GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA

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Weichert D.H., R.B. Horner, P.S. Munro,* R.J. Wetmiller,*
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August 1991 Août

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ABSTRACT

Following a magnitude M_S 6.6 earthquake in the North Nahanni River area of the Northwest Territories of Canada in October 1985, three accelerographs were installed near the centre of the aftershock activity. Until the end of 1985, these instruments were triggered by 60 aftershocks, including a second large earthquake, M_S6.9, on 23 December 1985. Accelerations recorded from this and three of the larger earthquakes in 1985 have been published in a previous Open File and have been widely circulated because of the large peak acceleration of over 2 g on the vertical component at site 1. Additional accelerographs were installed at two sites during 1986 and 1987, and were triggered by another 45 events; most records were produced at the original three sites.

In this report we present copies of all film records that were obtained until the removal of the last instruments in the summer of 1989. This comprises a total of 157 records, mostly from 90 confirmed aftershocks. In addition to the earlier published six 3-component digital records, another 13 records were digitized and processed digitally. The selection criterion was a peak acceleration of over 0.1 g regardless of duration, or peaks over 0.05 g with appreciable strong motion lasting longer than 1.5 sec. For these records we present plots of instrument-corrected, anti-aliased and filtered accelerations, velocities and displacements, as well as Fourier amplitude spectra of acceleration, and velocity response spectra.

For the smaller records, approximate peak accelerations scaled from the film records are tabulated, together with an indication of signal character. The large number of relatively well-determined epicentral locations allows the determination of a distance attenuation relation over the first ten to thirty kilometres, which behaves approximately as $x^{-2.5}$. The large peak accelerations at site 1 for the 23 December 1985 earthquake fit this attenuation if a rupture at 4km depth is postulated, perhaps directly under site 1. It is in any case unlikely to result from anomalous site response since, on the average, distance-corrected accelerations recorded at this site are smaller than those at site 2.

Résumé

Un séisme de magnitude M_S 6,6 a eu lieu le 5 octobre 1985 dans la région de la rivière Nahanni-Nord dans les Territoires Nord-Ouest au Canada. Trois accélérographes furent installées dans la région épicentrale et ont enregistré 60 événements jusqu'à la fin de l'année, y compris un deuxième grand tremblement de magnitude M_S 6,9 qui eut lieu le 23 décembre 1985. On a déjà présenté les résultats du traitement des enregistrements de ce deuxième séisme, et de trois autres de la même région qui ont eu lieu la même année, dans un Dossier public précédent (N° 86-1-PGC), où on s'intéressait surtout à l'accélération maximale verticale de plus de $2g$. Deux autres accélérographes furent installées dans la région durant 1986 et 1987 et ont enregistré 45 événements de plus; la plupart ont été enregistrée aux trois premiers sites.

Ce dossier présente des copies de tous les enregistrements de secousses fortes produites durant les installations des accélérographes dans la région jusqu'à la fin de l'été de 1989, y compris 157 traces provenant de 90 événements identifiées comme séismiques. Ci-inclus, on trouvera les résultats du traitement numérique de 13 enregistrements donc l'accélération maximale était de plus de $0,1g$ sans considération de durée ou de plus de $0,05g$ avec une durée de plus de 1,5 secondes. Pour ces derniers, on présente des graphiques d'accélération, de vélocité et de déplacement filtrés et corrigés pour les effets d'instruments, des graphiques de spectres d'amplitude de Fourier et des graphiques de spectres de réponse pseudo-vélocité.

On présente les accélérations maximales approximatives, avec une indication du type de signal, pour les enregistrements plus faibles. On a déterminé, en utilisant une suite de localisations de séismes relativement bien connues, un rapport entre distance à l'épicentre (x) et l'atténuation de signal séismique dans la région de dix à trente kilomètres, soit un effet de $x^{-2,5}$. Les grandes accélérations enregistrées au site 1, le 23 décembre 1985, sont en accord avec ce rapport si la profondeur de rupture était de 4 kilomètres directement au-dessous du site. Néamoins, c'est peu probable que ces accélérations ont été causées par un effet de site car, en moyenne, après avoir corrigé pour les effets de distance, elles sont plus faibles que celles du site 2.

INTRODUCTION

The earthquake sequence that began on 5 October 1985 in the North Nahanni river area of the Mackenzie Mountains, N.W.T., is described in detail by Wetmiller et al. (1988), Choy and Boatwright (1988), and Horner et al. (1990). The two largest earthquakes, magnitude M_S 6.6 and 6.9, occurred on 5 October and 23 December 1985, respectively. Each was followed by an extensive aftershock sequence. Field surveys to study the aftershock sequences and to deploy accelerographs were conducted in October 1985, January 1986, September 1986, and after a third magnitude 6 event, M_S6.0, on 25 March 1988 (Lamontagne et al., 1989). Other studies include a description of a large rock avalanche triggered by the 5 October event (Evans et al., 1987); shear wave splitting and anisotropy (Buchbinder, 1990); seismic hazard (Weichert and Horner, 1987; Wetmiller et al., 1987); and strong ground motion records (Weichert et al., 1986a; 1986b). A general overview is given by Horner et al. (1987).

In this report we present copies of 157 strong motion film records from a total of 105 earthquakes that were obtained in the Nahanni aftershock zone from 1985 to 1989. In addition to the 6 digital records that were processed and published earlier (Weichert et al., 1986b), another 13 are added here. We include plots of instrument-corrected, anti-aliased and filtered accelerations, velocities and displacements, as well as Fourier amplitude spectra of acceleration, and velocity response spectra for all 19 digital records.

SITE INSTALLATIONS AND INSTRUMENTATION

A total of five accelerographs were installed in the Nahanni aftershock zone between 1985 and 1989. Site coordinates, instrument parameters and field service details are summarized in Table 1. Site locations are shown in relation to the epicentres in Figure 1. The instrument orientations given in Table 1 for site 1 supercedes that used in the figure captions.

All sites were equipped with Kinemetrics SMA-1, 1g full scale accelerographs, equipped with TCG-1 time code generators; power was supplied from 12-volt heavy duty car batteries in addition to the internal batteries. Trigger thresholds were set to 0.005g, one half the usual level; this resulted in a large number of very low-amplitude records.

The time codes were an essential aid in correlating individual records with earthquakes observed and located by the standard and special stations. However, the inferred accuracy of timing and high failure rate (see Table 1) under the harsh winter conditions made them practically useless for other purposes, e.g. event location. The 23 December M6.9 event was *not* an exception: its accepted epicentre was derived from the strong motion S-P times, not from absolute time.

The first three instruments were installed during the October 1985 field survey and all recorded the 23 December, M_S6.9, main shock (Weichert et al., 1986a). All instruments were bolted to what appeared to be bedrock, using Philips 'Red Head' stud anchors and the procedure specified in the Kinemetrics operating instructions. Films were recovered from sites 1 and 2 during the January 1986 field survey, and a fourth instrument was installed about 50 km to the east. Site 3 was not serviced until the end of January. The accelerographs appeared to have operated normally and battery power held up despite the exposure to unusually harsh conditions (-40°C, high winds). The four instruments were next serviced and film recovered during the September 1986 field survey. The instrument at site 2 was replaced because of an intermittent loss of damping on the vertical accelerometer (Weichert et al., 1986b). In June 1987, sites 1, 3 and 4 were closed and a new site installed south of site 2. During the April 1988 field survey, site 2 was serviced but site 5 could not be found because of deep snow cover. Both sites were closed and the last films recovered in September 1989.

SITE INTEGRITY

The credibility of the very large peak acceleration at site 1 during the 23 December 1985 earthquake (Weichert et al., 1986a) has implications for building codes and engineering design. All components of this particular record exceed the design spectrum for even the highest seismic zone in the National Building Code of Canada, for periods shorter than 0.3 to 0.4 seconds (Wetmiller et al., 1987). The possibility of a site effect was therefore investigated, especially since the record at the approximately equidistant site 2 shows very little

energy corresponding to the site-1 peak energy around 9 seconds.

All instruments were bolted to what appeared to be competent bedrock, a Devonian limestone. For logistical reasons, i.e. ease of helicopter access, relatively low snow depths, and likelihood of finding bedrock, all strong motion sites were on high points and plateaus, not in valleys. During a mid-summer instrument service visit to the area in 1987, a more extensive inspection of all sites was made by one of the authors (DHW).

At site 1, removal of a thin accumulation of glacial till and partial excavation with pick and shovel showed that the accelerograph was indeed firmly bolted to an outcrop of bedrock. The site was on top of a gently undulating plateau, about 30 to 50 m from a 100 to 150 m high escarpment that marks the Iverson Thrust. This topography with a 50 to 75 percent slope could conceivably lead to some amplification, but hardly to the large high frequency accelerations observed near 9 seconds into the record. No sign of surface rupture was recognized on the Iverson Thrust.

Site 2 was on solid bedrock near the corner of a plateau within a few tens of metres of a steep dropoff forming a 10 to 20 m towering rampart, as seen from below. This formation could be suspected of generating topographical amplification and statistical evidence, to be described below, shows that accelerations at site 2 were indeed on the average about a factor of two higher than at site 1.

EARTHQUAKE PARAMETERS

Table 2 lists the hypocentres and magnitudes of all events that triggered strong motion recorders. The located events are shown in Figure 1. These data are abstracted from the final tabulation of Horner et al. (1990), and discussed by them. Focal depth, except for a few events in October 1985 located by field stations, could not be calculated and was fixed at 10 km. Field surveys indicated focal depths ranged between about 3 and 12 km. In Table 3, distances and azimuths for the poorly located events are included in brackets. Table 2 lists the final event parameters from Horner et al. (1990).

A number of source mechanism solutions have been derived by Wetmiller et al. (1988) and Horner et al.(1990) but are not repeated here. In general, these mechanisms were predominantly thrust-type with pressure axes to the ENE; toward the south end of the aftershock zone, however, some strike-slip events were observed with variable directions of pressure axes.

DATA PROCESSING

Copies of all film records are given grouped by event, including the earlier published large earthquakes (Weichert et al.,1986b). Several records could not be correlated with any known earthquake and may be noise. Problems with the time code were discussed above and the code shown in the film copies does not always agree with data in Table 2. The event identification shown is the best that could be achieved, but some small events may have been misidentified. As noted earlier, event parameters in the Tables 1 and 2 take precedence over information in the film captions. Site 4 did not trigger on any events.

Most of the 157 records clearly do not justify digitization; the signal is either almost imperceptible, or consists of only a few nearly sinusoidal cycles of small amplitude. Nevertheless, the choice of 0.005g for the trigger threshold provides useful statistical data. For these low-level records we give in Table 3 the dominant frequency (Hz) and maximum amplitude (mm/s^2 =0.0001 g). The implied precision of these peak amplitude readings is obviously exaggerated. Readings to 0.1 mm can be made directly on the film with a graduated hand lens, but trace thicknesses are on the order of 0.2 to 0.4 mm corresponding to about 1 to 2 %g. Nominal corrections for trace thickness and scaling by the respective instrument component sensitivities leads to the excessively precise-looking table entries. Entries were omitted where no meaningful estimates could be made.

Only the thirteen largest records were selected for digitization in addition to the six already published. The selection criterion was either the exceedence of 0.1 g regardless of duration, or a peak over 0.05 g with strong motion lasting longer than 1.5 s. The selected records are marked with a 'D' in Table 3. Digitization was performed commercially on a computer-based laser-beam trace-following system. Digital processing at the Geological Survey of Canada used the AGRAM strong motion package developed by the U.S. Geological Survey (Converse, 1984). Antialiased, instrument corrected and high pass filtered acceleration, velocity and displacement time histories are reproduced chronologically in Figures 2.5 to 2.101: the first digit in the Figure number refers

to the site and the second to the ID number of the event.

The choice of the high pass filter was made individually for each record, as indicated in the figure headings, after inspection of the initial broad-band displacement record and spectrum. The cutoff was chosen to eliminate displacement that appeared to be a harmonic of the record or digitizing length; in the Fourier or response spectra this choice can objectively be made at the point where the spectrum begins to increase towards the long periods, or the curves for different damping values start to diverge again. For the last two records, from sites 2 and 5, we include spectra of digitized reference traces: comparison with the respective seismic spectra illustrates the appropriateness of our cutoff criterion. In order to give the user 'proof' of the appropriate filter choice, we have usually chosen the cutoff one or two Δf towards the longer period side.

On reflection, it appears that the full band width spectra, consistent with the record length, might just as well be shown since low pass filtering does not change the Fourier spectrum, and does not noticeably affect the response spectra at higher frequencies.

Digitized data can be obtained separately, at the user's expense, from the Director, Geophysics Division, Geological Survey of Canada, 1 Observatory Crescent, Department of Energy, Mines & Resources, Ottawa, Ontario, K1A 0E4.

NEAR SOURCE ATTENUATION

The large peak amplitudes recorded at site 1 raised questions of relative site response or amplifications. A comparison was made between peak acceleration amplitudes from 66 aftershocks recorded at sites 1, 2 and 3. Ratios of peak accelerations are shown in Figure 2a-b, plotted against ratios of epicentral distances for the site pairs 1-2 and 1-3. On average, site 2 recorded almost a factor of two higher accelerations, after nominally correcting for epicentral distance. The attenuation is approximately as distance$^{-2.5}$ (Weichert and Horner, 1987), at the distances of sites 1 and 2. A similarly strong distance attenuation for peak acceleration, with exponent 2 to 2.5 is obtained for frequencies of 10 to 20 Hz from analysis of the response spectra of the 23 December event for site 2 and 3 (Weichert and Horner, 1987). However, the attenuation exponent decreases to as low as 1.26 for sites 1 and 3 (see fig.2).

Special site effects, therefore, appear to be discounted as causes of the extreme acceleration peaks in the later part of the site 1 record; instead, these strong motions most likely originate from very shallow (~4km) asperities. Horner et al. (1990) describe the development of secondary rupture planes coincident with the 23 December main shock, one of which extended directly underneath site 1.

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Table 1: NAHANNI STRONG MOTION SEISMOGRAPH INSTALLATION SUMMARY

Site Locations and Servicing

	Site 1	Site 2	Site 3	Site 4	Site 5
	Iverson	*Slide Mt.*	*Battlement Creek*	*Nahanni Mt.*	*Razor Ridge*
	SMA 5028	*SMA 1296*	*SMA 5917*	*SMA 5429*	*SMA 5429*
ϕ	*62.202 °N*	*62.233 °N*	*62.126 °N*	*62.135 °N*	*62.071 °N*
λ	*124.370 °W*	*124.168 °W*	*123.833 °W*	*123.355 °W*	*124.425 °W*
$+L$	*10 °*	*330 °*	*0 °*	*340 °*	*290 °*
Elevation	*850 m*	*900 m*	*1050 m*		*1300 m*
13 Oct 85	installed[a]	installed[a]	installed[a]	*n-a*	no action
04 Jan 86	serviced[a]	serviced[a]	*n-a*	*n-a*	*n-a*
29 Jan 86	serviced[c]	serviced[c]	serviced[b]	installed[b]	*n-a*
13 Sep 86	serviced[d]	serviced[a;e]	*n-a*	*n-a*	*n-a*
16 Sep 86	*n-a*	*n-a*	serviced[d]	*n-a*	*n-a*
17 Sep 86	*n-a*	*n-a*	*n-a*	serviced[d]	*n-a*
16 Jun 87	closed[a]	serviced[a]	closed[d]	*n-a*	*n-a*
17 Jun 87		*n-a*		closed[d]	installed[a]
08 Apr 88		serviced[d]			*n-a*
05 Sep 89		closed[d]			closed[d]

Notes

a. TCG clock started/reset manually; time correction determined by eye
b. TCG clock started/reset by TDC-2 Time Display Controller
c. TCG clock not reset/adjusted
d. battery found dead; no time on TCG clock
e. SMA 4938 replaced SMA 1296 during this service visit
n-a no action taken; site not visited

Accelerometer data for the SMA's deployed { nat freq (Hz) / damping (fraction of critical) / sensitivity (trace amplitude mm/g) }

Component	SMA 5028	SMA 1296	SMA 4938	SMA 5917	SMA 5429
Longitudinal	25.4 / 0.6 / 19.4	24.7 / 0.6 / 18.8	25.0 / 0.6 / 19.8	26.4 / 0.6 / 17.0	26.8 / 0.6 / 17.2
Vertical	25.2 / 0.6 / 18.2	26.1 / 0.6 / 17.8	25.6 / 0.6 / 19.2	25.8 / 0.6 / 18.4	26.4 / 0.6 / 16.9
Transverse	26.3 / 0.6 / 17.8	26.4 / 0.6 / 17.8	26.5 / 0.6 / 17.3	25.7 / 0.6 / 18.7	26.2 / 0.6 / 18.0

TABLE 2

HYPOCENTRES OF NAHANNI SMA TRIGGERED EVENTS

EVENT NO.	DATE(UT) yearmoda	TIME hrmnsec	LAT N	LONG W	DEPTH# (km)	MAG
1	19851014	043844.6	62.256	24.317	10.0F	3.6 mb(Lg)
2	19851014	0439				
3	19851014	232023.2	62.105	124.253	12.8	4.2 mb(Lg)
4	19851016	184512.3	62.157	124.330	5.6	4.5 mb(Lg)
5	19851019	035154.7	62.213	124.246	10.0F	3.2 mb(Lg)
6	19851021	124255.3	62.053	124.322	10.0F	4.8 mb(Lg)
7	19851023	0821				
8	19851028	013810.7	62.053	124.314	10.0F	3.9 mb(Lg)
9	19851028	025455.4	62.223	124.467	10.0F	3.2 mb(Lg)
10	19851??	??				
11	19851106	124624.3	62.199	124.300	10.0F	3.2 mb(Lg)
12	19851109	044644.4	62.247	124.263	10.0F	4.6 mb(Lg)
13	19851110	053349.1	62.313	124.263	10.0F	3.8 mb(Lg)
14	19851111	203509.0	62.312	124.323	10.0F	3.5 mb(Lg)
15	19851112	144959.7	62.197	124.412	10.0F	4.0 mb(Lg)
16	19851114	170726.9	62.249	124.250	10.0F	3.6 mb(Lg)
17	19851118	111438.1	62.267	124.264	10.0F	3.4 mb(Lg)
18	19851124	192927.3	62.070	124.218	10.0F	4.0 mb(Lg)
19*	19851130	120407.8				3.0 mb(Lg)
20	19851204	114100.2	62.204	124.120	10.0F	3.3 mb(Lg)
21	19851207	152911.5	62.116	124.353	10.0F	4.0 mb(Lg)

EVENT NO.	DATE(UT) yearmoda	TIME hrmnsec	LAT N	LONG W	DEPTH# (km)	MAG
22	19851212	004545.5	62.153	124.136	10.0F	3.4 mb(Lg)
23	19851223	051603.3	62.188	124.242	6.0	6.9 Ms
24	19851223	0520				
25	19851223	0521				
26	19851223	0522				
27	19851223	0523				
28*	19851223	052709.2				4.3 mb(Lg)
29*	19851223	052751.1				4.1 mb(Lg)
30	19851223	054847.1	62.142	124.394	10.0F	5.4 mb
31+	19851223	055705.5	62.159	124.377	10.0F	3.9 mb(Lg)
32+	19851223	060640.3	61.944	124.552	10.0F	4.1 mb(Lg)
33+	19851223	061130.3	62.126	124.656	10.0F	4.0 mb(Lg)
34	19851223	074253.4	61.994	124.159	10.0F	3.7 mb(Lg)
35	19851223	080217.6	61.980	124.378	10.0F	3.8 mb(Lg)
36	19851223	081007.2	62.185	124.228	10.0F	4.0 mb(Lg)
37	19851223	093743.4	62.088	124.070	10.0F	4.8 mb(Lg)
38	19851223	101852.0	62.234	124.414	10.0F	3.8 mb(Lg)
39	19851223	112720.3	62.240	124.357	10.0F	4.3 mb(Lg)
40	19851223	115210.4	62.105	124.419	10.0F	3.8 mb(Lg)
41	19851223	165343.7	62.271	124.416	10.0F	4.0 mb(Lg)
42	19851223	193754.4	62.065	124.291	10.0F	5.4 mb
43	19851223	195458.7	61.966	124.508	10.0F	3.2 mb(Lg)
44	19851223	221119.4	62.001	124.372	10.0F	4.2 mb(Lg)

EVENT NO.	DATE(UT) yearmoda	TIME hrmnsec	LAT N	LONG W	DEPTH# (km)	MAG
45	19851223	232354.6	61.999	124.409	10.0F	4.1 mb(Lg)
46	19851224	074144.8	61.970	124.284	10.0F	4.6 mb(Lg)
47	19851224	134928.8	62.246	124.312	10.0F	3.5 mb(Lg)
48	19851224	163011.8	62.276	124.292	10.0F	3.7 mb(Lg)
49	19851225	001658.6	62.127	124.215	10.0F	4.1 mb(Lg)
50	19851225	154241.9	62.014	124.142	10.0F	5.7 mb
51	19851225	184902.1	61.970	124.282	10.0F	5.4 mb
52	19851226	225924.1	62.048	124.327	10.0F	4.7 mb
53	19851229	012141.5	62.224	124.254	10.0F	3.5 mb(Lg)
54	19851229	1303				
55	19851229	140242.9	62.110	124.395	10.0F	3.7 mb(Lg)
56	19851229	161231.7	62.164	124.207	10.0F	3.9 mb(Lg)
57	19851229	191503.5	62.125	124.302	10.0F	4.1 mb(Lg)
58	19851230	185507.3	62.035	124.152	10.0F	4.8 mb
59	19851231	1043				
60	19851231	183416.8	62.093	124.263	10.0F	3.9 mb(Lg)
61	19860101	043724.6	62.006	124.159	10.0F	4.8 mb(Lg)
62	19860111	215455.5	62.143	124.254	10.0F	4.0 mb(Lg)
63	19860115	104202.6	62.027	124.176	10.0F	3.7 mb(Lg)
64	19860116	144031.3	62.383	124.262	10.0F	3.9 mb(Lg)
65	19860130	060640.6	62.228	124.332	10.0F	4.6 mb(Lg)
66	19860203	202501.9	62.225	124.452	10.0F	3.6 mb(Lg)
67	19860208	010128.8	62.254	124.308	10.0F	3.5 mb(Lg)

EVENT NO.	DATE(UT) yearmoda	TIME hrmnsec	LAT N	LONG W	DEPTH# (km)	MAG
68	19860211	215508.2	62.032	124.292	10.0F	4.2 mb(Lg)
69	19860213	0815				
70	19860213	203650.7	62.102	124.212	10.0F	5.4 mb(Lg)
71	19860217	124636.4	62.108	124.257	10.0F	4.7 mb(Lg)
72	19860219	???8				
73	19860220	152200.4	62.136	124.224	10.0F	4.4 mb(Lg)
74	19860223	081354.3	62.300	124.097	10.0F	2.9 mb(Lg)
75	19860225	2042				
76	19860302	090127.6	62.007	124.155	10.0F	5.0 mb
77	19860315	022752.2	62.185	124.320	10.0F	3.4 mb(Lg)
78	19860321	081531.1	62.053	124.218	10.0F	4.0 mb(Lg)
79	19860325	143952.8	62.322	124.246	10.0F	3.3 mb(Lg)
80	19860503	230511.3	62.052	124.212	10.0F	4.9 mb(Lg)
81	19860516	173055.4	62.062	124.255	10.0F	3.8 mb(Lg)
82	19860518	040956.0	62.276	124.278	10.0F	4.1 mb(Lg)
83	19860603	144726.4	62.078	124.003	10.0F	4.1 mb(Lg)
84	19860613	1533				
85	19860615	020219.4	62.235	124.299	10.0F	4.1 mb(Lg)
86	19860704	085438.3	62.171	124.280	10.0F	4.8 mb(Lg)
87	19860812	123948.6	62.044	124.313	10.0F	4.4 mb(Lg)
88	19860816	095146.7	62.296	124.359	10.0F	4.0 mb(Lg)
89	19860828	114727.0	62.221	124.241	10.0F	4.2 mb(Lg)
90	19860927	115140.3	62.247	124.355	10.0F	3.4 mb(Lg)

EVENT NO.	DATE(UT) yearmoda	TIME hrmnsec	LAT N	LONG W	DEPTH# (km)	MAG
91	19861110	133204.2	62.089	124.379	10.0F	4.3 mb(Lg)
92	19861209	152728.6	62.313	124.314	10.0F	3.4 mb(Lg)
93	19870109	135104.4	62.040	124.190	10.0F	4.1 mb(Lg)
94	19870110	230113.9	62.333	124.469	10.0F	4.1 mb(Lg)
95	19870303	093404.4	62.030	124.286	10.0F	3.9 mb(Lg)
96	19870305	1?07				
97	19870420	150318.8	62.178	124.390	10.0F	3.5 mb(Lg)
98	19870818	1630				
99	19880325	193646.0	62.119	124.209	10.0F	6.0 Ms
100	19880429	063209.3	62.283	124.286	10.0F	3.5 mb(Lg)
101	19880522	191847.6	62.198	124.189	10.0F	5.2 mb
102	19880716	072620.4	62.247	124.300	10.0F	3.6 mb(Lg)
103	19880822	1???				
104	19881222	060055.5	62.038	124.187	10.0F	4.8 mb
105	19890218	142946.3	62.287	124.301	10.0F	3.1 mb(Lg)

* Origin time and magnitude calculated using a fixed epicentre at 62.19 N, 124.24 W.

F indicates fixed depth.

+ Very poor locations.

TABLE 3

NAHANNI STRONG MOTION RECORDS
Station - Event Distances, Azimuths and Peak Groundmotion Parameters

D = digitizied record, DIS = Distance to station (KM); AZI = Azimuth to station; C = Component: L = longitudinal, V = vertical, T = transverse, Acc: = 1/2 peak-to-peak acceleration in cm/s/s/; HZ = frequency ; Q = quality comment: P = good phases, S = sinusoidal waveforms , a = asymmetric waveforms, f = frequency < 2 Hz is visible.

EVENT NUMBER	TRIGGER DATE YearMoDa	UT TIME HrMn	SITE 1 IVERSON DIS KM	AZI °	C Acc/Hz/Q		SITE 2 SLIDE MOUNTAIN DIS KM	AZI °	C Acc/Hz/Q	SITE 3 BATTLEMENT CREEK DIS KM	AZI °	C Acc/Hz/Q
1	19851014	0438	7	205			8	108	L 32/25/s V 13/20/s T 22/22/s	29	120	
2	19851014	0439							L 14/18 V 7/28 T 10/22			
3	19851014	2320	12	331			15	017		22	084	L 5/18 V 9/21 T 6/21
4	19851016	1845	15	338			12	045	L 19/25 V 11/28 T 14/22	26	097	L 13/25 V 7/18 T 5/18
5	19851019	0351	7	259		D	5	062	L 87/22/ps V 55/28/ps T 138/22/ps	24	114	
6	19851021	1242	17	351	L 38/13/psa V 18/15/s T 19/12/f		22	022	L 8/20 V 6/25 T 8/20	27	072	L 17/21/s V 10/24 T 12/19/s
7	19851023	0821			L 16/18/s V 13/18/ps T 16/18							
8	19851028	0138	17	350			23	022		28	070	L 12/16/s V 8/18/s T ---
9	19851028	0254	6	116			16	086	L 12/22 V 11/17 T 6/22	35	108	
10	198511 ?	??							L 14/20 V 6/25 T 14/22			
11	19851106	1246	4	275			8	062	L 8/18 V --- T 6/25	26	108	
12	19851109	0446	8	228	L 20/15/pf V 25/22/sf T 32/15/pf	D	5	108	L 263/20/psaf V 176/22/psf T 257/18/psaf	26	121	L 42/22/ps V 23/25/p T 14/22/ps
13	19851110	0533	14	204	L 8/20 V 5/20 T 12/22		10	151	L 34/14/s V 28/20/s T 26/18/s	31	133	L 28/24/s V 16/24 T 13/19/s
14	19851111	2035	13	191	L 5/20 V 5/20 T 9/20		12	138		33	129	
15	19851112	1449	2	077	L 6/17 V 5/15 T 3/17		13	073		31	105	

EVENT NUMBER	TRIGGER DATE YearMoDa	UT TIME HrMn	SITE 1 IVERSON DIS KM	AZI °	C	Acc/Hz/Q	SITE 2 SLIDE MOUNTAIN DIS KM	AZI °	C	Acc/Hz/Q	SITE 3 BATTLEMENT CREEK DIS KM	AZI °	C	Acc/Hz/Q
16	19851114	1707	8	230		L 18/15/s V 7/13 T 15/15/f	5	113		L 36/22/ps V 26/29 T 12/22	26	122		
17	19851118	1114	9	217			6	128	D	L 65/25/ps V 125/33/ps T 135/17/ps	27	125		
18	19851124	1929	17	332		L 4/14 V 8/18 T 6/20	18	008			21	073		
19	19851130	1204								L 6/22 V --- T 14/22				
20	19851204	1141	13	269			4	322		L 27/33 V --- T 17/24	17	120		
21	19851207	1529	10	355	D	L 53/ 7/ps V 38/13 T 40/18/sf	16	037			27	087		
22	19851212	0045	13	294			9	350		L 13/22 V --- T 14/22	16	100		
23	19851223	0516	7	283	D	L 1000/3 V 2000/8 T 1300/3	6	038	D	L 380/4 V --- T 530/4	22	108	D	L 190/5 V 180/5 T 180/5
24	19851223	0520								L 8/17/f V 6/29 T 5/20/f				
25	19851223	0521				L 18/13/s V 11/15/s T 15/13/s								L 11/18 V 8/20 T 10/14/f
26	19851223	0522				L 15/13/s V 12/15/s T 11/17/s								
27	19851223	0523												L 6/22 V 5/25 T 6/22
28	19851223	0526				L 12/20 V 5/17 T 10/20								
29	19851223	0527				L 13/12 V 8/14 T 10/18				L 22/20 V 14/19 T 18/18				L 16/25 V 11/25 T 9/20
30	19851223	0548	7	011	D	L 152/10/psa V 86/15/ps T 53/13/pf	16	049		L 9/22 V 14/15 T 13/18	29	093		L 17/20 V 22/20 T 18/20
31	19851223	0557	(5	004)			(14	053)			(29	097)		L 10/20 V 7/16 T 9/20
32	19851223	0606	(30	018)		L 8/20 V 8/15 T 9/20	(38	032)			(43	061)		

EVENT NUMBER	TRIGGER DATE YearMoDa	UT TIME HrMn		SITE 1 IVERSON DIS KM	AZI °	C	Acc/Hz/Q		SITE 2 SLIDE MOUNTAIN DIS KM	AZI °	C	Acc/Hz/Q		SITE 3 BATTLEMENT CREEK DIS KM	AZI °	C	Acc/Hz/Q
33	19851223	0611		(17	060)	L	11/20		(28	065)				(43	090)		
						V	16/17/s										
						T	11/18/s										
34	19851223	0742		26	335	L	4/18		27	359				23	049		
						V	8/20										
						T	10/17										
35	19851223	0802		25	001				30	021				33	060	L	9/17
																V	12/22
																T	8/18
36	19851223	0810		8	284	L	33/13/ps		6	031	L	42/20/ps		22	108	L	19/20
						V	22/17/s				V	60/22/ps				V	13/20
						T	26/14/ps				T	57/25/ps				T	19/20
37	19851223	0937		20	309				17	342				13	071	L	14/20
																V	16/25
																T	9/18
38	19851223	1018		4	147	L	15/14		13	091				33	111	L	6/15
						V	16/18									V	7/18
						T	22/14/af									T	4/20
39	19851223	1127		4	189	L	22/12/ps		10	095	L	17/20		30	115		
						V	19/14/s				V	24/25					
						T	22/13/p				T	16/18					
40	19851223	1152		11	013	L	20/13/s		19	043				31	085		
						V	22/13/s										
						T	17/13/s										
41	19851223	1653		8	163	L	20/16/sa		14	108	L	11/18		34	118		
						V	11/18				V	16/22					
						T	8/20				T	12/22					
42	19851223	1937	D	16	345	L	51/12/ps	D	20	019	L	99/13		25	074	L	15/22
						V	32/13/ps				V	57/18				V	16/22
						T	39/11/s				T	60/18				T	17/20/s
43	19851223	1954		27	015				31	074	L	36/33/s		40	063		
											V	16/25/s					
											T	17/22/s					
44	19851223	2211		22	000	L	13/14		28	022				31	063		
						V	11/15										
						T	7/14										
45	19851223	2323		23	005	L	10/13/s		29	026	L	13/20		33	065		
						V	12/18/s				V	13/20					
						T	7/20				T	8/20					
46	19851224	0741		26	350				29	053				30	012	L	6/22
																V	6/22
																T	6/22/f
47	19851224	1349		6	212	L	10/20		8	101	L	16/18		28	118		
						V	12/20				V	15/18					
						T	10/18				T	11/18					
48	19851224	1630		9	206	L	25/15/ps		8	127	L	16/17/p		29	125		
						V	30/20/s				V	53/29/ps					
						T	39/15/ps				T	27/20/p					
49	19851225	0016		12	316	L	11/22		12	012				20	090	L	13/25
						V	5/18									V	10/20
						T	12/25									T	13/32

EVENT NUMBER	TRIGGER DATE YearMoDa	UT TIME HrMn	SITE 1 IVERSON DIS KM	AZI °	C	Acc/Hz/Q	SITE 2 SLIDE MOUNTAIN DIS KM	AZI °	C	Acc/Hz/Q	SITE 3 BATTLEMENT CREEK DIS KM	AZI °	C	Acc/Hz/Q
50	19851225	1542	D	24 330	L	30/14/psf	D	24 357	L	54/25/psaf	D	20 052	L	72/17/ps
					V	27/14/s			V	73/29/psf			V	51/18/ps
					T	22/14/af			T	45/29/psf			T	81/12/ps
51	19851225	1849	D	26 350	L	48/17/ps		30 012	L	26/22/f		29 053	L	29/17/s
					V	30/17/s			V	29/22/s			V	32/17/s
					T	39/12/sf			T	18/17/f			T	23/20/s
52	19851226	2259		17 353				22 022				27 071	L	7/22
													V	10/25
													T	11/25
53	19851229	0121		7 248				5 078	L	8/20		25 116		
									V					
									T	15/29				
54	19851229	1303			L	10/18								
					V	5/16								
					T	7/16								
55	19851229	1402		10 007	L	11/11		18 041				29 086	L	8/20
					V	16/14							V	6/22
					T	8/15							T	5/18
56	19851229	1612		10 297	L	3/15		8 015				20 102		
					V	4/17								
					T	8/ 9								
57	19851229	1915		9 337	L	18/15		14 030	L	35/25		24 090		
					V	15/18/s			V					
					T	21/22			T	19/20				
58	19851230	1855		23 326	L	9/17		22 355				19 056	L	8/25
					V	5/18							V	14/20
					T	6/17							T	8/22
59	19851231	1043							L	5/14				
									V					
									T	8/17				
60	19851231	1834		13 335				16 018	L	22/20/s		23 080		
									V					
									T	25/25				
61	19860101	0437		25 333				25 359				22 052	L	12/22
													V	16/25/s
													T	16/20/s
62	19860111	2154		9 317				11 024				22 095	L	6/22
													V	5/16
													T	7/28
63	19860115	1042		23 001				21 058				21 058	L	8/20
													V	12/22
													T	5/20
64	19860116	1440		21 196				18 164				36 142	L	5/25
													V	14/32
													T	5/28
65	19860130	0606	D	3 214	L	165/ 5/psf		9 086	L	22/25/s		28 113	L	13/25/s
					V	130/11/ps			V	35/22			V	16/22/a
					T	207/ 5/psf			T	20/17/f			T	15/25
66	19860203	2025		5 121	L	23/ 8/pa		15 087	L	---		34 109		
					V	19/22			V	---				
					T	22/14			T	7/17				

EVENT NUMBER	TRIGGER DATE YearMoDa	UT TIME HrMn		SITE 1 IVERSON DIS KM	AZI °	C	Acc/Hz/Q		SITE 2 SLIDE MOUNTAIN DIS KM	AZI °	C	Acc/Hz/Q		SITE 3 BATTLEMENT CREEK DIS KM	AZI °	C	Acc/Hz/Q
67	19860208	0101		7	209				8	108	L	13/25/s		29	120		
											V	19/33/s					
											T	14/20					
68	19860211	2155		19	348				23	016				26	066	L	6/20
																V	8/18
																T	4/20
69	19860213	0815				L	3/25										
						V	12/20										
						T	7/18										
70	19860213	2036	D	14	323	L	57/12/psa	D	15	009	L	127/14/ps	D	20	082	L	26/22/ps
						V	38/12				V	70/33/ps				V	41/20/ps
						T	44/20/ps				T	86/17/ps				T	22/22
71	19860217	1246		12	331	L	41/14/ps		15	019	L	20/12		22	085	L	20/15
						V	30/11/ps				V	19/14				V	33/20
						T	41/10/psa				T	23/17/s				T	16/22
72	19860219	???8														L	3/25
																V	---
																T	---
73	19860220	1522		11	314	L	20/15/ps		11	015	L	22/29		20	093	L	11/25
						V	9/15/ps				V	14/25				V	39/15
						T	11/14/sf				T	18/25				T	17/39
74	19860223	0813		18	232	L	38/17		8	206				24	145		
						V	25/14										
						T	29/25										
75	19860225	2042									L	---					
											V	---					
											T	---					
76	19860302	0901		24	333				25	359	L	10/17		21	052	L	32/22
											V	12/33				V	35/25
											T	43/22/s				T	35/28
77	19860315	0227		3	306	L	---		10	056				26	104		
						V	---										
						T	---										
78	19860321	0815		18	334				20	007				22	068	L	---
																V	---
																T	---
79	19860325	1439		15	206	L	10/14		10	158				31	135		
						V	22/17/s										
						T	32/15/sa										
80	19860503	2305		19	334				20	007				21	067	L	10/18
																V	13/22
81	19860516	1730		17	339				20	013				23	072	L	17/20
																V	18/20
																T	9/20
82	19860518	0409		10	210	L	20/22/f		8	130	L	---		29	126		
						V	11/25				V	---					
						T	26/ 7/f				T	---					
83	19860603	1447		24	306	L	5/11		19	334	L	54/18		10	059	L	15/29
						V	7/ 9				V	32/25				V	19/25
						T	3/13				T	23/13				T	16/15

EVENT NUMBER	TRIGGER DATE YearMoDa	UT TIME HrMn	SITE 1 IVERSON DIS KM	AZI °	C	Acc/Hz/Q		SITE 2 SLIDE MOUNTAIN DIS KM	AZI °	C	Acc/Hz/Q		SITE 3 BATTLEMENT CREEK DIS KM	AZI °	C	Acc/Hz/Q
84	19860613	1533													L V T	18/29 18/22 12/25
85	19860615	0202	5	225	L V T	53/14/ps 30/15/ps 41/17/ps		7	092	L V T	42/20 37/25 32/20		27	116	L V T	9/22 7/22 6/20
86	19860704	0854	6	308			D	9	040	L V T	113/25 47/22 113/18		24	102	L V T	75/19 47/16 46/21
87	19860812	1239	18	350				22	020	L V T	13/25/sf 6/22 17/33/f		27	070		
88	19860816	0951	11	183				12	125	L V T	14/29 10/25 7/22		33	124		
89	19860828	1147	7	252				4	072	L V T	71/14/psa 29/25/s 61/14/ps		24	116		
	19860913		FOUND DEAD												FOUND DEAD	
90	19860927	1152	5	189				10	099	L V T	42/17/s 18/20/s 39/25/s		30	116	L V T	10/26 6/20 8/20
91	19861110	1332	13	002	L V T	13/15/s 7/15 8/14		19	034	L V T	38/20/ps 21/25/ps 48/17/ps		29	081	L V T	11/20/s 15/22/s 10/20/s
92	19861209	1527	13	193				12	140	L V T	9/25 6/25 16/25		33	130		
93	19870109	1351	20	333	L V T	--/13 --/17 --/12		21	063				22	003		
94	19870110	2301	15	161	L V T	26/33/s 22/25/p 32/20/ps		19	125				40	125		
95	19870303	0934	20	347	L V T	5/14 5/17 6/17		23	015	L V T	10/20 6/25 10/25		26	065		
96	19870305	1?07								L V T	12/20 9/33 11/29					
97	19870420	1503	3	021	L V T	15/17 11/14/s 17/12/s		13	062				30	101		
	19870616		CLOSED										FOUND DEAD & CLOSED SITE 5 INSTALLED			

EVENT NUMBER	TRIGGER DATE YearMoDa	UT TIME HrMn		SITE 2 SLIDE MOUNTAIN DIS KM	AZI °	C	Acc/Hz/Q		SITE 5 RAZOR RIDGE DIS KM	AZI °	C	Acc/Hz/Q
98	19870818	1630		NON SEISMIC								
99	19880325	1936		13	010			D	12	245	L V T	130/15 130/7 135/8
	19880408			FOUND DEAD								
100	19880429	0623		8	133	L V T	5 5 5		25	197		
101	19880522	1918	D	4	016	L V T	170/17 80/12 180/18		19	221		
102	19880716	0726		7	103	L V T	30/25 20/20 40/17		21	198		
103	19880822	1???				L V T	5 5 5					
104	19881222	0600		22	003	L V T	20/20 15/20 20/20		13	287		
105	19890218	1429		9	131	L V T	5 5 -		25	195		
	19890905			FOUND DEAD & CLOSED					FOUND DEAD & CLOSED			

Figure Captions

Fig. 1 Event locations from Horner et al.(1990), and accelerograph sites for four time periods. Event numbers as in Tables 2 and 3.

Fig. 2 Peak acceleration ratios for common events observed at sites 1/2 and 1/3.

Fig. 2.5, etc.
Instrument corrected, antialiased accelerations, integrated velocities and displacements, Fourier spectra and velocity response spectra. The first digit refers to the accelerograph site number, the second is the event ID number; L V T designate the respective component, F the Fourier spectrum, R the response spectra.

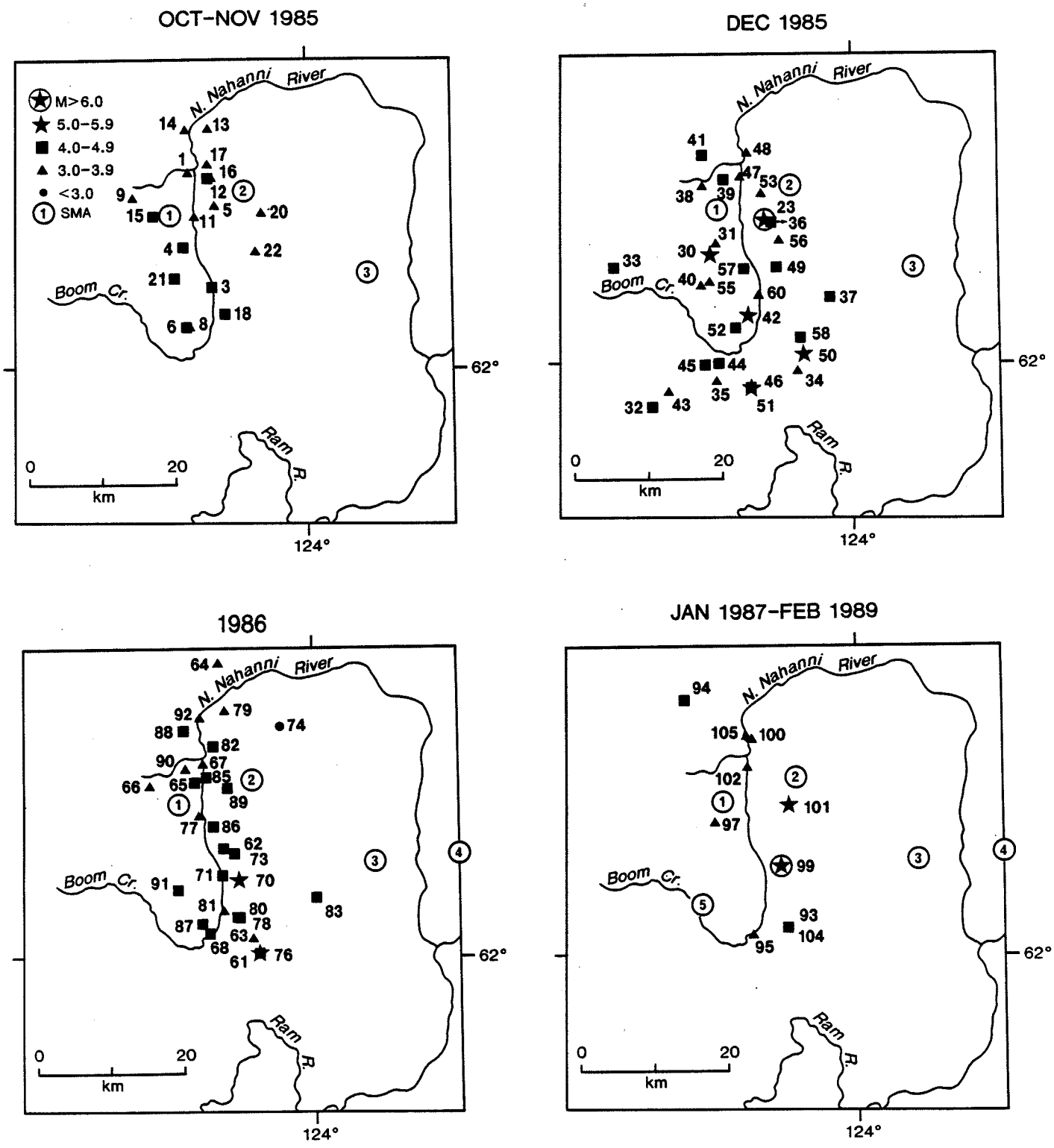
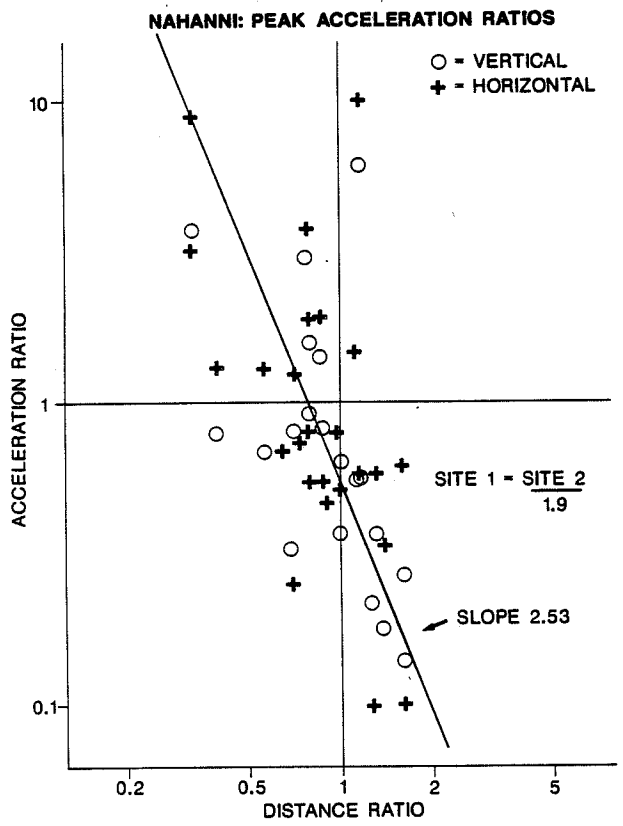

OCT-NOV 1985
M>6.0
5.0-5.9
4.0-4.9
3.0-3.9
<3.0
SMA
N. Nahanni River
Boom Cr.
Ram R.
0
20
km
62°
124°
DEC 1985
1986
JAN 1987-FEB 1989

Fig. 1


NAHANNI: PEAK ACCELERATION RATIOS
○ = VERTICAL
+ = HORIZONTAL
ACCELERATION RATIO
10
1
0.1
SITE 1 = SITE 2 / 1.9
SLOPE 2.53
0.2
0.5
1
2
5
DISTANCE RATIO

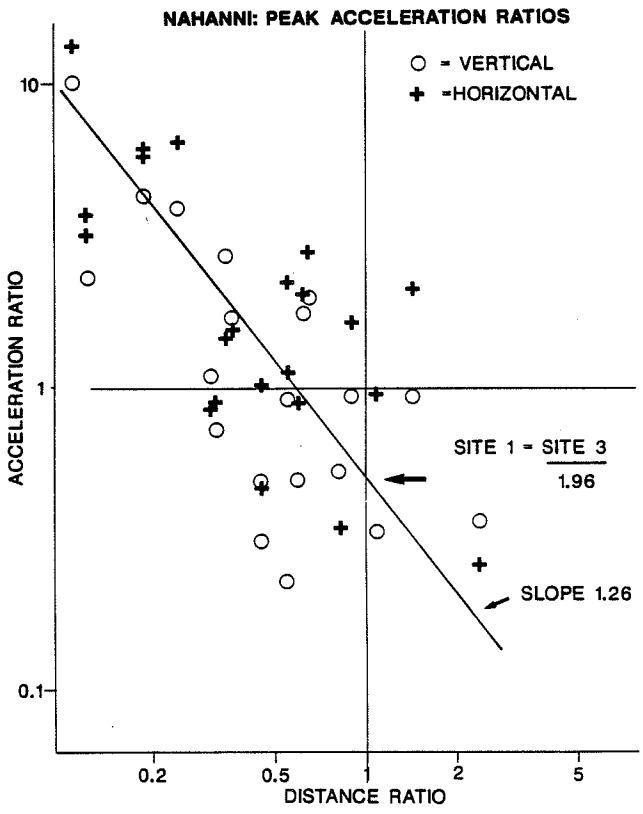

NAHANNI: PEAK ACCELERATION RATIOS
○ = VERTICAL
+ =HORIZONTAL
ACCELERATION RATIO
10
1
0.1
SITE 1 = SITE 3 / 1.96
SLOPE 1.26
0.2
0.5
1
2
5
DISTANCE RATIO

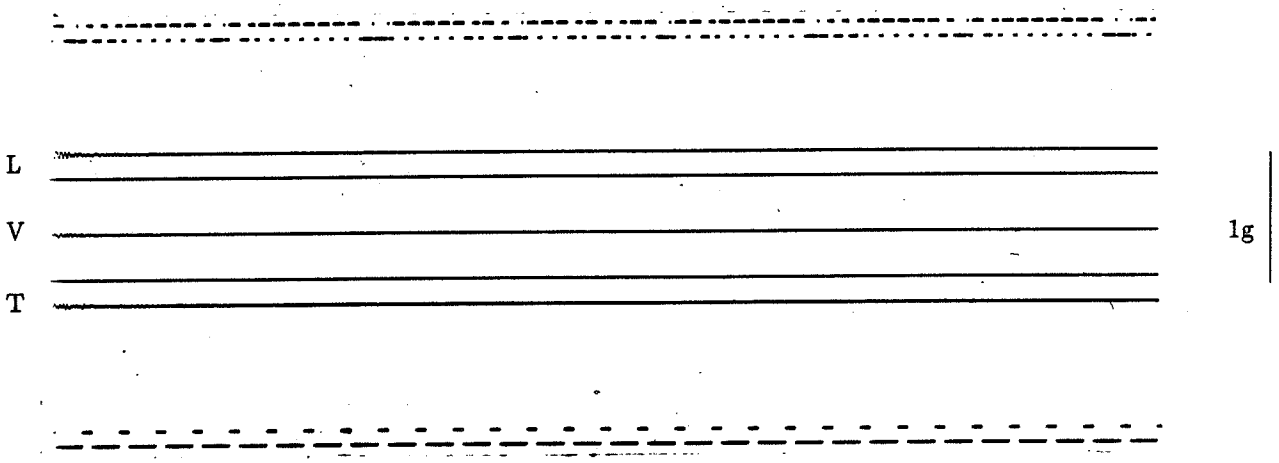
Fig. 2

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

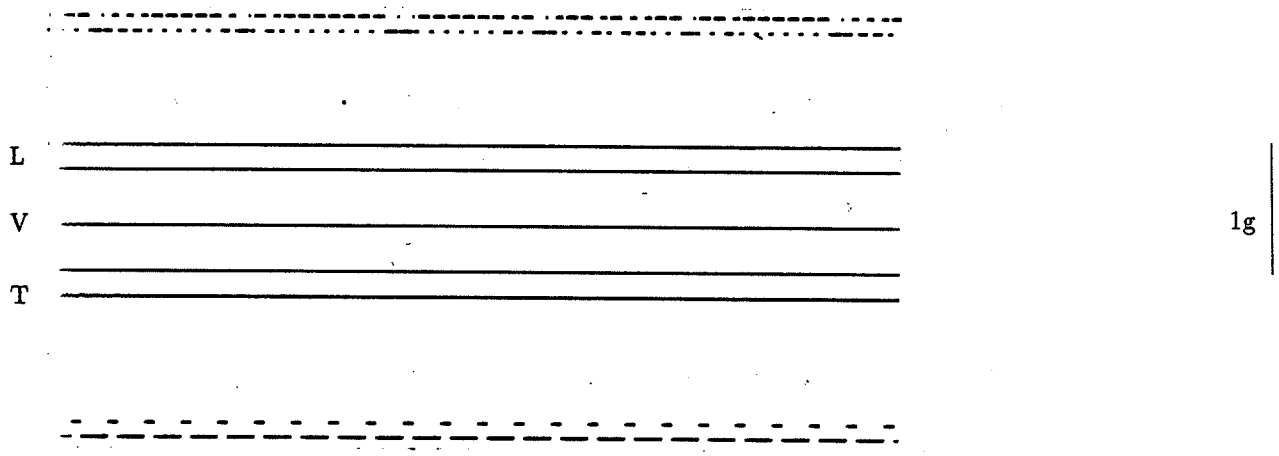
Event: 1985 10 14 at 04:38 U.T. *Magnitude 3.6*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 8 km



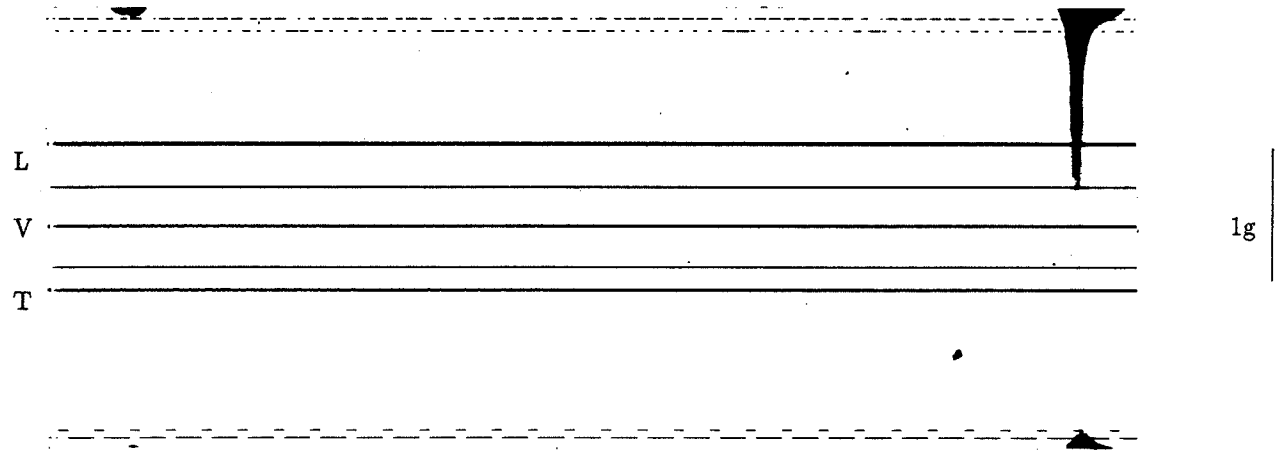
Event: 1985 10 14 at 04:39 U.T. *Magnitude*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance ?? km



Event: 1985 10 14 at 23:20 U.T. *Magnitude 4.2*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 23 km



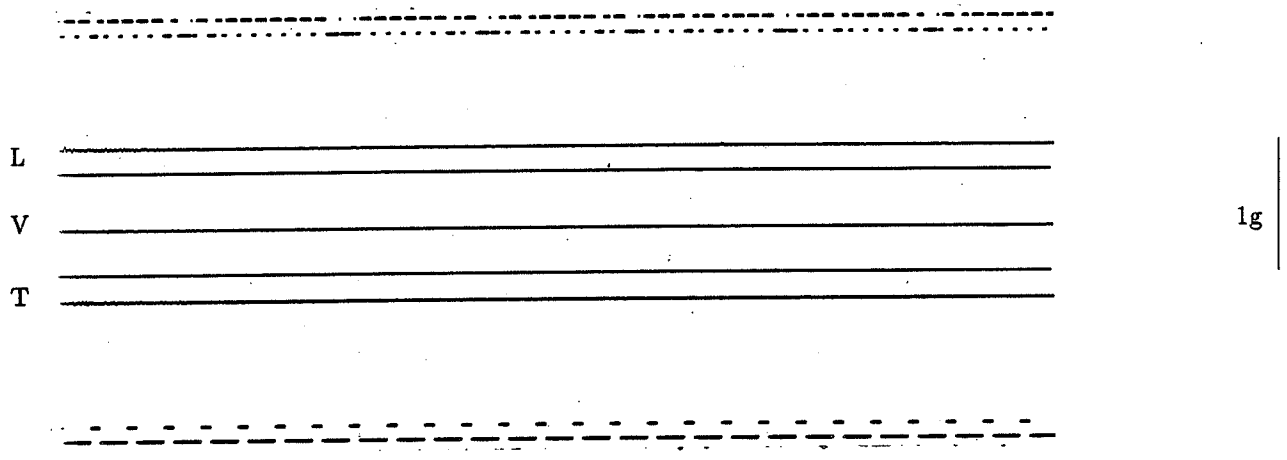
Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

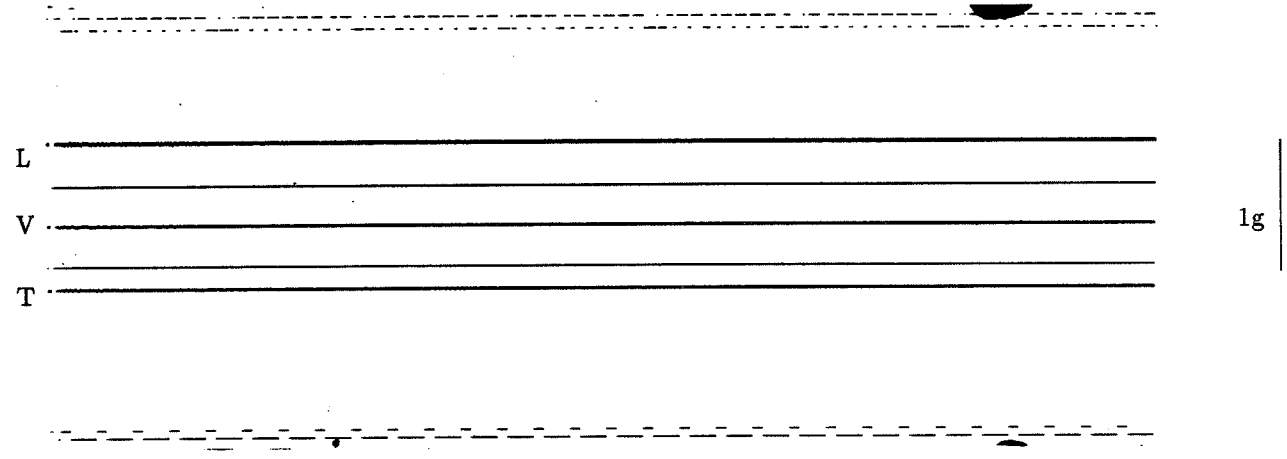
STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

Event: 1985 10 16 at 18:45 U.T. *Magnitude 4.5*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 17 km

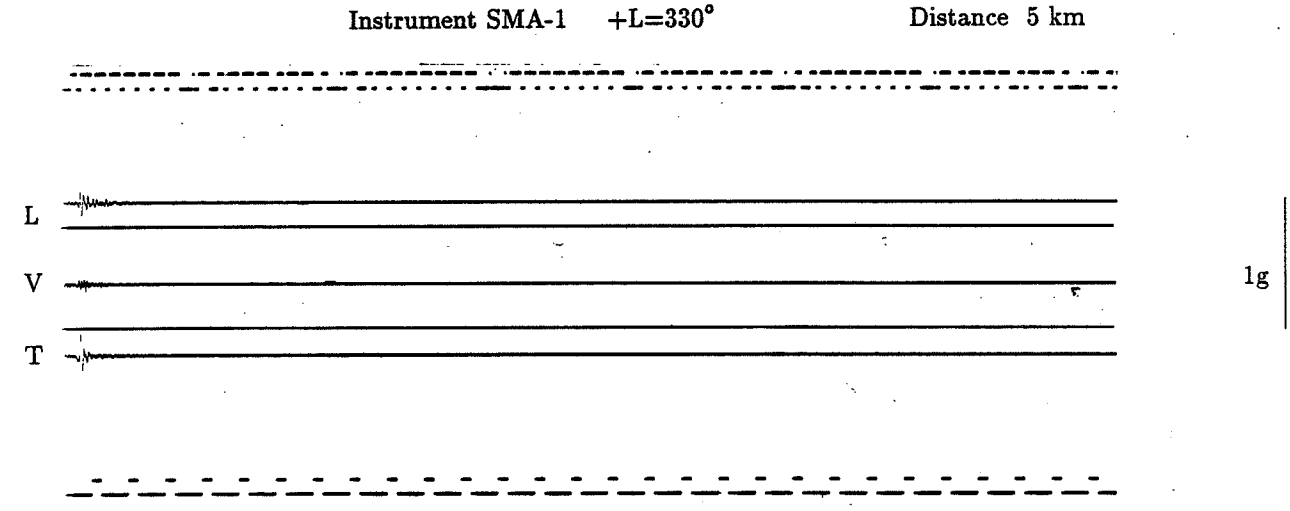


Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 27 km



Event: 1985 10 19 at 03:51 U.T. *Magnitude 3.2*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 5 km



Canada

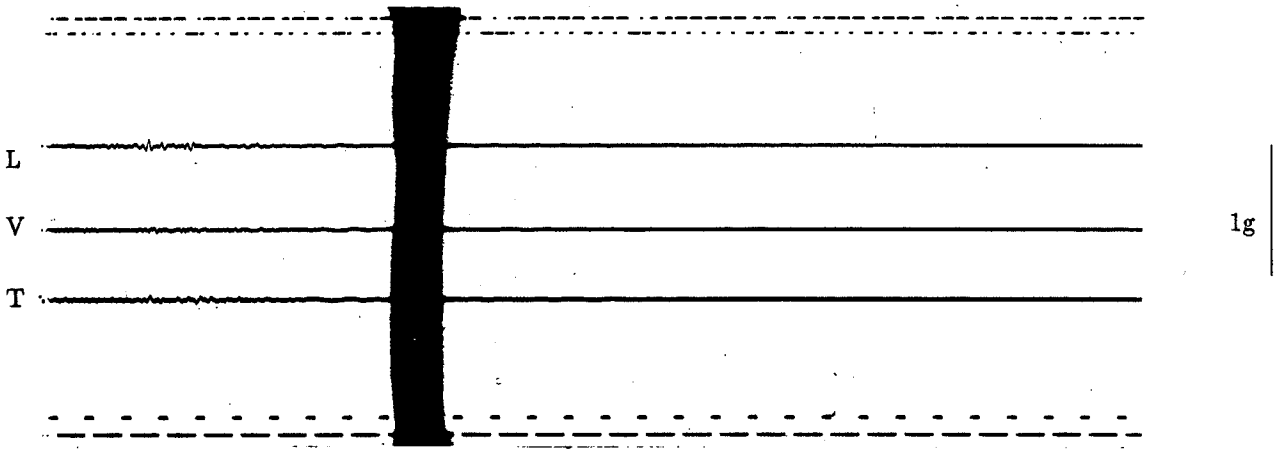
GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

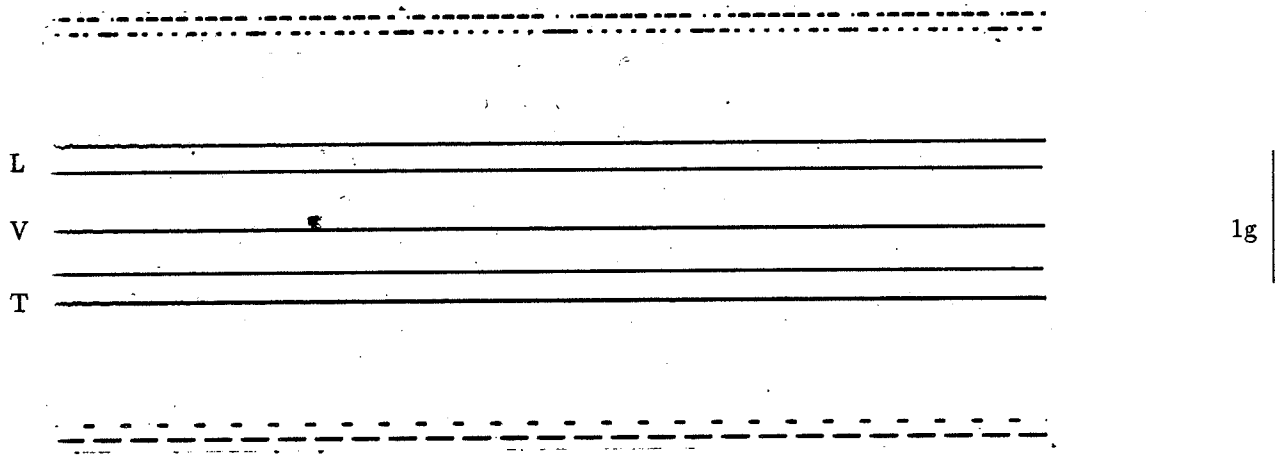
Event: 1985 10 21 at 12:42 U.T.

Magnitude 4.8

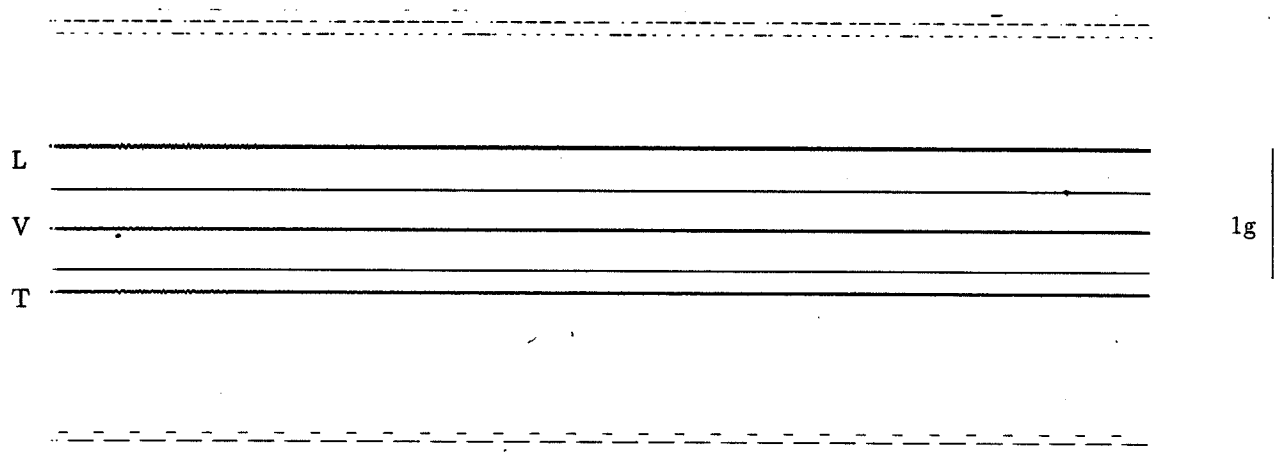
Site 1: Iverson | Latitude 62.2018°N | Longitude 124.3700°W | Elevation 792 m
Instrument SMA-1 | +L=10° | Distance 17 km



Site 2: Slide Mountain | Latitude 62.2335°N | Longitude 124.1675°W | Elevation 914 m
Instrument SMA-1 | +L=330° | Distance 21 km



Site 3: Battlement Creek | Latitude 62.1262°N | Longitude 123.8332°W | Elevation 1067 m
Instrument SMA-1 | +L=0° | Distance 27 km



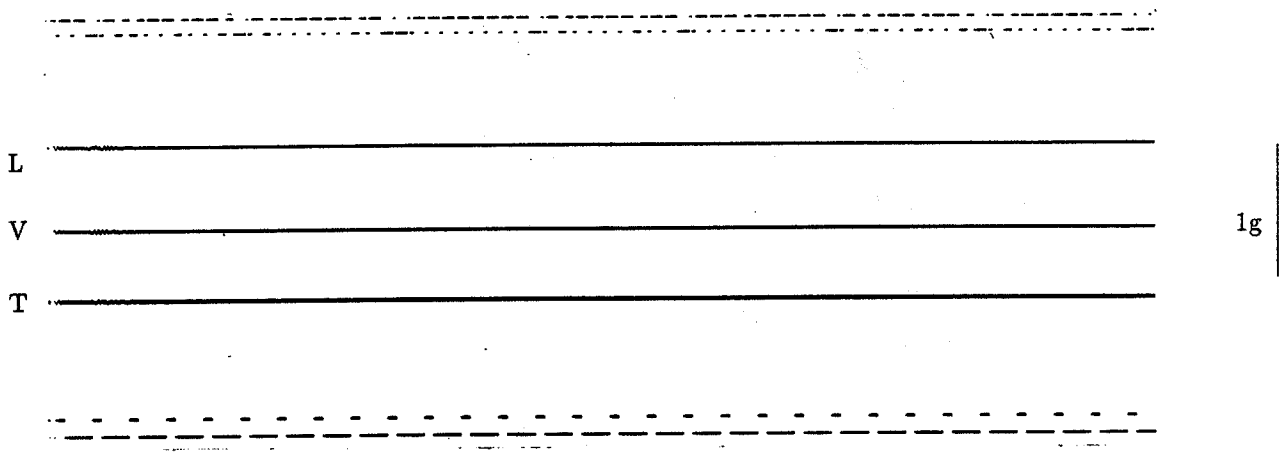
Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

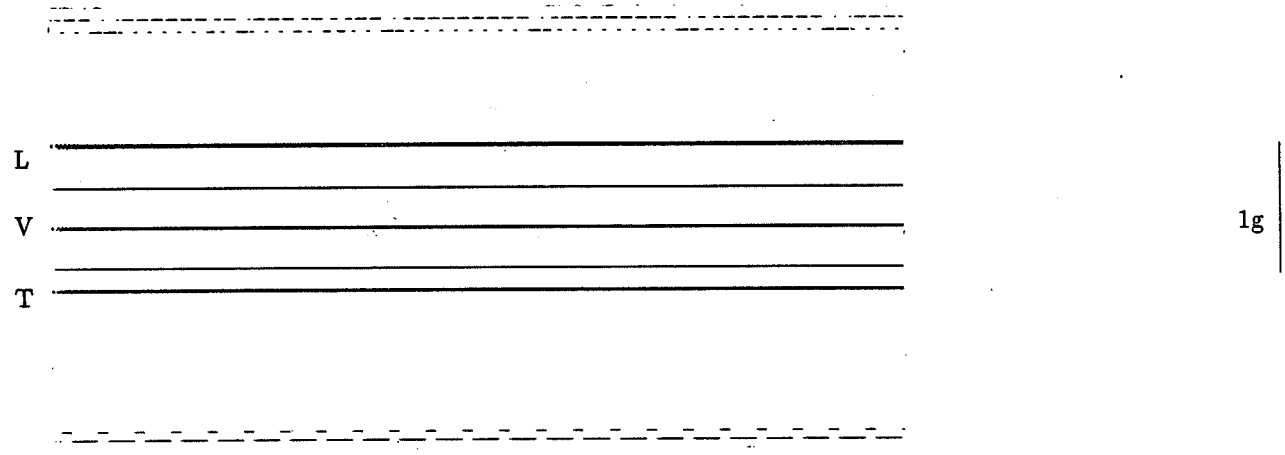
Event: 1985 10 23 at 08:21 U.T. *Magnitude*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance ?? km



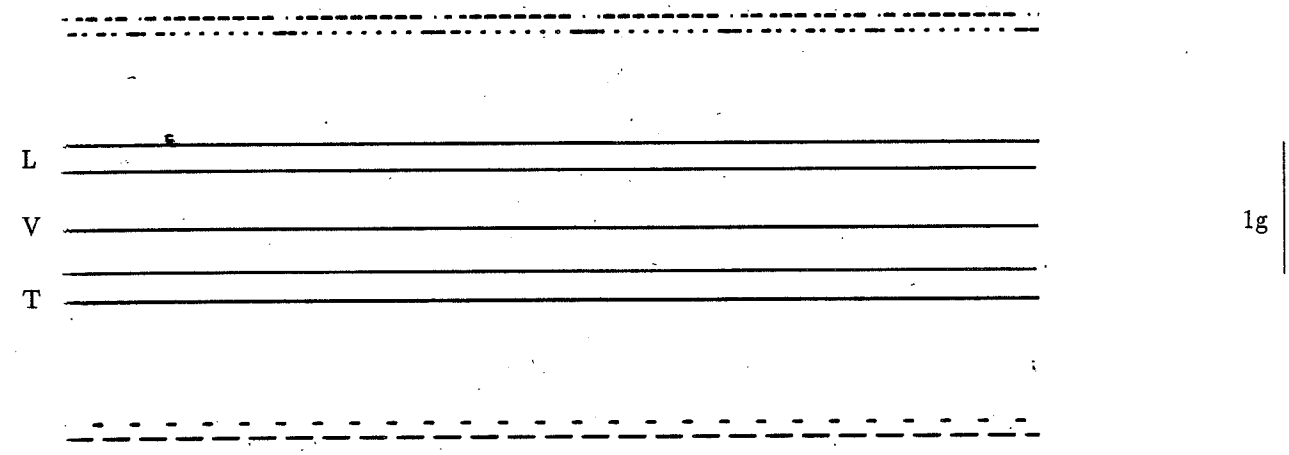
Event: 1985 10 28 at 01:38 U.T. *Magnitude 3.9*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 28 km



Event: 1985 10 28 at 02:54 U.T. *Magnitude 3.2*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 16 km



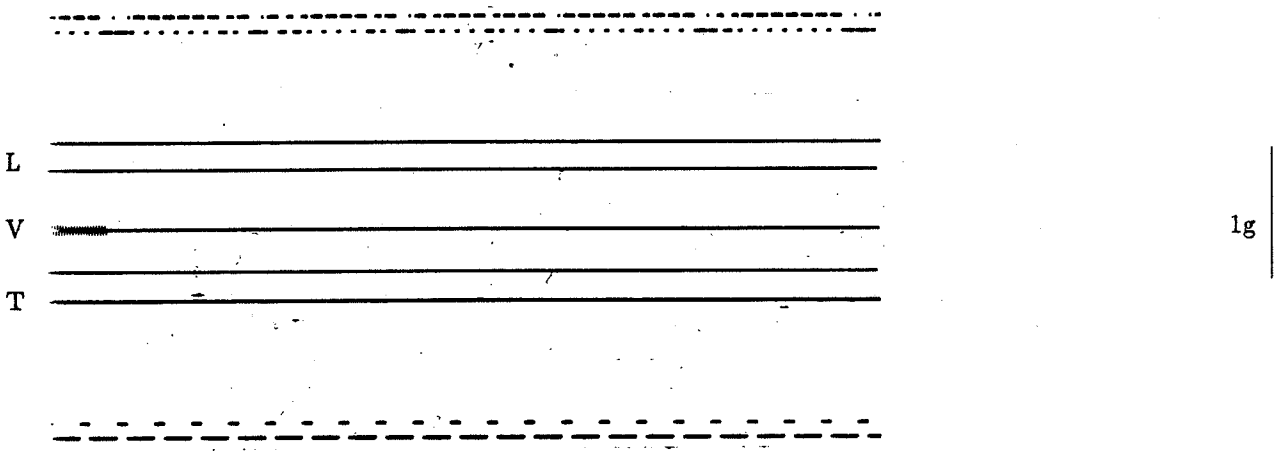
Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

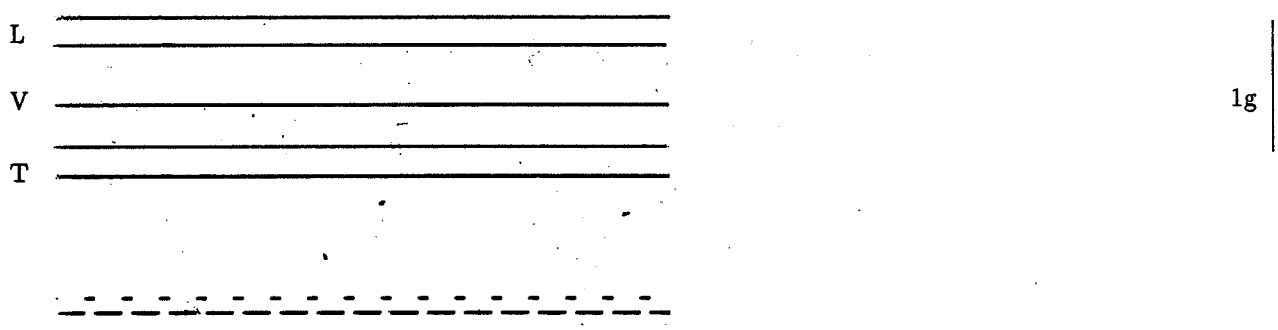
Event: 1985 11 06 at 12:46 U.T. *Magnitude 3.2*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 8 km



Event: 1985 11 ?? at ??.?? U.T. *Magnitude*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance ?? km



Canada

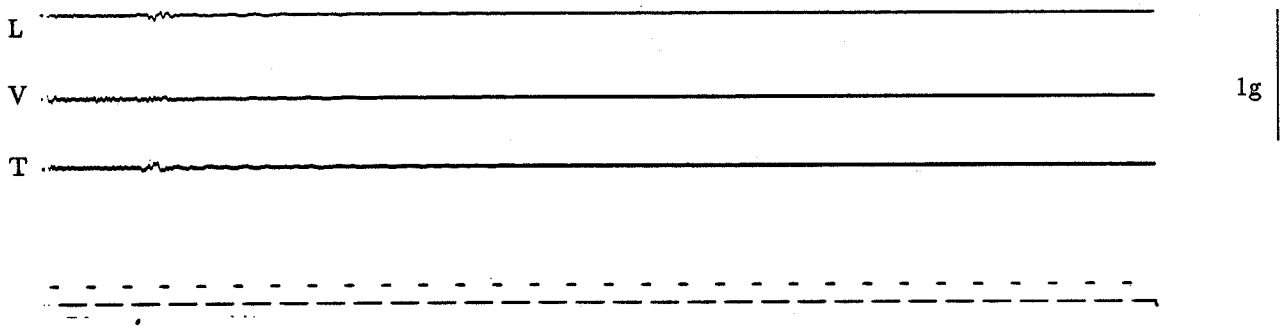
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 11 09 at 04:46 U.T. *Magnitude 4.6*

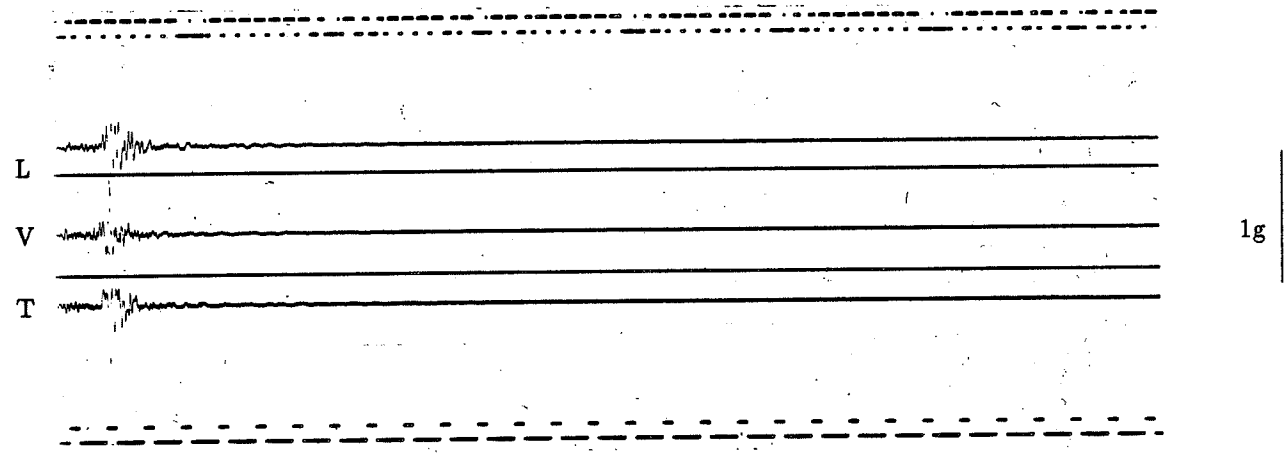
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 8 km



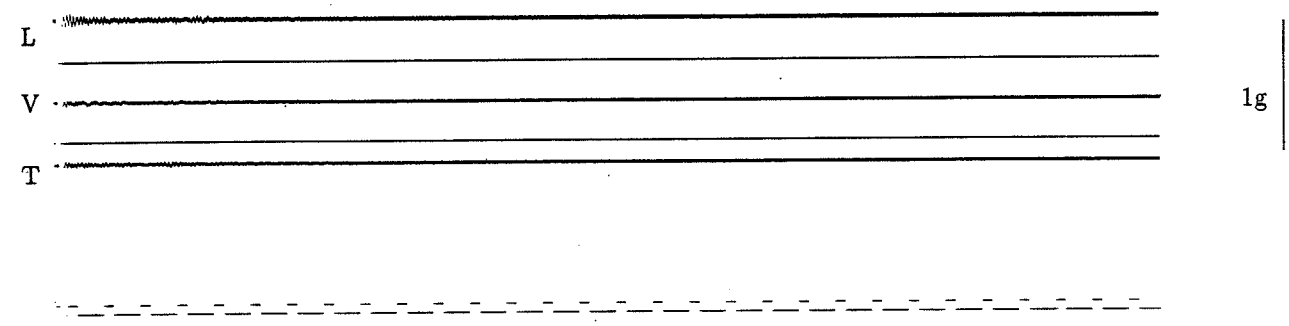
Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 5 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance 26 km



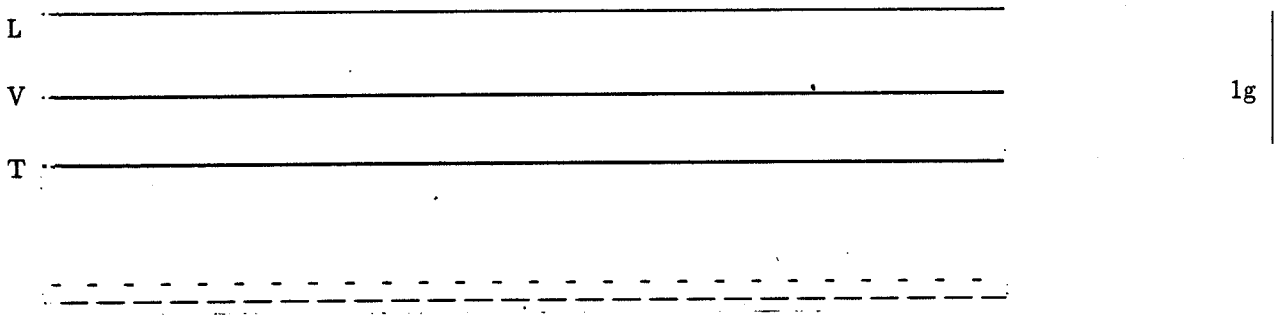
Canada

GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

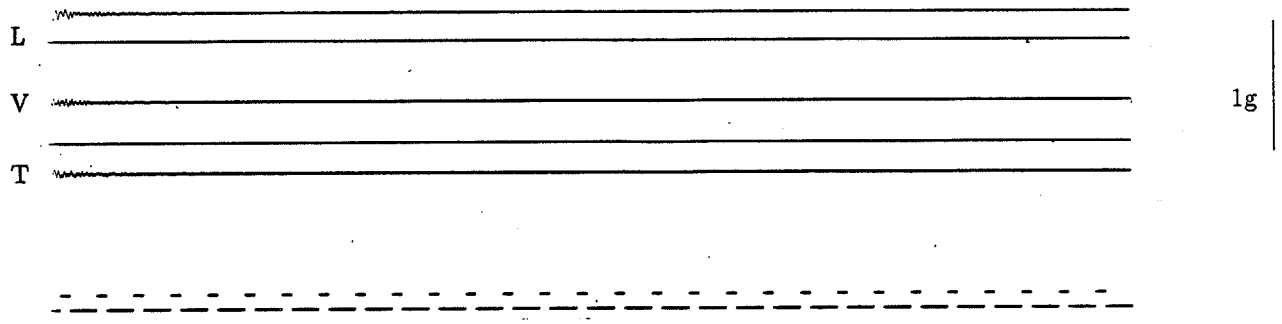
Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 11 10 at 05:33 U.T. *Magnitude 3.8*

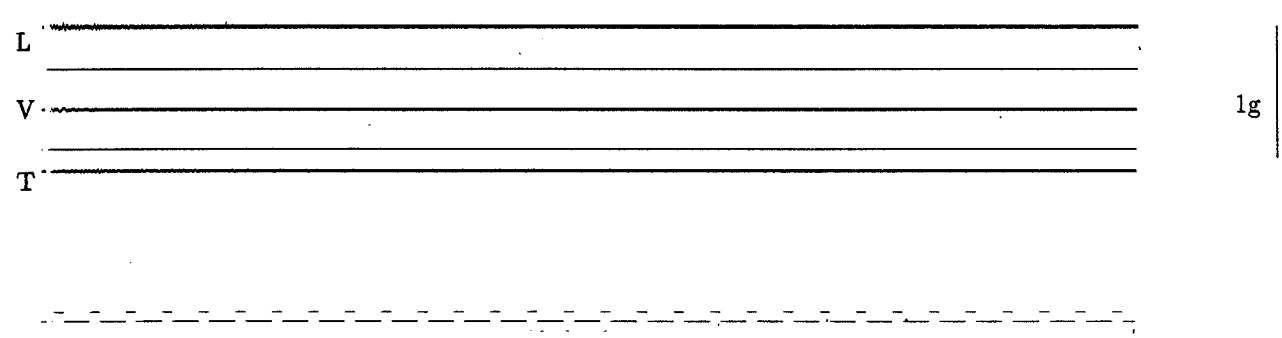
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance 14 km



Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 10 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 31 km



Canada

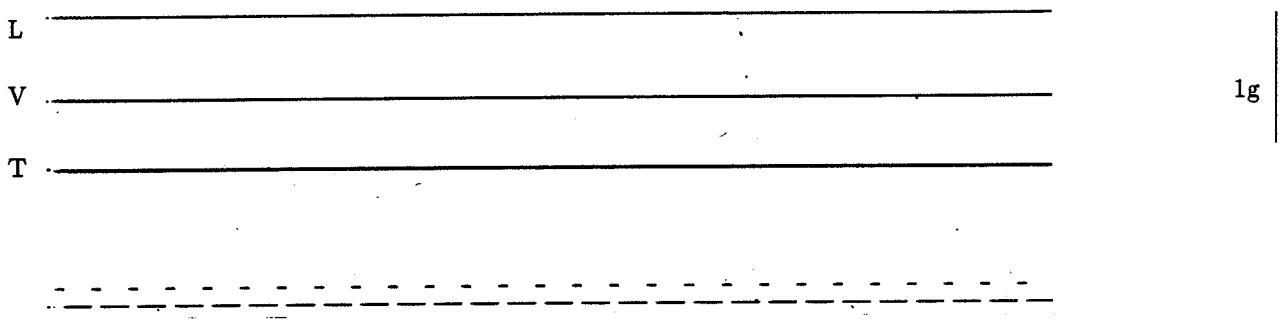
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 11 11 at 20:35 U.T. *Magnitude 3.5*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

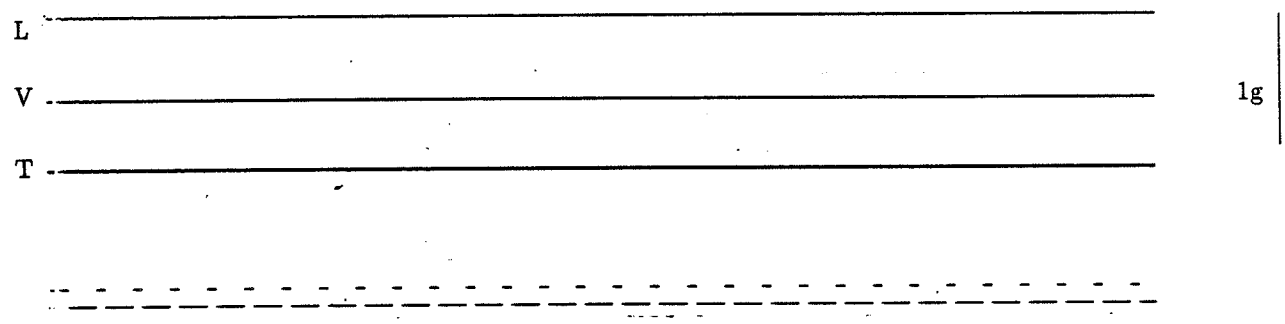
Instrument SMA-1 +L=10° Distance 13 km



Event: 1985 11 12 at 14:49 U.T. *Magnitude 4.0*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 2 km



Canada

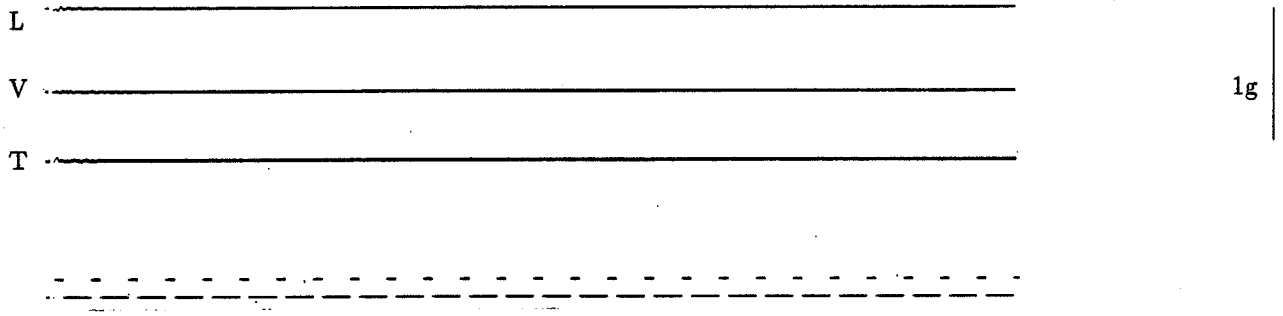
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 11 14 at 17:07 U.T. *Magnitude 3.6*

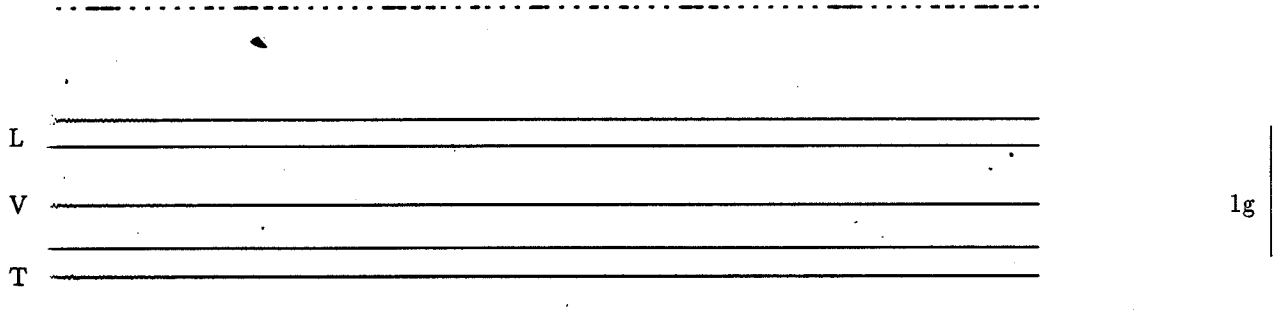
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 8 km



Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

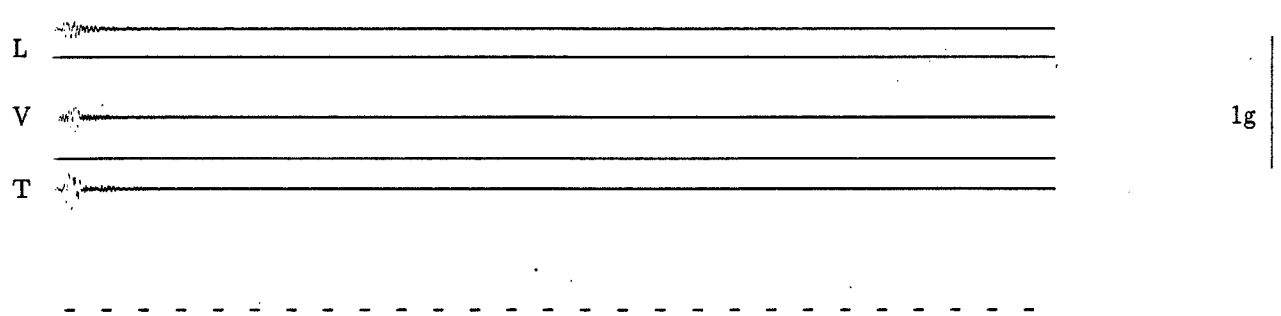
Instrument SMA-1 +L=330° Distance 5 km



Event: 1985 11 18 at 11:14 U.T. *Magnitude 3.4*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 6 km



Canada

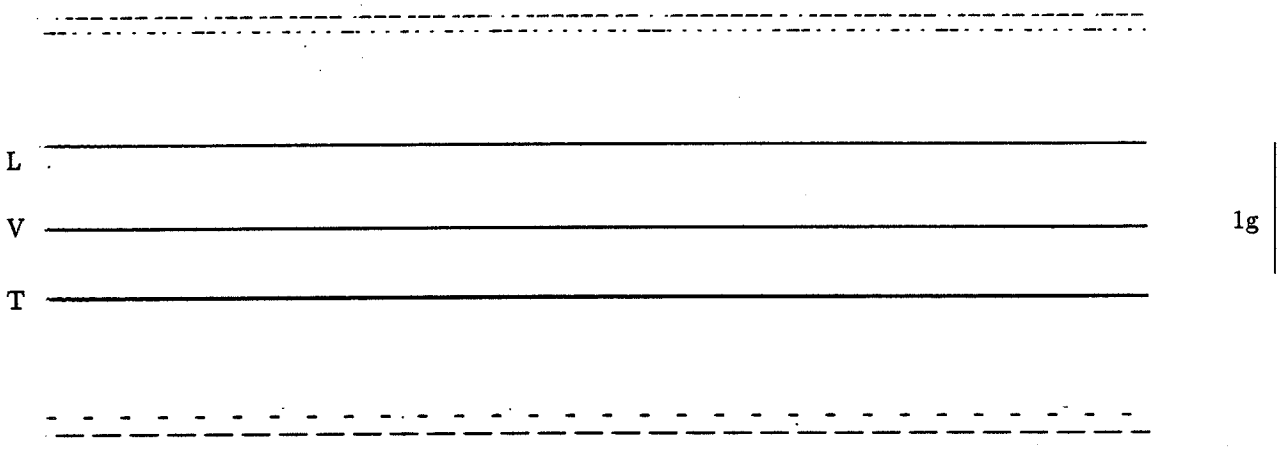
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence — District of Mackenzie, N.W.T., Canada

Event: 1985 11 24 at 19:29 U.T. *Magnitude 4.0*

Site 1: Iverson — Latitude 62.2018°N — Longitude 124.3700°W — Elevation 792 m

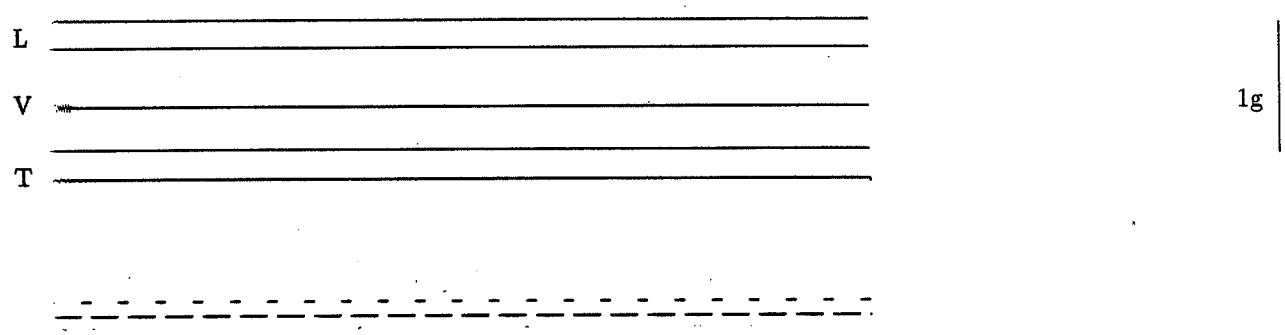
Instrument SMA-1 — +L=10° — Distance 17 km



Event: 1985 11 30 at 12:04 U.T. *Magnitude 2.9*

Site 2: Slide Mountain — Latitude 62.2335°N — Longitude 124.1675°W — Elevation 914 m

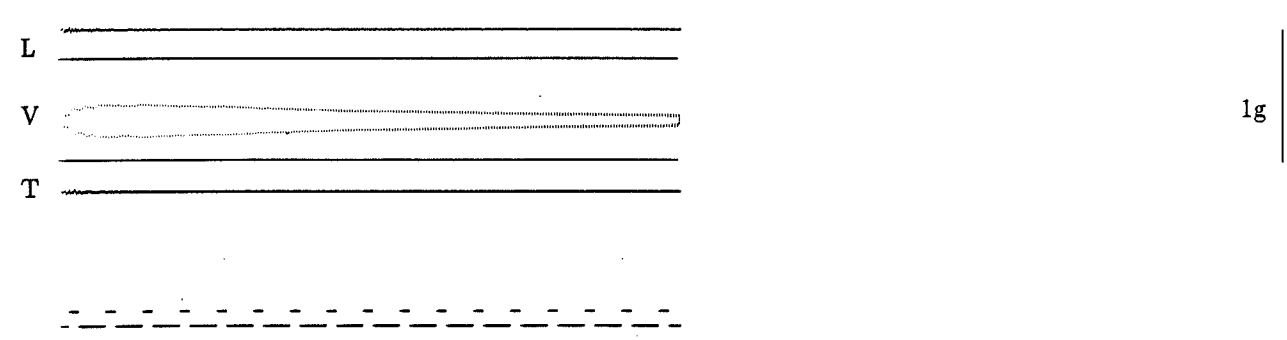
Instrument SMA-1 — +L=330° — Distance 21 km



Event: 1985 12 04 at 11:41 U.T. *Magnitude 3.3*

Site 2: Slide Mountain — Latitude 62.2335°N — Longitude 124.1675°W — Elevation 914 m

Instrument SMA-1 — +L=330° — Distance 4 km



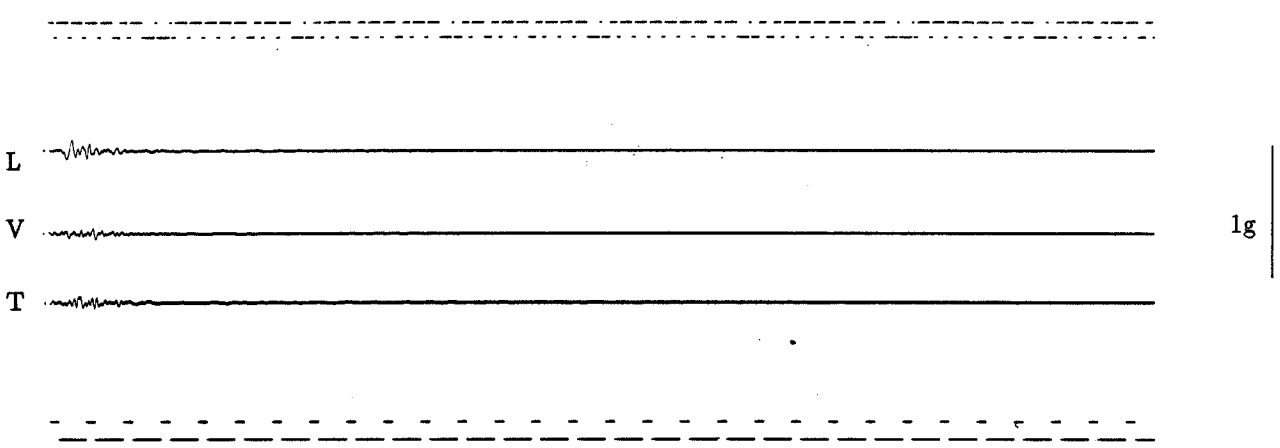
Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

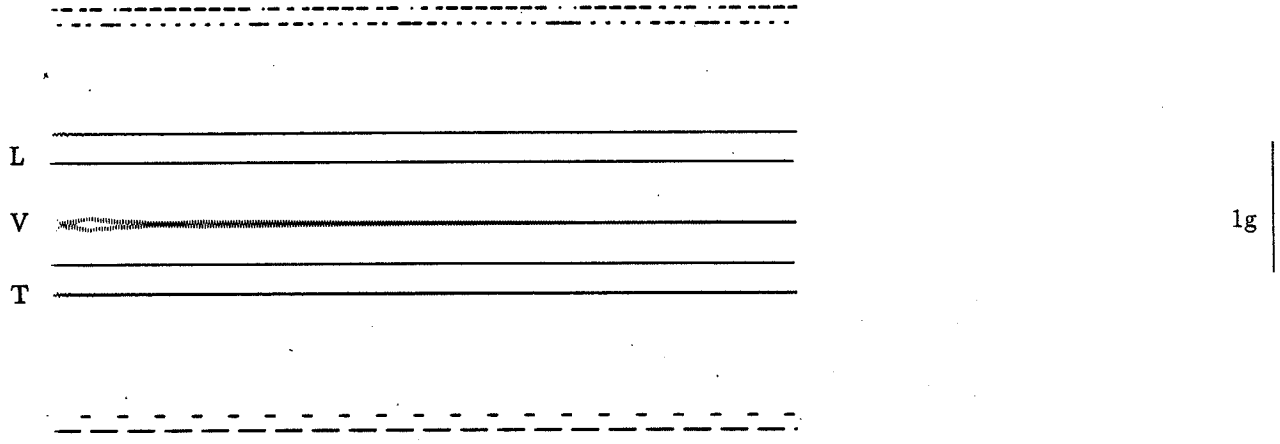
Event: 1985 12 07 at 15:29 U.T. *Magnitude 4.0*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance 2 km



Event: 1985 12 12 at 00:45 U.T. *Magnitude 3.4*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 9 km



Canada

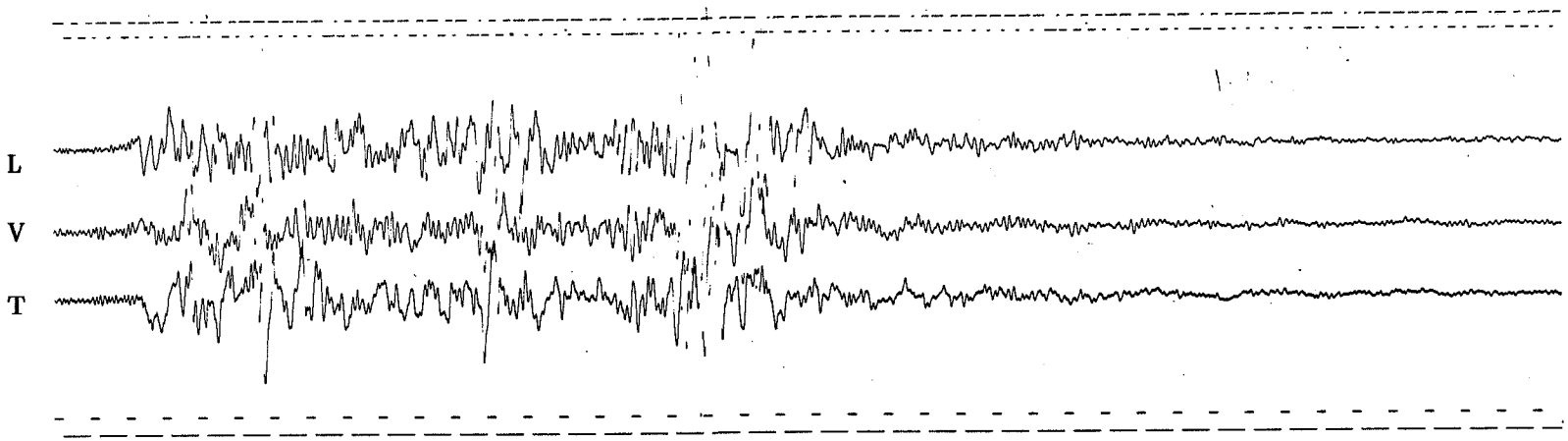
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 12 23 at 05:16 U.T. *Magnitude 6.9*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 5 km



Canada

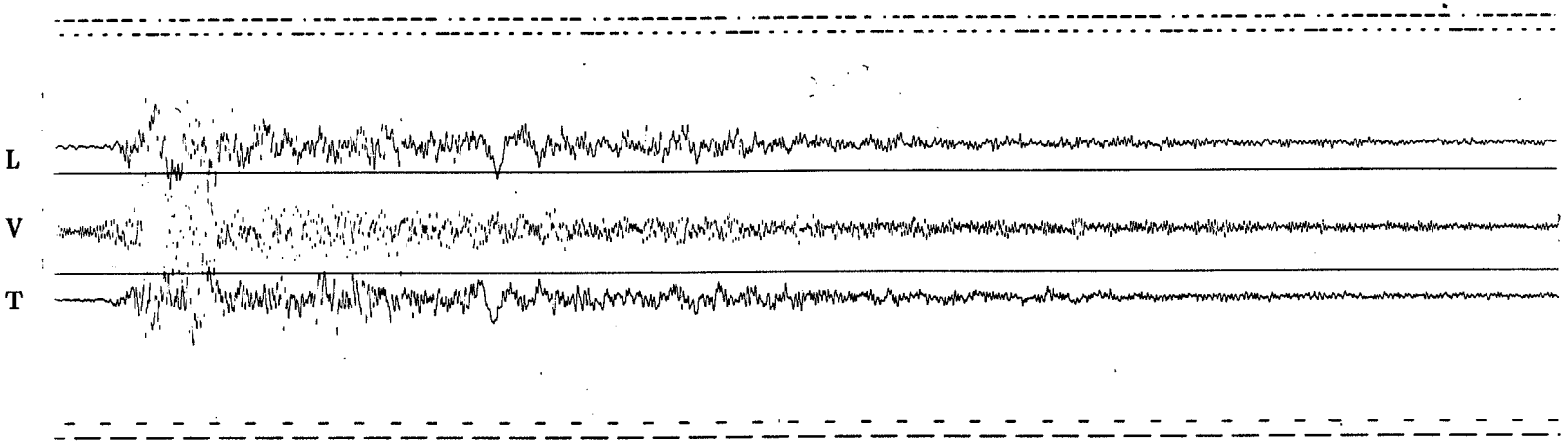
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 12 23 at 05:16 U.T. *Magnitude 6.9*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 10 km



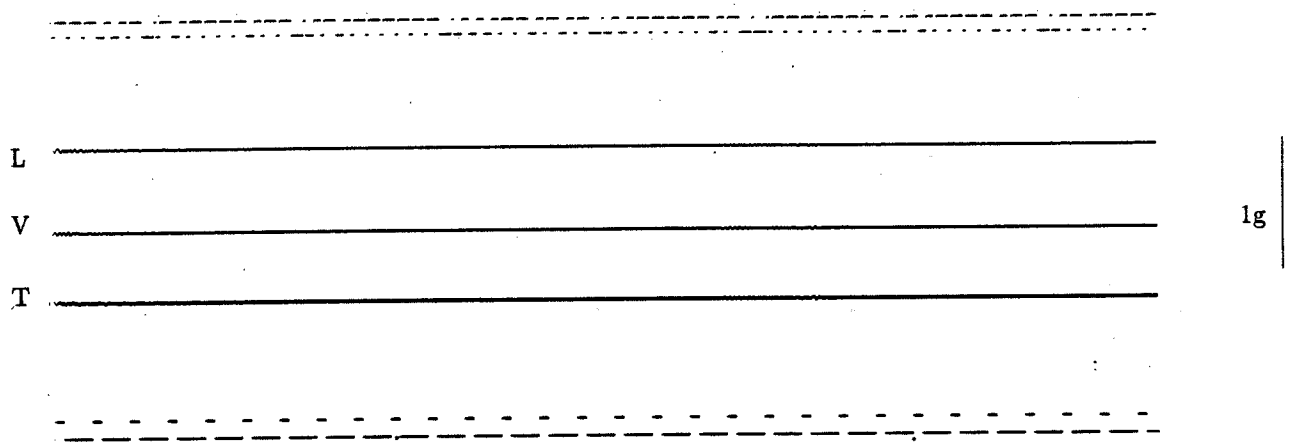
Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

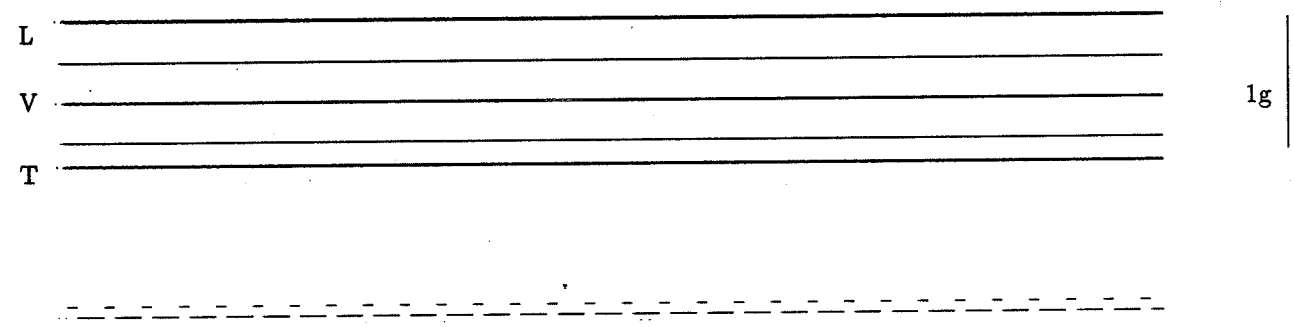
Event: 1985 12 23 at 05:22 U.T. *Magnitude*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance ?? km



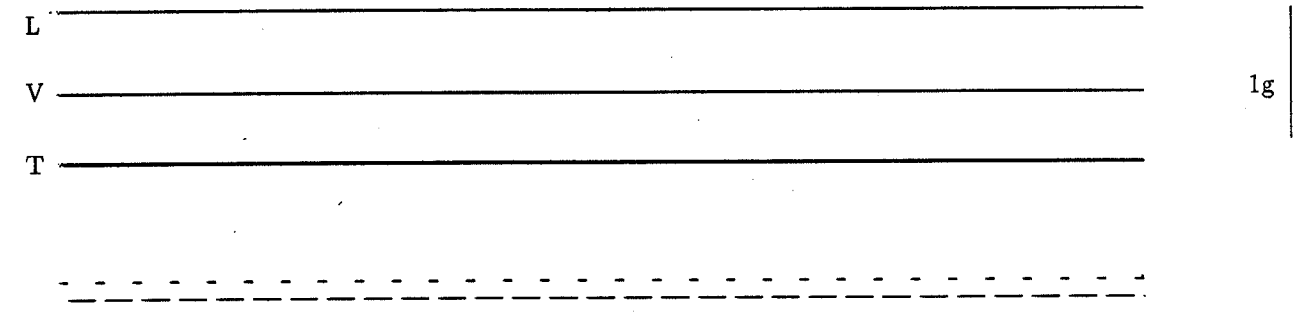
Event: 1985 12 23 at 05:23 U.T. *Magnitude*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance ?? km



Event: 1985 12 23 at 05:26 U.T. *Magnitude 4.3*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance 7 km



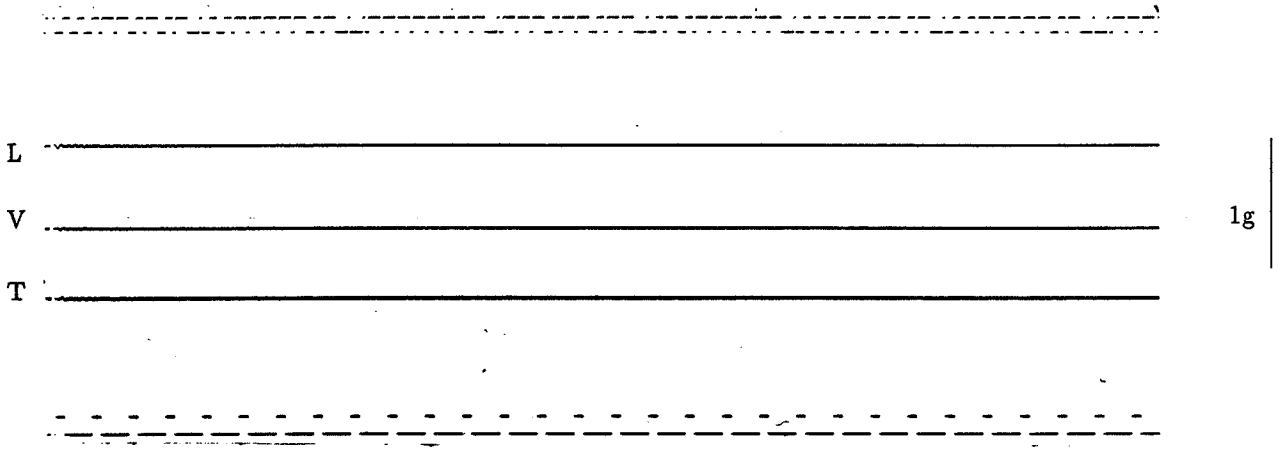
Canada

GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

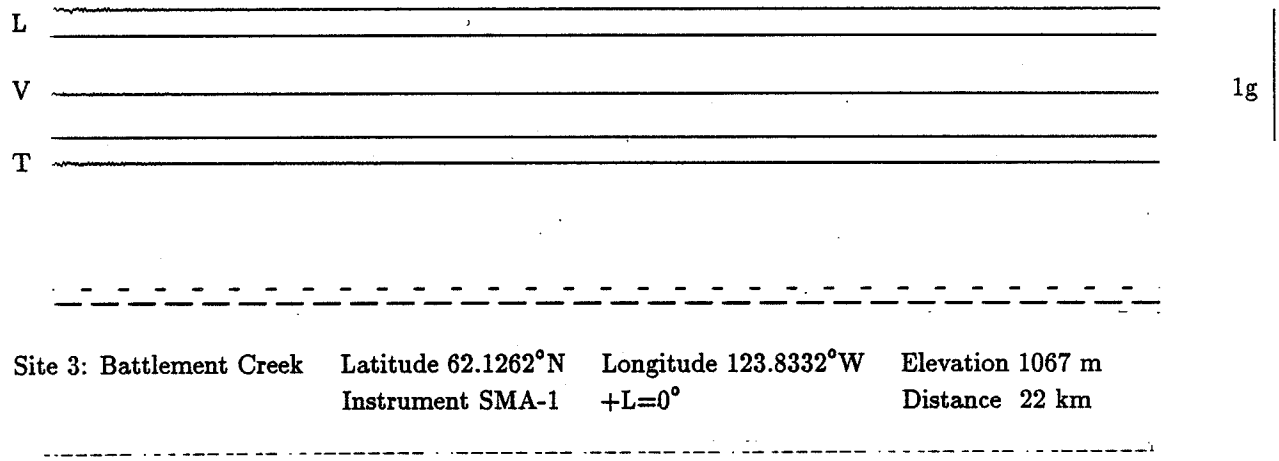
Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 12 23 at 05:27 U.T. *Magnitude 4.1*

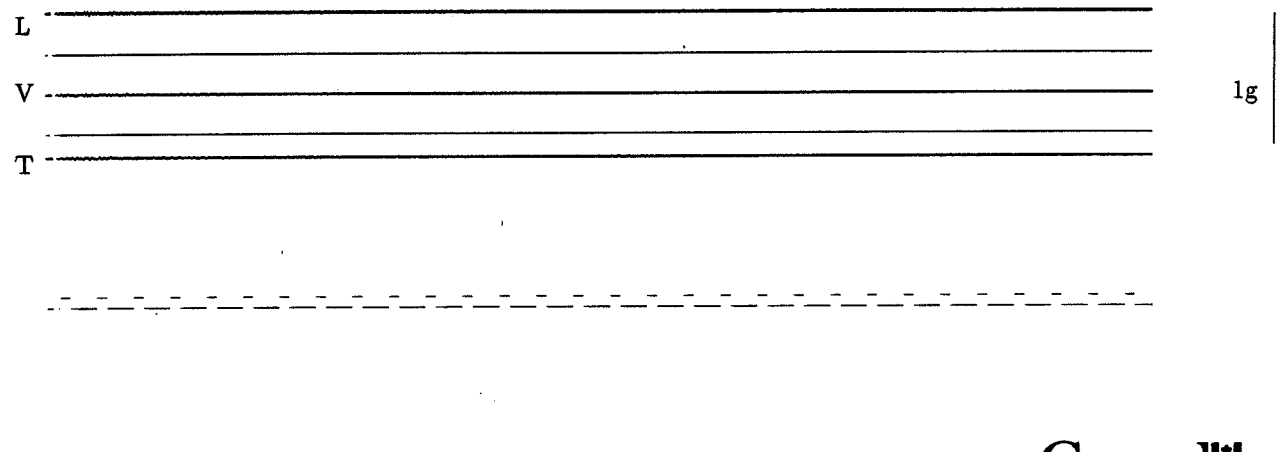
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance 7 km



Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 6 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 22 km



Canada

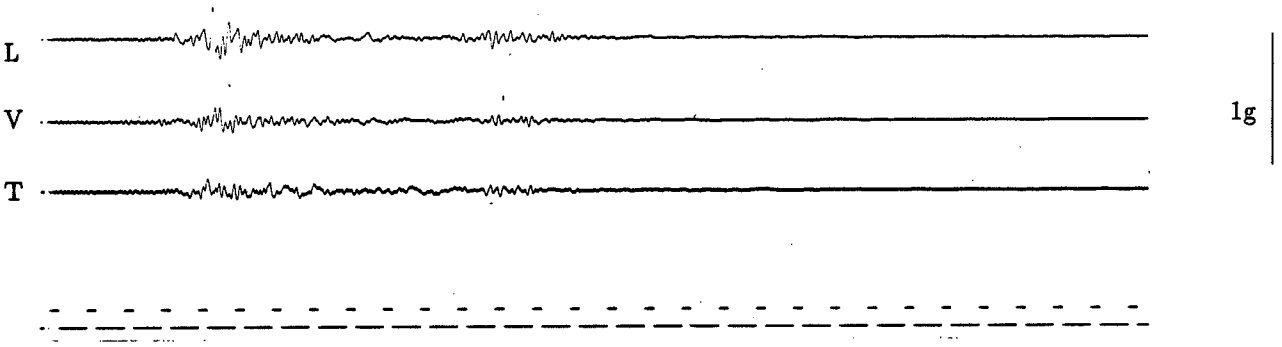
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 12 23 at 05:48 U.T. *Magnitude 5.2*

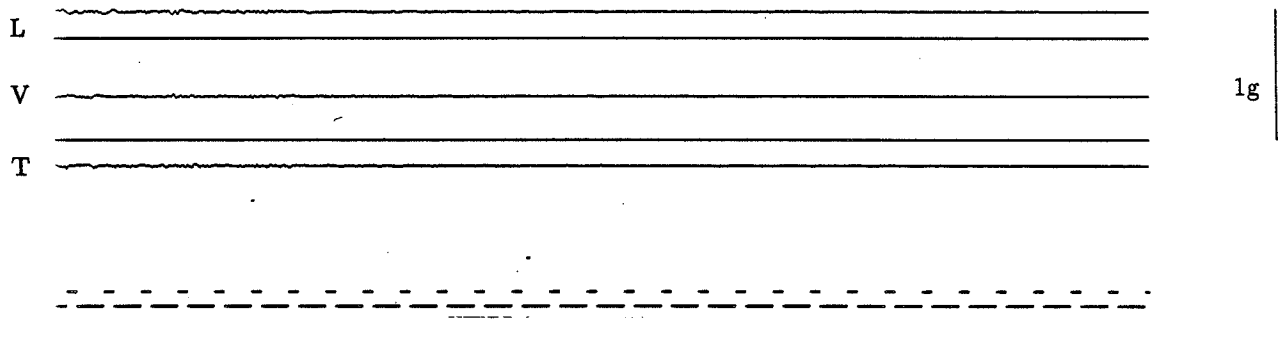
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 7 km



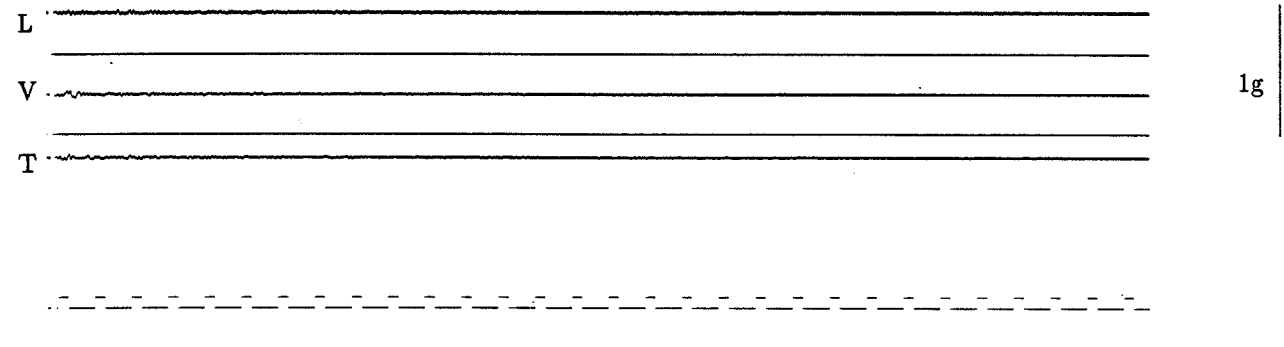
Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 15 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance 29 km



Canada

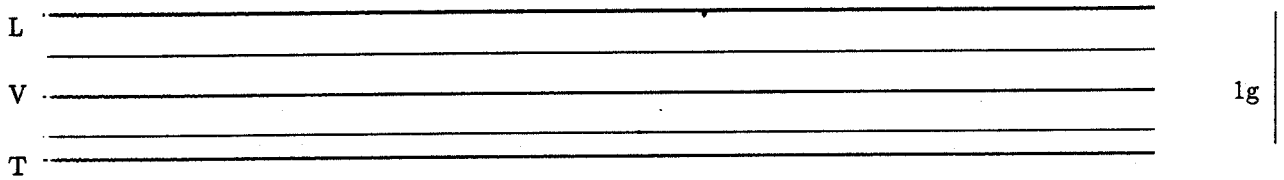
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 12 23 at 05:57 U.T. *Magnitude 3.9*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

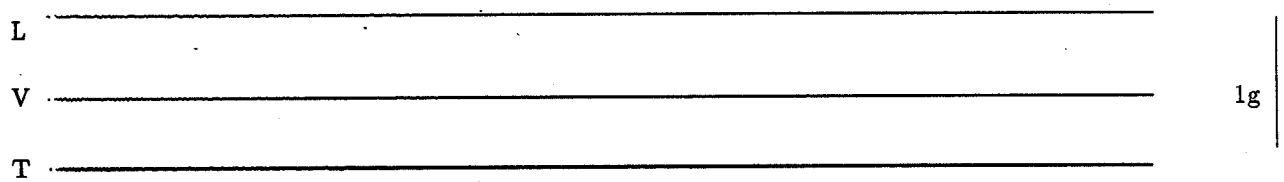
Instrument SMA-1 +L=0° Distance 29 km



Event: 1985 12 23 at 06:06 U.T. *Magnitude 4.1*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

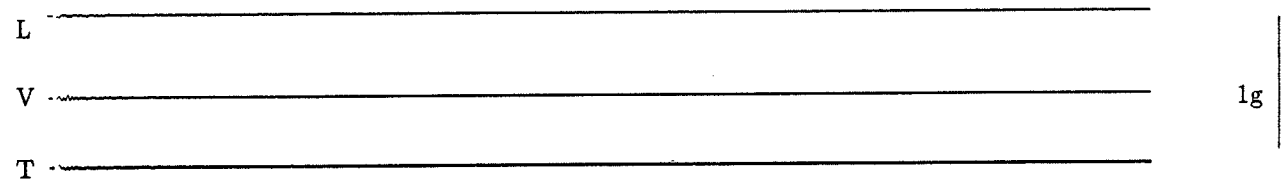
Instrument SMA-1 +L=10° Distance 30 km



Event: 1985 12 23 at 06:11 U.T. *Magnitude 4.0*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 26 km



Canada

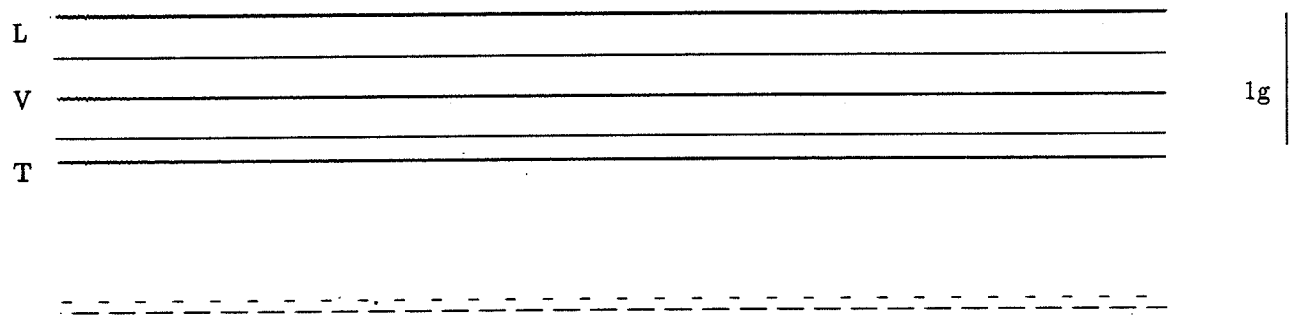
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 12 23 at 09:37 U.T. *Magnitude 4.8*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

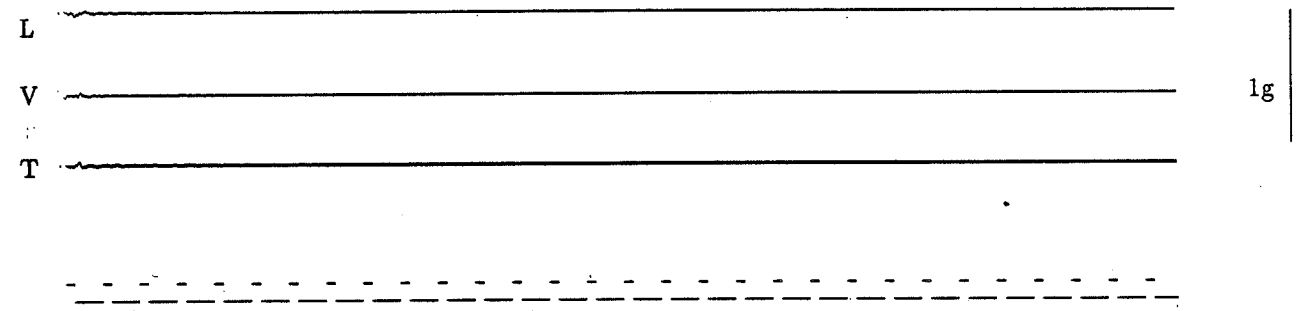
Instrument SMA-1 +L=0° Distance 29 km



Event: 1985 12 23 at 10:18 U.T. *Magnitude 3.8*

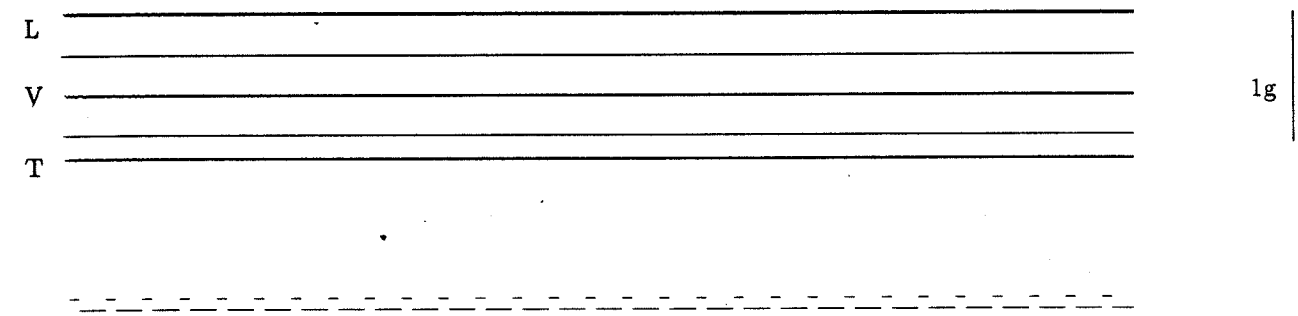
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 4 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance 33 km



Canada

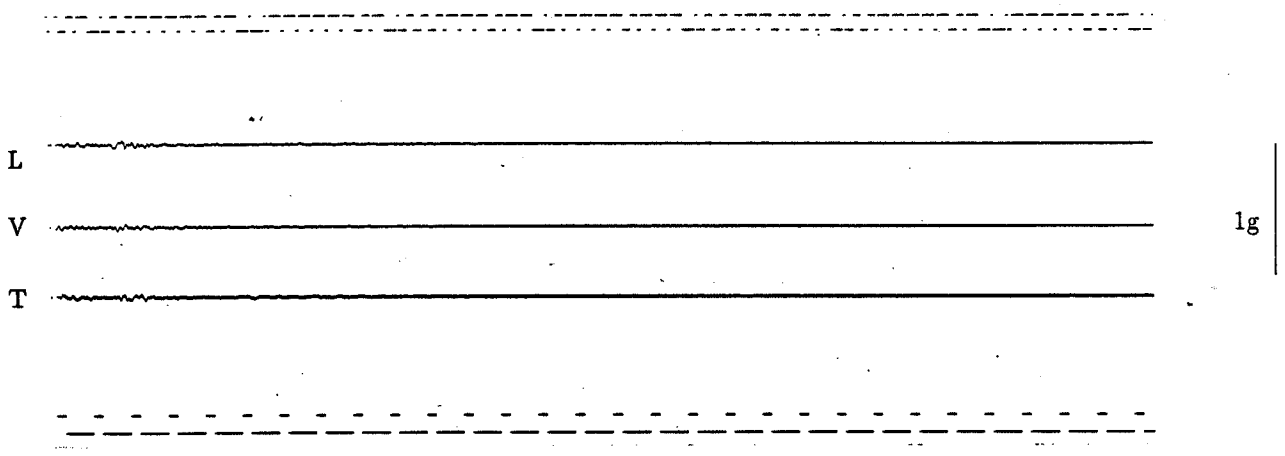
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence — District of Mackenzie, N.W.T., Canada

Event: 1985 12 23 at 11:27 U.T. — *Magnitude 4.3*

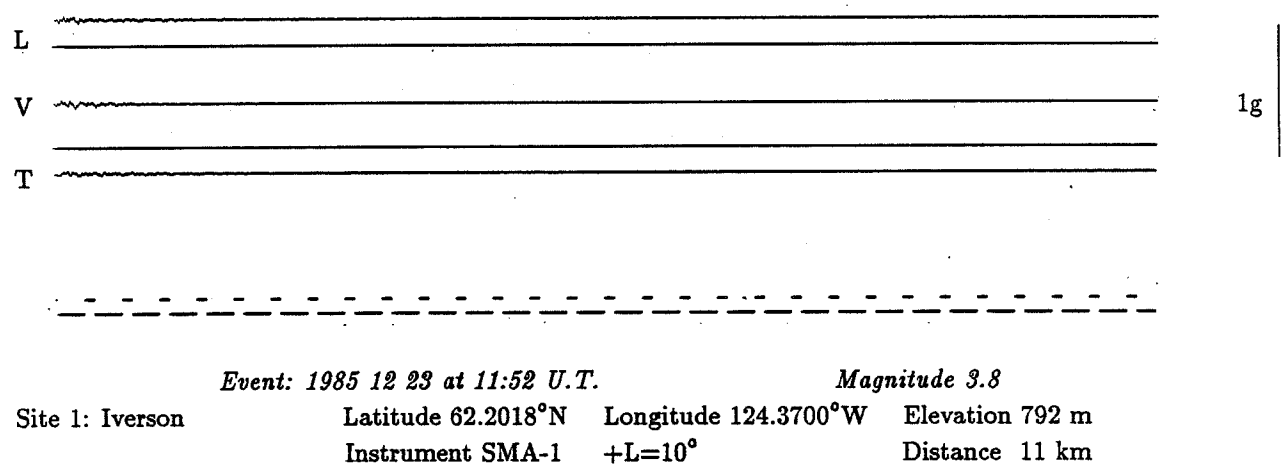
Site 1: Iverson — Latitude 62.2018°N — Longitude 124.3700°W — Elevation 792 m

Instrument SMA-1 — +L=10° — Distance 5 km



Site 2: Slide Mountain — Latitude 62.2335°N — Longitude 124.1675°W — Elevation 914 m

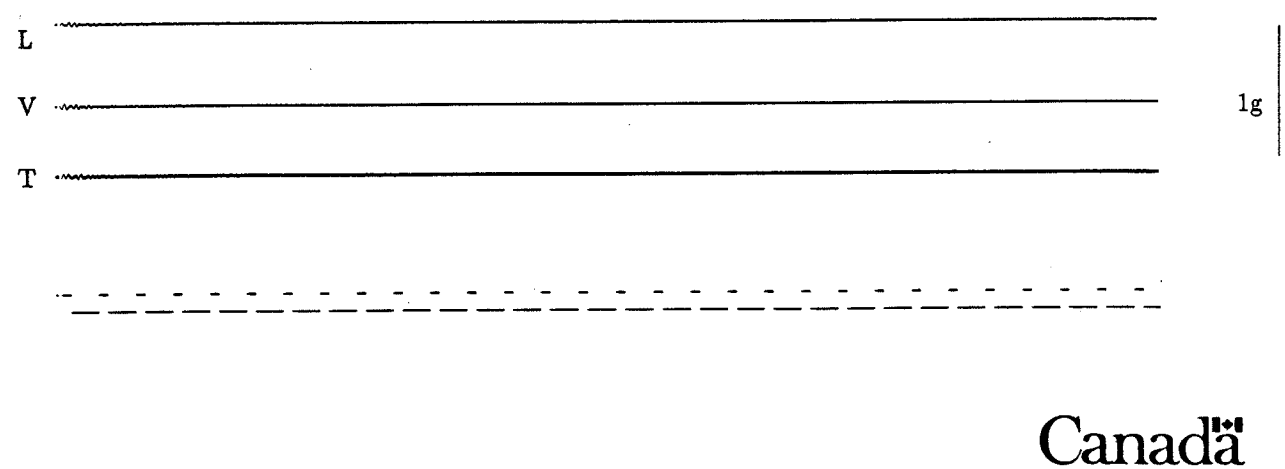
Instrument SMA-1 — +L=330° — Distance 12 km



Event: 1985 12 23 at 11:52 U.T. — *Magnitude 3.8*

Site 1: Iverson — Latitude 62.2018°N — Longitude 124.3700°W — Elevation 792 m

Instrument SMA-1 — +L=10° — Distance 11 km

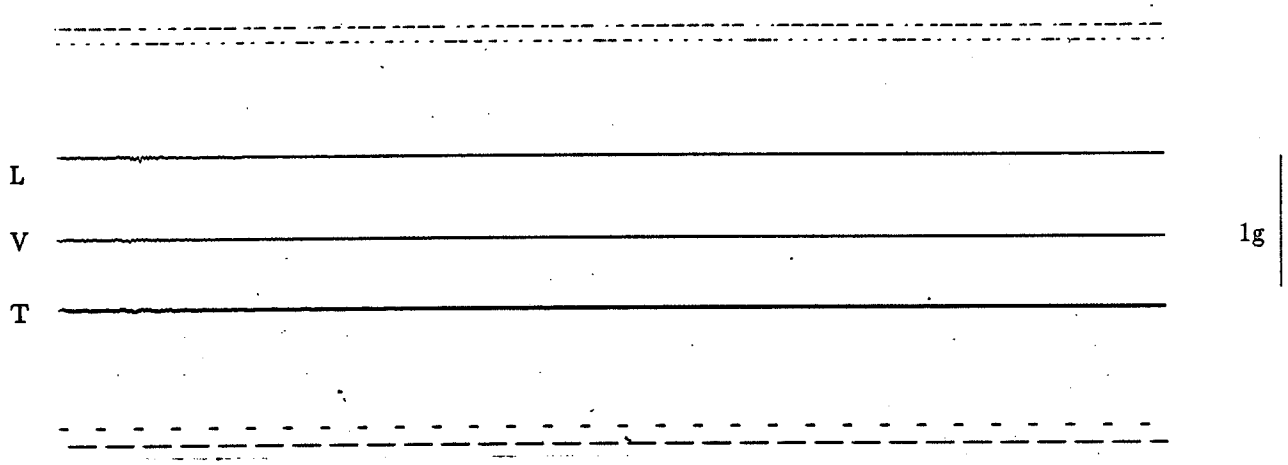


Canada

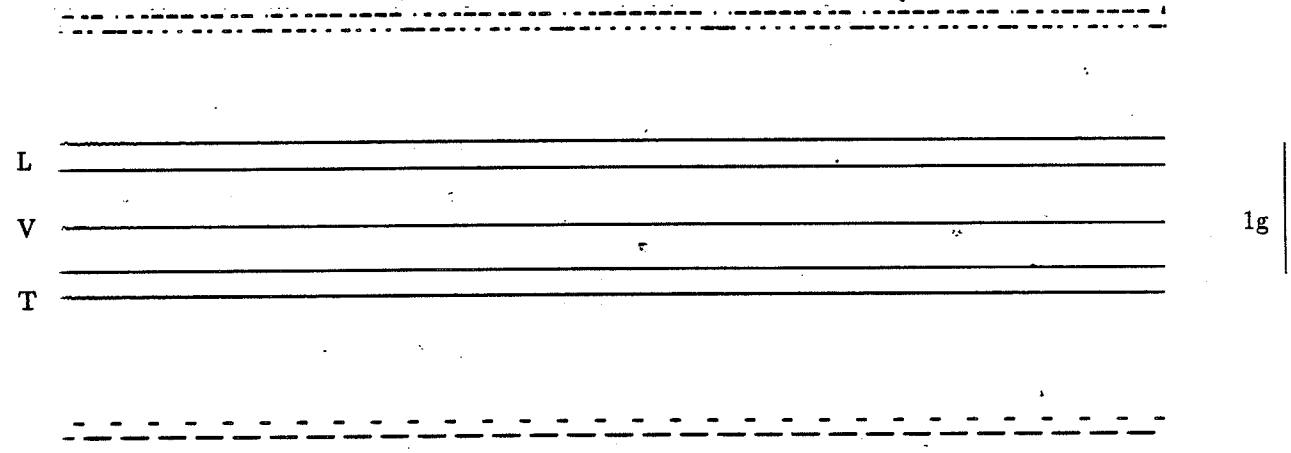
GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence
Event: 1985 12 23 at 16:53 U.T.

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada
Magnitude 4.0

Site 1: Iverson — Latitude 62.2018°N — Longitude 124.3700°W — Elevation 792 m
Instrument SMA-1 — +L=10° — Distance 8 km



Site 2: Slide Mountain — Latitude 62.2335°N — Longitude 124.1675°W — Elevation 914 m
Instrument SMA-1 — +L=330° — Distance 14 km



Canada

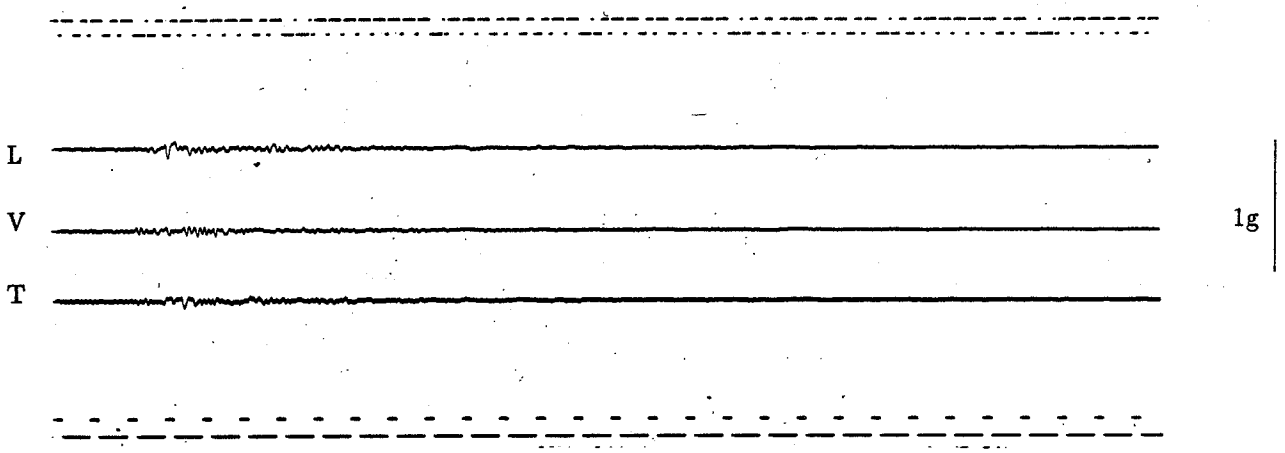
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence — District of Mackenzie, N.W.T., Canada

Event: 1985 12 23 at 19:37 U.T. — *Magnitude 5.6*

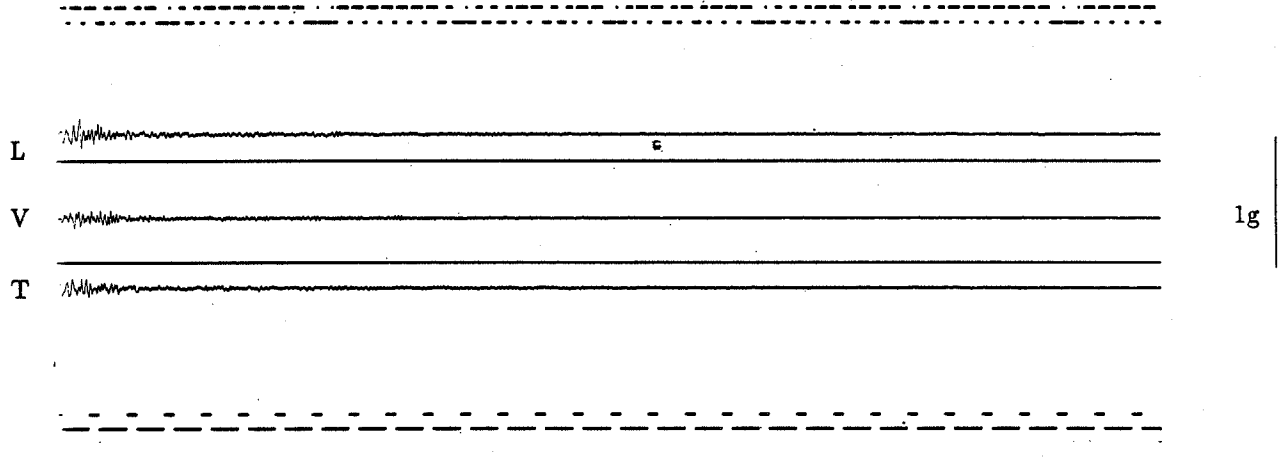
Site 1: Iverson — Latitude 62.2018°N — Longitude 124.3700°W — Elevation 792 m

Instrument SMA-1 — +L=10° — Distance 16 km



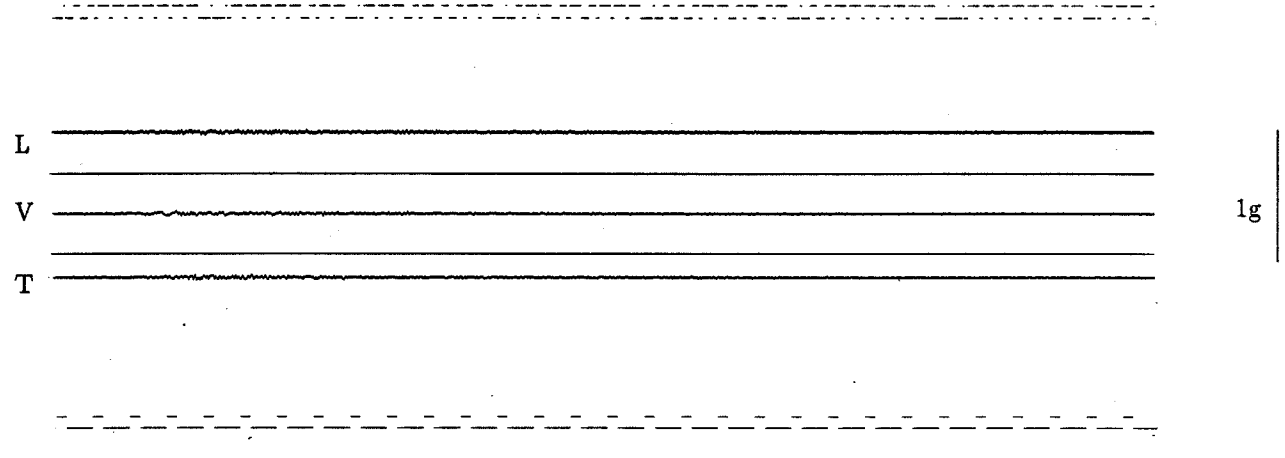
Site 2: Slide Mountain — Latitude 62.2335°N — Longitude 124.1675°W — Elevation 914 m

Instrument SMA-1 — +L=330° — Distance 20 km



Site 3: Battlement Creek — Latitude 62.1262°N — Longitude 123.8332°W — Elevation 1067 m

Instrument SMA-1 — +L=0° — Distance 25 km



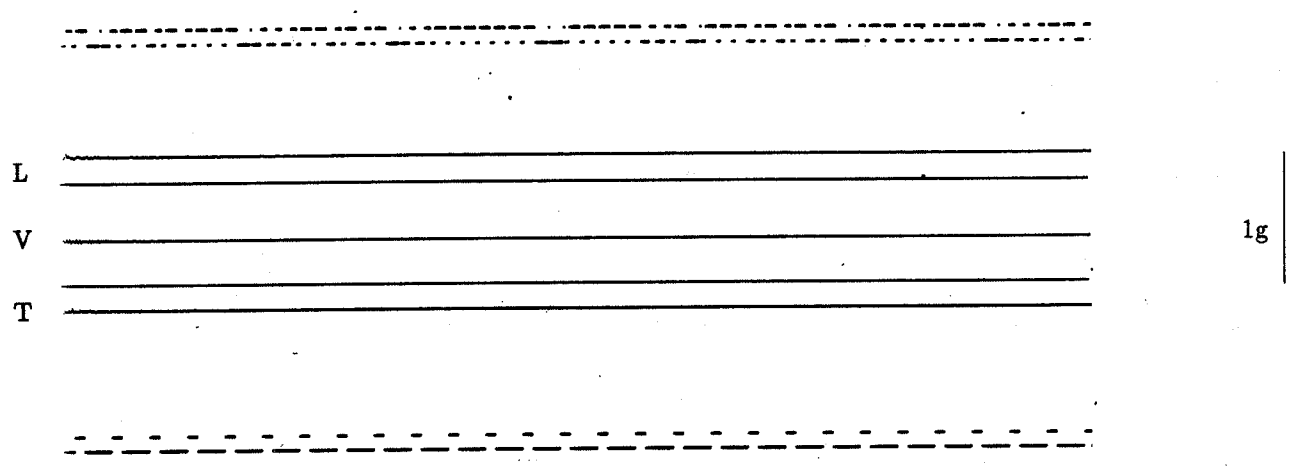
Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

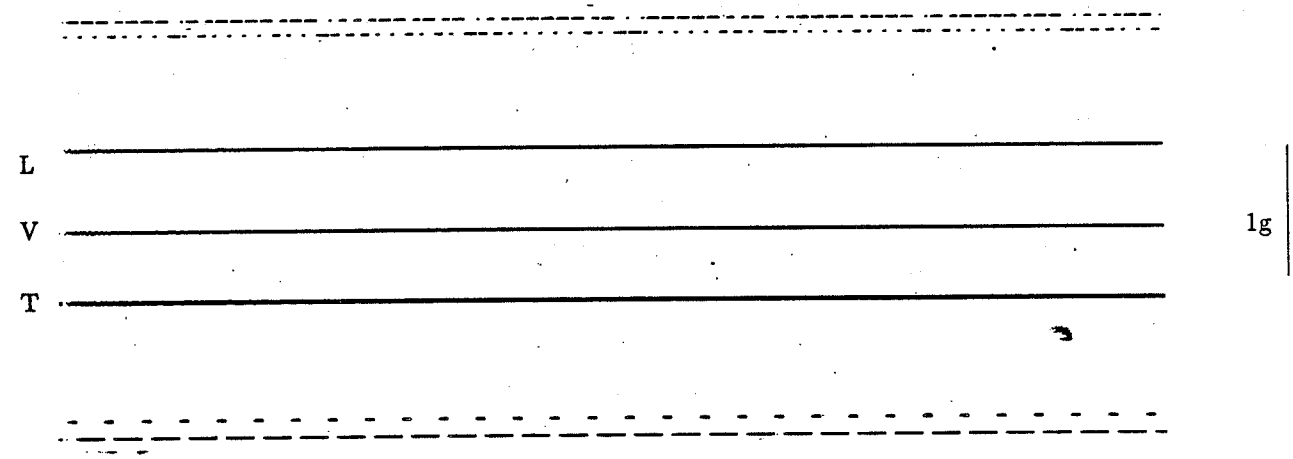
Event: 1985 12 23 at 19:54 U.T. *Magnitude 3.2*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 35 km



Event: 1985 12 23 at 22:11 U.T. *Magnitude 4.3*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance 21 km



Canada

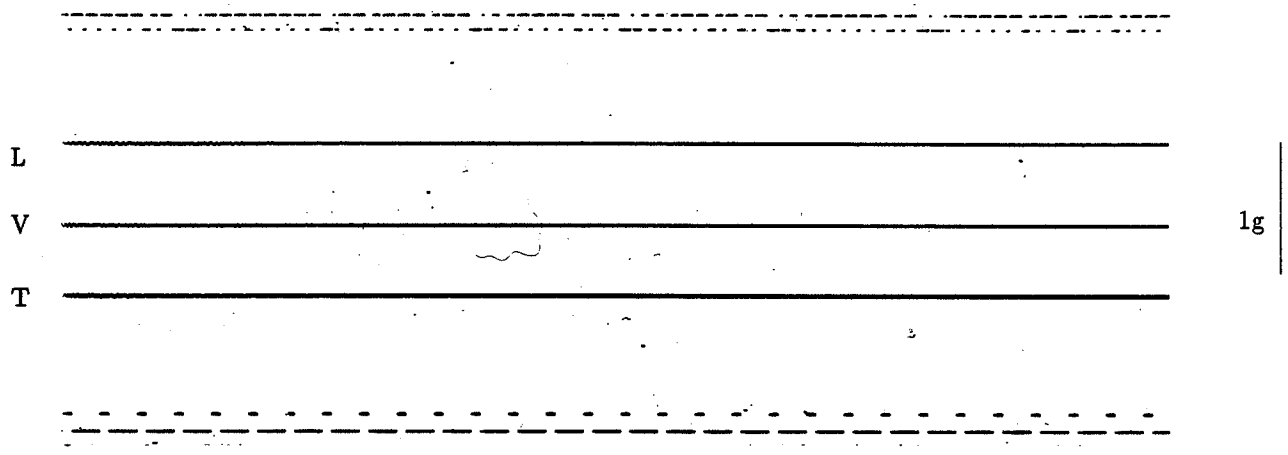
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 12 23 at 23:23 U.T. *Magnitude 4.1*

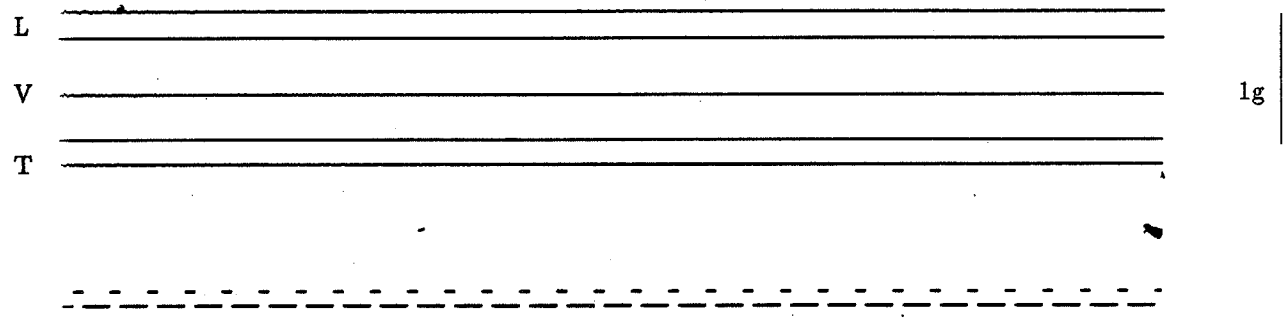
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 23 km



Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

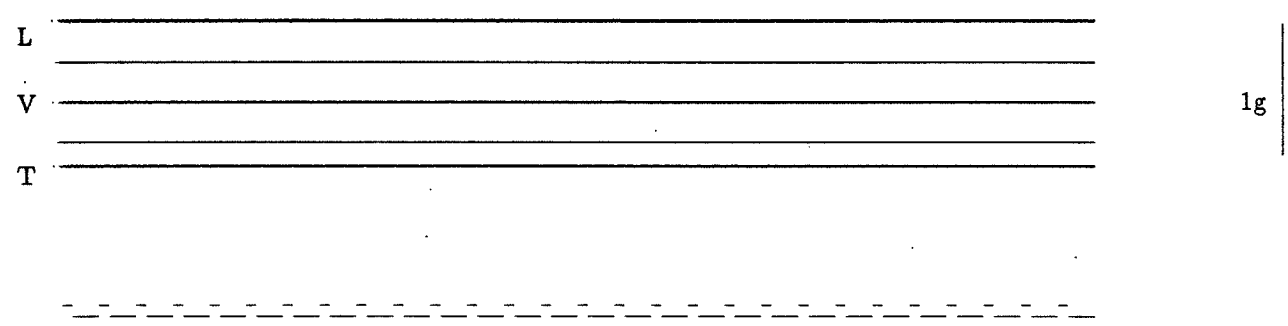
Instrument SMA-1 +L=330° Distance 29 km



Event: 1985 12 24 at 07:41 U.T. *Magnitude 4.6*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance 31 km



Canada

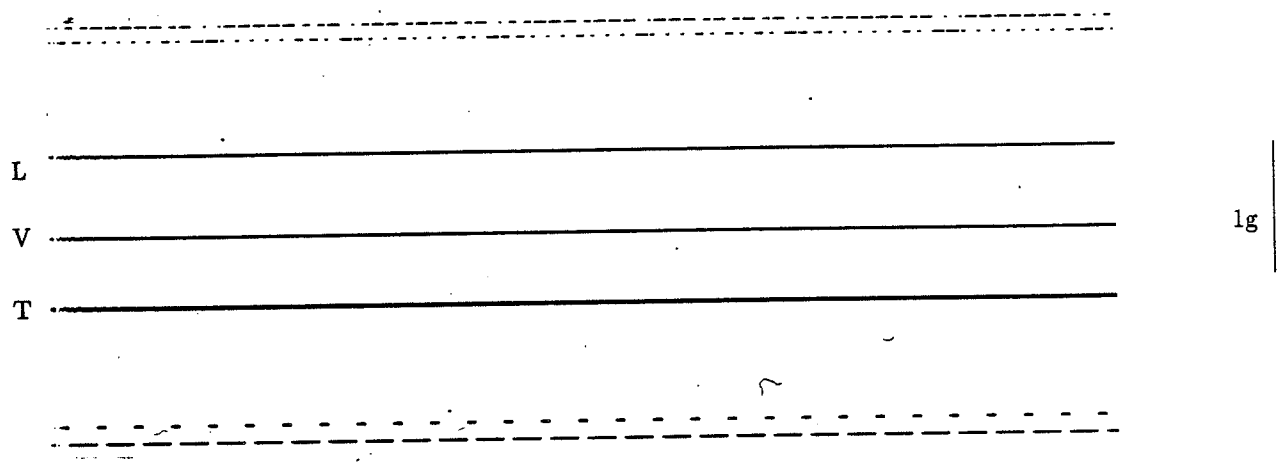
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 12 24 at 13:49 U.T. *Magnitude 3.5*

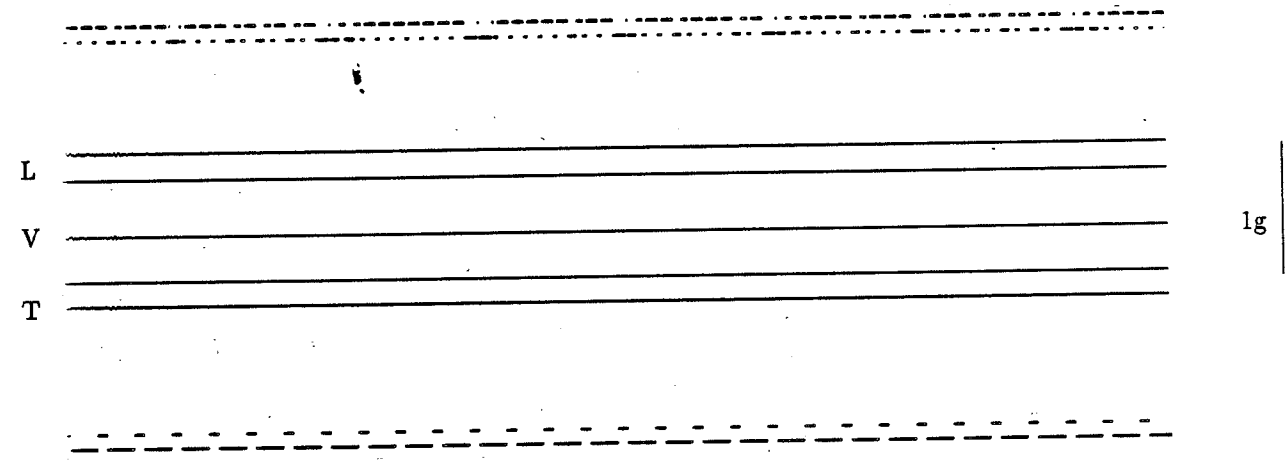
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 6 km



Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 8 km



Canada

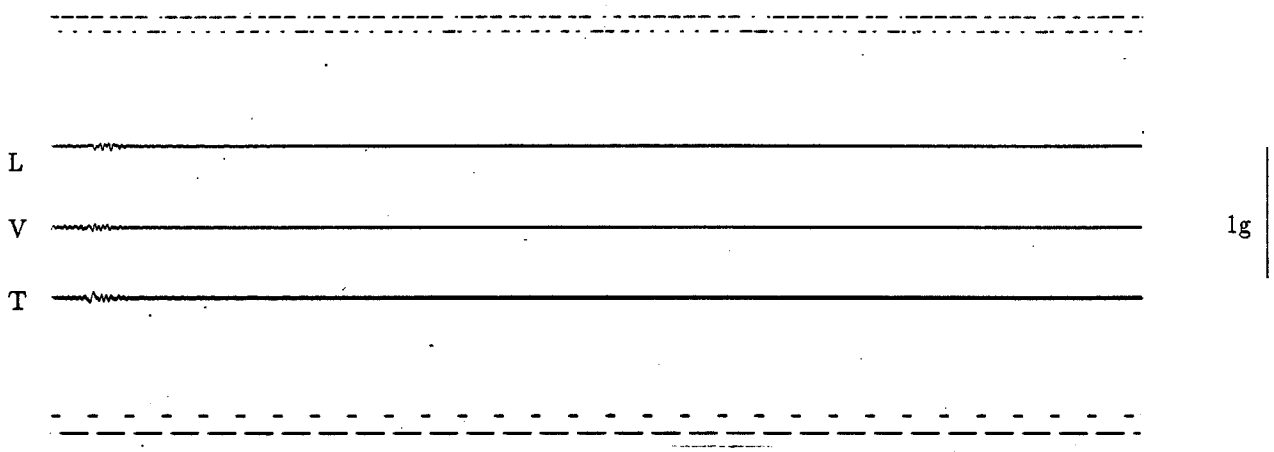
GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

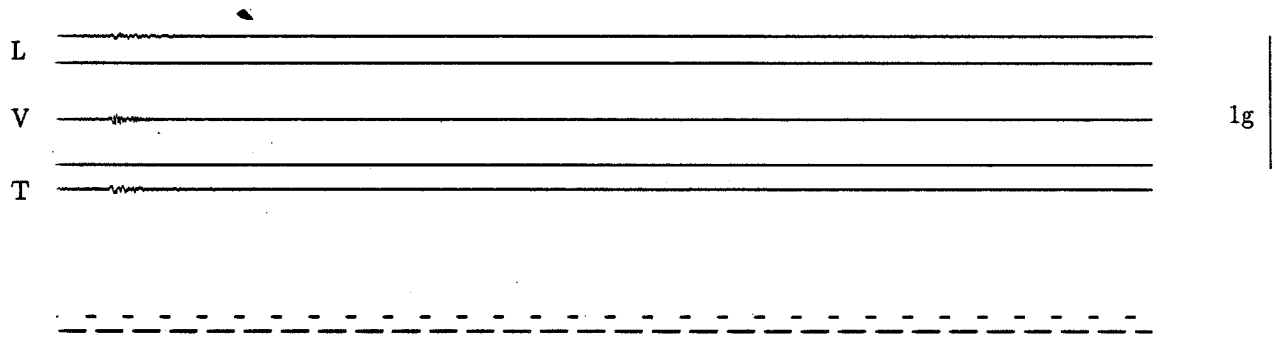
Event: 1985 12 24 at 16:30 U.T.

Magnitude 3.7

Site 1: Iverson | Latitude 62.2018°N | Longitude 124.3700°W | Elevation 792 m
Instrument SMA-1 | +L=10° | Distance 9 km



Site 2: Slide Mountain | Latitude 62.2335°N | Longitude 124.1675°W | Elevation 914 m
Instrument SMA-1 | +L=330° | Distance 8 km

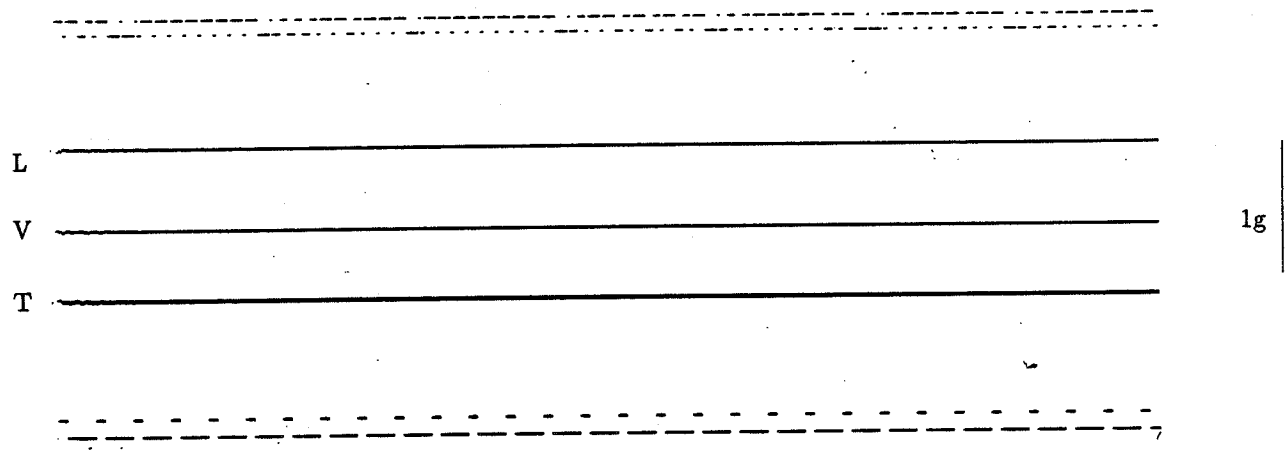


Canada

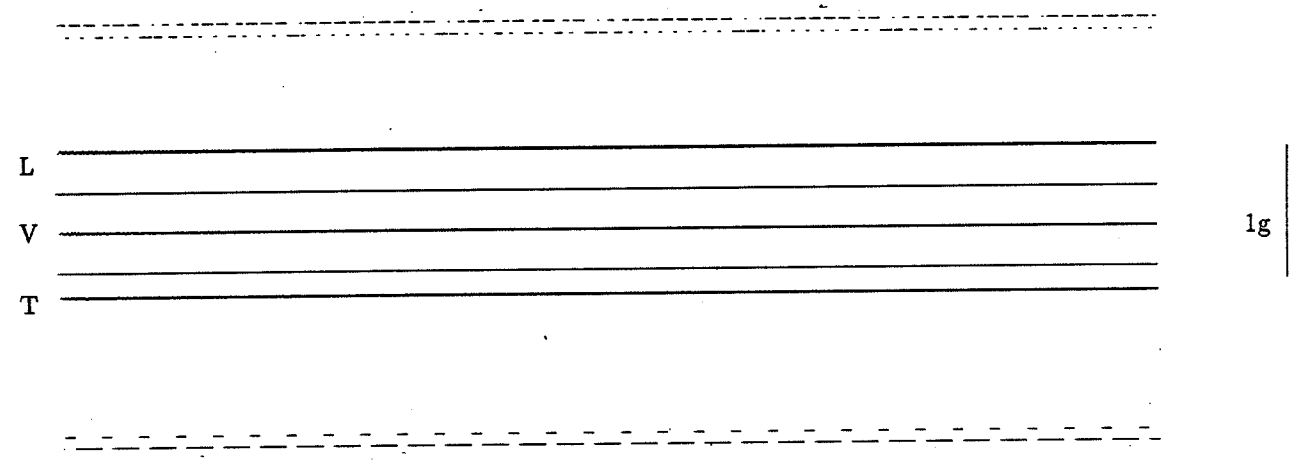
GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence
Event: 1985 12 25 at 00:16 U.T.

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada
Magnitude 4.1

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance 12 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 20 km



Canada

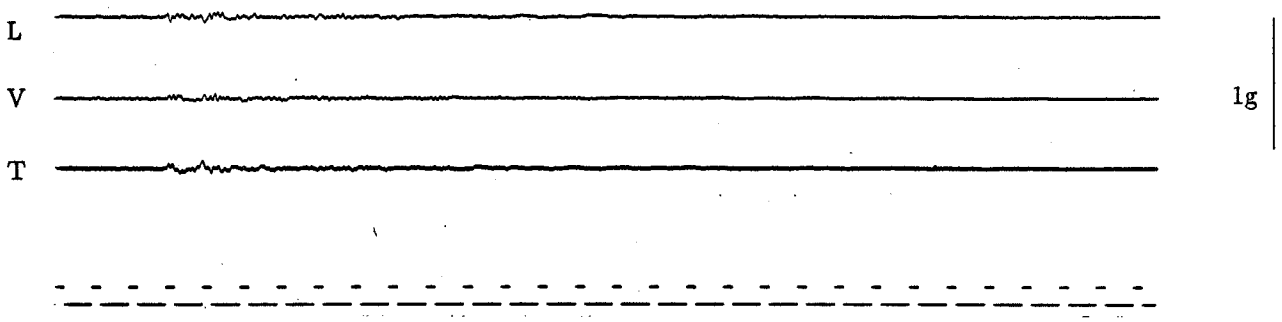
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 12 25 at 15:42 U.T. *Magnitude 5.3*

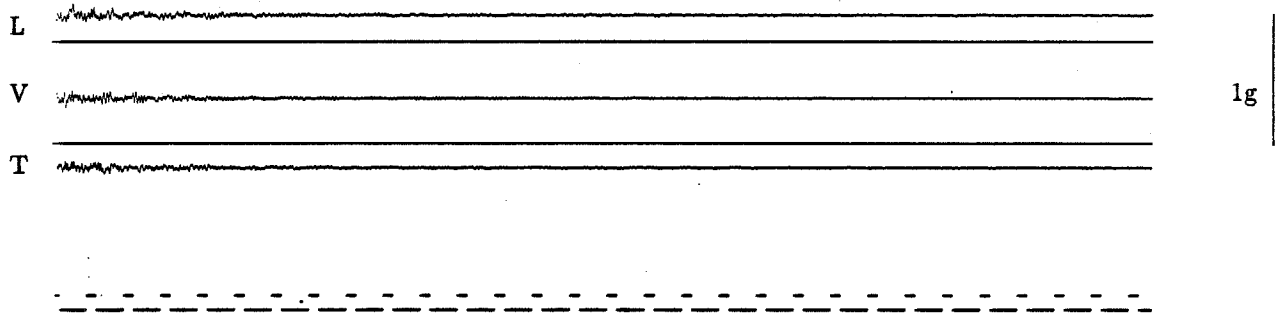
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 23 km



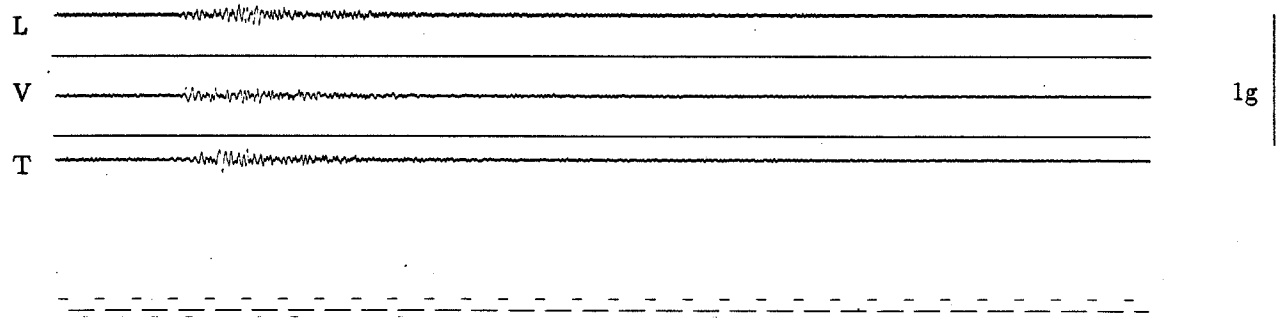
Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 24 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance 22 km

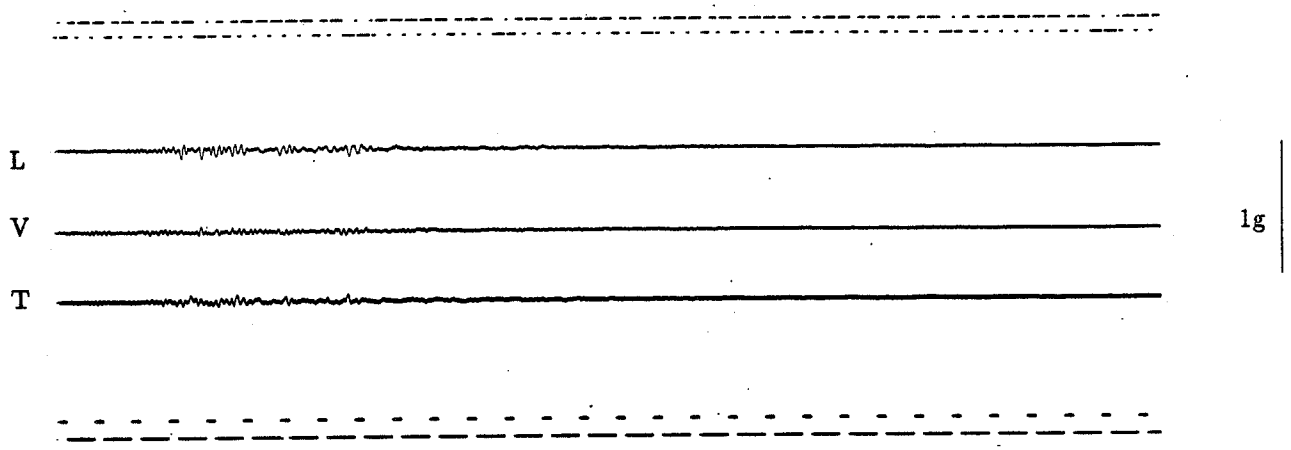


Canada

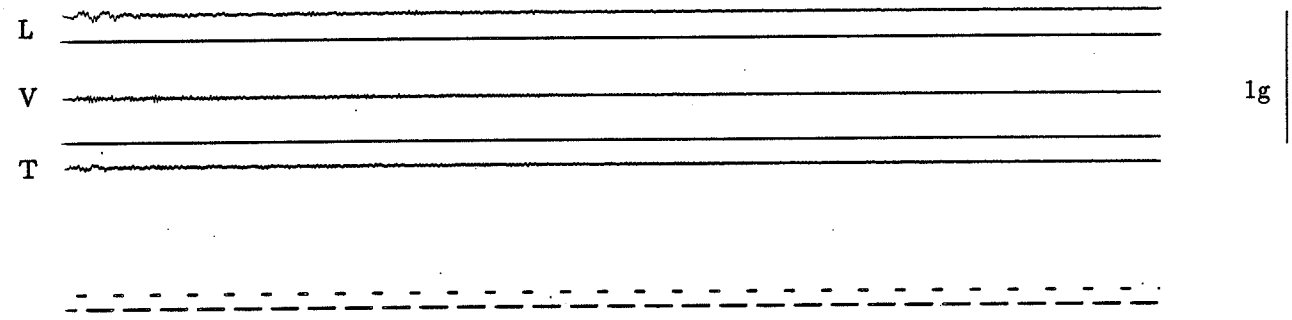
GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence
Event: 1985 12 25 at 18:49 U.T.

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada
Magnitude 5.3

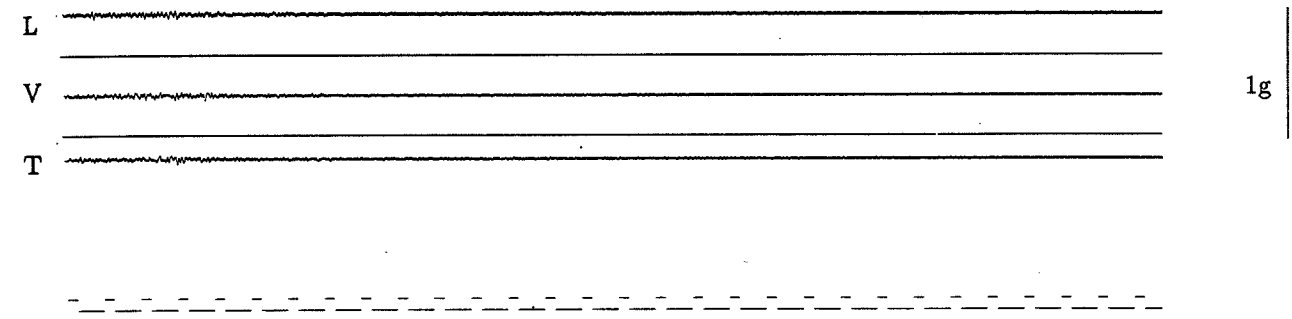
Site 1: Iverson — Latitude 62.2018°N — Longitude 124.3700°W — Elevation 792 m
Instrument SMA-1 — +L=10° — Distance 26 km



Site 2: Slide Mountain — Latitude 62.2335°N — Longitude 124.1675°W — Elevation 914 m
Instrument SMA-1 — +L=330° — Distance 30 km



Site 3: Battlement Creek — Latitude 62.1262°N — Longitude 123.8332°W — Elevation 1067 m
Instrument SMA-1 — +L=0° — Distance 29 km



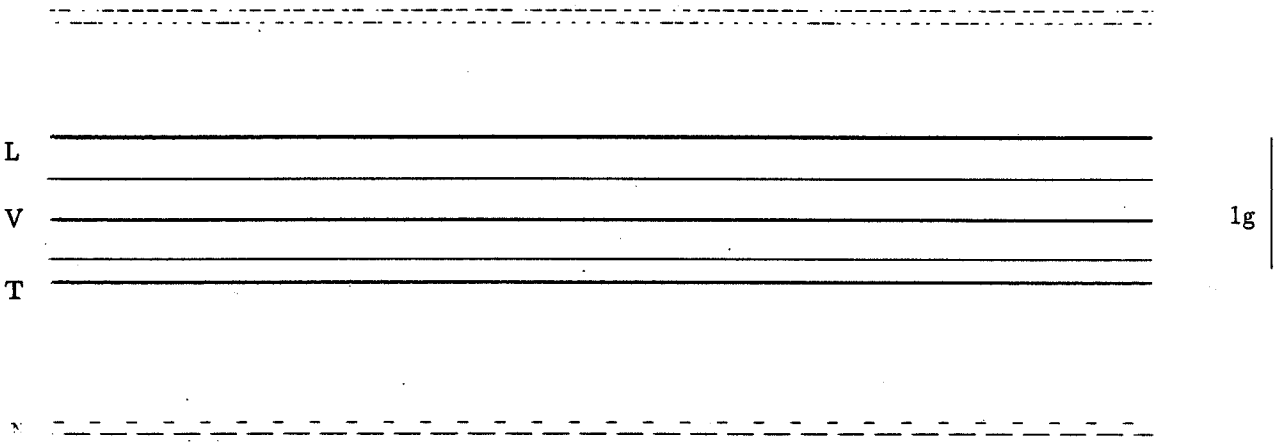
Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

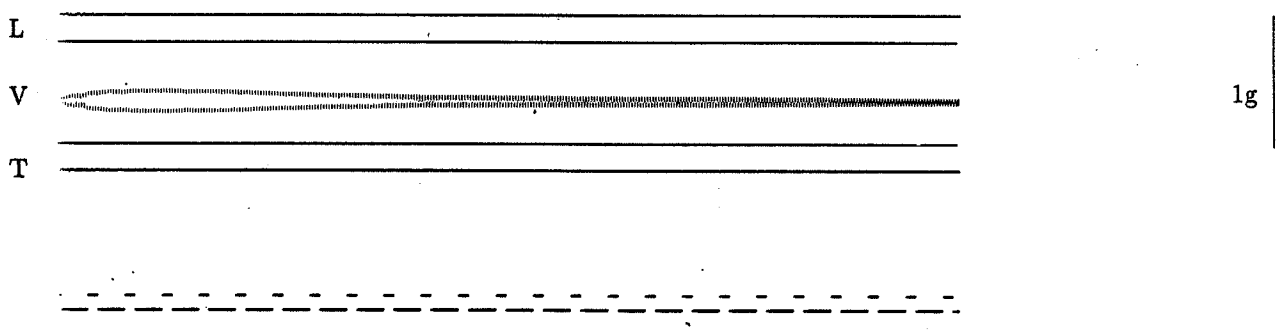
Event: 1985 12 26 at 22:59 U.T. *Magnitude 4.4*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 28 km



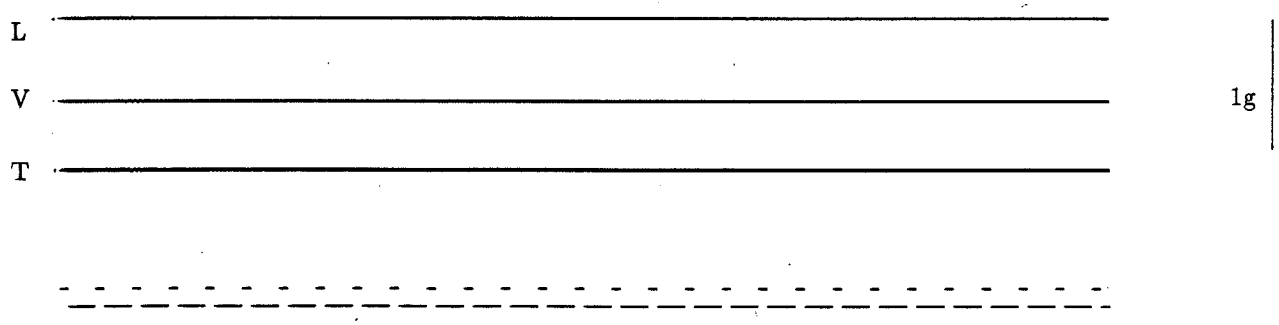
Event: 1985 12 29 at 01:21 U.T. *Magnitude 3.5*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 5 km



Event: 1985 12 29 at 13:03 U.T. *Magnitude*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance ?? km



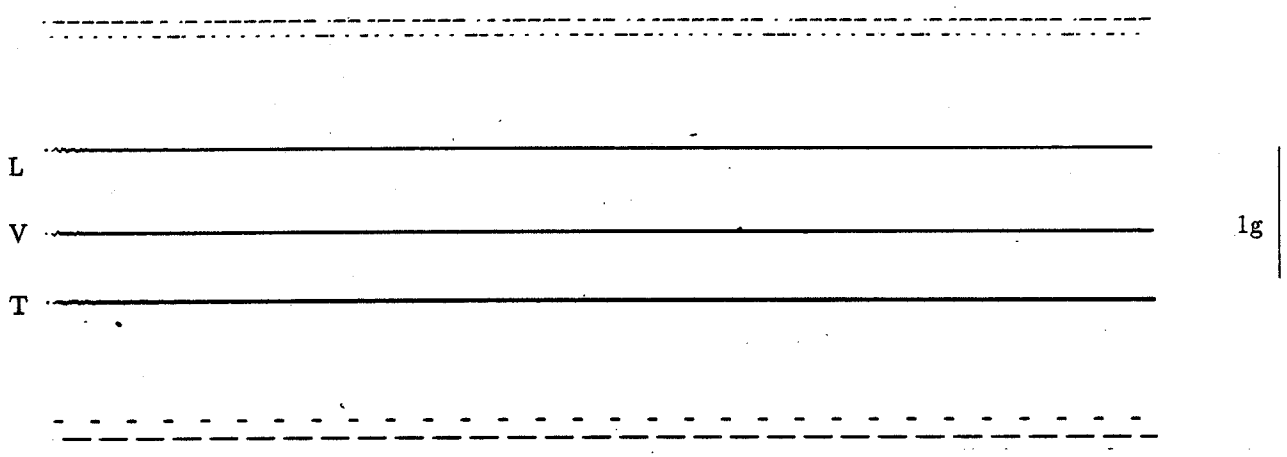
Canada

GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

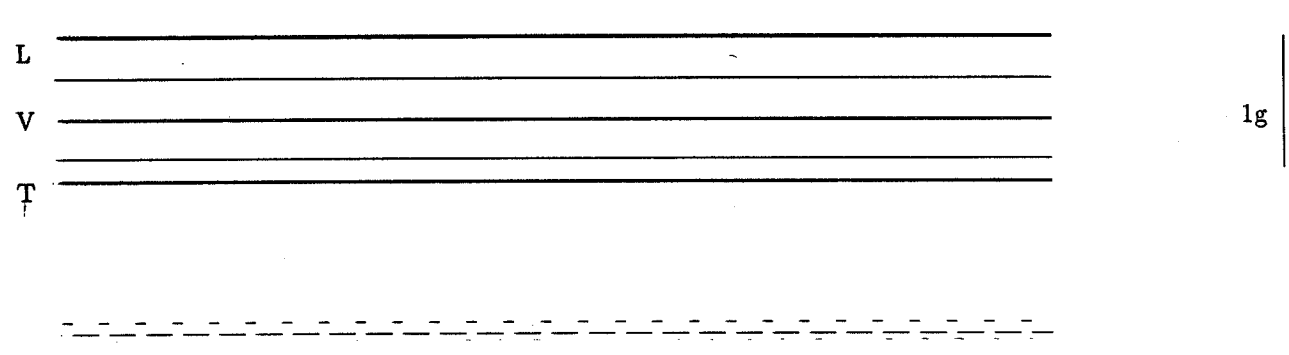
Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 12 29 at 14:02 U.T. *Magnitude 3.7*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance 6 km

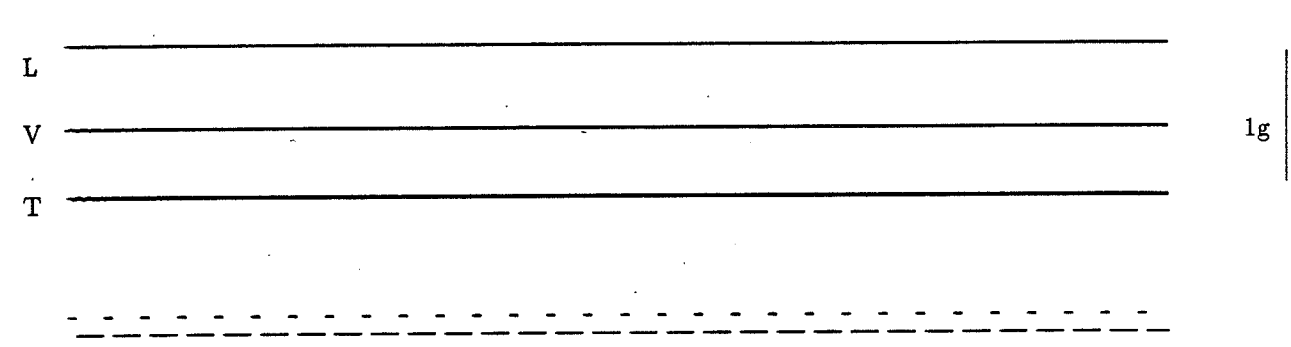


Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 35 km



Event: 1985 12 29 at 16:12 U.T. *Magnitude 3.9*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance 10 km



Canada

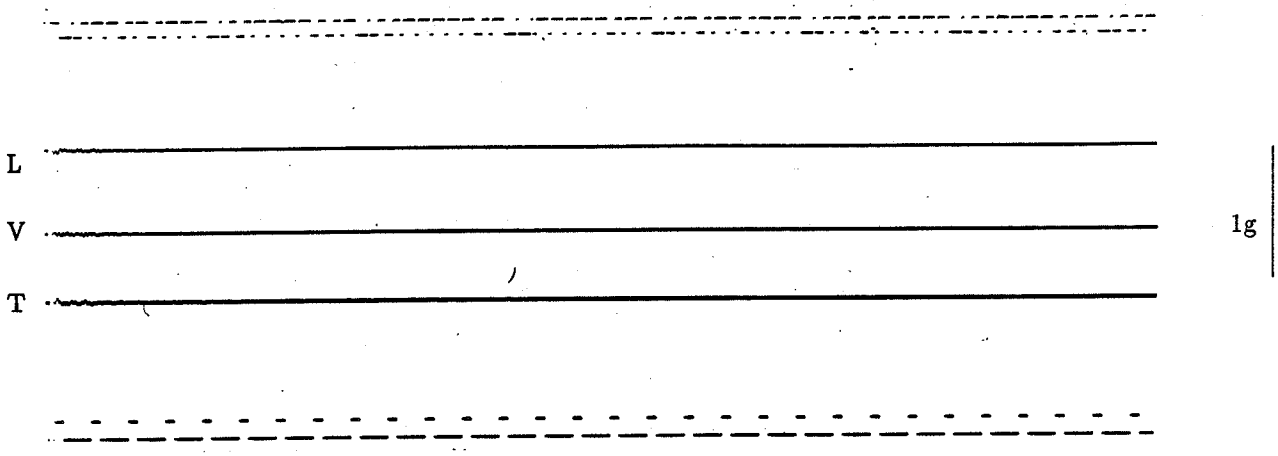
GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

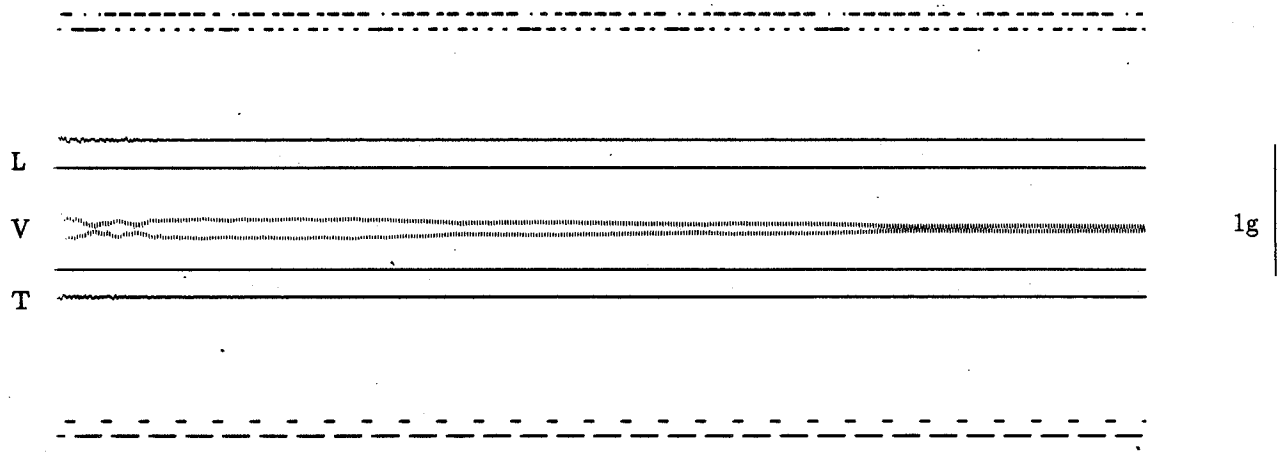
Event: 1985 12 29 at 19:15 U.T.

Magnitude 4.0

Site 1: Iverson — Latitude 62.2018°N — Longitude 124.3700°W — Elevation 792 m
Instrument SMA-1 — +L=10° — Distance 9 km



Site 2: Slide Mountain — Latitude 62.2335°N — Longitude 124.1675°W — Elevation 914 m
Instrument SMA-1 — +L=330° — Distance 14 km



Canada

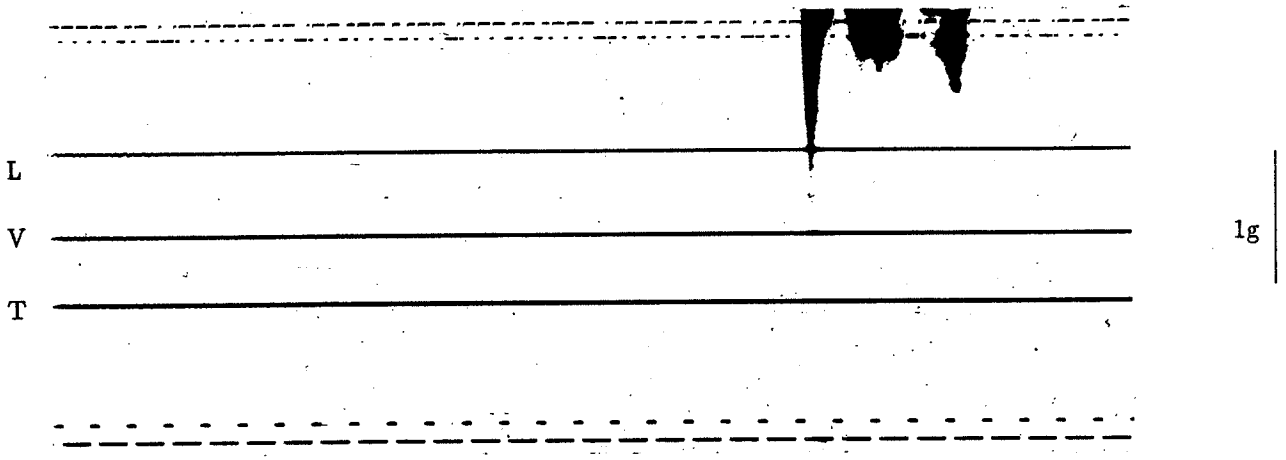
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1985 12 30 at 18:55 U.T. *Magnitude 4.8*

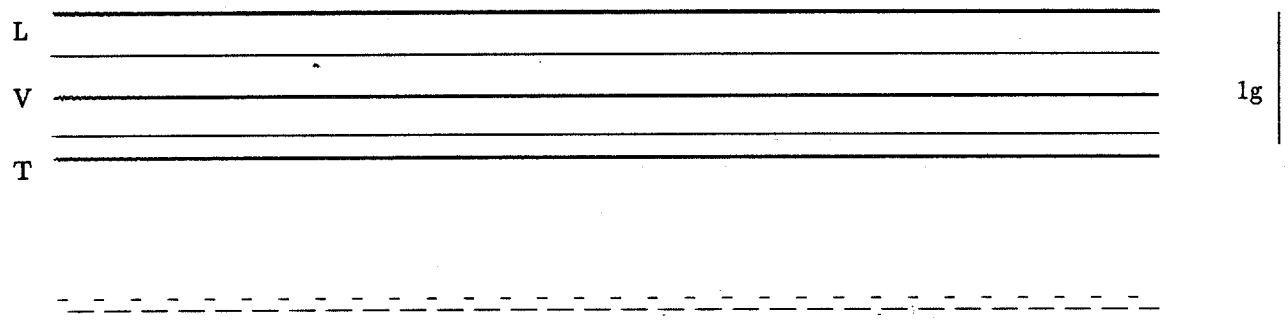
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 23 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

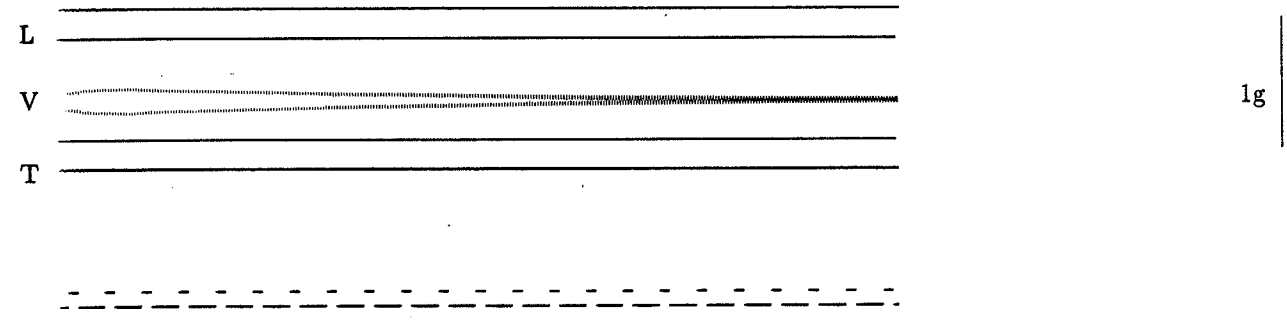
Instrument SMA-1 +L=0° Distance 19 km



Event: 1985 12 31 at 10:43 U.T. *Magnitude*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance ?? km



Canada

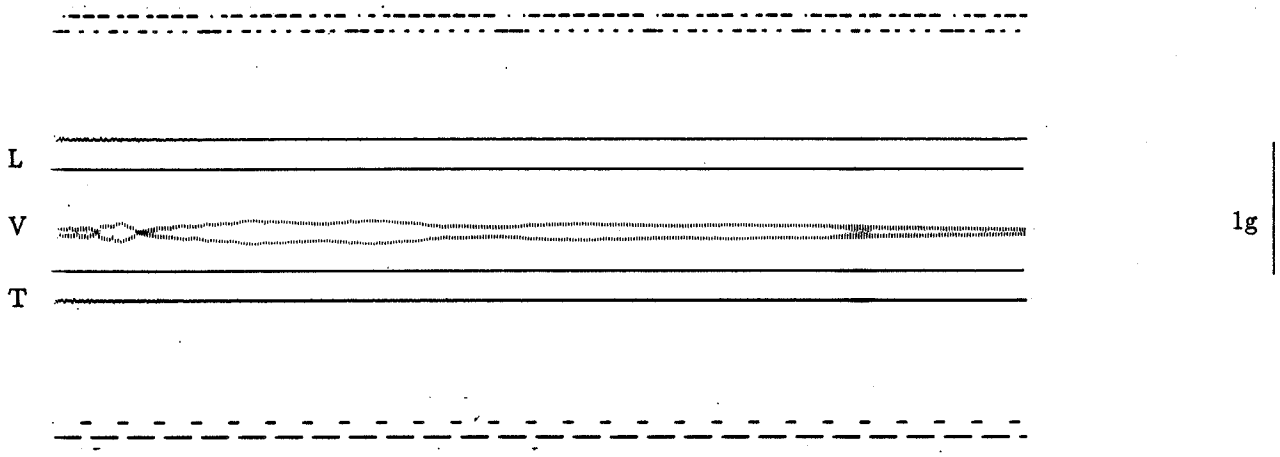
GEOLOGICAL SURVEY OF CANADA — STRONG MOTION PROGRAM

Nahanni Earthquake Sequence — District of Mackenzie, N.W.T., Canada

Event: 1985 12 31 at 18:34 U.T. — *Magnitude 3.9*

Site 2: Slide Mountain — Latitude 62.2335°N — Longitude 124.1675°W — Elevation 914 m

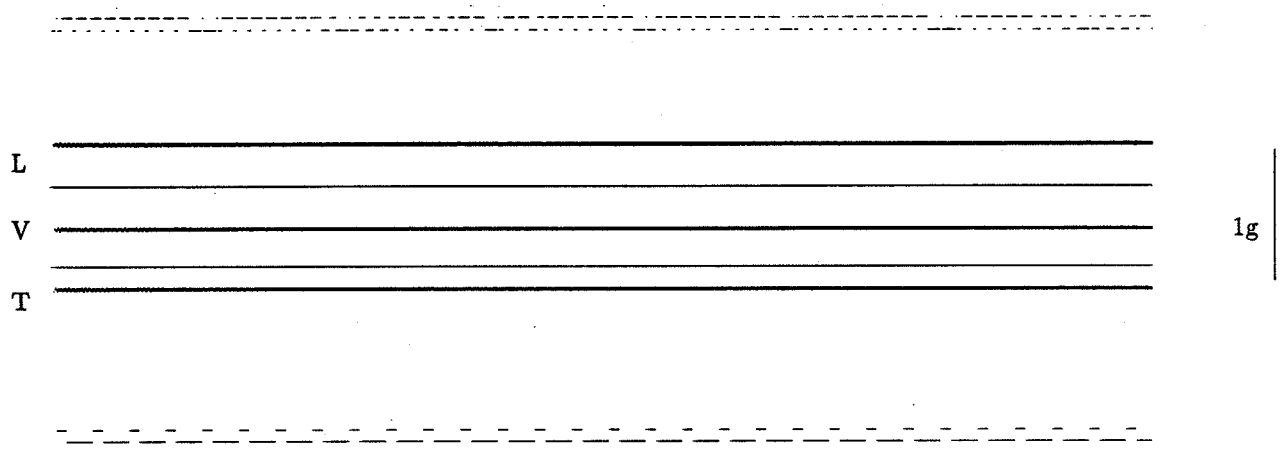
Instrument SMA-1 — +L=330° — Distance 16 km



Event: 1986 01 01 at 04:37 U.T. — *Magnitude 4.8*

Site 3: Battlement Creek — Latitude 62.1262°N — Longitude 123.8332°W — Elevation 1067 m

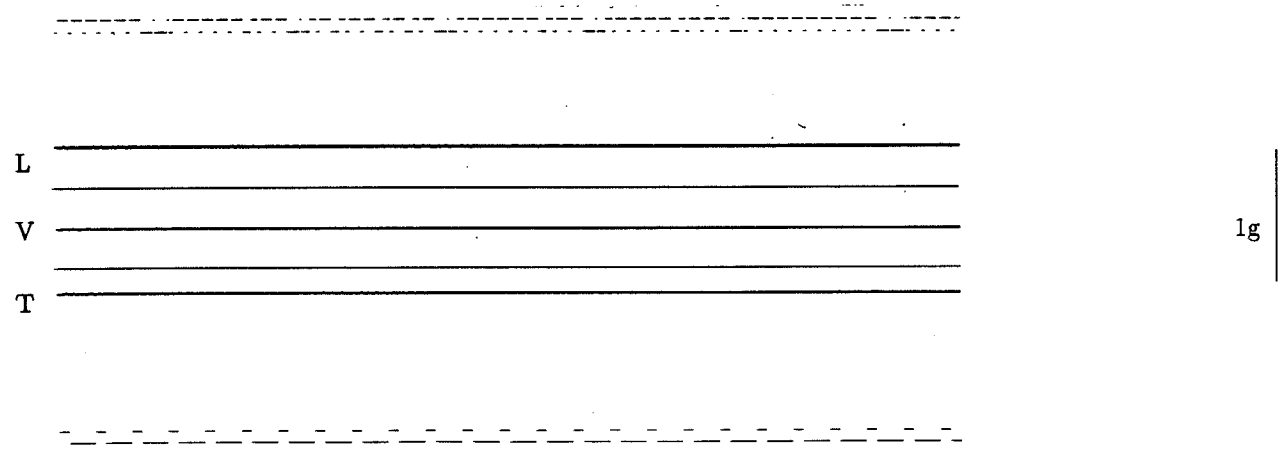
Instrument SMA-1 — +L=0° — Distance 22 km



Event: 1986 01 11 at 21:54 U.T. — *Magnitude 4.0*

Site 3: Battlement Creek — Latitude 62.1262°N — Longitude 123.8332°W — Elevation 1067 m

Instrument SMA-1 — +L=0° — Distance 22 km



Canada

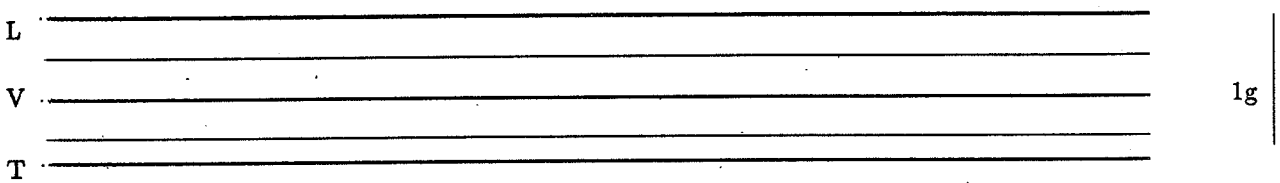
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 01 15 at 10:42 U.T. *Magnitude 3.7*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

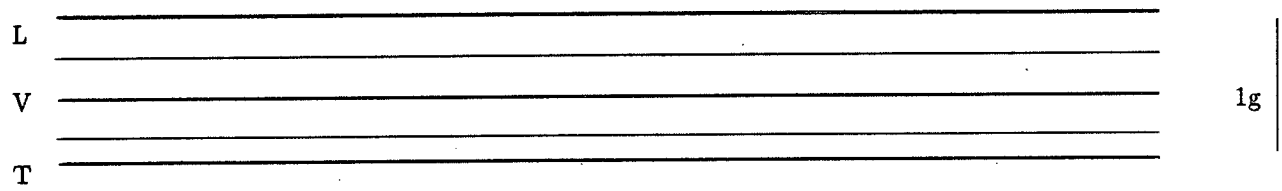
Instrument SMA-1 +L=0° Distance 21 km



Event: 1986 01 16 at 14:40 U.T. *Magnitude 3.9*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance 36 km



Canada

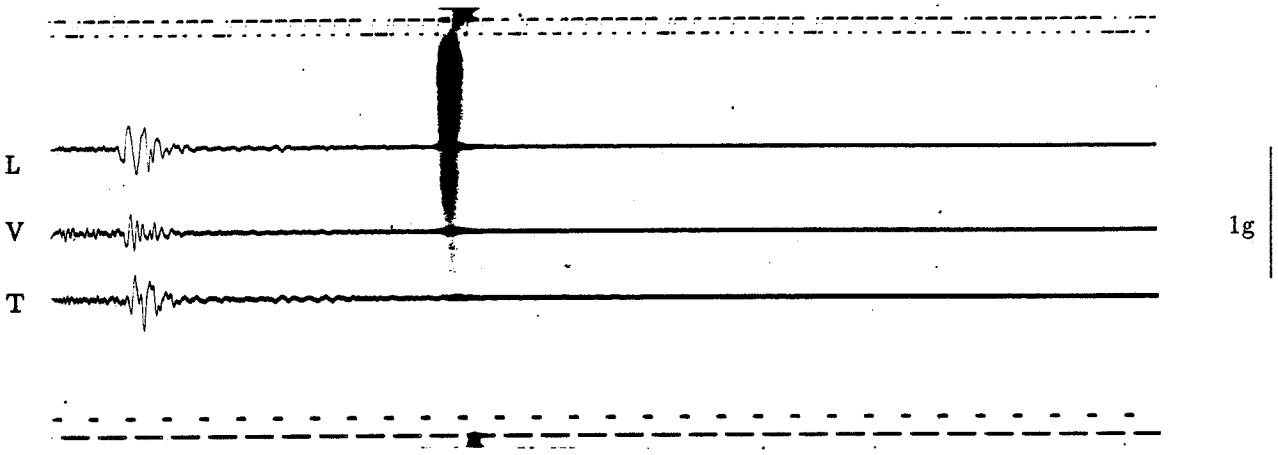
GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

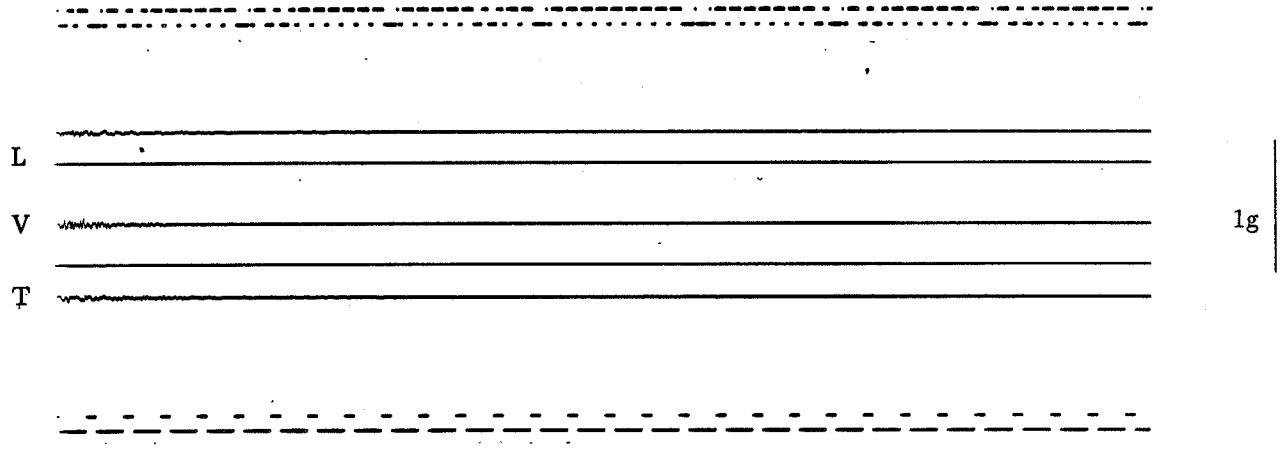
Event: 1986 01 30 at 06:06 U.T.

Magnitude 4.6

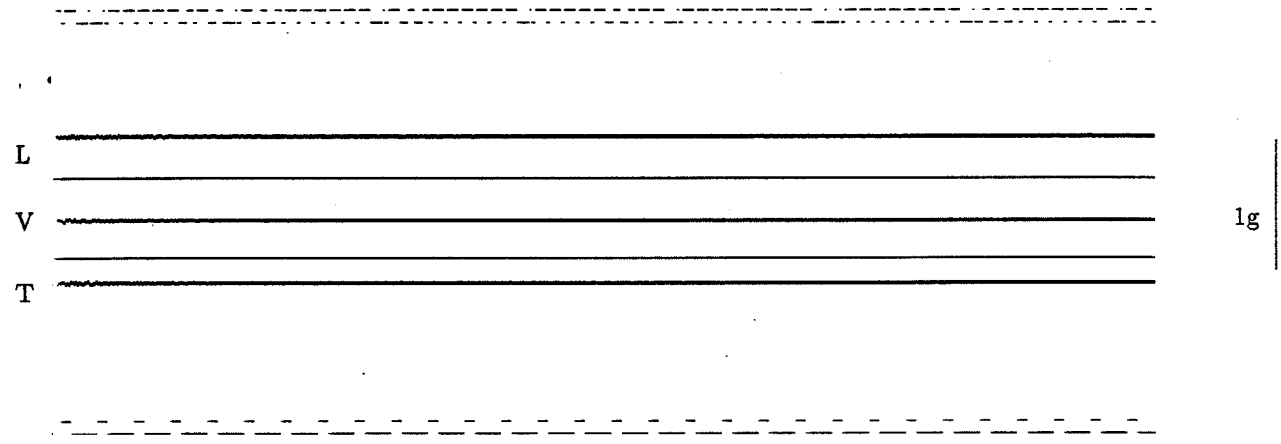
Site 1: Iverson — Latitude 62.2018°N — Longitude 124.3700°W — Elevation 792 m
Instrument SMA-1 — +L=10° — Distance 3 km



Site 2: Slide Mountain — Latitude 62.2335°N — Longitude 124.1675°W — Elevation 914 m
Instrument SMA-1 — +L=330° — Distance 8 km



Site 3: Battlement Creek — Latitude 62.1262°N — Longitude 123.8332°W — Elevation 1067 m
Instrument SMA-1 — +L=0° — Distance 28 km



Canada

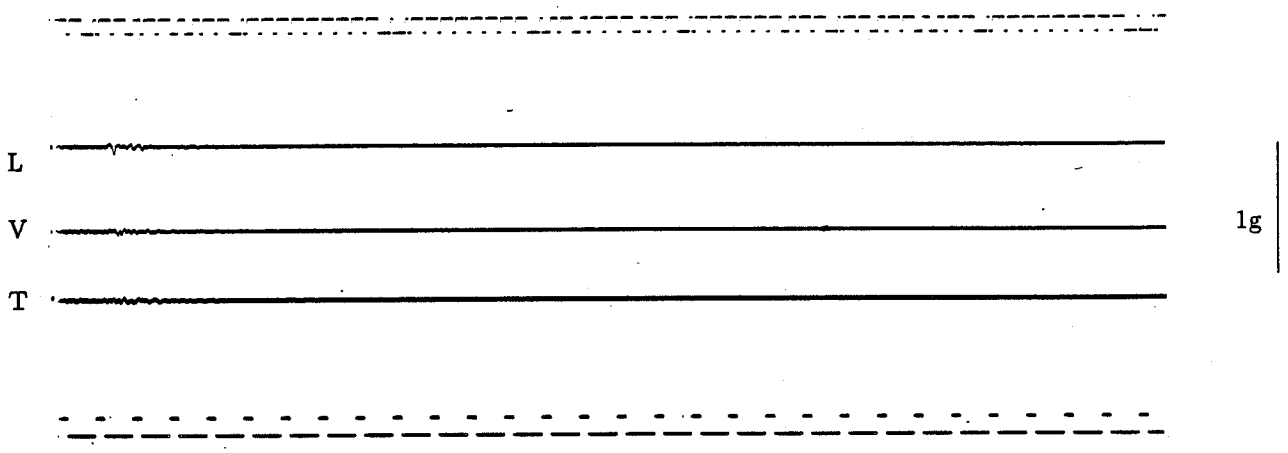
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 02 03 at 20:25 U.T. *Magnitude 3.7*

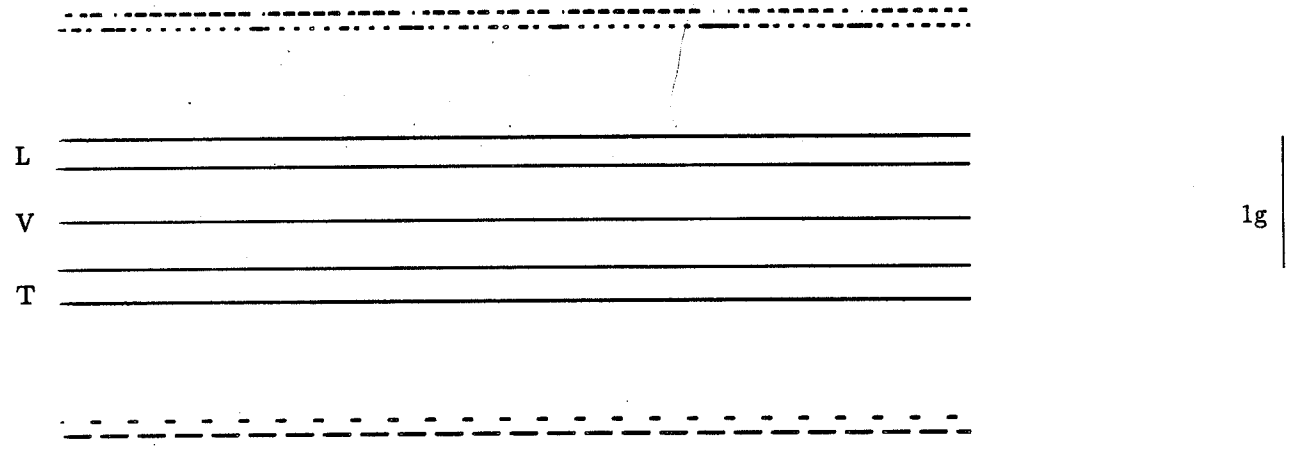
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 5 km



Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

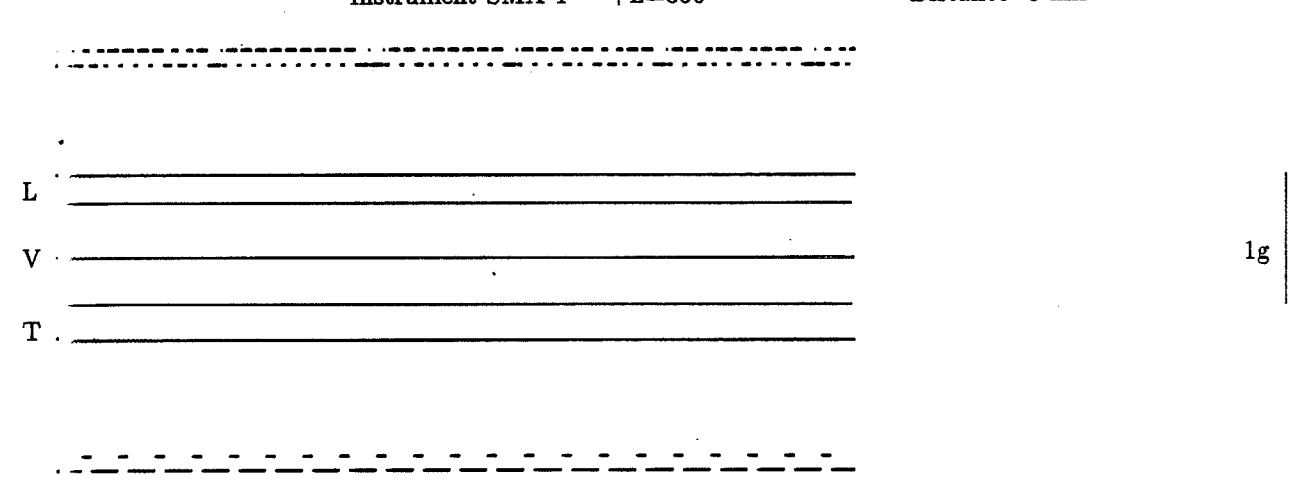
Instrument SMA-1 +L=330° Distance 15 km



Event: 1986 02 08 at 01:01 U.T. *Magnitude 3.7*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 8 km

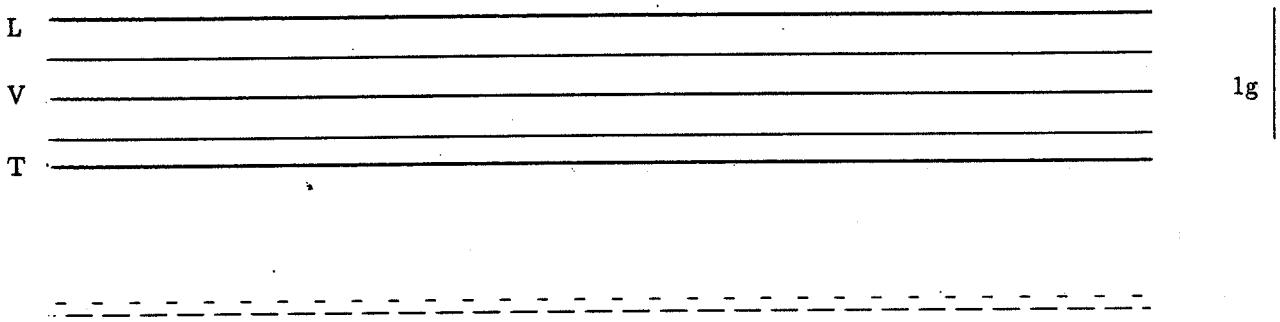


Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence
Event: 1986 02 11 at 21:55 U.T.

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada
Magnitude 4.2

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 26 km



Canada

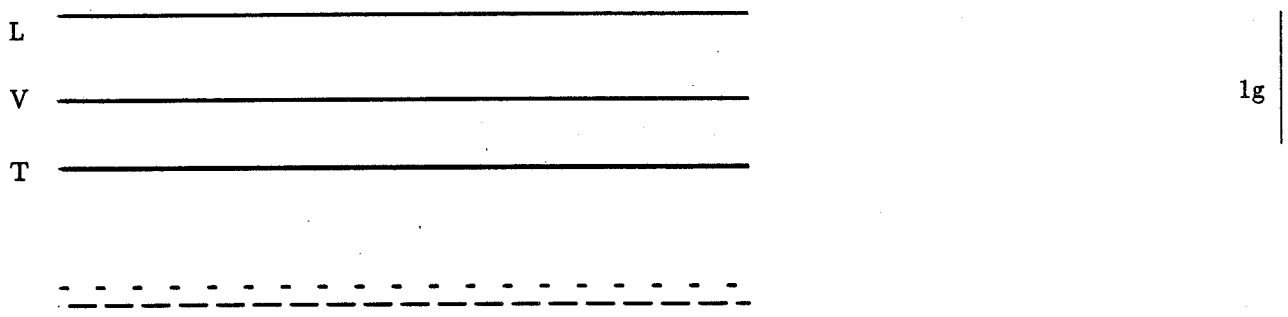
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 02 13 at 08:15 U.T. *Magnitude*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance ?? km

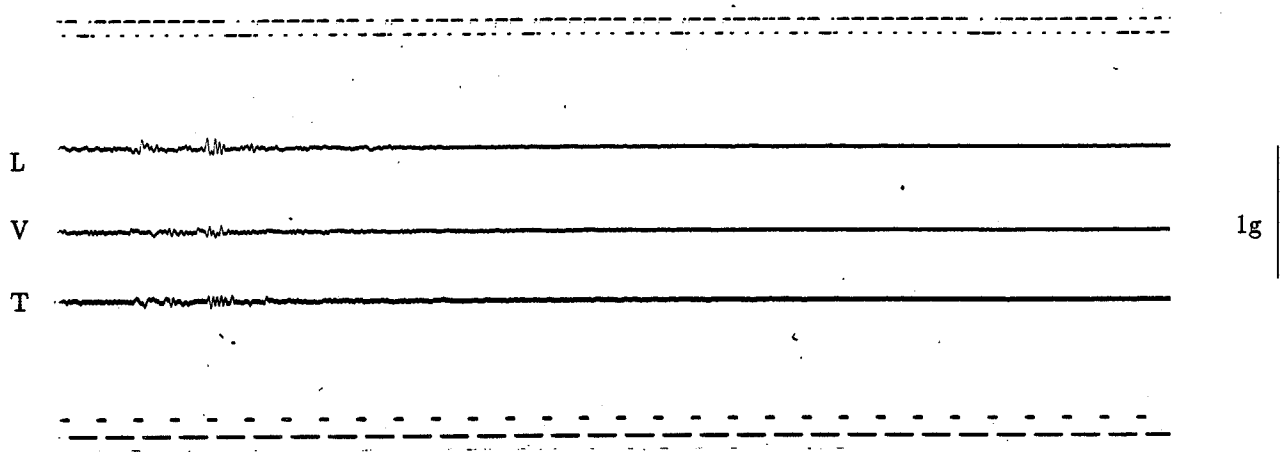


Canada

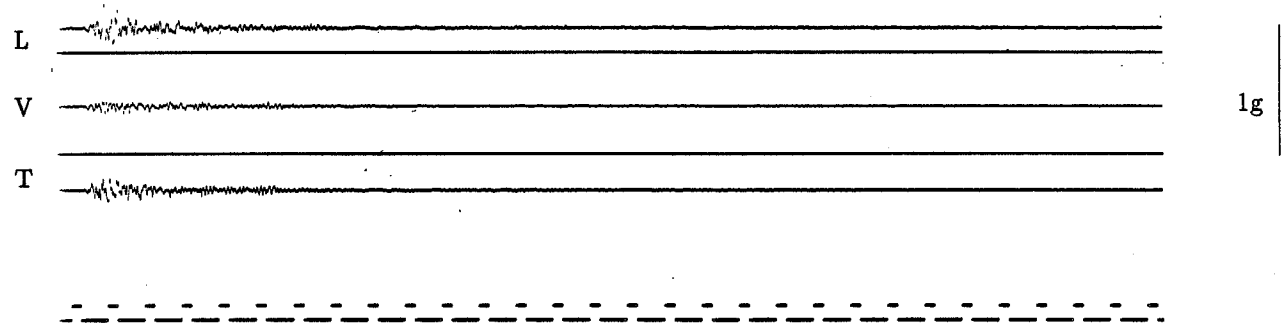
GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence
Event: 1986 02 13 at 20:36 U.T.

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada
Magnitude 5.4

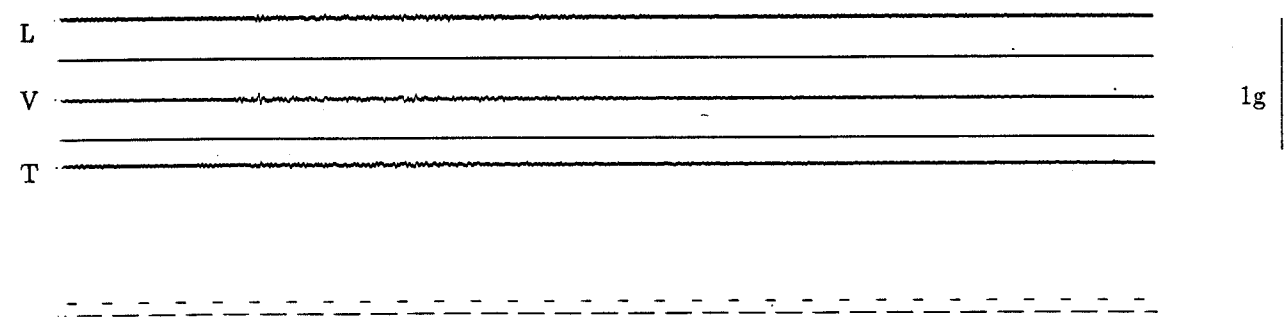
Site 1: Iverson — Latitude 62.2018°N — Longitude 124.3700°W — Elevation 792 m
Instrument SMA-1 — +L=10° — Distance 14 km



Site 2: Slide Mountain — Latitude 62.2335°N — Longitude 124.1675°W — Elevation 914 m
Instrument SMA-1 — +L=330° — Distance 15 km



Site 3: Battlement Creek — Latitude 62.1262°N — Longitude 123.8332°W — Elevation 1067 m
Instrument SMA-1 — +L=0° — Distance 20 km

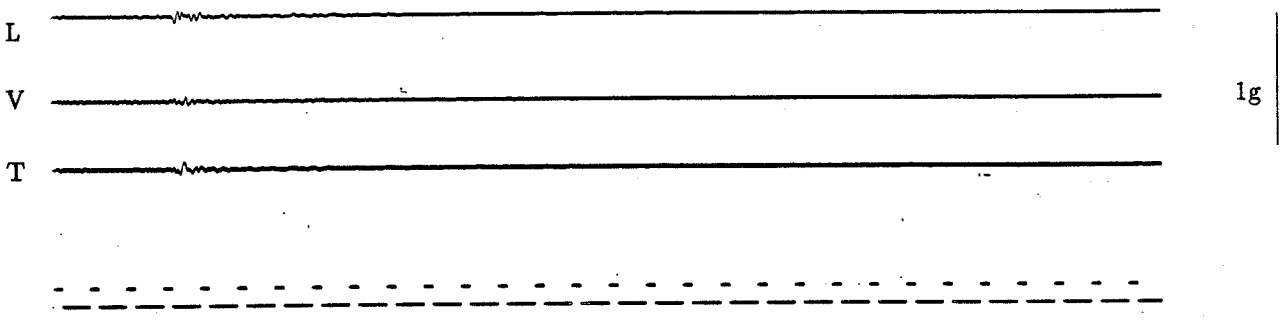


Canada

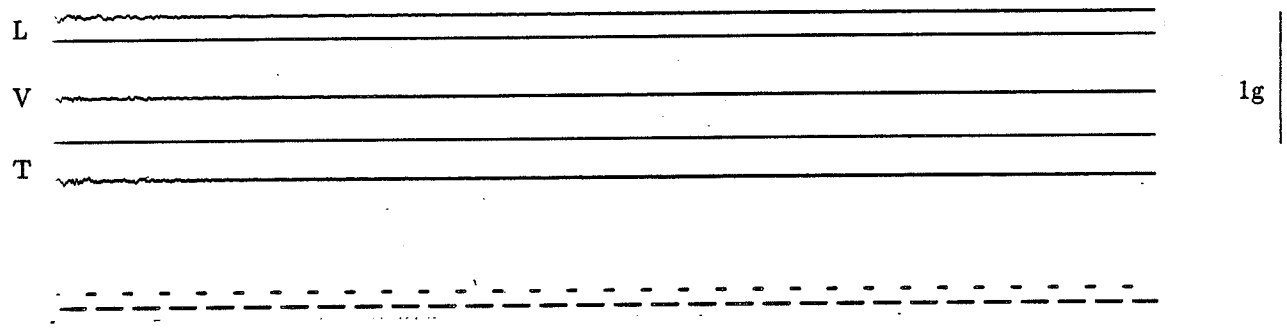
GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence
Event: 1986 02 17 at 12:46 U.T.

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada
Magnitude 4.7

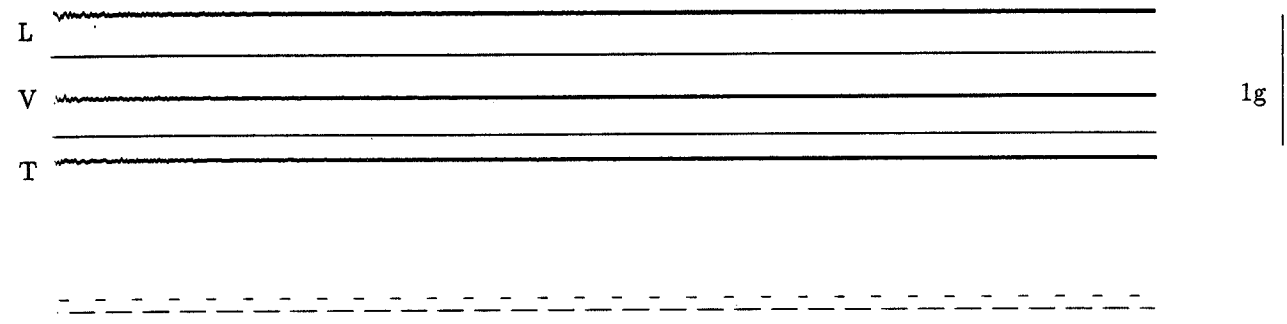
Site 1: Iverson — Latitude 62.2018°N — Longitude 124.3700°W — Elevation 792 m
Instrument SMA-1 — +L=10° — Distance 12 km



Site 2: Slide Mountain — Latitude 62.2335°N — Longitude 124.1675°W — Elevation 914 m
Instrument SMA-1 — +L=330° — Distance 15 km



Site 3: Battlement Creek — Latitude 62.1262°N — Longitude 123.8332°W — Elevation 1067 m
Instrument SMA-1 — +L=0° — Distance 22 km



Canada

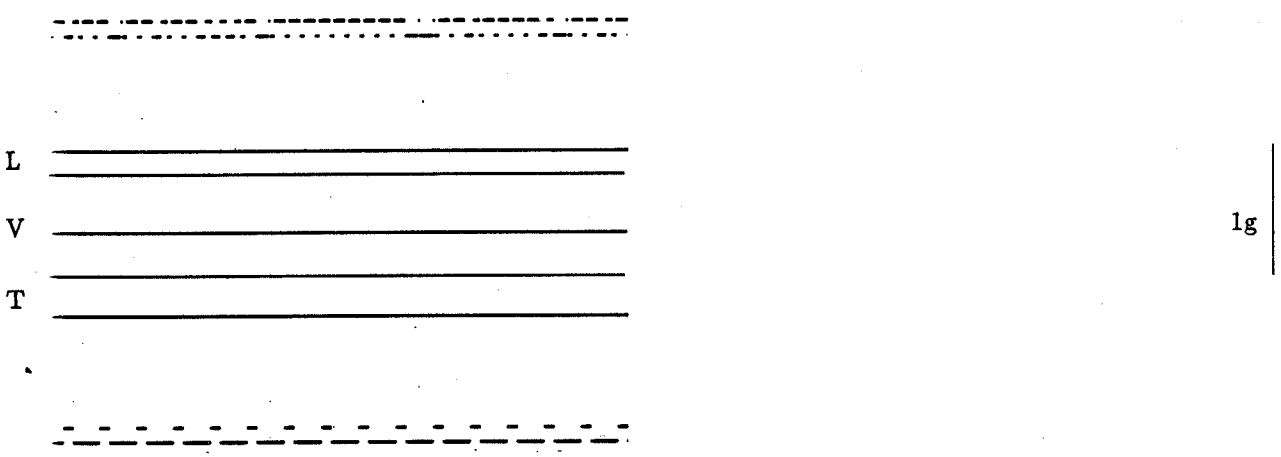
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 02 19 at ?? ?8 U.T. *Magnitude*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance ?? km



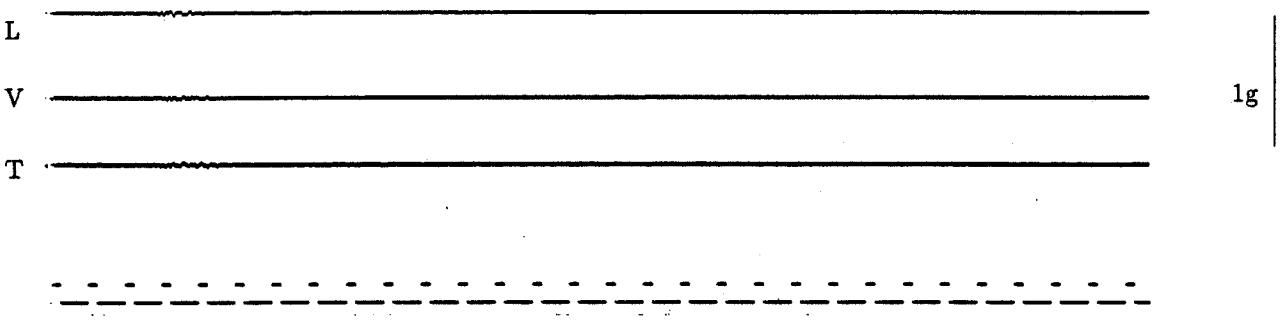
Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

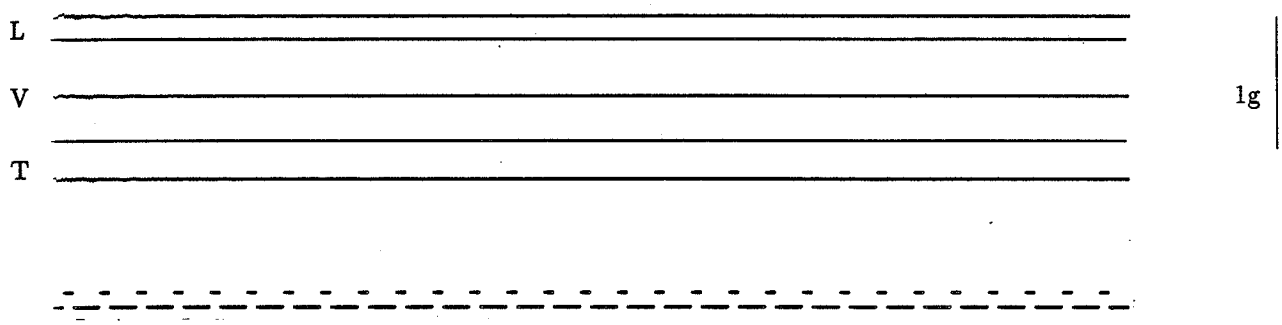
STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

Event: 1986 02 20 at 15:22 U.T. *Magnitude 4.4*

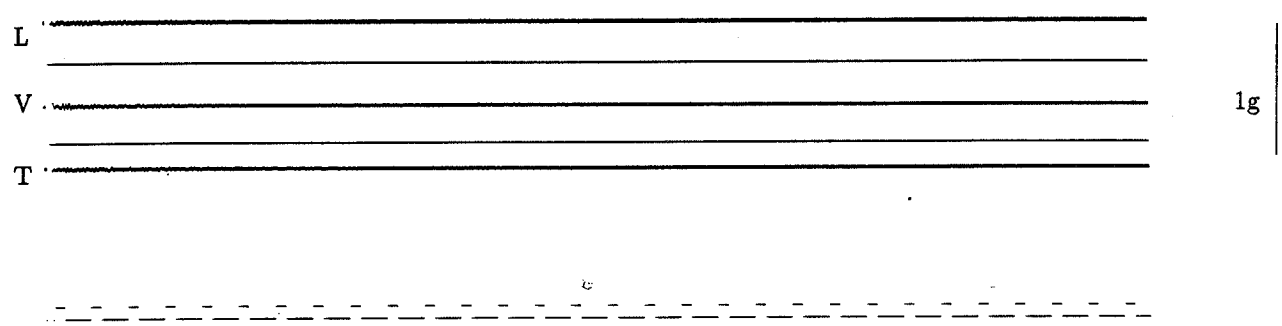
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance 11 km



Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 11 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 20 km



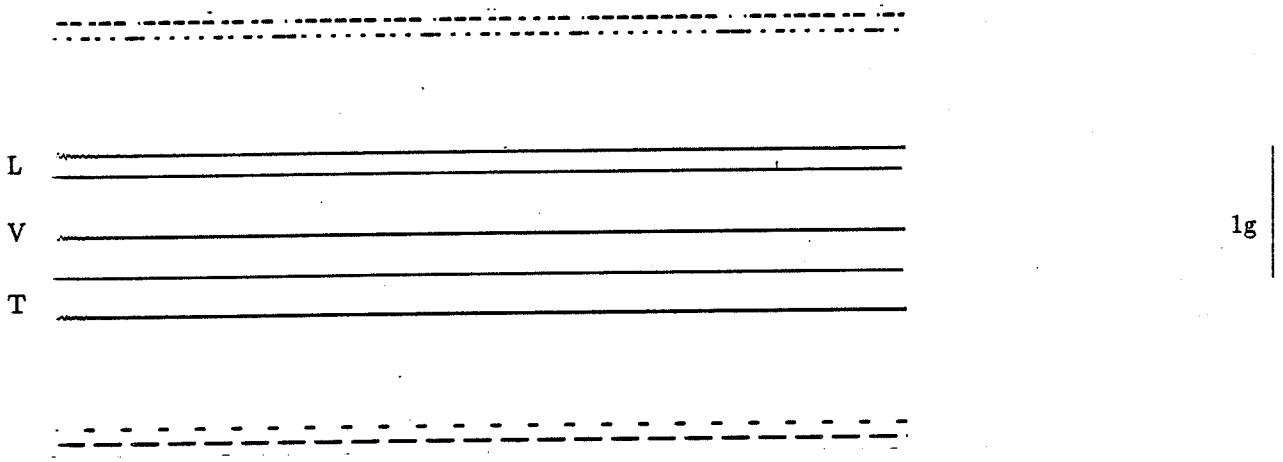
Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

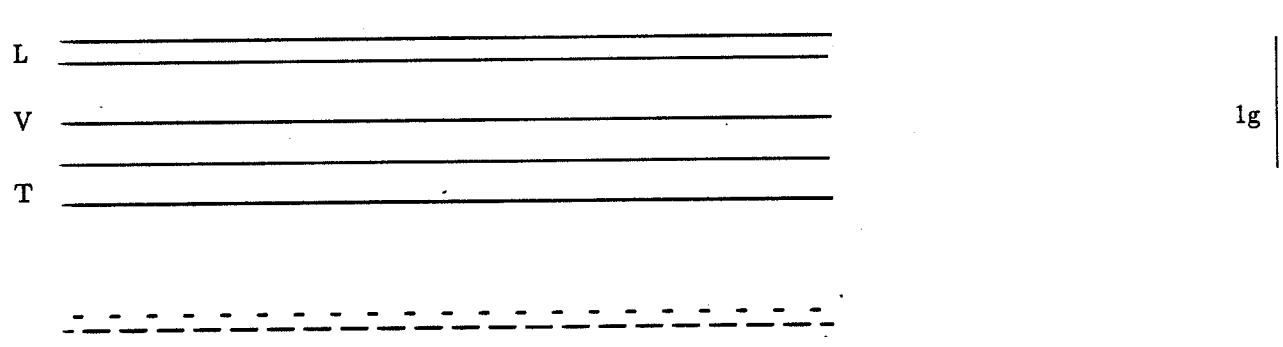
Event: 1986 02 23 at 08:13 U.T. *Magnitude 2.9*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 8 km



Event: 1986 02 25 at 20:42 U.T. *Magnitude*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance ?? km



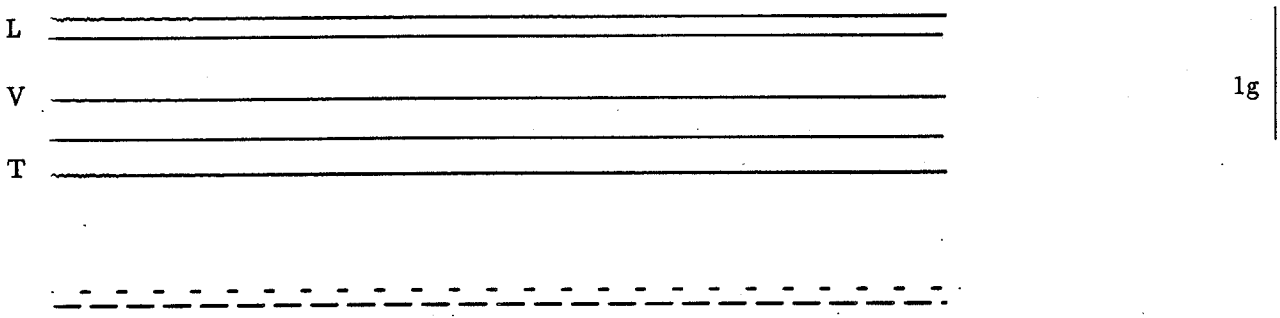
Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

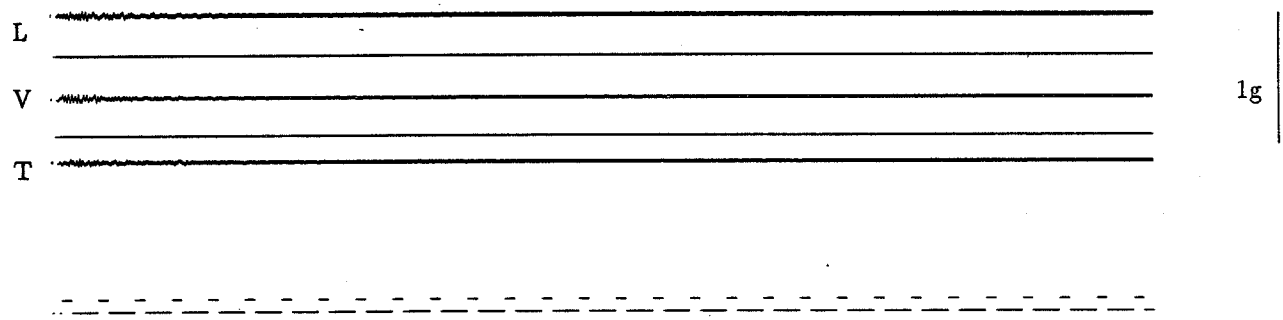
STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

Event: 1986 03 02 at 09:01 U.T. *Magnitude 4.6*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 25 km

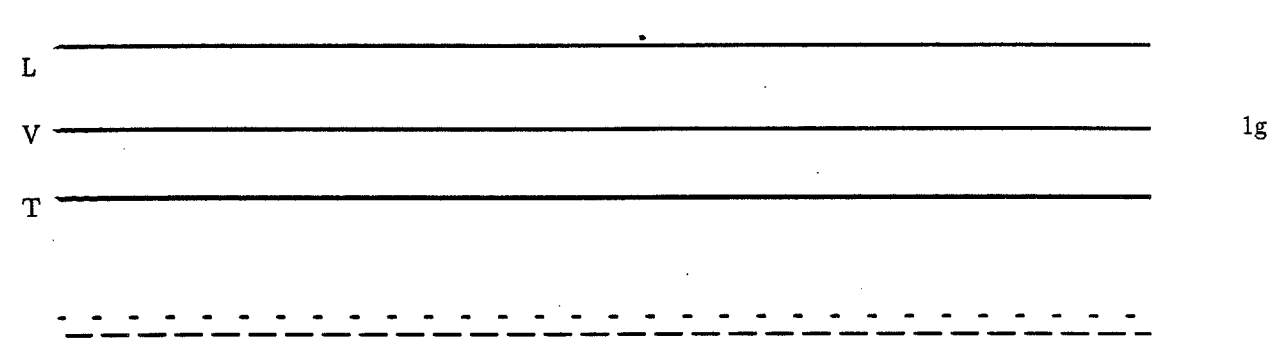


Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 21 km



Event: 1986 03 15 at 02:27 U.T. *Magnitude 3.3*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m
Instrument SMA-1 +L=10° Distance 5 km



Canada

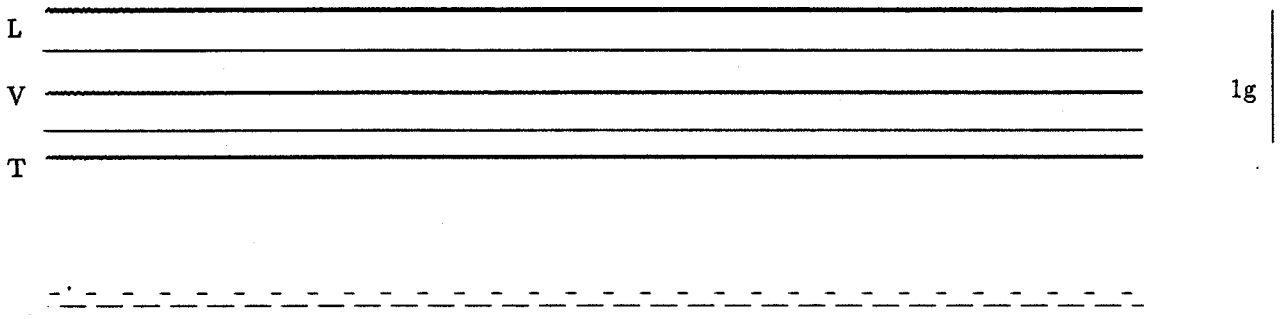
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 03 21 at 08:15 U.T. *Magnitude 4.0*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

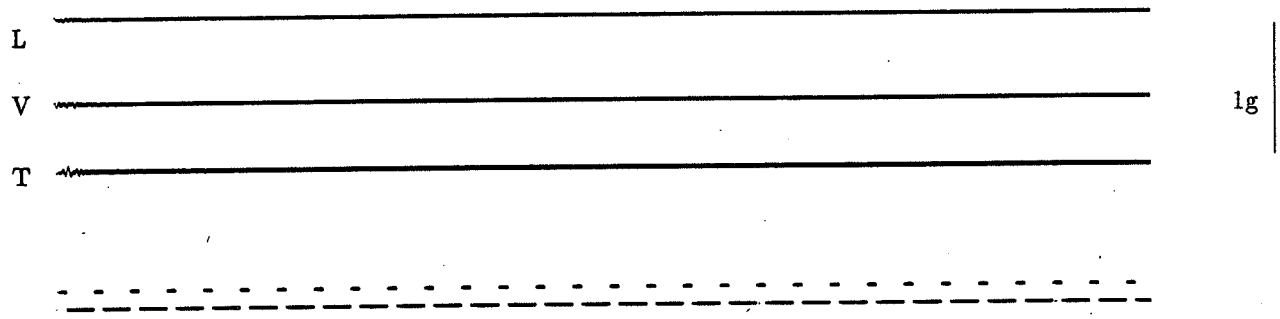
Instrument SMA-1 +L=0° Distance 22 km



Event: 1986 03 25 at 14:39 U.T. *Magnitude 3.3*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

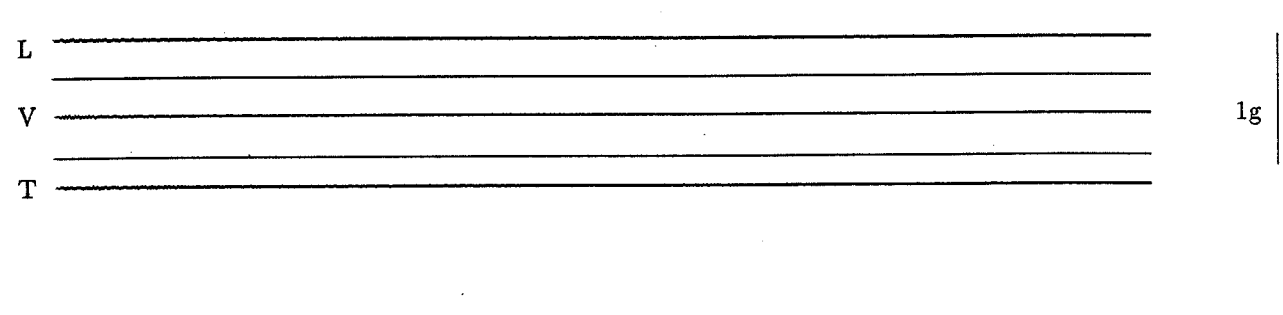
Instrument SMA-1 +L=10° Distance 12 km



Event: 1986 05 03 at 23:05 U.T. *Magnitude 5.0*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance 21 km



Canada

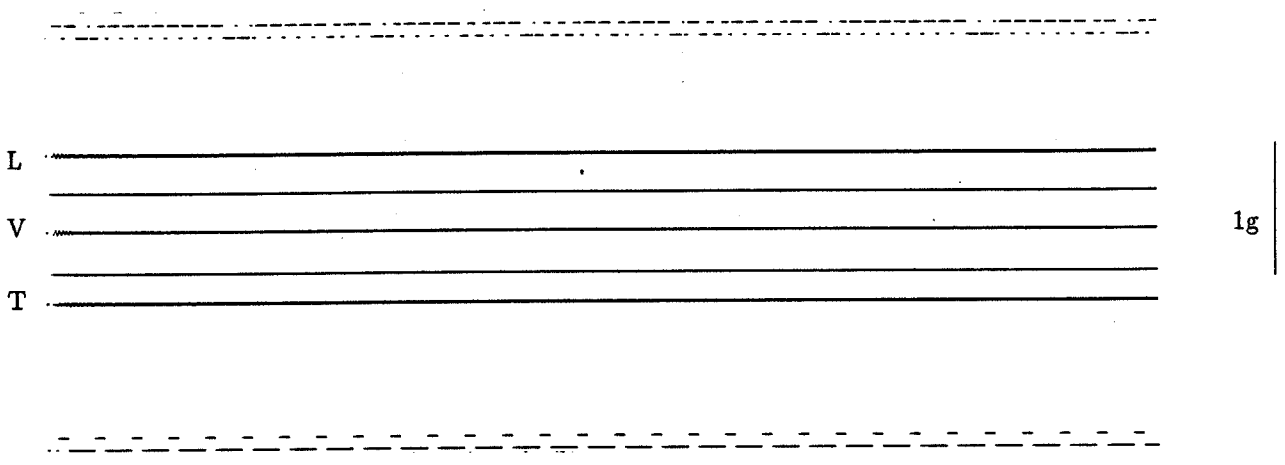
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 05 16 at 17:30 U.T. *Magnitude 4.1*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

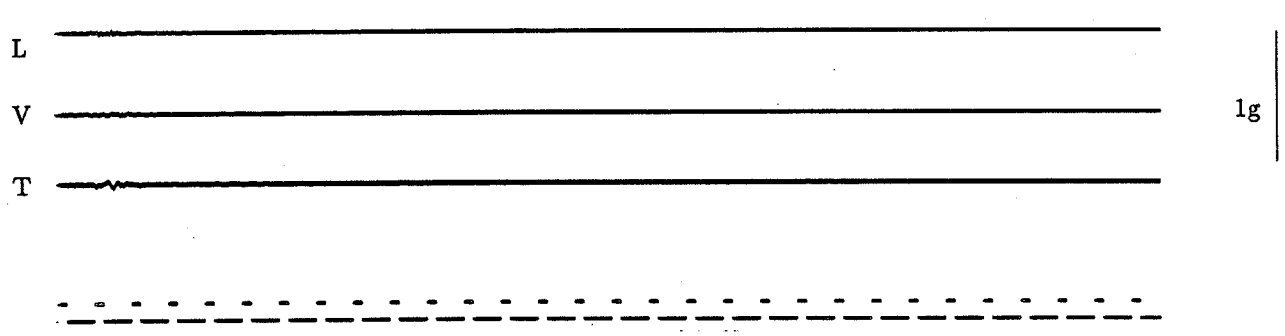
Instrument SMA-1 +L=0° Distance 23 km



Event: 1986 05 18 at 04:09 U.T. *Magnitude 4.2*

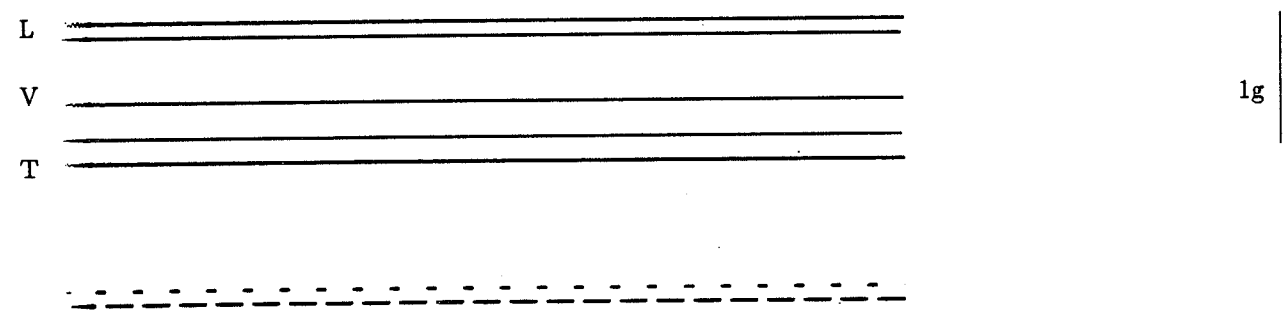
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 10 km



Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 8 km



Canada

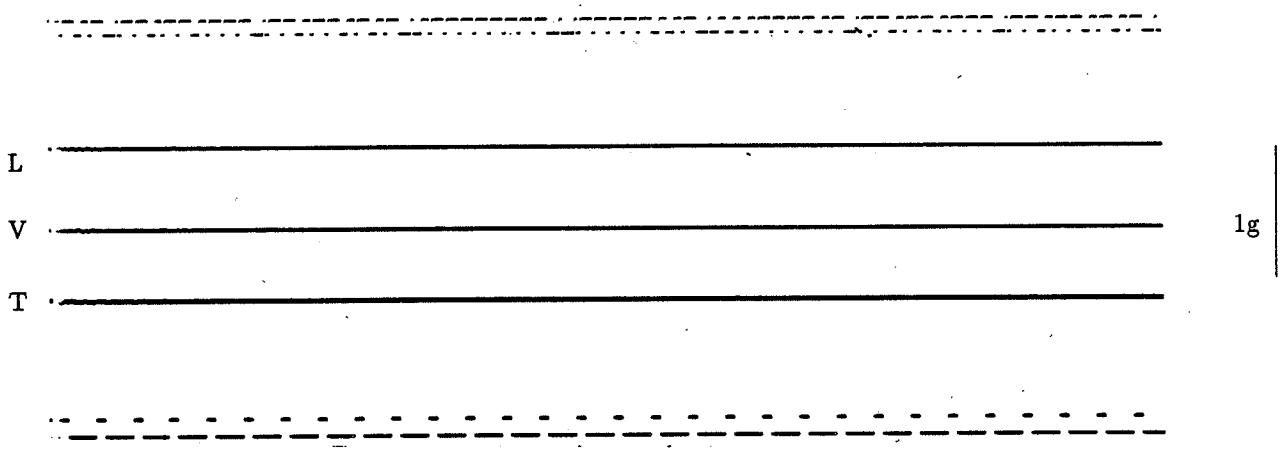
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 06 03 at 14:47 U.T. *Magnitude 3.8*

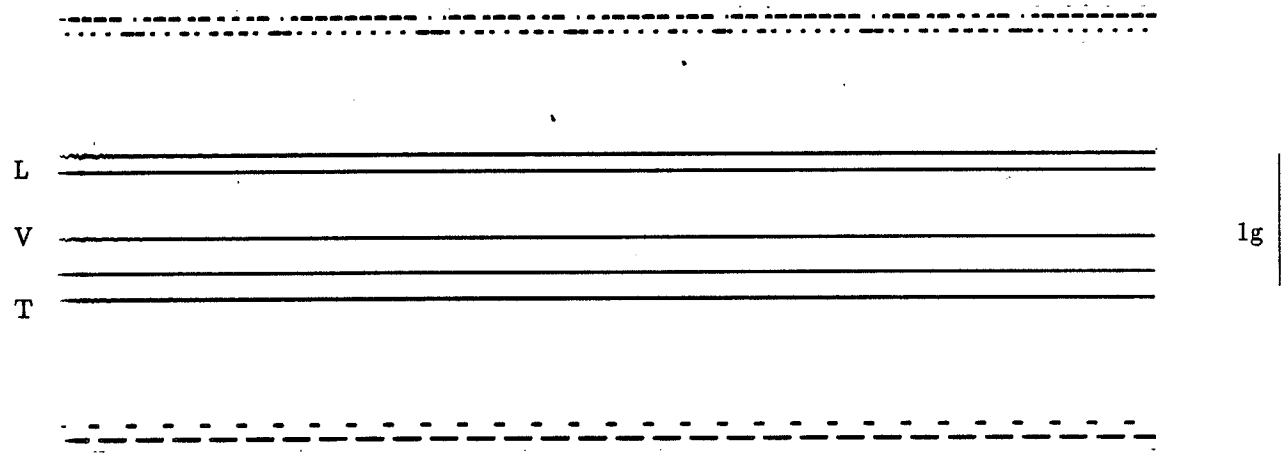
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 24 km



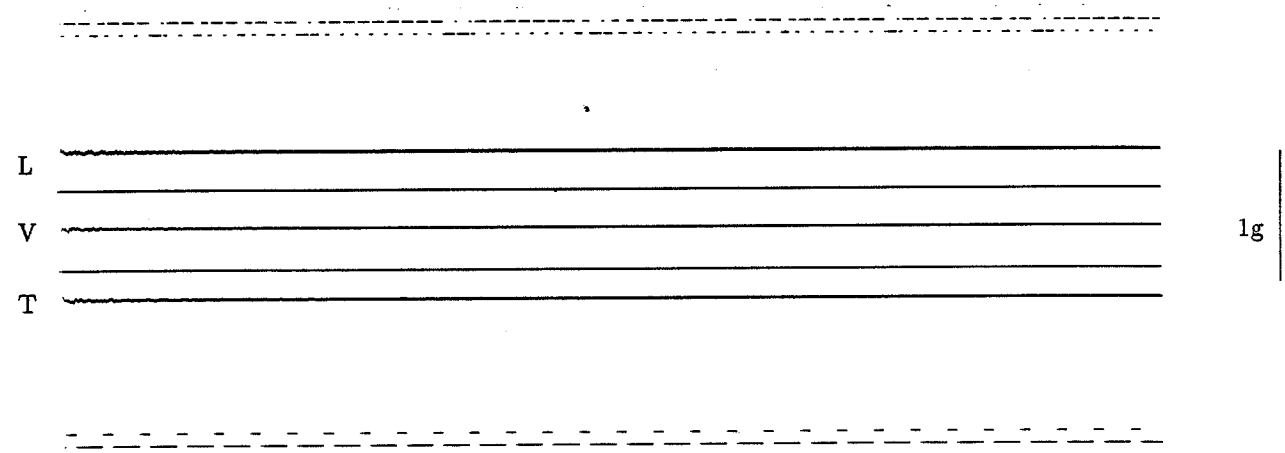
Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 19 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance 10 km



Canada

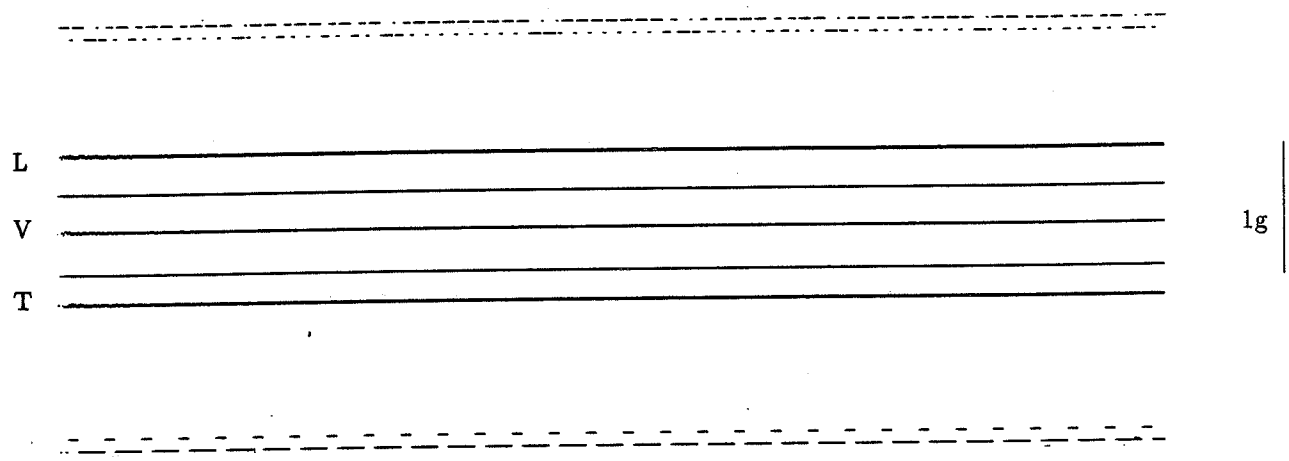
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 06 13 at 15:33 U.T. *Magnitude*

Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance ?? km



Canada

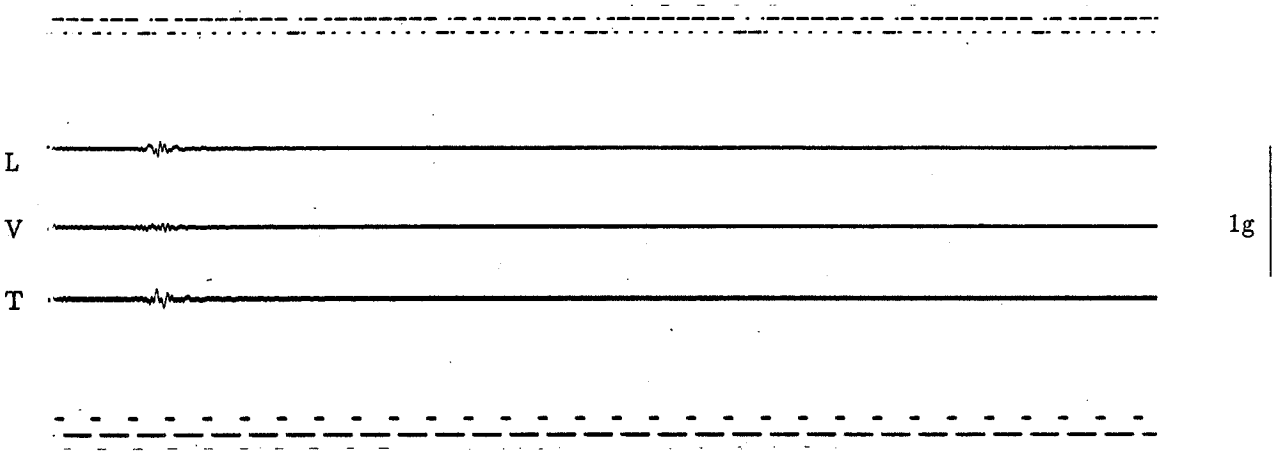
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 06 15 at 02:02 U.T. *Magnitude 4.0*

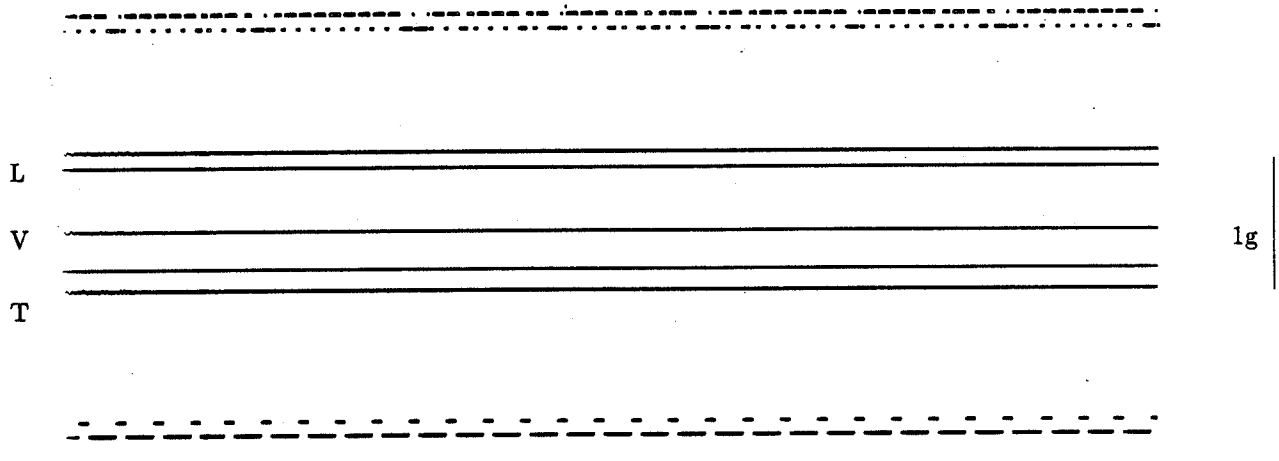
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 5 km



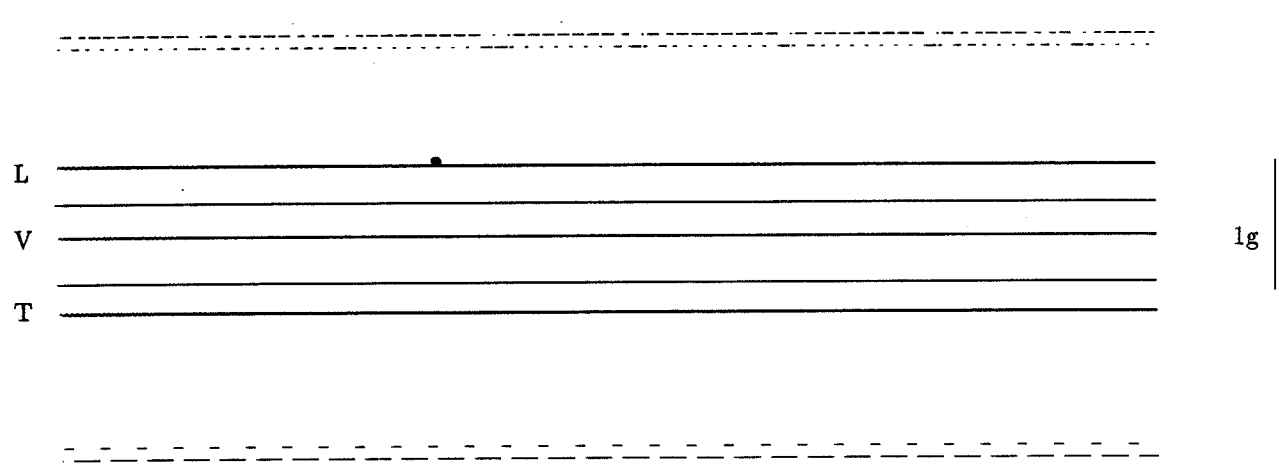
Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 7 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance 27 km



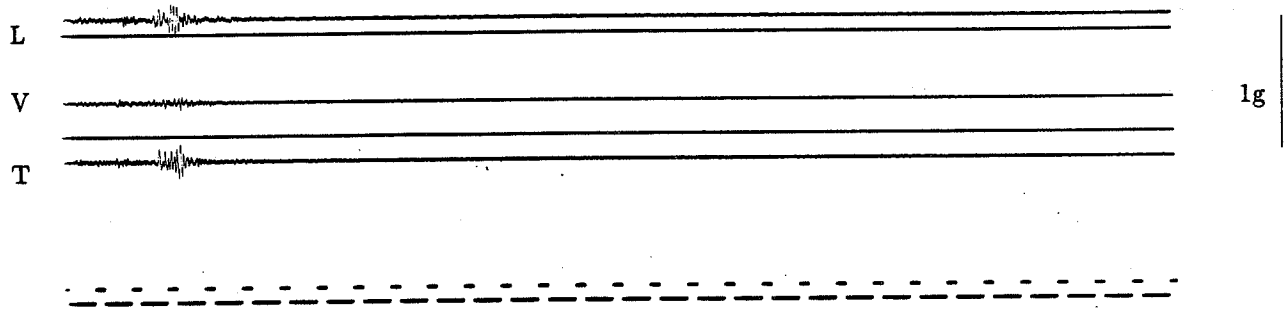
Canada

GEOLOGICAL SURVEY OF CANADA
Nahanni Earthquake Sequence

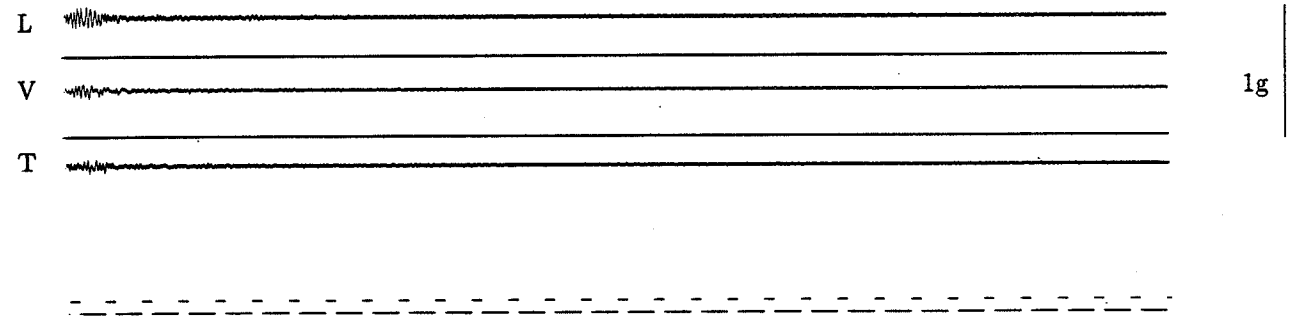
STRONG MOTION PROGRAM
District of Mackenzie, N.W.T., Canada

Event: 1986 07 04 at 08:54 U.T. *Magnitude 4.8*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 7 km

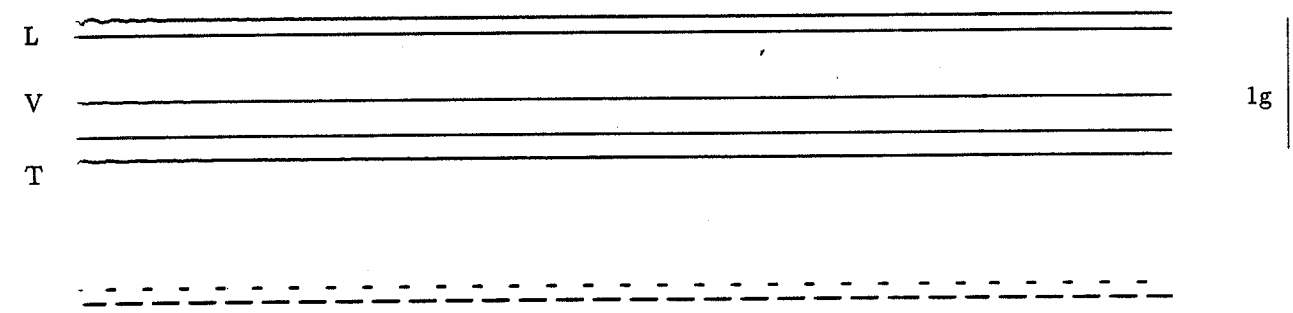


Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m
Instrument SMA-1 +L=0° Distance 9 km



Event: 1986 08 12 at 12:39 U.T. *Magnitude 4.4*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 22 km



Canada

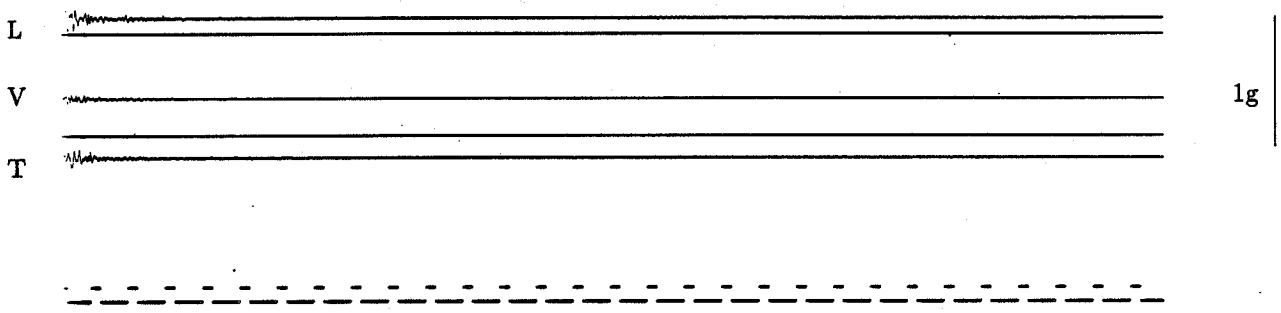
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 08 16 at 09:51 U.T. *Magnitude 4.0*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

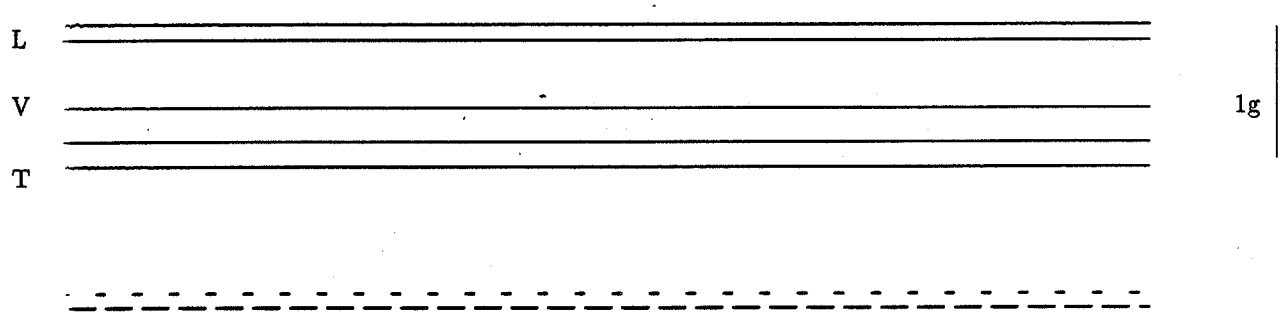
Instrument SMA-1 +L=330° Distance 12 km



Event: 1986 08 28 at 11:47 U.T. *Magnitude 4.2*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 4 km



Canada

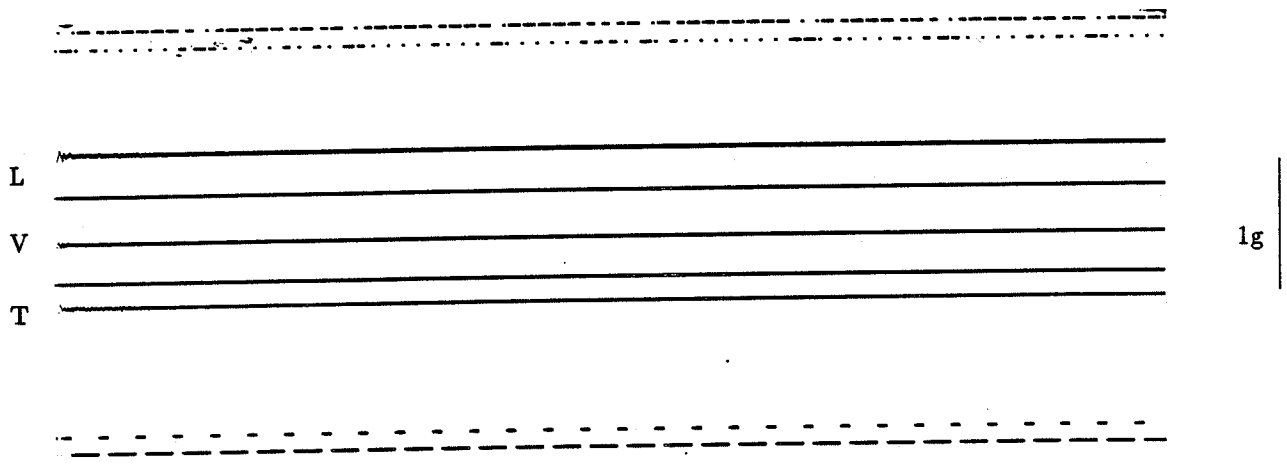
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 09 27 at 11:51 U.T. *Magnitude 3.5*

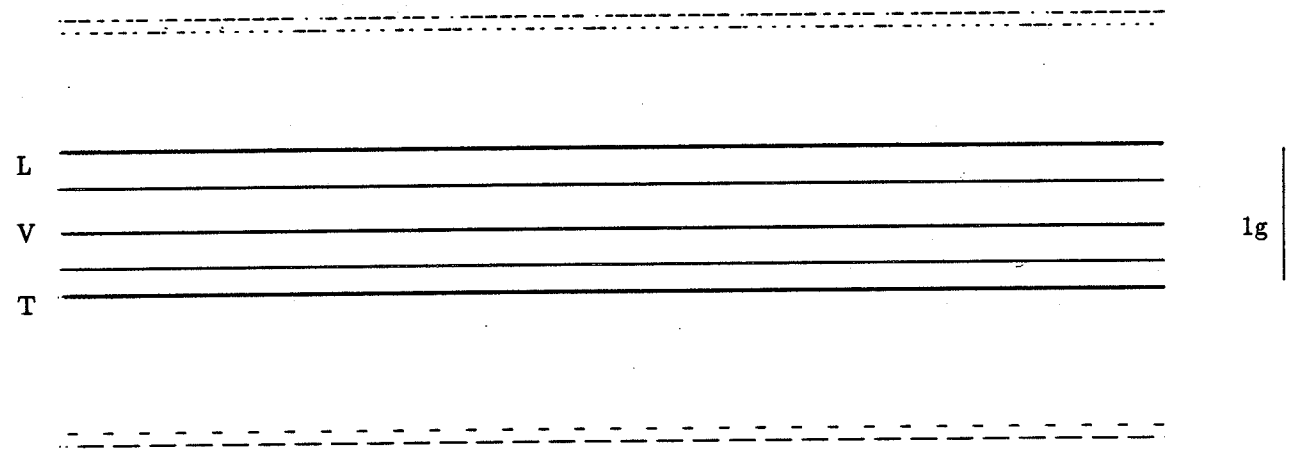
Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 10 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance 30 km



Canada

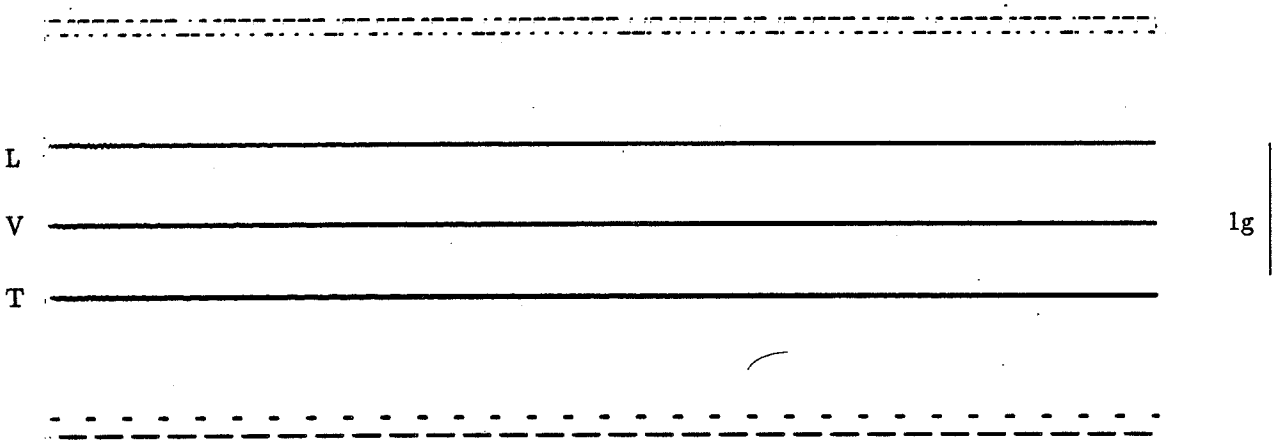
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 11 10 at 13:32 U.T. *Magnitude 4.3*

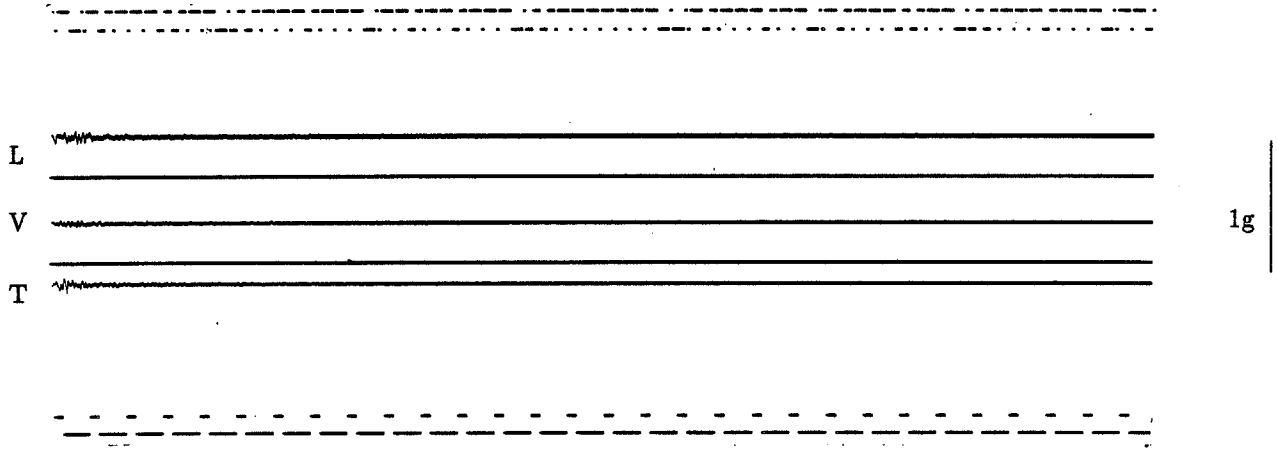
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 13 km



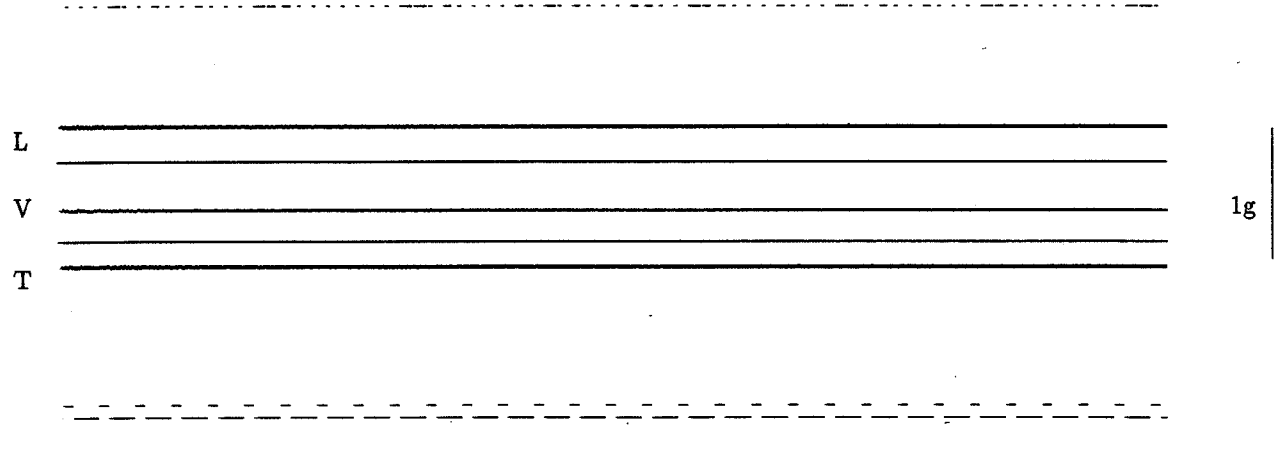
Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 19 km



Site 3: Battlement Creek Latitude 62.1262°N Longitude 123.8332°W Elevation 1067 m

Instrument SMA-1 +L=0° Distance 29 km



Canada

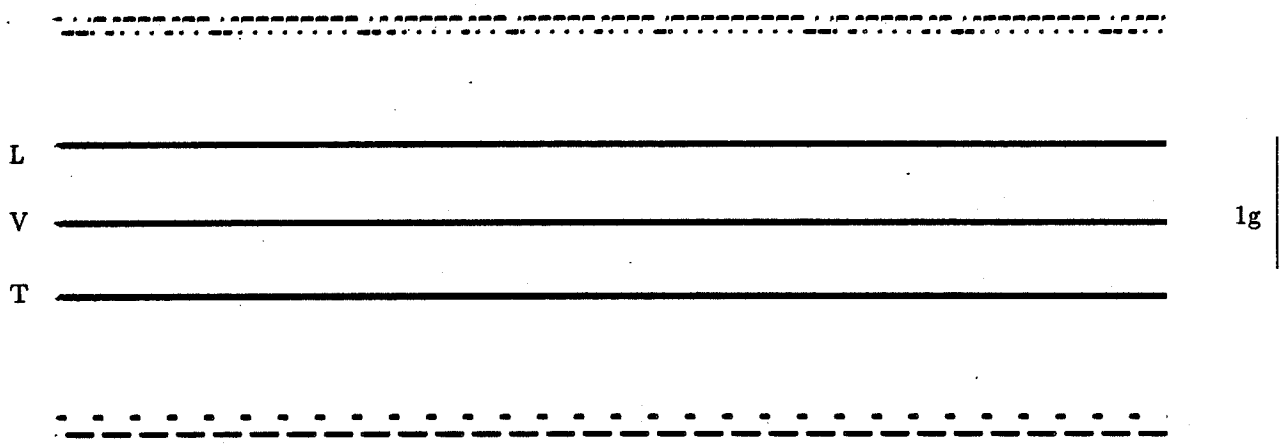
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1986 12 09 at 15:27 U.T. *Magnitude 3.4*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

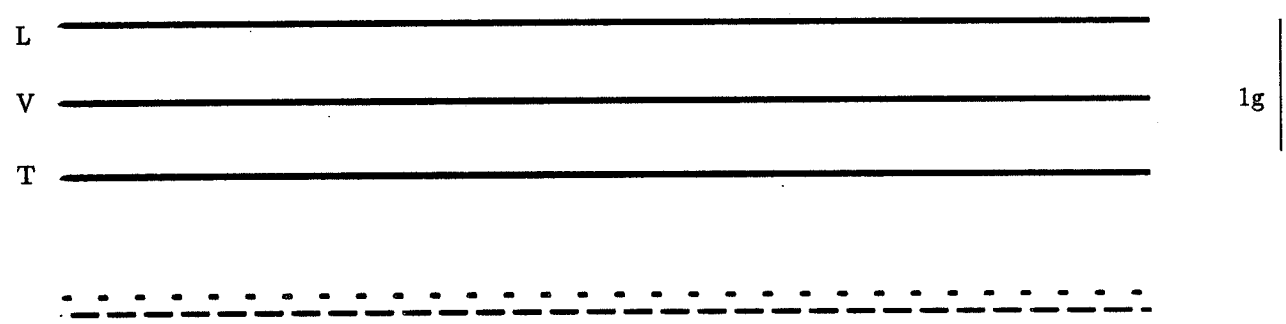
Instrument SMA-1 +L=330° Distance 12 km



Event: 1987 01 09 at 13:51 U.T. *Magnitude 4.0*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

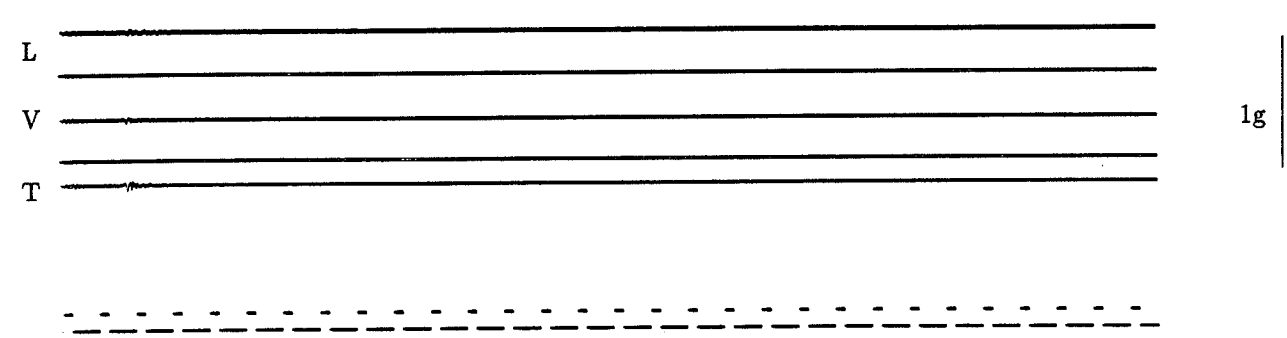
Instrument SMA-1 +L=10° Distance 20 km



Event: 1987 01 10 at 23:01 U.T. *Magnitude 4.1*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 15 km



Canada

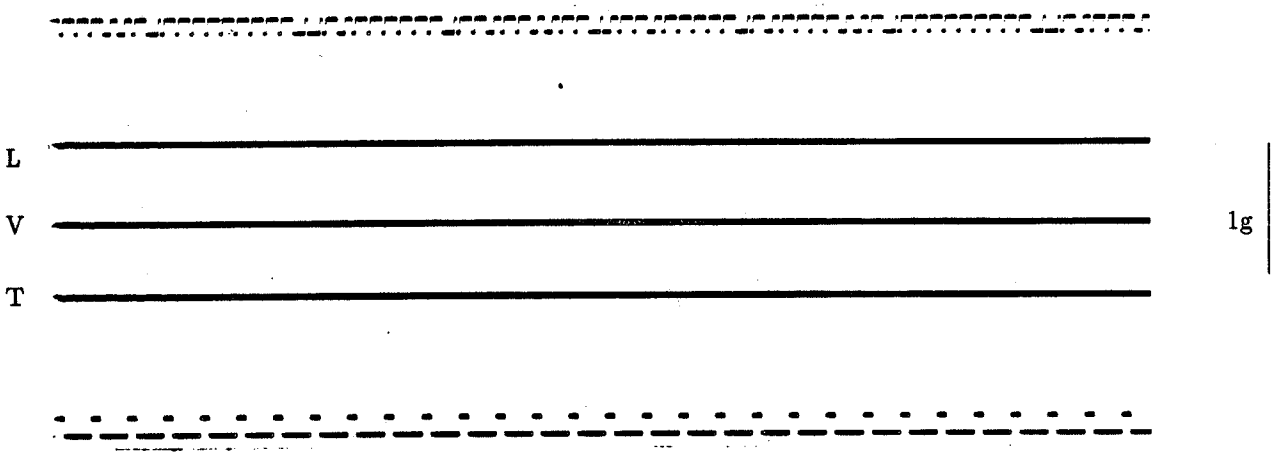
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1987 03 03 at 09:34 U.T. *Magnitude 4.2*

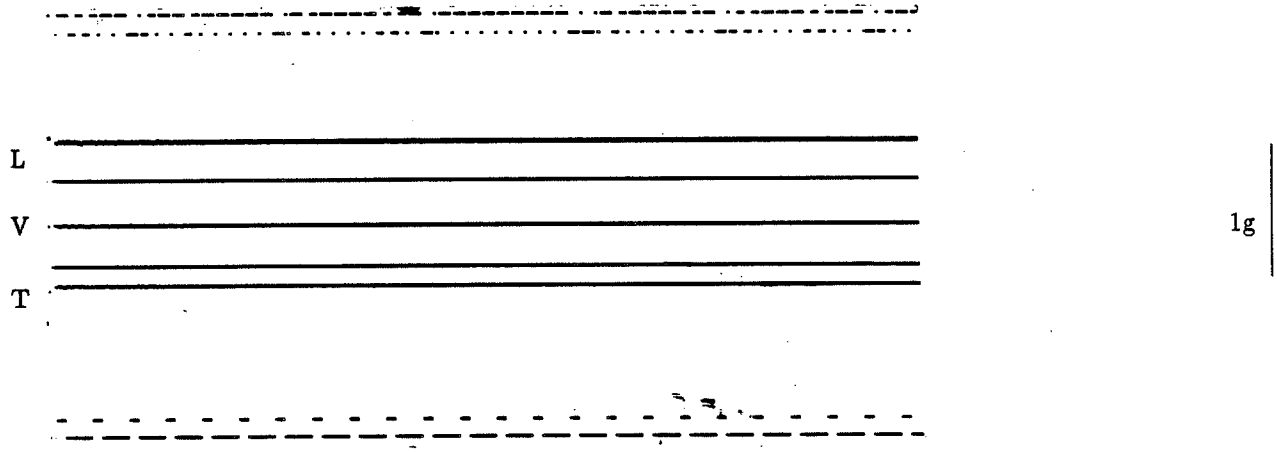
Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 20 km



Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

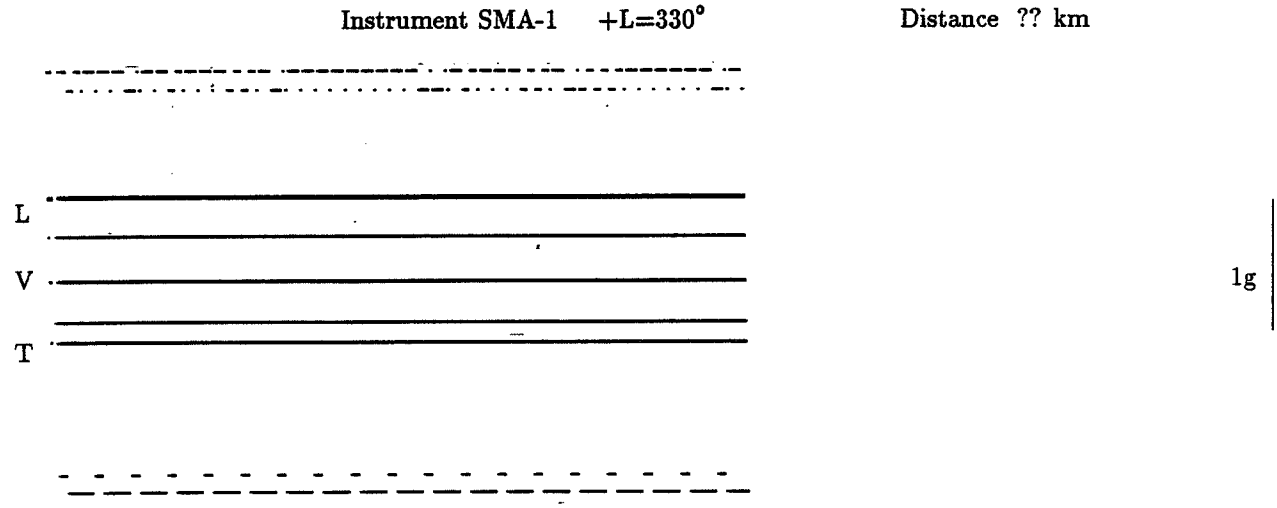
Instrument SMA-1 +L=330° Distance 23 km



Event: 1987 03 05 at 1?:07 U.T. *Magnitude*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance ?? km



Canada

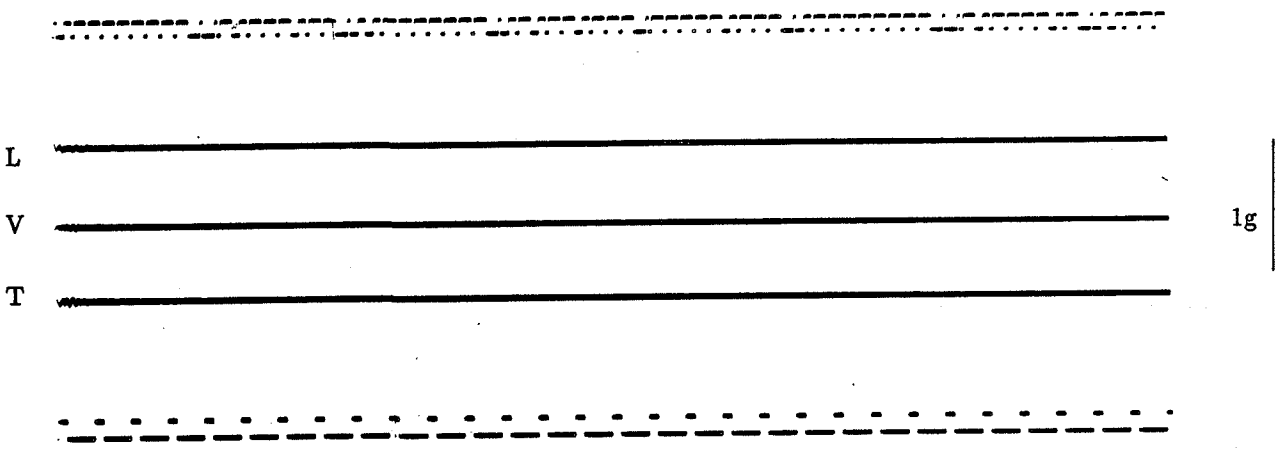
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1987 04 20 at 15:03 U.T. *Magnitude 3.5*

Site 1: Iverson Latitude 62.2018°N Longitude 124.3700°W Elevation 792 m

Instrument SMA-1 +L=10° Distance 3 km

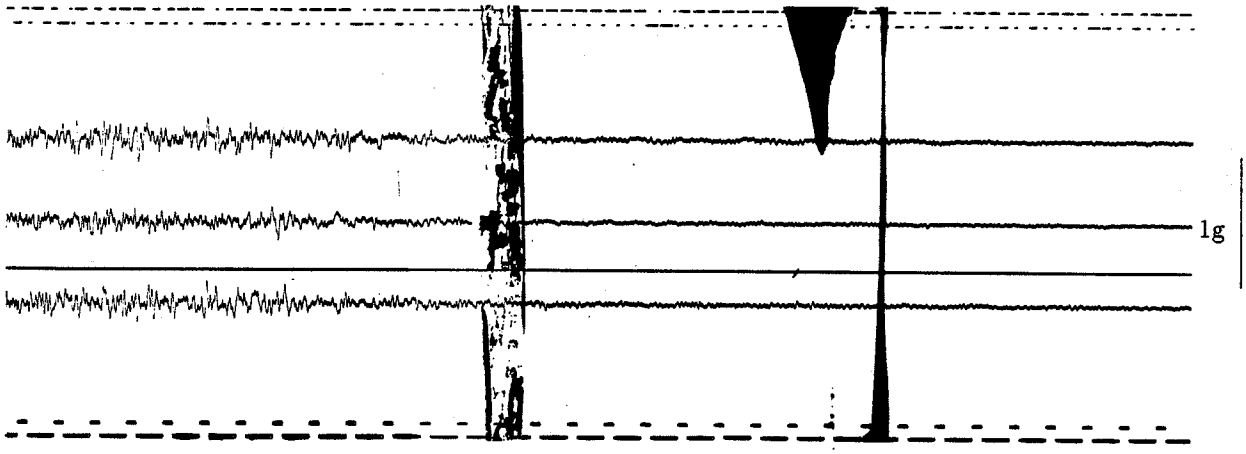


Canada

GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**
Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

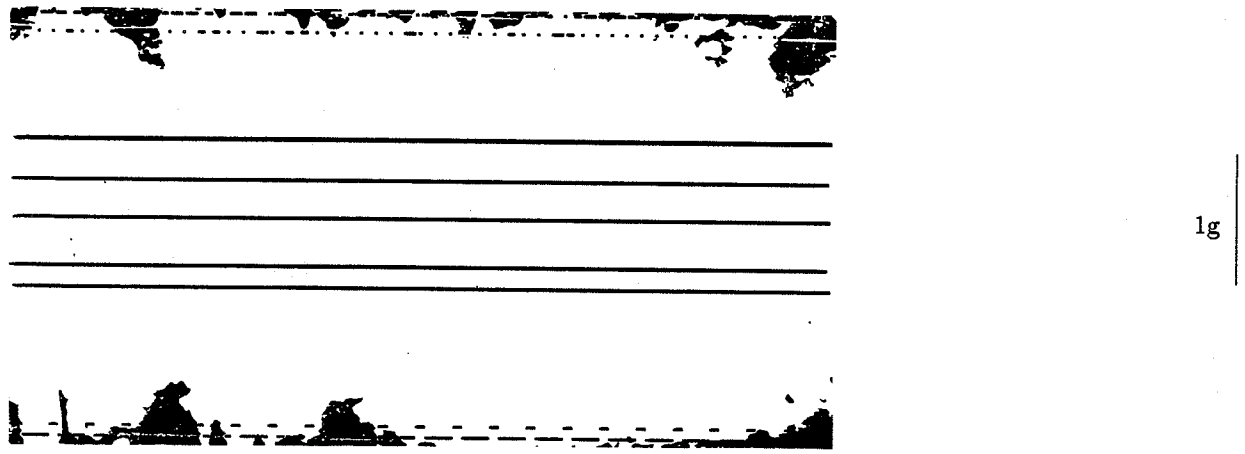
Event: 1988 03 25 at 19:36 U.T. *Magnitude 6.0*

Site 5: Razor Ridge Latitude 62.0709°N Longitude 124.4248°W
Instrument SMA-1 +L=290° Distance 12 km



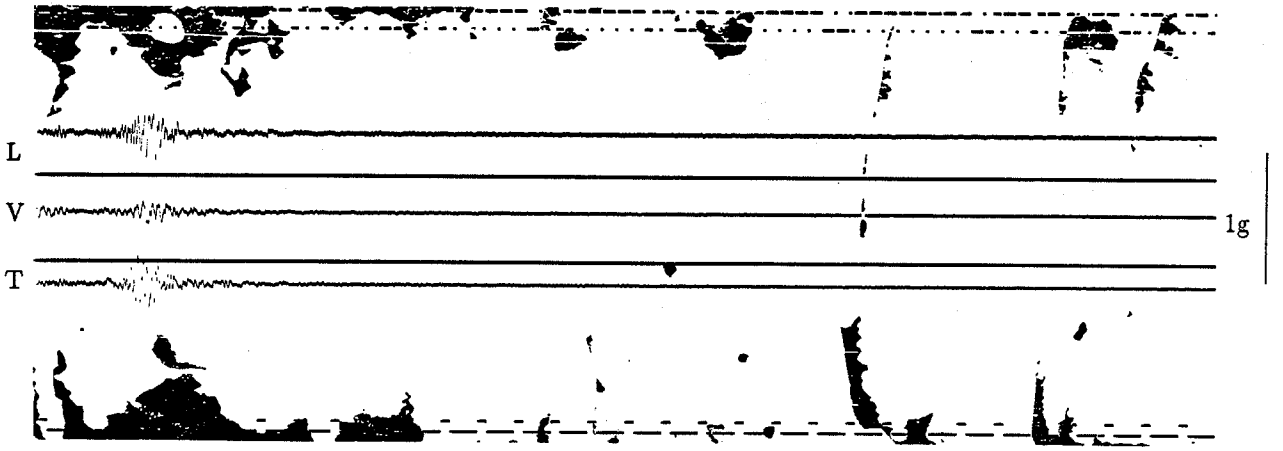
Event: 1988 04 29 at 06:32 U.T. *Magnitude 3.5*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 8 km



Event: 1988 05 22 at 19:19 U.T. *Magnitude 5.2*

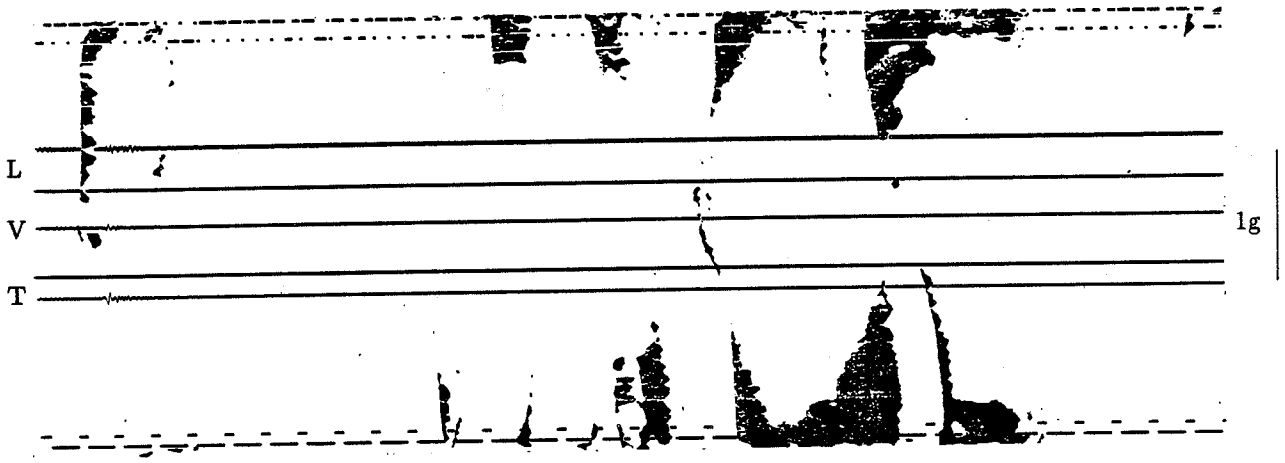
Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 4 km



GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**
Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

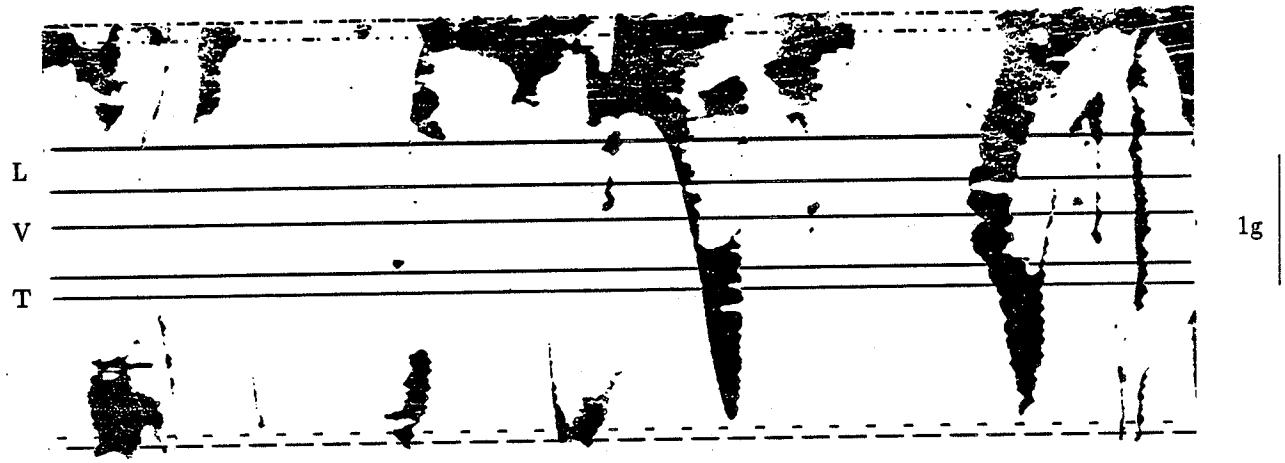
Event: 1988 07 16 at 07:26 U.T. *Magnitude 3.6*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 7 km



Event: 1988 08 22 at 1?:?? U.T. *Magnitude*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance km



Event: 1988 12 22 at 06:00 U.T. *Magnitude 4.8*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m
Instrument SMA-1 +L=330° Distance 22 km

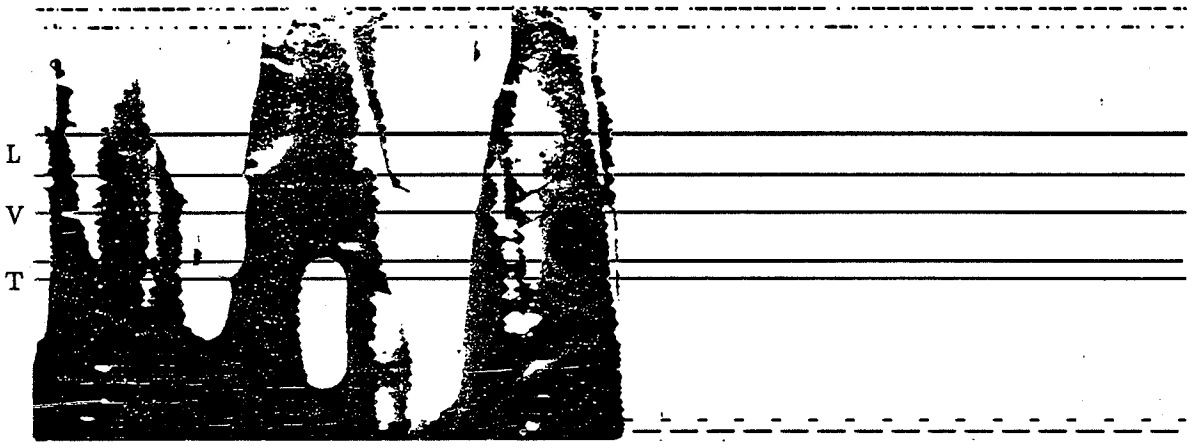
GEOLOGICAL SURVEY OF CANADA **STRONG MOTION PROGRAM**

Nahanni Earthquake Sequence District of Mackenzie, N.W.T., Canada

Event: 1989 02 18 at 14:29 U.T. *Magnitude 3.1*

Site 2: Slide Mountain Latitude 62.2335°N Longitude 124.1675°W Elevation 914 m

Instrument SMA-1 +L=330° Distance 9 km



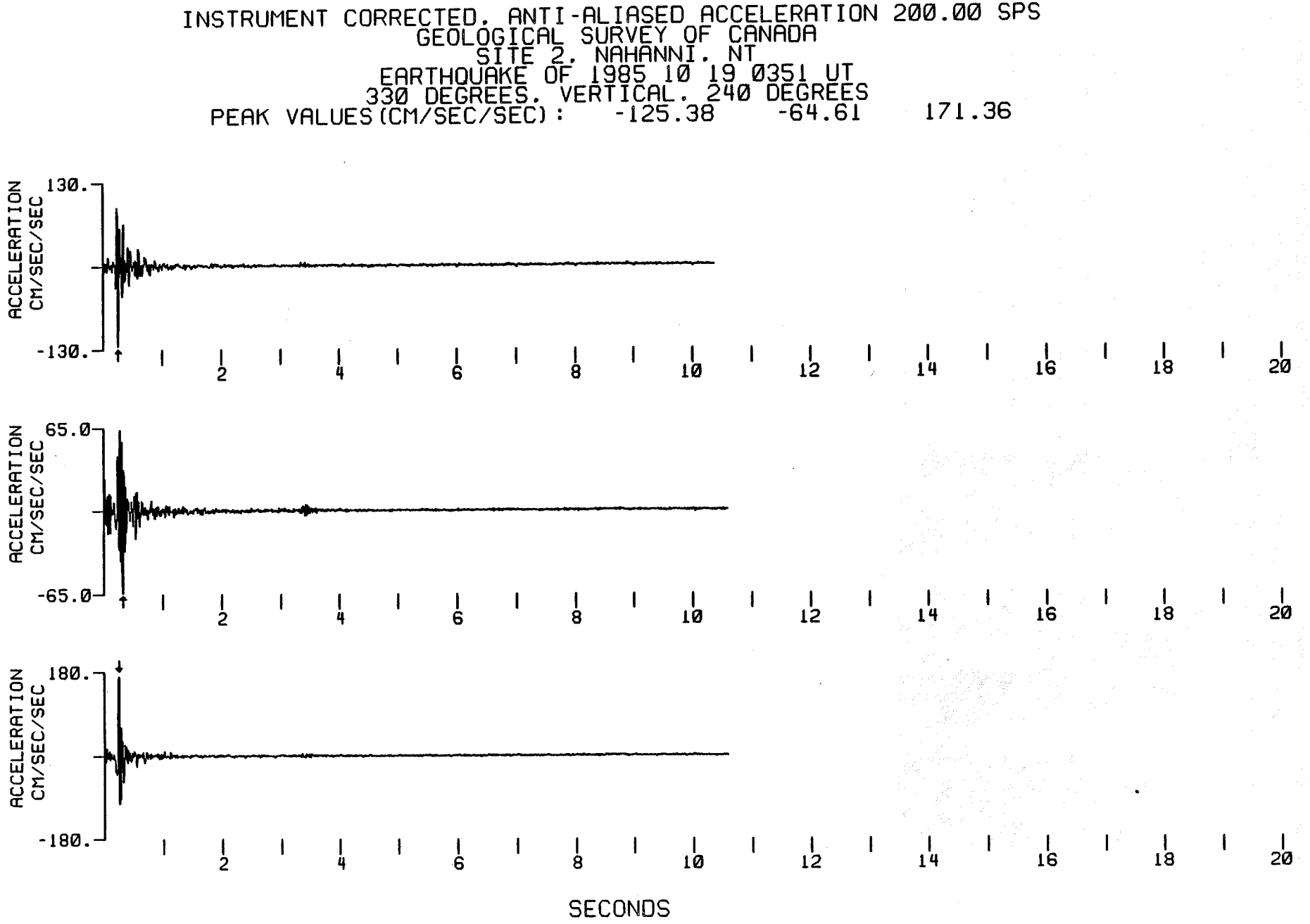

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 10 19 0351 UT
330 DEGREES. VERTICAL. 240 DEGREES
PEAK VALUES(CM/SEC/SEC): -125.38 -64.61 171.36
ACCELERATION CM/SEC/SEC
130.
-130.
65.0
-65.0
180.
-180.
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.5

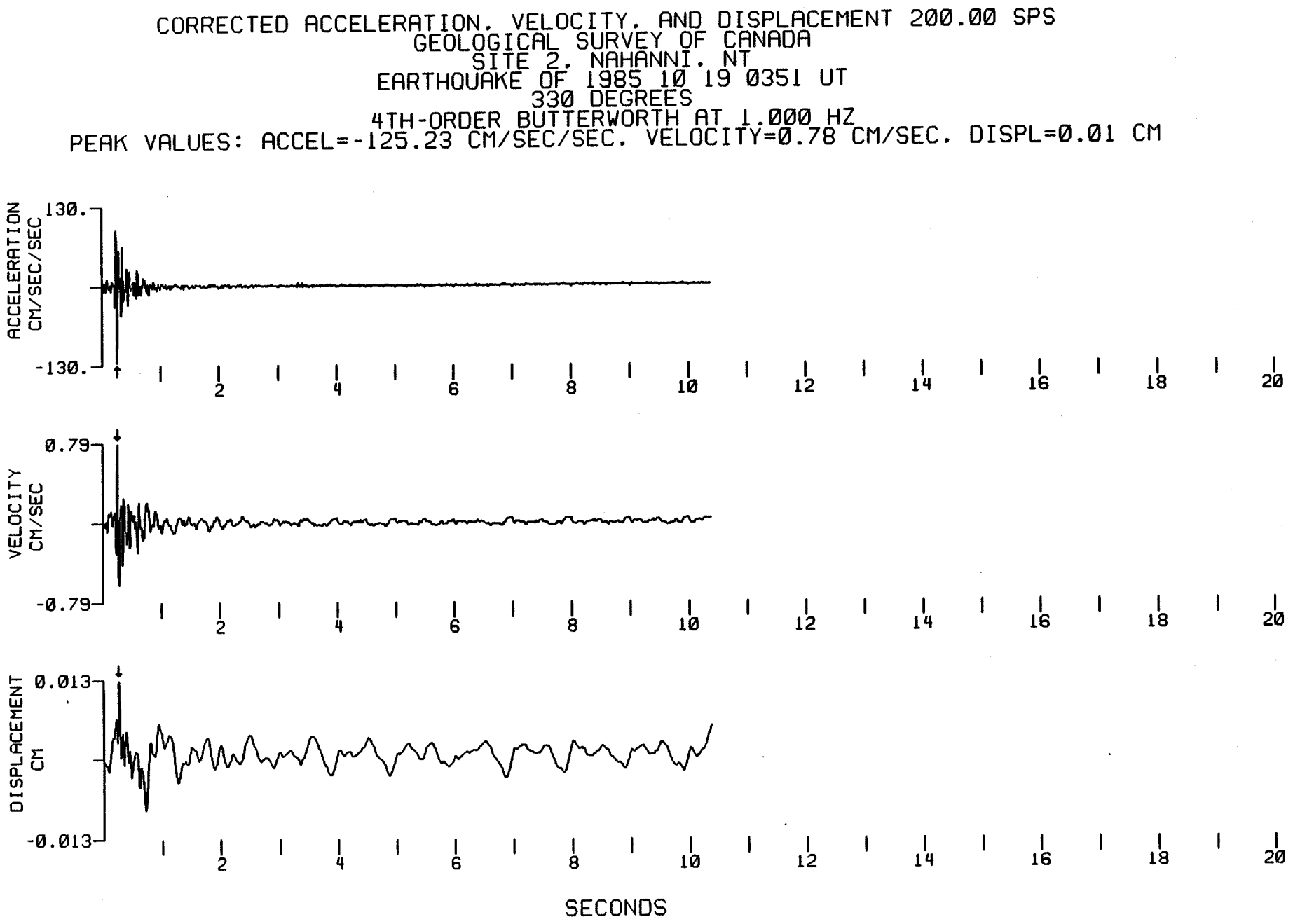

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 10 19 0351 UT
330 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
PEAK VALUES: ACCEL=-125.23 CM/SEC/SEC. VELOCITY=0.78 CM/SEC. DISPL=0.01 CM
ACCELERATION CM/SEC/SEC
130.
-130.
VELOCITY CM/SEC
0.79
-0.79
DISPLACEMENT CM
0.013
-0.013
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.5.1

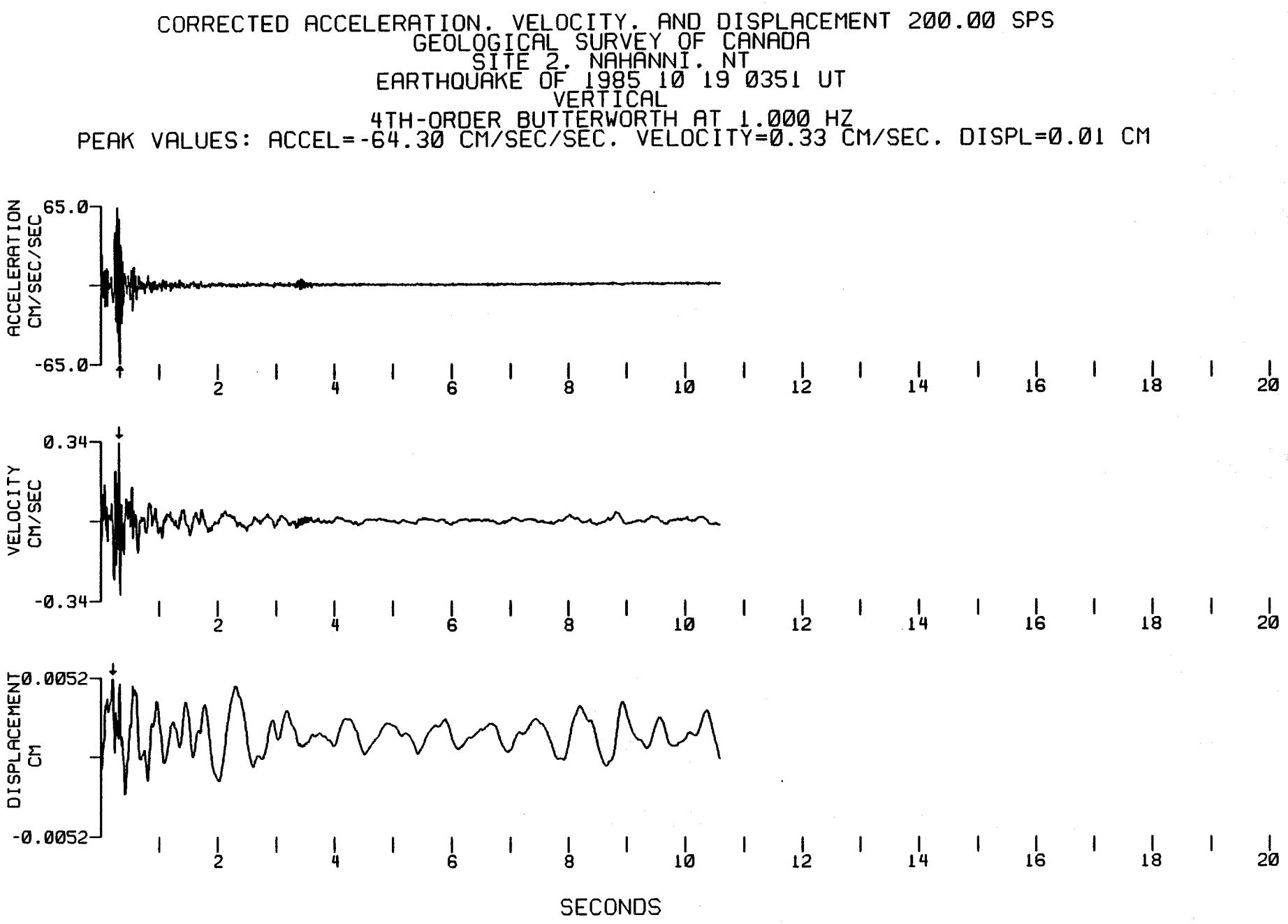

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 10 19 0351 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 1.000 HZ
PEAK VALUES: ACCEL=-64.30 CM/SEC/SEC. VELOCITY=0.33 CM/SEC. DISPL=0.01 CM
ACCELERATION CM/SEC/SEC
65.0
-65.0
VELOCITY CM/SEC
0.34
-0.34
DISPLACEMENT CM
0.0052
-0.0052
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.5.v

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2, NAHANNI, NT
EARTHQUAKE OF 1985 10 19 0351 UT
240 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
PEAK VALUES: ACCEL=172.24 CM/SEC/SEC, VELOCITY=1.43 CM/SEC, DISPL=-0.02 CM

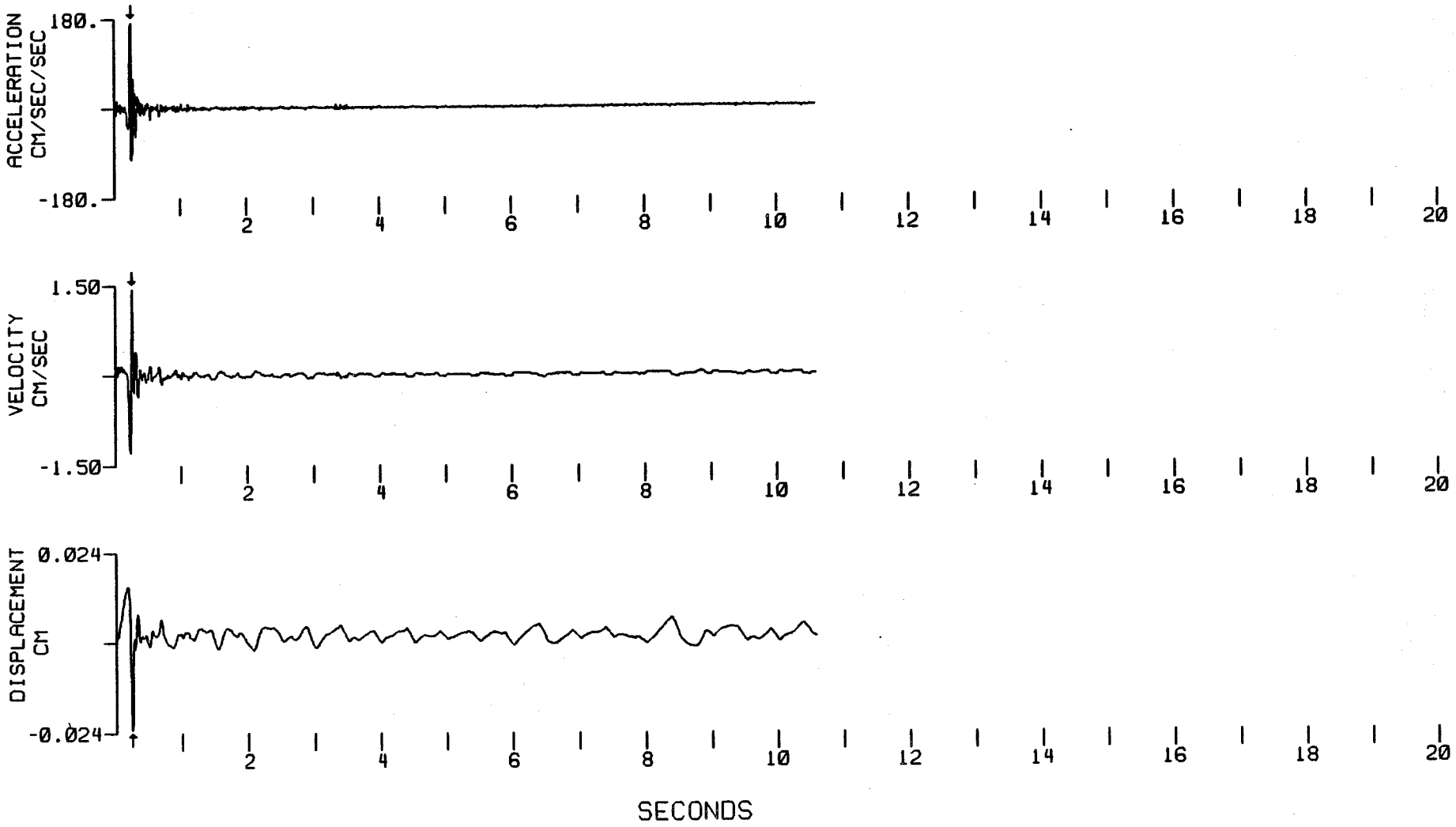


Fig. 2.5.1

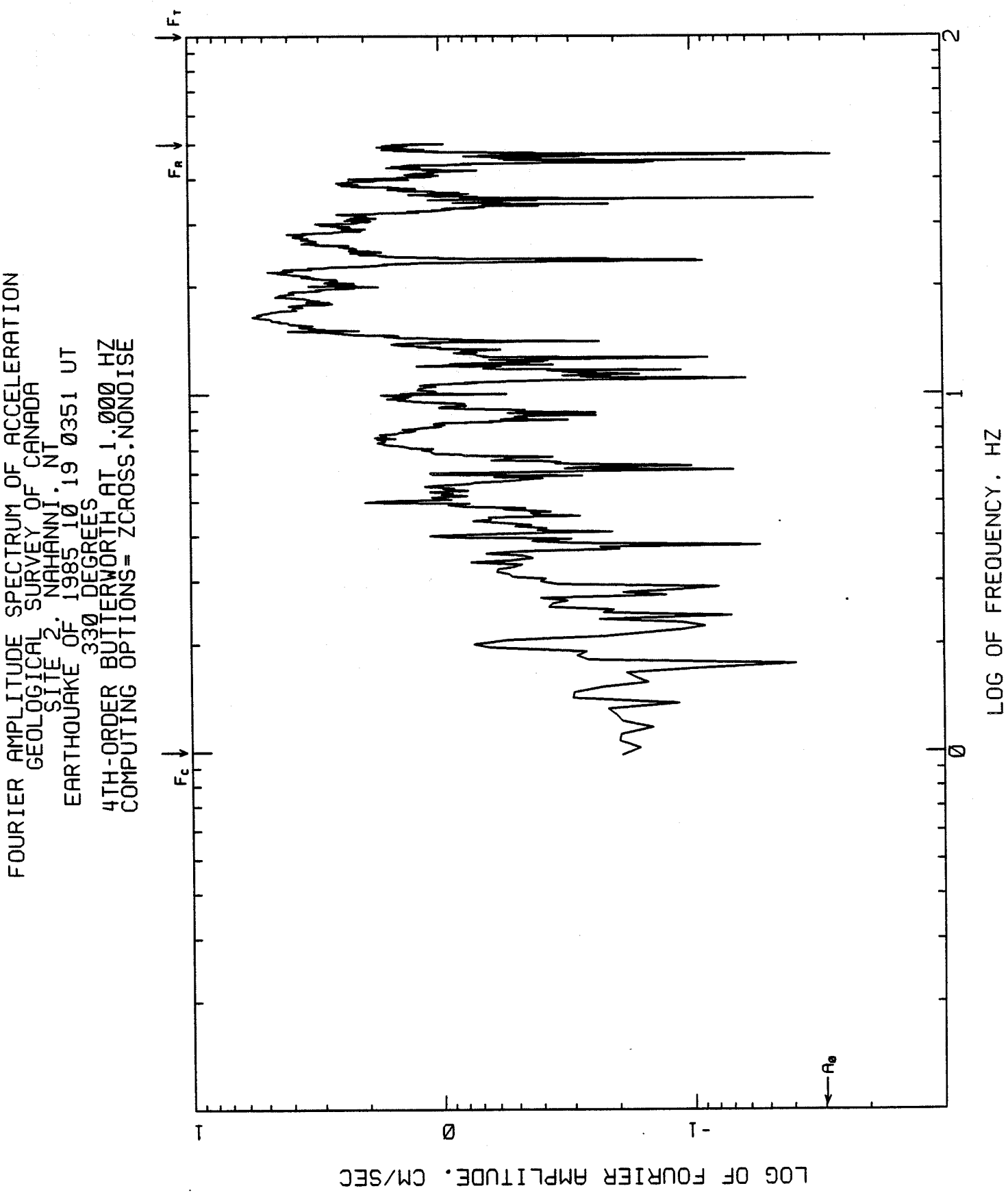

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2, NAHANNI, NT
EARTHQUAKE OF 1985 10 19 0351 UT
330 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
1
0
-1
2
1
0
F_T
F_R
F_C
A_0

Fig. 2.5.F.L

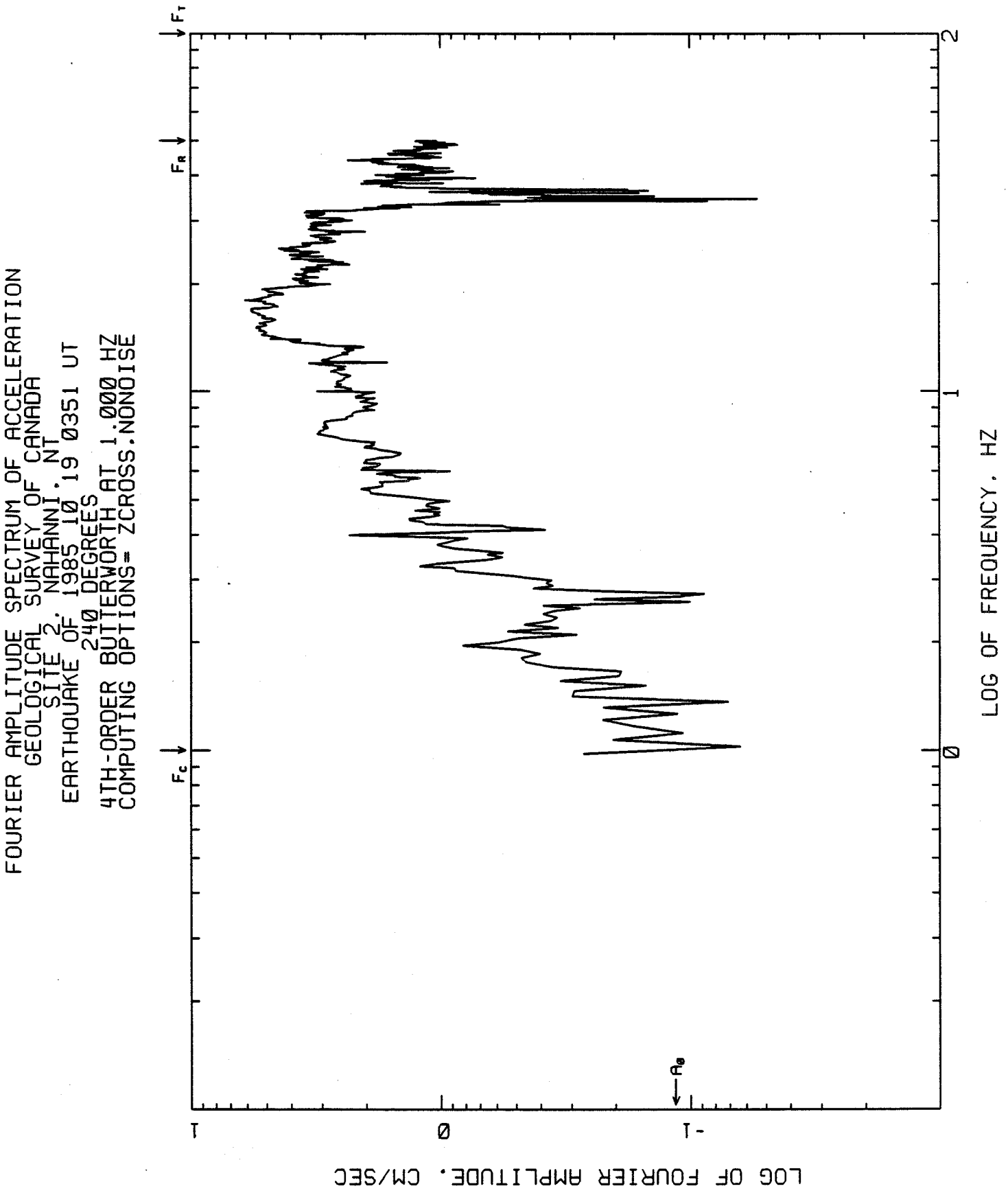

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 10 19 0351 UT
240 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
F_T
F_R
F_C
A_0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
1
0
-1
2
1
0

Fig. 2.5.F.T

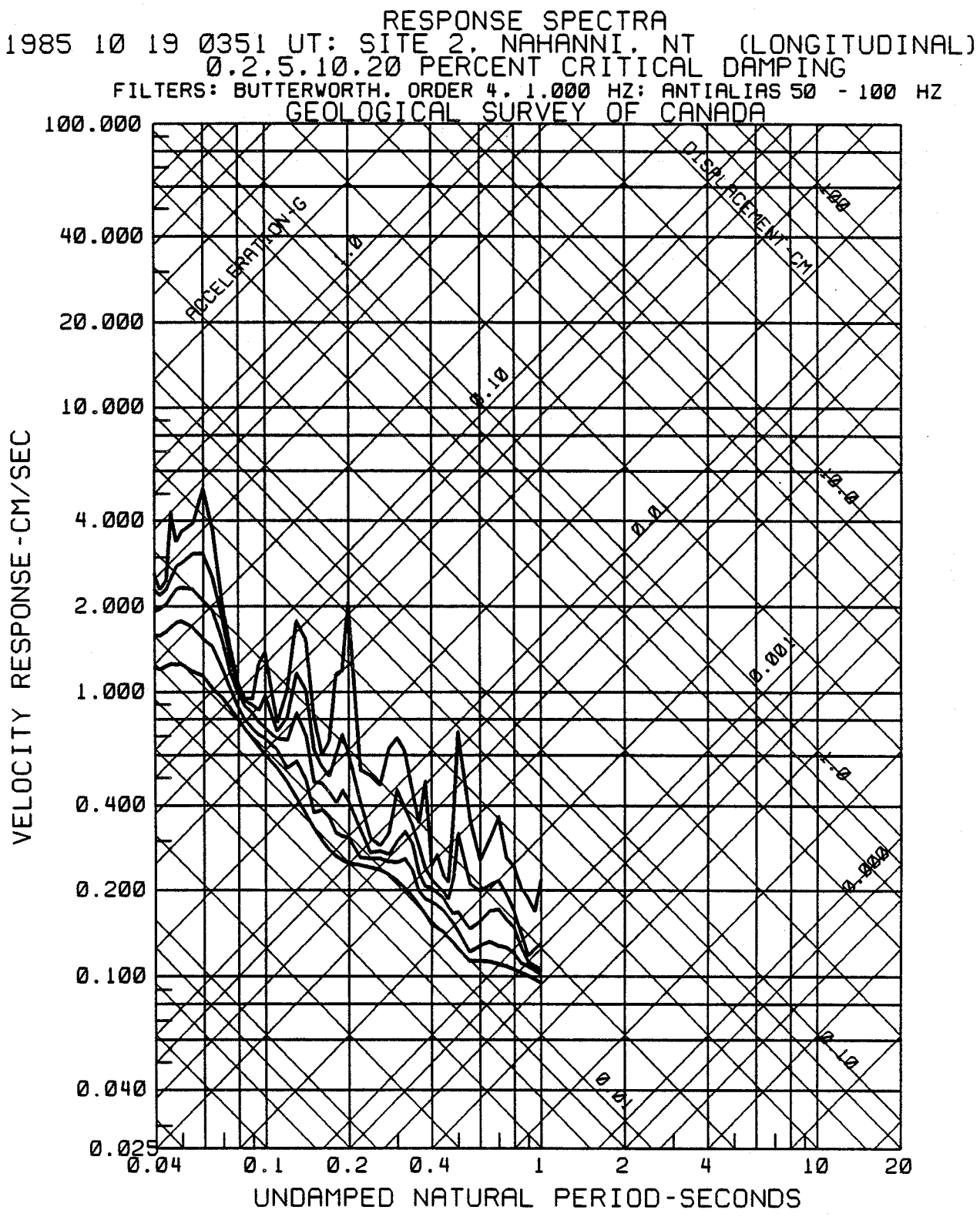

RESPONSE SPECTRA
1985 10 19 0351 UT: SITE 2. NAHANNI. NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 1.000 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
1.0
0.10
0.01
0.001
100
10.0
1.0
0.100
0.010
100.000
40.000
20.000
10.000
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
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS

Fig. 2.5.R.L

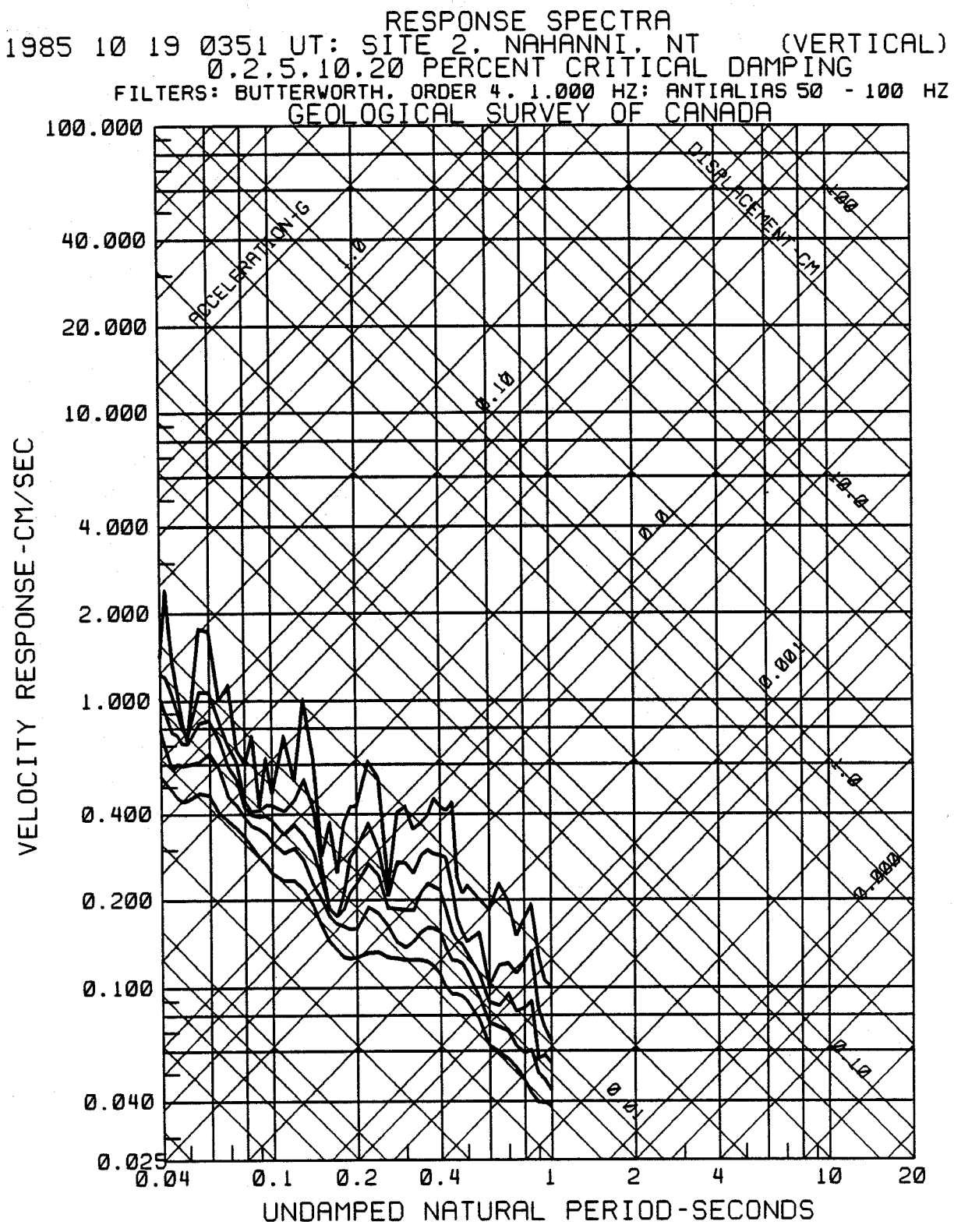

RESPONSE SPECTRA
1985 10 19 0351 UT: SITE 2, NAHANNI, NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 1.000 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
20.000
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

Fig. 2.5.R.V

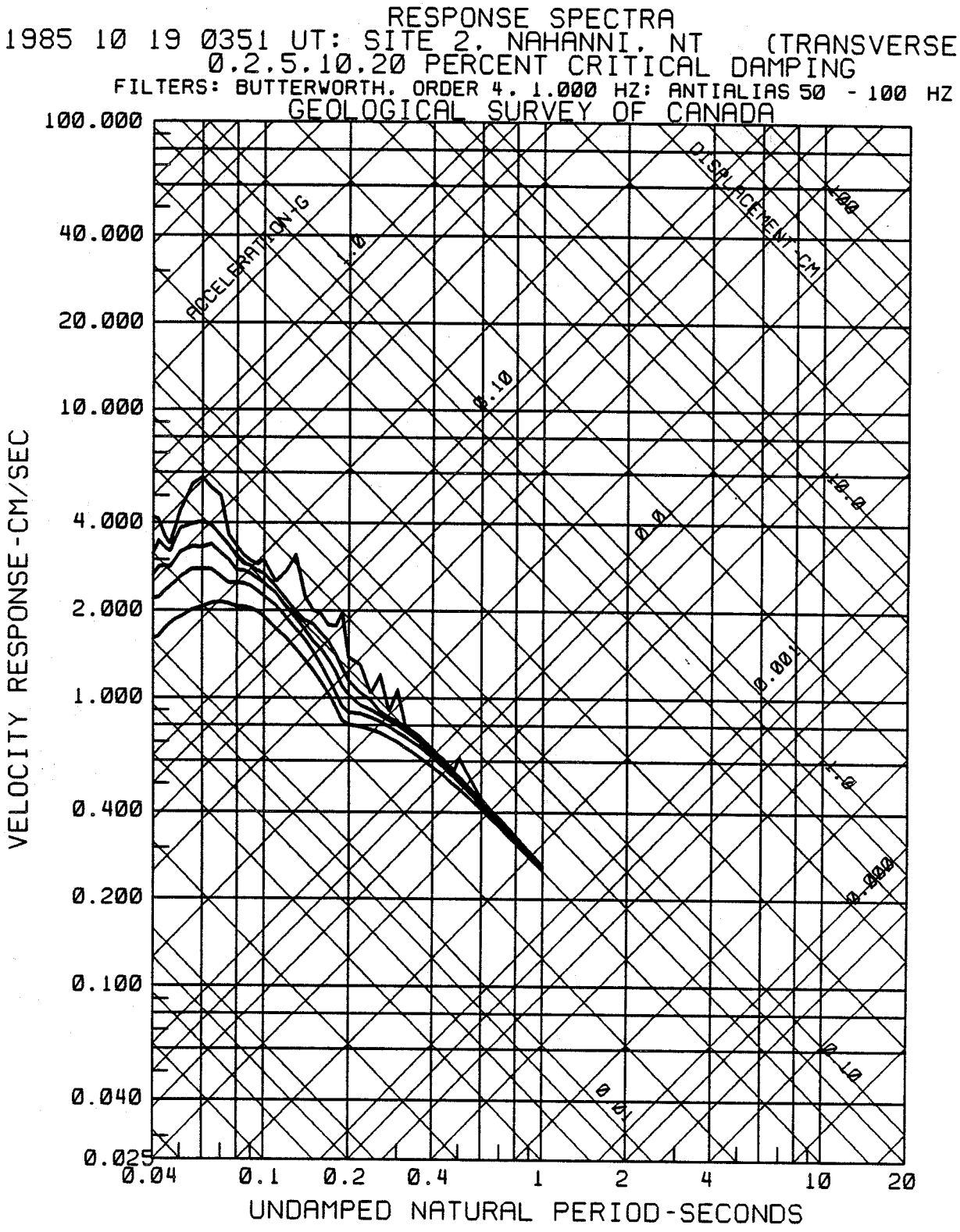

RESPONSE SPECTRA
1985 10 19 0351 UT: SITE 2, NAHANNI, NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 1.000 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 2.5.R.T

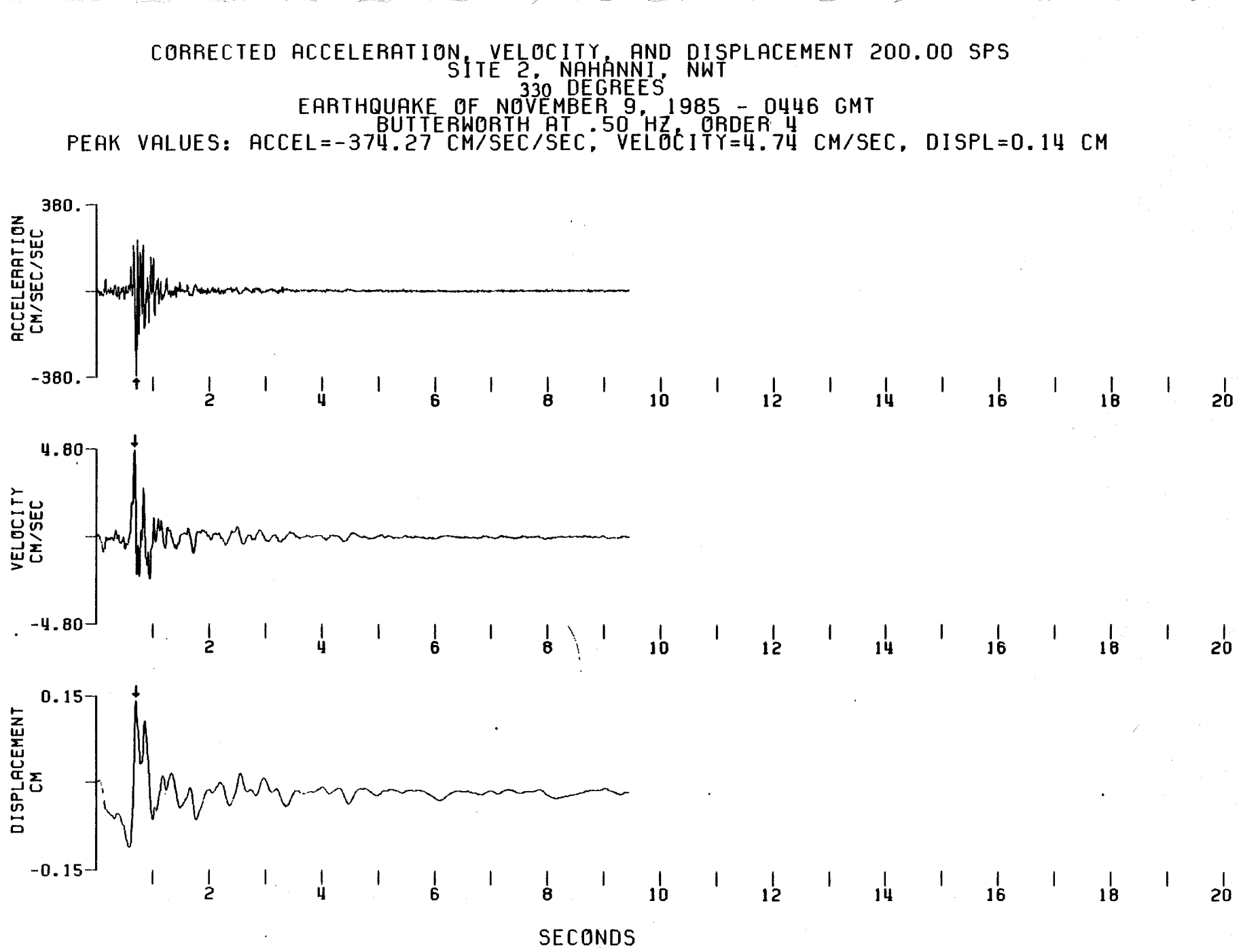

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 2, NAHANNI, NWT
330 DEGREES
EARTHQUAKE OF NOVEMBER 9, 1985 - 0446 GMT
BUTTERWORTH AT .50 HZ, ORDER 4
PEAK VALUES: ACCEL=-374.27 CM/SEC/SEC, VELOCITY=4.74 CM/SEC, DISPL=0.14 CM
ACCELERATION CM/SEC/SEC
380.
-380.
VELOCITY CM/SEC
4.80
-4.80
DISPLACEMENT CM
0.15
-0.15
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.12C.L

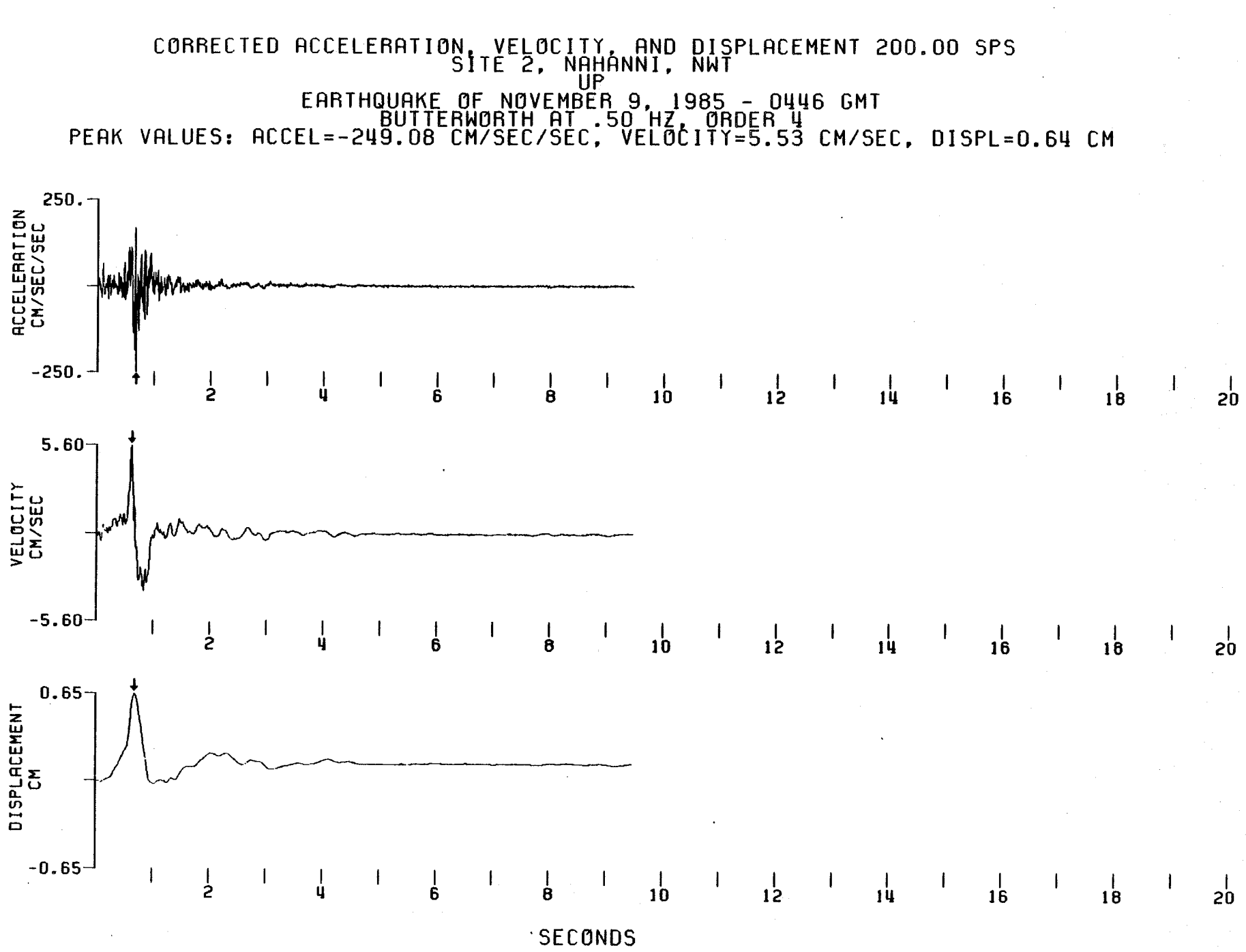

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 2, NAHANNI, NWT
UP
EARTHQUAKE OF NOVEMBER 9, 1985 - 0446 GMT
BUTTERWORTH AT .50 HZ, ORDER 4
PEAK VALUES: ACCEL=-249.08 CM/SEC/SEC, VELOCITY=5.53 CM/SEC, DISPL=0.64 CM
ACCELERATION CM/SEC/SEC
250.
-250.
VELOCITY CM/SEC
5.60
-5.60
DISPLACEMENT CM
0.65
-0.65
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.12C.V

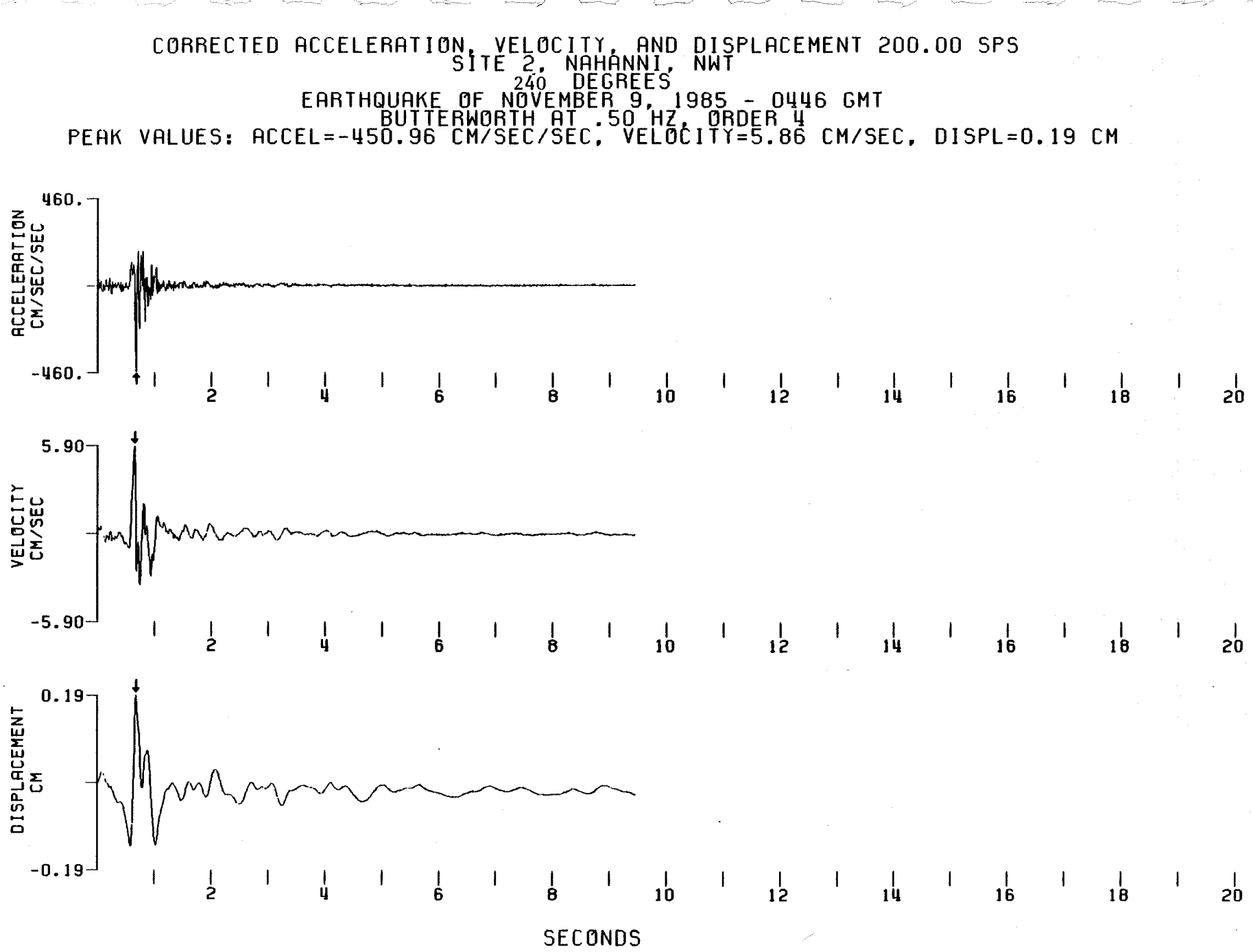

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 2, NAHANNI, NWT
240 DEGREES
EARTHQUAKE OF NOVEMBER 9, 1985 - 0446 GMT
BUTTERWORTH AT .50 HZ, ORDER 4
PEAK VALUES: ACCEL=-450.96 CM/SEC/SEC, VELOCITY=5.86 CM/SEC, DISPL=0.19 CM
ACCELERATION CM/SEC/SEC
460.
-460.
VELOCITY CM/SEC
5.90
-5.90
DISPLACEMENT CM
0.19
-0.19
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.12C.T

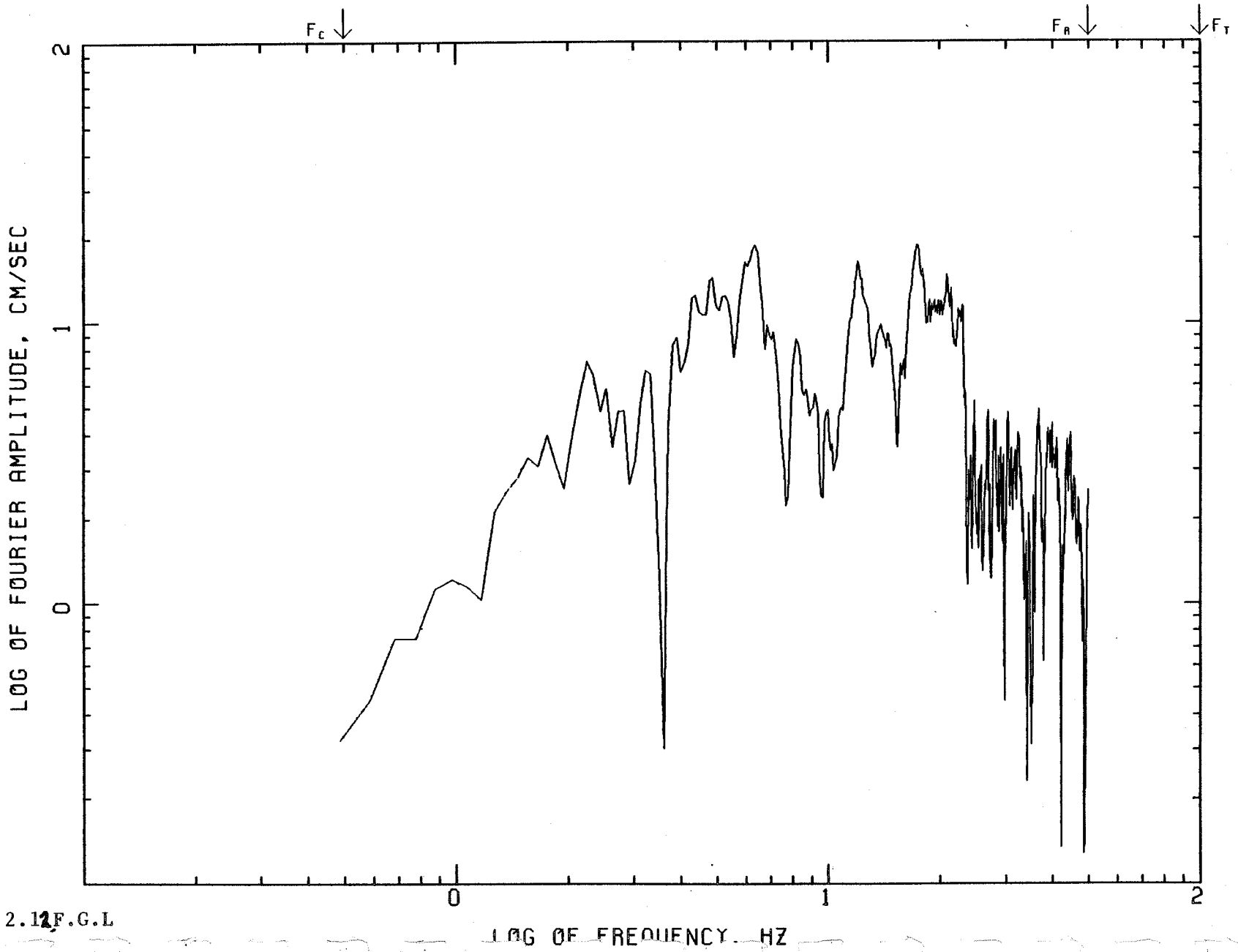

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE 2, NAHANNI, NWT
330 DEGREES
EARTHQUAKE OF NOVEMBER 9, 1985 - 0446 GMT
BUTTERWORTH AT .50 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FR
FT
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
0
1
2

Fig. 2.12 F.G.L

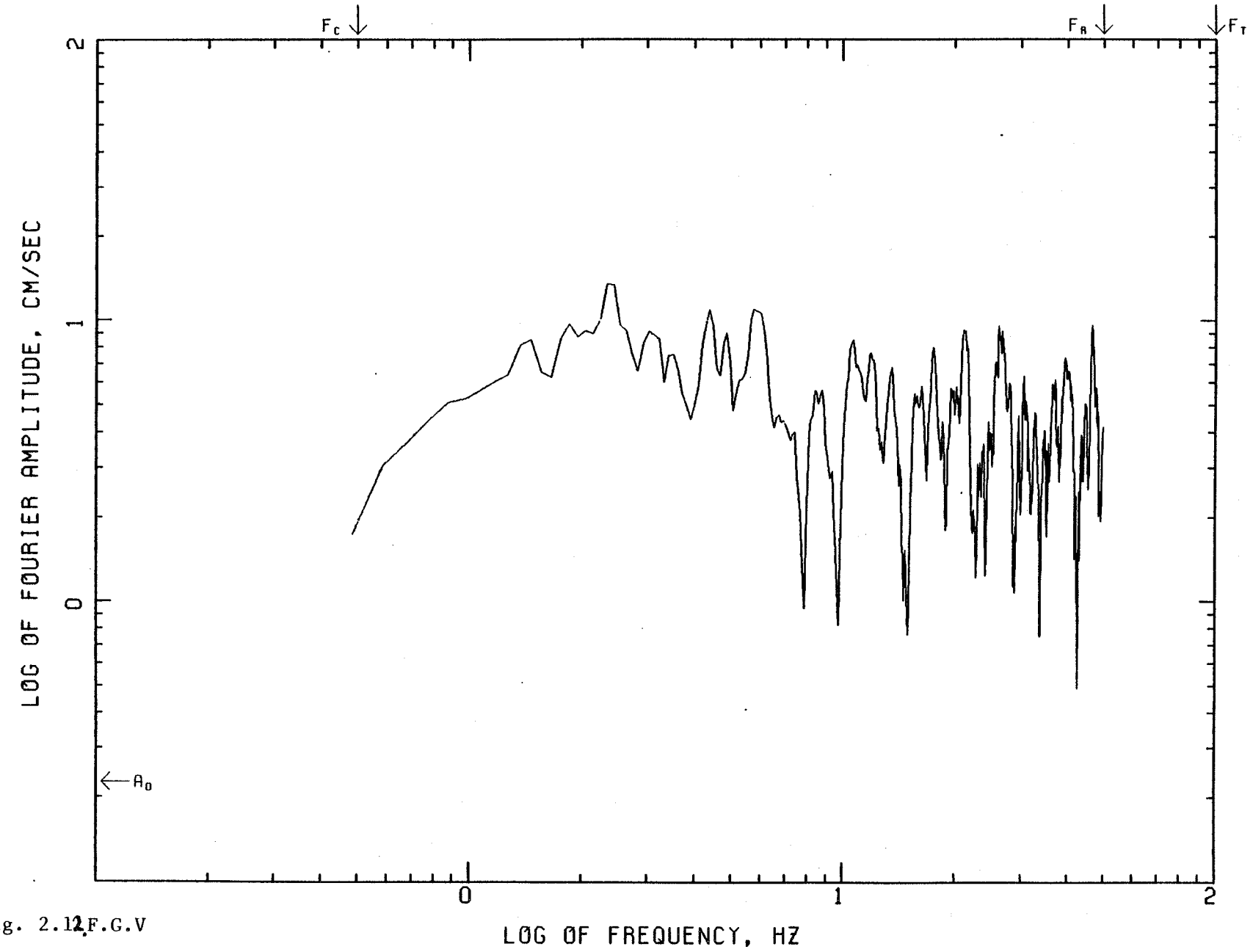

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE 2, NAHANNI, NWT
UP
EARTHQUAKE OF NOVEMBER 9, 1985 - 0446 GMT
BUTTERWORTH AT .50 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FR
FT
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
A0
2
1
0
0
1
2

Fig. 2.12 F.G.V

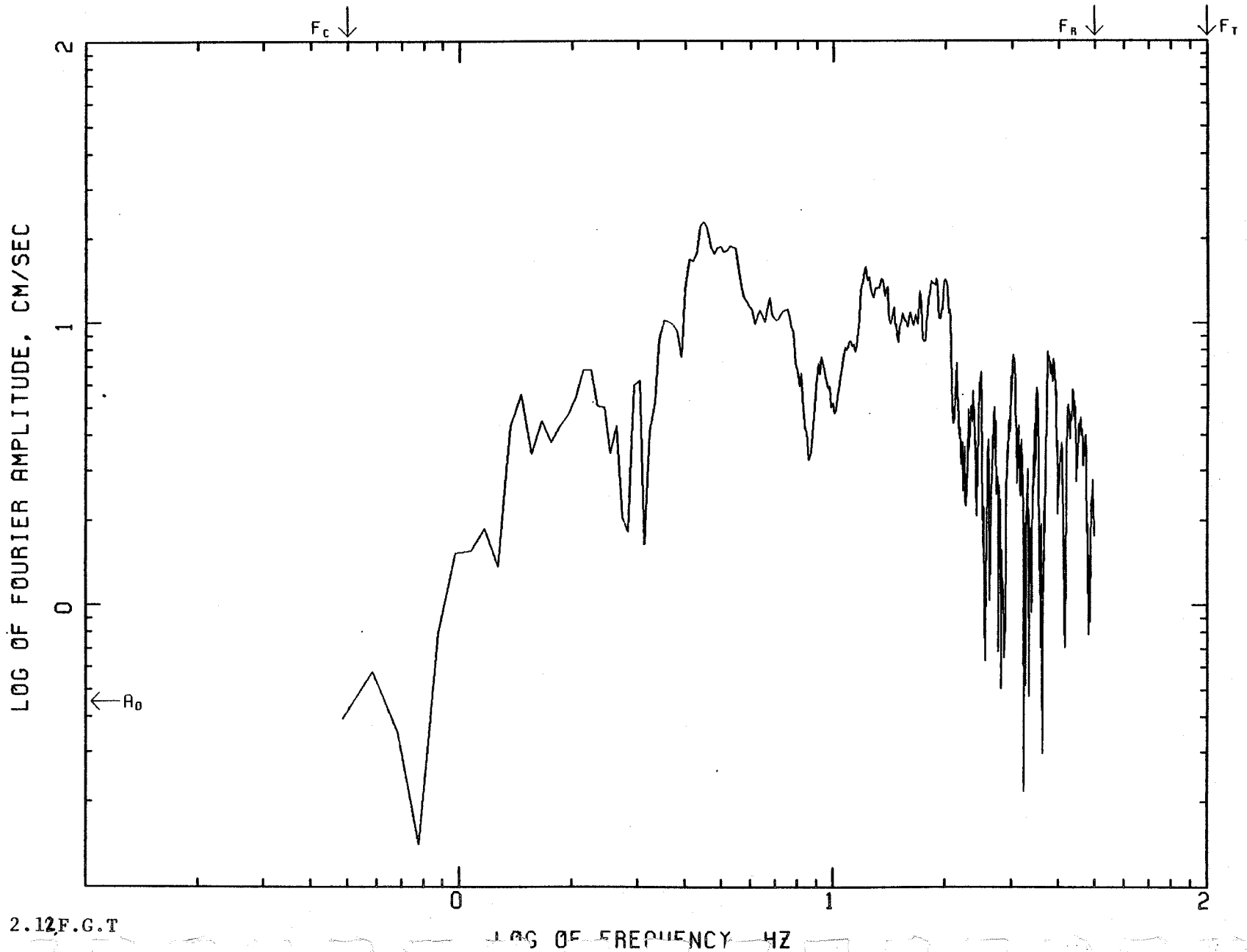

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE 2, NAHANNI, NWT
240 DEGREES
EARTHQUAKE OF NOVEMBER 9, 1985 - 0446 GMT
BUTTERWORTH AT .50 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
0
1
2

Fig. 2.12F.G.T

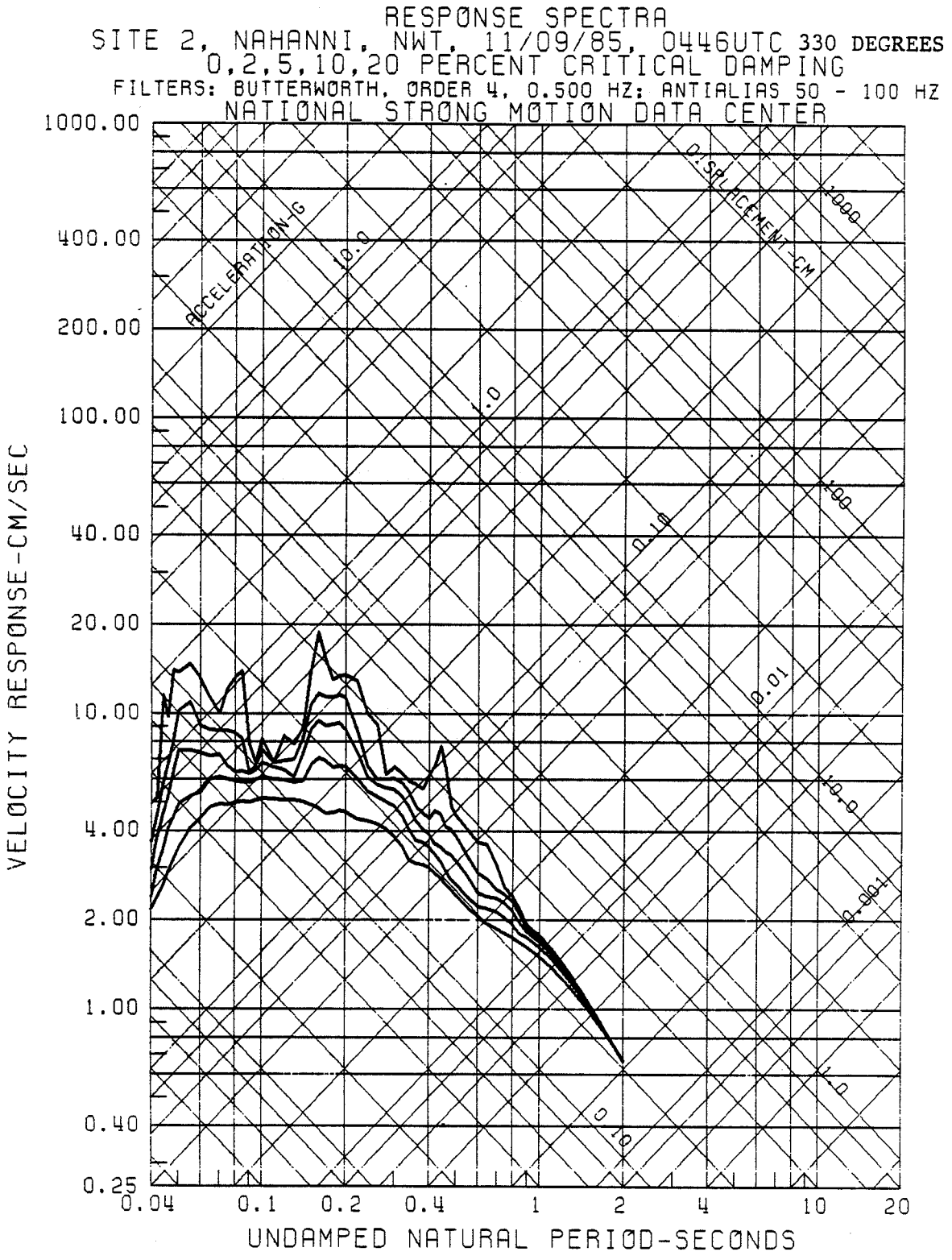

RESPONSE SPECTRA
SITE 2, NAHANNI, NWT, 11/09/85, 0446UTC 330 DEGREES
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
1000.00
400.00
200.00
100.00
40.00
20.00
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
10.0
1.0
0.10
0.01
0.001
DISPLACEMENT-CM
1000
100
10.0
1.0
0.10

Fig. 2.12 R.G.L

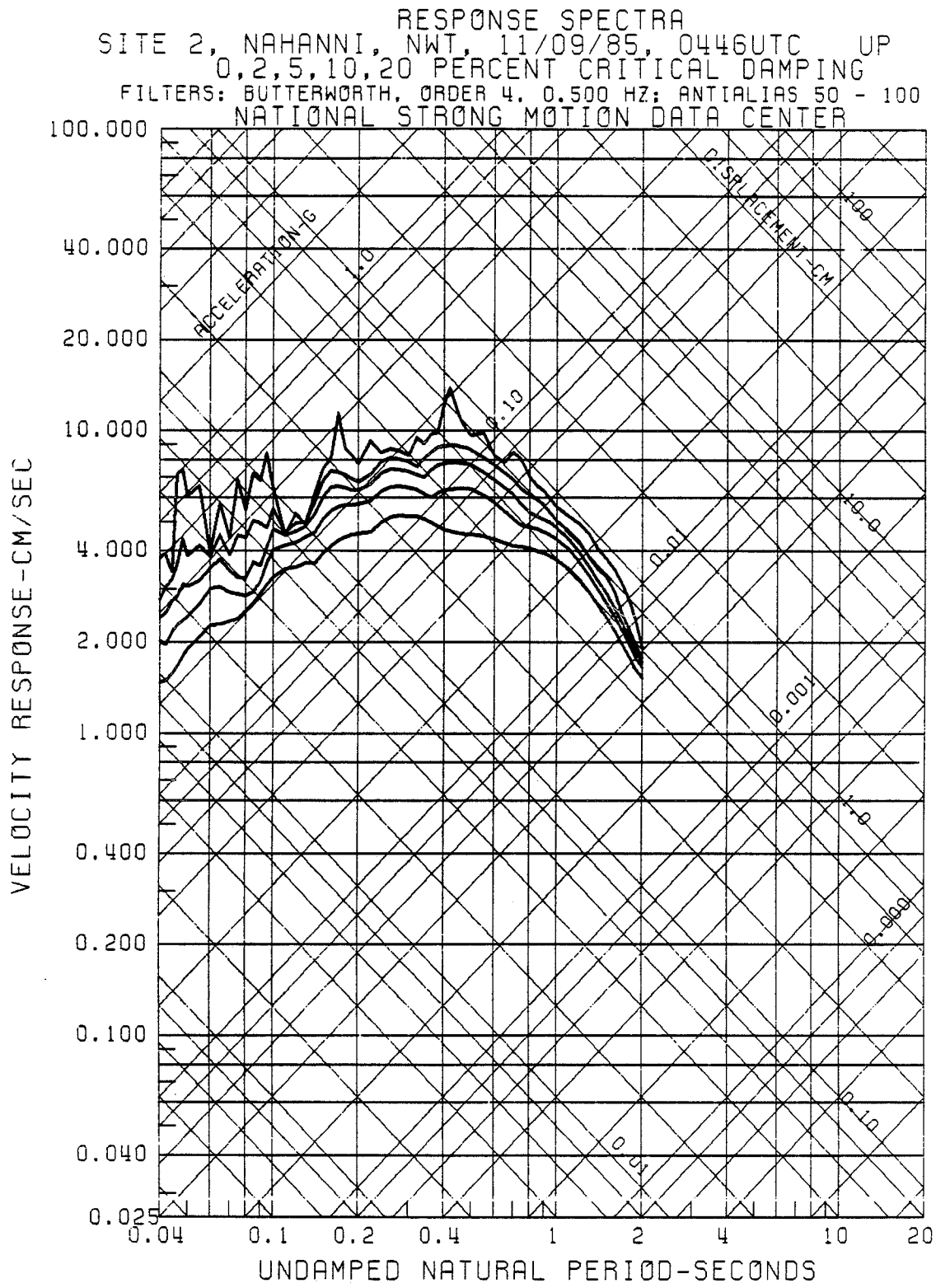

RESPONSE SPECTRA
SITE 2, NAHANNI, NWT, 11/09/85, 0446UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100.000
40.000
20.000
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
1.0
0.10
0.01
0.001
100
10.0
1.0
0.100
0.10
0.01

Fig. 2.12 R.G.V

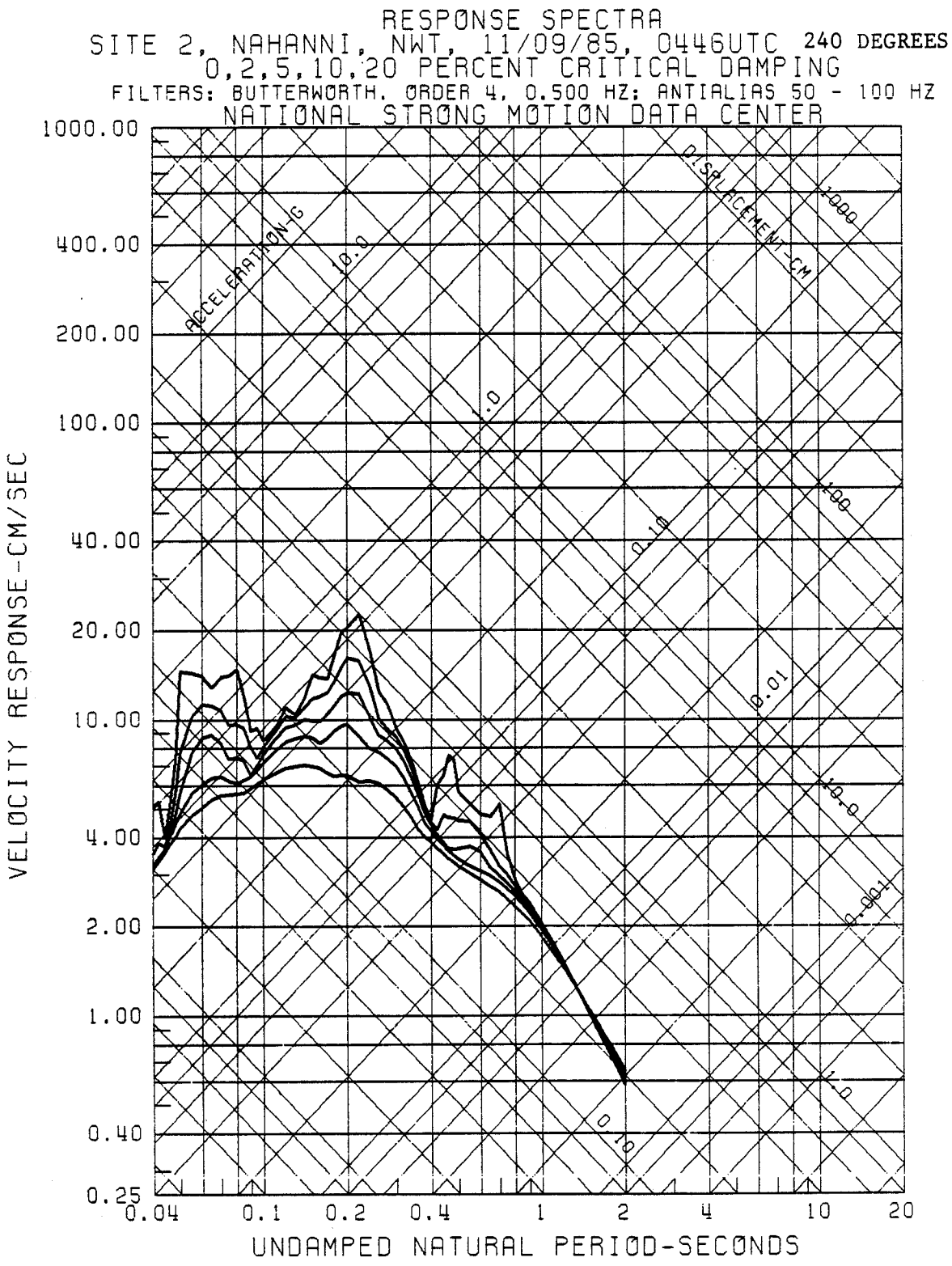

RESPONSE SPECTRA
SITE 2, NAHANNI, NWT, 11/09/85, 0446UTC 240 DEGREES
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
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
0.001
DISPLACEMENT-CM
1000
100
10.0
1.0
0.10

Fig. 2.12 R.G.T

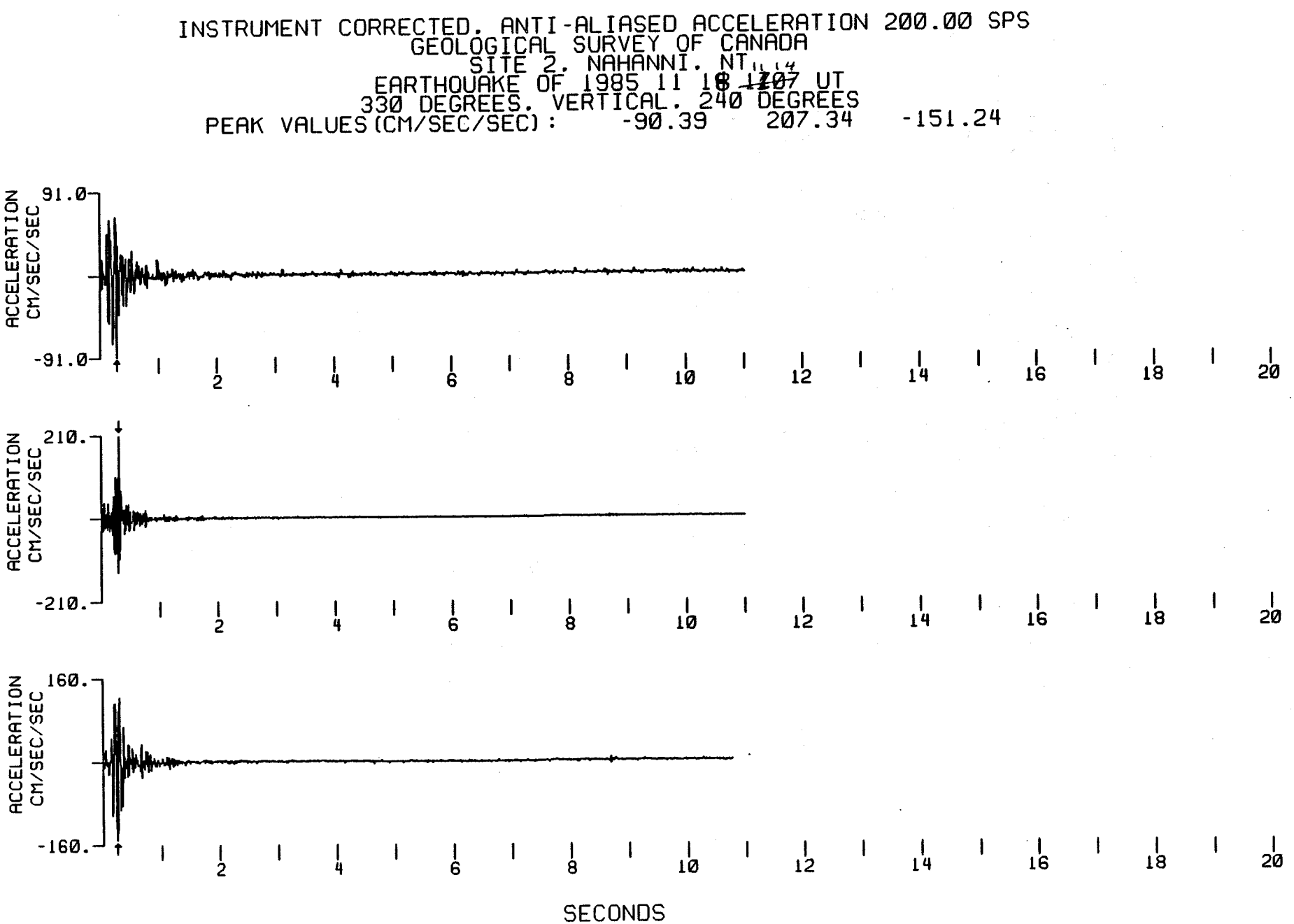

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT.
EARTHQUAKE OF 1985 11 18
330 DEGREES. VERTICAL. 240 DEGREES
PEAK VALUES(CM/SEC/SEC): -90.39 207.34 -151.24
ACCELERATION CM/SEC/SEC
91.0
-91.0
210.
-210.
160.
-160.
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.17

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 11 18 1707 UT
330 DEGREES
4TH-ORDER BUTTERWORTH 1.000 HZ
PEAK VALUES: ACCEL=-90.00 CM/SEC/SEC. VELOCITY=0.80 CM/SEC. DISPL=0.02 CM

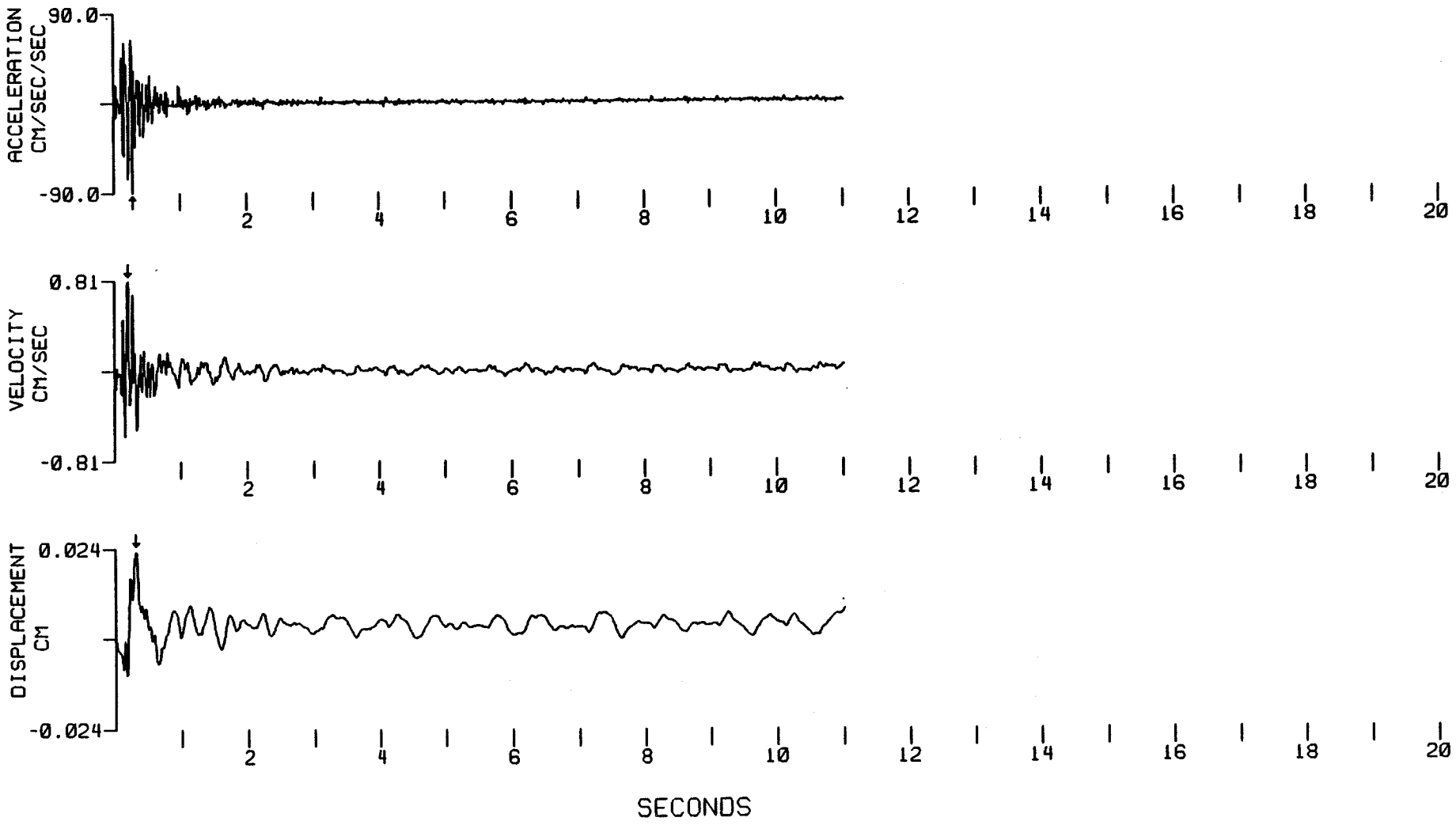


Fig. 2.17L

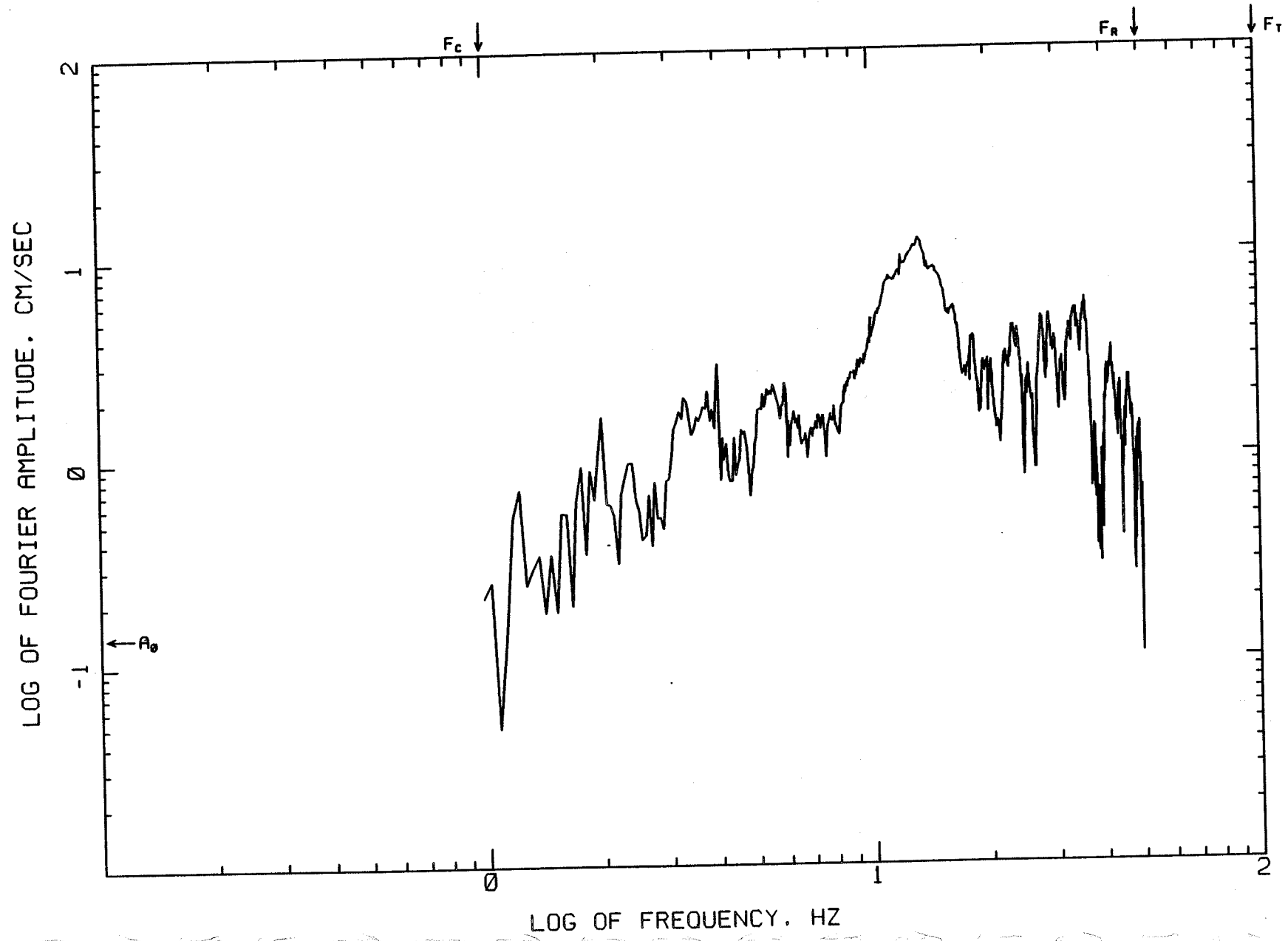

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 11 18 UT
240 DEGREES
4TH-ORDER BUTTERWORTH 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A∅
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
2
1
∅
-1
∅
1
2

Fig. 2.17 F.T

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 11 18 1707 UT
VERTICAL
4TH-ORDER BUTTERWORTH 1.000 HZ
PEAK VALUES: ACCEL=209.38 CM/SEC/SEC. VELOCITY=-0.81 CM/SEC. DISPL=0.02 CM

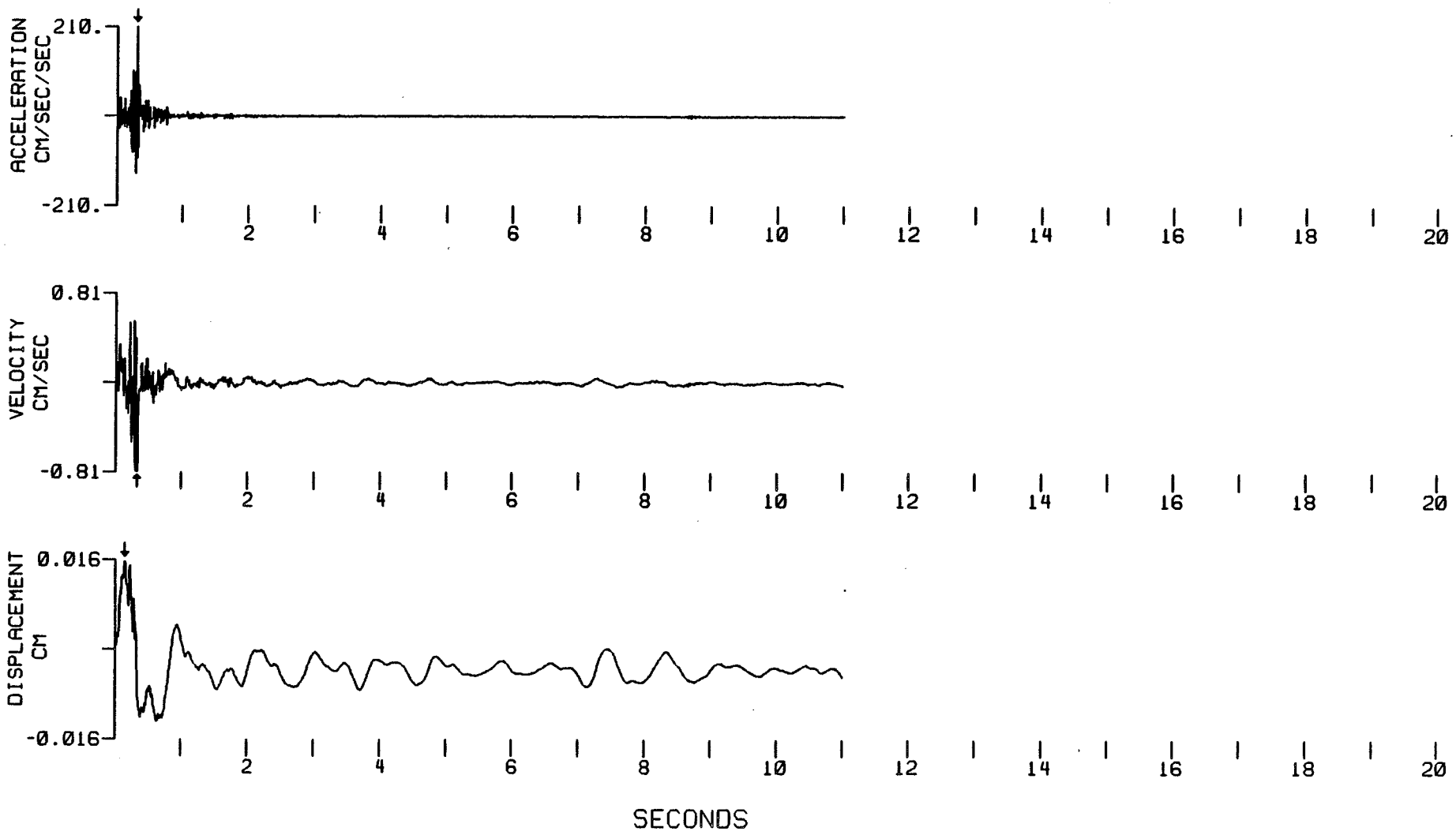


Fig. 2.17

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT 414
EARTHQUAKE OF 1985 11 18 ~~1707~~ UT
240 DEGREES
4TH-ORDER BUTTERWORTH 1.000 HZ
PEAK VALUES: ACCEL=-150.33 CM/SEC/SEC. VELOCITY=1.70 CM/SEC. DISPL=-0.04 CM

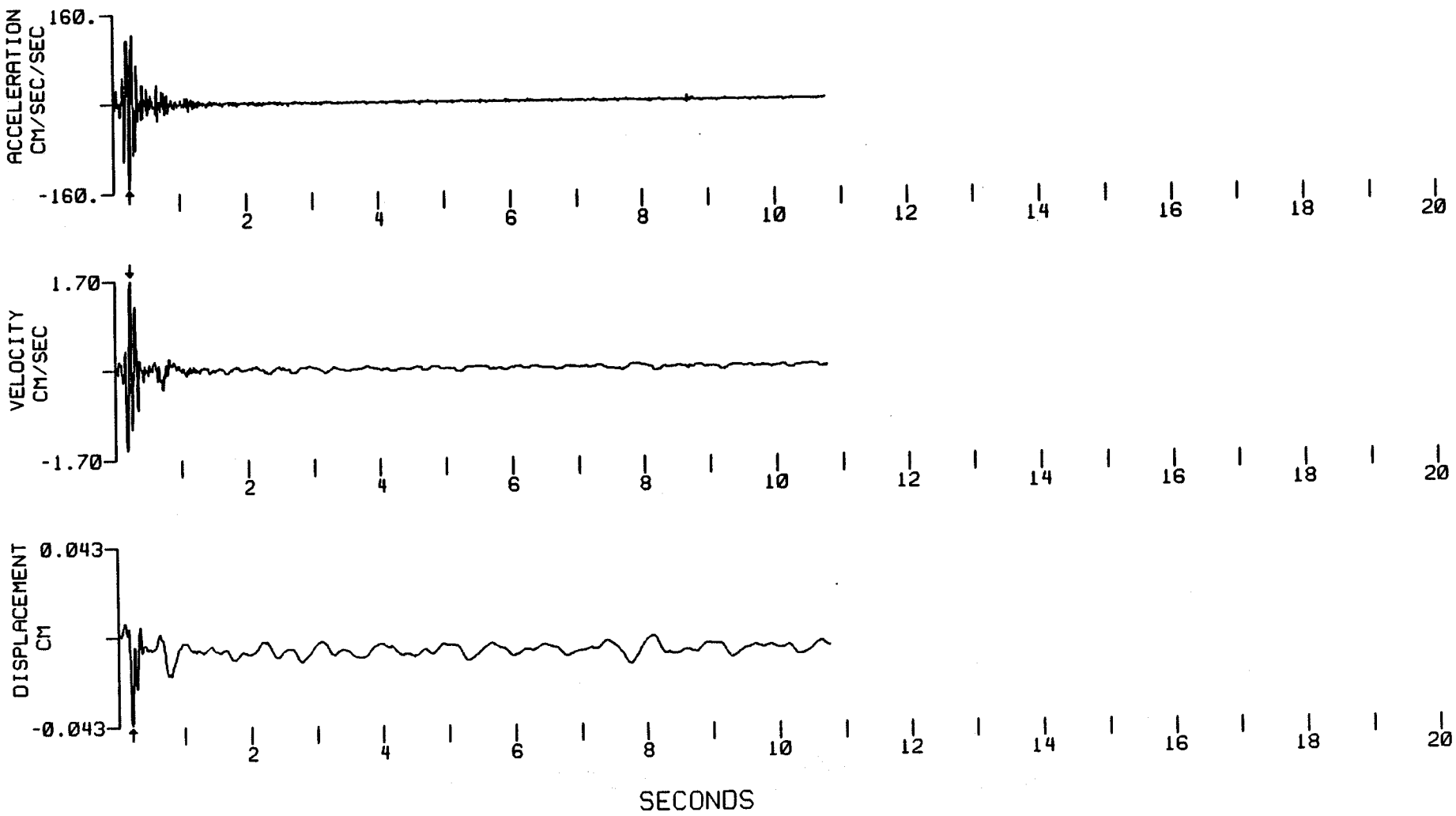


Fig. 2.12

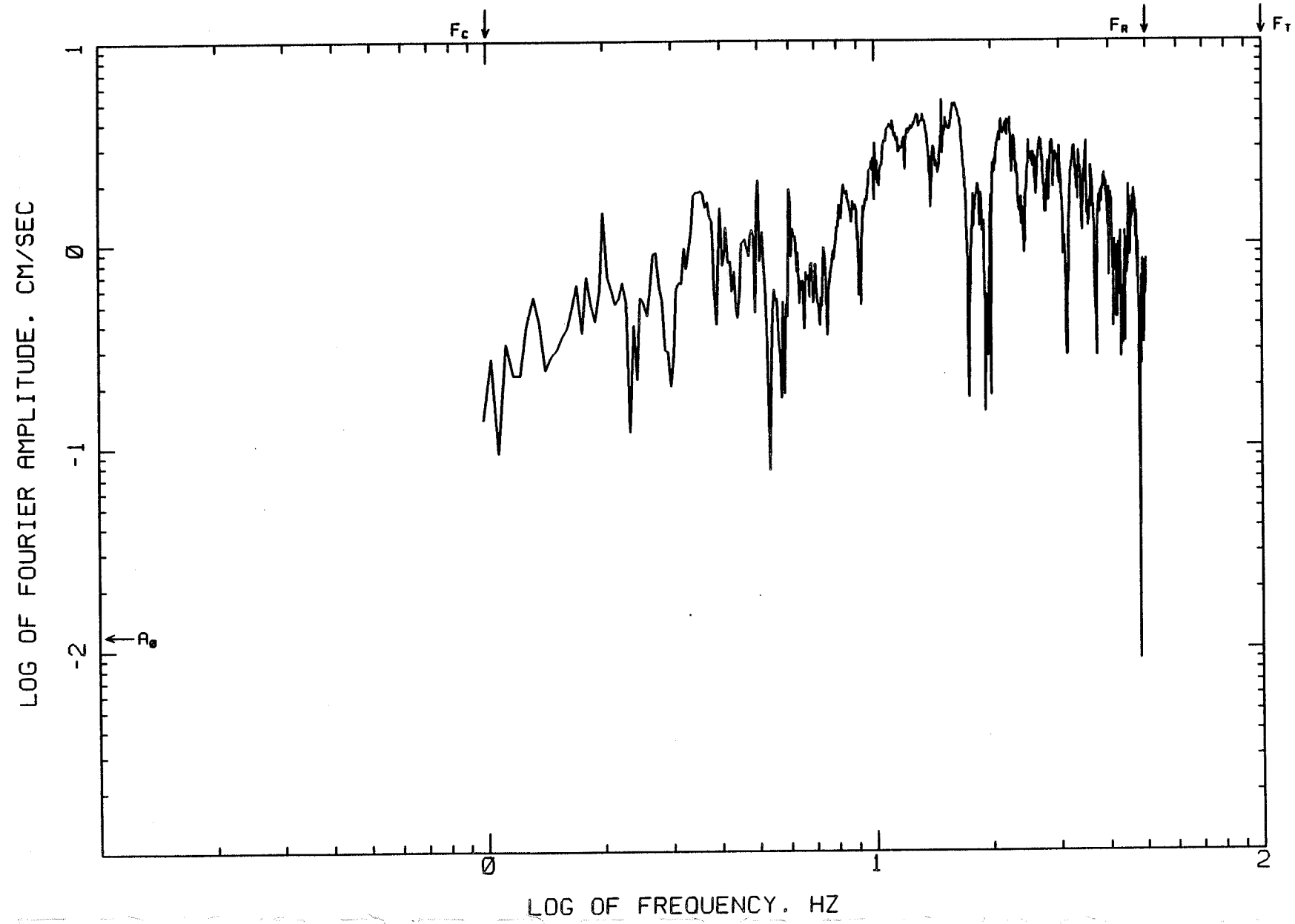

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT1114
EARTHQUAKE OF 1985 11 18 1707 UT
330 DEGREES
4TH-ORDER BUTTERWORTH 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
Ae
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
1
0
-1
-2
0
1
2

Fig. 2.17.F.L

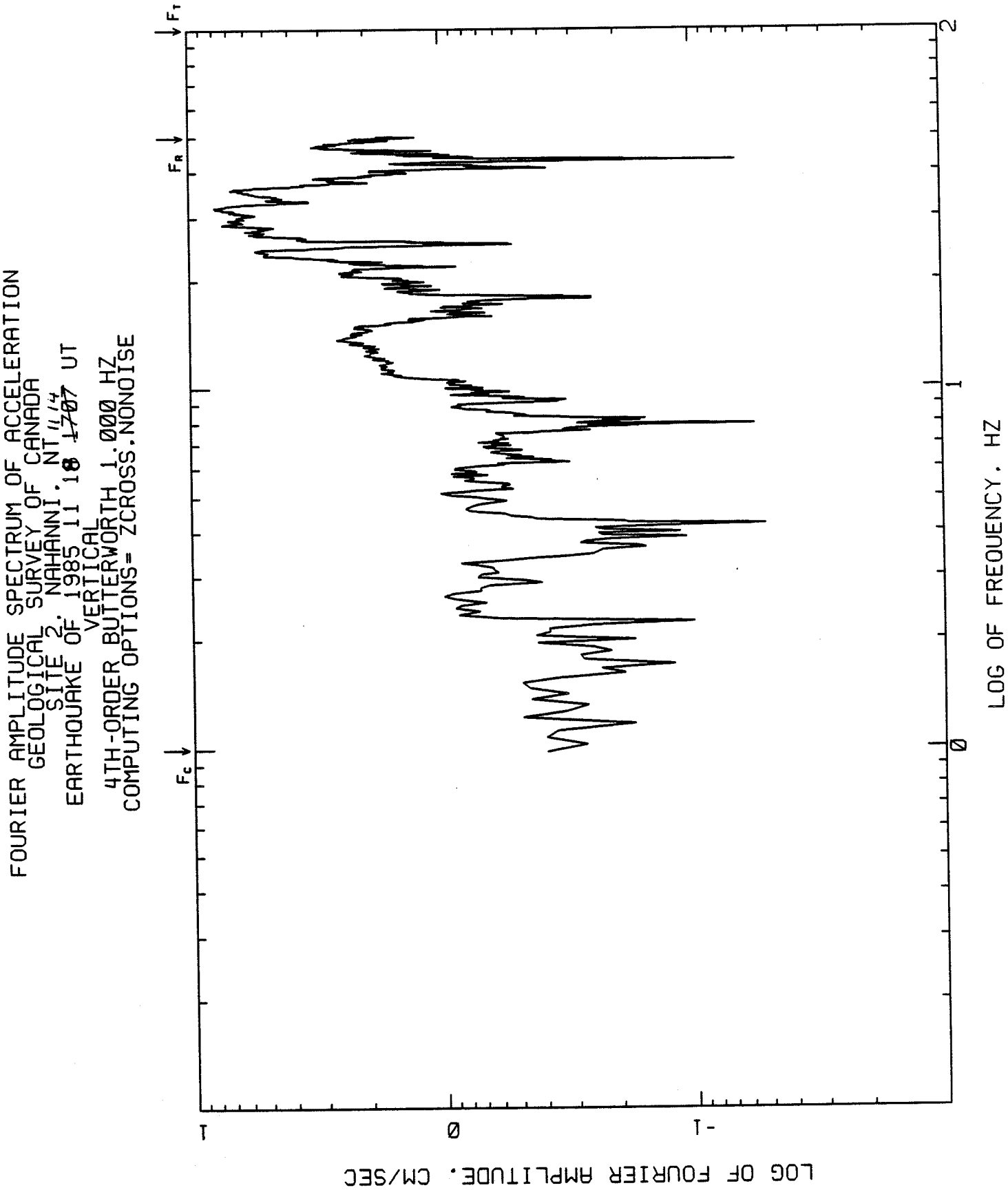

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT 44
EARTHQUAKE OF 1985 11 18 1707 UT
VERTICAL
4TH-ORDER BUTTERWORTH 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
1
0
-1
2
1
0
F_T
F_A
F_C

Fig. 2.17.F.V

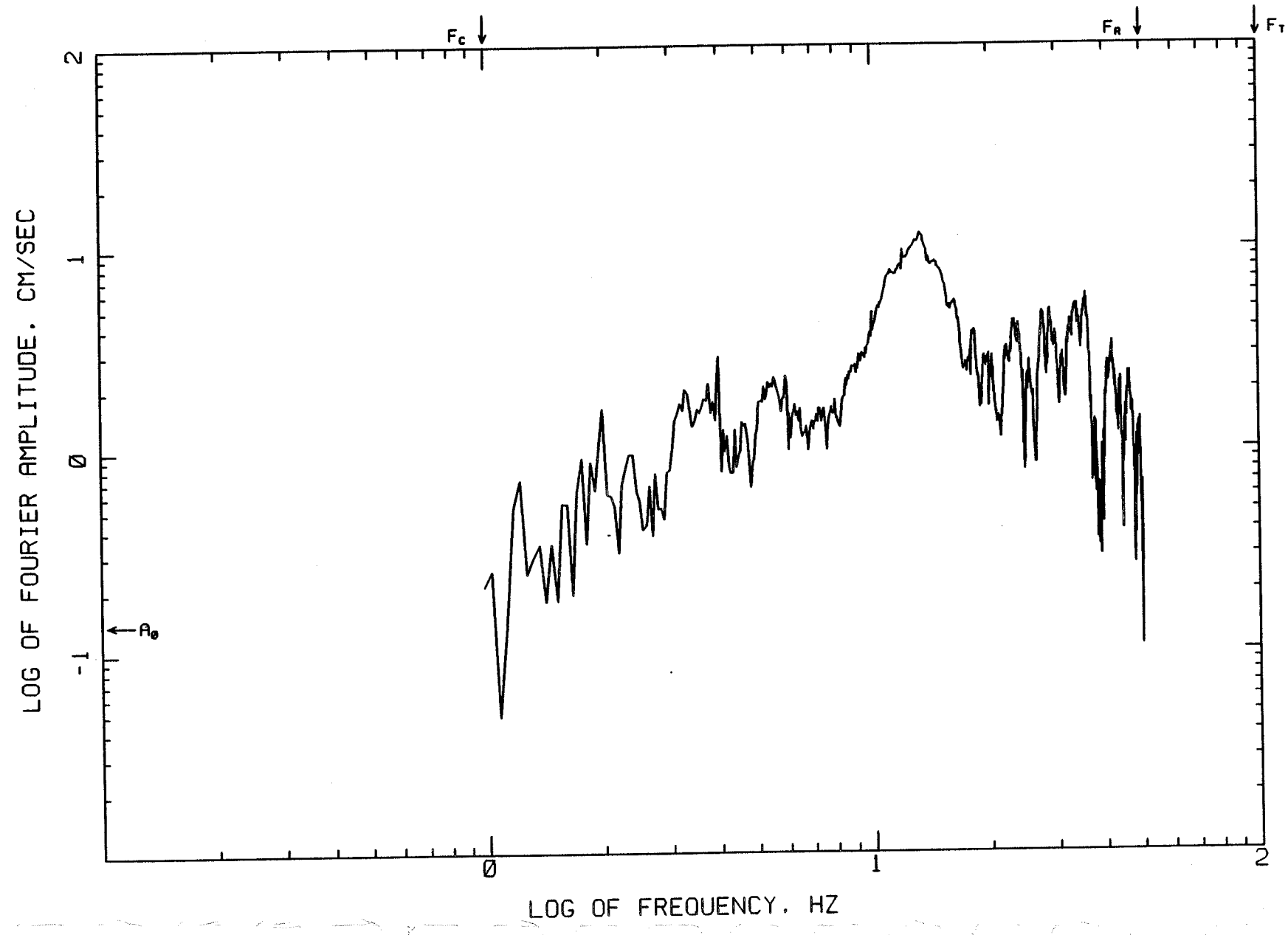

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT 11 14
EARTHQUAKE OF 1985 11 18 ~~1707~~ UT
240 DEGREES
4TH-ORDER BUTTERWORTH 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
LOG OF FOURIER AMPLITUDE. CM/SEC
2
1
0
-1
A0
0
1
2
LOG OF FREQUENCY. HZ

Fig. 2.17 F.T

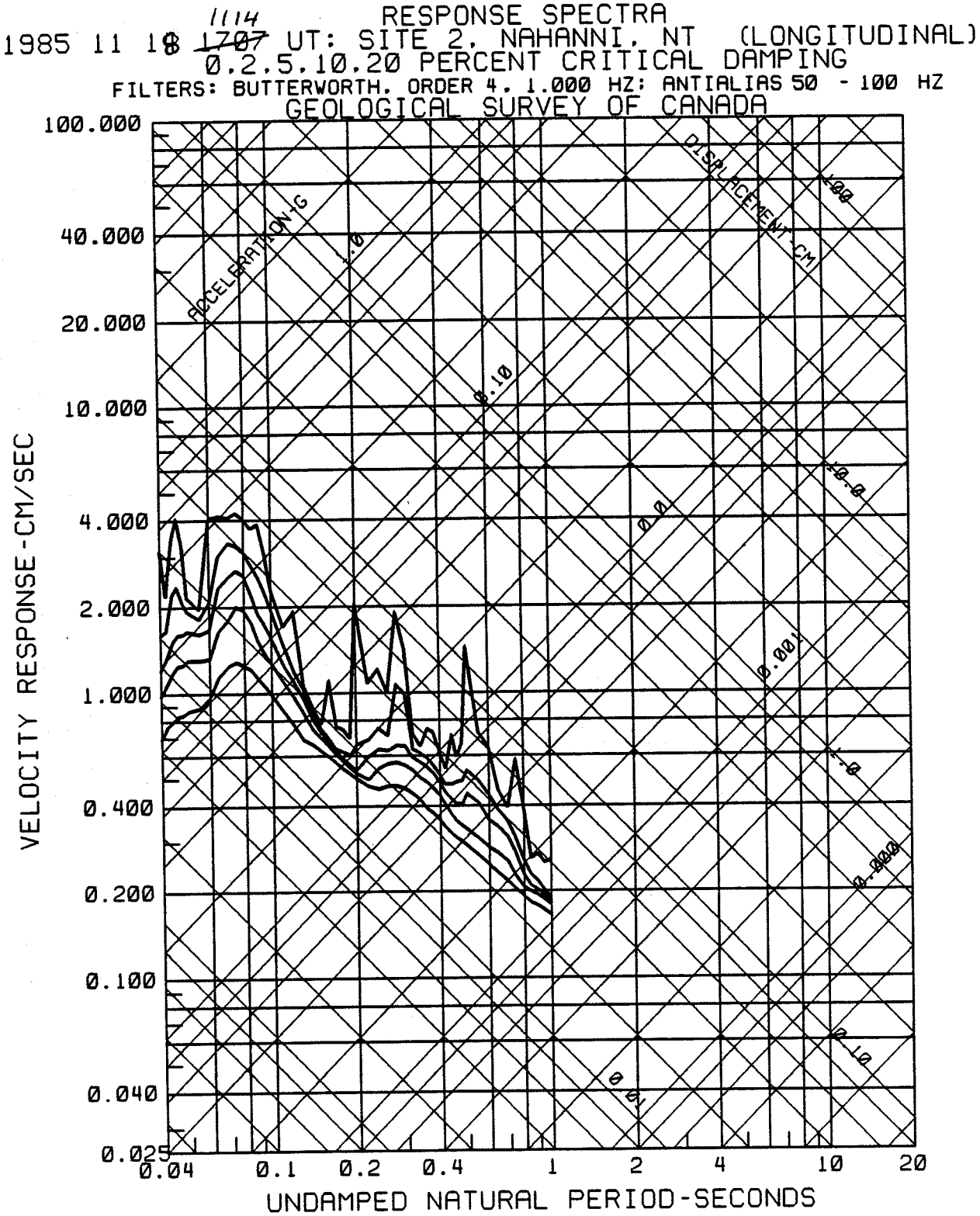

RESPONSE SPECTRA
1985 11 18 1114 UT: SITE 2. NAHANNI. NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 1.000 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 2.17.R.L

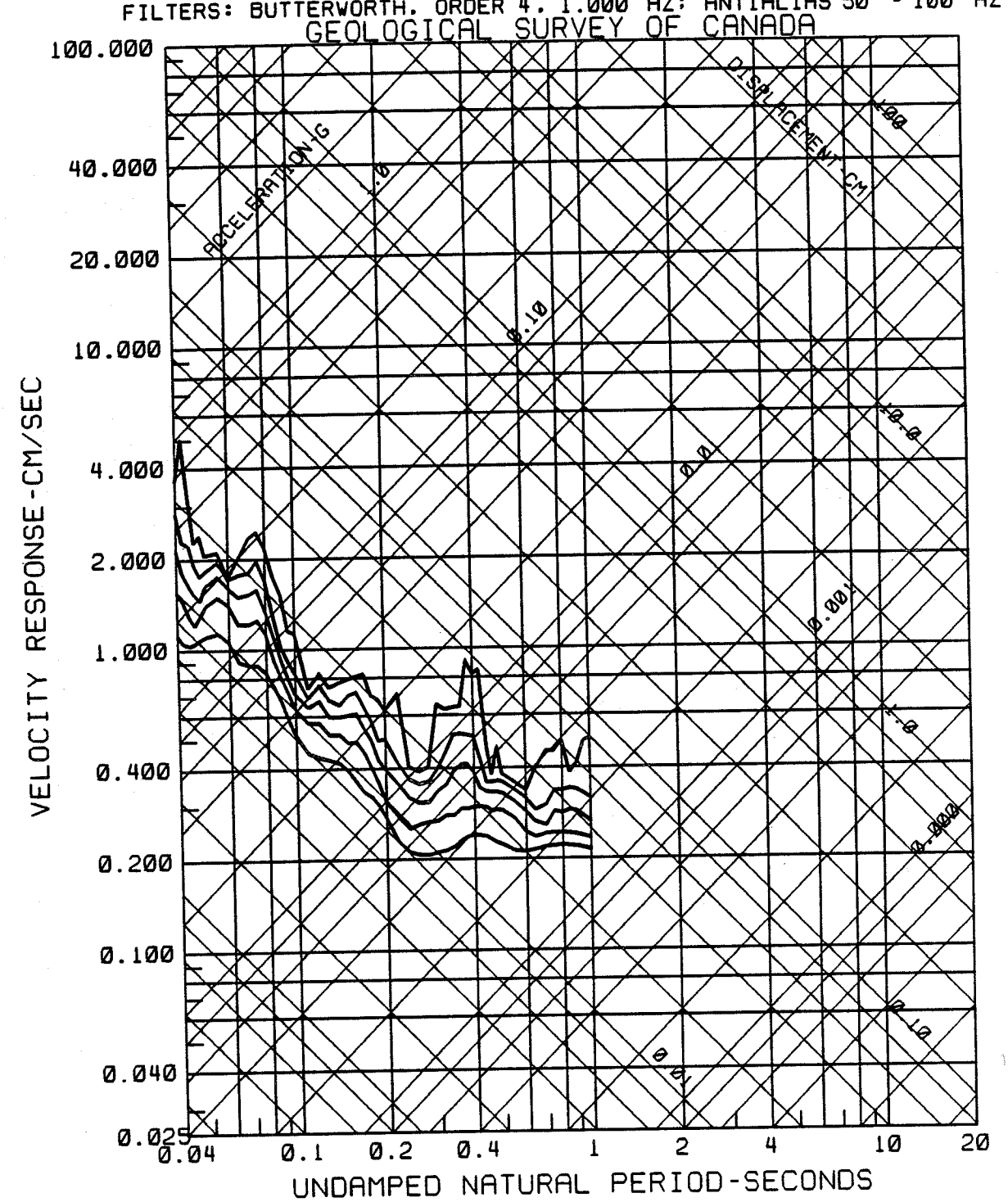

1114
RESPONSE SPECTRA
1985 11 18 1707 UT: SITE 2, NAHANNI, NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 1.000 HZ; ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 2.17R.V

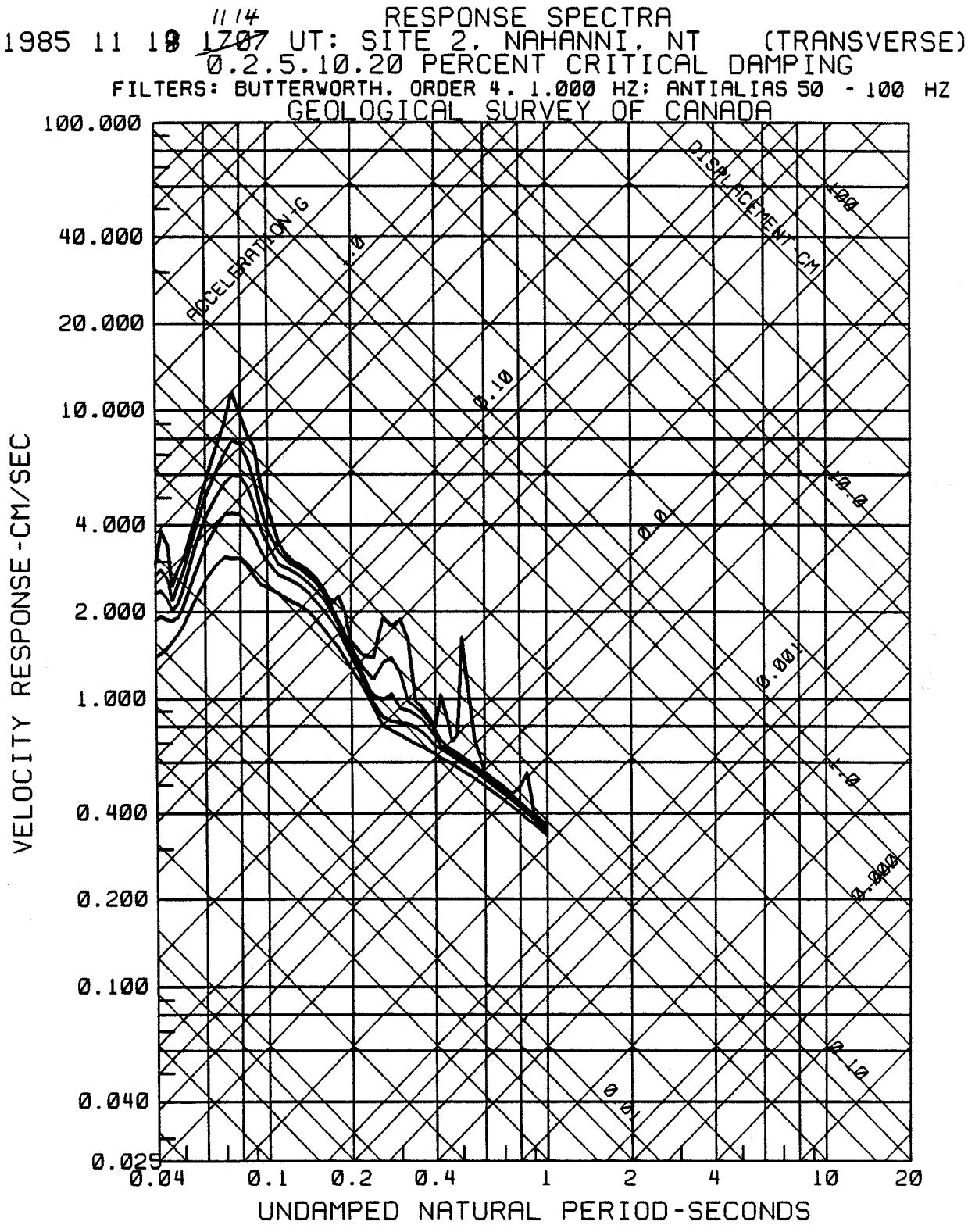

RESPONSE SPECTRA
1985 11 14 1707 UT: SITE 2, NAHANNI, NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 1.000 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 2.17R.T

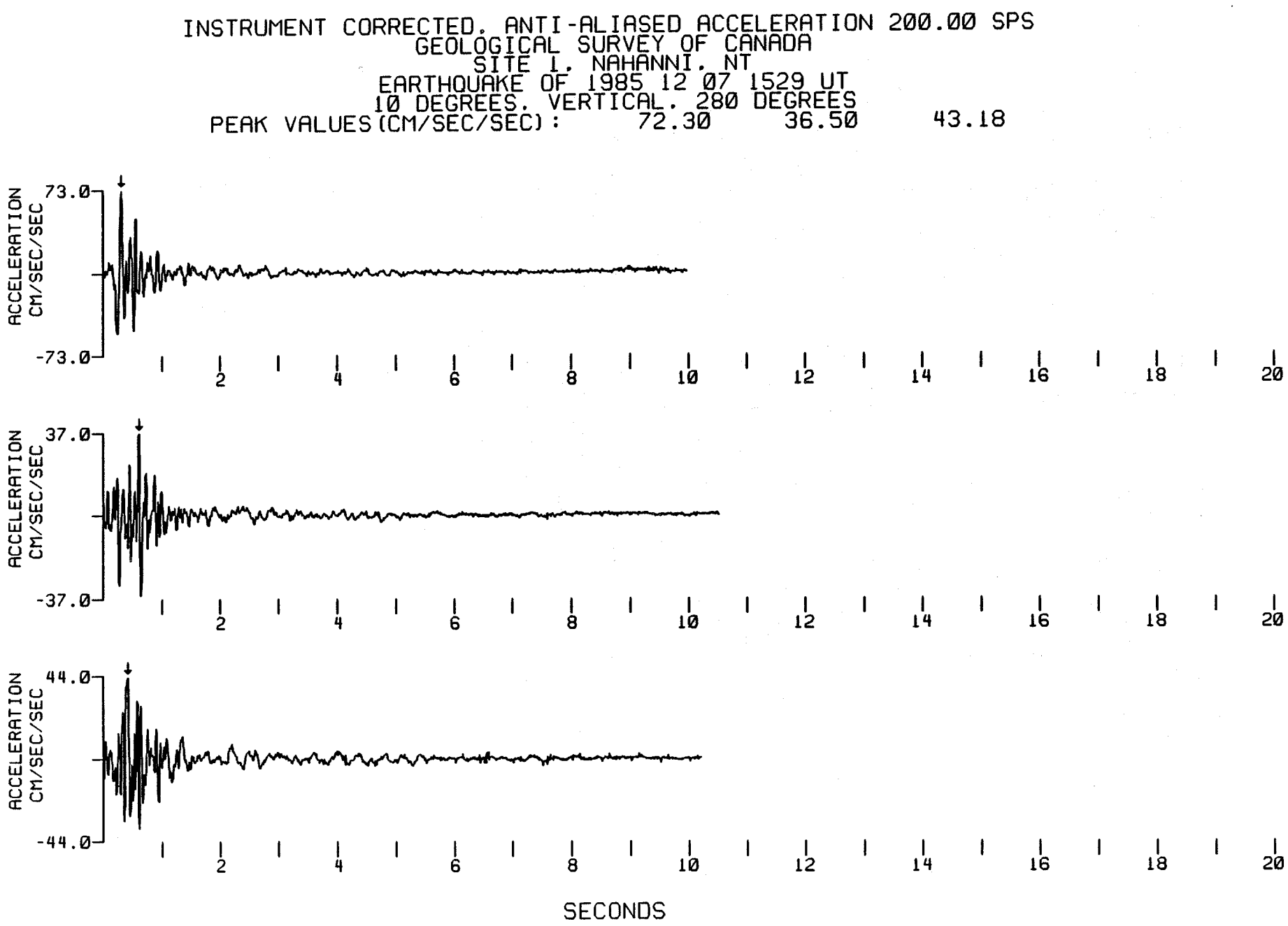

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 07 1529 UT
10 DEGREES. VERTICAL. 280 DEGREES
PEAK VALUES(CM/SEC/SEC): 72.30 36.50 43.18
ACCELERATION CM/SEC/SEC
73.0
-73.0
37.0
-37.0
44.0
-44.0
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.21.

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 07 1529 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT 0.333 HZ
PEAK VALUES: ACCEL=72.24 CM/SEC/SEC. VELOCITY=-2.11 CM/SEC. DISPL=-0.11 CM

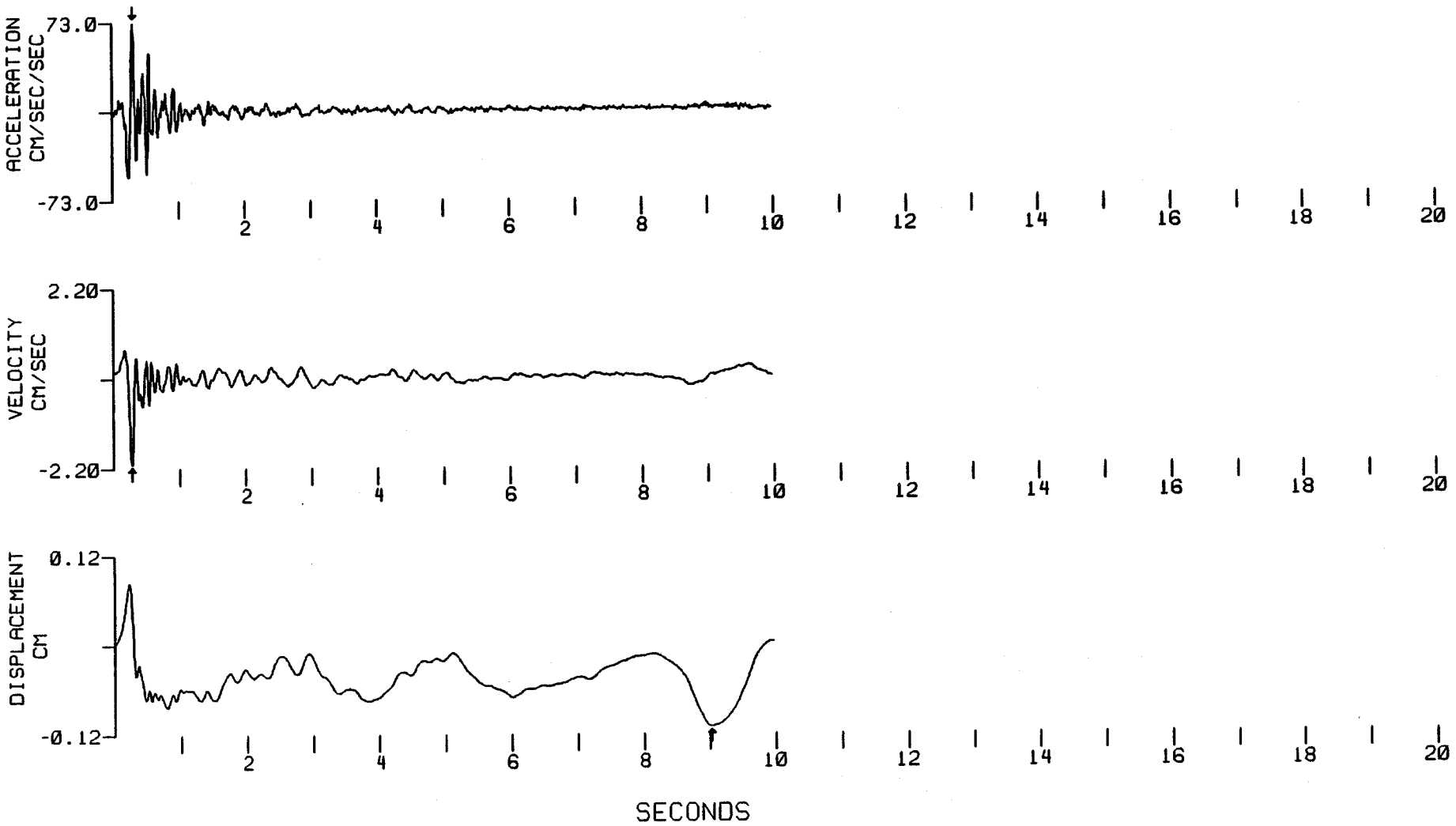


Fig. 1.11

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1, NAHANNI, NT
EARTHQUAKE OF 1985 12 07 1529 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.333 HZ
PEAK VALUES: ACCEL=36.48 CM/SEC/SEC, VELOCITY=0.76 CM/SEC, DISPL=0.06 CM

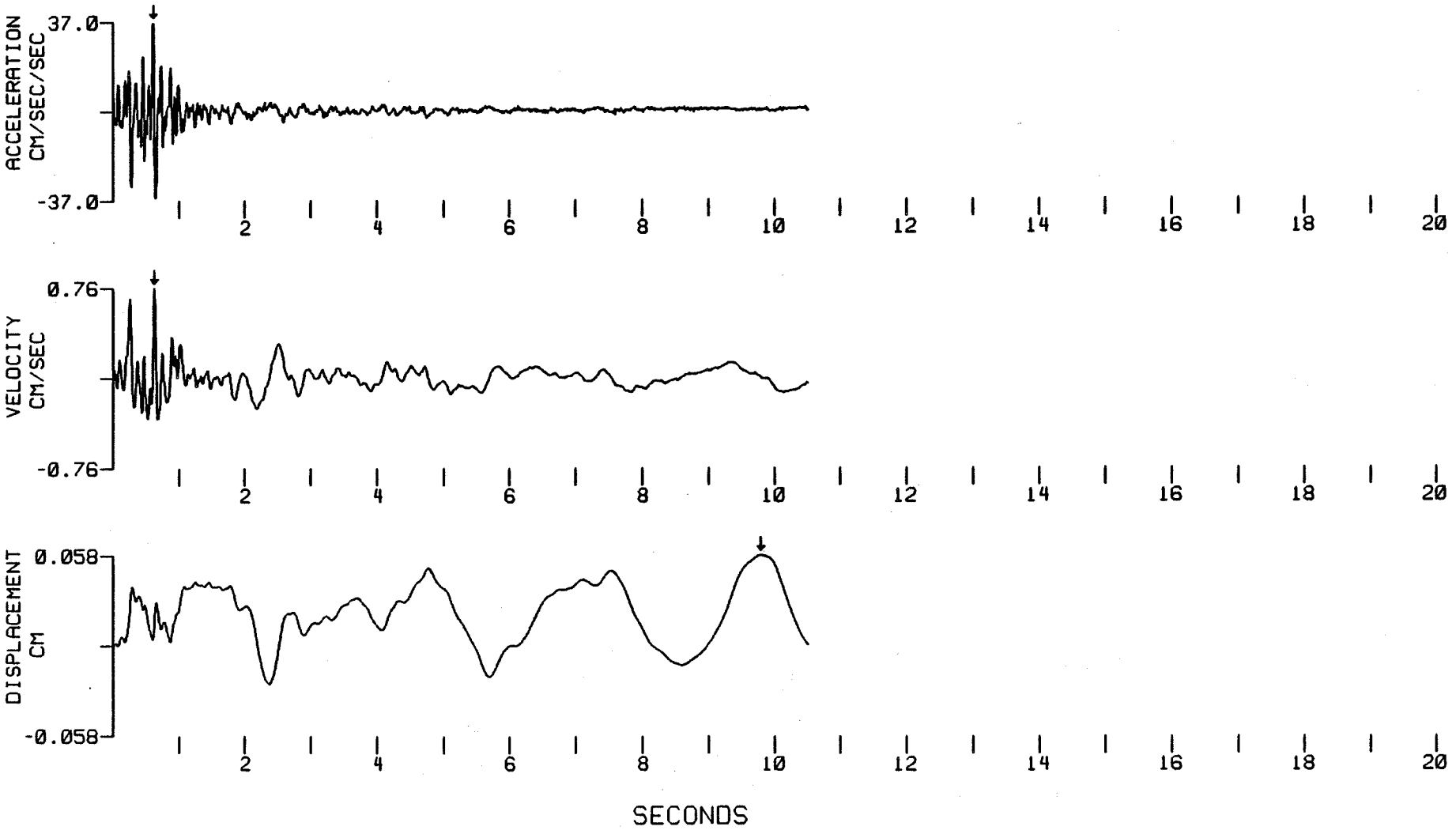


Fig. 1.21.V

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 07 1529 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT 0.333 HZ
PEAK VALUES: ACCEL=43.38 CM/SEC/SEC. VELOCITY=1.32 CM/SEC. DISPL=-0.10 CM

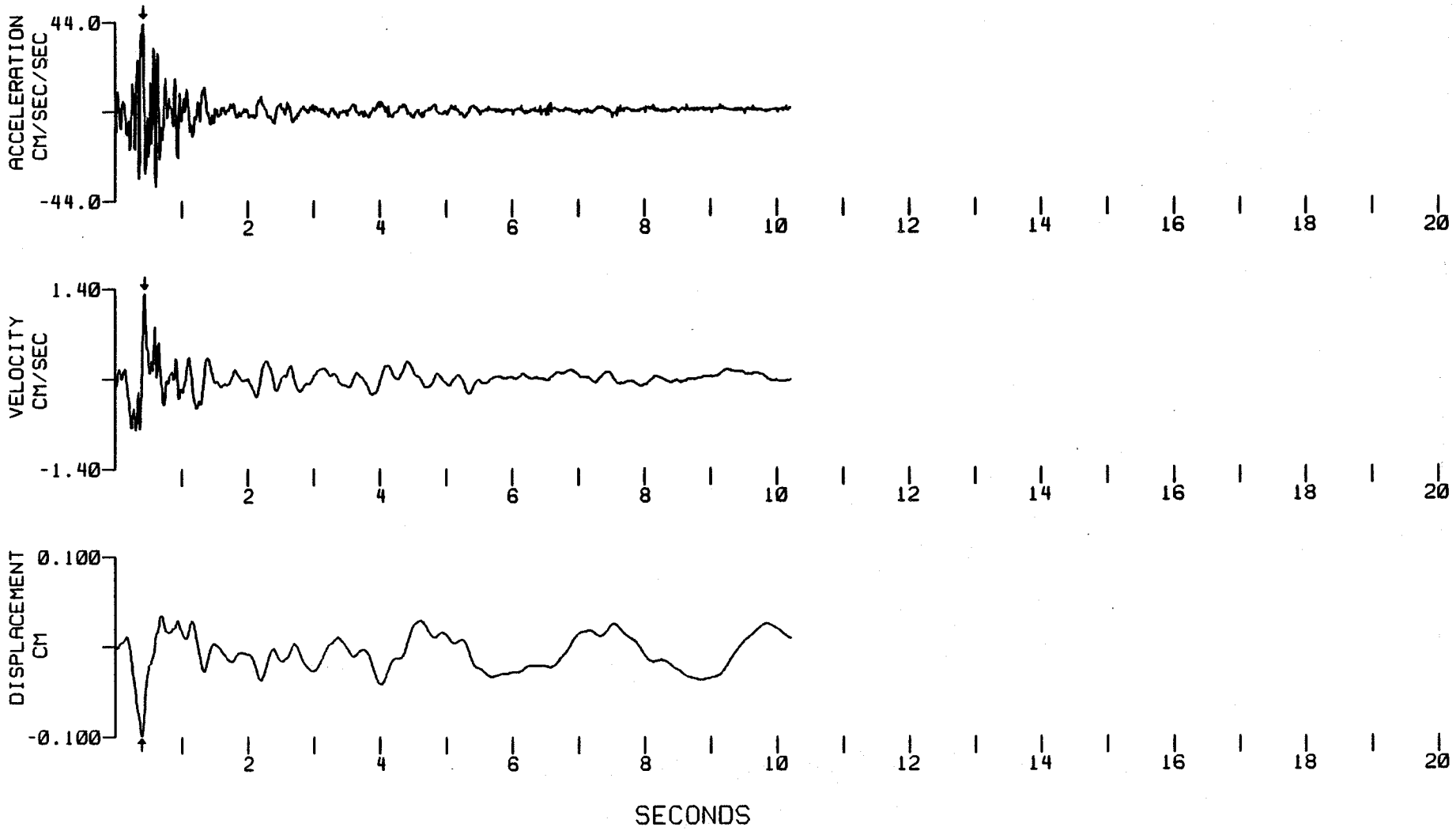


Fig. 1.2.1

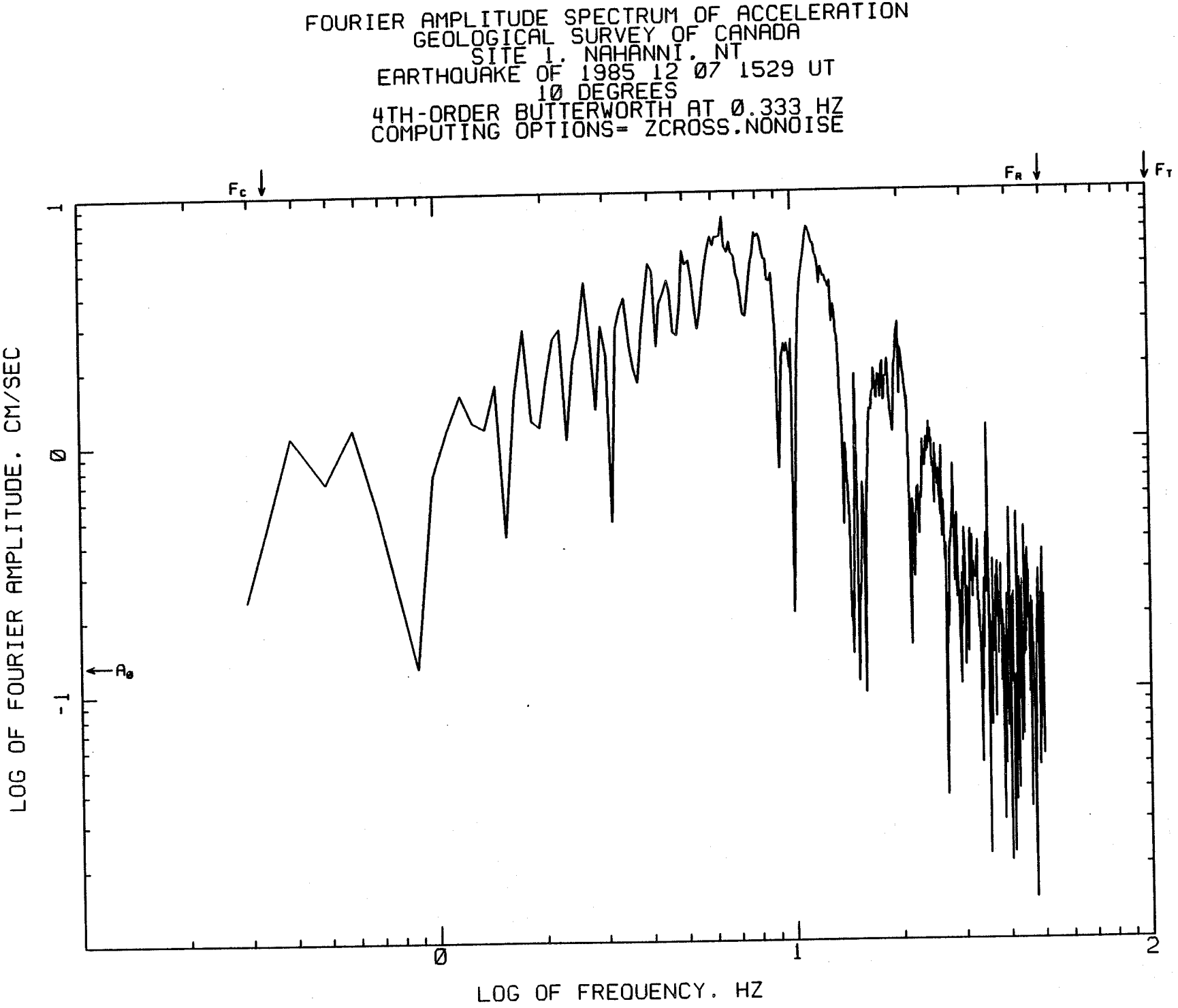

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 07 1529 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT 0.333 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
1
0
-1
0
1
2

Fig. 1.21.F.L

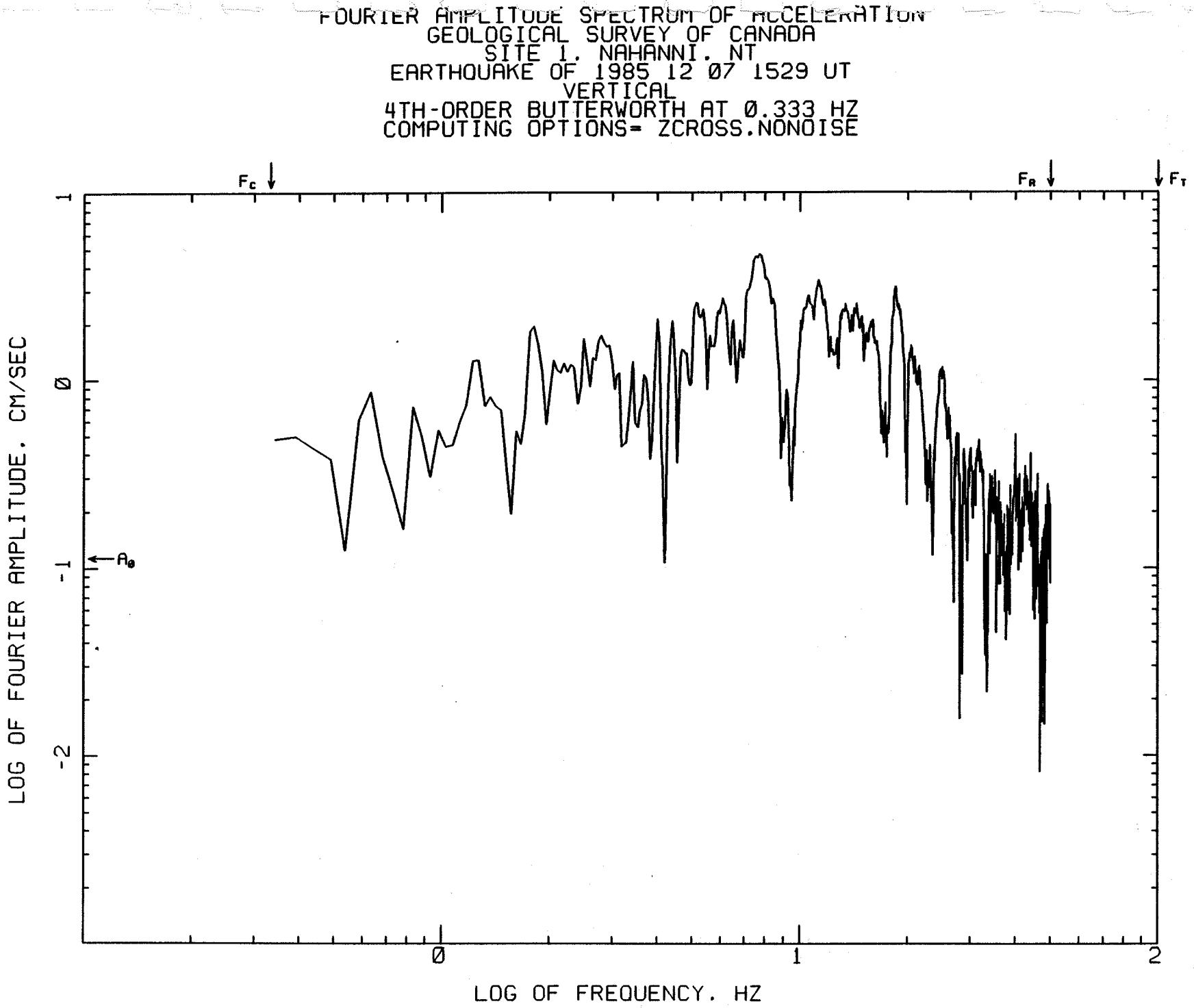

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 07 1529 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.333 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
1
0
-1
-2
0
1
2

Fig. 1.21.F.V

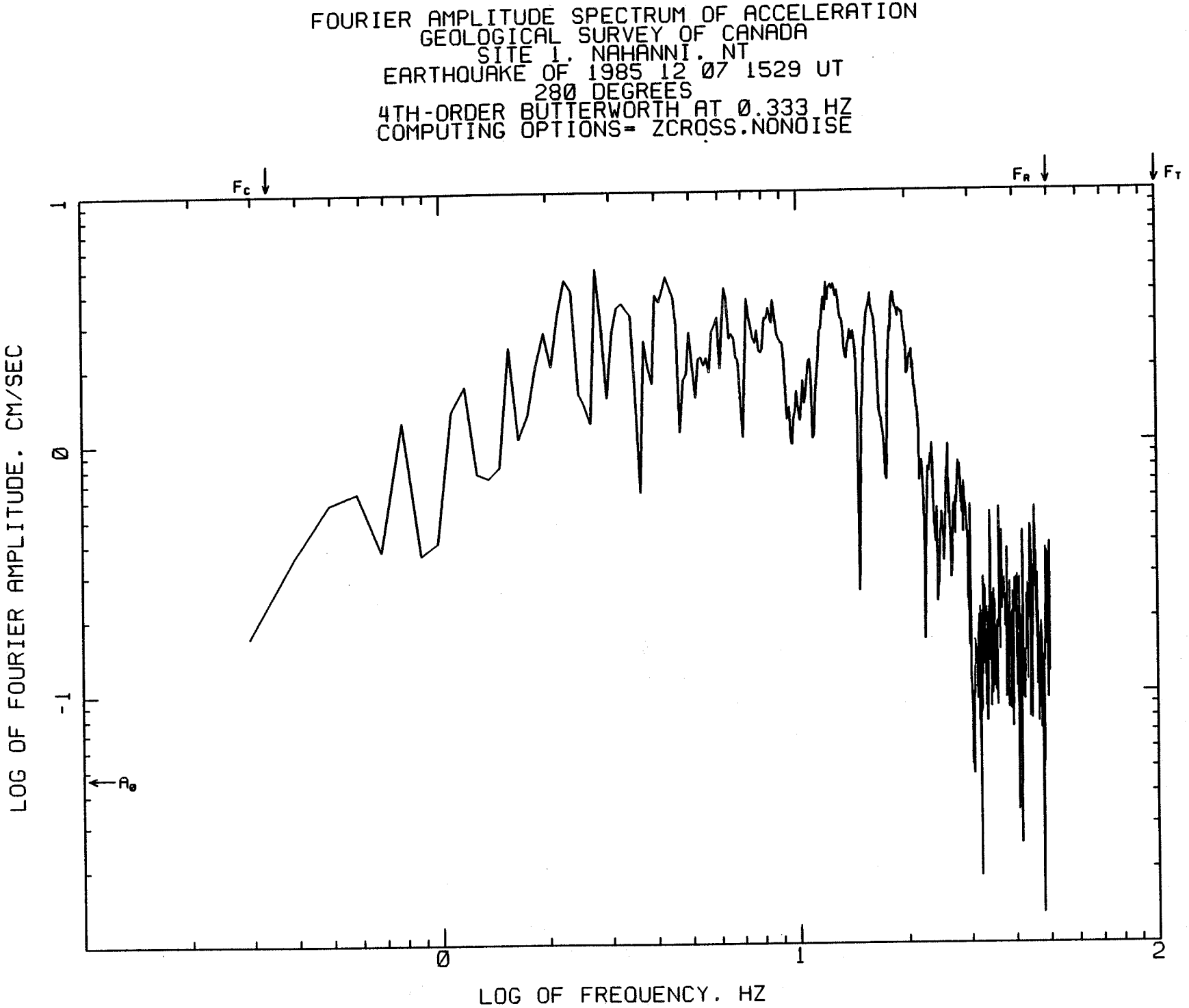

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 07 1529 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT 0.333 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
1
0
-1
0
1
2

Fig. 1.21.F.T

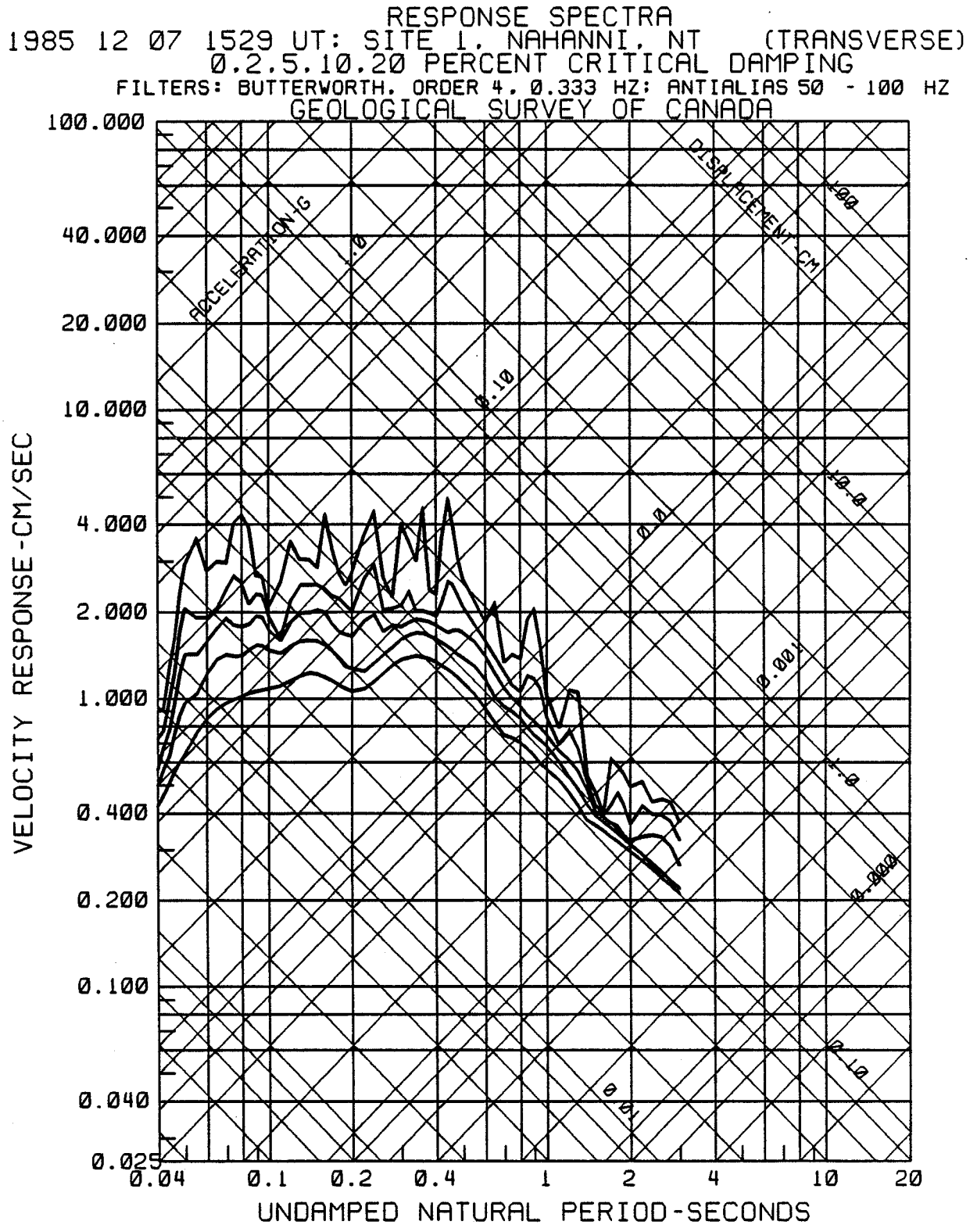

RESPONSE SPECTRA
1985 12 07 1529 UT: SITE 1. NAHANNI. NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.333 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
1.0
0.10
0.01
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
VELOCITY RESPONSE-CM/SEC
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS

Fig. 1.21.R.T

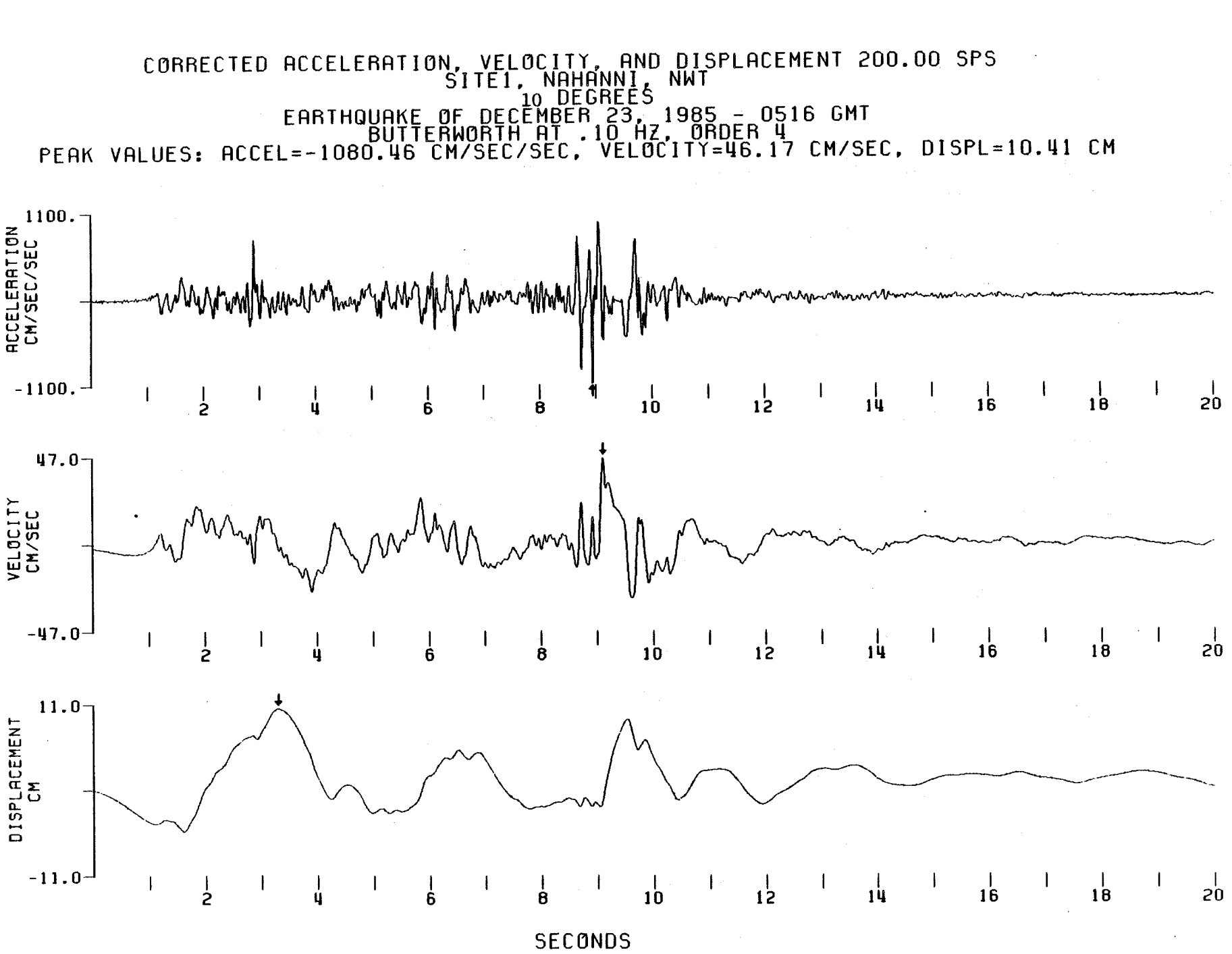

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE1, NAHANNI, NWT
10 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 - 0516 GMT
BUTTERWORTH AT .10 HZ, ORDER 4
PEAK VALUES: ACCEL=-1080.46 CM/SEC/SEC, VELOCITY=46.17 CM/SEC, DISPL=10.41 CM
ACCELERATION CM/SEC/SEC
1100.
-1100.
VELOCITY CM/SEC
47.0
-47.0
DISPLACEMENT CM
11.0
-11.0
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.23.C.L

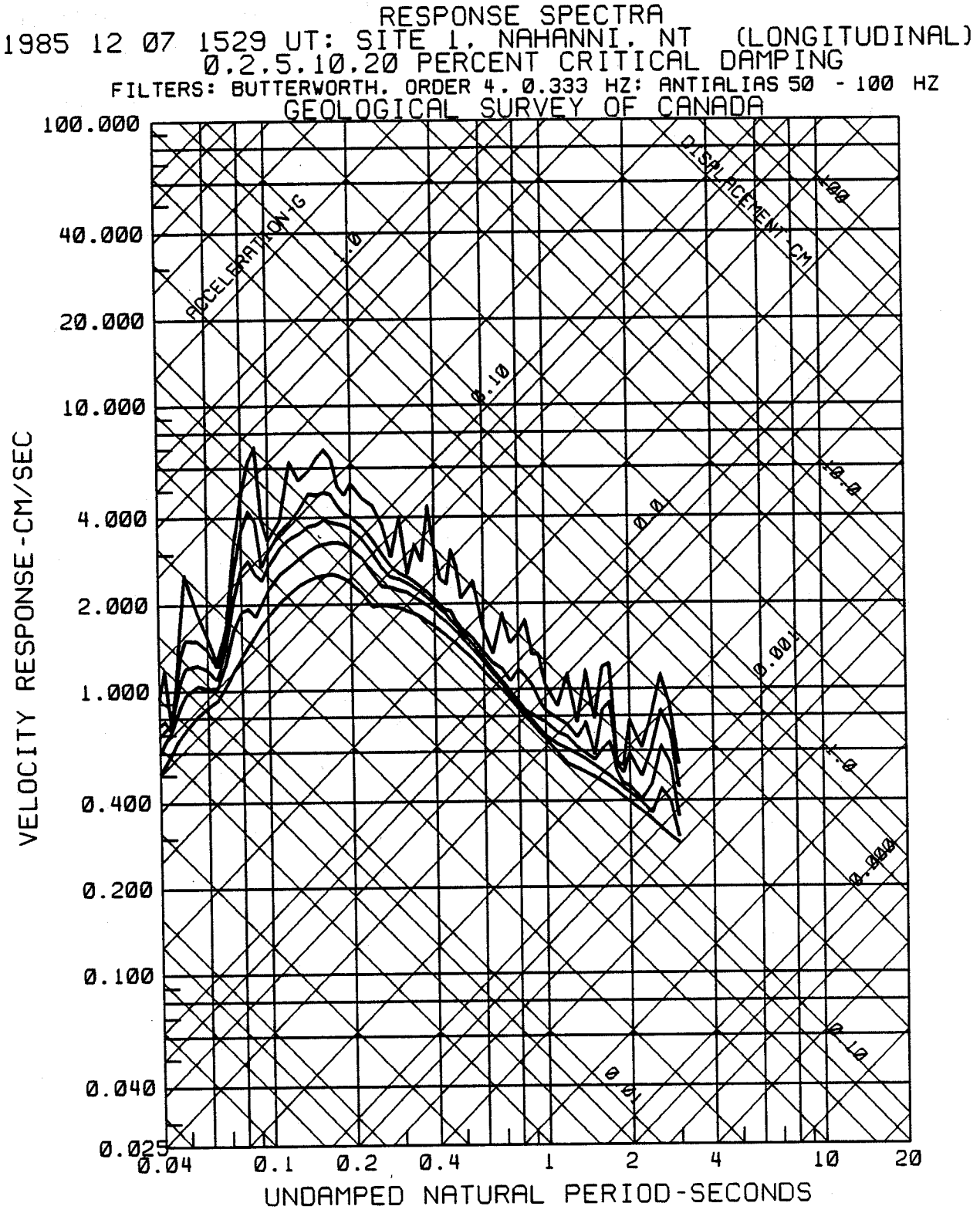

RESPONSE SPECTRA
1985 12 07 1529 UT: SITE 1, NAHANNI, NT (LONGITUDINAL)
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.333 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
1.0
0.10
0.01
DISPLACEMENT-CM
100
10.0
1.0
0.100
0.010
0.001

Fig. 1.21.R.L

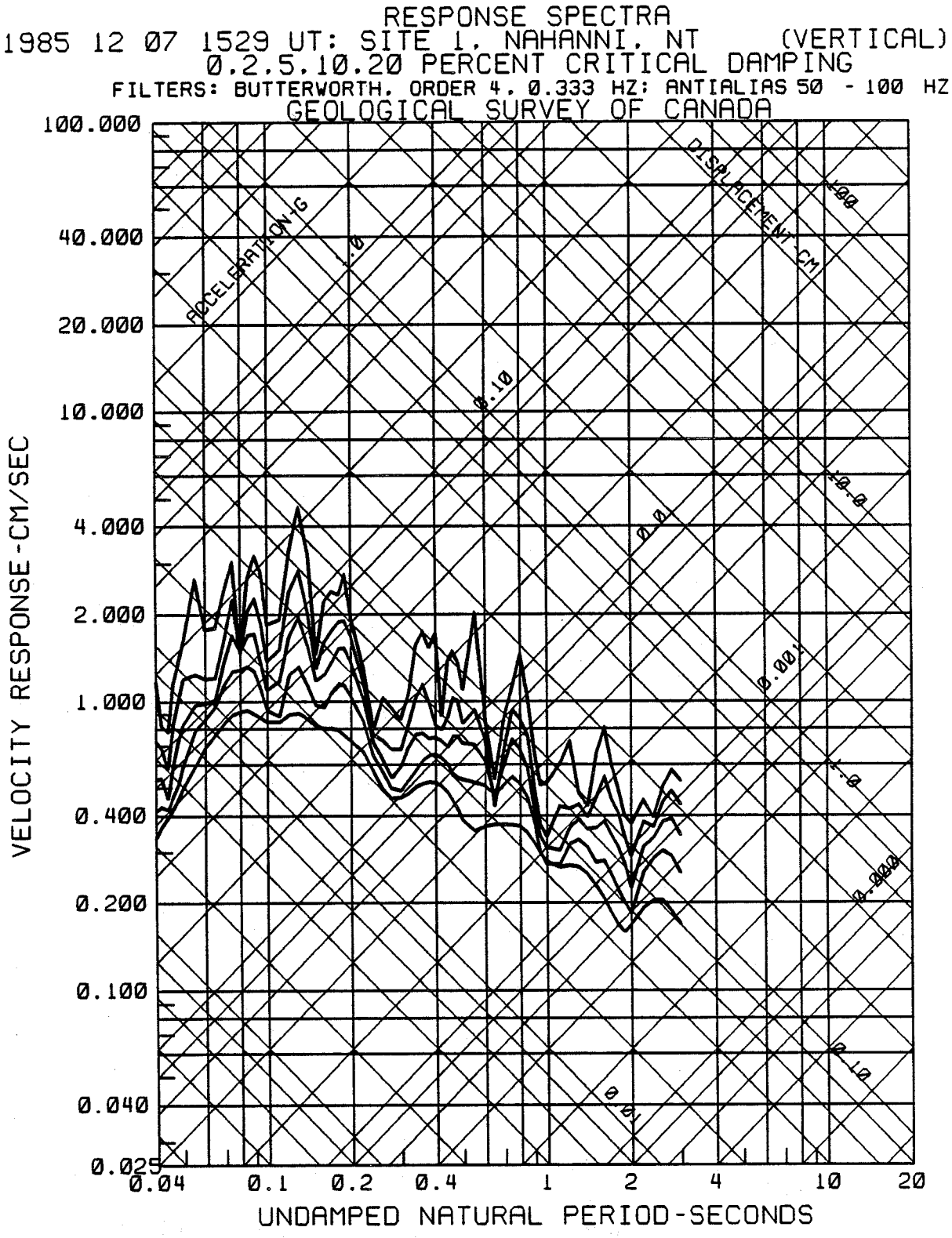

RESPONSE SPECTRA
1985 12 07 1529 UT: SITE 1, NAHANNI, NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.333 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
1.0
0.10
0.01
0.001
DISPLACEMENT-CM
100
10.0
1.0
0.100
0.10
0.01

Fig. 1.21.R.V

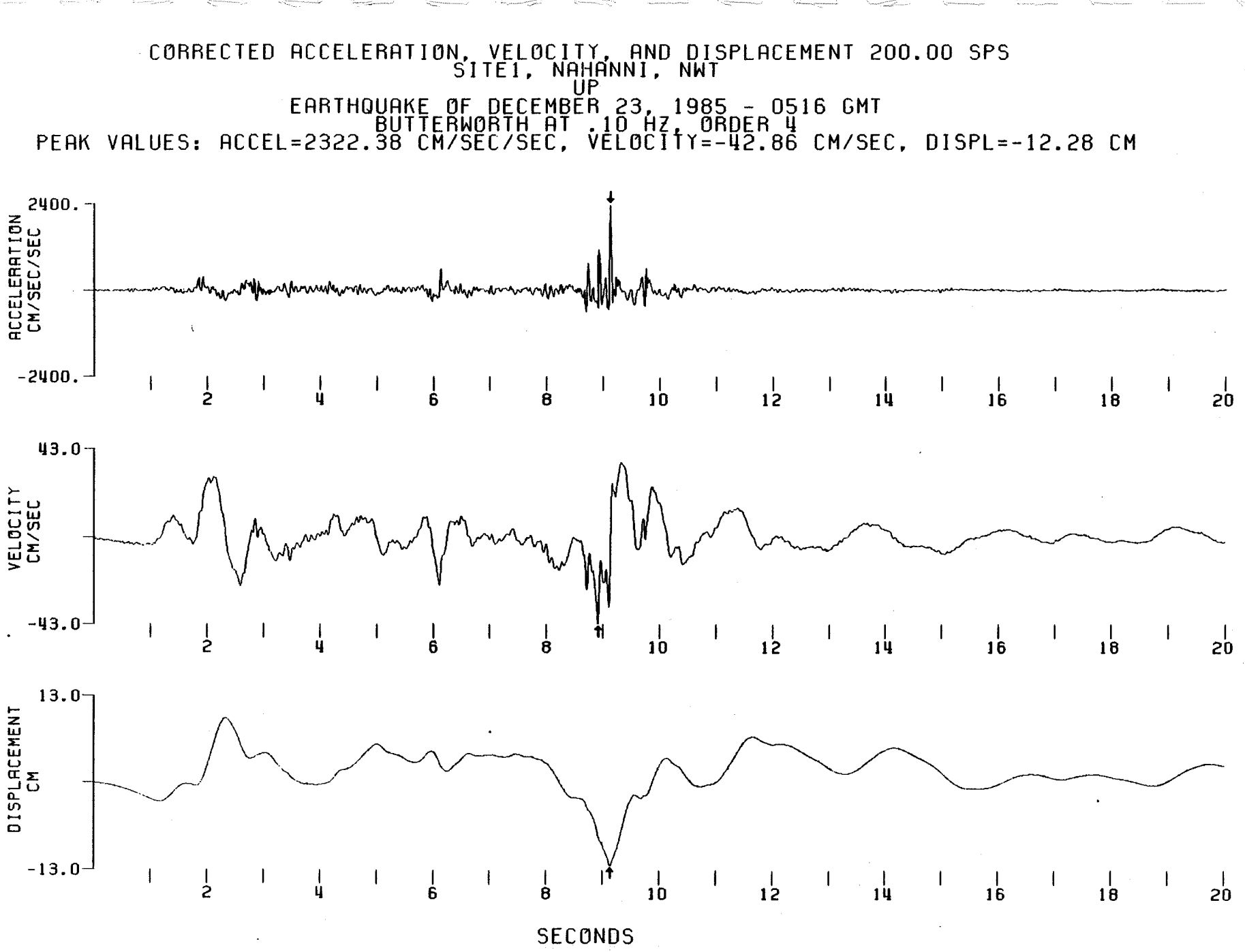

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE1, NAHANNI, NWT
UP
EARTHQUAKE OF DECEMBER 23, 1985 - 0516 GMT
BUTTERWORTH AT .10 HZ, ORDER 4
PEAK VALUES: ACCEL=2322.38 CM/SEC/SEC, VELOCITY=-42.86 CM/SEC, DISPL=-12.28 CM
ACCELERATION CM/SEC/SEC
2400.
-2400.
VELOCITY CM/SEC
43.0
-43.0
DISPLACEMENT CM
13.0
-13.0
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.23.C.V

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE1, NAHANNI, NWT
280 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 - 0516 GMT
BUTTERWORTH AT .10 HZ, ORDER 4
PEAK VALUES: ACCEL=-1319.08 CM/SEC/SEC, VELOCITY=-45.06 CM/SEC, DISPL=-15.25 CM

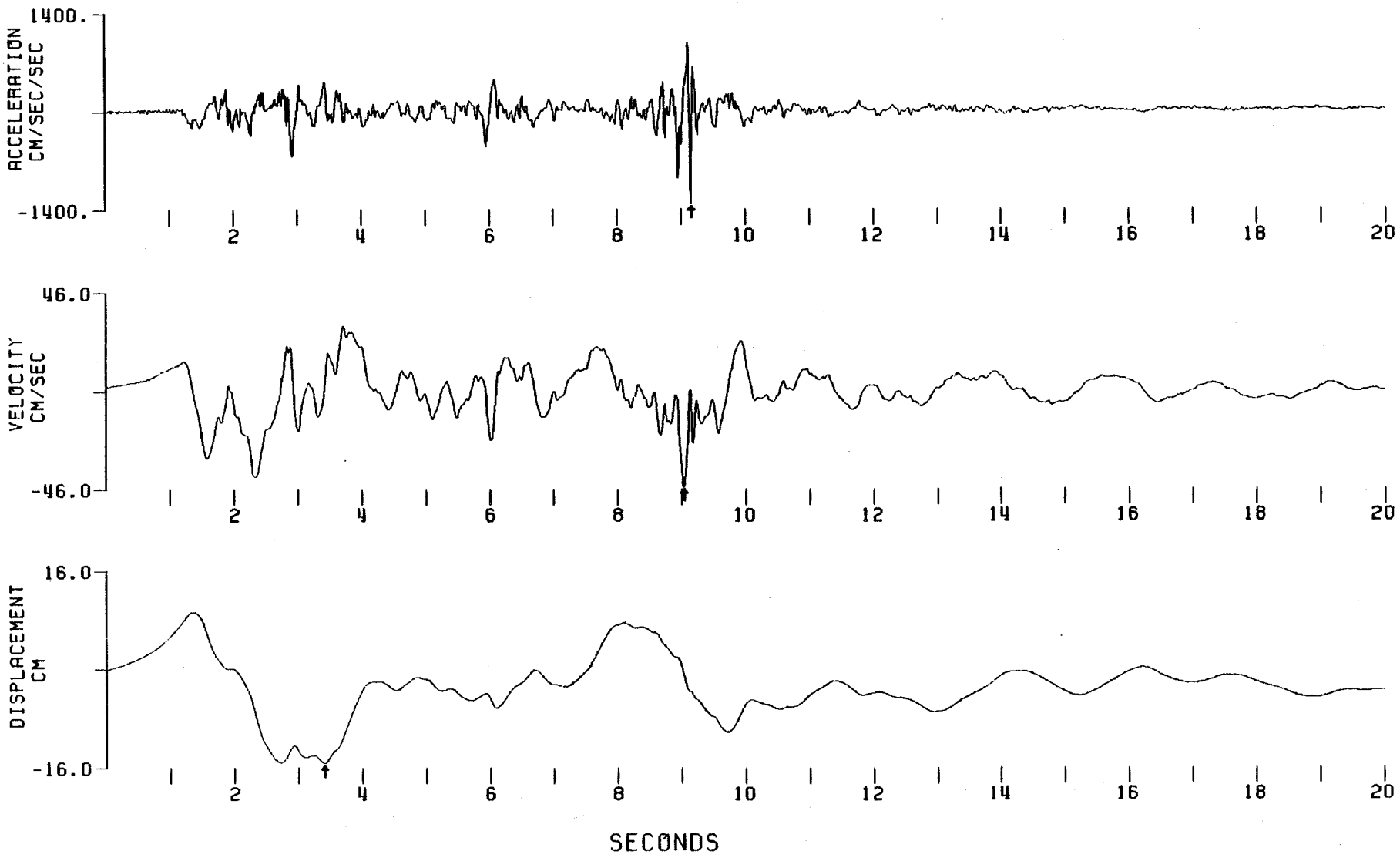


Fig. 123.C.T

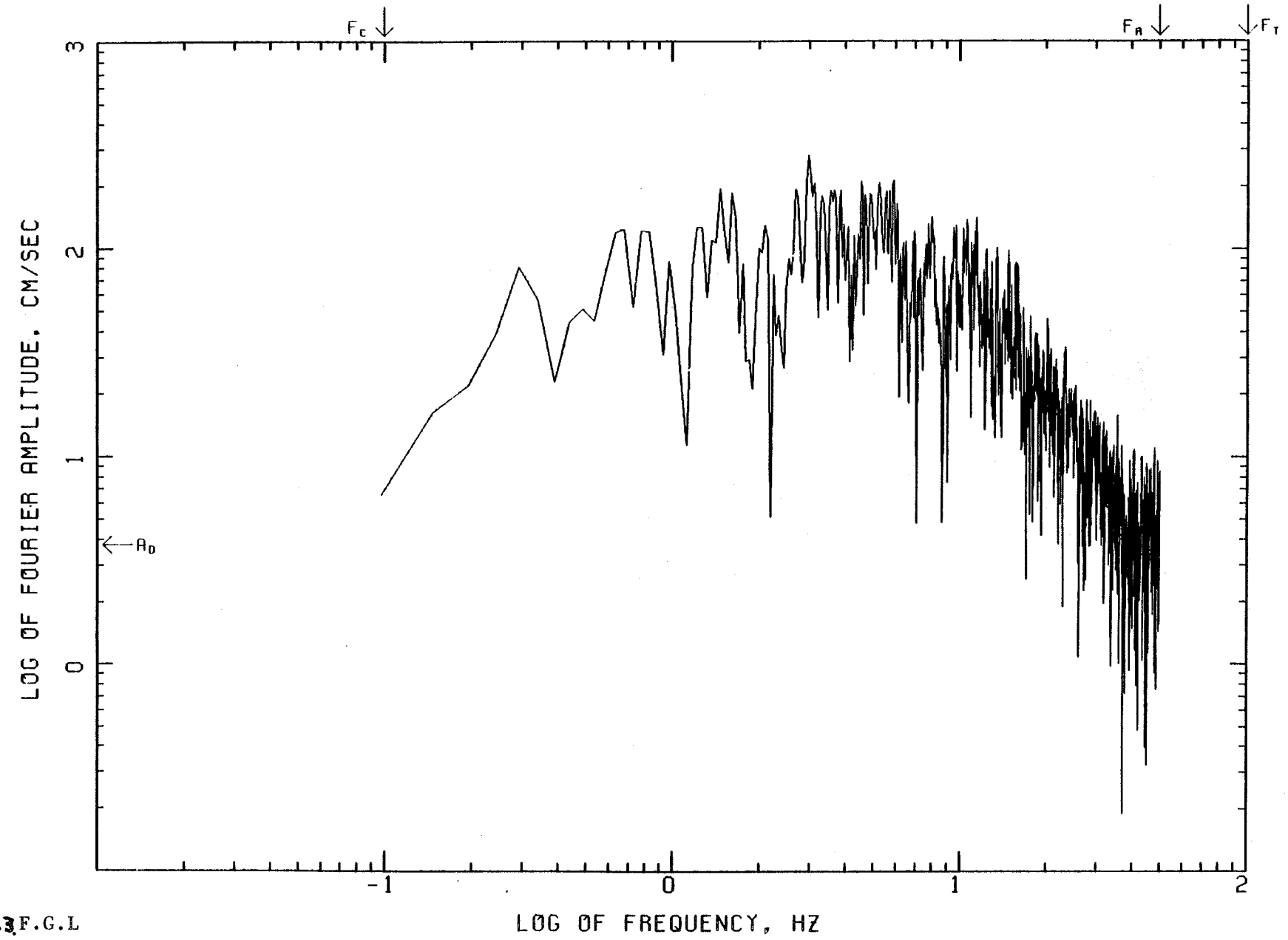

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE1, NAHANNI, NWT
10 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 - 0516 GMT
BUTTERWORTH AT .10 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FR
FT
AD
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
3
2
1
0
-1
0
1
2

Fig. 123 F.G.L

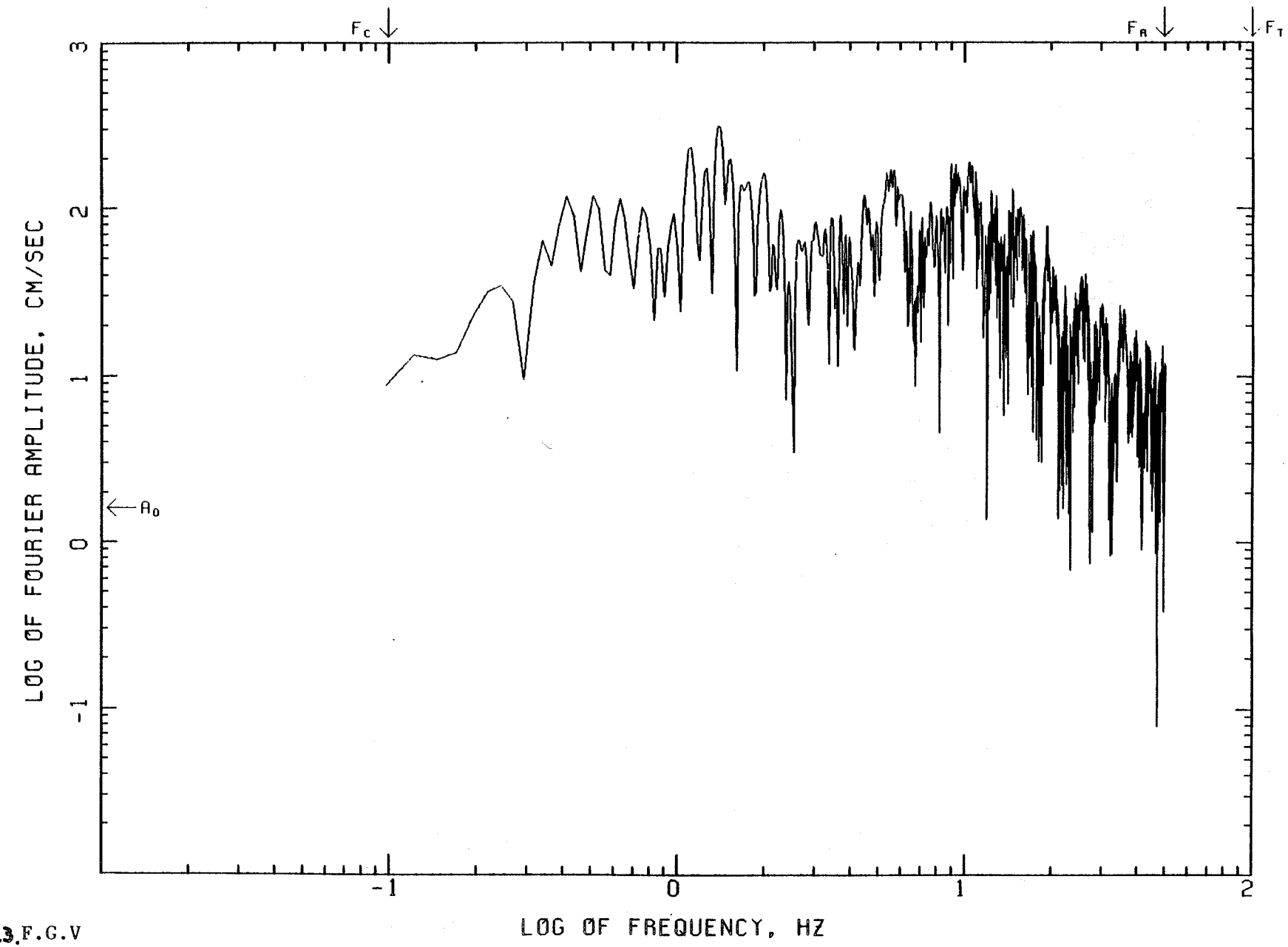

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE1, NAHANNI, NWT
UP
EARTHQUAKE OF DECEMBER 23, 1985 - 0516 GMT
BUTTERWORTH AT .10 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
3
2
1
0
-1
-1
0
1
2

Fig. 1.23.F.G.V

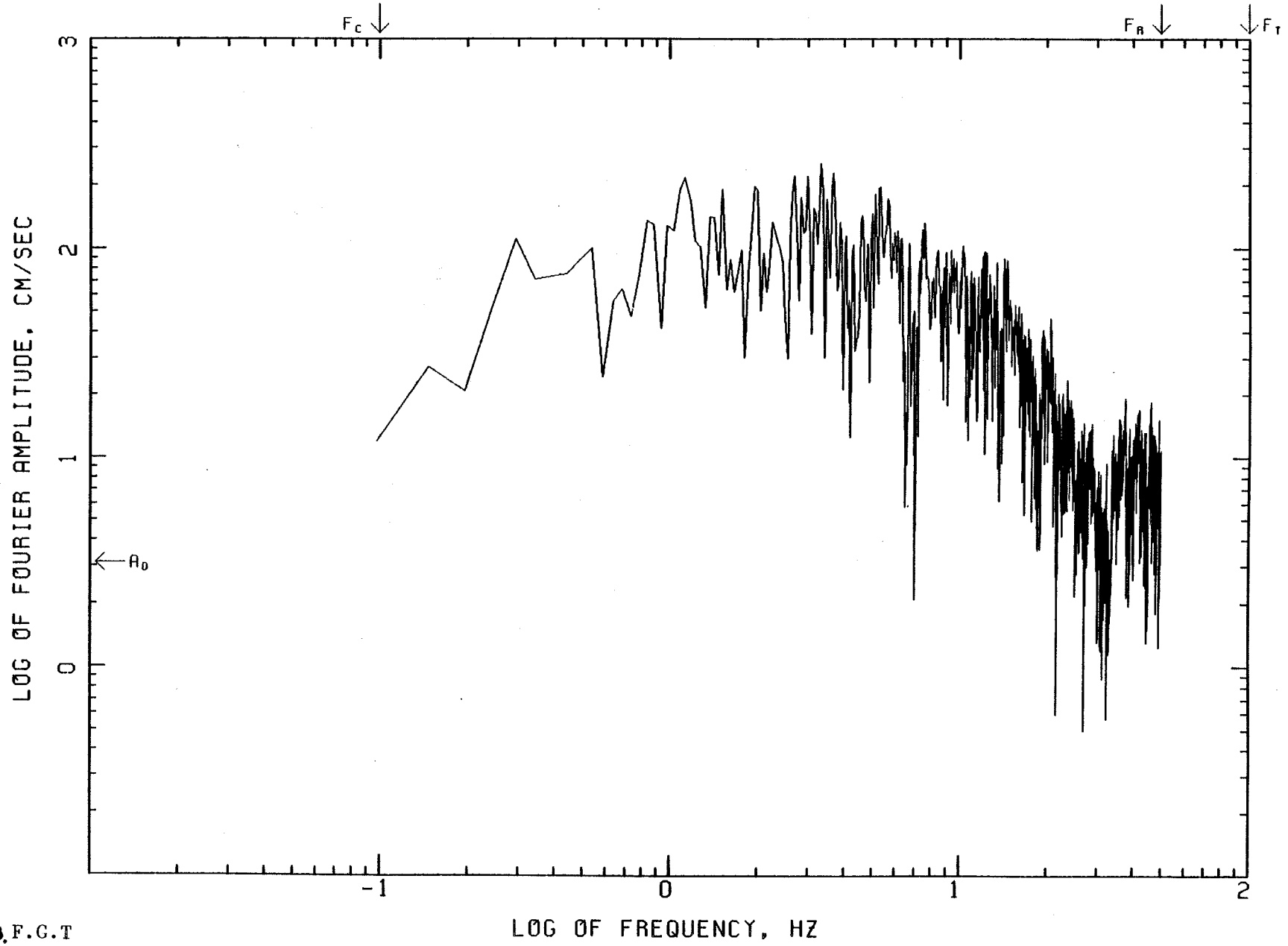

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE1, NAHANNI, NWT
280 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 - 0516 GMT
BUTTERWORTH AT .10 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
3
2
1
0
-1
0
1
2

Fig. 1.23.F.C.T

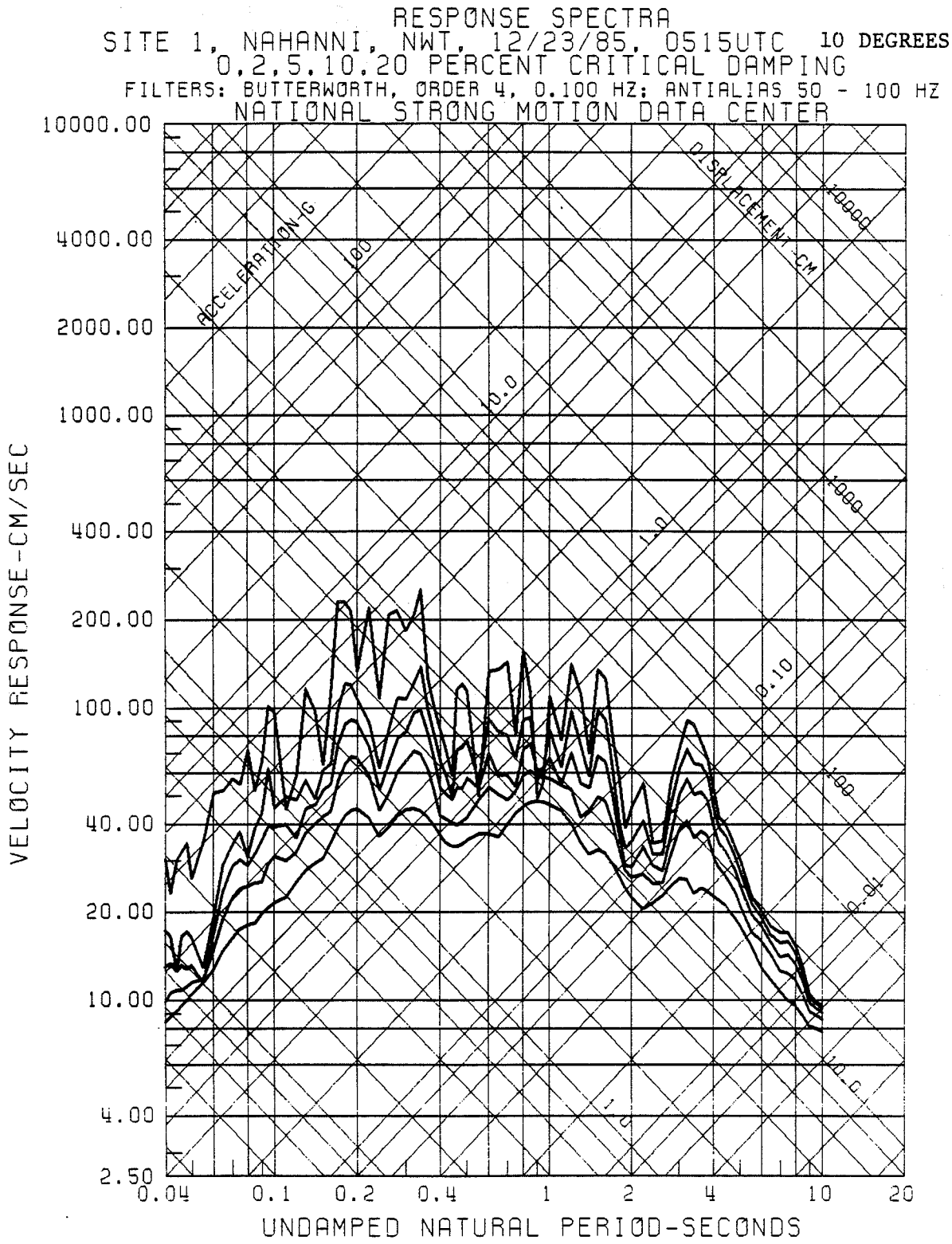

RESPONSE SPECTRA
SITE 1, NAHANNI, NWT, 12/23/85, 0515UTC 10 DEGREES
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.100 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
10000.00
4000.00
2000.00
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.50
0.04
0.1
0.2
0.4
1
2
4
10
20

Fig. 1.23 R.G.L

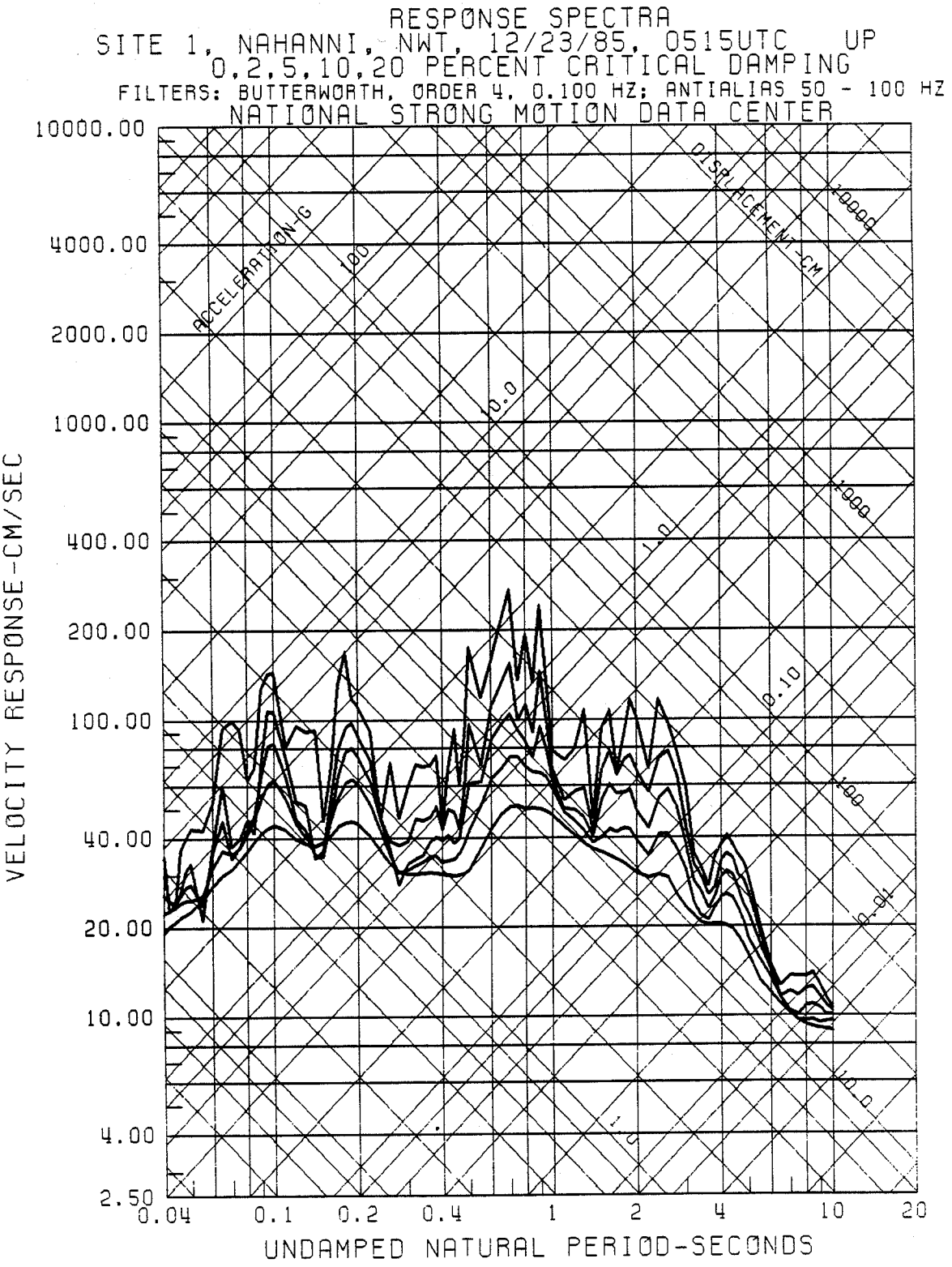

RESPONSE SPECTRA
SITE 1, NAHANNI, NWT, 12/23/85, 0515UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.100 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
10000.00
4000.00
2000.00
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.50
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
100
10.0
1.0
0.10
0.01
DISPLACEMENT-CM
1000
100
10
1

Fig. 1.23.R.G.V

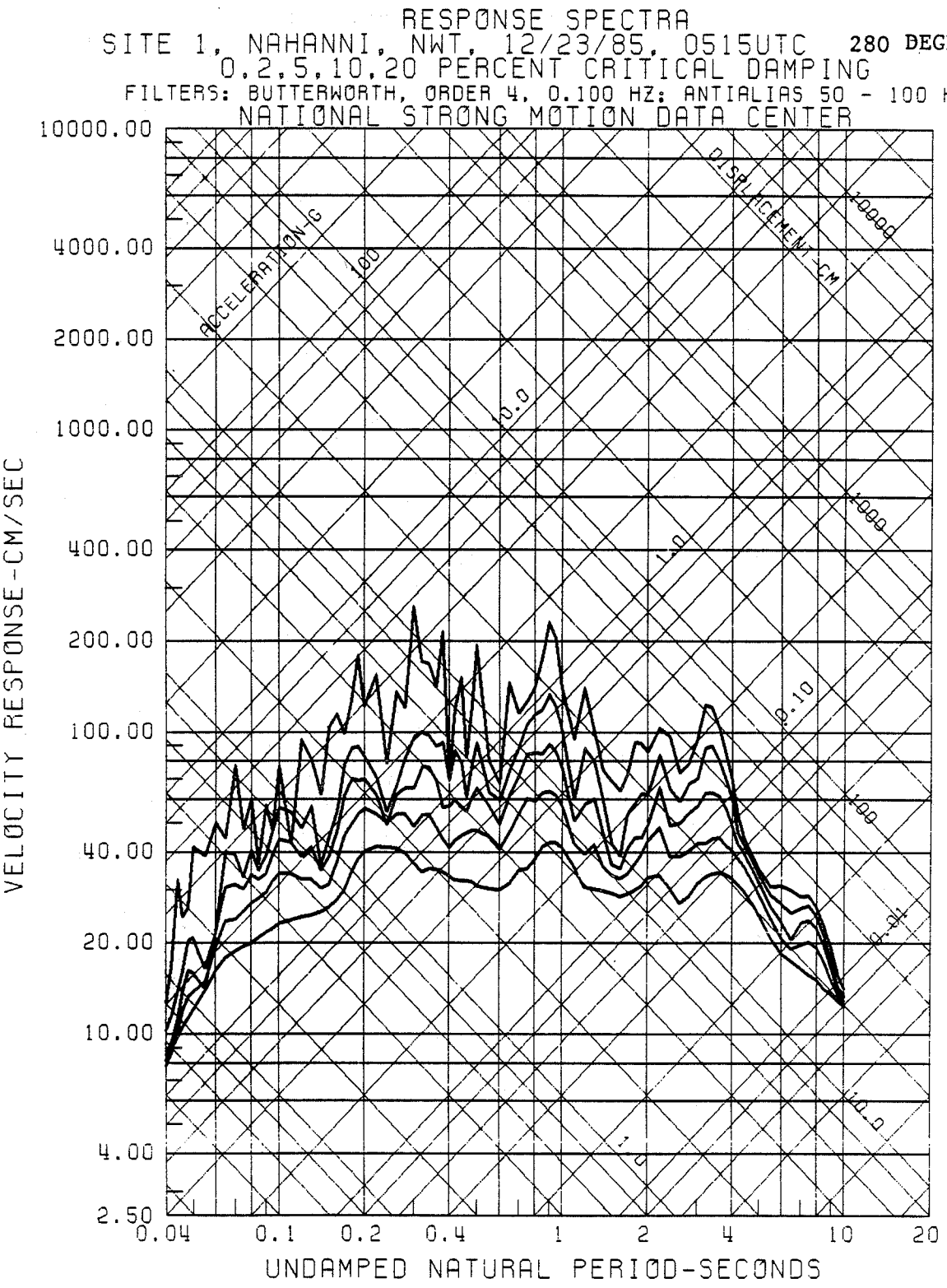

RESPONSE SPECTRA
SITE 1, NAHANNI, NWT, 12/23/85, 0515UTC 280 DEGREES
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.100 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
10000.00
4000.00
2000.00
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.50
0.04
0.1
0.2
0.4
1
2
4
10
20
100
2.0
1.0
0.5
0.2
0.1
10000
1000
100
10.0
1.0

Fig. 1.13.R.G.T

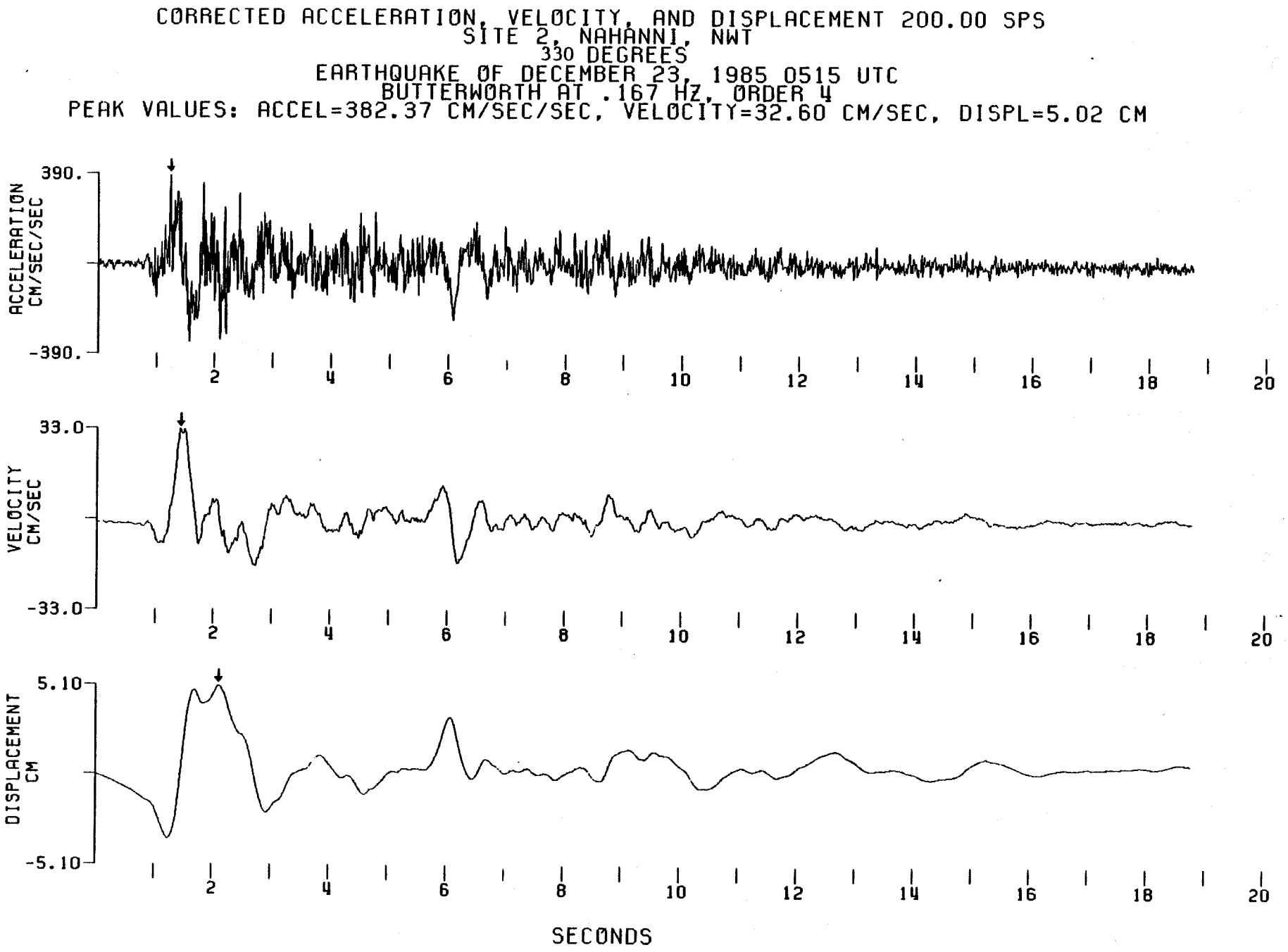

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 2, NAHANNI, NWT
330 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
PEAK VALUES: ACCEL=382.37 CM/SEC/SEC, VELOCITY=32.60 CM/SEC, DISPL=5.02 CM
ACCELERATION CM/SEC/SEC
390.
-390.
VELOCITY CM/SEC
33.0
-33.0
DISPLACEMENT CM
5.10
-5.10
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.23.C.L

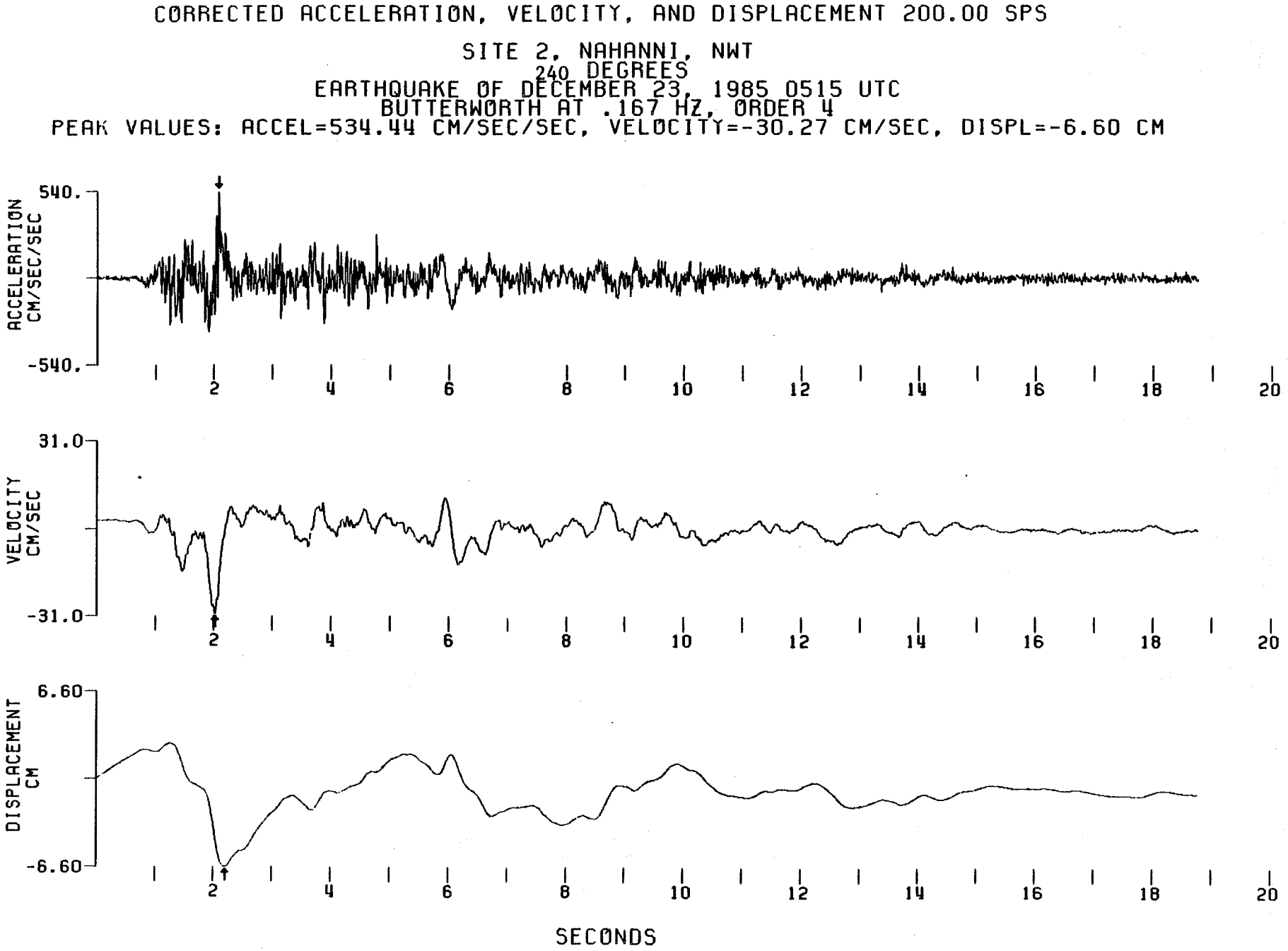

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 2, NAHANNI, NWT
240 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
PEAK VALUES: ACCEL=534.44 CM/SEC/SEC, VELOCITY=-30.27 CM/SEC, DISPL=-6.60 CM
ACCELERATION CM/SEC/SEC
540.
-540.
VELOCITY CM/SEC
31.0
-31.0
DISPLACEMENT CM
6.60
-6.60
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.23C.T

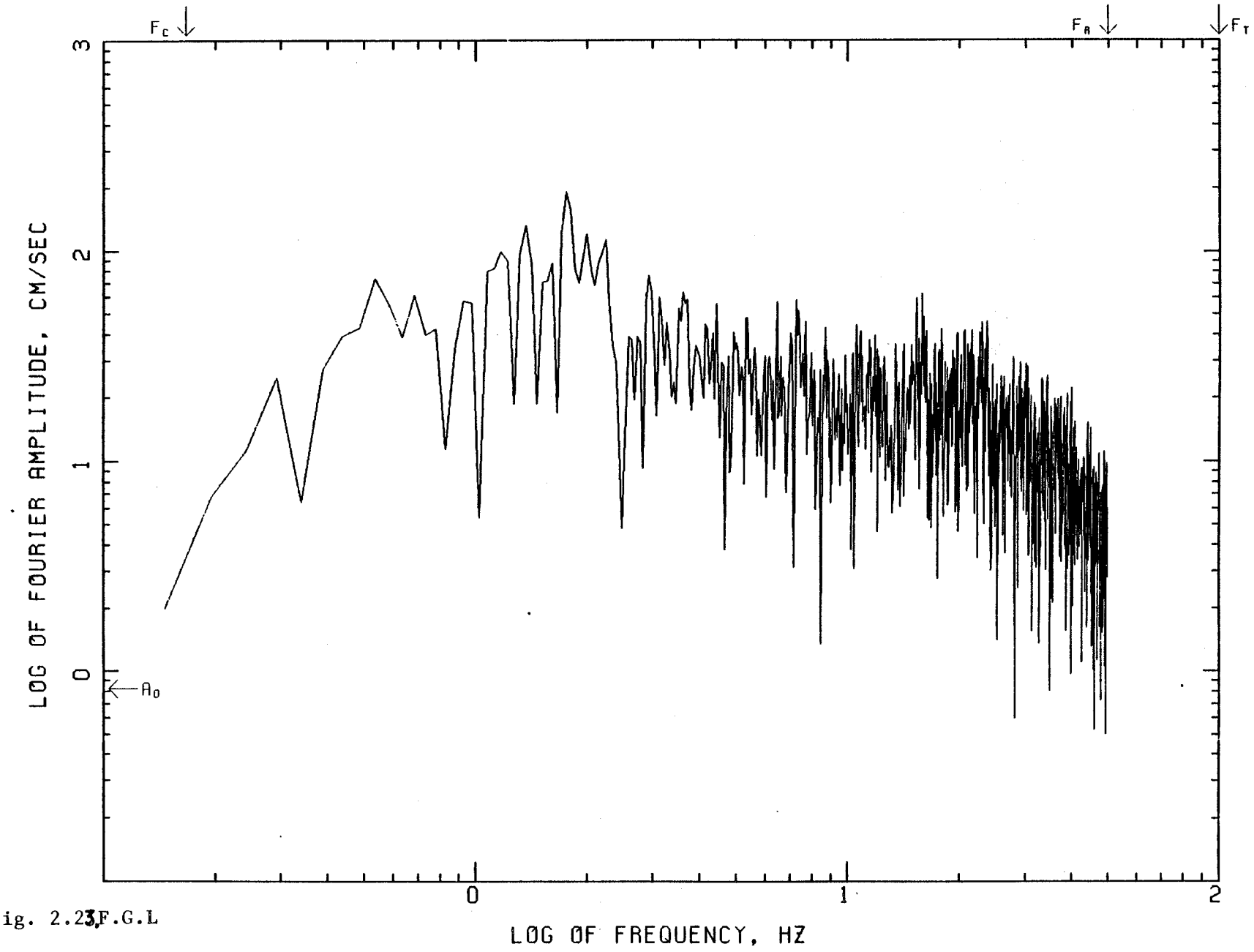

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE 2, NAHANNI, NWT
330 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
F_C
F_R
F_T
A_0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
3
2
1
0
0
1
2

Fig. 2.23 F.G.L

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE 2, NAHANNI, NWT
240 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE

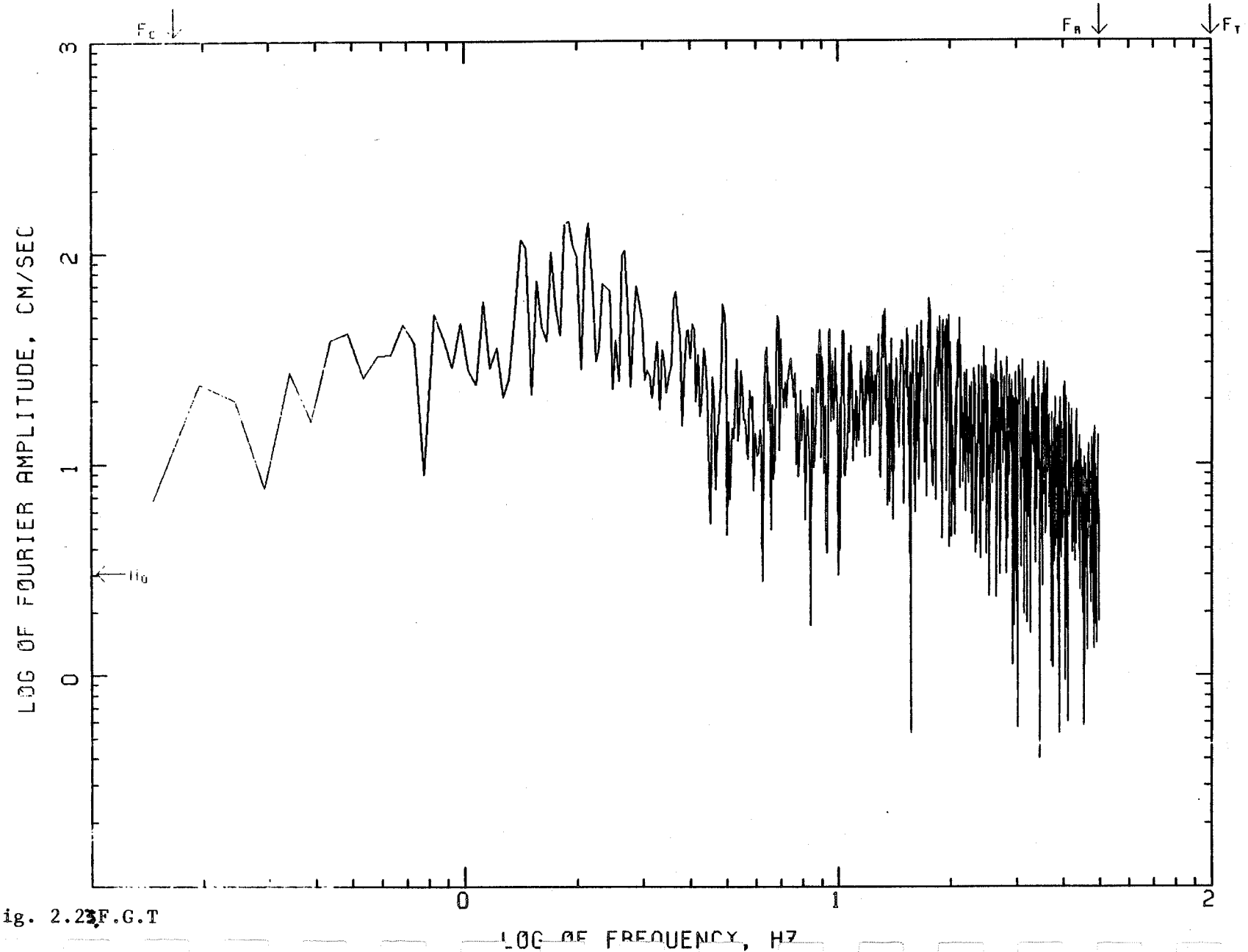


Fig. 2.23 F.G.T

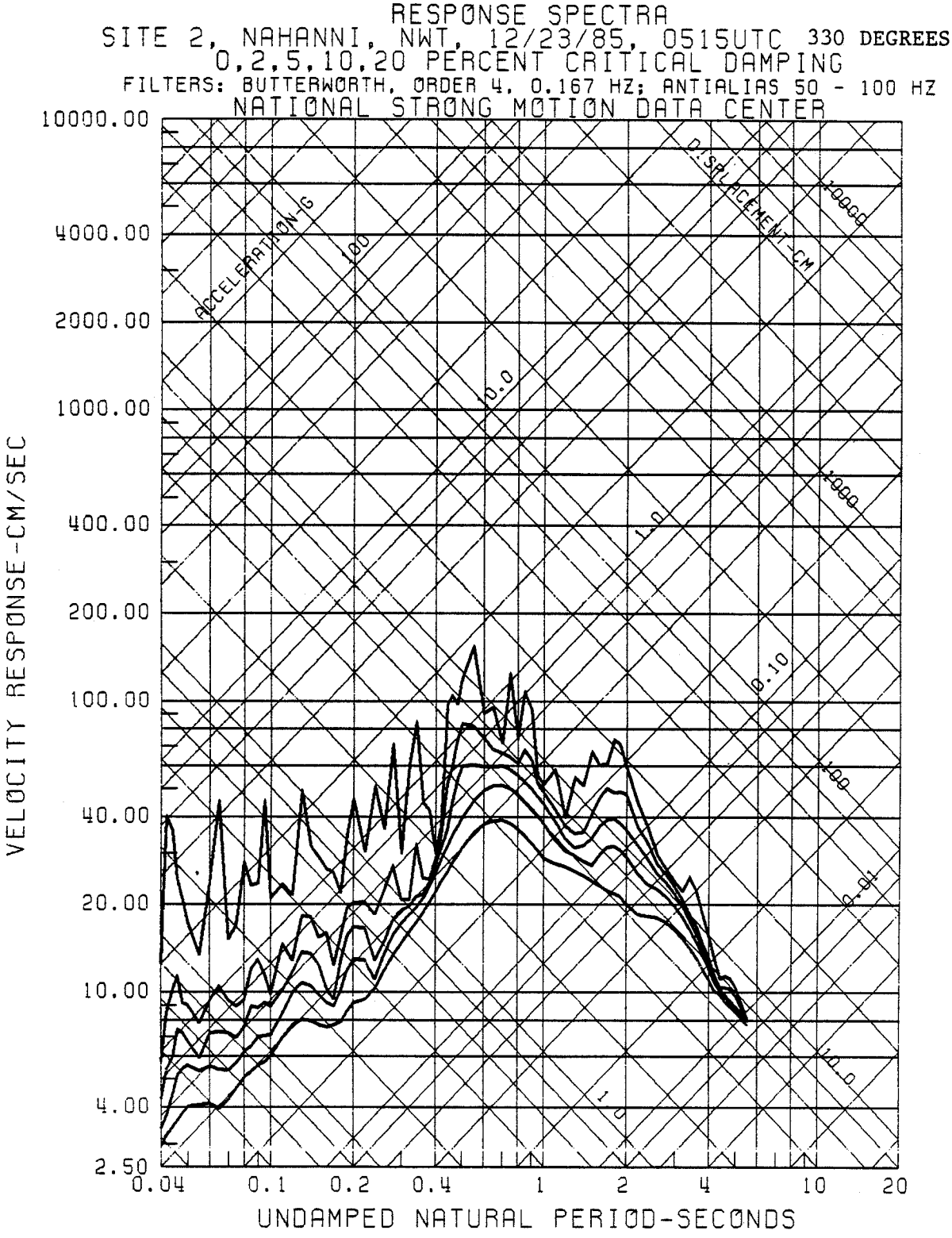

RESPONSE SPECTRA
SITE 2, NAHANNI, NWT, 12/23/85, 0515UTC 330 DEGREES
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
10000.00
4000.00
2000.00
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.50
0.04
0.1
0.2
0.4
1
2
4
10
20

Fig. 2.23 R.G.L

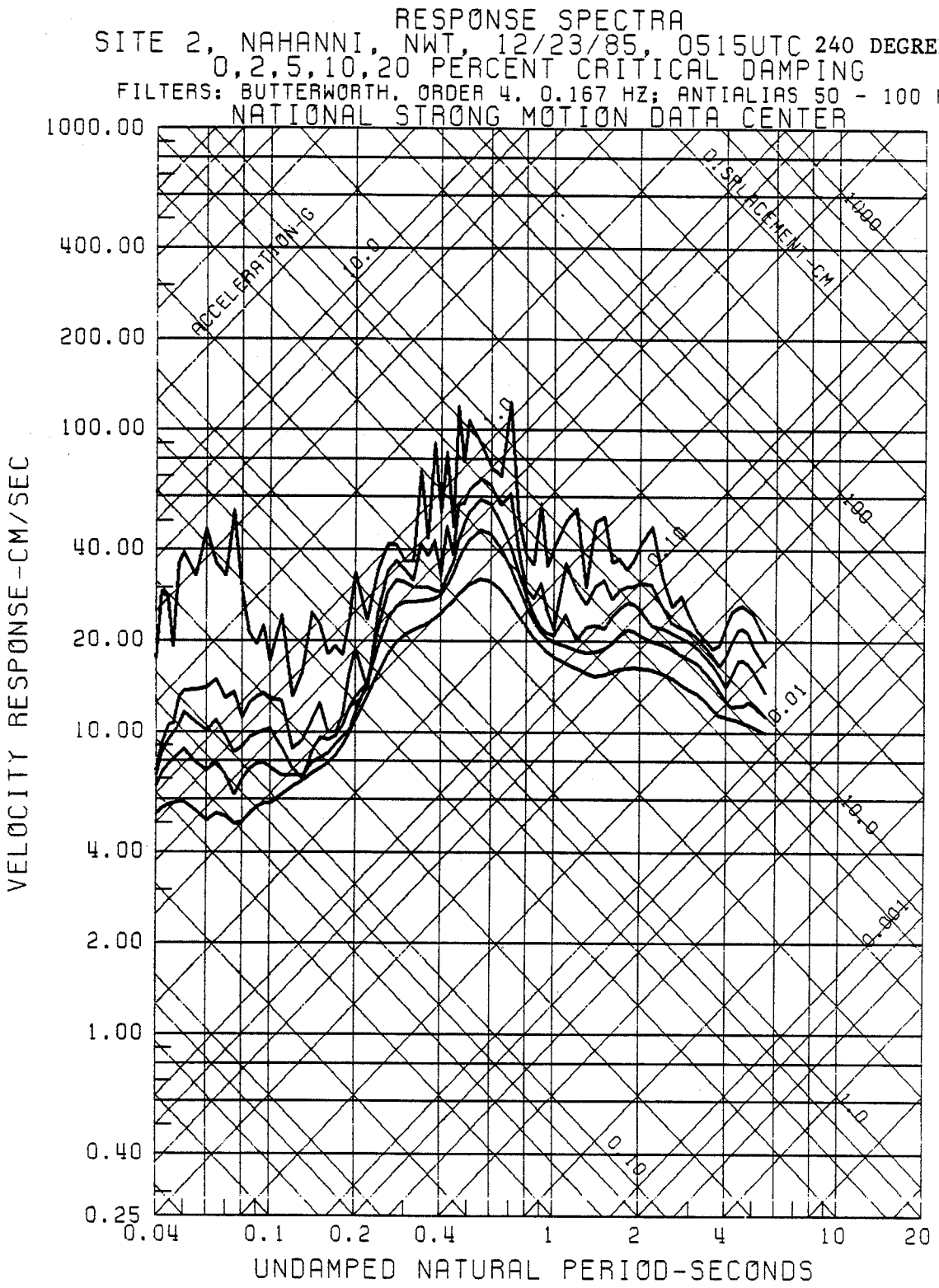

RESPONSE SPECTRA
SITE 2, NAHANNI, NWT, 12/23/85, 0515UTC 240 DEGREES
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
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
0.10

Fig. 2.23 R.G.T

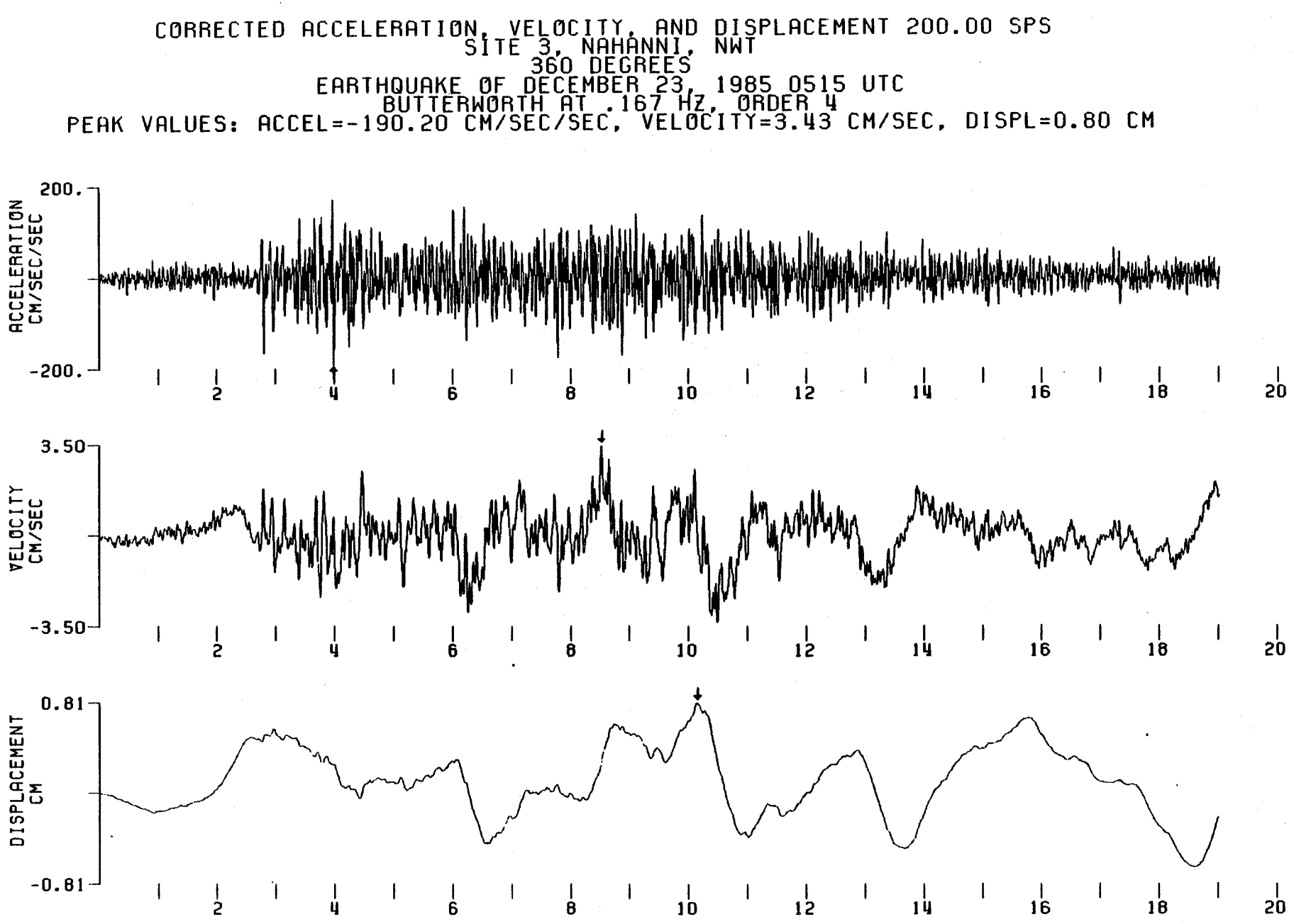

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 3, NAHANNI, NWT
360 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
PEAK VALUES: ACCEL=-190.20 CM/SEC/SEC, VELOCITY=3.43 CM/SEC, DISPL=0.80 CM
ACCELERATION CM/SEC/SEC
200.
-200.
VELOCITY CM/SEC
3.50
-3.50
DISPLACEMENT CM
0.81
-0.81
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 3.23C.L

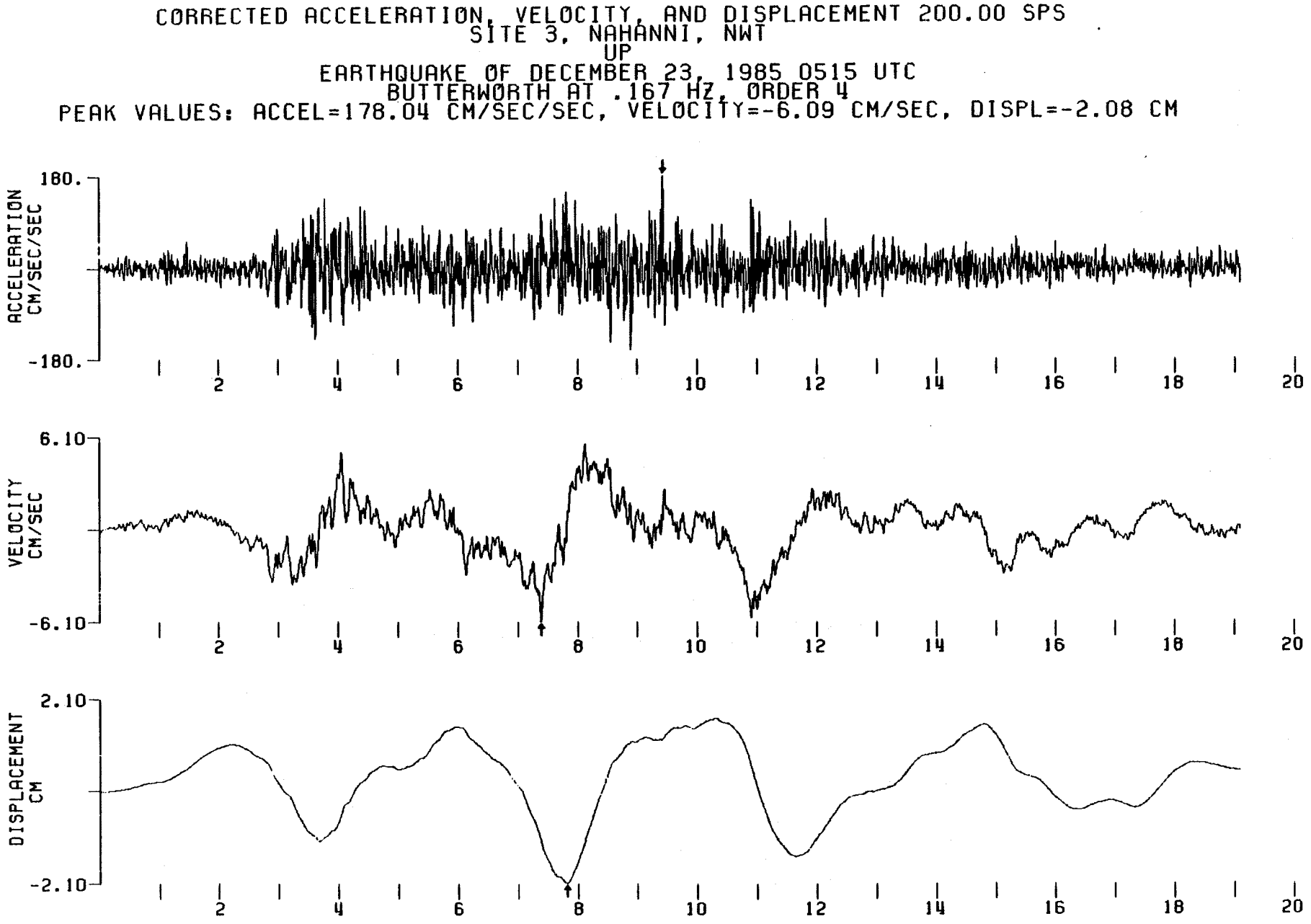

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 3, NAHANNI, NWT
UP
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
PEAK VALUES: ACCEL=178.04 CM/SEC/SEC, VELOCITY=-6.09 CM/SEC, DISPL=-2.08 CM
ACCELERATION CM/SEC/SEC
180.
-180.
VELOCITY CM/SEC
6.10
-6.10
DISPLACEMENT CM
2.10
-2.10
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 3.23C.V

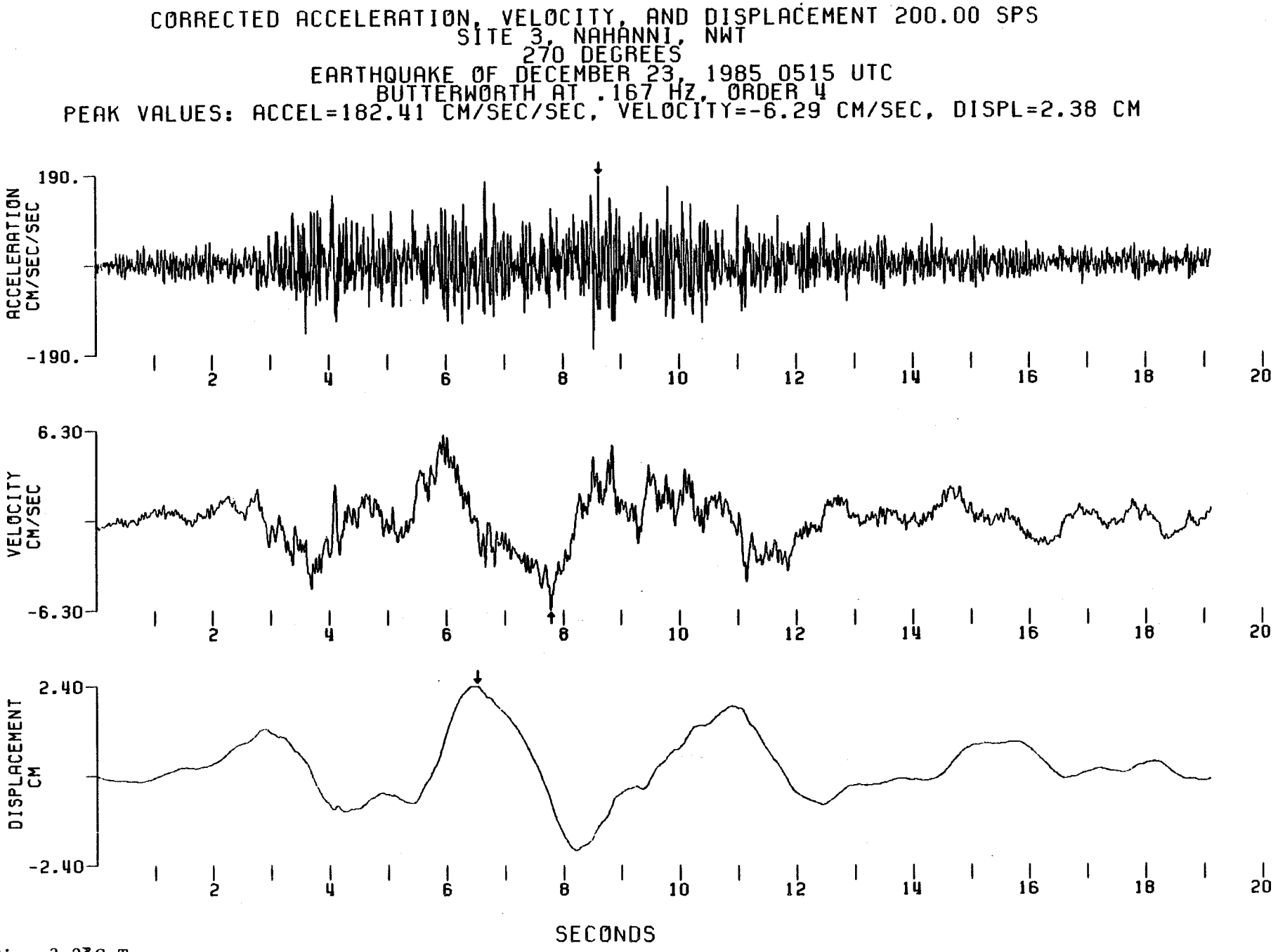

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 3, NAHANNI, NWT
270 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 Hz, ORDER 4
PEAK VALUES: ACCEL=182.41 CM/SEC/SEC, VELOCITY=-6.29 CM/SEC, DISPL=2.38 CM
ACCELERATION CM/SEC/SEC
190.
-190.
VELOCITY CM/SEC
6.30
-6.30
DISPLACEMENT CM
2.40
-2.40
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 3.23C.T

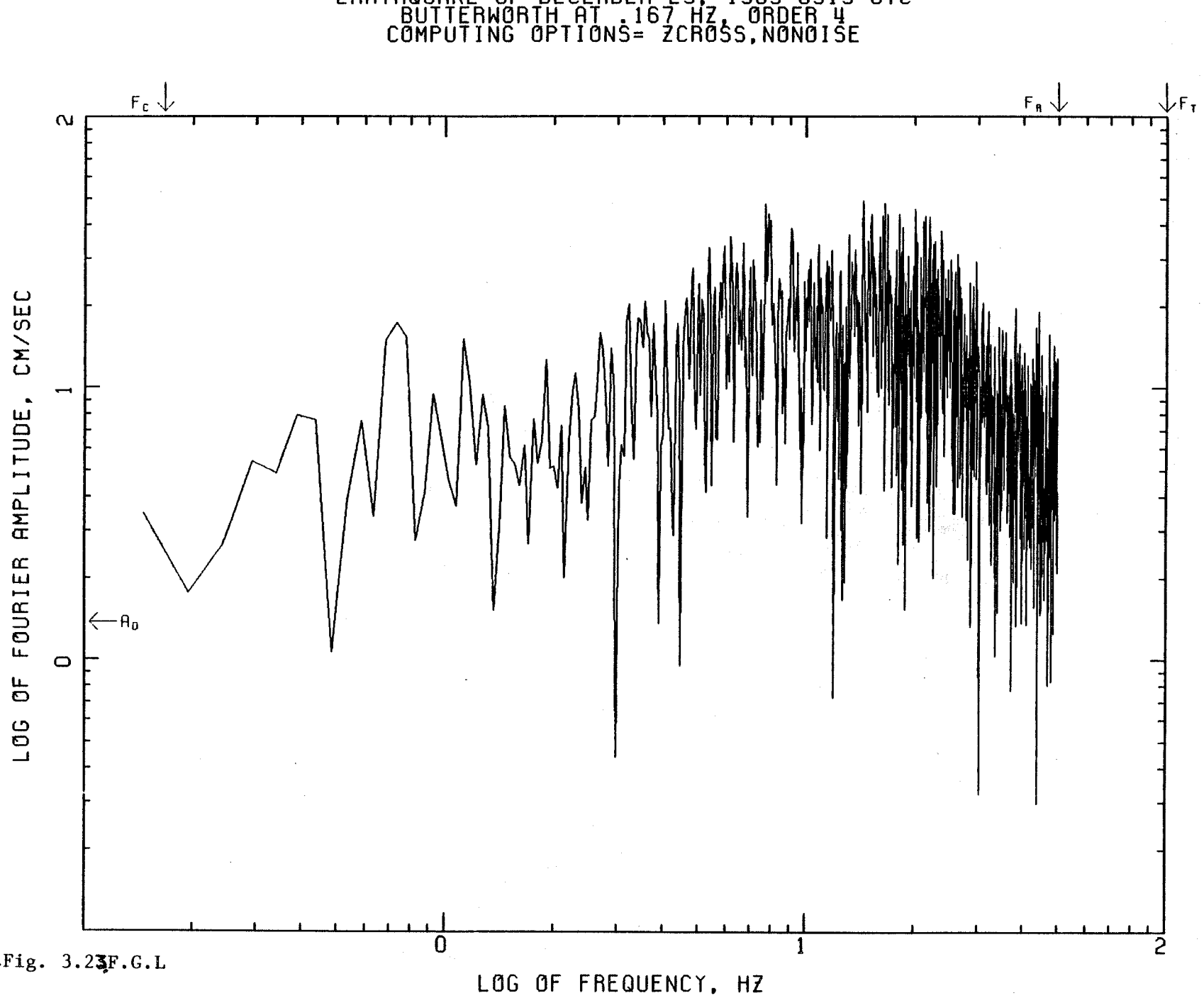

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE 3, NAHANNI, NWT
360 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
F_C
F_R
F_T
A_0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
0
1
2

Fig. 3.23F.G.L

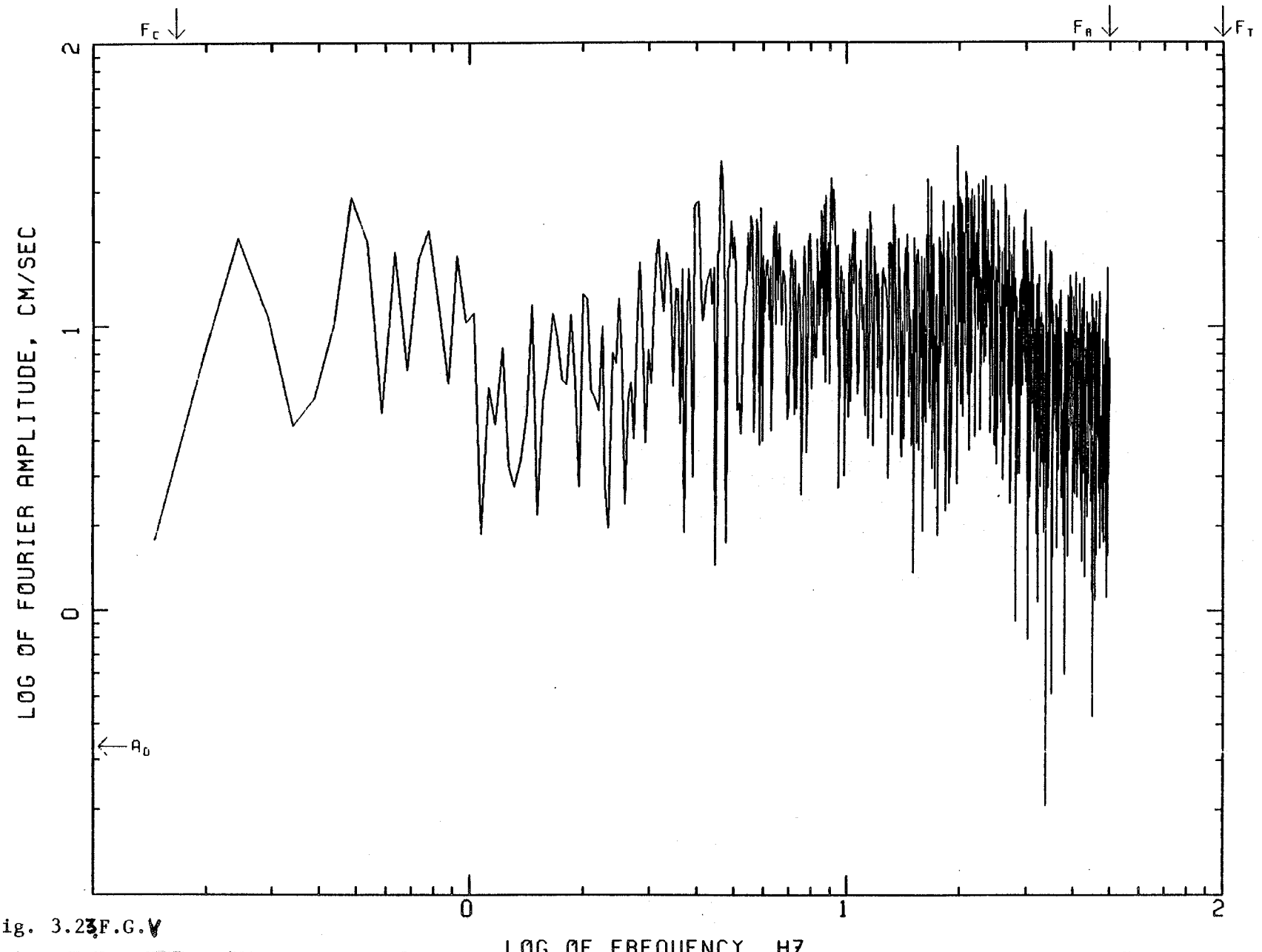

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE 3, NAHANNI, NWT
UP
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
F_C
F_A
F_T
A_0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
0
1
2

Fig. 3.23 F.G.V

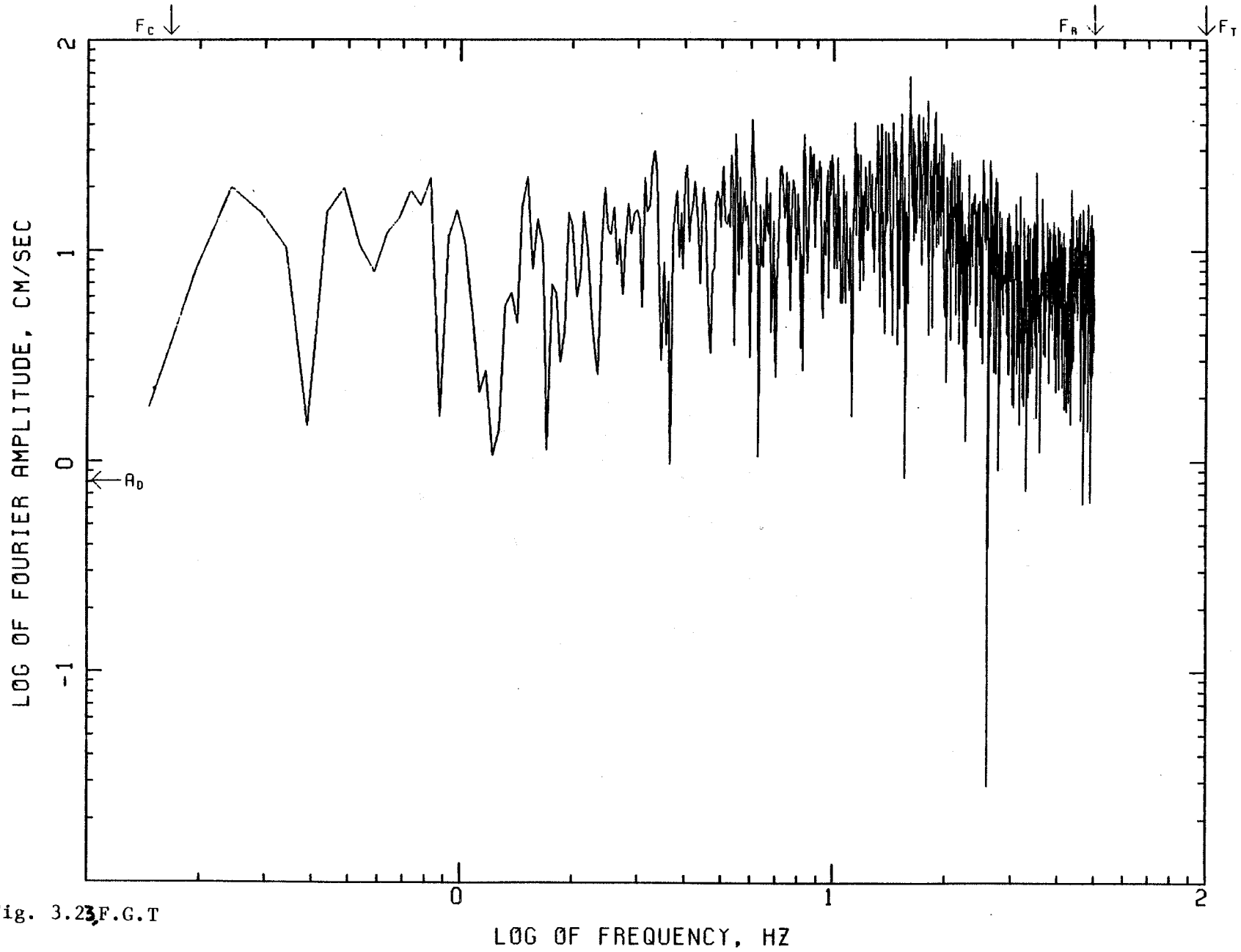

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE 3, NAHANNI, NWT
270 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
F_C
F_R
F_T
A_D
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
-1
0
1
2

Fig. 3.23 F.G.T

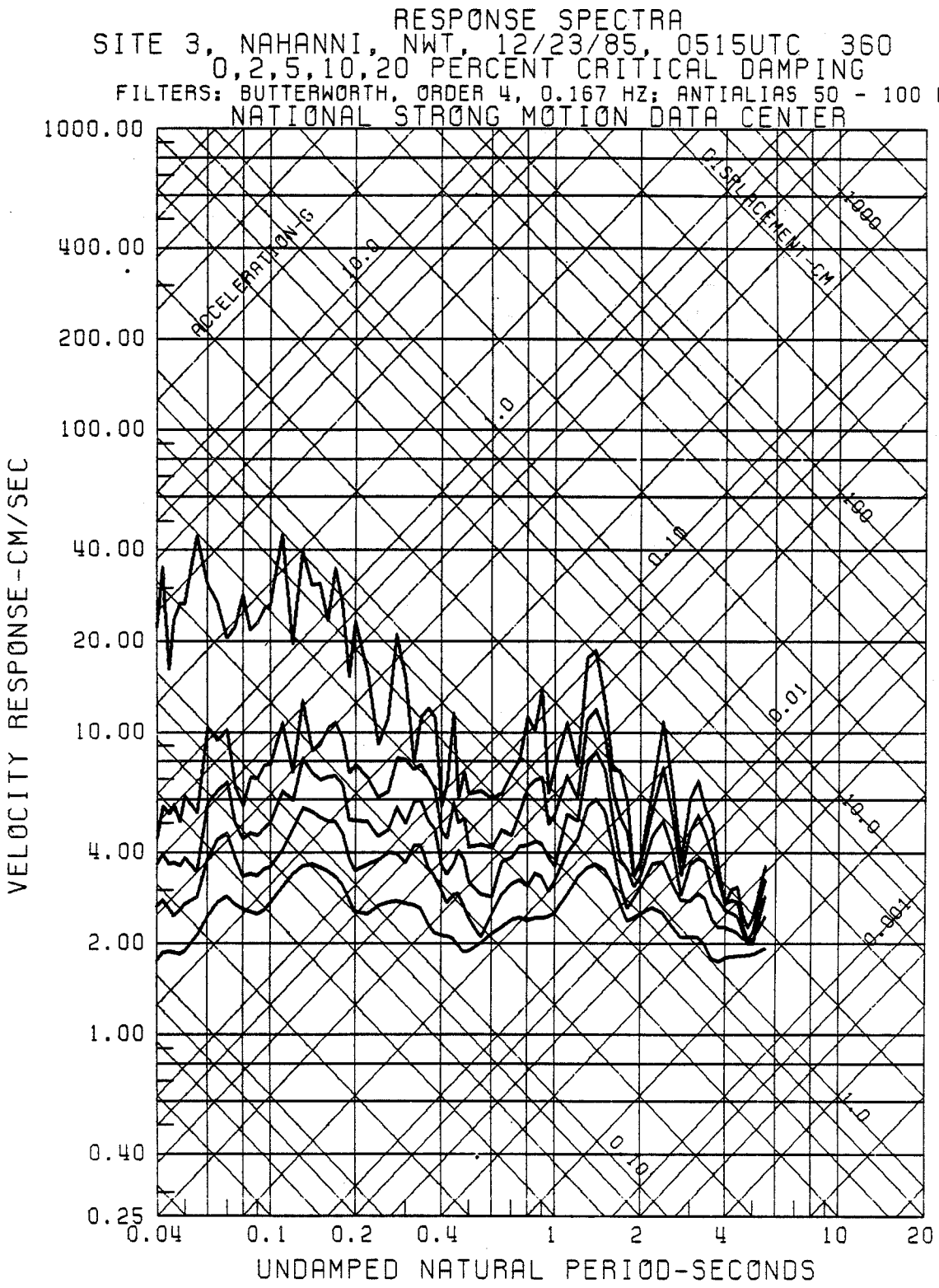

RESPONSE SPECTRA
SITE 3, NAHANNI, NWT, 12/23/85, 0515UTC 360
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
1000.00
400.00
200.00
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
10.0
1.0
0.1
0.01
100
10.0
1.0
0.10
1000
100
10.0
1.0
0.001

Fig. 3.23R.G.L

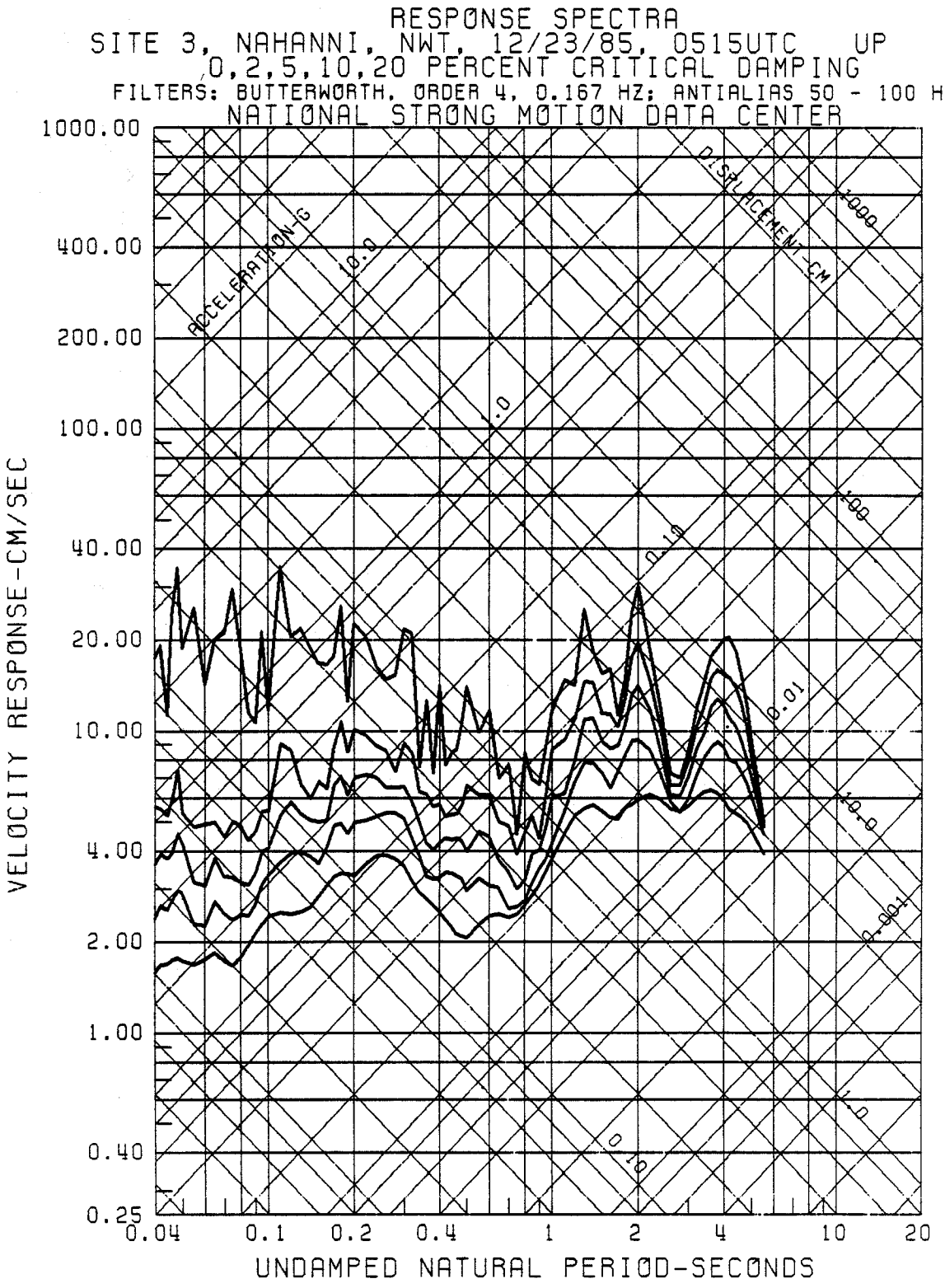

RESPONSE SPECTRA
SITE 3, NAHANNI, NWT, 12/23/85, 0515UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
ACCELERATION-G
10.0
1.0
0.10
0.01
DISPLACEMENT-CM
1000
100
10.0
1.0
0.01

Fig. 3.23 R.G.V

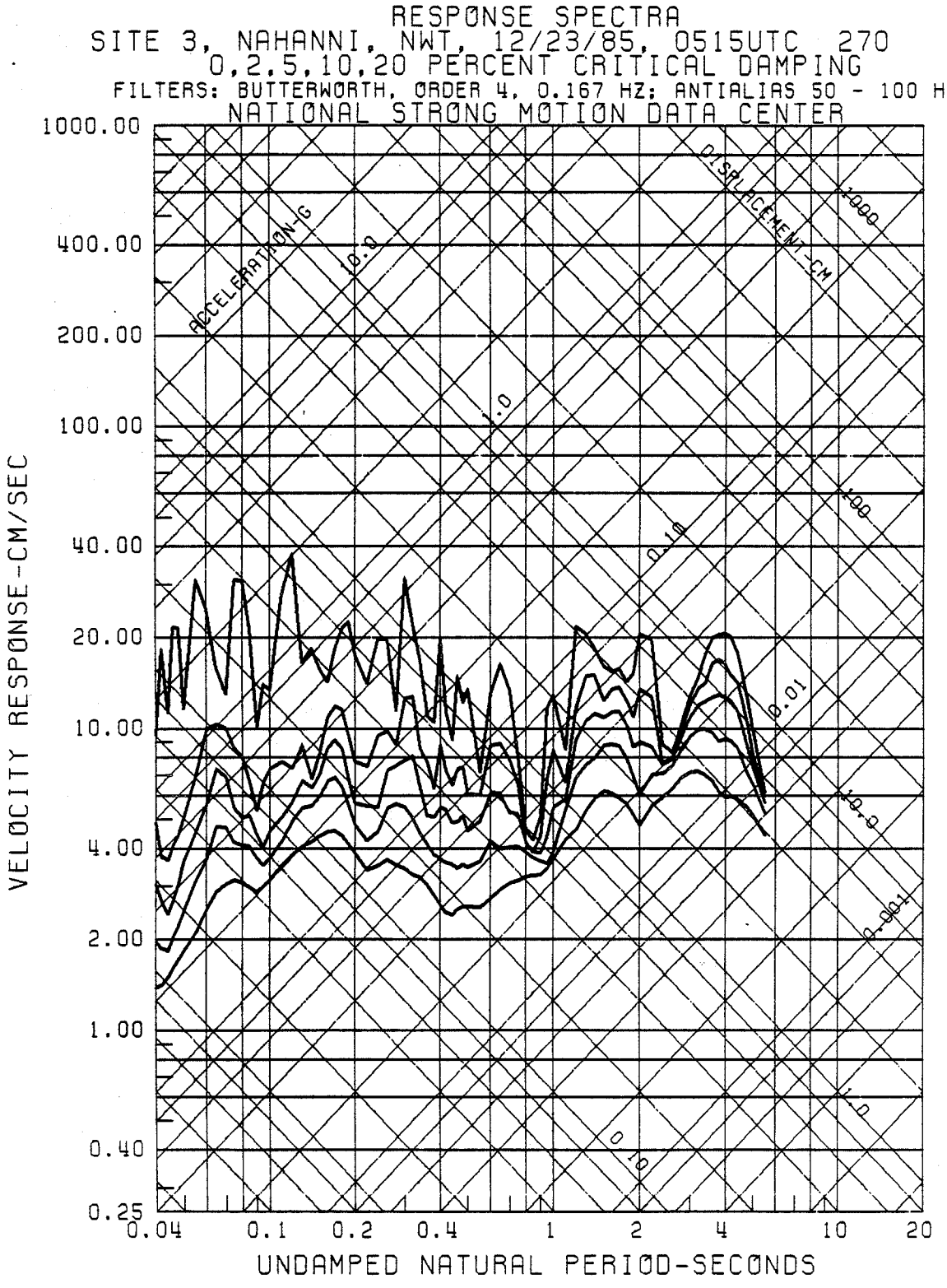

RESPONSE SPECTRA
SITE 3, NAHANNI, NWT, 12/23/85, 0515UTC 270
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
1000.00
400.00
200.00
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
10.0
1.0
0.10
0.01
1000
100
10.0
1.0
0.10
0.001

Fig. 3.23 R.G.T

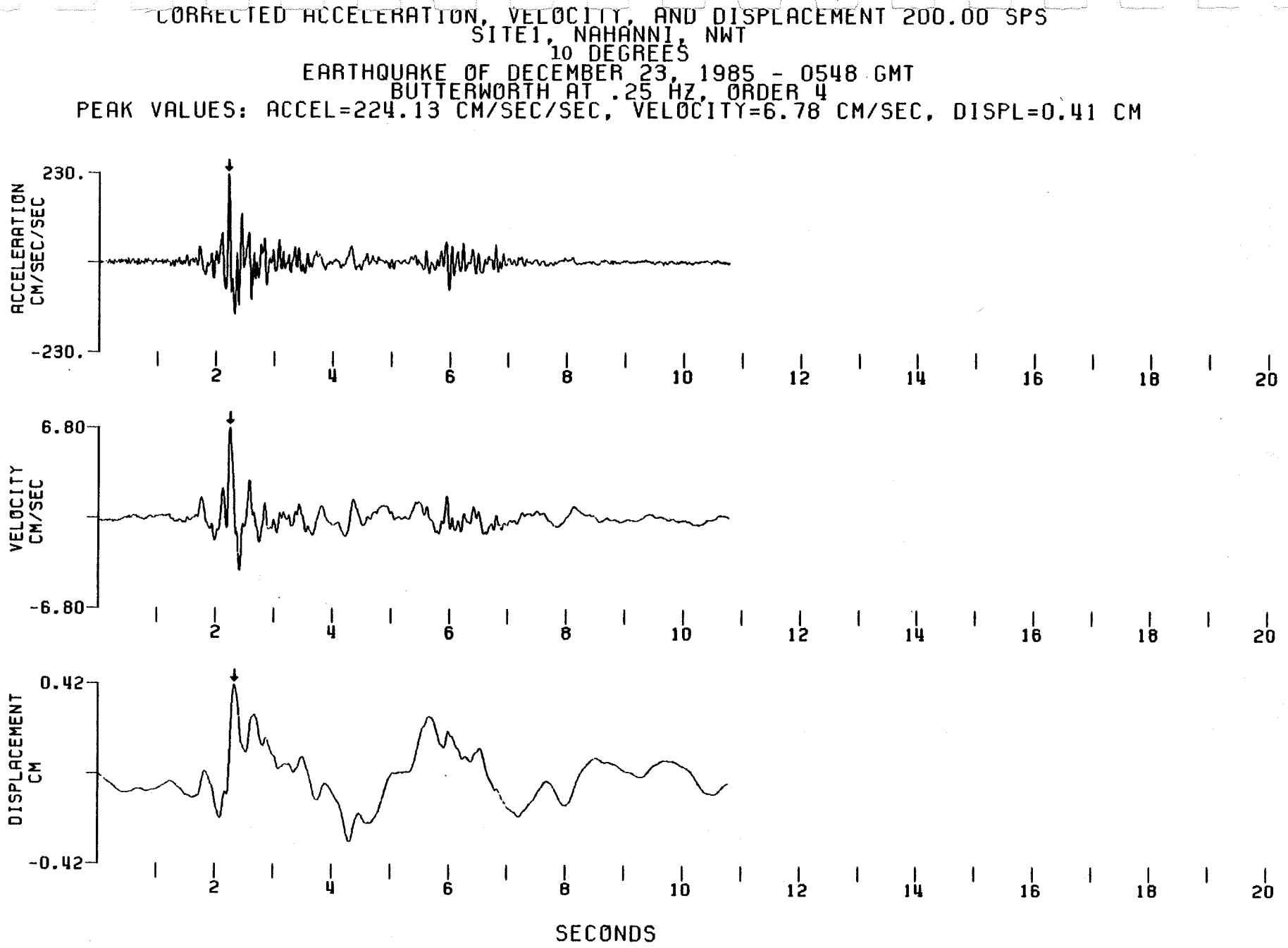

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE1, NAHANNI, NWT
10 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 - 0548 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
PEAK VALUES: ACCEL=224.13 CM/SEC/SEC, VELOCITY=6.78 CM/SEC, DISPL=0.41 CM
ACCELERATION CM/SEC/SEC
230.
-230.
VELOCITY CM/SEC
6.80
-6.80
DISPLACEMENT CM
0.42
-0.42
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.30C.L

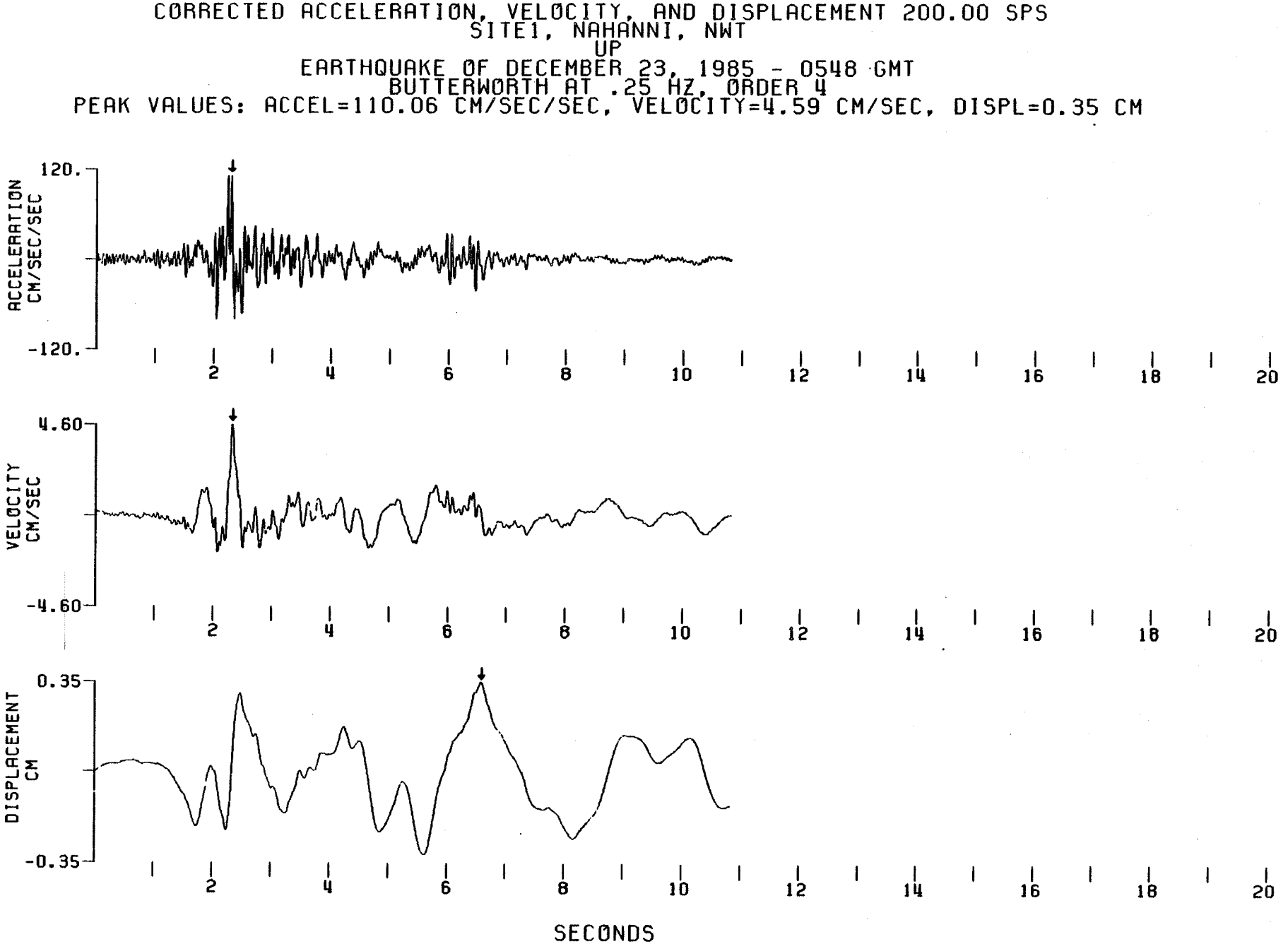

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE1, NAHANNI, NWT
UP
EARTHQUAKE OF DECEMBER 23, 1985 - 0548 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
PEAK VALUES: ACCEL=110.06 CM/SEC/SEC, VELOCITY=4.59 CM/SEC, DISPL=0.35 CM
ACCELERATION CM/SEC/SEC
120.
-120.
VELOCITY CM/SEC
4.60
-4.60
DISPLACEMENT CM
0.35
-0.35
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.30C.V

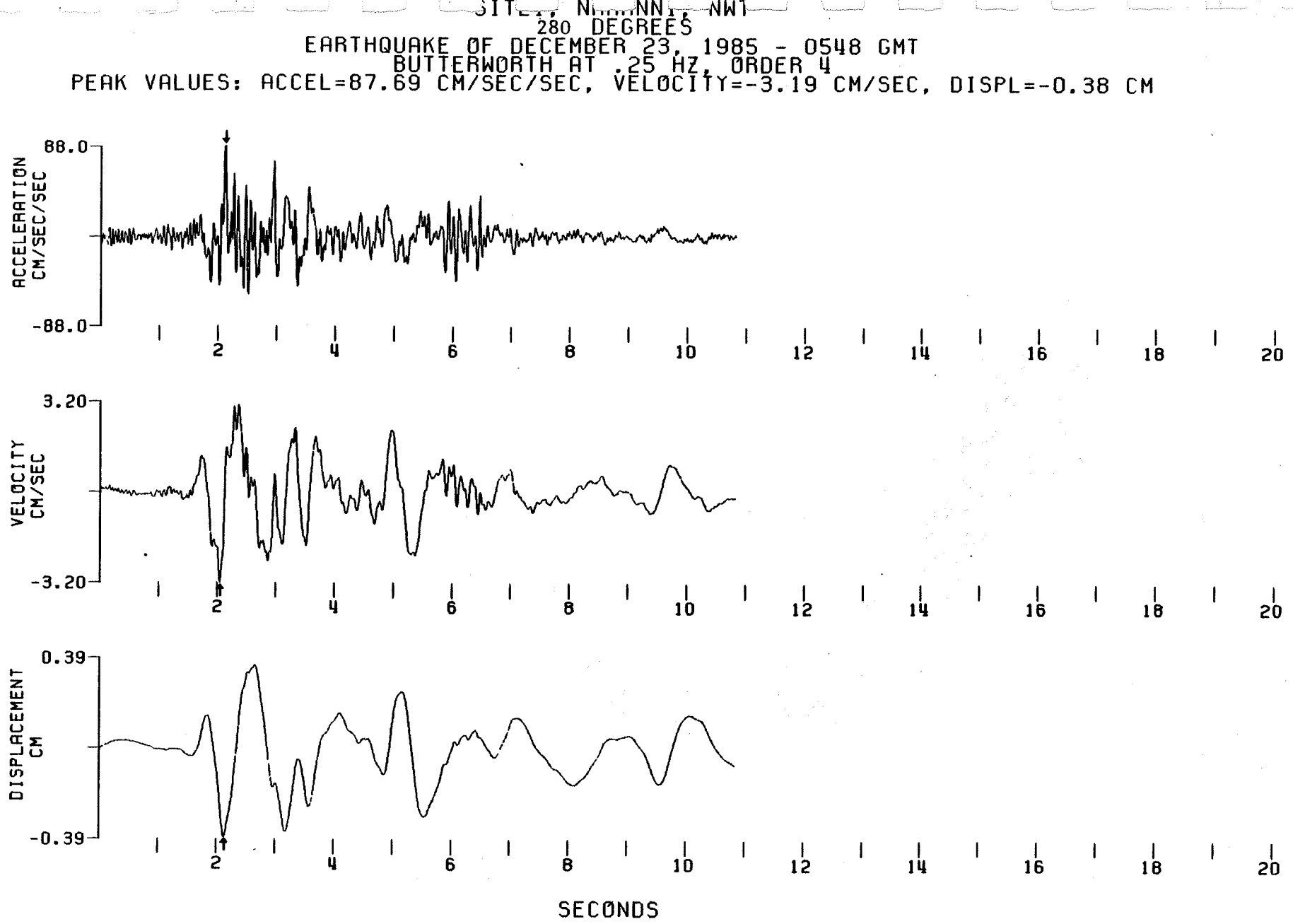

SITE, N[illegible]NN[illegible], NWT
280 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 - 0548 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
PEAK VALUES: ACCEL=87.69 CM/SEC/SEC, VELOCITY=-3.19 CM/SEC, DISPL=-0.38 CM
ACCELERATION CM/SEC/SEC
88.0
-88.0
VELOCITY CM/SEC
3.20
-3.20
DISPLACEMENT CM
0.39
-0.39
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.30.C.T

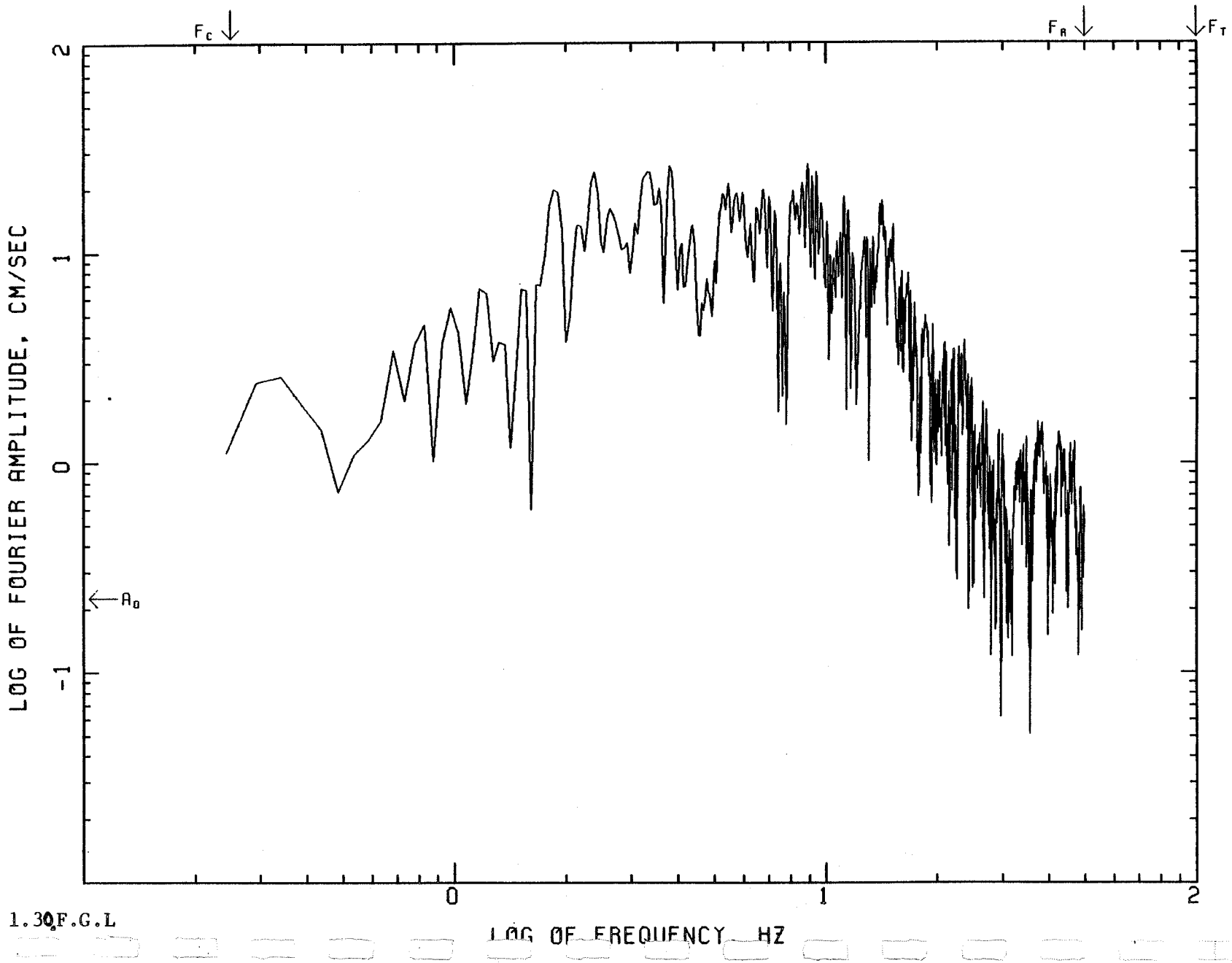

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE1, NAHANNI, NWT
10 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 - 0548 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
-1
0
1
2

Fig. 1.3 F.G.L

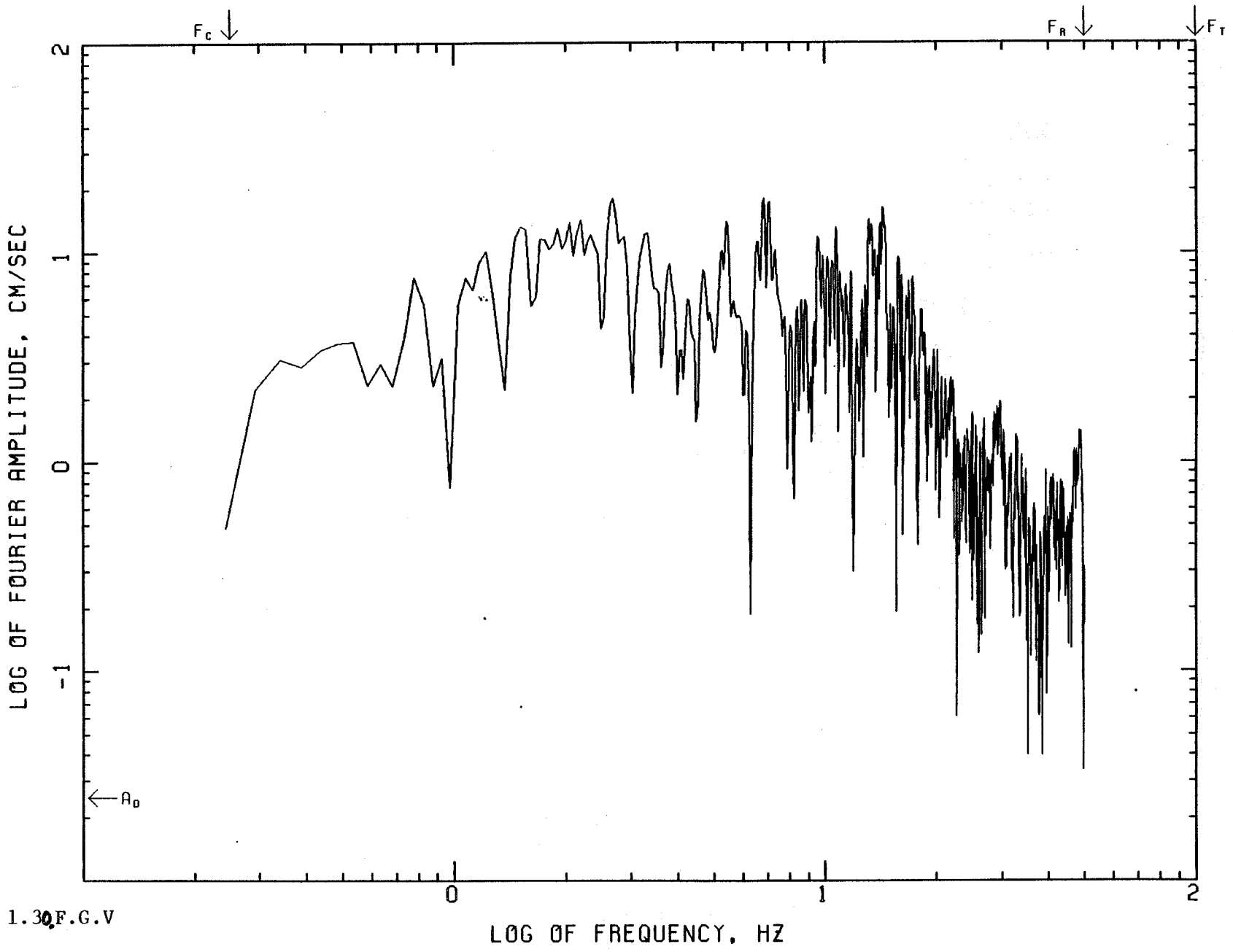

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE1, NAHANNI, NWT
UP
EARTHQUAKE OF DECEMBER 23, 1985 - 0548 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FR
FT
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
AD
2
1
0
-1
0
1
2

Fig. 1.30 F.G.V

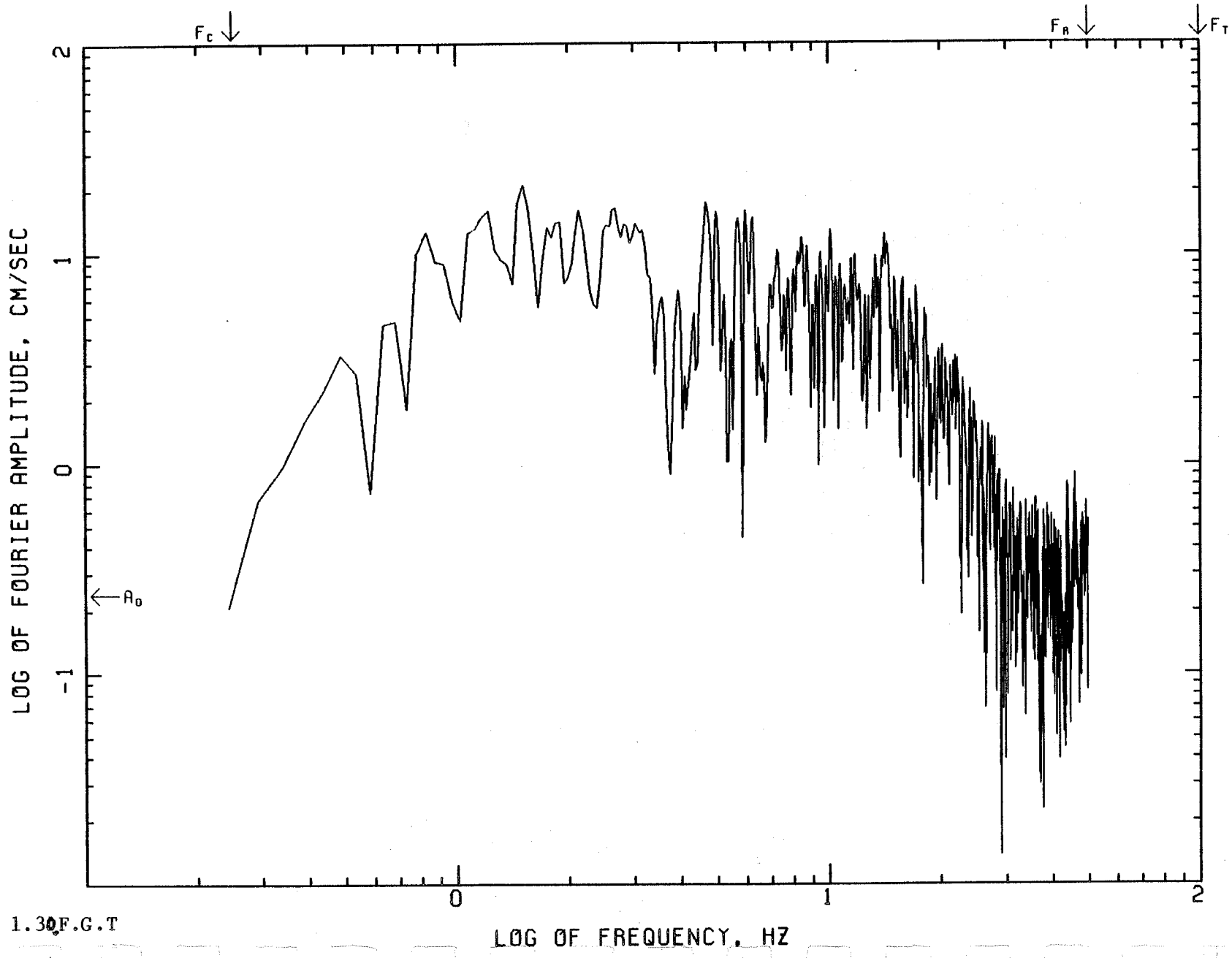

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE1, NAHANNI, NWT
280 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 - 0548 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FA
FT
A0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
-1
0
1
2

Fig. 1.30 F.G.T

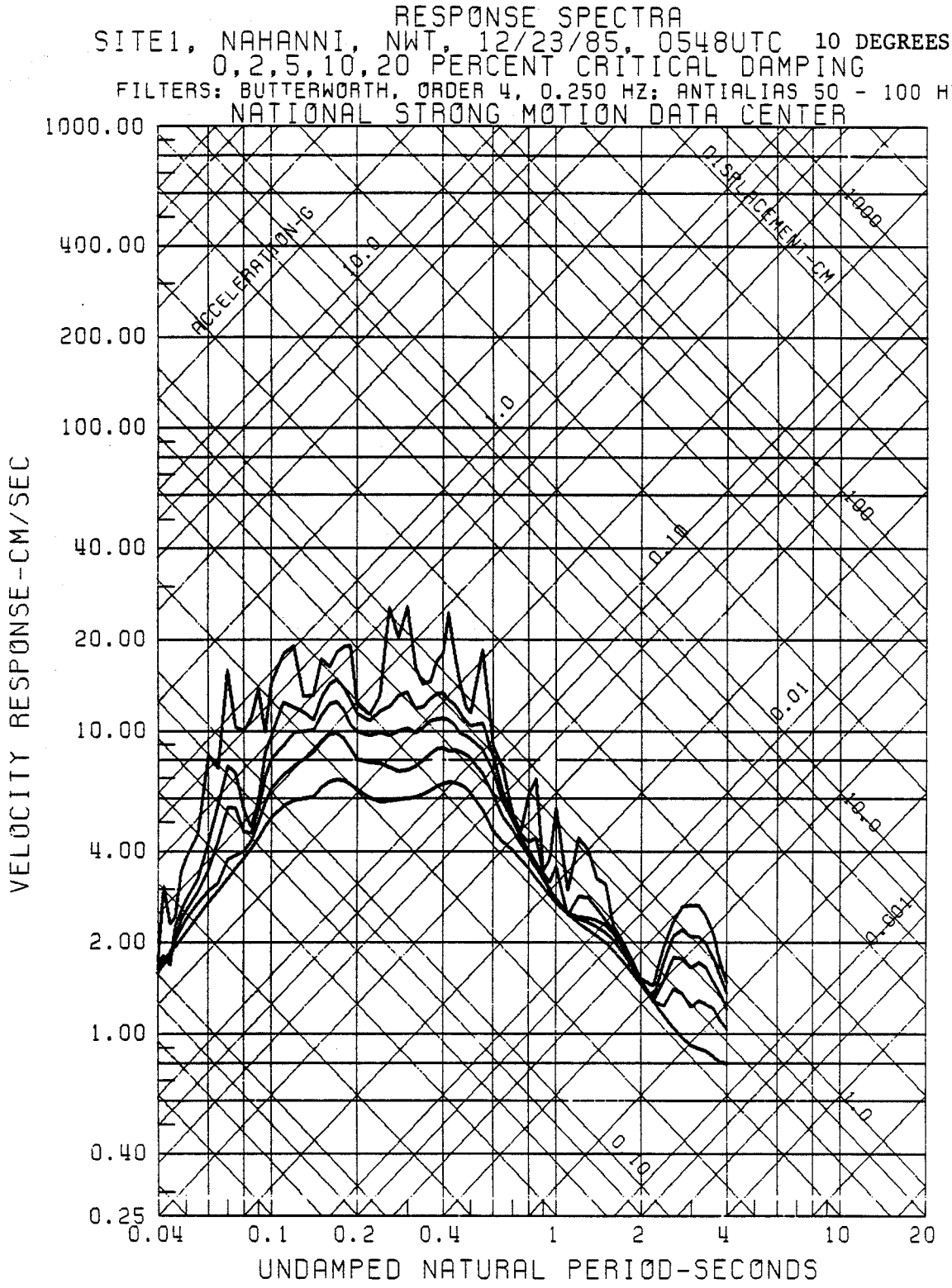

RESPONSE SPECTRA
SITE1, NAHANNI, NWT, 12/23/85, 0548UTC 10 DEGREES
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.250 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
1000.00
400.00
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

Fig. 1.30 R.G.L

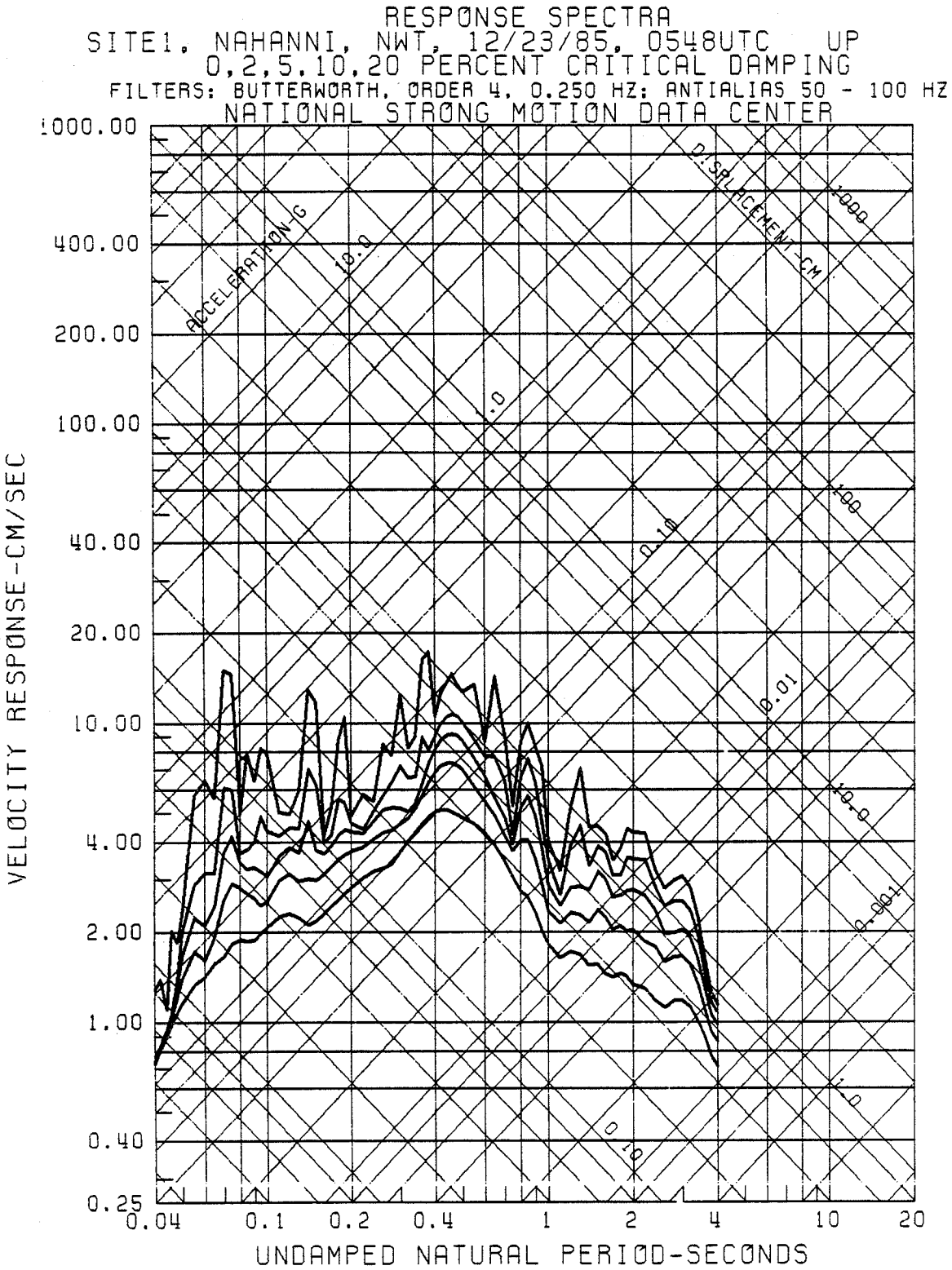

RESPONSE SPECTRA
SITE1, NAHANNI, NWT, 12/23/85, 0548UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.250 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
10.0
1.0
0.10
0.01
1000
100
10.0
1.0
0.10
0.01

Fig. 1.30 R.G.V

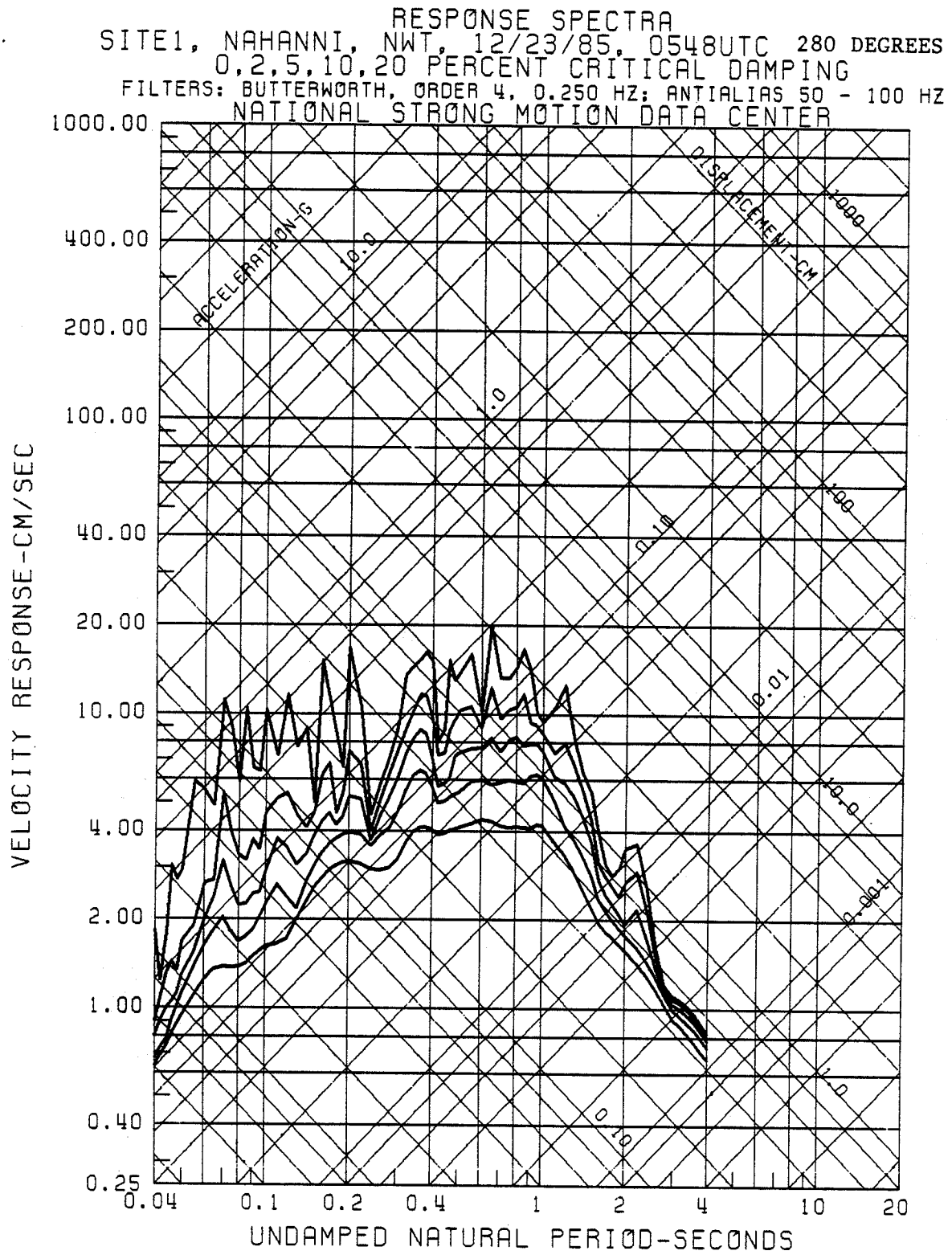

RESPONSE SPECTRA
SITE1, NAHANNI, NWT, 12/23/85, 0548UTC 280 DEGREES
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.250 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
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
0.001
DISPLACEMENT-CM
1000
100
10.0
1.0
0.10
0.01
0.001

Fig. 1.30 R.G.T

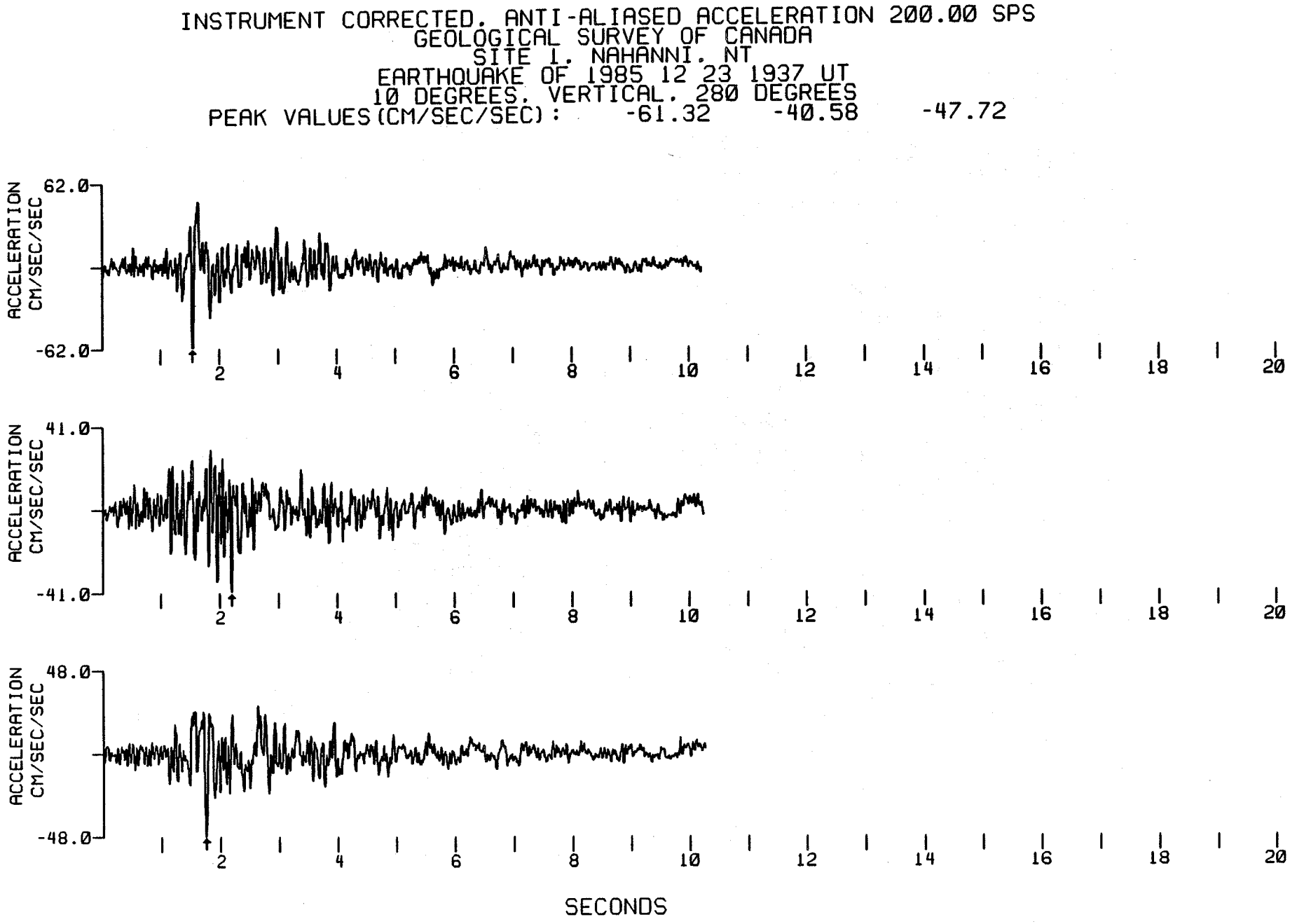

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 23 1937 UT
10 DEGREES. VERTICAL. 280 DEGREES
PEAK VALUES(CM/SEC/SEC): -61.32 -40.58 -47.72
ACCELERATION CM/SEC/SEC
62.0
-62.0
41.0
-41.0
48.0
-48.0
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.42

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1, NAHANNI, NT
EARTHQUAKE OF 1985 12 23 1937 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT 0.333 HZ
PEAK VALUES: ACCEL=-61.75 CM/SEC/SEC, VELOCITY=2.25 CM/SEC, DISPL=-0.29 CM

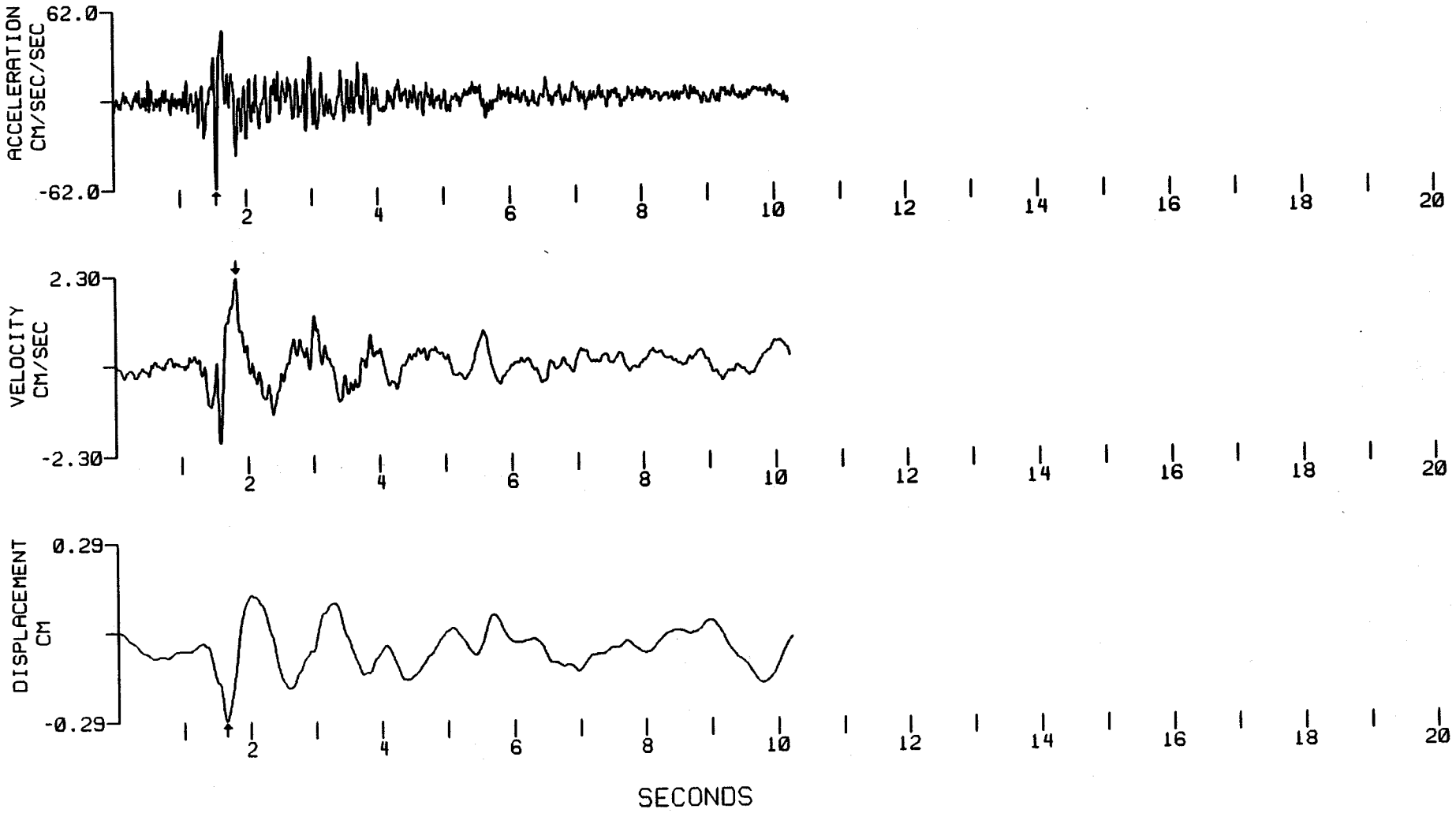


Fig. 142.1

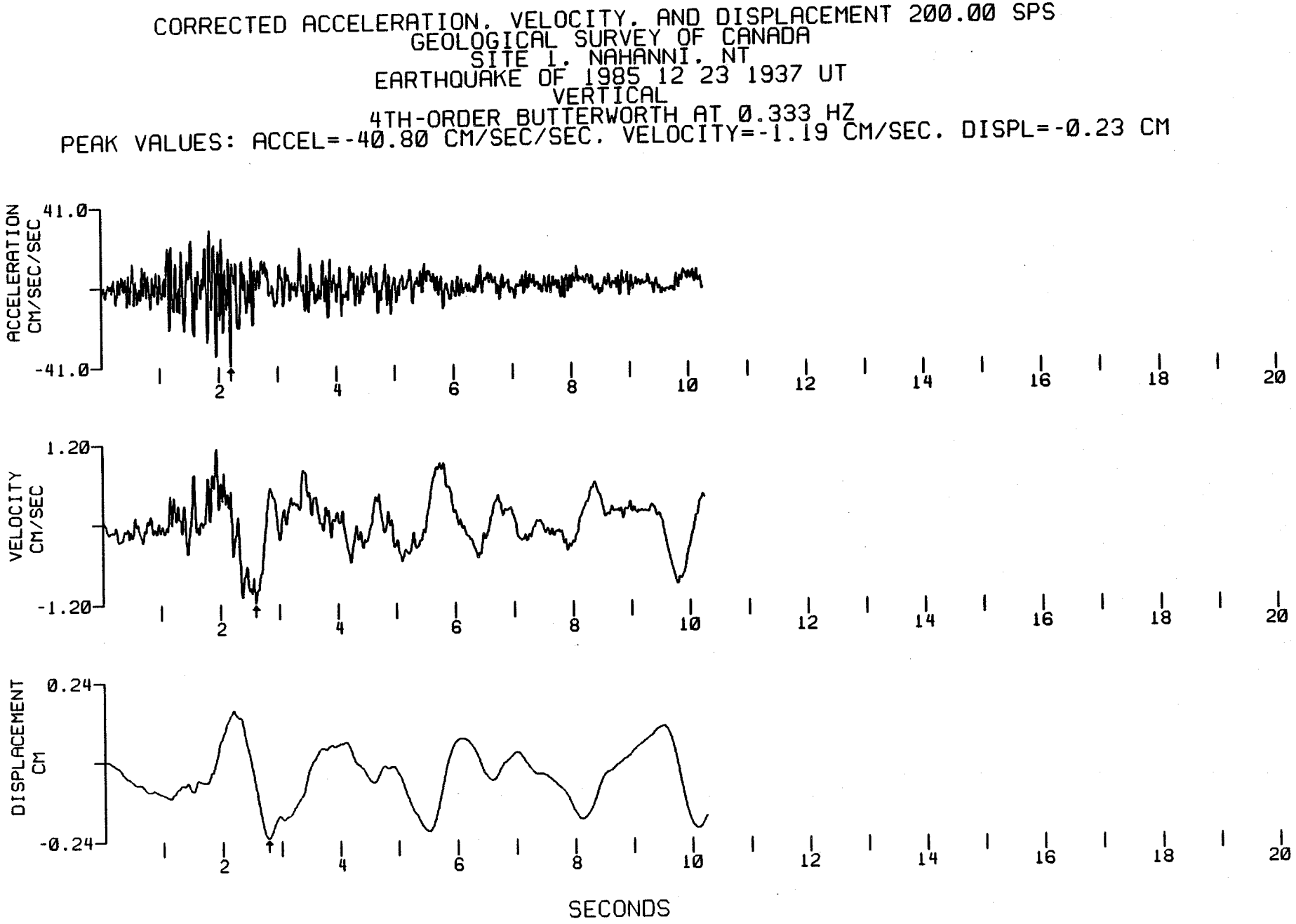

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1, NAHANNI, NT
EARTHQUAKE OF 1985 12 23 1937 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.333 HZ
PEAK VALUES: ACCEL=-40.80 CM/SEC/SEC, VELOCITY=-1.19 CM/SEC, DISPL=-0.23 CM
ACCELERATION CM/SEC/SEC
41.0
-41.0
VELOCITY CM/SEC
1.20
-1.20
DISPLACEMENT CM
0.24
-0.24
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.42.V

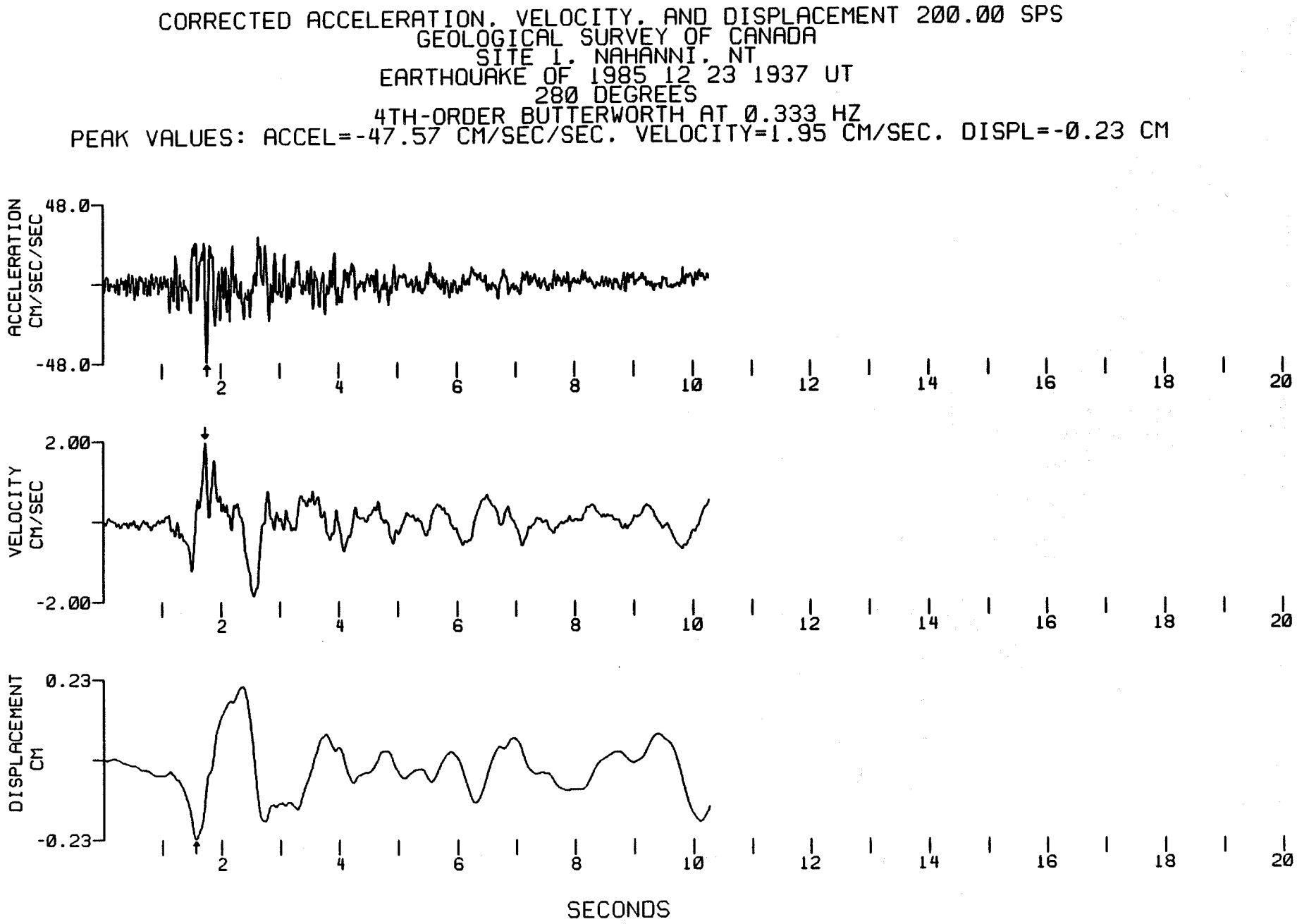

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 23 1937 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT 0.333 HZ
PEAK VALUES: ACCEL=-47.57 CM/SEC/SEC. VELOCITY=1.95 CM/SEC. DISPL=-0.23 CM
ACCELERATION CM/SEC/SEC
48.0
-48.0
VELOCITY CM/SEC
2.00
-2.00
DISPLACEMENT CM
0.23
-0.23
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 142.T

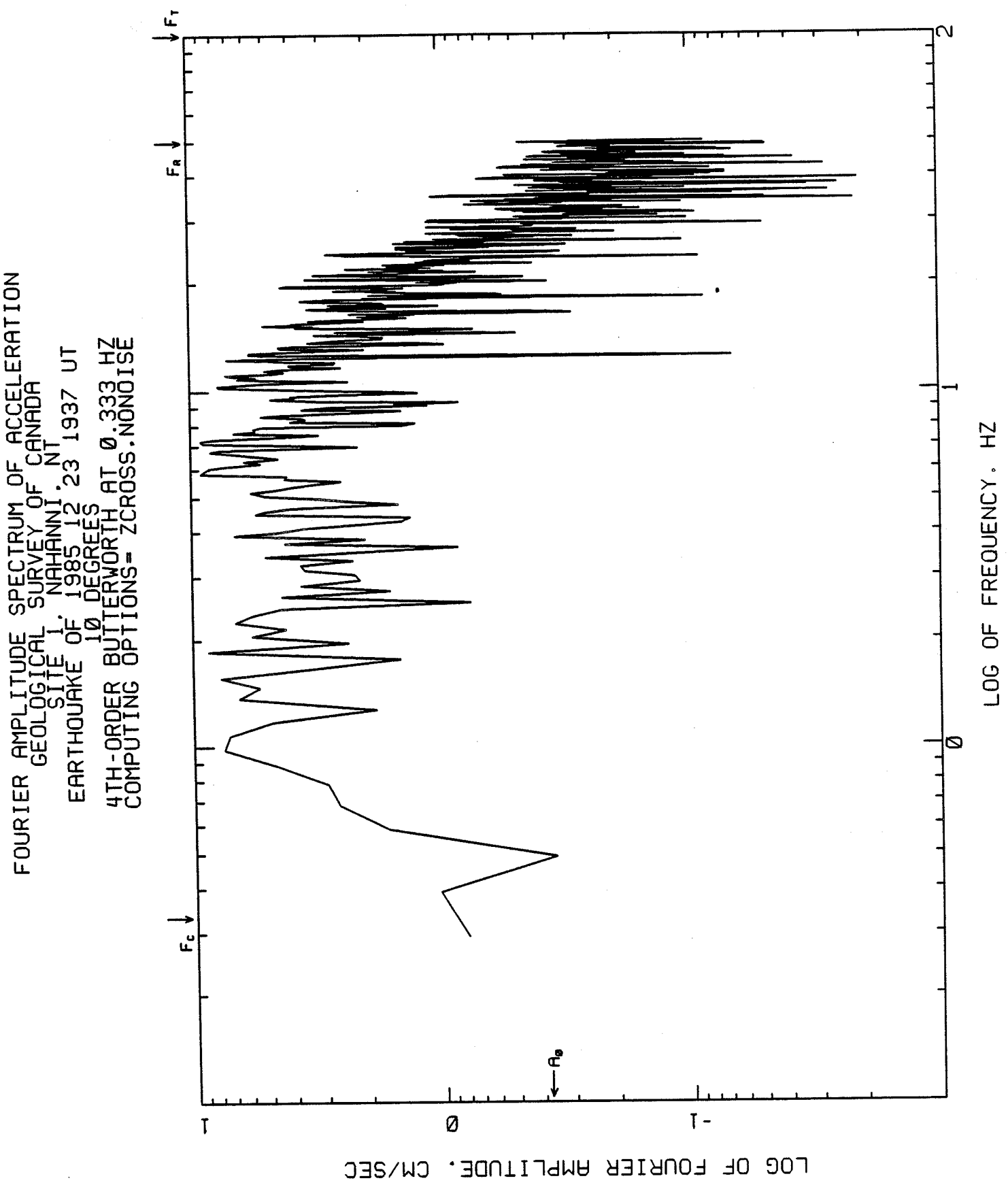

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1, NAHANNI, NT
EARTHQUAKE OF 1985 12 23 1937 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT Ø.333 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
1
Ø
-1
2
1
Ø
F_T
F_A
F_C
$A_Ø$

Fig. 1.42.F.L

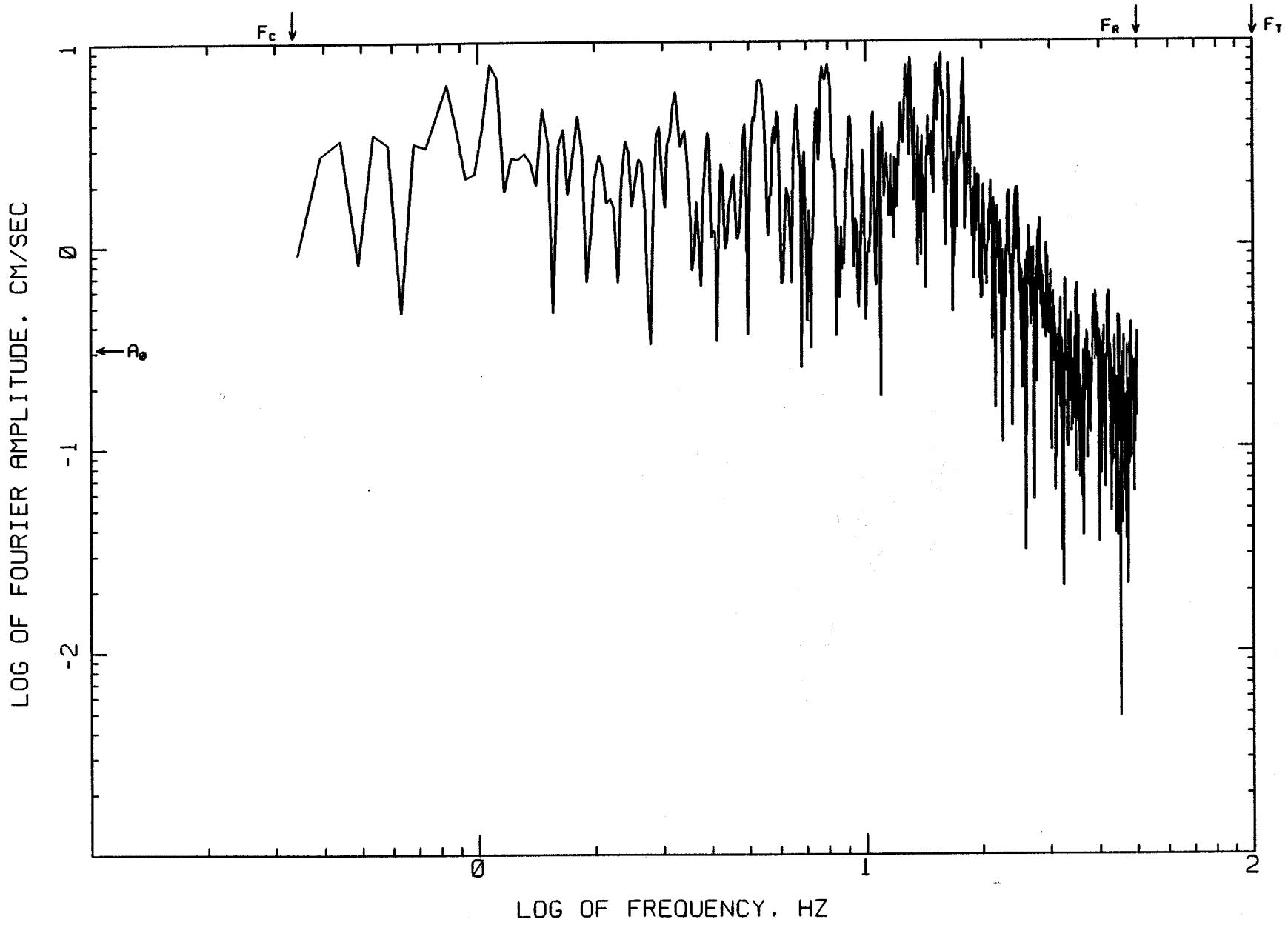

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 23 1937 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.333 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE. CM/SEC
1
0
-1
-2
0
1
2
LOG OF FREQUENCY. HZ

Fig. 1.42.F.V

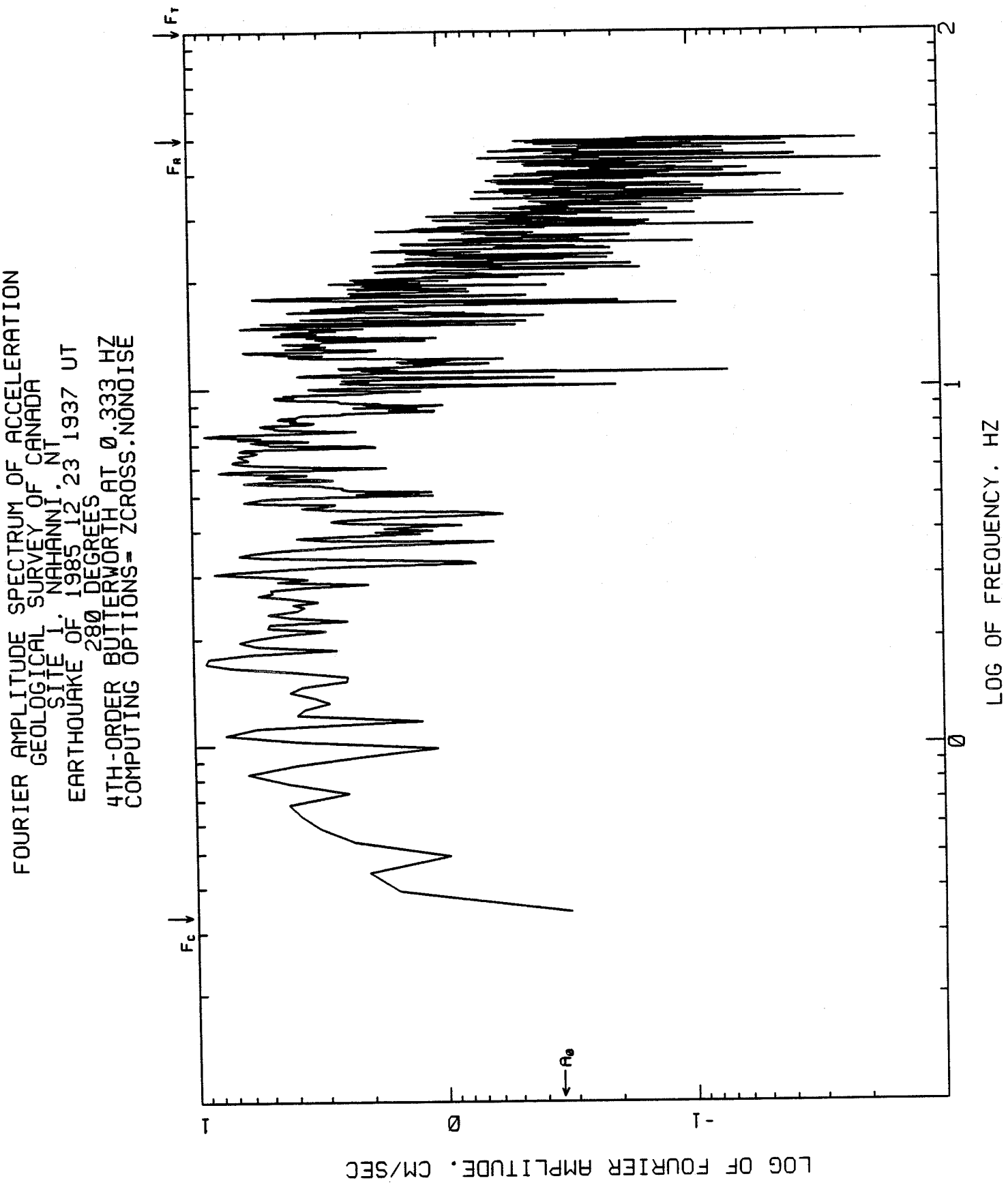

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1, NAHANNI, NT
EARTHQUAKE OF 1985 12 23 1937 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT Ø.333 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
Fc
FR
FT
Ao
1
Ø
-1
2

Fig. 1.42.F.T

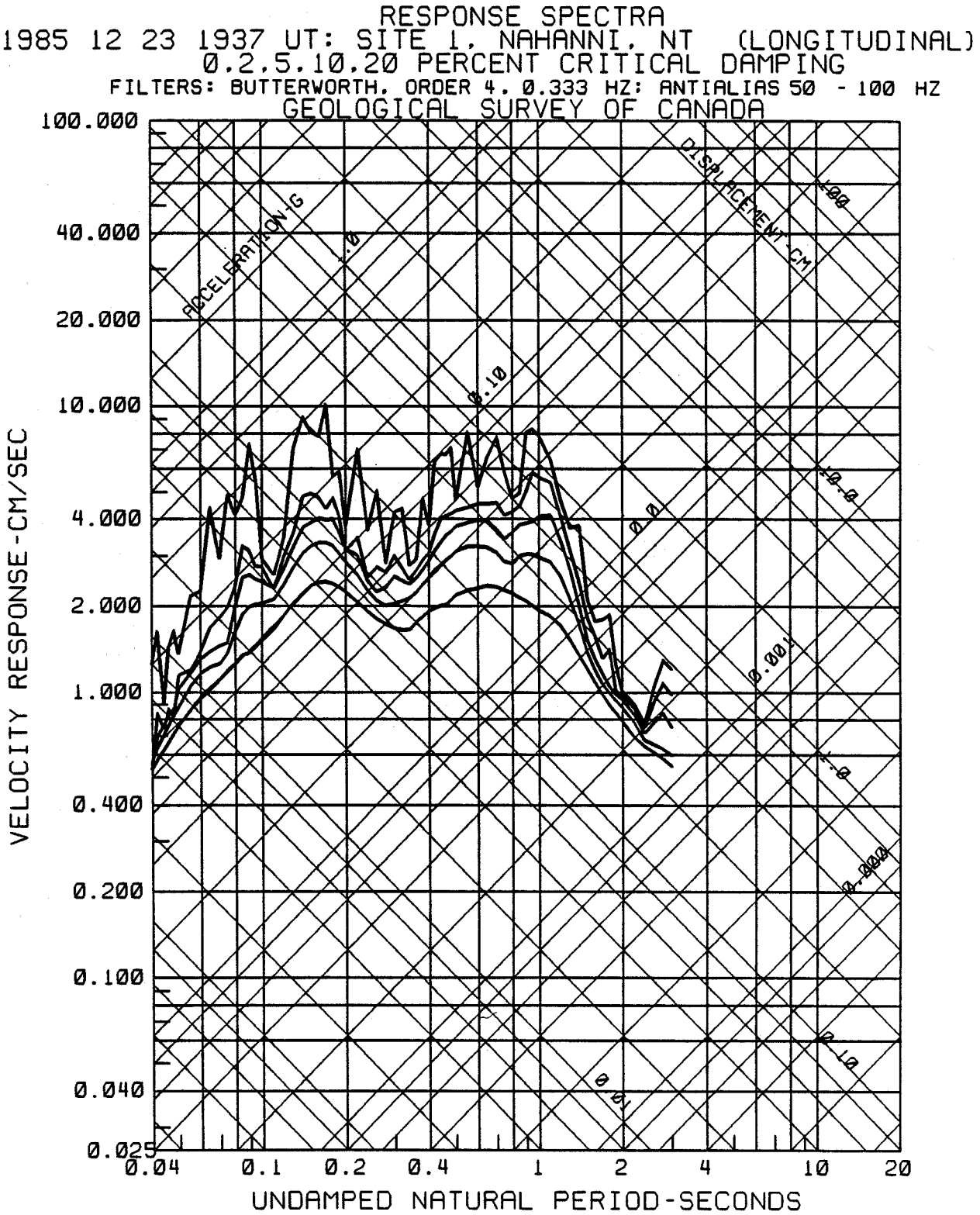

RESPONSE SPECTRA
1985 12 23 1937 UT: SITE 1. NAHANNI. NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.333 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 1.42.R.L

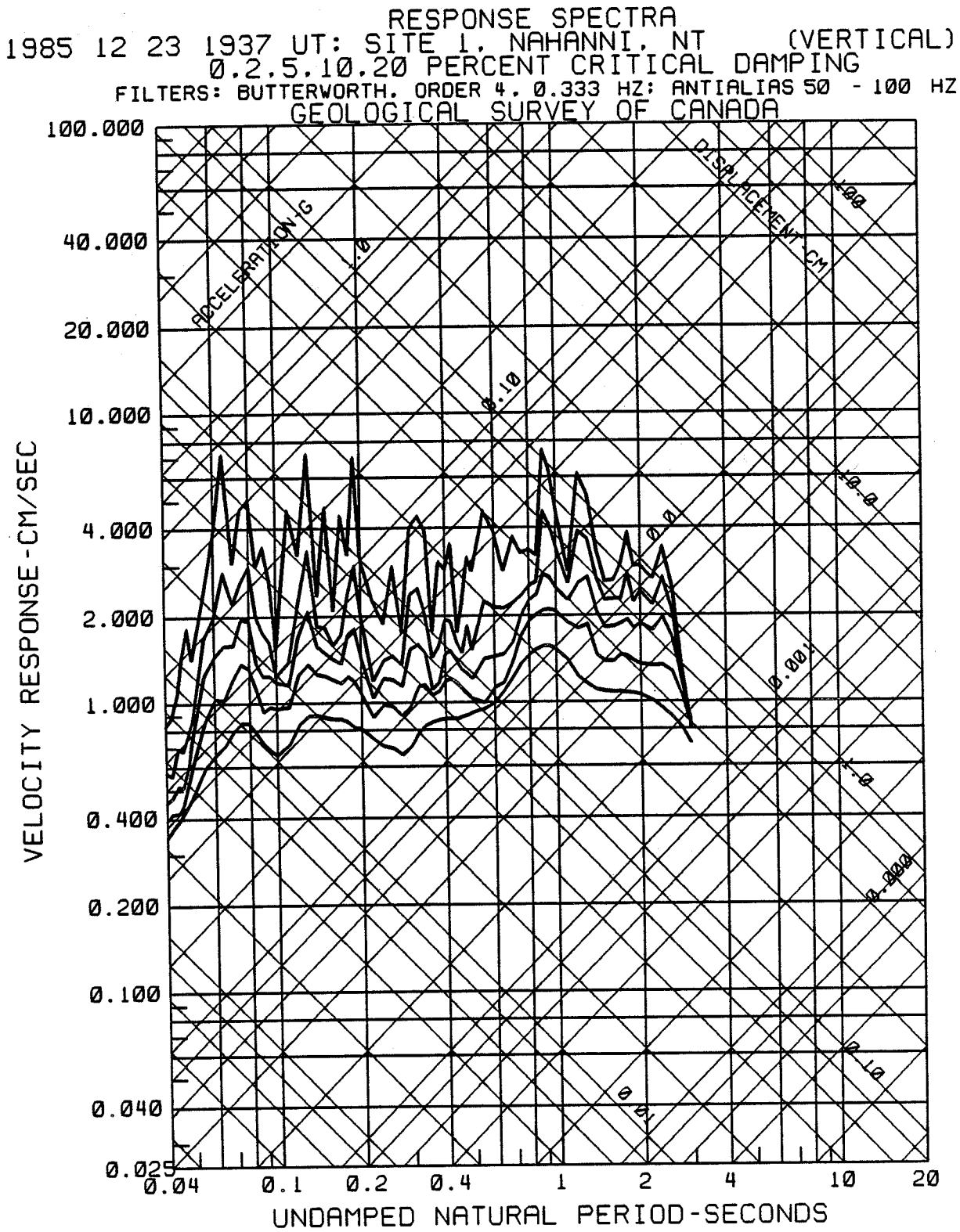

RESPONSE SPECTRA
1985 12 23 1937 UT: SITE 1, NAHANNI, NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.333 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
20.000
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

Fig. 142.R.V

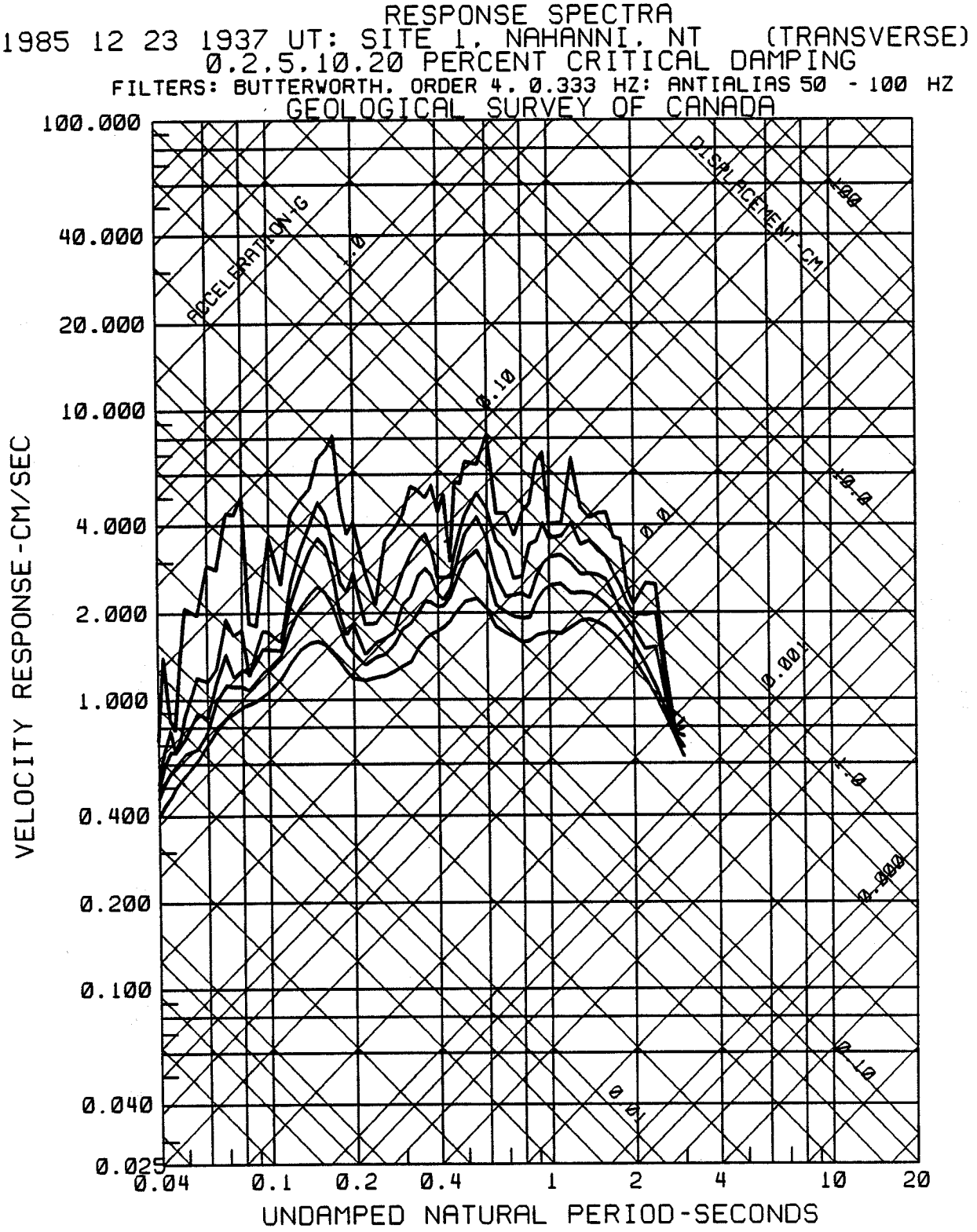

RESPONSE SPECTRA
1985 12 23 1937 UT: SITE 1, NAHANNI, NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.333 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 1.42.R.T

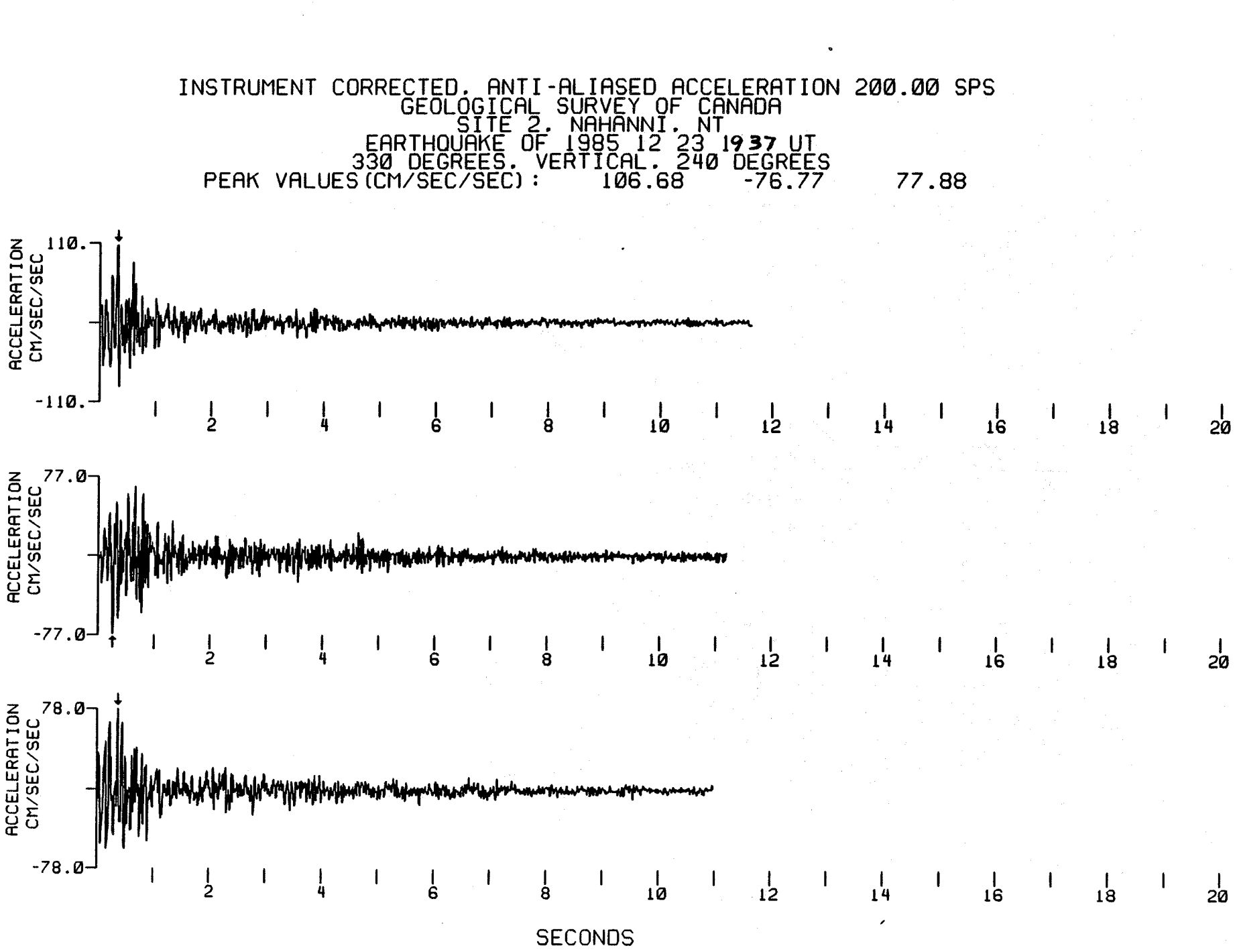

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 23 1937 UT
330 DEGREES. VERTICAL. 240 DEGREES
PEAK VALUES (CM/SEC/SEC): 106.68 -76.77 77.88
ACCELERATION CM/SEC/SEC
110.
-110.
77.0
-77.0
78.0
-78.0
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.42

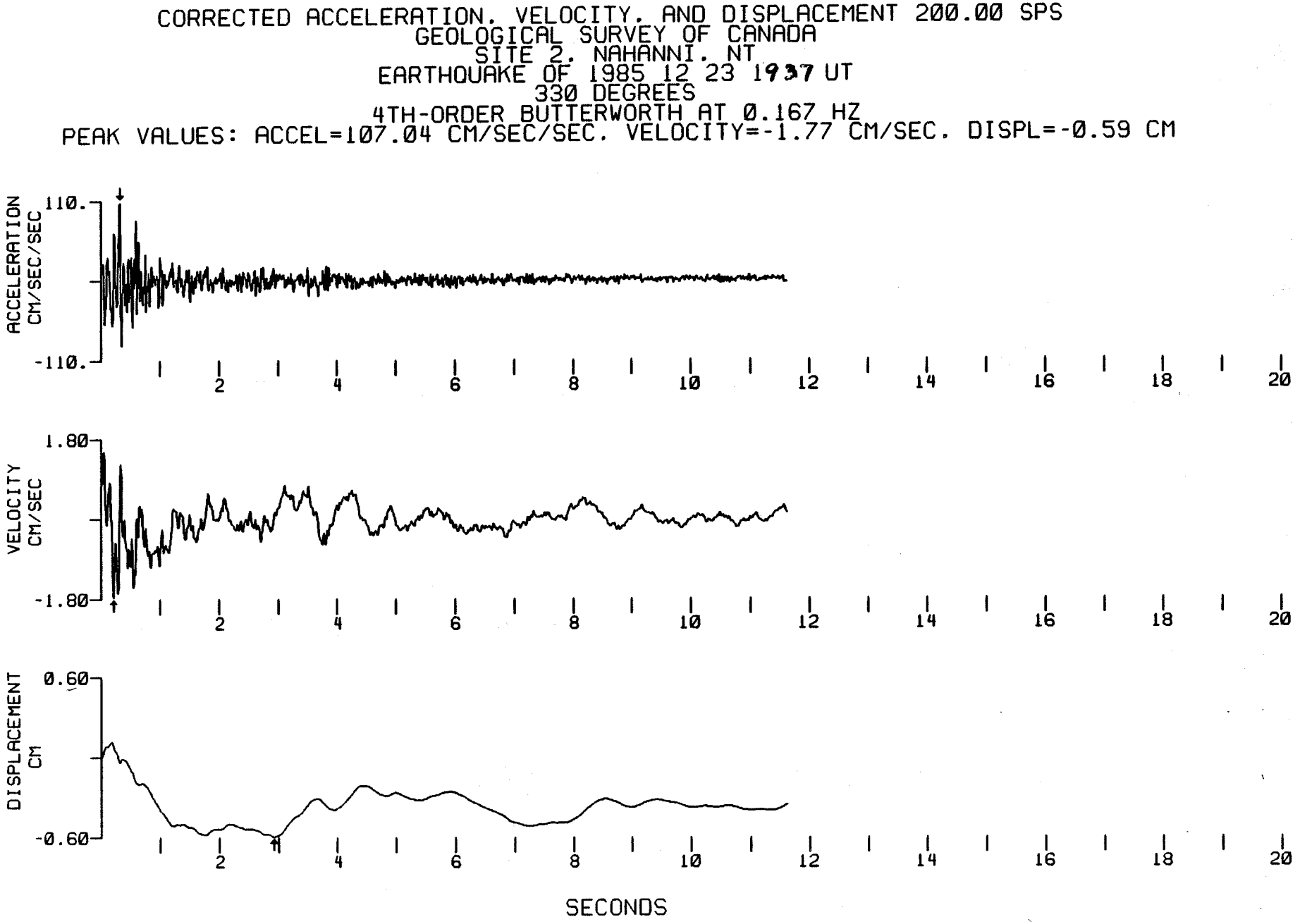

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 23 1937 UT
330 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=107.04 CM/SEC/SEC. VELOCITY=-1.77 CM/SEC. DISPL=-0.59 CM
ACCELERATION CM/SEC/SEC
110.
-110.
VELOCITY CM/SEC
1.80
-1.80
DISPLACEMENT CM
0.60
-0.60
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.42.L

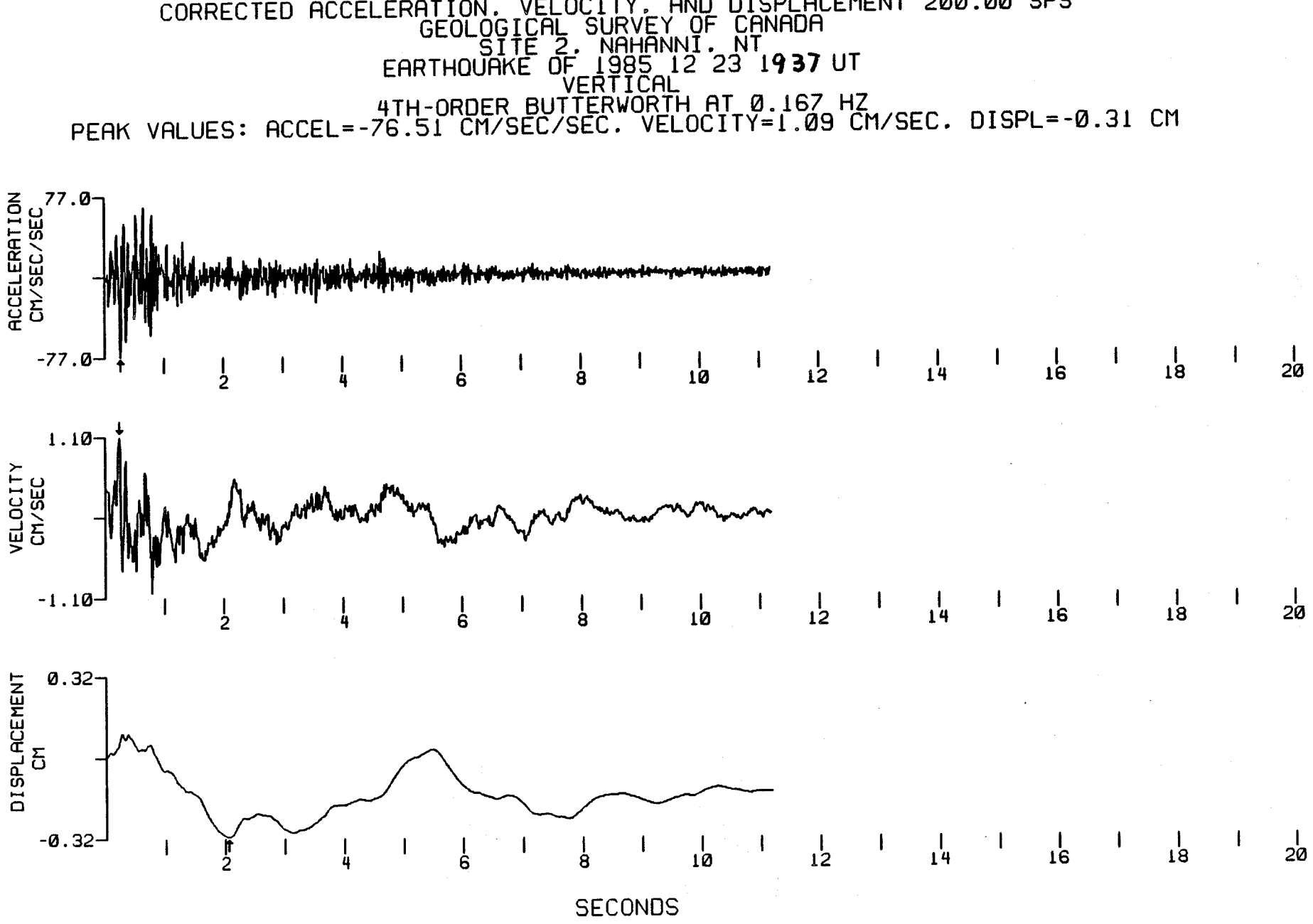

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 23 1937 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=-76.51 CM/SEC/SEC. VELOCITY=1.09 CM/SEC. DISPL=-0.31 CM
ACCELERATION CM/SEC/SEC
77.0
-77.0
VELOCITY CM/SEC
1.10
-1.10
DISPLACEMENT CM
0.32
-0.32
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.42.V

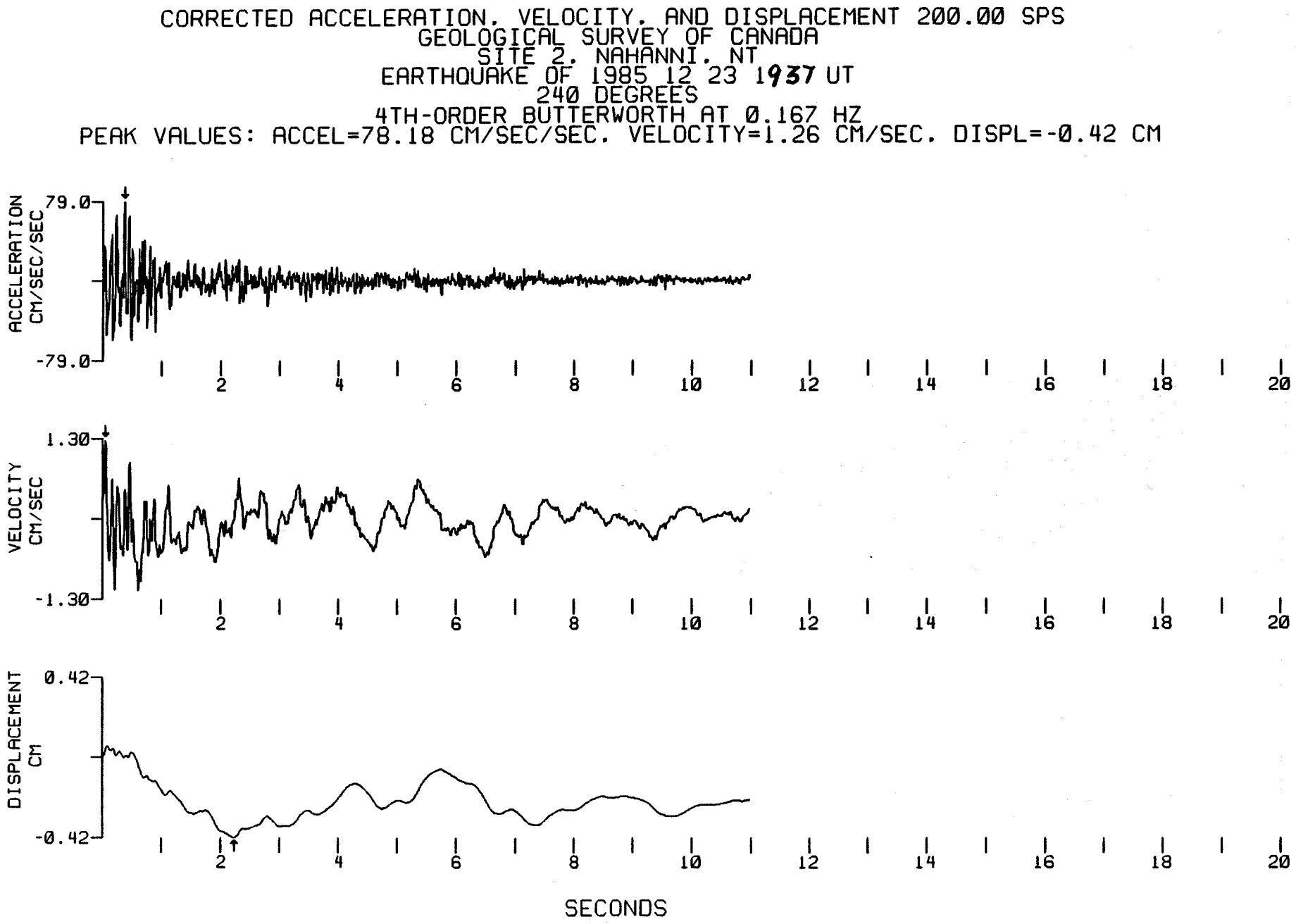

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 23 1937 UT
240 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=78.18 CM/SEC/SEC. VELOCITY=1.26 CM/SEC. DISPL=-0.42 CM
ACCELERATION CM/SEC/SEC
79.0
-79.0
VELOCITY CM/SEC
1.30
-1.30
DISPLACEMENT CM
0.42
-0.42
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.42.T

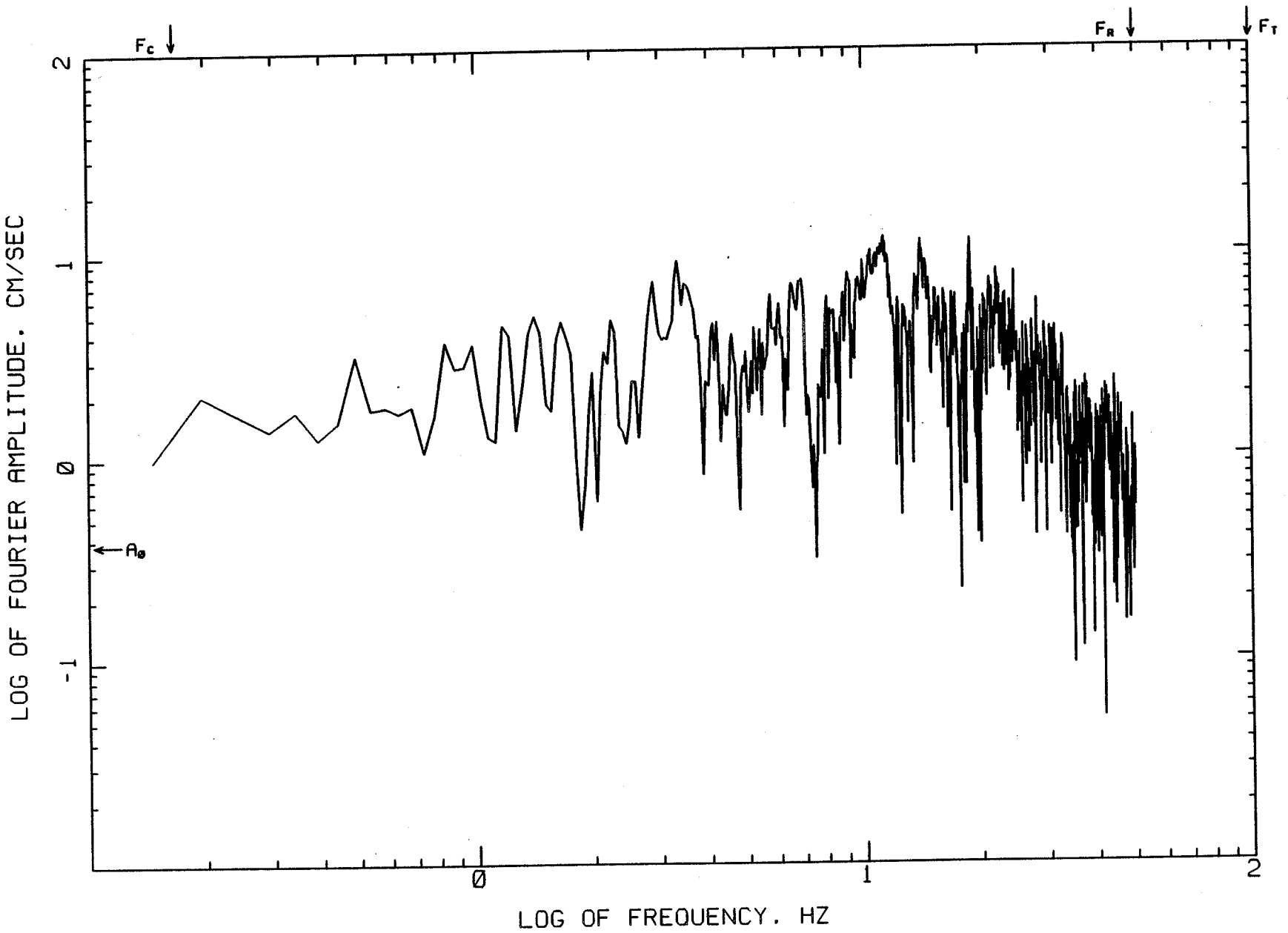

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 23 1937 UT
330 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
2
1
0
-1
0
1
2

Fig. 2.42.F.L

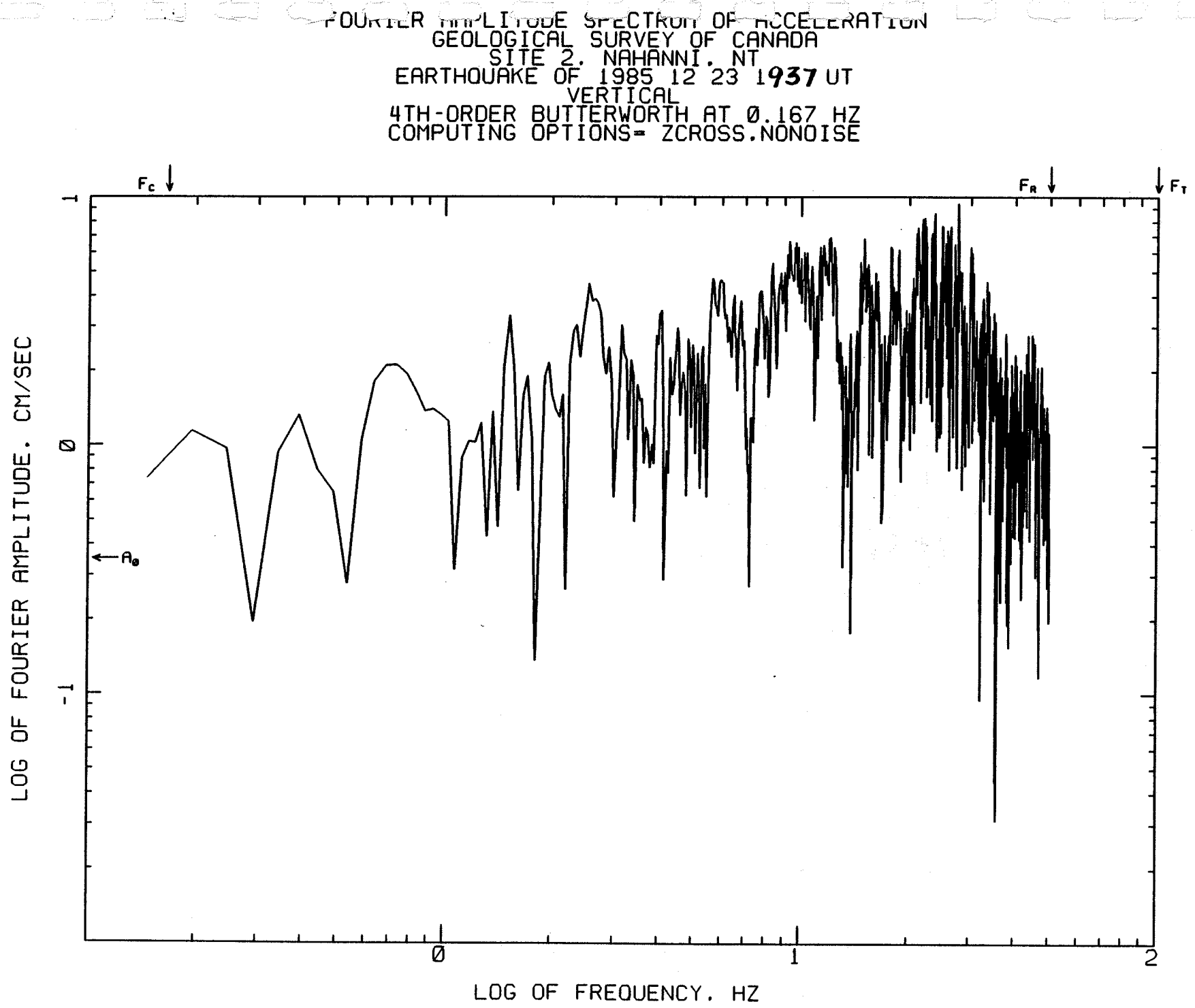

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 23 1937 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
1
0
-1
0
1
2

Fig. 2.42.F.V

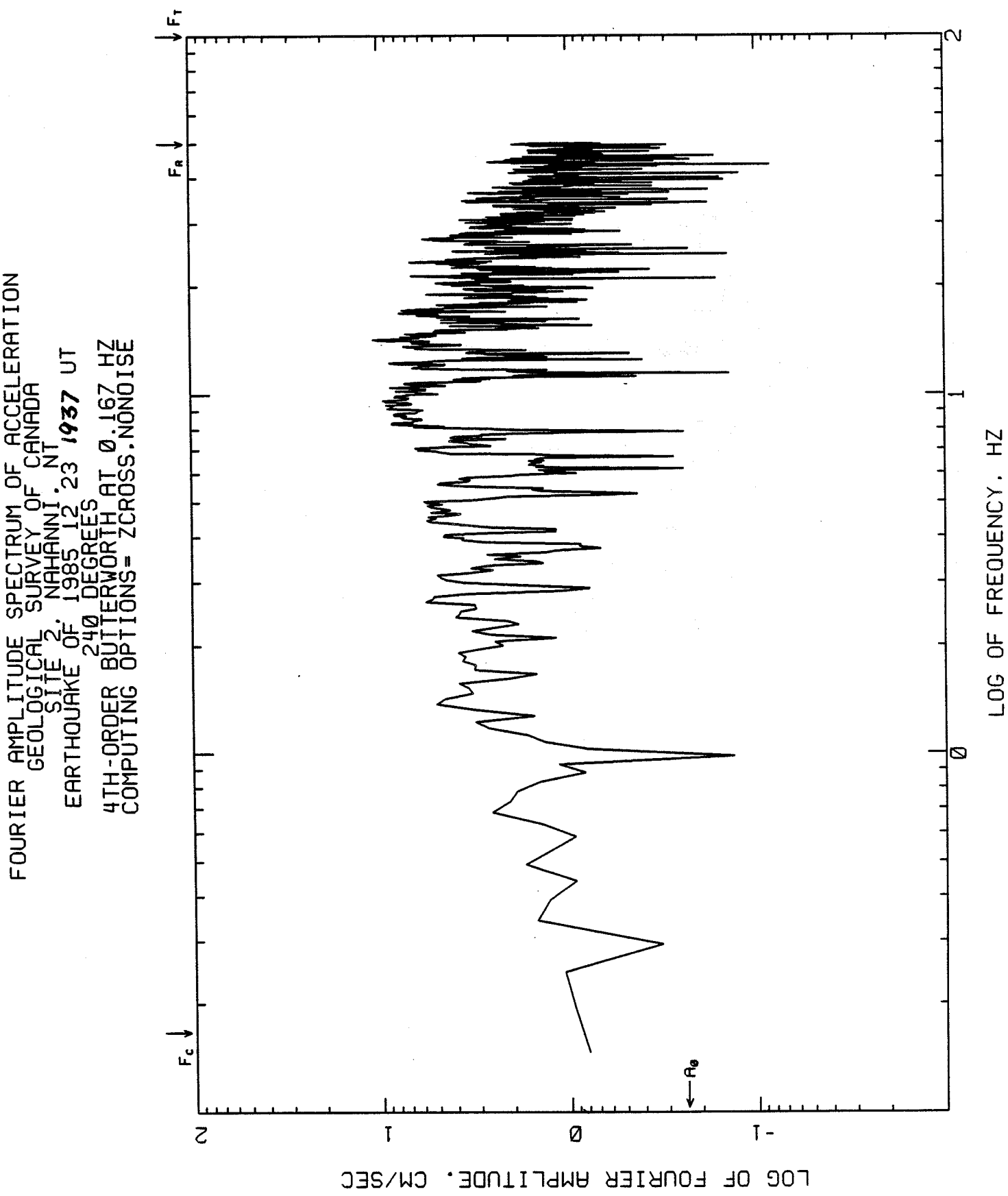

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2, NAHANNI, NT
EARTHQUAKE OF 1985 12 23 1937 UT
240 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
-1
F_T
F_A
F_C
A_0

Fig. 2.42.F.T

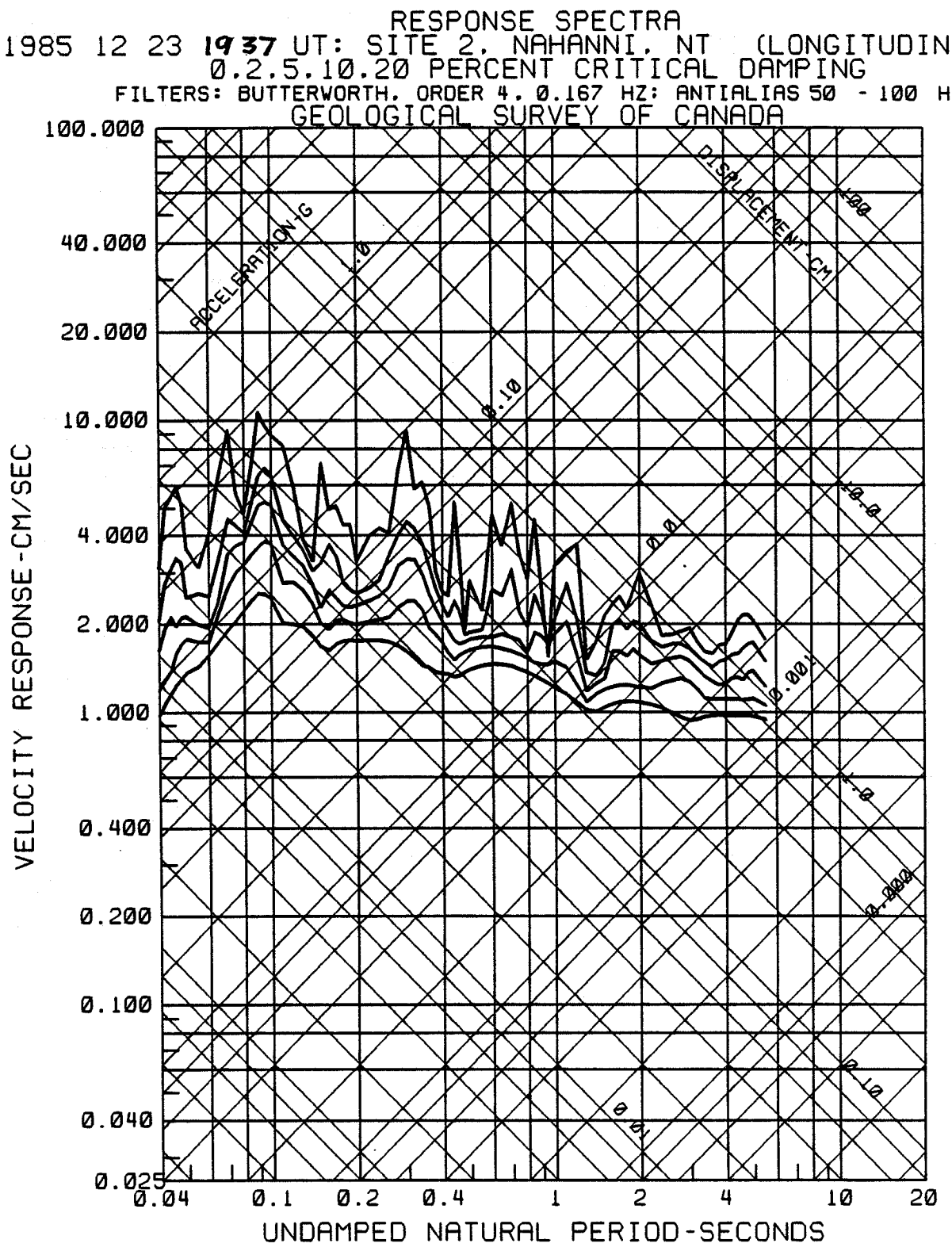

RESPONSE SPECTRA
1985 12 23 1937 UT: SITE 2. NAHANNI. NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 2.42.R.L

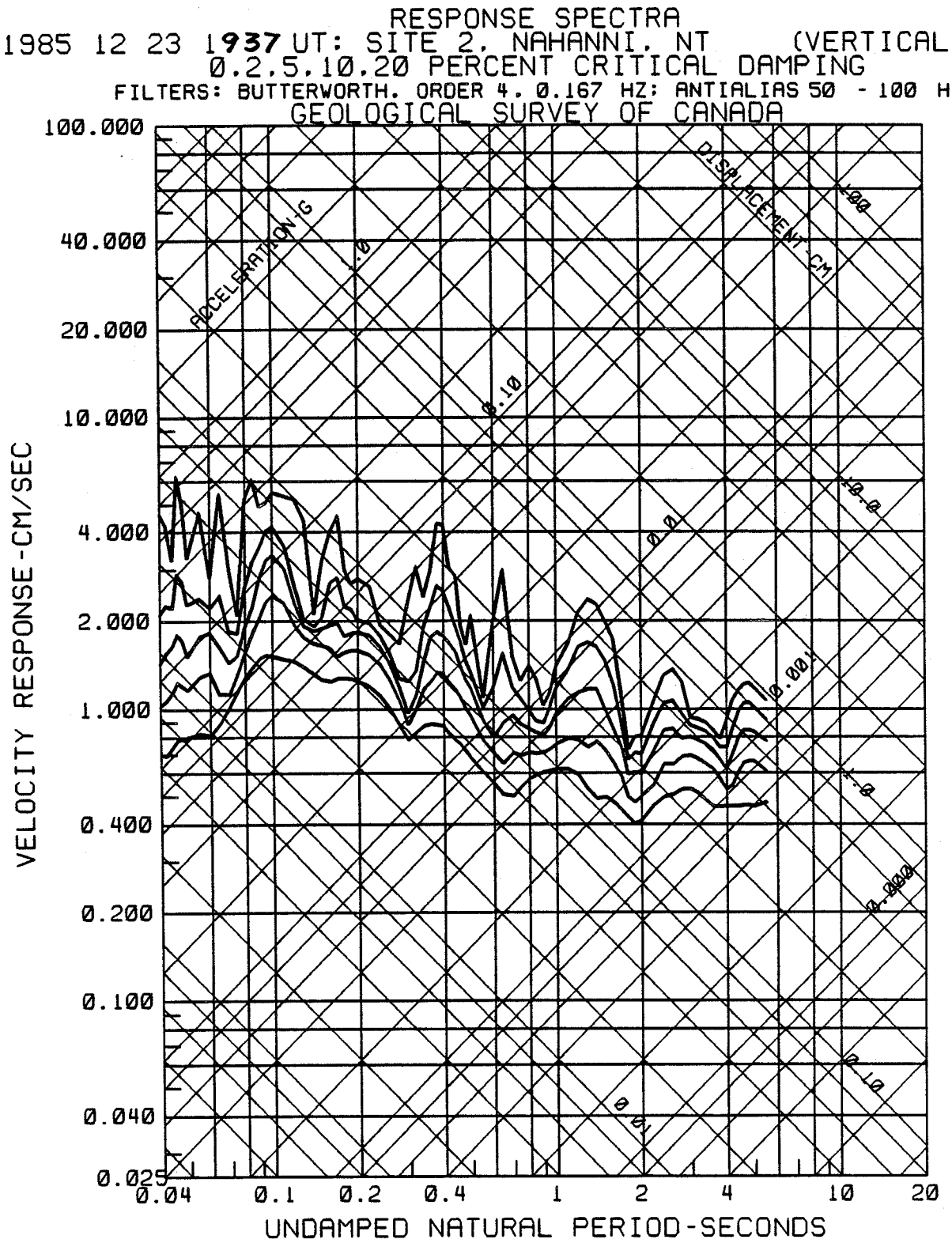

RESPONSE SPECTRA
1985 12 23 1937 UT: SITE 2, NAHANNI, NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ; ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
1.0
0.10
0.01
0.001
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
0.04
0.1
0.2
0.4
1
2
4
10
20
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS

Fig. 2.42.R.V

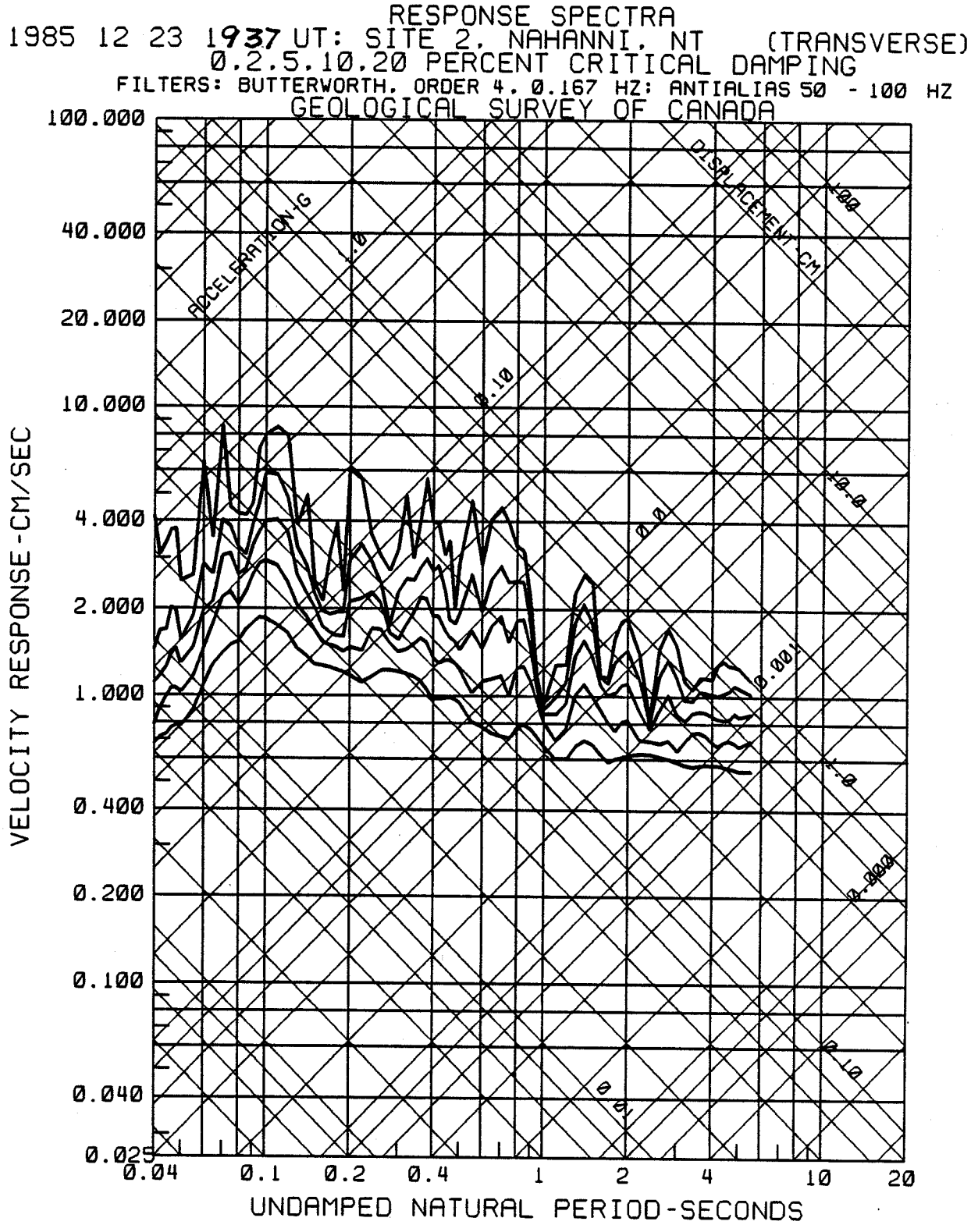

RESPONSE SPECTRA
1985 12 23 1937 UT: SITE 2, NAHANNI, NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 2.42.R.T

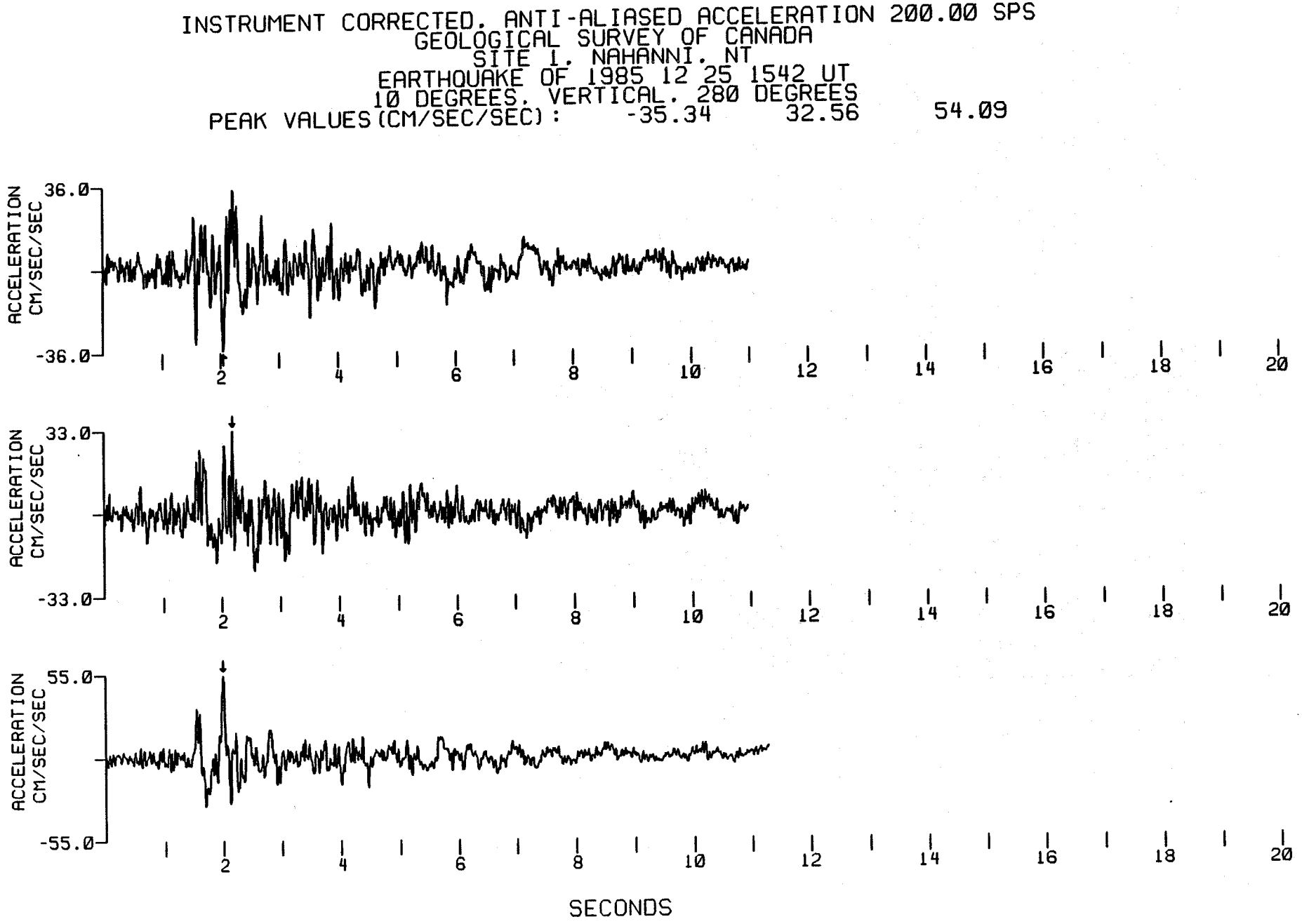

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
10 DEGREES. VERTICAL. 280 DEGREES
PEAK VALUES(CM/SEC/SEC): -35.34 32.56 54.09
ACCELERATION CM/SEC/SEC
36.0
-36.0
33.0
-33.0
55.0
-55.0
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.50

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=-35.60 CM/SEC/SEC. VELOCITY=1.92 CM/SEC. DISPL=-0.41 CM

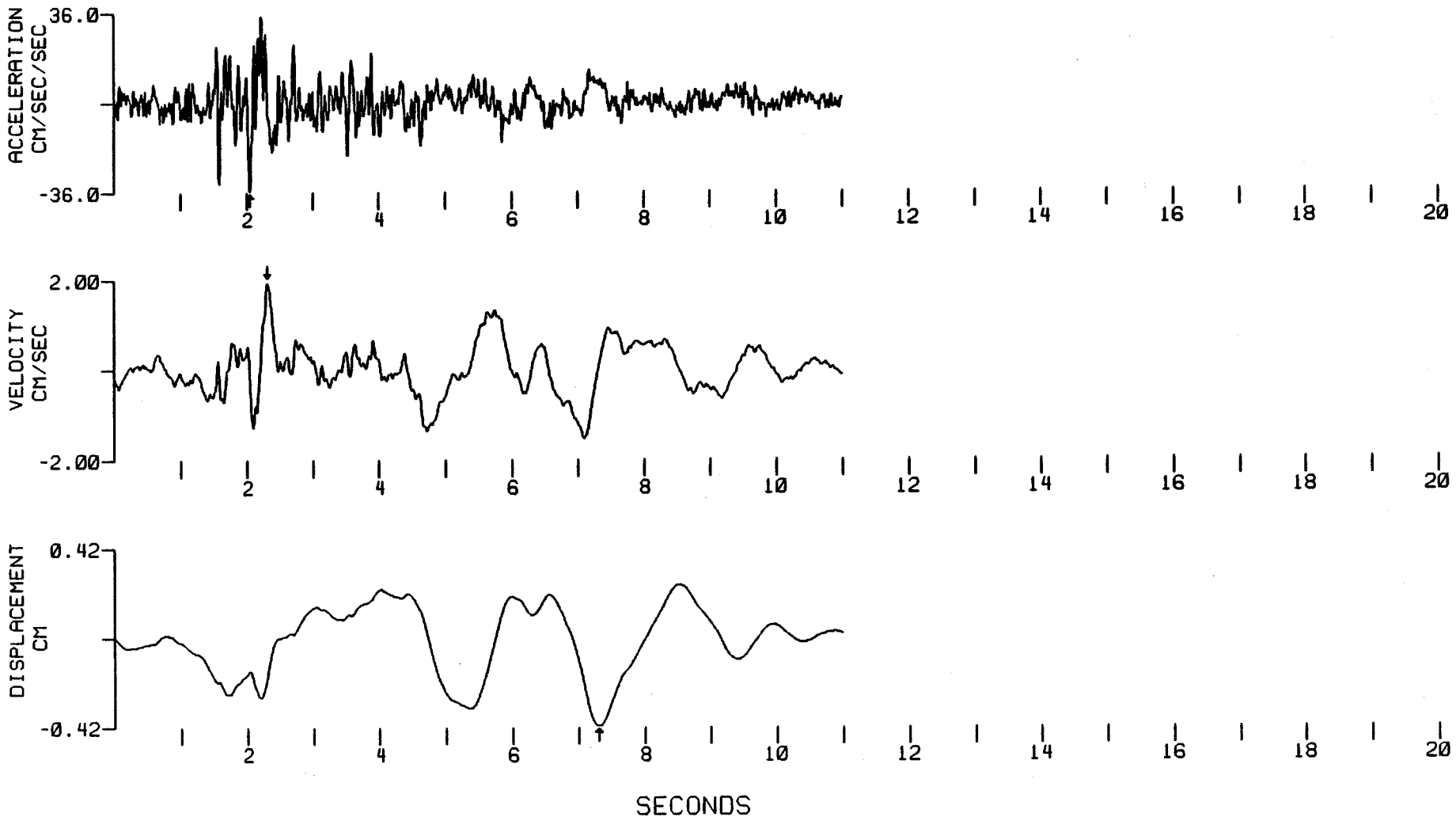


Fig. 1.5.1

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=32.35 CM/SEC/SEC. VELOCITY=1.76 CM/SEC. DISPL=-0.37 CM

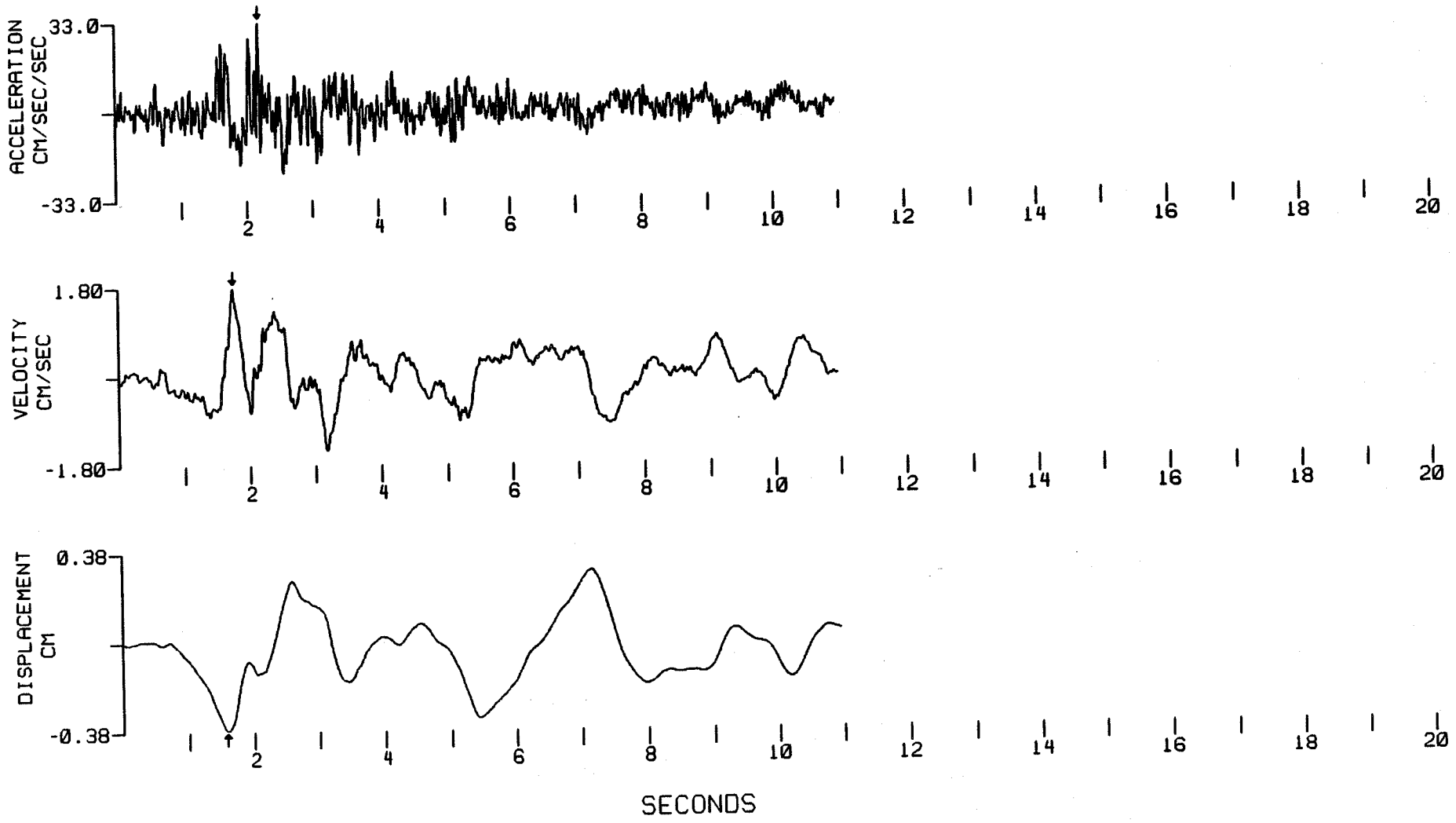


Fig. 1.50.V

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1, NAHANNI, NT
EARTHQUAKE OF 1985 12 25 1542 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=54.05 CM/SEC/SEC, VELOCITY=-1.97 CM/SEC, DISPL=-0.38 CM

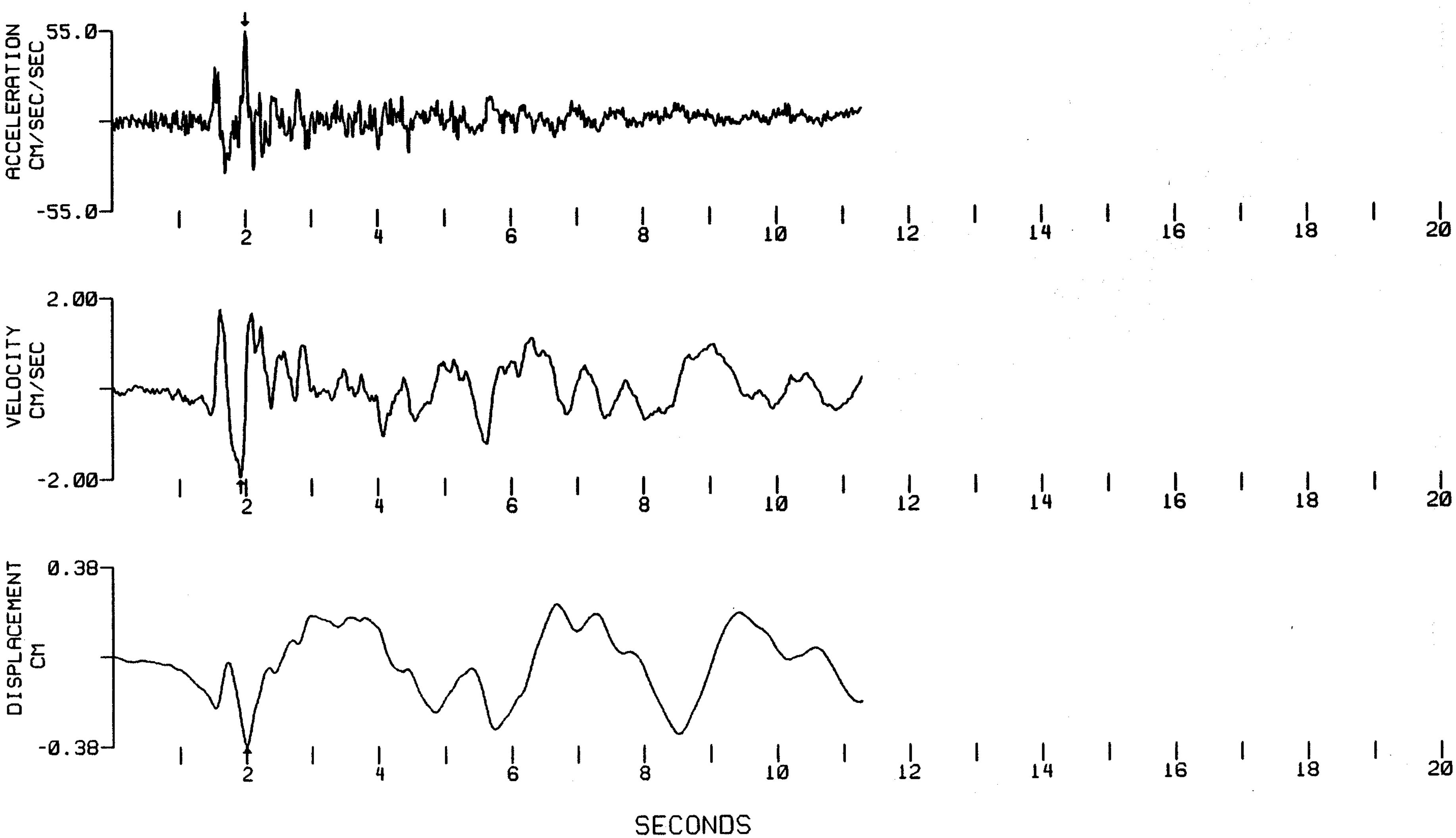


Fig. 1.50.T

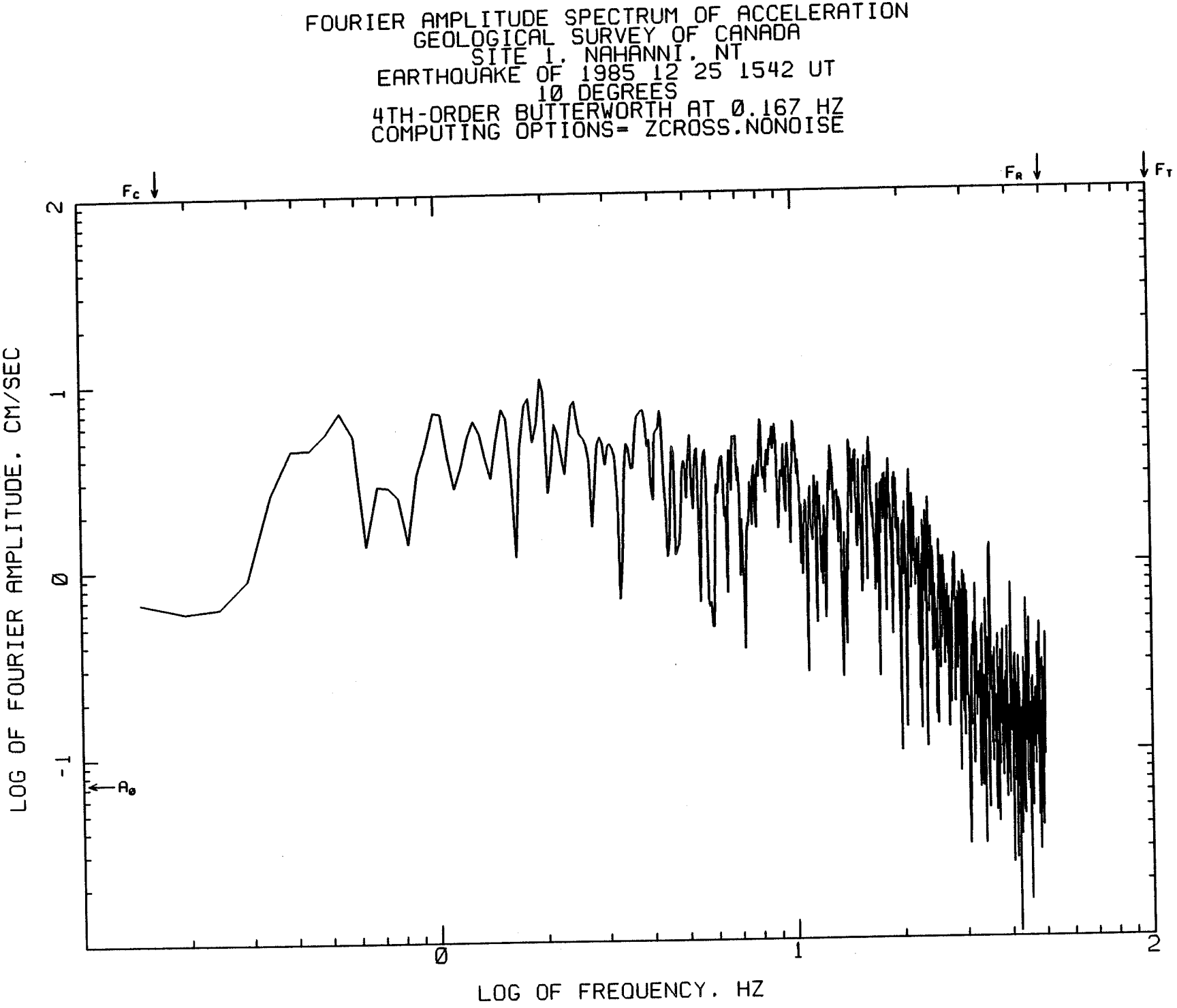

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
2
1
0
-1
A0
LOG OF FOURIER AMPLITUDE. CM/SEC
0
1
2
LOG OF FREQUENCY. HZ

Fig. 1.50.F.T.

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT Ø.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE

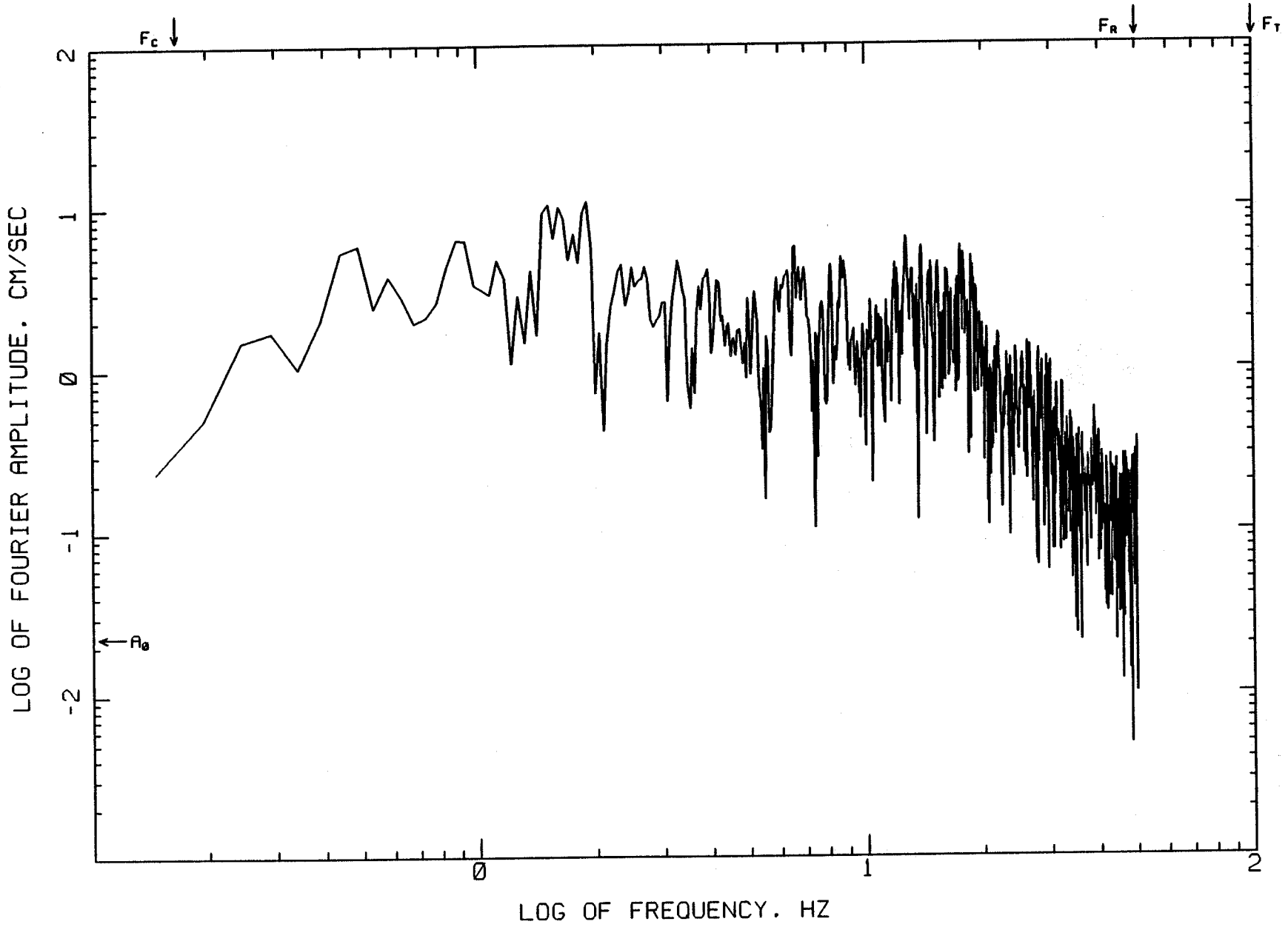


Fig. 1.50.F.V

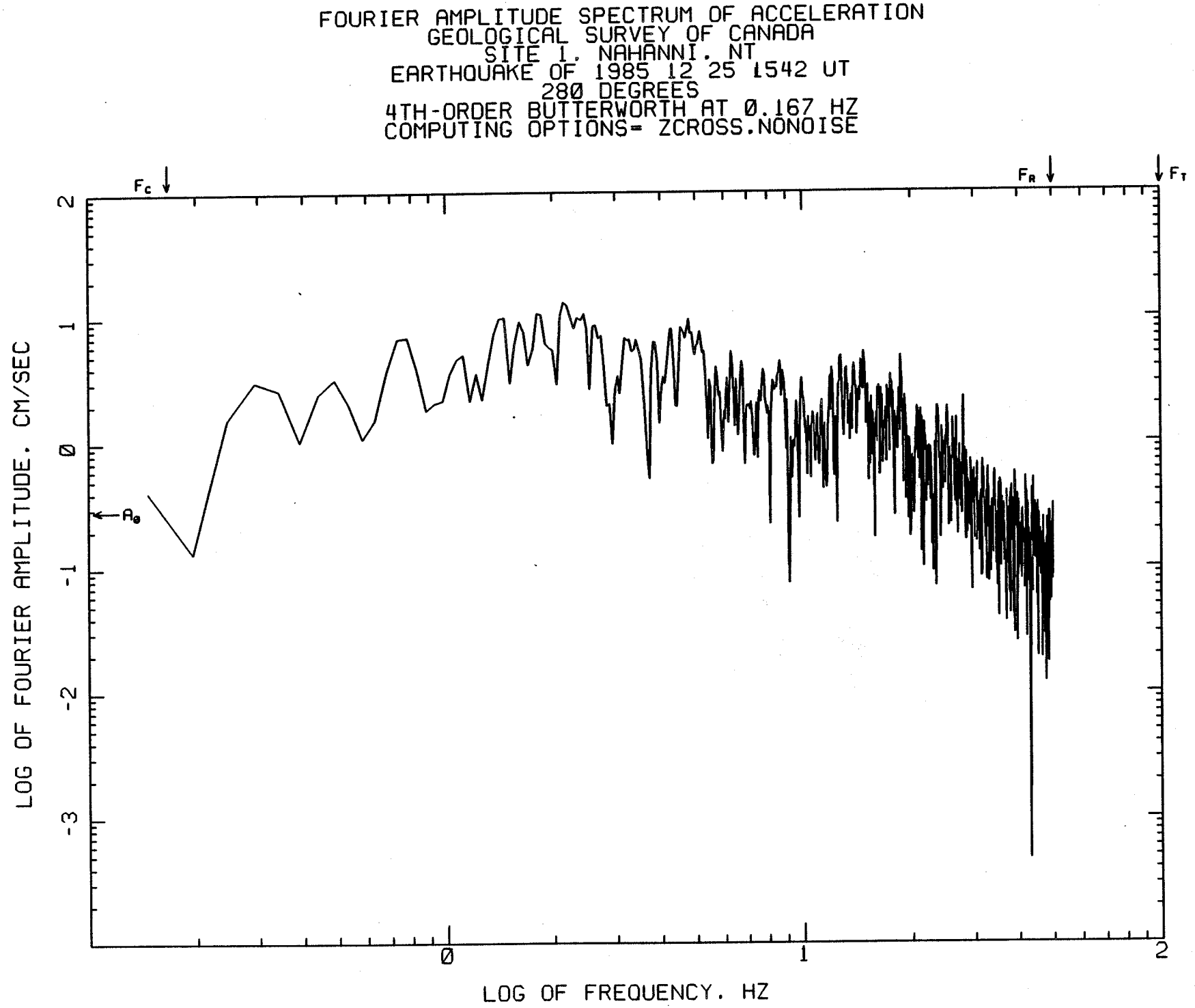

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
2
1
0
-1
-2
-3
0
1
2

Fig. 1.50.F.T

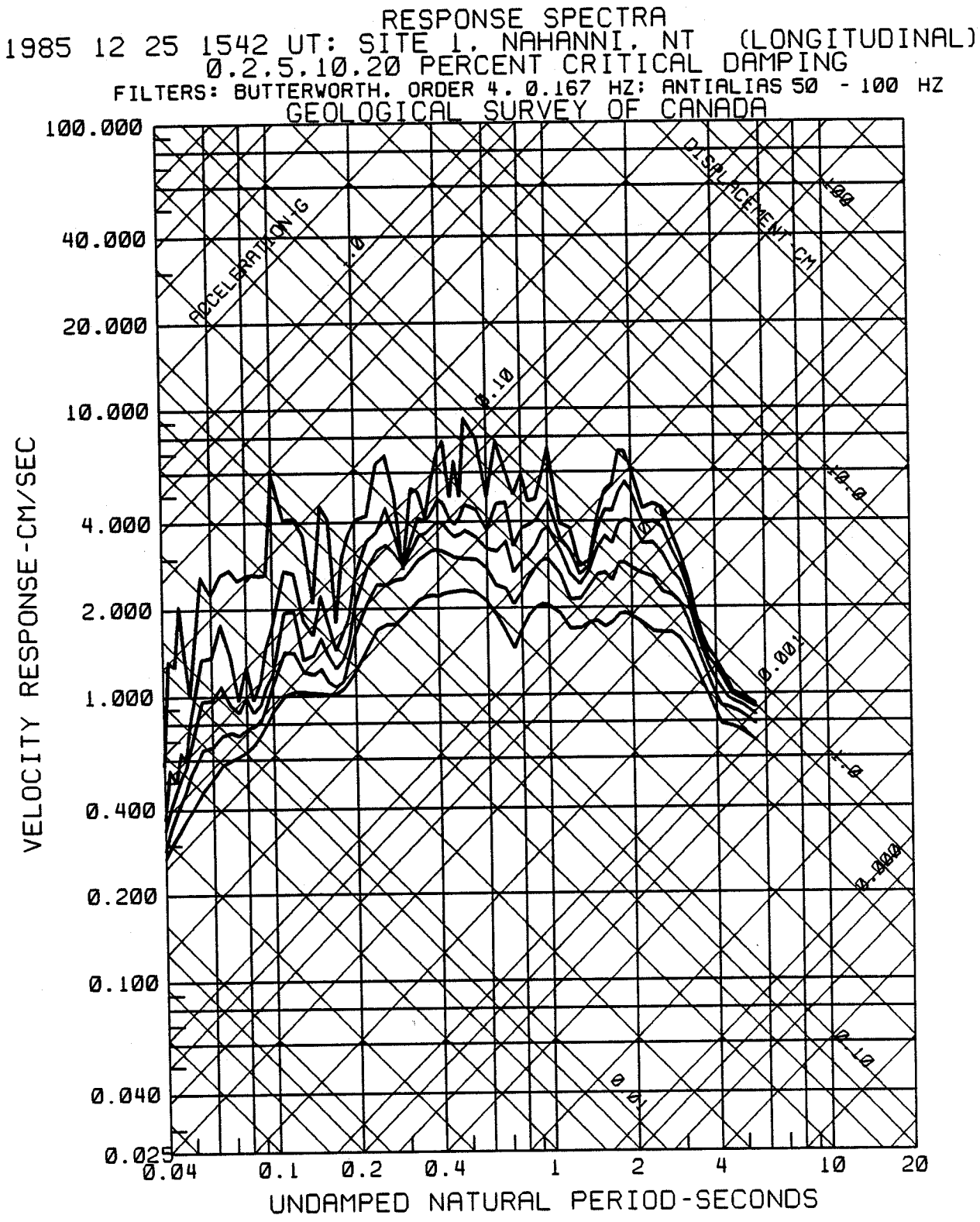

RESPONSE SPECTRA
1985 12 25 1542 UT: SITE 1. NAHANNI. NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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
100
1.0
0.10
0.01
0.001
0.0001

Fig. 1.50.R.L

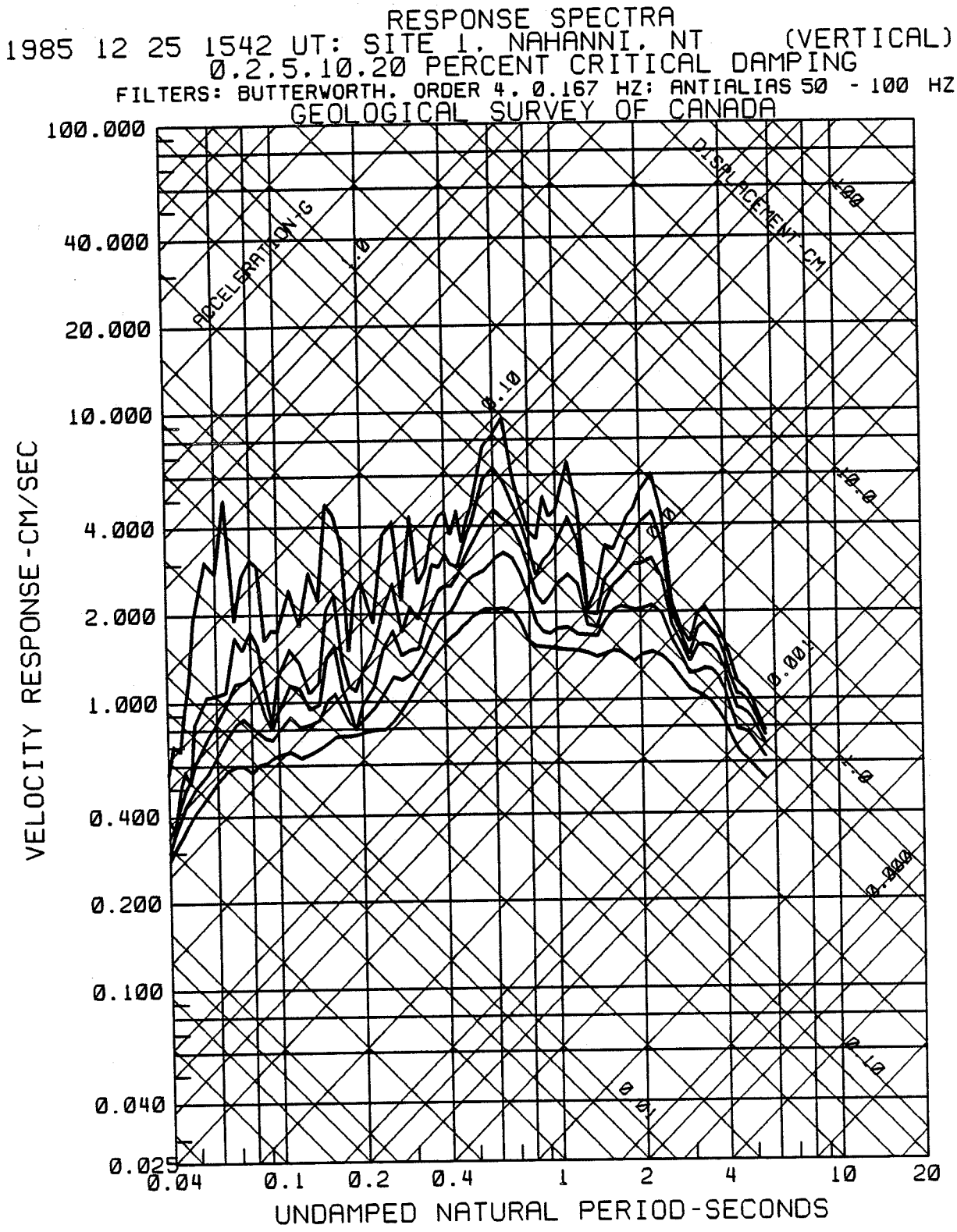

RESPONSE SPECTRA
1985 12 25 1542 UT: SITE 1. NAHANNI. NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
1.0
0.10
0.01
DISPLACEMENT-CM
100
10.0
1.0
0.100
0.10
0.01

Fig. 1.50 R.V

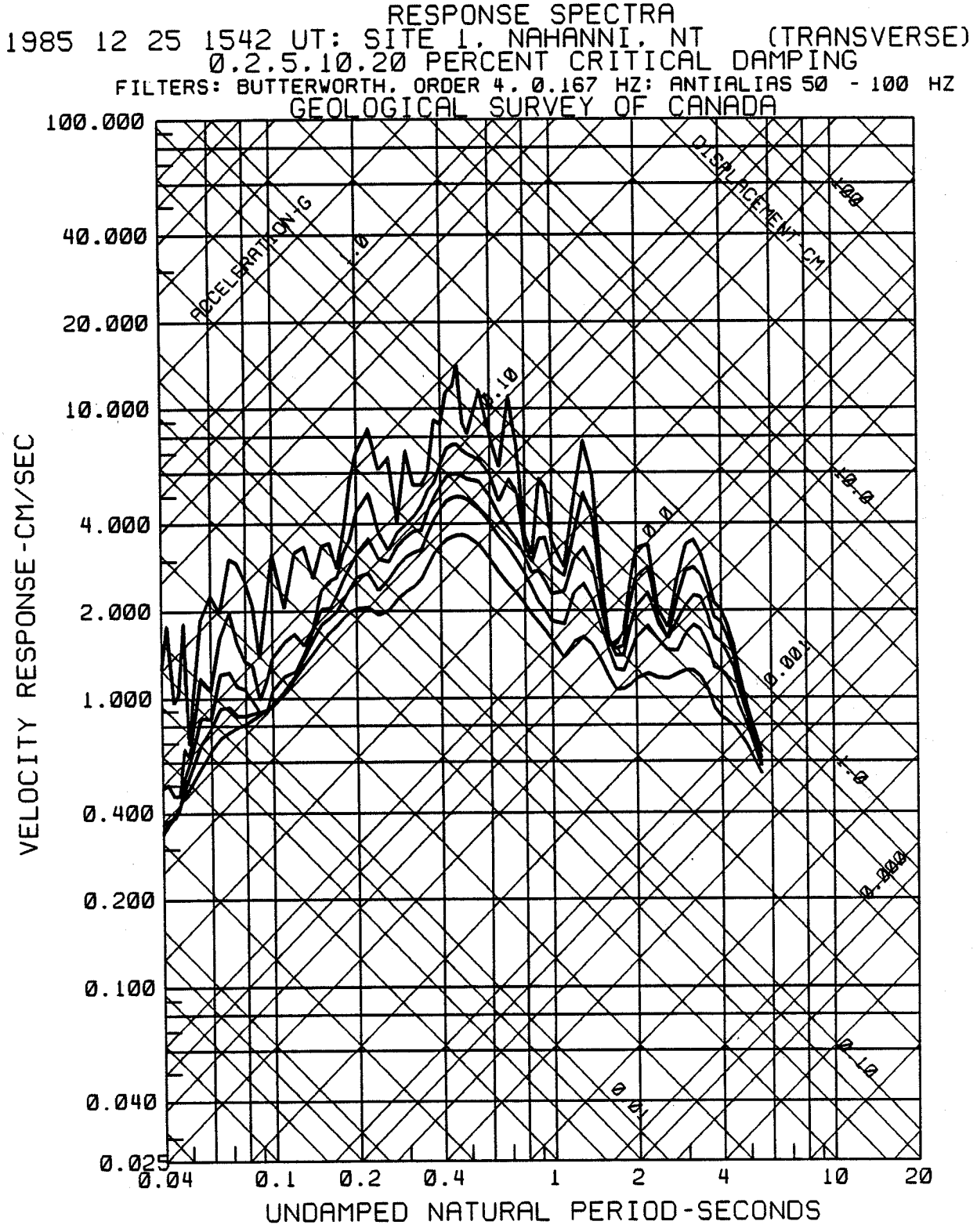

RESPONSE SPECTRA
1985 12 25 1542 UT: SITE 1, NAHANNI, NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100
10.0
1.0
0.10
0.01
0.001
0.0001

Fig. 1.50.R.T

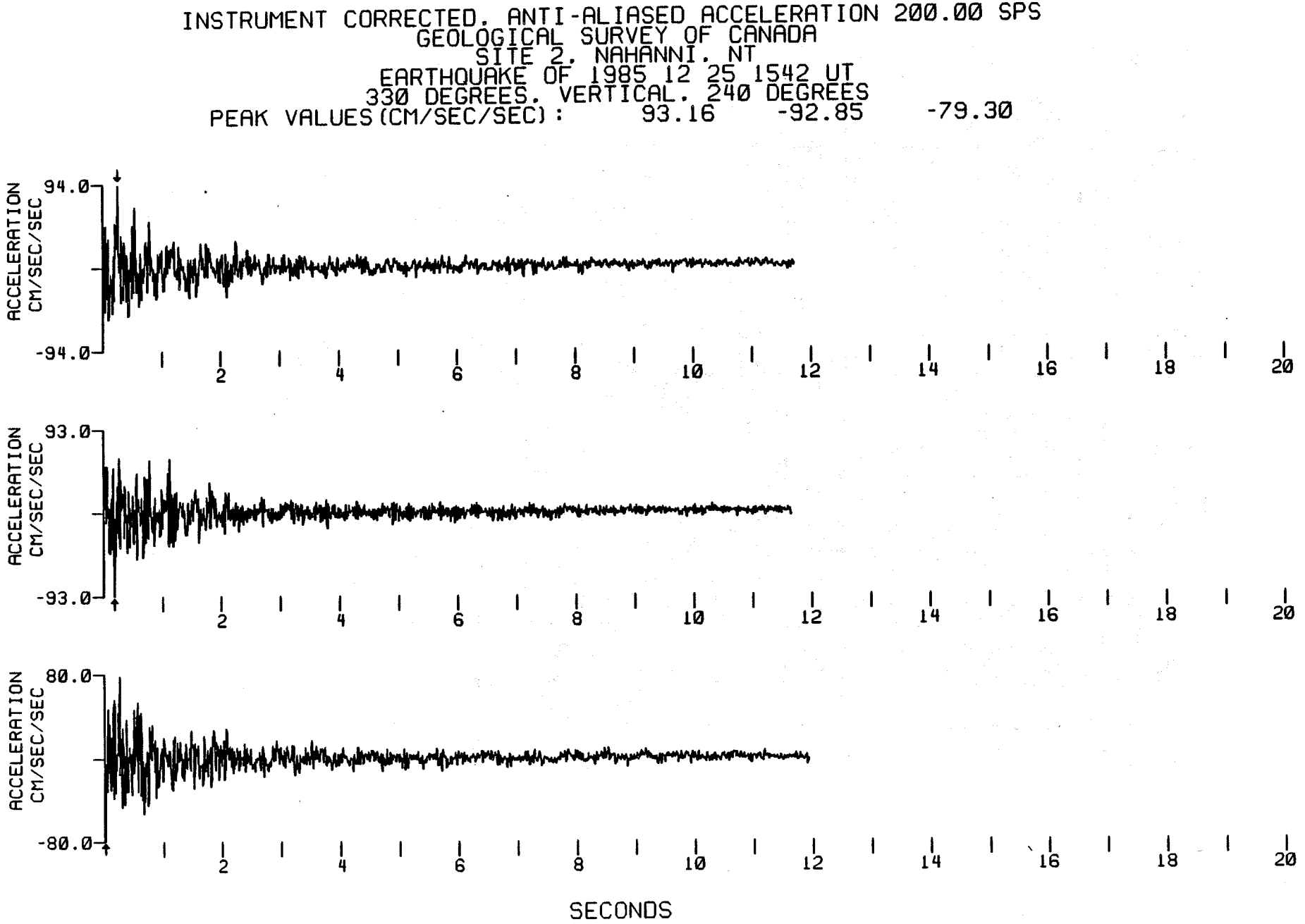

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
330 DEGREES. VERTICAL. 240 DEGREES
PEAK VALUES(CM/SEC/SEC): 93.16 -92.85 -79.30
ACCELERATION CM/SEC/SEC
94.0
-94.0
93.0
-93.0
80.0
-80.0
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.50

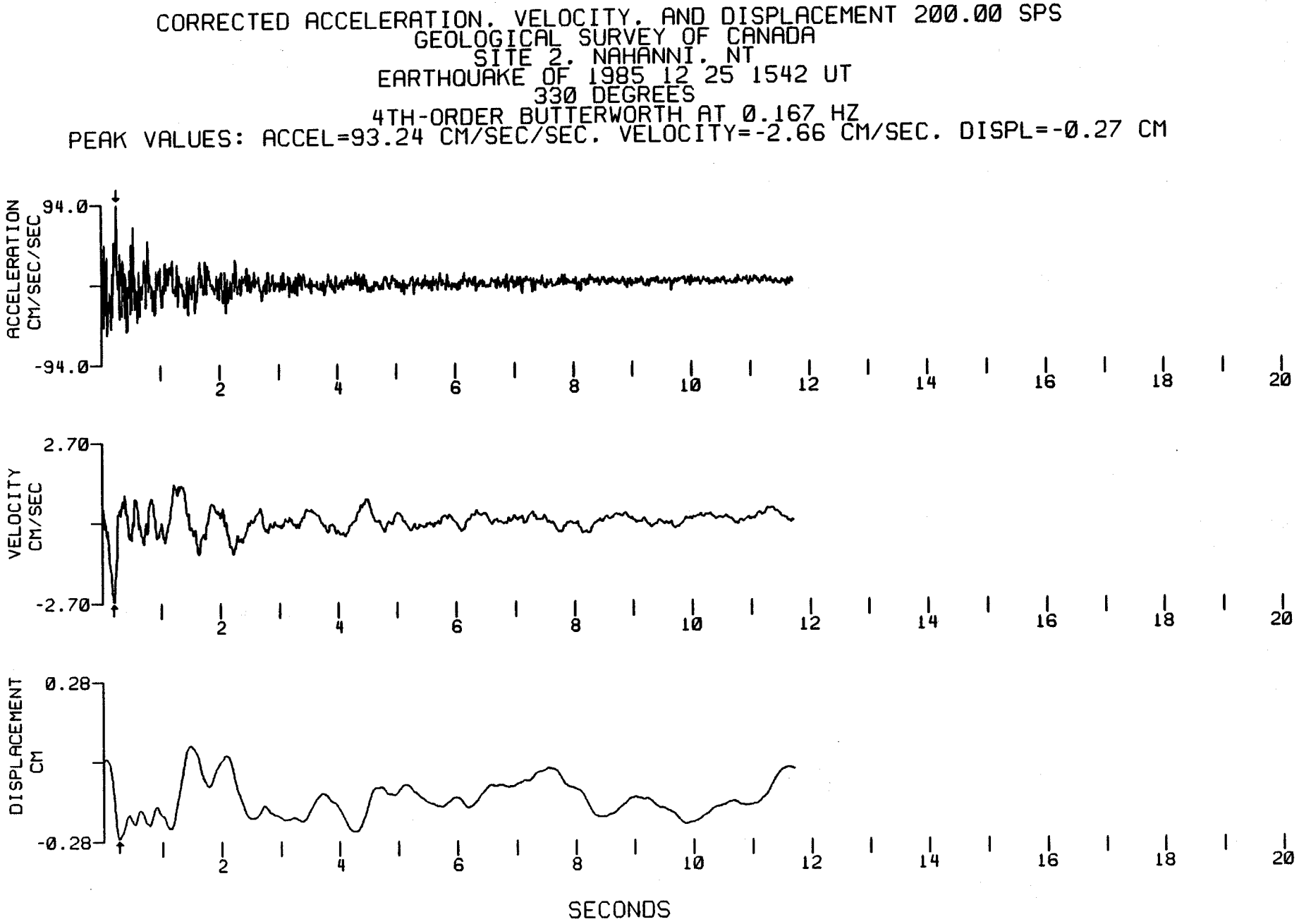

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
330 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=93.24 CM/SEC/SEC. VELOCITY=-2.66 CM/SEC. DISPL=-0.27 CM
ACCELERATION CM/SEC/SEC
94.0
-94.0
VELOCITY CM/SEC
2.70
-2.70
DISPLACEMENT CM
0.28
-0.28
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.50.1

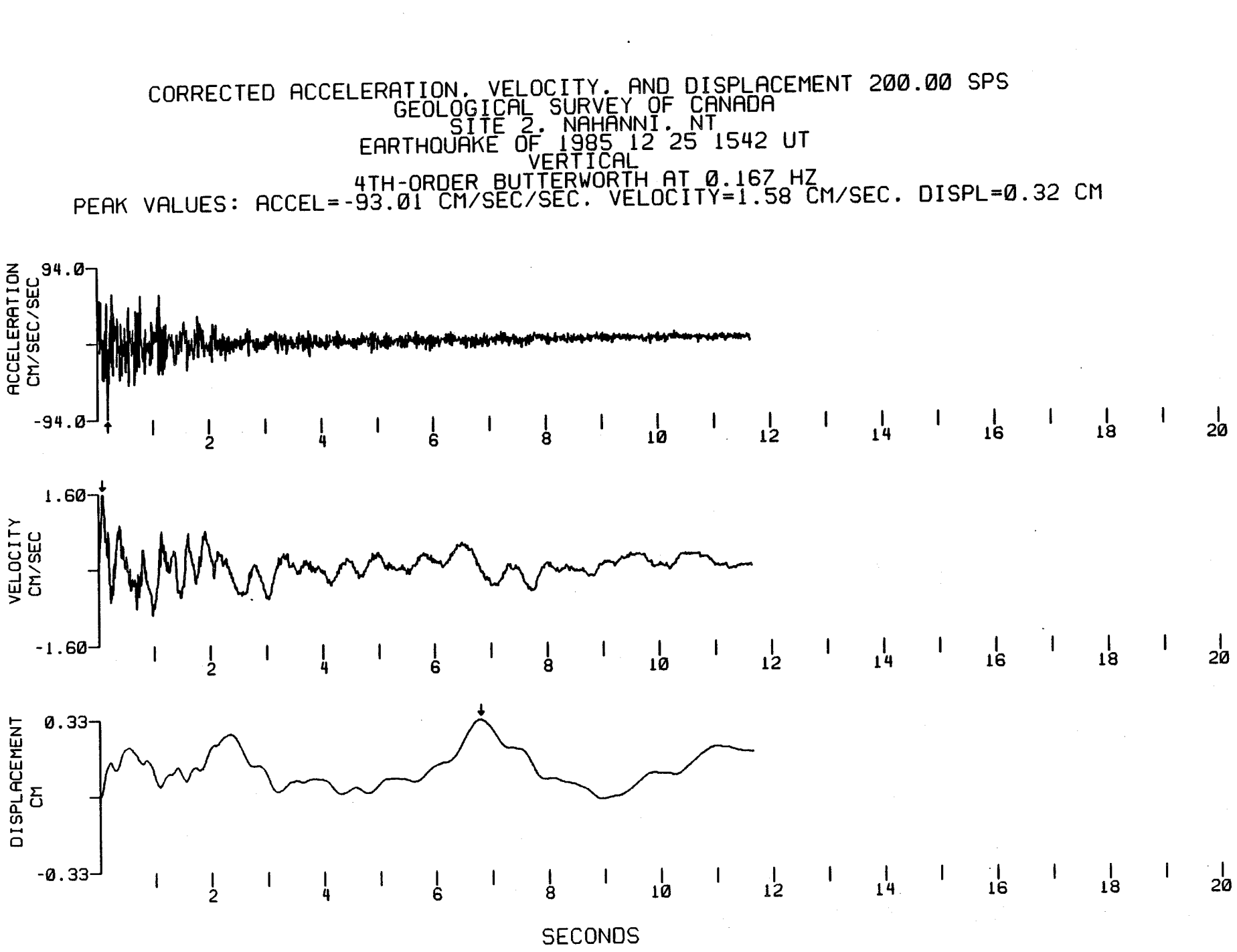

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=-93.01 CM/SEC/SEC. VELOCITY=1.58 CM/SEC. DISPL=0.32 CM
ACCELERATION CM/SEC/SEC
94.0
-94.0
VELOCITY CM/SEC
1.60
-1.60
DISPLACEMENT CM
0.33
-0.33
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.50.V

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
240 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=-79.36 CM/SEC/SEC. VELOCITY=2.11 CM/SEC. DISPL=0.50 CM

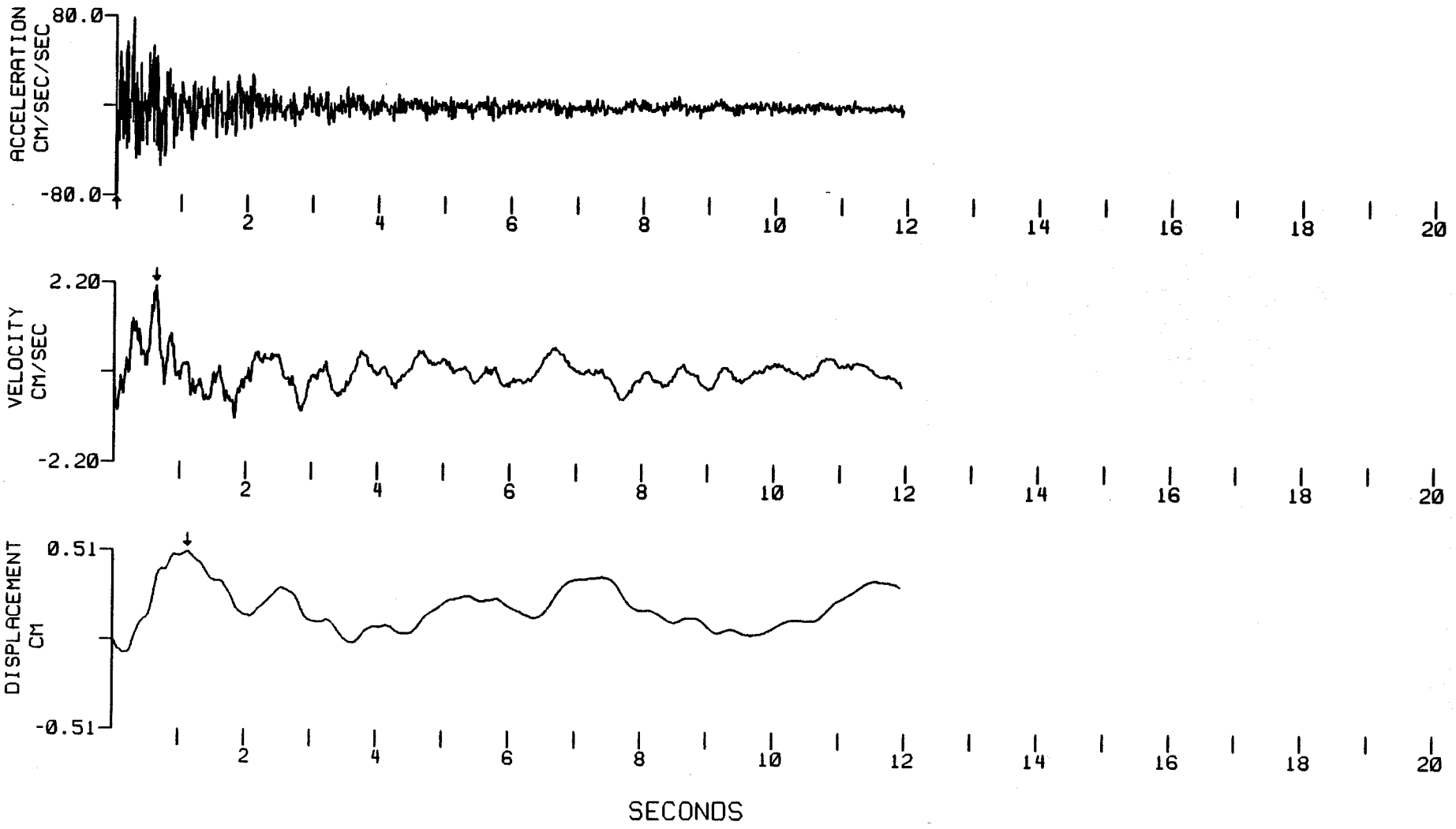


Fig. 2.50.T

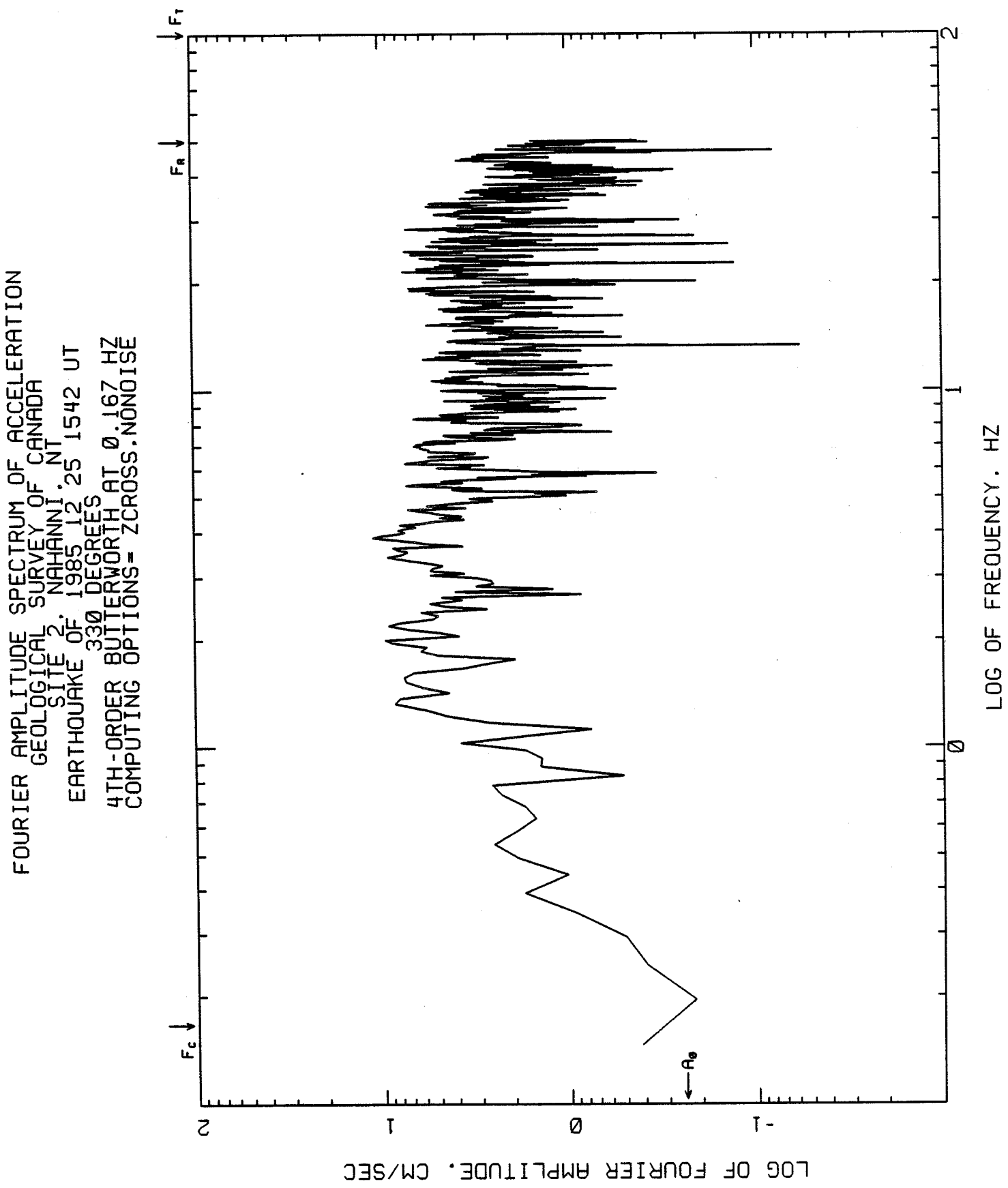

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2, NAHANNI, NT
EARTHQUAKE OF 1985 12 25 1542 UT
330 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
Fc
Fa
Ft
A0
2
1
0
-1
2
1
0

Fig. 2.50.F.L

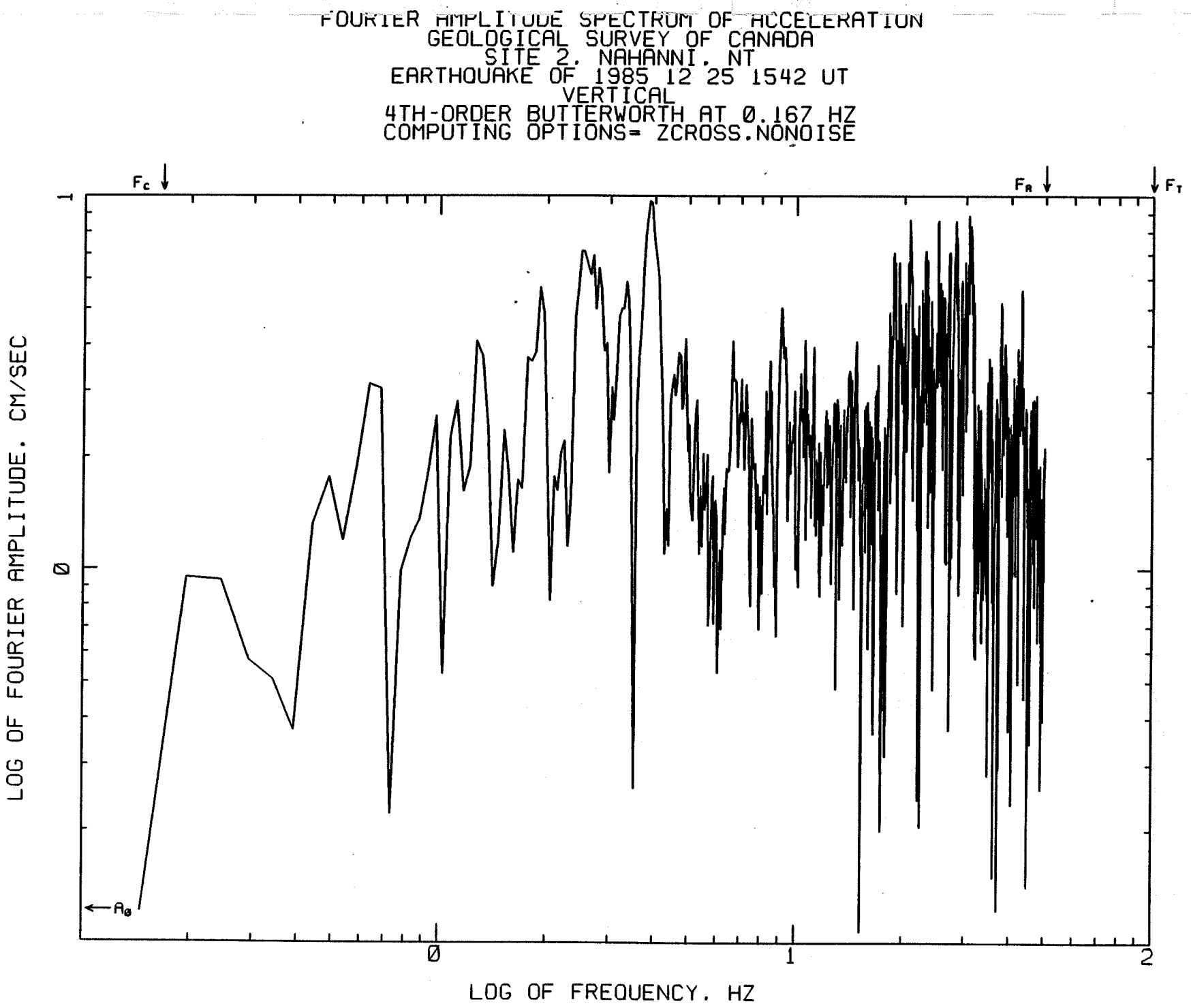

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
1
0
LOG OF FOURIER AMPLITUDE. CM/SEC
A0
0
1
2
LOG OF FREQUENCY. HZ

Fig. 2.50.F.V

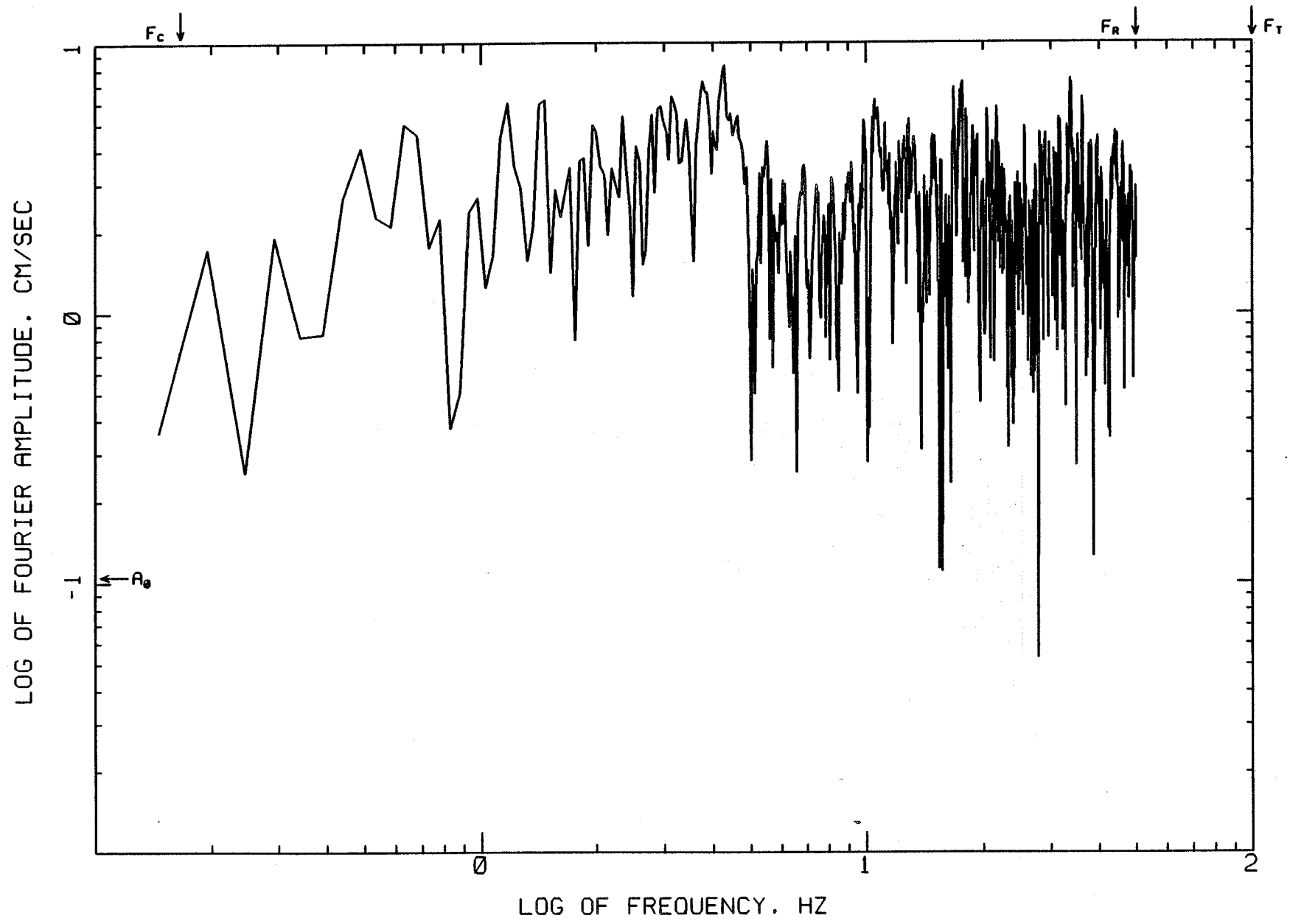

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1542 UT
240 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A0
1
0
-1
0
1
2
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ

Fig. 2.50.F.T

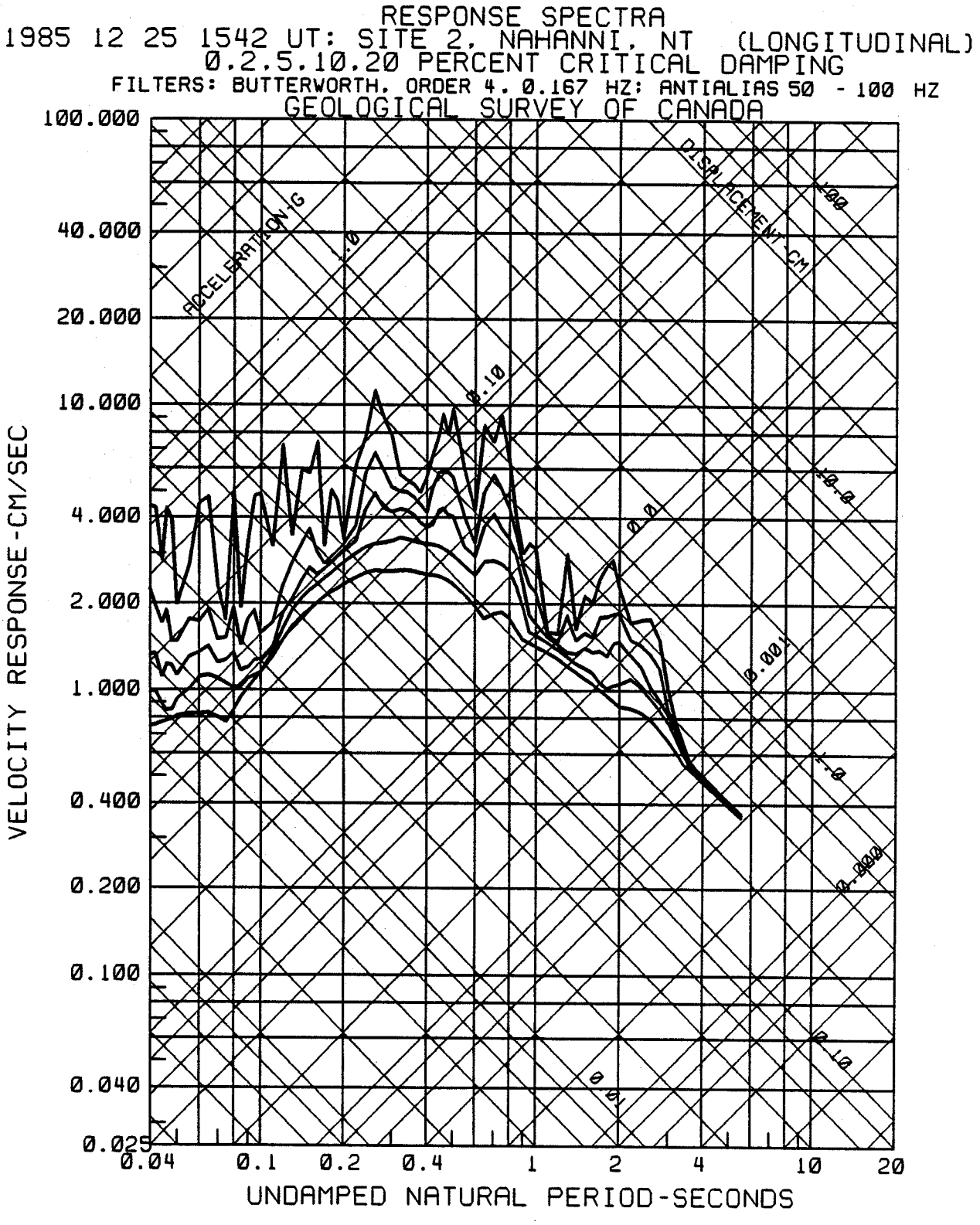

RESPONSE SPECTRA
1985 12 25 1542 UT: SITE 2, NAHANNI, NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ; ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100.000
40.000
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
1.0
0.10
0.01
0.001
100
10.0
1.0
0.100
0.010
0.01

Fig. 2.50.R.L

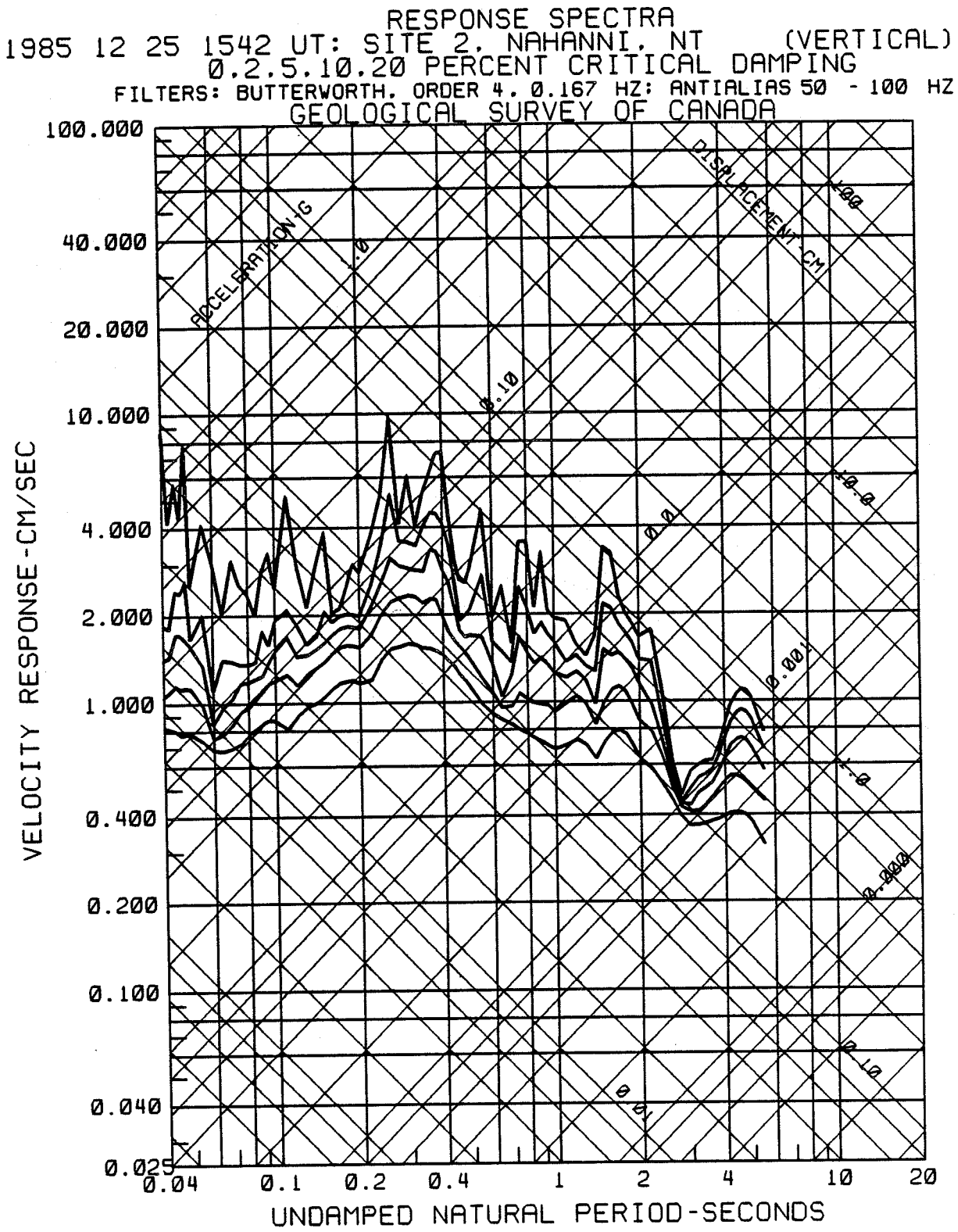

RESPONSE SPECTRA
1985 12 25 1542 UT: SITE 2. NAHANNI. NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100.000
40.000
20.000
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

Fig. 2.50.R.V

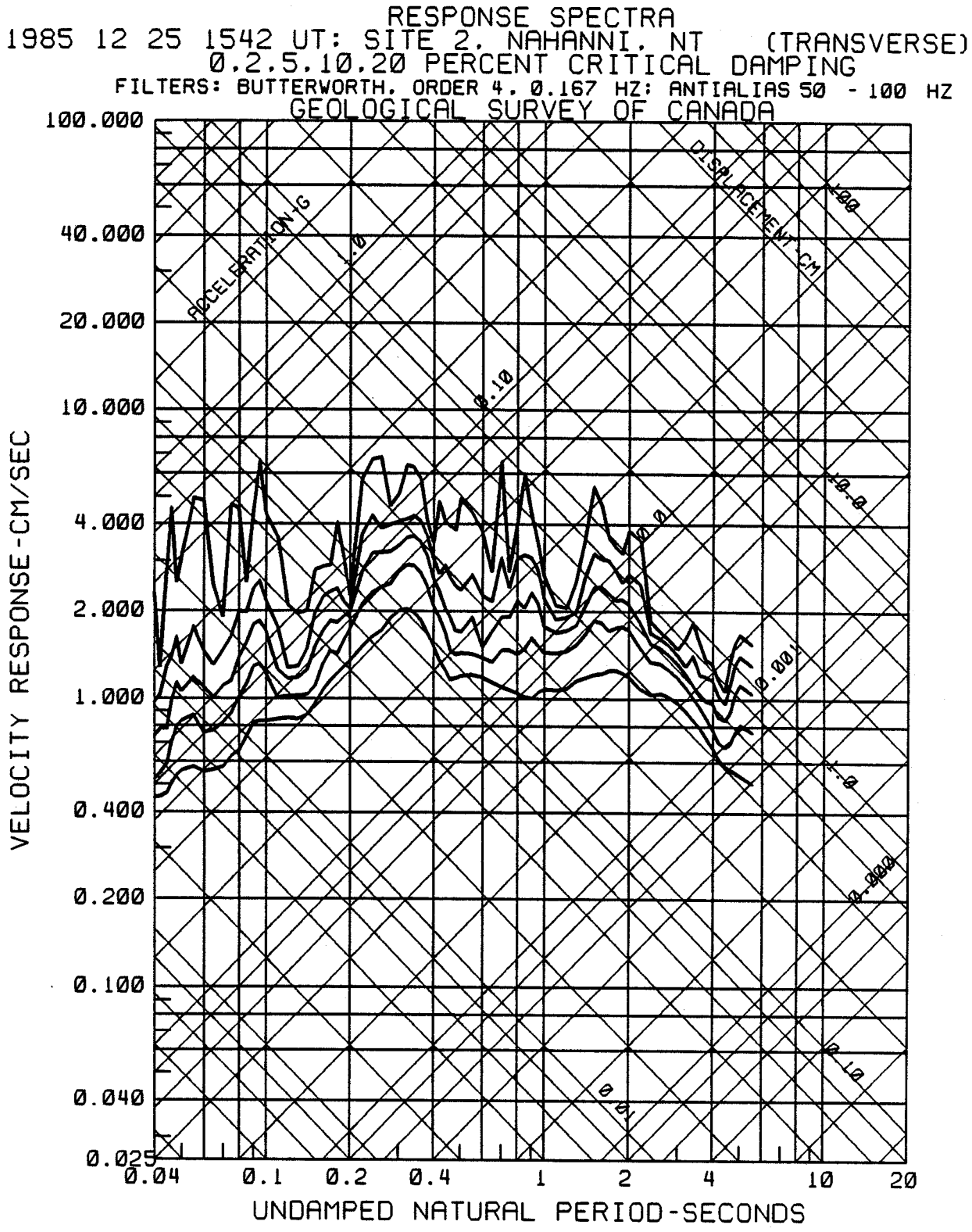

RESPONSE SPECTRA
1985 12 25 1542 UT: SITE 2. NAHANNI. NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 2.50.R.T

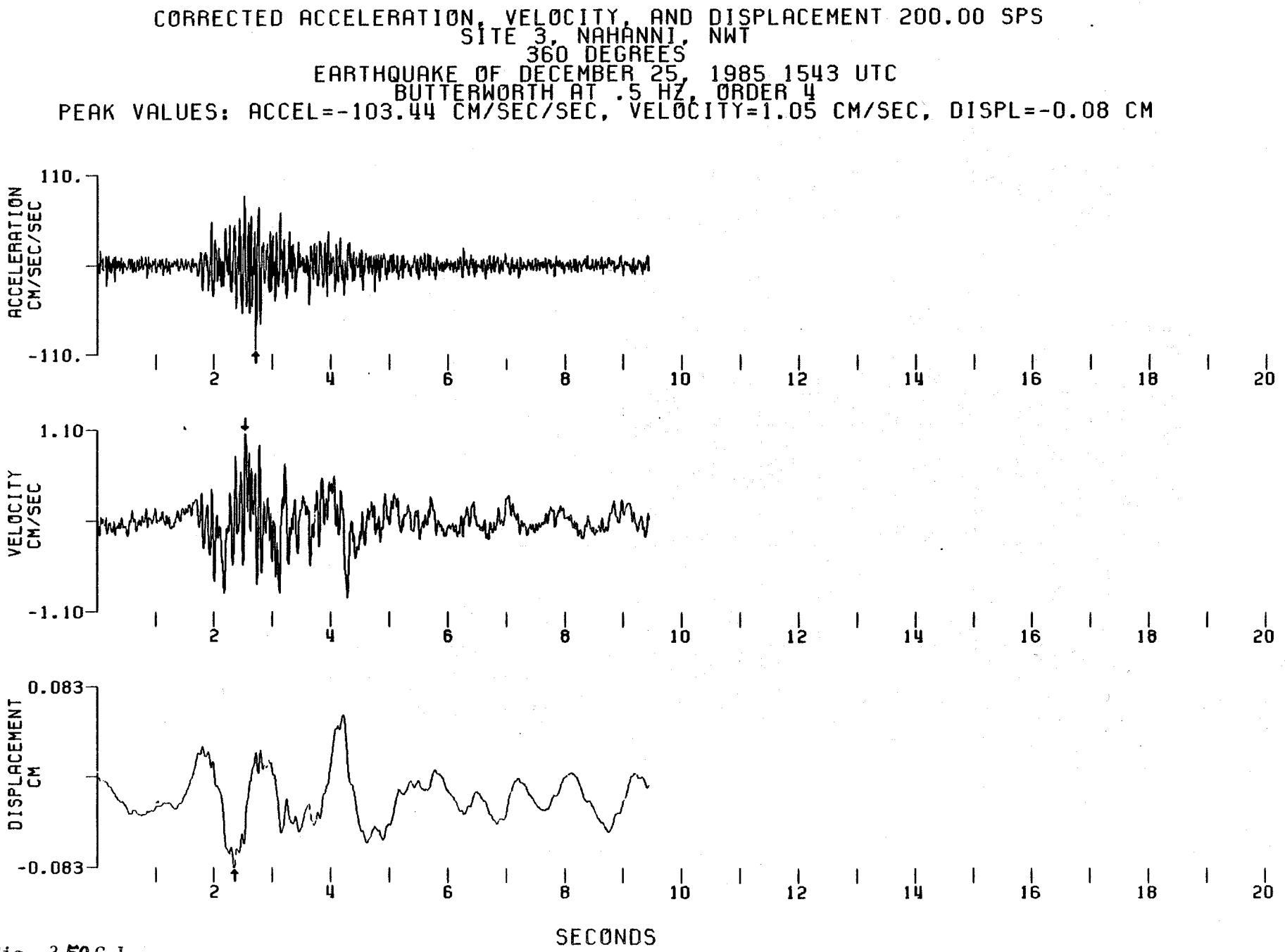

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 3, NAHANNI, NWT
360 DEGREES
EARTHQUAKE OF DECEMBER 25, 1985 1543 UTC
BUTTERWORTH AT .5 HZ, ORDER 4
PEAK VALUES: ACCEL=-103.44 CM/SEC/SEC, VELOCITY=1.05 CM/SEC, DISPL=-0.08 CM
ACCELERATION CM/SEC/SEC
110.
-110.
VELOCITY CM/SEC
1.10
-1.10
DISPLACEMENT CM
0.083
-0.083
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 3.50.C.L

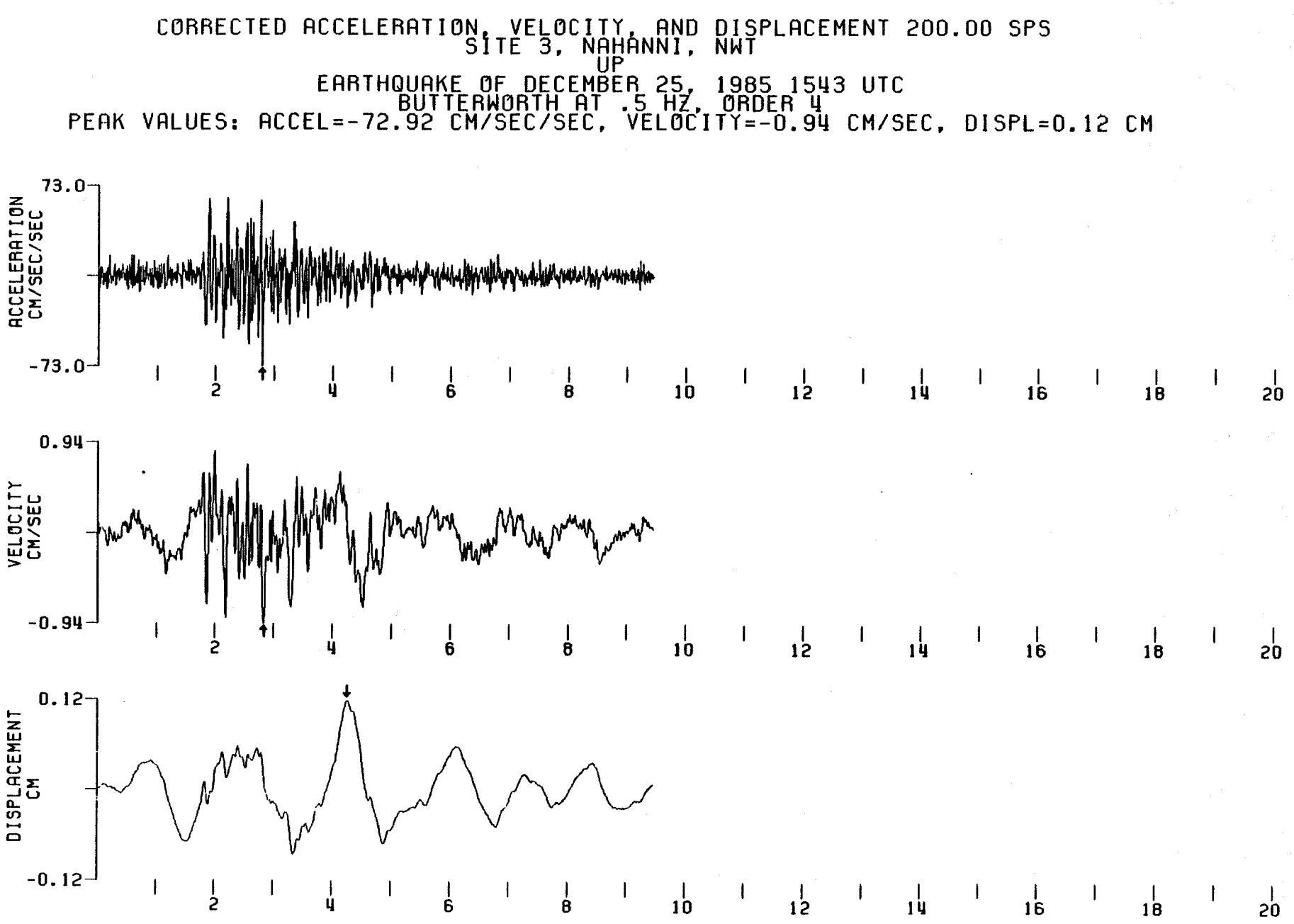

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 3, NAHANNI, NWT
UP
EARTHQUAKE OF DECEMBER 25, 1985 1543 UTC
BUTTERWORTH AT .5 HZ, ORDER 4
PEAK VALUES: ACCEL=-72.92 CM/SEC/SEC, VELOCITY=-0.94 CM/SEC, DISPL=0.12 CM
ACCELERATION CM/SEC/SEC
73.0
-73.0
VELOCITY CM/SEC
0.94
-0.94
DISPLACEMENT CM
0.12
-0.12
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 3.50.C.V

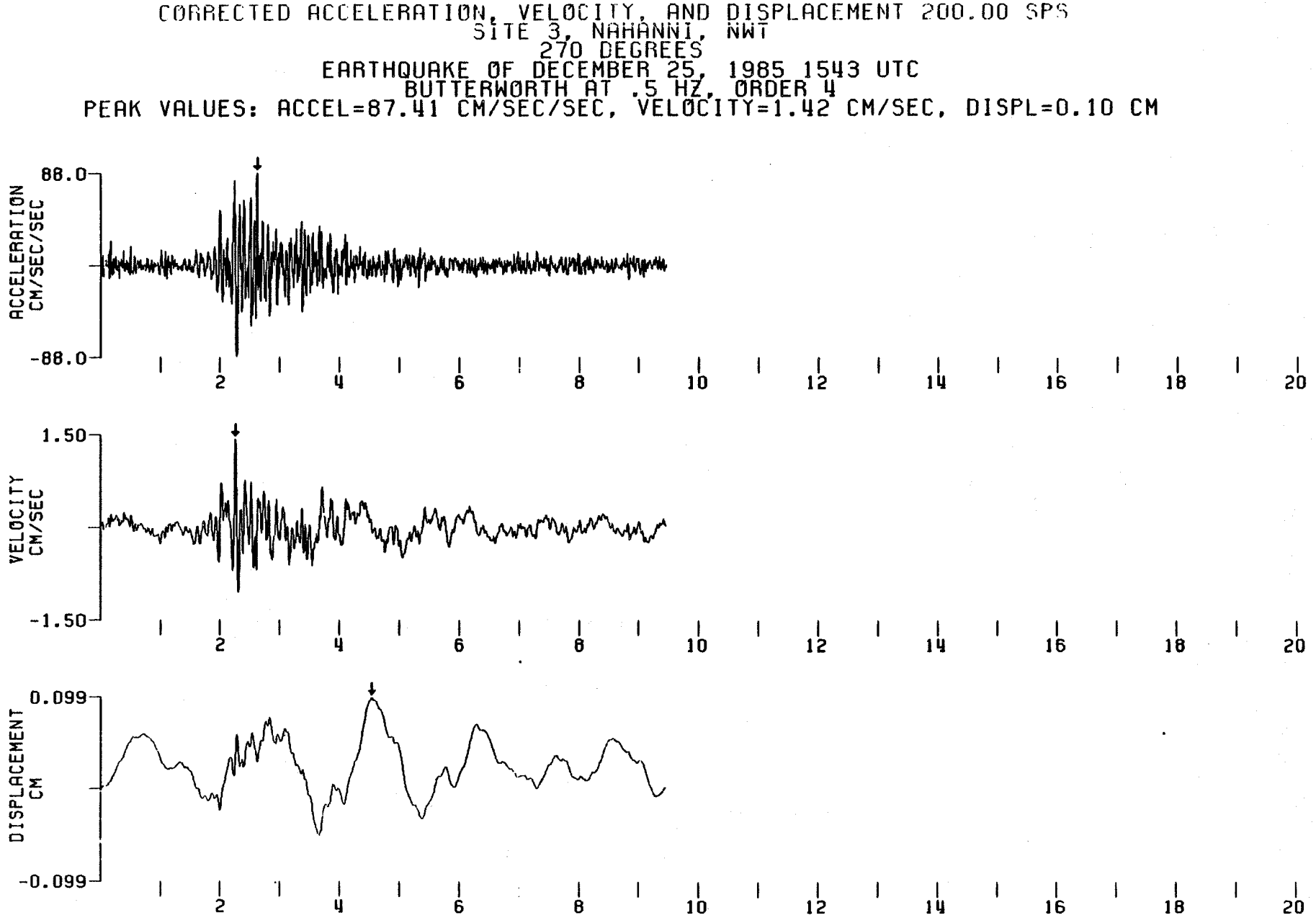

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 3, NAHANNI, NWT
270 DEGREES
EARTHQUAKE OF DECEMBER 25, 1985 1543 UTC
BUTTERWORTH AT .5 HZ, ORDER 4
PEAK VALUES: ACCEL=87.41 CM/SEC/SEC, VELOCITY=1.42 CM/SEC, DISPL=0.10 CM
ACCELERATION CM/SEC/SEC
88.0
-88.0
VELOCITY CM/SEC
1.50
-1.50
DISPLACEMENT CM
0.099
-0.099
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 3.50.C.T

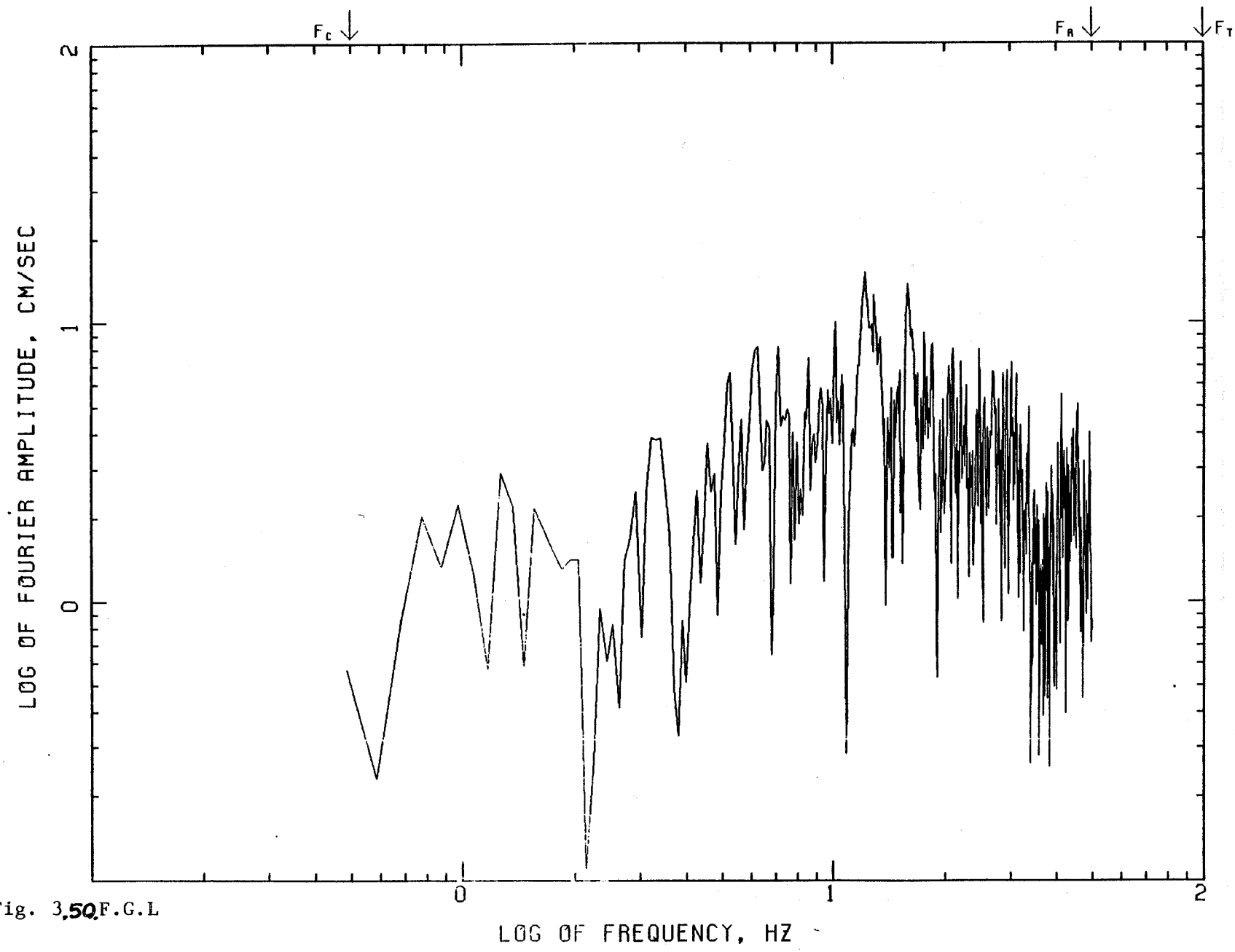

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE 3, NAHANNI, NWT
360 DEGREES
EARTHQUAKE OF DECEMBER 25, 1985 1543 UTC
BUTTERWORTH AT .5 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FA
FT
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
0
1
2

Fig. 3.50.F.G.L

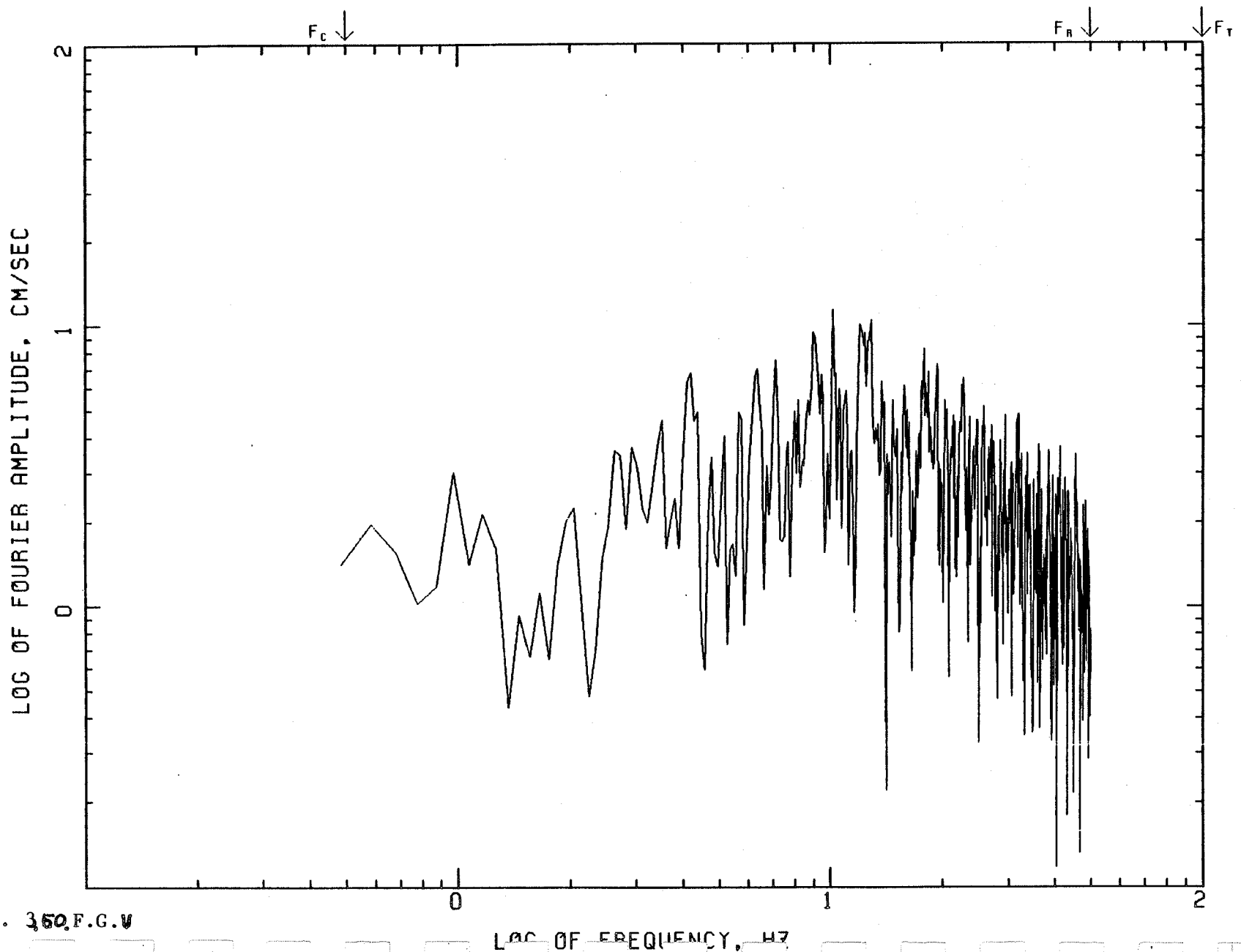

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE 3, NAHANNI, NWT
UP
EARTHQUAKE OF DECEMBER 25, 1985 1543 UTC
BUTTERWORTH AT .5 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
F_C
F_R
F_T
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
0
1
2

Fig. 3.50 F.G.V

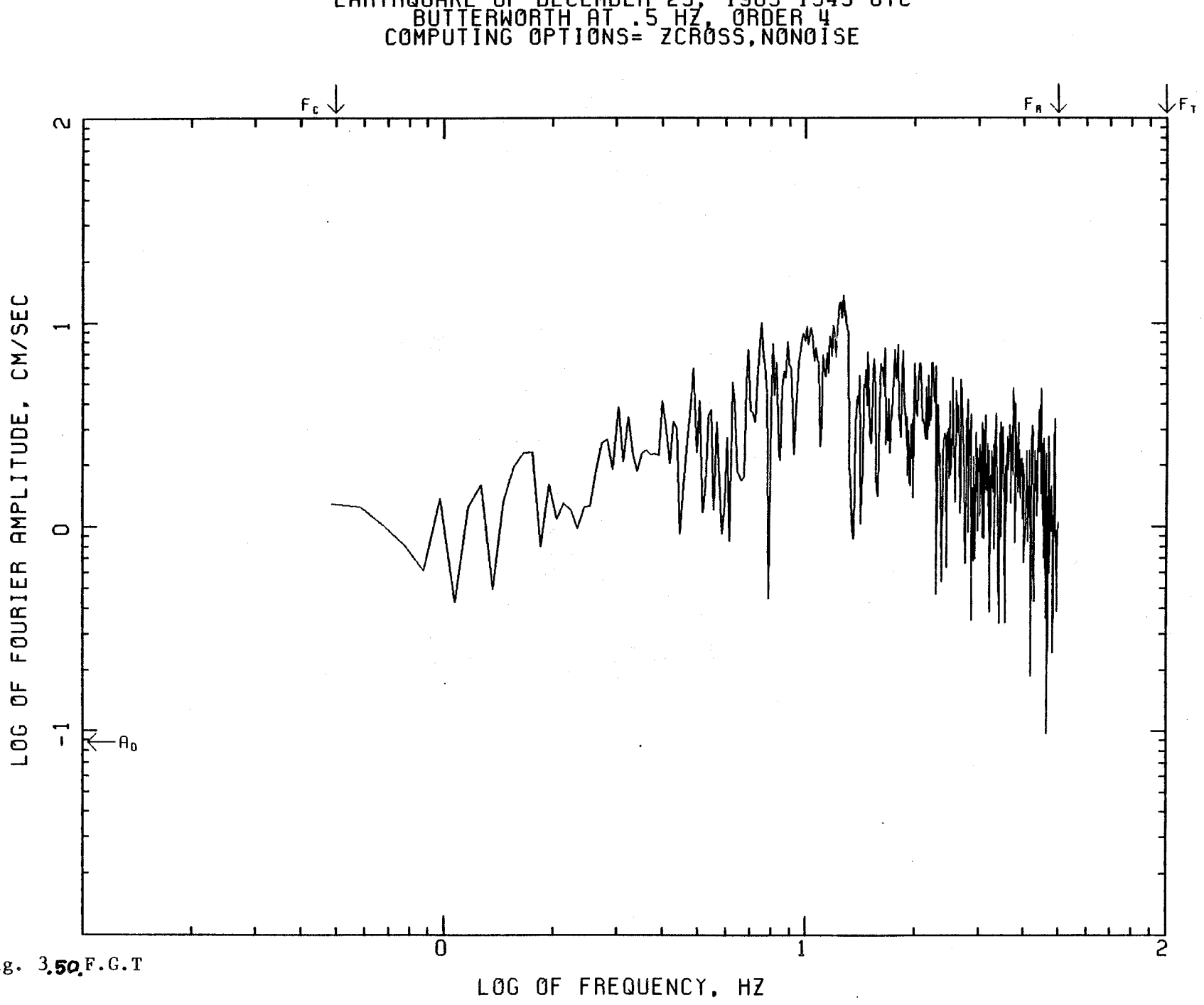

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
SITE 3, NAHANNI, NWT
270 DEGREES
EARTHQUAKE OF DECEMBER 25, 1985 1543 UTC
BUTTERWORTH AT .5 HZ, ORDER 4
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
-1
0
1
2

Fig. 3.50 F.G.T

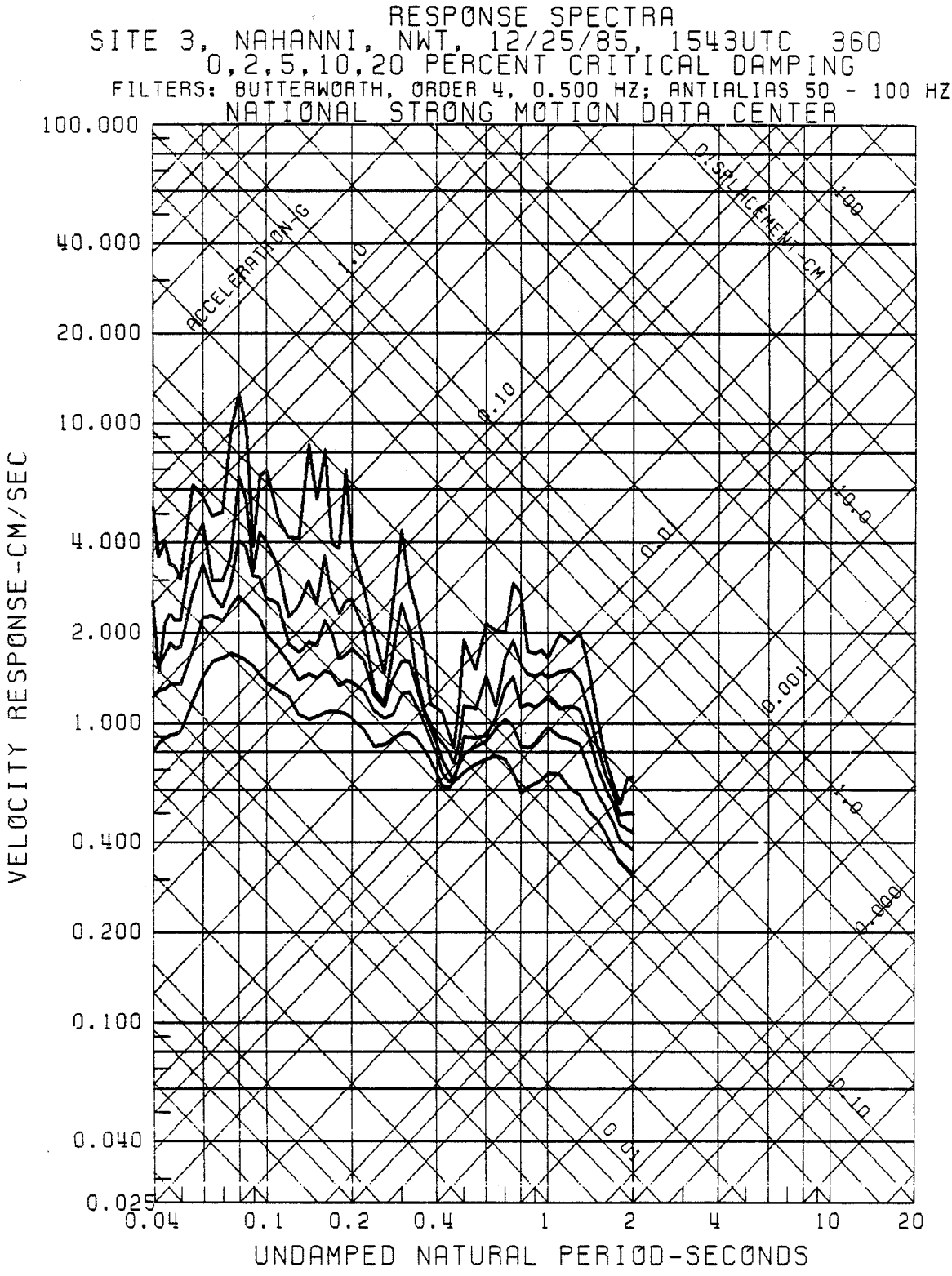

RESPONSE SPECTRA
SITE 3, NAHANNI, NWT, 12/25/85, 1543UTC 360
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
ACCELERATION-G
1.0
0.10
0.01
DISPLACEMENT-CM
100
10.0
1.0
0.100
0.10
0.01
0.001
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS

Fig. 3.50 R.G.L

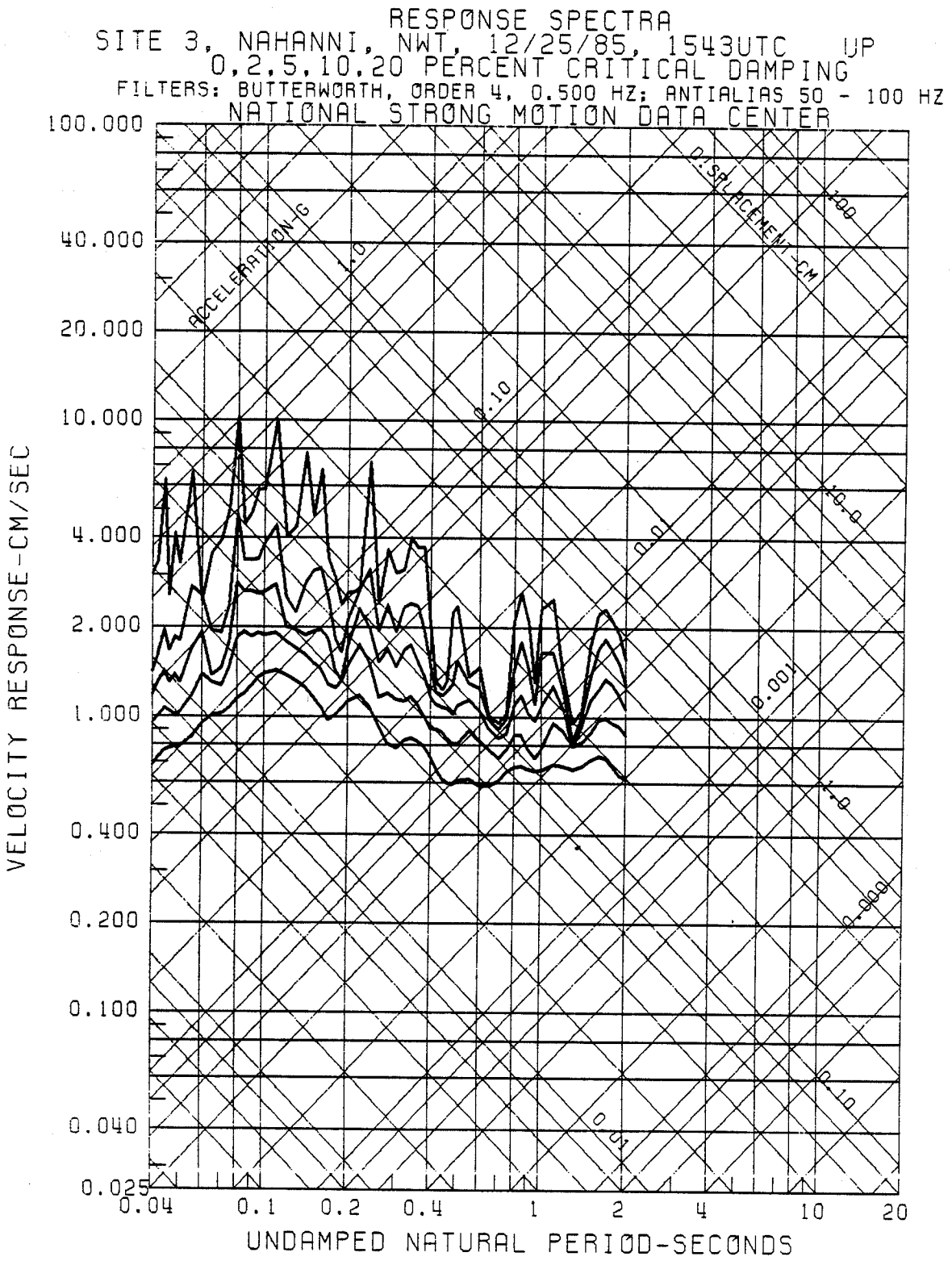

RESPONSE SPECTRA
SITE 3, NAHANNI, NWT, 12/25/85, 1543UTC UP
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
1.0
0.10
0.01
DISPLACEMENT-CM
100
10.0
1.0
0.100
0.010
0.001

Fig. 3.50 R.G.V

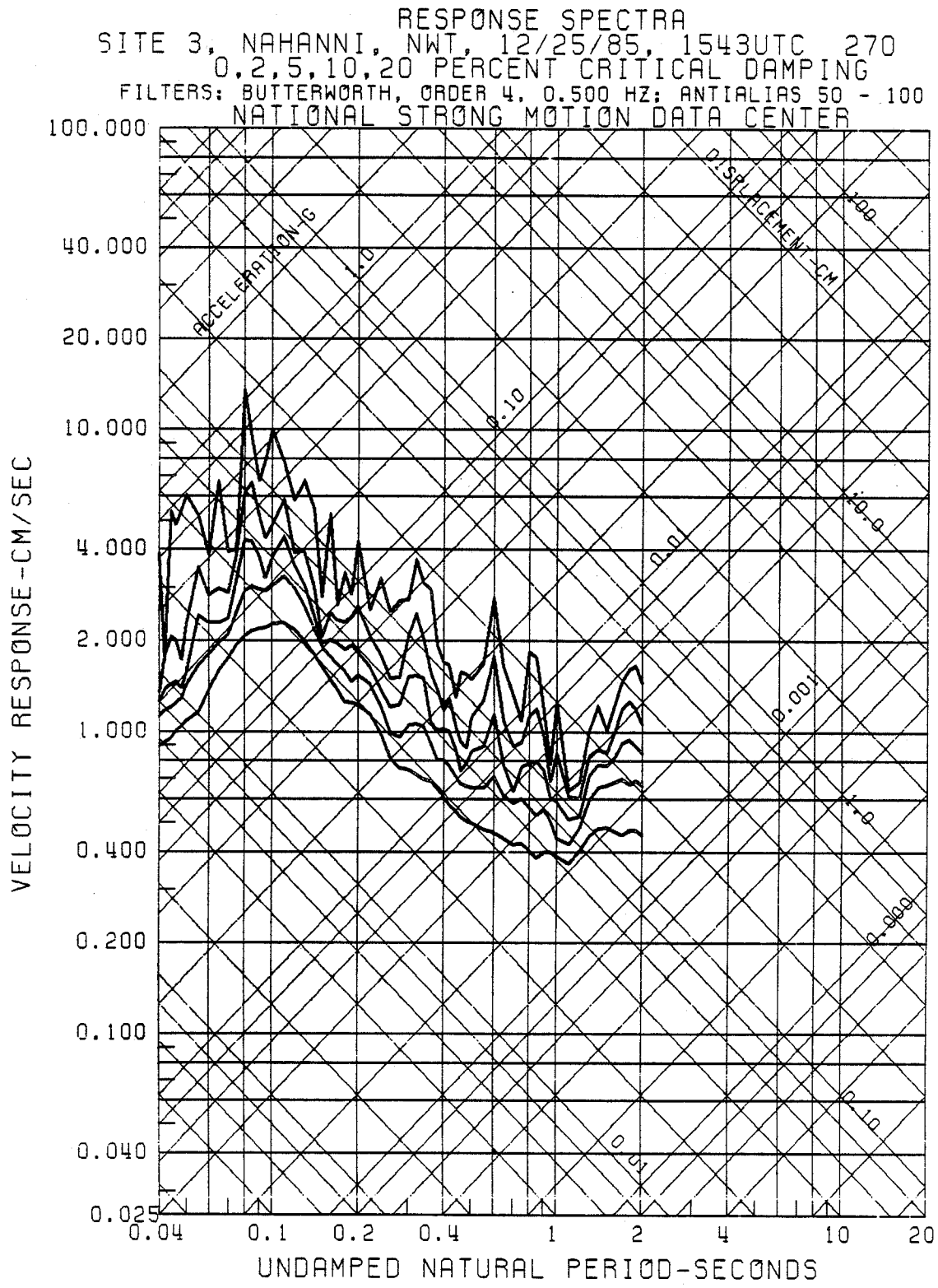

RESPONSE SPECTRA
SITE 3, NAHANNI, NWT, 12/25/85, 1543UTC 270
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.500 HZ; ANTIALIAS 50 - 100 HZ
NATIONAL STRONG MOTION DATA CENTER
VELOCITY RESPONSE-CM/SEC
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
1.0
0.10
0.01
0.001
DISPLACEMENT-CM
100.
10.0
1.0
0.100
0.10
0.01

Fig. 3.50 R.G.T

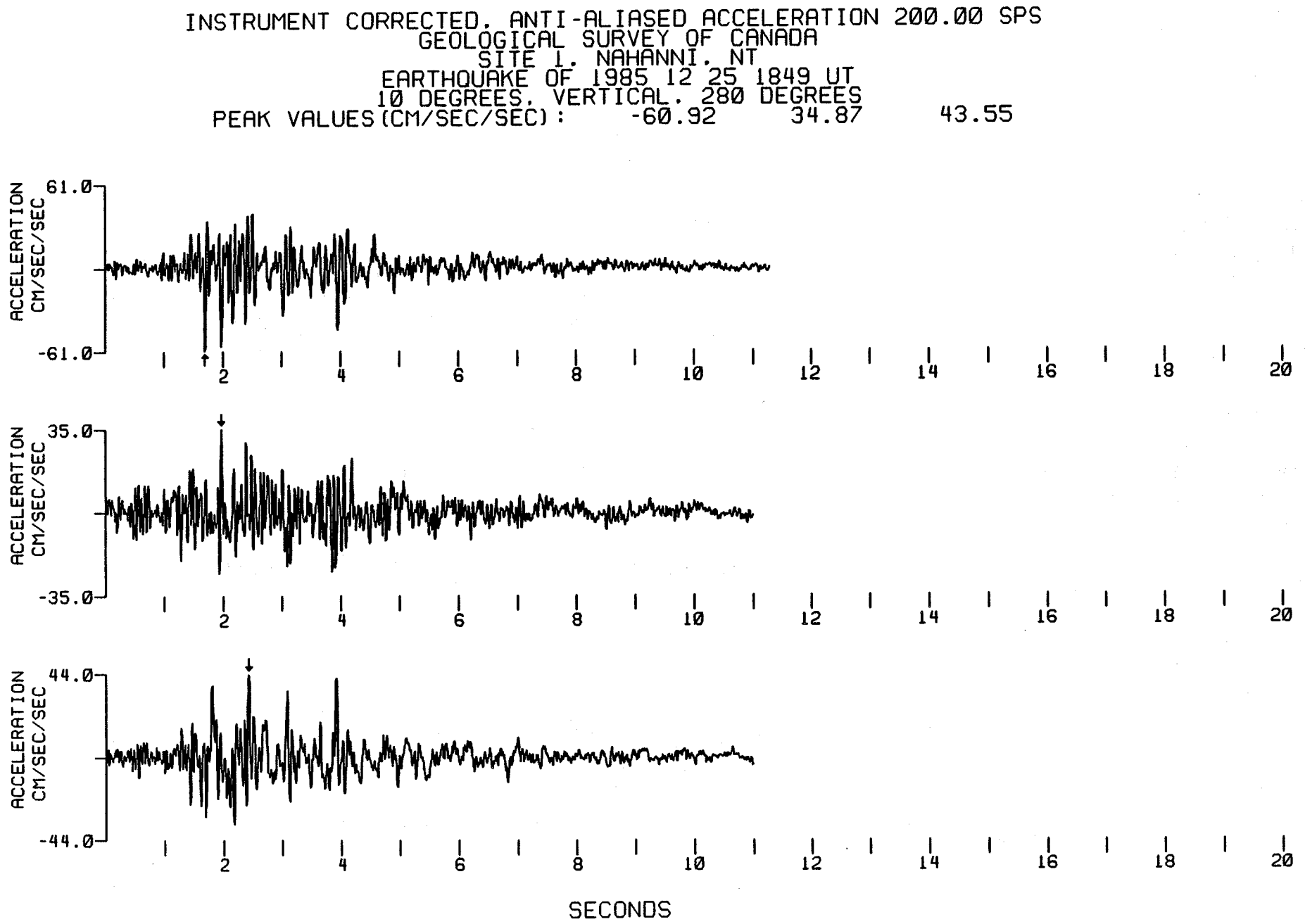

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1849 UT
10 DEGREES. VERTICAL. 280 DEGREES
PEAK VALUES(CM/SEC/SEC): -60.92 34.87 43.55
ACCELERATION CM/SEC/SEC
61.0
-61.0
35.0
-35.0
44.0
-44.0
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.51

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1849 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=-61.16 CM/SEC/SEC. VELOCITY=1.19 CM/SEC. DISPL=-0.23 CM

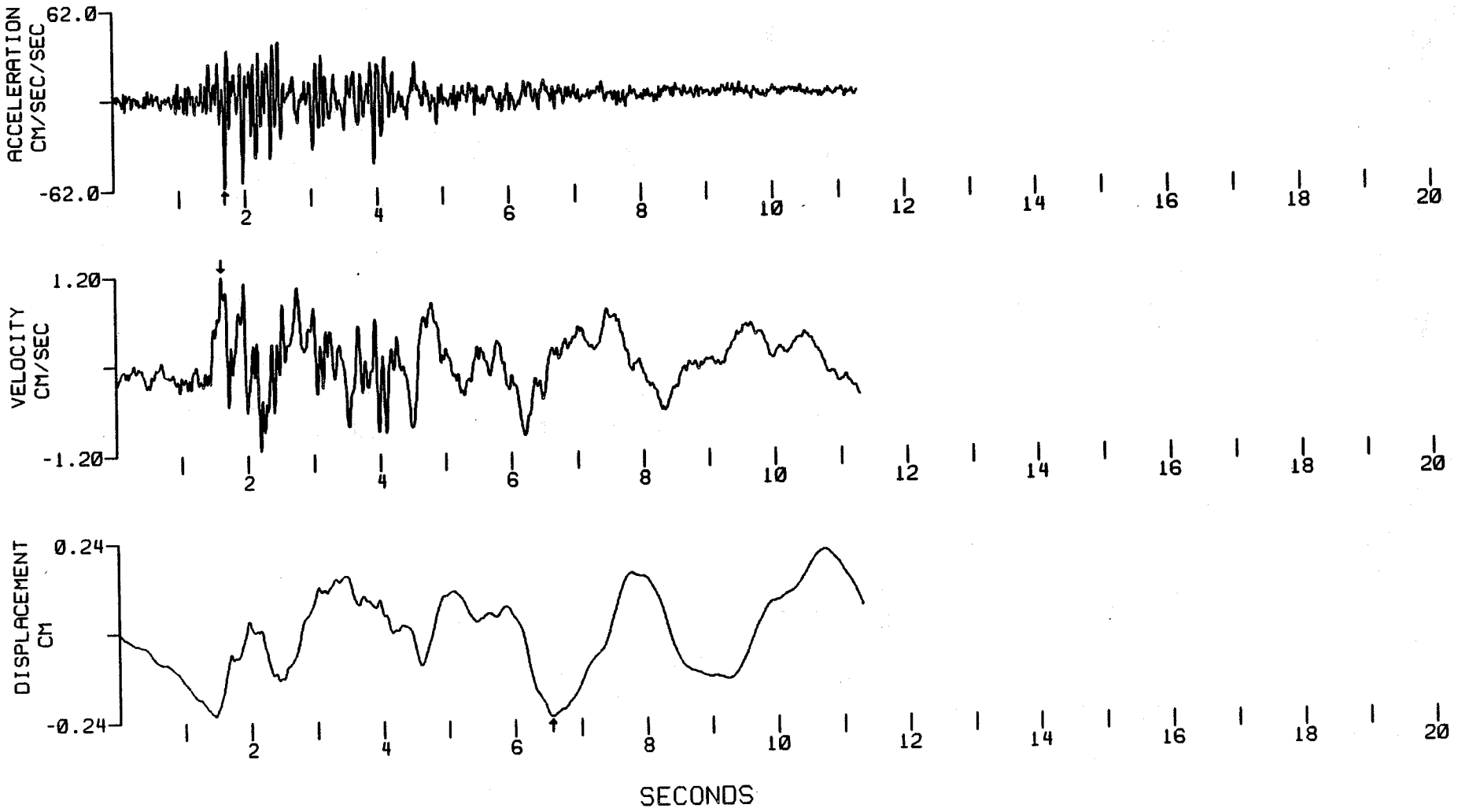


Fig. 1.51.1

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1849 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=34.33 CM/SEC/SEC. VELOCITY=1.24 CM/SEC. DISPL=0.28 CM

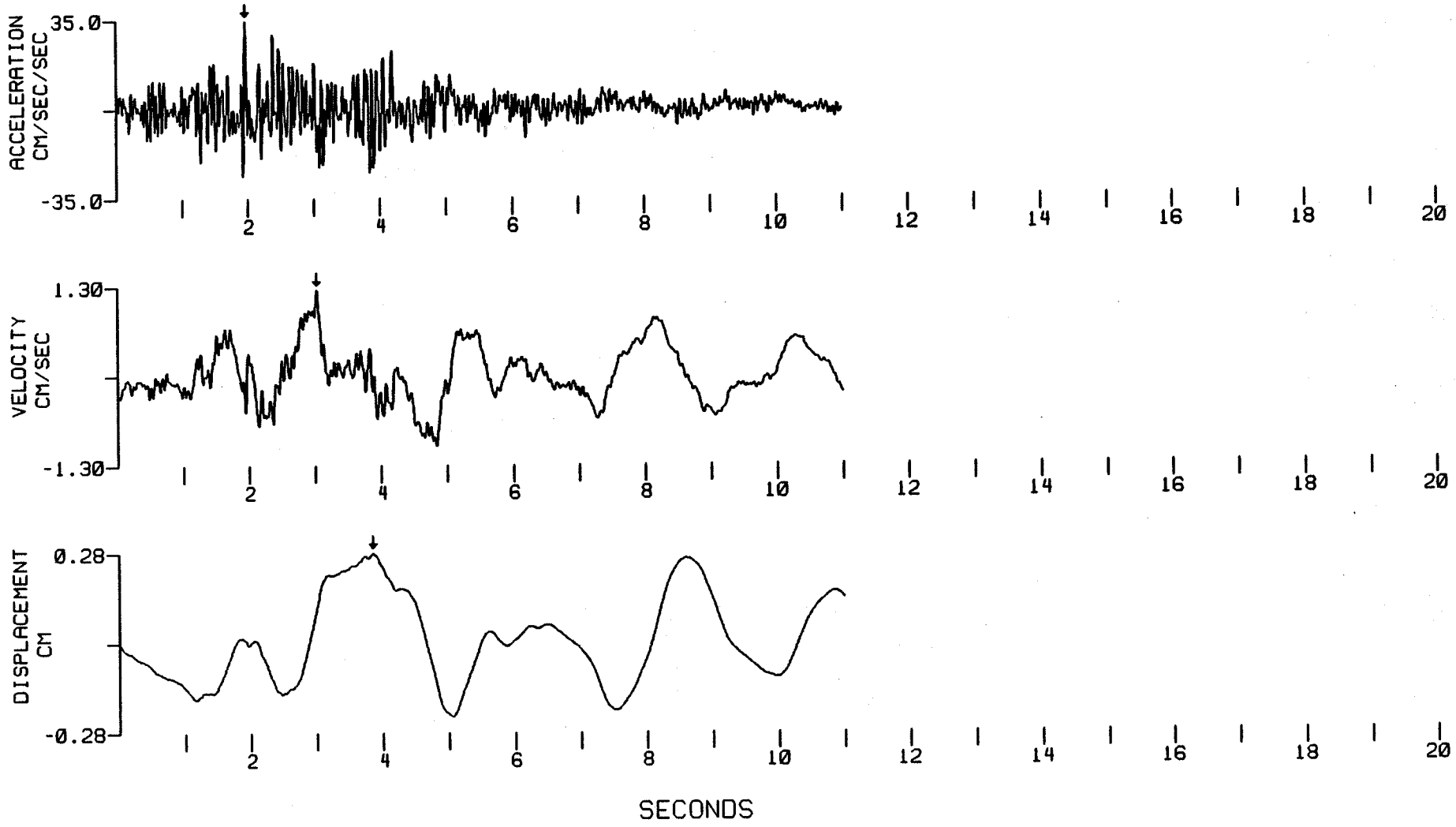


Fig. 151.V

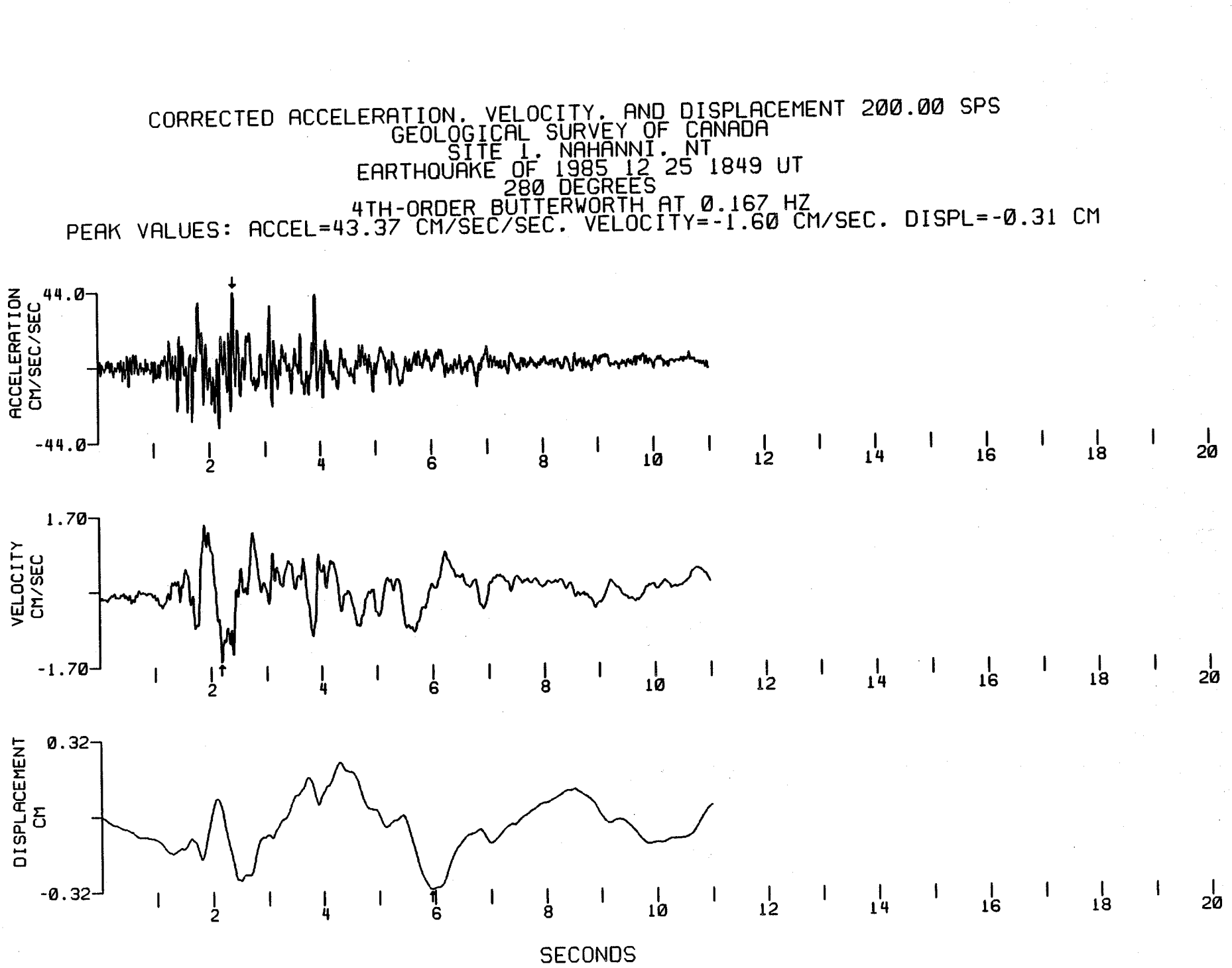

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1849 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=43.37 CM/SEC/SEC. VELOCITY=-1.60 CM/SEC. DISPL=-0.31 CM
ACCELERATION CM/SEC/SEC
44.0
-44.0
VELOCITY CM/SEC
1.70
-1.70
DISPLACEMENT CM
0.32
-0.32
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.5.1

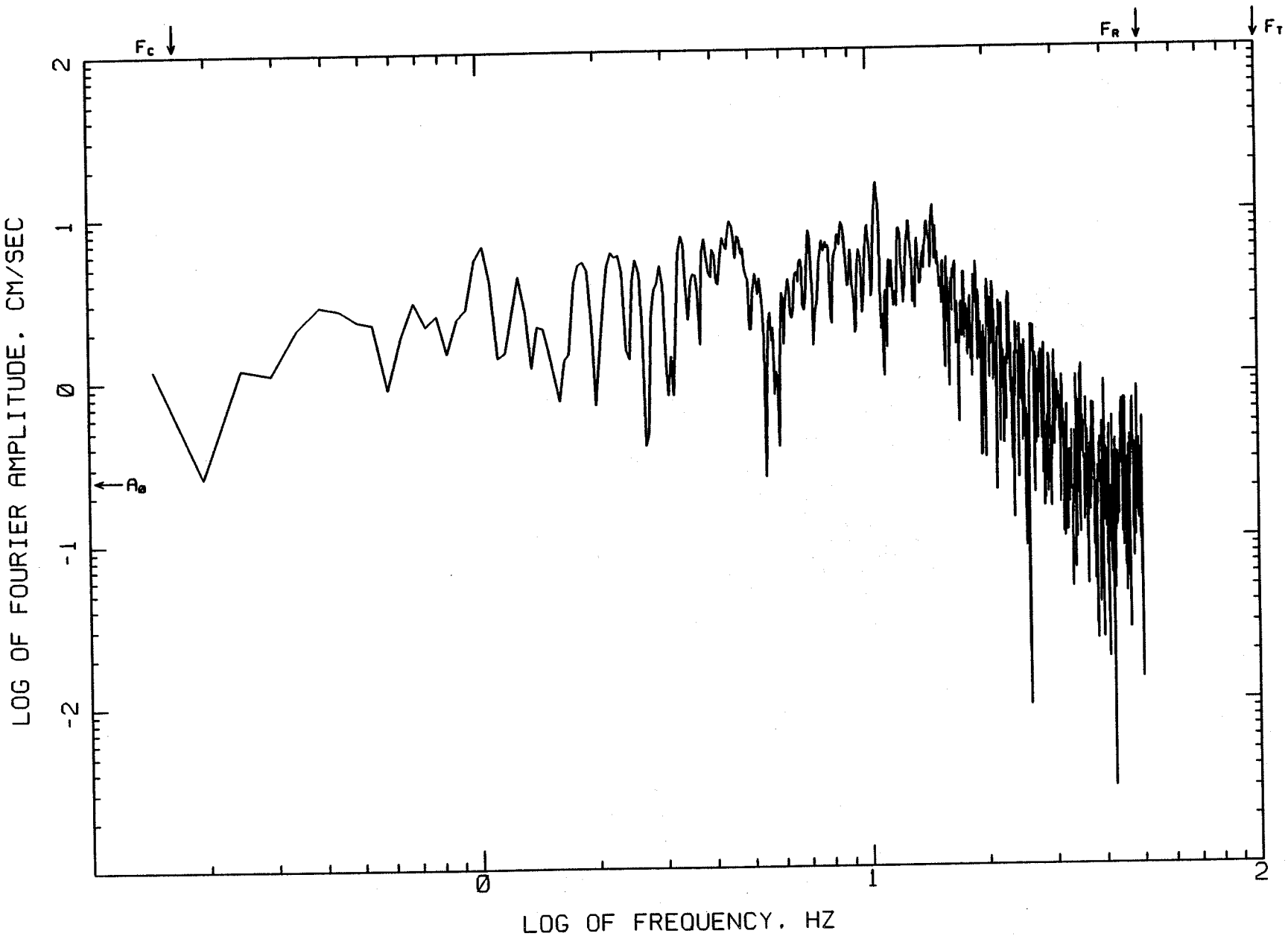

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1849 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
Ao
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
2
1
0
-1
-2
0
1
2

Fig. 1.51.F.1

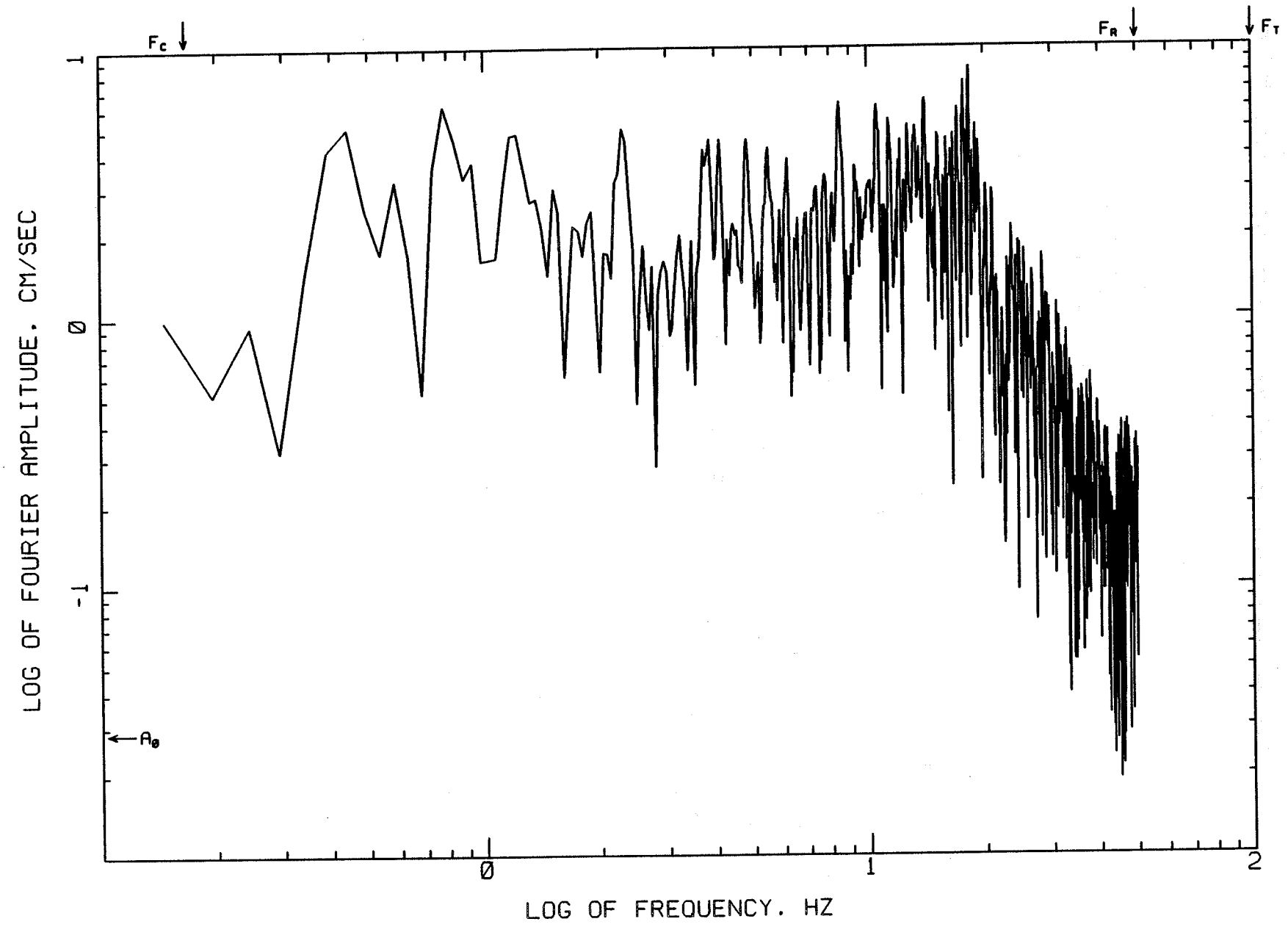

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1985 12 25 1849 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT Ø.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
1
Ø
-1
A0
Ø
1
2
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ

Fig. 1.S1.F.V

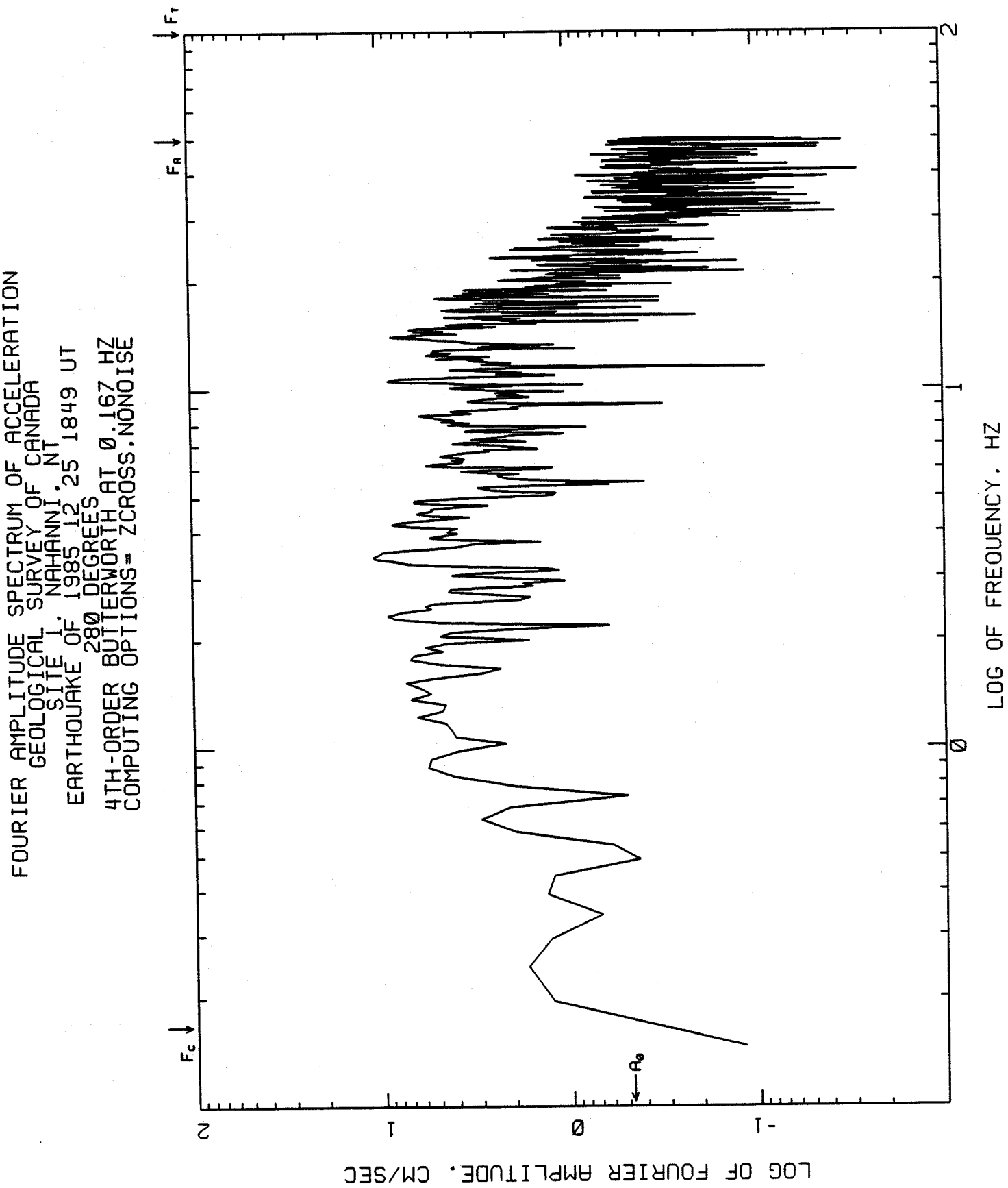

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1, NAHANNI, NT
EARTHQUAKE OF 1985 12 25 1849 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
F_T
F_R
F_C
A_0
2
1
0
-1
2
1
0

Fig. 1.51.F.T

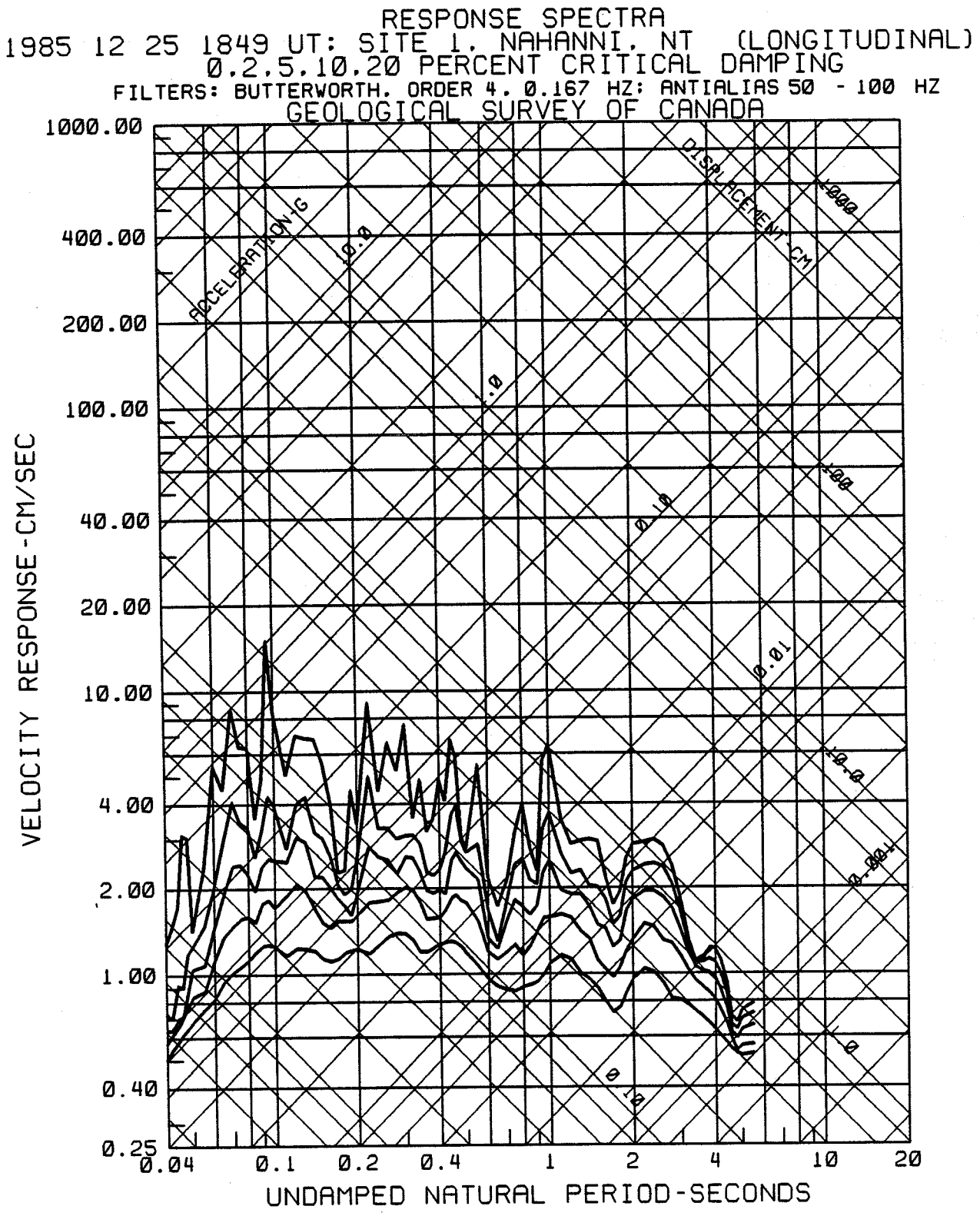

RESPONSE SPECTRA
1985 12 25 1849 UT: SITE 1. NAHANNI. NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
1000.00
400.00
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

Fig. 1.51.R.L

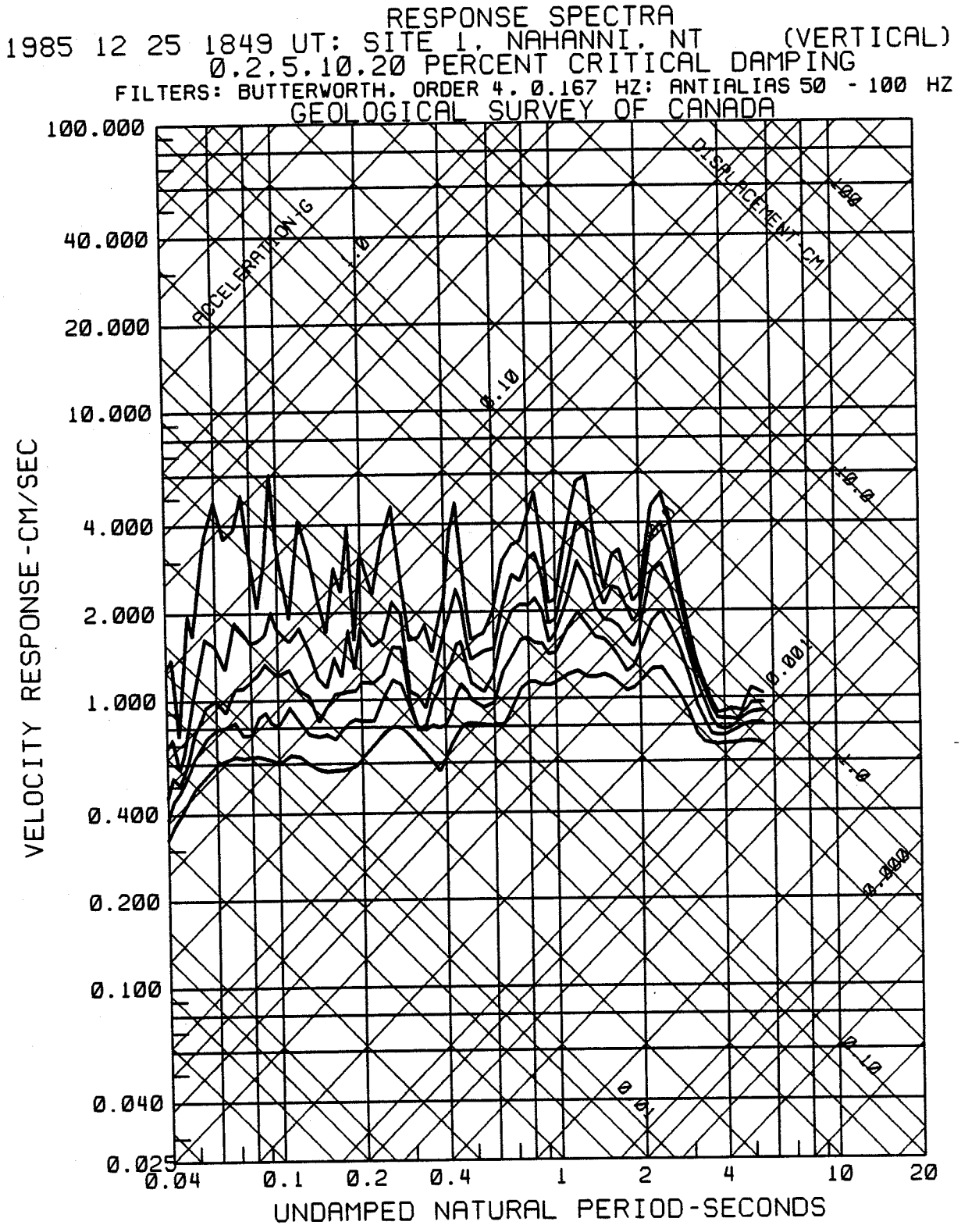

RESPONSE SPECTRA
1985 12 25 1849 UT: SITE 1, NAHANNI, NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
20.000
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

Fig. 1.51.R.V

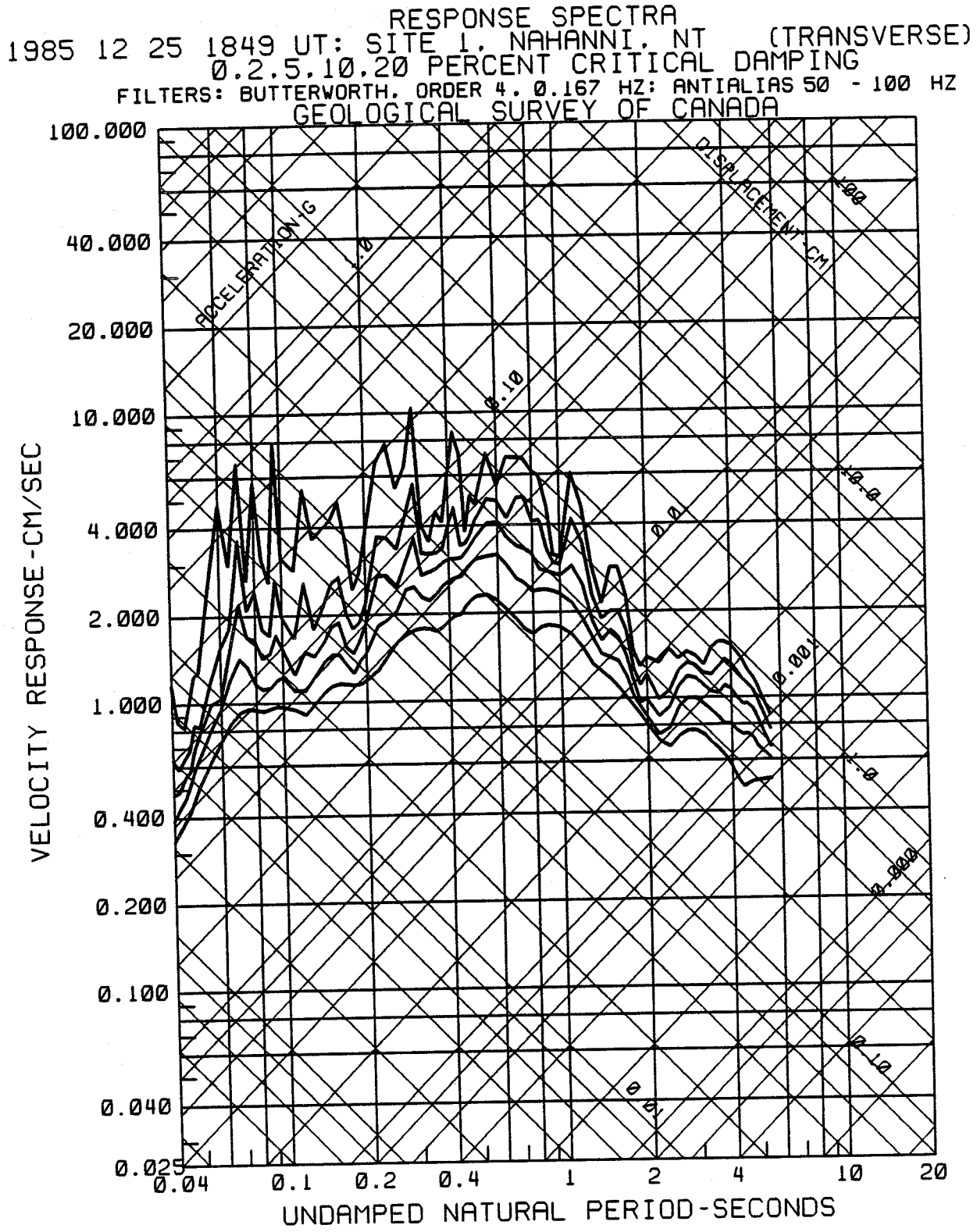

RESPONSE SPECTRA
1985 12 25 1849 UT: SITE 1. NAHANNI. NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
100.000
40.000
20.000
10.000
4.000
2.000
1.000
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

Fig. 1.51.R.T

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 01 30 0606 UT
10 DEGREES. VERTICAL. 280 DEGREES
PEAK VALUES(CM/SEC/SEC): -169.76 136.19 -223.32

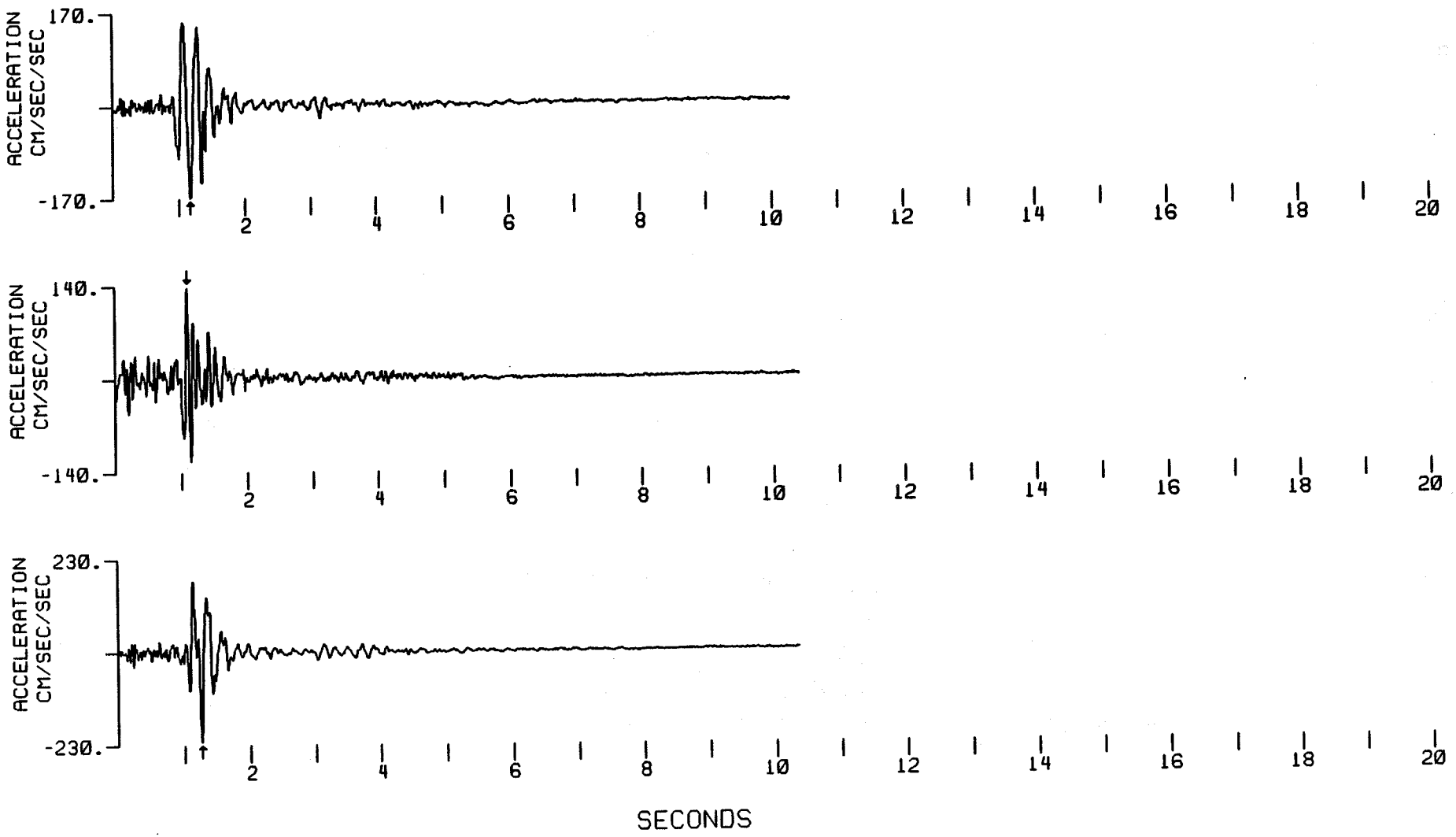


Fig. 1.65

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 01 30 0606 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
PEAK VALUES: ACCEL=-168.87 CM/SEC/SEC. VELOCITY=5.43 CM/SEC. DISPL=-0.23 CM

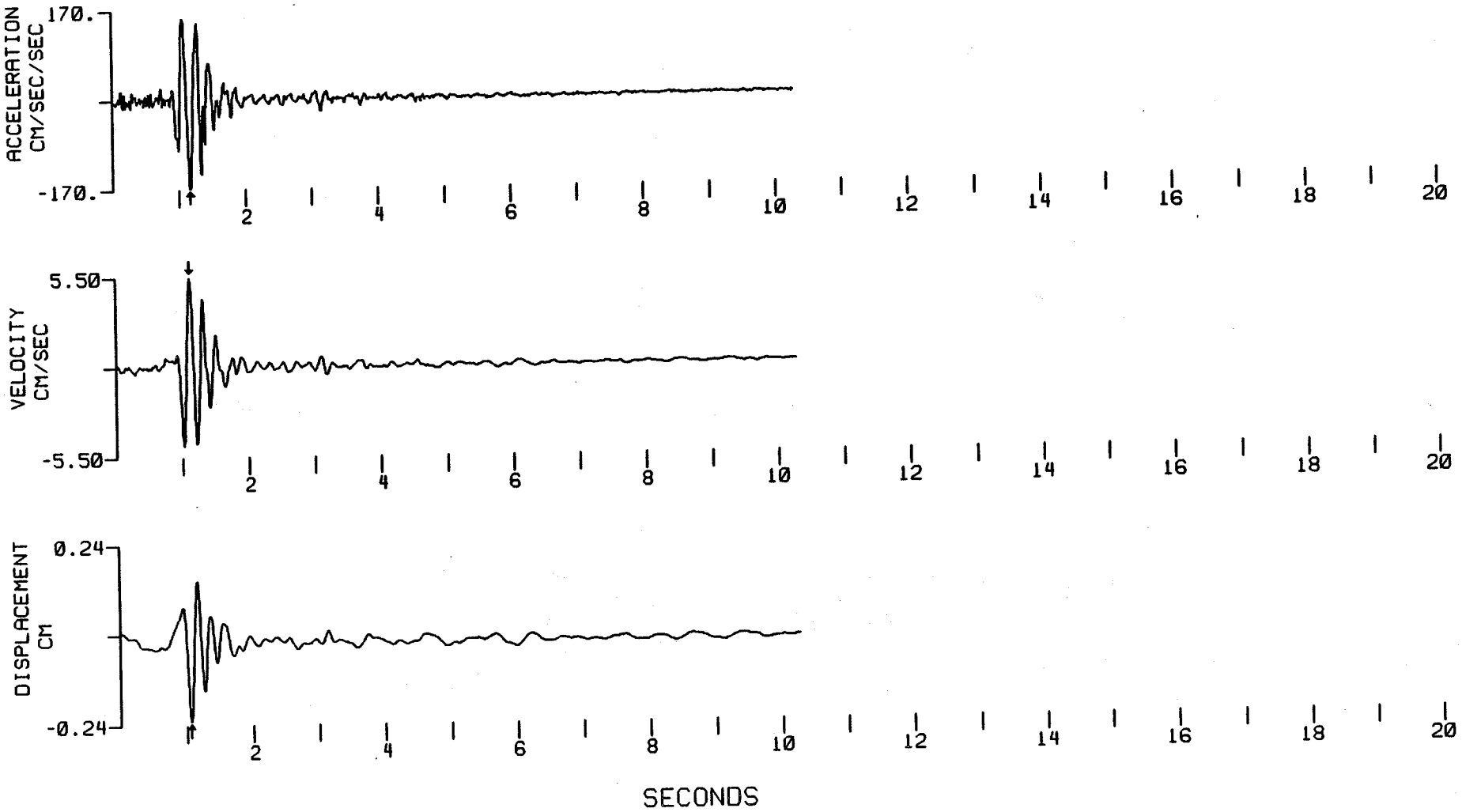


Fig. 165.

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 01 30 0606 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 1.000 HZ
PEAK VALUES: ACCEL=136.88 CM/SEC/SEC. VELOCITY=-2.87 CM/SEC. DISPL=0.08 CM

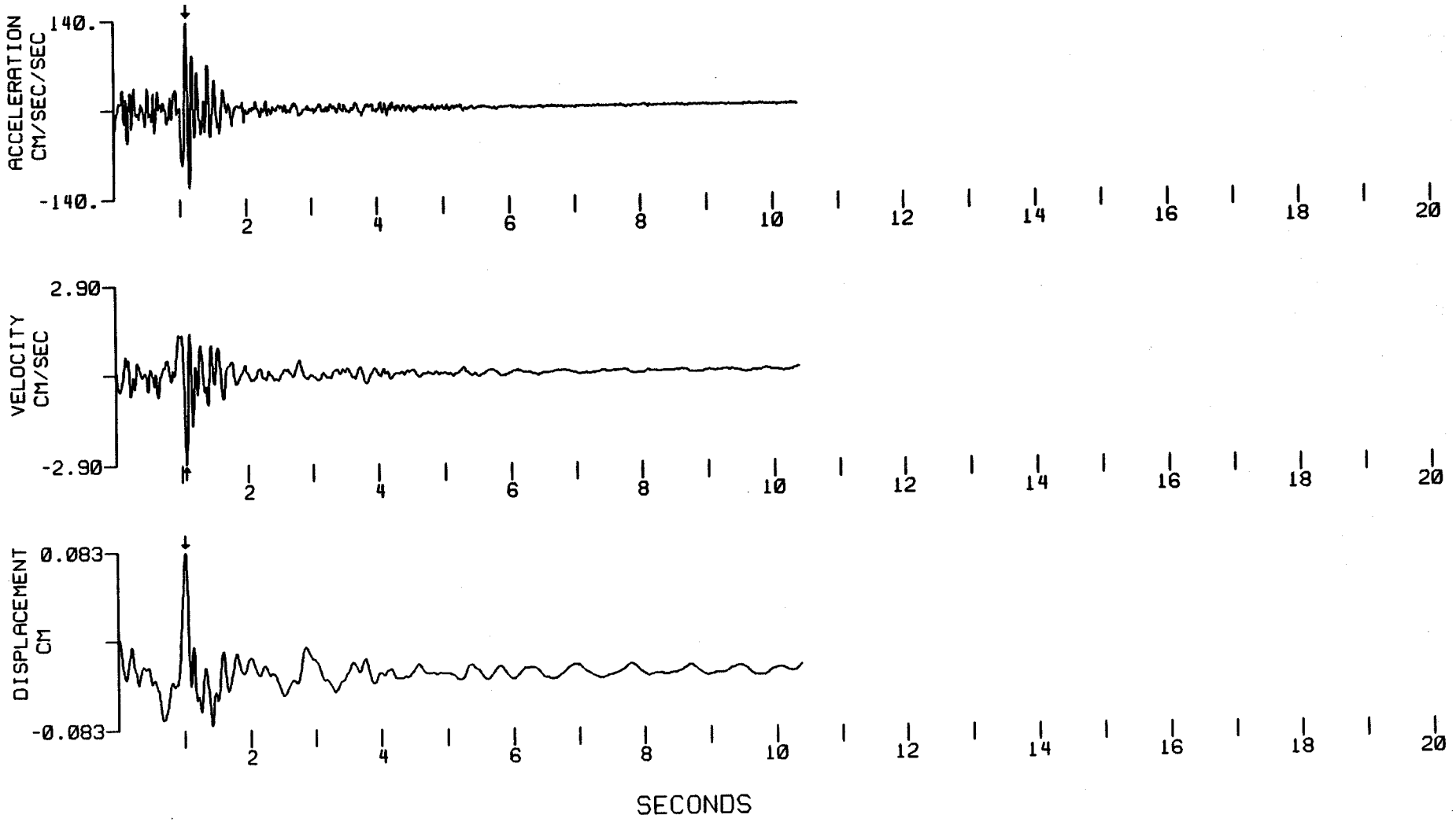


Fig. 165.V

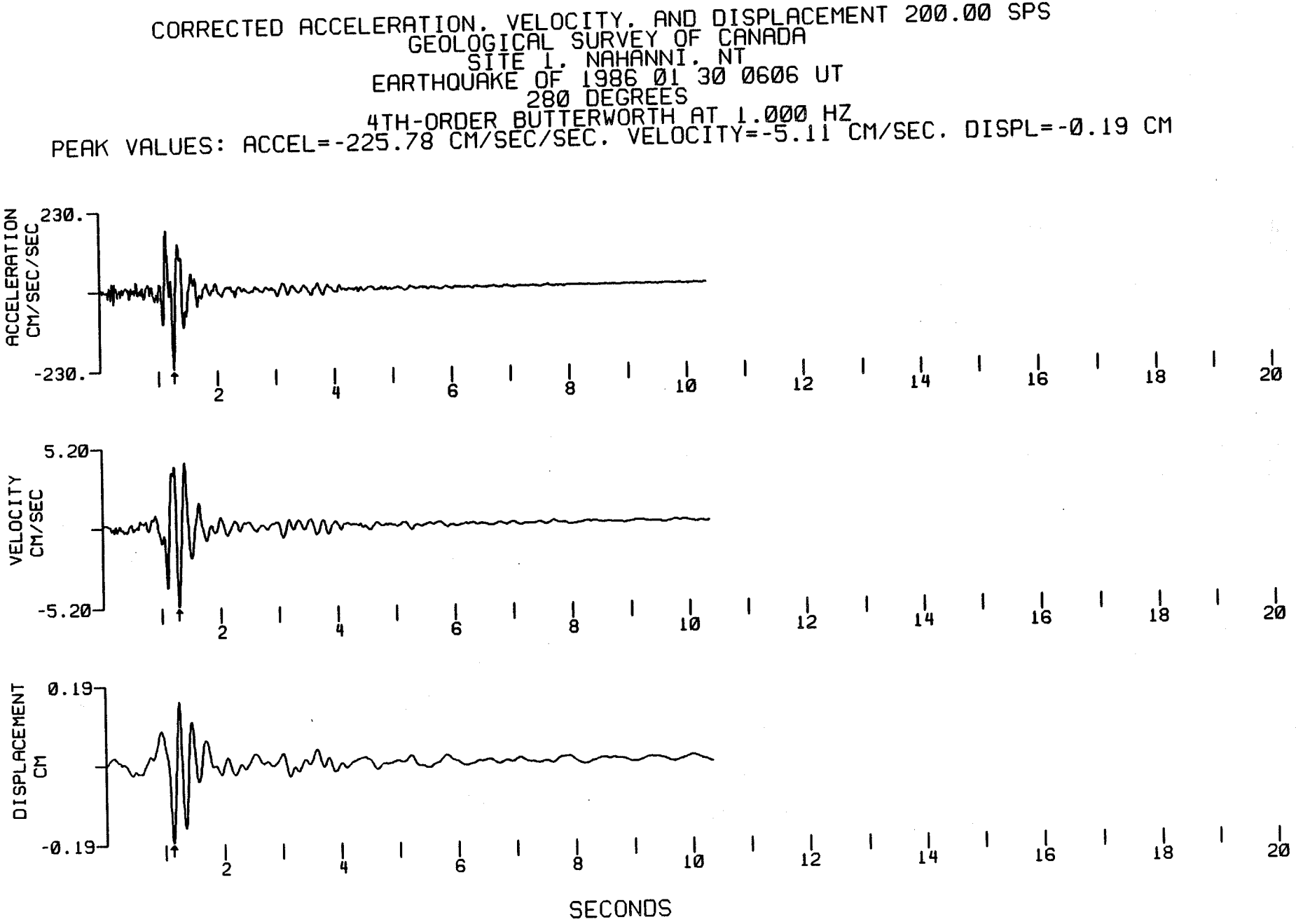

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 01 30 0606 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
PEAK VALUES: ACCEL=-225.78 CM/SEC/SEC. VELOCITY=-5.11 CM/SEC. DISPL=-0.19 CM
ACCELERATION CM/SEC/SEC
230.
-230.
VELOCITY CM/SEC
5.20
-5.20
DISPLACEMENT CM
0.19
-0.19
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 165.T

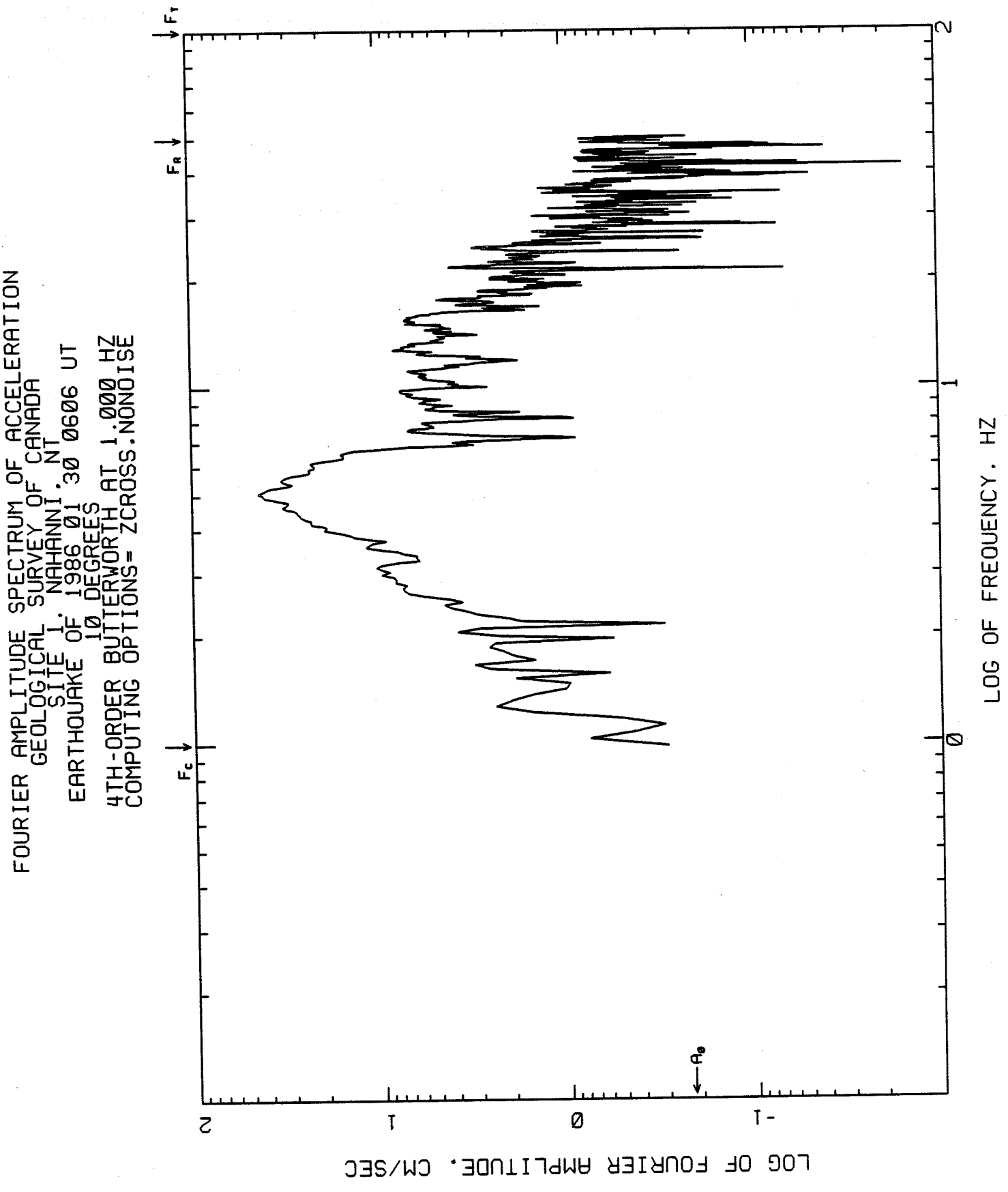

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 01 30 0606 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
F_T
F_R
F_C
A_0
2
1
0
-1
LOG OF FOURIER AMPLITUDE. CM/SEC
2
1
0
LOG OF FREQUENCY. HZ

Fig. 1.65.F.L

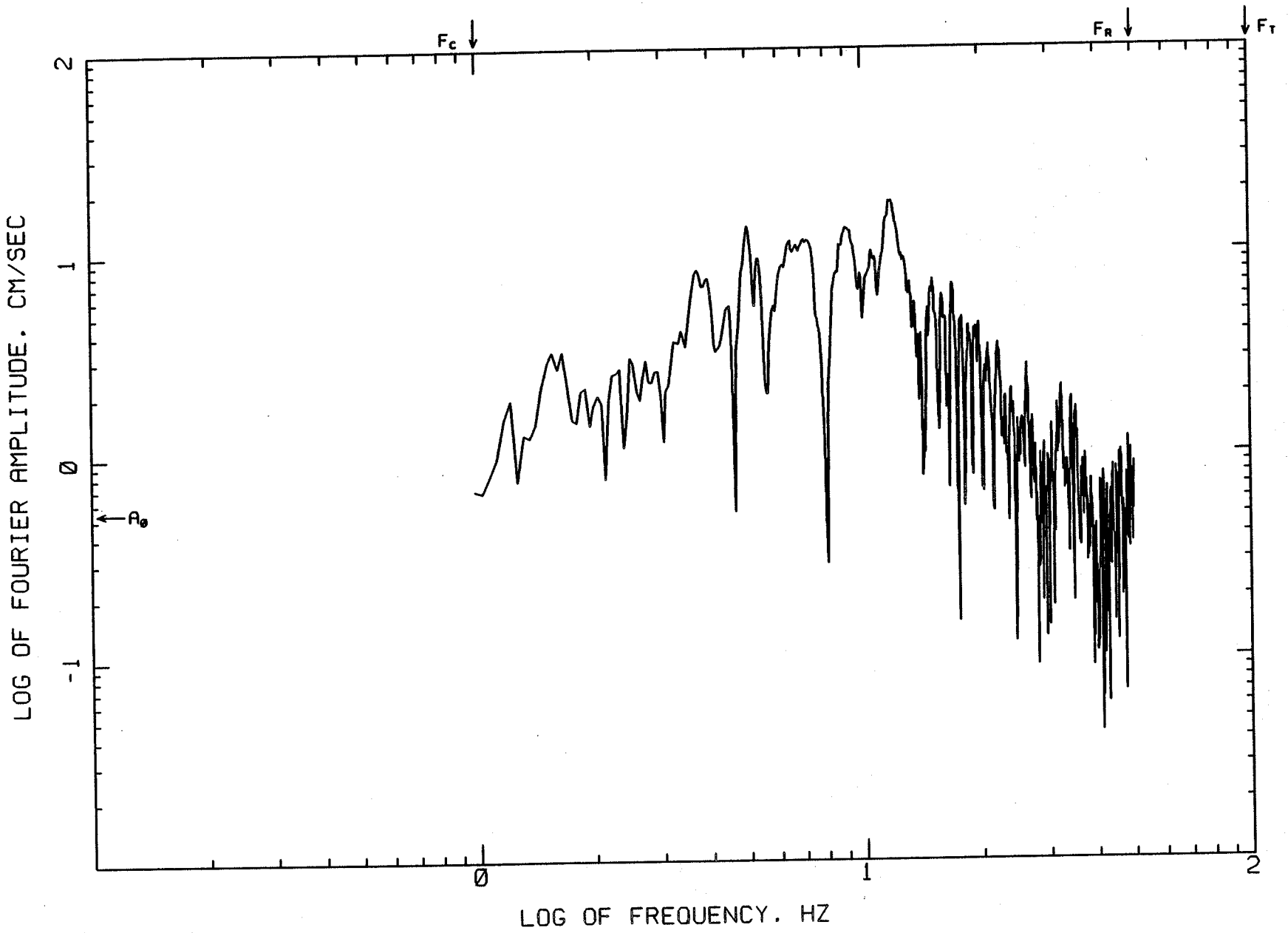

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 01 30 0606 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A∅
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
2
1
∅
-1
∅
1
2

Fig. 165.F.V

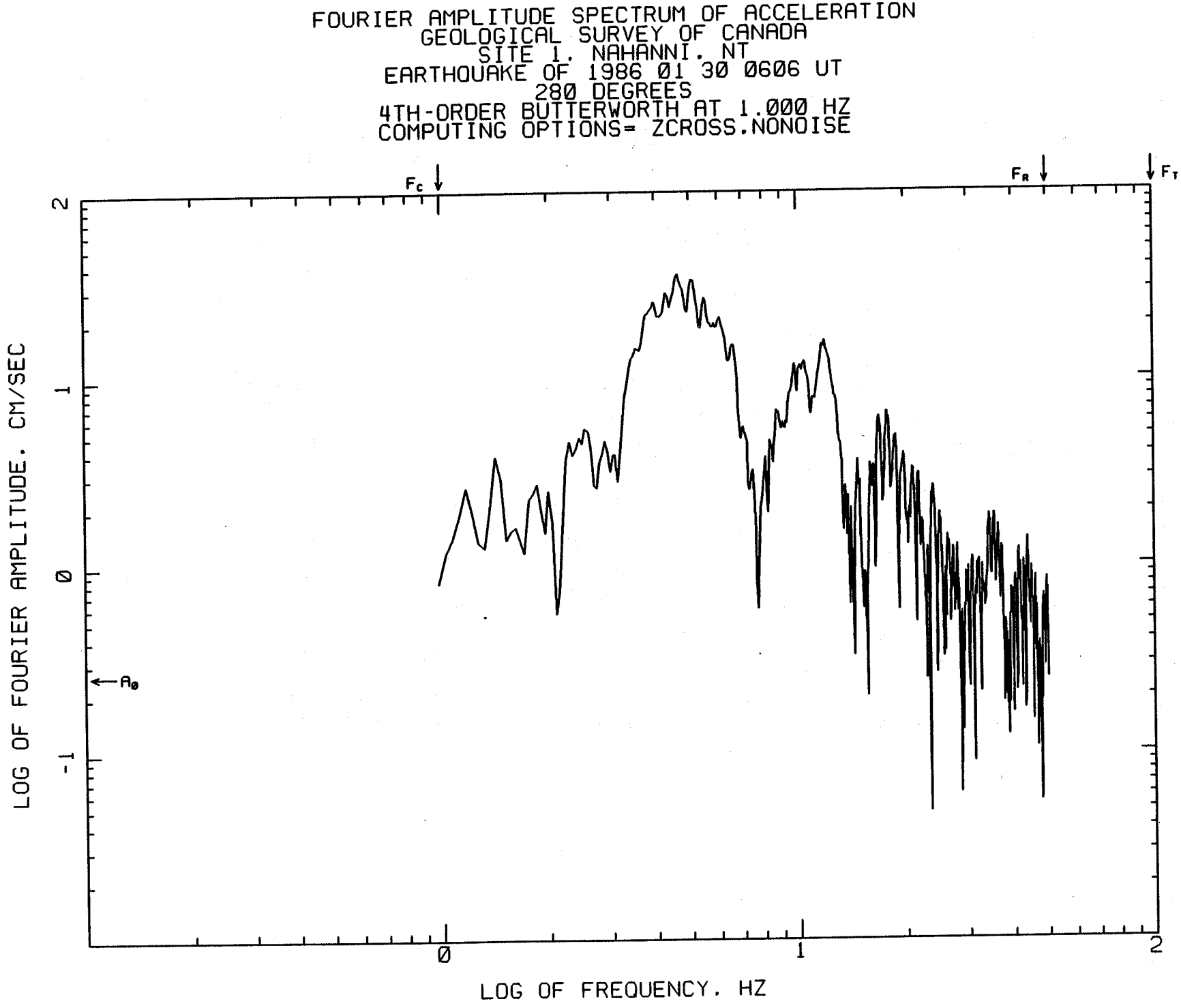

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 01 30 0606 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A∅
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
2
1
0
-1
0
1
2

Fig. 165.F.T

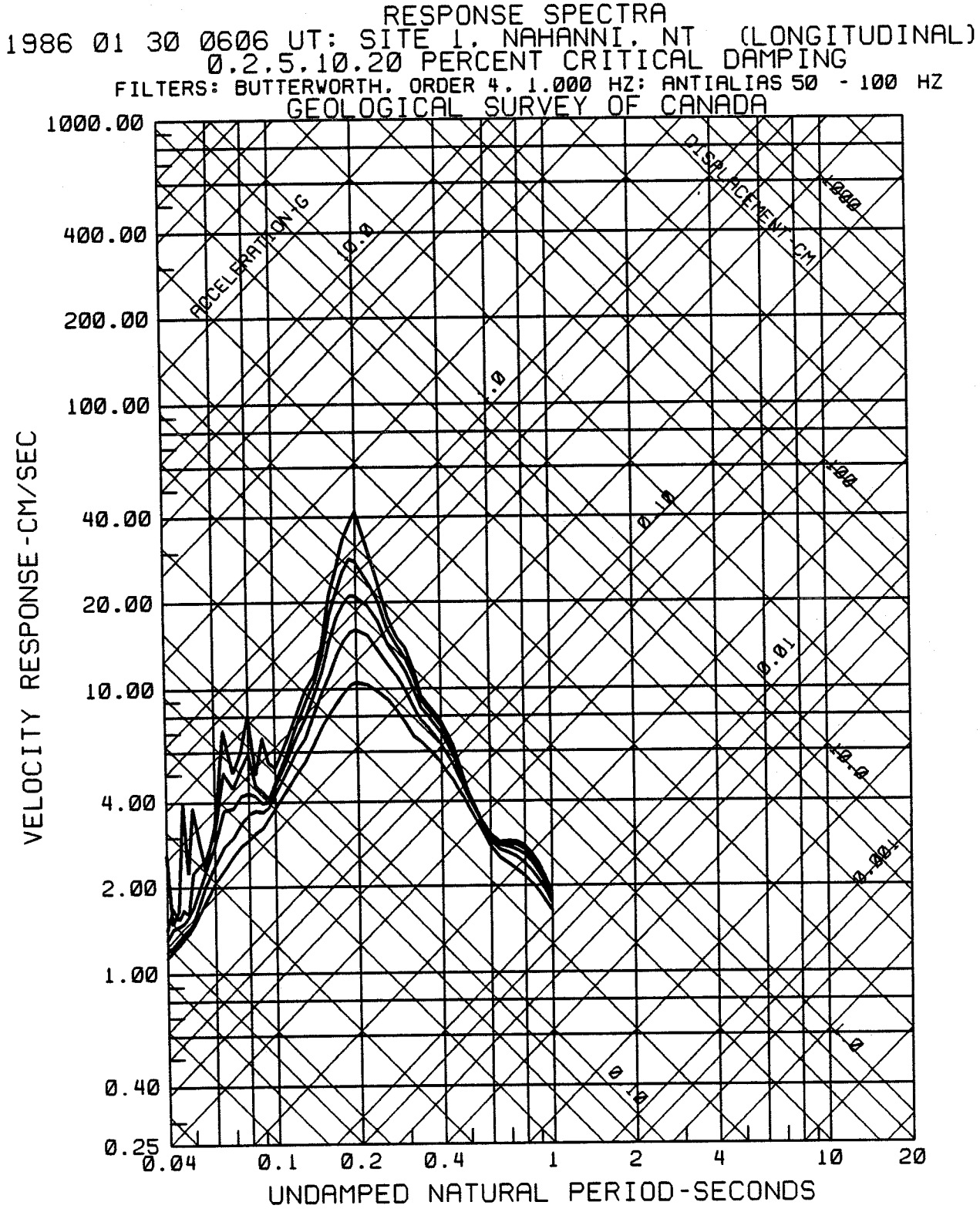

RESPONSE SPECTRA
1986 01 30 0606 UT: SITE 1. NAHANNI. NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 1.000 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
1000.00
400.00
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

Fig. 165.R.L

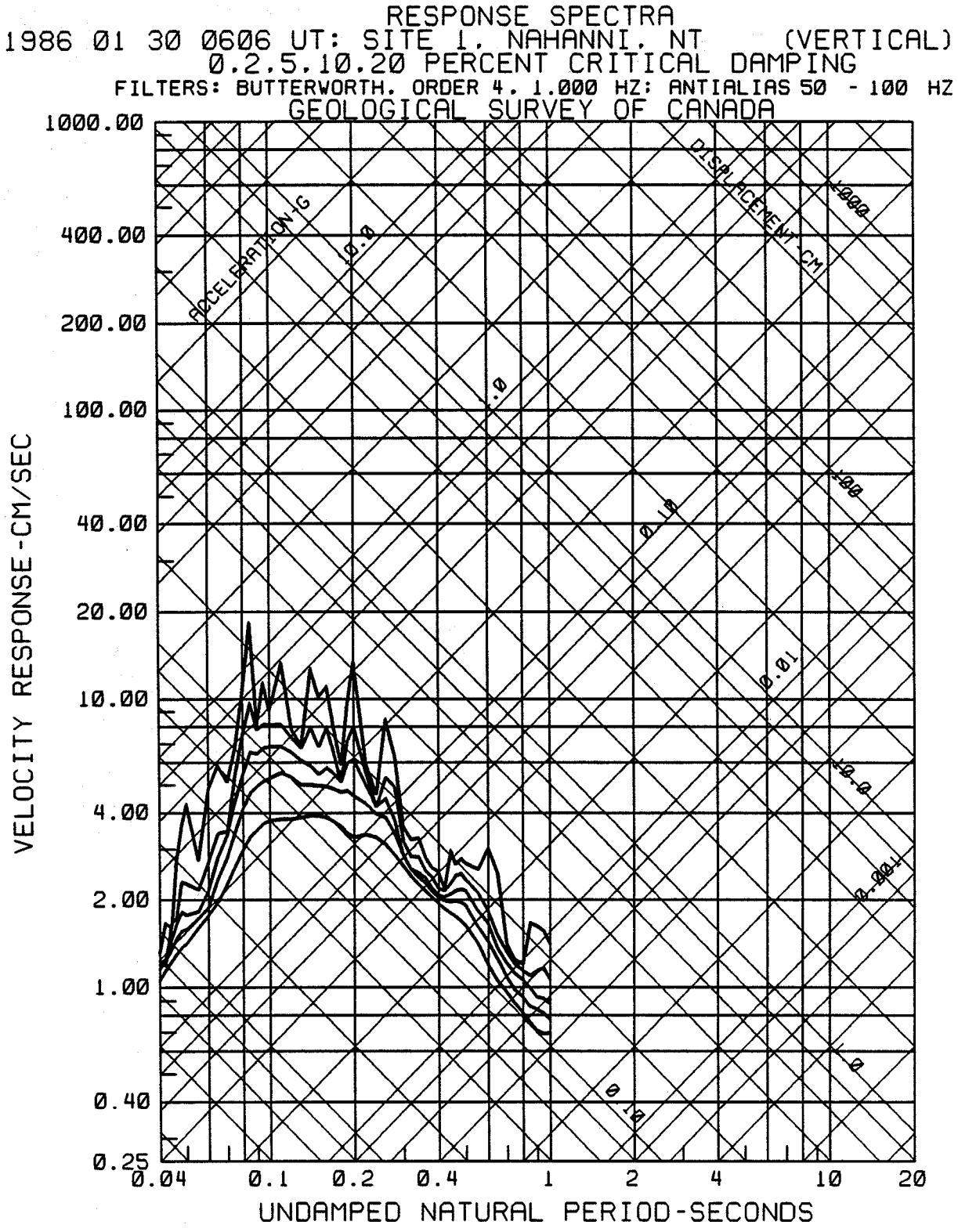

RESPONSE SPECTRA
1986 01 30 0606 UT: SITE 1. NAHANNI. NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 1.000 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
1000.00
400.00
200.00
100.00
40.00
20.00
10.00
4.00
2.00
1.00
0.40
0.25
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM

Fig. 1.65.R.V

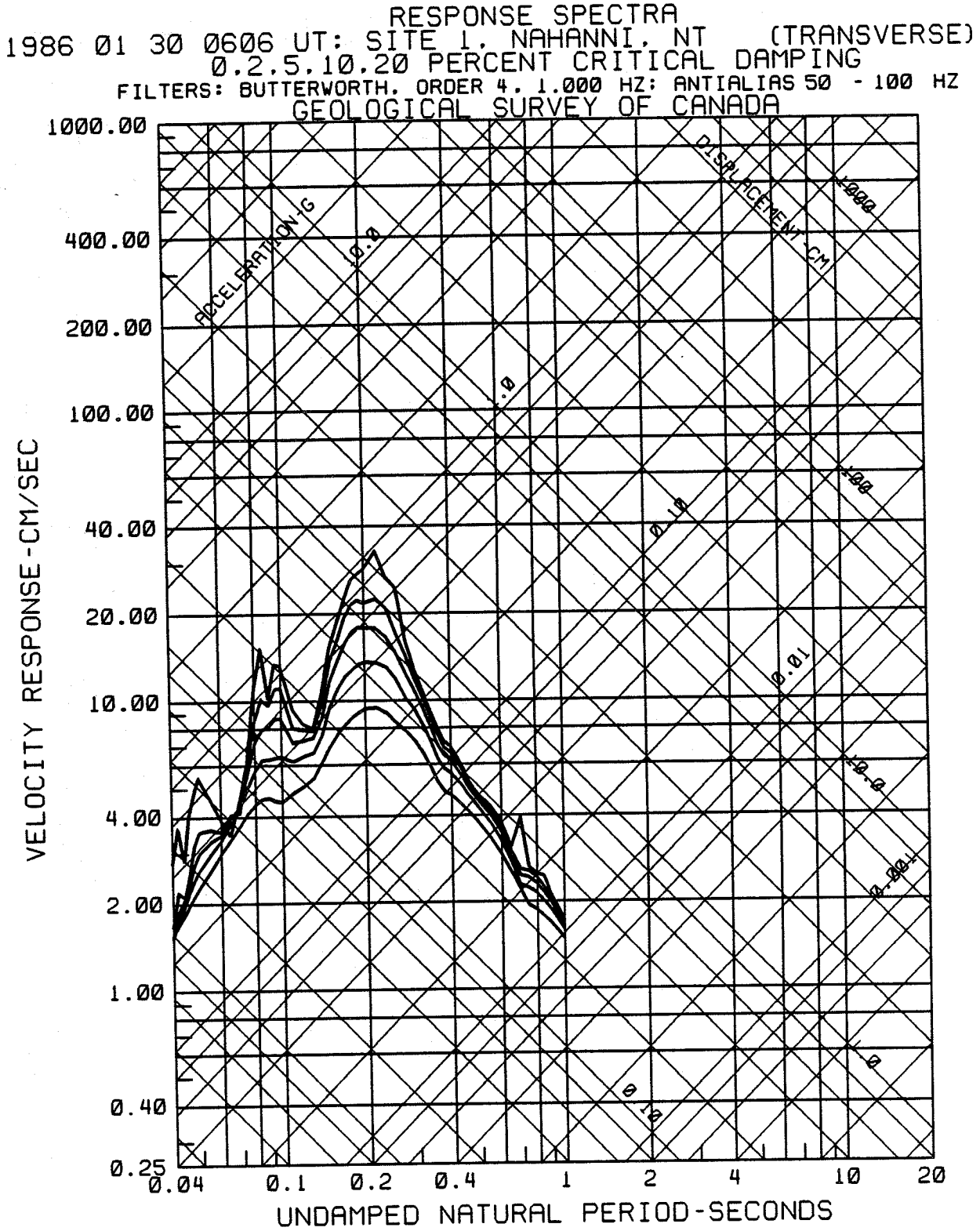

RESPONSE SPECTRA
1986 01 30 0606 UT: SITE 1. NAHANNI. NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 1.000 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
1000.00
400.00
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

Fig. 165.R.T

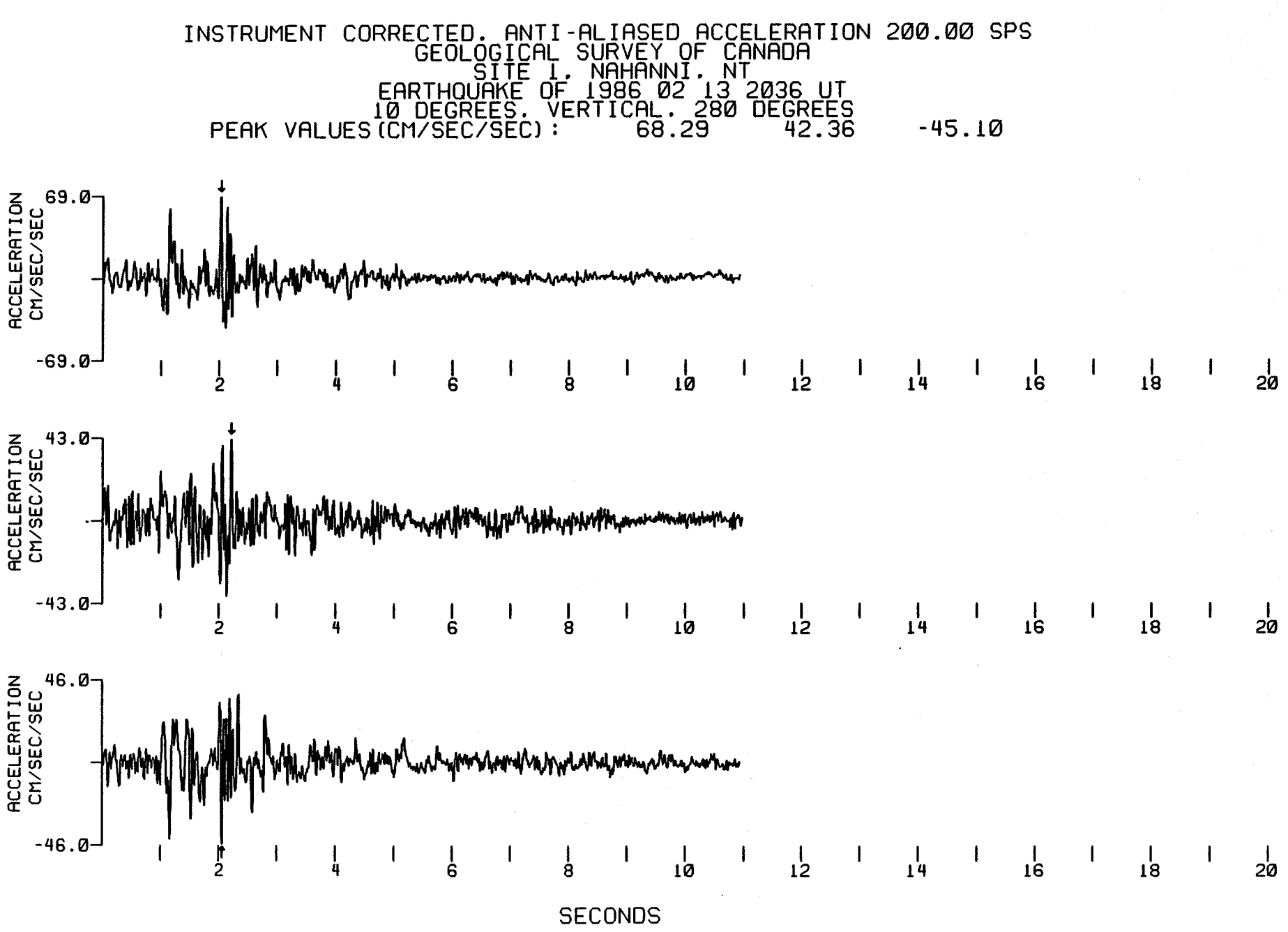

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
10 DEGREES. VERTICAL. 280 DEGREES
PEAK VALUES(CM/SEC/SEC): 68.29 42.36 -45.10
ACCELERATION CM/SEC/SEC
69.0
-69.0
43.0
-43.0
46.0
-46.0
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.70

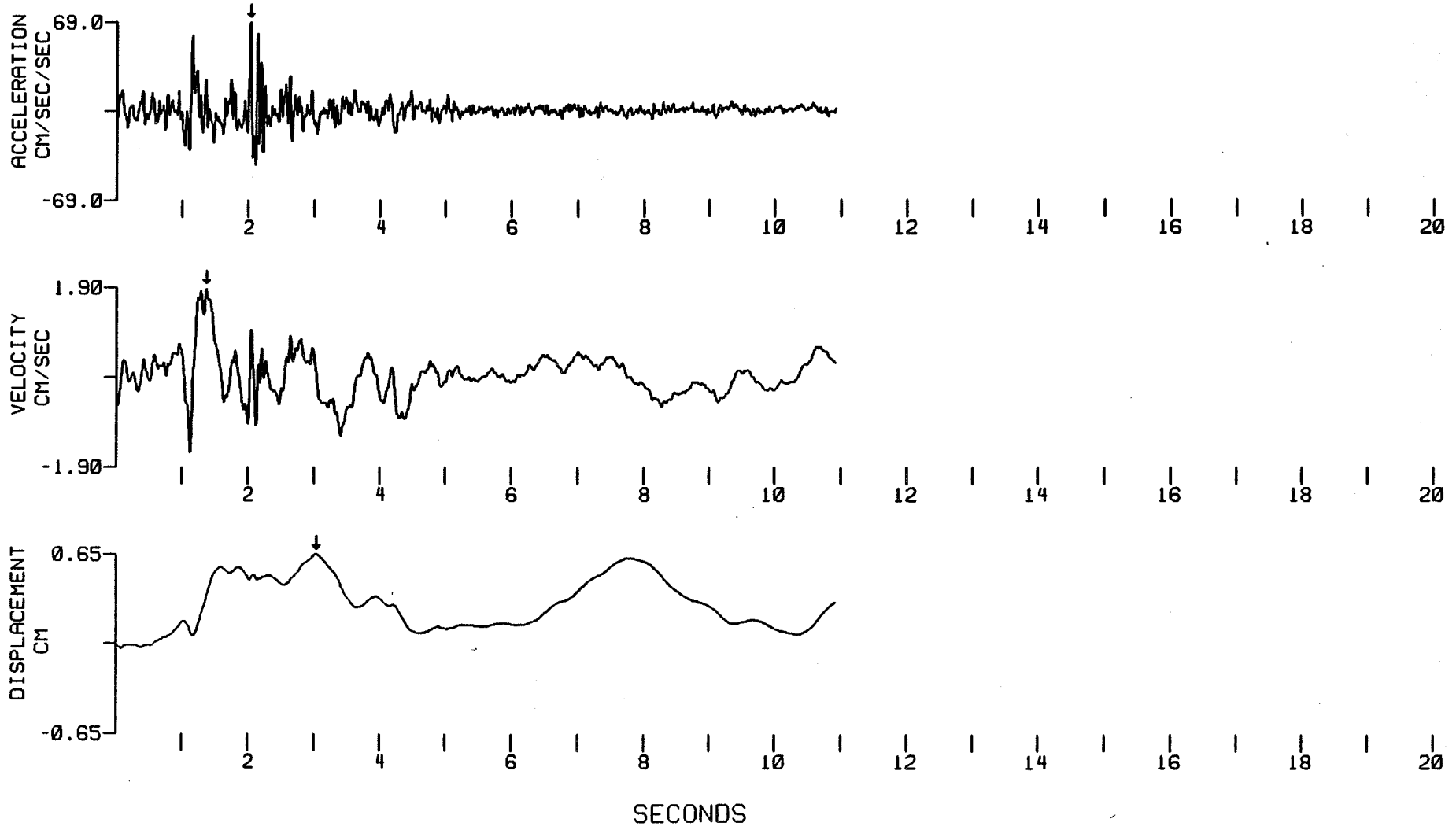

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=68.43 CM/SEC/SEC. VELOCITY=1.87 CM/SEC. DISPL=0.65 CM
ACCELERATION CM/SEC/SEC
69.0
-69.0
VELOCITY CM/SEC
1.90
-1.90
DISPLACEMENT CM
0.65
-0.65
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.10

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=42.35 CM/SEC/SEC. VELOCITY=1.57 CM/SEC. DISPL=0.60 CM

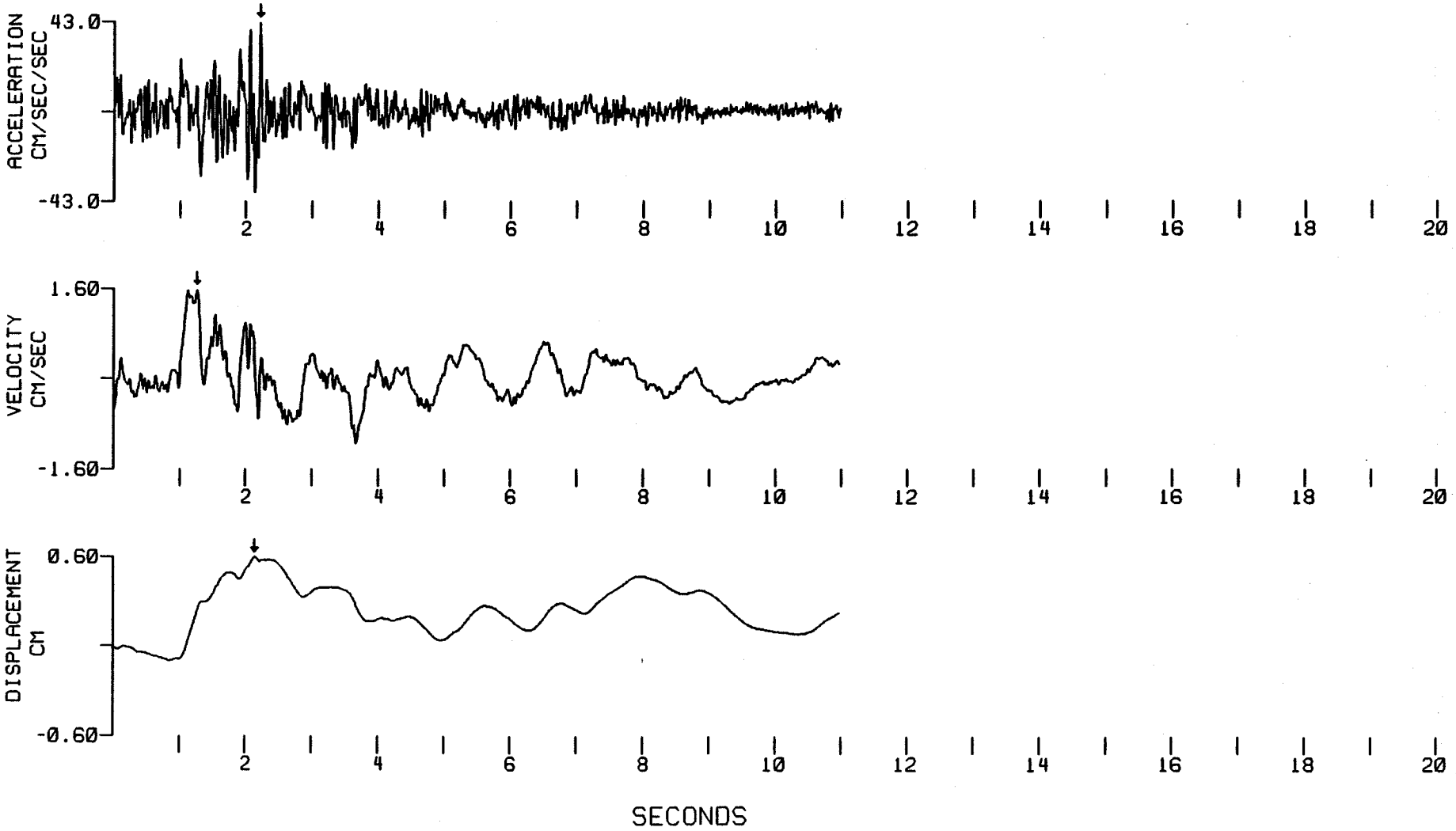


Fig. 1.70.V

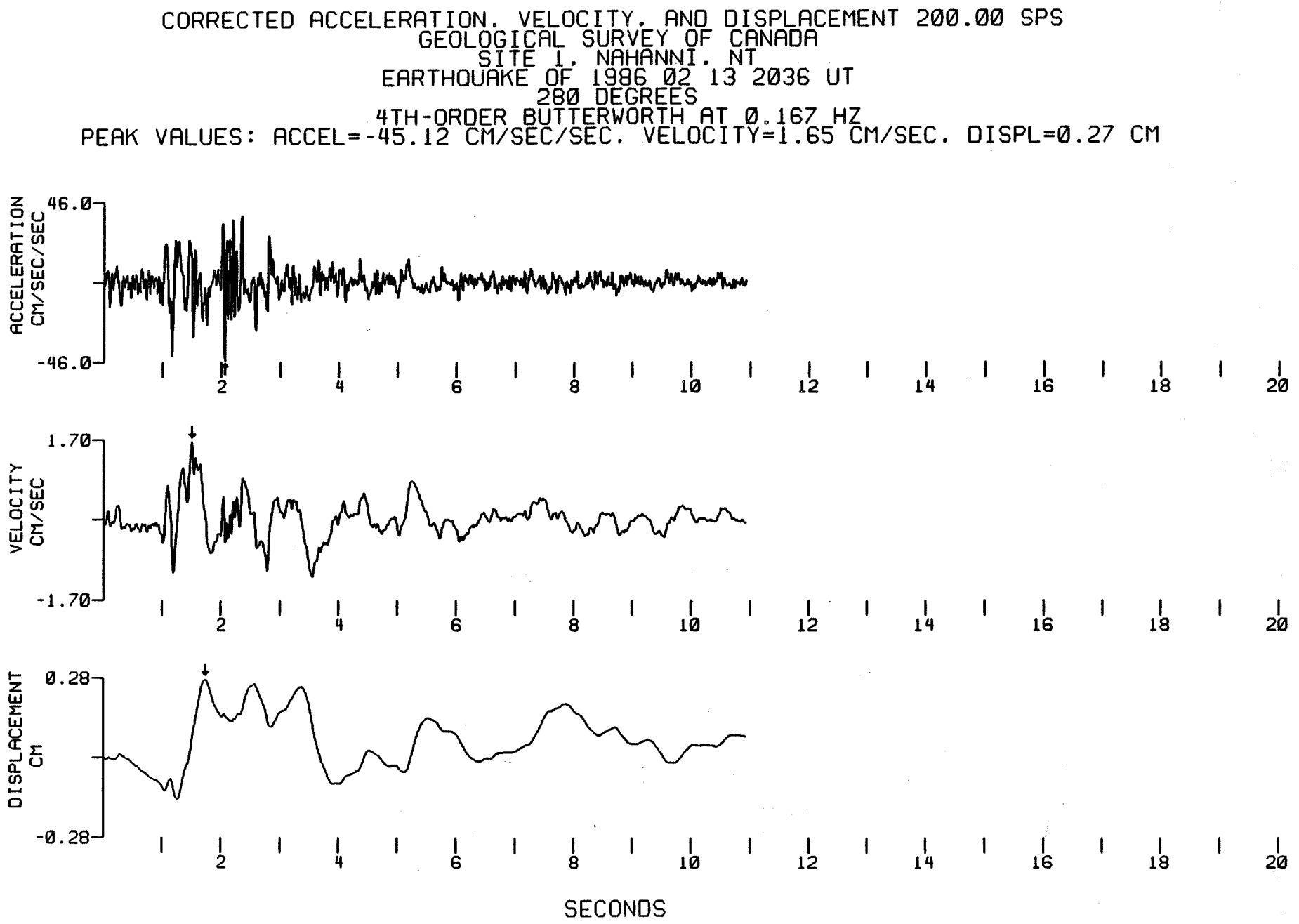

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=-45.12 CM/SEC/SEC. VELOCITY=1.65 CM/SEC. DISPL=0.27 CM
ACCELERATION CM/SEC/SEC
46.0
-46.0
VELOCITY CM/SEC
1.70
-1.70
DISPLACEMENT CM
0.28
-0.28
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 1.70.T

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
10 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE

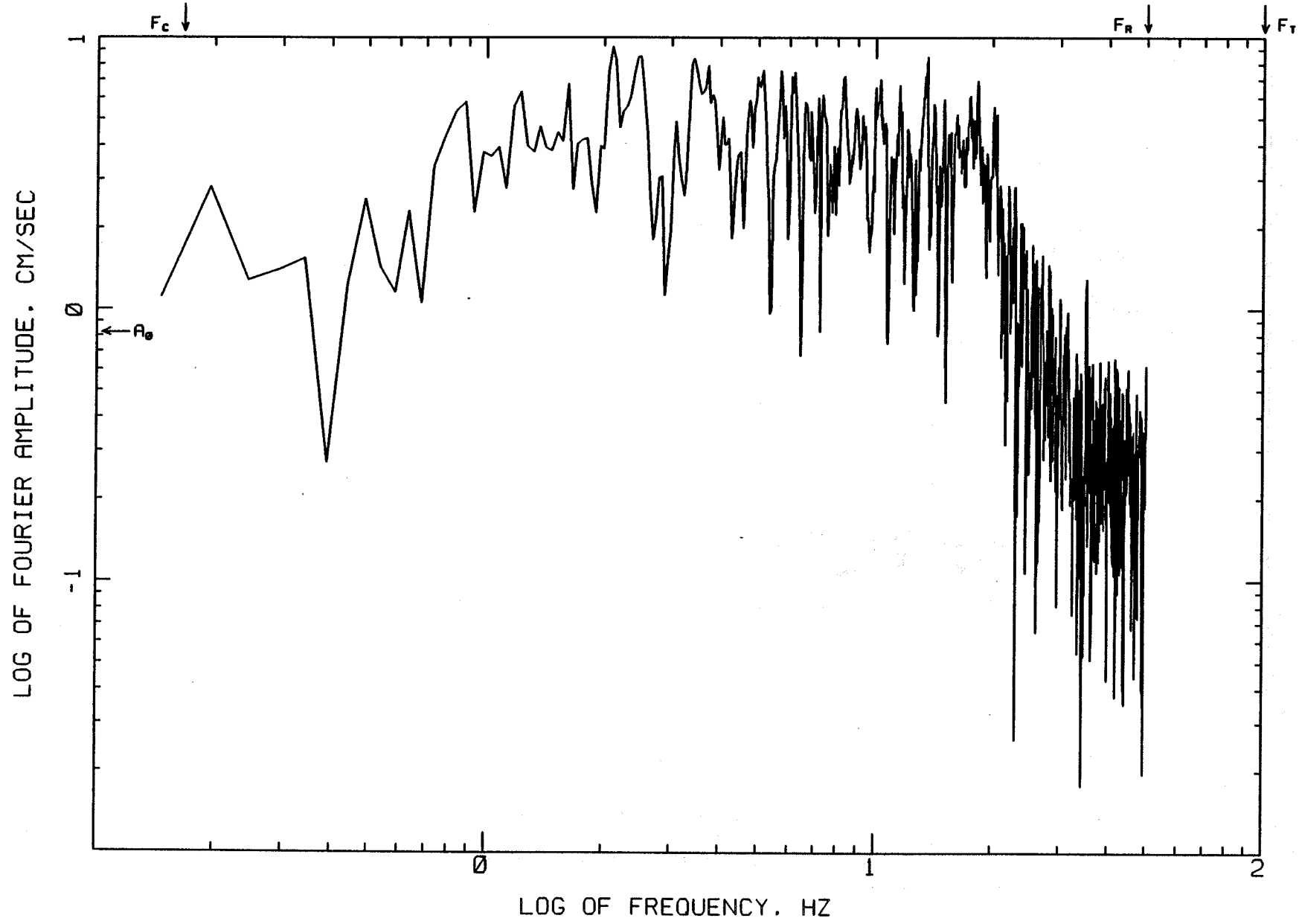


Fig. 1.70.F.1

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE

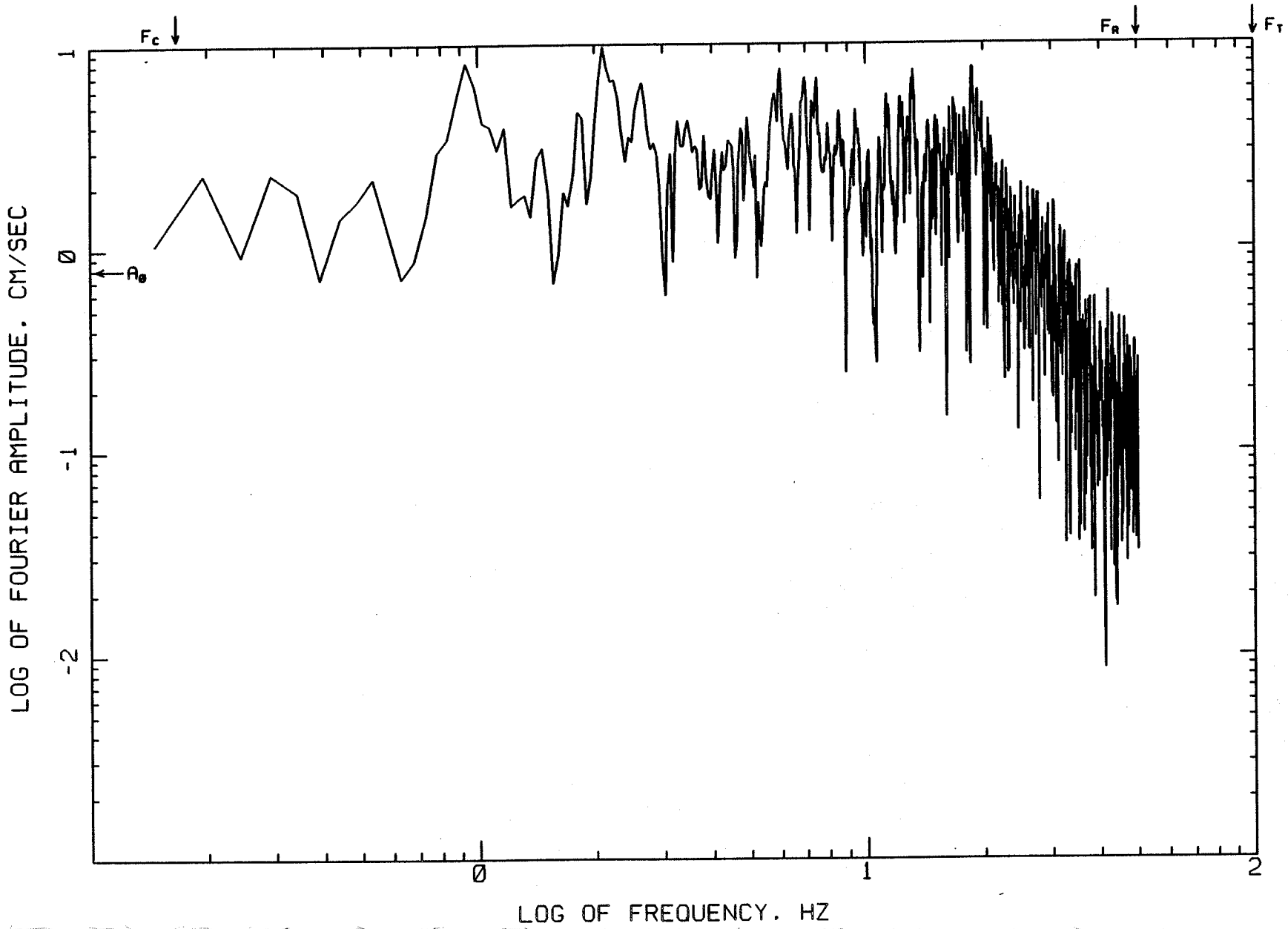


Fig. 1.70.F.V

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 1. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
280 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE

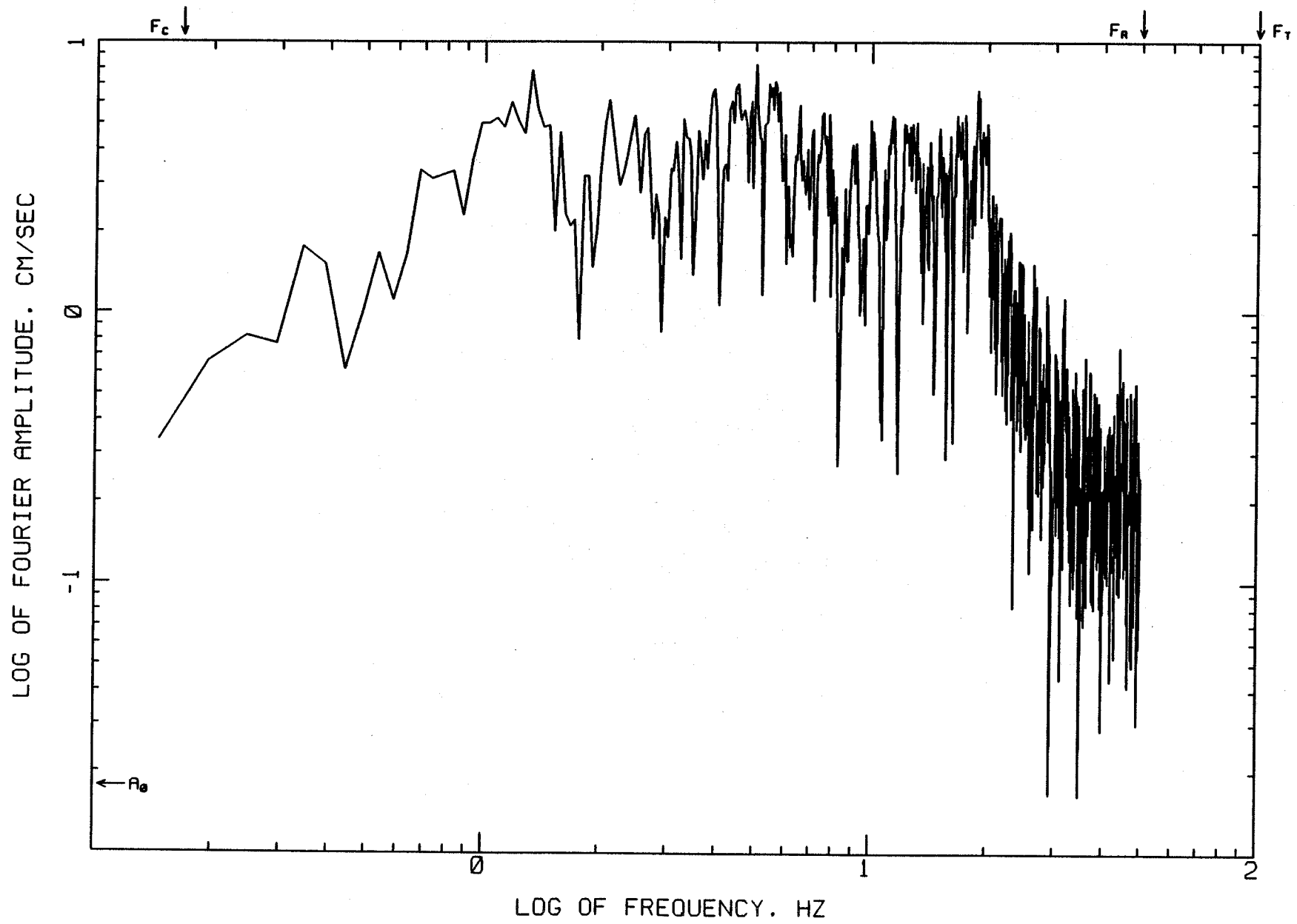


Fig. 1.70.F.T

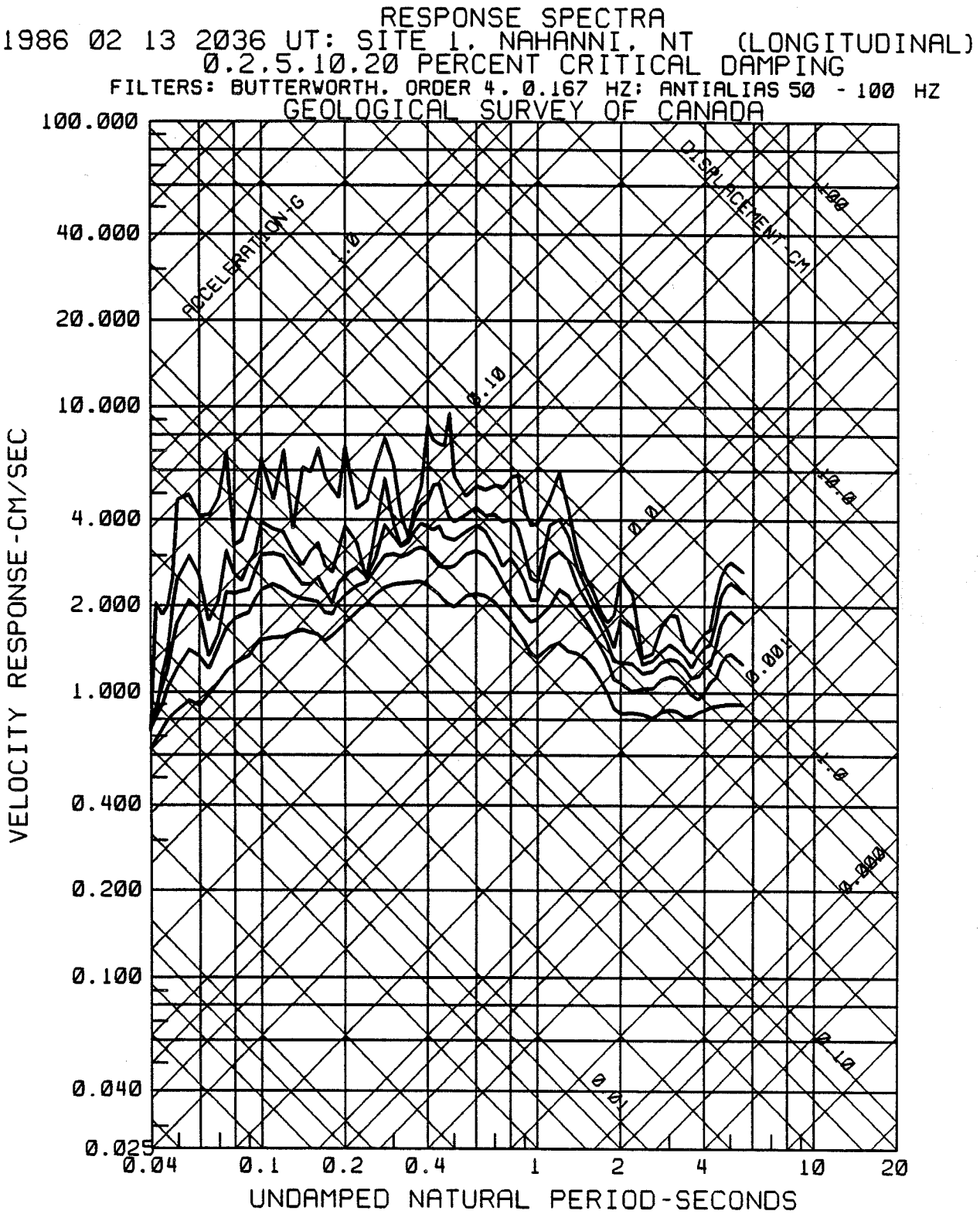

RESPONSE SPECTRA
1986 02 13 2036 UT: SITE 1. NAHANNI, NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100.000
40.000
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
1.0
0.10
0.01
100
10.0
1.0
0.10
0.01
0.001
0.0001

Fig. 1.70.R.L

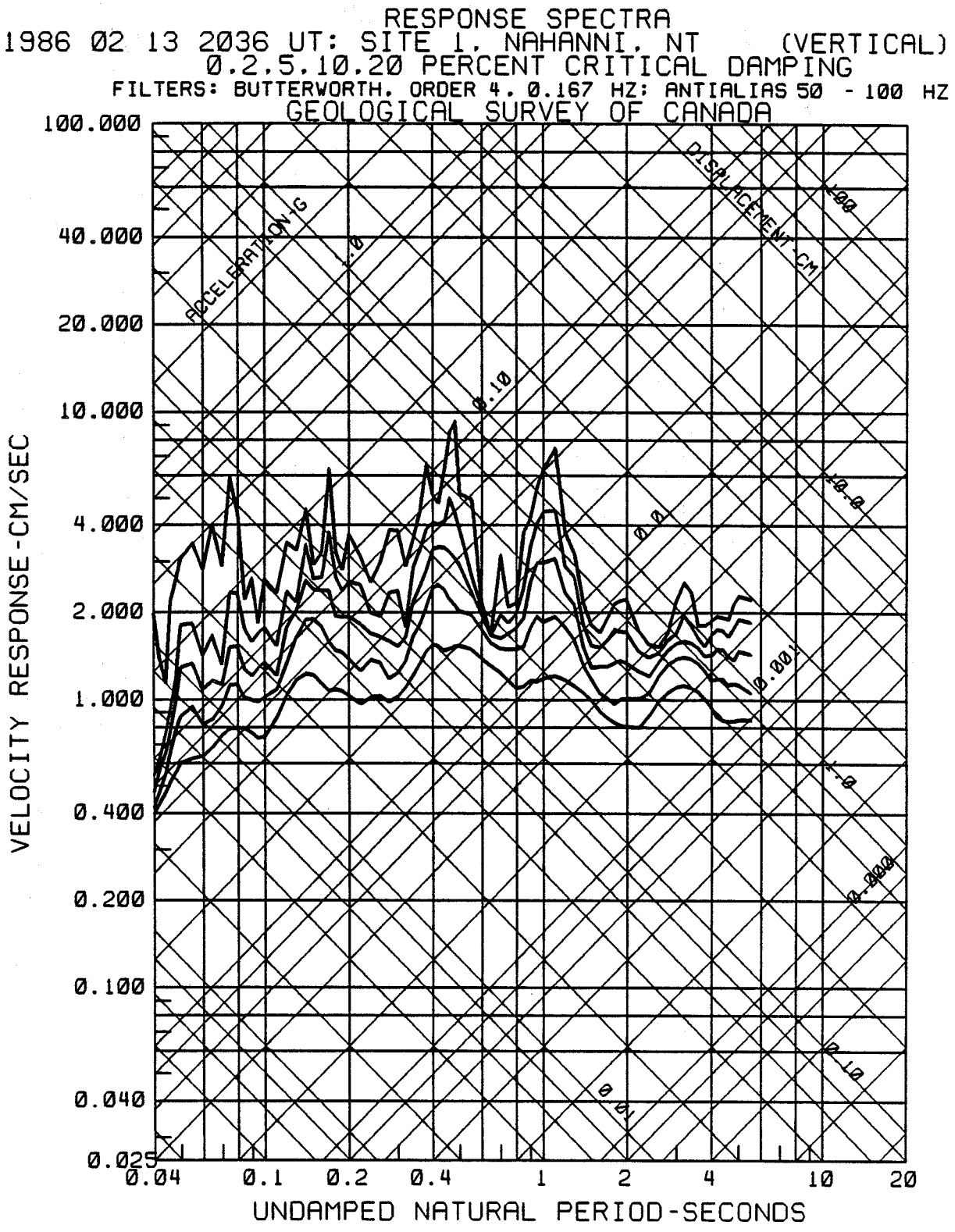

RESPONSE SPECTRA
1986 02 13 2036 UT: SITE 1, NAHANNI, NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ; ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100.000
40.000
20.000
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
0.10
0.01

Fig. 1.70.R.V

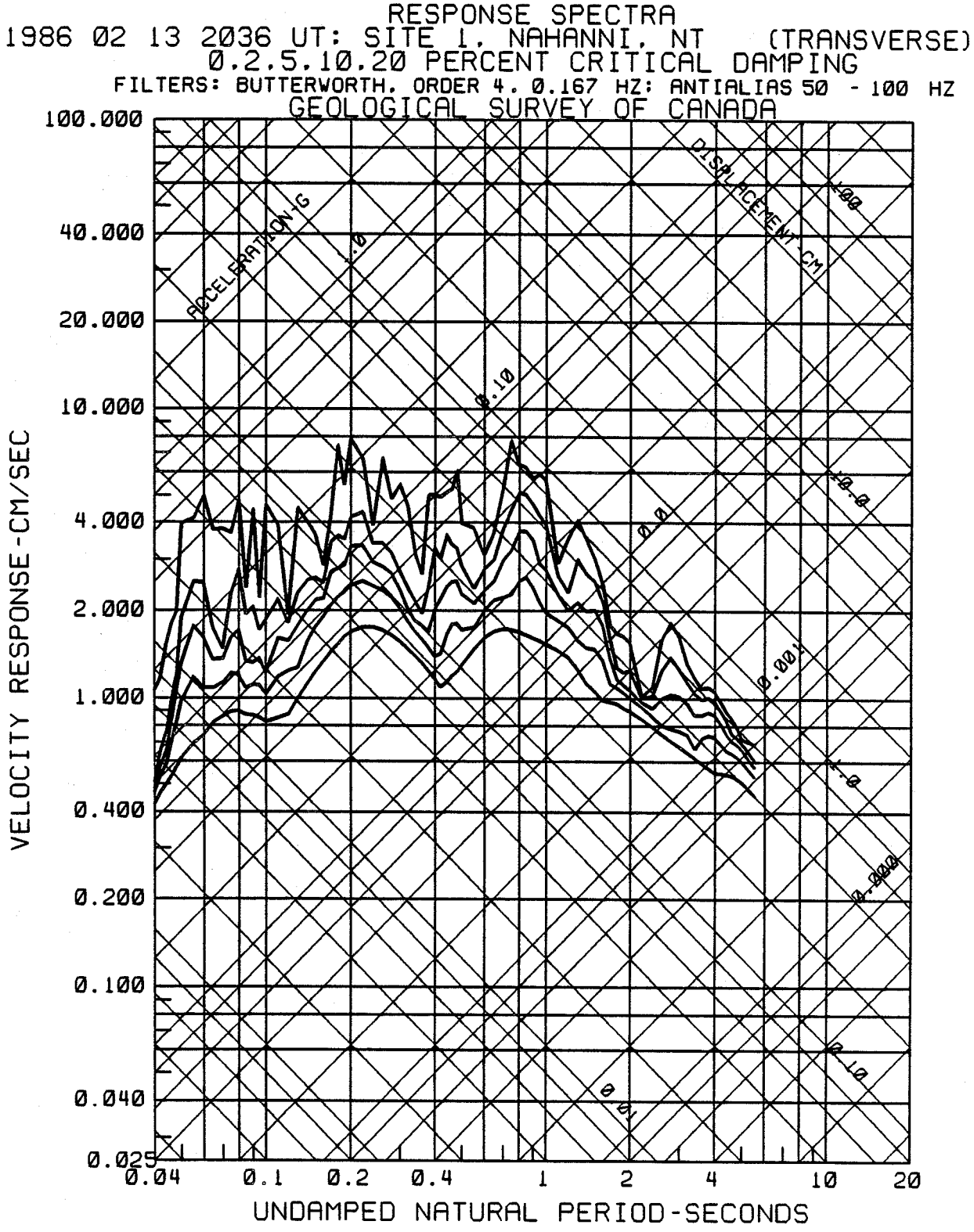

RESPONSE SPECTRA
1986 02 13 2036 UT: SITE 1, NAHANNI, NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 1.70.R.T

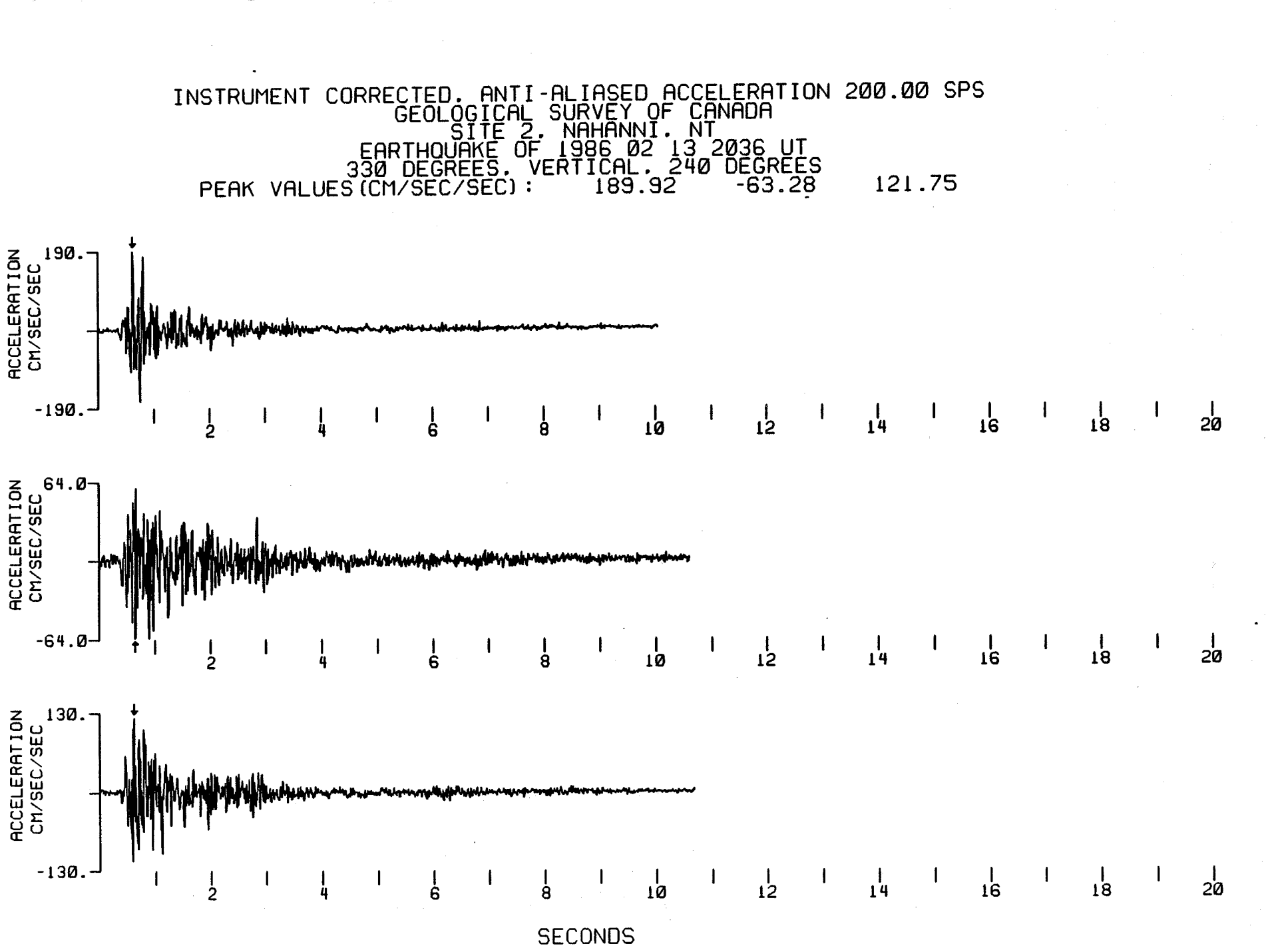

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
330 DEGREES. VERTICAL. 240 DEGREES
PEAK VALUES (CM/SEC/SEC): 189.92 -63.28 121.75
ACCELERATION CM/SEC/SEC
190.
-190.
64.0
-64.0
130.
-130.
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.7b

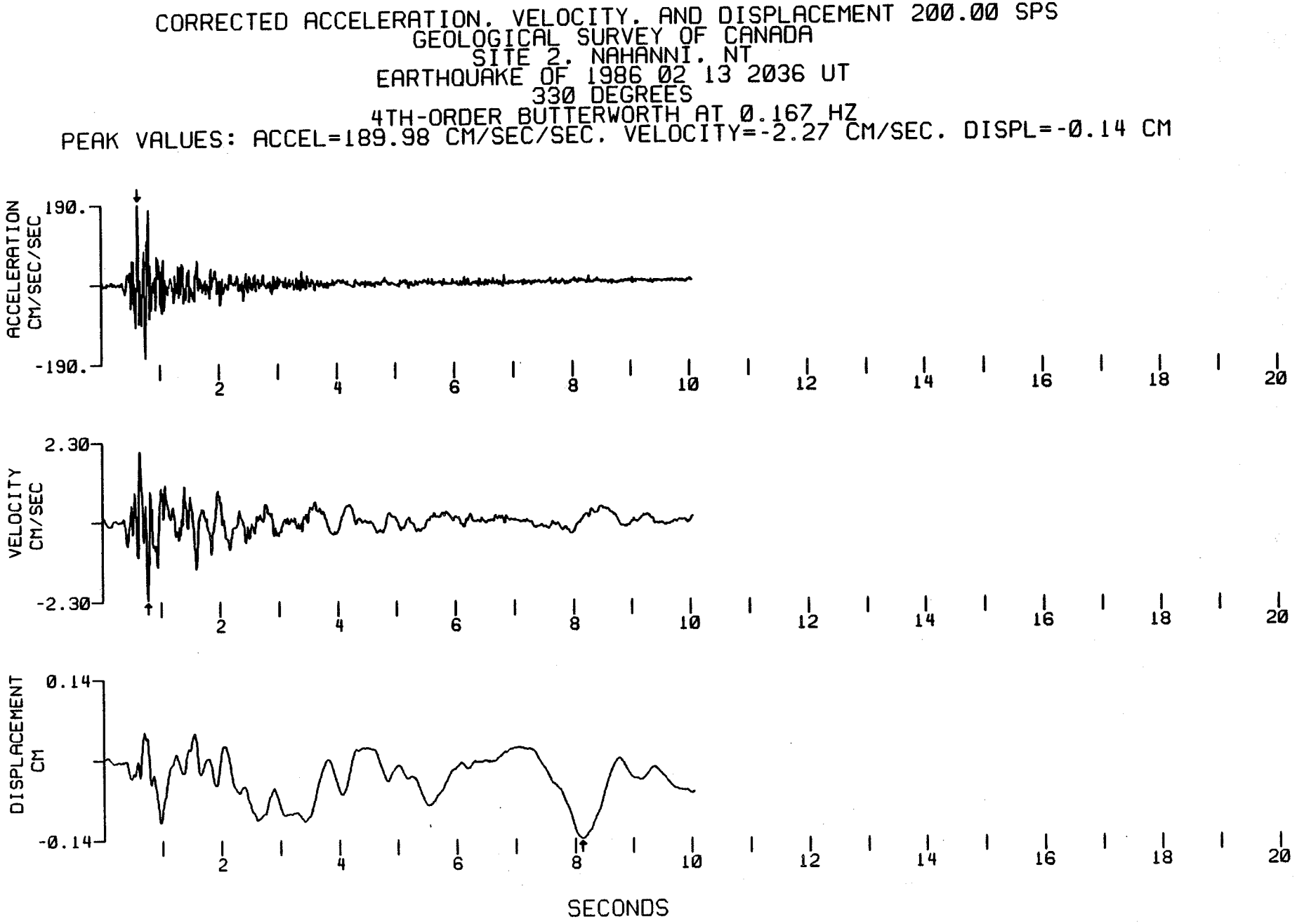

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
330 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=189.98 CM/SEC/SEC. VELOCITY=-2.27 CM/SEC. DISPL=-0.14 CM
ACCELERATION CM/SEC/SEC
190.
-190.
VELOCITY CM/SEC
2.30
-2.30
DISPLACEMENT CM
0.14
-0.14
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.10.1

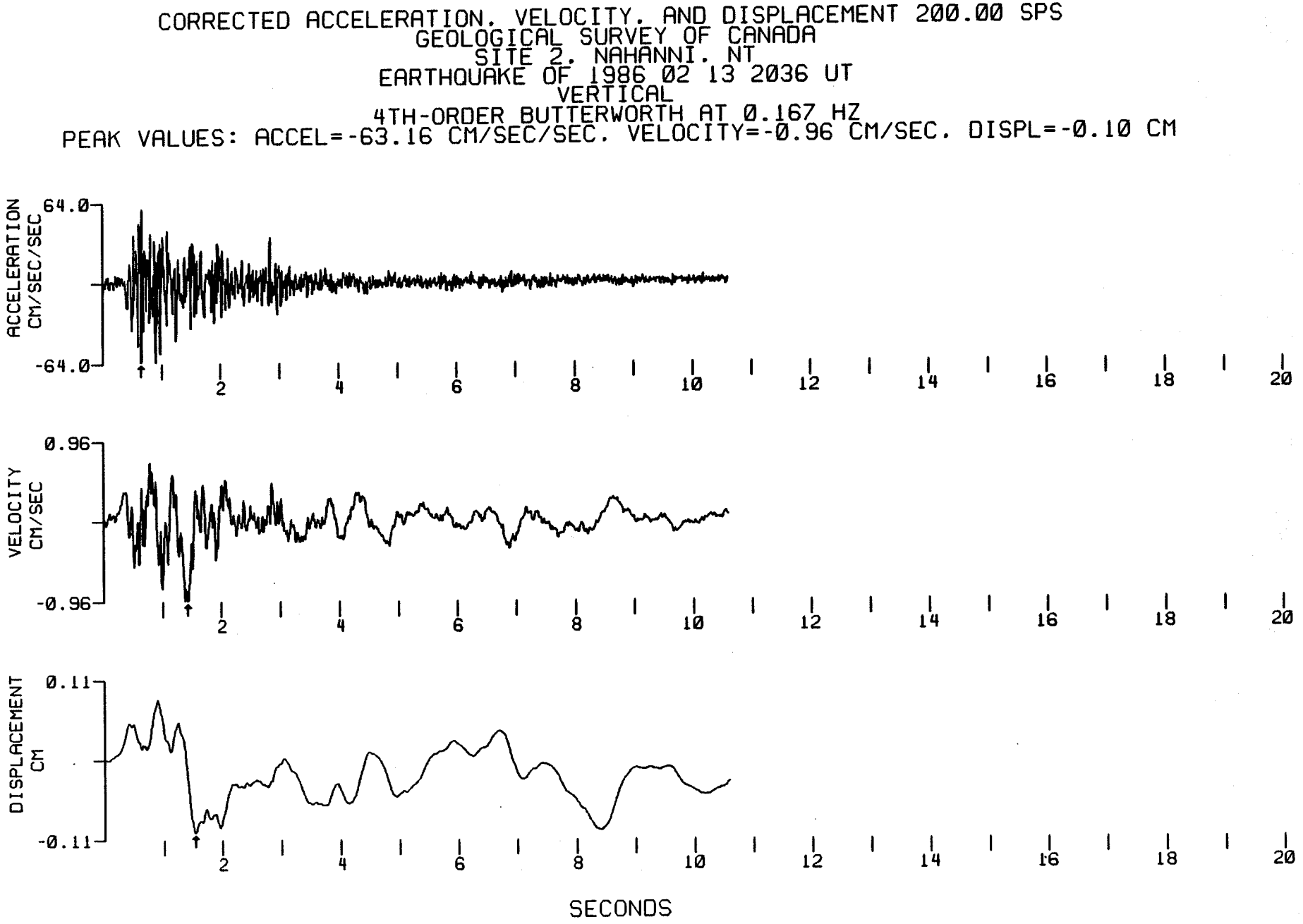

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=-63.16 CM/SEC/SEC. VELOCITY=-0.96 CM/SEC. DISPL=-0.10 CM
ACCELERATION CM/SEC/SEC
64.0
-64.0
VELOCITY CM/SEC
0.96
-0.96
DISPLACEMENT CM
0.11
-0.11
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.10.V

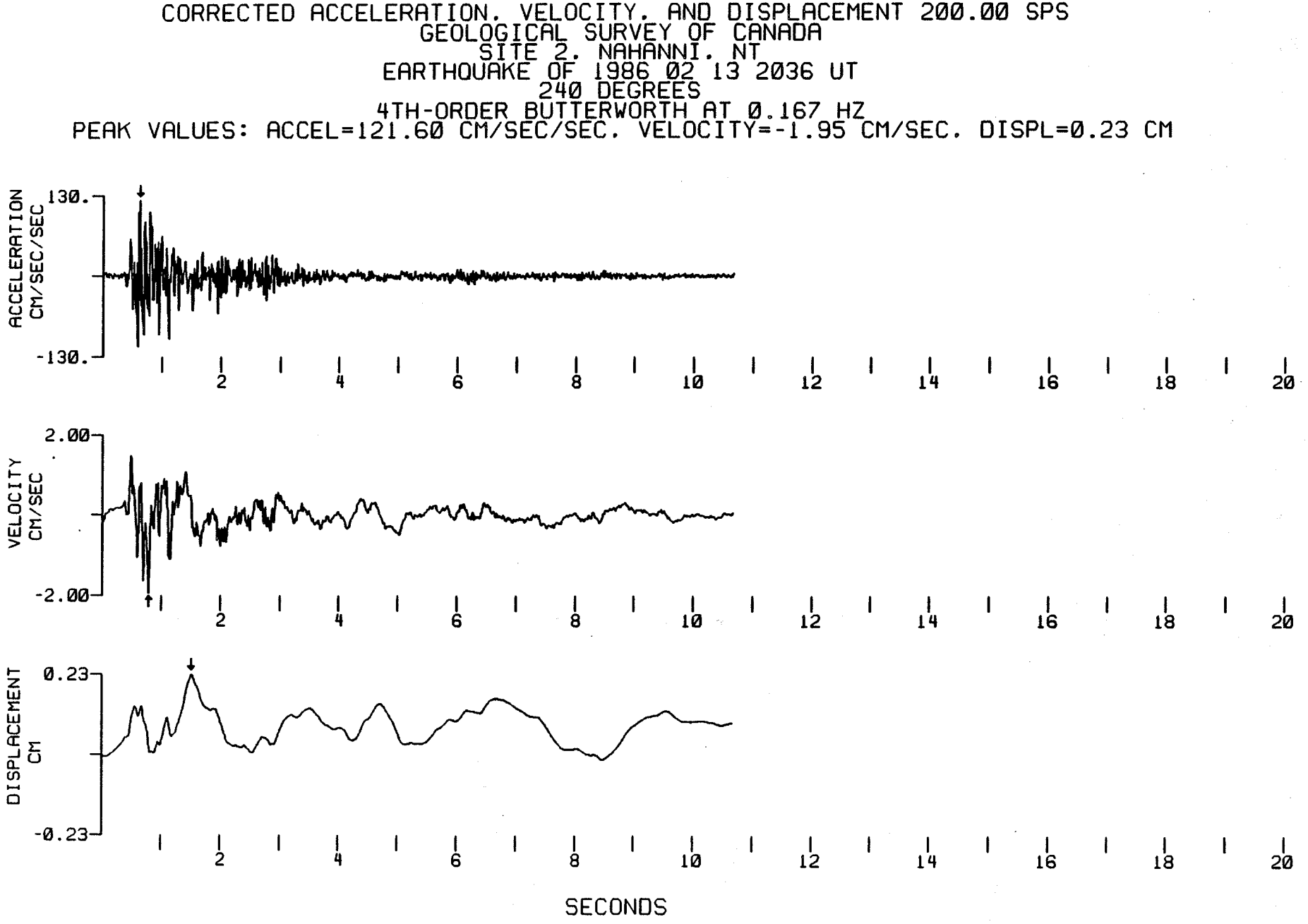

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
240 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=121.60 CM/SEC/SEC. VELOCITY=-1.95 CM/SEC. DISPL=0.23 CM
ACCELERATION CM/SEC/SEC
130.
-130.
VELOCITY CM/SEC
2.00
-2.00
DISPLACEMENT CM
0.23
-0.23
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.10

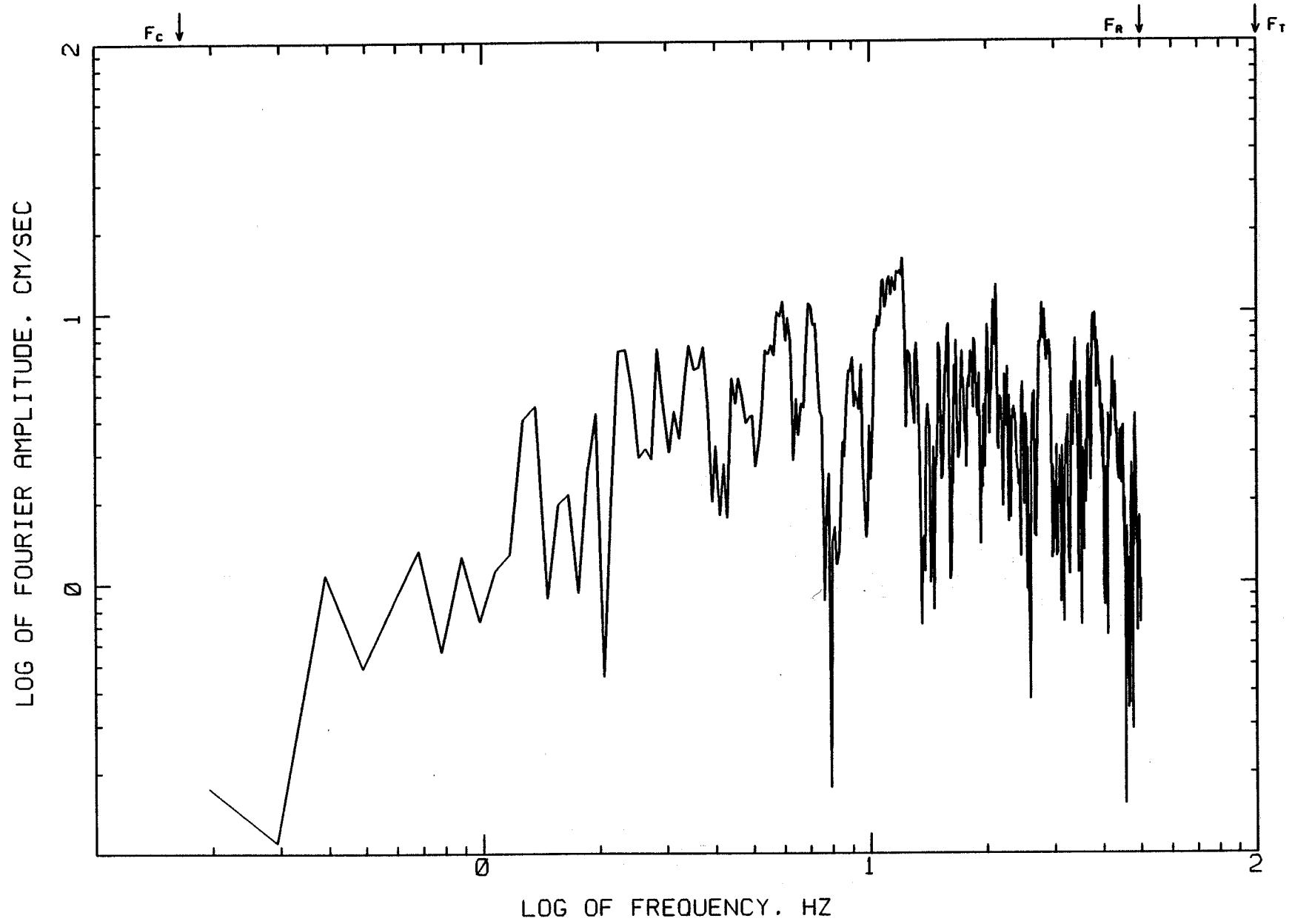

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
330 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
2
1
0
0
1
2

Fig. 2.10.F.L

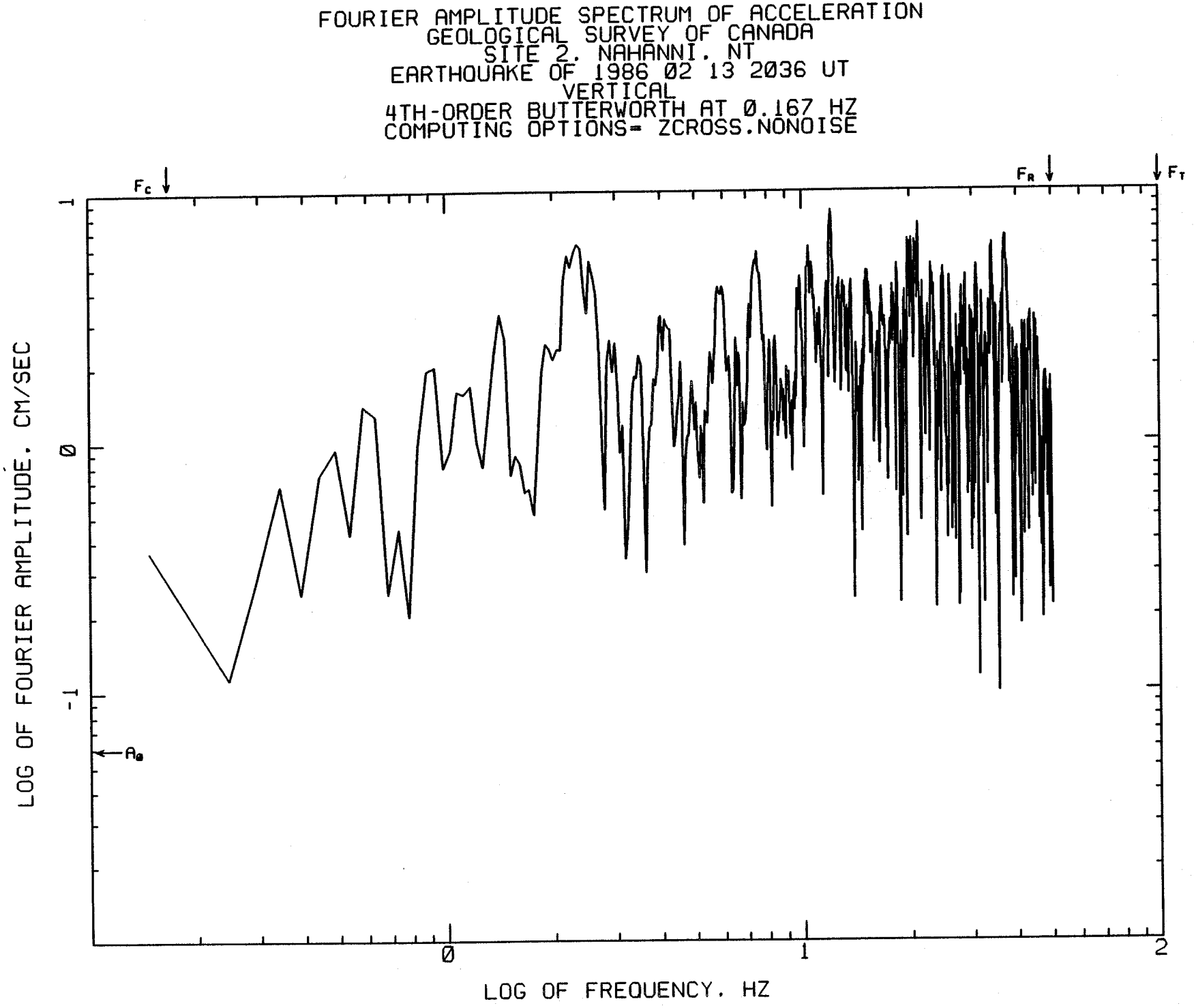

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
Aa
1
0
-1
0
1
2
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ

Fig. 2.10.F.V

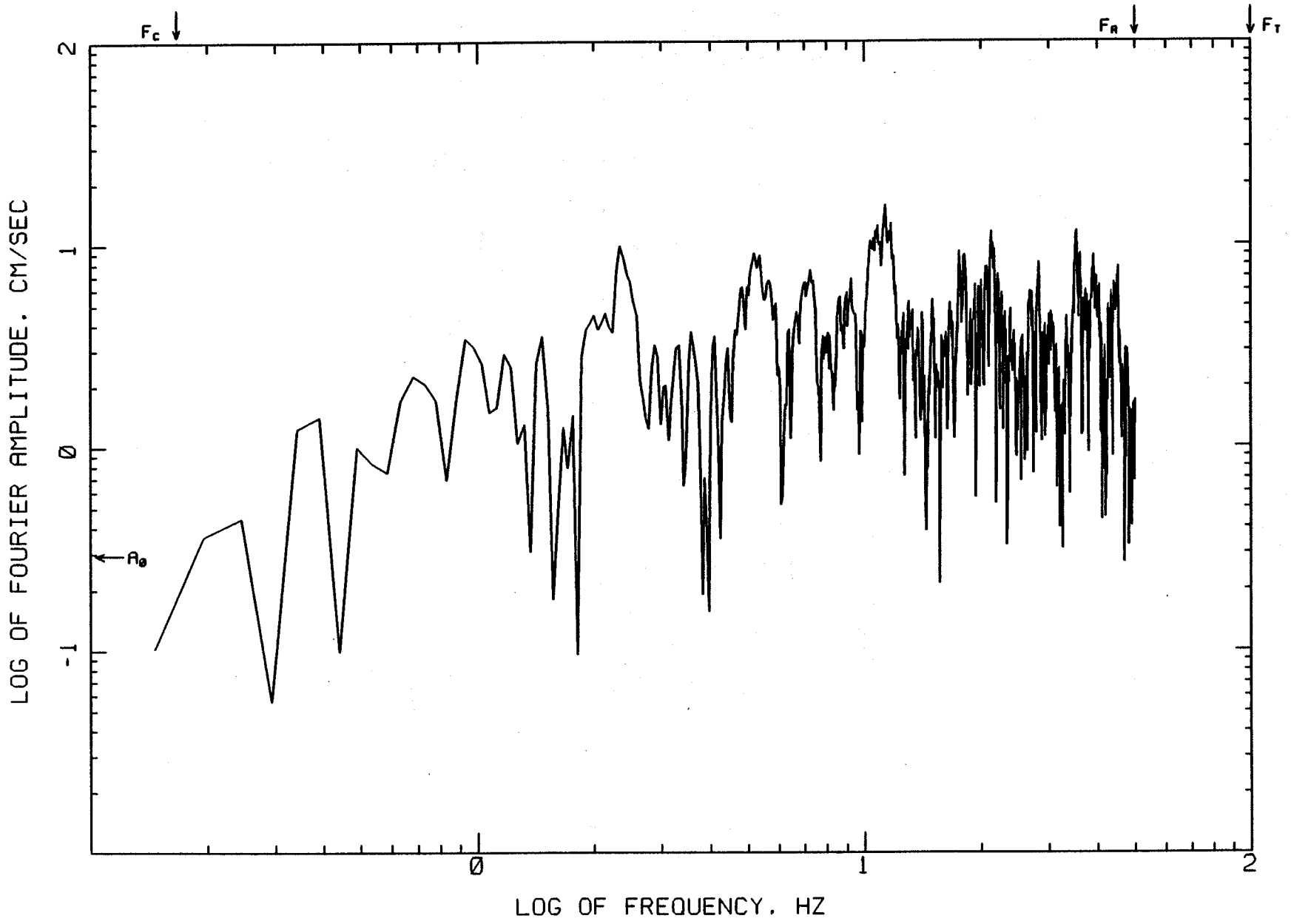

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2036 UT
240 DEGREES
4TH-ORDER BUTTERWORTH AT 0.167 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
2
1
0
-1
0
1
2

Fig. 2.10.F.T

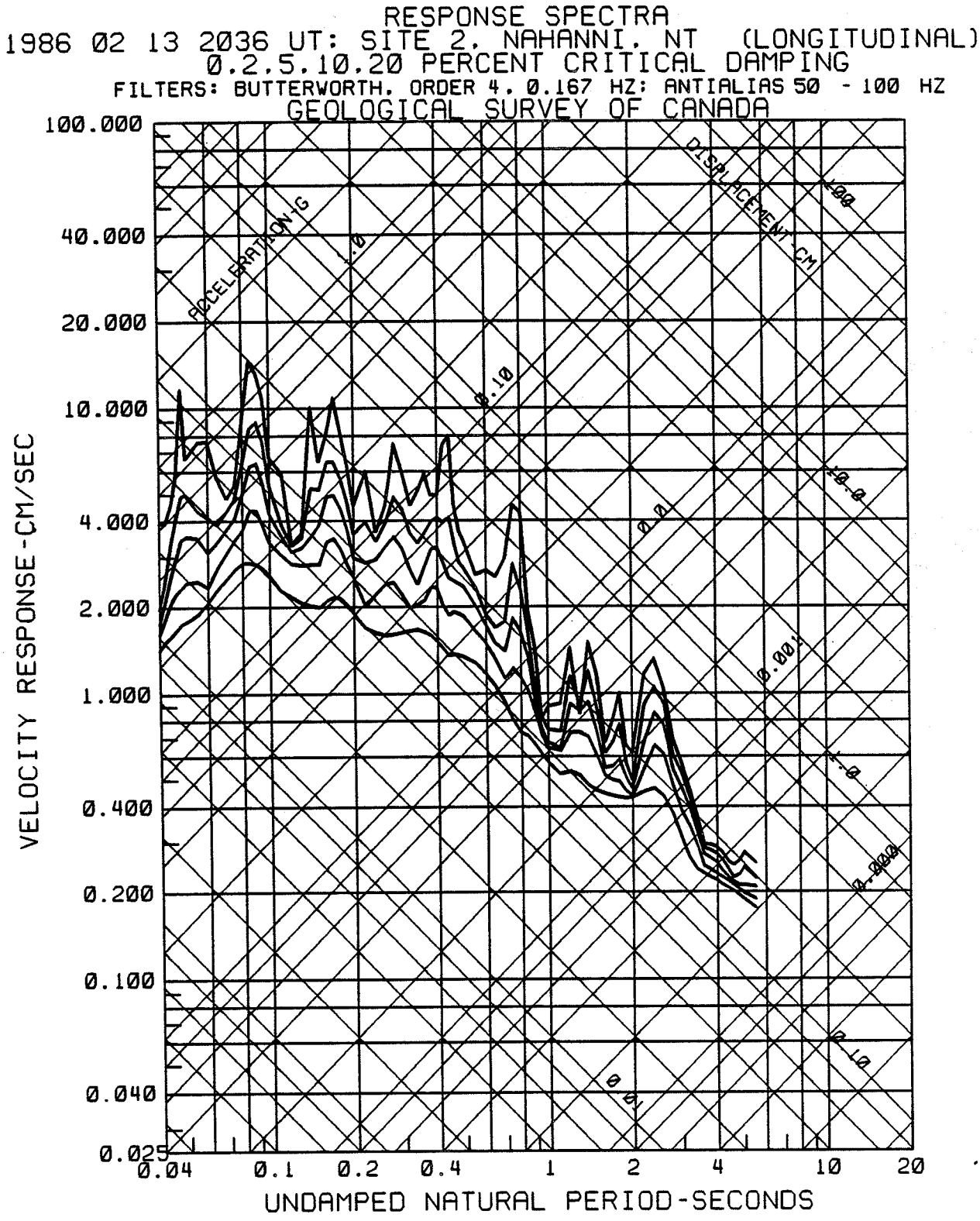

RESPONSE SPECTRA
1986 02 13 2036 UT: SITE 2. NAHANNI. NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100.000
40.000
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

Fig. 2.70.R.L

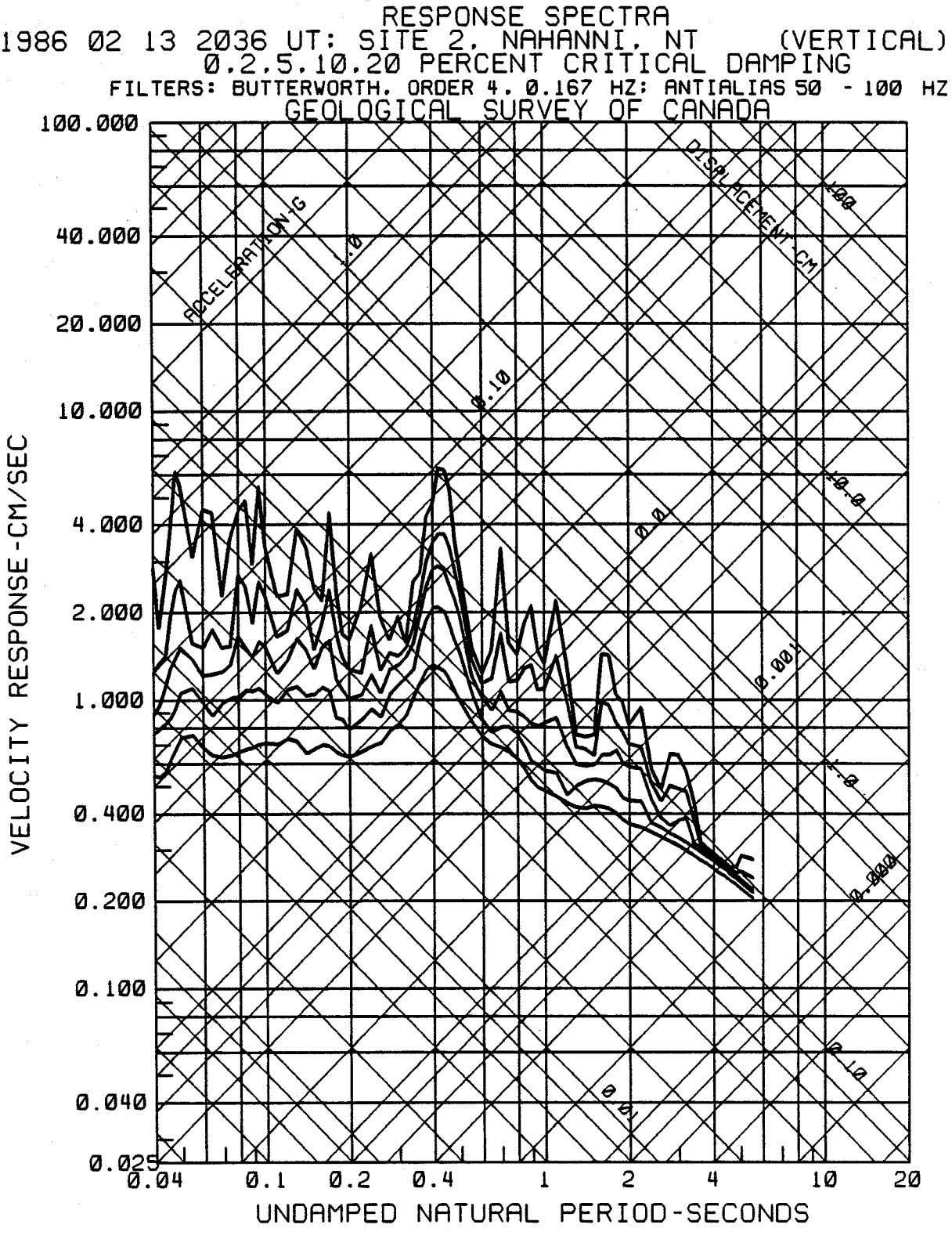

RESPONSE SPECTRA
1986 02 13 2036 UT: SITE 2, NAHANNI, NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100.000
40.000
20.000
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
1.0
0.10
0.01
0.001
100
10.0
1.0
0.100
0.10
0.01

Fig. 2.70.R.V

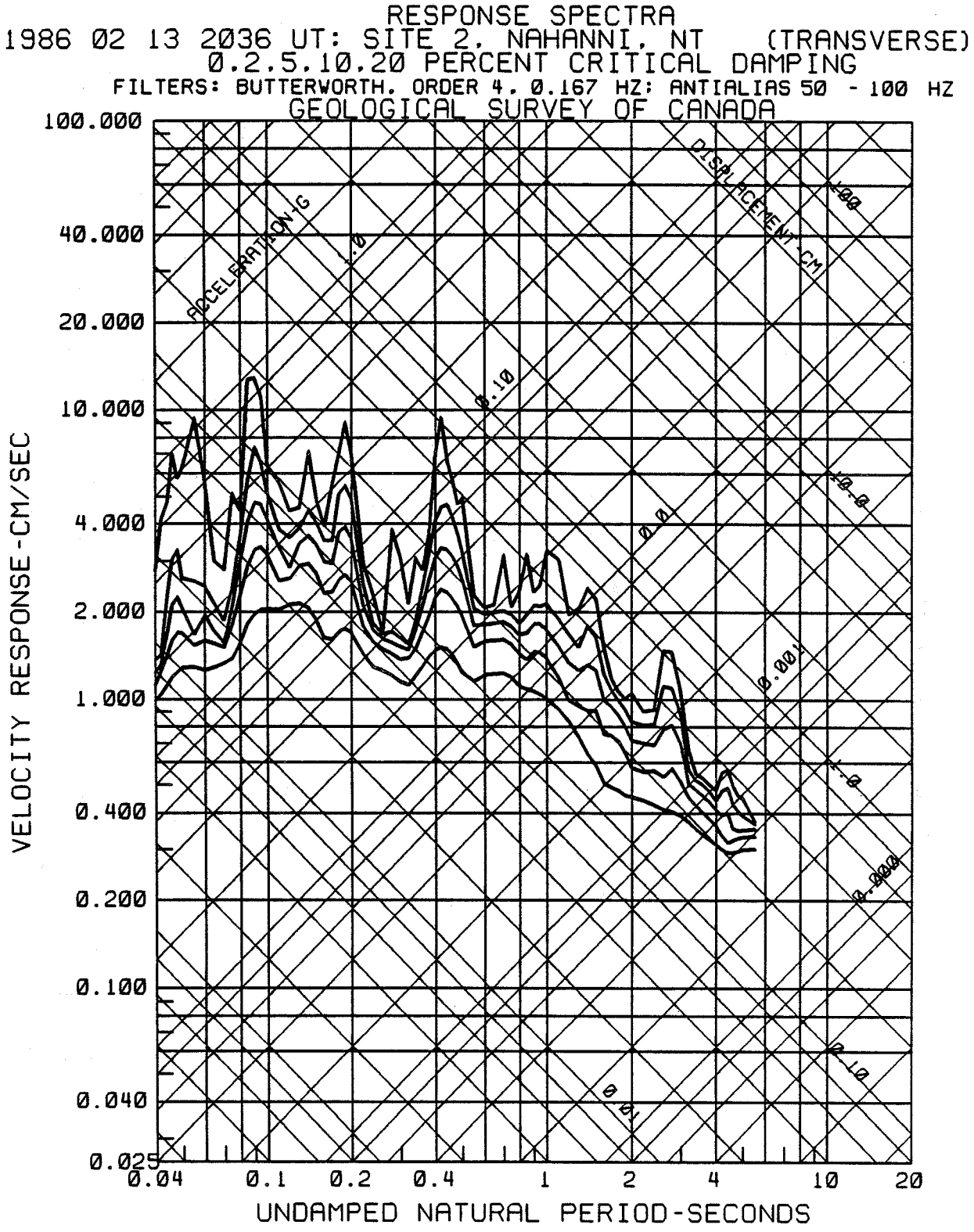

RESPONSE SPECTRA
1986 02 13 2036 UT: SITE 2, NAHANNI, NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.167 HZ; ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
100.000
40.000
20.000
10.000
4.000
2.000
1.000
0.400
0.200
0.100
0.040
0.025
0.04
0.1
0.2
0.4
1
2
4
10
20
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM

Fig. 2.70.R.T

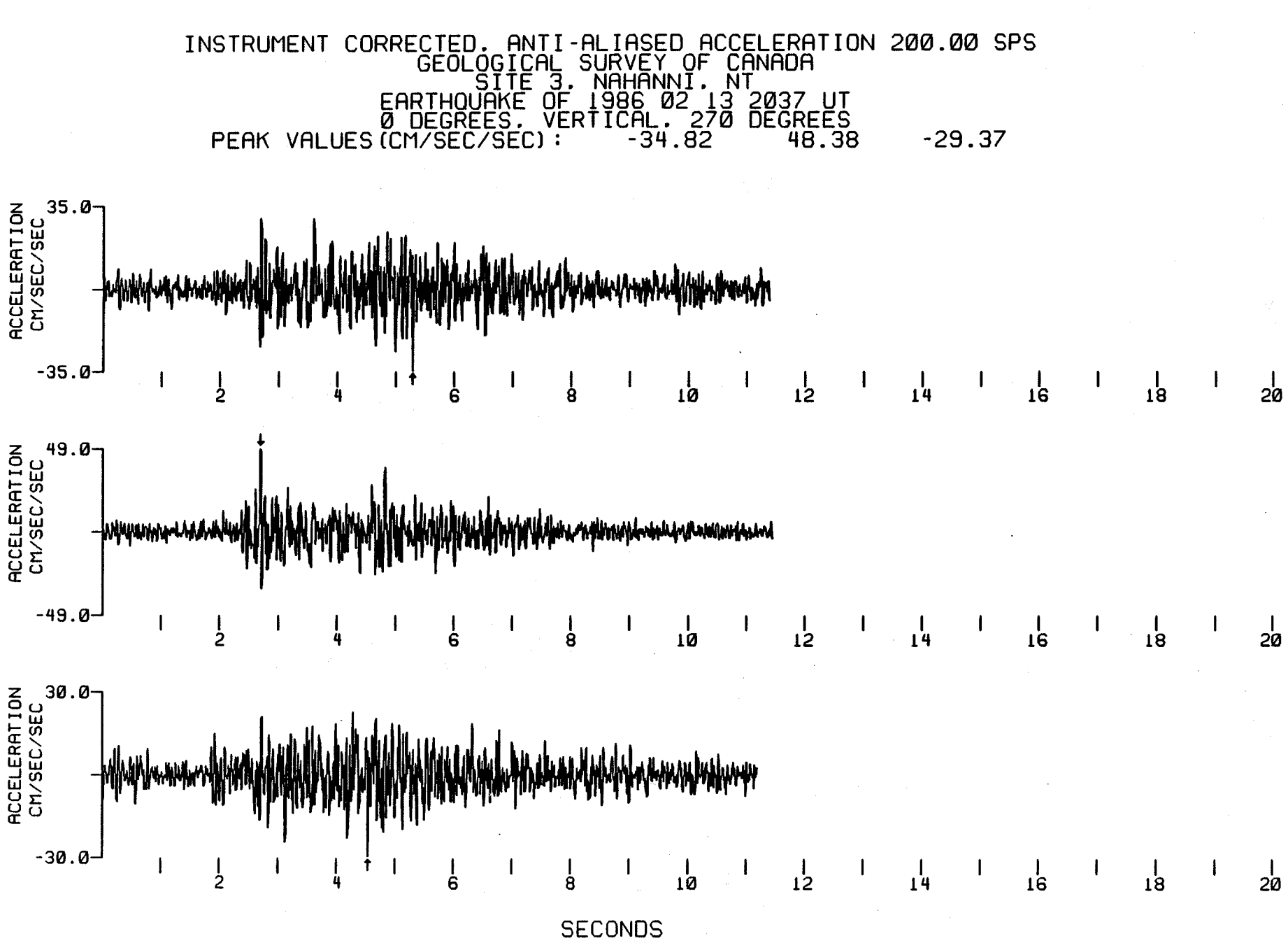

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 3. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2037 UT
0 DEGREES. VERTICAL. 270 DEGREES
PEAK VALUES(CM/SEC/SEC): -34.82 48.38 -29.37
ACCELERATION CM/SEC/SEC
35.0
-35.0
49.0
-49.0
30.0
-30.0
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 3.40

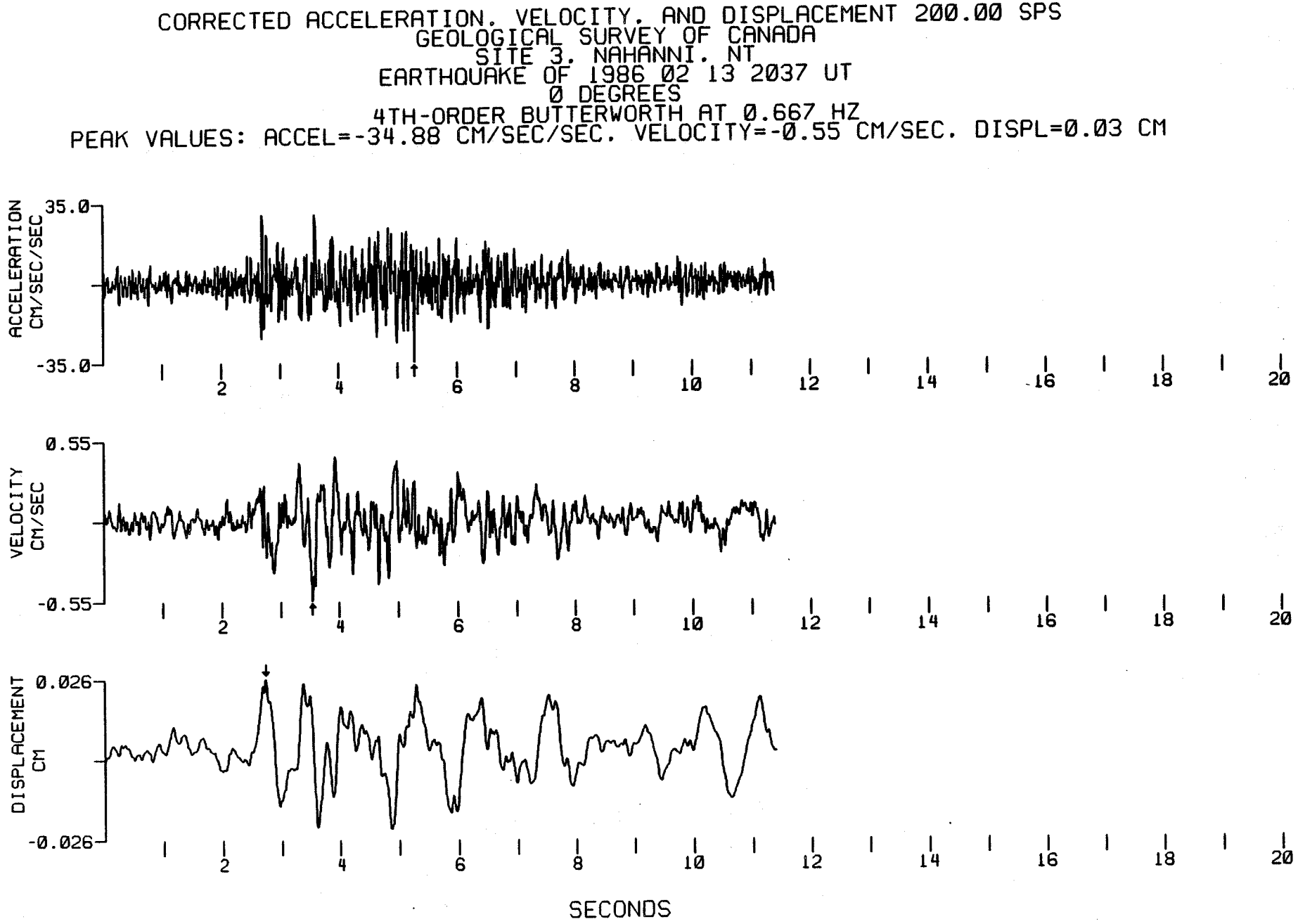

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 3. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2037 UT
0 DEGREES
4TH-ORDER BUTTERWORTH AT 0.667 HZ
PEAK VALUES: ACCEL=-34.88 CM/SEC/SEC. VELOCITY=-0.55 CM/SEC. DISPL=0.03 CM
ACCELERATION CM/SEC/SEC
35.0
-35.0
VELOCITY CM/SEC
0.55
-0.55
DISPLACEMENT CM
0.026
-0.026
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 3.10.

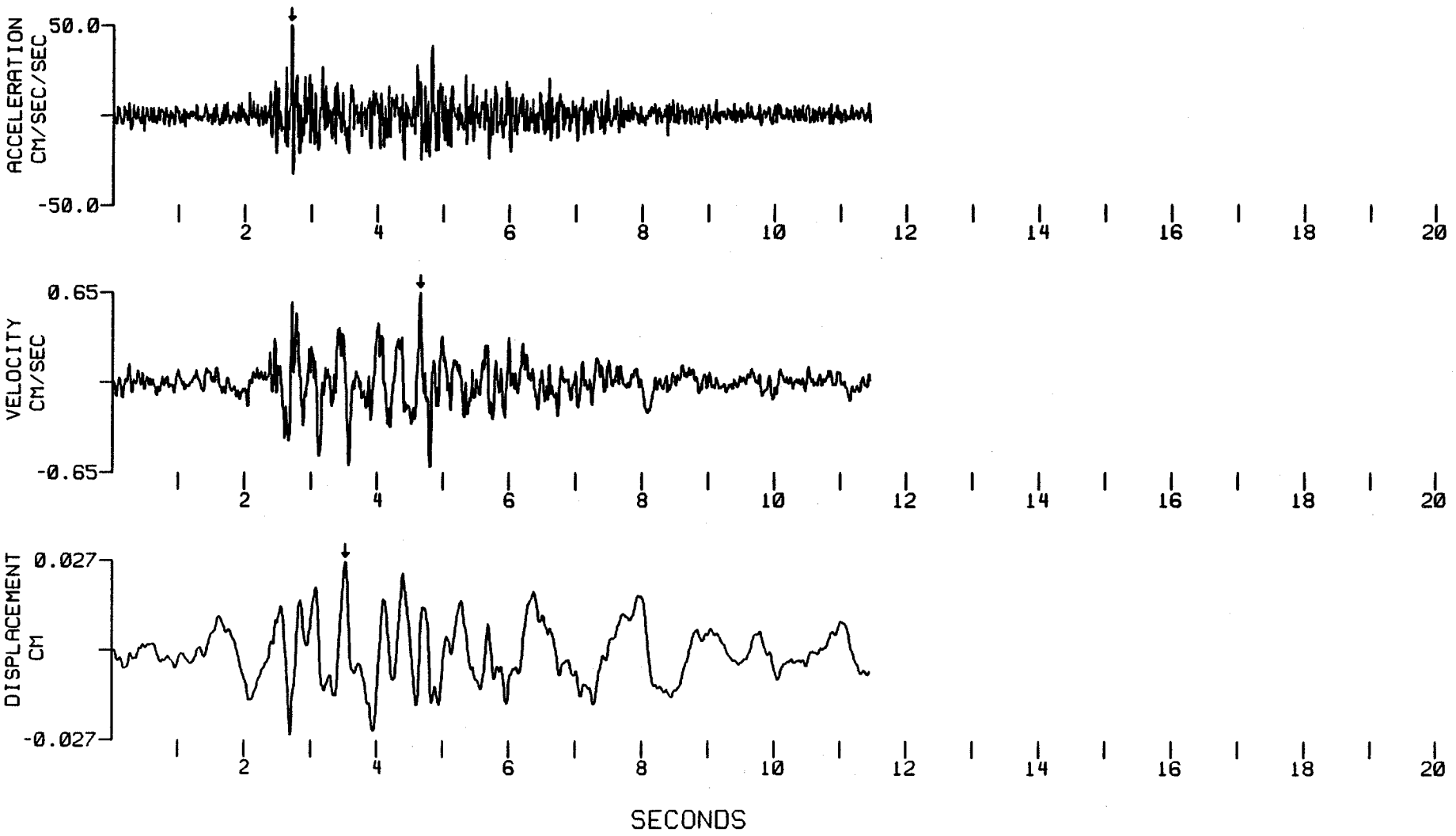

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 3. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2037 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.667 HZ
PEAK VALUES: ACCEL=49.39 CM/SEC/SEC. VELOCITY=0.65 CM/SEC. DISPL=0.03 CM
ACCELERATION CM/SEC/SEC
50.0
-50.0
VELOCITY CM/SEC
0.65
-0.65
DISPLACEMENT CM
0.027
-0.027
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 3.10.v

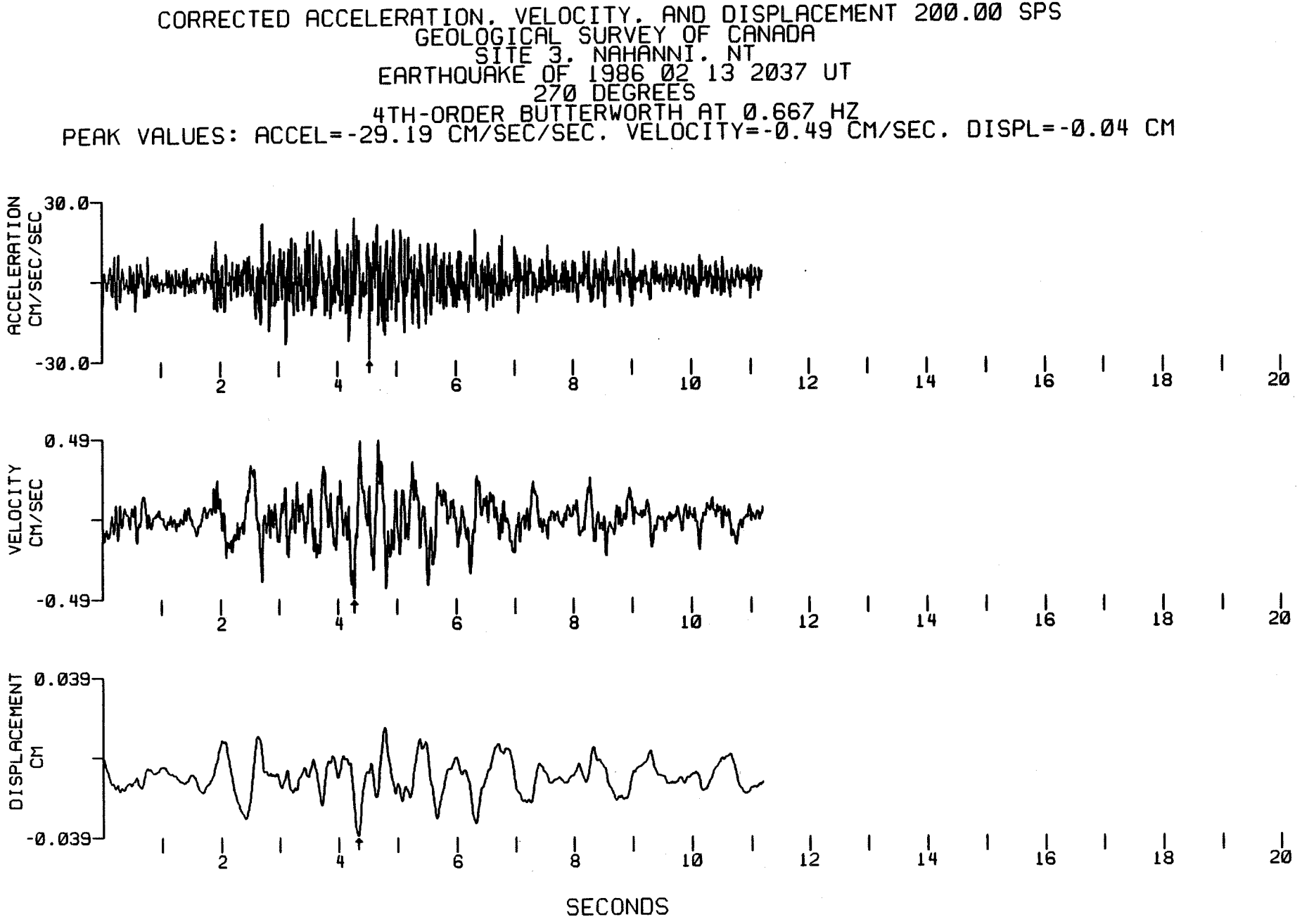

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 3. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2037 UT
270 DEGREES
4TH-ORDER BUTTERWORTH AT 0.667 HZ
PEAK VALUES: ACCEL=-29.19 CM/SEC/SEC. VELOCITY=-0.49 CM/SEC. DISPL=-0.04 CM
ACCELERATION CM/SEC/SEC
30.0
-30.0
VELOCITY CM/SEC
0.49
-0.49
DISPLACEMENT CM
0.039
-0.039
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 3.10.1

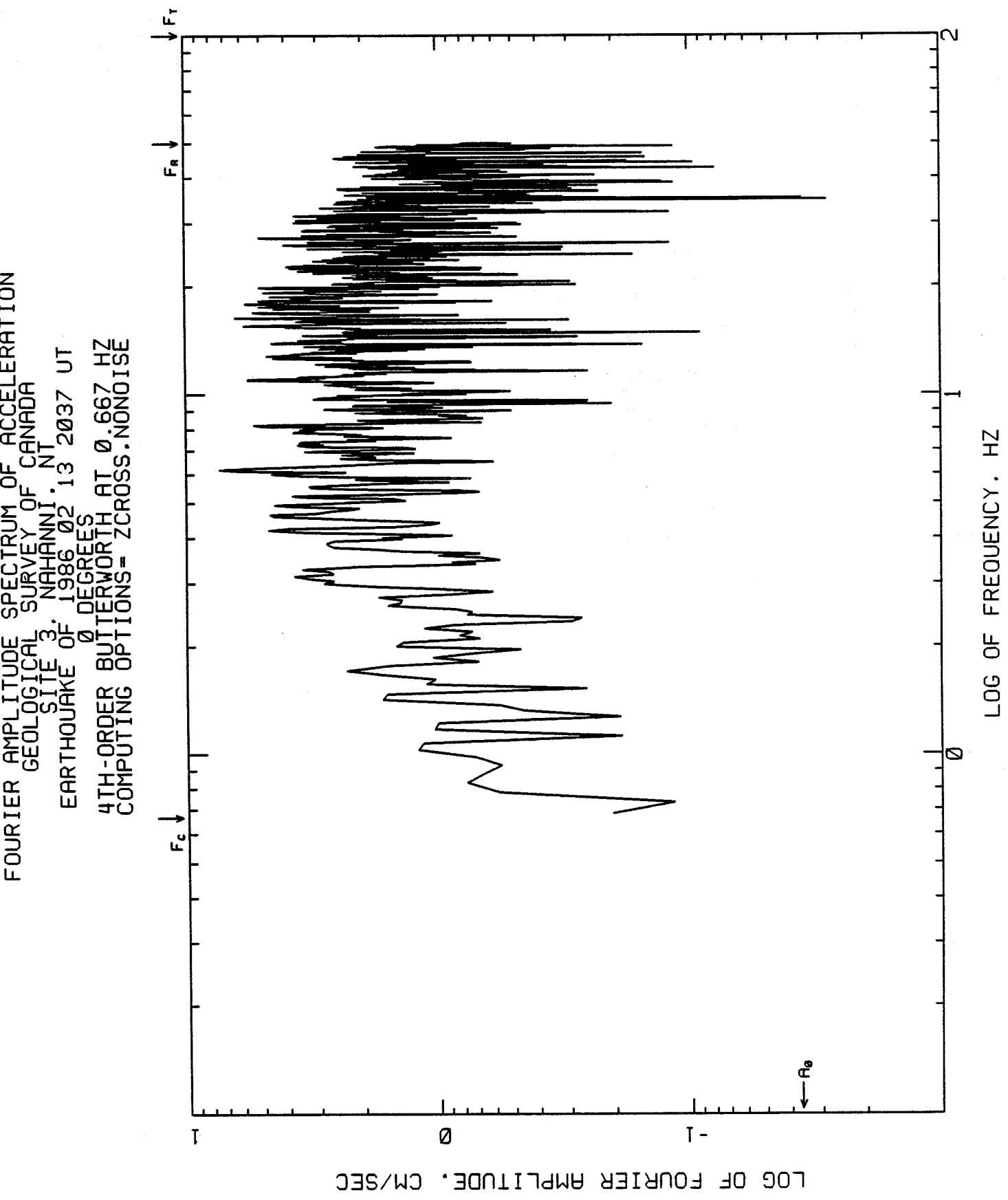

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 3, NAHANNI, NT
EARTHQUAKE OF 1986 02 13 2037 UT
0 DEGREES
4TH-ORDER BUTTERWORTH AT 0.667 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
Fc
Fa
Fr
Ao
1
0
-1
2

Fig. 3.70.F.L

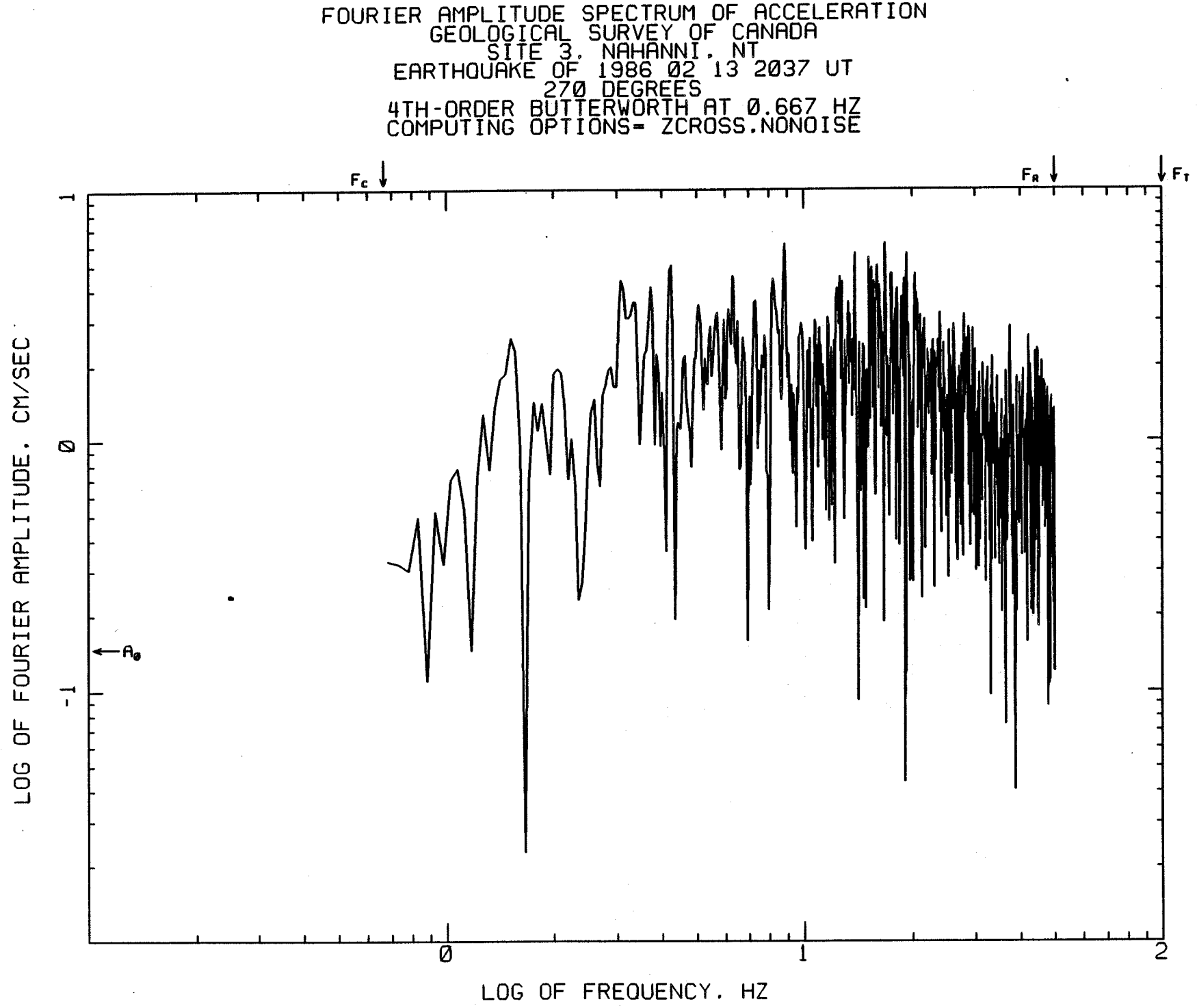

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 3. NAHANNI. NT
EARTHQUAKE OF 1986 02 13 2037 UT
270 DEGREES
4TH-ORDER BUTTERWORTH AT 0.667 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
1
0
-1
A0
LOG OF FOURIER AMPLITUDE. CM/SEC
0
1
2
LOG OF FREQUENCY. HZ

Fig. 3.10.F.T

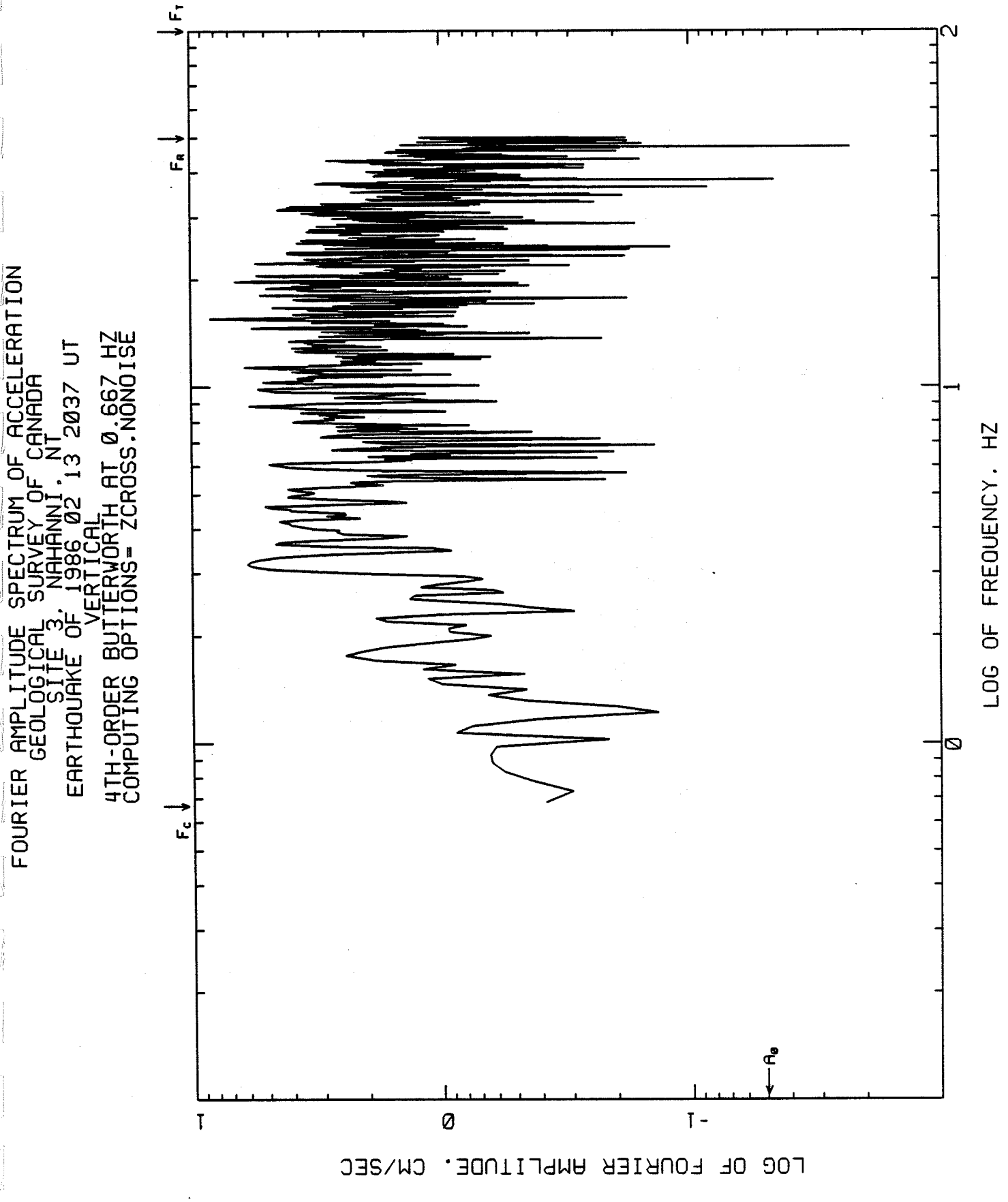

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 3, NAHANNI, NT
EARTHQUAKE OF 1986 02 13 2037 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 0.667 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
F_T
F_R
F_C
A_0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
1
0
-1
2
1
0

Fig. 3.70.F.V

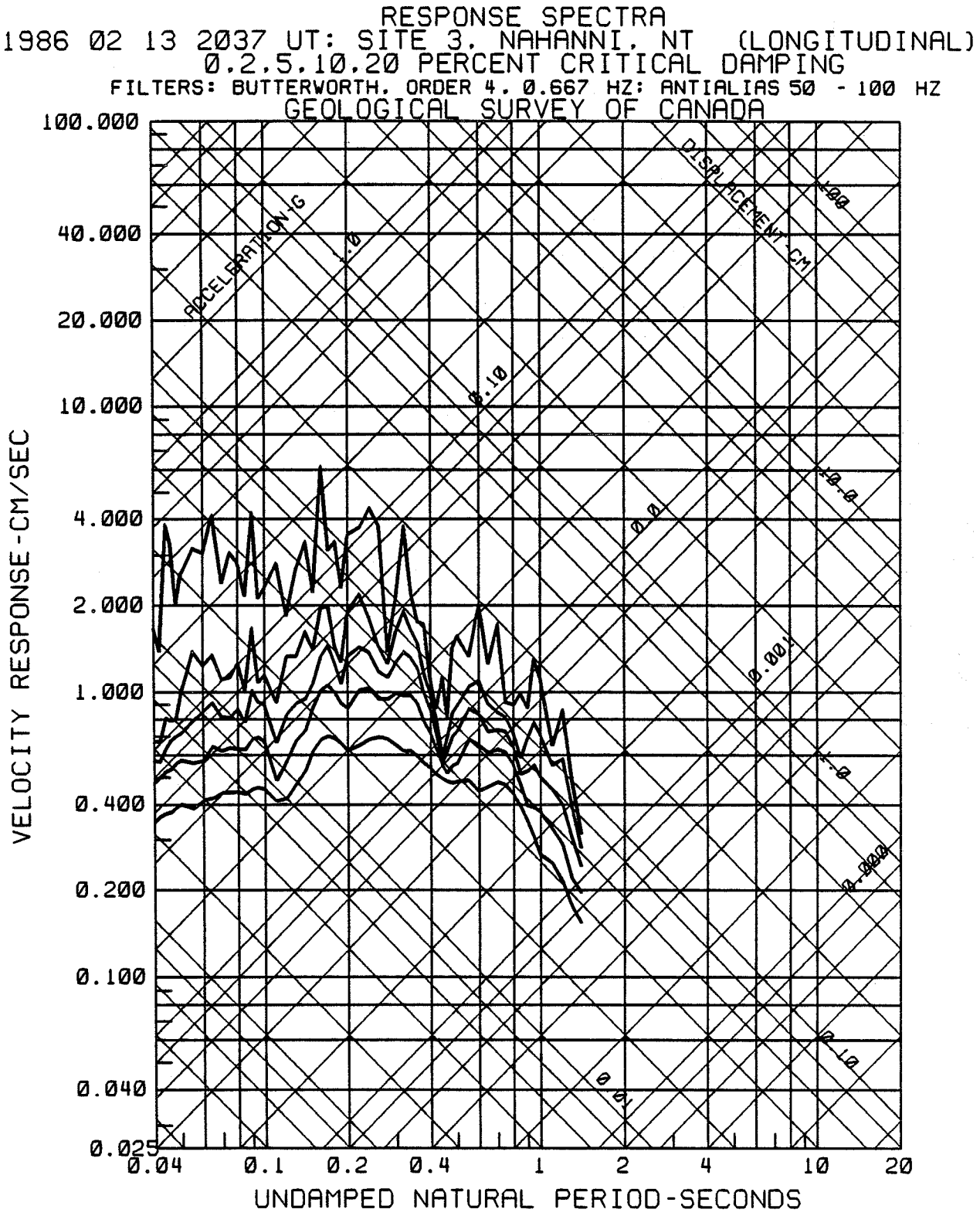

RESPONSE SPECTRA
1986 02 13 2037 UT: SITE 3. NAHANNI. NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.667 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100.000
40.000
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

Fig. 3.70.R.L

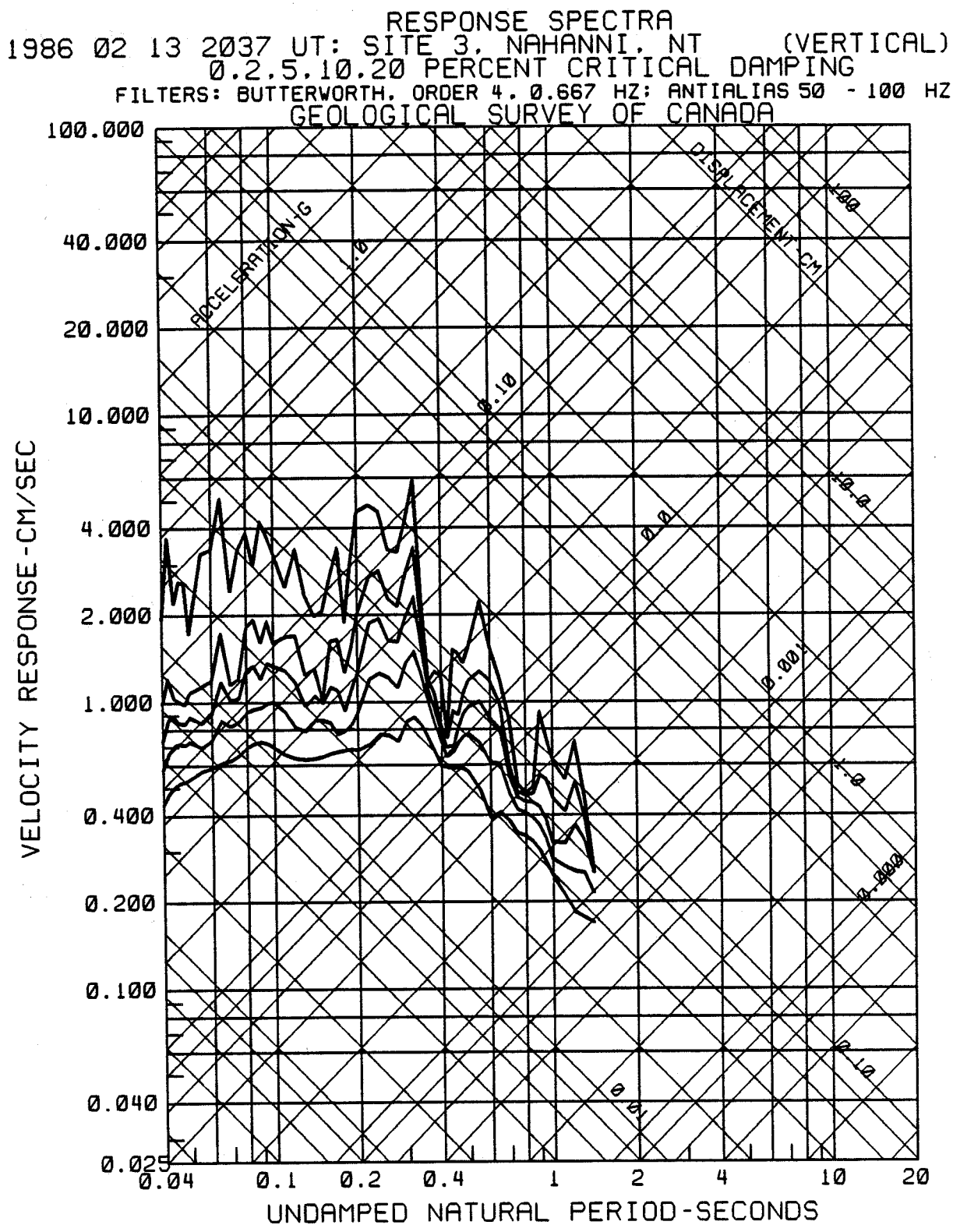

RESPONSE SPECTRA
1986 02 13 2037 UT: SITE 3, NAHANNI, NT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.667 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100.000
40.000
20.000
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

Fig. 3.70.R.V

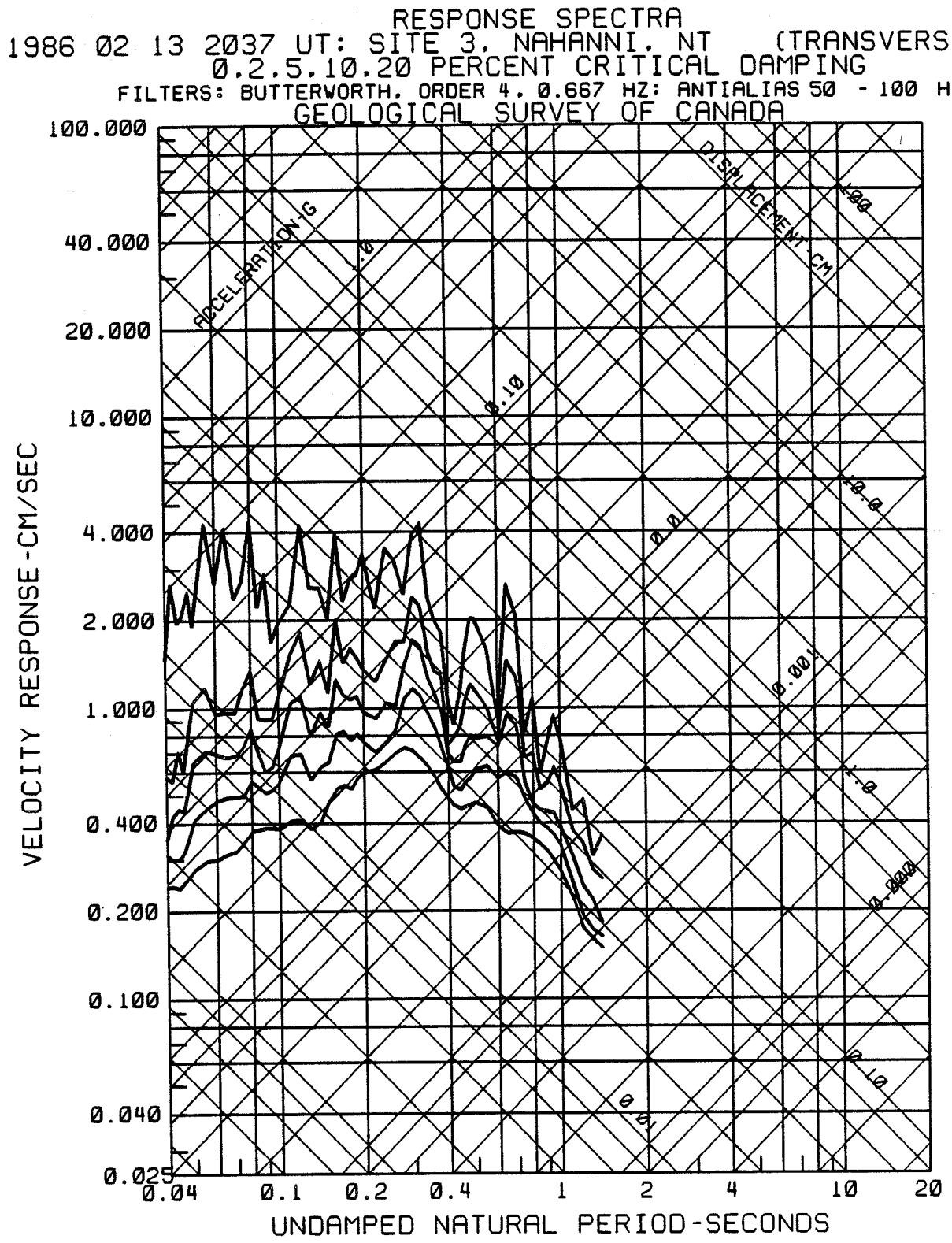

RESPONSE SPECTRA
1986 02 13 2037 UT: SITE 3, NAHANNI, NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 0.667 HZ; ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
ACCELERATION-G
DISPLACEMENT-CM
100.000
40.000
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

Fig. 3.70.R.T

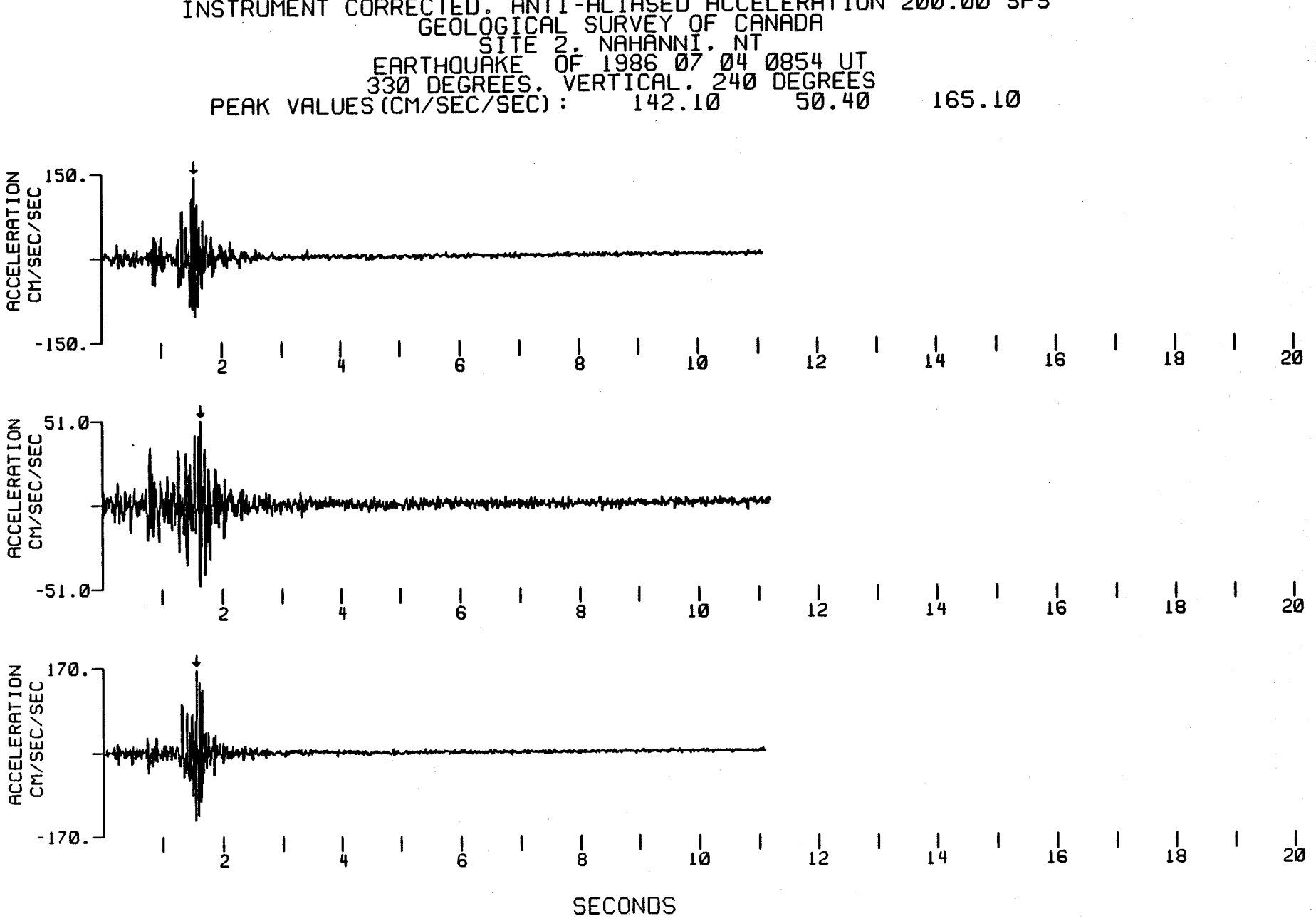

INSTRUMENT CORRECTED. ANTI-ALIASED ACCELERATION 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 07 04 0854 UT
330 DEGREES. VERTICAL. 240 DEGREES
PEAK VALUES(CM/SEC/SEC): 142.10 50.40 165.10
ACCELERATION CM/SEC/SEC
150.
-150.
51.0
-51.0
170.
-170.
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.86

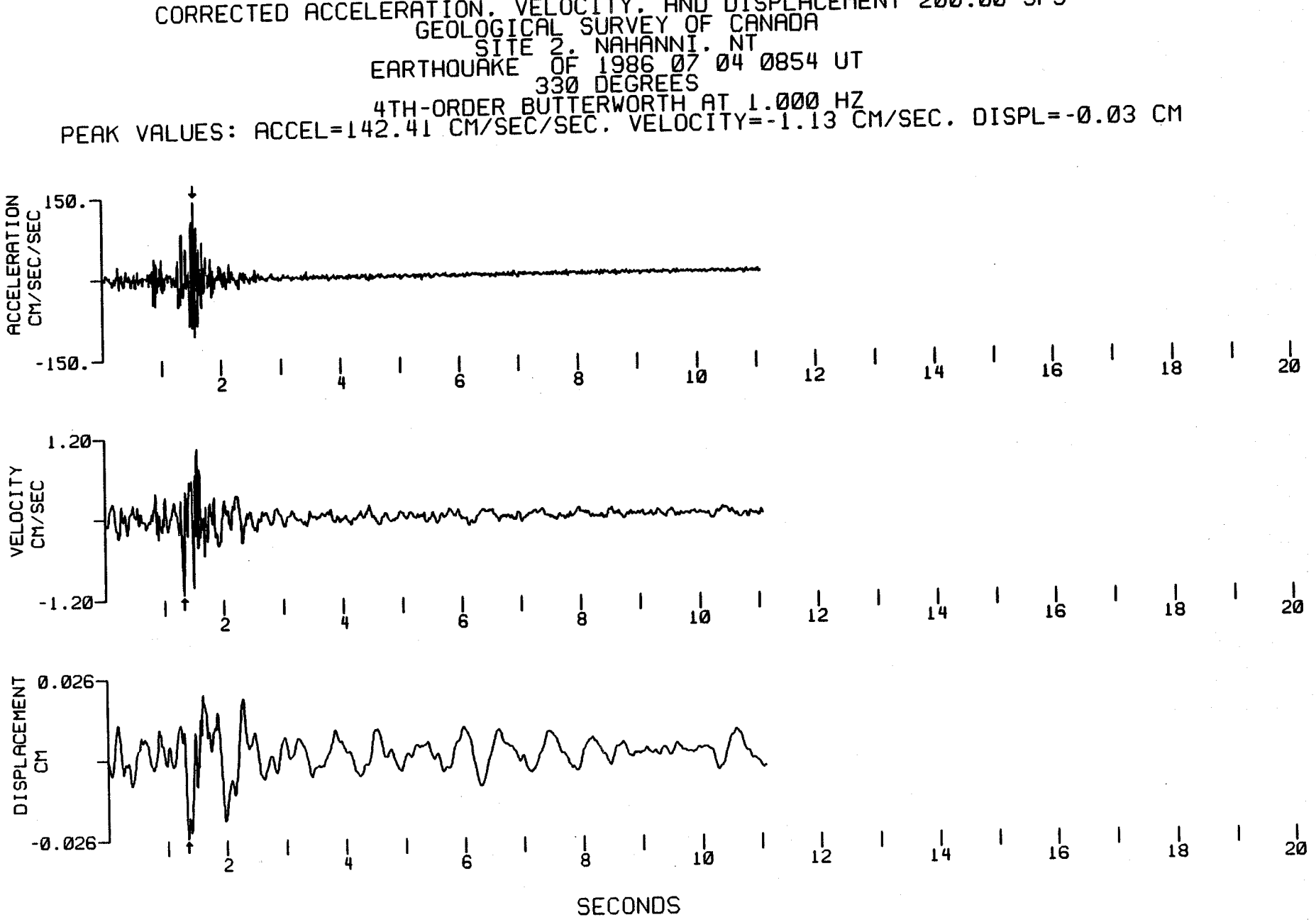

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 07 04 0854 UT
330 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
PEAK VALUES: ACCEL=142.41 CM/SEC/SEC. VELOCITY=-1.13 CM/SEC. DISPL=-0.03 CM
ACCELERATION CM/SEC/SEC
150.
-150.
VELOCITY CM/SEC
1.20
-1.20
DISPLACEMENT CM
0.026
-0.026
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.86.1

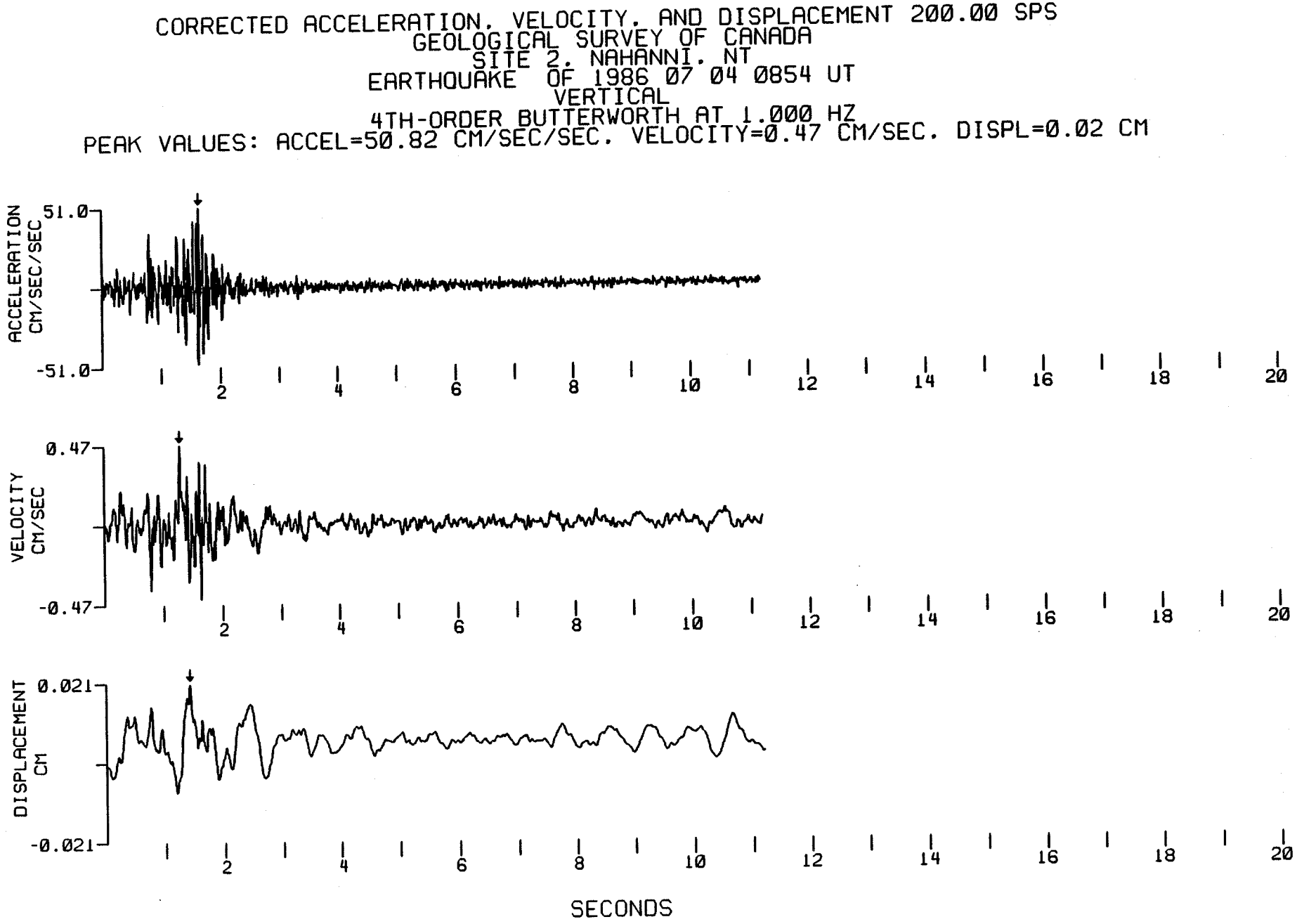

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 07 04 0854 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 1.000 HZ
PEAK VALUES: ACCEL=50.82 CM/SEC/SEC. VELOCITY=0.47 CM/SEC. DISPL=0.02 CM
ACCELERATION CM/SEC/SEC
51.0
-51.0
VELOCITY CM/SEC
0.47
-0.47
DISPLACEMENT CM
0.021
-0.021
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.86.V

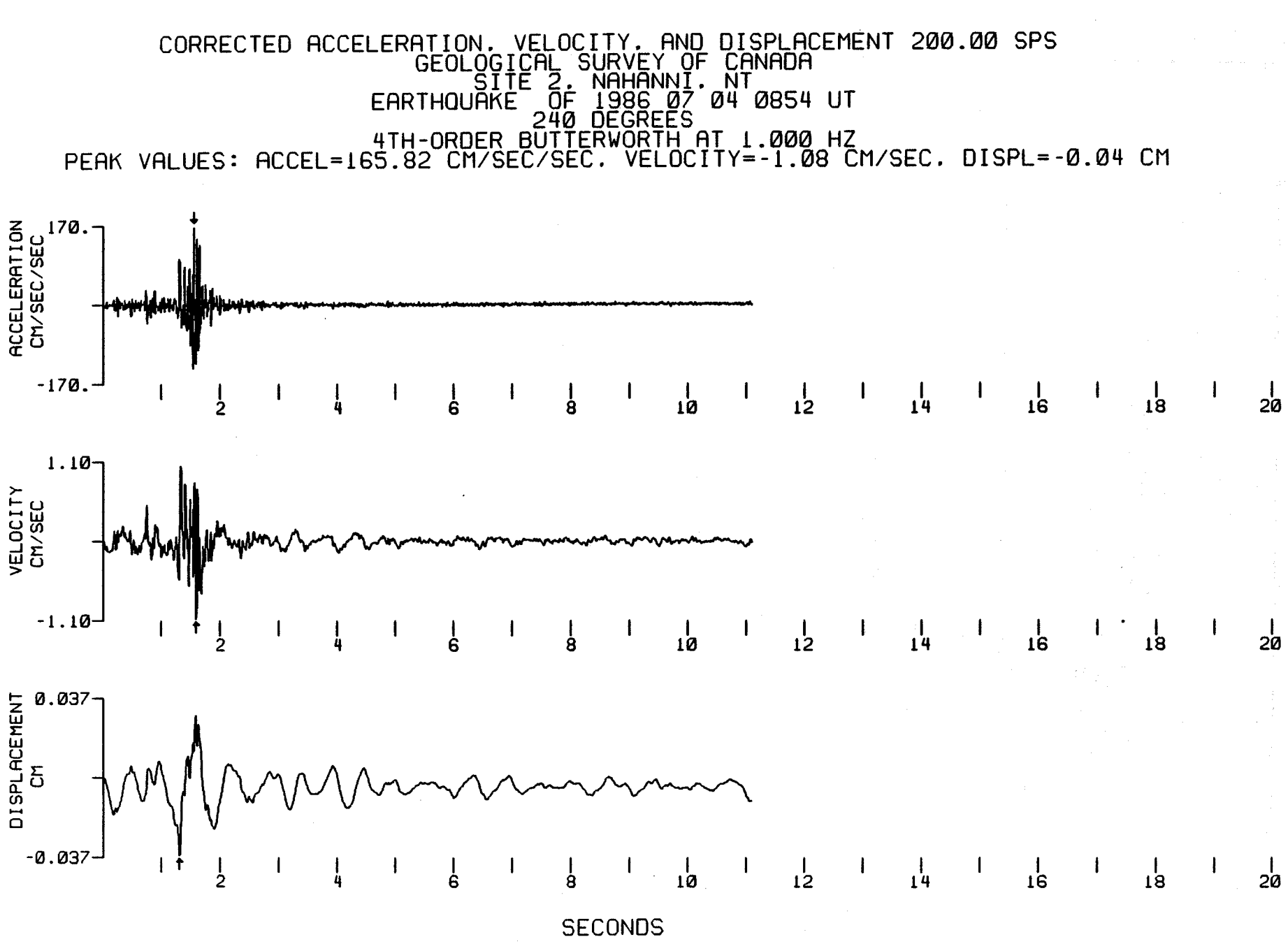

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 07 04 0854 UT
240 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
PEAK VALUES: ACCEL=165.82 CM/SEC/SEC. VELOCITY=-1.08 CM/SEC. DISPL=-0.04 CM
ACCELERATION CM/SEC/SEC
170.
-170.
VELOCITY CM/SEC
1.10
-1.10
DISPLACEMENT CM
0.037
-0.037
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.36.T

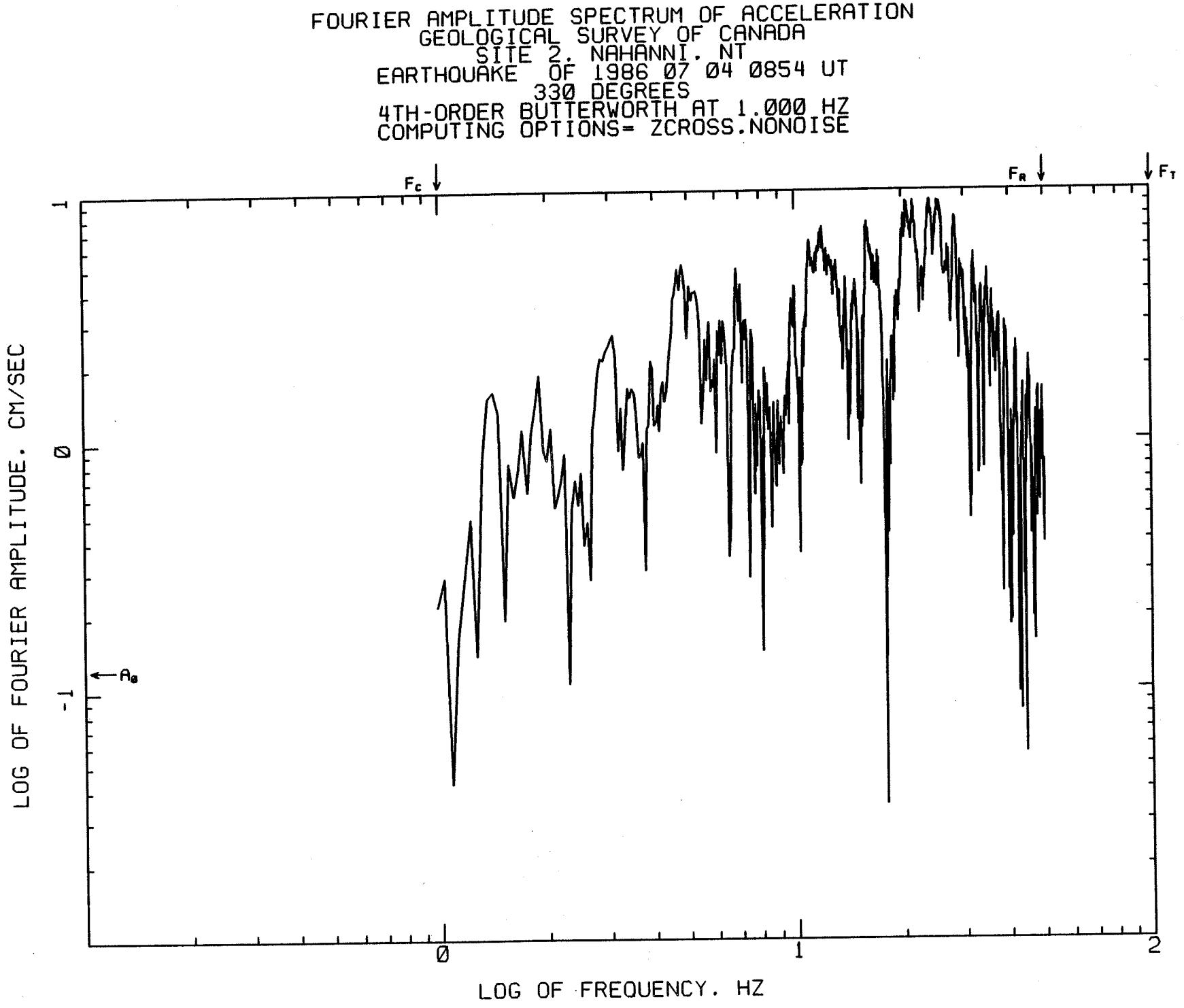

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 07 04 0854 UT
330 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
Aa
1
0
-1
0
1
2
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ

Fig. 2.86.F.L

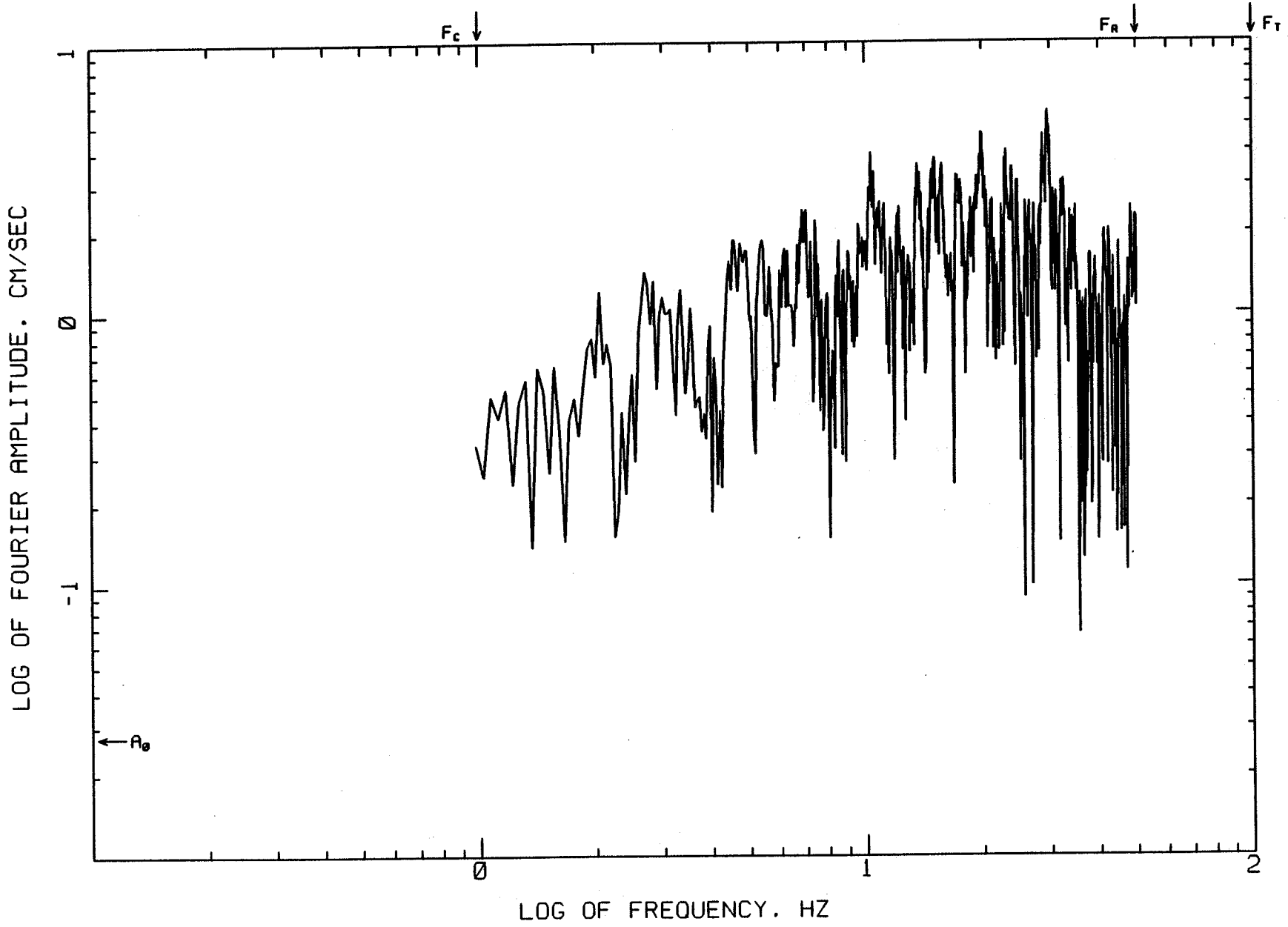

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 07 04 0854 UT
VERTICAL
4TH-ORDER BUTTERWORTH AT 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
LOG OF FOURIER AMPLITUDE. CM/SEC
1
0
-1
A0
0
1
2
LOG OF FREQUENCY. HZ

Fig. 2.86.F.V

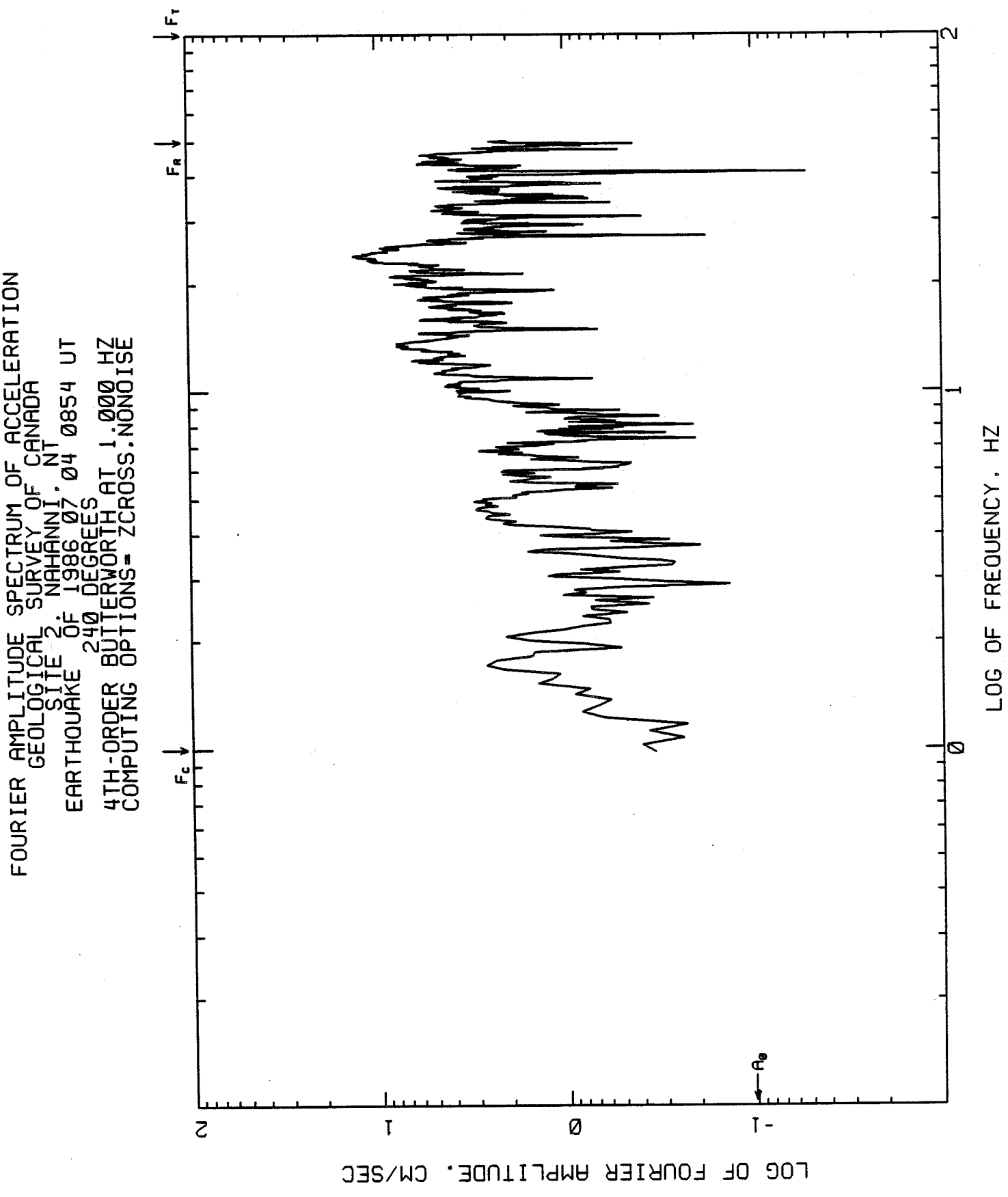

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
SITE 2. NAHANNI. NT
EARTHQUAKE OF 1986 07 04 0854 UT
240 DEGREES
4TH-ORDER BUTTERWORTH AT 1.000 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
F_T
F_R
F_C
A_0
2
1
0
-1
LOG OF FOURIER AMPLITUDE. CM/SEC
2
1
0
LOG OF FREQUENCY. HZ

Fig. 2.86.F.T

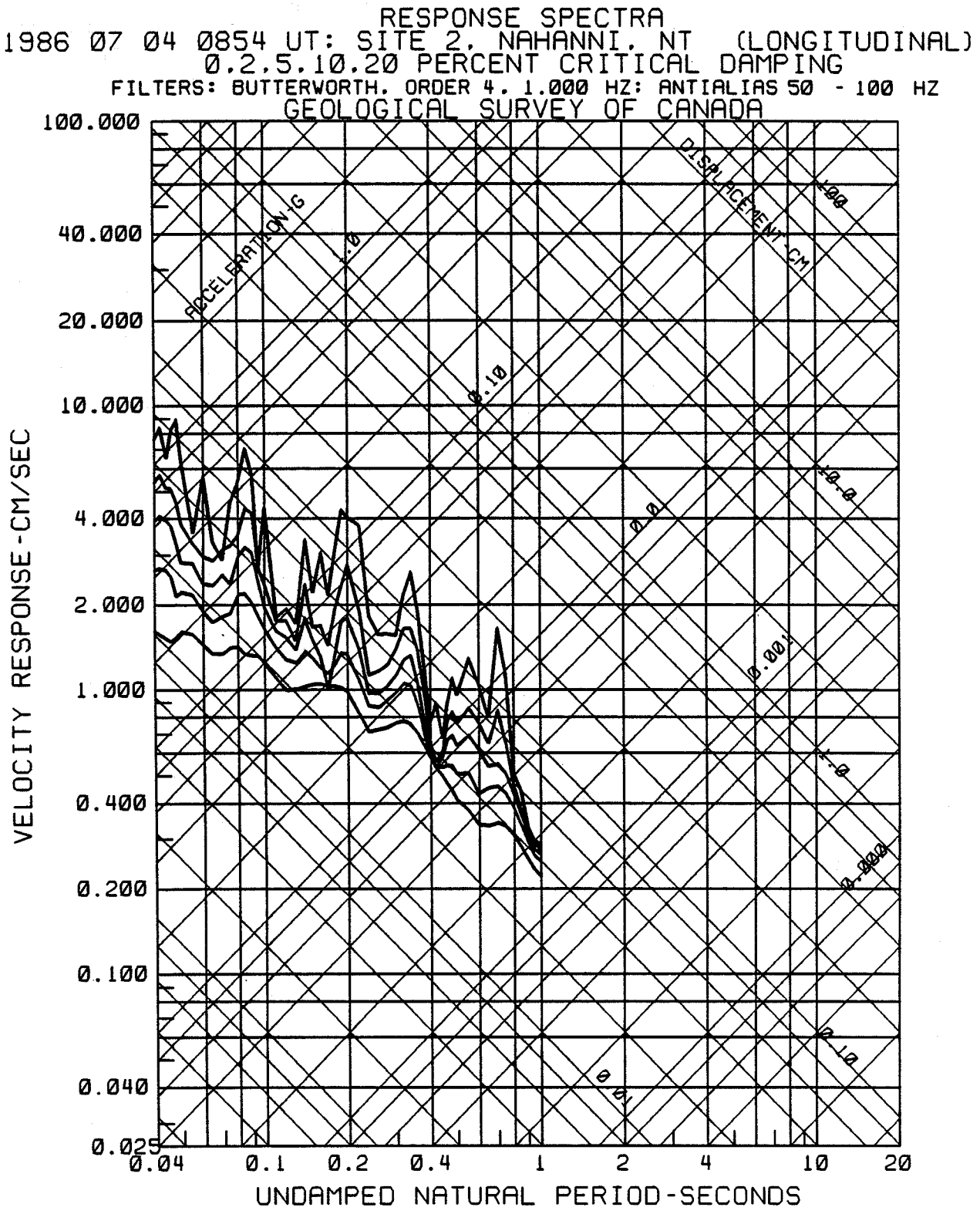

RESPONSE SPECTRA
1986 07 04 0854 UT: SITE 2. NAHANNI. NT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 1.000 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 2.86.R.L

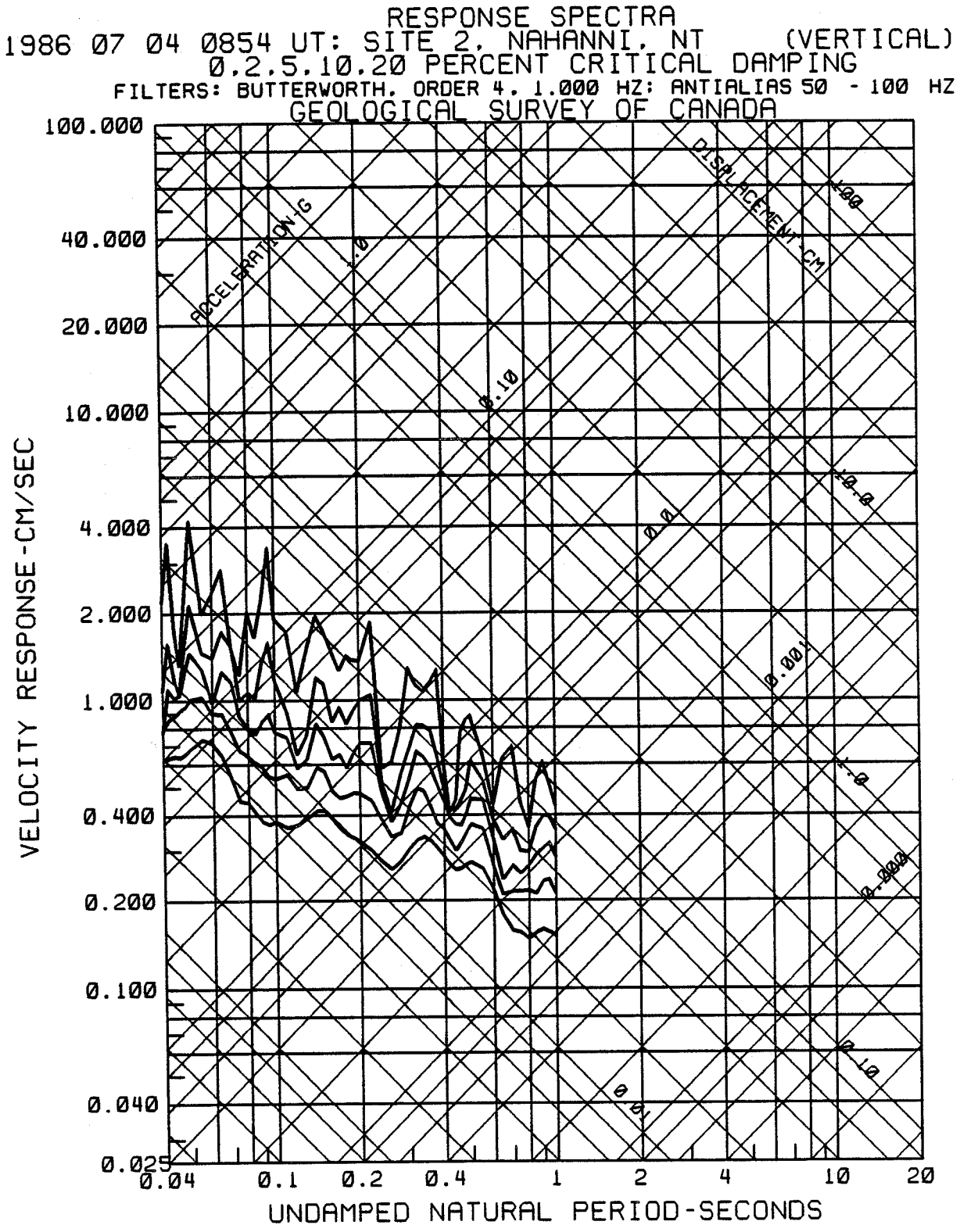

RESPONSE SPECTRA
1986 07 04 0854 UT: SITE 2, NAHANNI, NT (VERTICAL)
0,2,5,10,20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH, ORDER 4, 1.000 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
1.0
0.10
0.01
DISPLACEMENT-CM
100
10.0
1.0
0.100
0.010
VELOCITY RESPONSE-CM/SEC
100.000
40.000
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

Fig. 2.86.R.V

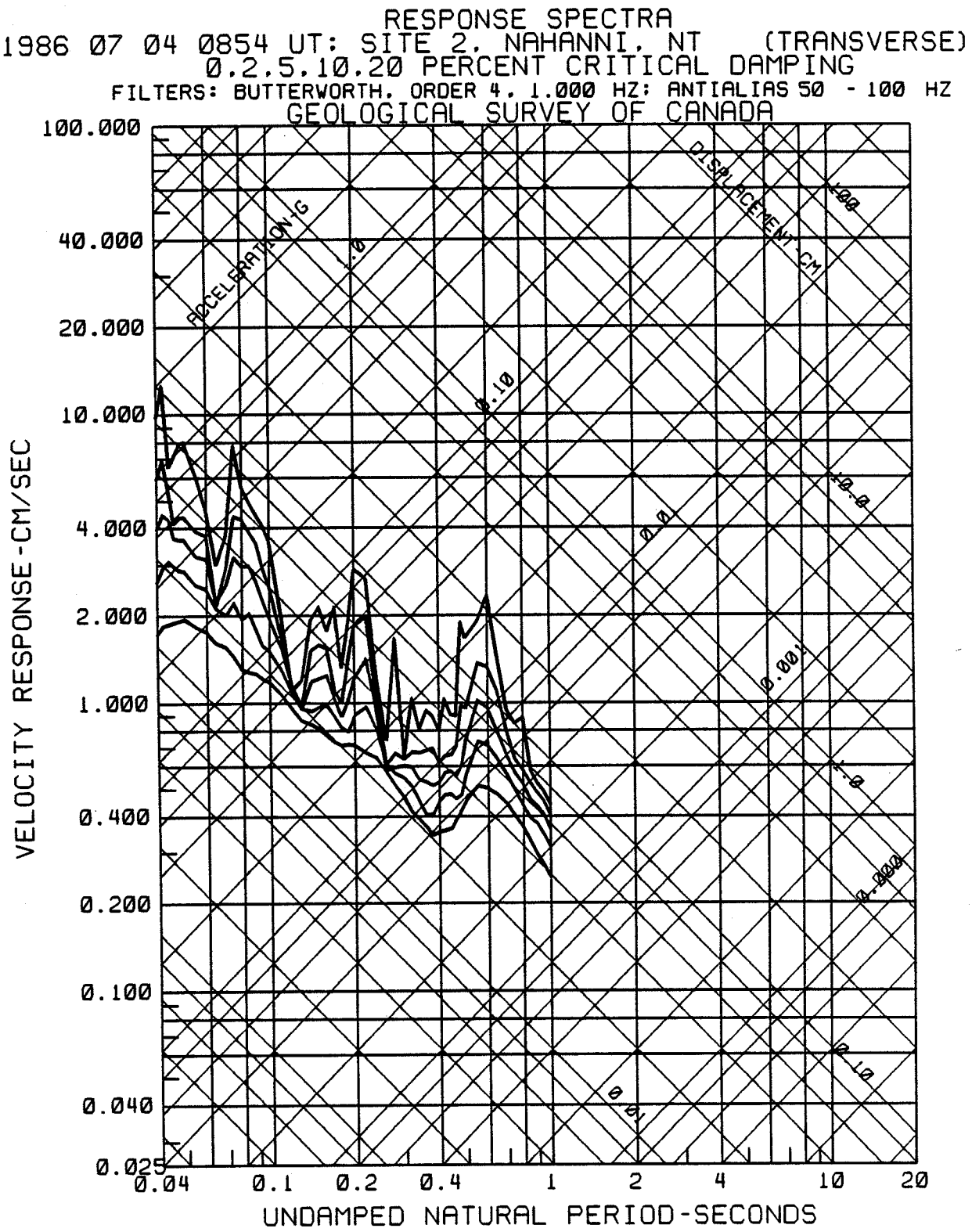

RESPONSE SPECTRA
1986 07 04 0854 UT: SITE 2. NAHANNI. NT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 1.000 HZ: ANTIALIAS 50 - 100 HZ
GEOLOGICAL SURVEY OF CANADA
ACCELERATION-G
DISPLACEMENT-CM
VELOCITY RESPONSE-CM/SEC
UNDAMPED NATURAL PERIOD-SECONDS
100.000
40.000
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

Fig. 2.86.R.T

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 25 MARCH 1988: 1937UT
SITE 5: RAZOR RIDGE. N.W.T.: AZ. = 245 DEG: DIST. = 12 KM
+L=290 DEGREES: 4-TH ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=-190.80 CM/SEC/SEC. VELOCITY=-5.80 CM/SEC. DISPL=-1.48 CM

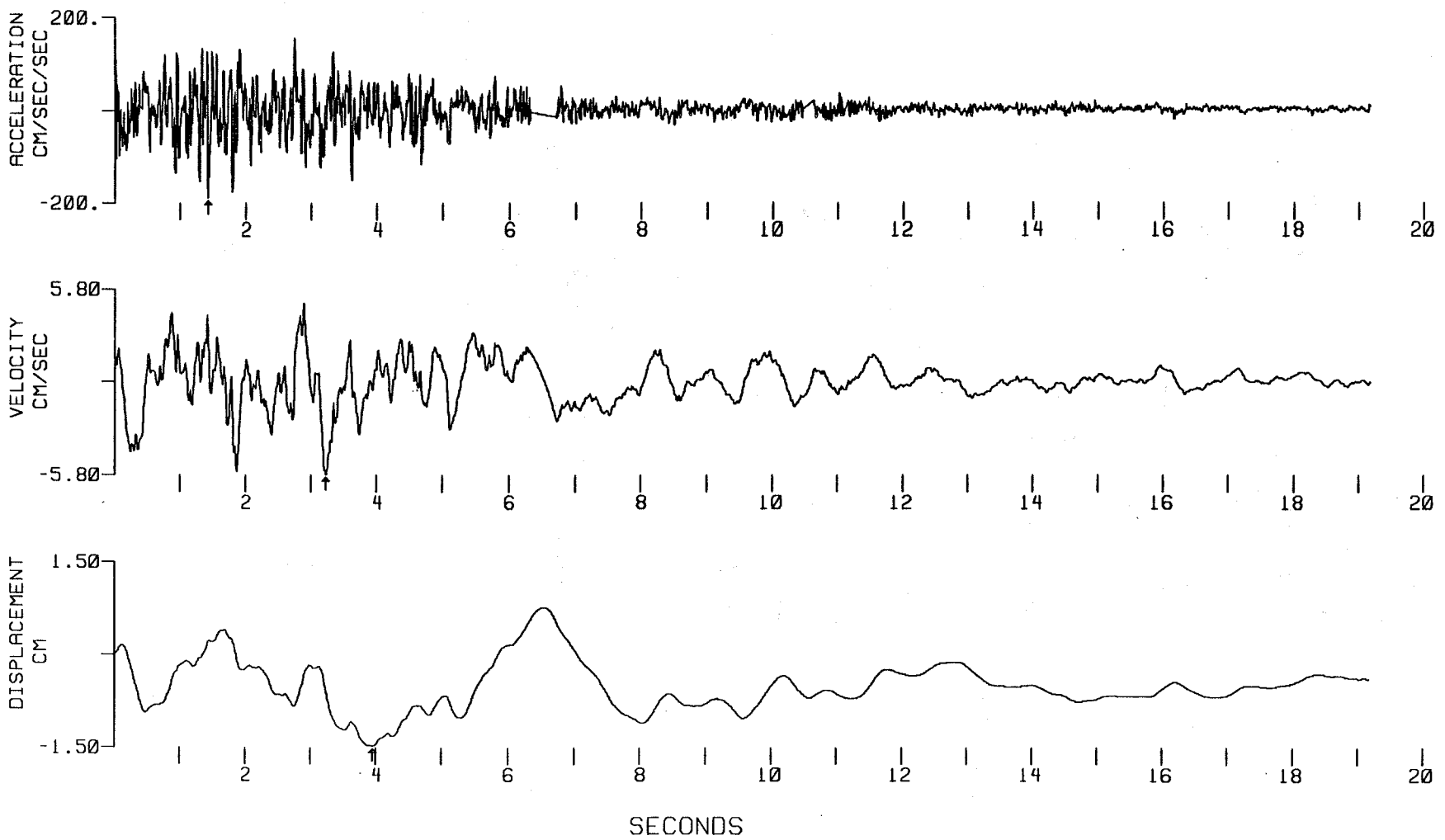


Fig. 5.99.7

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 25 MARCH 1988: 1937UT
SITE 5: RAZOR RIDGE, N.W.T.: AZ. = 245 DEG: DIST. = 12 KM
VERTICAL: 4-TH ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=-145.91 CM/SEC/SEC. VELOCITY=5.25 CM/SEC. DISPL=2.25 CM

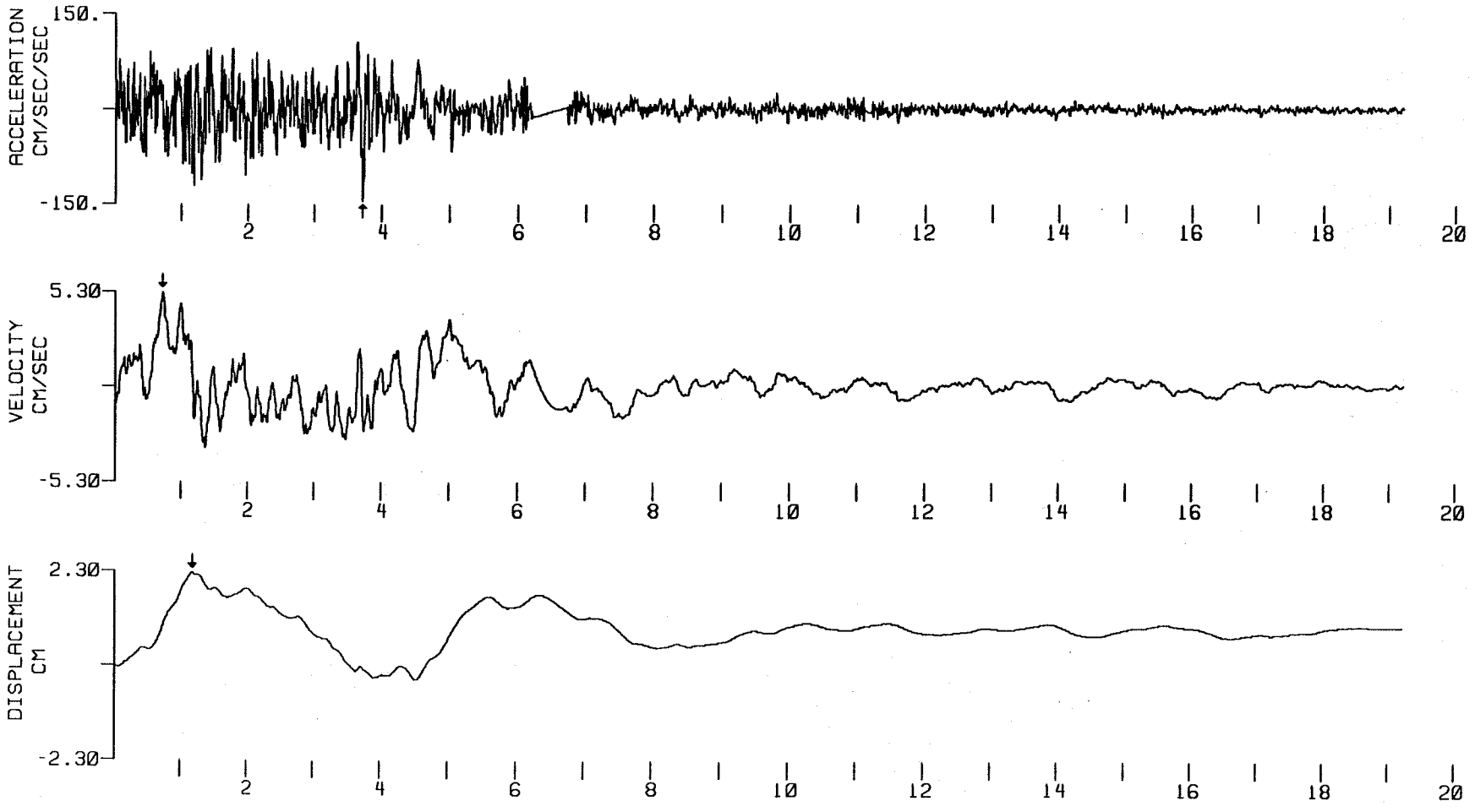


Fig. 5.99

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 25 MARCH 1988: 1937UT
SITE 5: RAZOR RIDGE. N.W.T.: AZ. = 245 DEG: DIST. = 12 KM
+T=220 DEGREES: 4-TH ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=183.98 CM/SEC/SEC. VELOCITY=-6.77 CM/SEC. DISPL=-1.54 CM

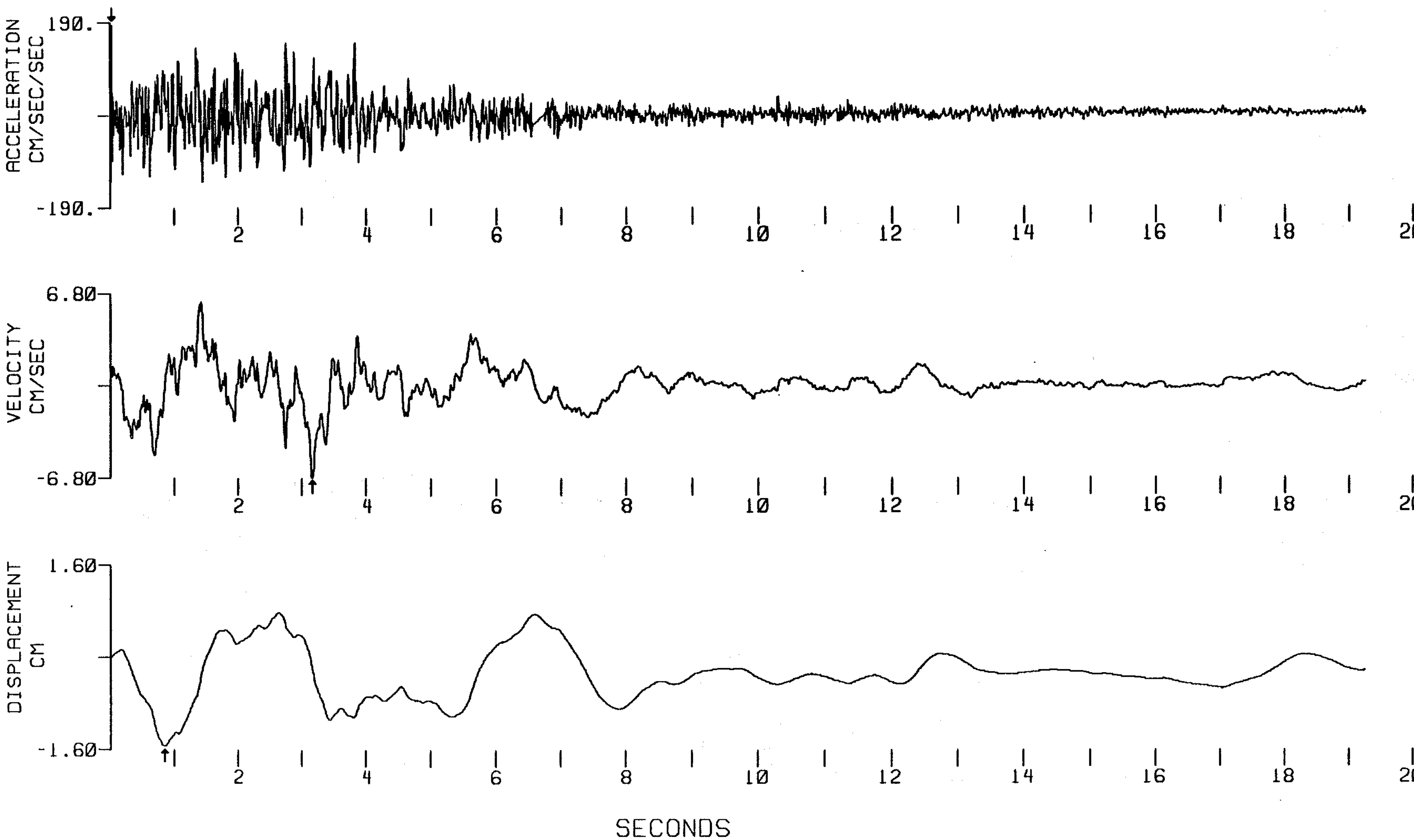


Fig5.99.T

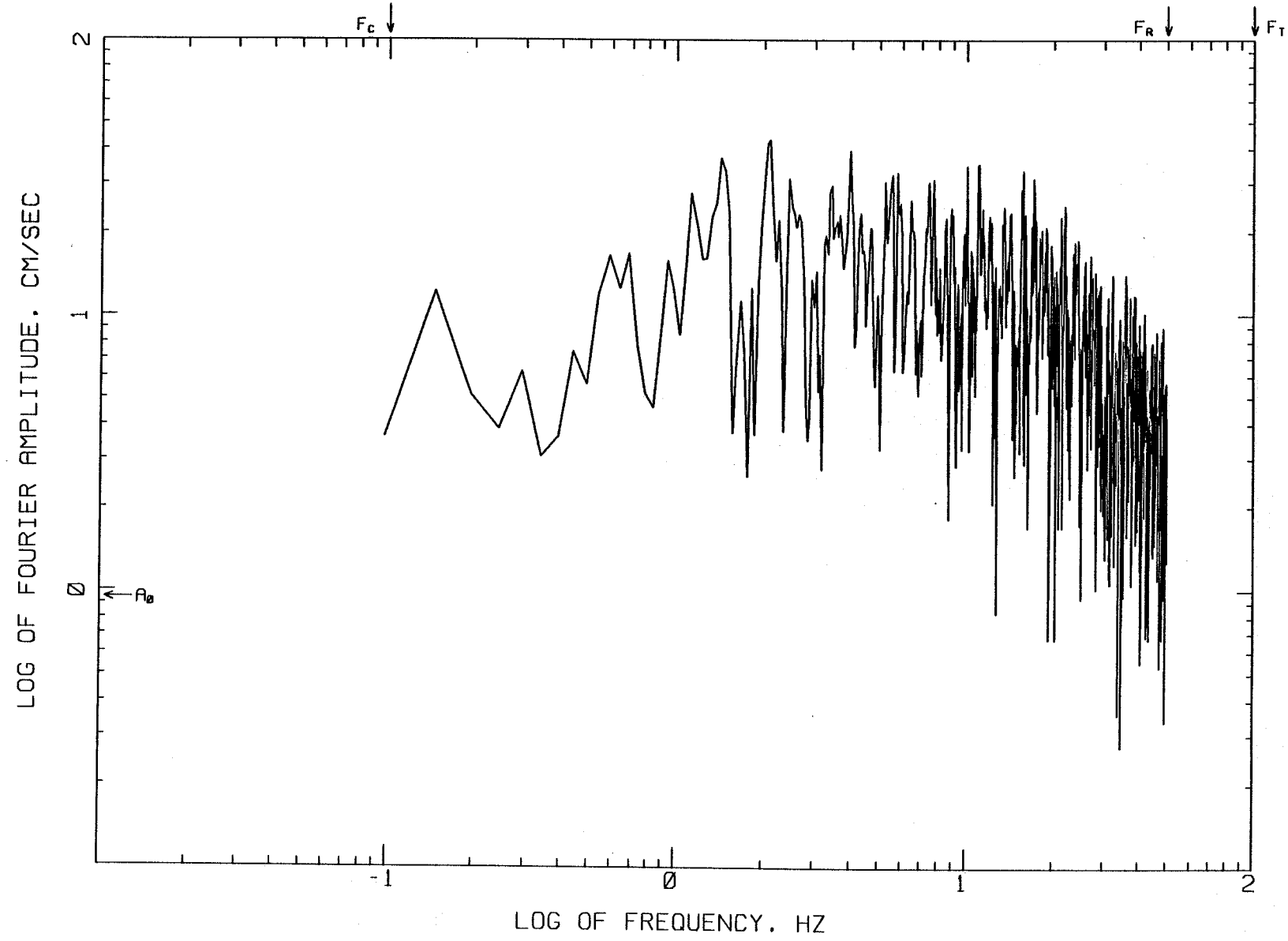

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 25 MARCH 1988: 1937UT
SITE 5: RAZOR RIDGE, N.W.T.: AZ. = 245 DEG: DIST. = 12 KM
+L=290 DEGREES: 4-TH ORDER BUTTERWORTH AT 0.100 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
A0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
2
1
0
-1
0
1
2

Fig. S.99.c.

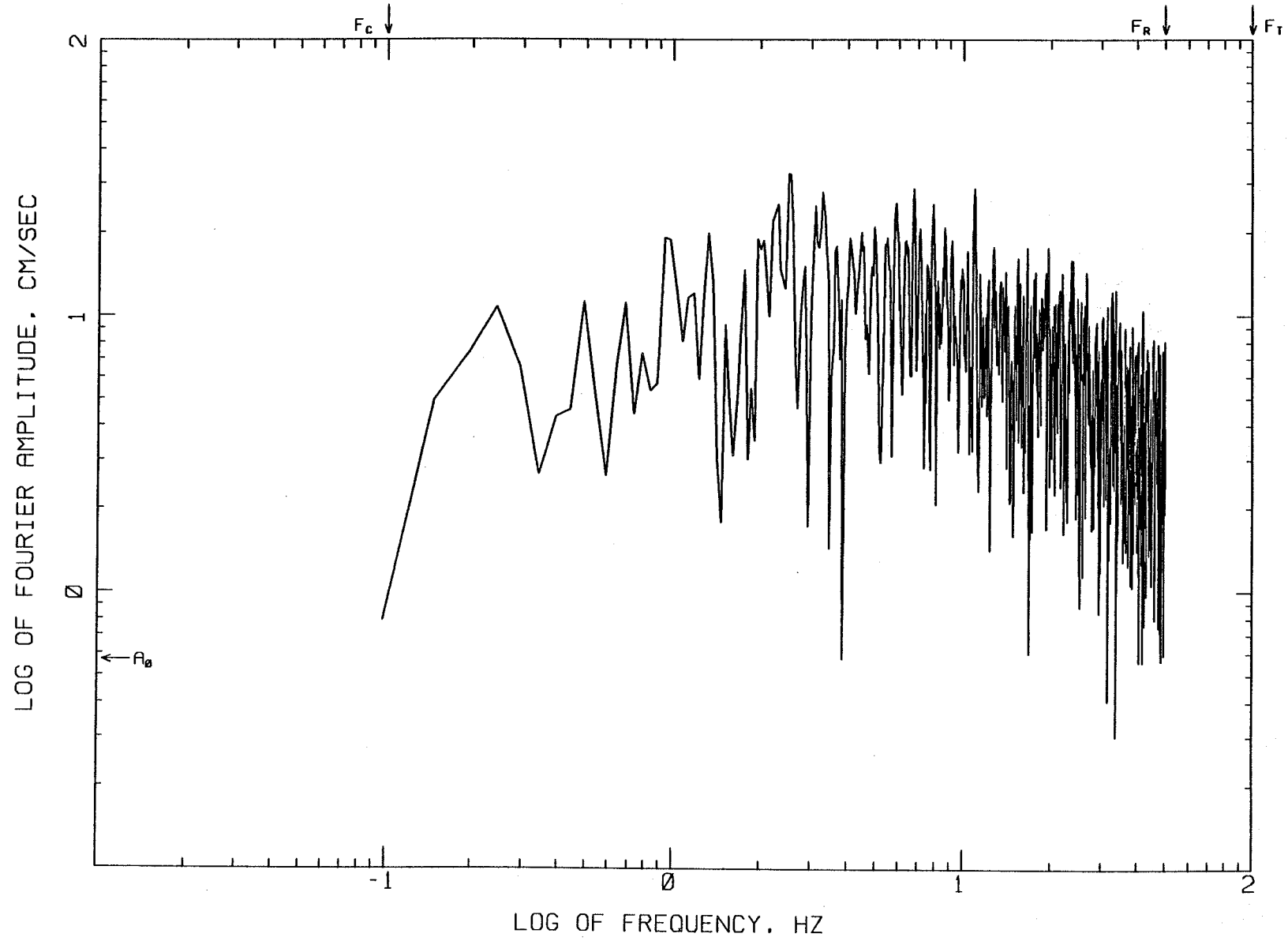

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 25 MARCH 1988: 1937UT
SITE 5: RAZOR RIDGE, N.W.T.: AZ. = 245 DEG: DIST. = 12 KM
VERTICAL: 4-TH ORDER BUTTERWORTH AT 0.100 HZ
COMPUTING OPTIONS= ZCROSS,NONOISE
Fc
FR
FT
2
1
0
A0
LOG OF FOURIER AMPLITUDE, CM/SEC
-1
0
1
2
LOG OF FREQUENCY, HZ

Fig. 5.89.

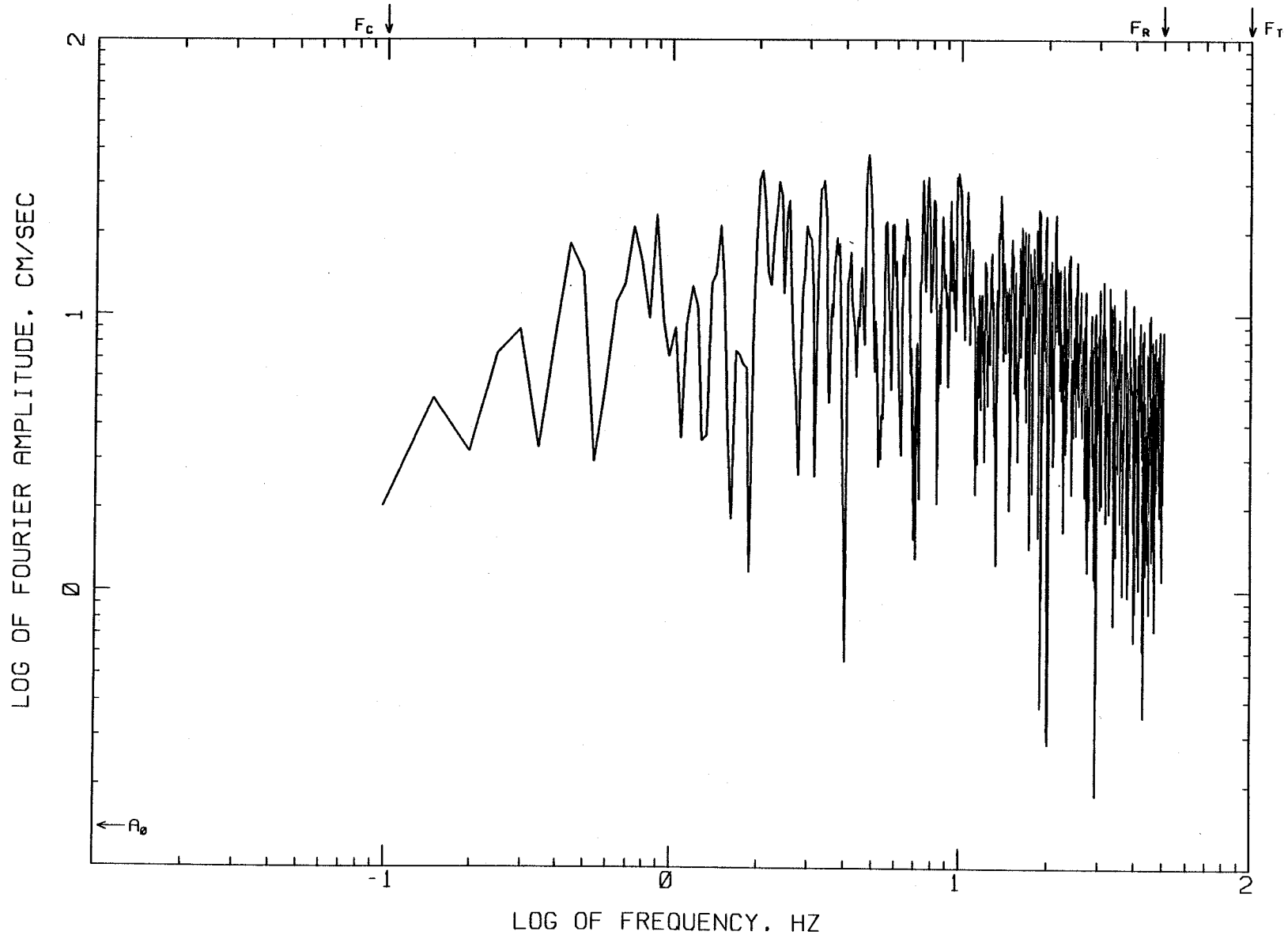

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 25 MARCH 1988: 193ZUT
SITE 5: RAZOR RIDGE. N.W.T.: AZ. = 245 DEG: DIST. = 12 KM
+T=220 DEGREES: 4-TH ORDER BUTTERWORTH AT 0.100 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
2
1
0
-1
0
1
2
LOG OF FOURIER AMPLITUDE. CM/SEC
LOG OF FREQUENCY. HZ
A0

Fig. 5.99 F.I

RESPONSE SPECTRA
SITE 5: NAHANNI: 25 MARCH 1988: 1937UT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.100 HZ: ANTIALIAS 50 - 100 HZ

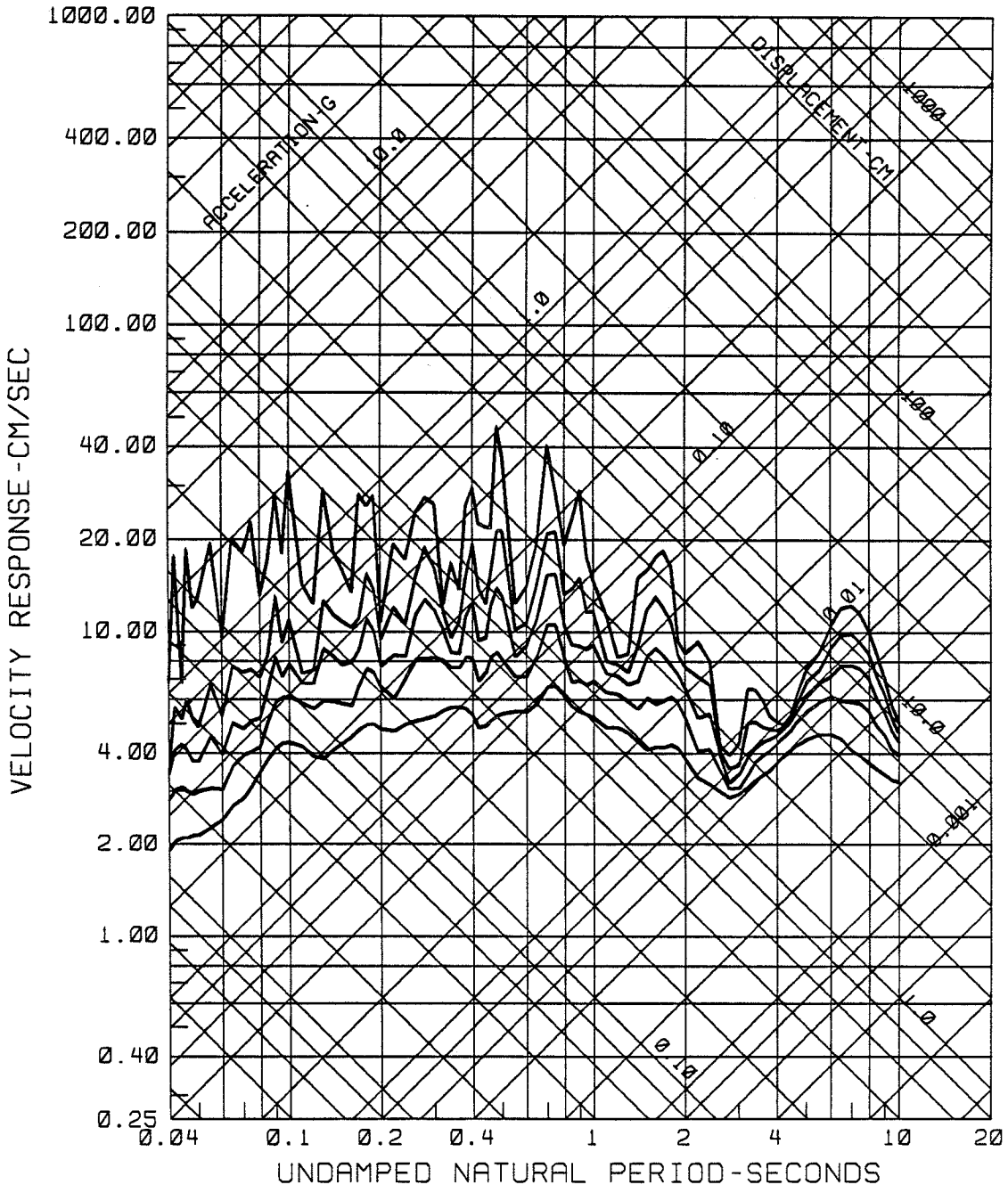


Fig. 5.99.R.

RESPONSE SPECTRA
SITE 5: NAHANNI: 25 MARCH 1988: 1937UT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.100 HZ: ANTIALIAS 50 - 100 HZ

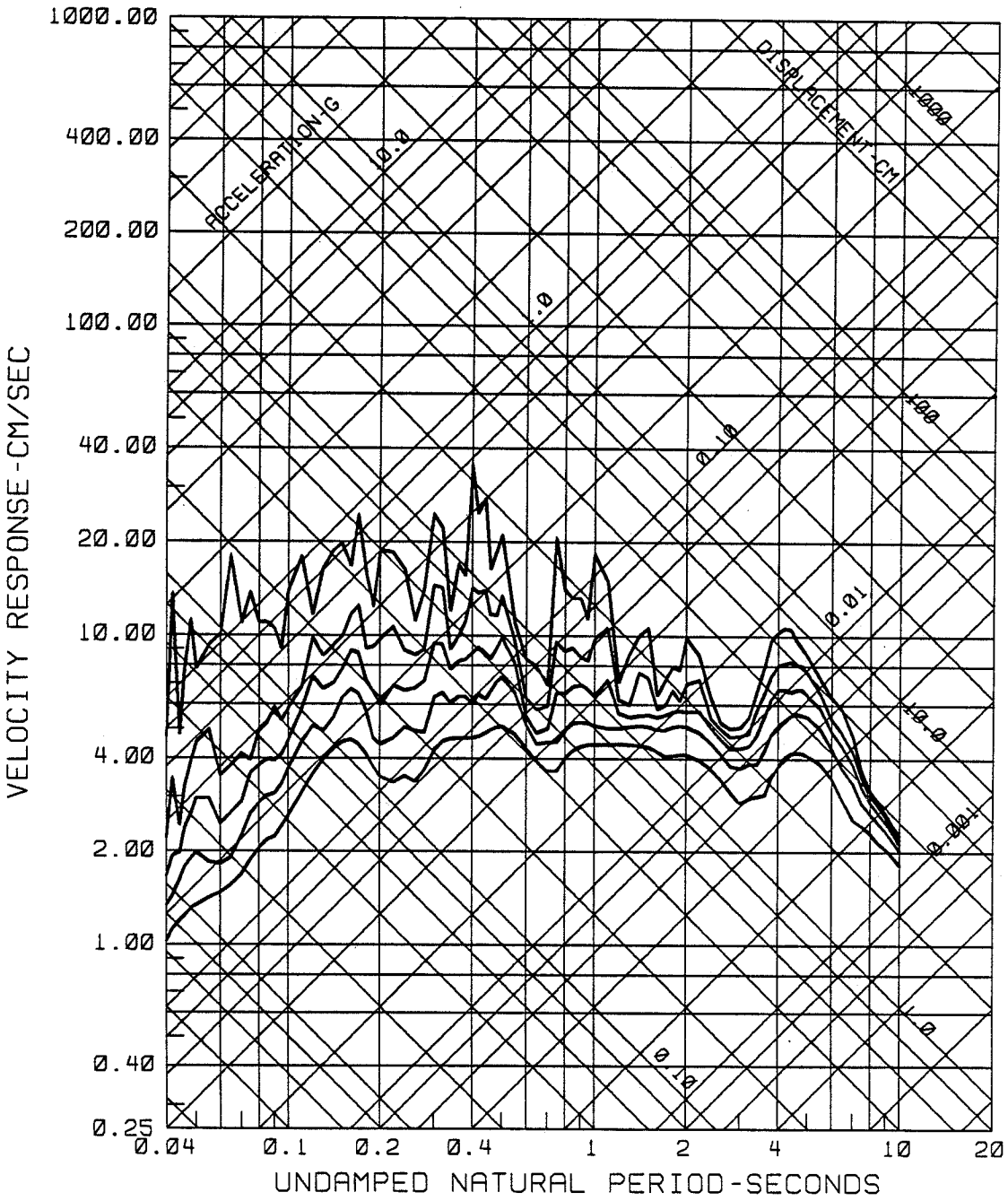


Fig. 5.99.R.4

RESPONSE SPECTRA
SITE 5: NAHANNI: 25 MARCH 1988: 1937UT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.100 HZ: ANTIALIAS 50 - 100 HZ

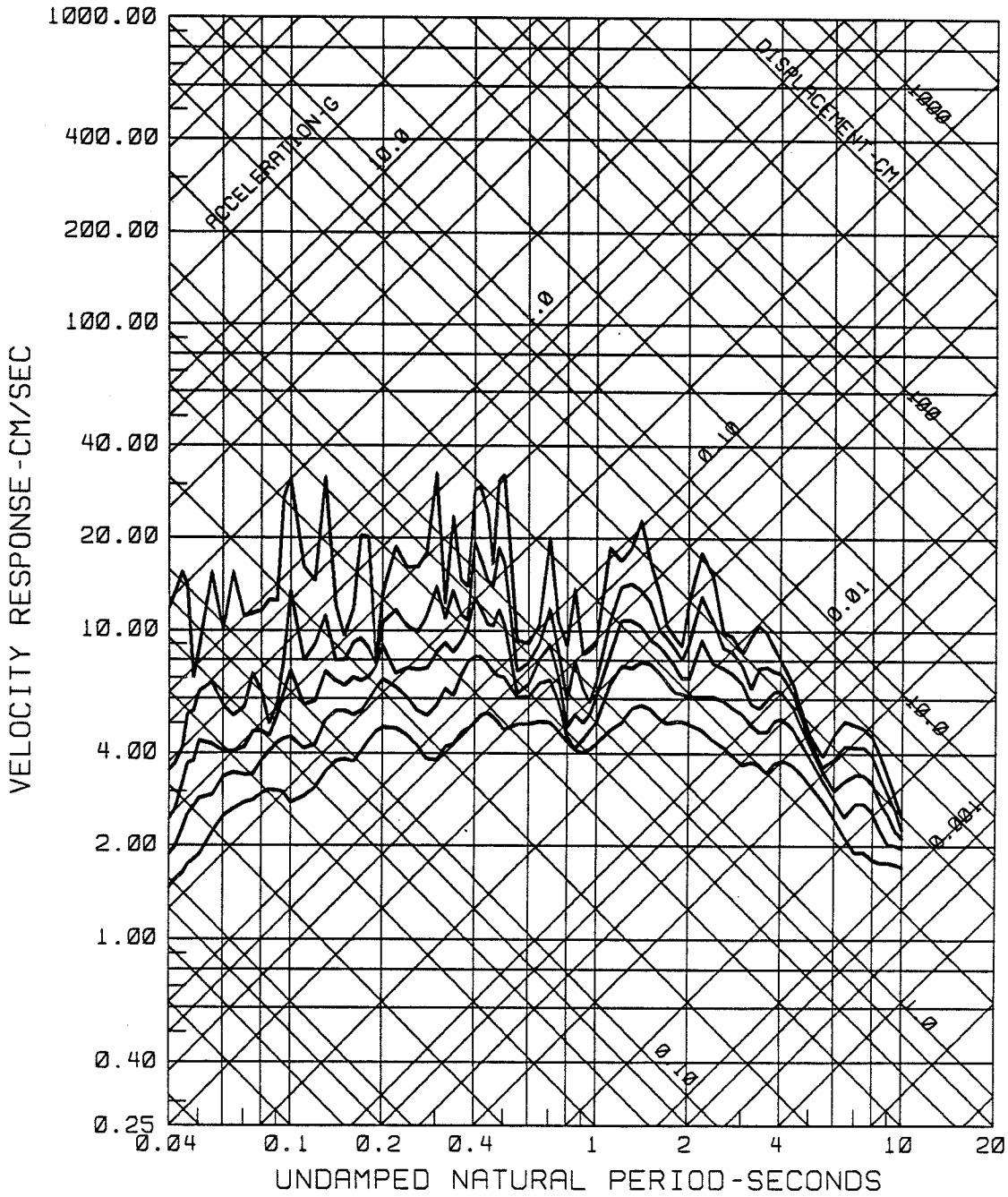


Fig. 5.9. R. T

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 25 MARCH 1988: 1937UT
NOISE REFERENCE TRACE
SITE 5: RAZOR RIDGE. N.W.T.: AZ. = 245 DEG: DIST. = 12 KM
+T=~~220 DEGREES:~~ 4-TH ORDER BUTTERWORTH AT 0.100 HZ
PEAK VALUES: ACCEL=-3.81 CM/SEC/SEC. VELOCITY=-0.83 CM/SEC. DISPL=1.33 CM

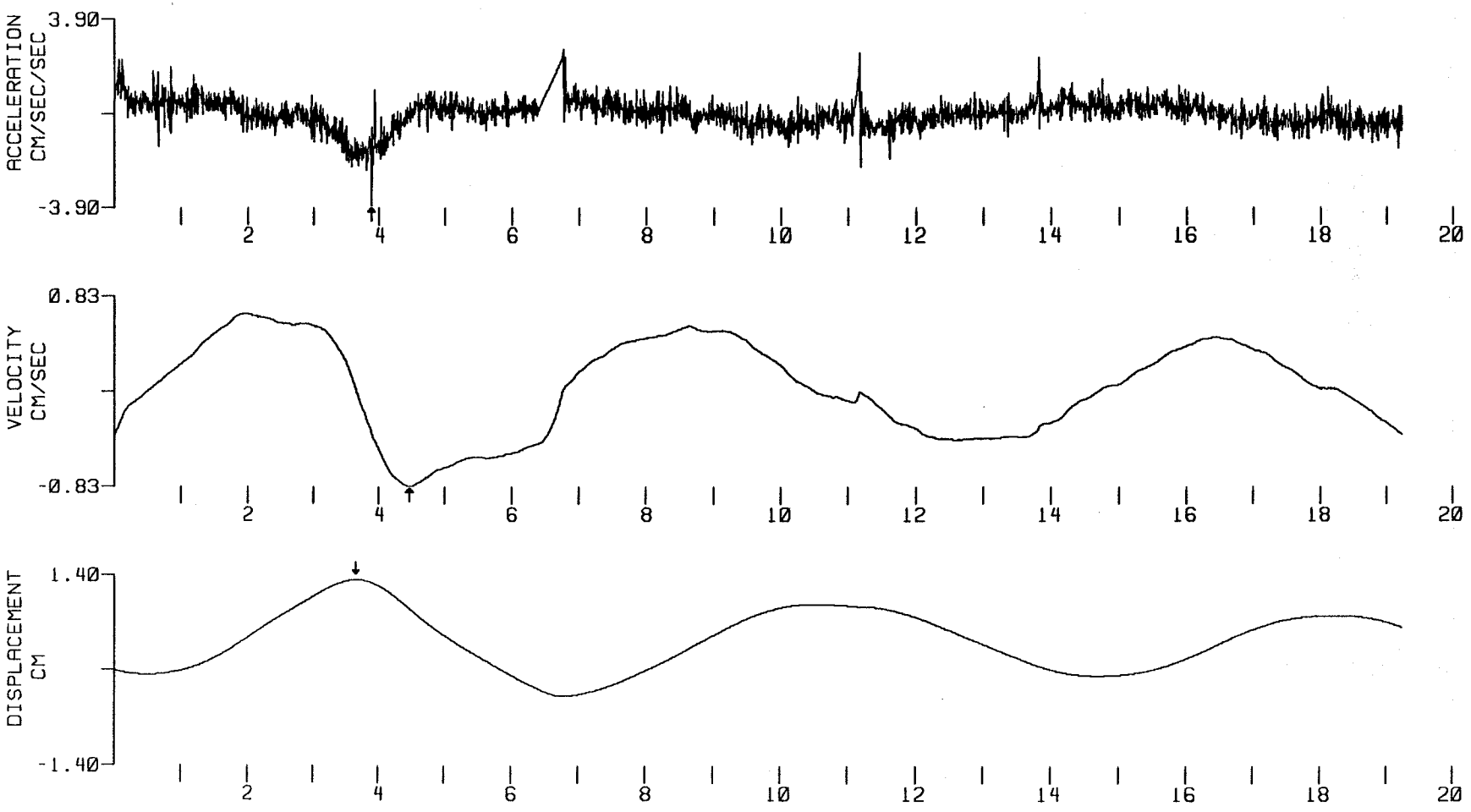


Fig. 5. 92 Nov. 4

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 25 MARCH 1988: 1937UT
SITE 5: RAZOR RIDGE, N.W.T.: AZ. = 245 DEG: DIST. = 12 KM
REFERENCE + T=~~220~~ DEGREES: 4-TH ORDER BUTTERWORTH AT 0.100 HZ
TRACE
COMPUTING OPTIONS= ZCROSS.NONOISE

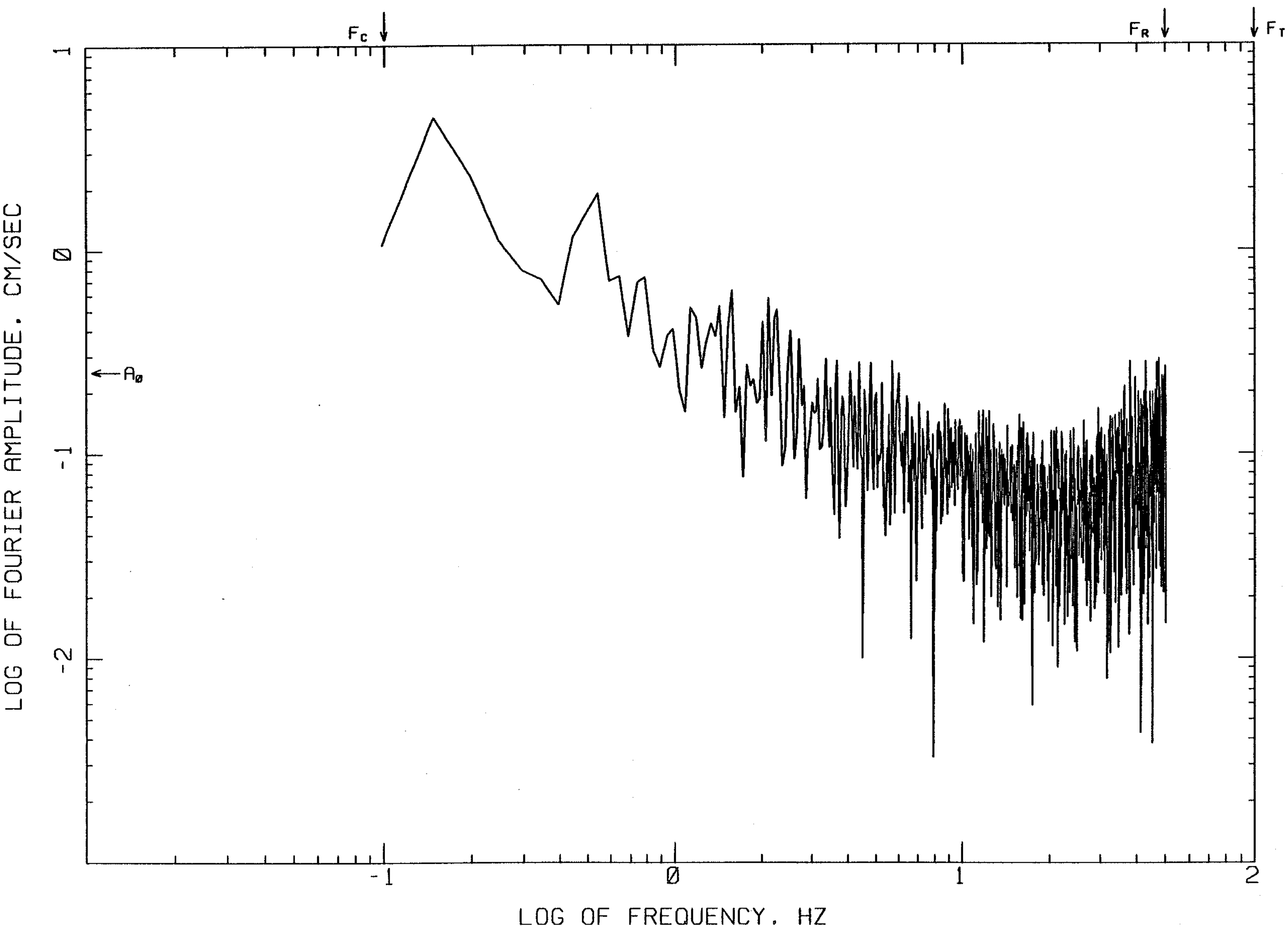


Fig. 5.99.N

RESPONSE SPECTRA **REFERENCE TRACE**

SITE 5: NAHANNI: 25 MARCH 1988: 1937UT (~~TRANSVERSE~~)

0.2.5.10.20 PERCENT CRITICAL DAMPING

FILTERS: BUTTERWORTH. ORDER 4. 0.100 HZ: ANTIALIAS 50 - 100 HZ

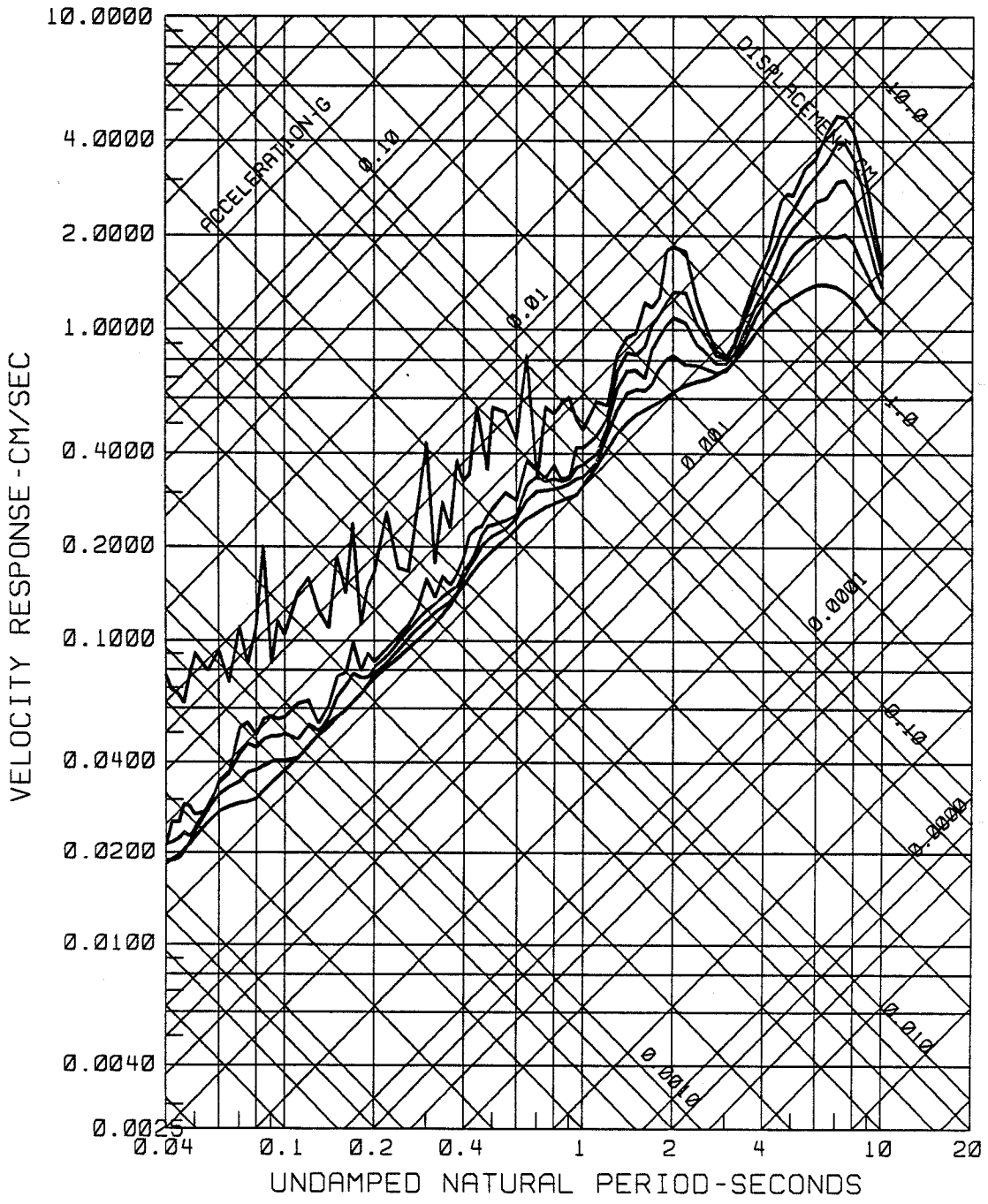


Fig. 5.99. N.A

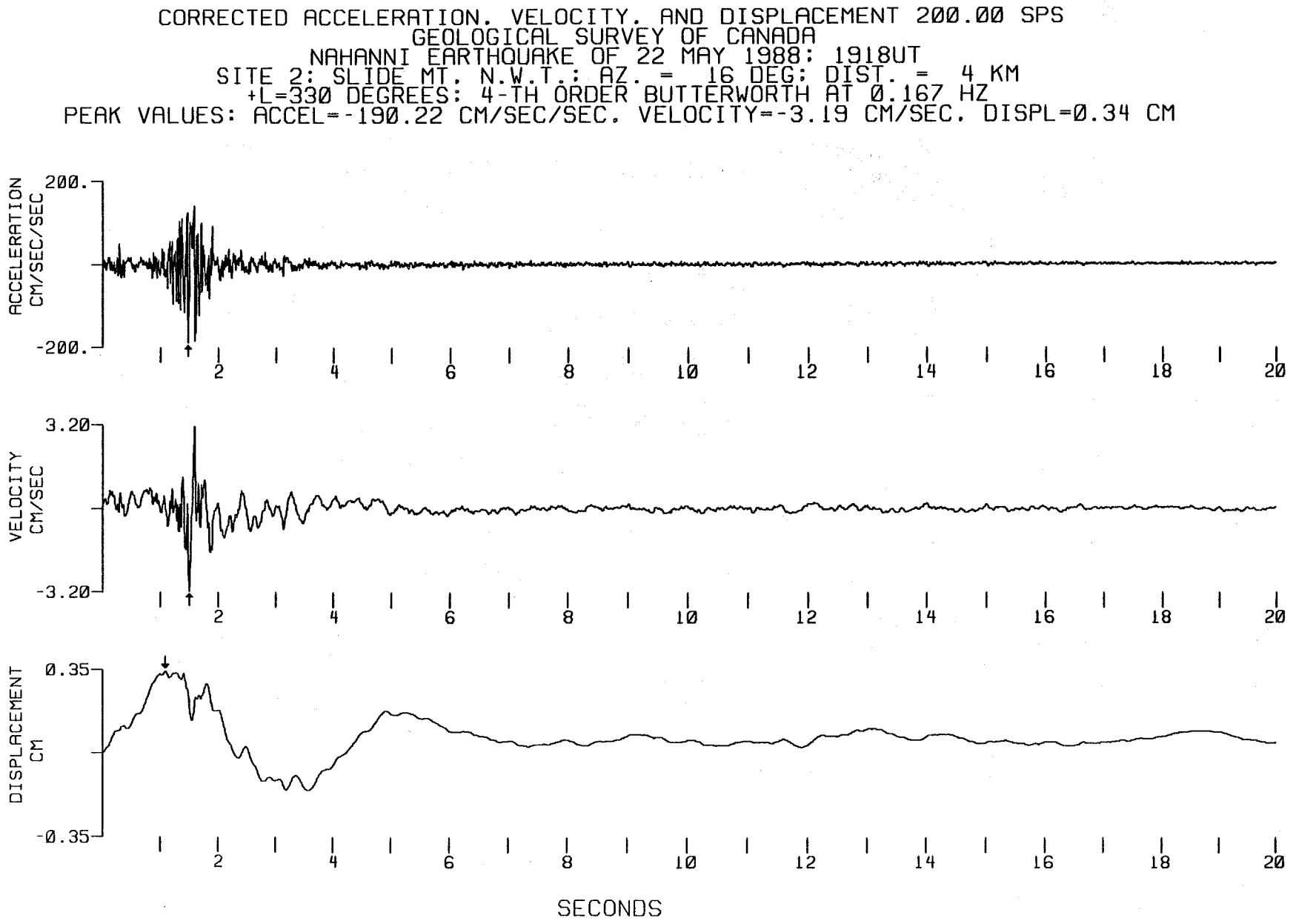

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 22 MAY 1988: 1918UT
SITE 2: SLIDE MT. N.W.T.: AZ. = 16 DEG: DIST. = 4 KM
+L=330 DEGREES: 4-TH ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=-190.22 CM/SEC/SEC. VELOCITY=-3.19 CM/SEC. DISPL=0.34 CM
ACCELERATION CM/SEC/SEC
200.
-200.
VELOCITY CM/SEC
3.20
-3.20
DISPLACEMENT CM
0.35
-0.35
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.10.7

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 22 MAY 1988: 1918UT
SITE 2: SLIDE MT, N.W.T.: AZ. = 16 DEG: DIST. = 4 KM
VERTICAL: 4-TH ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=-79.84 CM/SEC/SEC, VELOCITY=2.06 CM/SEC, DISPL=-0.17 CM

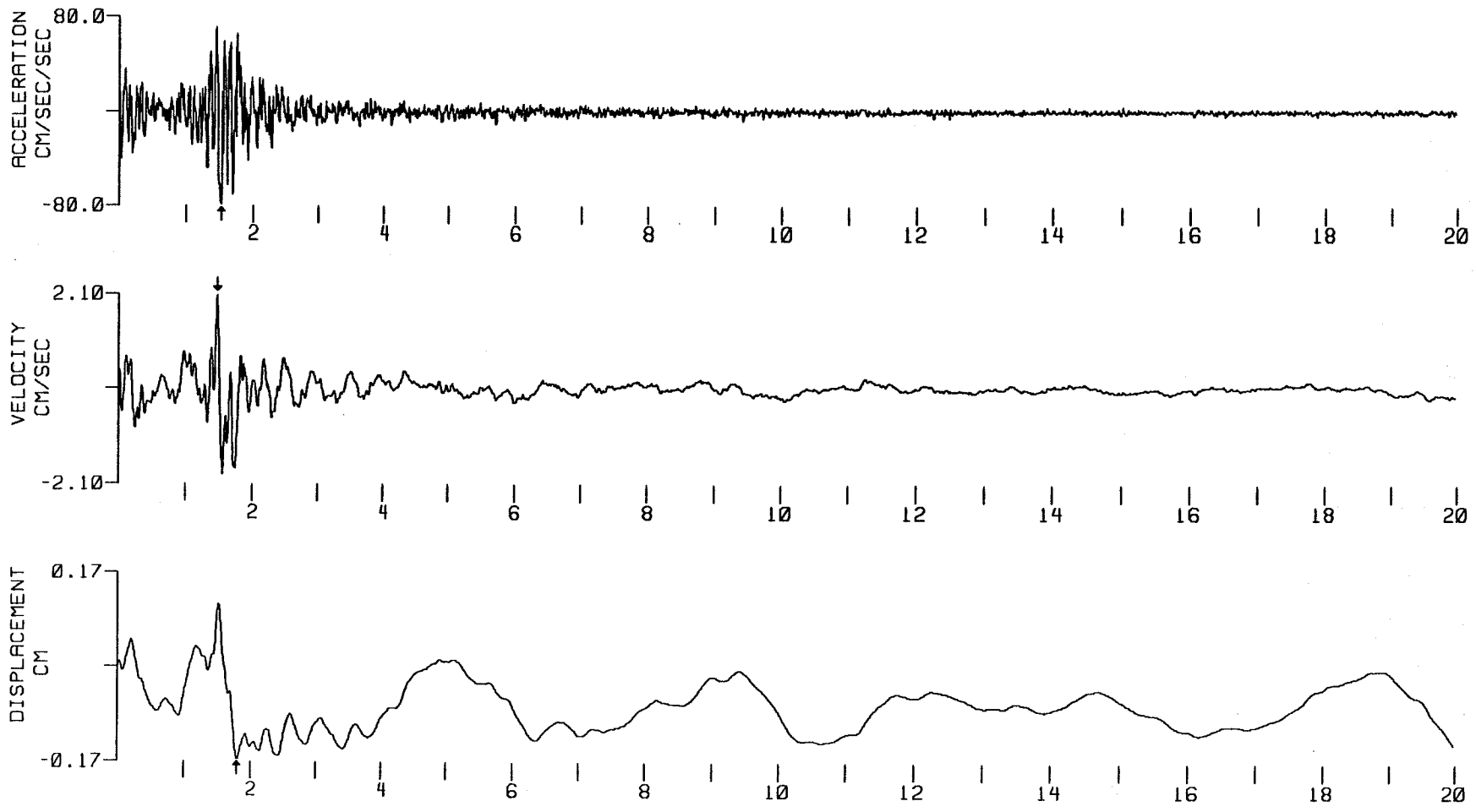


Fig. 2.10.1

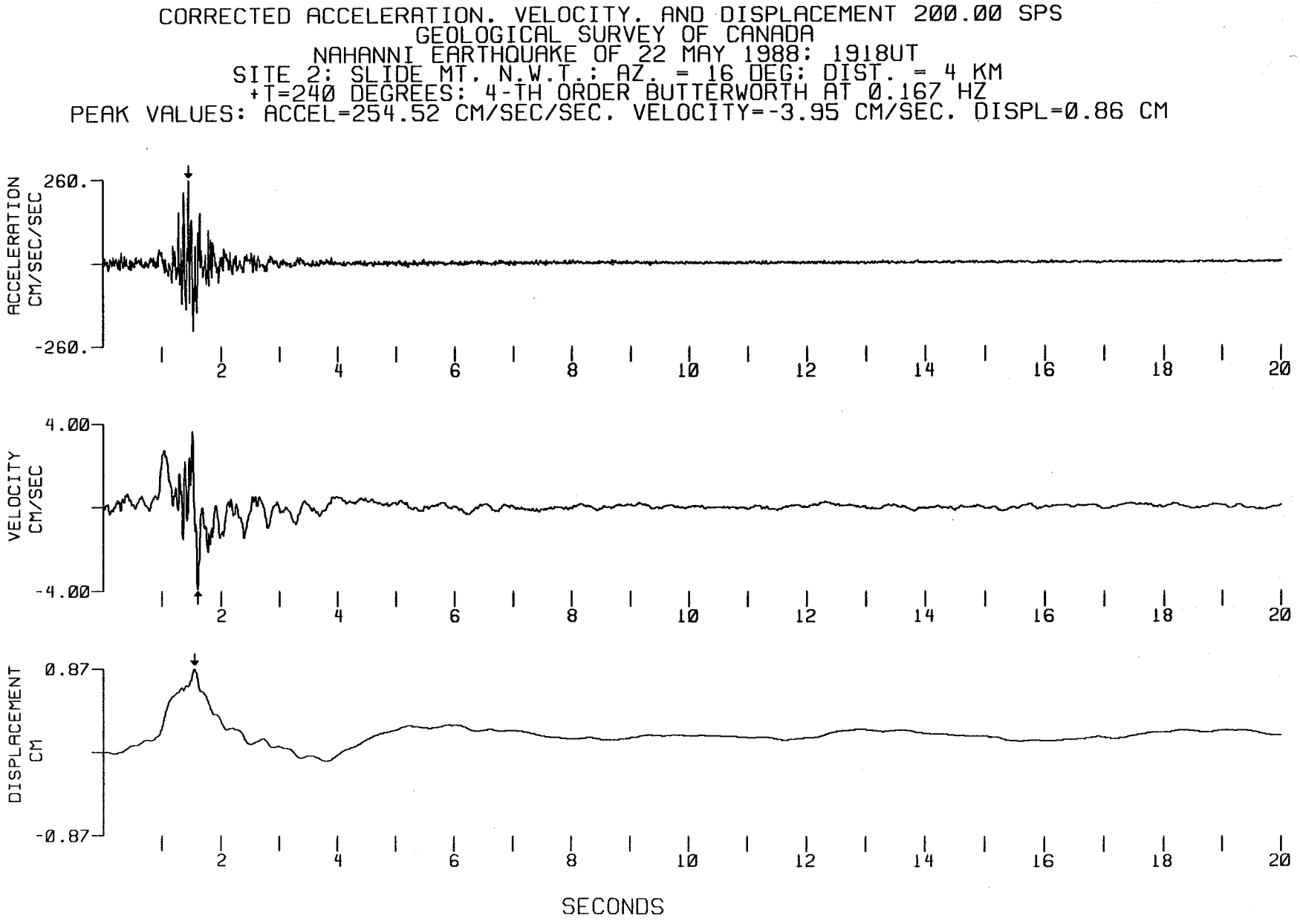

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 22 MAY 1988: 1918UT
SITE 2: SLIDE MT. N.W.T.: AZ. = 16 DEG: DIST. = 4 KM
+T=240 DEGREES: 4-TH ORDER BUTTERWORTH AT 0.167 HZ
PEAK VALUES: ACCEL=254.52 CM/SEC/SEC. VELOCITY=-3.95 CM/SEC. DISPL=0.86 CM
ACCELERATION CM/SEC/SEC
260.
-260.
VELOCITY CM/SEC
4.00
-4.00
DISPLACEMENT CM
0.87
-0.87
2
4
6
8
10
12
14
16
18
20
SECONDS

Fig. 2.10.

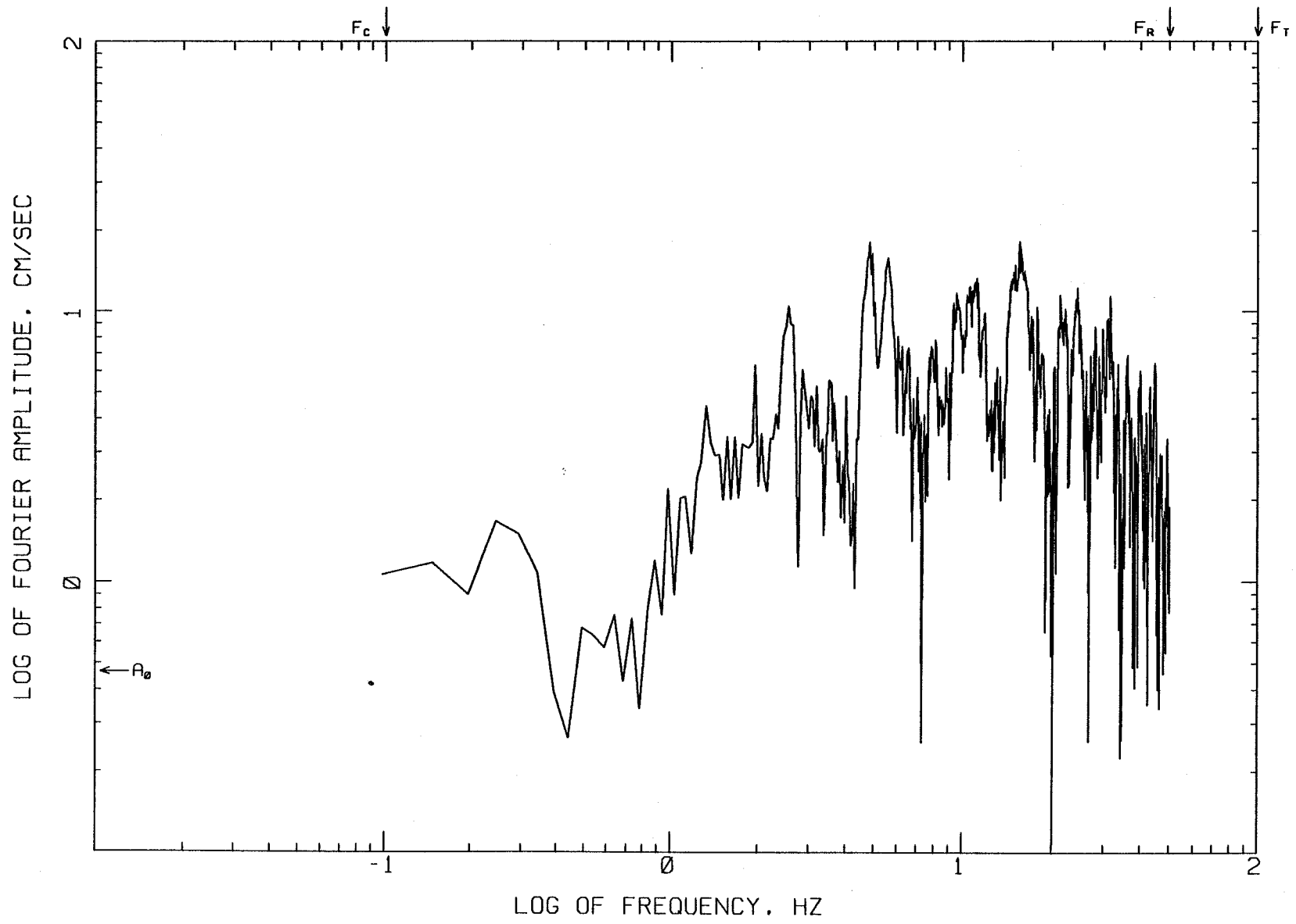

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 22 MAY 1988; 1918UT
SITE 2: SLIDE MT, N.W.T.: AZ. = 16 DEG: DIST. = 4 KM
+L=330 DEGREES: 4-TH ORDER BUTTERWORTH AT 0.100 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
2
1
0
-1
0
1
2
A0
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ

Fig. 2.10.2.1

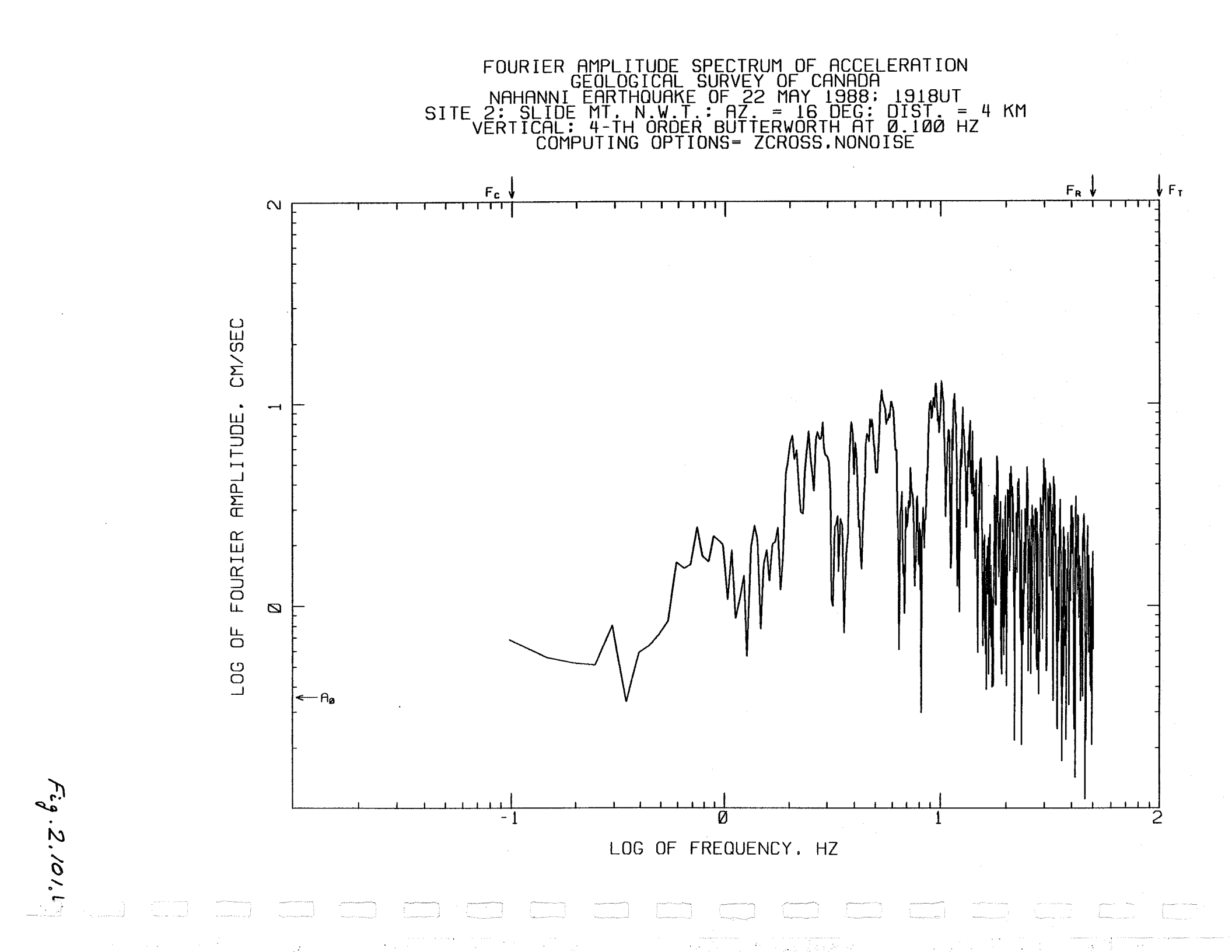

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 22 MAY 1988; 1918UT
SITE 2; SLIDE MT, N.W.T.; AZ. = 16 DEG; DIST. = 4 KM
VERTICAL; 4-TH ORDER BUTTERWORTH AT 0.100 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
2
1
0
-1
0
1
2
LOG OF FOURIER AMPLITUDE, CM/SEC
LOG OF FREQUENCY, HZ
A0

Fig. 2.101

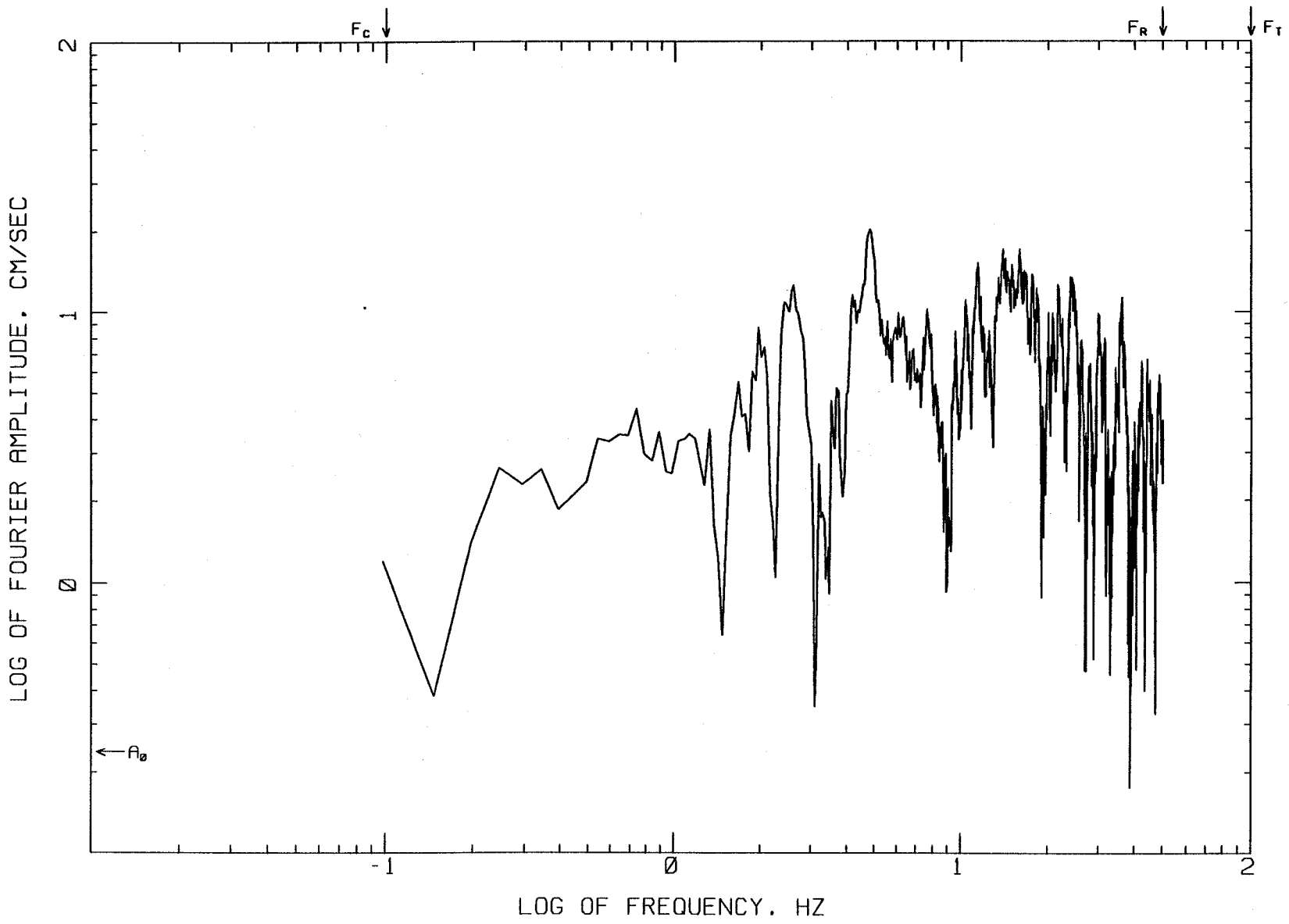

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 22 MAY 1988: 1918UT
SITE 2: SLIDE MT. N.W.T.: AZ. = 16 DEG: DIST. = 4 KM
+T=240 DEGREES: 4-TH ORDER BUTTERWORTH AT 0.100 HZ
COMPUTING OPTIONS= ZCROSS.NONOISE
Fc
FR
FT
LOG OF FOURIER AMPLITUDE, CM/SEC
2
1
0
A0
-1
0
1
2
LOG OF FREQUENCY, HZ

Fig. 2.10.1.

RESPONSE SPECTRA
SITE 2: NAHANNI: 22 MAY 1988: 1918UT (LONGITUDINAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.100 HZ: ANTIALIAS 50 - 100 HZ

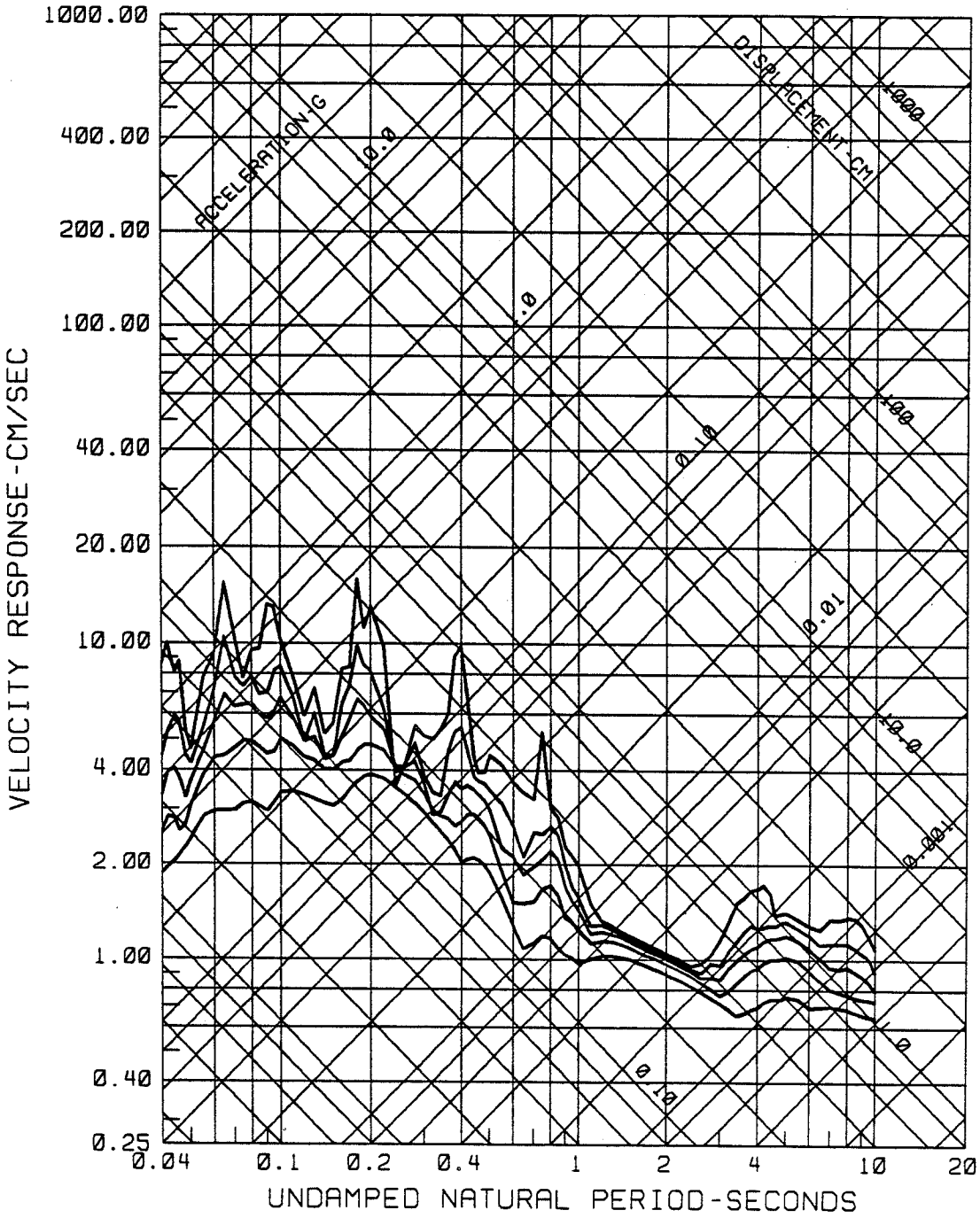


Fig. 2.101.LR

RESPONSE SPECTRA
SITE 2: NAHANNI: 22 MAY 1988: 1918UT (VERTICAL)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.100 HZ: ANTIALIAS 50 - 100 HZ

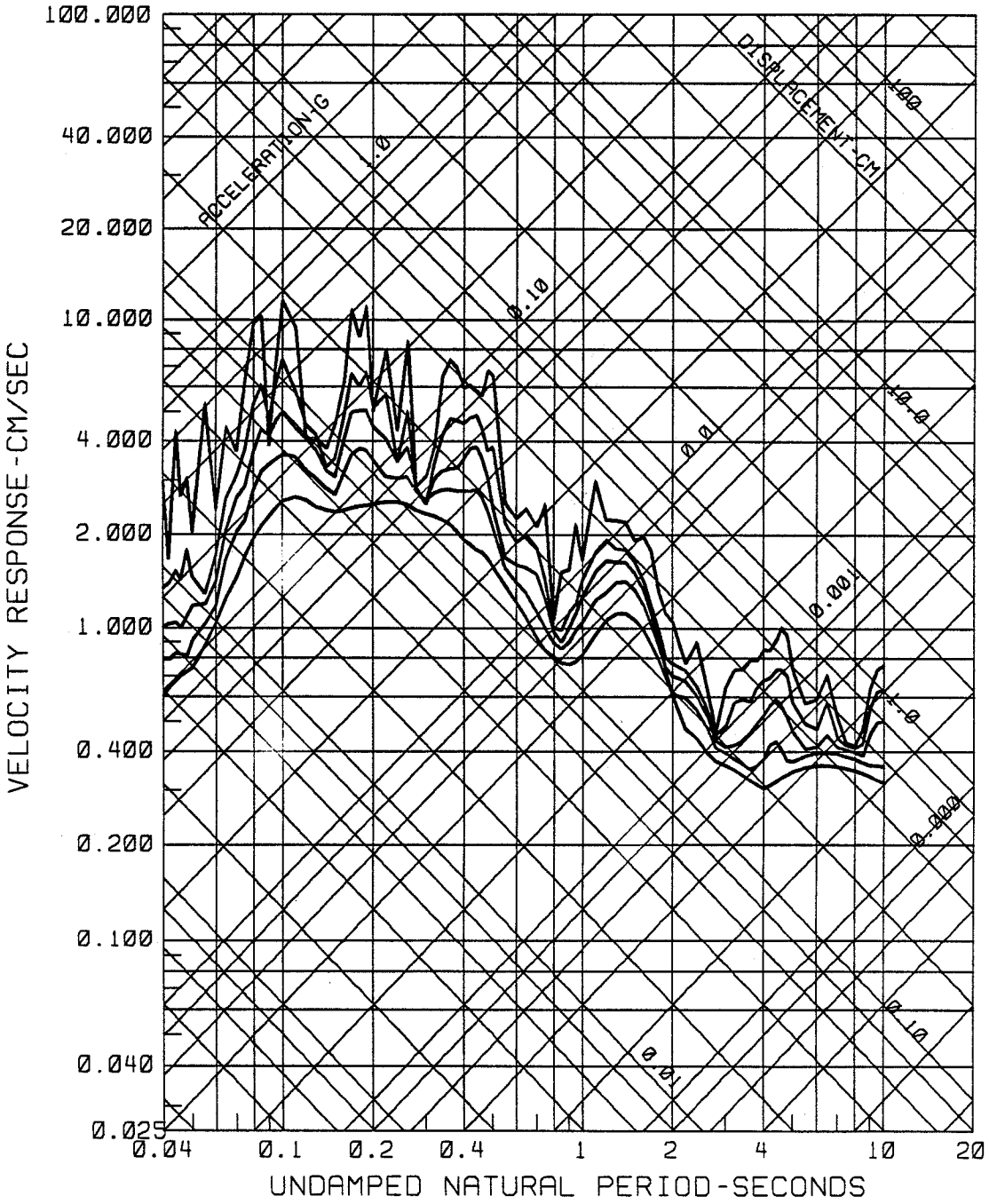


Fig. 2.101.1

RESPONSE SPECTRA
SITE 2: NAHANNI: 22 MAY 1988: 1918UT (TRANSVERSE)
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.100 HZ: ANTIALIAS 50 - 100 HZ

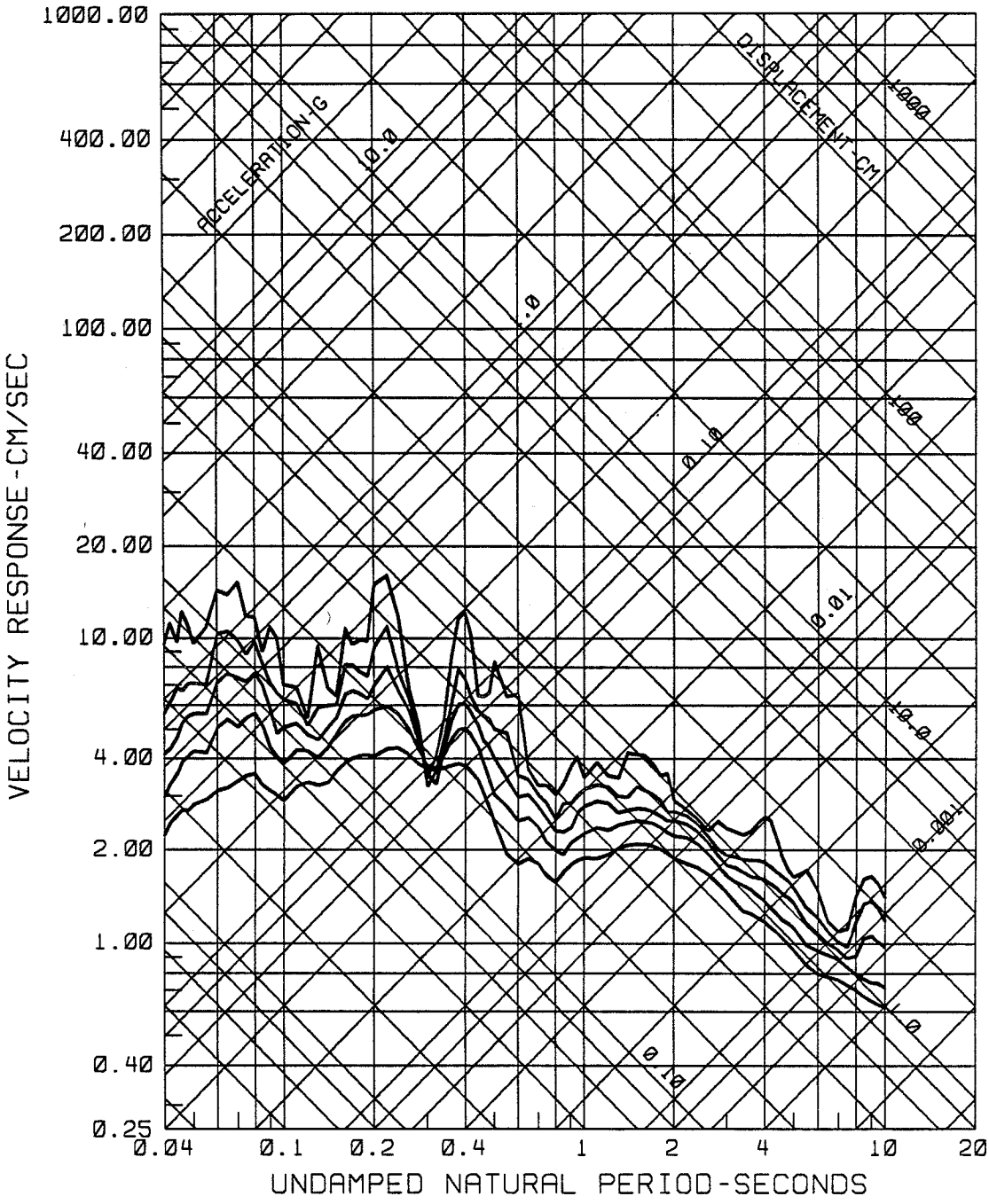


Fig. 2.101.T.R

CORRECTED ACCELERATION. VELOCITY. AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 22 MAY 1988: 1918UT
NOISE REFERENCE TRACE SITE 2: SLIDE MT. N.W.T.: AZ. = 16 DEG: DIST. = 4 KM
~~T=240 DEGREES~~: 4-TH ORDER BUTTERWORTH AT 0.100 HZ
PEAK VALUES: ACCEL=2.30 CM/SEC/SEC. VELOCITY=0.18 CM/SEC. DISPL=0.14 CM

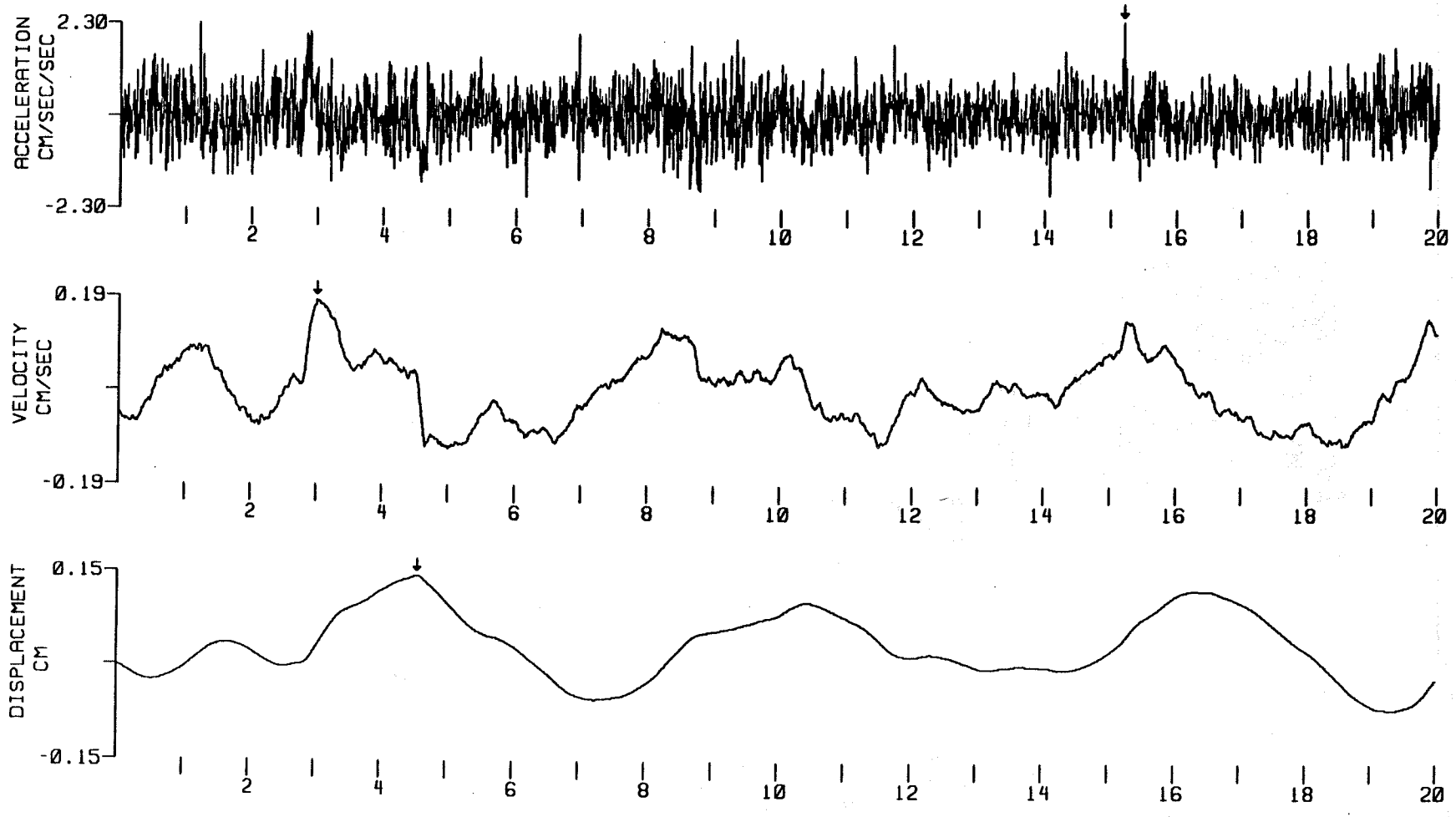


Fig. 2.101.No

FOURIER AMPLITUDE SPECTRUM OF ACCELERATION
GEOLOGICAL SURVEY OF CANADA
NAHANNI EARTHQUAKE OF 22 MAY 1988: 1918UT
SITE 2: SLIDE MT. N.W.T.: AZ. = 16 DEG: DIST. = 4 KM
~~+T=240 DEGREES~~; 4-TH ORDER BUTTERWORTH AT 0.100 HZ
NOISE
COMPUTING OPTIONS= ZCROSS.NONOISE

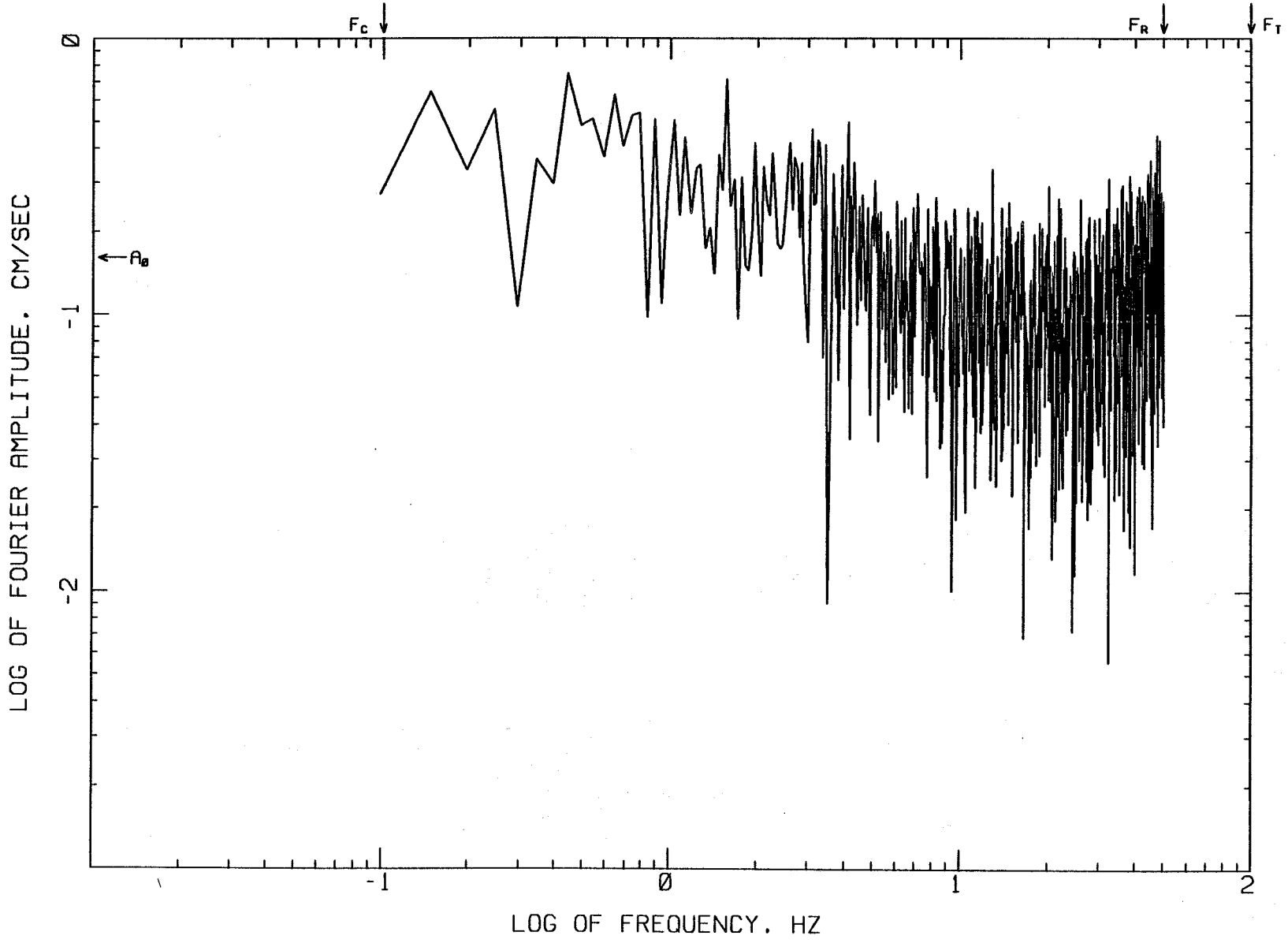


Fig. 2.101.

RESPONSE SPECTRA NOISE
SITE 2: NAHANNI: 22 MAY 1988: 1918UT ~~(TRANSVERSE)~~
0.2.5.10.20 PERCENT CRITICAL DAMPING
FILTERS: BUTTERWORTH. ORDER 4. 0.100 HZ: ANTIALIAS 50 - 100 HZ

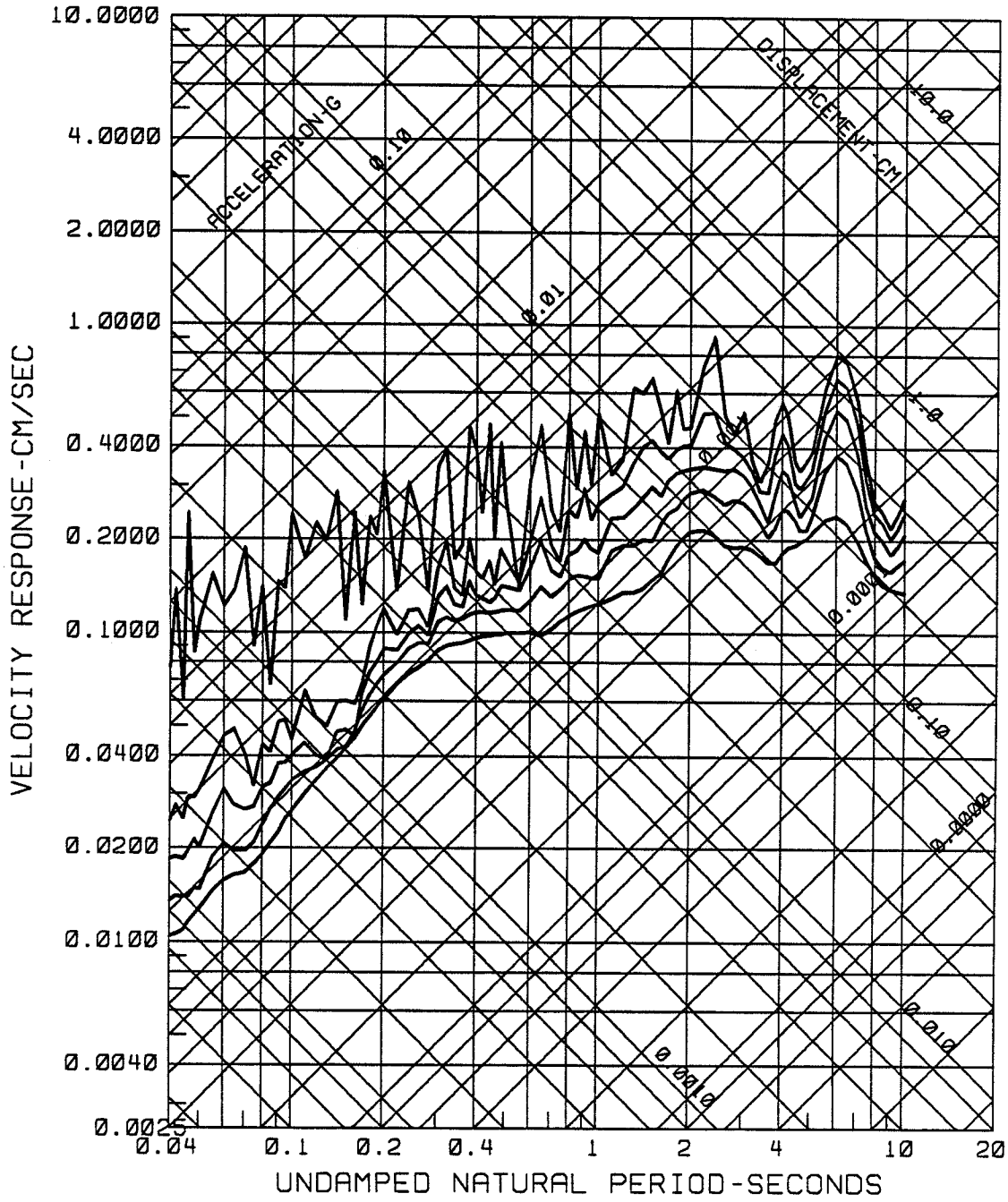


Fig. 2.101.N.f