitude records. The latter replaces the standard time-domain method.

5. The maximum relative velocity response spectra are calculated for damping values of 0, 2, 5, 10, and 20 percent of critical. These response spectra are calculated for a period range which commences at 0.04 s and ends with the long period limit used in the base-line correction algorithm. The dashed curve on this plot is the unsmoothed Fourier amplitude spectrum, calculated at the same periods as the response spectra are calculated.

   The second response spectra plot contains the pseudo-velocity response spectra, calculated for the same five damping values. This tripartite plot also has the values for the maximum relative displacement response spectrum and the pseudo-absolute acceleration spectrum.

6. Fourier amplitude spectra, calculated by FFT, are presented on linear and log-log axes to accent the particular characteristics at each end of the spectrum.

For a more complete description of the processing method see Converse (1984).

Processing Considerations for Records in this Report

The first 2-3 seconds of the three data traces on the uncorrected record from 500 W. Third, Basement, have a non-zero start and similar downward slopes, indicating a problem with the subtraction of the reference trace. (The original record has no reference traces and the digitized time trace was used for both time trace and reference trace). In an unsuccessful effort to correct this problem, the data traces were processed with no reference trace (Fig. 3). Since these plots clearly indicate that the motion of the film through the camera must be corrected with a reference trace, even if less than ideal, we decided to use the original results and rely on the subsequent processing to make the correction.

Results/Summary

Appendix I contains reproductions of computer-generated plots which provide a visual description of the recorded accelerations and their processed results. These plots may be used to measure directly specific earthquake characteristics or record parameters and to select records for further study using the digital data.

ACKNOWLEDGMENTS

Modern digital processing of strong-motion accelerograms has evolved over many years, from the work of Trifunac and Lee at Cal Tech and of Virgilio Perez at the USGS, to the present ongoing refinements of the process in April Converse' AGRAM series. The authors acknowledge these and other contributions to strong-motion data processing.

REFERENCES

Basili, M., and Brady, G., 1978; Low Frequency Filtering and the Selection of Limits for Accelerogram Corrections: *Sixth European Conference on Engineering Seismology*, Dubrovnik, Yugoslavia, 8 p.

Converse, A.M., 1984; AGRAM: A Series of Computer Programs for Processing Digitized Strong-Motion Accelerograms, Version 2.0: *U.S. Geological Survey Open-File Report 81-525*, 118 p.

Seismic Engineering Branch, 1975; Seismic Engineering Program Report, April-June 1975, *U.S. Geological Survey Circular 717-B*.

Switzer, J., Johnson, D., Maley, R., and Matthiesen, R., 1981; Western Hemisphere Strong-Motion Station List - 1980; *U.S. Geological Survey Open-File Report No. 81-664*, 162 p.

Table I. Source parameters for January 1, 1975, southern Alaska earthquake*

Date	1/1/75
Time	0355 12.0 GMT
Epicenter	61.9° N., 149.7° W.
Depth	66 km
Magnitude	5.9 M_B

* From "Preliminary Determination of Epicenters," published by the U.S. Geological Survey.

Table II. Peak values of processed records

Earthquake	Station	Coordinates	Distances (km) Epic. (All distance ± 10 km)	Hypo.	Components Directions	Peak Acceleration Scaled (g)	Digitized (cm/s^2)	Corrected Peak Motion Accel. (cm/s^2)	Vel. (cm/s)	Disp. (cm)
January 1, 1975	Anchorage, 500 W. Third St.,	61.220 N	76	101	135°	0.05	49.15	49.00	-5.15	-0.68
0355 12.0 GMT	Basement	149.892 W			UP	0.02	-19.68	-18.85	-1.27	-0.17
					045°	0.05	45.05	44.40	-2.79	-0.31
Epicenter:										
61.9 N	Anchorage, Alaskan	61.189 N	79	103	315°	0.07	57.72	50.17	-2.64	0.34
149.7 W	Methodist University	149.801 W			UP	0.04	30.92	57.24	0.86	-0.16
					225°	0.09	83.83	96.97	2.91	0.19
	Anchorage	61.19 N	80	103	360°	0.07	-68.76	-70.40	4.46	0.62
	Government Hospital	149.89 W			UP	0.05	-45.64	-54.57	1.88	-0.24
					270°	0.06	-70.22	-85.13	-4.19	0.50
	Talkeetna	62.30 N	49	82	165°	0.07	-72.48	-75.55	5.39	-0.87
	FAA-VOR Bldg.	150.10 W			UP	0.09	85.46	-84.22	2.43	-0.20
					075°	0.08	74.60	74.93	4.58	-0.65

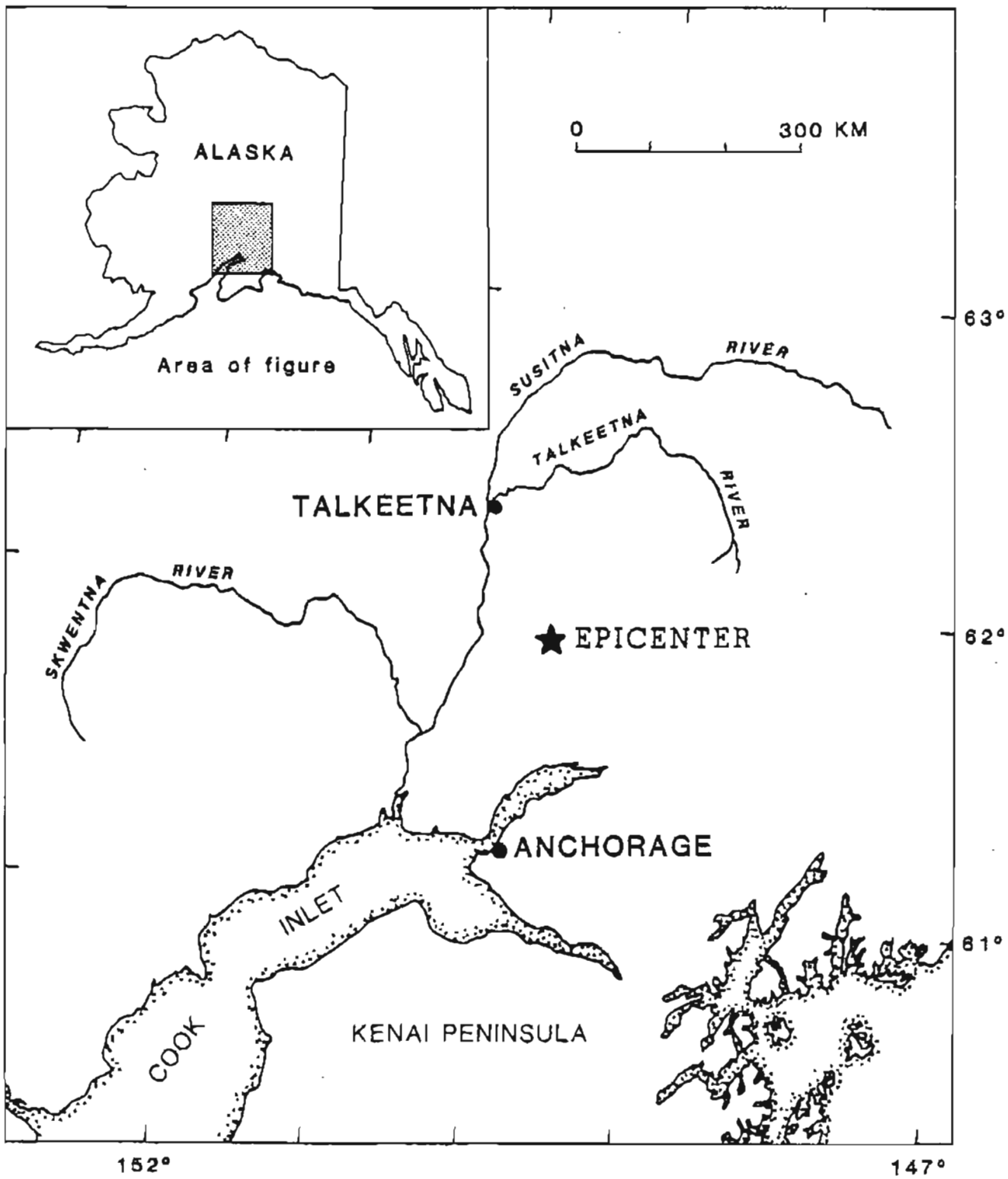


Figure 1: Epicenter and instrument locations.

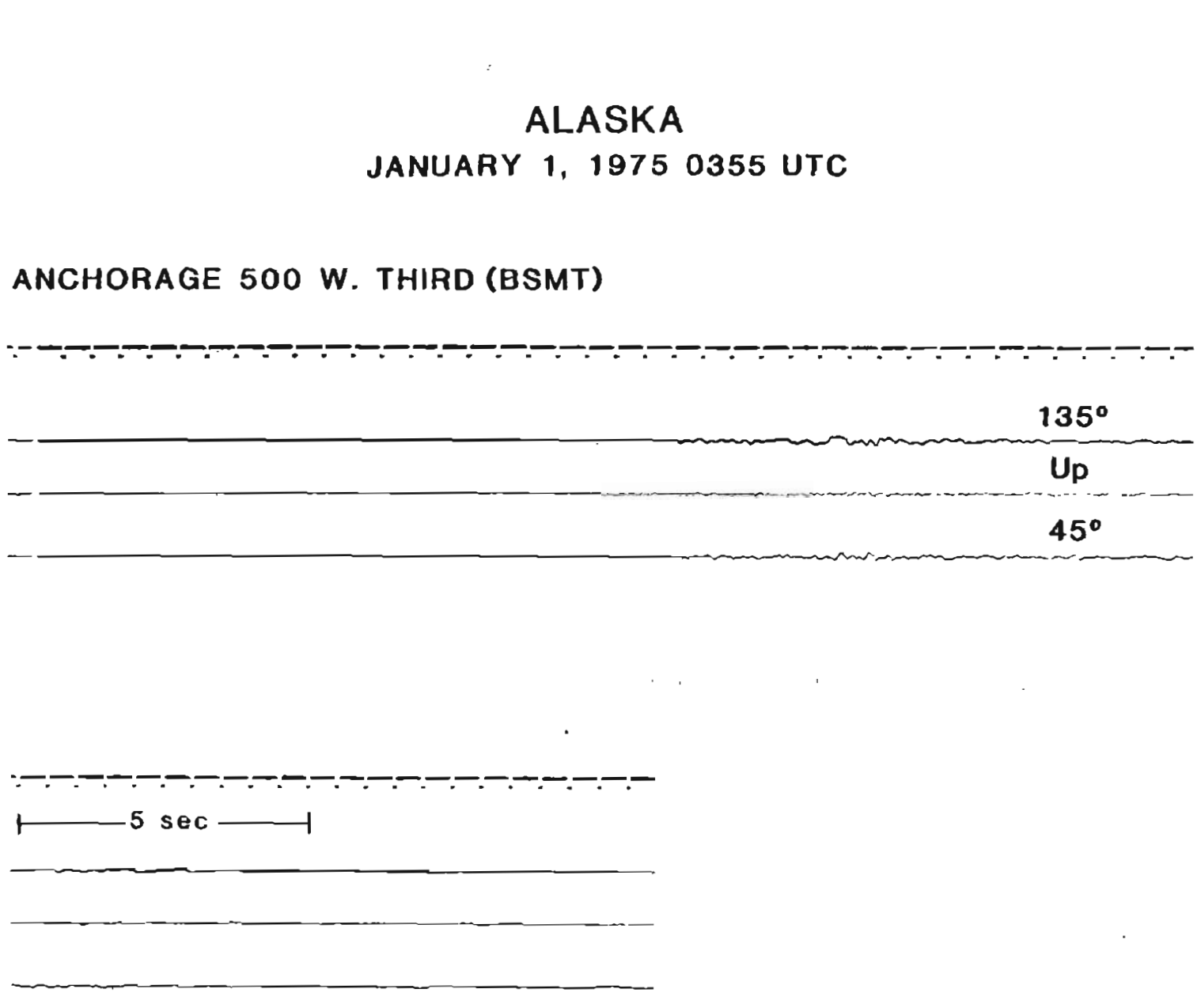


Figure 2: Copies of original records.

ALASKA

JANUARY 1, 1975 0355 UTC

ANCHORAGE 500 W. THIRD (ROOF)

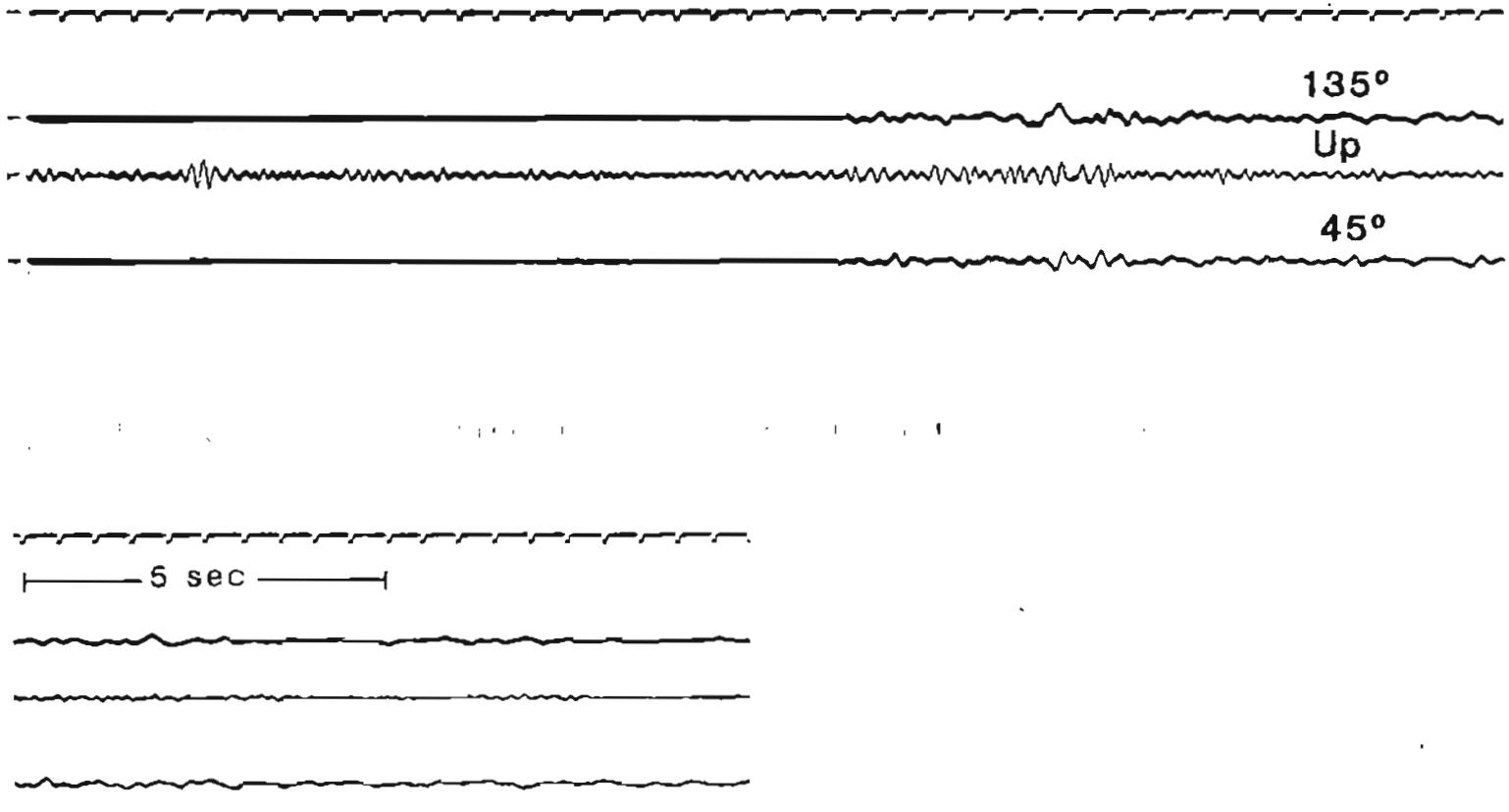


Fig. 2: (cont.)

ALASKA

JANUARY 1, 1975 0355 UTC

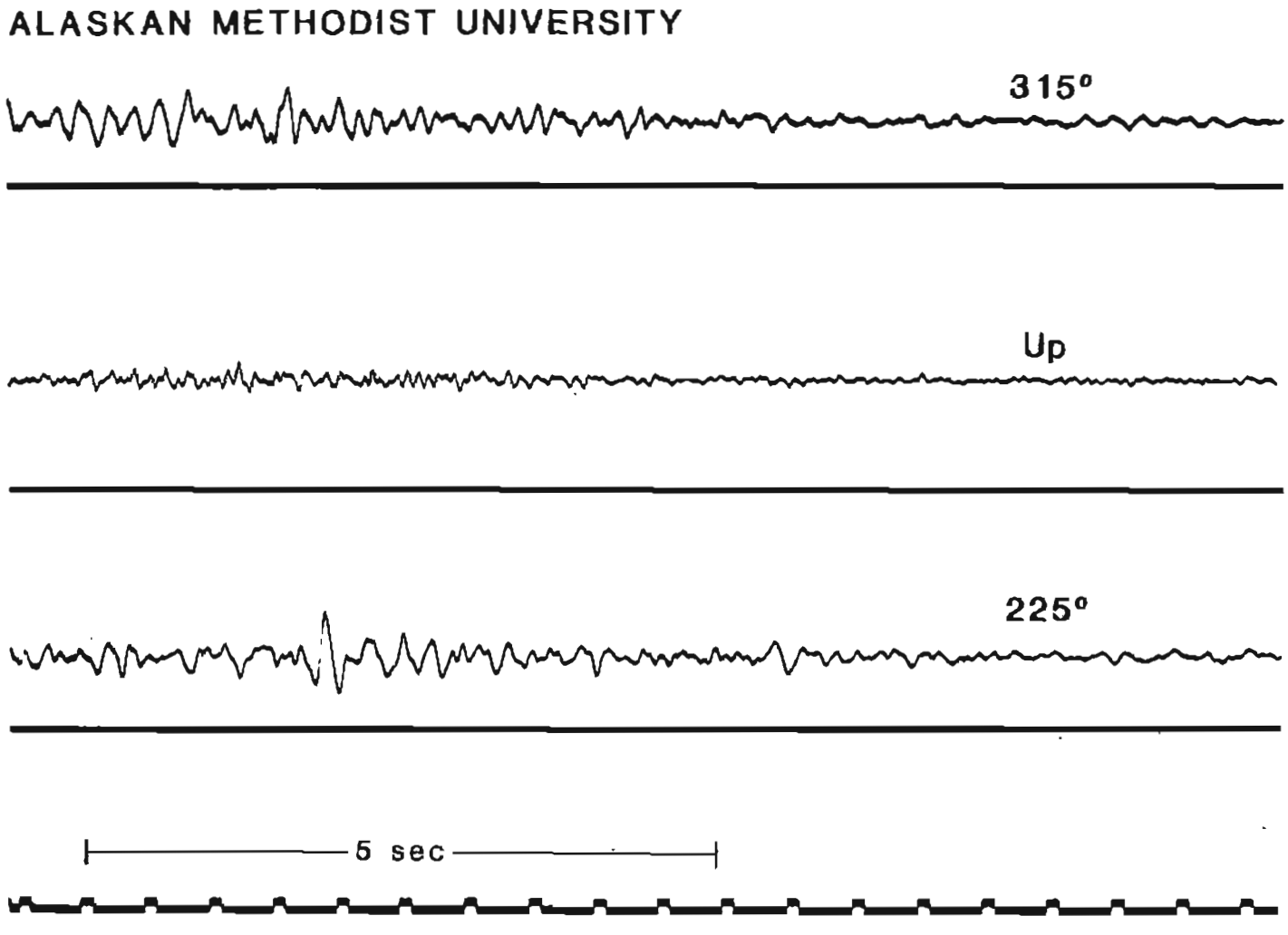


Fig. 2: (cont.)

ALASKA

JANUARY 1, 1975 0355 UTC

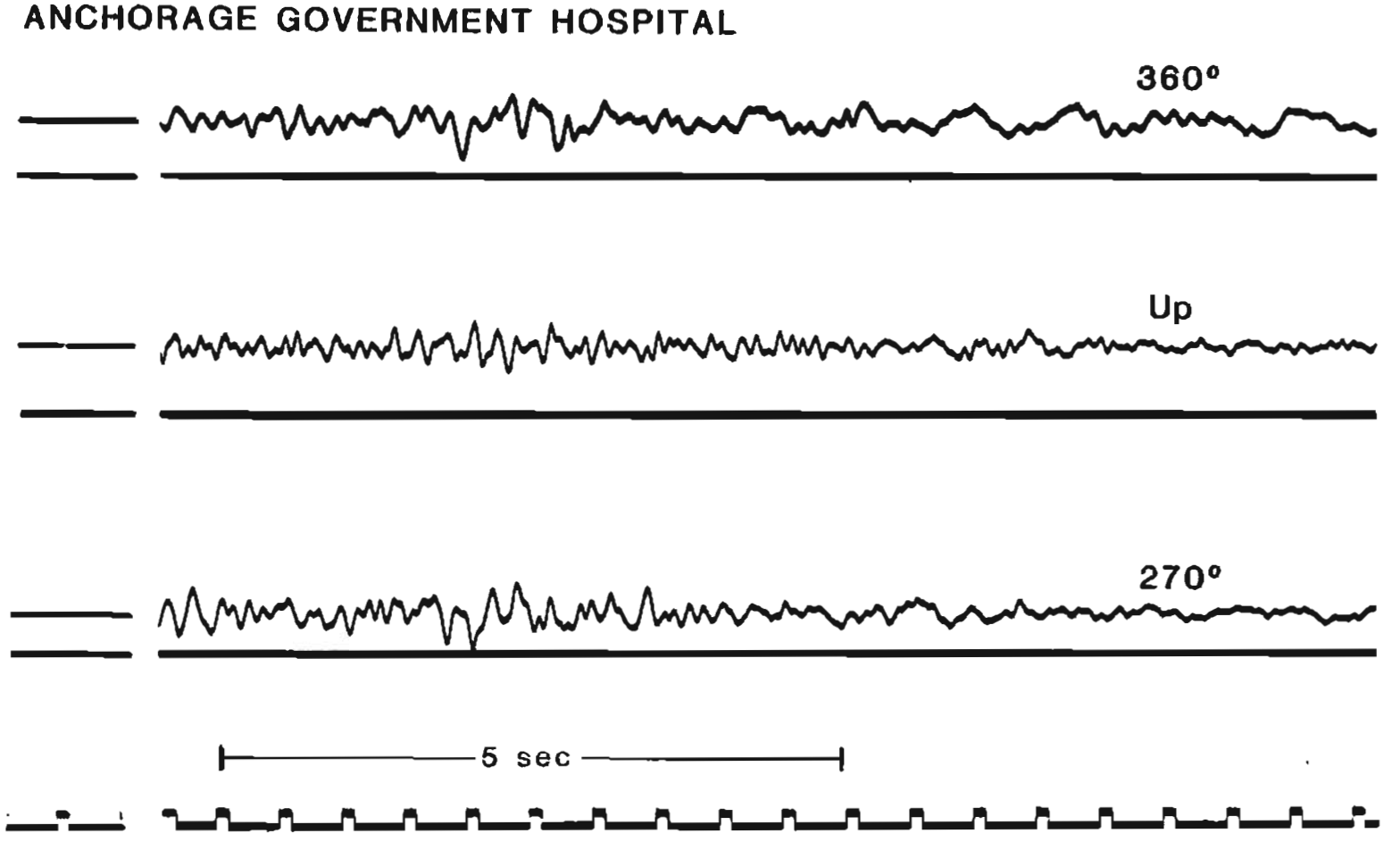


Fig. 2: (cont.)

ALASKA

JANUARY 1, 1975 0355 UTC

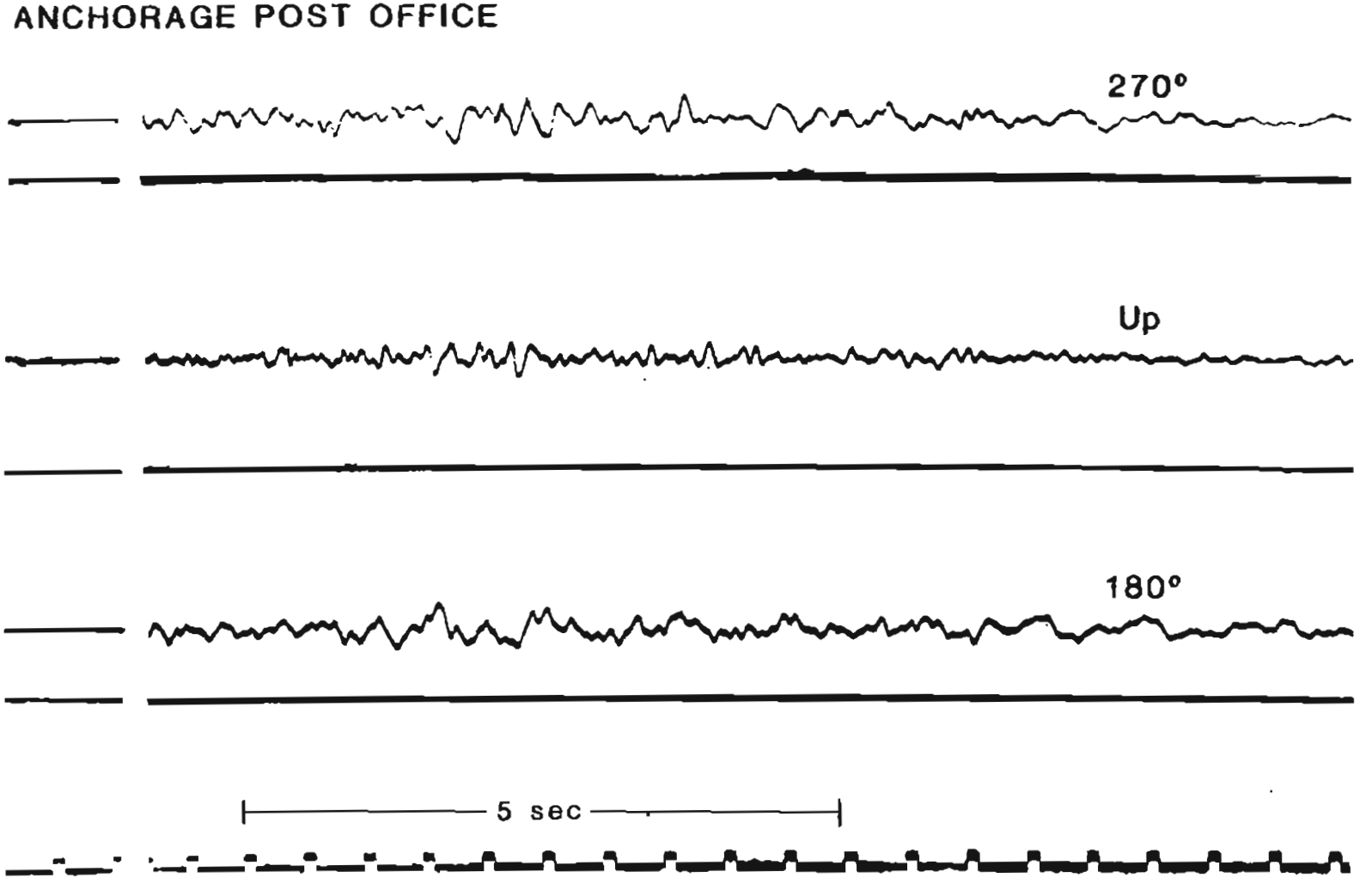


Fig. 2: (cont.)

ALASKA

JANUARY 1, 1975 0355 UTC

TALKEETNA FAA-VOR BLDG.

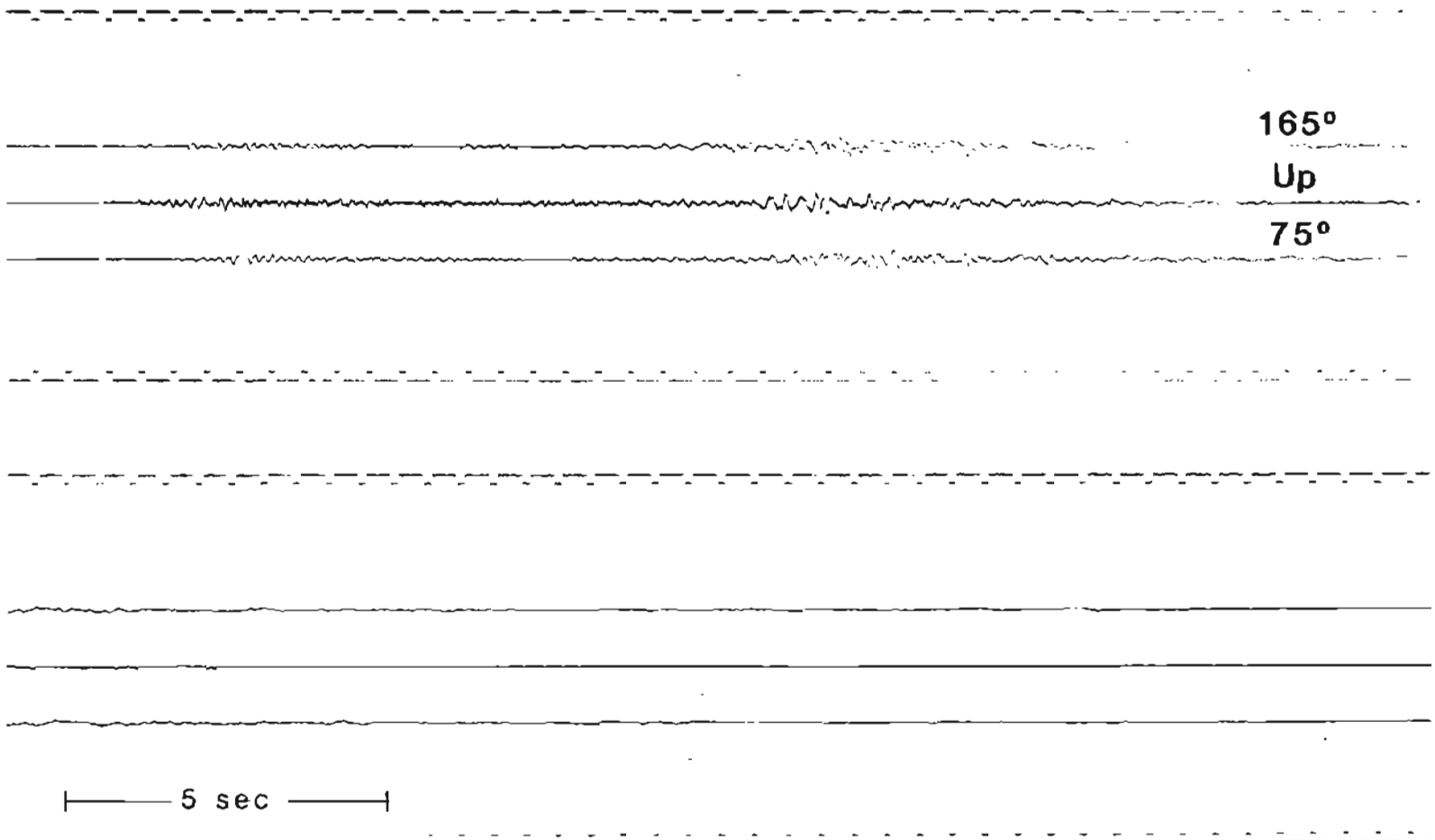


Fig. 2: (cont.)

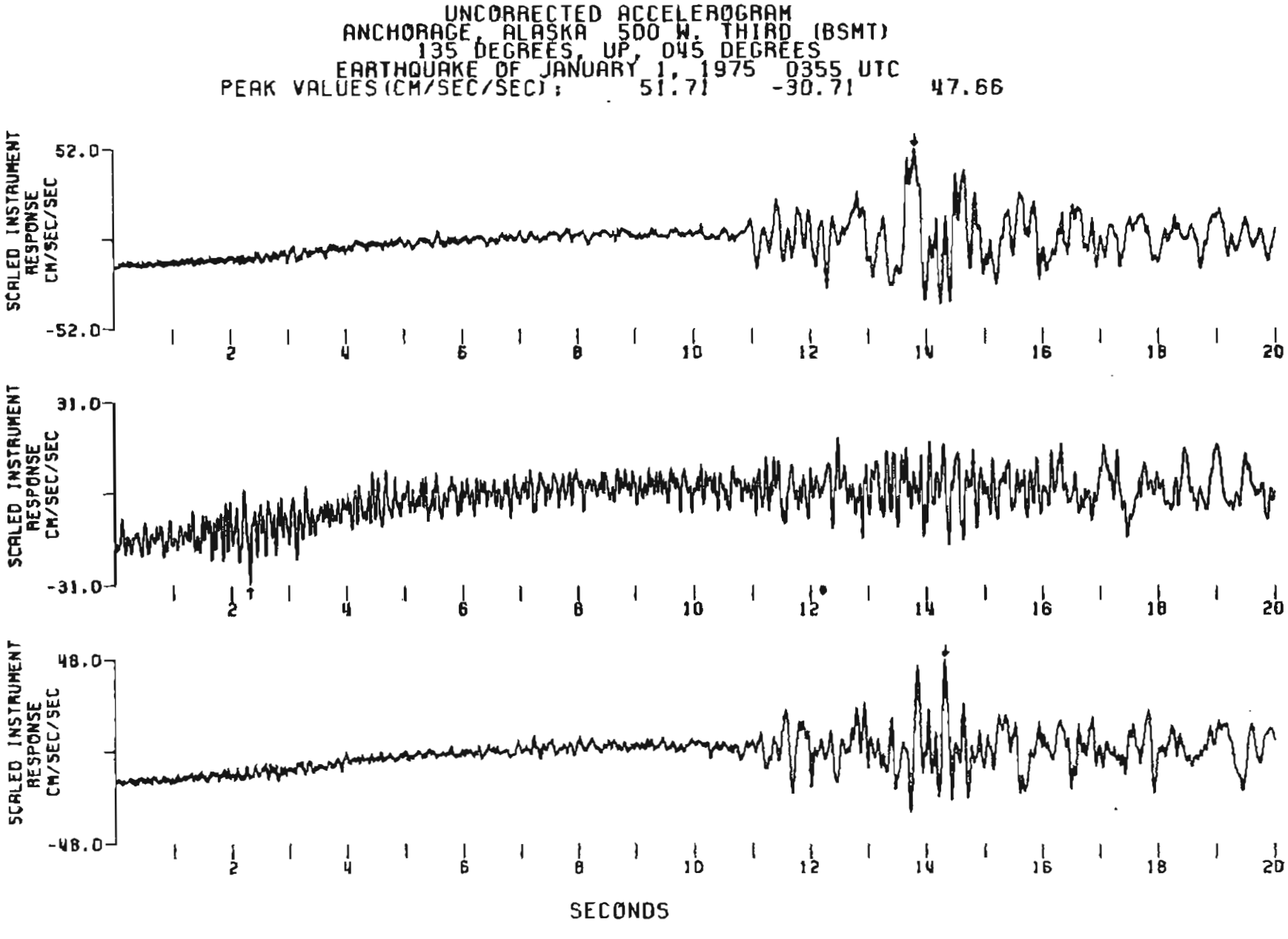
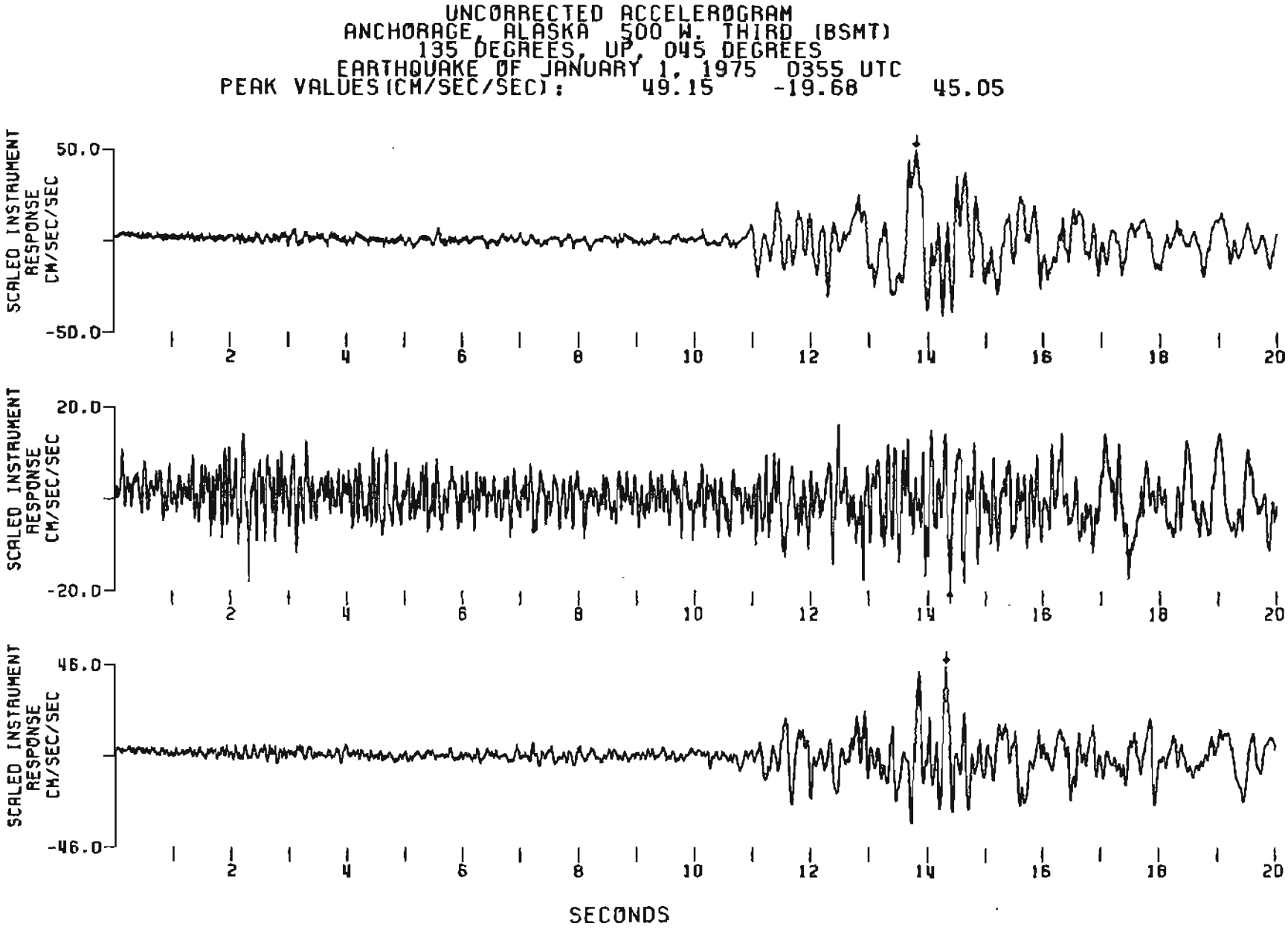
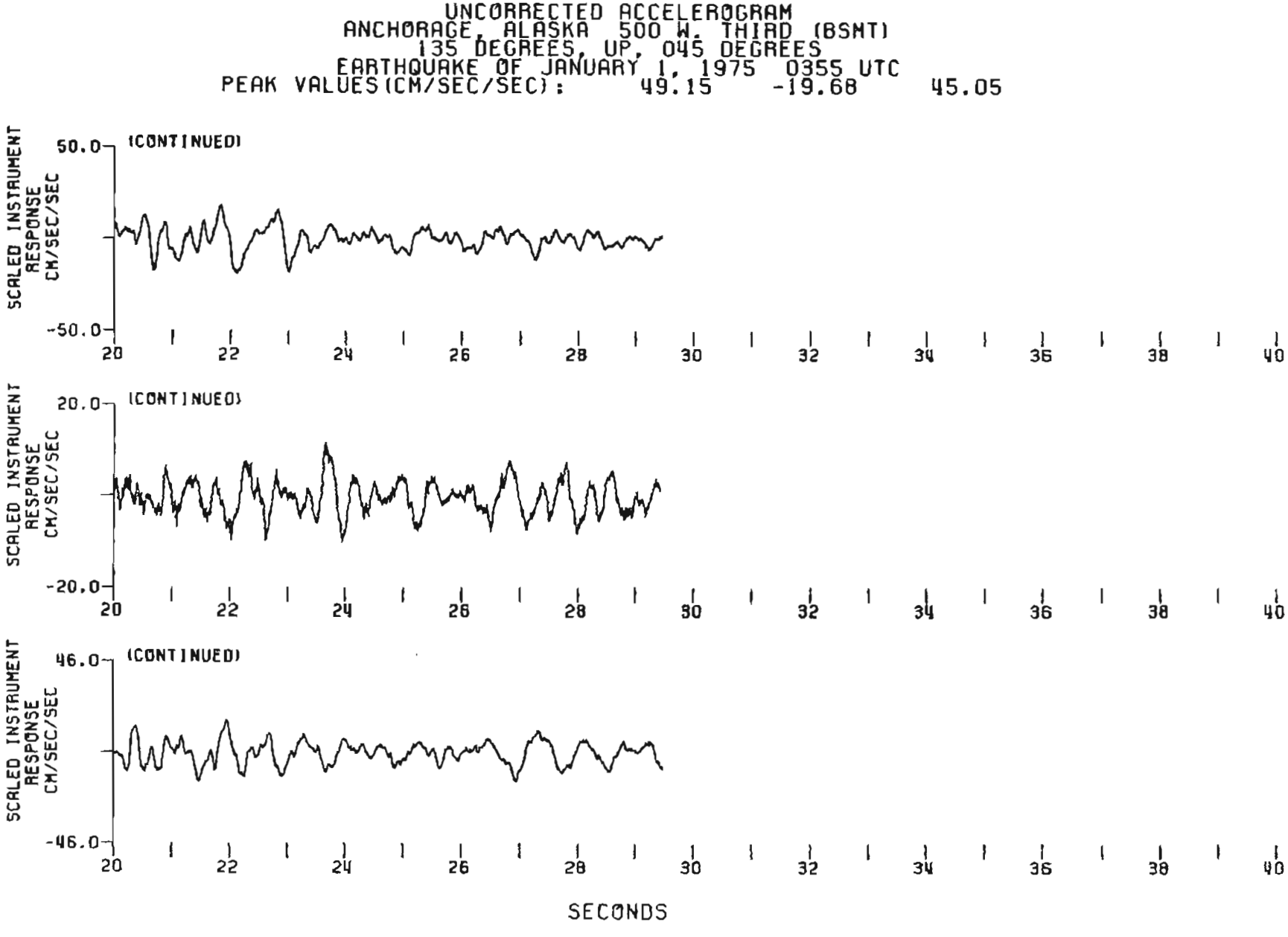


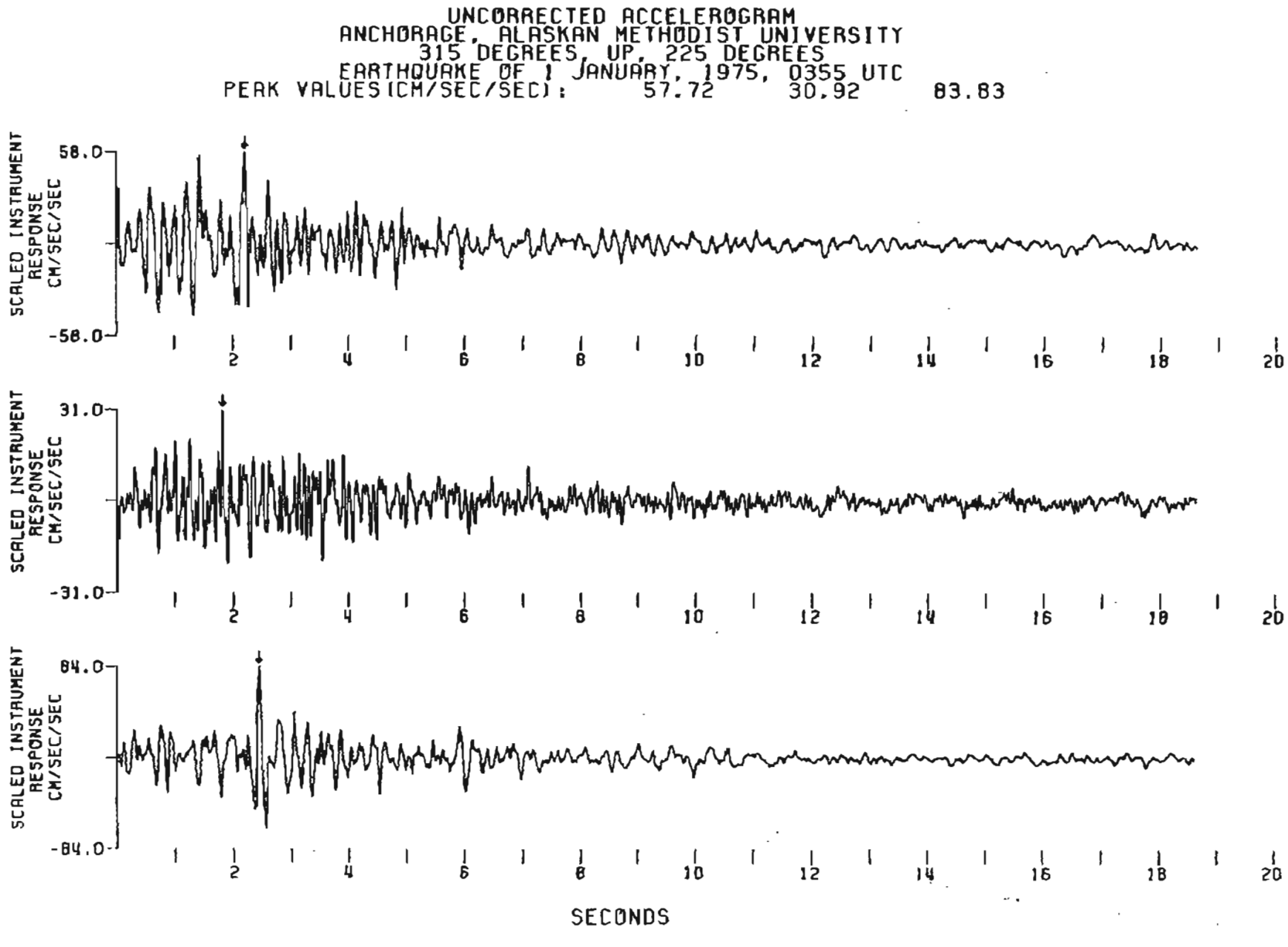
Fig. 3. Processed without using a reference trace

Appendix I

Computer Plots


UNCORRECTED ACCELEROGRAM
ANCHORAGE, ALASKA 500 W. THIRD (BSMT)
135 DEGREES, UP, 045 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
PEAK VALUES(CM/SEC/SEC): 49.15 -19.68 45.05
SCALED INSTRUMENT RESPONSE CM/SEC/SEC
50.0
-50.0
20.0
-20.0
46.0
-46.0
2
4
6
8
10
12
14
16
18
20
SECONDS


UNCORRECTED ACCELEROGRAM
ANCHORAGE, ALASKA 500 W. THIRD (BSMT)
135 DEGREES, UP, 045 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
PEAK VALUES(CM/SEC/SEC): 49.15 -19.68 45.05
SCALED INSTRUMENT RESPONSE CM/SEC/SEC
50.0
(CONTINUED)
-50.0
20
22
24
26
28
30
32
34
36
38
40
SCALED INSTRUMENT RESPONSE CM/SEC/SEC
20.0
(CONTINUED)
-20.0
SCALED INSTRUMENT RESPONSE CM/SEC/SEC
46.0
(CONTINUED)
-46.0
SECONDS


UNCORRECTED ACCELEROGRAM
ANCHORAGE, ALASKAN METHODIST UNIVERSITY
315 DEGREES, UP, 225 DEGREES
EARTHQUAKE OF 1 JANUARY, 1975, 0355 UTC
PEAK VALUES(CM/SEC/SEC): 57.72 30.92 83.83
SCALED INSTRUMENT RESPONSE CM/SEC/SEC
58.0
-58.0
31.0
-31.0
84.0
-84.0
2
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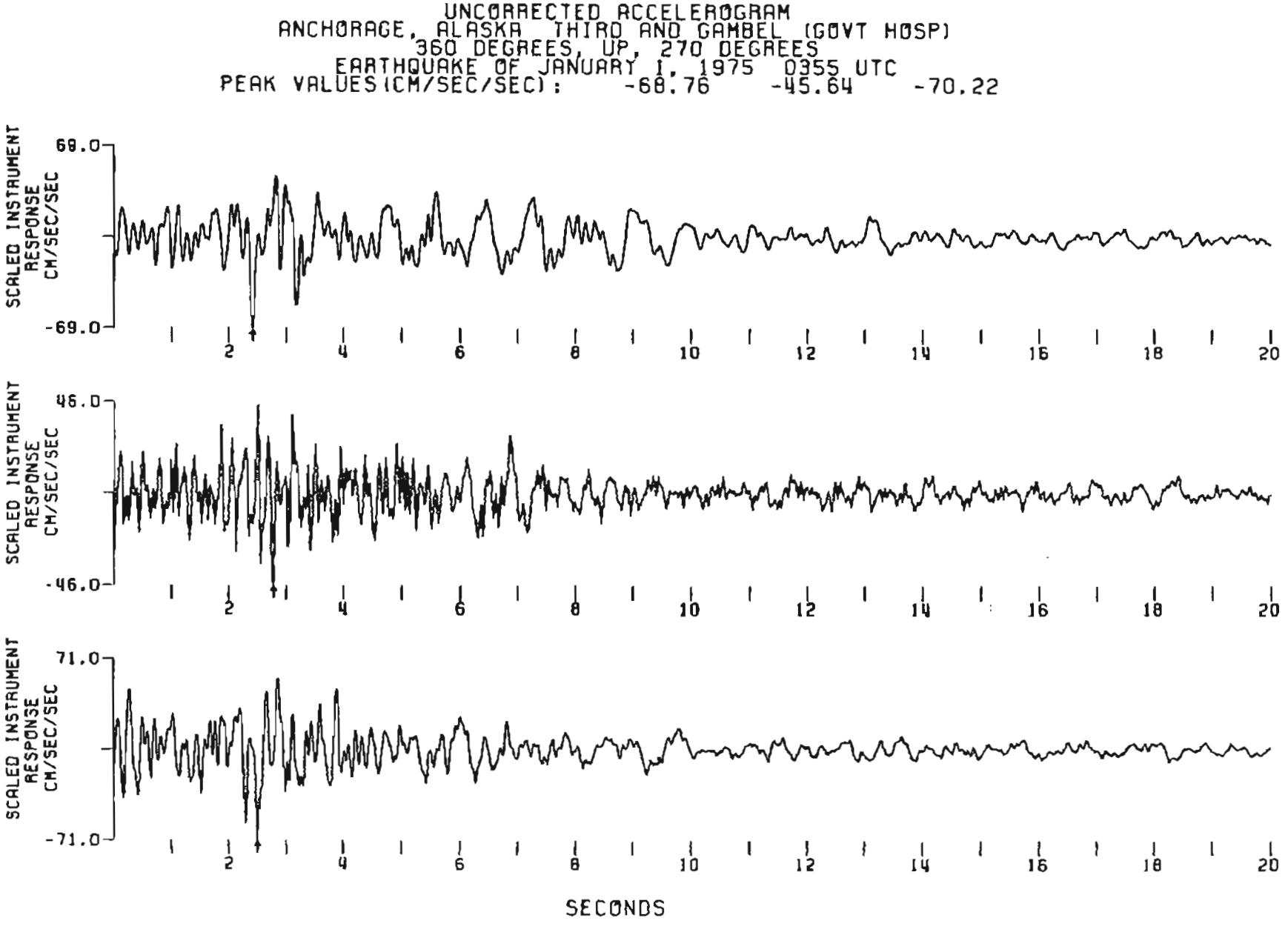
6
8
10
12
14
16
18
20
SECONDS


UNCORRECTED ACCELEROGRAM
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP)
360 DEGREES, UP, 270 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
PEAK VALUES(CM/SEC/SEC): -68.76 -45.64 -70.22
SCALED INSTRUMENT RESPONSE CM/SEC/SEC
69.0
-69.0
46.0
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71.0
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2
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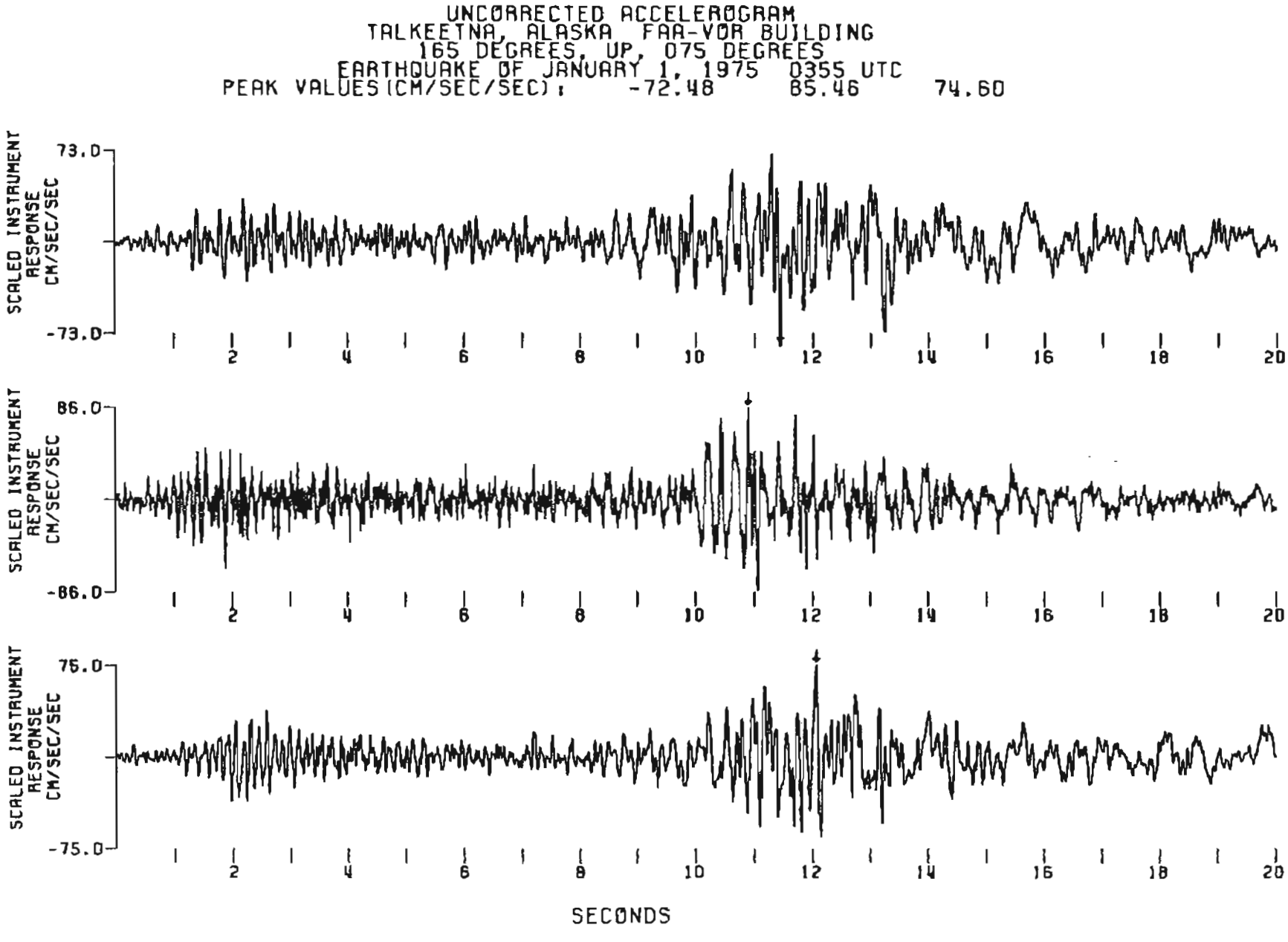
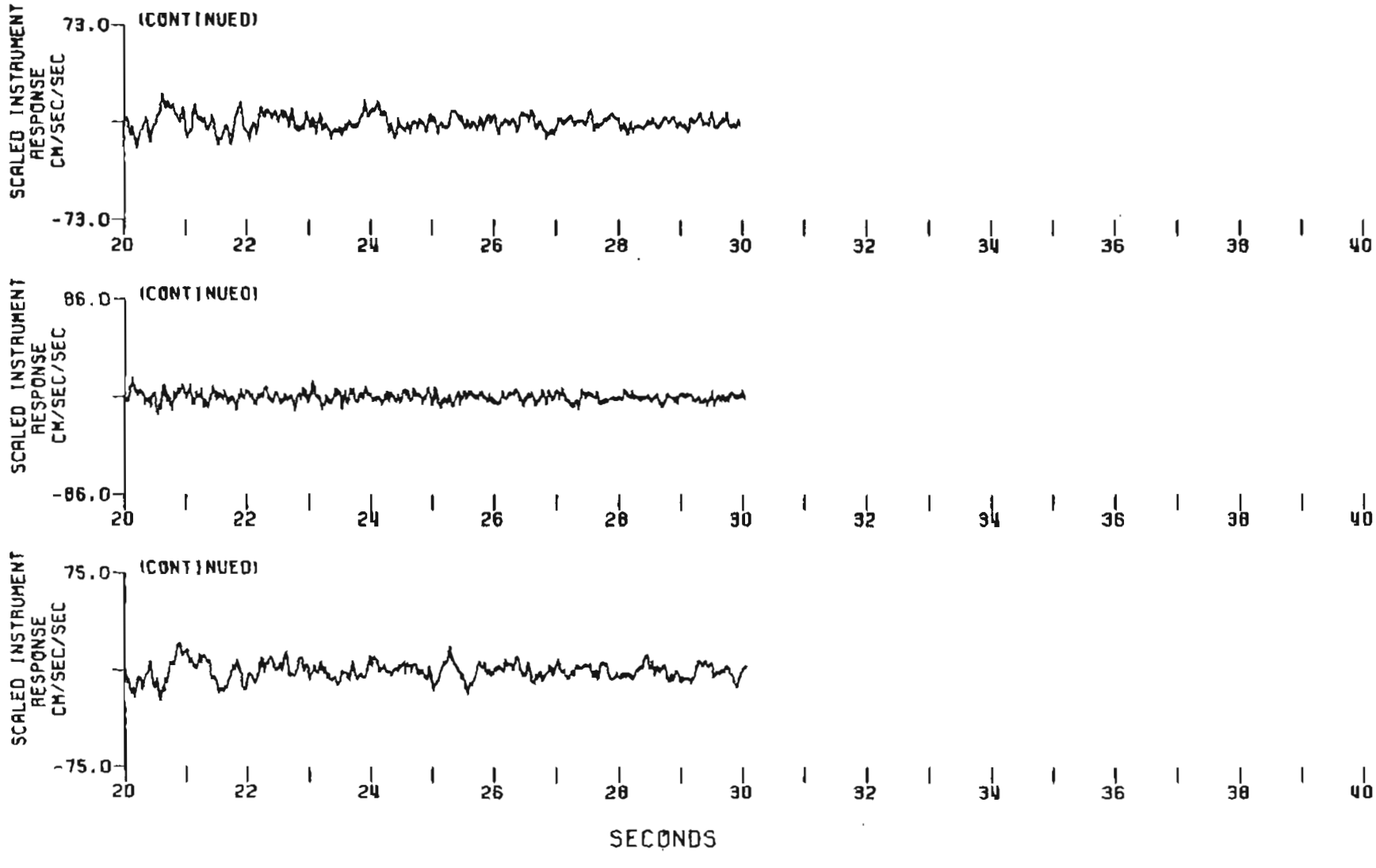
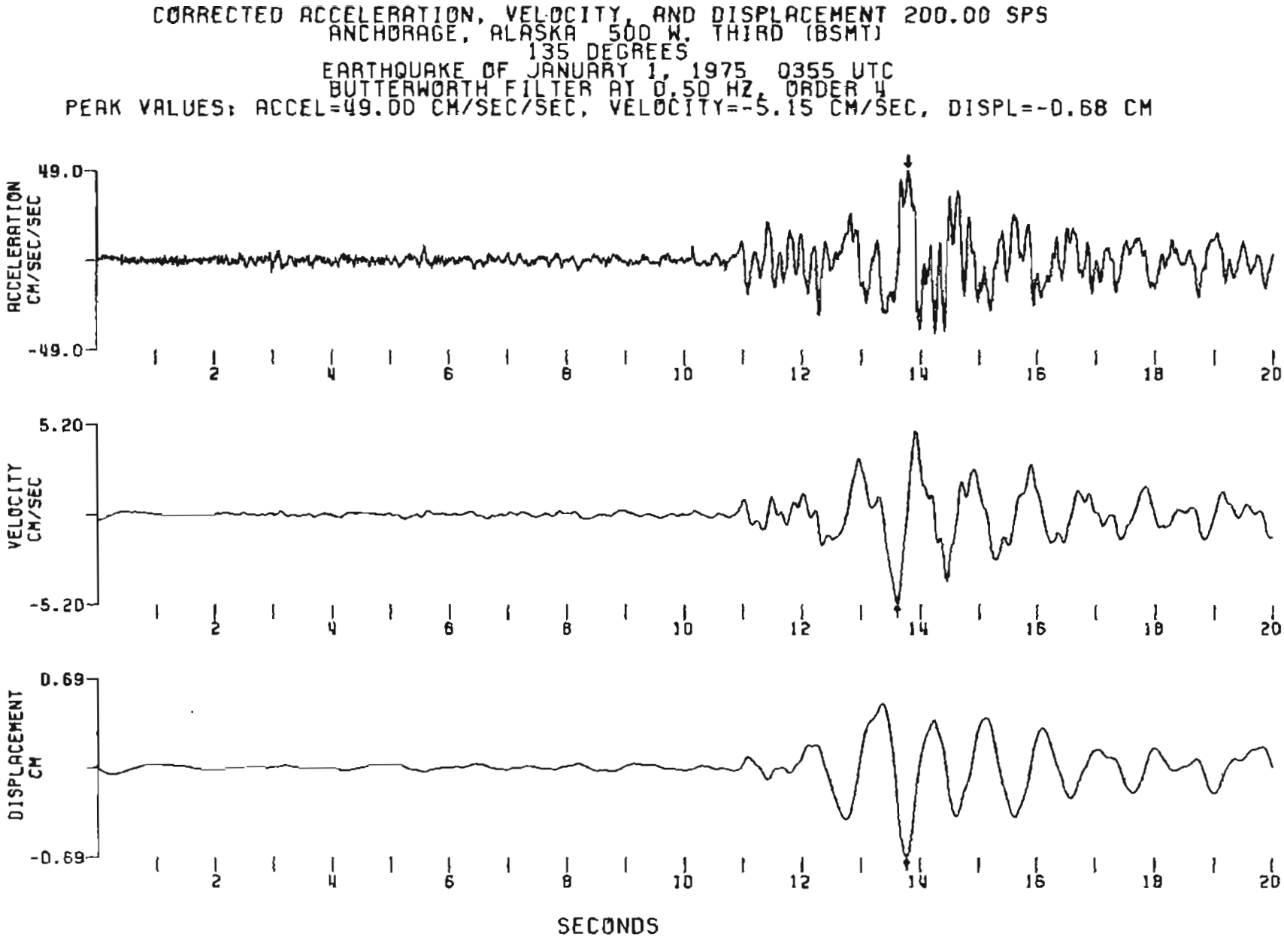
8
10
12
14
16
18
20
SECONDS


UNCORRECTED ACCELEROGRAM
TALKEETNA, ALASKA FAA-VOR BUILDING
165 DEGREES, UP, 075 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
PEAK VALUES(CM/SEC/SEC): -72.48 85.46 74.60
SCALED INSTRUMENT RESPONSE CM/SEC/SEC
73.0
-73.0
86.0
-86.0
75.0
-75.0
2
4
6
8
10
12
14
16
18
20
SECONDS

UNCORRECTED ACCELEROGRAM
TALKEETNA, ALASKA FAA-VOR BUILDING
165 DEGREES, UP, 075 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
PEAK VALUES(CM/SEC/SEC): -72.48 85.46 74.60




CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANCHORAGE, ALASKA 500 W. THIRD (BSMT)
135 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=49.00 CM/SEC/SEC, VELOCITY=-5.15 CM/SEC, DISPL=-0.68 CM
ACCELERATION CM/SEC/SEC
49.0
-49.0
VELOCITY CM/SEC
5.20
-5.20
DISPLACEMENT CM
0.69
-0.69
2
4
6
8
10
12
14
16
18
20
SECONDS

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANCHORAGE, ALASKA 500 W. THIRD (BSMT)
135 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
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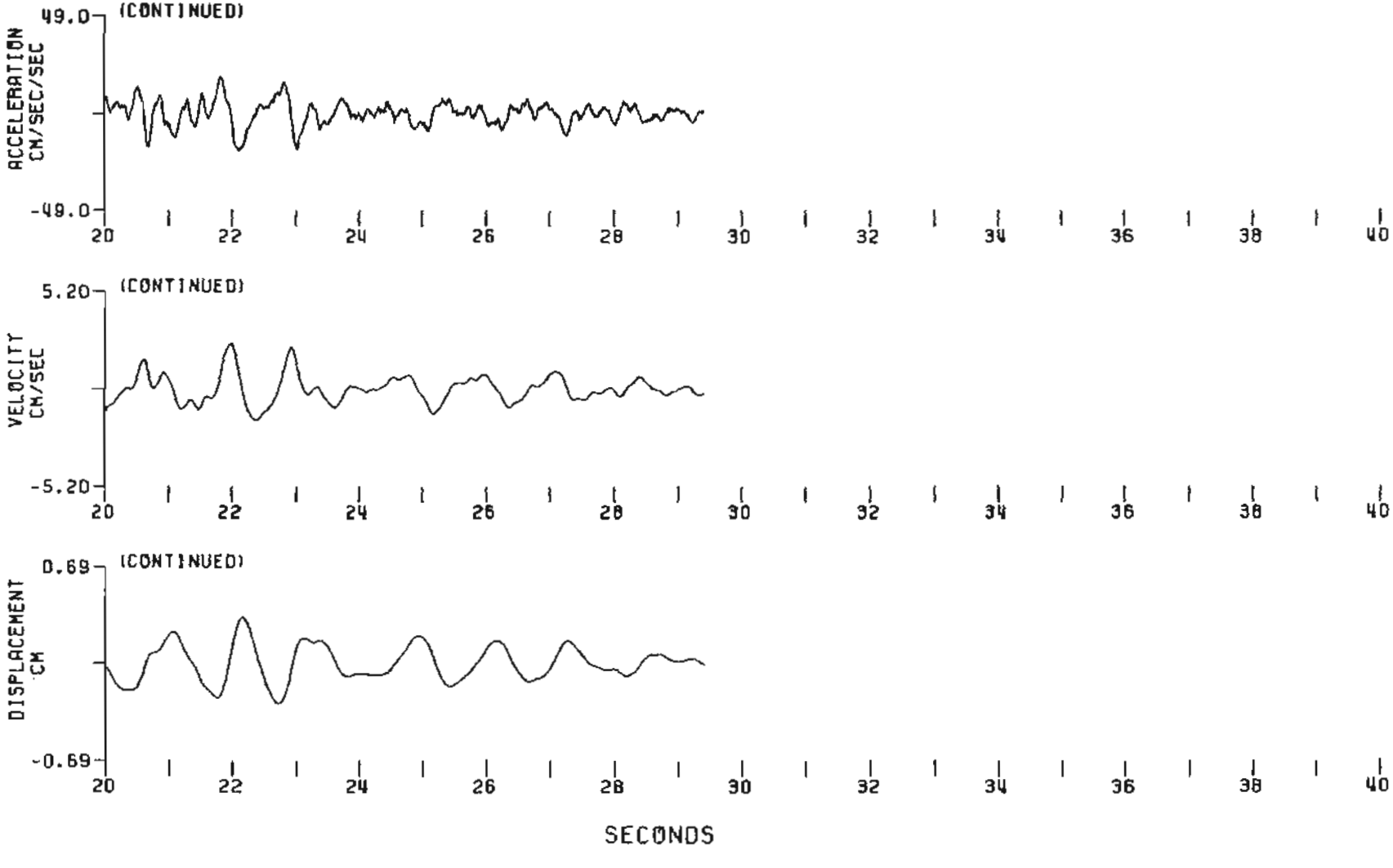

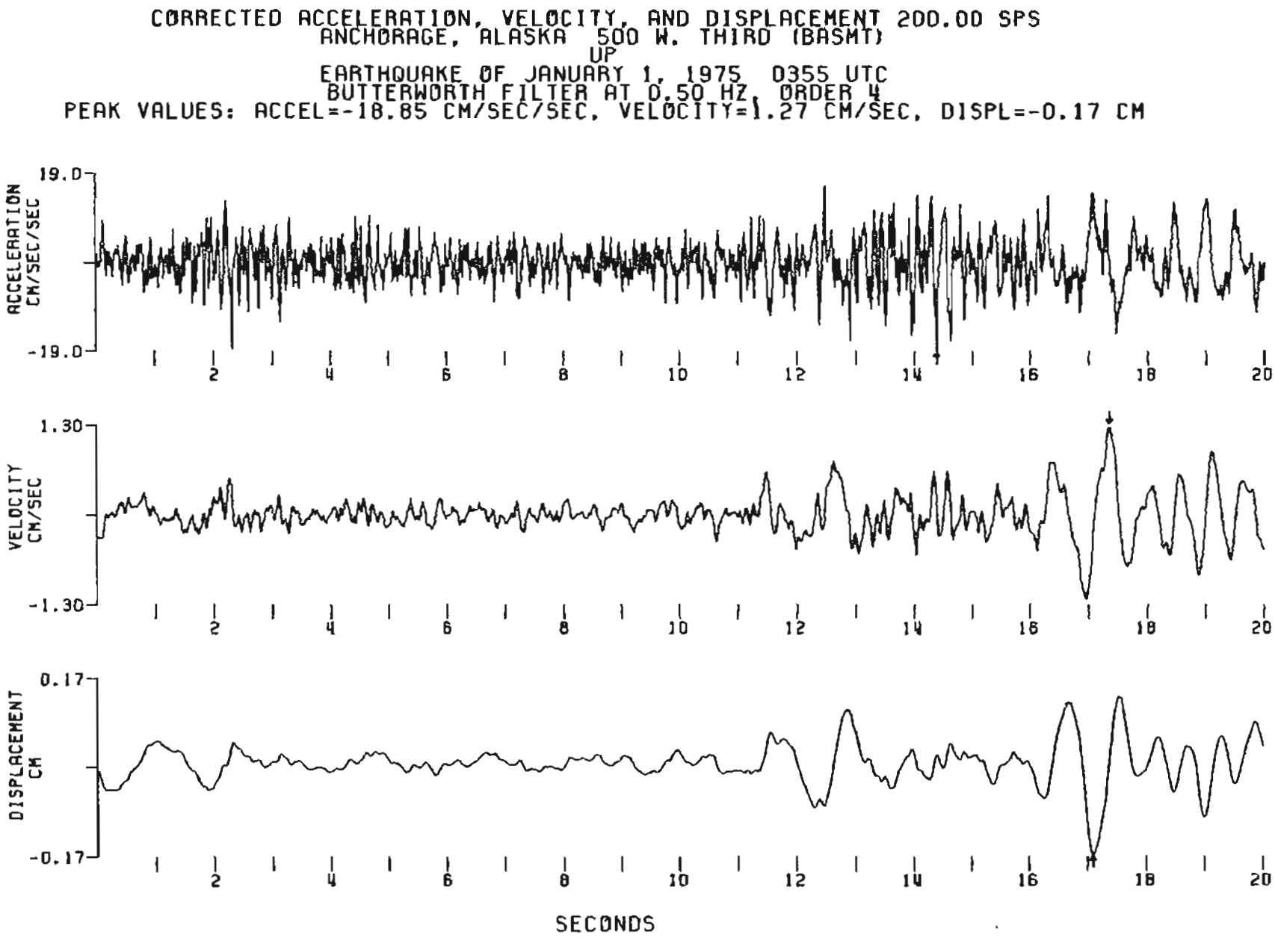
CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANCHORAGE, ALASKA 500 W. THIRD (BASMT)
UP
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=-18.85 CM/SEC/SEC, VELOCITY=1.27 CM/SEC, DISPL=-0.17 CM
ACCELERATION CM/SEC/SEC
19.0
-19.0
VELOCITY CM/SEC
1.30
-1.30
DISPLACEMENT CM
0.17
-0.17
2
4
6
8
10
12
14
16
18
20
SECONDS

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANCHORAGE, ALASKA 500 W. THIRD (BASMT)
UP
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
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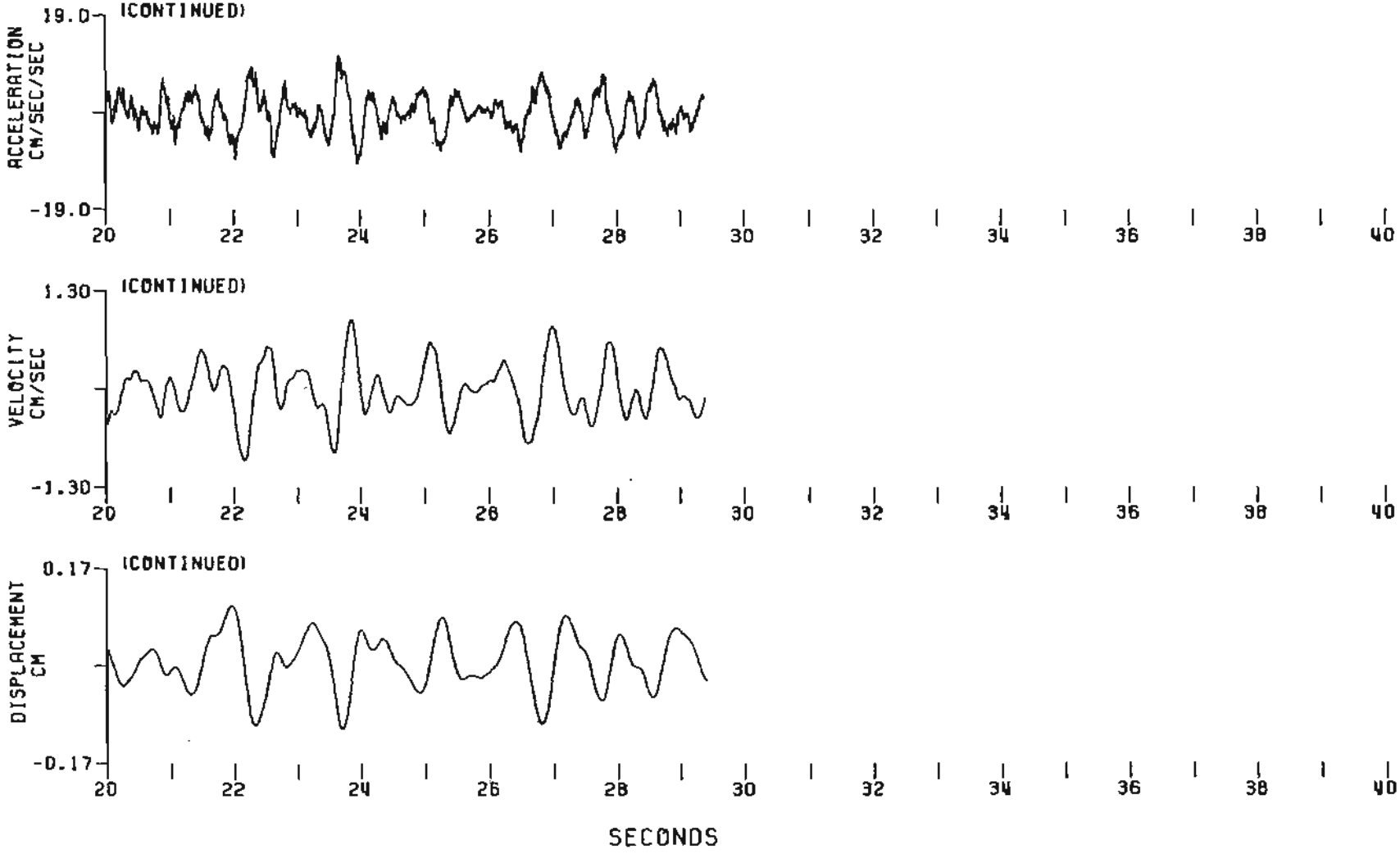

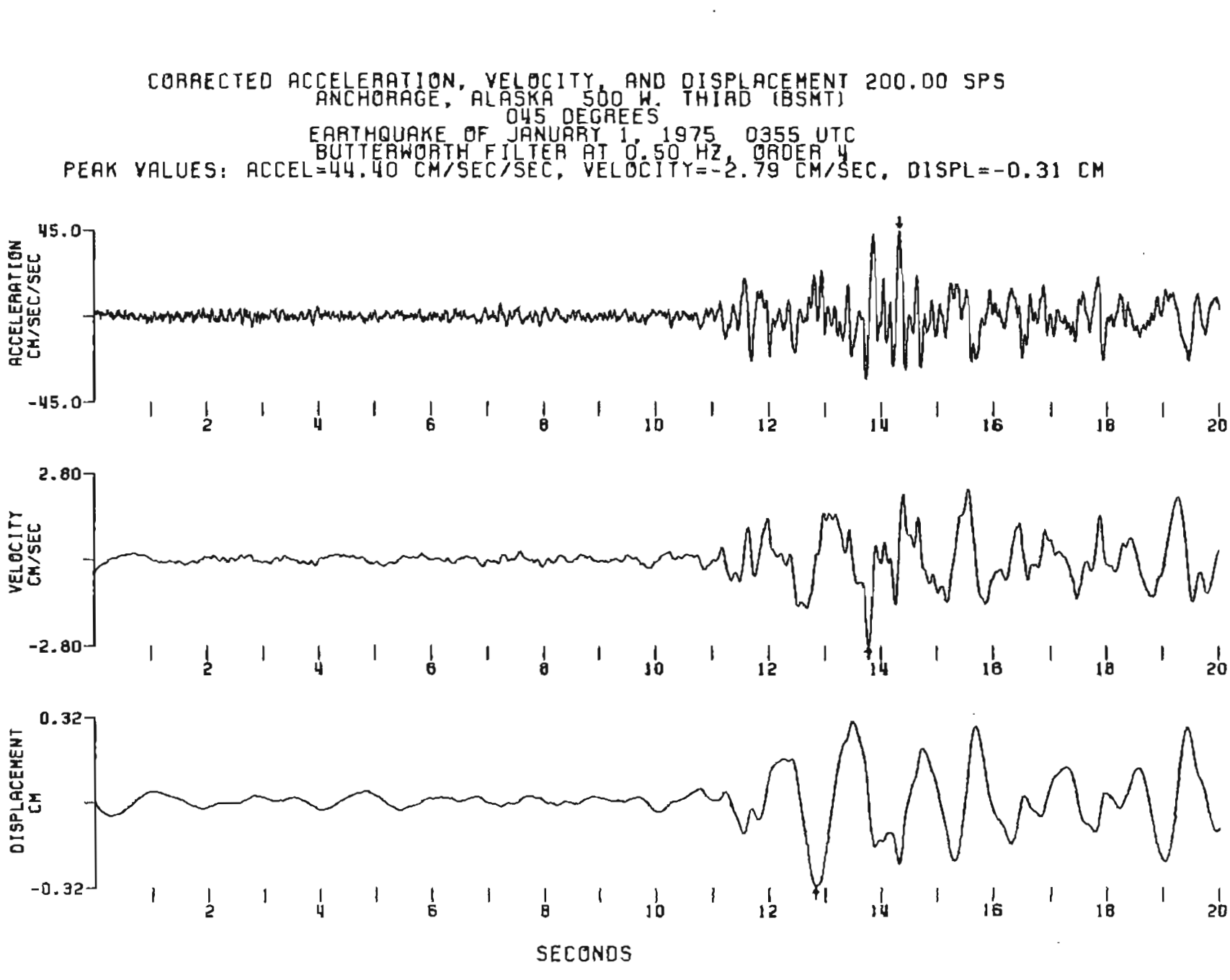
CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
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045 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
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ACCELERATION CM/SEC/SEC
45.0
-45.0
VELOCITY CM/SEC
2.80
-2.80
DISPLACEMENT CM
0.32
-0.32
2
4
6
8
10
12
14
16
18
20
SECONDS

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANCHORAGE, ALASKA 500 W. THIRD (BSMT)
045 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
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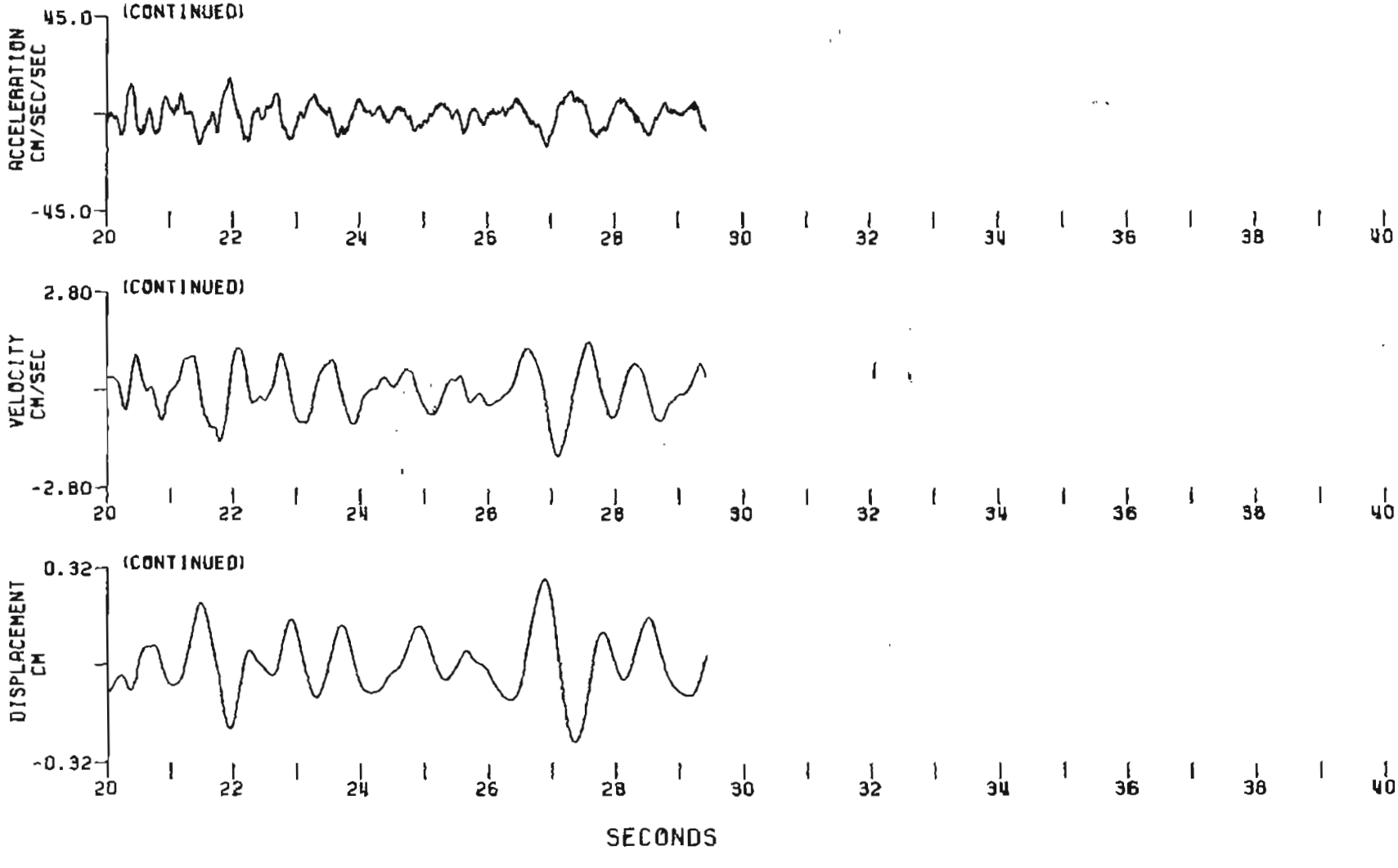

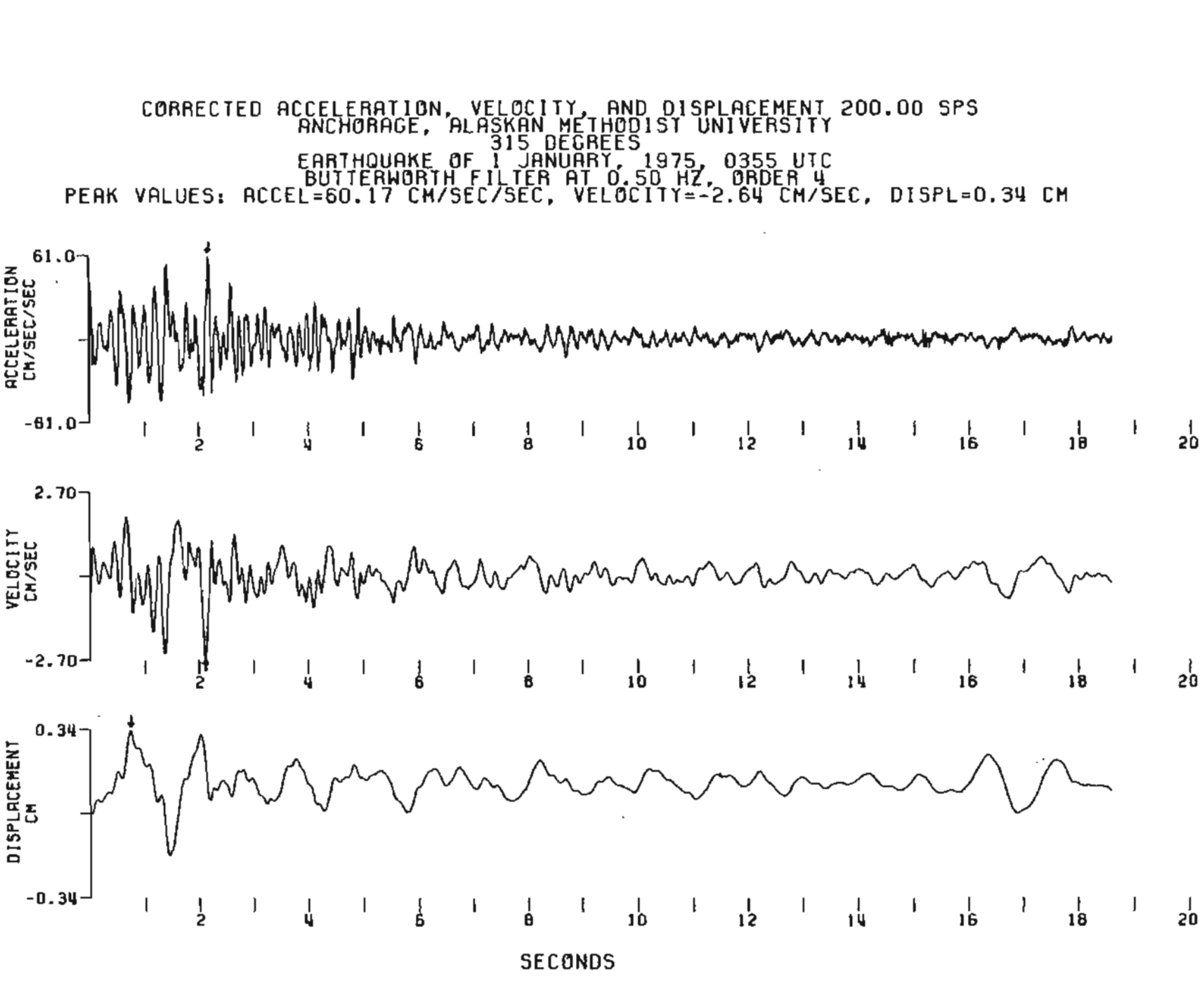
CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANCHORAGE, ALASKAN METHODIST UNIVERSITY
315 DEGREES
EARTHQUAKE OF 1 JANUARY, 1975, 0355 UTC
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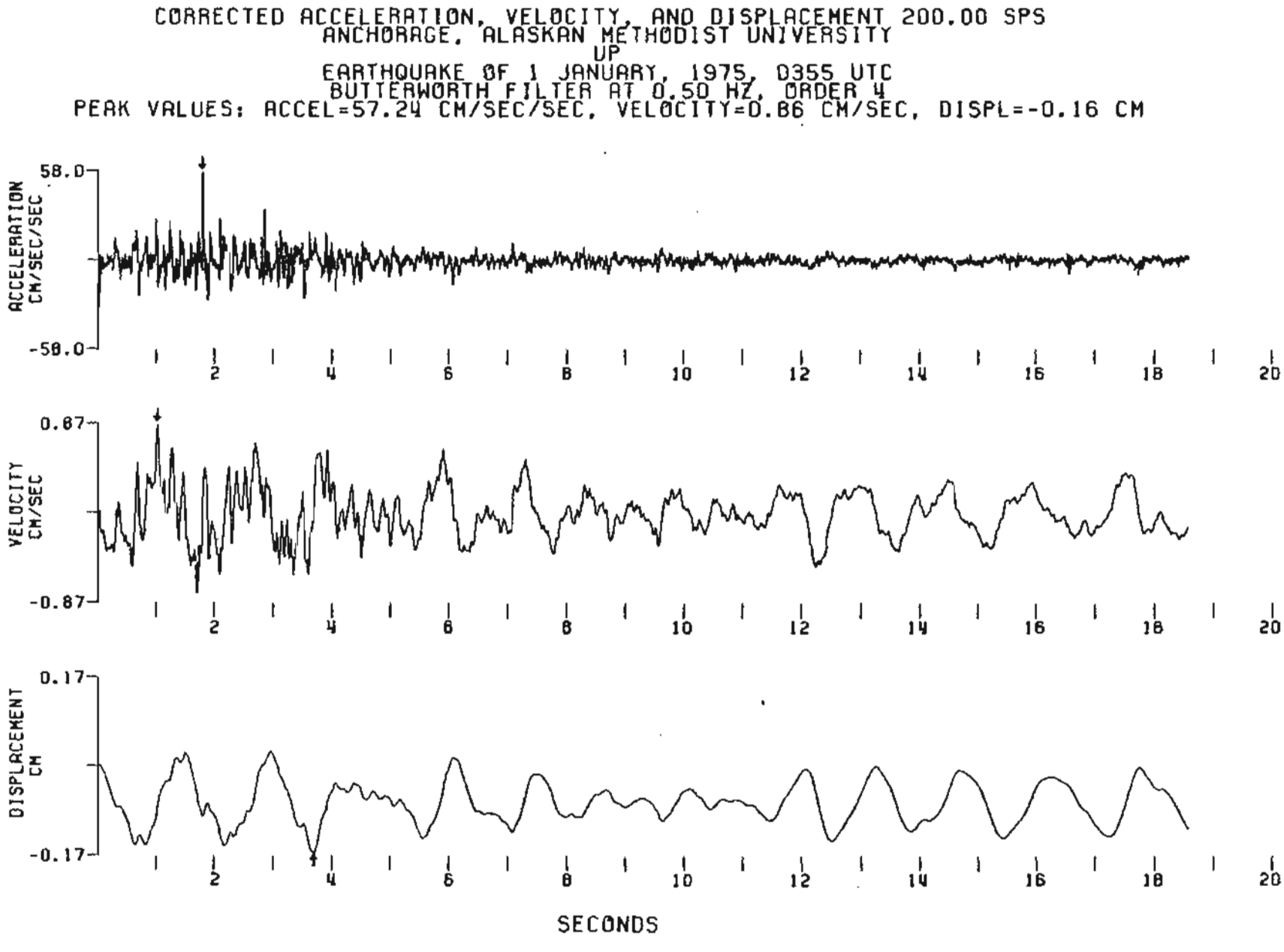
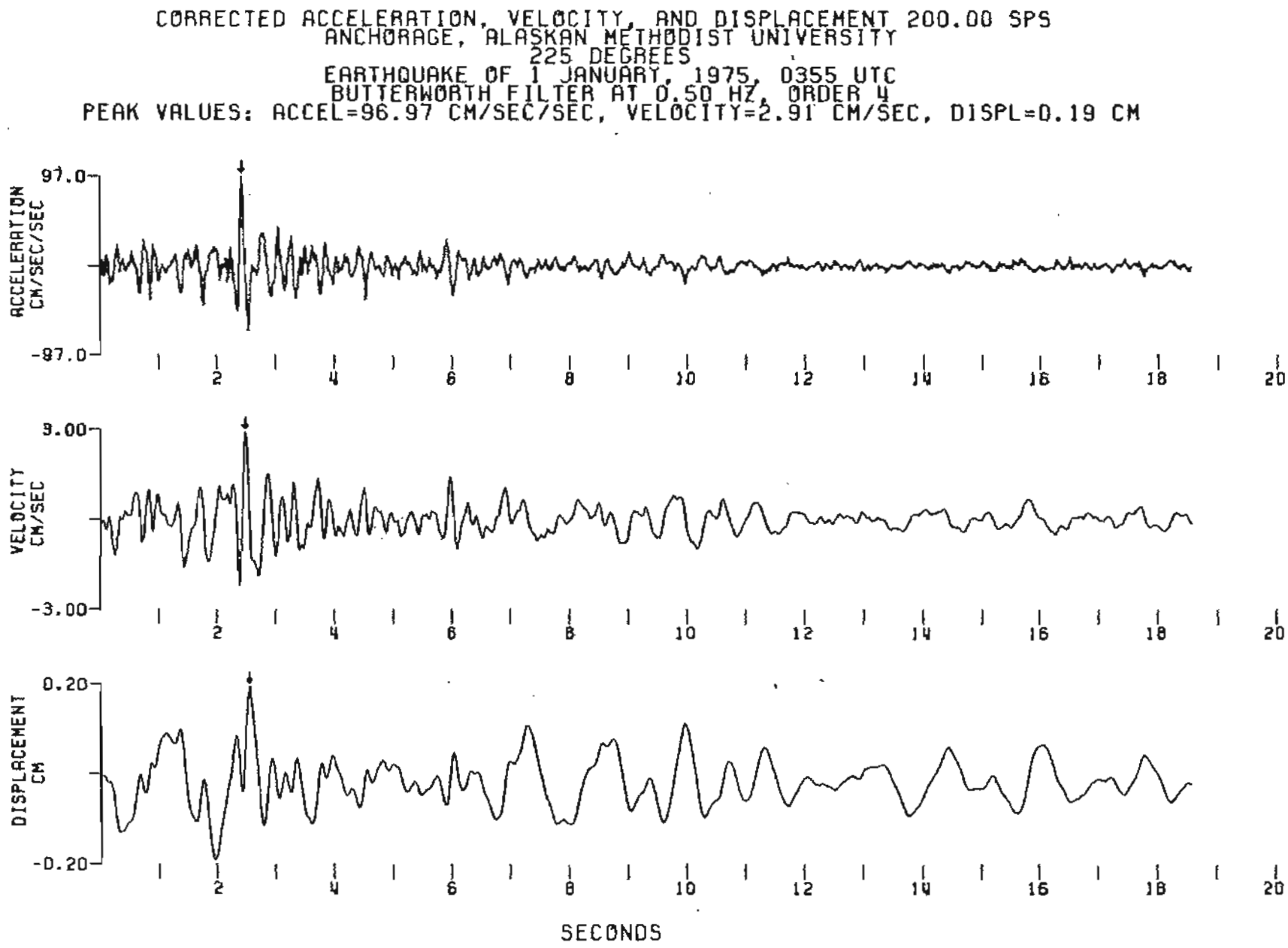
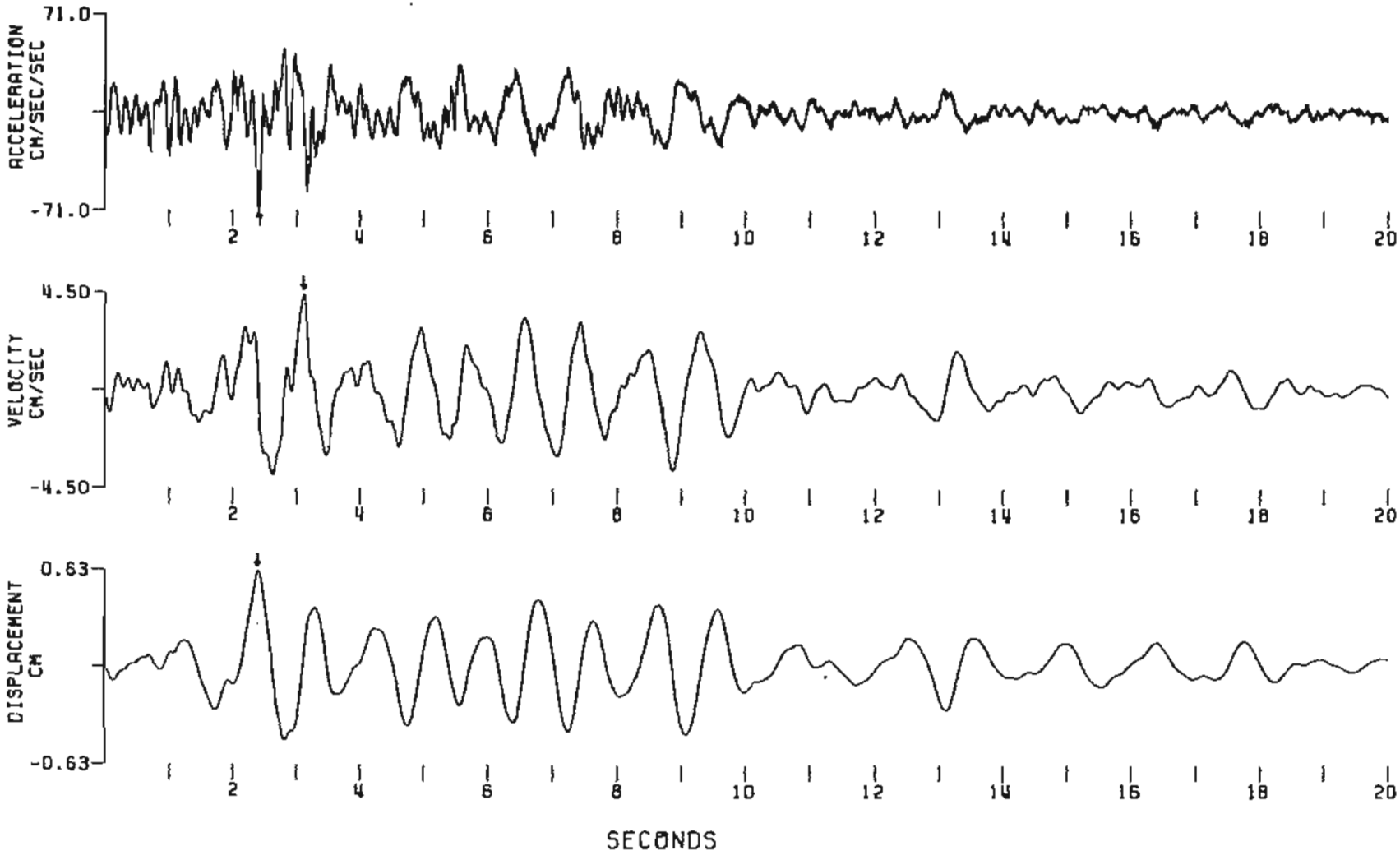
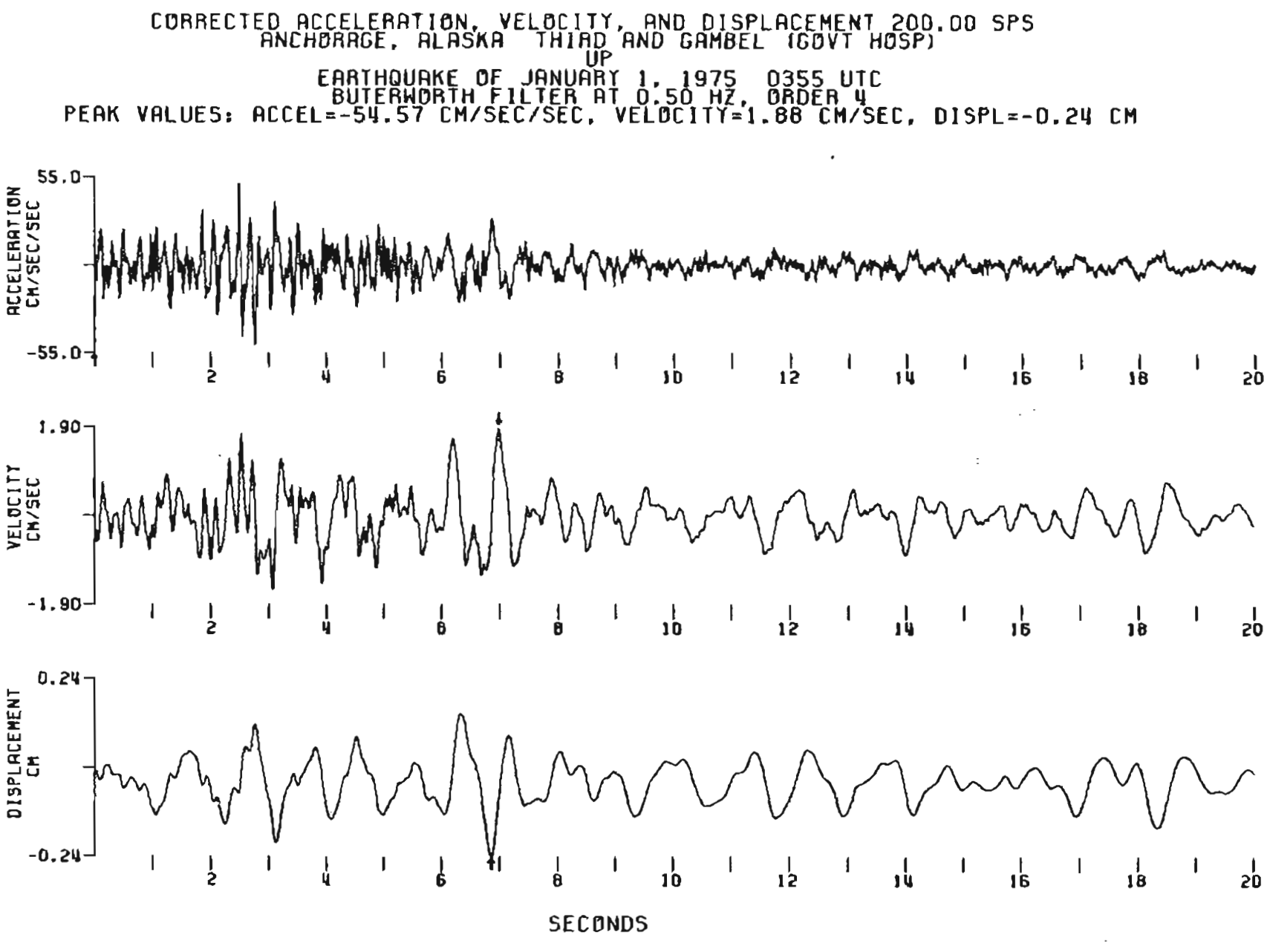
-61.0
VELOCITY CM/SEC
2.70
-2.70
DISPLACEMENT CM
0.34
-0.34
2
4
6
8
10
12
14
16
18
20
SECONDS

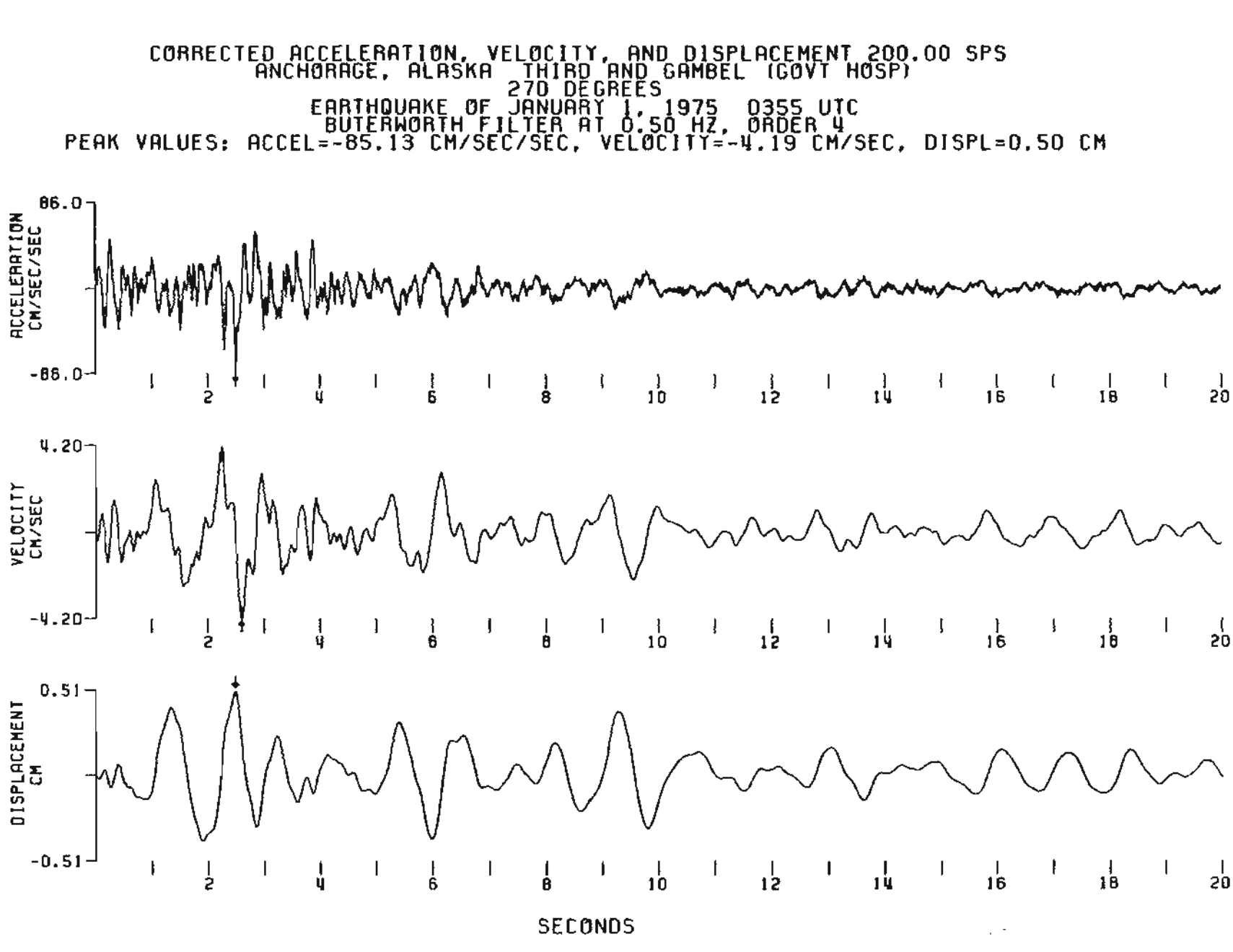

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANCHORAGE, ALASKAN METHODIST UNIVERSITY
UP
EARTHQUAKE OF 1 JANUARY, 1975, 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=57.24 CM/SEC/SEC, VELOCITY=0.86 CM/SEC, DISPL=-0.16 CM
ACCELERATION CM/SEC/SEC
58.0
-58.0
VELOCITY CM/SEC
0.87
-0.87
DISPLACEMENT CM
0.17
-0.17
2
4
6
8
10
12
14
16
18
20
SECONDS

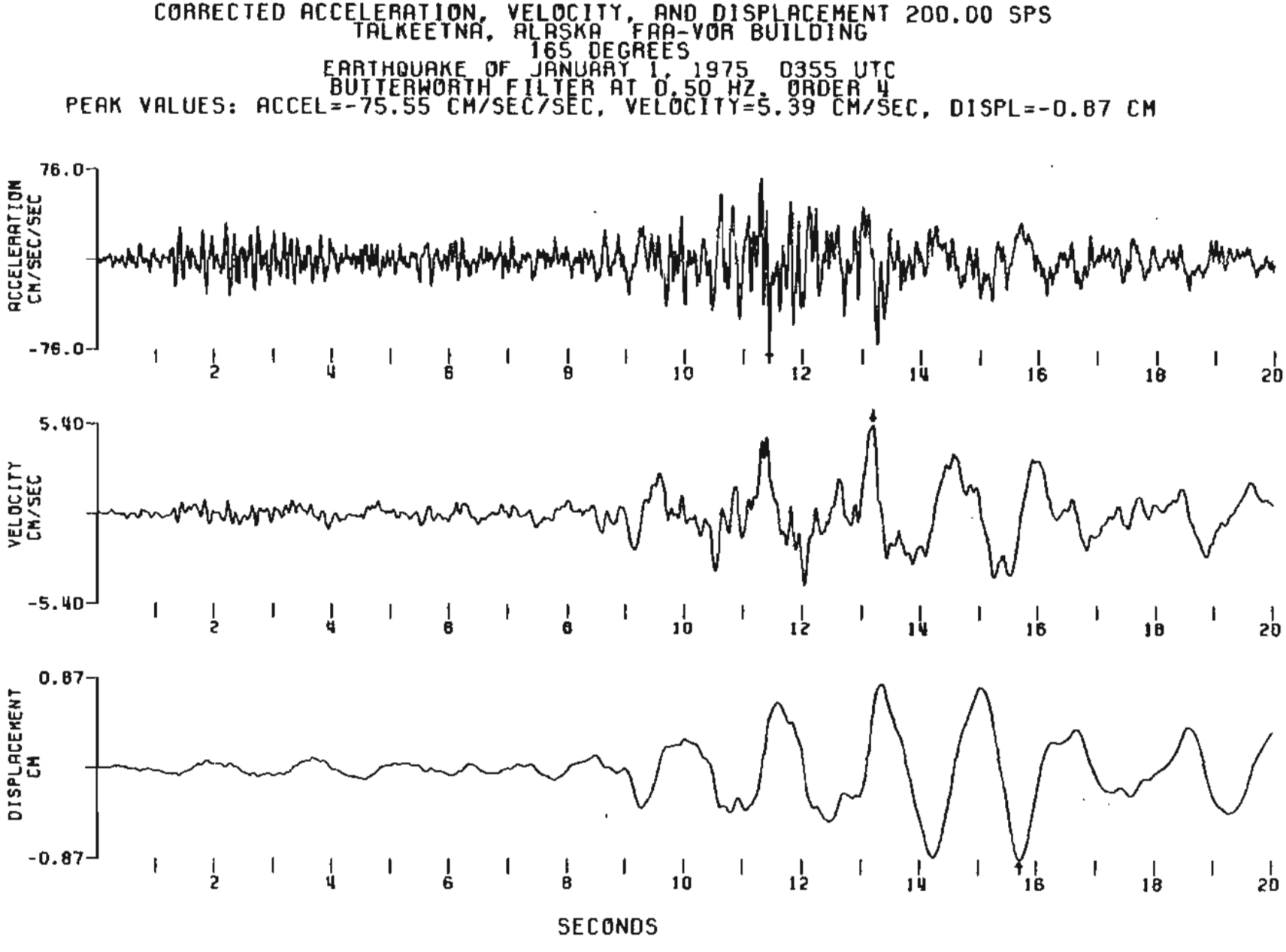

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANCHORAGE, ALASKAN METHODIST UNIVERSITY
225 DEGREES
EARTHQUAKE OF 1 JANUARY, 1975, 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=96.97 CM/SEC/SEC, VELOCITY=2.91 CM/SEC, DISPL=0.19 CM
ACCELERATION CM/SEC/SEC
97.0
-97.0
VELOCITY CM/SEC
3.00
-3.00
DISPLACEMENT CM
0.20
-0.20
2
4
6
8
10
12
14
16
18
20
SECONDS

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP)
360 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=-70.40 CM/SEC/SEC, VELOCITY=4.46 CM/SEC, DISPL=0.62 CM

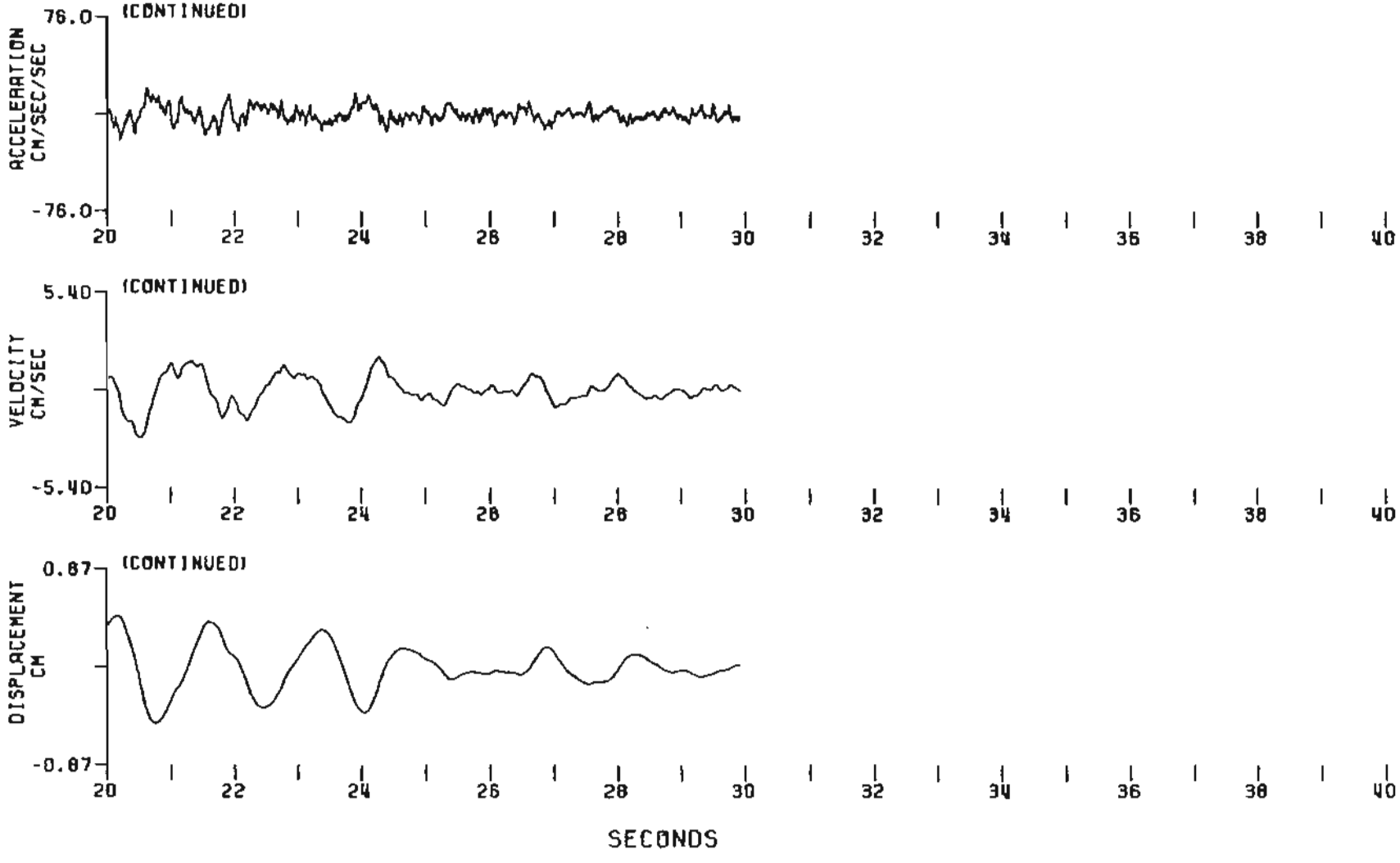


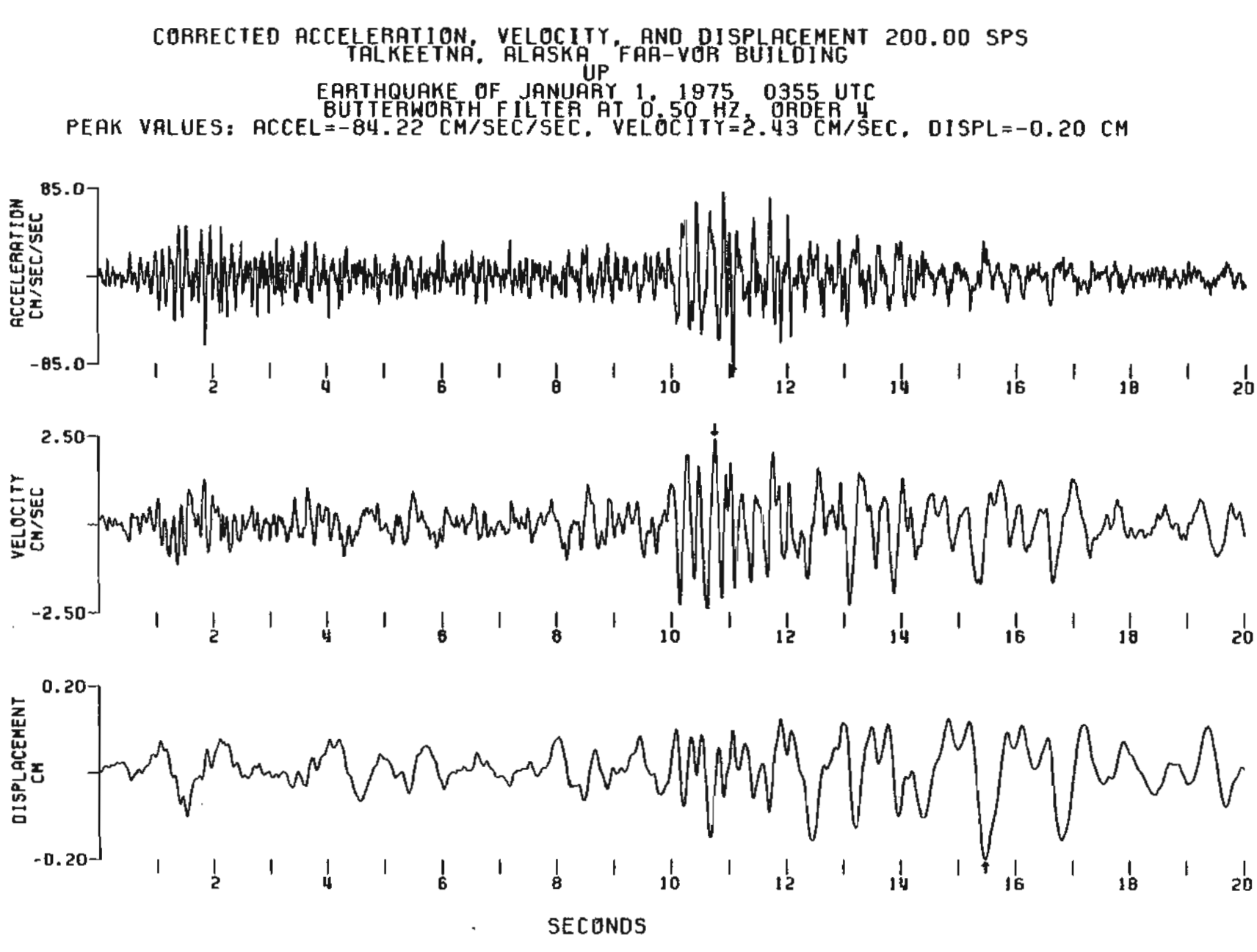

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP)
UP
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=-54.57 CM/SEC/SEC, VELOCITY=1.88 CM/SEC, DISPL=-0.24 CM
ACCELERATION CM/SEC/SEC
55.0
-55.0
VELOCITY CM/SEC
1.90
-1.90
DISPLACEMENT CM
0.24
-0.24
2
4
6
8
10
12
14
16
18
20
SECONDS


CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP)
270 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=-85.13 CM/SEC/SEC, VELOCITY=-4.19 CM/SEC, DISPL=0.50 CM
ACCELERATION CM/SEC/SEC
86.0
-86.0
VELOCITY CM/SEC
4.20
-4.20
DISPLACEMENT CM
0.51
-0.51
2
4
6
8
10
12
14
16
18
20
SECONDS

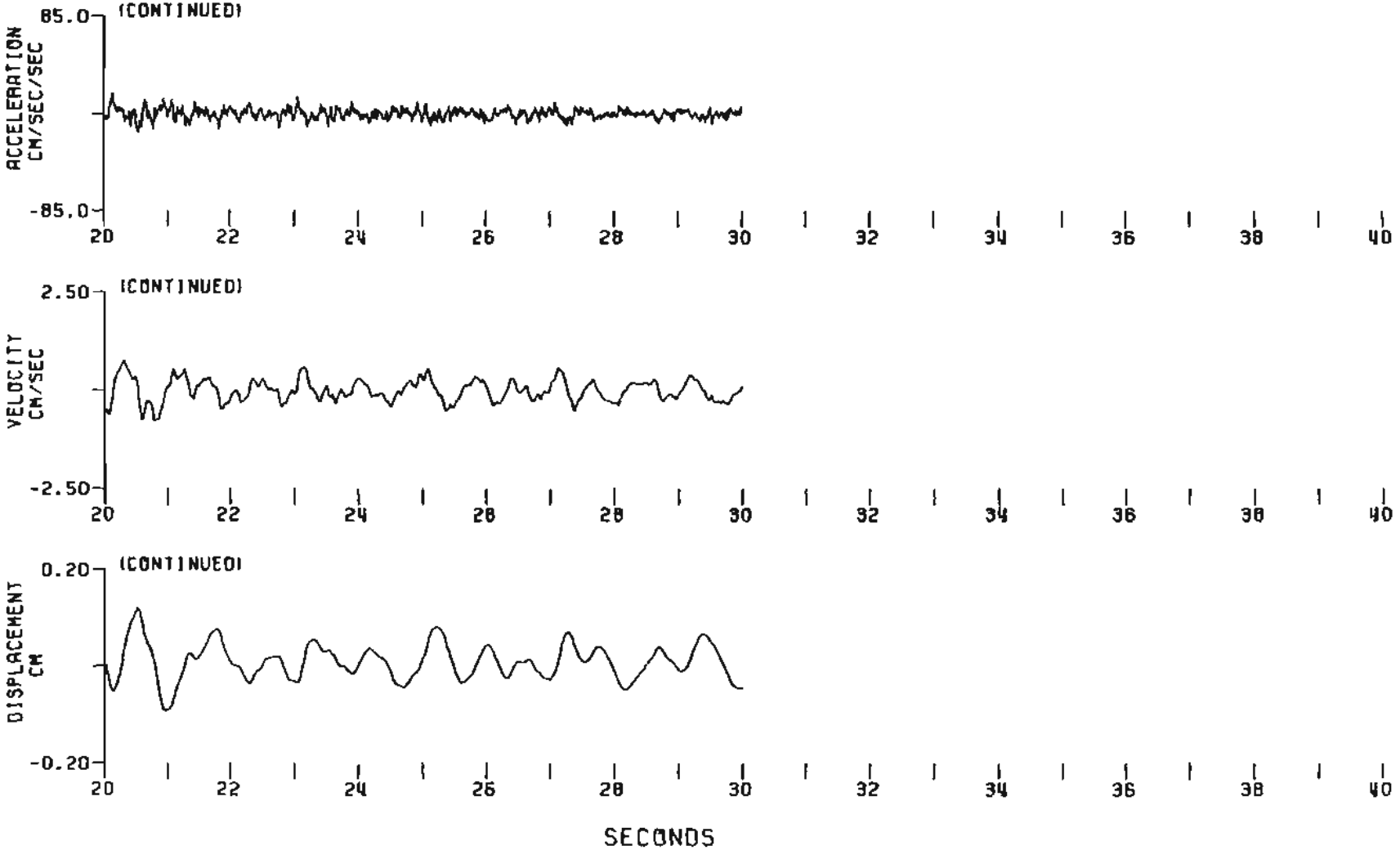

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
TALKEETNA, ALASKA FAA-VOR BUILDING
165 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=-75.55 CM/SEC/SEC, VELOCITY=5.39 CM/SEC, DISPL=-0.87 CM
ACCELERATION CM/SEC/SEC
76.0
-76.0
VELOCITY CM/SEC
5.40
-5.40
DISPLACEMENT CM
0.87
-0.87
2
4
6
8
10
12
14
16
18
20
SECONDS

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
TALKEETNA, ALASKA FAA-VOR BUILDING
165 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=-75.55 CM/SEC/SEC, VELOCITY=5.39 CM/SEC, DISPL=-0.87 CM

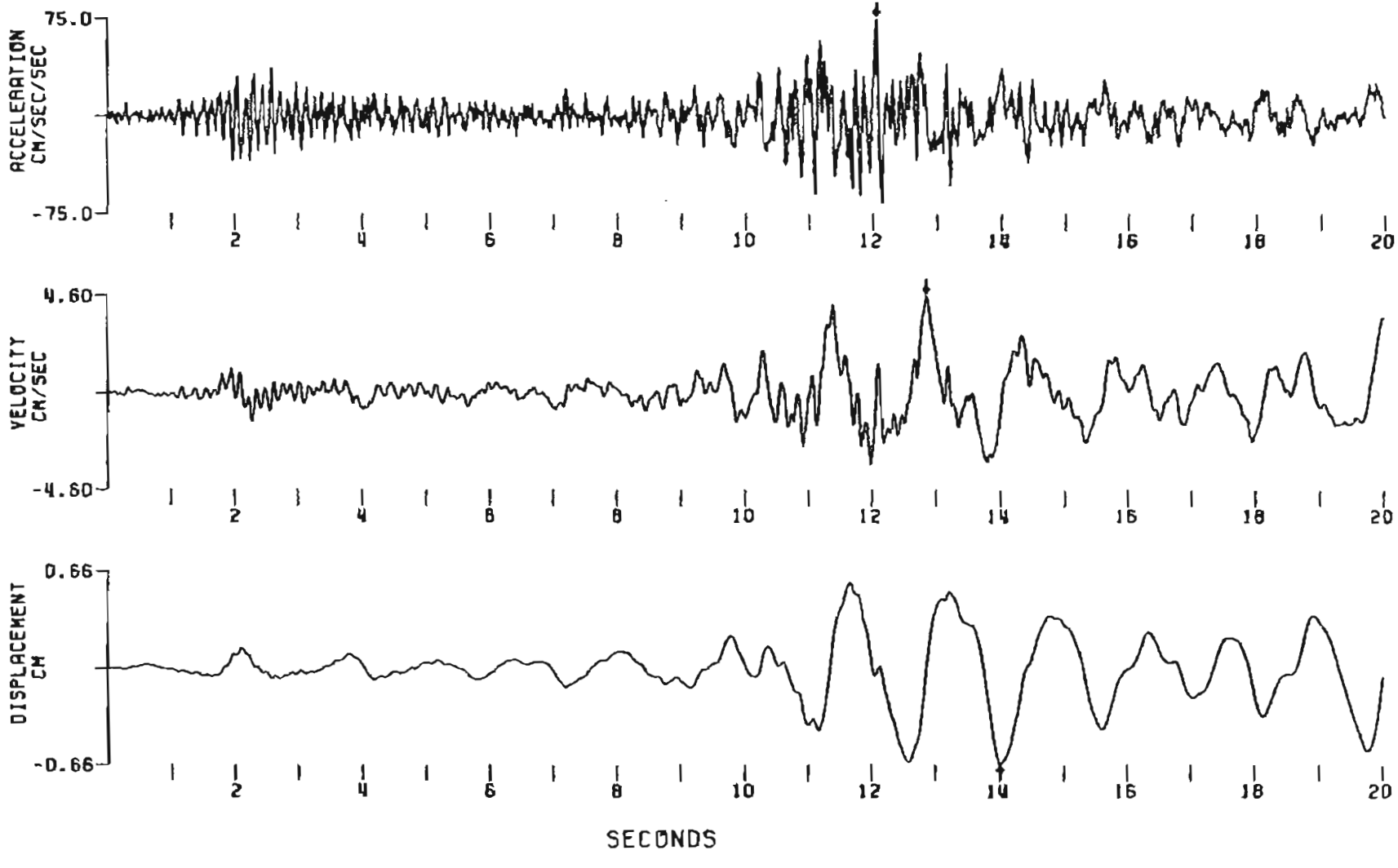



CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
TALKEETNA, ALASKA FAA-VOR BUILDING
UP
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=-84.22 CM/SEC/SEC, VELOCITY=2.43 CM/SEC, DISPL=-0.20 CM
ACCELERATION CM/SEC/SEC
85.0
-85.0
VELOCITY CM/SEC
2.50
-2.50
DISPLACEMENT CM
0.20
-0.20
2
4
6
8
10
12
14
16
18
20
SECONDS

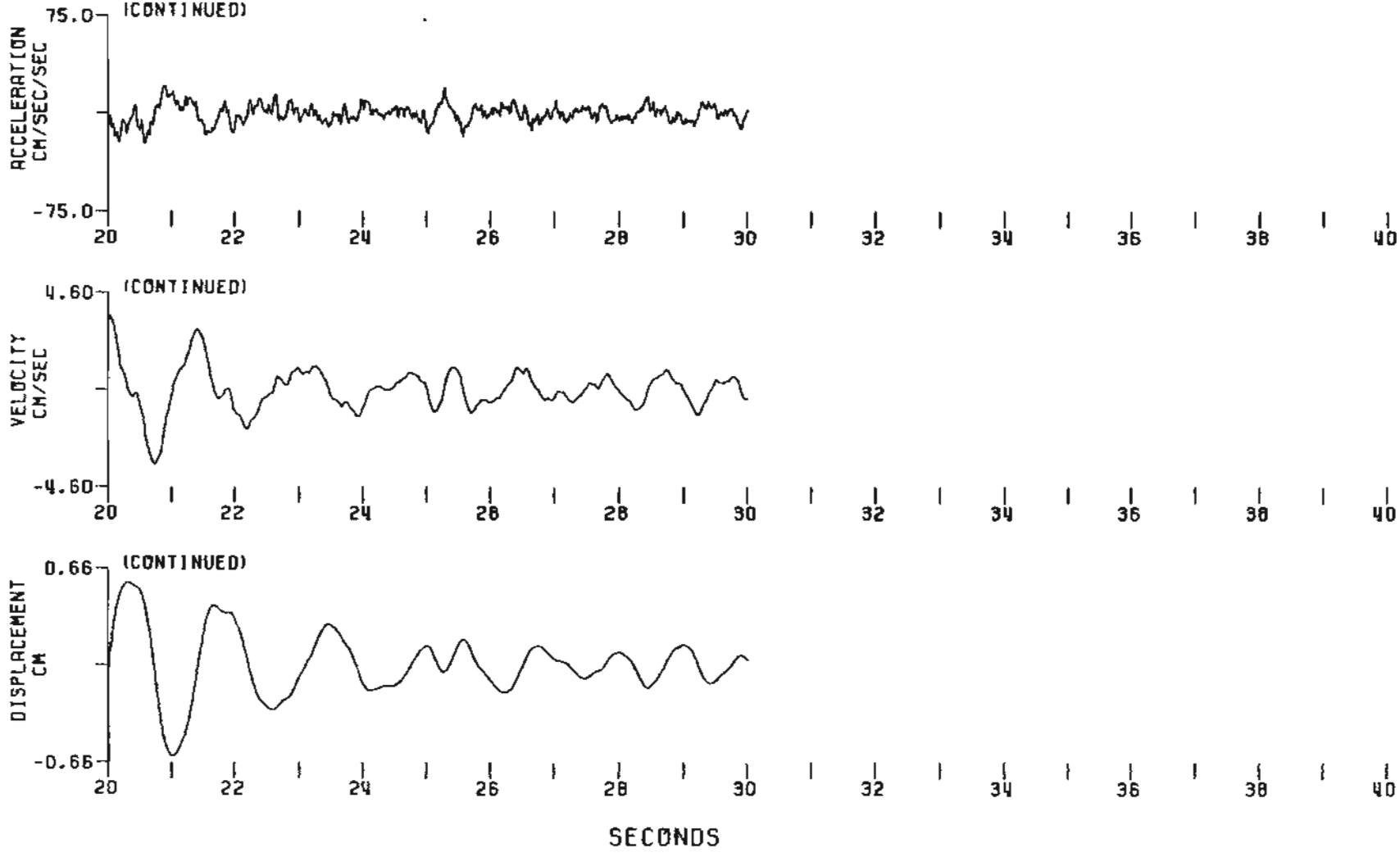
CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
TALKEETNA, ALASKA FAA-VOR BUILDING
UP
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=-84.22 CM/SEC/SEC, VELOCITY=2.43 CM/SEC, DISPL=-0.20 CM

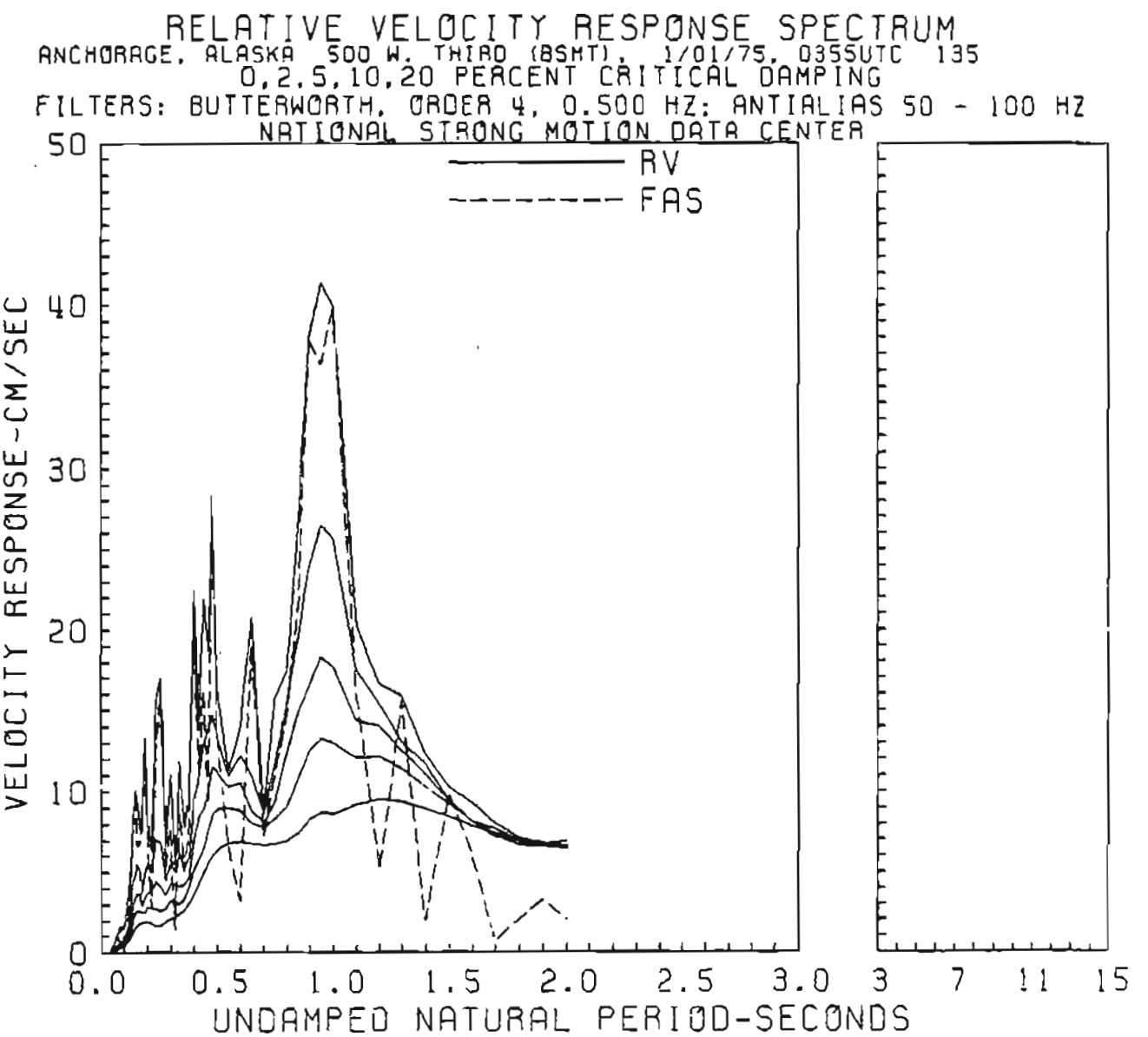


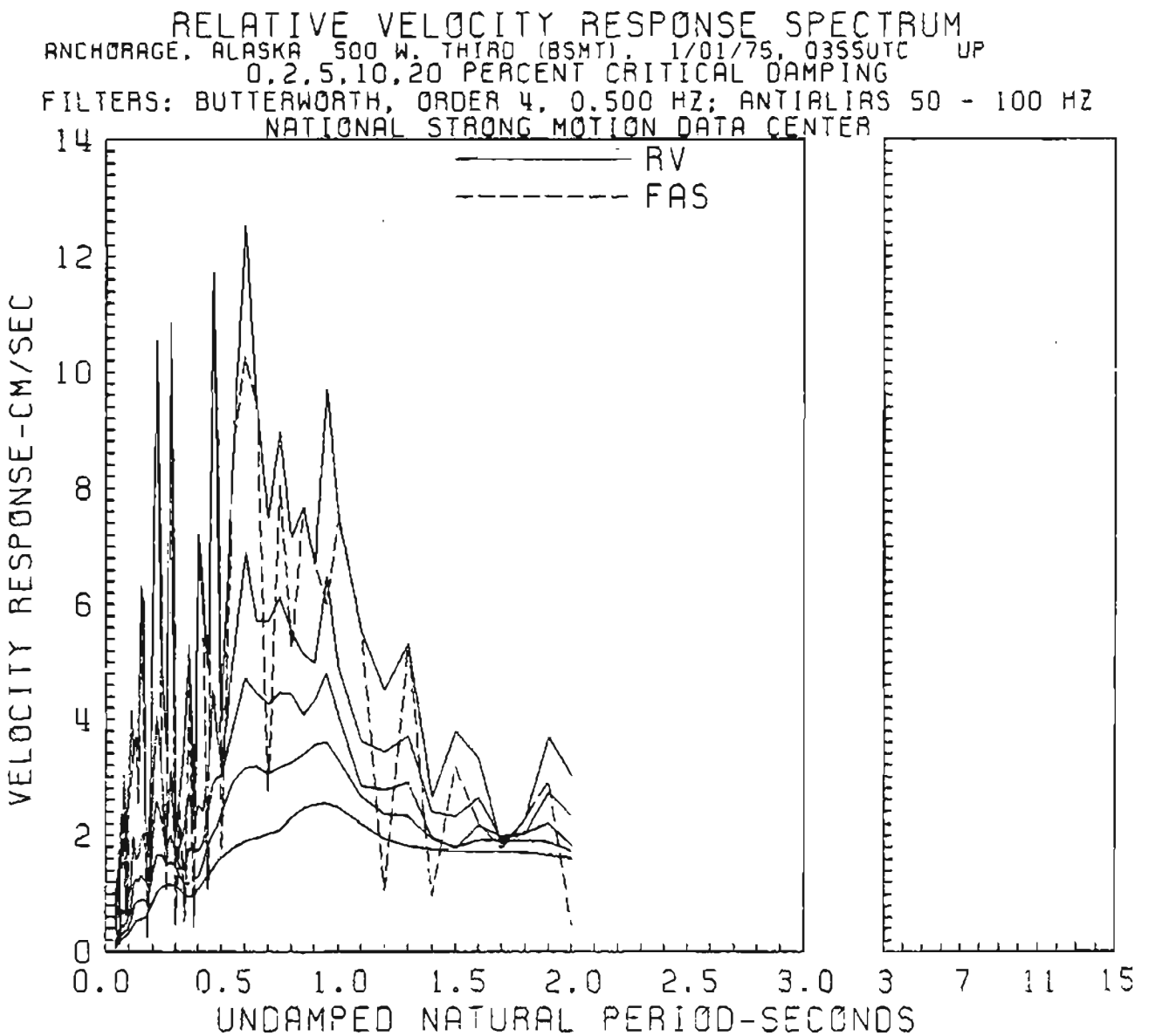
CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
TALKEETNA, ALASKA FAA-VOR BUILDING
075 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ. ORDER 4
PEAK VALUES: ACCEL=74.93 CM/SEC/SEC, VELOCITY=4.58 CM/SEC, DISPL=-0.65 CM

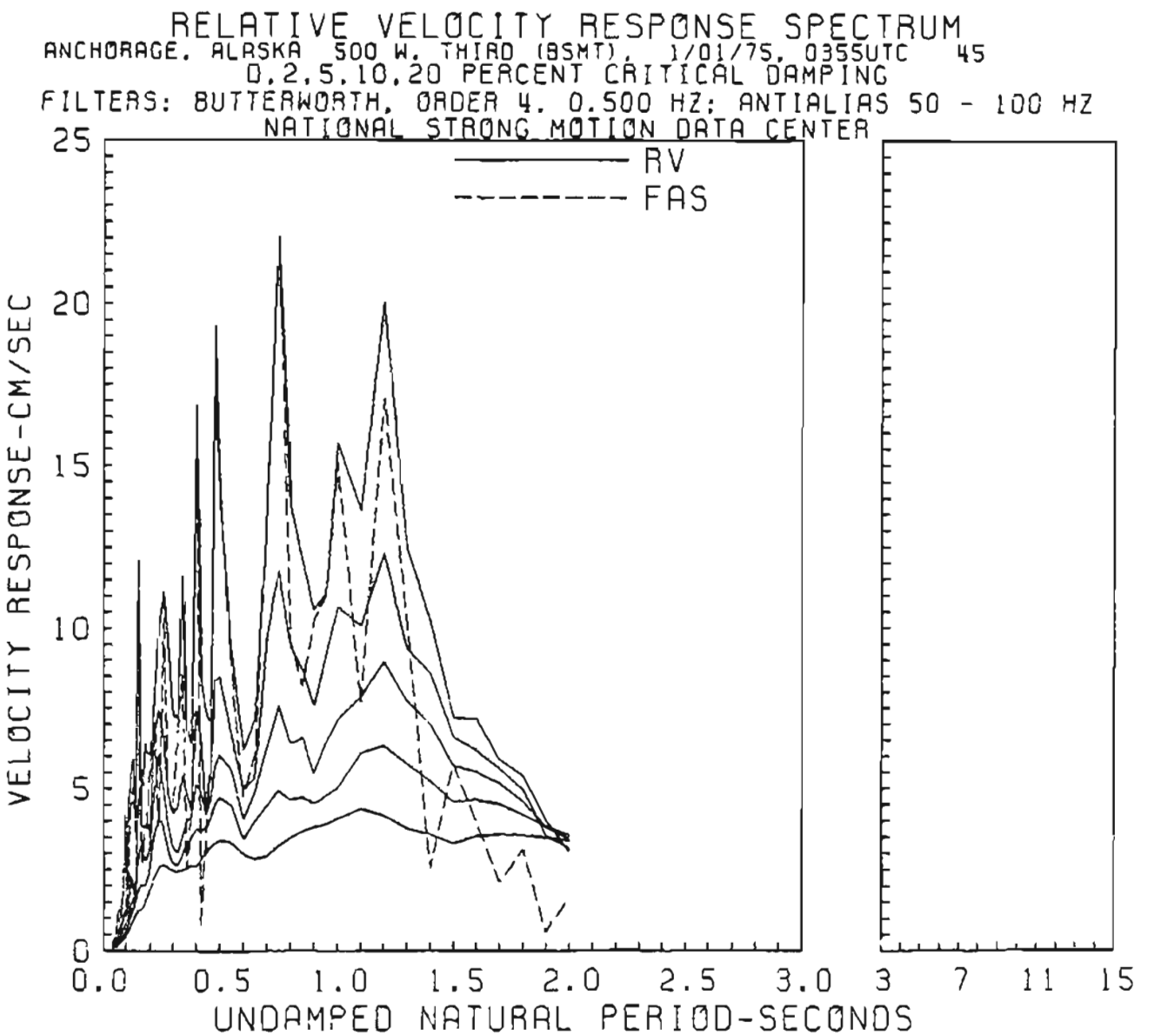


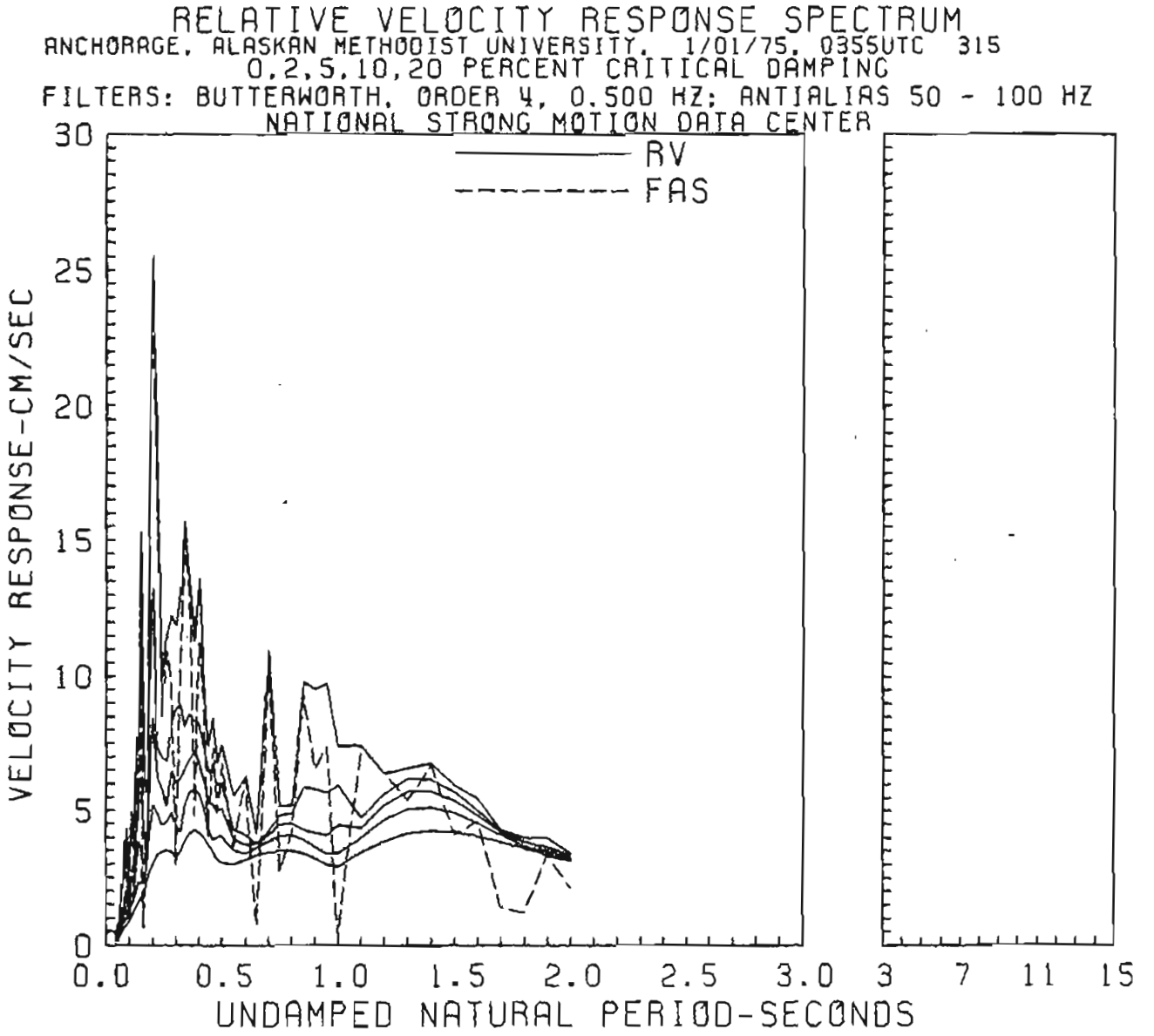
CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
TALKEETNA, ALASKA FAA-VOR BUILDING
075 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
PEAK VALUES: ACCEL=74.93 CM/SEC/SEC, VELOCITY=4.58 CM/SEC, DISPL=-0.65 CM

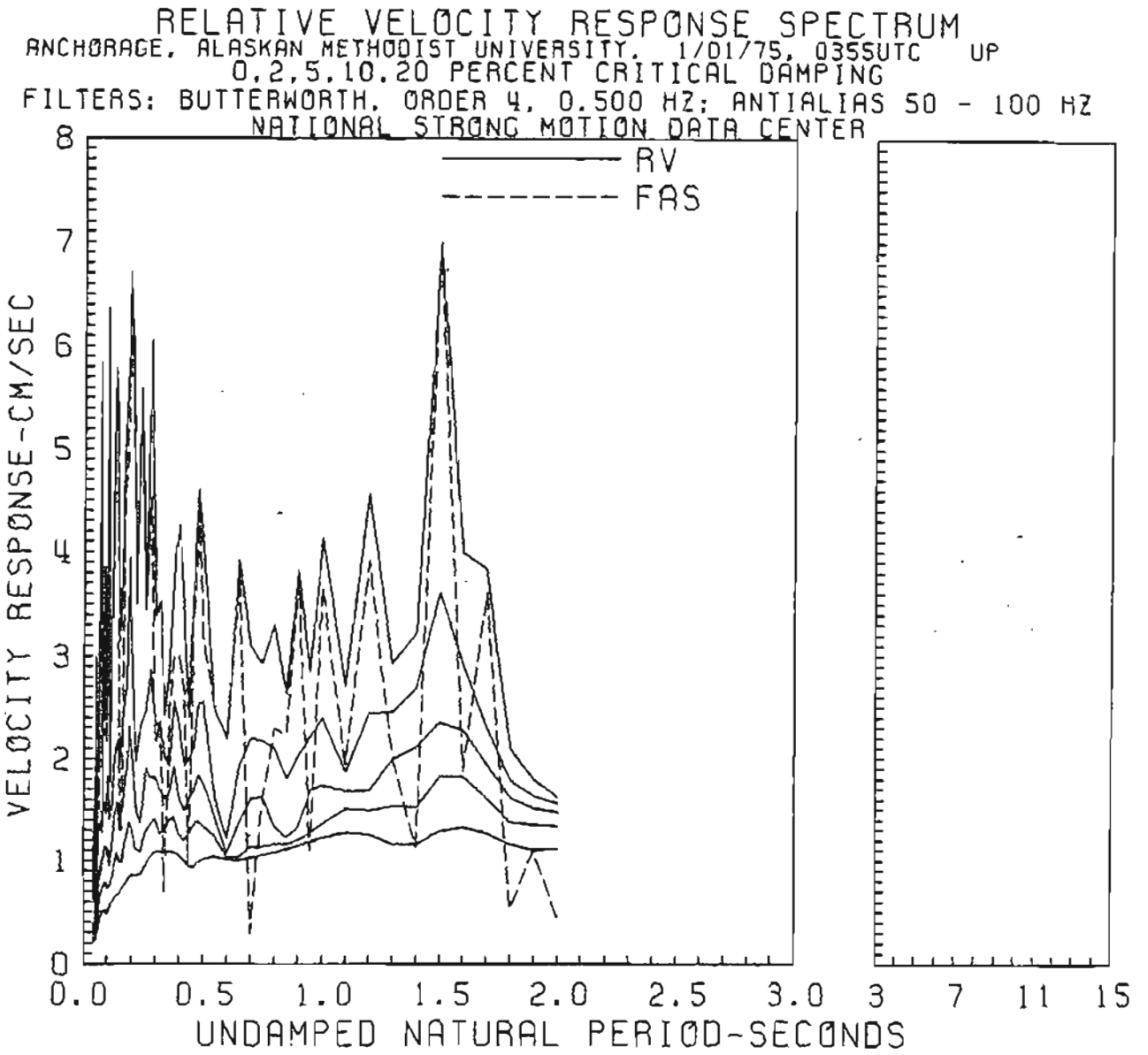


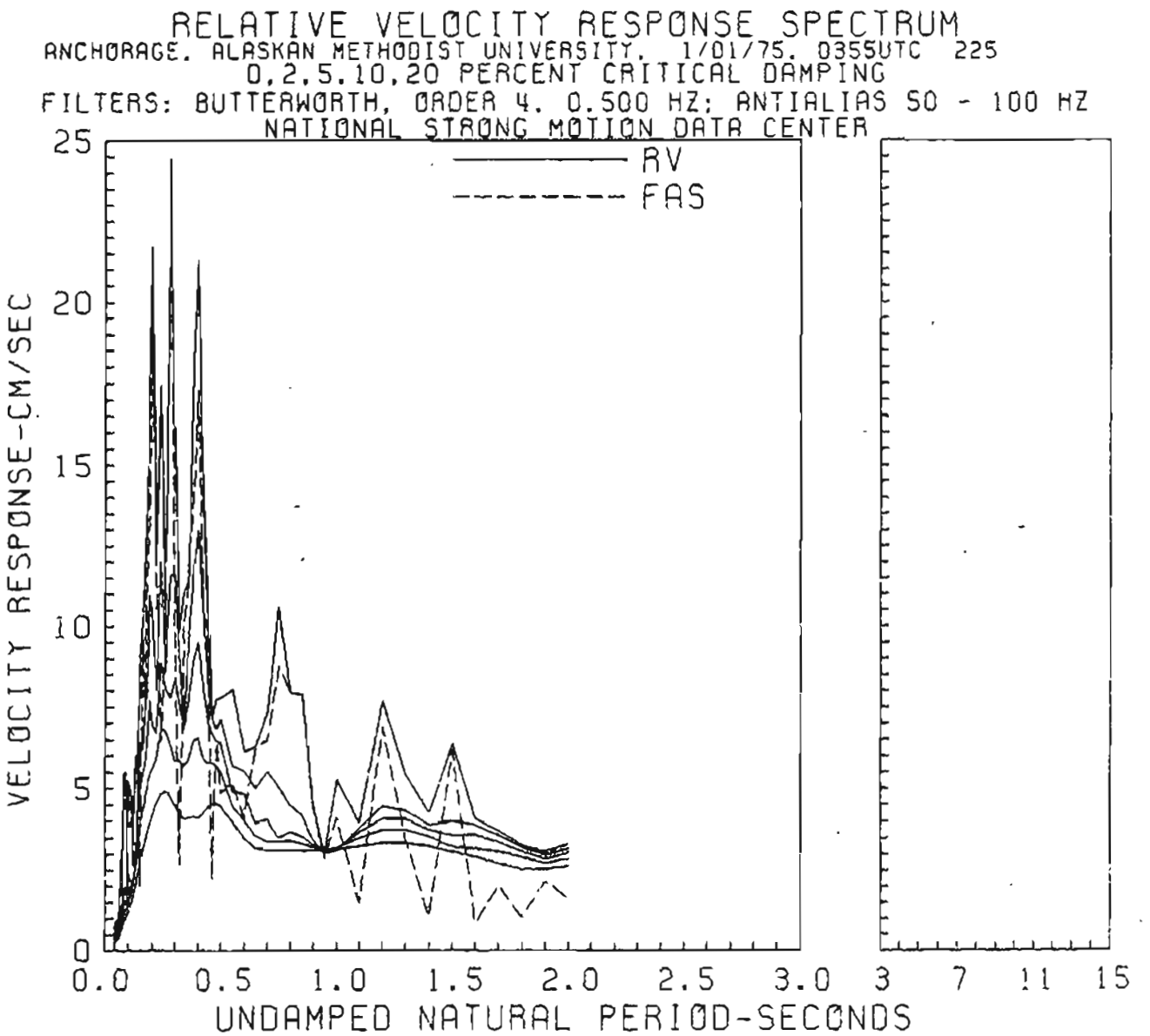

RELATIVE VELOCITY RESPONSE SPECTRUM
ANCHORAGE, ALASKA 500 W. THIRD (BSMT), 1/01/75, 0355UTC 135
0,2.5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
0
10
20
30
40
50
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15
UNDAMPED NATURAL PERIOD-SECONDS

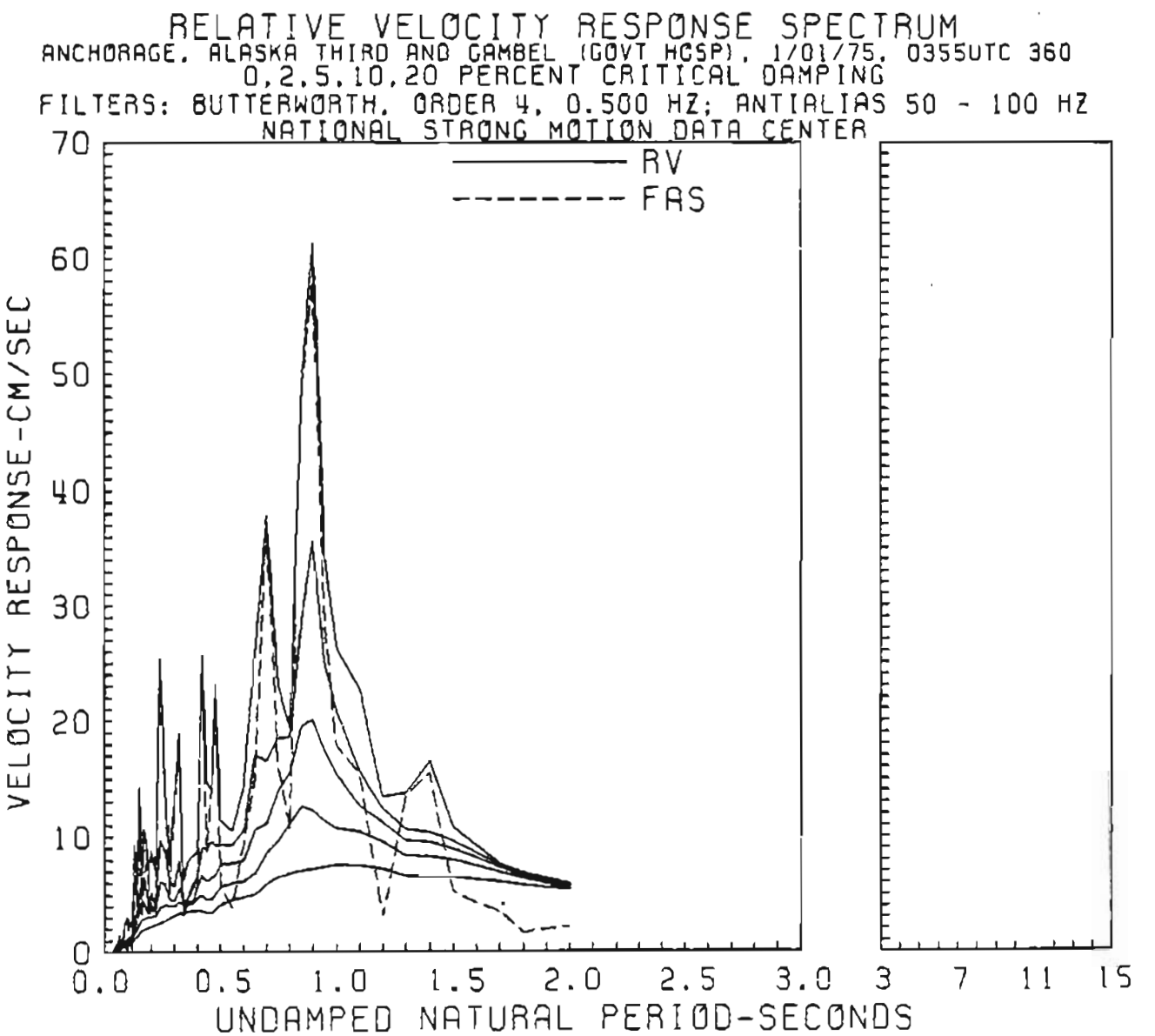

RELATIVE VELOCITY RESPONSE SPECTRUM
ANCHORAGE, ALASKA 500 W. THIRD (BSMT), 1/01/75, 0355UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
0
2
4
6
8
10
12
14
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15
UNDAMPED NATURAL PERIOD-SECONDS

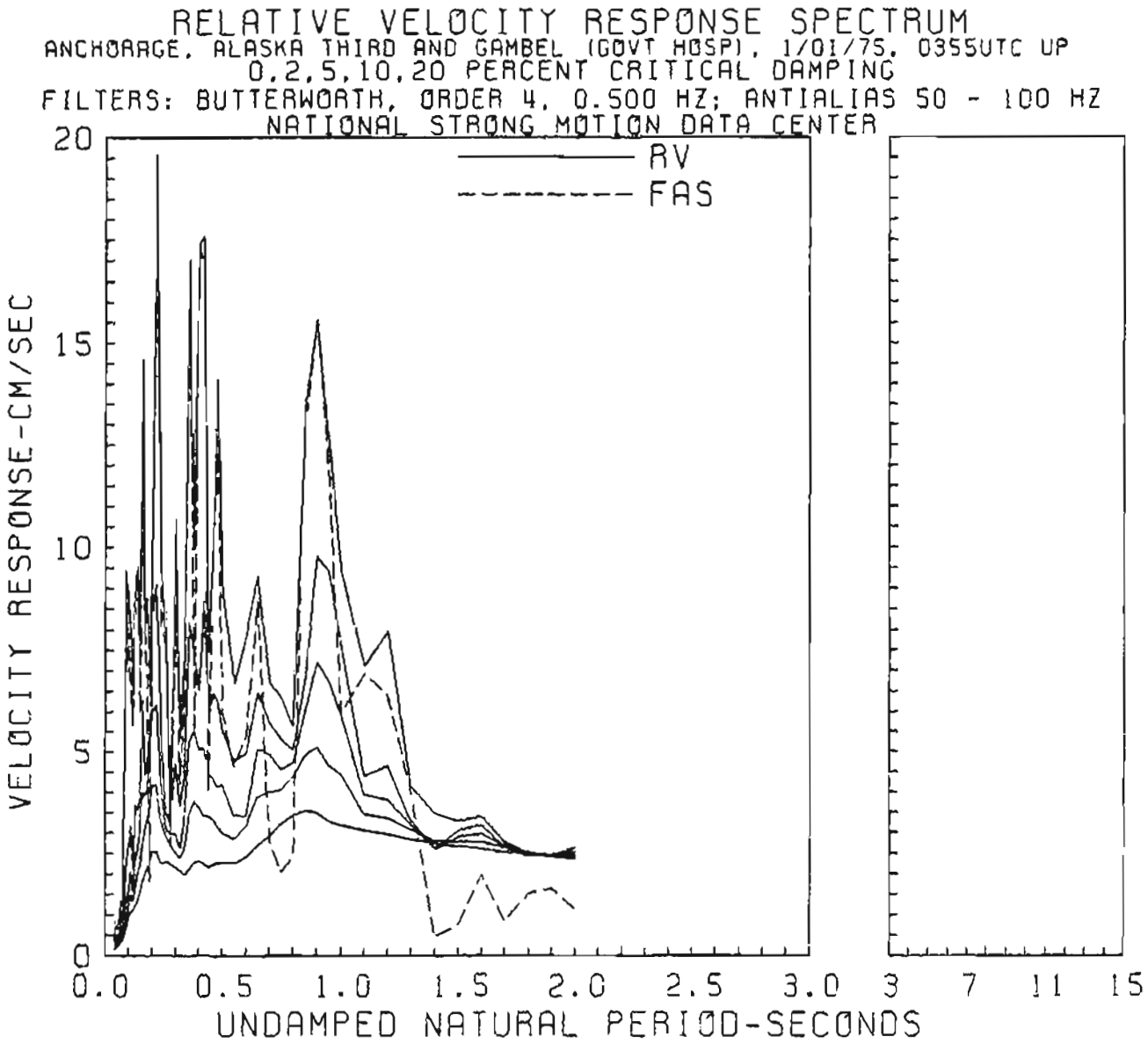

RELATIVE VELOCITY RESPONSE SPECTRUM
ANCHORAGE, ALASKA 500 W. THIRD (BSMT), 1/01/75, 0355UTC 45
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
0
5
10
15
20
25
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15
UNDAMPED NATURAL PERIOD-SECONDS

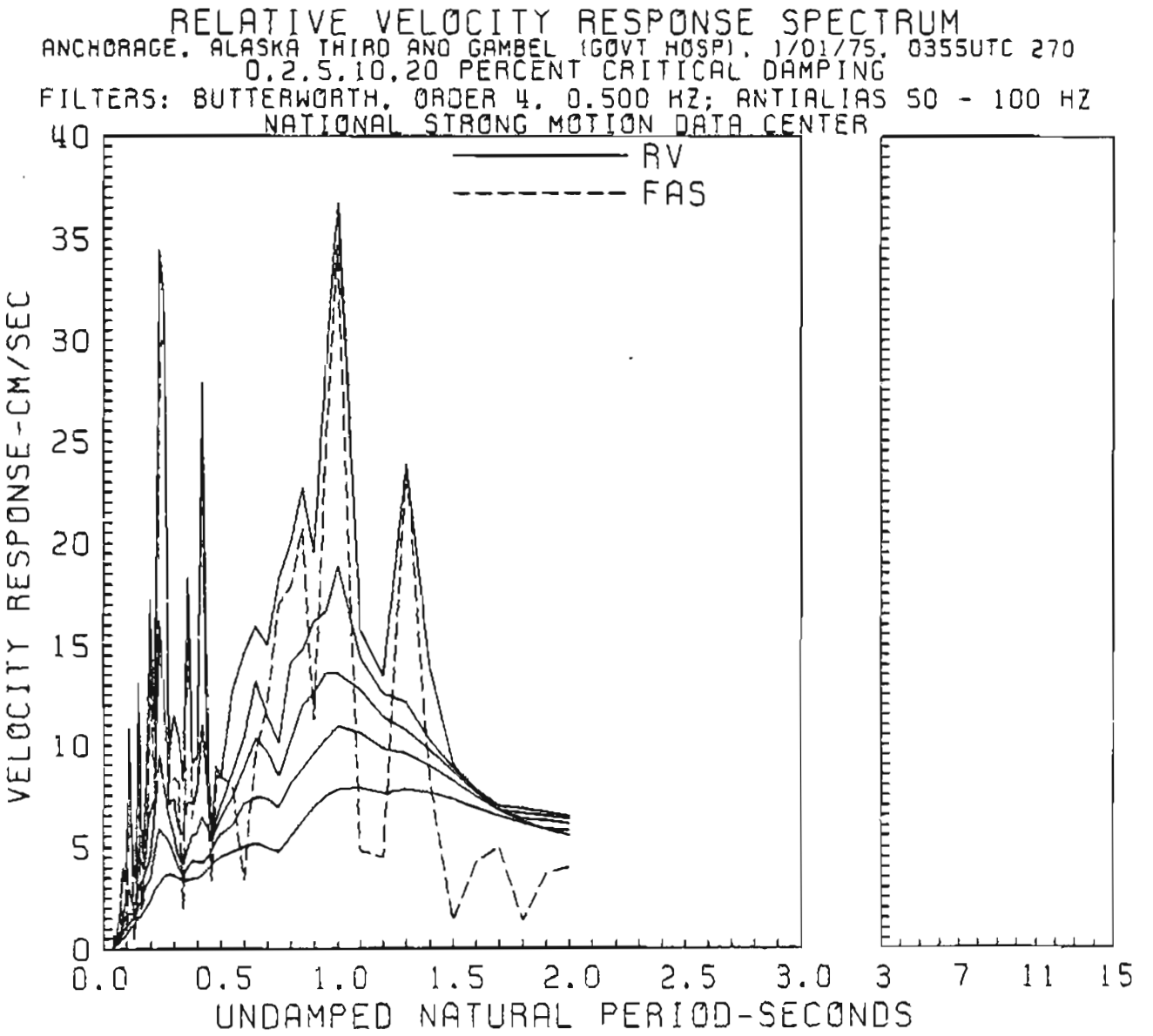

RELATIVE VELOCITY RESPONSE SPECTRUM
ANCHORAGE, ALASKAN METHODIST UNIVERSITY, 1/01/75, 0355UTC 315
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
0
5
10
15
20
25
30
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15
UNDAMPED NATURAL PERIOD-SECONDS

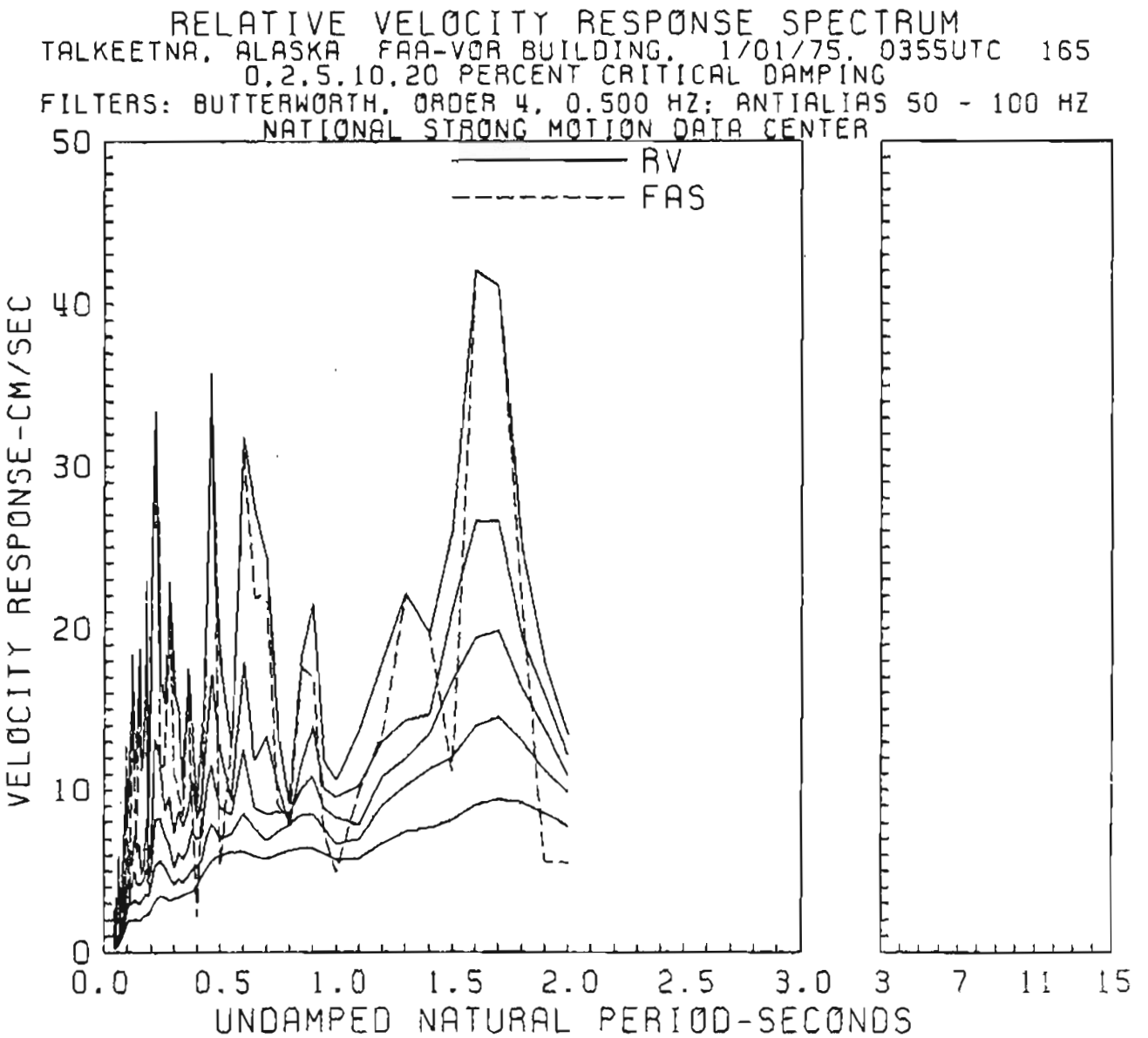

RELATIVE VELOCITY RESPONSE SPECTRUM
ANCHORAGE, ALASKAN METHODIST UNIVERSITY, 1/01/75, 0355UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
0
1
2
3
4
5
6
7
8
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15

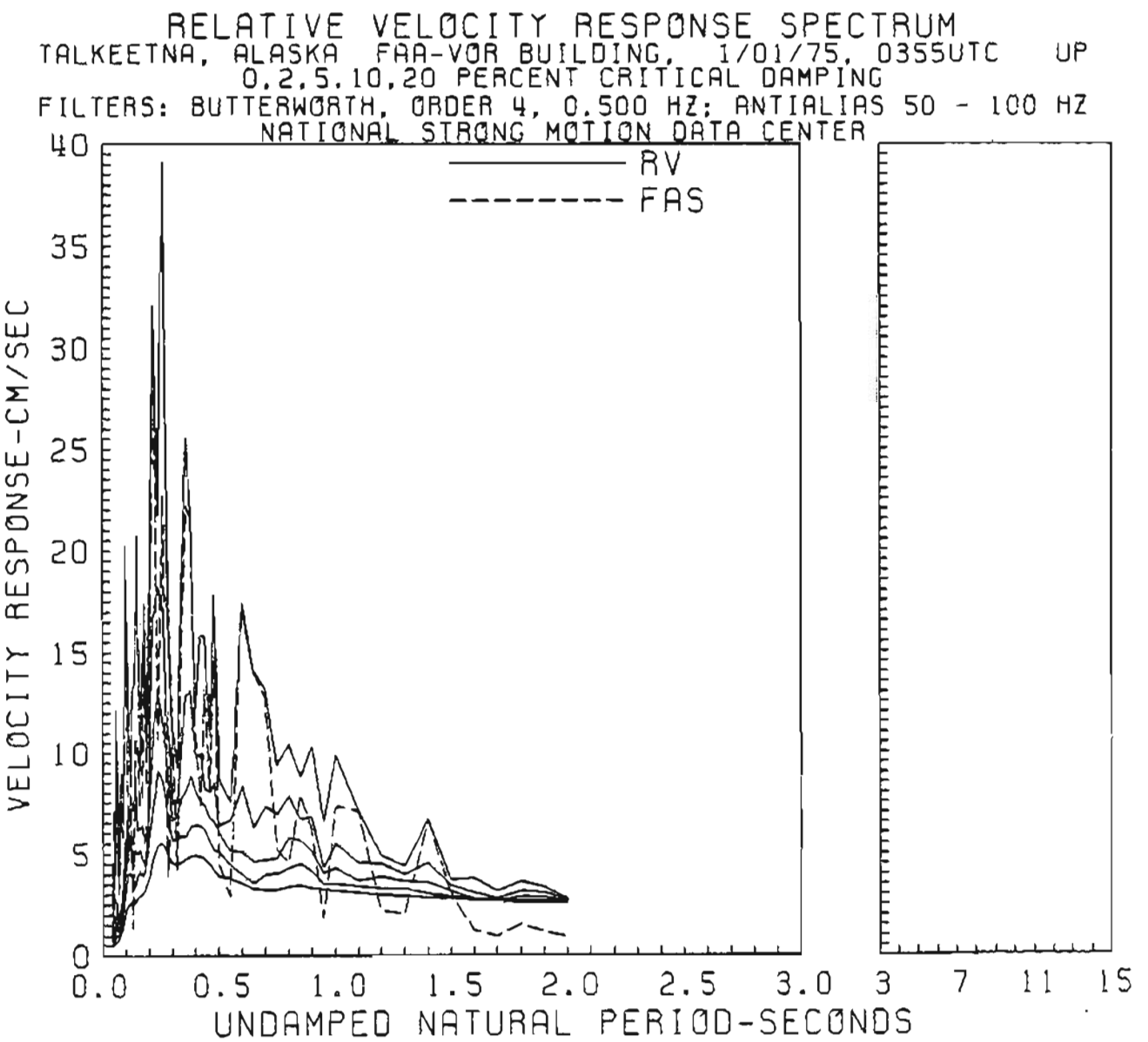

RELATIVE VELOCITY RESPONSE SPECTRUM
ANCHORAGE. ALASKAN METHODIST UNIVERSITY. 1/01/75. 0355UTC 225
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4. 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
0
5
10
15
20
25
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15
UNDAMPED NATURAL PERIOD-SECONDS

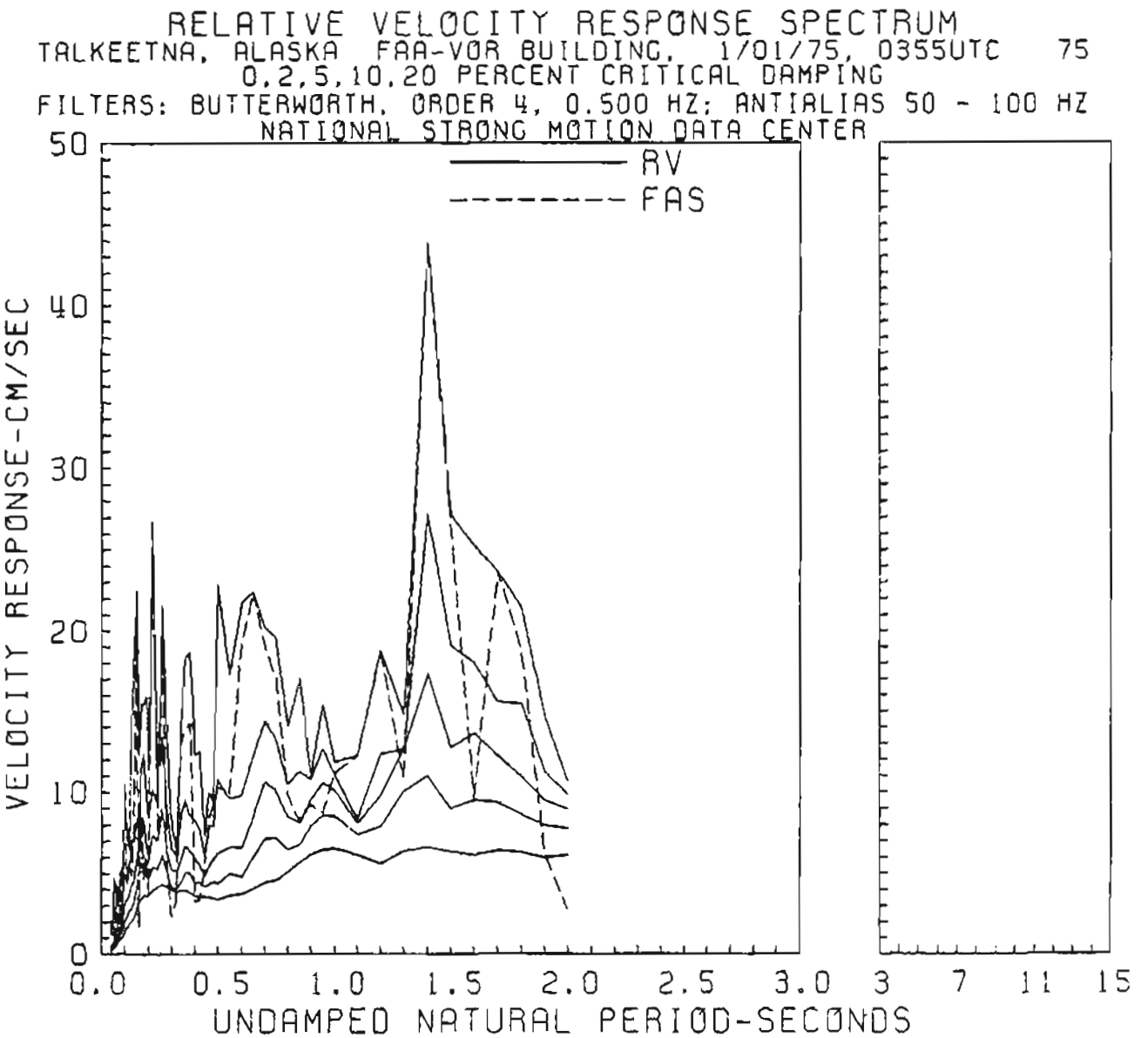

RELATIVE VELOCITY RESPONSE SPECTRUM
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP), 1/01/75, 0355UTC 360
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
0
10
20
30
40
50
60
70
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15

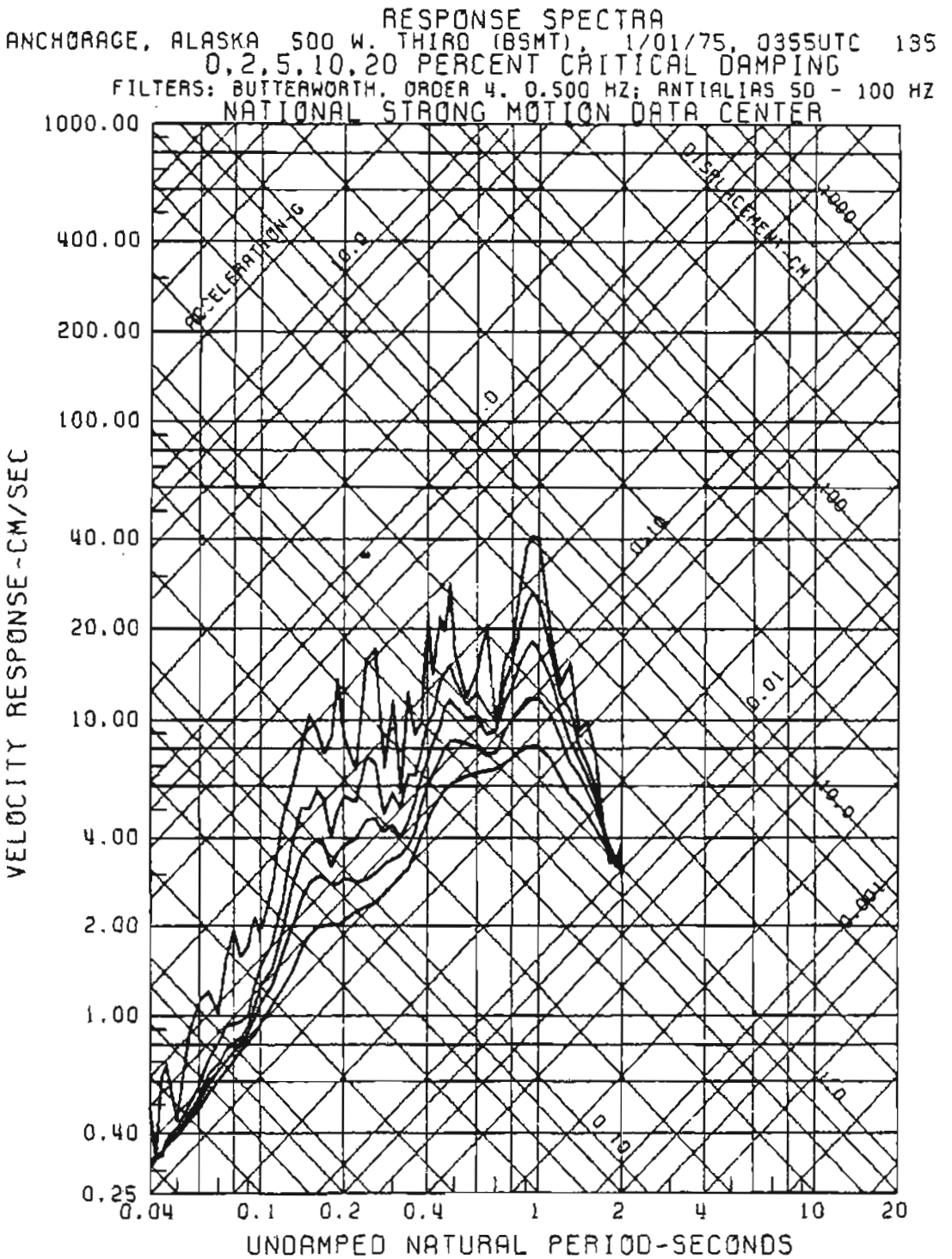

RELATIVE VELOCITY RESPONSE SPECTRUM
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP), 1/01/75, 0355UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
0
5
10
15
20
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15
UNDAMPED NATURAL PERIOD-SECONDS

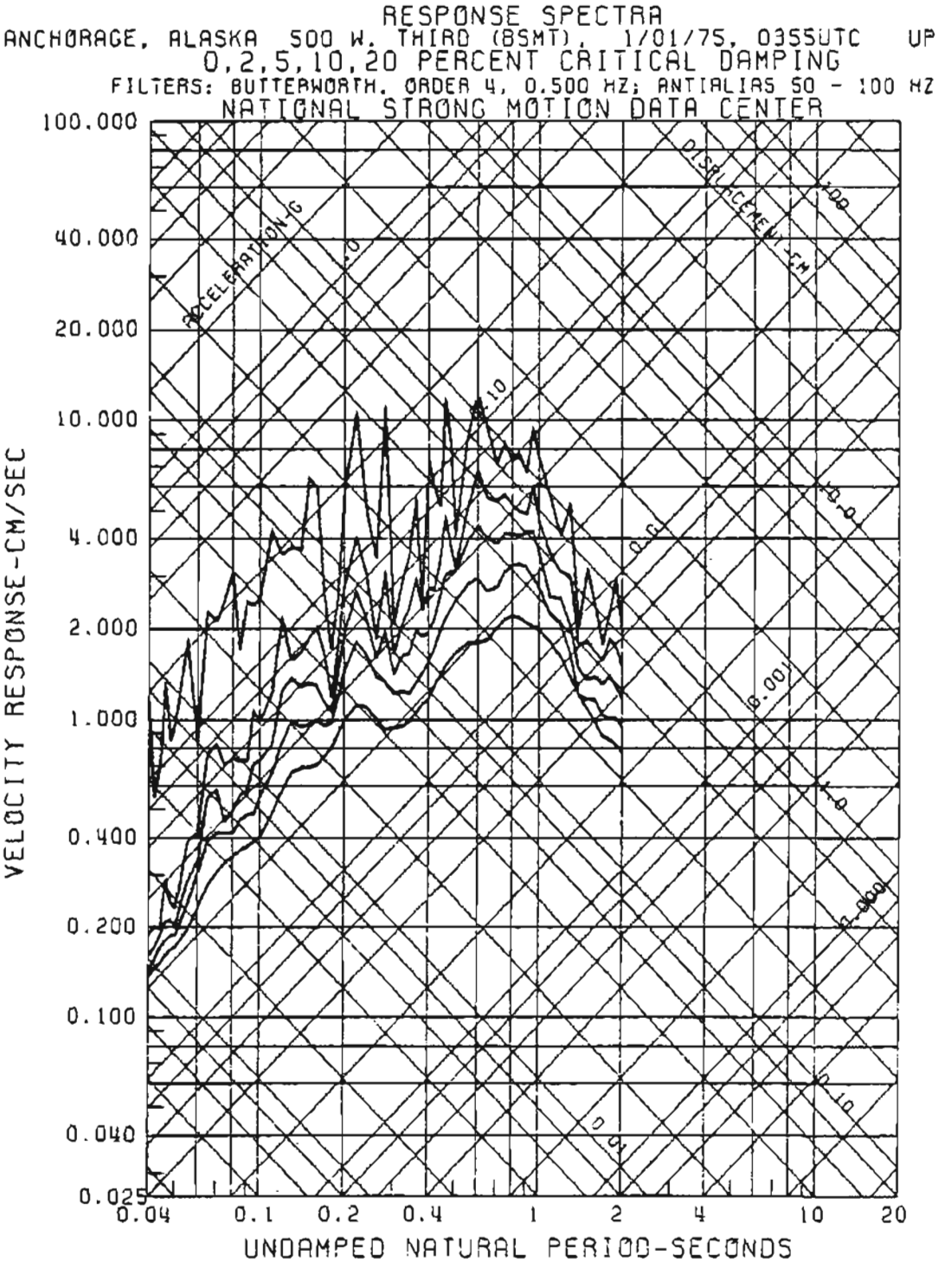

RELATIVE VELOCITY RESPONSE SPECTRUM
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP), 1/01/75, 0355UTC 270
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
0
5
10
15
20
25
30
35
40
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15
UNDAMPED NATURAL PERIOD-SECONDS

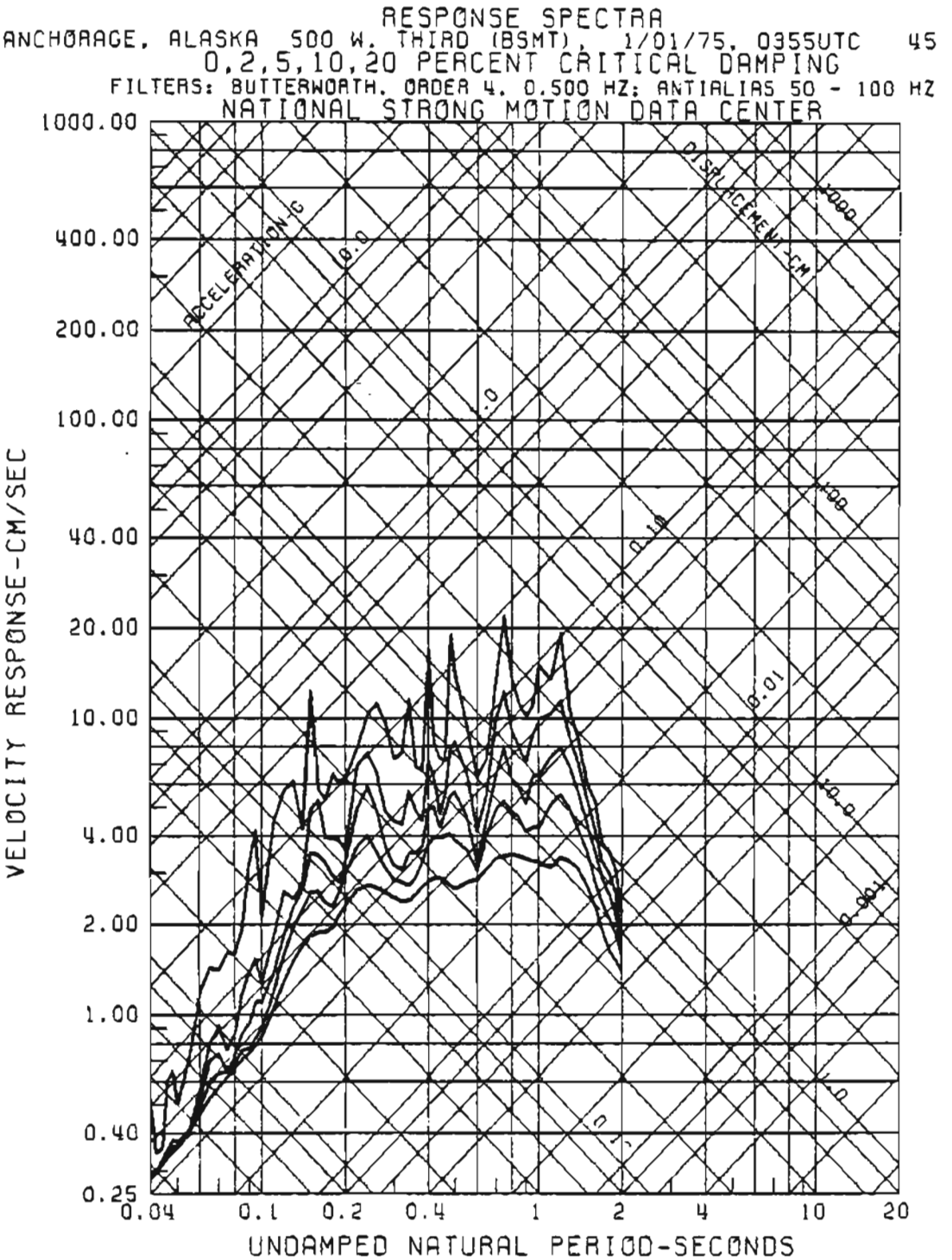

RELATIVE VELOCITY RESPONSE SPECTRUM
TALKEETNA, ALASKA FAA-VOR BUILDING, 1/01/75, 0355UTC 165
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
50
40
30
20
10
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15
UNDAMPED NATURAL PERIOD-SECONDS

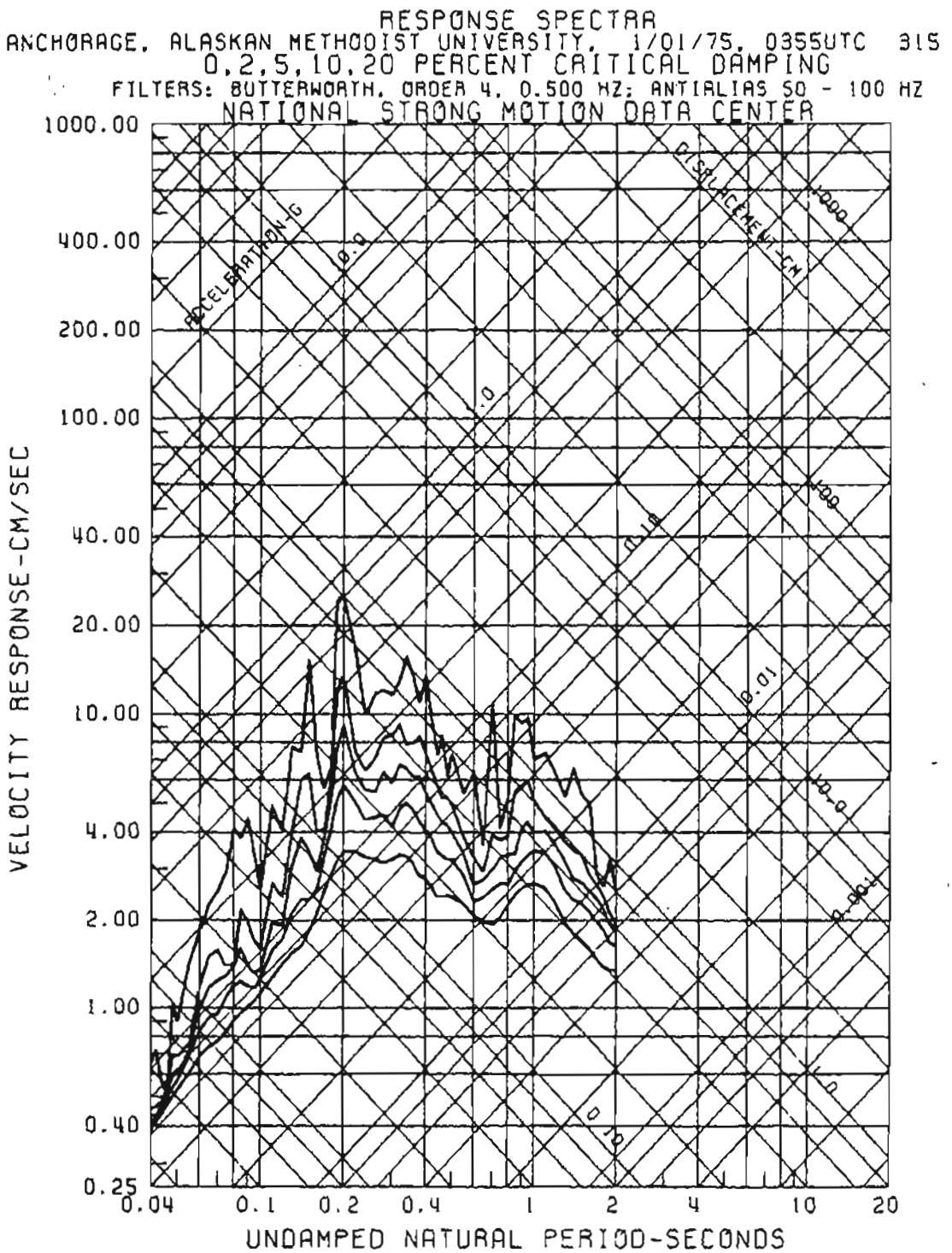

RELATIVE VELOCITY RESPONSE SPECTRUM
TALKEETNA, ALASKA FAA-VOR BUILDING, 1/01/75, 0355UTC UP
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
0
5
10
15
20
25
30
35
40
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15
UNDAMPED NATURAL PERIOD-SECONDS

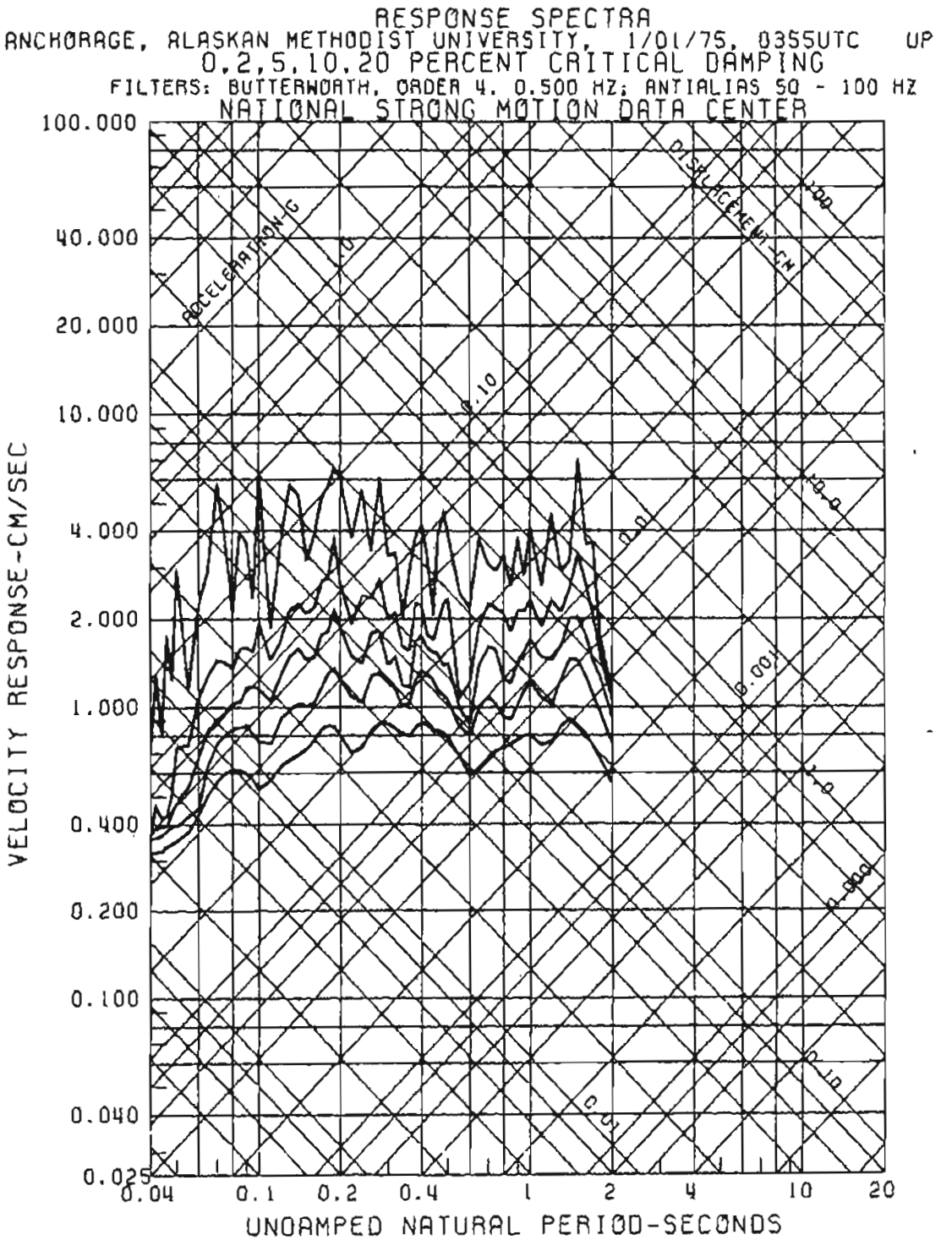

RELATIVE VELOCITY RESPONSE SPECTRUM
TALKEETNA, ALASKA FAA-VOR BUILDING, 1/01/75, 0355UTC 75
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
RV
FAS
VELOCITY RESPONSE-CM/SEC
0
10
20
30
40
50
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3
7
11
15
UNDAMPED NATURAL PERIOD-SECONDS

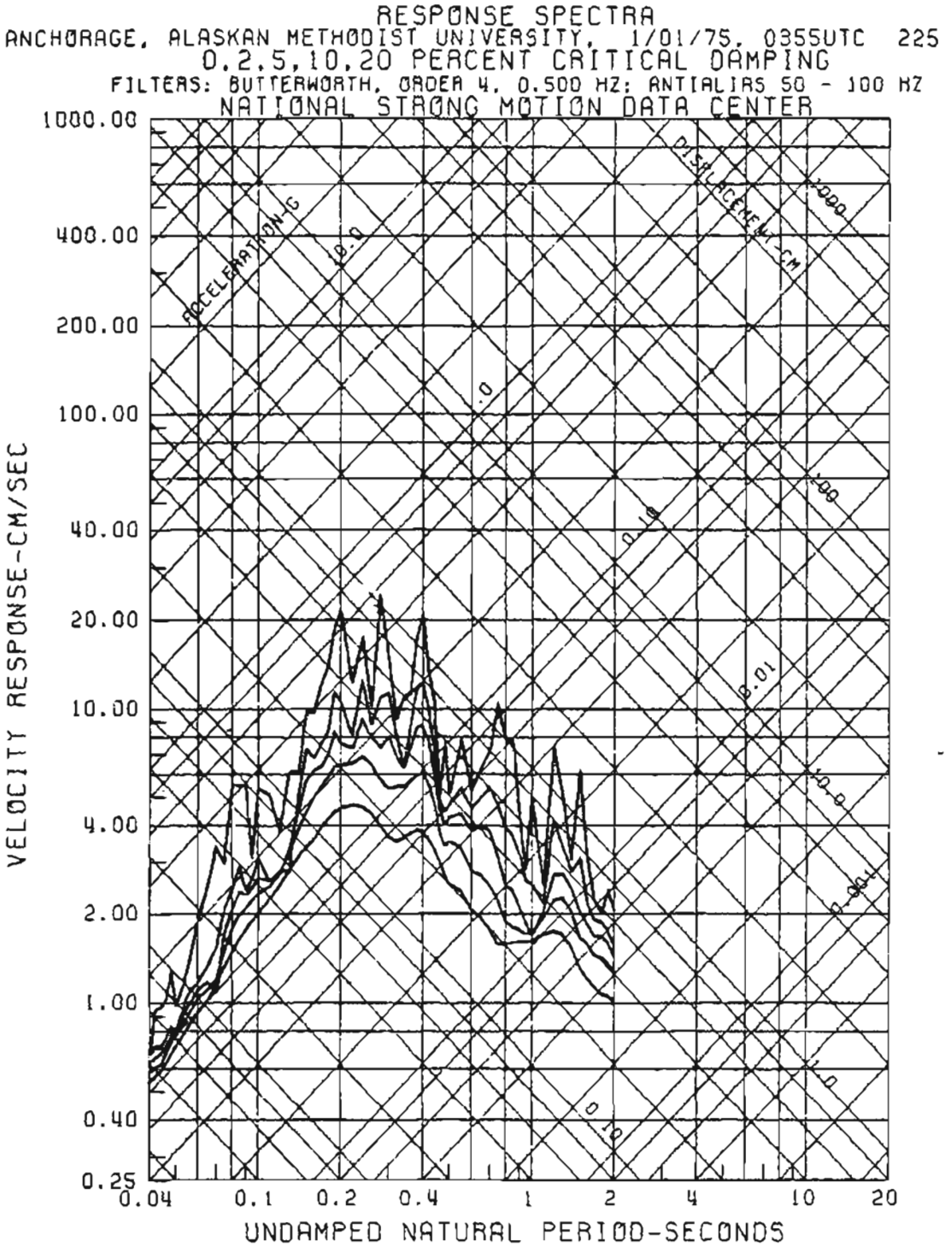

RESPONSE SPECTRA
ANCHORAGE, ALASKA 500 W. THIRD (BSMT), 1/01/75, 0355UTC 135
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM

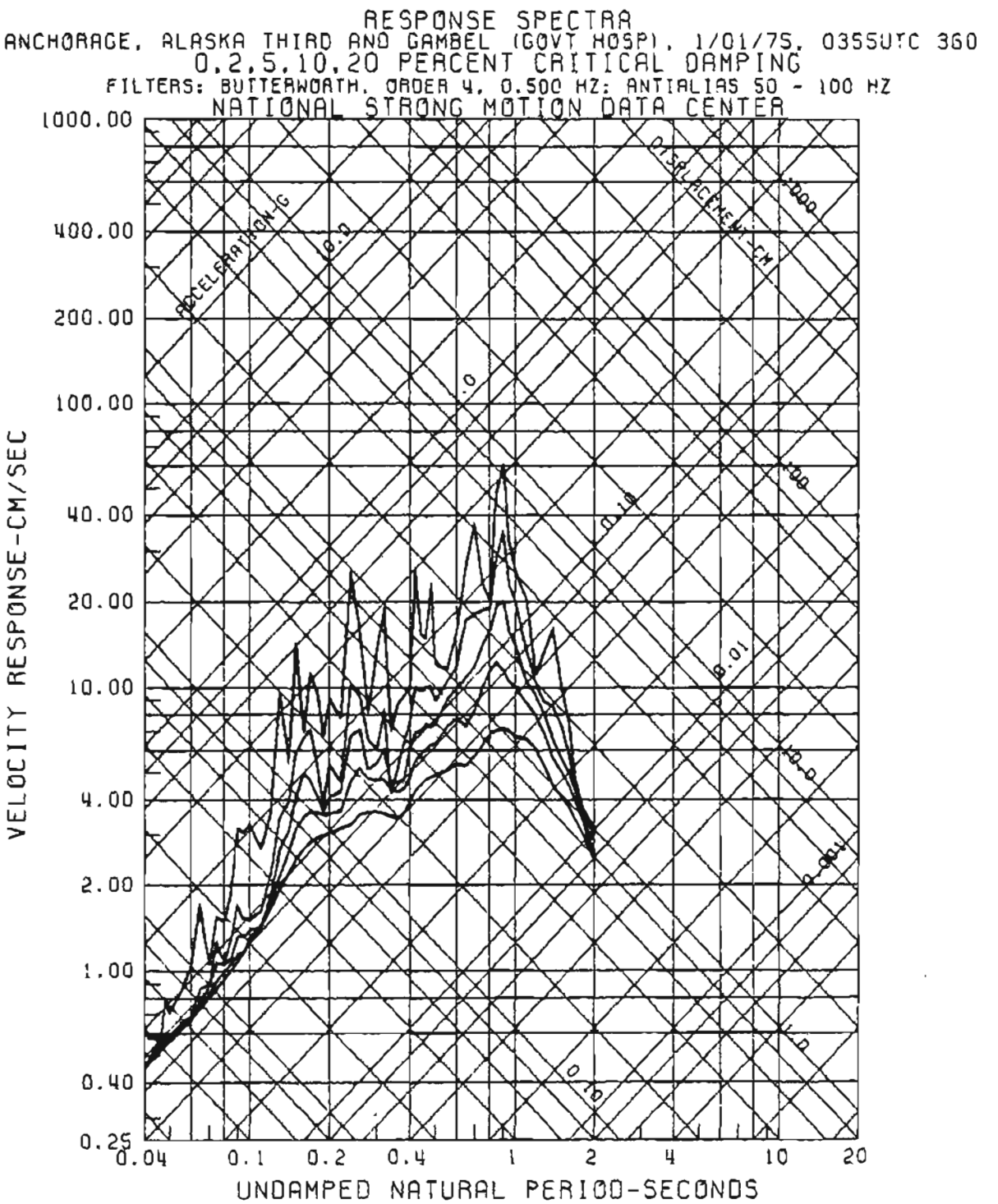

RESPONSE SPECTRA
ANCHORAGE, ALASKA 500 W. THIRD (BSMT), 1/01/75, 0355UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
0.04
0.1
0.2
0.4
1
2
4
10
20

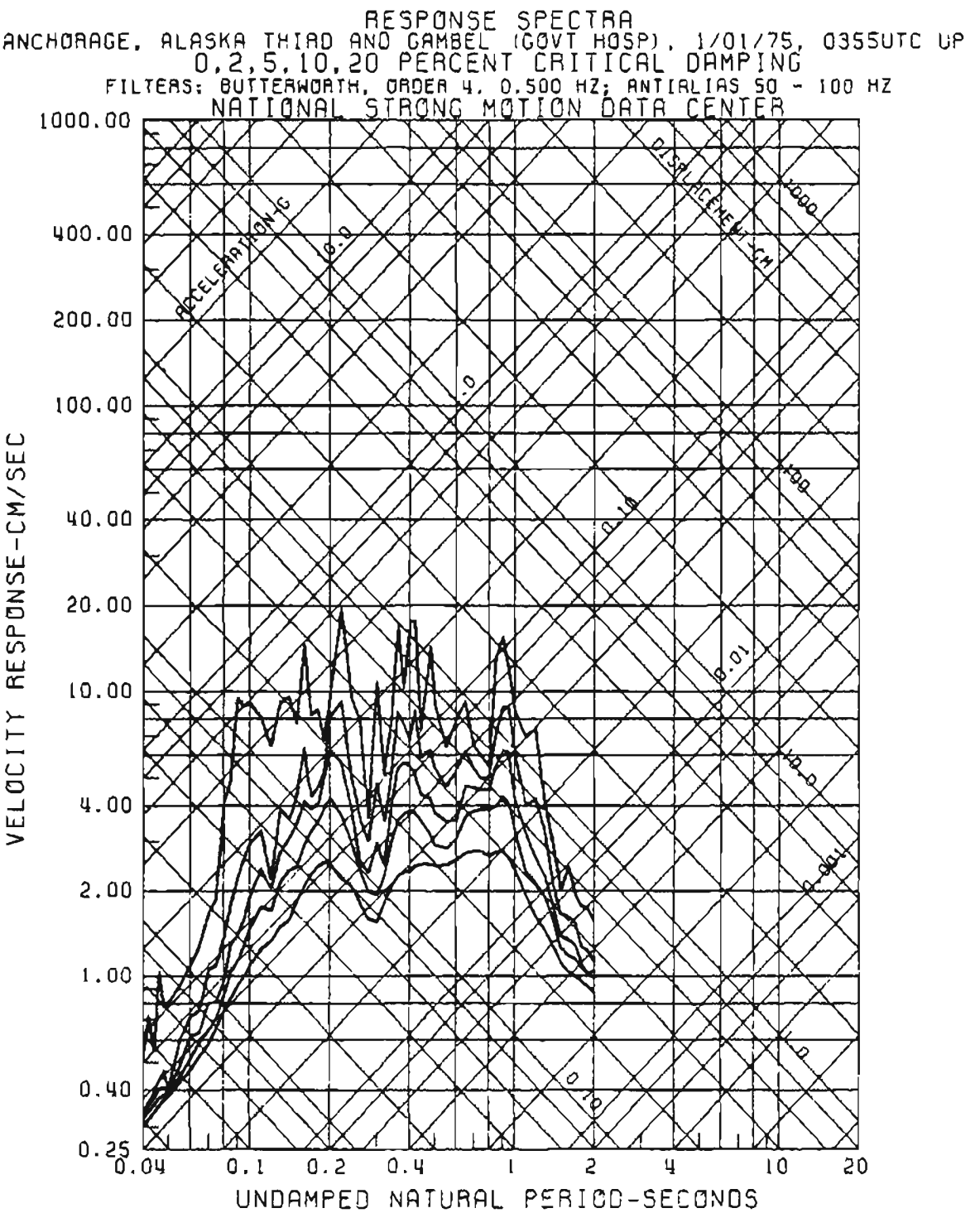

RESPONSE SPECTRA
ANCHORAGE, ALASKA 500 W. THIRD (BSMT), 1/01/75, 0355UTC 45
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM

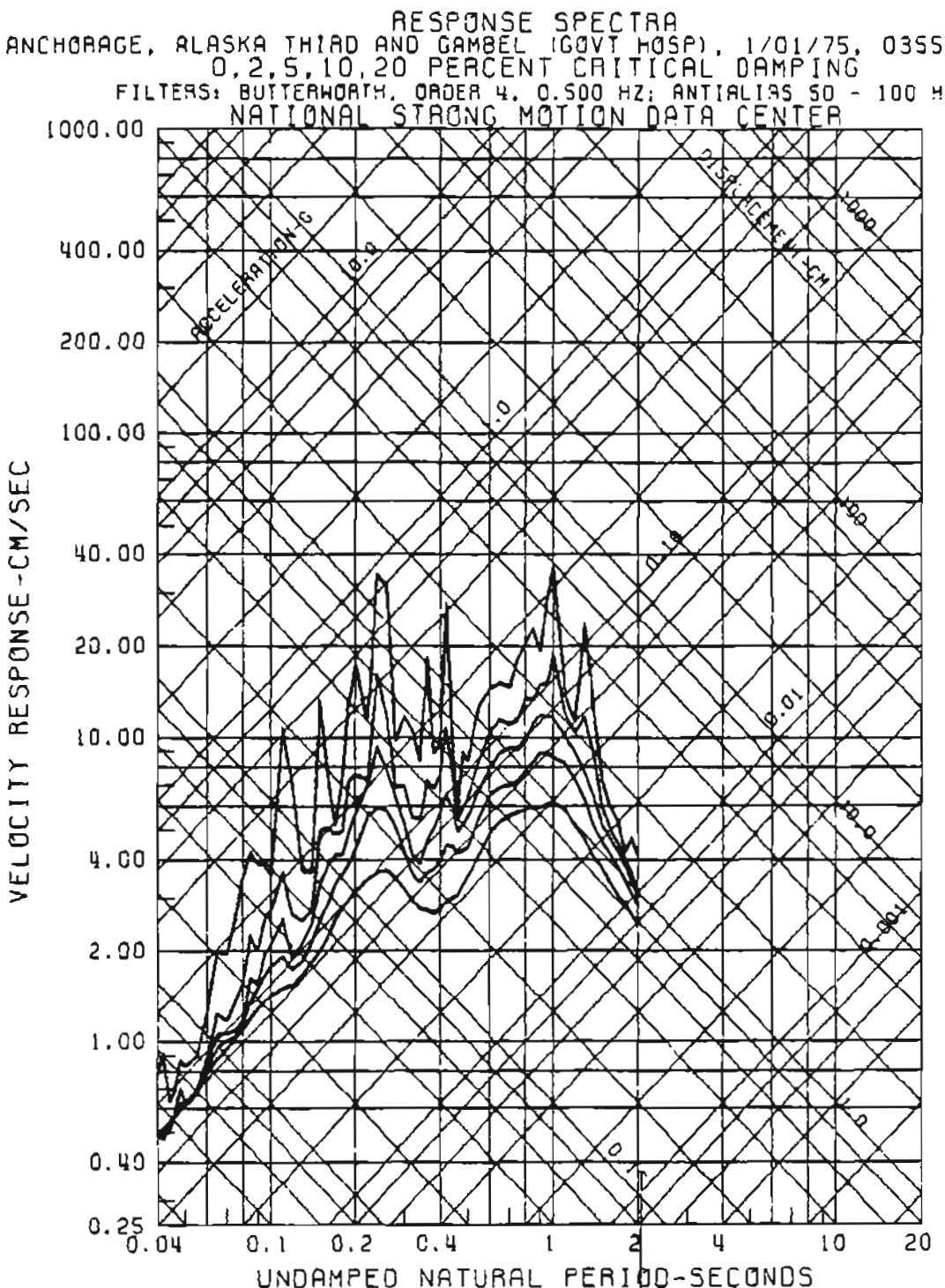

RESPONSE SPECTRA
ANCHORAGE, ALASKAN METHODIST UNIVERSITY, 1/01/75, 0355UTC 315
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
D(SPLACEMENT-CM
1000
100
10.0
1.0
0.1
0.01
0.001
0.9
0.5
0.2
0.10

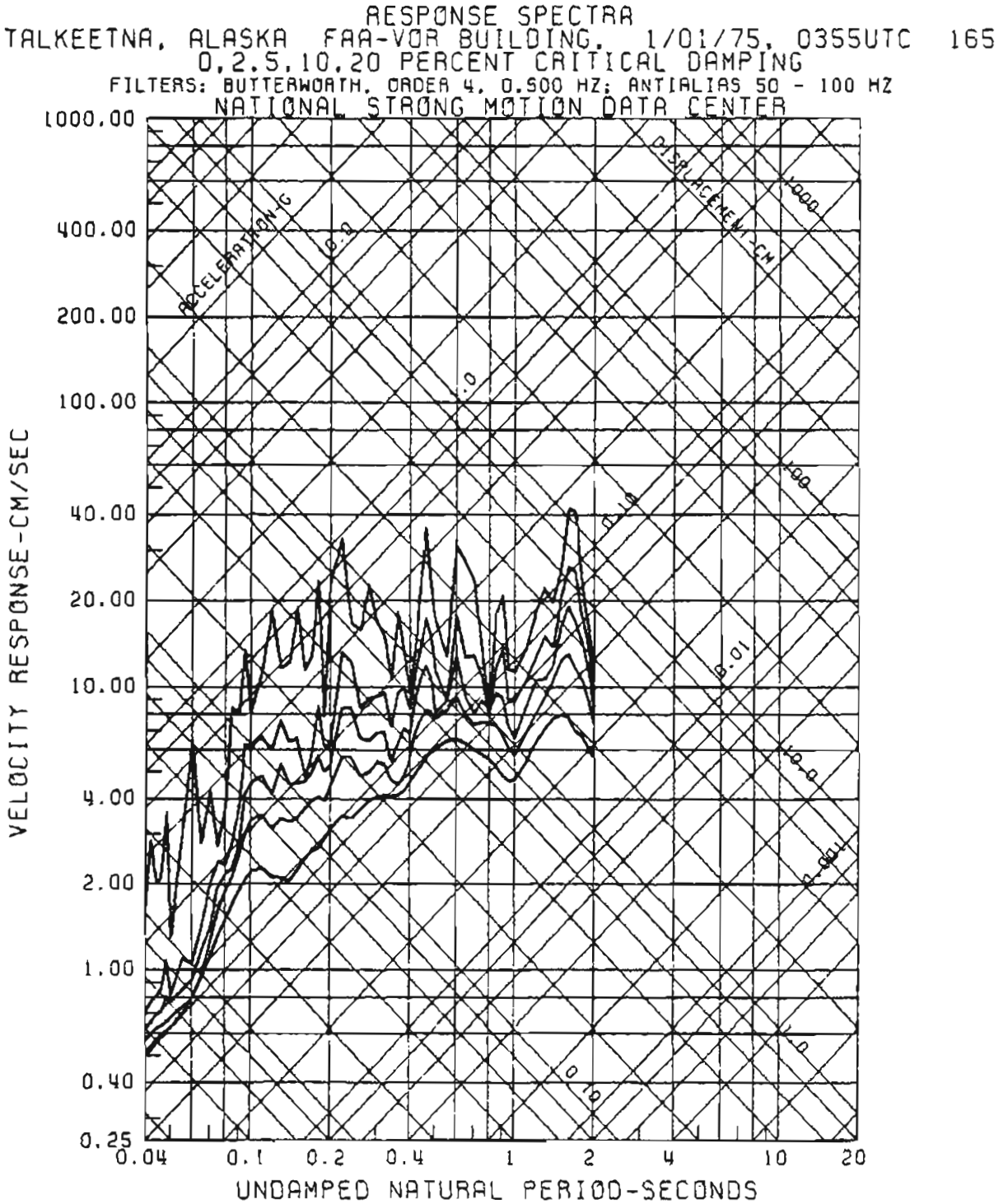

RESPONSE SPECTRA
ANCHORAGE, ALASKAN METHODIST UNIVERSITY, 1/01/75, 0355UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
0.10
0.00

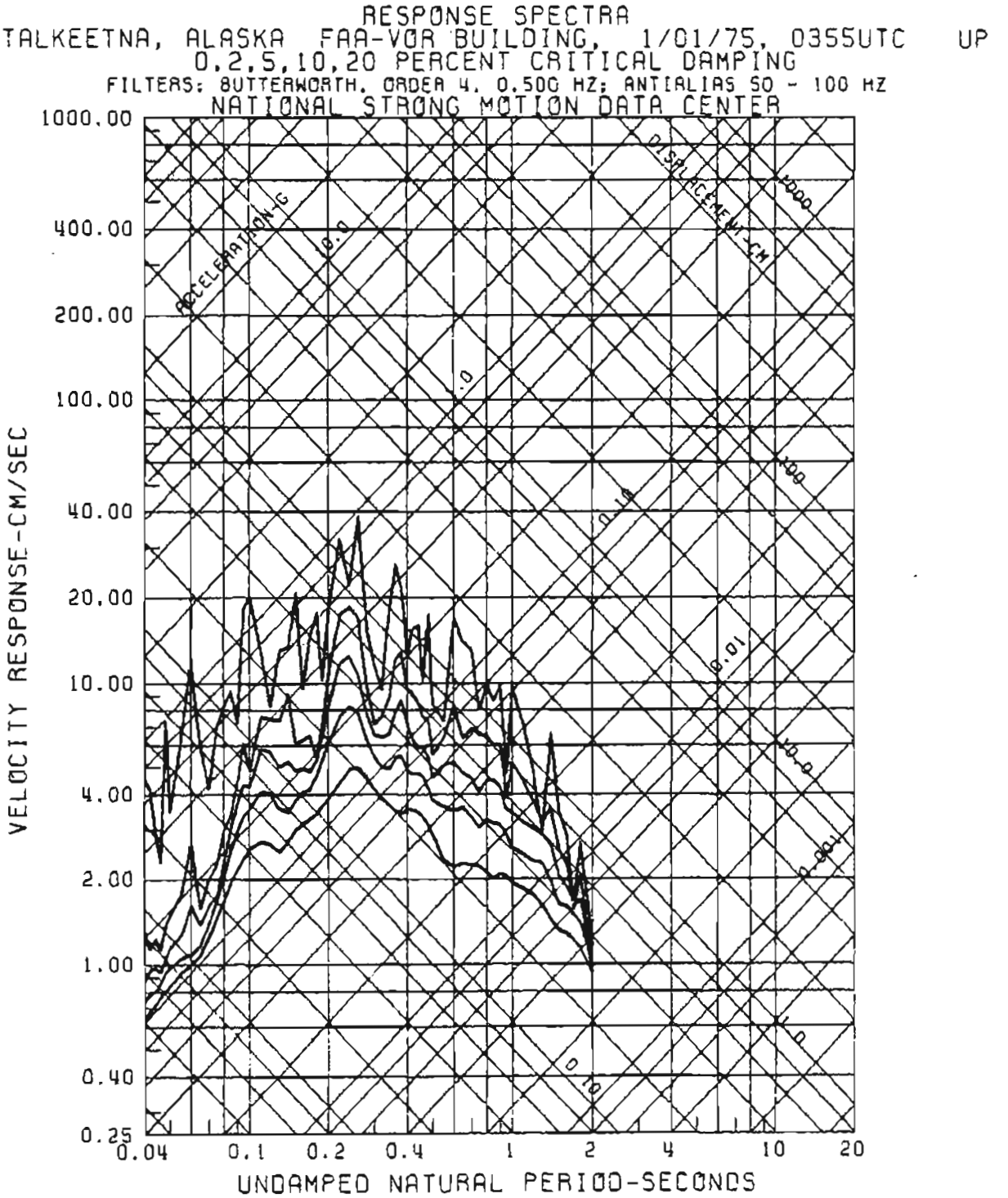

RESPONSE SPECTRA
ANCHORAGE, ALASKAN METHODIST UNIVERSITY, 1/01/75, 0355UTC 225
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
10.0
1.0
0.1
0.01
0.001
DISPLACEMENT-CM
1000.
100.
10.0
1.0
0.10

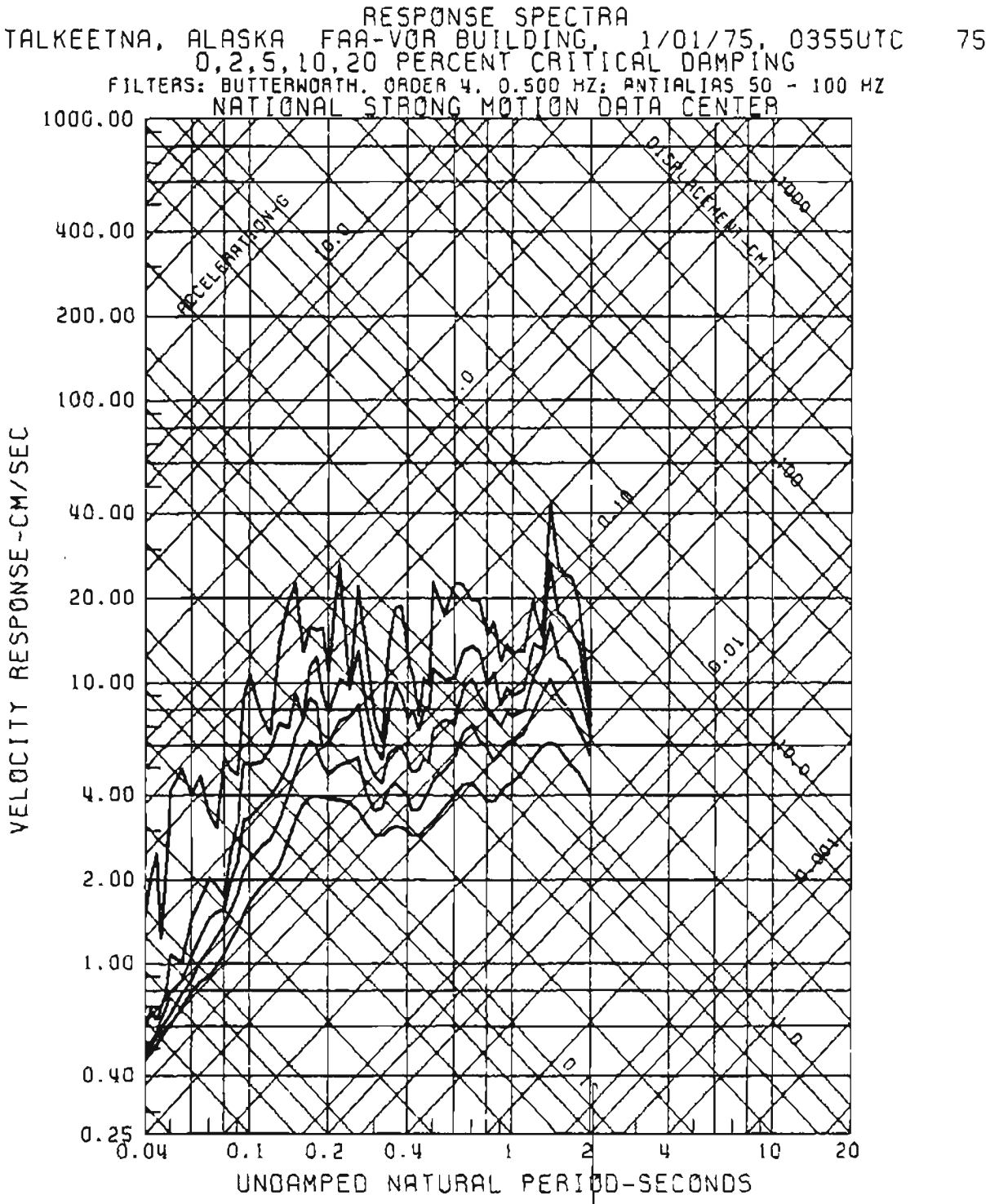

RESPONSE SPECTRA
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP), 1/01/75, 0355UTC 360
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
VELOCITY RESPONSE-CM/SEC
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM

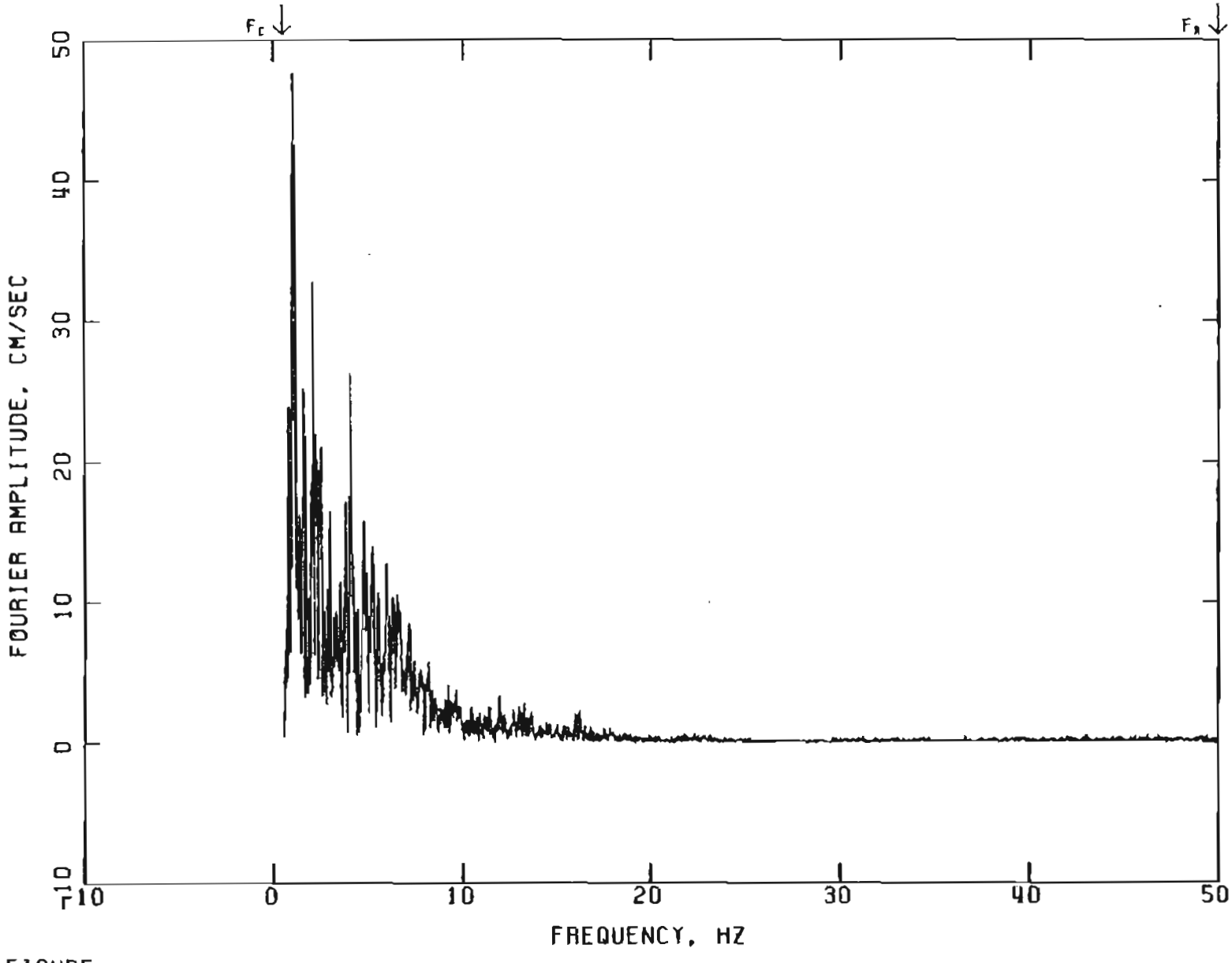

RESPONSE SPECTRA
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP), 1/01/75, 0355UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
10.0
1.0
0.10
0.01
DISPLACEMENT-CM
1000
100
10.0
1.0
0.10


RESPONSE SPECTRA
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP), 1/01/75, 0355UTC 270
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM


RESPONSE SPECTRA
TALKEETNA, ALASKA FAA-VOR BUILDING. 1/01/75, 0355UTC 165
0,2.5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
ACCELERATION-G
DISPLACEMENT-CM
0.0
.0
0.10
0.01
0.001
1000
100
10.0
1.0
0.10

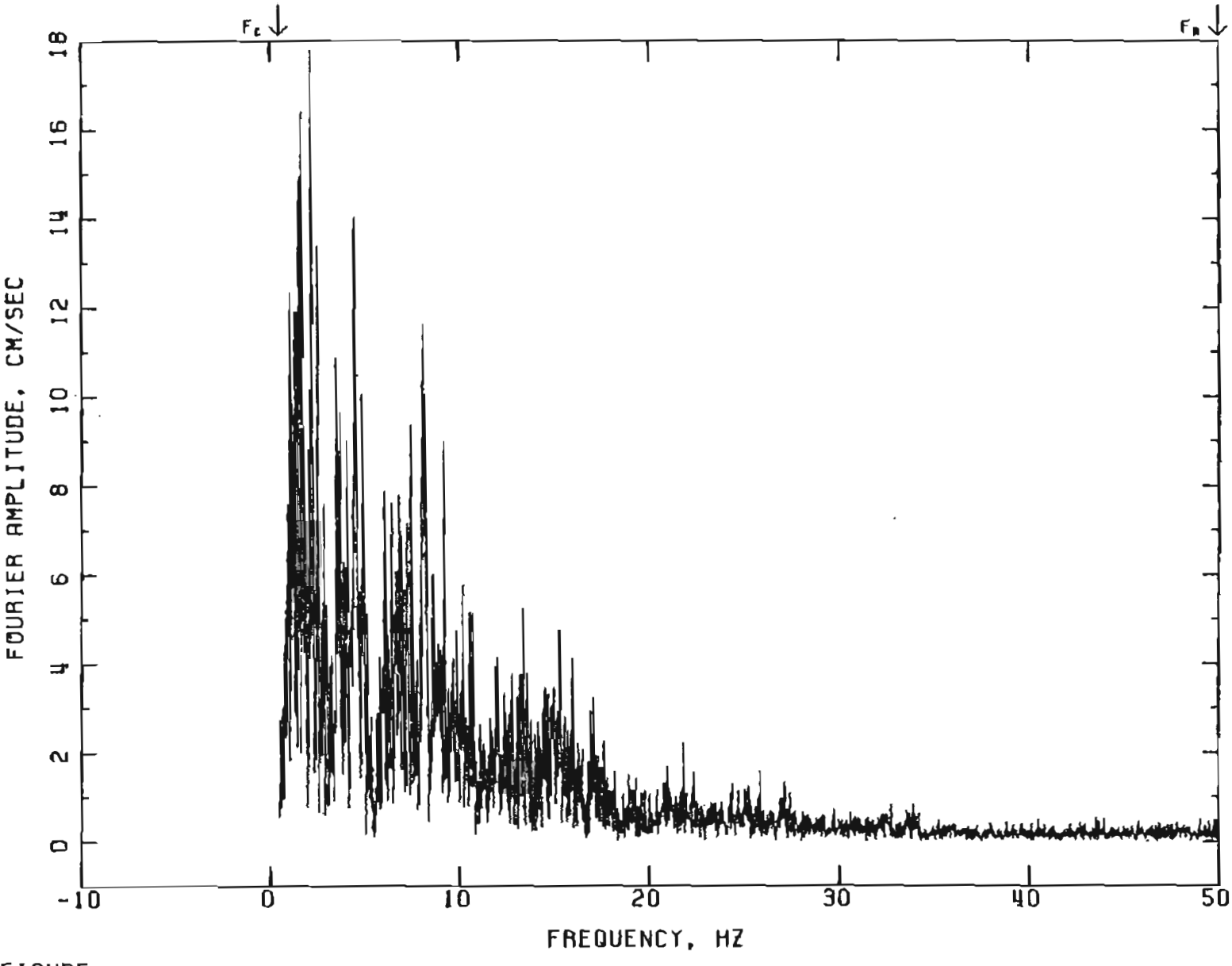

RESPONSE SPECTRA
TALKEETNA, ALASKA FAA-VOR BUILDING, 1/01/75, 0355UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
10.0
1.0
0.1
0.01
DISPLACEMENT-CM
1000
100
10.0
1.0
0.1
0.0
0.10


RESPONSE SPECTRA
TALKEETNA, ALASKA FAA-VOR BUILDING, 1/01/75, 0355UTC 75
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM



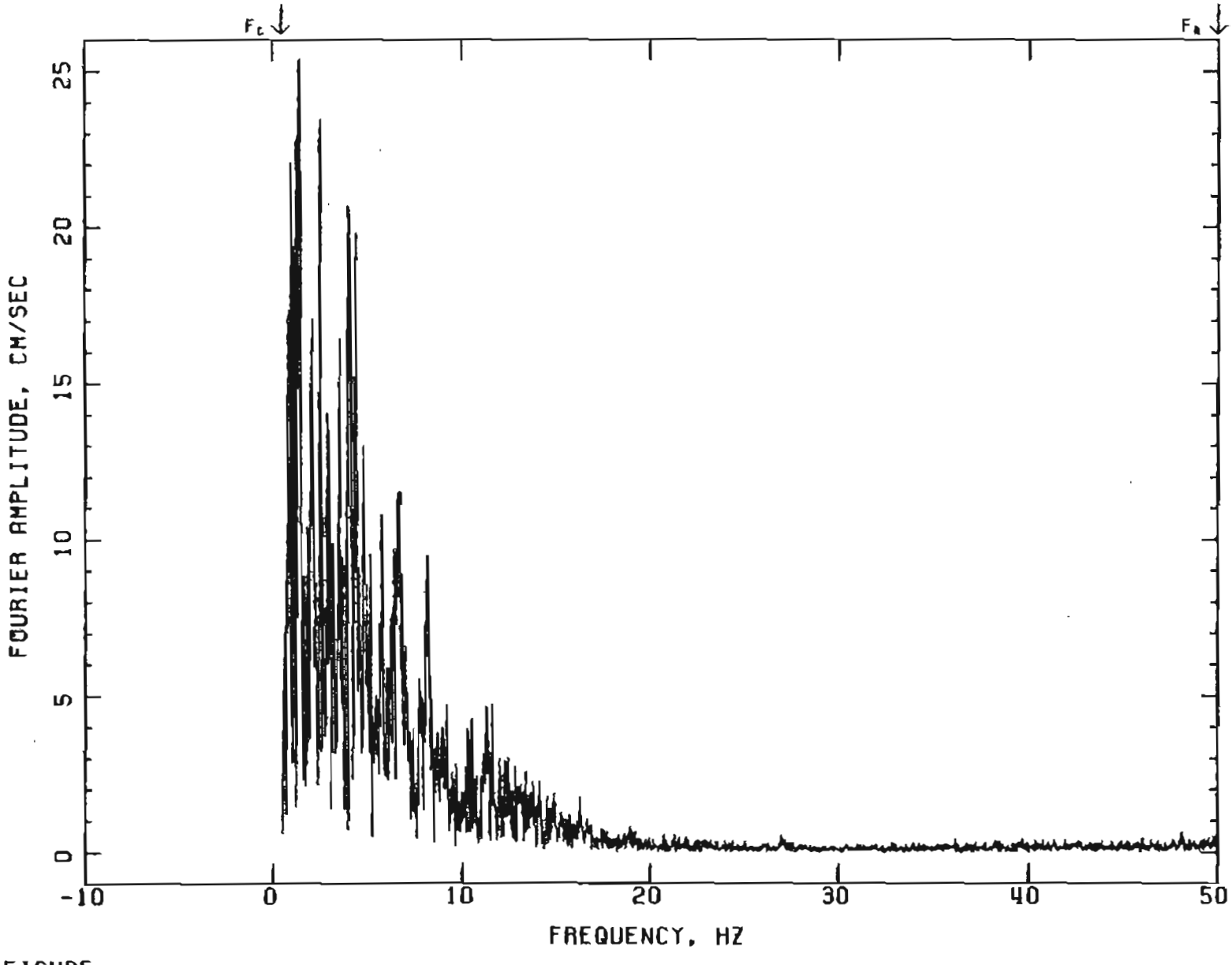
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA 500 W. THIRD (BSMT)
135 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



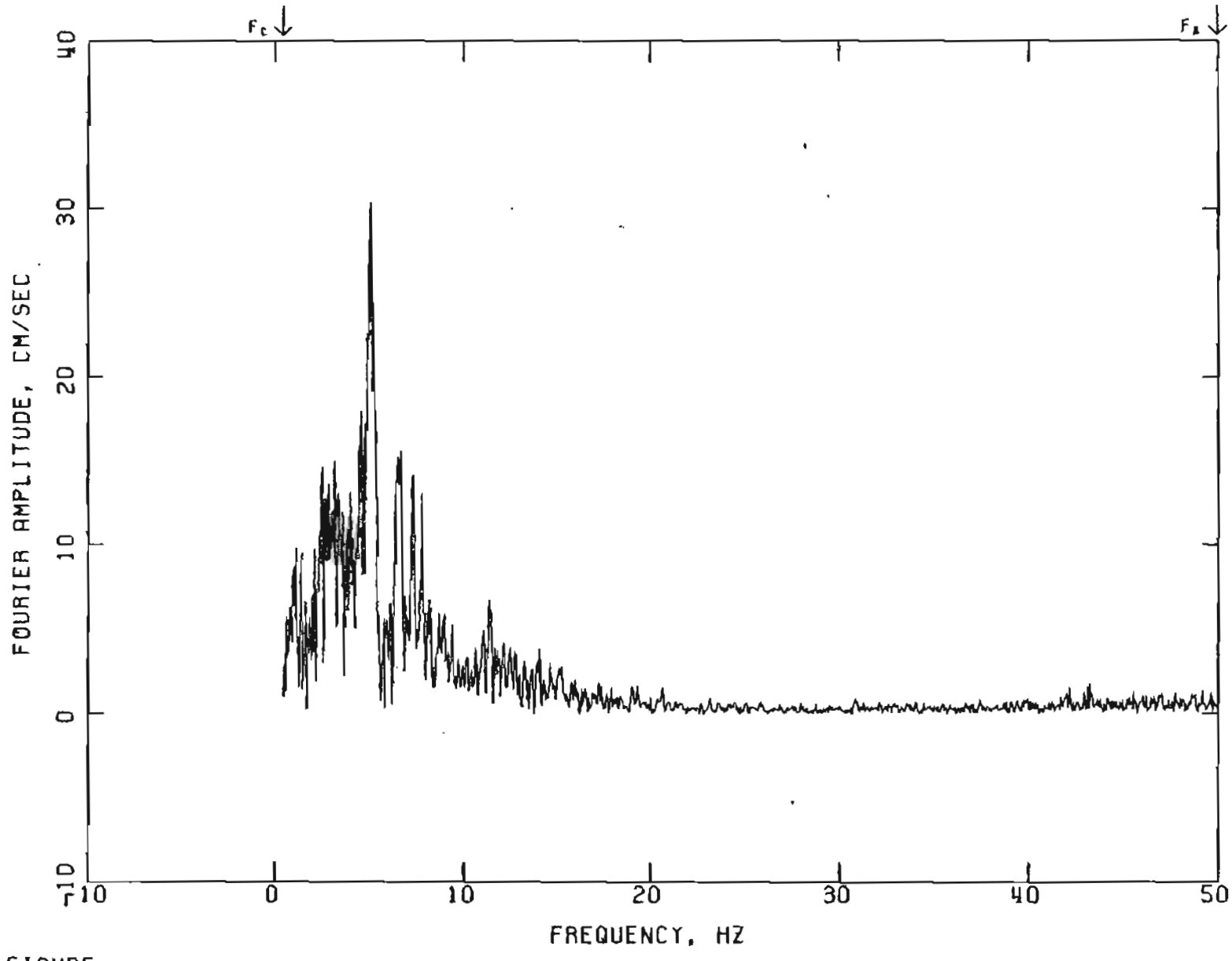
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA 500 W. THIRD (BASMT)
UP
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



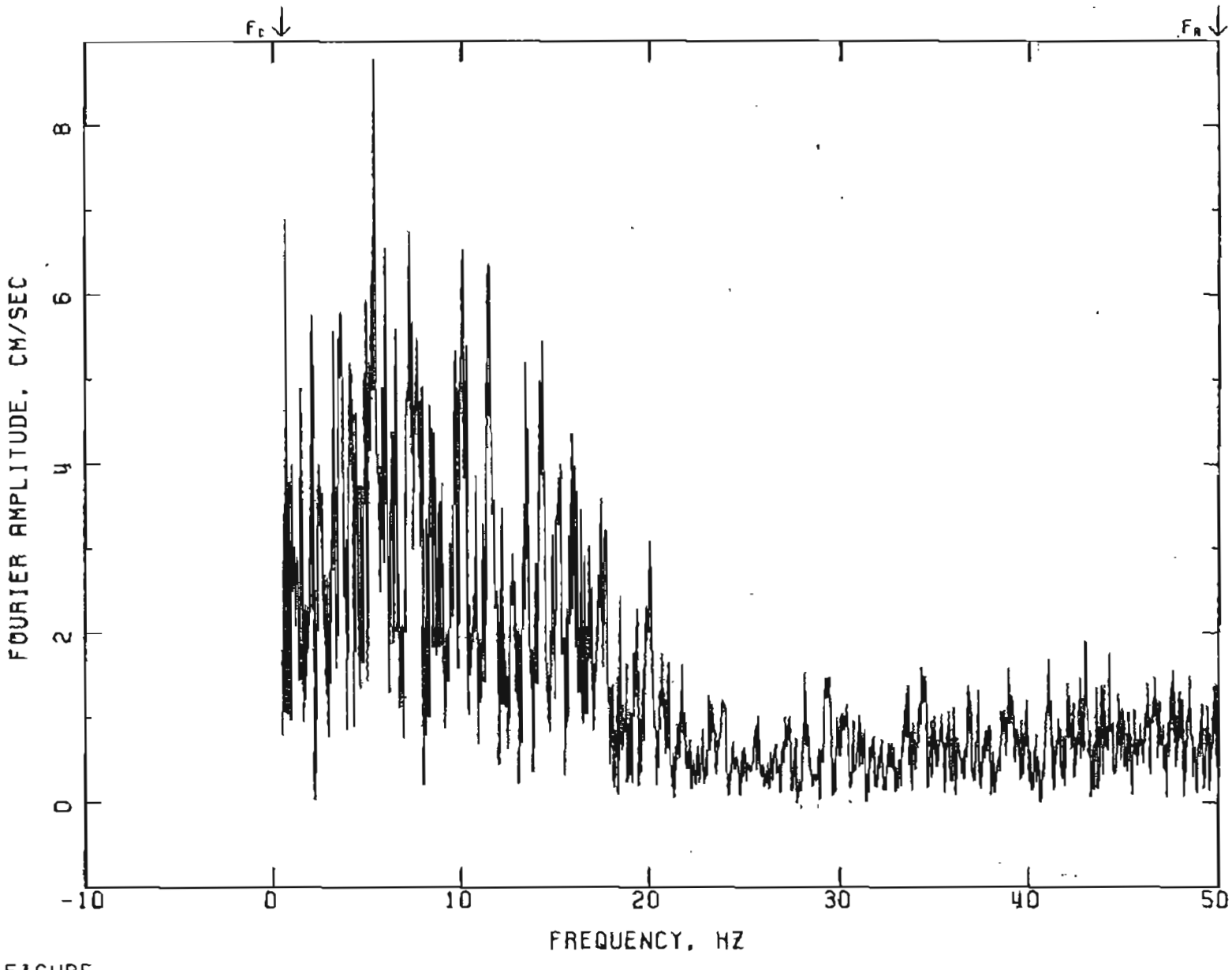
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA 500 W. THIRD (BSMT)
045 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



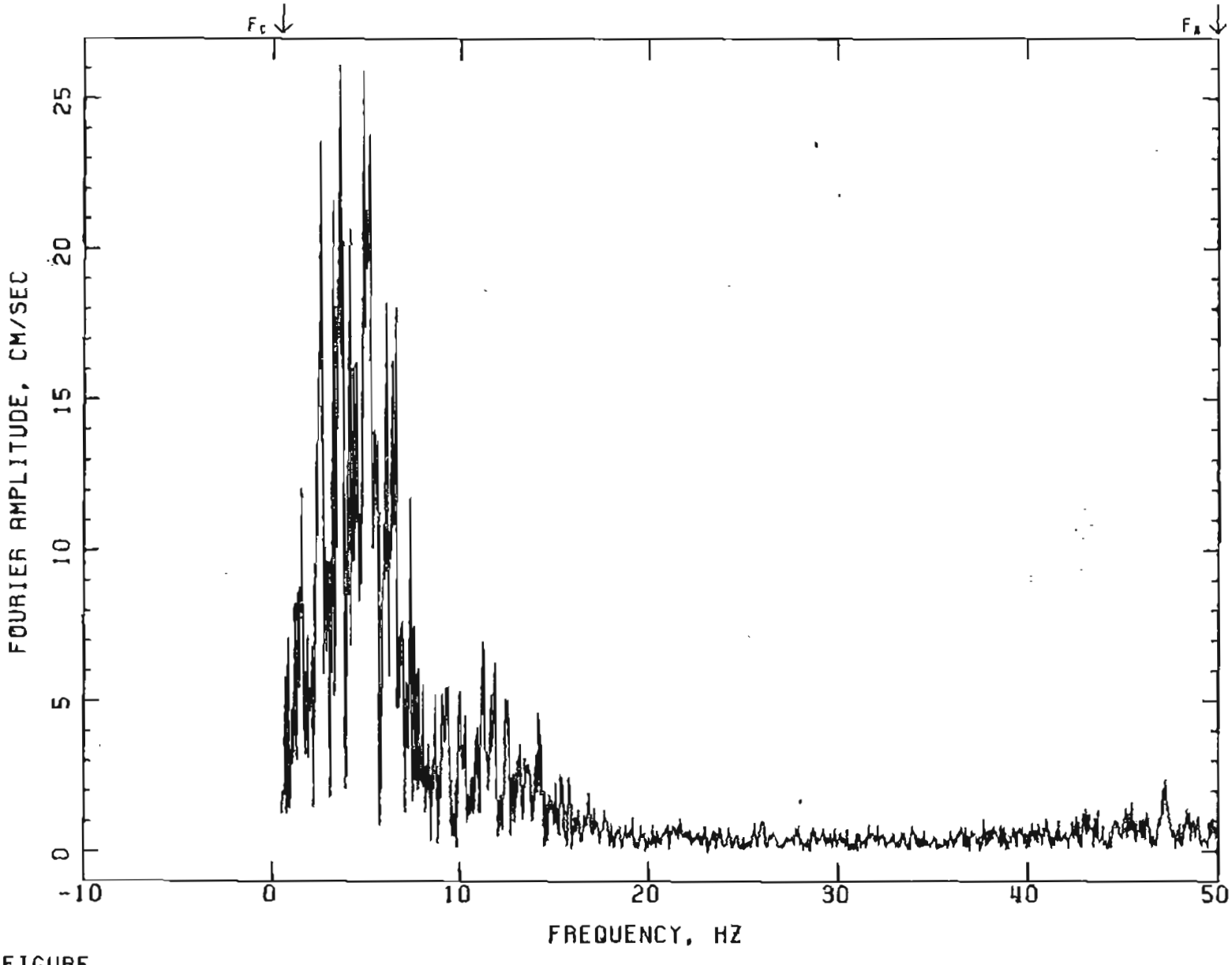
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKAN METHODIST UNIVERSITY
315 DEGREES
EARTHQUAKE OF 1 JANUARY, 1975, 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



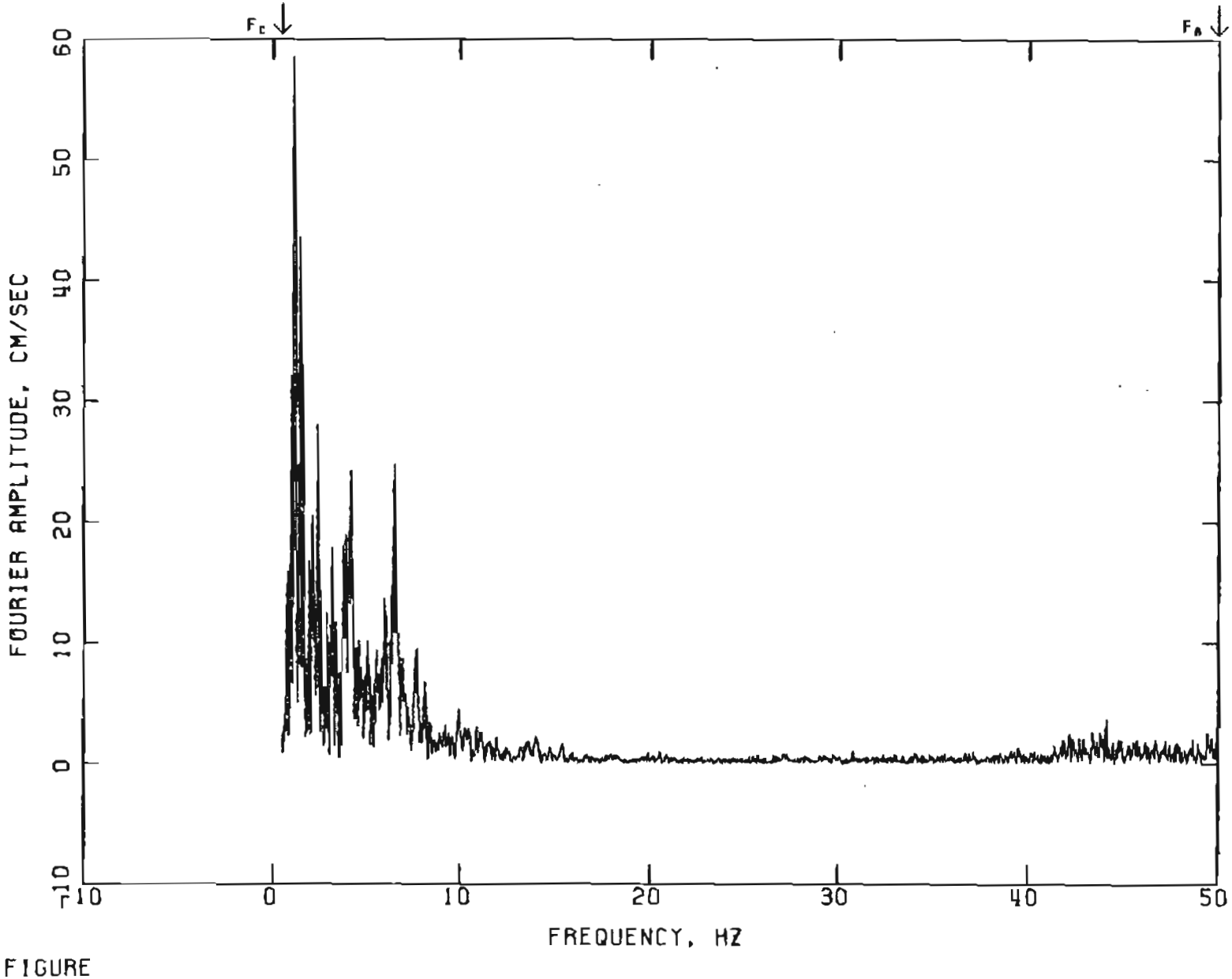
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKAN METHODIST UNIVERSITY
UP
EARTHQUAKE OF 1 JANUARY, 1975, 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



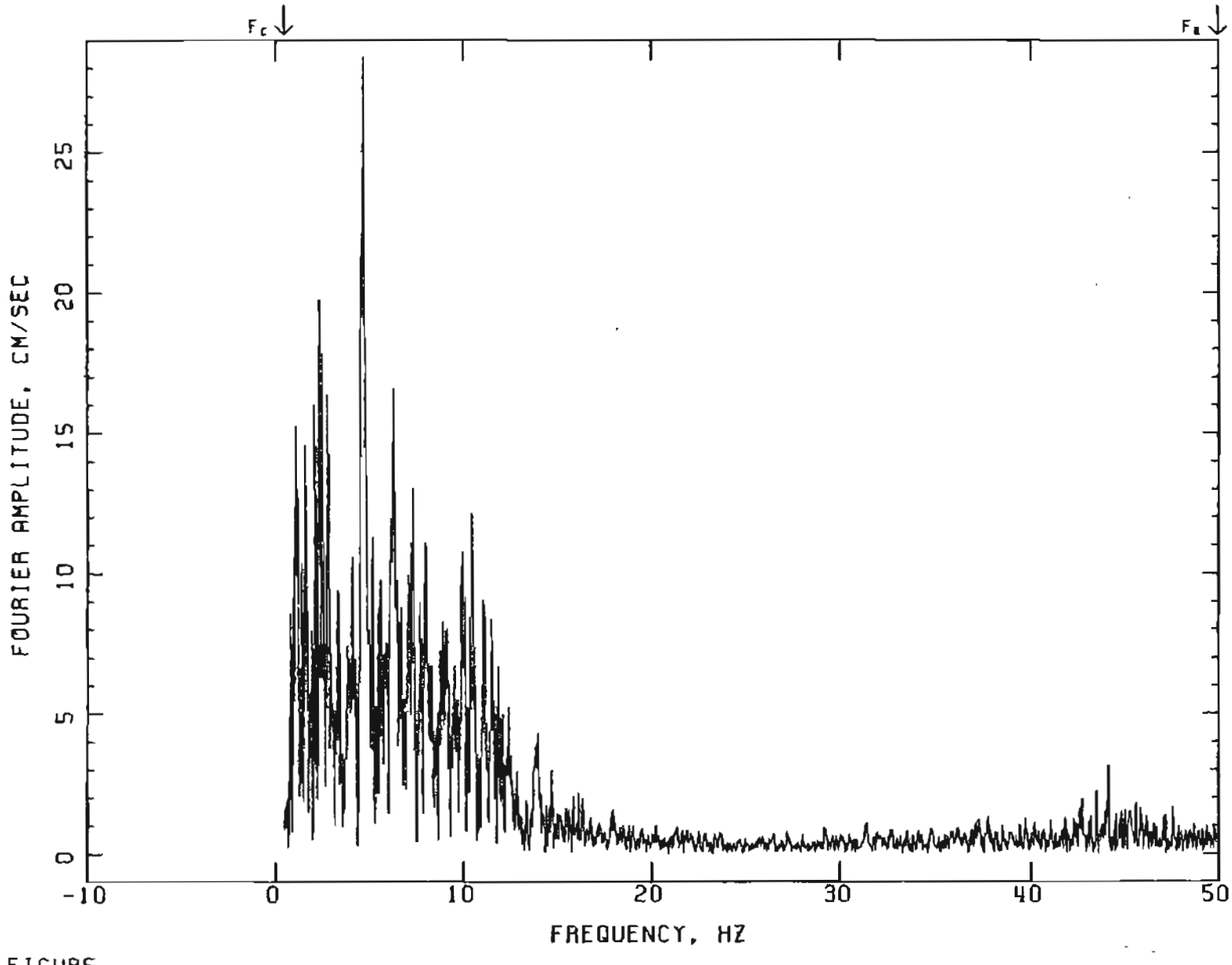
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKAN METHODIST UNIVERSITY
225 DEGREES
EARTHQUAKE OF 1 JANUARY, 1975, 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



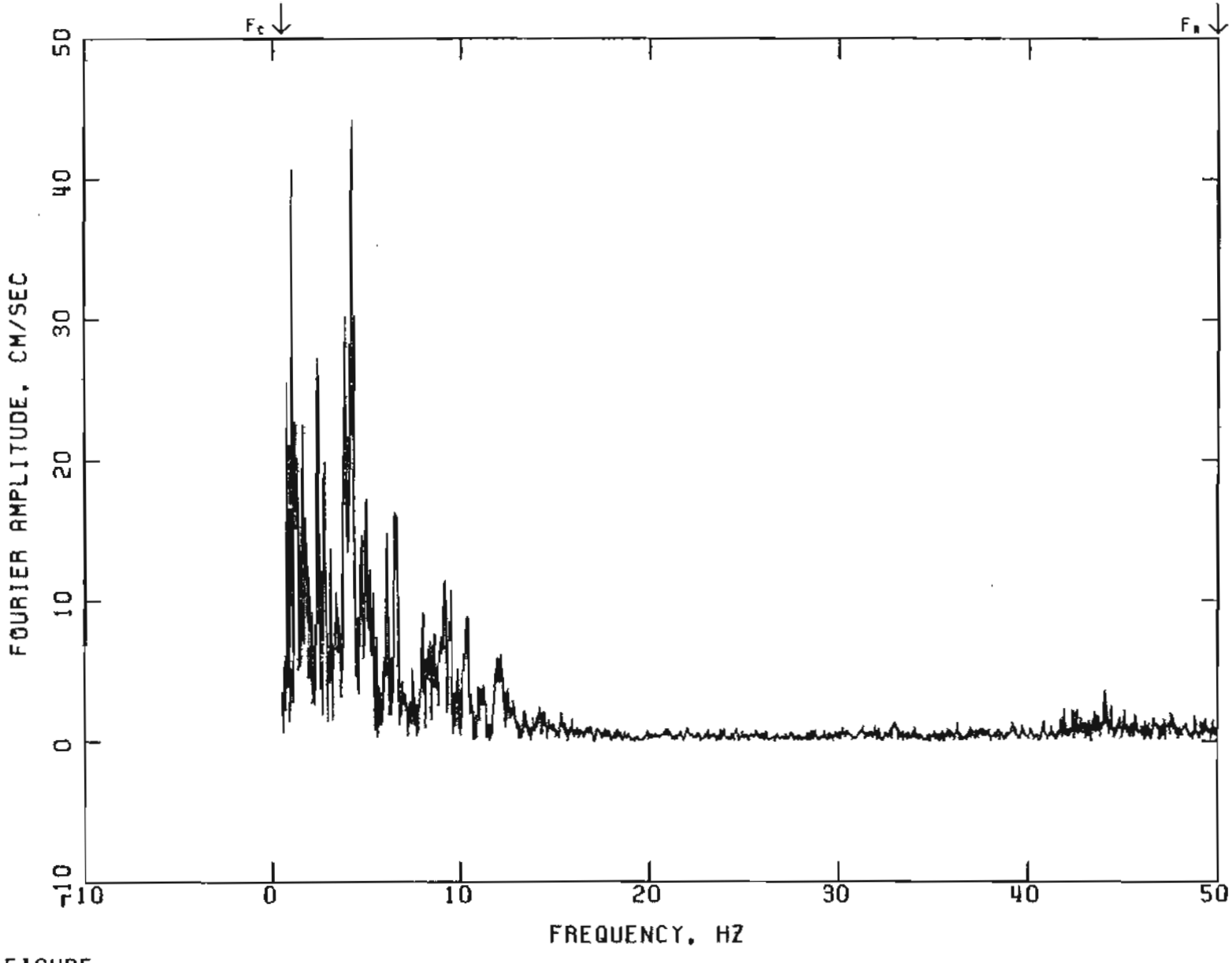
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP)
360 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



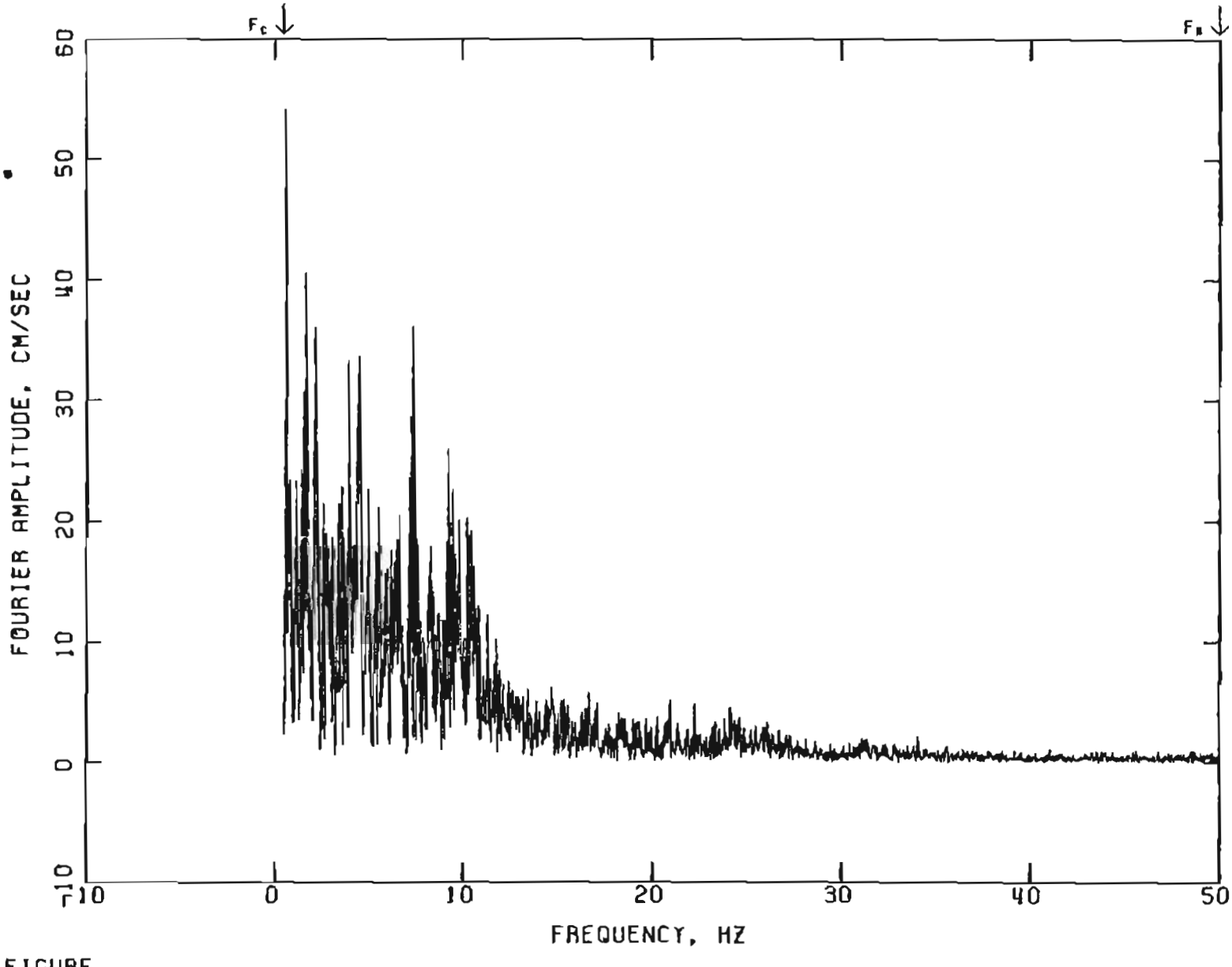
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP)
UP
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



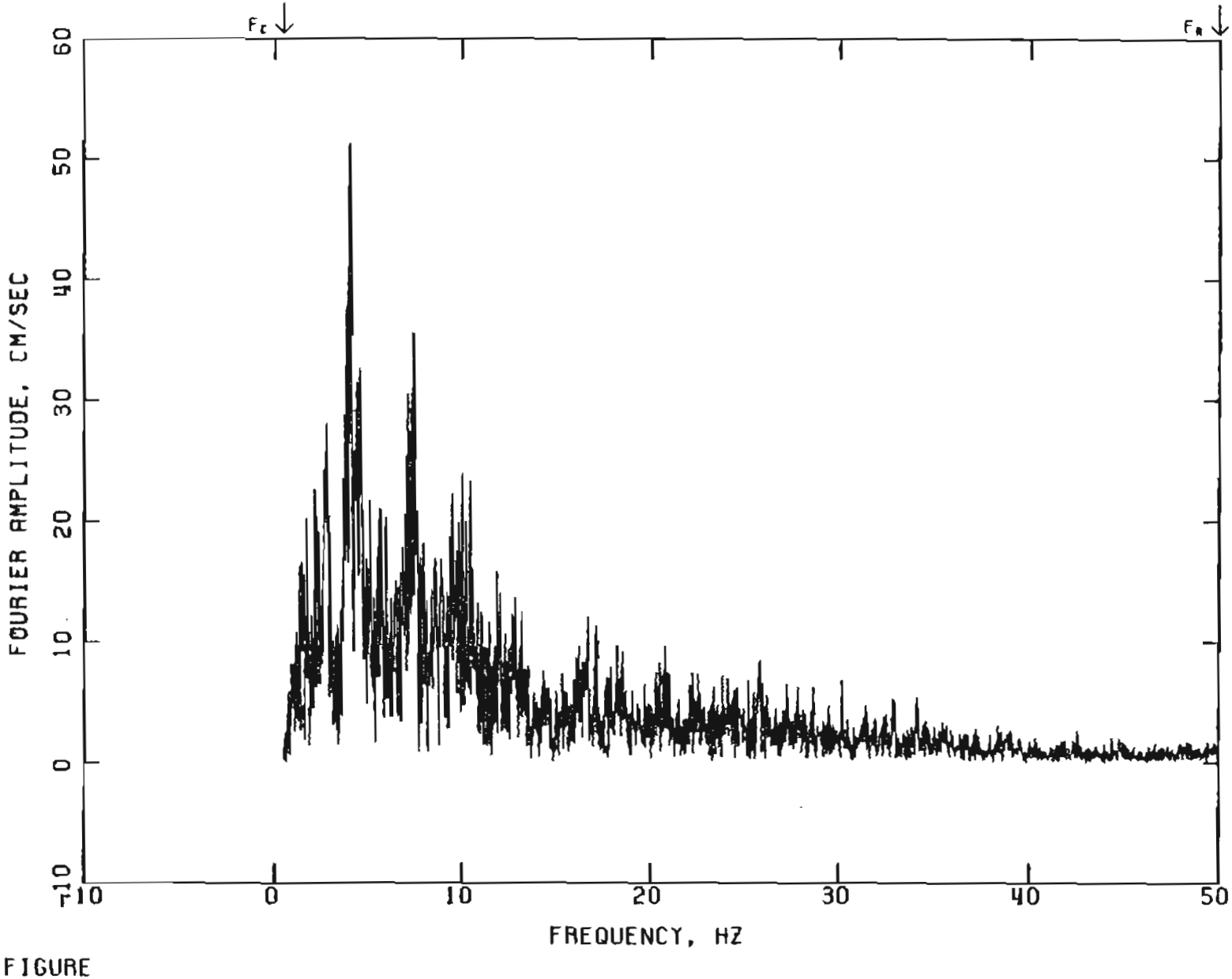
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP)
270 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



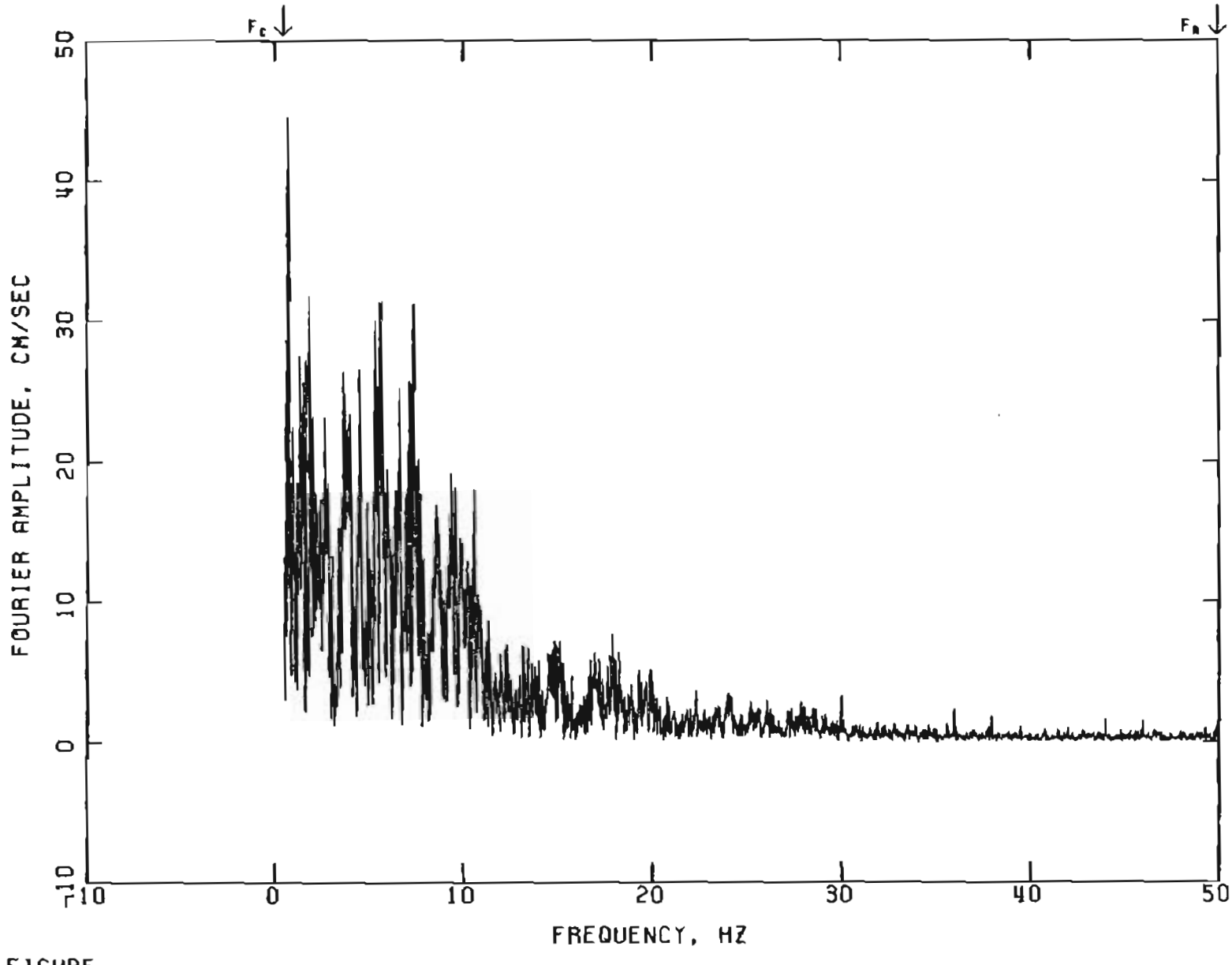
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
TALKEETNA, ALASKA FAA-VOR BUILDING
165 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ. ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



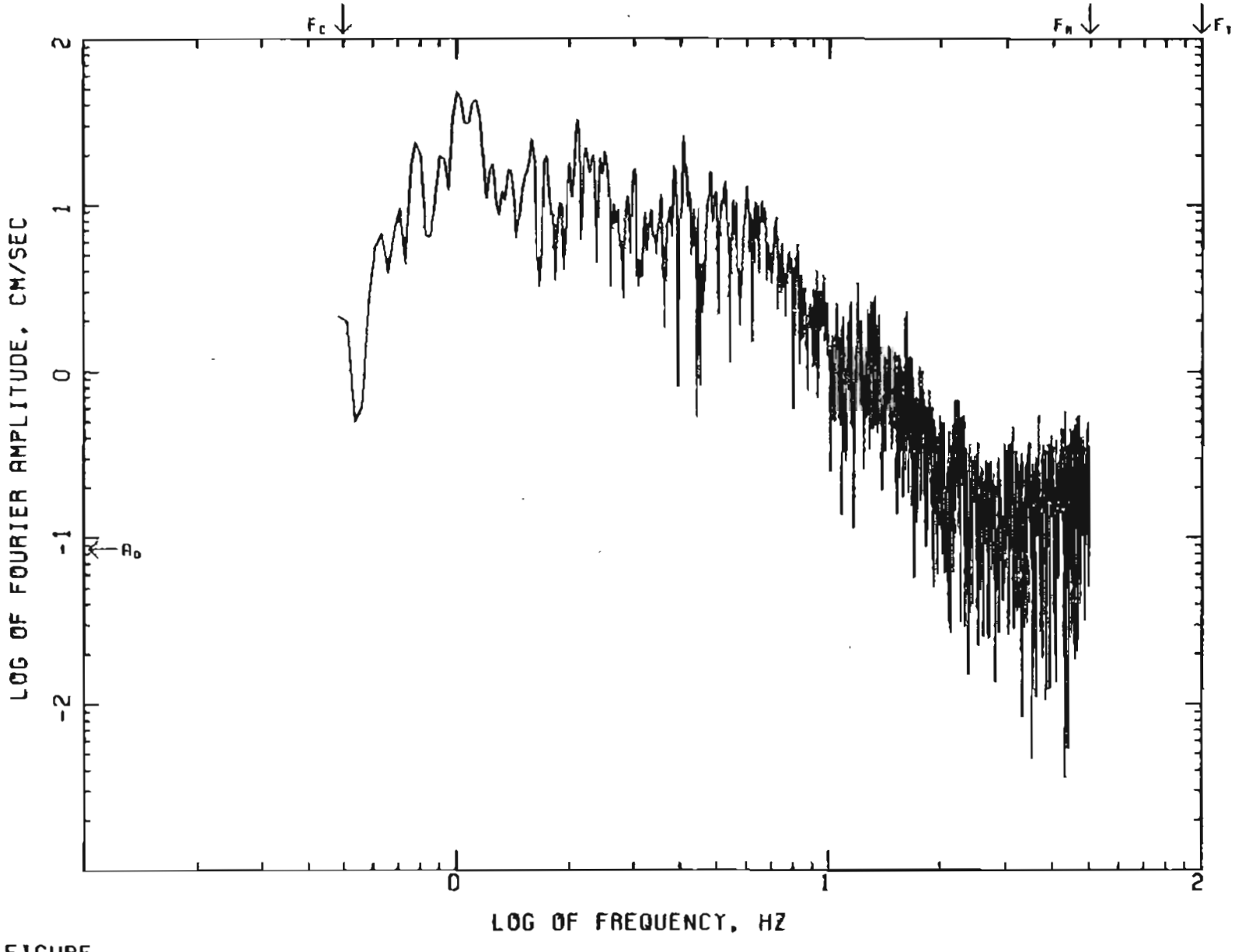
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
TALKEETNA, ALASKA FAA-VOR BUILDING
UP
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ. ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



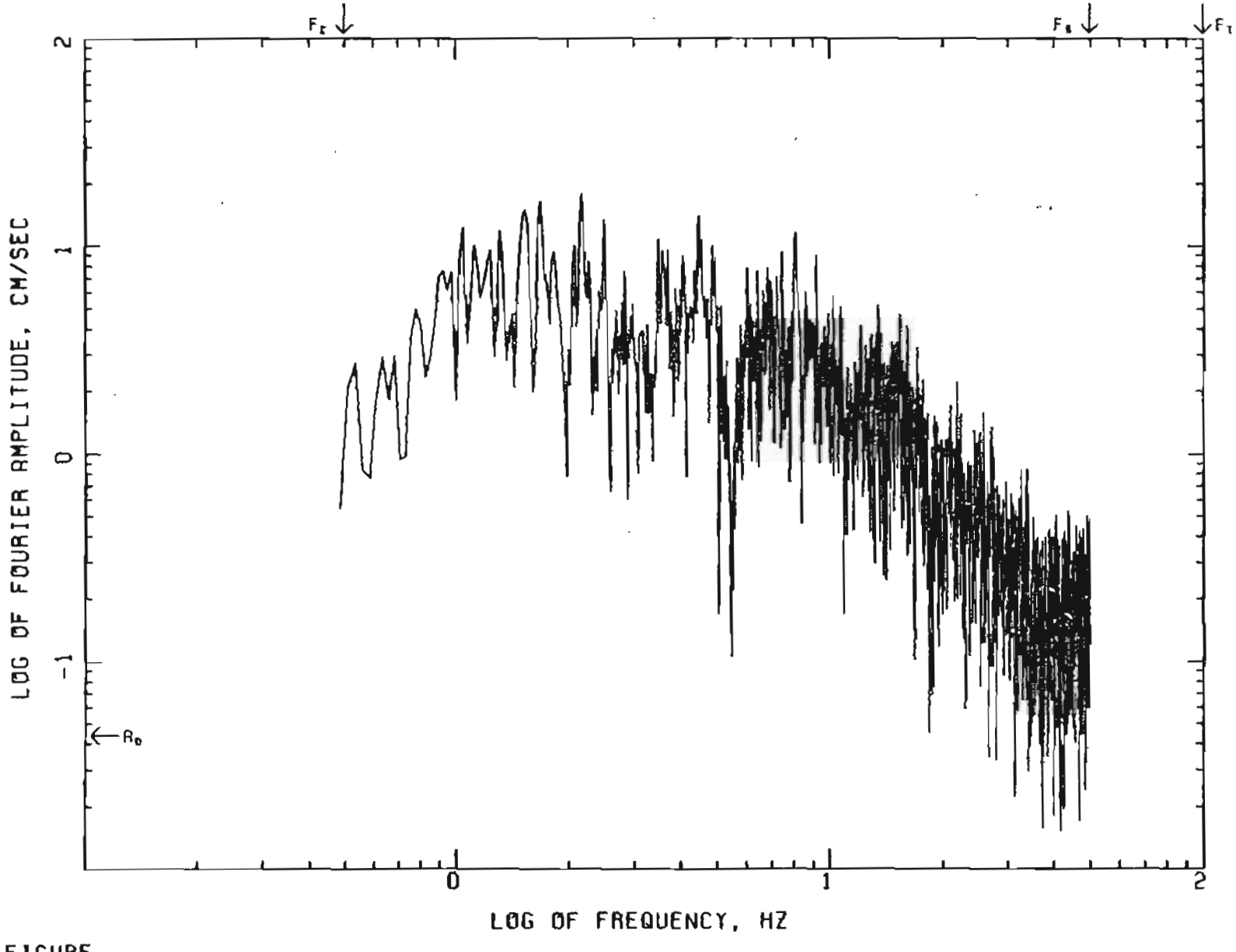
FIGURE

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
TALKEETNA, ALASKA FAA-VOR BUILDING
075 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ. ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



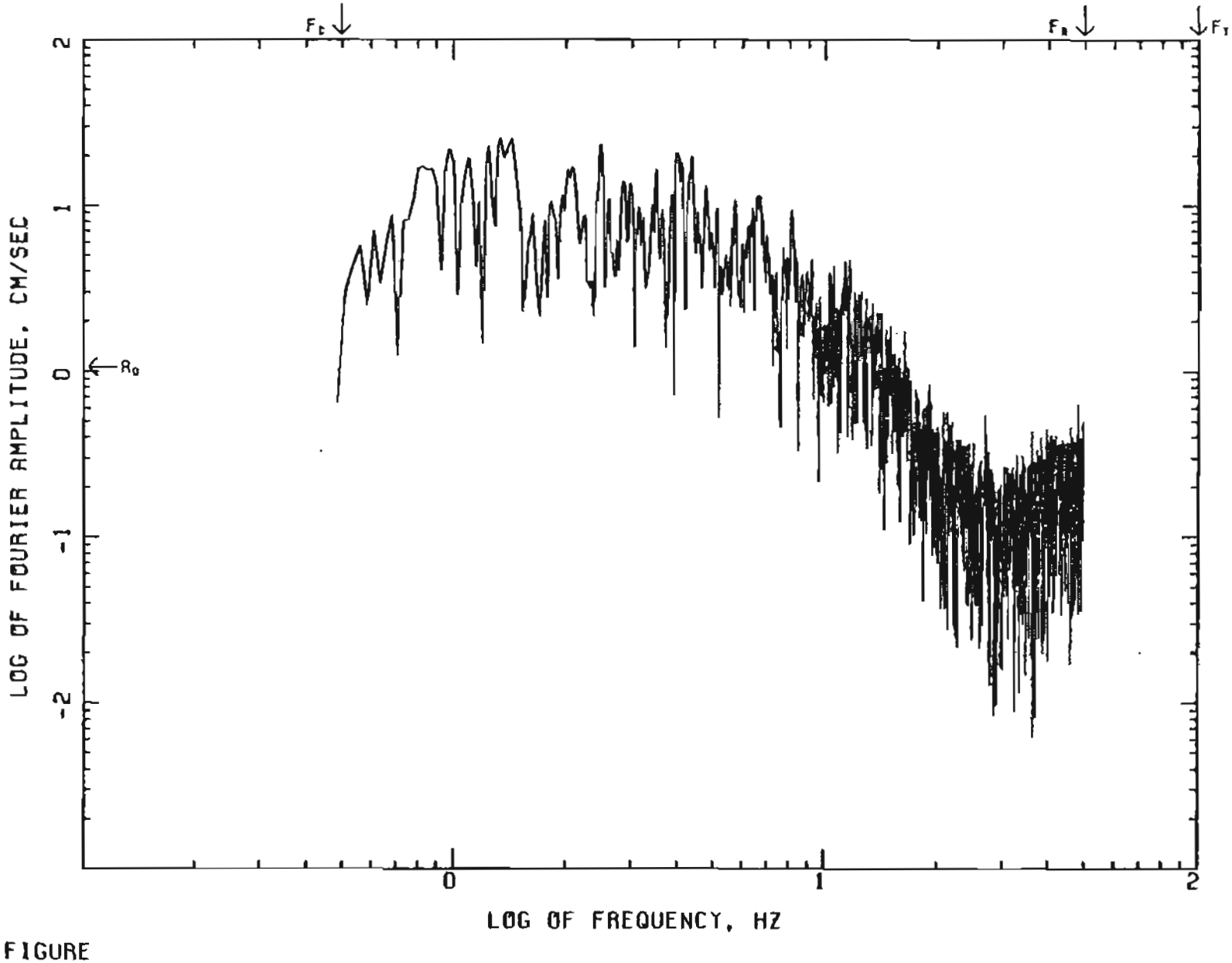
FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA 500 W. THIRD (BSMT)
135 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



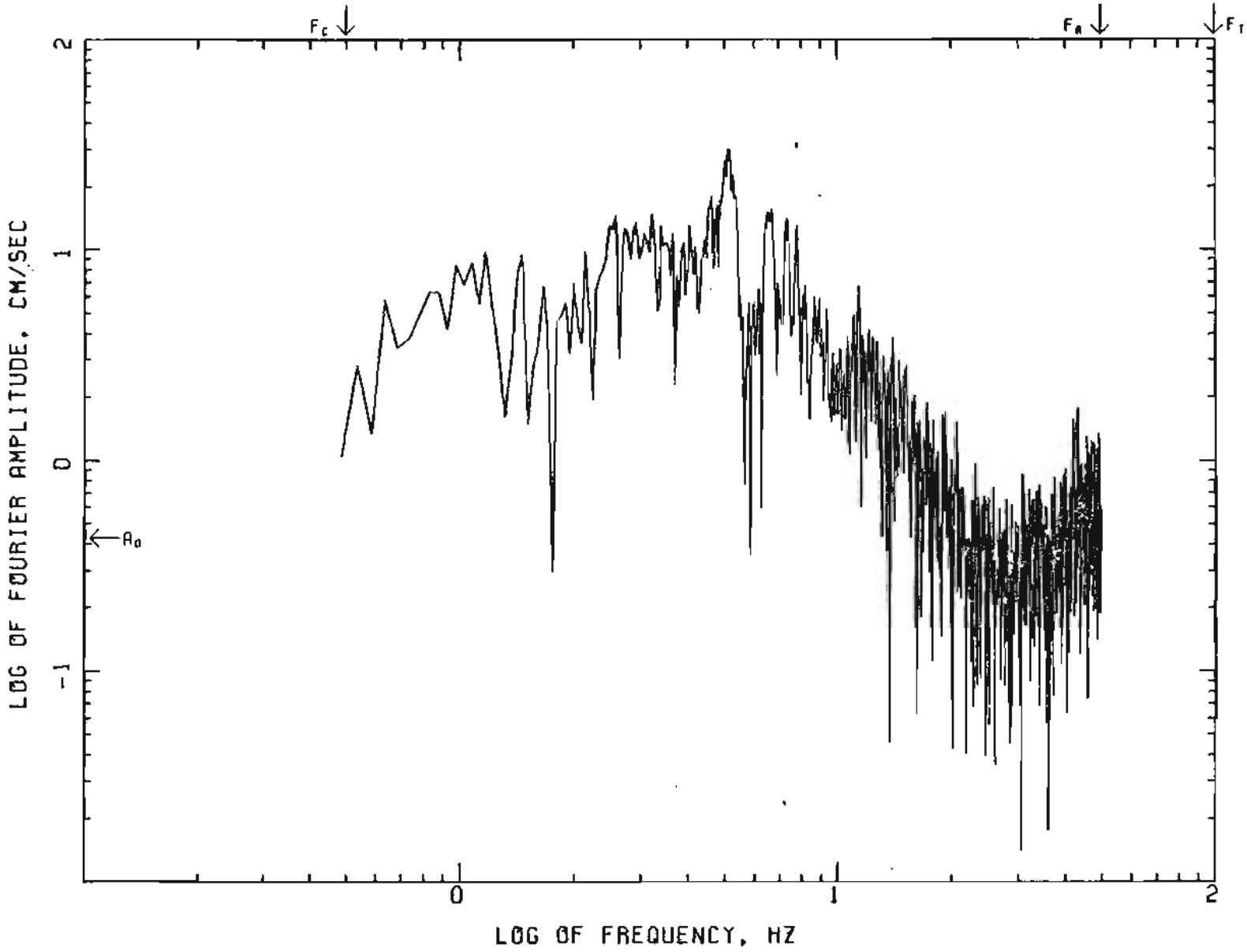
FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA 500 W. THIRD (BASMT)
UP
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



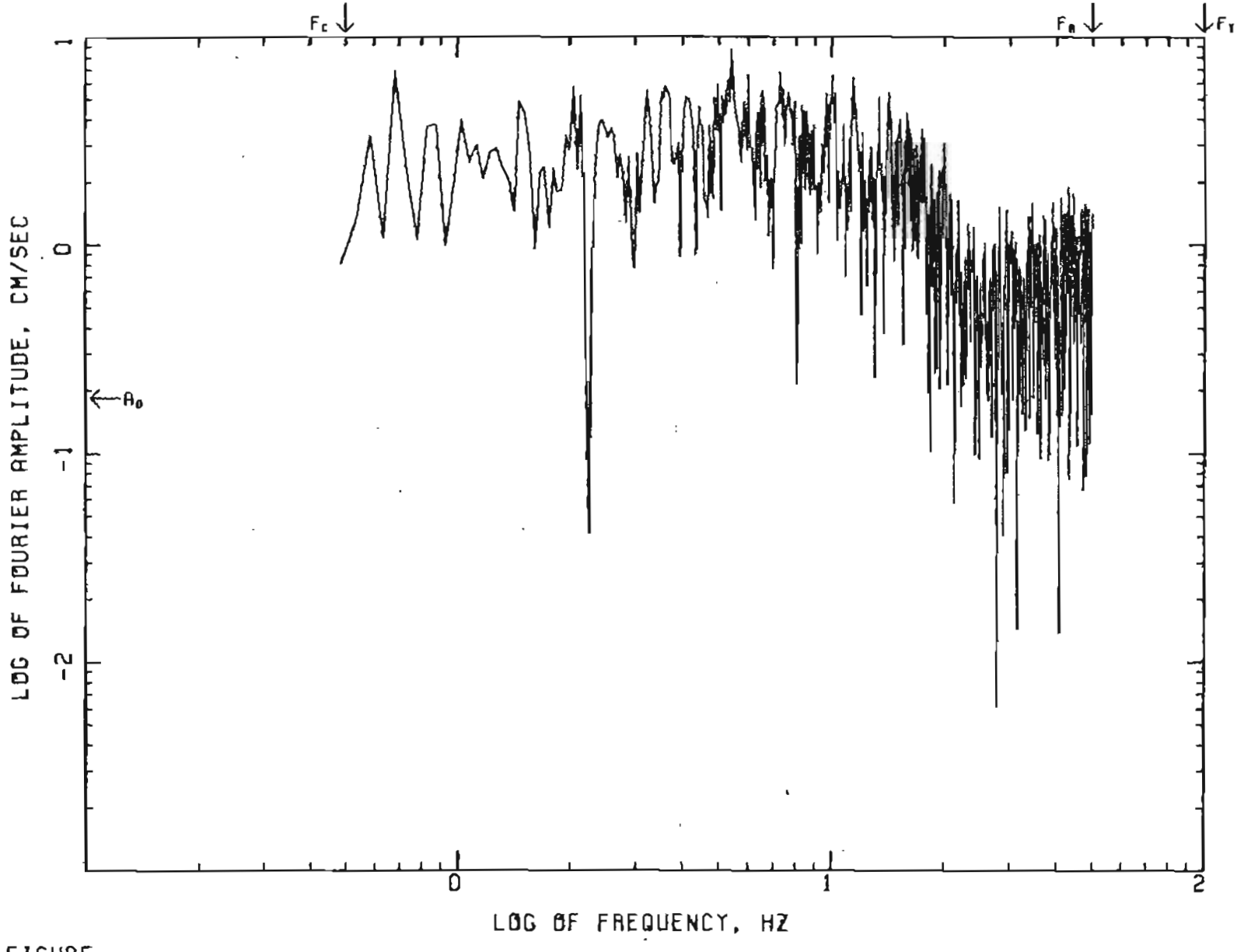
FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA 500 W. THIRD (BSMT)
045 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



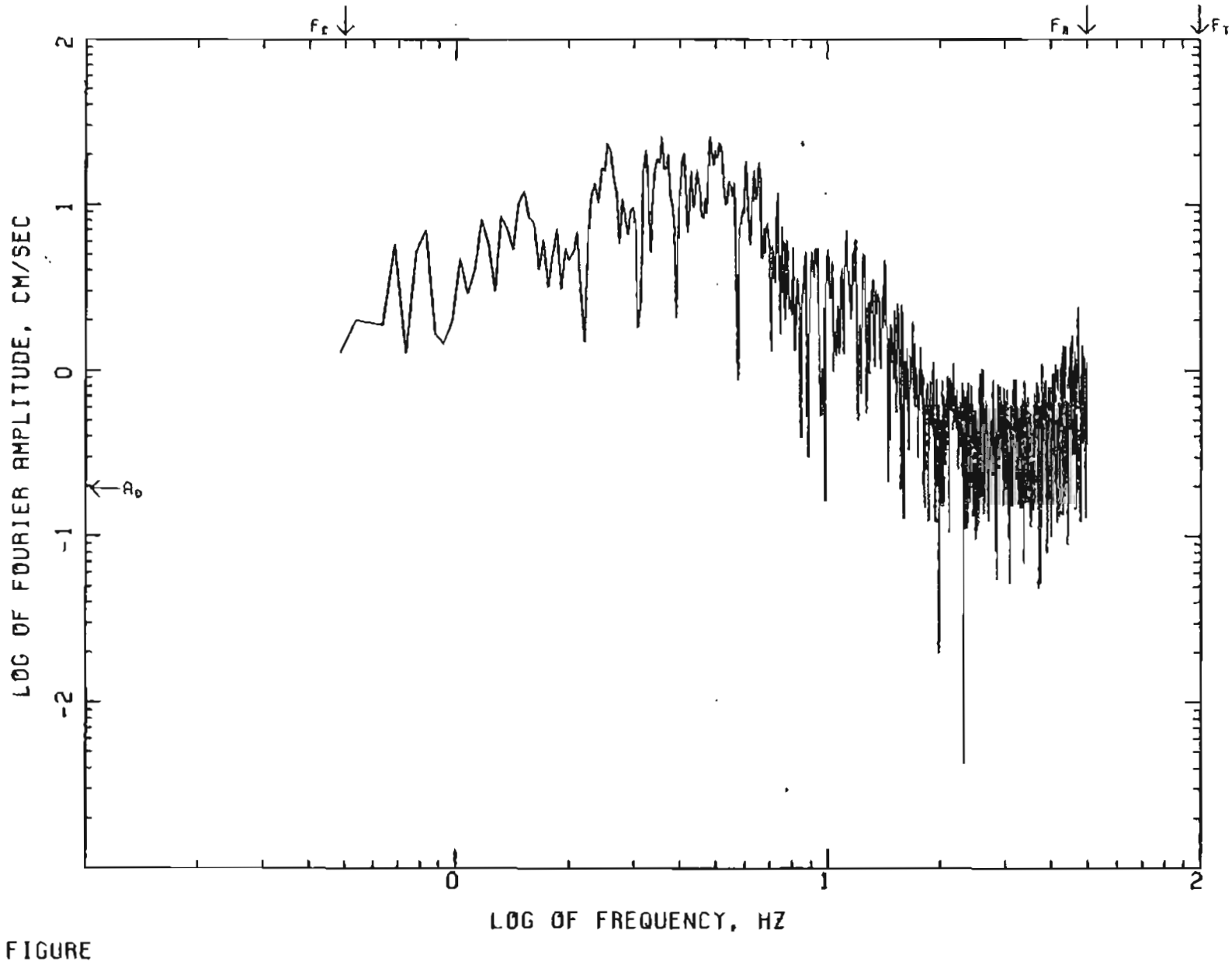
FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKAN METHODIST UNIVERSITY
315 DEGREES
EARTHQUAKE OF 1 JANUARY, 1975, 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



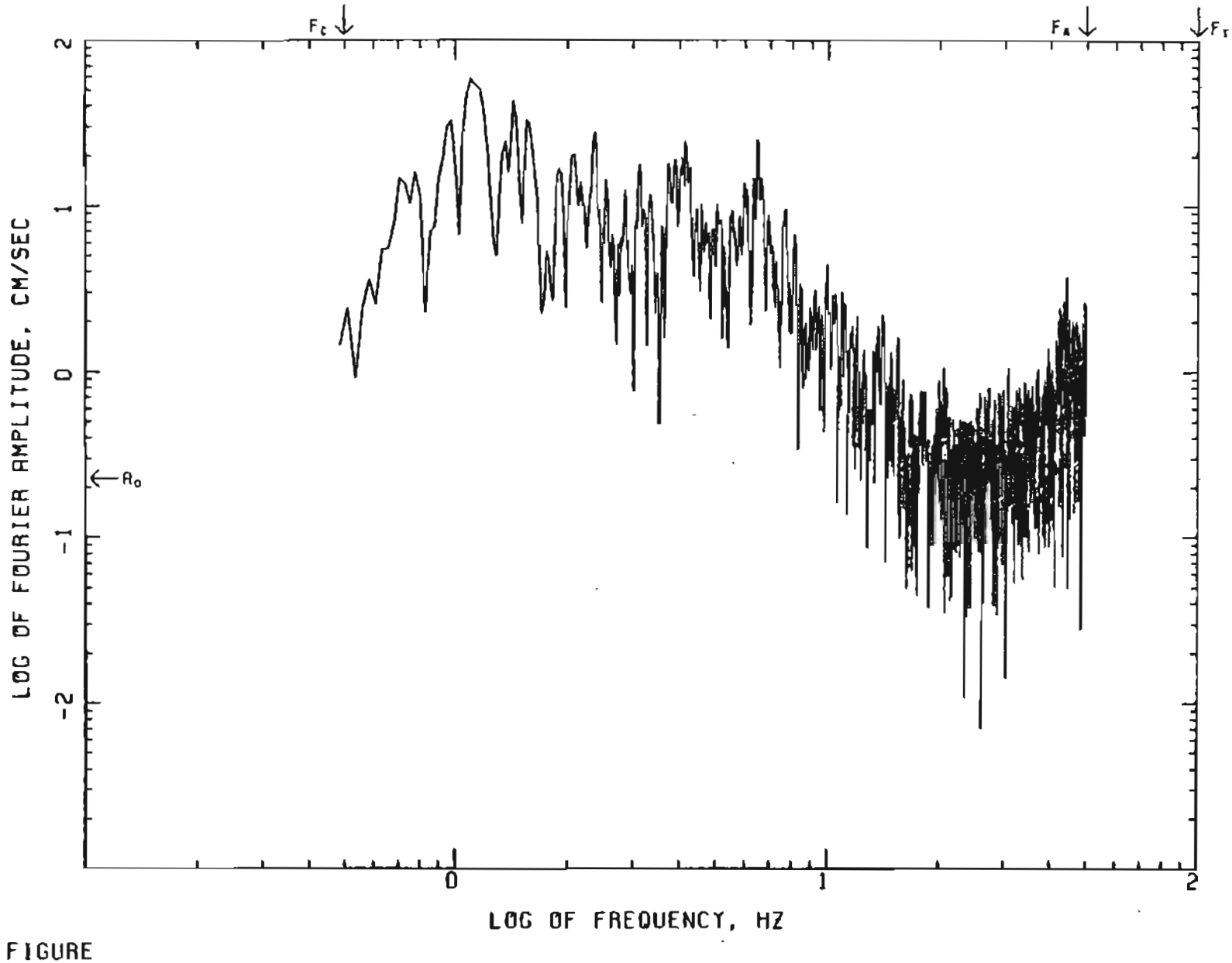
FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKAN METHODIST UNIVERSITY
UP
EARTHQUAKE OF 1 JANUARY, 1975, 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



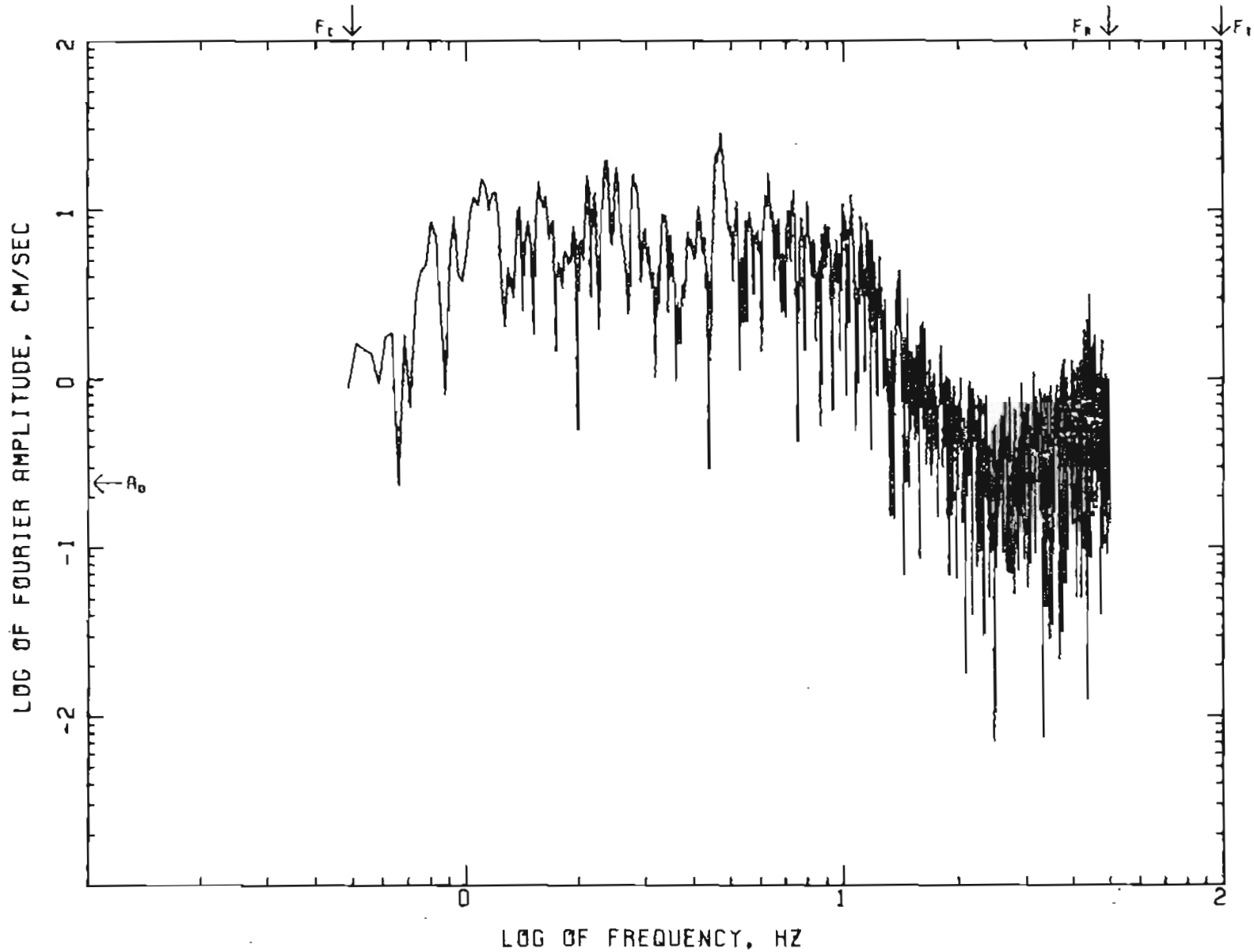
FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKAN METHODIST UNIVERSITY
225 DEGREES
EARTHQUAKE OF 1 JANUARY, 1975, 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



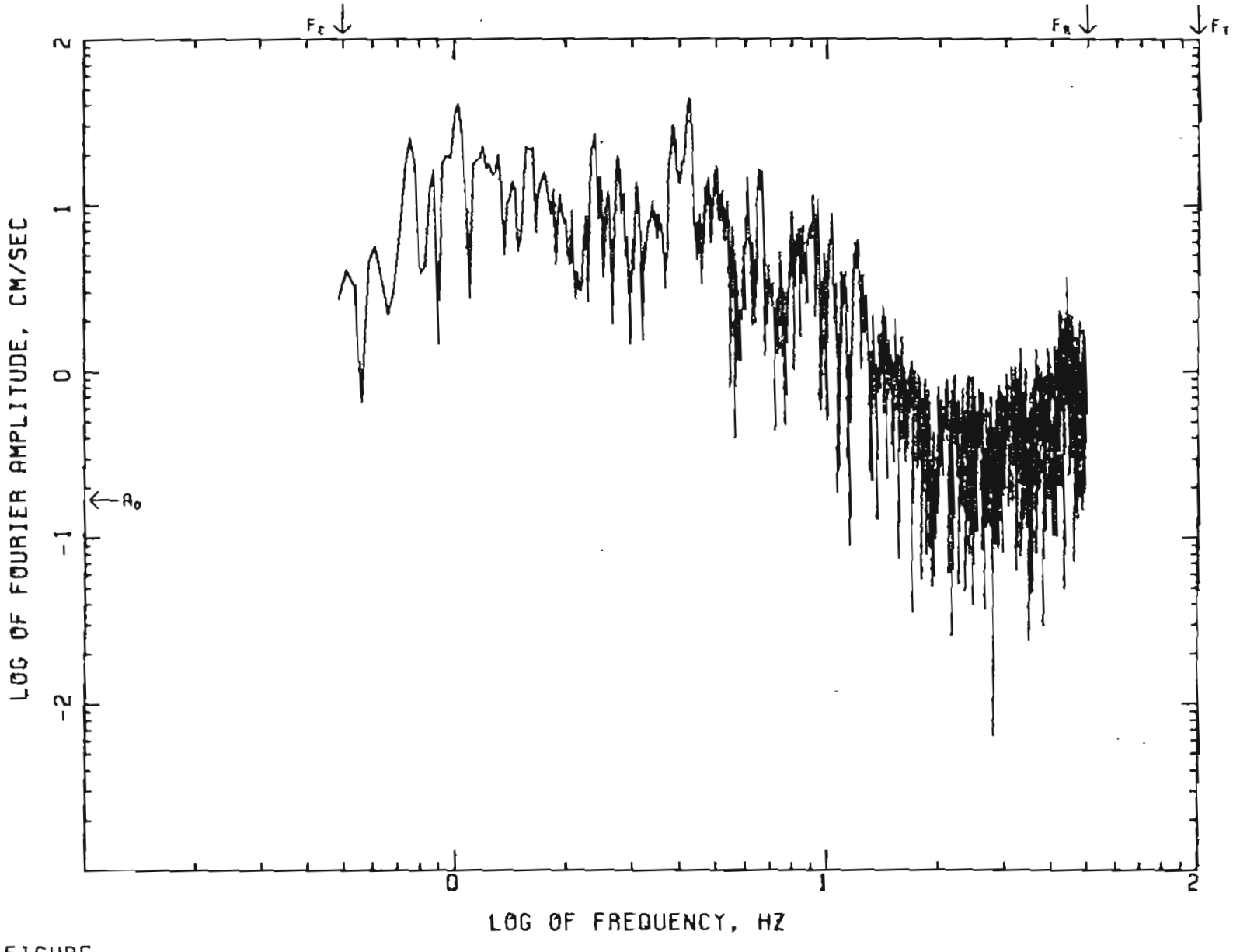
FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP)
360 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



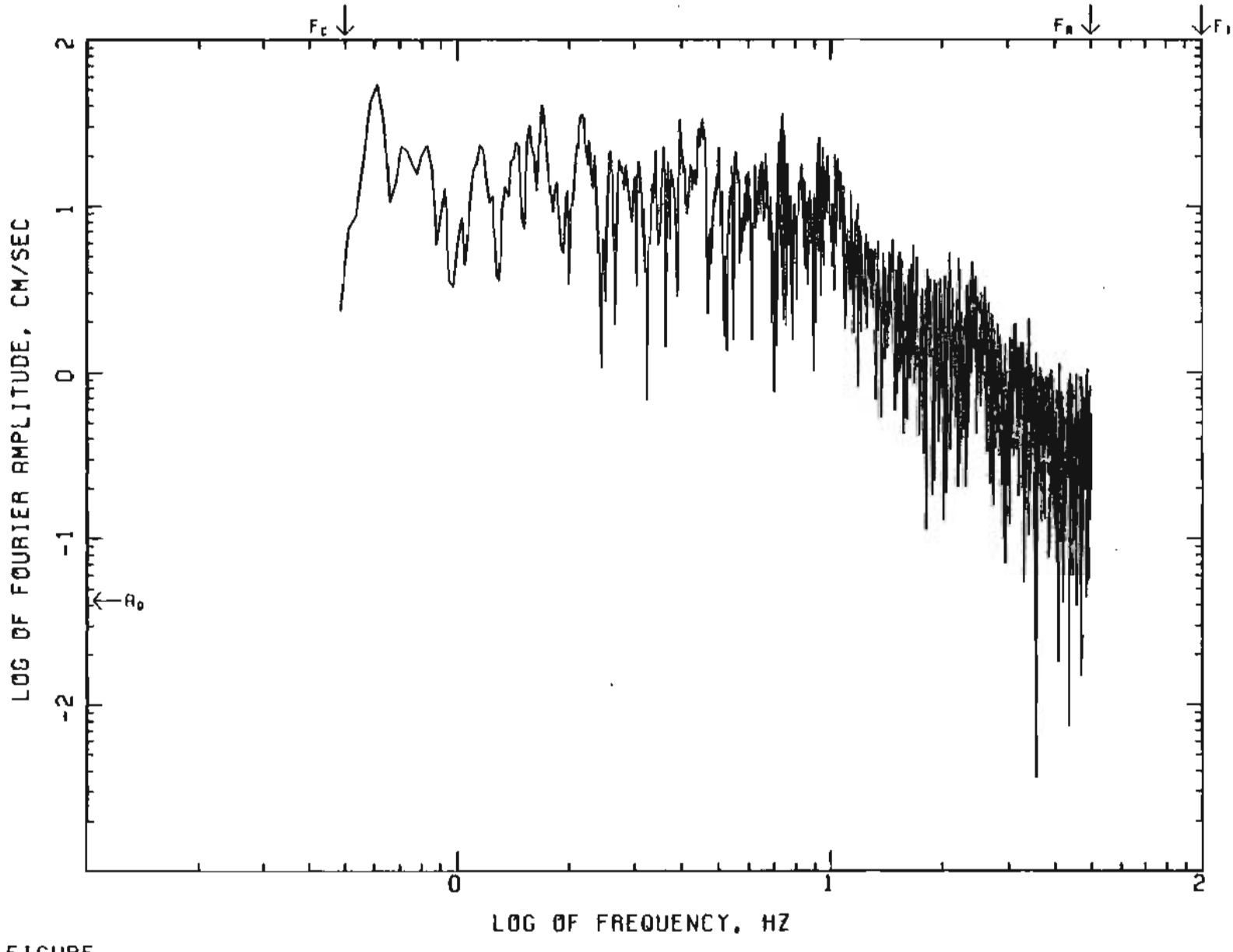
FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP)
UP
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



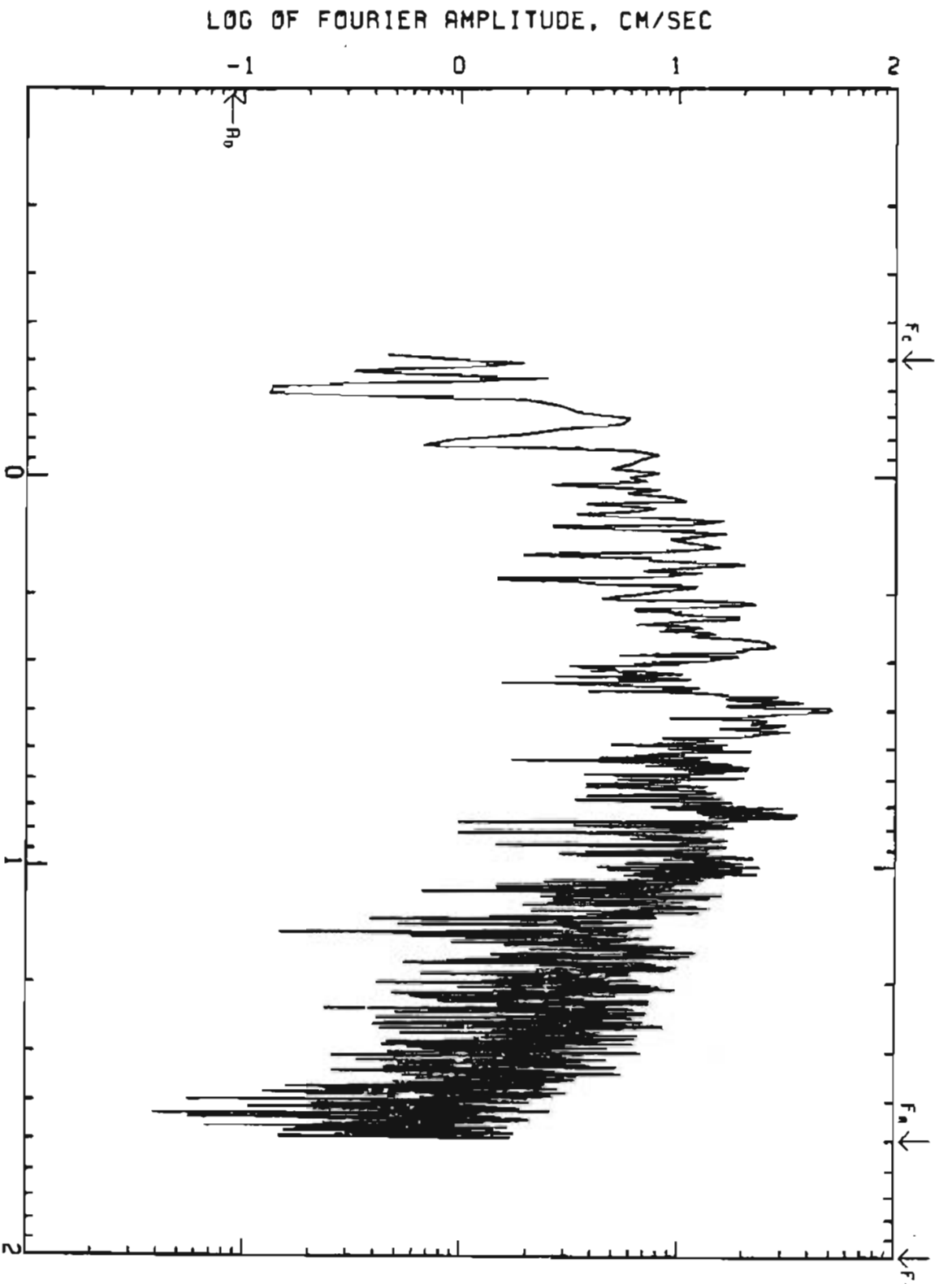
FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
ANCHORAGE, ALASKA THIRD AND GAMBEL (GOVT HOSP)
270 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTERWORTH FILTER AT 0.50 HZ, ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



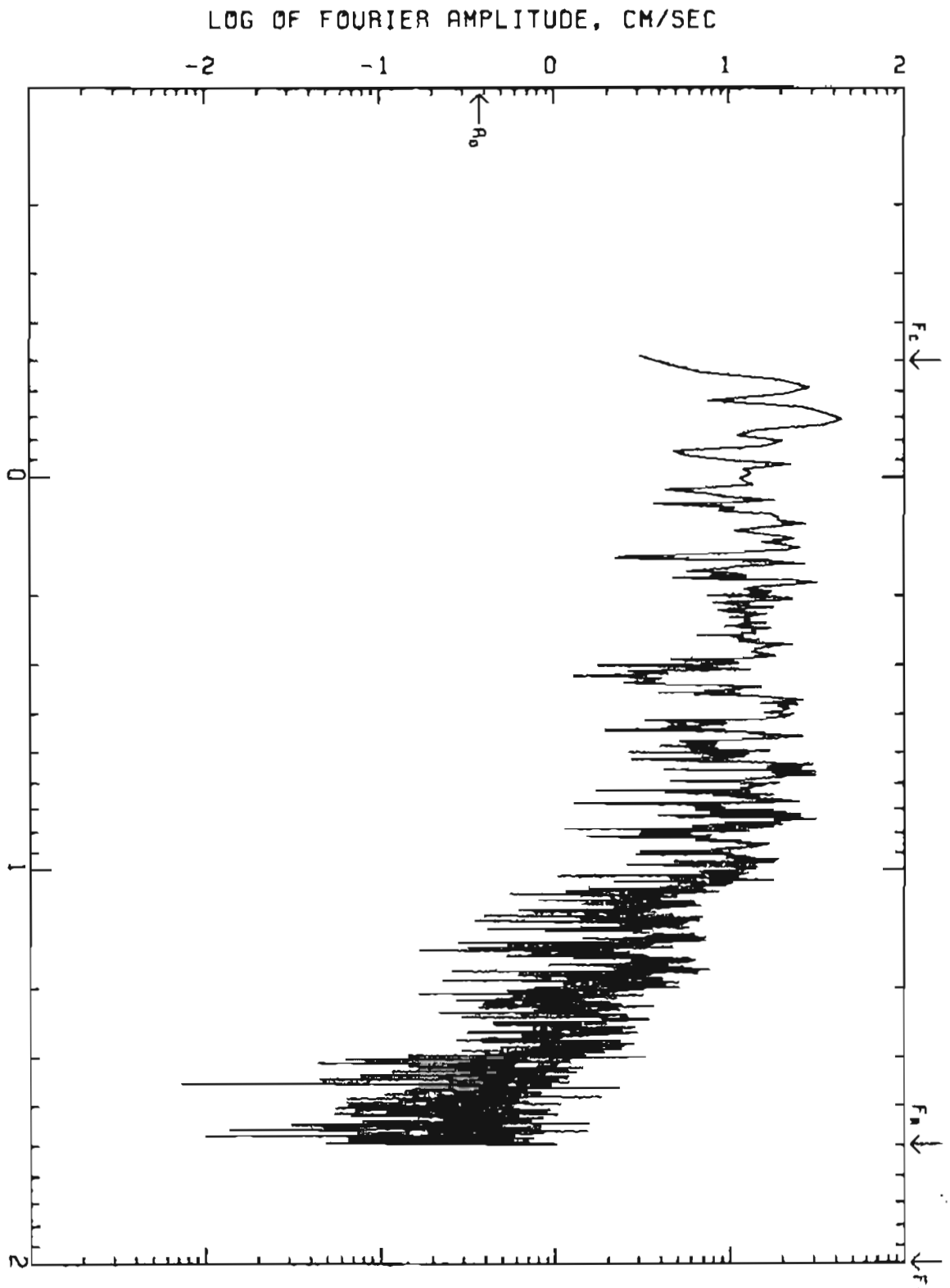
FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
TALKEETNA, ALASKA FAA-VOR BUILDING
165 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ. ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
TALKEETNA, ALASKA FAA-VOR BUILDING
UP
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ. ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS,NONOISE.



FIGURE

LOG-LOG FOURIER AMPLITUDE SPECTRUM OF ACCELERATION.
TALKEETNA ALASKA FAA-VOR BUILDING
075 DEGREES
EARTHQUAKE OF JANUARY 1, 1975 0355 UTC
BUTTERWORTH FILTER AT 0.50 HZ. ORDER 4
DATA BAND PASSED FROM 0.50 TO 50.00 HZ.
COMPUTING OPTIONS= ZCROSS, NONOISE.

Appendix II

Current List of Processed Records

APPENDIX II

CURRENT LIST OF PROCESSED RECORDS

USGS processing of records from the USGS permanent network of strong-motion accelerographs and associated networks

Strong motion data from earthquakes 1978* and later.

TABLE 1. Chronological list of events and associated reports describing the existence/processing/analysis/availability of digital data on tape, or at the National Strong Motion Data Center in Menlo Park.

Date & Time	Earthquake	Reference (see attached list)
January 1, 1975; 0355 GMT	Southern Alaska;	OFR 86-191 (Silverstein, Brady, Mork, 1986b)
March 25, 1978;	Coyote Dam, California	OFR 83-166 (Brady & Perez, 1983)
August 27, 1978 and two later shocks;	Monticello Dam, Jenkinsville, South Carolina;	OFR 81-0448 (Brady & others, 1981)
August 6, 1979;	Coyote Lake, California	OFR 81-42 (Brady & others, 1980)
October 15, 1979;	Imperial Valley, California;	OFR 80-703 (Brady, Perez & Mork, 1980)
October 15, 1979;	Imperial Valley, California;	OFR 82-183 (Perez, 1982)
October 15, 1979; 2317:41, 2318:20, 2318:40	Imperial Valley California aftershock	OFR 86-____ (Brady, Mork, Silverstein)
October 16, 1979, 0706 GMT;	Monticello Dam, Jenkinsville, South Carolina;	OFR 81-1241 (Mork & Brady, 1981)
December 13, 1981 and March 18, 1983;	Solomon Islands;	OFR 86- (Silverstein, Brady, Mork, 1986a)
February 13, 14, and 23, 1983;	Monasavu Dam, Fiji;	OFR 85-375 (Silverstein, 1985a)
May 2 and May 9, 1983;	Coalinga, California;	OFR 84-626 (Maley & others, 1984)
July 9, 1983; 0740 GMT;	Coalinga, California;	OFR 85-584 (Silverstein, 1985b)
July 22, 1983; 0239 GMT;	Coalinga, California;	OFR 85-250 (Silverstein and Brady, 1985)

*With inclusion of isolated earlier events recently processed.

TABLE 1. Chronological list of events and associated reports (continued)

Date & Time	Earthquake	Reference (see attached list)
April 24, 1984;	Morgan Hill, California;	OFR 84-498, Vol I and II (Compiled by Seena Hoose)
December 23, 1985; 0516 GMT and Nov. 9, Dec. 23, Dec 25	Northwest Territories, Canada	OFR 86-____, (Weichert and others, 1986)
January 26, 1986; 1920 GMT	Hollister, California	OFR 86-____, (Brady and others, 1986)

TABLE 2. Processed records in each report.

January 1, 1975; 0355 GMT; southern Alaska; OFR 86-191
Records (4): Anchorage, 500 W. Third St., Basement
Anchorage, Alaskan Methodist University
Anchorage, Government Hospital
Talkeetna, FAA-VOR Building

March 25, 1978; Coyote Dam, California; OFR 83-166.
Records (3): Coyote Dam, Ukiah, California: aoutment, toe, crest.

August 27, 1978, 1023 GMT and 2 later shocks; Monticello Dam, South Carolina, OFR 81-0448.
Records (3): Jenkinsville, S.C. Monticello Dam
Shared abutment (center crest)
August 27, 1978, 1023 GMT
Two later unidentified events

August 6, 1979, Coyote Lake, California; OFR 81-42
Records (6): Coyote Creek, San Martin, California
Gilroy Array: Station 6, San Ysidro, California
Gilroy Array: Station 4, San Ysidro School, California
Gilroy Array: Station 3, Sewage Treatment Plant, California
Gilroy Array: Station 2, Mission Trails Motel, California
Gilroy Array: Station 1, Gavilan College, California

October 15, 1979, 2317 GMT; The Imperial Valley Earthquake; OFR 80-703.
Records (22): El Centro Array 7, Imperial Valley College, California
El Centro Array 6, Huston Road
El Centro, Bonds Corner, Hiways 98 & 115
El Centro Array 8, Cruickshank Road
El Centro Array 5, James Road
El Centro Differential Array
El Centro Array 4, Anderson Road
Brawley, Brawley Municipal Airport
Holtville, California, Holtville Post Office
El Centro Array 10, Keystone Road
Calexico, California, Calexico Fire Station
El Centro Array 11, McCabe School
El Centro Array 3, Pine Union School
Parachute Test Facility
El Centro Array 2, Keystone Road
El Centro Array 12, Brockman Road
Calipatria, California, Calipatria Fire Station
El Centro Array 13, Strobel Residence
El Centro Array 1, Borchard Ranch
Superstition Mountain, California
Plaster City, California, Storehouse
Coachella Canal Number 4, California

TABLE 2. Processed records in each report. (continued)

October 15, 1979, 2317:41 GMT; Imperial Valley Aftershocks; OFR 86-___
Records (6) El Centro Array 5, James Road
El Centro Array 6, Huston Road
El Centro Array 7, Imperial Valley College
El Centro Array 8, Cruickshank Road
El Centro Array 9, Commercial Ave.
El Centro Differential Array

October 15, 1979, 2318:20 GMT; Imperial Valley Aftershocks; OFR 86-___
Records (6) El Centro Array 5, James Road
El Centro Array 6, Huston Road
El Centro Array 7, Imperial Valley College
El Centro Array 8, Cruickshank Road
El Centro Array 9, Commercial Ave.
El Centro Differential Array

October 15, 1979, 2318:40; Imperial Valley Afrershock; OFR 86-___
Records (7) El Centro Array 6, Huston Road
El Centro Array 7, Imperial Valley College
El Centro Array 8, Cruickshank Road
El Centro Array 9, Commercial Ave.
El Centro Differential Array
Bonds Corner, Highways 115 & 98
Holtville Post Office

October 15, 1979; The Imperial Valley, California; OFR 82-183;
Records (22): This report contains the time-dependent response spectrum plots for the same records as in OFR 80-703, above.

October 16, 1979, 0706 GMT, Monticello Dam, South Carolina, OFR 81-1214.
Records (1): Jenkinsville, South Carolina, Monticello Dam shared abutment (center crest)

December 13, 1981 and March 18, 1983; Solomon Islands, OFR 86-
Records (5): Dec. 13, 1981, 0129 GMT: 460 Beach, Panguna Mine, Bougainville Island.
Dec. 13, 1981, 1324 GMT: "
March 18, 1983: Arawa Town
Bato Bridge
BVE80, Panguna Mine.

February 13, 14, and 23, 1983; Monasavu Dam, Fiji; OFR 85-375
Records (3): Feb 13, 14, 23, 1983: Monasavu Dam.

TABLE 2. Processed records in each report. (continued)

May 2 and May 9, 1983; Coalinga, California; OFR 84-625.
Records (13): May 2, 1983, 2342 UTC:
Pleasant Valley Pump Plant: switchyard, basement

May 9, 1983, 0249 UTC
Anticline Ridge: freefield and pad
Burnett Construction
Oil City
Oil Fields Fire Station
Palmer Avenue
Skunk Hollow
Pleasant Valley Pump Plant: switchyard, basement, 1st floor, roof

July 9, 1983; 0740 GMT; Coalinga, California; OFR 85-584
Records (7): Anticline Ridge: freefield and pad
Burnett Construction
Oil City
Oil Fields Fire Station: freefield and pad
Palmer Avenue
Skunk Hollow
Transmitter Hill

July 22, 1983; 0239 GMT; Coalinga, California; OFR 85-250
Records (12): Anticline Ridge: pad site
Oil City
Oil Fields Fire Station: freefield and pad
Palmer Avenue
Pleasant Valley Pump Plant: 1st floor, basement, roof, switchyard, freefield
Skunk Hollow
Transmitter Hill

April 24, 1984; Morgan Hill, California; OFR 84-4988, Vol. II.
Records (11): Anderson Dam: downstream, crest
Hollister City Hall Annex
Hollister Differential Array
San Justo Damsite: right abutment, left abutment
San Jose 101/280/680 bridge
Hollister Differential Array No. 1, 3, 4, 5

December 23, 1985; with foreshock and aftershocks; Northwest Territories, Canada; OFR 86-____
Records (6): Nov. 9, 1985; 0446 GMT: Nahanni Site 2
Dec. 23, 1985; 0516 GMT: Nahanni Sites 1, 2, 3
Dec. 23, 1985; 0548 GMT: Nahanni Site 1
Dec. 25, 1985; 1543 GMT: Nahanni Site 3

January 26, 1986; Hollister, California; OFR 86-____ (in press)
Records (5): Hollister Digital Differential Array, Stations 1, 3, 4, 5, 6

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