

**DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY**

**National Earthquake Information Center
Waveform Catalog
October 1986**

by

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**This report is preliminary and has not been reviewed for conformity with
U.S. Geological Survey editorial standards.**

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Introduction

This report provides a visual catalog of digitally recorded waveform data available from the event tapes produced by the United States Geological Survey's National Earthquake Information Center (NEIC). It is intended to provide the researcher with a quick index both to the availability of data and to the character of the data for each event (e.g., complexity and directionality).

The network-event tapes are a data service initiated by the NEIC in 1984. Currently, these tapes contain data from the Global Digital Seismograph Network (GDSN), the Regional Seismograph Test Network (RSTN), and the Glen Almond, Canada, SRO station. In the future, data from other high-quality stations and arrays, installed and operated by countries around the world, will be added to the event tapes as they are made available to us.

Network-event tapes contain digital data for earthquakes of magnitude 5.5 or greater in the NEIC network-day tape format. For this catalog, all available vertical component recordings in all period bands are shown, including those for stations that were saturated or nonoperational or that had some other difficulty during the event. Horizontal component records were omitted in order to minimize the size of this catalog. In general, one can expect them to be of approximately the same quality as the vertical component records at any particular time. Most of the available stations do not record short-period horizontal components. All stations that have intermediate-period recordings, however, record all three components in this band. Only long-period components are recorded continuously; short- and intermediate-period channels are recorded only when an event is detected. Horizontal components (where available) are recorded whenever the vertical component is, and never otherwise.

This report mainly consists of vertical component waveforms from all reporting stations, organized by event. The section for each event is prefaced by a station coverage map, in which stations and geography within 100° of the source are shown in an azimuthal equidistant projection centered at the epicenter. Following the coverage map, all short-period, vertical component waveforms are shown in order of increasing epicentral distance. Each short-period waveform is two minutes long and is identified by station code, start

time, and epicentral distance, Δ , in degrees. The start time is chosen to be about 15 seconds before the earliest theoretical arrival time of interest (P, Pdiff, or PKPdiff, depending on distance). The vertical scale is in microns of ground displacement at the dominant period of the instrument response, which is taken to be 1 second. Each page of waveforms is titled with the event origin date-time, the Flinn-Engdahl region name, and the component identifier (SPZ, LPZ or IPZ). Also, the depth of the event (h) in kilometers and its average body (m_b) and vertical surface wave (M_{SZ}) magnitudes are shown for convenience.

Following the short-period waveforms (SPZ), long-period vertical (LPZ) and finally intermediate-period vertical (IPZ) waveforms are shown. In each case, the format is the same as for the short-period waveforms. Fifty minutes of long-period data are shown beginning 1 minute before the theoretical first arrival, and the dominant period is taken to be 25 seconds. Four minutes of intermediate-period data are shown beginning 30 seconds before the theoretical first arrival, and the dominant period is assumed to be 1 second. Because (1) the event detection algorithm is not perfect, (2) only about half of the available stations have intermediate-period channels, and (3) one station (GAC) has no short-period recordings, it is not uncommon for stations with good long-period recordings to have no intermediate-period and perhaps no short-period recordings at all.

With the inclusion of the Network of Autonomously Registering Stations (NARS) in September 1985, it was difficult to list the name of each station in the network on the station coverage map because of their close proximity. Instead, a new symbol ($\square$) will be used to denote each station of the network, with the name NARS. When other networks are included with stations situated close together, a new symbol will be used to denote each station of each network. The name used will be the network name only.

Table 1. Earthquakes for October 1986 with magnitudes ≥ 5.5

	Origin Time UTC	Latitude	Longitude	Depth (km)	m_b	Magnitude M_{SZ}	Flinn-Engdahl Region Name
1.	1986 10 02 20:15:31.27	2.870° N	127.274° E	33.0	5.5	4.9	Molucca Passage
2.	1986 10 04 02:00:08.33	2.981° N	128.041° E	110.1	5.9		Halmahera
3.	1986 10 06 07:10:56.43	56.806° S	26.362° W	33.0	5.6	4.4	South Sandwich Islands Region
4.	1986 10 07 14:03:48.35	16.564° S	167.239° E	33.0	5.7	5.2	Vanuatu Islands
5.	1986 10 10 17:48:24.69	7.494° S	107.271° E	84.0	5.5		Java
6.	1986 10 11 09:00:13.11	37.960° N	28.594° E	23.7	5.4	5.5	Turkey
7.	1986 10 13 21:17:50.76	37.049° N	141.015° E	65.3	5.7		Near East Coast of Honshu, Japan
8.	1986 10 14 13:07:19.29	43.214° S	41.988° E	10.0	5.4	5.5	Prince Edward Islands Region
9.	1986 10 14 16:53:07.45	4.985° S	153.584° E	33.0	6.1	6.6	New Ireland Region
10.	1986 10 15 13:14:29.73	6.275° S	146.855° E	90.2	5.5		East Papua New Guinea Region
11.	1986 10 15 22:03:10.04	9.751° S	162.846° E	40.3	5.6	5.2	Solomon Islands
12.	1986 10 15 23:04:15.20	56.364° S	25.549° W	33.0	5.6	4.9	South Sandwich Islands Region
13.	1986 10 16 19:25:00.09	37.220° N	116.462° W	0.0	5.6		Southern Nevada
14.	1986 10 17 07:32:49.19	5.274° S	131.500° E	50.4	6.2	5.9	Banda Sea
15.	1986 10 18 09:46:43.08	12.129° N	142.859° E	45.3	5.7	4.9	South of Mariana Islands
16.	1986 10 18 22:09:31.16	5.628° S	110.003° E	634.1	5.7		Java Sea
17.	1986 10 20 06:30:26.30	2.763° N	126.884° E	47.2	5.5	5.1	Molucca Passage
18.	1986 10 20 06:46:10.44	28.100° S	176.430° W	33.0	6.6	8.2	Kermadec Islands Region
19.	1986 10 20 12:01:42.25	27.552° S	176.319° W	33.0	5.7	5.4	Kermadec Islands Region
20.	1986 10 20 12:32:45.84	27.705° S	176.461° W	33.0	5.6	5.7	Kermadec Islands Region
21.	1986 10 20 14:41:25.79	27.895° S	176.243° W	33.0	5.5	6.0	Kermadec Islands Region
22.	1986 10 20 16:01:33.66	27.583° S	176.165° W	33.0	5.5		Kermadec Islands Region
23.	1986 10 20 18:16:03.93	27.971° S	176.278° W	33.0	5.1	5.5	Kermadec Islands Region
24.	1986 10 20 19:39:15.69	27.783° S	176.697° W	33.0	5.6	5.4	Kermadec Islands Region
25.	1986 10 20 21:23:10.70	28.109° S	176.702° W	33.0	5.4	5.5	Kermadec Islands Region
26.	1986 10 20 21:26:17.57	27.961° S	176.632° W	33.0	5.6	5.6	Kermadec Islands Region
27.	1986 10 21 00:43:41.58	27.678° S	176.475° W	33.0	5.5	5.1	Kermadec Islands Region
28.	1986 10 21 05:51:59.66	27.891° S	176.348° W	45.1	5.6	4.9	Kermadec Islands Region
29.	1986 10 21 11:02:59.90	27.820° S	176.524° W	33.0	5.8	5.8	Kermadec Islands Region
30.	1986 10 21 12:29:44.27	27.465° S	176.732° W	33.0	5.4	5.6	Kermadec Islands Region
31.	1986 10 22 08:59:32.79	10.634° S	166.029° E	201.8	5.8		Santa Cruz Islands
32.	1986 10 22 19:40:48.53	28.121° S	176.484° W	33.0	5.3	5.5	Kermadec Islands Region
33.	1986 10 23 02:18:52.79	15.561° S	167.643° E	171.9	5.7		Vanuatu Islands
34.	1986 10 23 03:54:20.39	6.130° S	146.367° E	123.9	5.8		East Papua New Guinea Region

Table 1. Earthquakes for October 1986 with magnitudes ≥ 5.5 , continued.

	Origin Time		Latitude	Longitude	Depth (km)	Magnitude		Flinn-Engdahl Region Name
	1986	UTC				m_b	M_{sz}	
35.	10 23 15:48:45.88	10.980° S	165.172° E	33.0	5.4	6.6	Santa Cruz Islands	
36.	10 23 16:23:50.50	11.083° S	165.517° E	33.0	5.4	6.4	Santa Cruz Islands	
37.	10 23 17:33:05.54	11.194° S	165.240° E	33.0	5.0	5.8	Santa Cruz Islands	
38.	10 23 18:44:56.79	11.088° S	165.188° E	33.0	5.7	5.5	Santa Cruz Islands	
39.	10 24 02:58:47.19	5.636° S	153.889° E	55.8	5.5		New Ireland Region	
40.	10 24 05:27:36.66	10.955° S	164.979° E	48.7	5.6	6.1	Santa Cruz Islands Region	
41.	10 24 05:53:17.68	10.864° S	165.219° E	33.0	5.5	5.9	Santa Cruz Islands	
42.	10 25 20:47:02.71	17.618° S	168.117° E	36.8	5.8	5.9	Vanuatu Islands	
43.	10 26 00:59:22.53	5.647° S	154.050° E	46.1	5.5	4.7	Solomon Islands	
44.	10 27 08:02:53.29	34.106° S	78.842° W	10.0	5.0	5.5	Juan Fernandez Islands Region	
45.	10 28 15:11:23.37	30.471° S	60.165° E	10.0	5.6	5.4	Atlantic-Indian Rise	
46.	10 30 01:28:55.30	21.693° S	176.679° W	194.0	6.4		Fiji Islands Region	

Table 2. Current network-event tape station list

Code	Station	Latitude	Longitude	Elevation (m)	Type'
AFI	Afamalu, Western Samoa	13.91° S	171.78° W	706.0	DWWSSN
ANMO	Albuquerque, New Mexico	34.95° N	106.46° W	1740.0	SRO
ANTO	Ankara, Turkey	39.87° N	32.79° E	883.0	SRO
BCAO	Bangui, Central African Republic	4.43° N	18.54° E	336.0	SRO
BDF	Brasilia, Brazil	15.66° S	47.90° W	1500.0	DWWSSN
BGIO	Bar-Giyyora, Israel	31.72° N	35.09° E	651.7	SRO
BJI	Beijing, China	40.04° N	116.18° E	43.0	CDSN
BOCO	Bogota, Columbia	4.59° N	74.04° W	3071.0	SRO
CHTO	Chiang Mai, Thailand	18.79° N	98.98° E	316.0	SRO
COL	College, Alaska	64.90° N	147.79° W	320.0	DWWSSN
CTAO	Charters Towers, Australia	20.09° S	146.25° E	357.0	ASRO
GAC	Glen Almond, Quebec, Canada	45.70° N	75.48° W	620.0	SRO
GDH	Godhavn, Greenland	69.25° N	53.53° W	23.0	DWWSSN
GRA1	Haidhof, Germany	49.69° N	11.22° E	500.0	GRF
GRB1	Brunnthal, Germany	49.39° N	11.65° E	494.0	GRF
GRC1	Eglofsdorf, Germany	48.99° N	11.52° E	512.0	GRF
GRFO	Graefenberg, Germany	49.69° N	11.22° E	500.0	SRO
HON	Honolulu, Hawaii	21.32° N	158.01° W	2.0	DWWSSN
JAS1	Jamestown, California	37.93° N	120.42° W	425.0	DWWSSN
KBS	Kingsbay, Norway	78.92° N	11.92° E	46.0	DWWSSN
KMI	Kunming, China	25.12° N	102.74° E	1945.0	CDSN
KONO	Kongsberg, Norway	59.65° N	9.60° E	216.0	ASRO
LEM	Lembang, Indonesia	6.83° S	107.62° E	1247.0	DWWSSN
LON	Longmire, Washington	46.75° N	121.81° W	854.0	DWWSSN
LZH	Lanzhou, China	36.09° N	103.84° E	1560.0	CDSN
MAJO	Matsushiro, Japan	36.54° N	138.21° E	422.0	ASRO
MDJ	Mundanjiang, China	44.62° N	129.59° E	250.0	CDSN
NE03	Logumkloster, Denmark	55.05° N	9.15° E	25.0	NARS
NE04	Witteveen, Netherlands	52.81° N	6.67° E	17.0	NARS
NE05	Utrecht, Netherlands	52.09° N	5.17° E	2.0	NARS
NE06	Dourbes, Belgium	50.10° N	4.60° E	225.0	NARS
NE07	Villiers-Adam, France	49.07° N	2.23° E	70.0	NARS
NE10	Arette, France	43.09° N	0.70° W	480.0	NARS
NE11	Ainzon, France	41.81° N	1.52° W	440.0	NARS
NE13	Puertollano, Spain	38.69° N	4.09° W	700.0	NARS
NE14	Granada, Spain	37.19° N	3.60° W	774.0	NARS
NE15	Valkenburg, Netherlands	50.87° N	5.79° E	100.0	NARS
NE16	Clermont-Ferand, France	45.76° N	3.10° E	80.0	NARS
NE17	Toledo, Spain	39.88° N	4.05° W	480.0	NARS
NRA0	NORESS array site A0	60.74° N	11.54° E	302.0	NRSA
NWAO	Mundaring (Narrogin), Australia	32.93° S	117.24° E	265.0	SRO
RSCP	Cumberland Plateau, Tennessee,	35.60° N	85.57° W	481.0	RSTN
RSNT	Yellowknife, Northwest Territories	62.48° N	114.59° W	90.0	RSTN
RSNY	Adirondack, New York	44.55° N	74.53° W	351.0	RSTN
RSO	Red Lake, Ontario	50.86° N	93.70° W	302.0	RSTN
RSSD	Black Hills, South Dakota	44.12° N	104.04° W	1948.0	RSTN

Table 2. Current network-event tape station list, continued.

Code	Station	Latitude	Longitude	Elevation (m)	Type[*]
SLR	Silverton, South Africa	25.73° S	28.28° E	1348.0	DWWSSN
SNZO	Wellington (South Karori), New Zealand	41.31° S	174.70° E	-12.0	SRO
TATO	Taipei, Taiwan	24.98° N	121.49° E	53.0	SRO
TAU	Hobart, Tasmania	42.91° S	147.32° E	132.0	DWWSSN
WMQ	Urumqi, China	43.82° N	87.70° E	970.0	CDSN
ZOBO	La Paz (Zongo), Bolivia	16.27° S	68.13° W	4450.0	ASRO

^{*} ASRO - Abbreviated Seismic Research Observatory

CDSN - China Digital Seismograph Network

DWWSSN - Digital World Wide Standardized Seismograph Network

GRF - Graefenberg Array

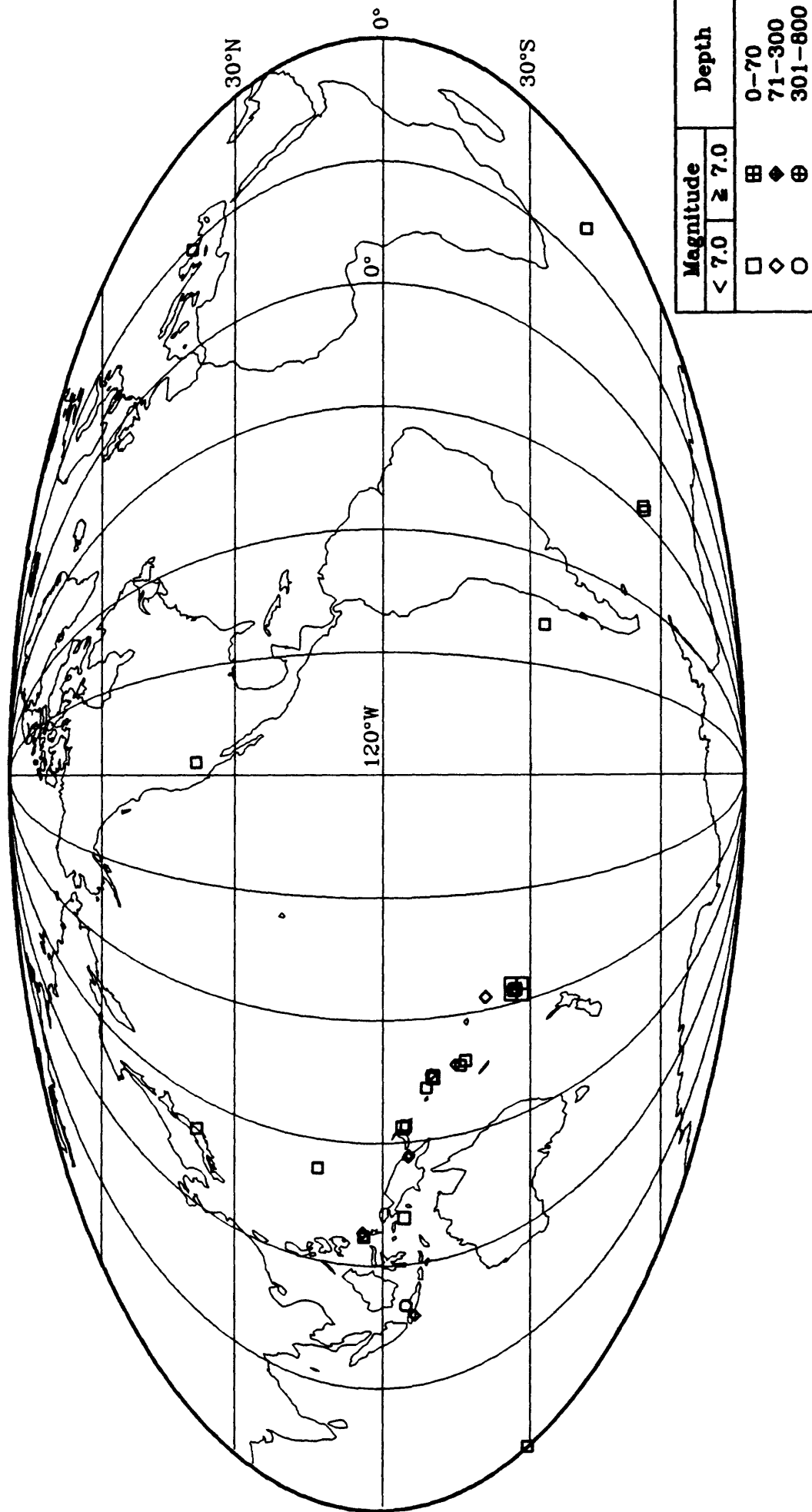
NARS - Network of Autonomously Registrating Stations

NRSA - Norwegian Regional Seismic Array

RSTN - Regional Seismic Test Network

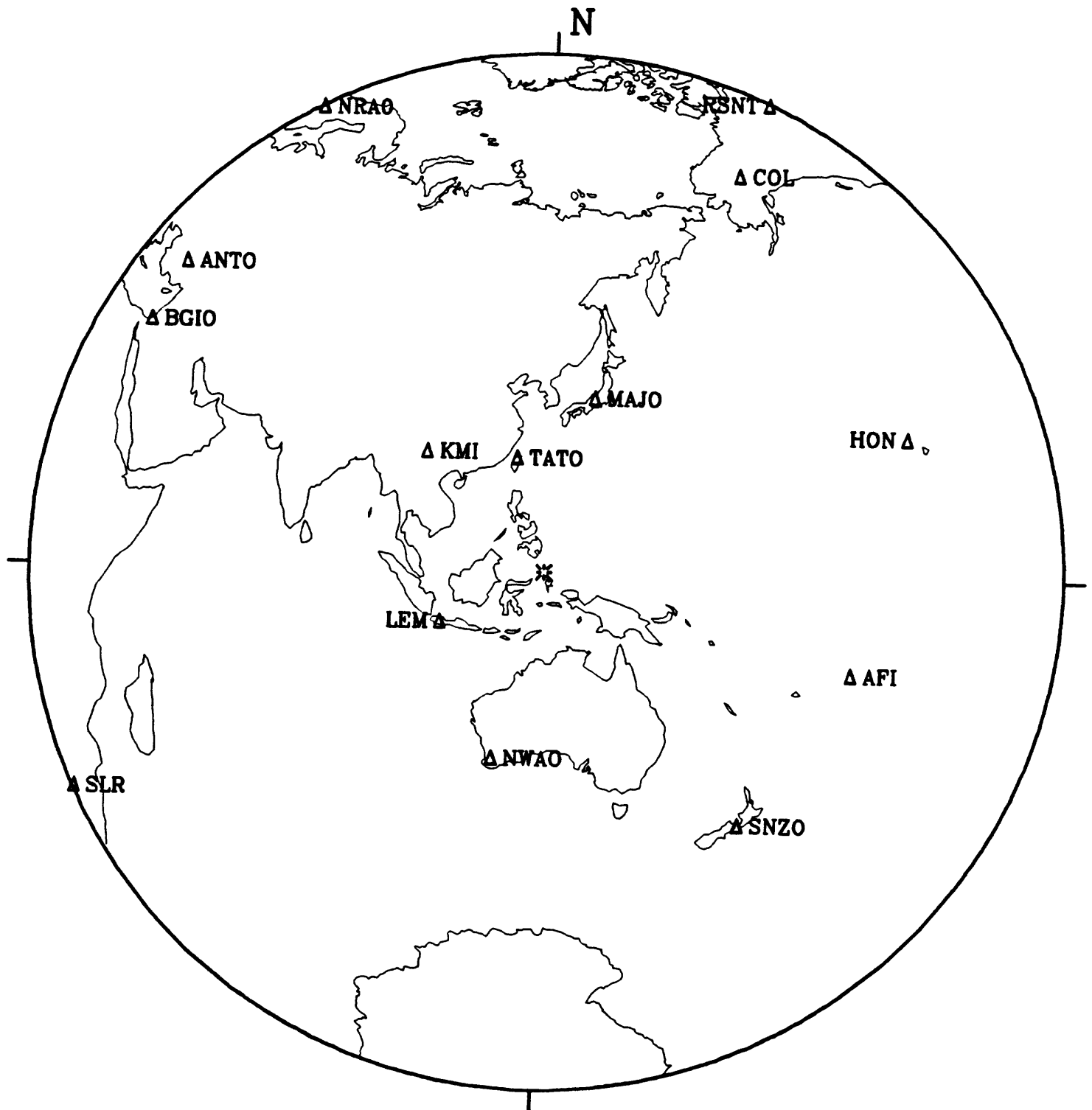
SRO - Seismic Research Observatory

EARTHQUAKES – October 1986 – MAGNITUDE ≥ 5.5



02 October 1986 20:15:31.27

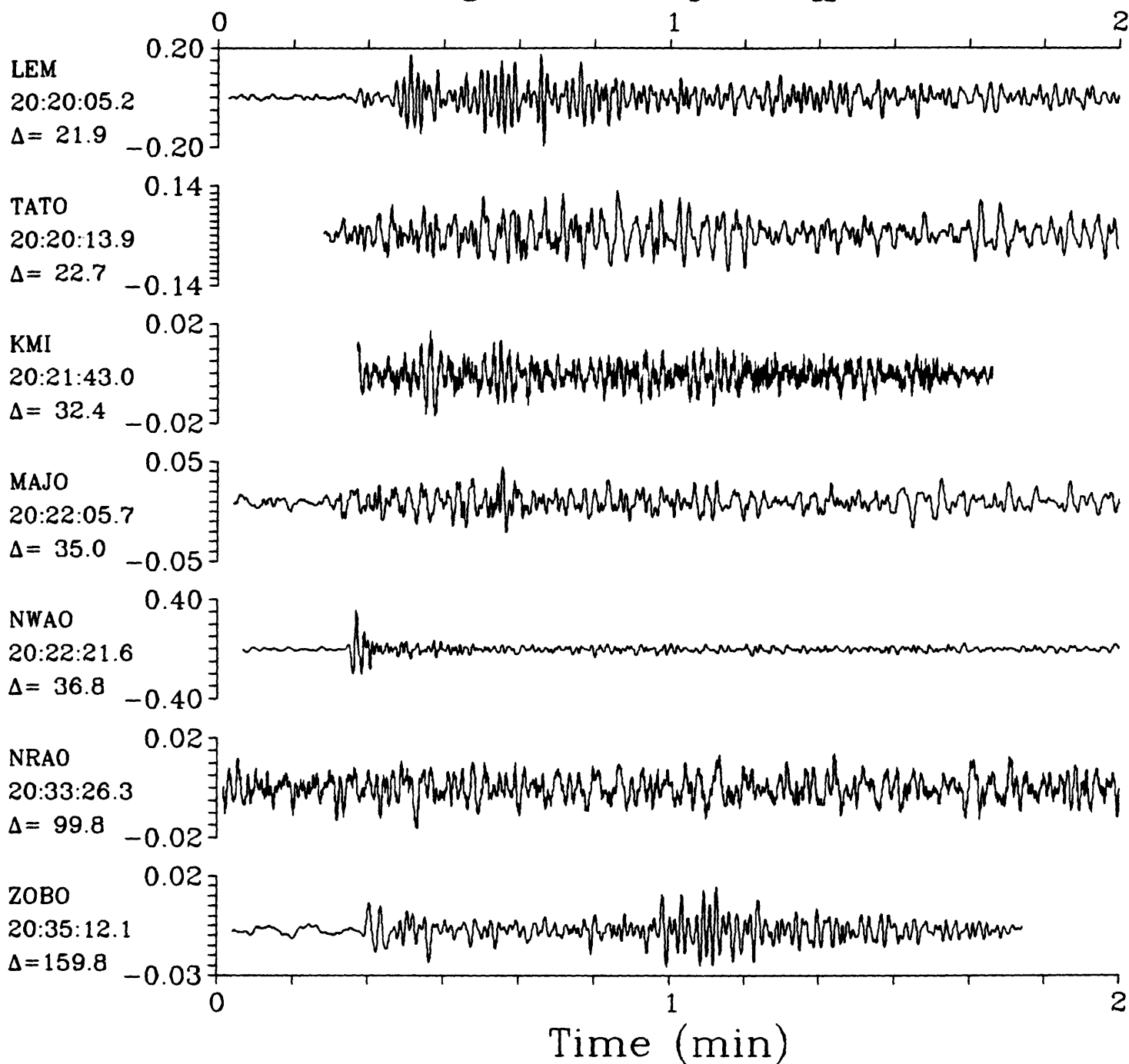
Molucca Passage



SPZ

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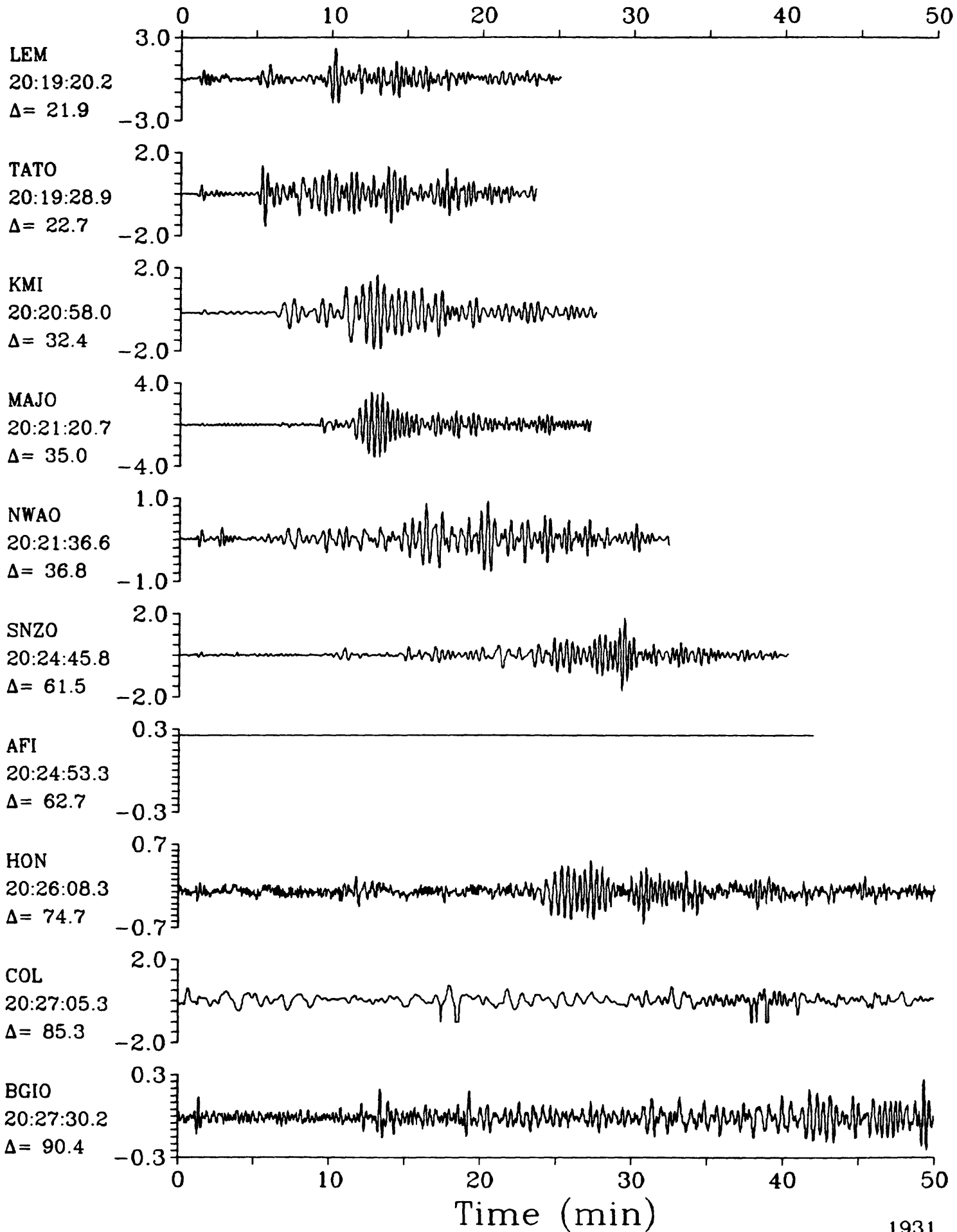
SPZ

Molucca Passage $h=33.0$ $m_b=5.5$ $M_{SZ}=4.9$ 

LPZ

02 October 1986 20:15:31.27

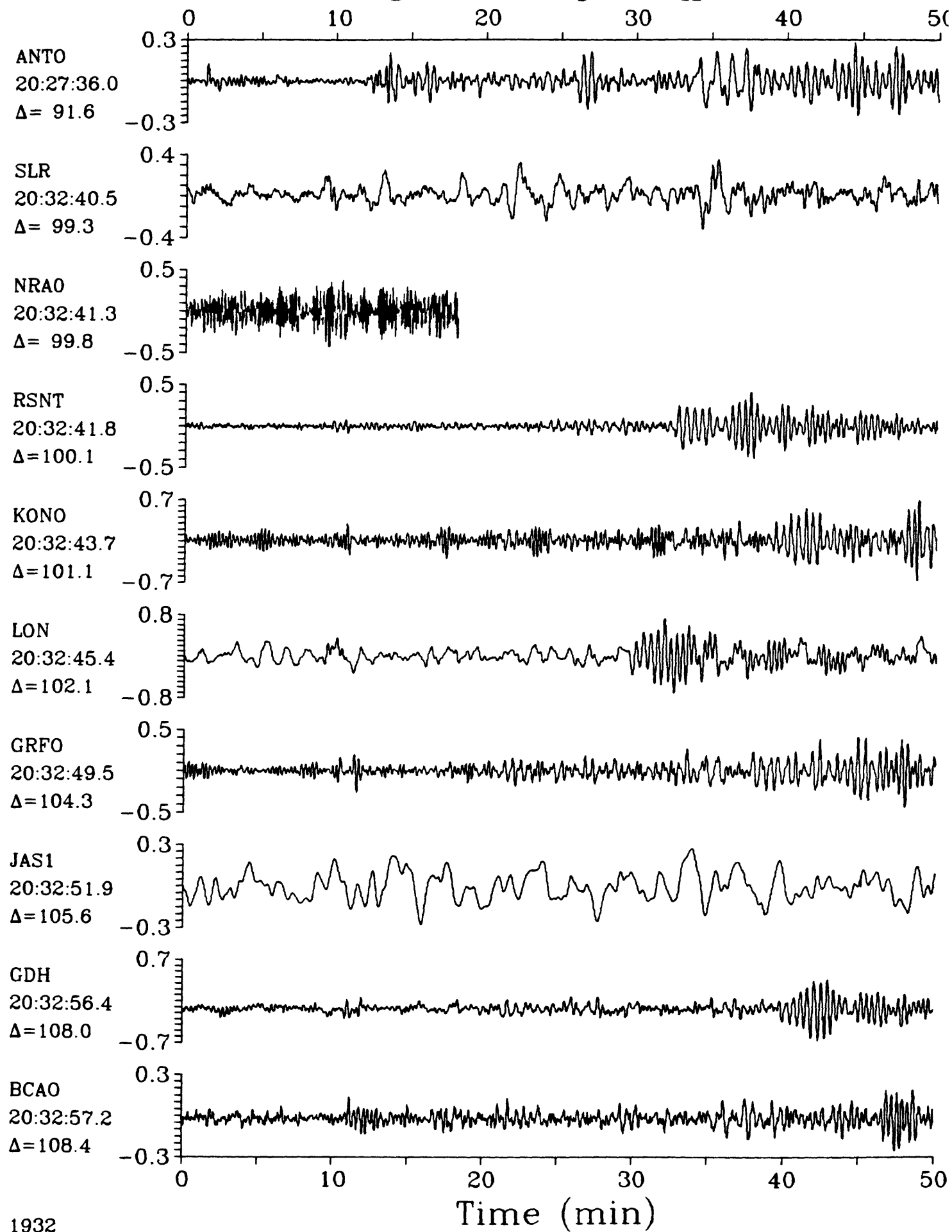
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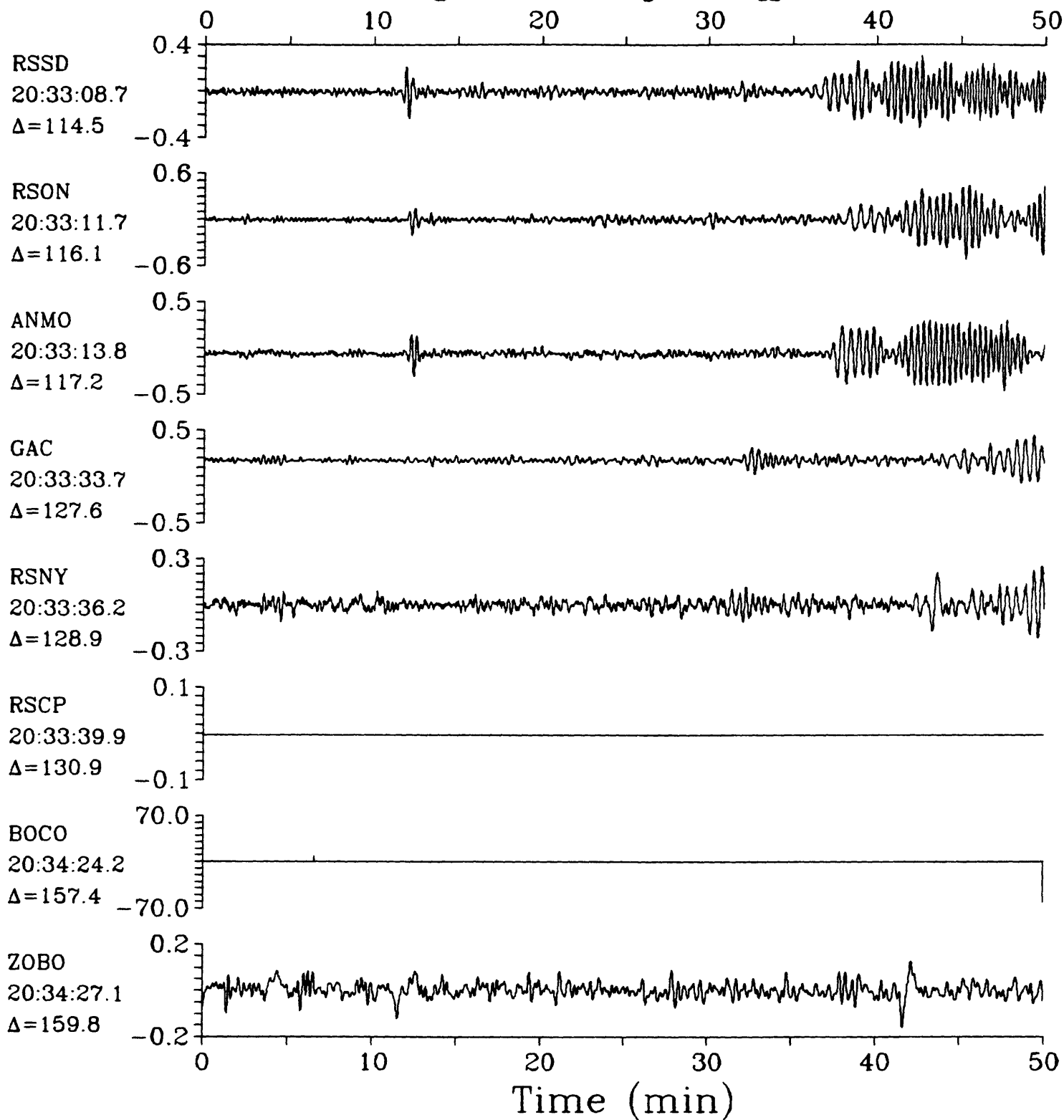
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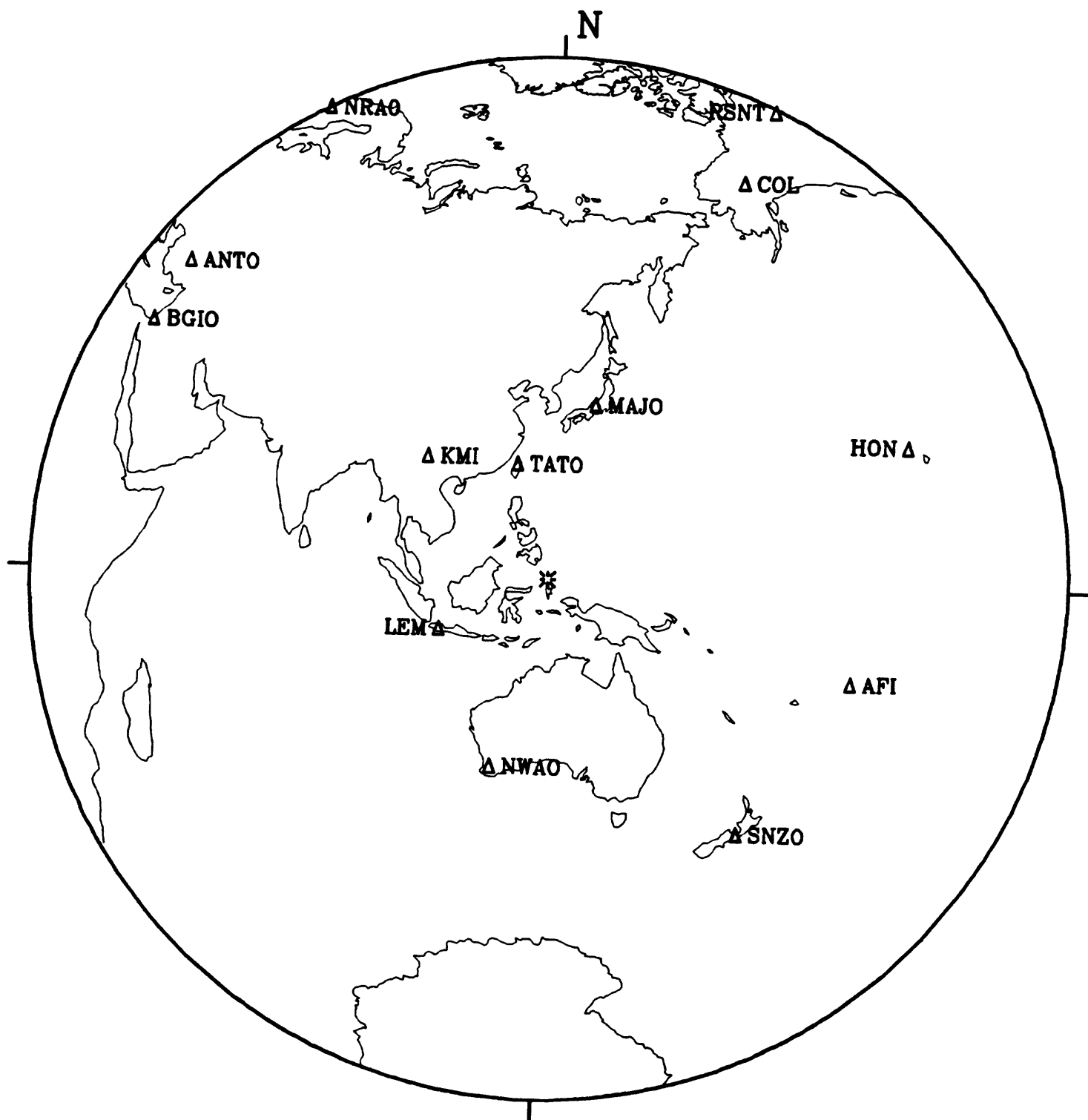
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LPZ

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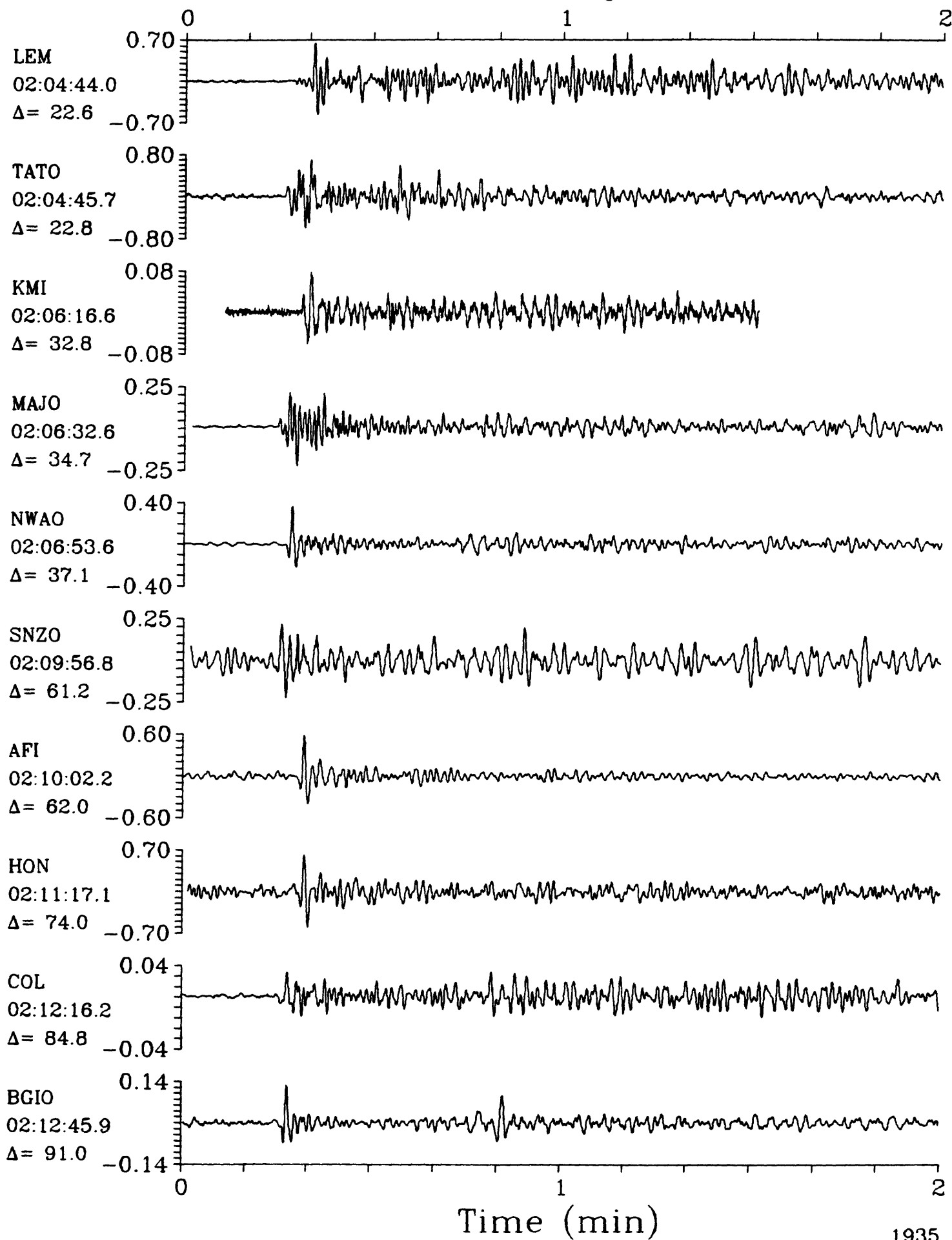
Halmahera

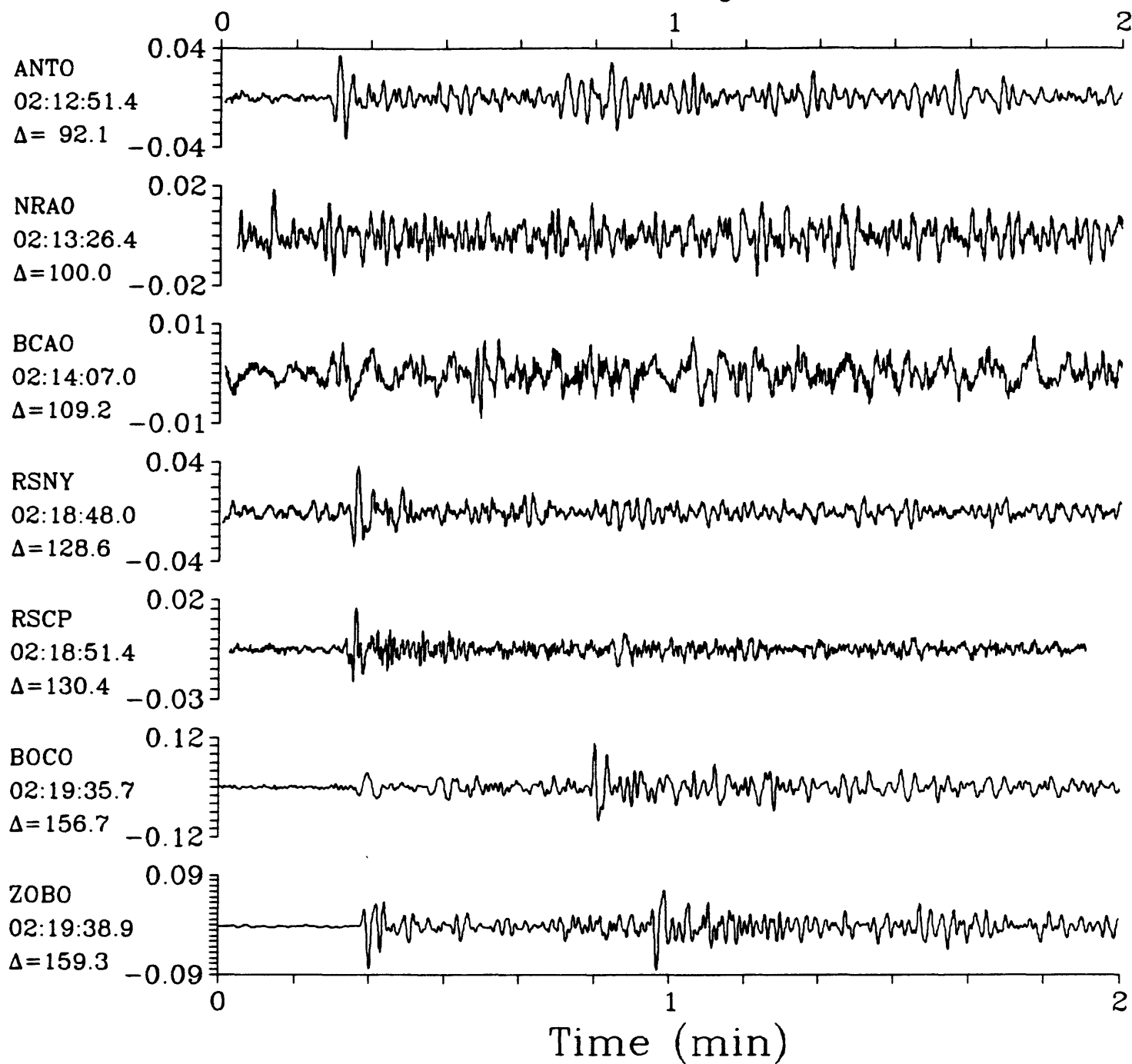


SPZ

04 October 1986 02:00:08.33
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SPZ

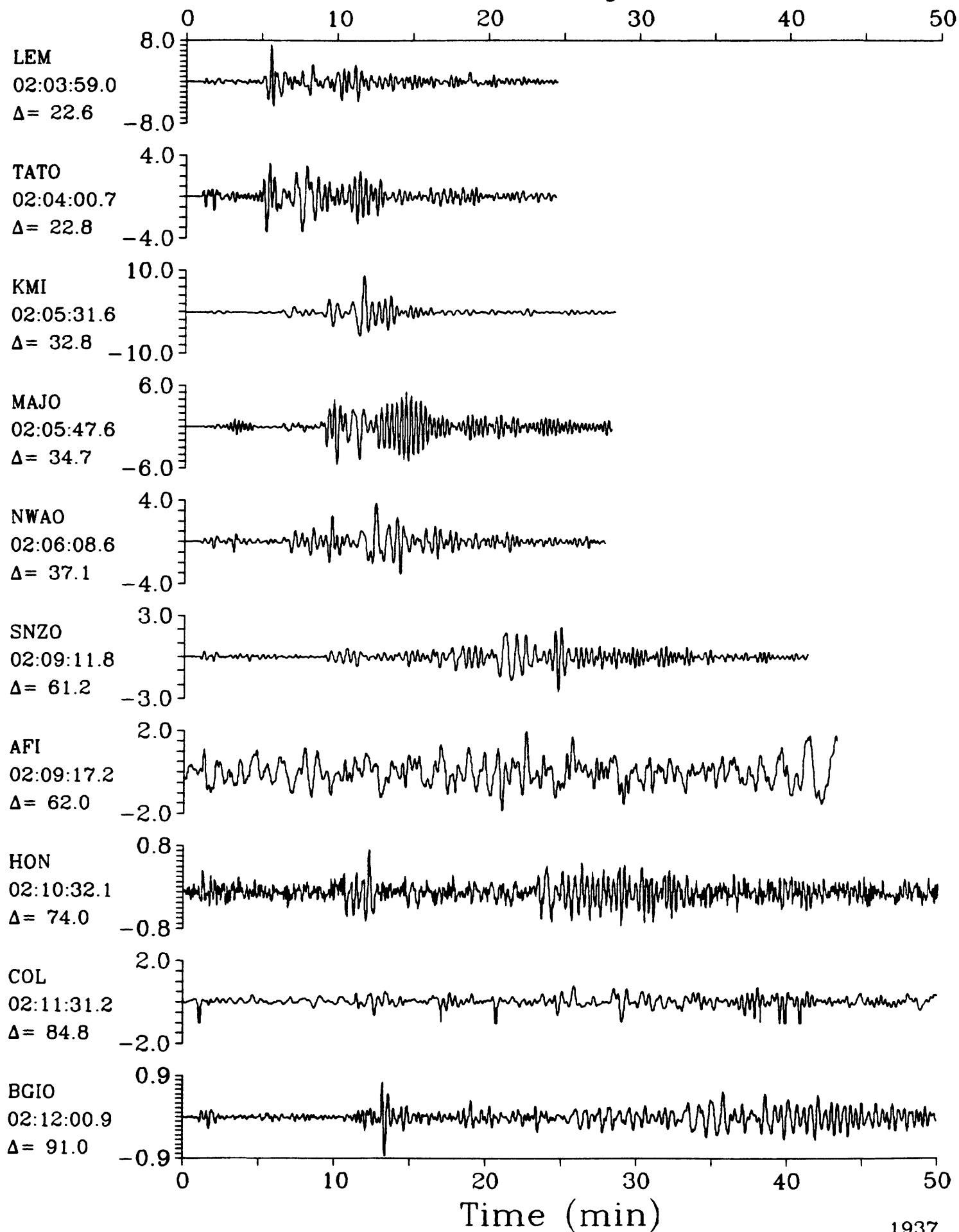




LPZ

04 October 1986 02:00:08.33
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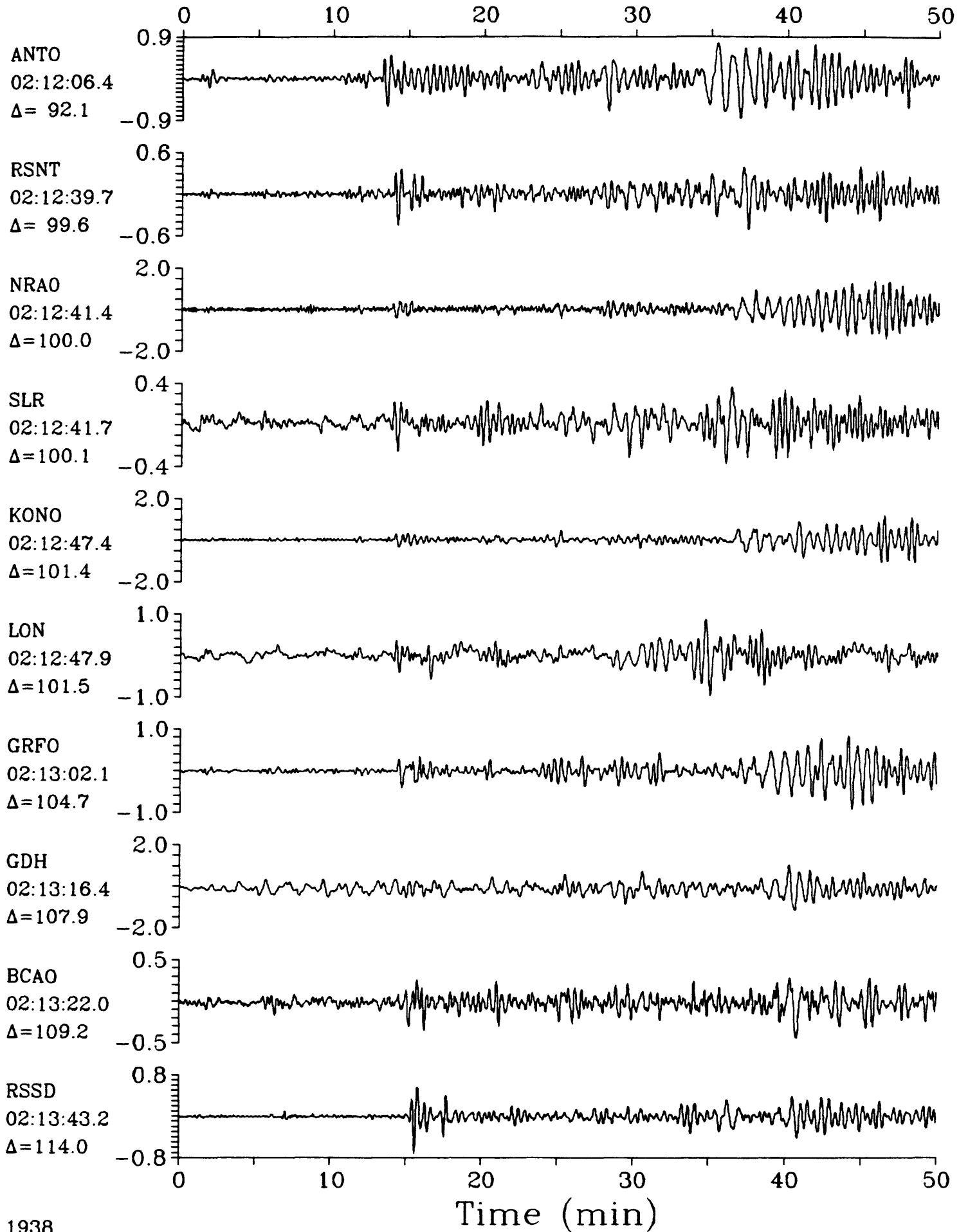
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LPZ

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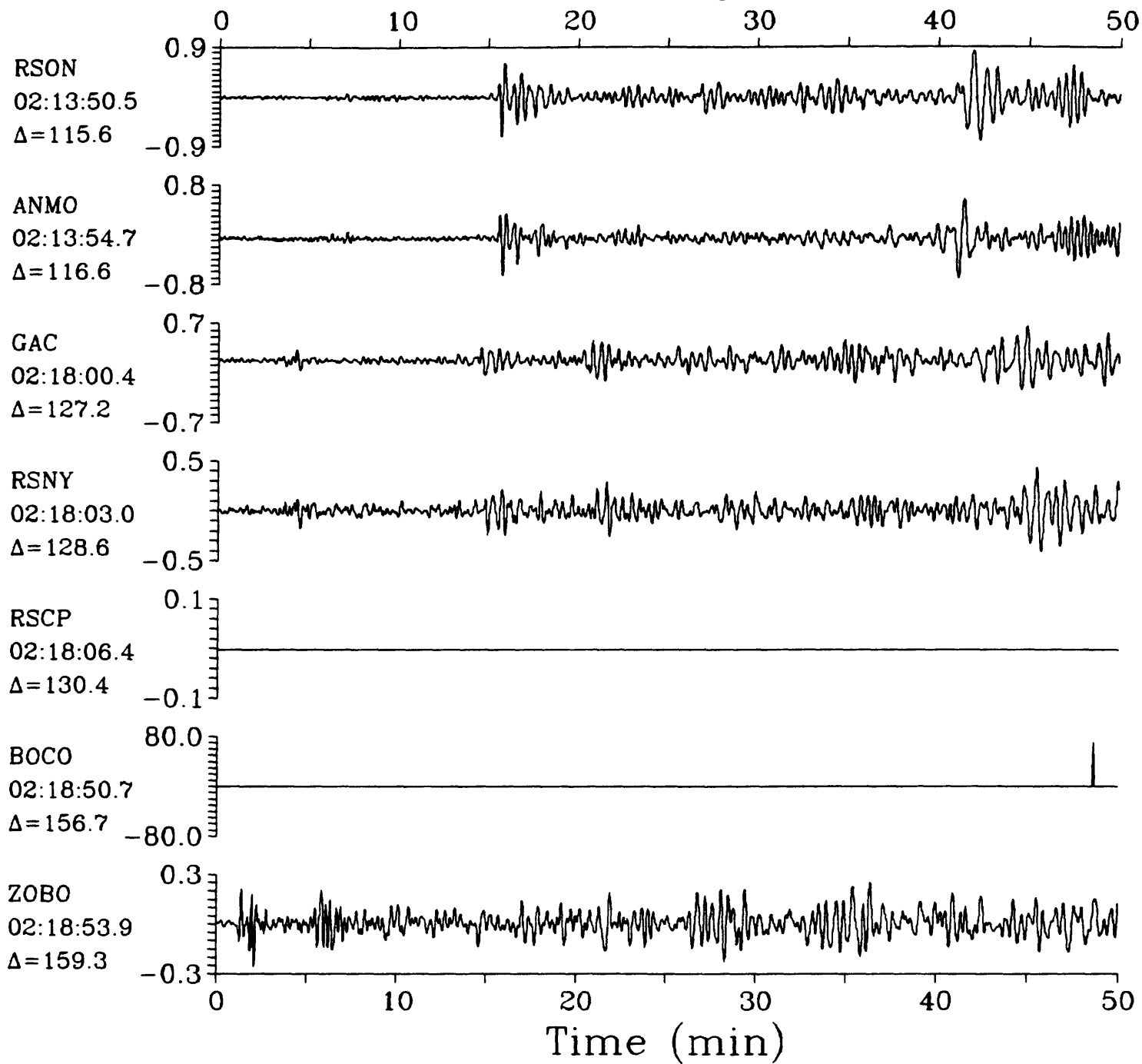
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LPZ

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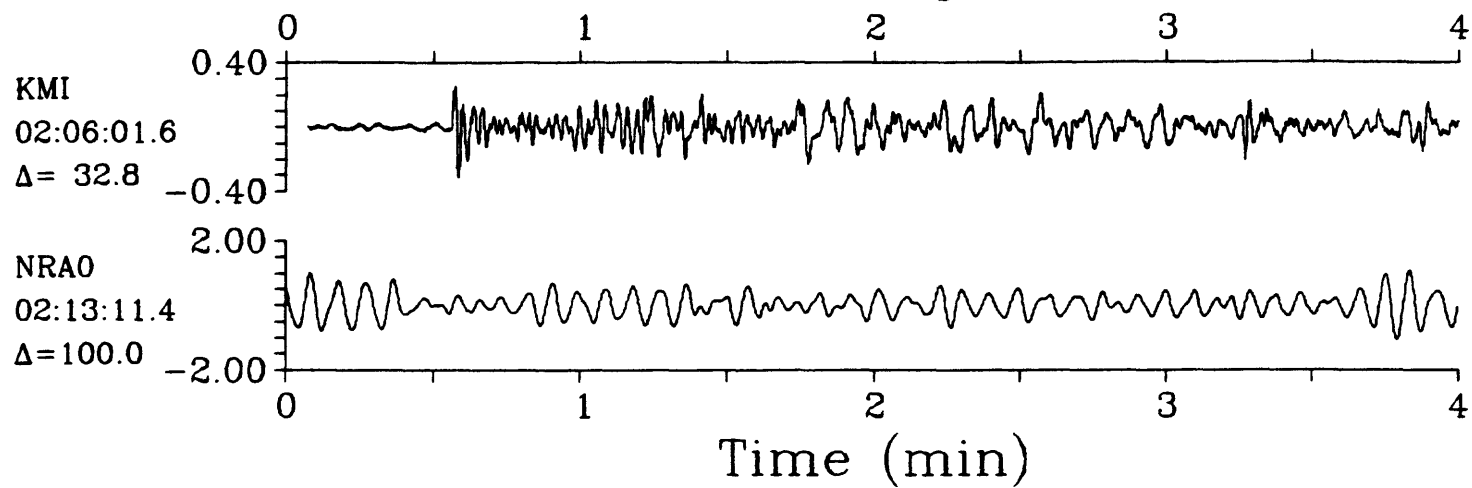
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IPZ

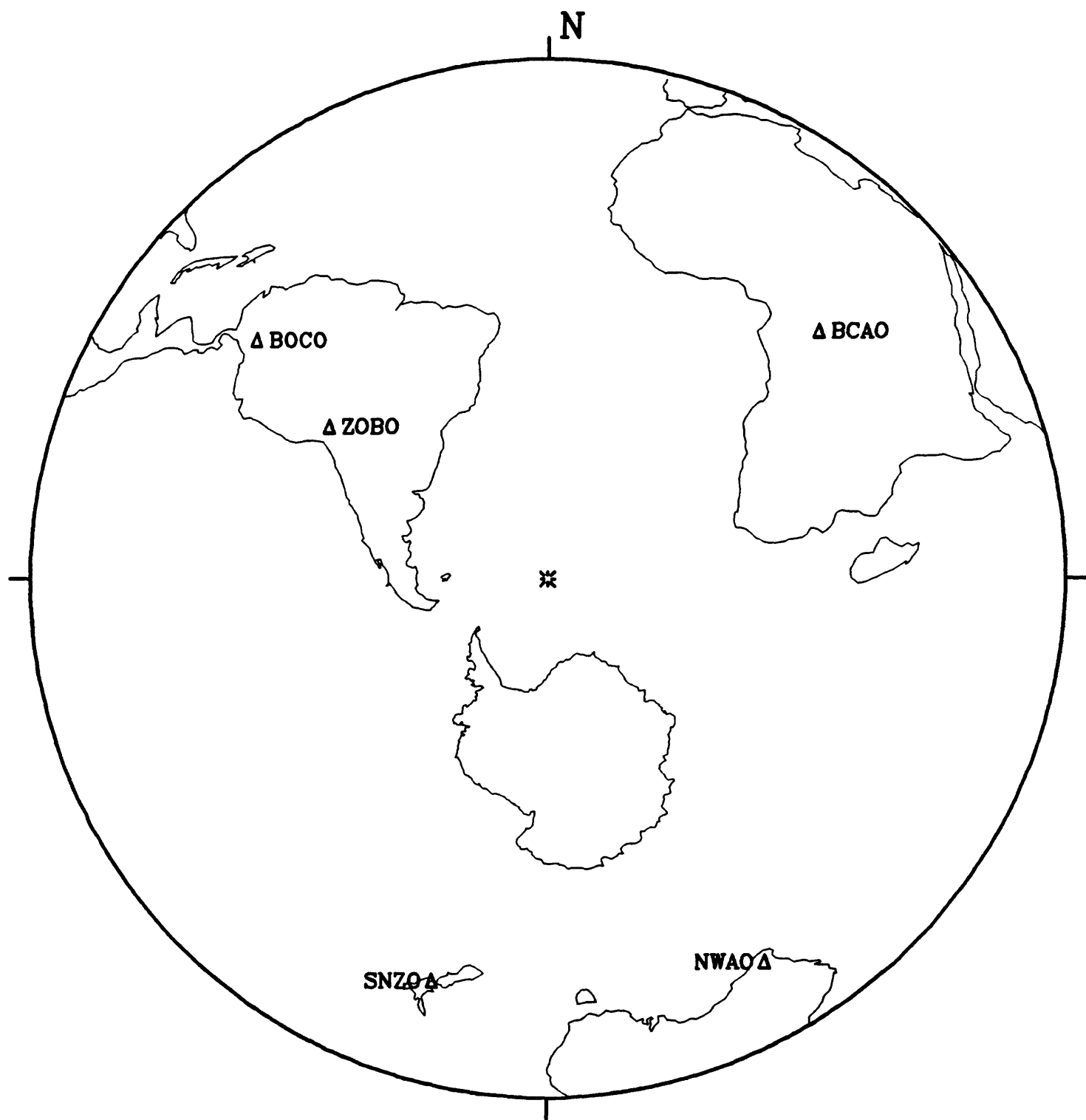
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IPZ



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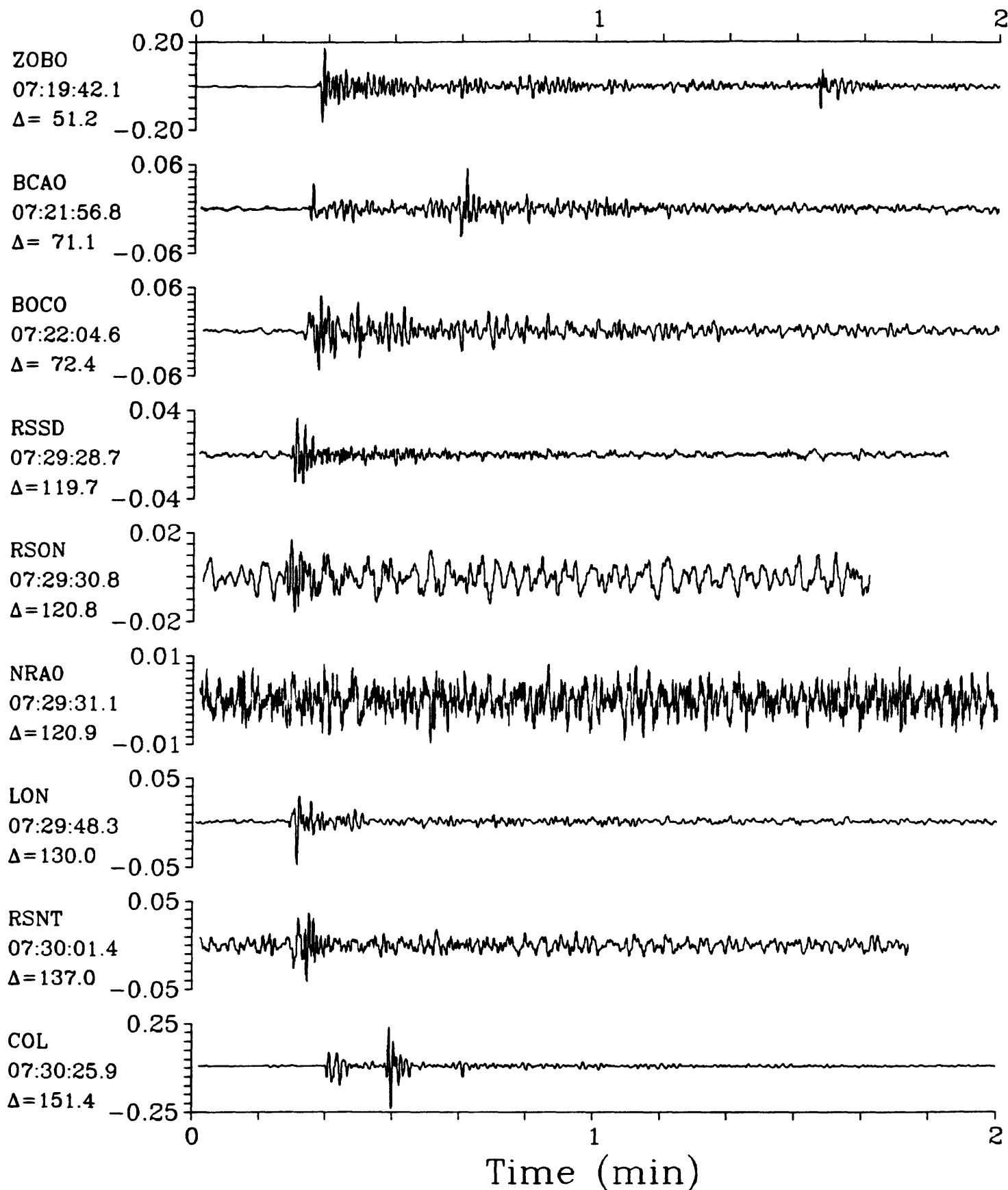
South Sandwich Islands Region



SPZ

06 October 1986 07:10:56.43

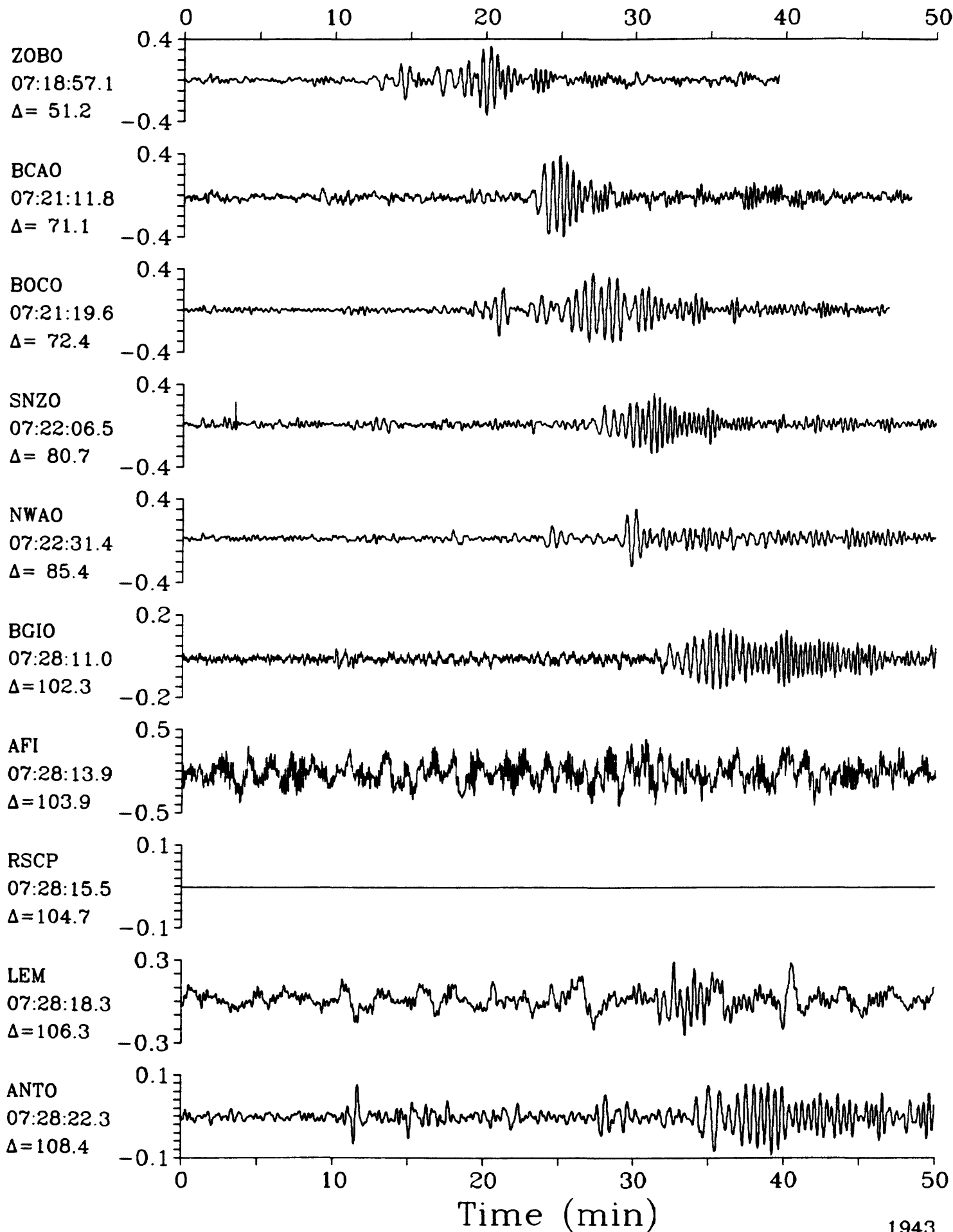
SPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{SZ}=4.4$ 

LPZ

06 October 1986 07:10:56.43

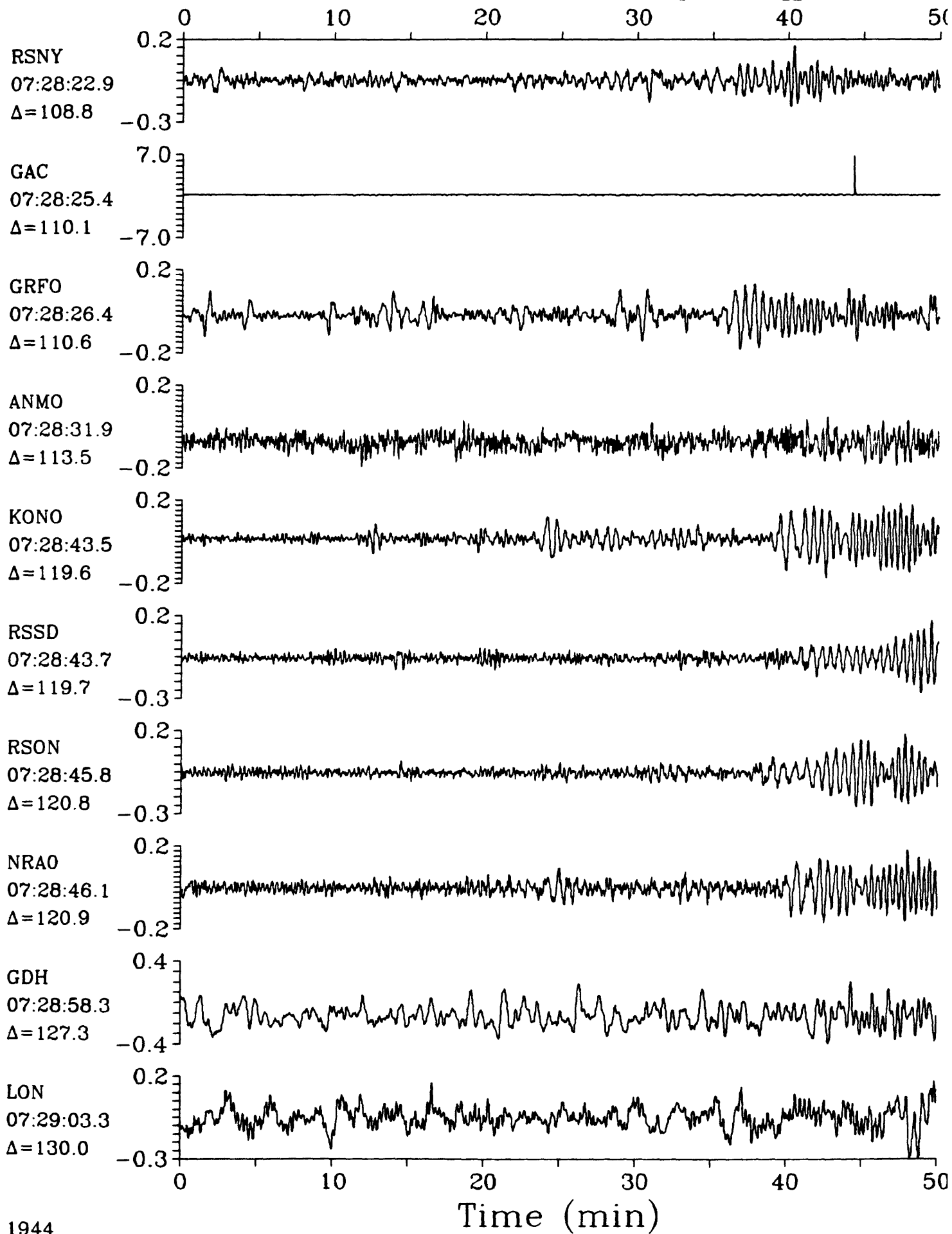
LPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=4.4$ 

LPZ

06 October 1986 07:10:56.43

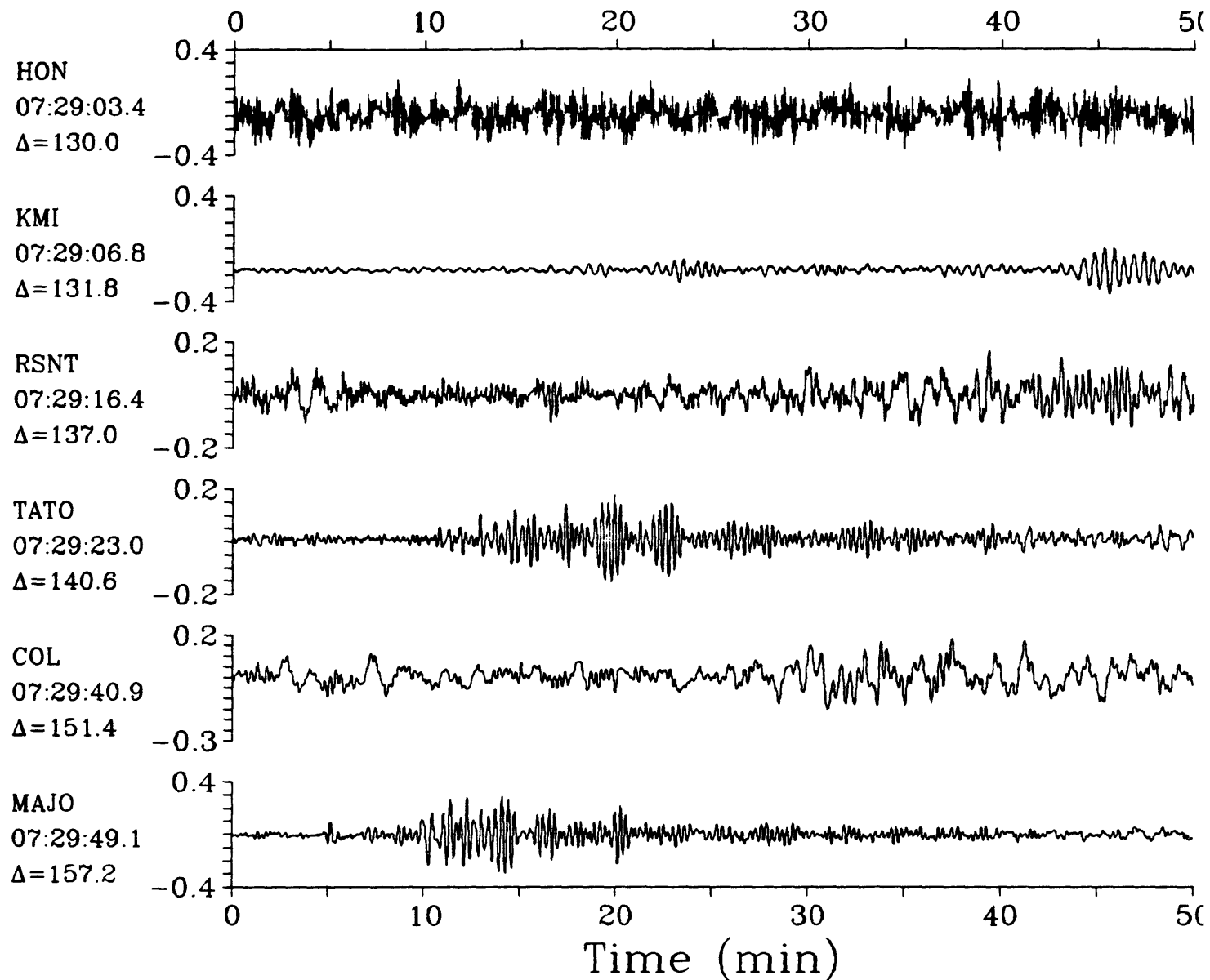
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South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=4.4$ 

LPZ

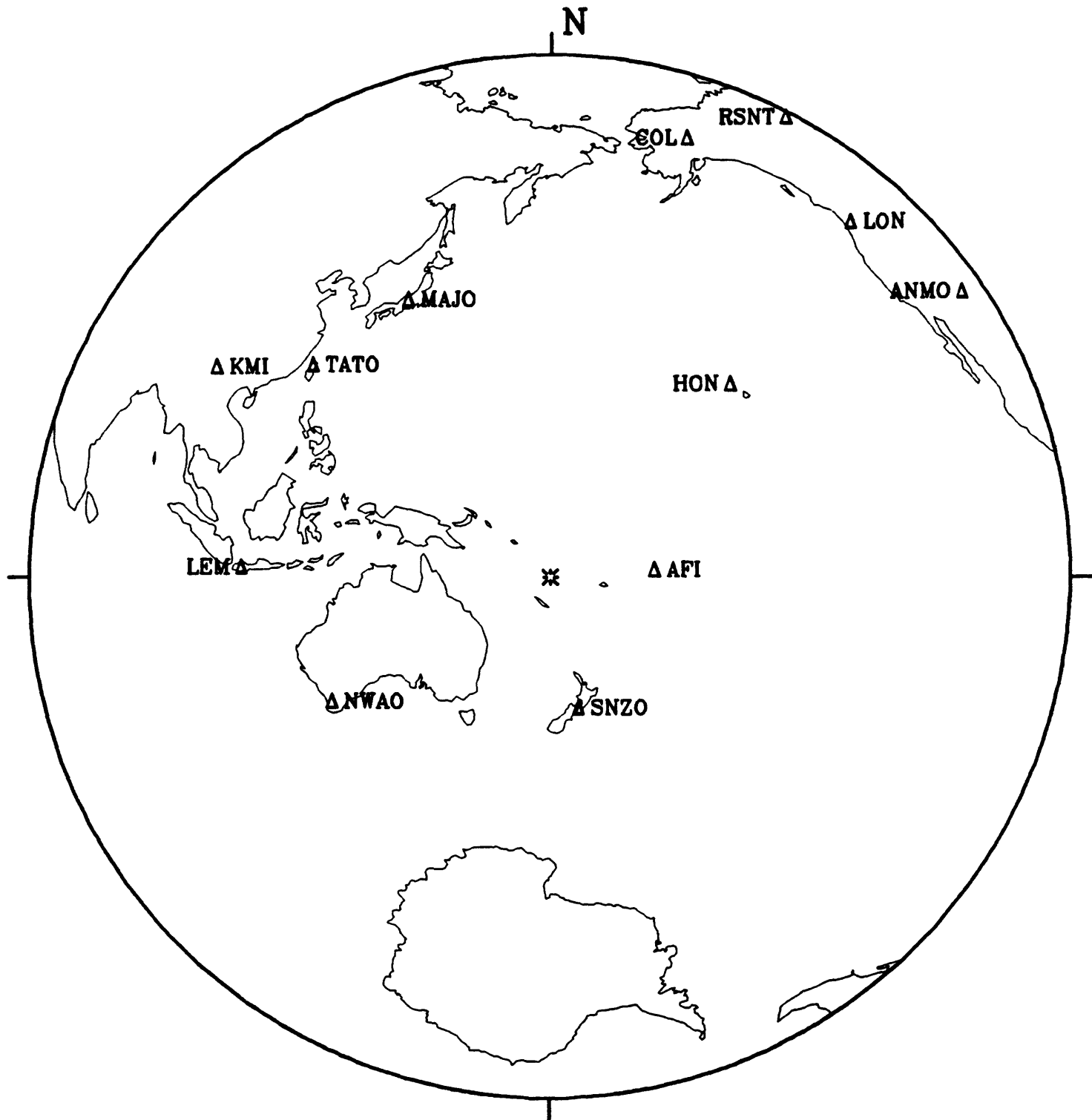
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LPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=4.4$ 

07 October 1986 14:03:48.35

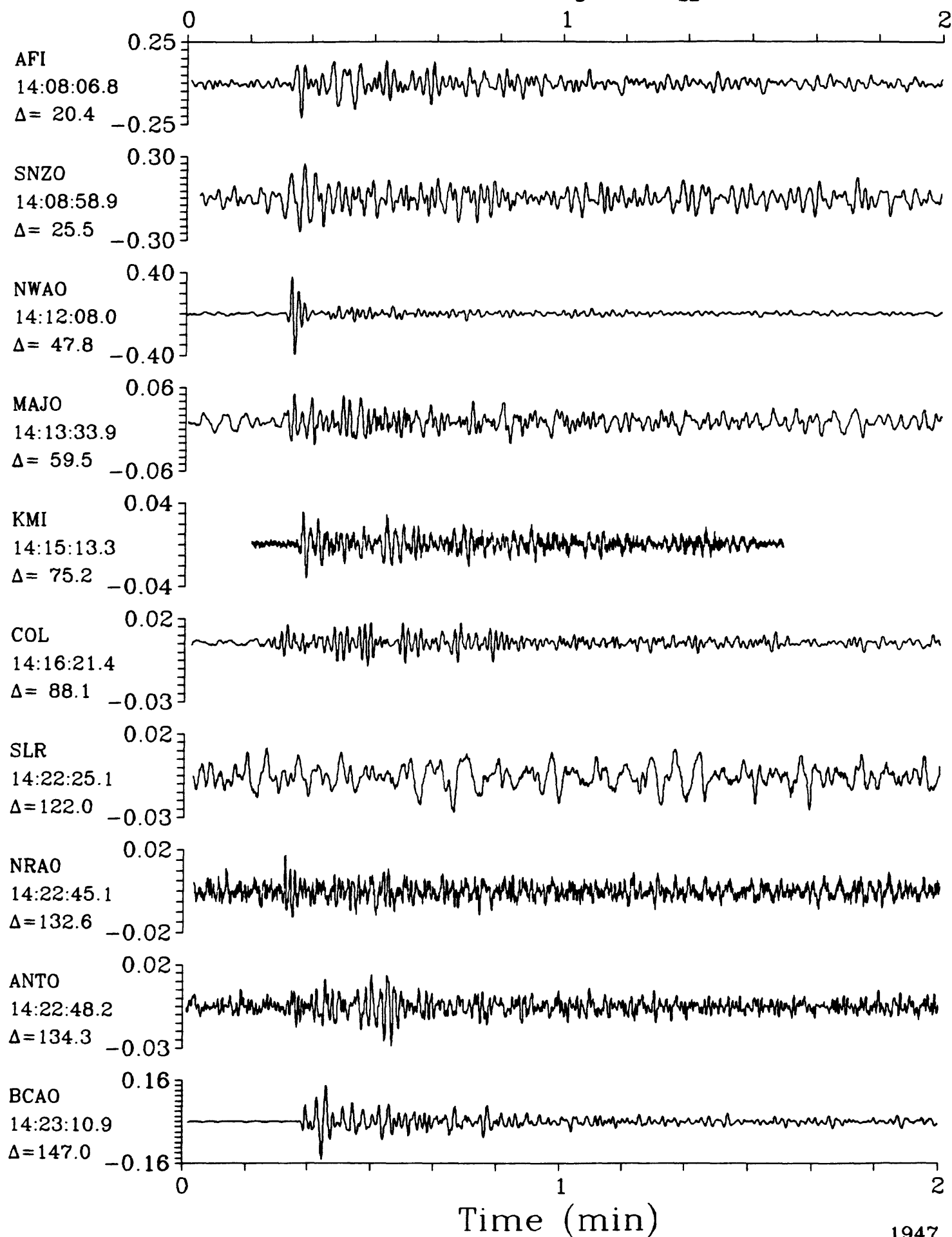
Vanuatu Islands



SPZ

07 October 1986 14:03:48.35

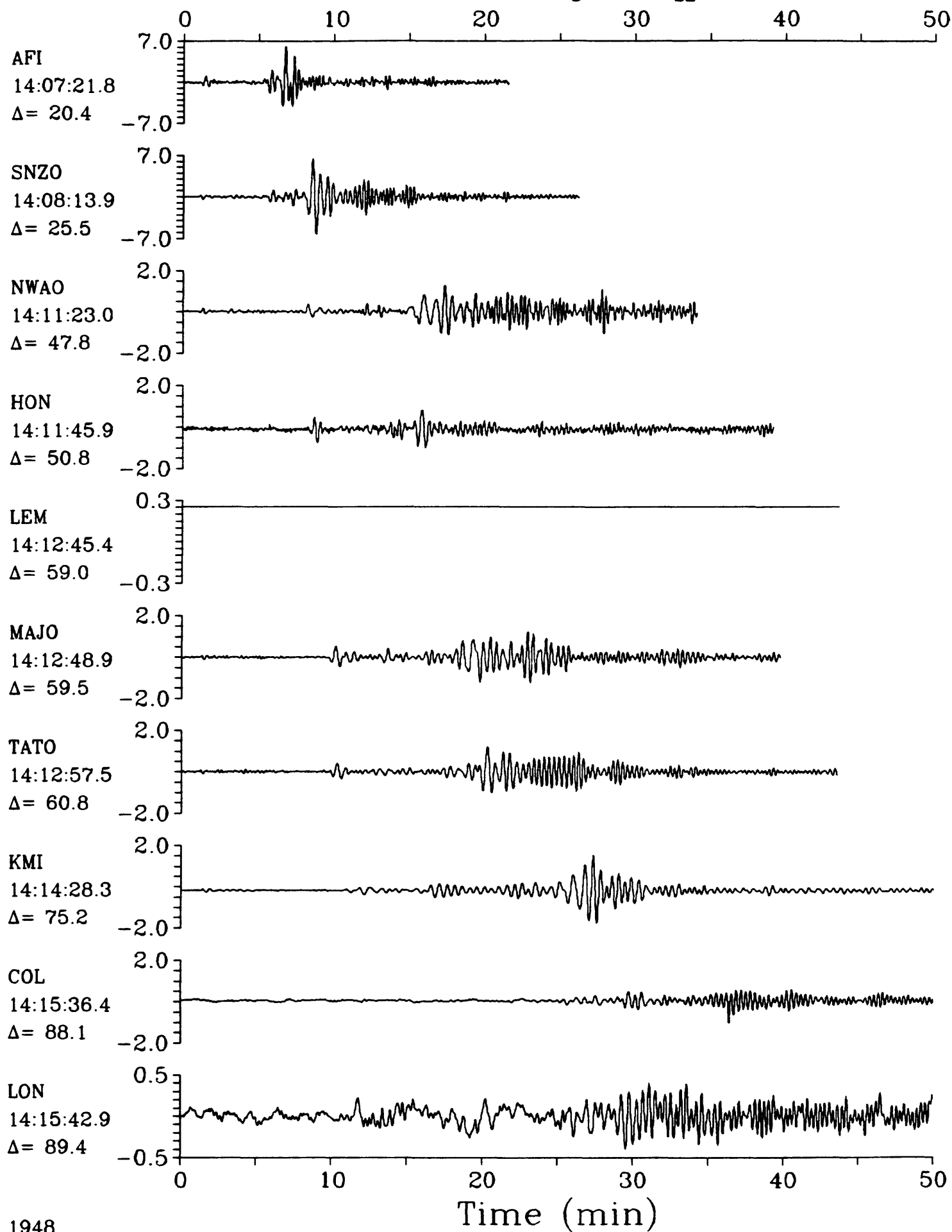
SPZ

Vanuatu Islands $h=33.0$ $m_b=5.7$ $M_{sz}=5.2$ 

LPZ

07 October 1986 14:03:48.35
Vanuatu Islands $h=33.0$ $m_b=5.7$ $M_{sz}=5.2$

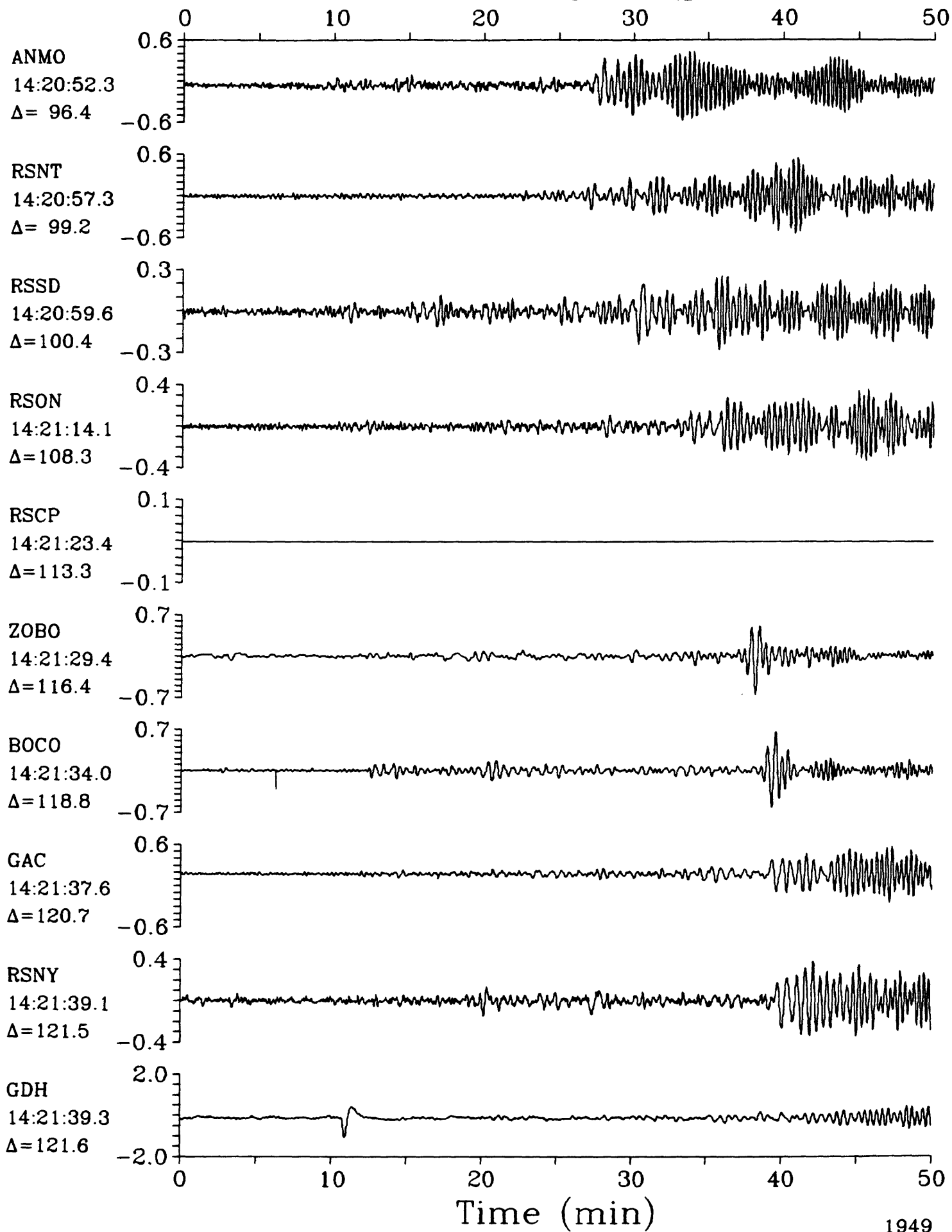
LPZ



LPZ

07 October 1986 14:03:48.35

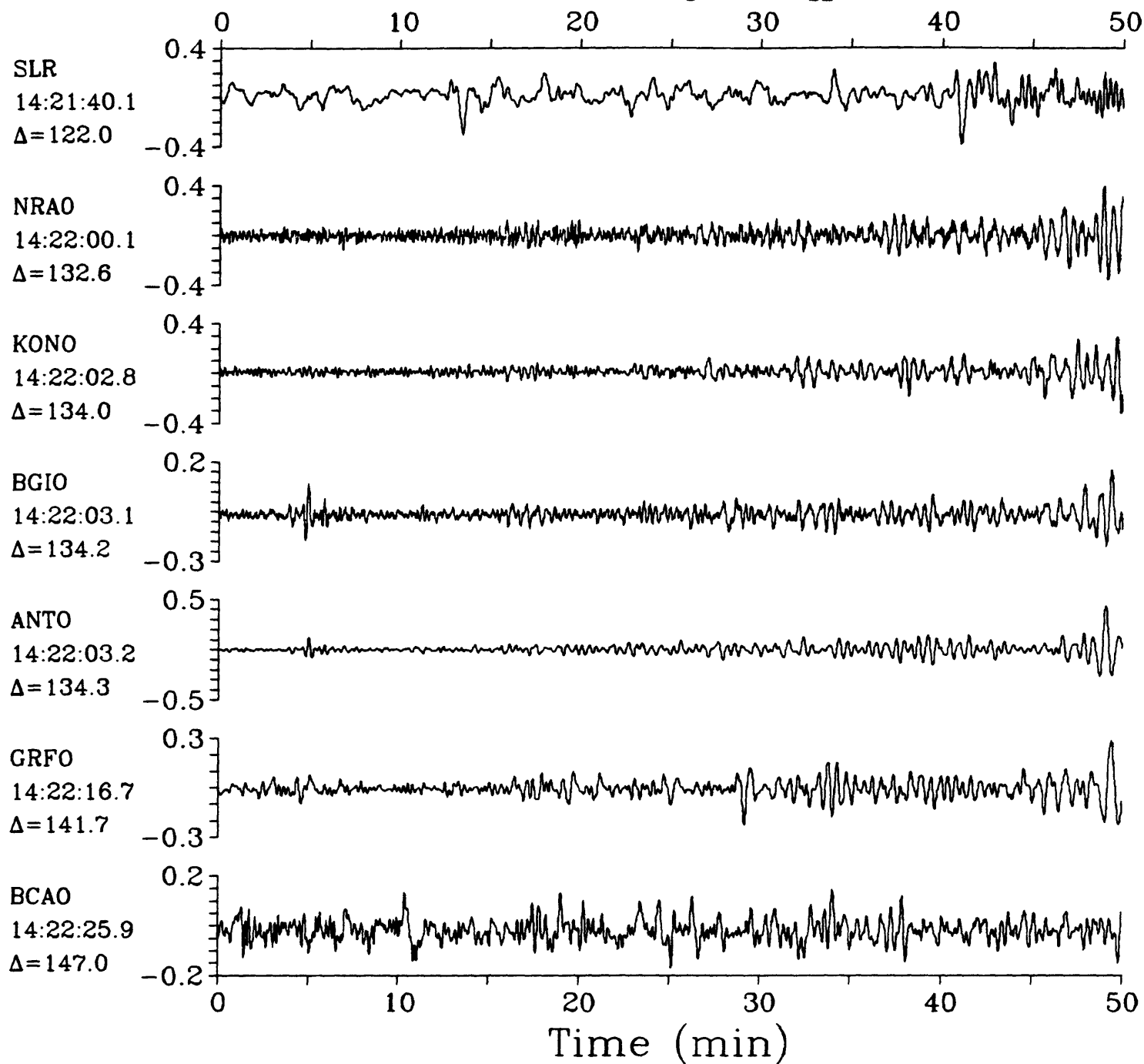
LPZ

Vanuatu Islands $h=33.0$ $m_b=5.7$ $M_{sz}=5.2$ 

LPZ

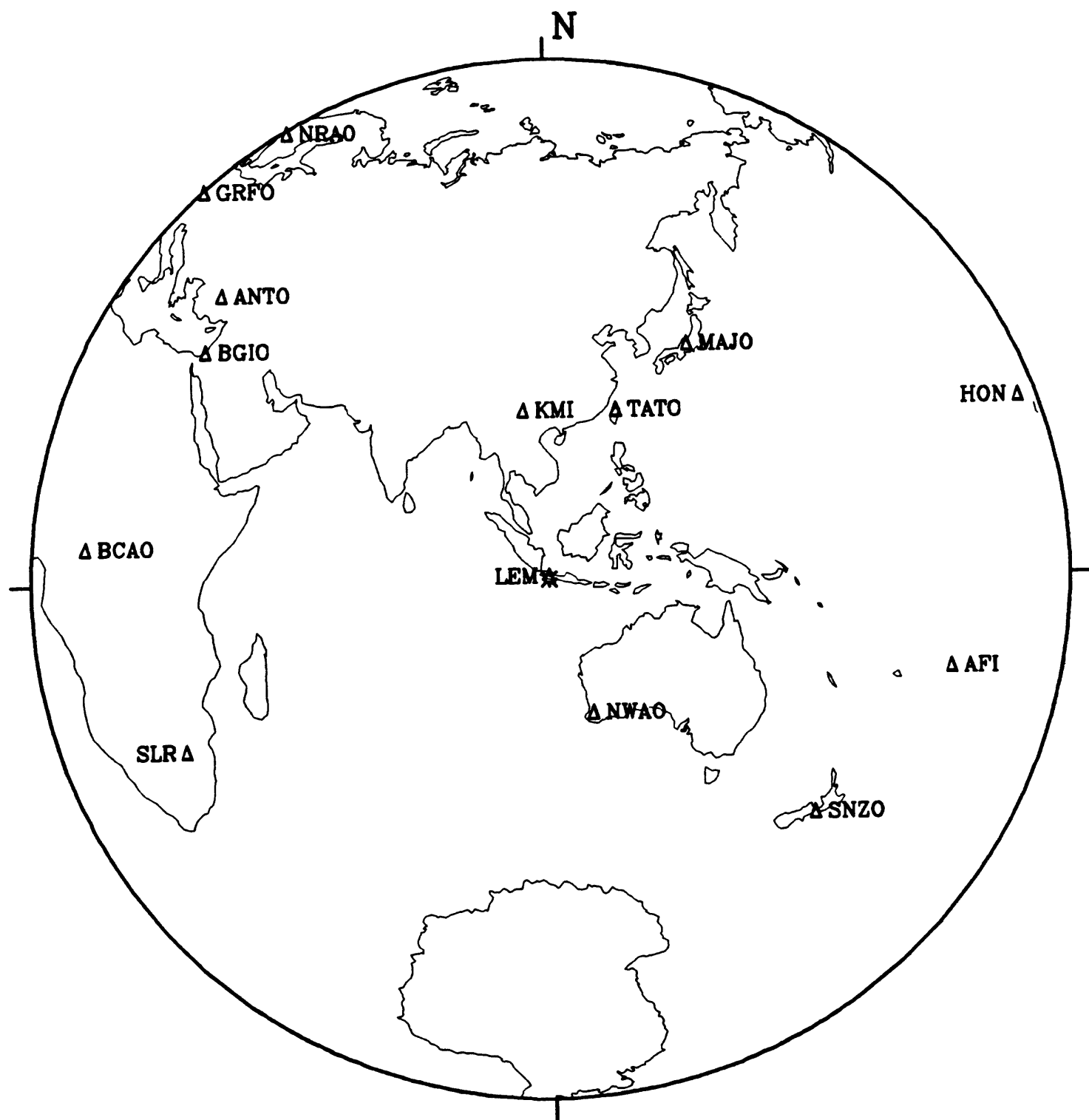
07 October 1986 14:03:48.35

LPZ

Vanuatu Islands $h=33.0$ $m_b=5.7$ $M_{sz}=5.2$ 

10 October 1986 17:48:24.69

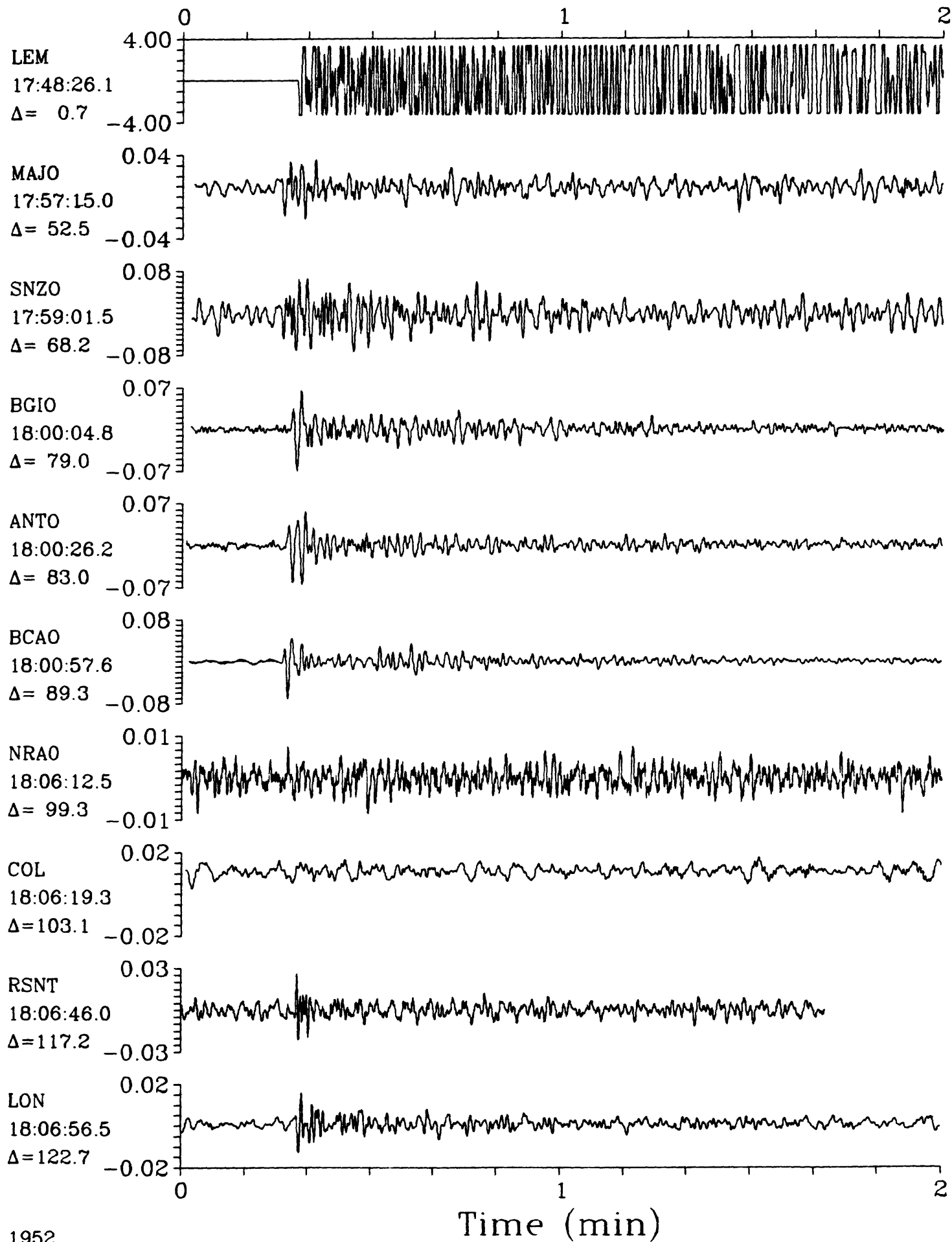
Java



SPZ

10 October 1986 17:48:24.69

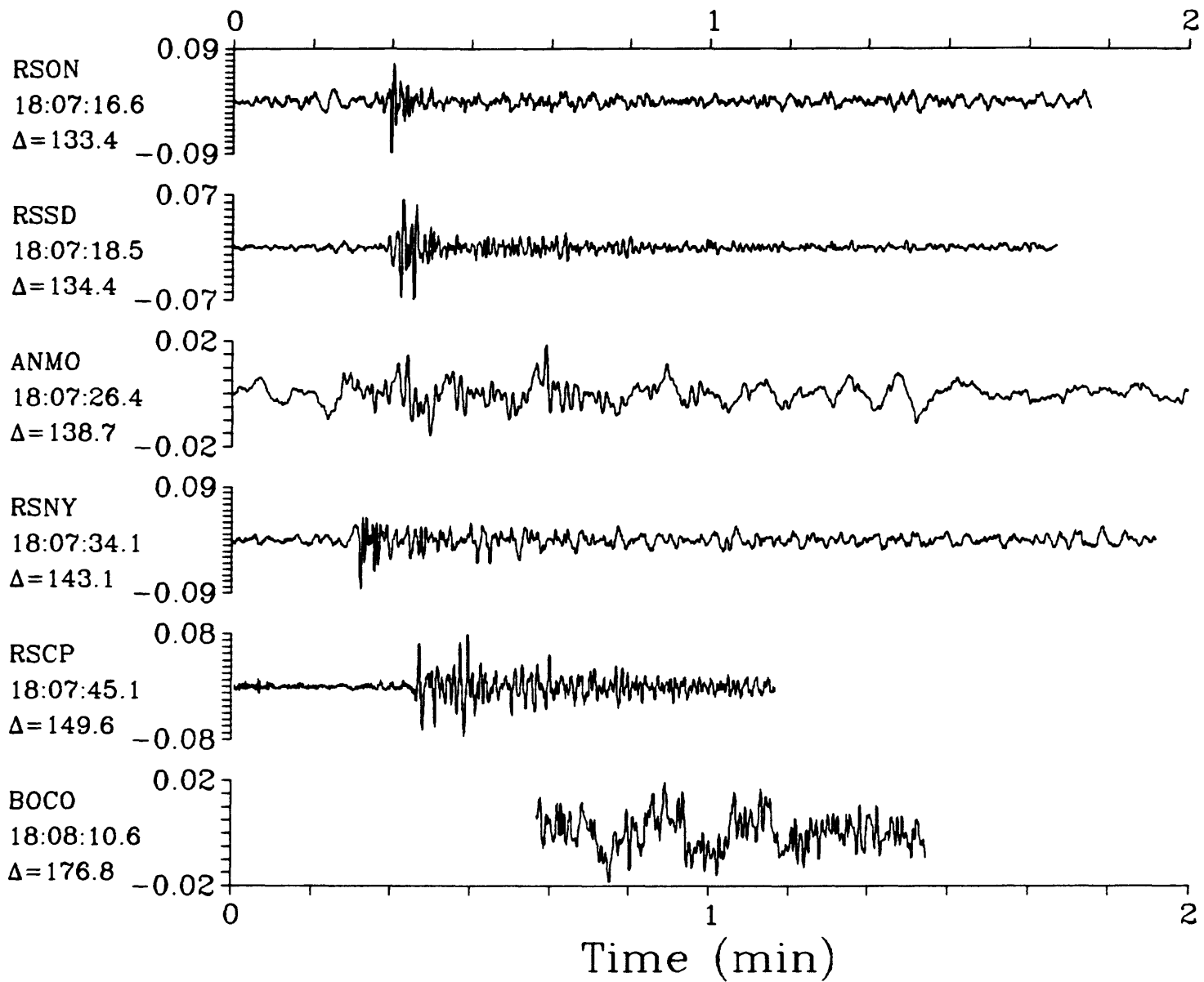
SPZ

Java h=84.0 m_b=5.5

SPZ

10 October 1986 17:48:24.69

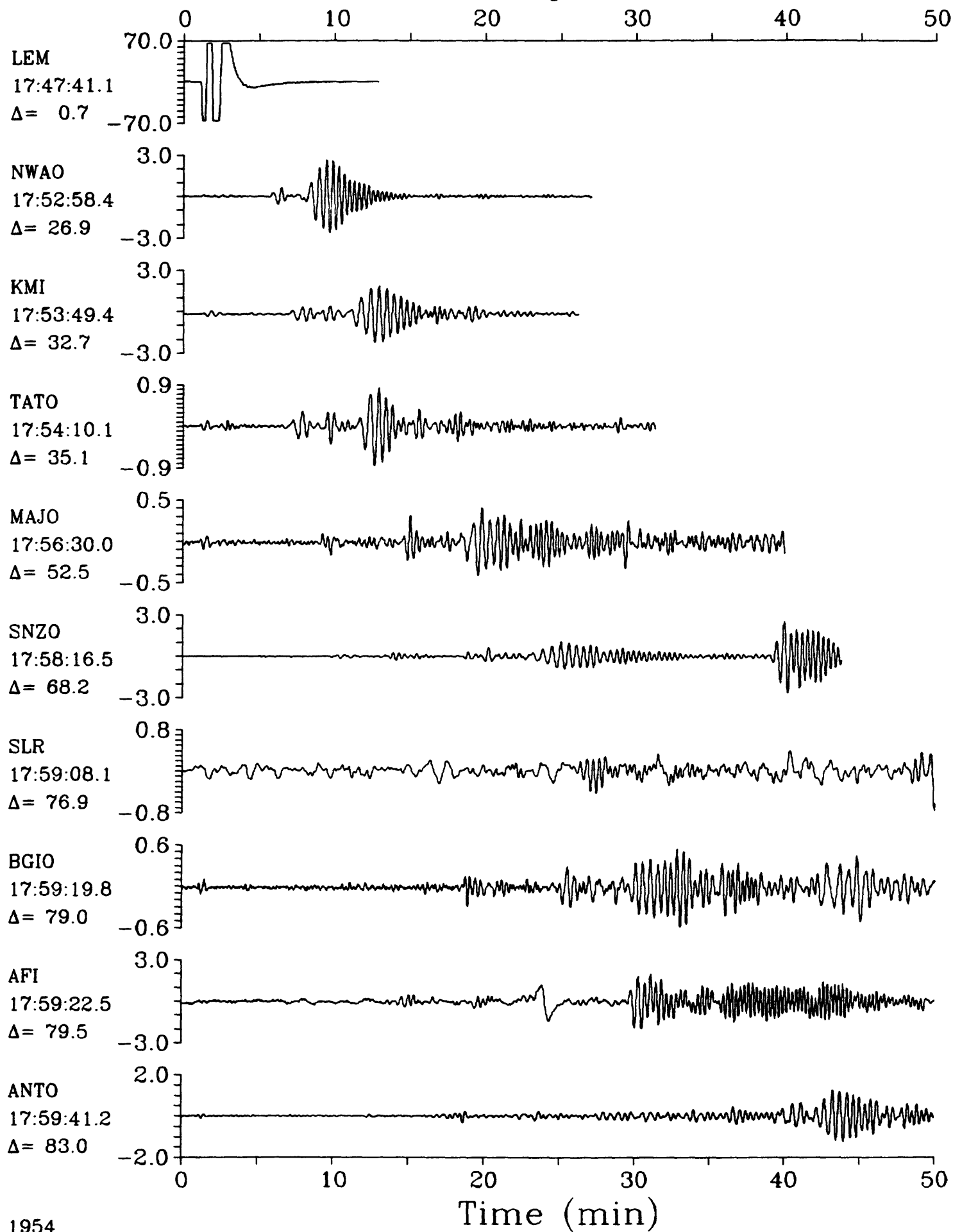
SPZ

Java h=84.0 m_b=5.5

LPZ

10 October 1986 17:48:24.69

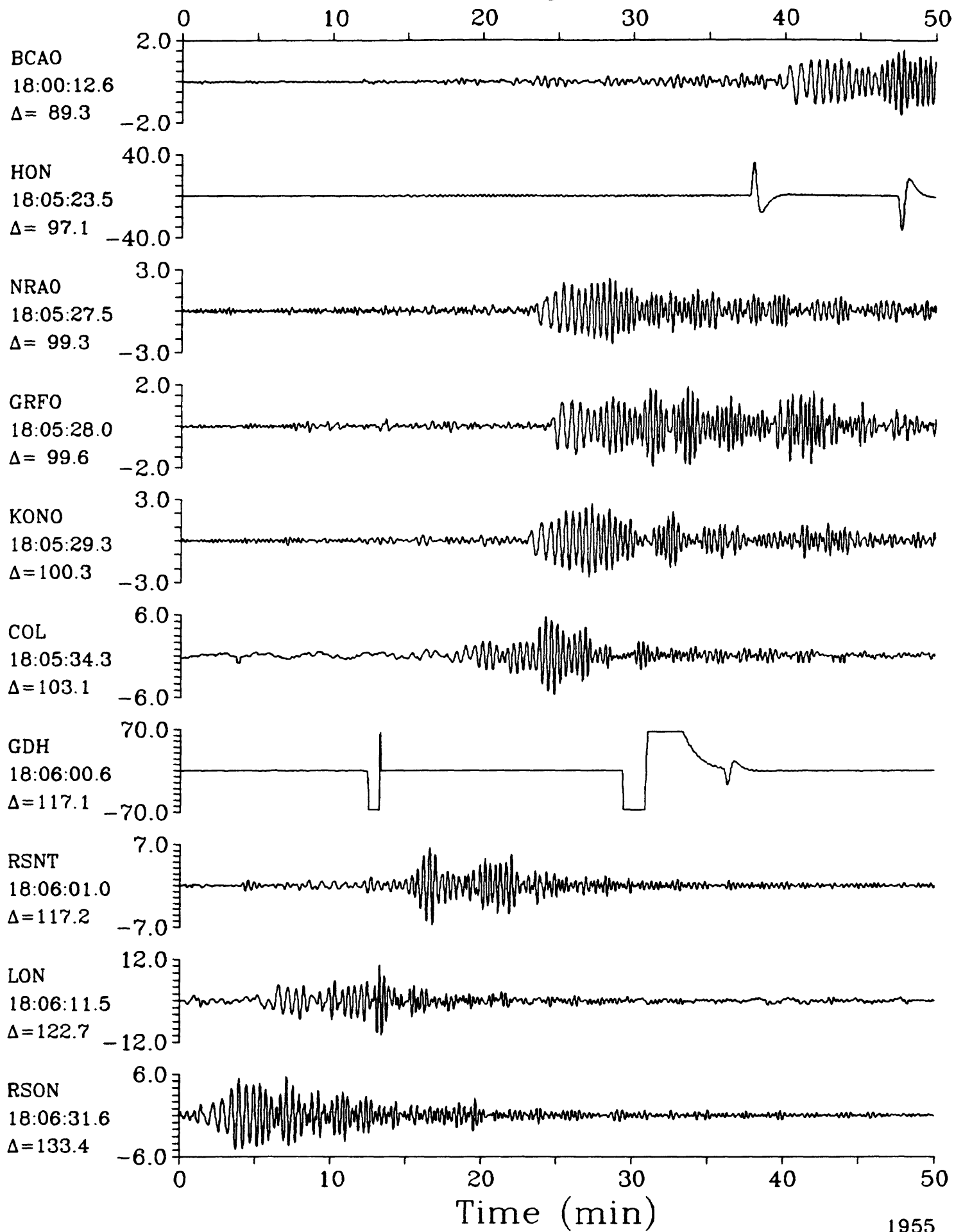
LPZ

Java h=84.0 m_b=5.5

LPZ

10 October 1986 17:48:24.69

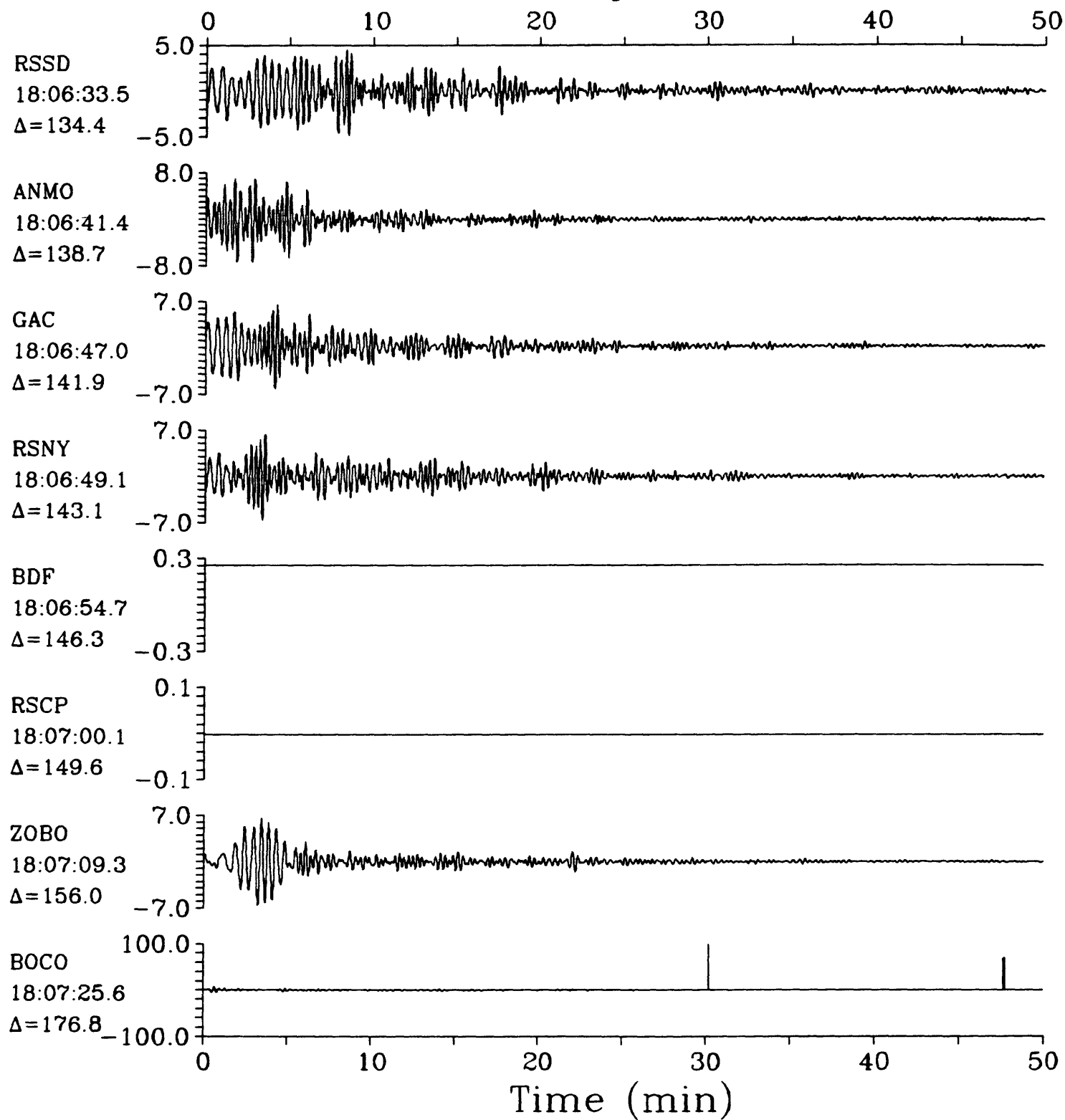
LPZ

Java h=84.0 m_b=5.5

LPZ

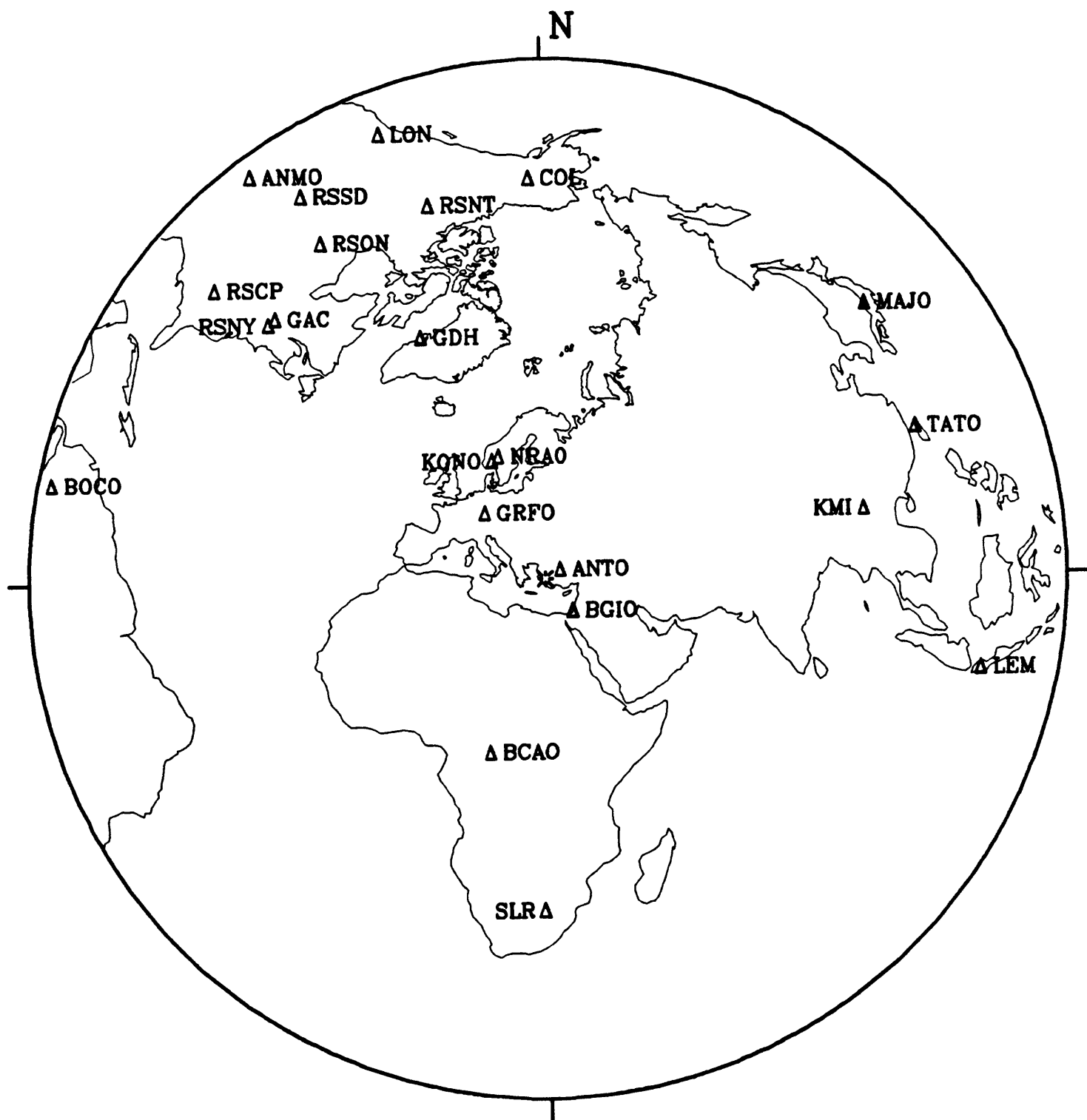
10 October 1986 17:48:24.69

LPZ

Java h=84.0 m_b=5.5

11 October 1986 09:00:13.11

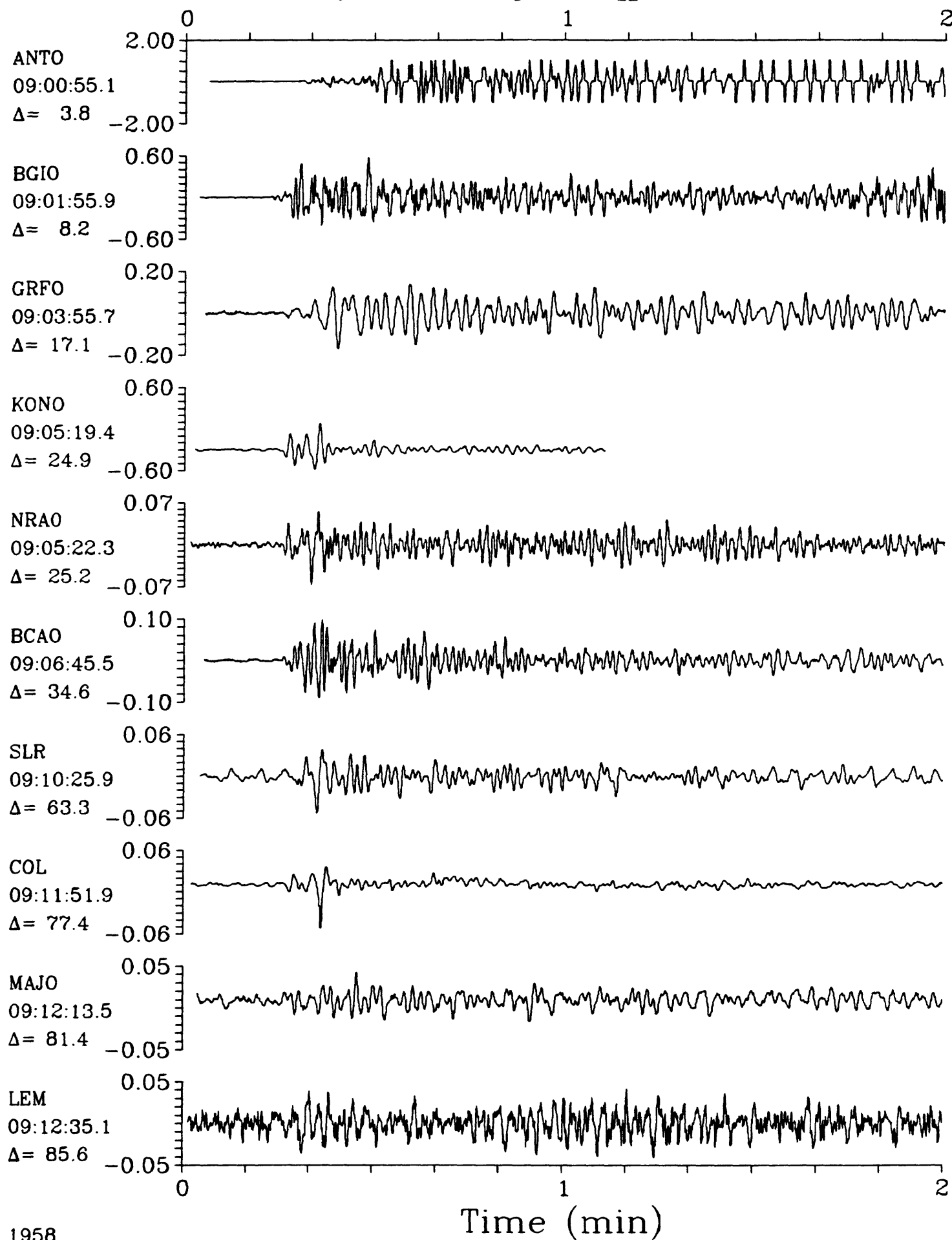
Turkey



SPZ

11 October 1986 09:00:13.11
Turkey $h=23.7$ $m_b=5.4$ $M_{sz}=5.5$

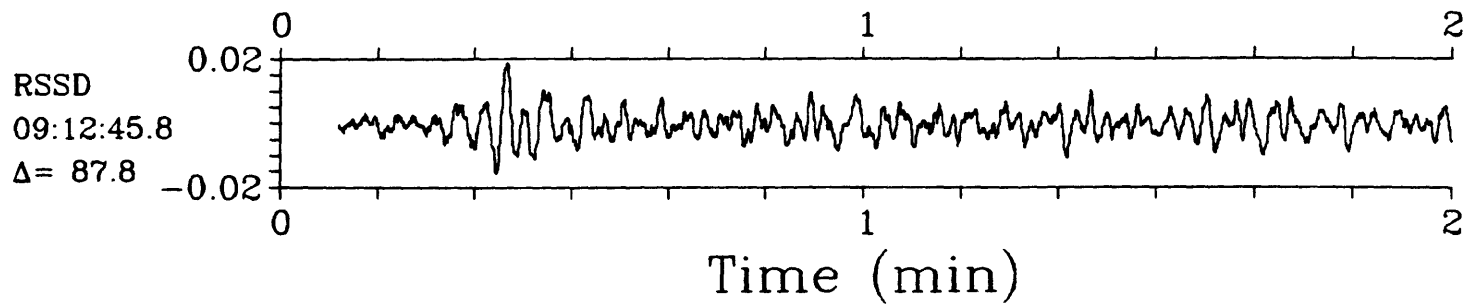
SPZ



SPZ

11 October 1986 09:00:13.11
Turkey $h=23.7$ $m_b=5.4$ $M_{sz}=5.5$

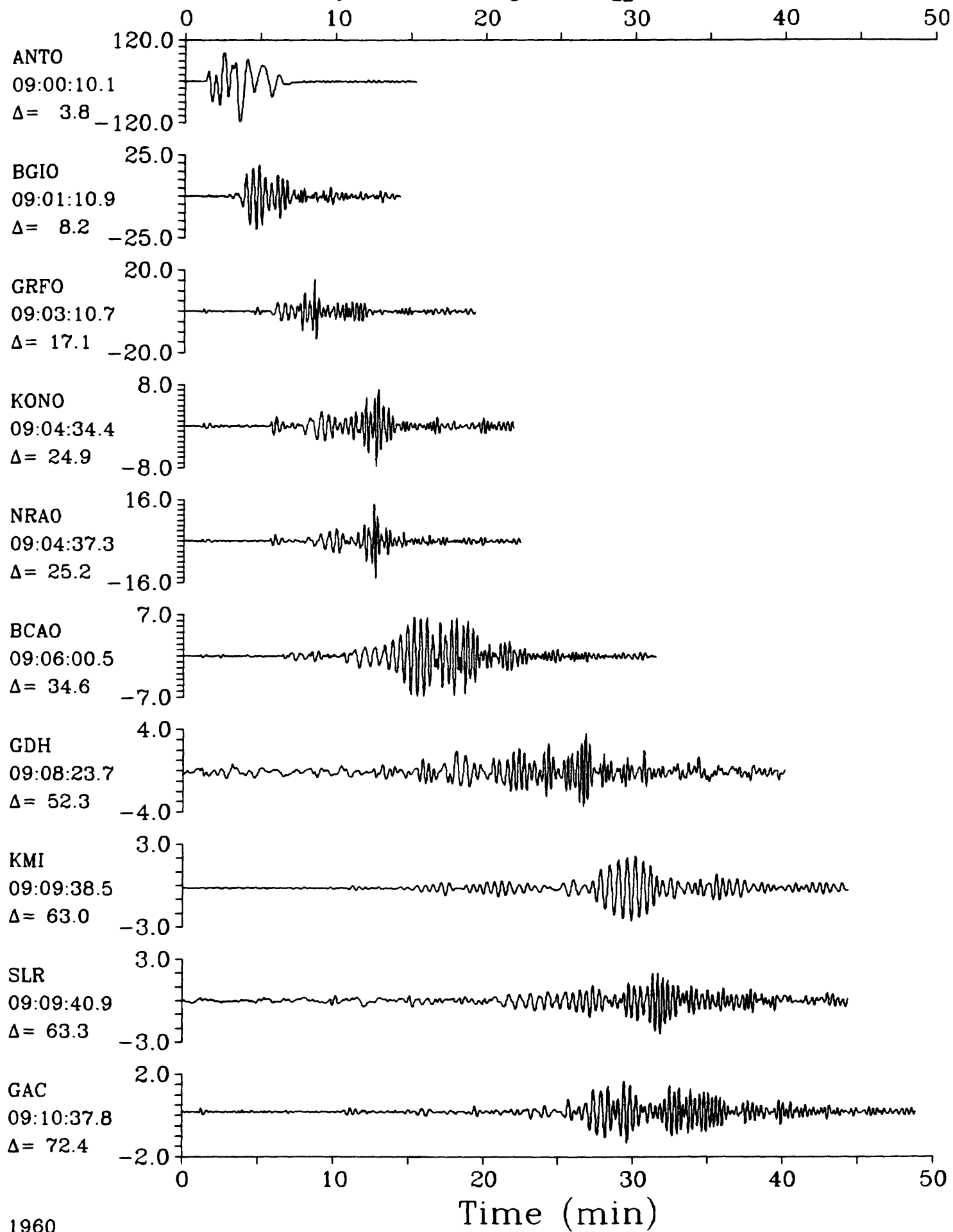
SPZ



LPZ

11 October 1986 09:00:13.11
Turkey $h=23.7$ $m_b=5.4$ $M_{sz}=5.5$

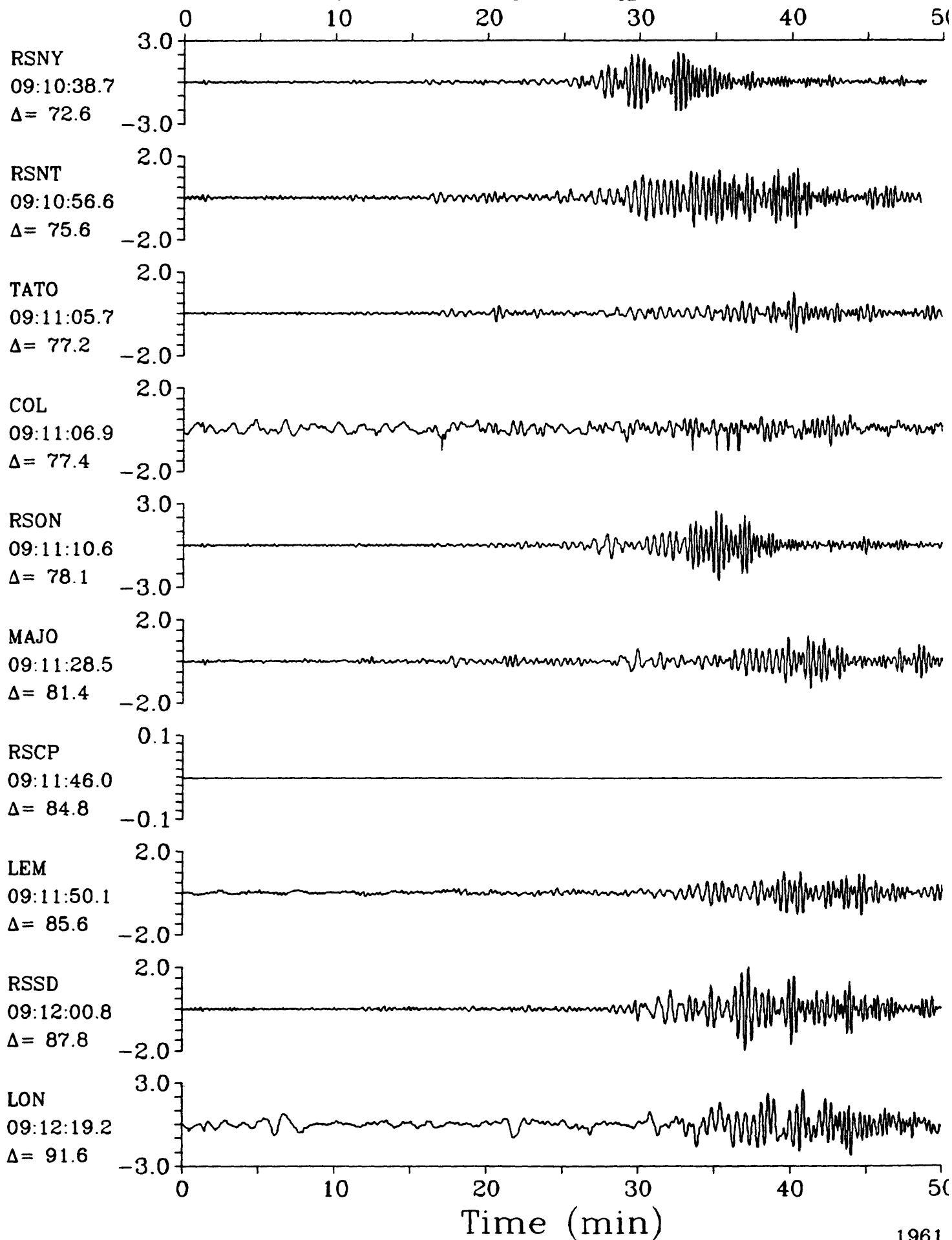
LPZ



LPZ

11 October 1986 09:00:13.11
Turkey $h=23.7$ $m_b=5.4$ $M_{sz}=5.5$

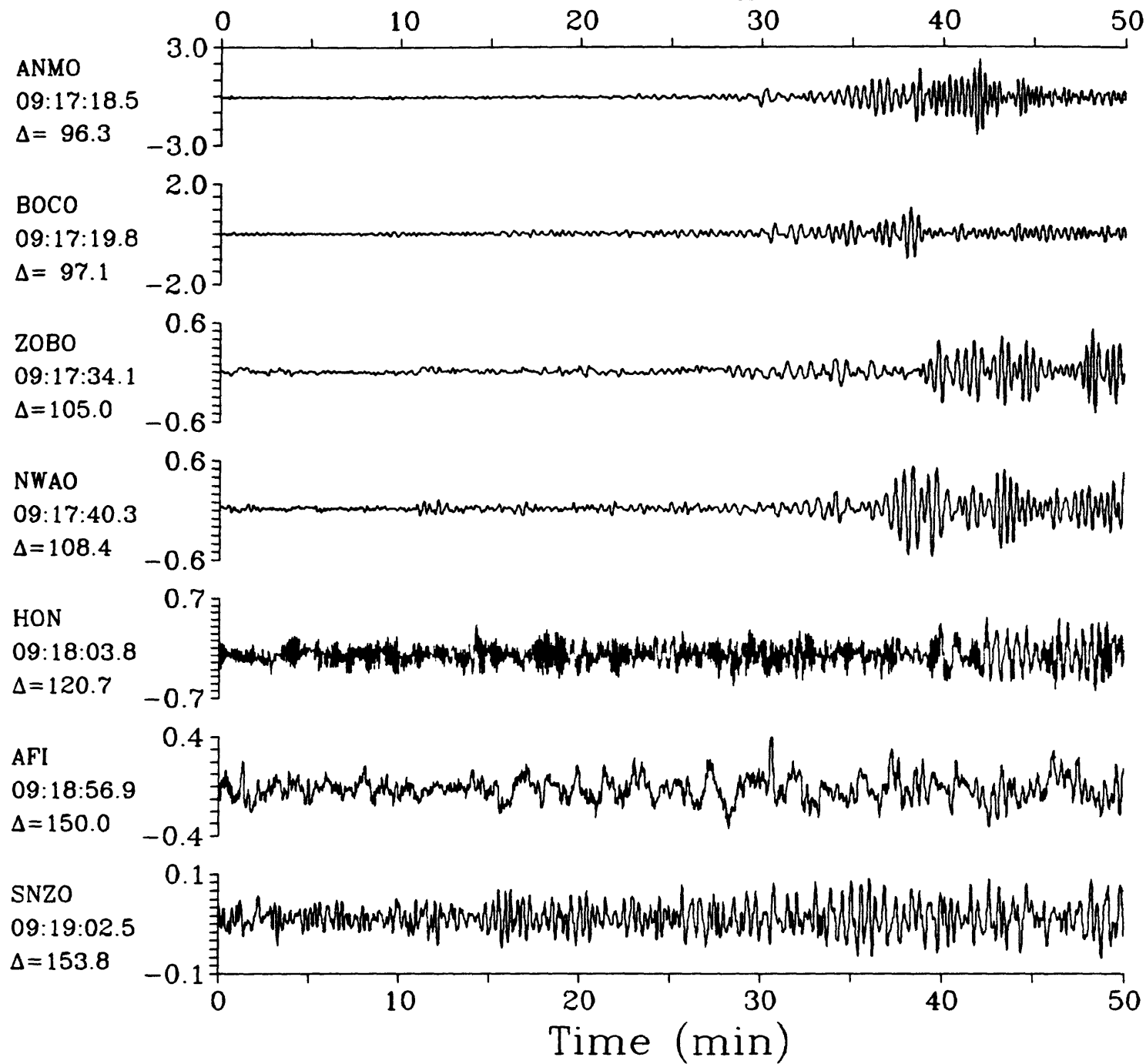
LPZ



LPZ

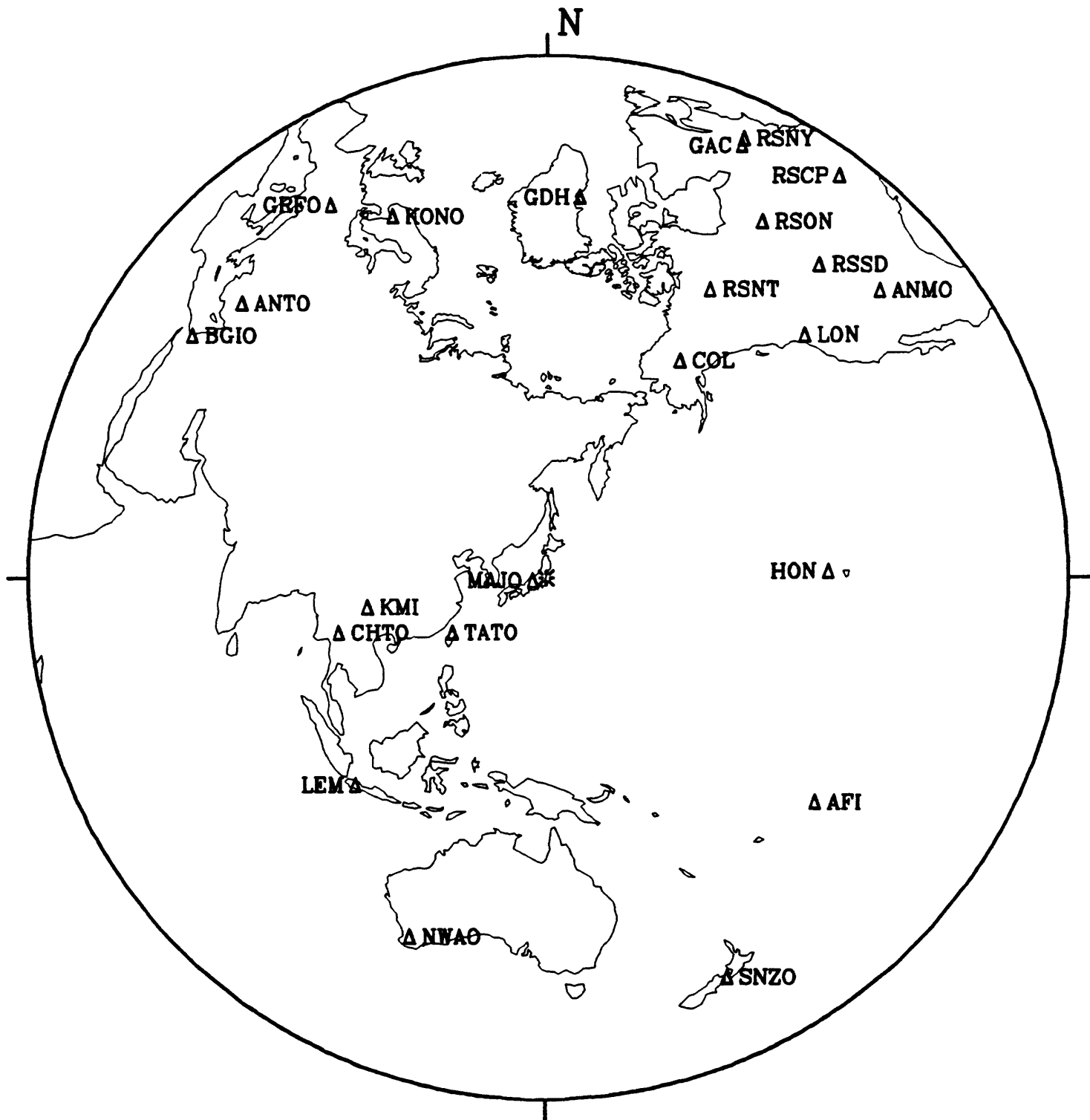
11 October 1986 09:00:13.11
Turkey $h=23.7$ $m_b=5.4$ $M_{sz}=5.5$

LPZ



13 October 1986 21:17:50.76

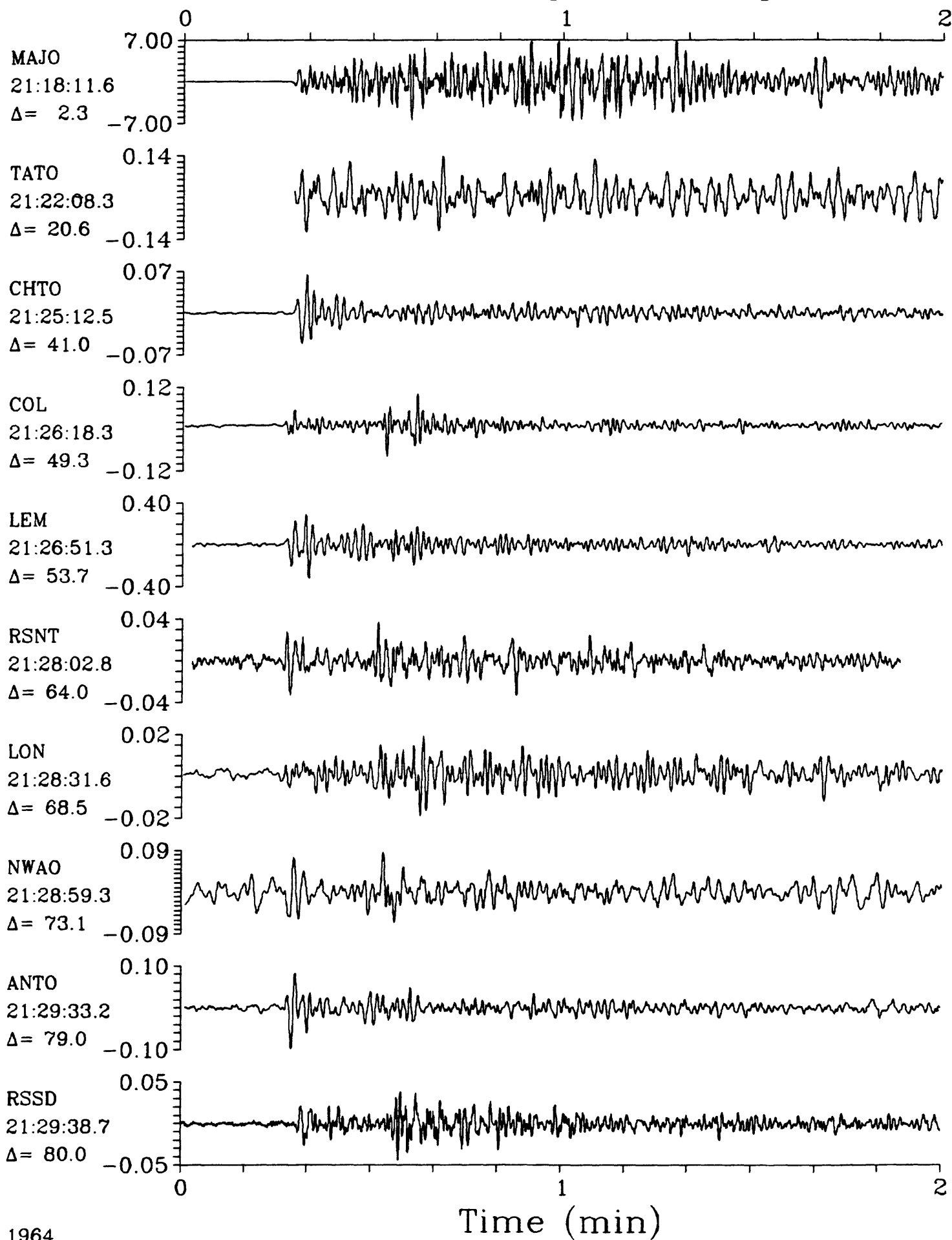
Near East Coast of Honshu, Japan



SPZ

13 October 1986 21:17:50.76

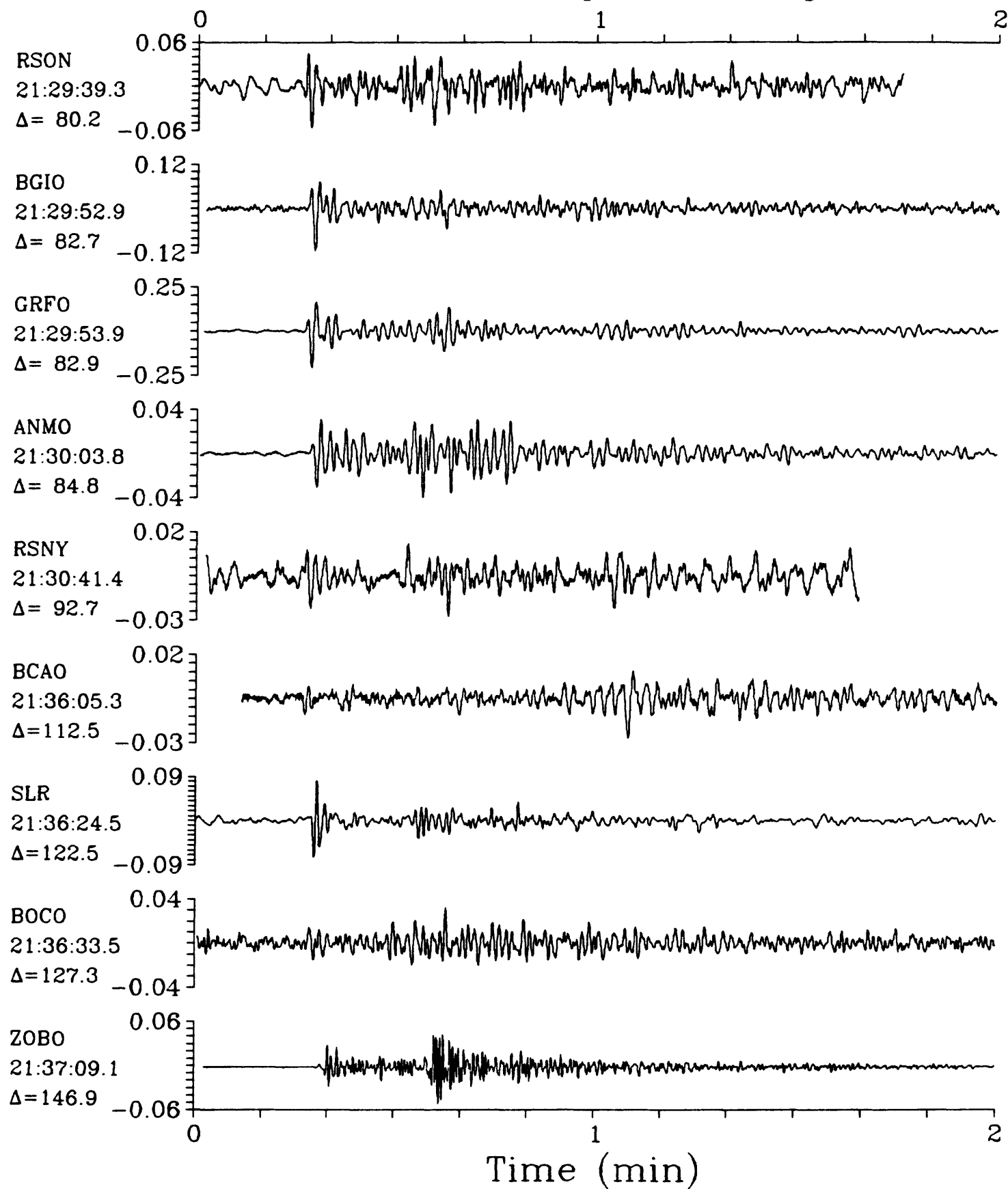
SPZ

Near East Coast of Honshu, Japan $h=65.3$ $m_b=5.7$ 

SPZ

13 October 1986 21:17:50.76

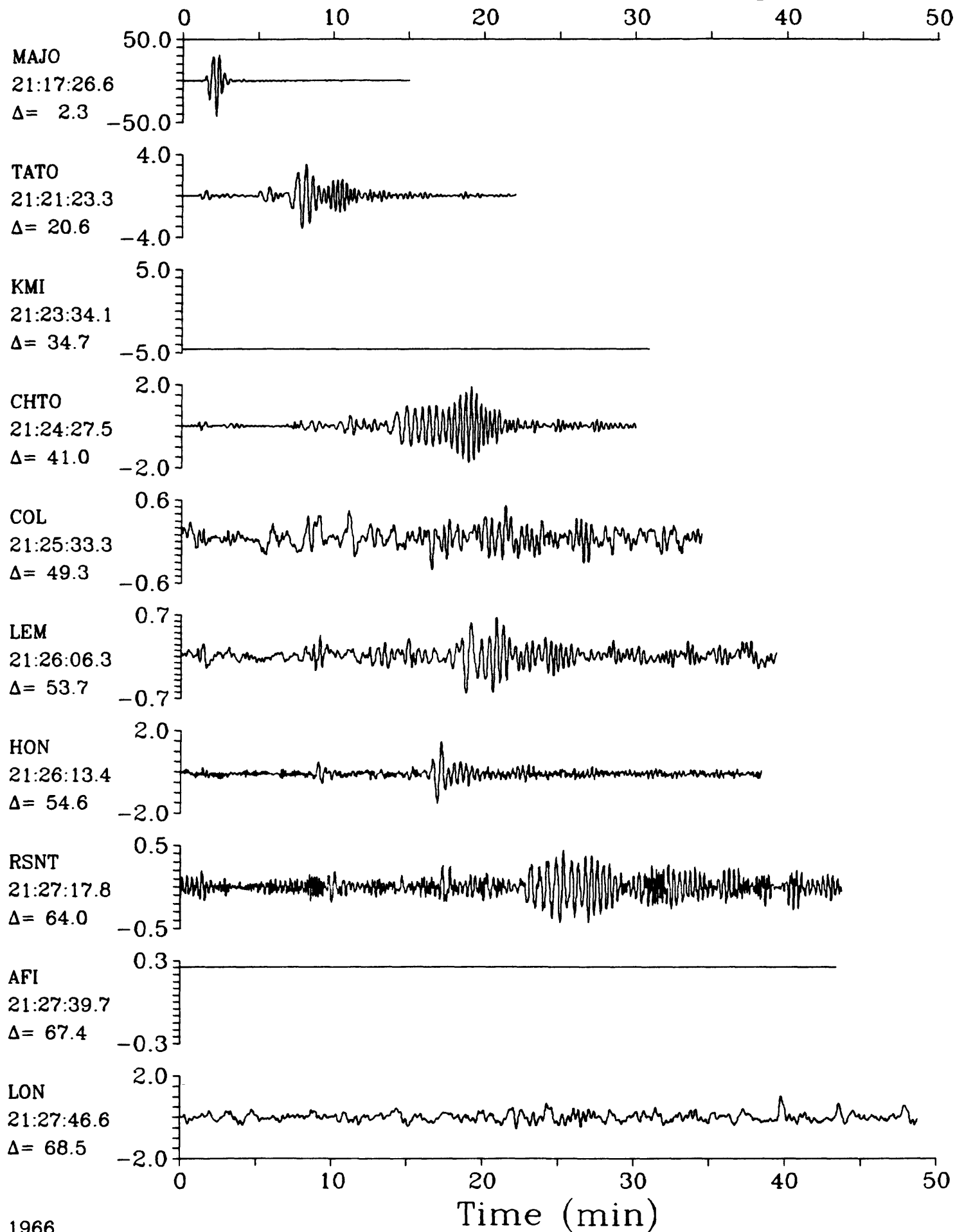
SPZ

Near East Coast of Honshu, Japan $h=65.3$ $m_b=5.7$ 

LPZ

13 October 1986 21:17:50.76

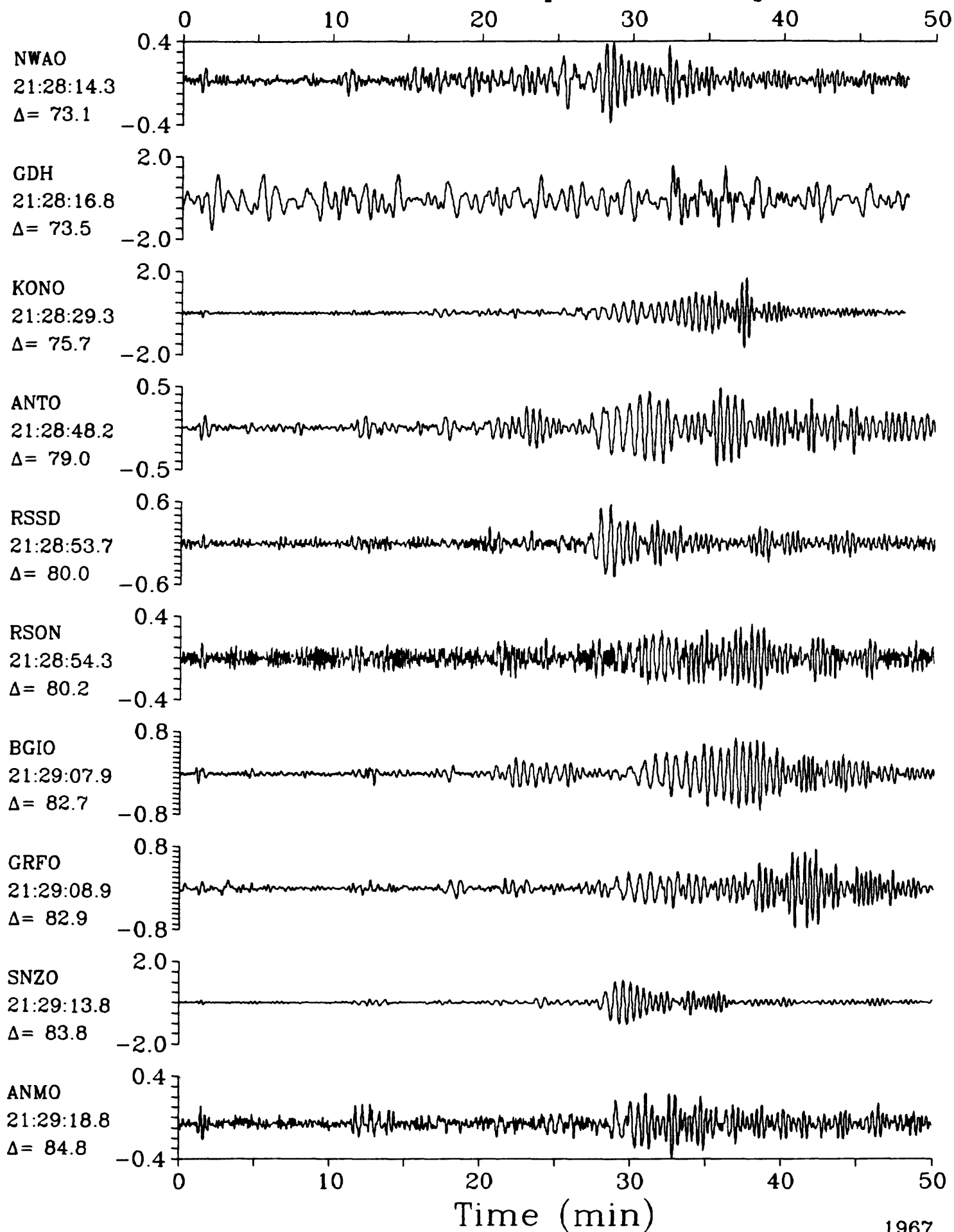
LPZ

Near East Coast of Honshu, Japan $h=65.3$ $m_b=5.7$ 

LPZ

13 October 1986 21:17:50.76

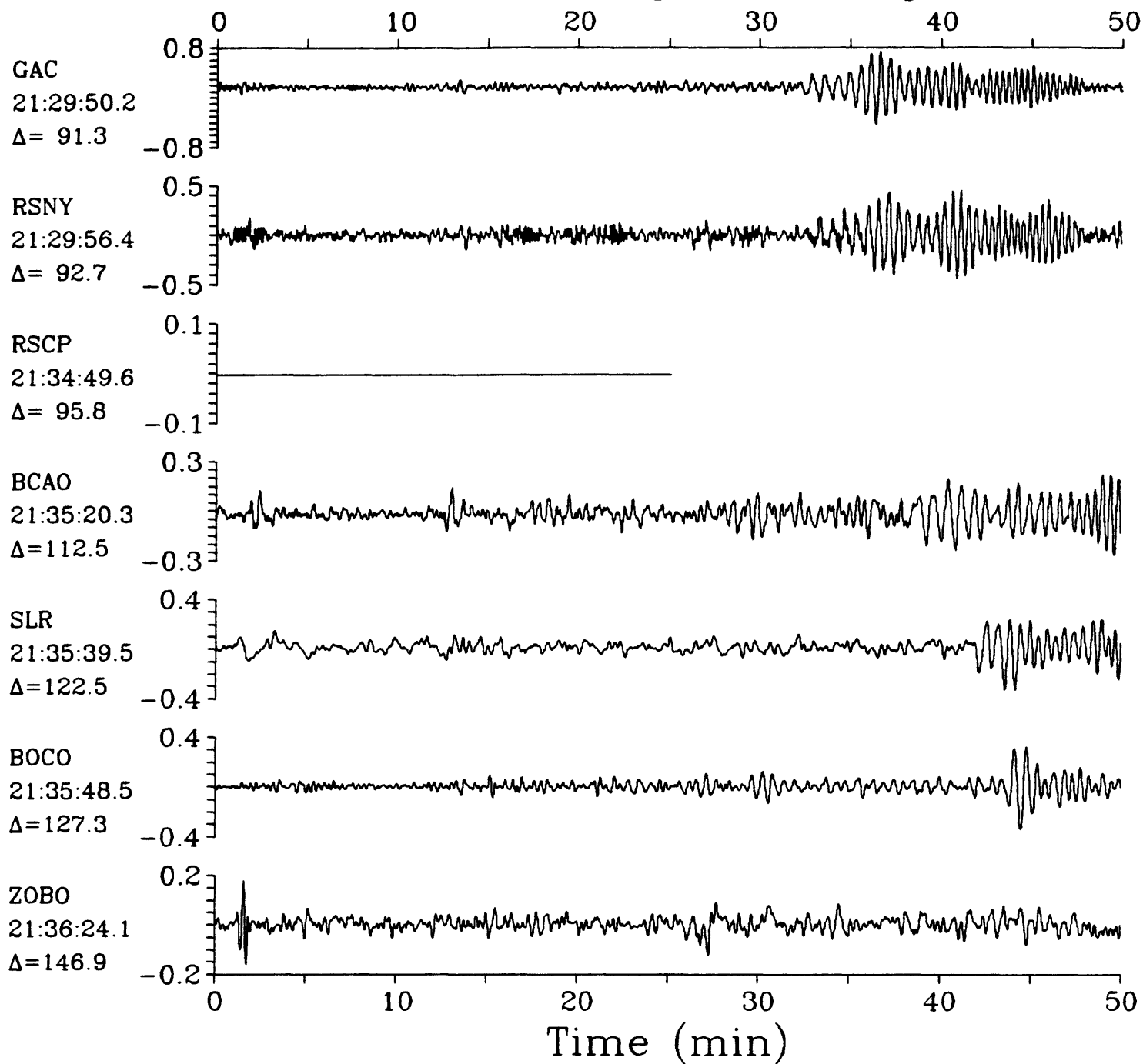
LPZ

Near East Coast of Honshu, Japan $h=65.3$ $m_b=5.7$ 

LPZ

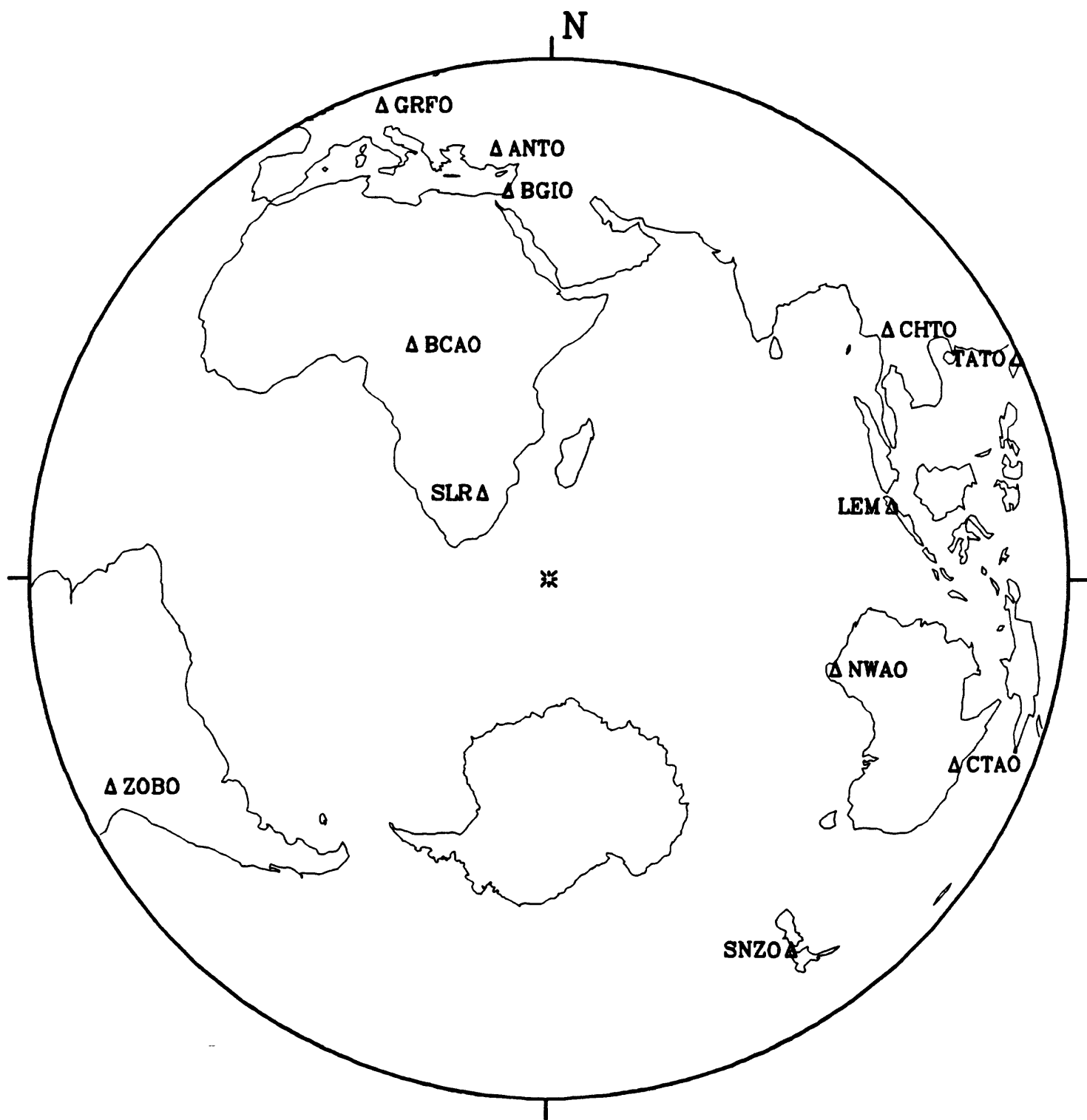
13 October 1986 21:17:50.76

LPZ

Near East Coast of Honshu, Japan $h=65.3$ $m_b=5.7$ 

14 October 1986 13:07:19.29

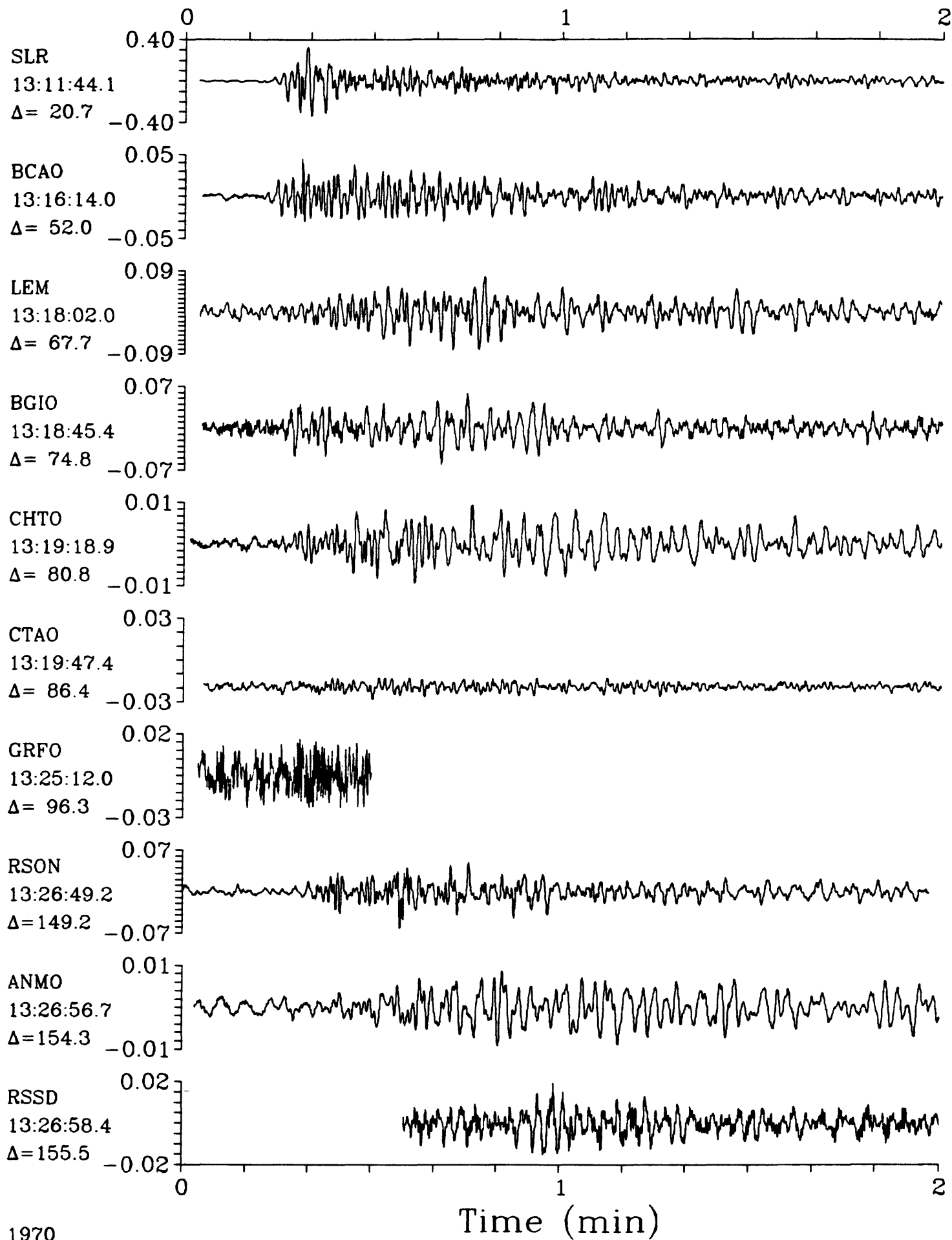
Prince Edward Islands Region



SPZ

14 October 1986 13:07:19.29

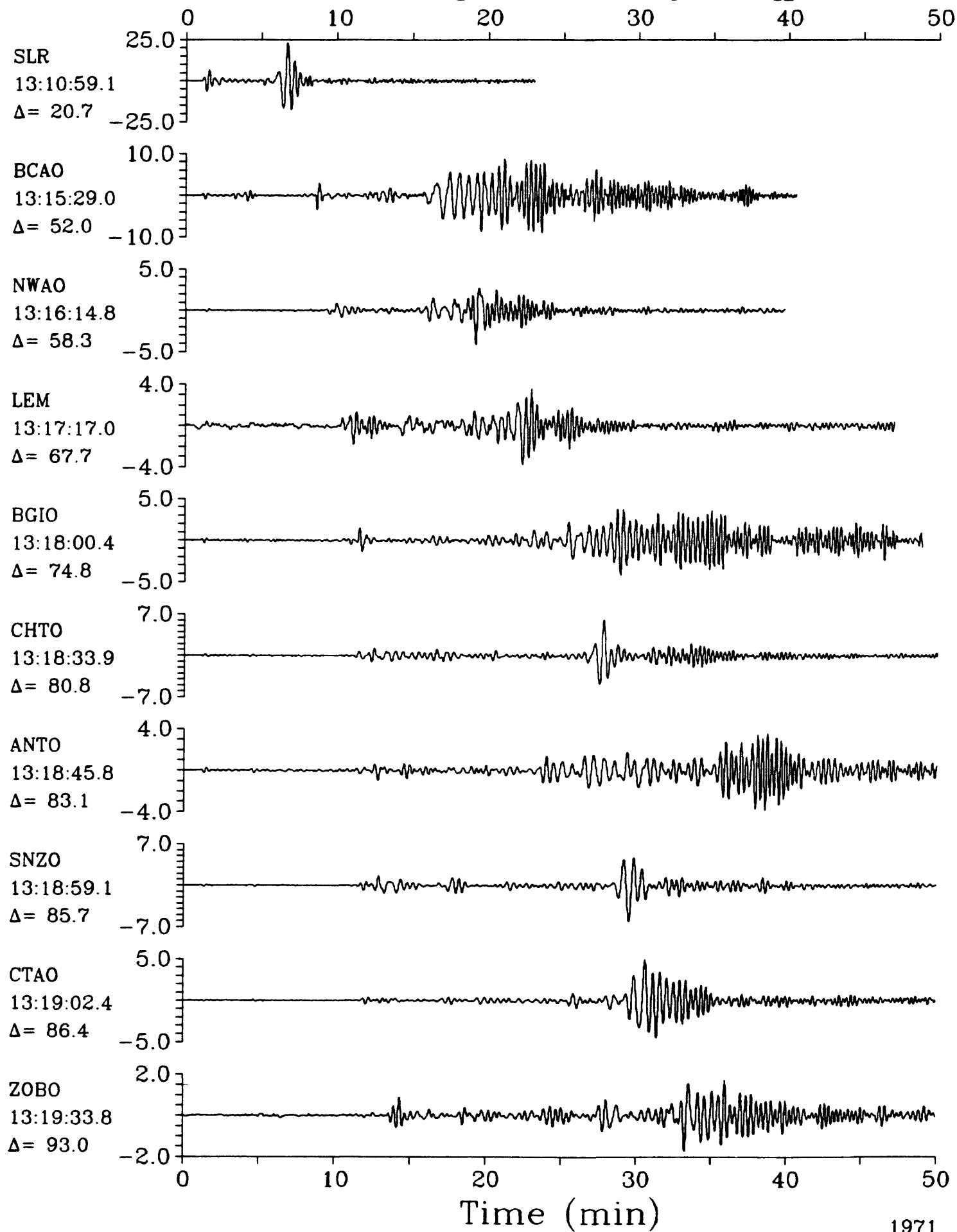
SPZ

Prince Edward Islands Region $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

14 October 1986 13:07:19.29

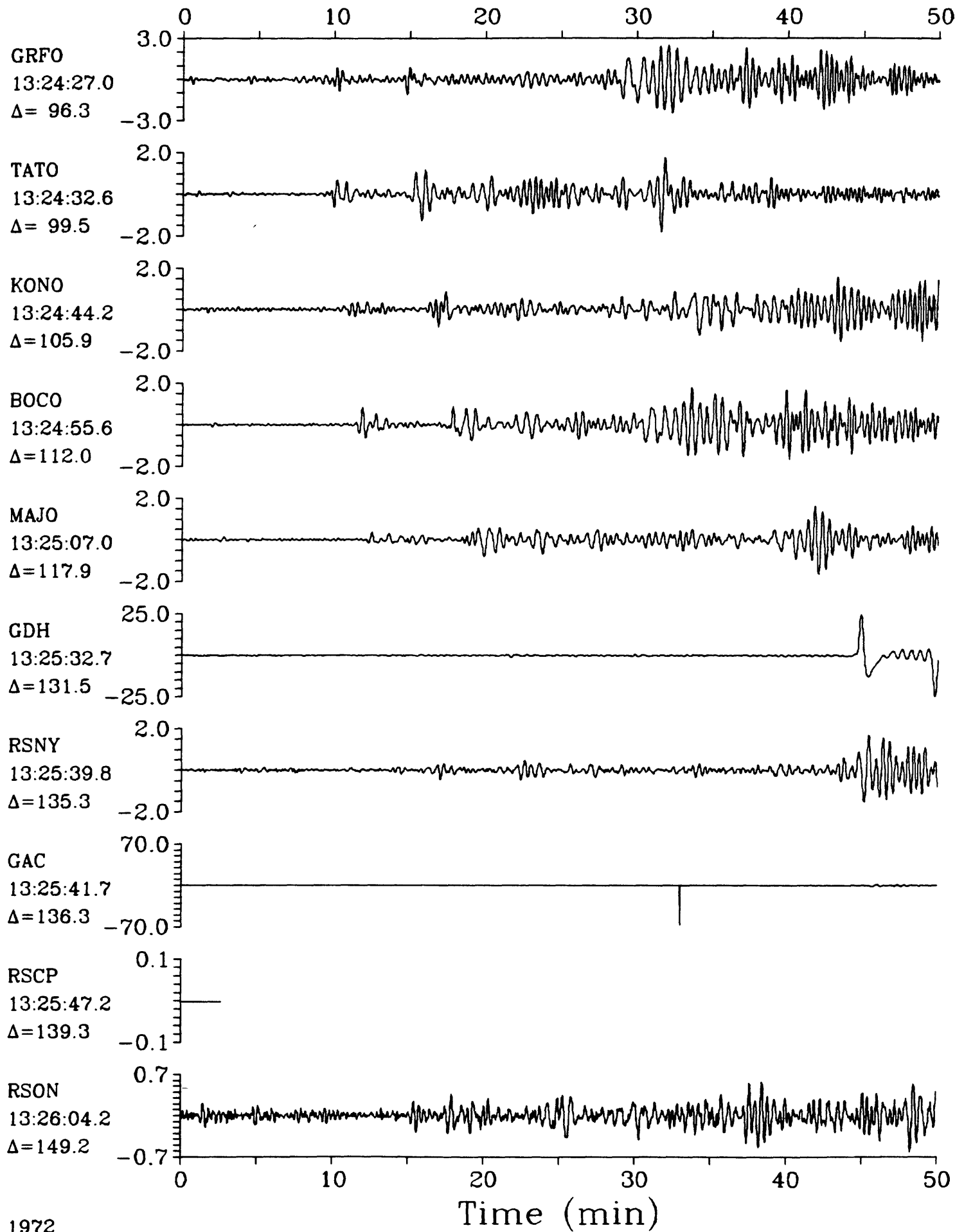
LPZ

Prince Edward Islands Region $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

14 October 1986 13:07:19.29

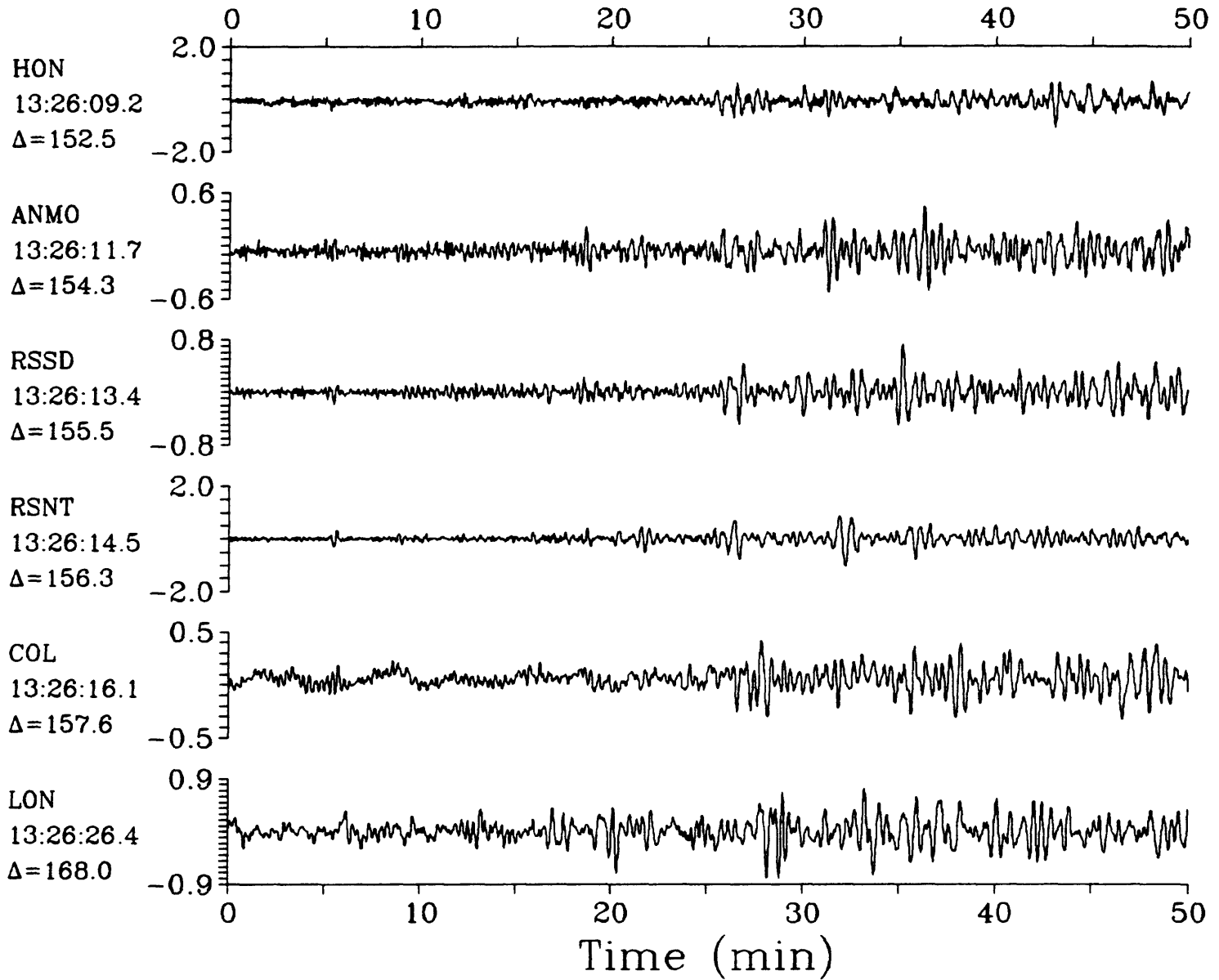
LPZ

Prince Edward Islands Region $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

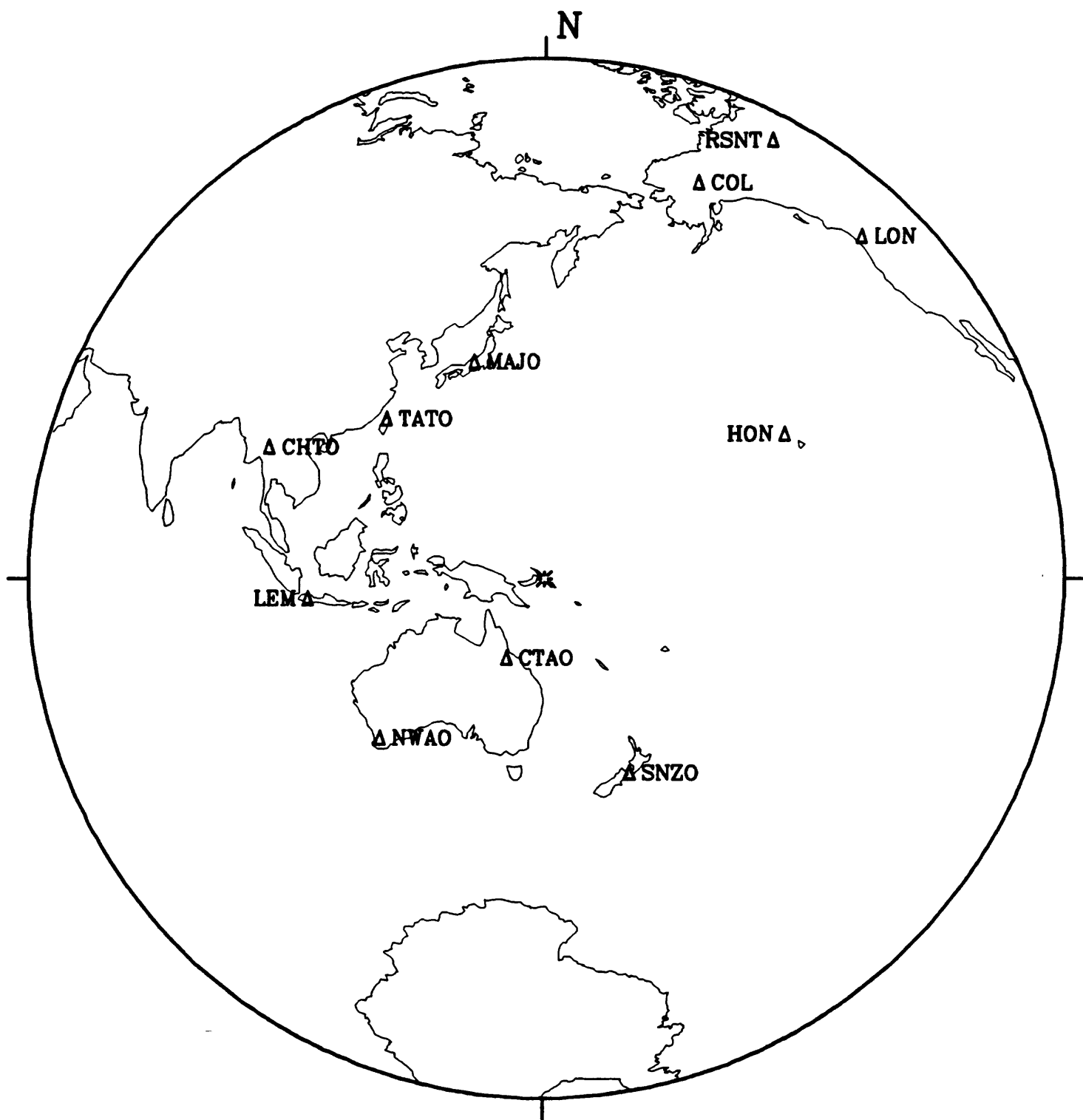
14 October 1986 13:07:19.29

LPZ

Prince Edward Islands Region $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$ 

14 October 1986 16:53:07.45

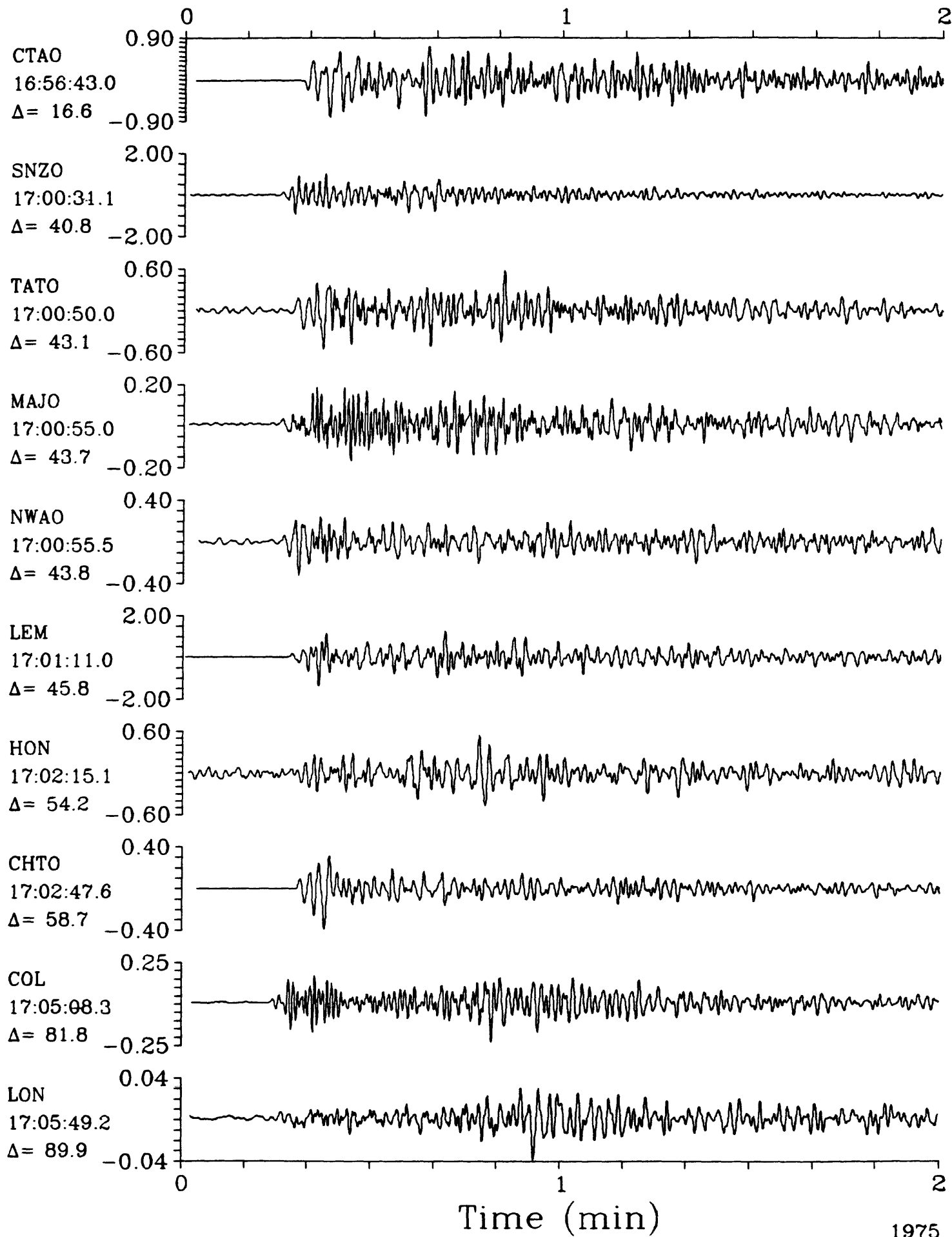
New Ireland Region



SPZ

14 October 1986 16:53:07.45

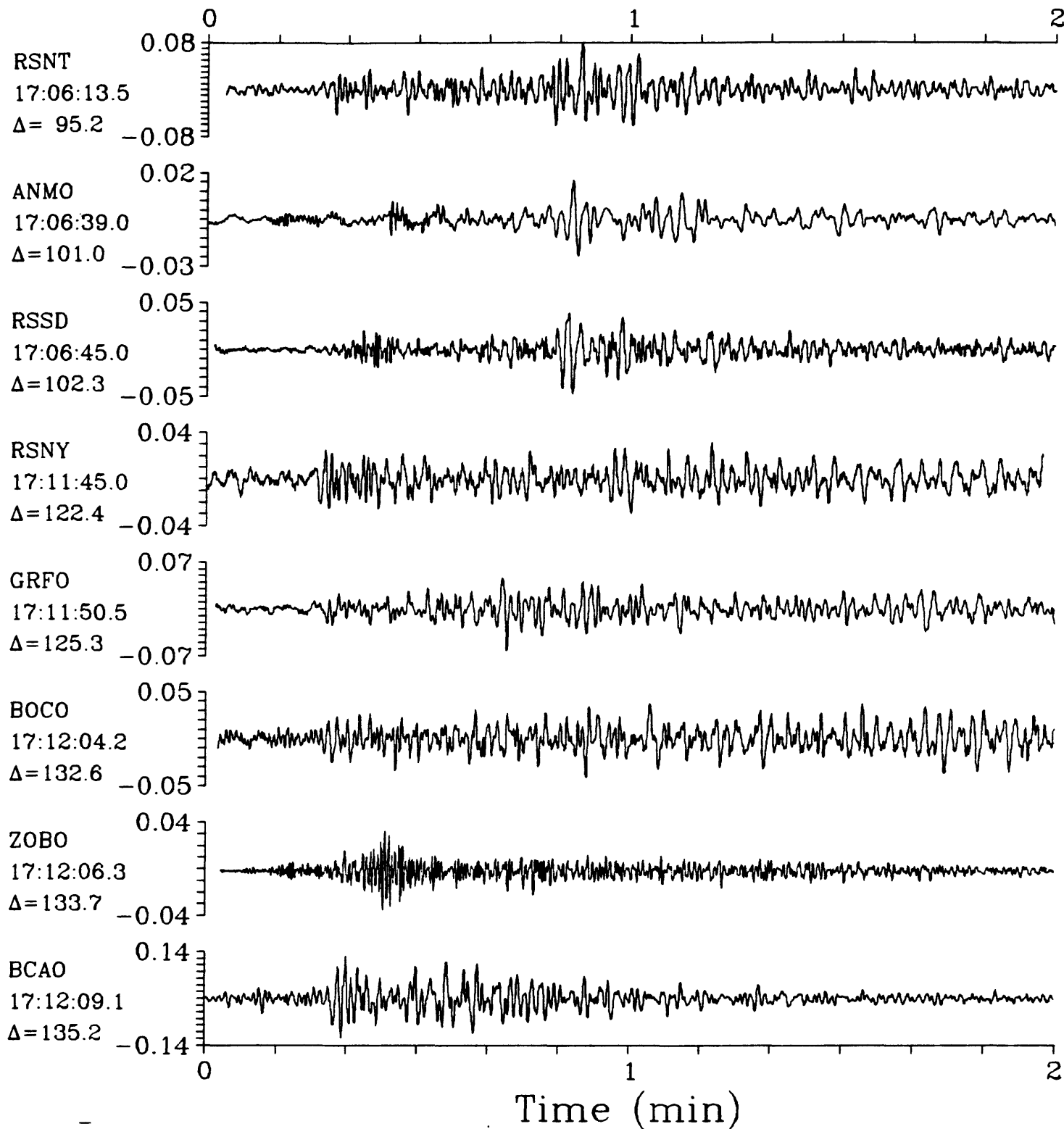
SPZ

New Ireland Region $h=33.0$ $m_b=6.1$ $M_{SZ}=6.6$ 

SPZ

14 October 1986 16:53:07.45

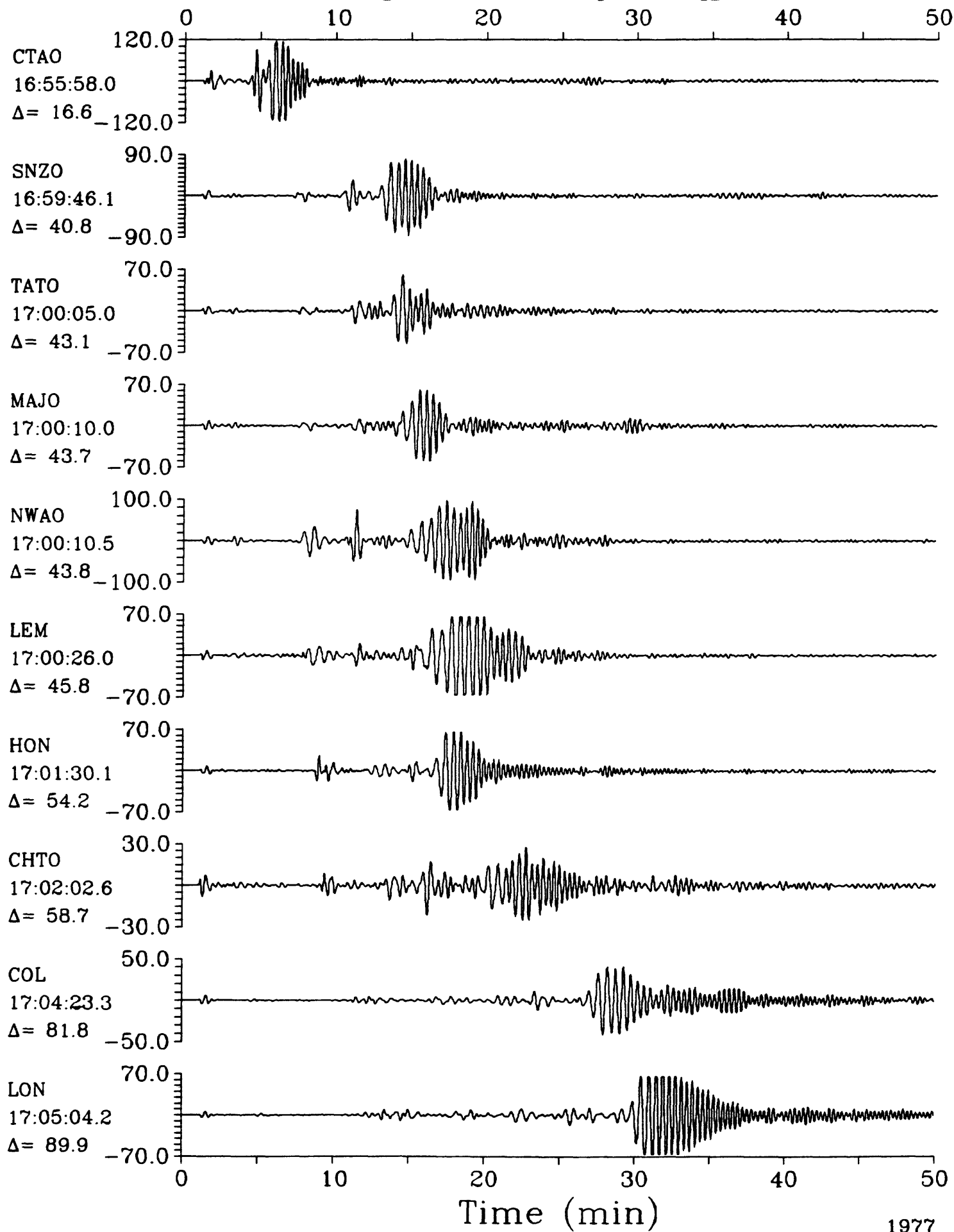
SPZ

New Ireland Region $h=33.0$ $m_b=6.1$ $M_{SZ}=6.6$ 

LPZ

14 October 1986 16:53:07.45
New Ireland Region $h=33.0$ $m_b=6.1$ $M_{sz}=6.6$

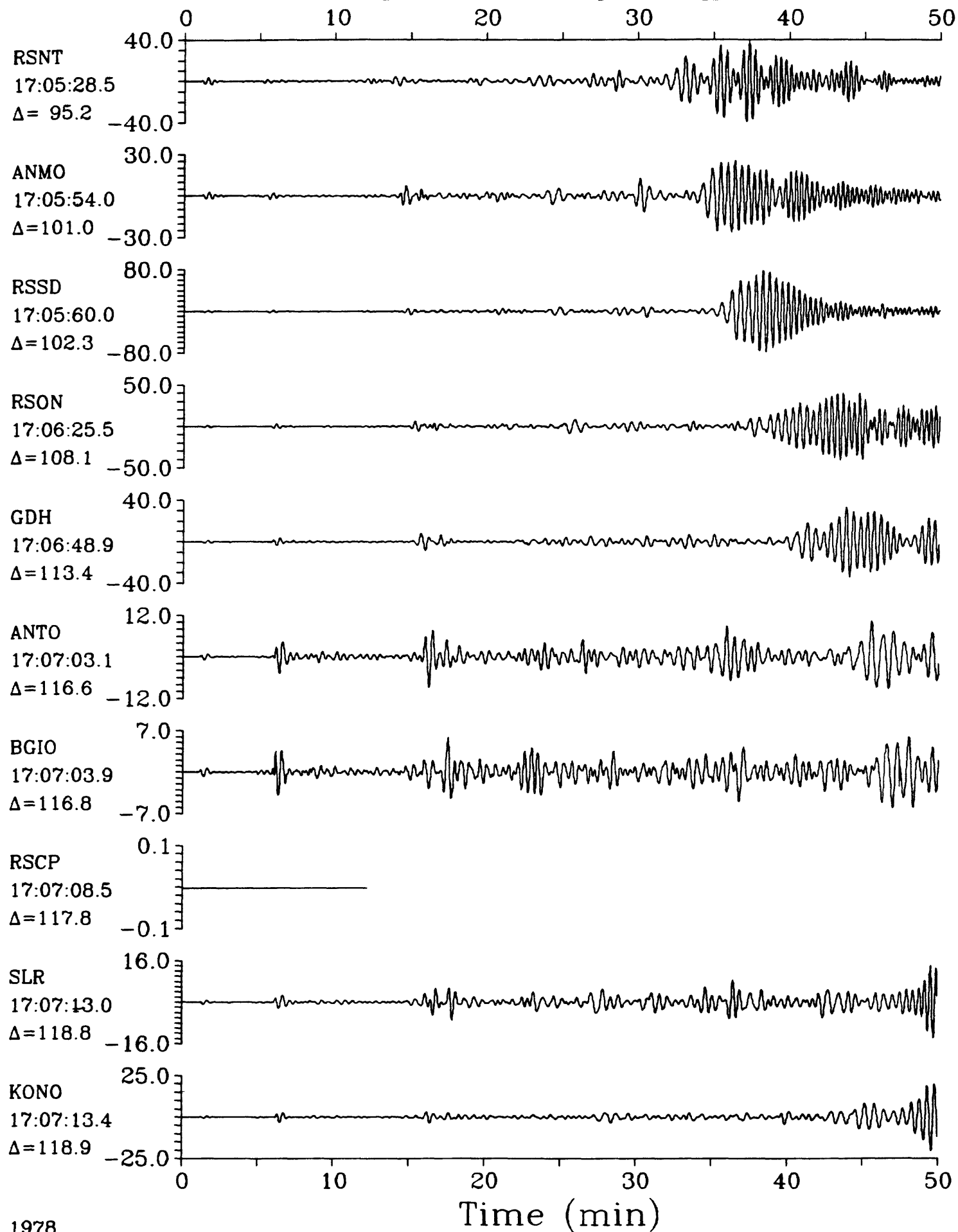
LPZ



LPZ

14 October 1986 16:53:07.45

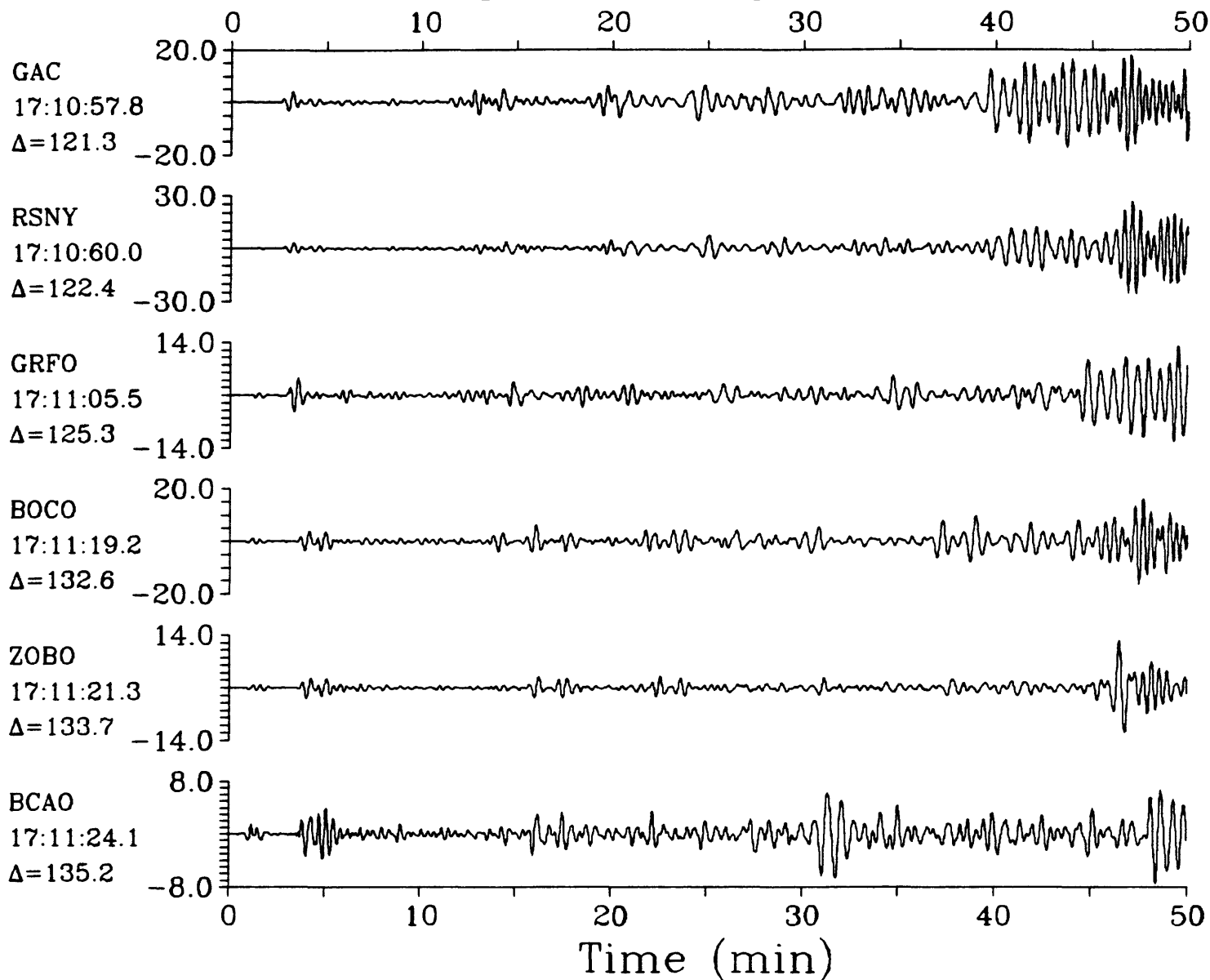
LPZ

New Ireland Region $h=33.0$ $m_b=6.1$ $M_{sz}=6.6$ 

LPZ

14 October 1986 16:53:07.45

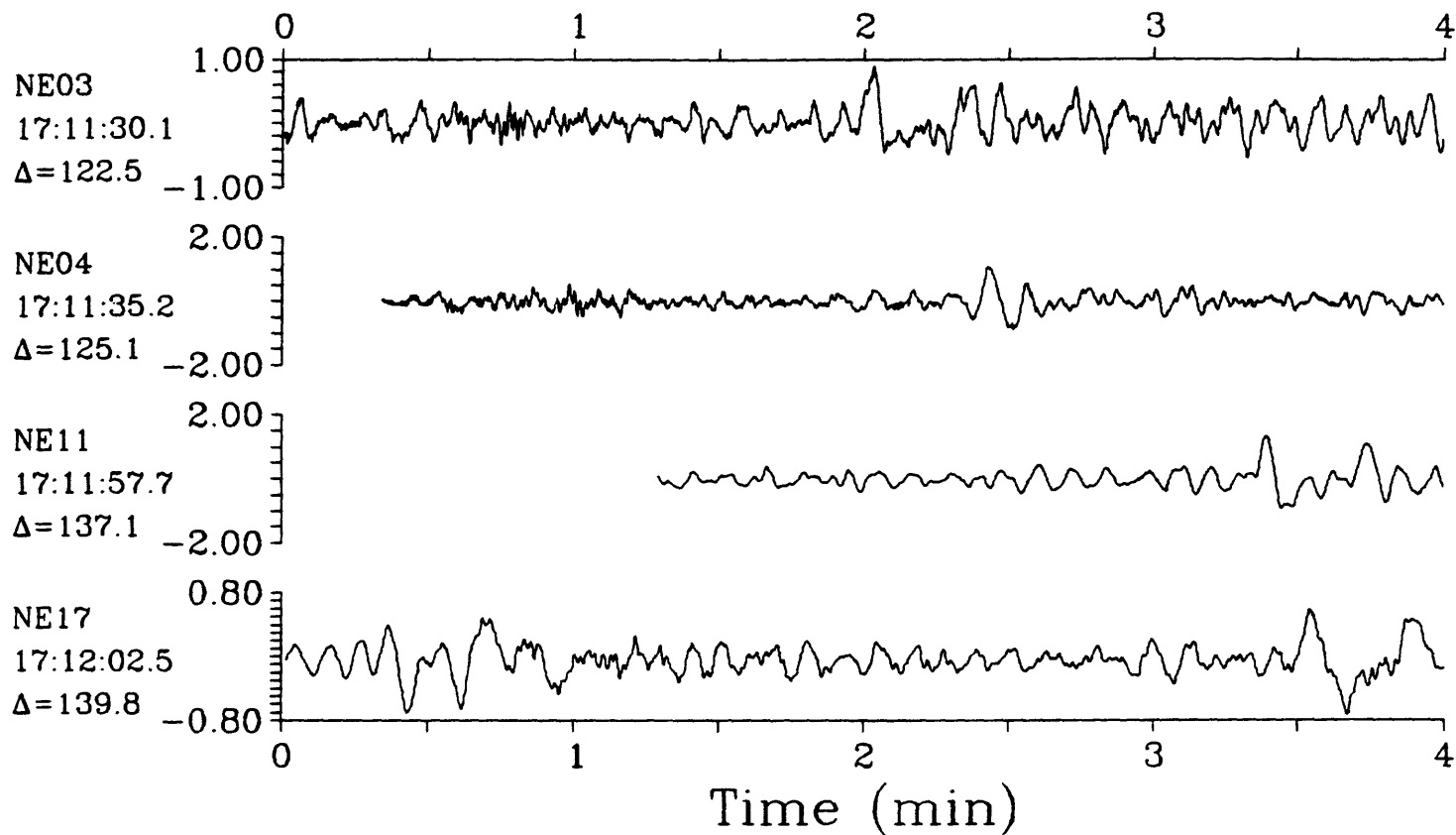
LPZ

New Ireland Region $h=33.0$ $m_b=6.1$ $M_{sz}=6.6$ 

IPZ

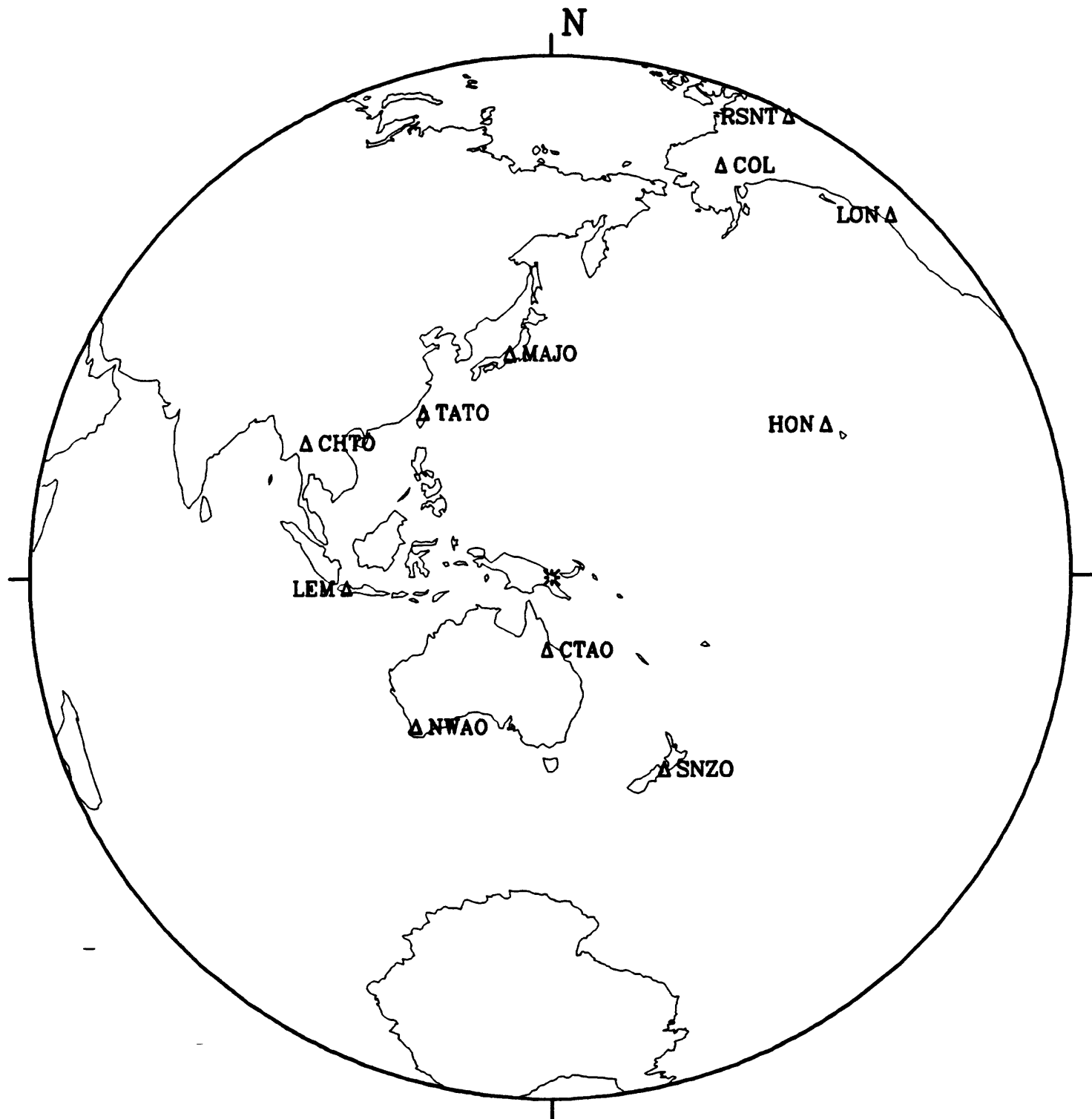
14 October 1986 16:53:07.45

IPZ

New Ireland Region $h=33.0$ $m_b=6.1$ $M_{sz}=6.6$ 

15 October 1986 13:14:29.73

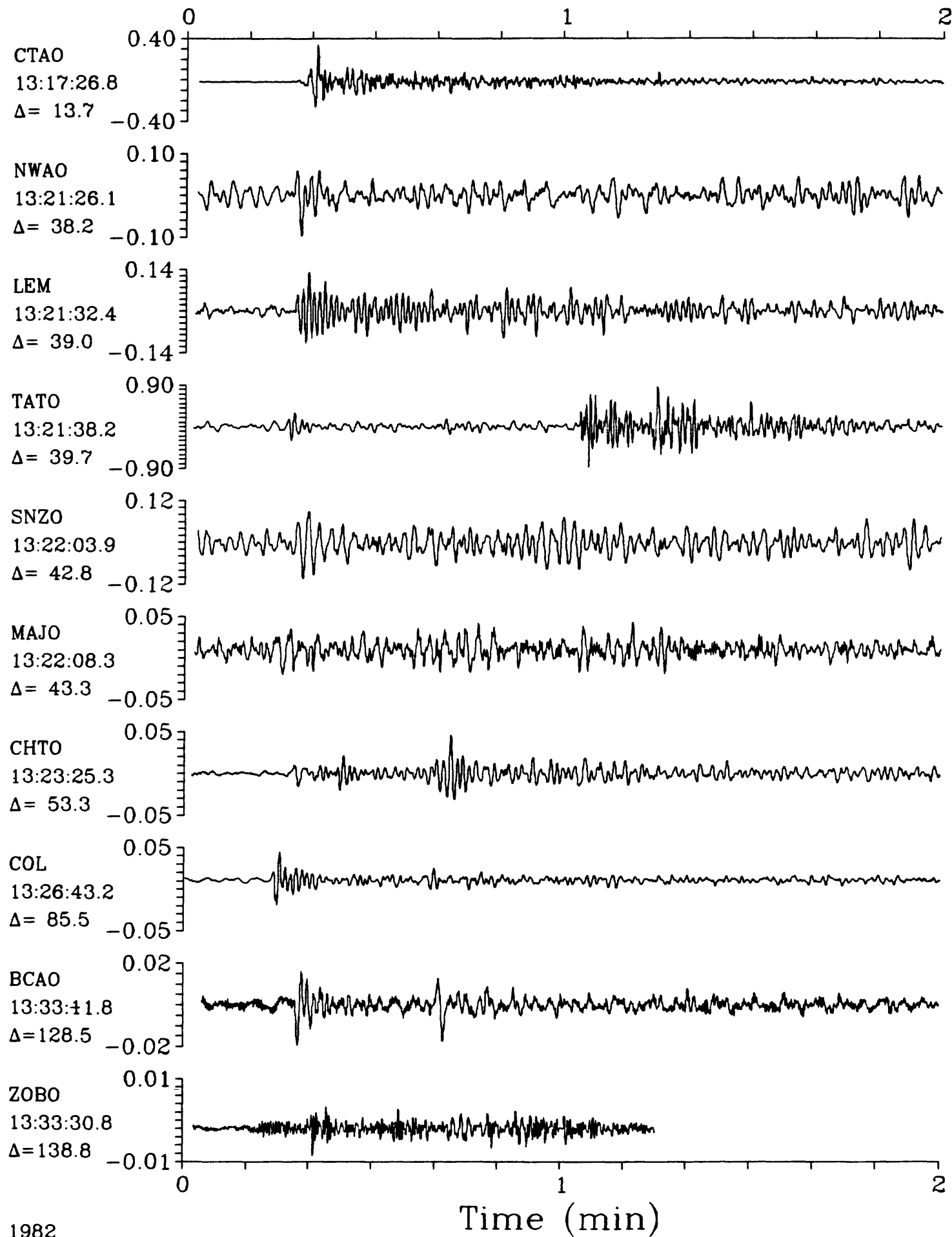
East Papua New Guinea Region



SPZ

15 October 1986 13:14:29.73

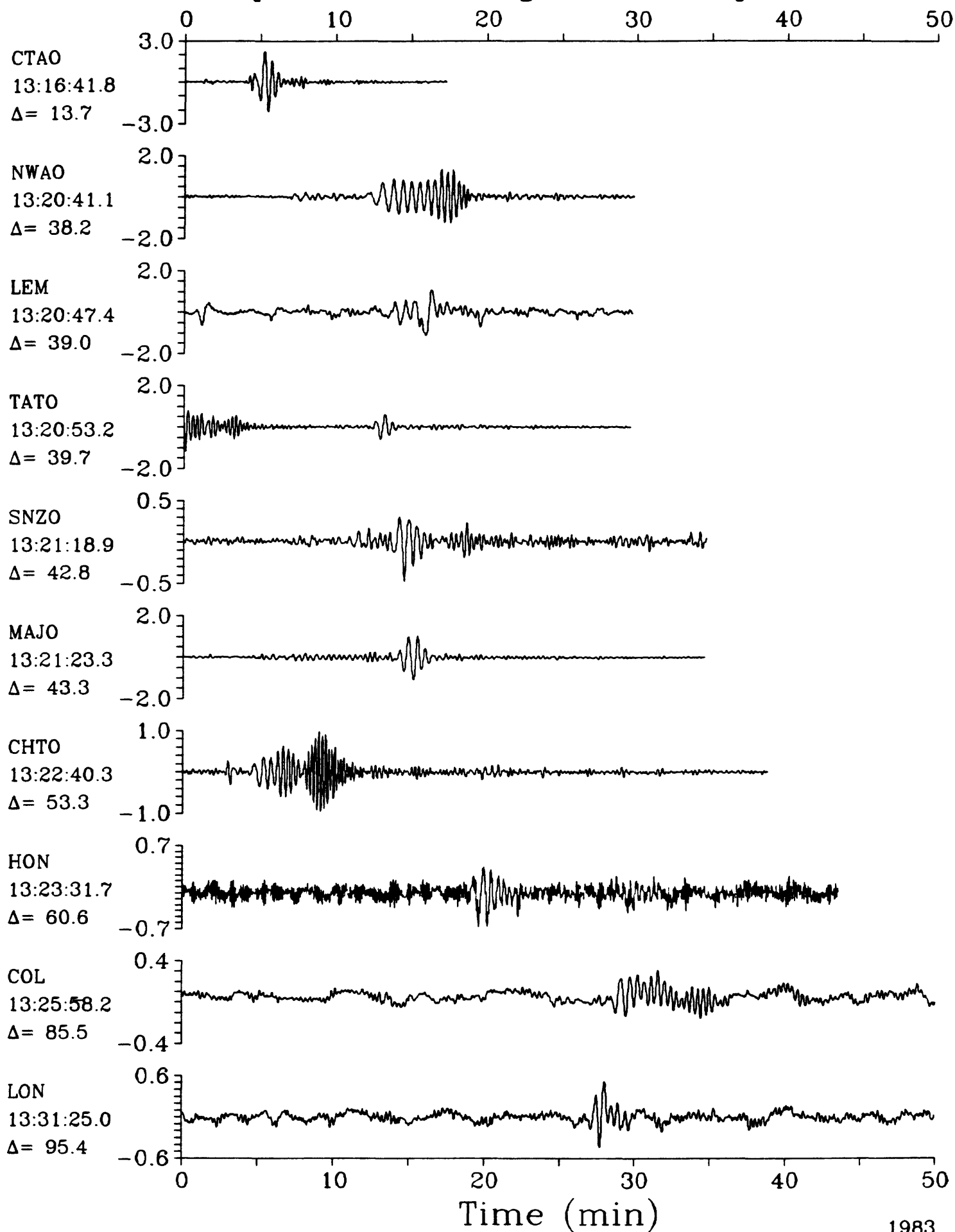
SPZ

East Papua New Guinea Region $h=90.2$ $m_b=5.5$ 

LPZ

15 October 1986 13:14:29.73

LPZ

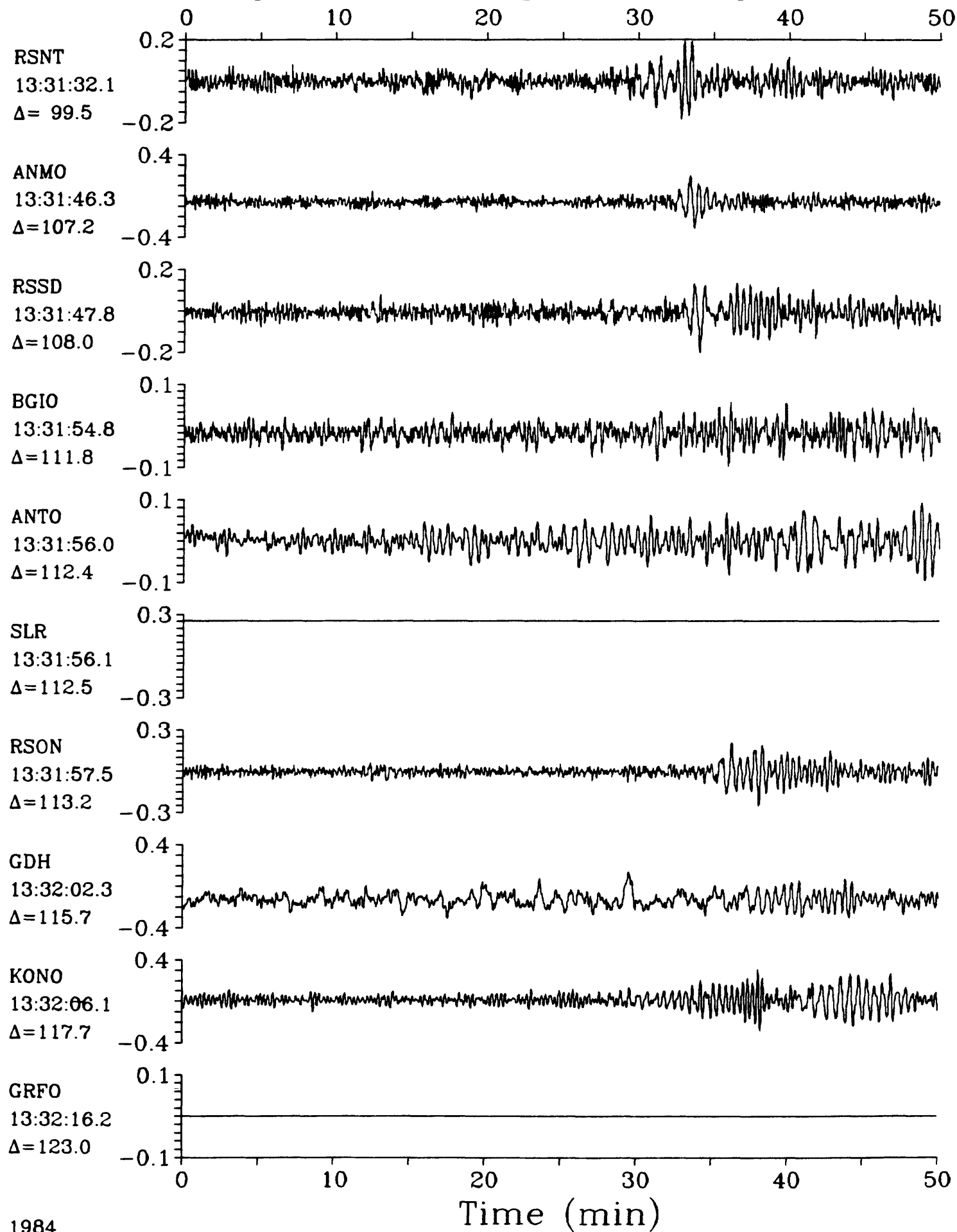
East Papua New Guinea Region $h=90.2$ $m_b=5.5$ 

1983

LPZ

15 October 1986 13:14:29.73

LPZ

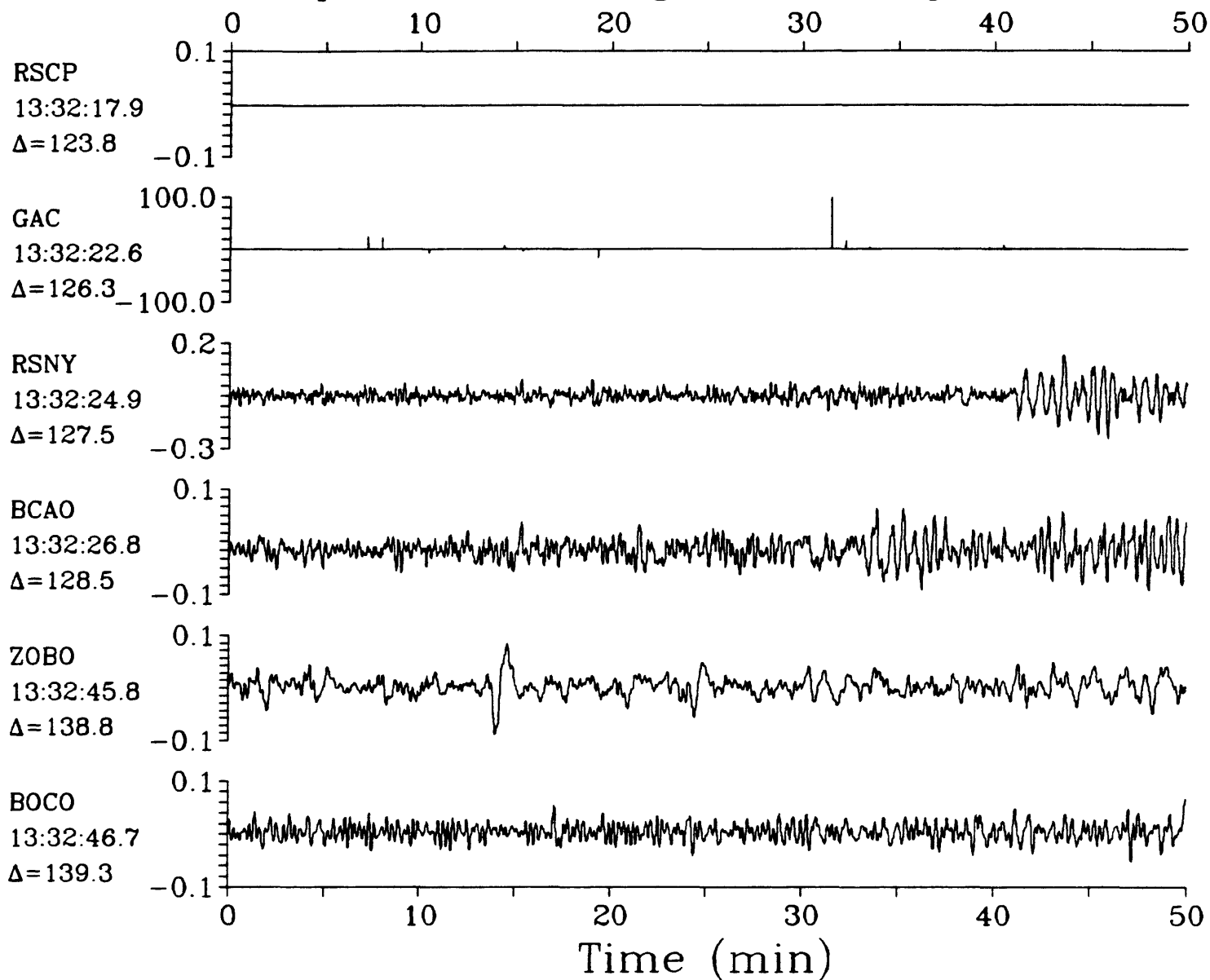
East Papua New Guinea Region $h=90.2$ $m_b=5.5$ 

1984

LPZ

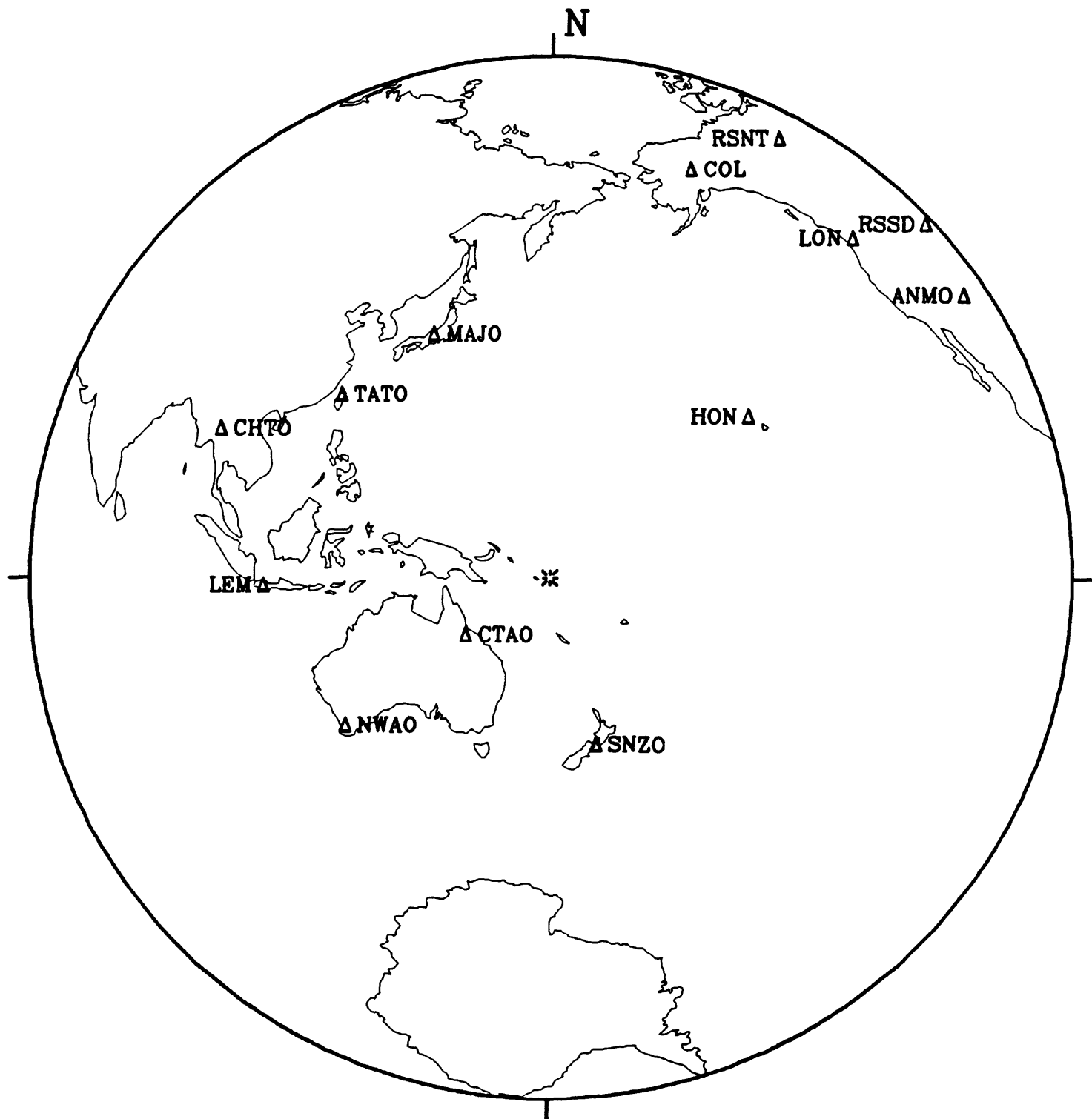
15 October 1986 13:14:29.73

LPZ

East Papua New Guinea Region $h=90.2$ $m_b=5.5$ 

15 October 1986 22:03:10.04

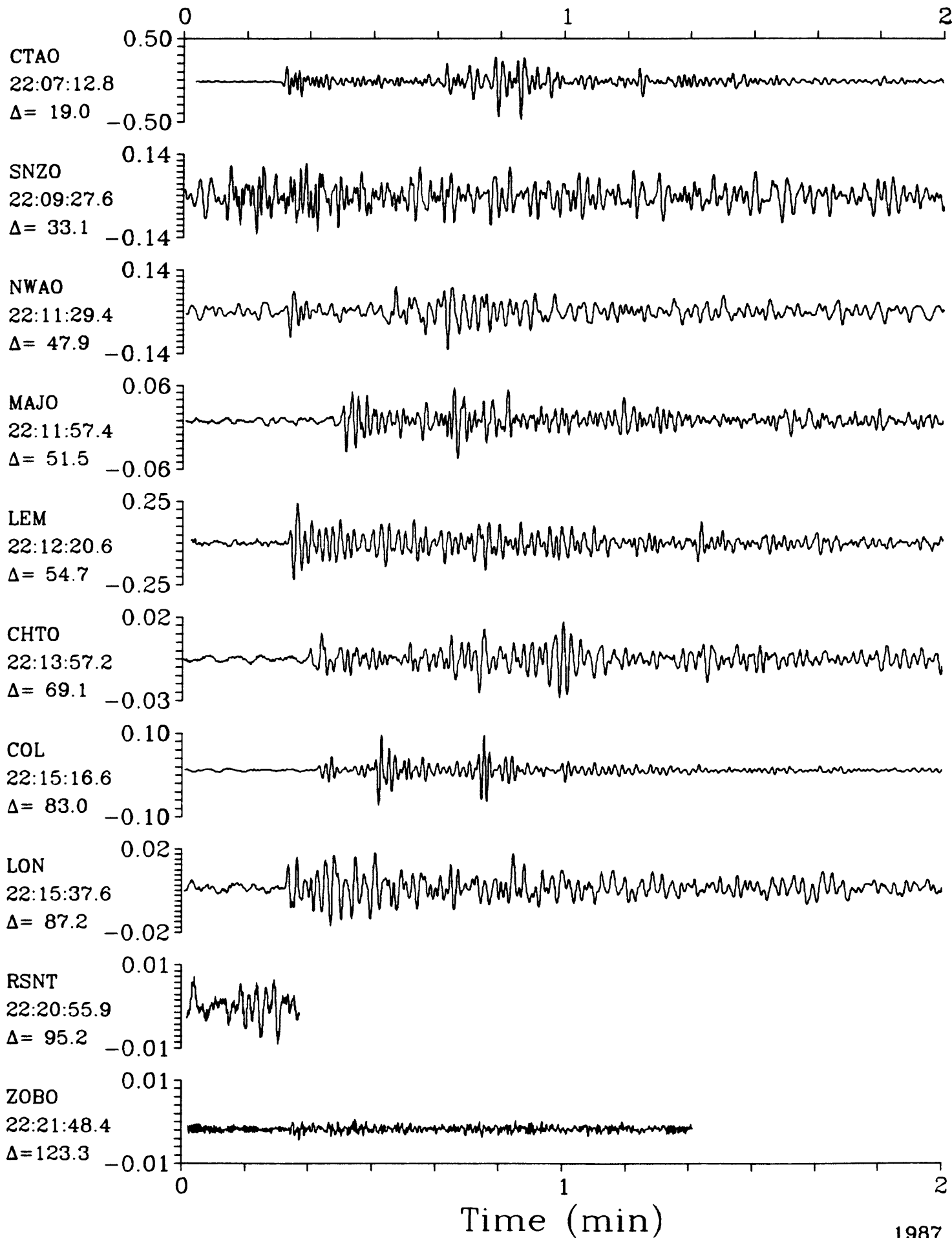
Solomon Islands



SPZ

15 October 1986 22:03:10.04

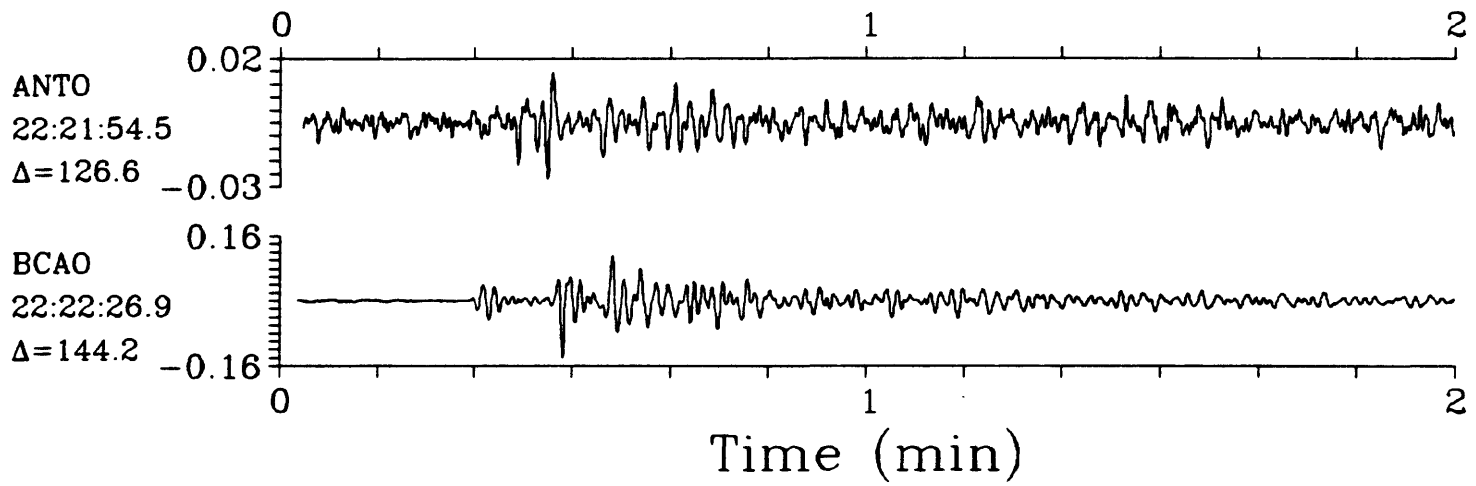
SPZ

Solomon Islands $h=40.3$ $m_b=5.6$ $M_{sz}=5.2$ 

SPZ

15 October 1986 22:03:10.04

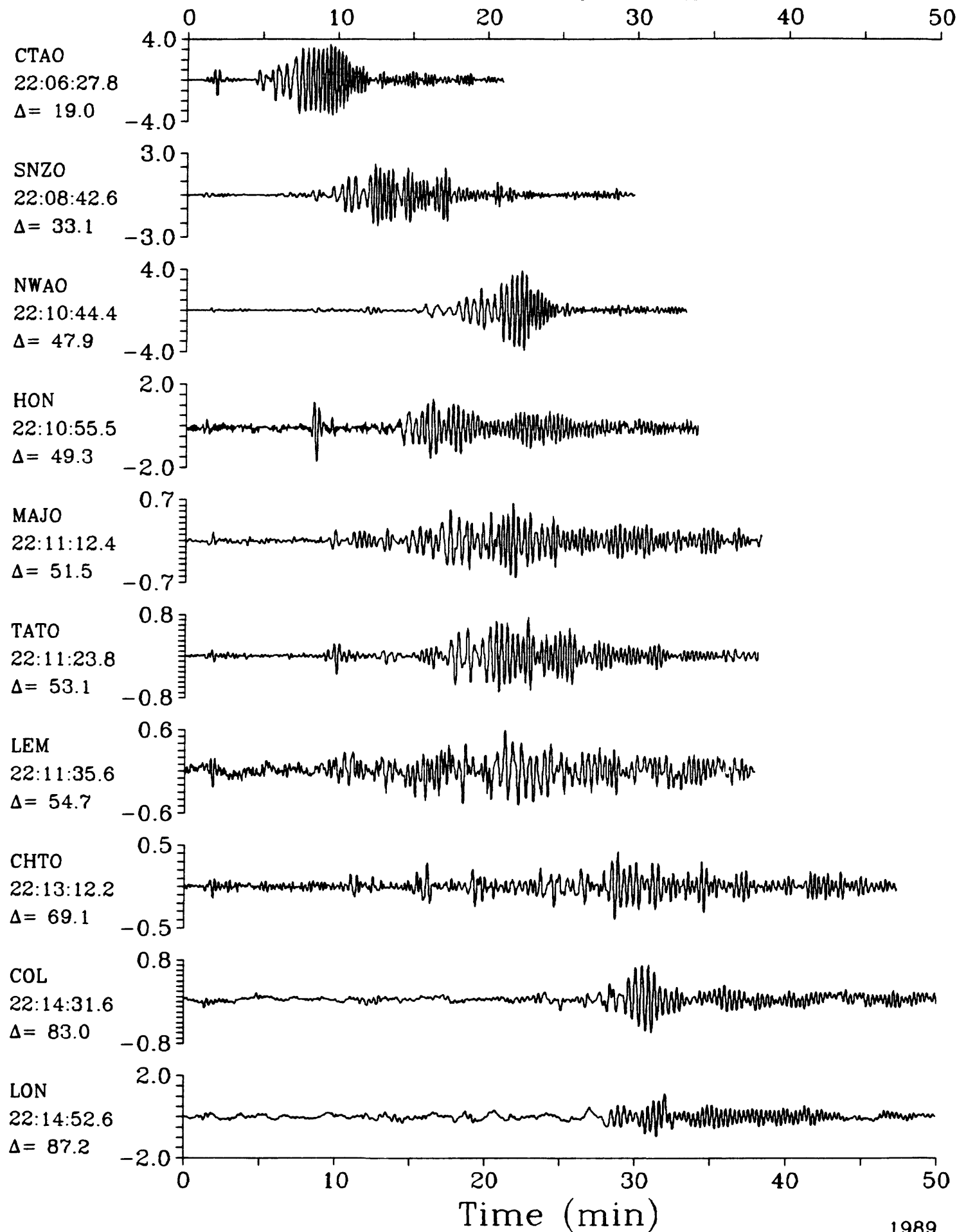
SPZ

Solomon Islands $h=40.3$ $m_b=5.6$ $M_{sz}=5.2$ 

LPZ

15 October 1986 22:03:10.04

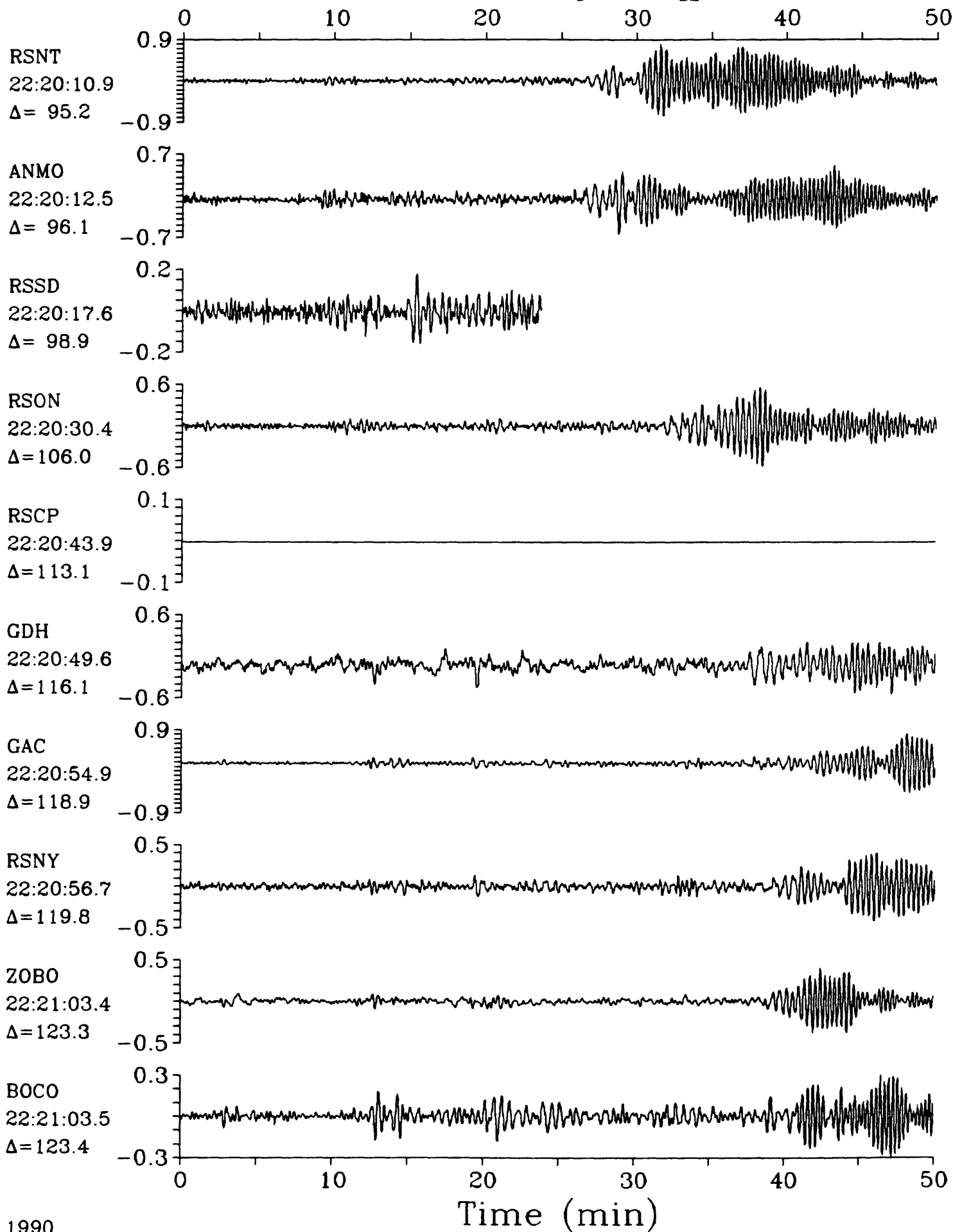
LPZ

Solomon Islands $h=40.3$ $m_b=5.6$ $M_{sz}=5.2$ 

LPZ

15 October 1986 22:03:10.04

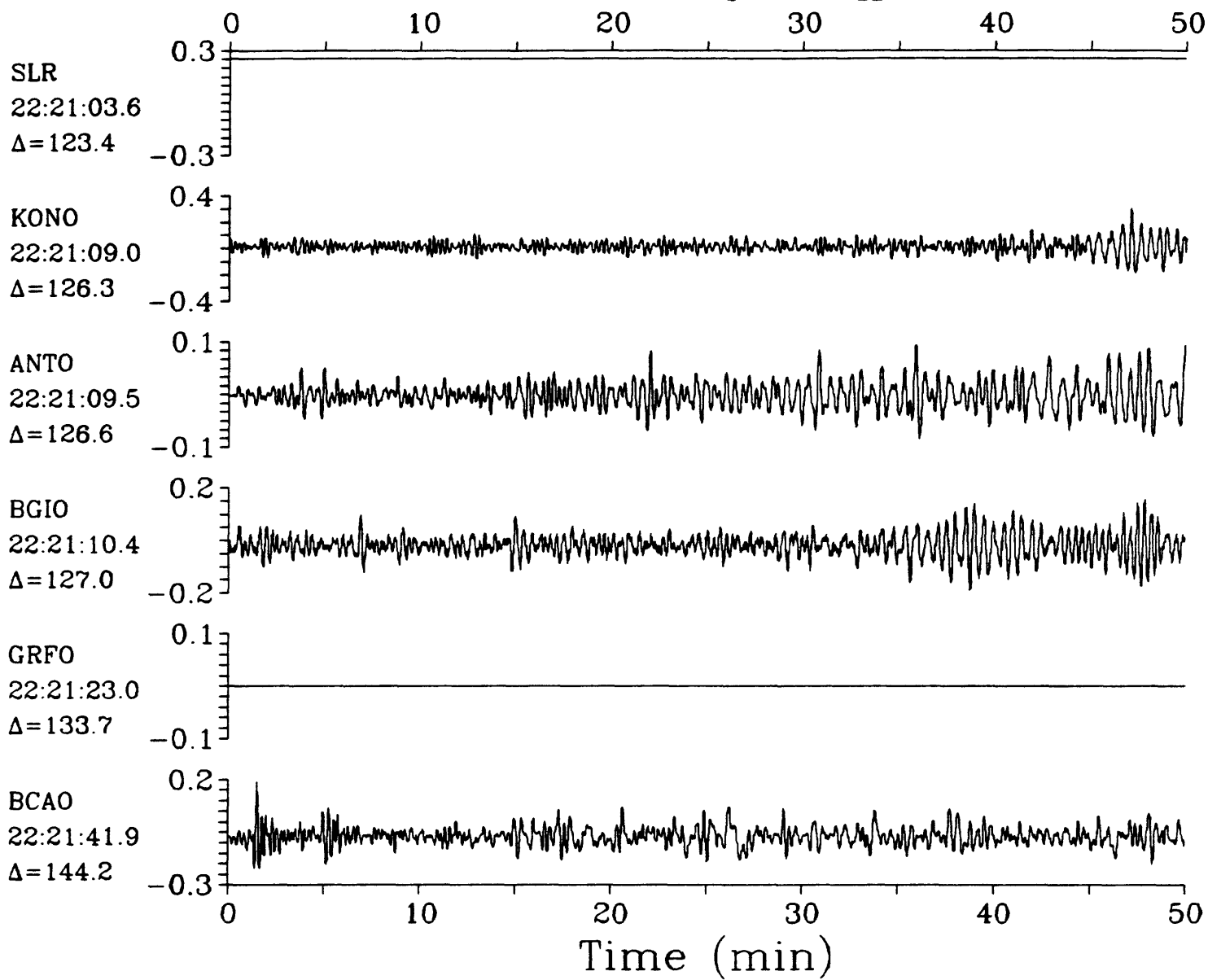
LPZ

Solomon Islands $h=40.3$ $m_b=5.6$ $M_{sz}=5.2$ 

LPZ

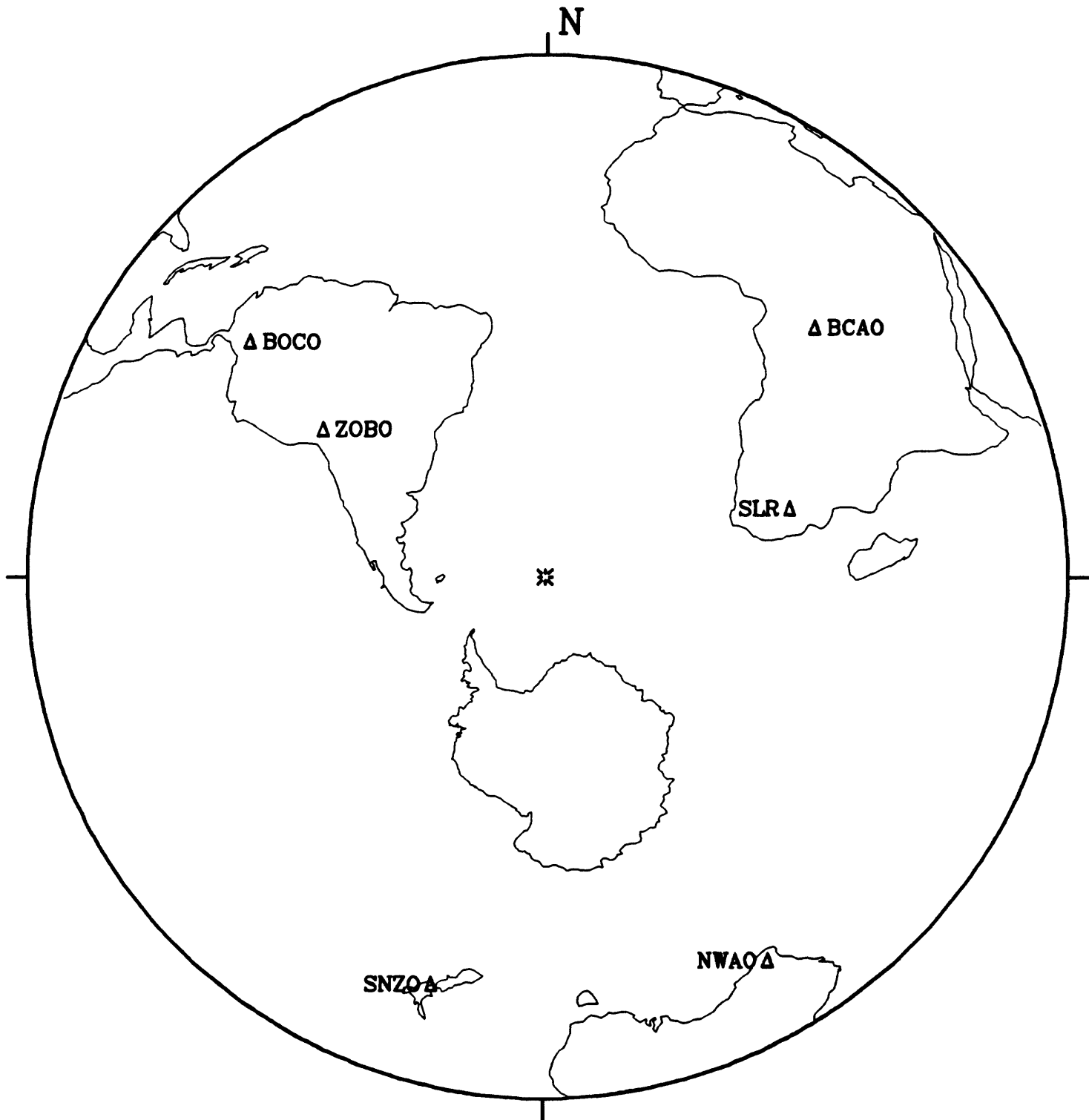
15 October 1986 22:03:10.04

LPZ

Solomon Islands $h=40.3$ $m_b=5.6$ $M_{sz}=5.2$ 

15 October 1986 23:04:15.20

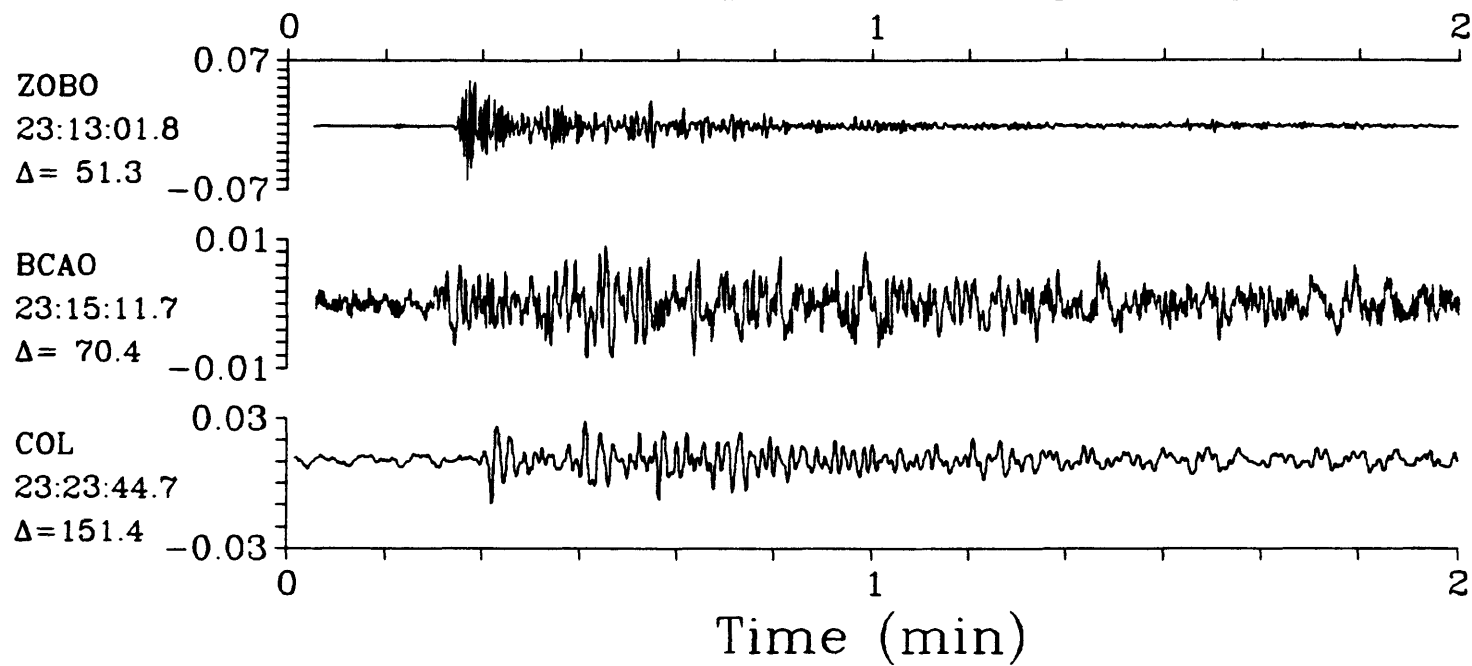
South Sandwich Islands Region



SPZ

15 October 1986 23:04:15.20

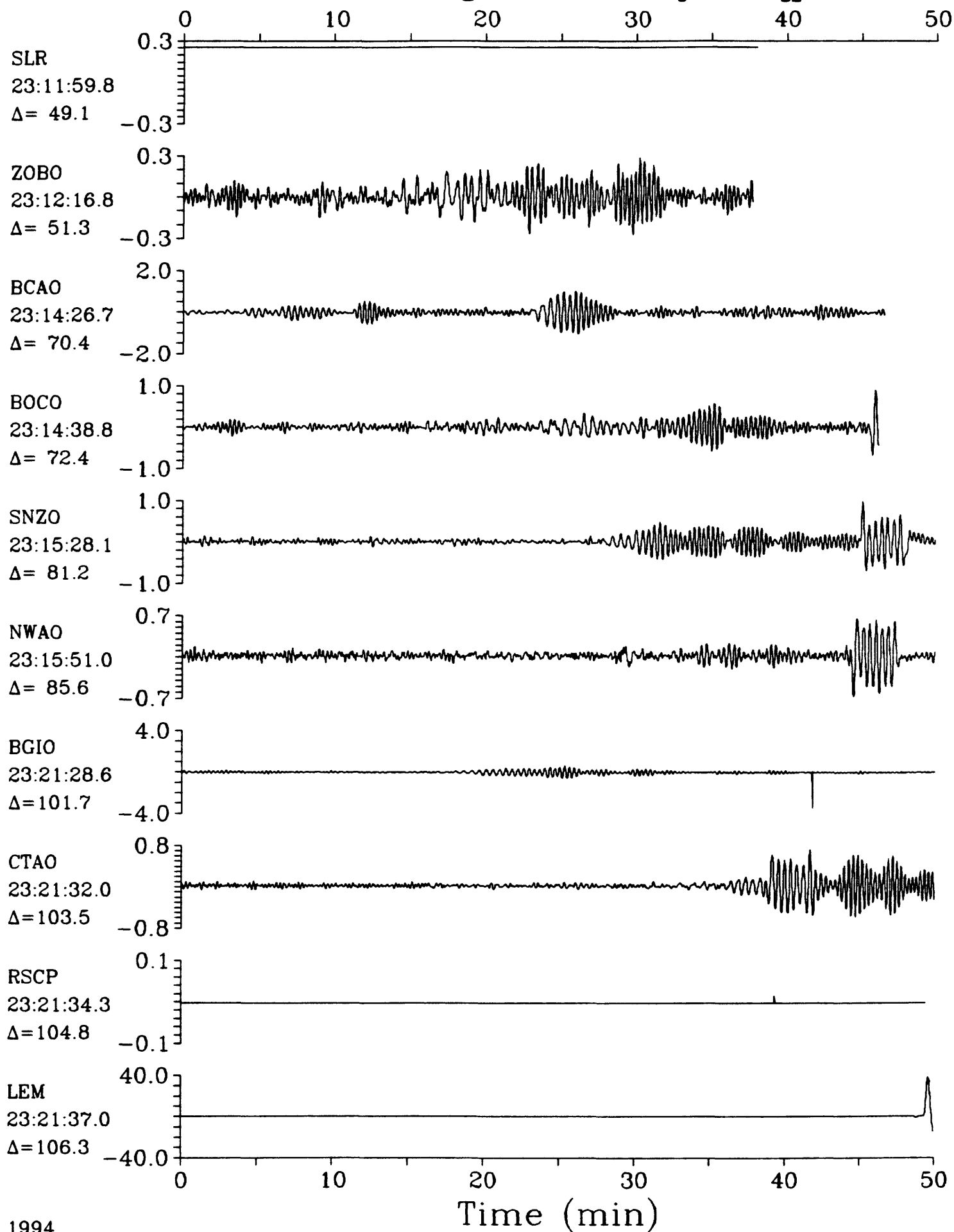
SPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=4.9$ 

LPZ

15 October 1986 23:04:15.20

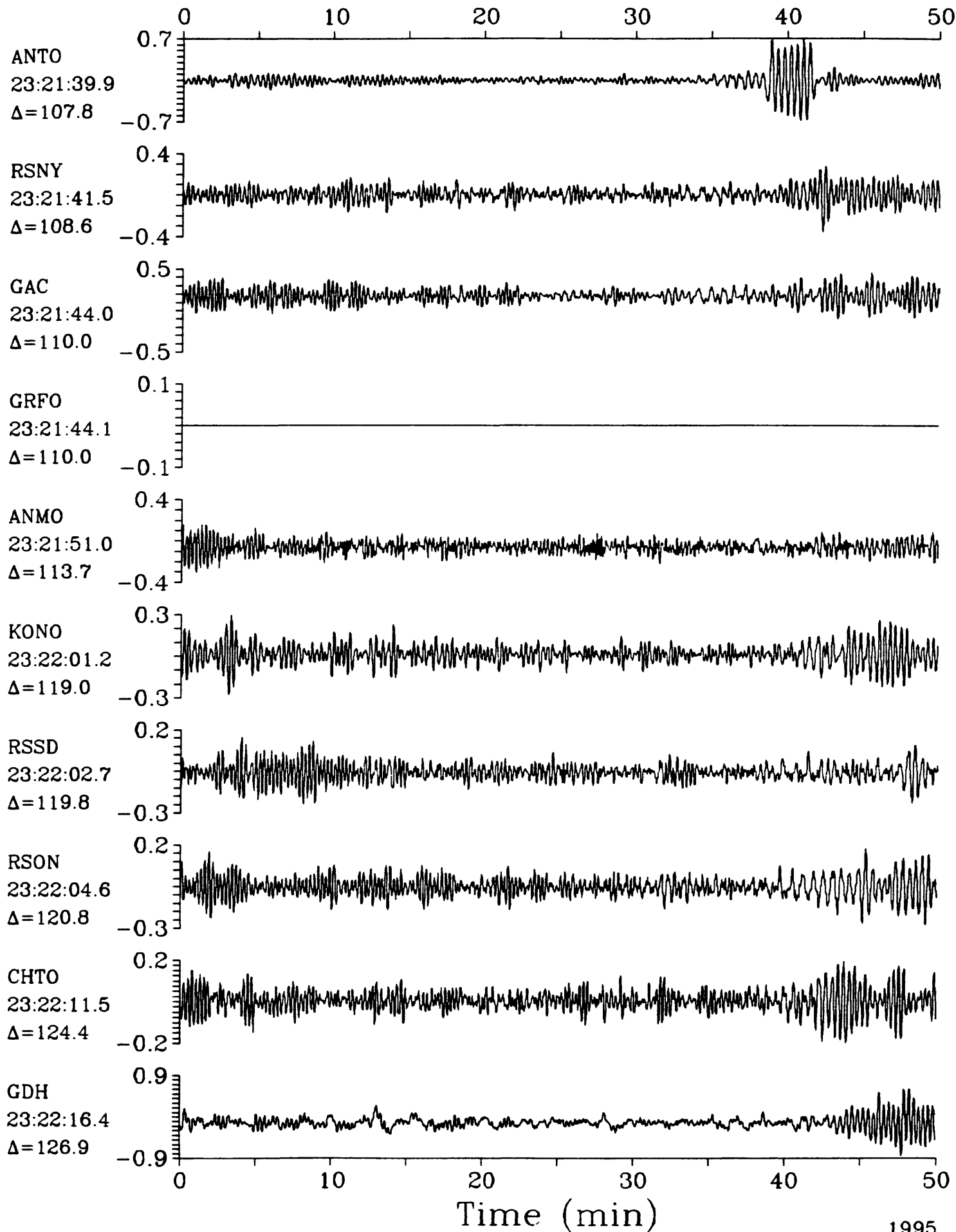
LPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{SZ}=4.9$ 

LPZ

15 October 1986 23:04:15.20

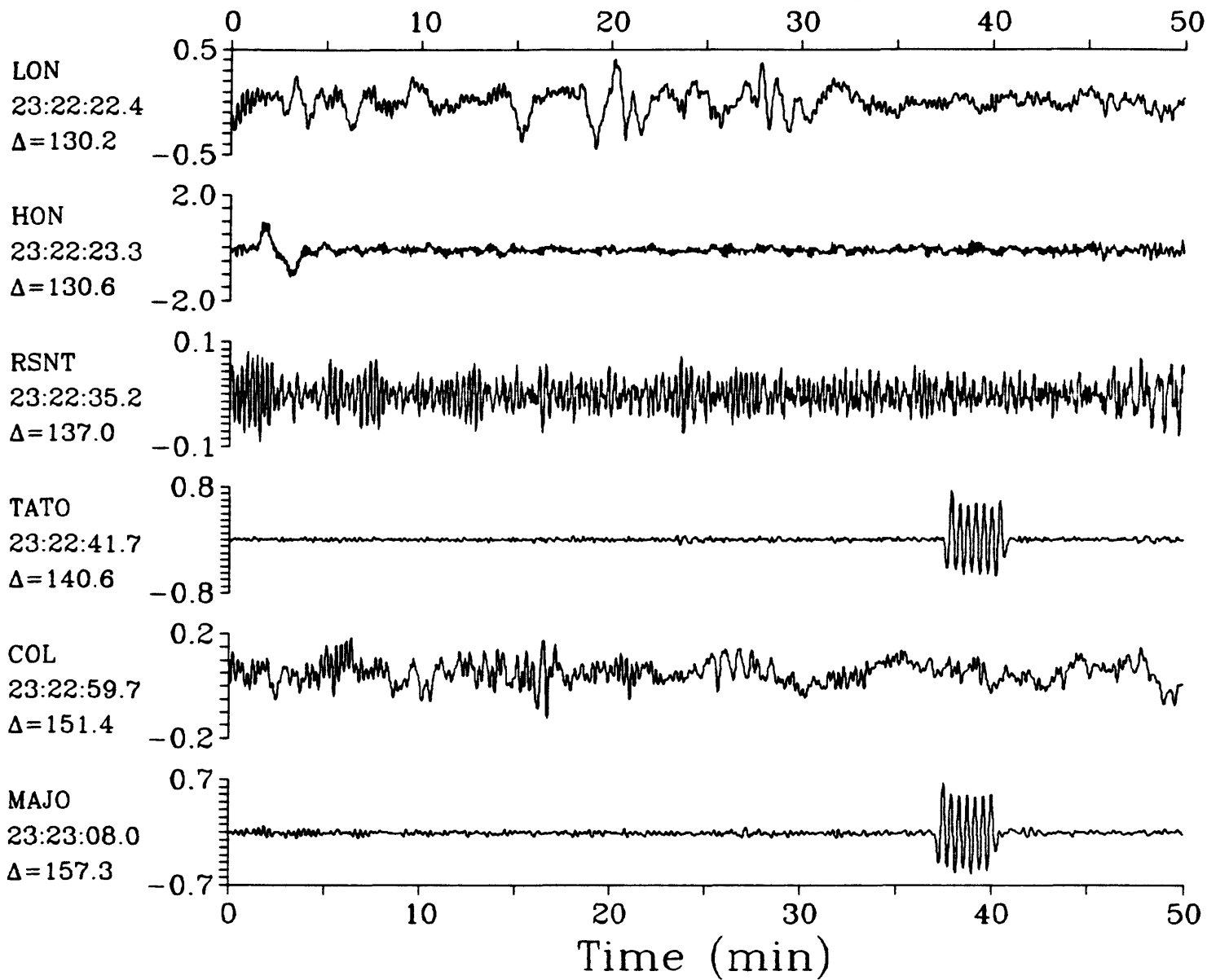
LPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=4.9$ 

LPZ

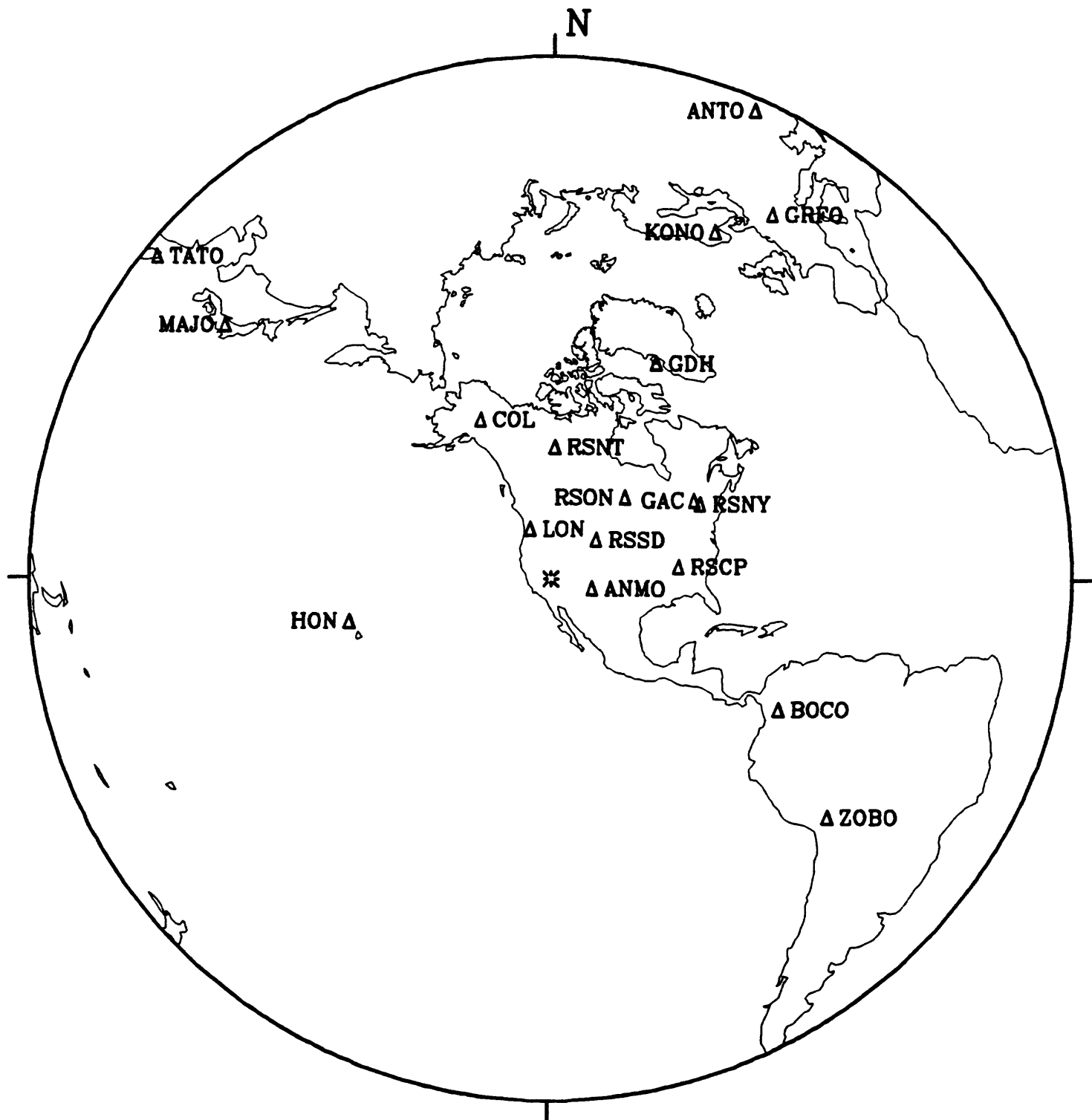
15 October 1986 23:04:15.20

LPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=4.9$ 

16 October 1986 19:25:00.09

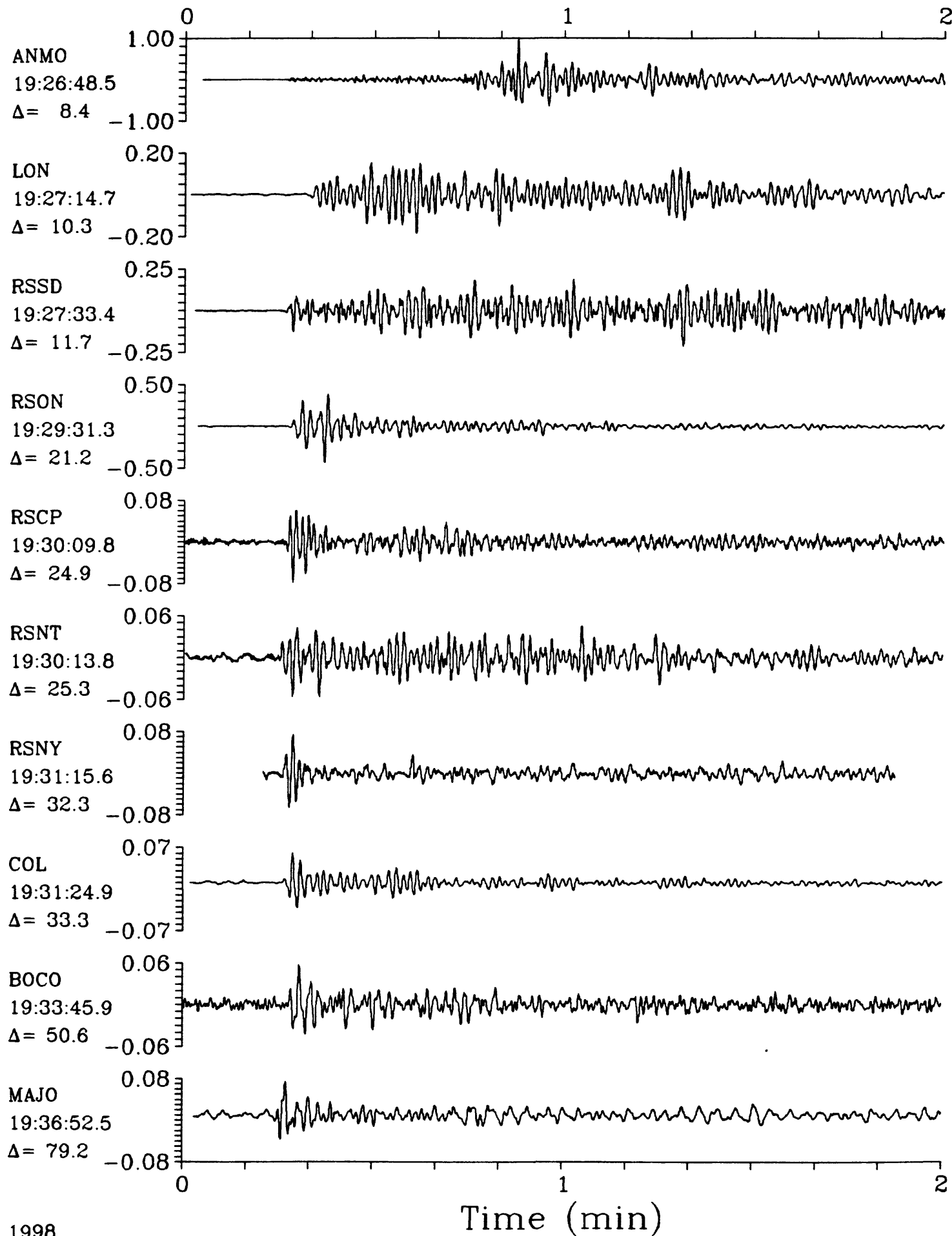
Southern Nevada



SPZ

16 October 1986 19:25:00.09
Southern Nevada $h=0.0$ $m_b=5.6$

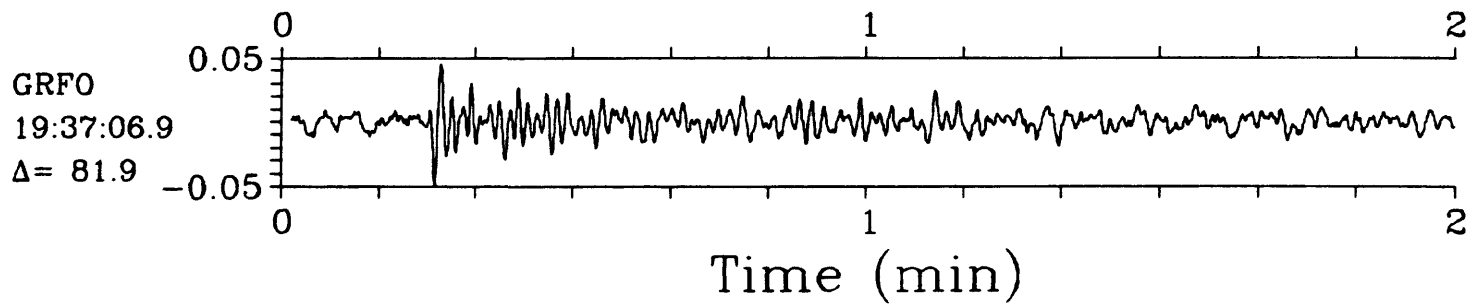
SPZ



SPZ

16 October 1986 19:25:00.09
Southern Nevada $h=0.0$ $m_b=5.6$

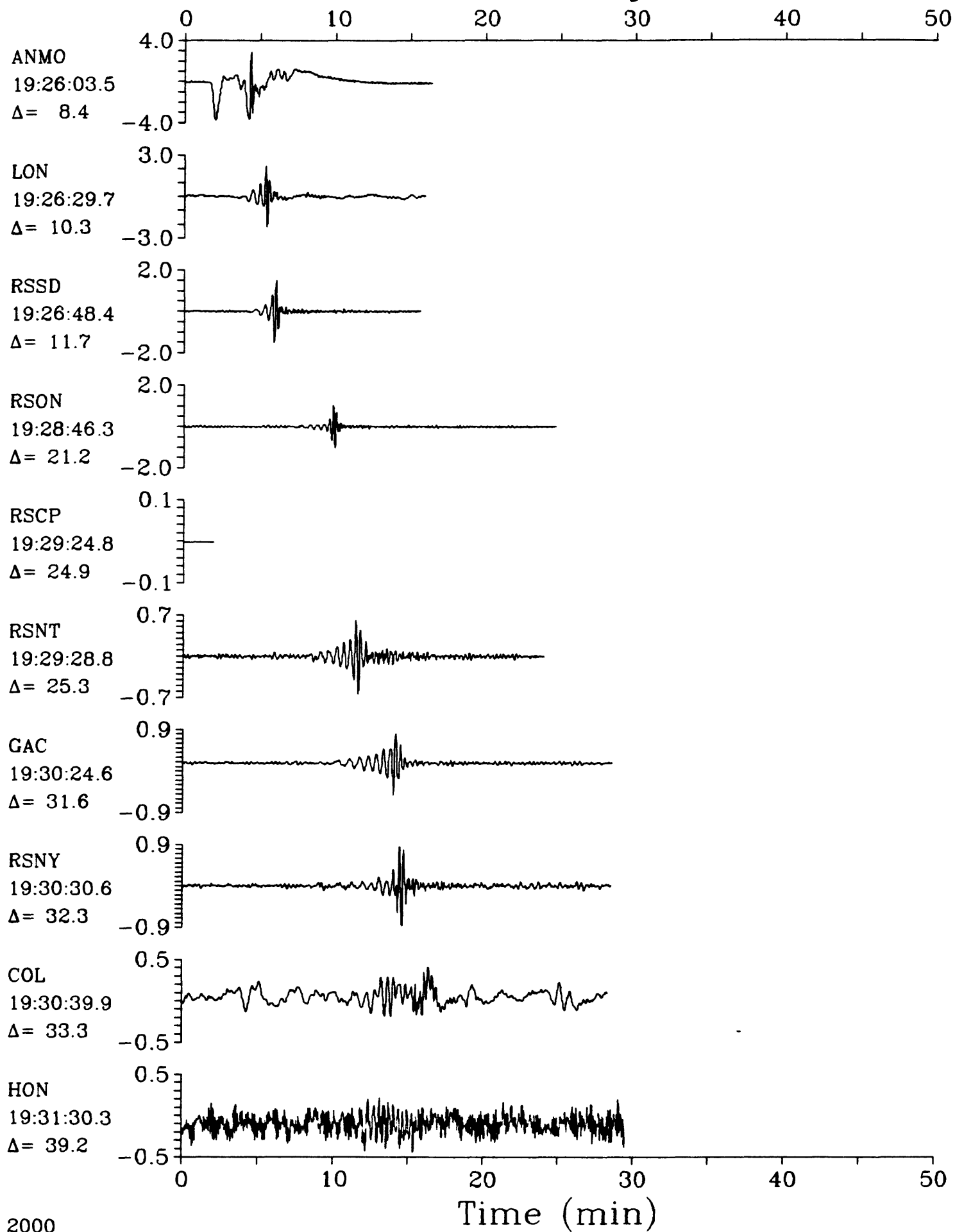
SPZ



LPZ

16 October 1986 19:25:00.09
Southern Nevada $h=0.0$ $m_b=5.6$

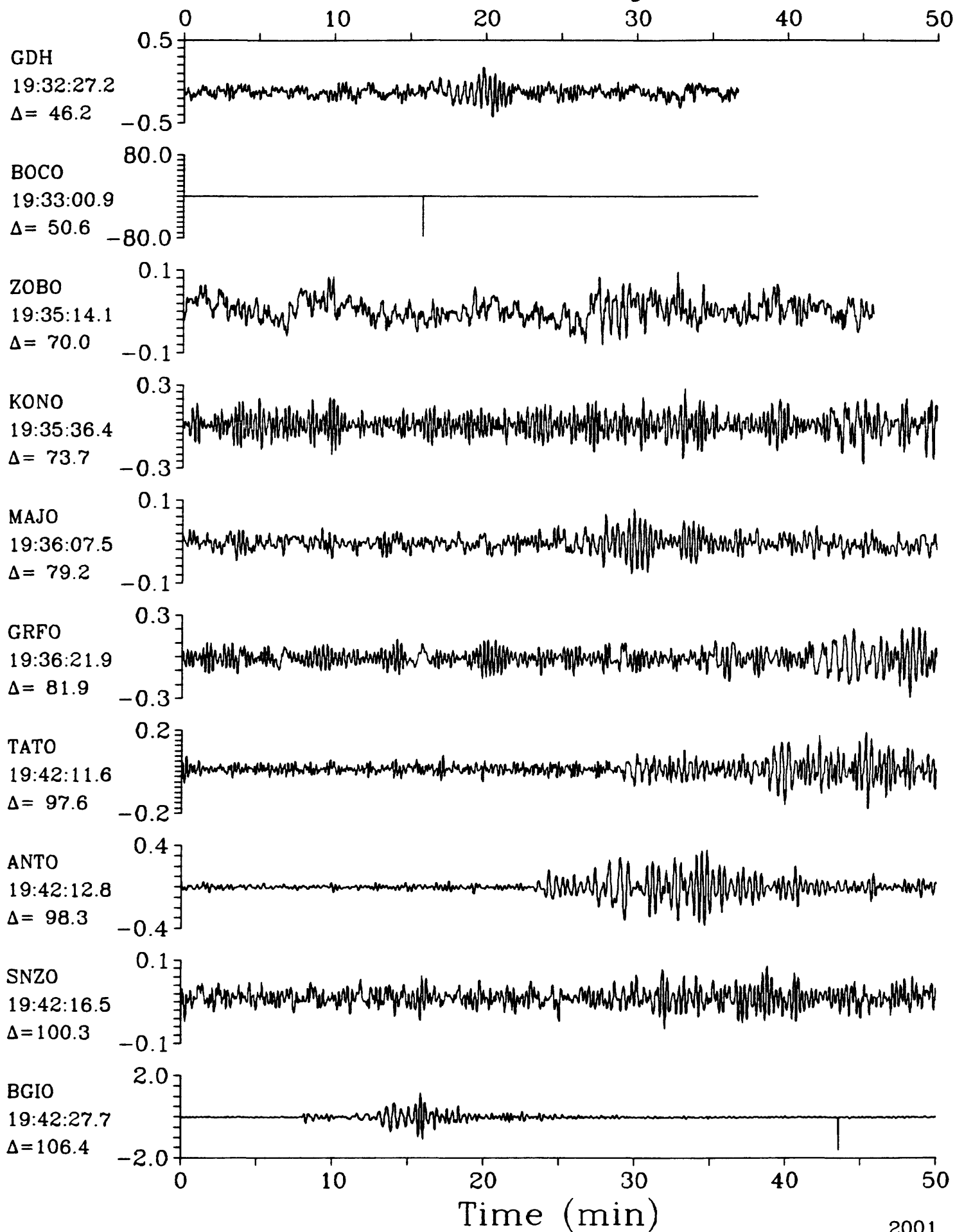
LPZ



LPZ

16 October 1986 19:25:00.09
Southern Nevada $h=0.0$ $m_b=5.6$

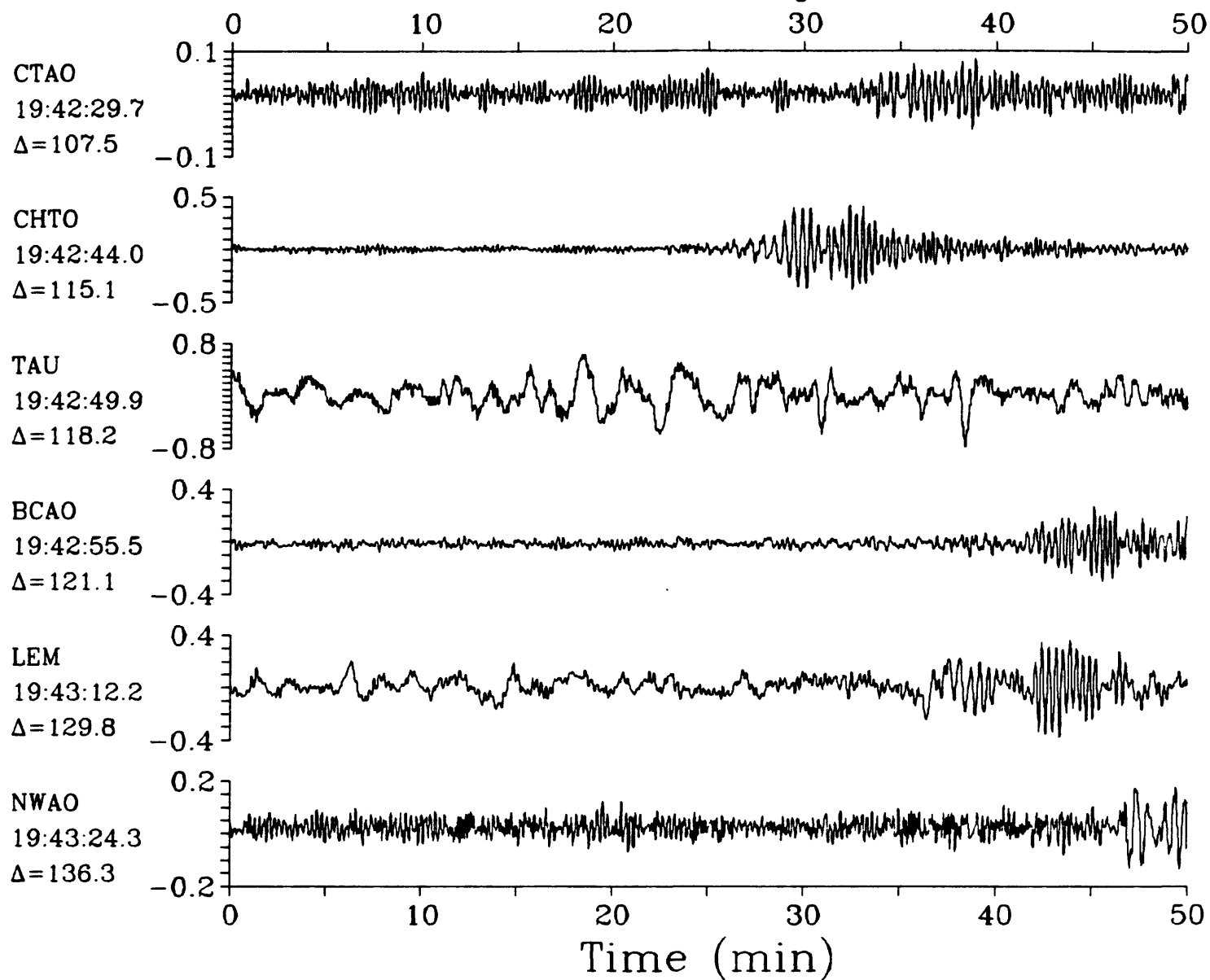
LPZ



LPZ

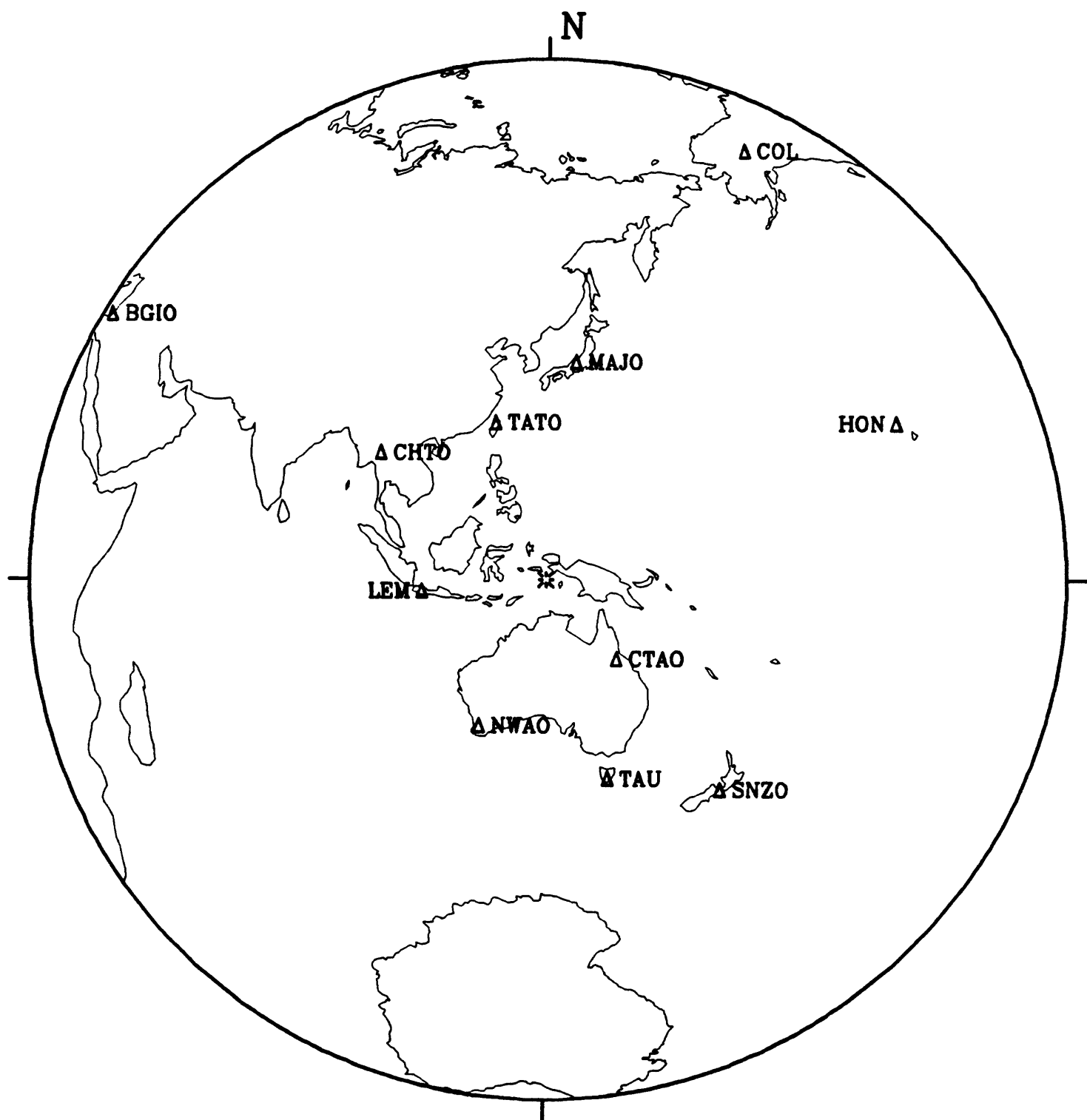
16 October 1986 19:25:00.09
Southern Nevada $h=0.0$ $m_b=5.6$

LPZ



17 October 1986 07:32:49.19

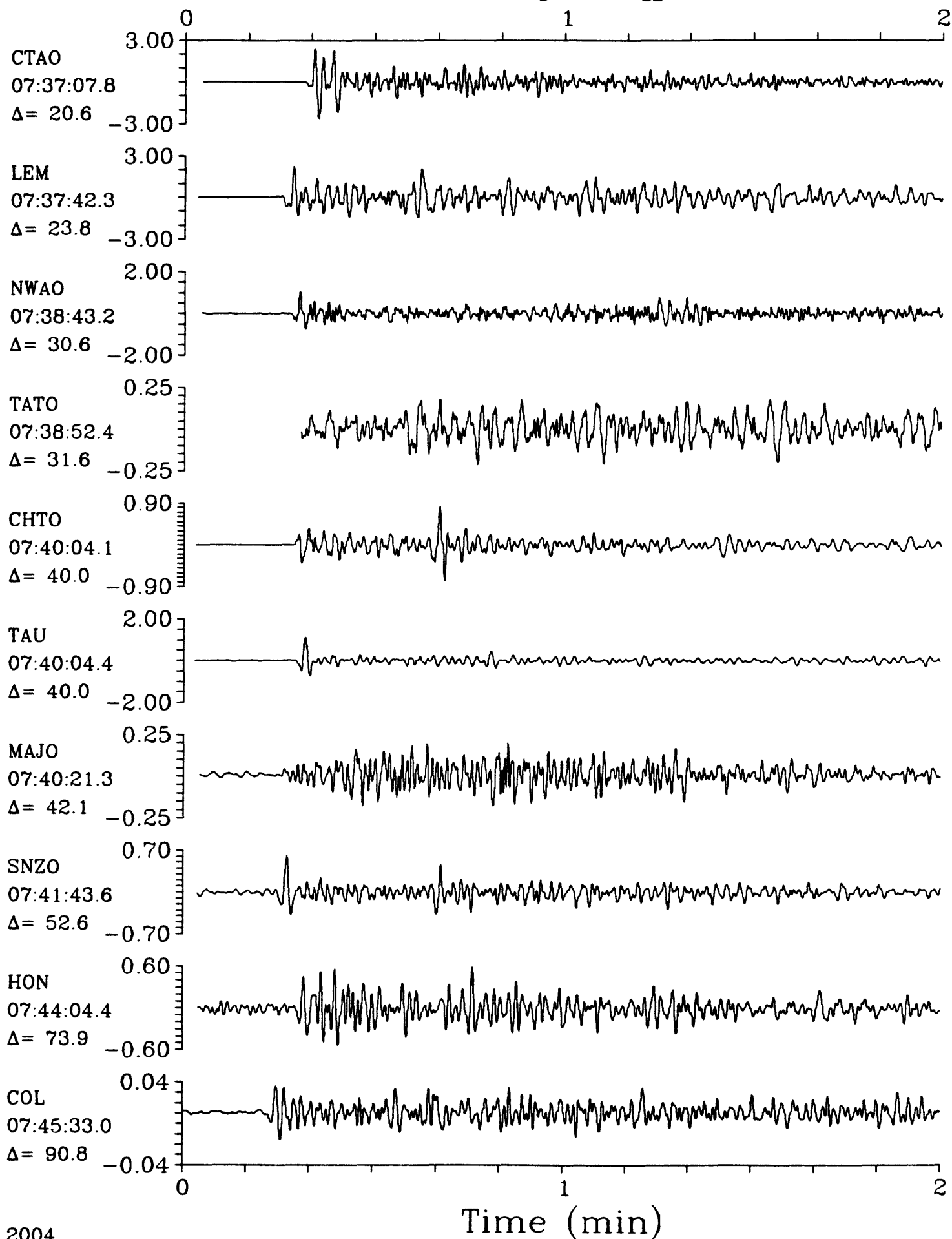
Banda Sea



SPZ

17 October 1986 07:32:49.19
Banda Sea $h=50.4$ $m_b=6.2$ $M_{SZ}=5.9$

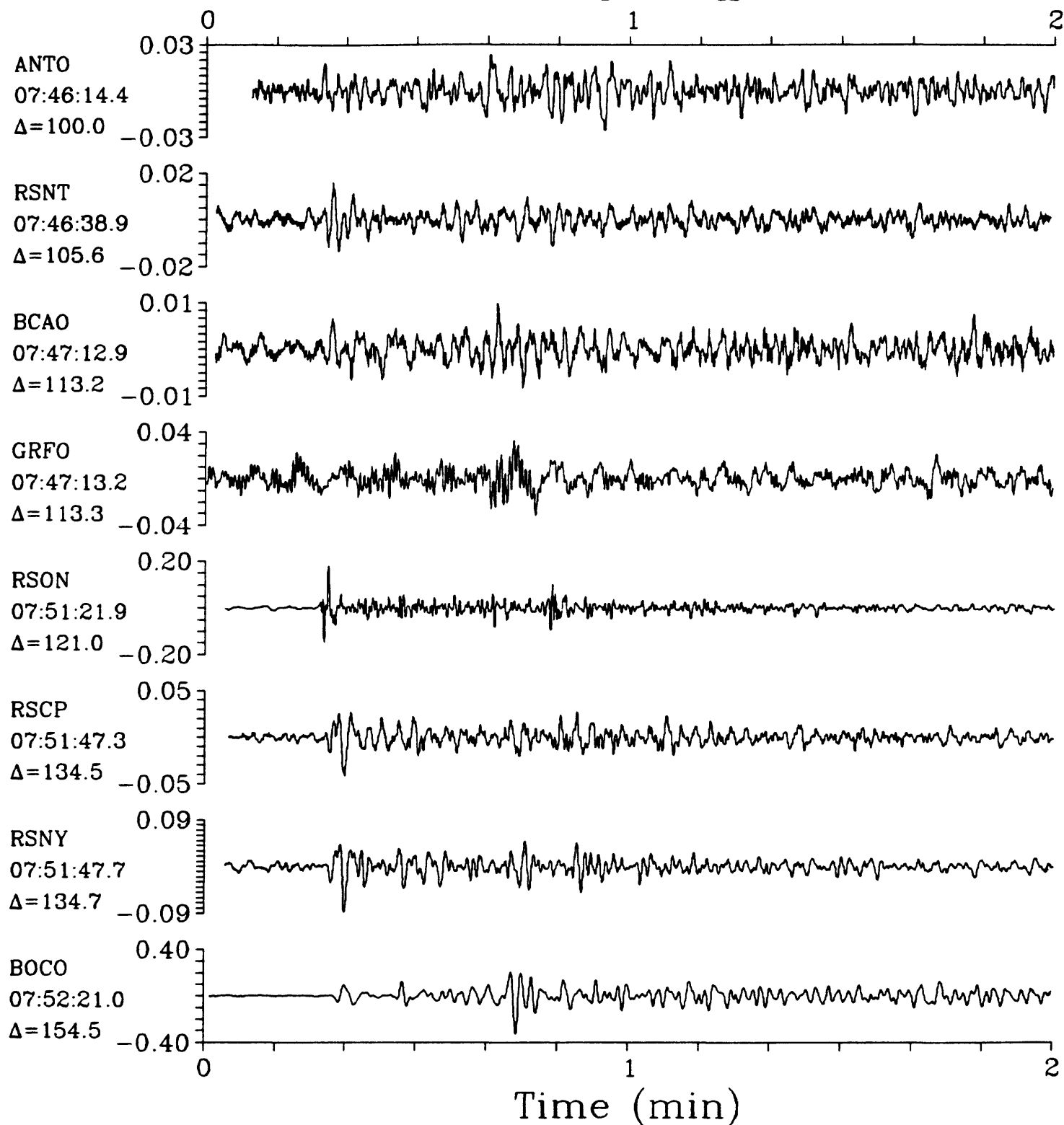
SPZ



SPZ

17 October 1986 07:32:49.19
Banda Sea $h=50.4$ $m_b=6.2$ $M_{sz}=5.9$

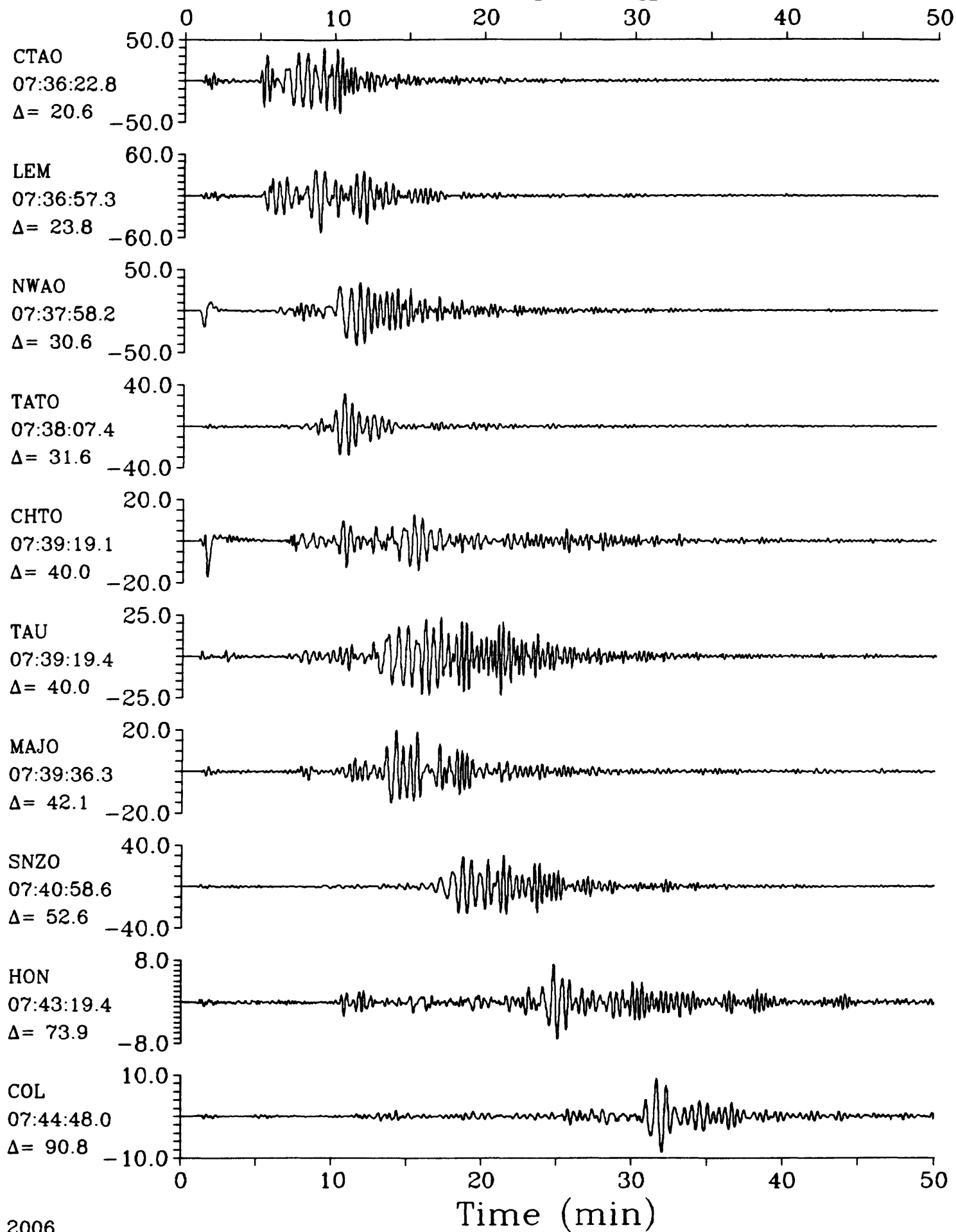
SPZ



LPZ

17 October 1986 07:32:49.19
Banda Sea $h=50.4$ $m_b=6.2$ $M_{sz}=5.9$

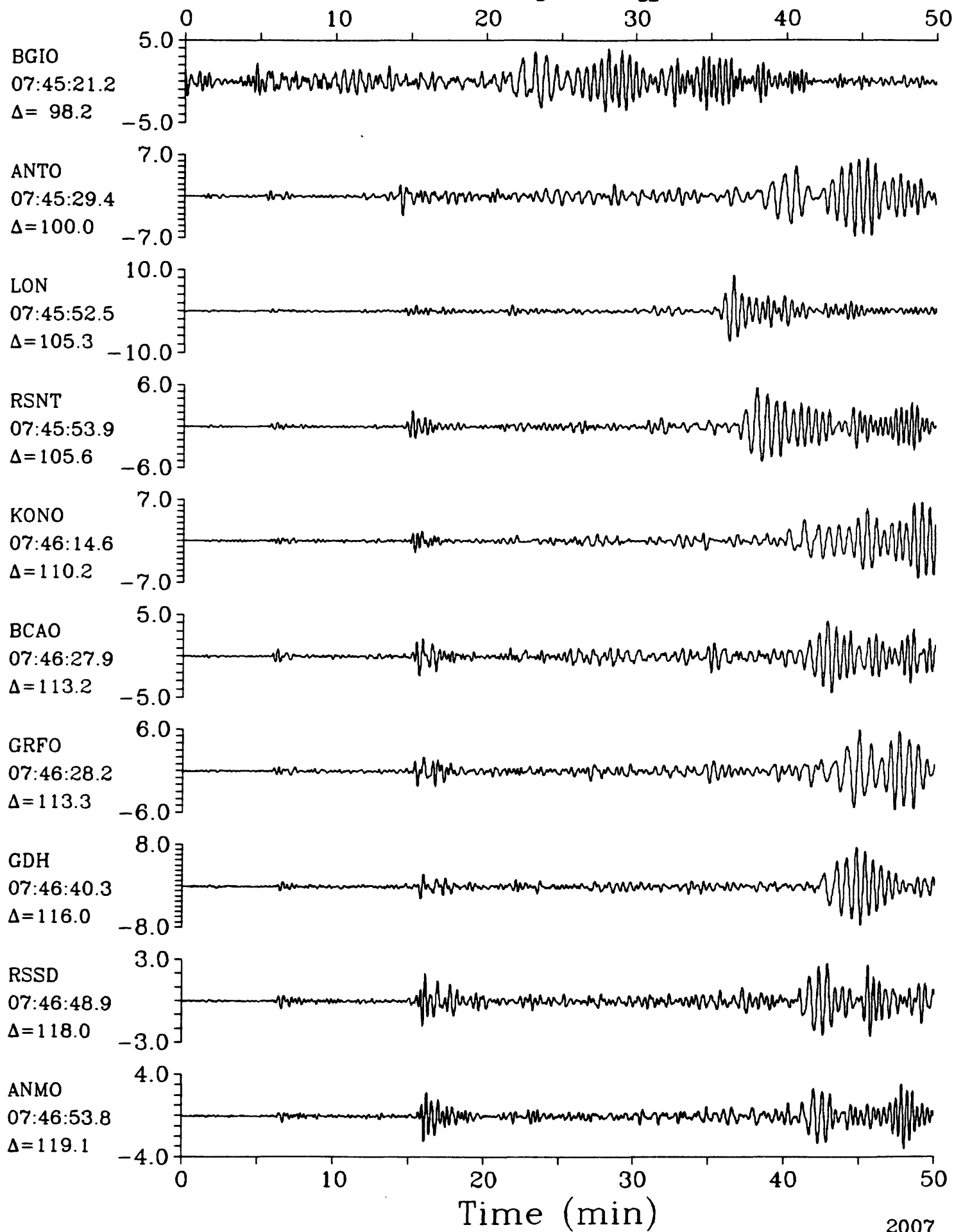
LPZ



LPZ

17 October 1986 07:32:49.19
Banda Sea $h=50.4$ $m_b=6.2$ $M_{sz}=5.9$

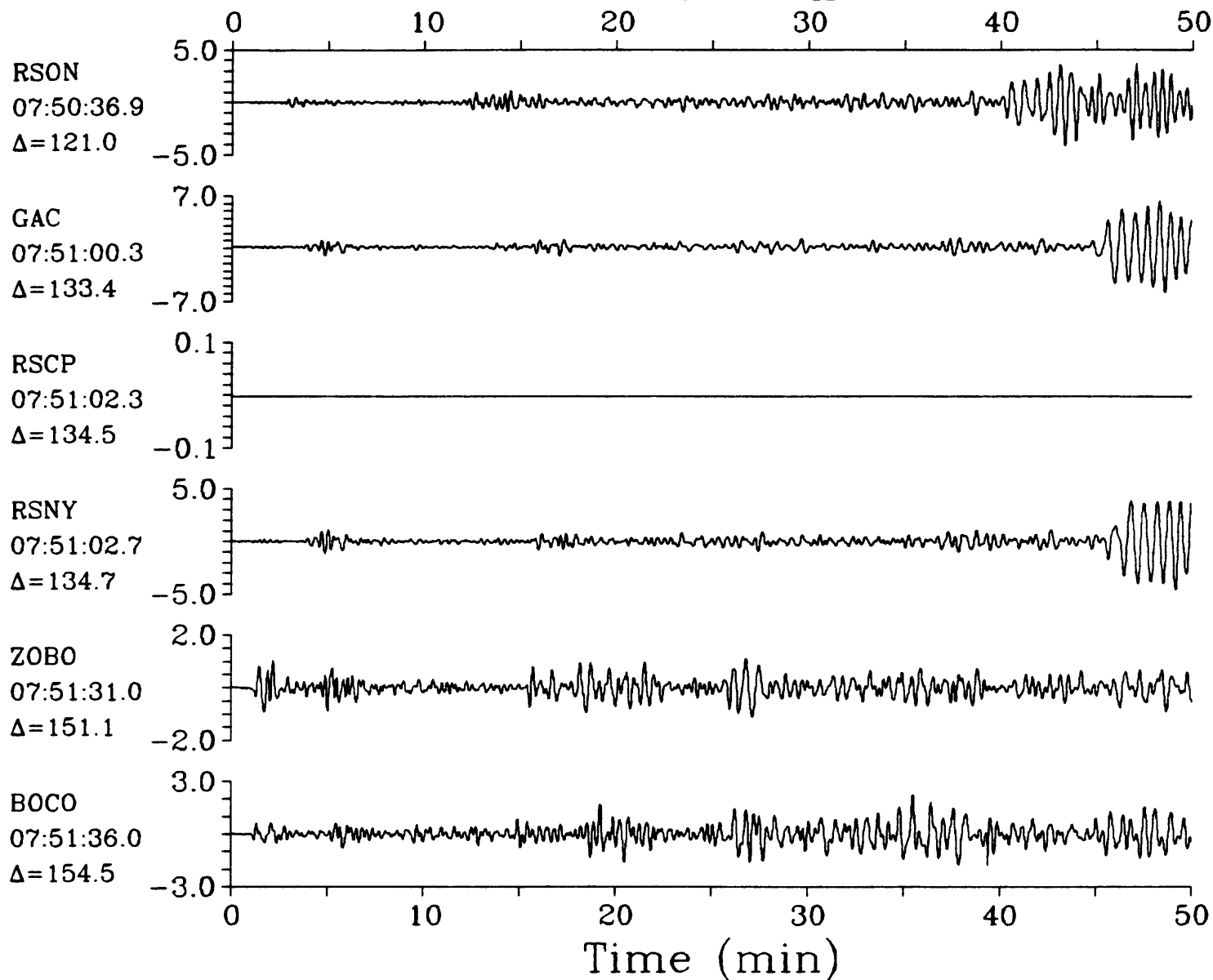
LPZ



LPZ

17 October 1986 07:32:49.19
Banda Sea $h=50.4$ $m_b=6.2$ $M_{sz}=5.9$

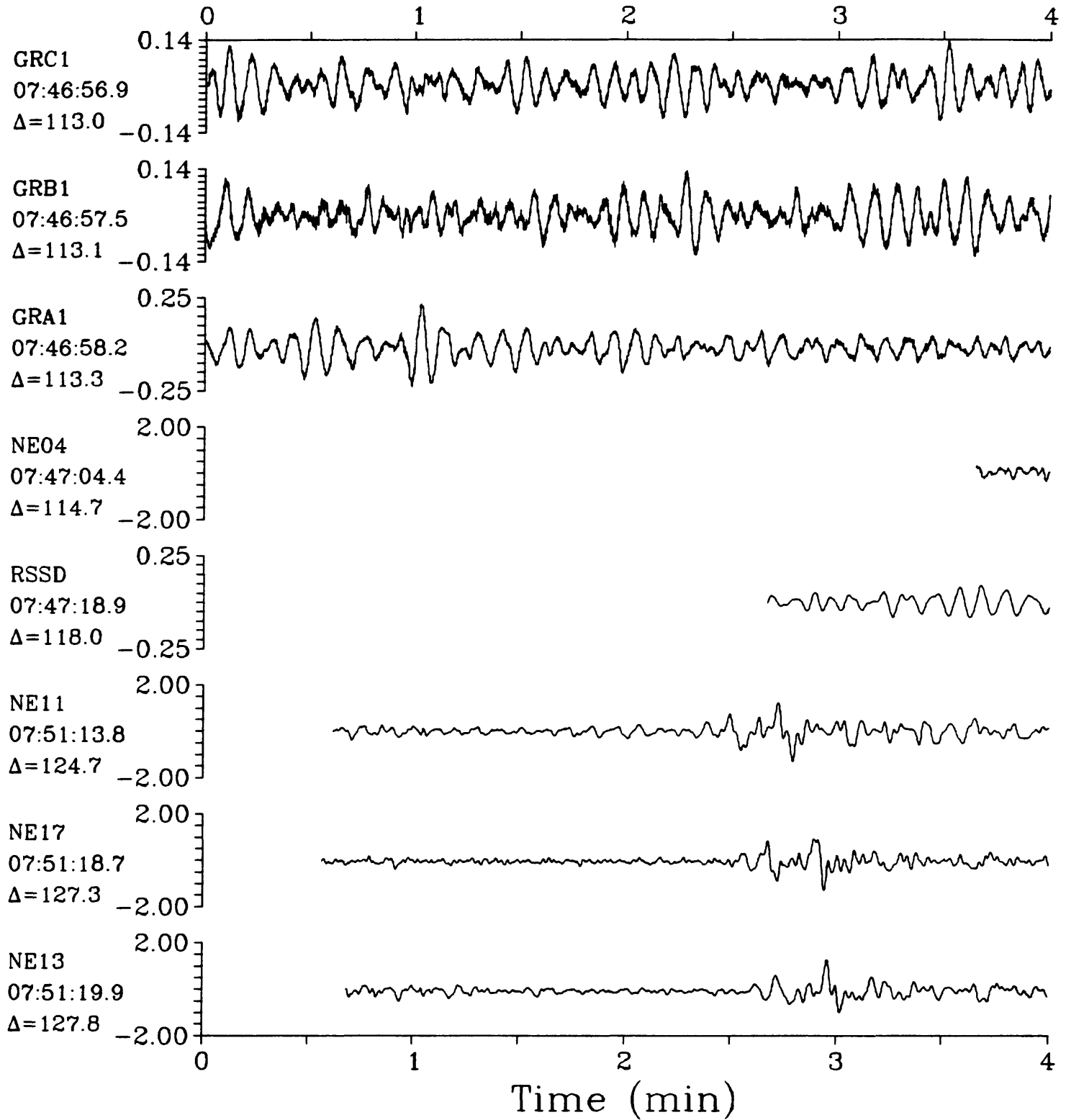
LPZ



IPZ

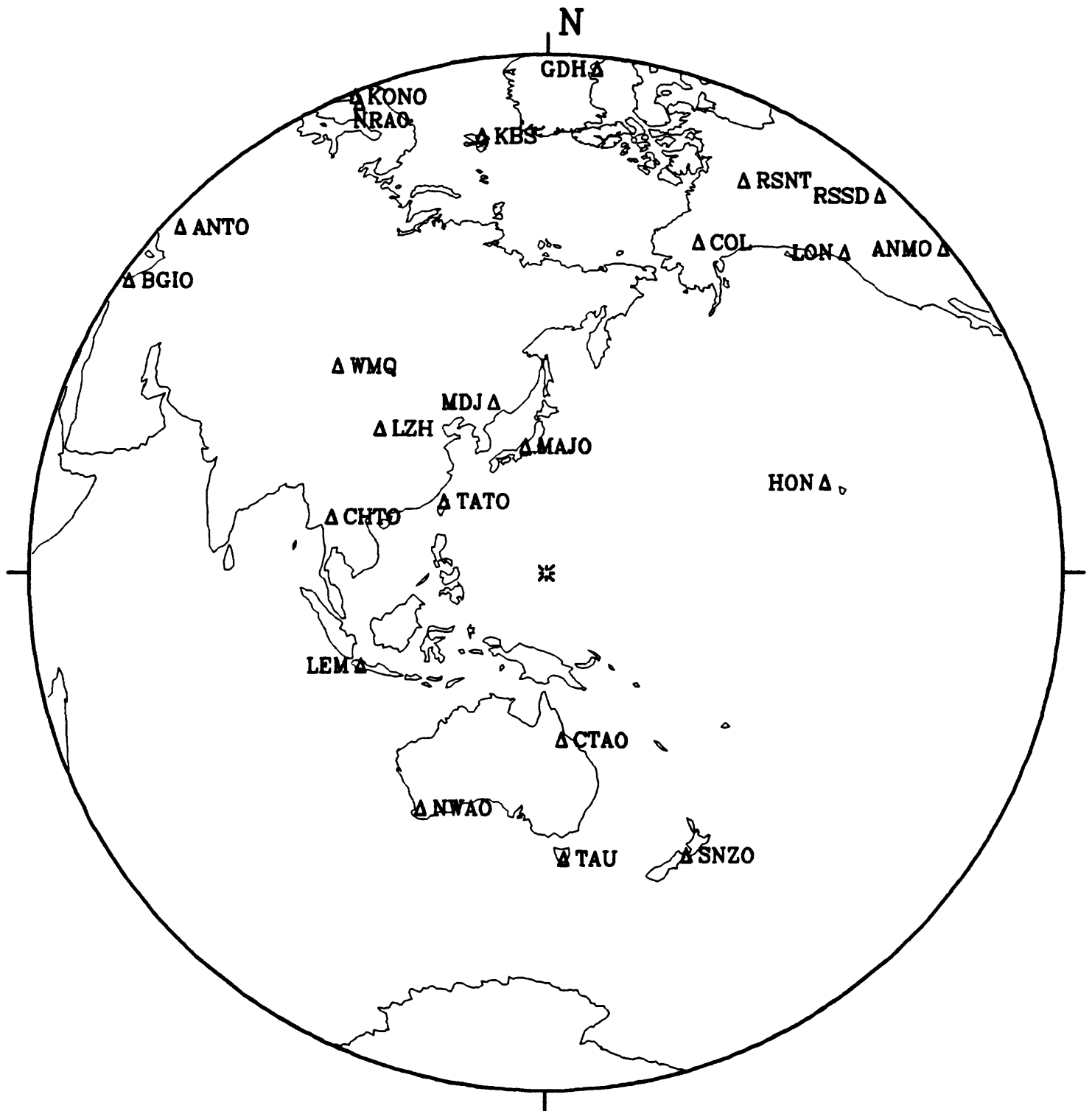
17 October 1986 07:32:49.19
Banda Sea $h=50.4$ $m_b=6.2$ $M_{sz}=5.9$

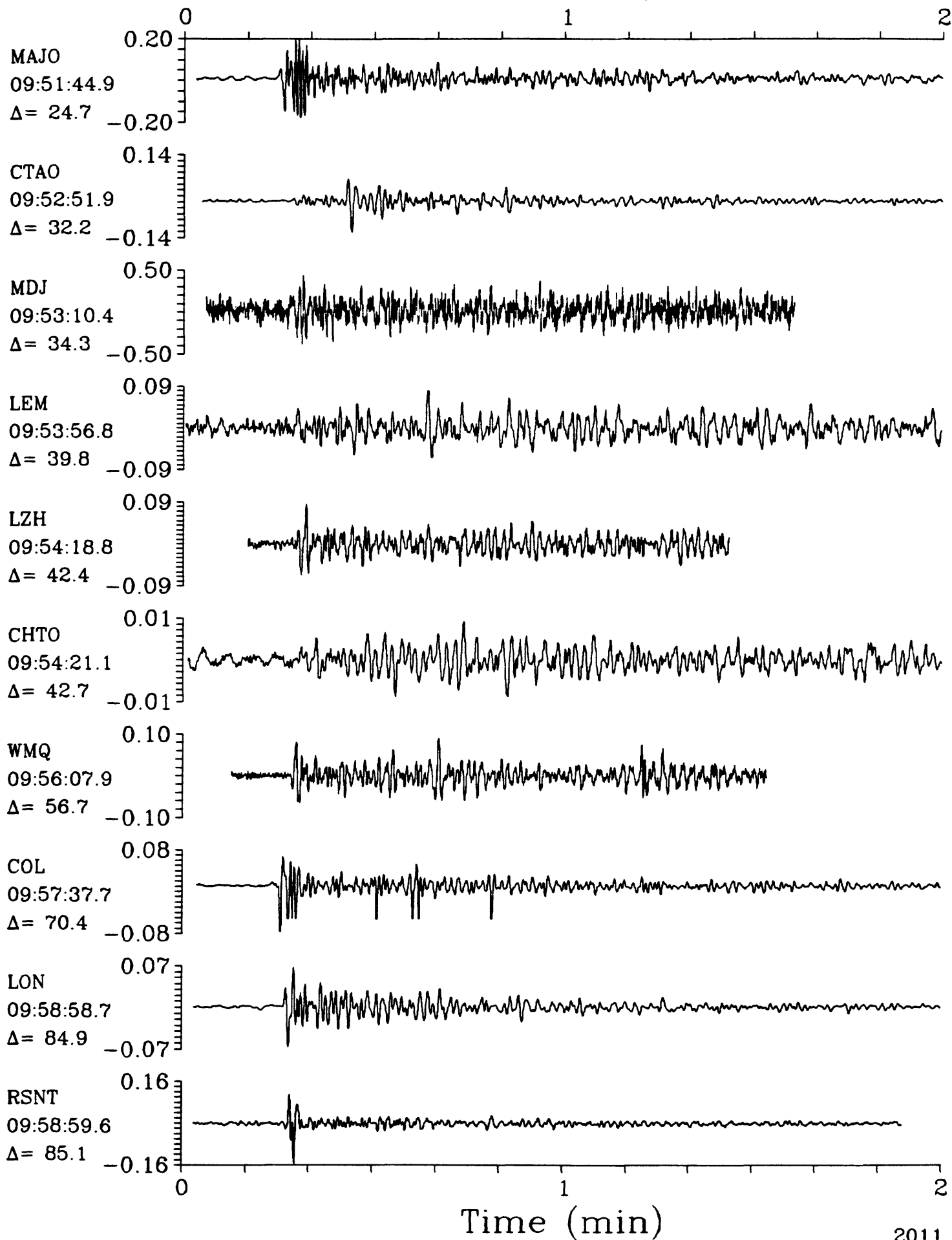
IPZ



18 October 1986 09:46:43.08

South of Mariana Islands

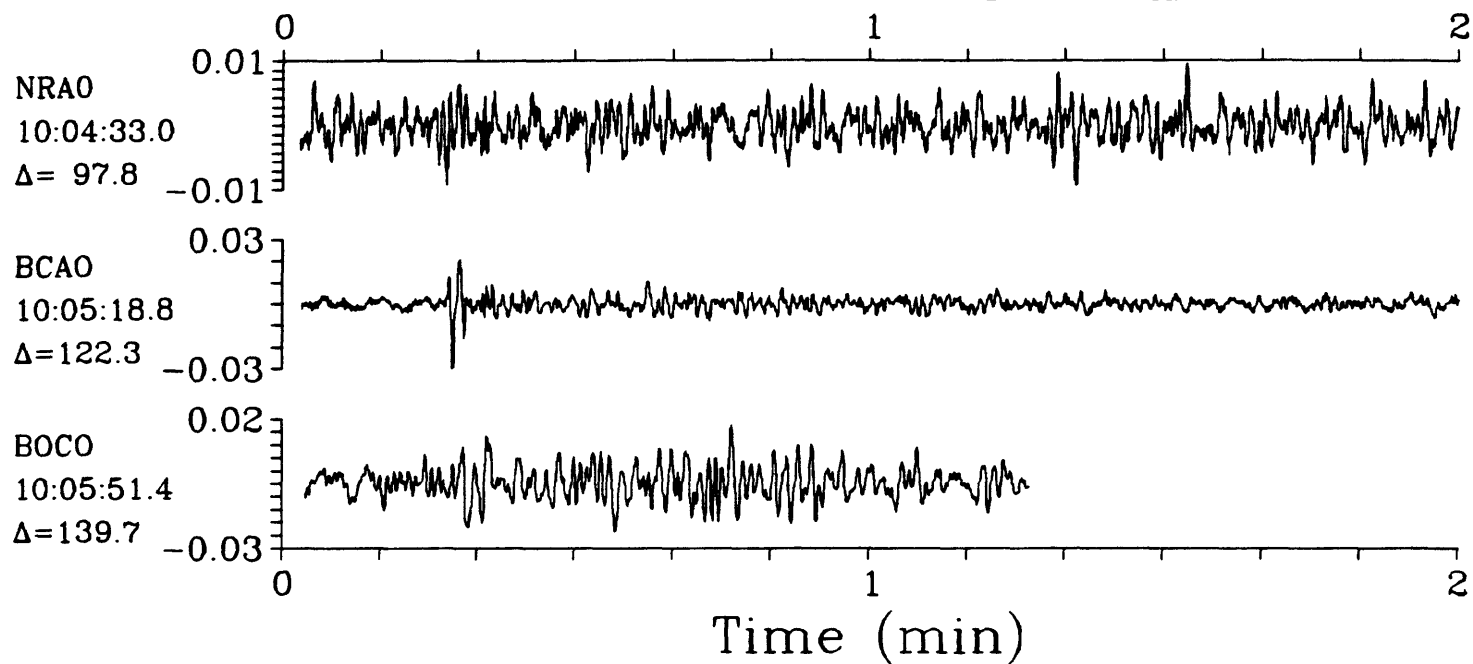


South of Mariana Islands $h=45.3$ $m_b=5.7$ $M_{sz}=4.9$ 

SPZ

18 October 1986 09:46:43.08

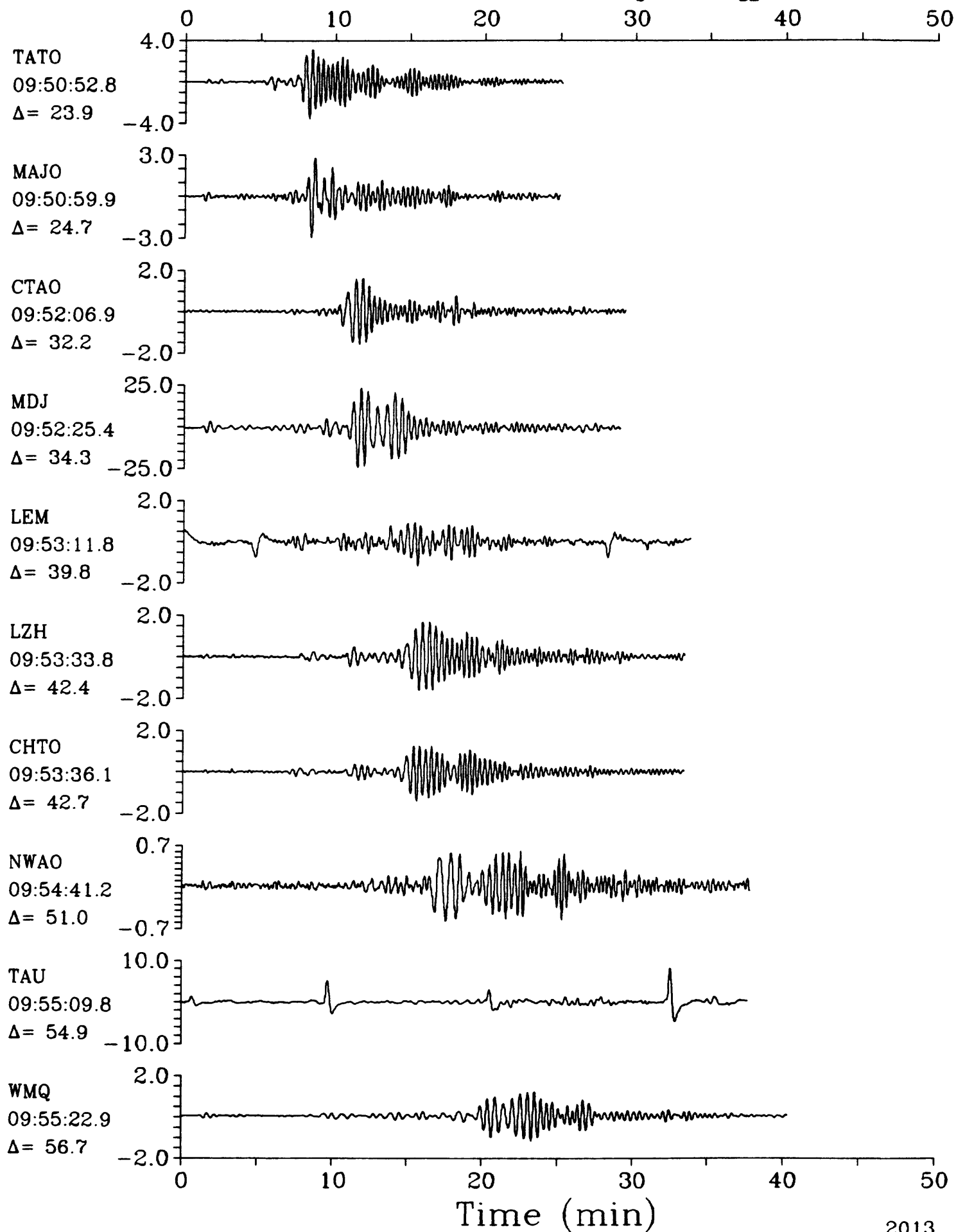
SPZ

South of Mariana Islands $h=45.3$ $m_b=5.7$ $M_{sz}=4.9$ 

LPZ

18 October 1986 09:46:43.08

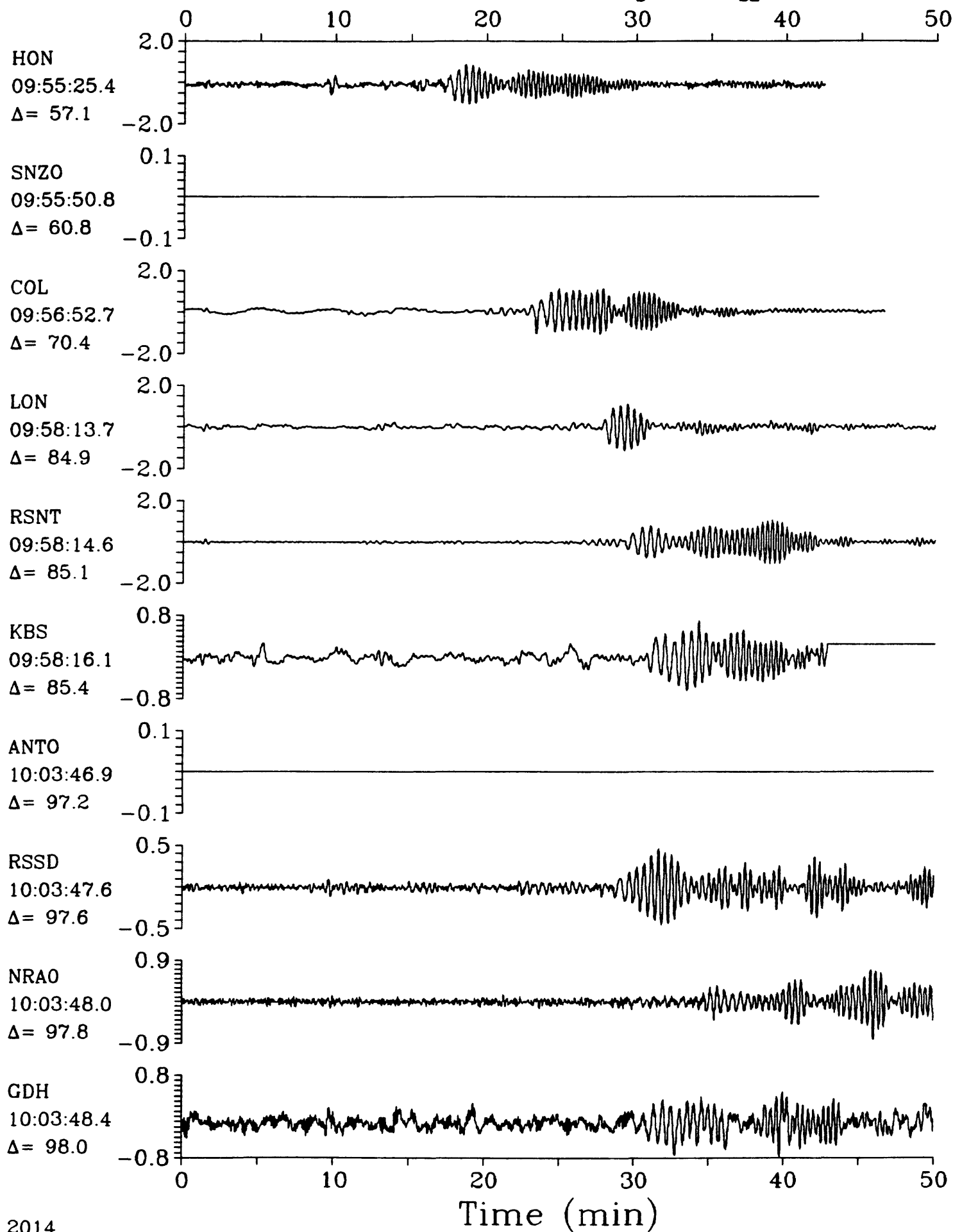
LPZ

South of Mariana Islands $h=45.3$ $m_b=5.7$ $M_{sz}=4.9$ 

LPZ

18 October 1986 09:46:43.08

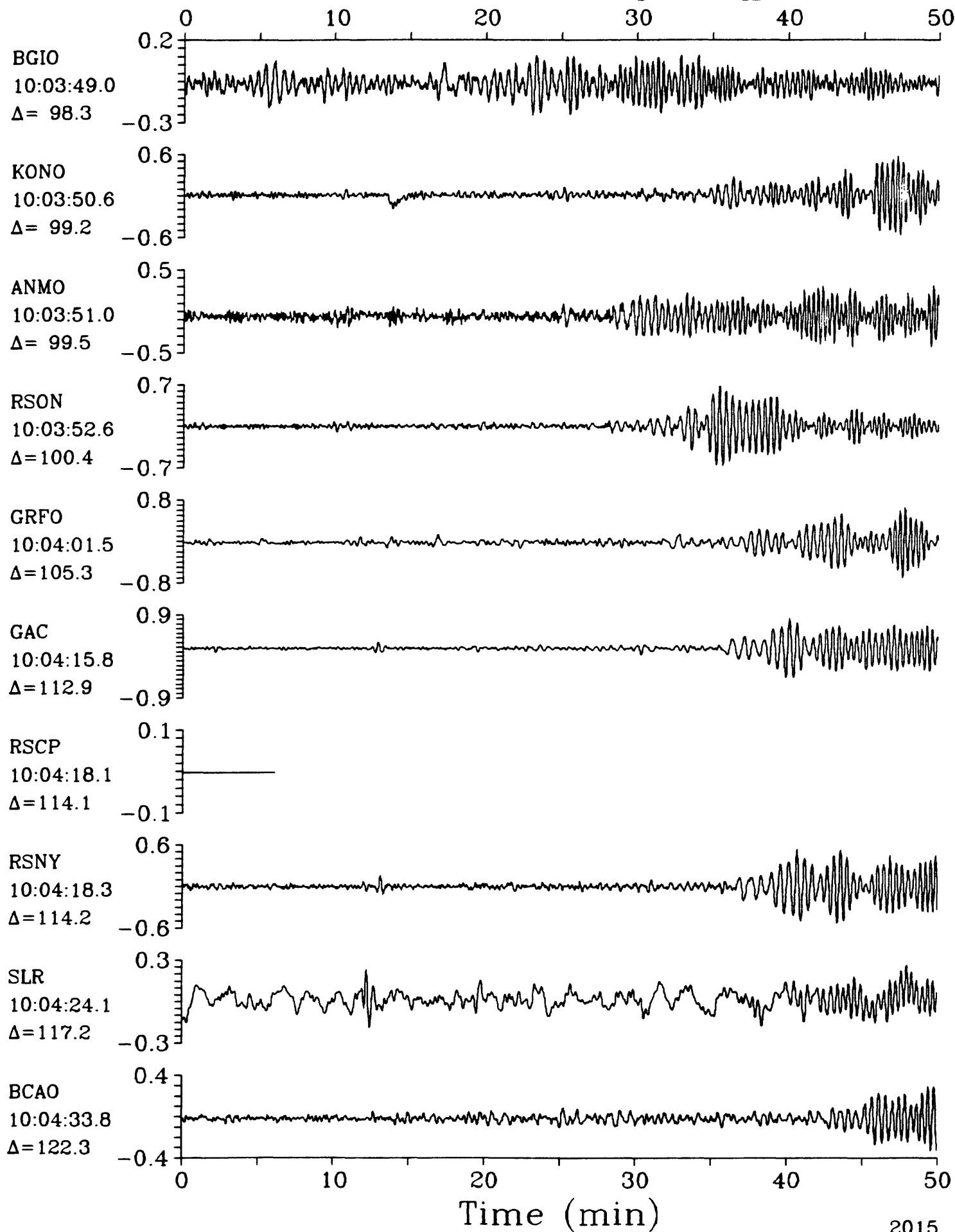
LPZ

South of Mariana Islands $h=45.3$ $m_b=5.7$ $M_{sz}=4.9$ 

LPZ

18 October 1986 09:46:43.08

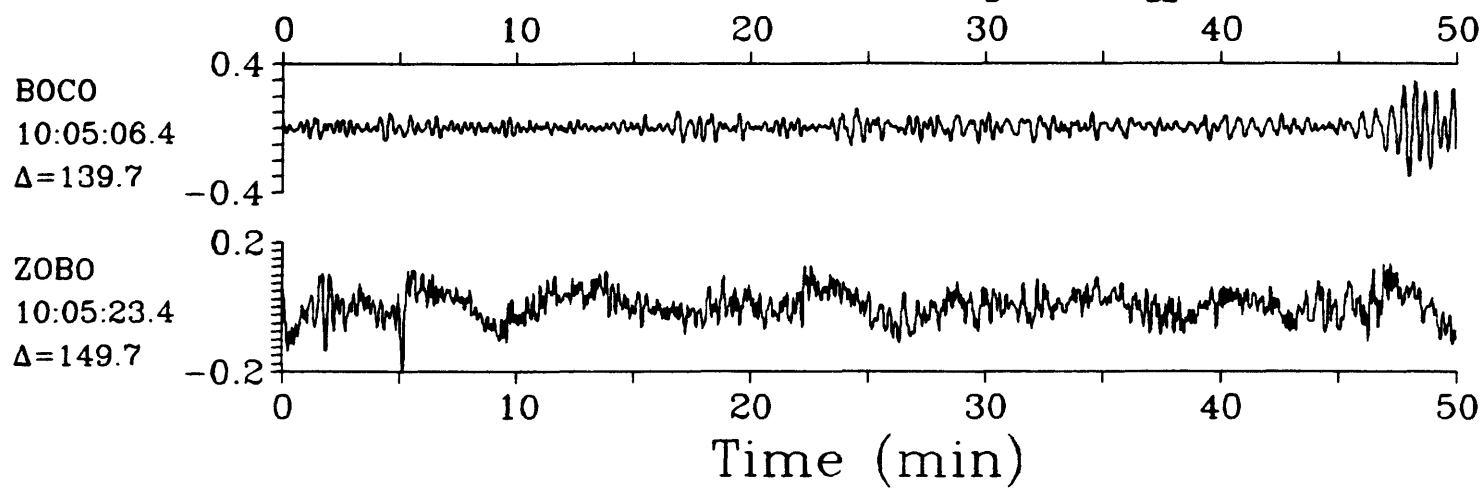
LPZ

South of Mariana Islands $h=45.3$ $m_b=5.7$ $M_{sz}=4.9$ 

LPZ

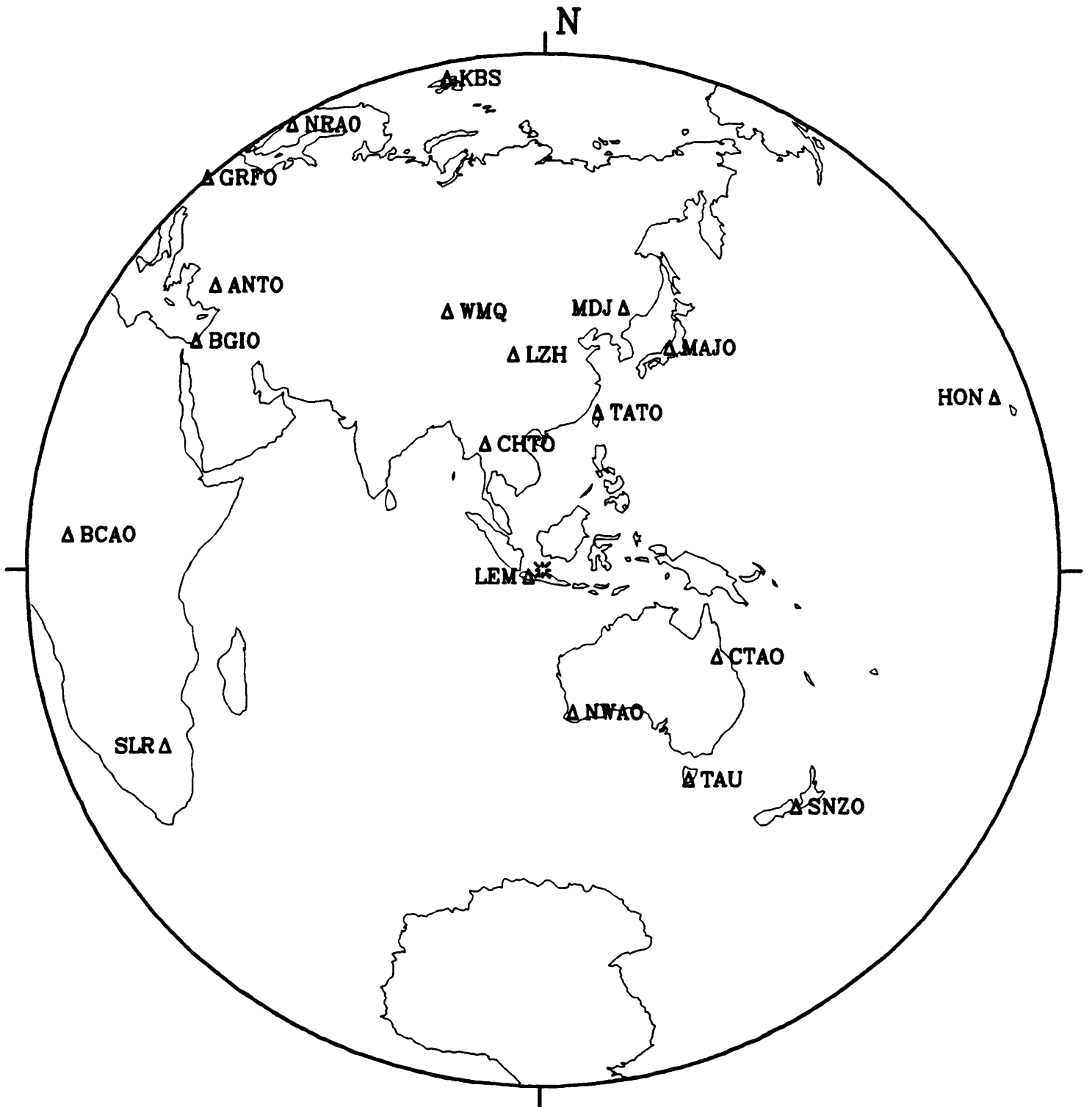
18 October 1986 09:46:43.08

LPZ

South of Mariana Islands $h=45.3$ $m_b=5.7$ $M_{sz}=4.9$ 

18 October 1986 22:09:31.16

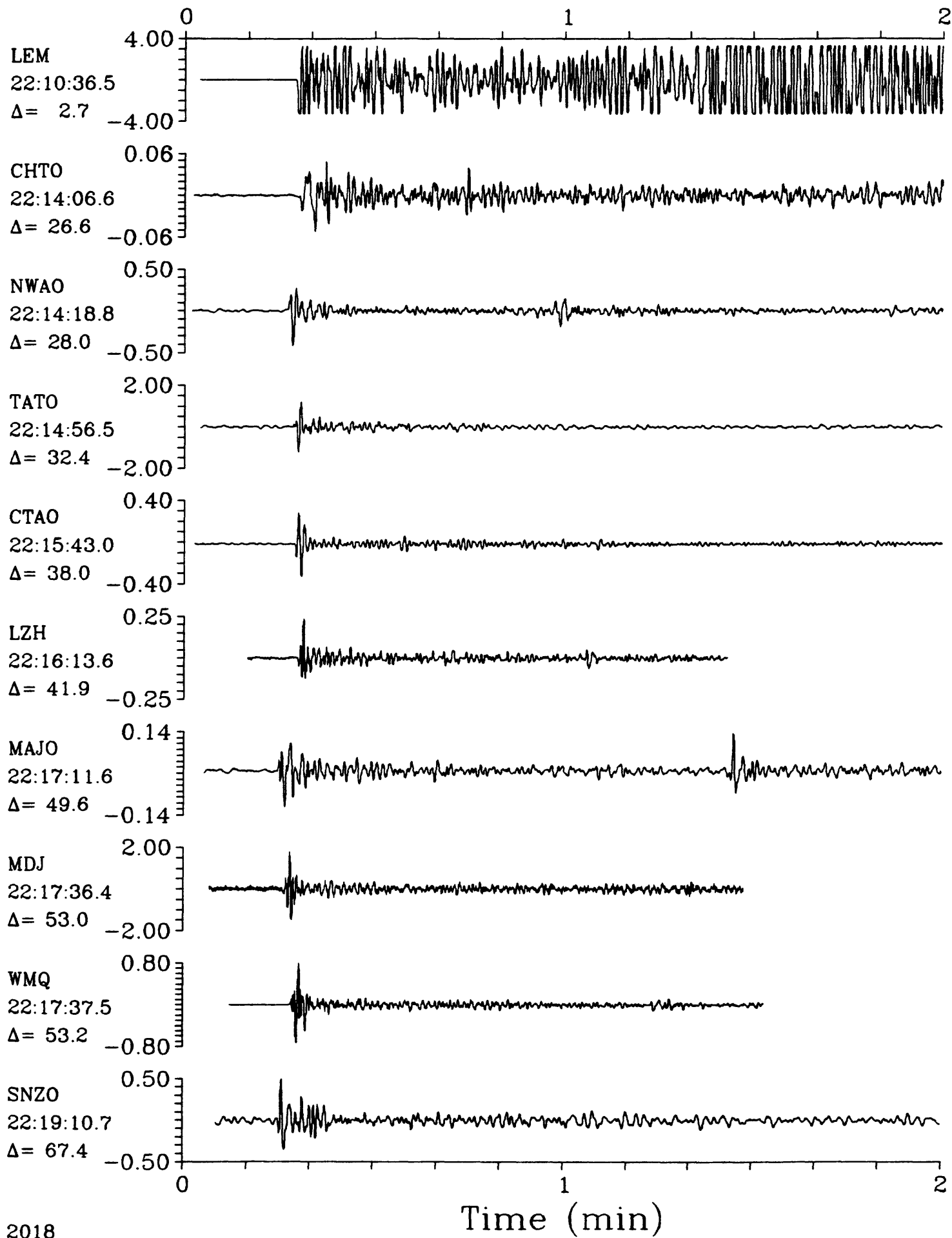
Java Sea



SPZ

18 October 1986 22:09:31.16

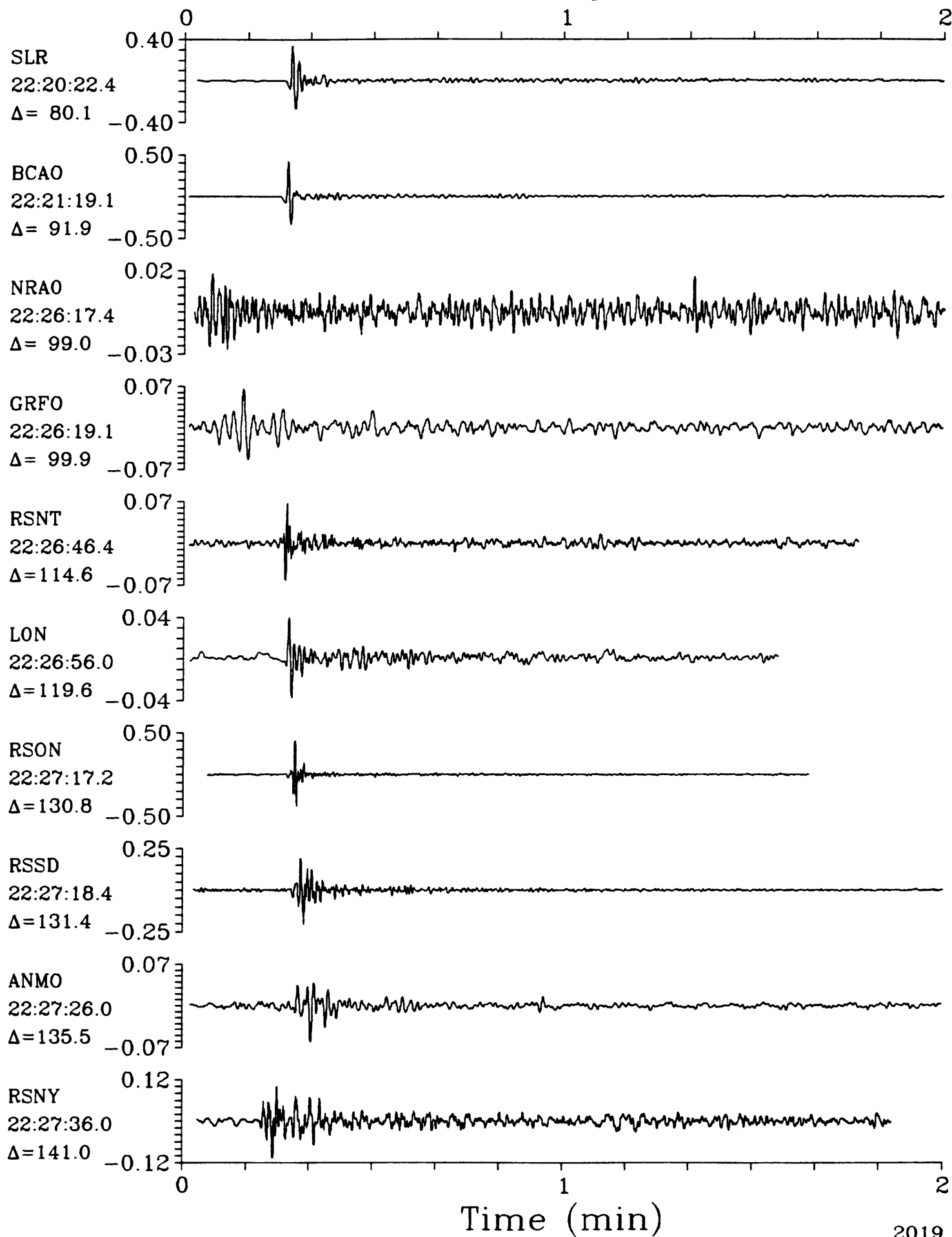
SPZ

Java Sea $h=634.1$ $m_b=5.7$ 

SPZ

18 October 1986 22:09:31.16

SPZ

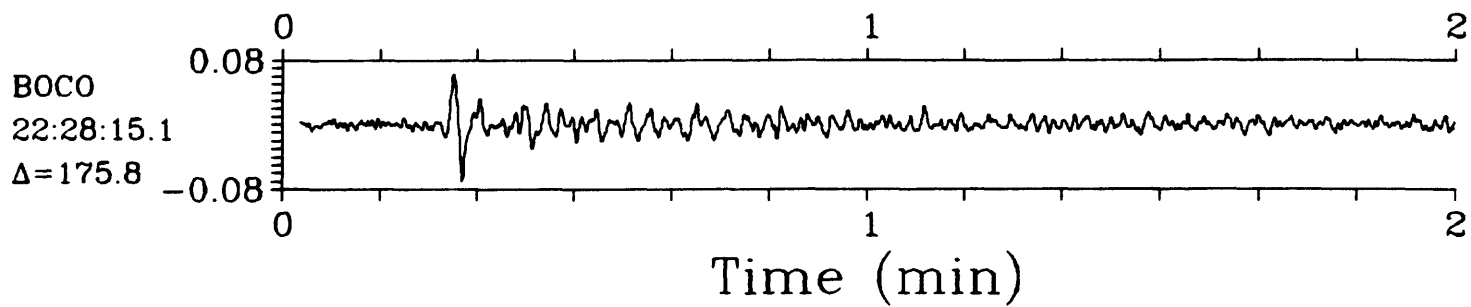
Java Sea $h=634.1$ $m_b=5.7$ 

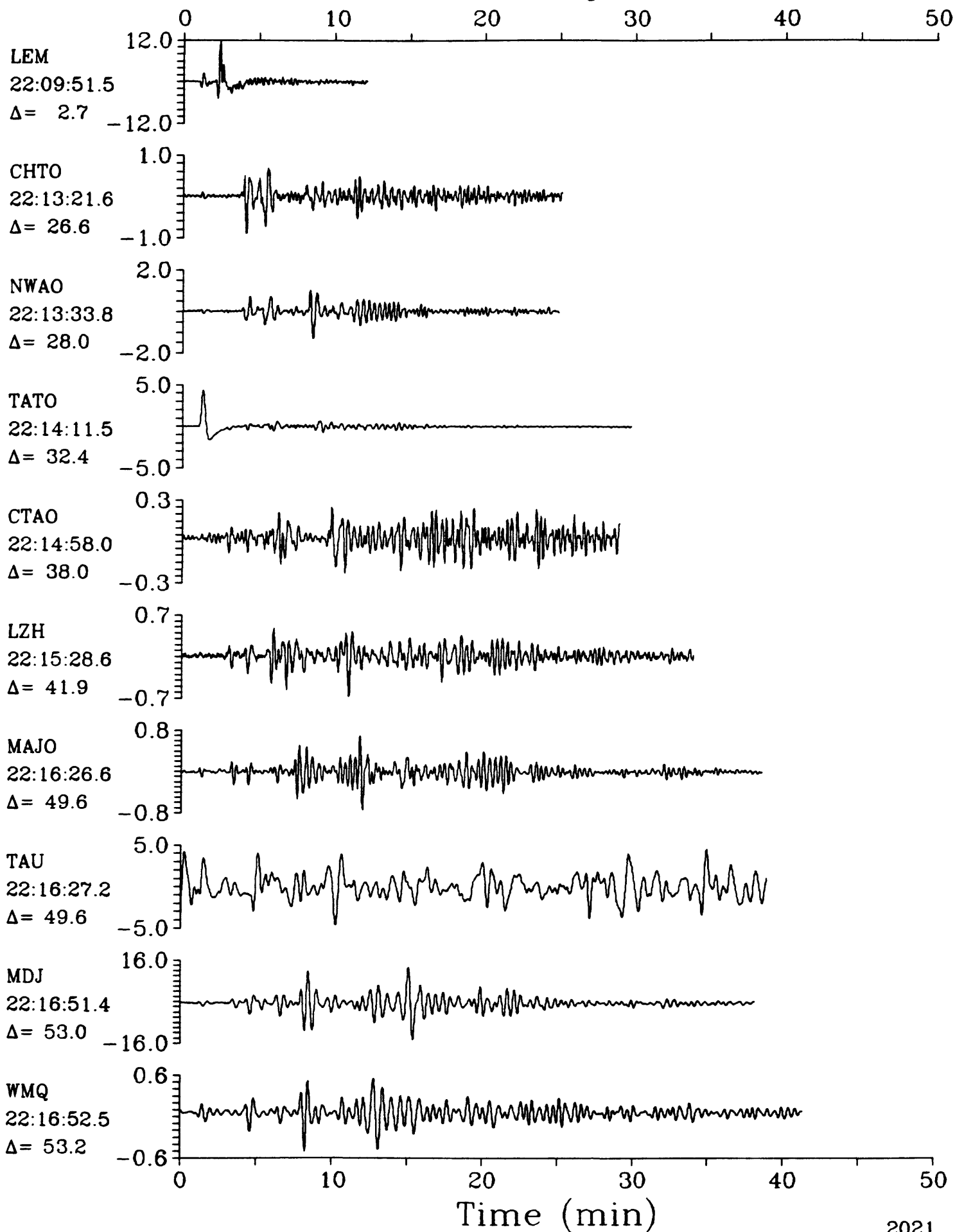
SPZ

18 October 1986 22:09:31.16

SPZ

Java Sea $h=634.1$ $m_b=5.7$

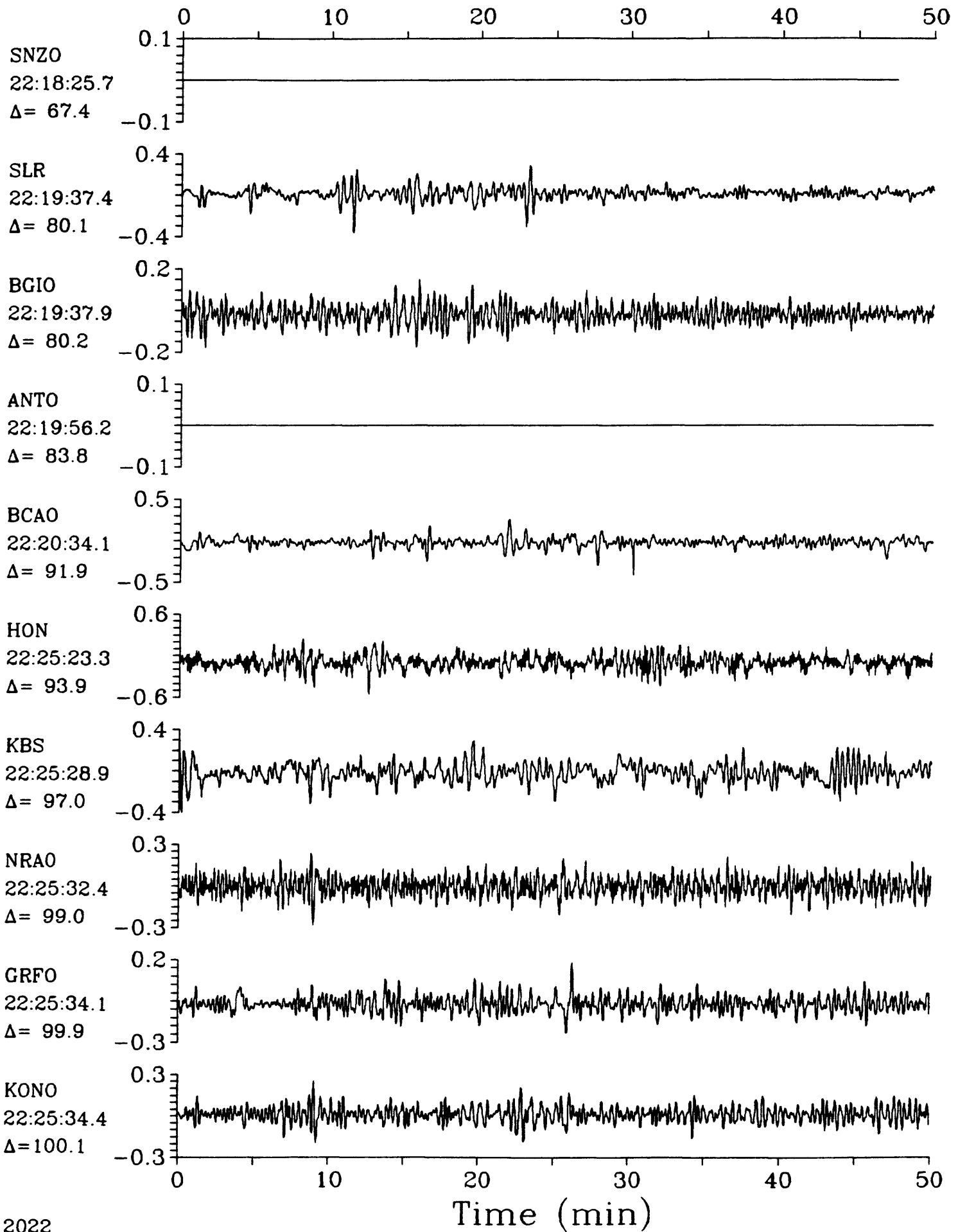


Java Sea $h=634.1$ $m_b=5.7$ 

LPZ

18 October 1986 22:09:31.16

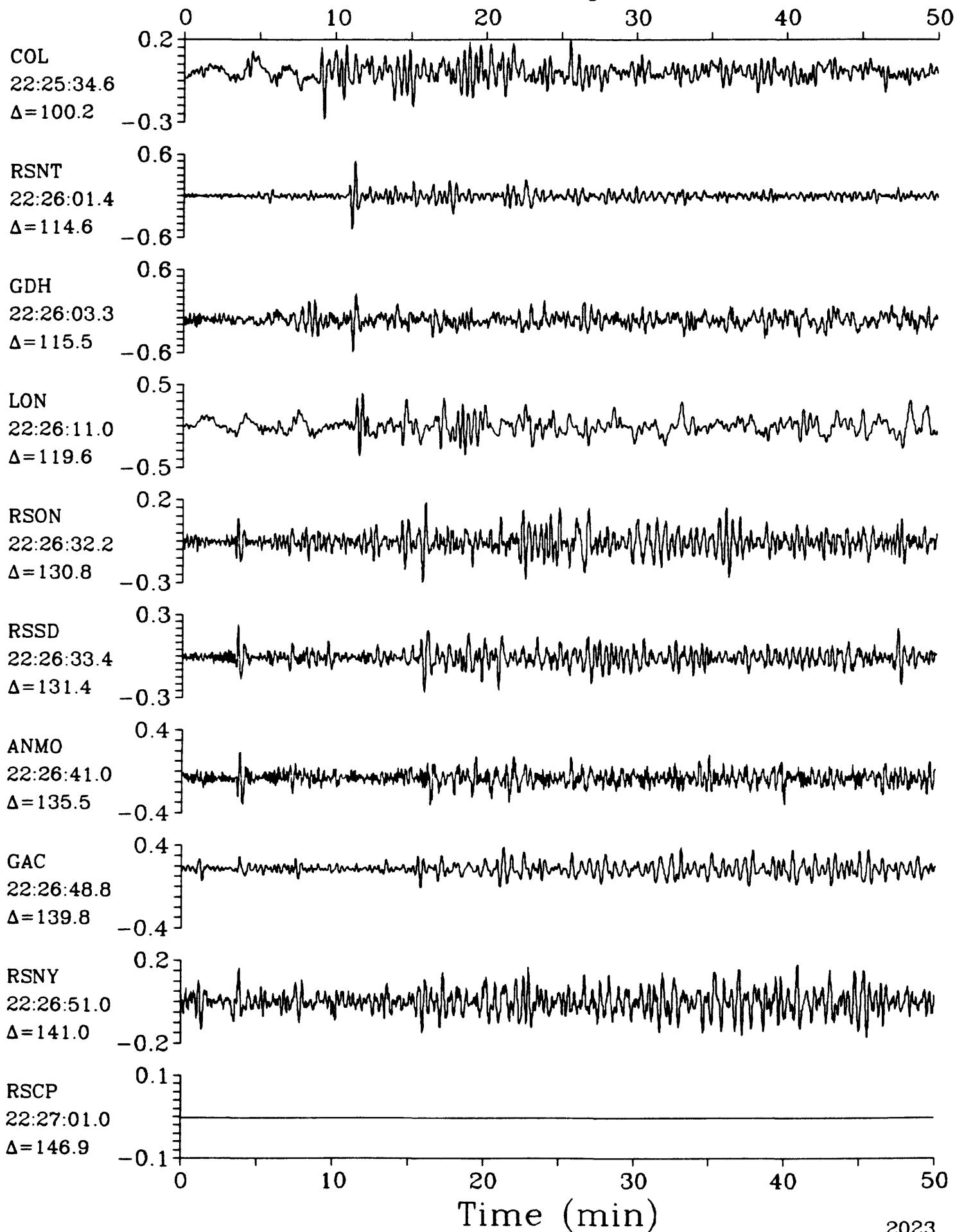
LPZ

Java Sea $h=634.1$ $m_b=5.7$ 

LPZ

18 October 1986 22:09:31.16

LPZ

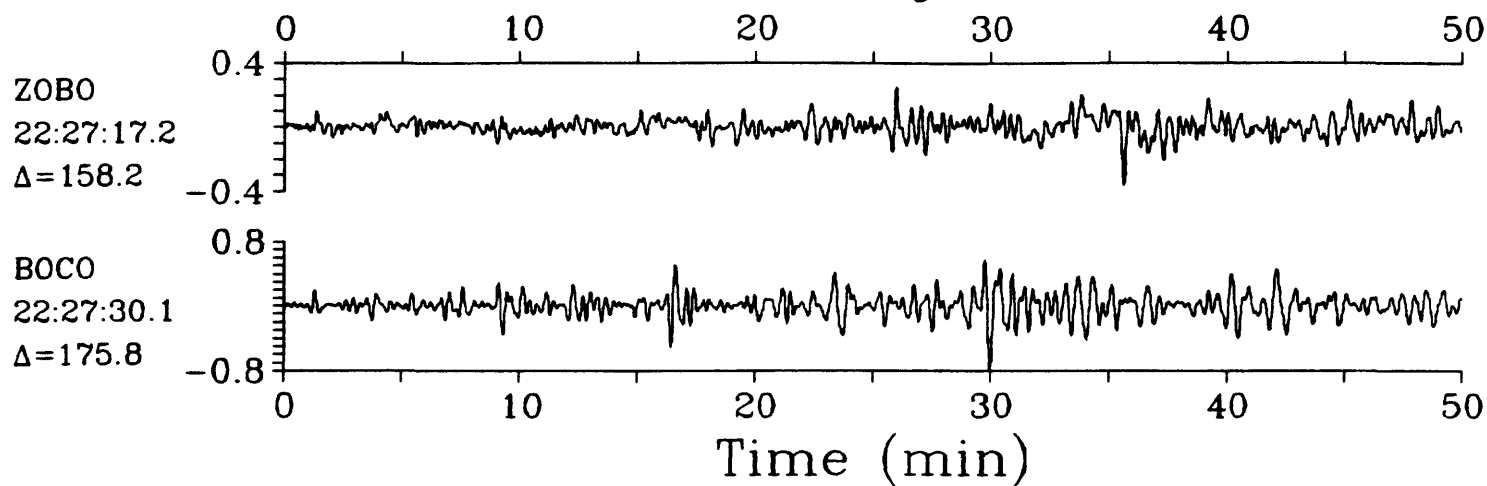
Java Sea $h=634.1$ $m_b=5.7$ 

LPZ

18 October 1986 22:09:31.16

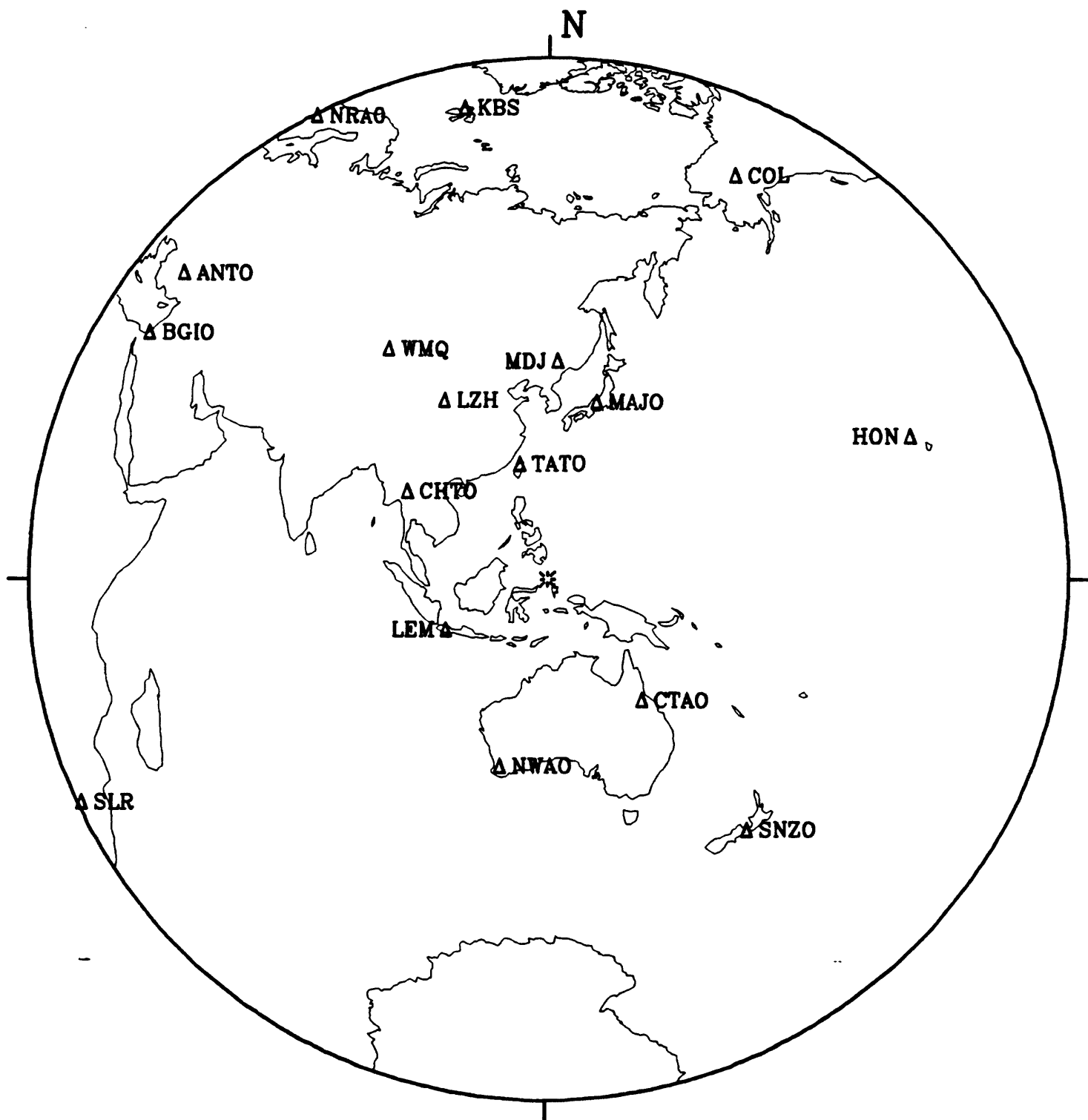
LPZ

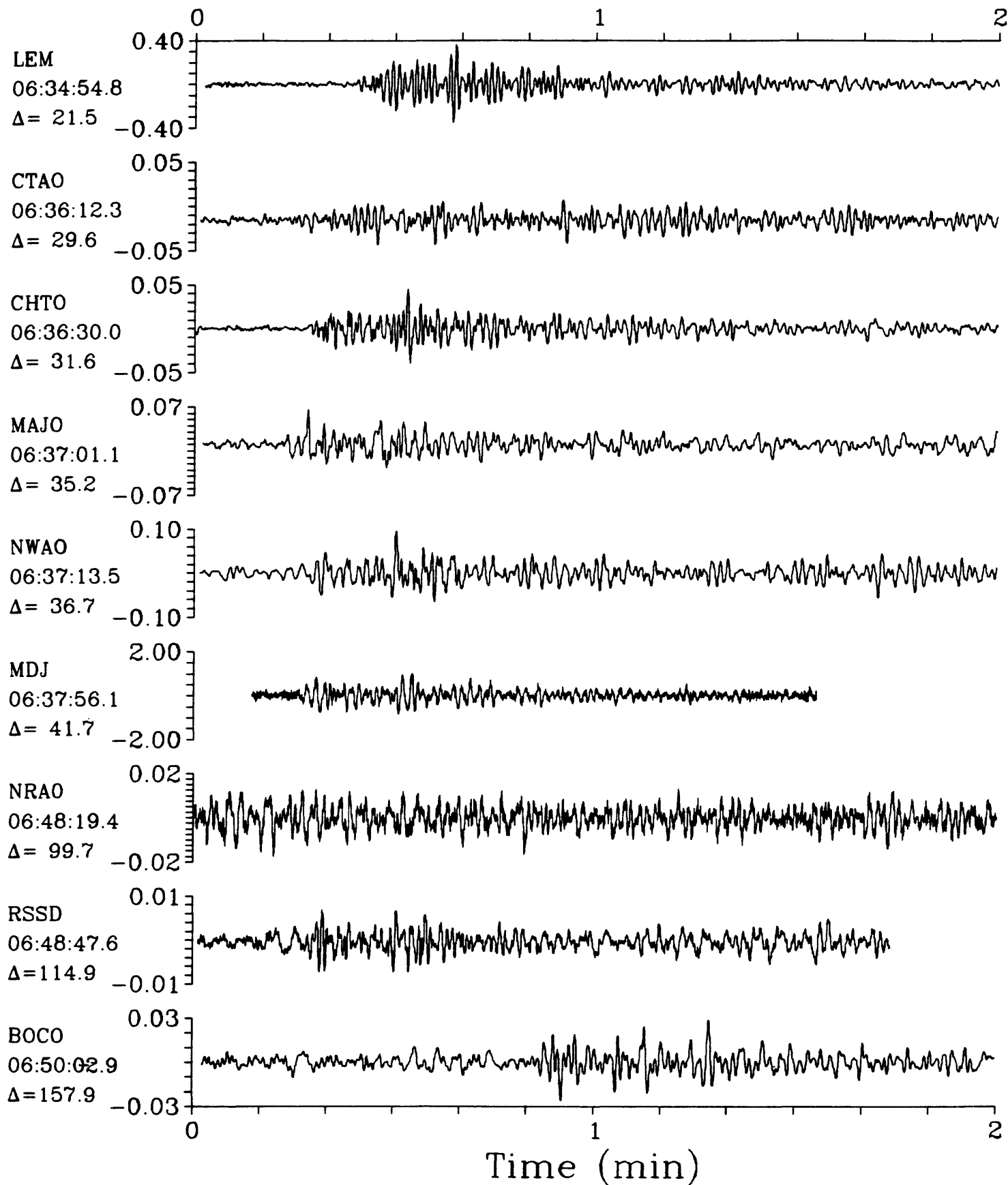
Java Sea $h=634.1$ $m_b=5.7$



20 October 1986 06:30:26.30

Molucca Passage

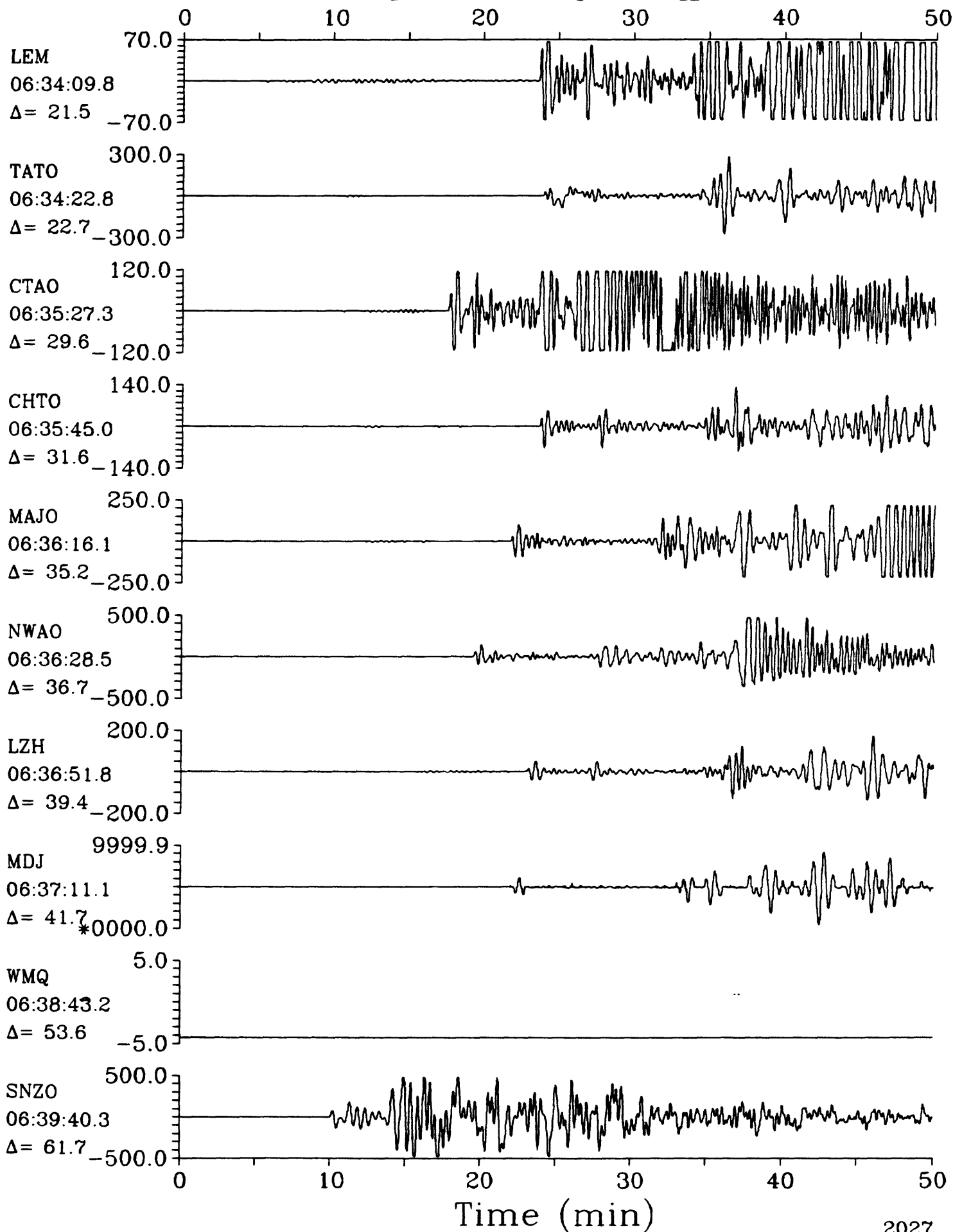


Molucca Passage $h=47.2$ $m_b=5.5$ $M_{sz}=5.1$ 

LPZ

20 October 1986 06:30:26.30

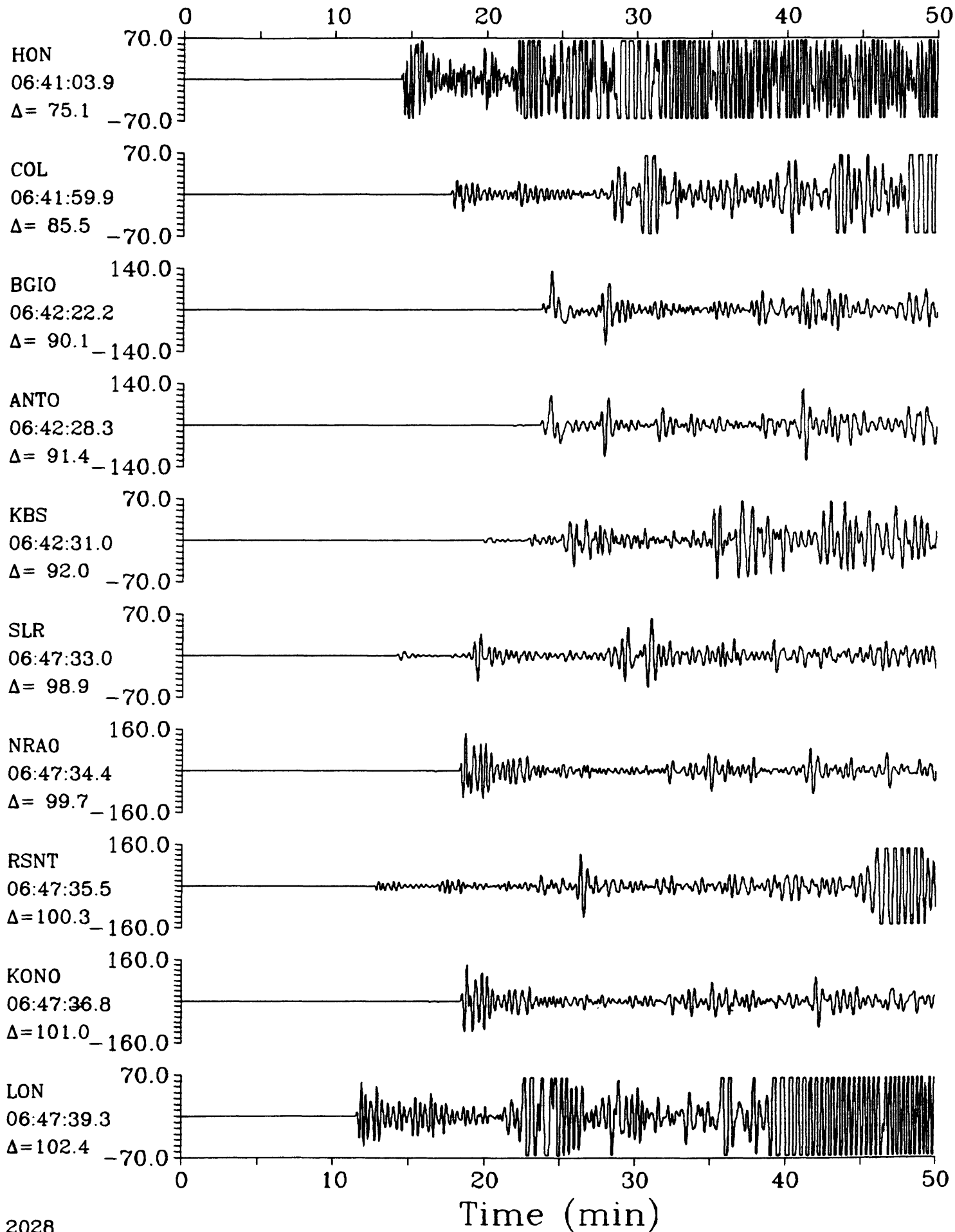
LPZ

Molucca Passage $h=47.2$ $m_b=5.5$ $M_{sz}=5.1$ 

LPZ

20 October 1986 06:30:26.30

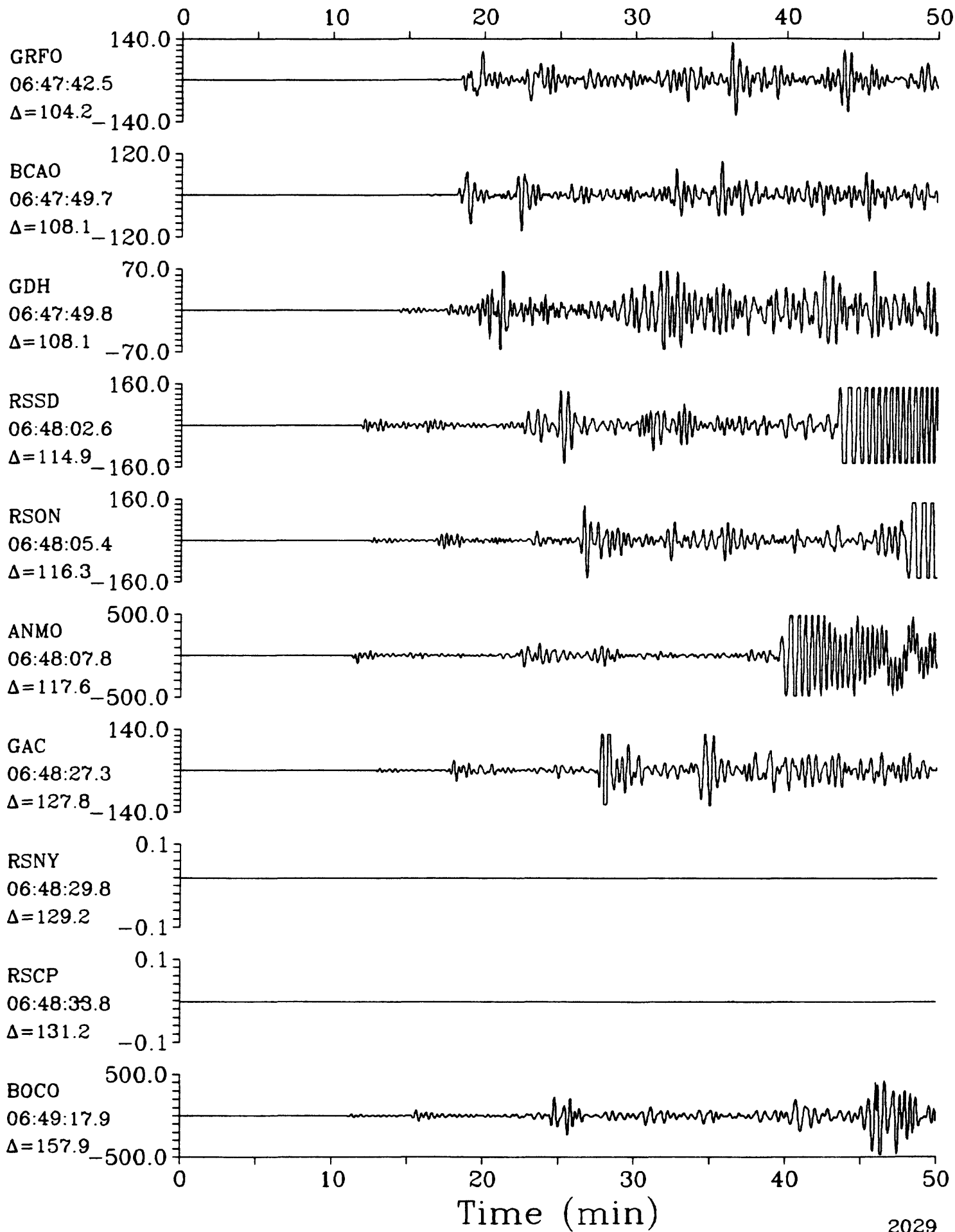
LPZ

Molucca Passage $h=47.2$ $m_b=5.5$ $M_{sz}=5.1$ 

LPZ

20 October 1986 06:30:26.30
Molucca Passage $h=47.2$ $m_b=5.5$ $M_{sz}=5.1$

LPZ

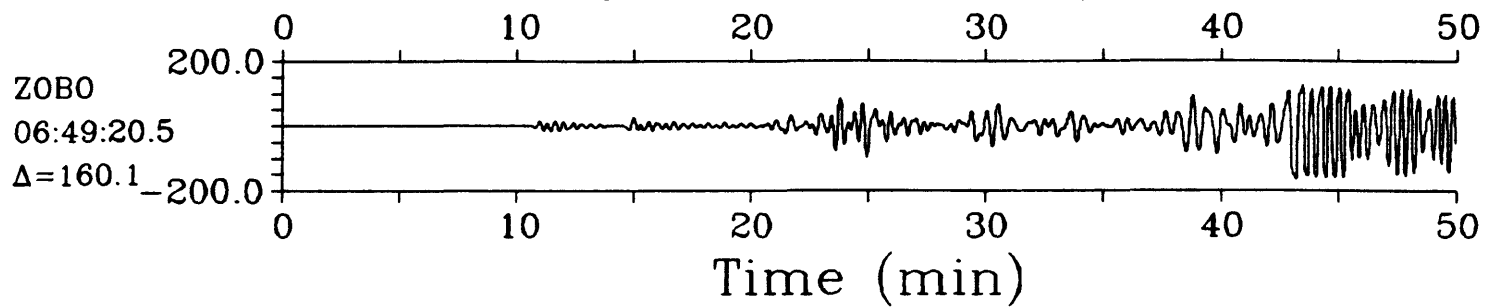


LPZ

20 October 1986 06:30:26.30

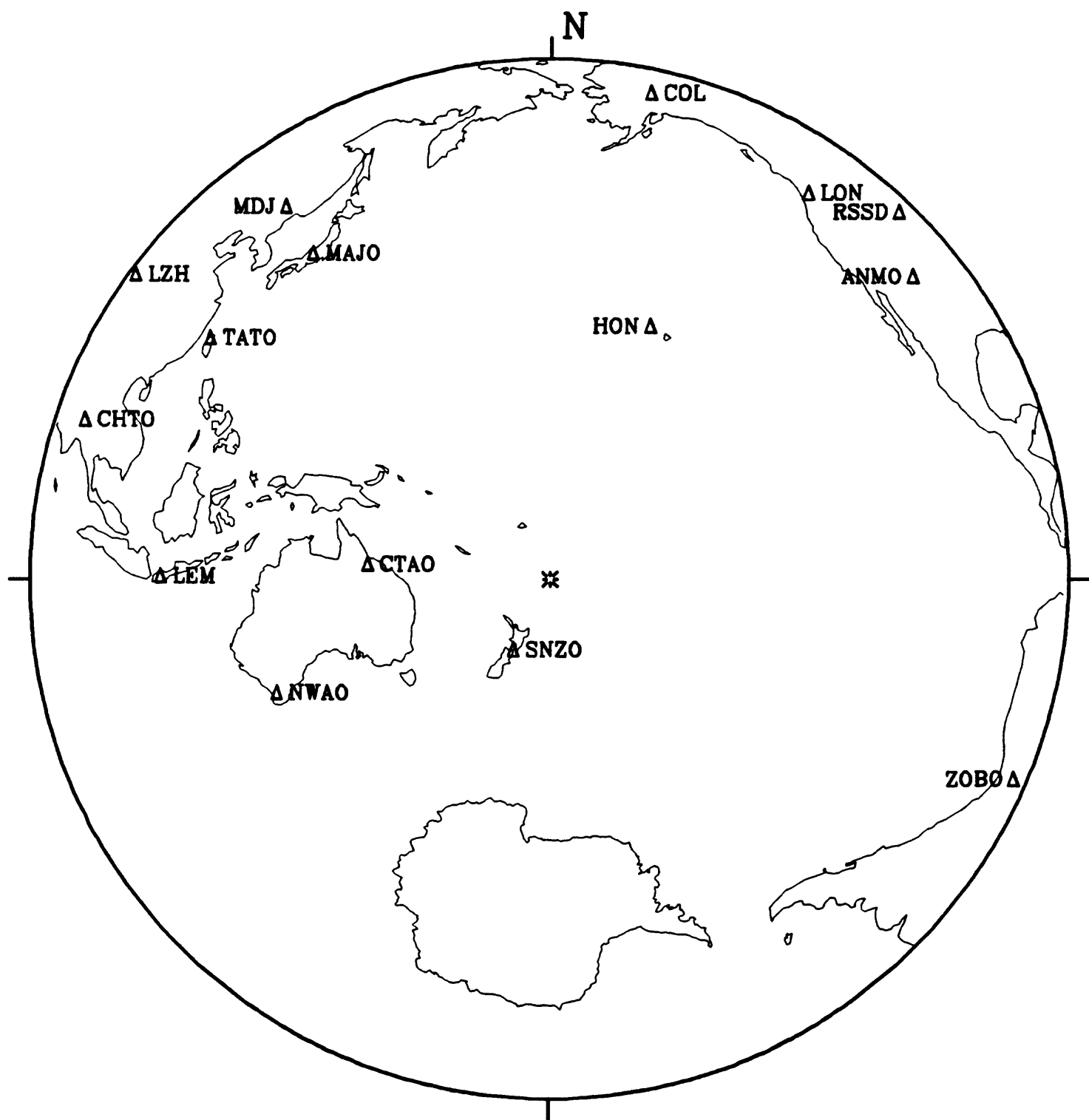
LPZ

Molucca Passage $h=47.2$ $m_b=5.5$ $M_{sz}=5.1$



20 October 1986 06:46:10.44

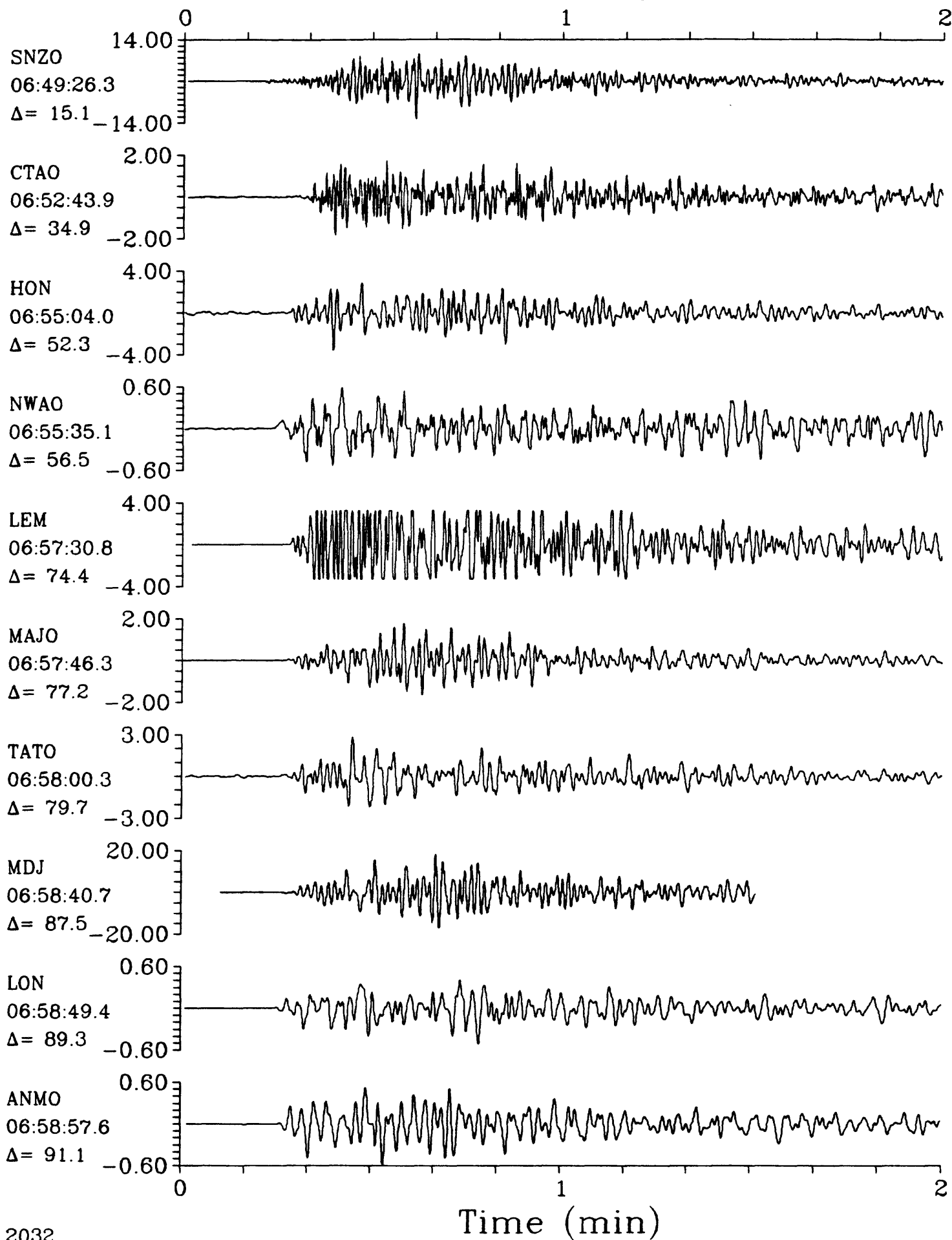
Kermadec Islands Region



SPZ

20 October 1986 06:46:10.44

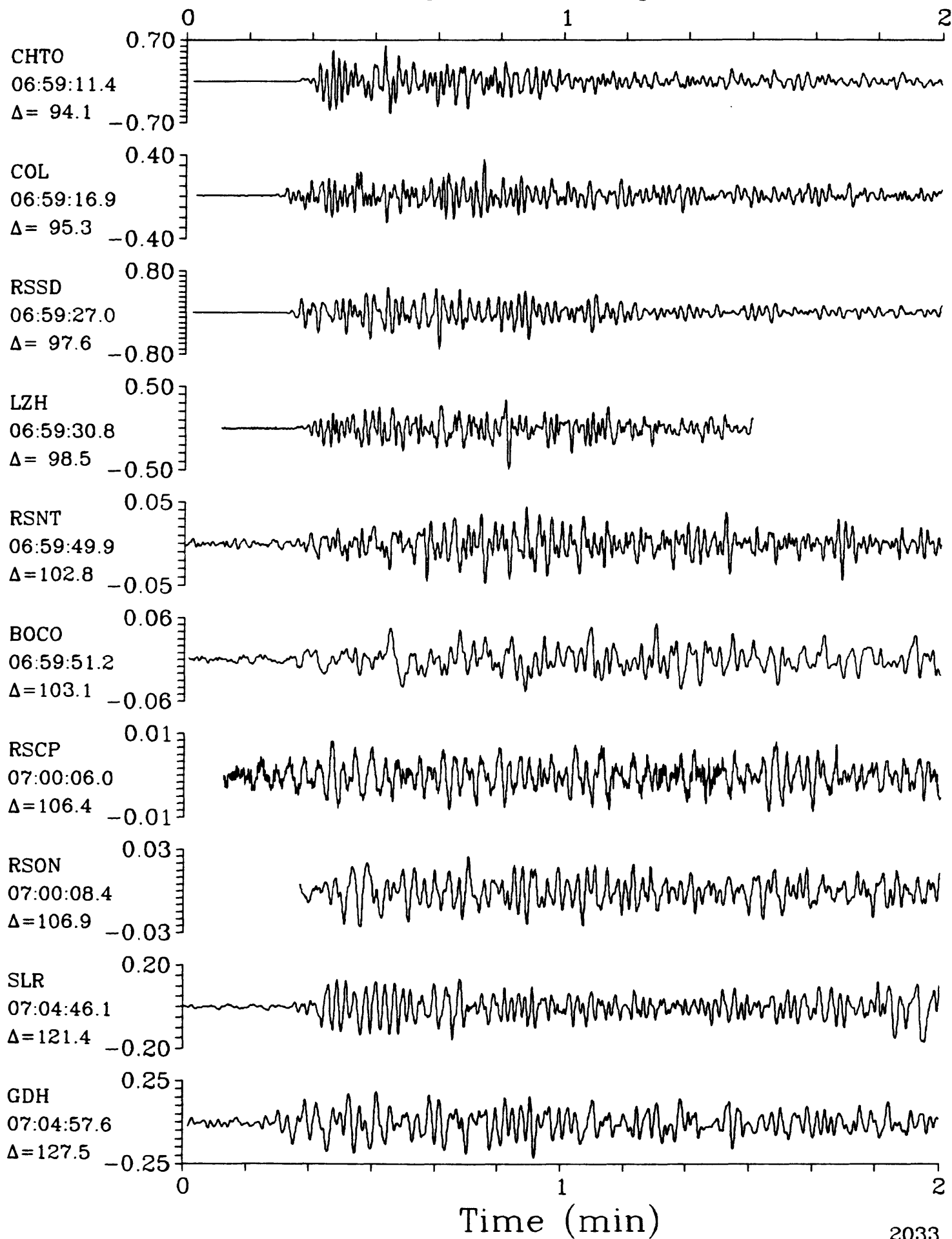
SPZ

Kermadec Islands Region $h=33.0$ $m_b=6.6$ $M_{sz}=8.2$ 

SPZ

20 October 1986 06:46:10.44

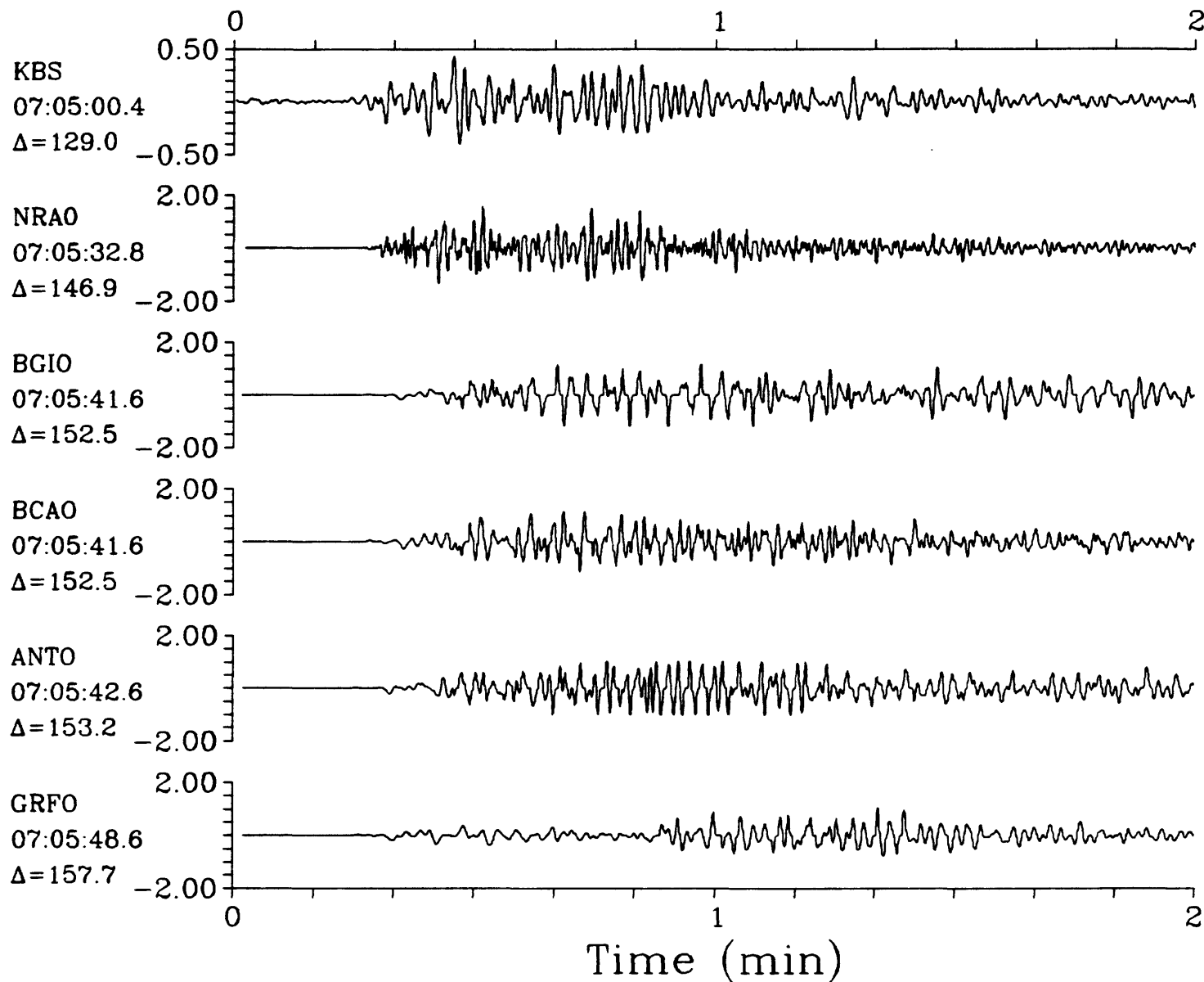
SPZ

Kermadec Islands Region $h=33.0$ $m_b=6.6$ $M_{sz}=8.2$ 

SPZ

20 October 1986 06:46:10.44

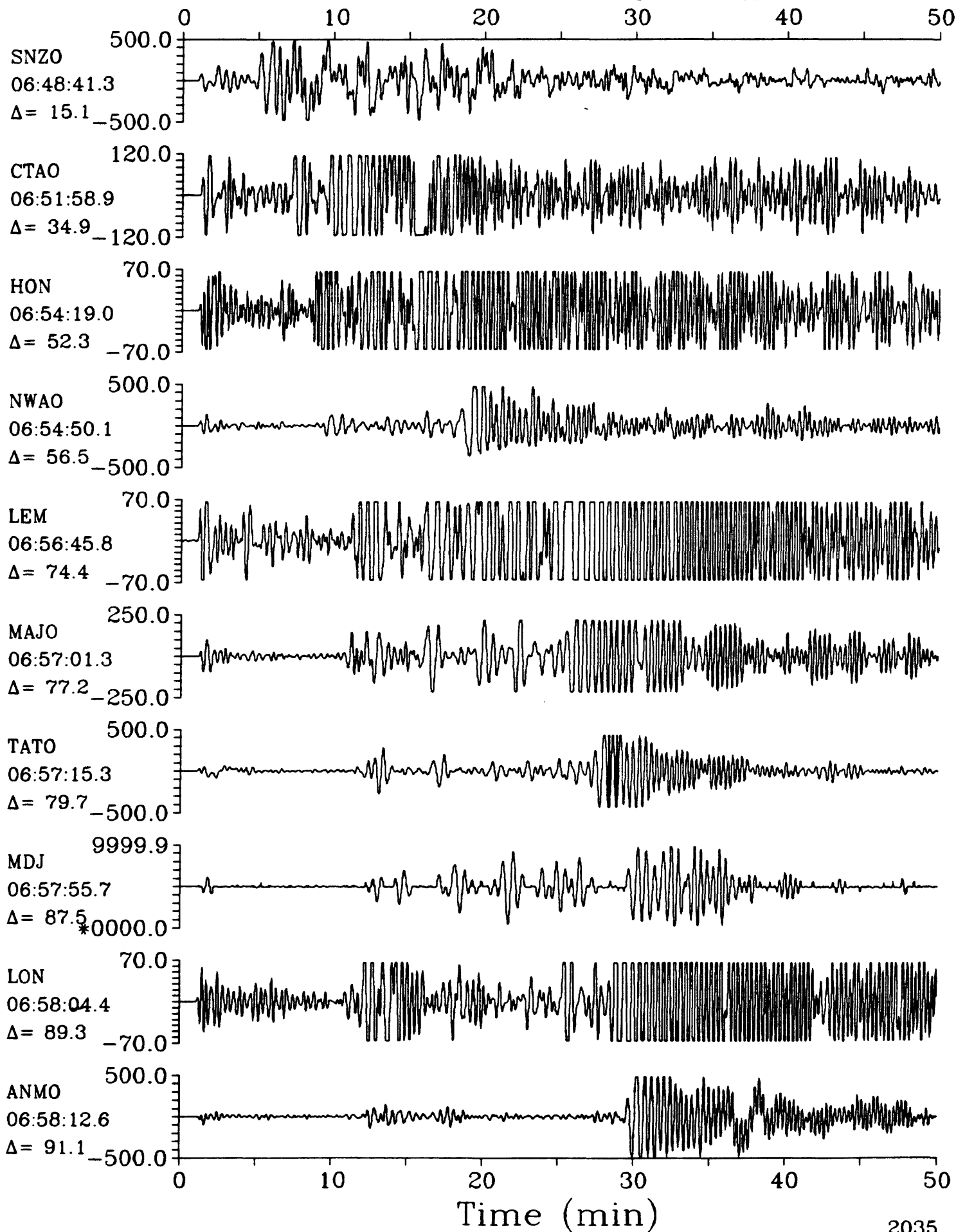
SPZ

Kermadec Islands Region $h=33.0$ $m_b=6.6$ $M_{sz}=8.2$ 

LPZ

20 October 1986 06:46:10.44

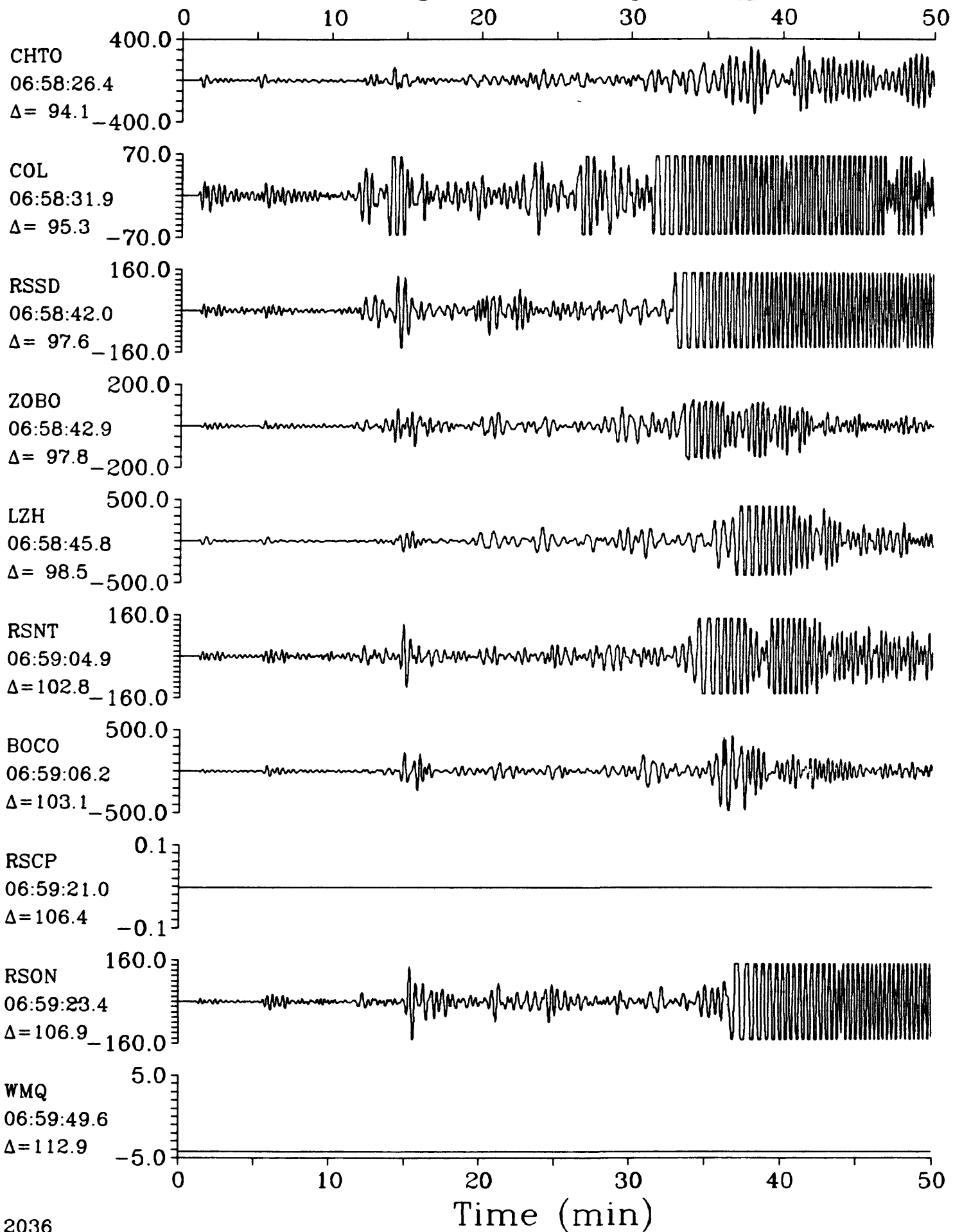
LPZ

Kermadec Islands Region $h=33.0$ $m_b=6.6$ $M_{sz}=8.2$ 

LPZ

20 October 1986 06:46:10.44

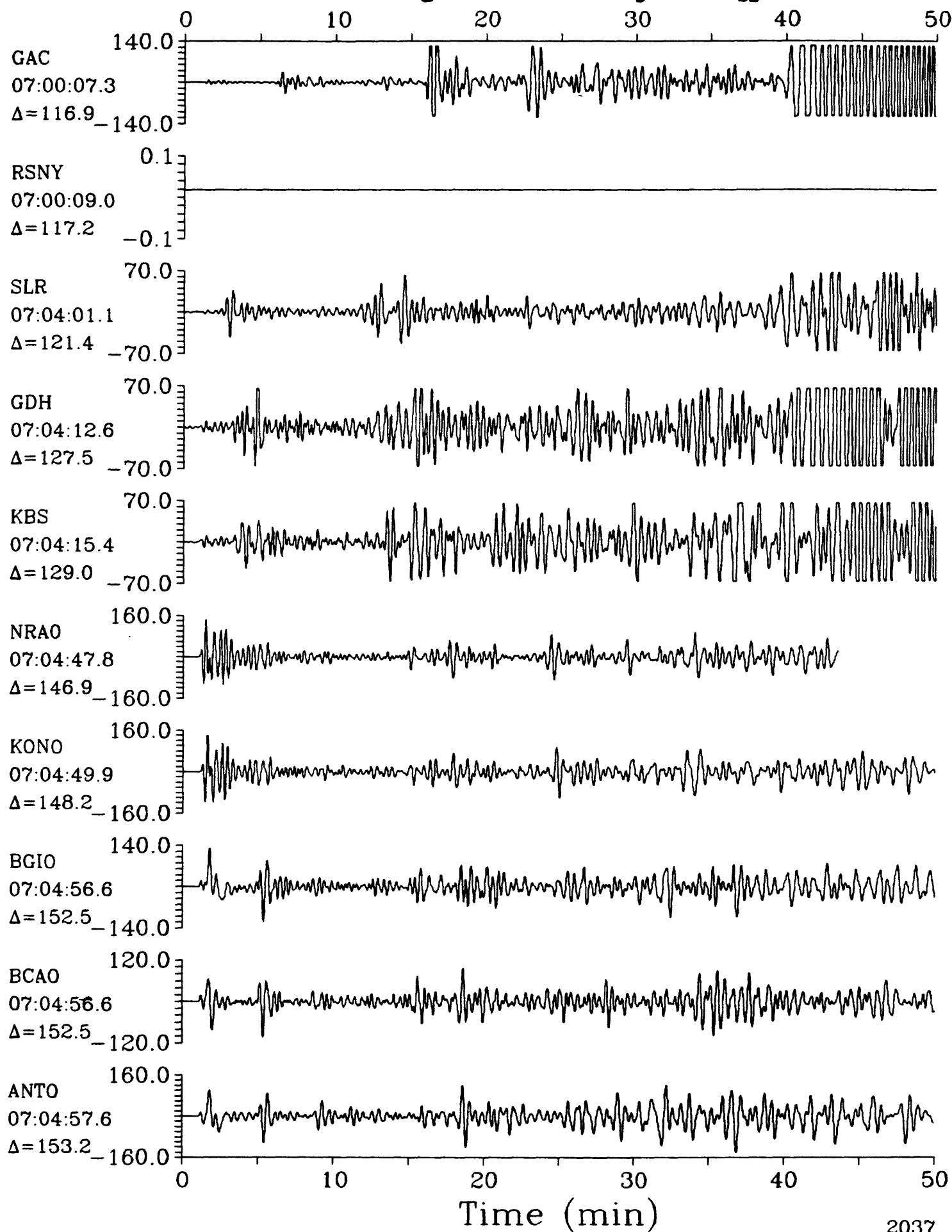
LPZ

Kermadec Islands Region $h=33.0$ $m_b=6.6$ $M_{SZ}=8.2$ 

LPZ

20 October 1986 06:46:10.44

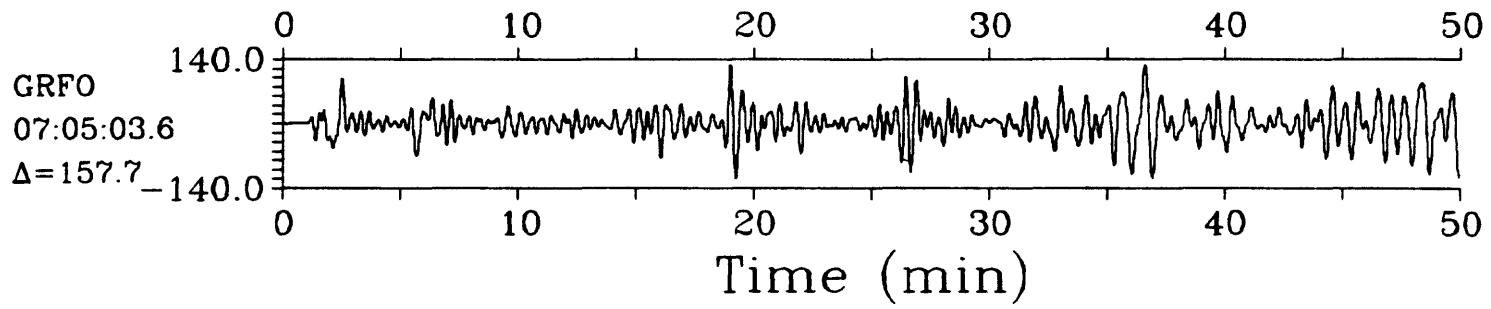
LPZ

Kermadec Islands Region $h=33.0$ $m_b=6.6$ $M_{sz}=8.2$ 

LPZ

20 October 1986 06:46:10.44

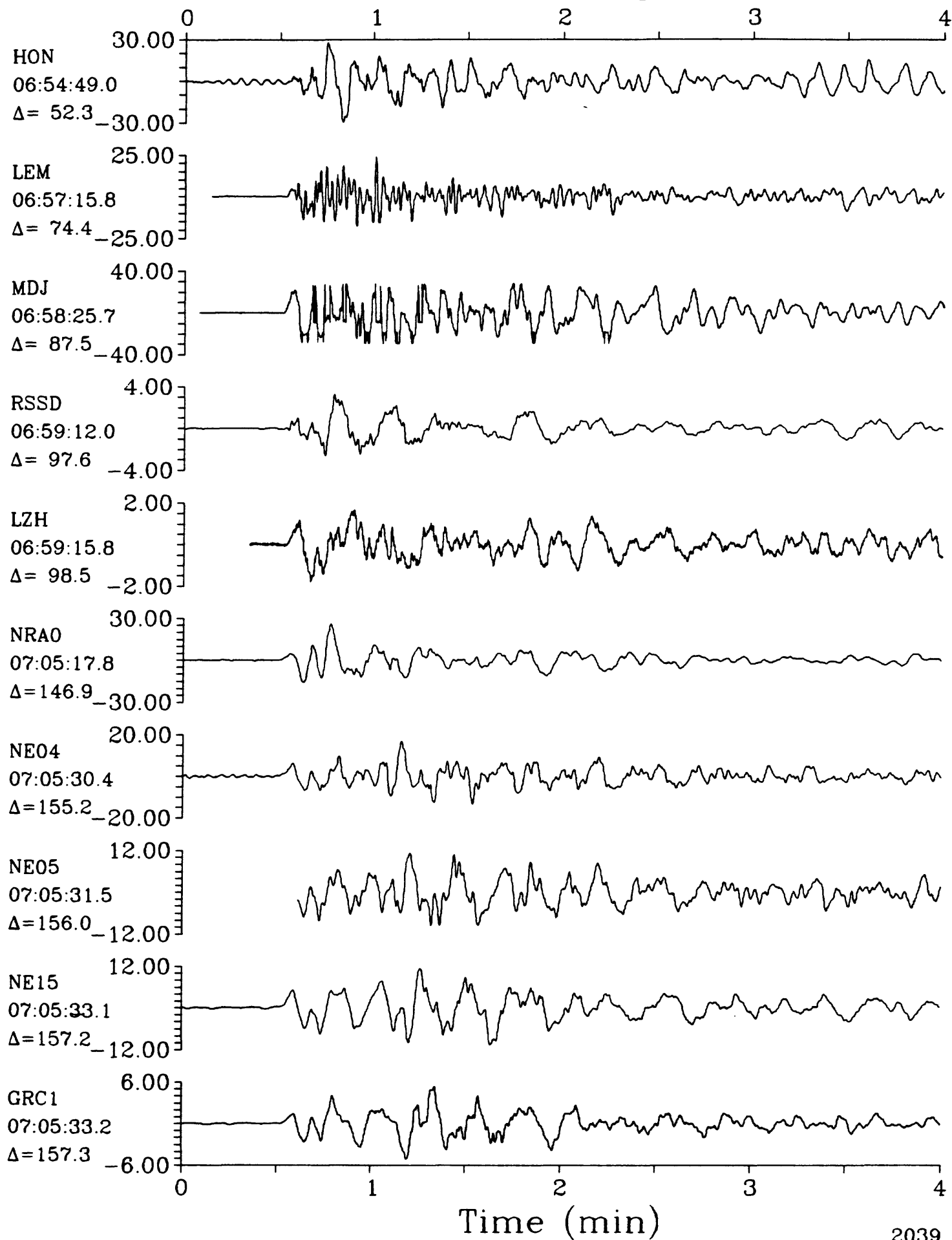
LPZ

Kermadec Islands Region $h=33.0$ $m_b=6.6$ $M_{sz}=8.2$ 

IPZ

20 October 1986 06:46:10.44

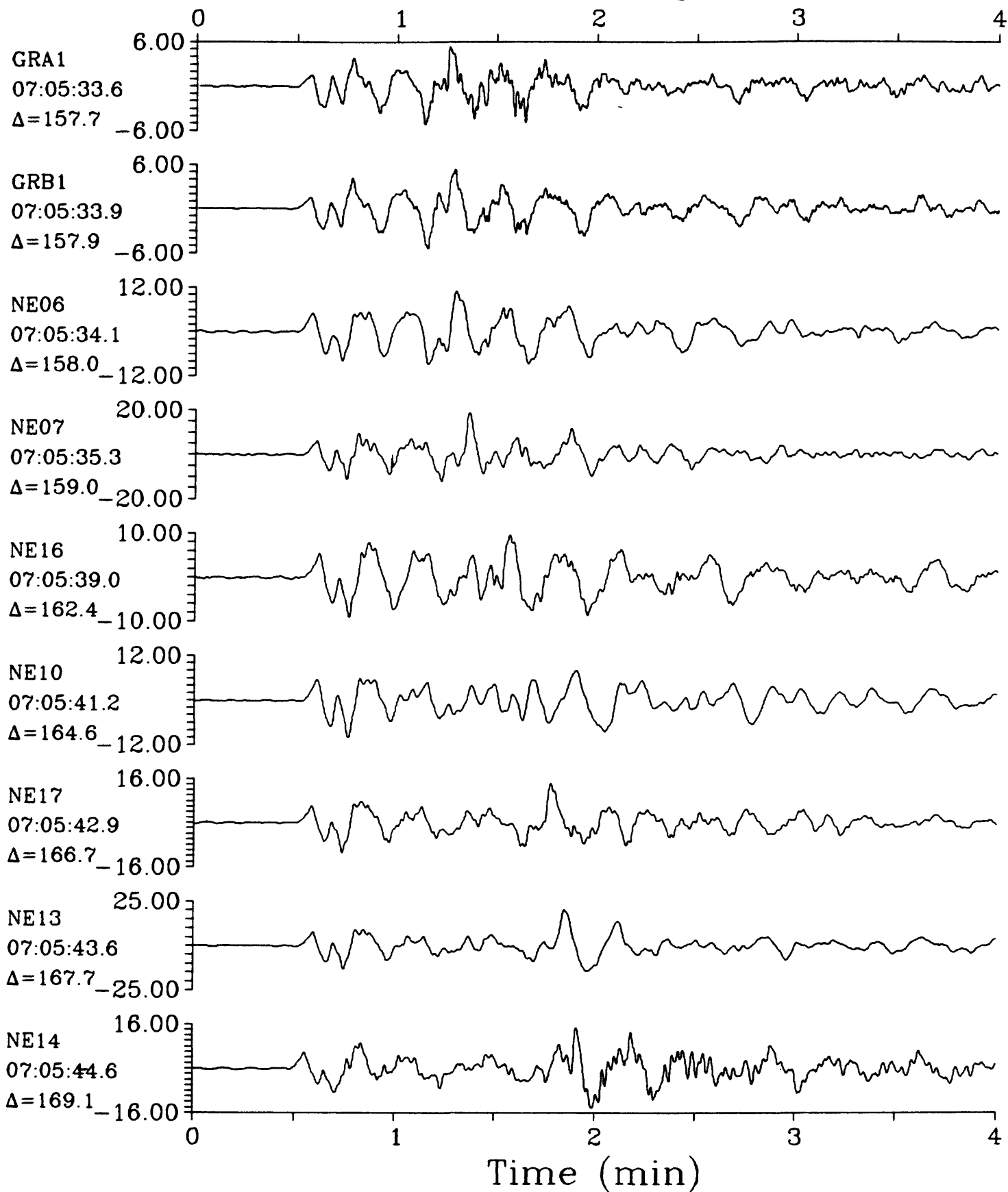
IPZ

Kermadec Islands Region $h=33.0$ $m_b=6.6$ $M_{SZ}=8.2$ 

IPZ

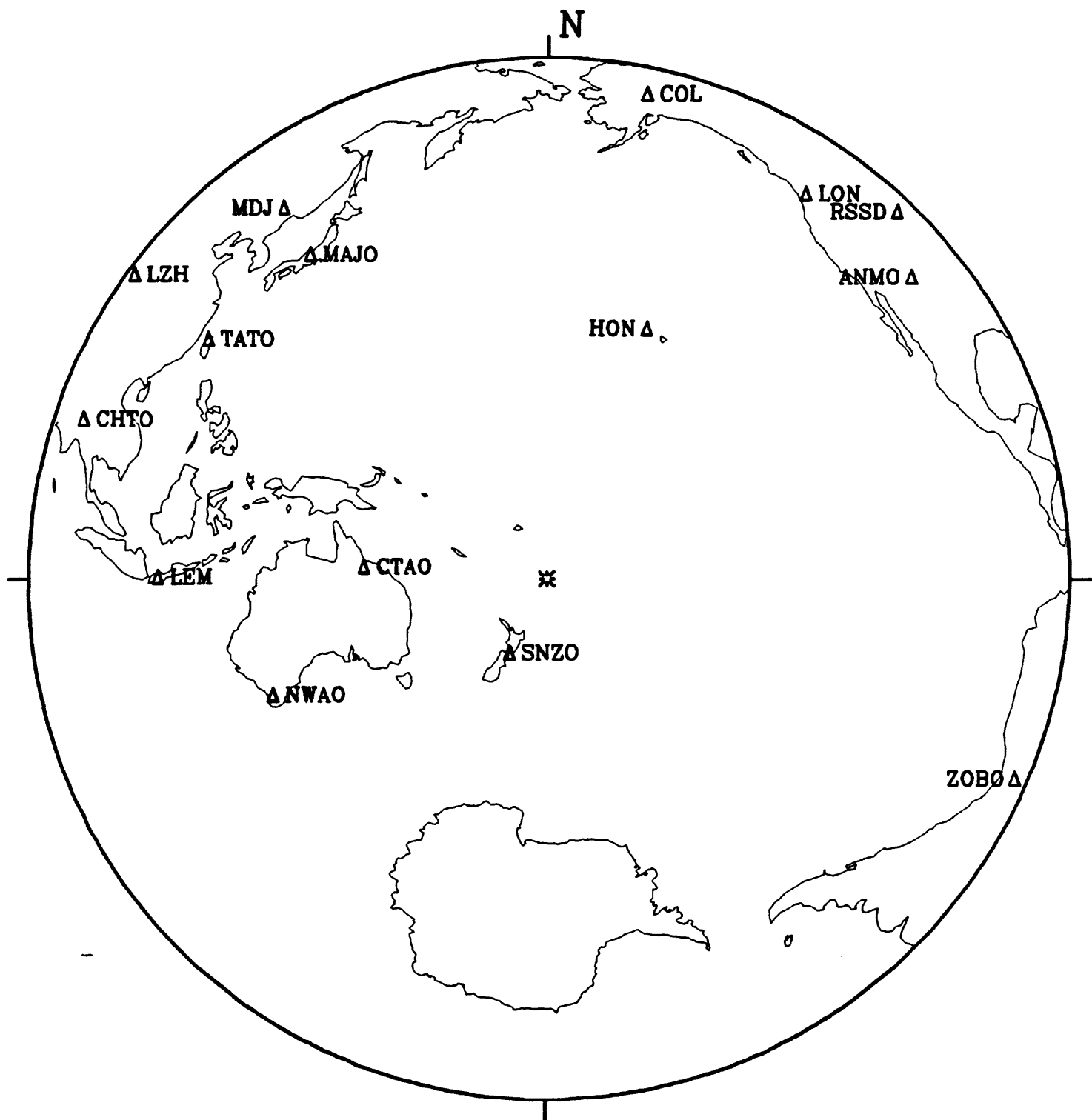
20 October 1986 06:46:10.44

IPZ

Kermadec Islands Region $h=33.0$ $m_b=6.6$ $M_{sz}=8.2$ 

20 October 1986 12:01:42.25

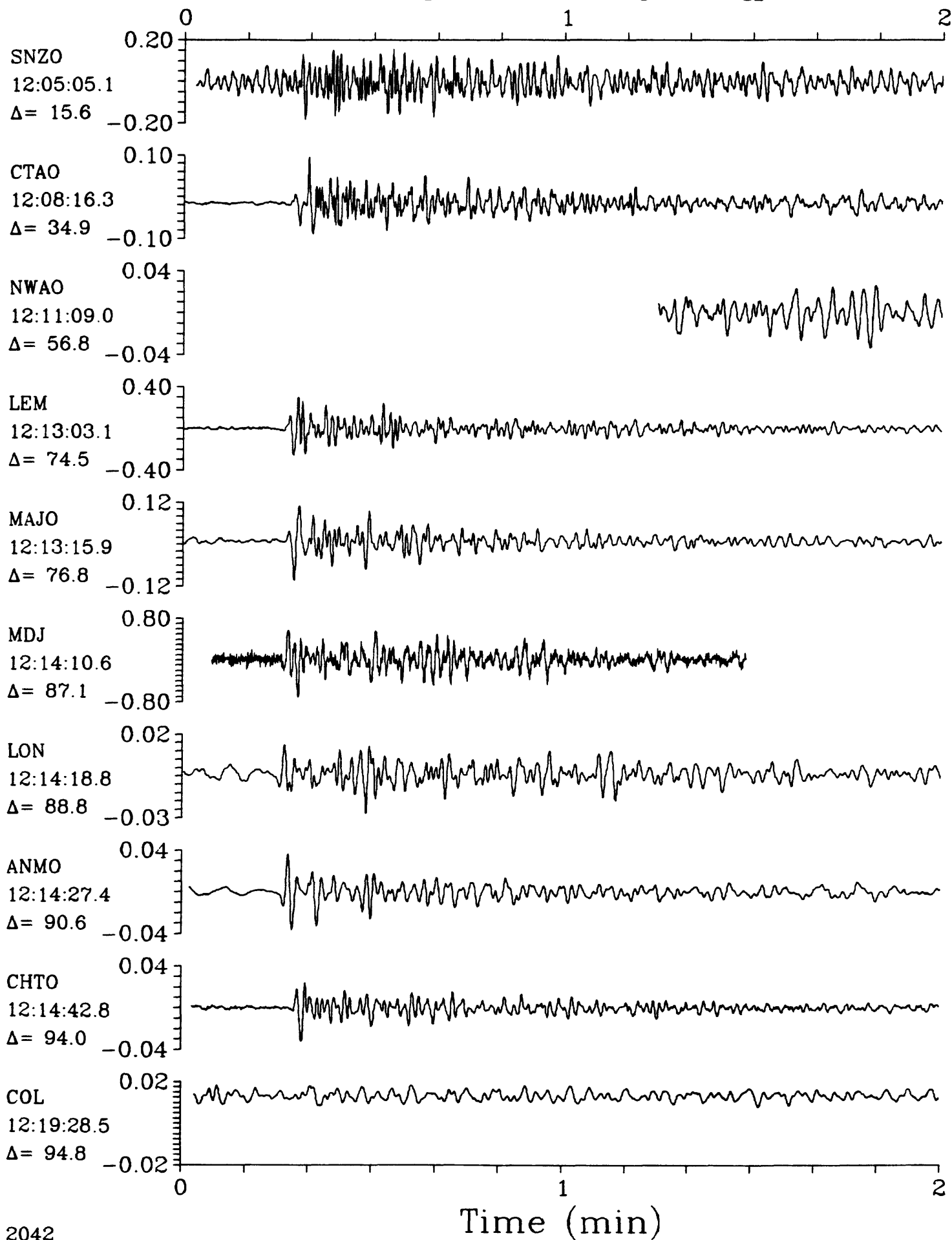
Kermadec Islands Region



SPZ

20 October 1986 12:01:42.25

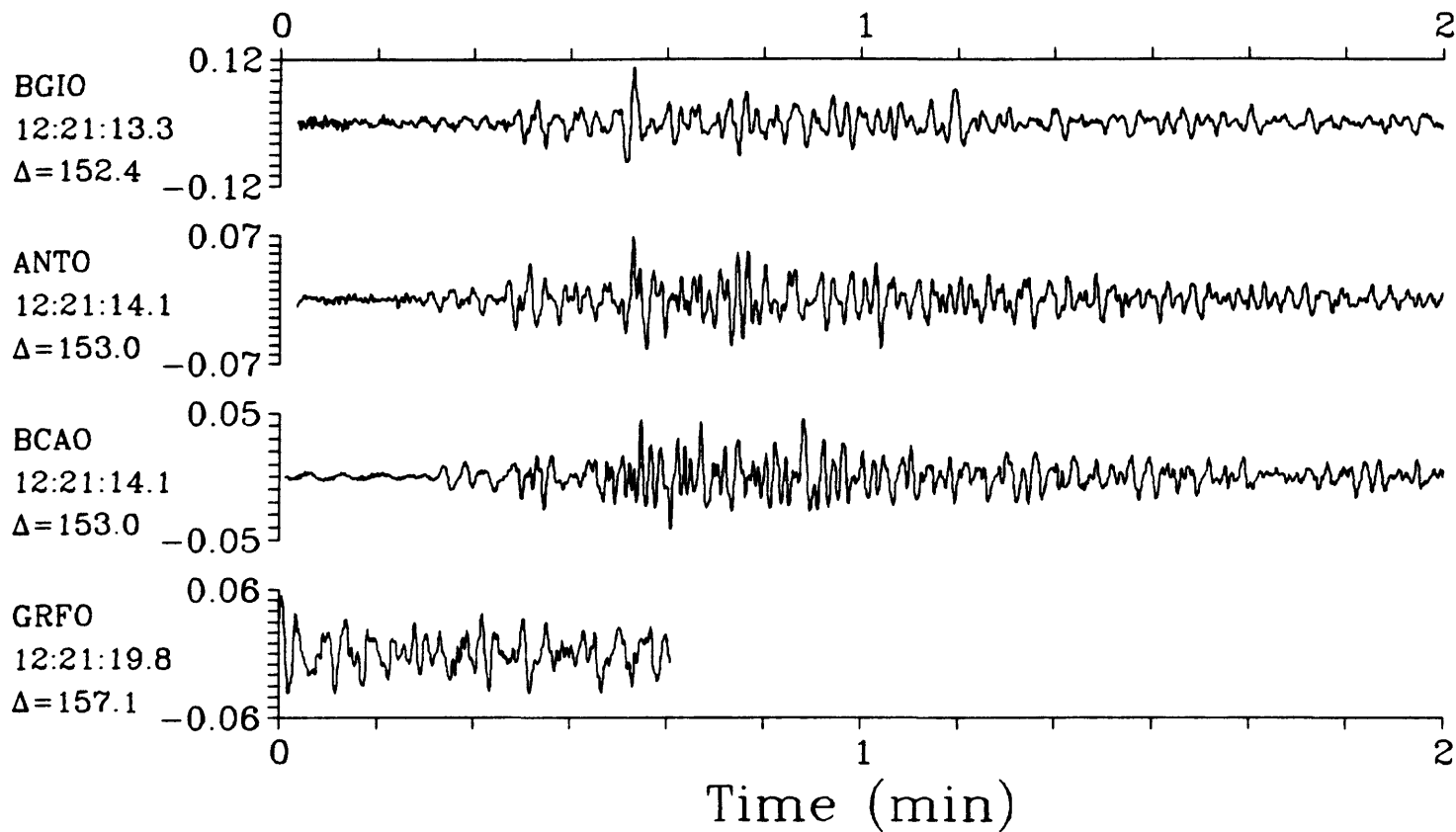
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.7$ $M_{SZ}=5.4$ 

SPZ

20 October 1986 12:01:42.25

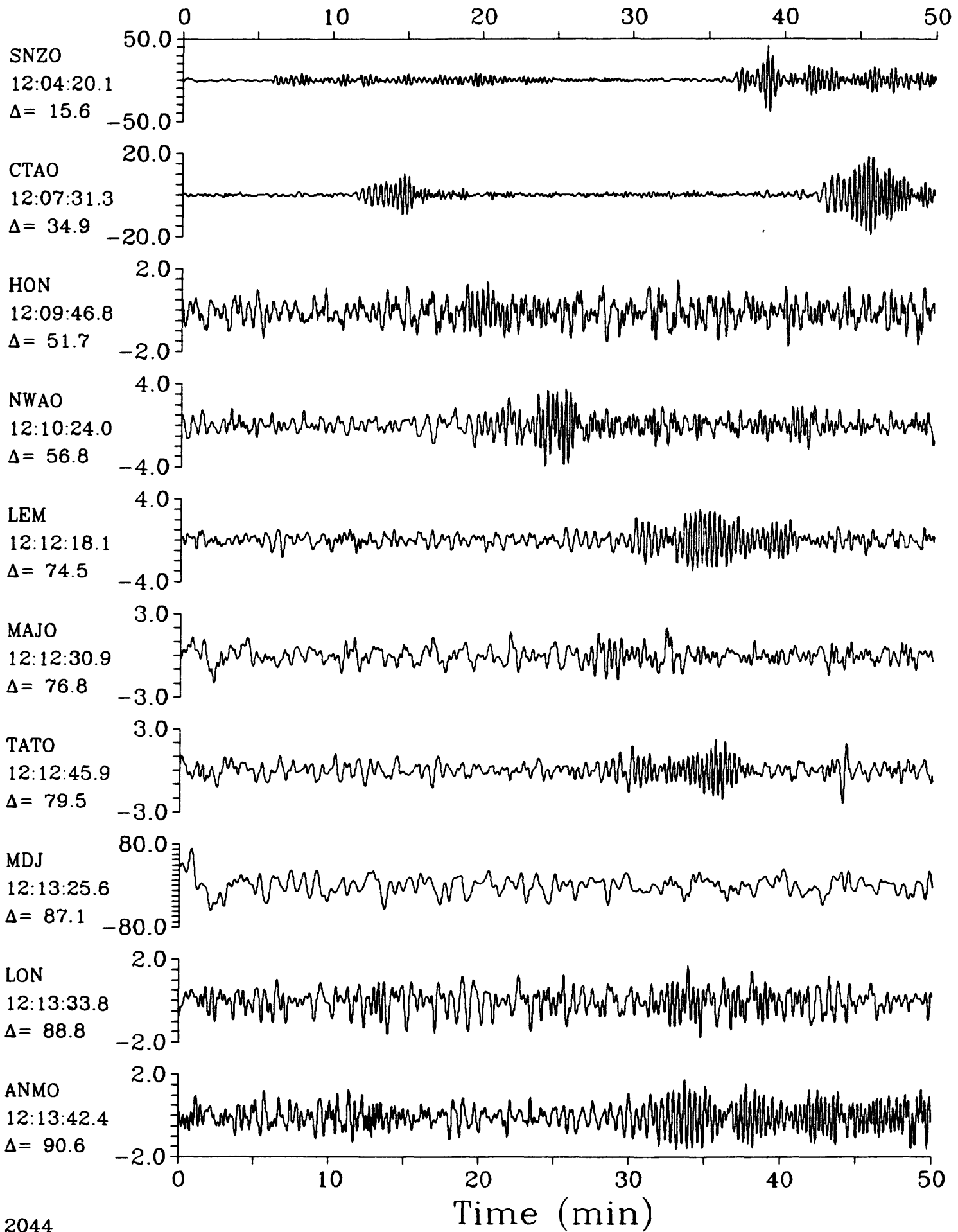
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.4$ 

LPZ

20 October 1986 12:01:42.25

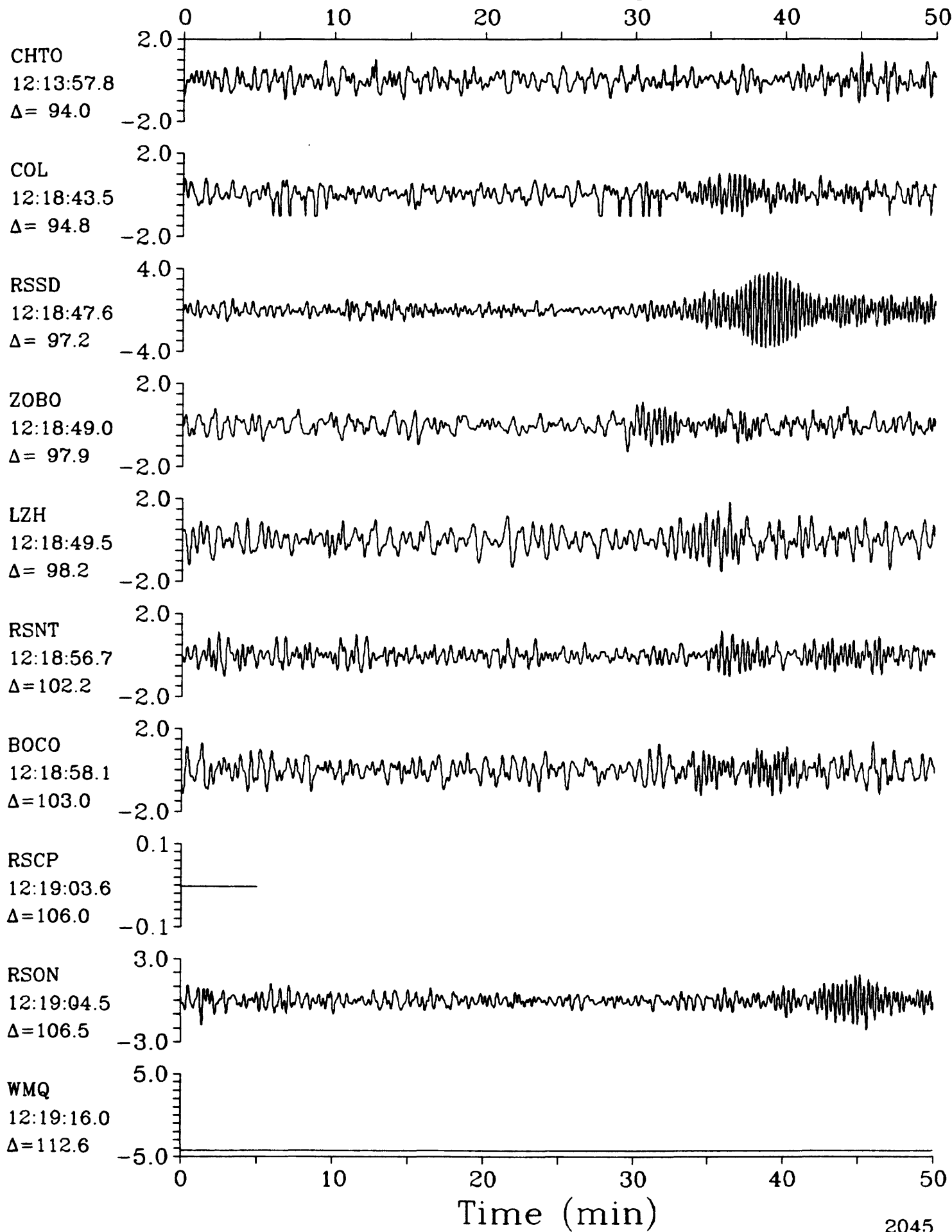
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.4$ 

LPZ

20 October 1986 12:01:42.25

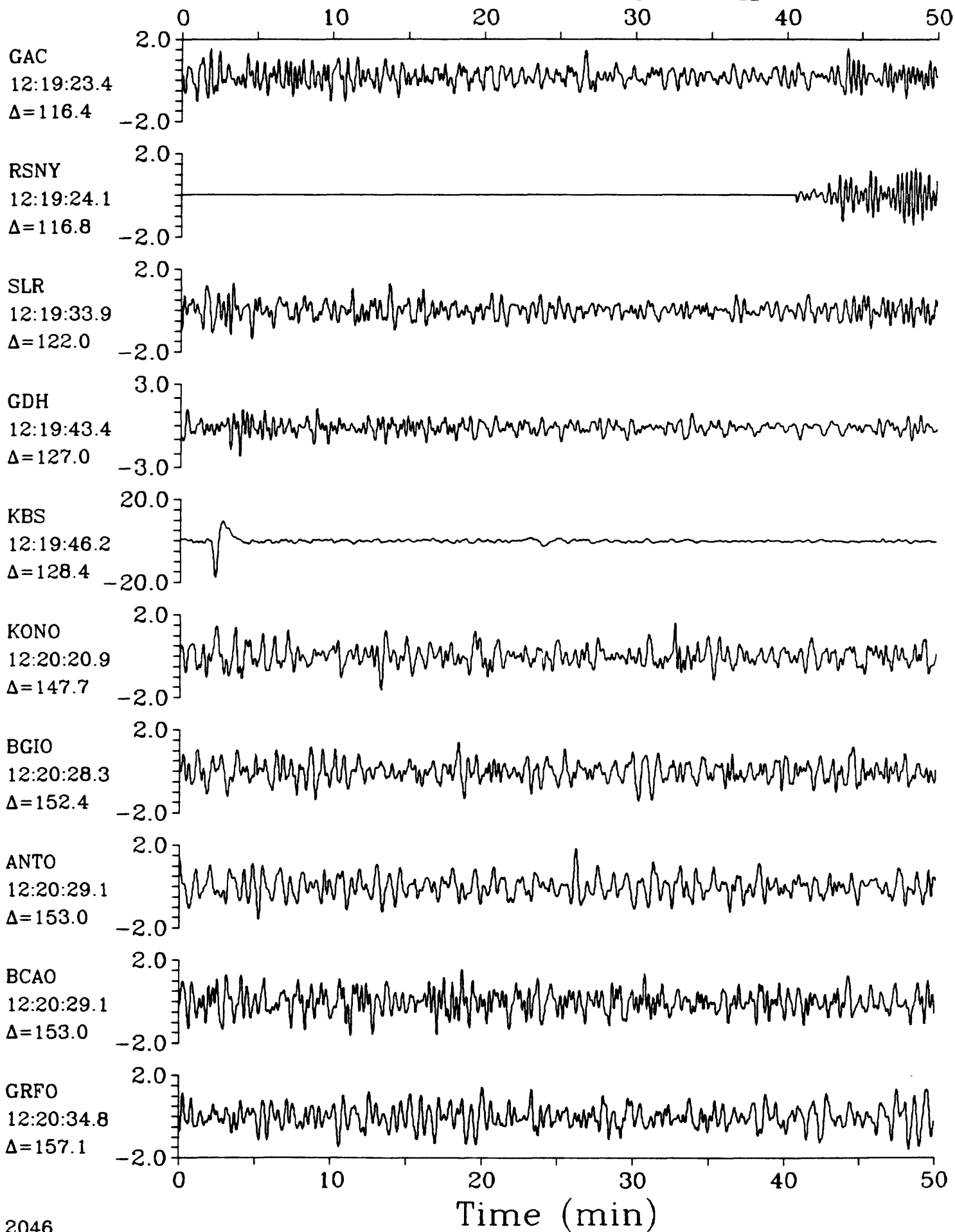
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.4$ 

LPZ

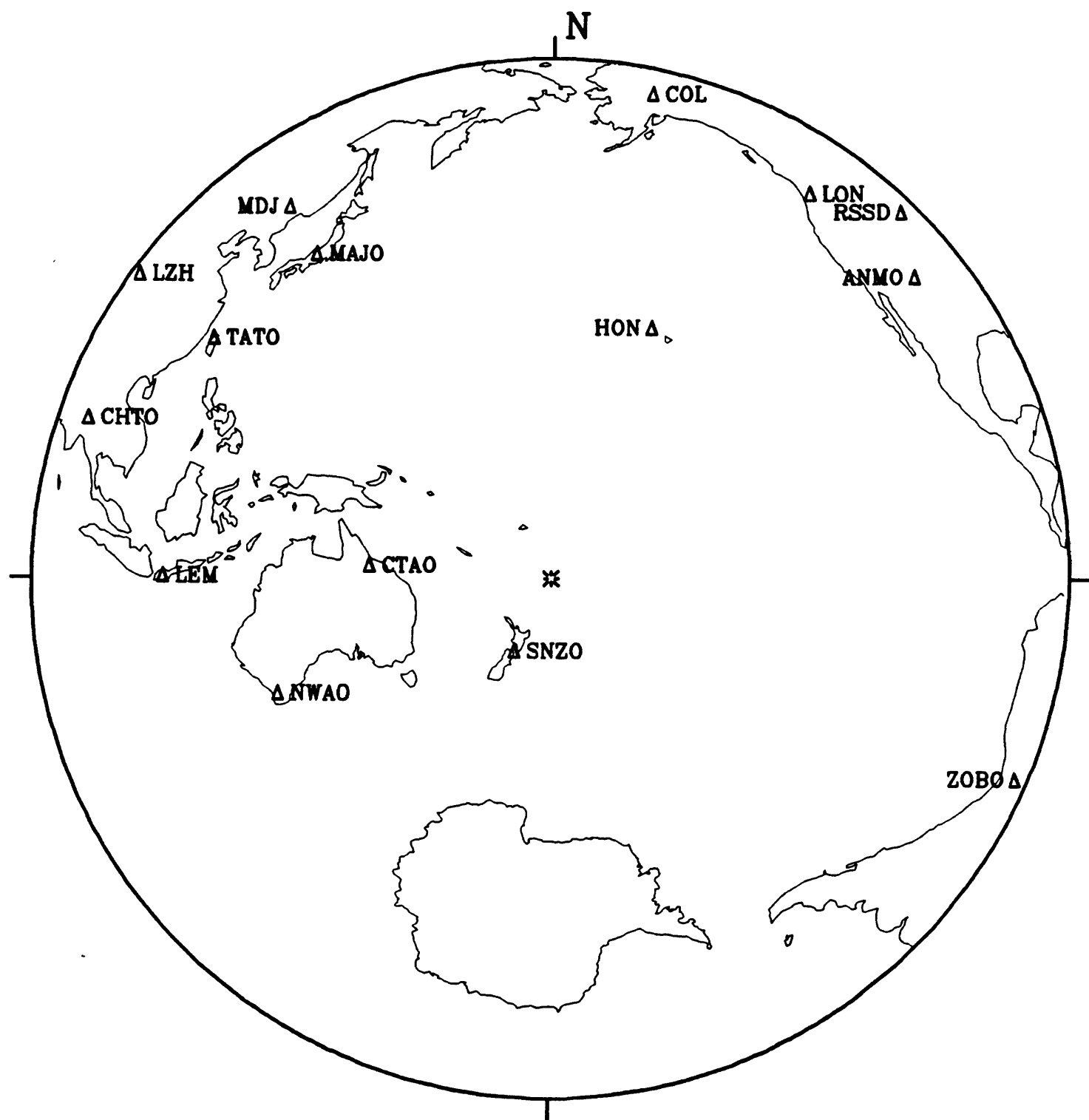
20 October 1986 12:01:42.25

LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.4$ 

20 October 1986 12:32:45.84

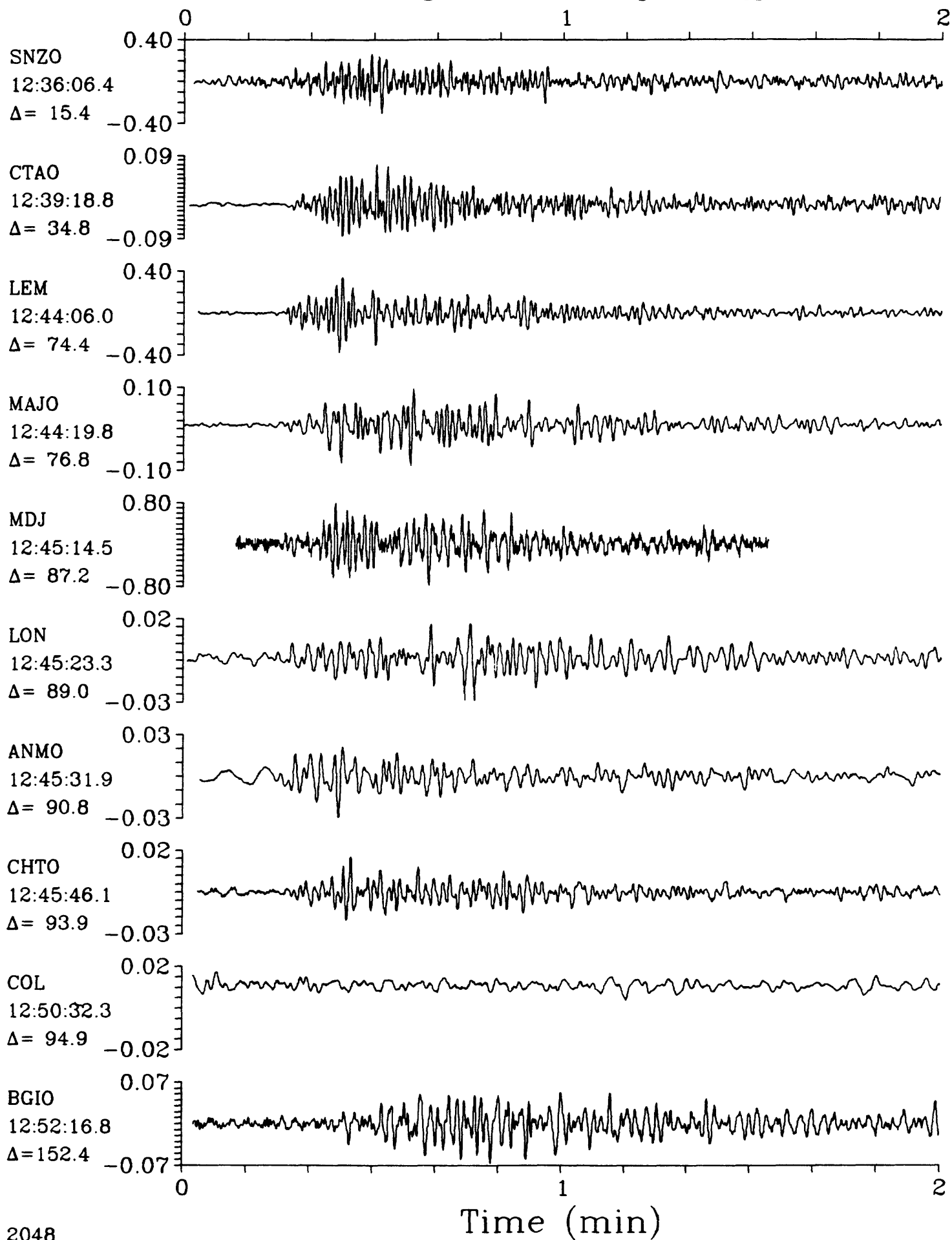
Kermadec Islands Region



SPZ

20 October 1986 12:32:45.84

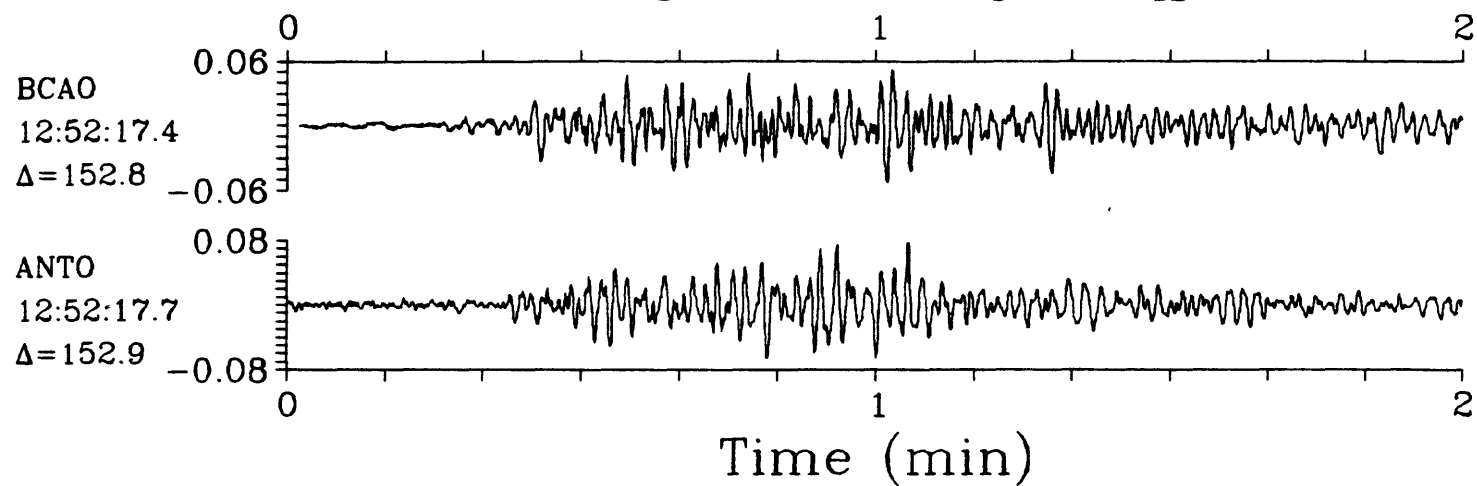
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.7$ 

SPZ

20 October 1986 12:32:45.84

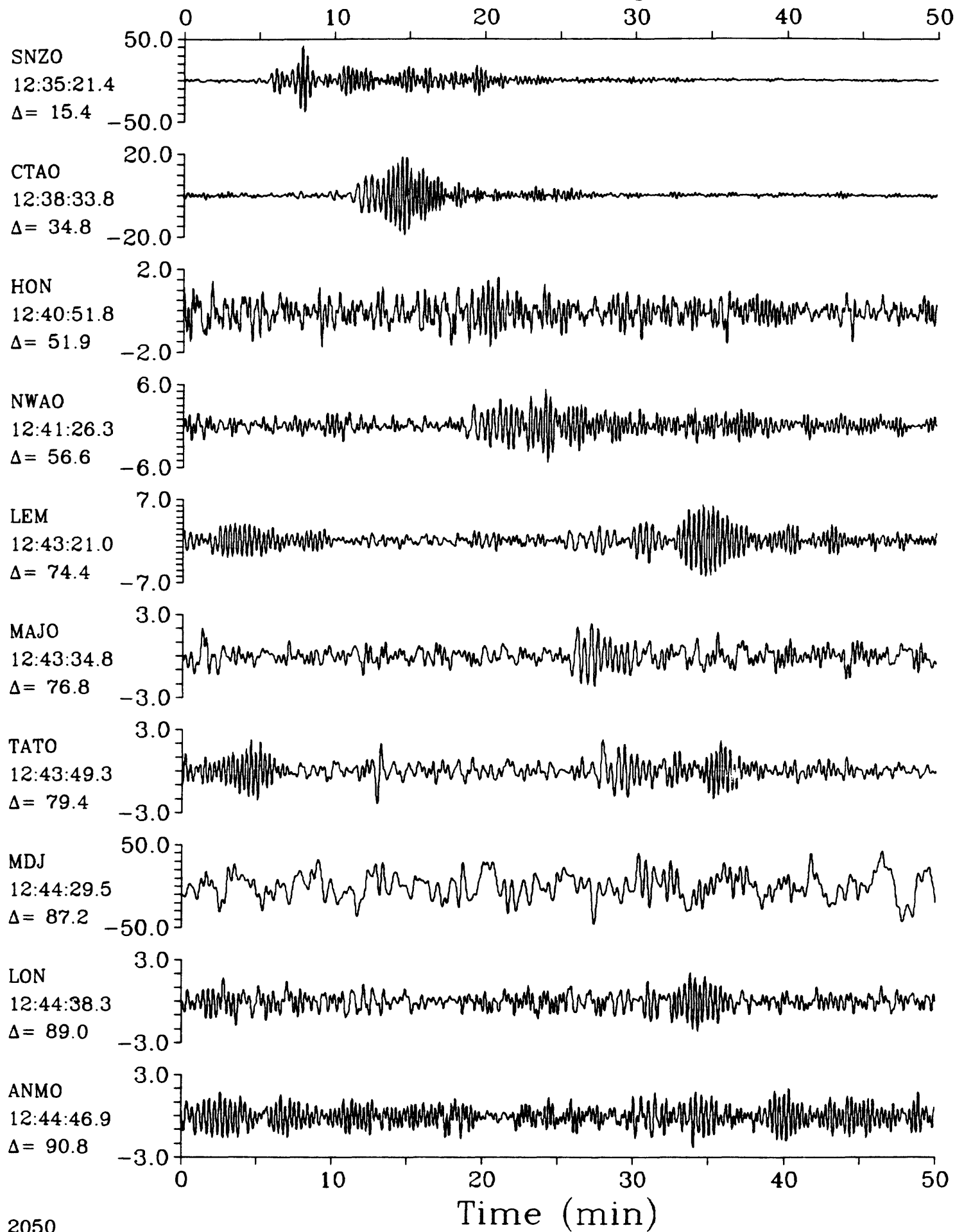
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{SZ}=5.7$ 

LPZ

20 October 1986 12:32:45.84

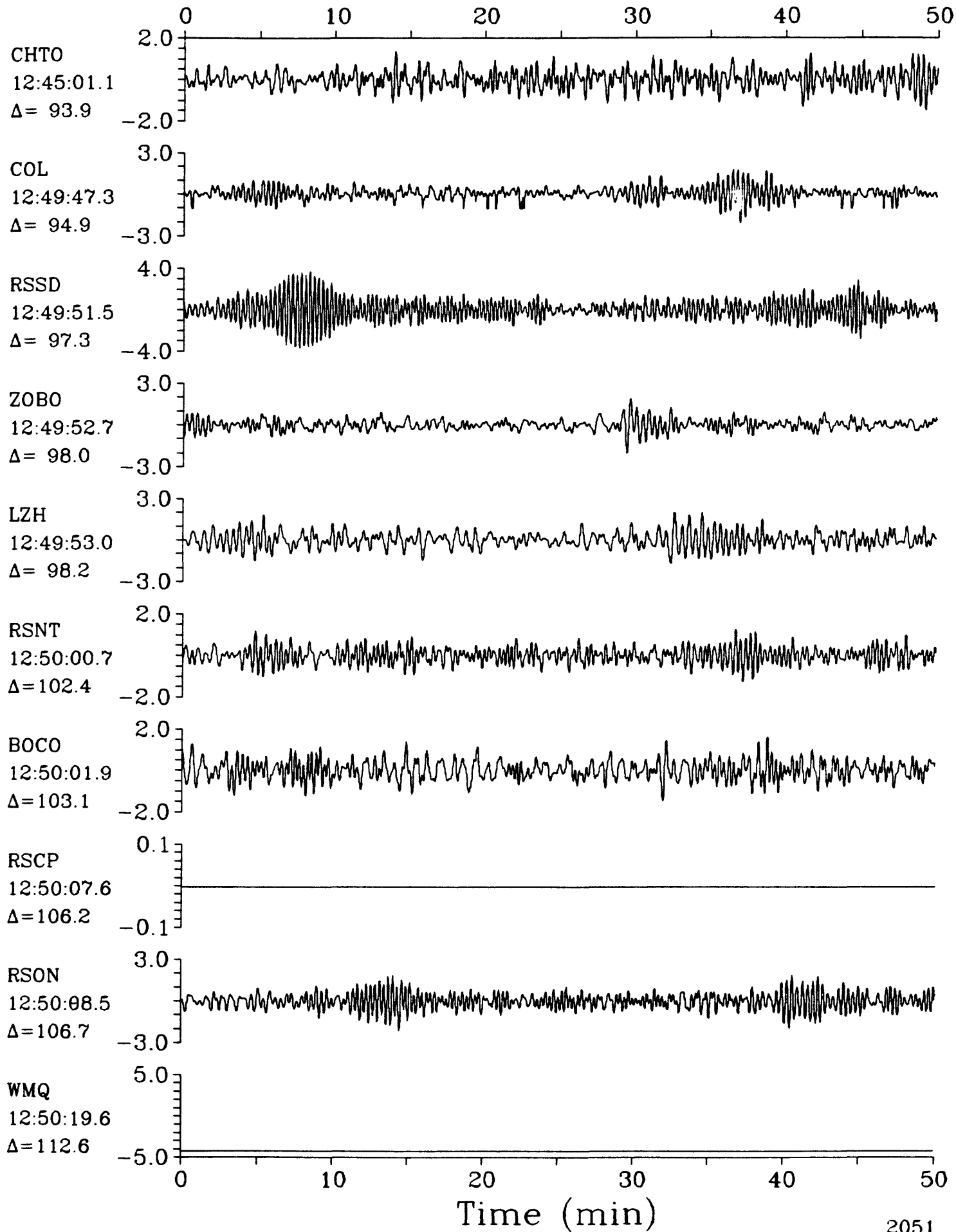
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.7$ 

LPZ

20 October 1986 12:32:45.84

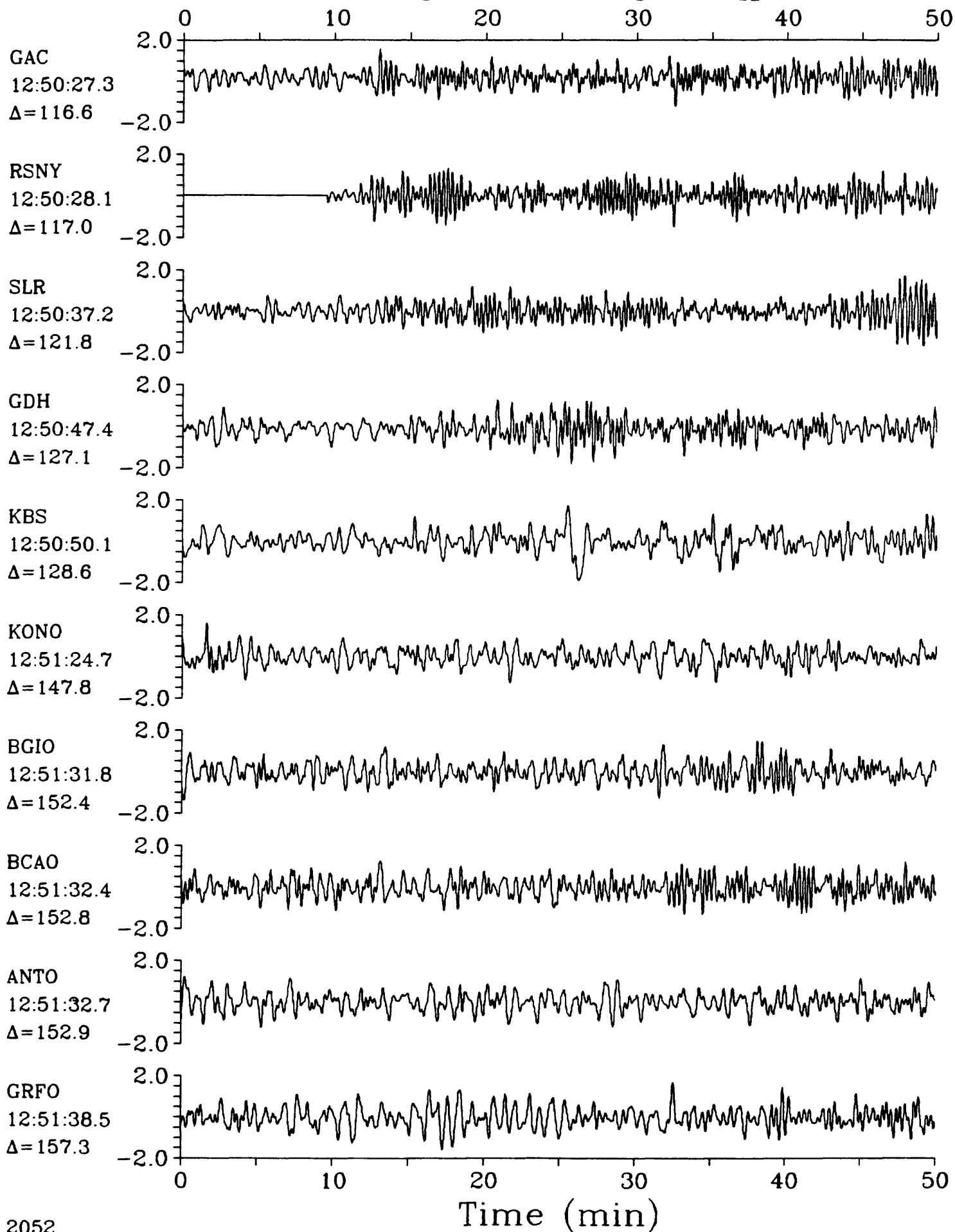
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.7$ 

LPZ

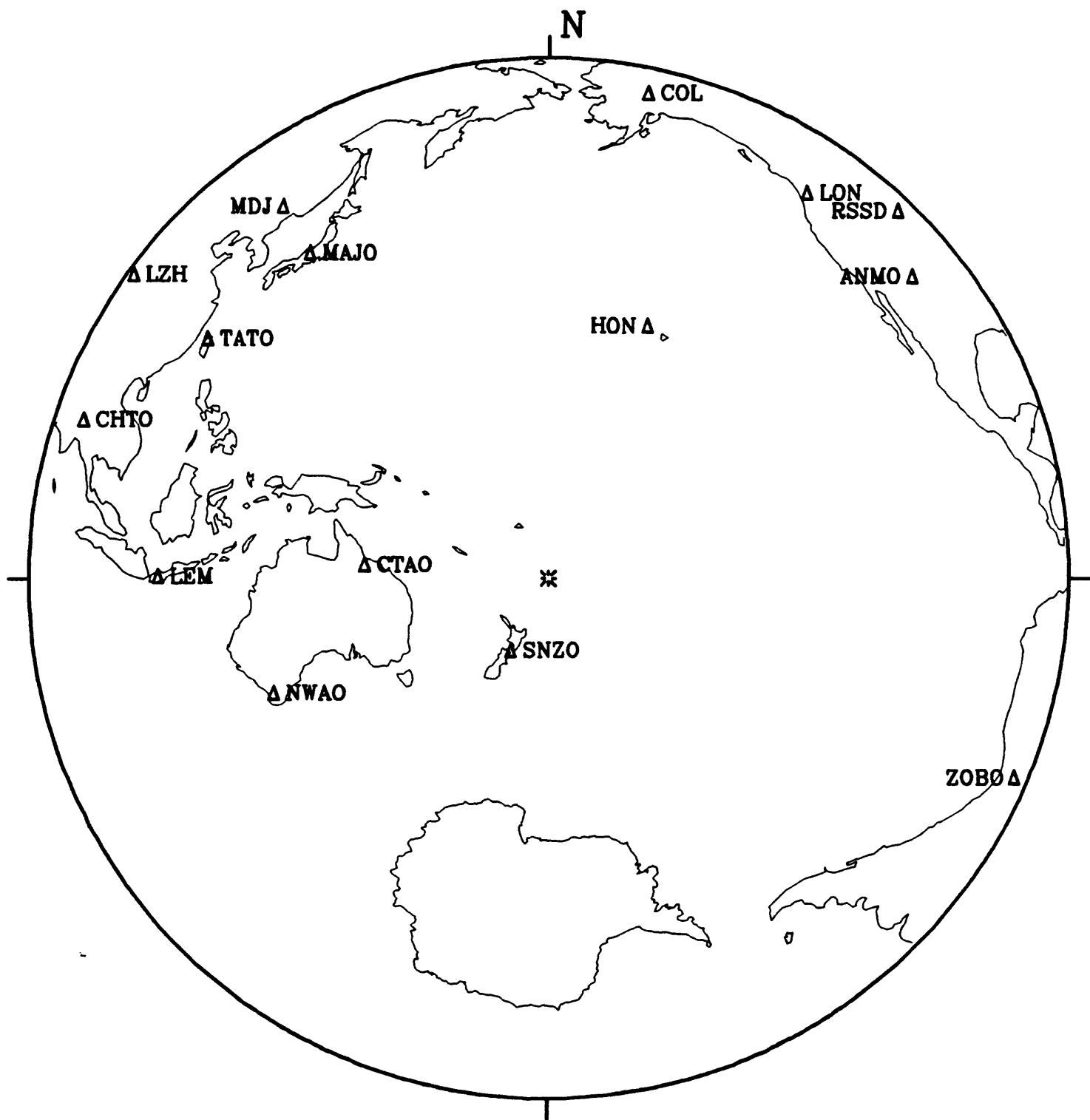
20 October 1986 12:32:45.84

LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.7$ 

20 October 1986 14:41:25.79

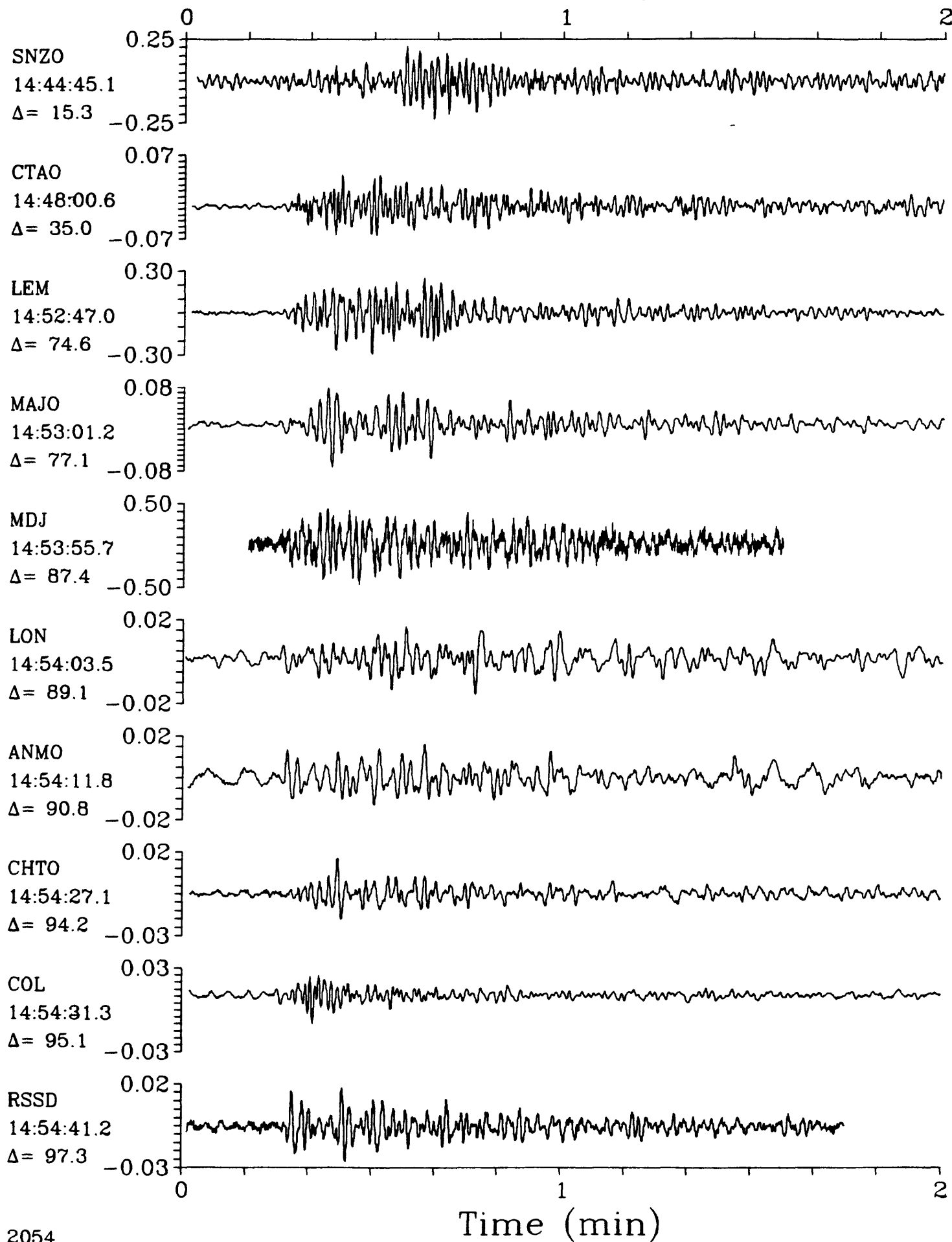
Kermadec Islands Region



SPZ

20 October 1986 14:41:25.79

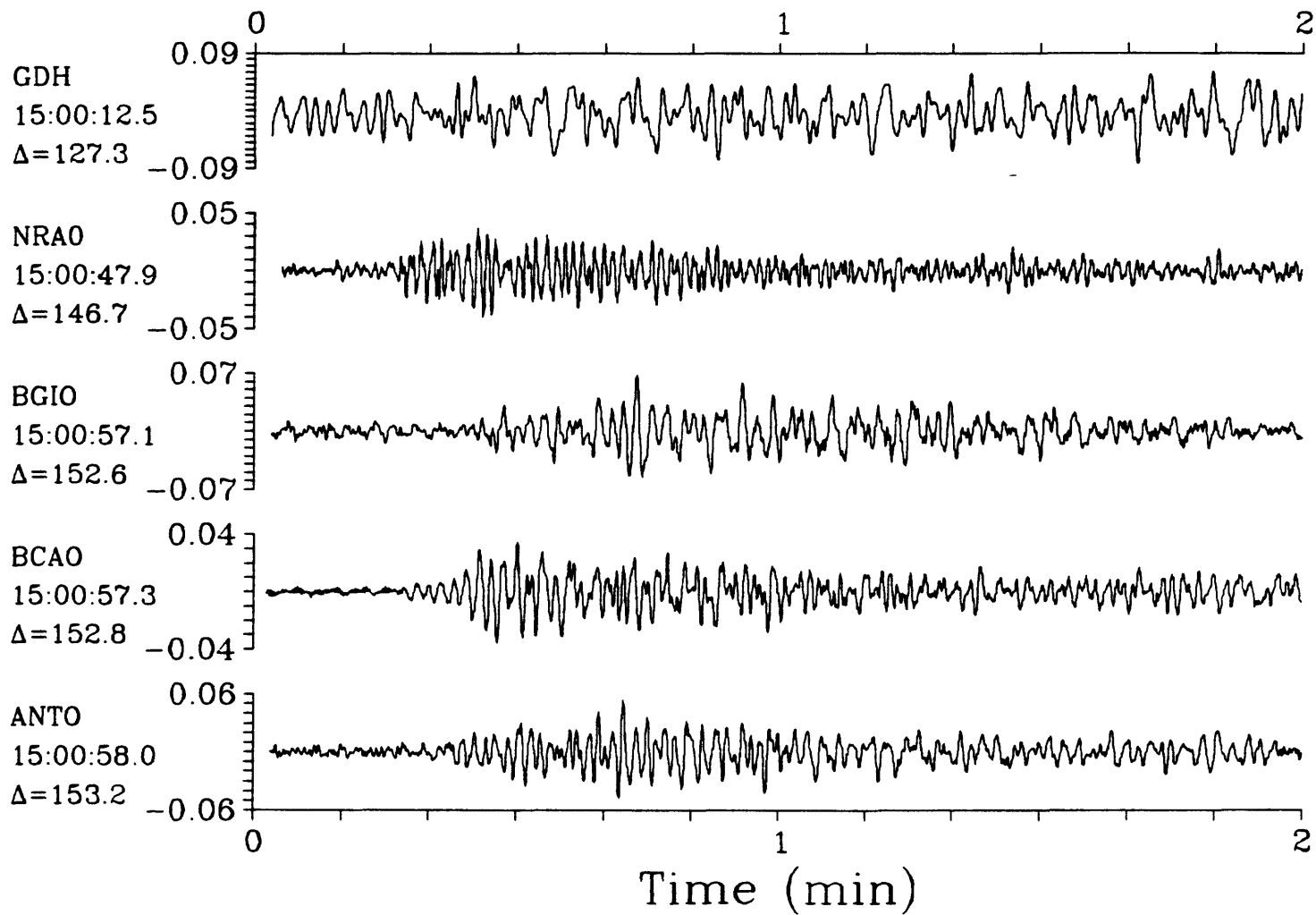
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{SZ}=6.0$ 

SPZ

20 October 1986 14:41:25.79

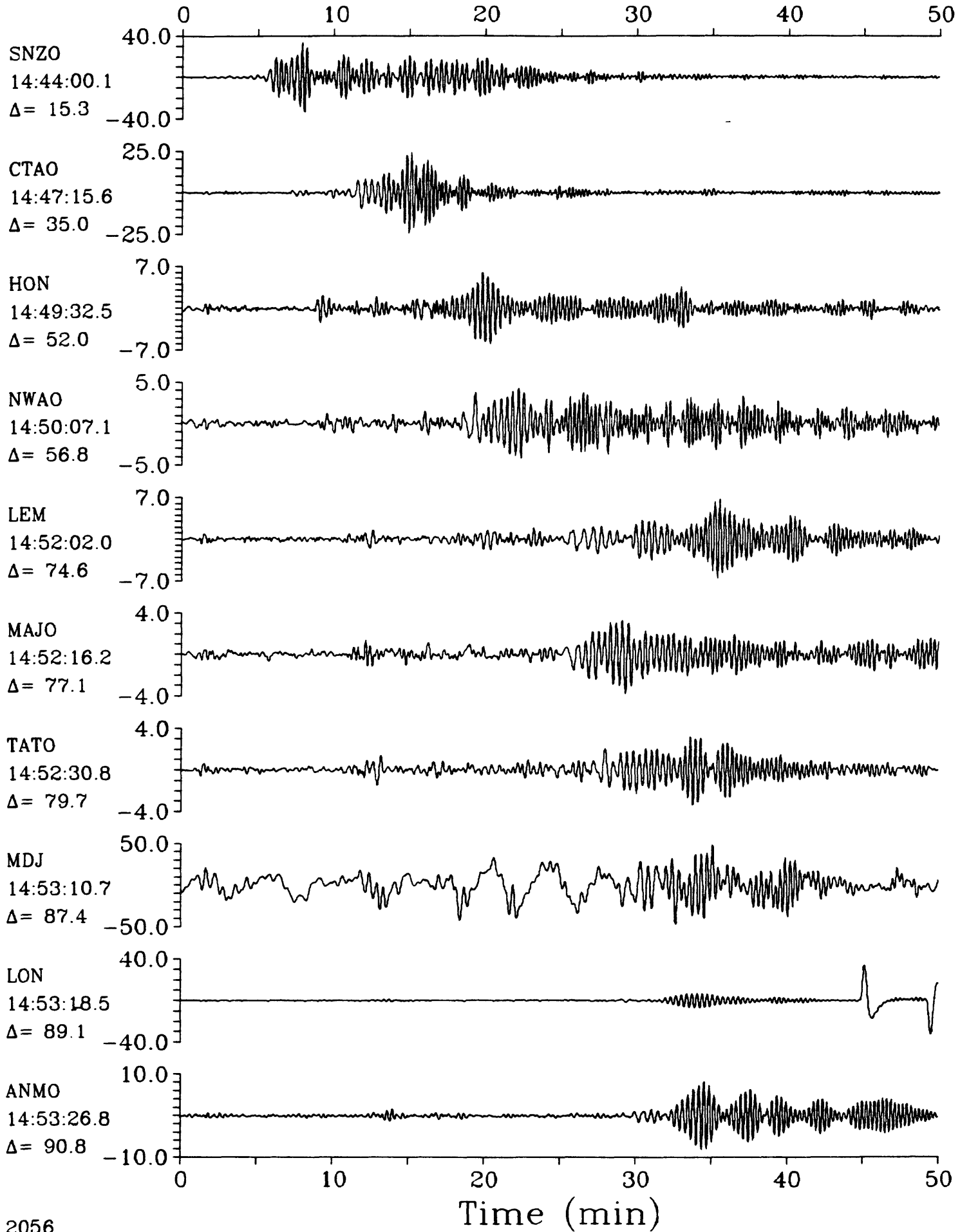
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{sz}=6.0$ 

LPZ

20 October 1986 14:41:25.79

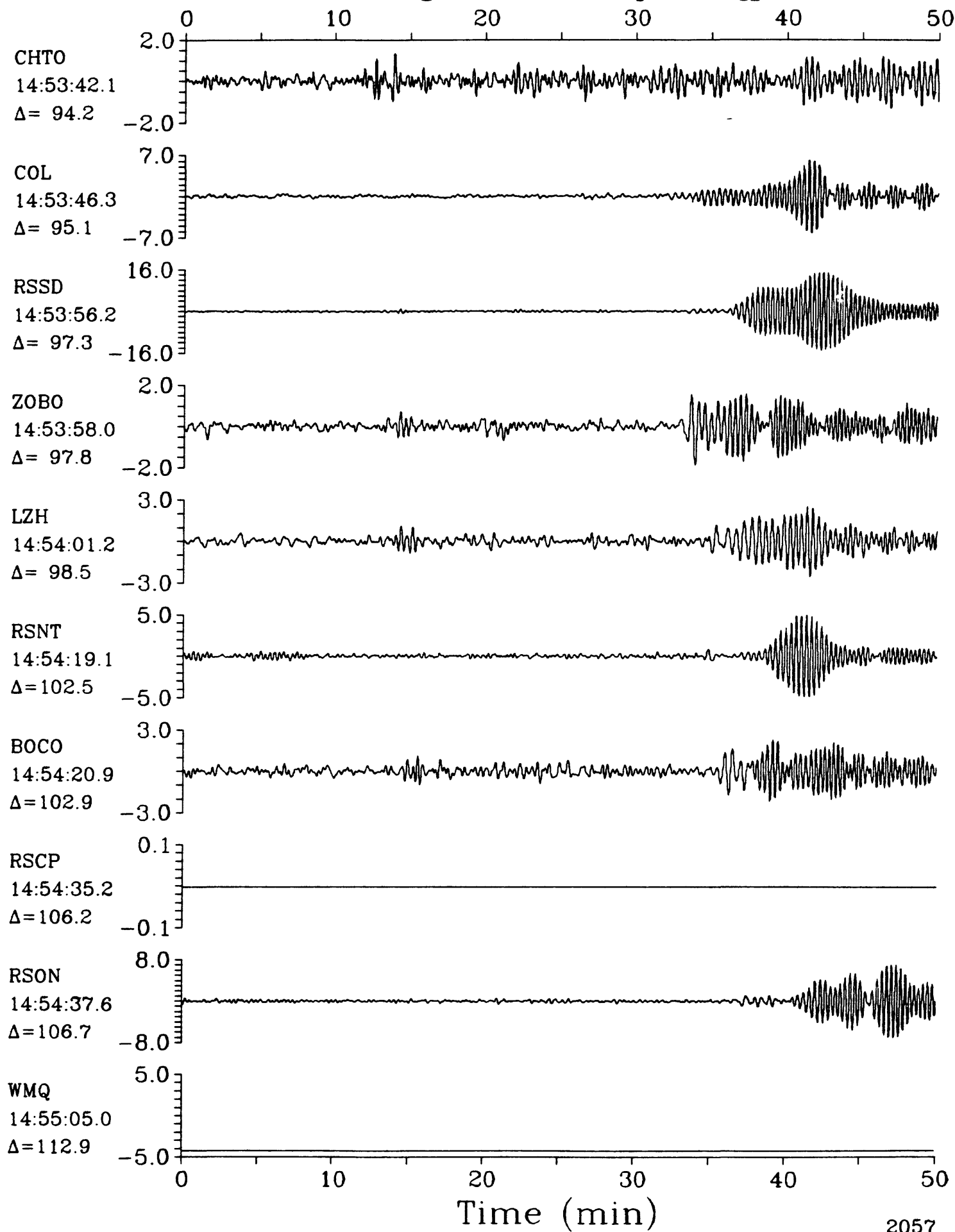
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{sz}=6.0$ 

LPZ

20 October 1986 14:41:25.79

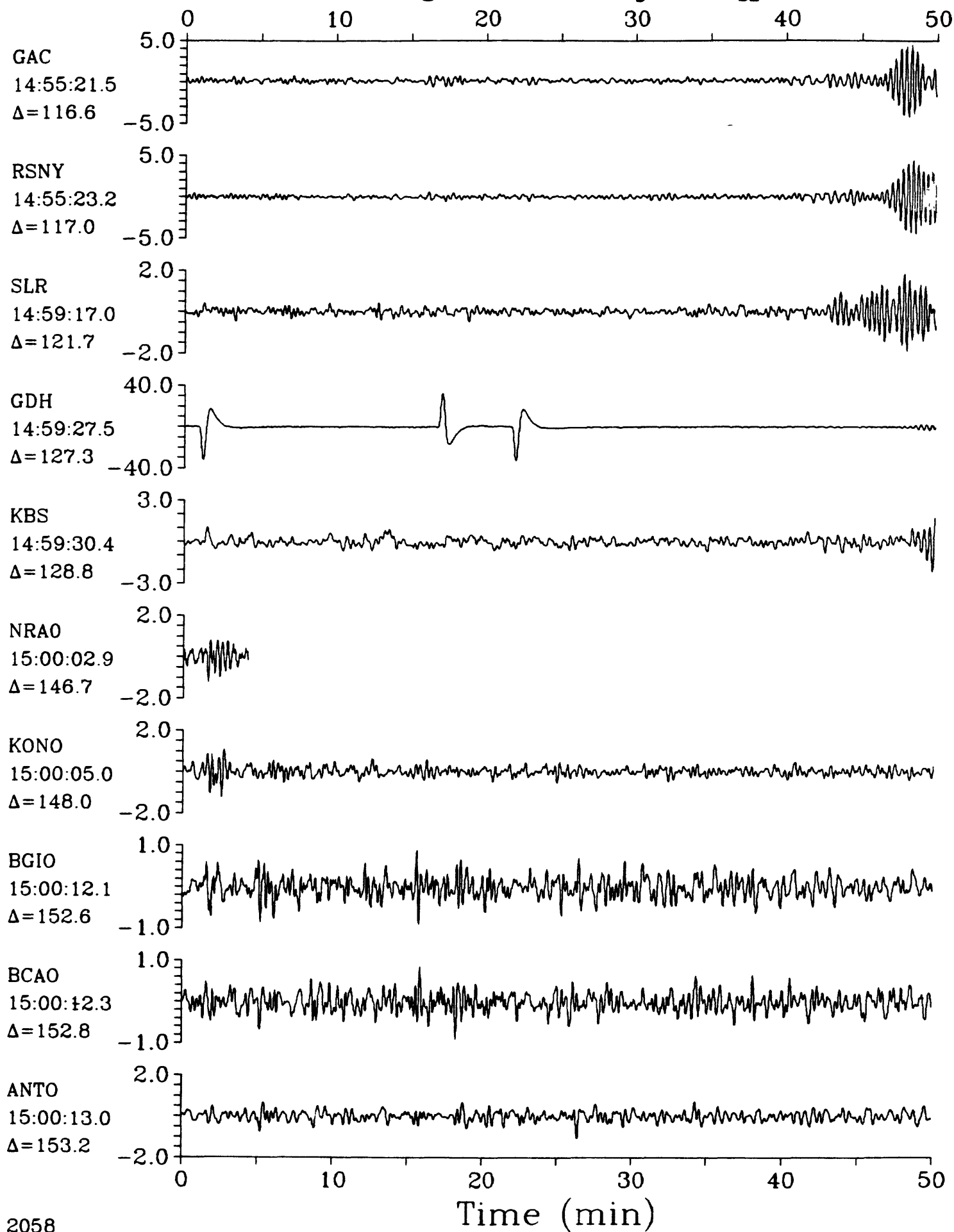
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{sz}=6.0$ 

LPZ

20 October 1986 14:41:25.79

LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{sz}=6.0$ 

LPZ

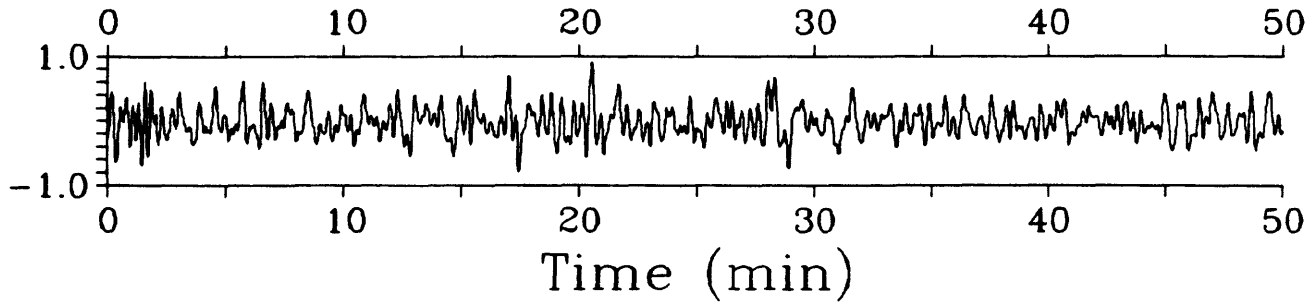
20 October 1986 14:41:25.79

LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{SZ}=6.0$

GRFO

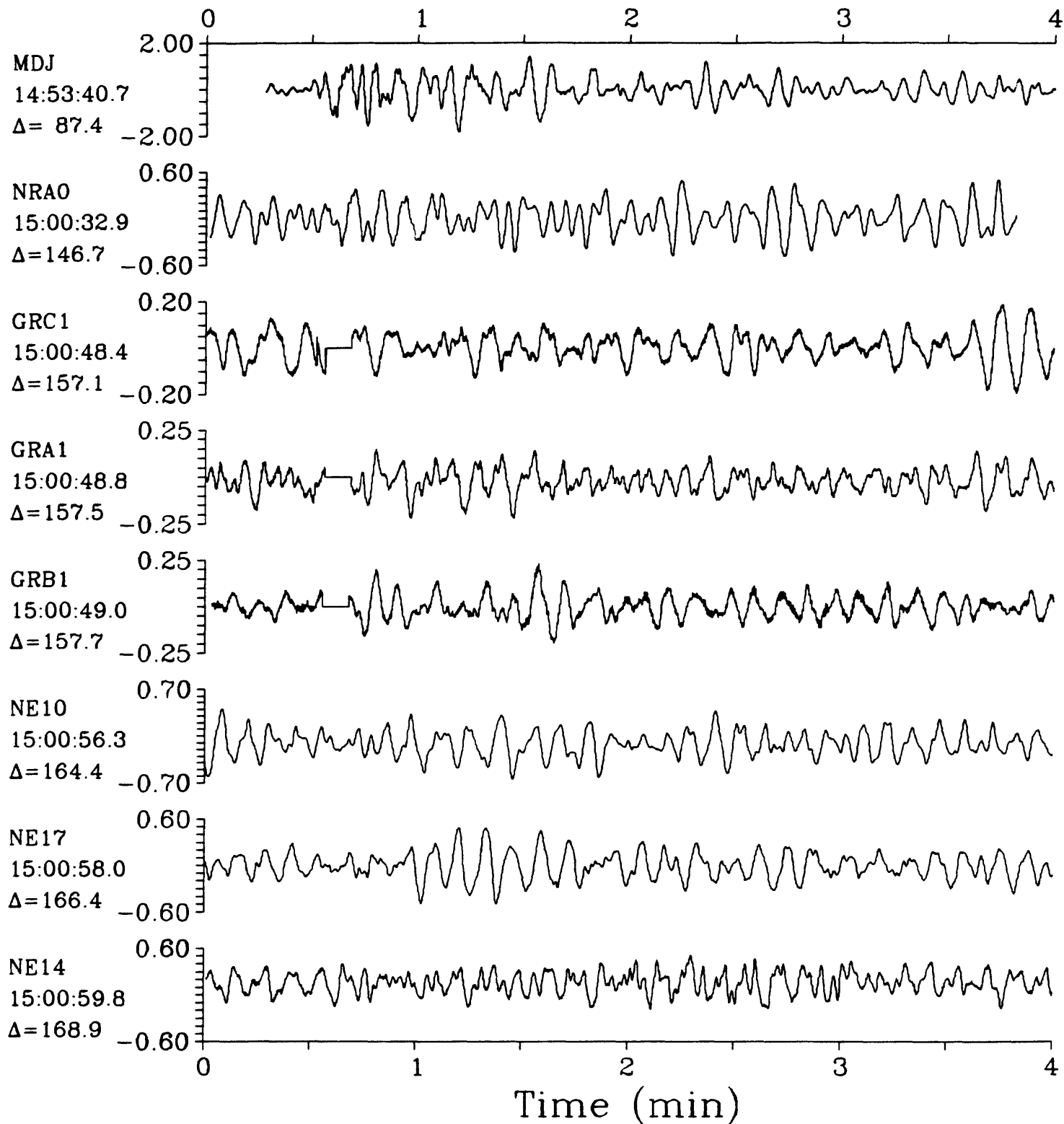
15:00:18.8

 $\Delta=157.5$ 

IPZ

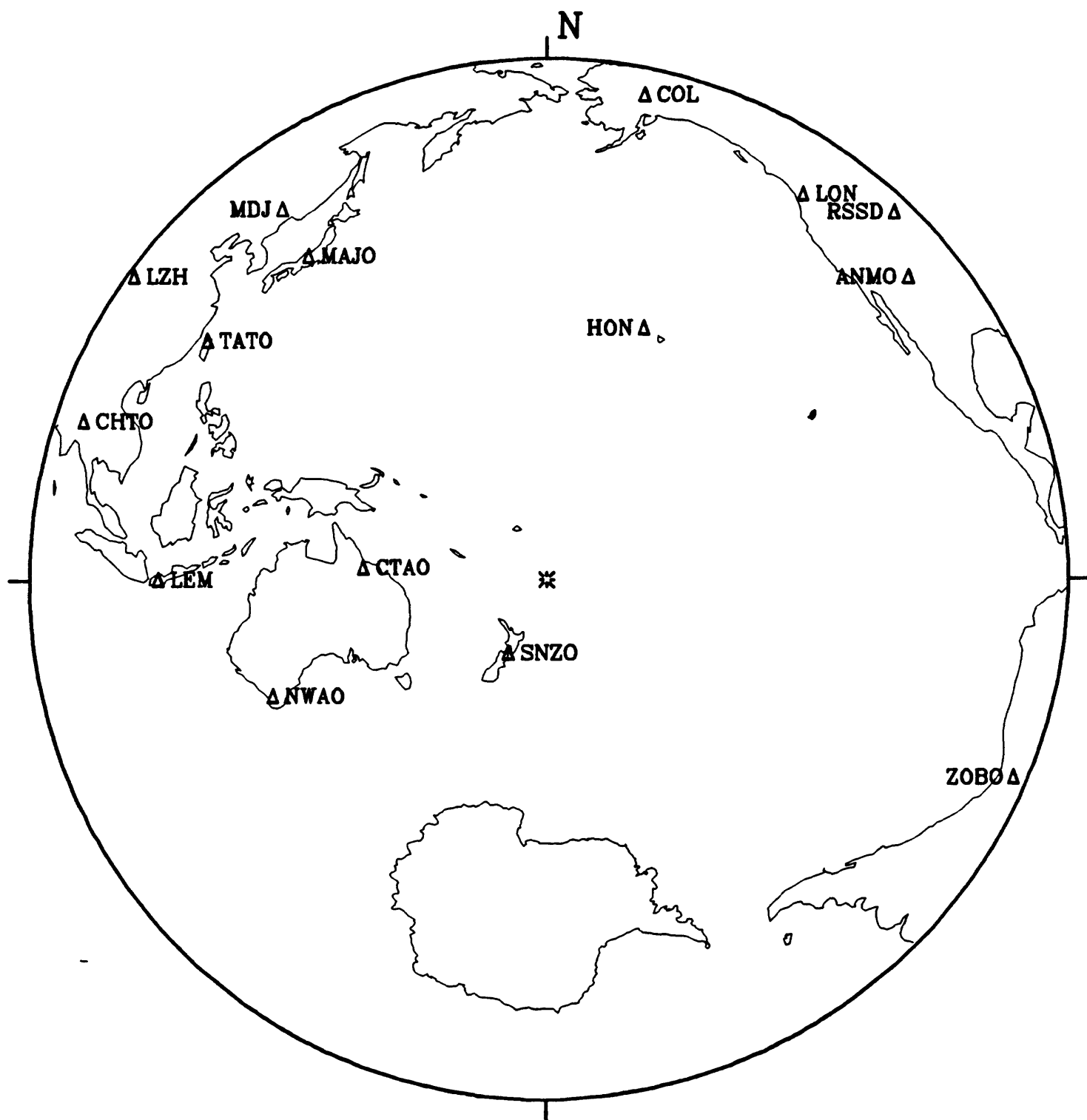
20 October 1986 14:41:25.79

IPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{sz}=6.0$ 

20 October 1986 16:01:33.66

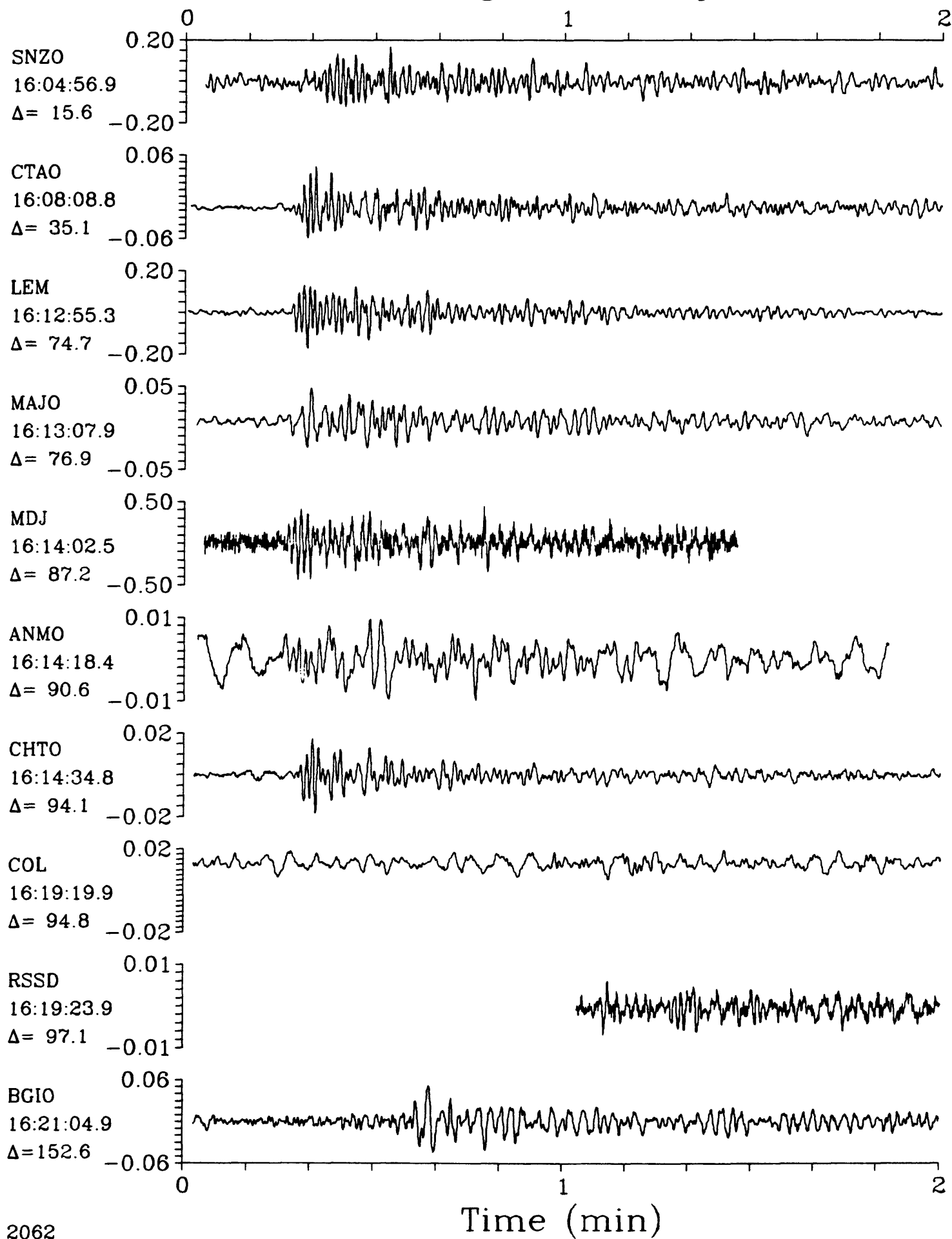
Kermadec Islands Region



SPZ

20 October 1986 16:01:33.66

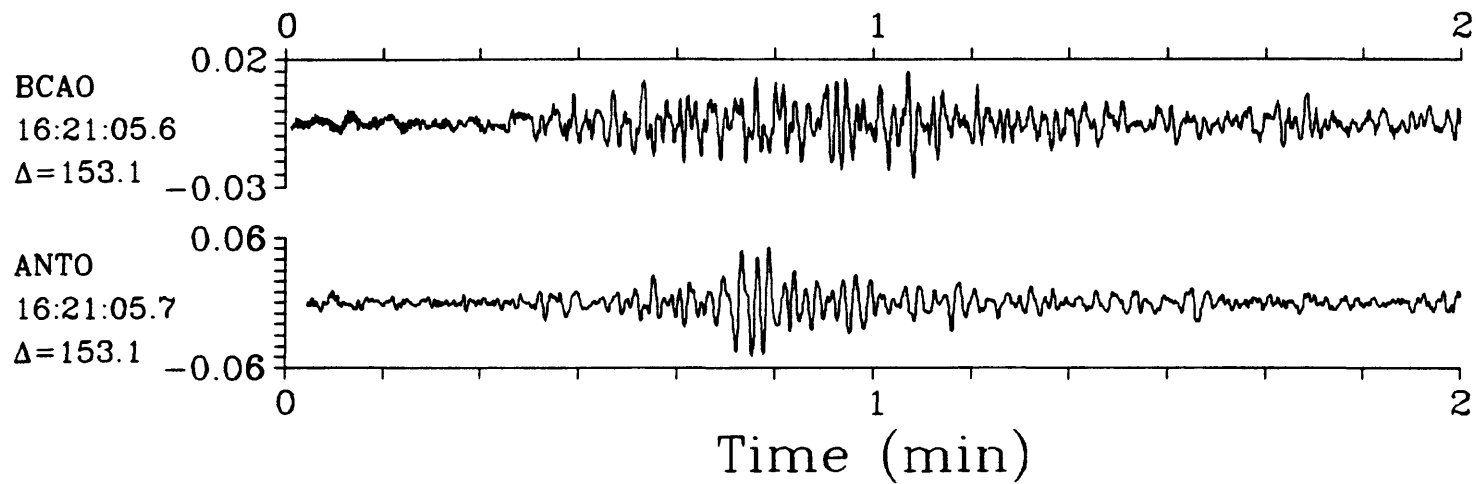
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ 

SPZ

20 October 1986 16:01:33.66

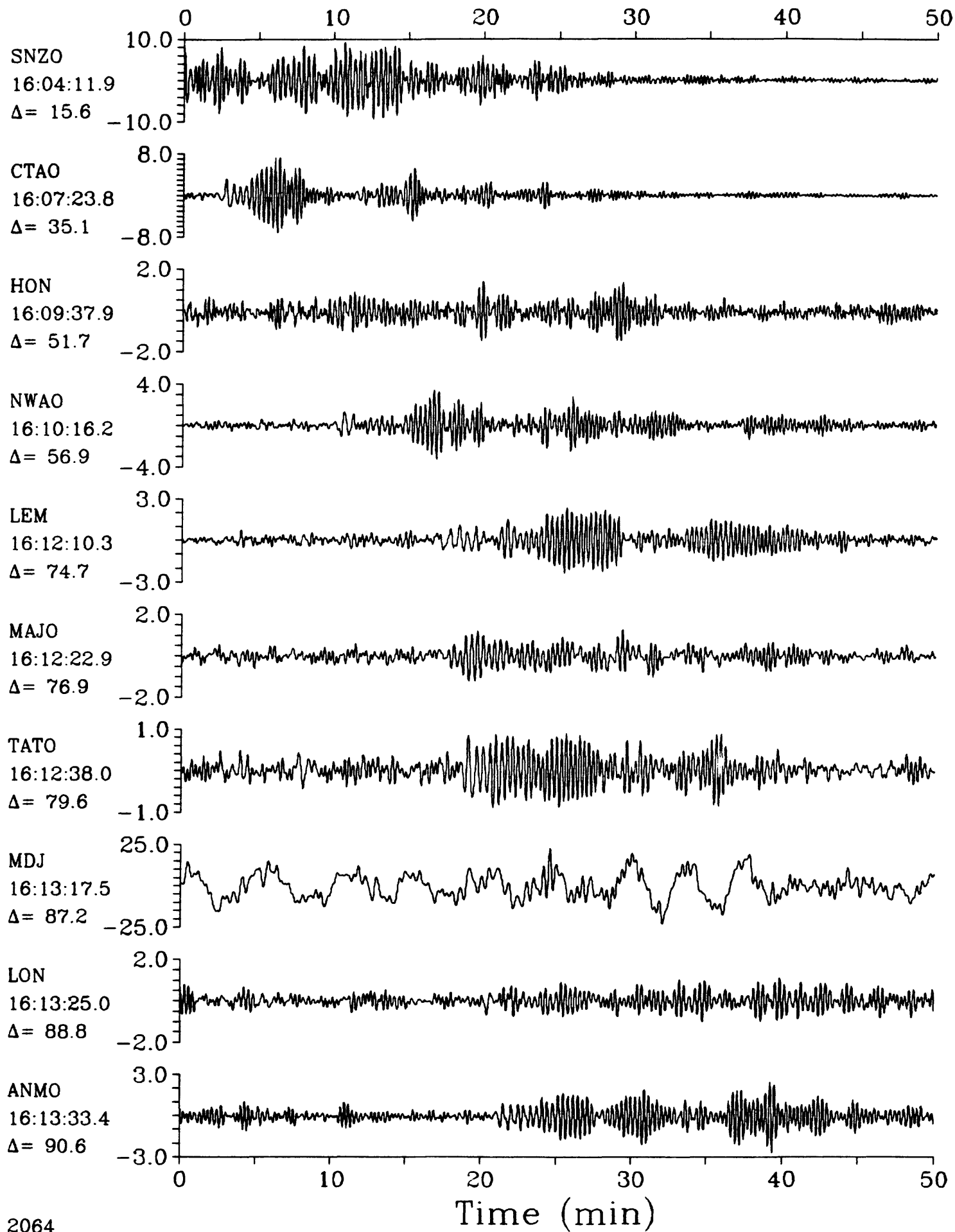
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ 

LPZ

20 October 1986 16:01:33.66

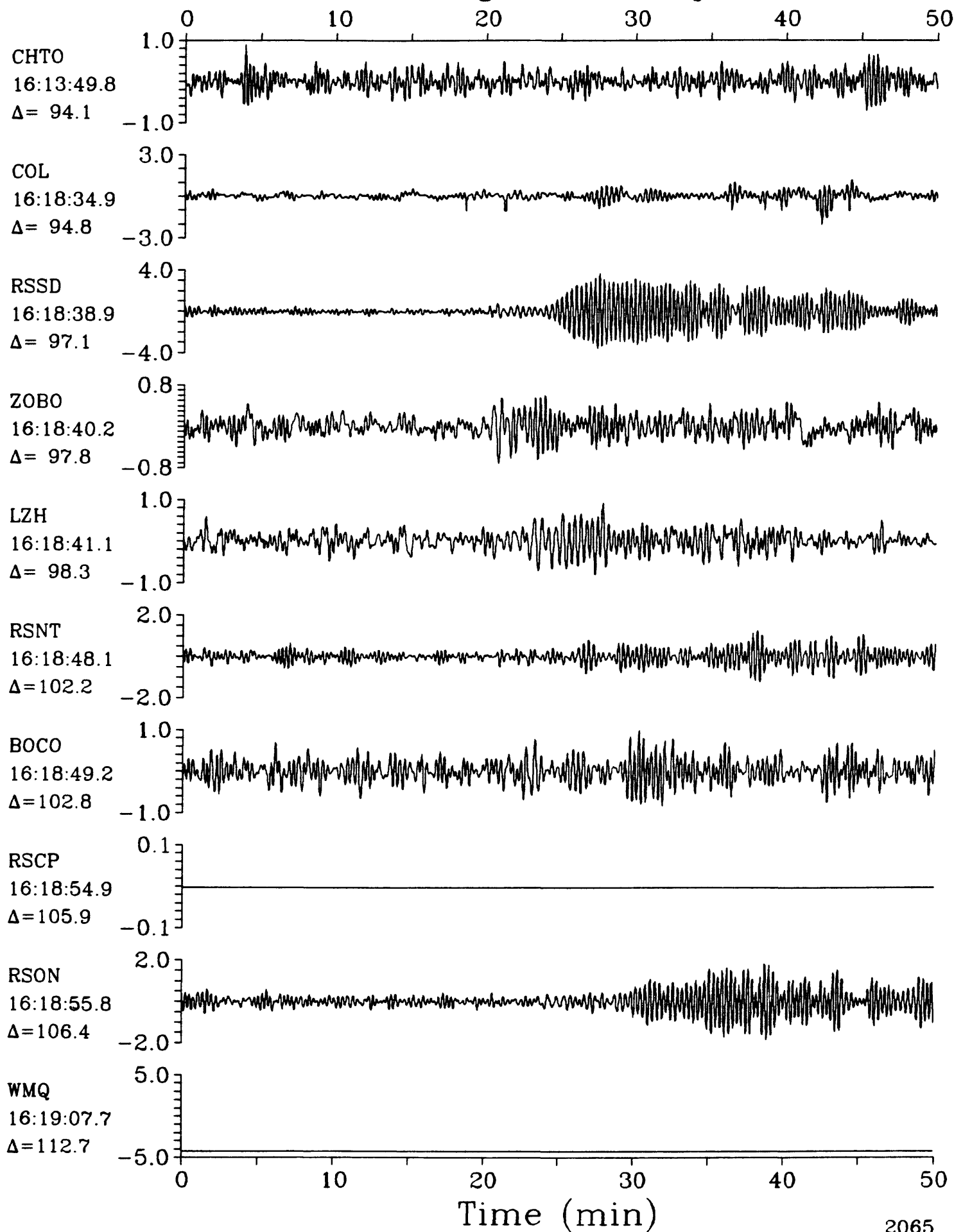
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ 

LPZ

20 October 1986 16:01:33.66

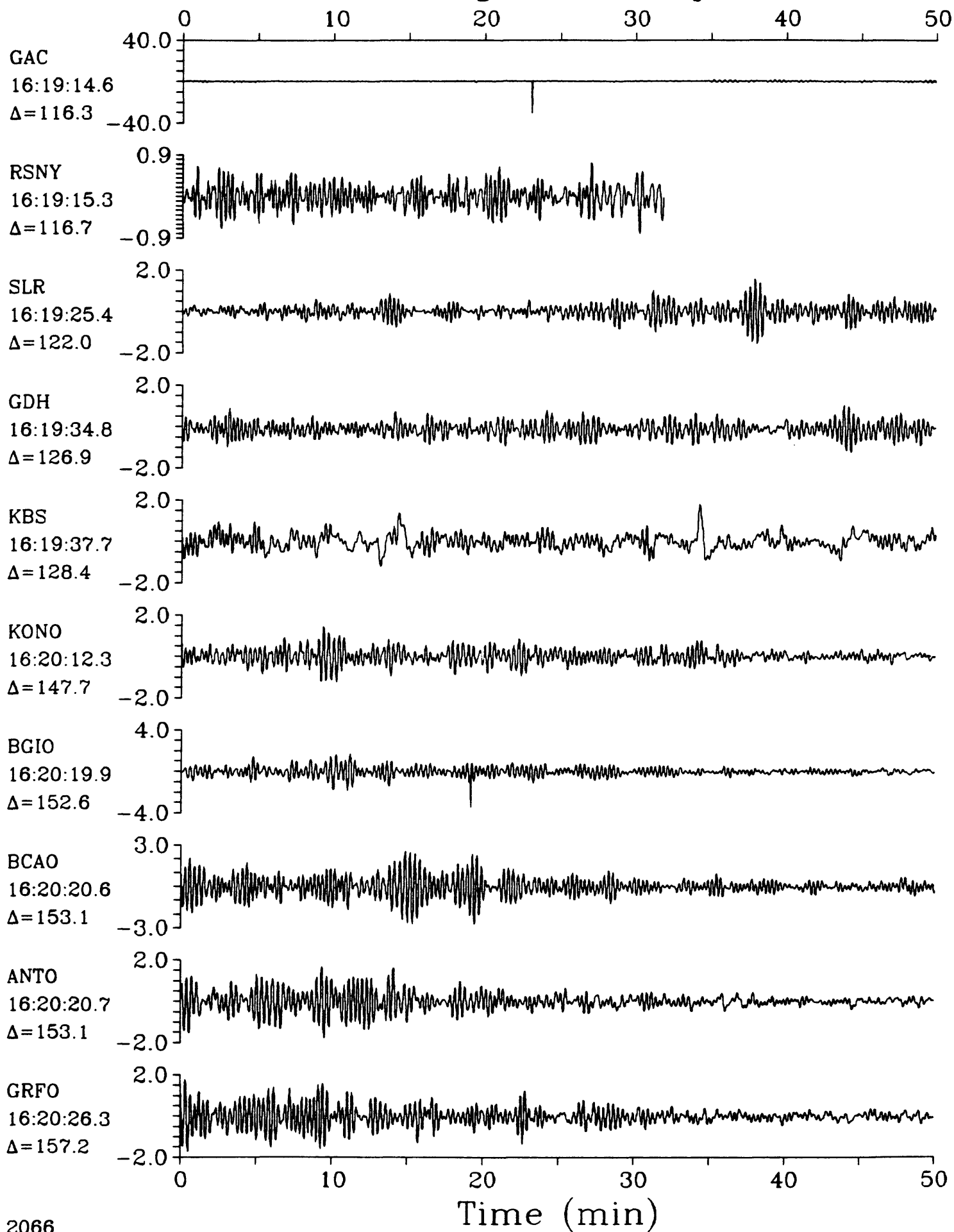
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ 

LPZ

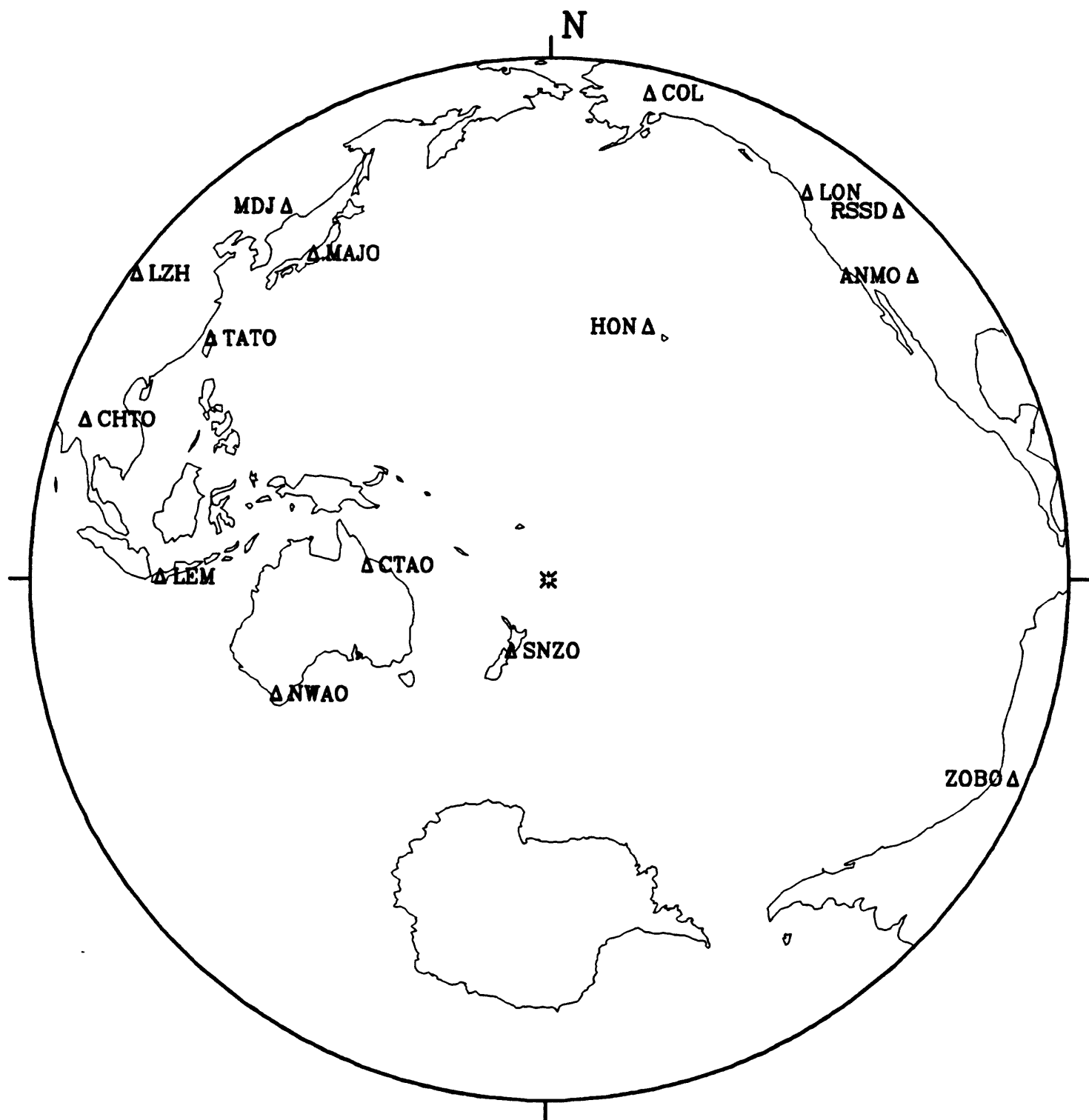
20 October 1986 16:01:33.66

LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ 

20 October 1986 18:16:03.93

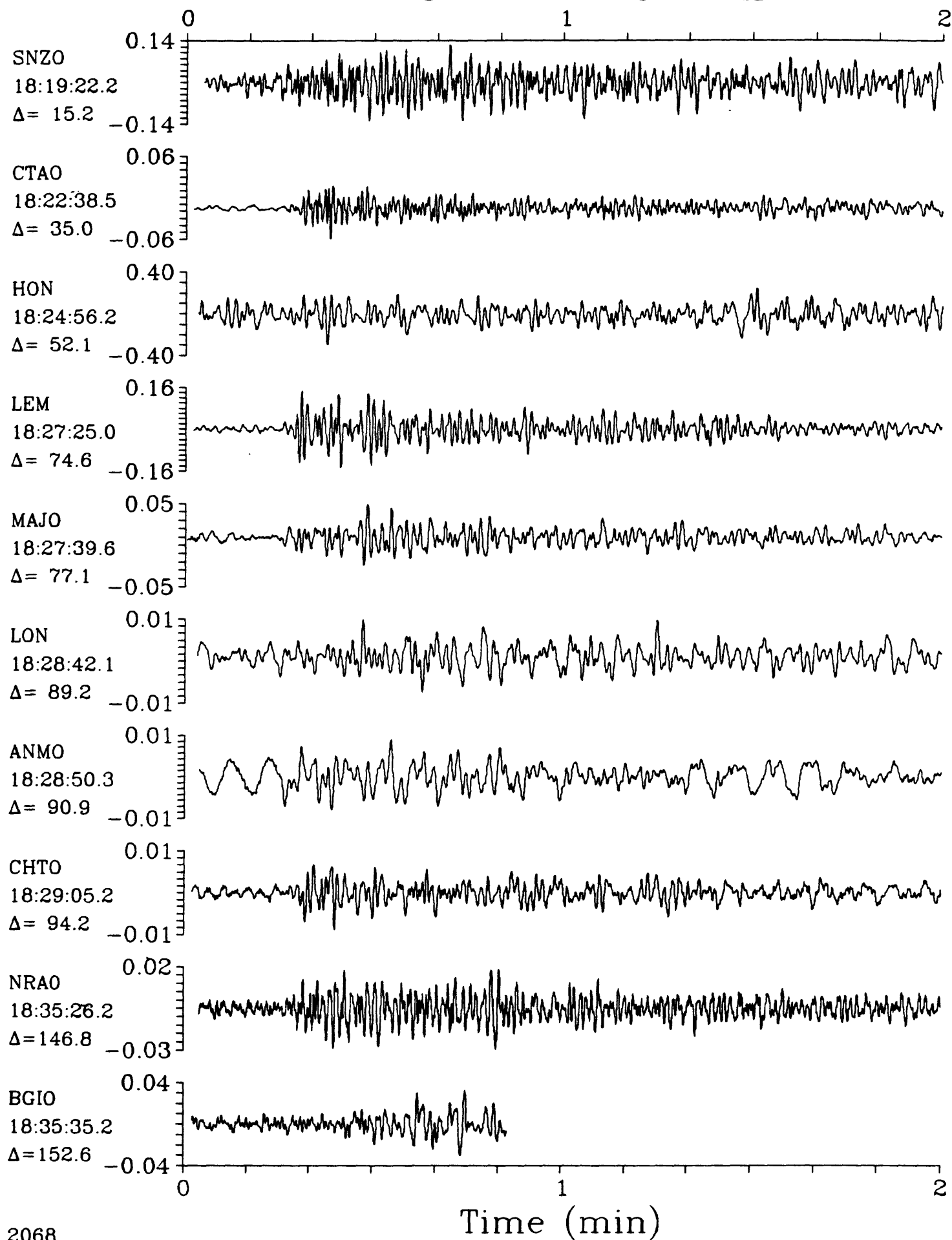
Kermadec Islands Region



SPZ

20 October 1986 18:16:03.93

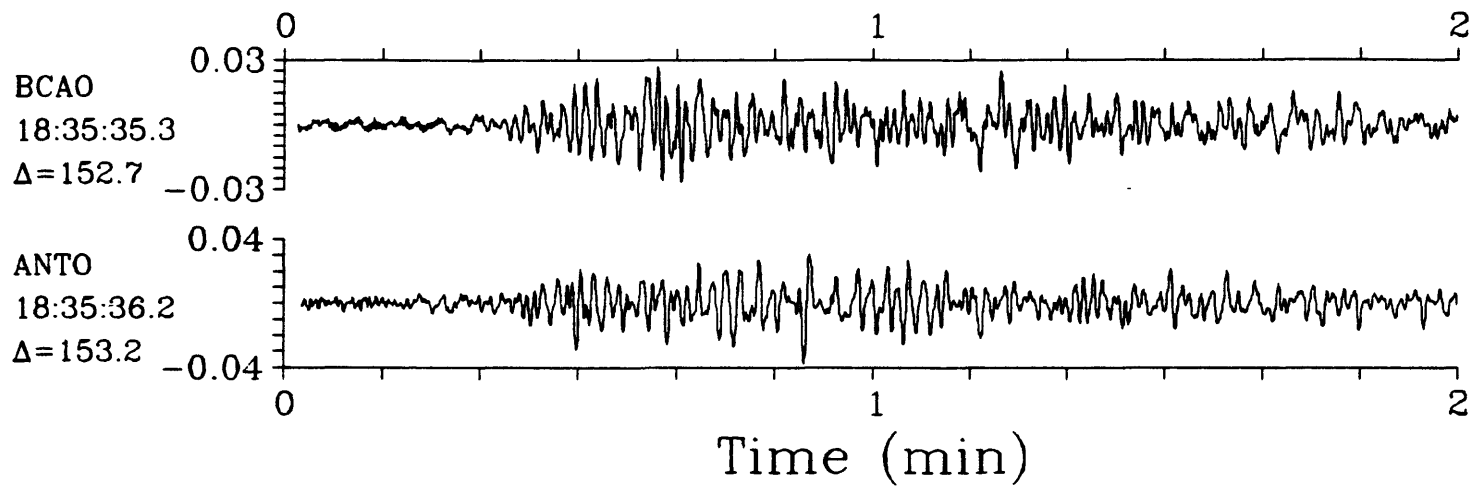
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.1$ $M_{SZ}=5.5$ 

SPZ

20 October 1986 18:16:03.93

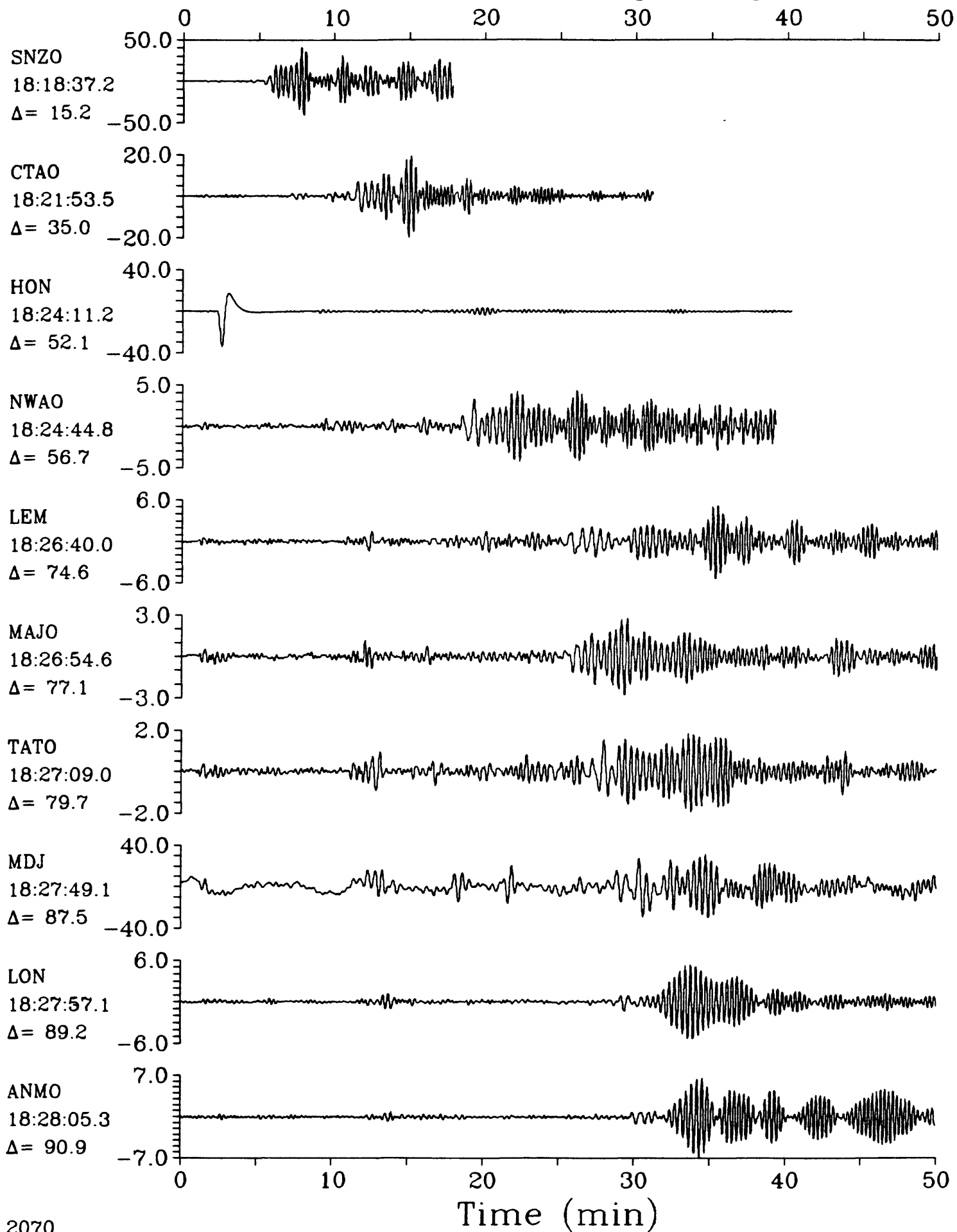
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.1$ $M_{sz}=5.5$ 

LPZ

20 October 1986 18:16:03.93

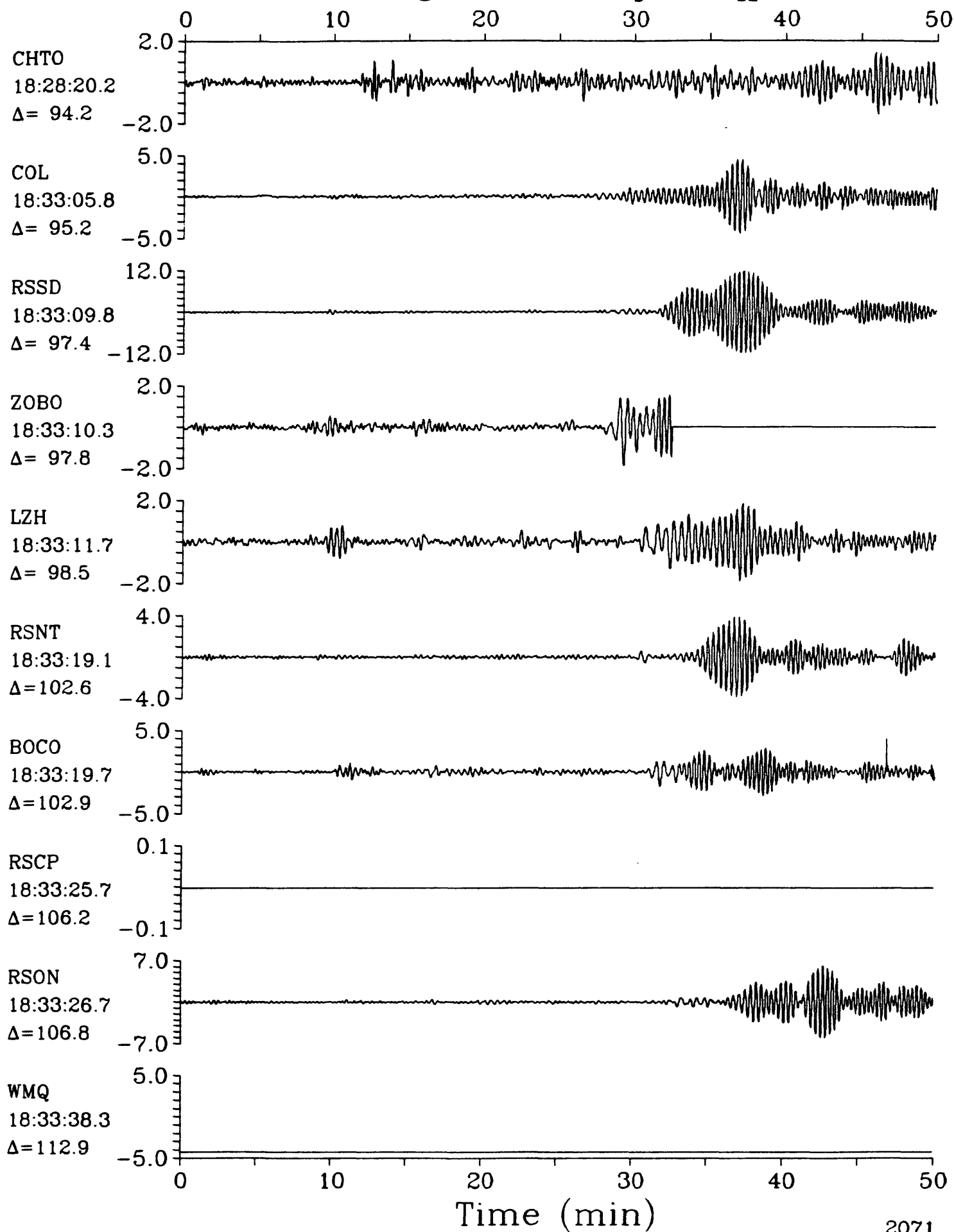
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.1$ $M_{sz}=5.5$ 

LPZ

20 October 1986 18:16:03.93

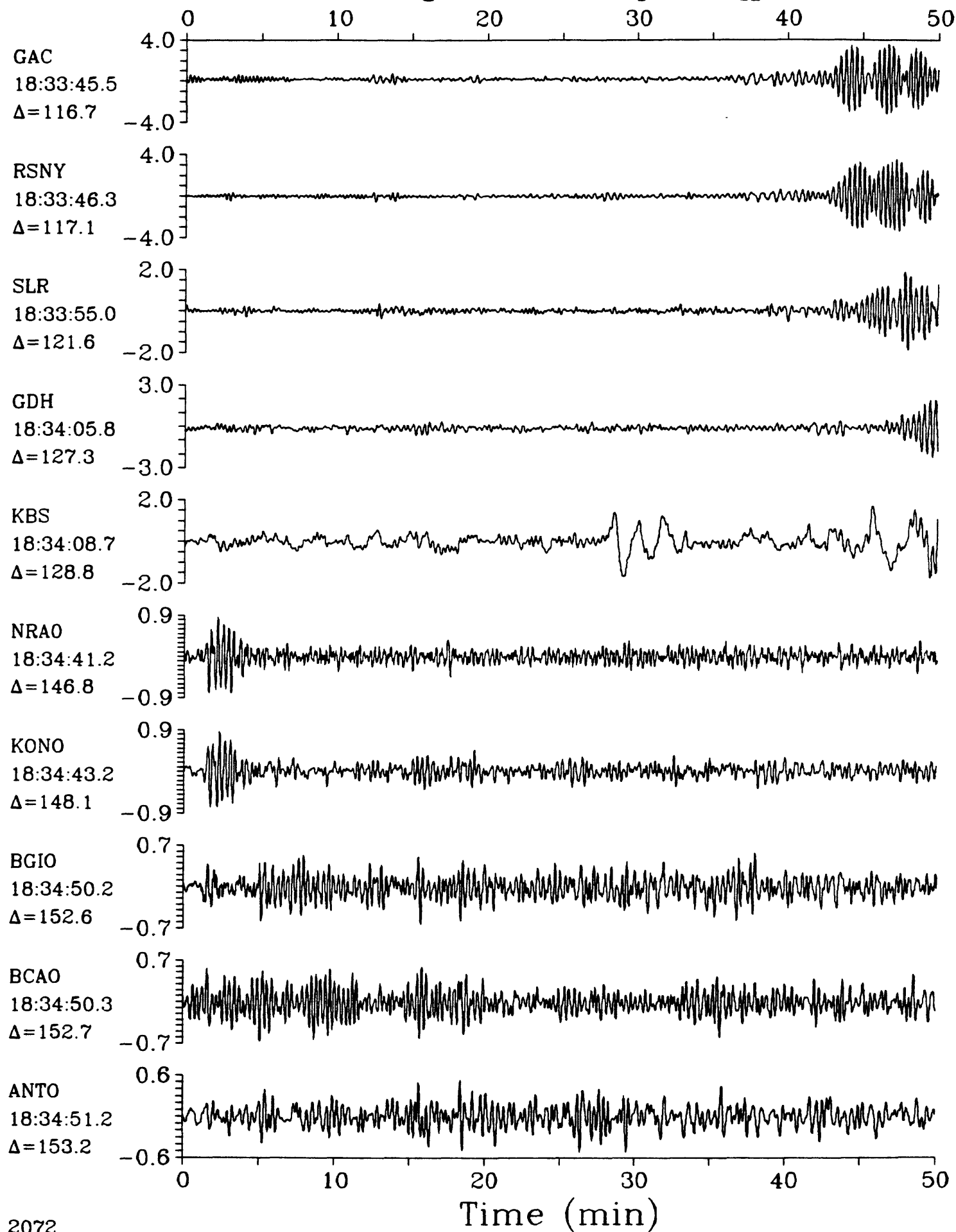
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.1$ $M_{sz}=5.5$ 

LPZ

20 October 1986 18:16:03.93

LPZ

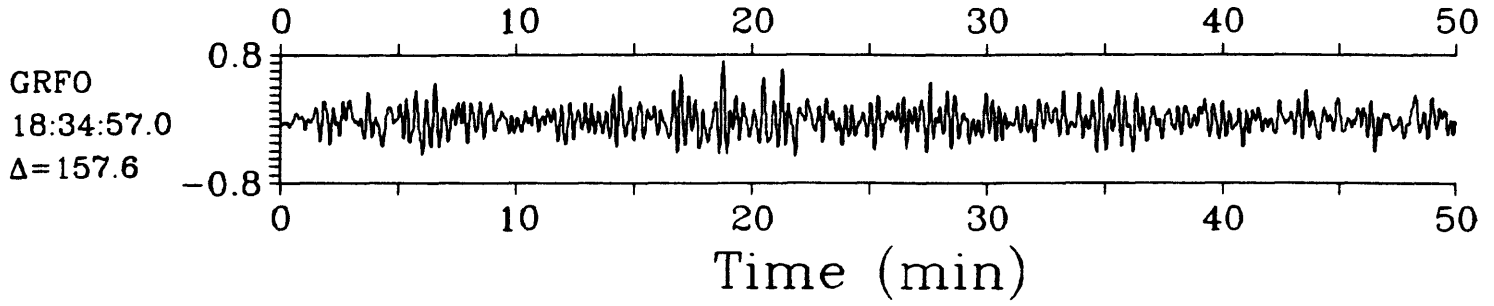
Kermadec Islands Region $h=33.0$ $m_b=5.1$ $M_{sz}=5.5$ 

LPZ

20 October 1986 18:16:03.93

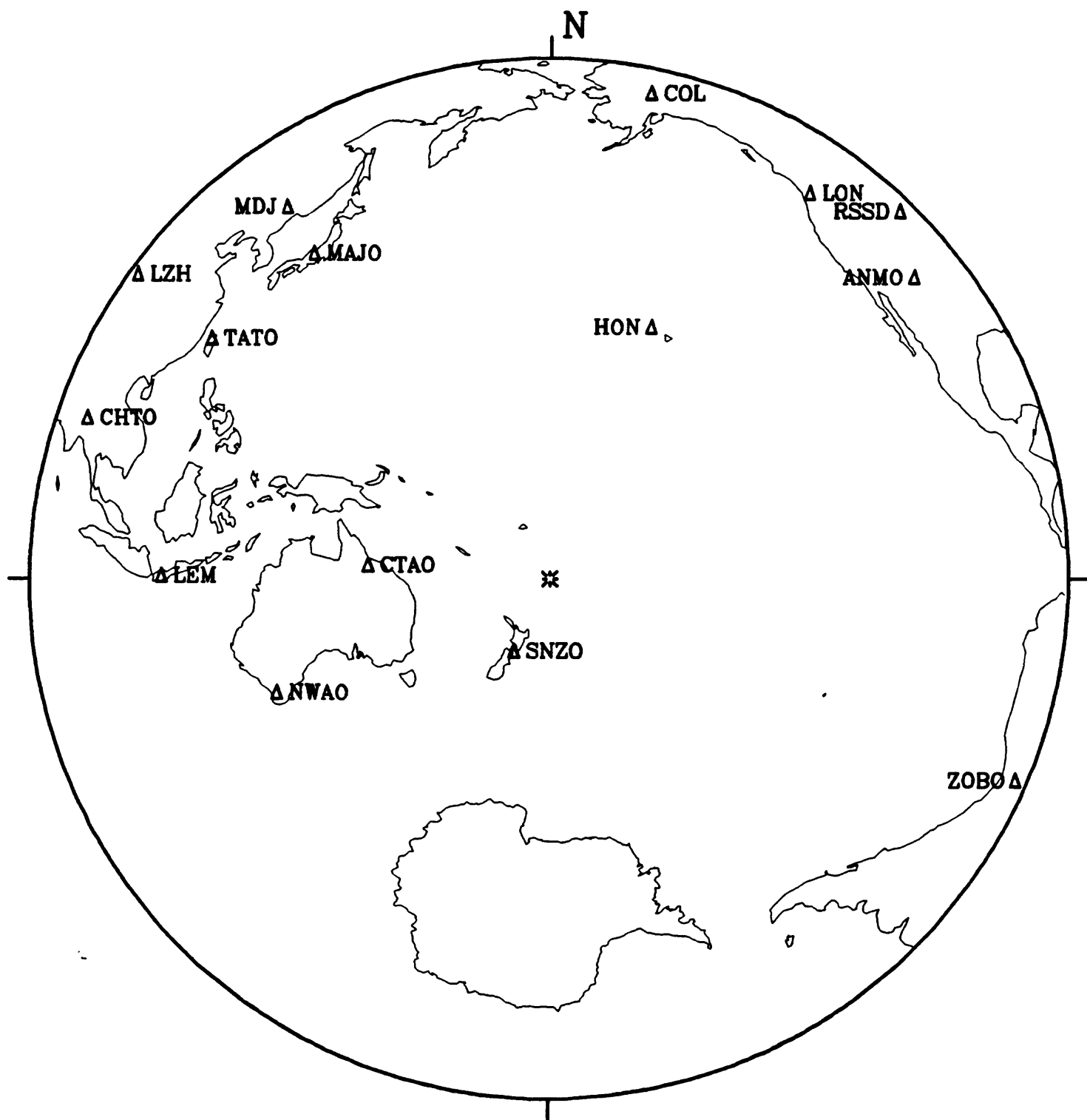
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.1$ $M_{sz}=5.5$



20 October 1986 19:39:15.69

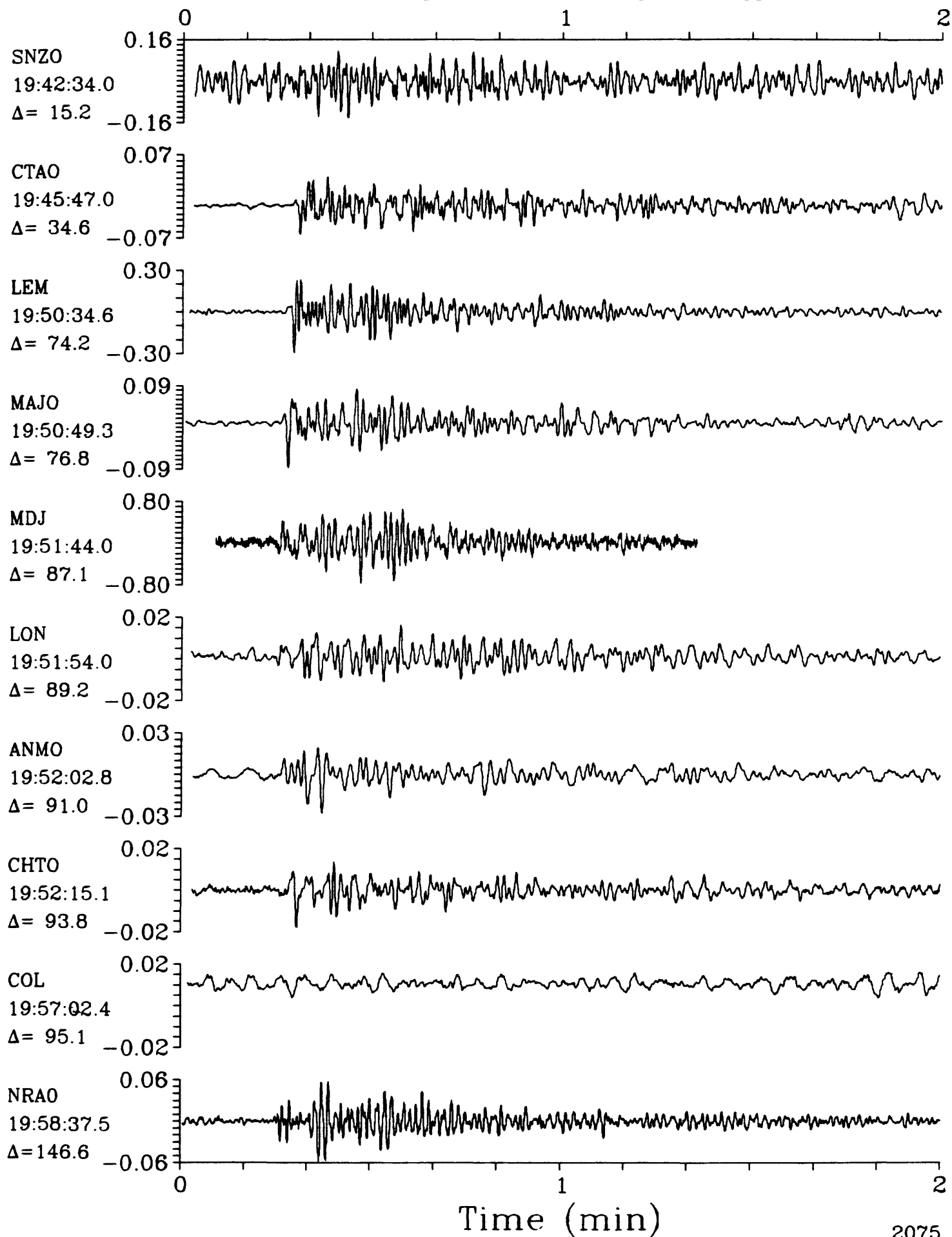
Kermadec Islands Region



SPZ

20 October 1986 19:39:15.69

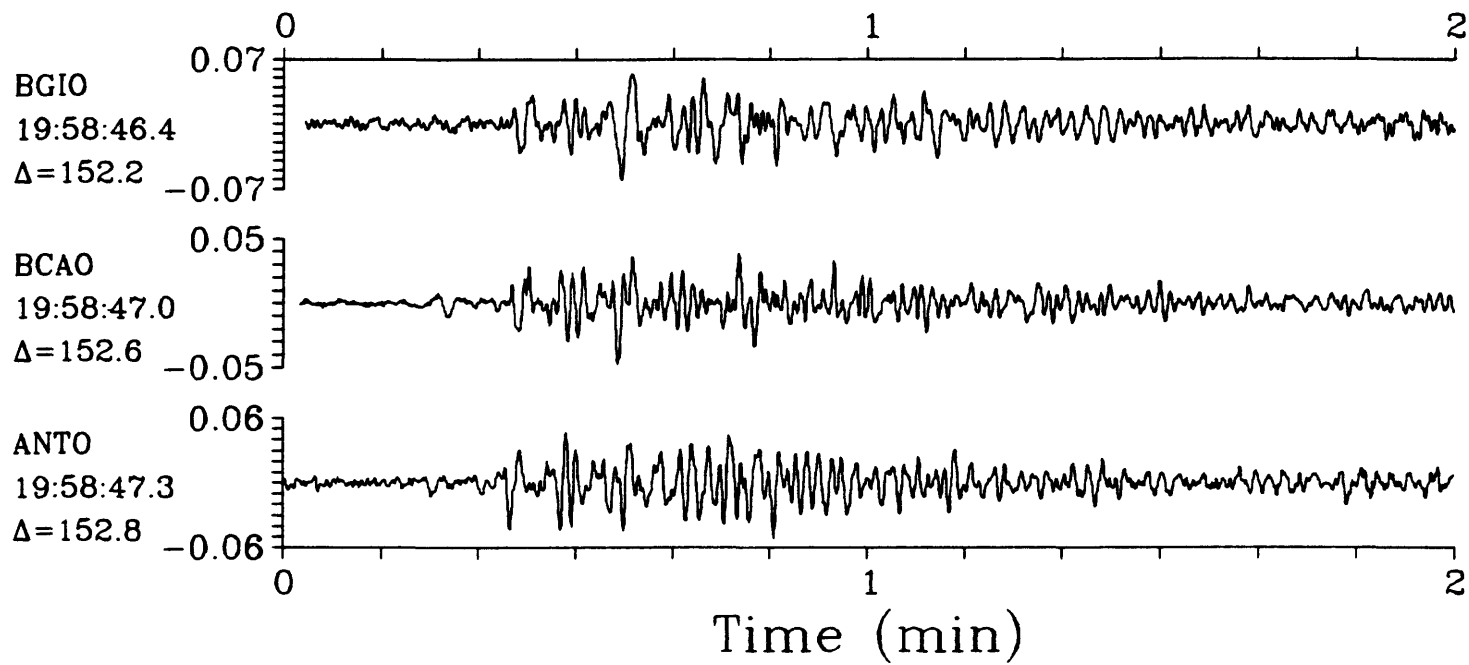
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{SZ}=5.4$ 

SPZ

20 October 1986 19:39:15.69

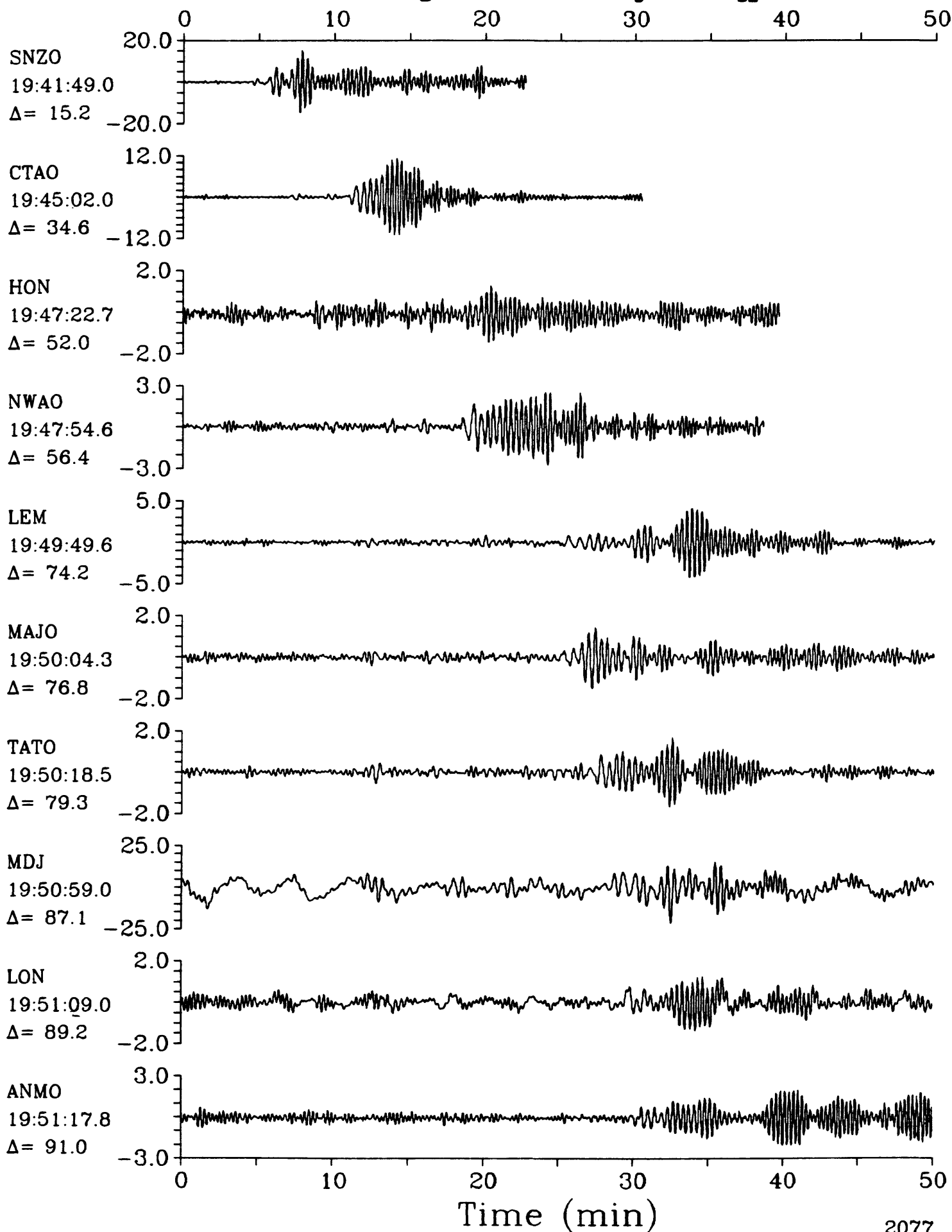
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{SZ}=5.4$ 

LPZ

20 October 1986 19:39:15.69

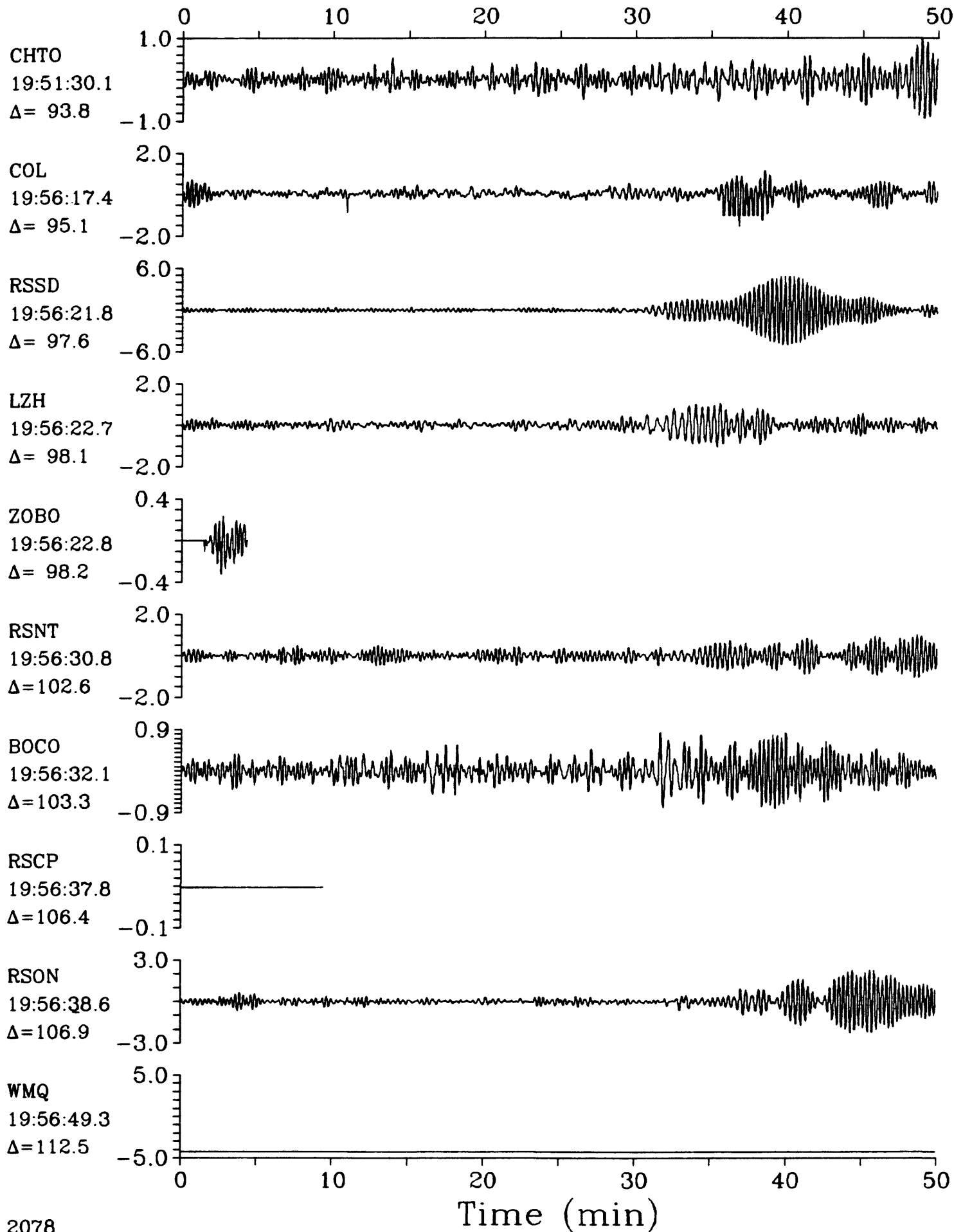
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.4$ 

LPZ

20 October 1986 19:39:15.69

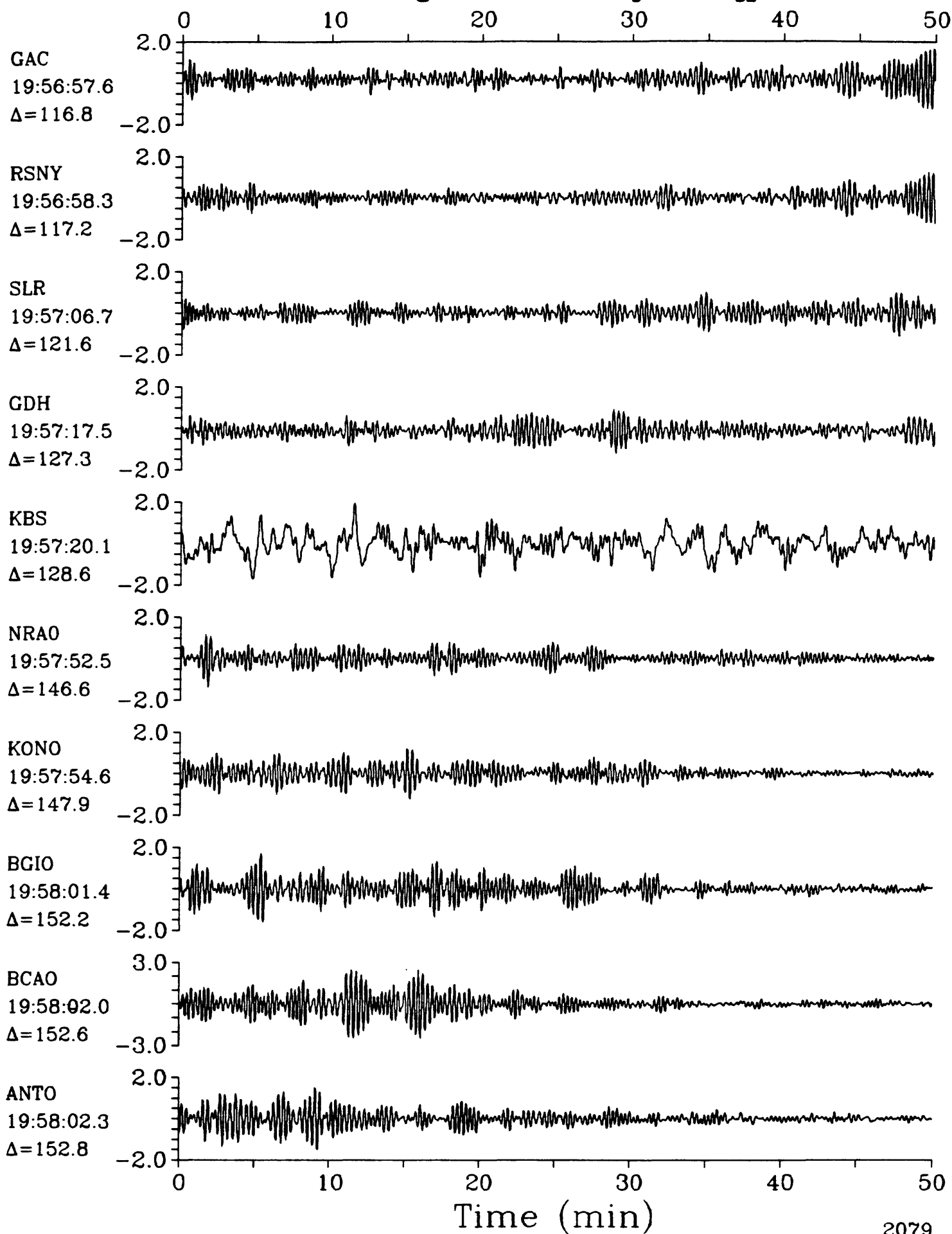
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.4$ 

LPZ

20 October 1986 19:39:15.69

LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.4$ 

LPZ

20 October 1986 19:39:15.69

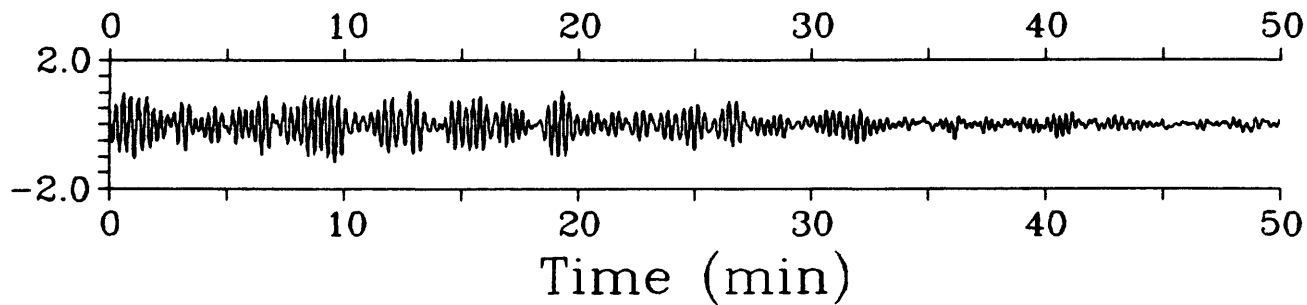
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.4$

GRFO

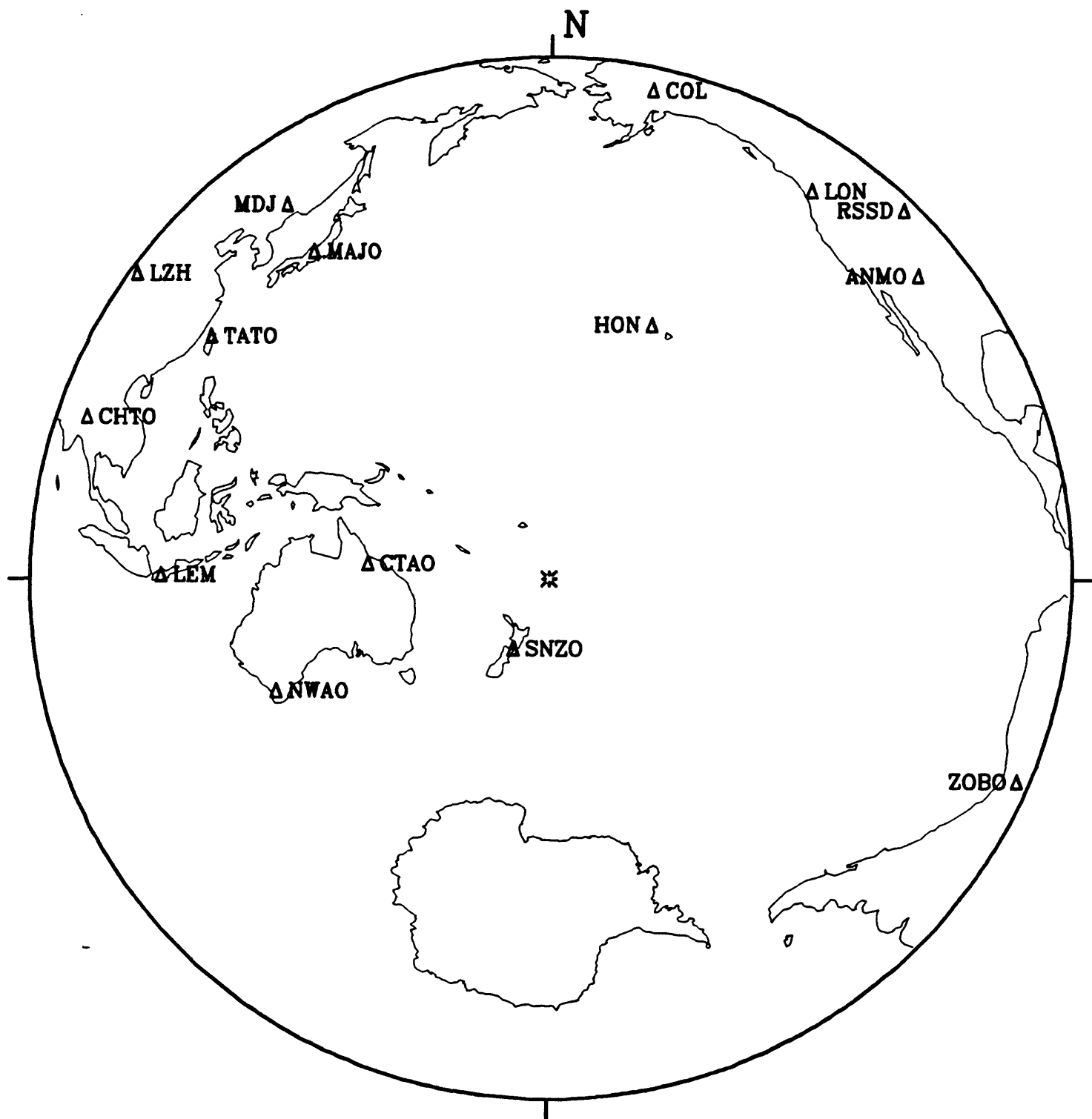
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$\Delta=157.3$



20 October 1986 21:23:10.70

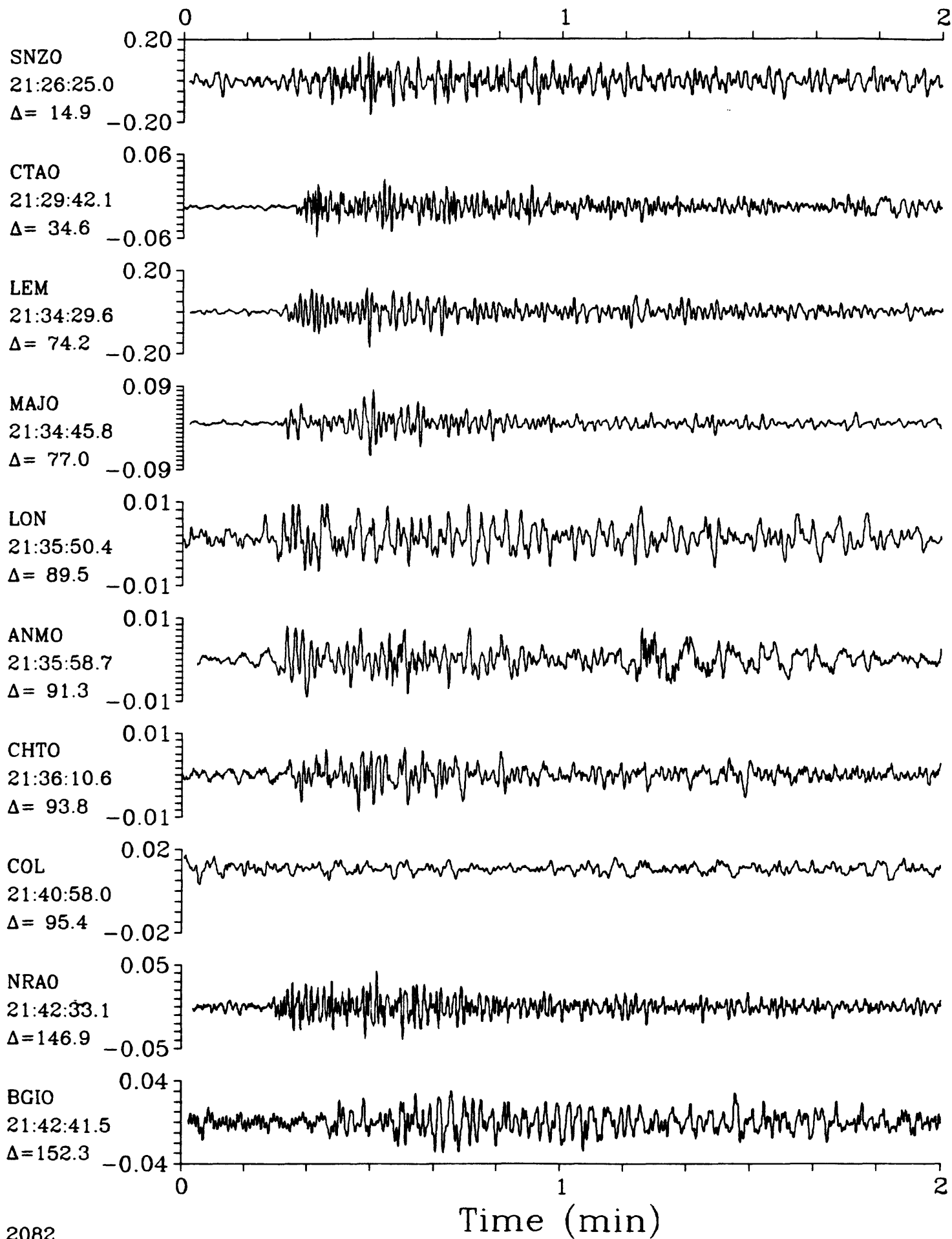
Kermadec Islands Region



SPZ

20 October 1986 21:23:10.70

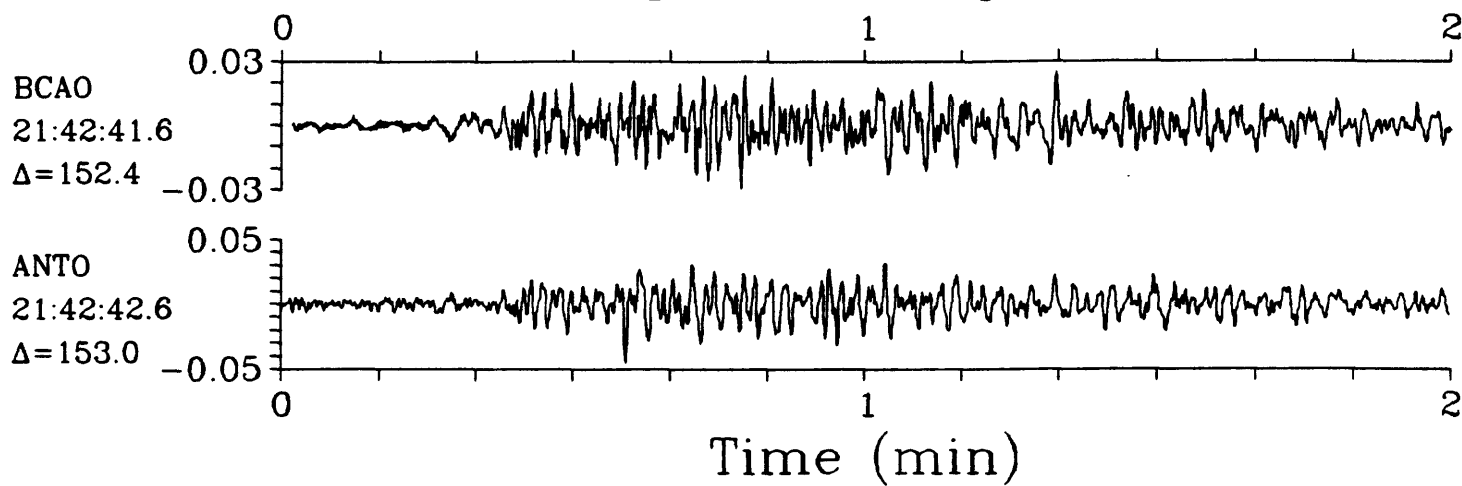
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.4$ $M_{sz}=5.5$ 

SPZ

20 October 1986 21:23:10.70

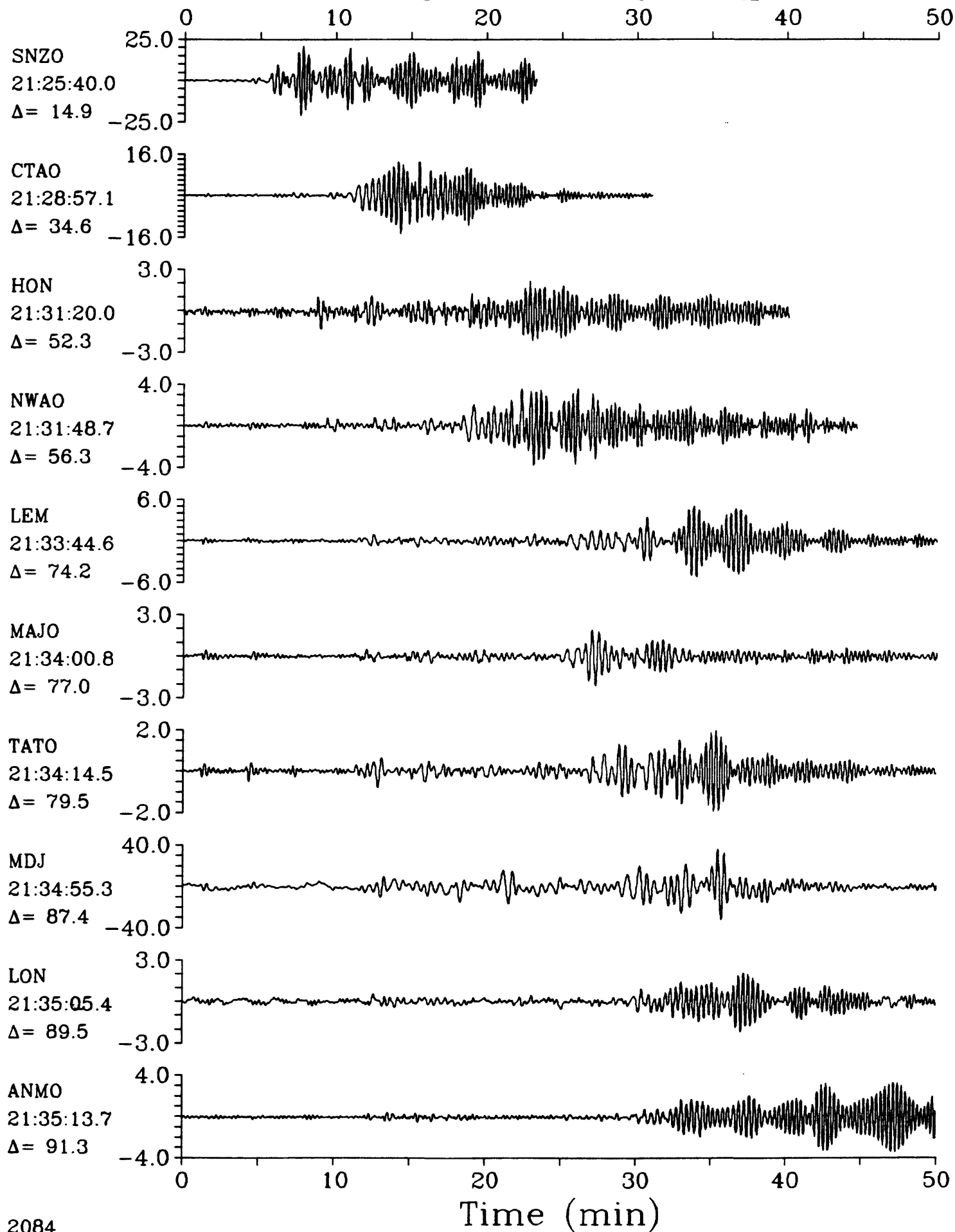
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

20 October 1986 21:23:10.70

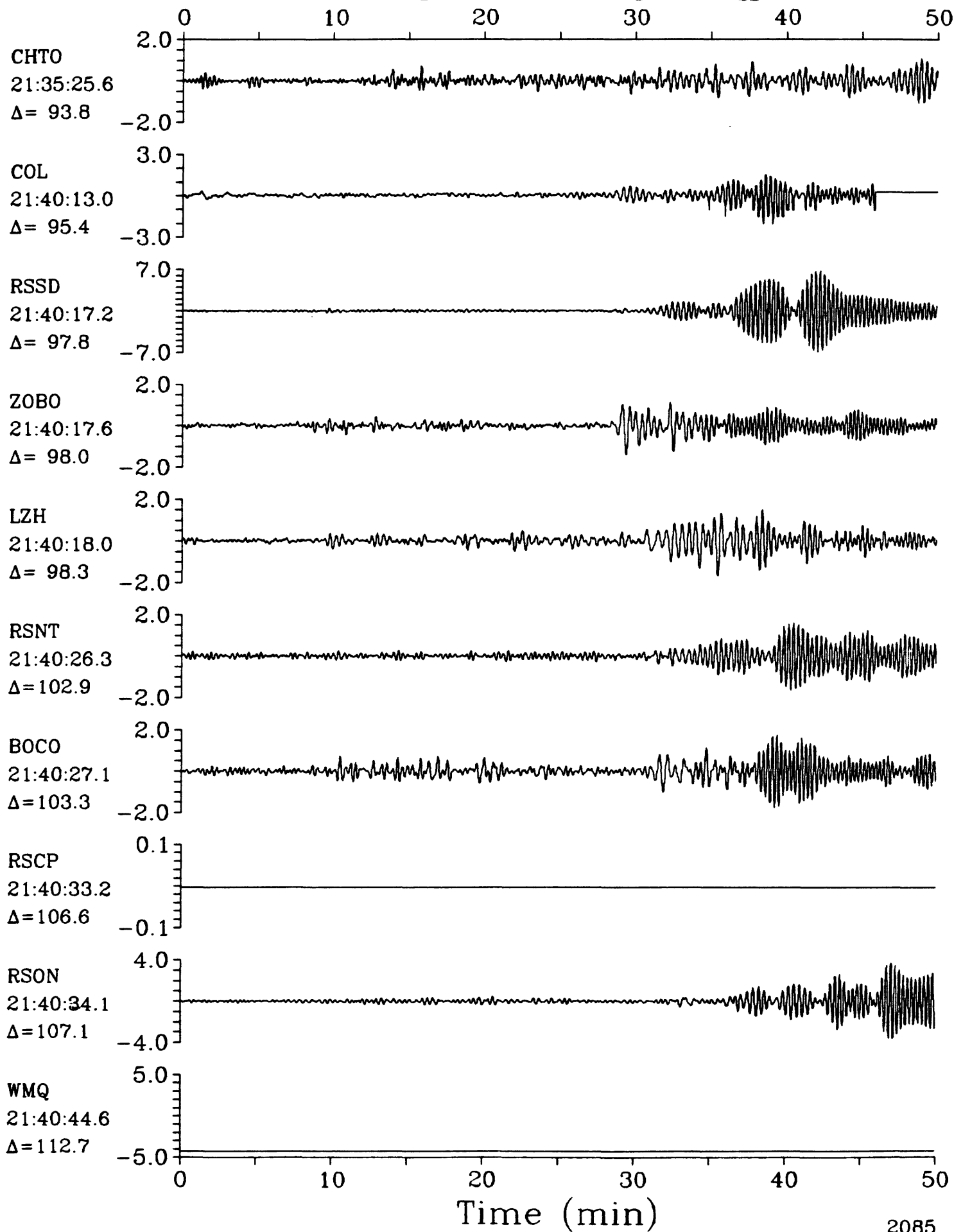
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

20 October 1986 21:23:10.70

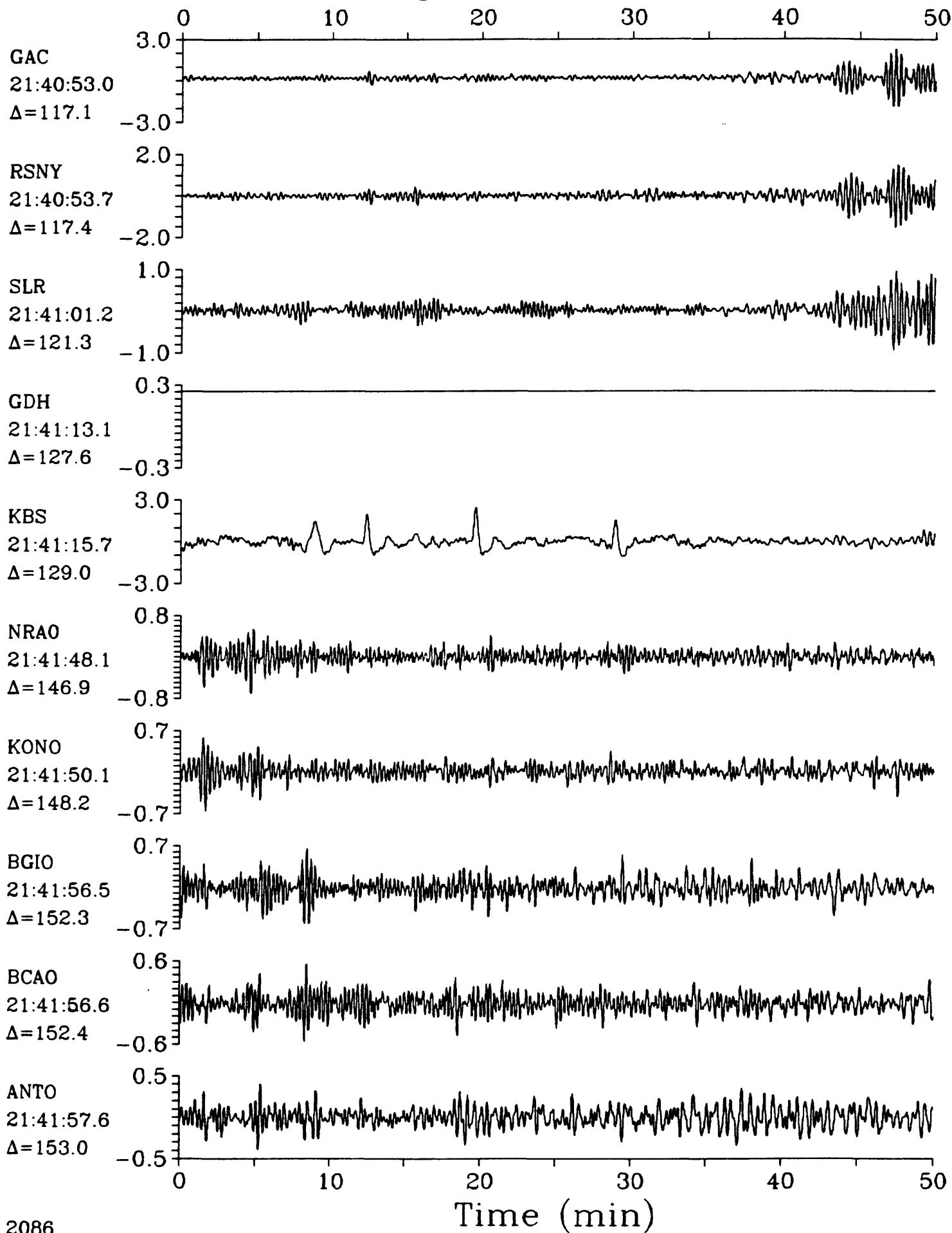
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

20 October 1986 21:23:10.70

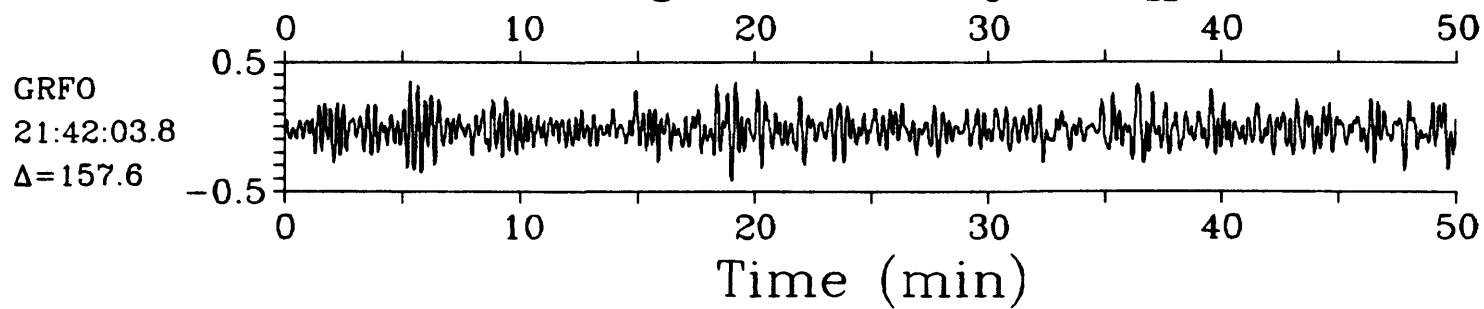
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.4$ $M_{SZ}=5.5$ 

LPZ

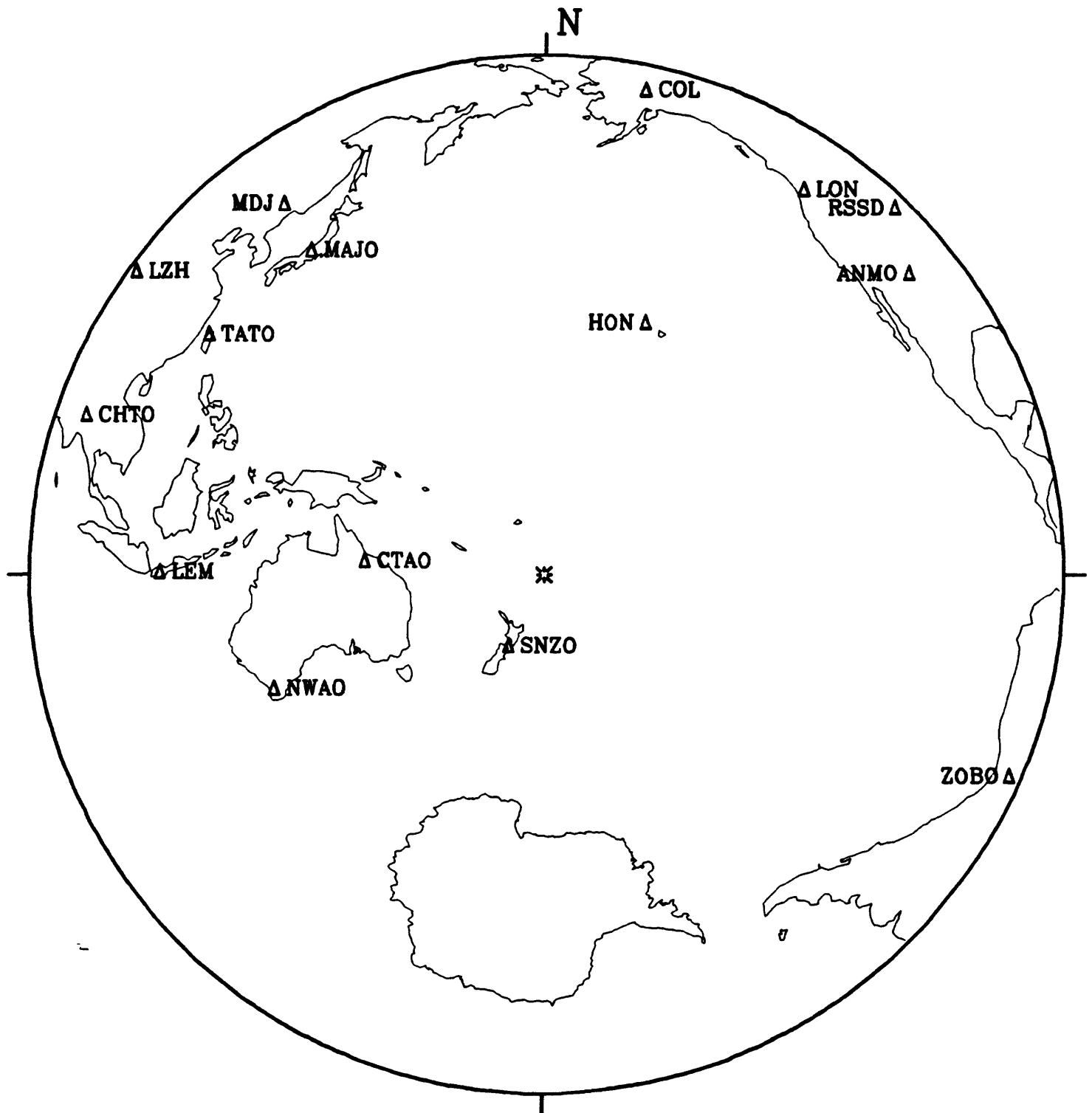
20 October 1986 21:23:10.70

LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.4$ $M_{sz}=5.5$ 

20 October 1986 21:26:17.57

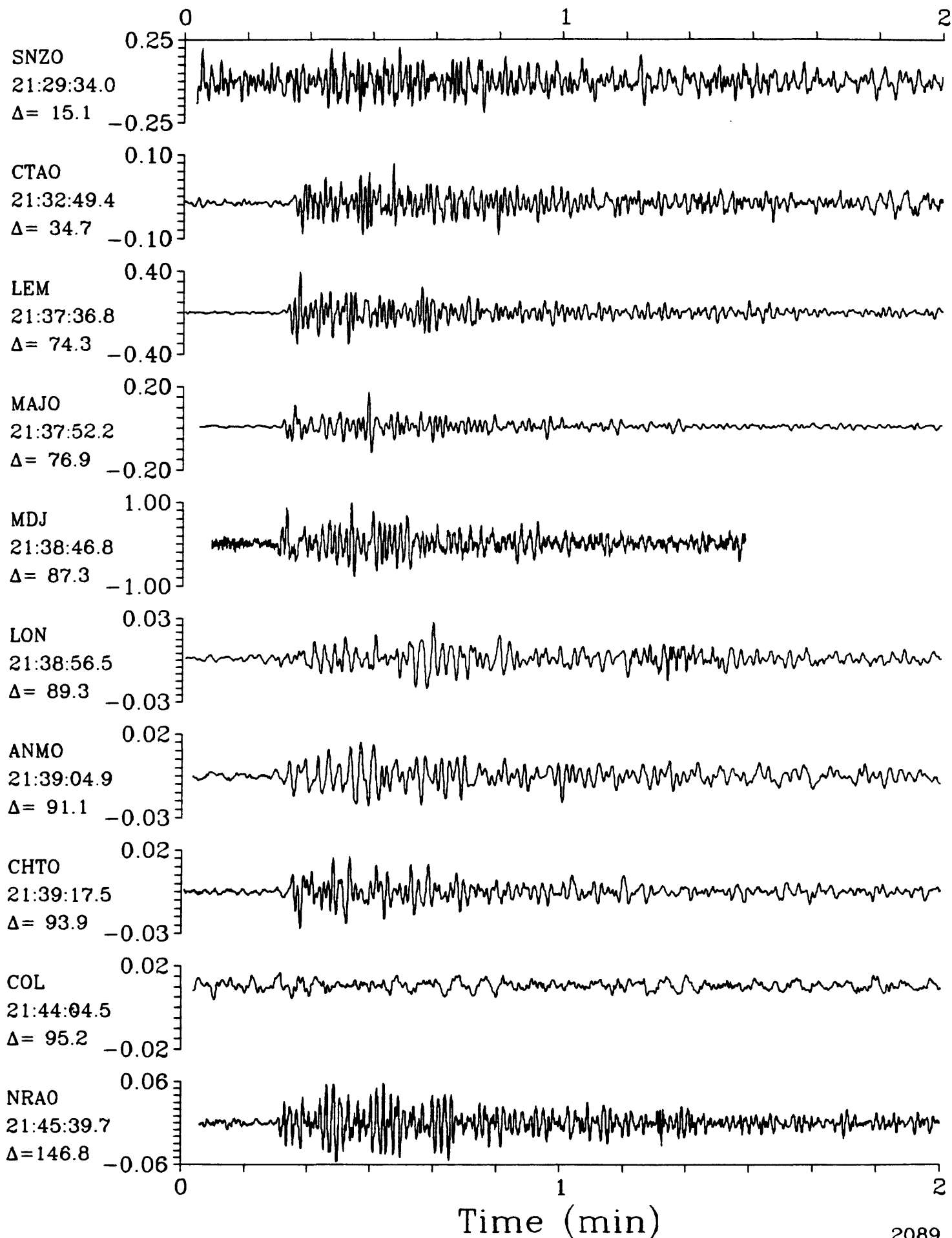
Kermadec Islands Region



SPZ

20 October 1986 21:26:17.57

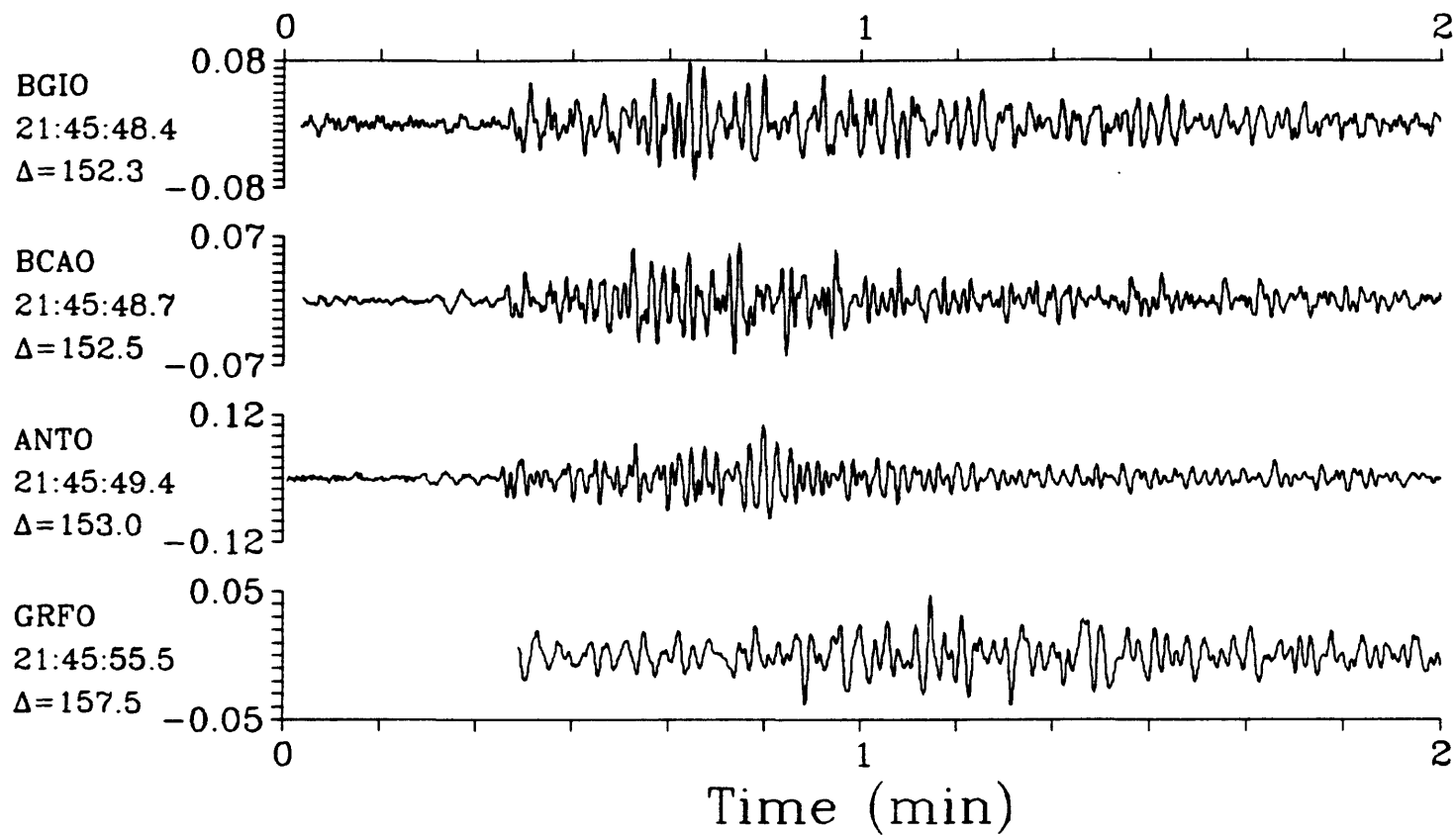
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.6$ 

SPZ

20 October 1986 21:26:17.57

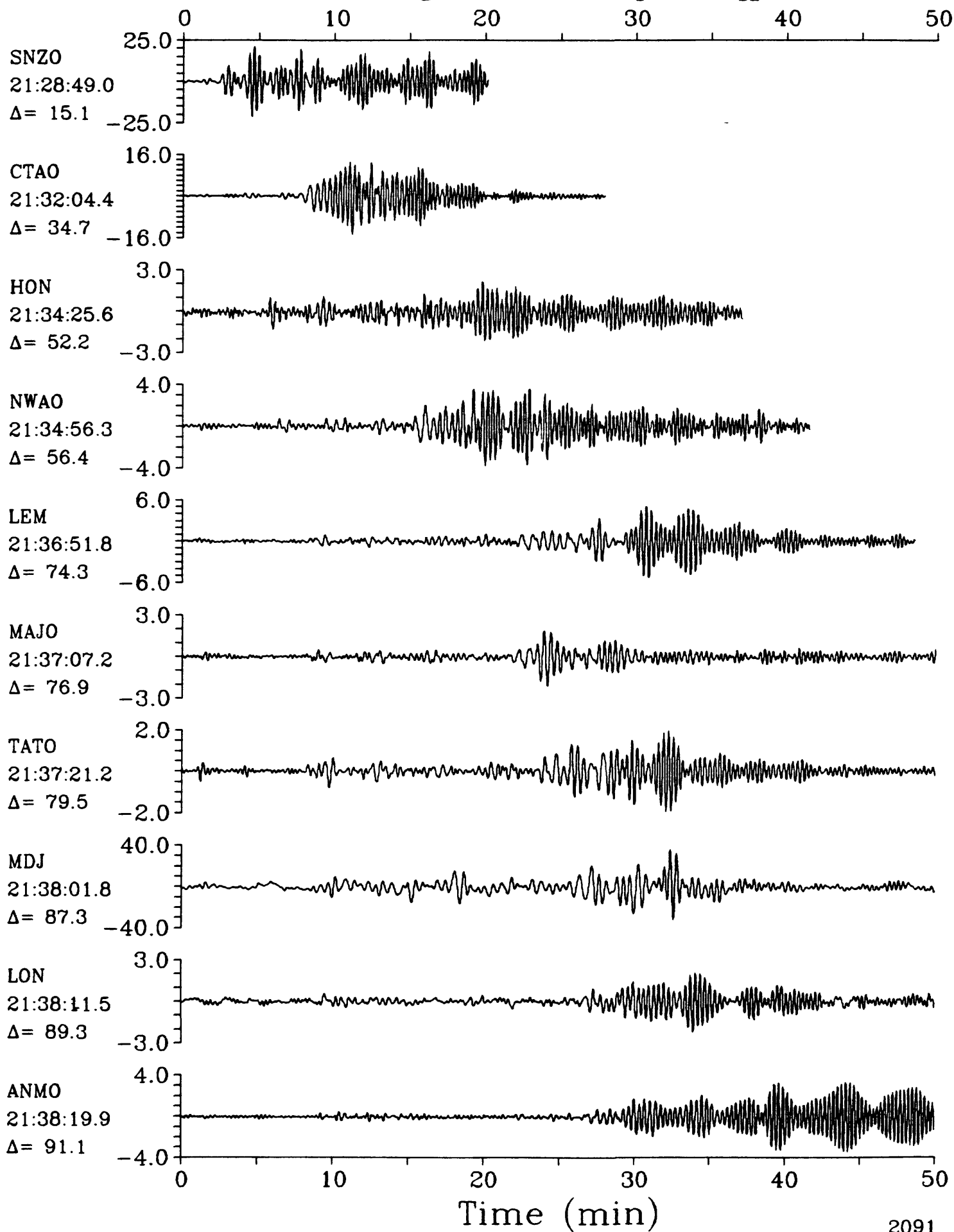
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.6$ 

LPZ

20 October 1986 21:26:17.57

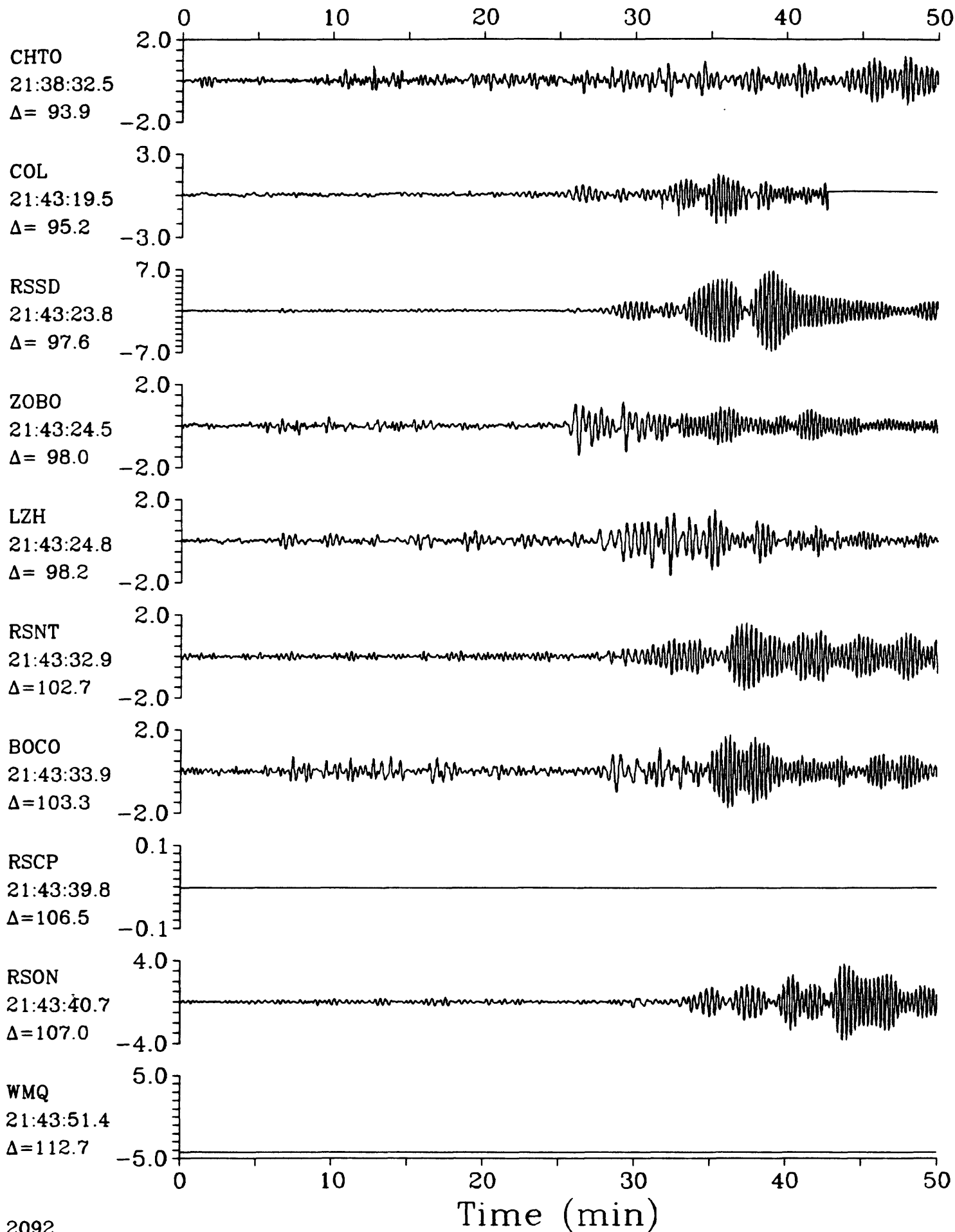
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{SZ}=5.6$ 

LPZ

20 October 1986 21:26:17.57

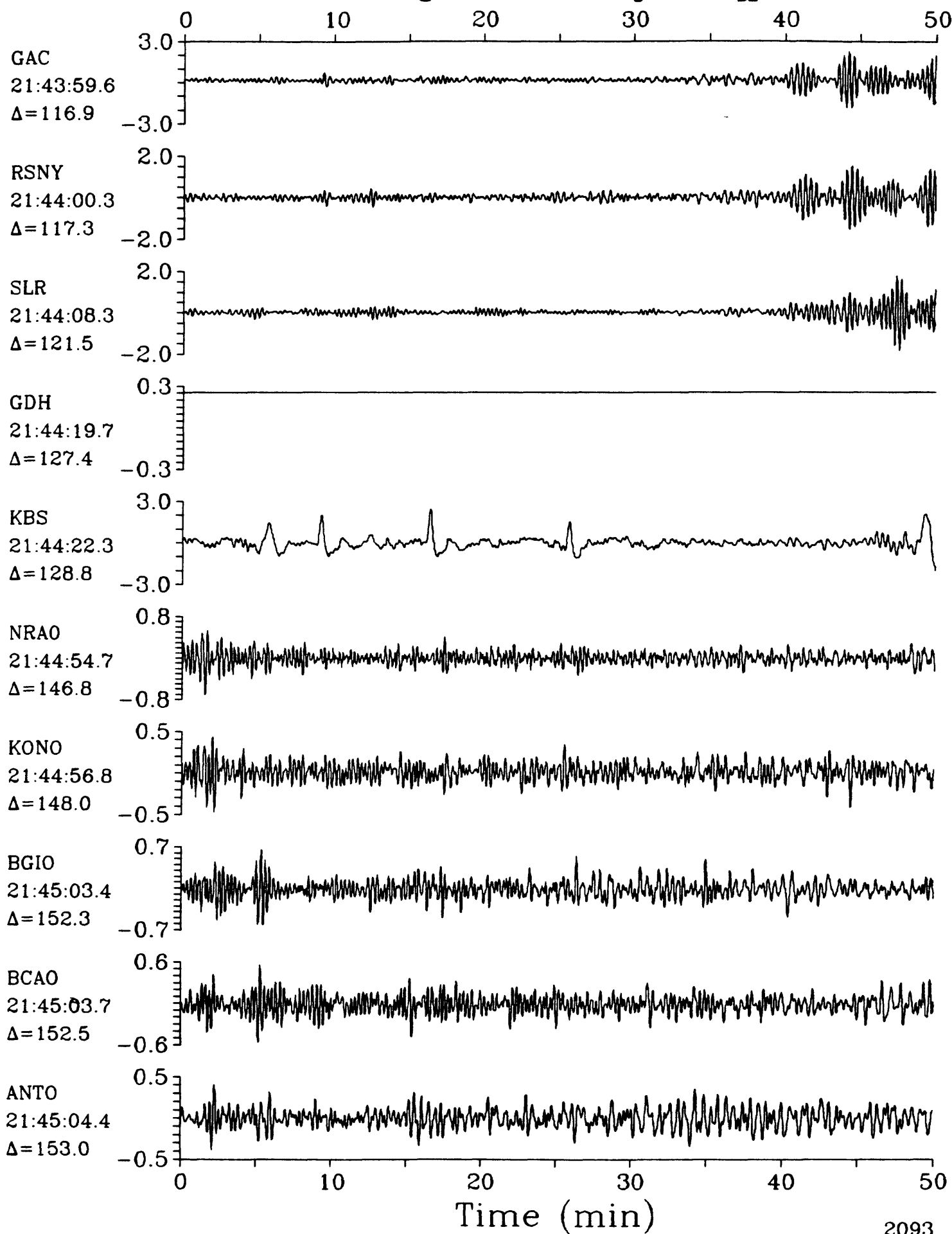
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.6$ 

LPZ

20 October 1986 21:26:17.57

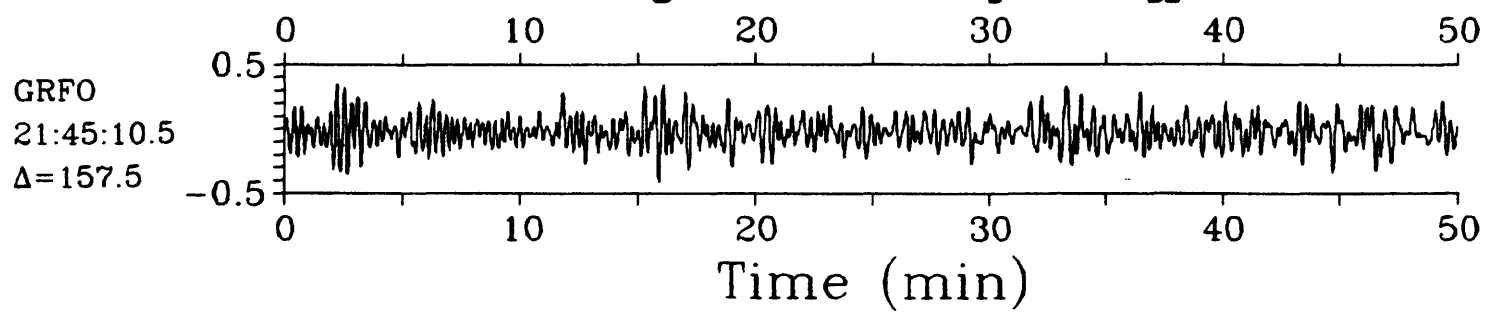
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.6$ 

LPZ

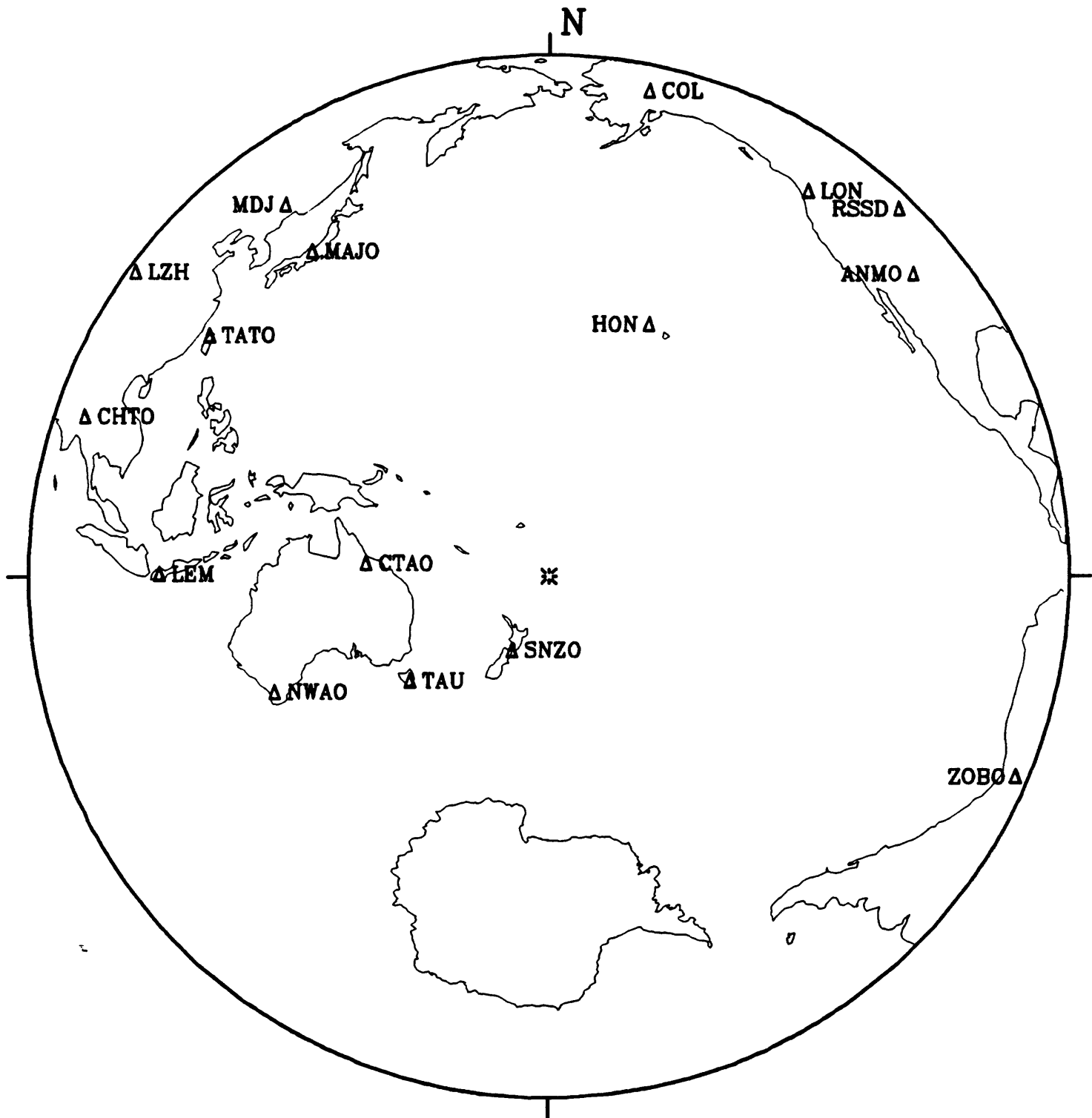
20 October 1986 21:26:17.57

LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=5.6$ 

21 October 1986 00:43:41.58

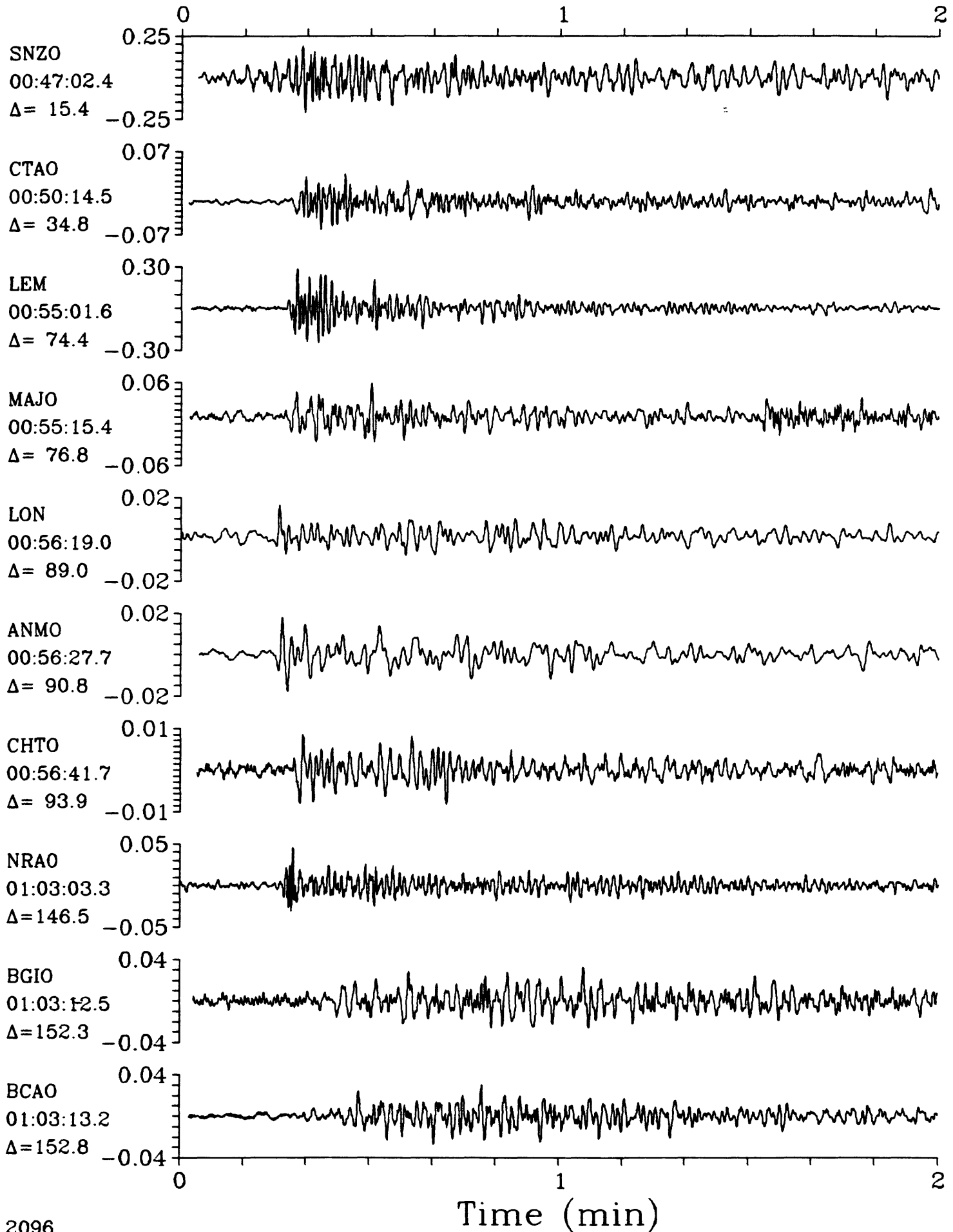
Kermadec Islands Region



SPZ

21 October 1986 00:43:41.58

SPZ

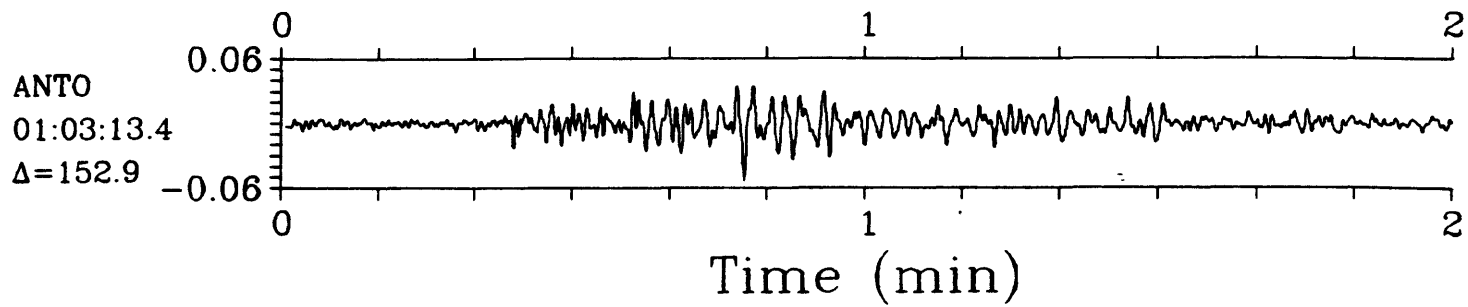
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SPZ

21 October 1986 00:43:41.58

SPZ

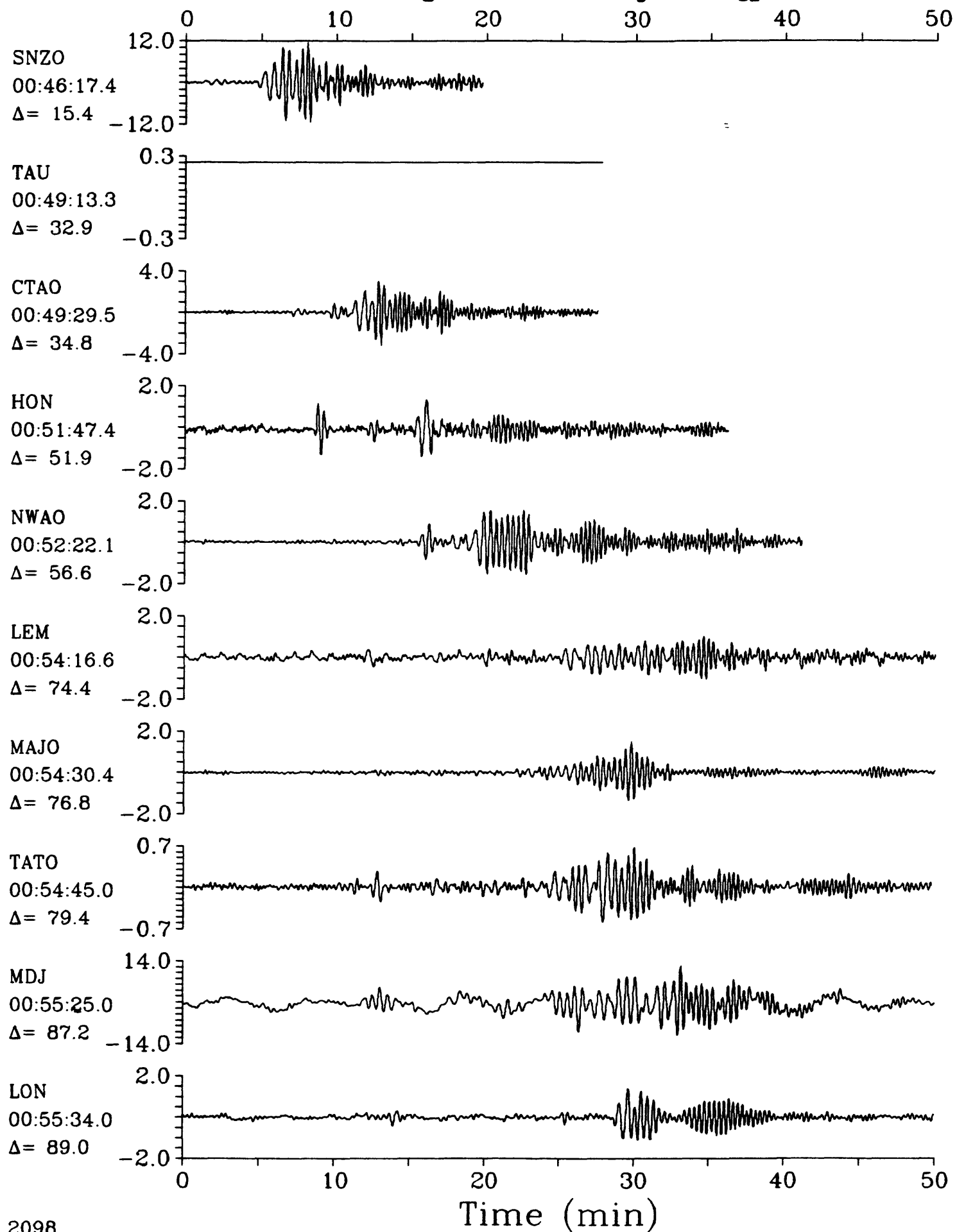
Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{SZ}=5.1$



LPZ

21 October 1986 00:43:41.58

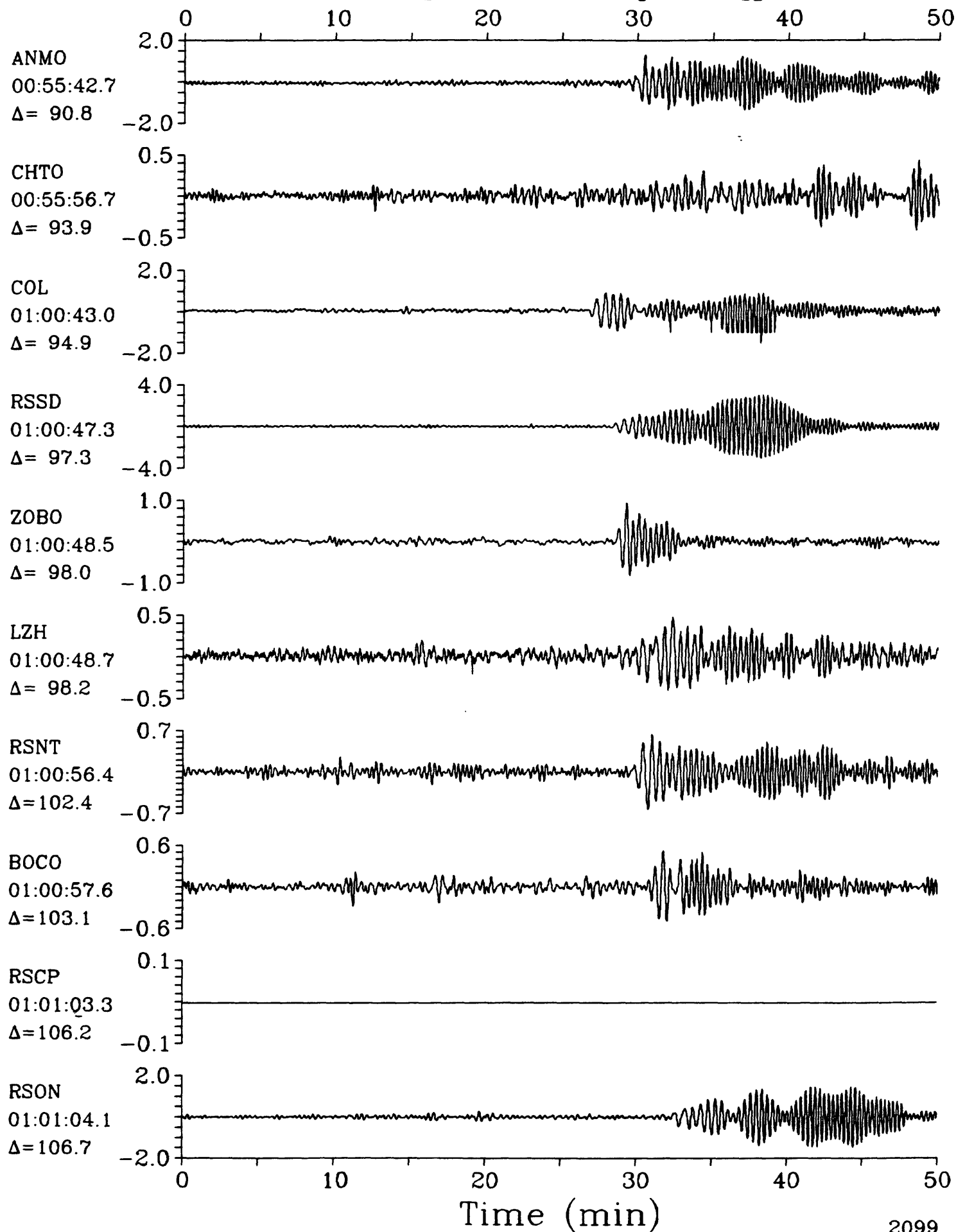
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{SZ}=5.1$ 

LPZ

21 October 1986 00:43:41.58

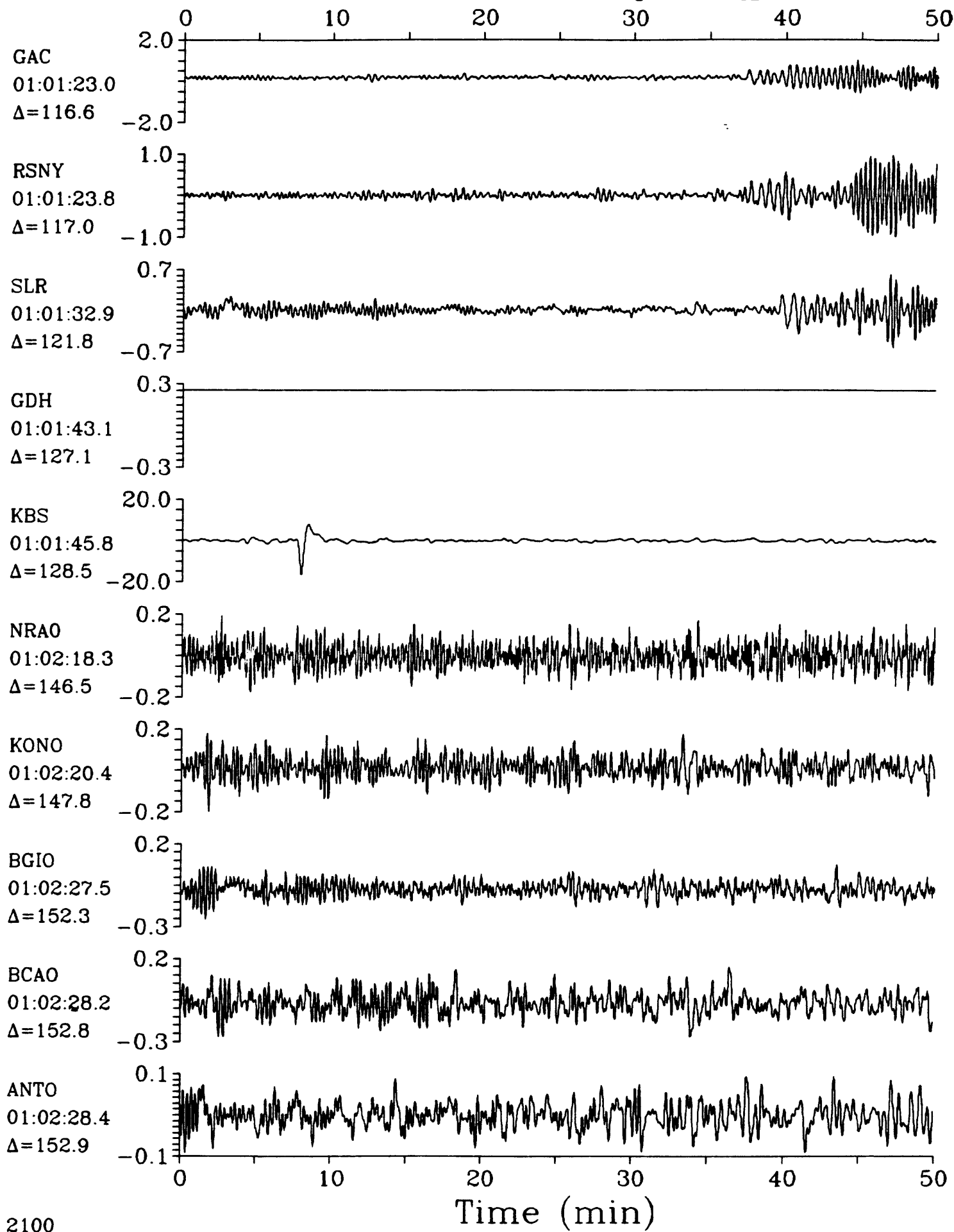
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{sz}=5.1$ 

LPZ

21 October 1986 00:43:41.58

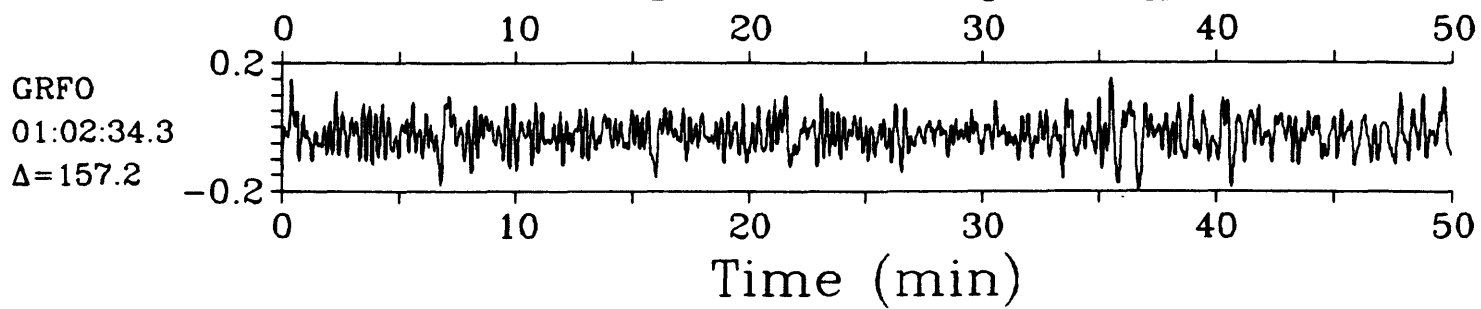
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{sz}=5.1$ 

LPZ

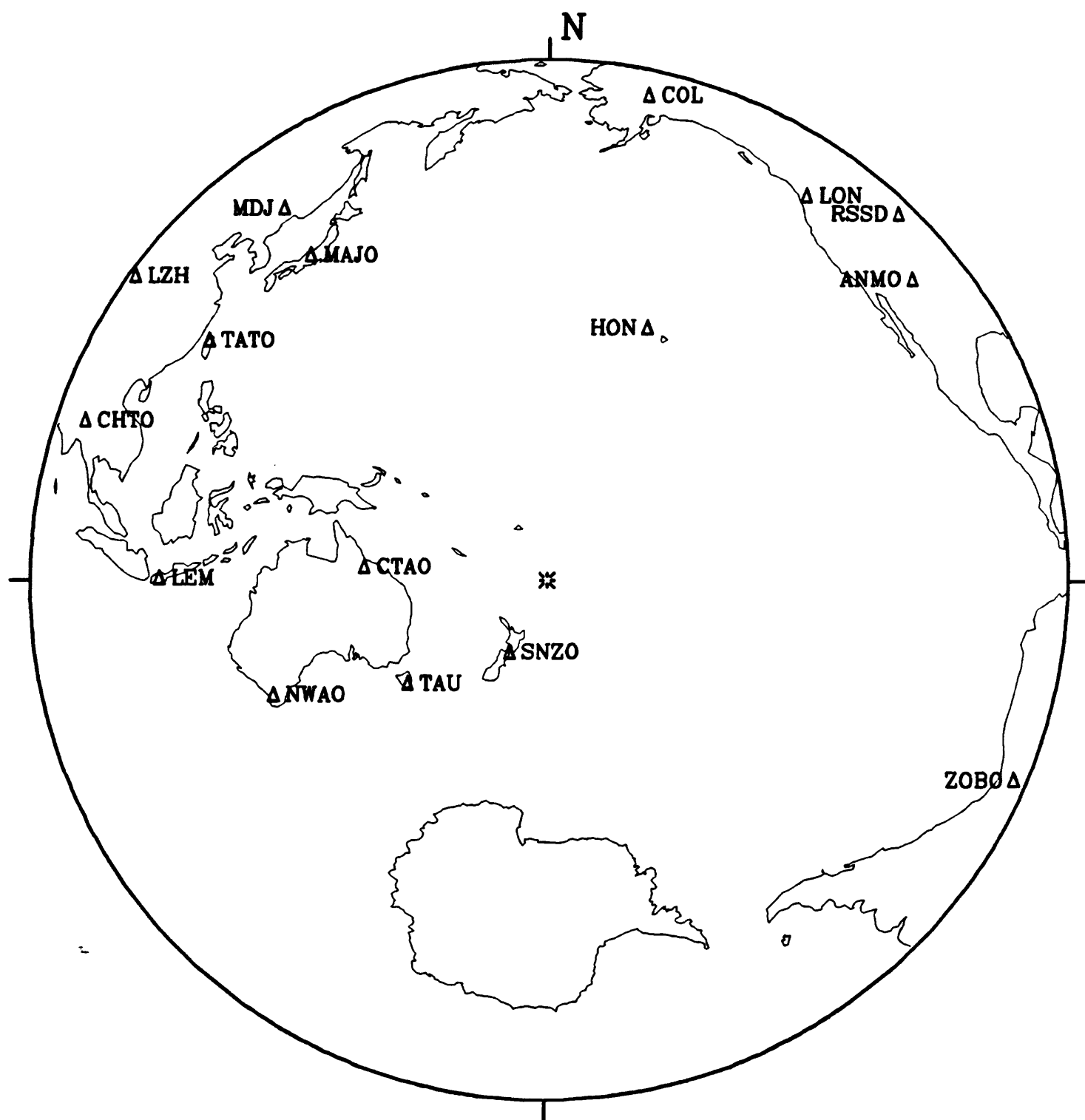
21 October 1986 00:43:41.58

LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.5$ $M_{sz}=5.1$ 

21 October 1986 05:51:59.66

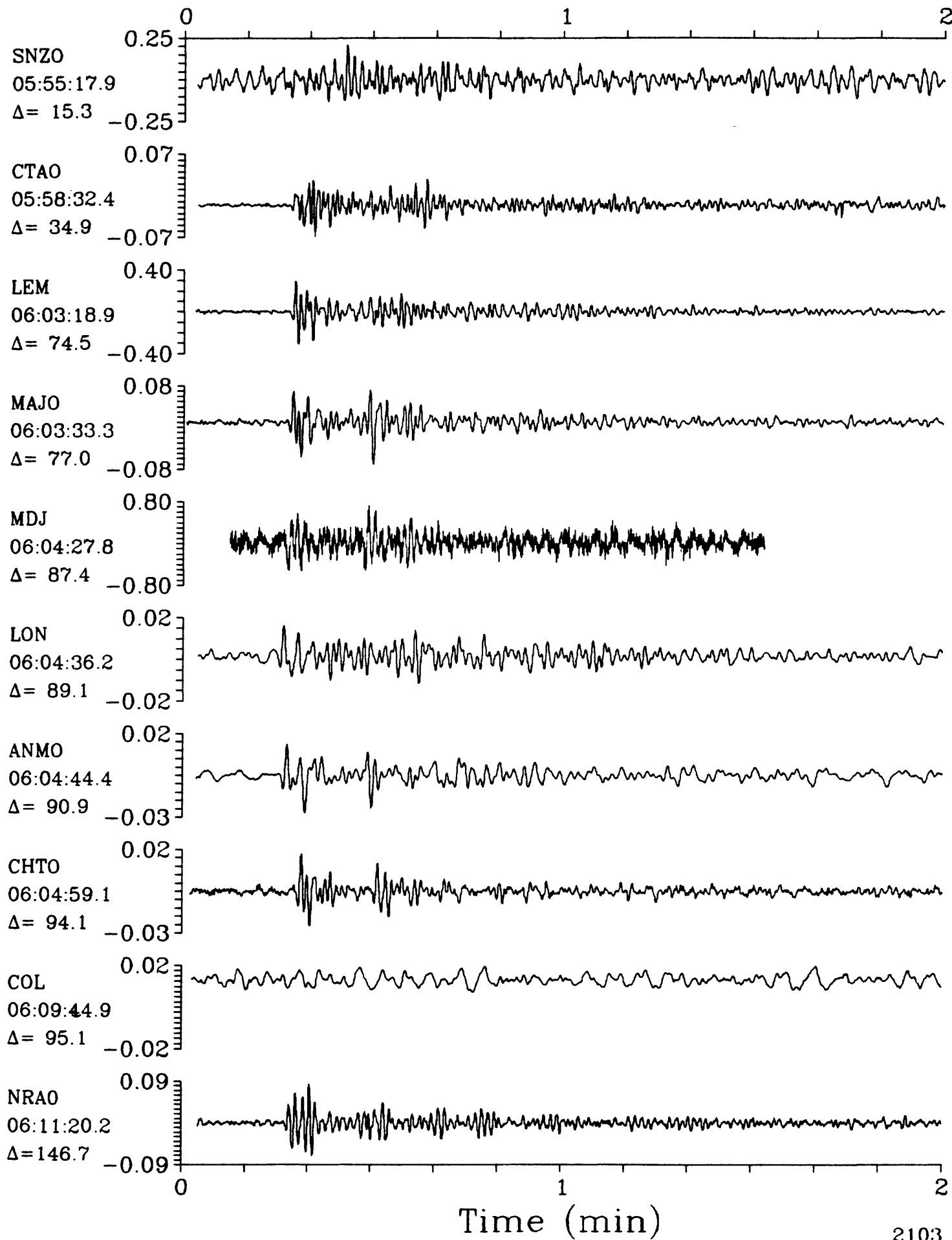
Kermadec Islands Region



SPZ

21 October 1986 05:51:59.66

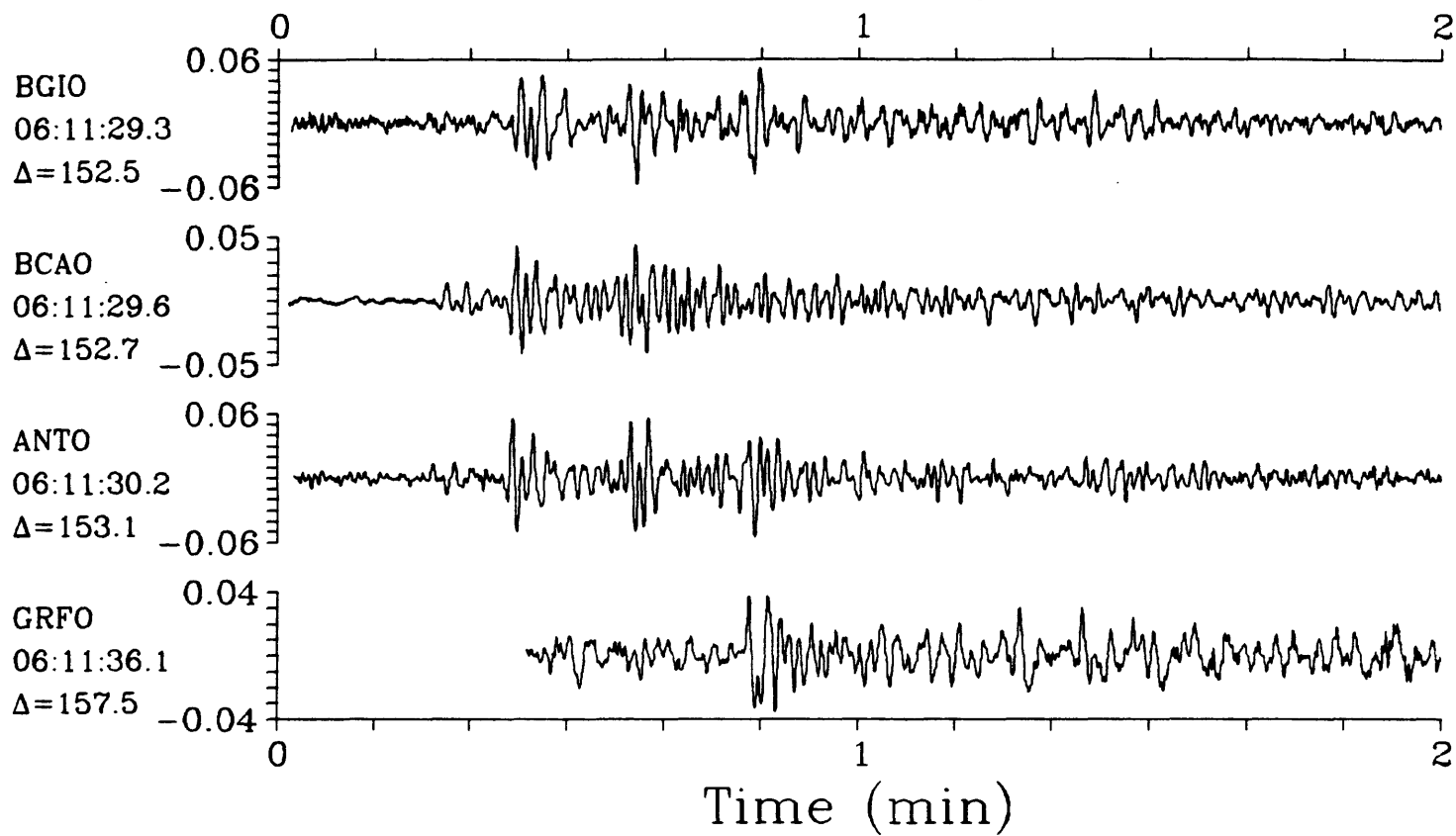
SPZ

Kermadec Islands Region $h=45.1$ $m_b=5.6$ $M_{sz}=4.9$ 

SPZ

21 October 1986 05:51:59.66

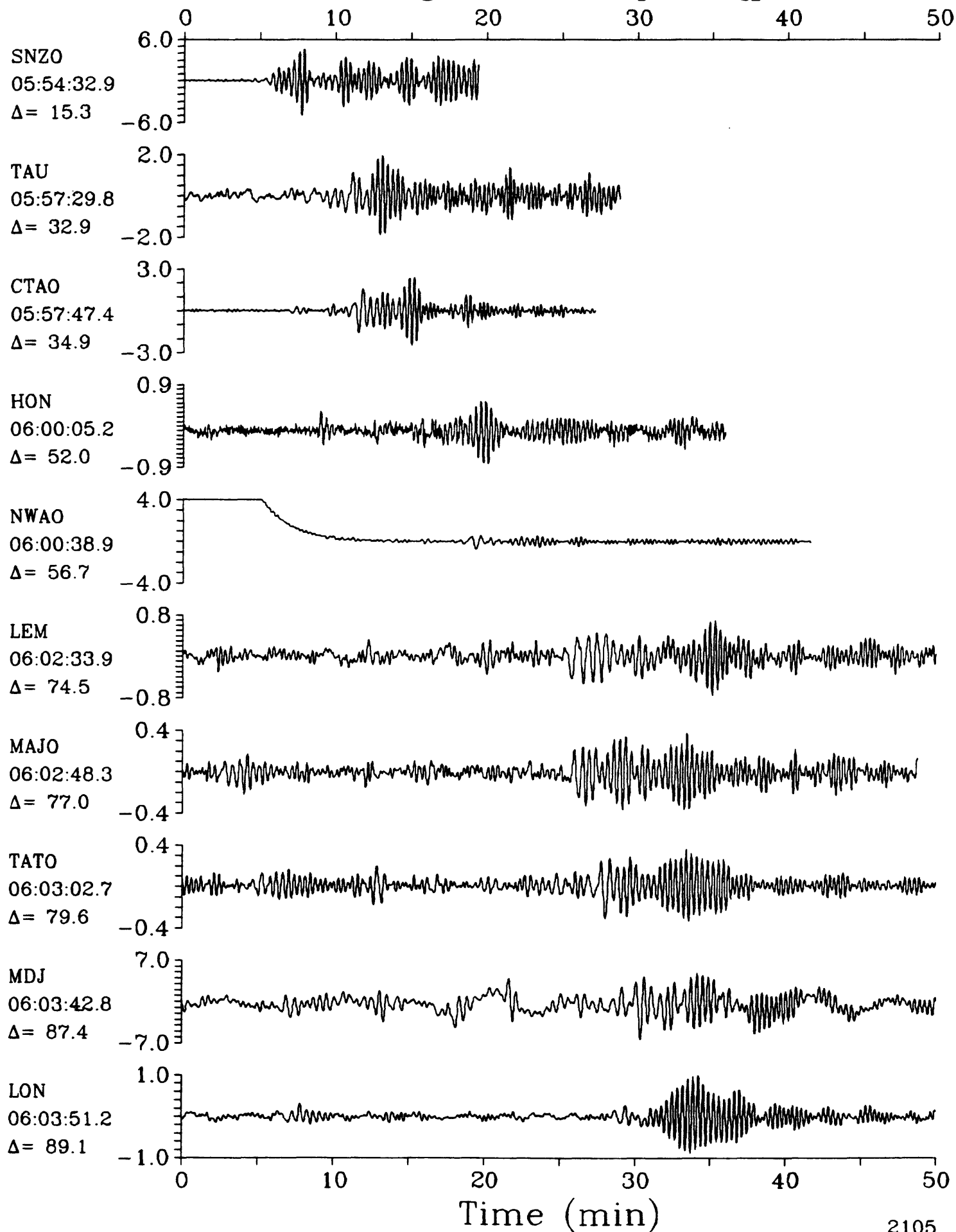
SPZ

Kermadec Islands Region $h=45.1$ $m_b=5.6$ $M_{sz}=4.9$ 

LPZ

21 October 1986 05:51:59.66

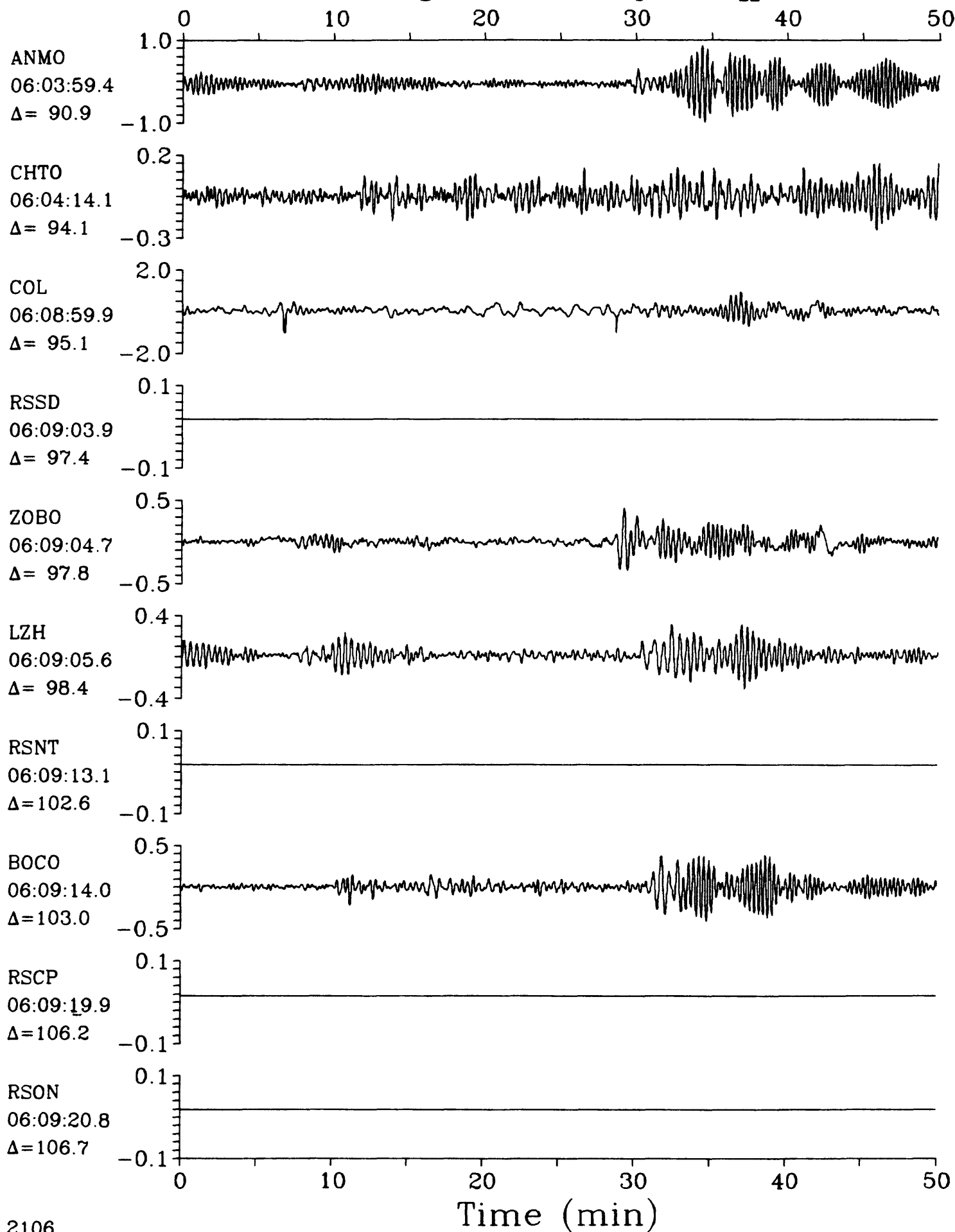
LPZ

Kermadec Islands Region $h=45.1$ $m_b=5.6$ $M_{SZ}=4.9$ 

LPZ

21 October 1986 05:51:59.66

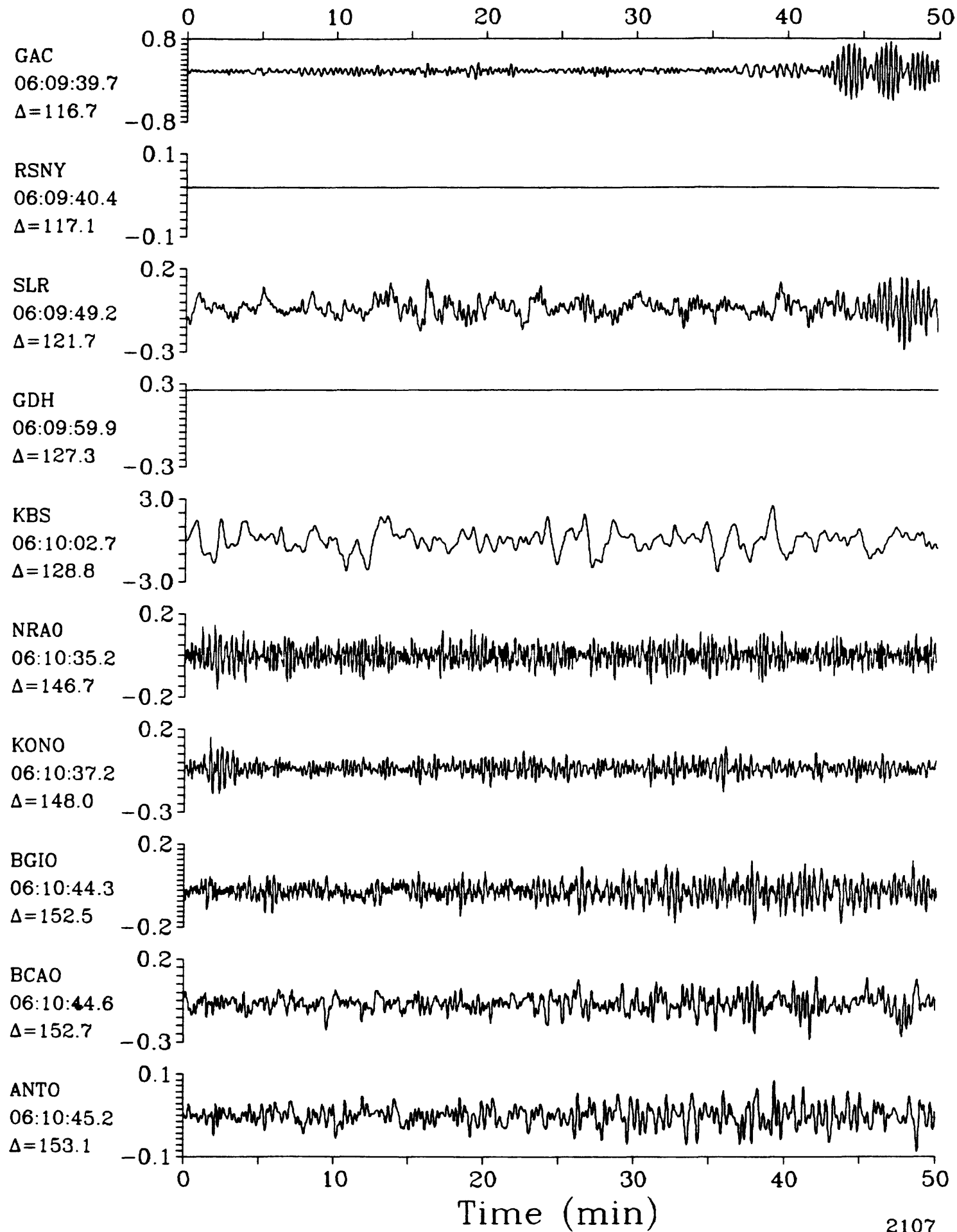
LPZ

Kermadec Islands Region $h=45.1$ $m_b=5.6$ $M_{sz}=4.9$ 

LPZ

21 October 1986 05:51:59.66

LPZ

Kermadec Islands Region $h=45.1$ $m_b=5.6$ $M_{sz}=4.9$ 

LPZ

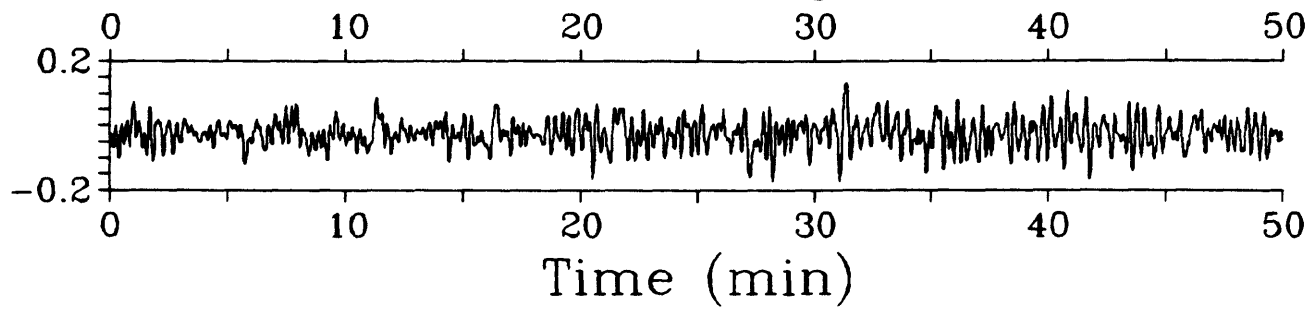
21 October 1986 05:51:59.66

LPZ

Kermadec Islands Region $h=45.1$ $m_b=5.6$ $M_{sz}=4.9$

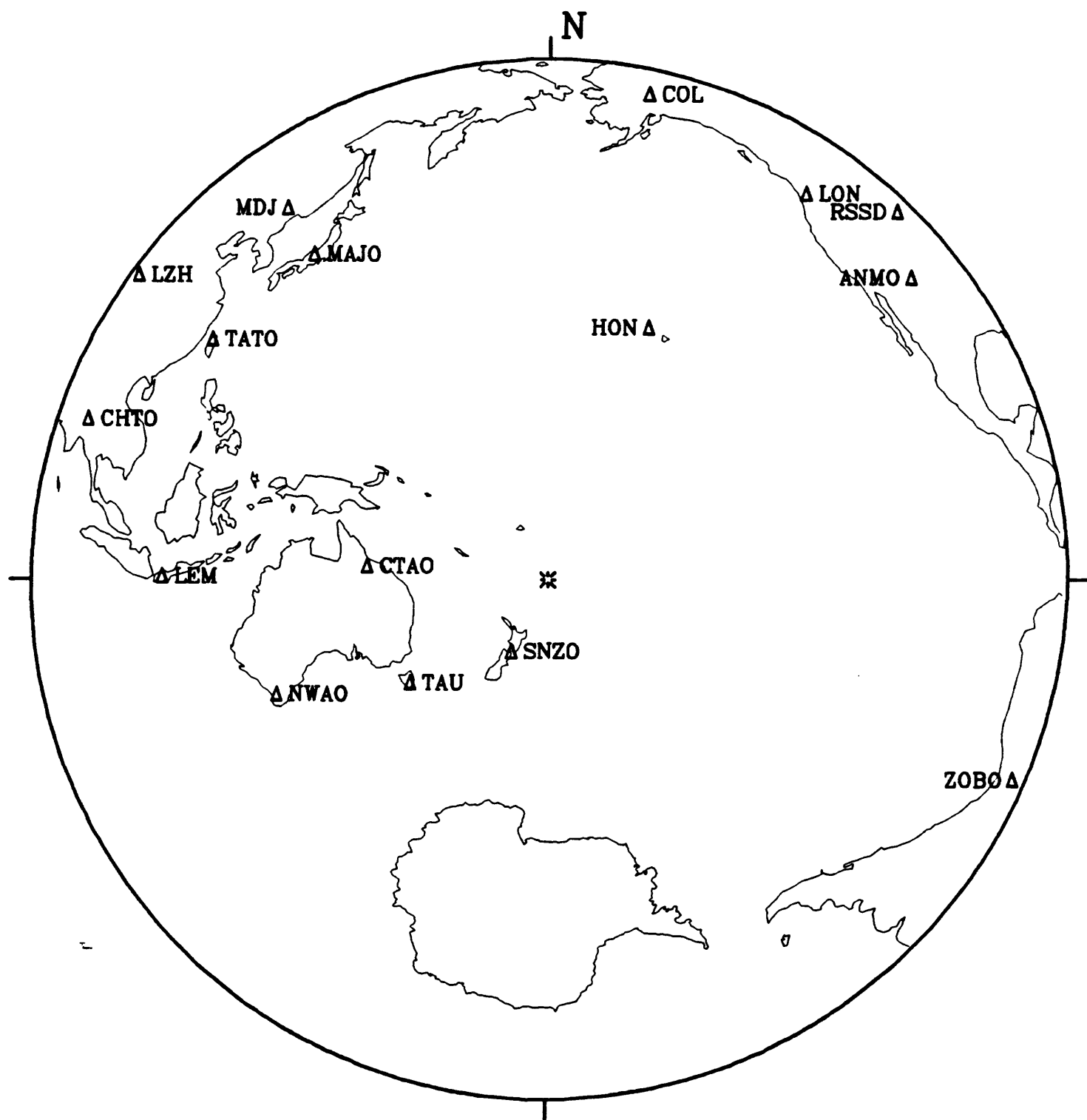
GRFO

06:10:51.1

 $\Delta=157.5$ 

21 October 1986 11:02:59.90

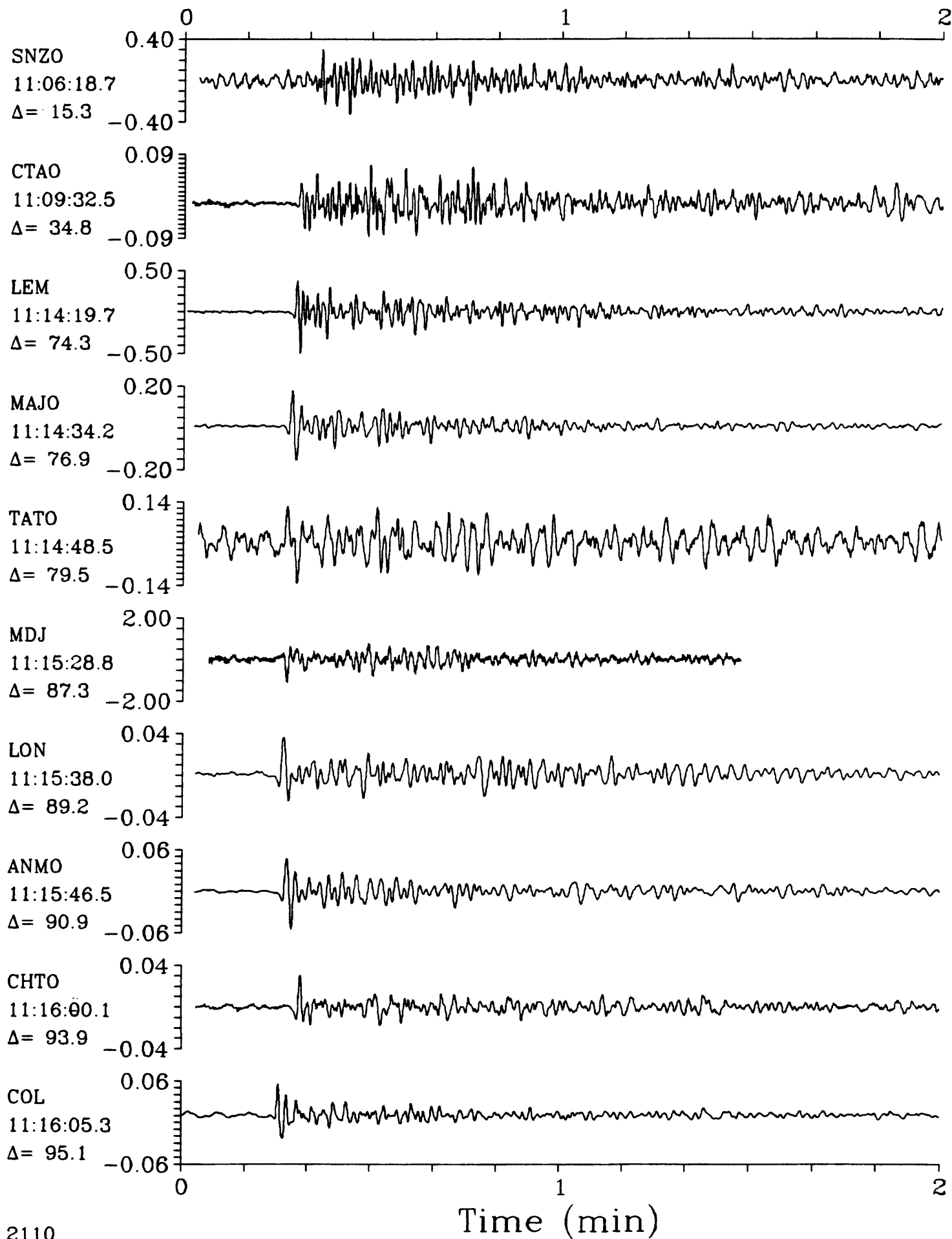
Kermadec Islands Region



SPZ

21 October 1986 11:02:59.90

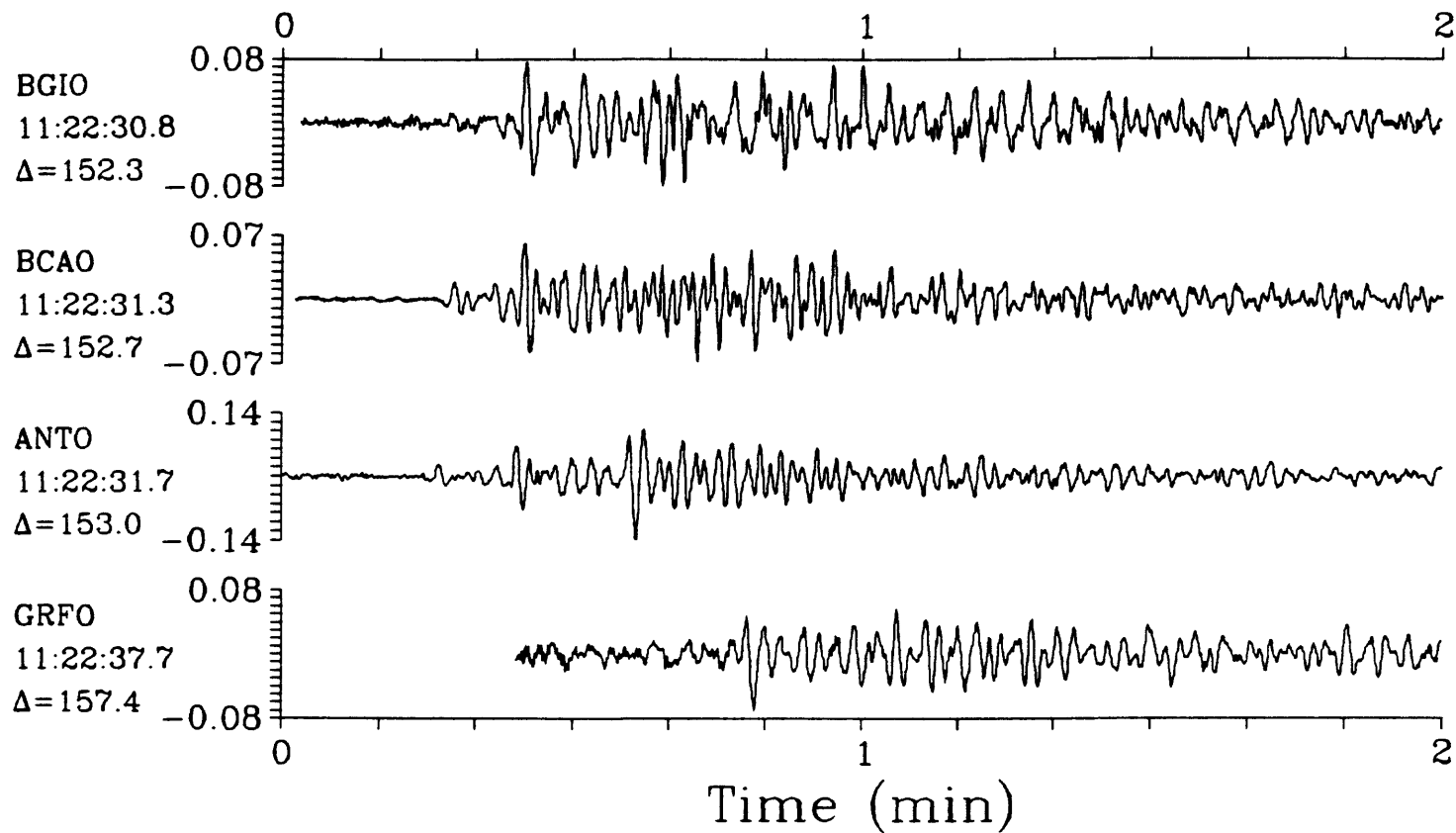
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.8$ $M_{sz}=5.8$ 

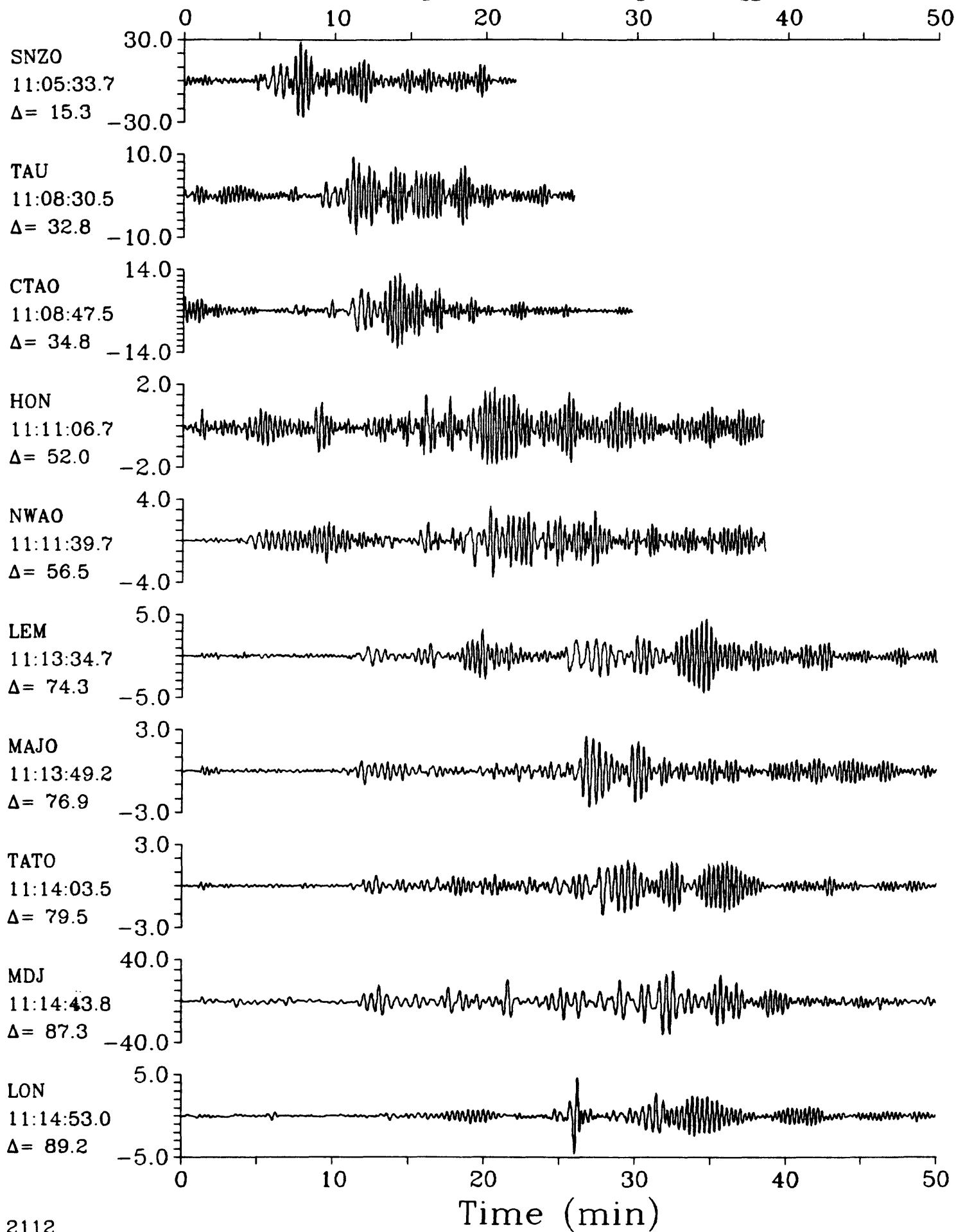
SPZ

21 October 1986 11:02:59.90

SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.8$ $M_{SZ}=5.8$ 

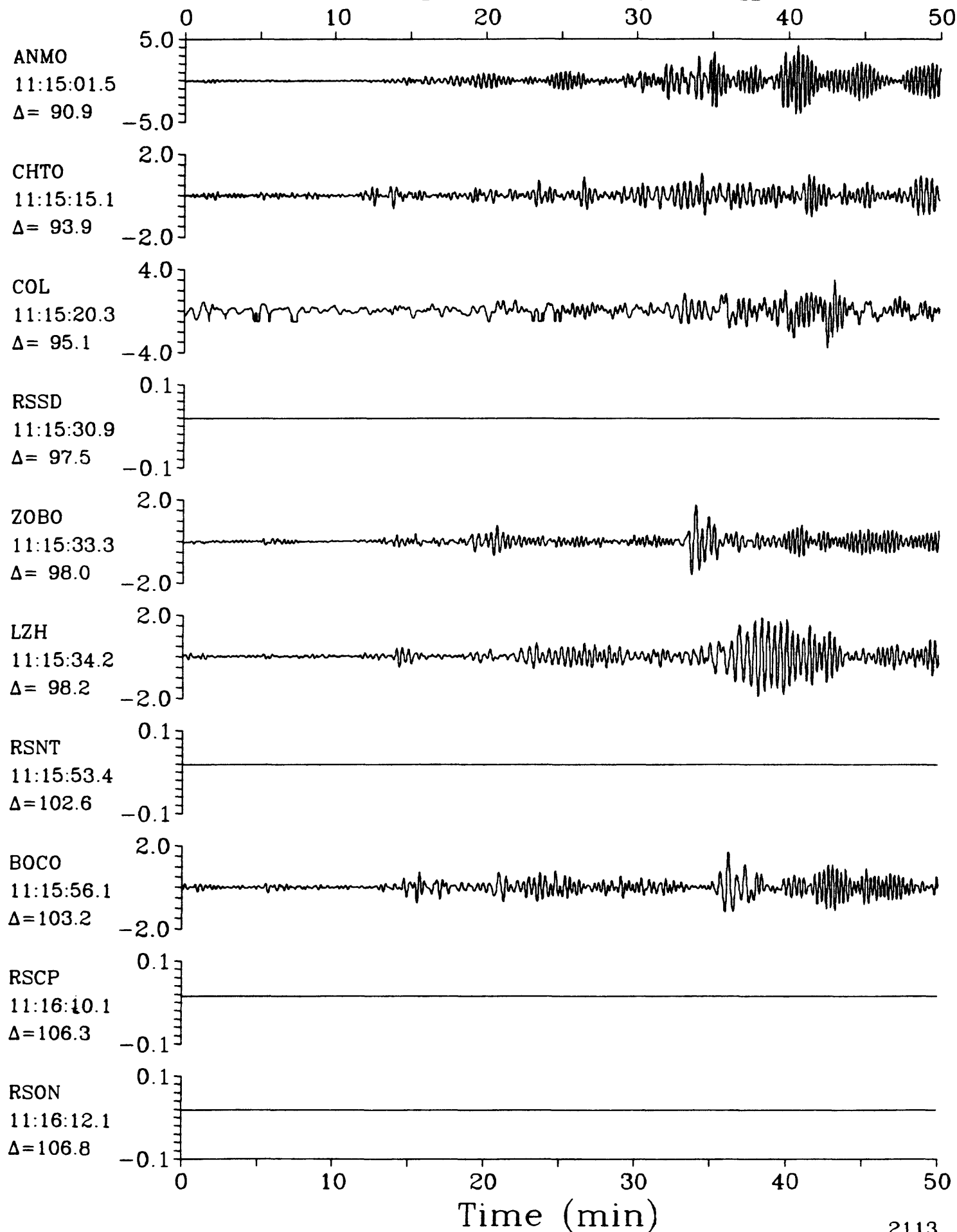
u :

Kermadec Islands Region $h=33.0$ $m_b=5.8$ $M_{sz}=5.8$ 

LPZ

21 October 1986 11:02:59.90

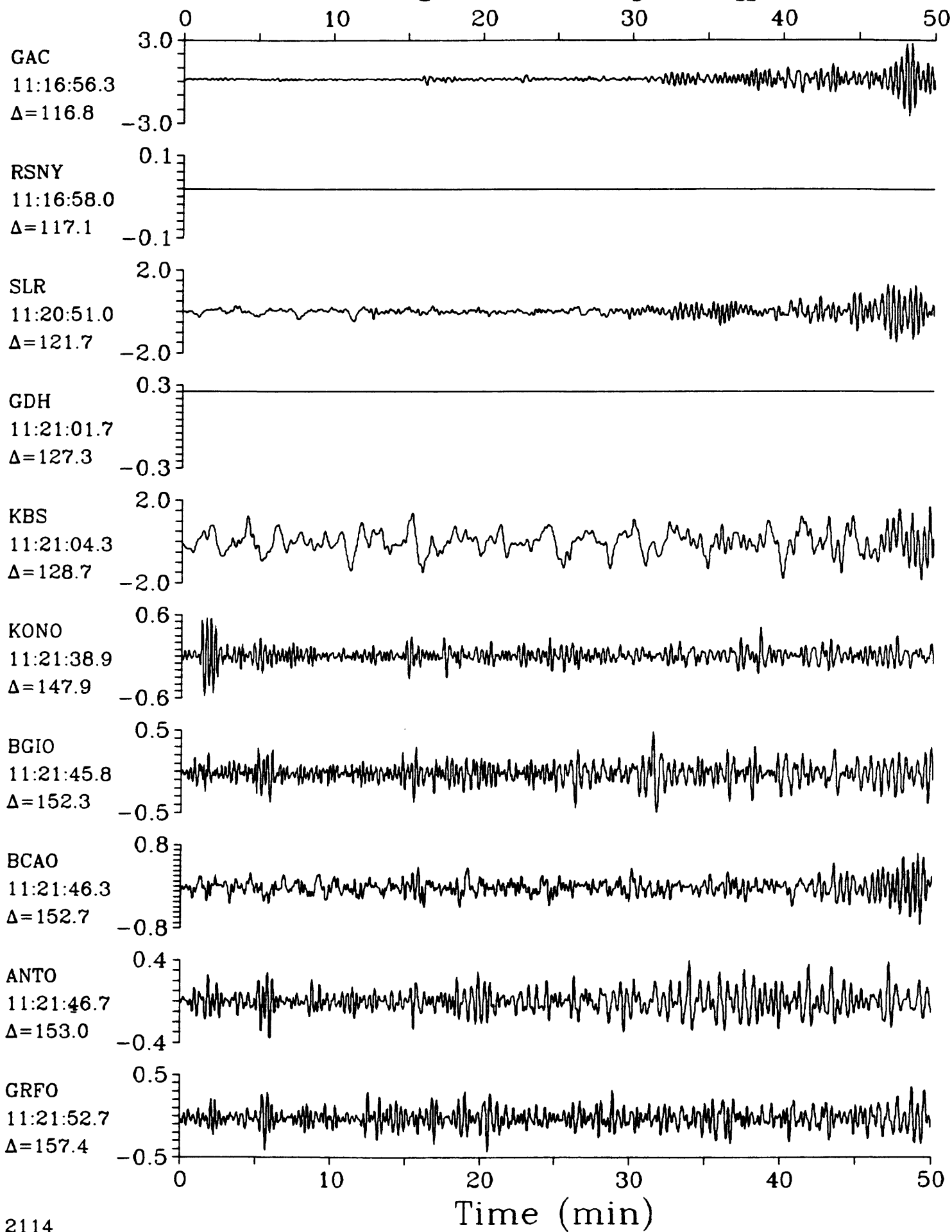
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.8$ $M_{sz}=5.8$ 

LPZ

21 October 1986 11:02:59.90

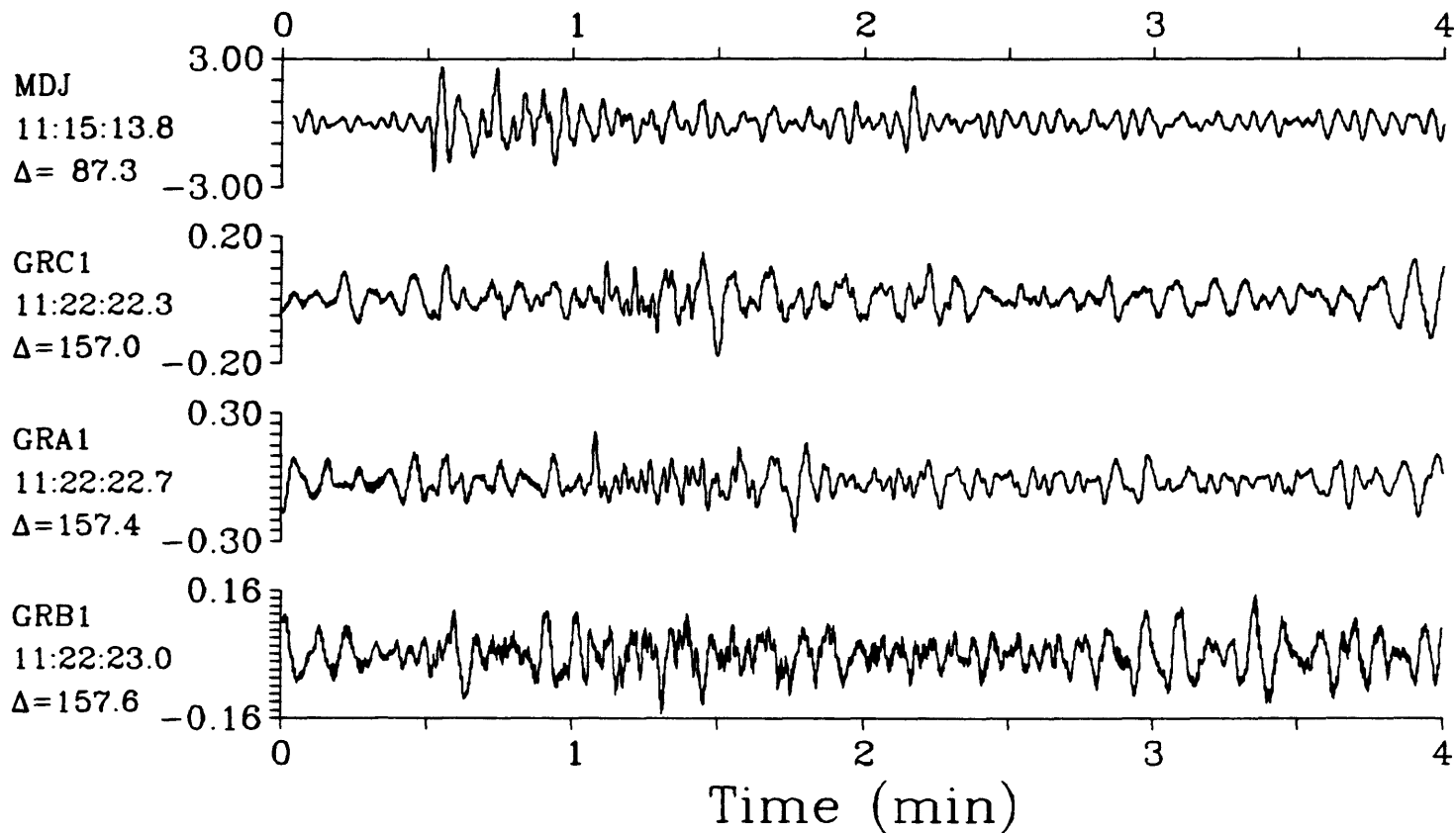
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.8$ $M_{sz}=5.8$ 

IPZ

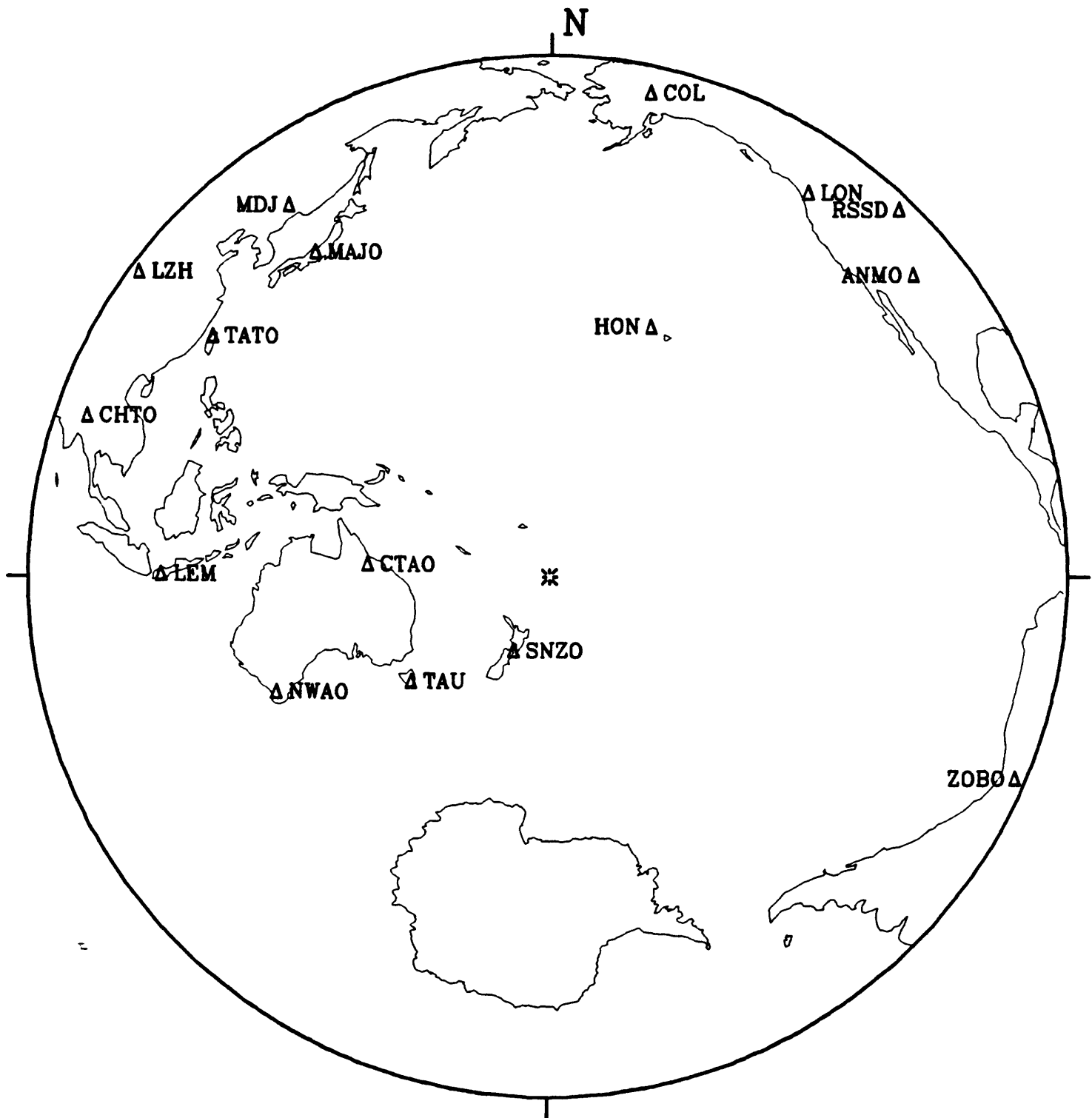
21 October 1986 11:02:59.90

IPZ

Kermadec Islands Region $h=33.0$ $m_b=5.8$ $M_{sz}=5.8$ 

21 October 1986 12:29:44.27

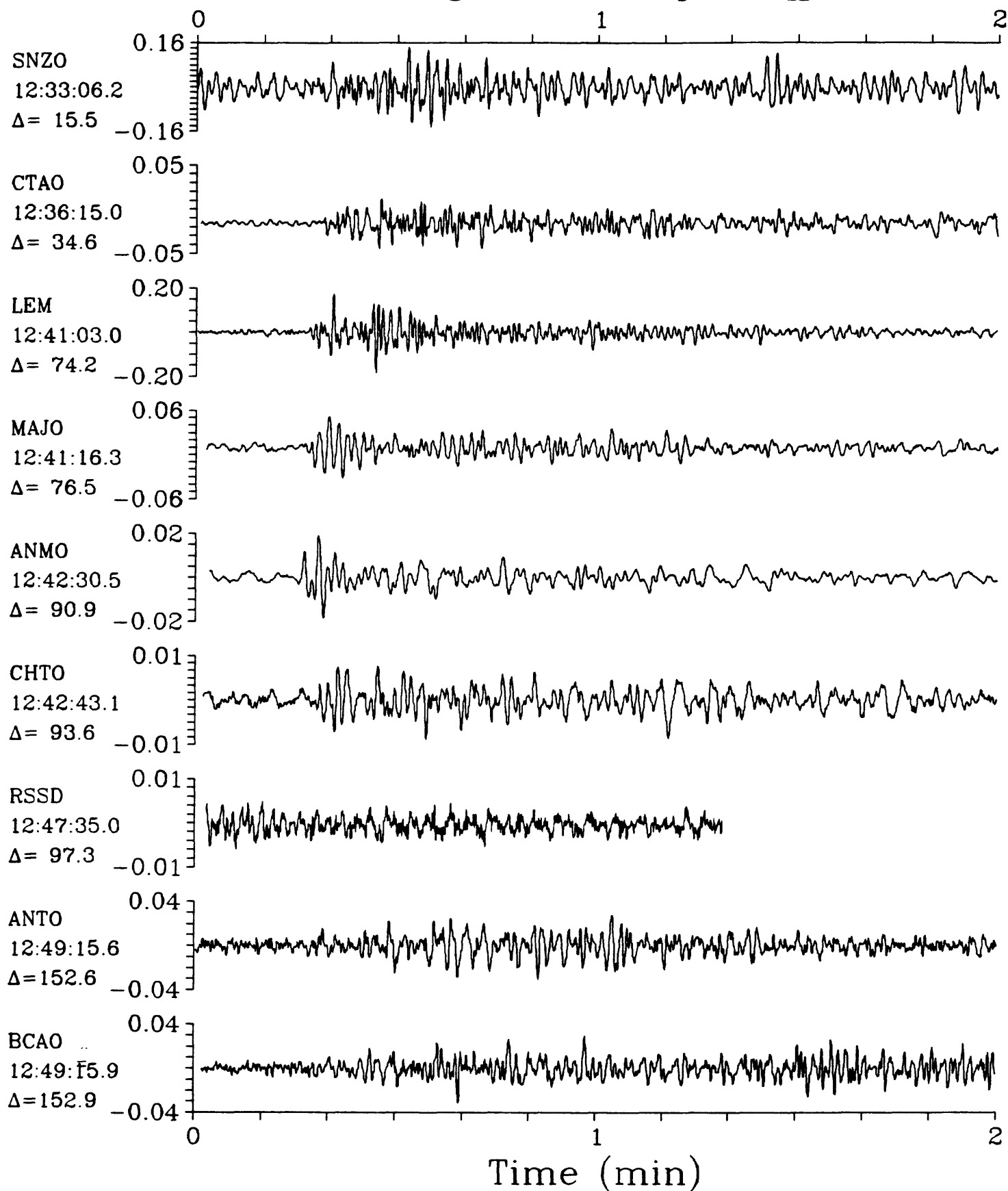
Kermadec Islands Region



SPZ

21 October 1986 12:29:44.27

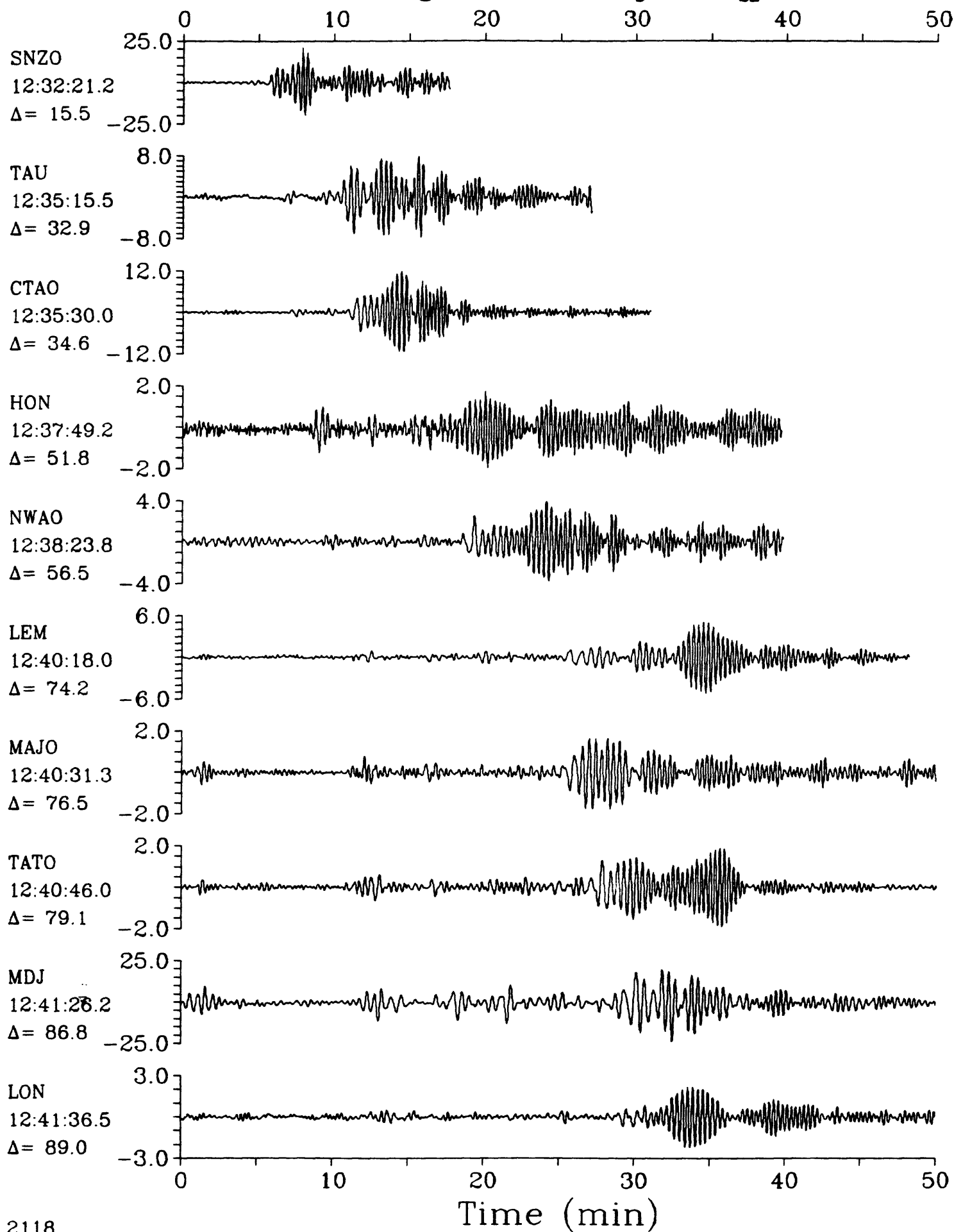
SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.4$ $M_{sz}=5.6$ 

LPZ

21 October 1986 12:29:44.27

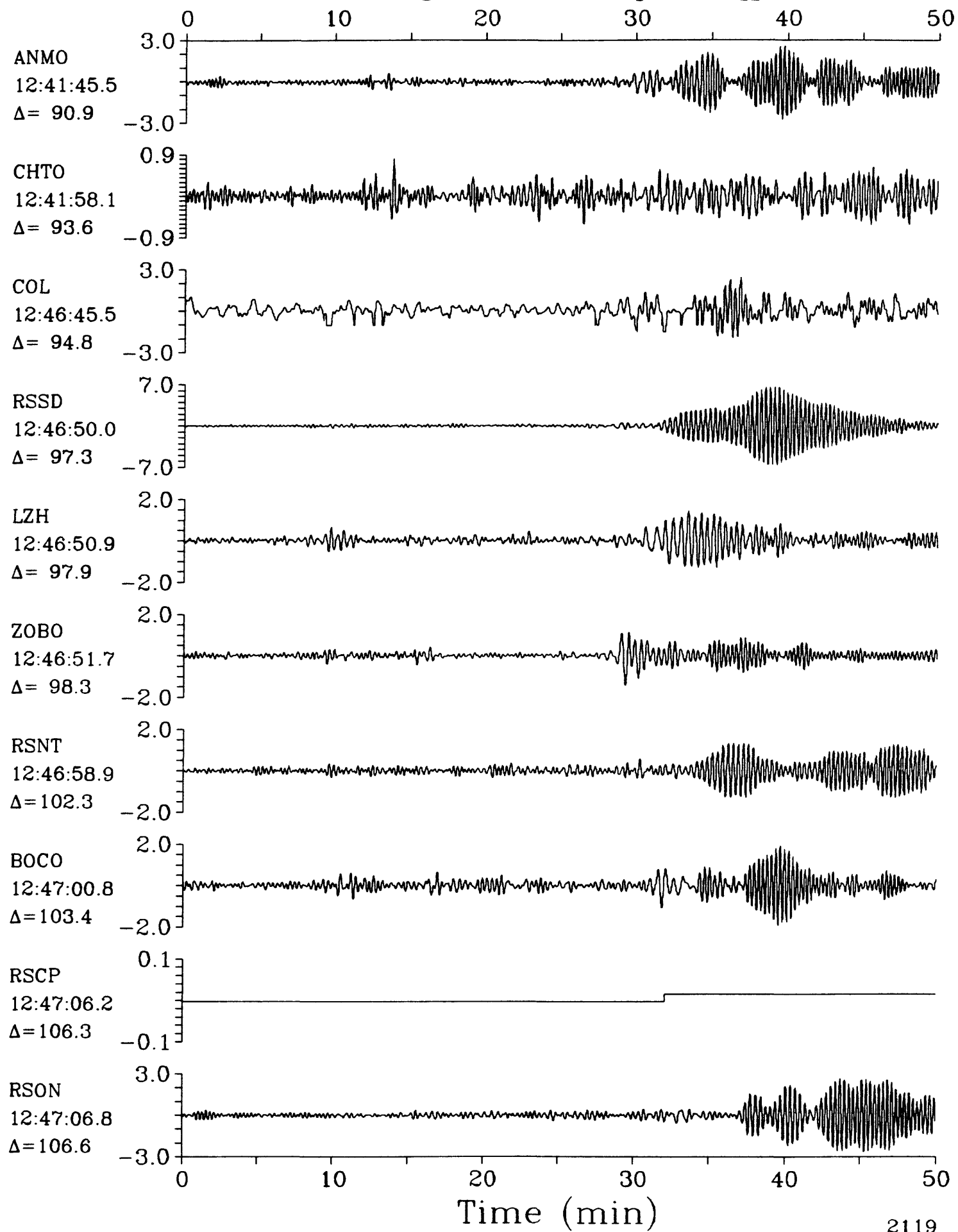
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.4$ $M_{sz}=5.6$ 

LPZ

21 October 1986 12:29:44.27

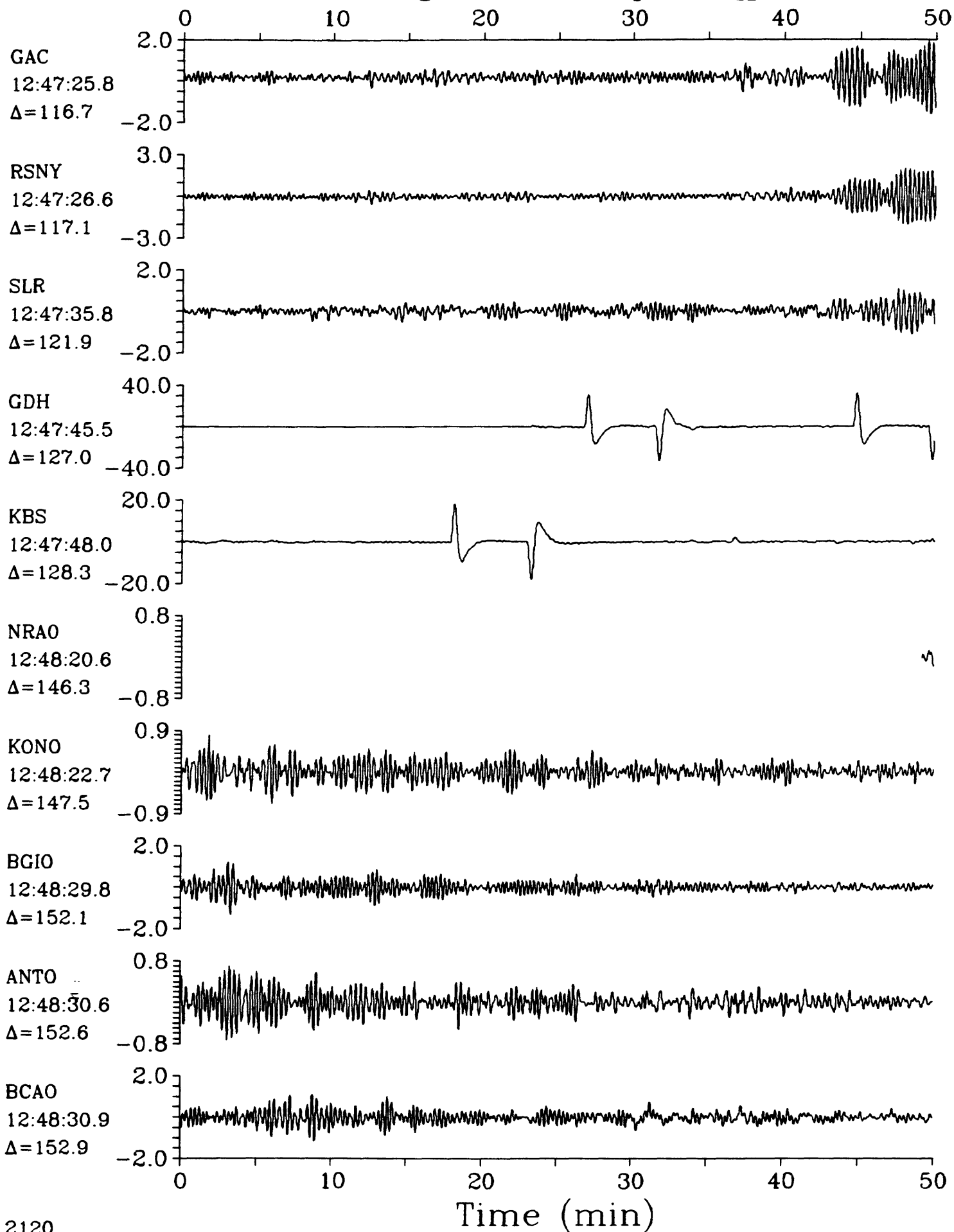
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.4$ $M_{SZ}=5.6$ 

LPZ

21 October 1986 12:29:44.27

LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.4$ $M_{sz}=5.6$ 

LPZ

21 October 1986 12:29:44.27

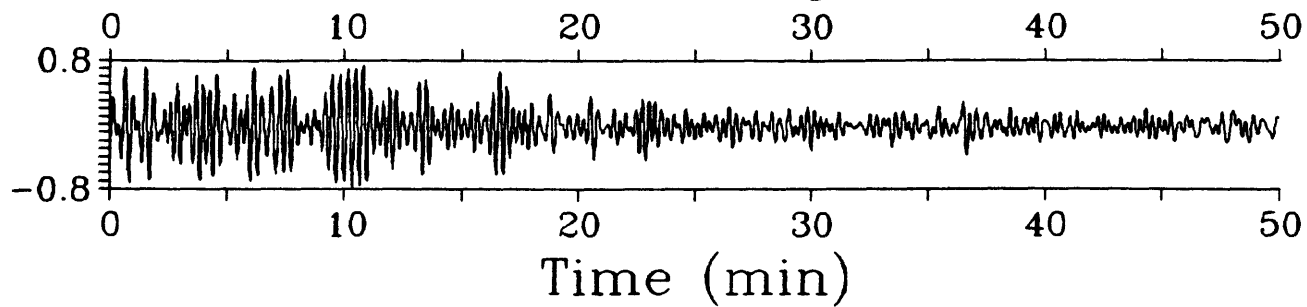
LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.4$ $M_{sz}=5.6$

GRFO

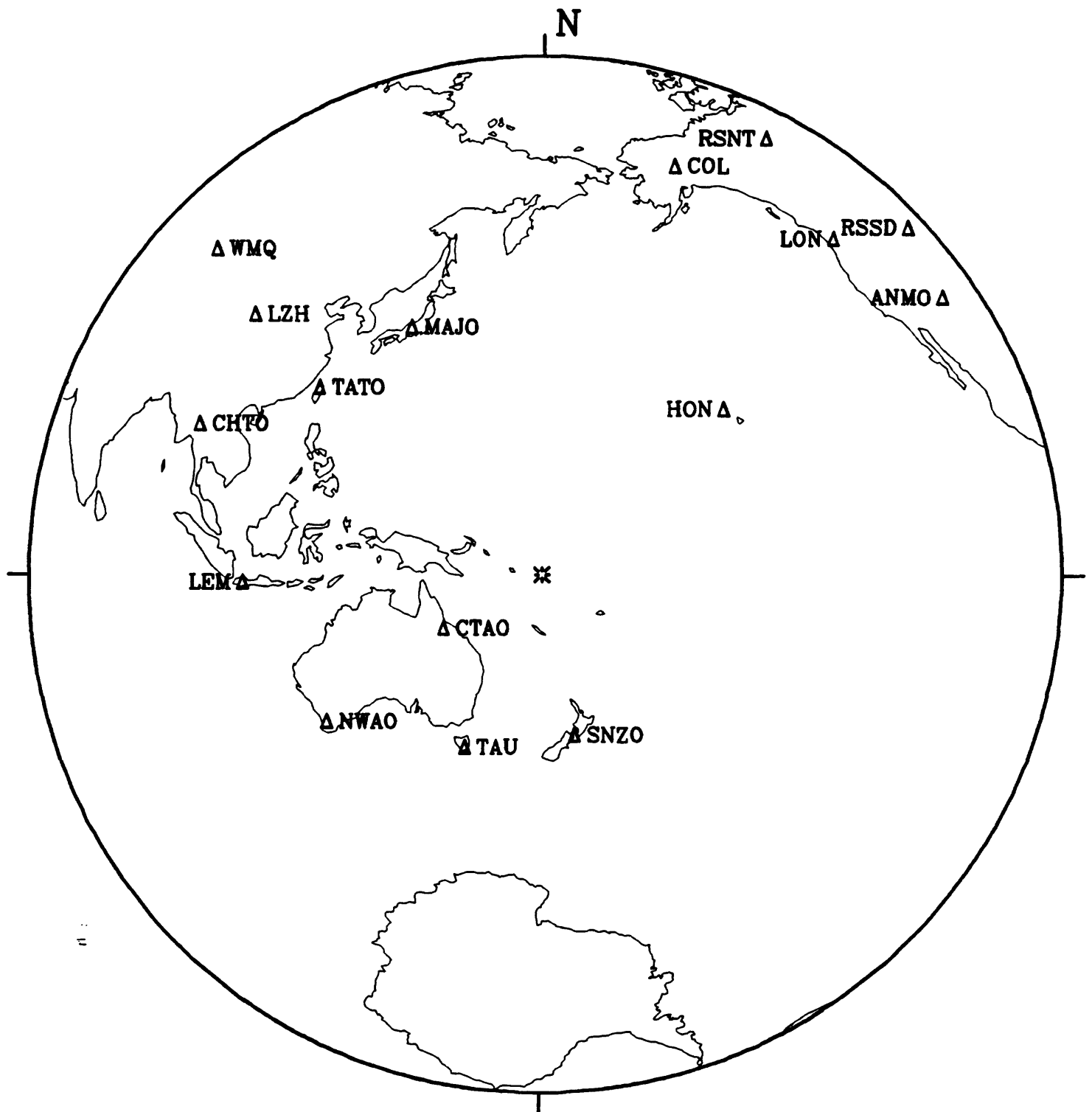
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$\Delta=157.0$



22 October 1986 08:59:32.79

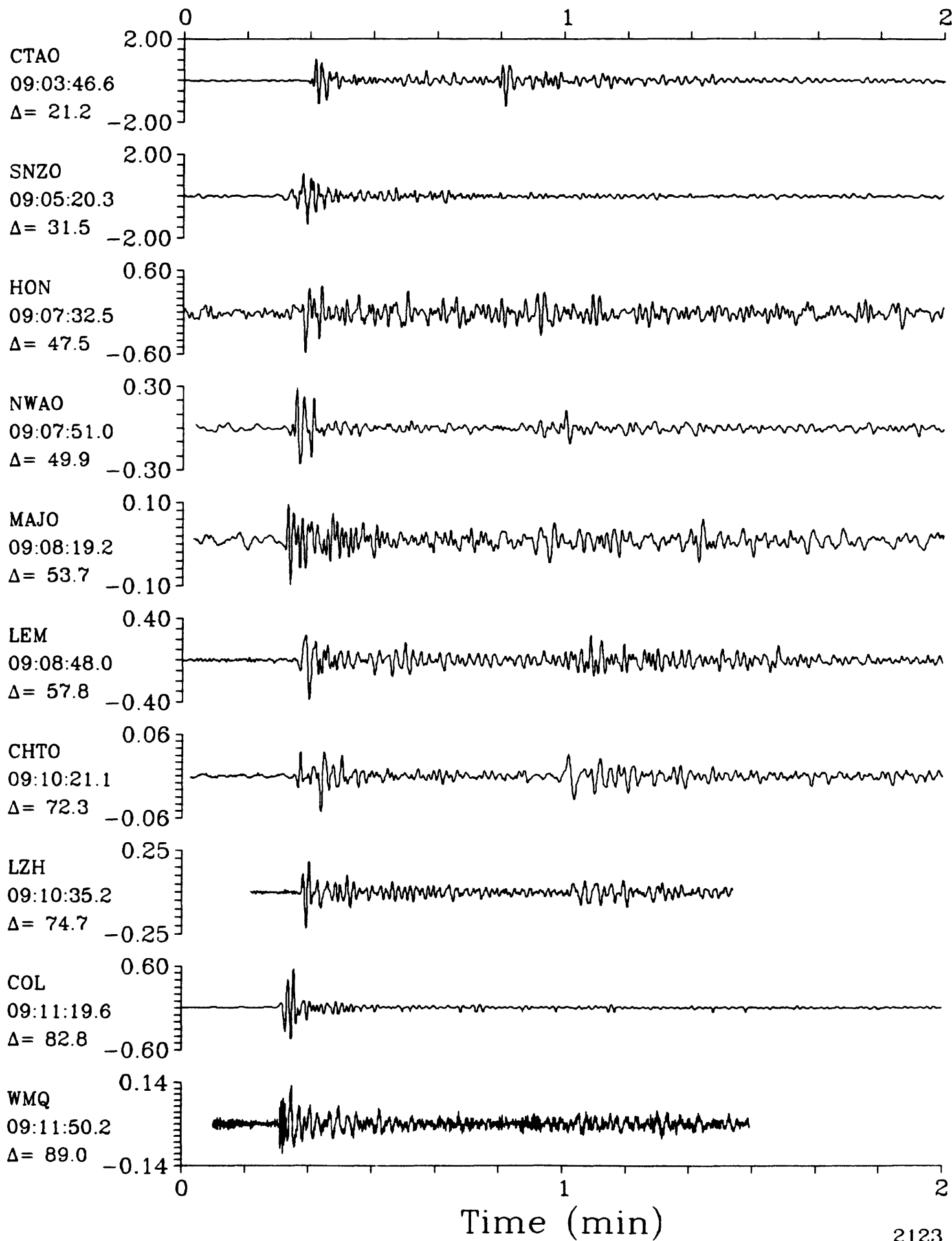
Santa Cruz Islands



SPZ

22 October 1986 08:59:32.79
Santa Cruz Islands $h=201.8$ $m_b=5.8$

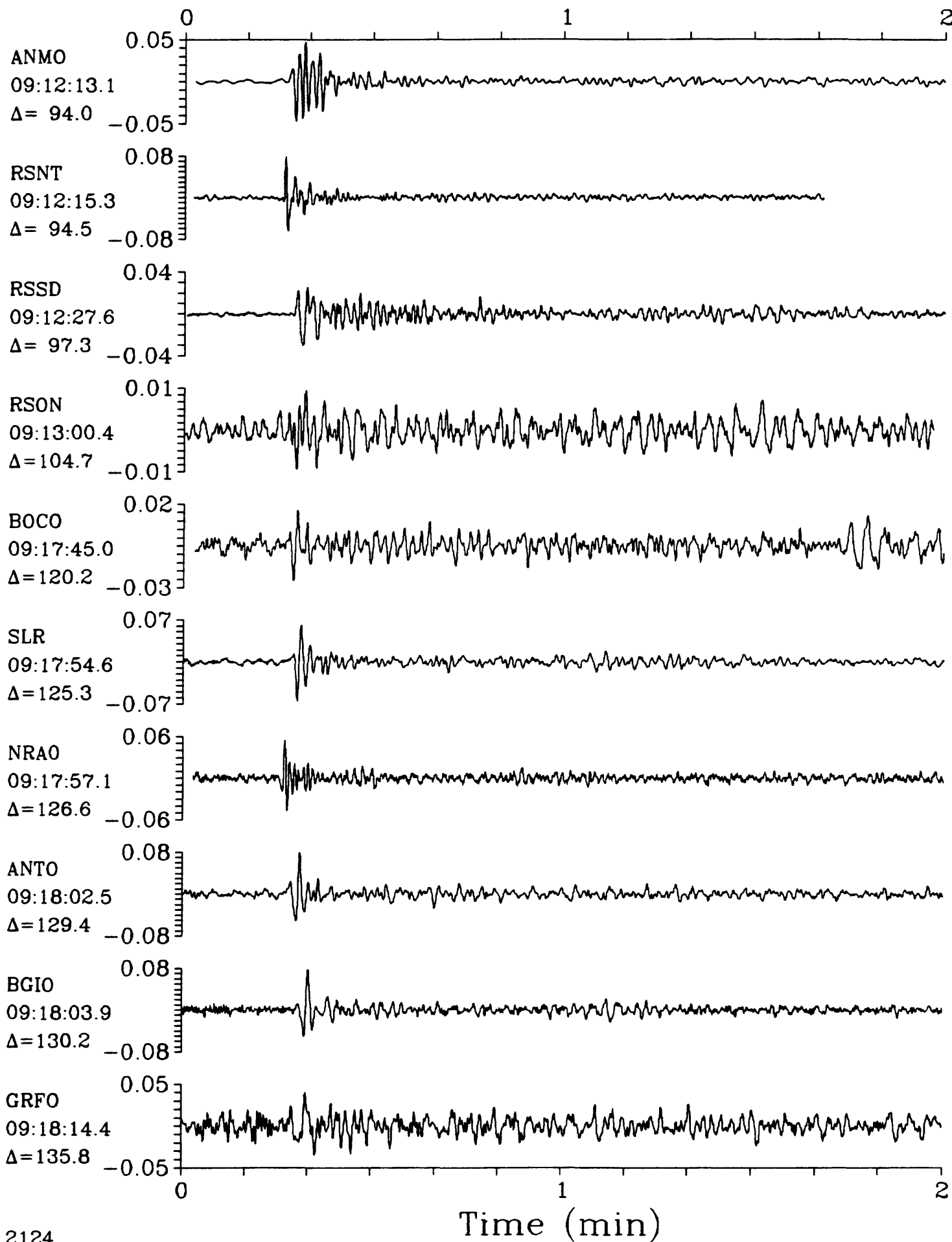
SPZ



SPZ

22 October 1986 08:59:32.79
Santa Cruz Islands $h=201.8$ $m_b=5.8$

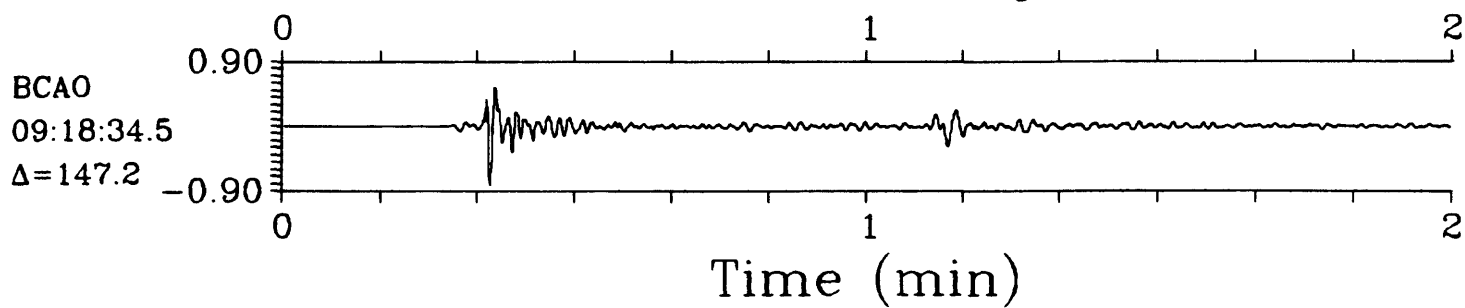
SPZ



SPZ

22 October 1986 08:59:32.79
Santa Cruz Islands $h=201.8$ $m_b=5.8$

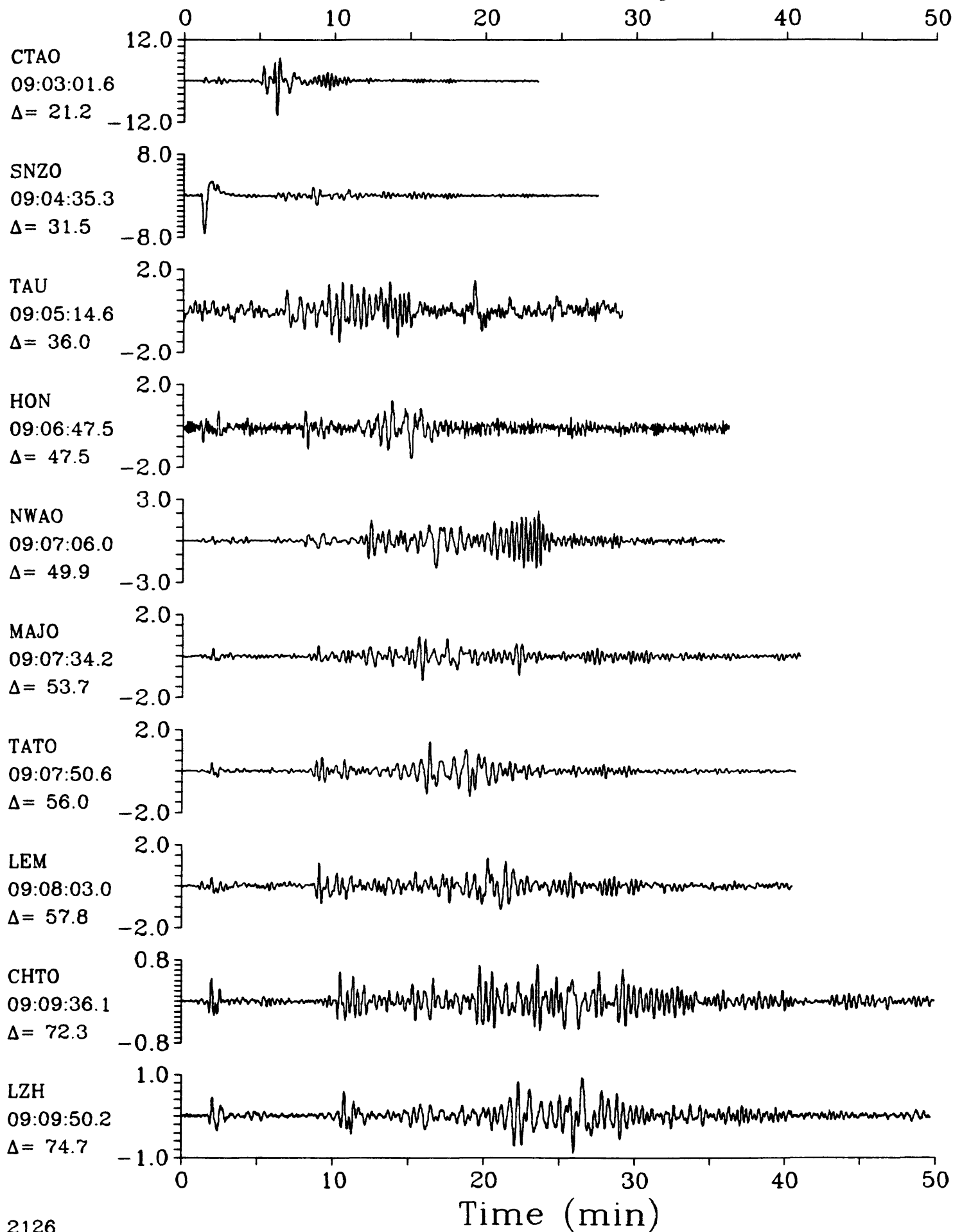
SPZ



LPZ

22 October 1986 08:59:32.79
Santa Cruz Islands $h=201.8$ $m_b=5.8$

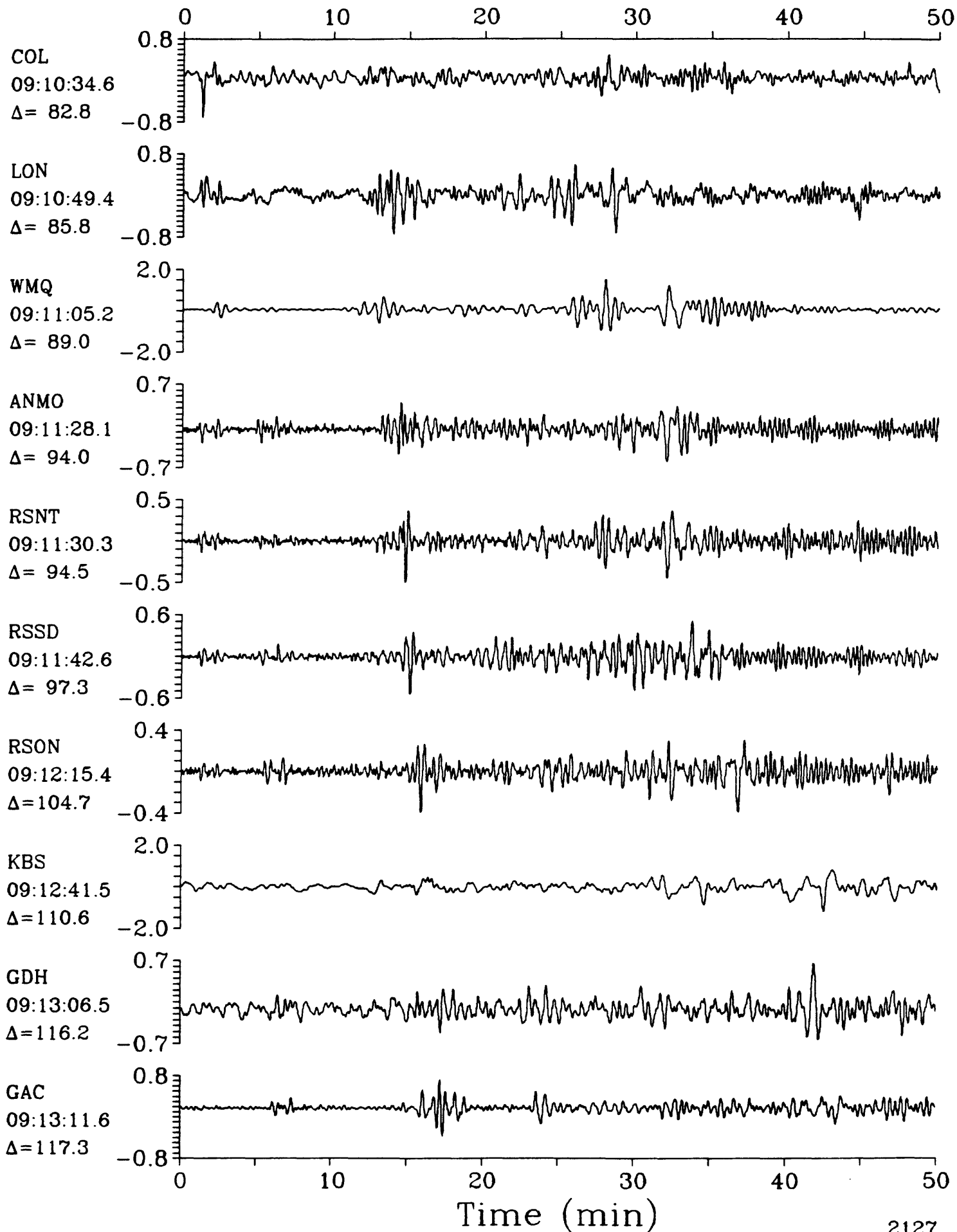
LPZ



LPZ

22 October 1986 08:59:32.79
Santa Cruz Islands $h=201.8$ $m_b=5.8$

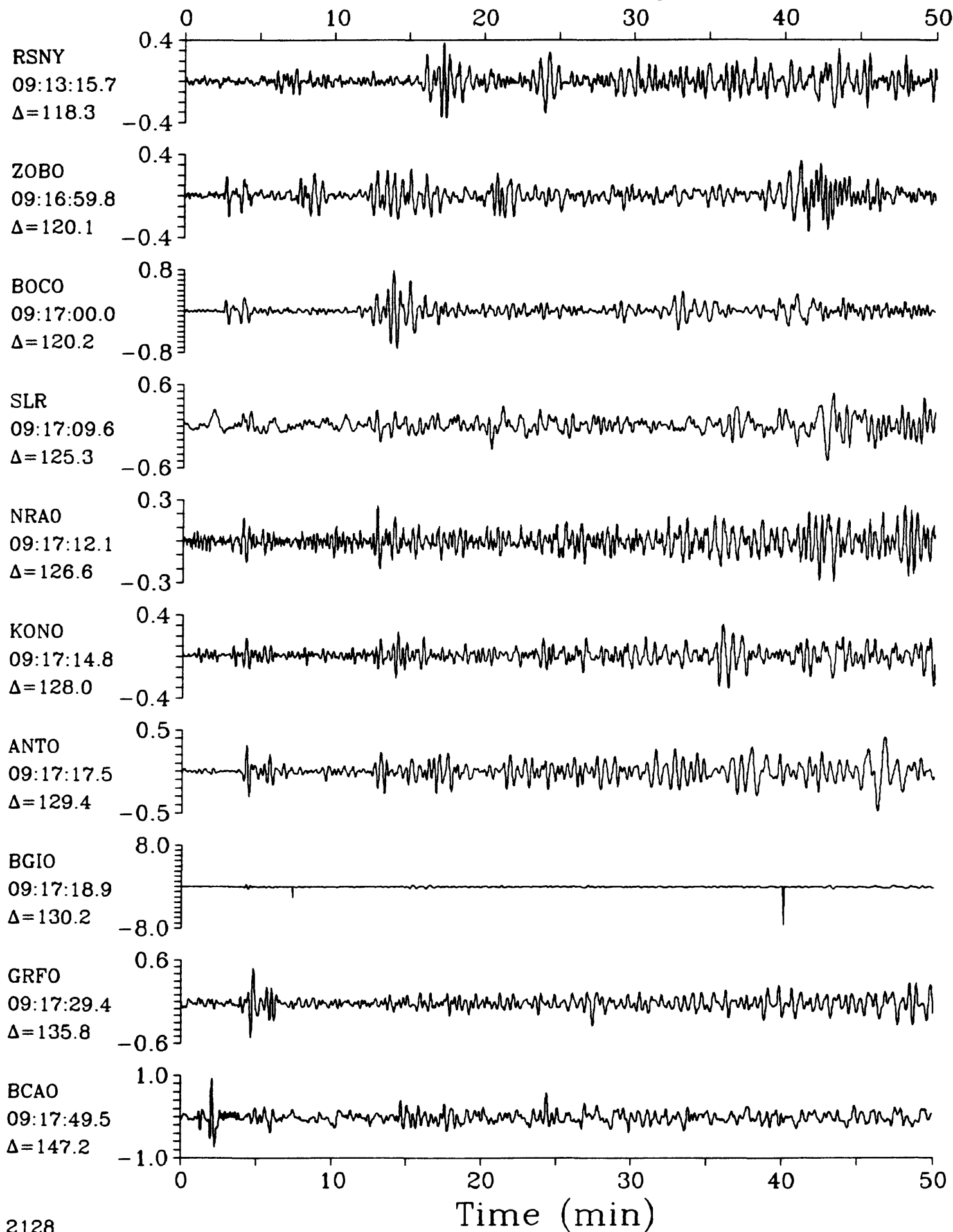
LPZ



LPZ

22 October 1986 08:59:32.79
Santa Cruz Islands $h=201.8$ $m_b=5.8$

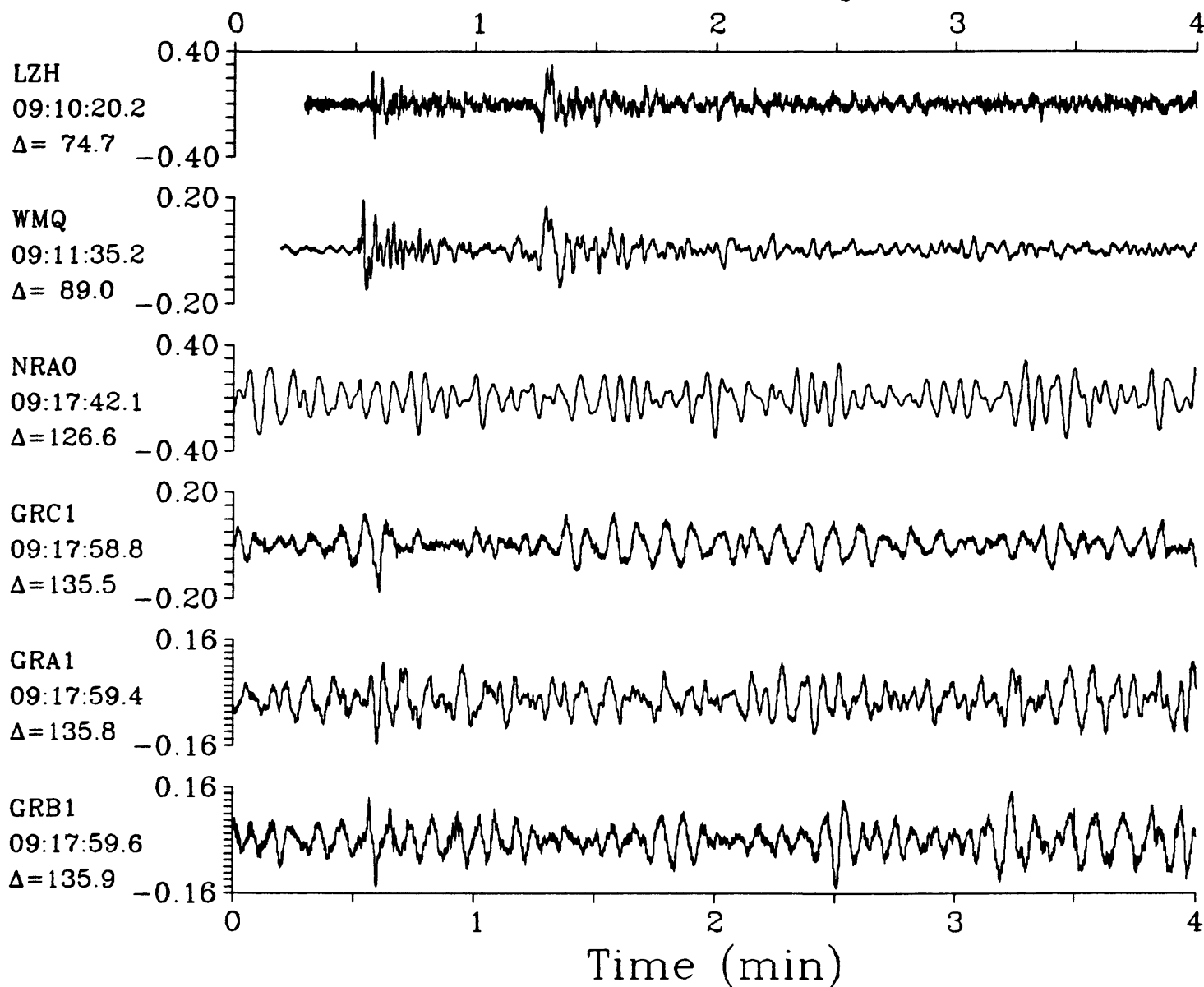
LPZ



IPZ

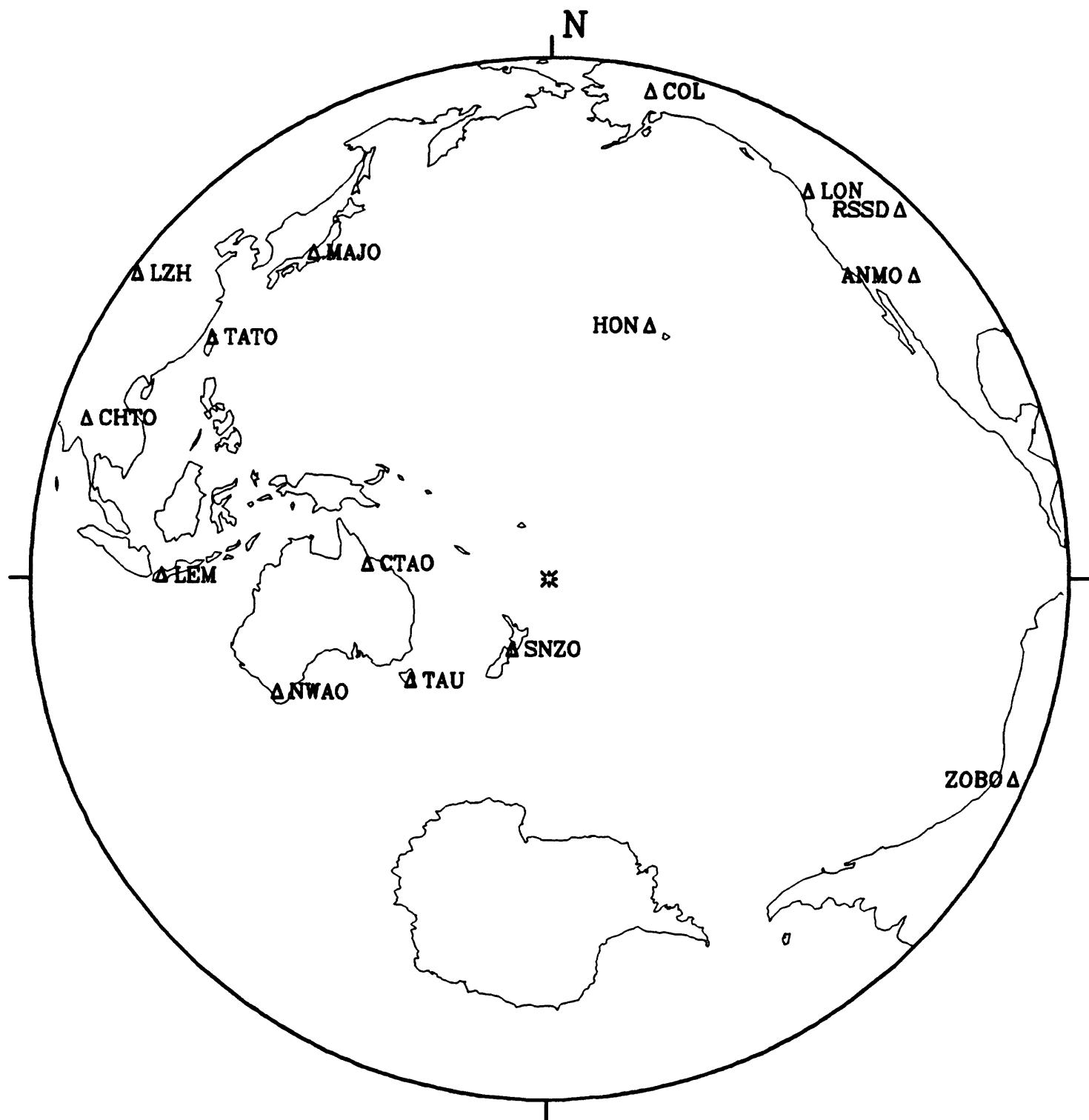
22 October 1986 08:59:32.79
Santa Cruz Islands $h=201.8$ $m_b=5.8$

IPZ



22 October 1986 19:40:48.53

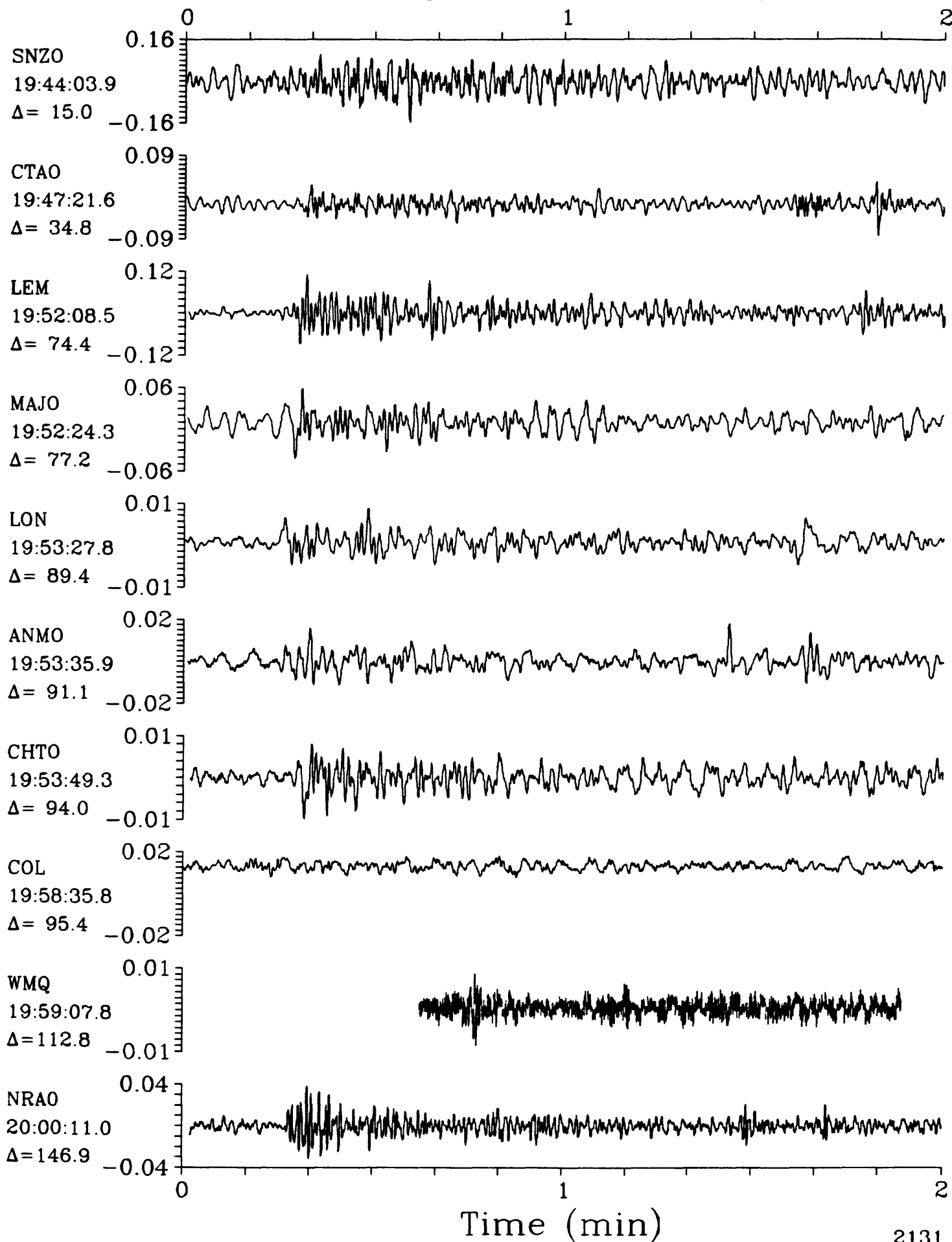
Kermadec Islands Region



SPZ

22 October 1986 19:40:48.53

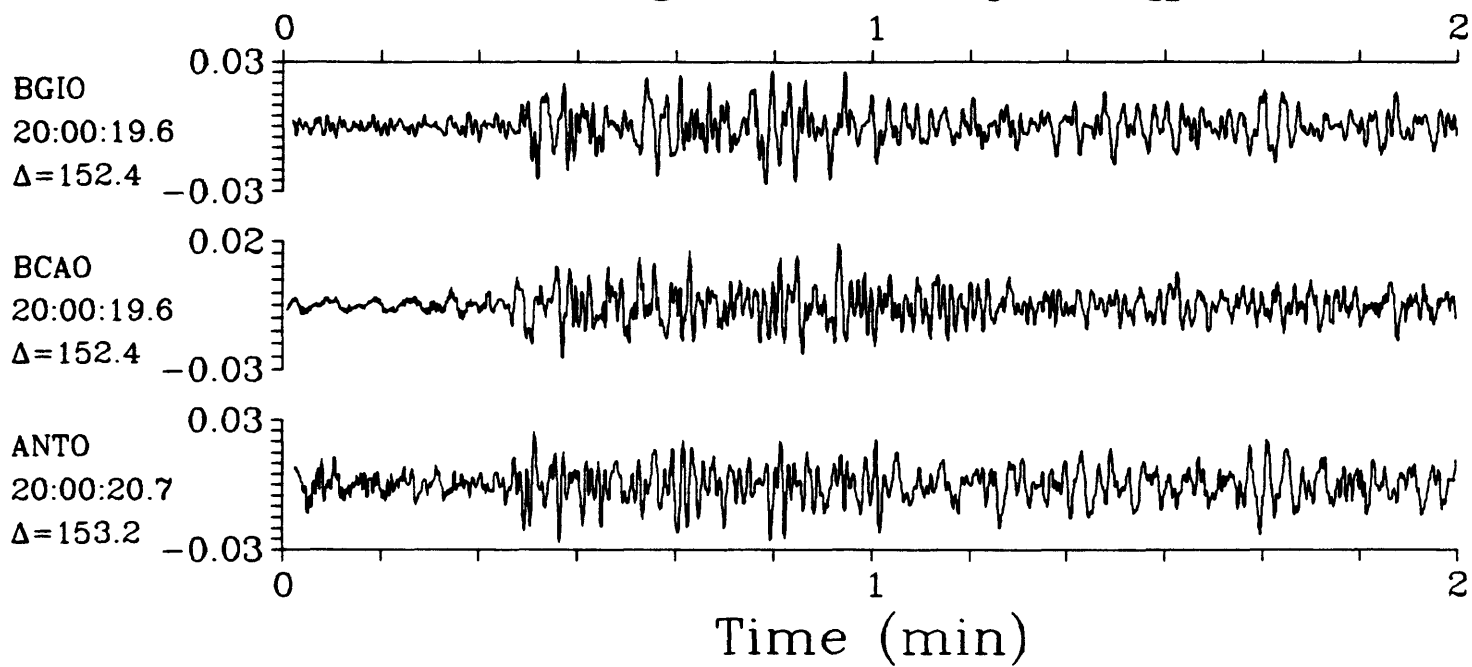
SPZ

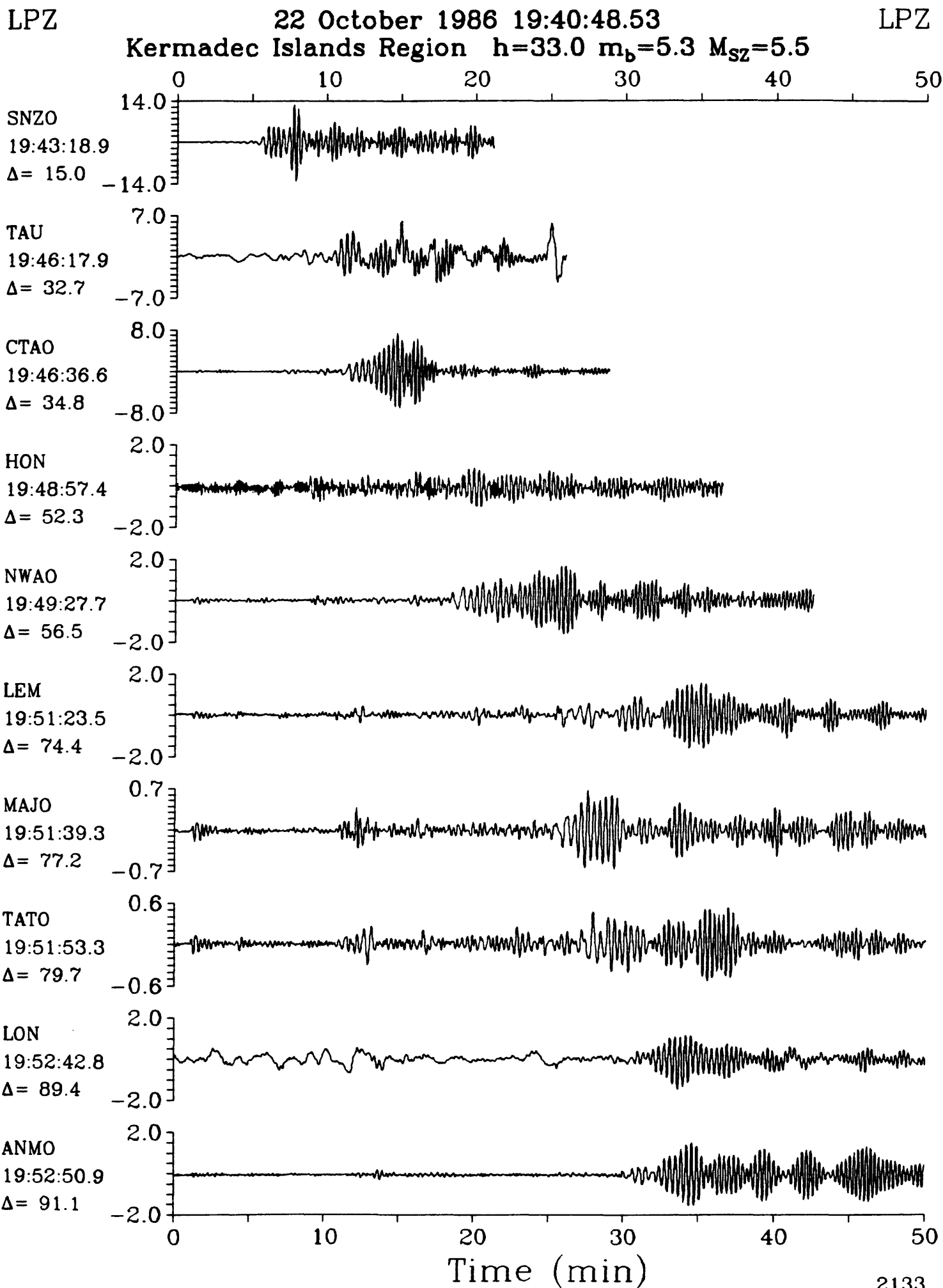
Kermadec Islands Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.5$ 

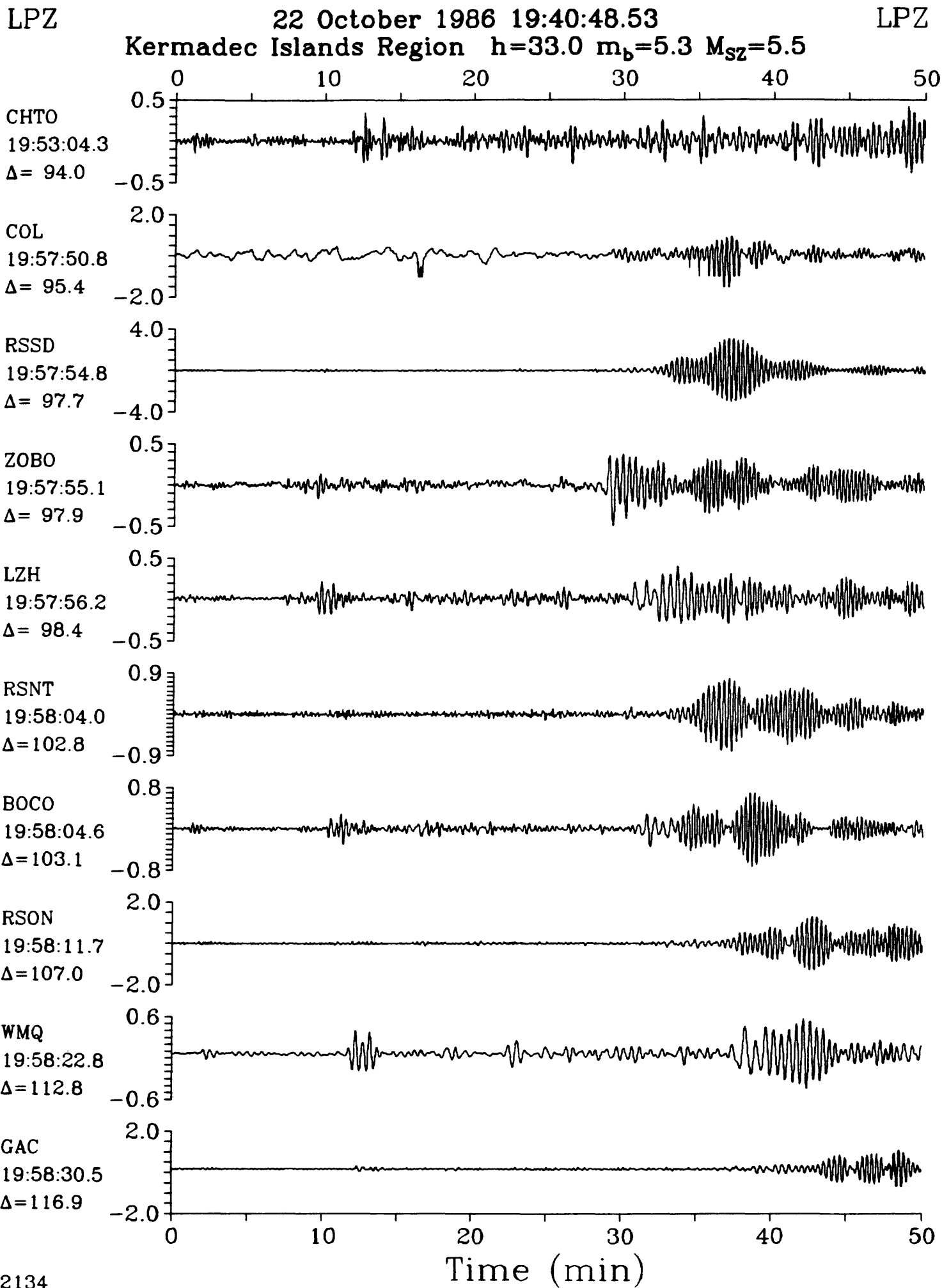
SPZ

22 October 1986 19:40:48.53

SPZ

Kermadec Islands Region $h=33.0$ $m_b=5.3$ $M_{SZ}=5.5$ 

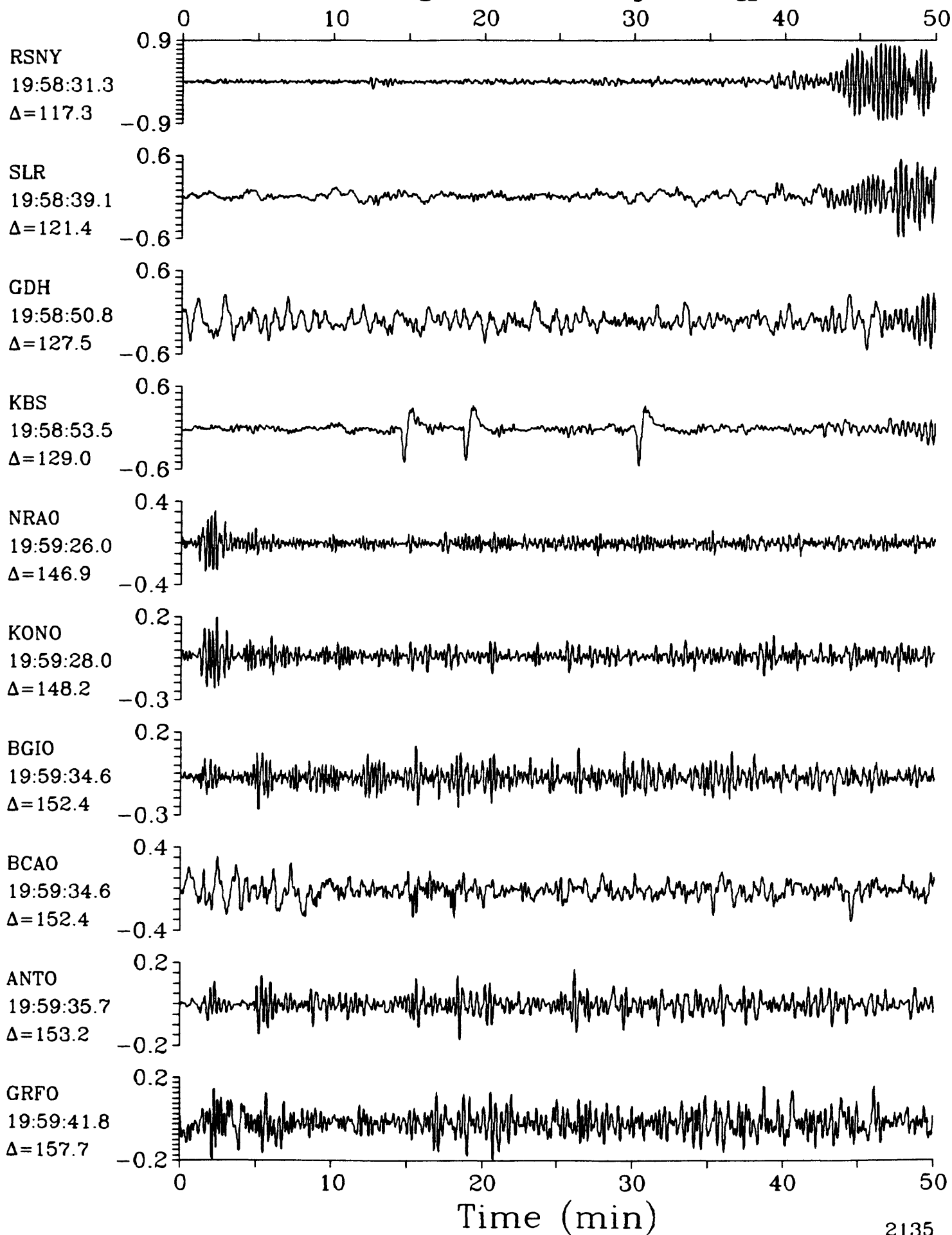




LPZ

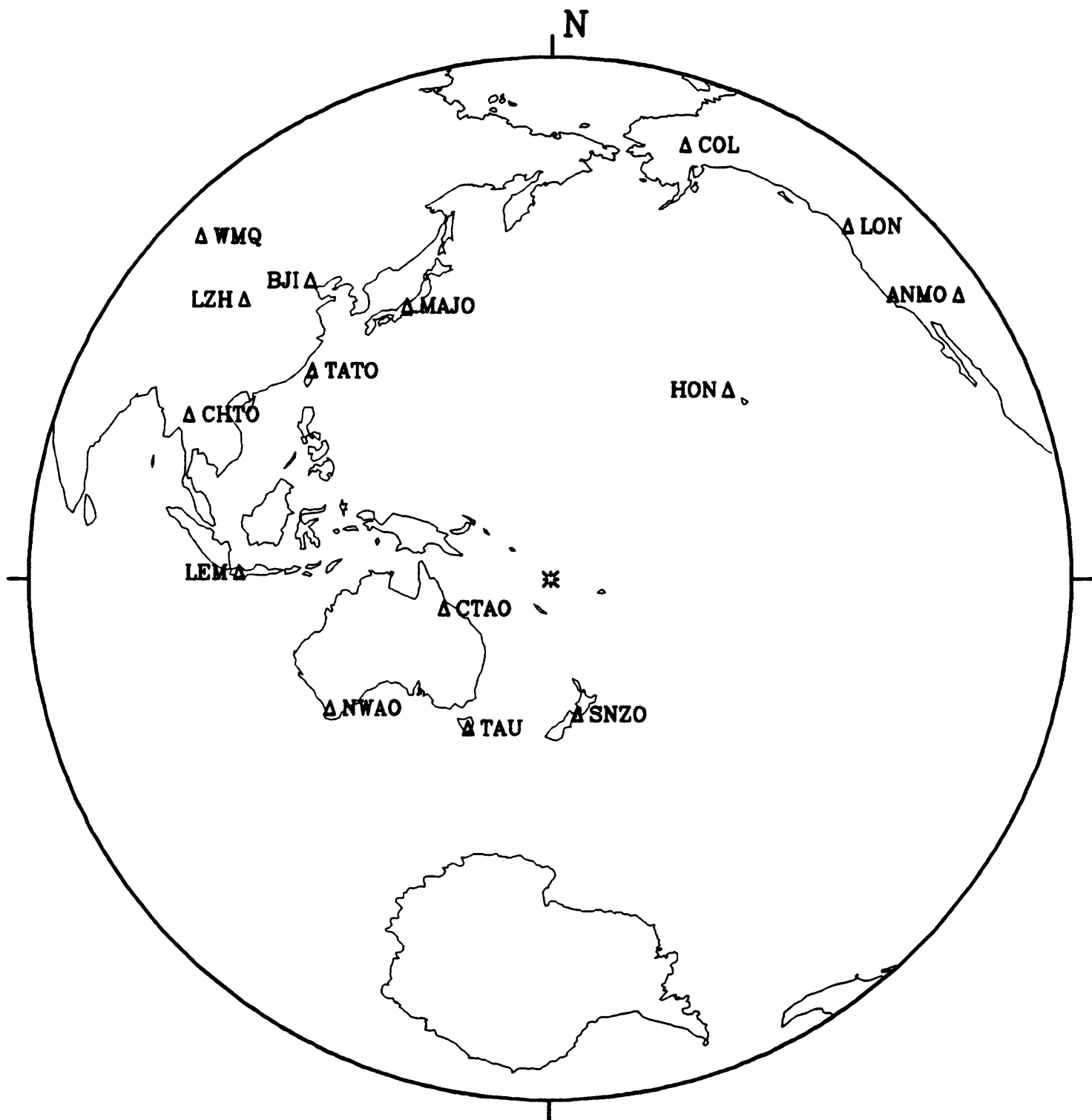
22 October 1986 19:40:48.53

LPZ

Kermadec Islands Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.5$ 

23 October 1986 02:18:52.79

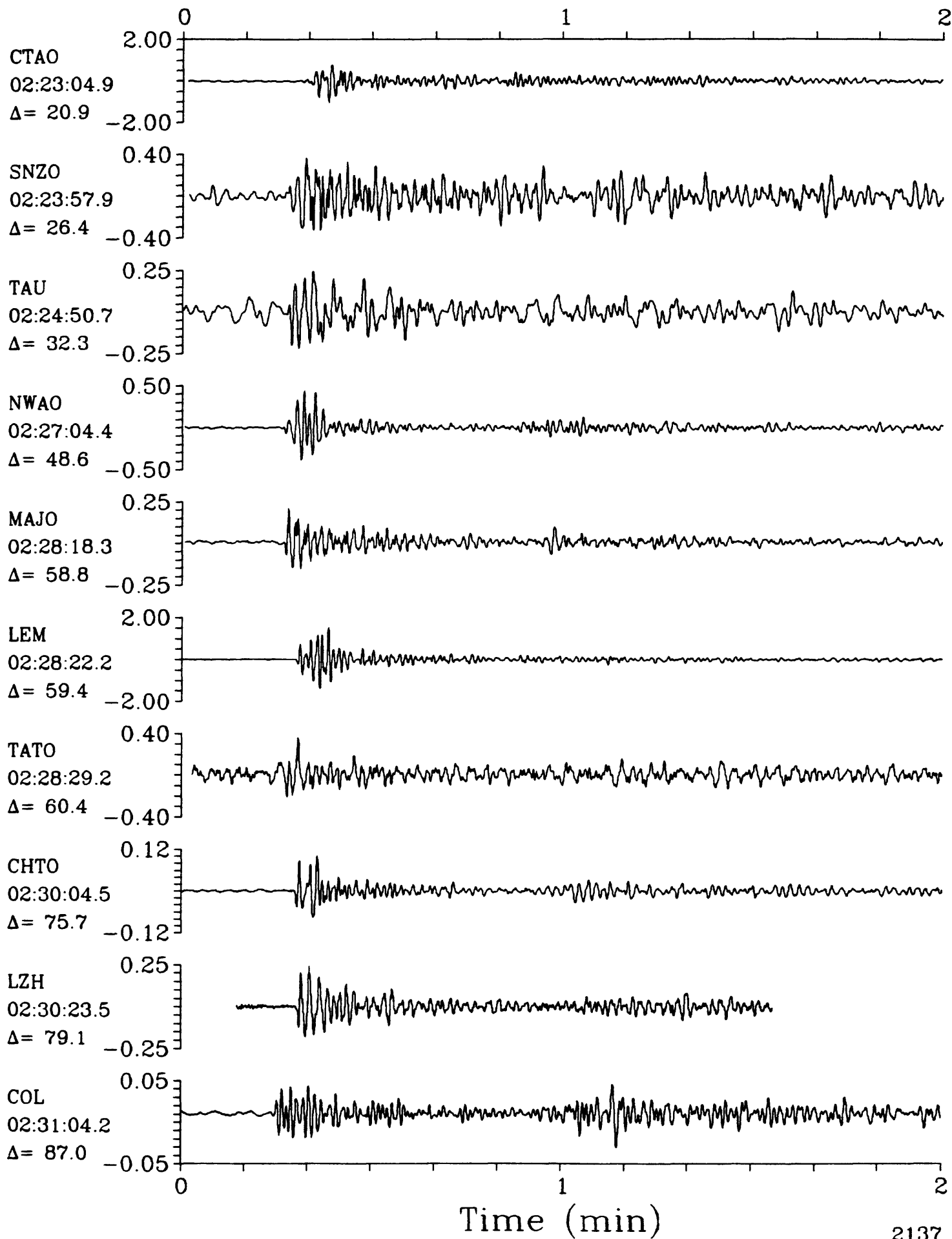
Vanuatu Islands



SPZ

23 October 1986 02:18:52.79
Vanuatu Islands $h=171.9$ $m_b=5.7$

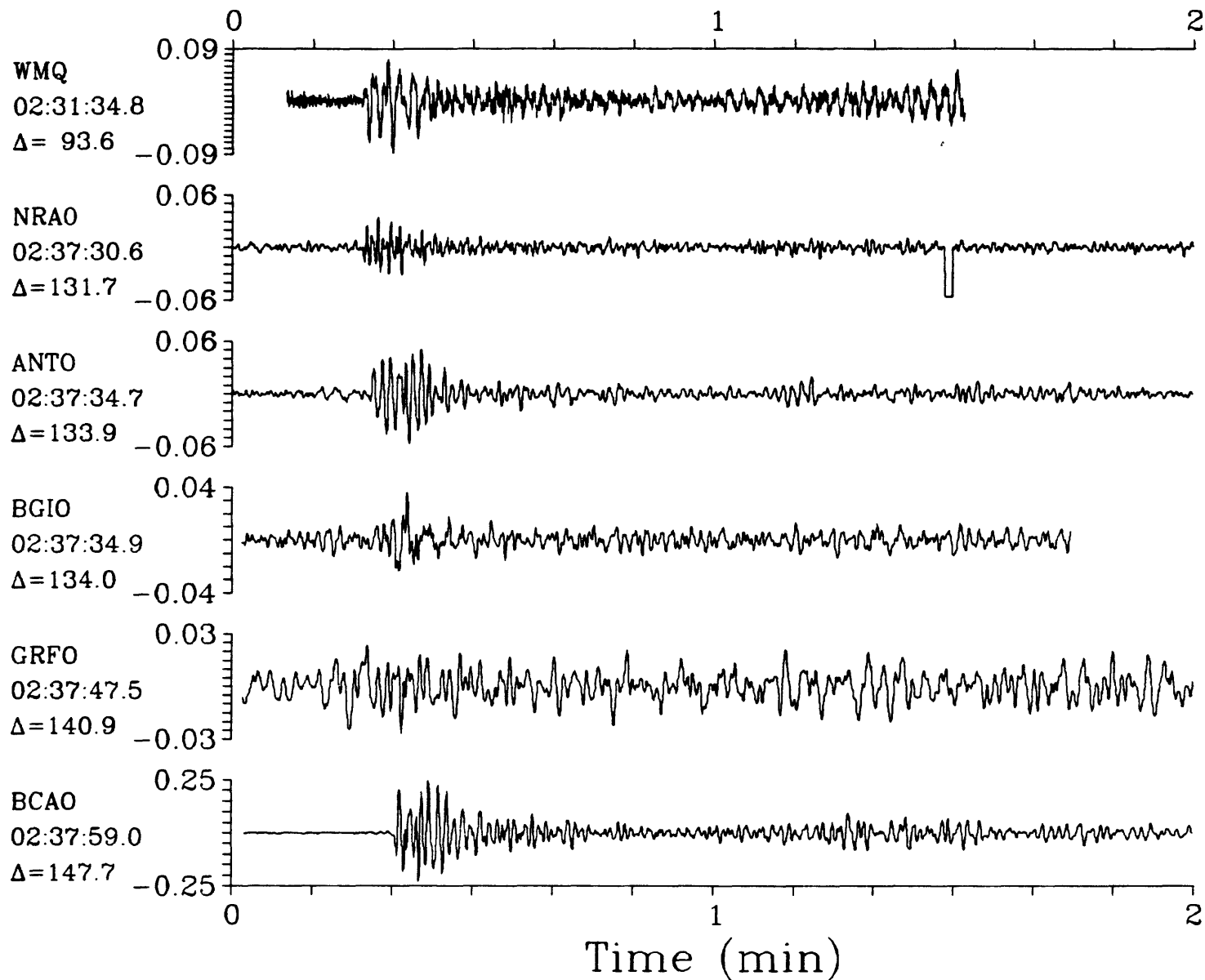
SPZ



SPZ

23 October 1986 02:18:52.79
Vanuatu Islands $h=171.9$ $m_b=5.7$

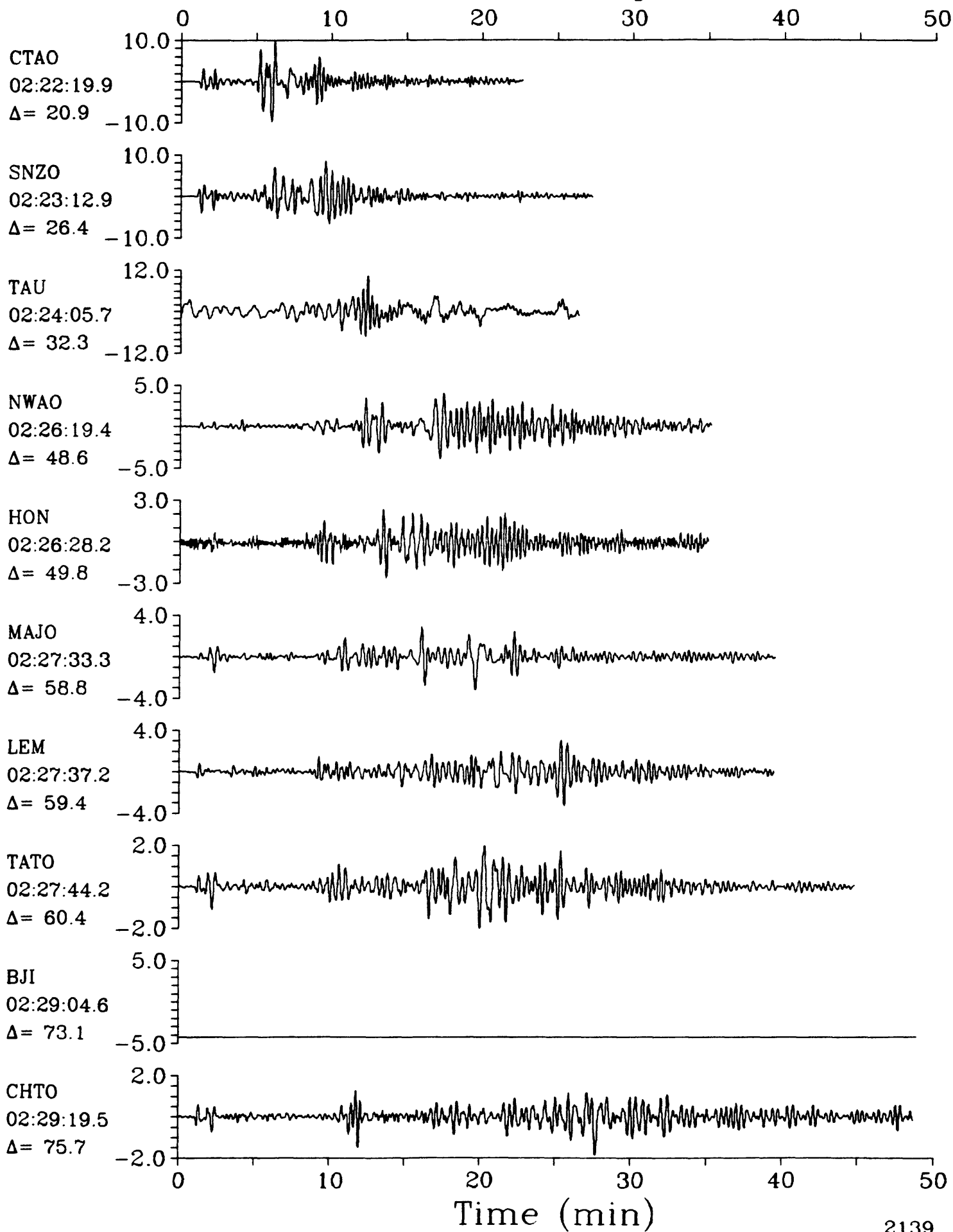
SPZ



LPZ

23 October 1986 02:18:52.79
Vanuatu Islands $h=171.9$ $m_b=5.7$

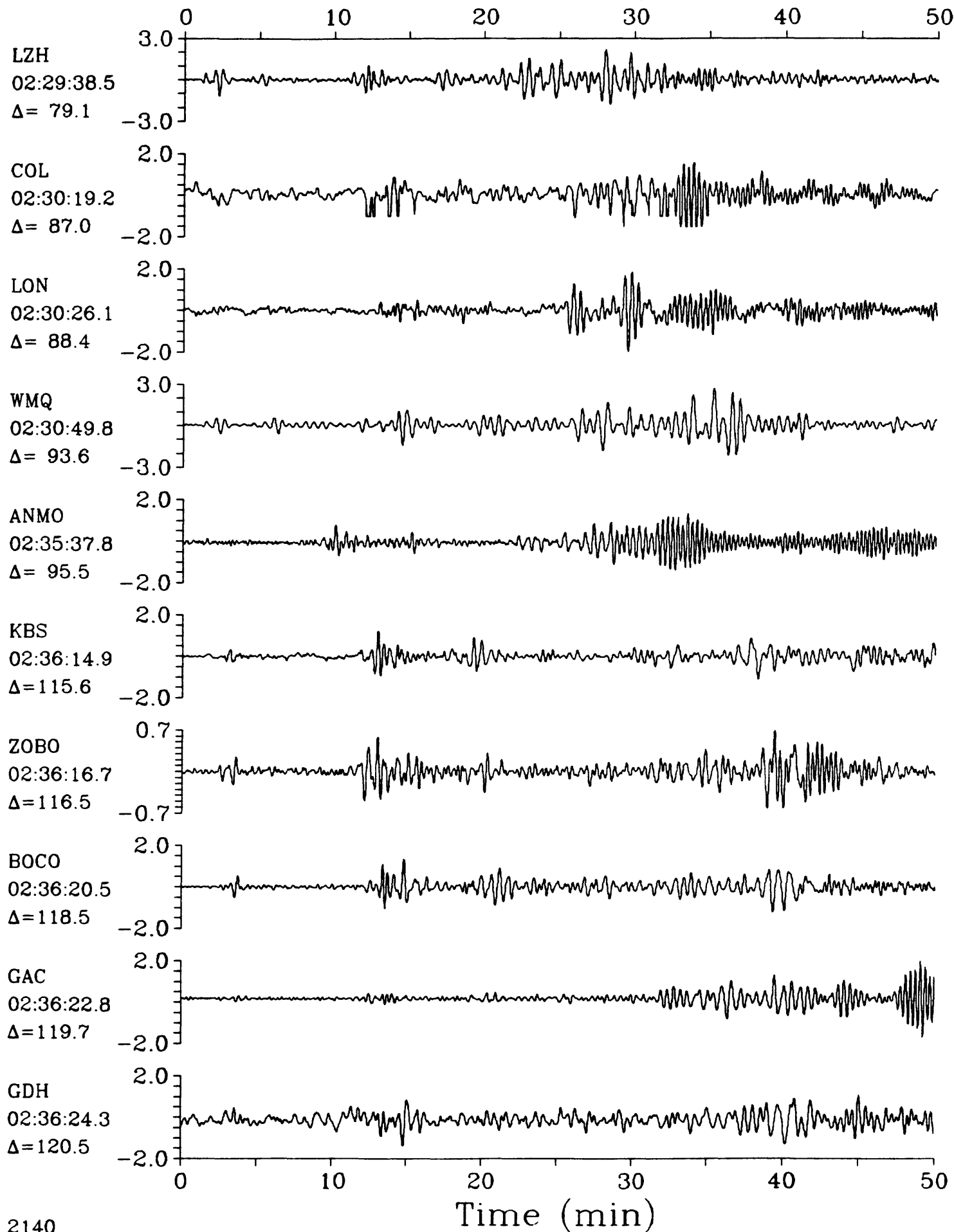
LPZ



LPZ

23 October 1986 02:18:52.79
Vanuatu Islands $h=171.9$ $m_b=5.7$

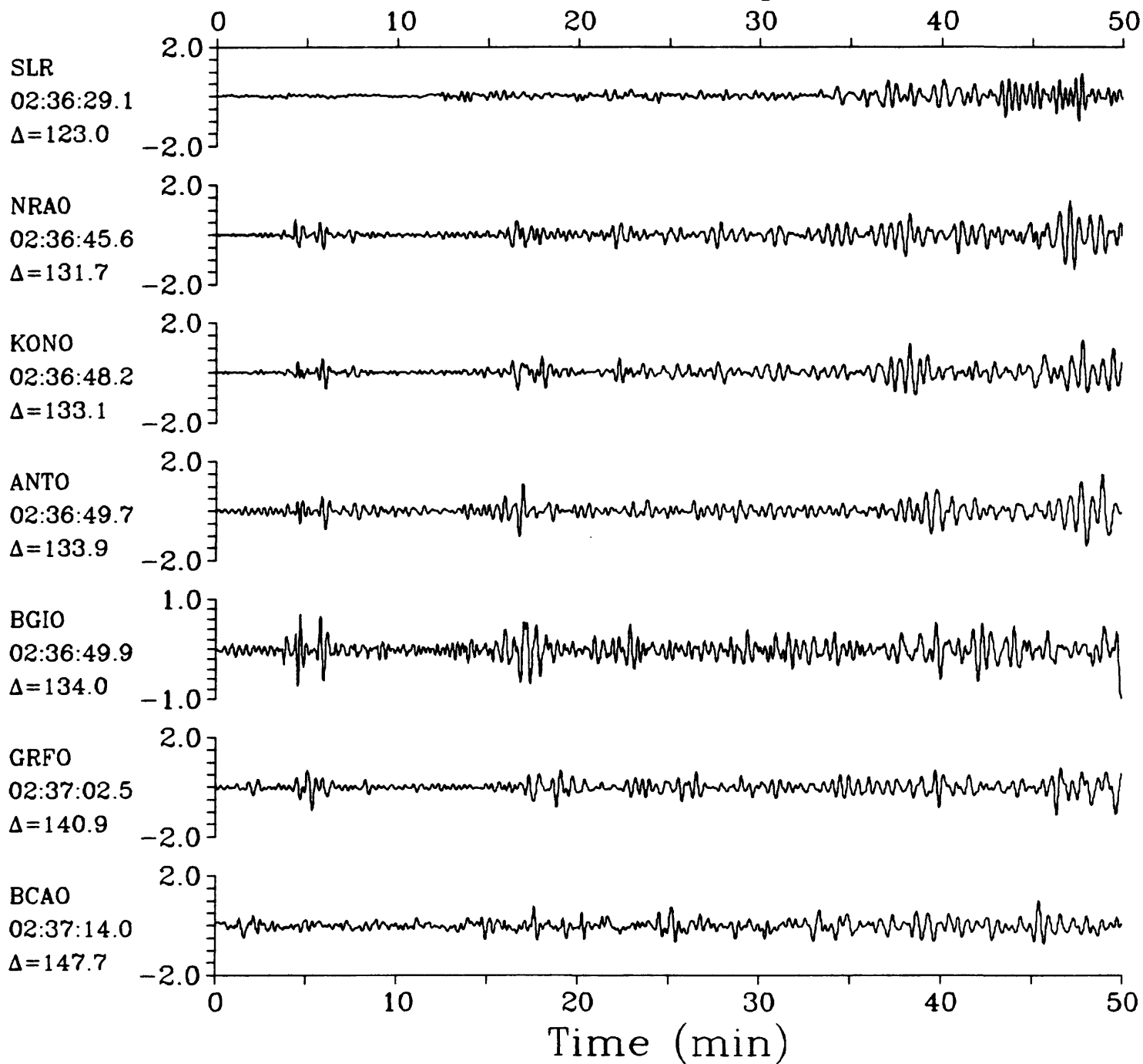
LPZ



LPZ

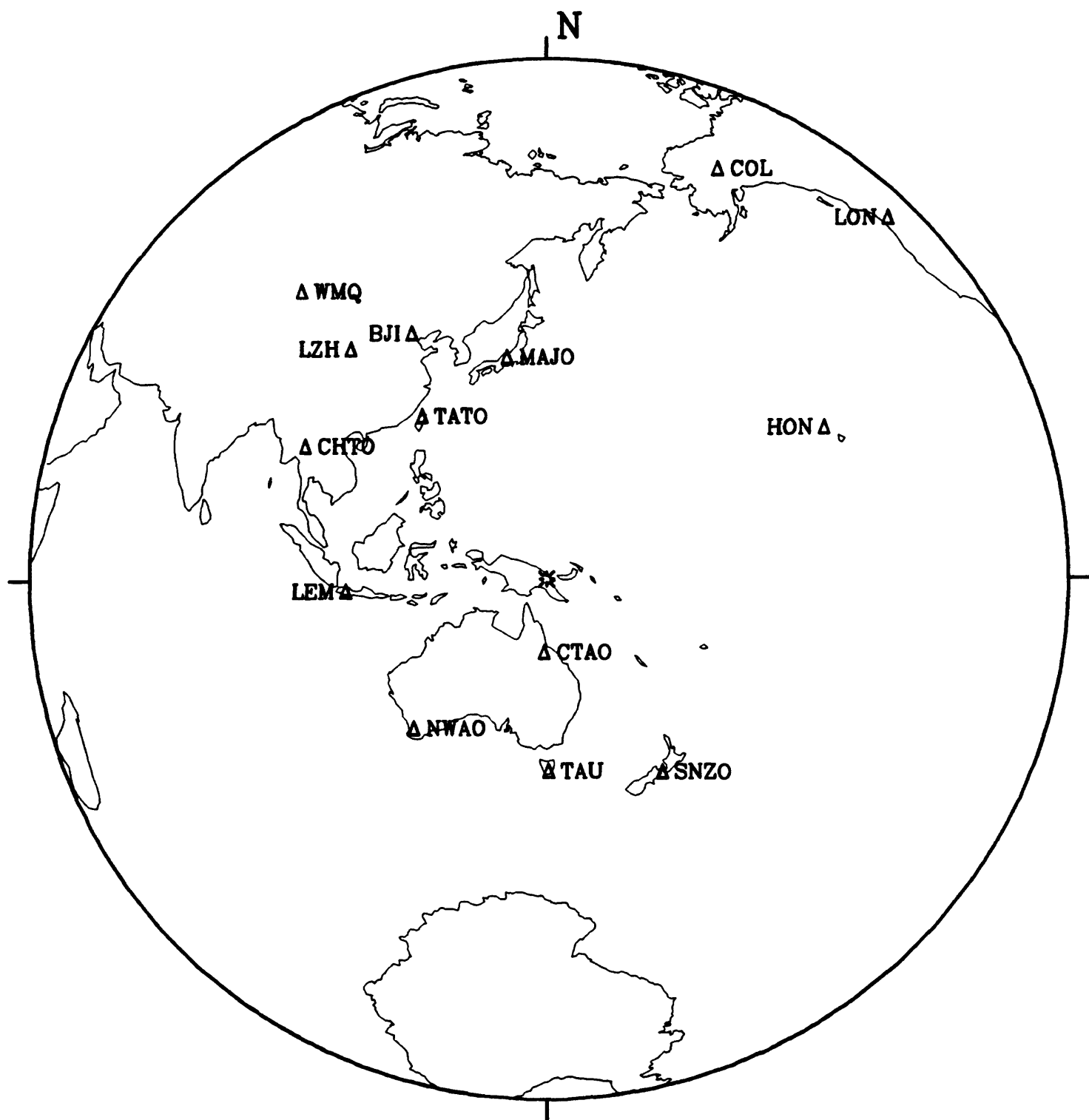
23 October 1986 02:18:52.79
Vanuatu Islands $h=171.9$ $m_b=5.7$

LPZ



23 October 1986 03:54:20.39

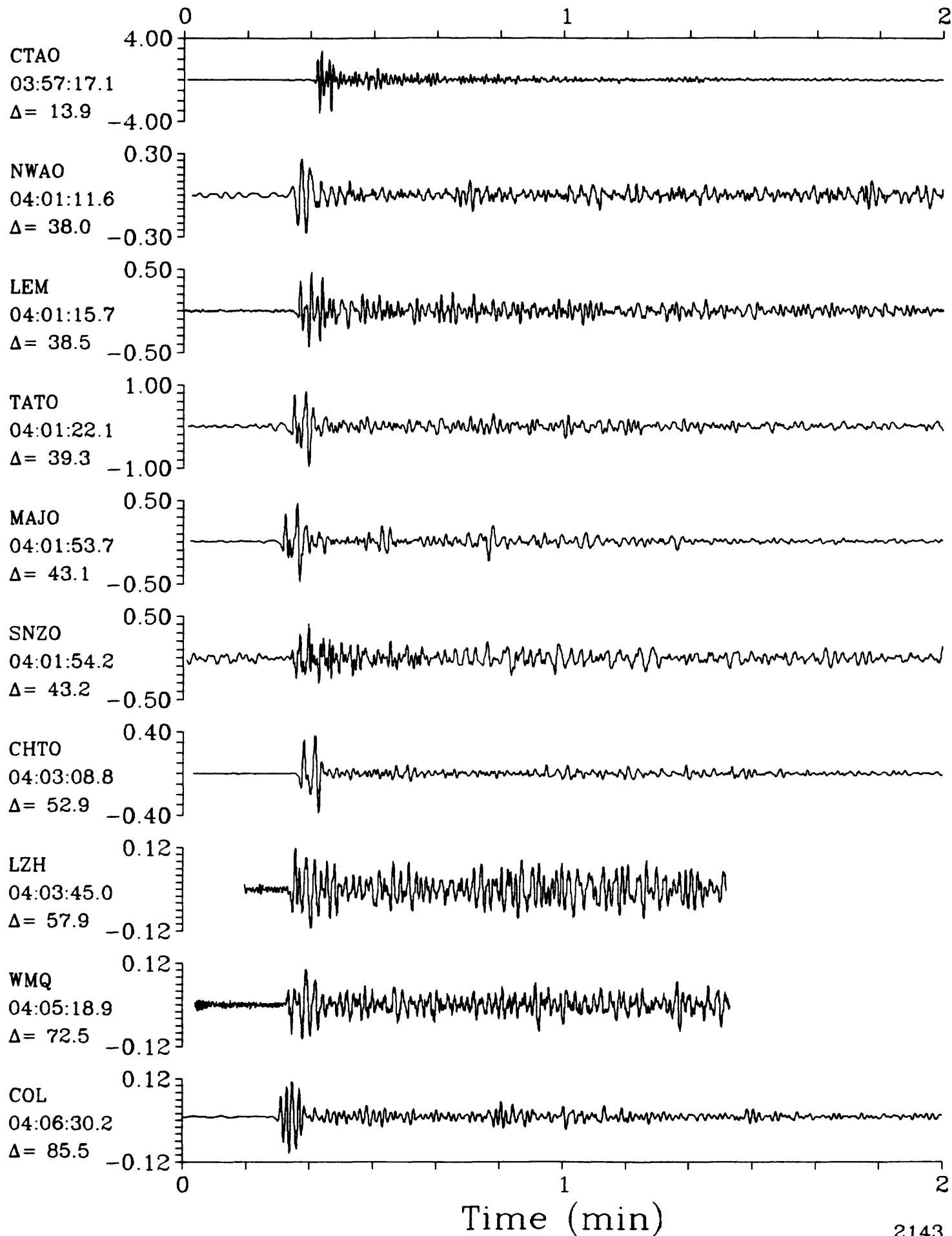
East Papua New Guinea Region



SPZ

23 October 1986 03:54:20.39

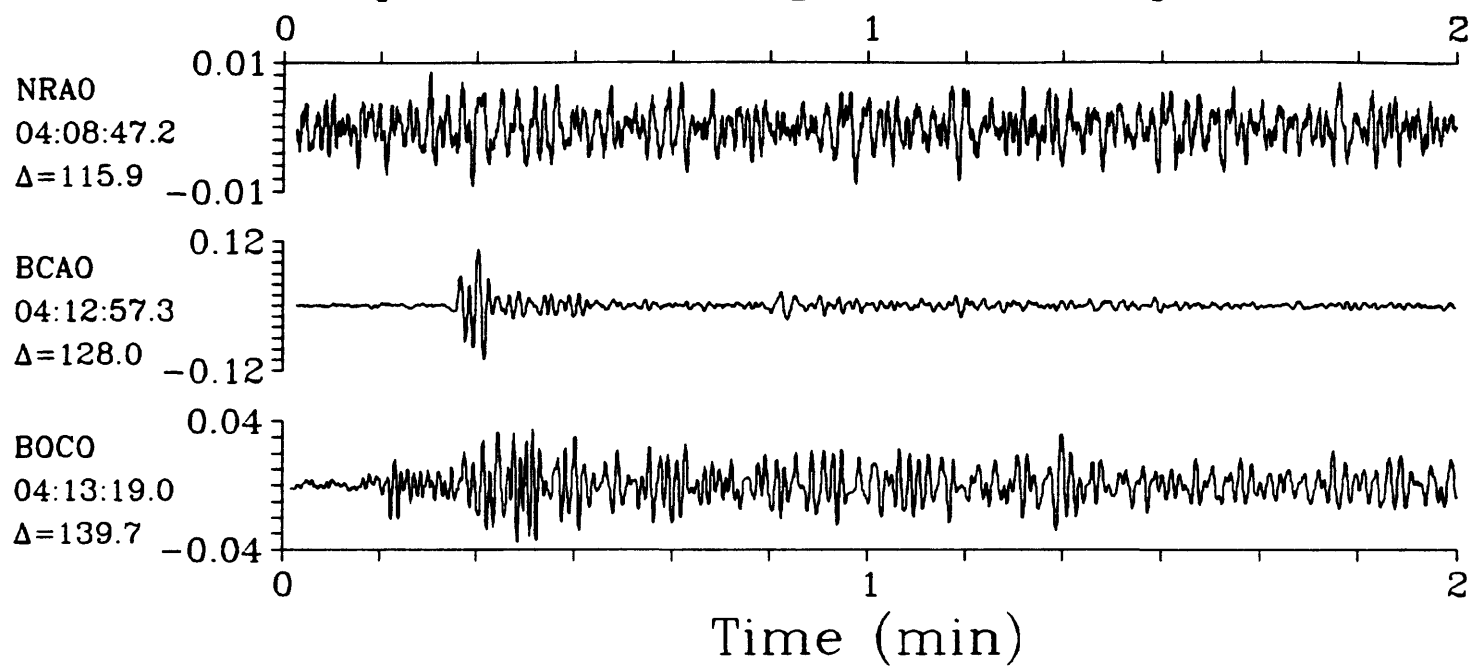
SPZ

East Papua New Guinea Region $h=123.9$ $m_b=5.8$ 

SPZ

23 October 1986 03:54:20.39

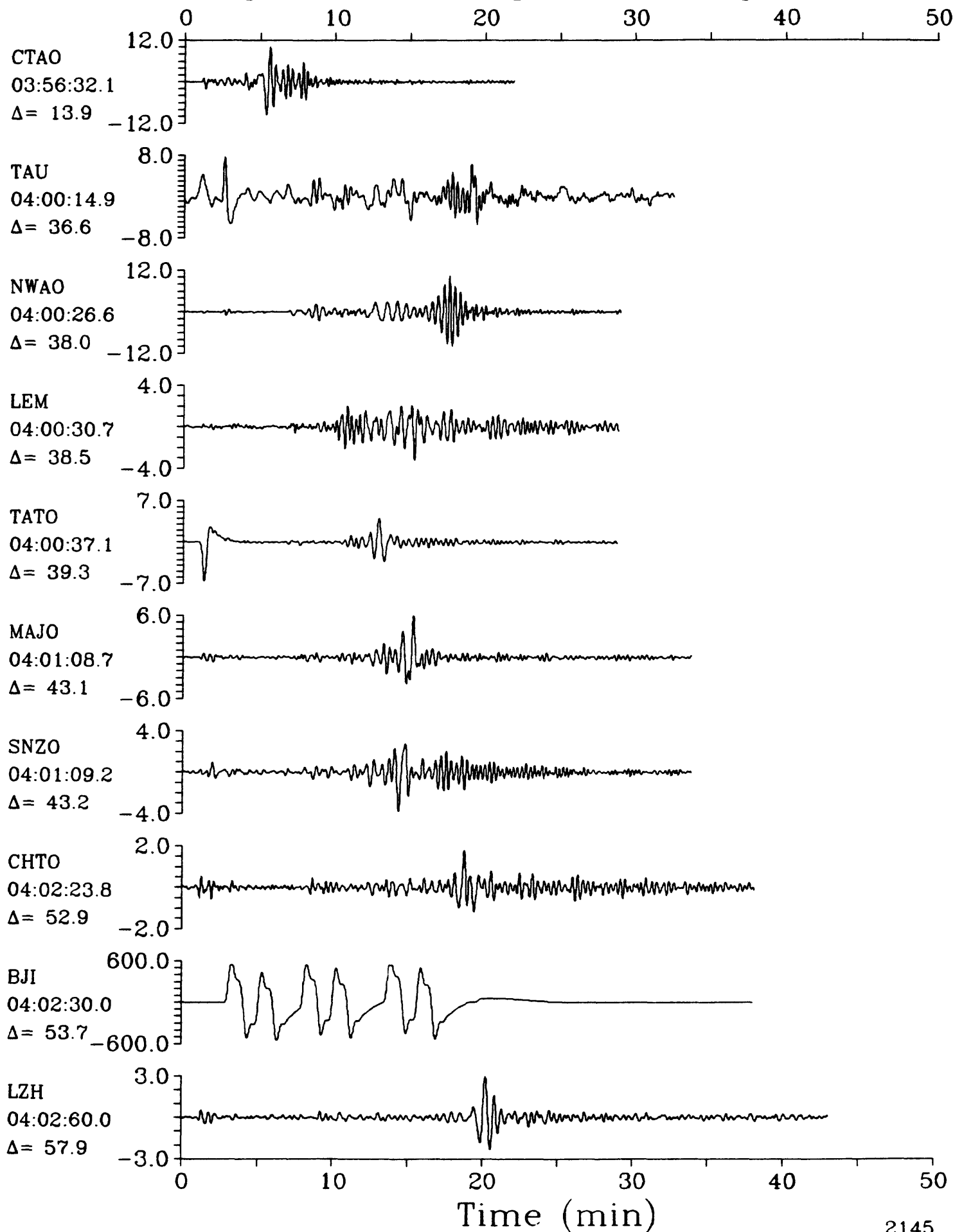
SPZ

East Papua New Guinea Region $h=123.9$ $m_b=5.8$ 

LPZ

23 October 1986 03:54:20.39

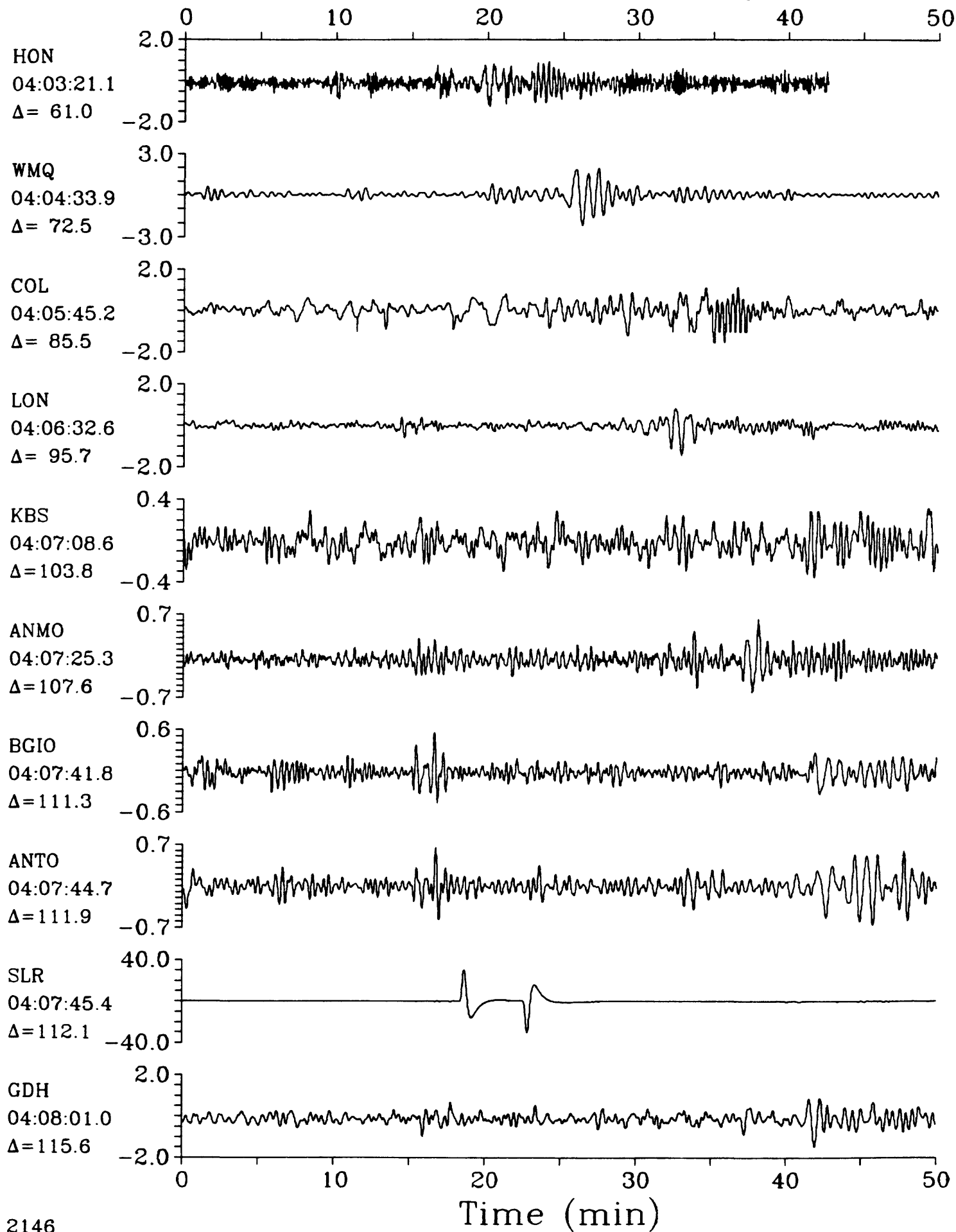
LPZ

East Papua New Guinea Region $h=123.9$ $m_b=5.8$ 

LPZ

23 October 1986 03:54:20.39

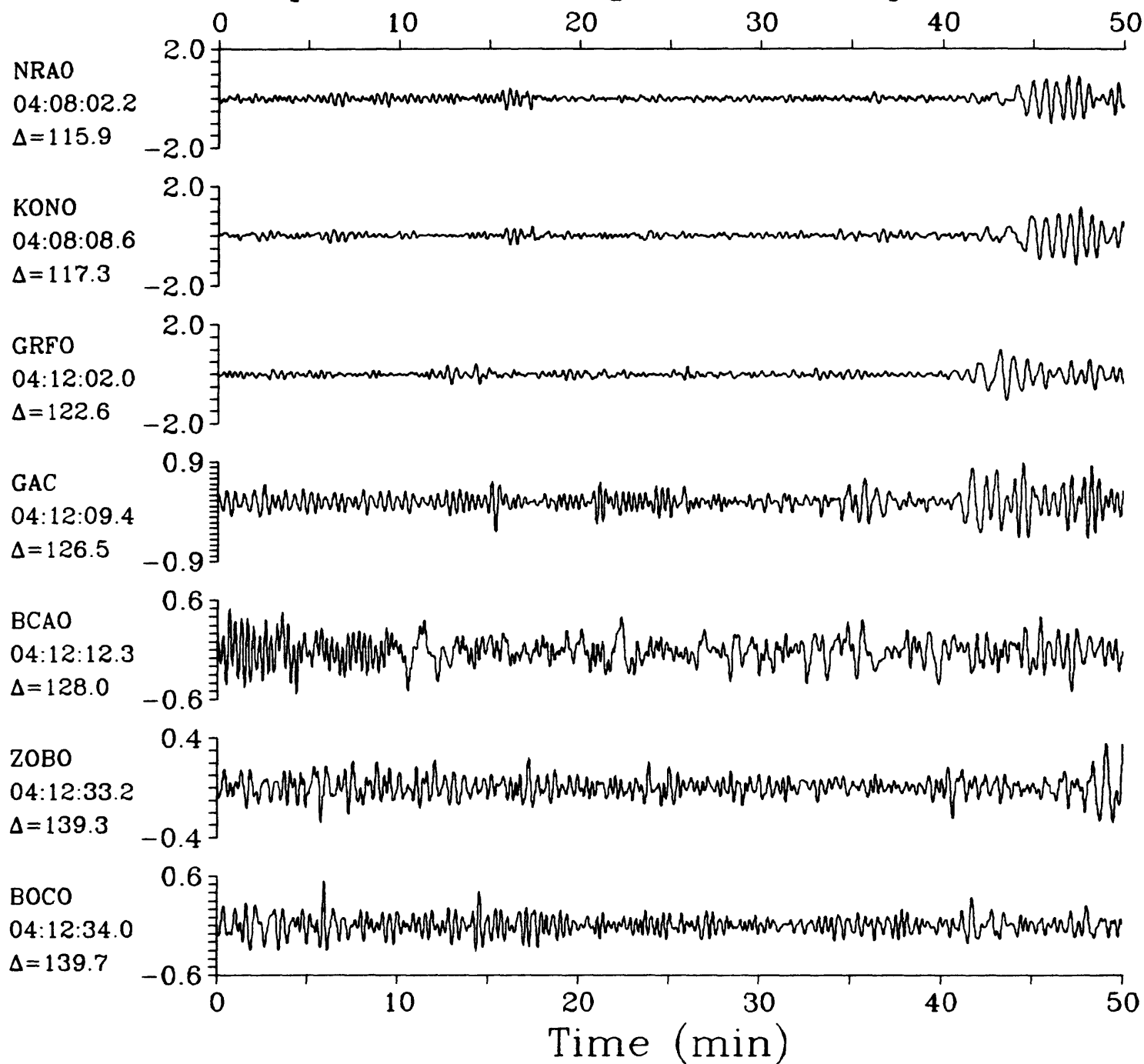
LPZ

East Papua New Guinea Region $h=123.9$ $m_b=5.8$ 

LPZ

23 October 1986 03:54:20.39

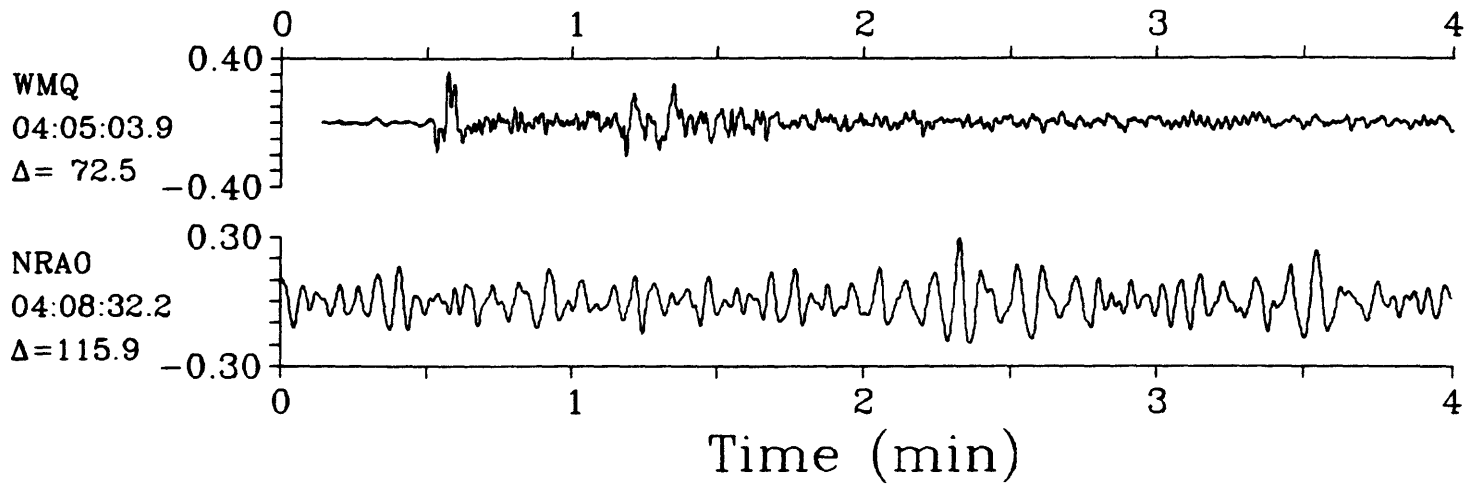
LPZ

East Papua New Guinea Region $h=123.9$ $m_b=5.8$ 

IPZ

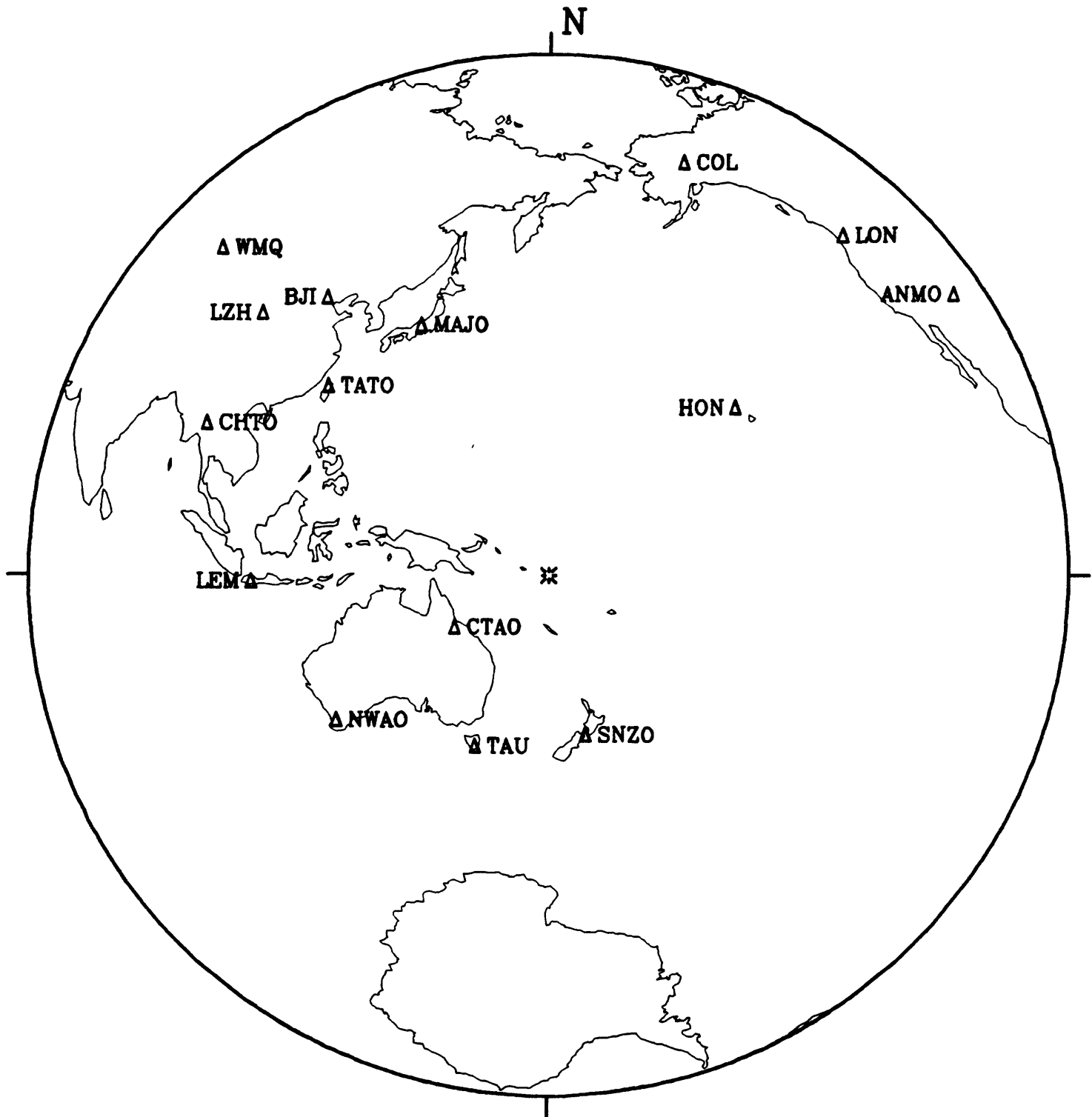
23 October 1986 03:54:20.39

IPZ

East Papua New Guinea Region $h=123.9$ $m_b=5.8$ 

23 October 1986 15:48:45.88

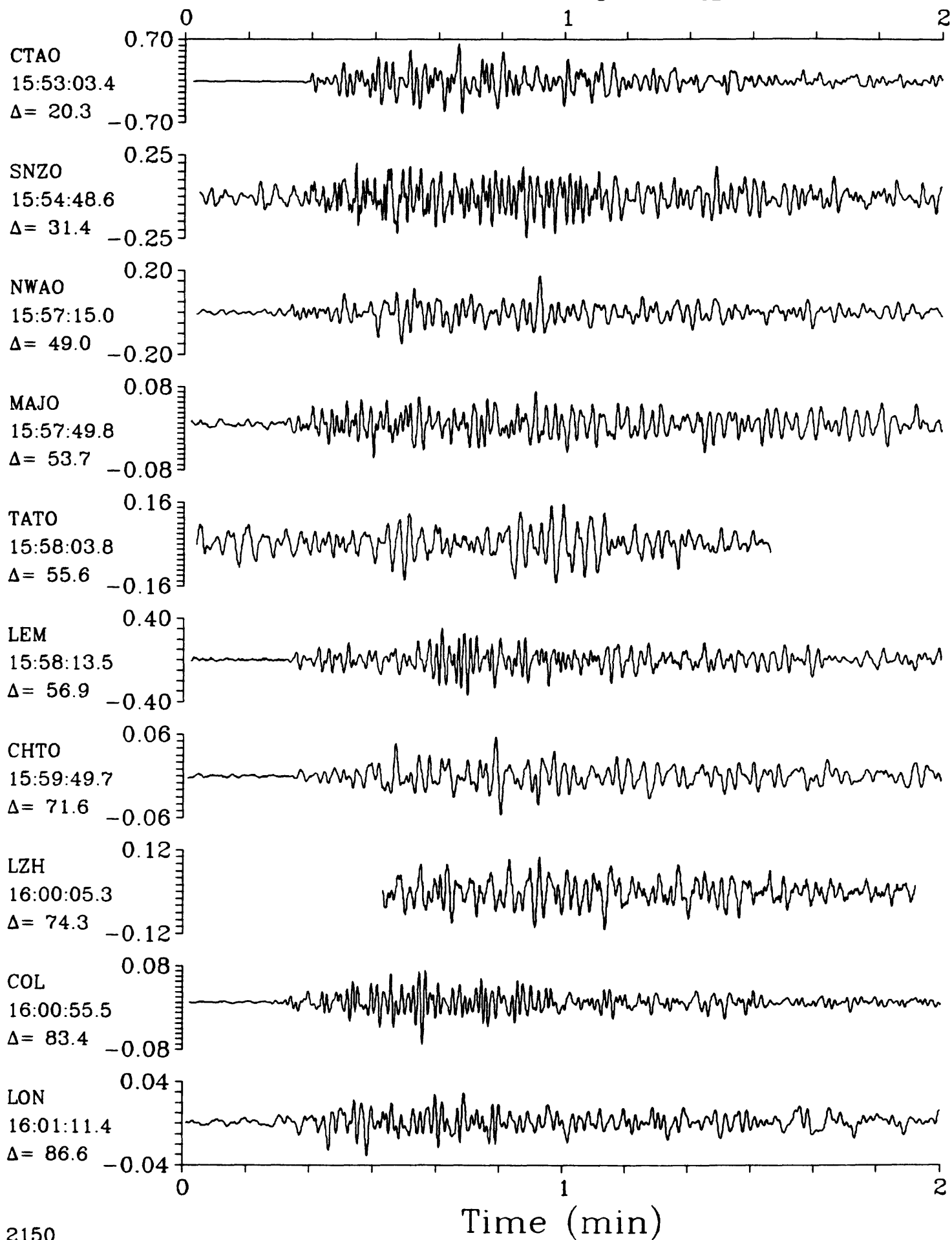
Santa Cruz Islands



SPZ

23 October 1986 15:48:45.88

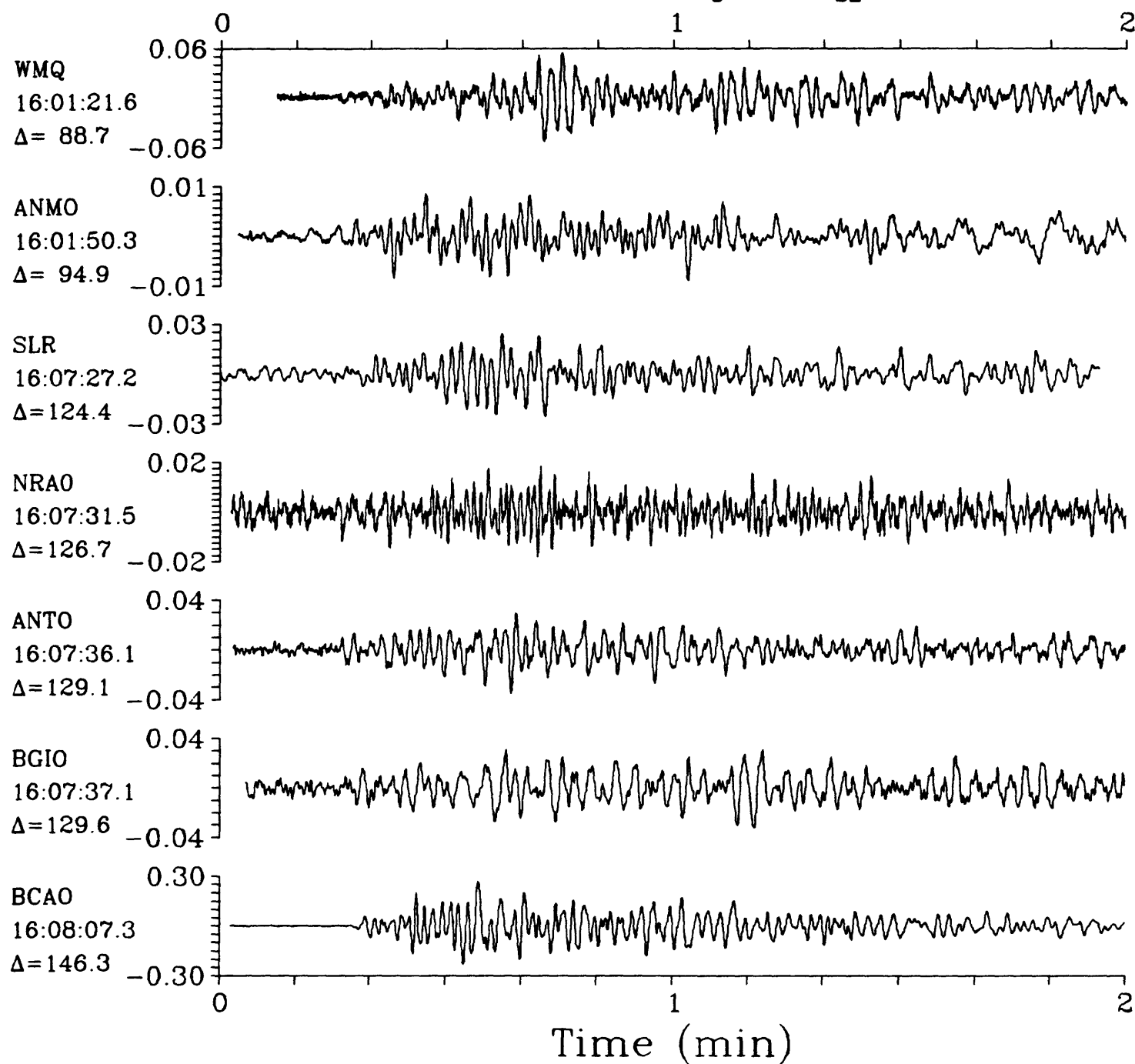
SPZ

Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.6$ 

SPZ

23 October 1986 15:48:45.88

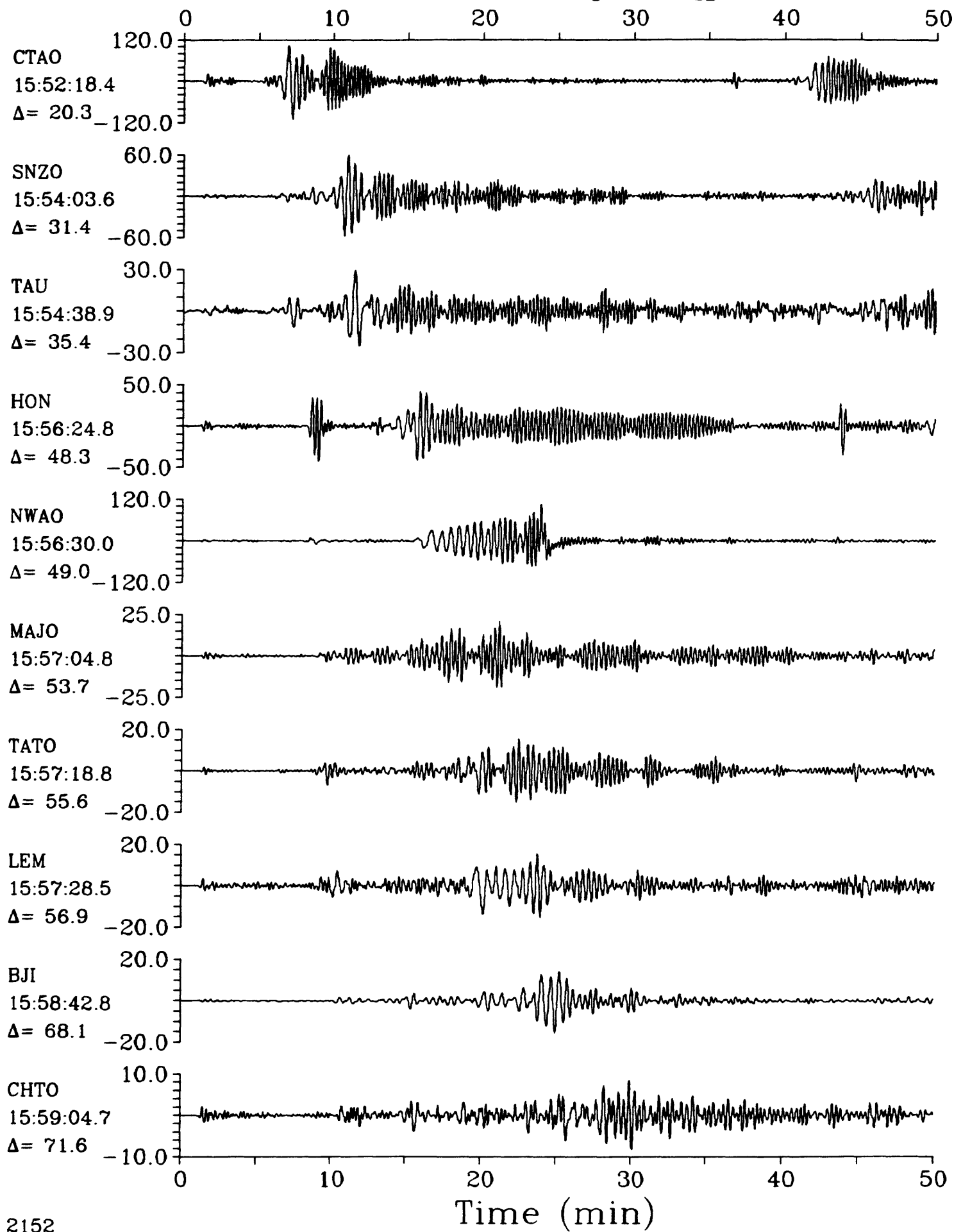
SPZ

Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.6$ 

LPZ

23 October 1986 15:48:45.88

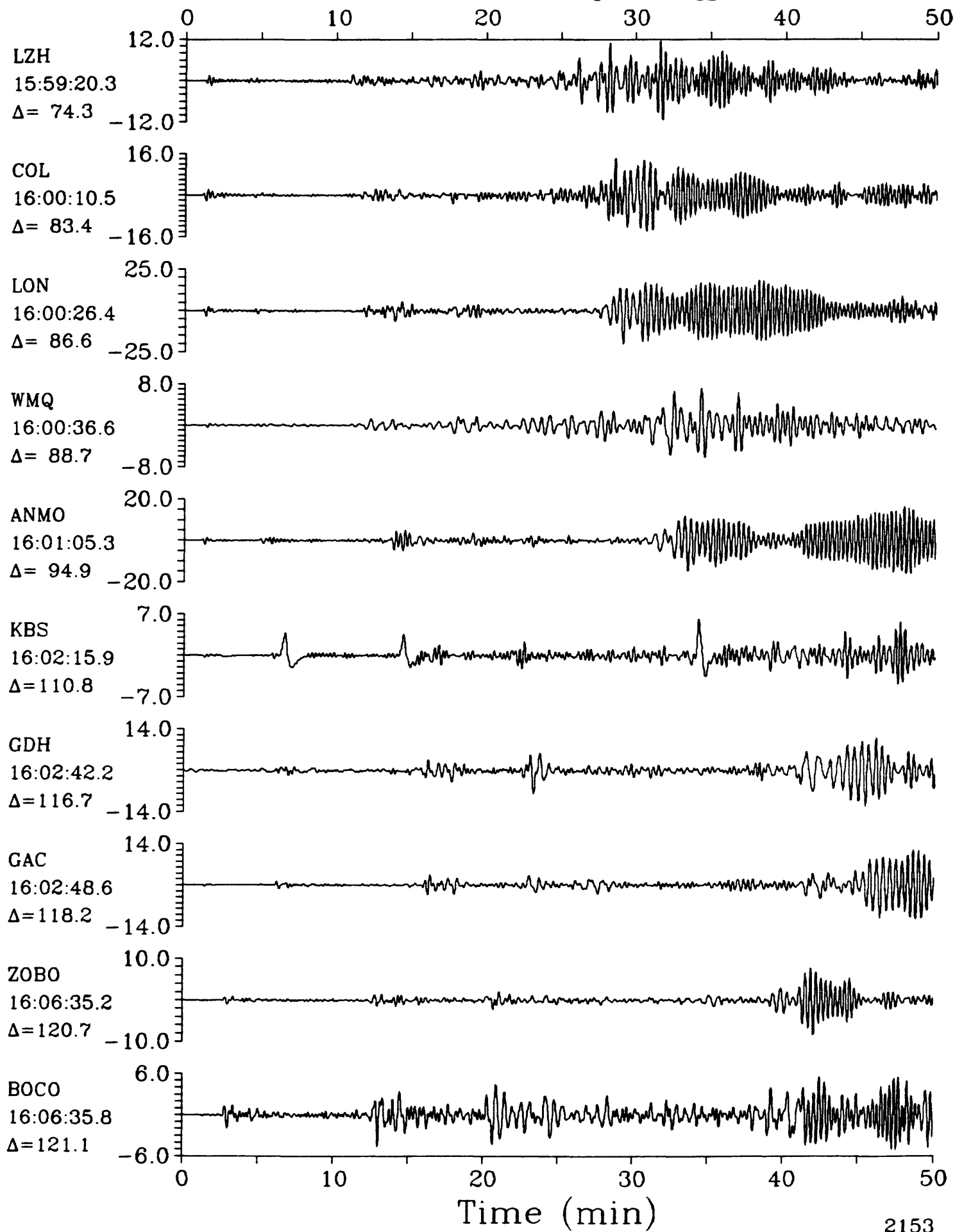
LPZ

Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.6$ 

LPZ

23 October 1986 15:48:45.88
Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.6$

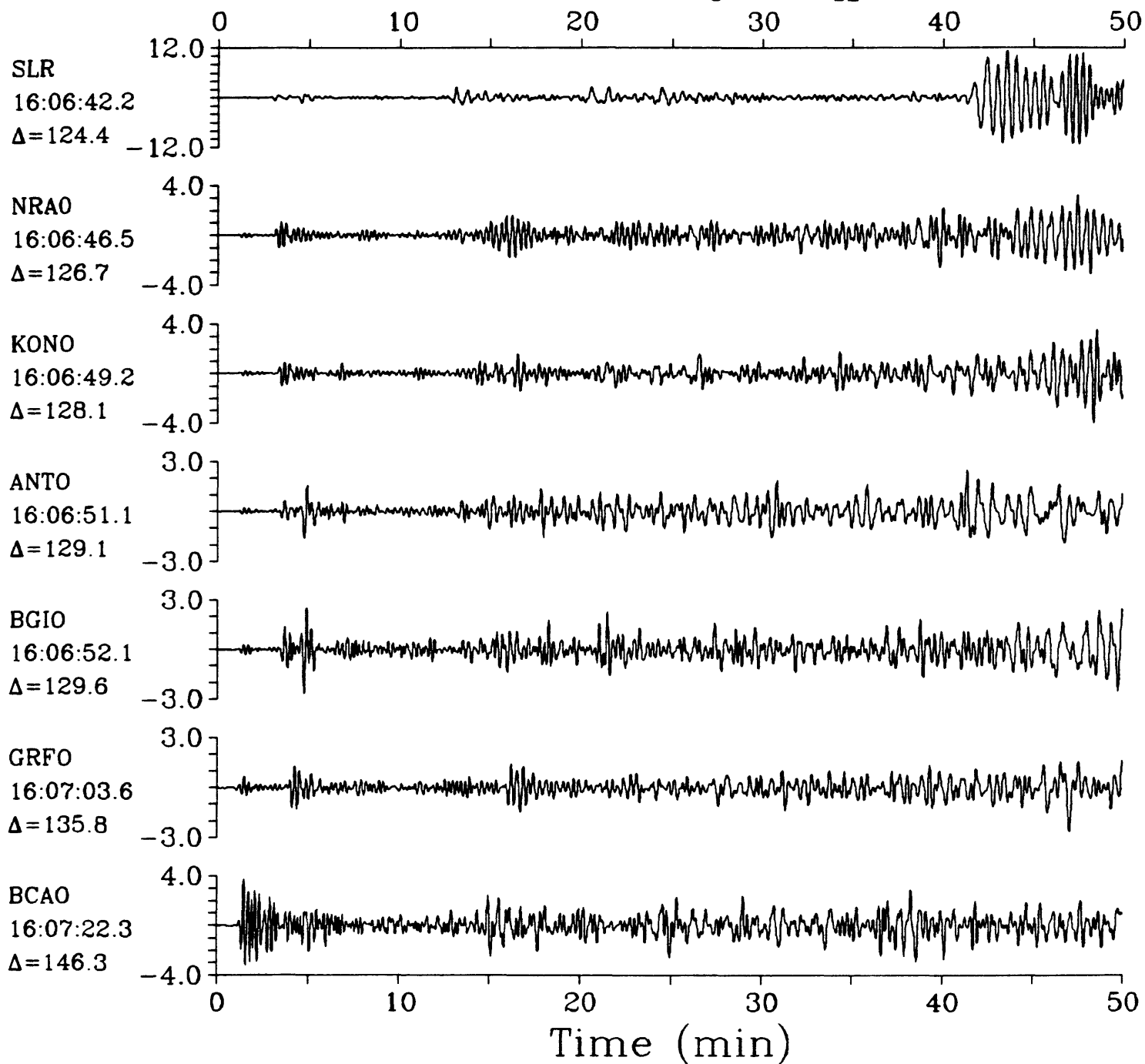
LPZ



LPZ

23 October 1986 15:48:45.88

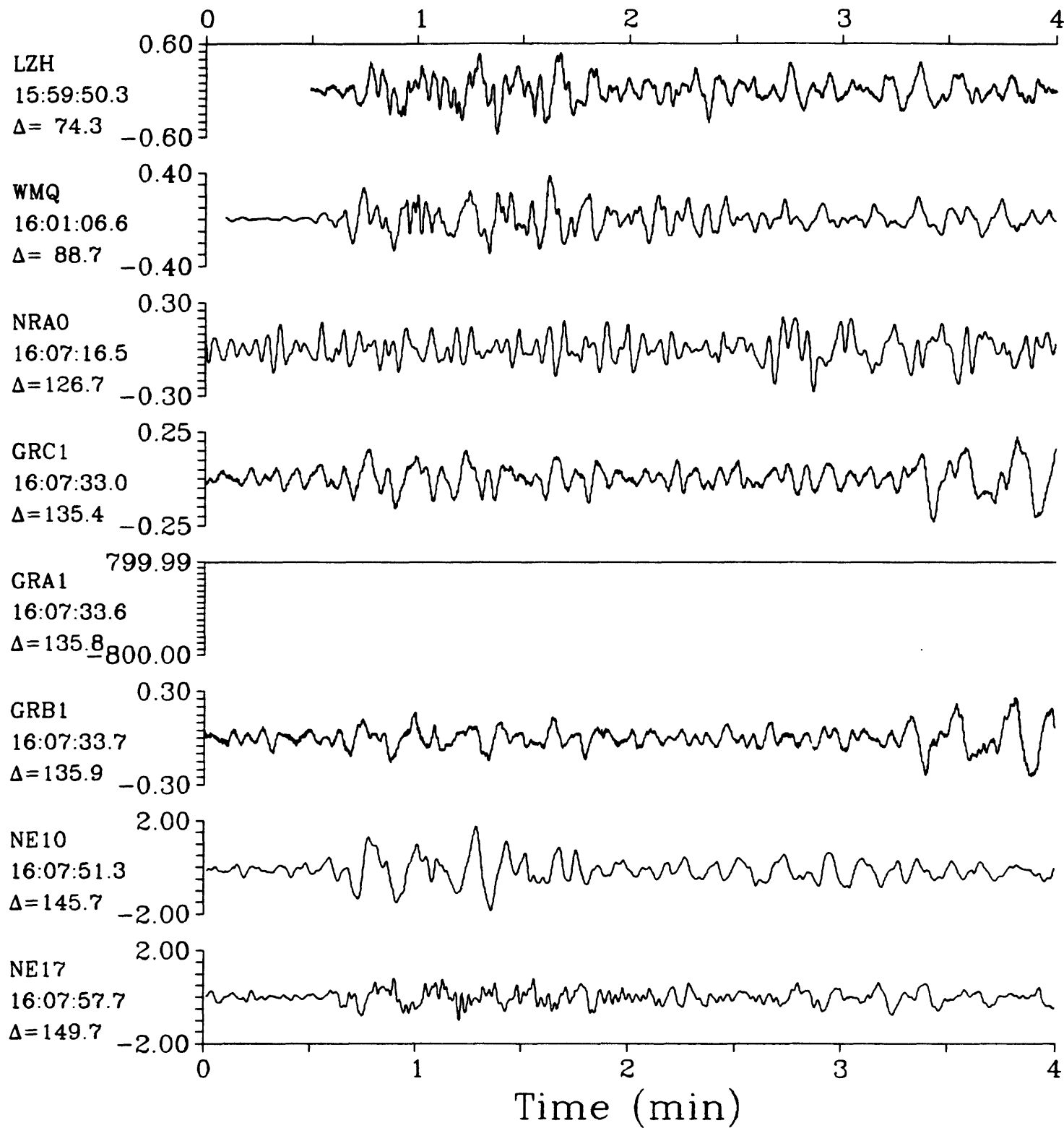
LPZ

Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.6$ 

IPZ

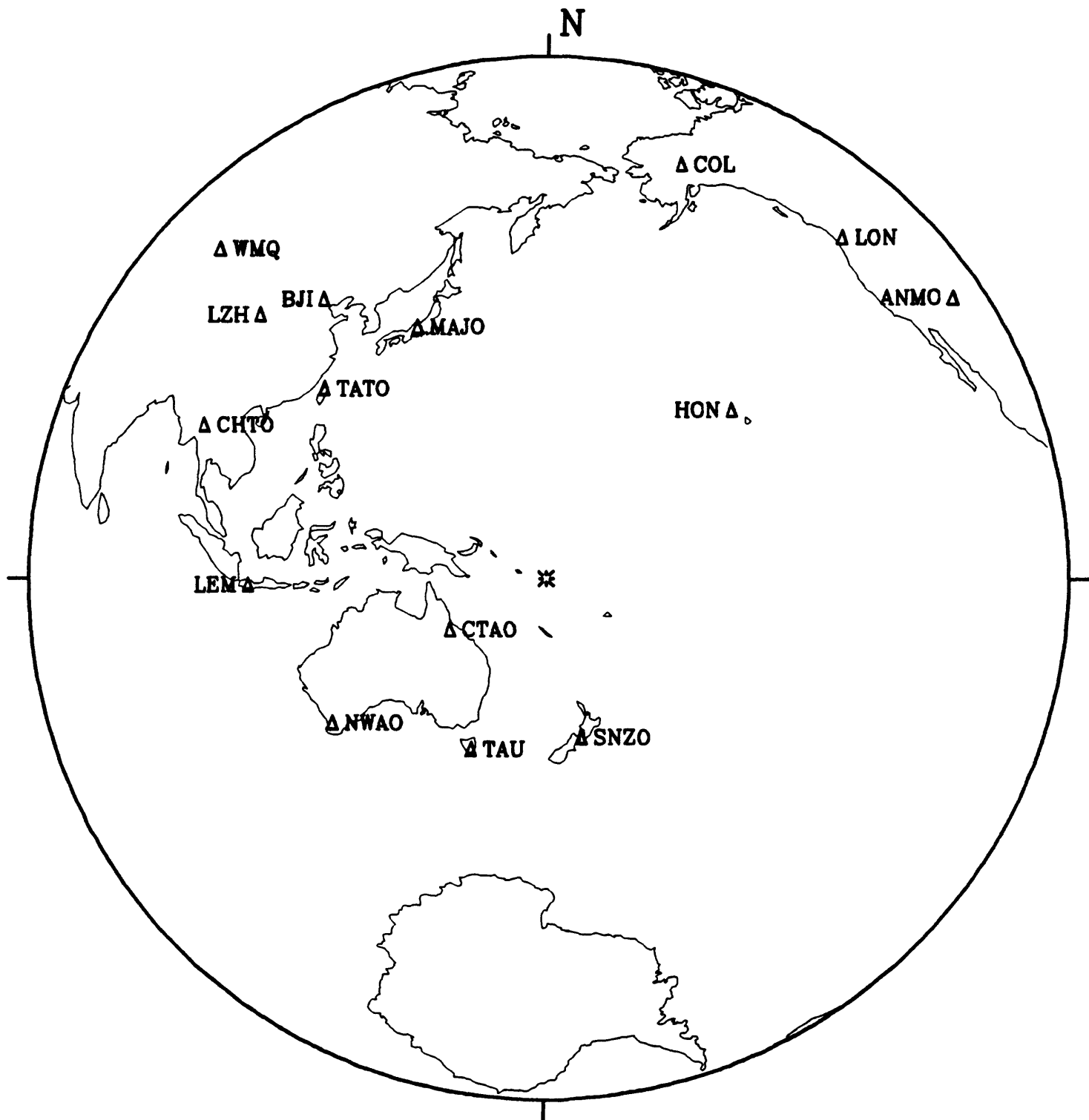
23 October 1986 15:48:45.88

IPZ

Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.6$ 

23 October 1986 16:23:50.50

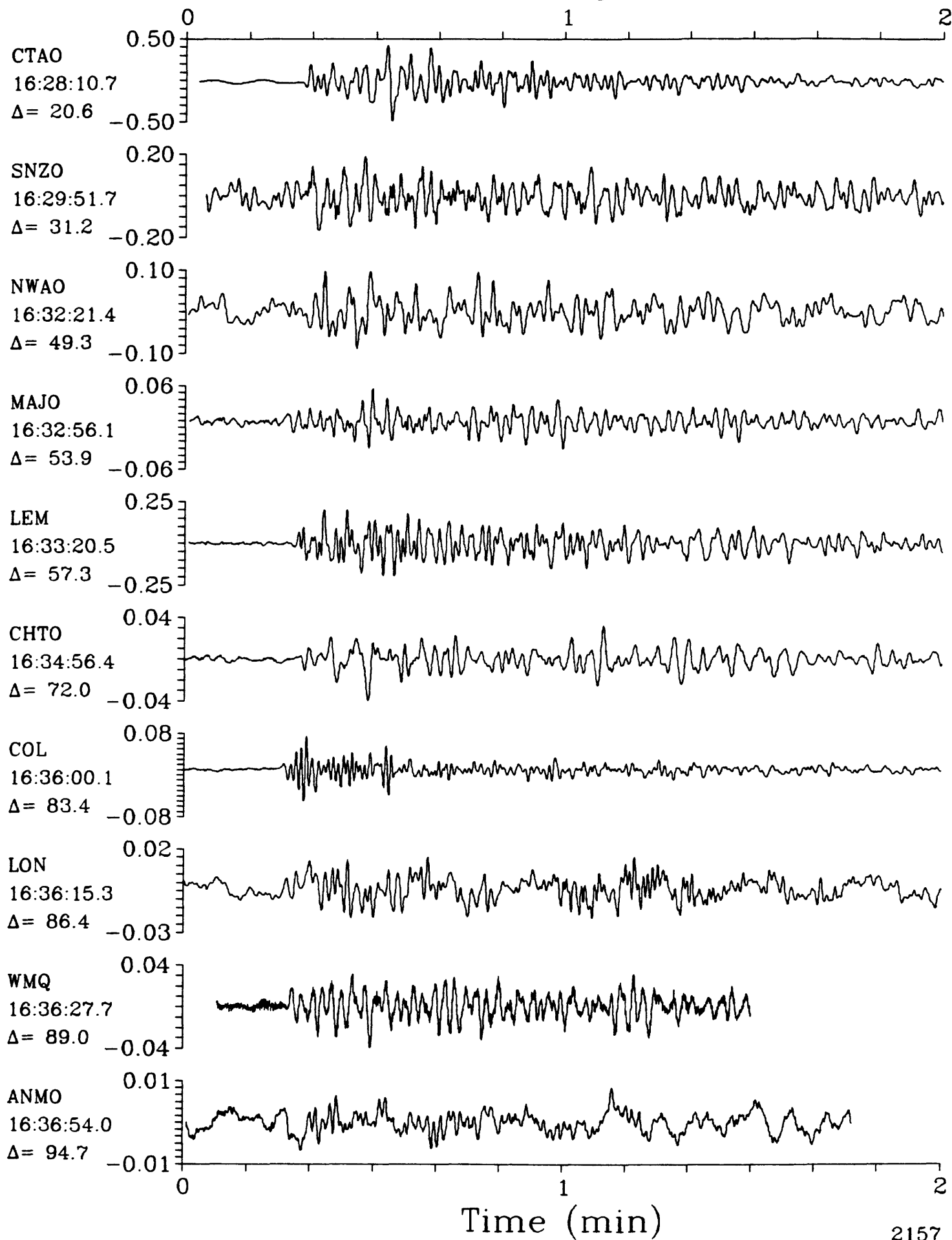
Santa Cruz Islands



SPZ

23 October 1986 16:23:50.50

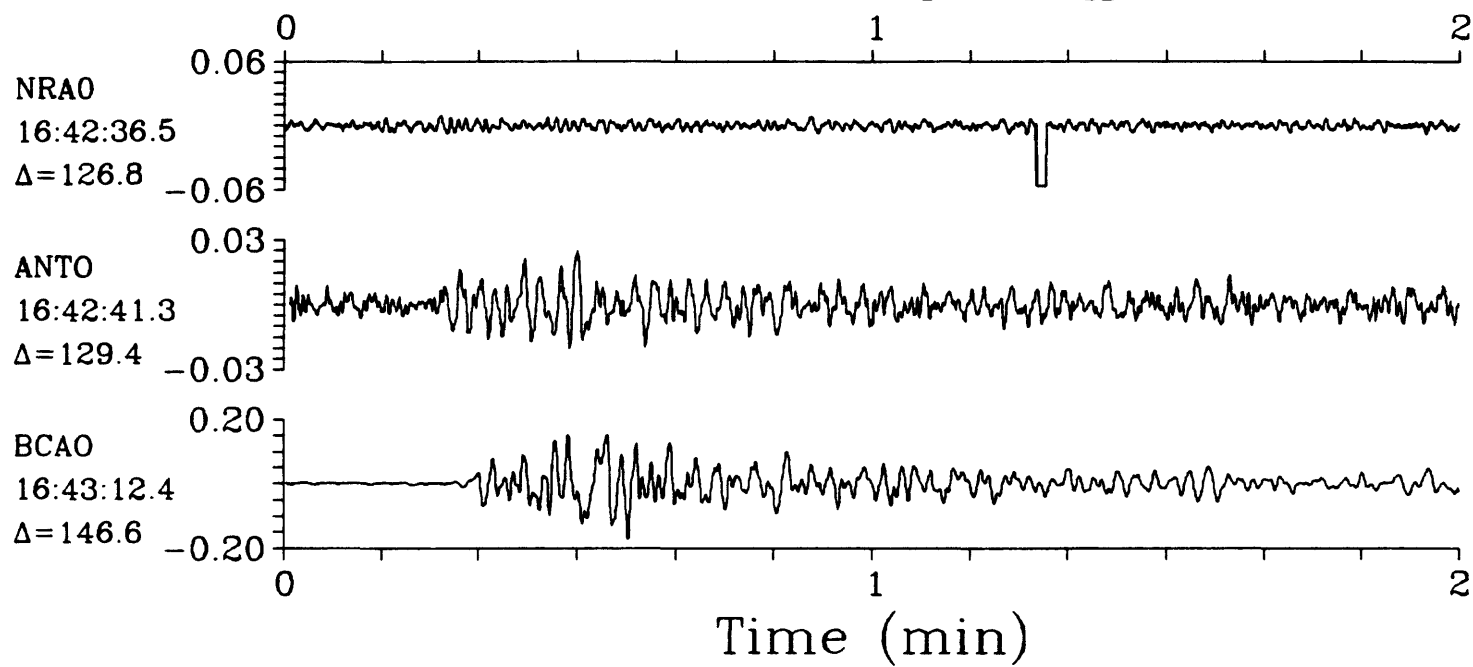
SPZ

Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.4$ 

SPZ

23 October 1986 16:23:50.50

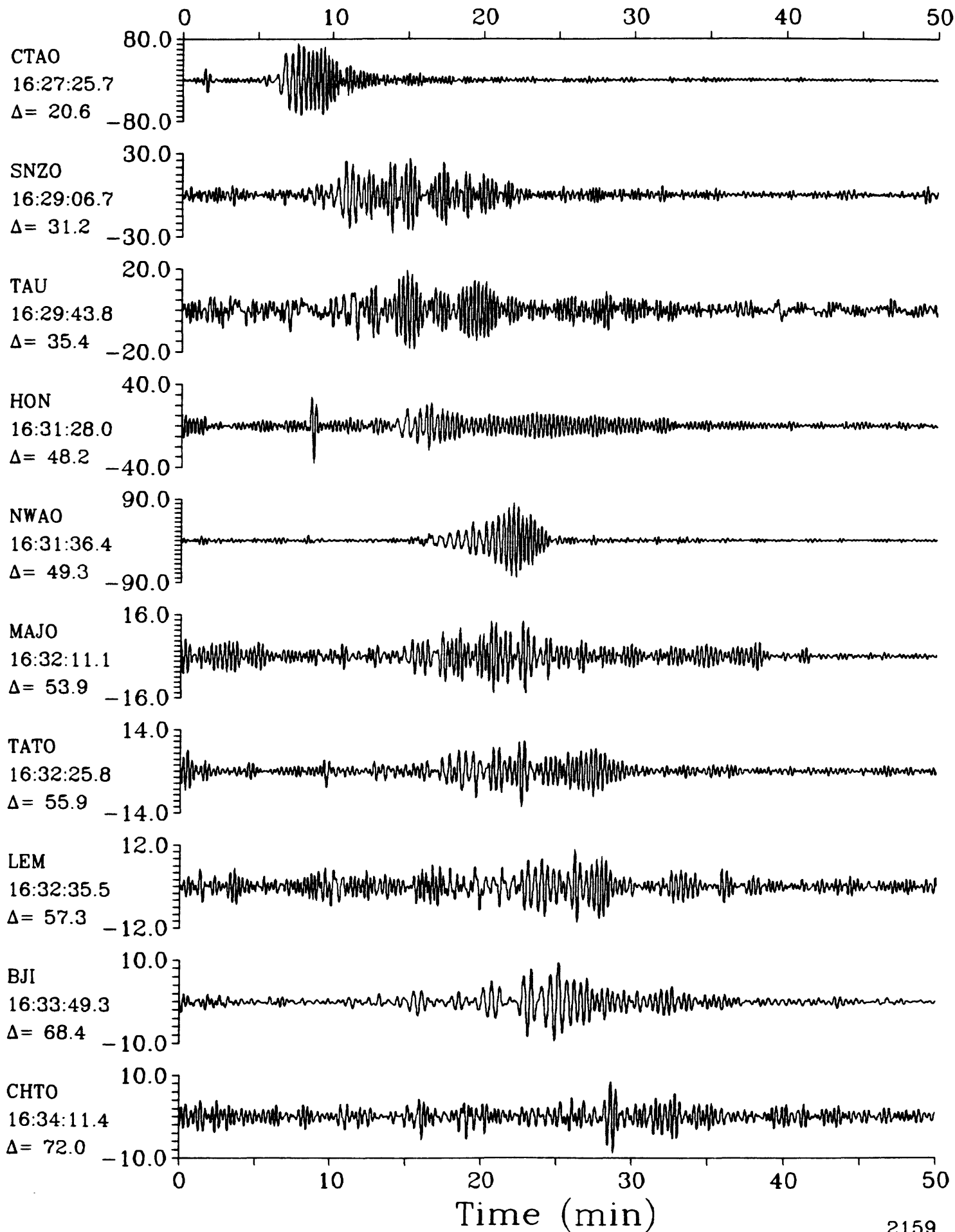
SPZ

Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.4$ 

LPZ

23 October 1986 16:23:50.50

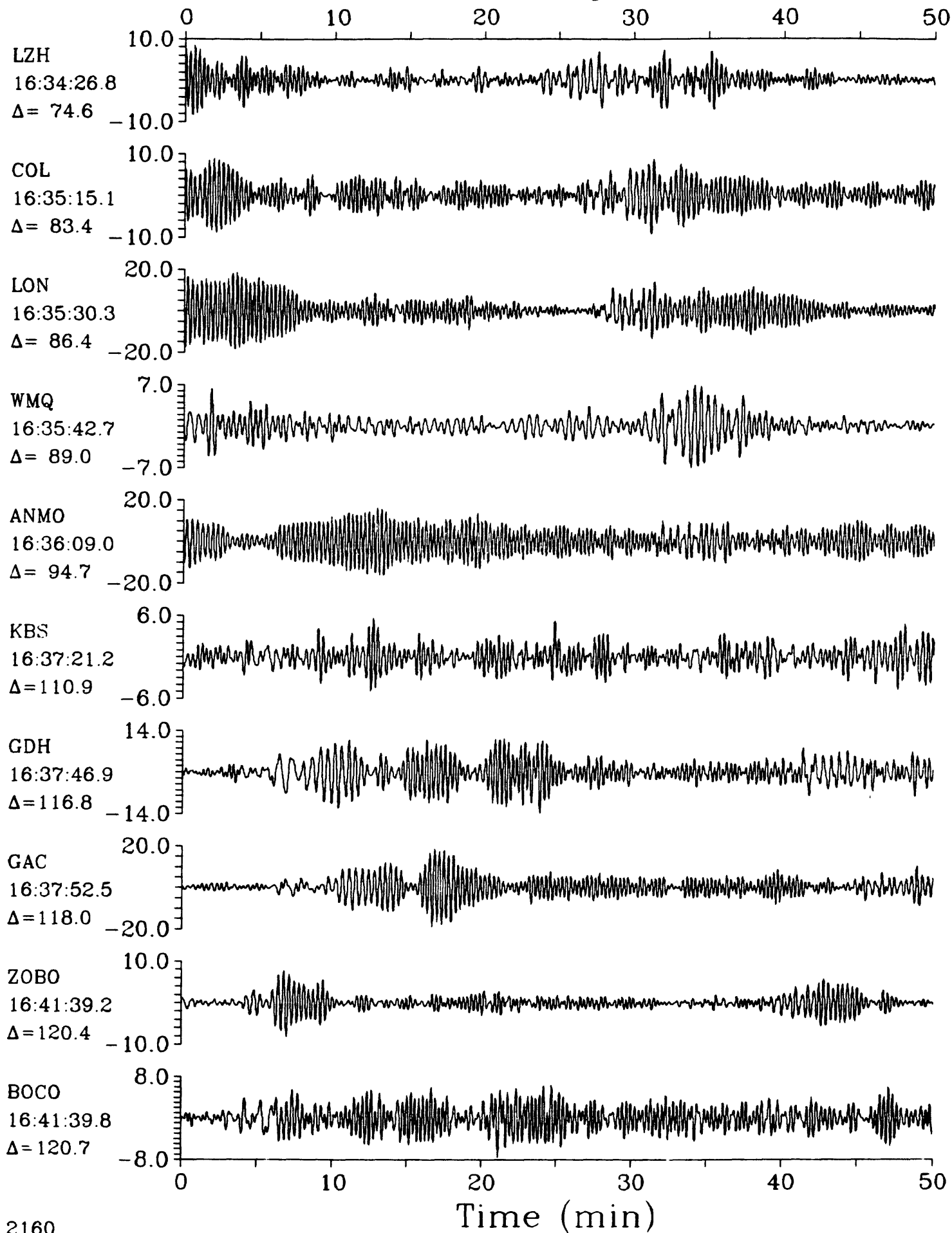
LPZ

Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.4$ 

LPZ

23 October 1986 16:23:50.50

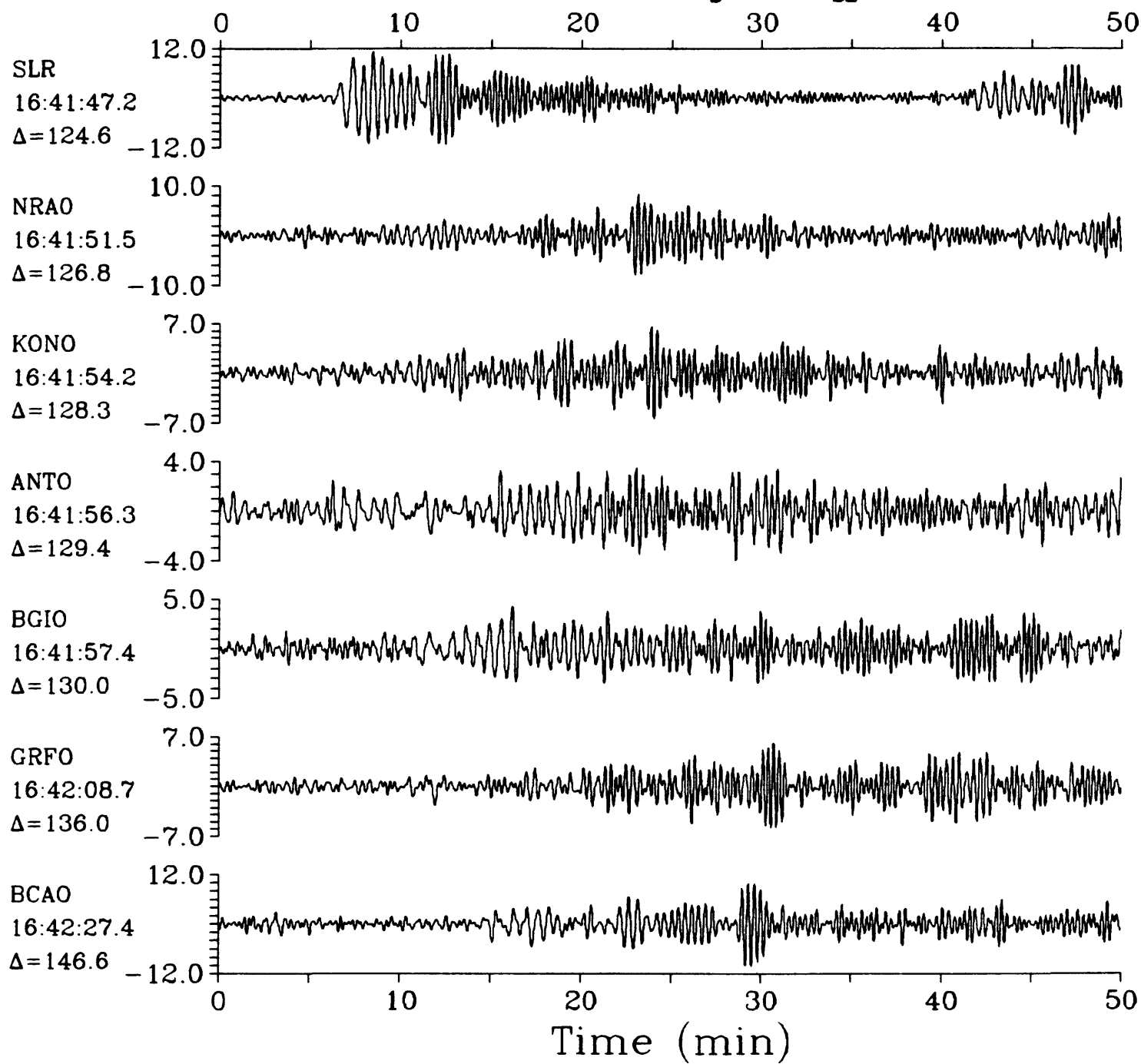
LPZ

Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{SZ}=6.4$ 

LPZ

23 October 1986 16:23:50.50
Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.4$

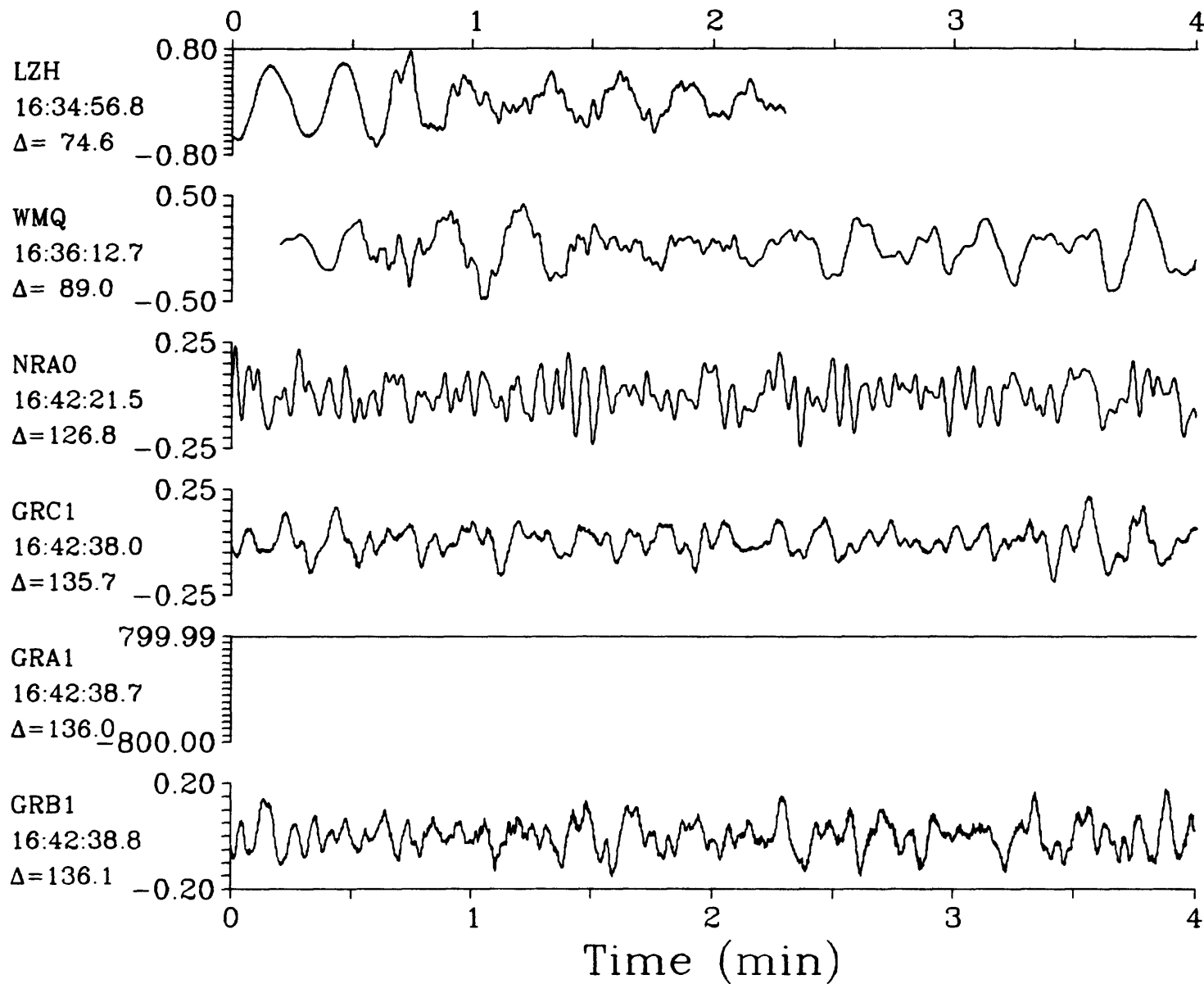
LPZ



IPZ

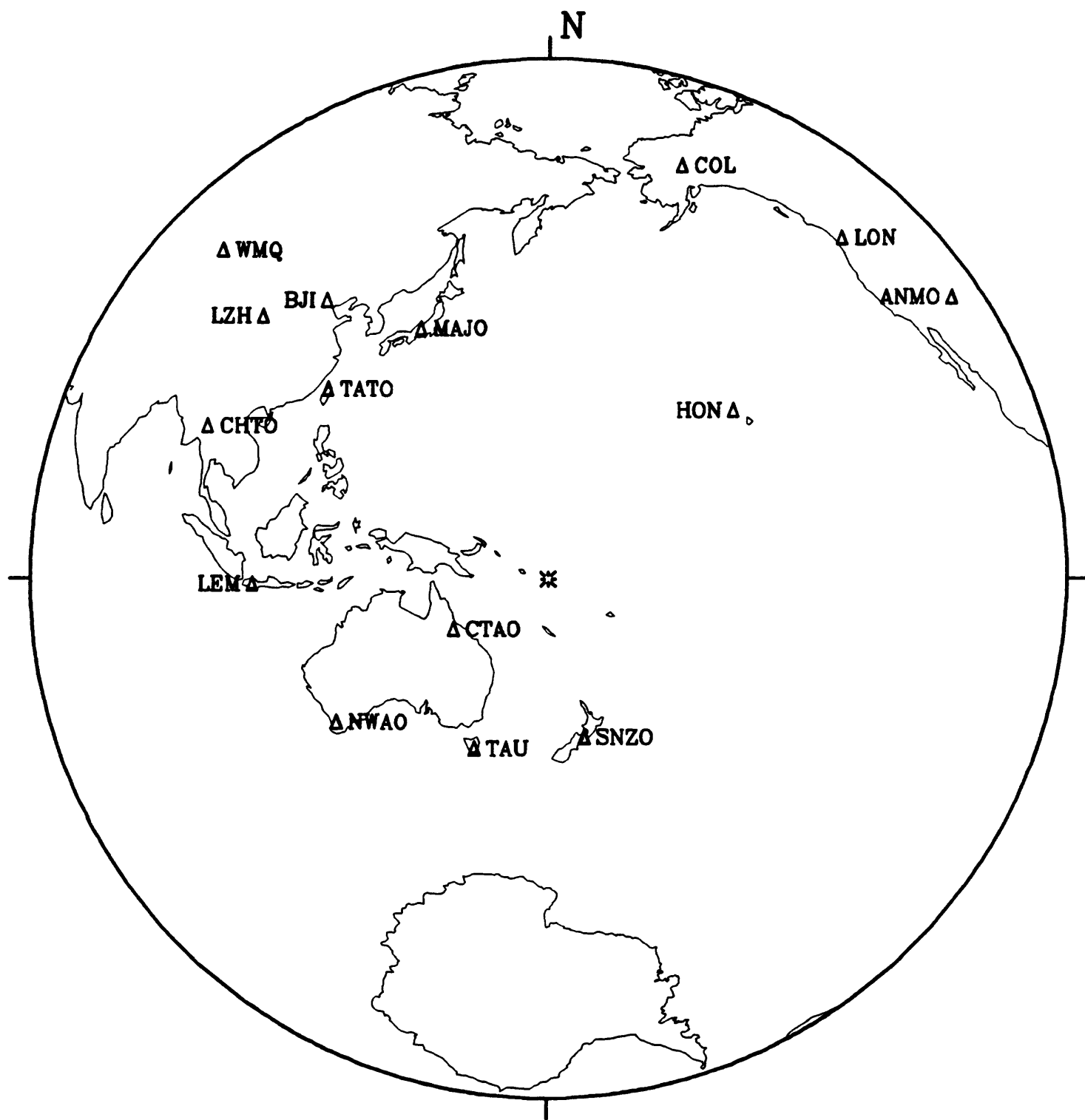
23 October 1986 16:23:50.50
Santa Cruz Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.4$

IPZ



23 October 1986 17:33:05.54

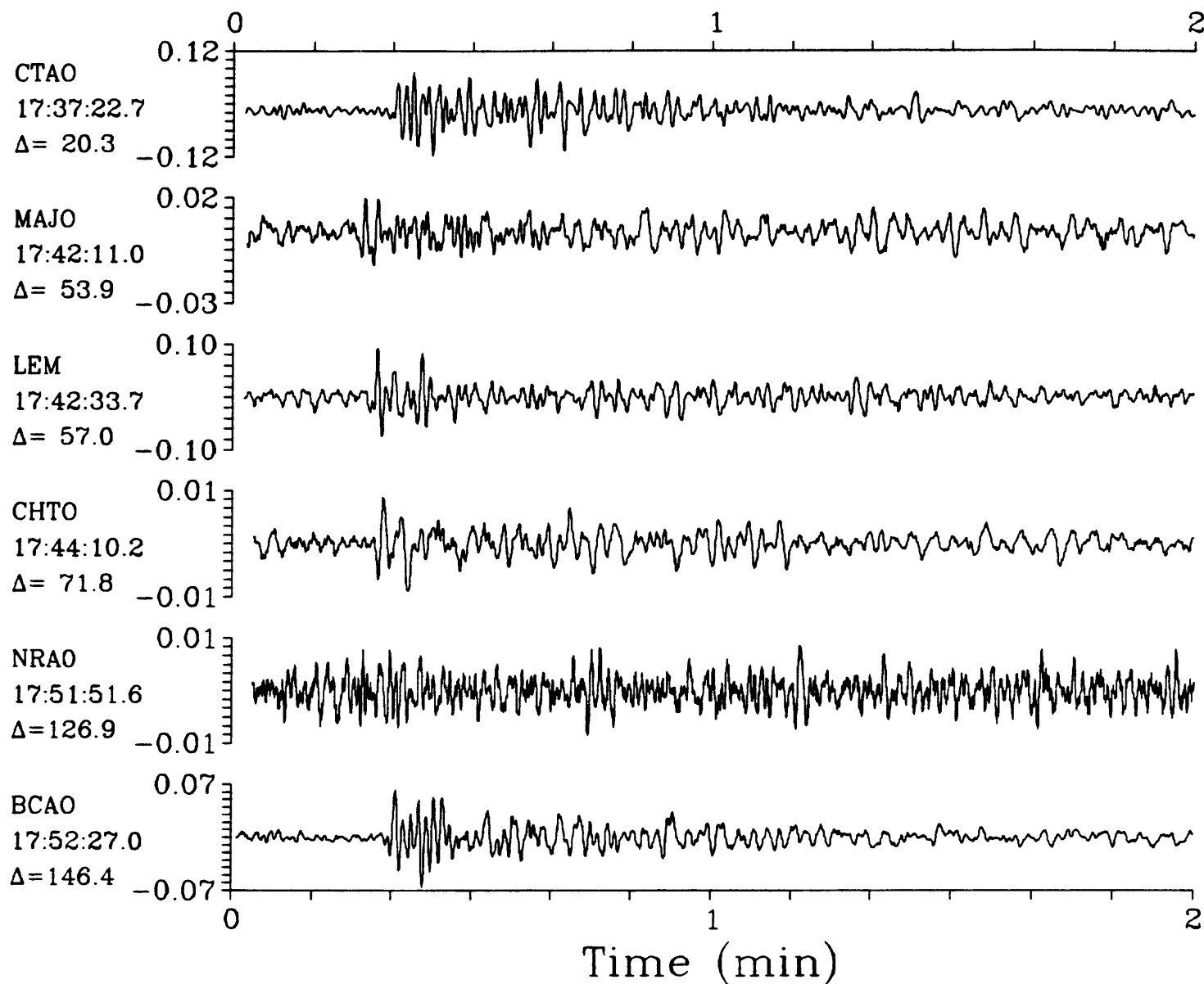
Santa Cruz Islands



SPZ

23 October 1986 17:33:05.54

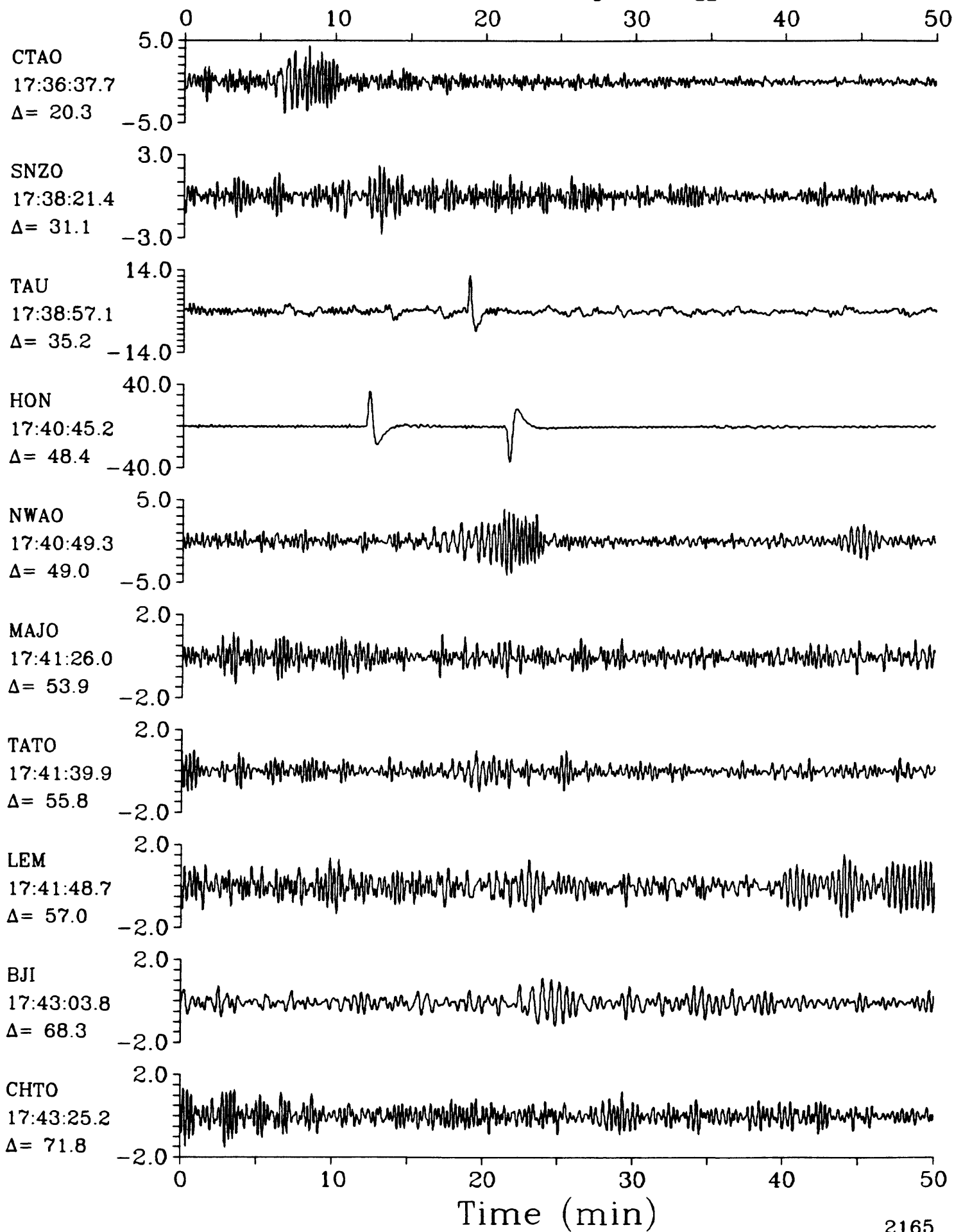
SPZ

Santa Cruz Islands $h=33.0$ $m_b=5.0$ $M_{sz}=5.8$ 

LPZ

23 October 1986 17:33:05.54

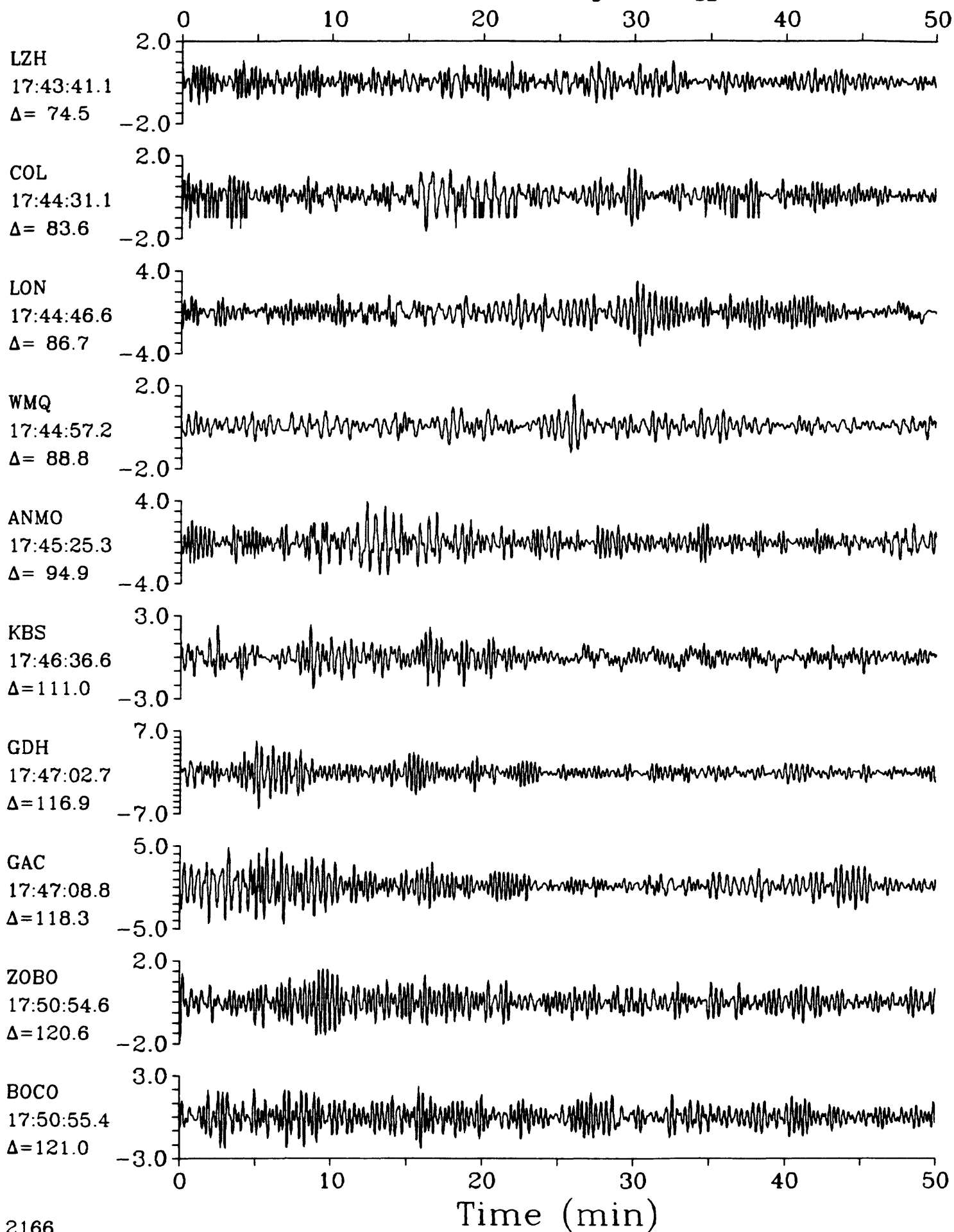
LPZ

Santa Cruz Islands $h=33.0$ $m_b=5.0$ $M_{sz}=5.8$ 

LPZ

23 October 1986 17:33:05.54
Santa Cruz Islands $h=33.0$ $m_b=5.0$ $M_{sz}=5.8$

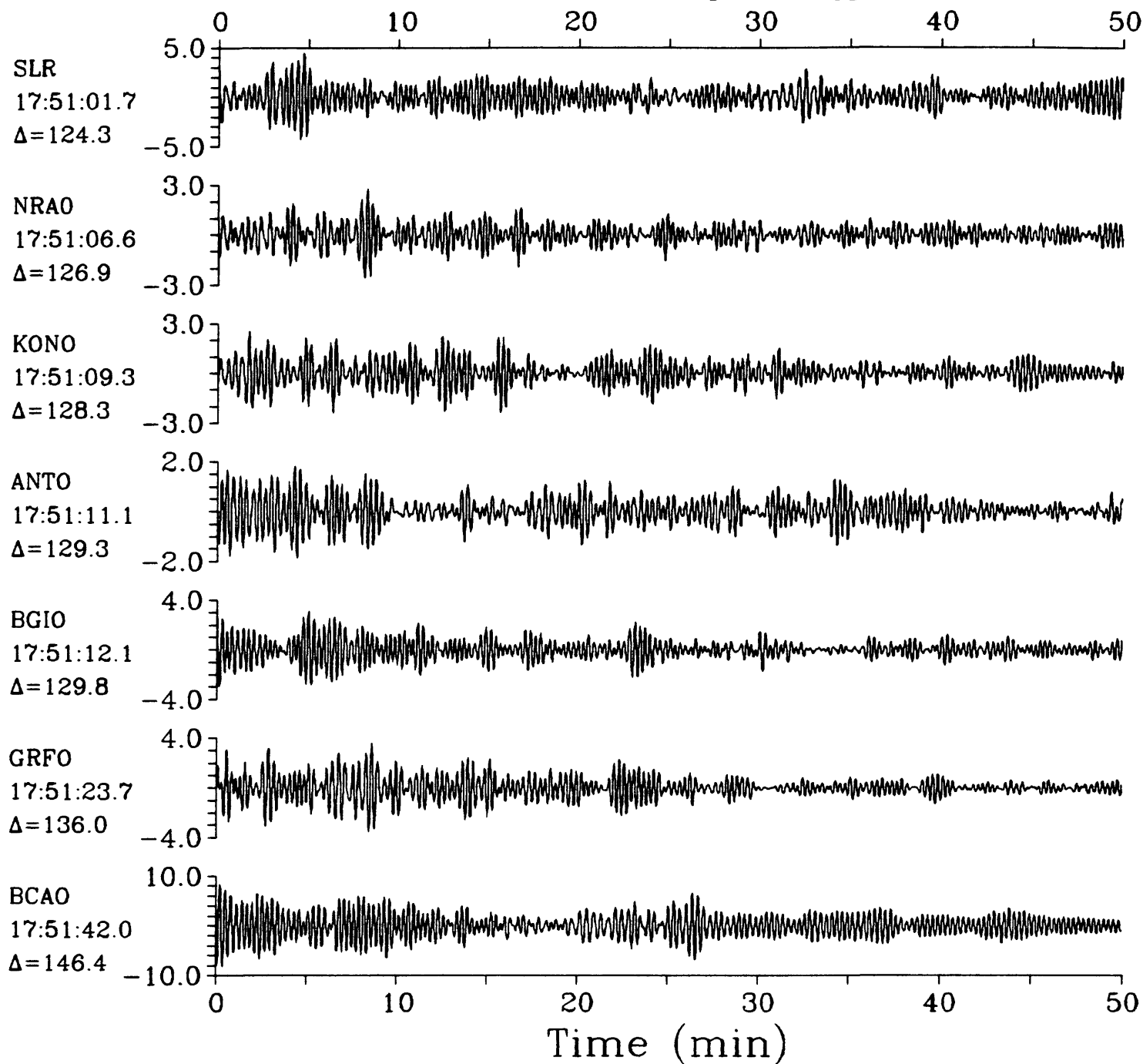
LPZ



LPZ

23 October 1986 17:33:05.54

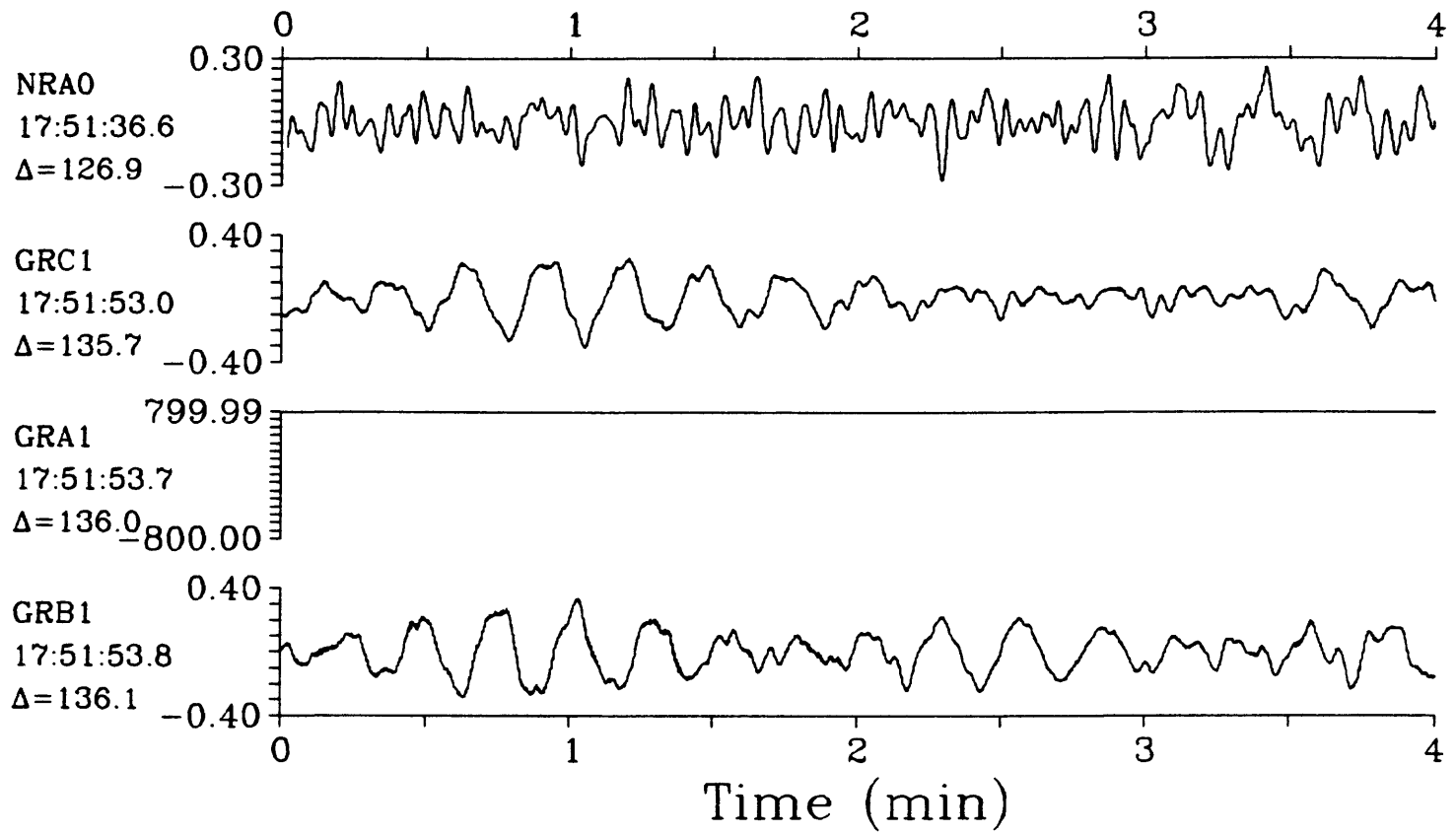
LPZ

Santa Cruz Islands $h=33.0$ $m_b=5.0$ $M_{sz}=5.8$ 

IPZ

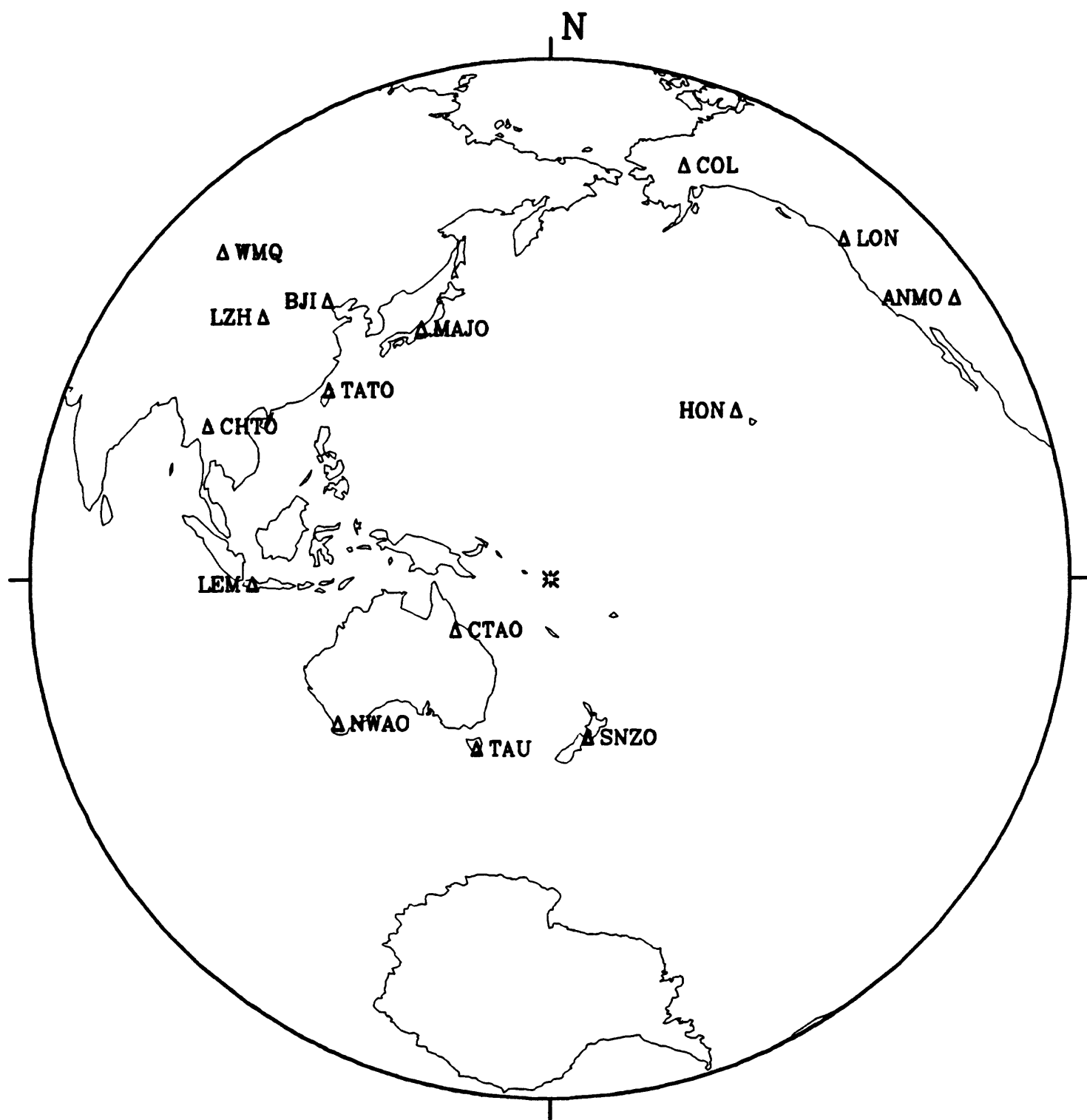
23 October 1986 17:33:05.54

IPZ

Santa Cruz Islands $h=33.0$ $m_b=5.0$ $M_{sz}=5.8$ 

23 October 1986 18:44:56.79

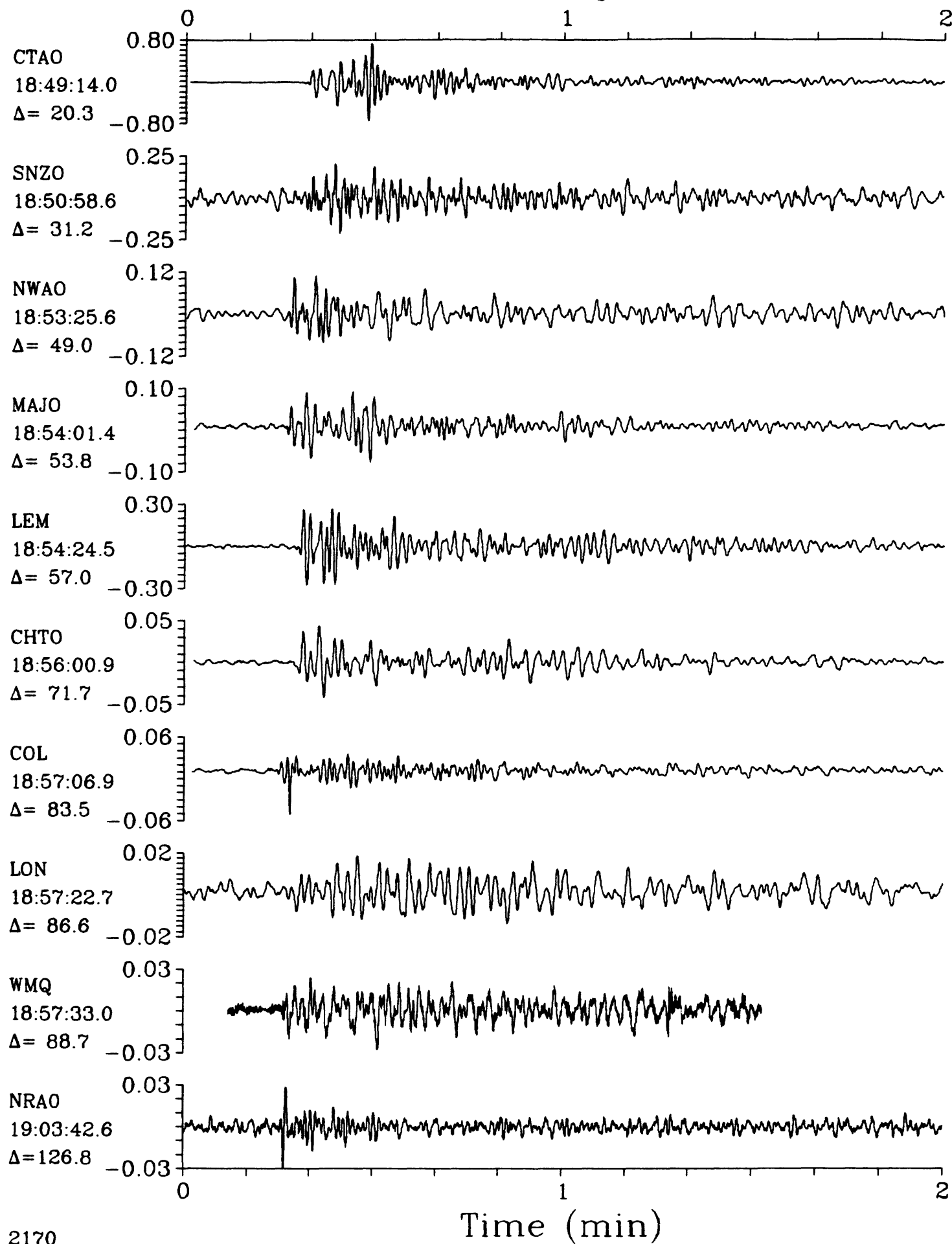
Santa Cruz Islands



SPZ

23 October 1986 18:44:56.79

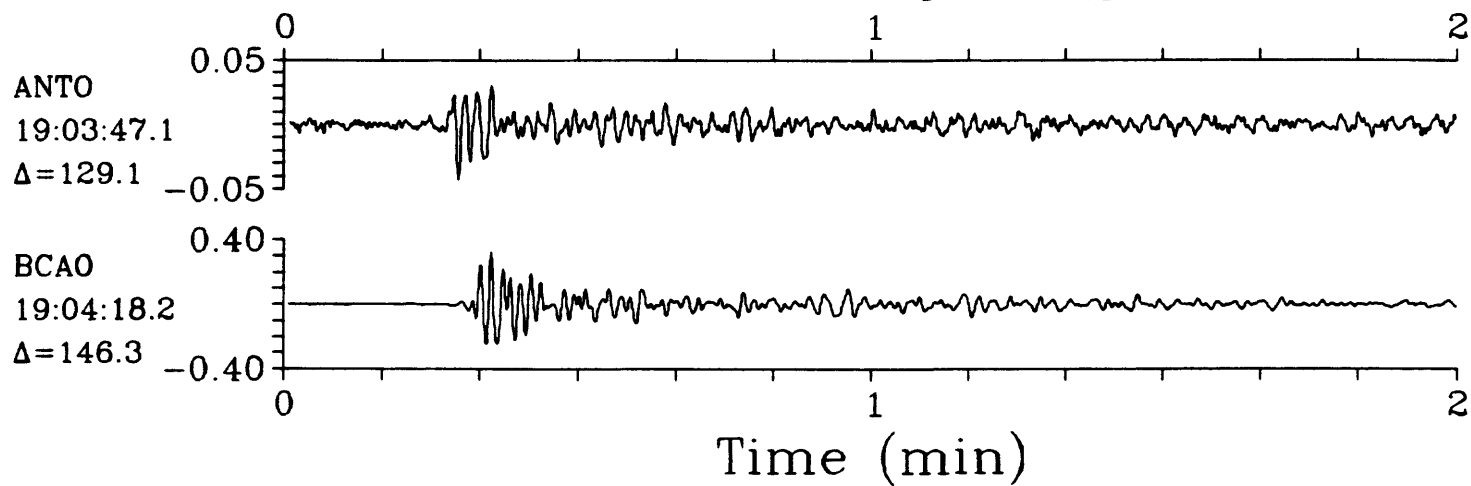
SPZ

Santa Cruz Islands $h=33.0$ $m_b=5.7$ $M_{sz}=5.5$ 

SPZ

23 October 1986 18:44:56.79

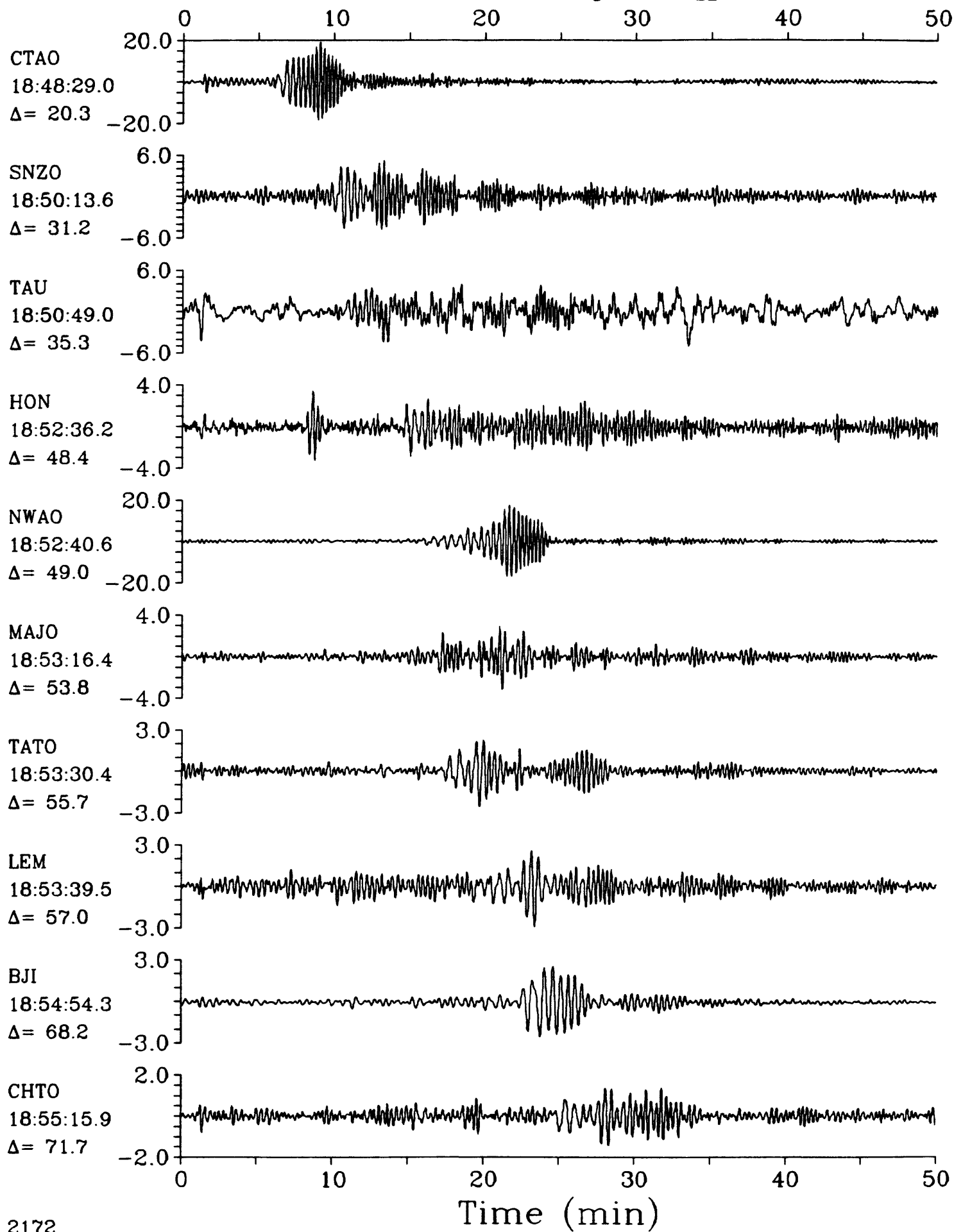
SPZ

Santa Cruz Islands $h=33.0$ $m_b=5.7$ $M_{sz}=5.5$ 

LPZ

23 October 1986 18:44:56.79

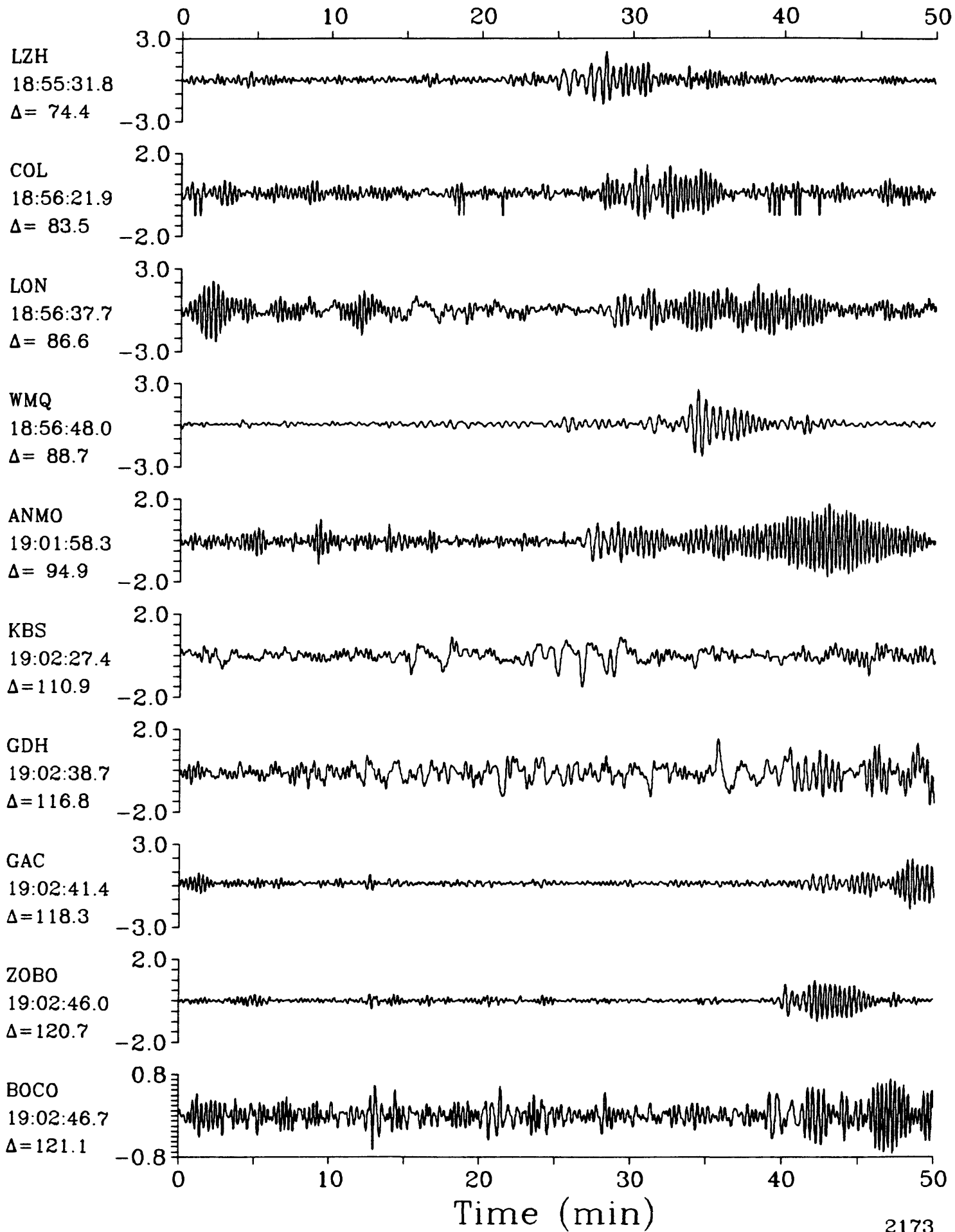
LPZ

Santa Cruz Islands $h=33.0$ $m_b=5.7$ $M_{sz}=5.5$ 

LPZ

23 October 1986 18:44:56.79

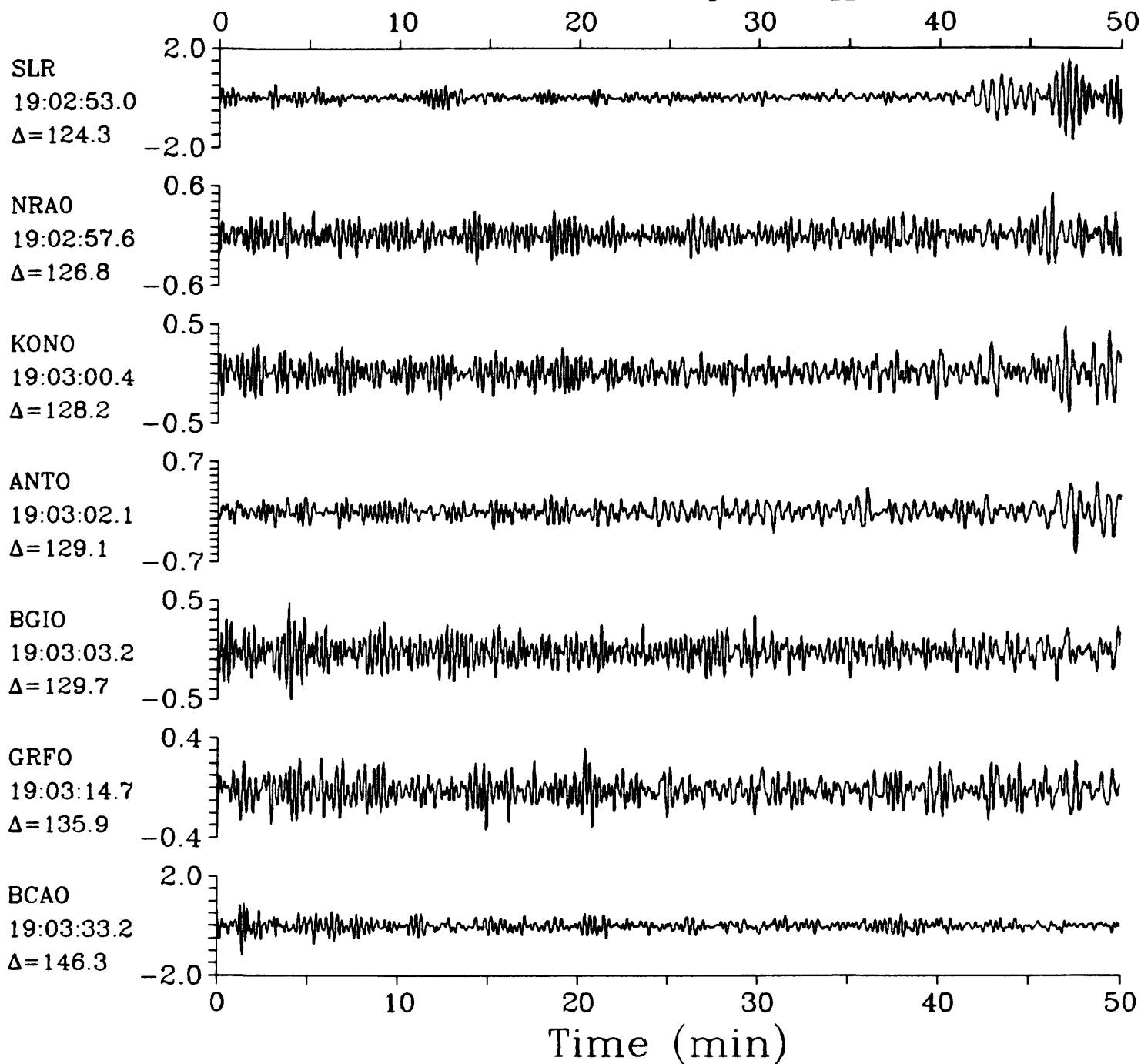
LPZ

Santa Cruz Islands $h=33.0$ $m_b=5.7$ $M_{sz}=5.5$ 

LPZ

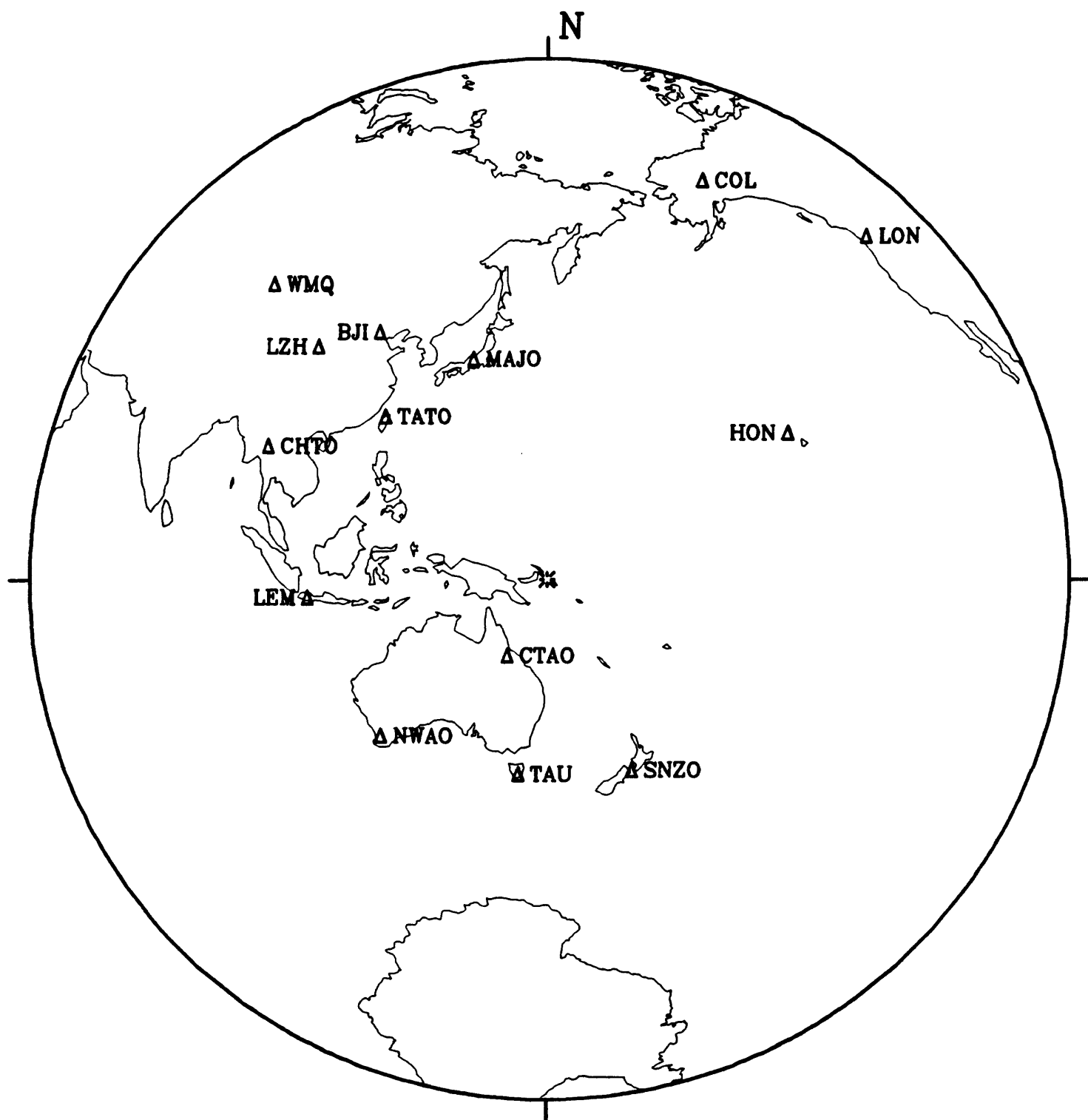
23 October 1986 18:44:56.79

LPZ

Santa Cruz Islands $h=33.0$ $m_b=5.7$ $M_{sz}=5.5$ 

24 October 1986 02:58:47.19

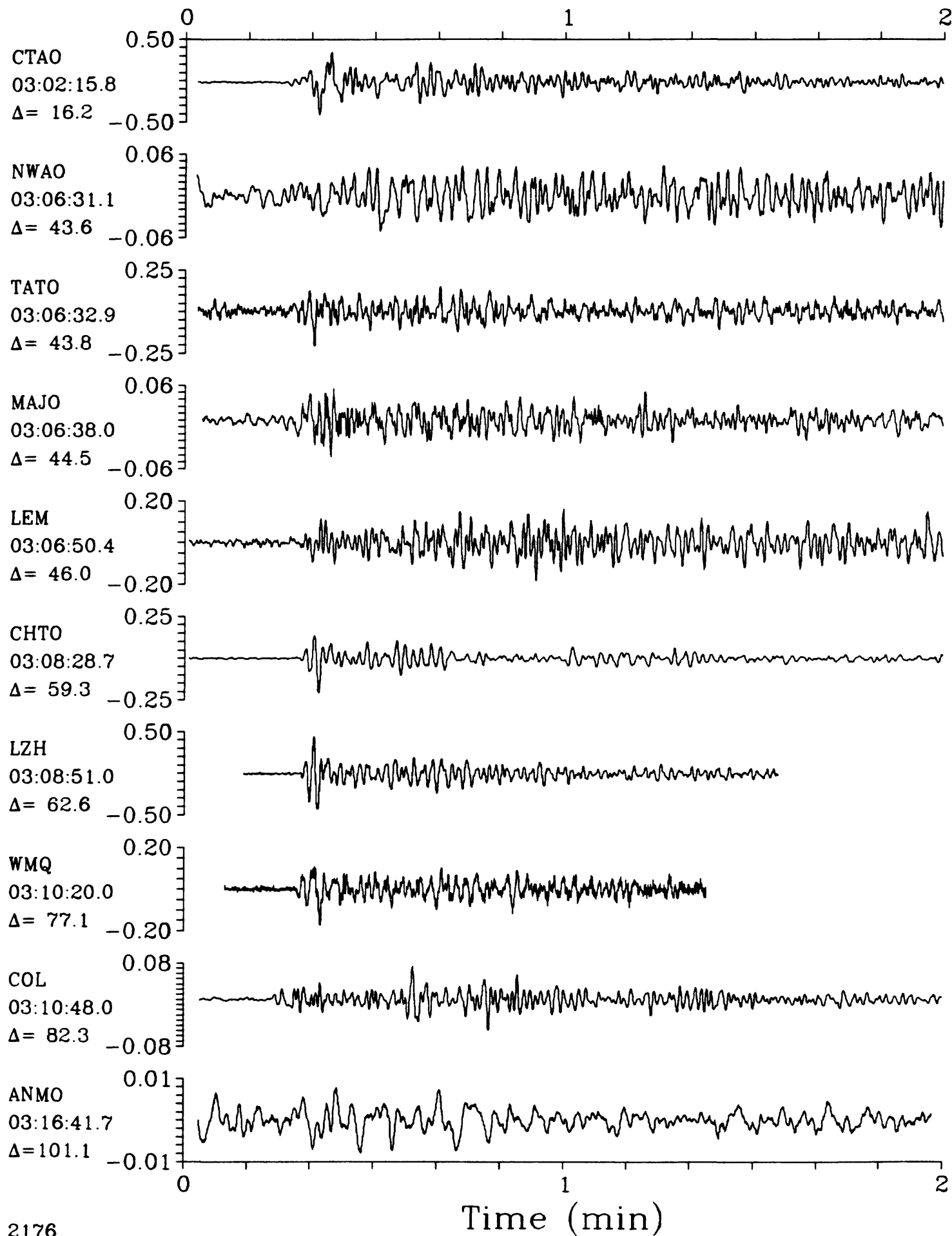
New Ireland Region



SPZ

24 October 1986 02:58:47.19
New Ireland Region $h=55.8$ $m_b=5.5$

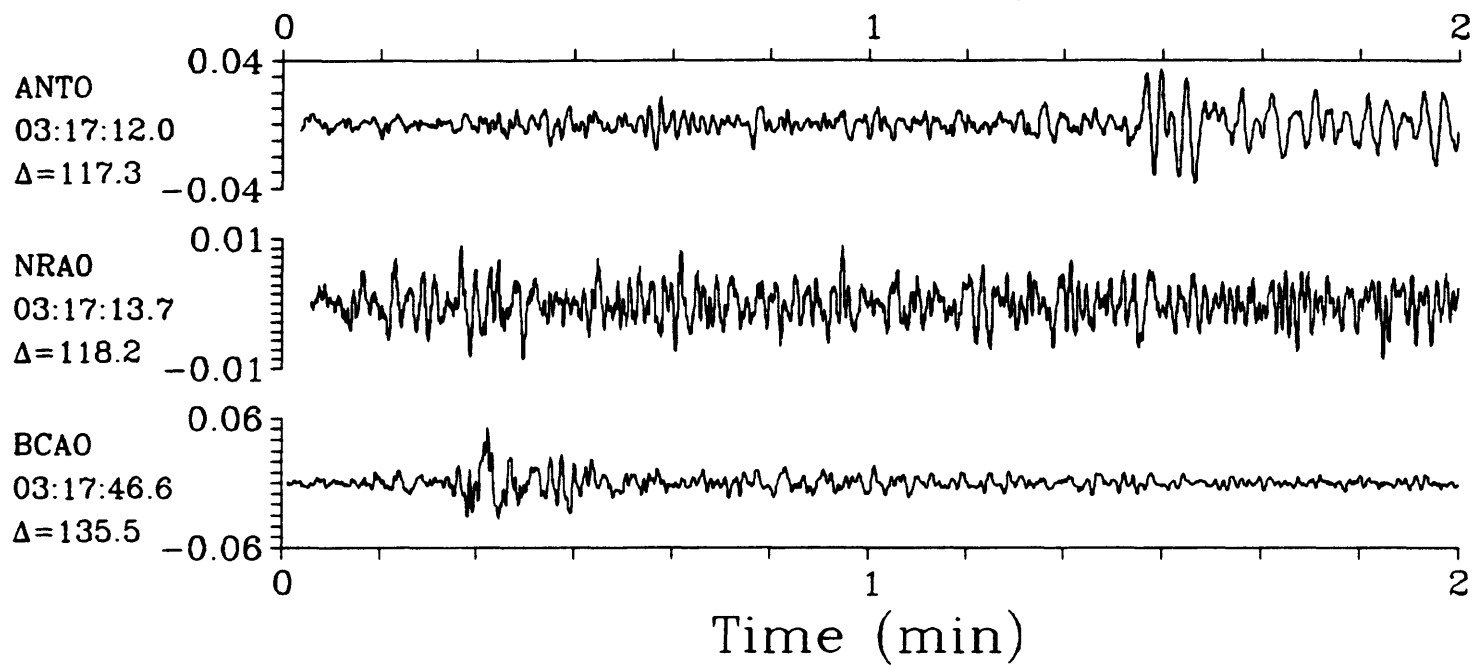
SPZ



SPZ

24 October 1986 02:58:47.19
New Ireland Region $h=55.8$ $m_b=5.5$

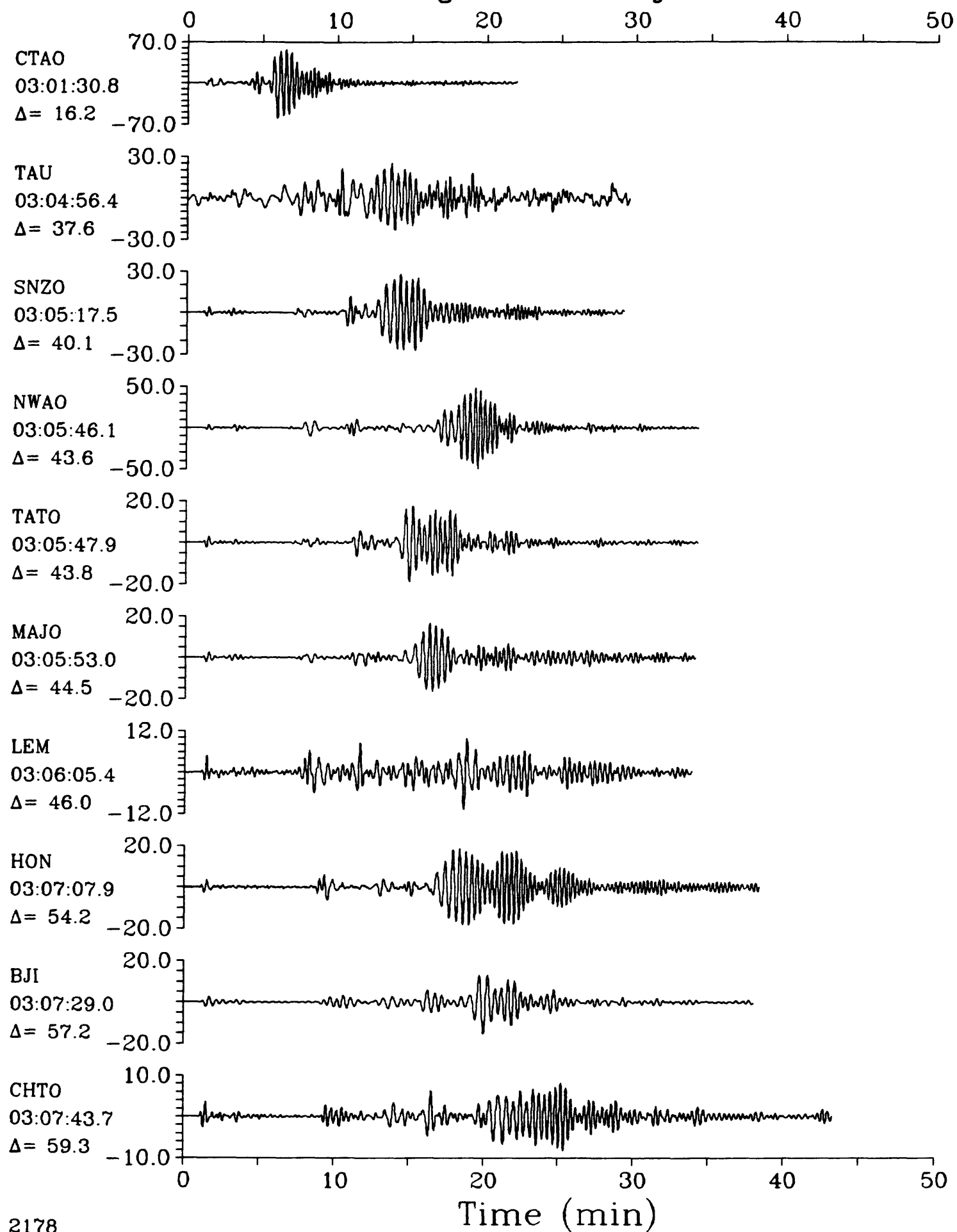
SPZ



LPZ

24 October 1986 02:58:47.19
New Ireland Region $h=55.8$ $m_b=5.5$

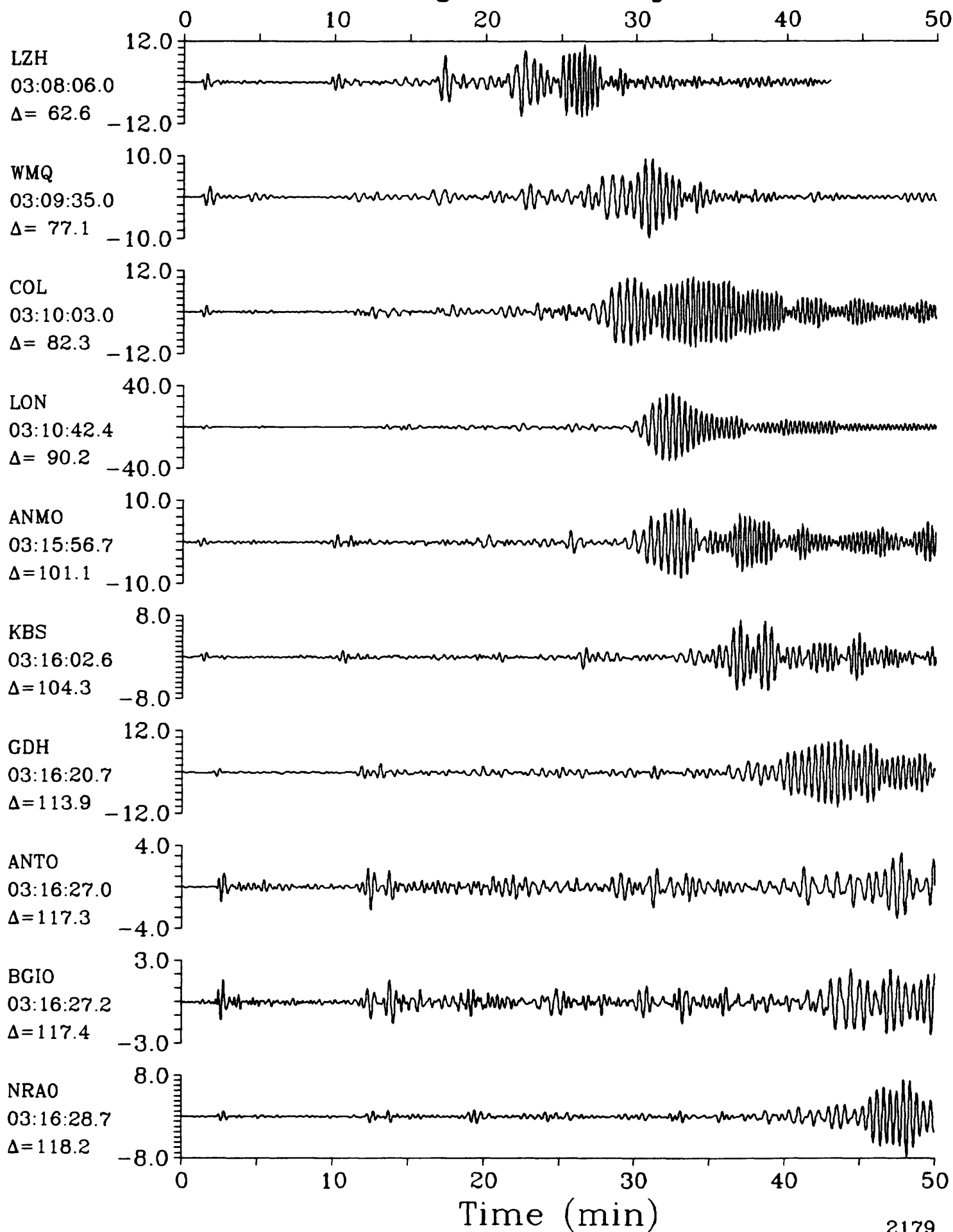
LPZ



LPZ

24 October 1986 02:58:47.19
New Ireland Region $h=55.8$ $m_b=5.5$

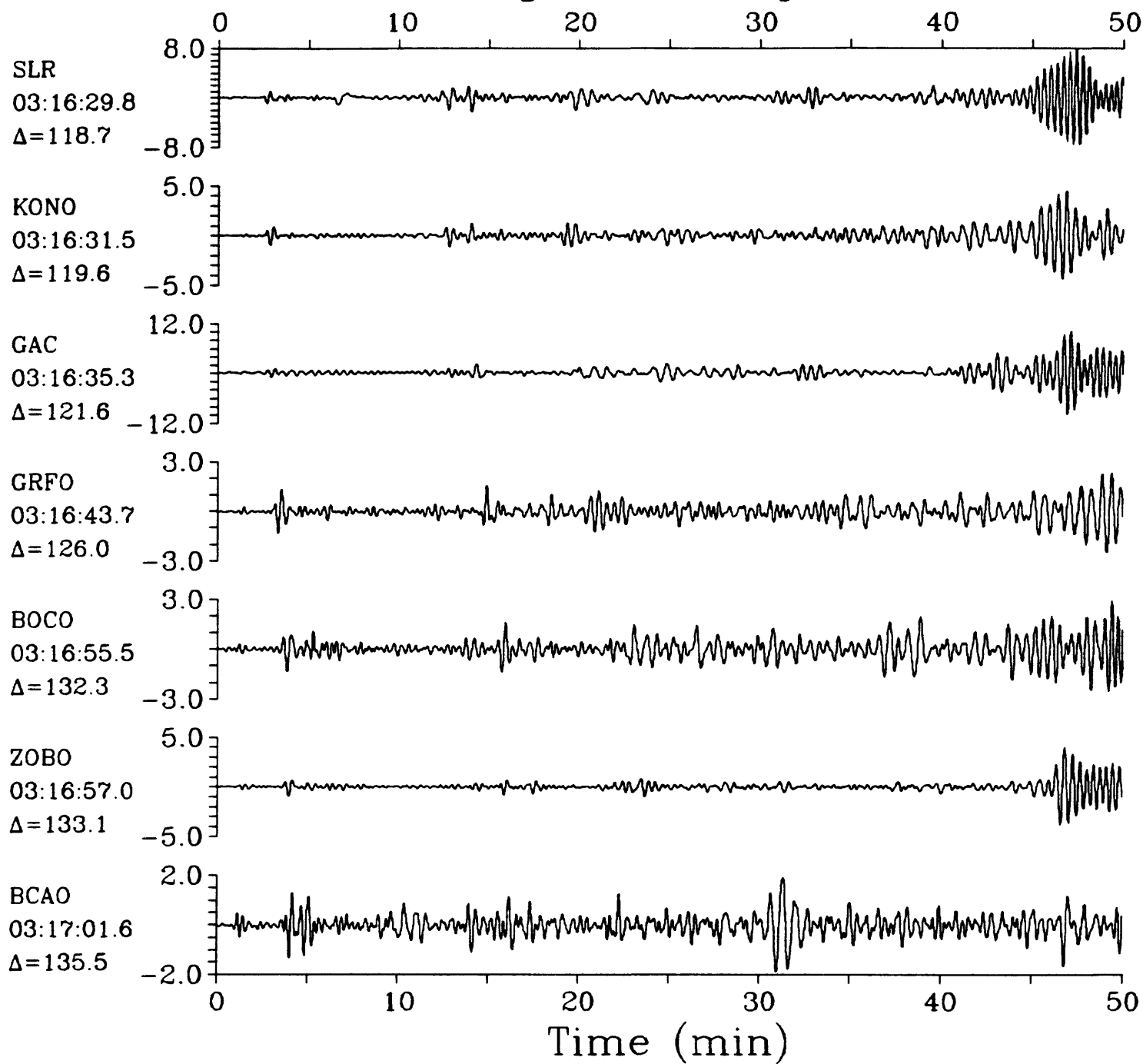
LPZ



LPZ

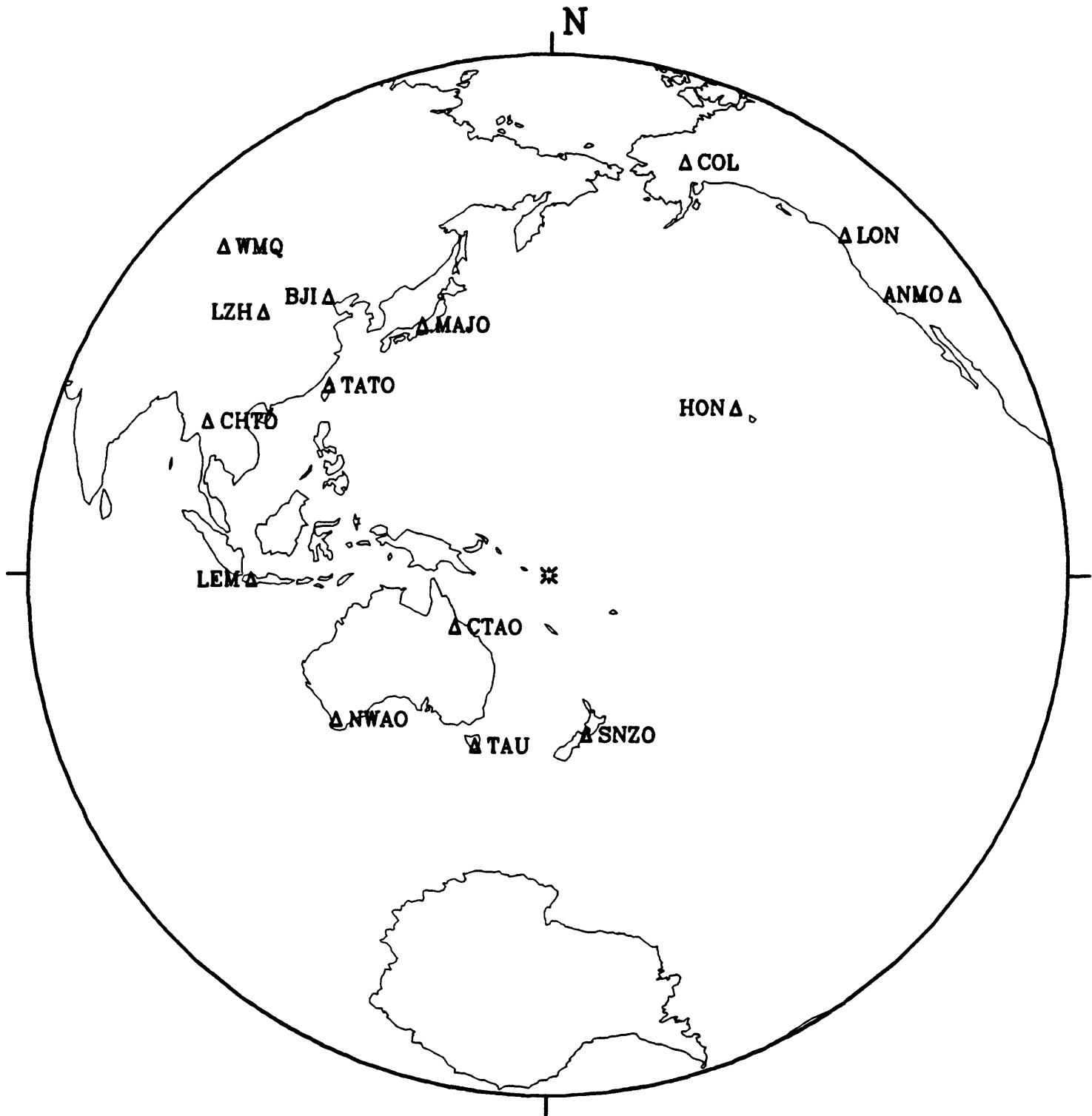
24 October 1986 02:58:47.19
New Ireland Region $h=55.8$ $m_b=5.5$

LPZ



24 October 1986 05:27:36.66

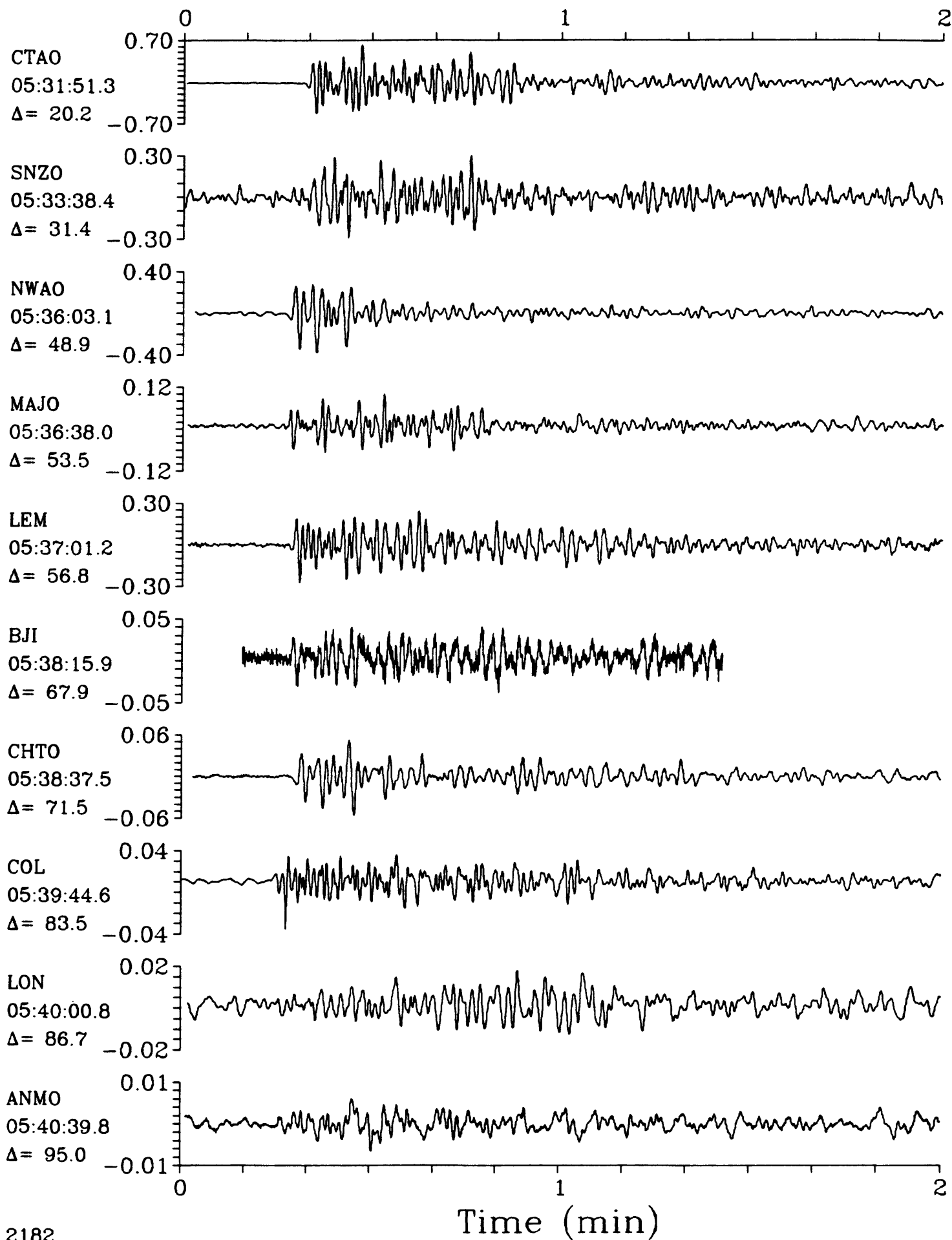
Santa Cruz Islands Region



SPZ

24 October 1986 05:27:36.66

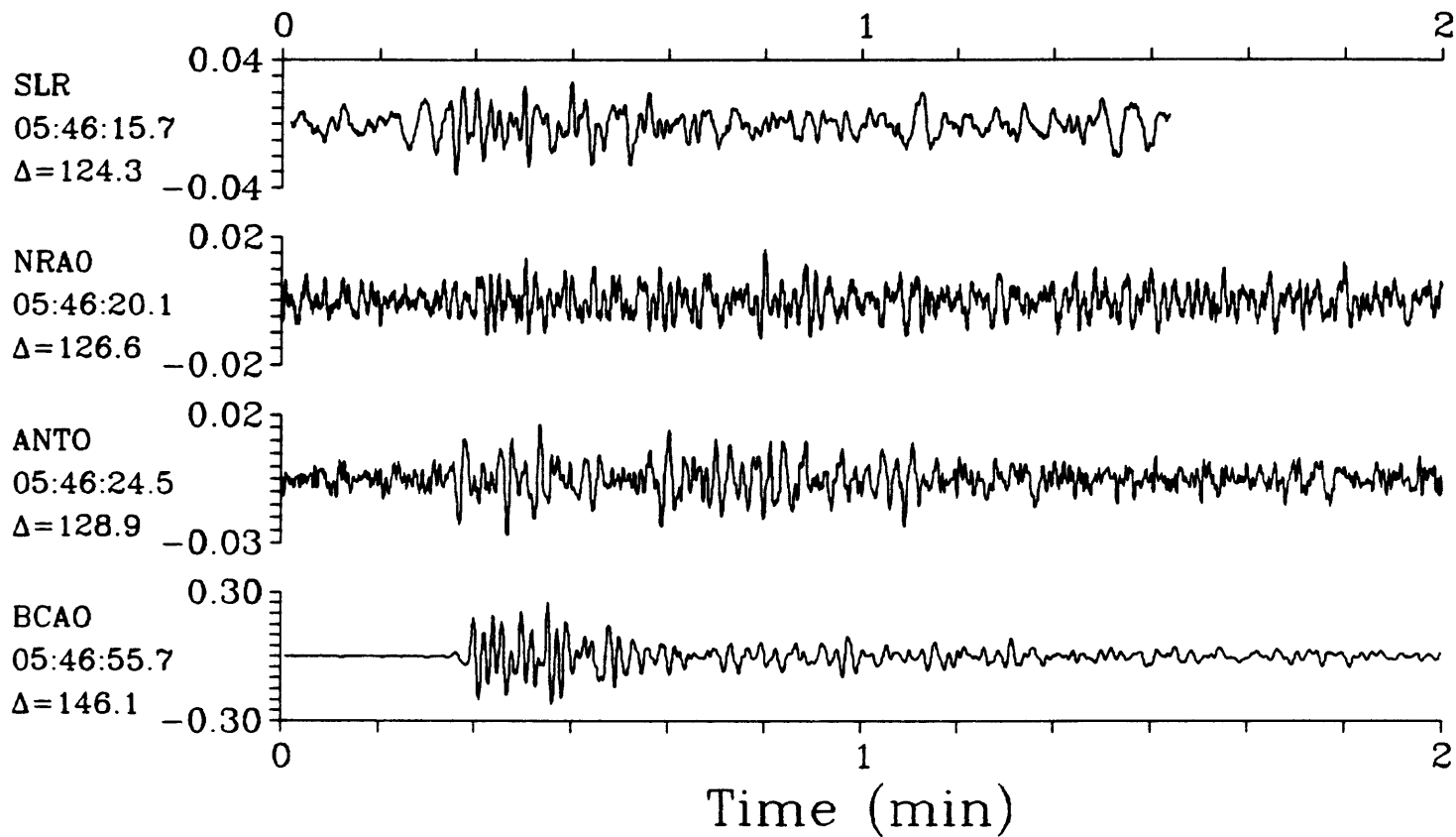
SPZ

Santa Cruz Islands Region $h=48.7$ $m_b=5.6$ $M_{sz}=6.1$ 

SPZ

24 October 1986 05:27:36.66

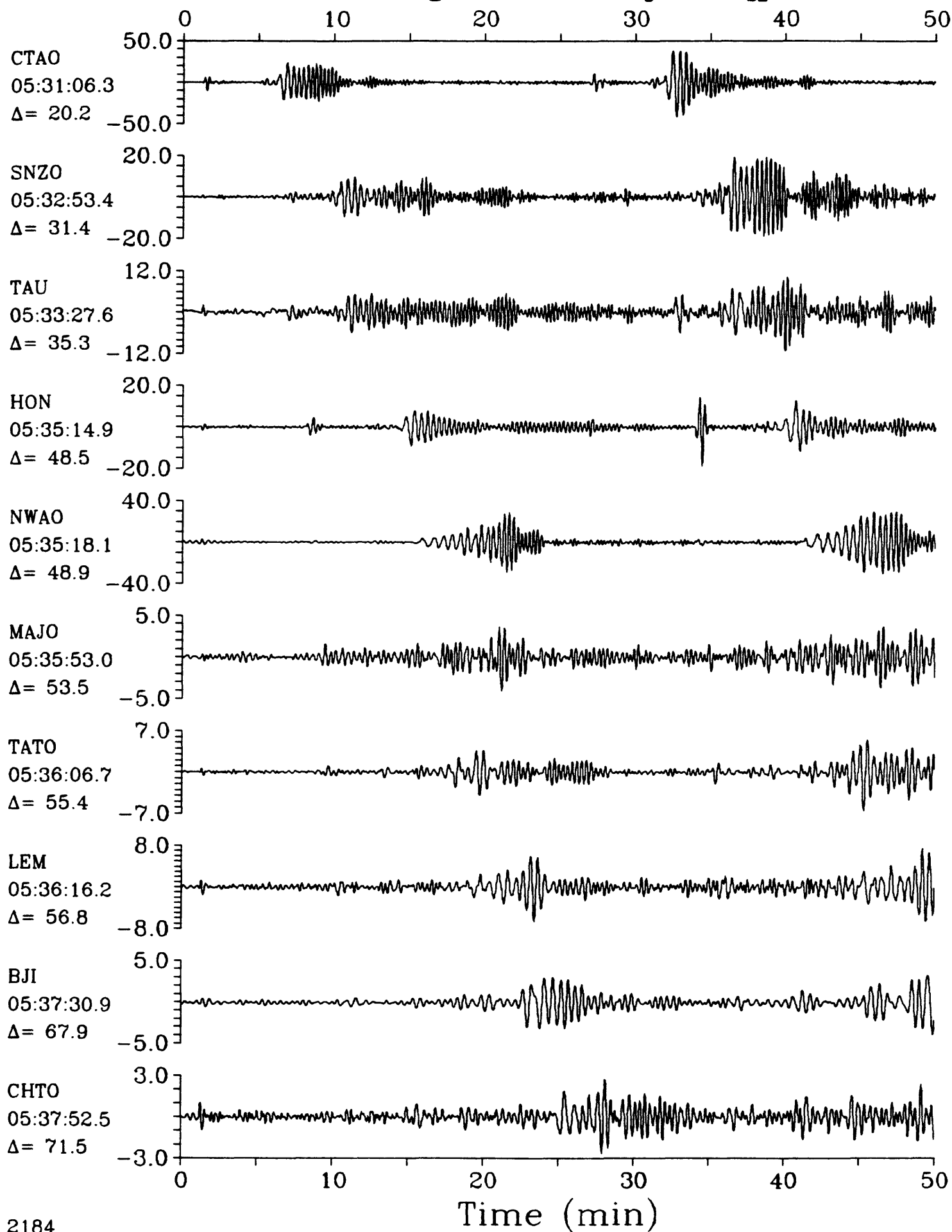
SPZ

Santa Cruz Islands Region $h=48.7$ $m_b=5.6$ $M_{SZ}=6.1$ 

LPZ

24 October 1986 05:27:36.66

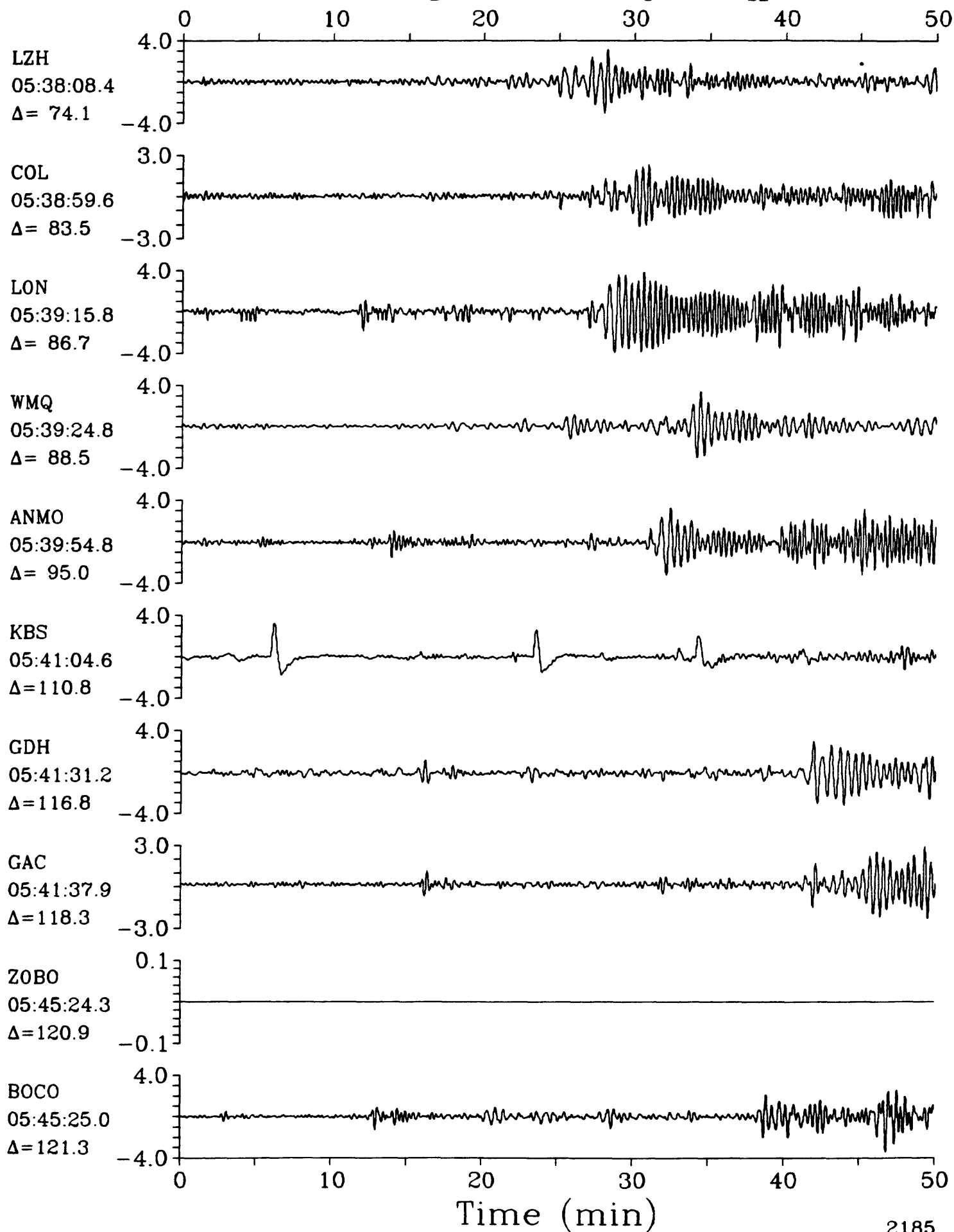
LPZ

Santa Cruz Islands Region $h=48.7$ $m_b=5.6$ $M_{SZ}=6.1$ 

LPZ

24 October 1986 05:27:36.66

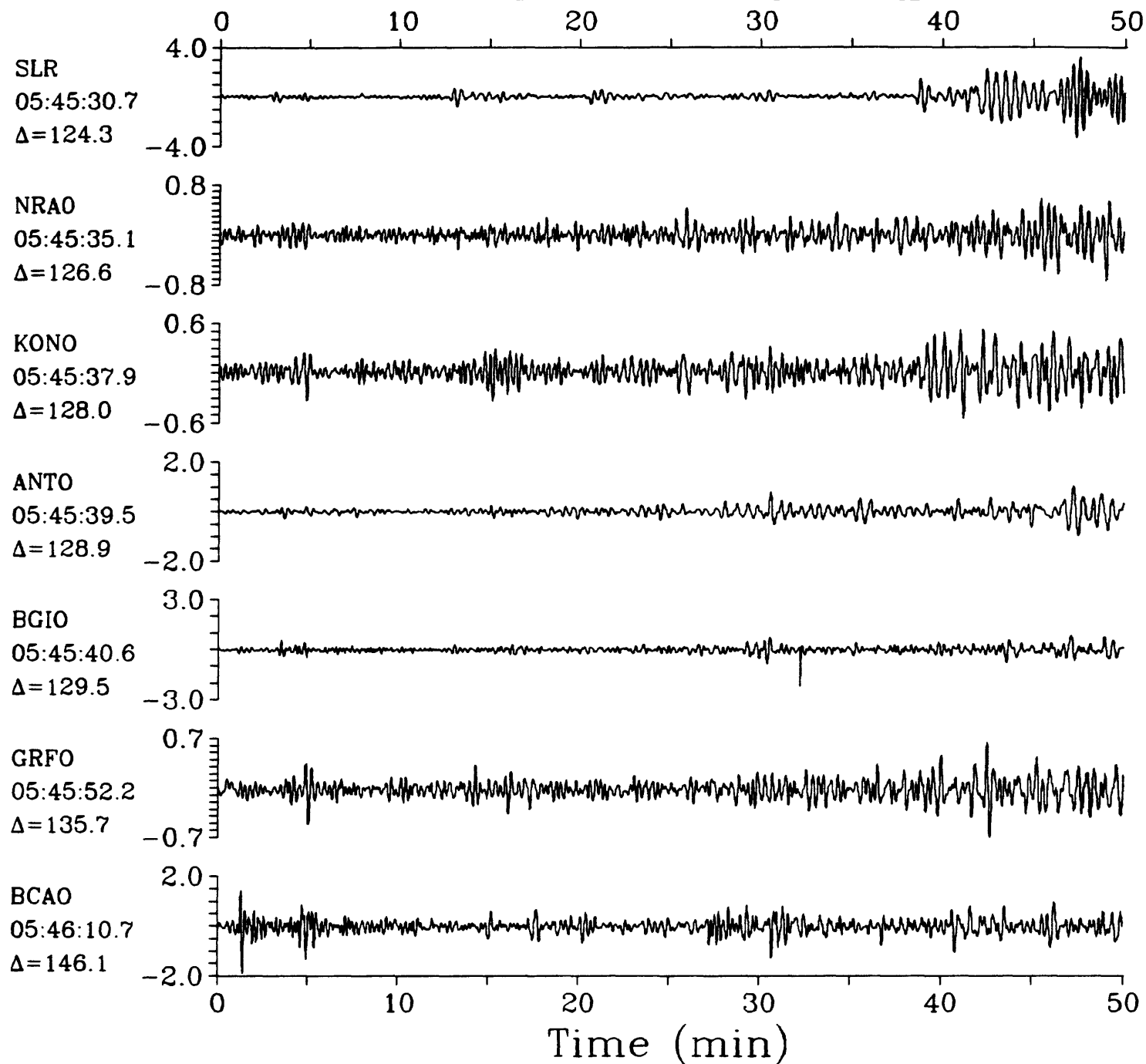
LPZ

Santa Cruz Islands Region $h=48.7$ $m_b=5.6$ $M_{SZ}=6.1$ 

LPZ

24 October 1986 05:27:36.66

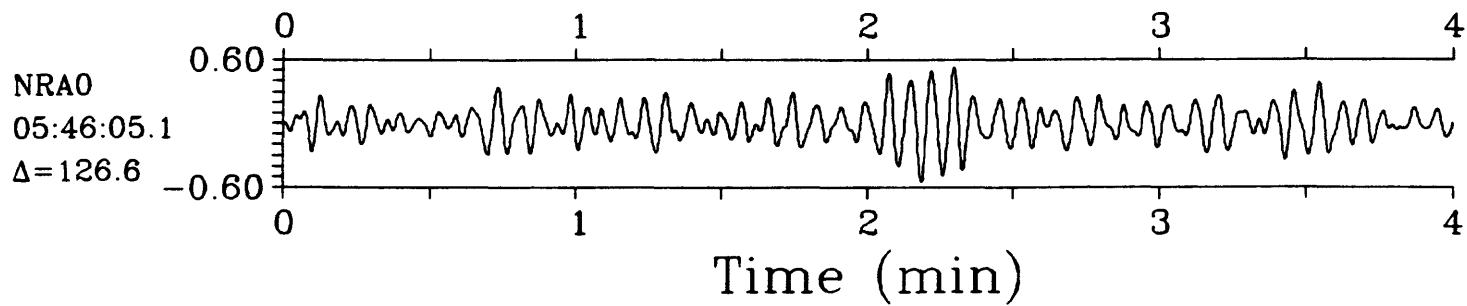
LPZ

Santa Cruz Islands Region $h=48.7$ $m_b=5.6$ $M_{SZ}=6.1$ 

IPZ

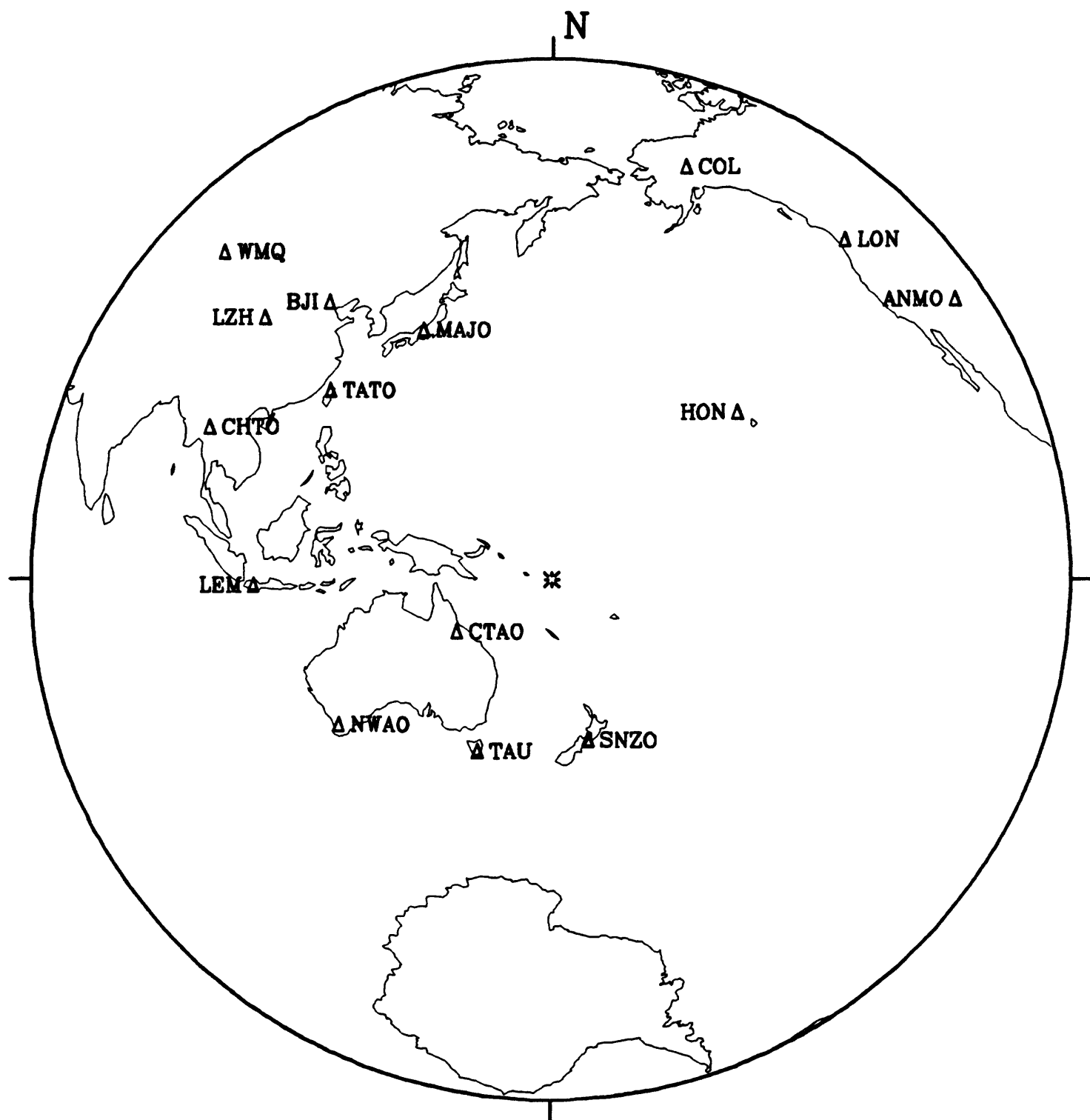
24 October 1986 05:27:36.66

IPZ

Santa Cruz Islands Region $h=48.7$ $m_b=5.6$ $M_{sz}=6.1$ 

24 October 1986 05:53:17.68

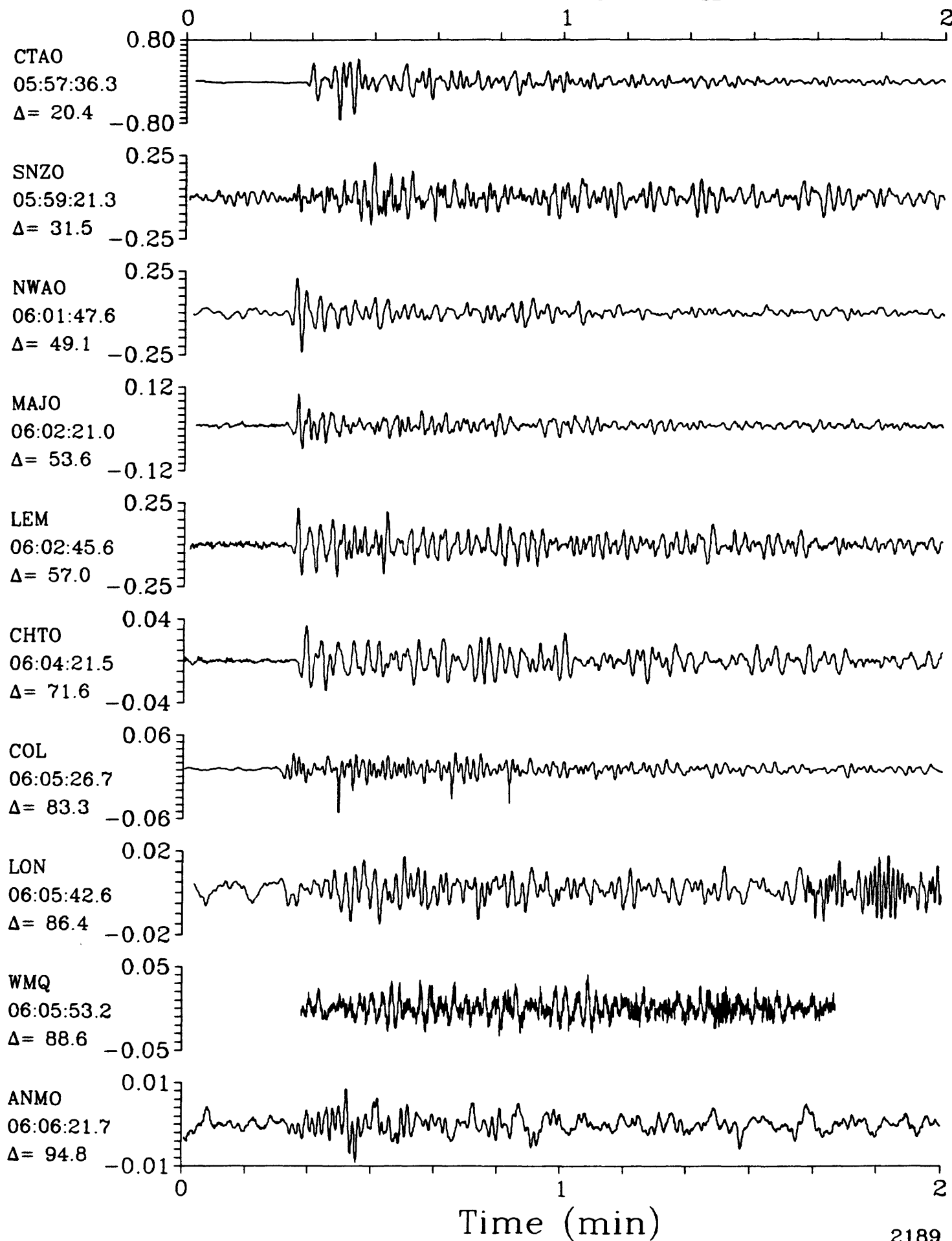
Santa Cruz Islands



SPZ

24 October 1986 05:53:17.68

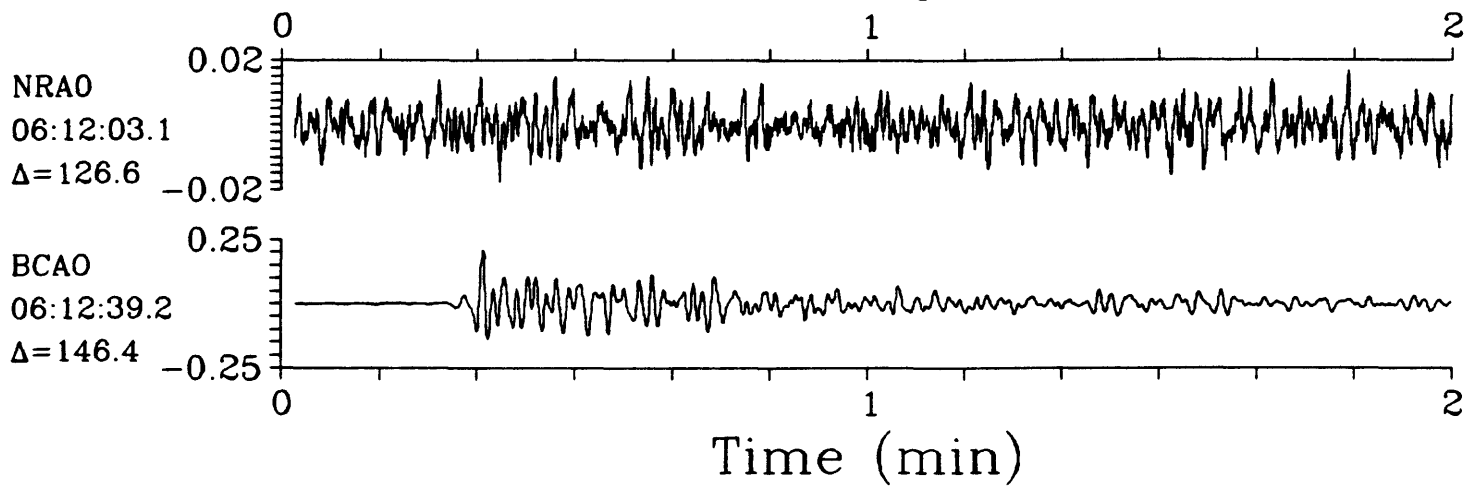
SPZ

Santa Cruz Islands $h=33.0$ $m_b=5.5$ $M_{sz}=5.9$ 

SPZ

24 October 1986 05:53:17.68

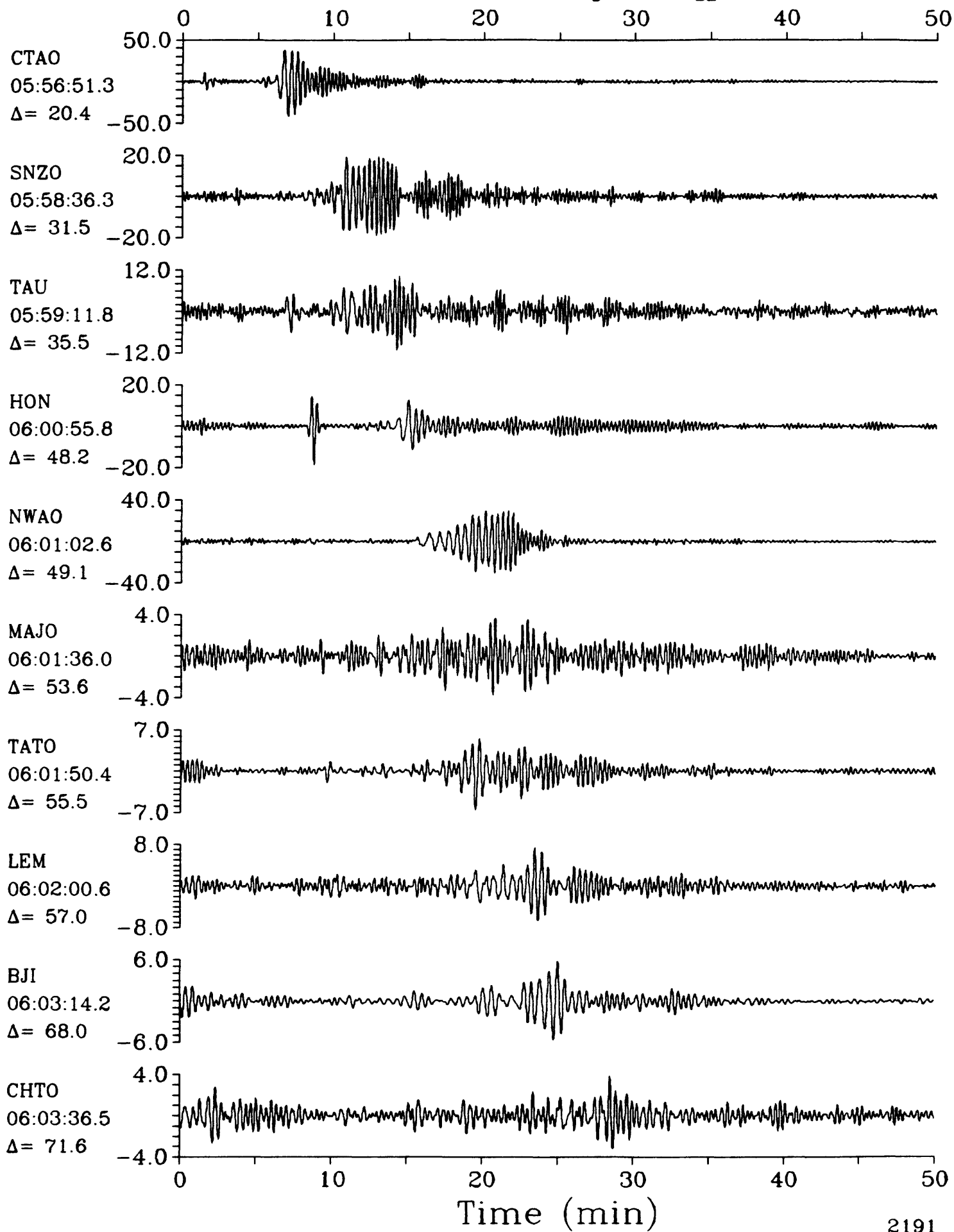
SPZ

Santa Cruz Islands $h=33.0$ $m_b=5.5$ $M_{sz}=5.9$ 

LPZ

24 October 1986 05:53:17.68
Santa Cruz Islands $h=33.0$ $m_b=5.5$ $M_{sz}=5.9$

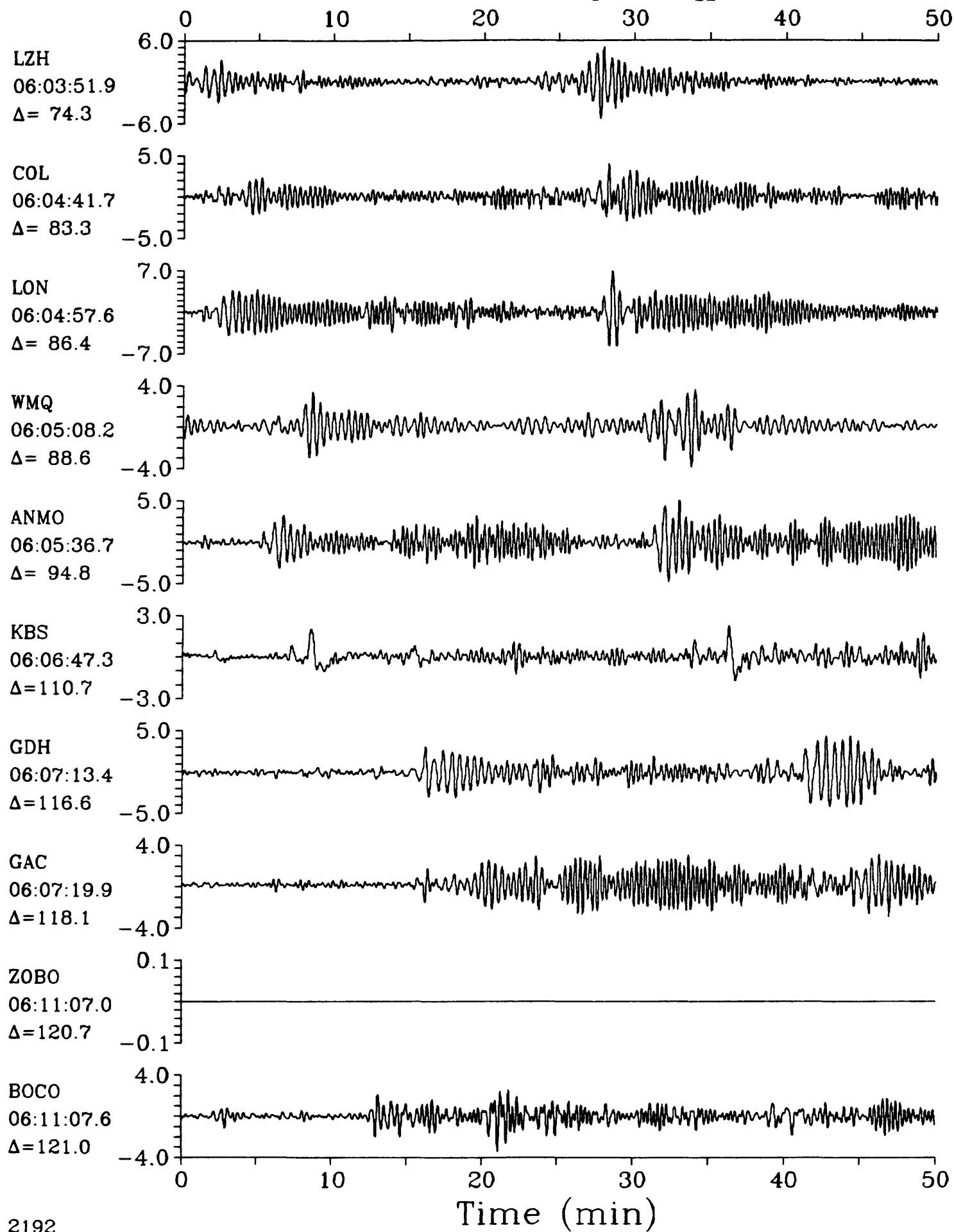
LPZ



LPZ

24 October 1986 05:53:17.68
Santa Cruz Islands $h=33.0$ $m_b=5.5$ $M_{sz}=5.9$

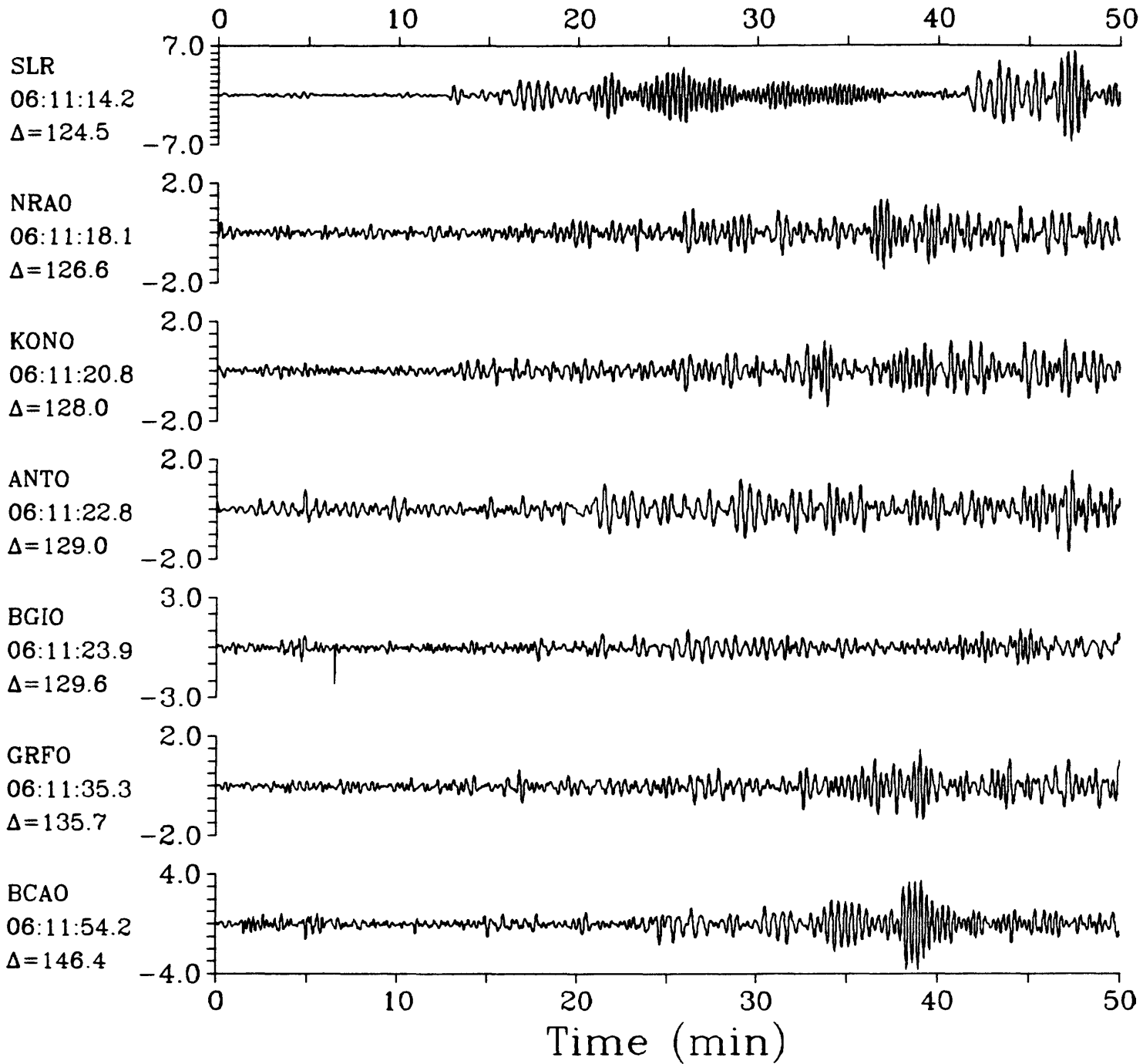
LPZ



LPZ

24 October 1986 05:53:17.68

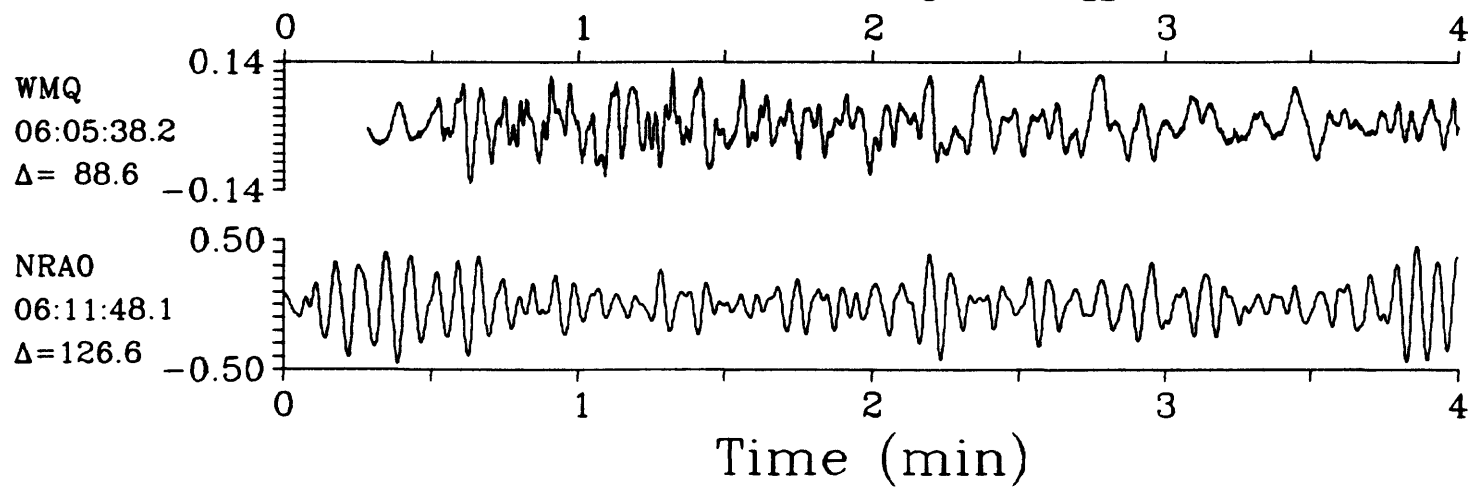
LPZ

Santa Cruz Islands $h=33.0$ $m_b=5.5$ $M_{sz}=5.9$ 

IPZ

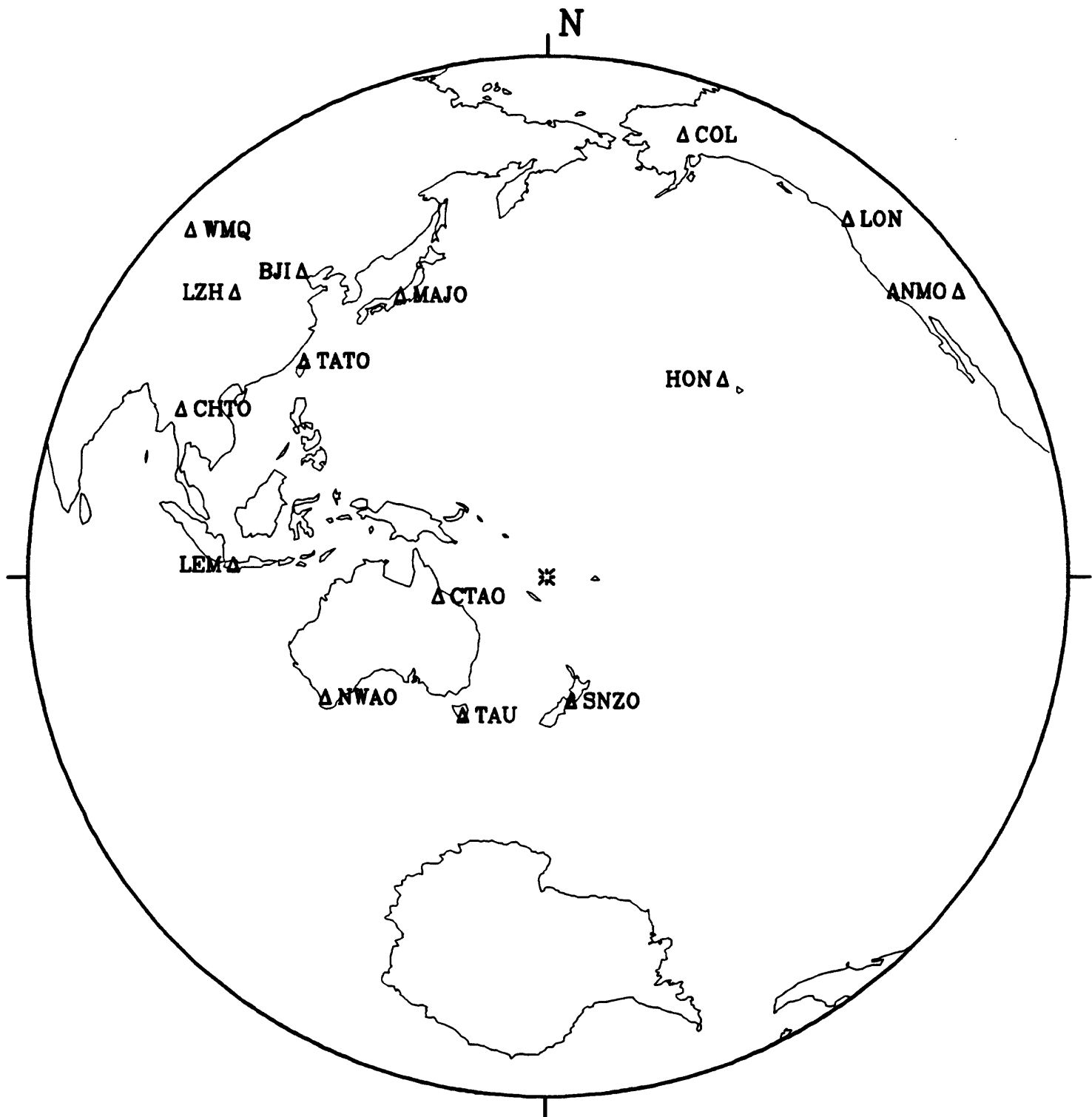
24 October 1986 05:53:17.68

IPZ

Santa Cruz Islands $h=33.0$ $m_b=5.5$ $M_{sz}=5.9$ 

25 October 1986 20:47:02.71

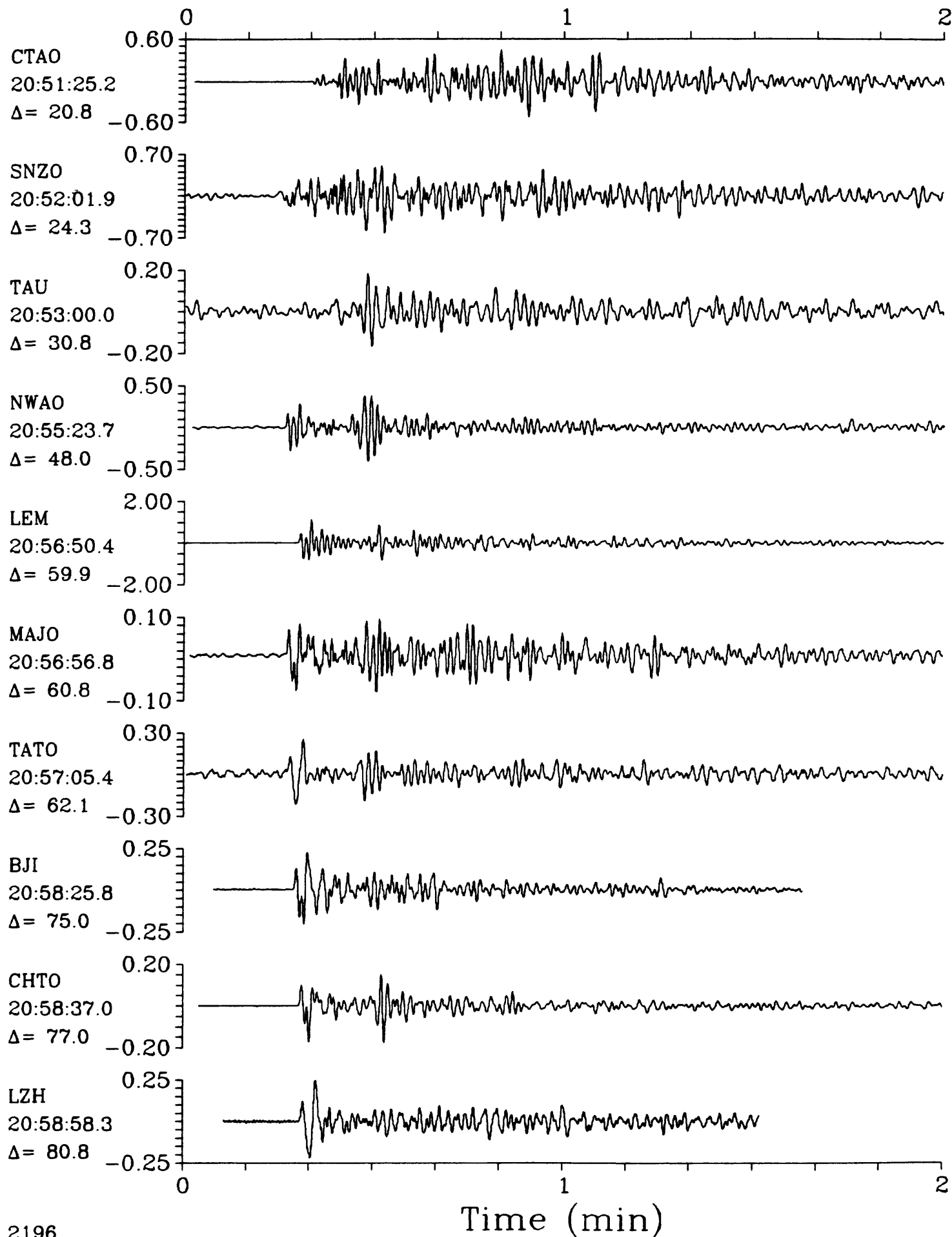
Vanuatu Islands



SPZ

25 October 1986 20:47:02.71

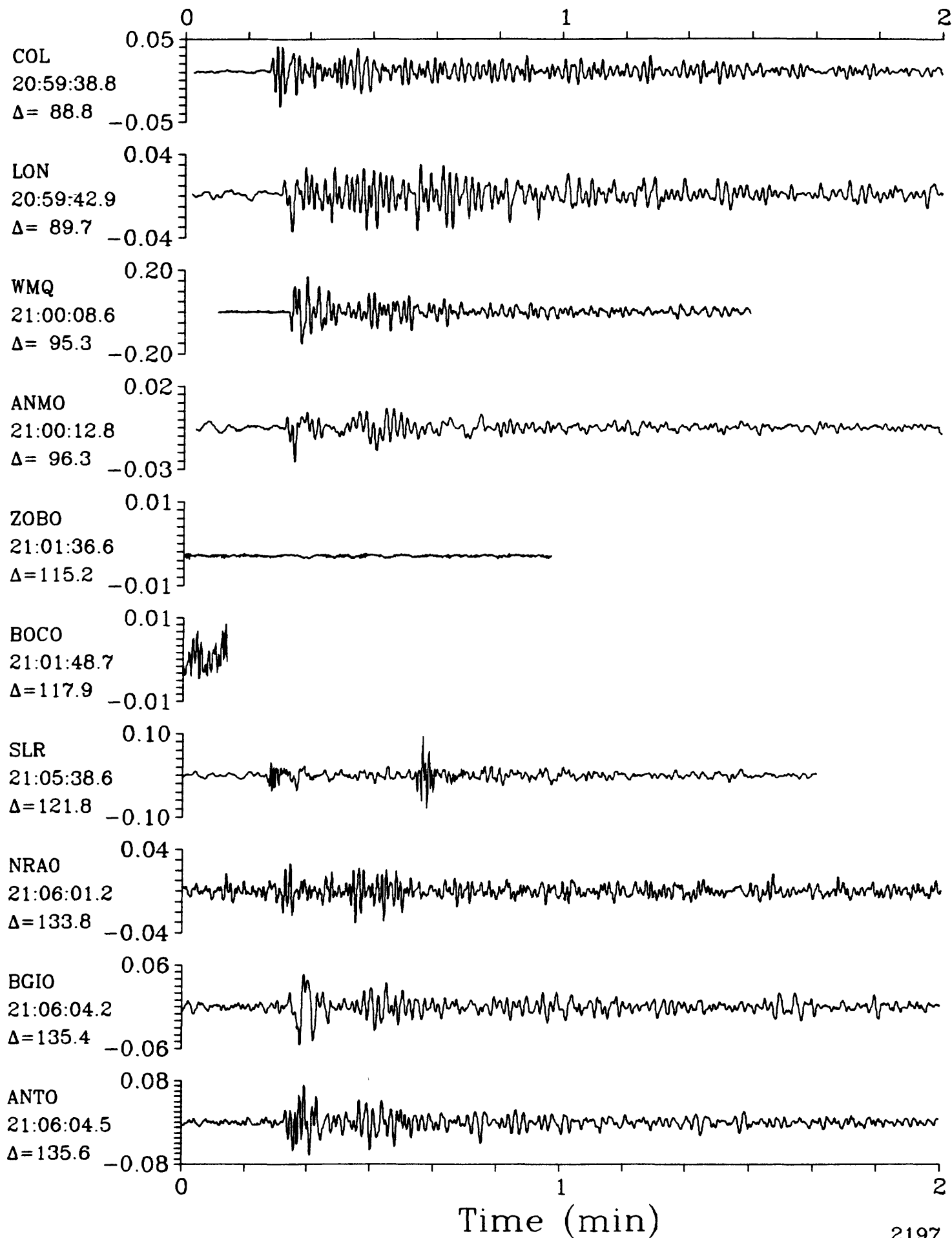
SPZ

Vanuatu Islands $h=36.8$ $m_b=5.8$ $M_{sz}=5.9$ 

SPZ

25 October 1986 20:47:02.71

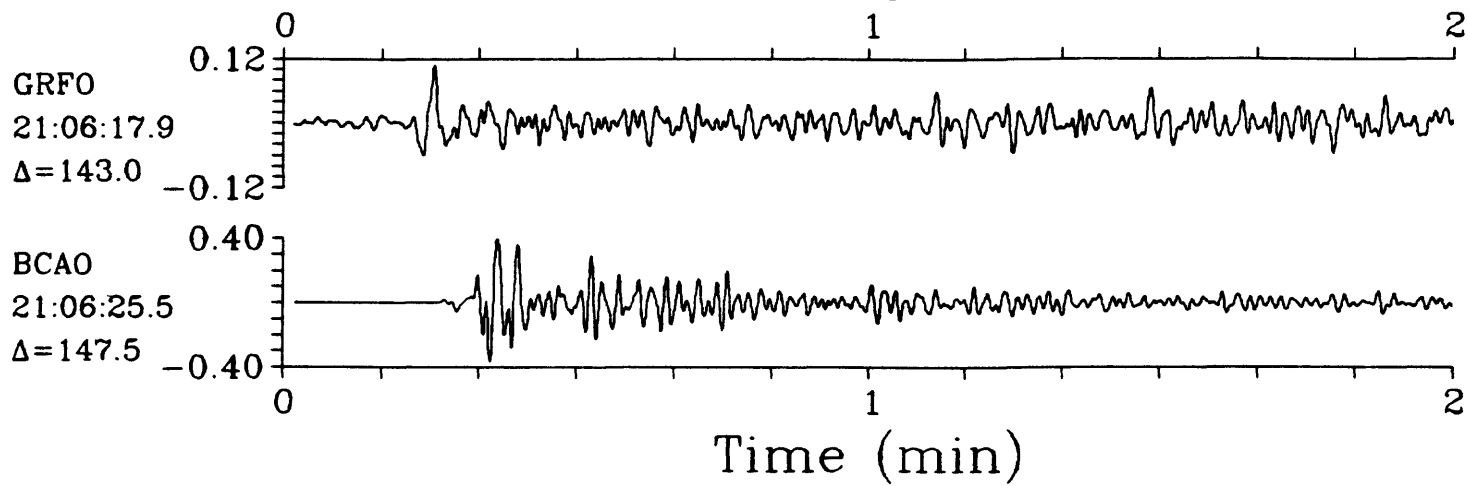
SPZ

Vanuatu Islands $h=36.8$ $m_b=5.8$ $M_{sz}=5.9$ 

SPZ

25 October 1986 20:47:02.71

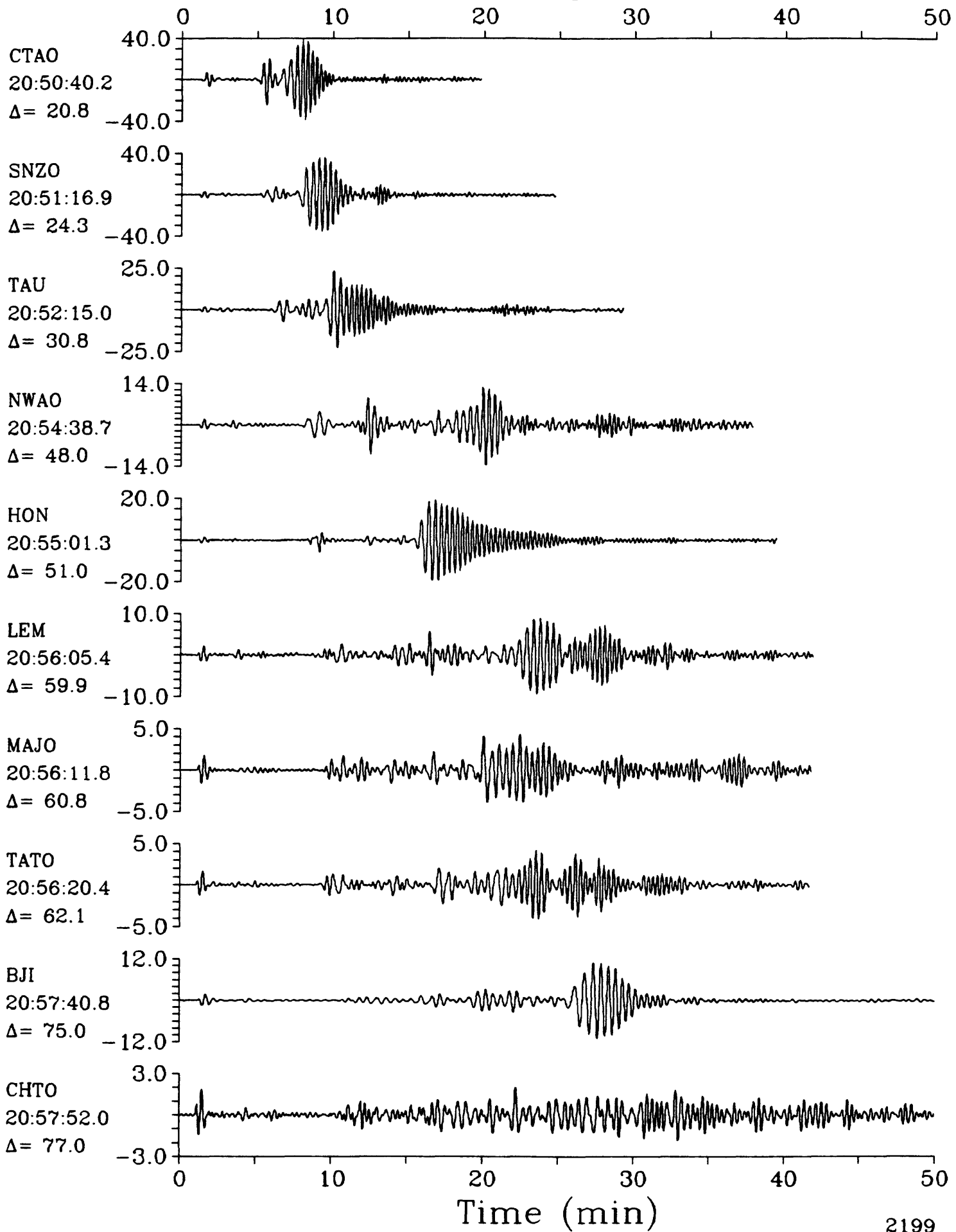
SPZ

Vanuatu Islands $h=36.8$ $m_b=5.8$ $M_{sz}=5.9$ 

LPZ

25 October 1986 20:47:02.71
Vanuatu Islands $h=36.8$ $m_b=5.8$ $M_{sz}=5.9$

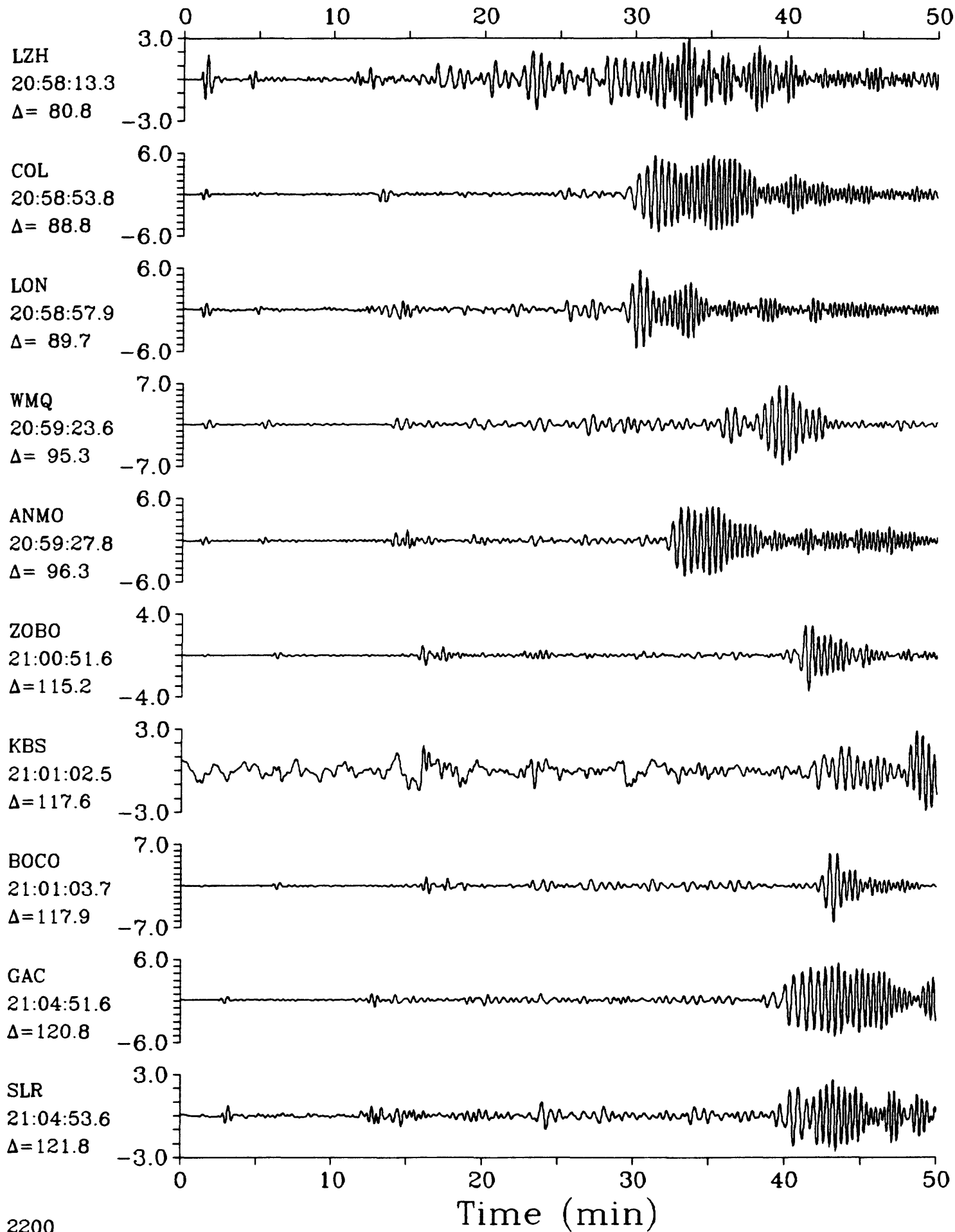
LPZ



LPZ

25 October 1986 20:47:02.71
Vanuatu Islands $h=36.8$ $m_b=5.8$ $M_{sz}=5.9$

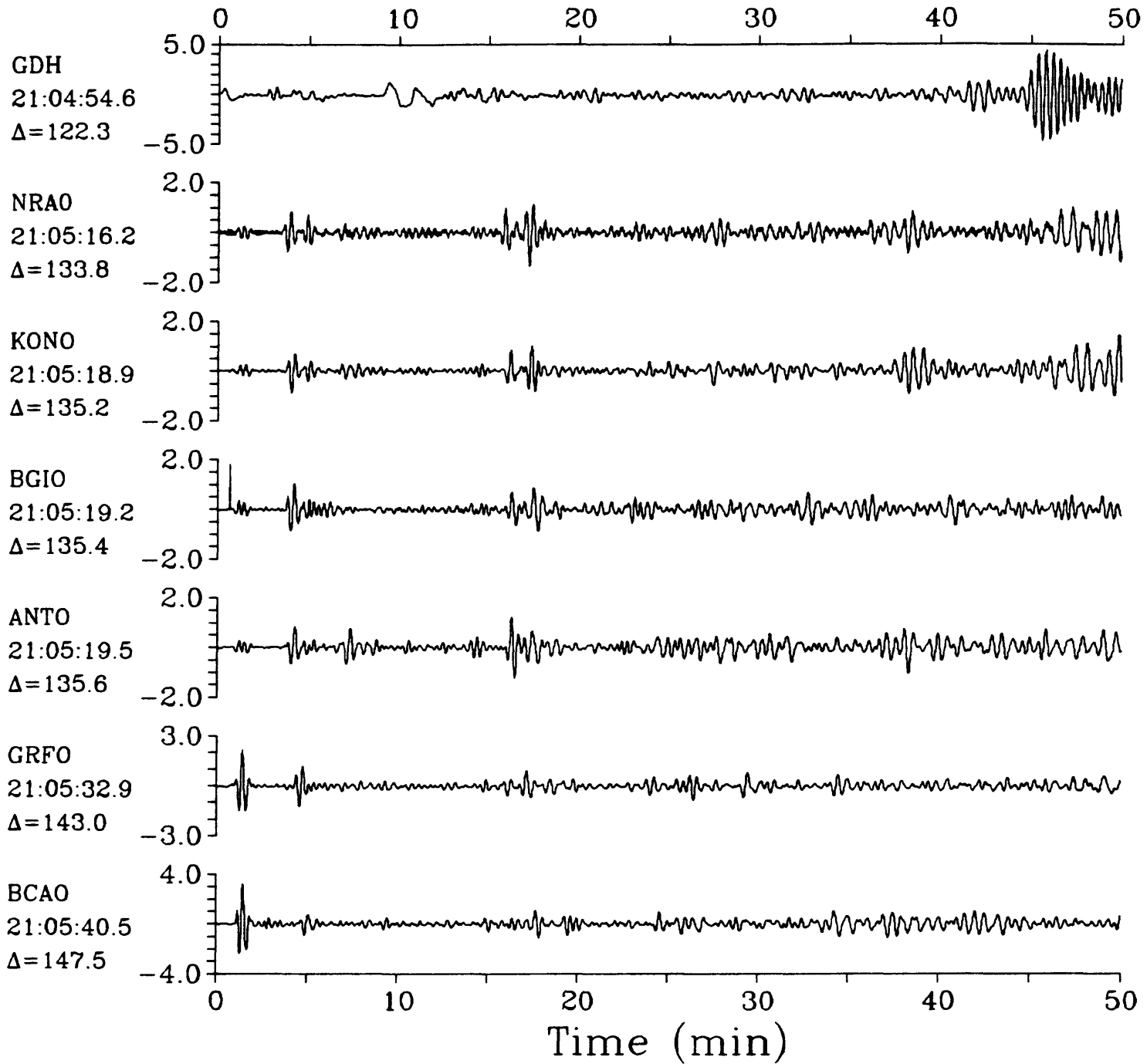
LPZ



LPZ

25 October 1986 20:47:02.71

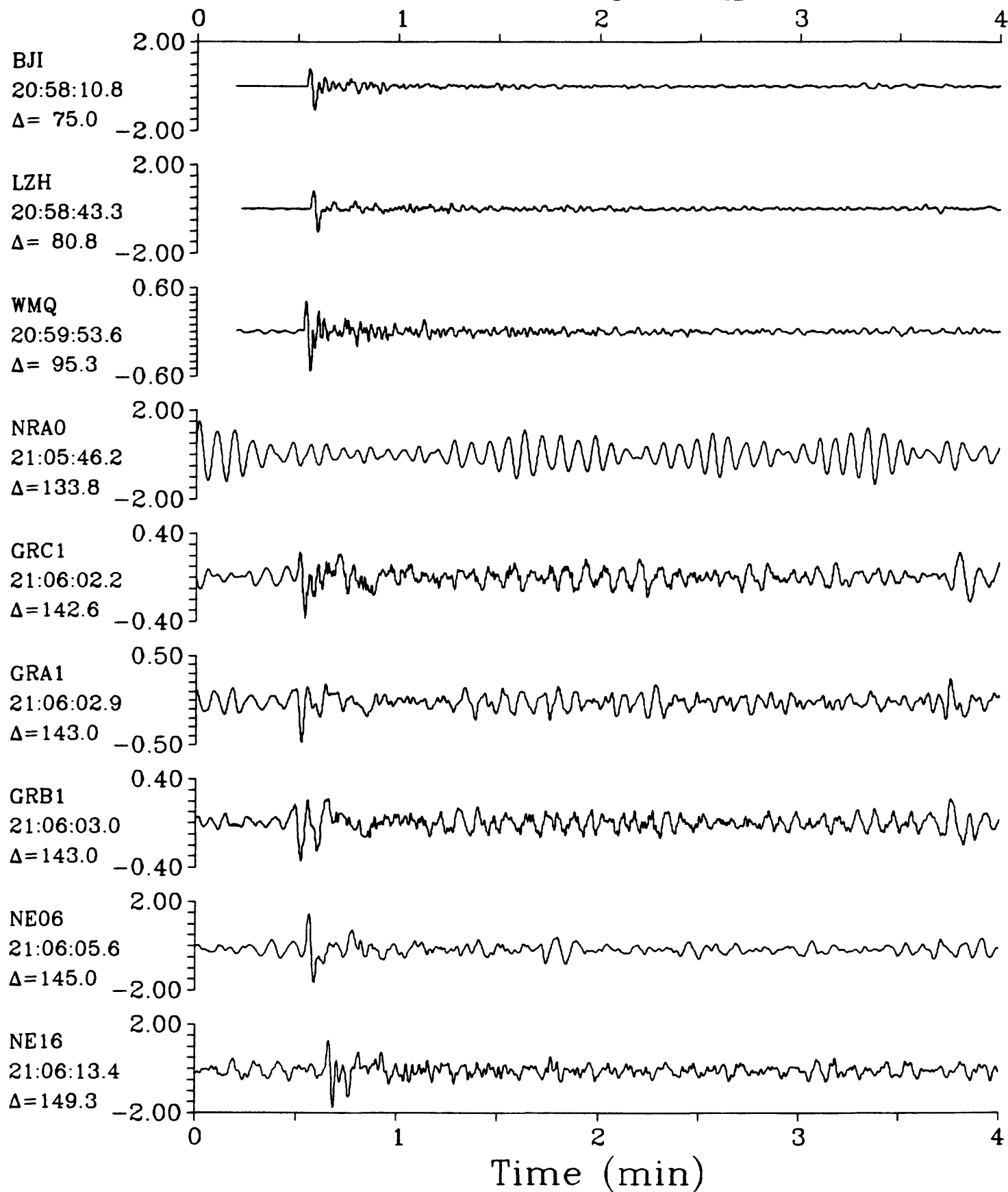
LPZ

Vanuatu Islands $h=36.8$ $m_b=5.8$ $M_{sz}=5.9$ 

IPZ

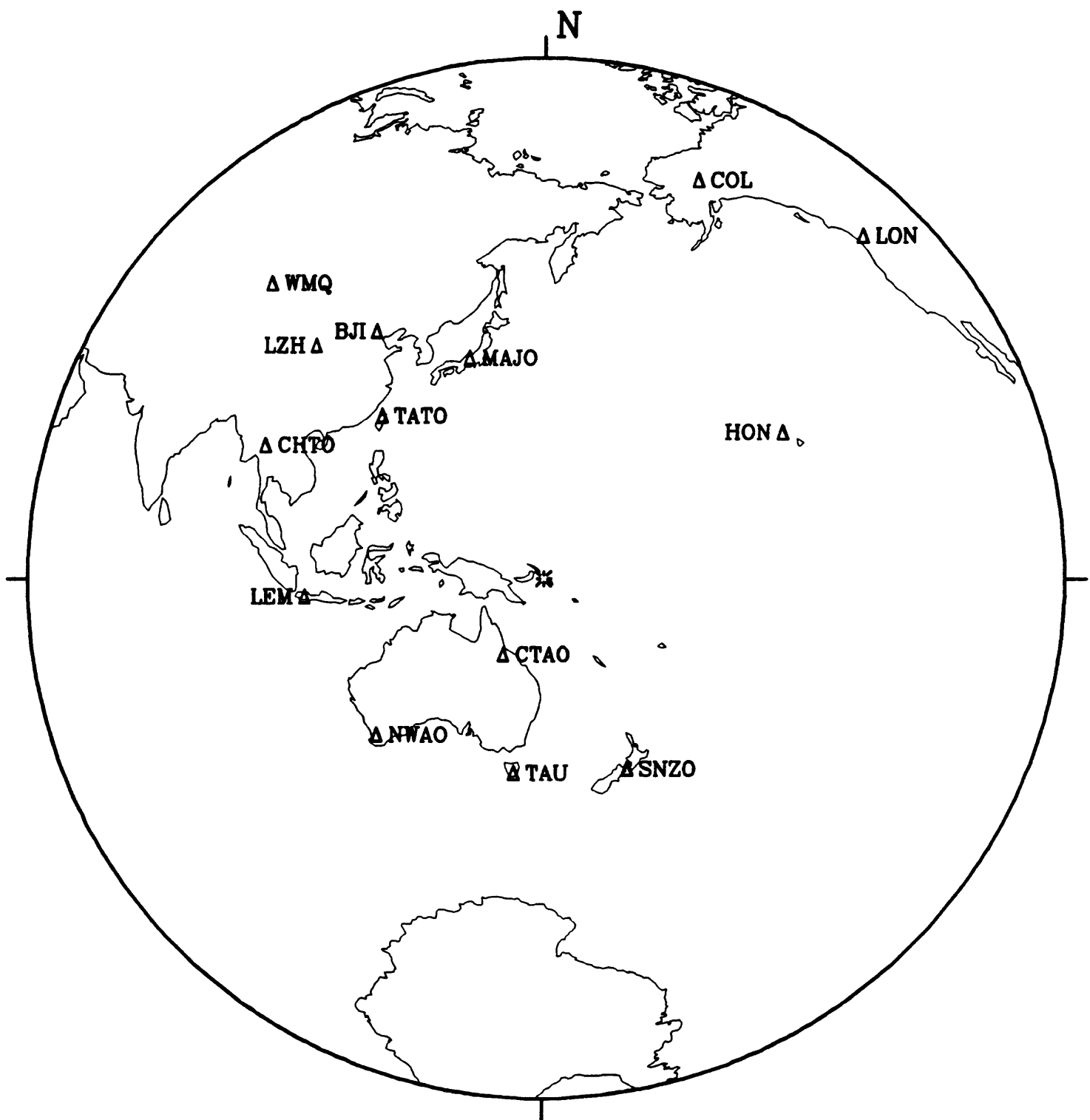
25 October 1986 20:47:02.71
Vanuatu Islands $h=36.8$ $m_b=5.8$ $M_{sz}=5.9$

IPZ



26 October 1986 00:59:22.53

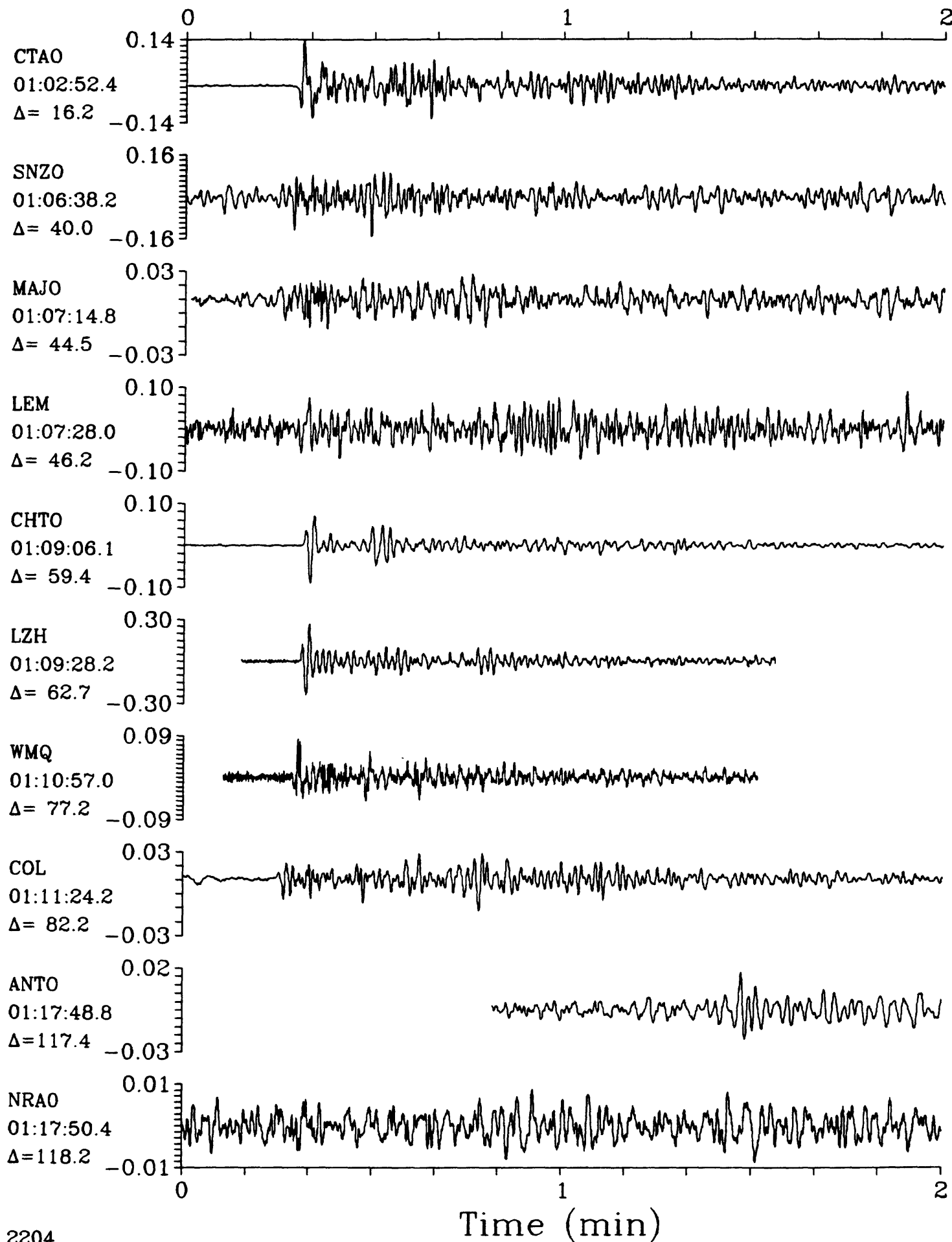
Solomon Islands



SPZ

26 October 1986 00:59:22.53
Solomon Islands $h=46.1$ $m_b=5.5$ $M_{sz}=4.7$

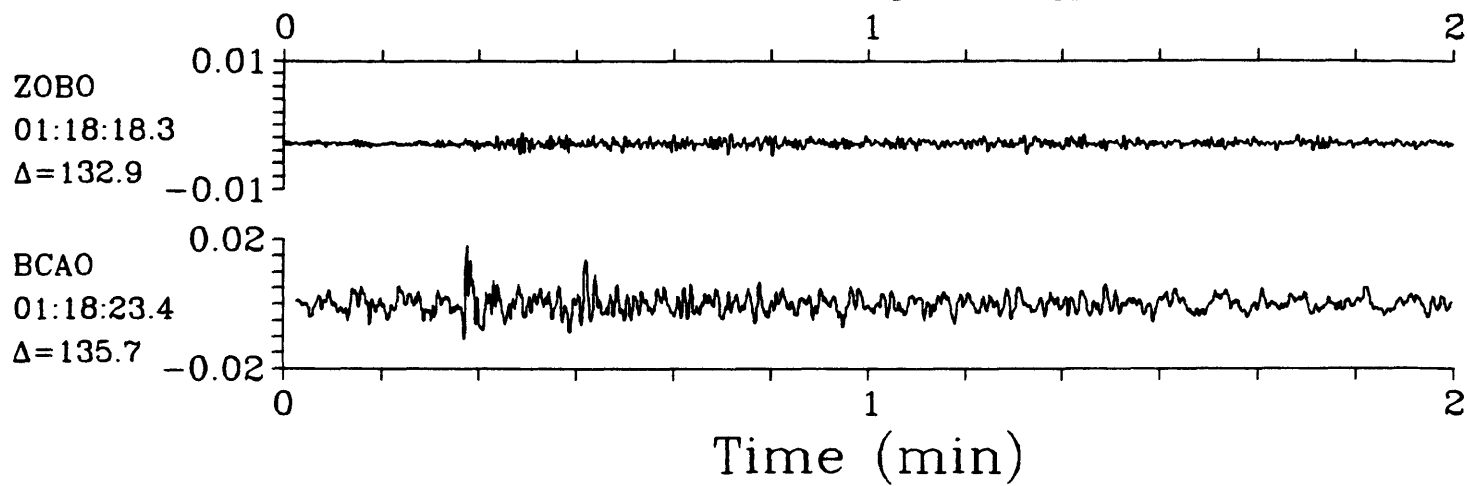
SPZ



SPZ

26 October 1986 00:59:22.53

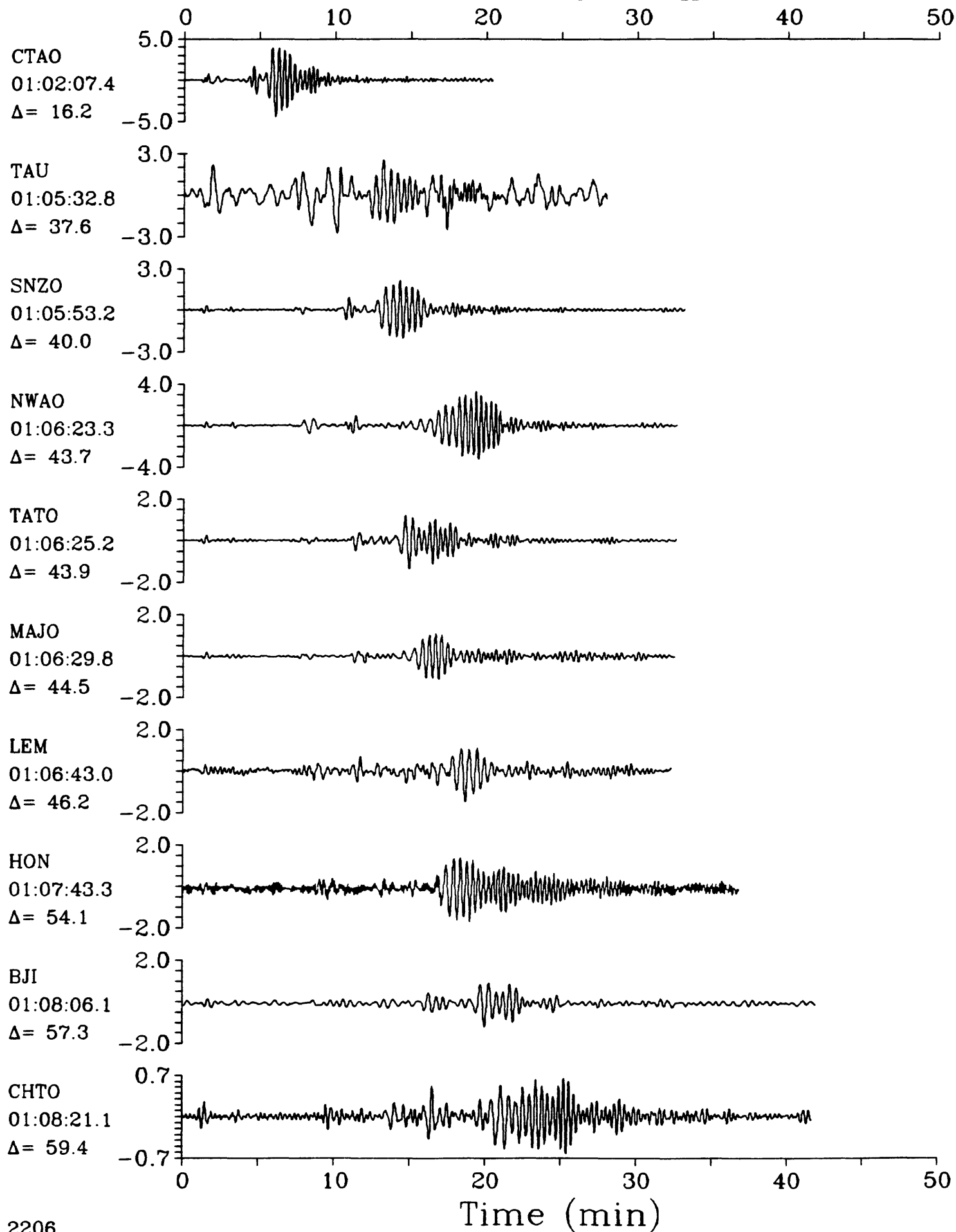
SPZ

Solomon Islands $h=46.1$ $m_b=5.5$ $M_{sz}=4.7$ 

LPZ

26 October 1986 00:59:22.53
Solomon Islands $h=46.1$ $m_b=5.5$ $M_{sz}=4.7$

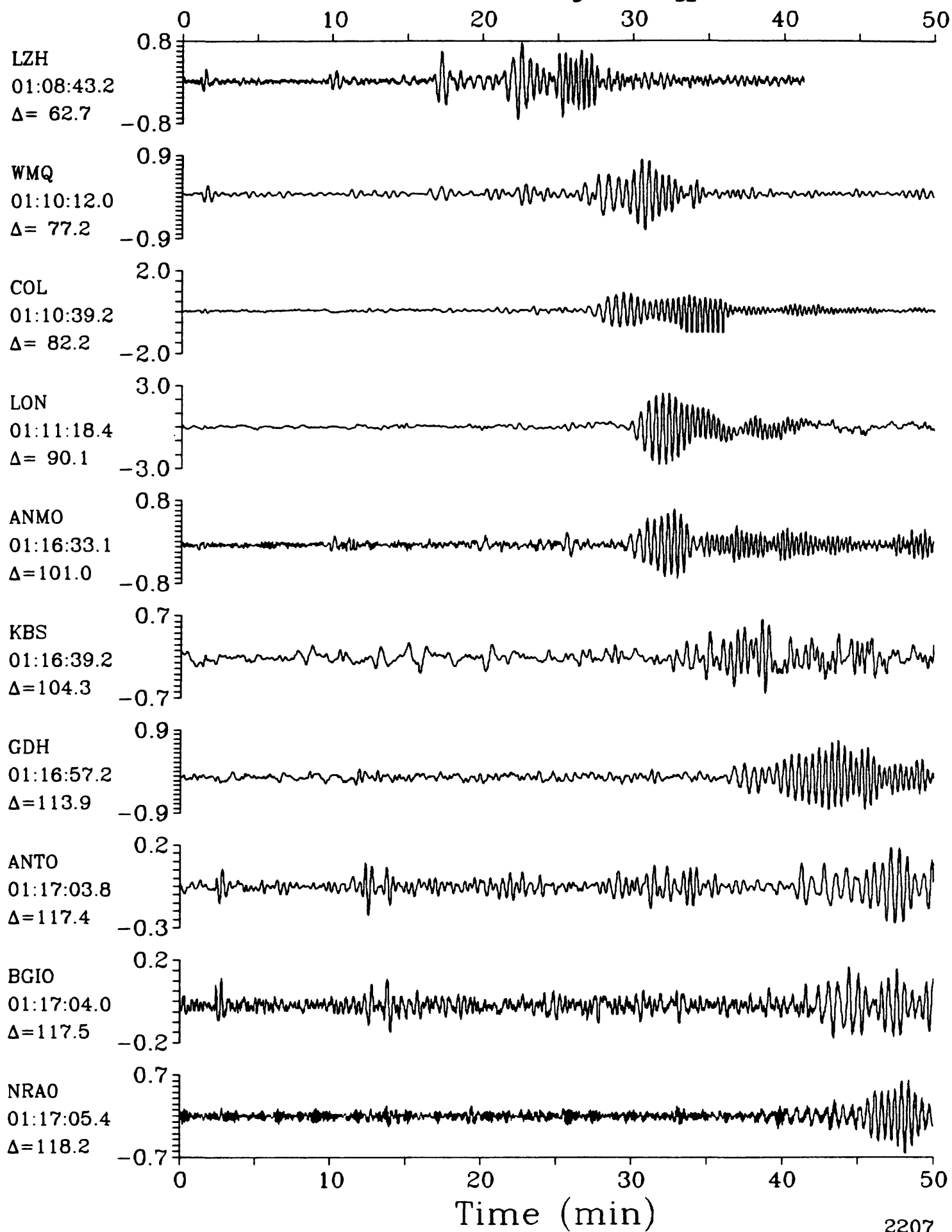
LPZ



LPZ

26 October 1986 00:59:22.53
Solomon Islands $h=46.1$ $m_b=5.5$ $M_{sz}=4.7$

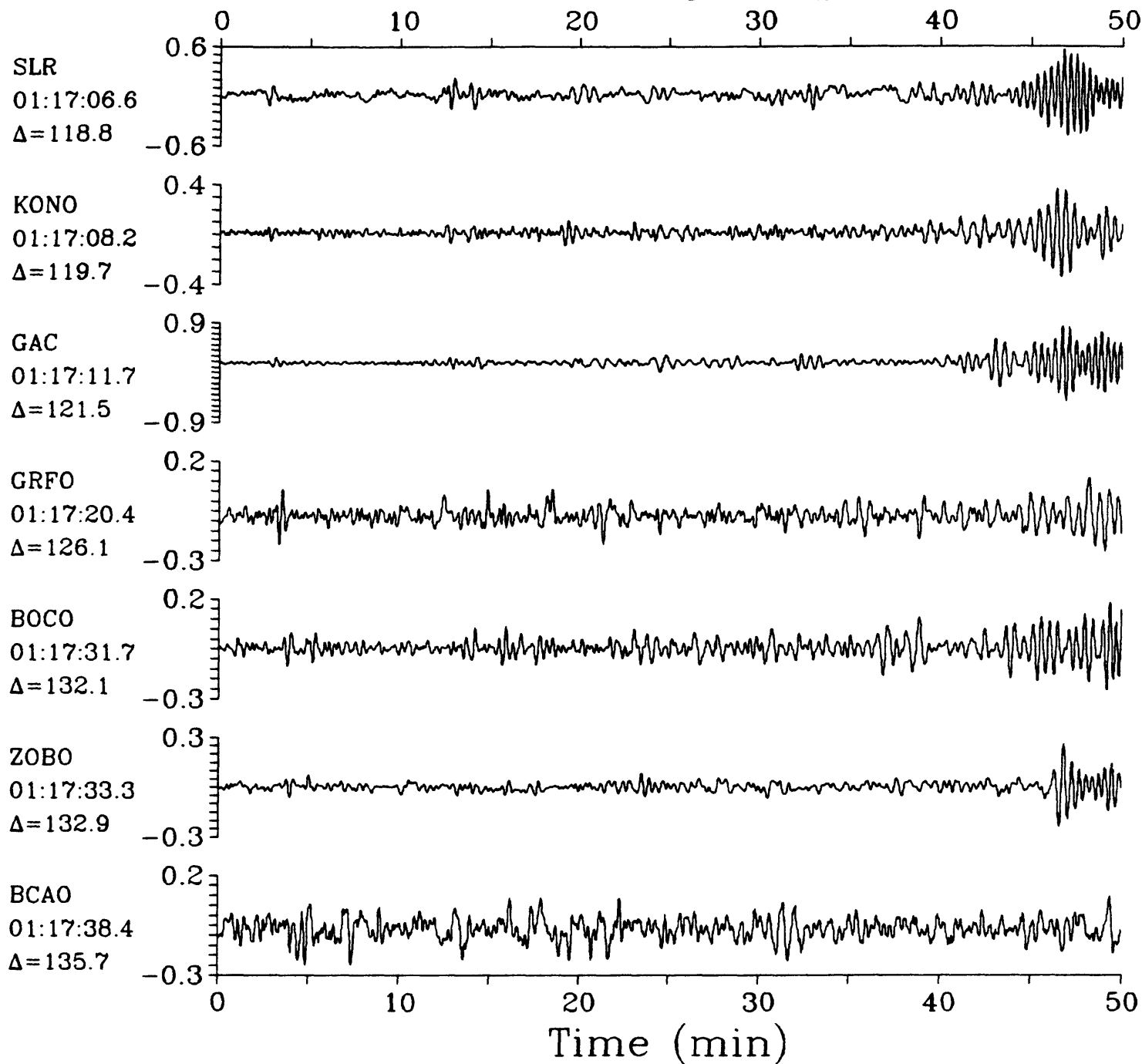
LPZ



LPZ

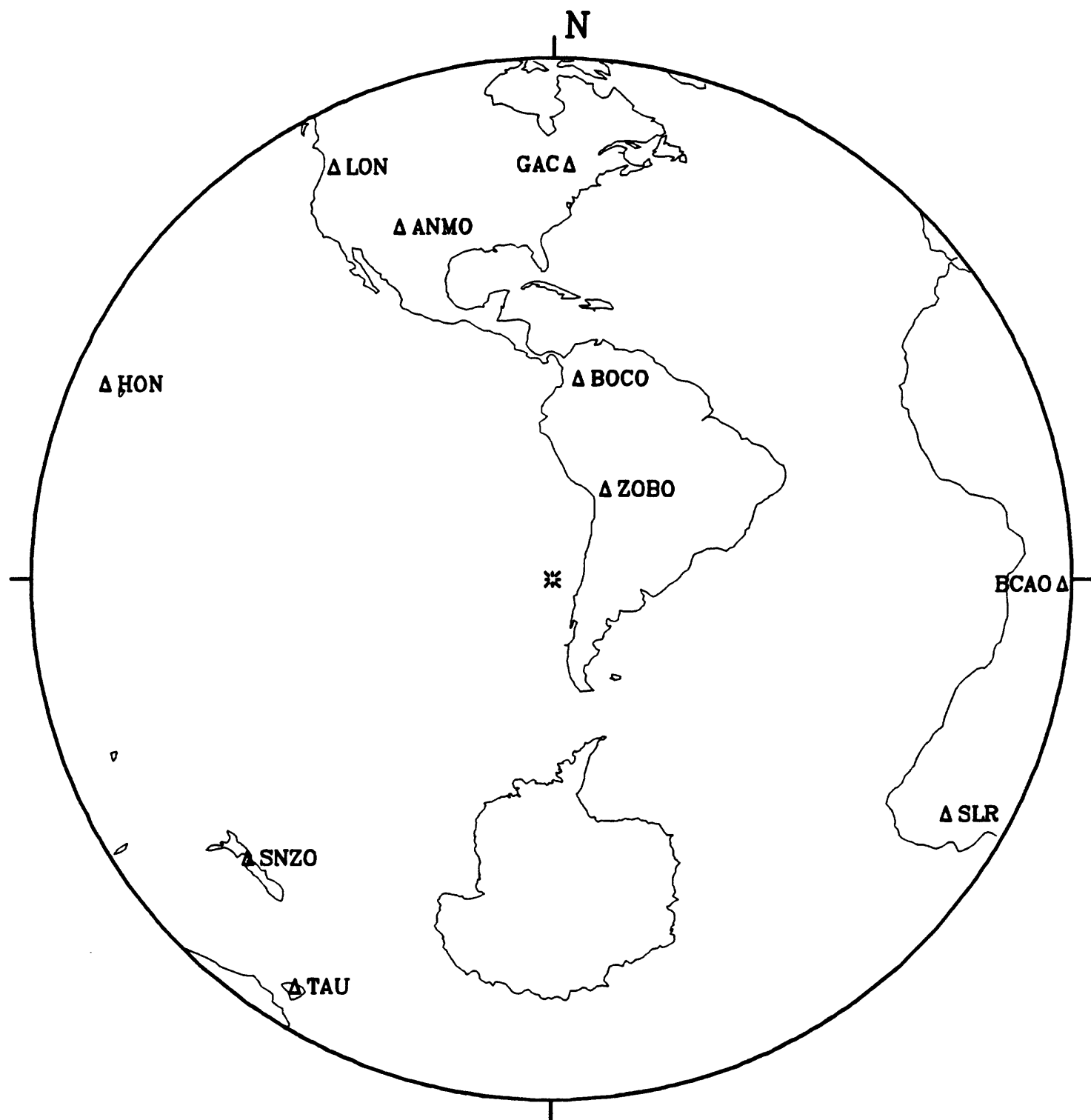
26 October 1986 00:59:22.53

LPZ

Solomon Islands $h=46.1$ $m_b=5.5$ $M_{sz}=4.7$ 

27 October 1986 08:02:53.29

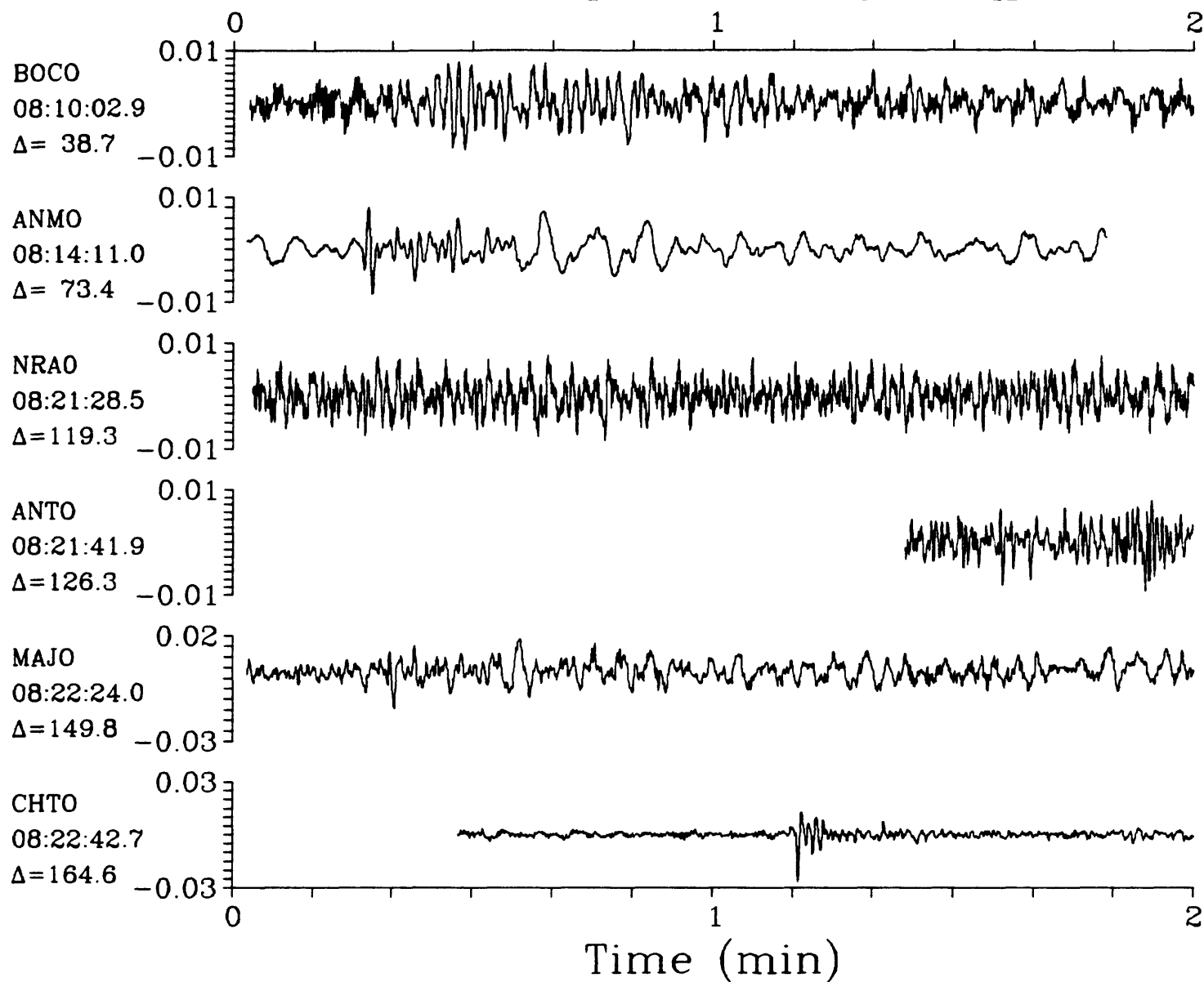
Juan Fernandez Islands Region



SPZ

27 October 1986 08:02:53.29

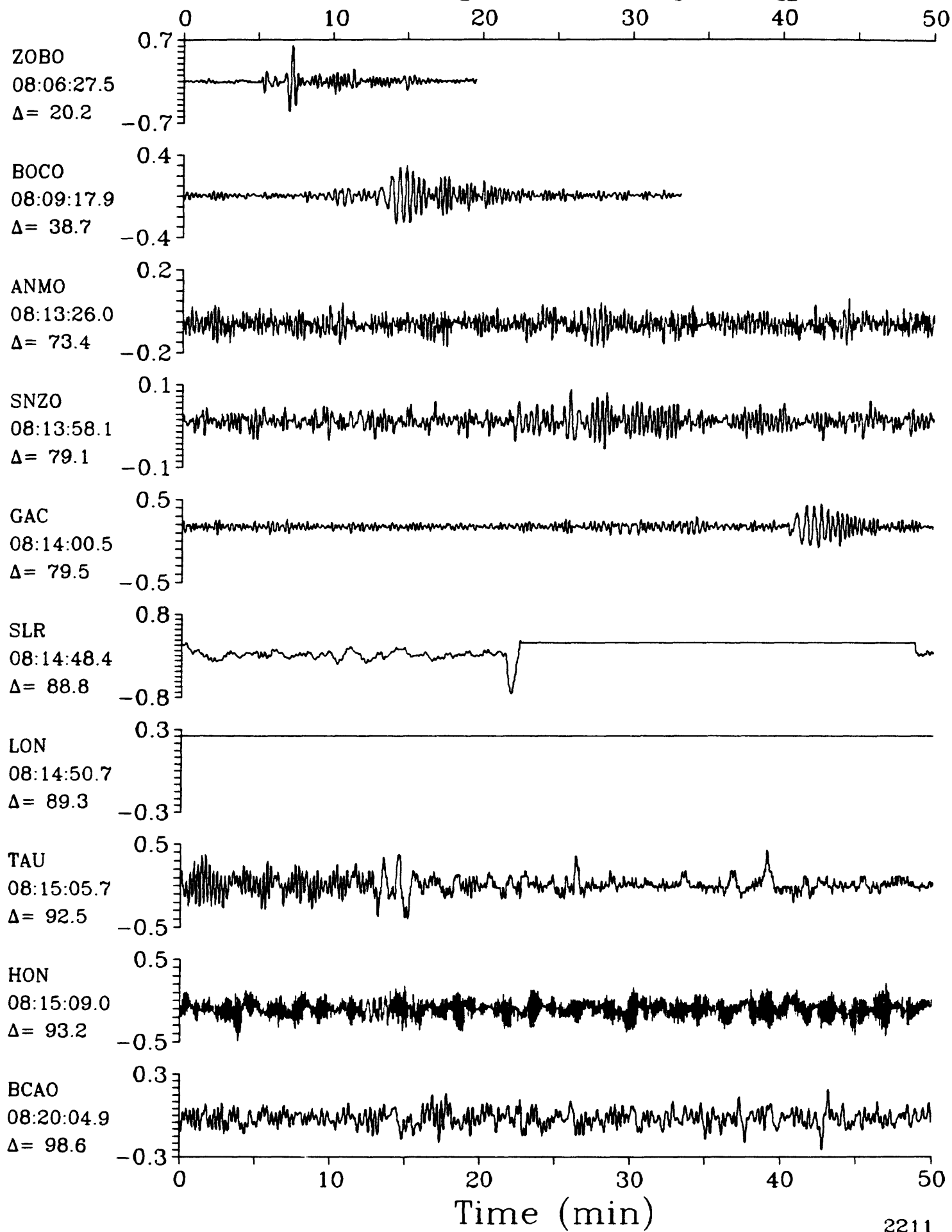
SPZ

Juan Fernandez Islands Region $h=10.0$ $m_b=5.0$ $M_{SZ}=5.5$ 

LPZ

27 October 1986 08:02:53.29

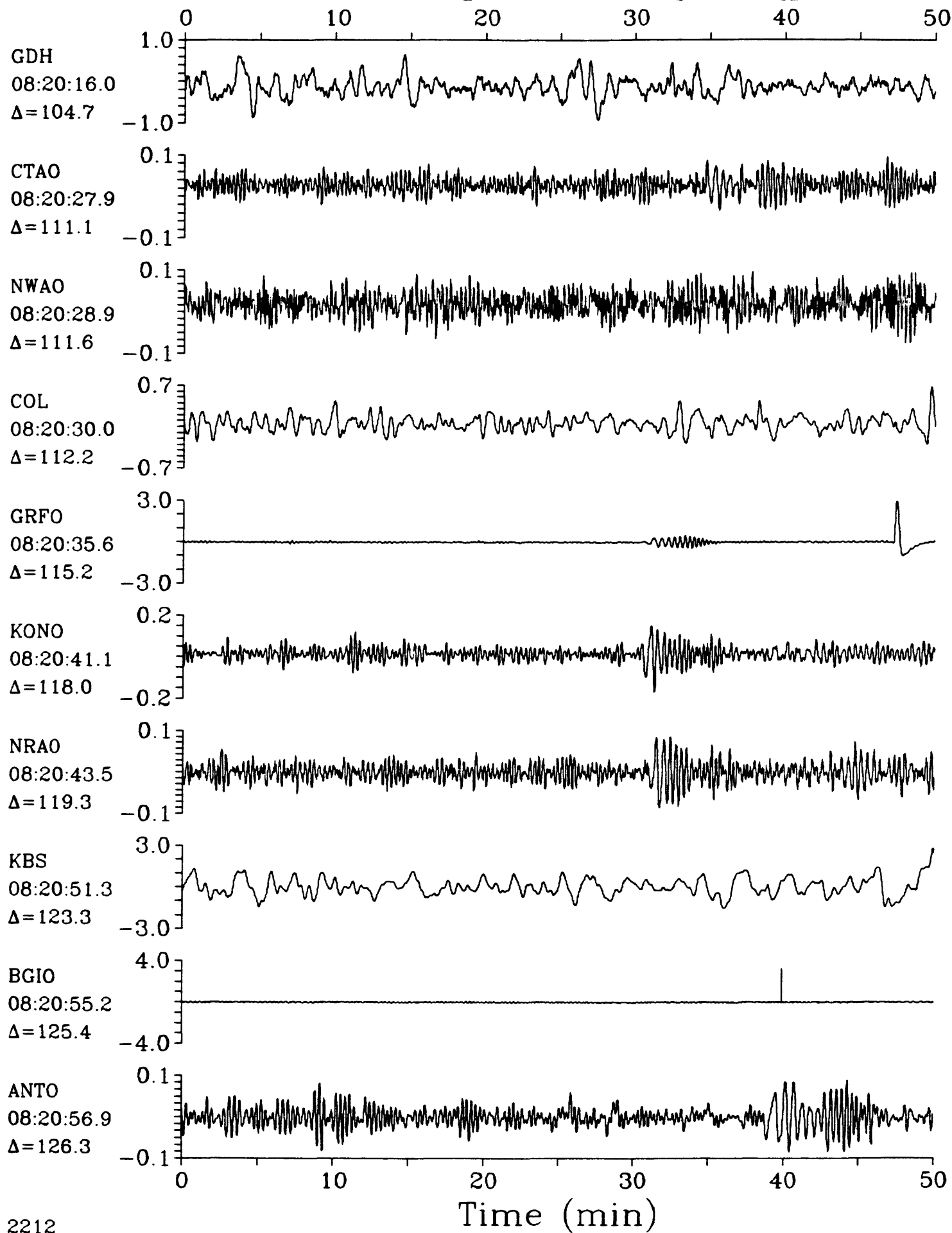
LPZ

Juan Fernandez Islands Region $h=10.0$ $m_b=5.0$ $M_{SZ}=5.5$ 

LPZ

27 October 1986 08:02:53.29

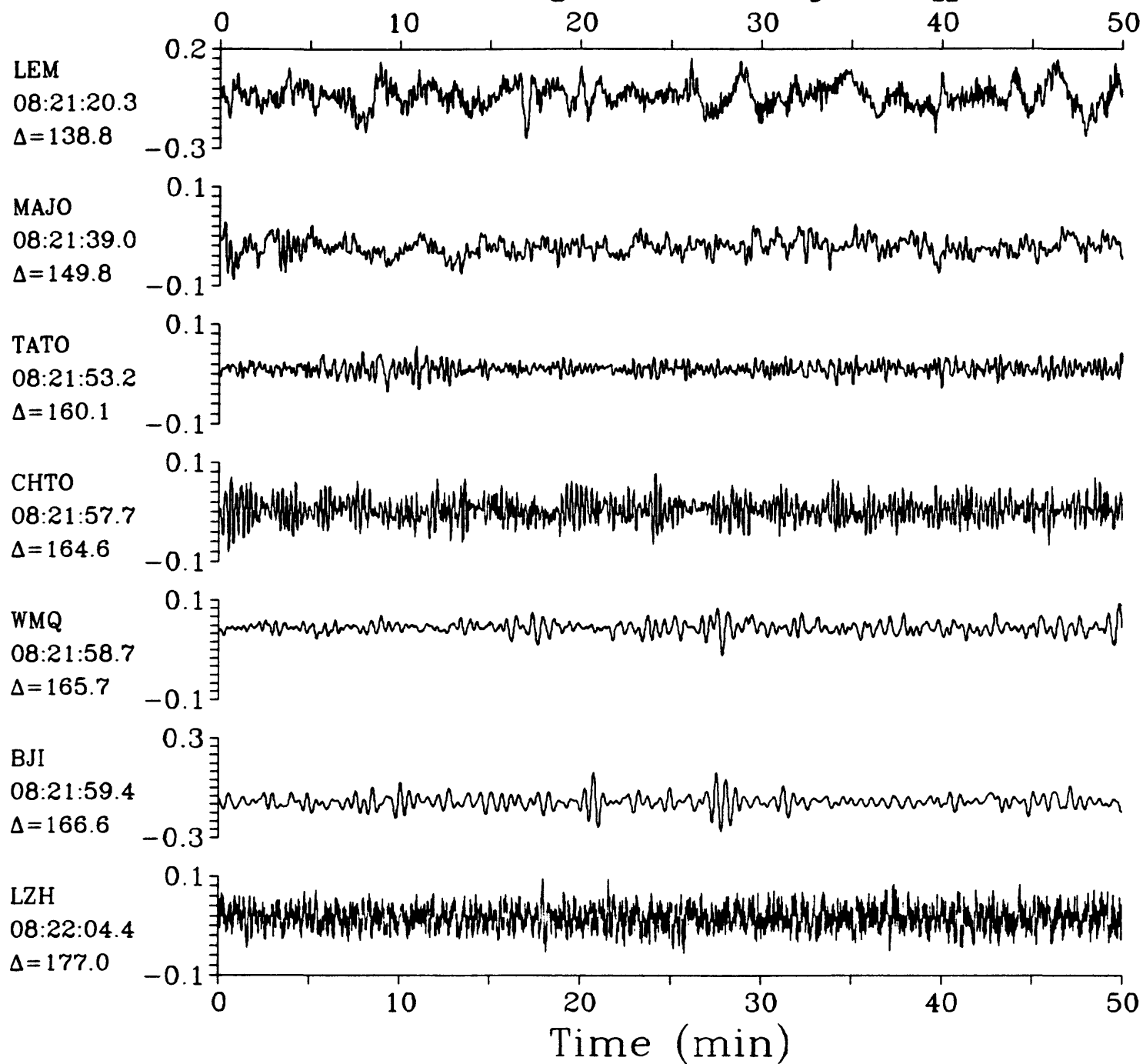
LPZ

Juan Fernandez Islands Region $h=10.0$ $m_b=5.0$ $M_{SZ}=5.5$ 

LPZ

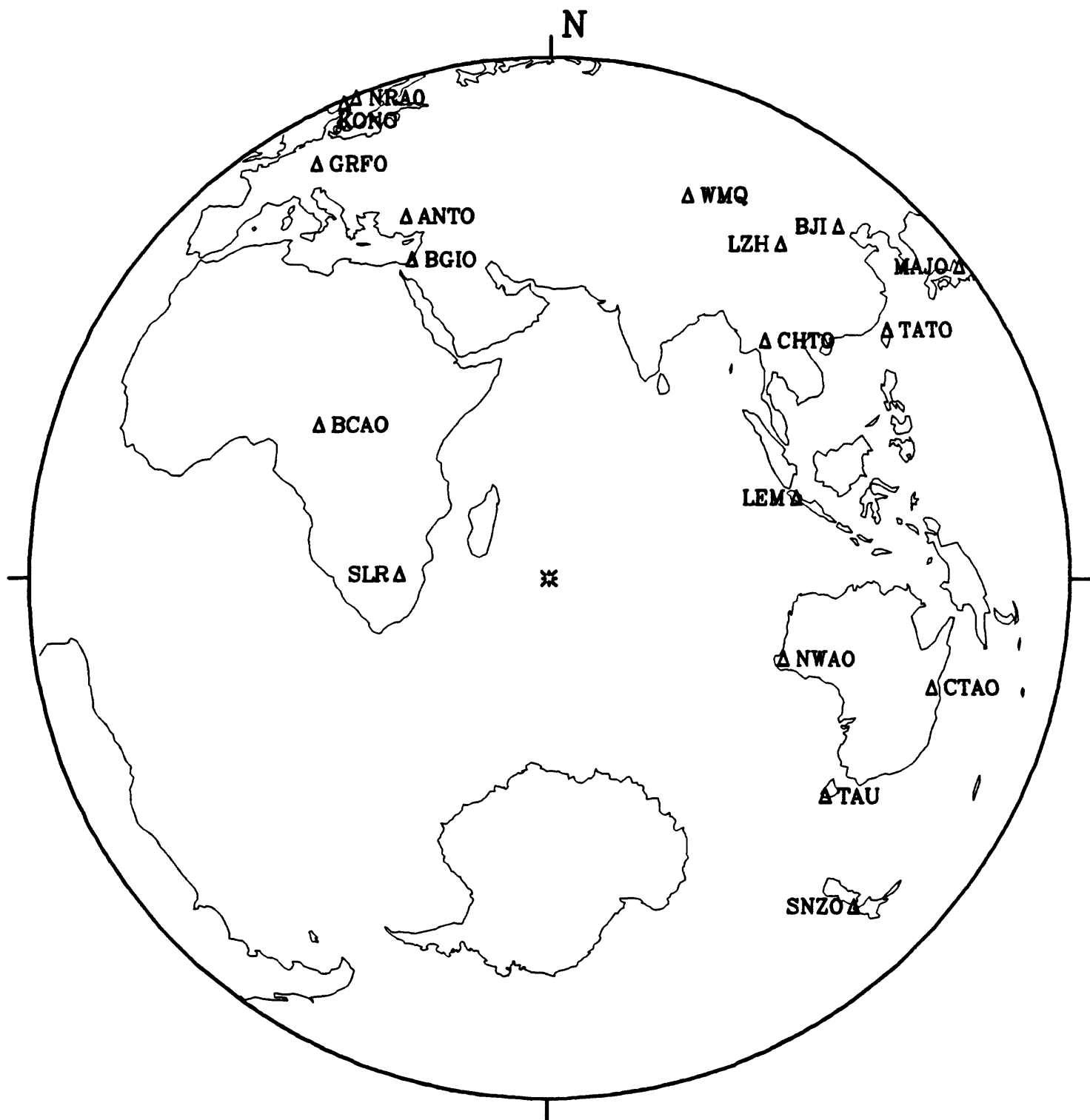
27 October 1986 08:02:53.29

LPZ

Juan Fernandez Islands Region $h=10.0$ $m_b=5.0$ $M_{sz}=5.5$ 

28 October 1986 15:11:23.37

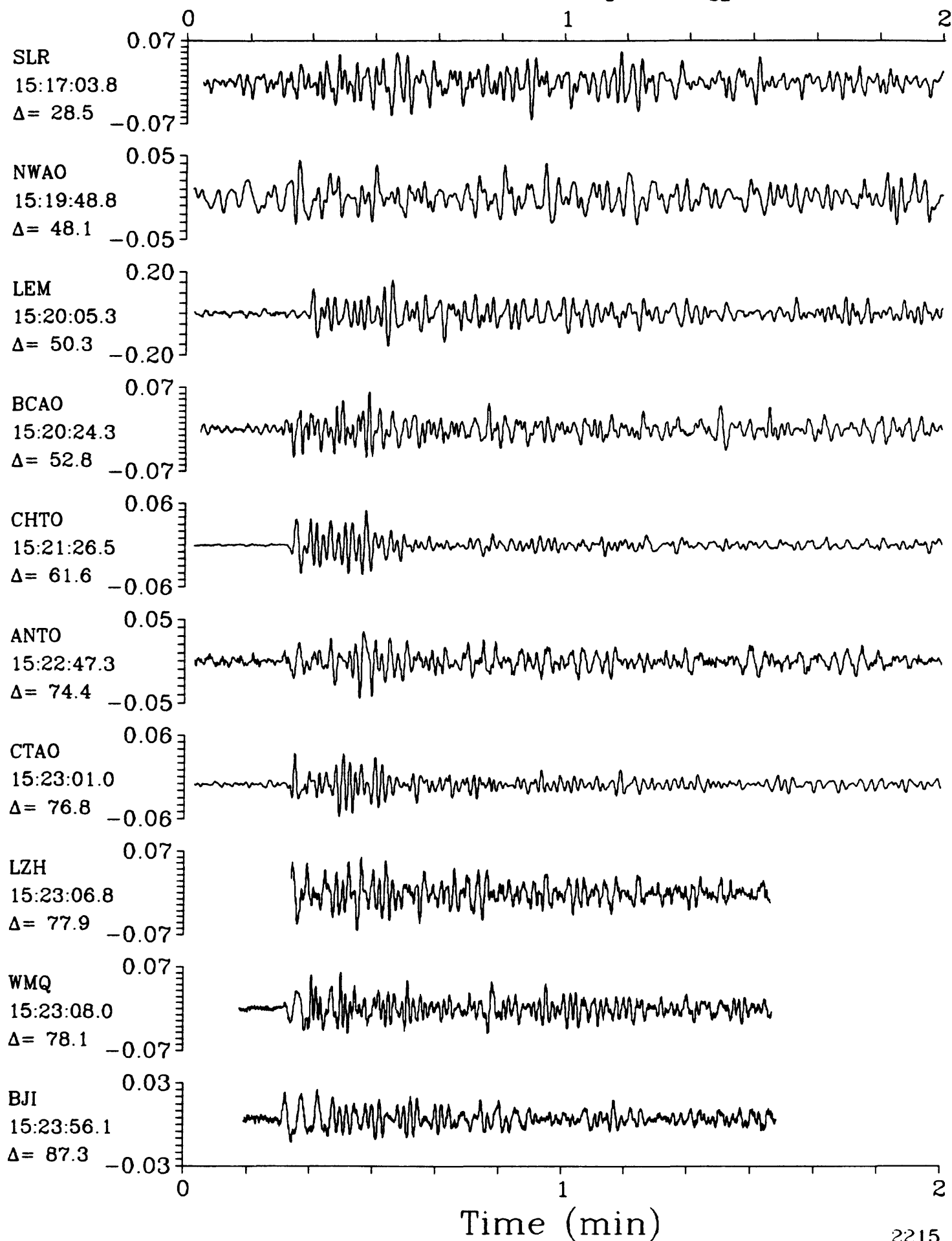
Atlantic-Indian Rise



SPZ

28 October 1986 15:11:23.37

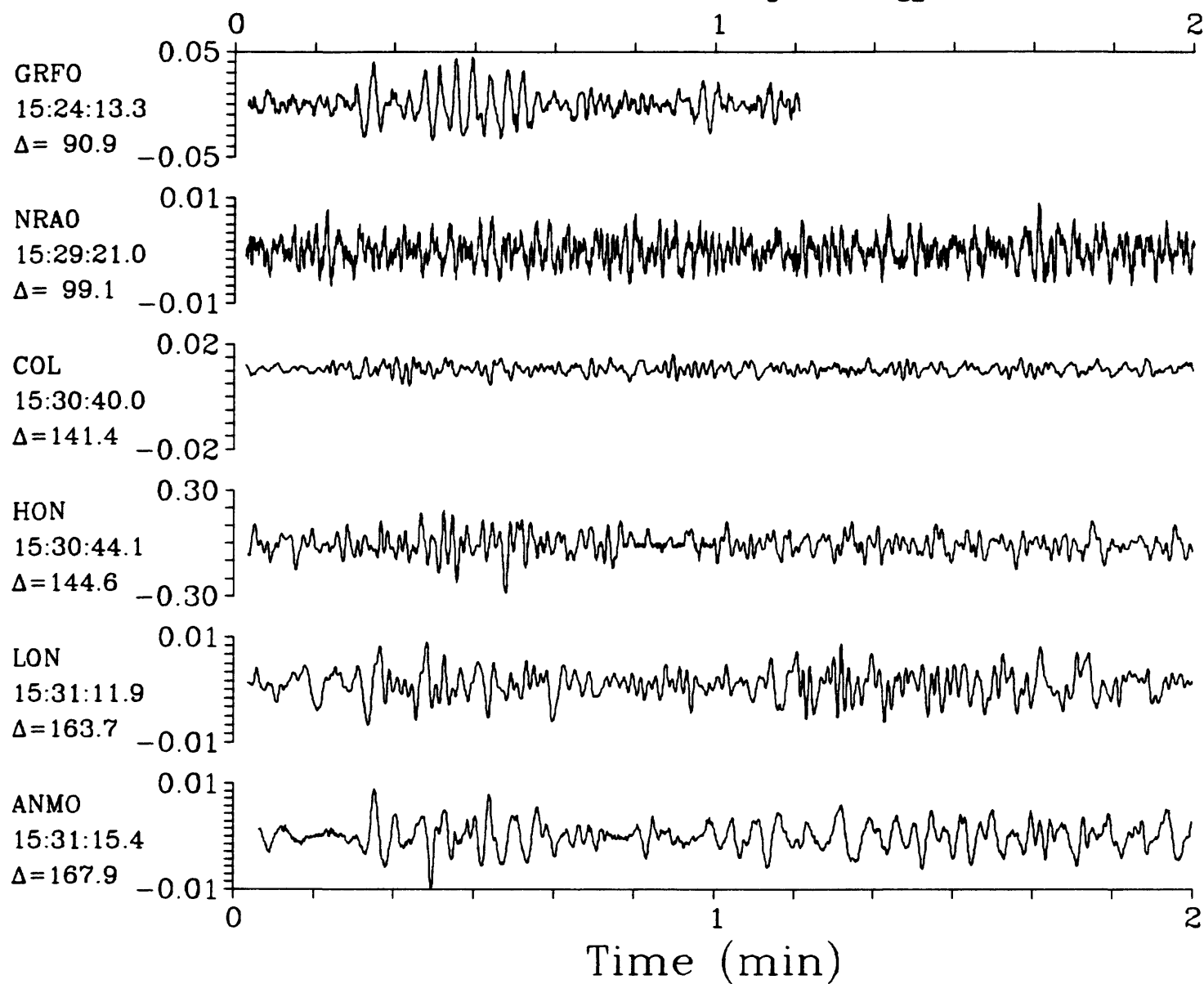
SPZ

Atlantic-Indian Rise $h=10.0$ $m_b=5.6$ $M_{sz}=5.4$ 

SPZ

28 October 1986 15:11:23.37

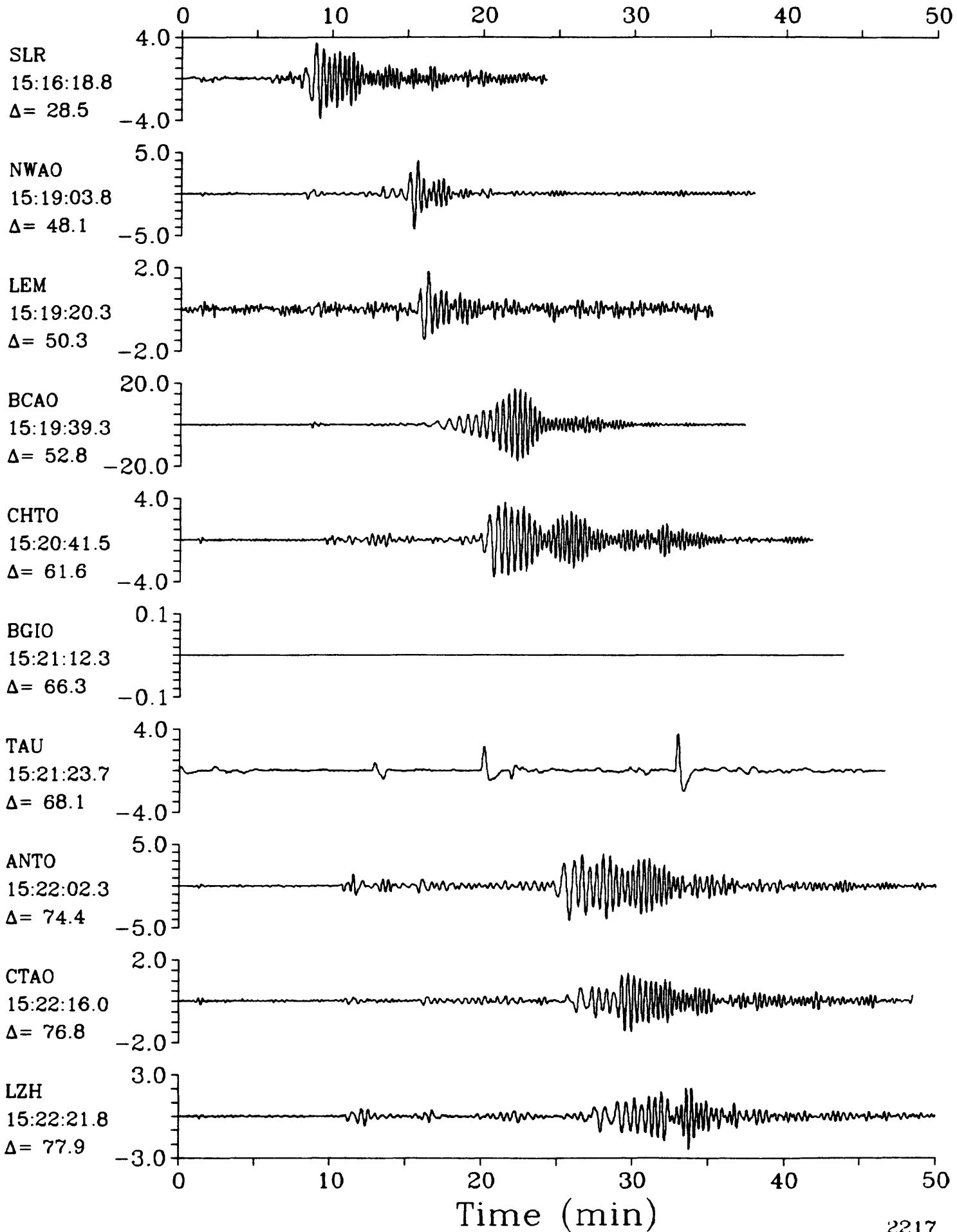
SPZ

Atlantic-Indian Rise $h=10.0$ $m_b=5.6$ $M_{sz}=5.4$ 

LPZ

28 October 1986 15:11:23.37

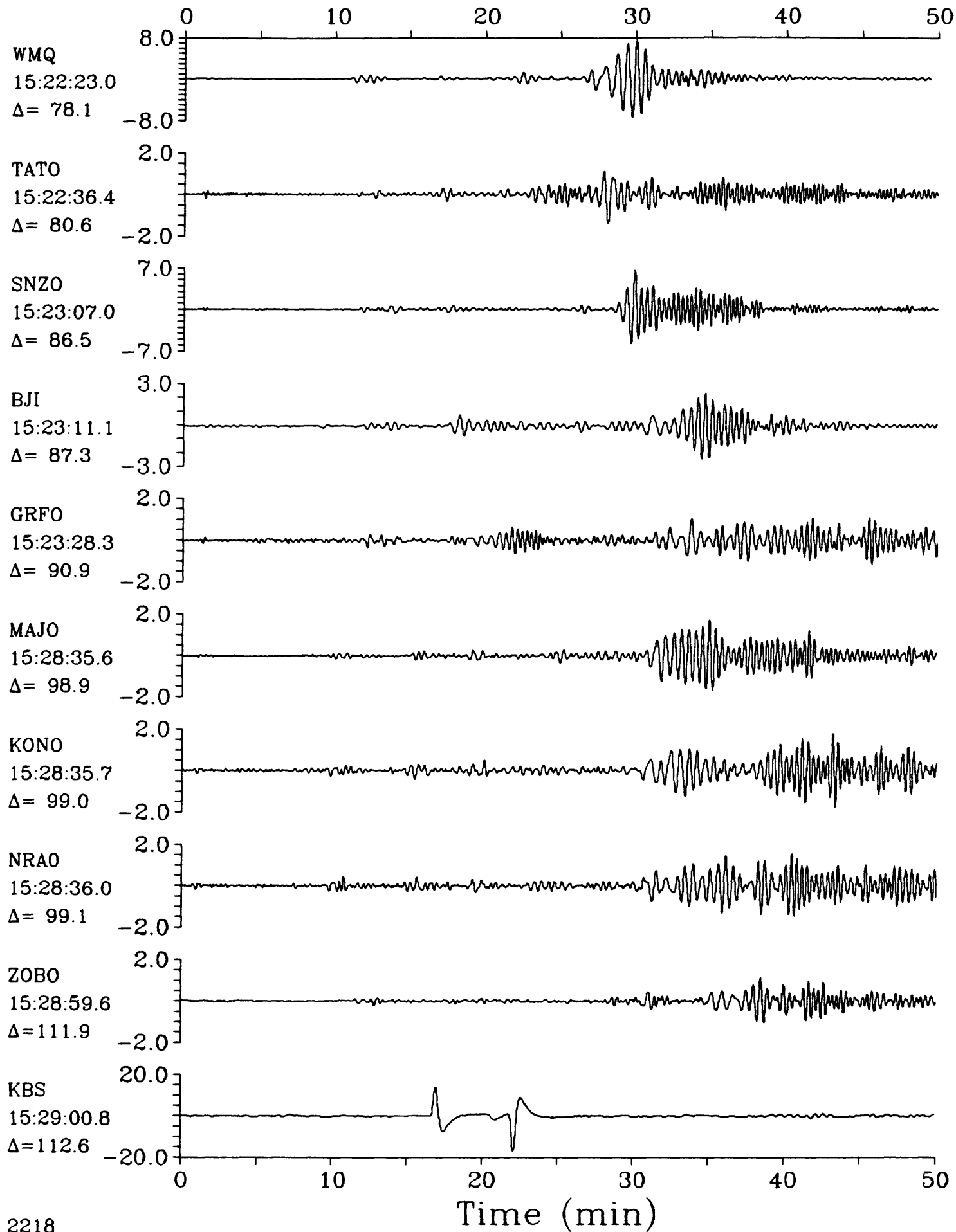
LPZ

Atlantic-Indian Rise $h=10.0$ $m_b=5.6$ $M_{sz}=5.4$ 

LPZ

28 October 1986 15:11:23.37

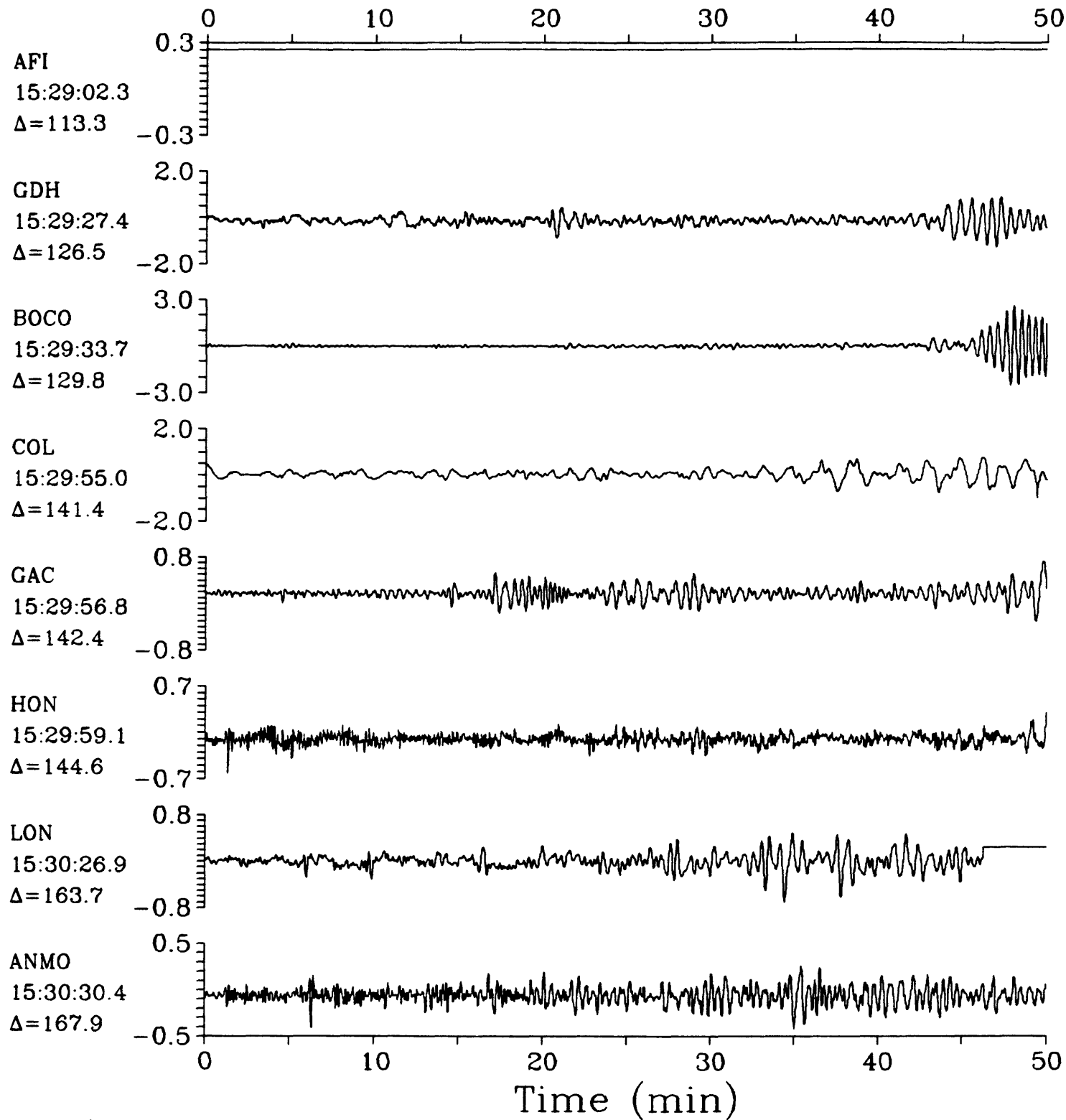
LPZ

Atlantic-Indian Rise $h=10.0$ $m_b=5.6$ $M_{sz}=5.4$ 

LPZ

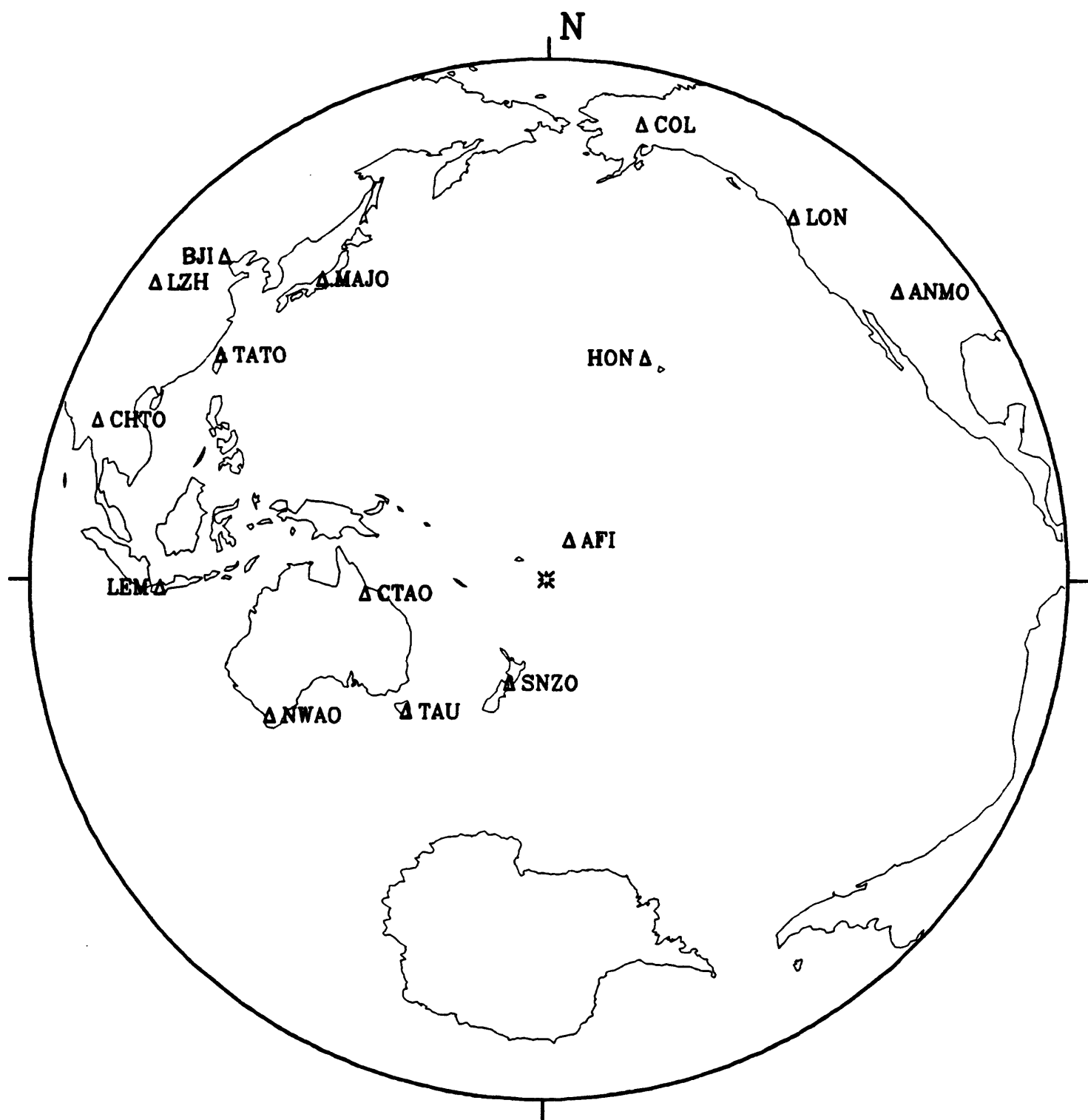
28 October 1986 15:11:23.37

LPZ

Atlantic-Indian Rise $h=10.0$ $m_b=5.6$ $M_{sz}=5.4$ 

30 October 1986 01:28:55.30

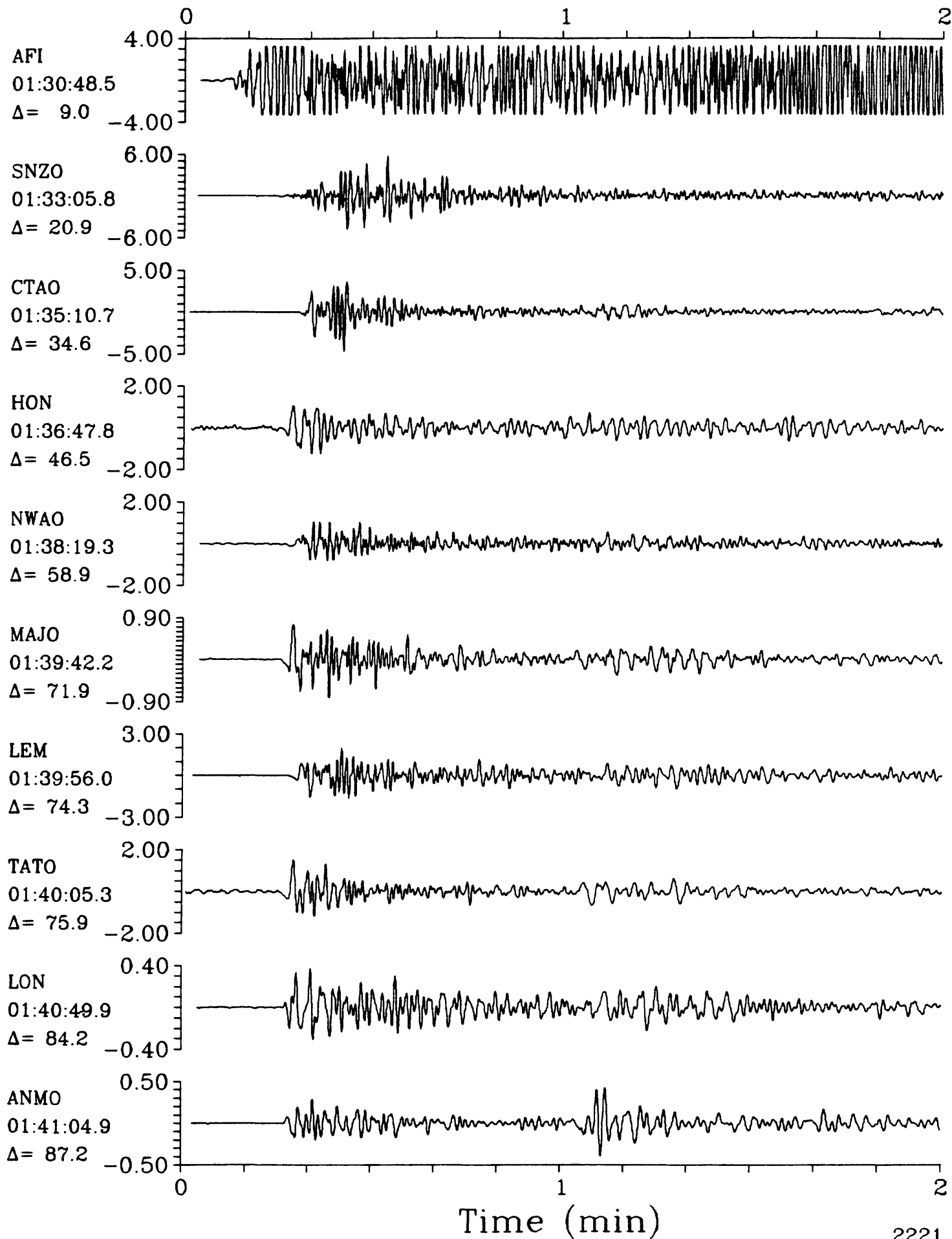
Fiji Islands Region



SPZ

30 October 1986 01:28:55.30
Fiji Islands Region $h=194.0$ $m_b=6.4$

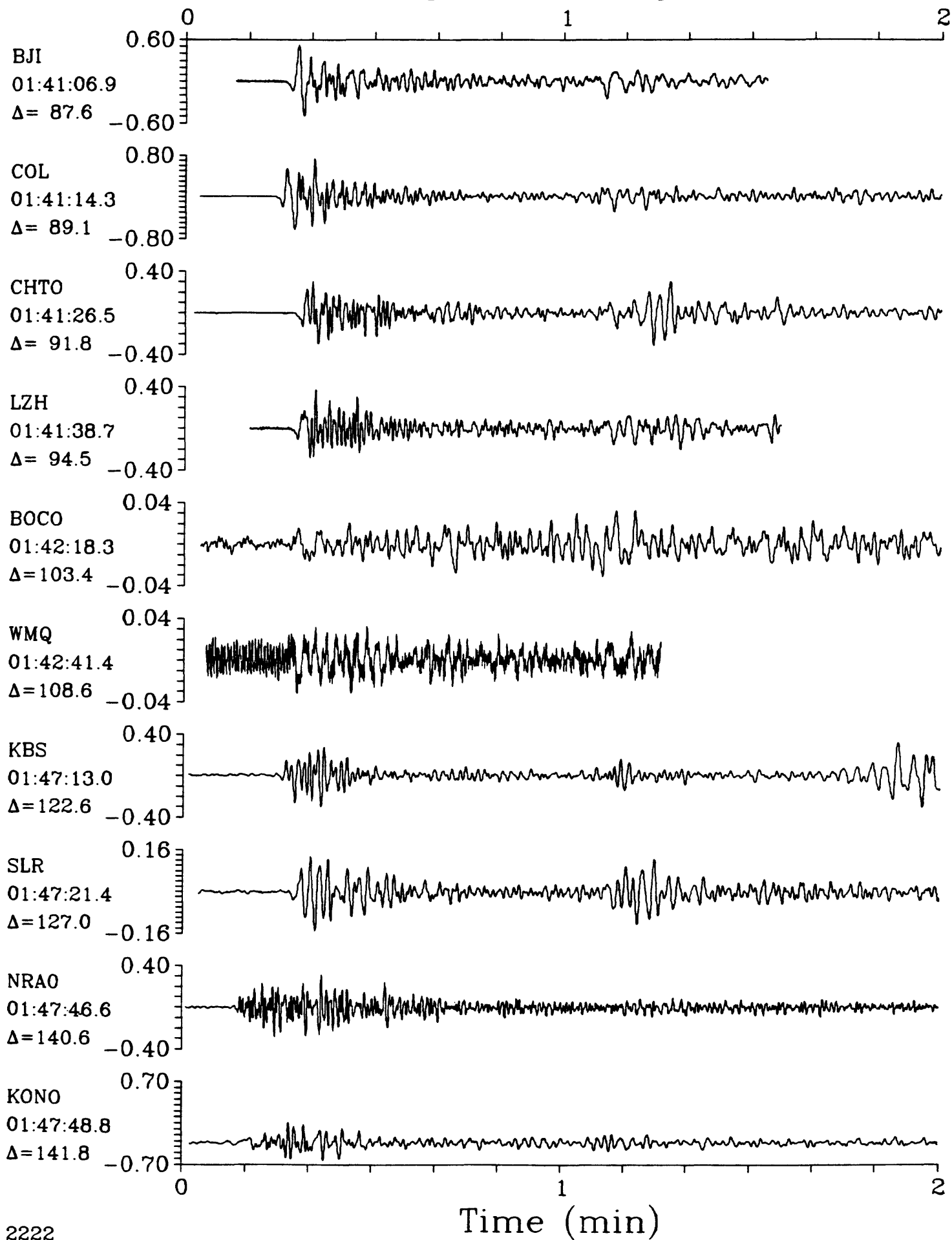
SPZ



SPZ

30 October 1986 01:28:55.30
Fiji Islands Region $h=194.0$ $m_b=6.4$

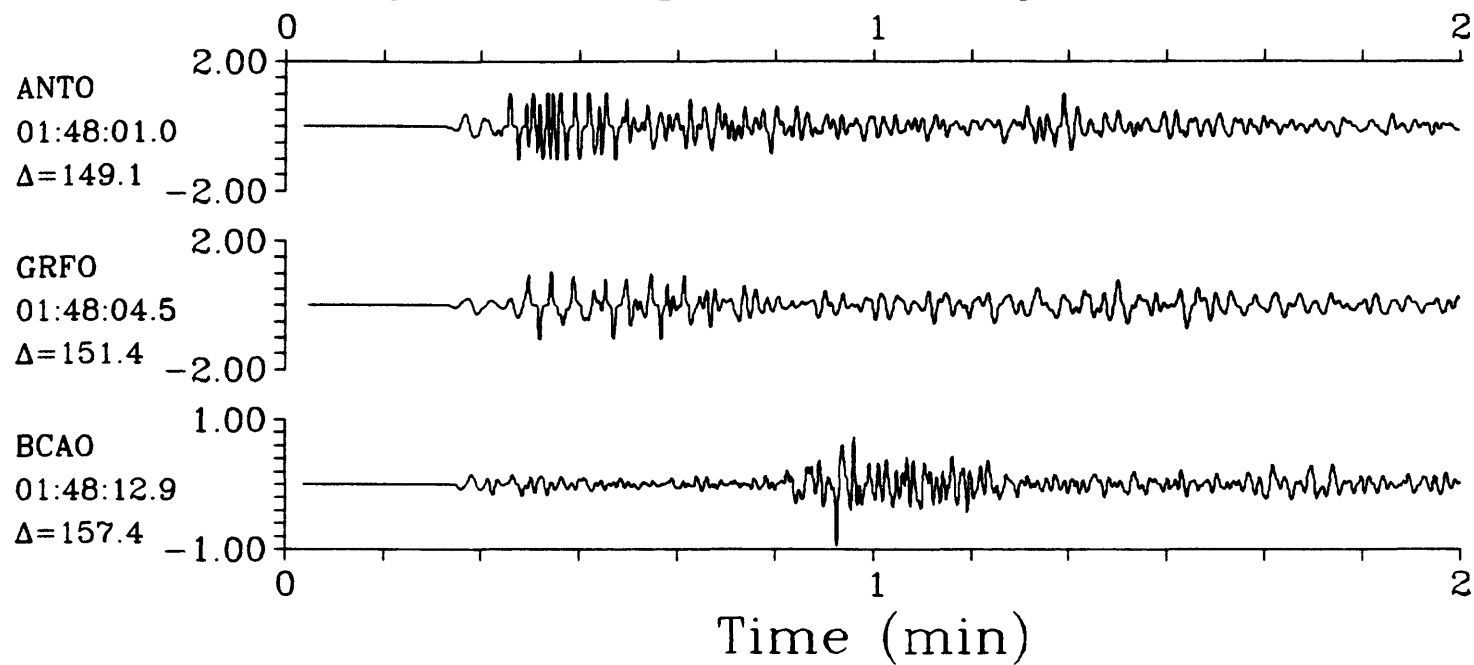
SPZ



SPZ

30 October 1986 01:28:55.30

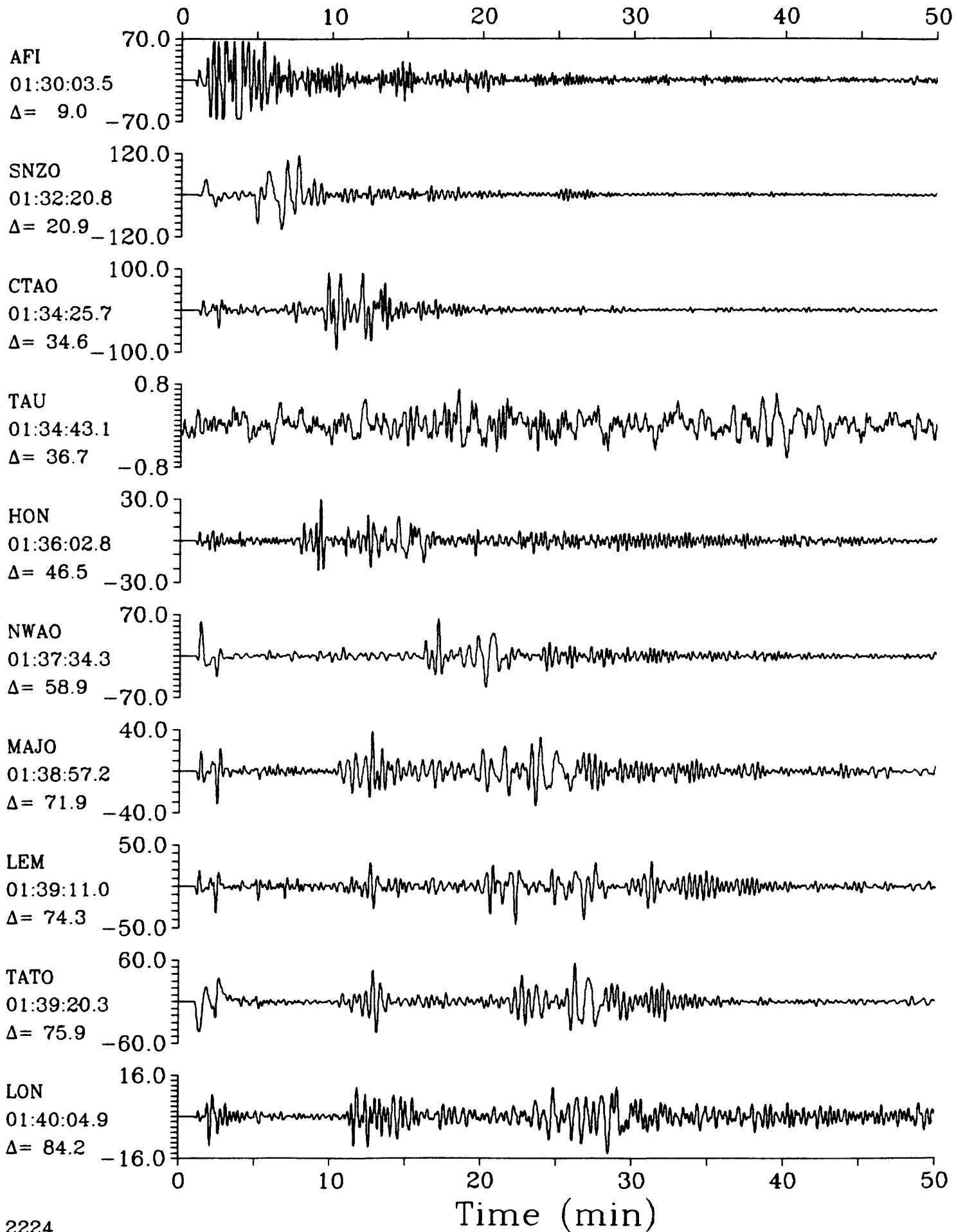
SPZ

Fiji Islands Region $h=194.0$ $m_b=6.4$ 

LPZ

30 October 1986 01:28:55.30
Fiji Islands Region $h=194.0$ $m_b=6.4$

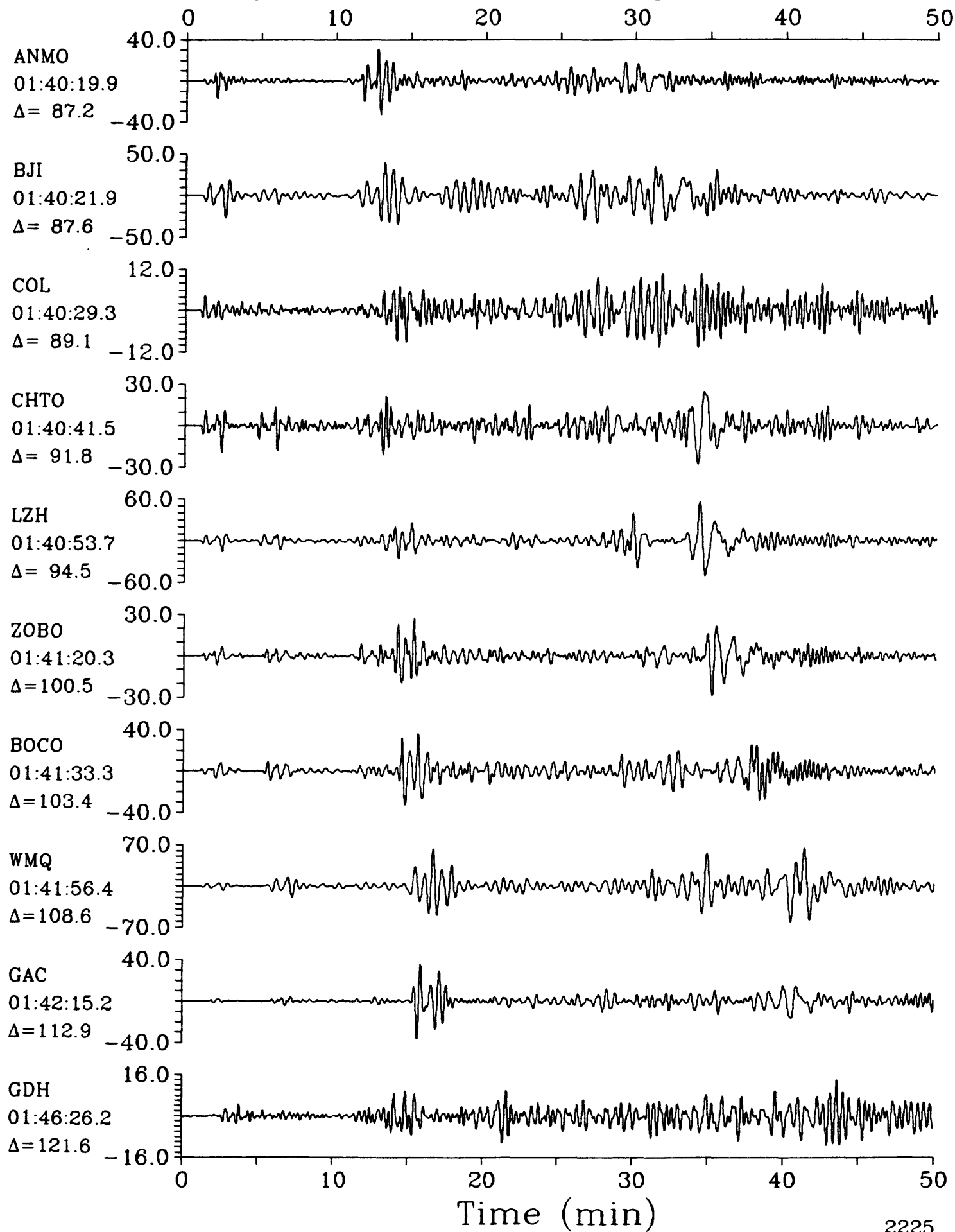
LPZ



LPZ

30 October 1986 01:28:55.30
Fiji Islands Region $h=194.0$ $m_b=6.4$

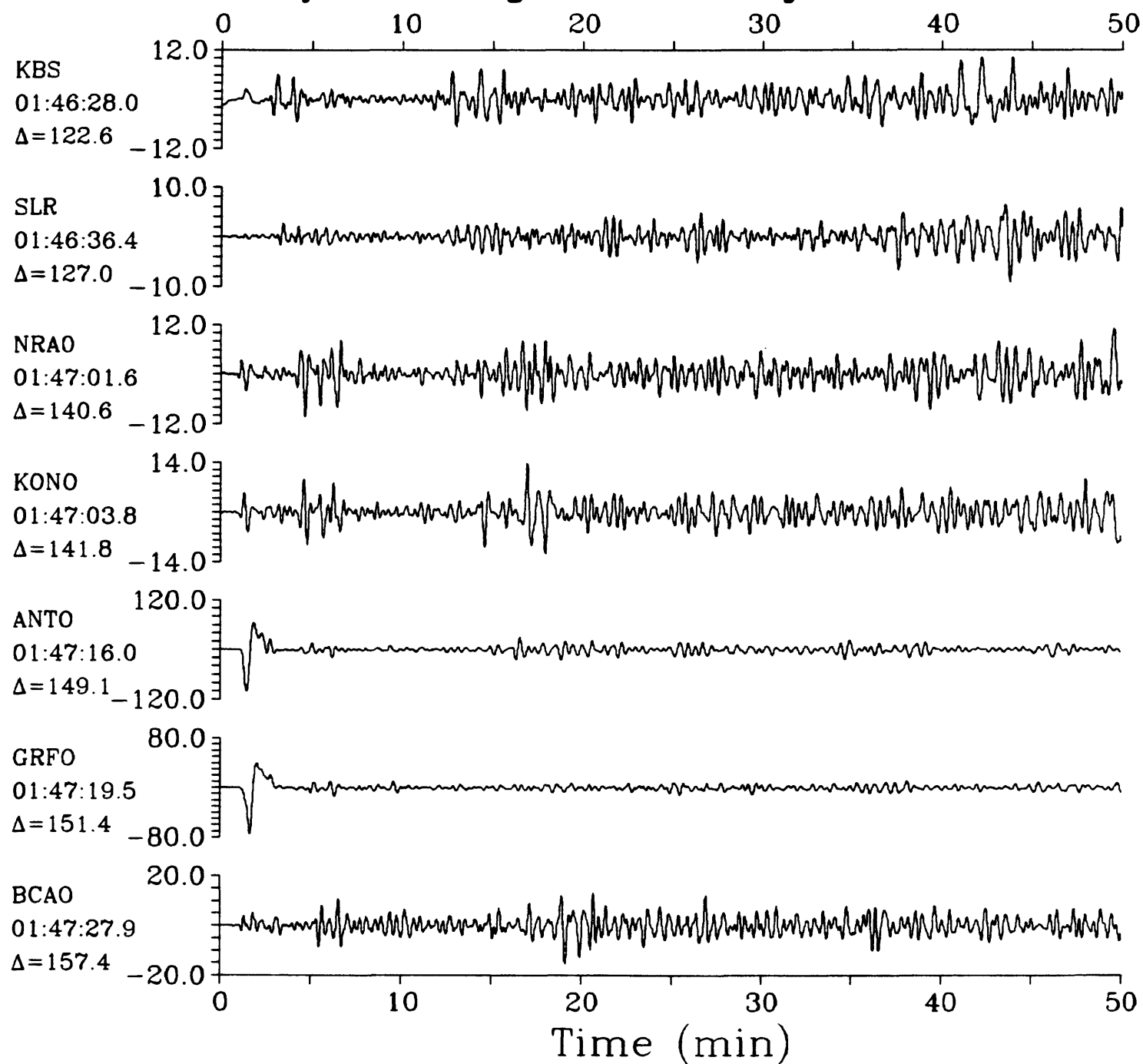
LPZ



LPZ

30 October 1986 01:28:55.30
Fiji Islands Region $h=194.0$ $m_b=6.4$

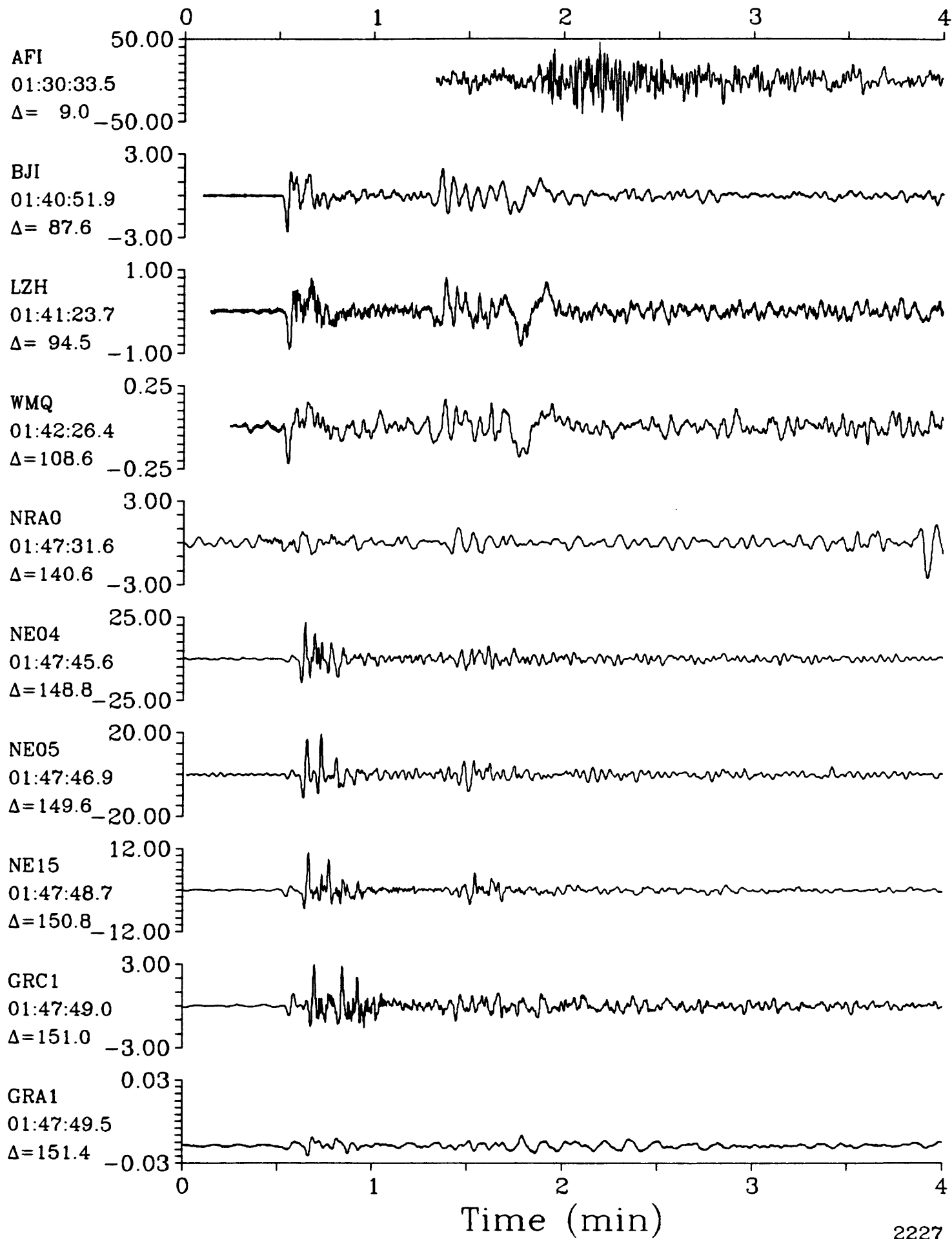
LPZ



IPZ

30 October 1986 01:28:55.30
Fiji Islands Region $h=194.0$ $m_b=6.4$

IPZ



IPZ

30 October 1986 01:28:55.30
Fiji Islands Region $h=194.0$ $m_b=6.4$

IPZ

