

DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY

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

by

Madeleine D. Zirbes  
U.S. Geological Survey  
Denver, Colorado

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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  $100^\circ$  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,  $\Delta$ , 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 July 1986 with magnitudes  $\geq 5.5$

	Origin Time UTC	Latitude	Longitude	Depth (km)	M <sub>W</sub>	M <sub>SZ</sub>	Flinn-Engdahl Region Name
1.	1986 07 01 00:49:06.95	15.673° S	172.326° W	33.0	5.5	5.7	Samoa Islands Region
2.	1986 07 01 01:06:46.70	15.805° S	172.783° W	33.0	5.5	5.7	Samoa Islands Region
3.	1986 07 01 06:03:12.61	4.720° S	128.060° E	60.0	5.6		Banda Sea
4.	1986 07 01 07:32:54.22	3.180° S	148.428° E	10.0	5.2	5.6	Bismarck Sea
5.	1986 07 01 08:39:59.53	3.126° S	148.715° E	10.0	5.0	5.5	Bismarck Sea
6.	1986 07 02 04:16:58.29	21.954° S	179.662° W	597.4	5.5		Fiji Islands Region
7.	1986 07 02 10:20:25.70	7.839° S	150.723° E	33.0	5.5	4.6	New Britain Region
8.	1986 07 02 12:53:07.83	59.530° S	26.171° W	50.0	5.6	5.2	South Sandwich Islands Region
9.	1986 07 02 20:45:50.57	26.718° S	114.353° W	10.0	5.6	5.6	Easter Island Region
10.	1986 07 05 03:01:32.63	51.253° N	179.768° W	33.0	5.6	5.2	Andreanof Islands, Aleutian Is.
11.	1986 07 05 19:57:37.06	60.791° S	154.173° E	10.0	5.5	5.6	West of Macquarie Island
12.	1986 07 05 21:19:58.82	57.282° S	25.891° W	33.0	5.6	5.2	South Sandwich Islands Region
13.	1986 07 06 19:24:26.34	34.416° N	80.072° E	33.0	5.8	6.1	Tibet
14.	1986 07 07 16:26:56.85	10.421° N	56.764° E	10.0	6.4	6.1	Carlsberg Ridge
15.	1986 07 08 04:27:39.54	2.026° N	124.320° E	295.2	5.6		Celebes Sea
16.	1986 07 08 09:20:44.00	33.998° N	116.607° W	10.0	5.8	6.0	Southern California
17.	1986 07 09 23:10:55.93	1.956° N	126.593° E	53.1	6.2	6.5	Molucca Passage
18.	1986 07 10 01:29:35.70	1.842° N	126.372° E	33.0	5.6	5.9	Molucca Passage
19.	1986 07 11 07:17:58.49	26.221° S	132.838° E	10.0	5.6	5.4	South Australia
20.	1986 07 12 08:27:46.27	46.016° S	166.354° E	33.0	5.4	5.6	Off W. Coast of S. Island, N.Z.
21.	1986 07 12 07:54:30.13	29.947° N	51.515° E	33.0	5.7	5.6	Southern Iran
22.	1986 07 13 09:12:11.59	16.059° N	93.849° W	89.6	5.9		Chiapas, Mexico
23.	1986 07 13 10:14:35.01	28.111° S	70.889° W	33.0	5.5		Central Chile
24.	1986 07 13 13:47:08.05	33.016° N	117.793° W	5.0	5.6	5.8	Southern California
25.	1986 07 16 12:41:28.28	19.502° S	169.143° E	110.0	6.2		Vanuatu Islands
26.	1986 07 16 22:03:10.66	30.944° N	77.877° E	33.0	5.6	5.1	Northern India
27.	1986 07 17 21:00:00.06	37.279° N	116.356° W	0.0	5.7		Southern Nevada
28.	1986 07 18 15:07:51.25	16.345° S	28.521° E	14.3	5.5	4.6	Zambia
29.	1986 07 18 17:22:41.68	10.721° N	69.505° W	33.0	5.8	4.9	Venezuela
30.	1986 07 19 04:31:56.15	53.381° N	165.980° W	33.0	5.5	5.0	Fox Islands, Aleutian Islands
31.	1986 07 19 05:59:37.13	47.223° N	151.130° E	150.7	5.9		Kuril Islands
32.	1986 07 19 06:53:17.69	53.568° N	167.210° W	33.0	5.3	5.8	Fox Islands, Aleutian Islands
33.	1986 07 19 22:32:36.21	53.557° N	167.328° W	33.0	5.6	5.6	Fox Islands, Aleutian Islands
34.	1986 07 20 14:29:45.50	37.580° N	118.450° W	8.0	5.6		California-Nevada Border Region

**Table 1.** Earthquakes for July 1986 with magnitudes  $\geq 5.5$ , continued.

	Origin Time UTC	Latitude	Longitude	Depth (km)	$m_b$	Magnitude $M_{S-Z}$	Flinn-Engdahl Region Name
35.	1986 07 20 18:09:06.55	56.596° S	3.486° W	10.0	5.6	5.0	South Atlantic Ridge
36.	1986 07 21 12:11:16.20	20.518° S	174.383° W	37.8	5.5	5.0	Tonga Islands
37.	1986 07 21 14:42:26.60	37.537° N	118.447° W	9.0	6.0	6.2	California-Nevada Border Region
38.	1986 07 21 22:07:18.00	37.498° N	118.397° W	9.0	5.5	5.1	California-Nevada Border Region
39.	1986 07 22 02:12:46.52	33.435° S	178.472° W	33.0	5.5	5.2	South of Kermadec Islands
40.	1986 07 23 07:35:27.48	61.930° S	154.776° E	10.0	5.3	5.6	Balleny Islands Region
41.	1986 07 25 09:01:32.10	51.196° N	176.154° W	33.0	5.3	5.5	Andreanof Islands, Aleutian Is.
42.	1986 07 25 09:04:16.68	51.240° N	176.002° W	33.0	5.4	5.6	Andreanof Islands, Aleutian Is.
43.	1986 07 25 23:41:10.42	26.449° N	125.954° E	38.0	5.5	6.1	Northeast of Taiwan
44.	1986 07 27 10:43:24.08	25.900° S	177.492° W	130.5	5.8		South of Fiji Islands
45.	1986 07 30 11:31:50.23	24.617° N	121.797° E	33.0	5.6	5.6	Taiwan
46.	1986 07 31 07:22:40.34	37.471° N	118.360° W	5.0	5.5	5.2	California-Nevada Border Region
47.	1986 07 31 09:37:23.95	52.570° S	18.444° E	10.0	5.0	5.5	Southwest of Africa

**Table 2.** Current network-event tape station list

Code	ID	Station	Latitude	Longitude	Elevation (m)	Type
ANMO	30	Albuquerque, New Mexico	34.95° N	106.46° W	1740.0	SRO
ANTO	31	Ankara, Turkey	39.87° N	32.79° E	883.0	SRO
BCAO	37	Bangui, Central African Republic	4.43° N	18.54° E	336.0	SRO
BDF	72	Brasilia, Brazil	15.66° S	47.90° W	1500.0	DWWSSN
BGIO	34	Bar Giyyora, Israel	31.72° N	35.09° E	651.7	SRO
BOCO	32	Bogota, Columbia	4.59° N	74.04° W	3071.0	SRO
CHTO	33	Chiang Mai, Thailand	18.79° N	98.98° E	316.0	SRO
COL	62	College, Alaska	64.90° N	147.79° W	320.0	DWWSSN
CTAO	50	Charters Towers, Australia	20.09° S	146.25° E	357.0	ASRO
GAC	43	Glen Almond, Quebec, Canada	45.70° N	75.48° W	620.0	SRO
GDH	70	Godhavn, Greenland	69.25° N	53.53° W	23.0	DWWSSN
GRA1	302	Haidhof, Germany	49.69° N	11.22° E	500.0	GRF
GRB1	303	Bruennthal, Germany	49.39° N	11.65° E	494.0	GRF
GRC1	304	Eglofsdorf, Germany	48.99° N	11.52° E	512.0	GRF
GRFO	39	Graefenberg, Germany	49.69° N	11.22° E	500.0	SRO
GUMO	35	Guam, Mariana Islands	13.59° N	144.87° E	14.0	SRO
HON	66	Honolulu, Hawaii	21.32° N	158.01° W	2.0	DWWSSN
JAS1	64	Jamestown, California	37.93° N	120.42° W	425.0	DWWSSN
KONO	54	Kongsberg, Norway	59.65° N	9.60° E	216.0	ASRO
LON	63	Longmire, Washington	46.75° N	121.81° W	854.0	DWWSSN
MAJO	53	Matsushiro, Japan	36.54° N	138.21° E	422.0	ASRO
NE03	203	Logumkloster, Denmark	55.045° N	9.153° E	25.0	NARS
NE05	205	Utrecht, Netherlands	52.088° N	5.172° E	2.0	NARS
NE06	206	Dourbes, Belgium	50.097° N	4.595° E	225.0	NARS
NE10	210	Arette, France	43.086° N	0.699° W	480.0	NARS
NE11	211	Ainzon, France	41.814° N	1.517° W	440.0	NARS
NE13	213	Puertollano, Spain	38.685° N	4.091° W	700.0	NARS
NE14	214	Granada, Spain	37.190° N	3.595° W	774.0	NARS
NE15	215	Valkenburg, Netherlands	50.867° N	5.785° E	100.0	NARS
NE16	216	Clermont-Ferand, France	45.763° N	3.103° E	80.0	NARS
NE17	217	Toledo, Spain	39.881° N	4.049° W	480.0	NARS
NE18	218	Les Rejaudoux, France	45.304° N	1.516° E	410.0	NARS
NRA0	301	NORESS array site A0	60.735° N	11.541° E	302.0	NRSA
NWAO	38	Mundaring (Narrogin), Australia	32.93° S	117.24° E	265.0	SRO
RSCP	81	Cumberland Plateau, Tennessee	35.60° N	85.57° W	481.0	RSTN
RSNT	82	Yellowknife, Northwest Territories	62.48° N	114.59° W	90.0	RSTN
RSNY	84	Adirondack, New York	44.55° N	74.53° W	351.0	RSTN
RSON	85	Red Lake, Ontario	50.86° N	93.70° W	302.0	RSTN
RSSD	83	Black Hills, South Dakota	44.12° N	104.04° W	1948.0	RSTN
SLR	71	Silverton, South Africa	25.73° S	28.28° E	1348.0	DWWSSN
SNZO	42	Wellington (South Karori), New Zealand	41.31° S	174.70° E	-12.0	SRO
TATO	41	Taipei, Taiwan	24.98° N	121.49° E	53.0	SRO
TAU	74	Hobart, Tasmania	42.91° S	147.32° E	132.0	DWWSSN
TOL	73	Toledo, Spain	39.88° N	4.05° W	480.0	DWWSSN
ZOBO	51	La Paz (Zongo), Bolivia	16.27° S	68.13° W	4450.0	ASRO

\* ASRO - Abbreviated Seismic Research Observatory

DWWSSN - Digital World Wide Standardized Seismograph Network

GRF - Graefenberg Array

NARS - Network of Autonomously Registering Stations

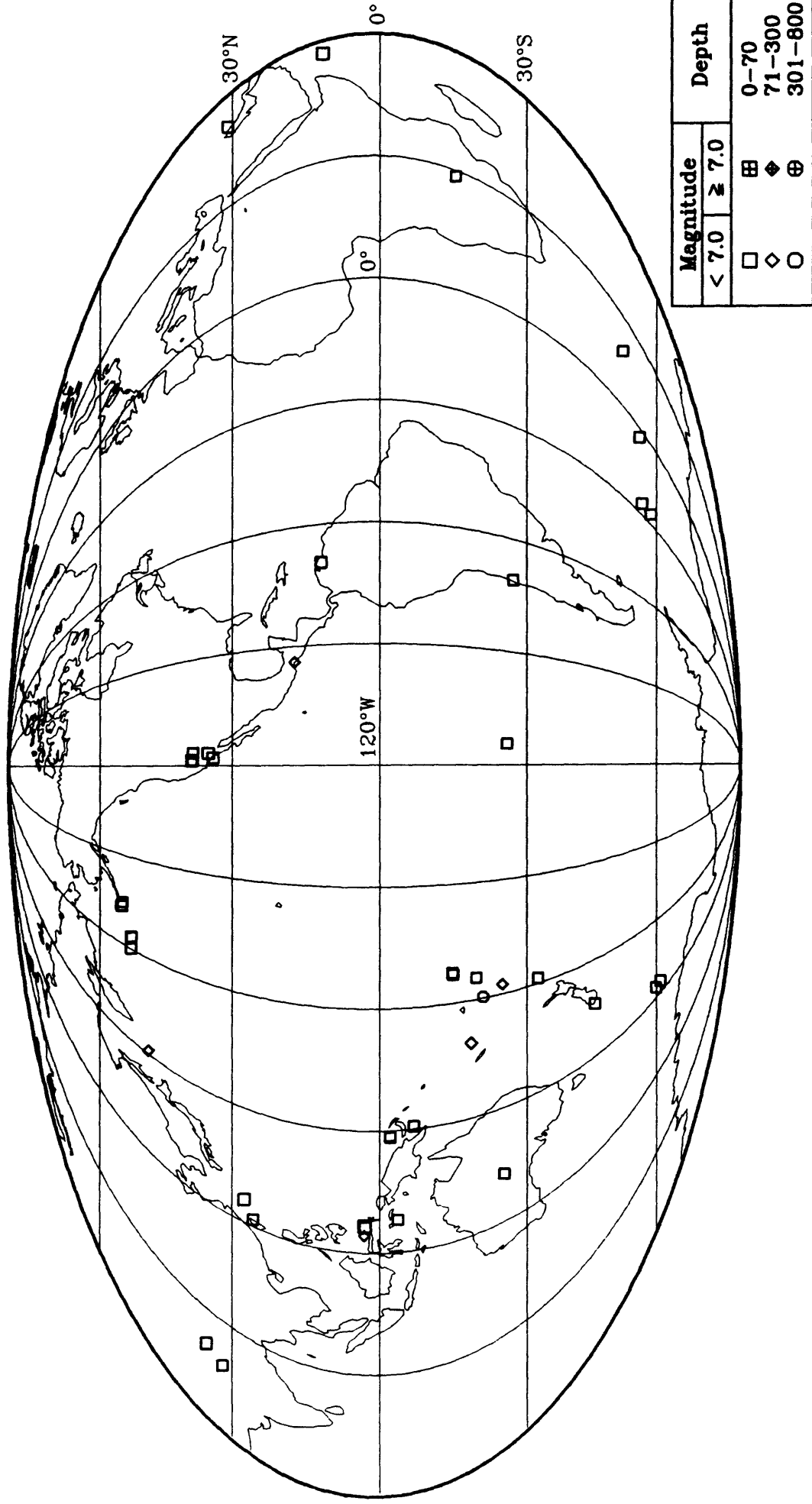
NRSA - Norwegian Regional Seismic Array

RSTN - Regional Seismic Test Network

SRO - Seismic Research Observatory

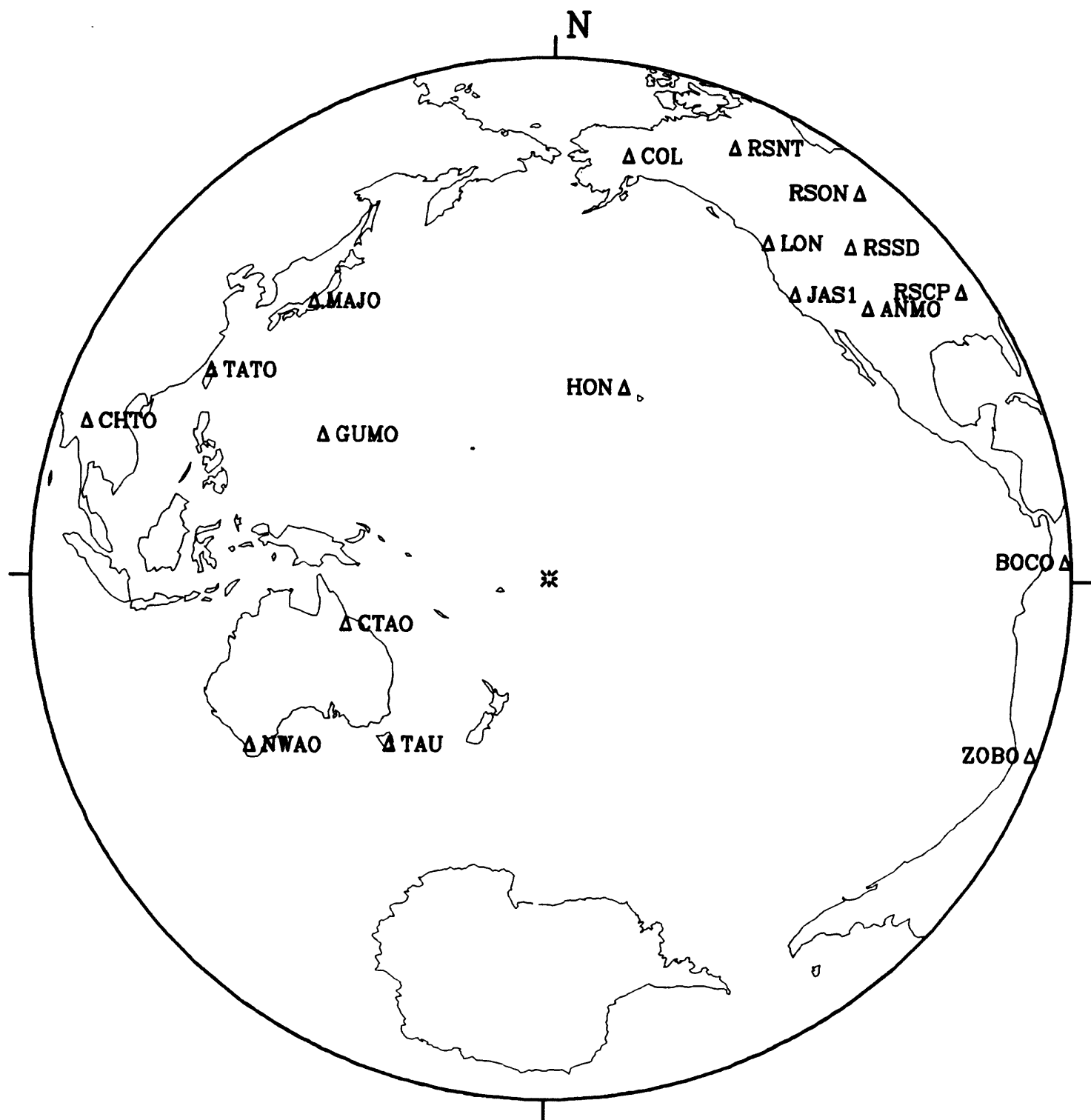


# EARTHQUAKES - July 1986 - MAGNITUDE $\geq 5.5$



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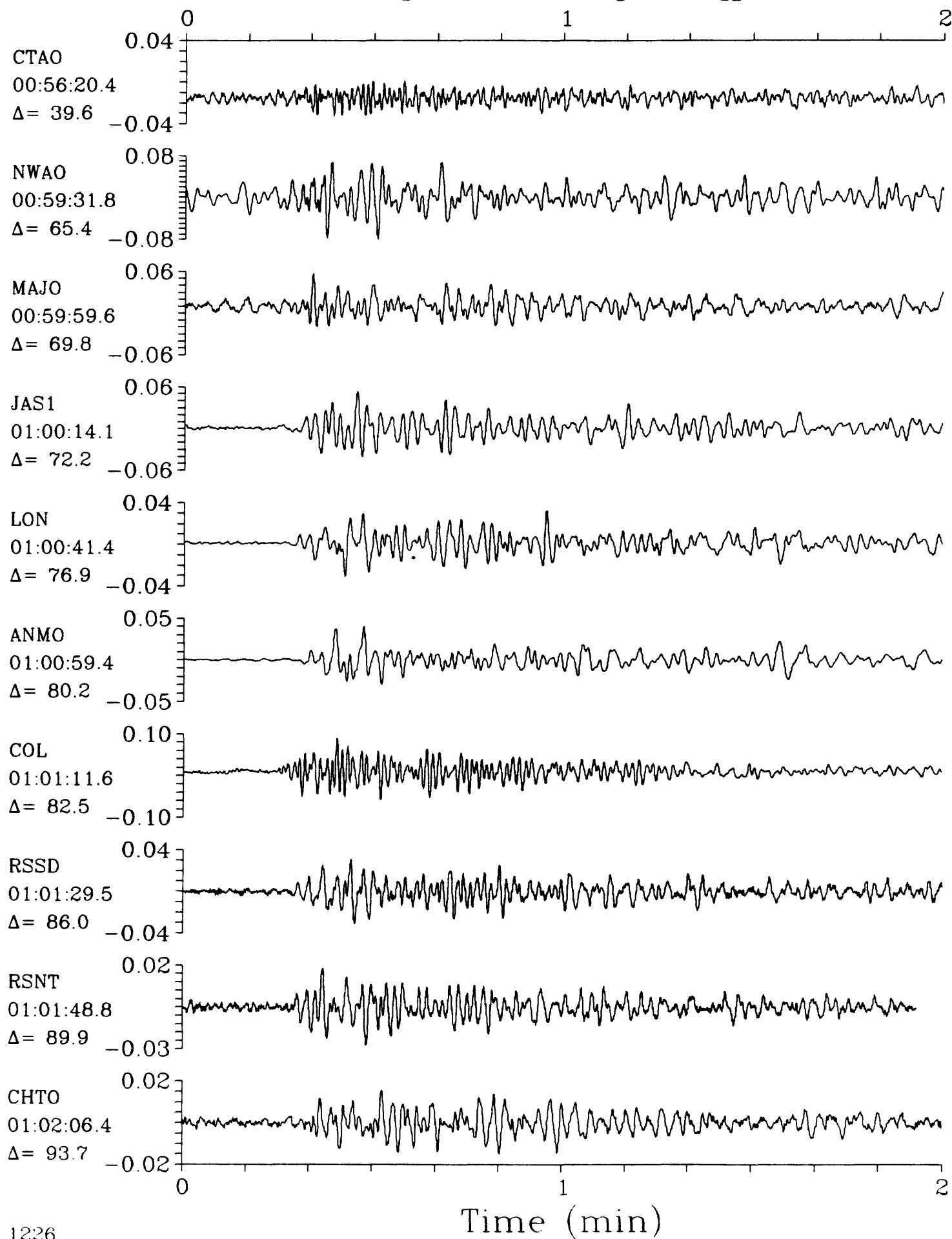
## Samoa Islands Region



SPZ

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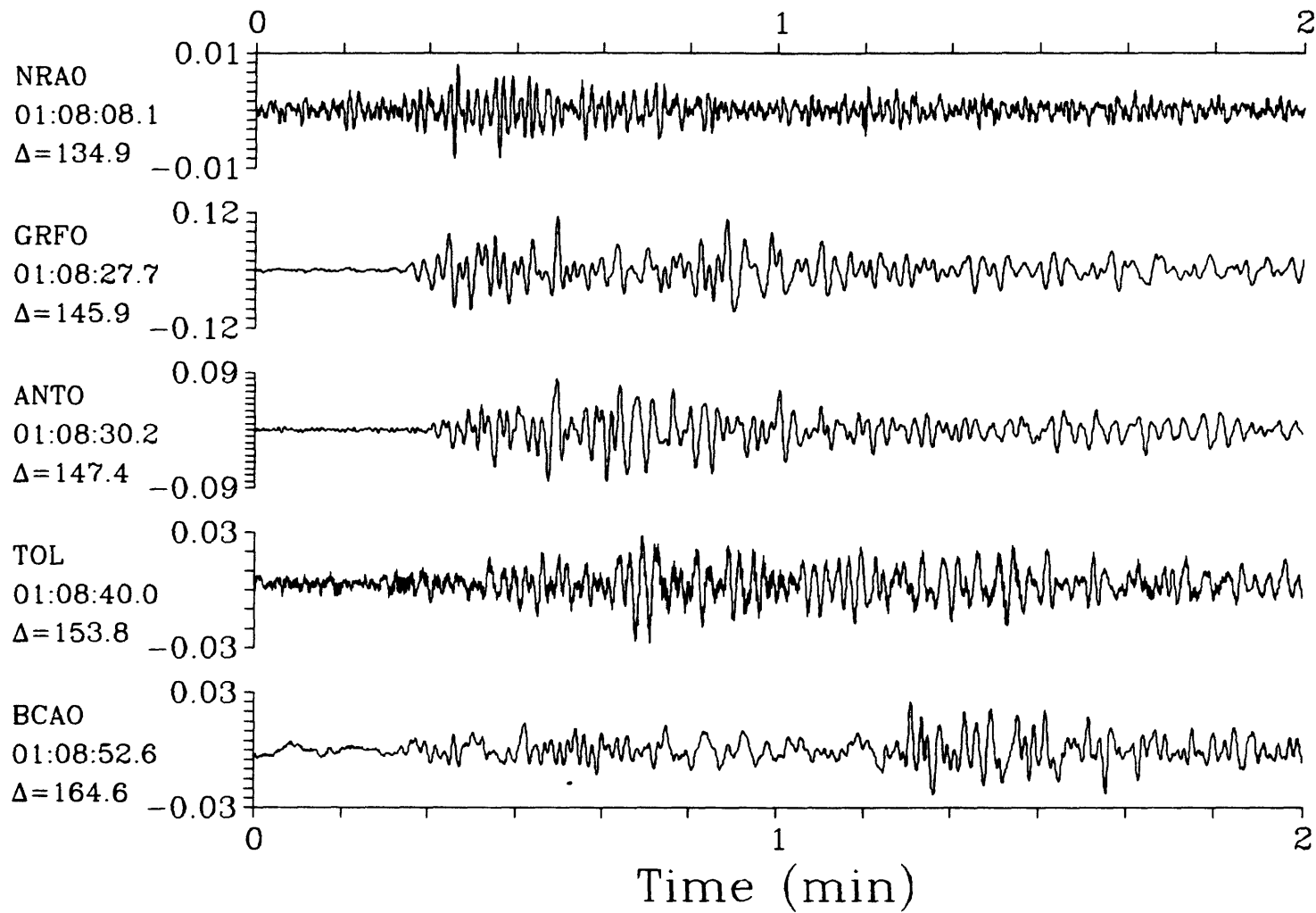
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SPZ

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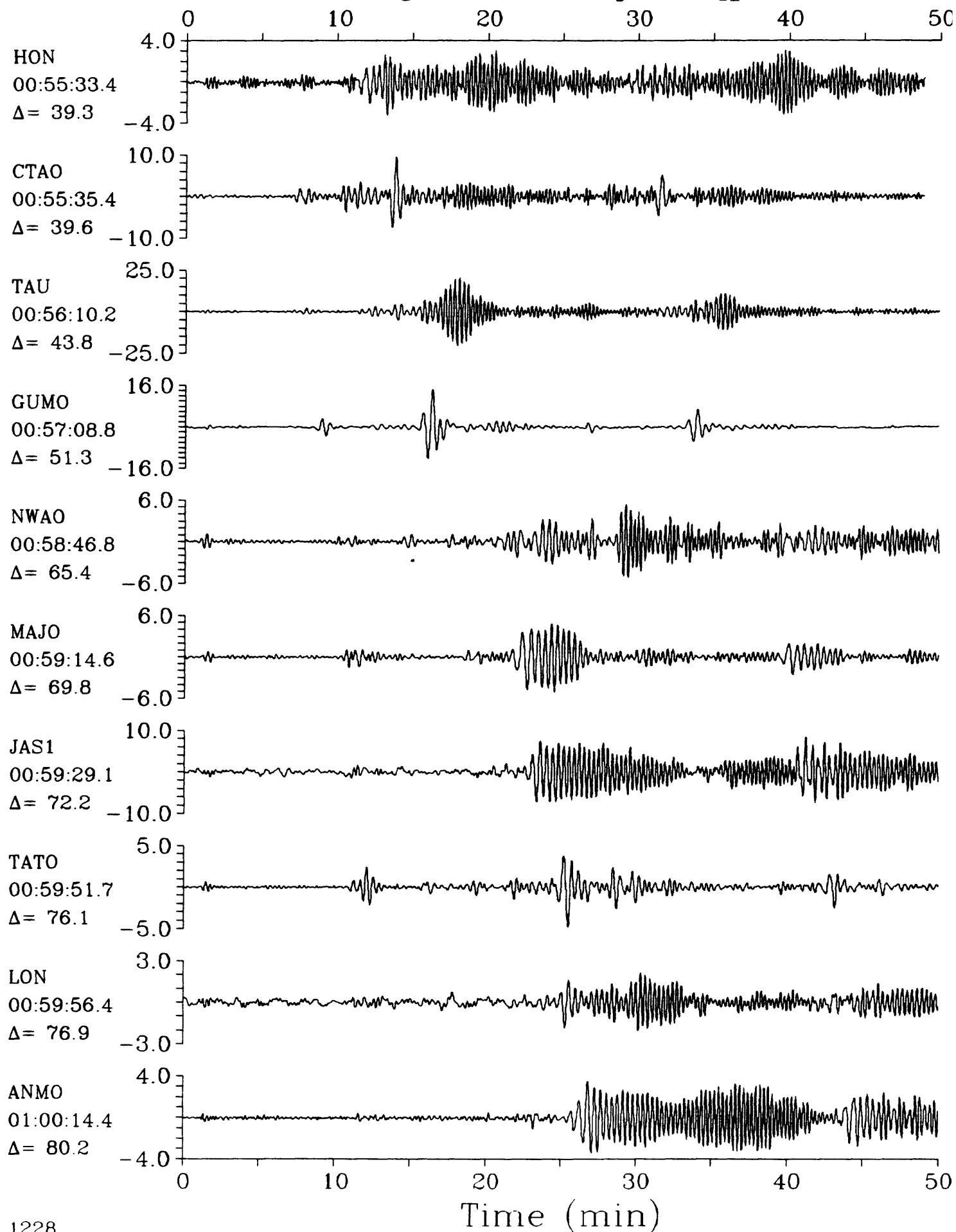
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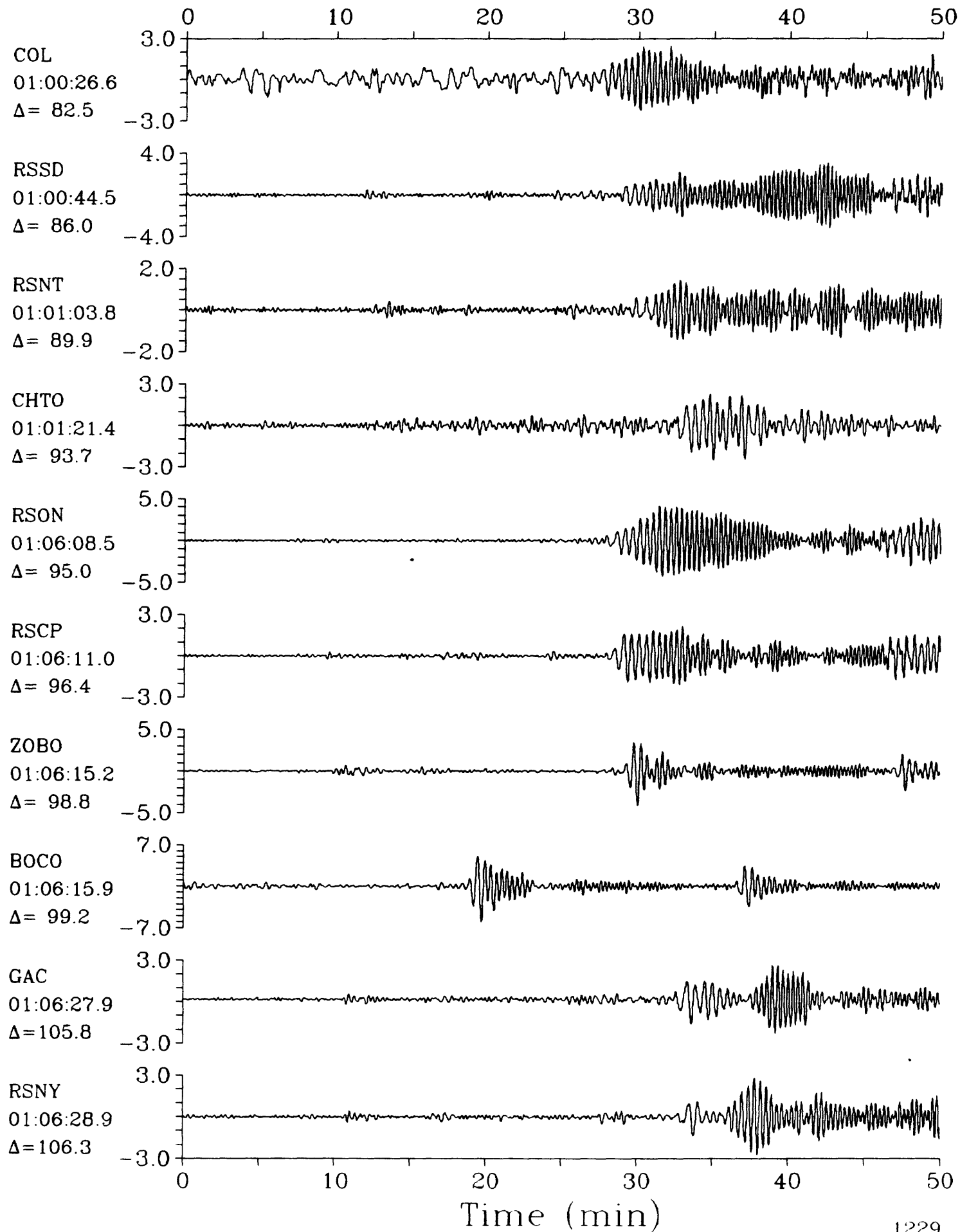
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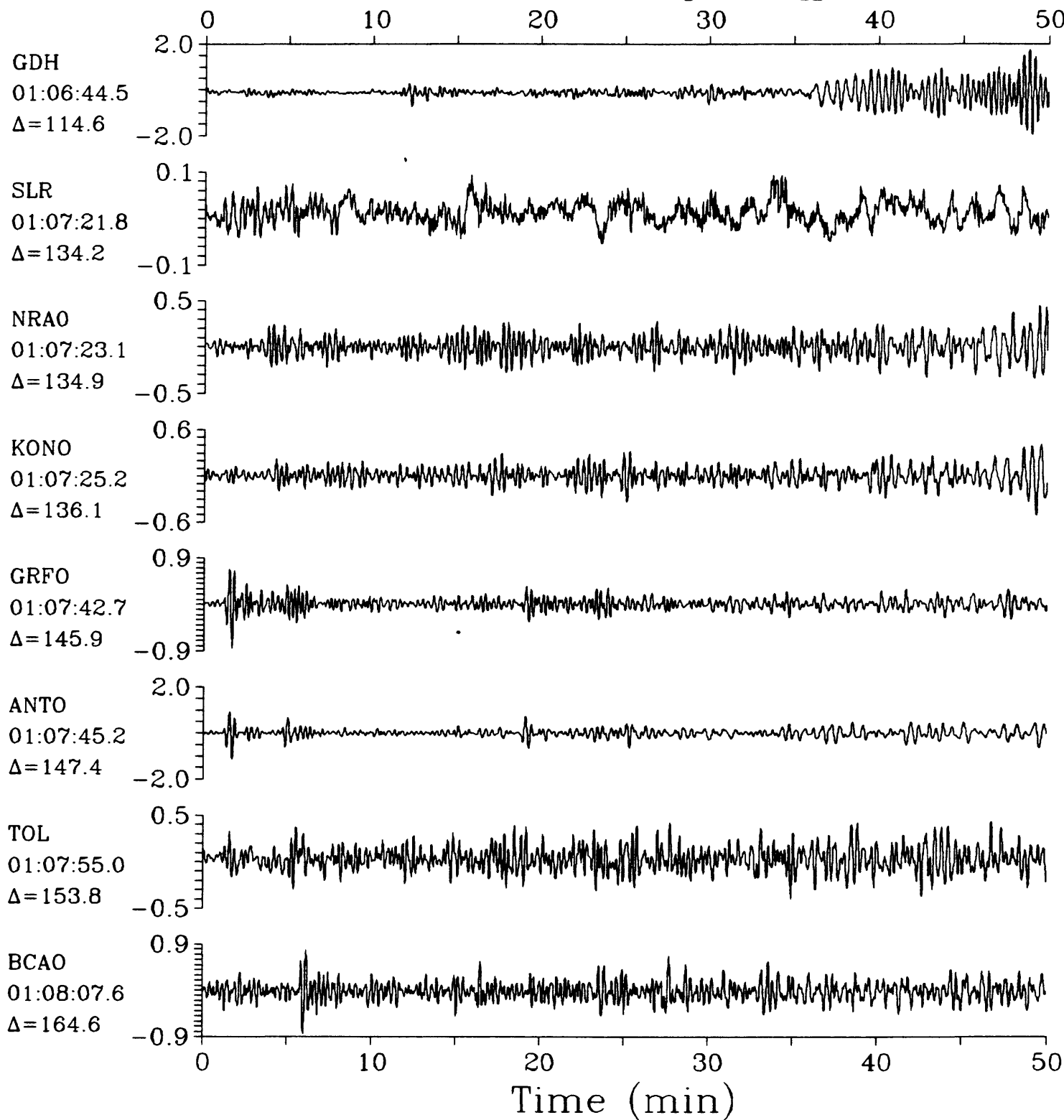
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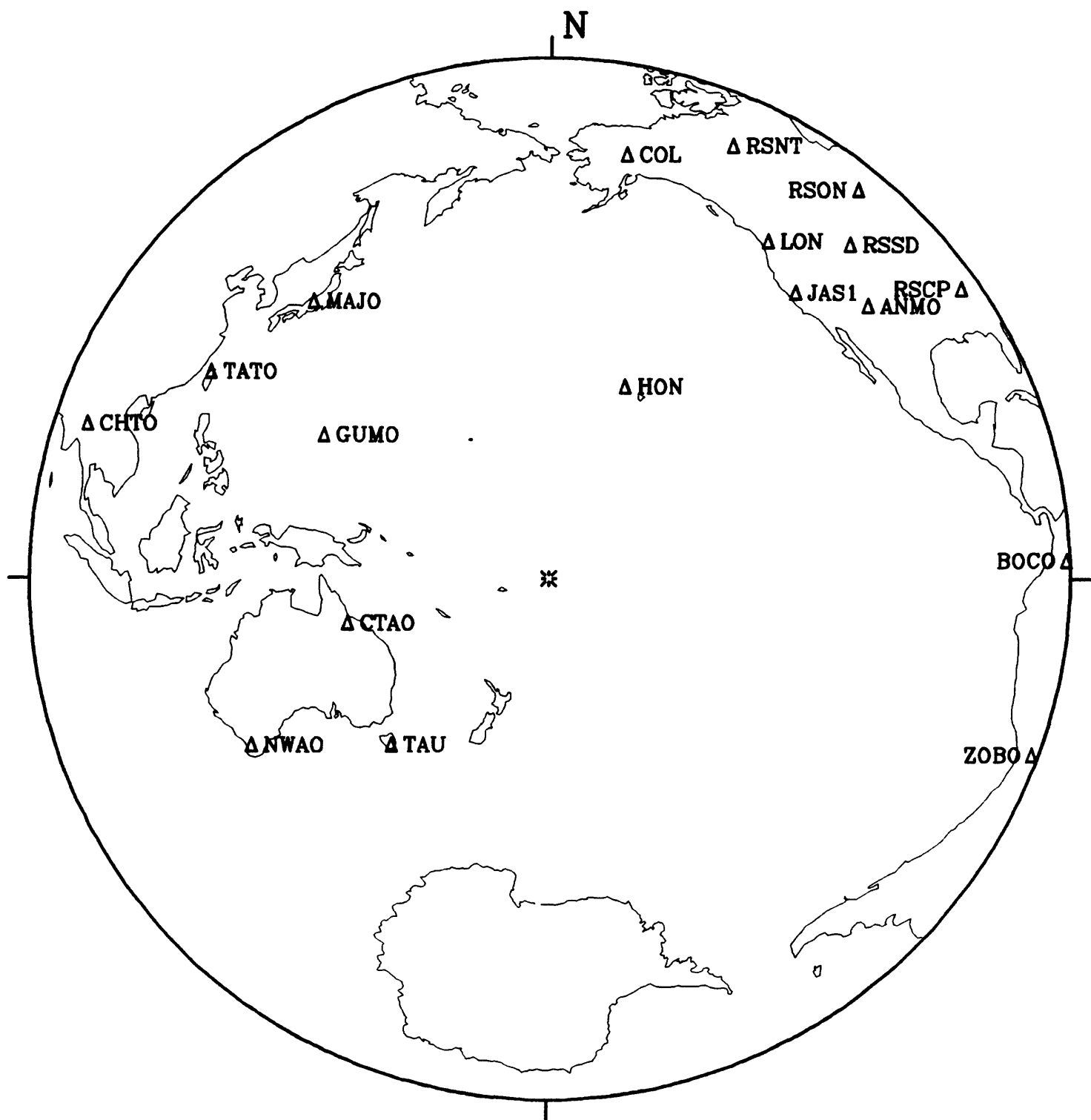
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01 July 1986 01:06:46.70

## Samoa Islands Region

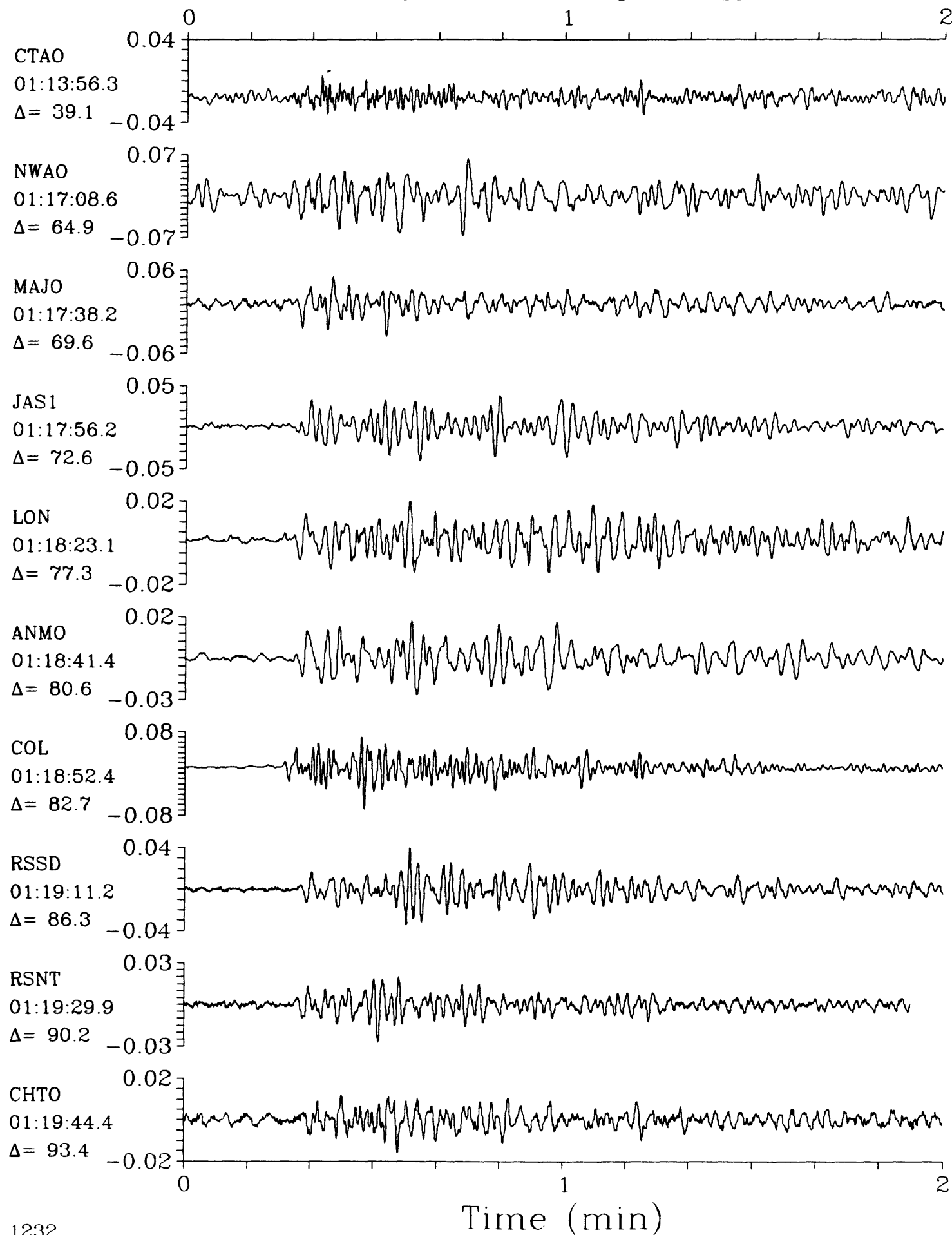




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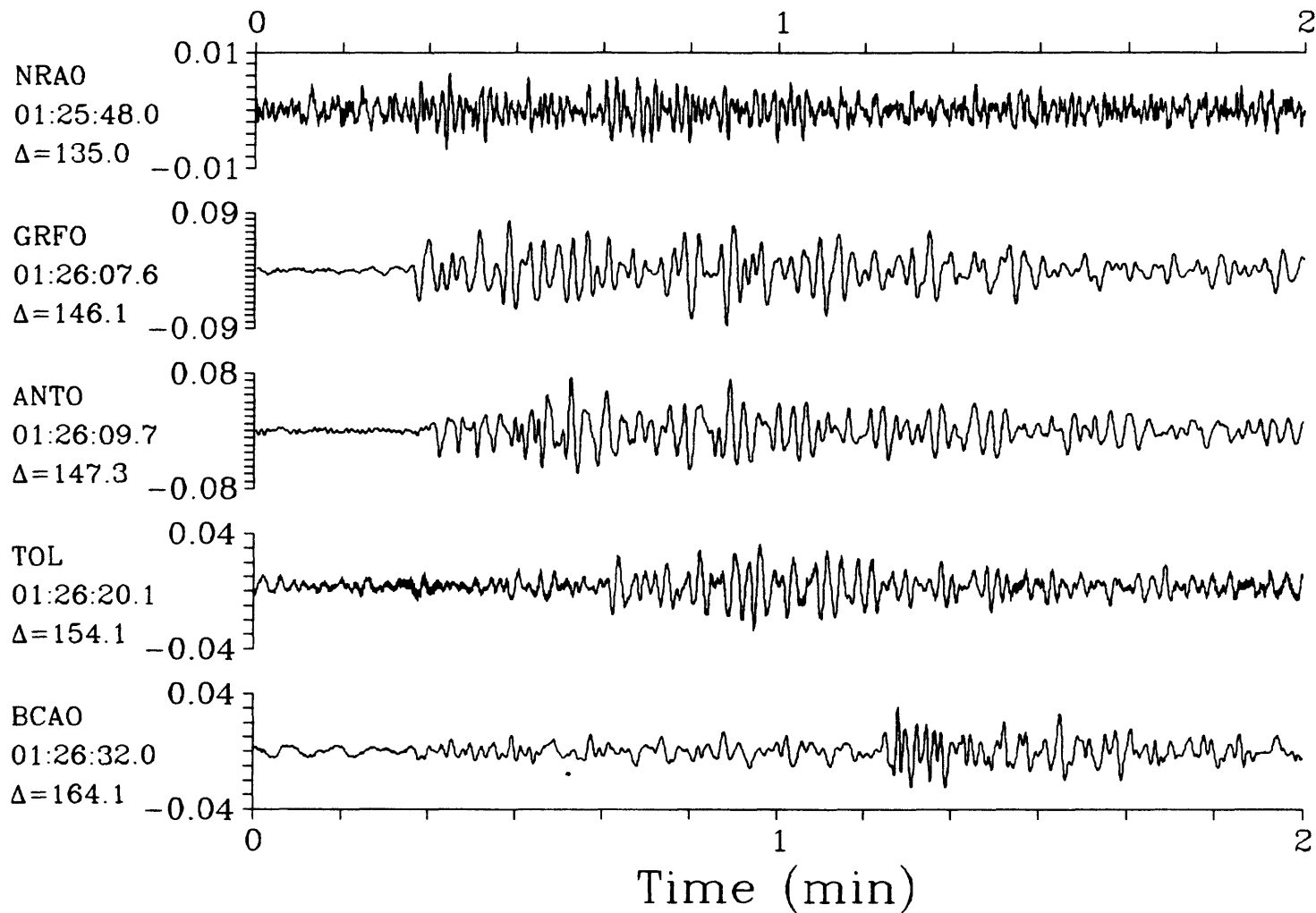
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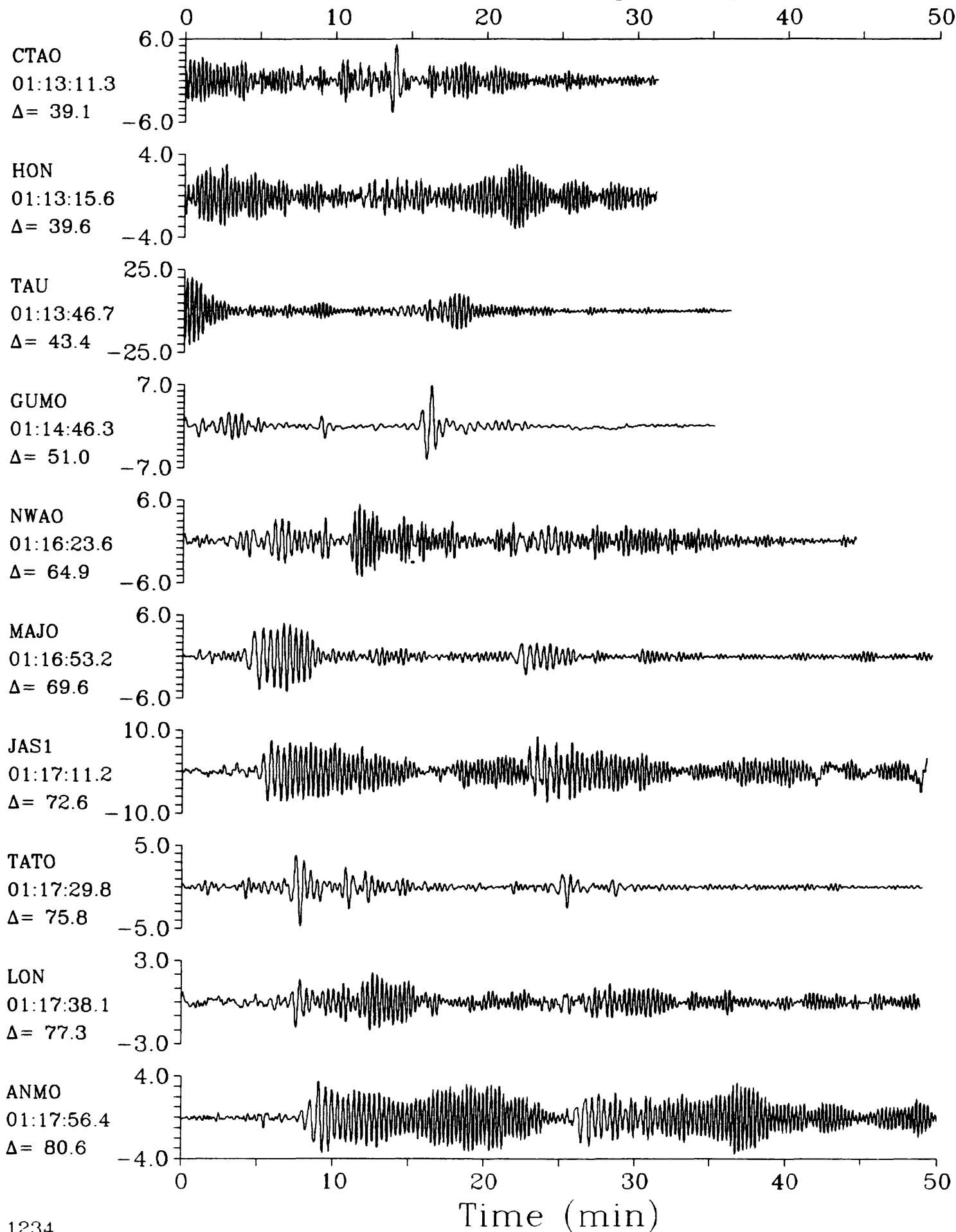
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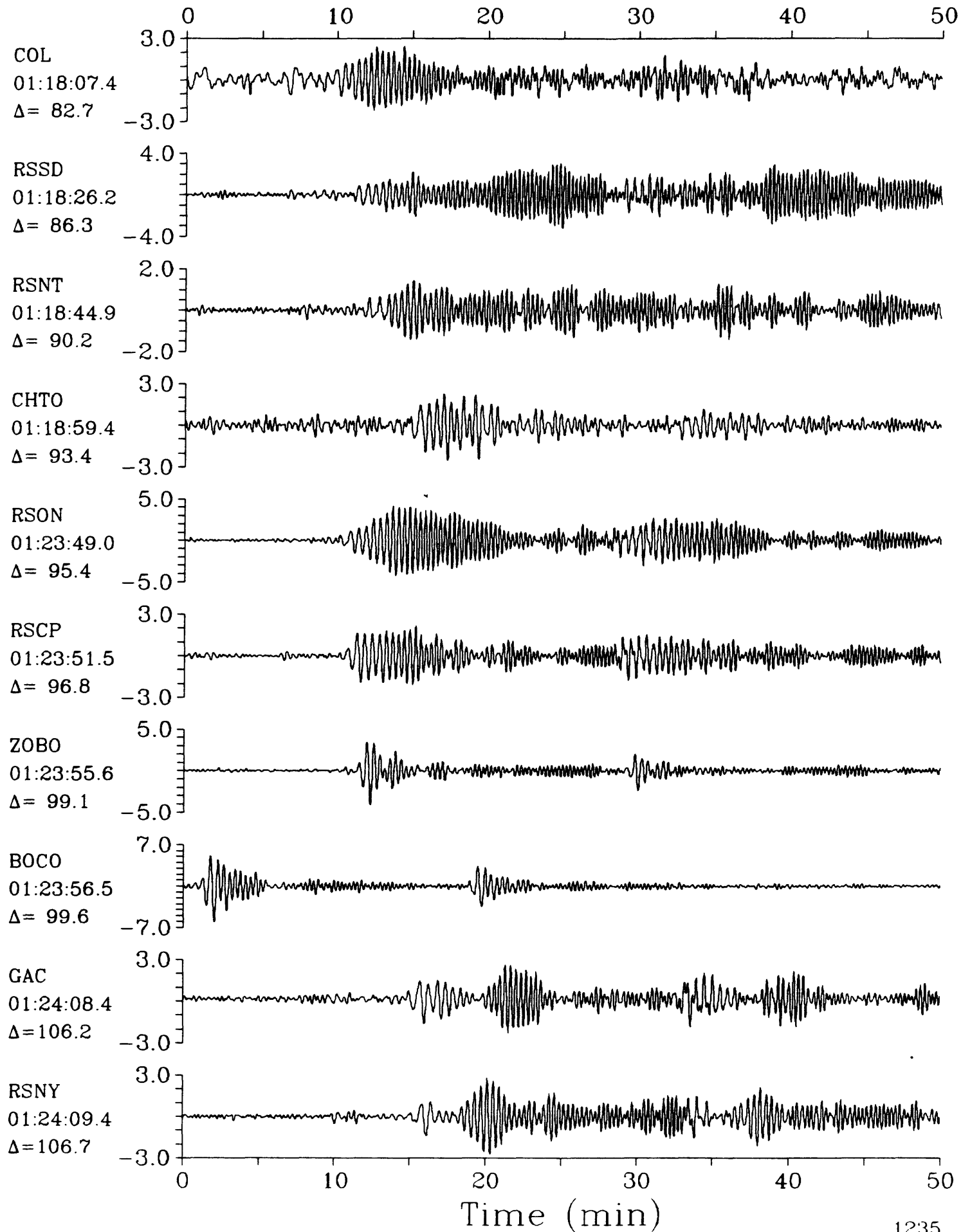
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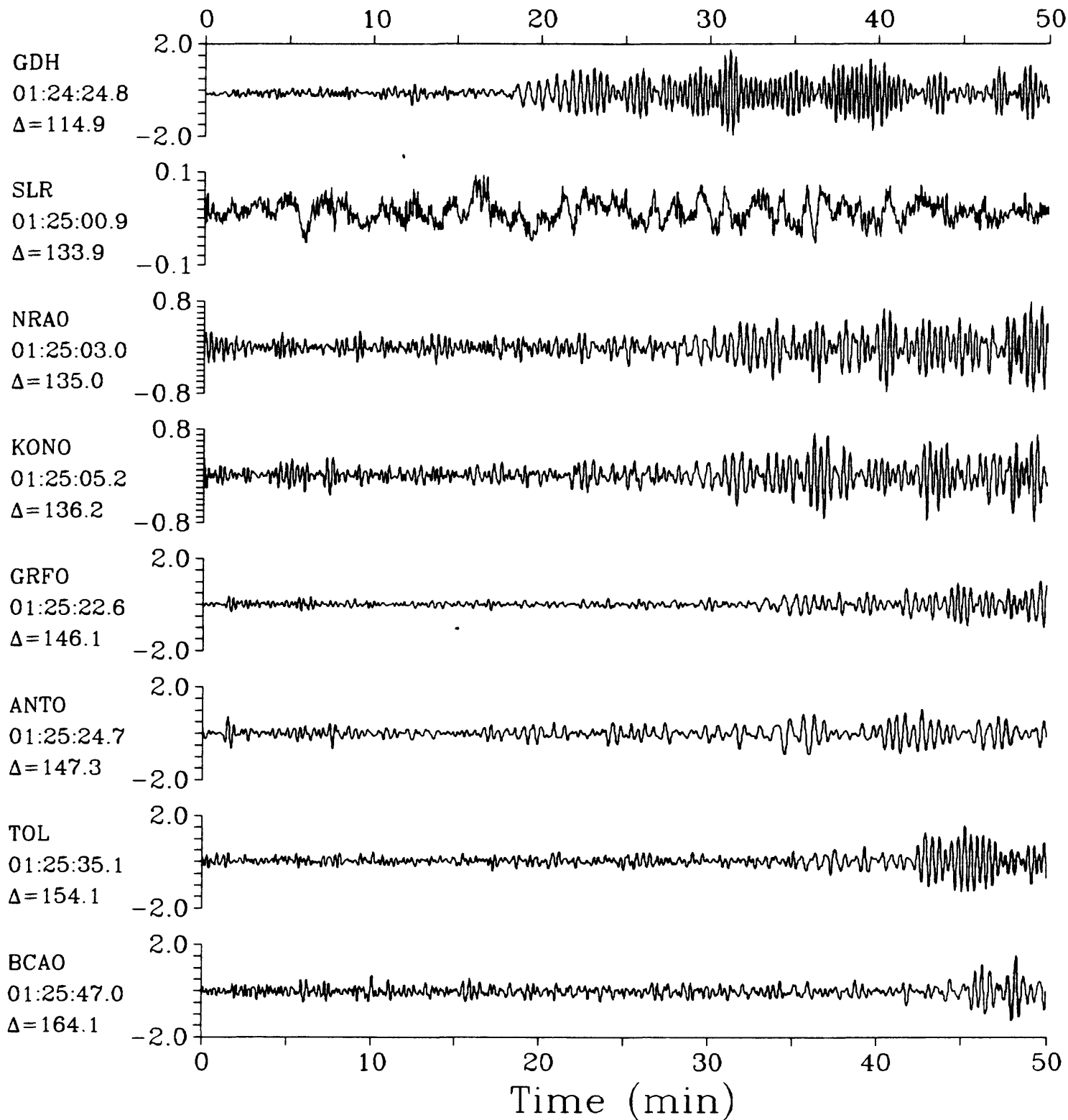
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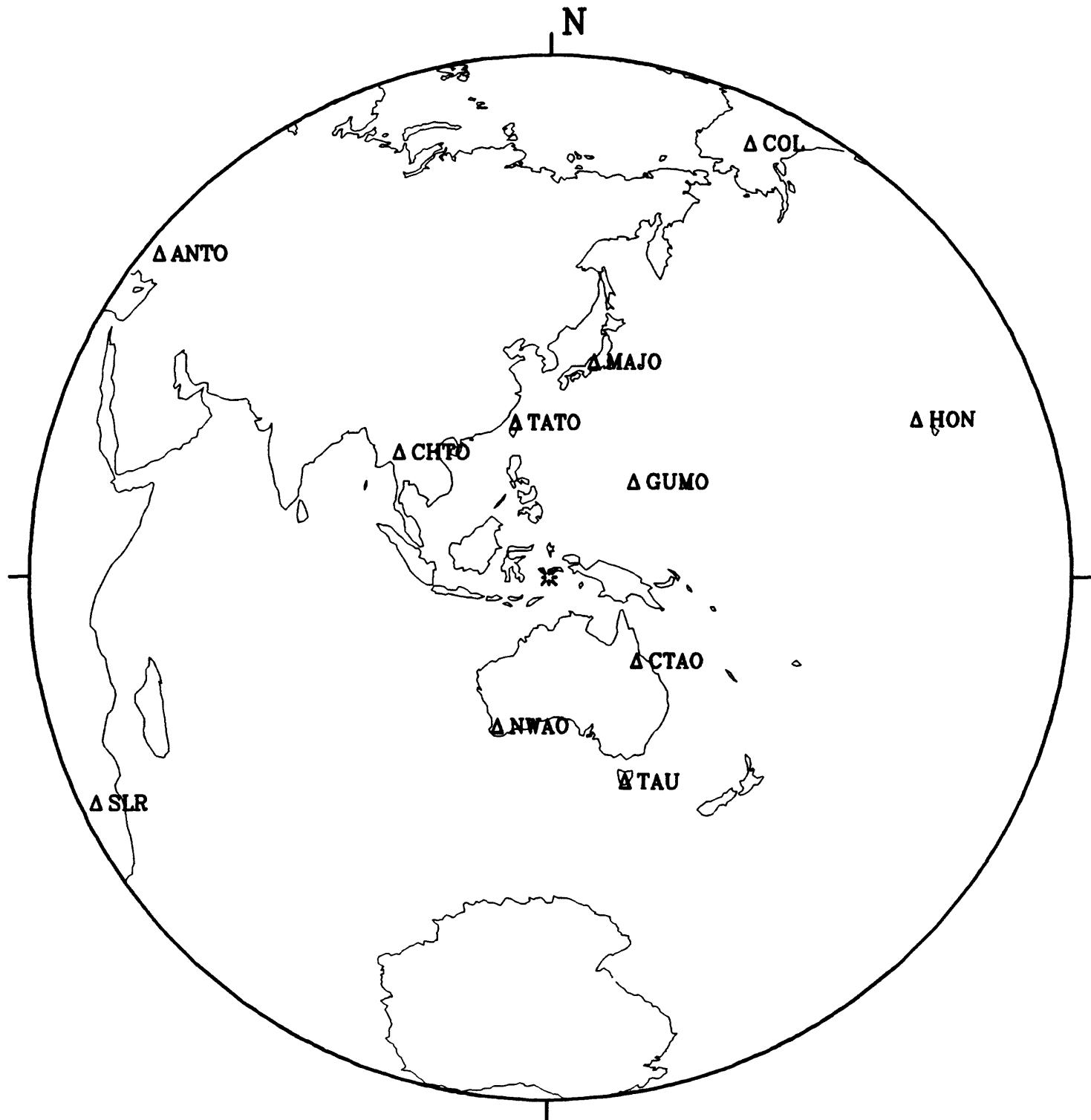
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LPZ

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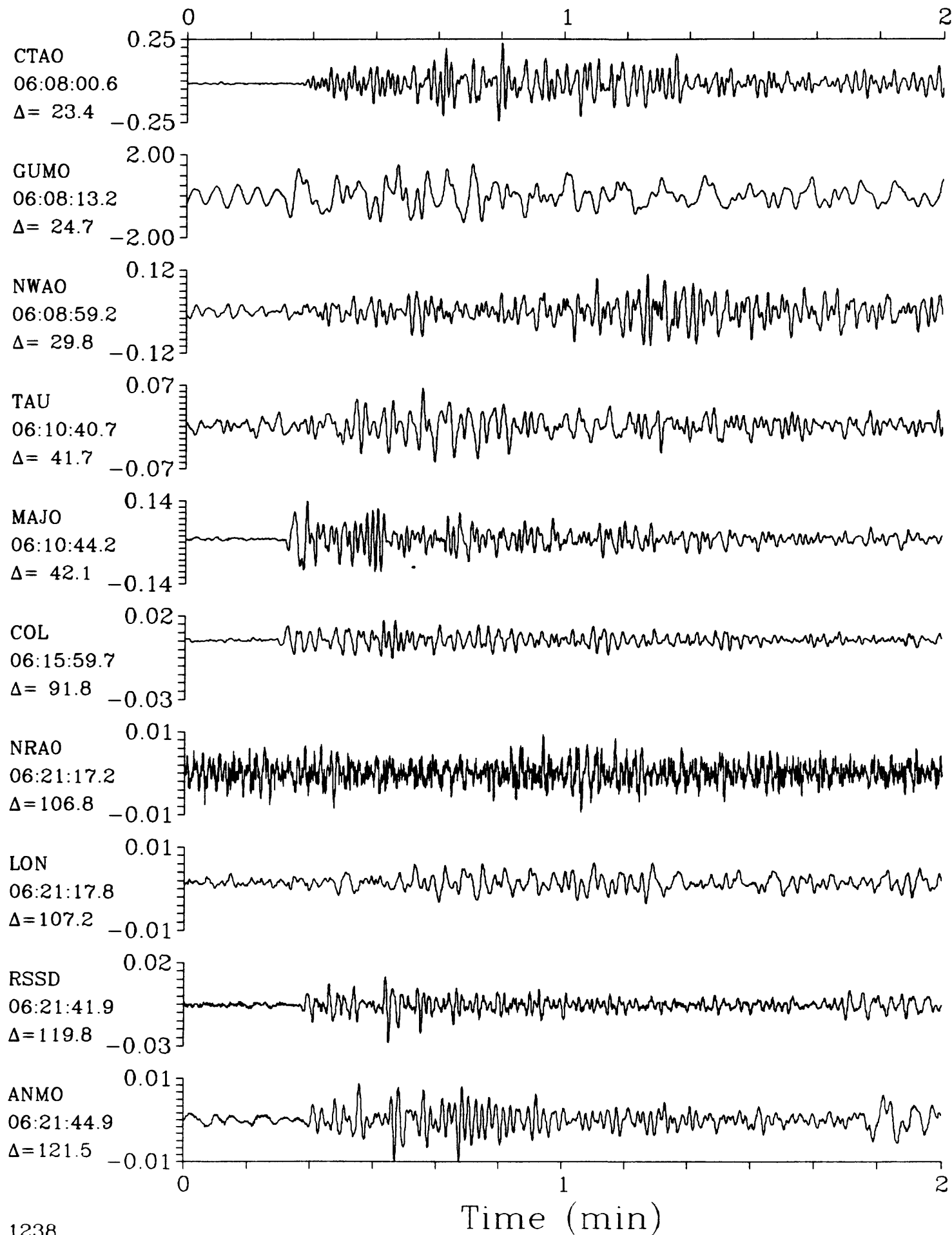
## Banda Sea



SPZ

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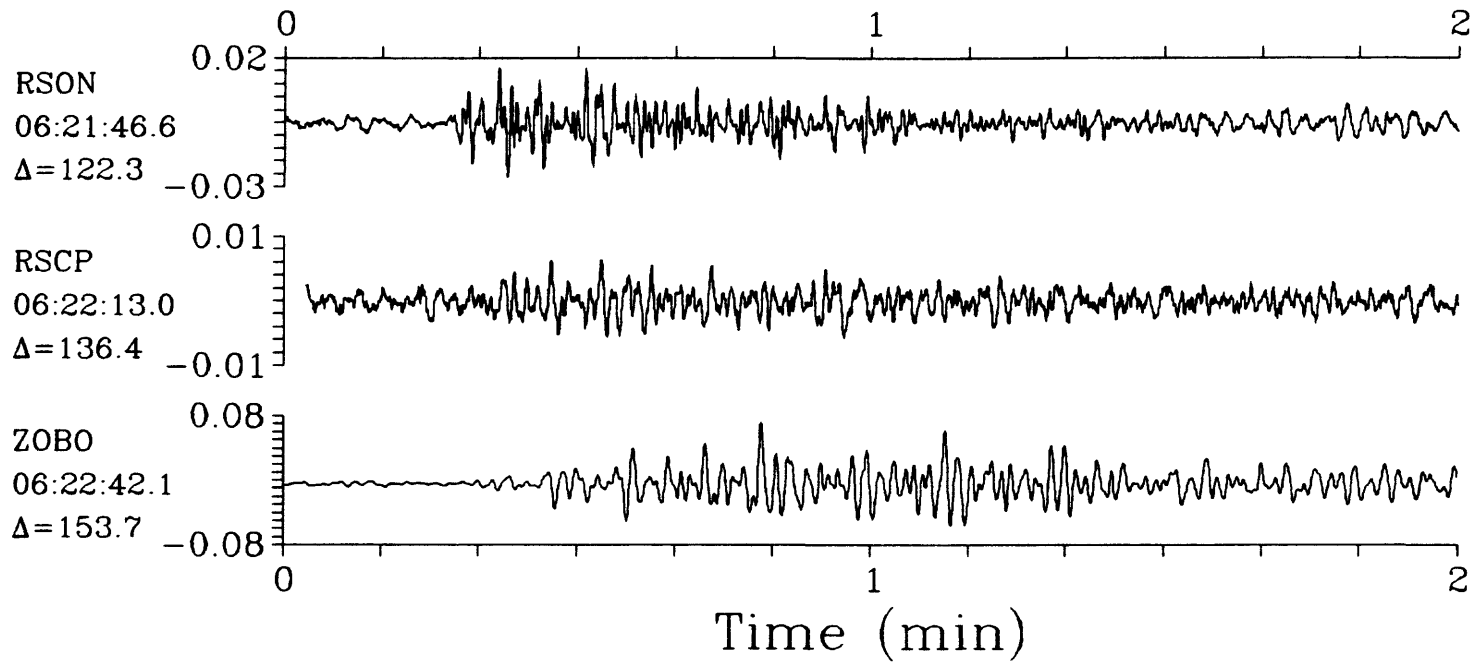
SPZ



SPZ

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Banda Sea  $h=60.0$   $m_b=5.6$ 

SPZ

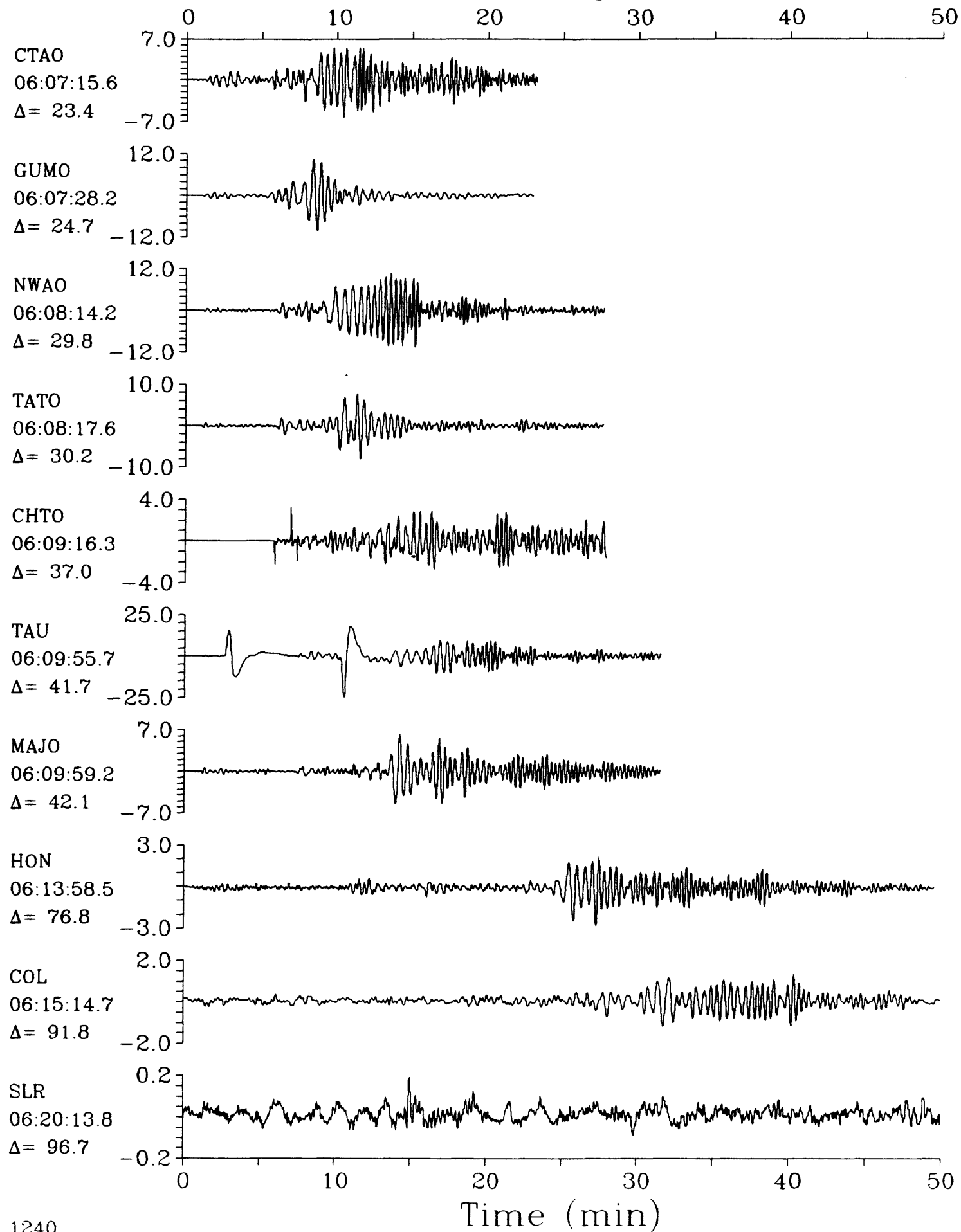




LPZ

01 July 1986 06:03:12.61  
Banda Sea  $h=60.0$   $m_b=5.6$ 

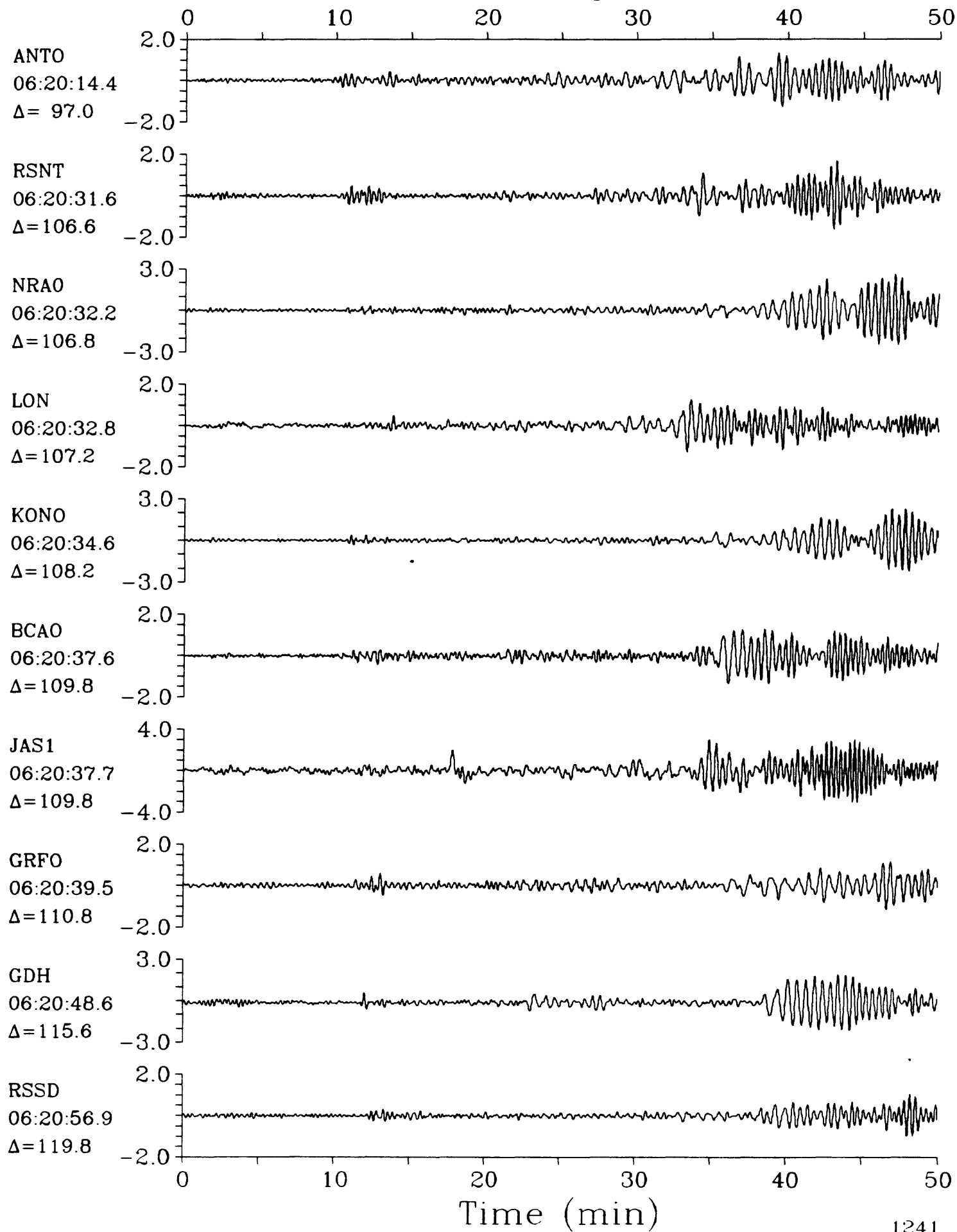
LPZ



LPZ

01 July 1986 06:03:12.61  
Banda Sea  $h=60.0$   $m_b=5.6$ 

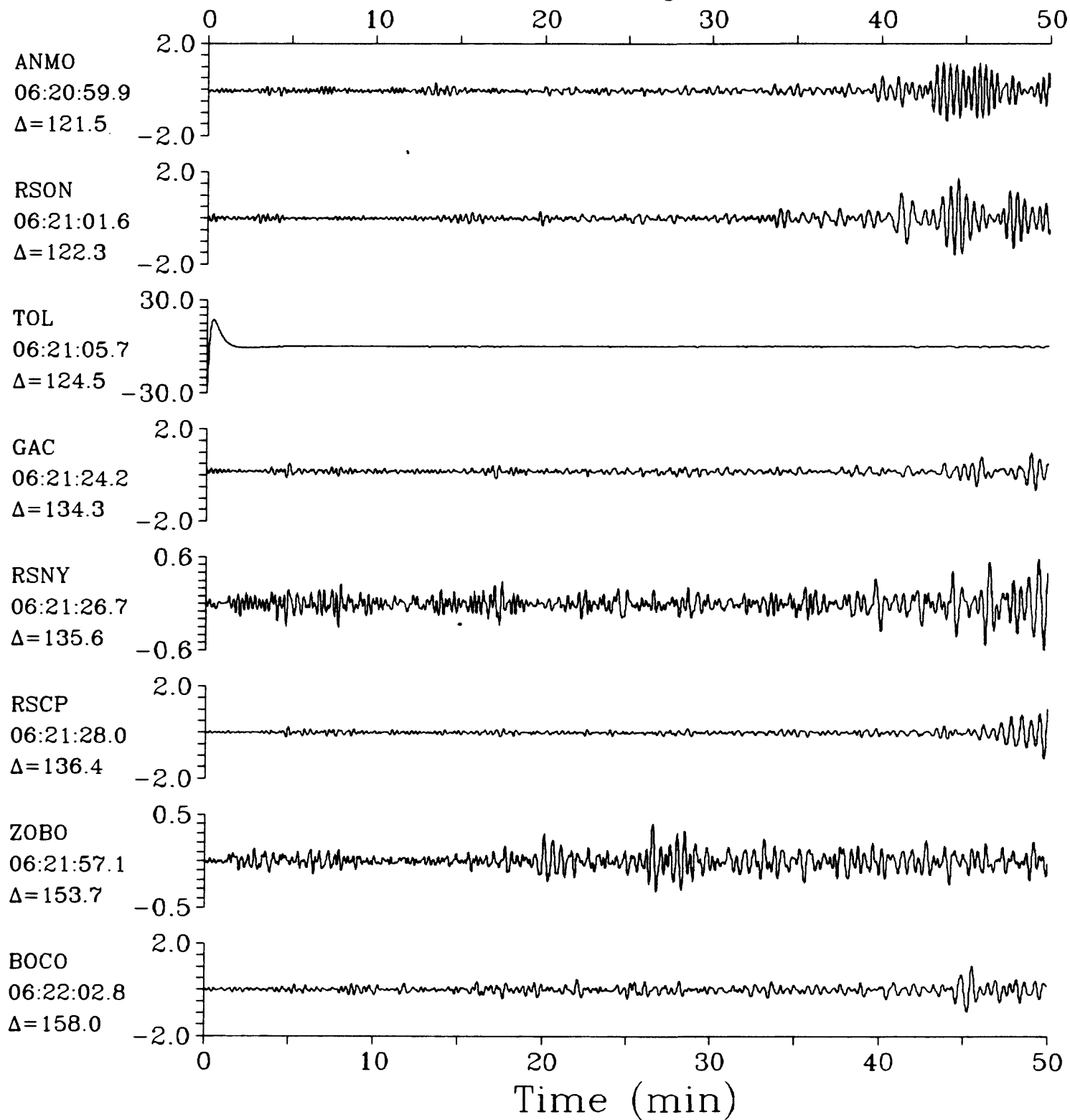
LPZ



LPZ

01 July 1986 06:03:12.61  
Banda Sea  $h=60.0$   $m_b=5.6$ 

LPZ



01 July 1986 07:32:54.22

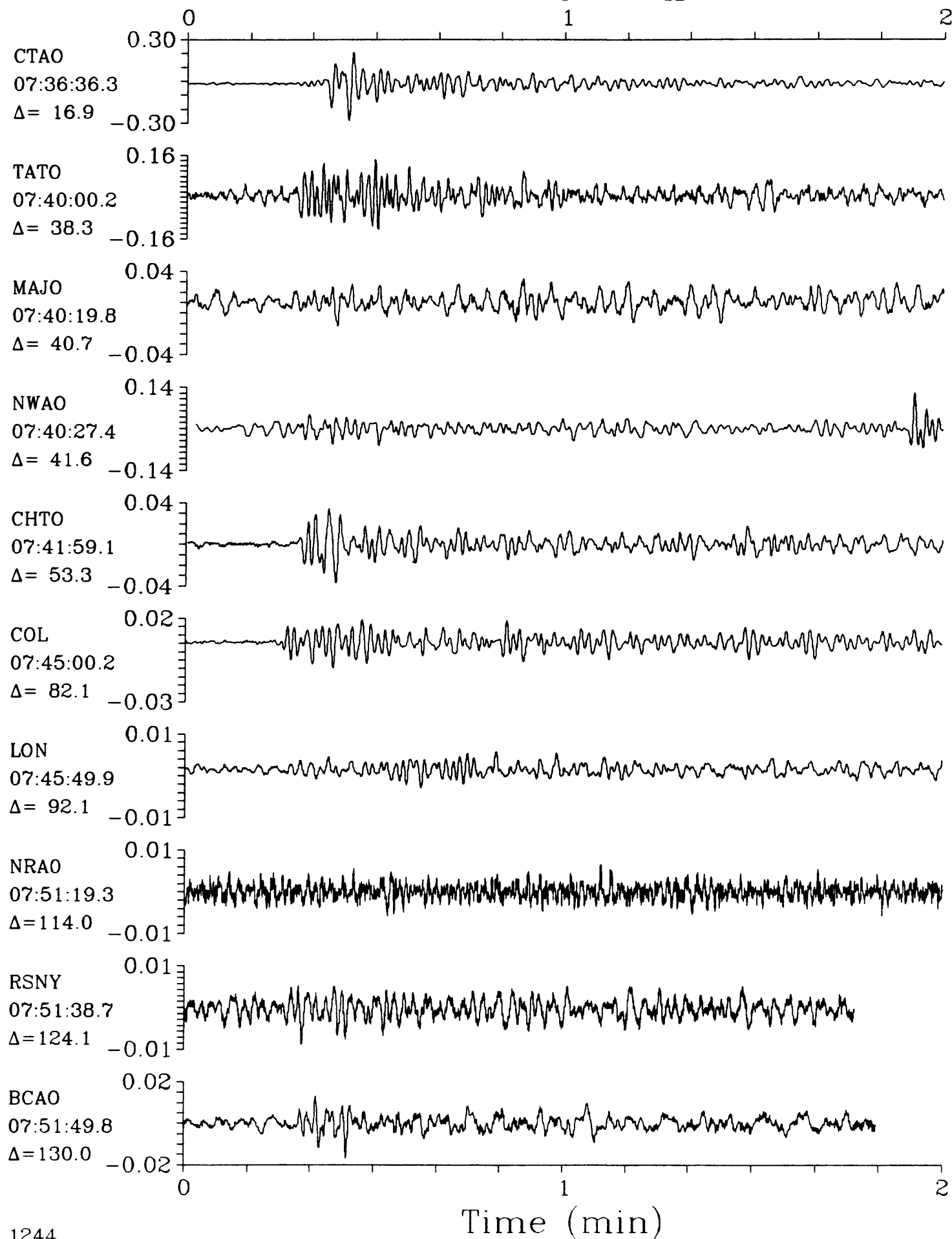
## Bismarck Sea



SPZ

01 July 1986 07:32:54.22

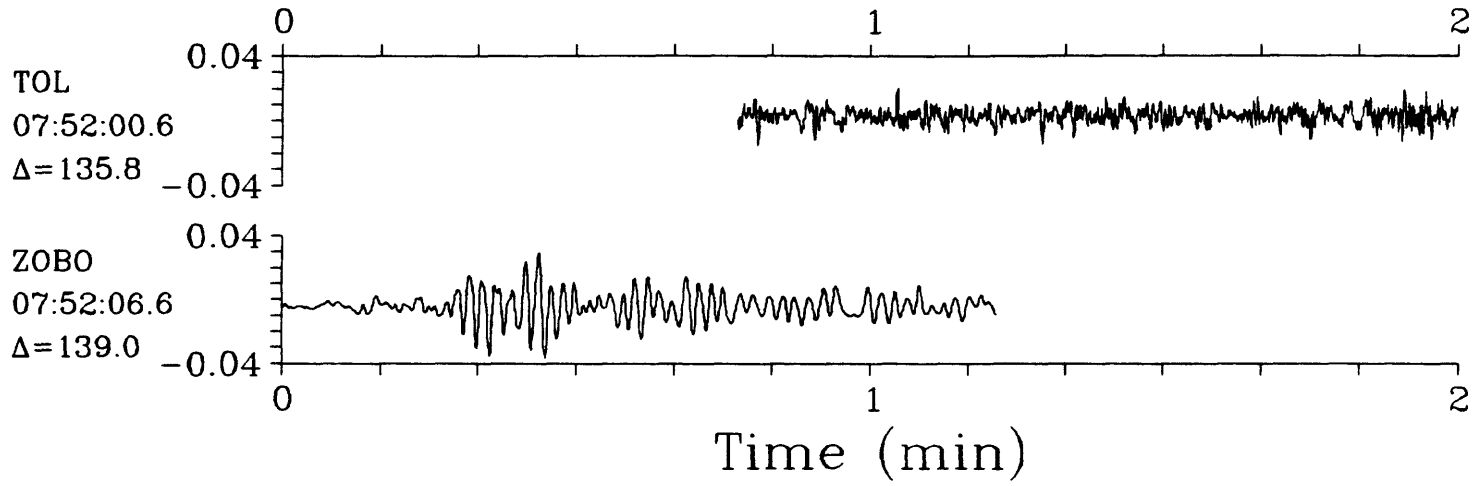
SPZ

Bismarck Sea  $h=10.0$   $m_b=5.2$   $M_{sz}=5.6$ 

SPZ

01 July 1986 07:32:54.22

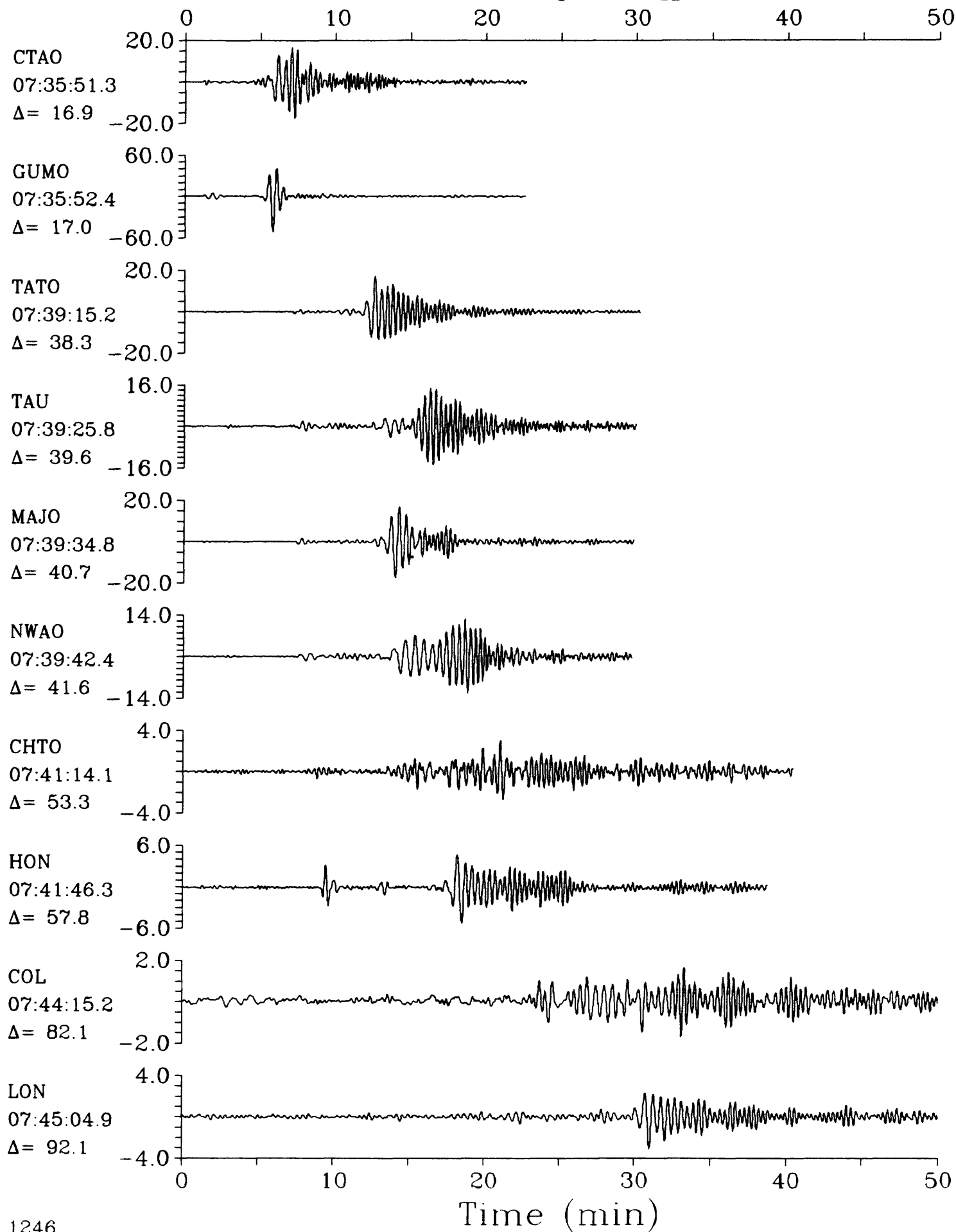
SPZ

Bismarck Sea  $h=10.0$   $m_b=5.2$   $M_{sz}=5.6$ 

LPZ

01 July 1986 07:32:54.22  
Bismarck Sea  $h=10.0$   $m_b=5.2$   $M_{sz}=5.6$ 

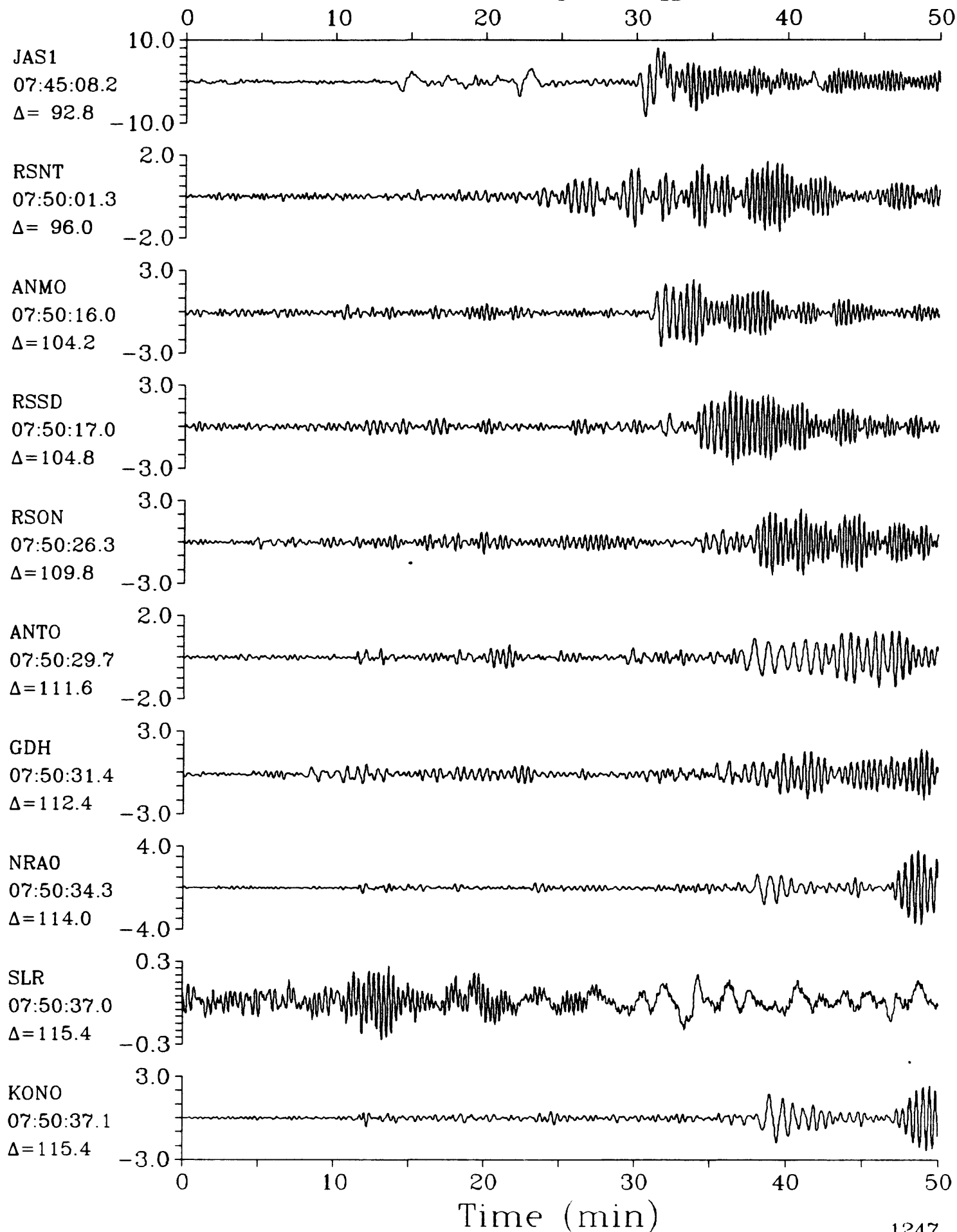
LPZ



LPZ

01 July 1986 07:32:54.22

LPZ

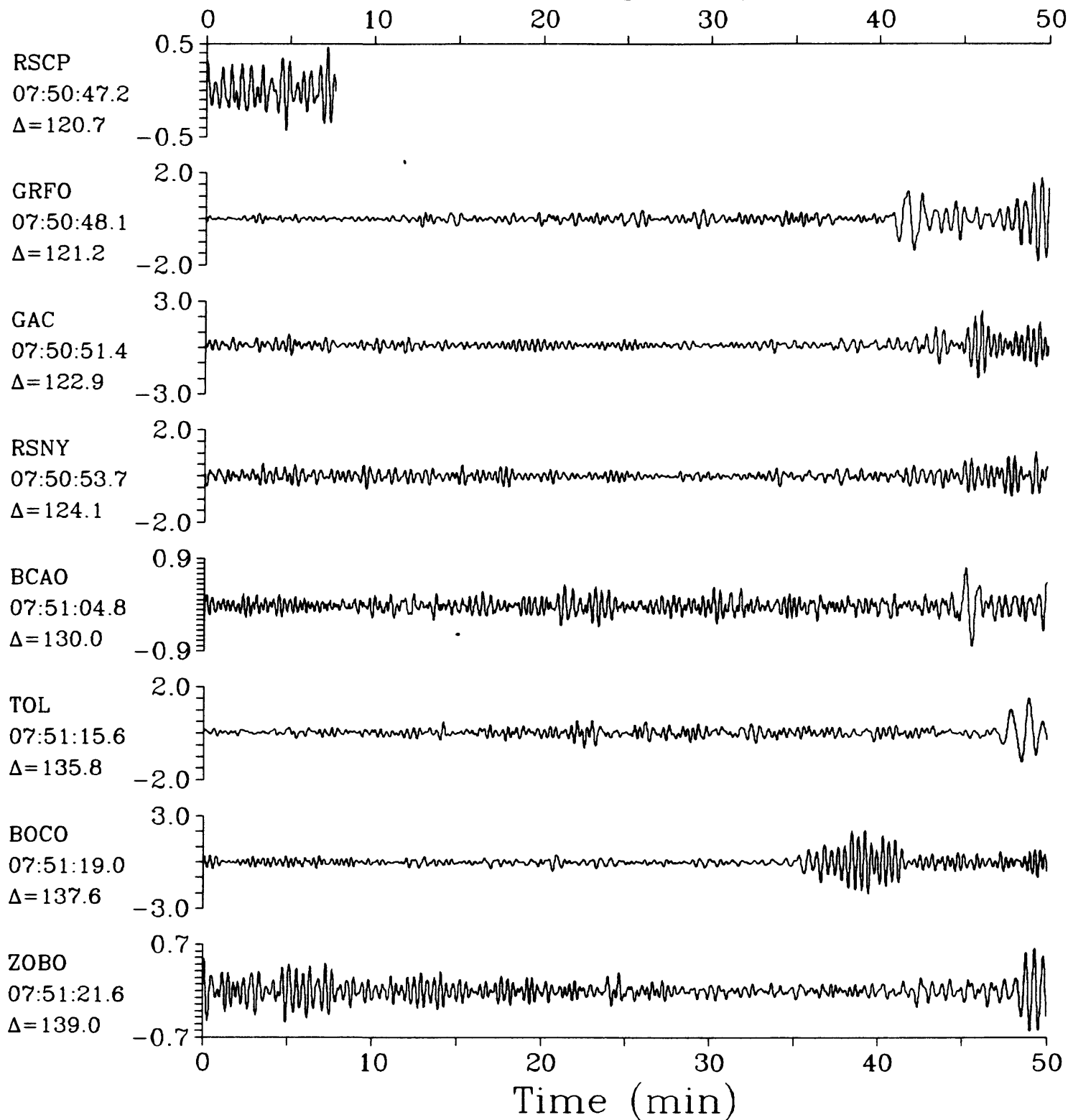
Bismarck Sea  $h=10.0$   $m_b=5.2$   $M_{sz}=5.6$ 



LPZ

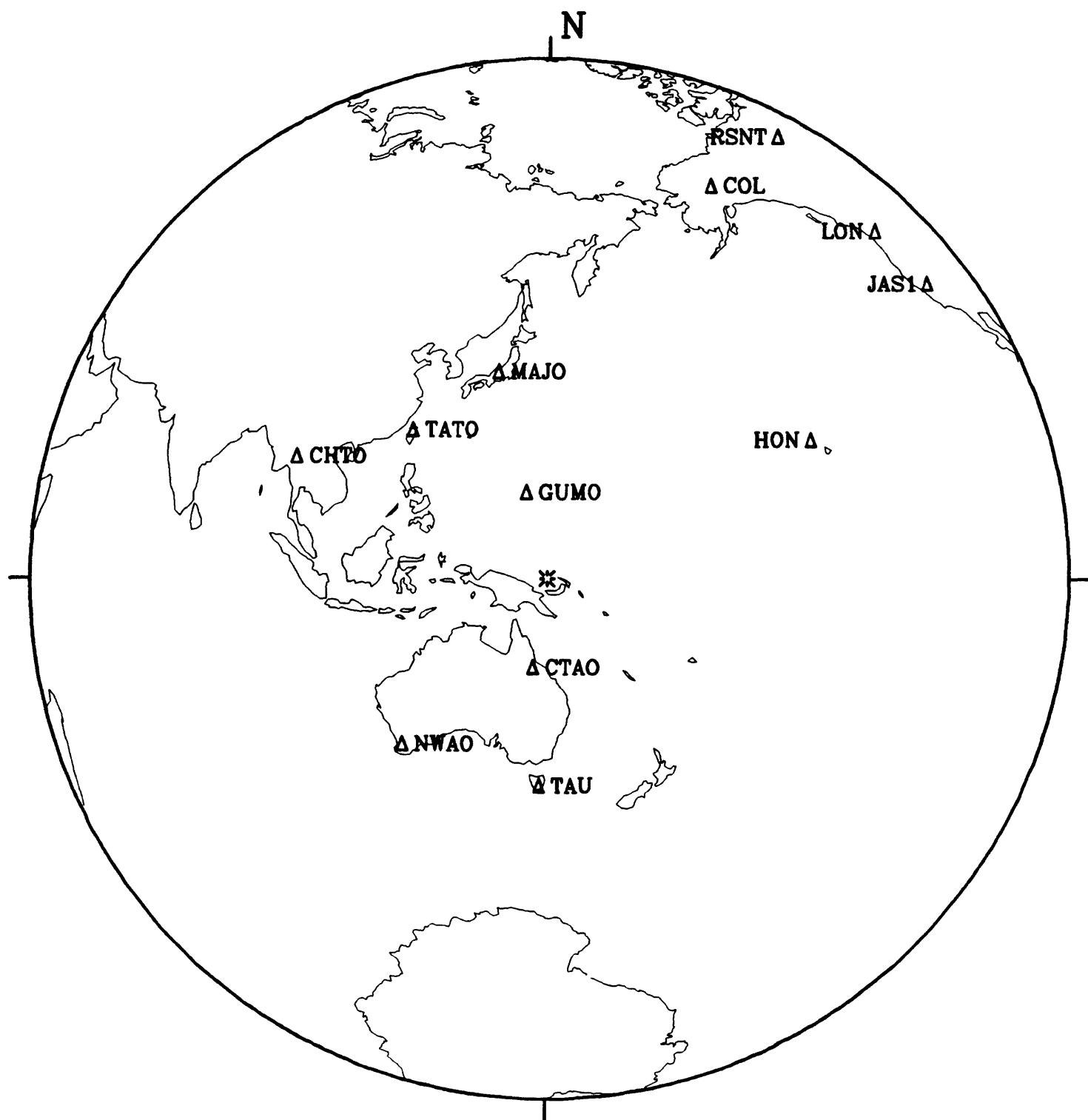
01 July 1986 07:32:54.22

LPZ

Bismarck Sea  $h=10.0$   $m_b=5.2$   $M_{sz}=5.6$ 

01 July 1986 08:39:59.53

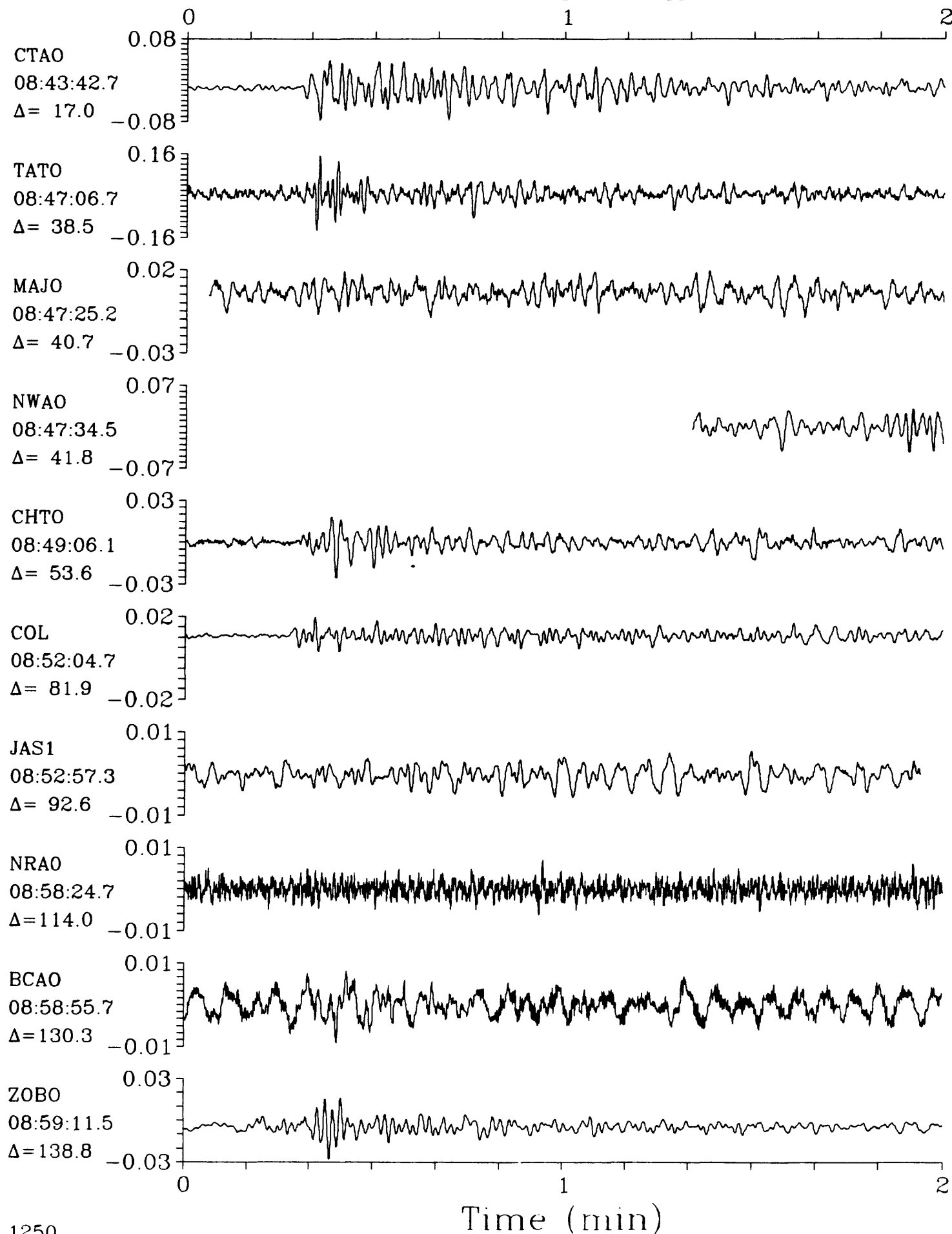
## Bismarck Sea



SPZ

01 July 1986 08:39:59.53

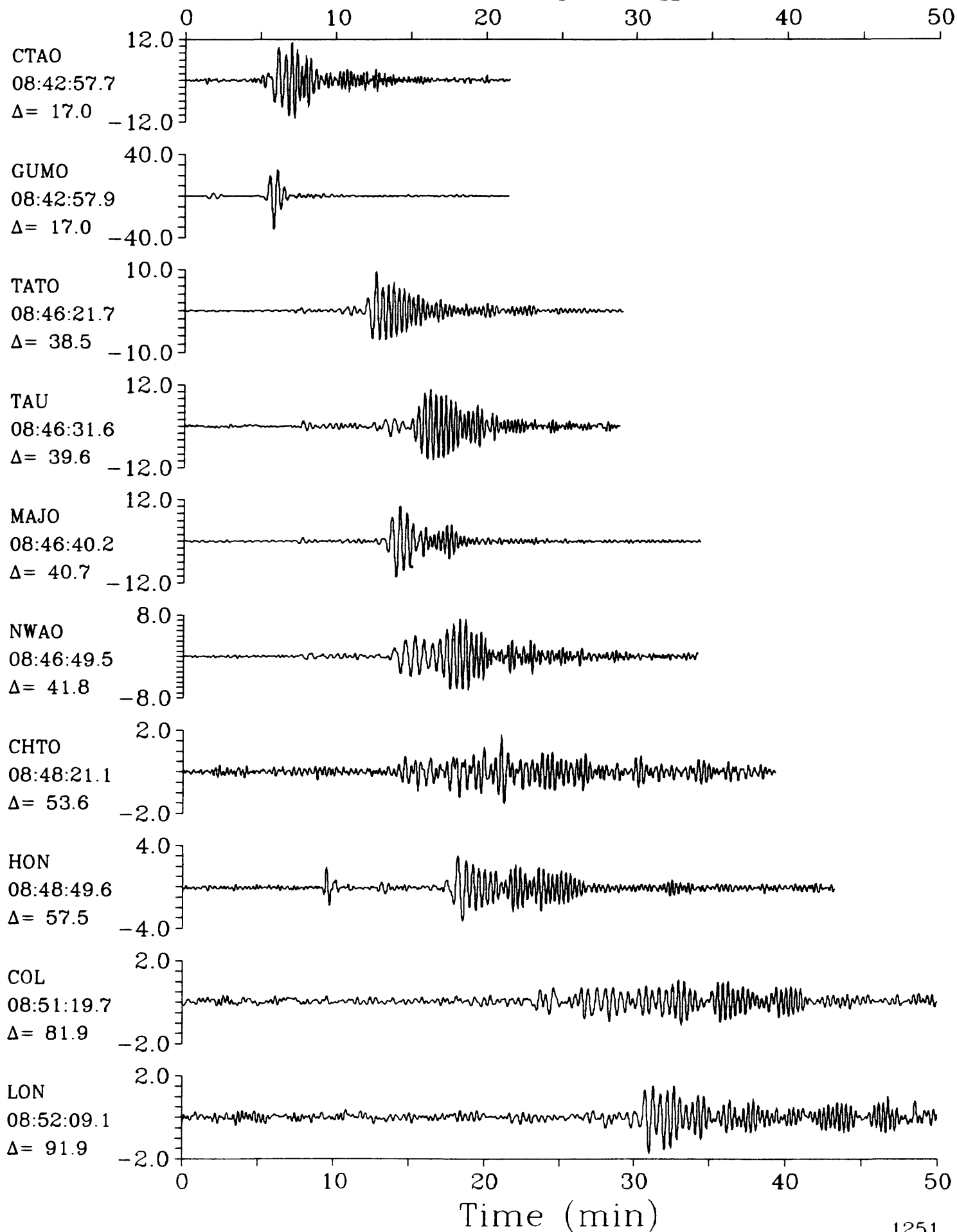
SPZ

Bismarck Sea  $h=10.0$   $m_b=5.0$   $M_{sz}=5.5$ 

LPZ

01 July 1986 08:39:59.53

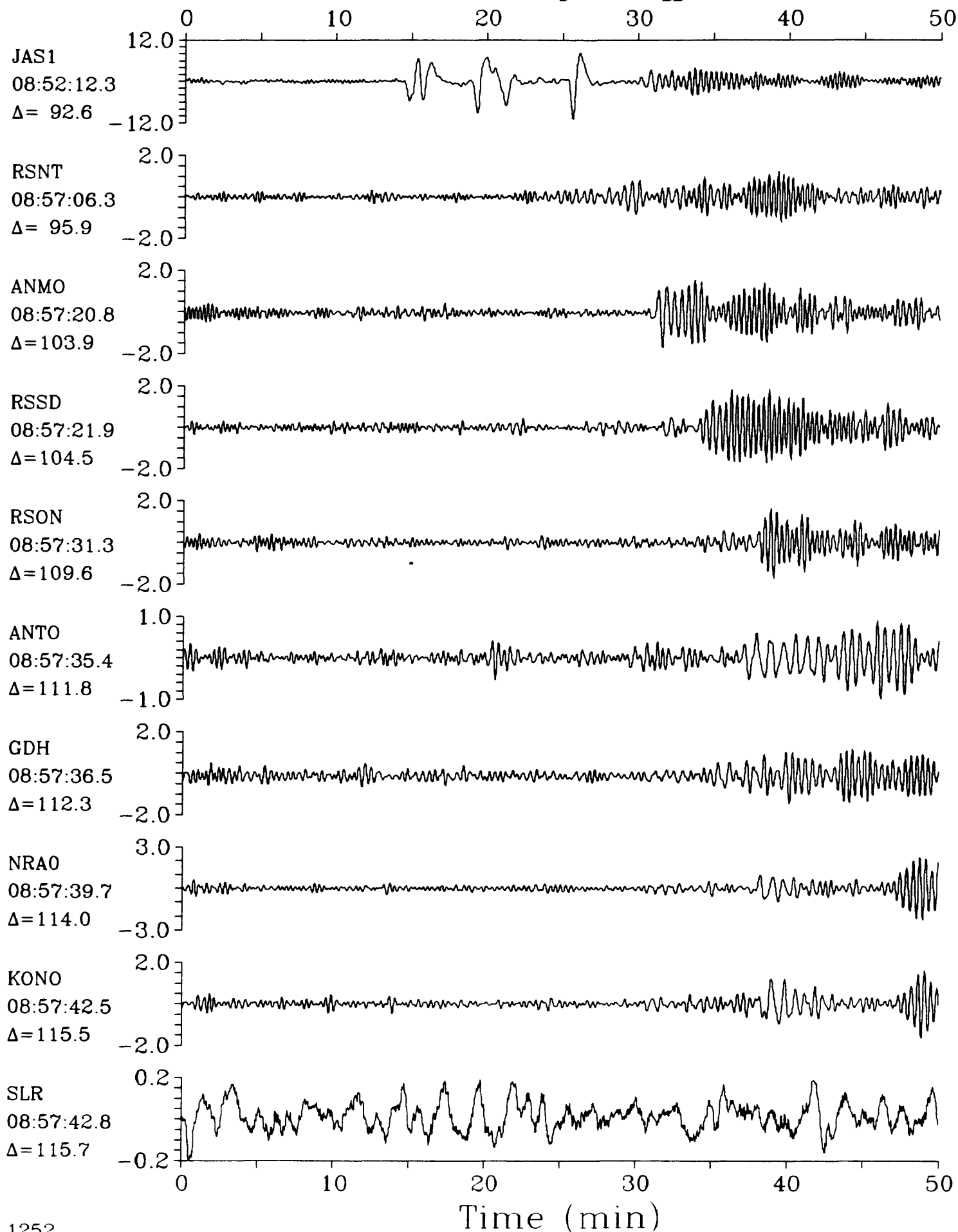
LPZ

Bismarck Sea  $h=10.0$   $m_b=5.0$   $M_{sz}=5.5$ 

LPZ

01 July 1986 08:39:59.53

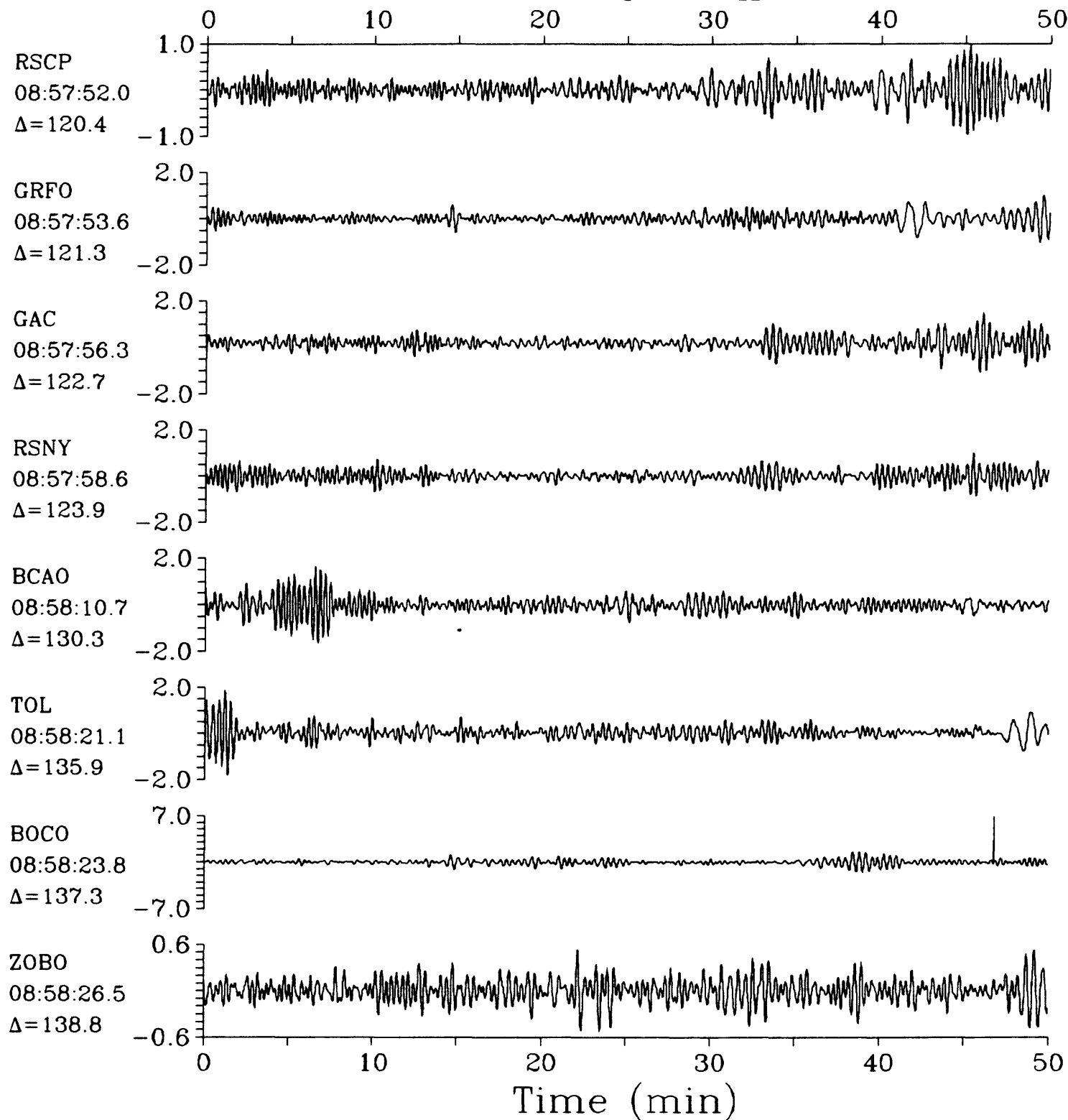
LPZ

Bismarck Sea  $h=10.0$   $m_b=5.0$   $M_{sz}=5.5$ 

LPZ

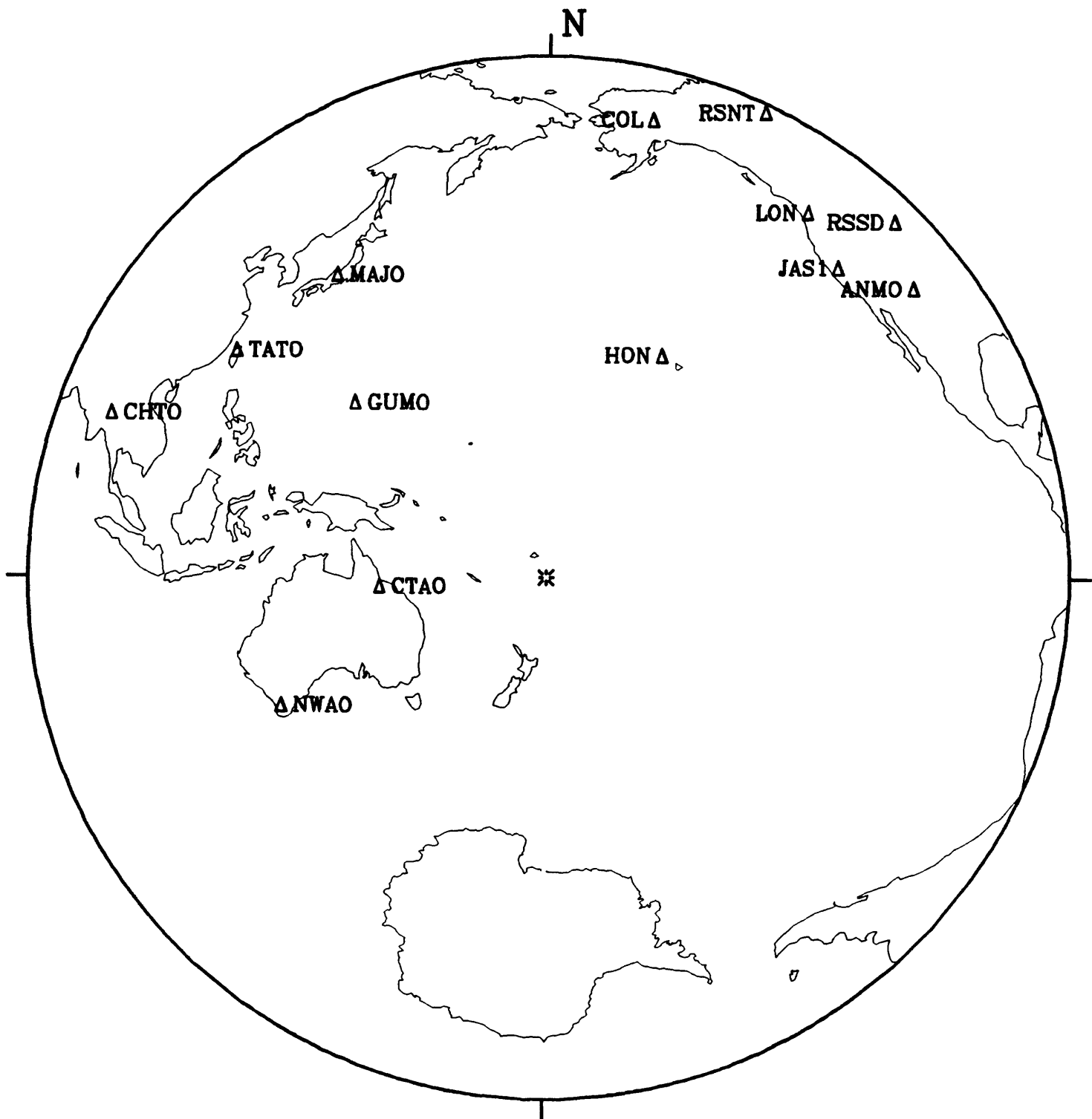
01 July 1986 08:39:59.53

LPZ

Bismarck Sea  $h=10.0$   $m_b=5.0$   $M_{sz}=5.5$ 

02 July 1986 04:16:58.29

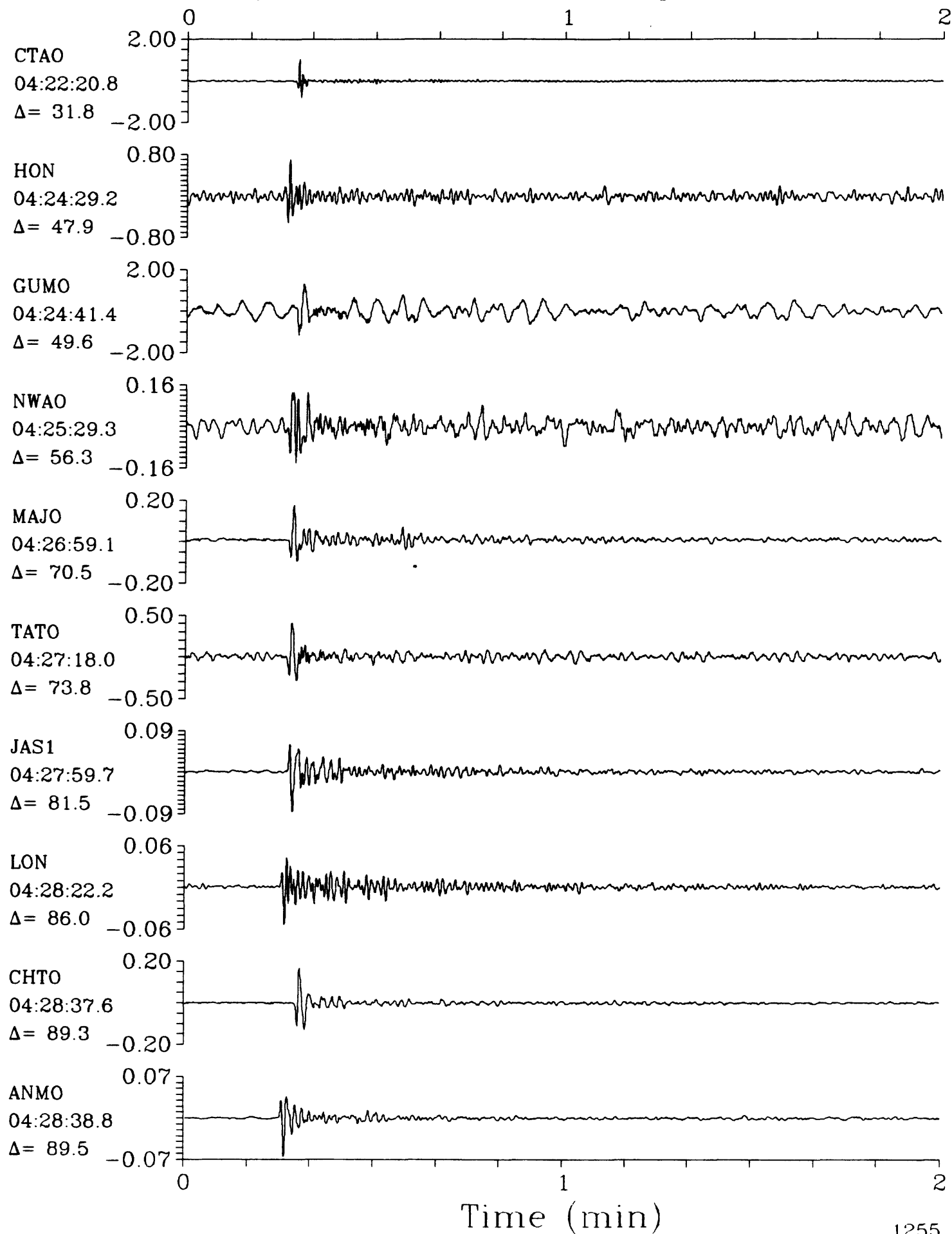
## Fiji Islands Region



SPZ

02 July 1986 04:16:58.29  
Fiji Islands Region  $h=597.4$   $m_b=5.5$ 

SPZ

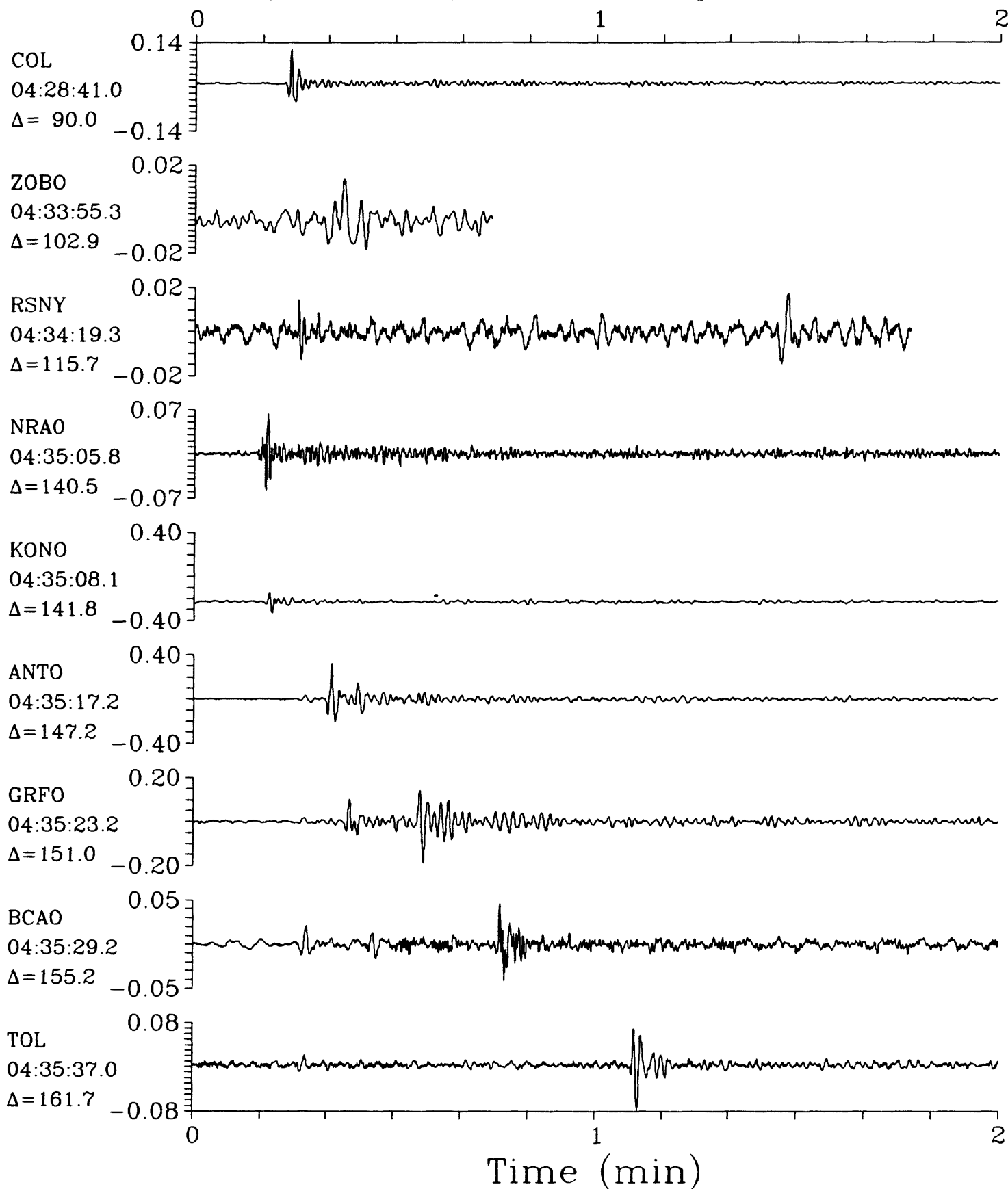




SPZ

02 July 1986 04:16:58.29

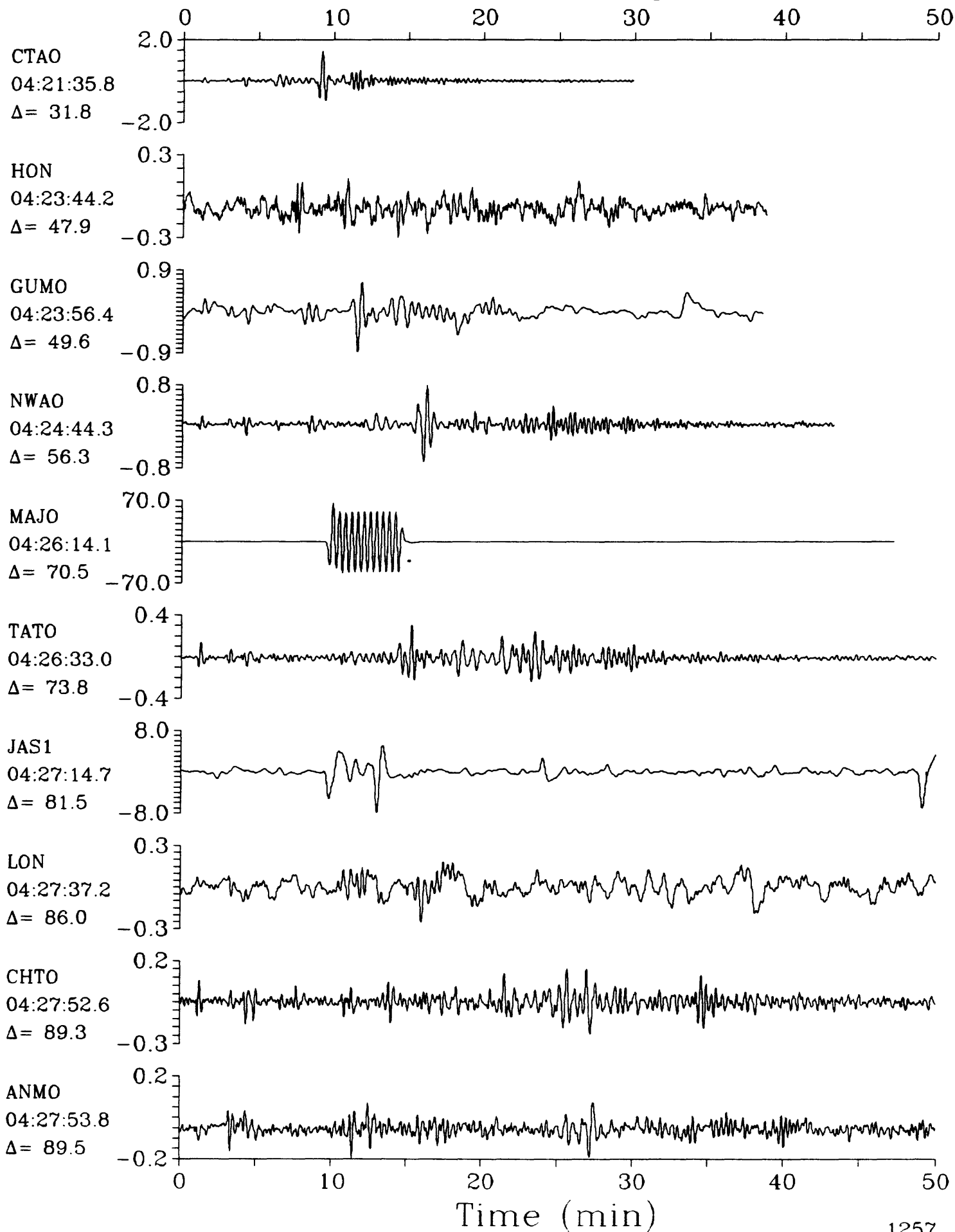
SPZ

Fiji Islands Region  $h=597.4$   $m_b=5.5$ 

LPZ

02 July 1986 04:16:58.29  
Fiji Islands Region  $h=597.4$   $m_b=5.5$ 

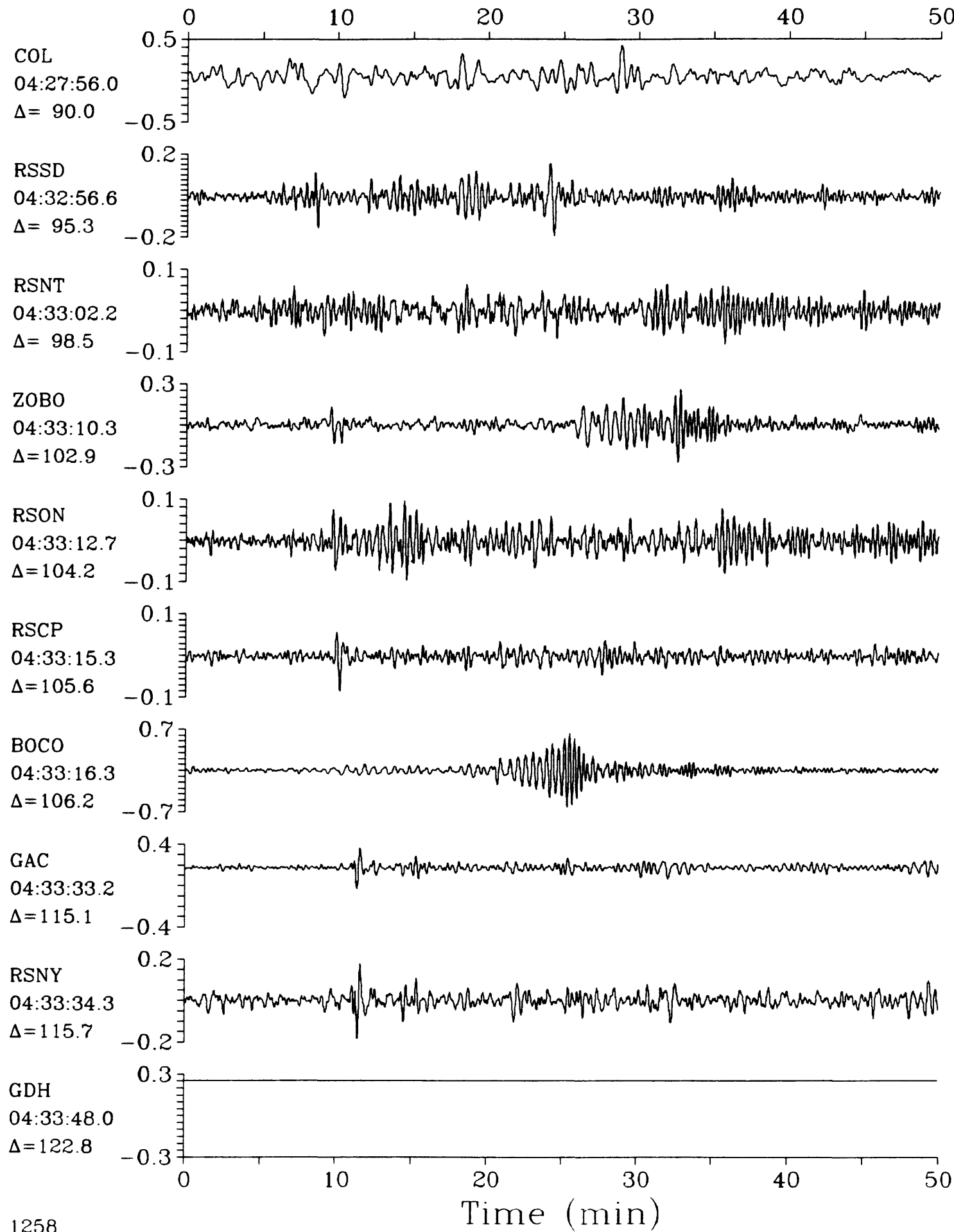
LPZ



LPZ

02 July 1986 04:16:58.29  
Fiji Islands Region  $h=597.4$   $m_b=5.5$ 

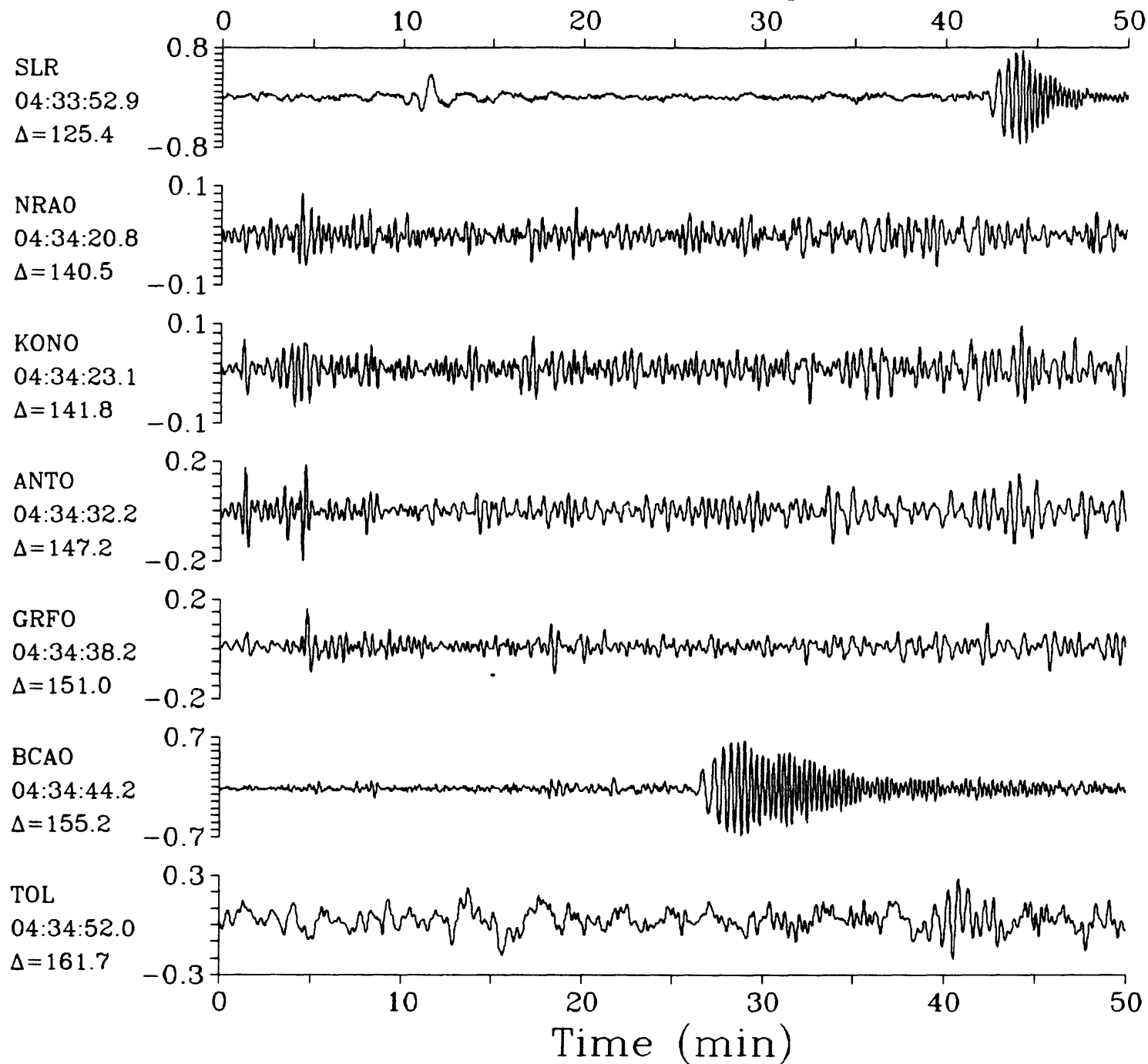
LPZ



LPZ

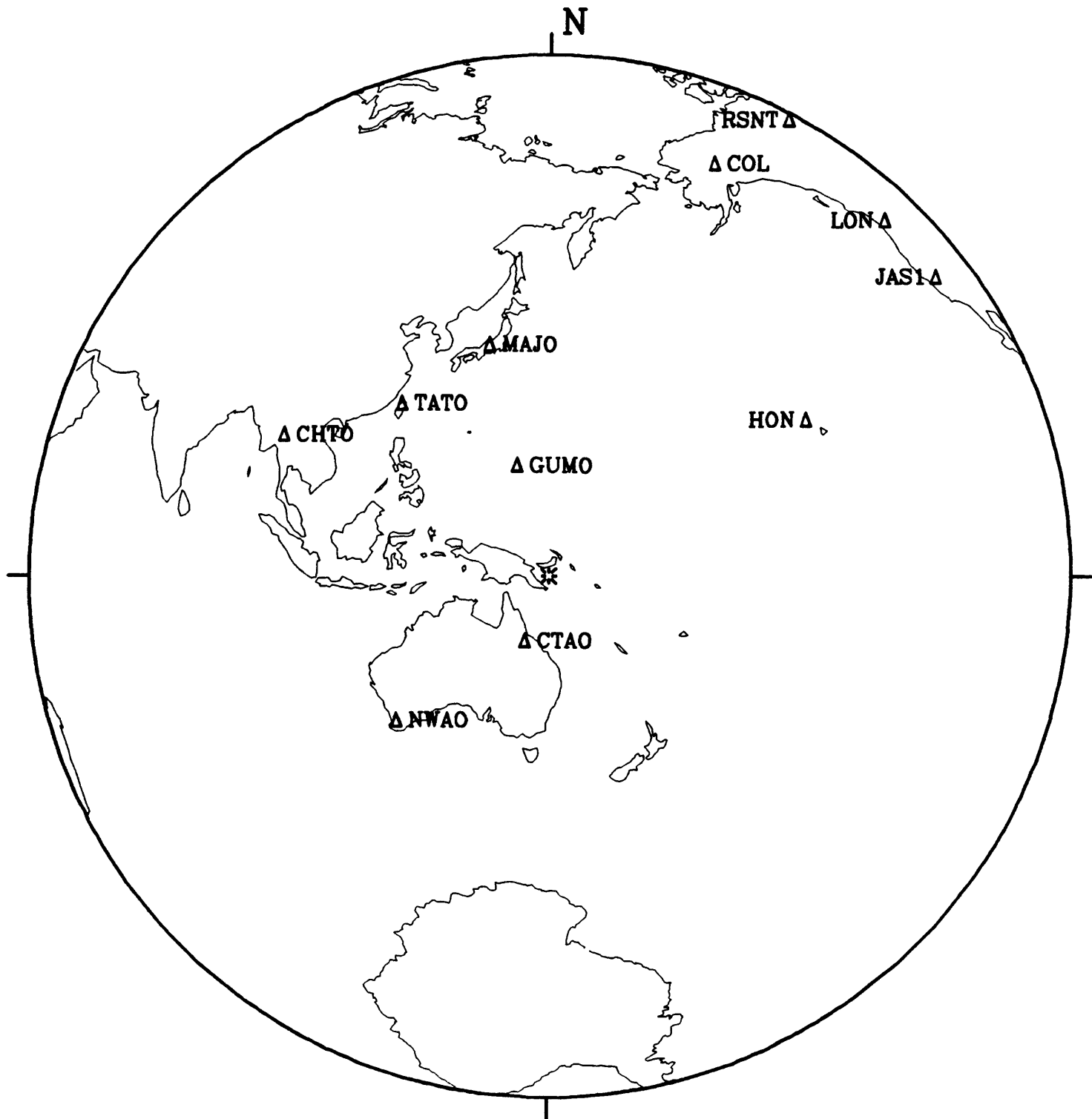
02 July 1986 04:16:58.29  
Fiji Islands Region  $h=597.4$   $m_b=5.5$ 

LPZ



02 July 1986 10:20:25.70

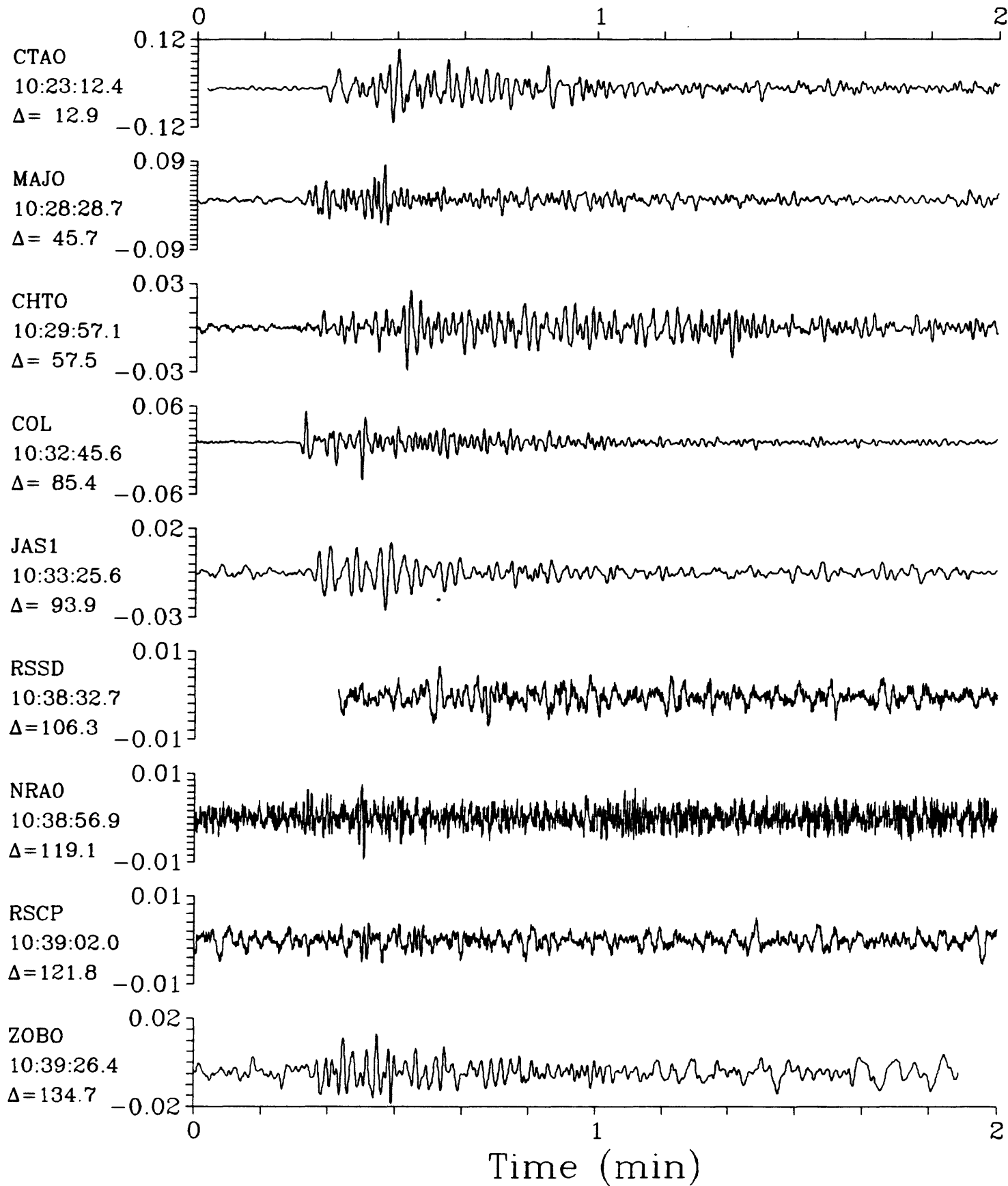
## New Britain Region



SPZ

02 July 1986 10:20:25.70

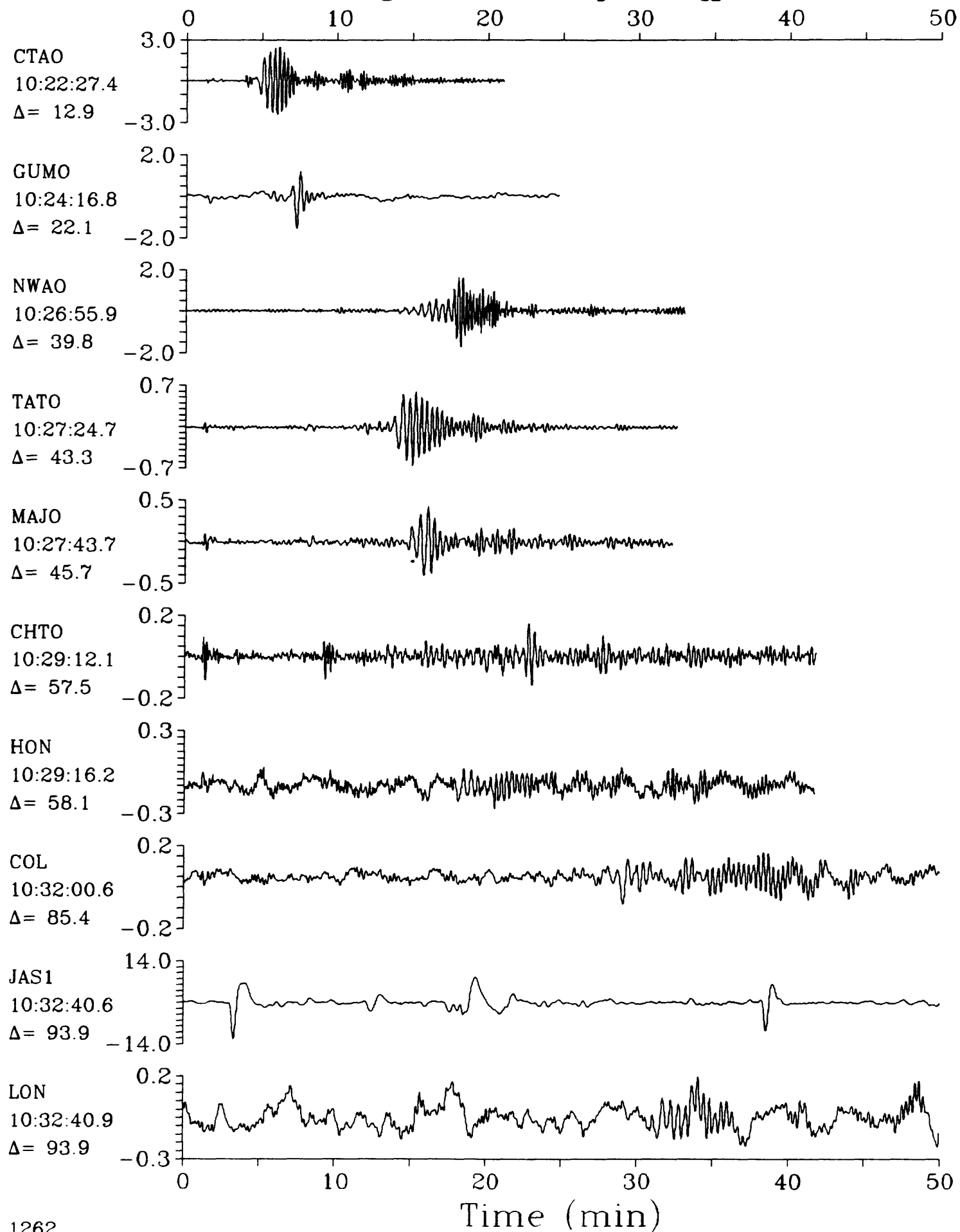
SPZ

New Britain Region  $h=33.0$   $m_b=5.5$   $M_{SZ}=4.6$ 

LPZ

02 July 1986 10:20:25.70

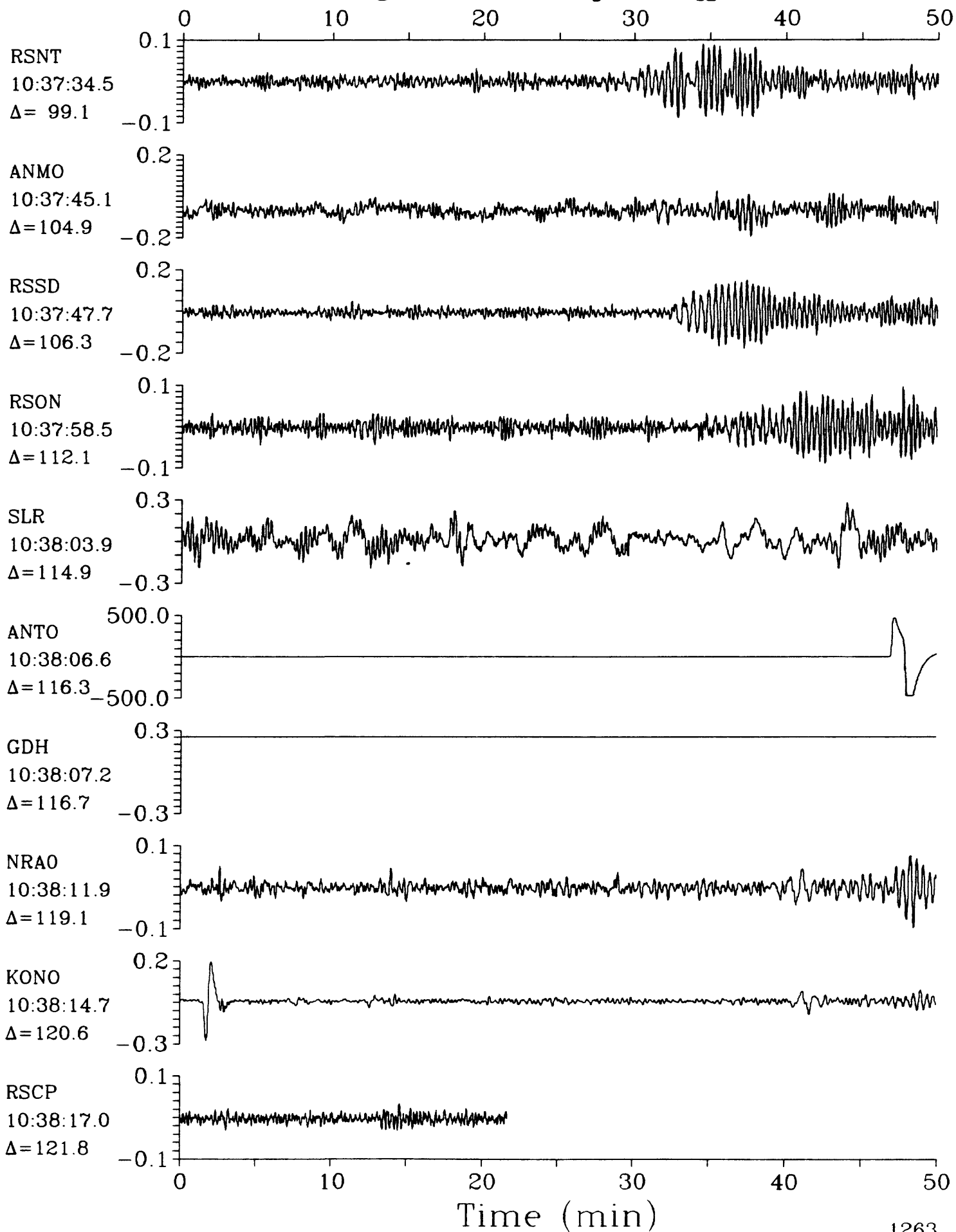
LPZ

New Britain Region  $h=33.0$   $m_b=5.5$   $M_{sz}=4.6$ 

LPZ

02 July 1986 10:20:25.70

LPZ

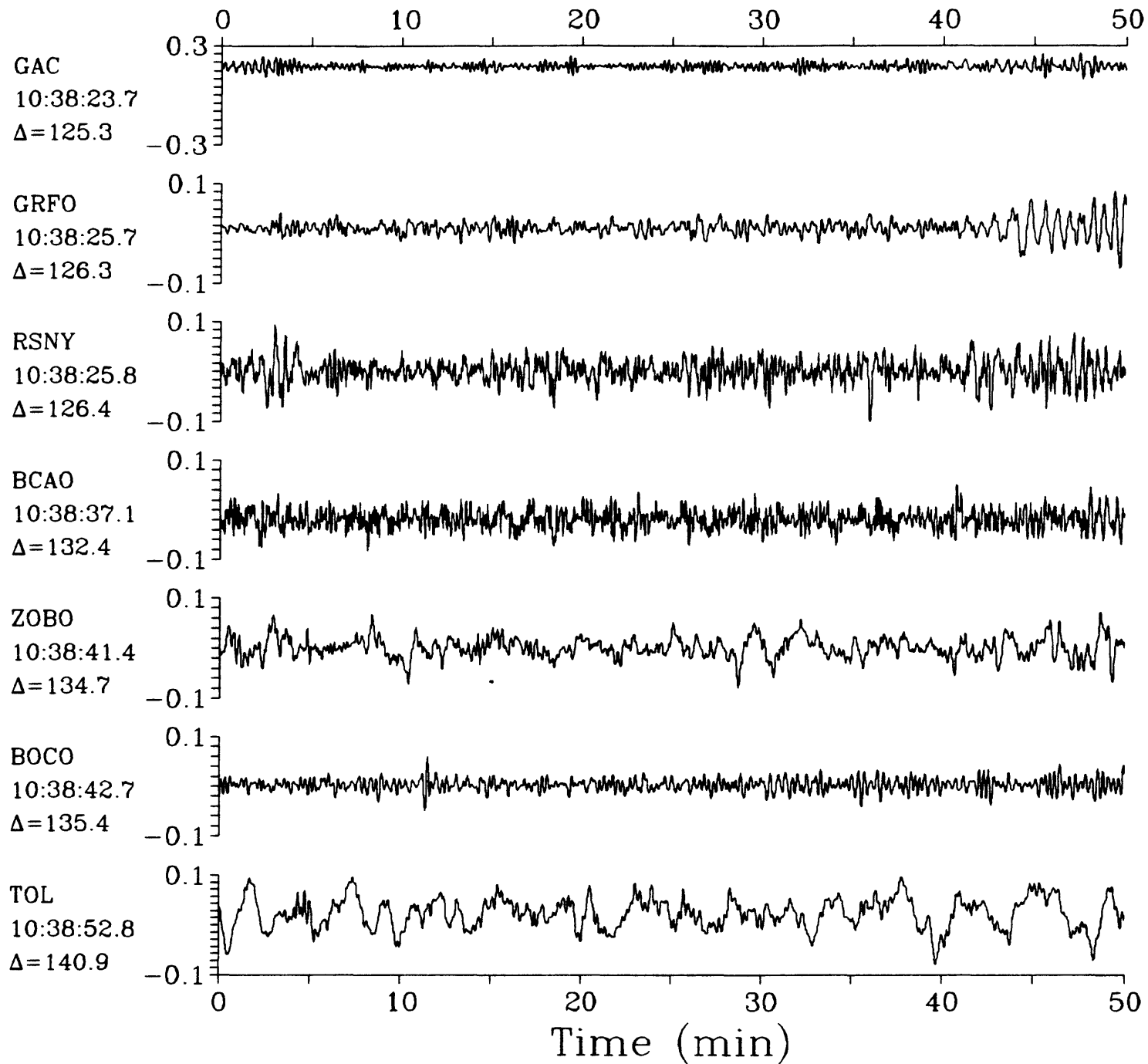
New Britain Region  $h=33.0$   $m_b=5.5$   $M_{sz}=4.6$ 



LPZ

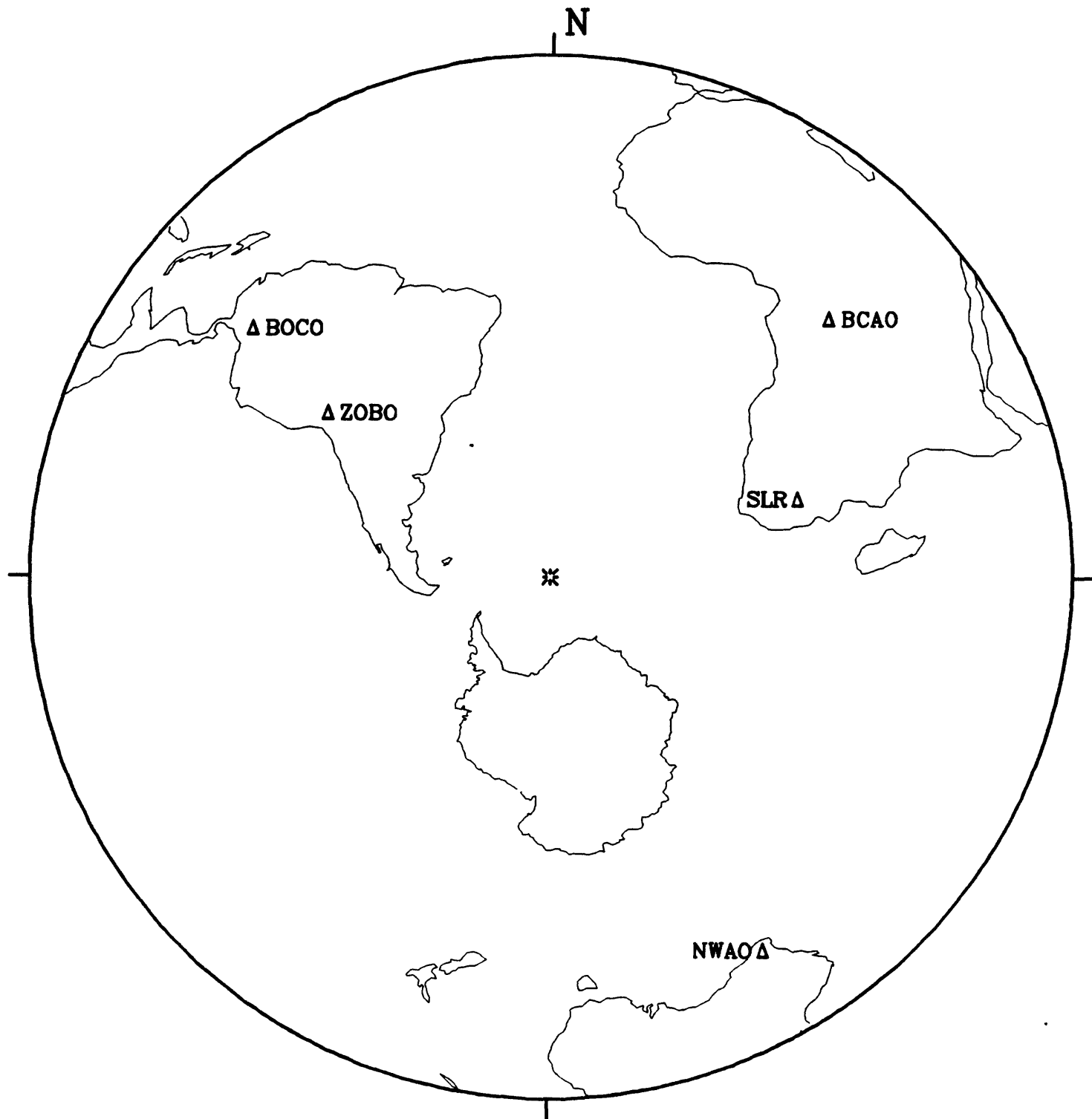
02 July 1986 10:20:25.70

LPZ

New Britain Region  $h=33.0$   $m_b=5.5$   $M_{sz}=4.6$ 

02 July 1986 12:53:07.83

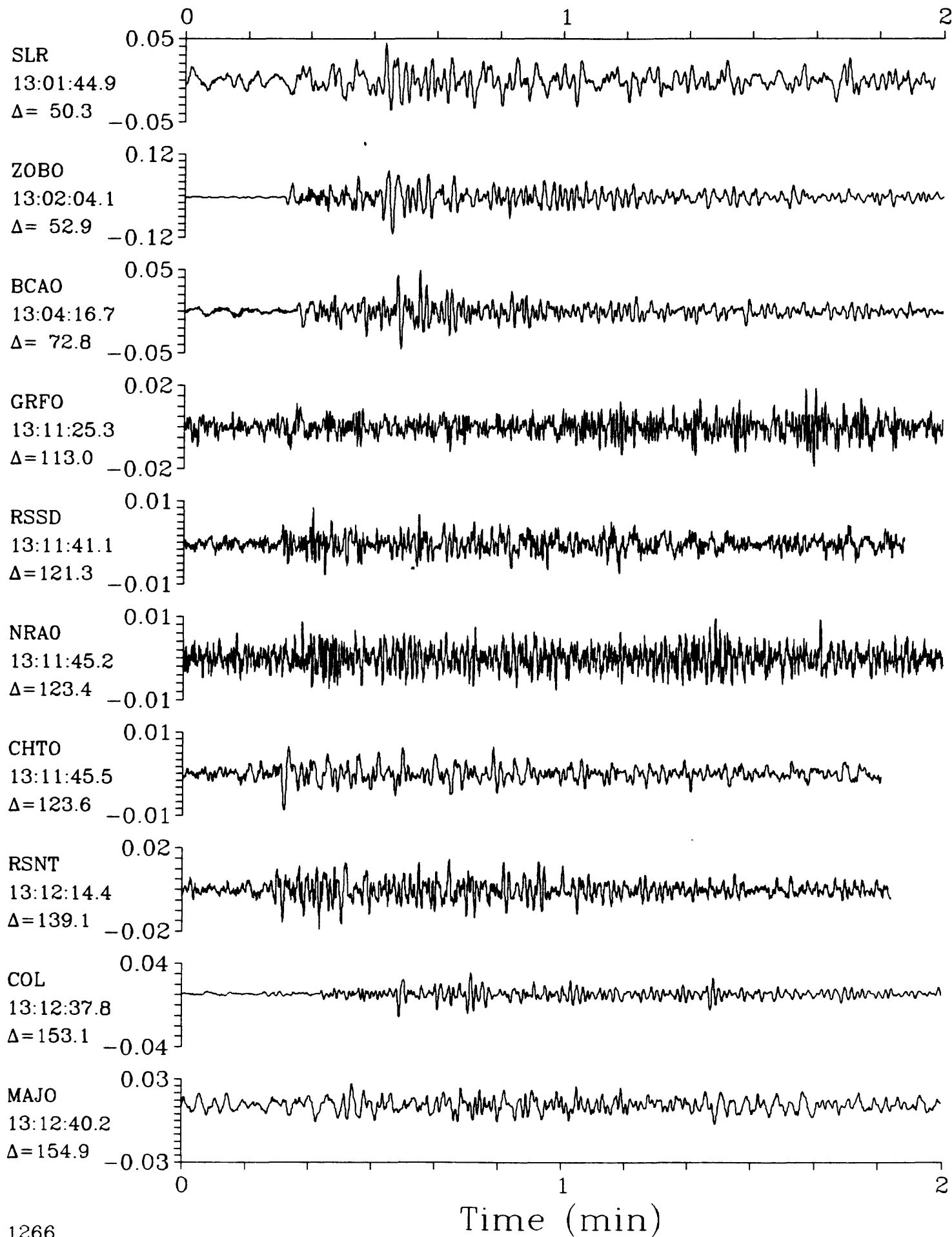
## South Sandwich Islands Region



SPZ

02 July 1986 12:53:07.83

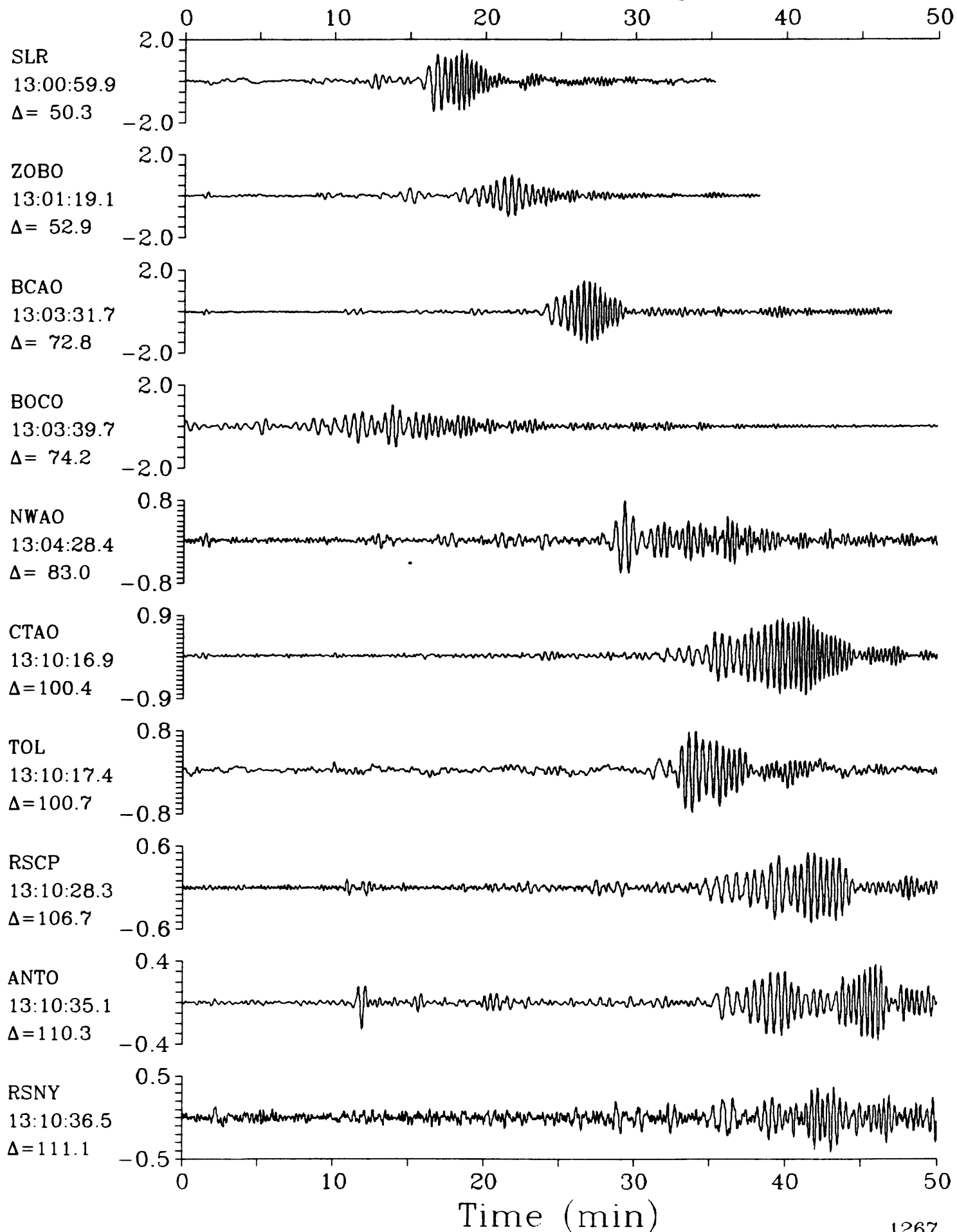
SPZ

South Sandwich Islands Region  $h=50.0$   $m_b=5.6$   $M_{sz}=5.2$ 

LPZ

02 July 1986 12:53:07.83

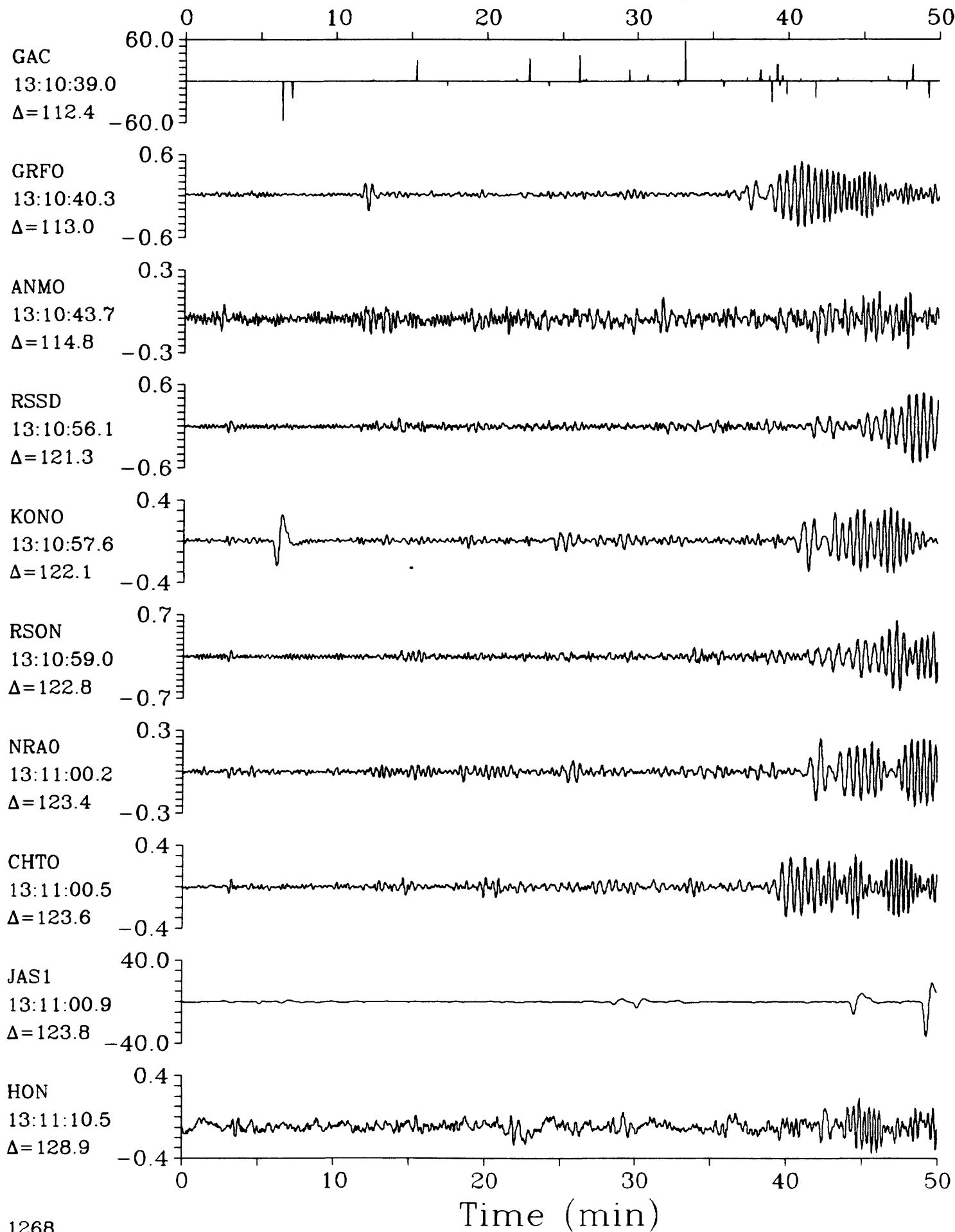
LPZ

South Sandwich Islands Region  $h=50.0$   $m_b=5.6$   $M_{sz}=5.2$ 

LPZ

02 July 1986 12:53:07.83

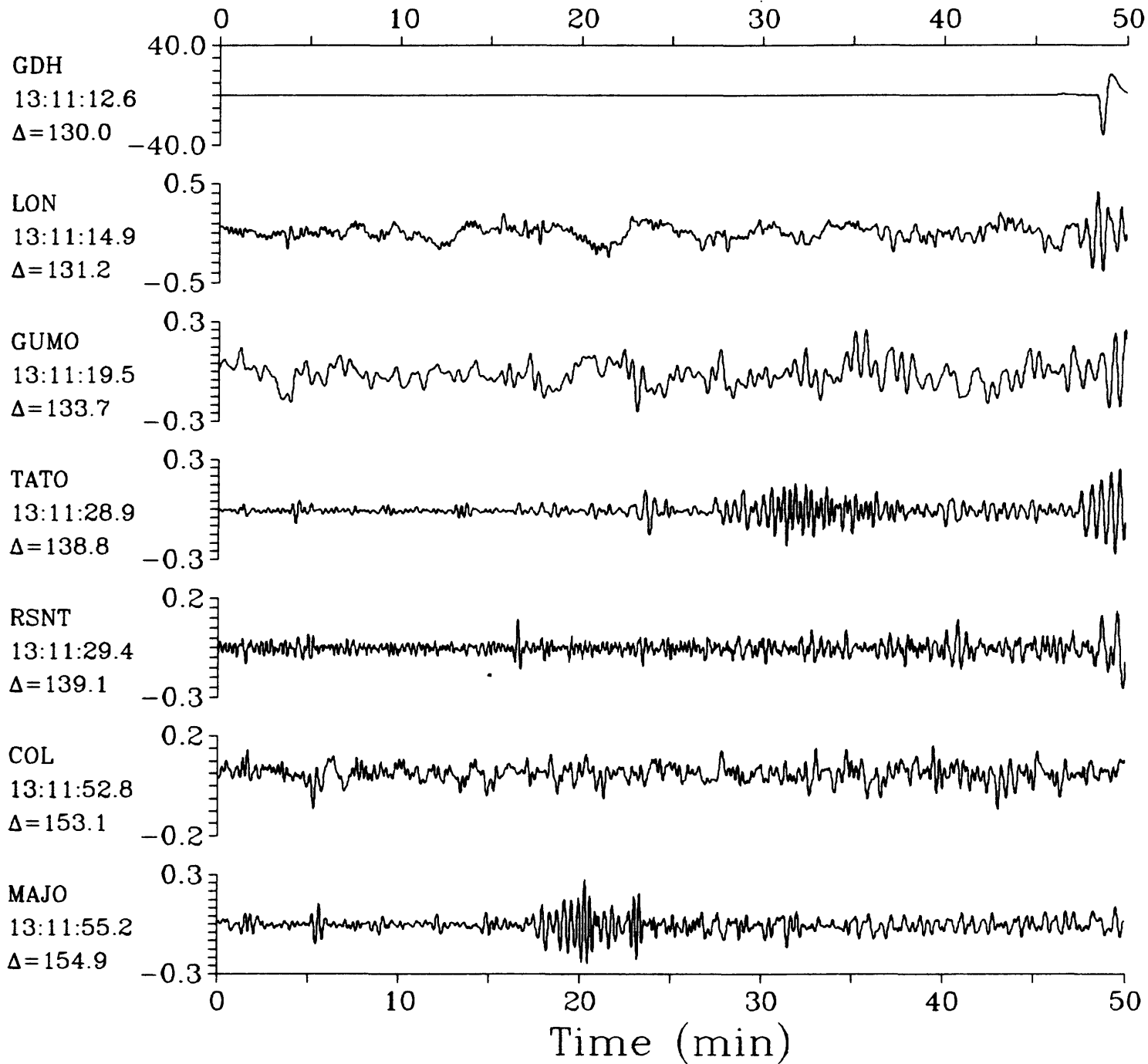
LPZ

South Sandwich Islands Region  $h=50.0$   $m_b=5.6$   $M_{sz}=5.2$ 

LPZ

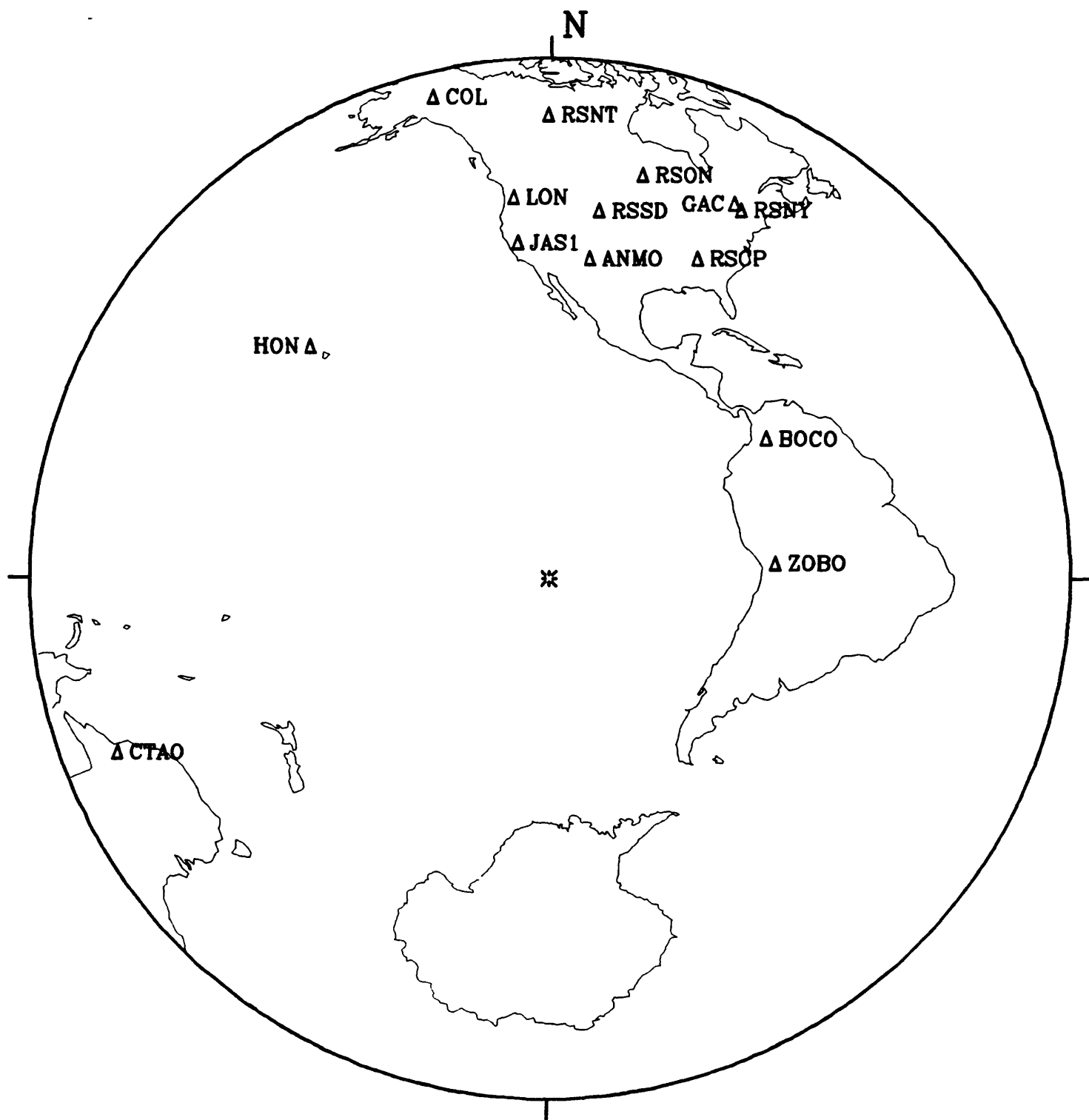
02 July 1986 12:53:07.83

LPZ

South Sandwich Islands Region  $h=50.0$   $m_b=5.6$   $M_{sz}=5.2$ 

02 July 1986 20:45:50.57

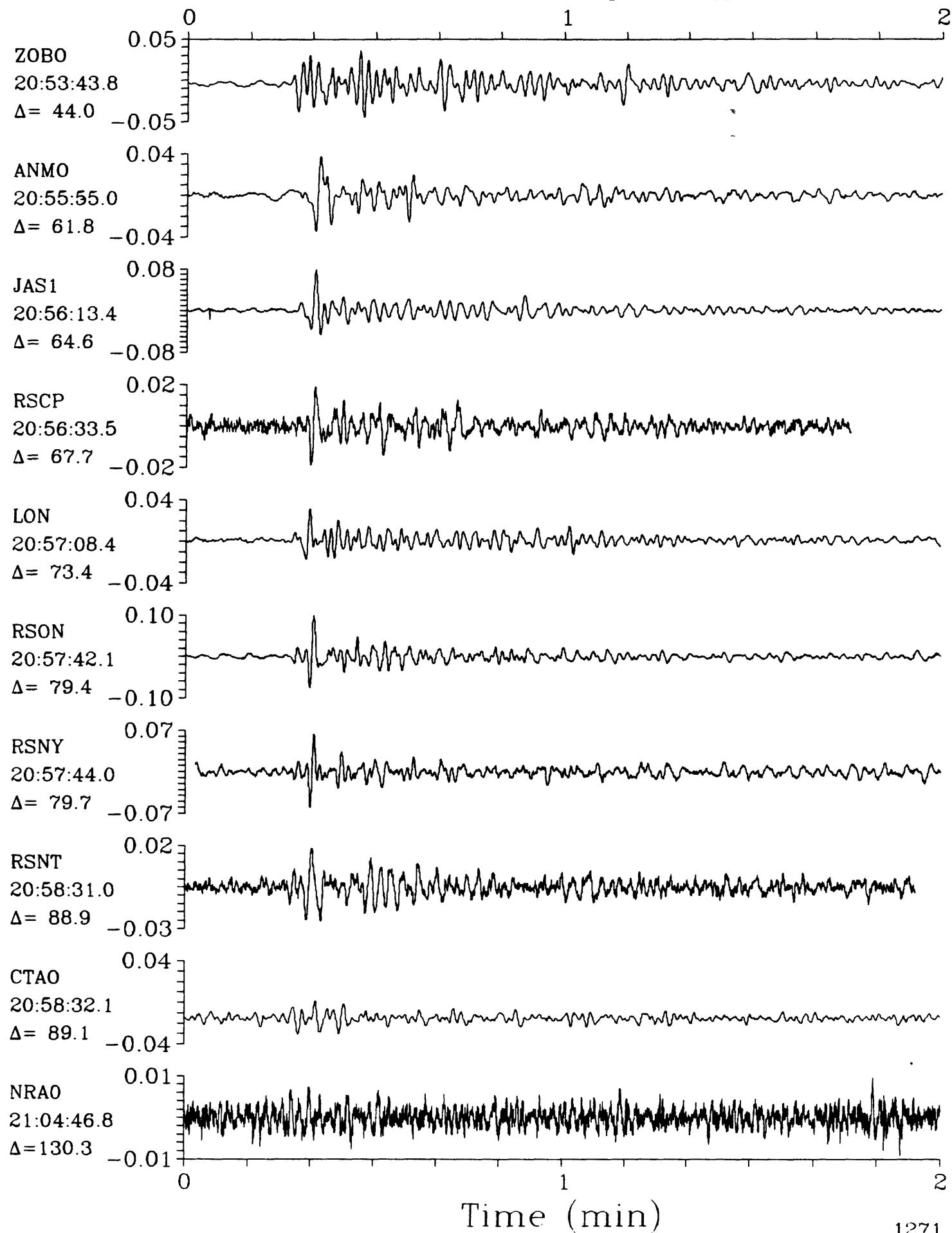
## Easter Island Region



SPZ

02 July 1986 20:45:50.57

SPZ

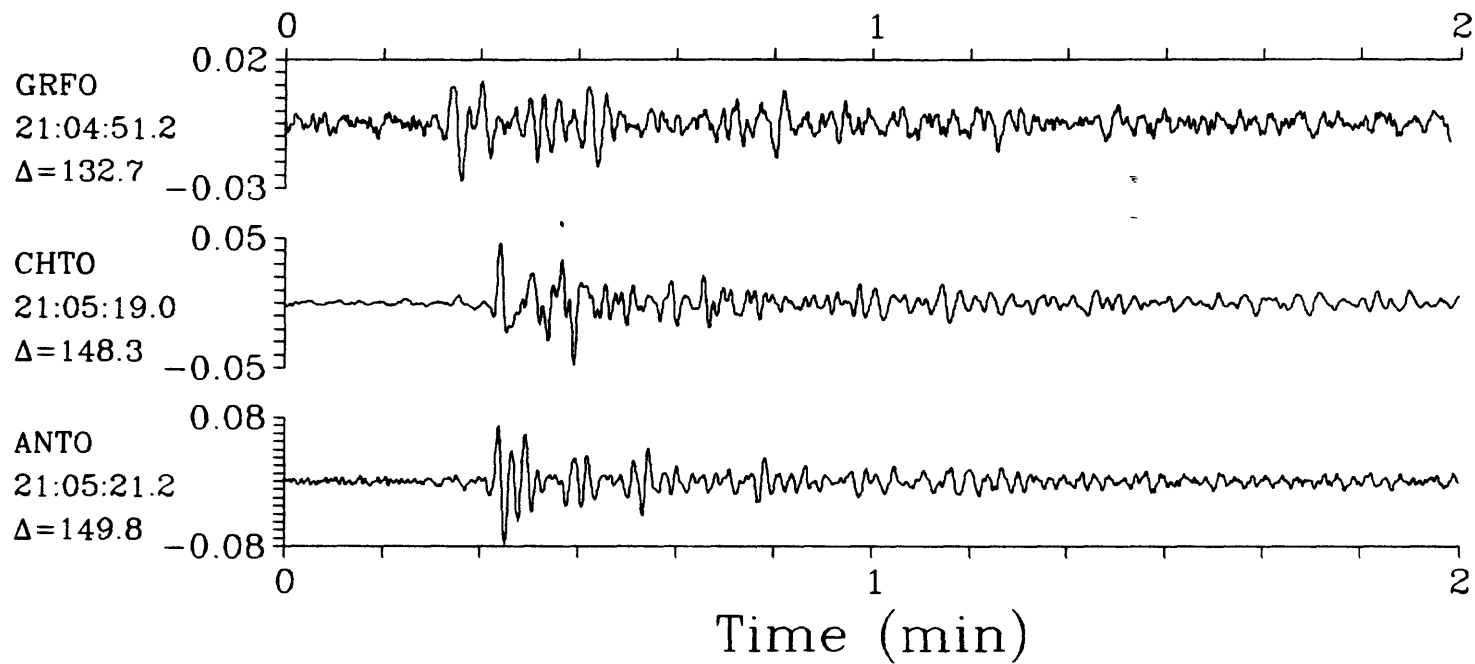
Easter Island Region  $h=10.0$   $m_b=5.6$   $M_{sz}=5.6$ 



SPZ

02 July 1986 20:45:50.57

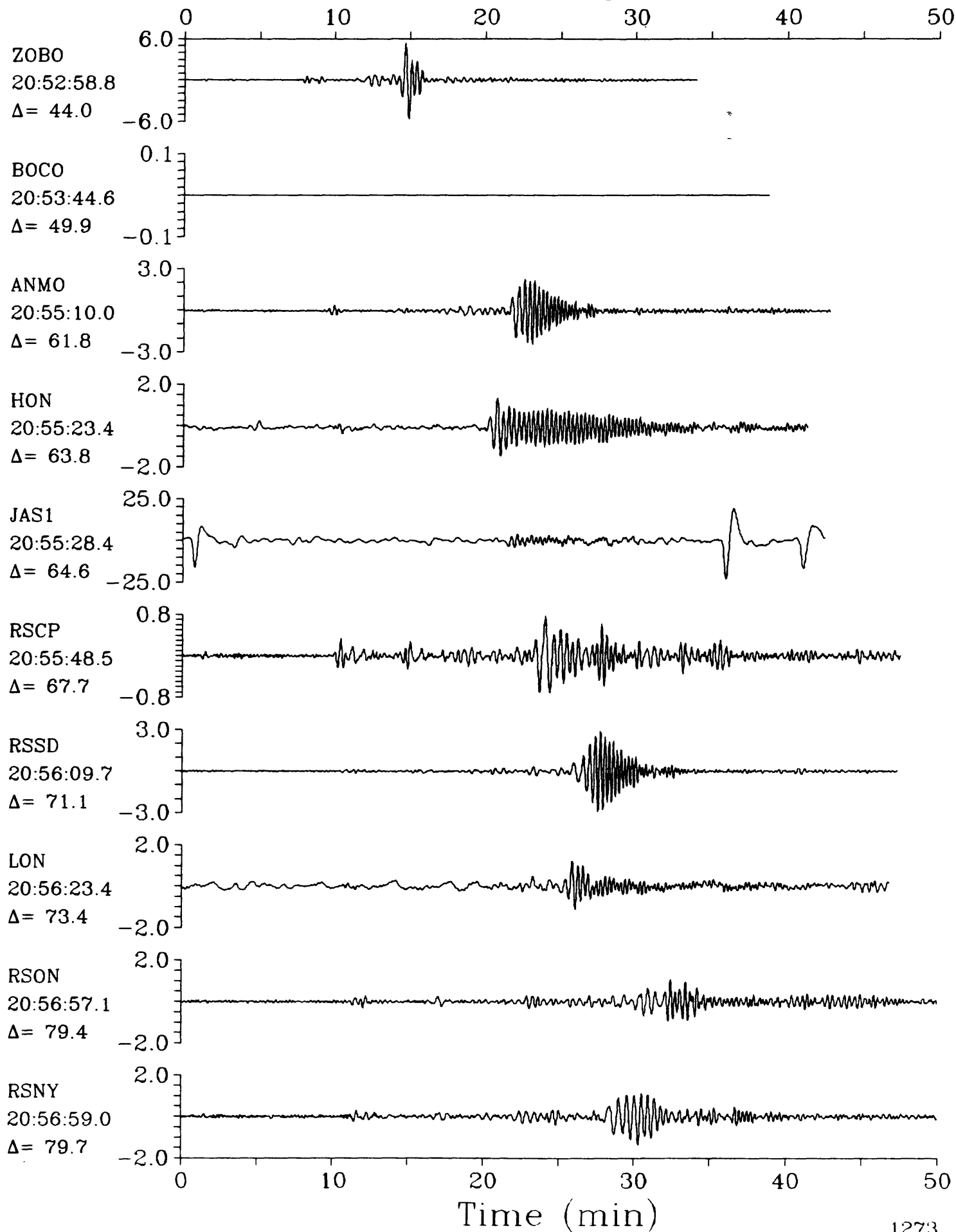
SPZ

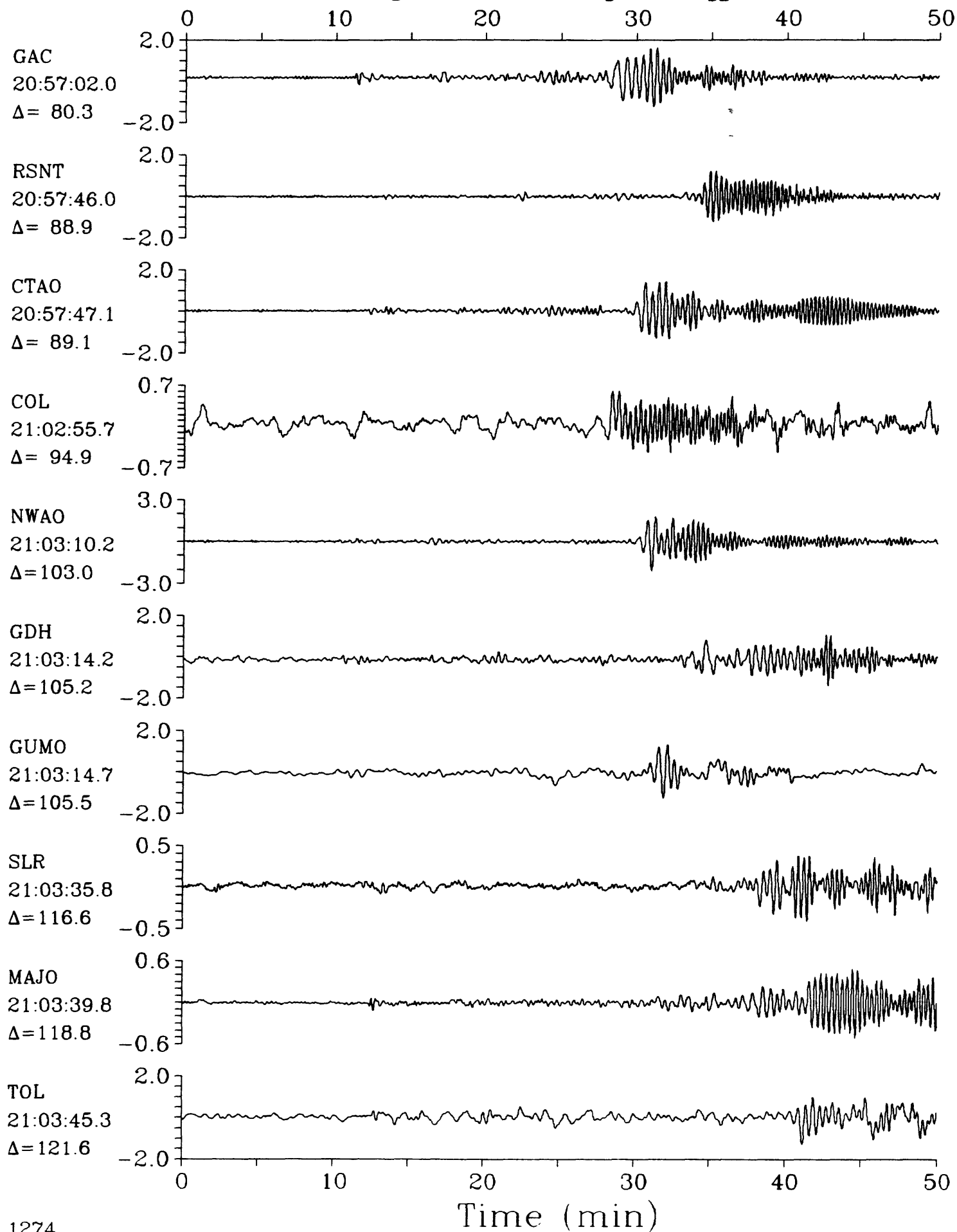
Easter Island Region  $h=10.0$   $m_b=5.6$   $M_{sz}=5.6$ 

LPZ

02 July 1986 20:45:50.57

LPZ

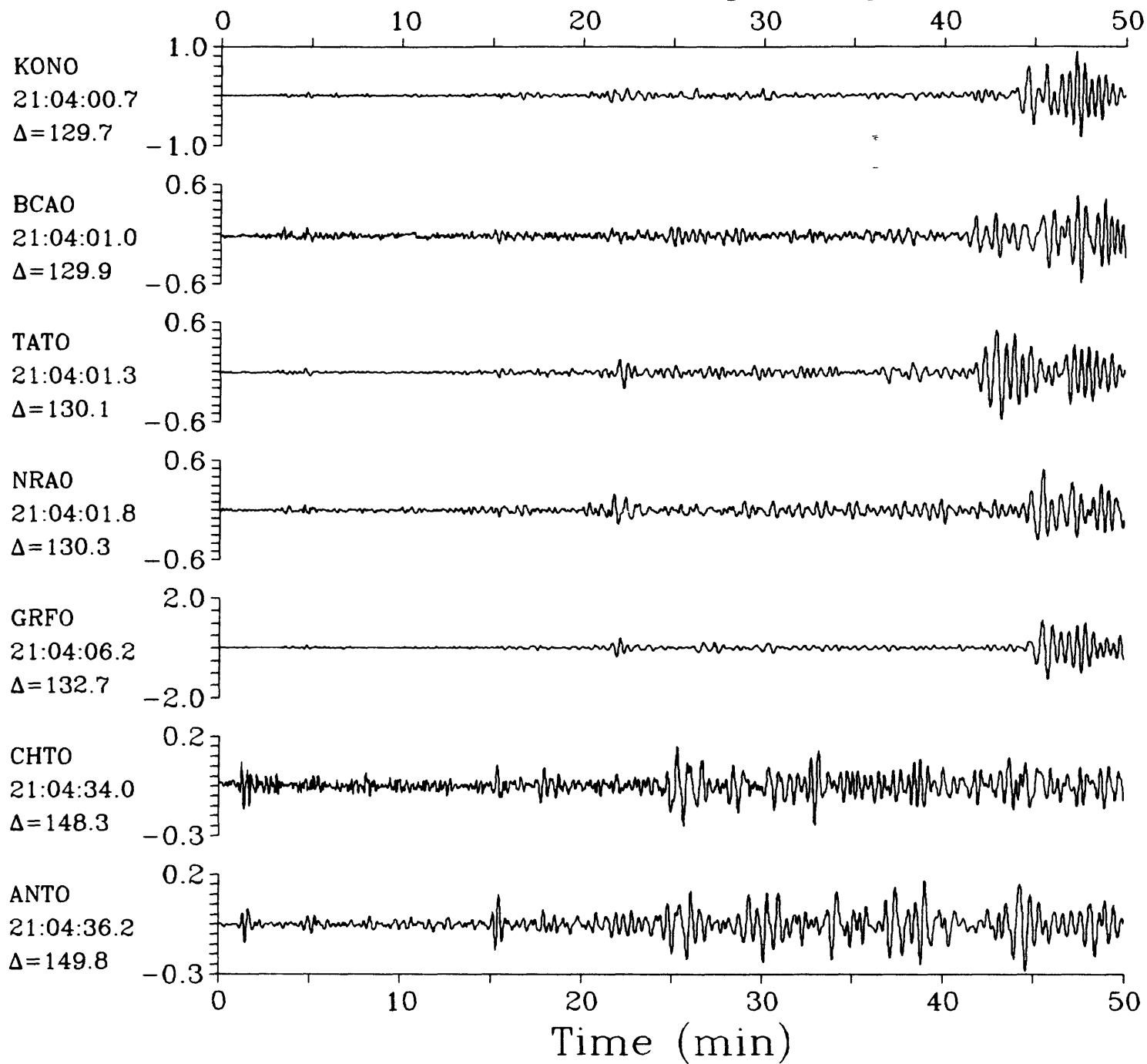
Easter Island Region  $h=10.0$   $m_b=5.6$   $M_{sz}=5.6$ 

Easter Island Region  $h=10.0$   $m_b=5.6$   $M_{sz}=5.6$ 

LPZ

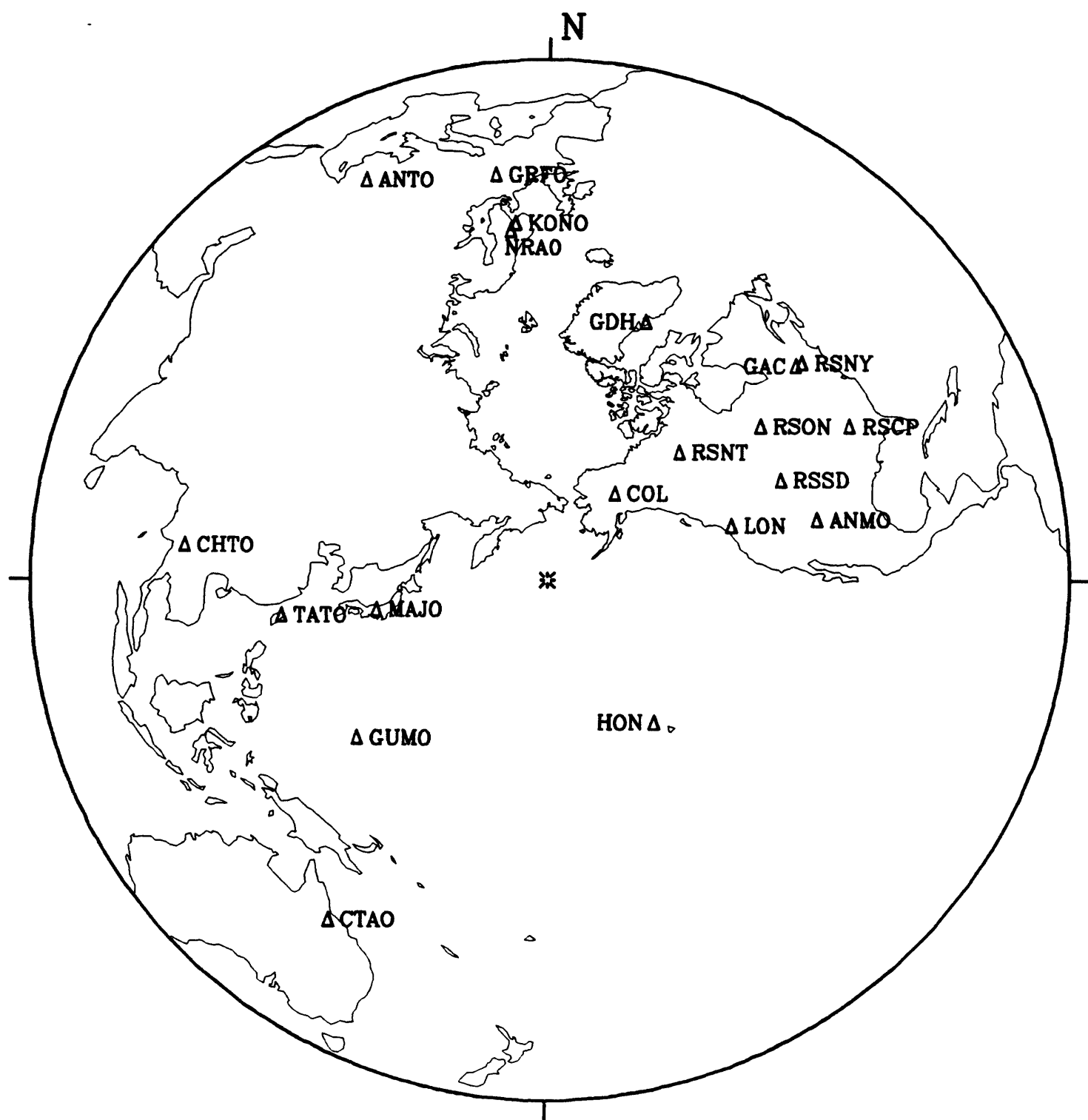
02 July 1986 20:45:50.57

LPZ

Easter Island Region  $h=10.0$   $m_b=5.6$   $M_{sz}=5.6$ 

05 July 1986 03:01:32.63

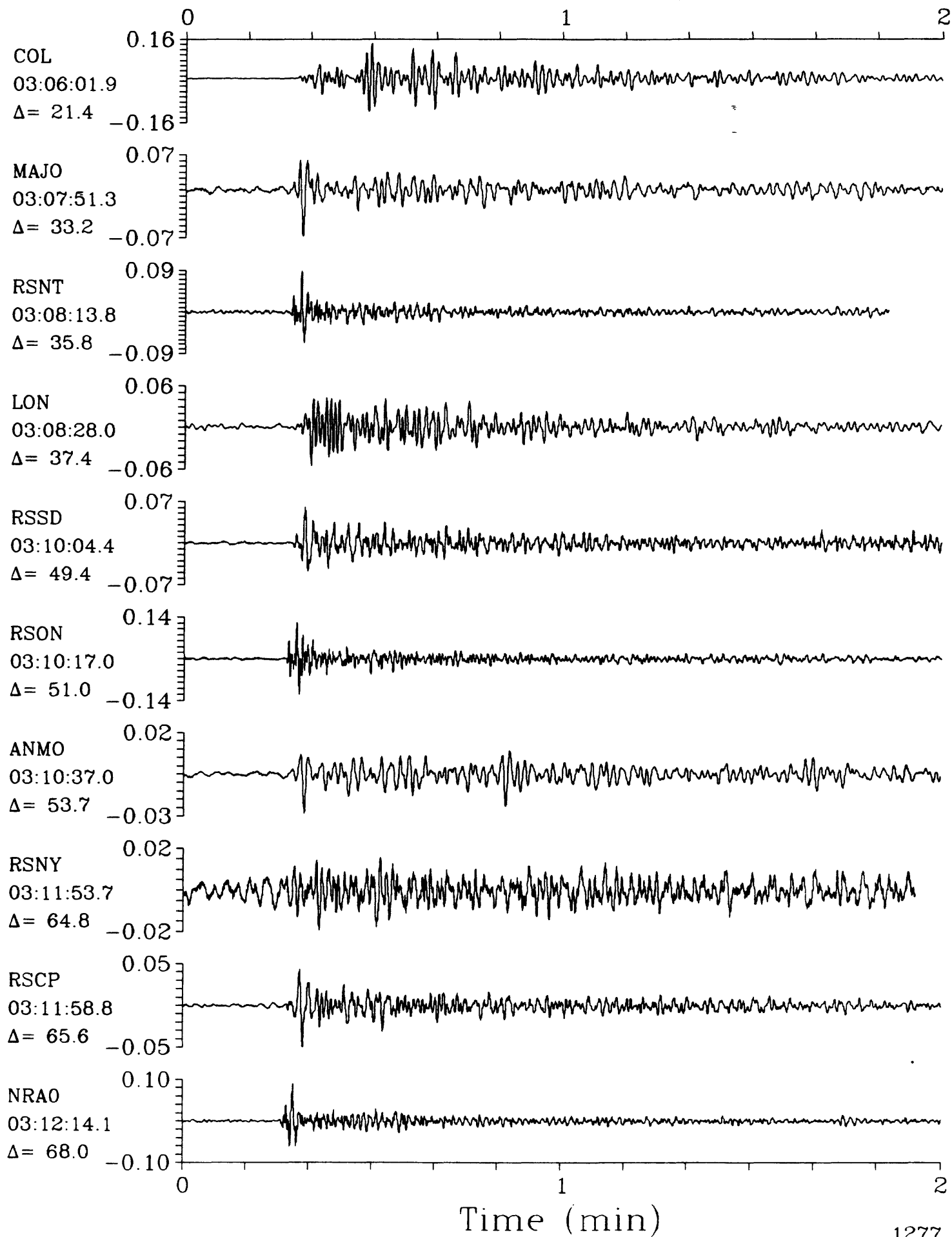
# Andreanof Islands, Aleutian Is.



SPZ

05 July 1986 03:01:32.63

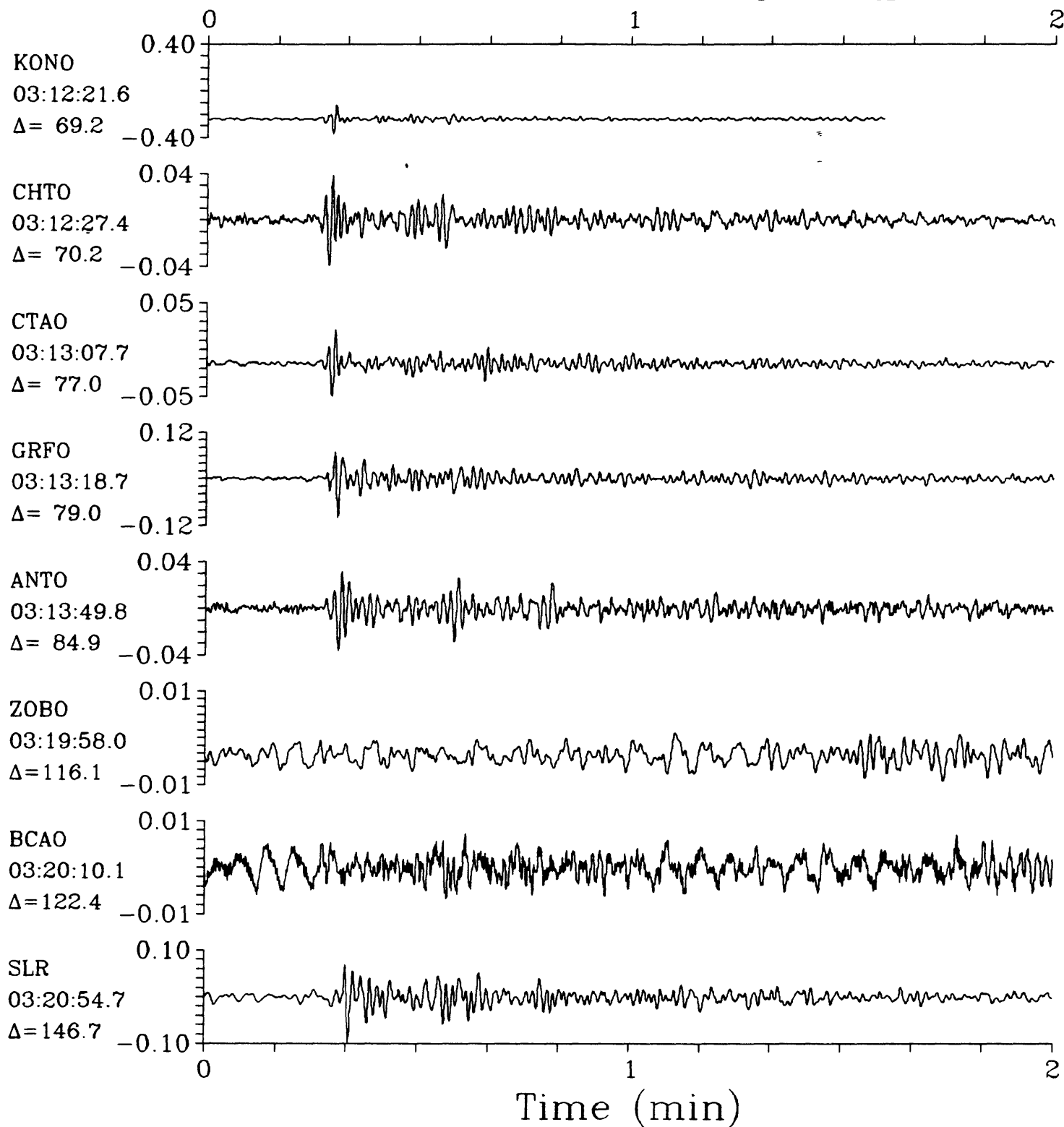
SPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.6$   $M_{sz}=5.2$ 

SPZ

05 July 1986 03:01:32.63

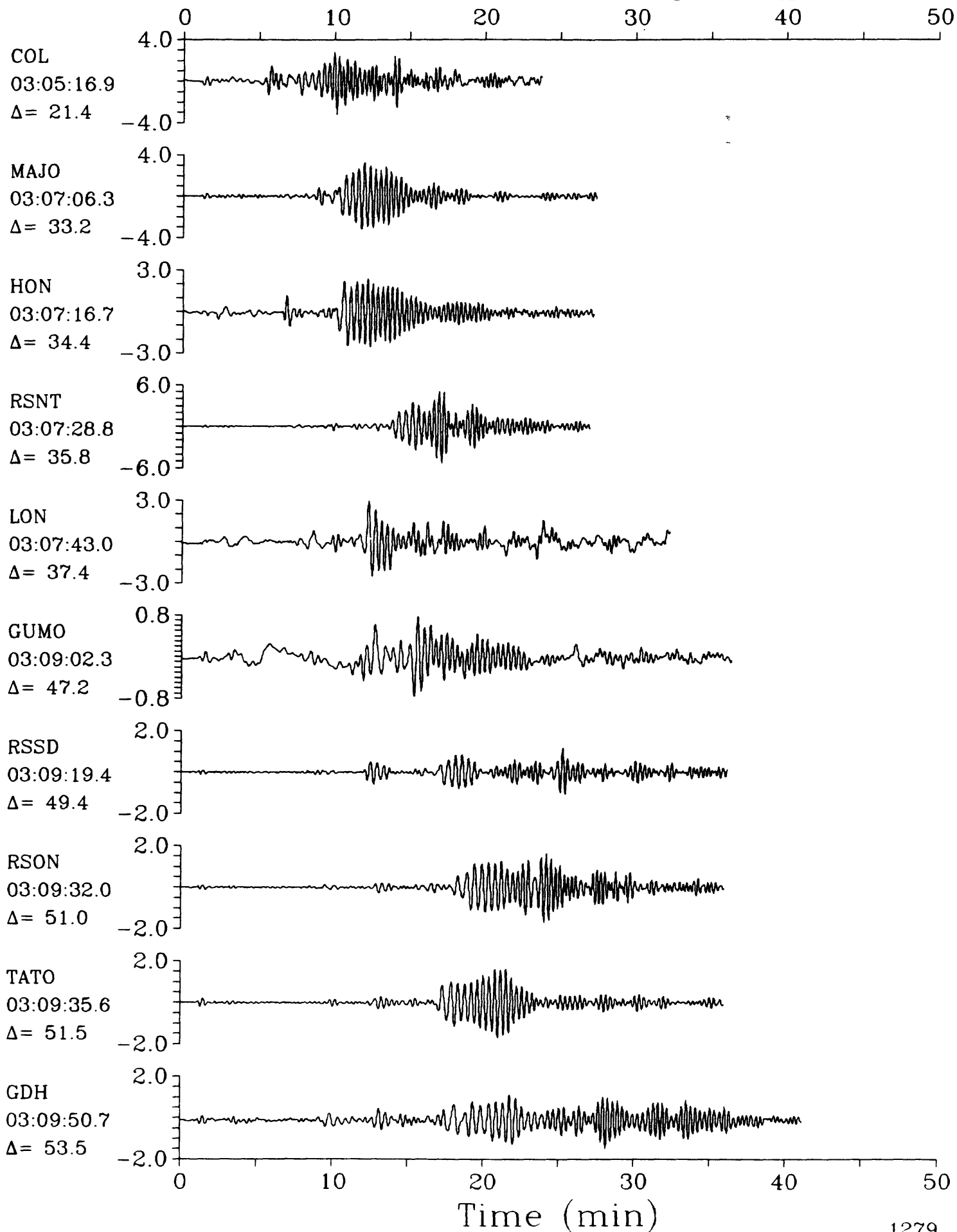
SPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.6$   $M_{sz}=5.2$ 

LPZ

05 July 1986 03:01:32.63

LPZ

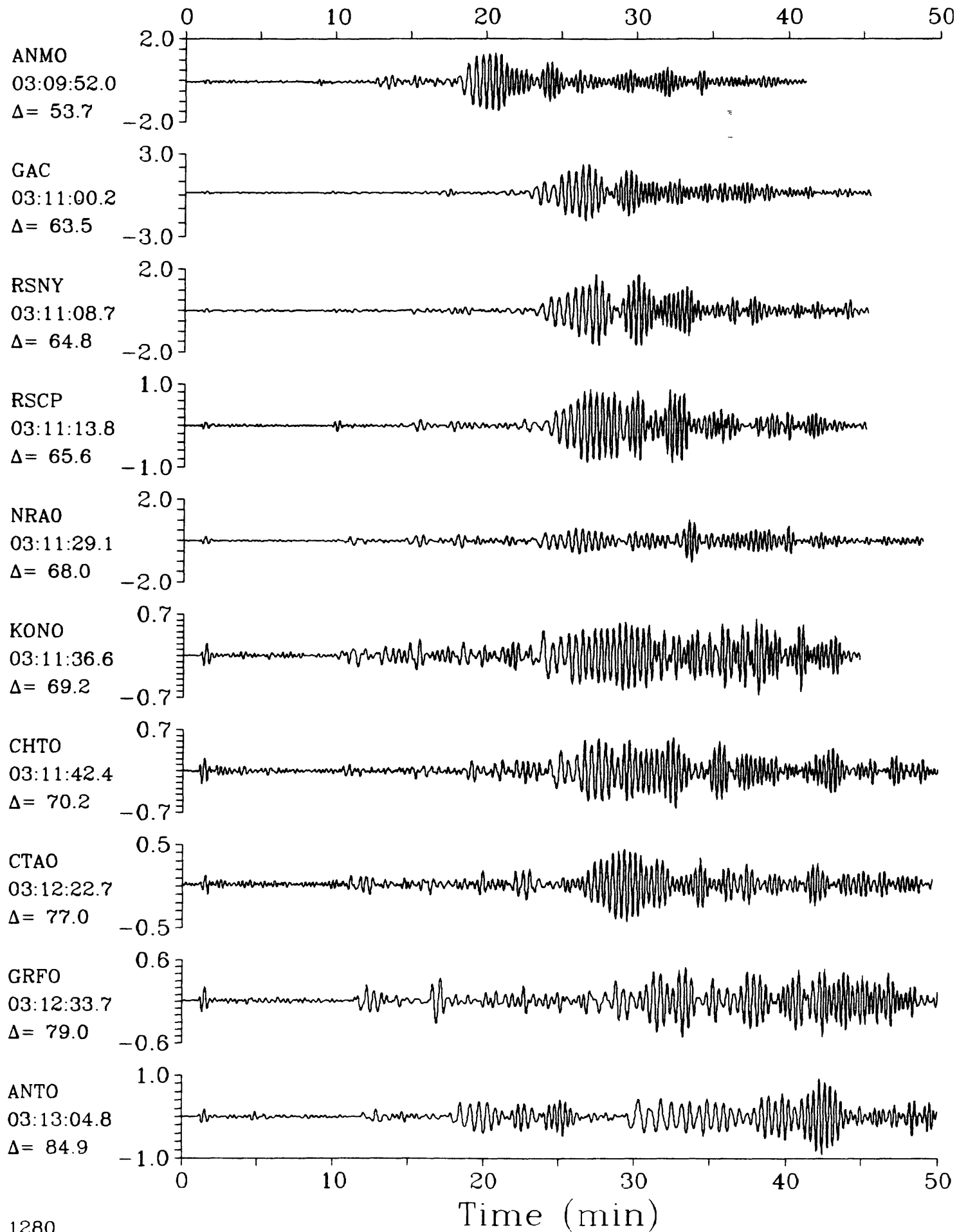
Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.6$   $M_{sz}=5.2$ 



LPZ

05 July 1986 03:01:32.63

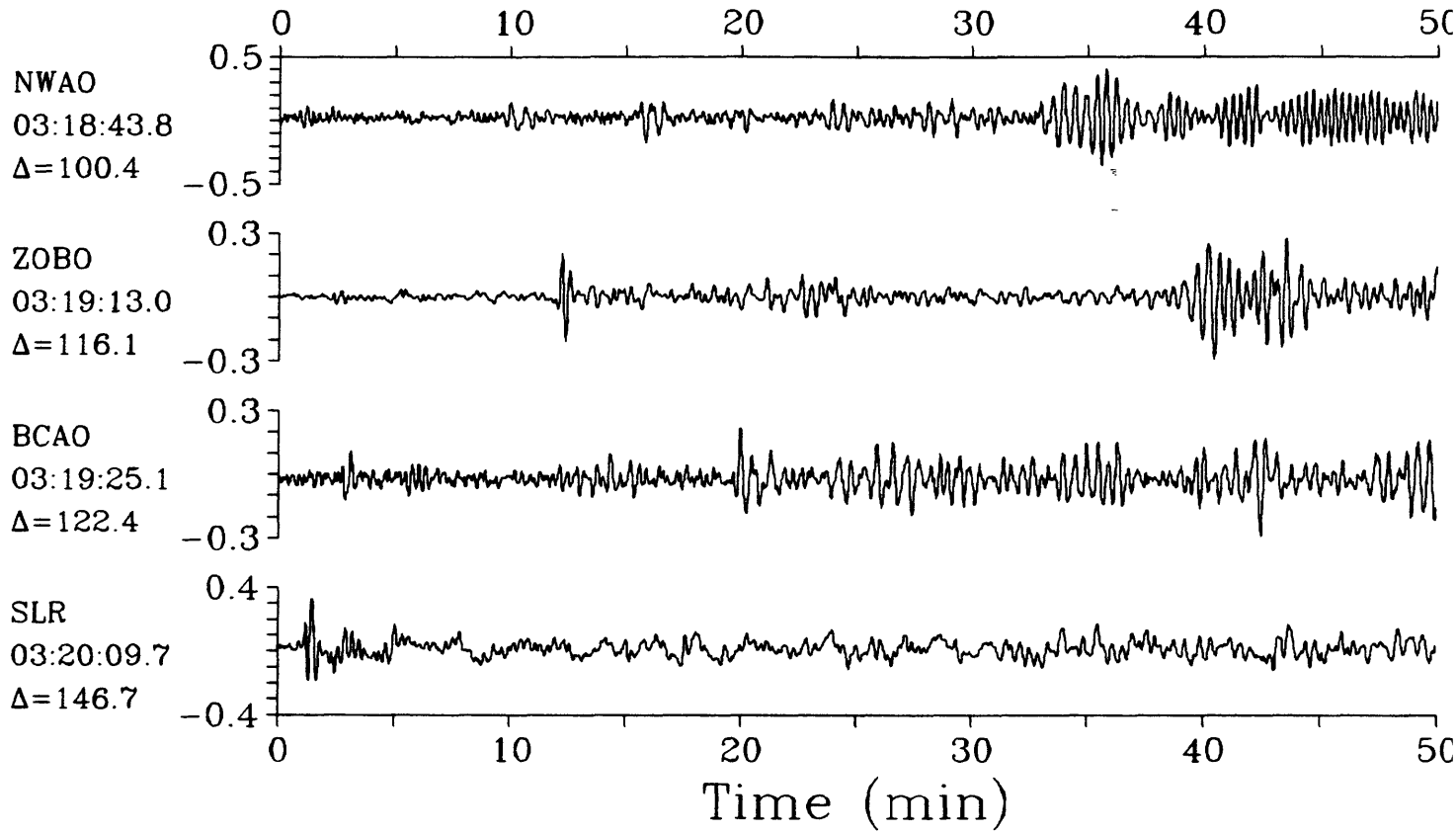
LPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.6$   $M_{sz}=5.2$ 

LPZ

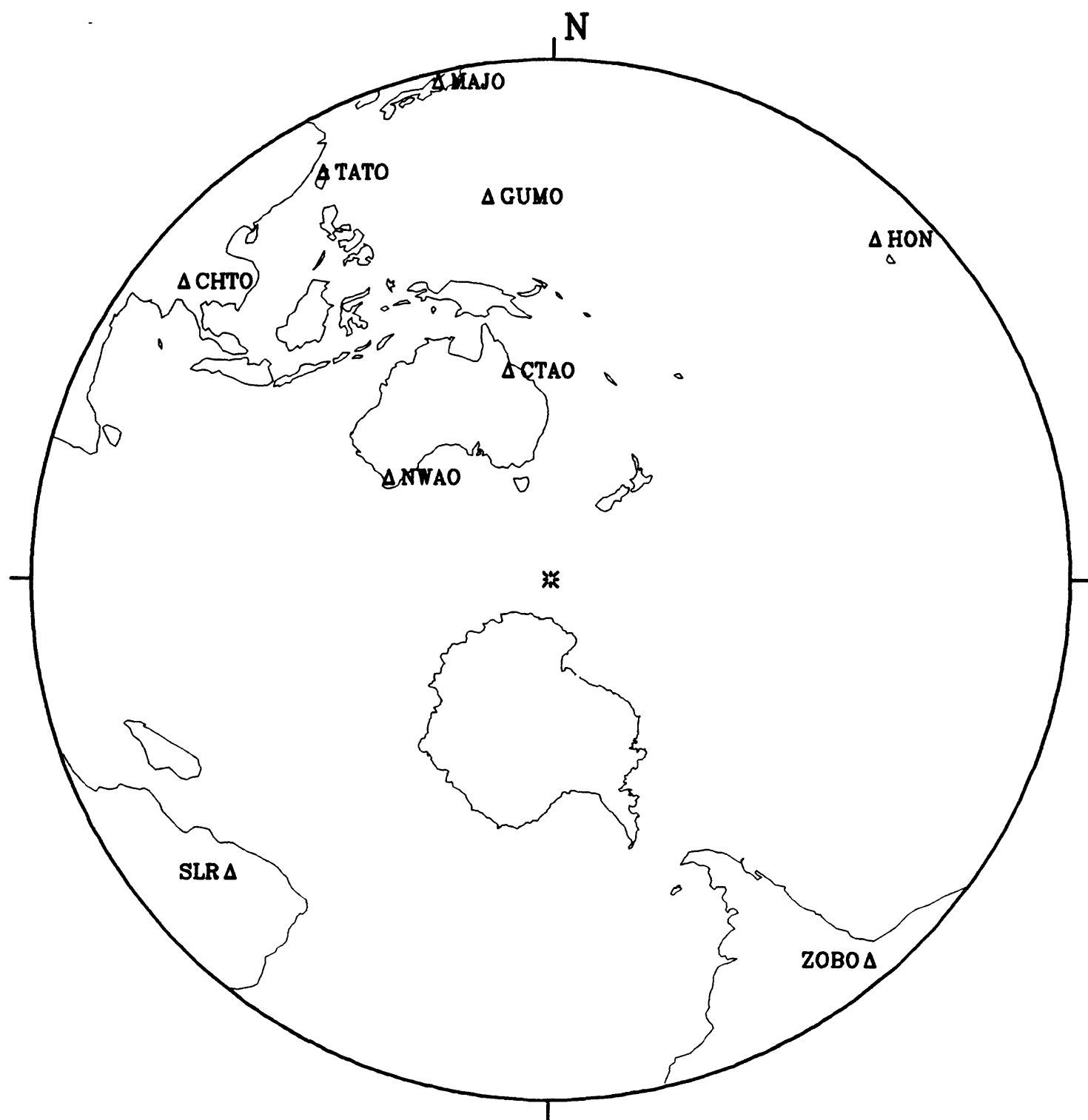
05 July 1986 03:01:32.63

LPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.6$   $M_{sz}=5.2$ 

05 July 1986 19:57:37.06

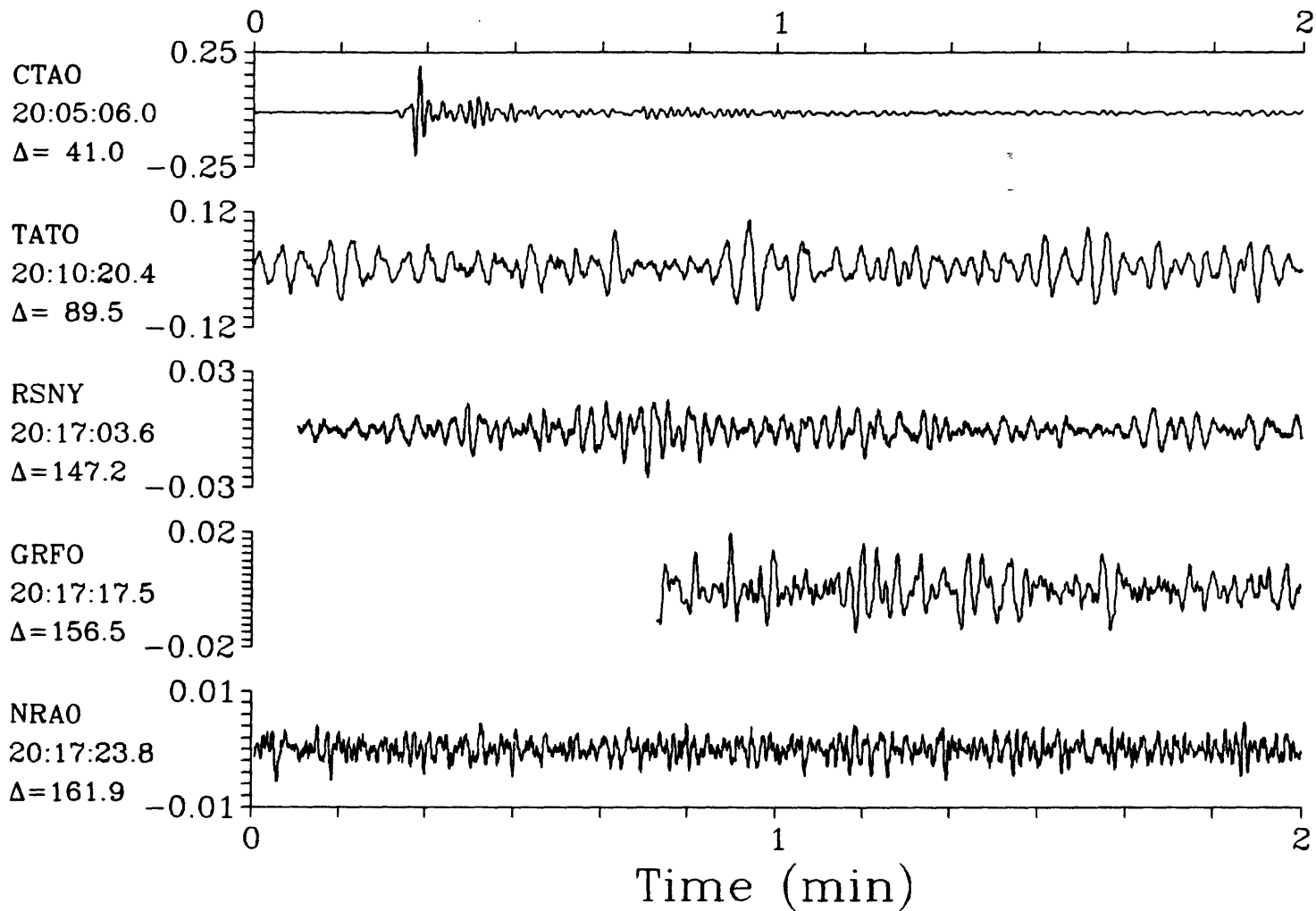
West of Macquarie Island



SPZ

05 July 1986 19:57:37.06

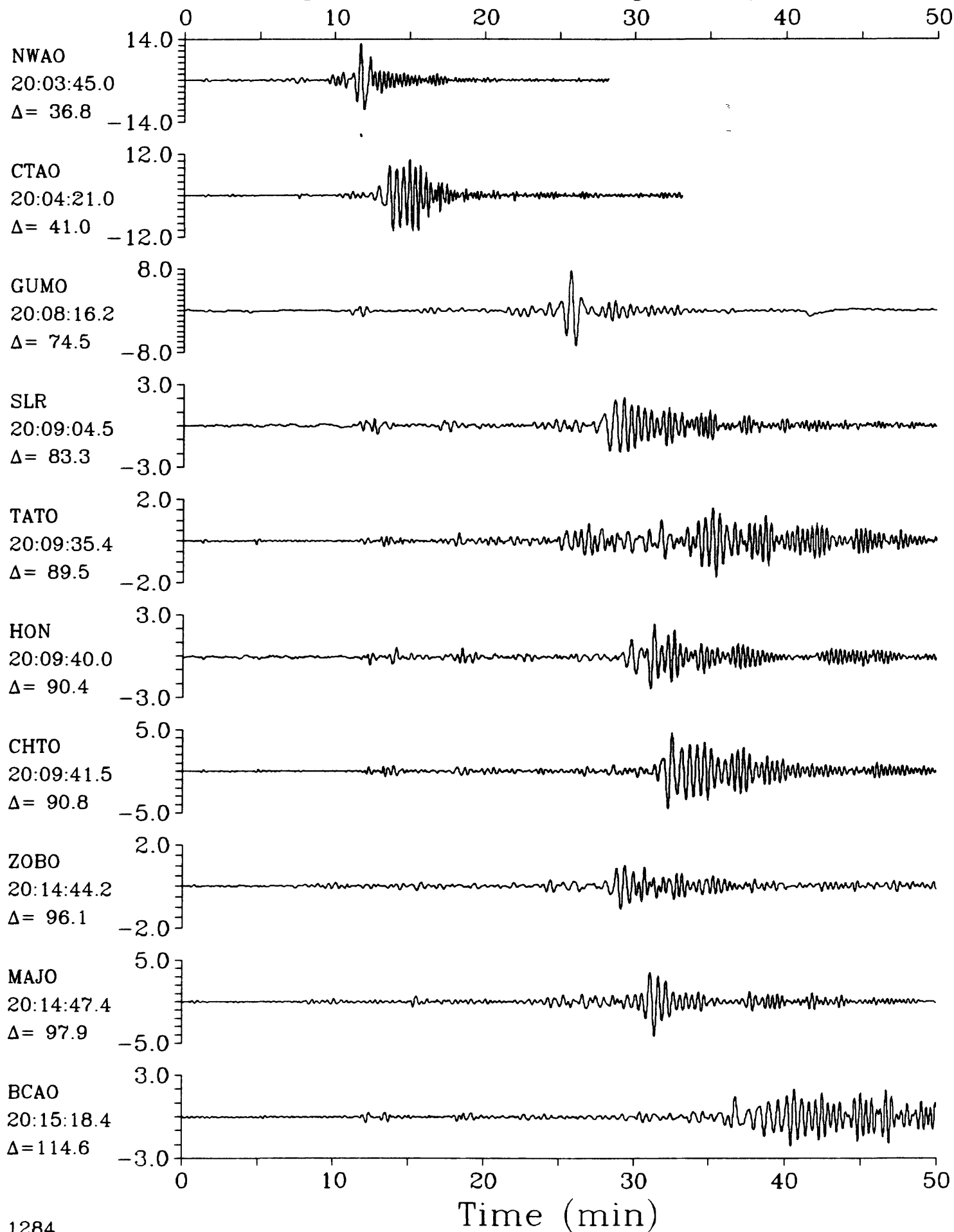
SPZ

West of Macquarie Island  $h=10.0$   $m_b=5.5$   $M_{sz}=5.6$ 

LPZ

05 July 1986 19:57:37.06

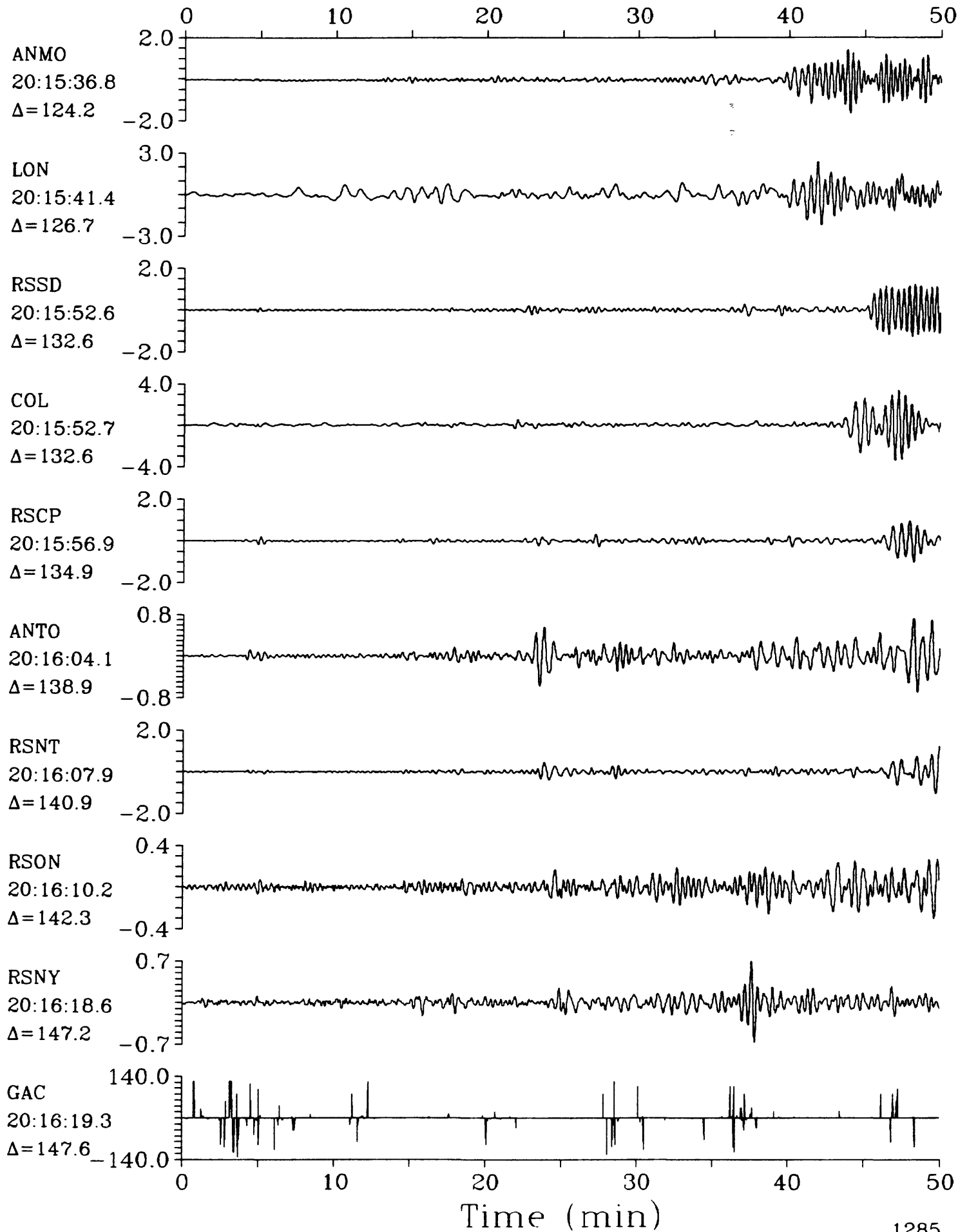
LPZ

West of Macquarie Island  $h=10.0$   $m_b=5.5$   $M_{sz}=5.6$ 

LPZ

05 July 1986 19:57:37.06

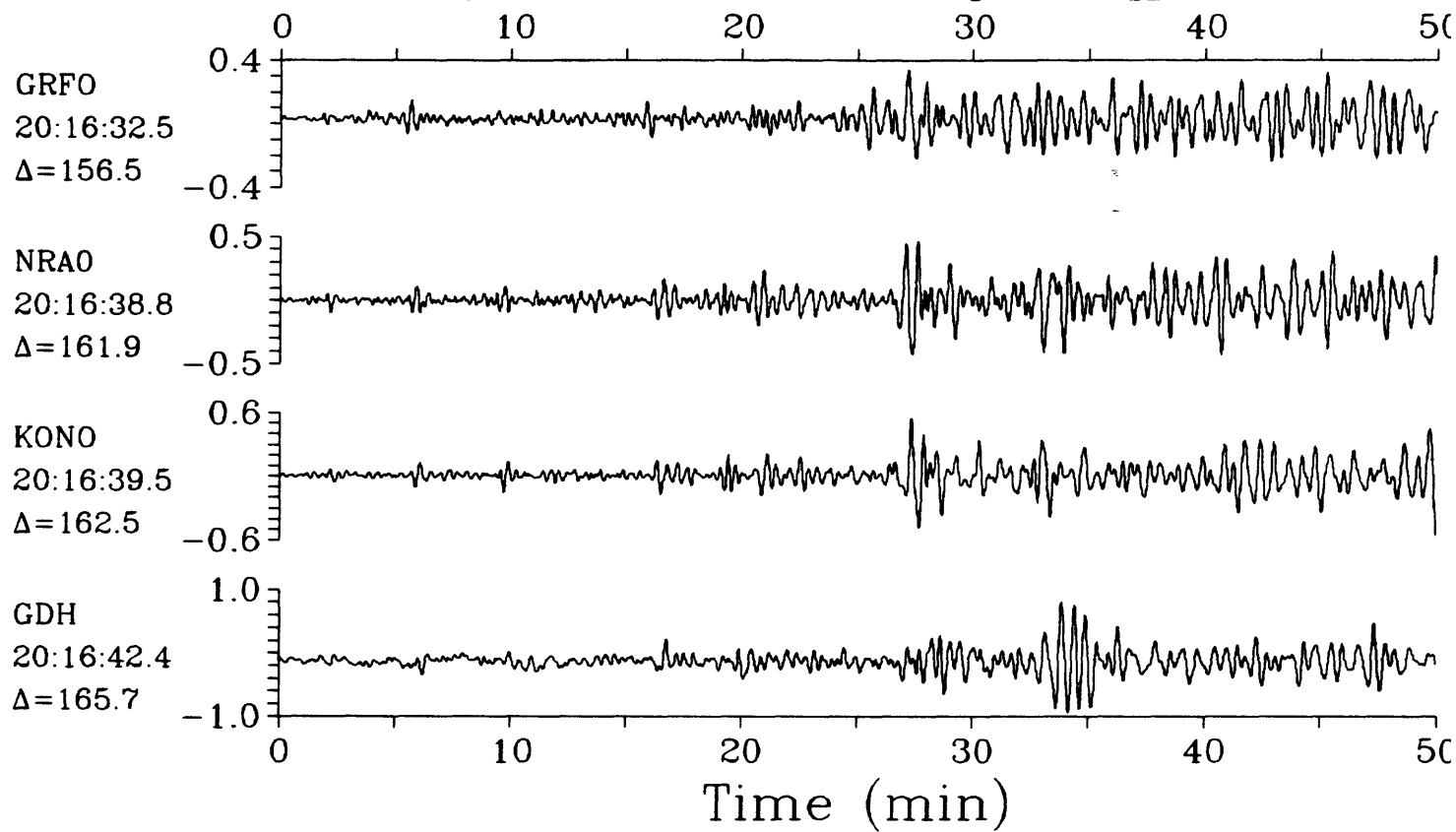
LPZ

West of Macquarie Island  $h=10.0$   $m_b=5.5$   $M_{sz}=5.6$ 

LPZ

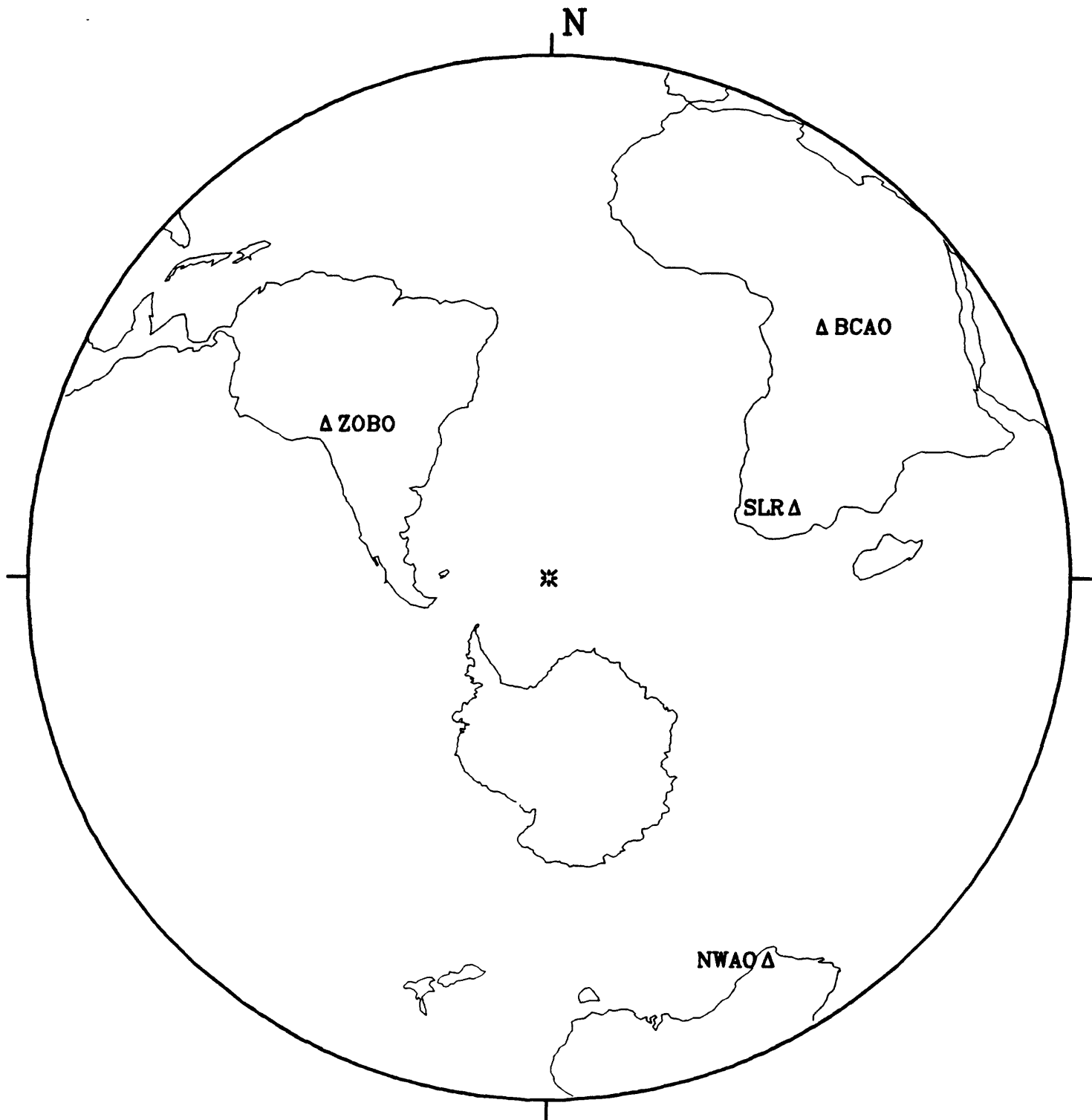
05 July 1986 19:57:37.06

LPZ

West of Macquarie Island  $h=10.0$   $m_b=5.5$   $M_{sz}=5.6$ 

05 July 1986 21:19:58.82

## South Sandwich Islands Region

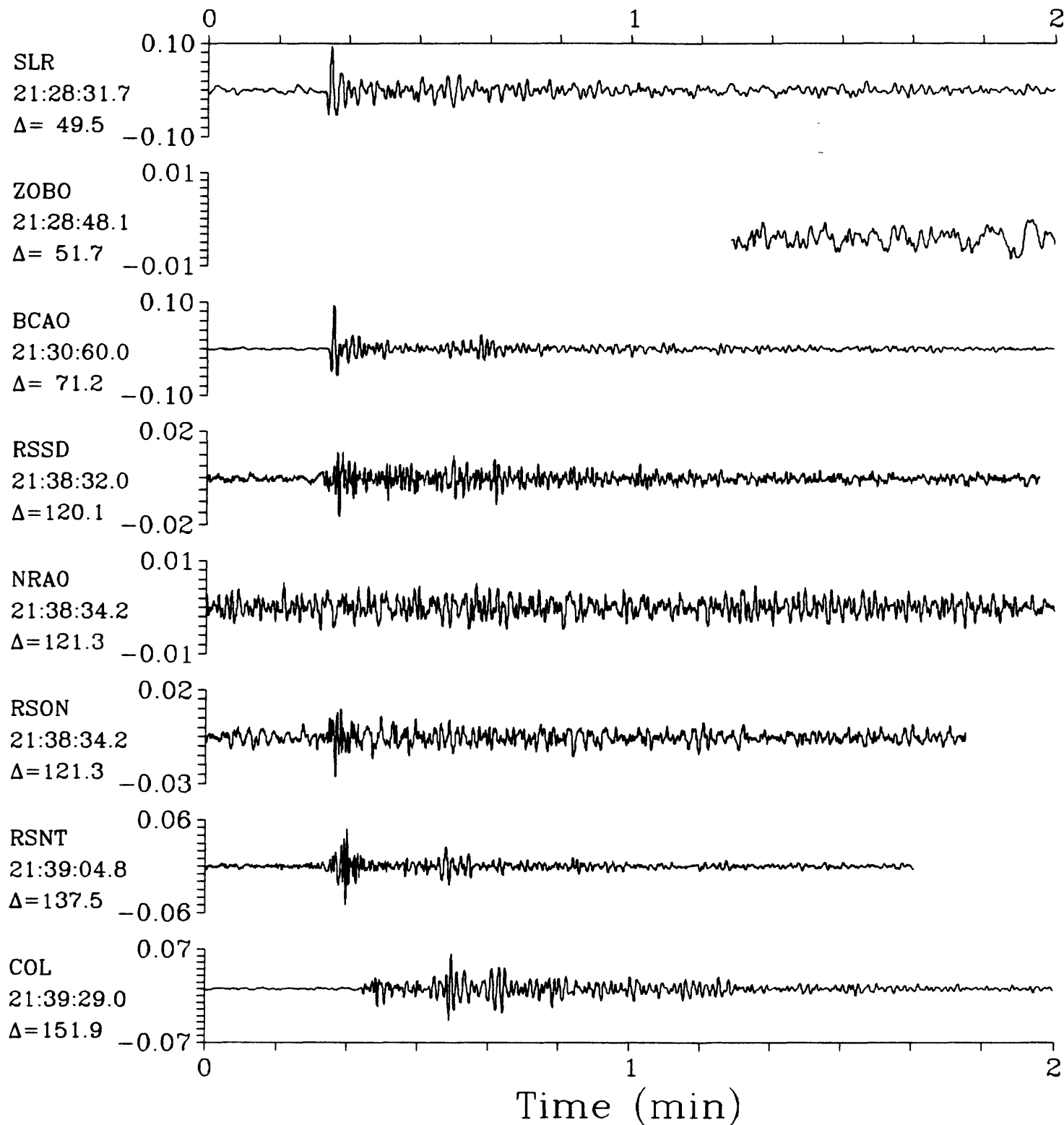




SPZ

05 July 1986 21:19:58.82

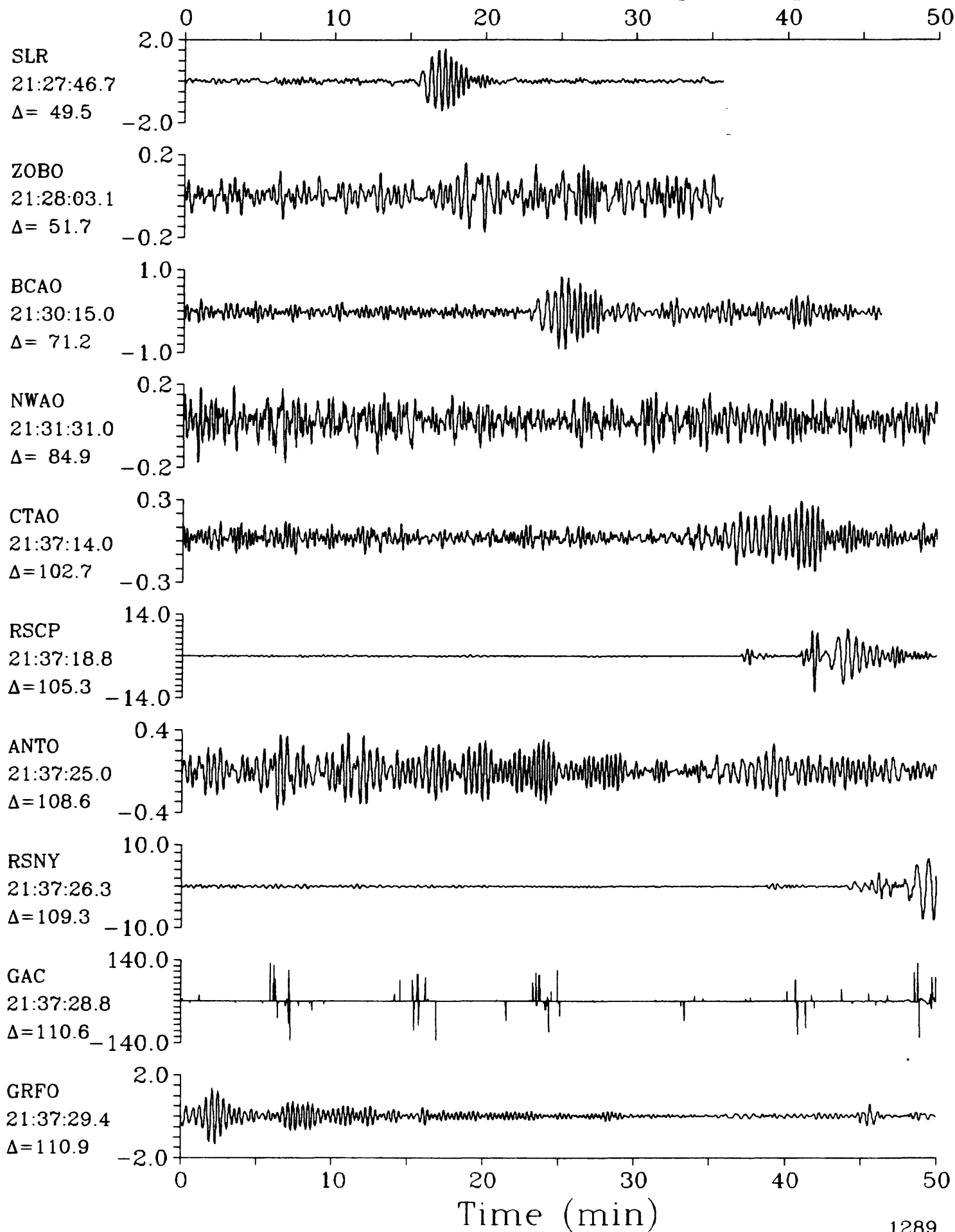
SPZ

South Sandwich Islands Region  $h=33.0$   $m_b=5.6$   $M_{sz}=5.2$ 

LPZ

05 July 1986 21:19:58.82

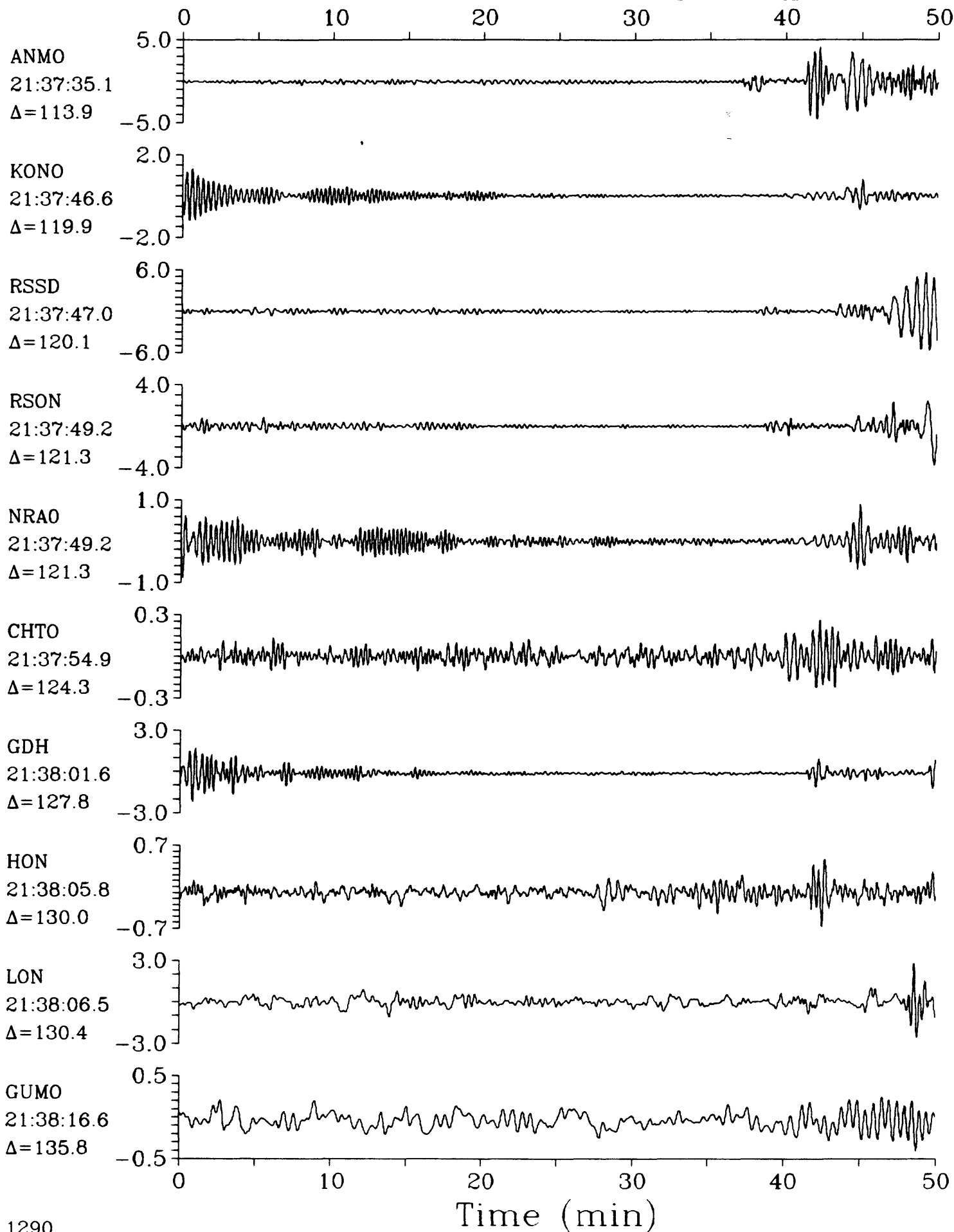
LPZ

South Sandwich Islands Region  $h=33.0$   $m_b=5.6$   $M_{SZ}=5.2$ 

LPZ

05 July 1986 21:19:58.82

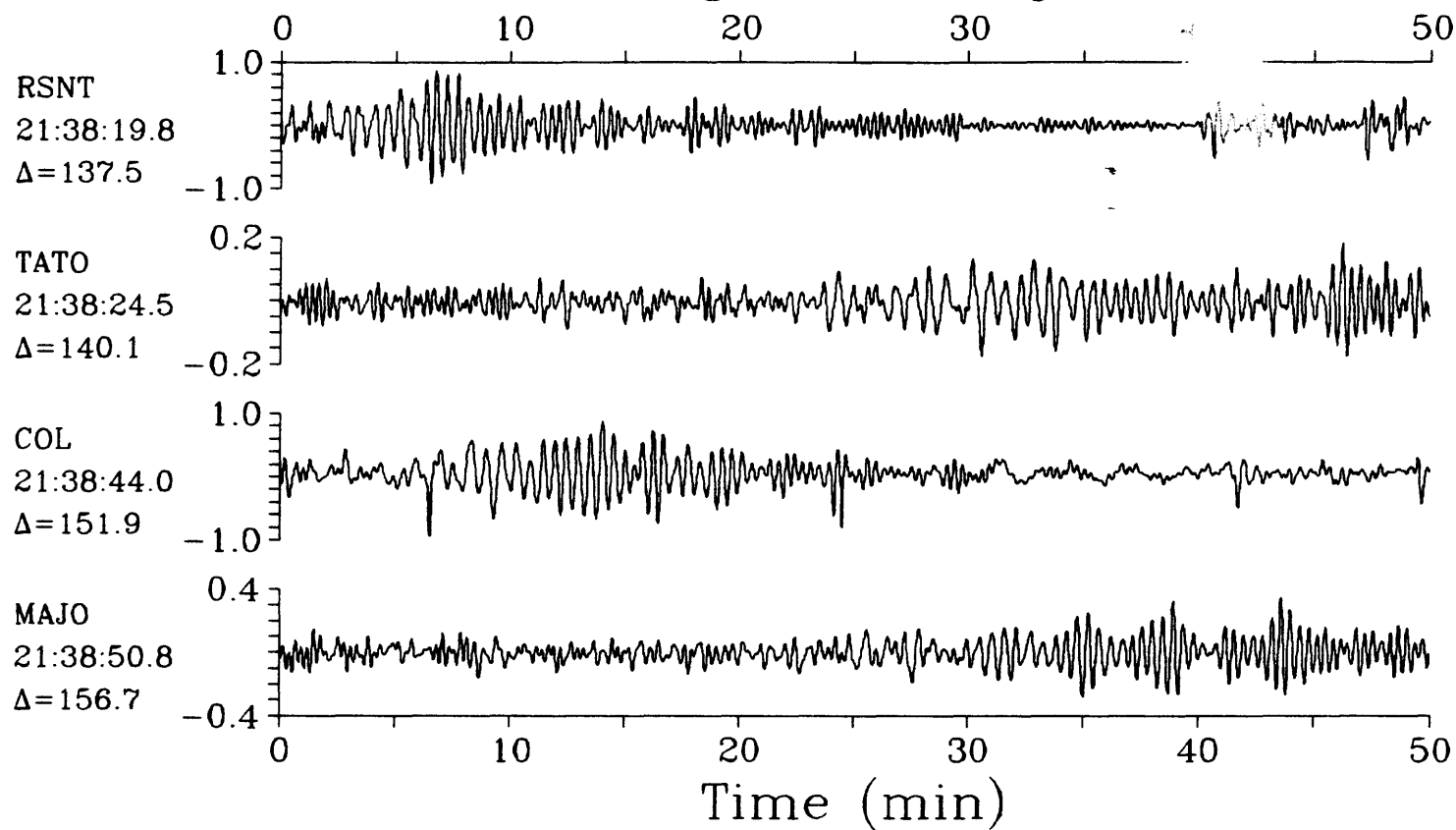
LPZ

South Sandwich Islands Region  $h=33.0$   $m_b=5.6$   $M_{sz}=5.2$ 

LPZ

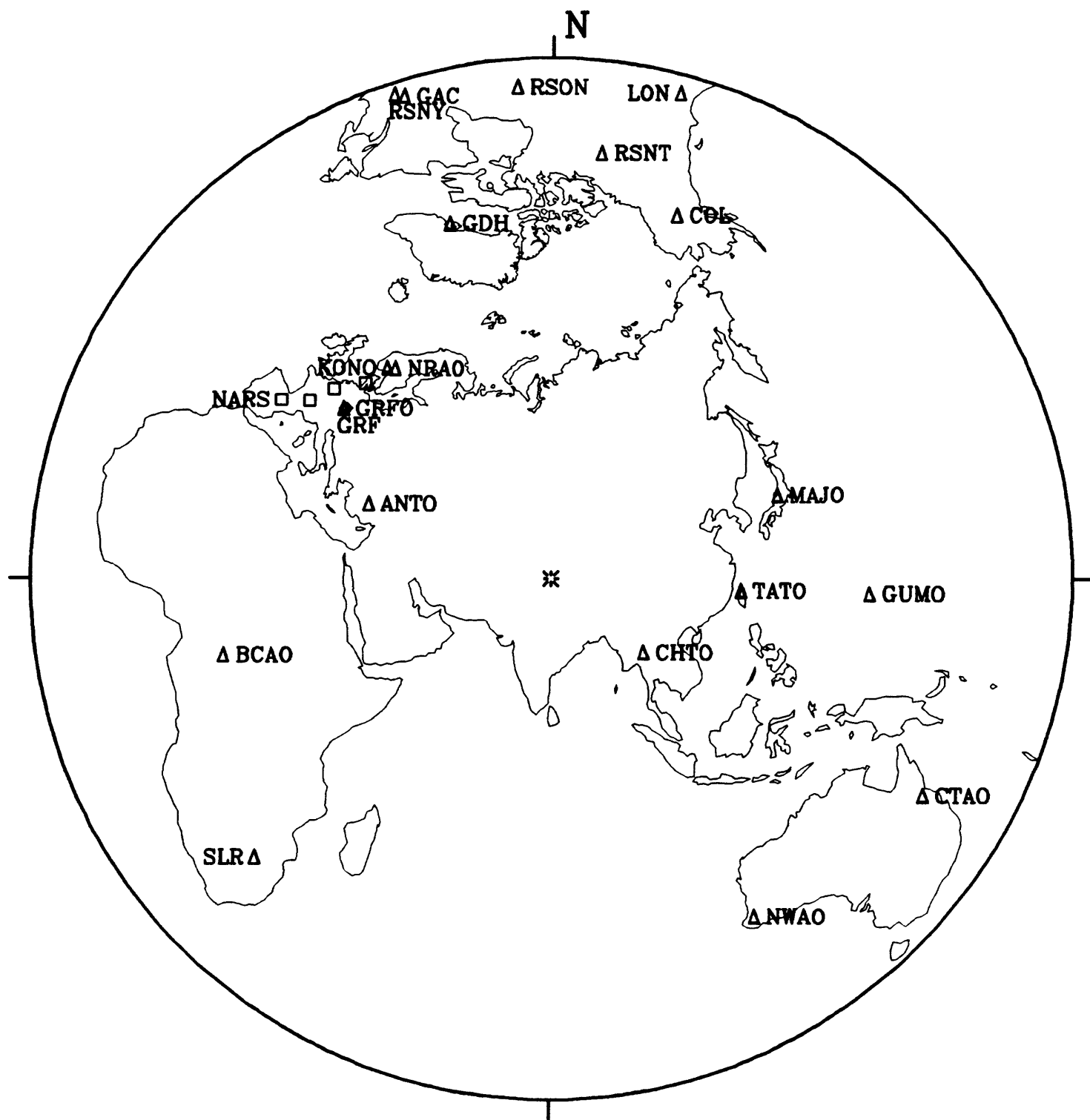
05 July 1986 21:19:58.82

LPZ

South Sandwich Islands Region  $h=33.0$   $m_b=5.6$   $M_s=5.2$ 

06 July 1986 19:24:26.34

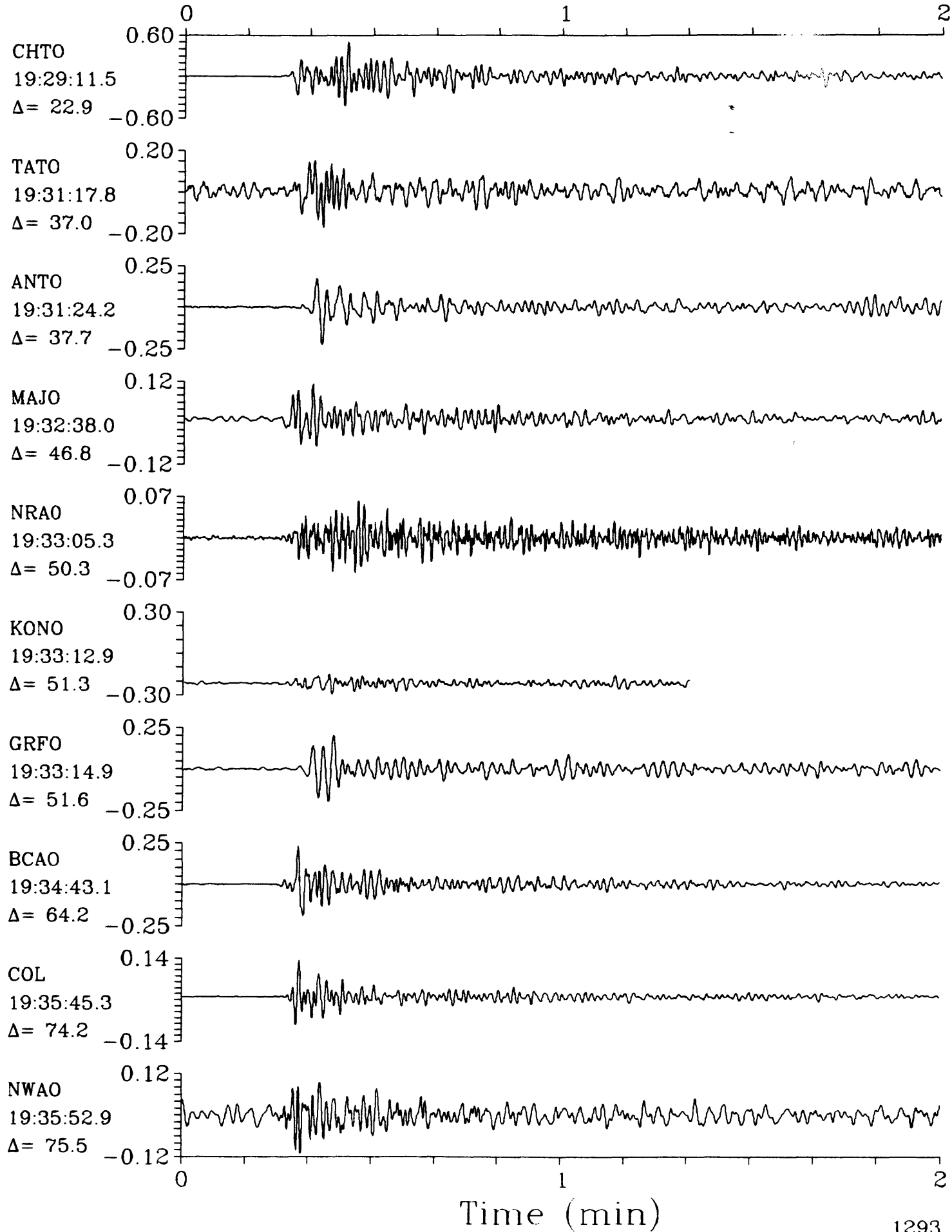
# Tibet



SPZ

06 July 1986 19:24:26.34  
Tibet  $h=33.0$   $m_b=5.8$   $M_{sz}=6.1$ 

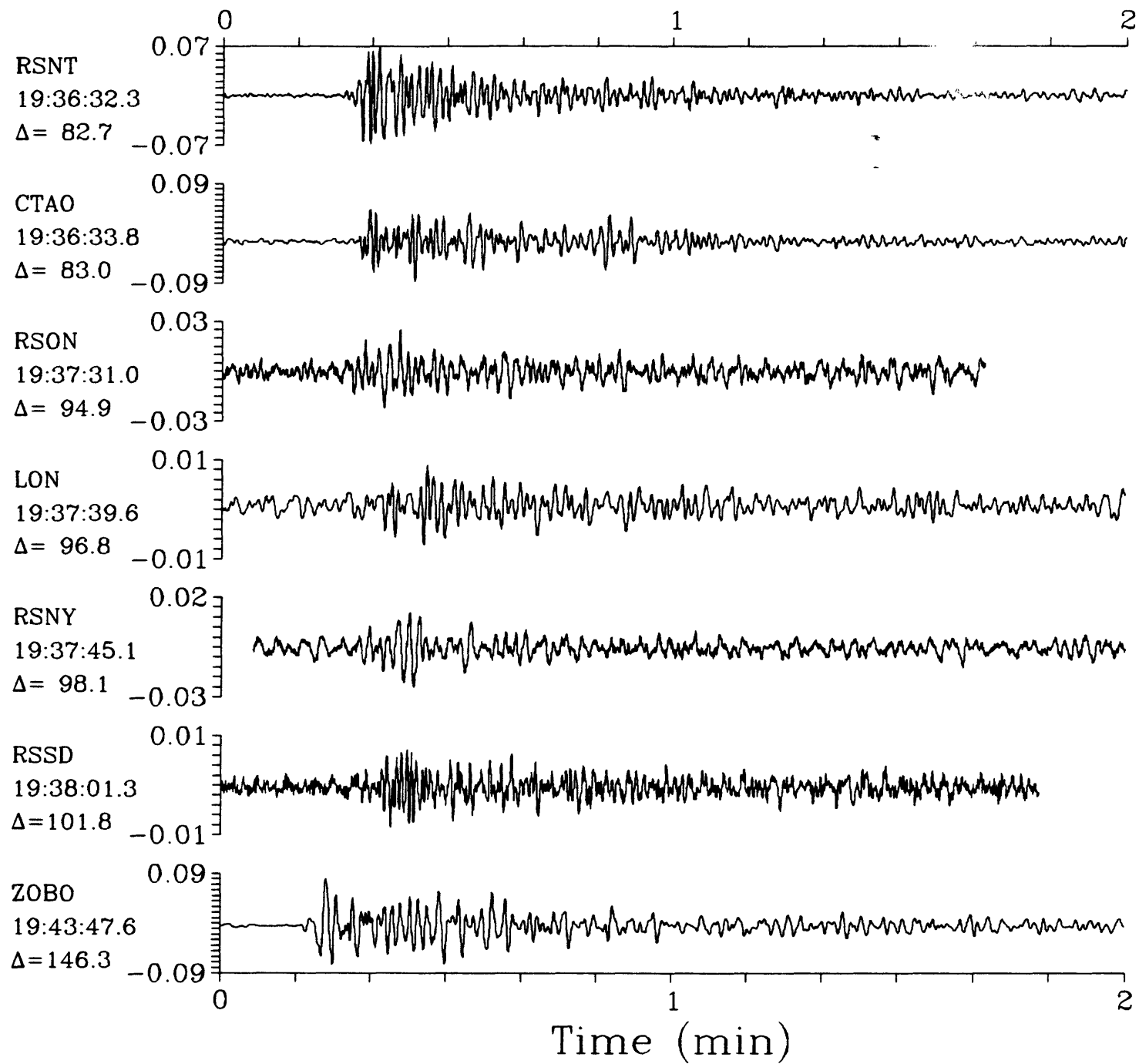
SPZ



SPZ

06 July 1986 19:24:26.34  
Tibet  $h=33.0$   $m_b=5.8$   $M_{sz}=6.1$ 

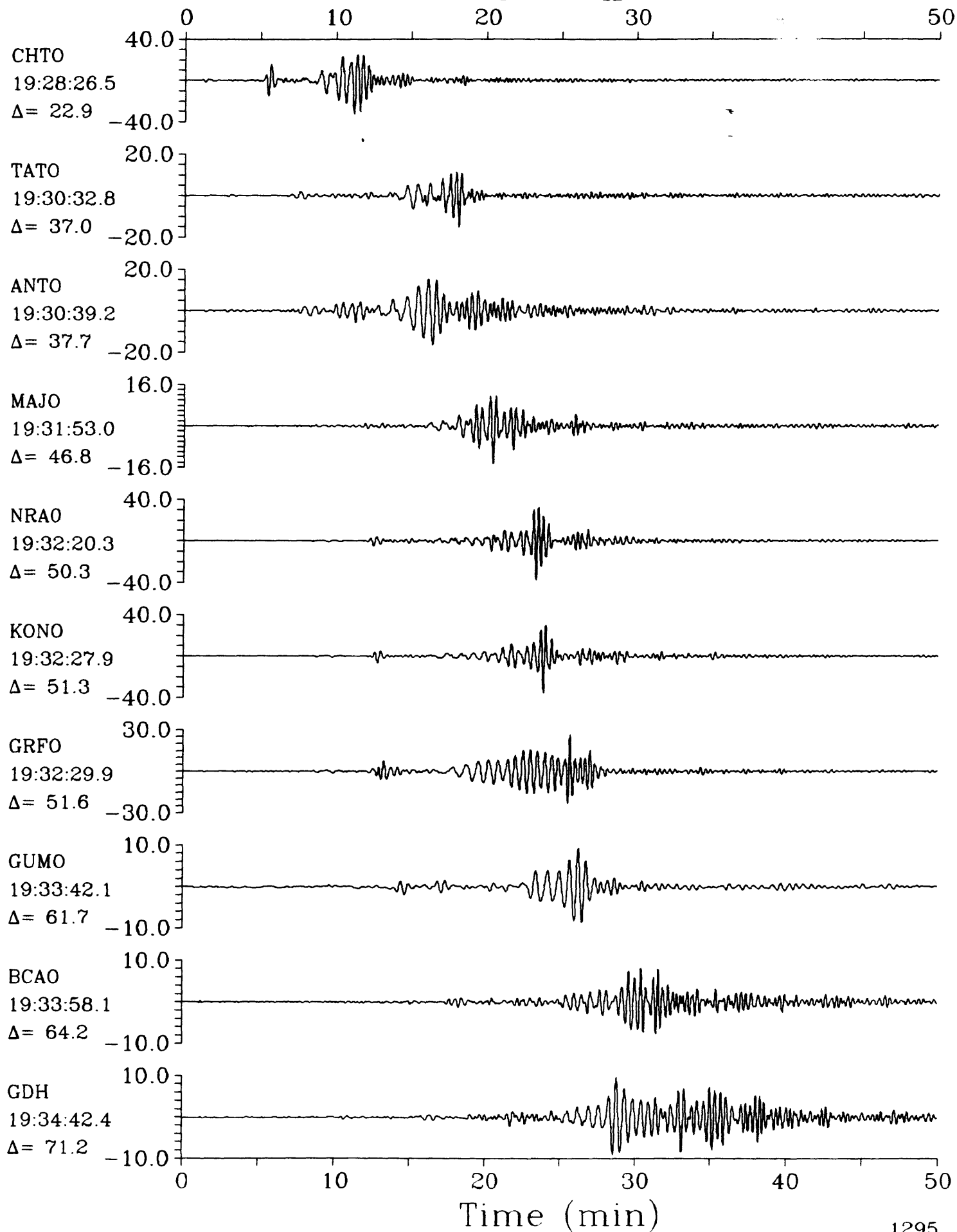
SPZ



LPZ

06 July 1986 19:24:26.34  
Tibet  $h=33.0$   $m_b=5.8$   $M_{sz}=6.1$ 

LPZ

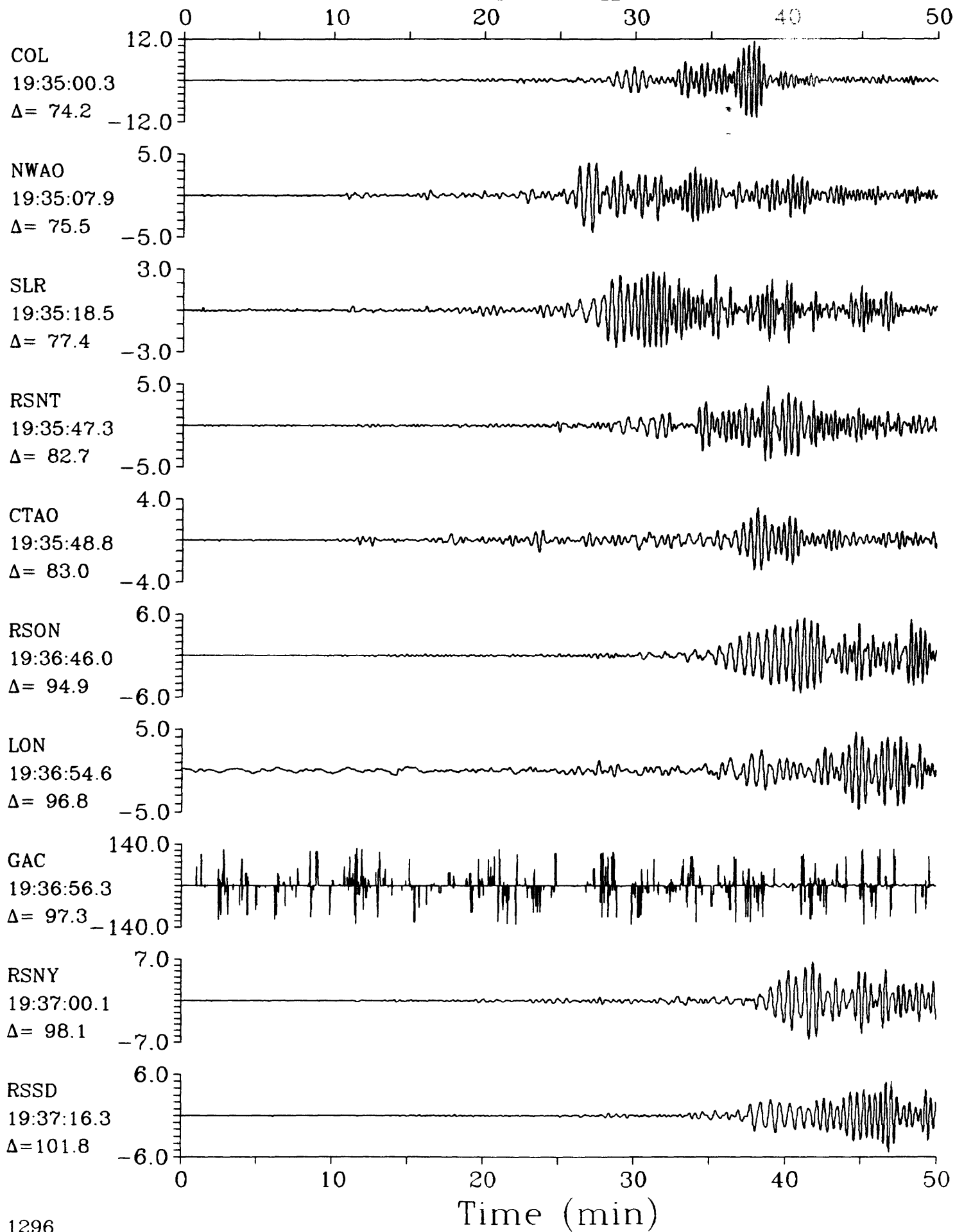




LPZ

06 July 1986 19:24:26.34  
Tibet  $h=33.0$   $m_b=5.8$   $M_{sz}=6.1$ 

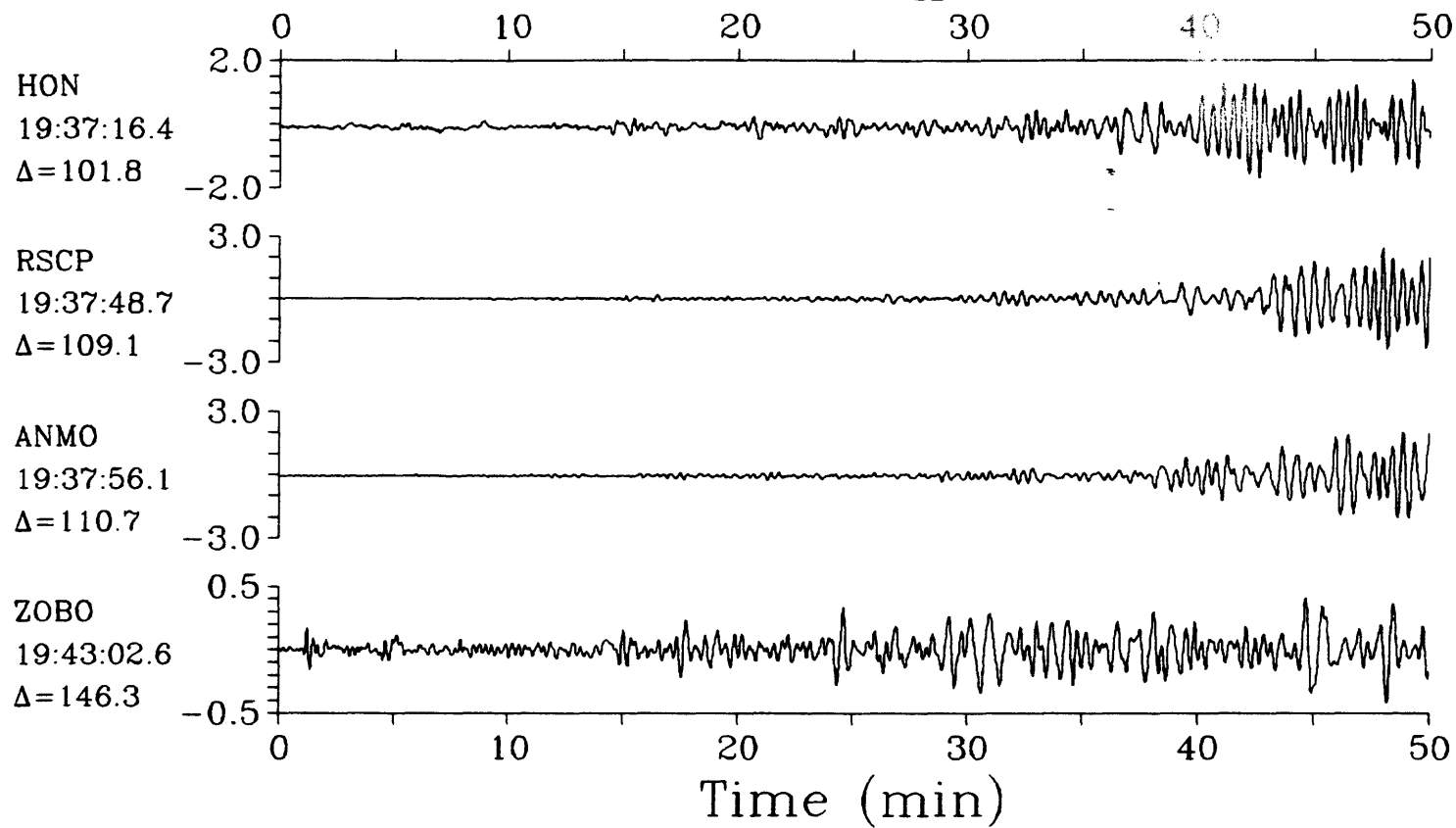
LPZ



LPZ

06 July 1986 19:24:26.34  
Tibet  $h=33.0$   $m_b=5.8$   $M_{sz}=6.1$

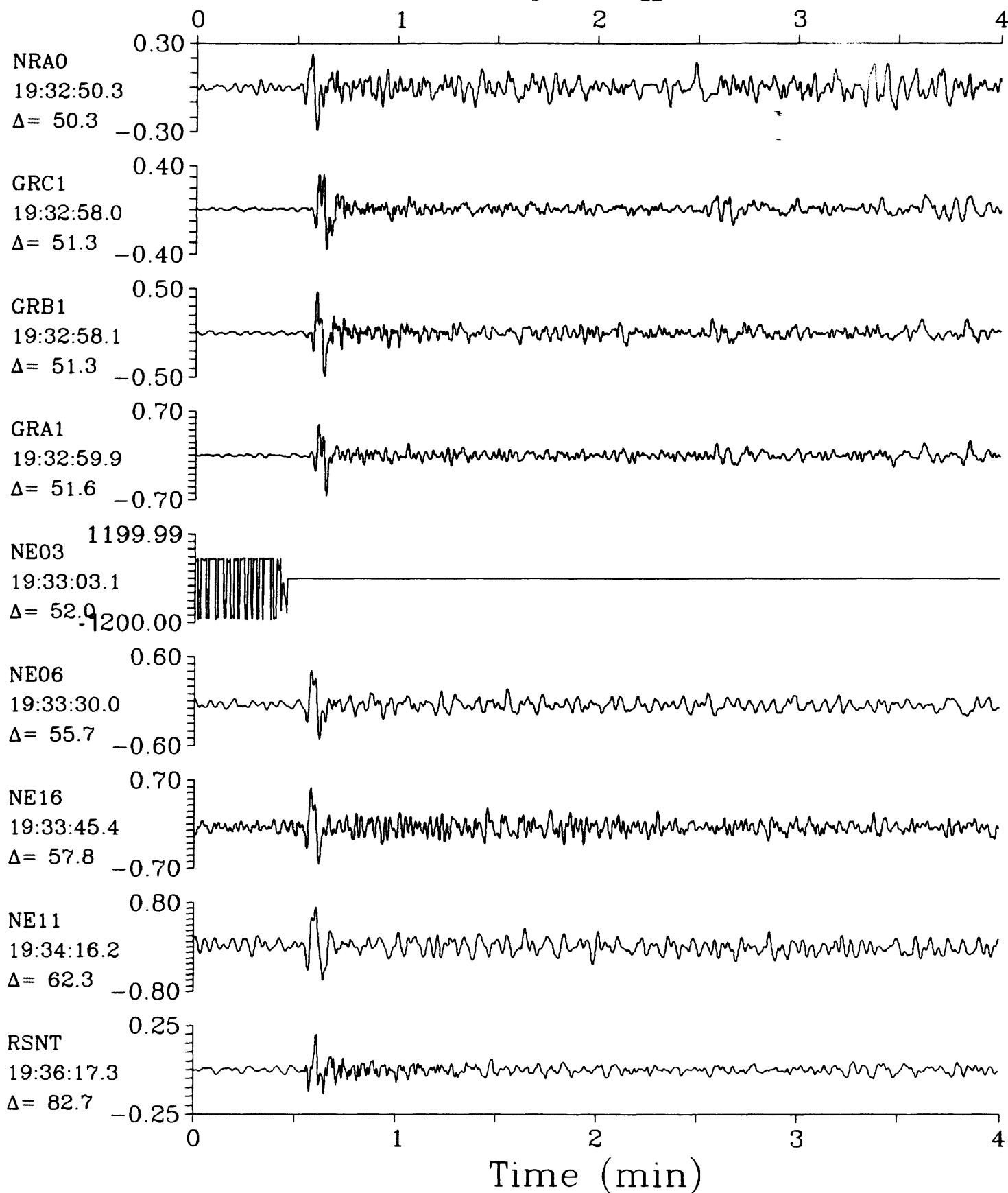
LPZ



IPZ

06 July 1986 19:24:26.34  
Tibet  $h=33.0$   $m_b=5.8$   $M_{SZ}=6.1$ 

IPZ



07 July 1986 16:26:56.85

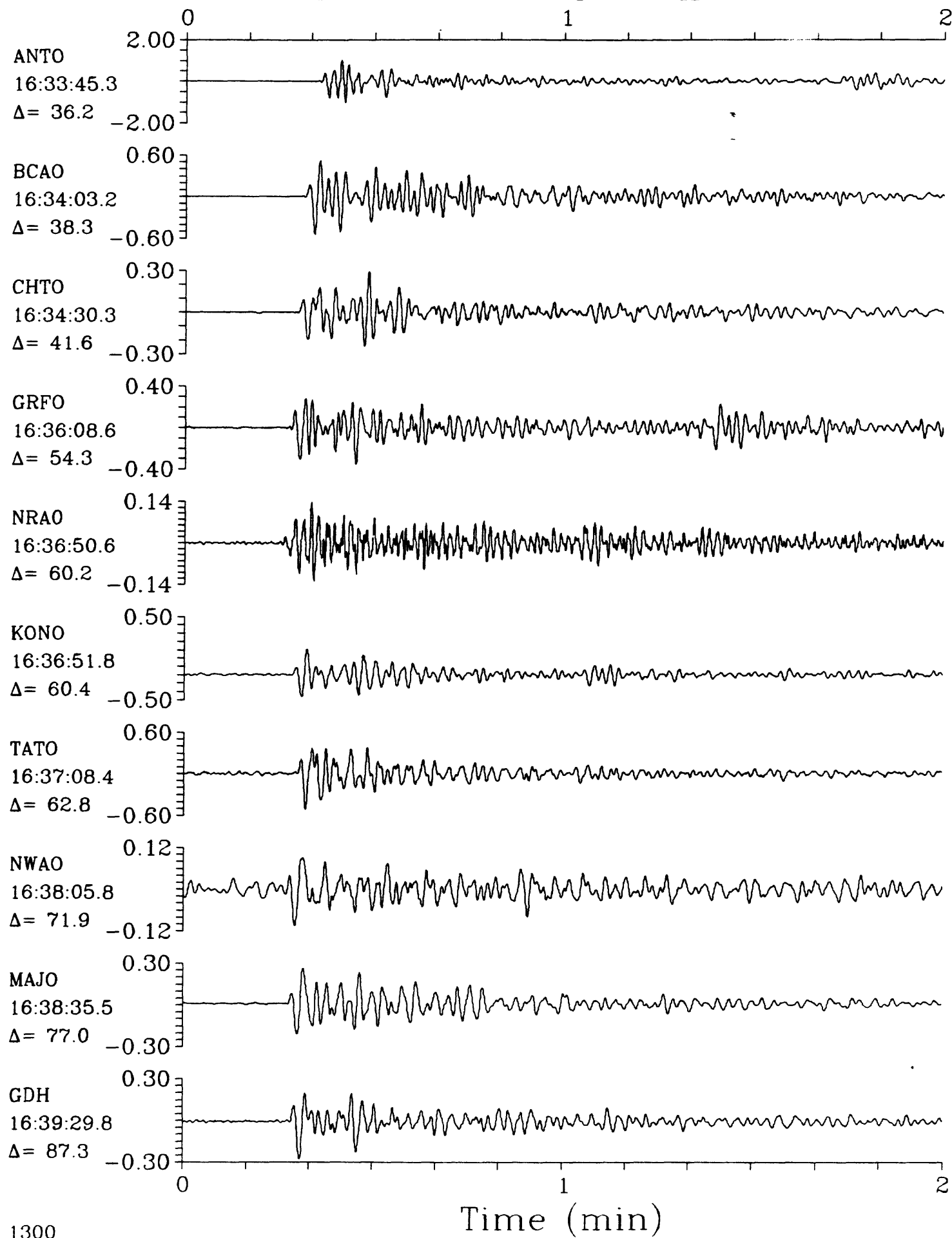
## Carlsberg Ridge



SPZ

07 July 1986 16:26:56.85  
Carlsberg Ridge  $h=10.0$   $m_b=6.4$   $M_{sz}=6.1$ 

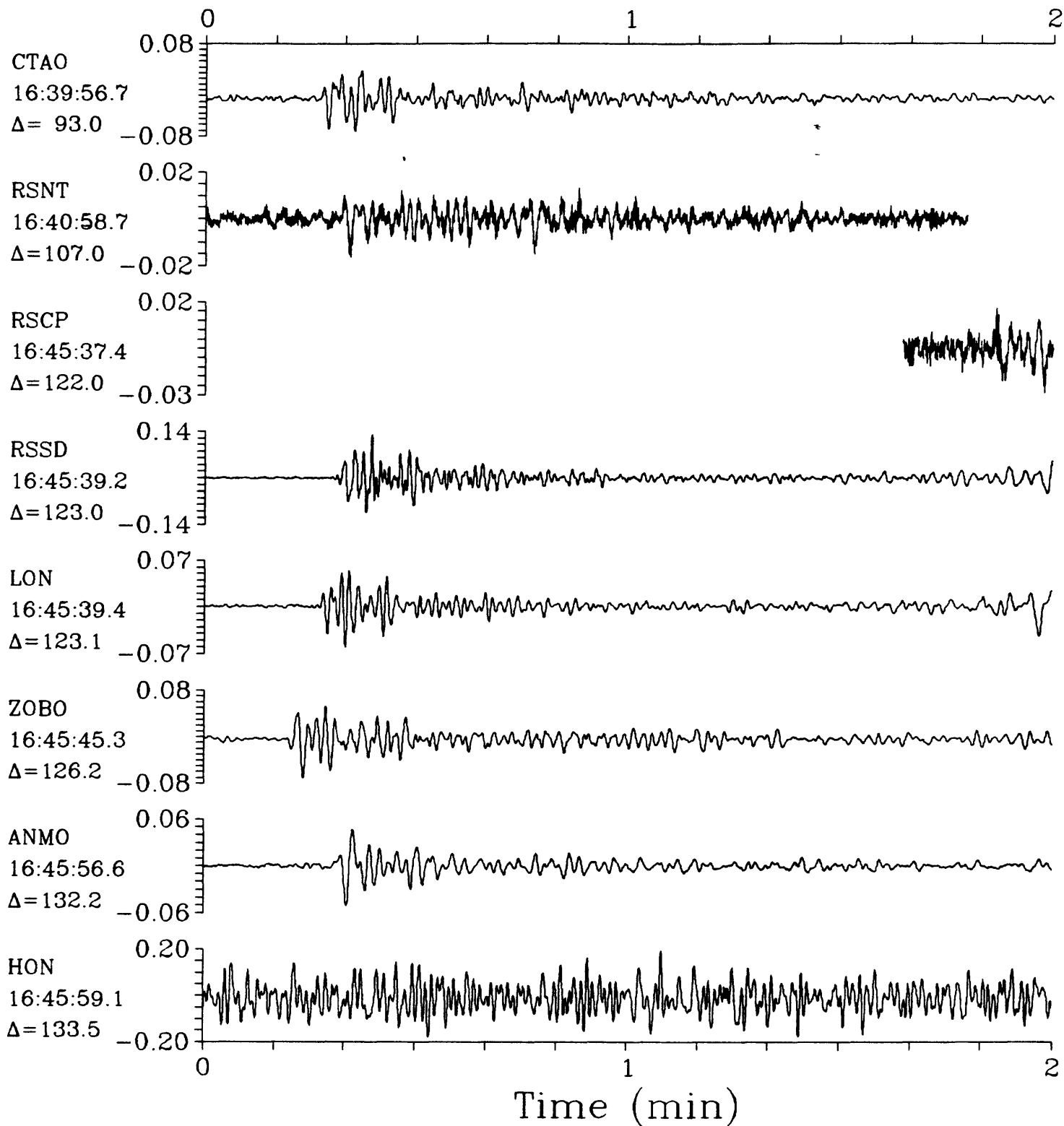
SPZ

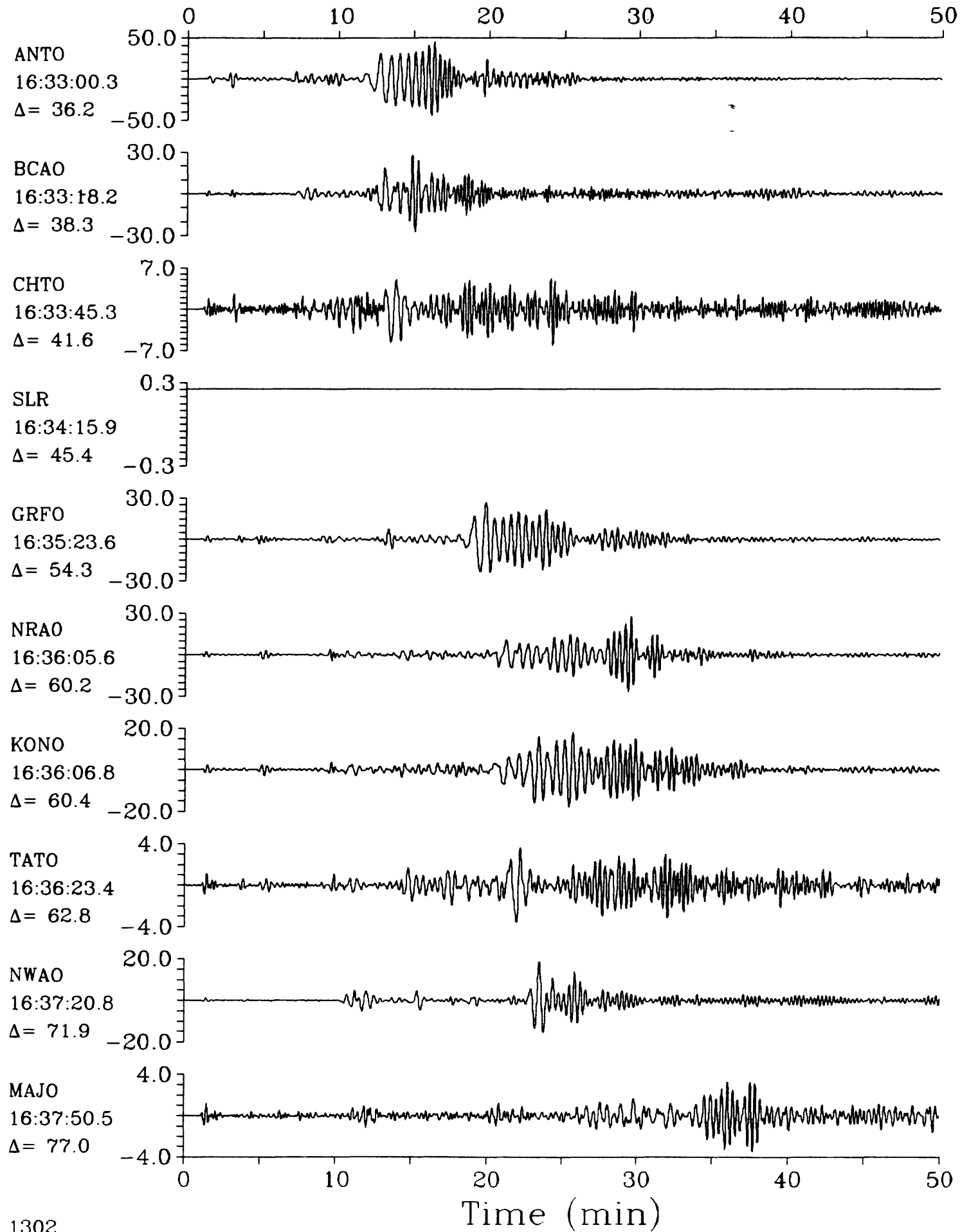


SPZ

07 July 1986 16:26:56.85

SPZ

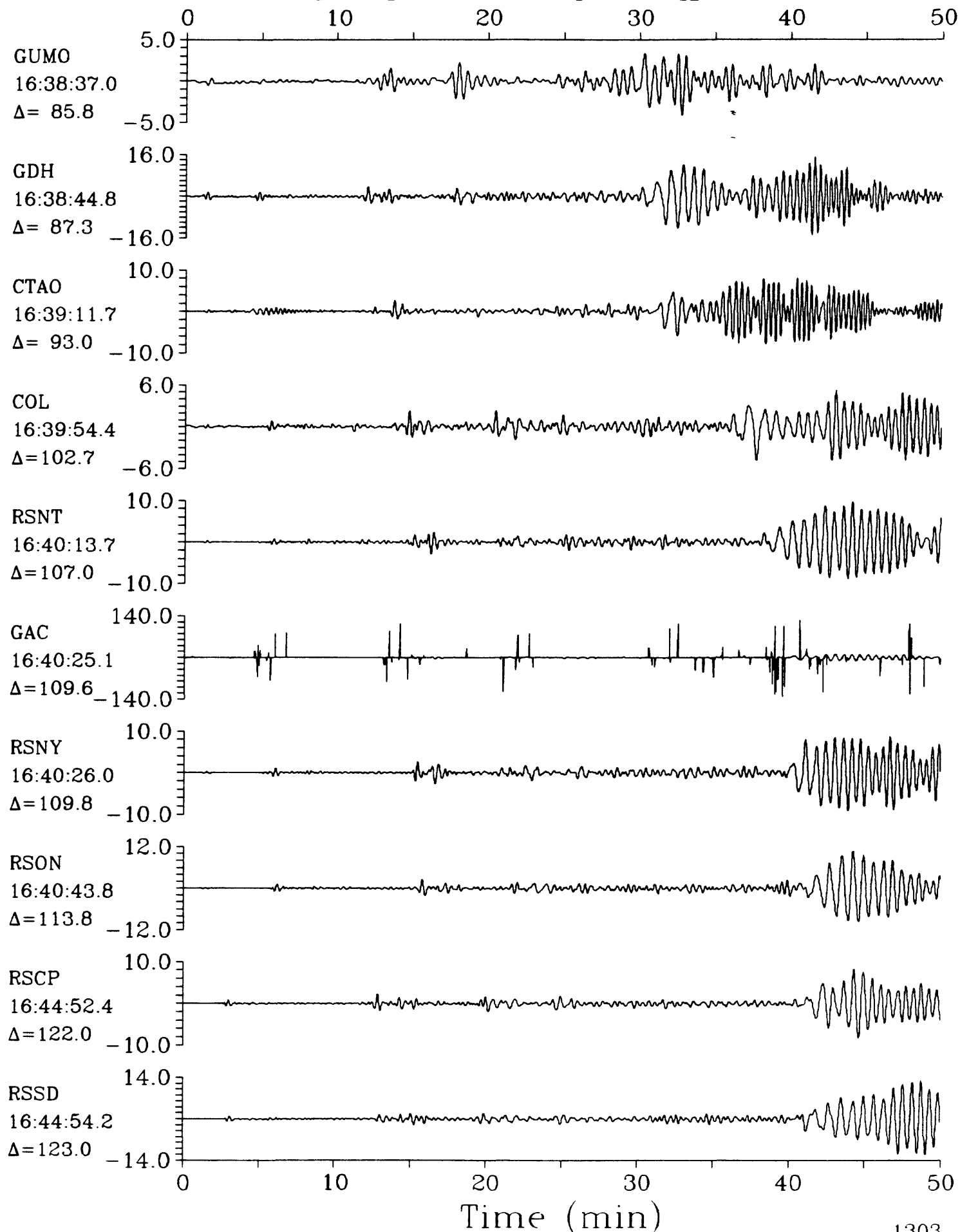
Carlsberg Ridge  $h=10.0$   $m_b=6.4$   $M_{SZ}=6.1$ 

Carlsberg Ridge  $h=10.0$   $m_b=6.4$   $M_{SZ}=6.1$ 

LPZ

07 July 1986 16:26:56.85

LPZ

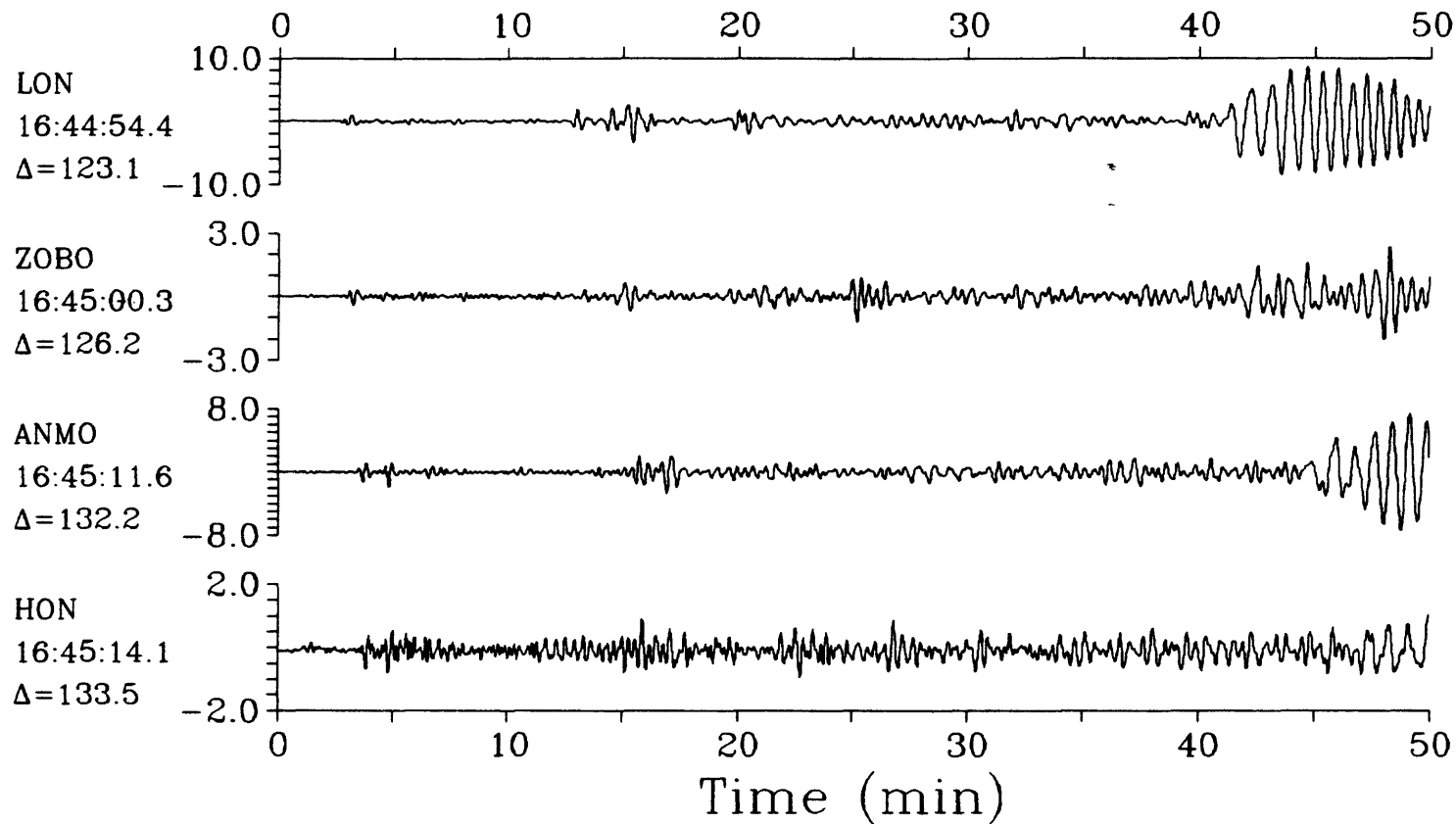
Carlsberg Ridge  $h=10.0$   $m_b=6.4$   $M_{sz}=6.1$ 



LPZ

07 July 1986 16:26:56.85

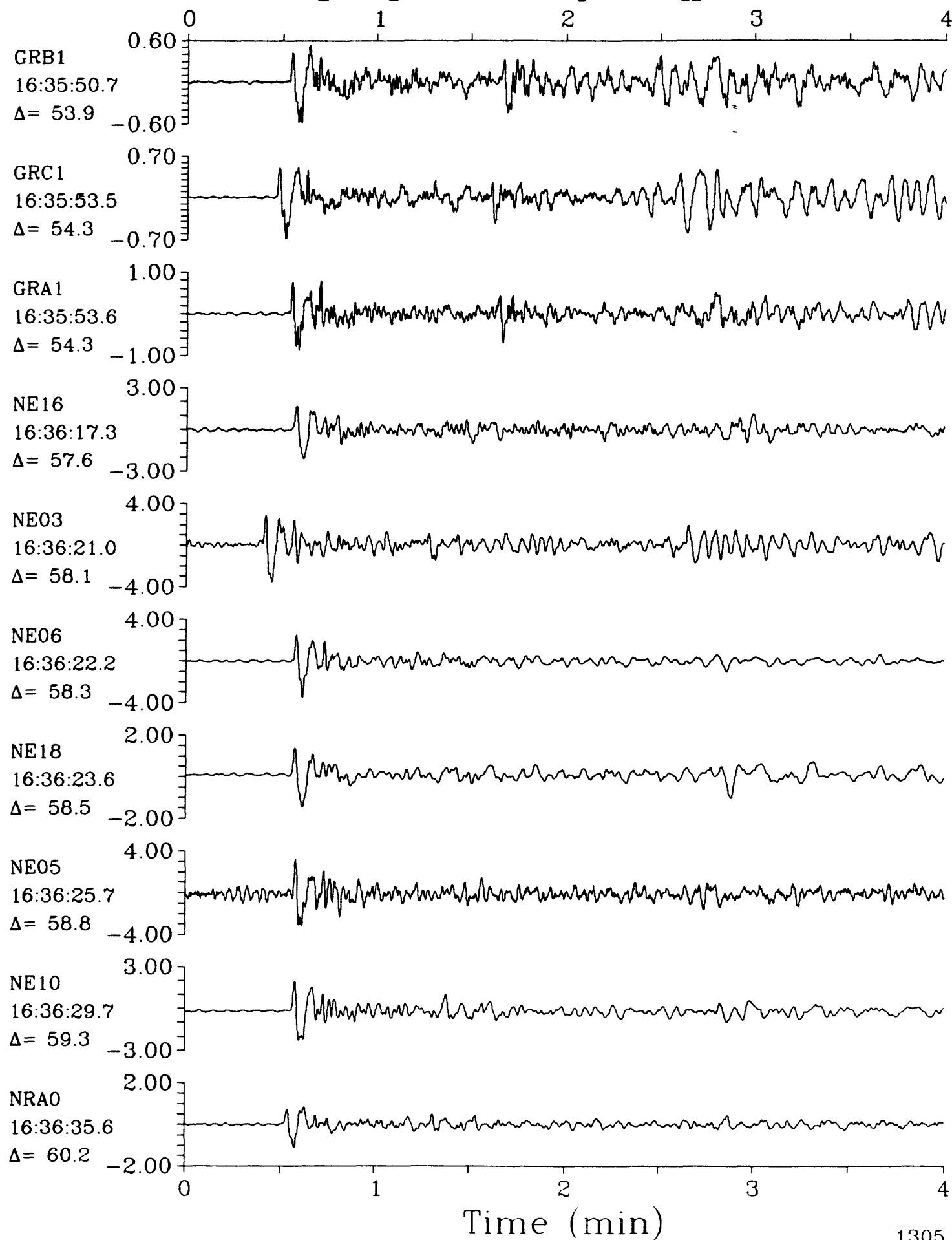
LPZ

Carlsberg Ridge  $h=10.0$   $m_b=6.4$   $M_{SZ}=6.1$ 

IPZ

07 July 1986 16:26:56.85

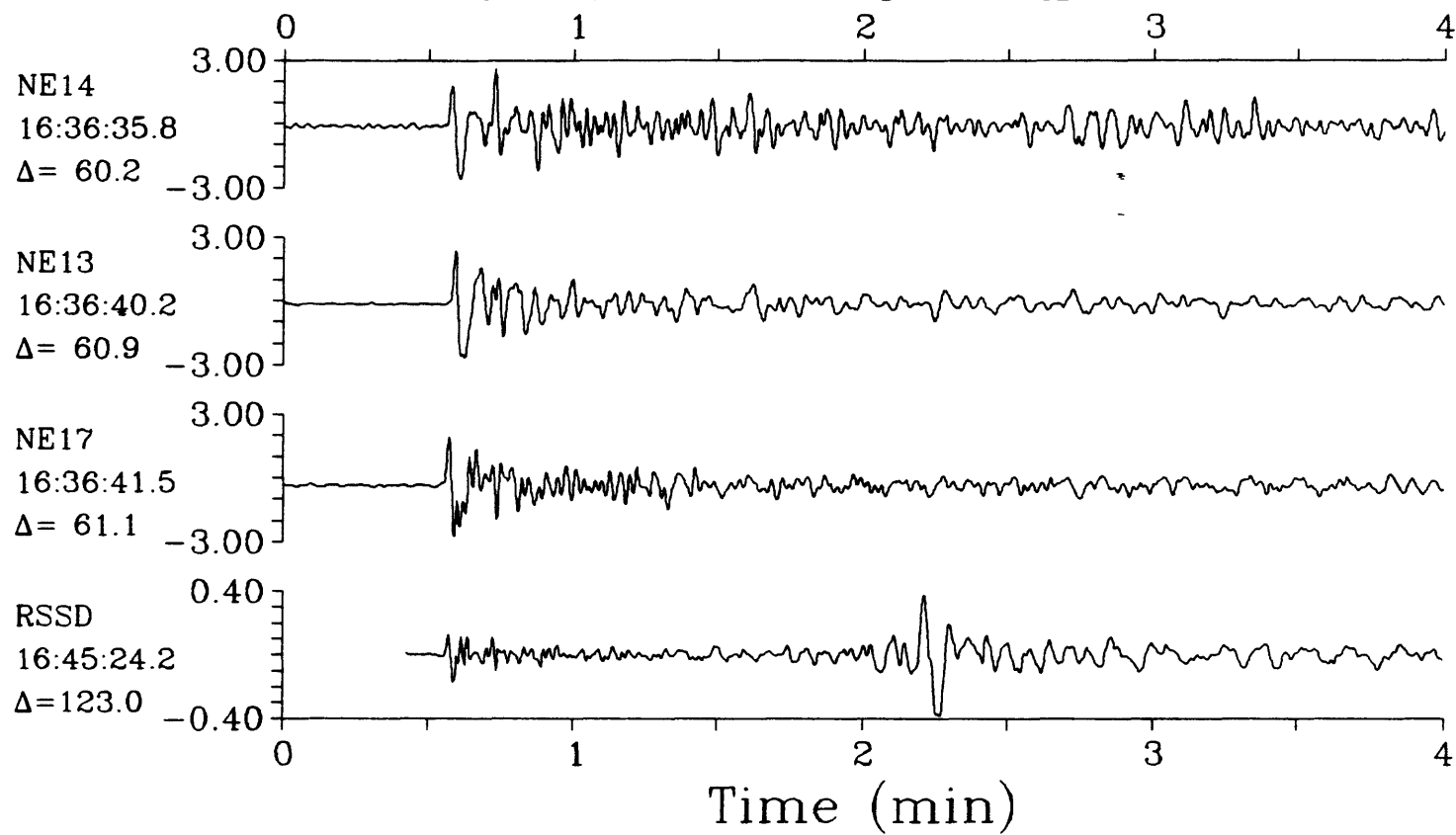
IPZ

Carlsberg Ridge  $h=10.0$   $m_b=6.4$   $M_{sz}=6.1$ 

IPZ

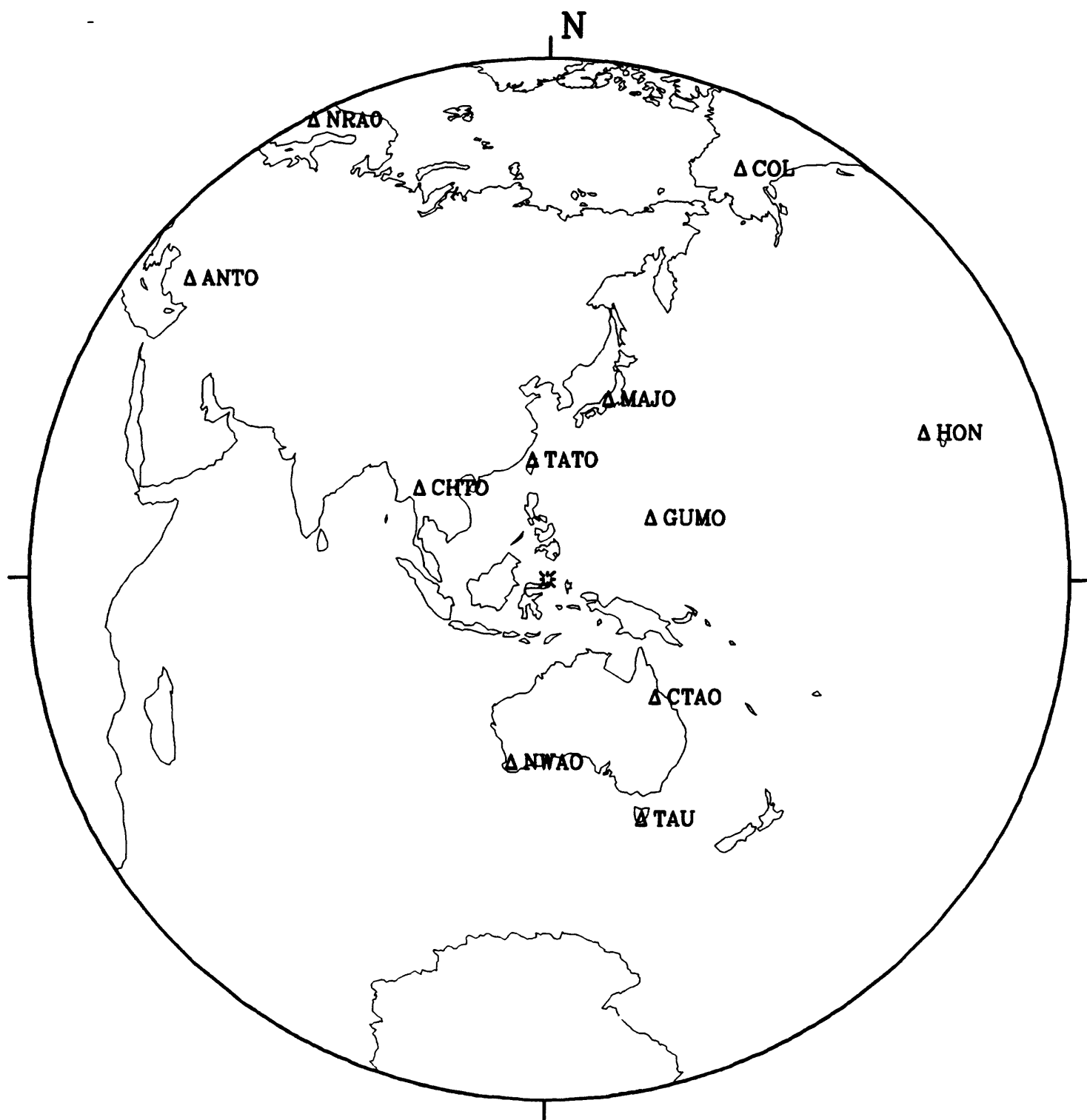
07 July 1986 16:26:56.85  
Carlsberg Ridge  $h=10.0$   $m_b=6.4$   $M_{sz}=6.1$ 

IPZ



08 July 1986 04:27:39.54

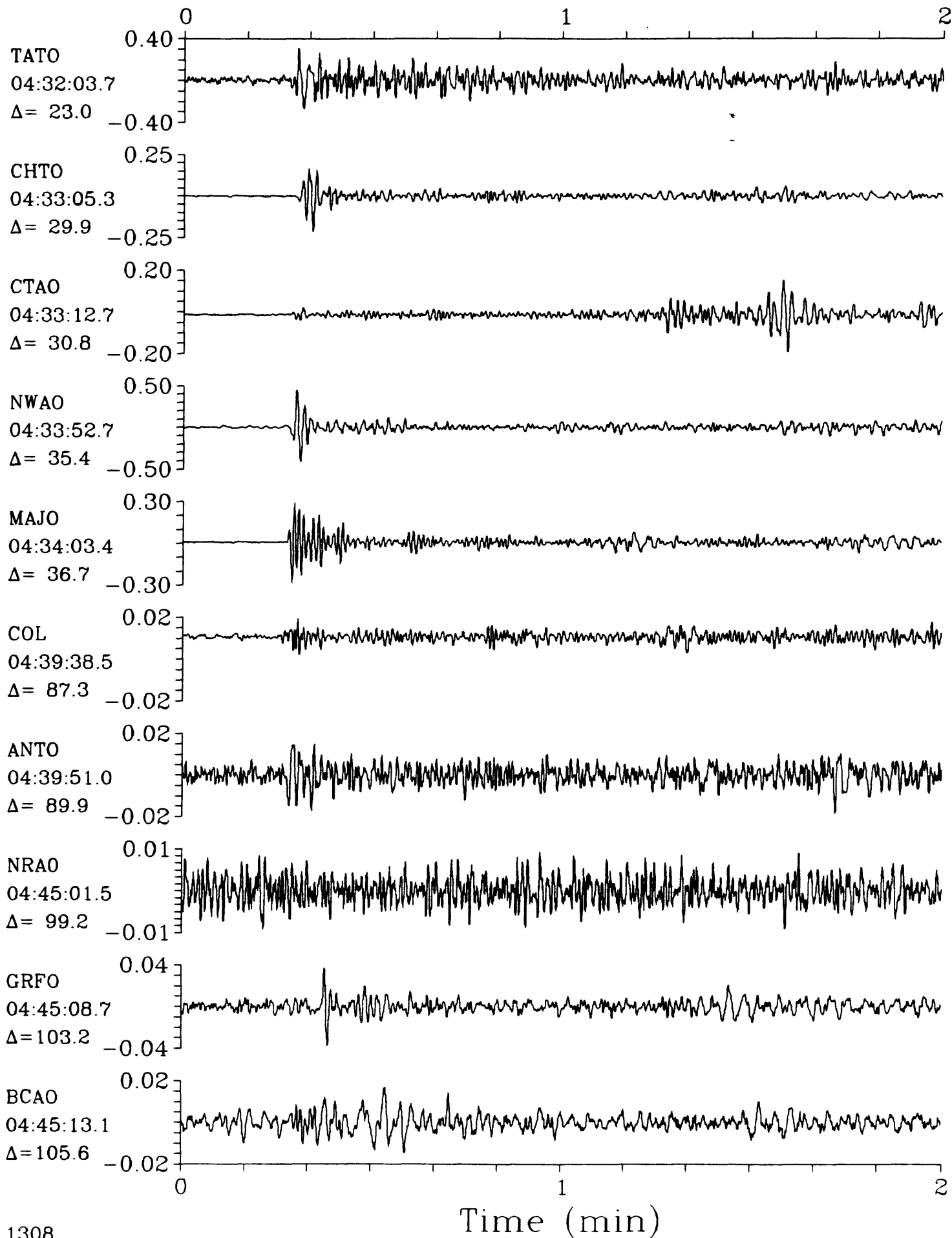
## Celebes Sea



SPZ

08 July 1986 04:27:39.54  
Celebes Sea  $h=295.2$   $m_b=5.6$ 

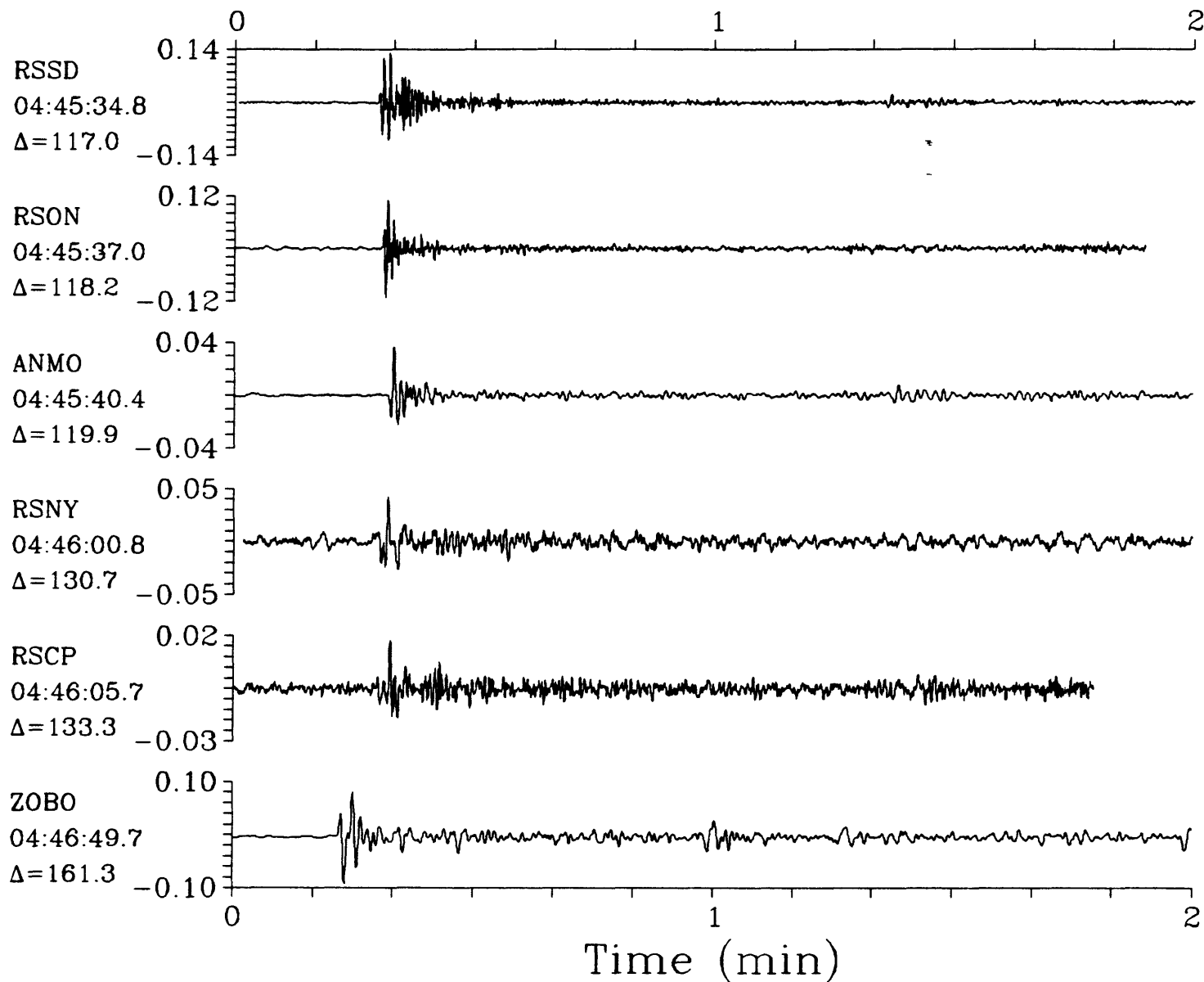
SPZ



SPZ

08 July 1986 04:27:39.54  
Celebes Sea  $h=295.2$   $m_b=5.6$ 

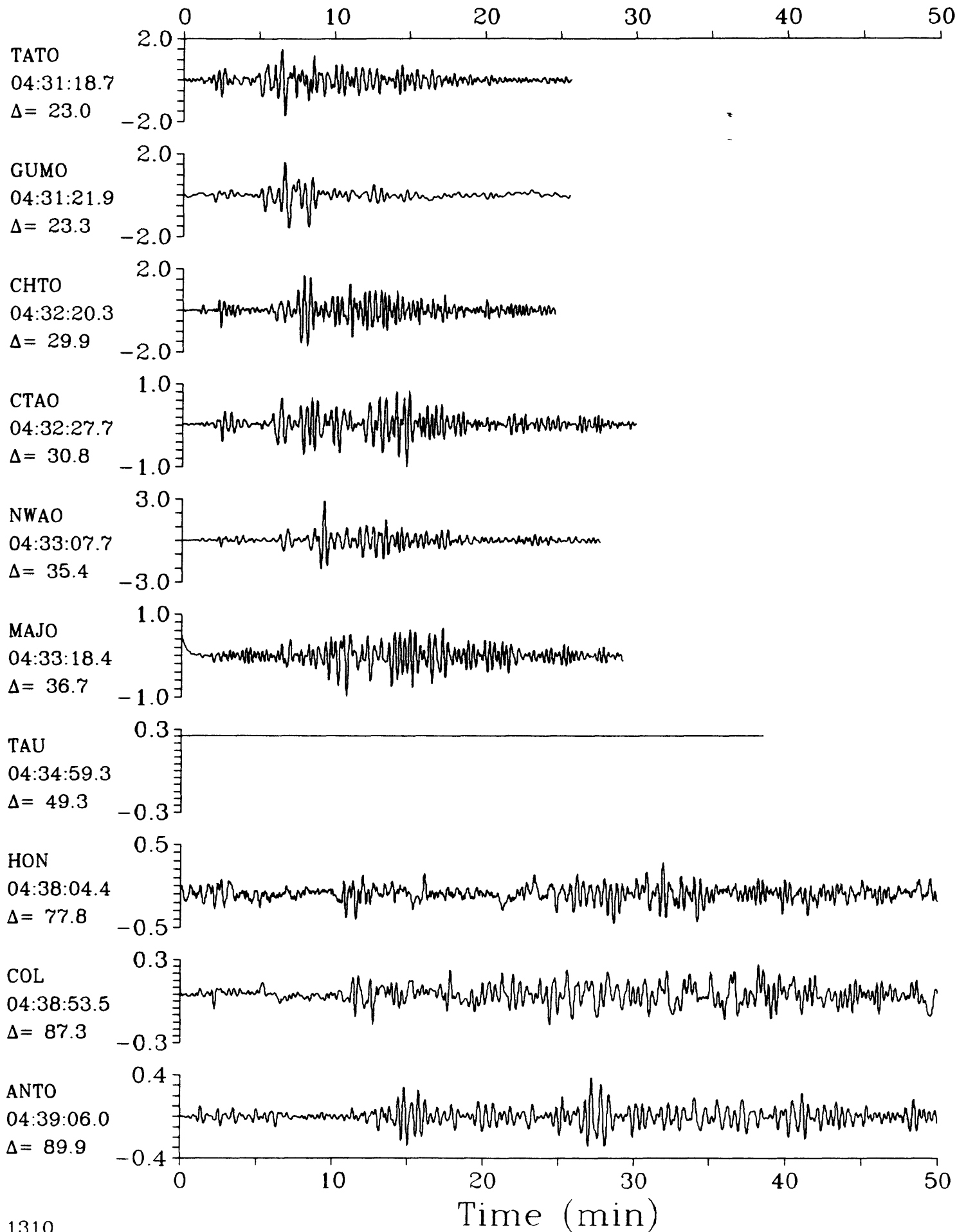
SPZ



LPZ

08 July 1986 04:27:39.54  
Celebes Sea  $h=295.2$   $m_b=5.6$ 

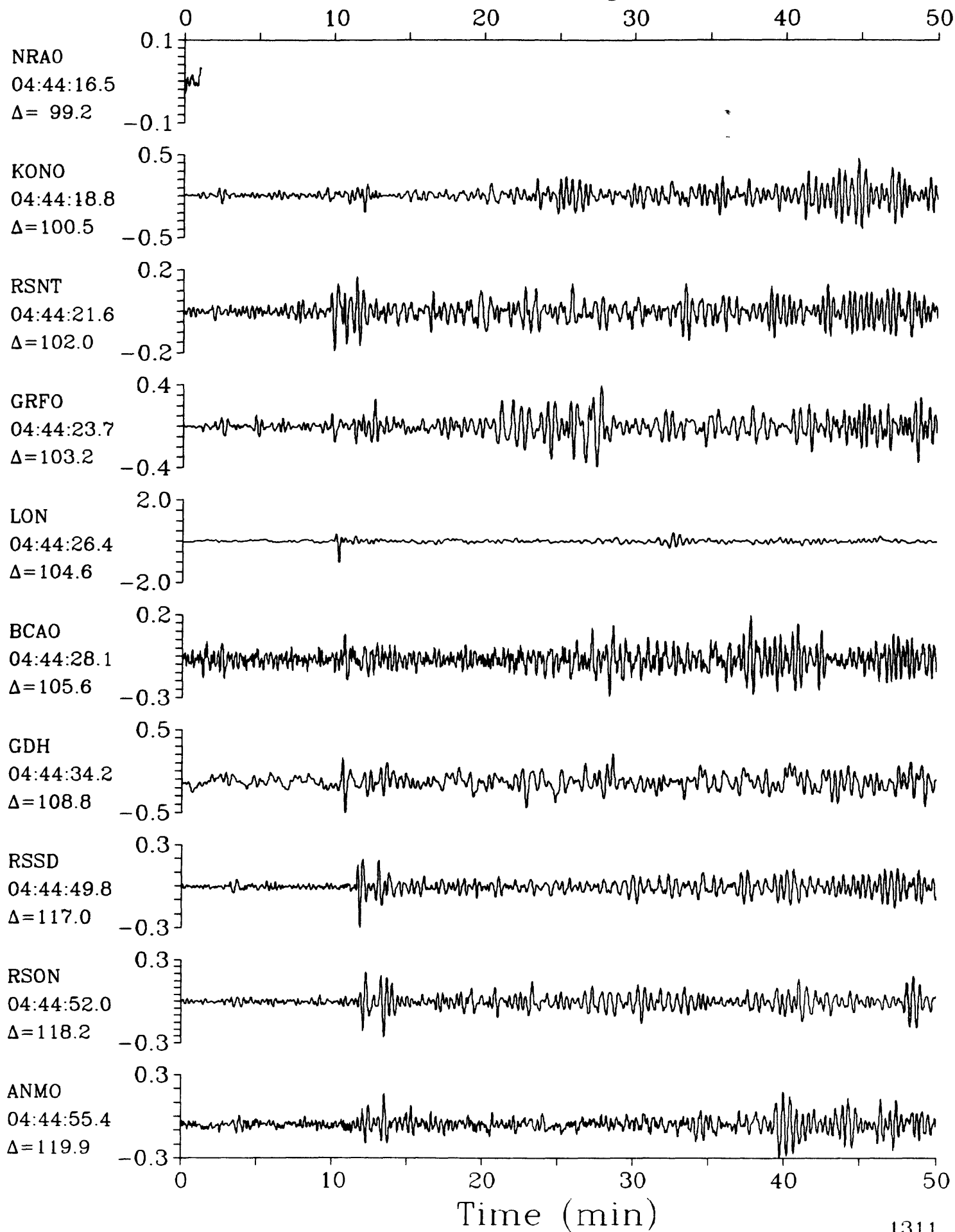
LPZ



LPZ

08 July 1986 04:27:39.54  
Celebes Sea  $h=295.2$   $m_b=5.6$ 

LPZ

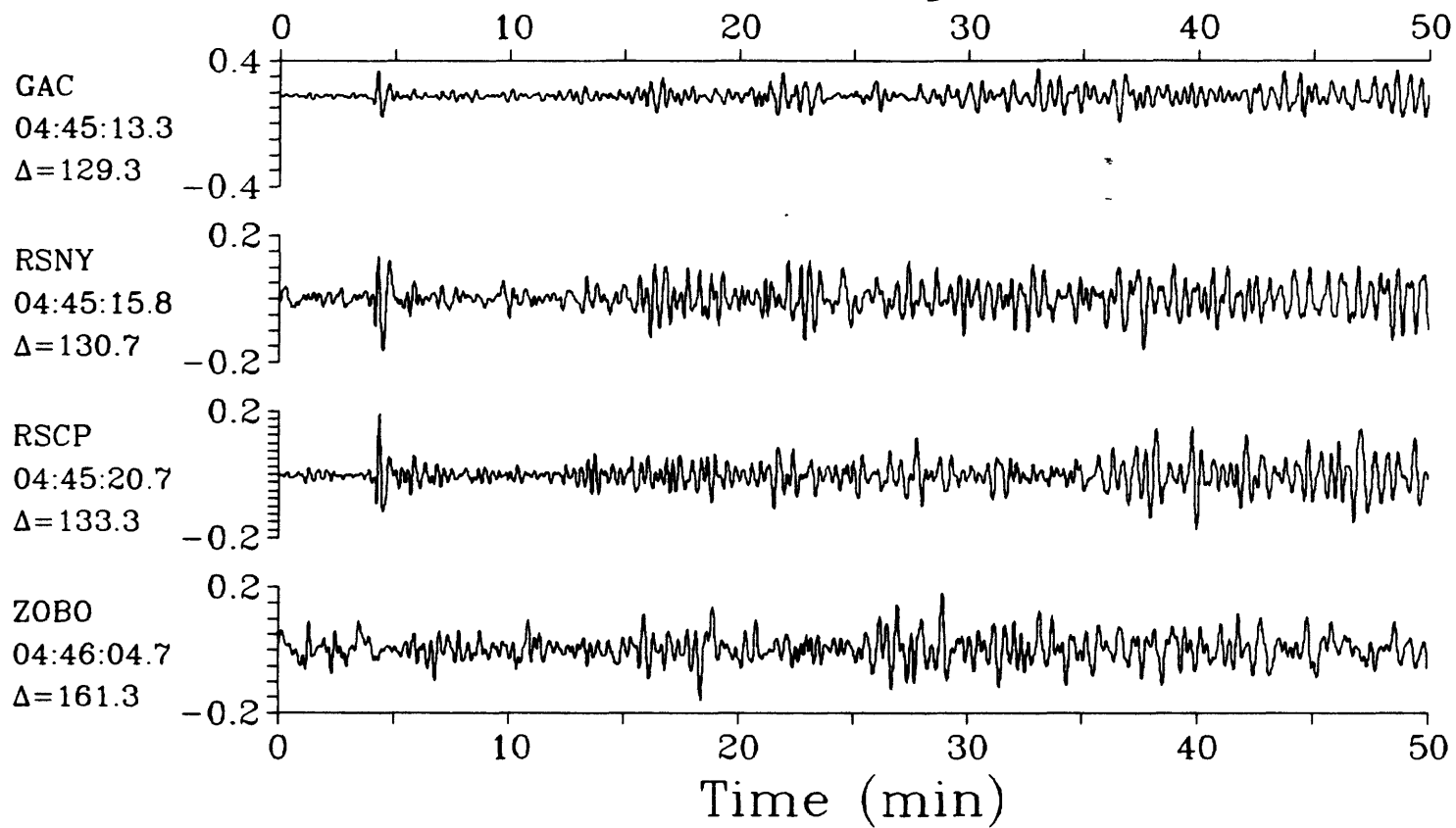




LPZ

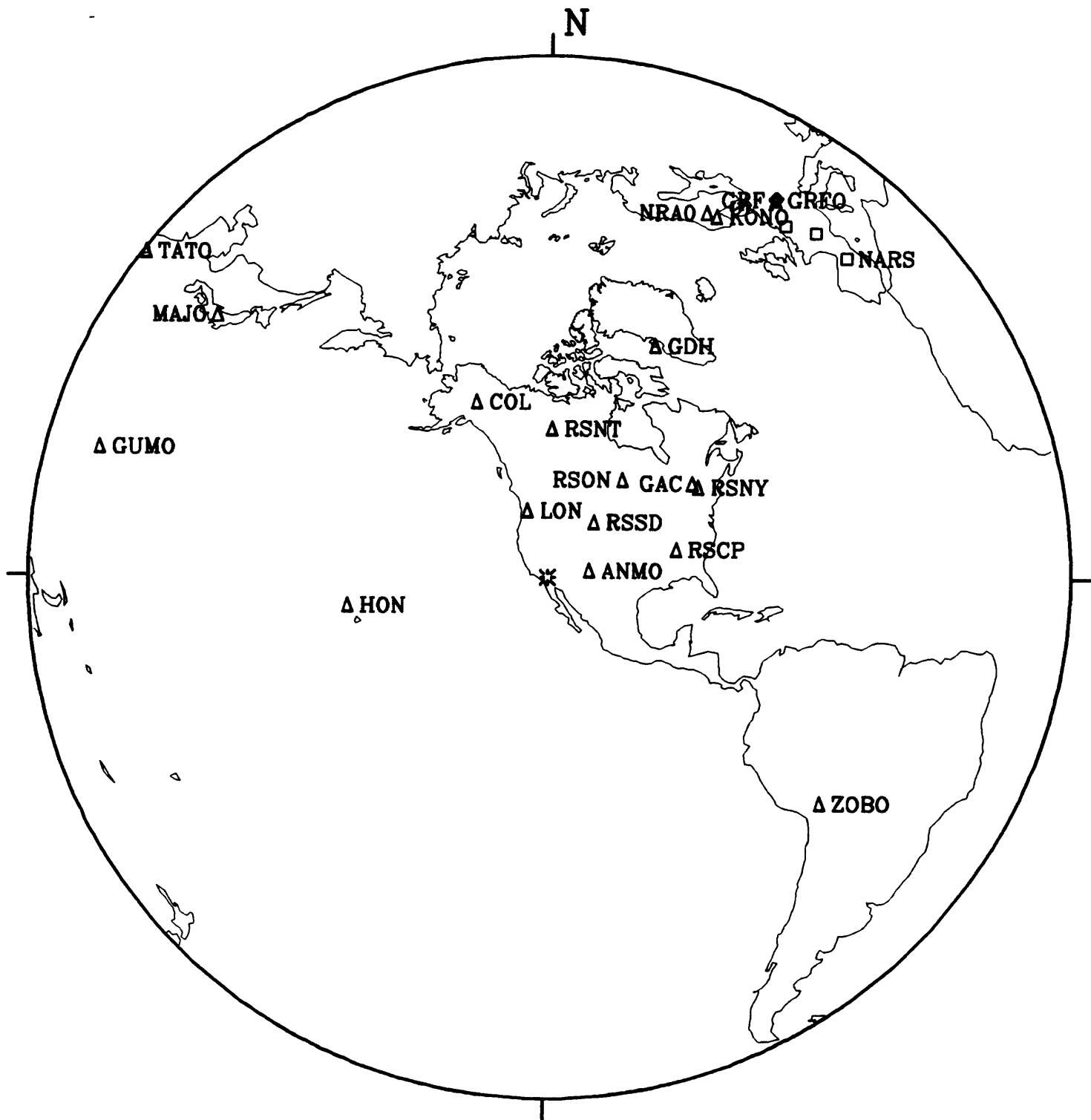
08 July 1986 04:27:39.54  
Celebes Sea  $h=295.2$   $m_b=5.6$ 

LPZ



08 July 1986 09:20:44.00

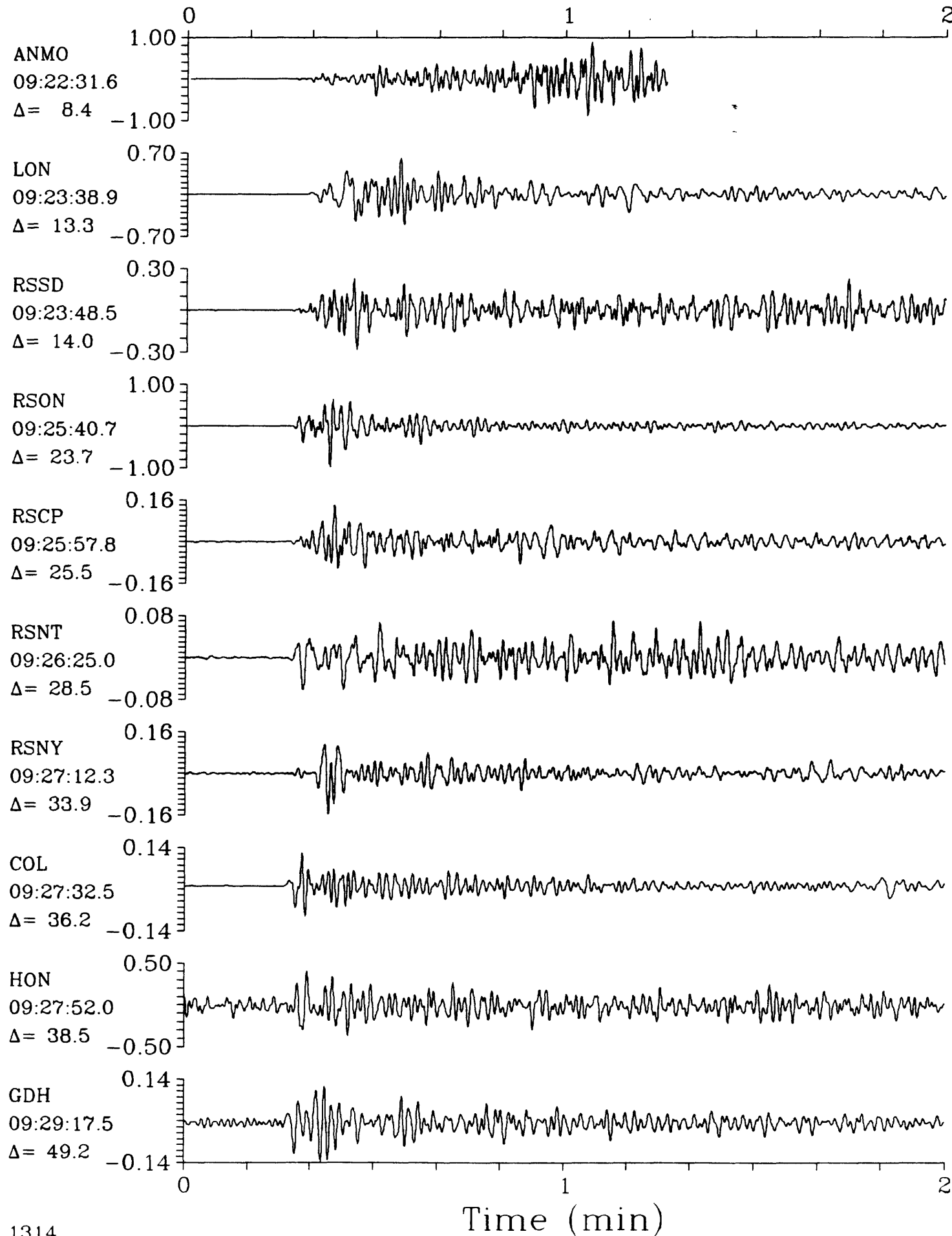
# Southern California



SPZ

08 July 1986 09:20:44.00

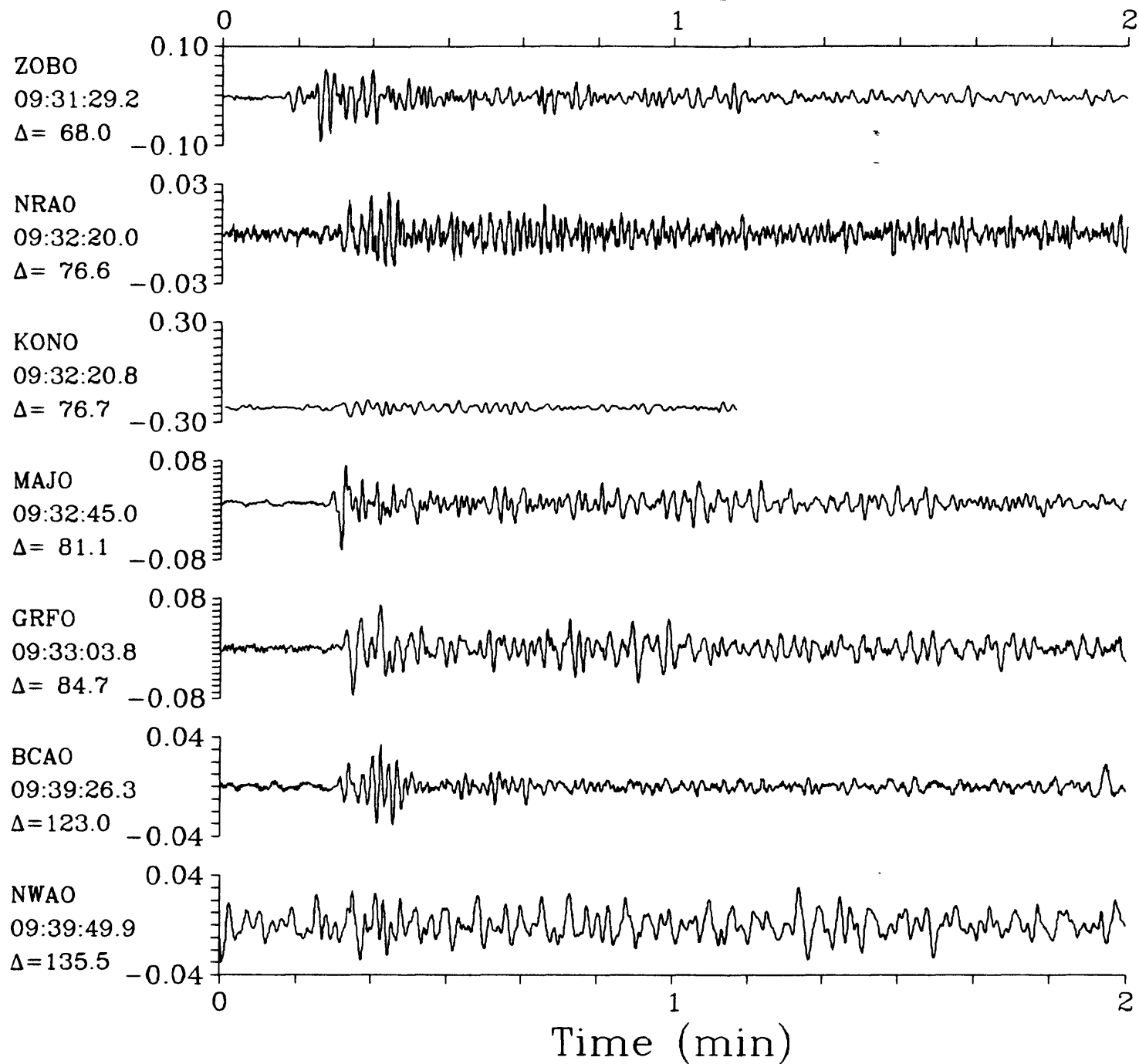
SPZ

Southern California  $h=10.0$   $m_b=5.8$   $M_{sz}=6.0$ 

SPZ

08 July 1986 09:20:44.00

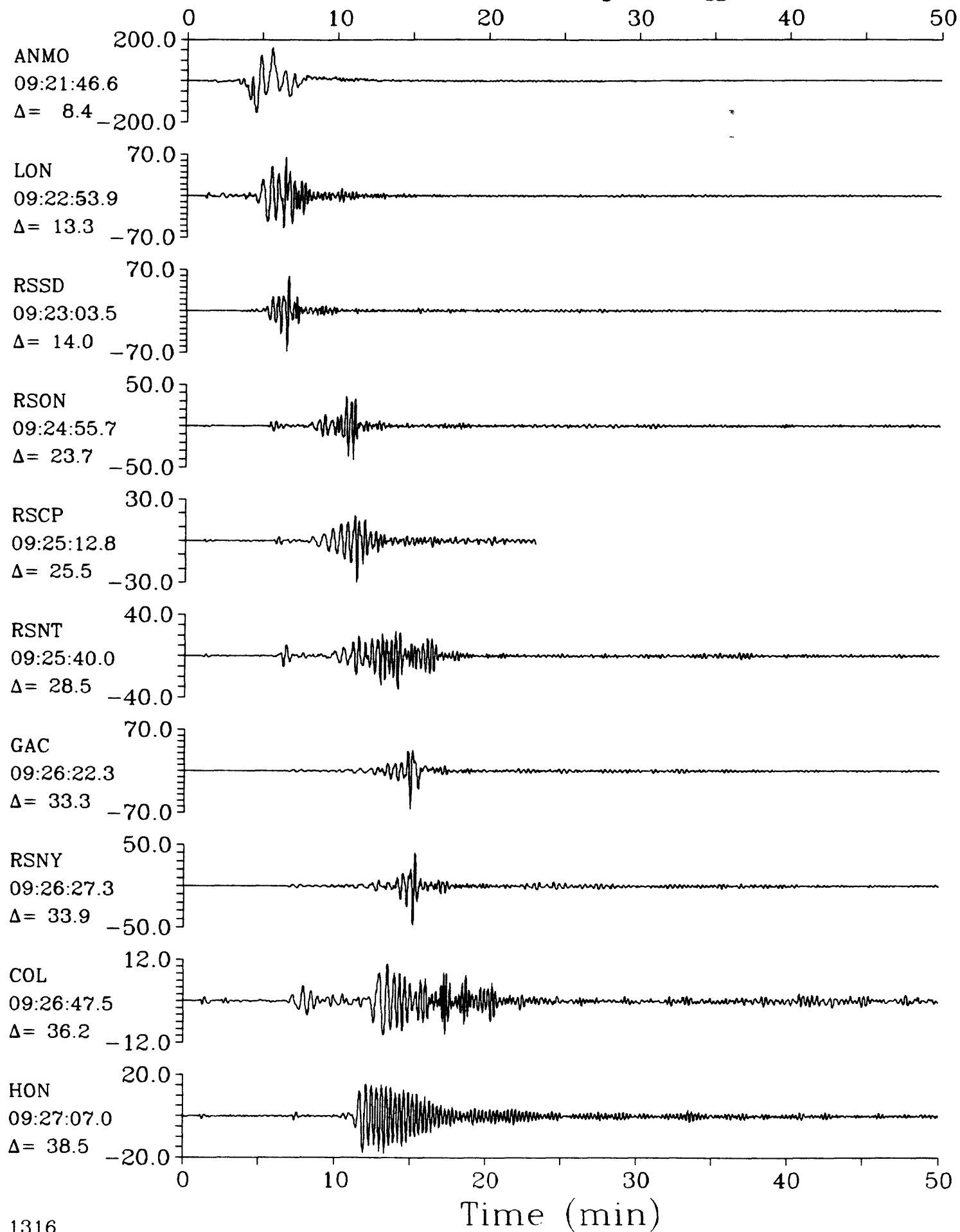
SPZ

Southern California  $h=10.0$   $m_b=5.8$   $M_{sz}=6.0$ 

LPZ

08 July 1986 09:20:44.00

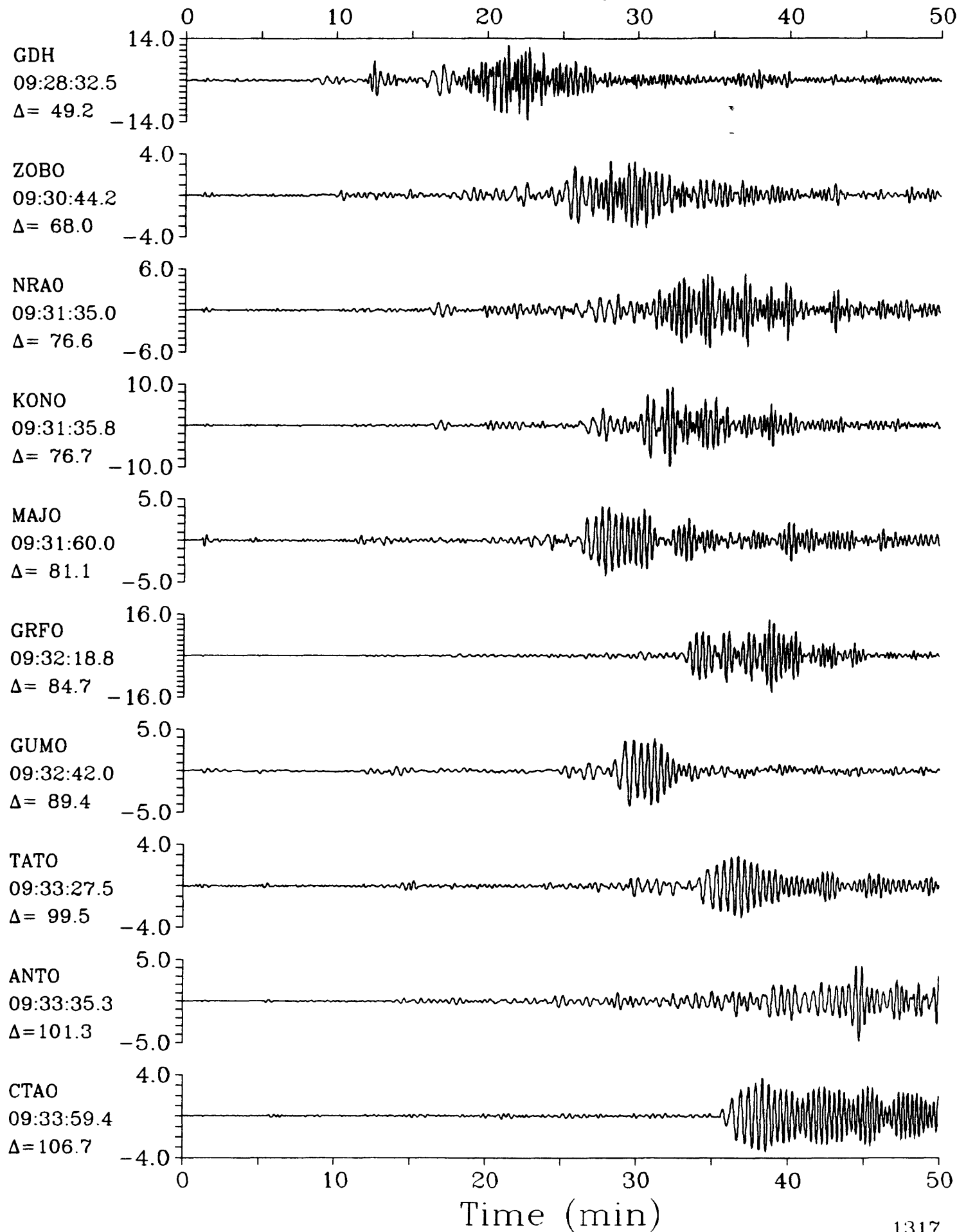
LPZ

Southern California  $h=10.0$   $m_b=5.8$   $M_{sz}=6.0$ 

LPZ

08 July 1986 09:20:44.00

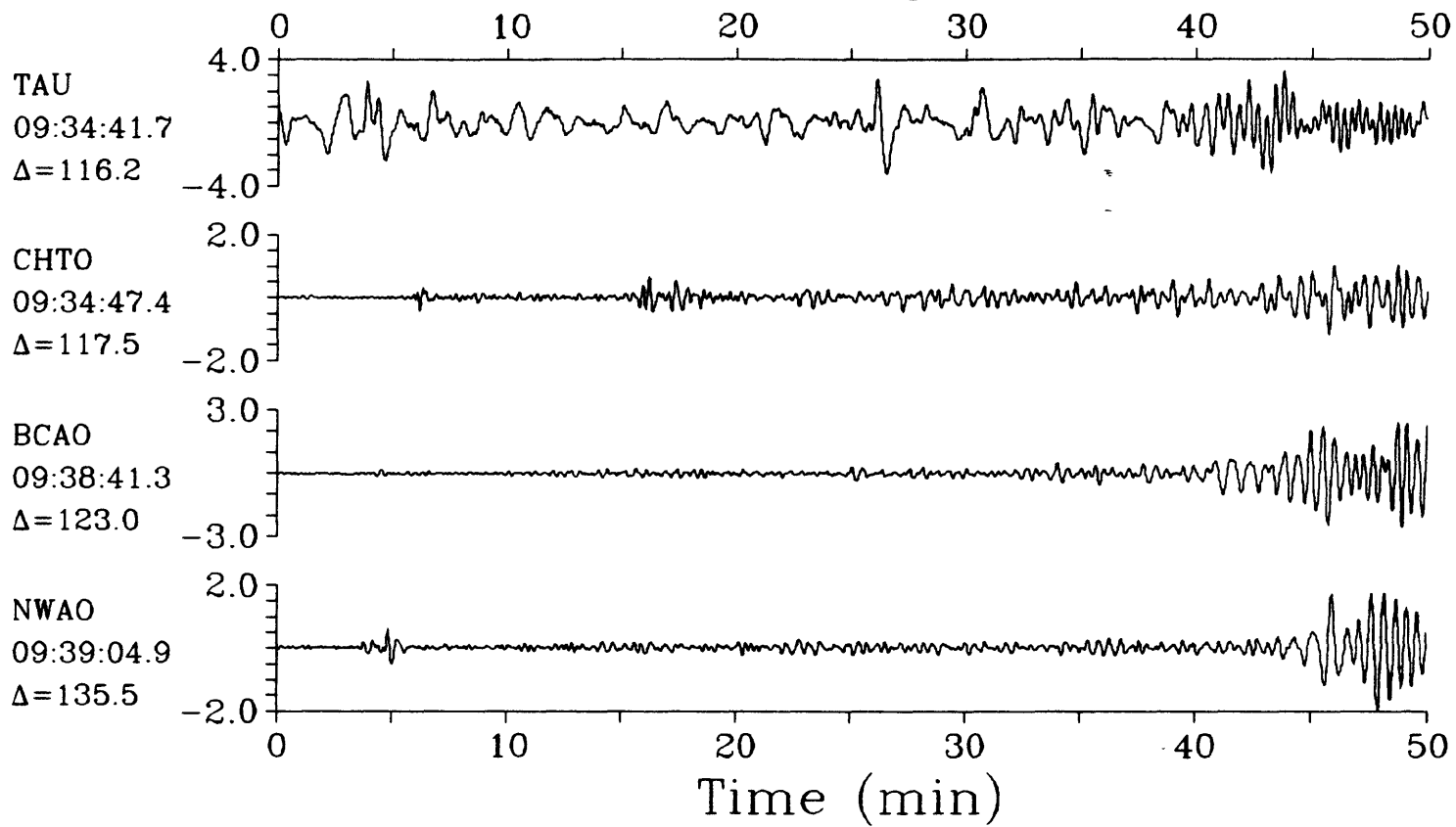
LPZ

Southern California  $h=10.0$   $m_b=5.8$   $M_{sz}=6.0$ 

LPZ

08 July 1986 09:20:44.00

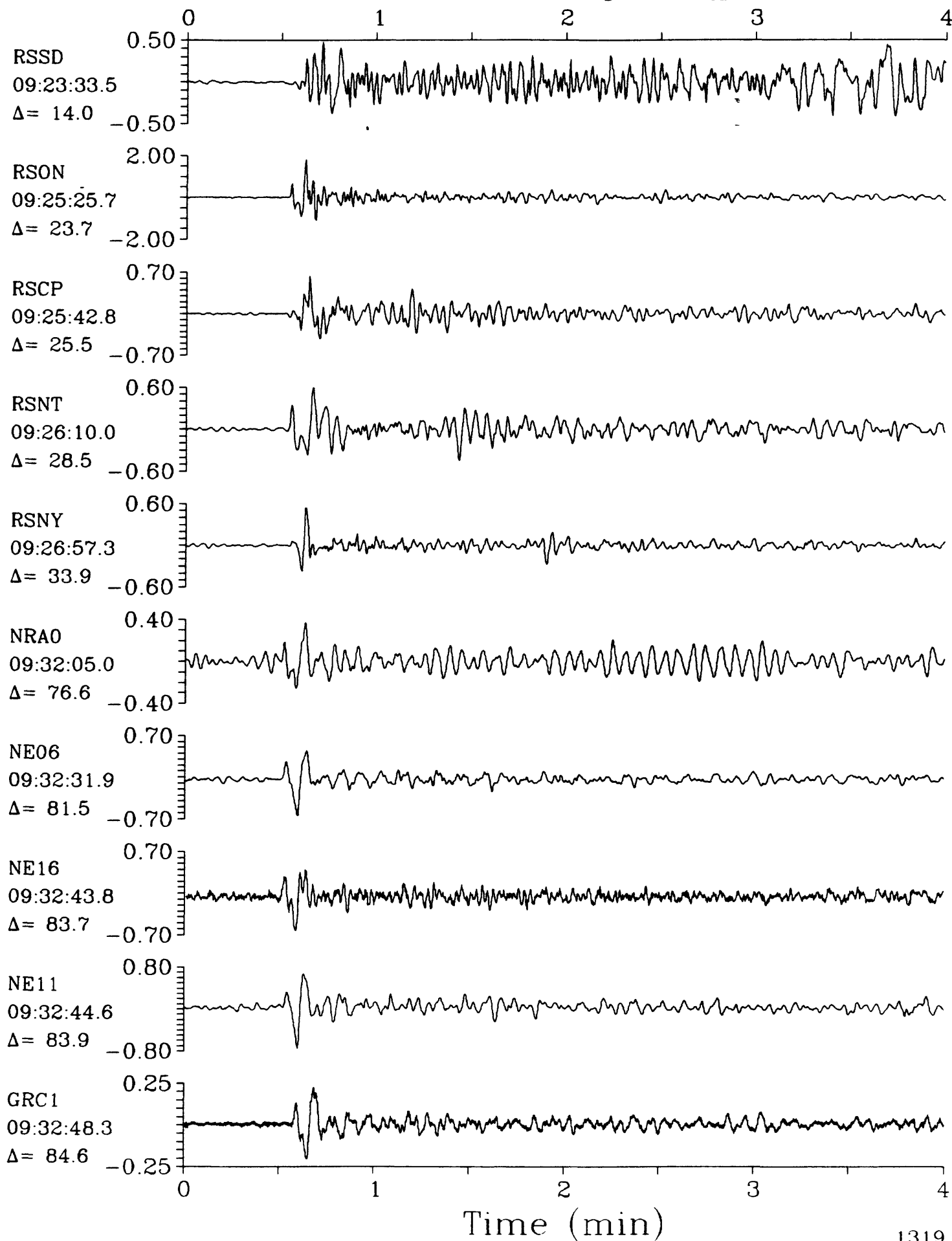
LPZ

Southern California  $h=10.0$   $m_b=5.8$   $M_{sz}=6.0$ 

IPZ

08 July 1986 09:20:44.00

IPZ

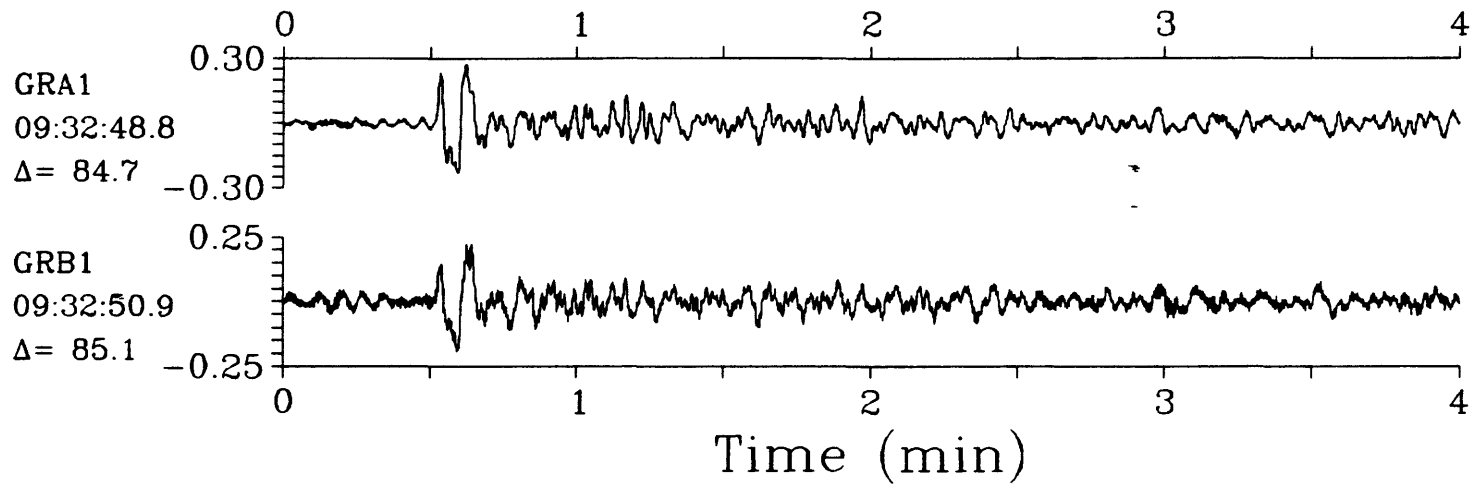
Southern California  $h=10.0$   $m_b=5.8$   $M_{sz}=6.0$ 



IPZ

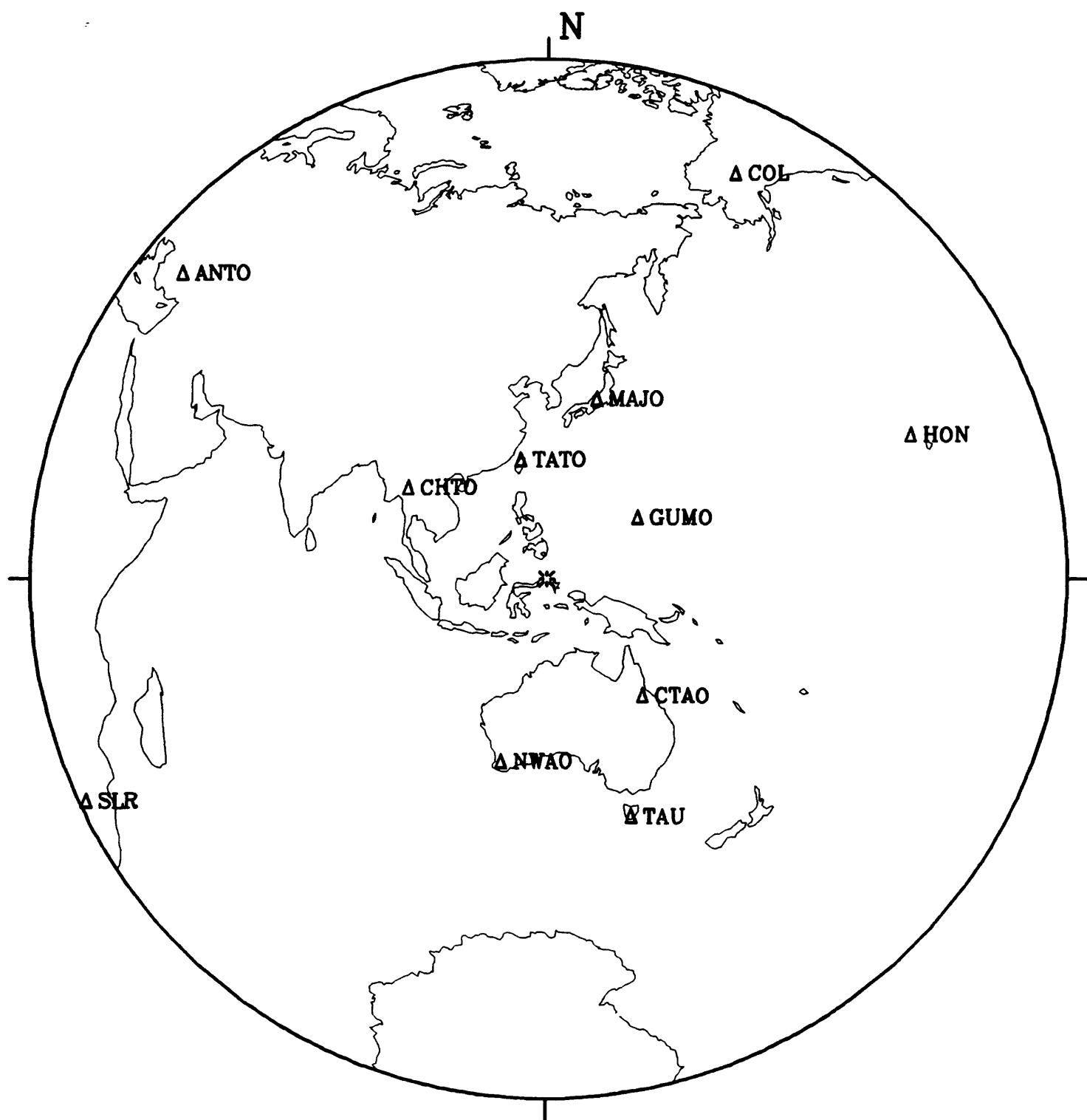
08 July 1986 09:20:44.00

IPZ

Southern California  $h=10.0$   $m_b=5.8$   $M_{SZ}=6.0$ 

09 July 1986 23:10:55.93

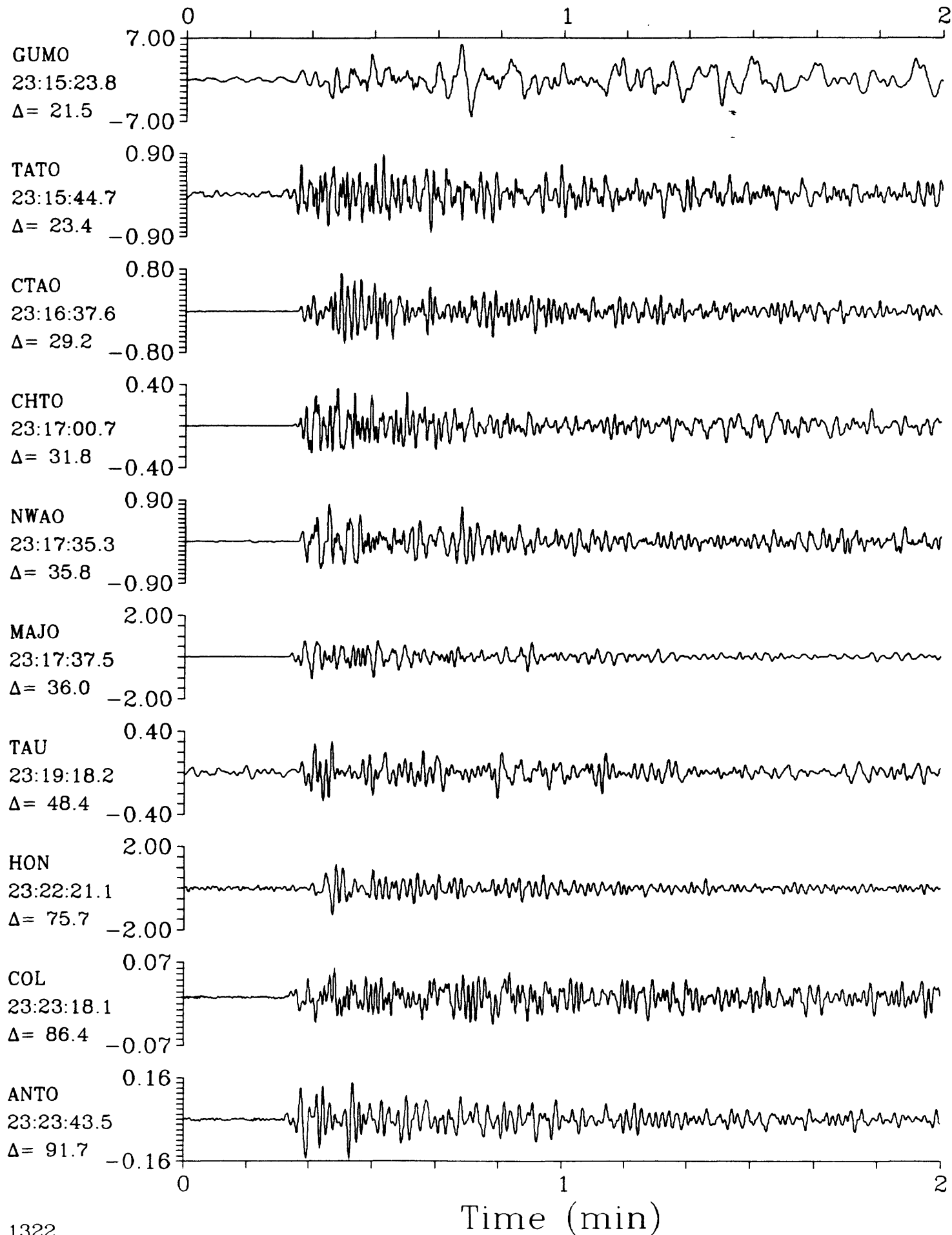
# Molucca Passage



SPZ

09 July 1986 23:10:55.93

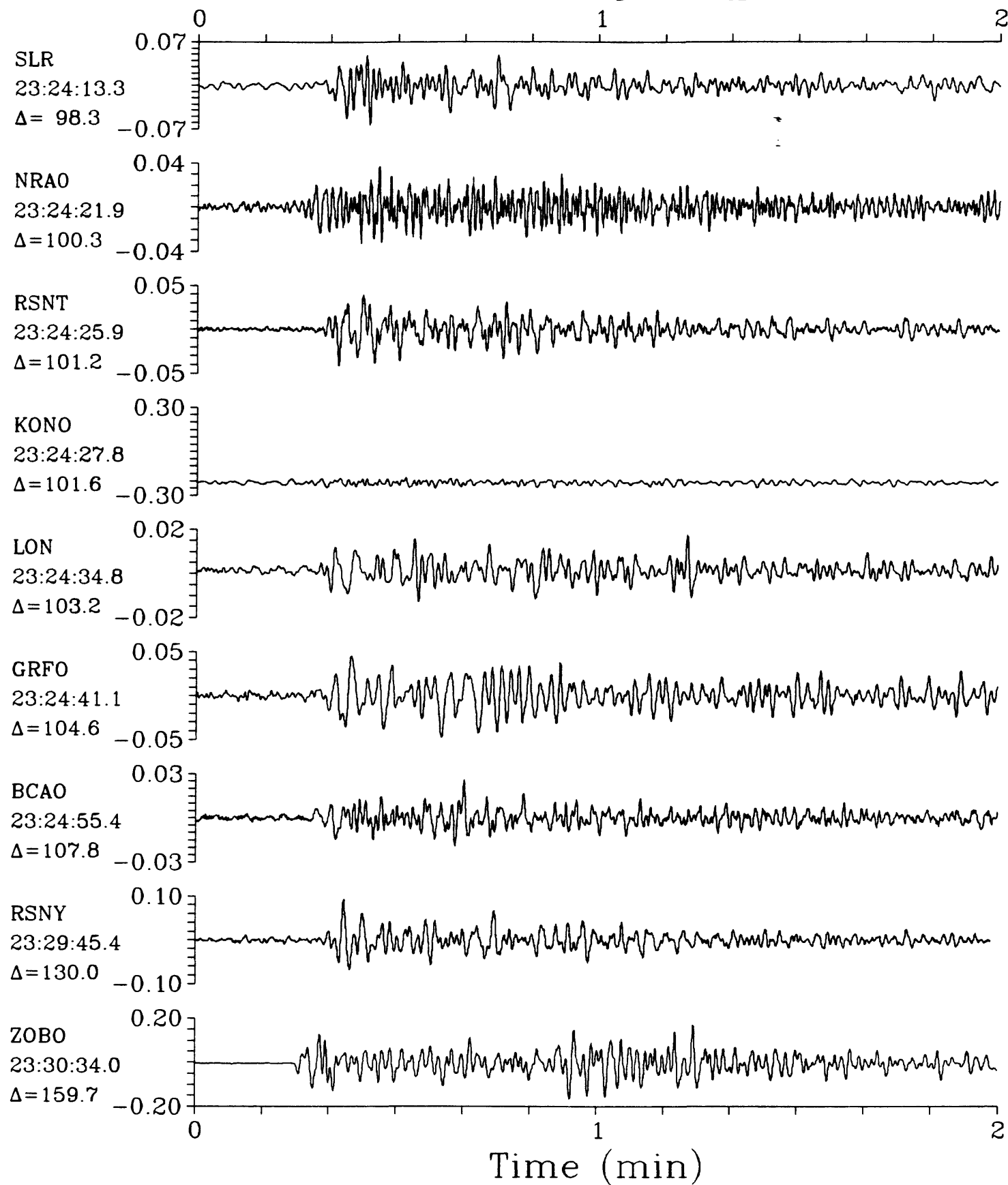
SPZ

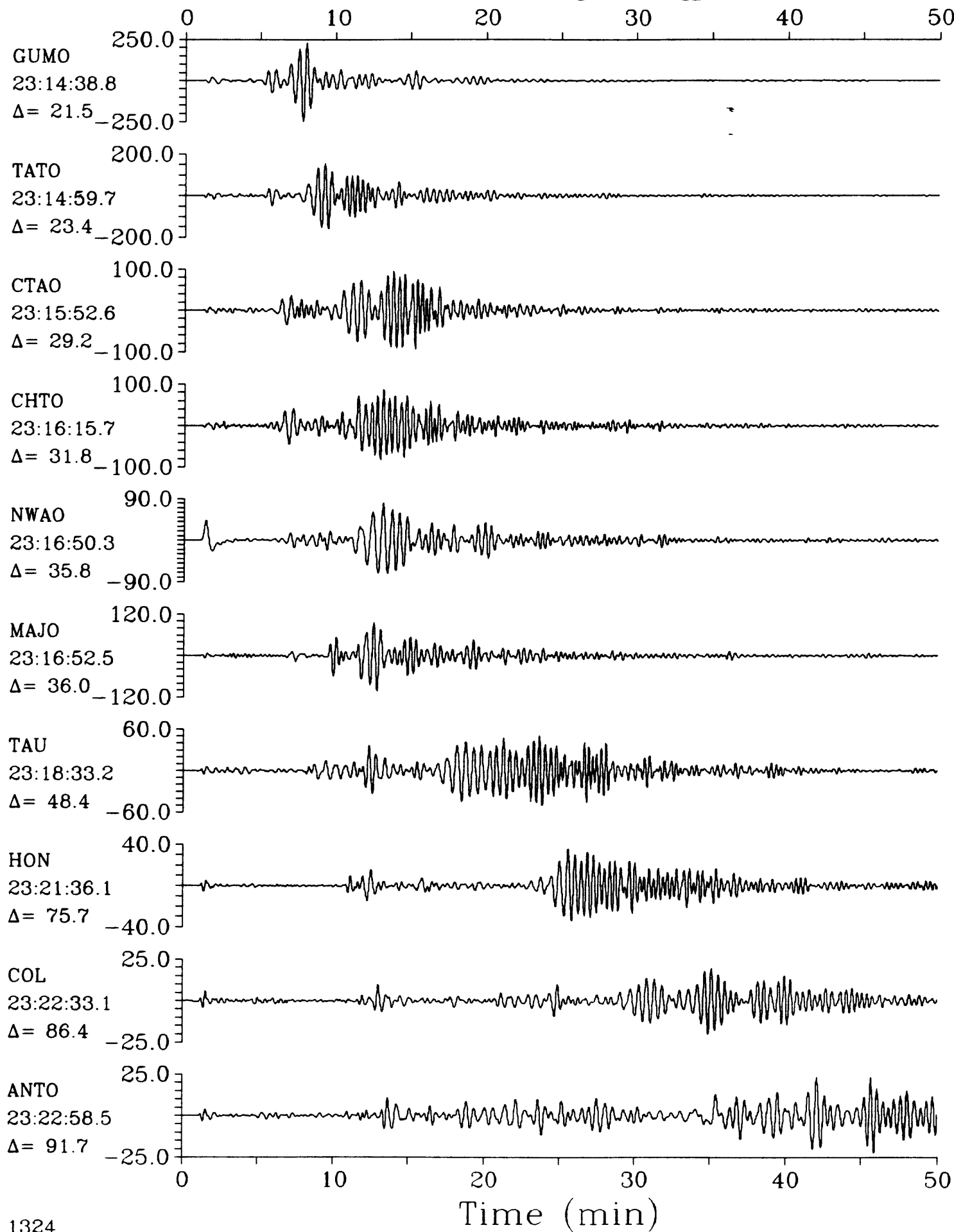
Molucca Passage  $h=53.1$   $m_b=6.2$   $M_{sz}=6.5$ 

SPZ

09 July 1986 23:10:55.93

SPZ

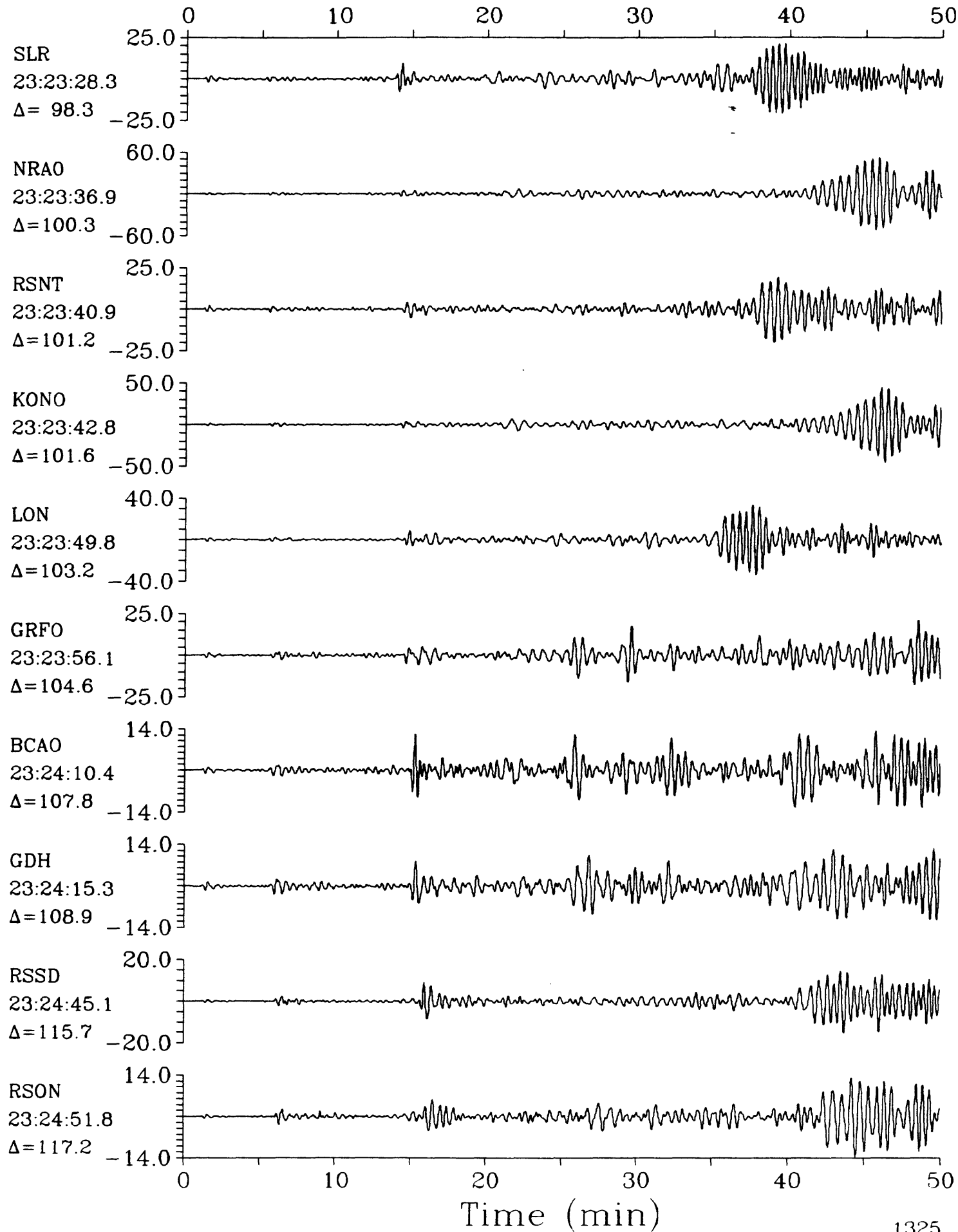
Molucca Passage  $h=53.1$   $m_b=6.2$   $M_{sz}=6.5$ 

Molucca Passage  $h=53.1$   $m_b=6.2$   $M_{sz}=6.5$ 

LPZ

09 July 1986 23:10:55.93

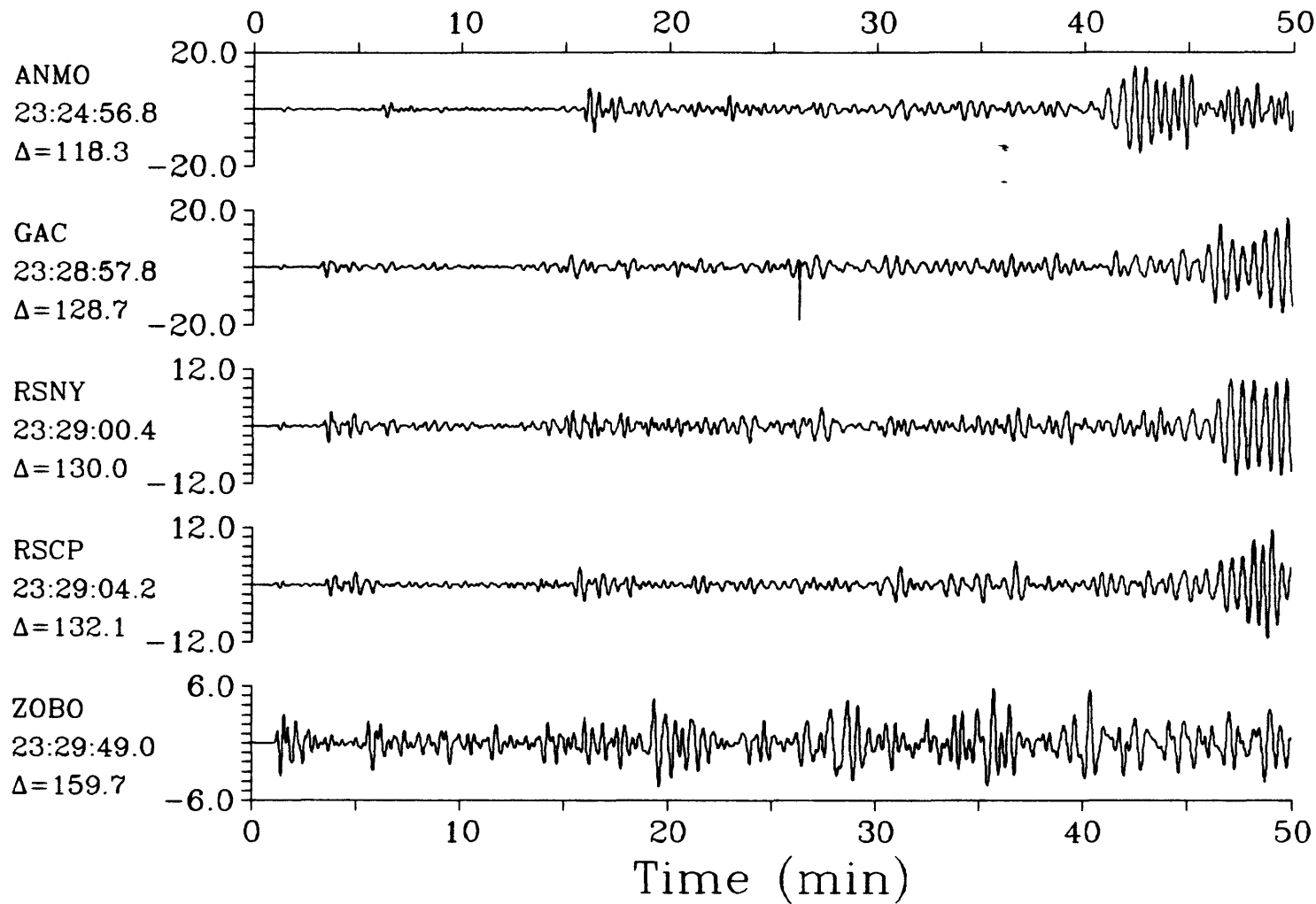
LPZ

Molucca Passage  $h=53.1$   $m_b=6.2$   $M_{sz}=6.5$ 

LPZ

09 July 1986 23:10:55.93

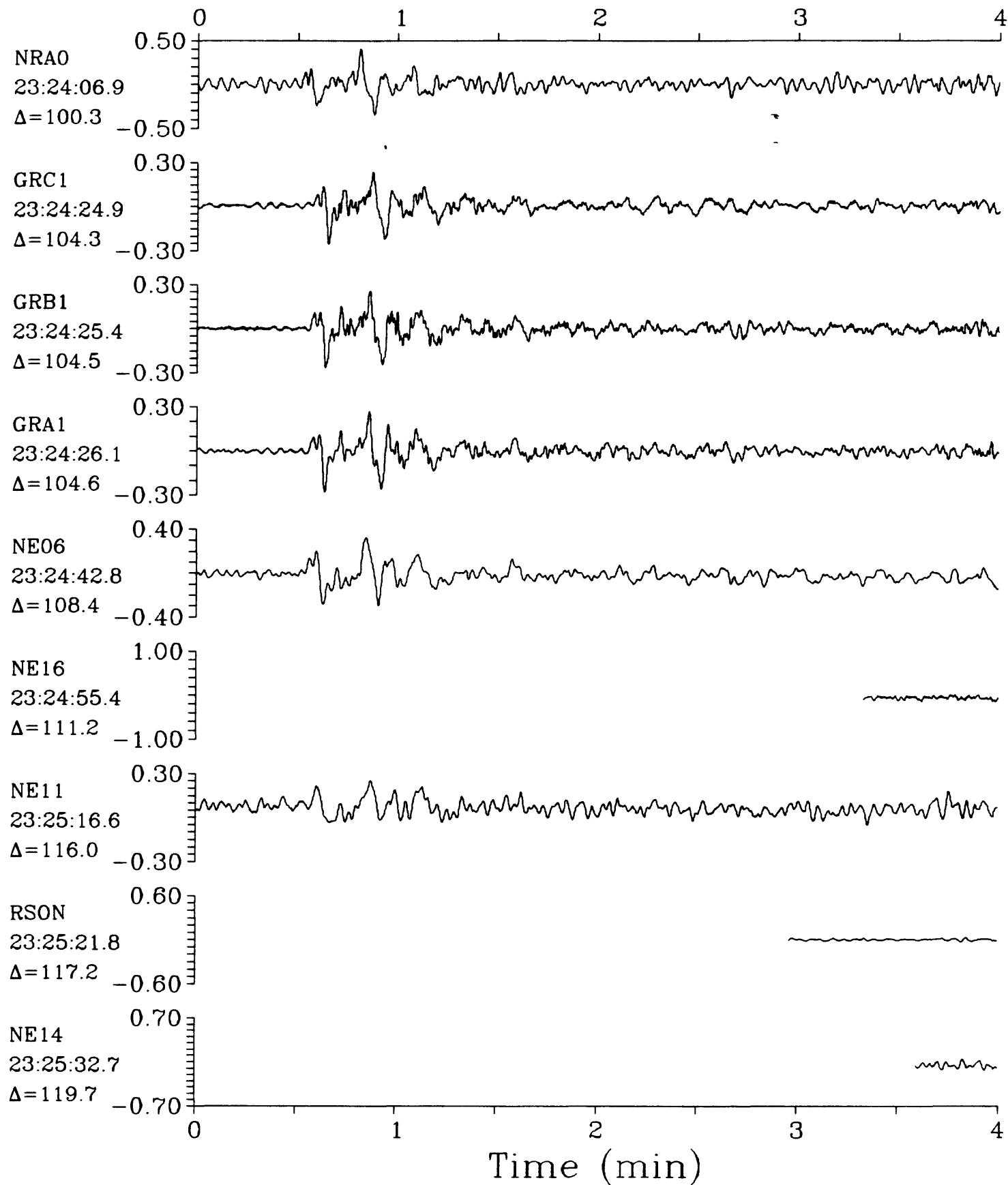
LPZ

Molucca Passage  $h=53.1$   $m_b=6.2$   $M_{sz}=6.5$ 

IPZ

09 July 1986 23:10:55.93

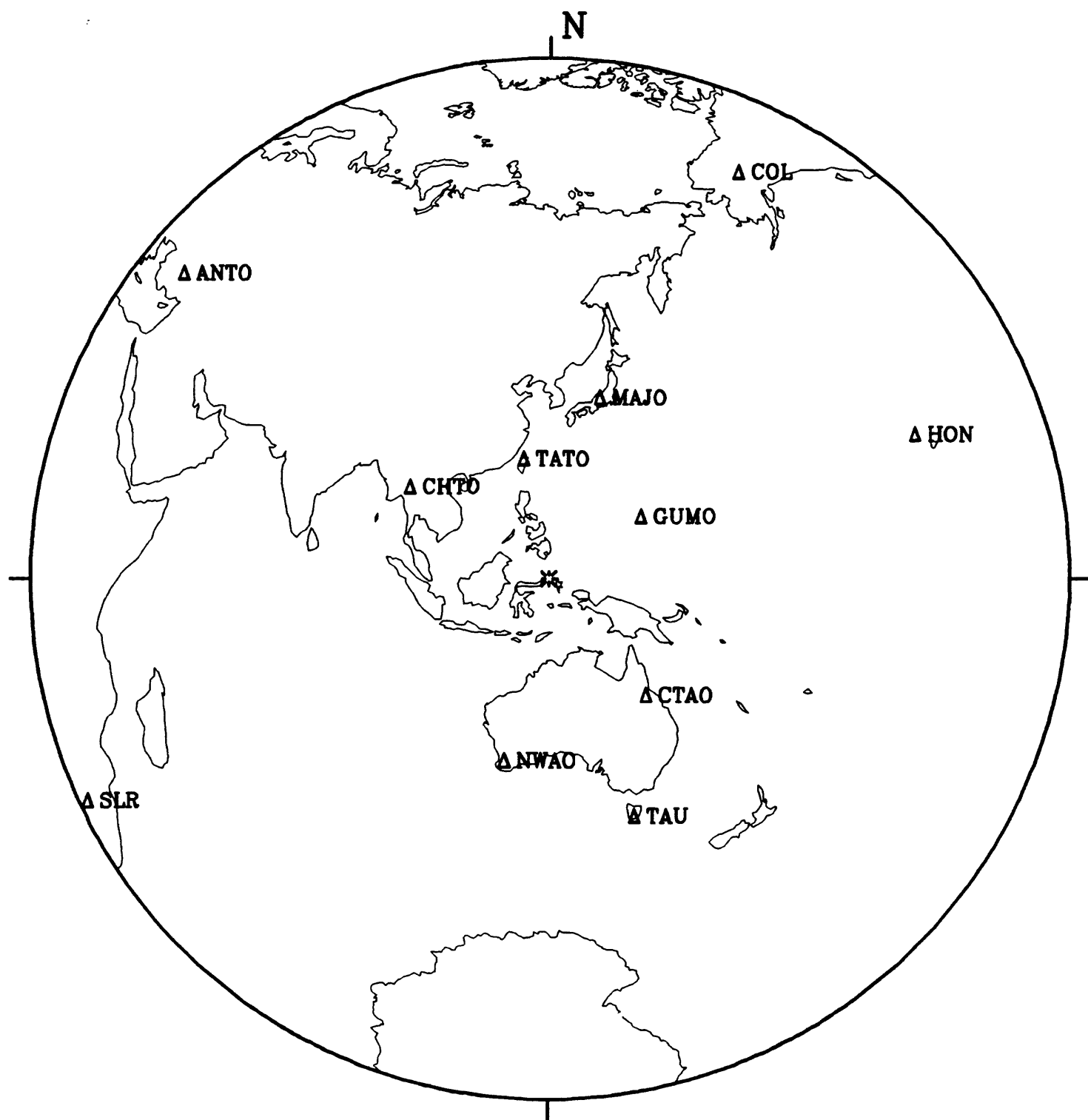
IPZ

Molucca Passage  $h=53.1$   $m_b=6.2$   $M_{sz}=6.5$ 



10 July 1986 01:29:35.70

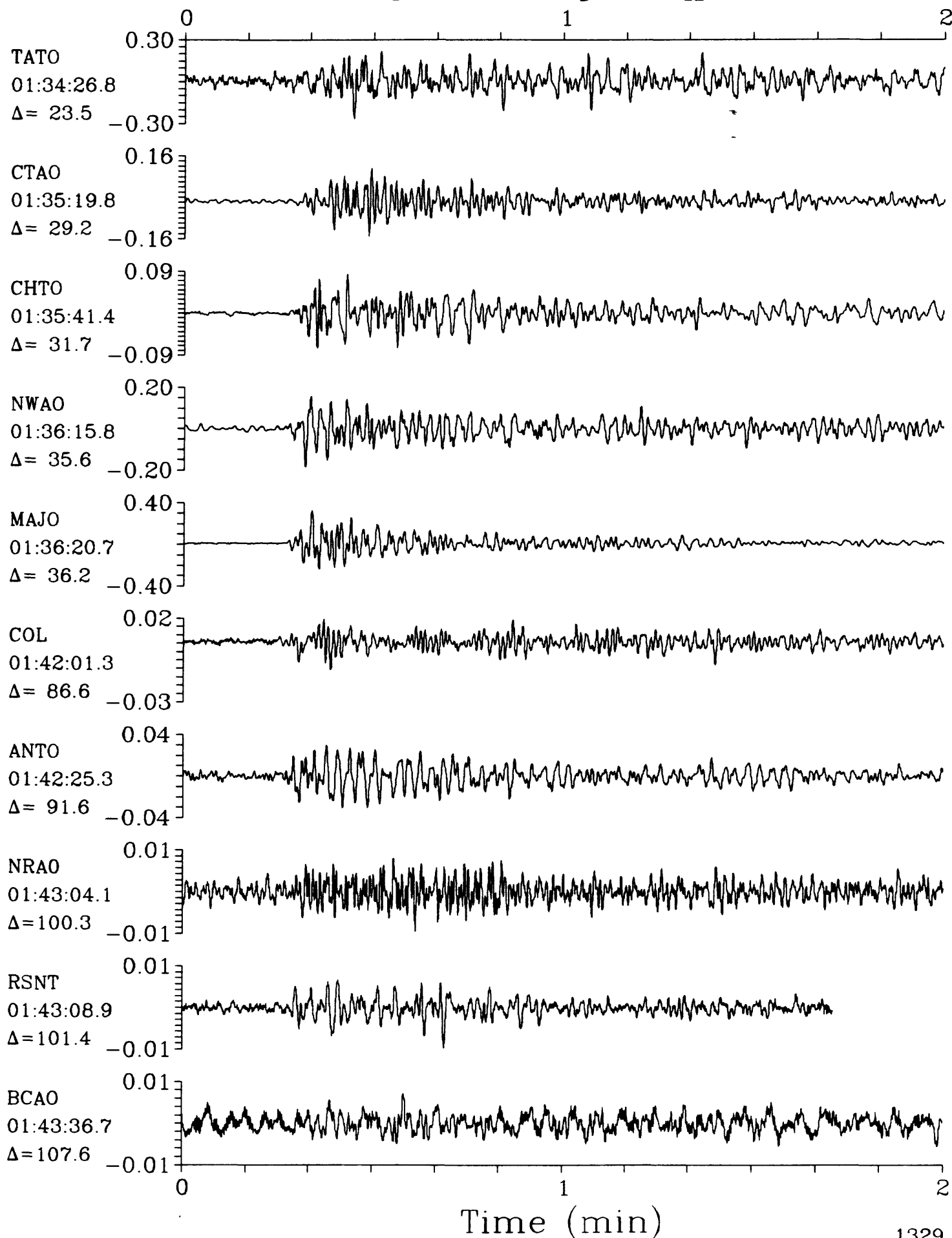
# Molucca Passage



SPZ

10 July 1986 01:29:35.70

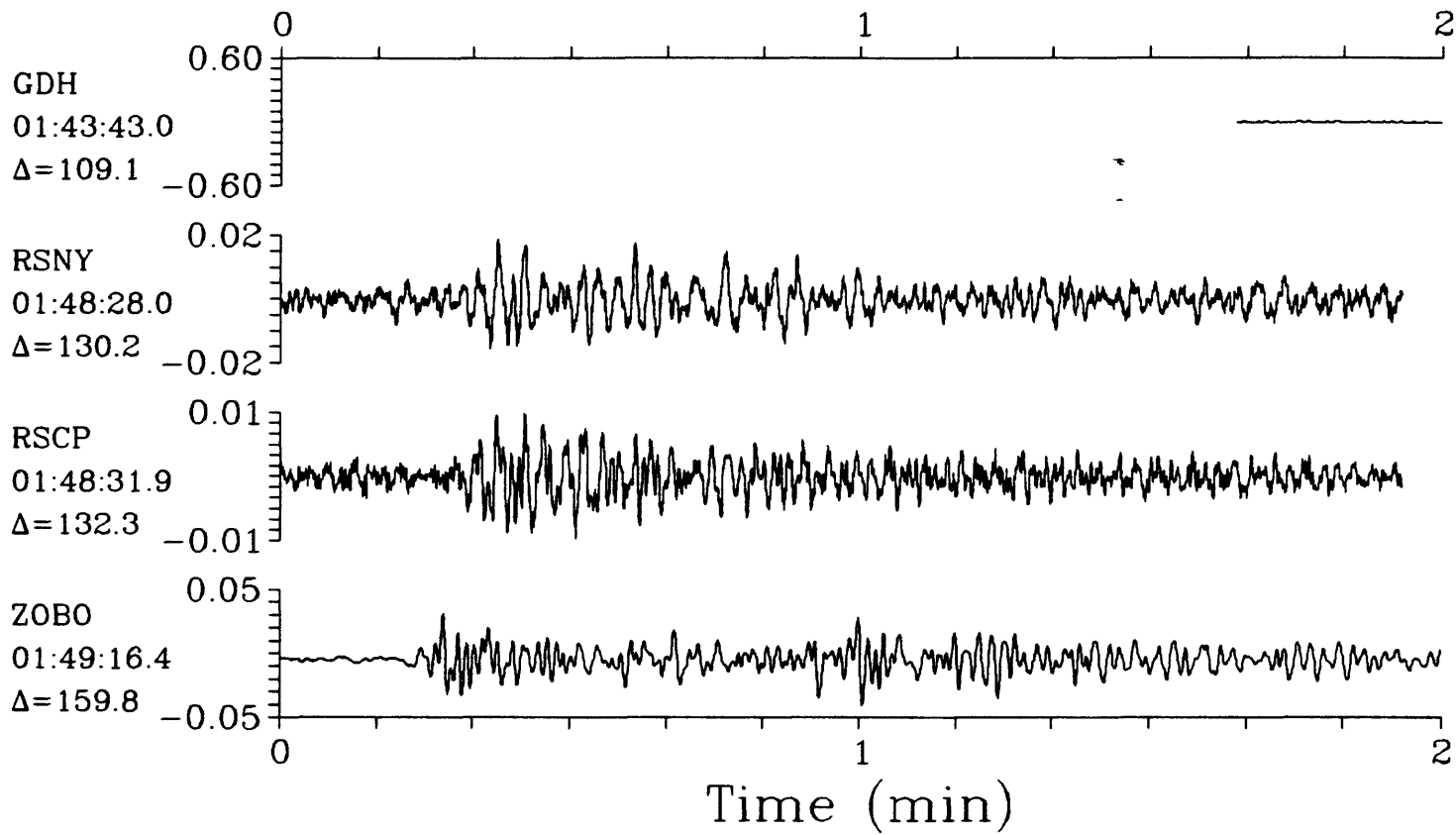
SPZ

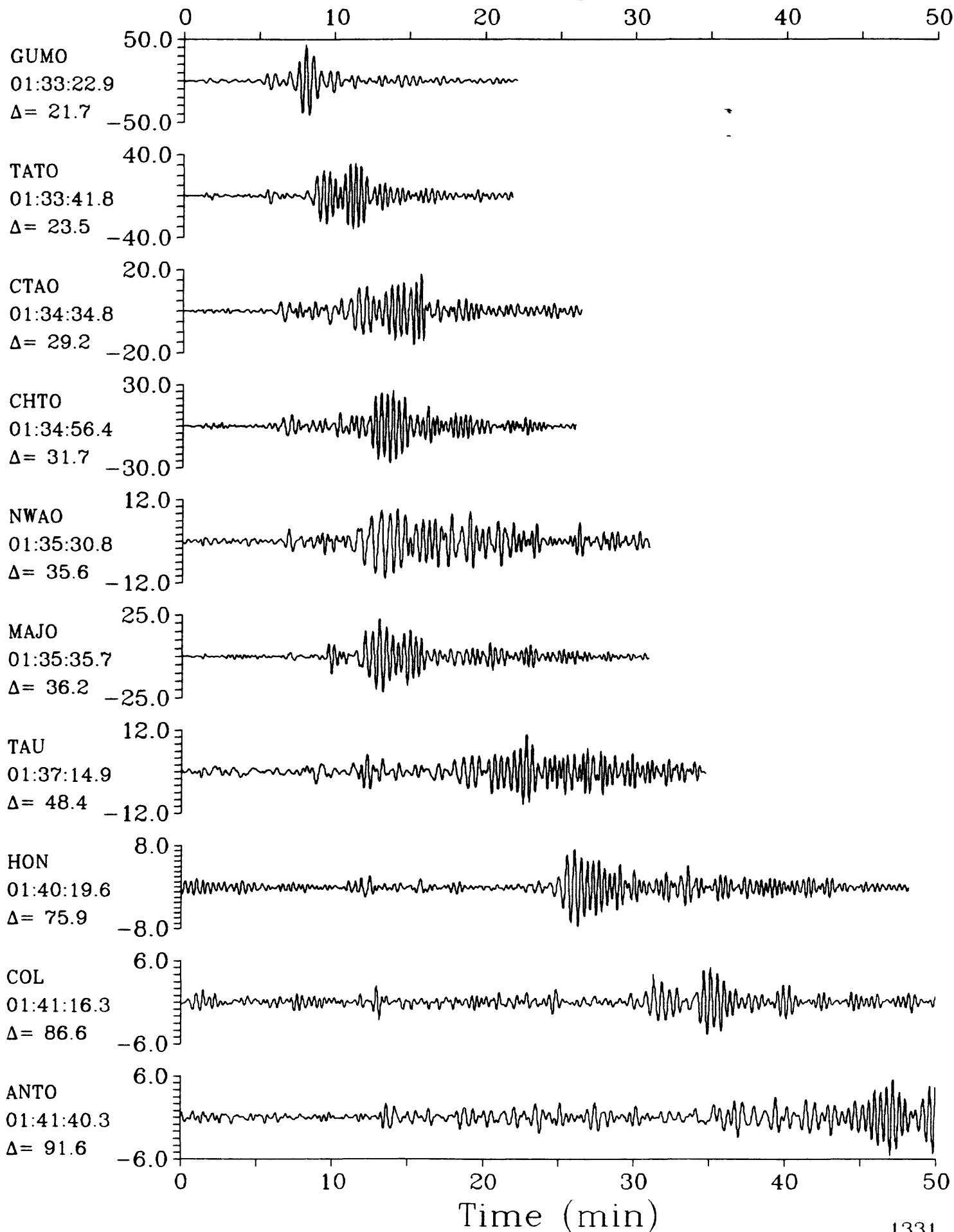
Molucca Passage  $h=33.0$   $m_b=5.6$   $M_{SZ}=5.9$ 

SPZ

10 July 1986 01:29:35.70

SPZ

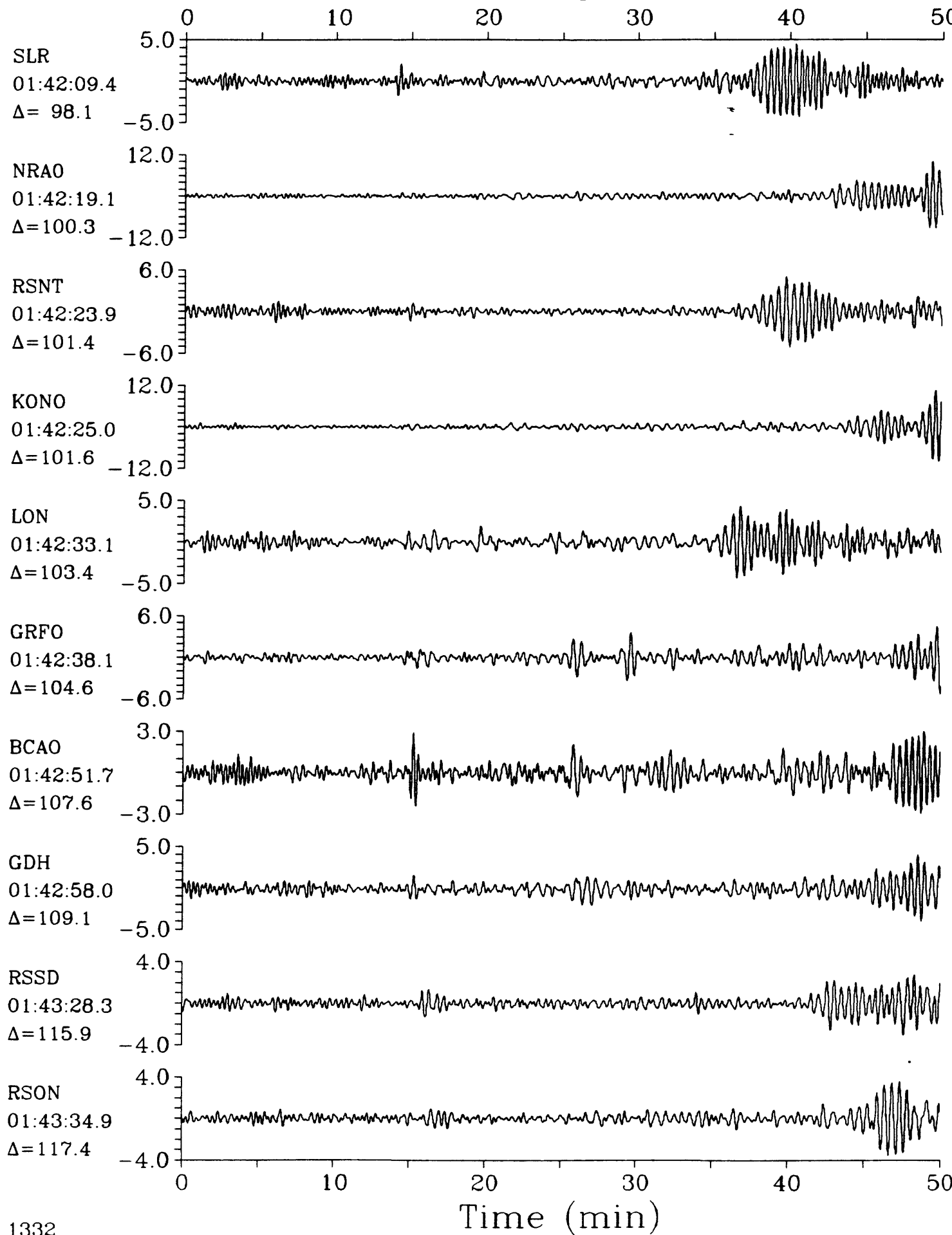
Molucca Passage  $h=33.0$   $m_b=5.6$   $M_{sz}=5.9$ 

Molucca Passage  $h=33.0$   $m_b=5.6$   $M_{sz}=5.9$ 

LPZ

10 July 1986 01:29:35.70

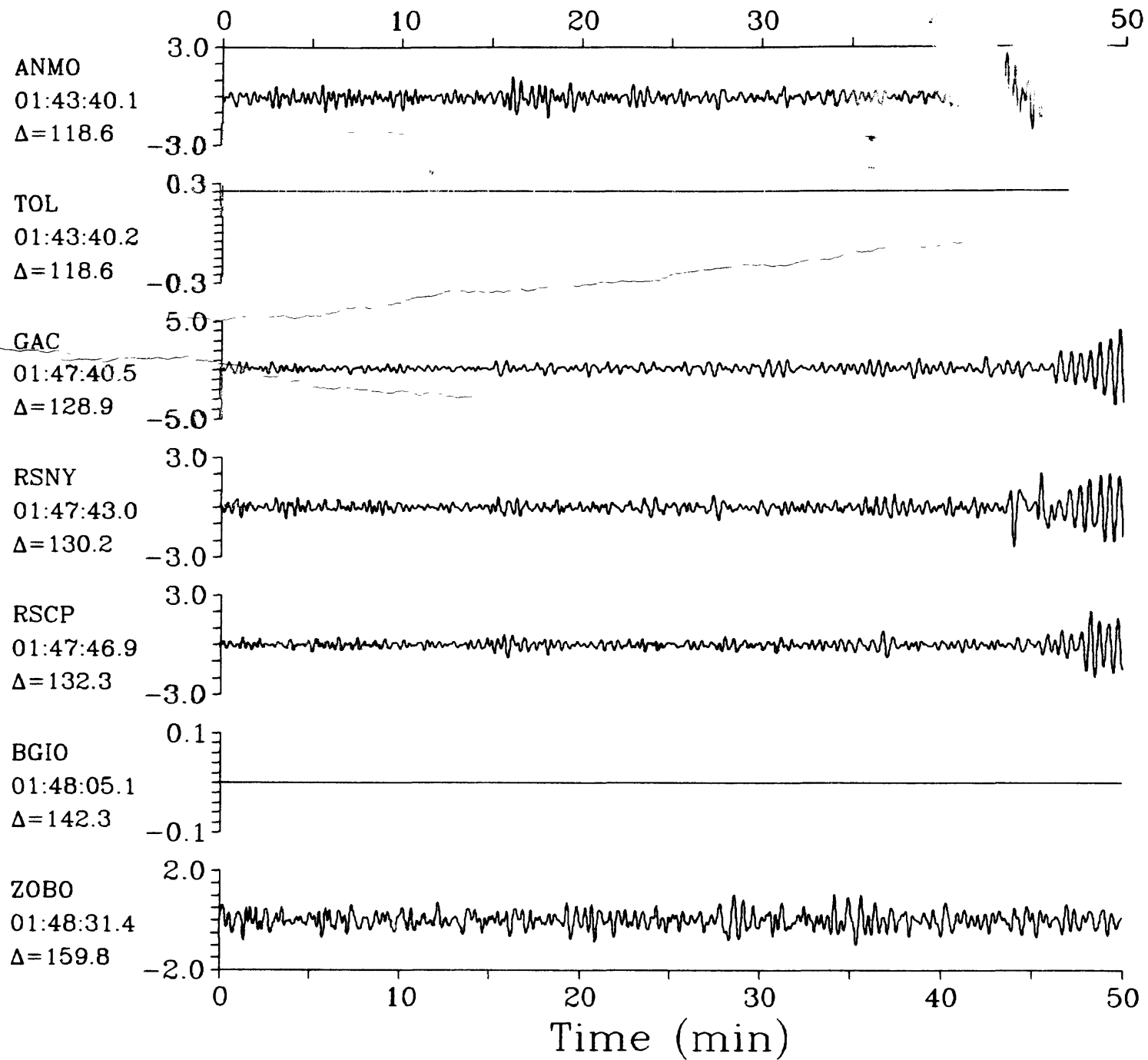
LPZ

Molucca Passage  $h=33.0$   $m_b=5.6$   $M_{sz}=5.9$ 

LPZ

10 July 1986 01:29:35.70

Z

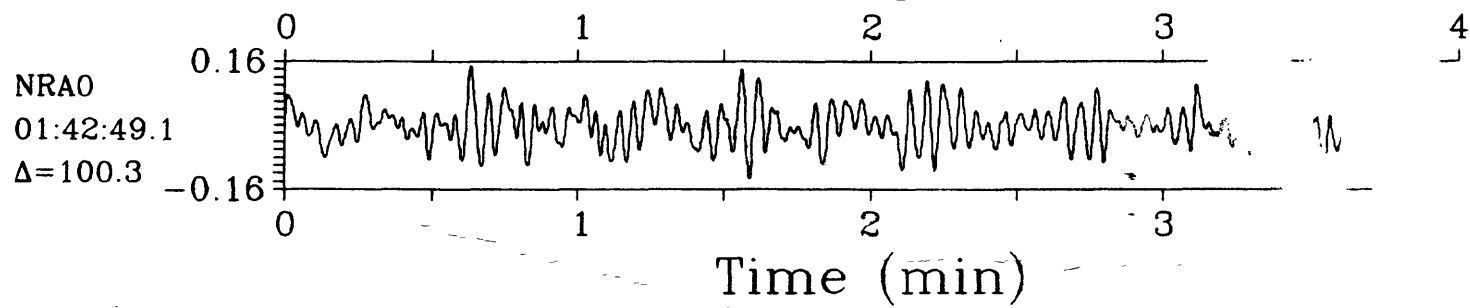
Molucca Passage  $h=33.0$   $m_b=5.6$   $M_{SZ}=5.9$ 

IPZ

10 July 1986 01:29:35.70

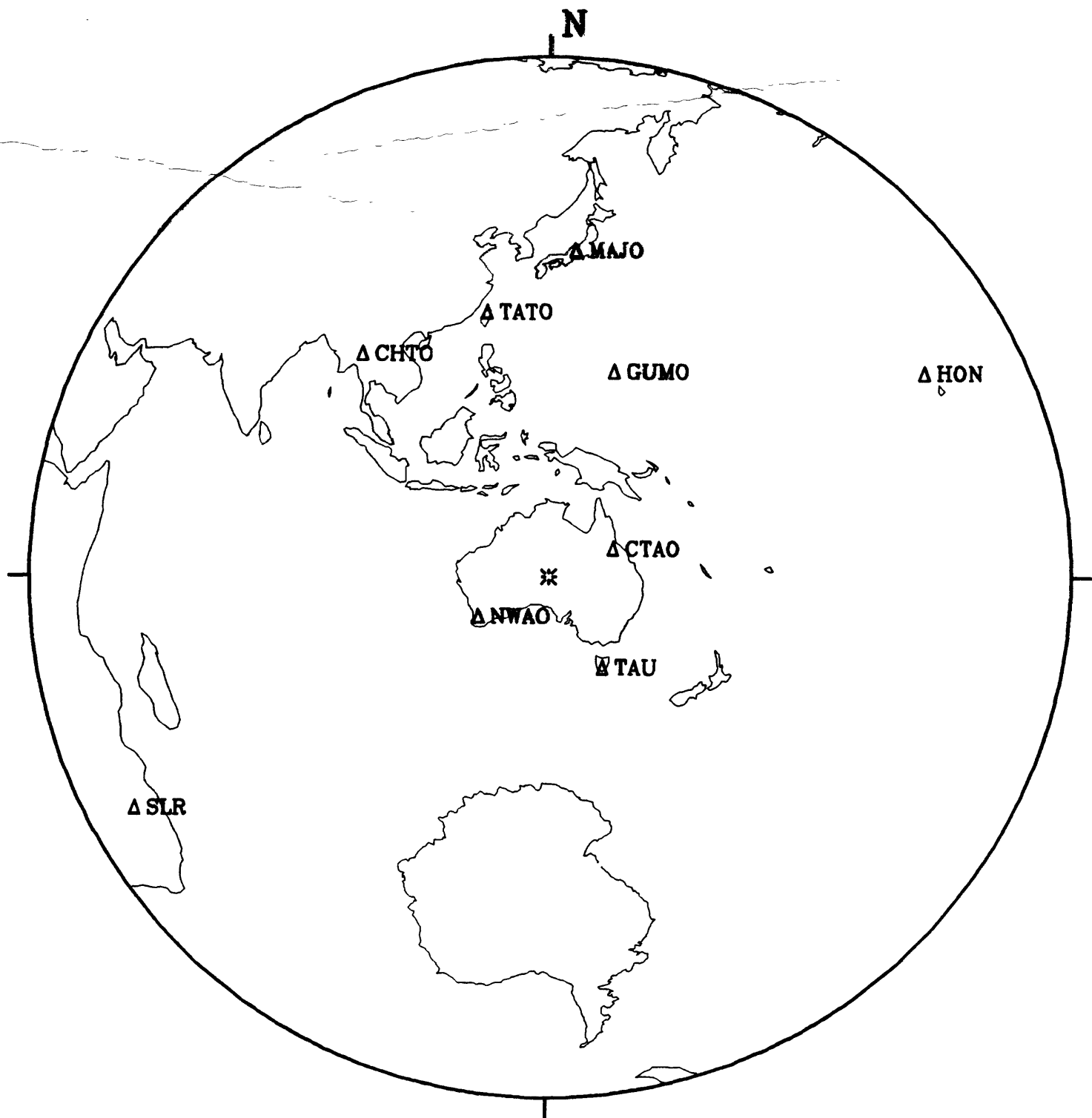
0Z

Molucca Passage  $h=33.0$   $m_b=5.6$   $M_{sz}=5.9$



11 July 1986 07:17:58.49

## South Australia

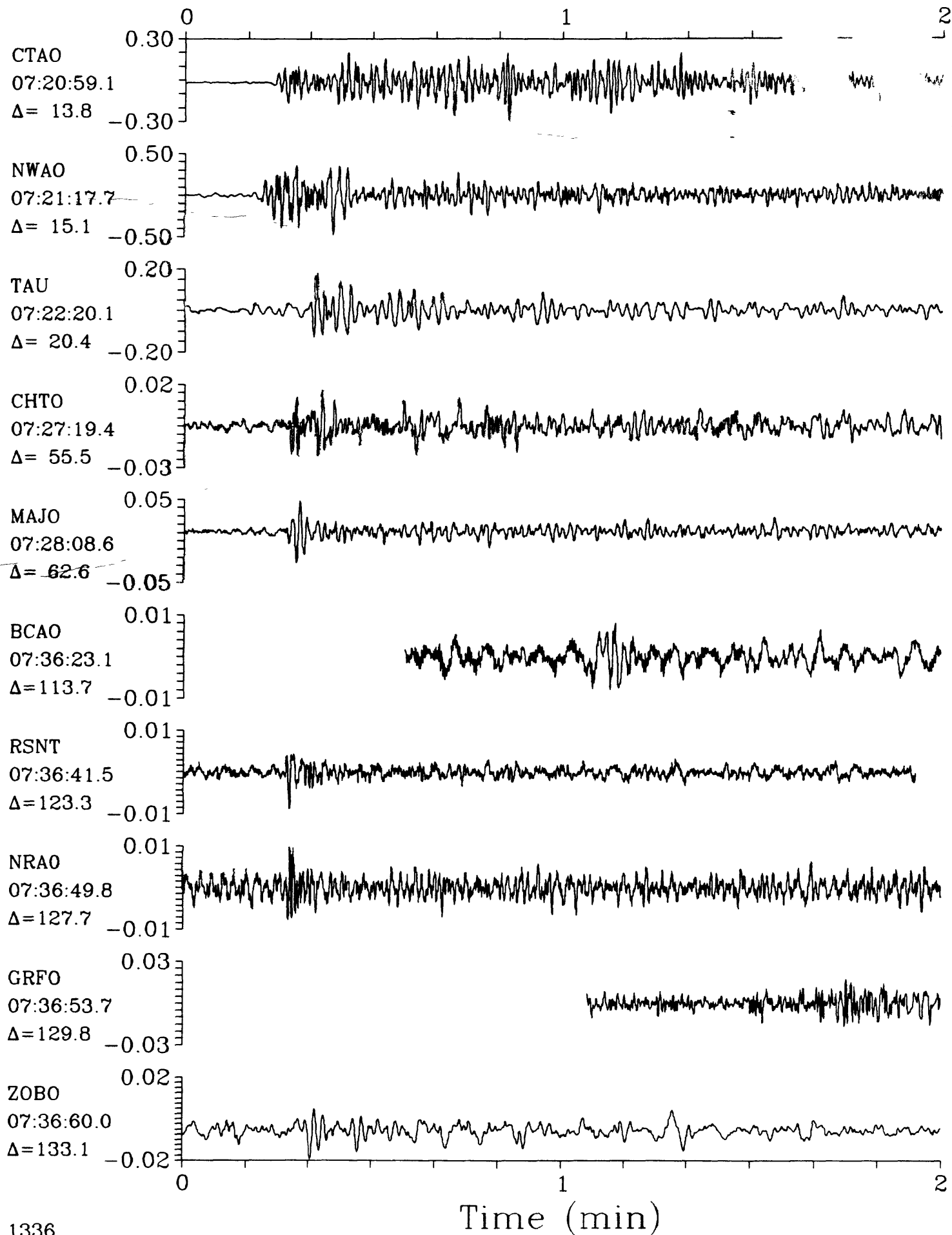




SPZ

11 July 1986 07:17:58.49

Z

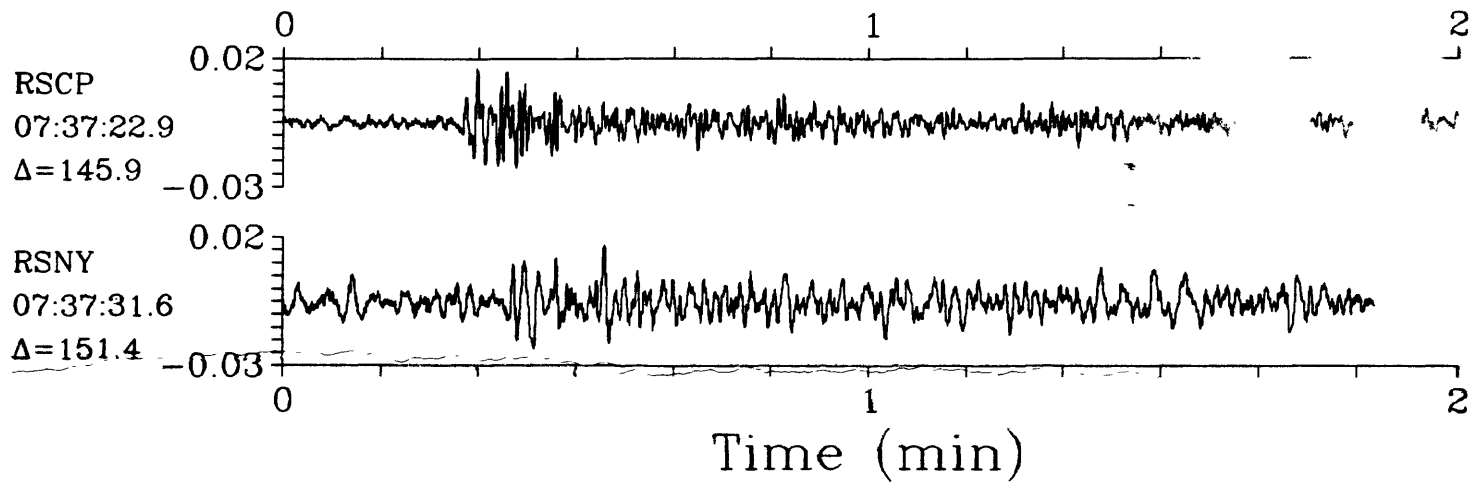
South Australia  $h=10.0$   $m_b=5.6$   $M_{sz}=5.4$ 

SPZ

11 July 1986 07:17:58.49

'Z

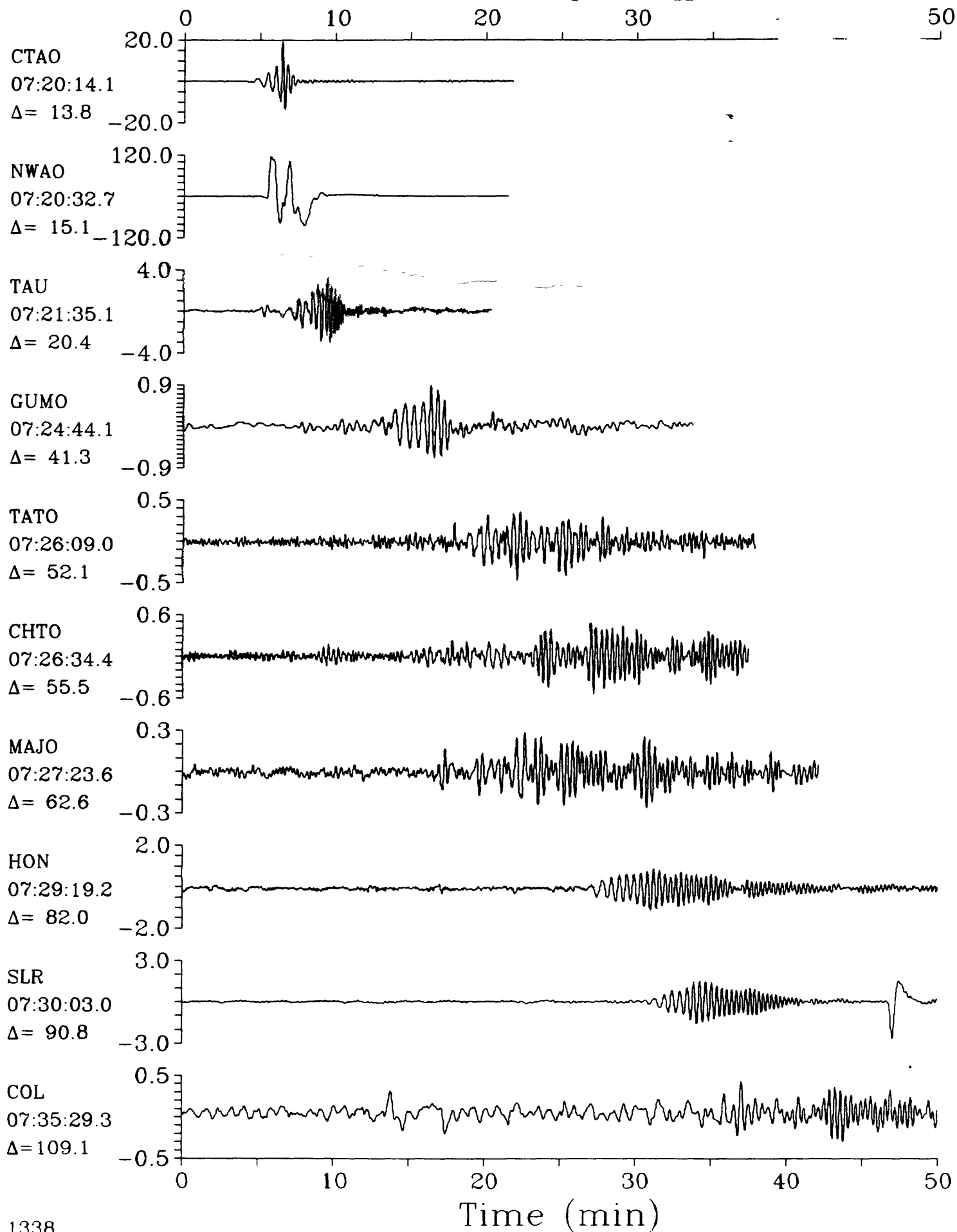
South Australia  $h=10.0$   $m_b=5.6$   $M_{sz}=5.4$



LPZ

11 July 1986 07:17:58.49

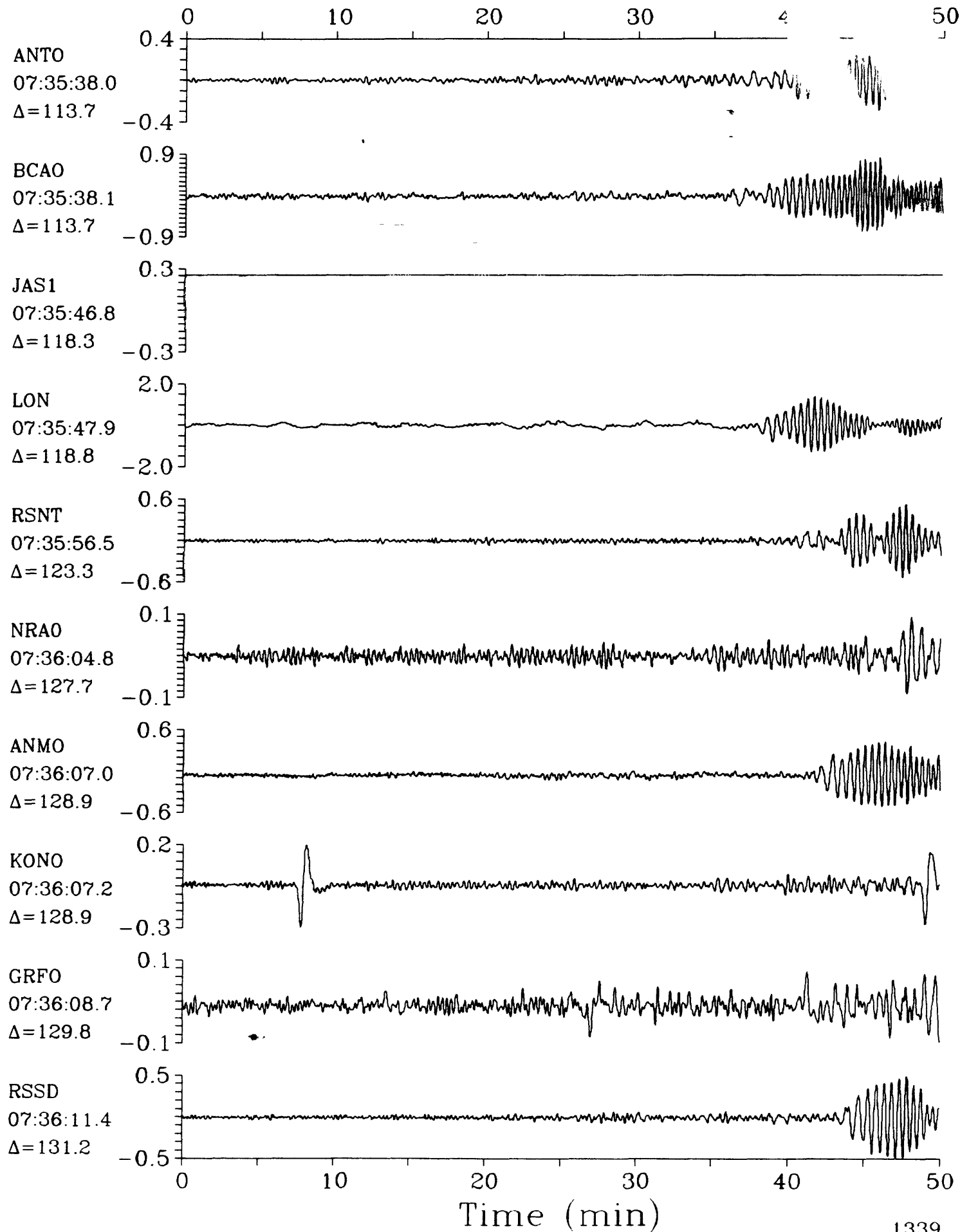
Z

South Australia  $h=10.0$   $m_b=5.6$   $M_{sz}=5.4$ 

LPZ

11 July 1986 07:17:58.49

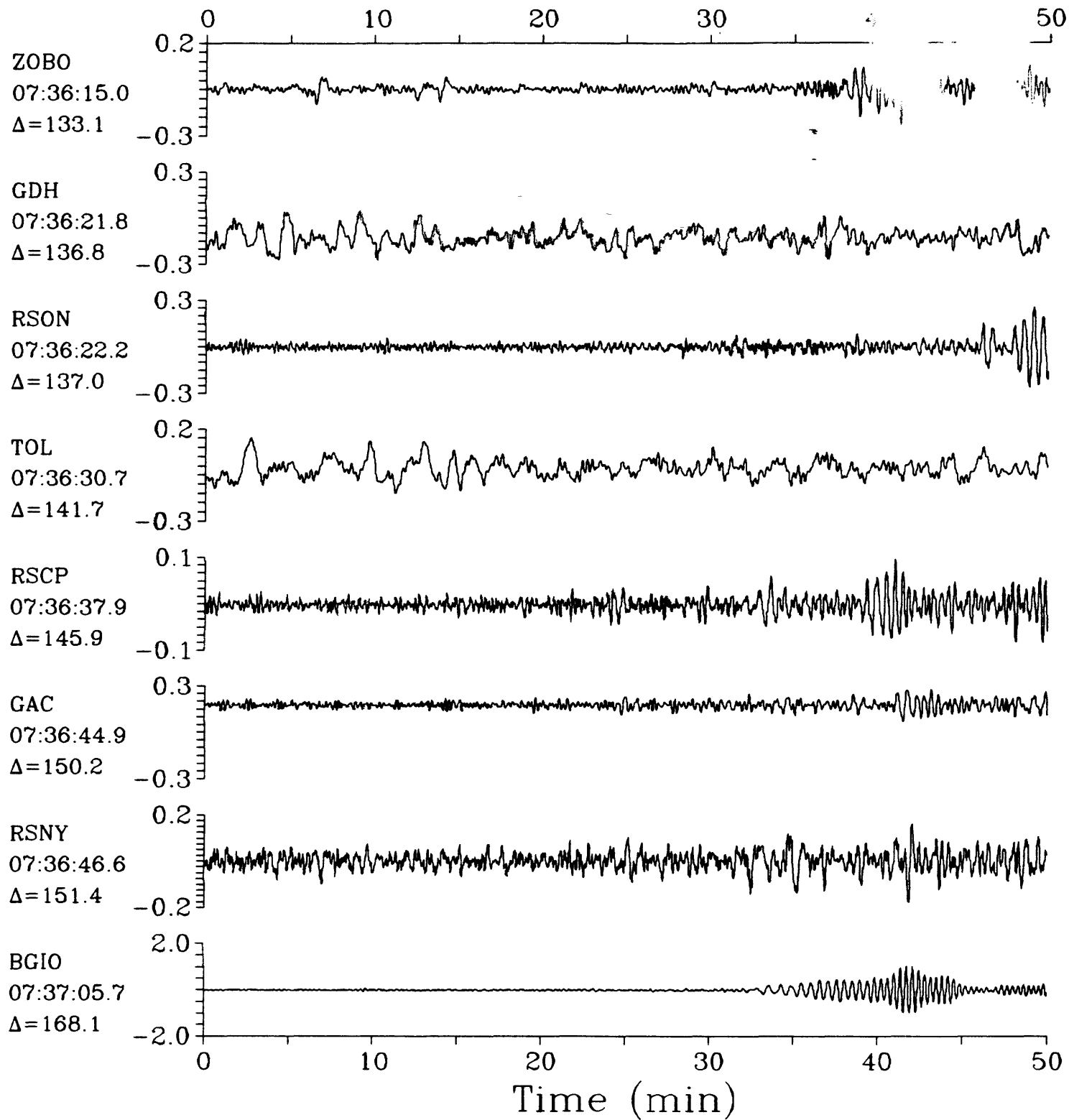
Z

South Australia  $h=10.0$   $m_b=5.6$   $M_{sz}=5.4$ 

LPZ

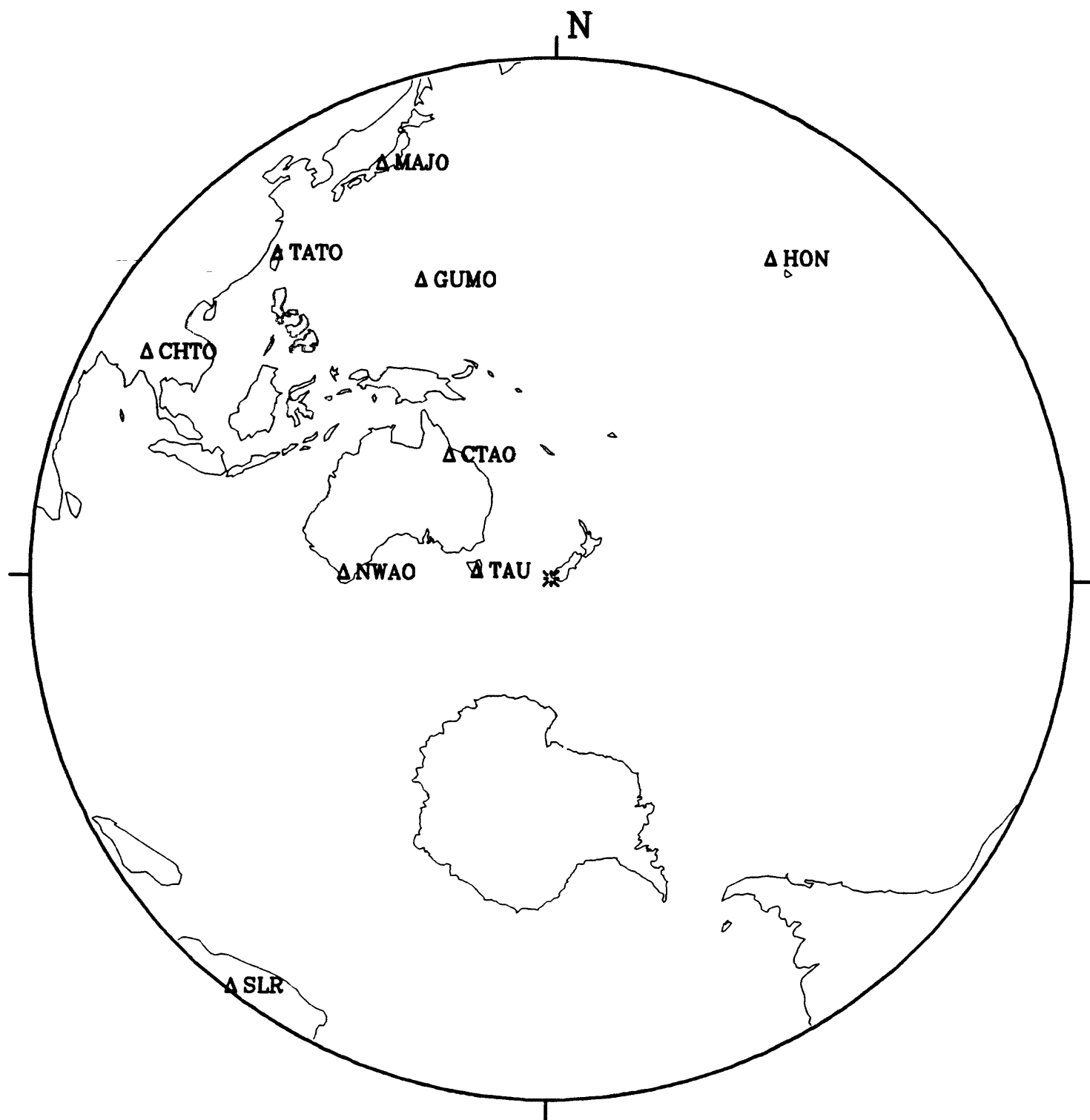
11 July 1986 07:17:58.49

PZ

South Australia  $h=10.0$   $m_b=5.6$   $M_{sz}=5.4$ 

11 July 1986 08:27:46.27

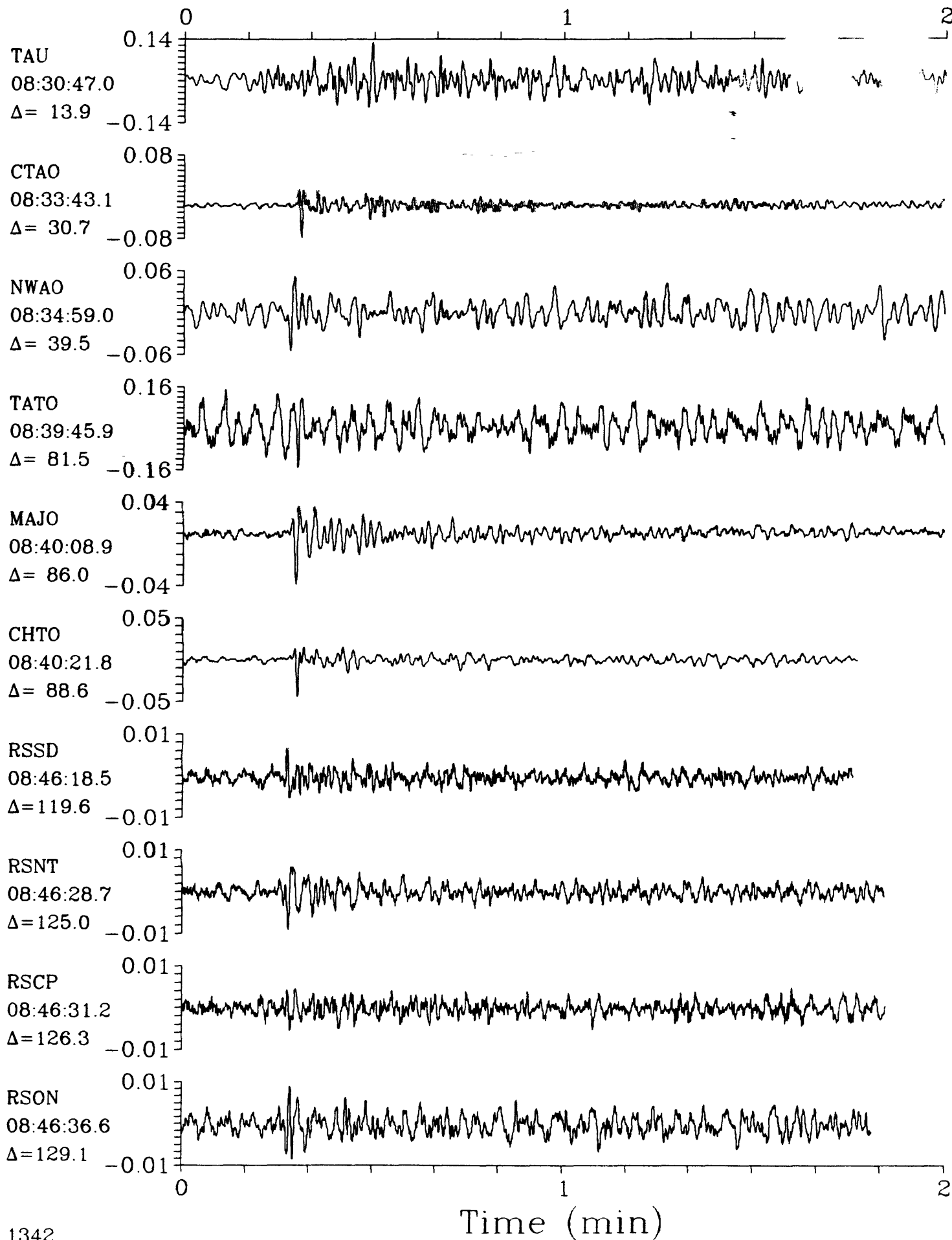
Off W. Coast of S. Island, N.Z.



SPZ

11 July 1986 08:27:46.27

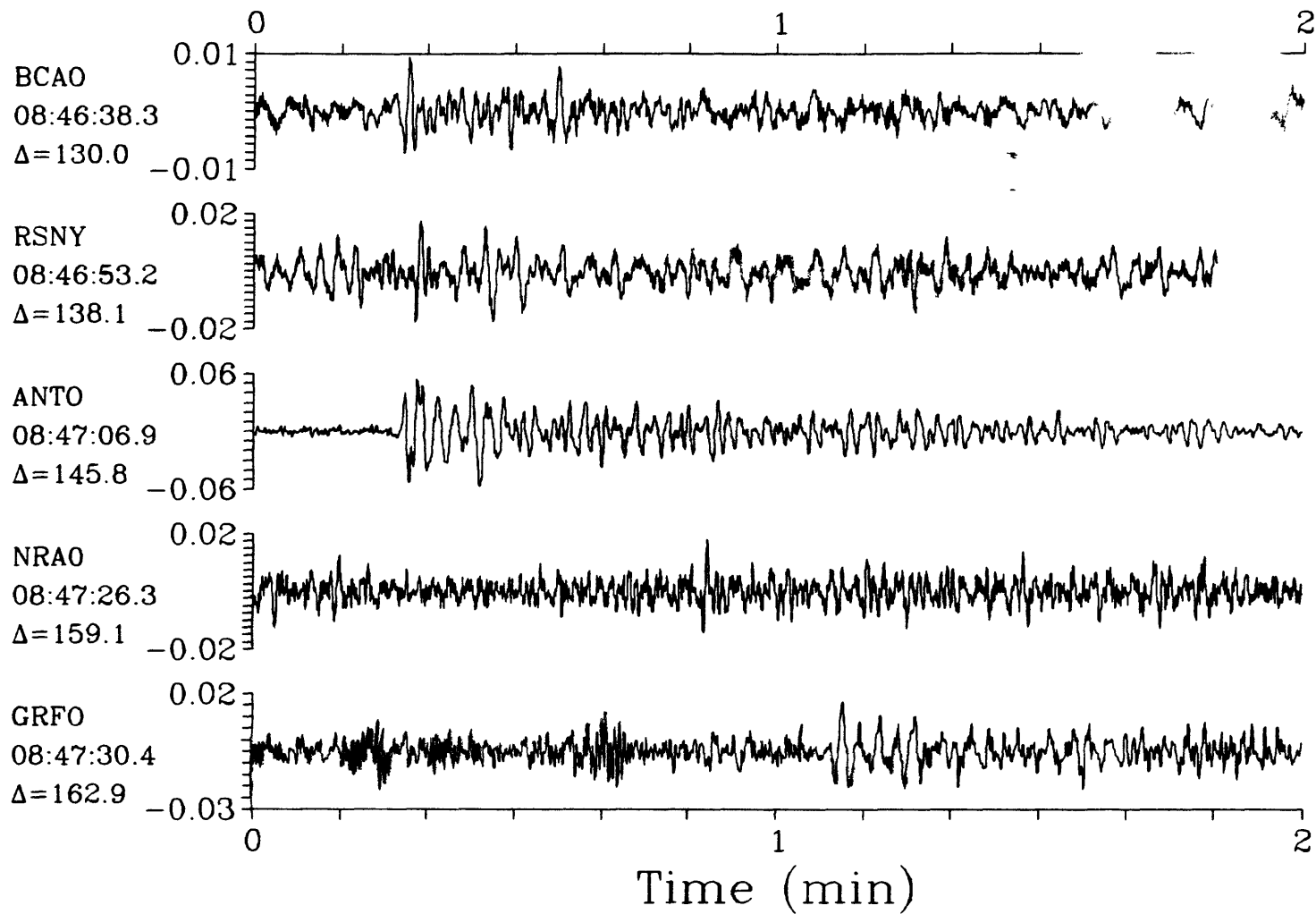
PZ

Off W. Coast of S. Island, N.Z.  $h=33.0$   $m_b=5.4$   $M_S$  .6

SPZ

11 July 1986 08:27:46.27

Z

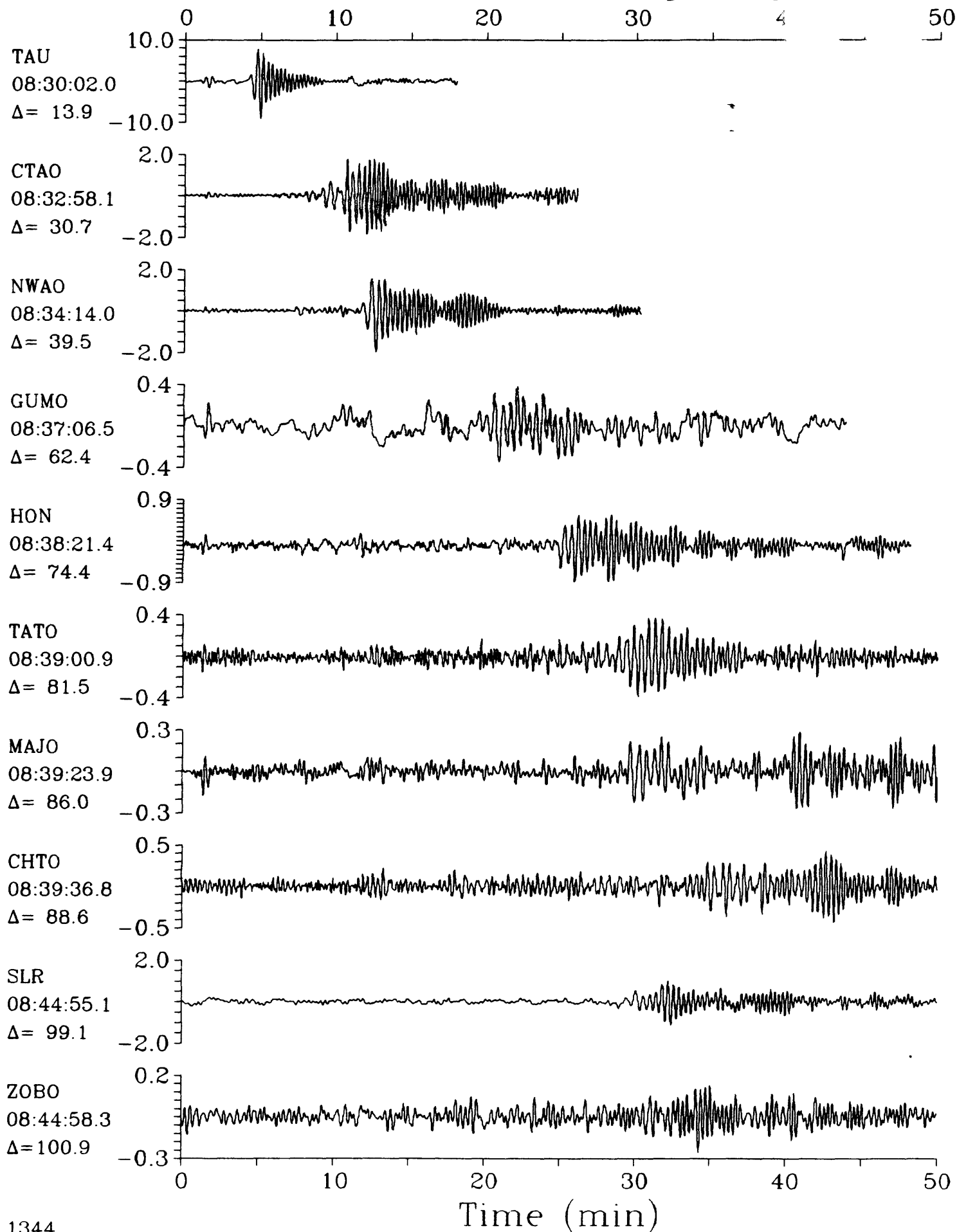
Off W. Coast of S. Island, N.Z.  $h=33.0$   $m_b=5.4$   $M_S$  .6



LPZ

11 July 1986 08:27:46.27

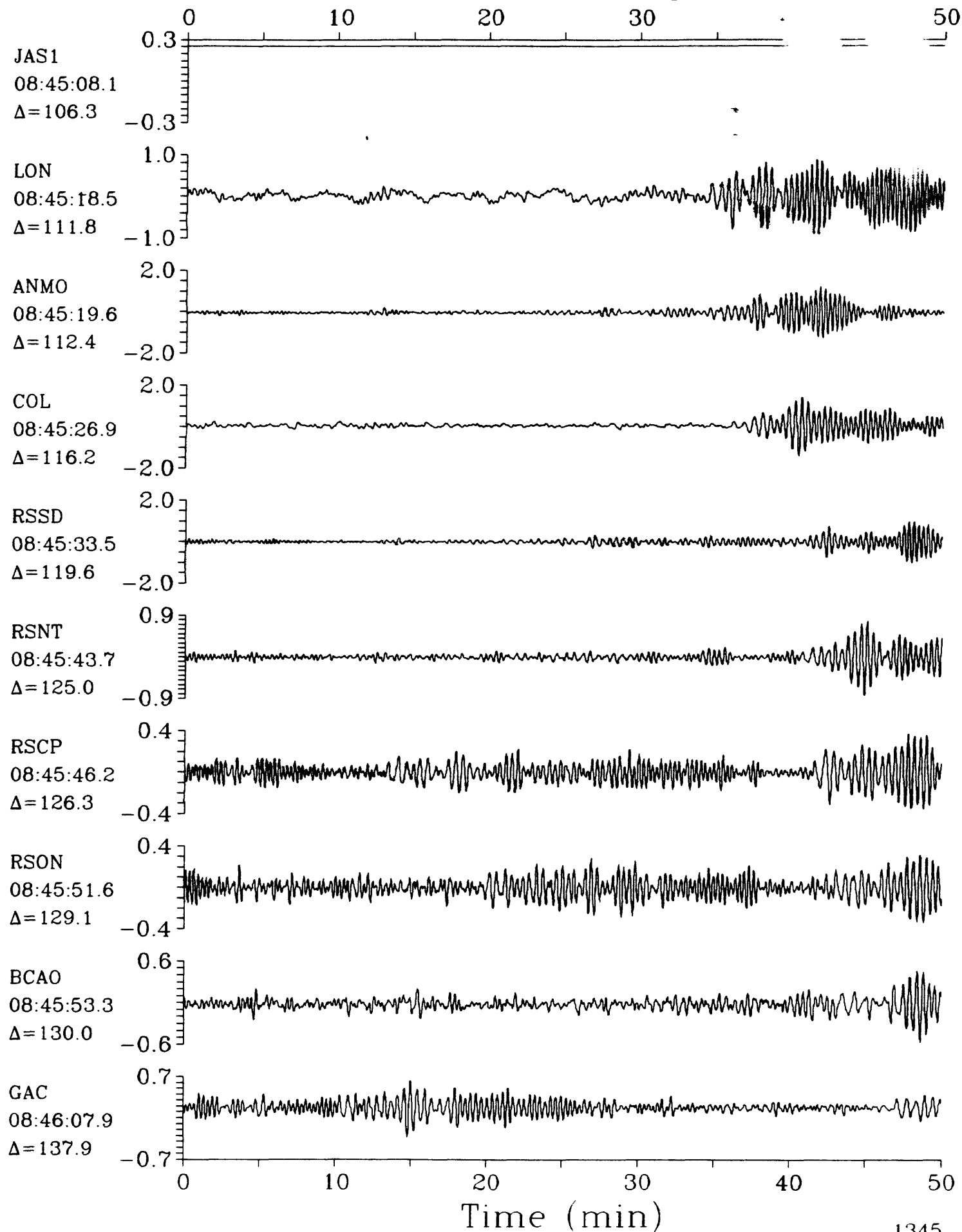
Z

Off W. Coast of S. Island, N.Z.  $h=33.0$   $m_b=5.4$   $M_s$  .6

LPZ

11 July 1986 08:27:46.27

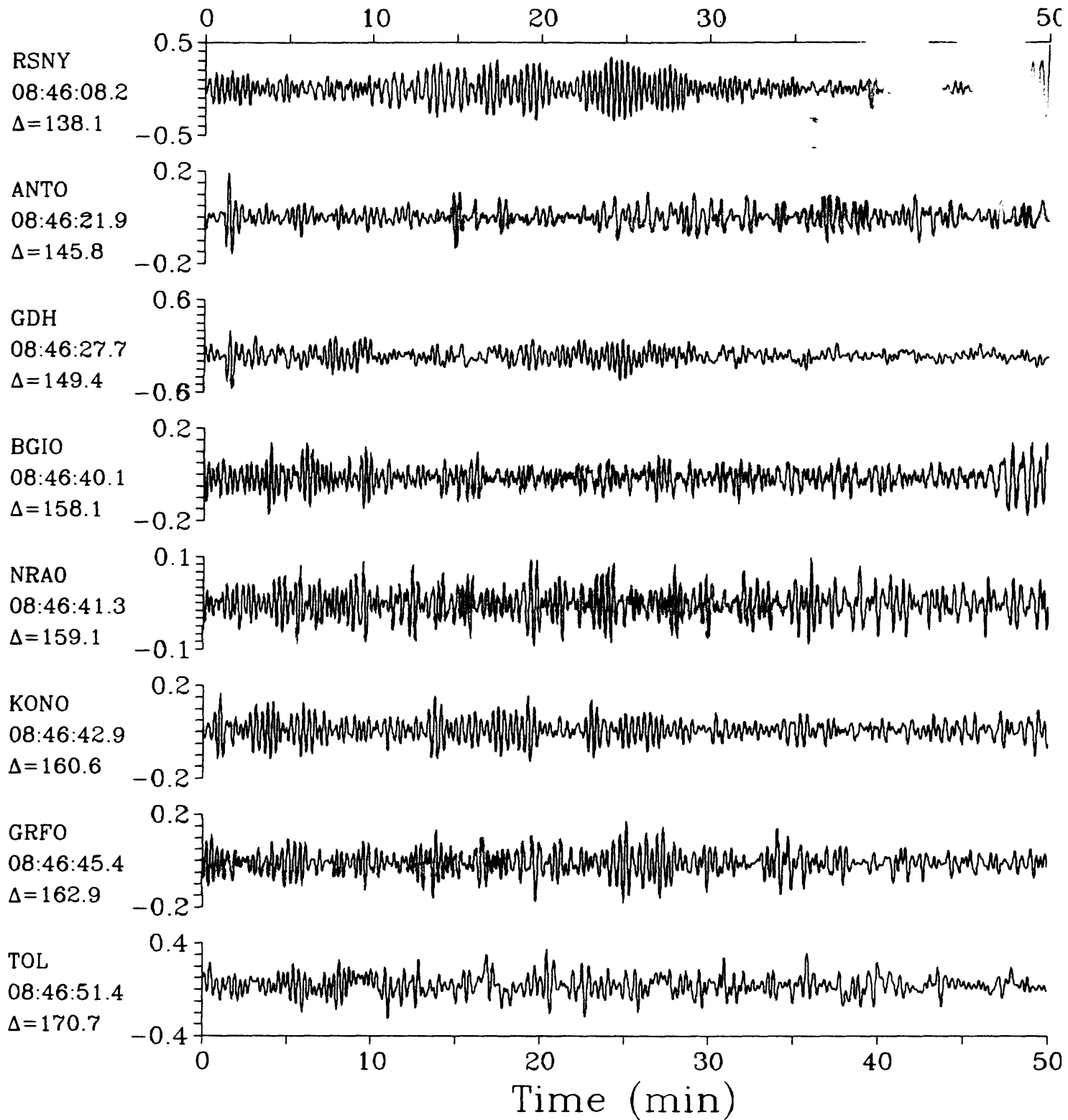
PZ

Off W. Coast of S. Island, N.Z.  $h=33.0$   $m_b=5.4$   $M_s$  .6

LPZ

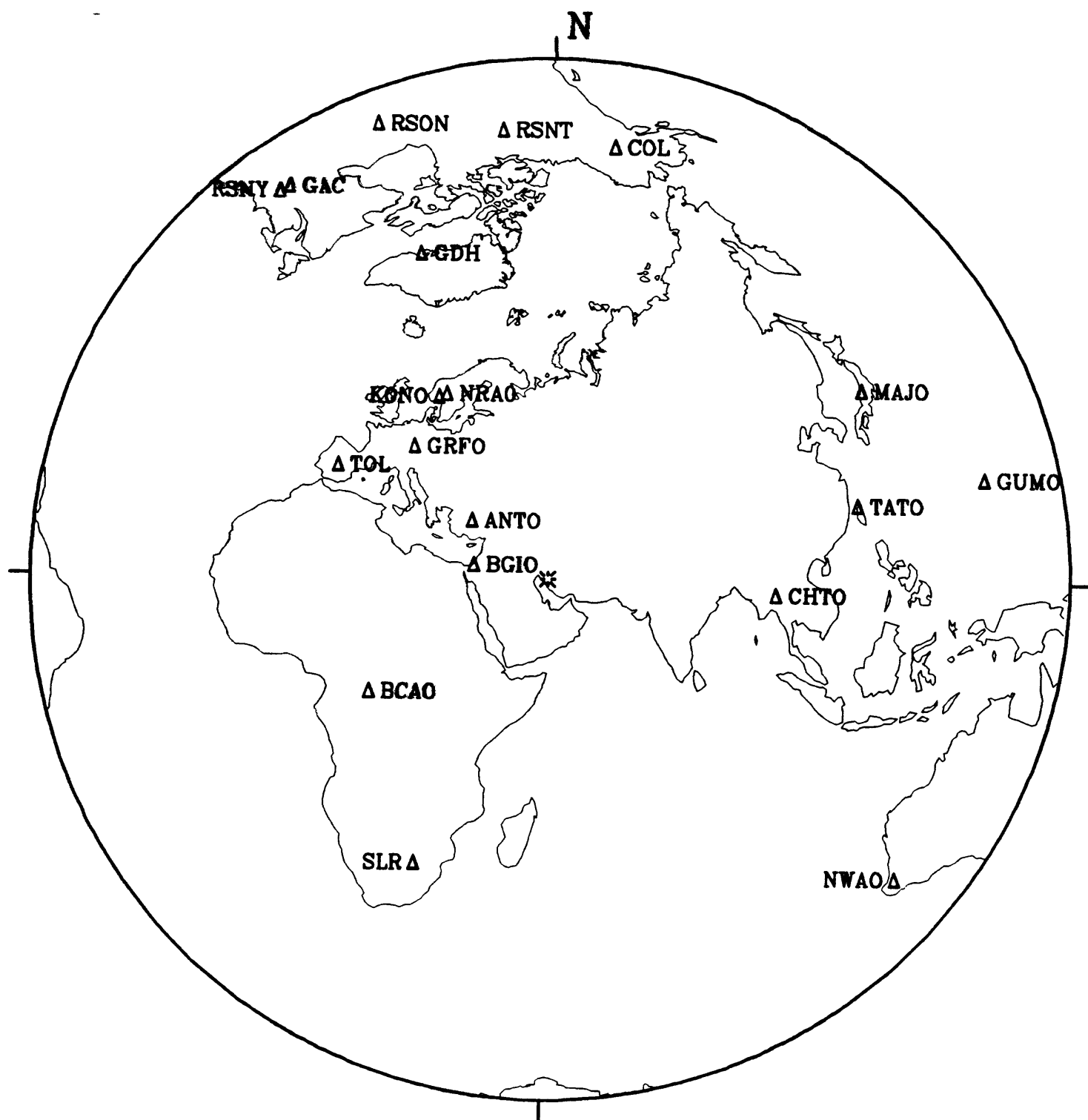
11 July 1986 08:27:46.27

PZ

Off W. Coast of S. Island, N.Z.  $h=33.0$   $m_b=5.4$   $M_s$  5.6

12 July 1986 07:54:30.13

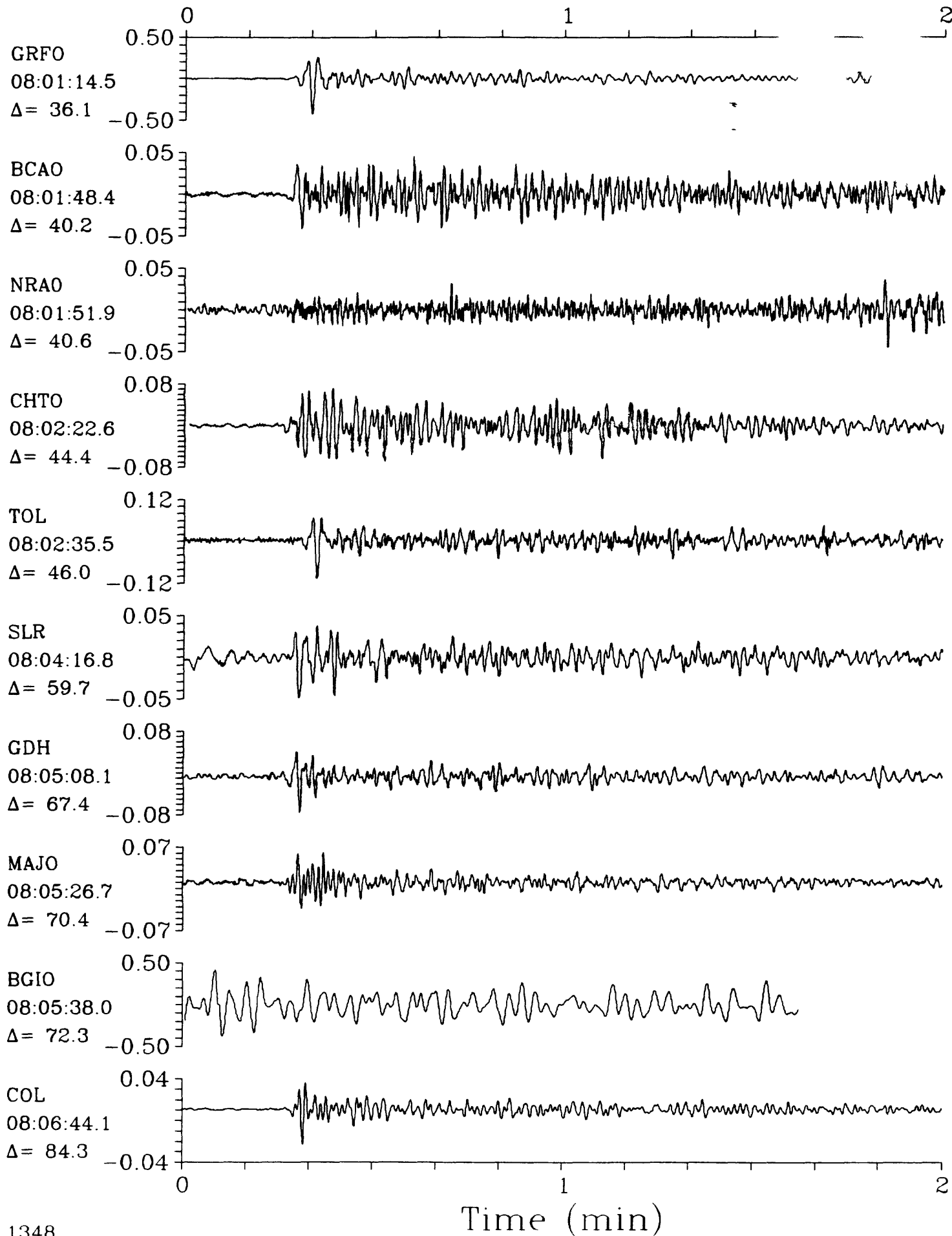
## Southern Iran



SPZ

12 July 1986 07:54:30.13

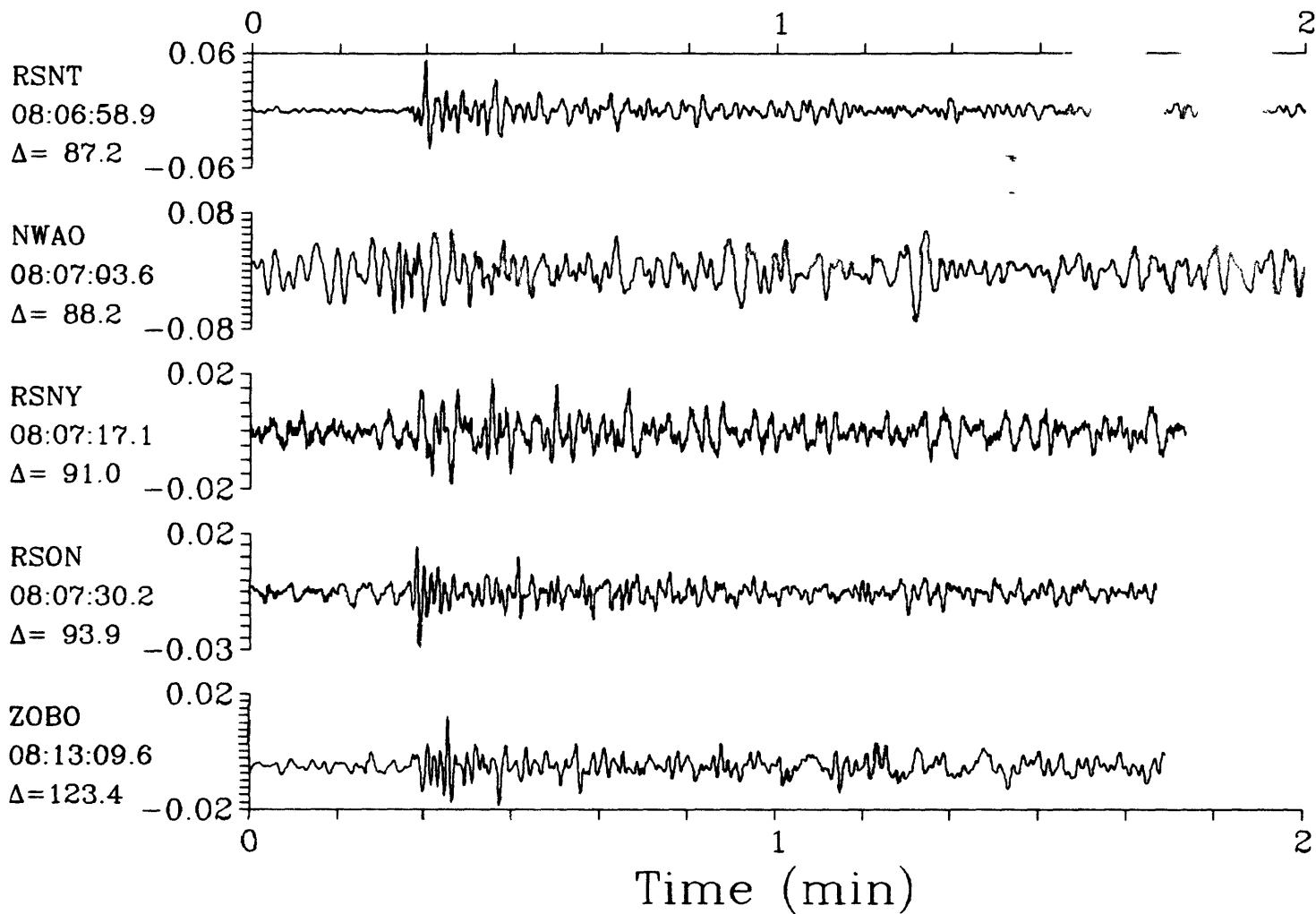
PZ

Southern Iran  $h=33.0$   $m_b=5.7$   $M_{sz}=5.6$ 

SPZ

12 July 1986 07:54:30.13

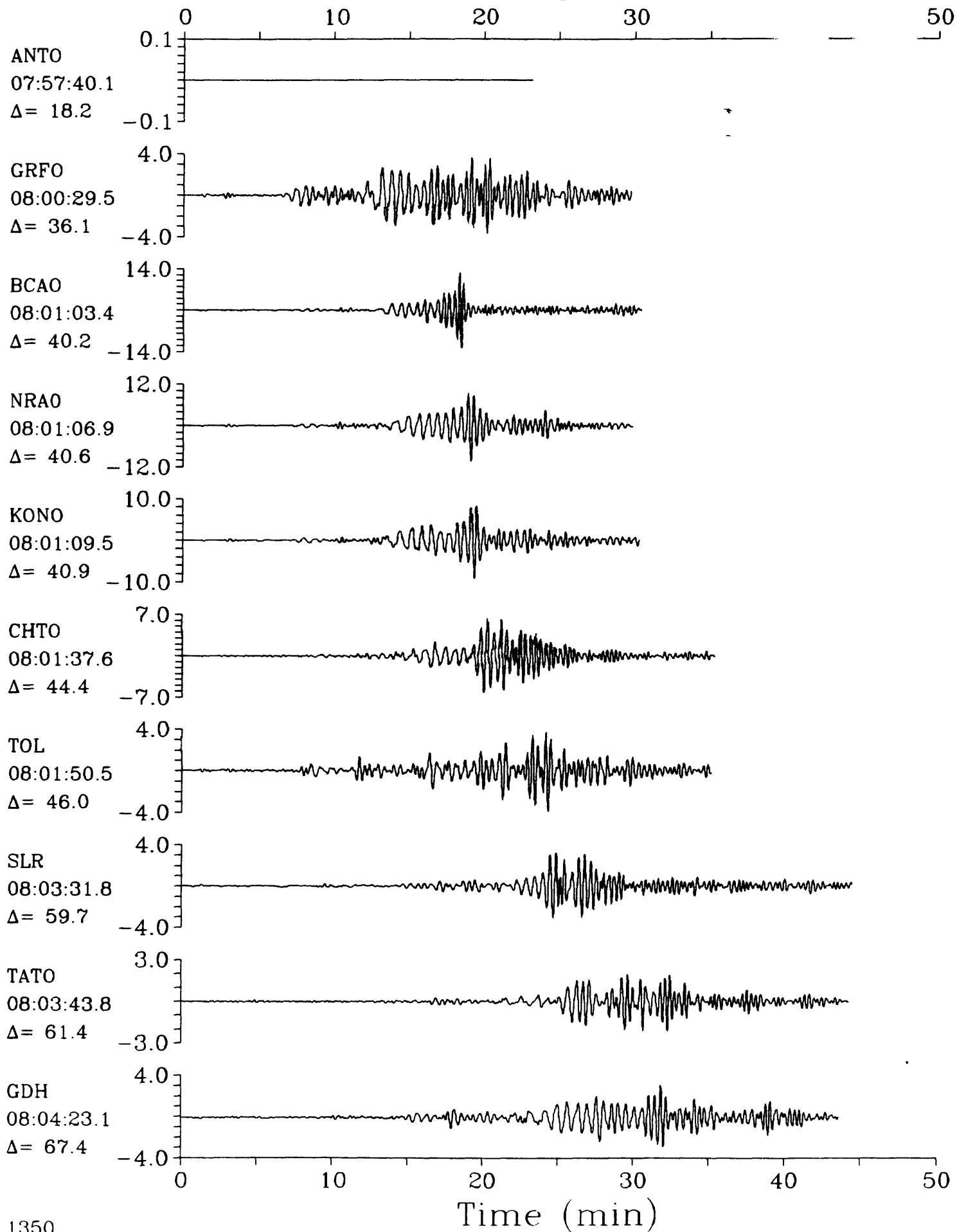
SPZ

Southern Iran  $h=33.0$   $m_b=5.7$   $M_{SZ}=5.6$ 

LPZ

12 July 1986 07:54:30.13  
Southern Iran  $h=33.0$   $m_b=5.7$   $M_{sz}=5.6$ 

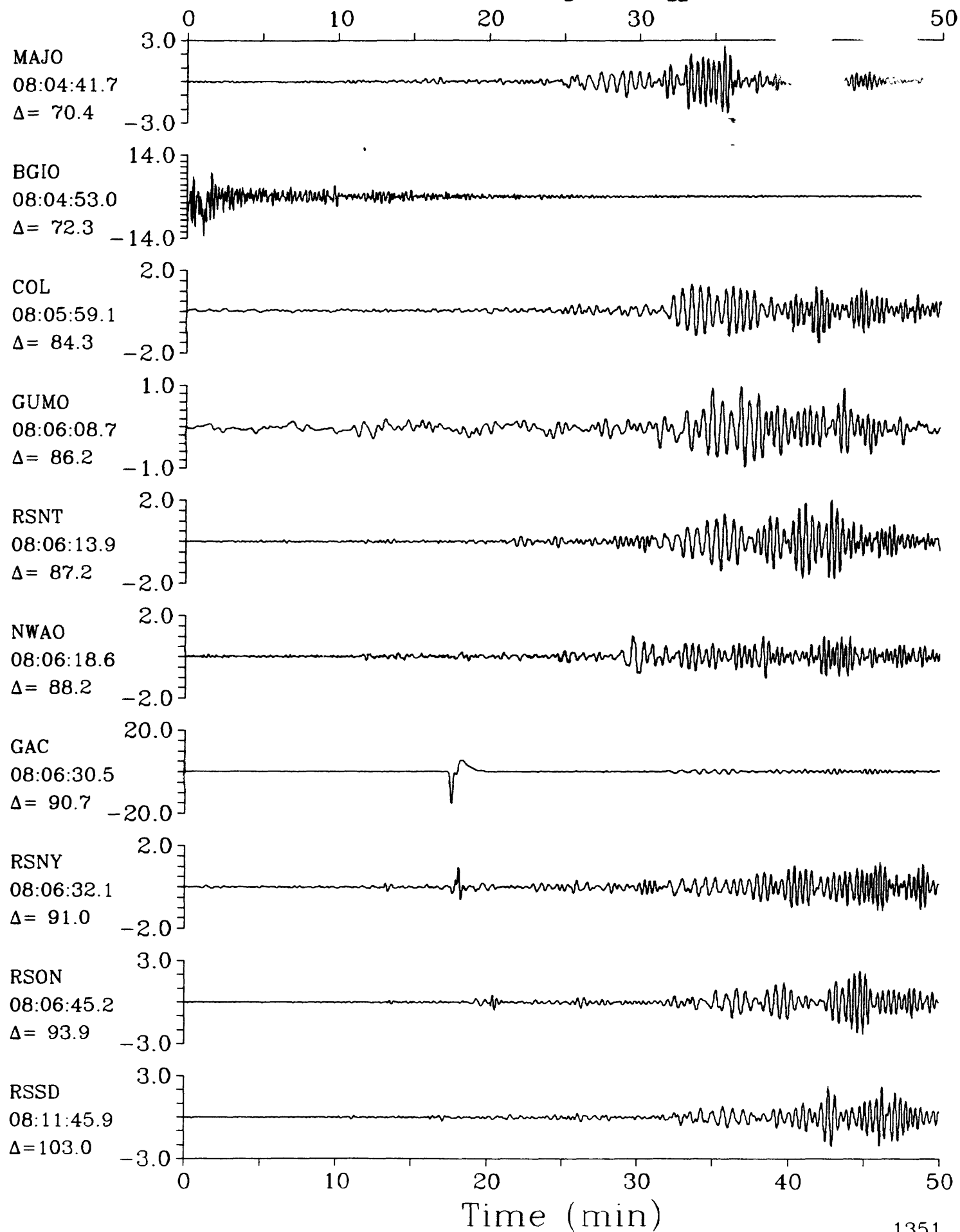
PZ



LPZ

12 July 1986 07:54:30.13

JPZ

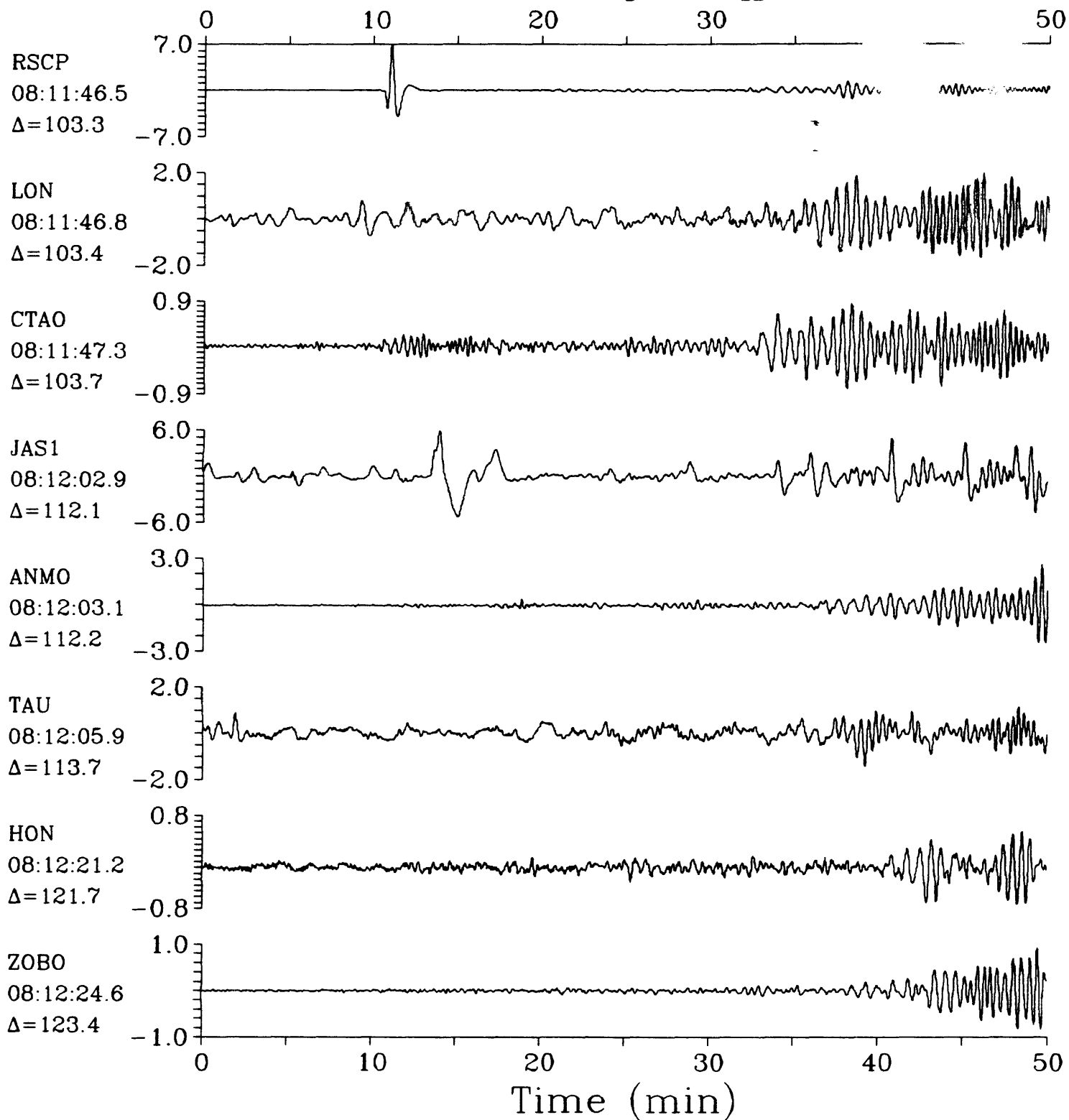
Southern Iran  $h=33.0$   $m_b=5.7$   $M_{sz}=5.6$ 



LPZ

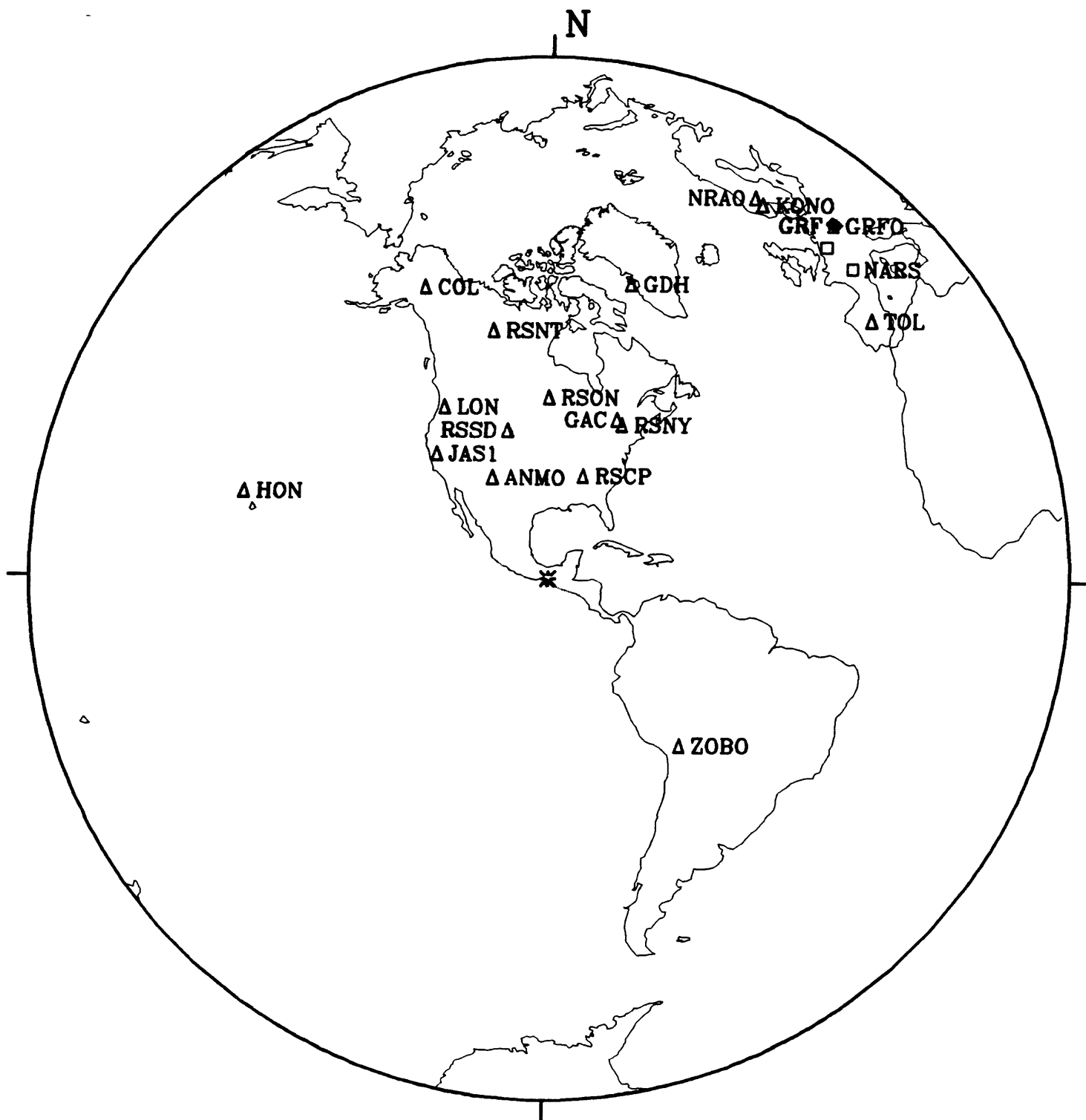
12 July 1986 07:54:30.13

PZ

Southern Iran  $h=33.0$   $m_b=5.7$   $M_{sz}=5.6$ 

13 July 1986 09:12:11.59

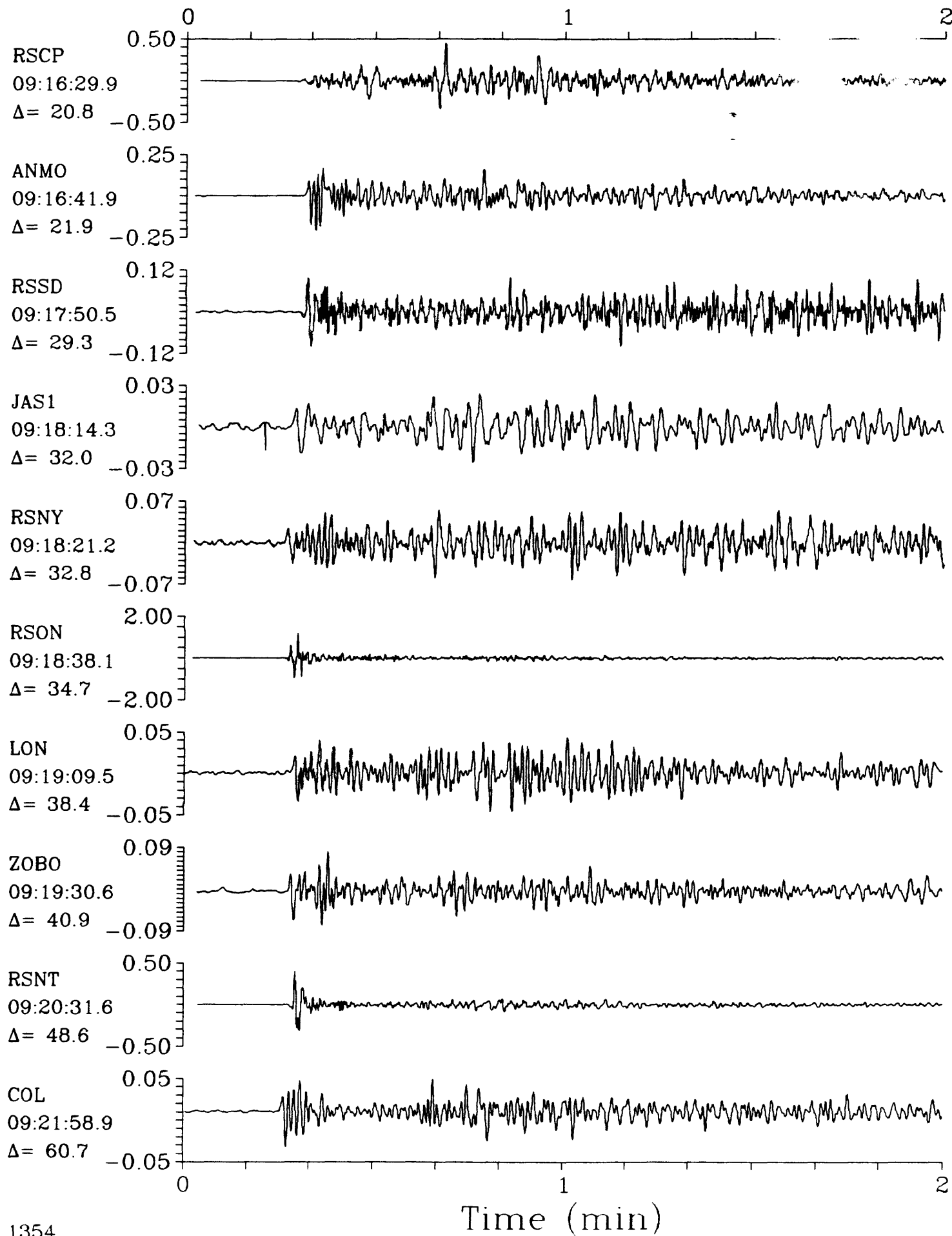
## Chiapas, Mexico



SPZ

13 July 1986 09:12:11.59  
Chiapas, Mexico  $h=89.6$   $m_b=5.9$ 

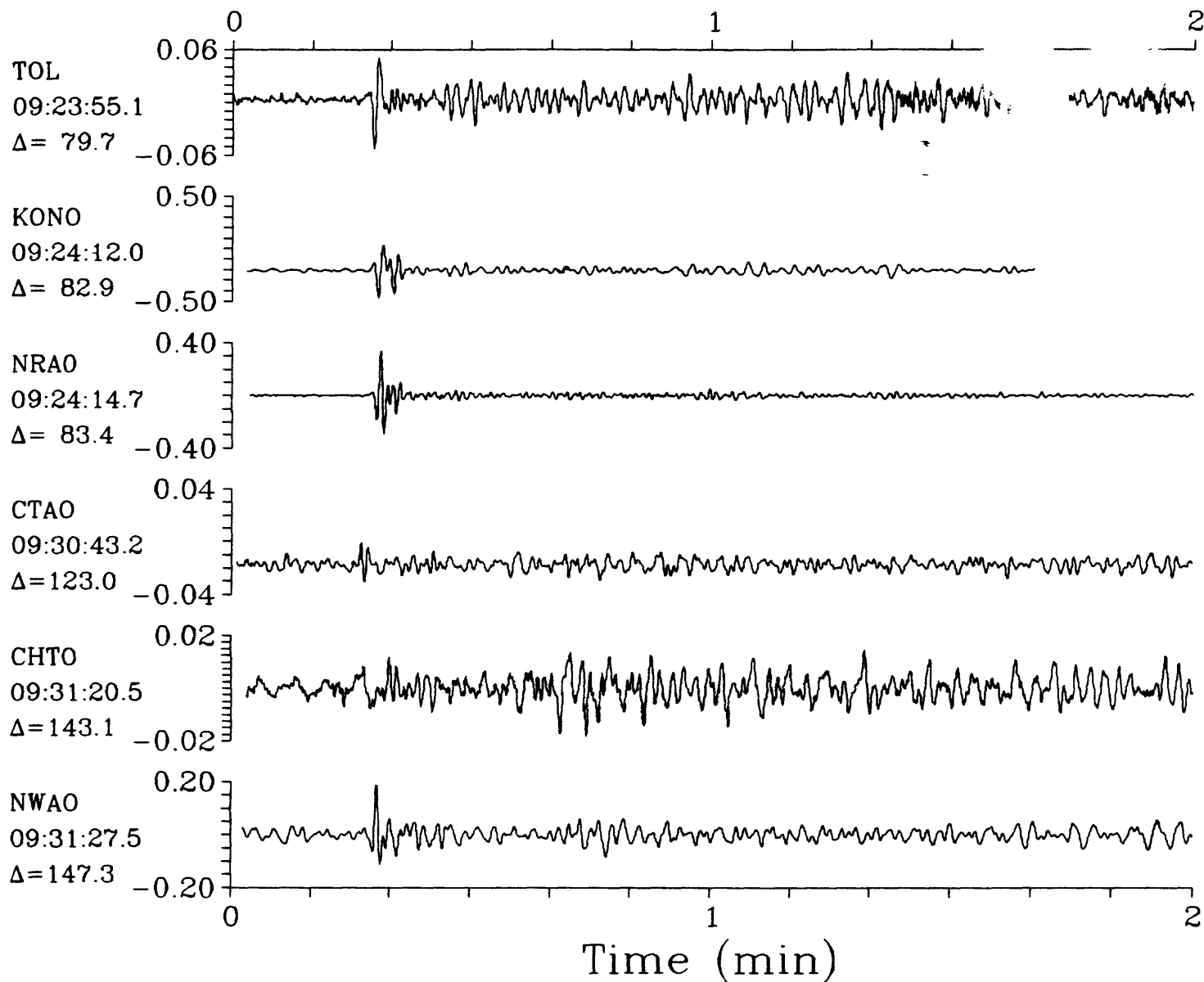
SPZ



SPZ

13 July 1986 09:12:11.59  
Chiapas, Mexico  $h=89.6$   $m_b=5.9$ 

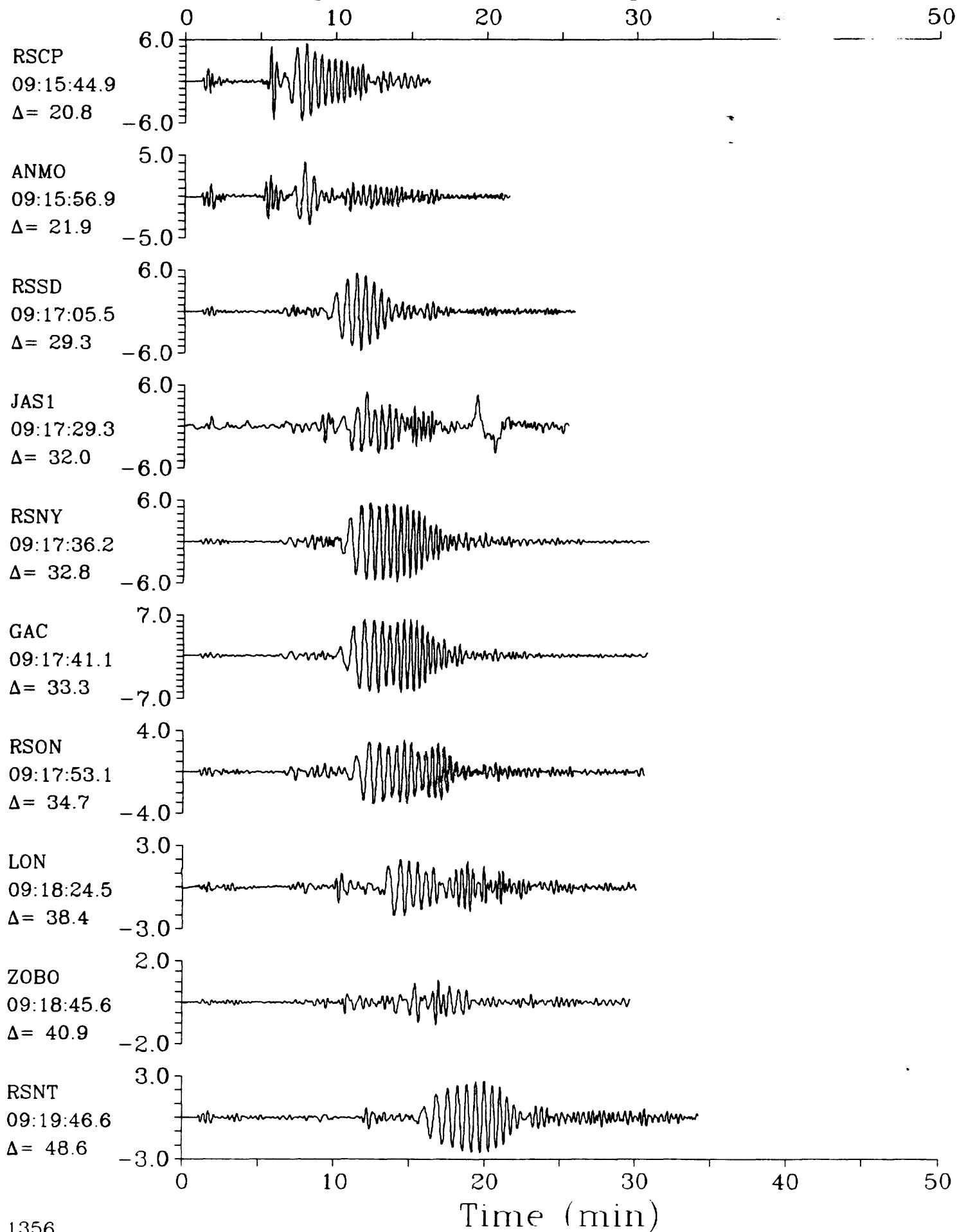
SPZ



LPZ

13 July 1986 09:12:11.59  
Chiapas, Mexico  $h=89.6$   $m_b=5.9$ 

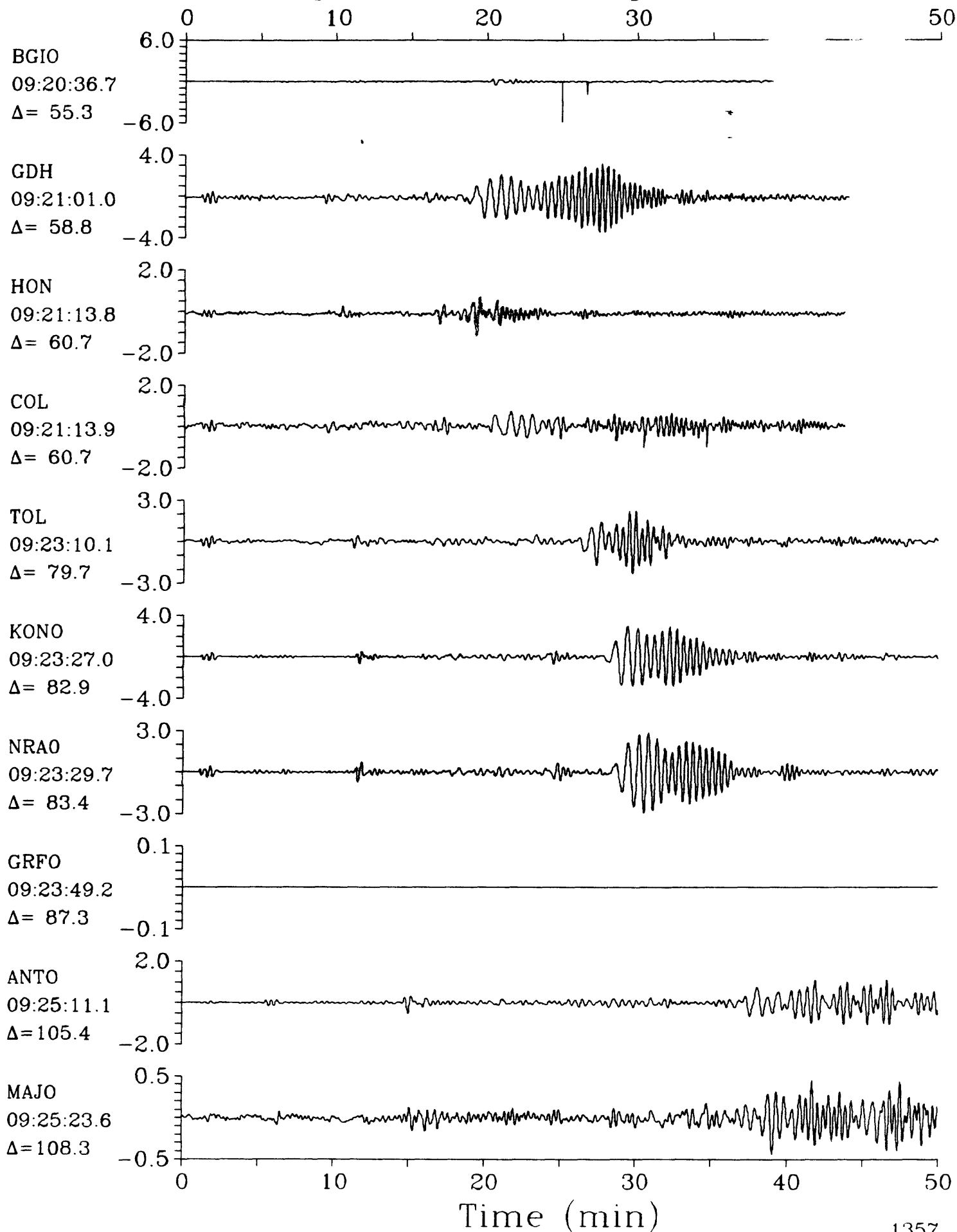
PZ



LPZ

13 July 1986 09:12:11.59  
Chiapas, Mexico  $h=89.6$   $m_b=5.9$ 

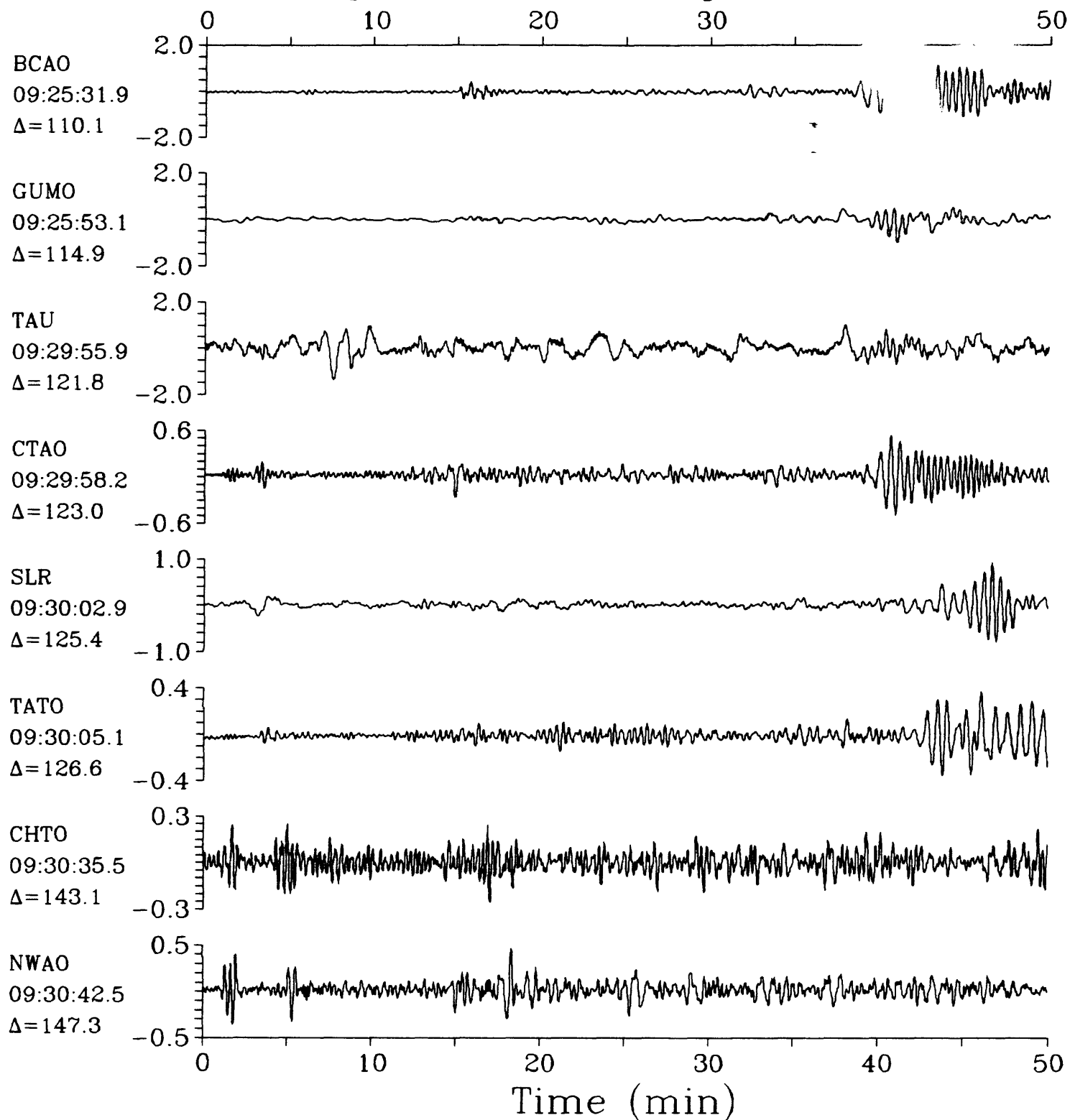
LPZ



LPZ

13 July 1986 09:12:11.59  
Chiapas, Mexico  $h=89.6$   $m_b=5.9$ 

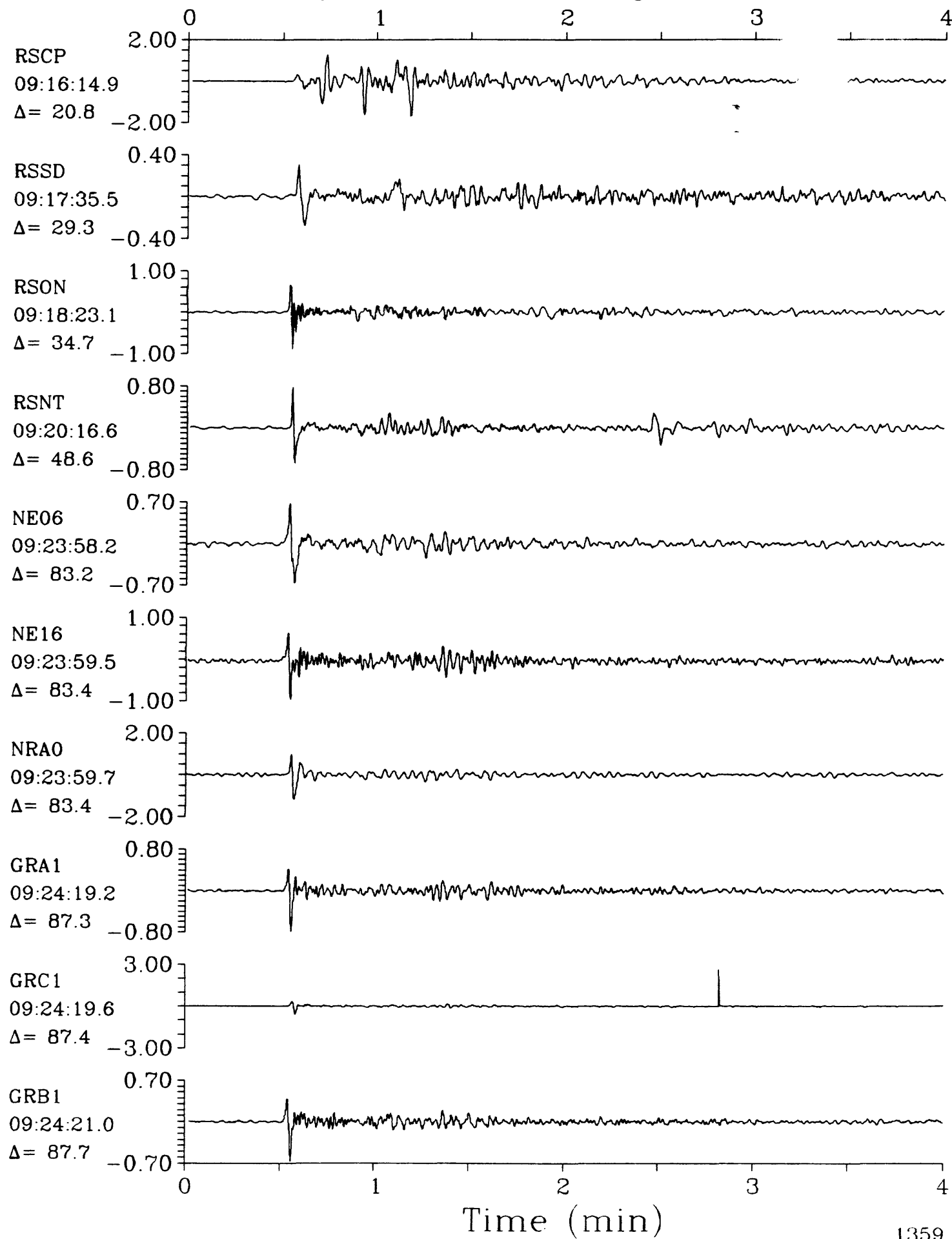
LPZ



IPZ

13 July 1986 09:12:11.59  
Chiapas, Mexico  $h=89.6$   $m_b=5.9$ 

IPZ





13 July 1986 10:14:35.01

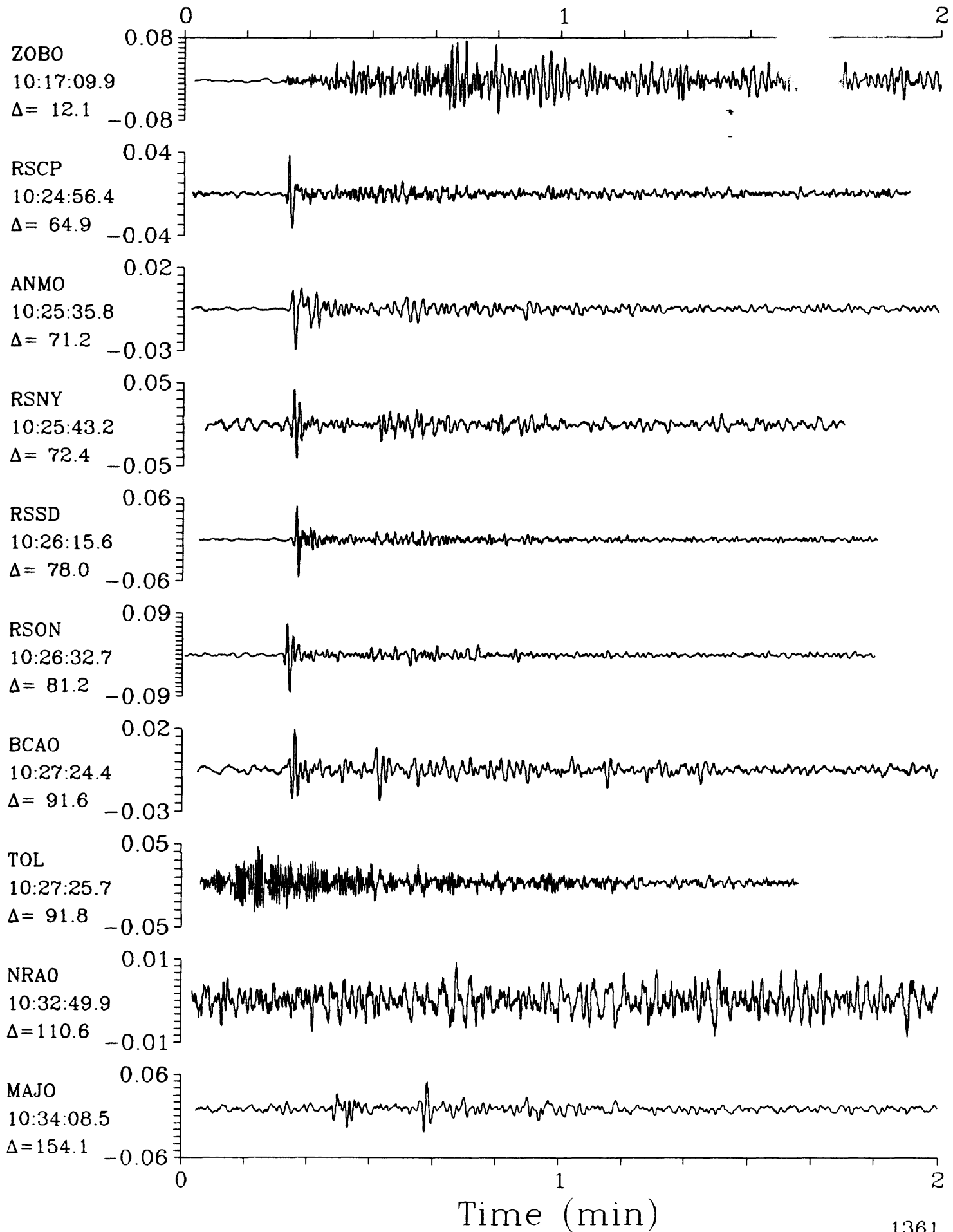
## Central Chile



SPZ

13 July 1986 10:14:35.01  
Central Chile  $h=33.0$   $m_b=5.5$ 

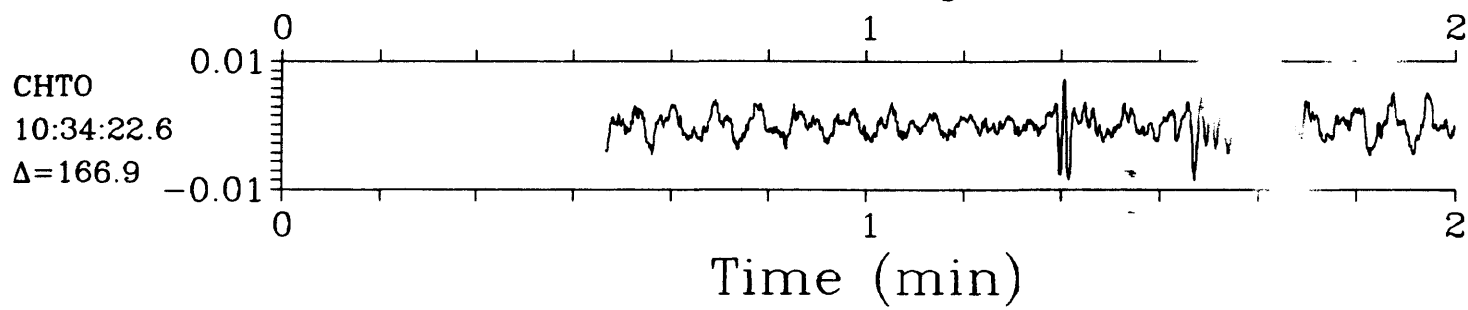
SPZ



SPZ

13 July 1986 10:14:35.01  
Central Chile  $h=33.0$   $m_b=5.5$ 

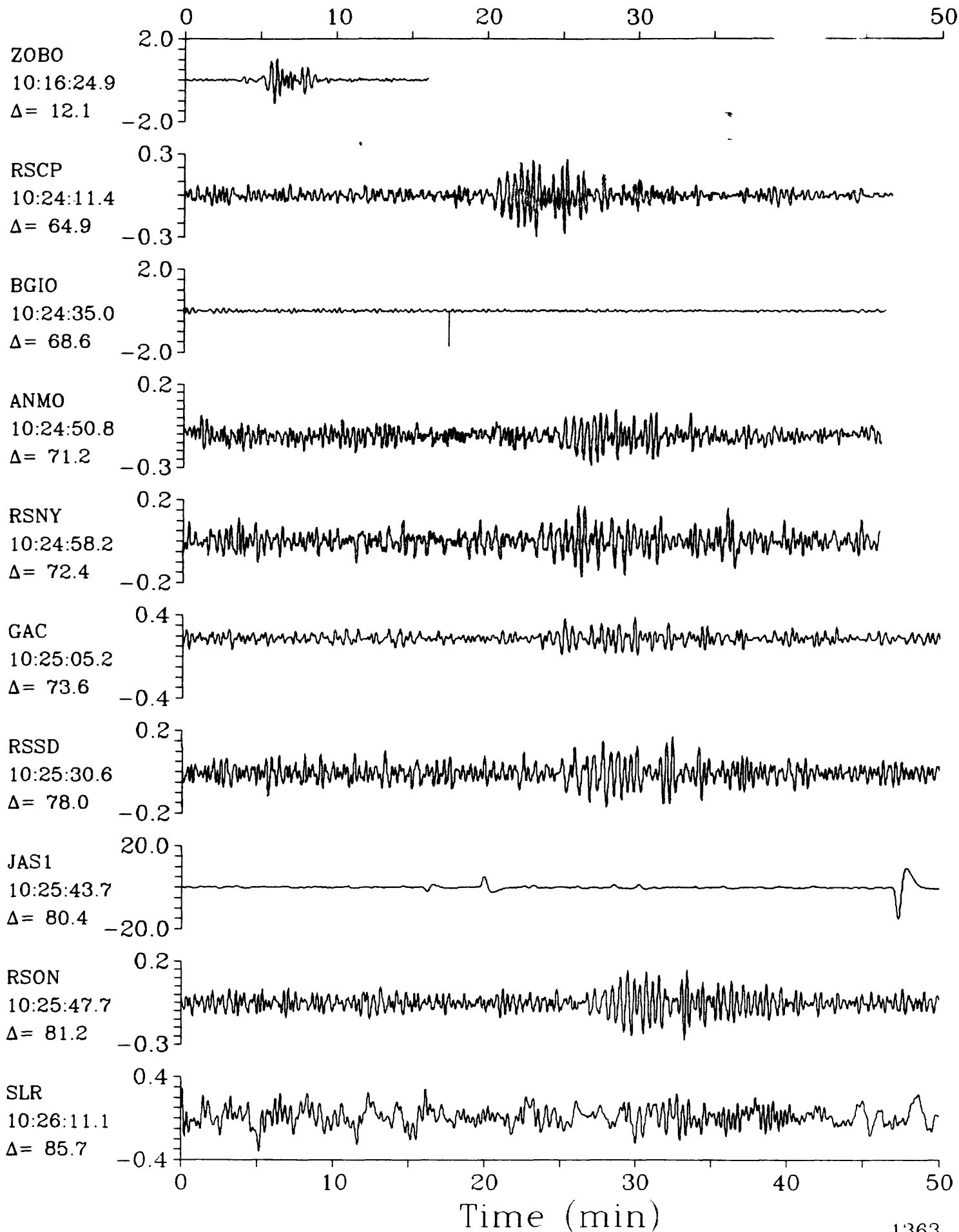
SPZ



LPZ

13 July 1986 10:14:35.01  
Central Chile  $h=33.0$   $m_b=5.5$ 

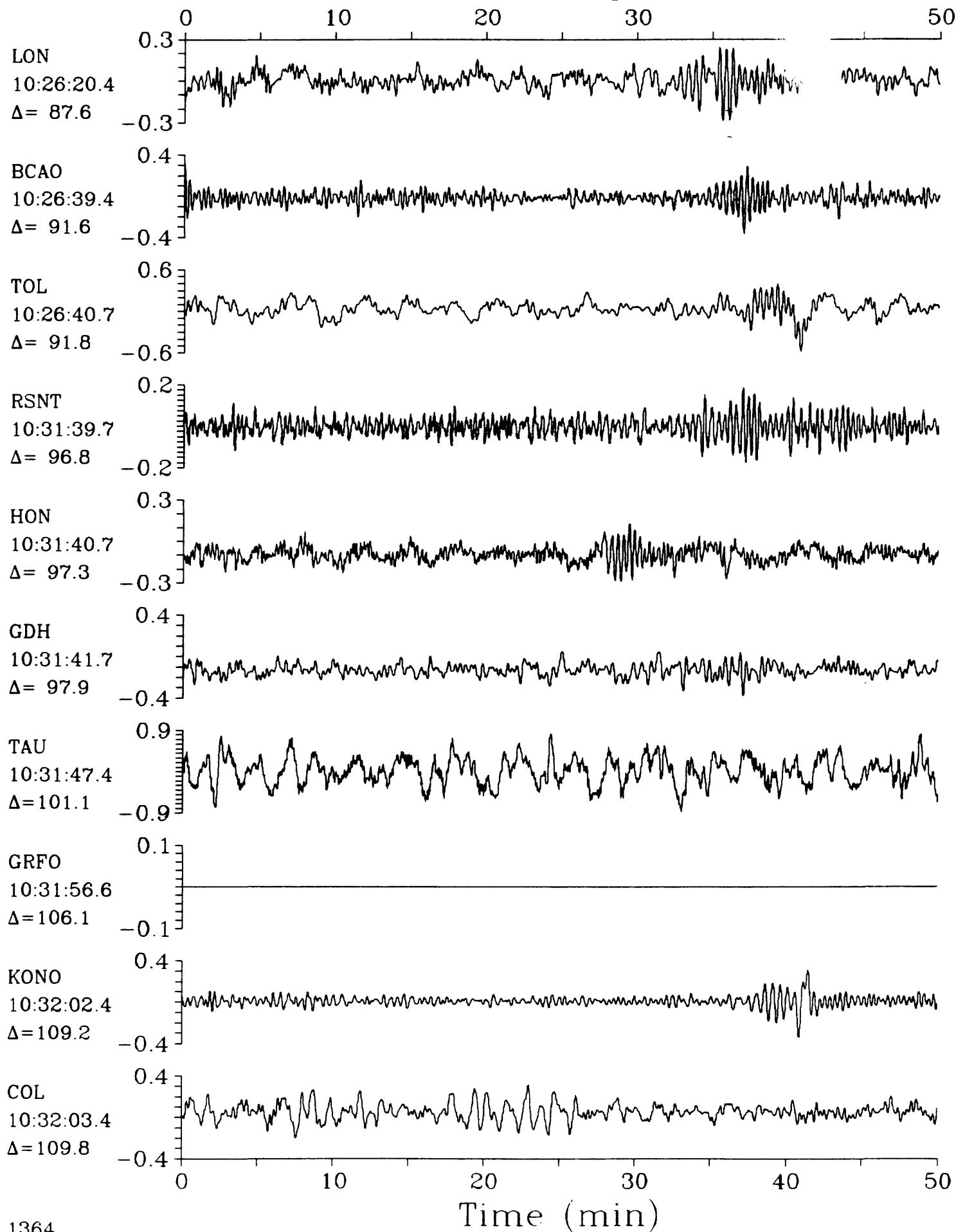
LPZ



LPZ

13 July 1986 10:14:35.01  
Central Chile  $h=33.0$   $m_b=5.5$ 

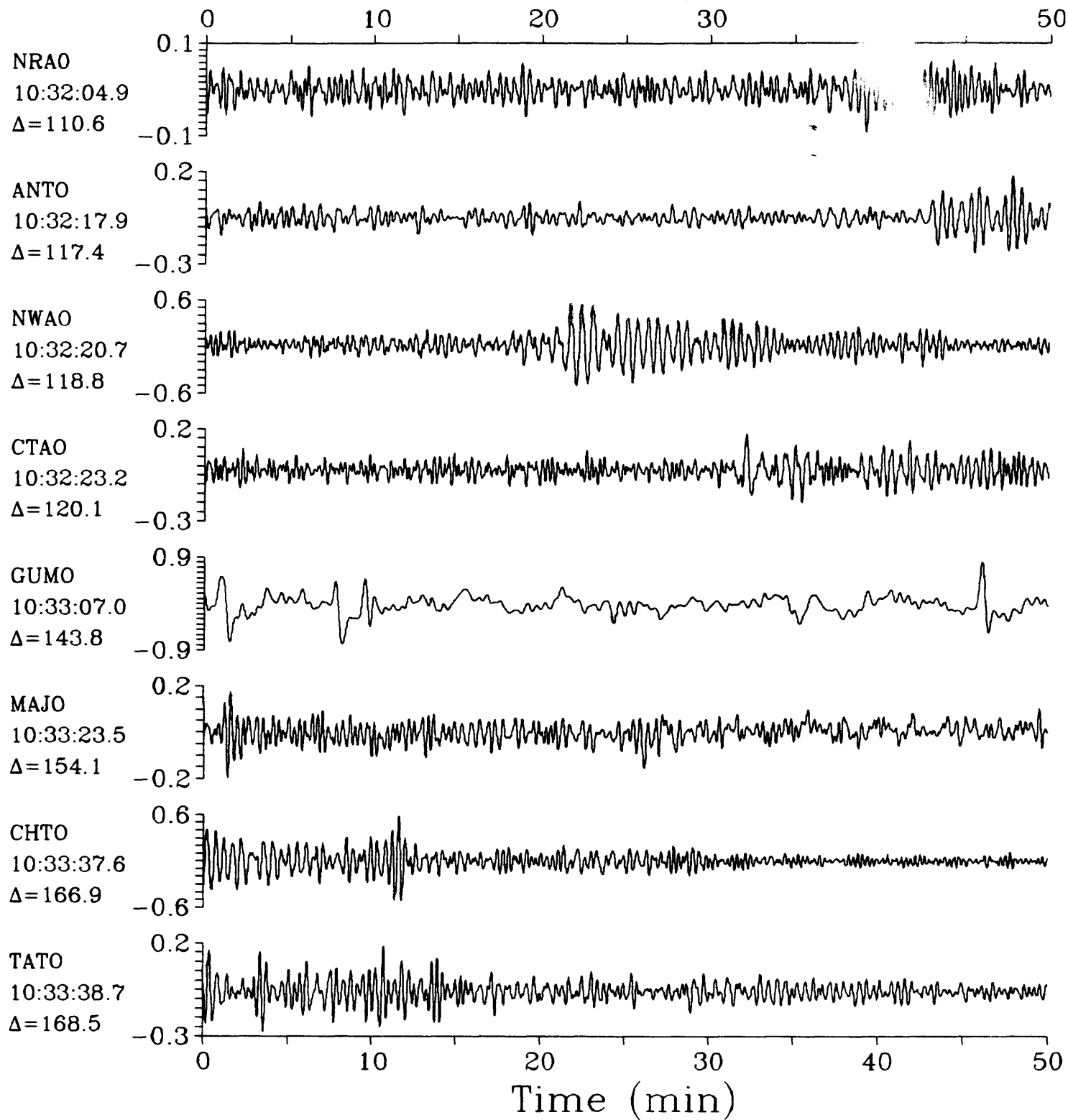
LPZ



LPZ

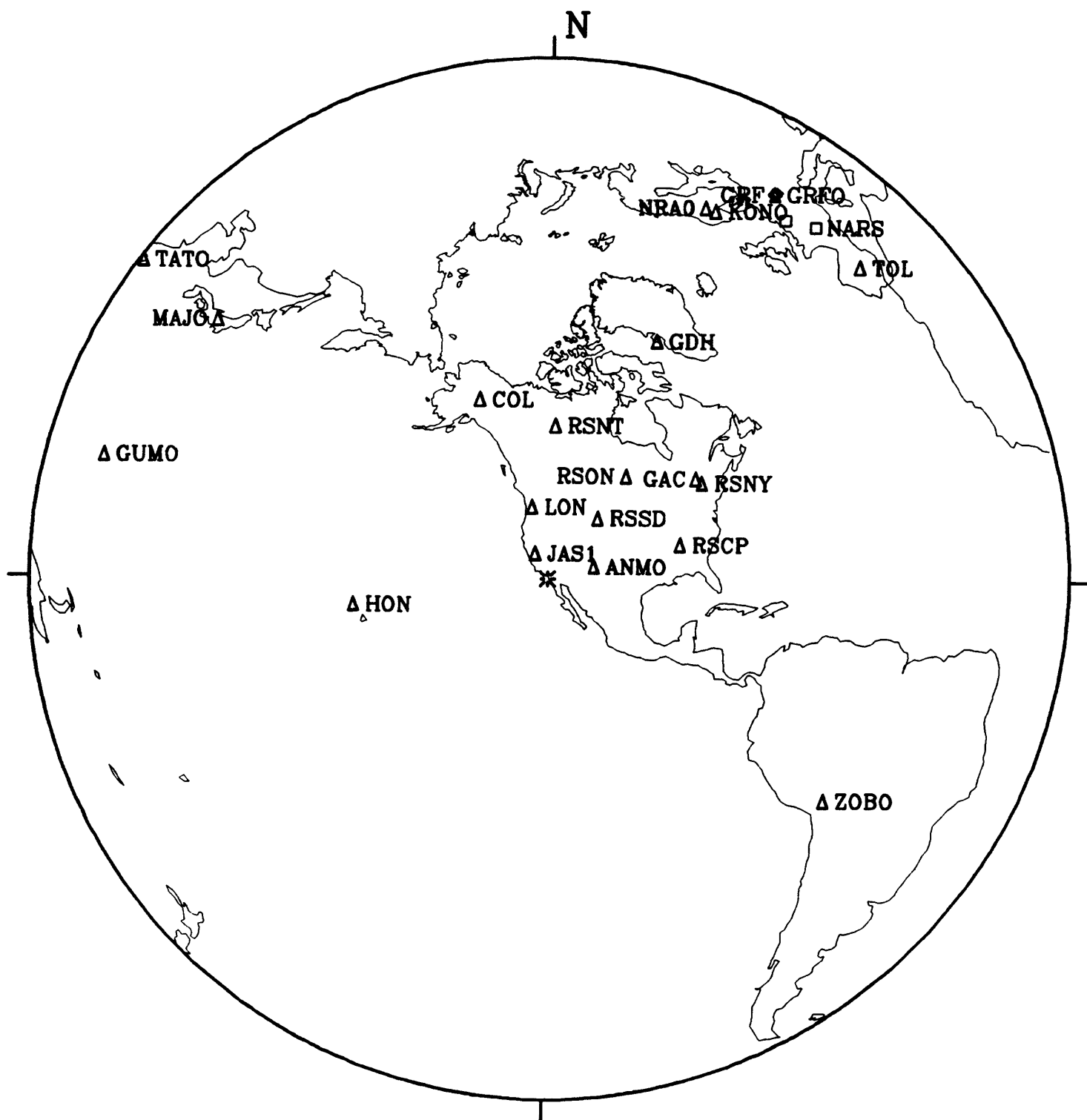
13 July 1986 10:14:35.01  
Central Chile  $h=33.0$   $m_b=5.5$ 

LPZ



13 July 1986 13:47:08.05

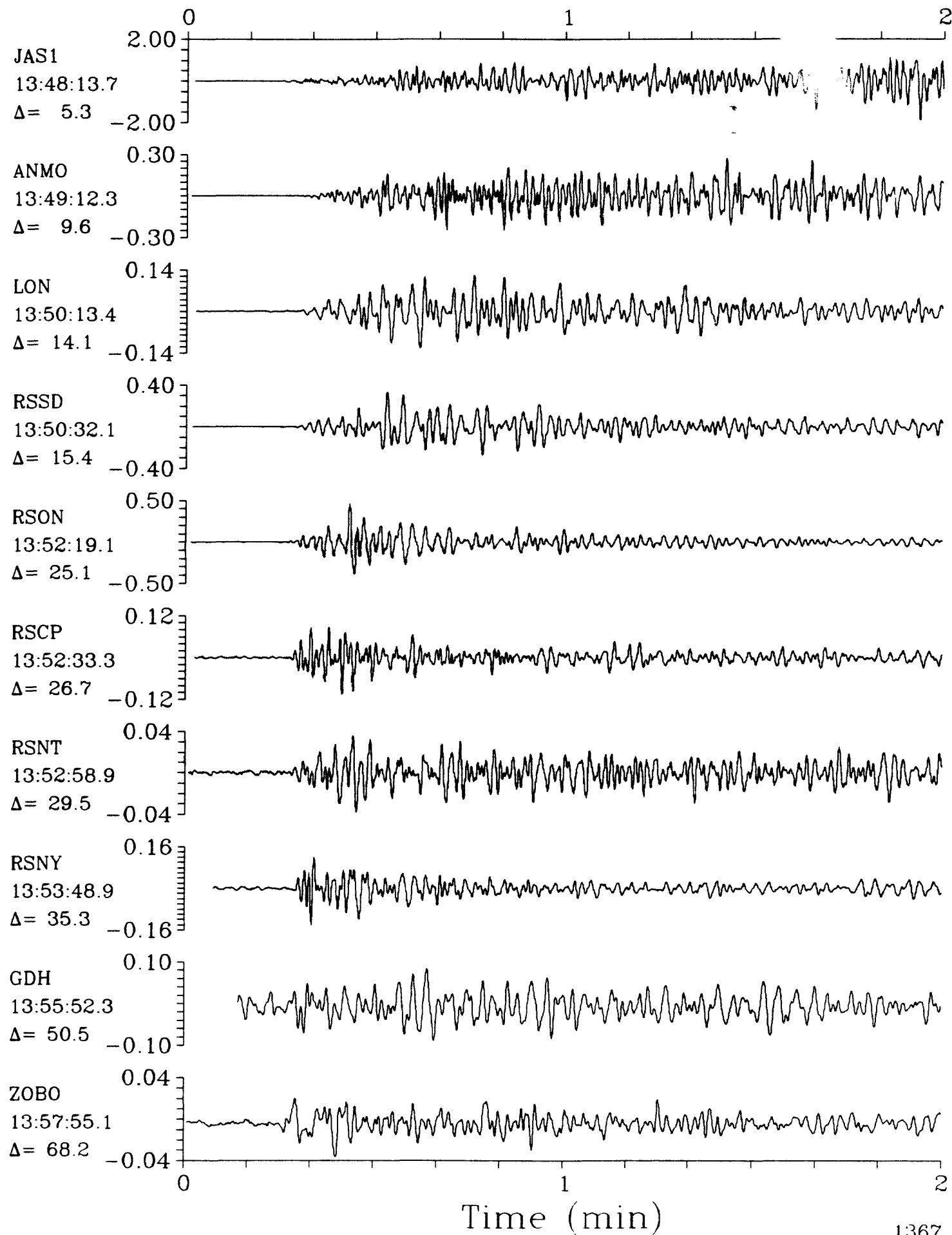
## Southern California



SPZ

13 July 1986 13:47:08.05

SPZ

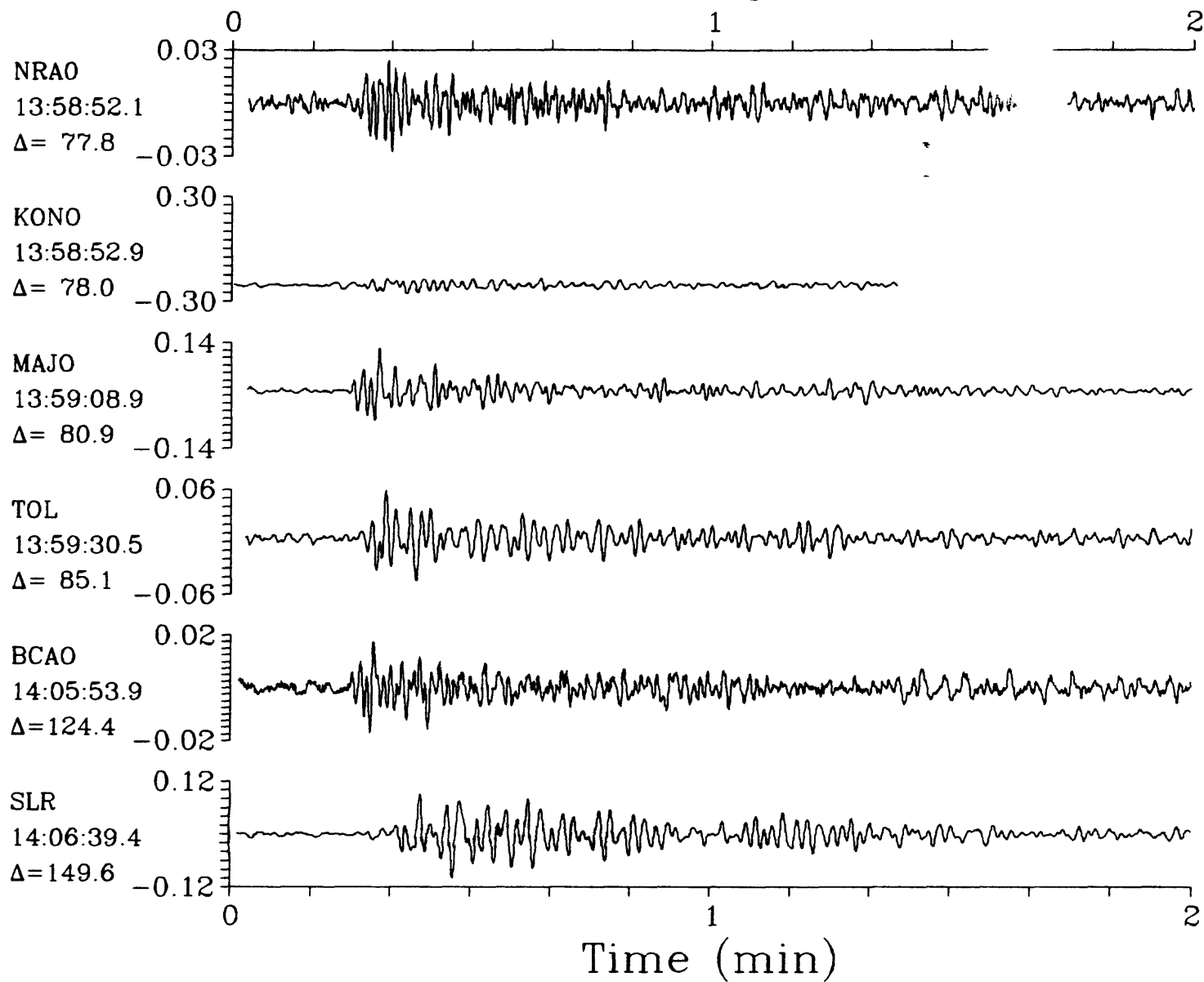
Southern California  $h=5.0$   $m_b=5.6$   $M_{sz}=5.8$ 



SPZ

13 July 1986 13:47:08.05

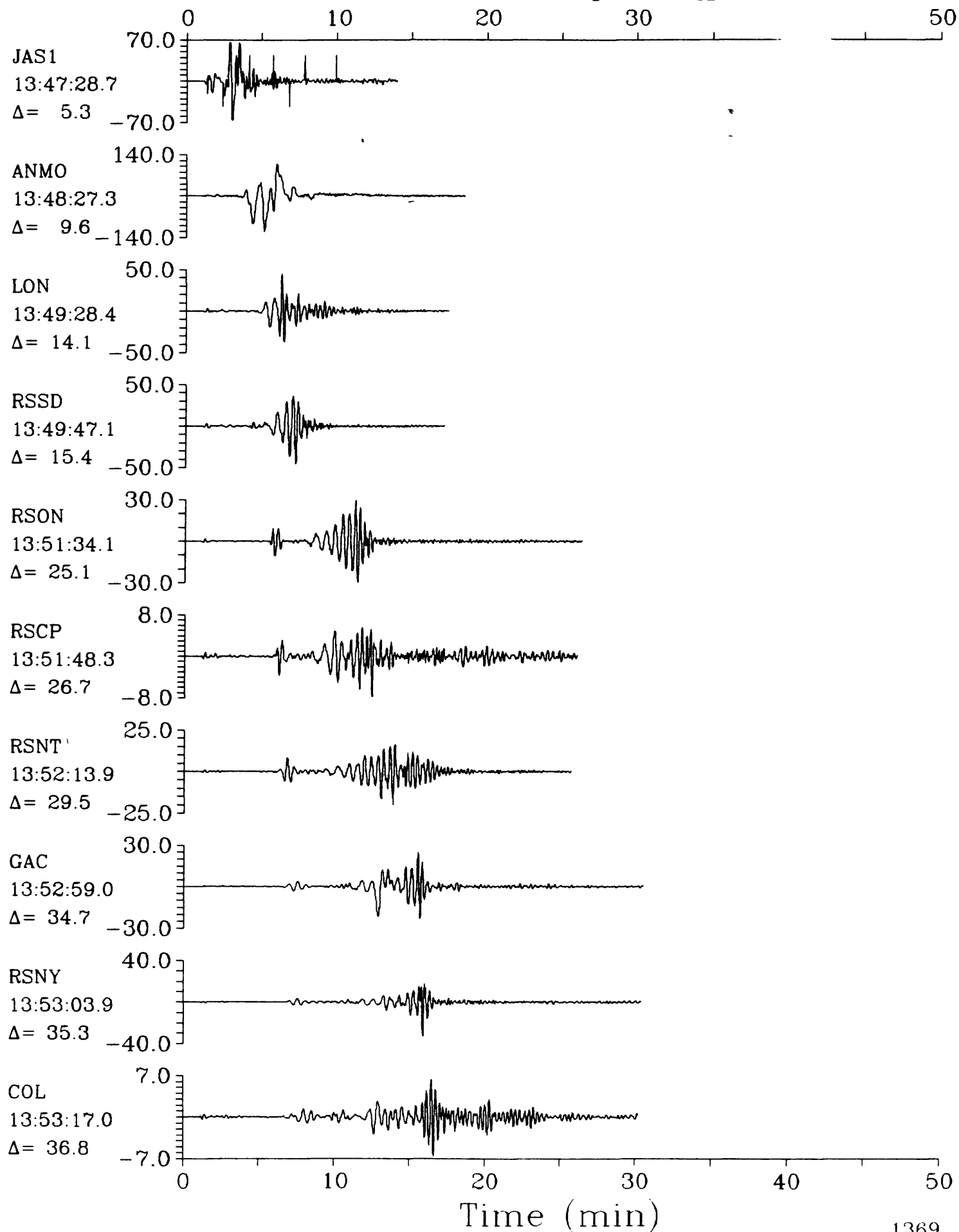
SPZ

Southern California  $h=5.0$   $m_b=5.6$   $M_{sz}=5.8$ 

LPZ

13 July 1986 13:47:08.05

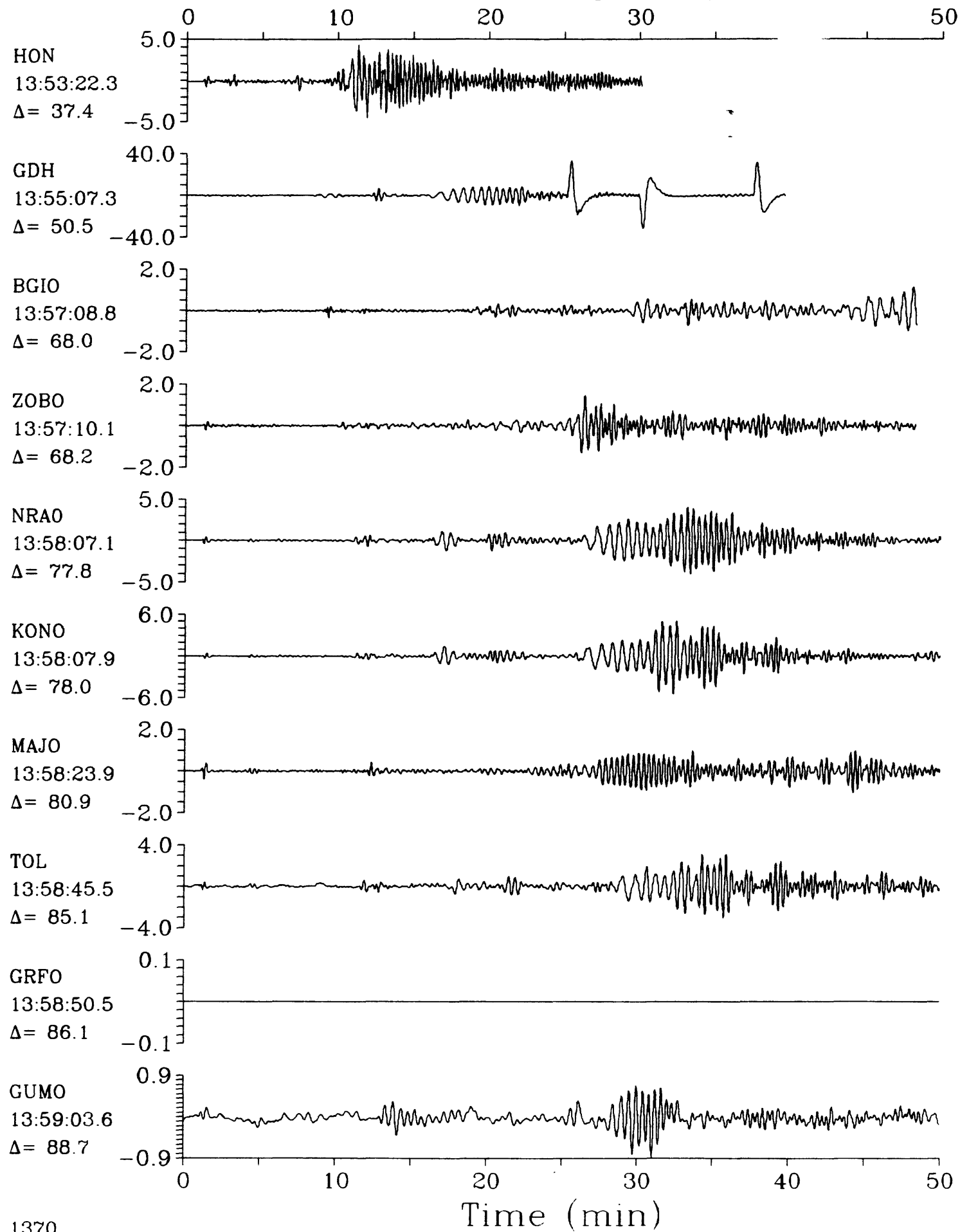
LPZ

Southern California  $h=5.0$   $m_b=5.6$   $M_{sz}=5.8$ 

LPZ

13 July 1986 13:47:08.05

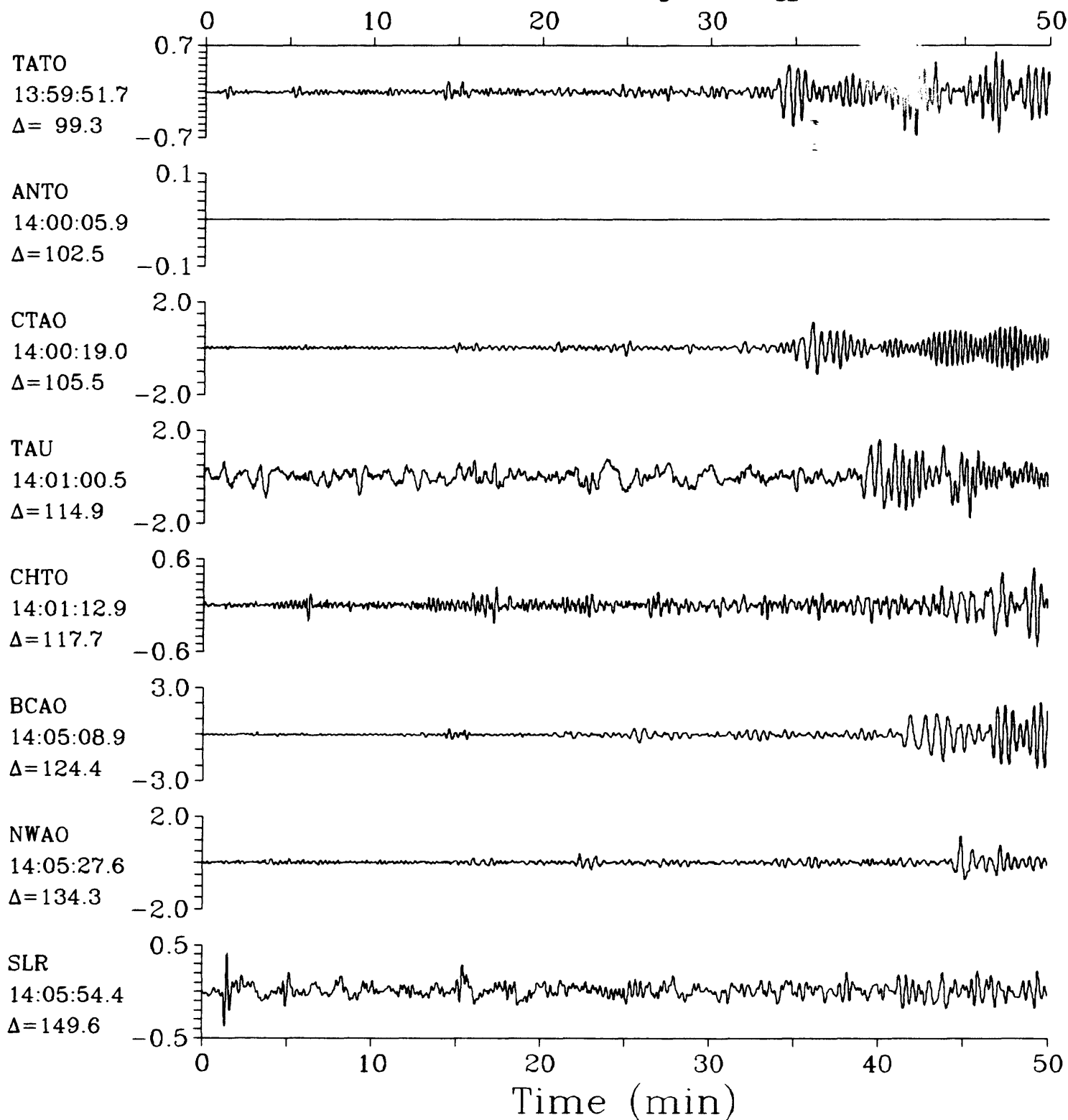
LPZ

Southern California  $h=5.0$   $m_b=5.6$   $M_{sz}=5.8$ 

LPZ

13 July 1986 13:47:08.05

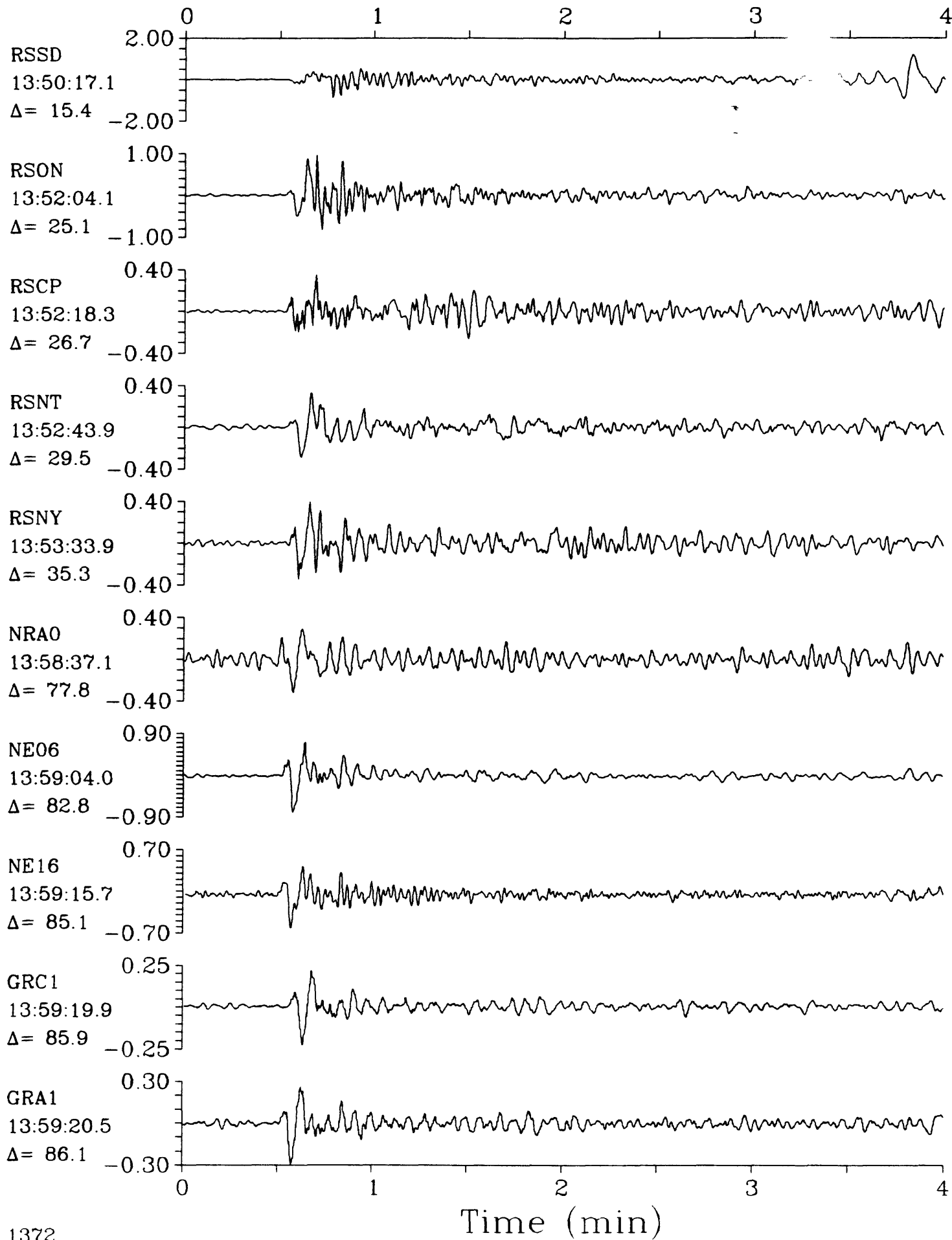
LPZ

Southern California  $h=5.0$   $m_b=5.6$   $M_{sz}=5.8$ 

IPZ

13 July 1986 13:47:08.05

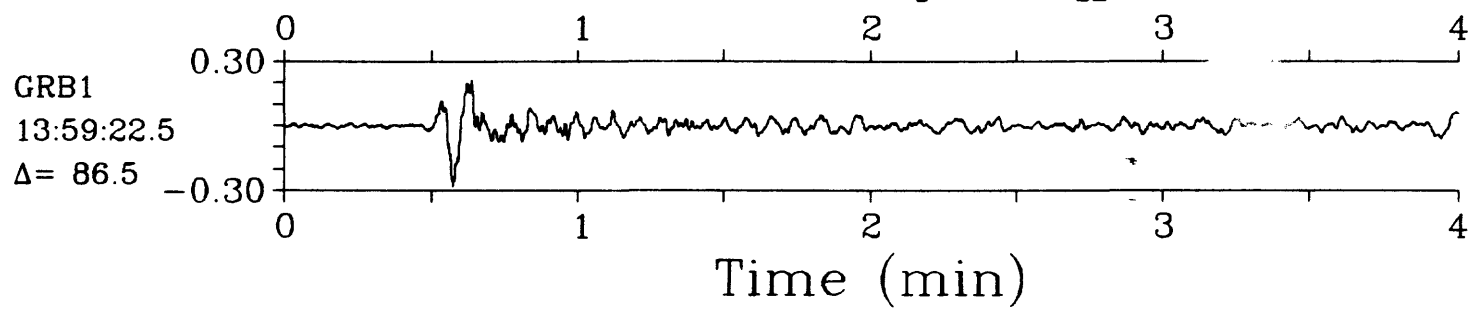
IPZ

Southern California  $h=5.0$   $m_b=5.6$   $M_{sz}=5.8$ 

IPZ

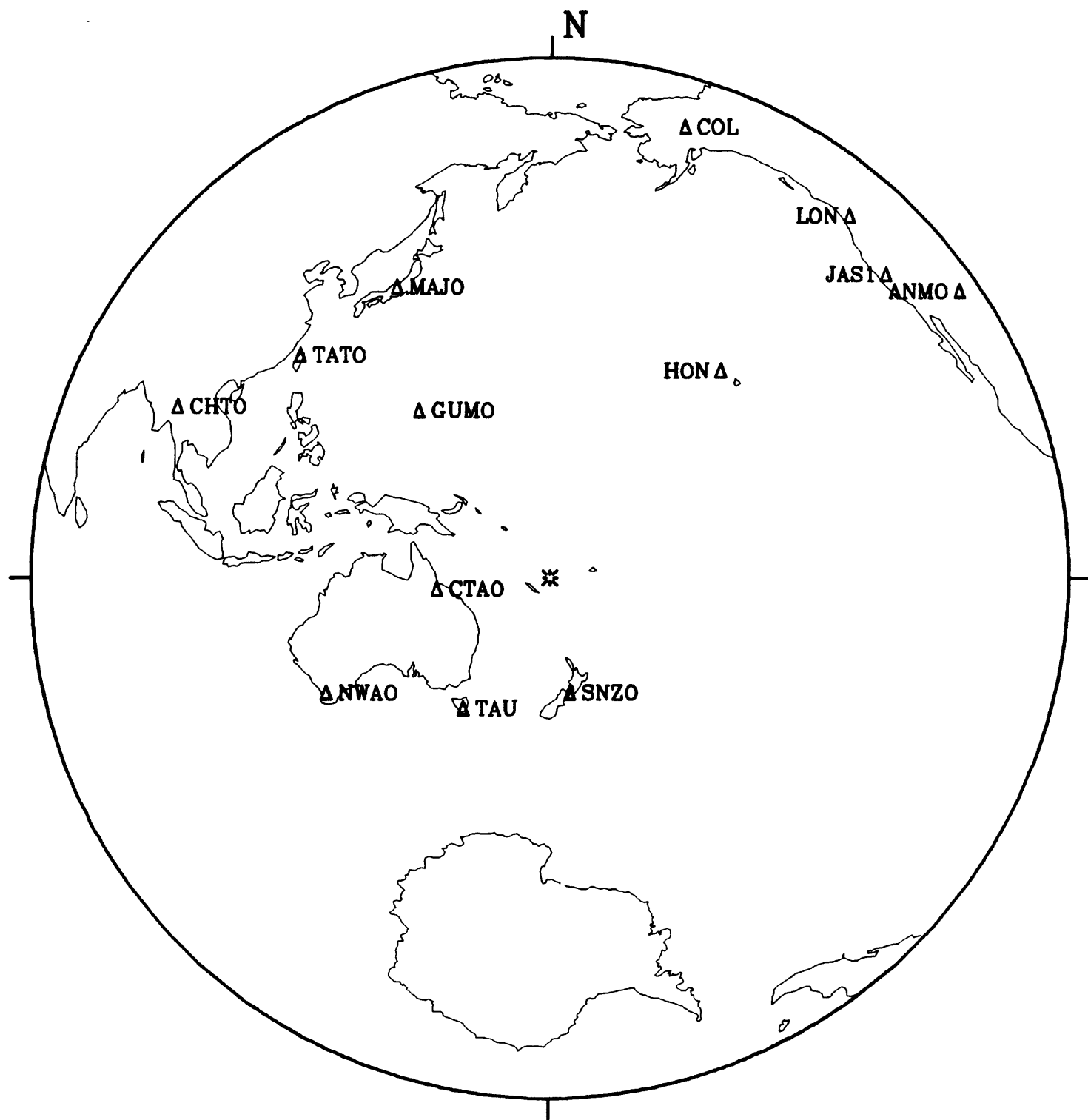
13 July 1986 13:47:08.05

IPZ

Southern California  $h=5.0$   $m_b=5.6$   $M_{sz}=5.8$ 

16 July 1986 12:41:28.28

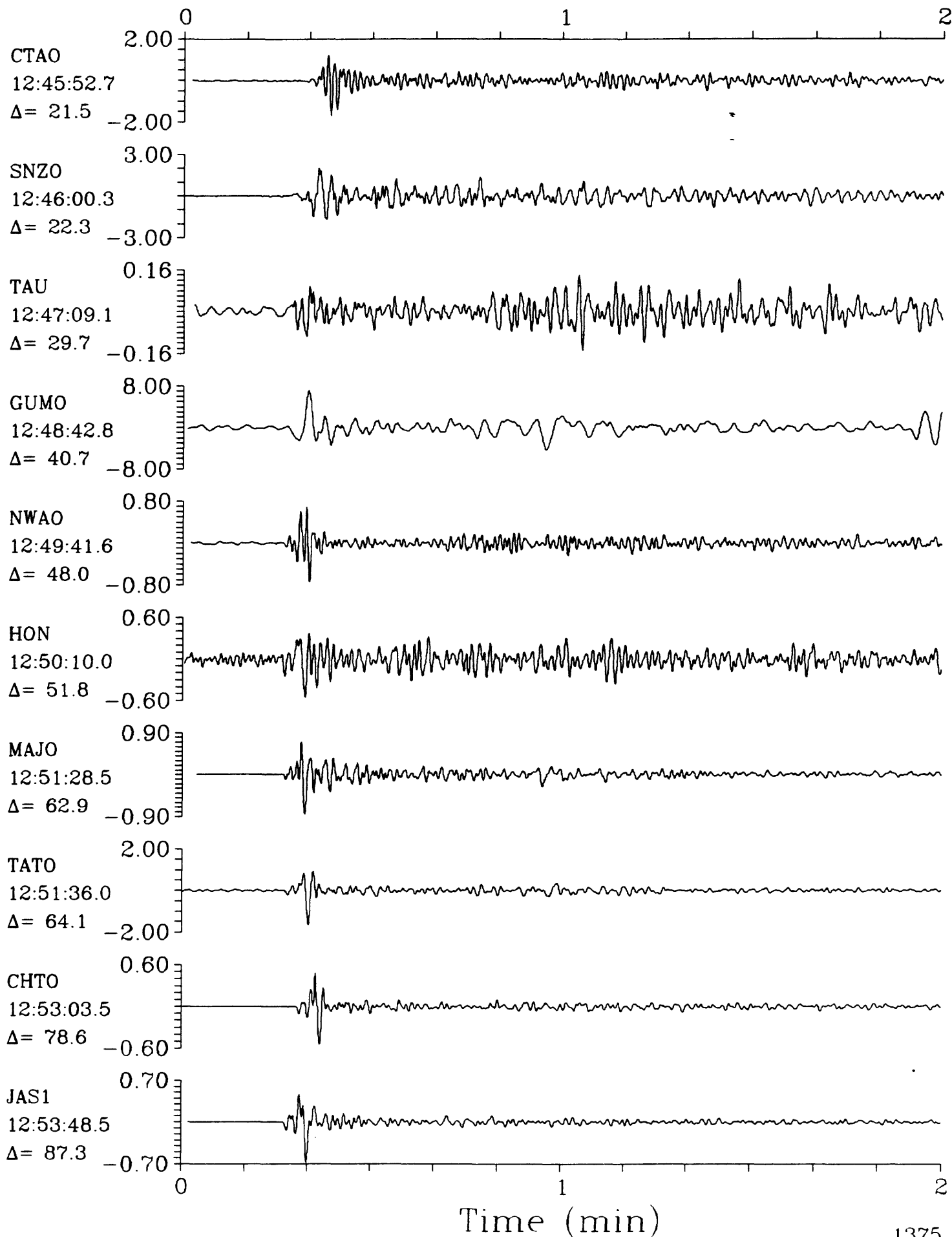
# Vanuatu Islands



SPZ

16 July 1986 12:41:28.28  
Vanuatu Islands  $h=110.0$   $m_b=6.2$ 

SPZ

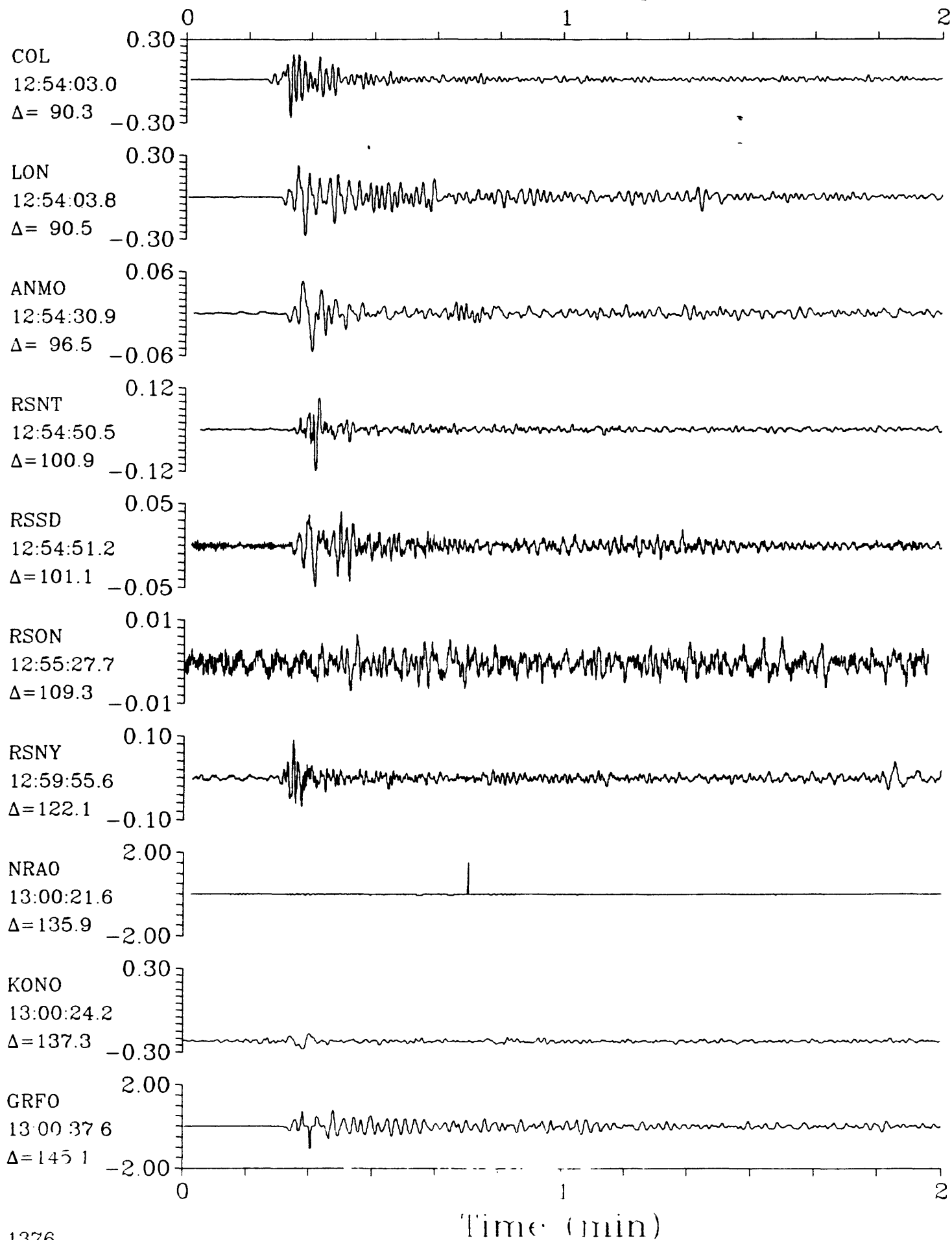




SPZ

16 July 1986 12:41:28.28  
Vanuatu Islands  $h=110.0$   $m_b=6.2$ 

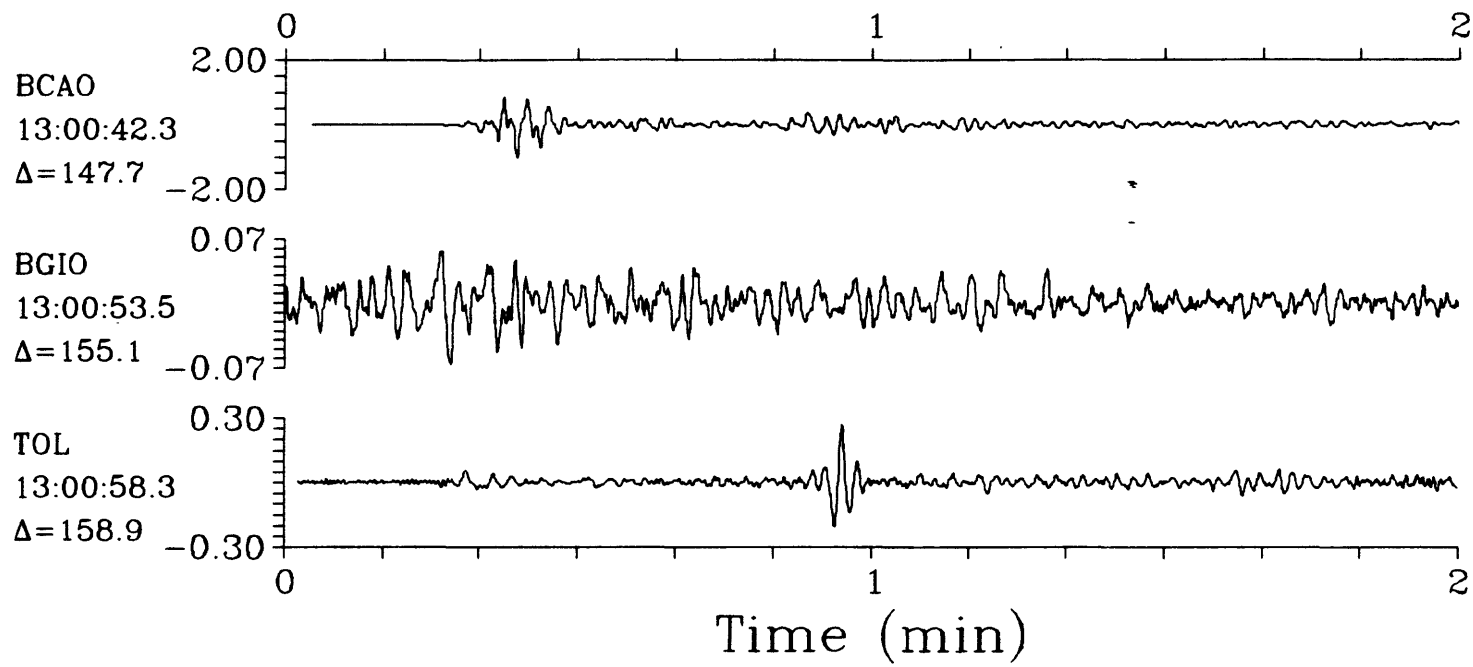
SPZ



SPZ

16 July 1986 12:41:28.28  
Vanuatu Islands  $h=110.0$   $m_b=6.2$ 

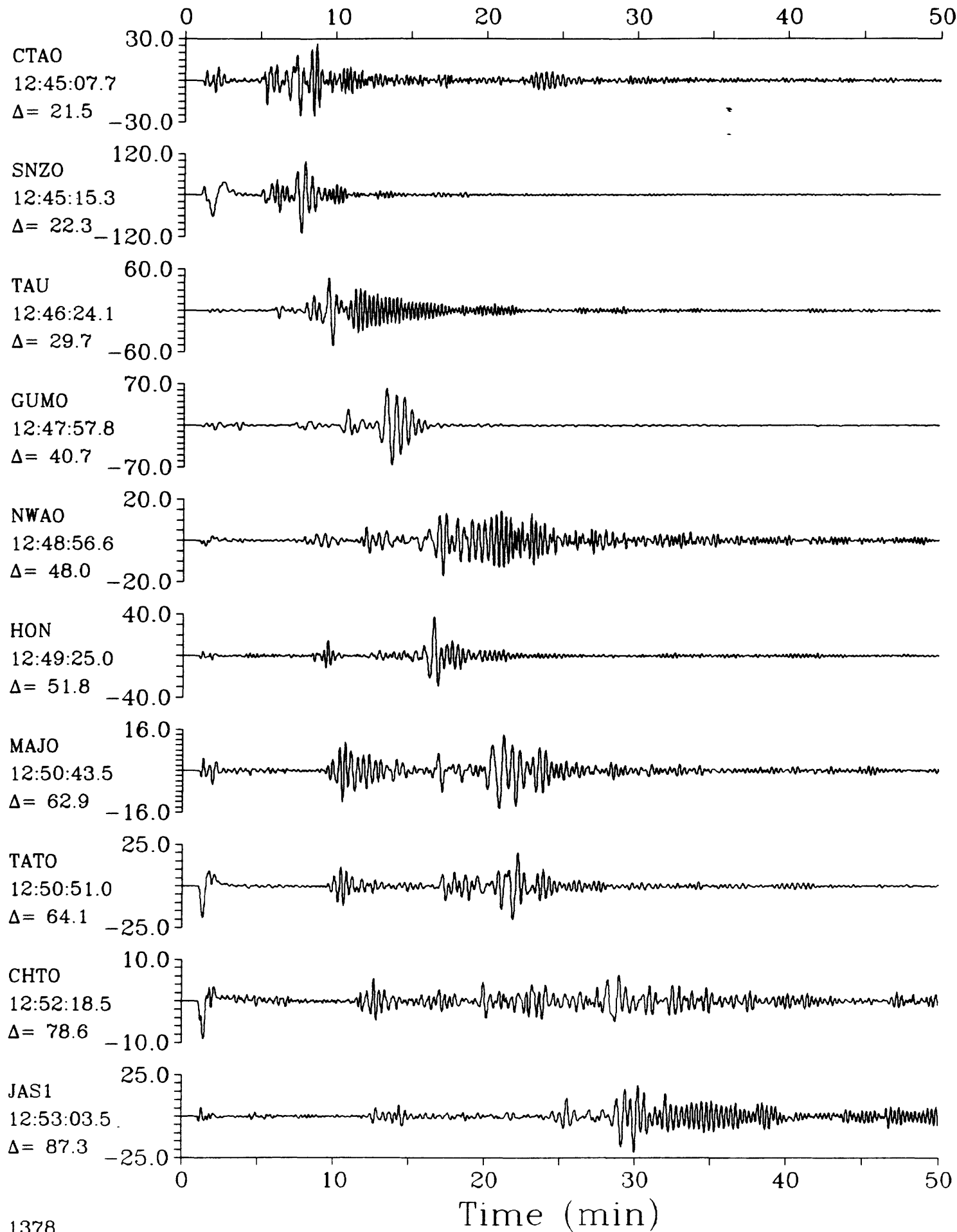
SPZ



LPZ

16 July 1986 12:41:28.28  
Vanuatu Islands  $h=110.0$   $m_b=6.2$ 

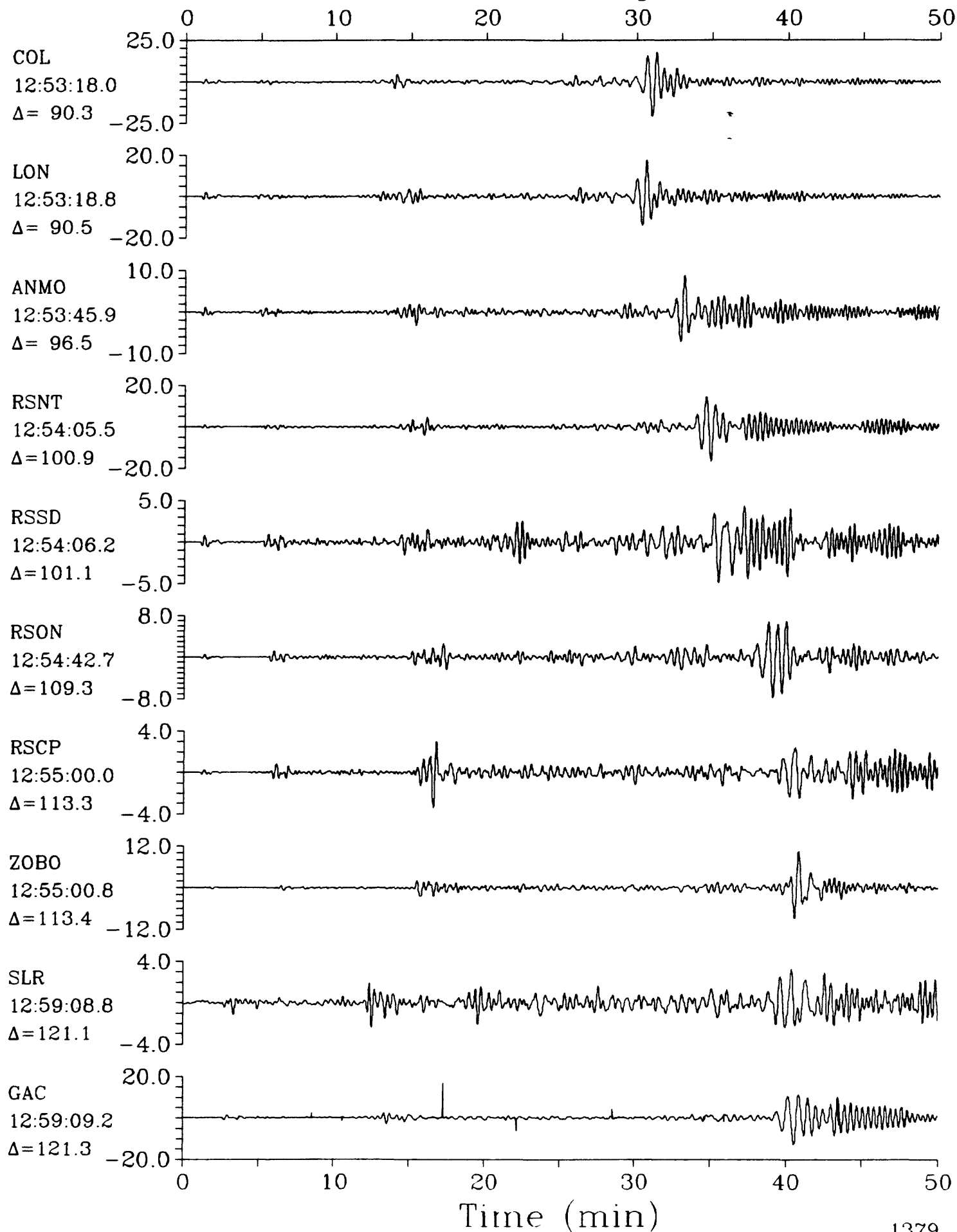
LPZ



LPZ

16 July 1986 12:41:28.28  
Vanuatu Islands  $h=110.0$   $m_b=6.2$ 

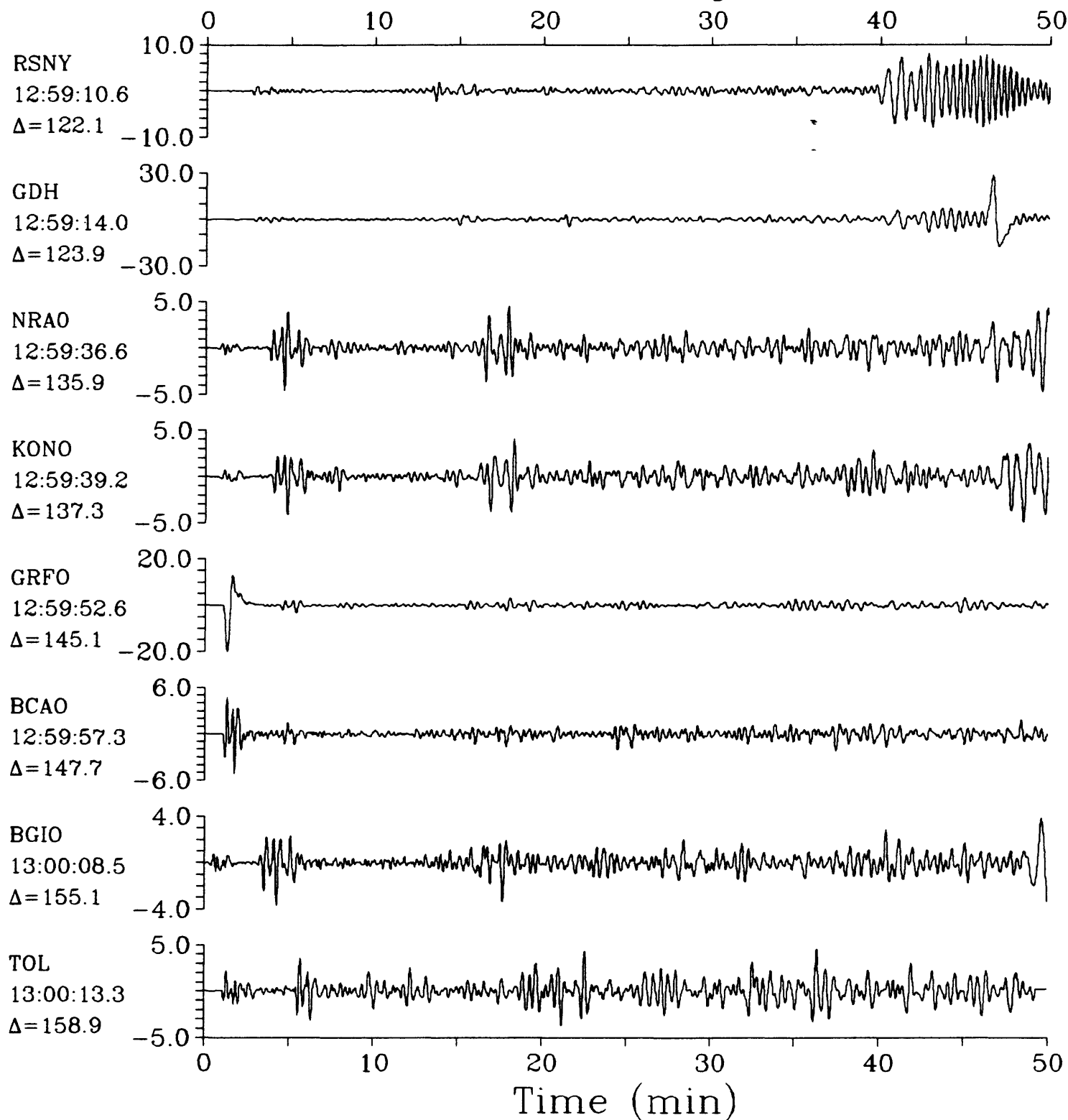
LPZ



LPZ

16 July 1986 12:41:28.28  
Vanuatu Islands  $h=110.0$   $m_b=6.2$ 

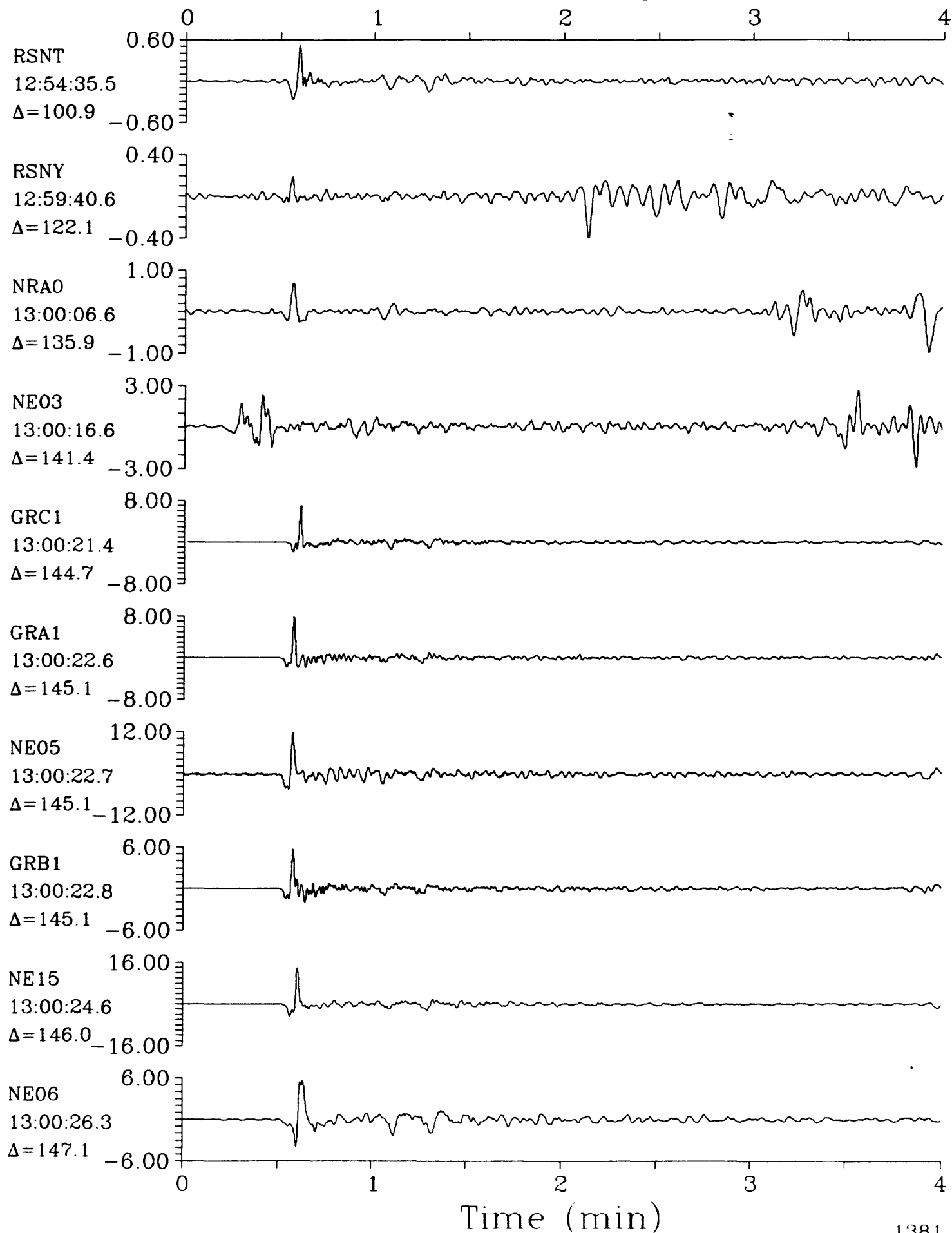
LPZ



IPZ

16 July 1986 12:41:28.28  
Vanuatu Islands  $h=110.0$   $m_b=6.2$ 

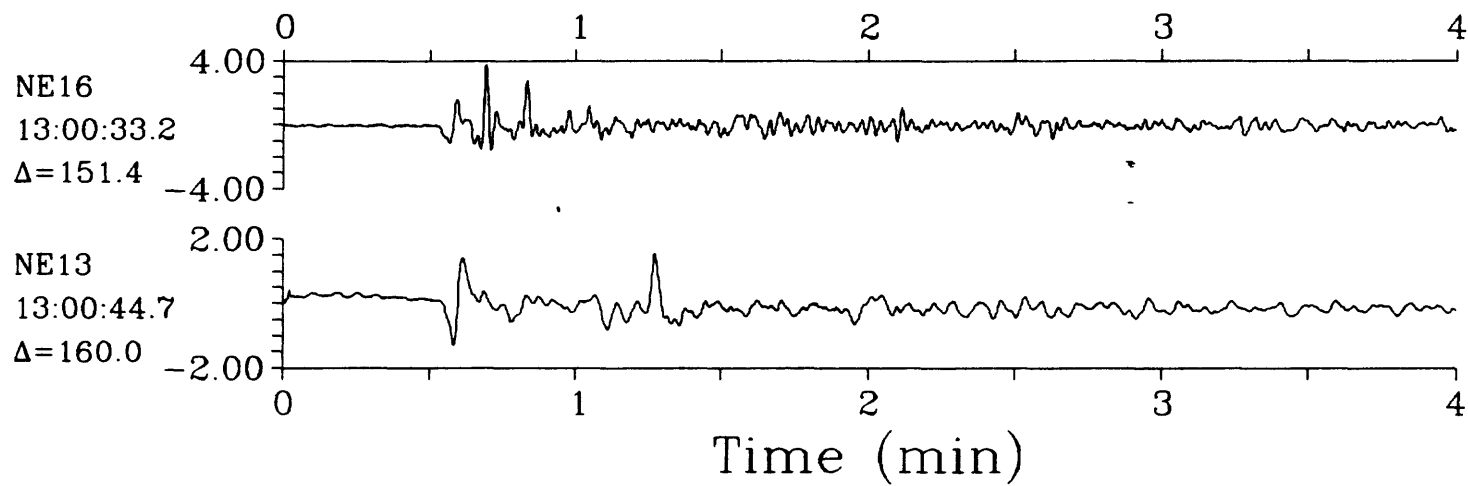
IPZ



IPZ

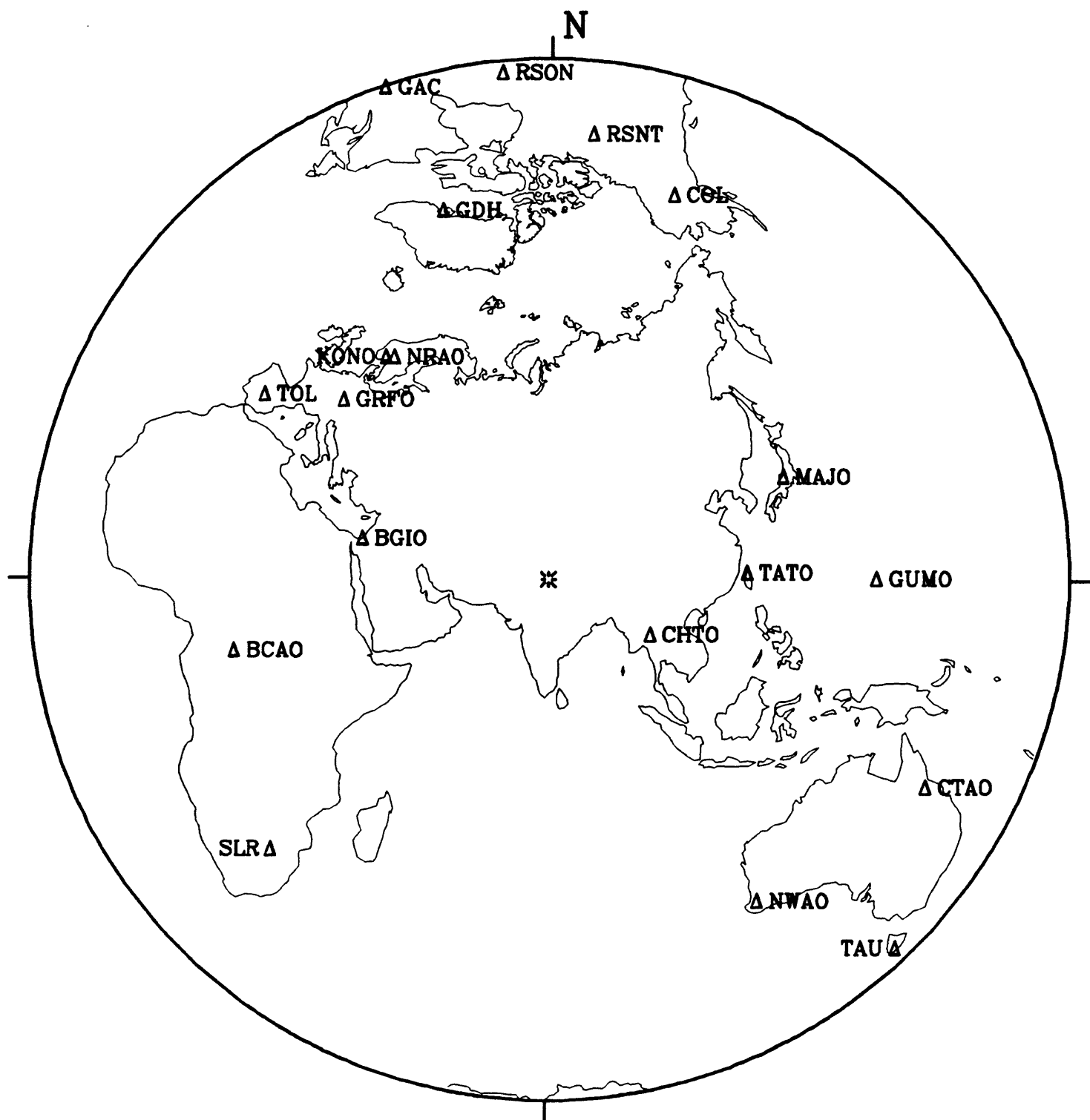
16 July 1986 12:41:28.28  
Vanuatu Islands  $h=110.0$   $m_b=6.2$

IPZ



16 July 1986 22:03:10.66

## Northern India

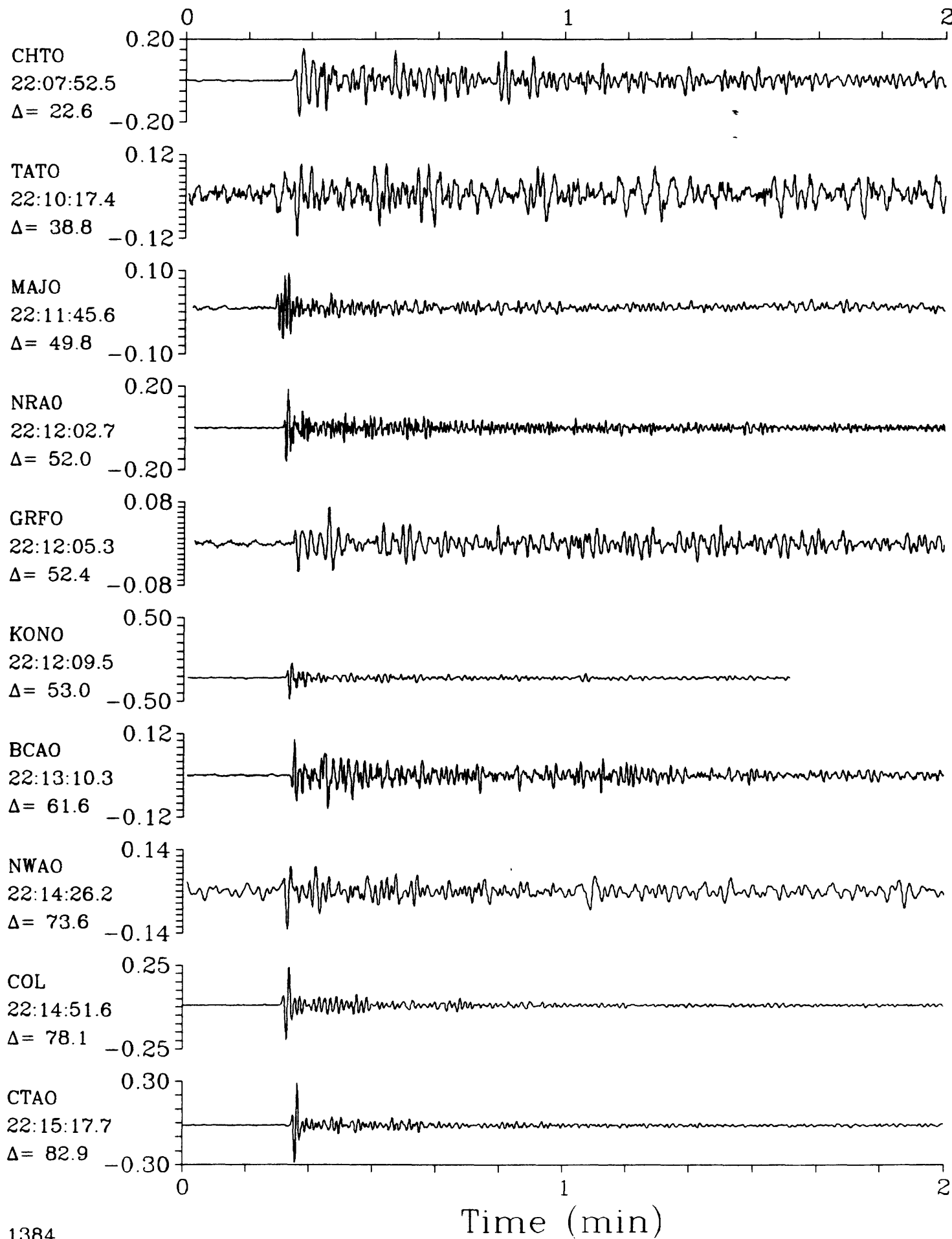




SPZ

16 July 1986 22:03:10.66

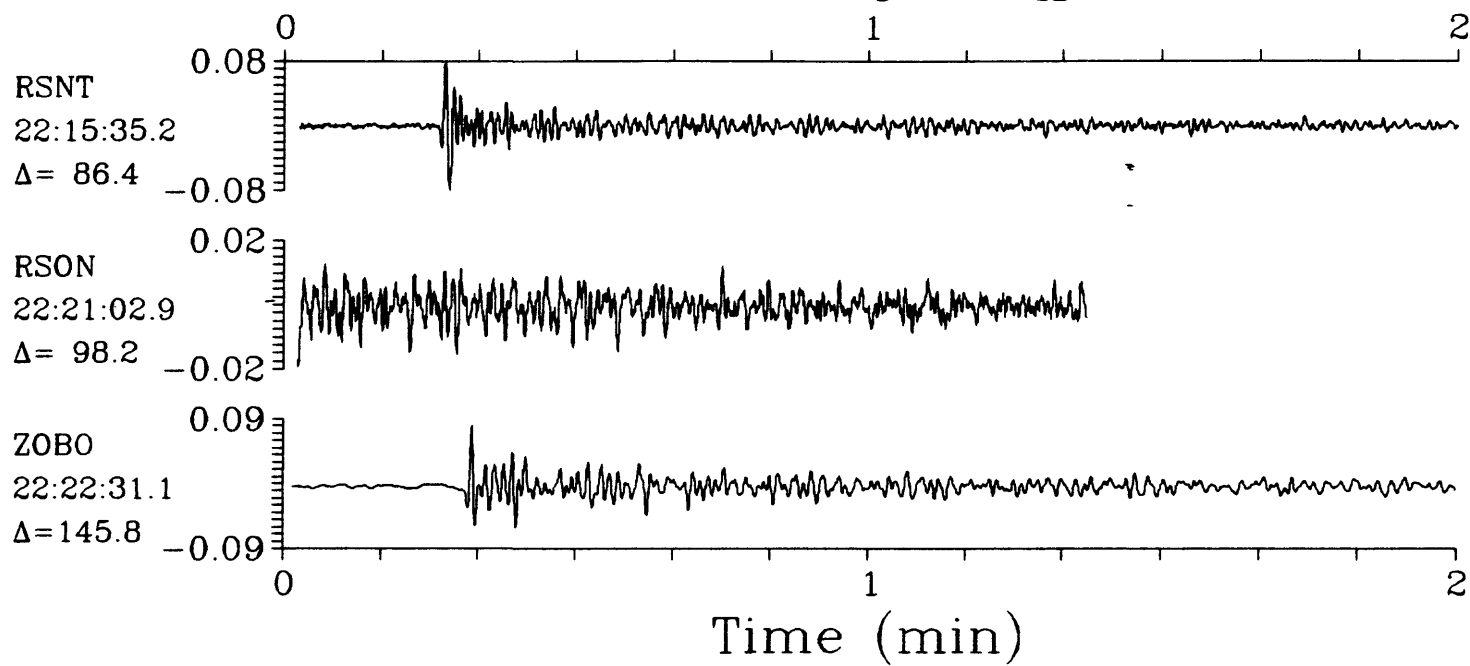
SPZ

Northern India  $h=33.0$   $m_b=5.6$   $M_{SZ}=5.1$ 

SPZ

16 July 1986 22:03:10.66

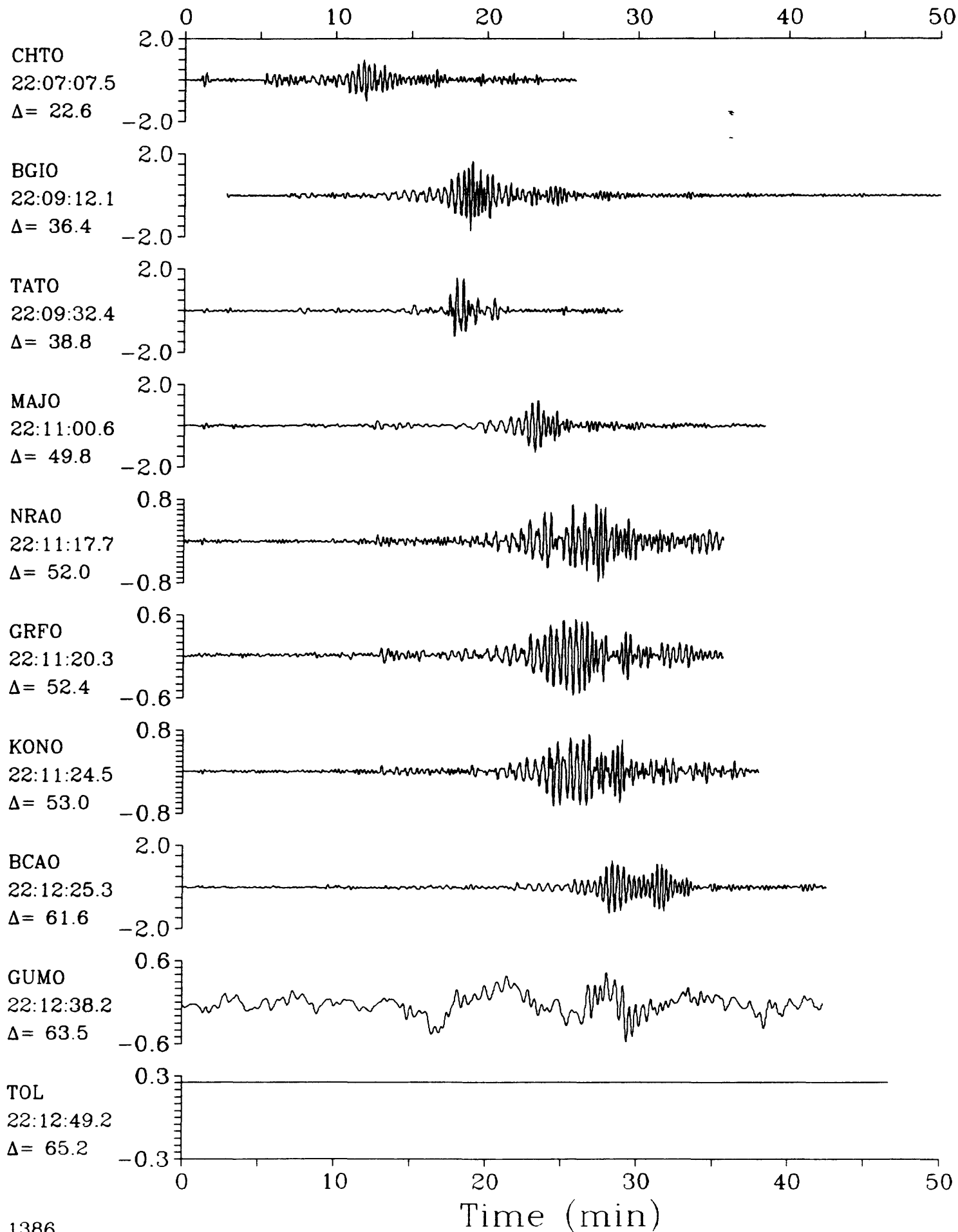
SPZ

Northern India  $h=33.0$   $m_b=5.6$   $M_{SZ}=5.1$ 

LPZ

16 July 1986 22:03:10.66

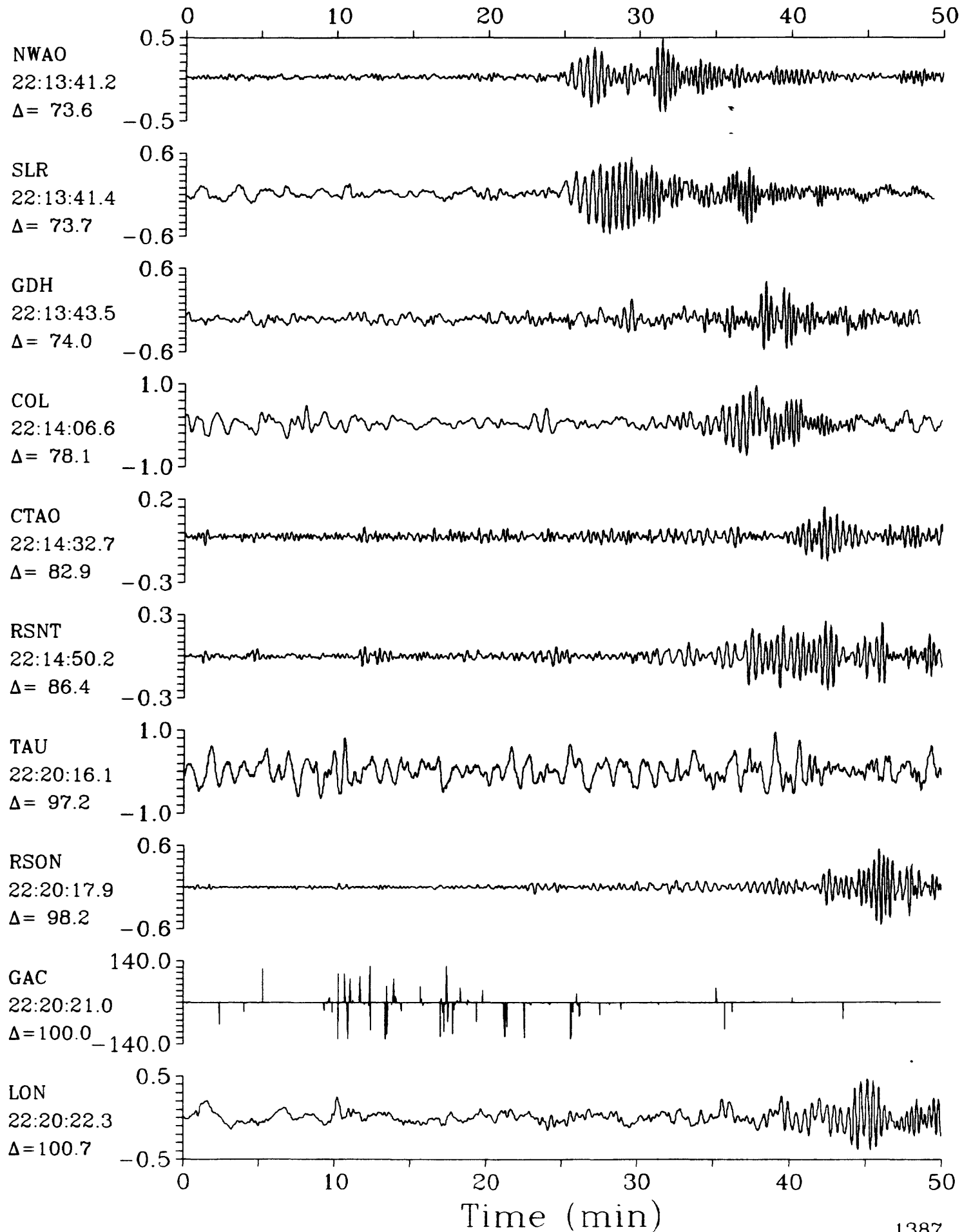
LPZ

Northern India  $h=33.0$   $m_b=5.6$   $M_{sz}=5.1$ 

LPZ

16 July 1986 22:03:10.66

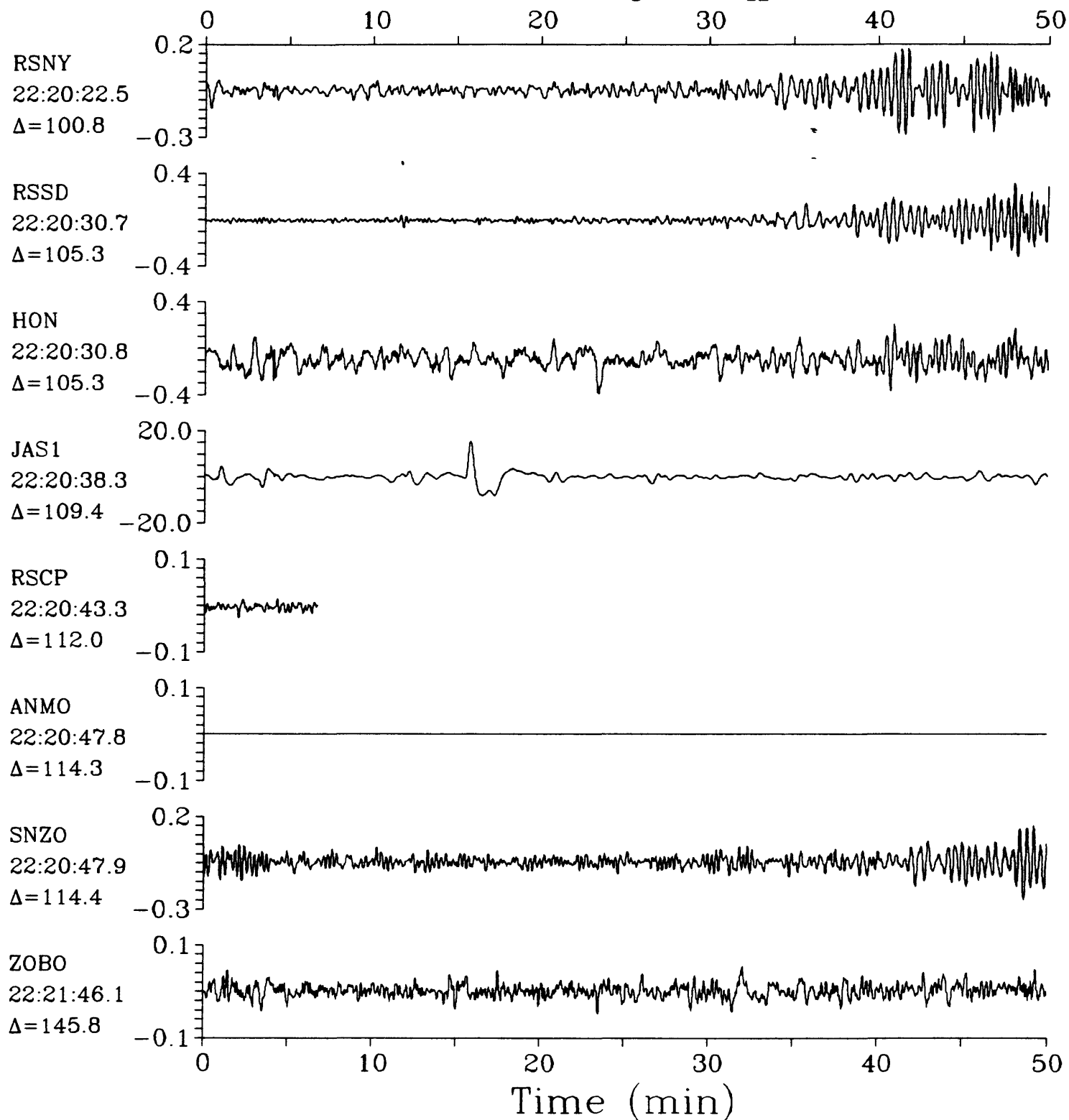
LPZ

Northern India  $h=33.0$   $m_b=5.6$   $M_{sz}=5.1$ 

LPZ

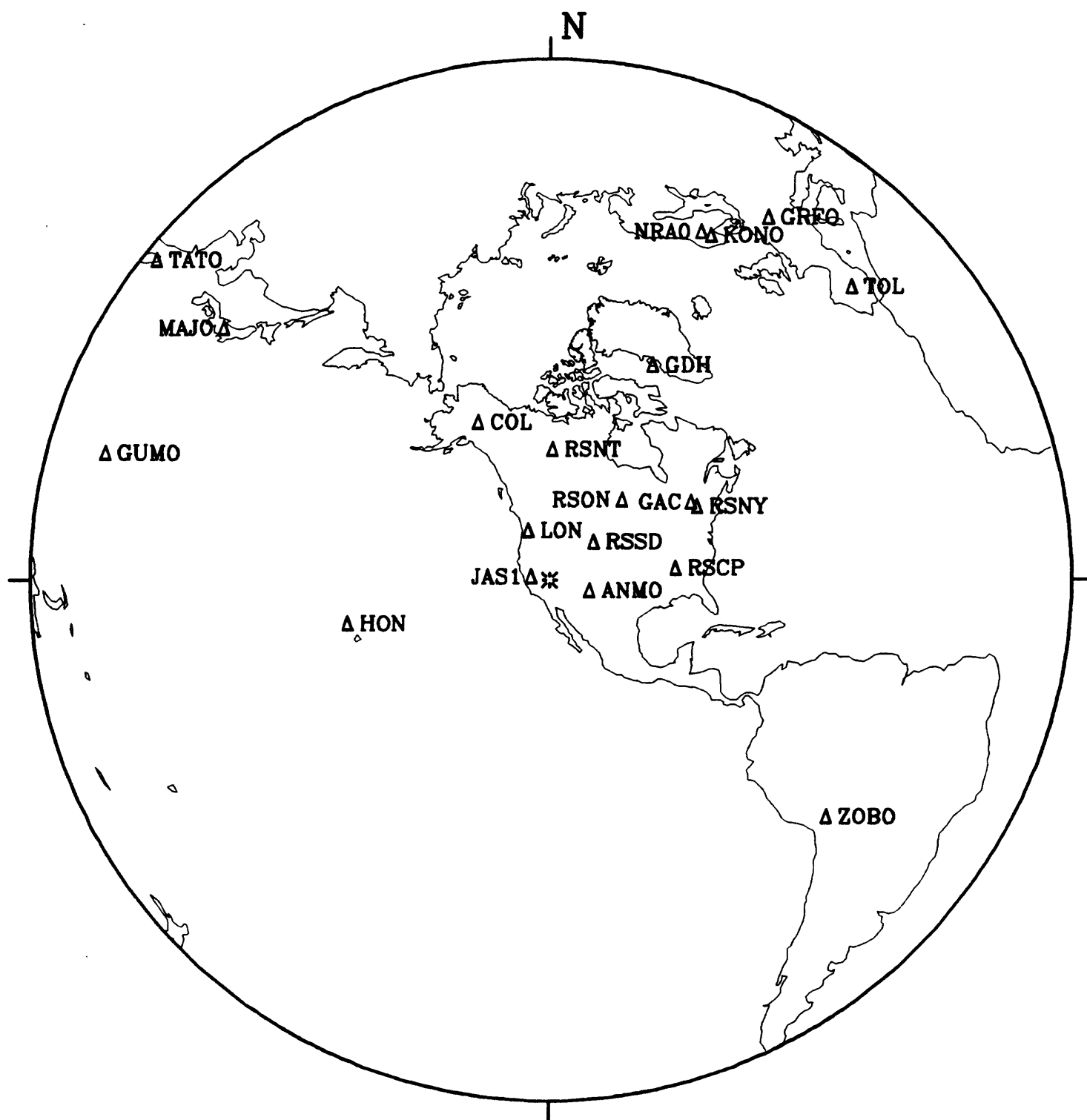
16 July 1986 22:03:10.66

LPZ

Northern India  $h=33.0$   $m_b=5.6$   $M_{sz}=5.1$ 

17 July 1986 21:00:00.06

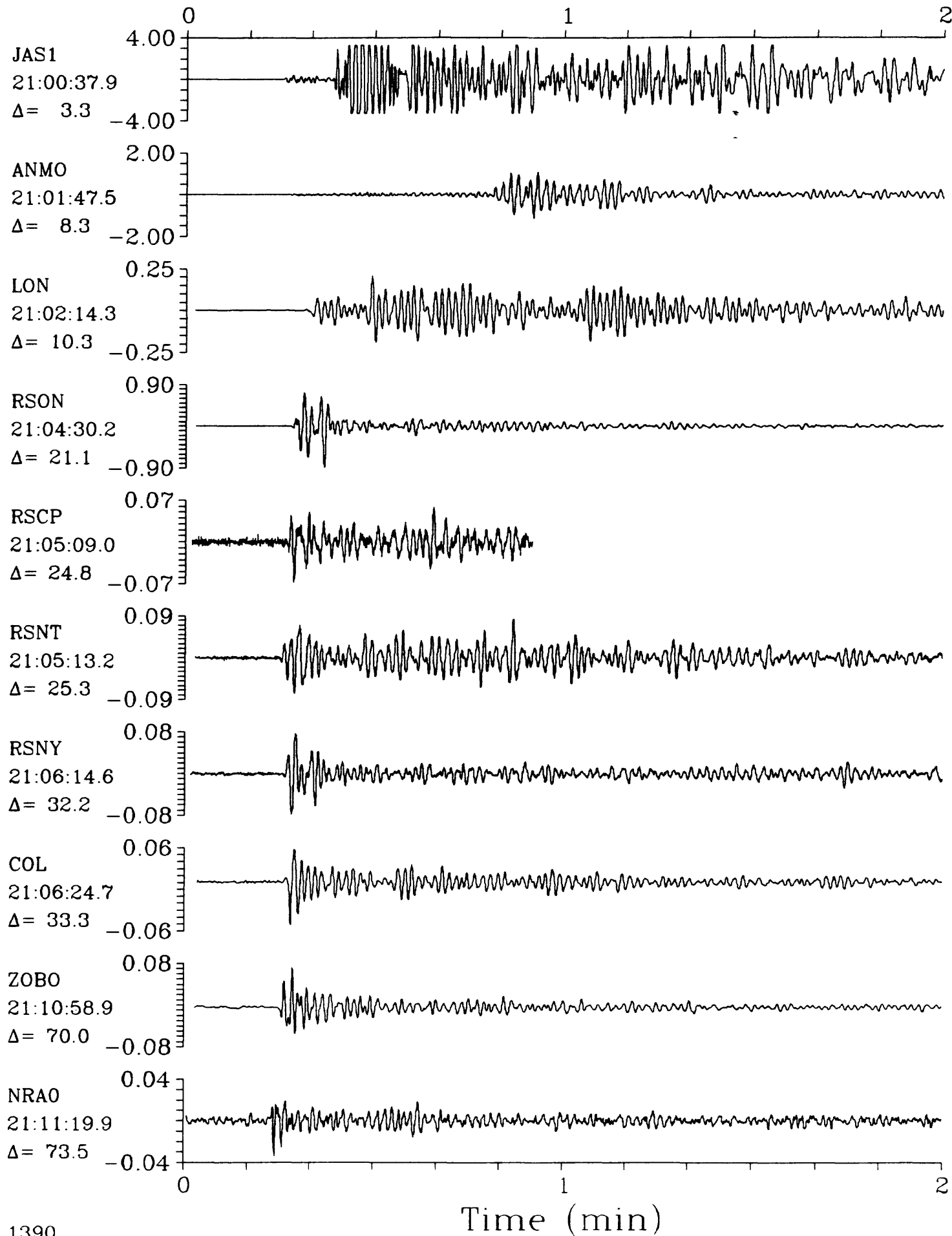
## Southern Nevada



SPZ

17 July 1986 21:00:00.06  
Southern Nevada  $h=0.0$   $m_b=5.7$ 

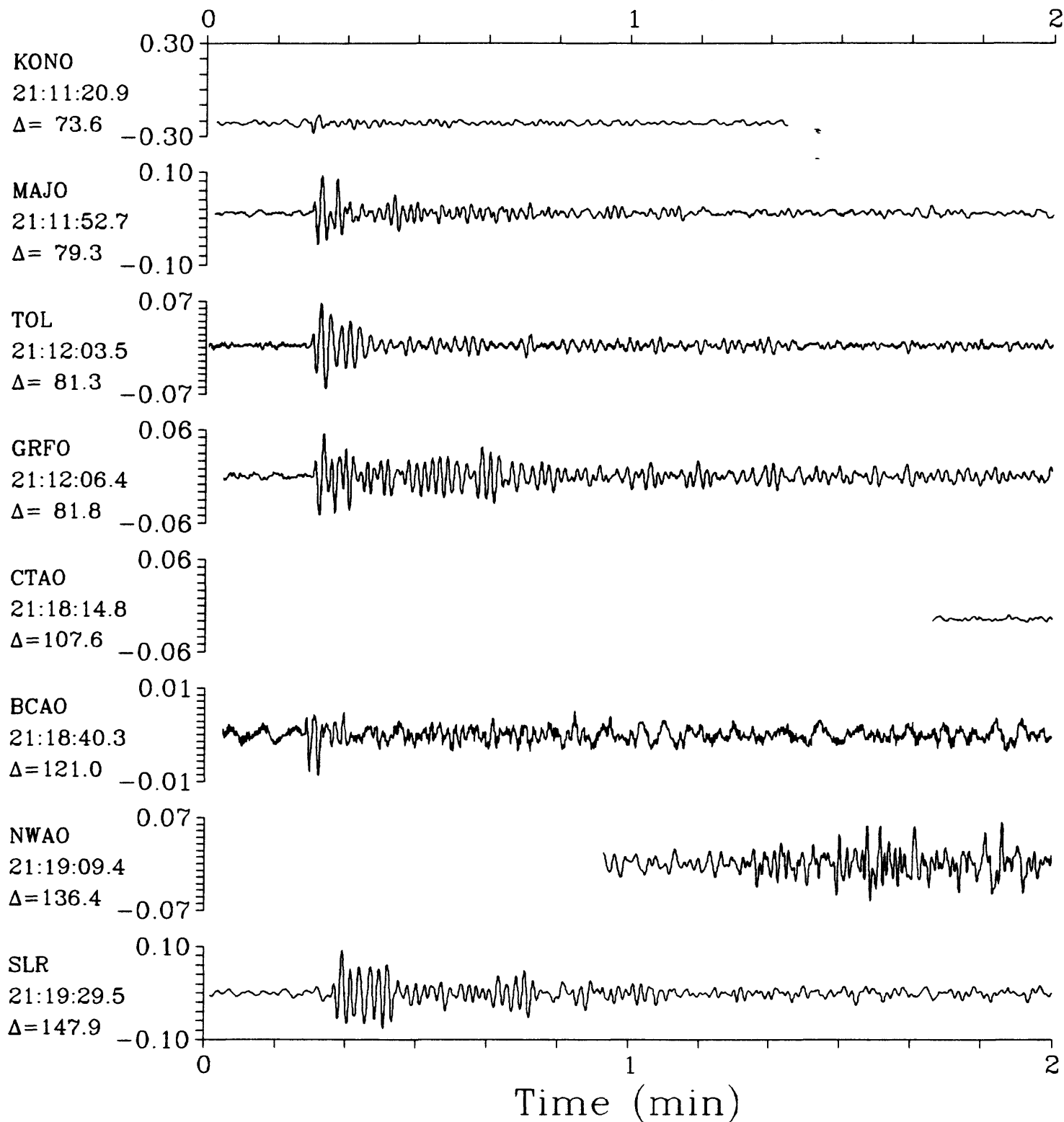
SPZ



SPZ

17 July 1986 21:00:00.06  
Southern Nevada  $h=0.0$   $m_b=5.7$ 

SPZ

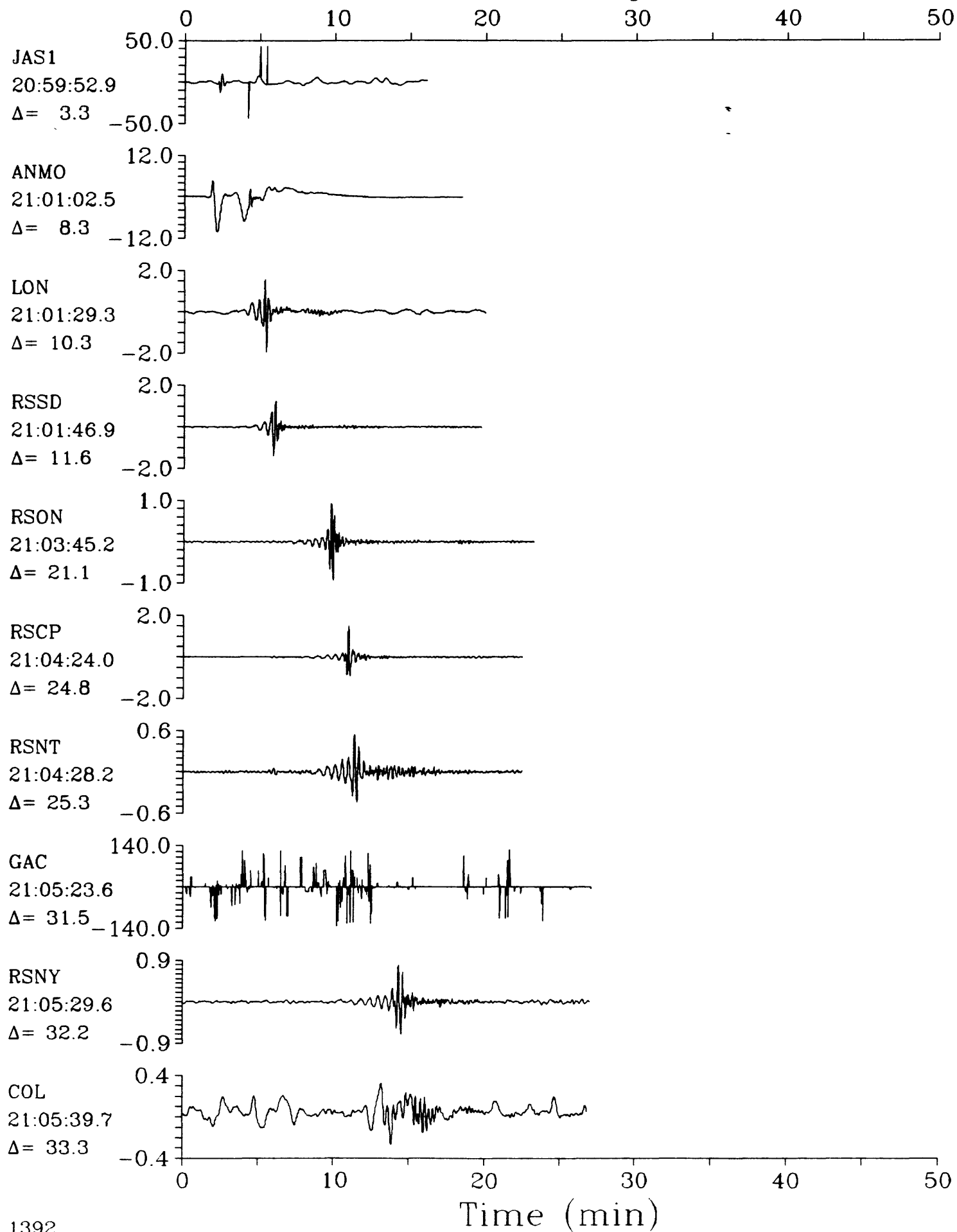




LPZ

17 July 1986 21:00:00.06  
Southern Nevada  $h=0.0$   $m_b=5.7$ 

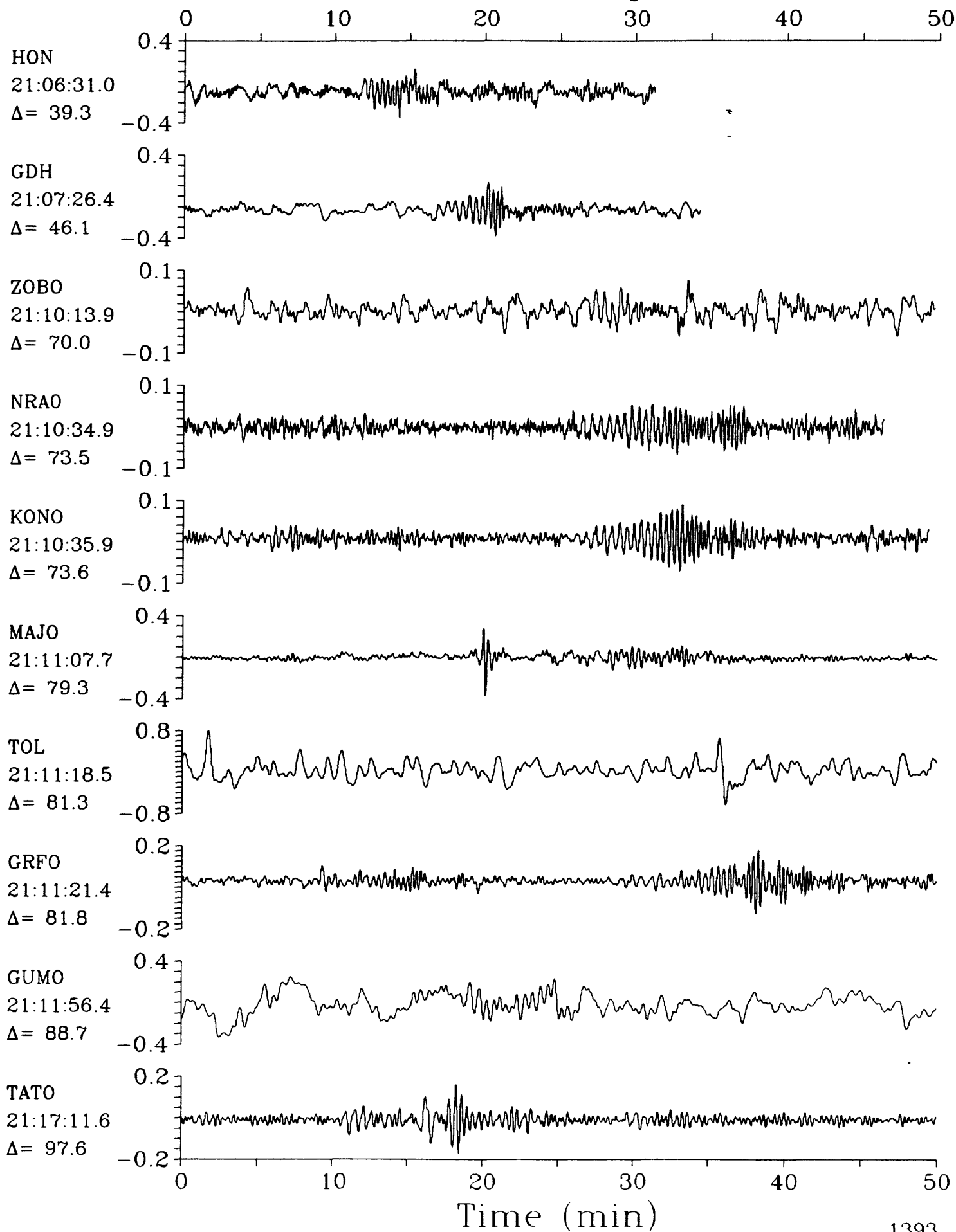
LPZ



LPZ

17 July 1986 21:00:00.06  
Southern Nevada  $h=0.0$   $m_b=5.7$ 

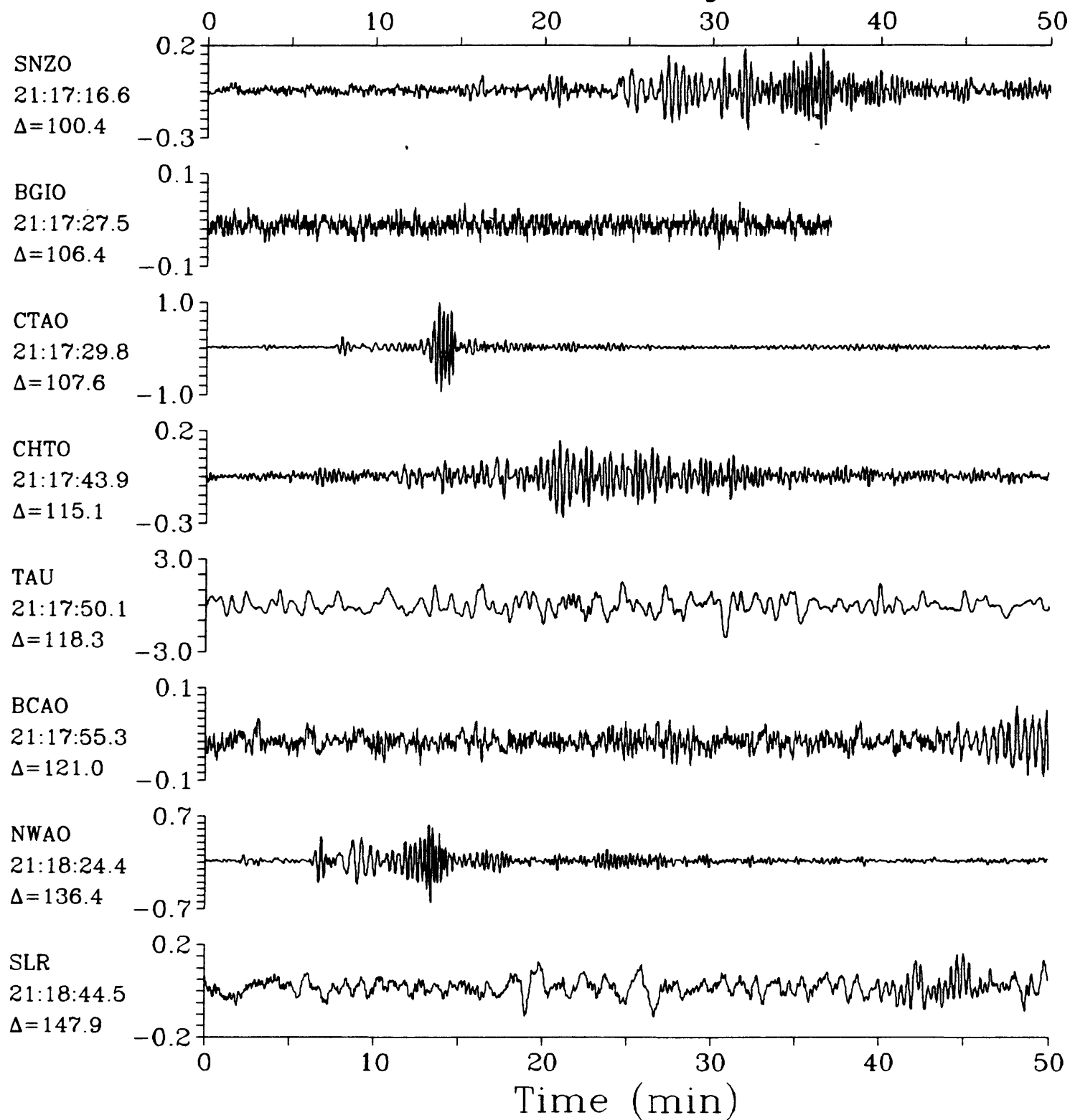
LPZ



LPZ

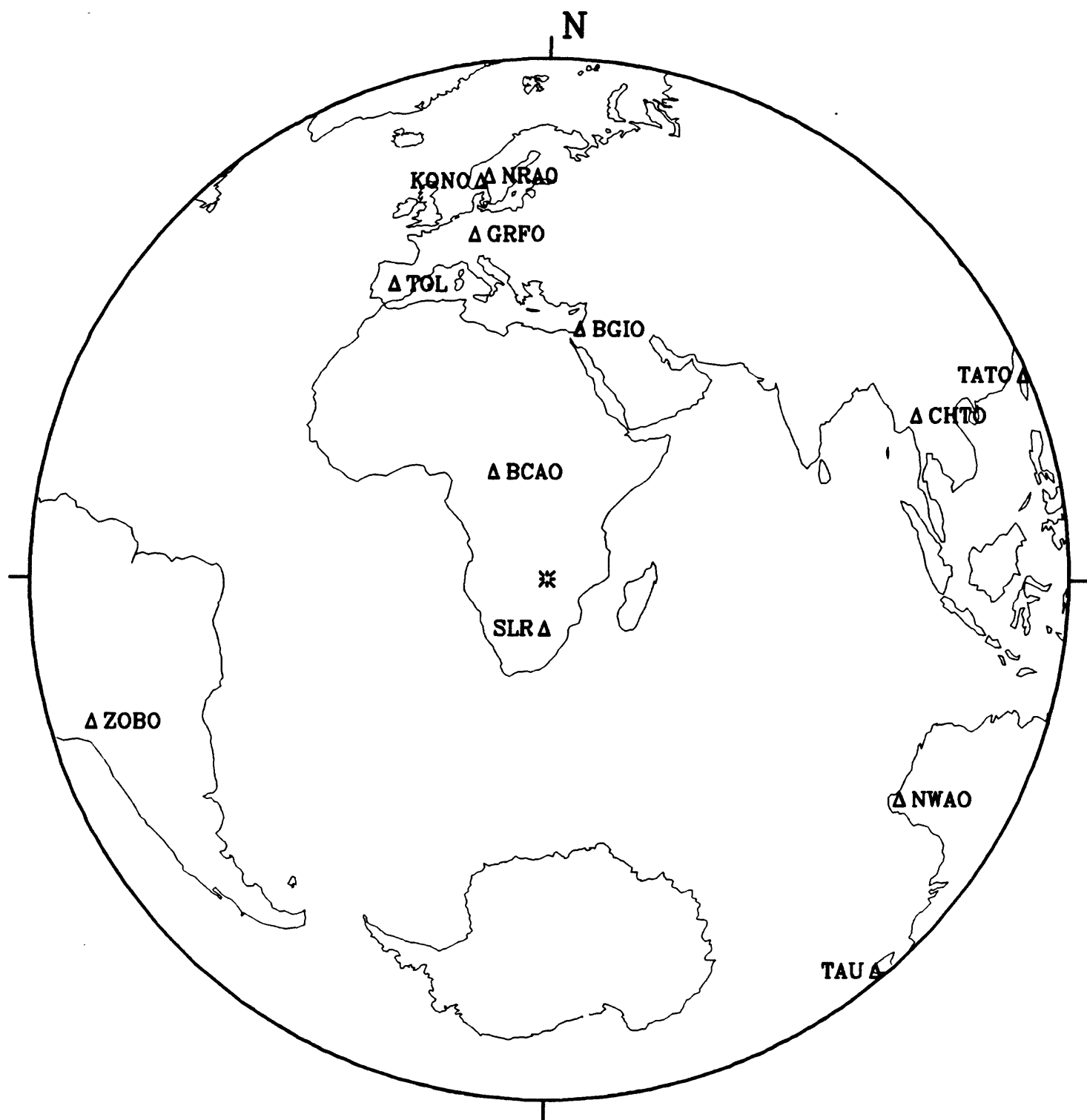
17 July 1986 21:00:00.06  
Southern Nevada  $h=0.0$   $m_b=5.7$ 

LPZ



18 July 1986 15:07:51.25

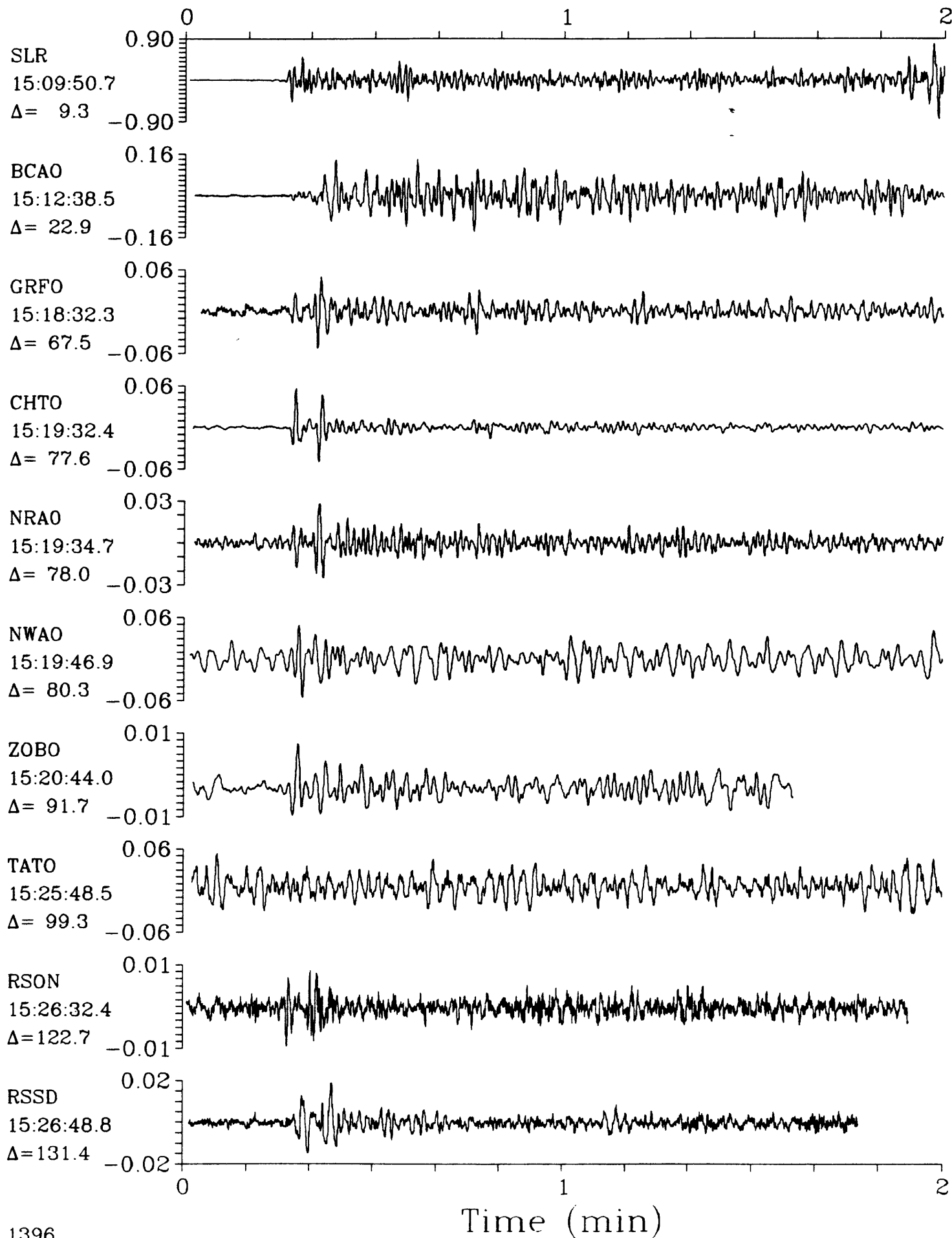
# Zambia



SPZ

18 July 1986 15:07:51.25  
Zambia  $h=14.3$   $m_b=5.5$   $M_{SZ}=4.6$ 

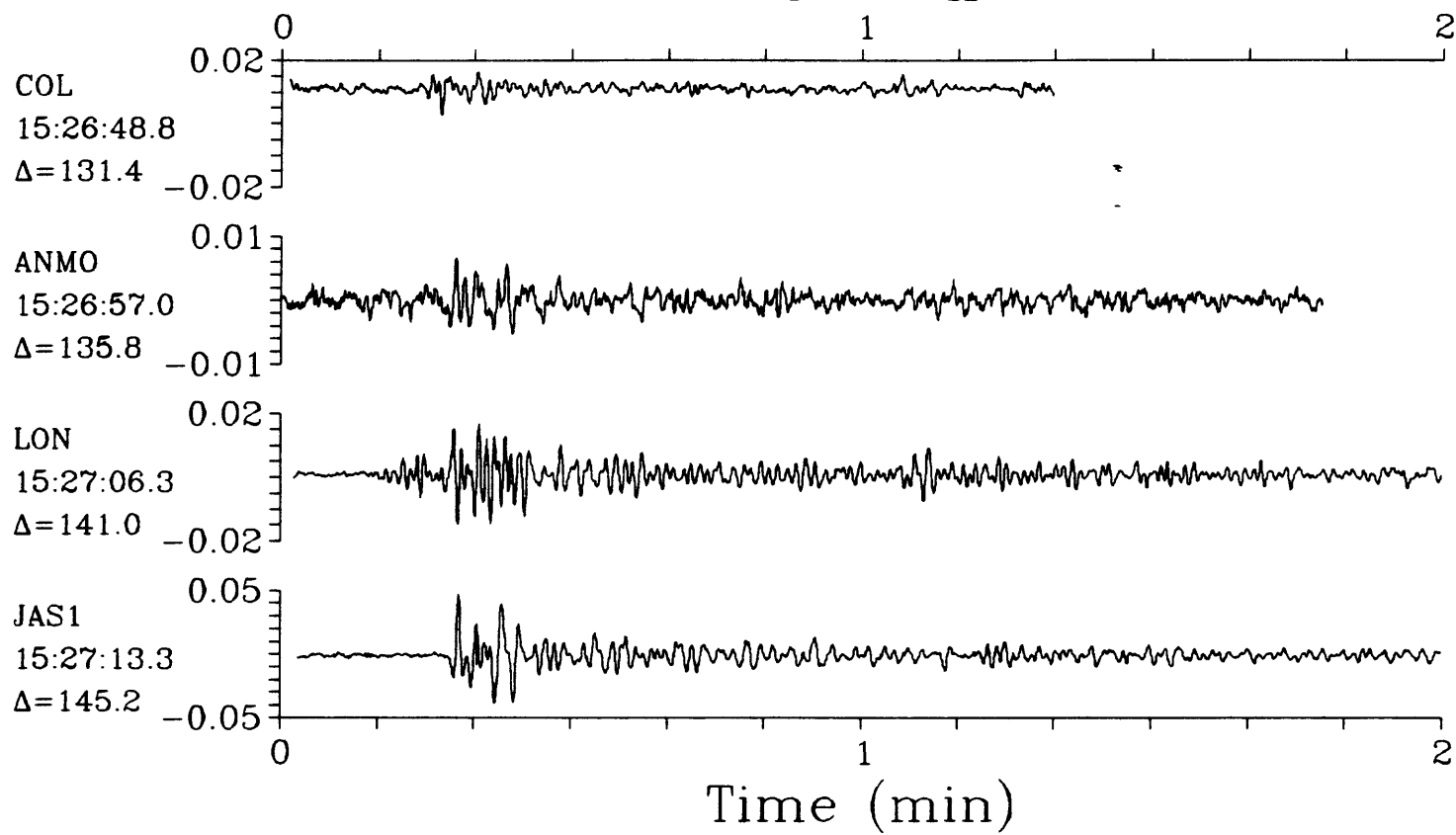
SPZ



SPZ

18 July 1986 15:07:51.25  
Zambia  $h=14.3$   $m_b=5.5$   $M_{SZ}=4.6$

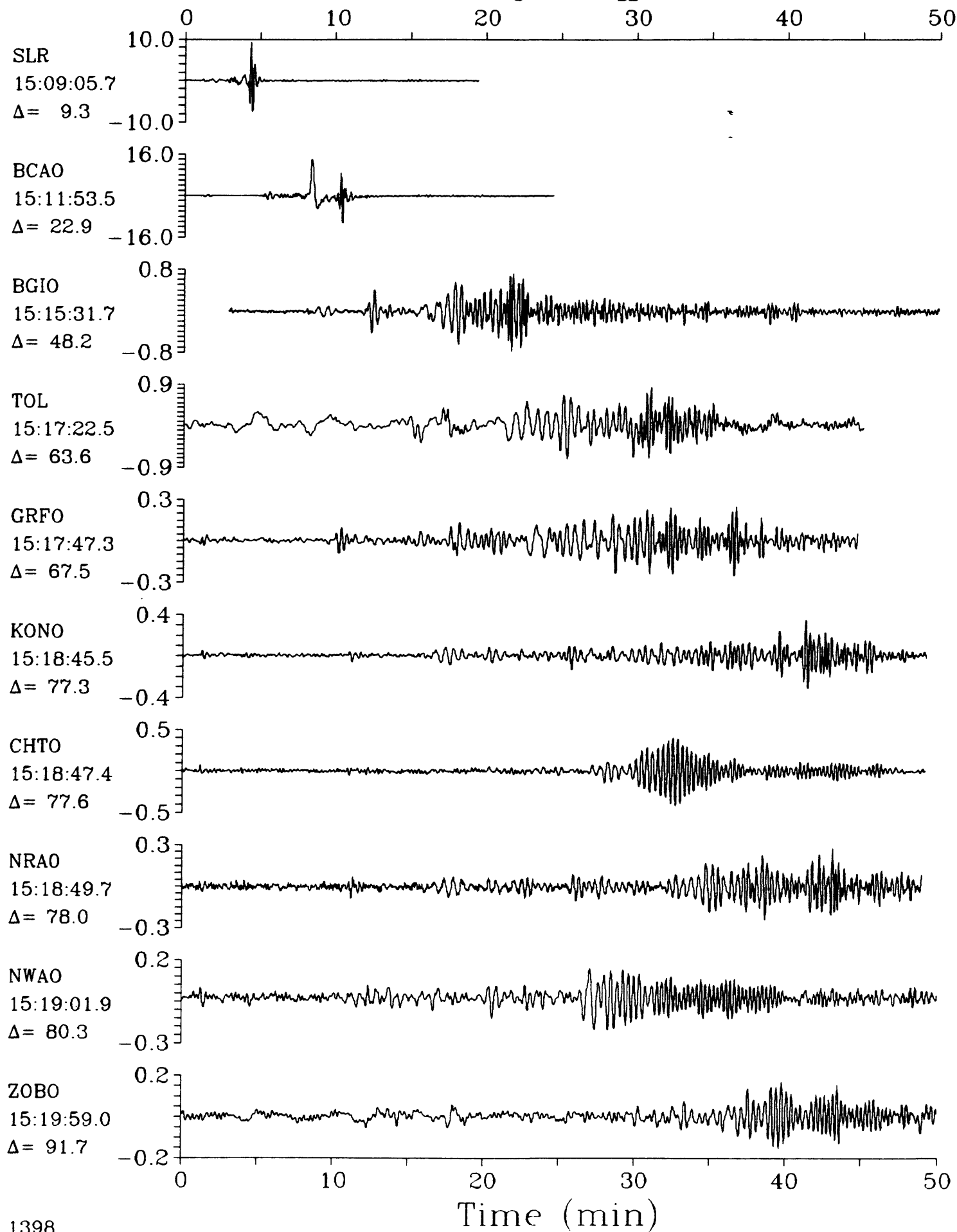
SPZ



LPZ

18 July 1986 15:07:51.25  
Zambia  $h=14.3$   $m_b=5.5$   $M_{sz}=4.6$ 

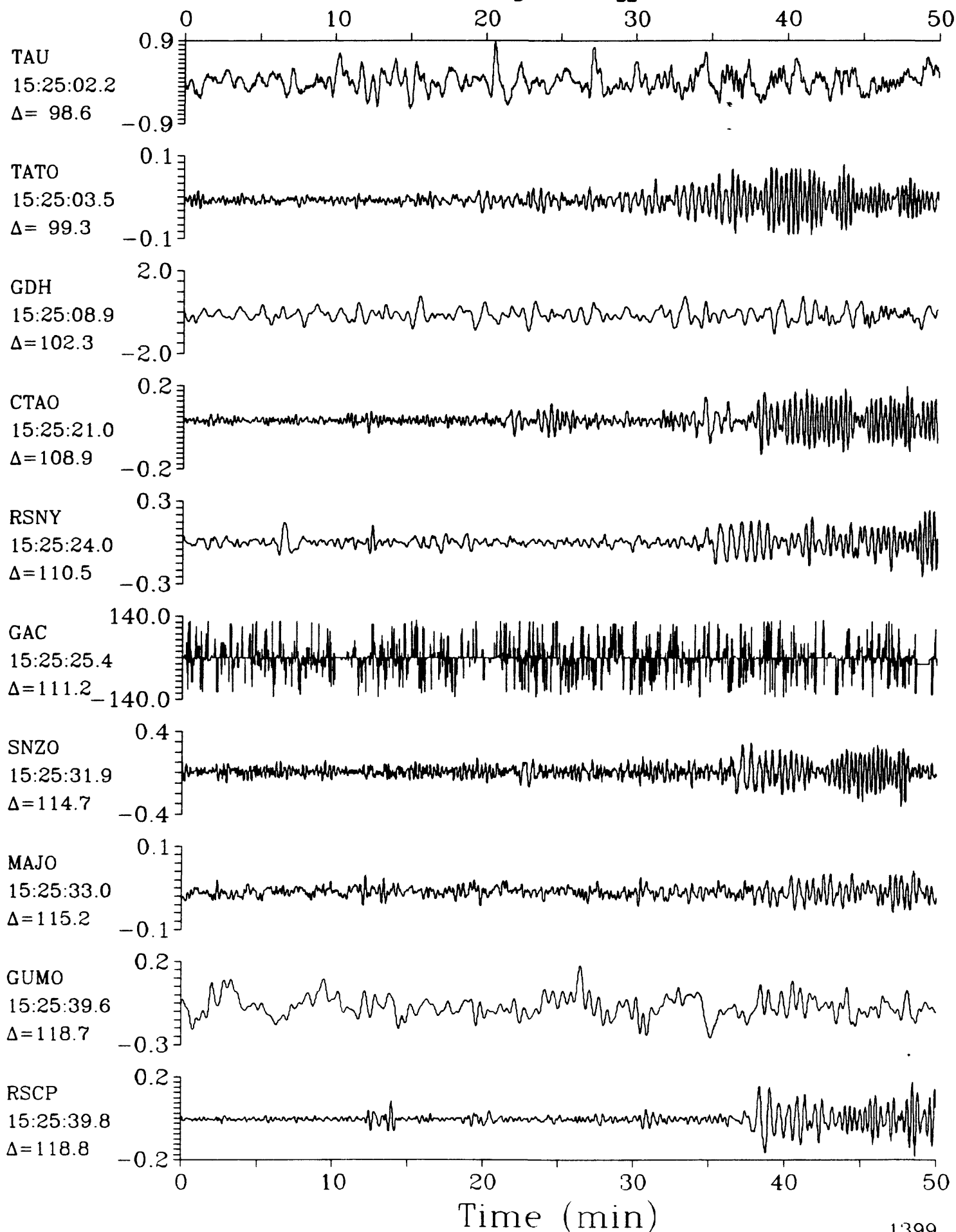
LPZ



LPZ

18 July 1986 15:07:51.25  
Zambia  $h=14.3$   $m_b=5.5$   $M_{sz}=4.6$ 

LPZ

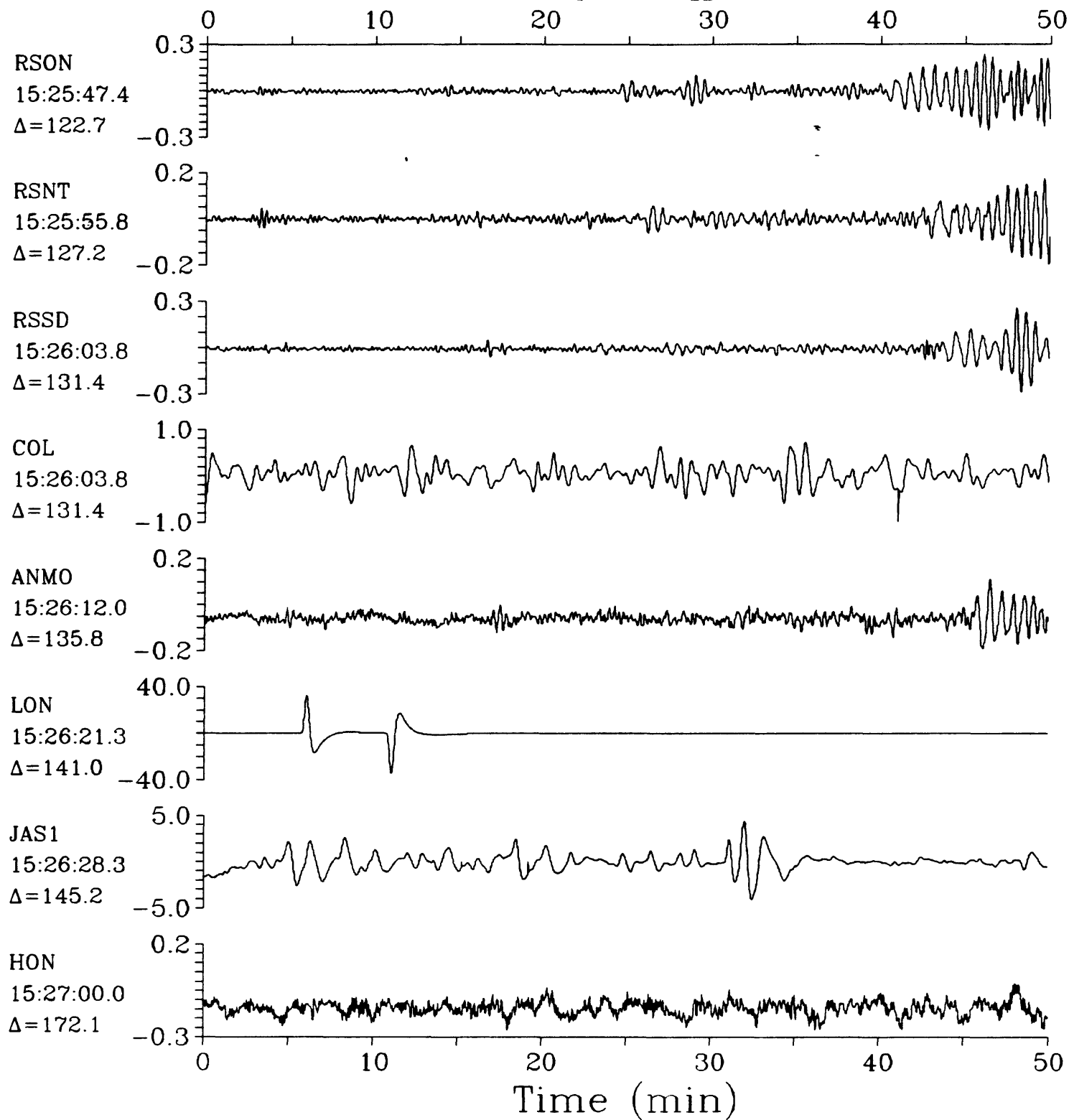




LPZ

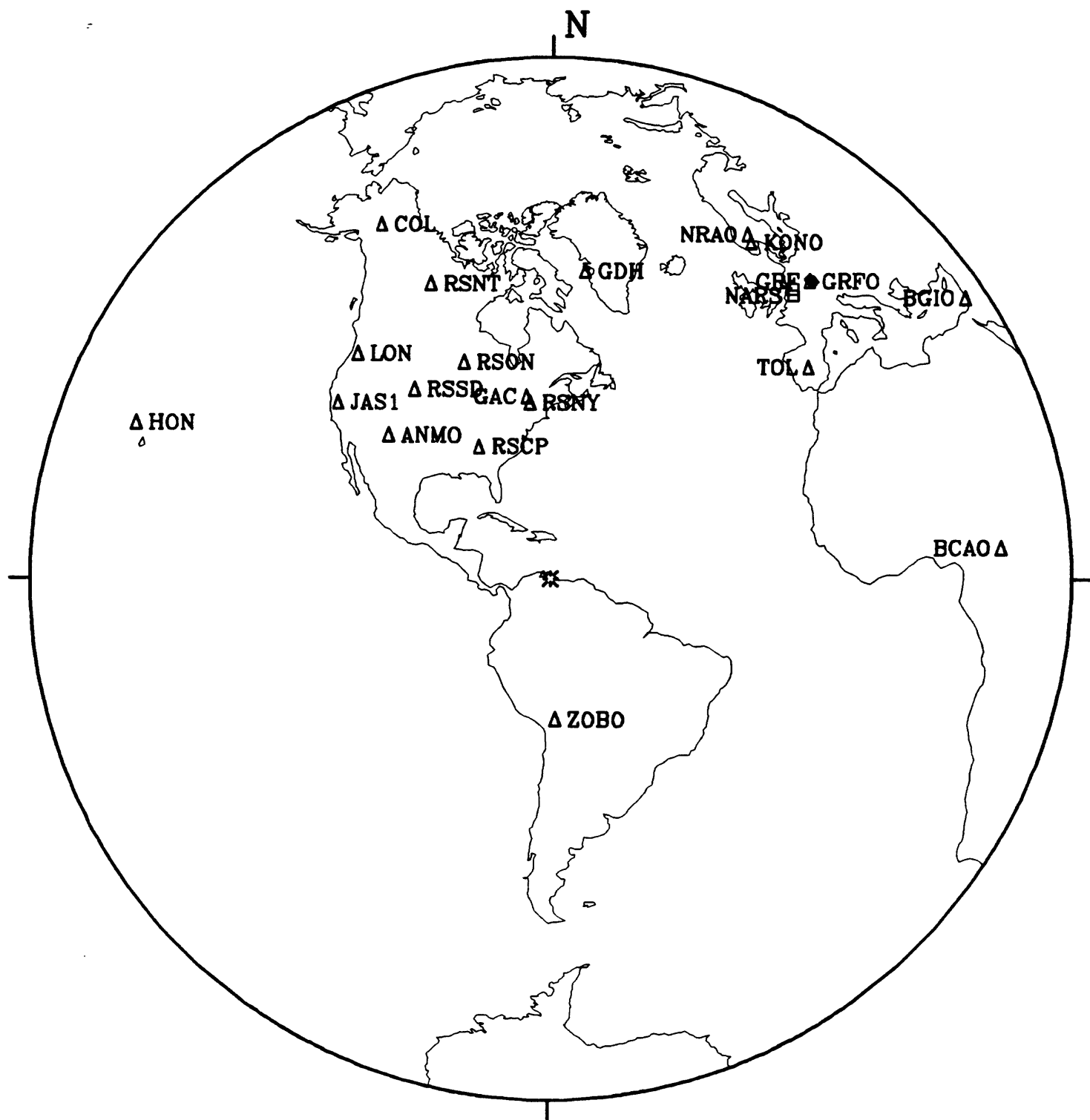
18 July 1986 15:07:51.25  
Zambia  $h=14.3$   $m_b=5.5$   $M_{sz}=4.6$ 

LPZ



18 July 1986 17:22:41.68

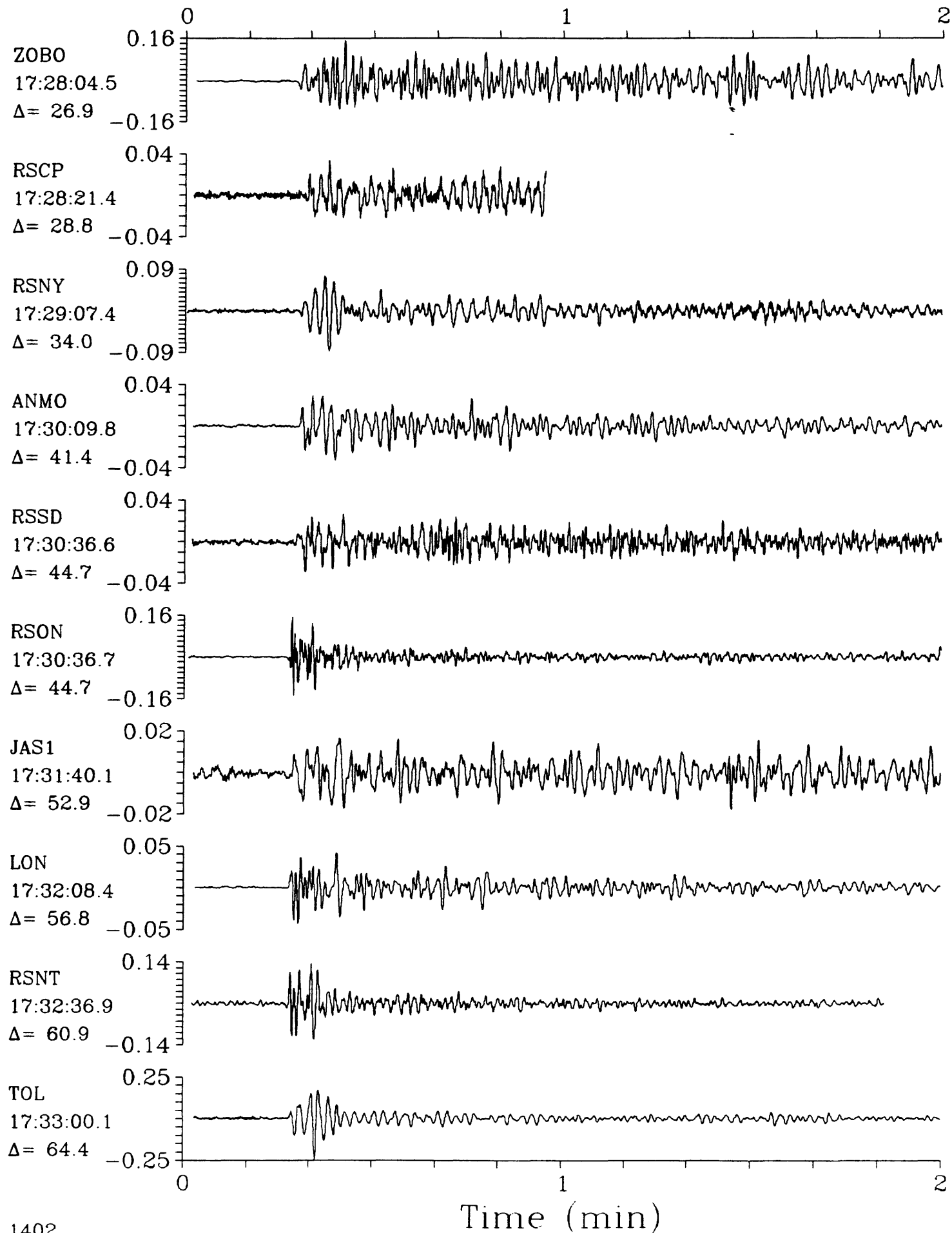
# Venezuela



SPZ

18 July 1986 17:22:41.68  
Venezuela  $h=33.0$   $m_b=5.8$   $M_{sz}=4.9$ 

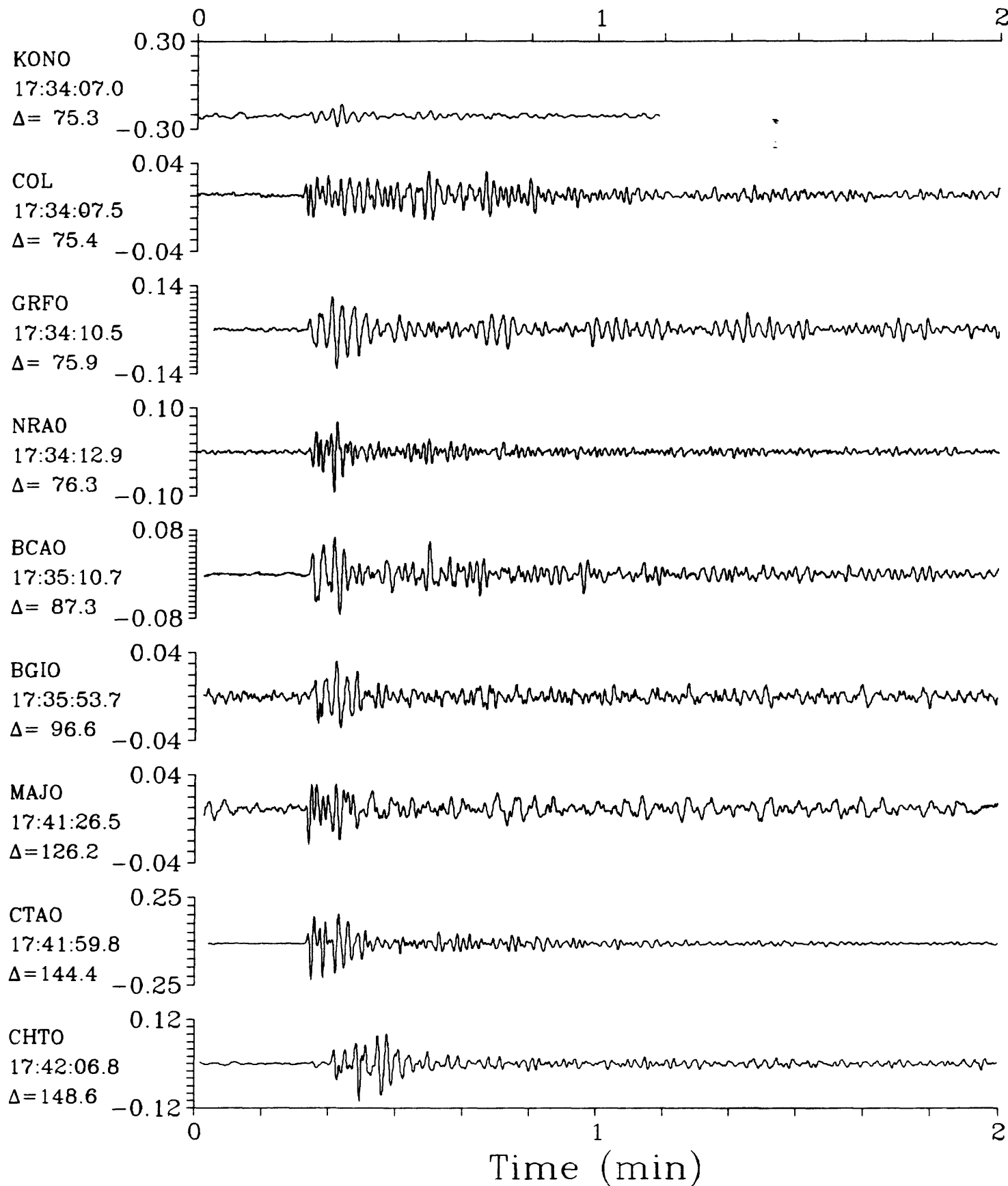
SPZ



SPZ

18 July 1986 17:22:41.68  
Venezuela  $h=33.0$   $m_b=5.8$   $M_{sz}=4.9$ 

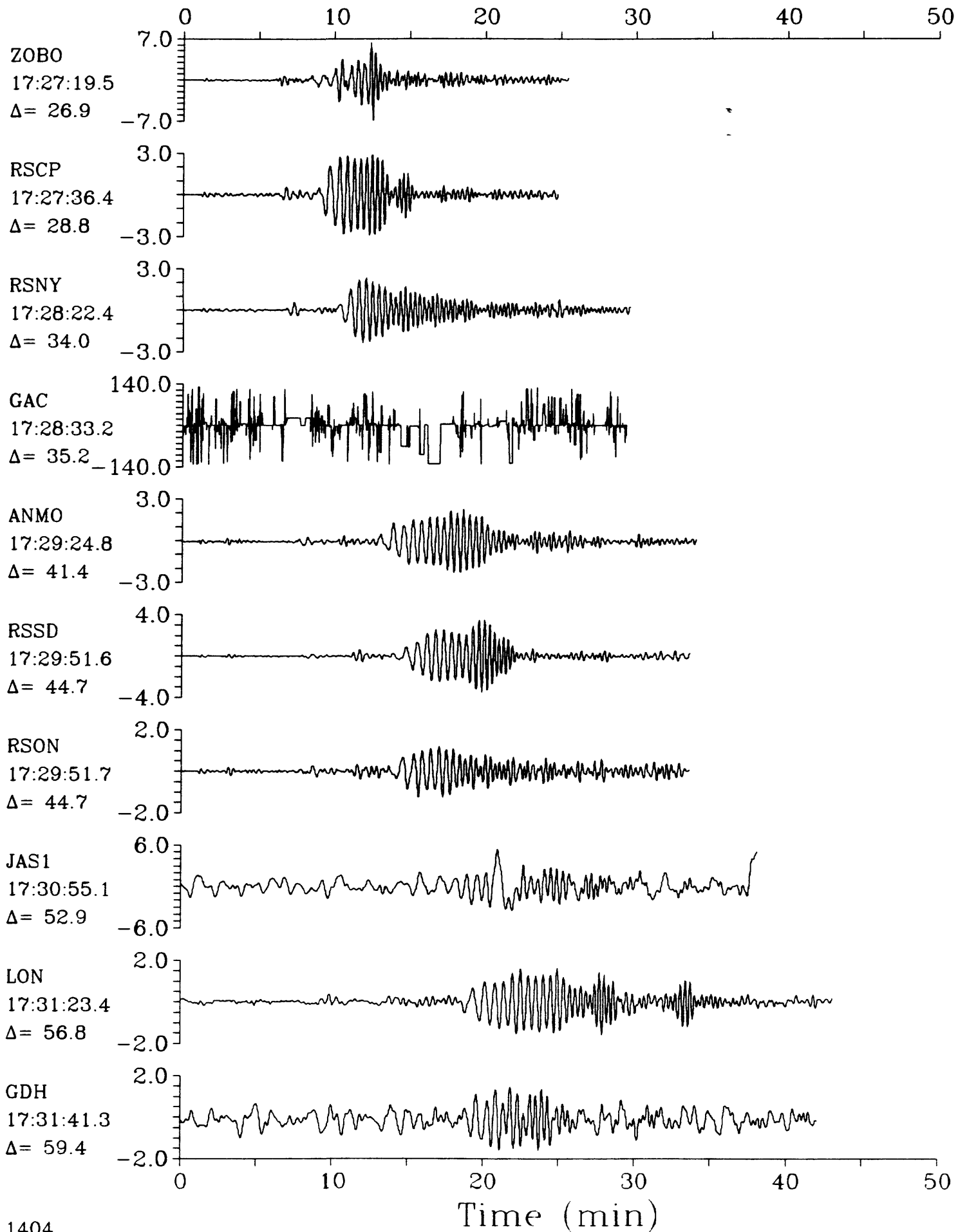
SPZ



LPZ

18 July 1986 17:22:41.68  
Venezuela  $h=33.0$   $m_b=5.8$   $M_{sz}=4.9$ 

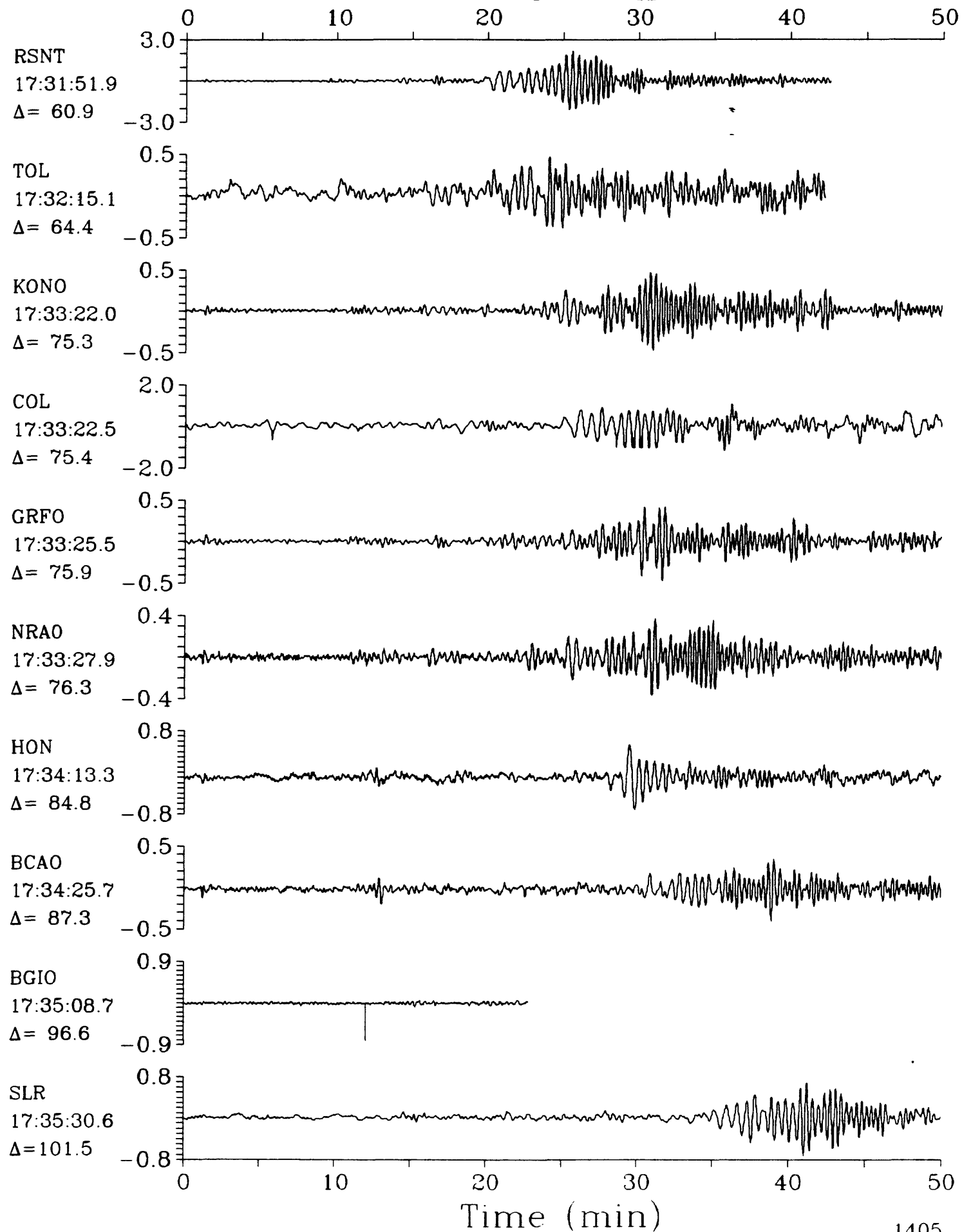
LPZ



LPZ

18 July 1986 17:22:41.68  
Venezuela  $h=33.0$   $m_b=5.8$   $M_{sz}=4.9$ 

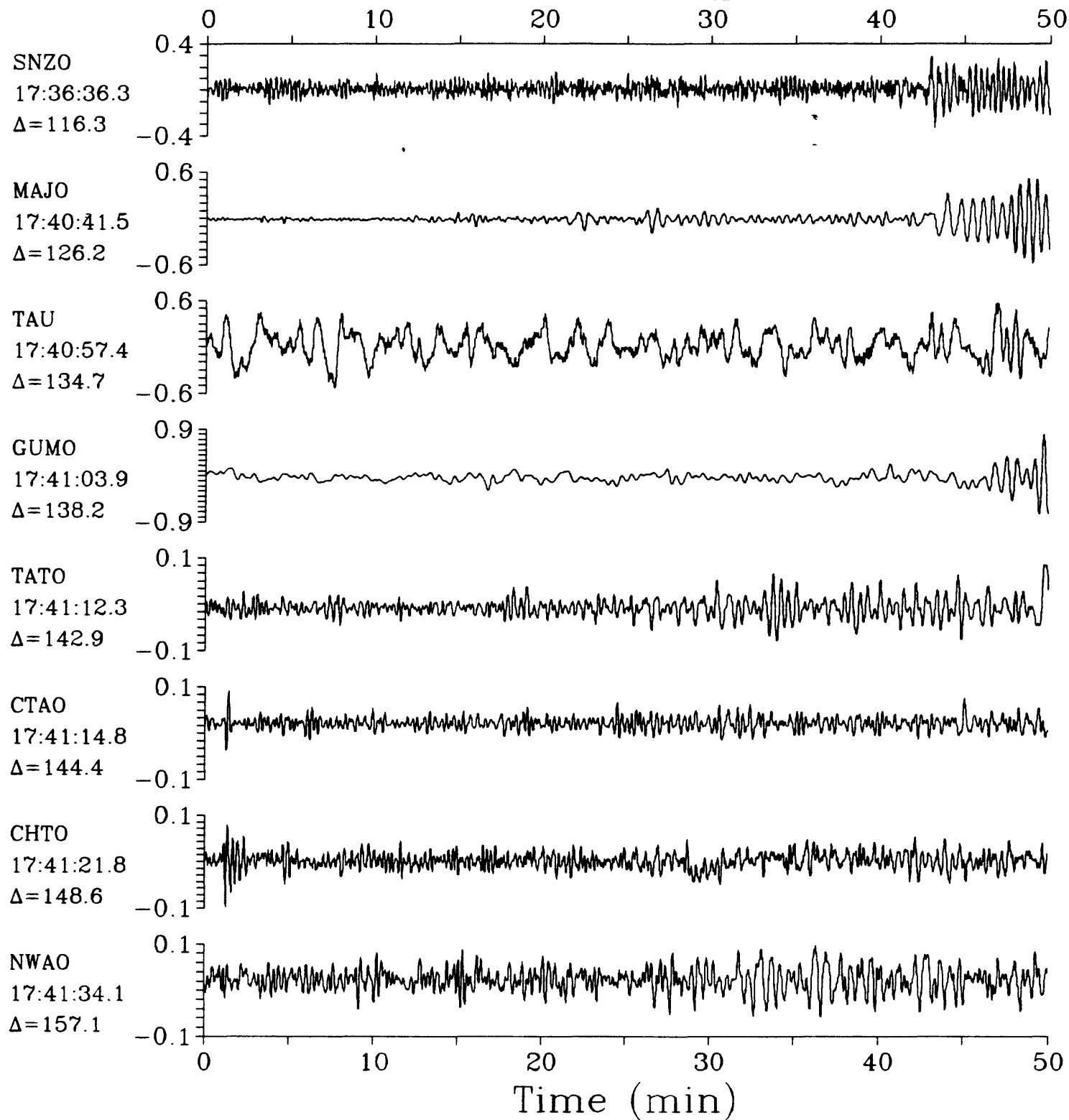
LPZ



LPZ

18 July 1986 17:22:41.68  
Venezuela  $h=33.0$   $m_b=5.8$   $M_{SZ}=4.9$ 

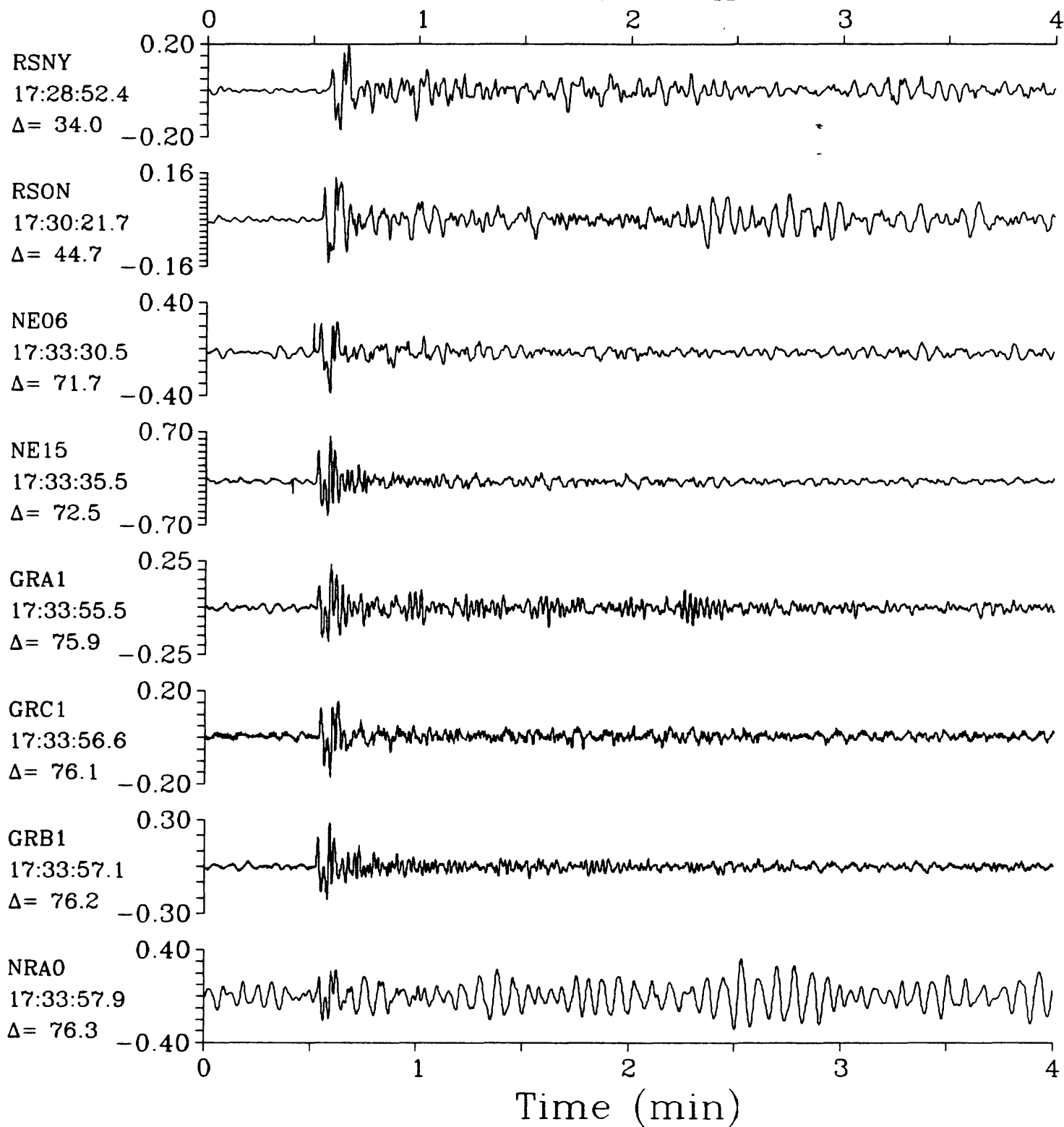
LPZ



IPZ

18 July 1986 17:22:41.68  
Venezuela  $h=33.0$   $m_b=5.8$   $M_{SZ}=4.9$ 

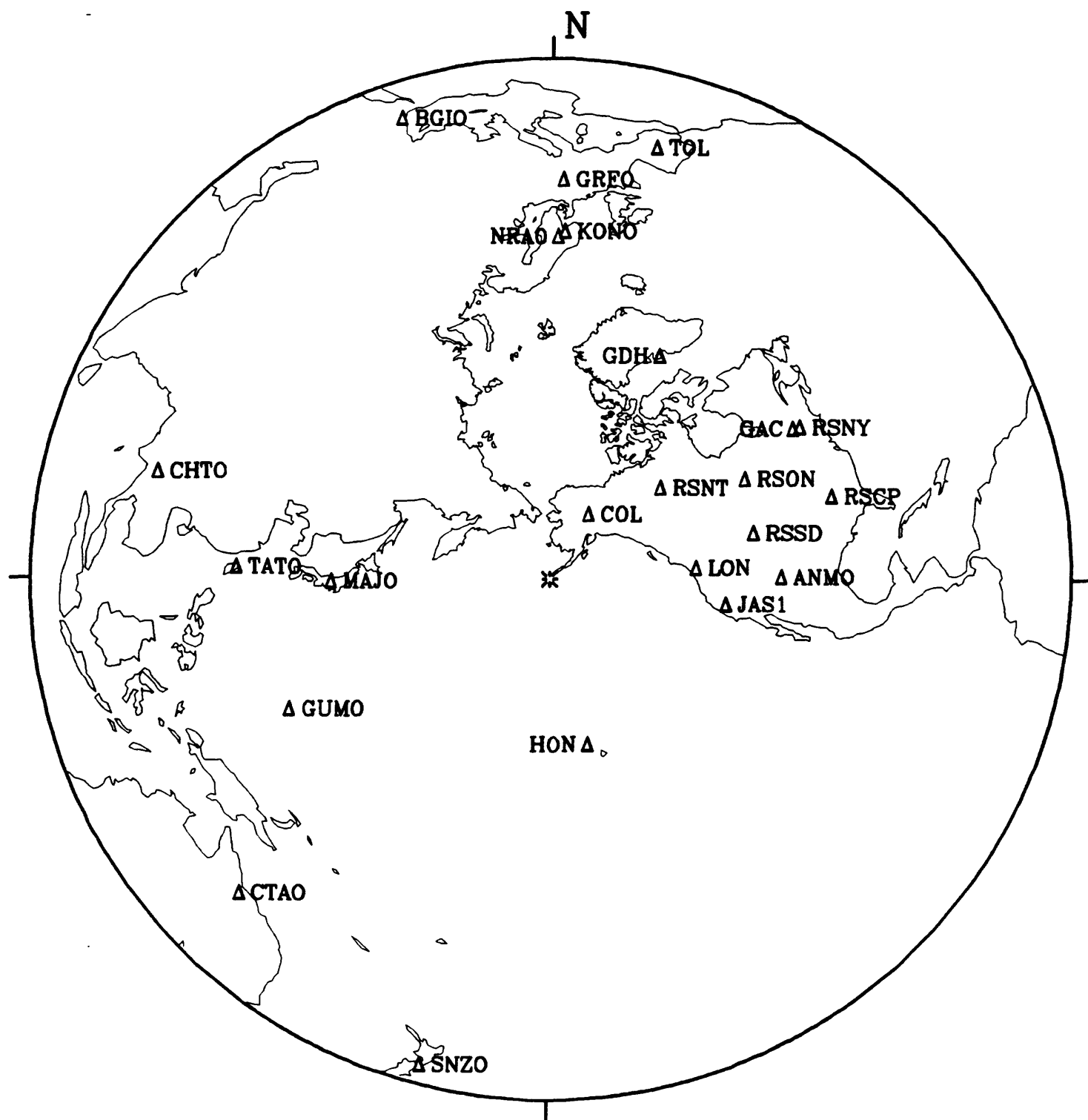
IPZ





19 July 1986 04:31:56.15

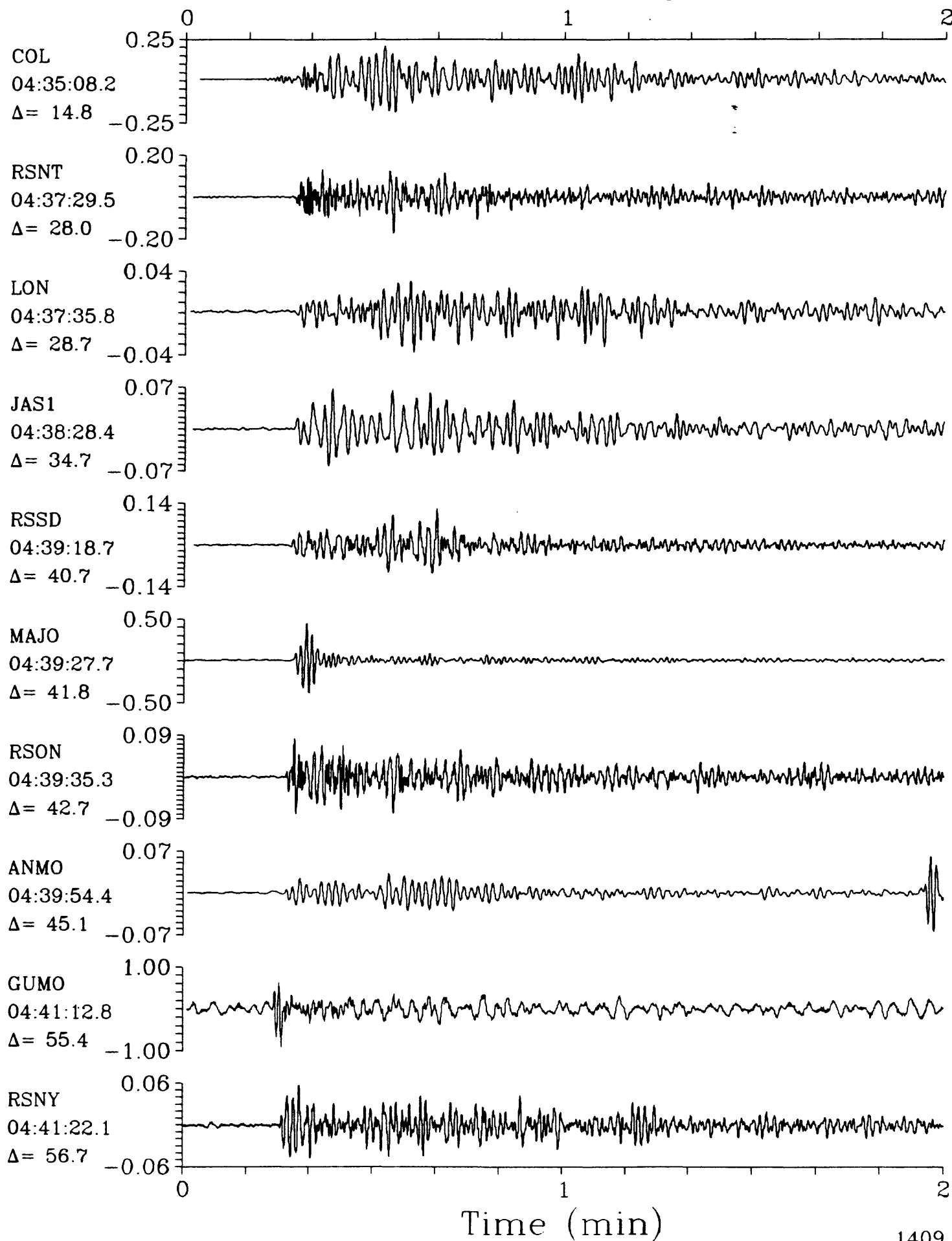
## Fox Islands, Aleutian Islands



SPZ

19 July 1986 04:31:56.15

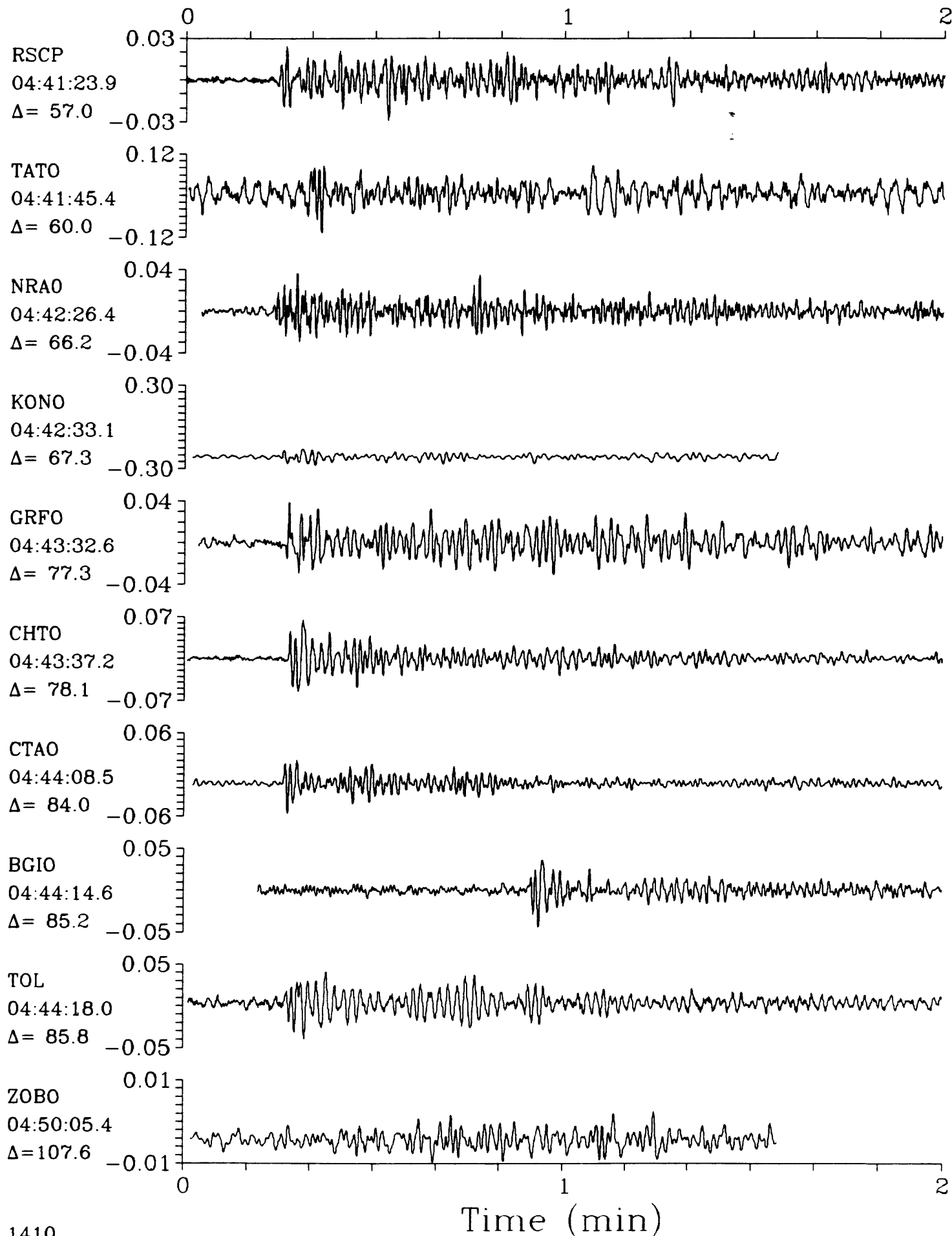
SPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.5$   $M_{sz}=5.0$ 

SPZ

19 July 1986 04:31:56.15

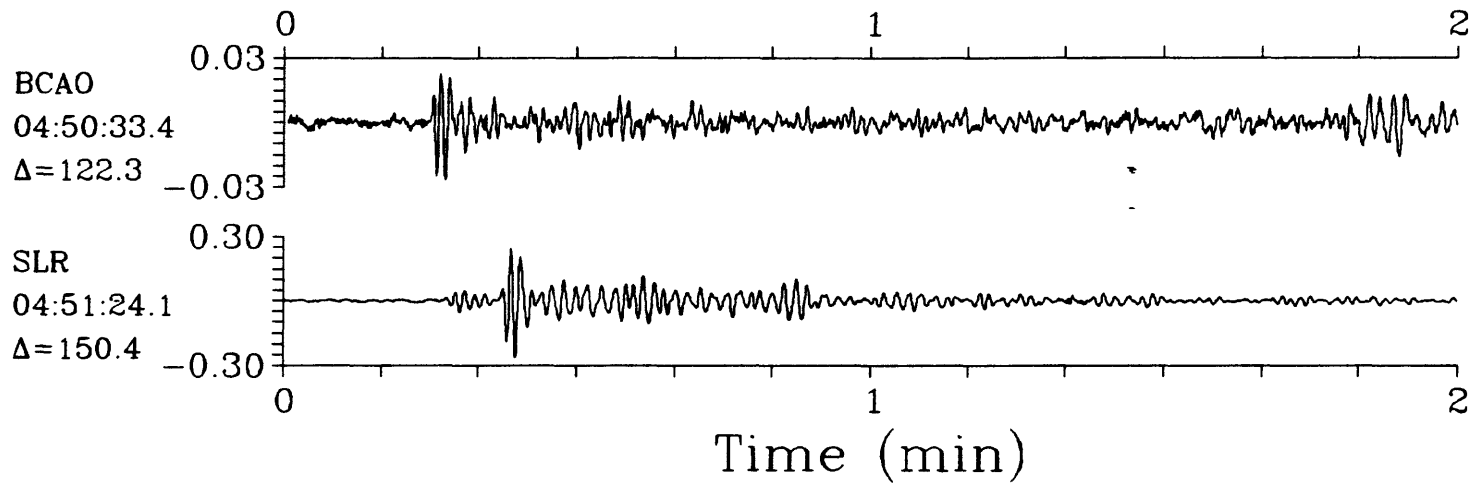
SPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.5$   $M_{sz}=5.0$ 

SPZ

19 July 1986 04:31:56.15

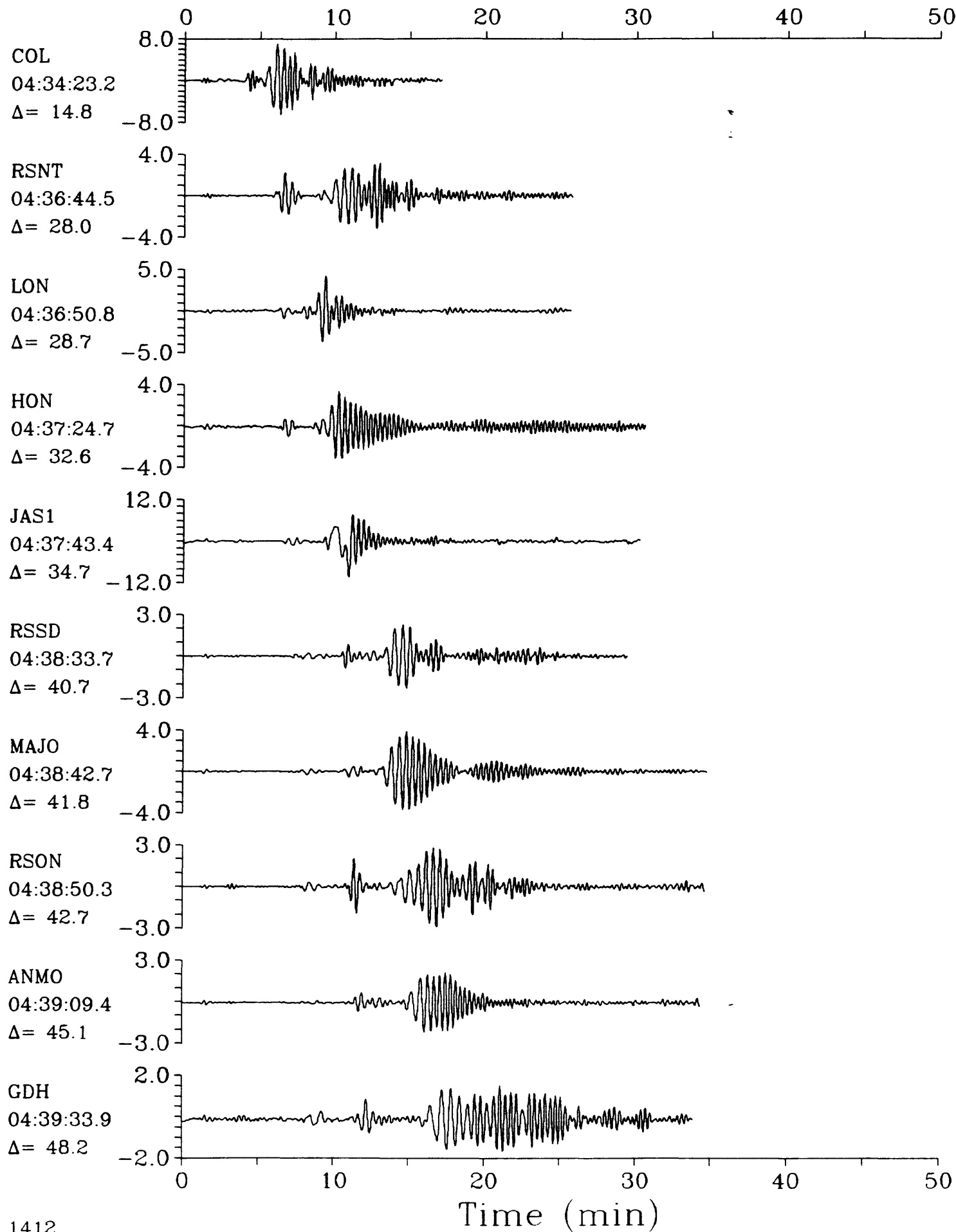
SPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.5$   $M_{sz}=5.0$ 

LPZ

19 July 1986 04:31:56.15

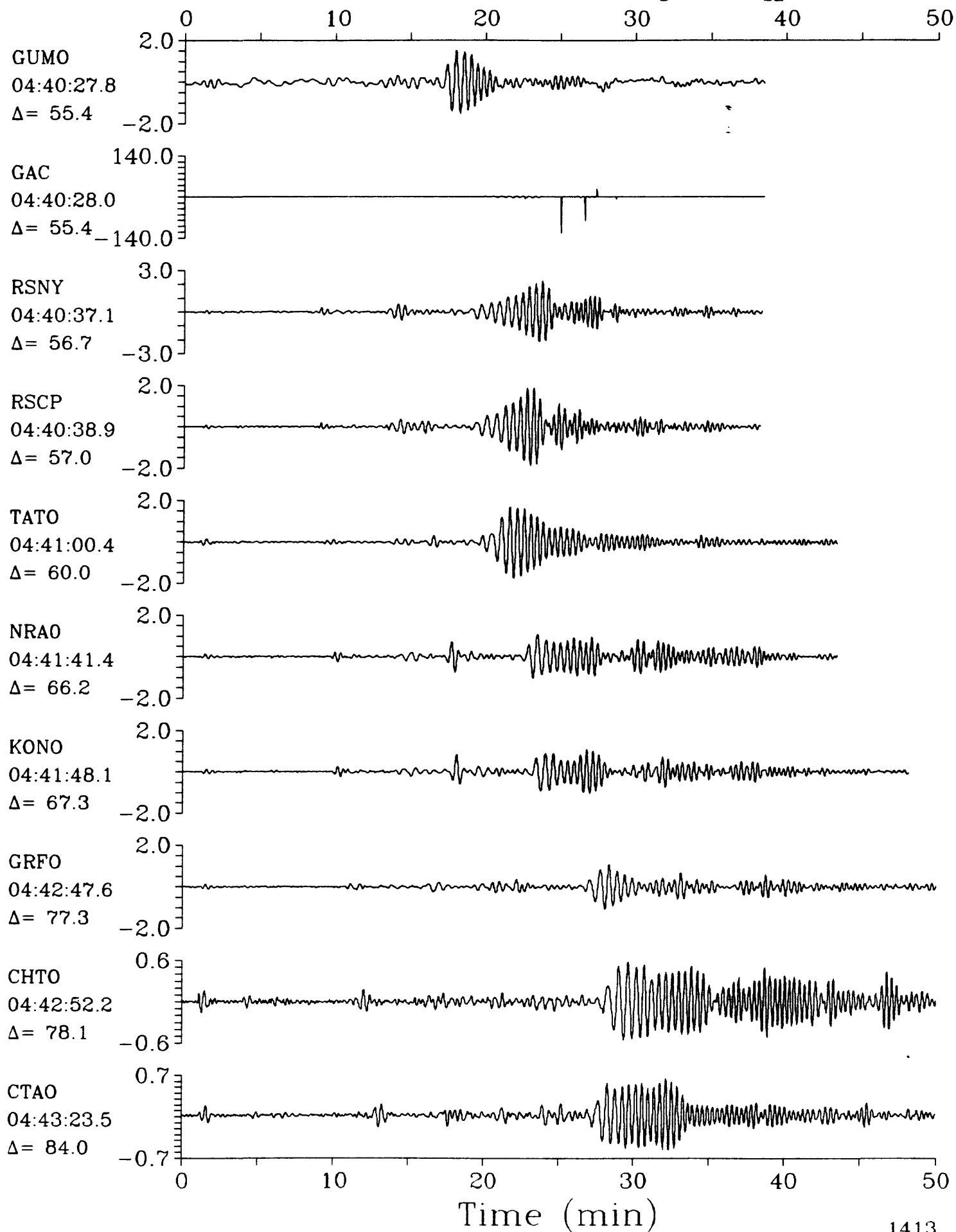
LPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.5$   $M_{sz}=5.0$ 

LPZ

19 July 1986 04:31:56.15

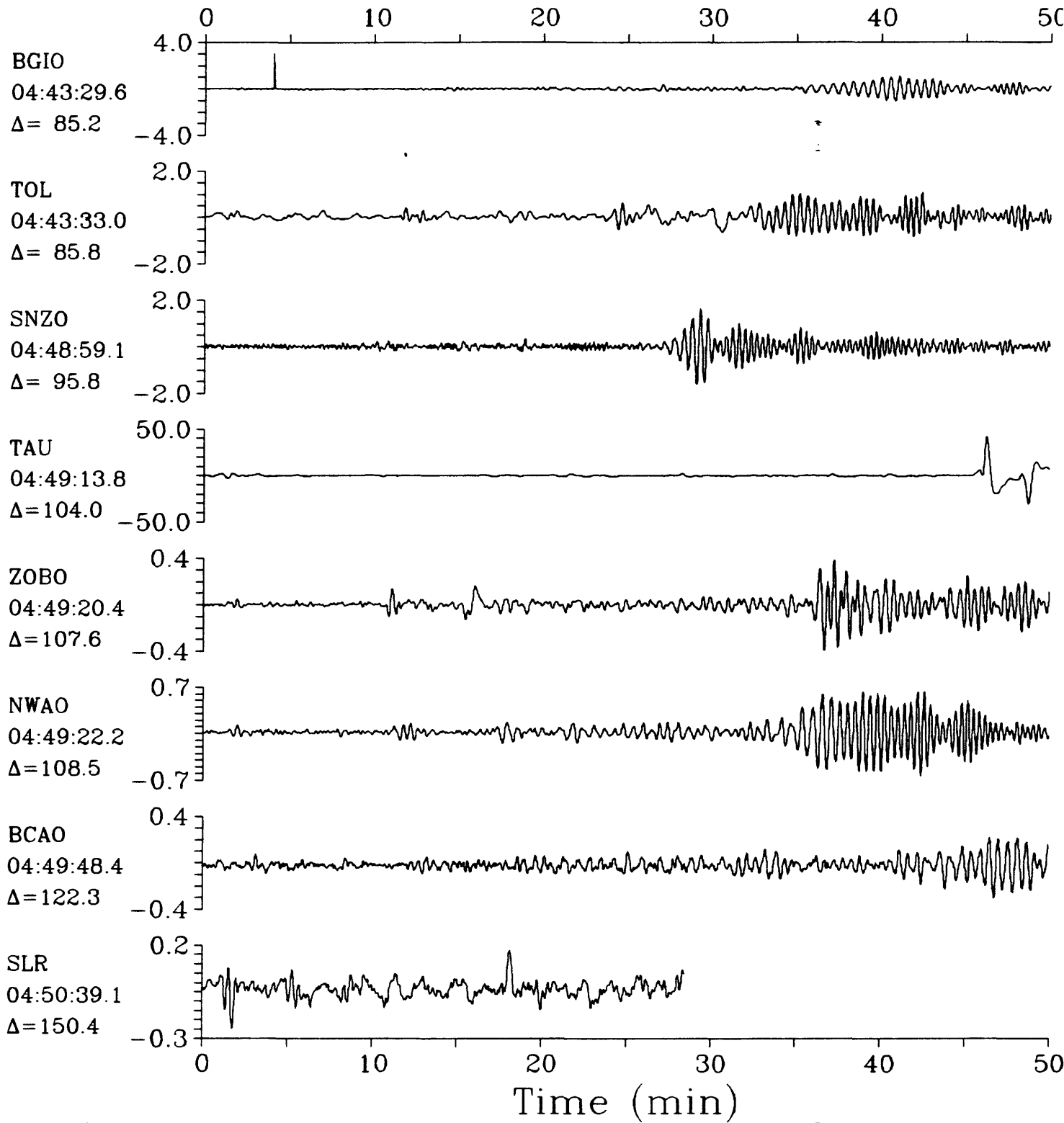
LPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.5$   $M_{sz}=5.0$ 

LPZ

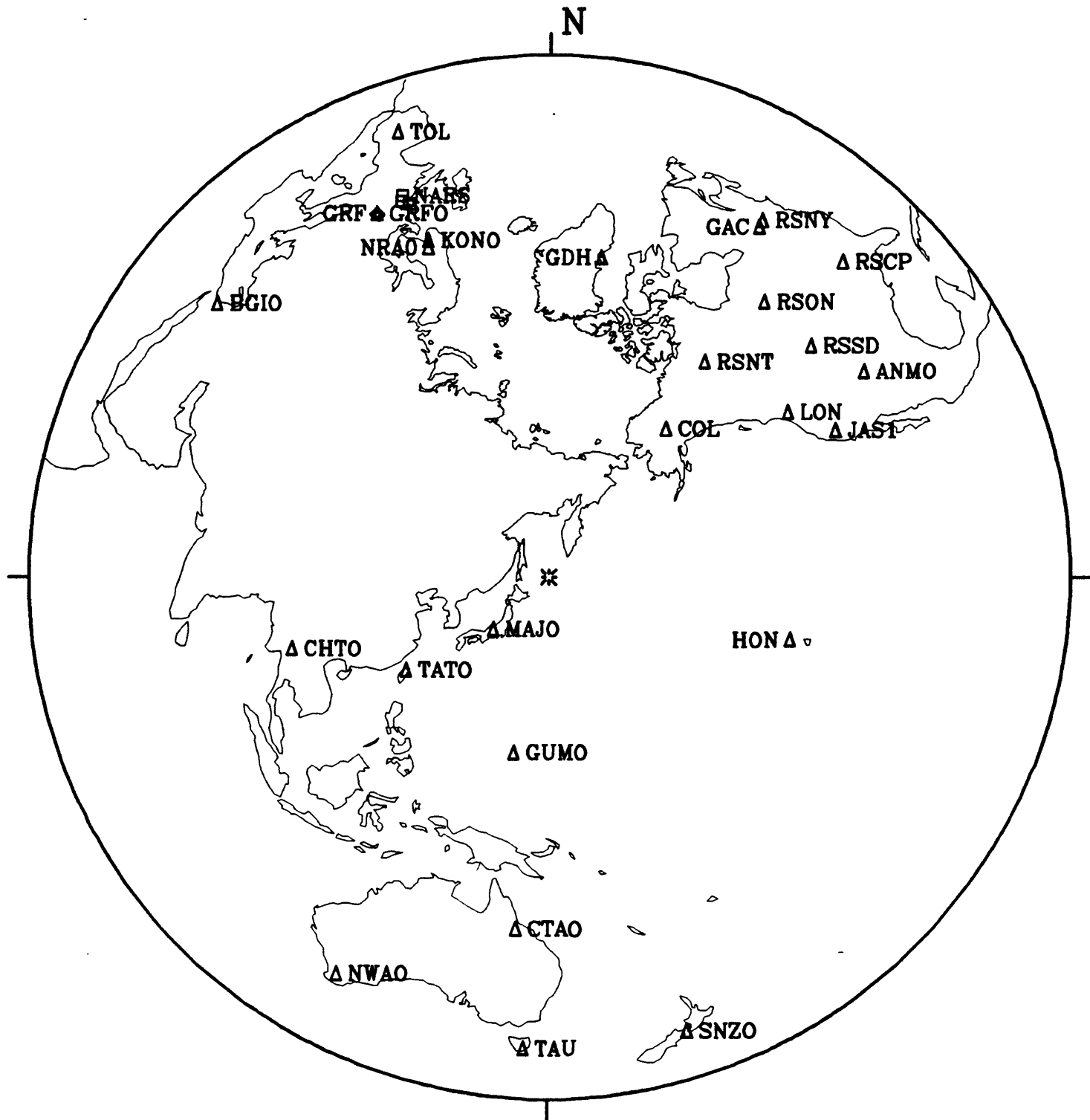
19 July 1986 04:31:56.15

LPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.5$   $M_{SZ}=5.0$ 

19 July 1986 05:59:37.13

## Kuril Islands

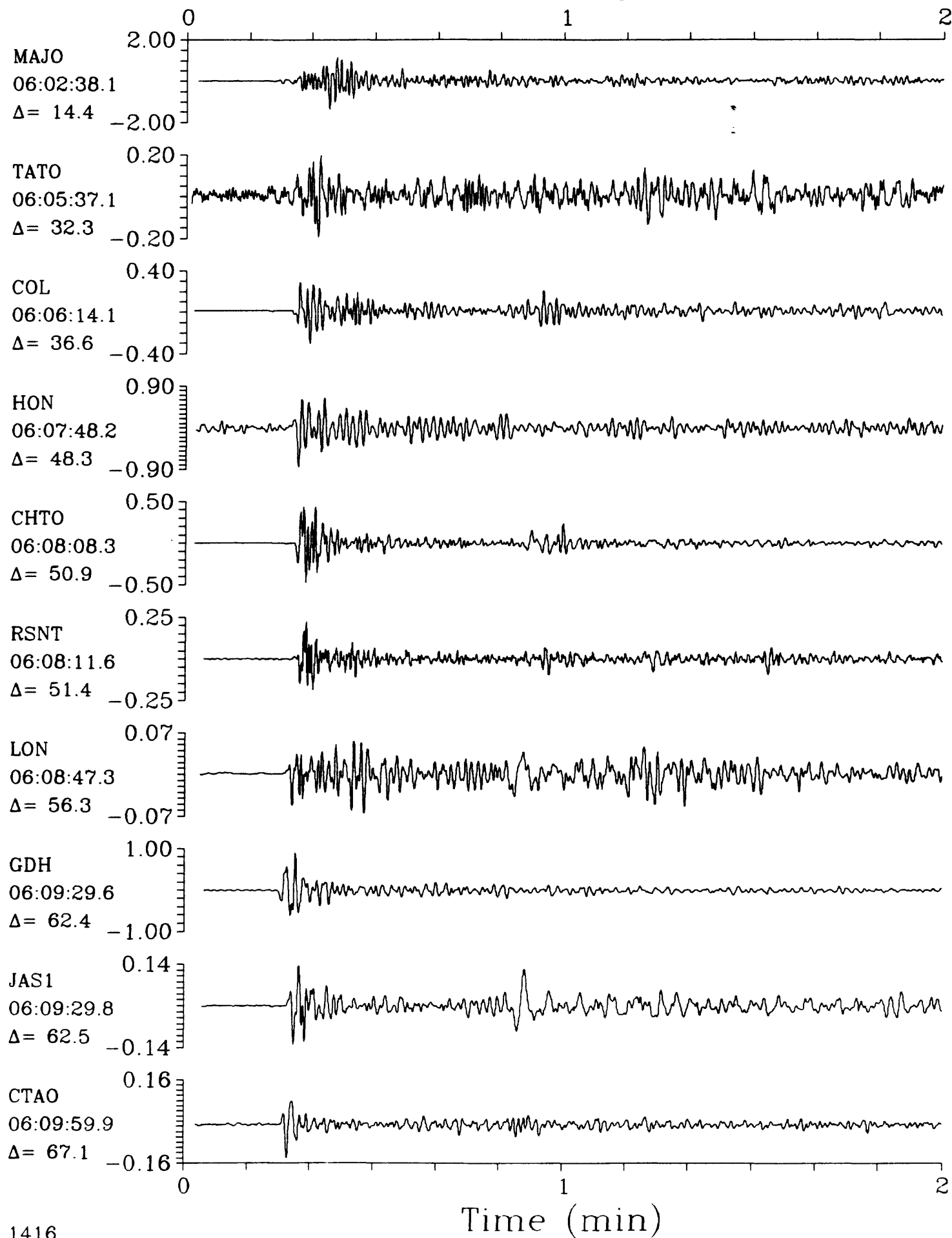




SPZ

19 July 1986 05:59:37.13  
Kuril Islands  $h=150.7$   $m_b=5.9$ 

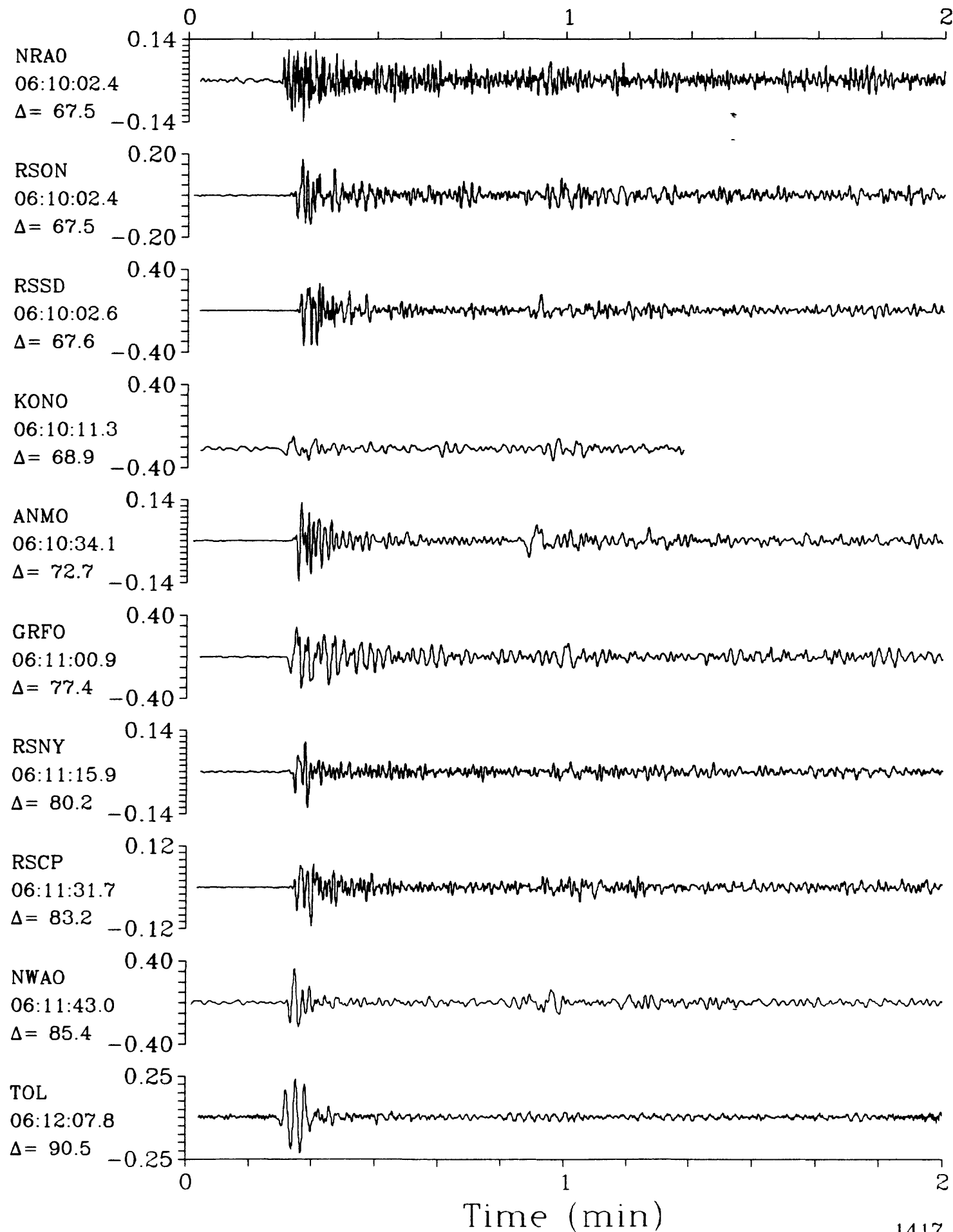
SPZ



SPZ

19 July 1986 05:59:37.13  
Kuril Islands  $h=150.7$   $m_b=5.9$ 

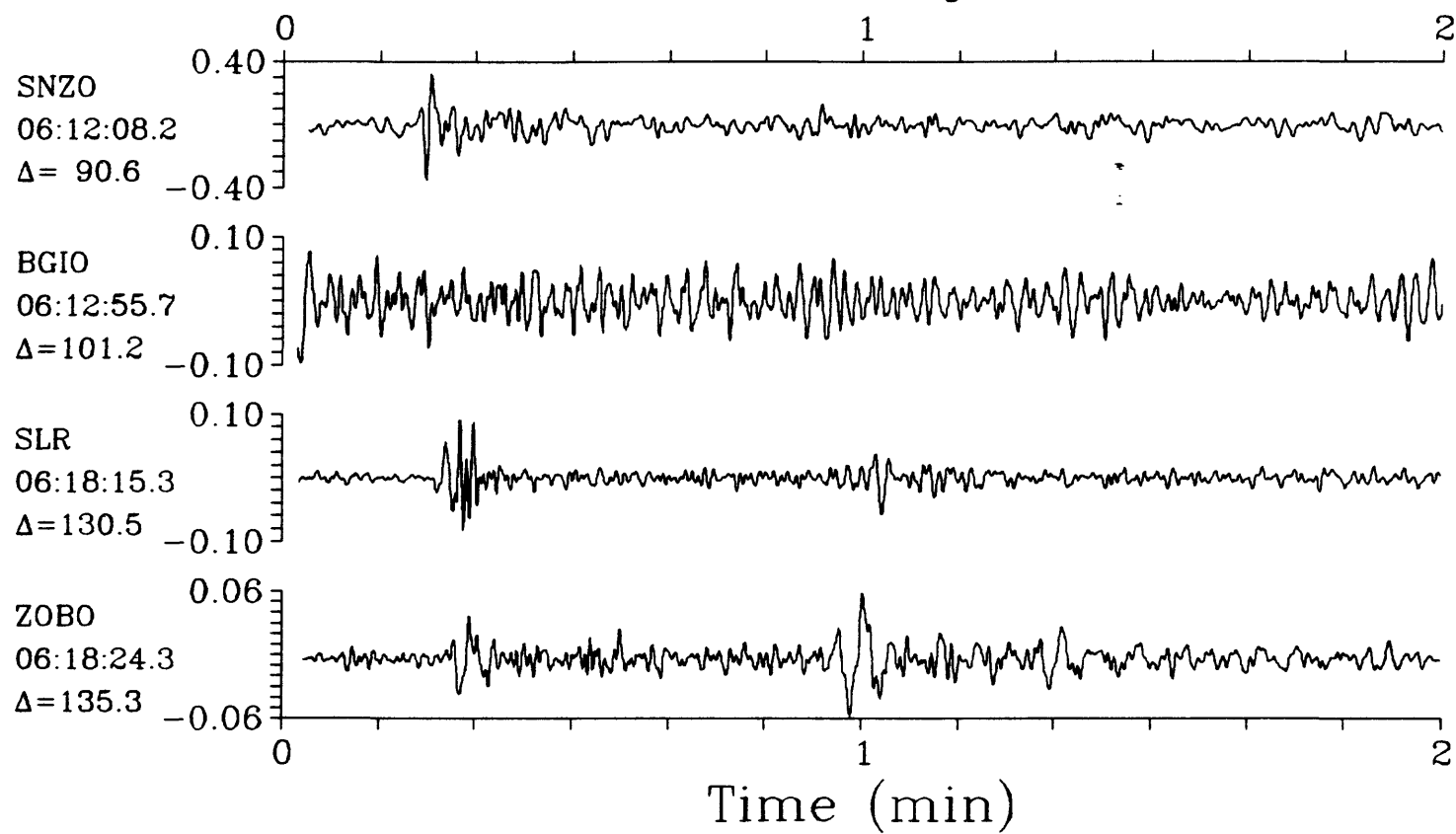
SPZ



SPZ

19 July 1986 05:59:37.13  
Kuril Islands  $h=150.7$   $m_b=5.9$ 

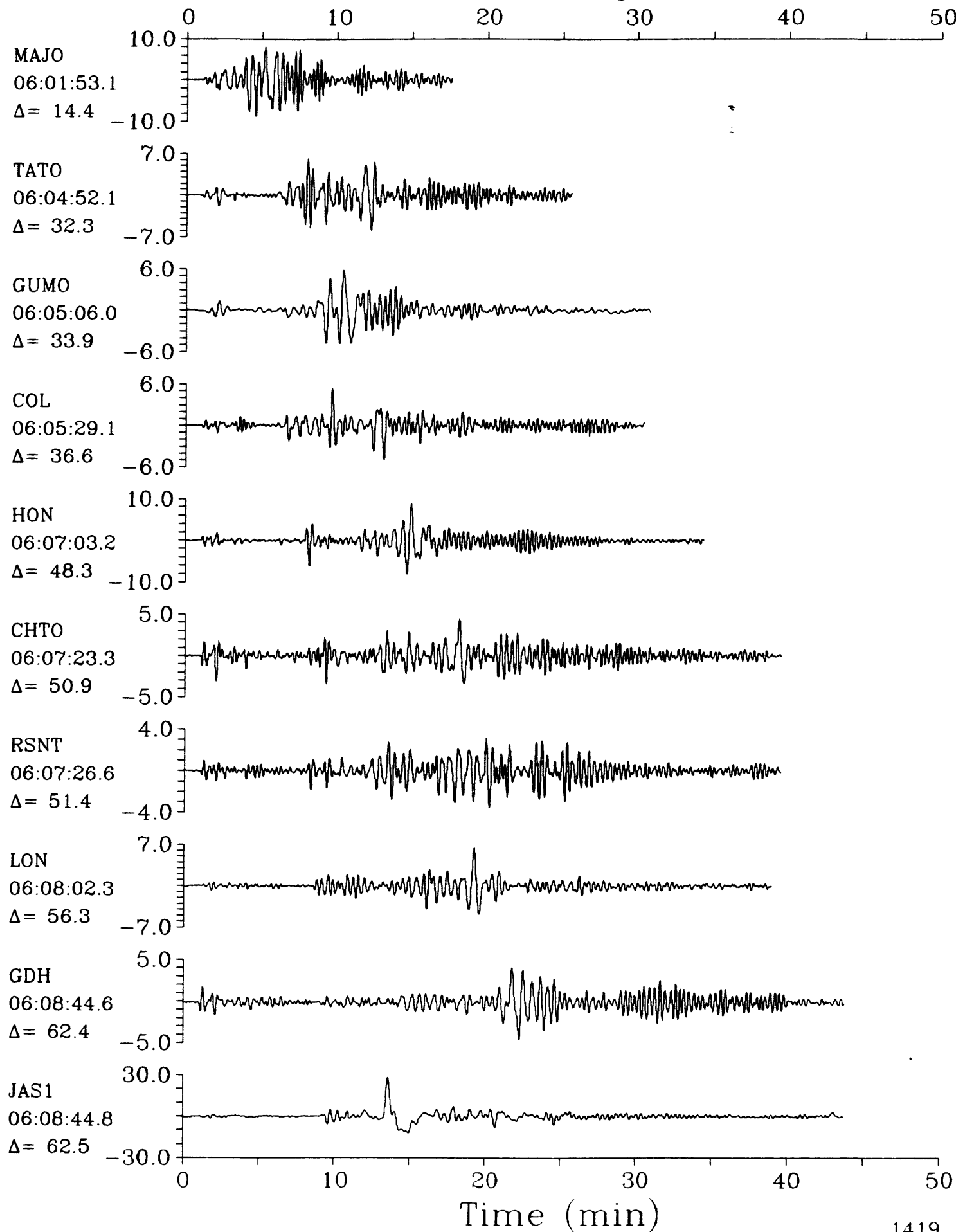
SPZ



LPZ

19 July 1986 05:59:37.13  
Kuril Islands  $h=150.7$   $m_b=5.9$ 

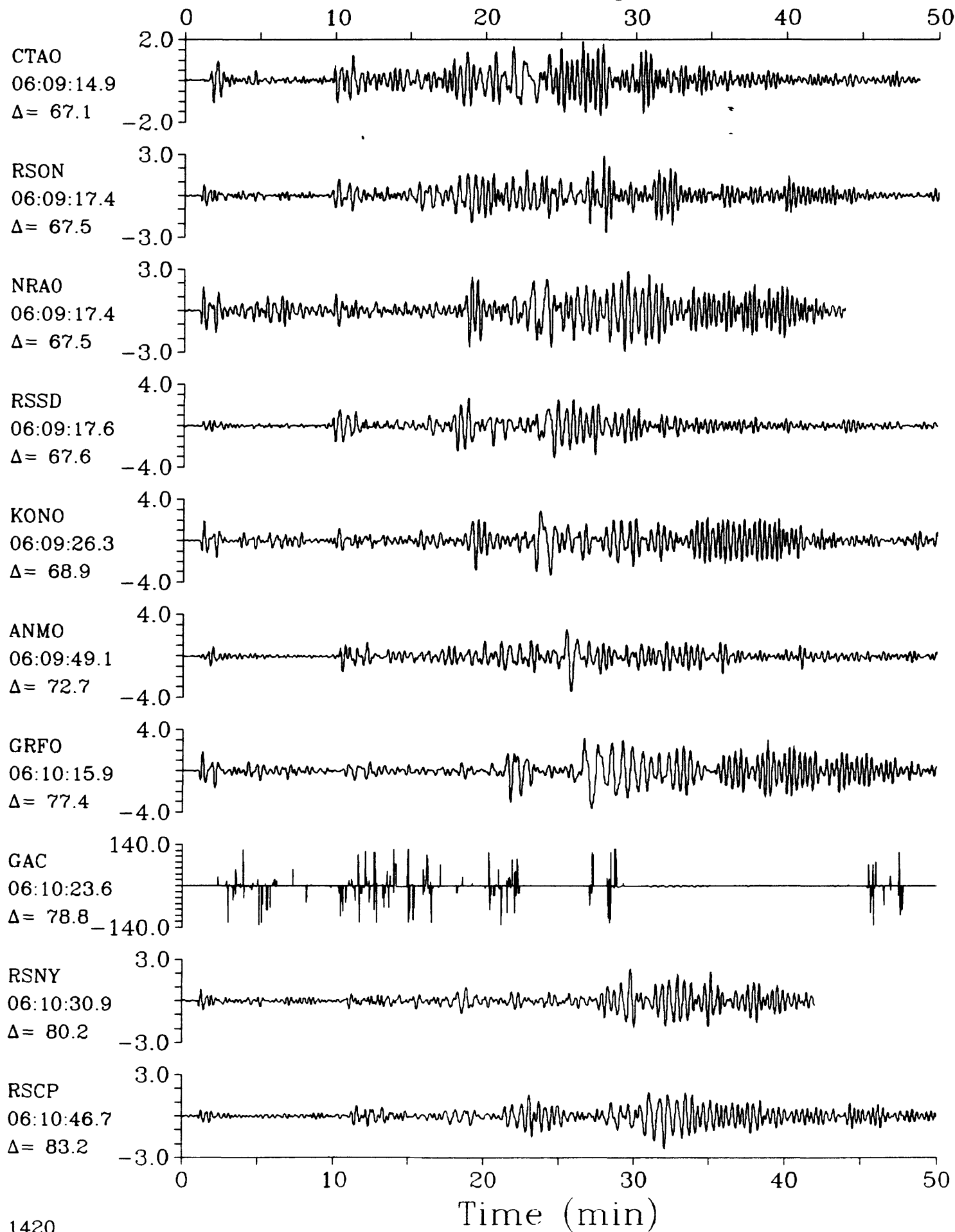
LPZ



LPZ

19 July 1986 05:59:37.13  
Kuril Islands  $h=150.7$   $m_b=5.9$ 

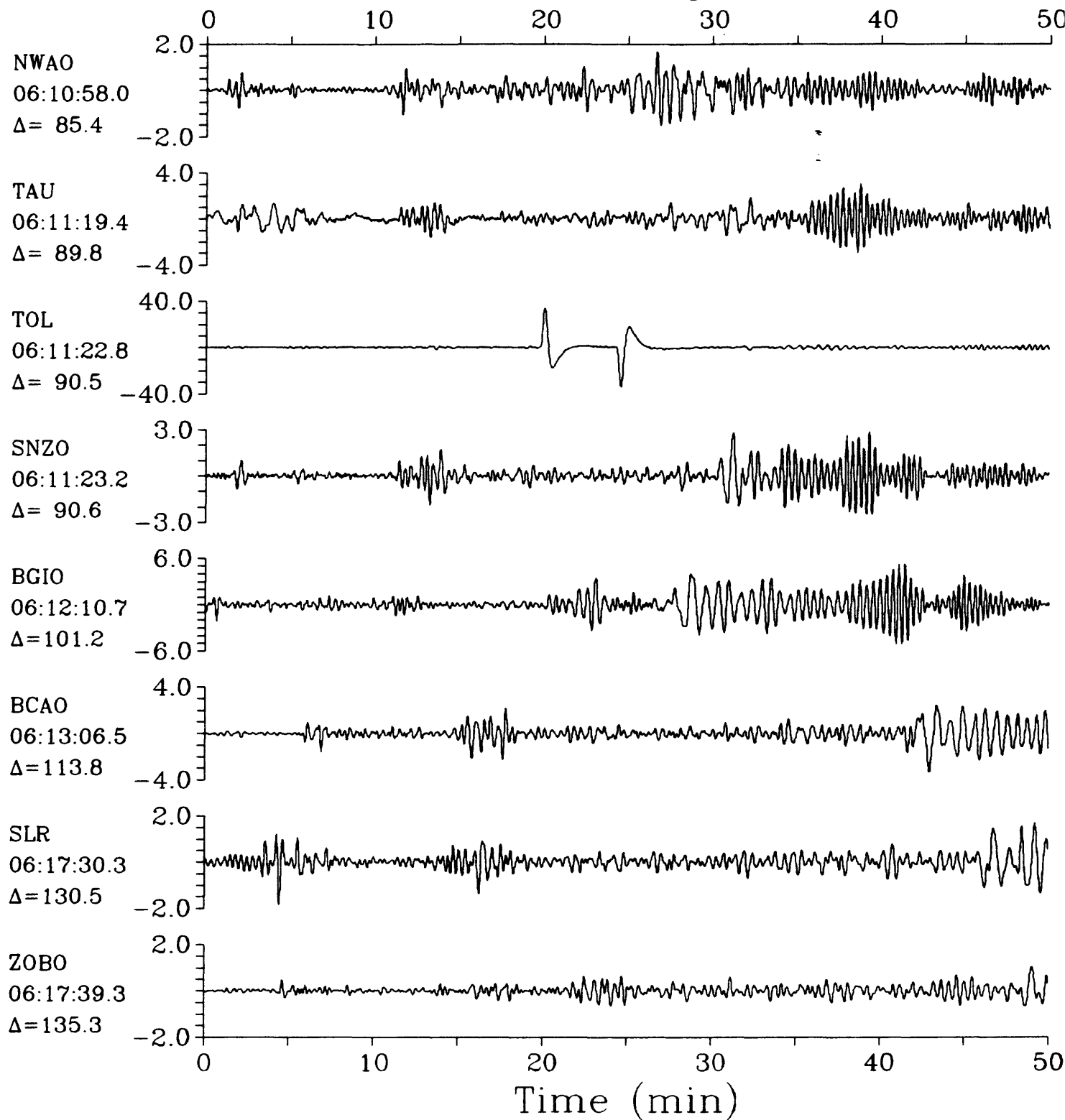
LPZ



LPZ

19 July 1986 05:59:37.13  
Kuril Islands  $h=150.7$   $m_b=5.9$ 

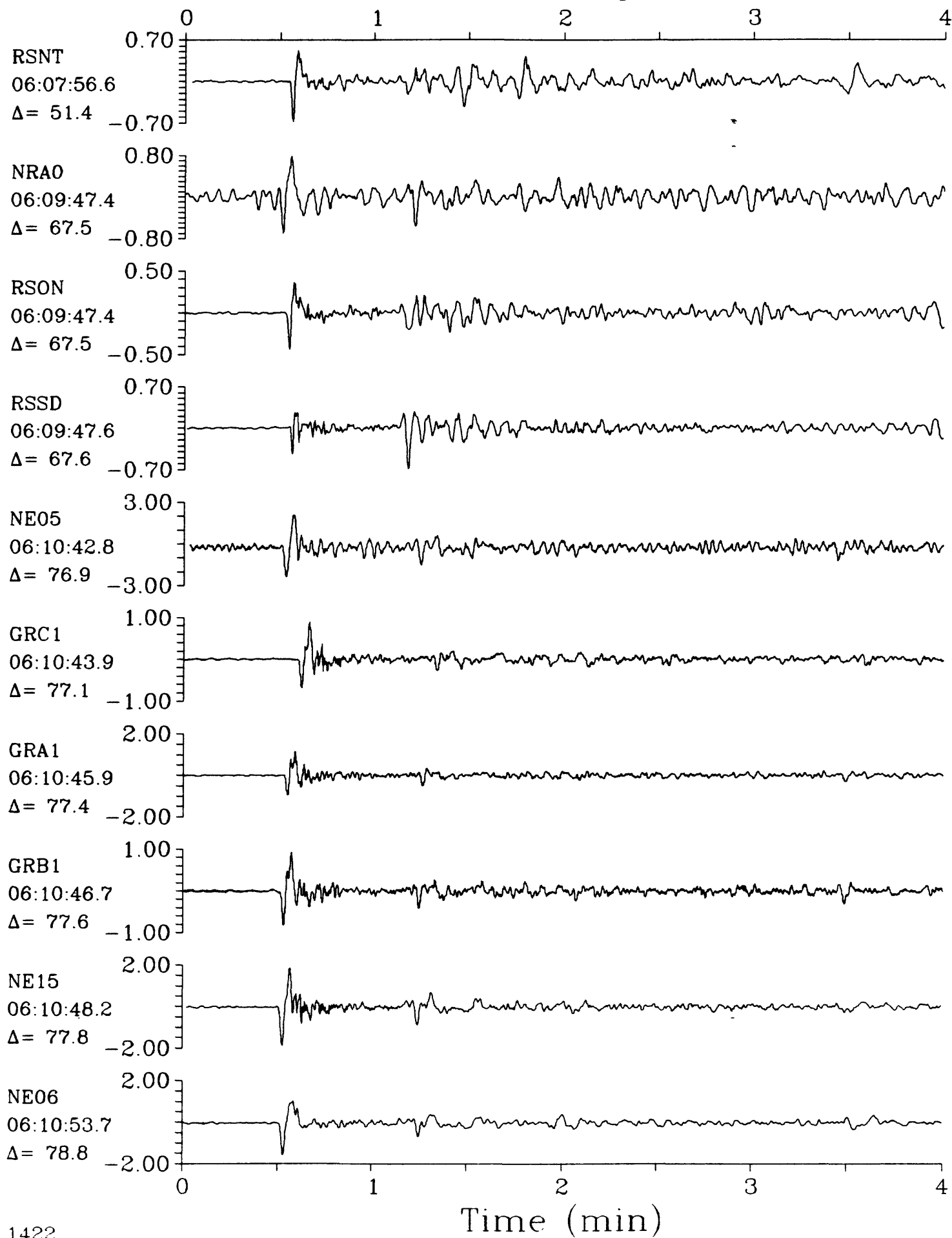
LPZ



IPZ

19 July 1986 05:59:37.13  
Kuril Islands  $h=150.7$   $m_b=5.9$ 

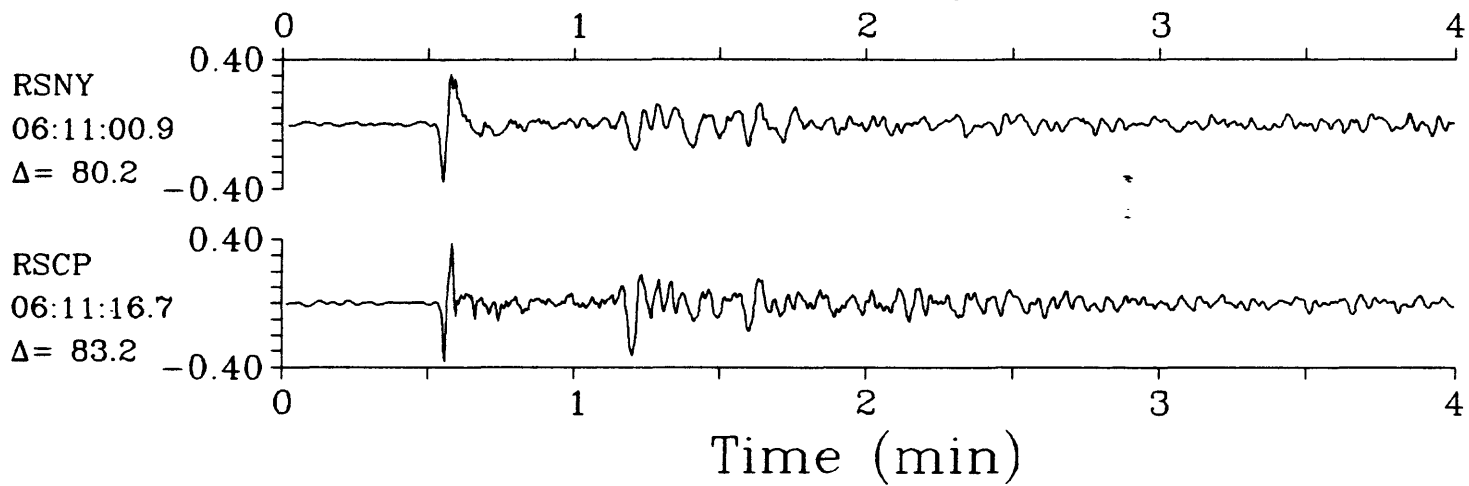
IPZ



IPZ

19 July 1986 05:59:37.13  
Kuril Islands  $h=150.7$   $m_b=5.9$ 

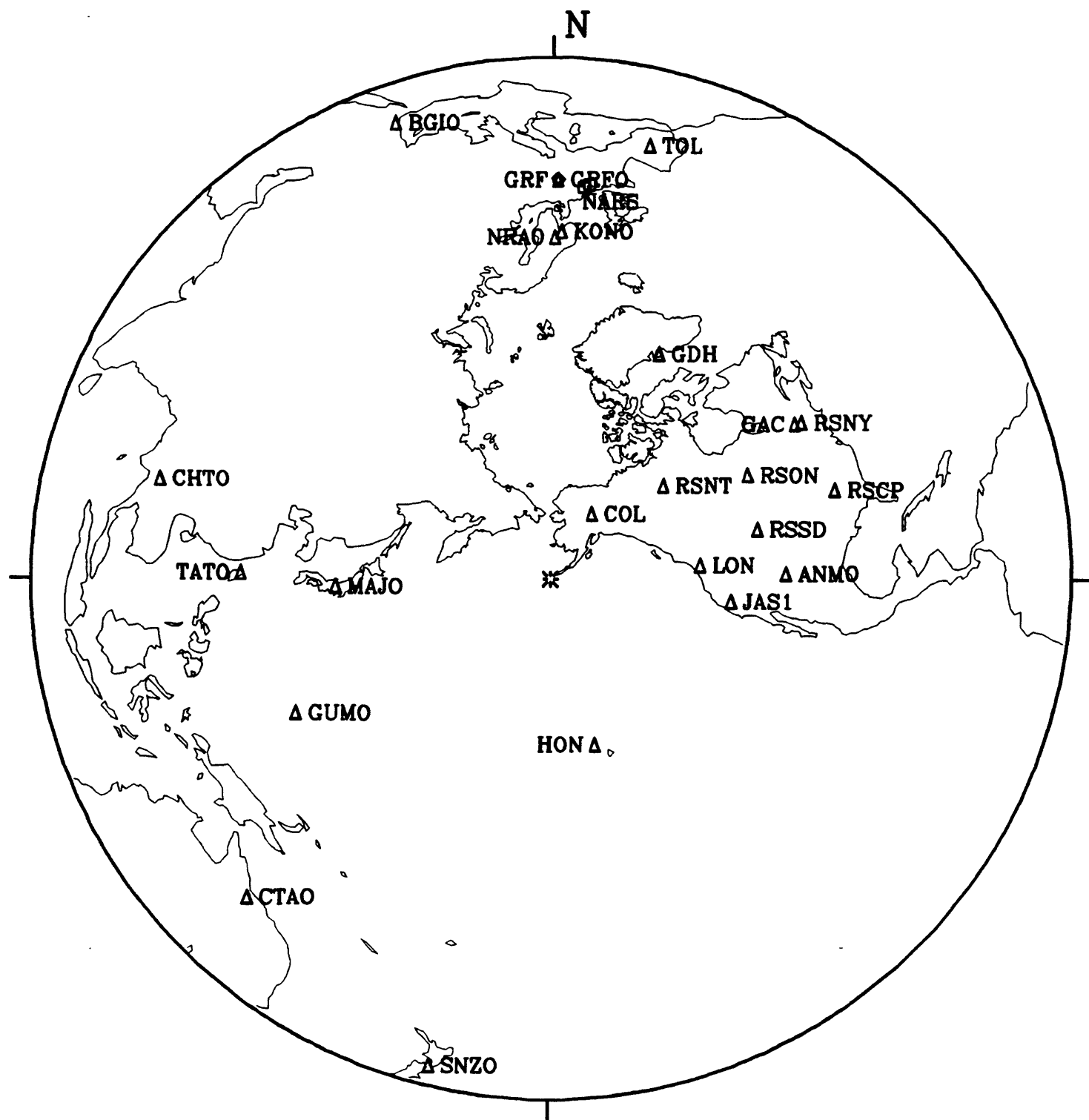
IPZ





19 July 1986 06:53:17.69

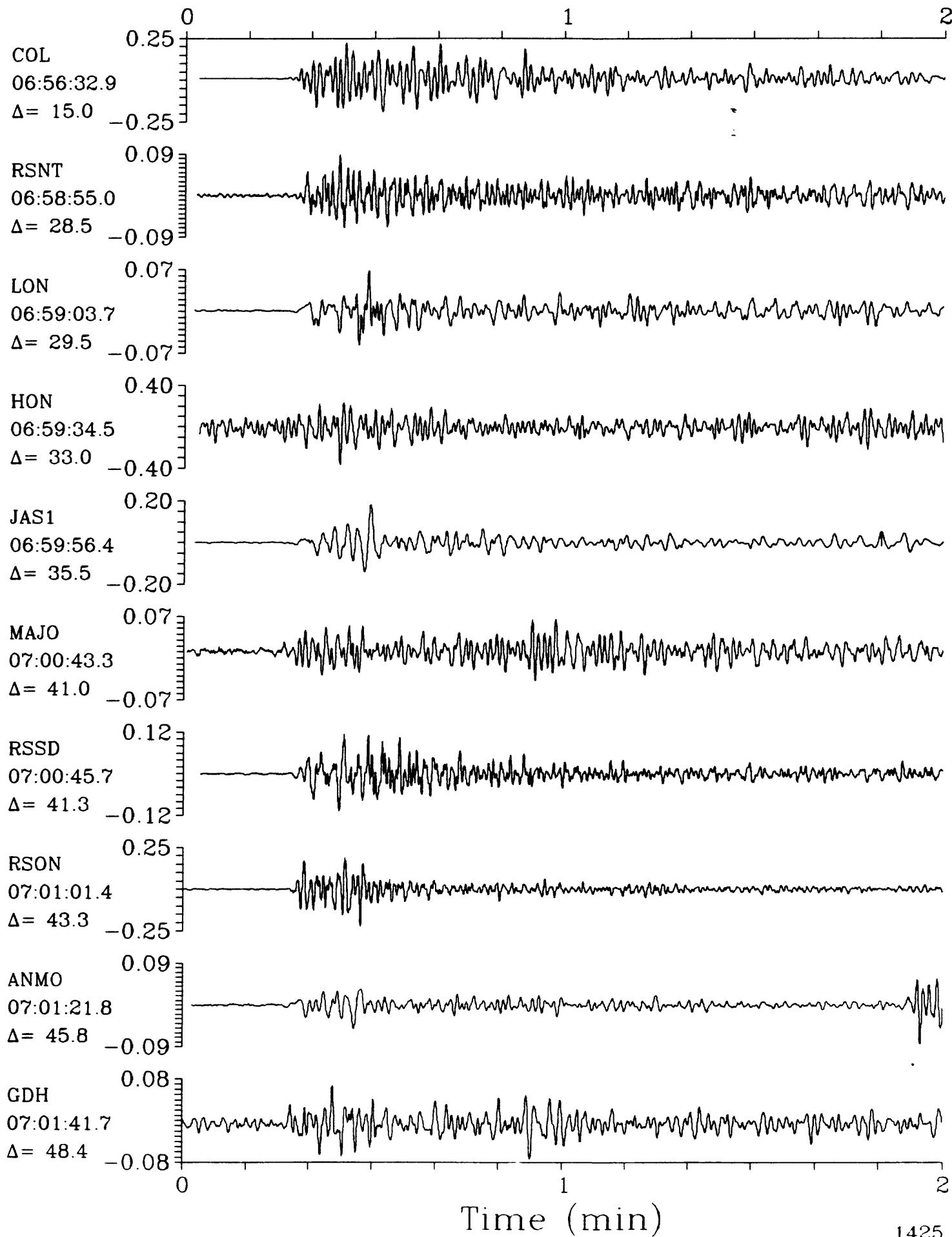
## Fox Islands, Aleutian Islands



SPZ

19 July 1986 06:53:17.69

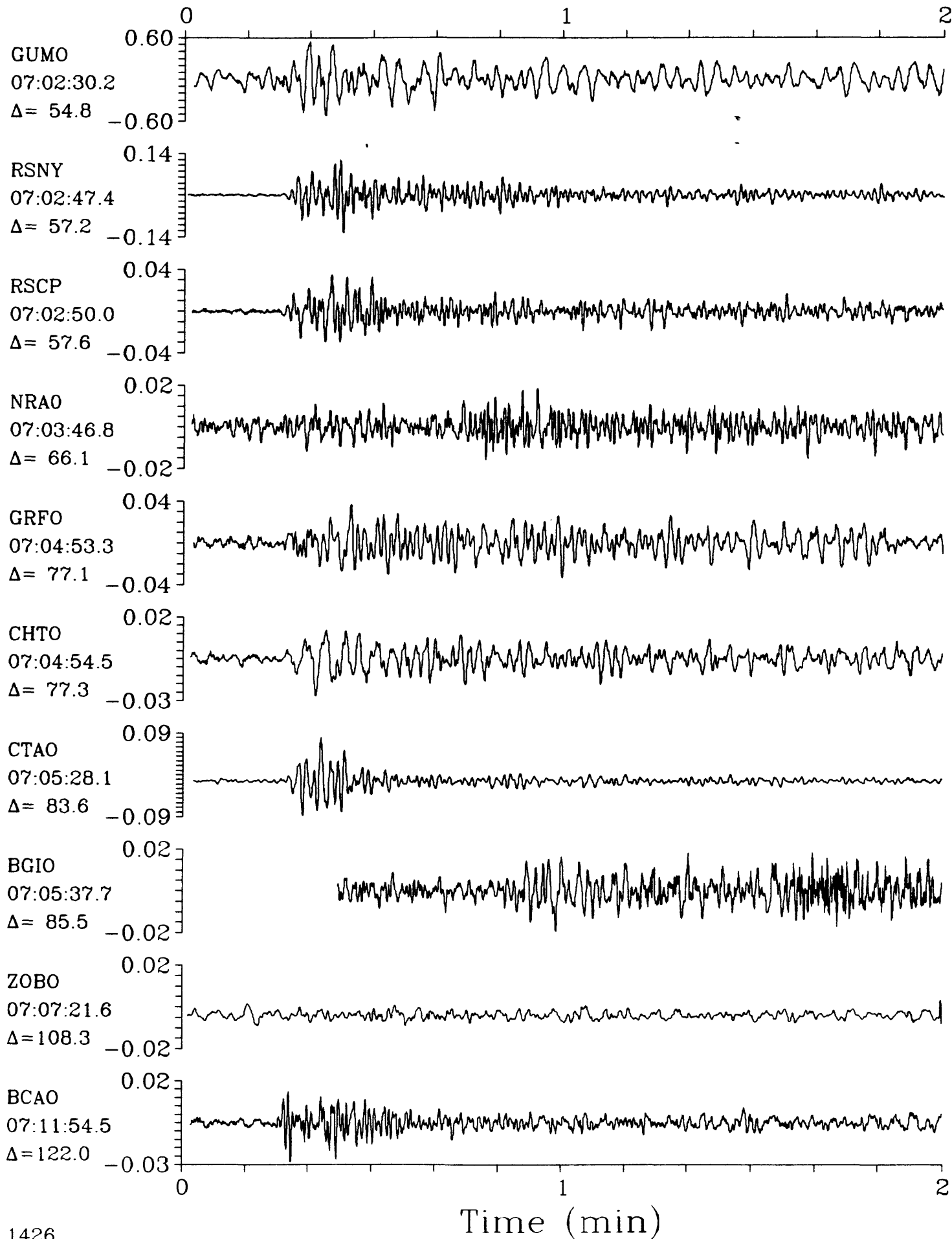
SPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.3$   $M_{sz}=5.8$ 

SPZ

19 July 1986 06:53:17.69

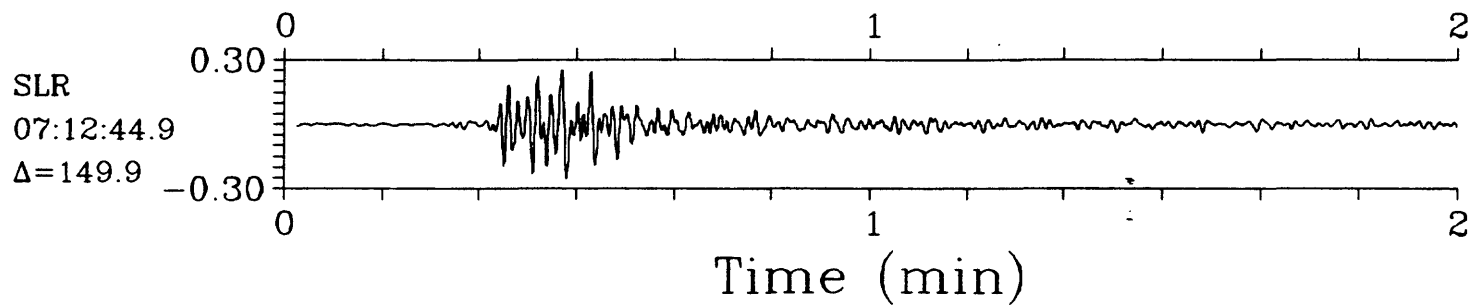
SPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.3$   $M_{sz}=5.8$ 

SPZ

19 July 1986 06:53:17.69

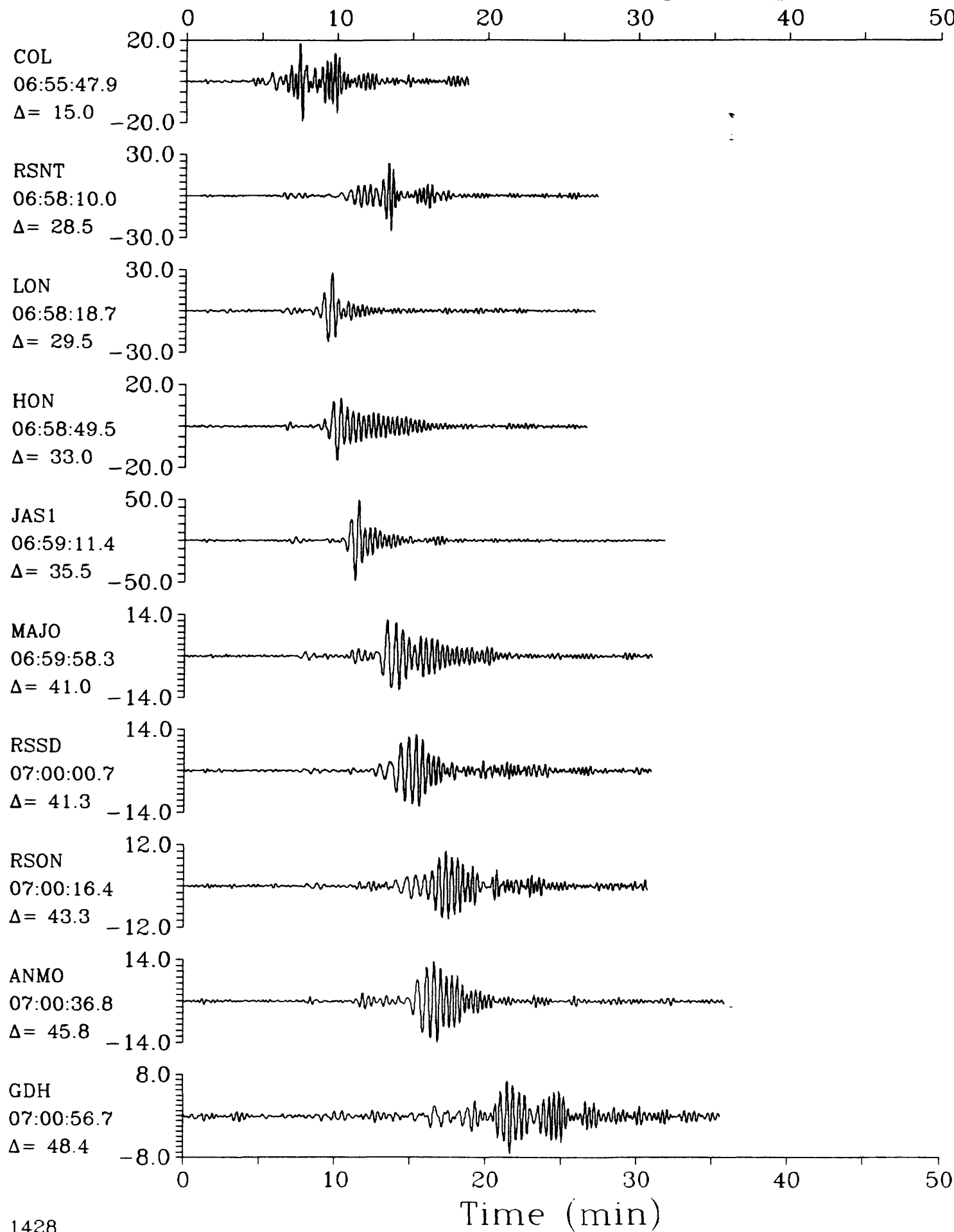
SPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.3$   $M_{sz}=5.8$ 

LPZ

19 July 1986 06:53:17.69

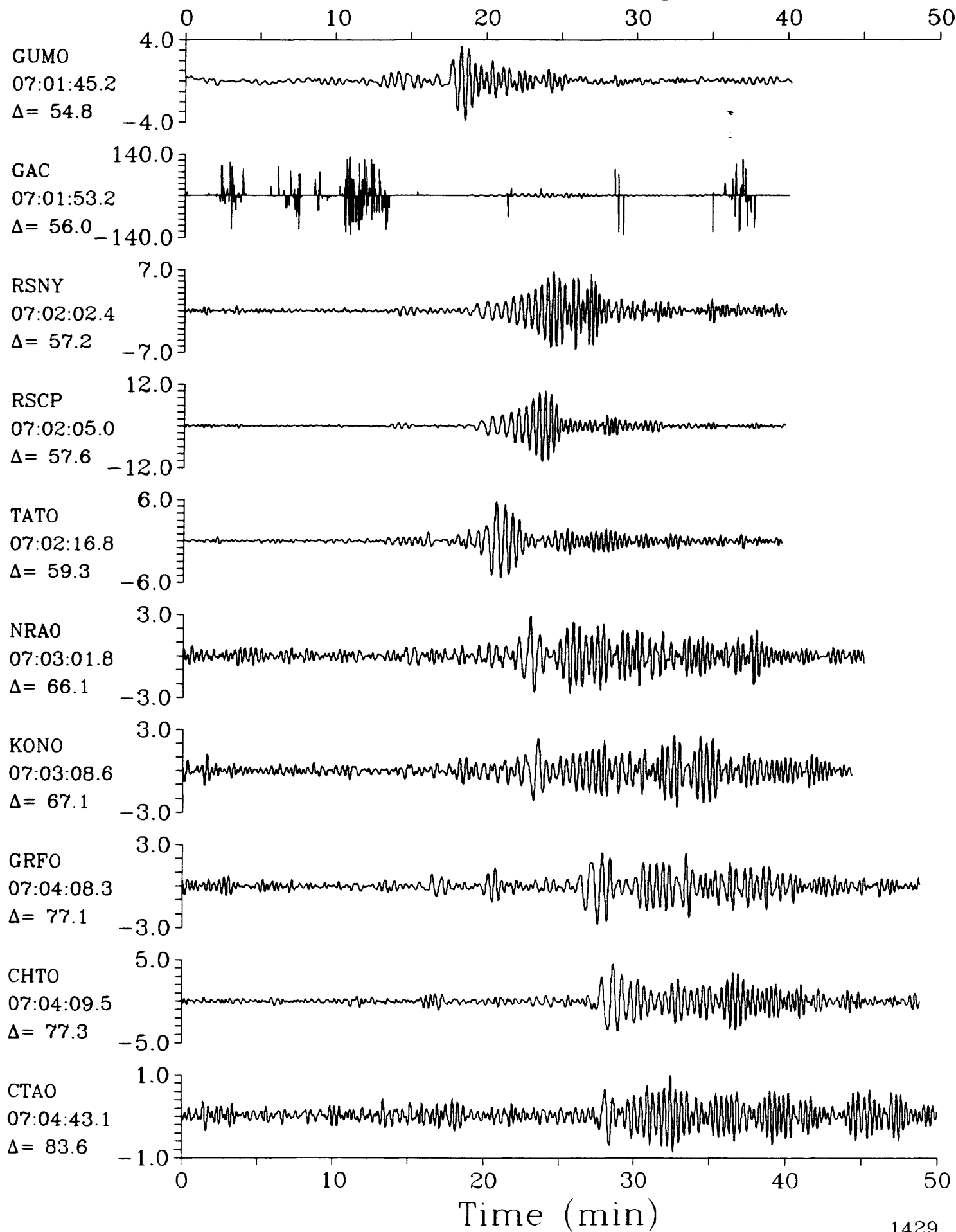
LPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.3$   $M_{sz}=5.8$ 

LPZ

19 July 1986 06:53:17.69

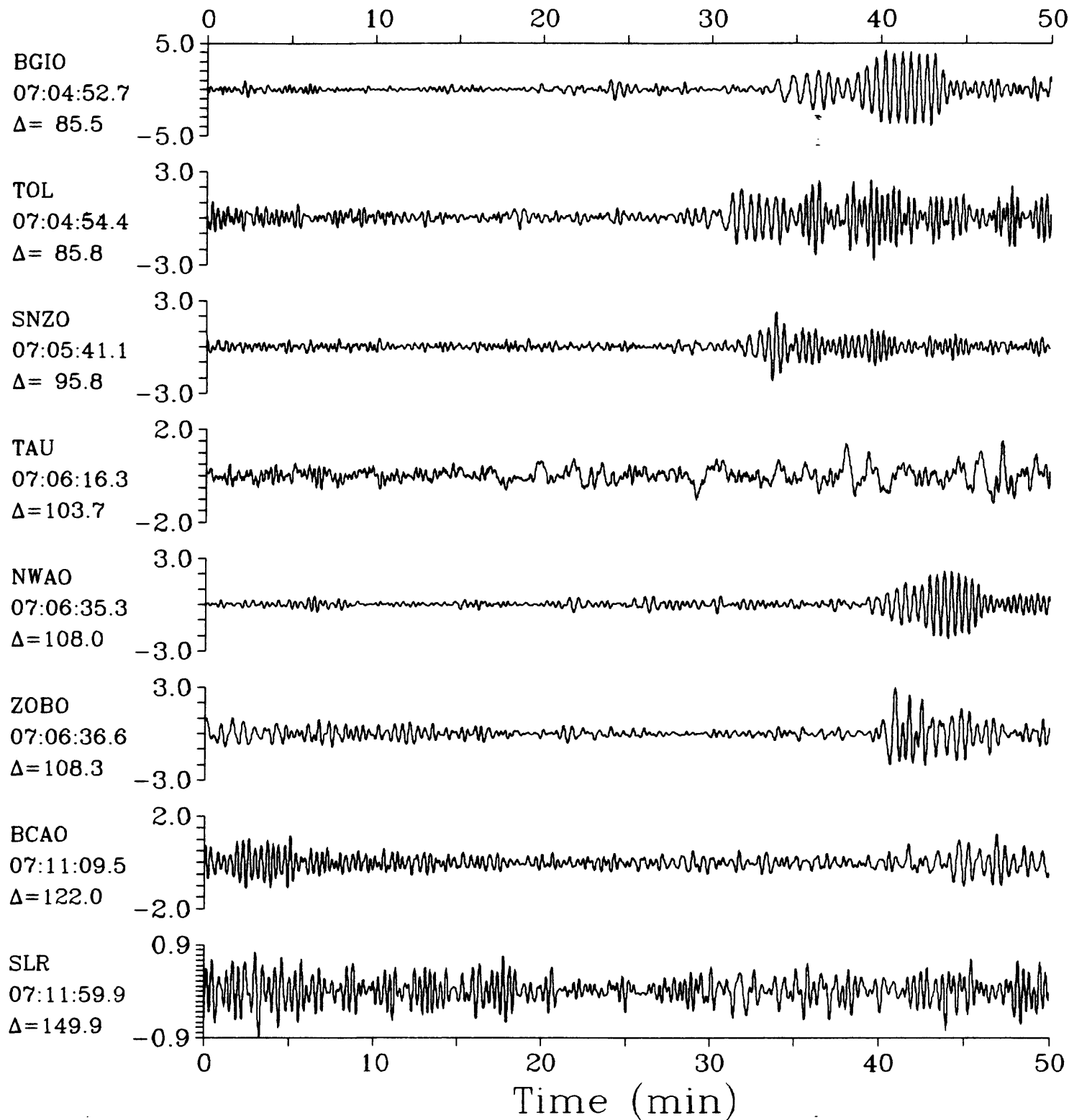
LPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.3$   $M_{sz}=5.8$ 

LPZ

19 July 1986 06:53:17.69

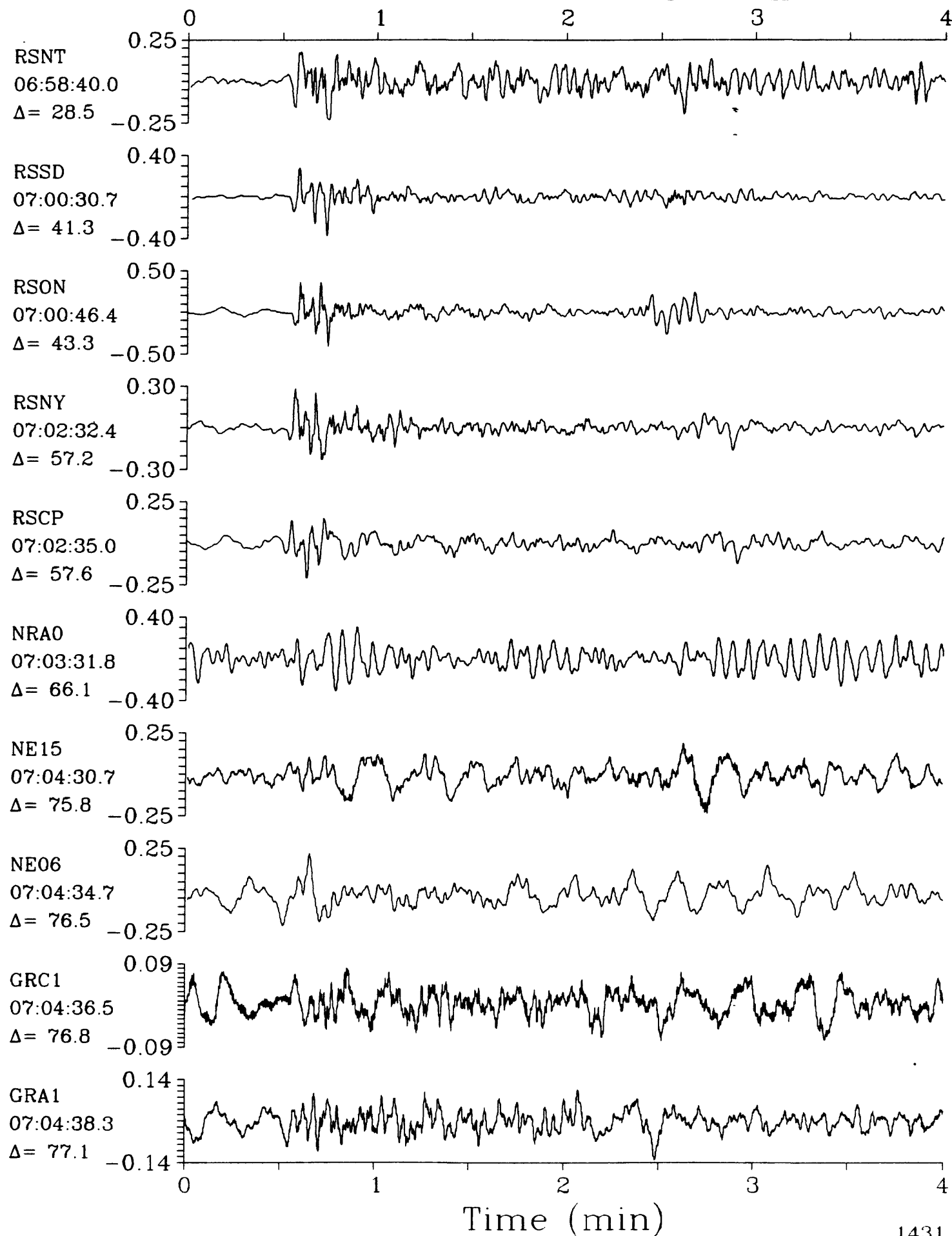
LPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.3$   $M_{sz}=5.8$ 

IPZ

19 July 1986 06:53:17.69

IPZ

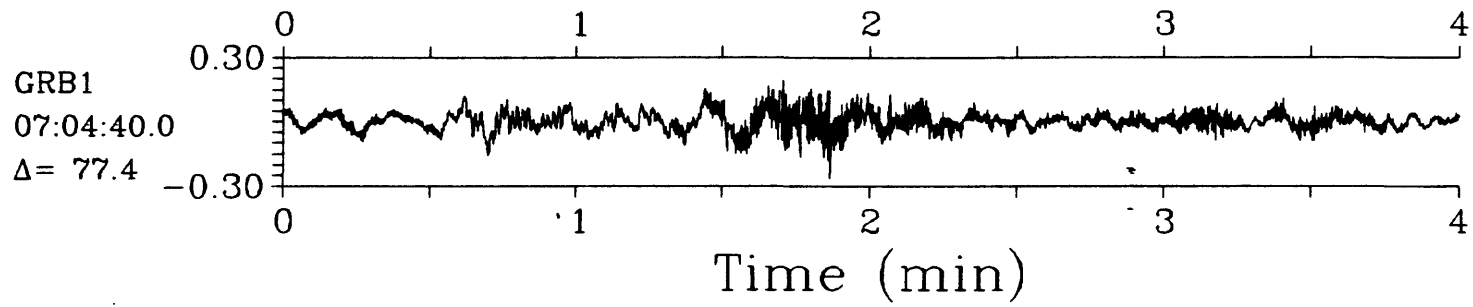
Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.3$   $M_{sz}=5.8$ 



IPZ

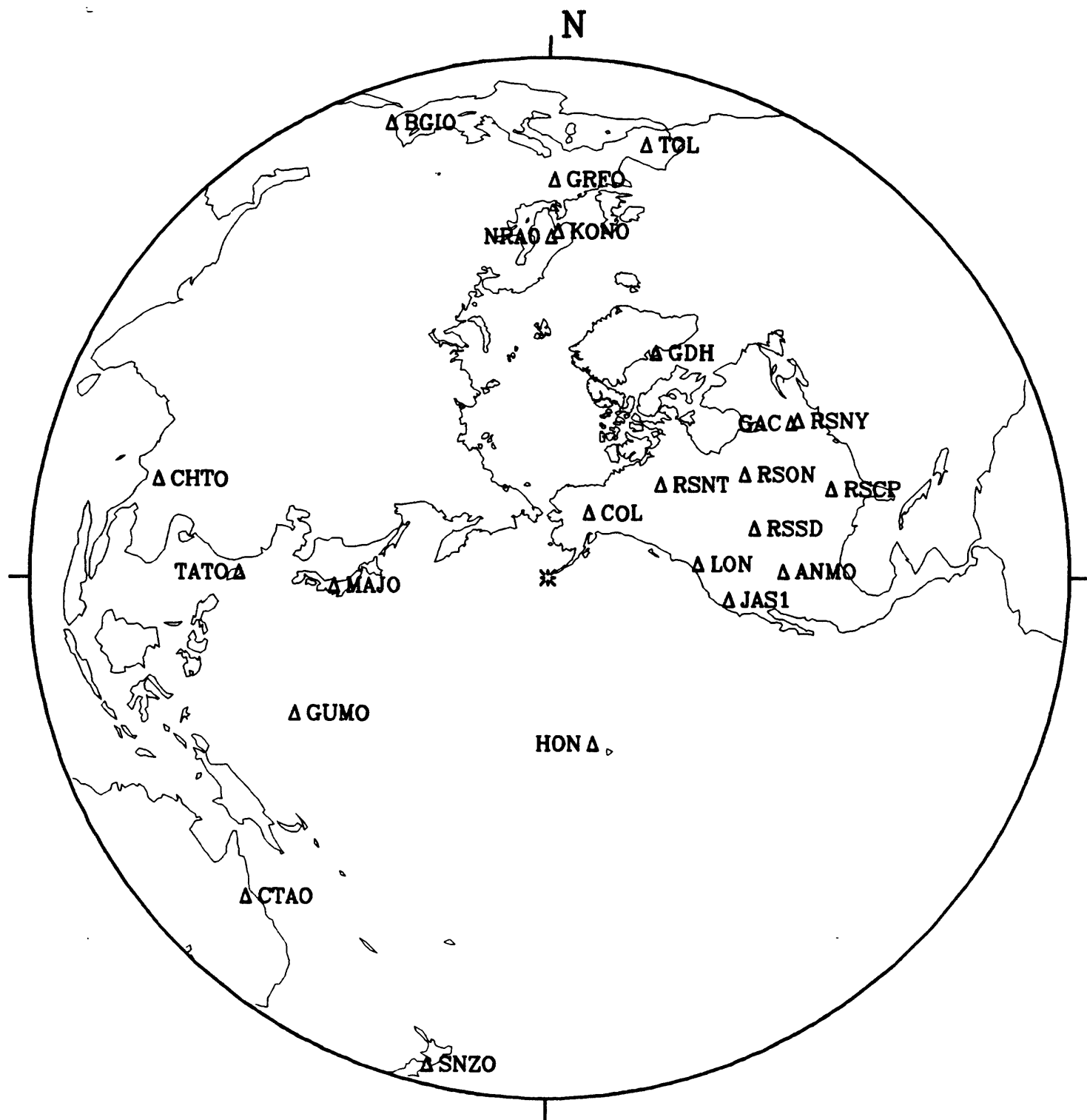
19 July 1986 06:53:17.69

IPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.3$   $M_{sz}=5.8$ 

19 July 1986 22:32:36.21

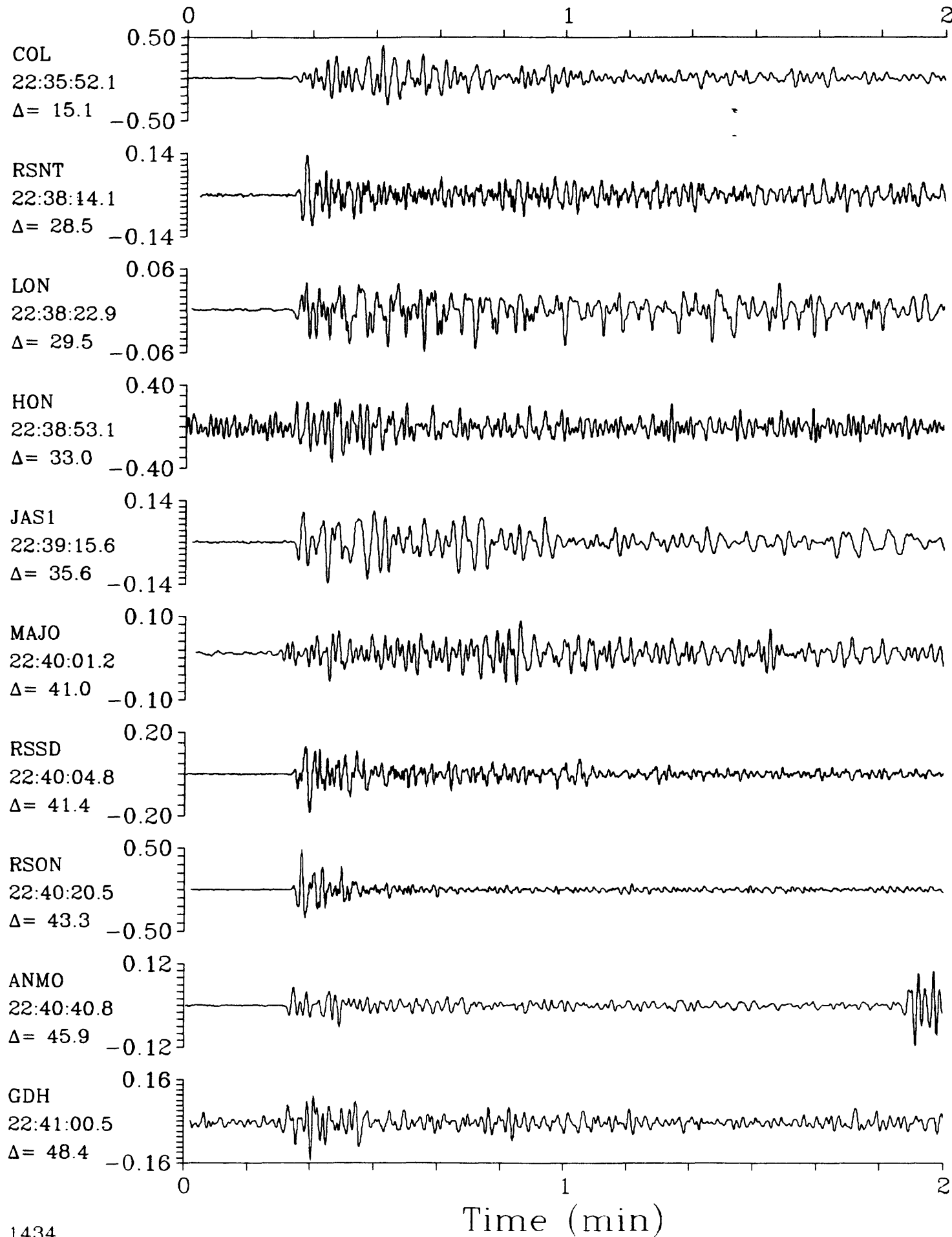
## Fox Islands, Aleutian Islands



SPZ

19 July 1986 22:32:36.21

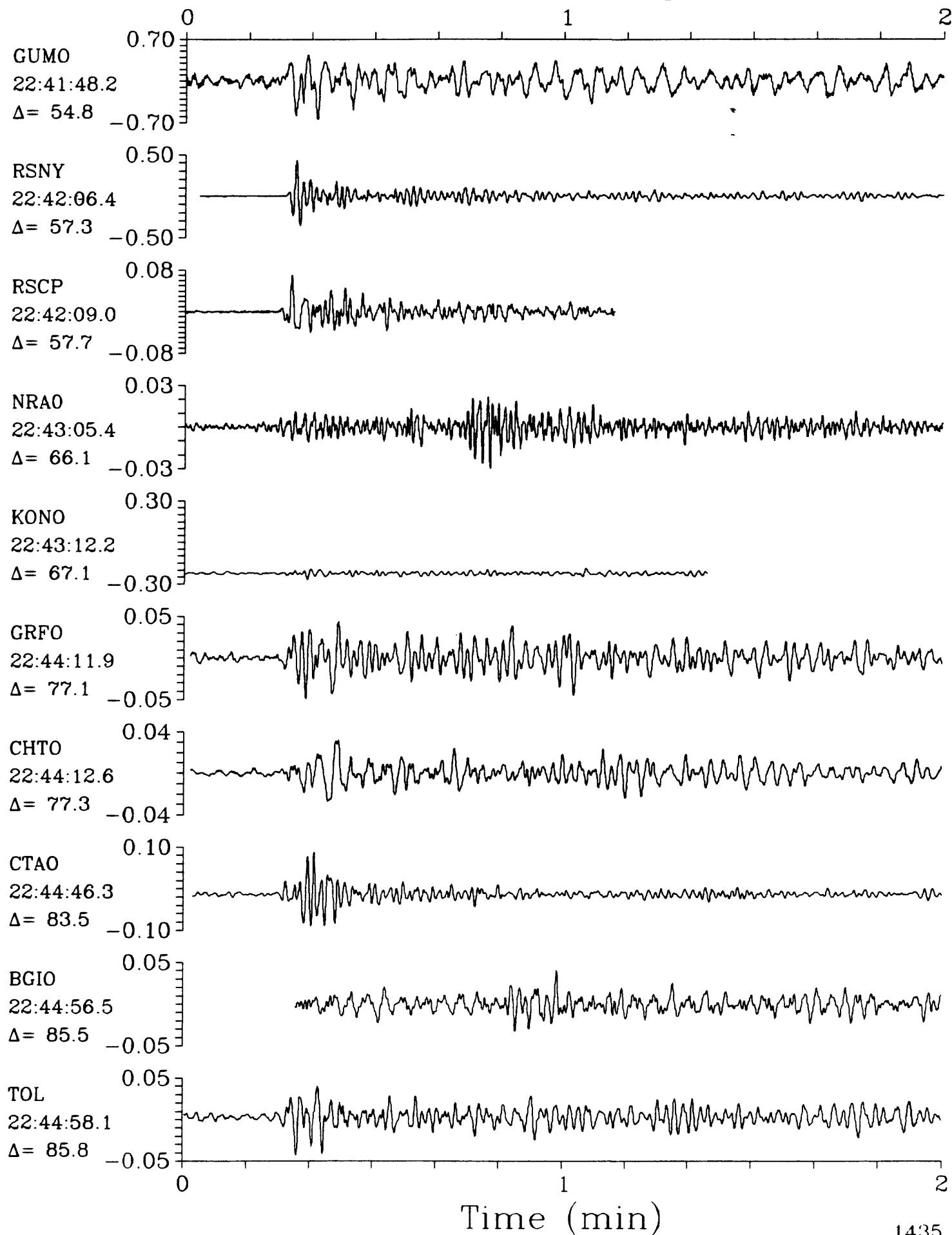
SPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.6$   $M_{sz}=5.6$ 

SPZ

19 July 1986 22:32:36.21

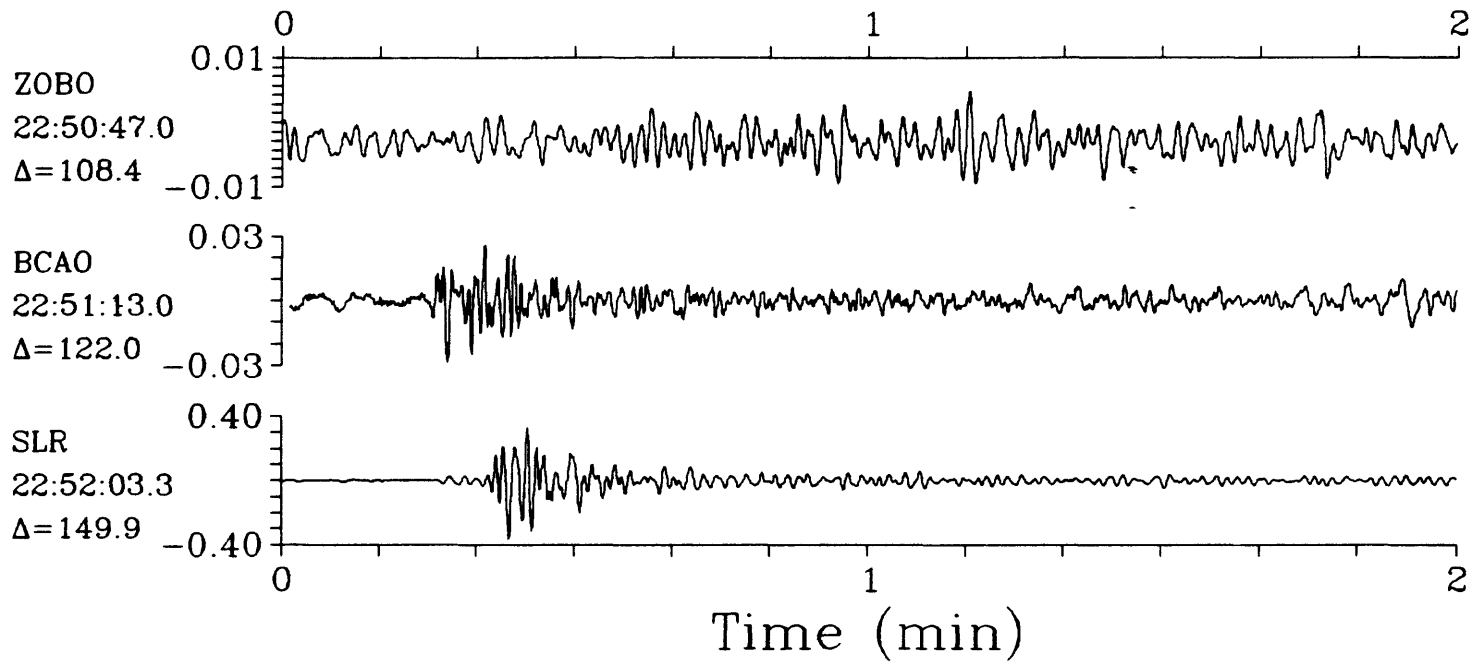
SPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.6$   $M_{SZ}=5.6$ 

SPZ

19 July 1986 22:32:36.21

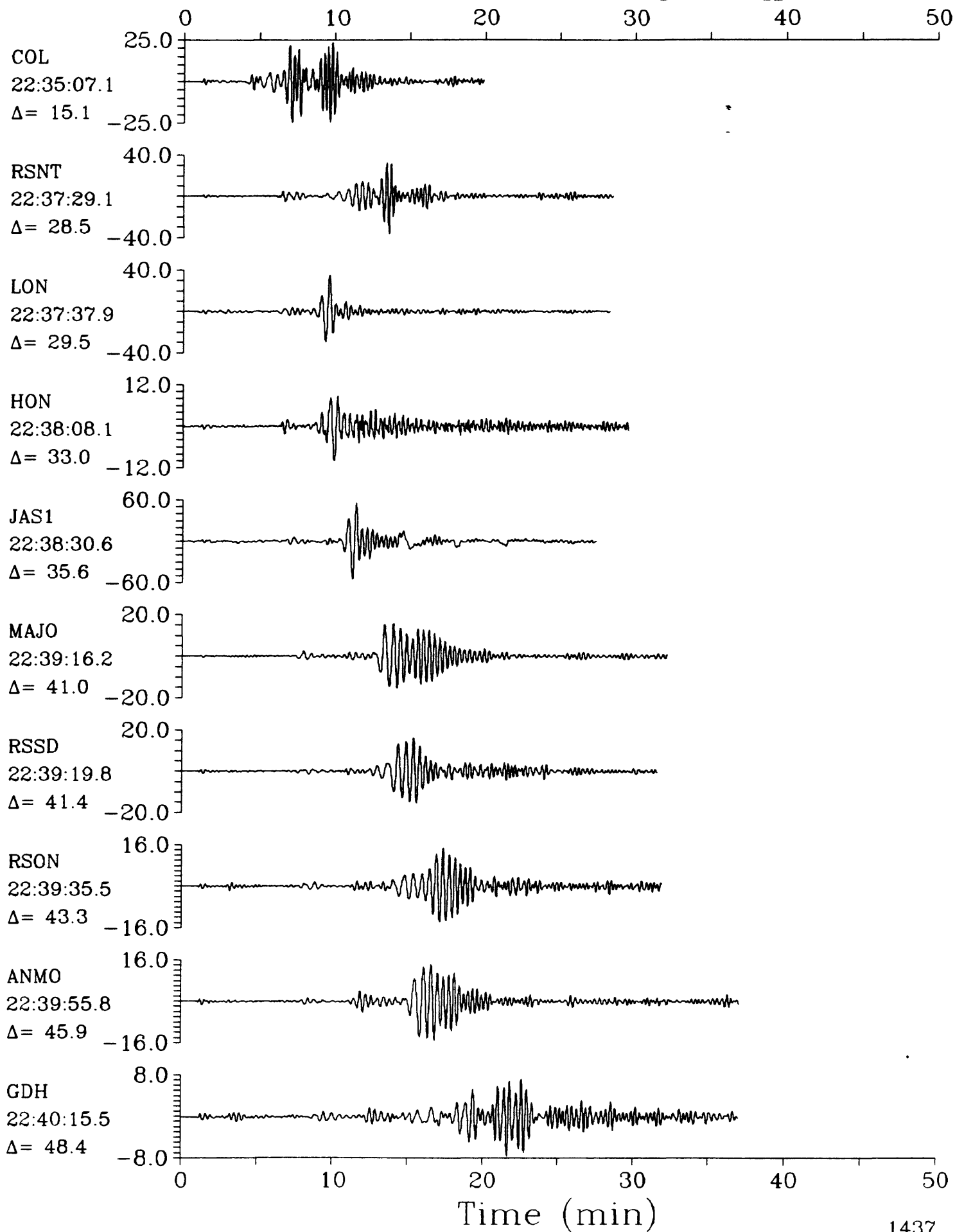
SPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.6$   $M_{sz}=5.6$ 

LPZ

19 July 1986 22:32:36.21

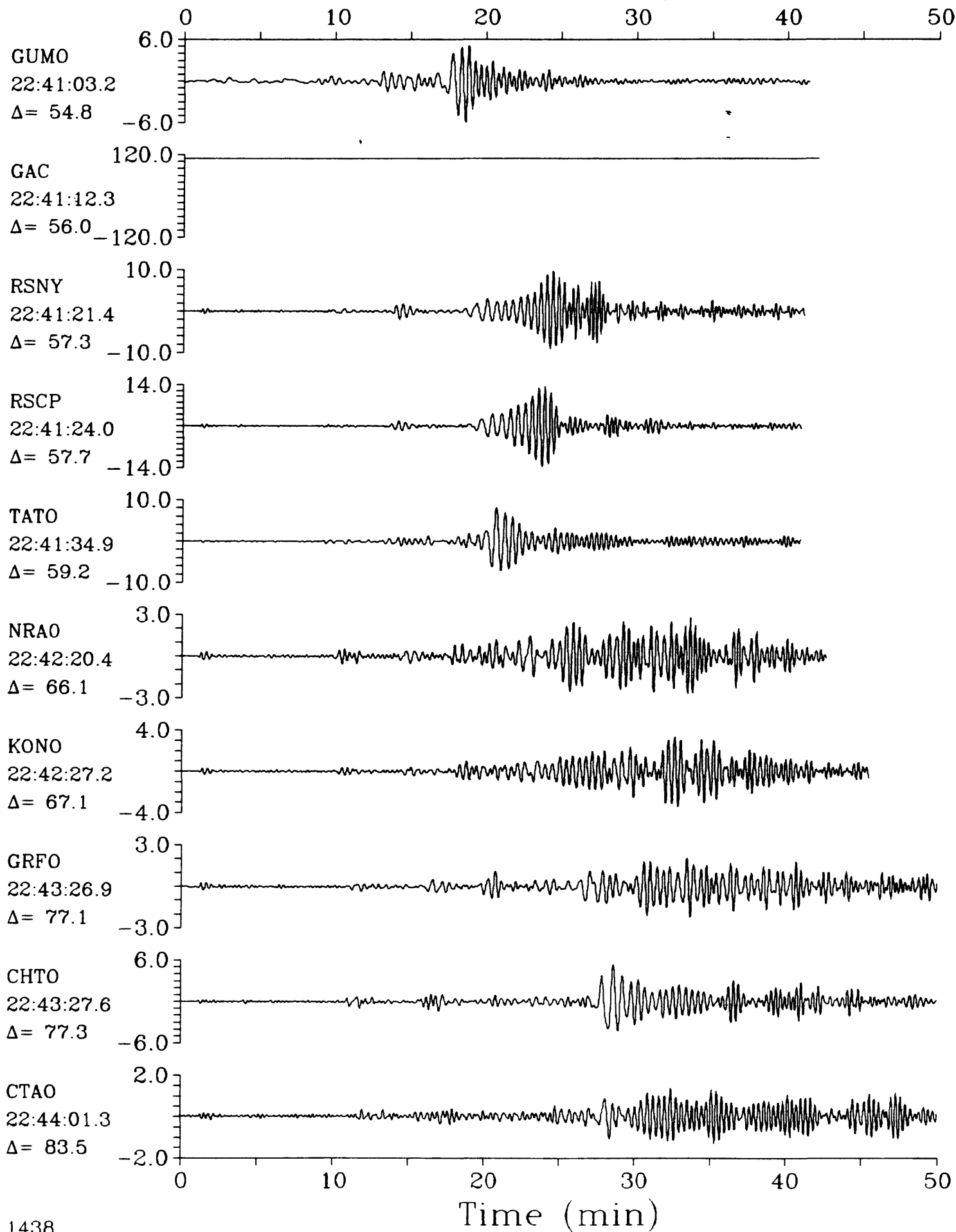
LPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.6$   $M_{sz}=5.6$ 

LPZ

19 July 1986 22:32:36.21

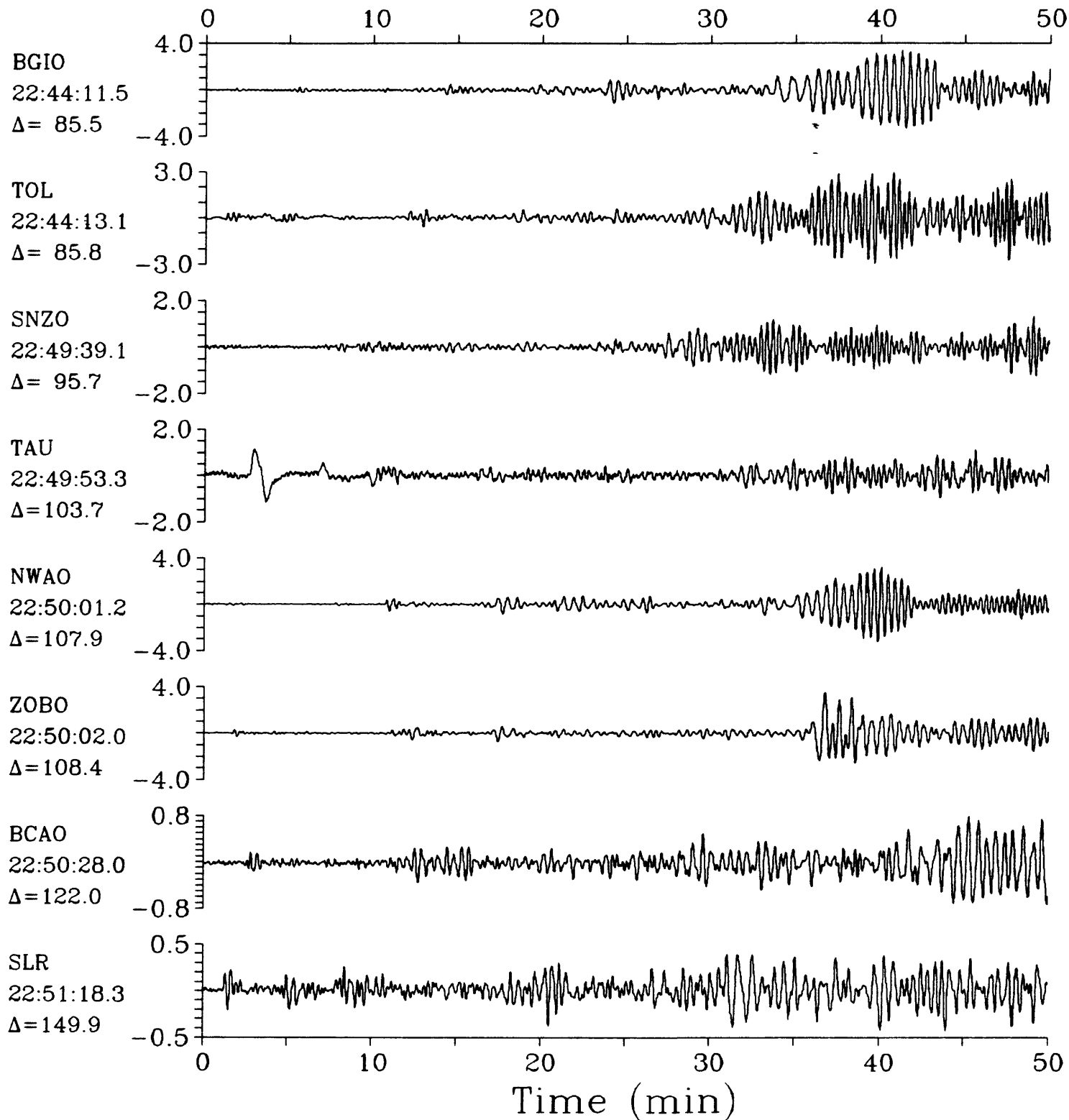
LPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.6$   $M_{sz}=5.6$ 

LPZ

19 July 1986 22:32:36.21

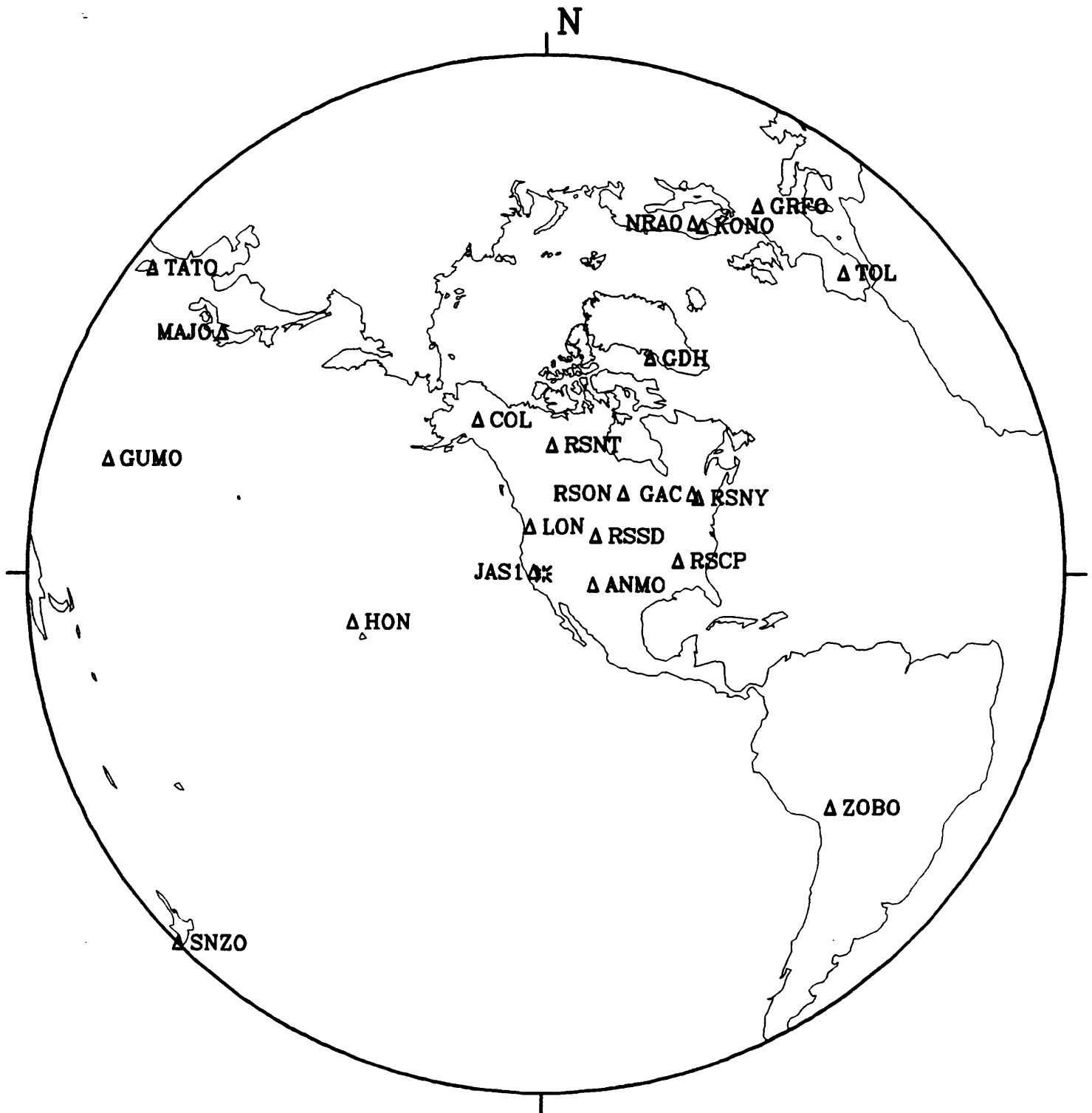
LPZ

Fox Islands, Aleutian Islands  $h=33.0$   $m_b=5.6$   $M_{sz}=5.6$ 



20 July 1986 14:29:45.50

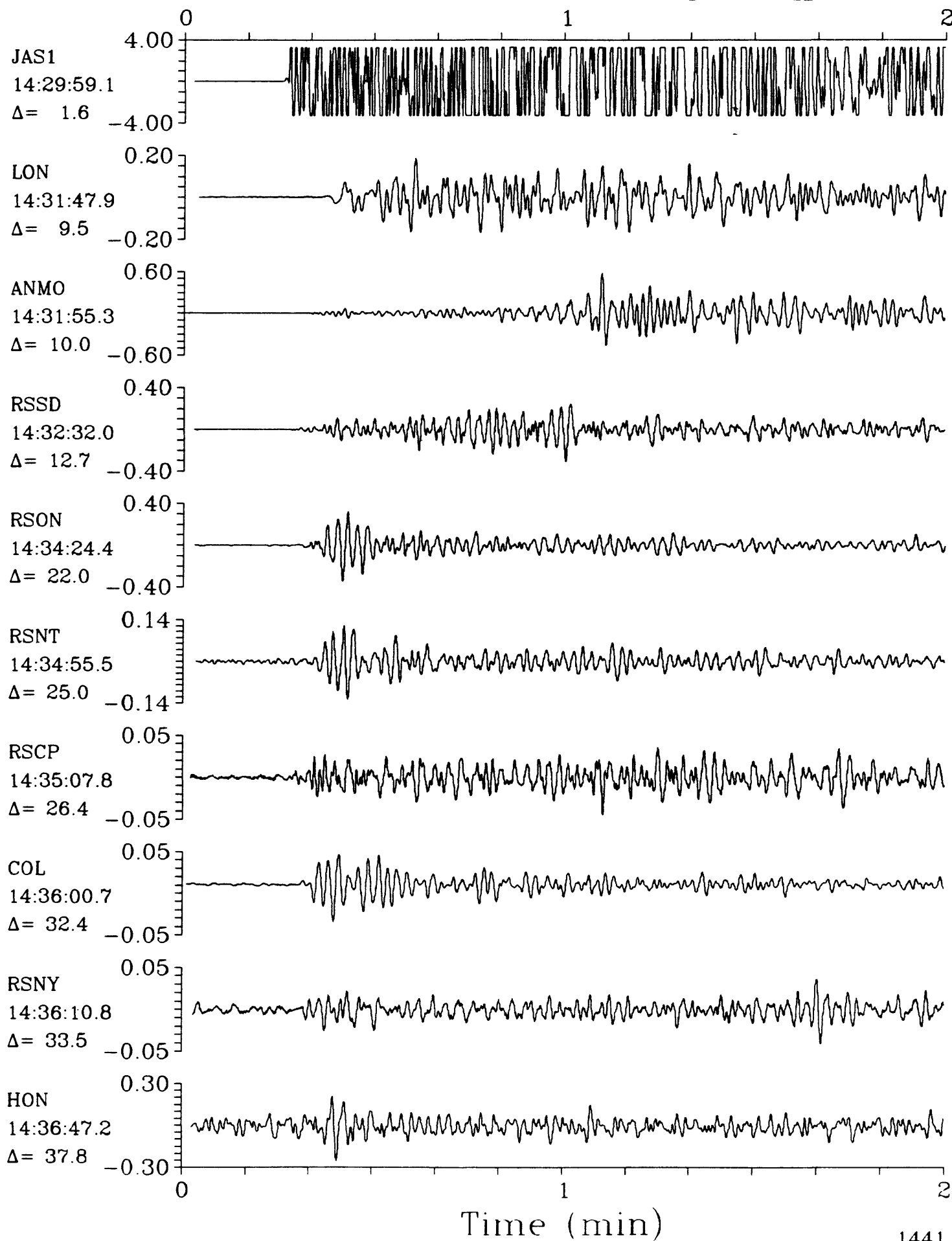
# California–Nevada Border Region



SPZ

20 July 1986 14:29:45.50

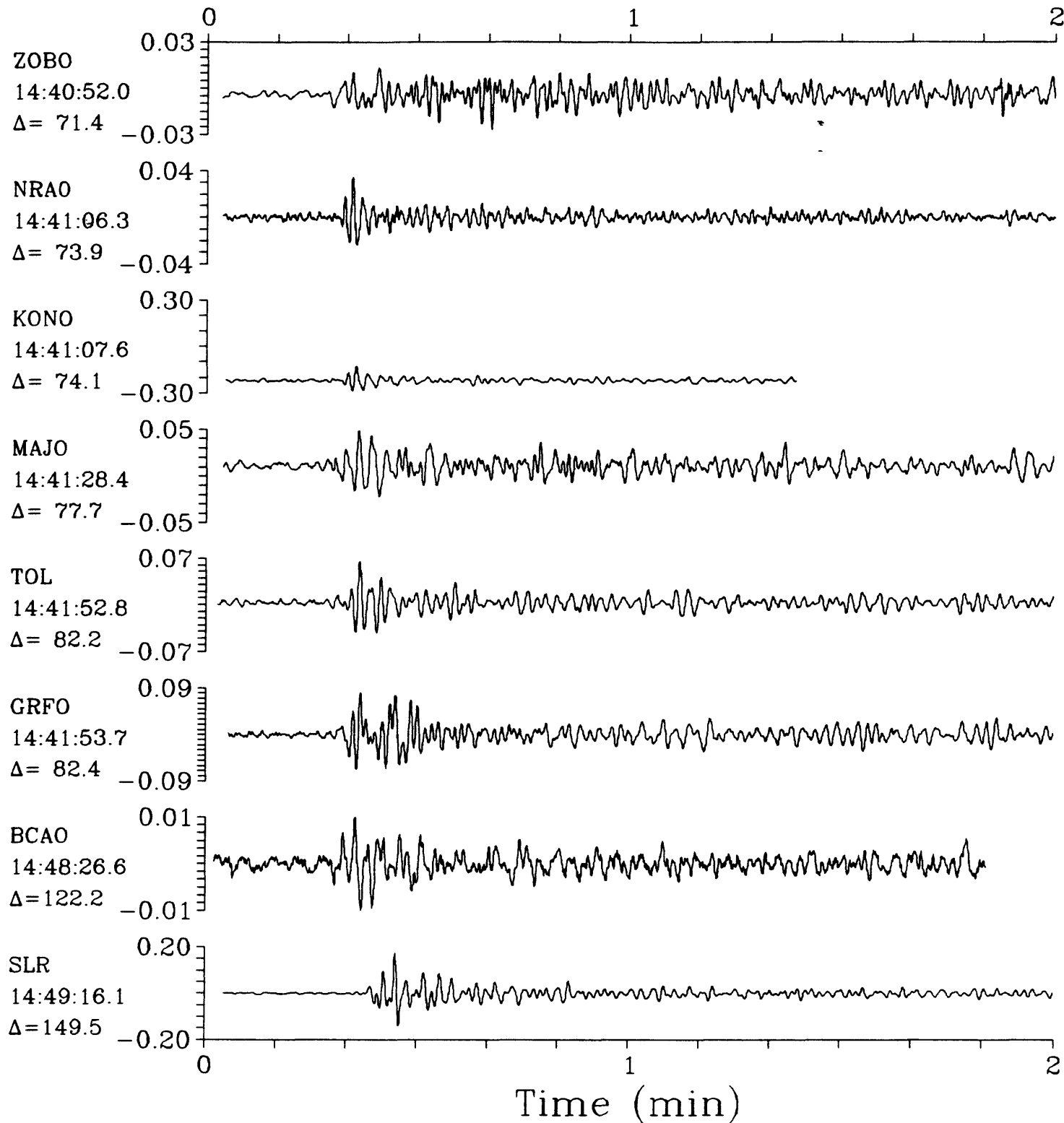
SPZ

California-Nevada Border Region  $h=8.0$   $m_b=5.6$   $M_{sz}=5.6$ 

SPZ

20 July 1986 14:29:45.50

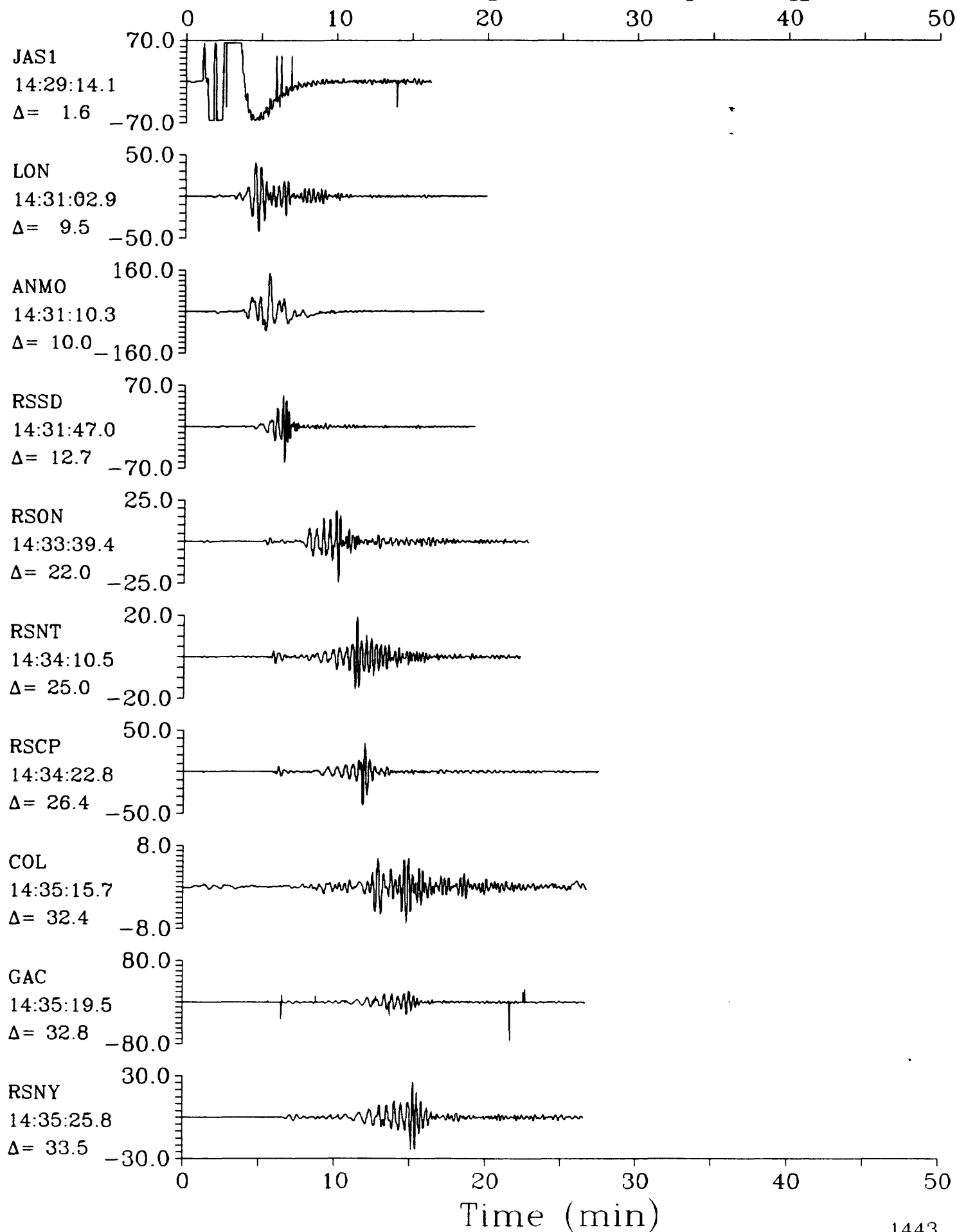
SPZ

California-Nevada Border Region  $h=8.0$   $m_b=5.6$   $M_{sz}=5.6$ 

LPZ

20 July 1986 14:29:45.50

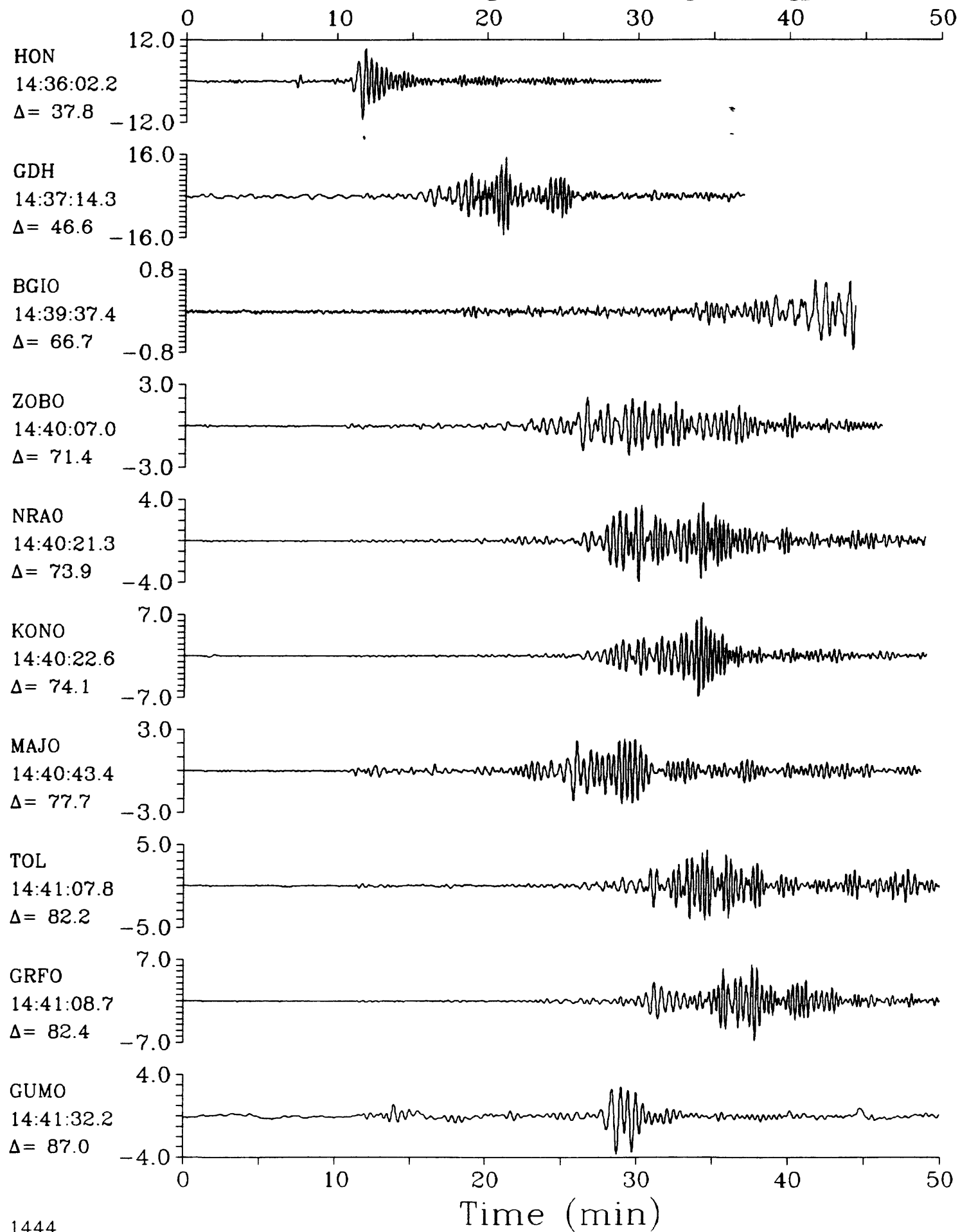
LPZ

California-Nevada Border Region  $h=8.0$   $m_b=5.6$   $M_{sz}=5.6$ 

LPZ

20 July 1986 14:29:45.50

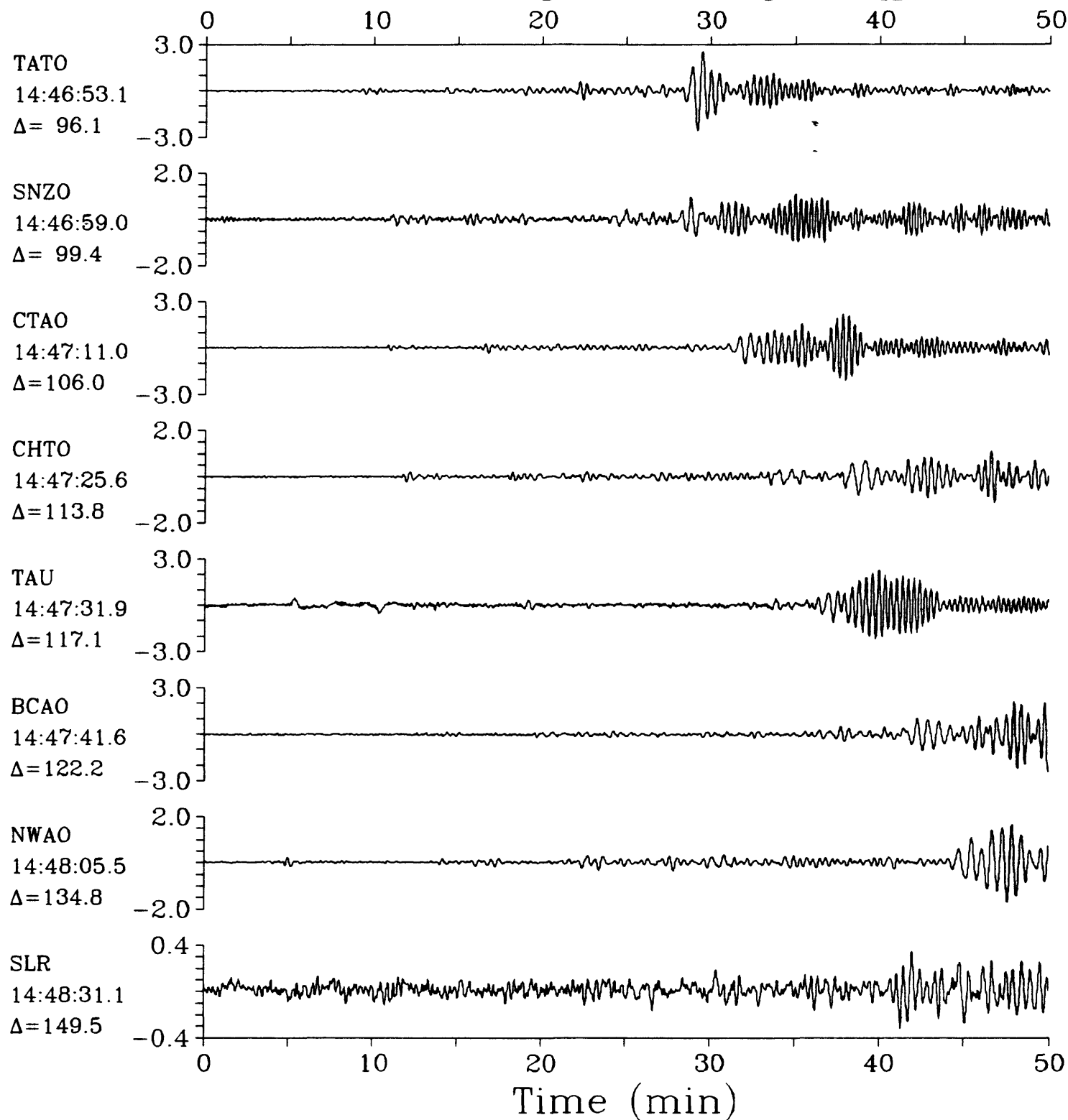
LPZ

California-Nevada Border Region  $h=8.0$   $m_b=5.6$   $M_{sz}=5.6$ 

LPZ

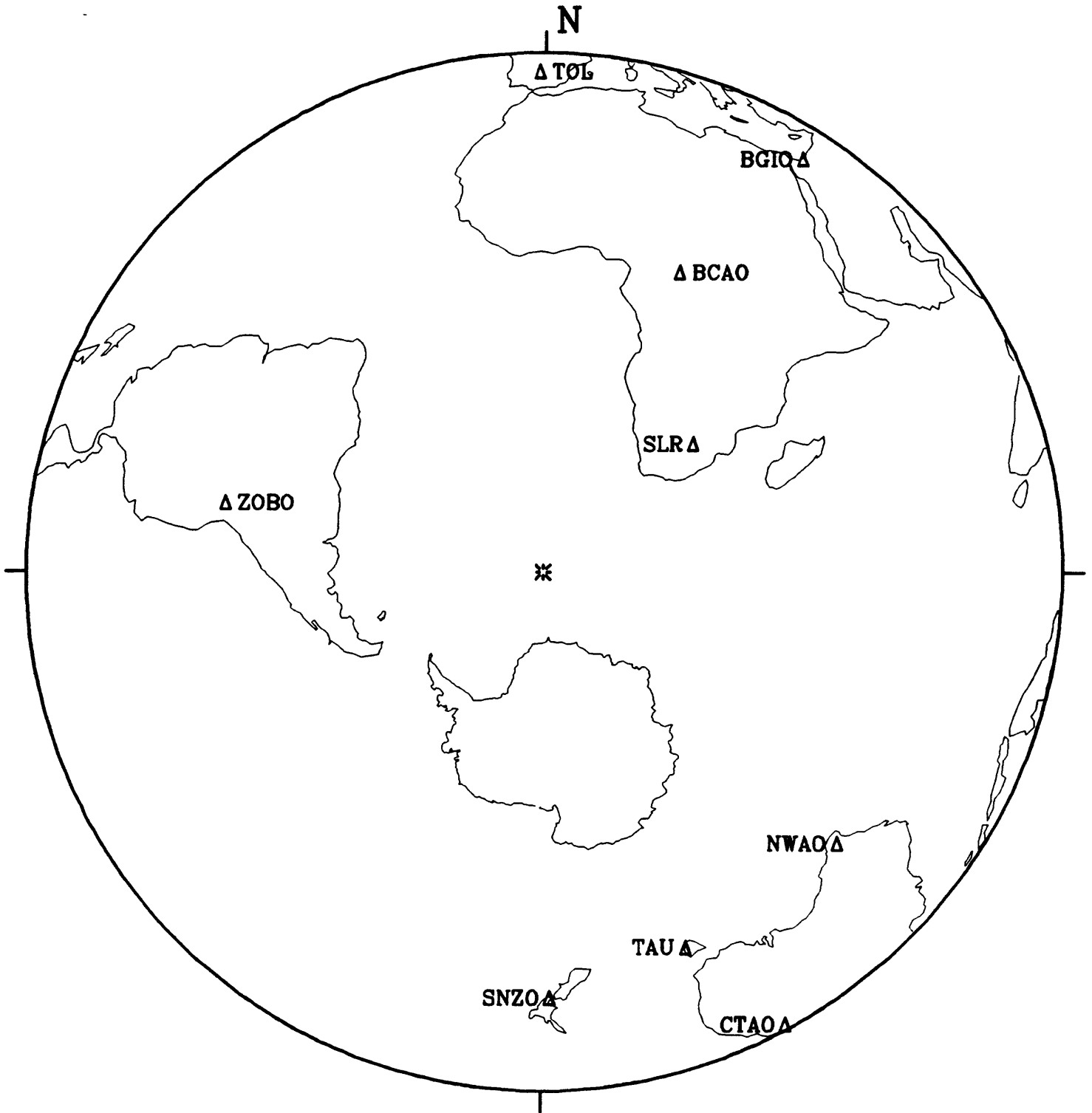
20 July 1986 14:29:45.50

LPZ

California-Nevada Border Region  $h=8.0$   $m_b=5.6$   $M_{SZ}=5.6$ 

20 July 1986 18:09:06.55

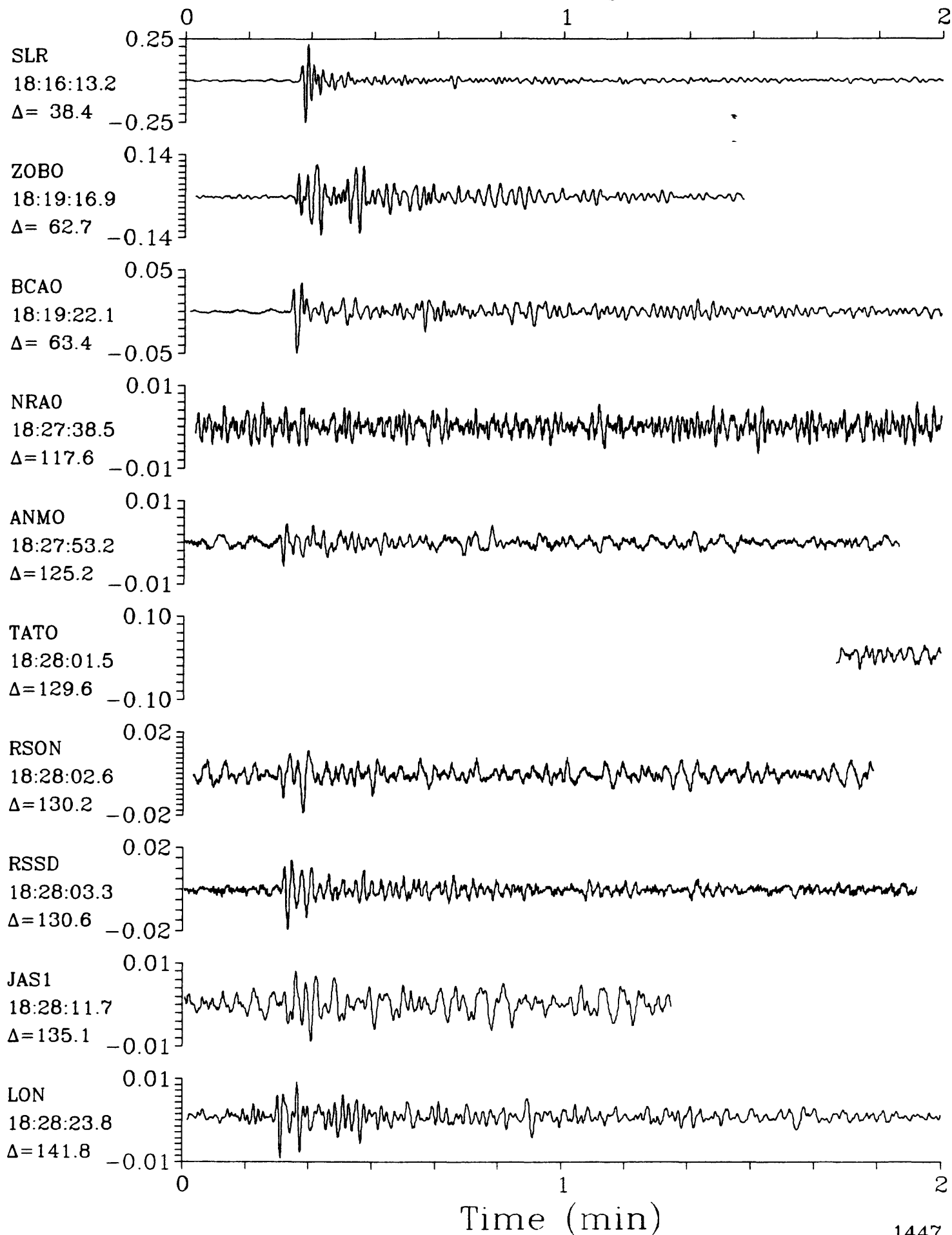
# South Atlantic Ridge



SPZ

20 July 1986 18:09:06.55

SPZ

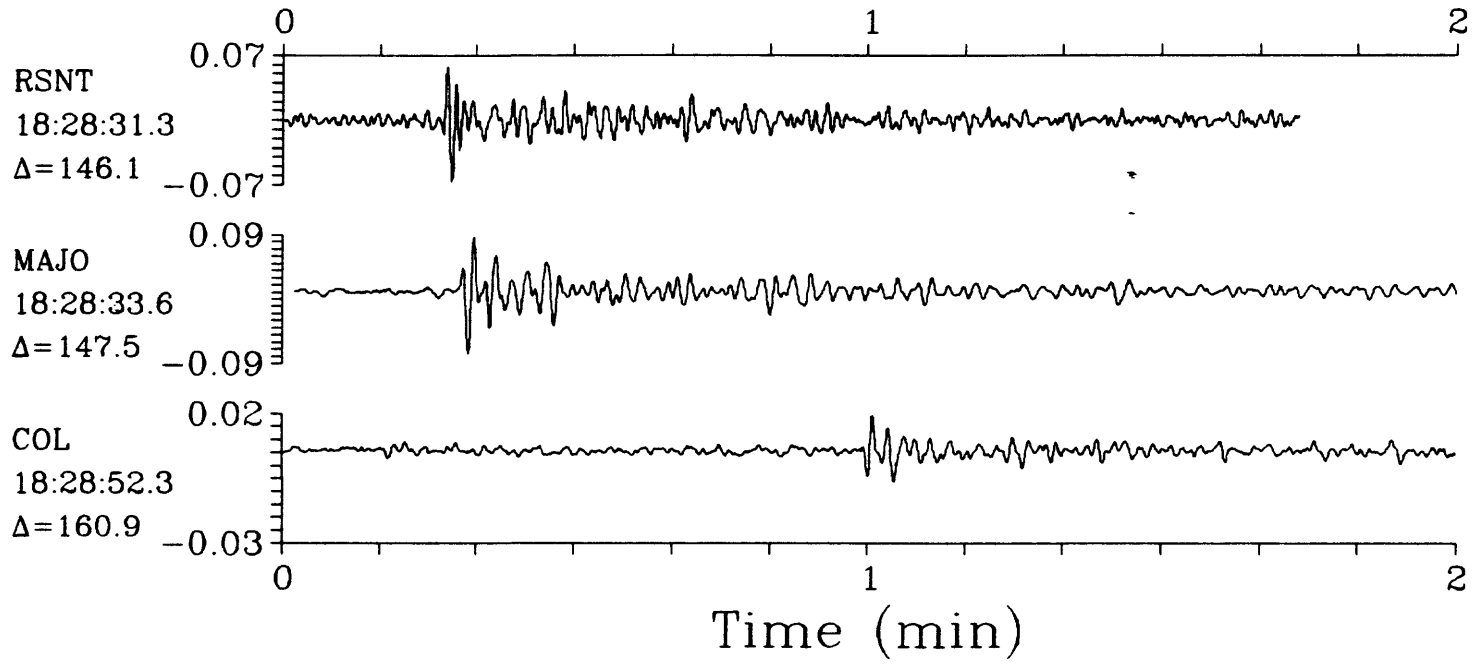
South Atlantic Ridge  $h=10.0$   $m_b=5.6$   $M_{sz}=5.0$ 



SPZ

20 July 1986 18:09:06.55

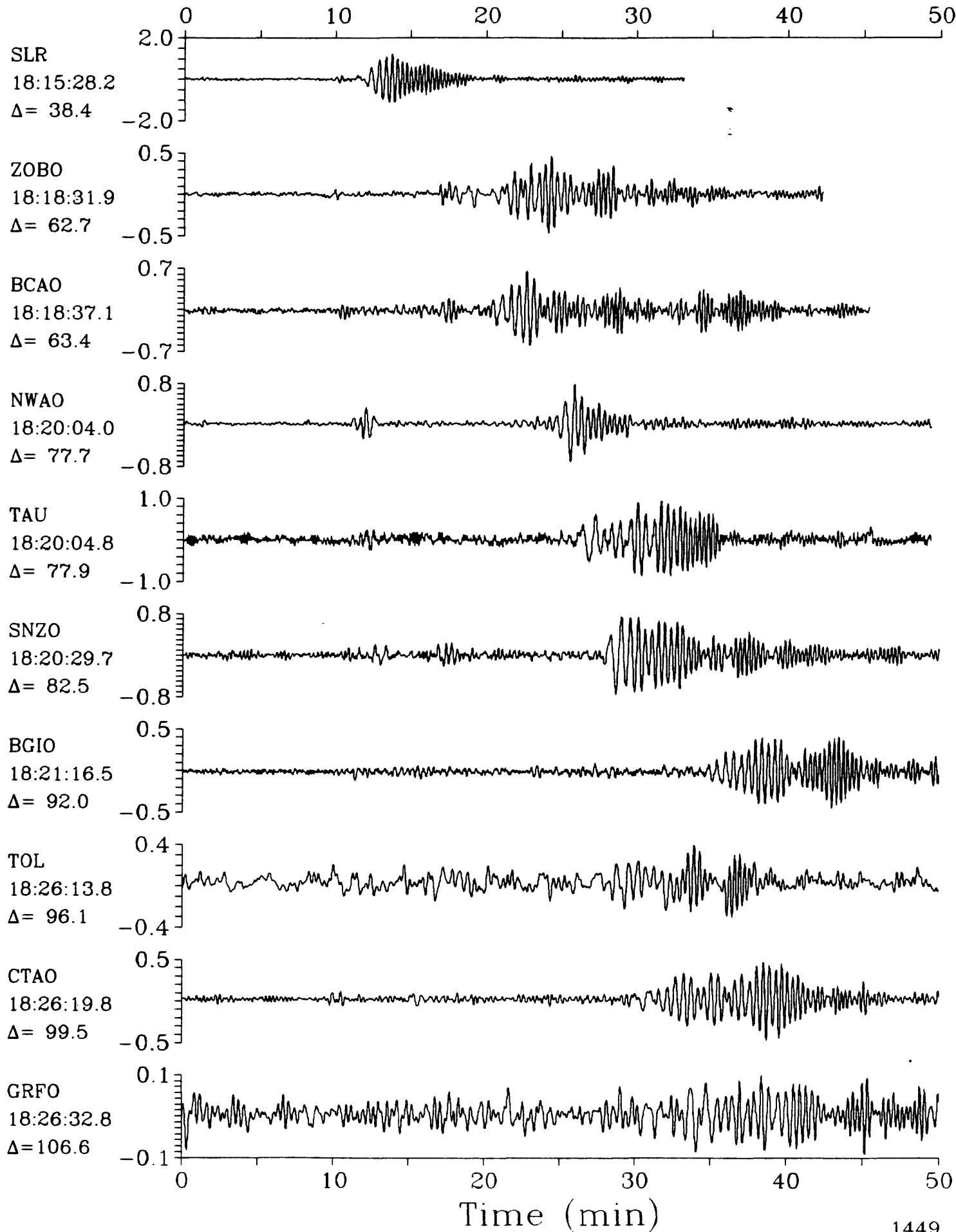
SPZ

South Atlantic Ridge  $h=10.0$   $m_b=5.6$   $M_{sz}=5.0$ 

LPZ

20 July 1986 18:09:06.55

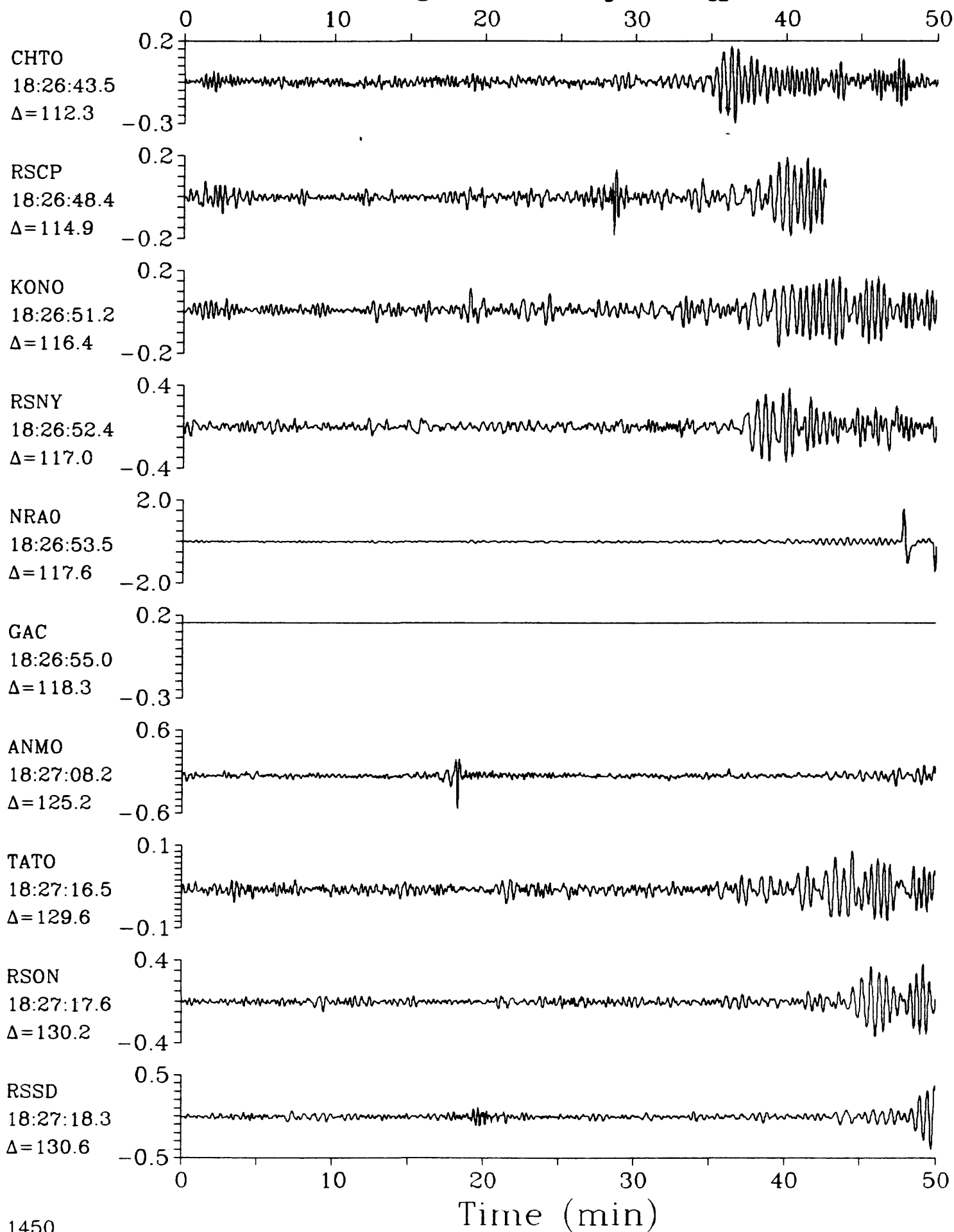
LPZ

South Atlantic Ridge  $h=10.0$   $m_b=5.6$   $M_{sz}=5.0$ 

LPZ

20 July 1986 18:09:06.55

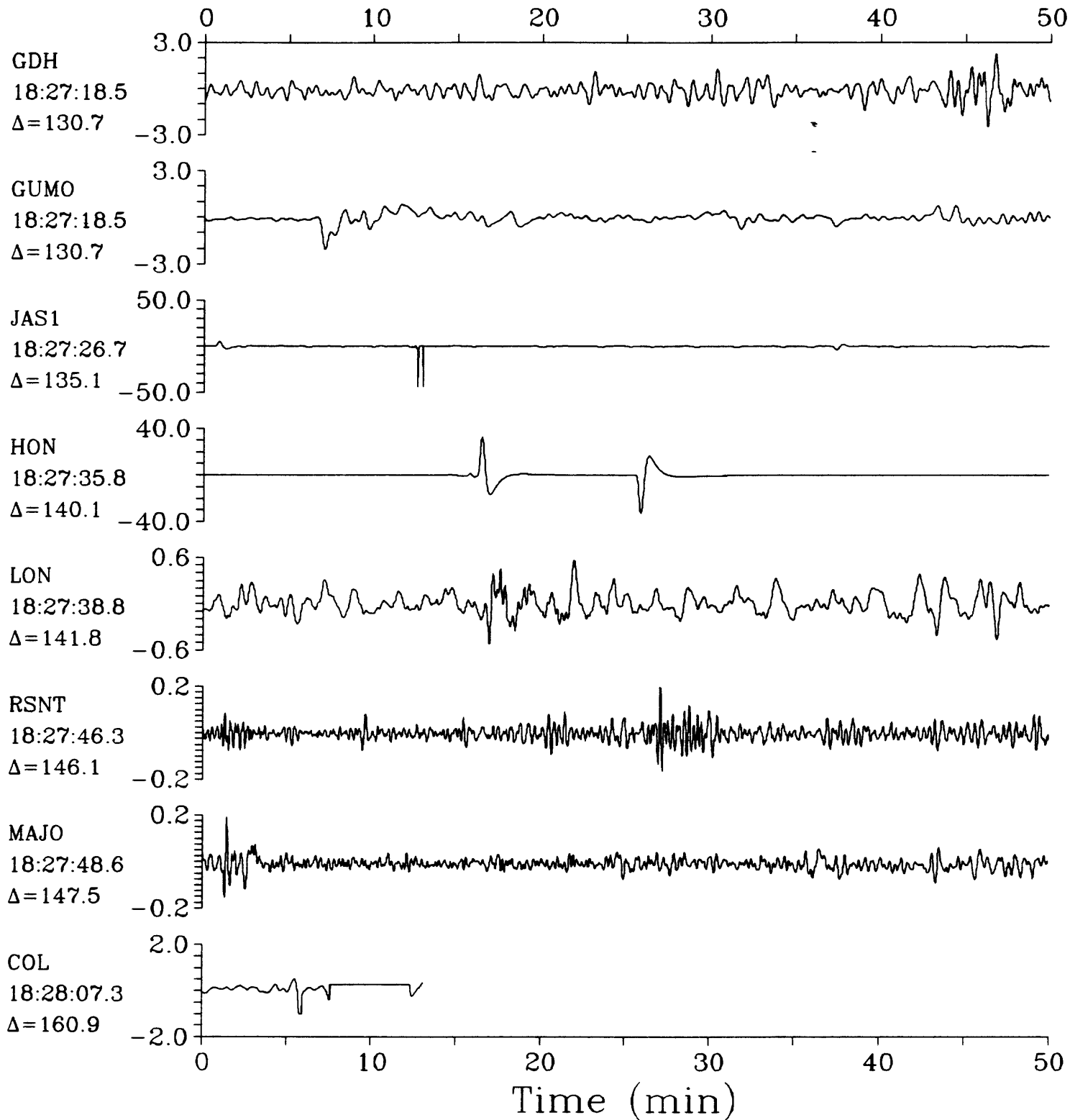
LPZ

South Atlantic Ridge  $h=10.0$   $m_b=5.6$   $M_{sz}=5.0$ 

LPZ

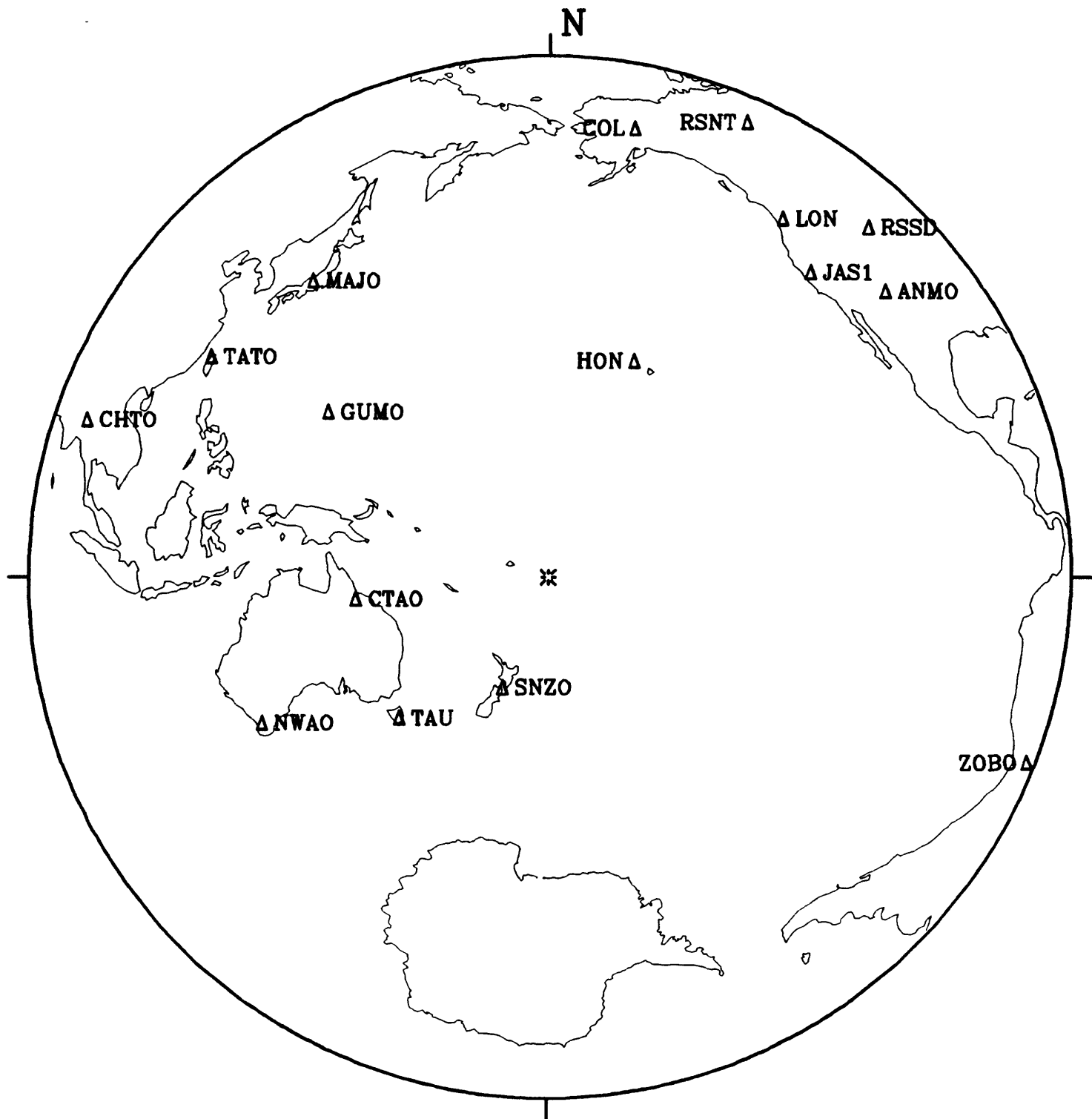
20 July 1986 18:09:06.55

LPZ

South Atlantic Ridge  $h=10.0$   $m_b=5.6$   $M_{sz}=5.0$ 

21 July 1986 12:11:16.20

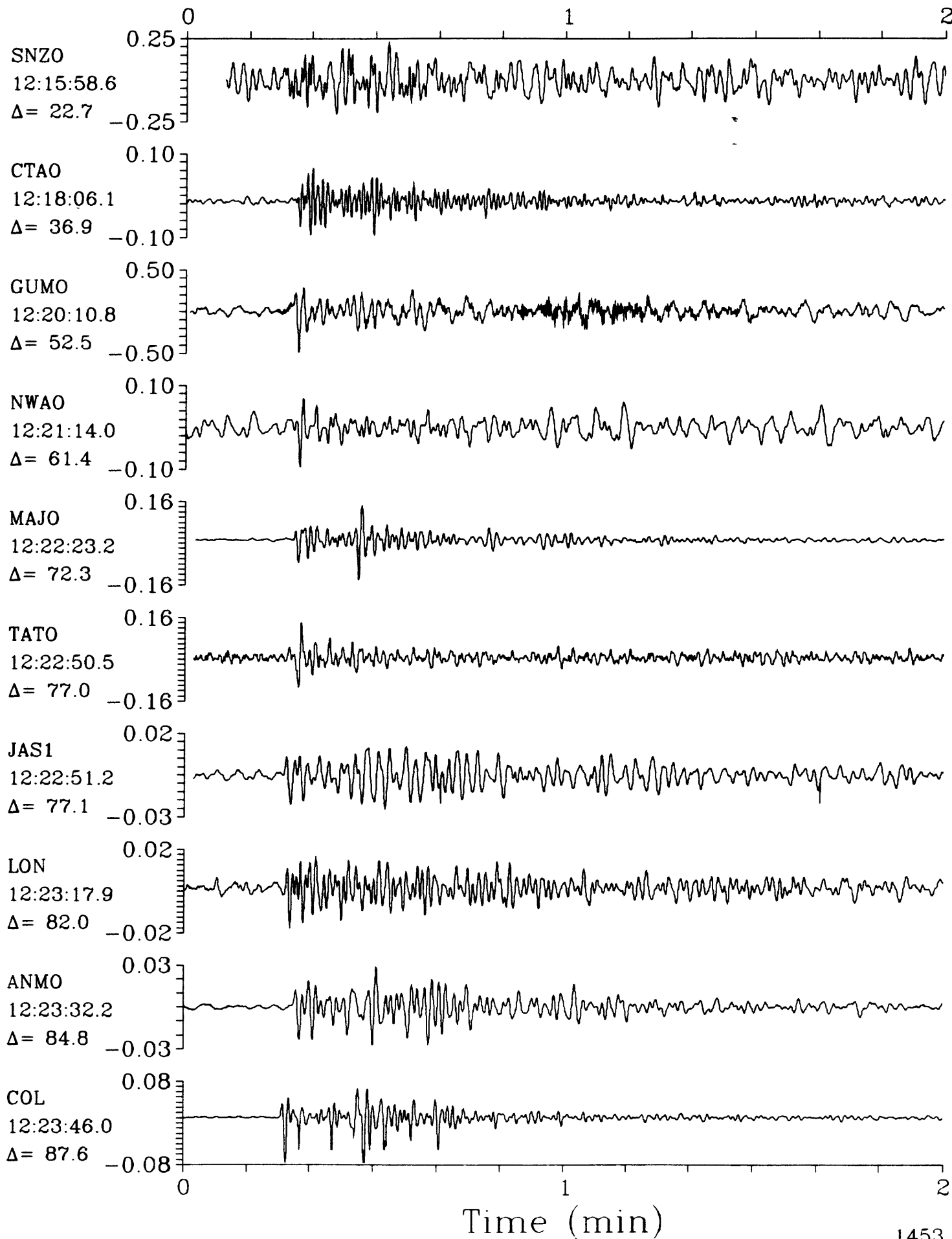
# Tonga Islands



SPZ

21 July 1986 12:11:16.20  
Tonga Islands  $h=37.8$   $m_b=5.5$   $M_{SZ}=5.0$ 

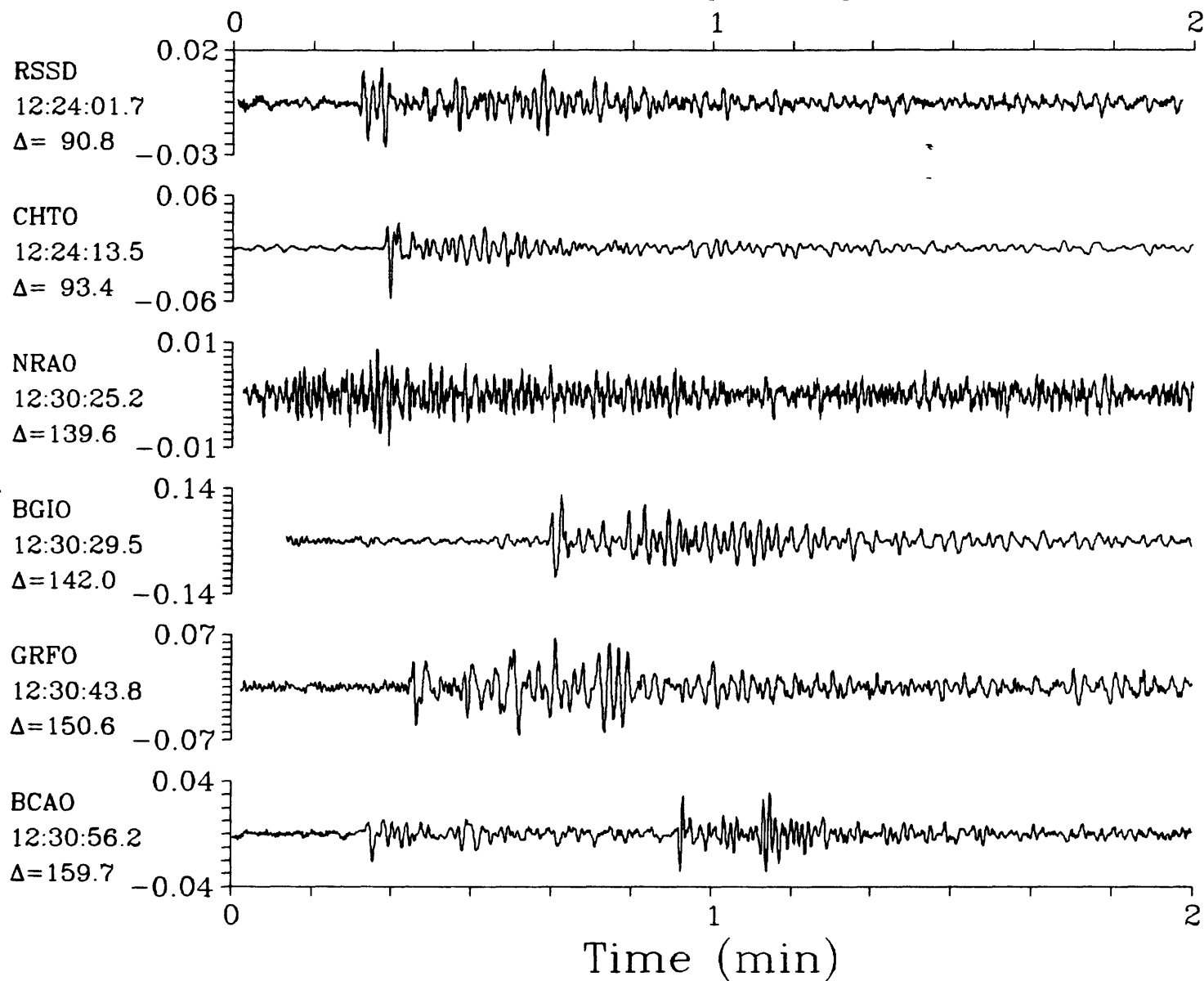
SPZ



SPZ

21 July 1986 12:11:16.20

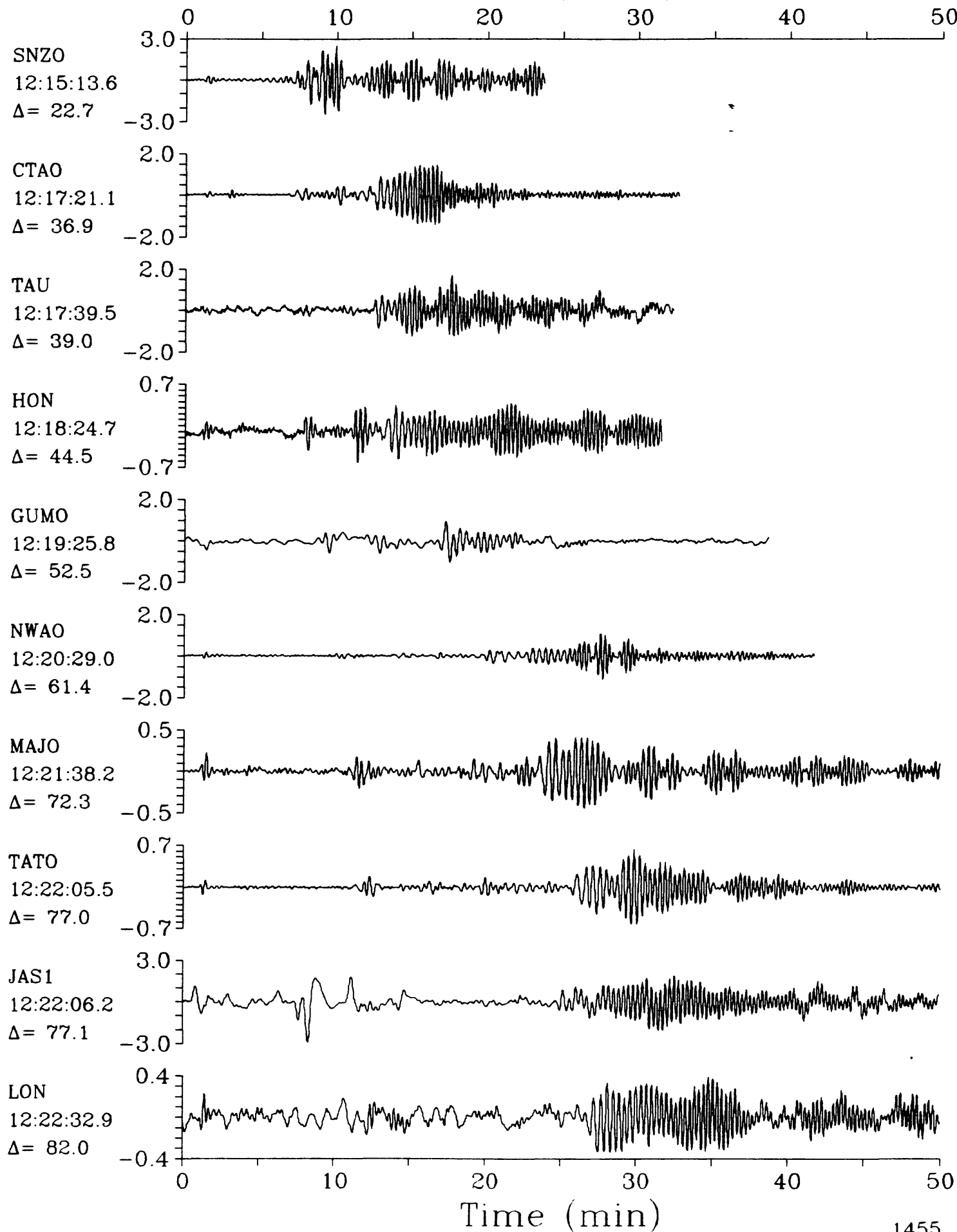
SPZ

Tonga Islands  $h=37.8$   $m_b=5.5$   $M_{sz}=5.0$ 

LPZ

21 July 1986 12:11:16.20  
Tonga Islands  $h=37.8$   $m_b=5.5$   $M_{SZ}=5.0$ 

LPZ

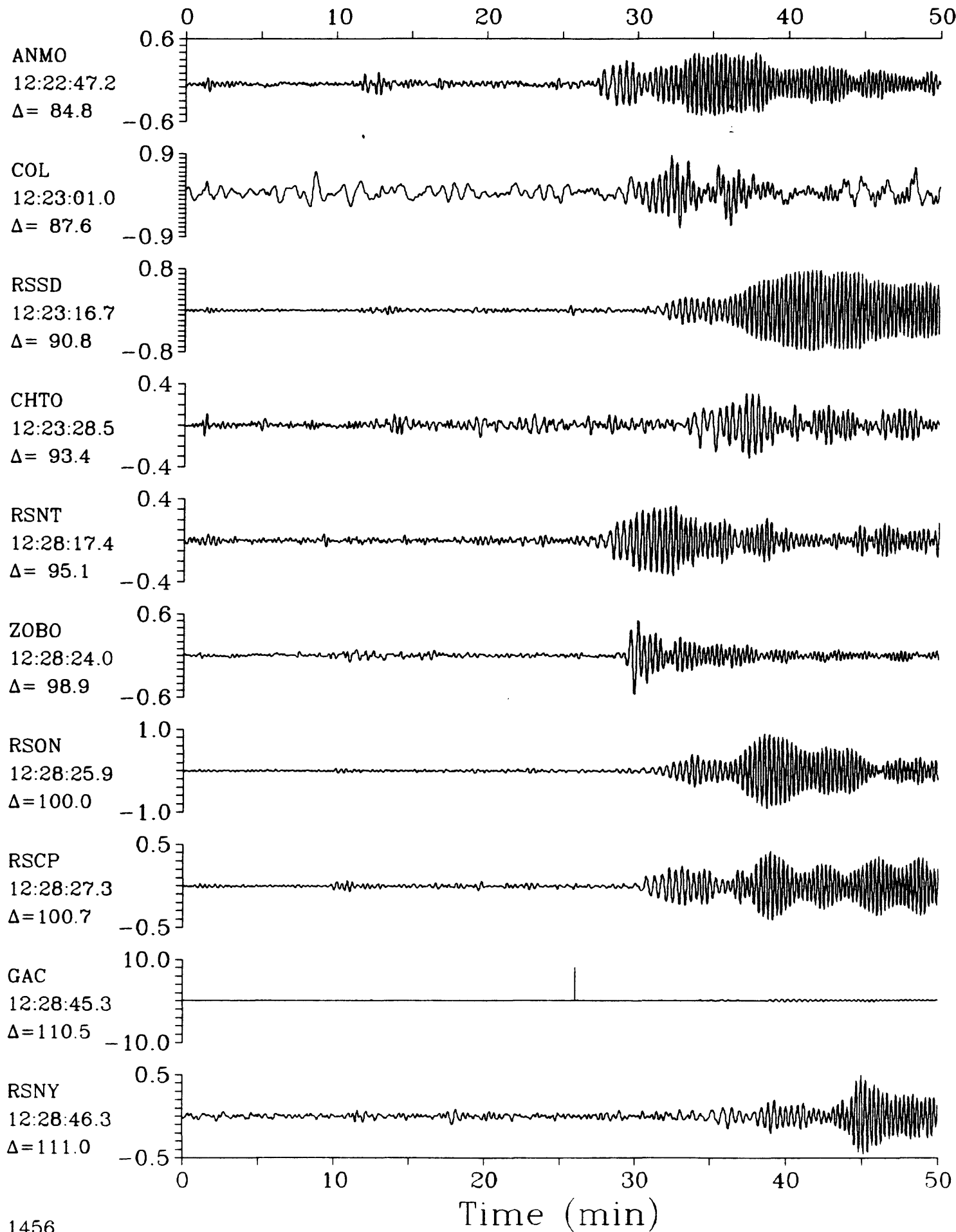




LPZ

21 July 1986 12:11:16.20

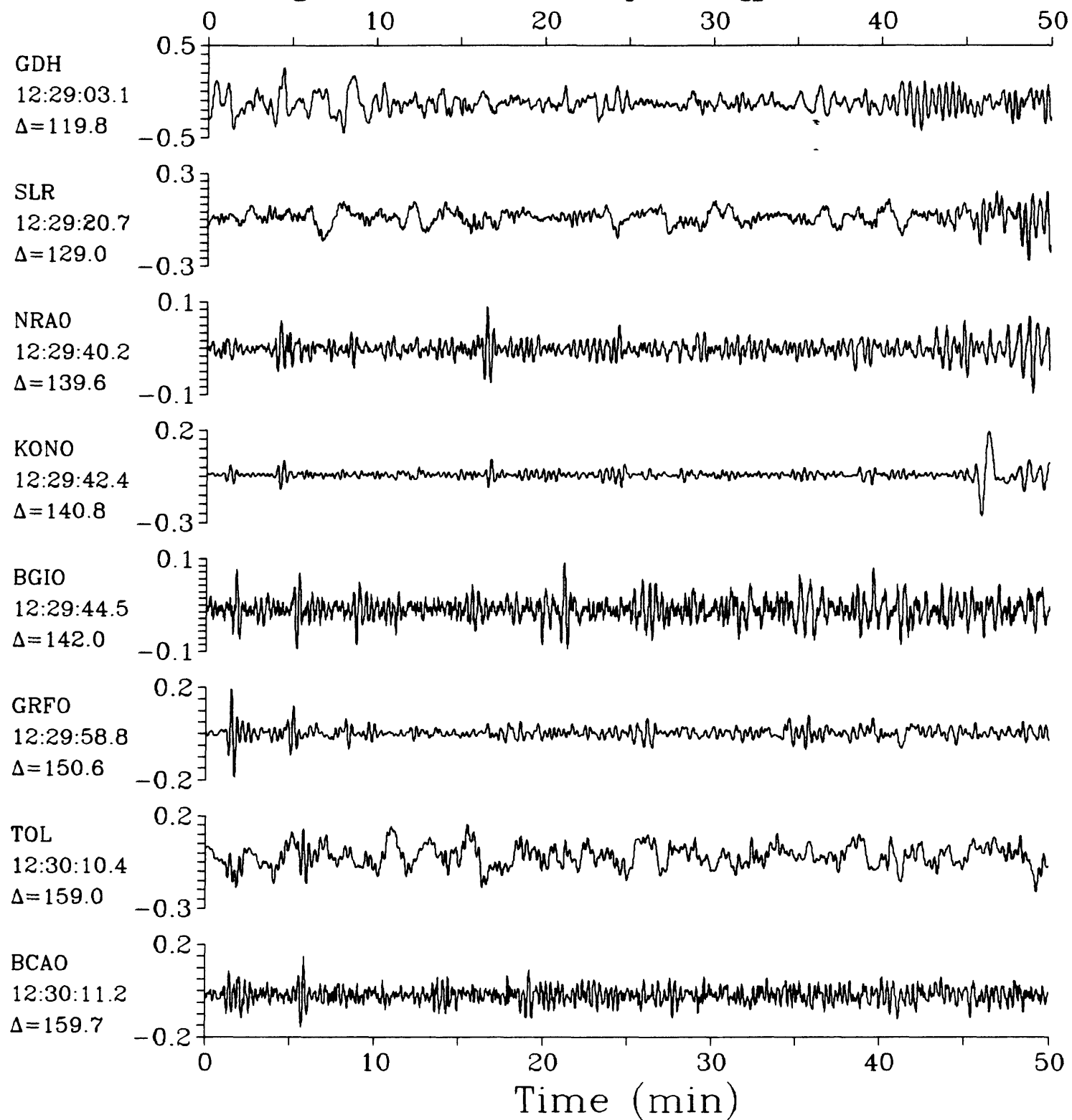
LPZ

Tonga Islands  $h=37.8$   $m_b=5.5$   $M_{sz}=5.0$ 

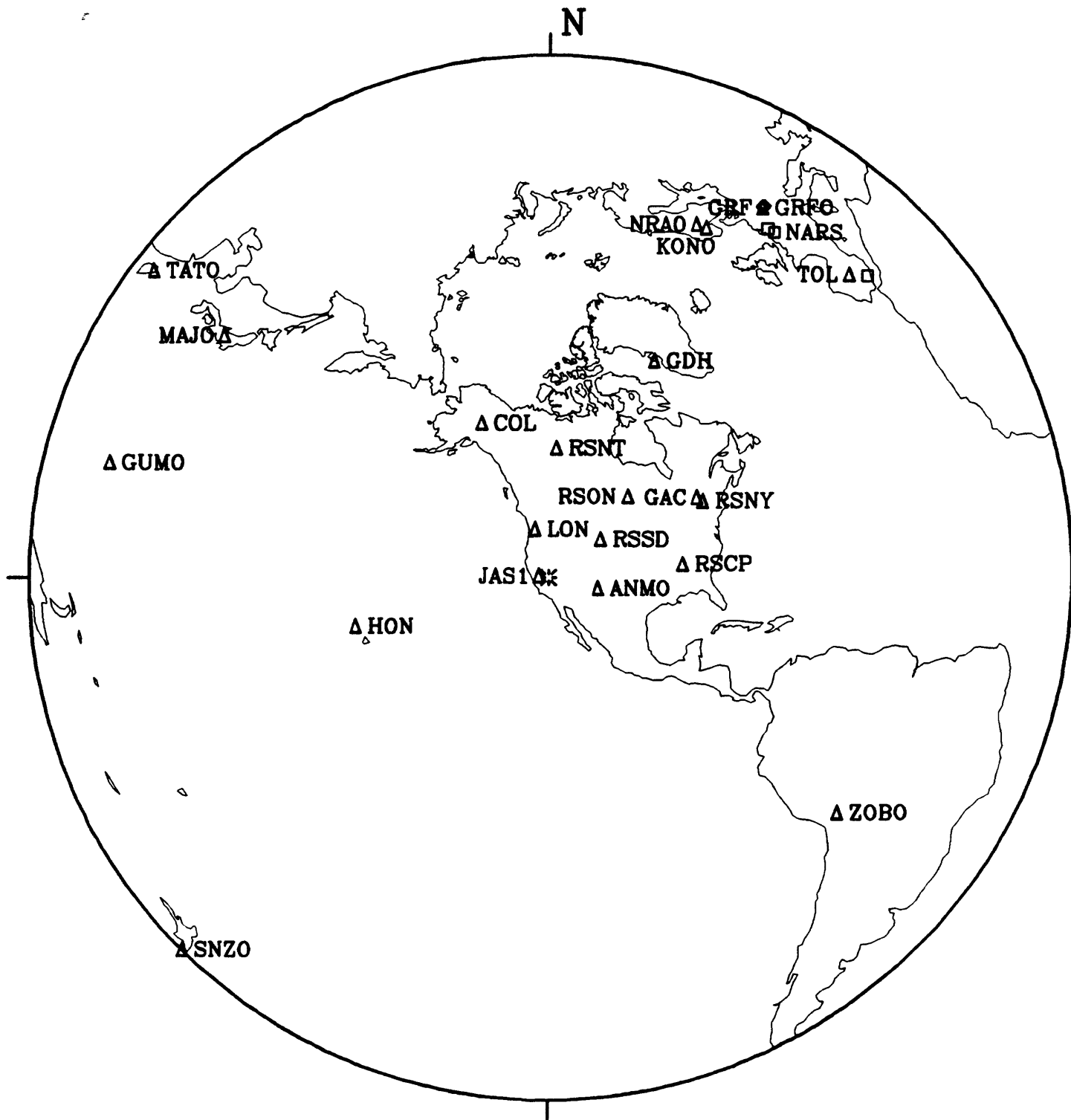
LPZ

21 July 1986 12:11:16.20  
Tonga Islands  $h=37.8$   $m_b=5.5$   $M_{SZ}=5.0$ 

LPZ



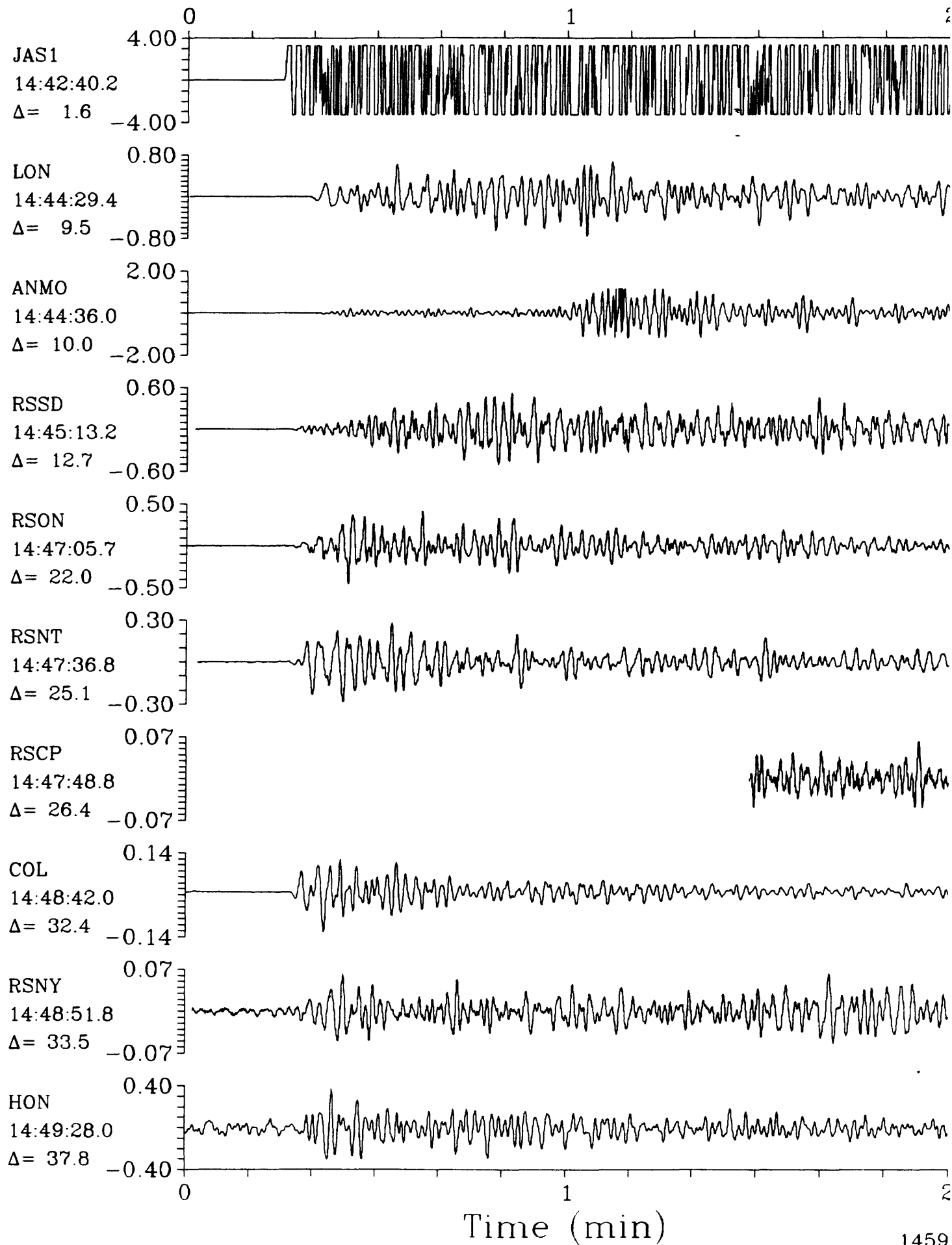
# California–Nevada Border Region



SPZ

21 July 1986 14:42:26.60

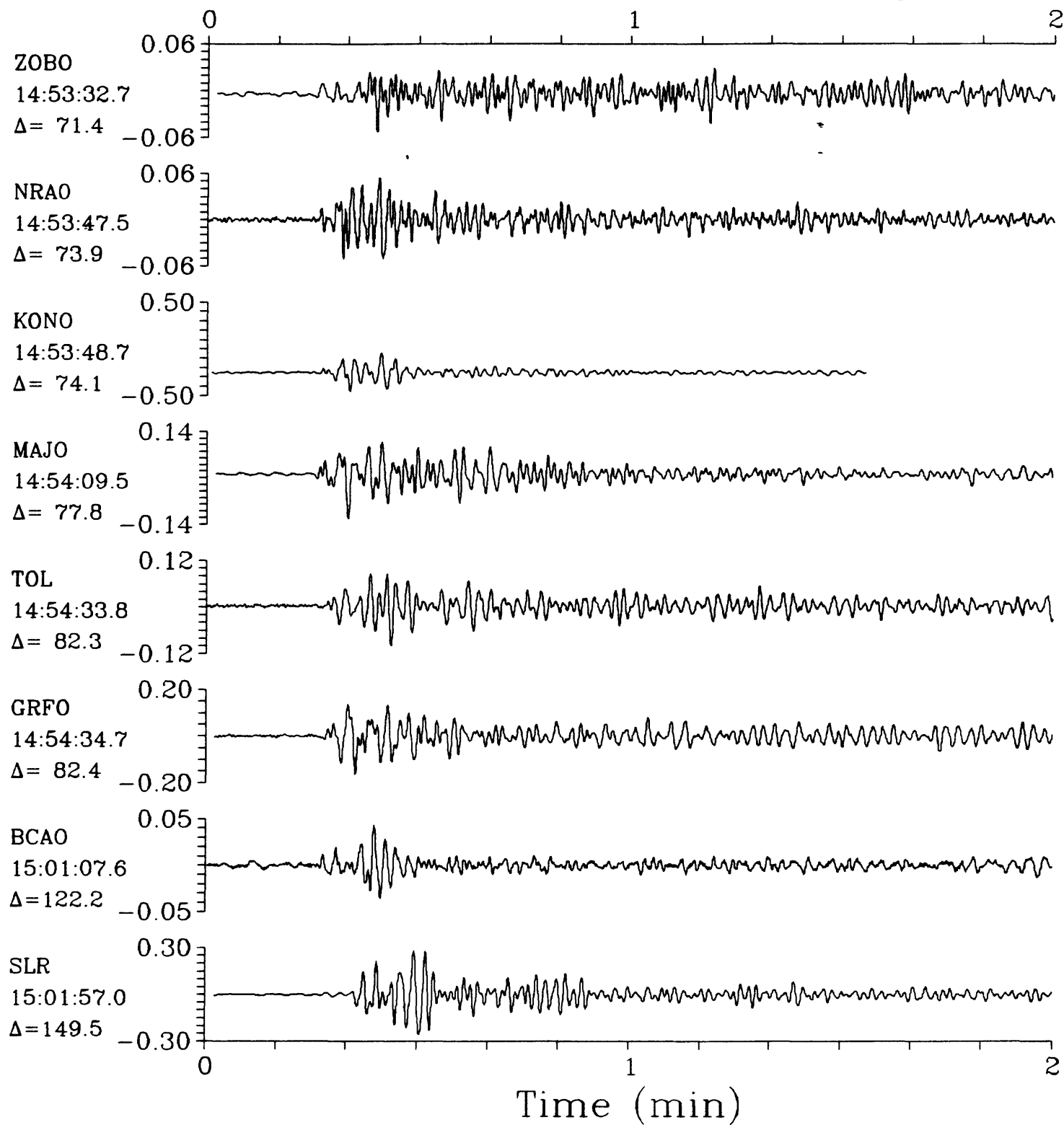
SPZ

California-Nevada Border Region  $h=9.0$   $m_b=6.0$   $M_{sz}=6.2$ 

SPZ

21 July 1986 14:42:26.60

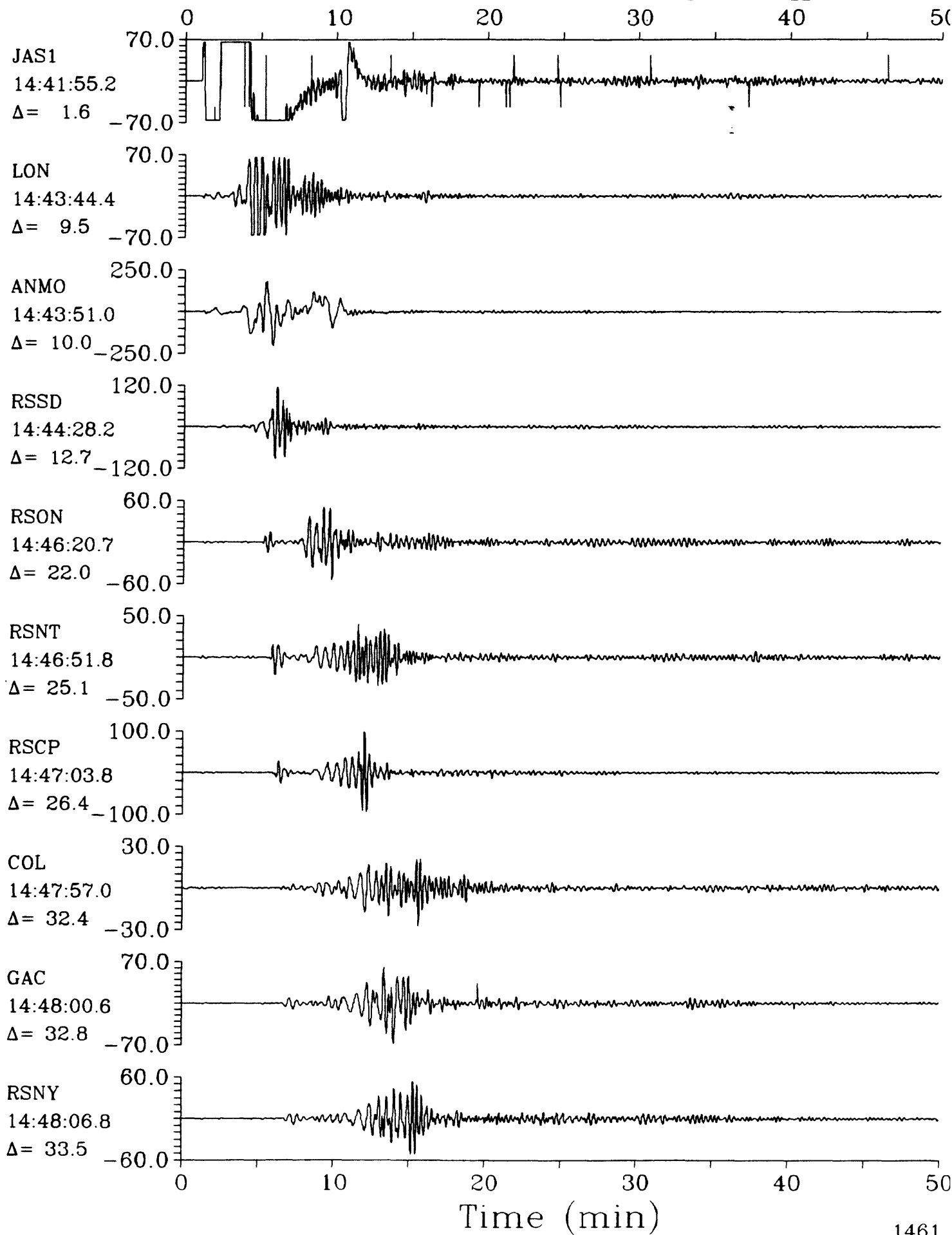
SPZ

California-Nevada Border Region  $h=9.0$   $m_b=6.0$   $M_{sz}=6.2$ 

LPZ

21 July 1986 14:42:26.60

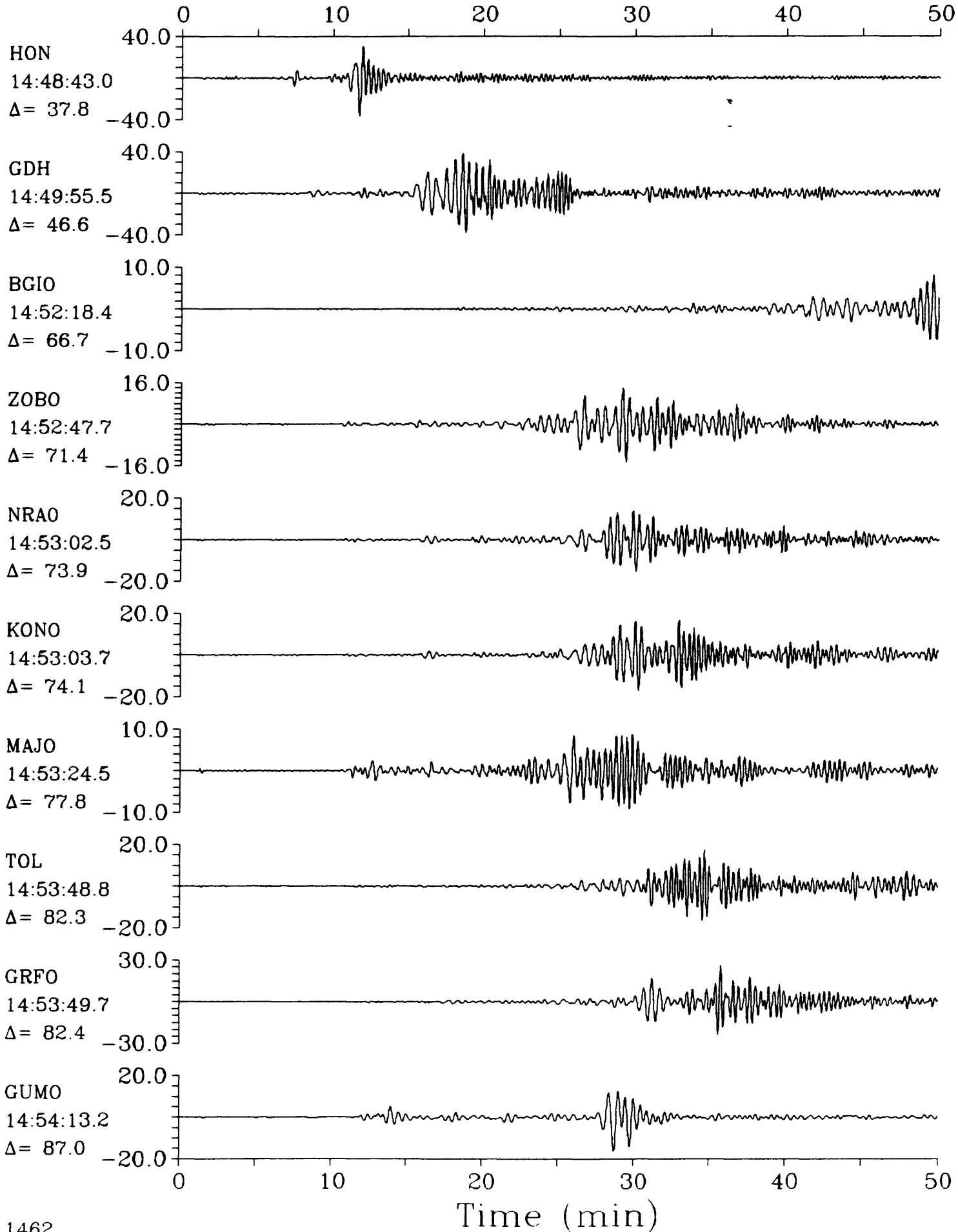
LPZ

California-Nevada Border Region  $h=9.0$   $m_b=6.0$   $M_{sz}=6.2$ 

LPZ

21 July 1986 14:42:26.60

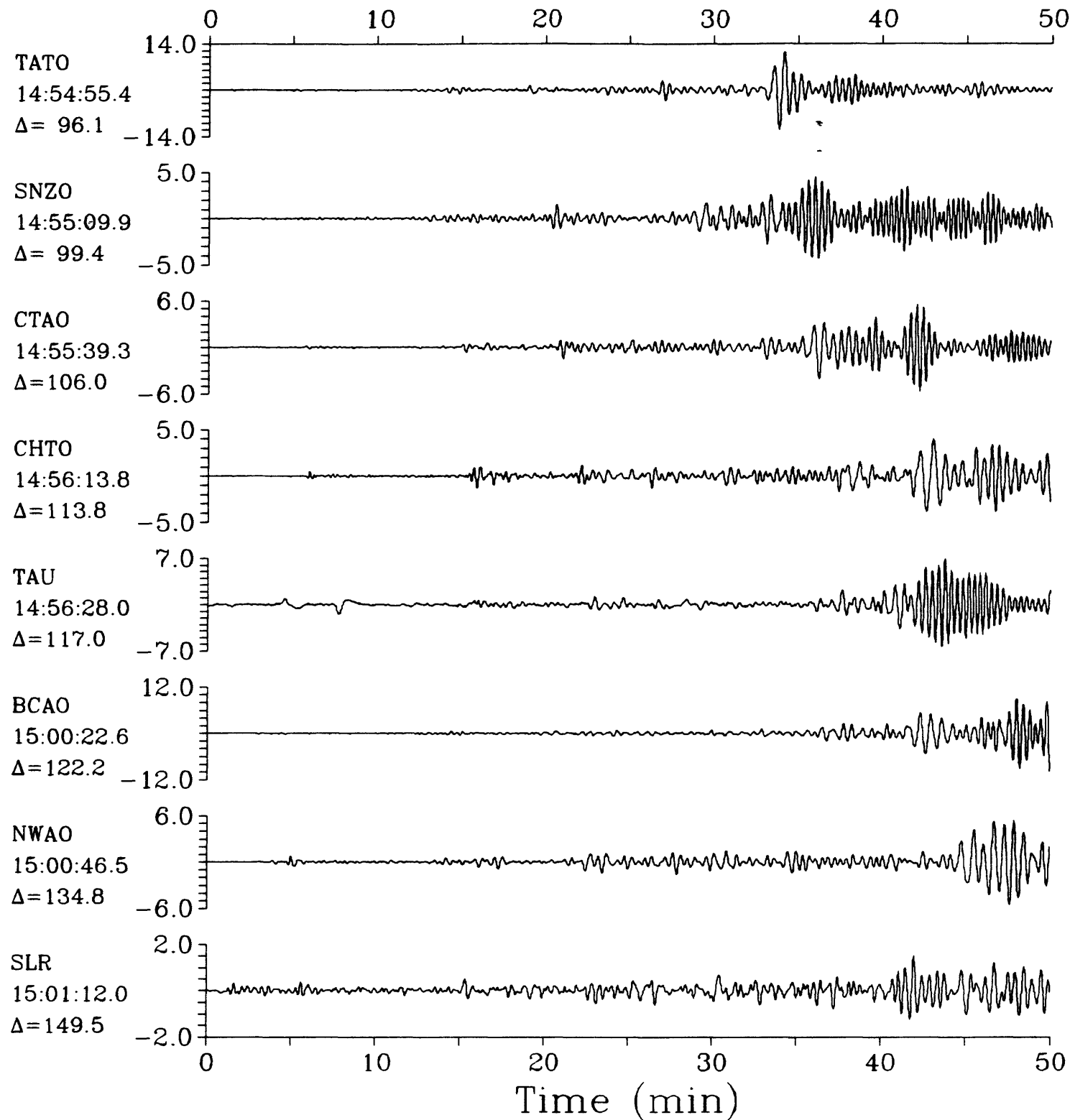
LPZ

California-Nevada Border Region  $h=9.0$   $m_b=6.0$   $M_{sz}=6.2$ 

LPZ

21 July 1986 14:42:26.60

LPZ

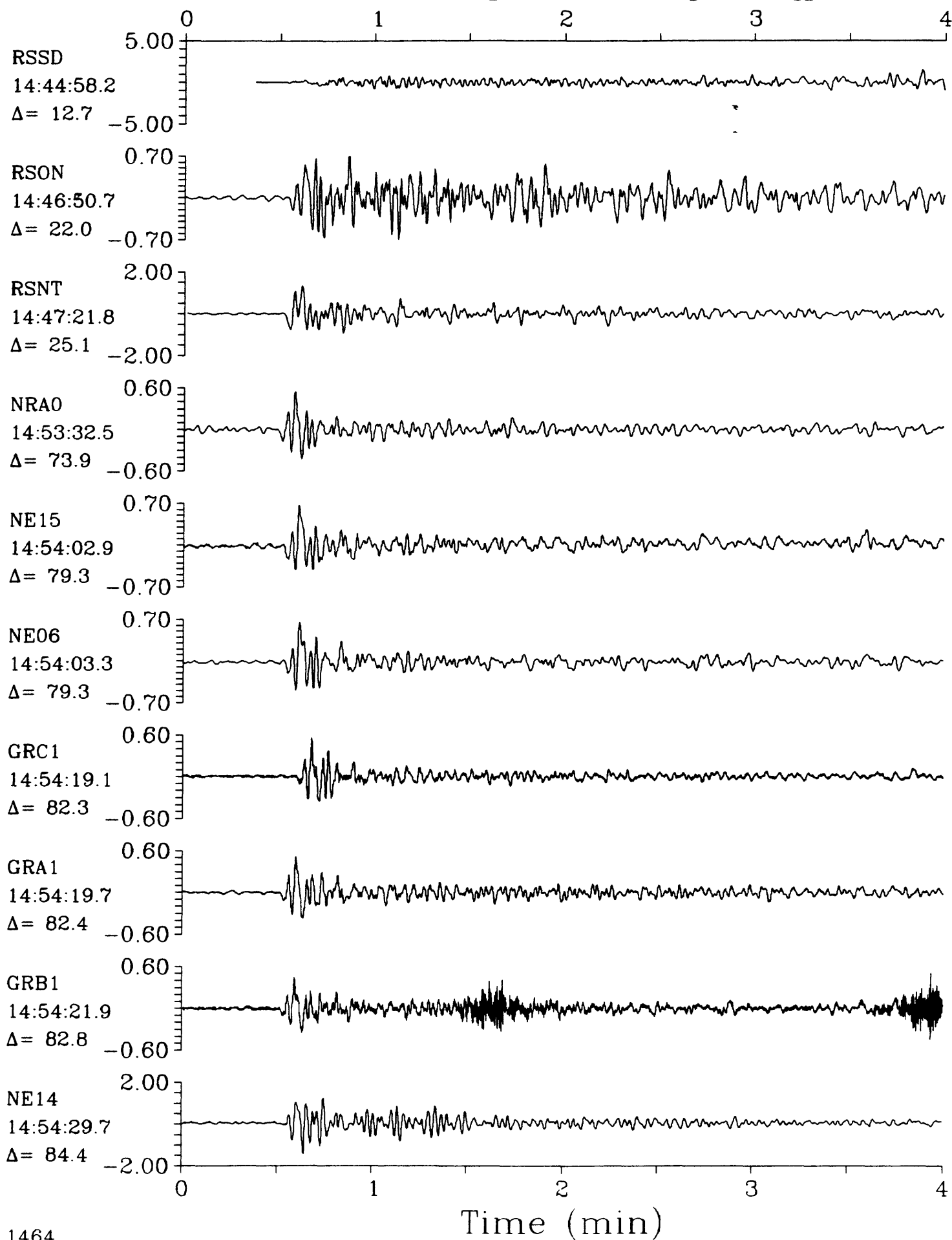
California-Nevada Border Region  $h=9.0$   $m_b=6.0$   $M_{sz}=6.2$ 



IPZ

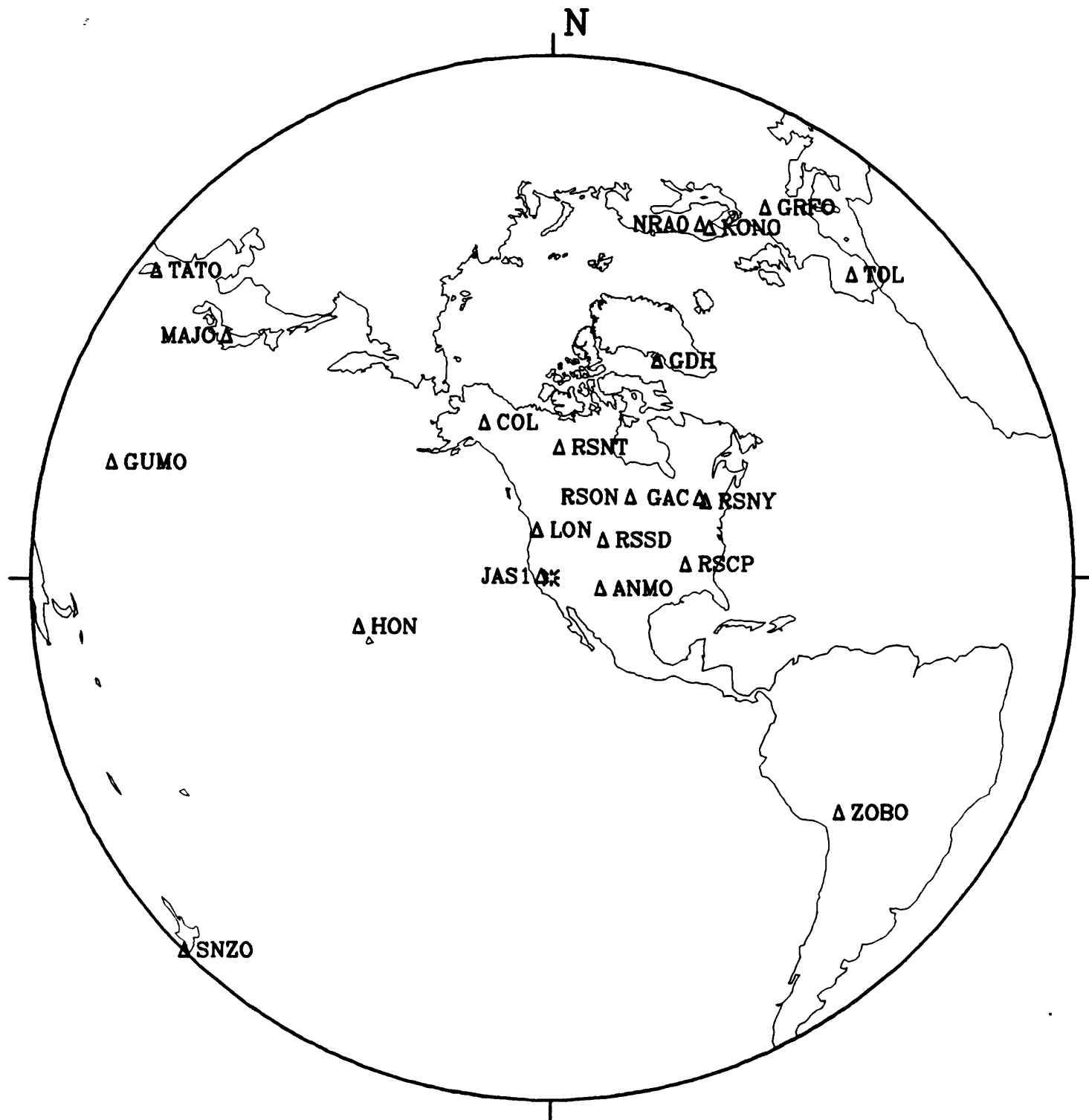
21 July 1986 14:42:26.60

IPZ

California-Nevada Border Region  $h=9.0$   $m_b=6.0$   $M_{sz}=6.2$ 

21 July 1986 22:07:18.00

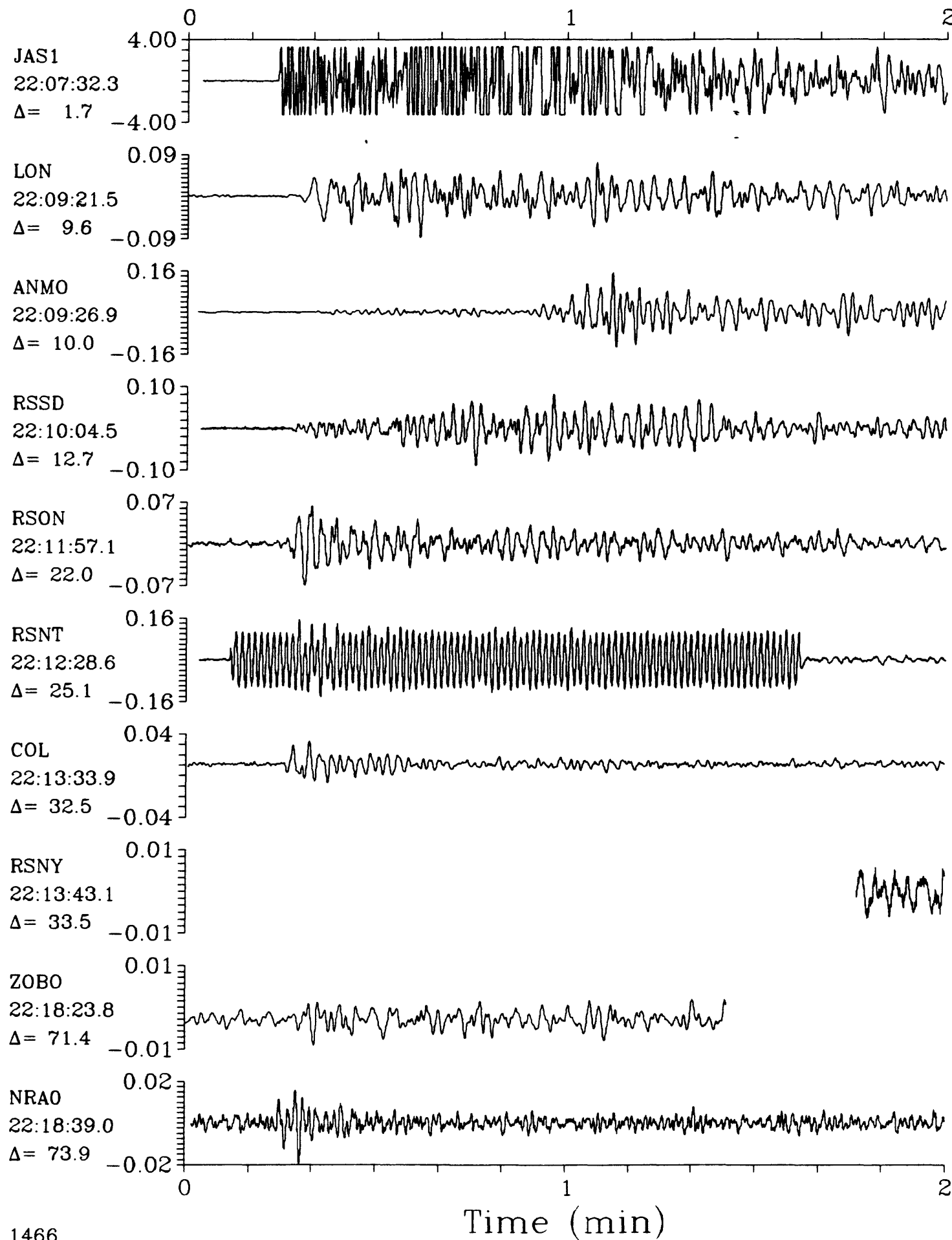
# California–Nevada Border Region



SPZ

21 July 1986 22:07:18.00

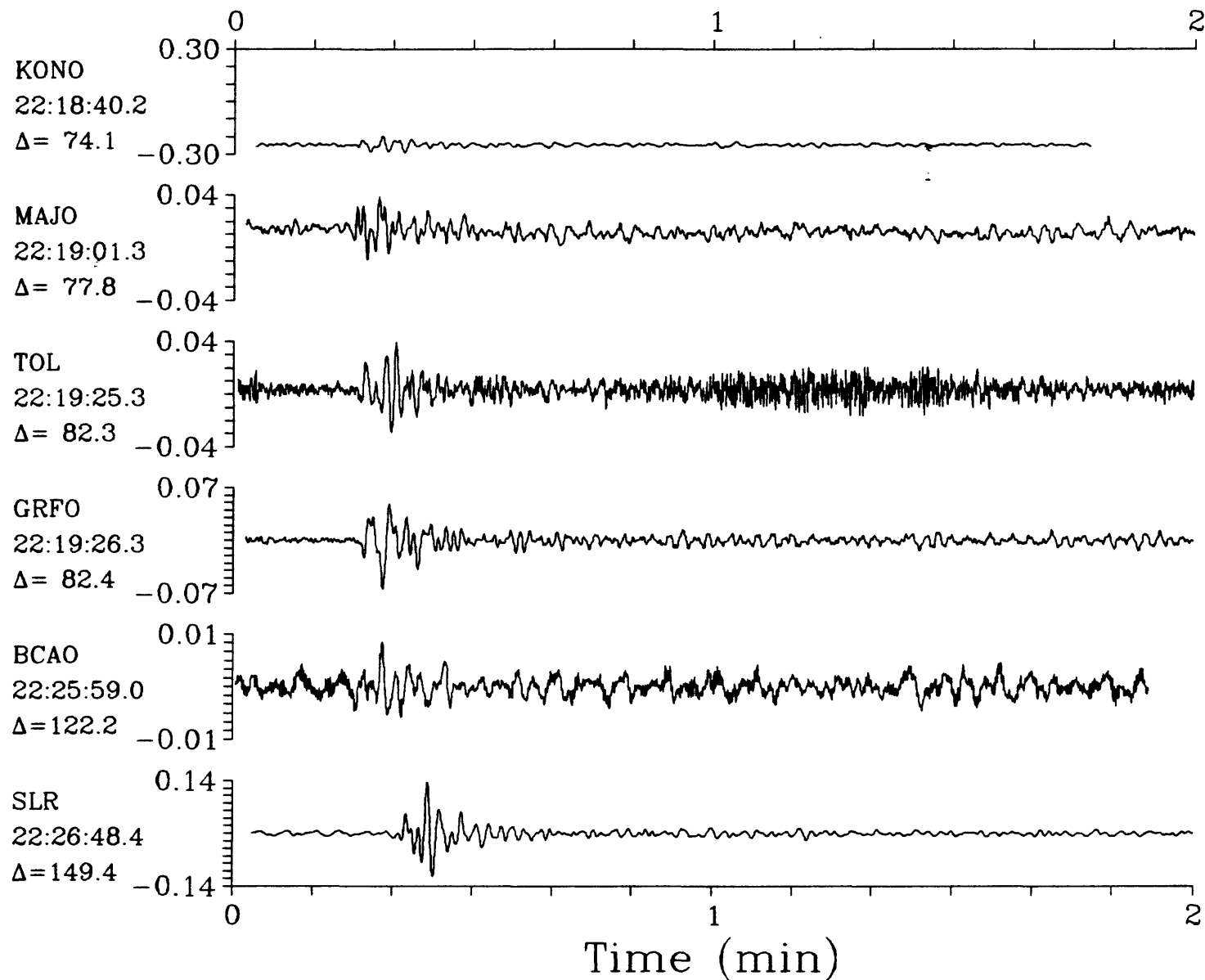
SPZ

California-Nevada Border Region  $h=9.0$   $m_b=5.5$   $M_{sz}=5.1$ 

SPZ

21 July 1986 22:07:18.00

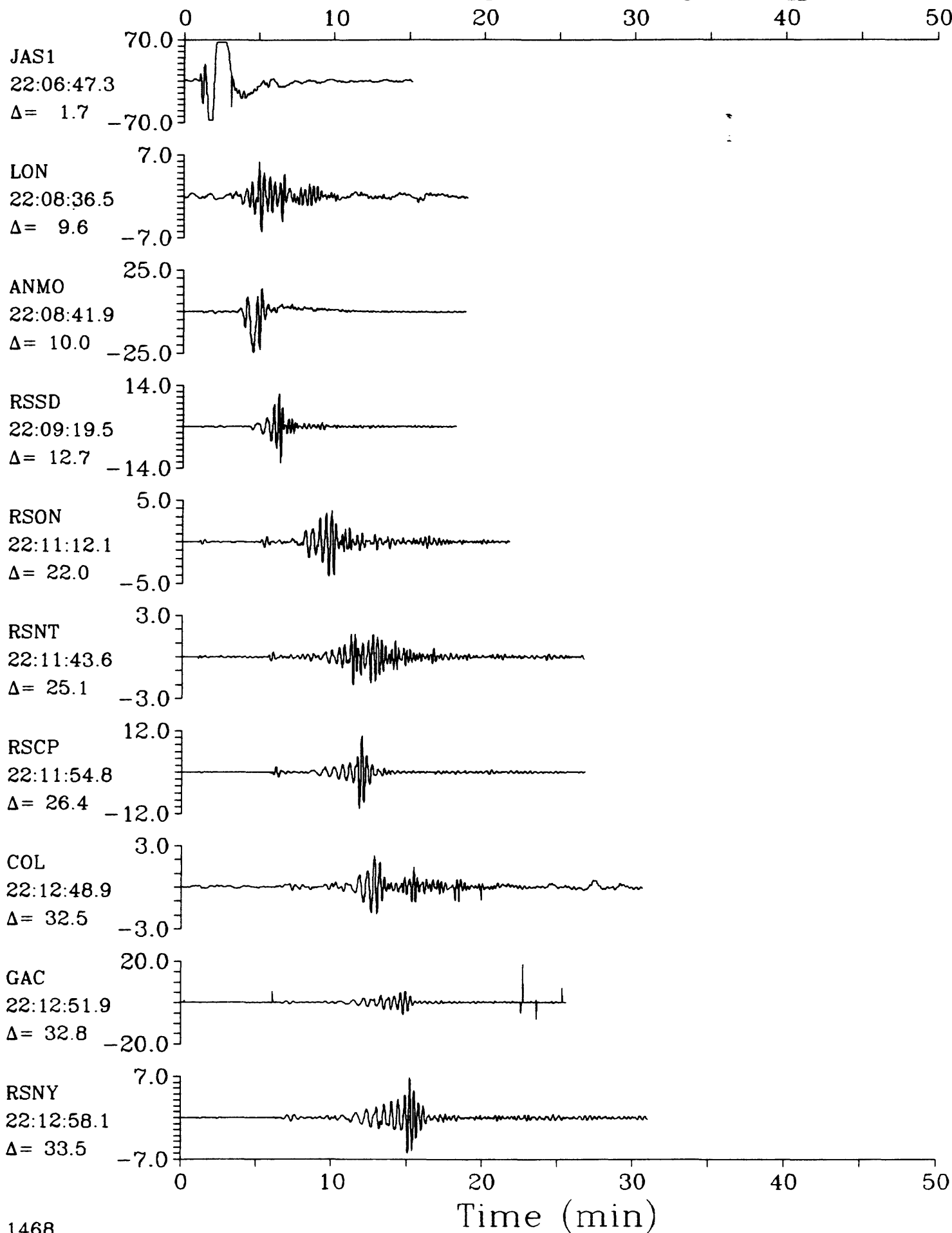
SPZ

California-Nevada Border Region  $h=9.0$   $m_b=5.5$   $M_{SZ}=5.1$ 

LPZ

21 July 1986 22:07:18.00

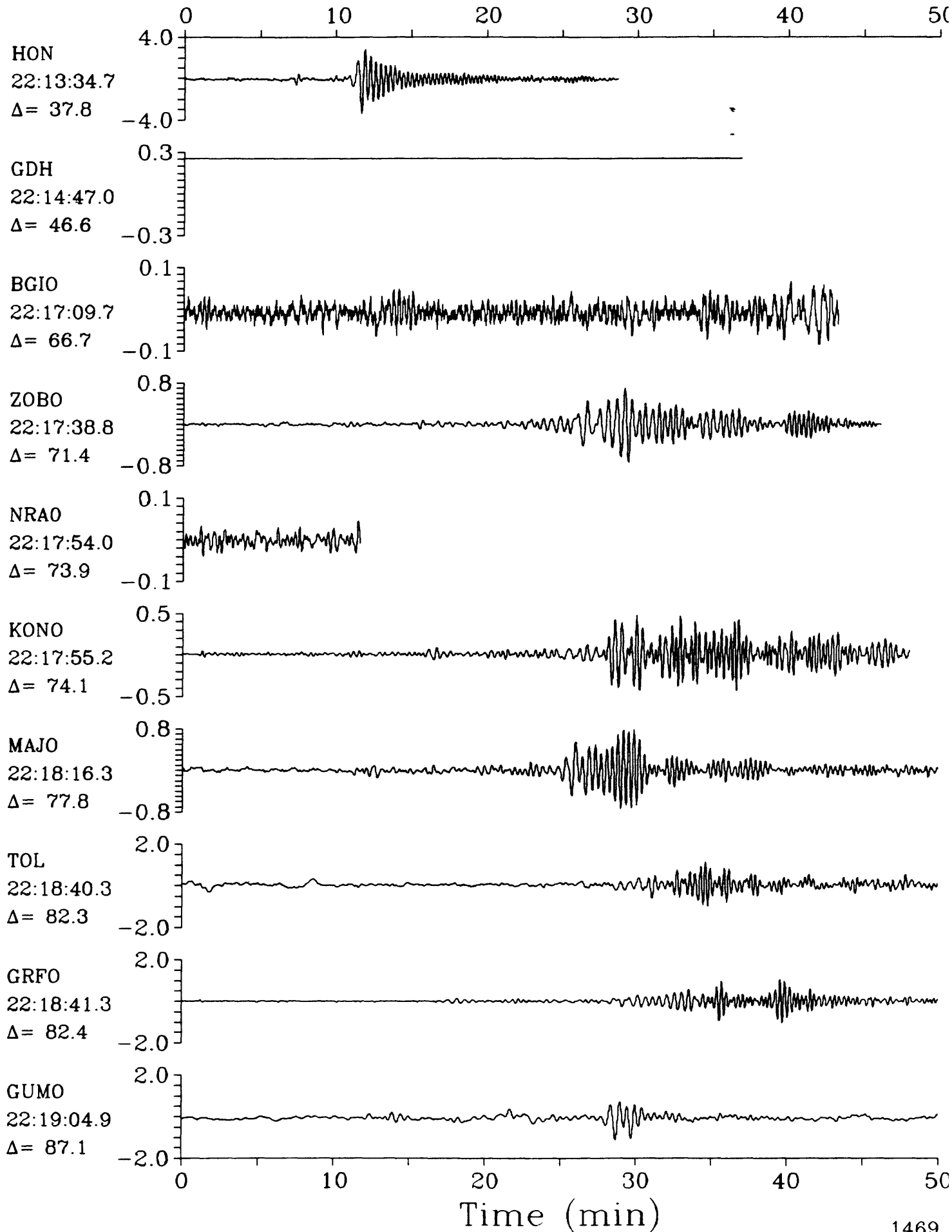
LPZ

California-Nevada Border Region  $h=9.0$   $m_b=5.5$   $M_{sz}=5.1$ 

LPZ

21 July 1986 22:07:18.00

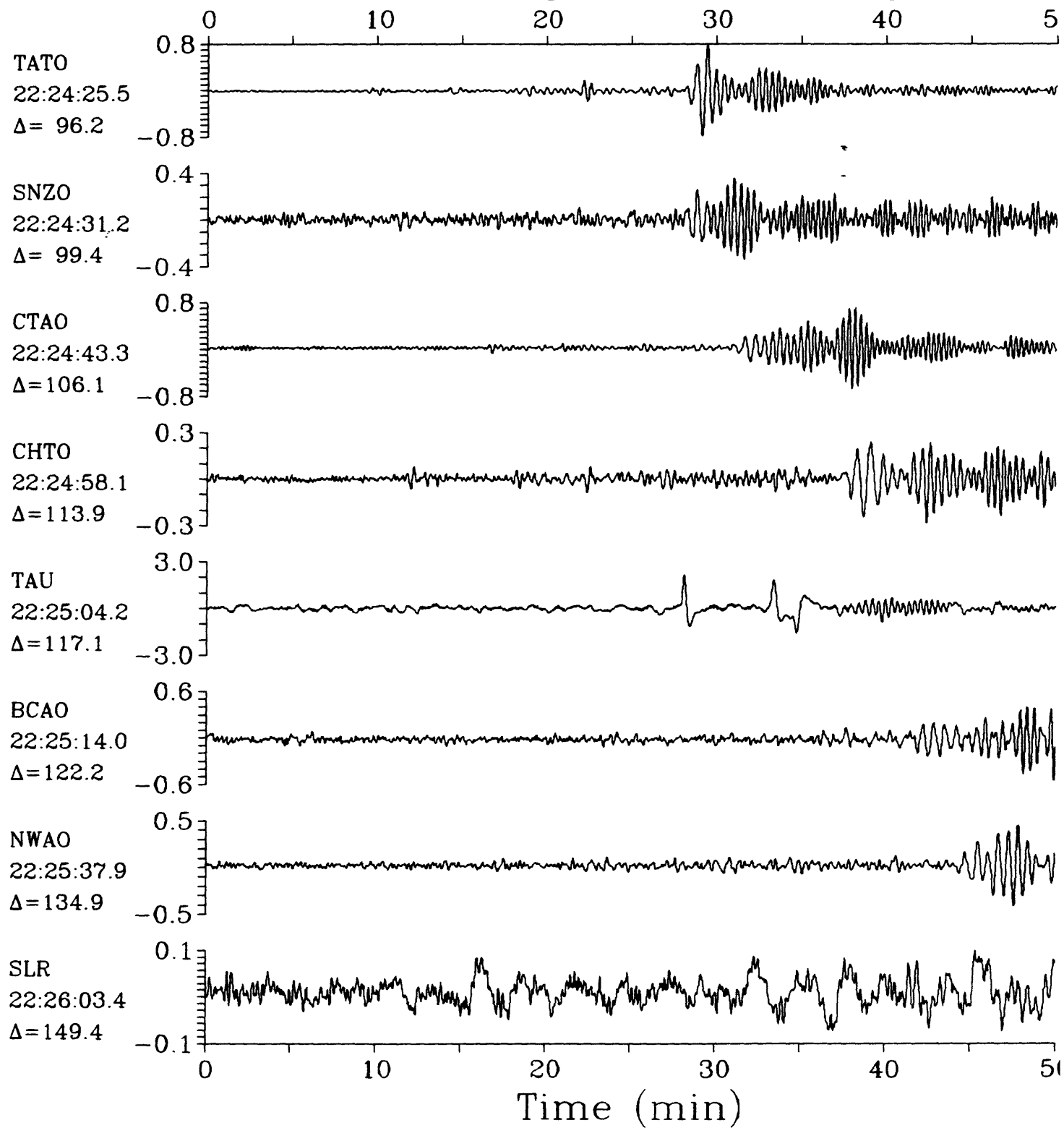
LPZ

California-Nevada Border Region  $h=9.0$   $m_b=5.5$   $M_{SZ}=5.1$ 

LPZ

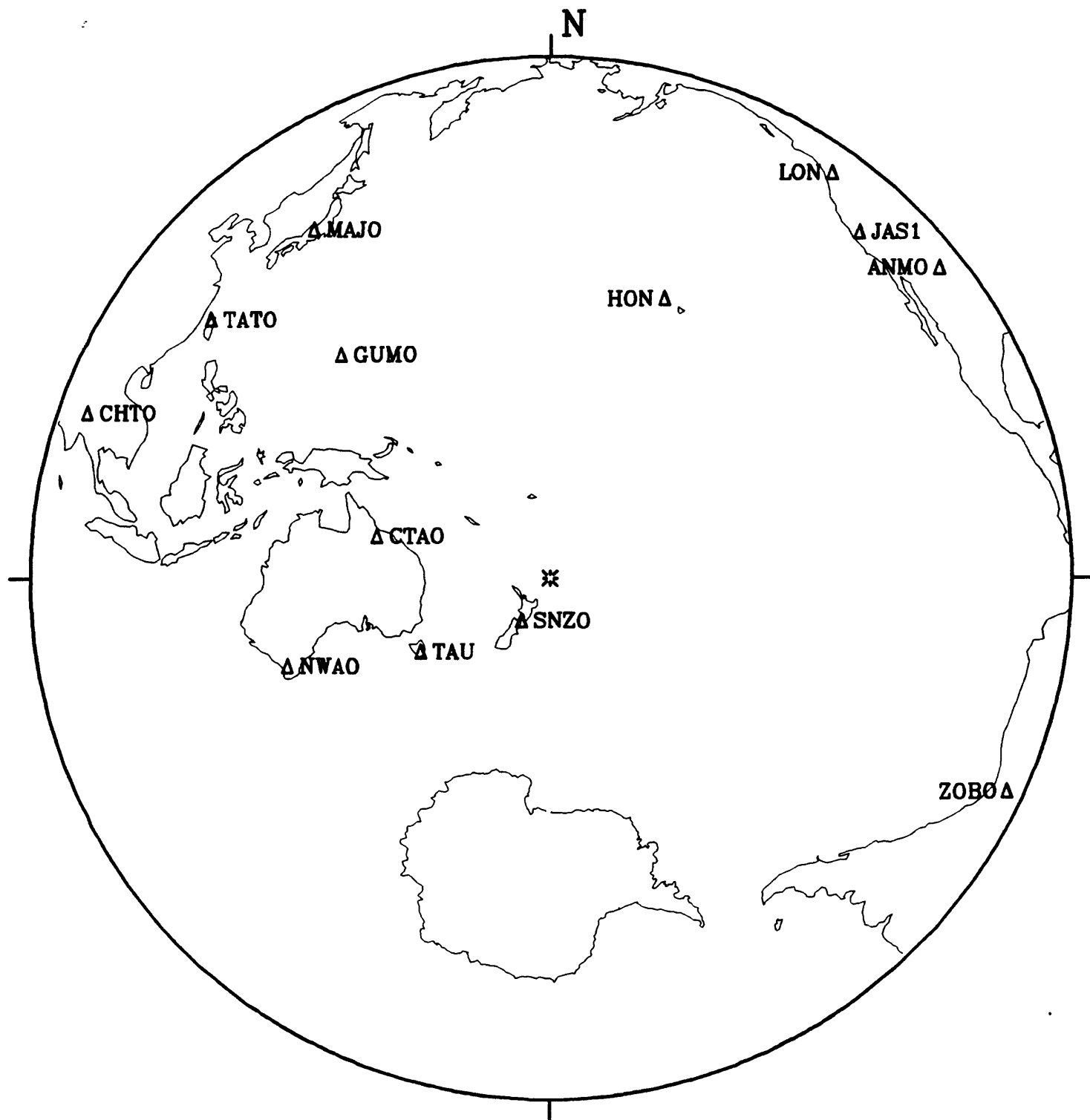
21 July 1986 22:07:18.00

LPZ

California-Nevada Border Region  $h=9.0$   $m_b=5.5$   $M_{SZ}=5.1$ 

22 July 1986 02:12:46.52

## South of Kermadec Islands

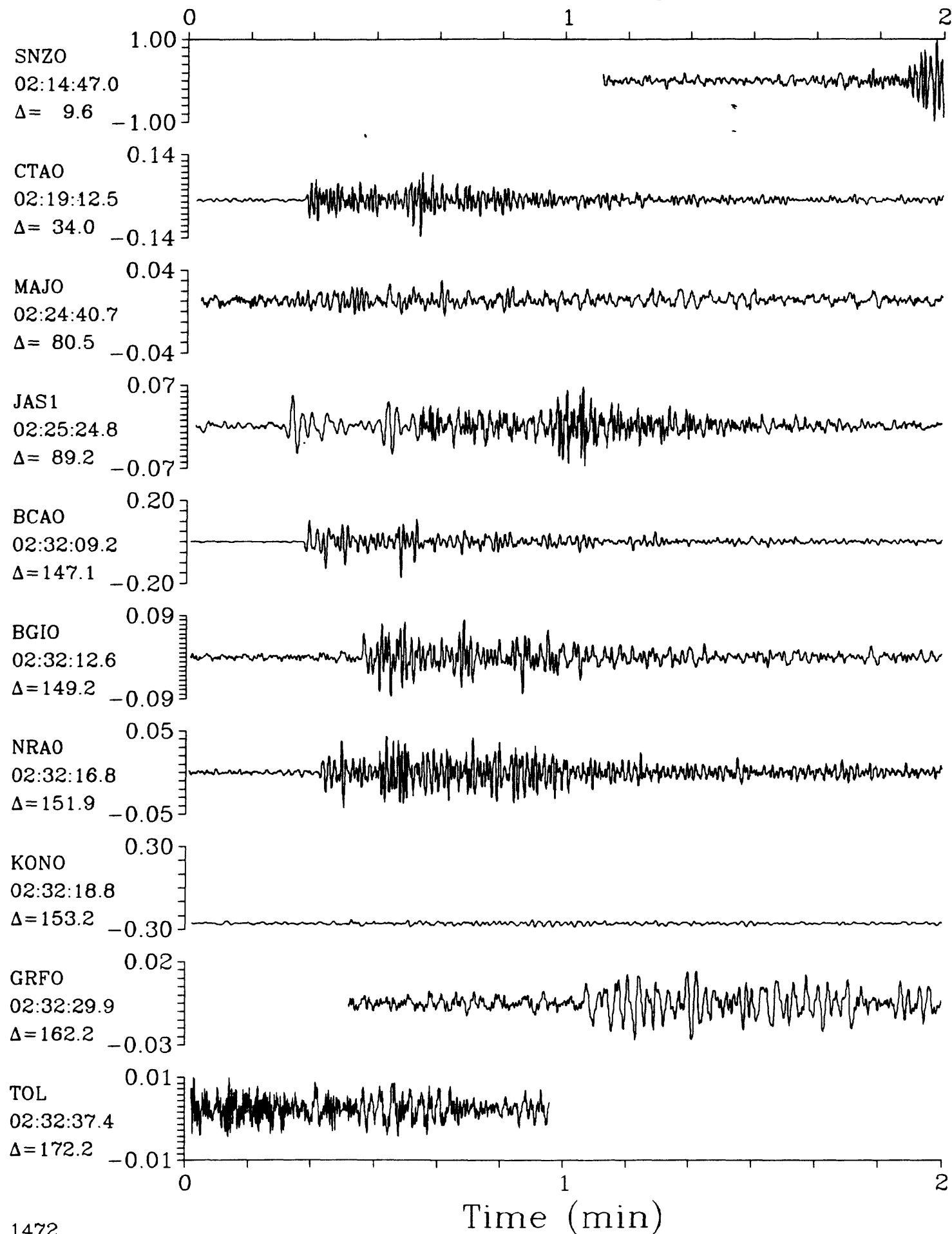




SPZ

22 July 1986 02:12:46.52

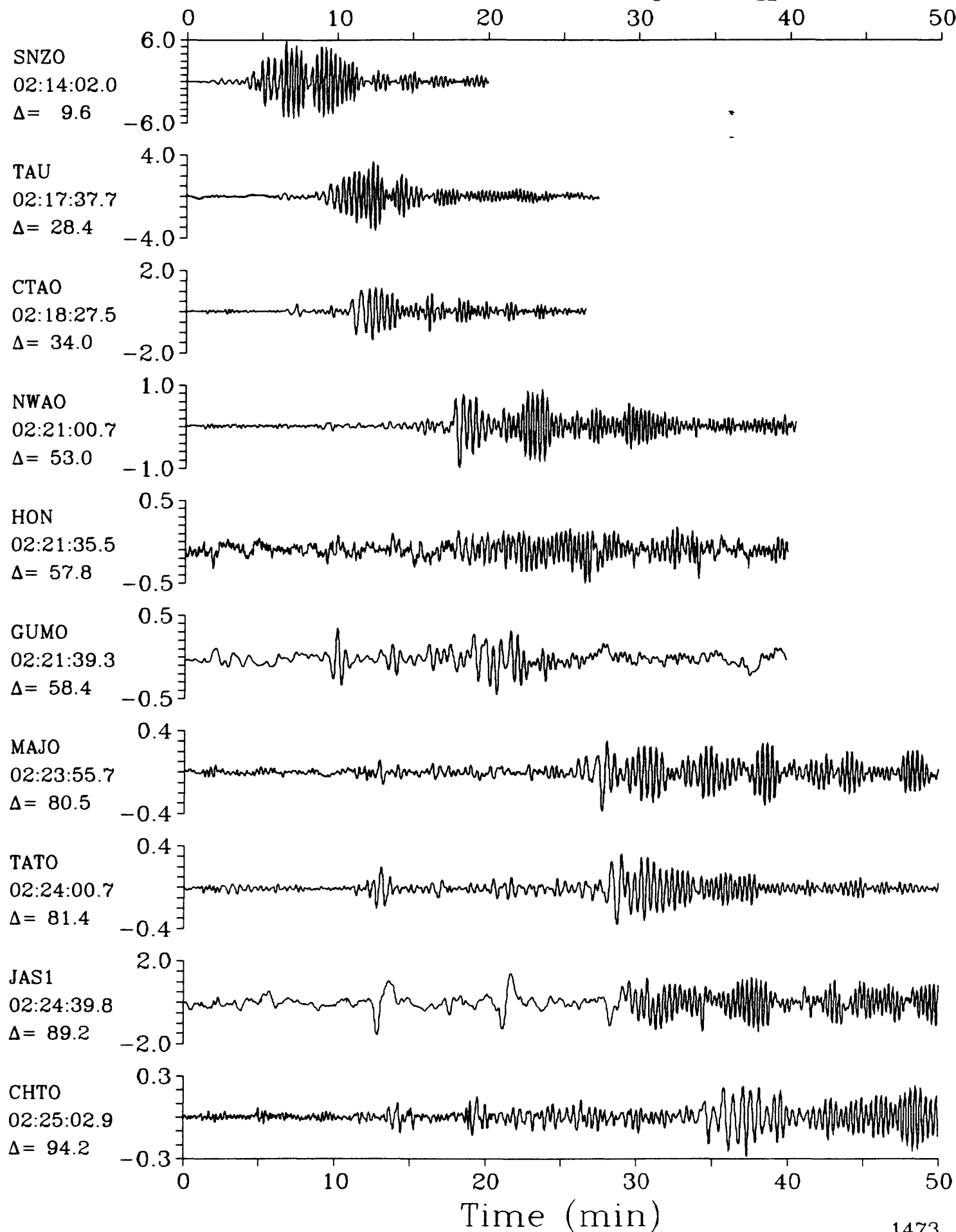
SPZ

South of Kermadec Islands  $h=33.0$   $m_b=5.5$   $M_{SZ}=5.2$ 

LPZ

22 July 1986 02:12:46.52

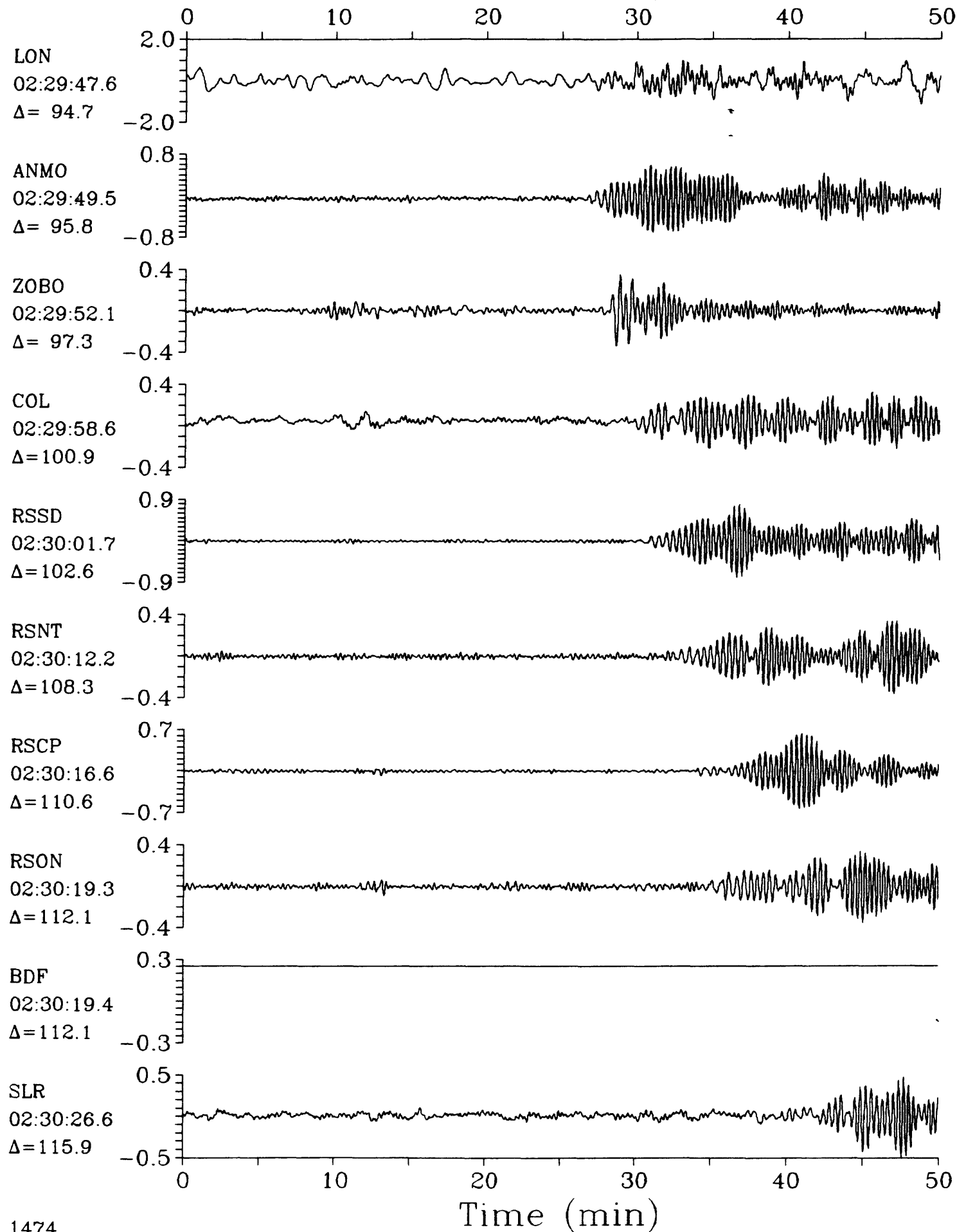
LPZ

South of Kermadec Islands  $h=33.0$   $m_b=5.5$   $M_{sz}=5.2$ 

LPZ

22 July 1986 02:12:46.52

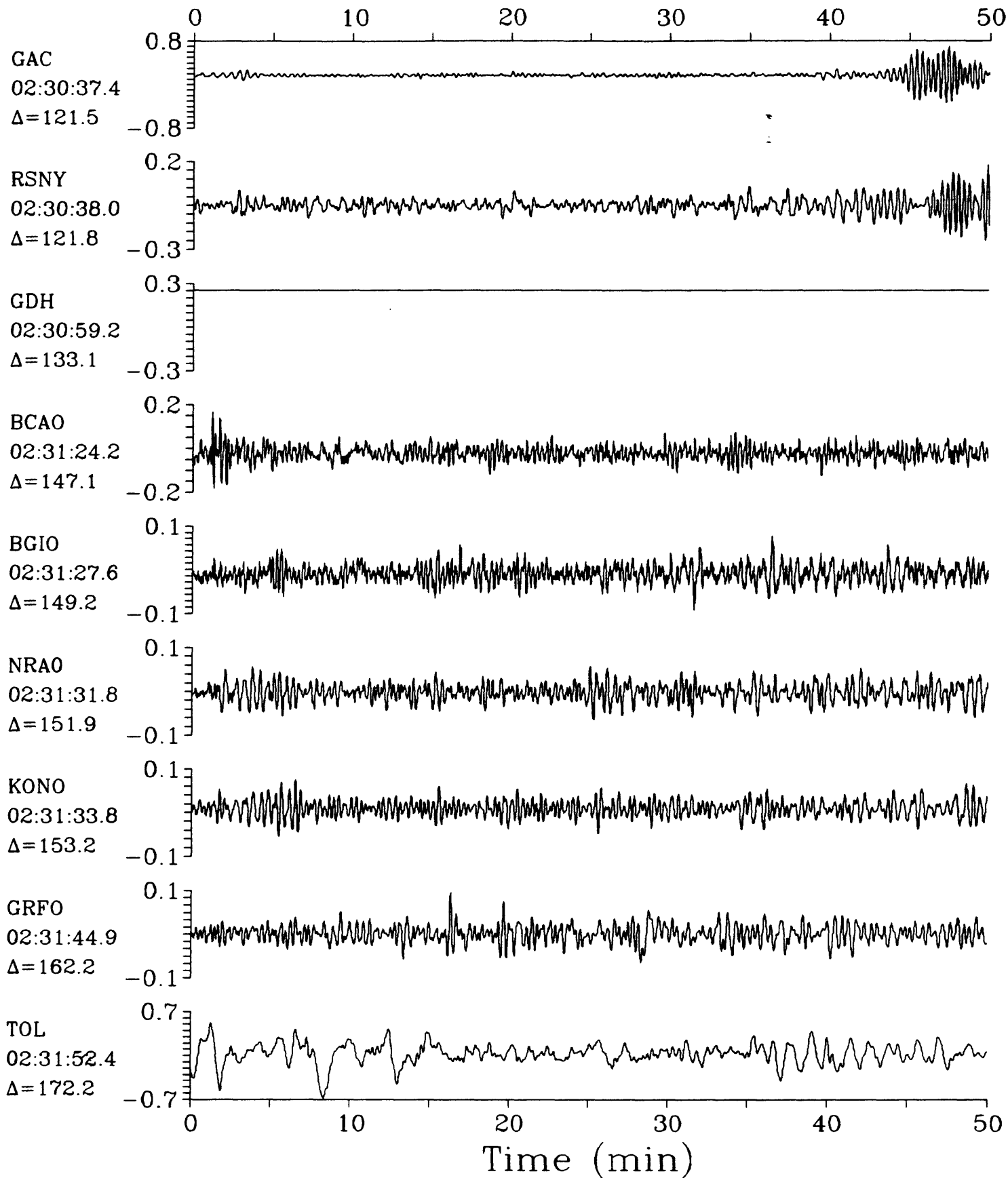
LPZ

South of Kermadec Islands  $h=33.0$   $m_b=5.5$   $M_{sz}=5.2$ 

LPZ

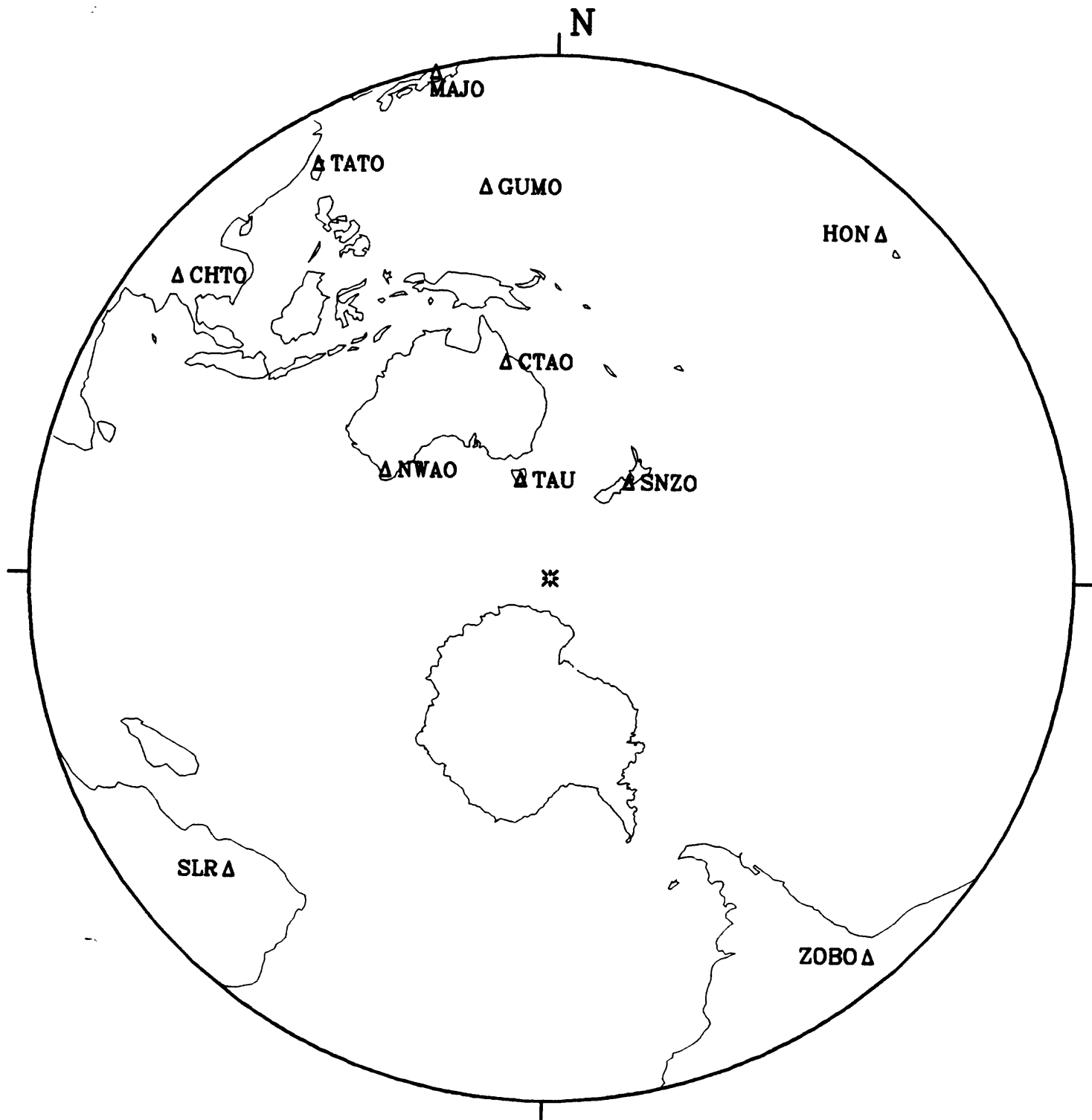
22 July 1986 02:12:46.52

LPZ

South of Kermadec Islands  $h=33.0$   $m_b=5.5$   $M_{sz}=5.2$ 

23 July 1986 07:35:27.48

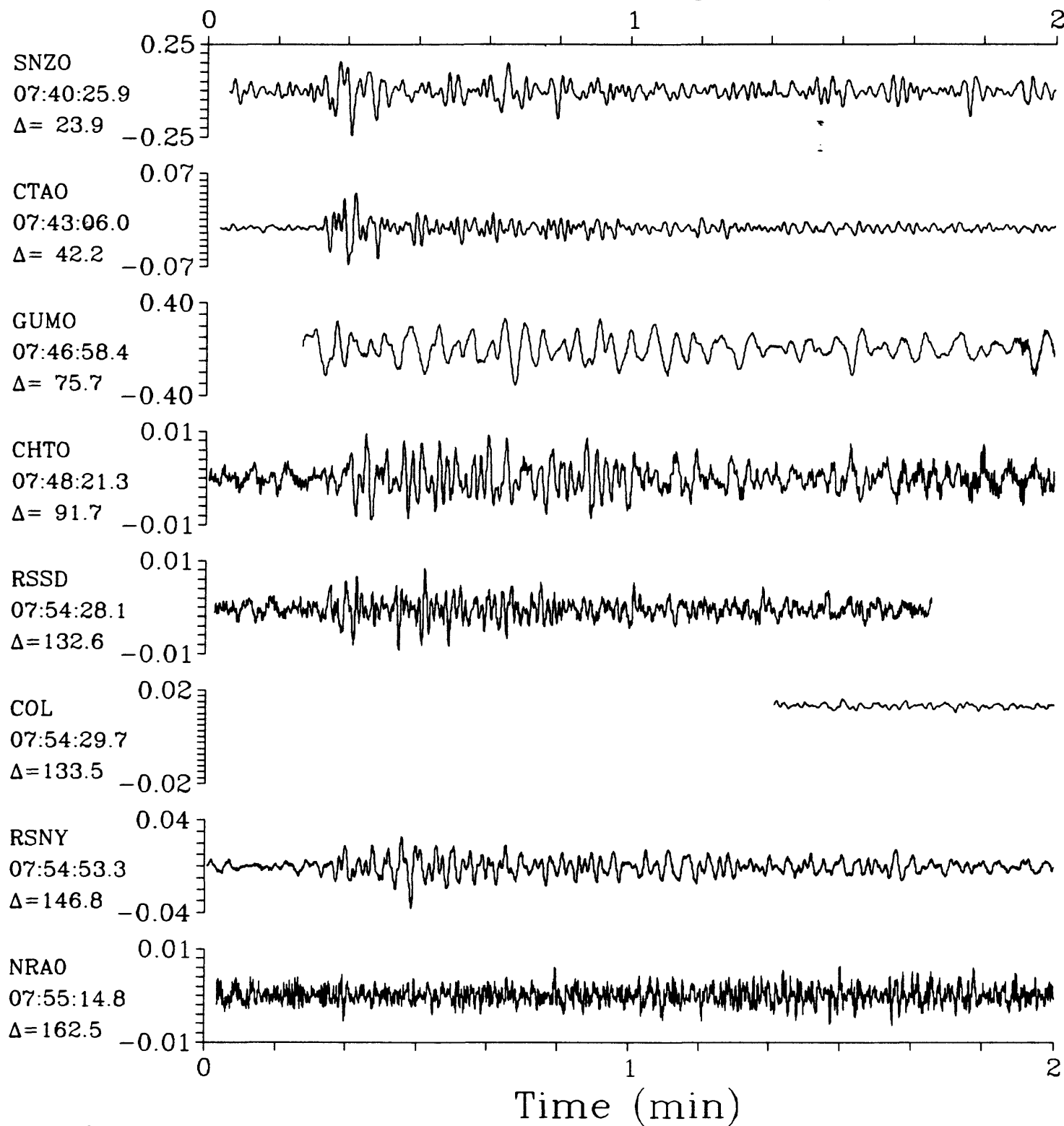
## Balleny Islands Region



SPZ

23 July 1986 07:35:27.48

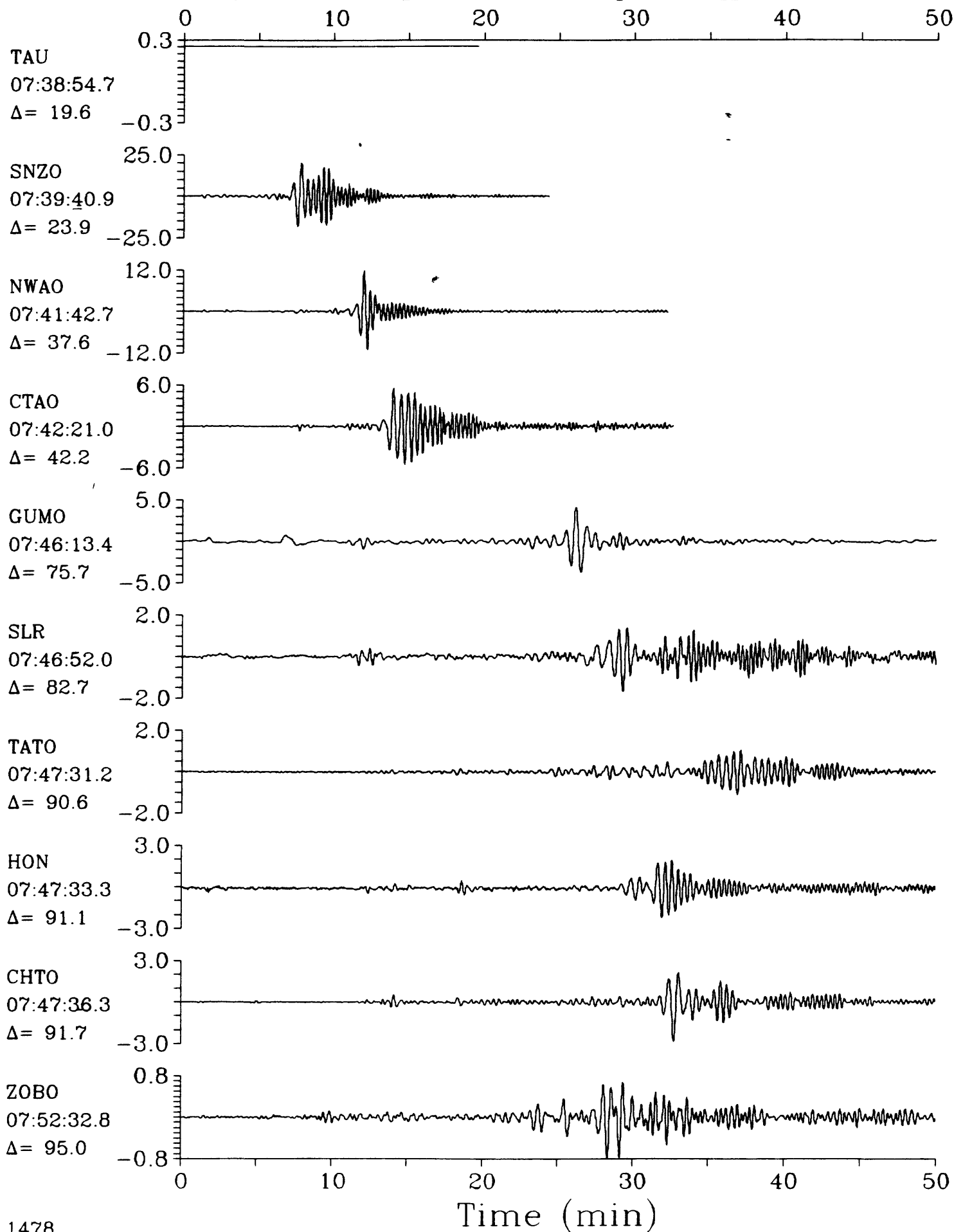
SPZ

Balleny Islands Region  $h=10.0$   $m_b=5.3$   $M_{sz}=5.6$ 

LPZ

23 July 1986 07:35:27.48

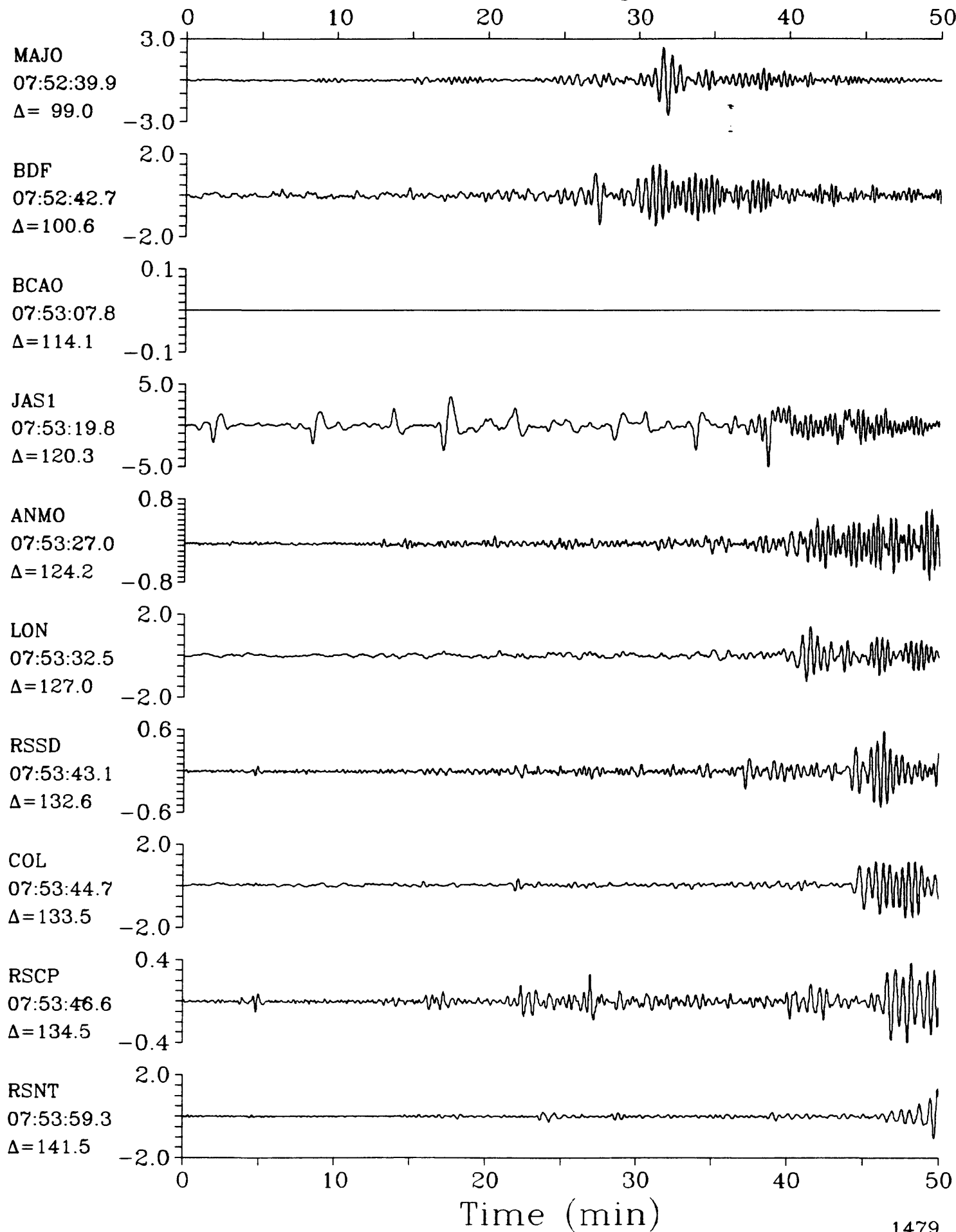
LPZ

Balleny Islands Region  $h=10.0$   $m_b=5.3$   $M_{sz}=5.6$ 

LPZ

23 July 1986 07:35:27.48

LPZ

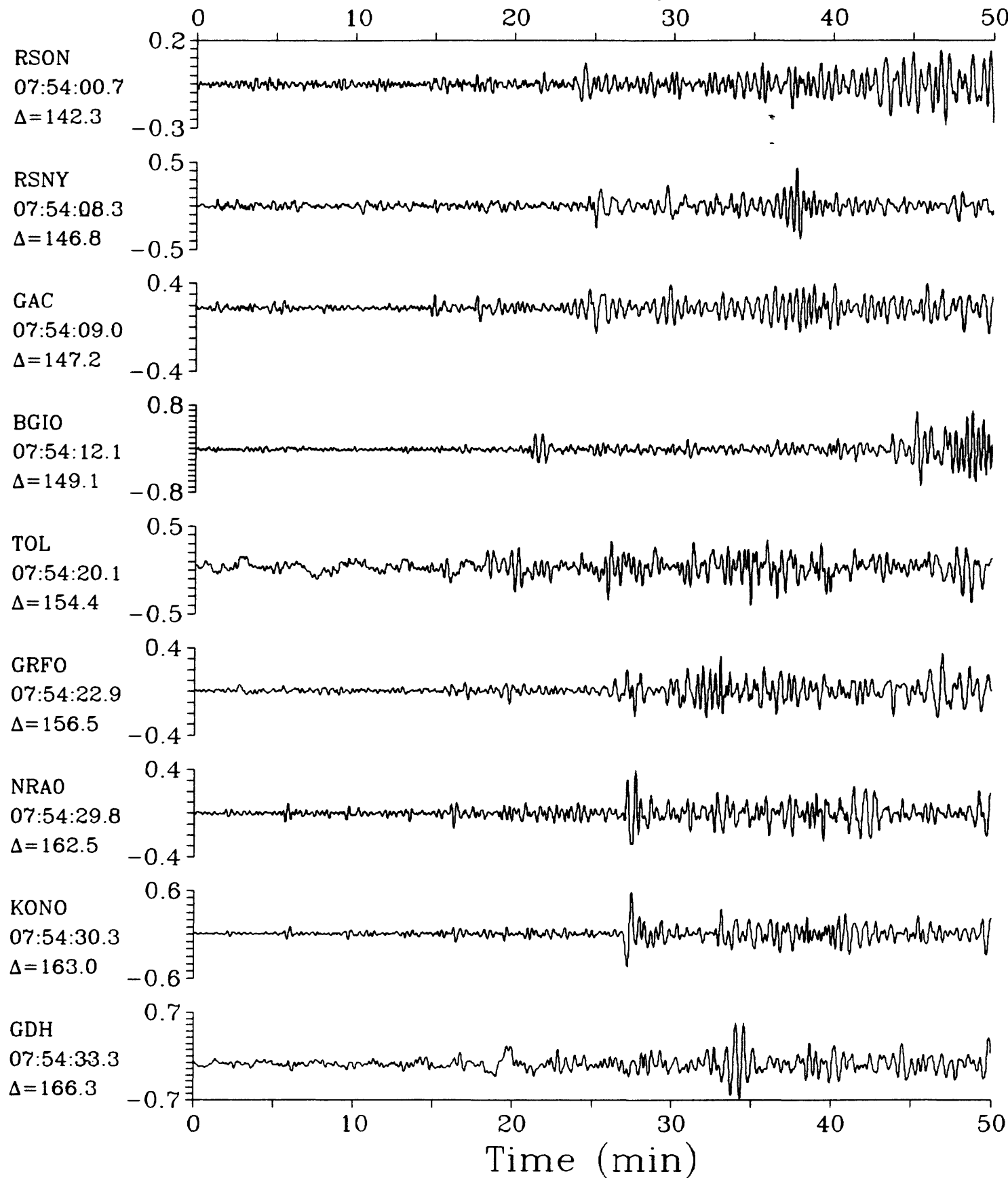
Balleny Islands Region  $h=10.0$   $m_b=5.3$   $M_{SZ}=5.6$ 



LPZ

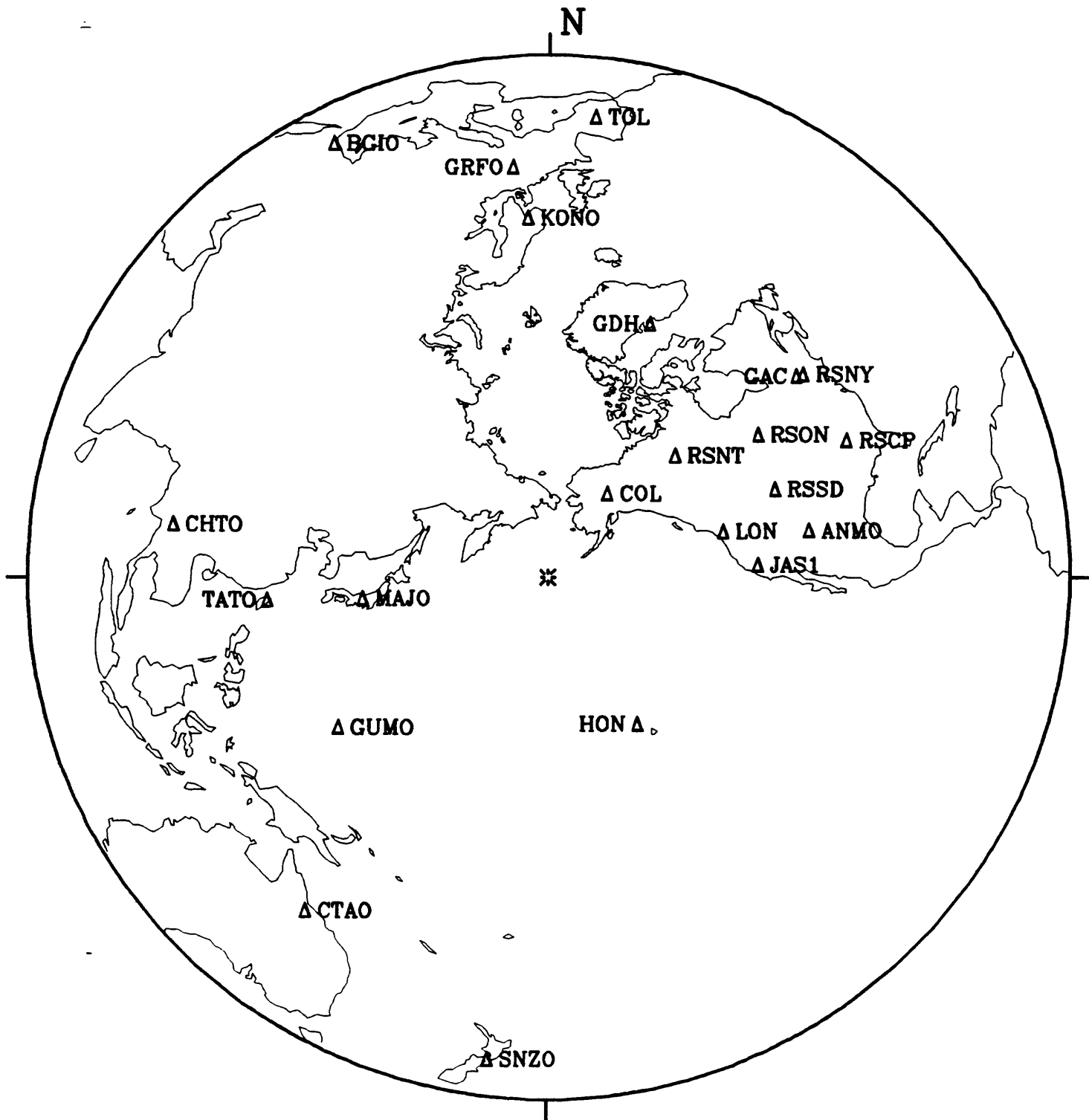
23 July 1986 07:35:27.48

LPZ

Balleny Islands Region  $h=10.0$   $m_b=5.3$   $M_{sz}=5.6$ 

25 July 1986 09:01:32.10

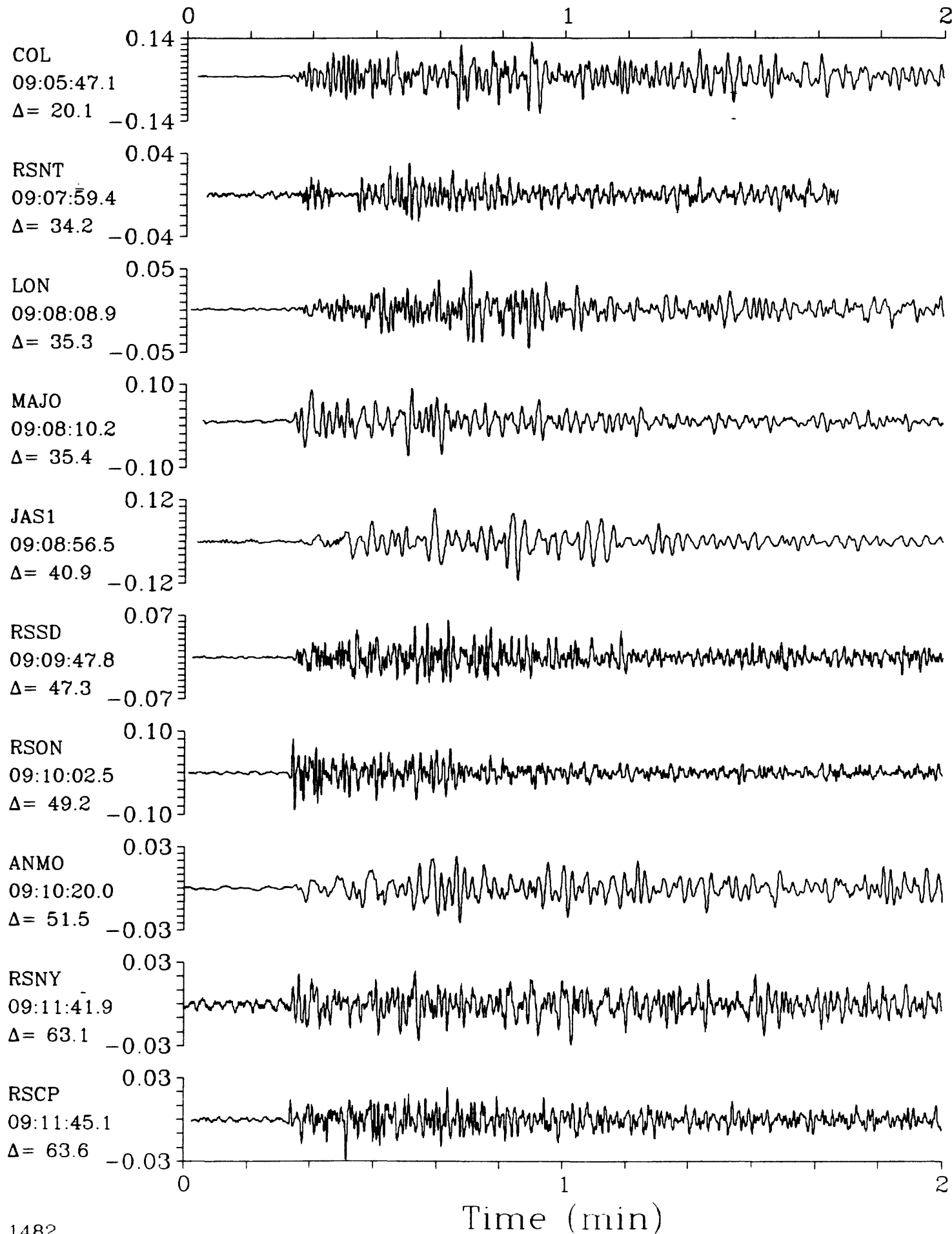
# Andreanof Islands, Aleutian Is.



SPZ

25 July 1986 09:01:32.10

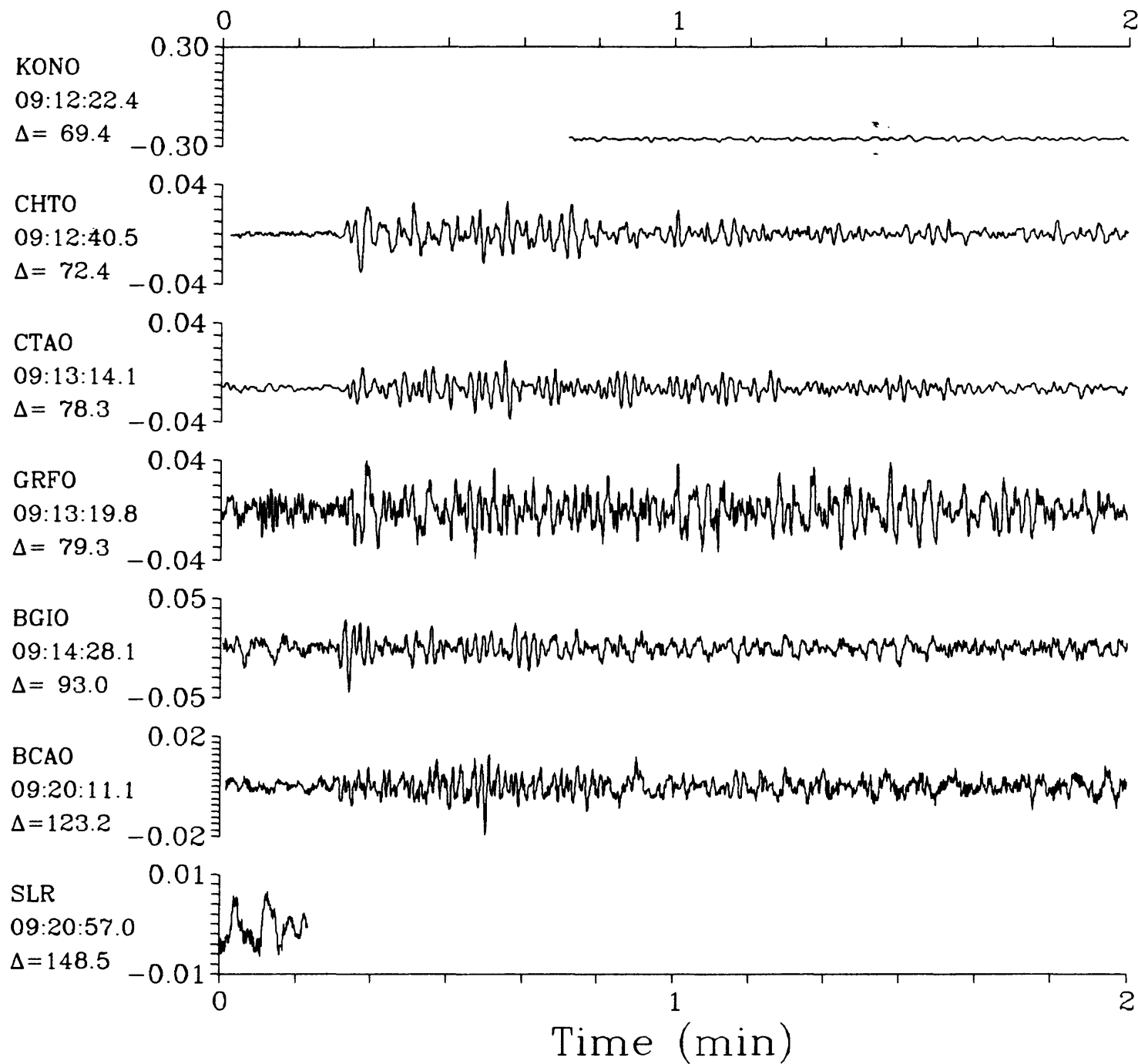
SPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.3$   $M_{sz}=5.5$ 

SPZ

25 July 1986 09:01:32.10

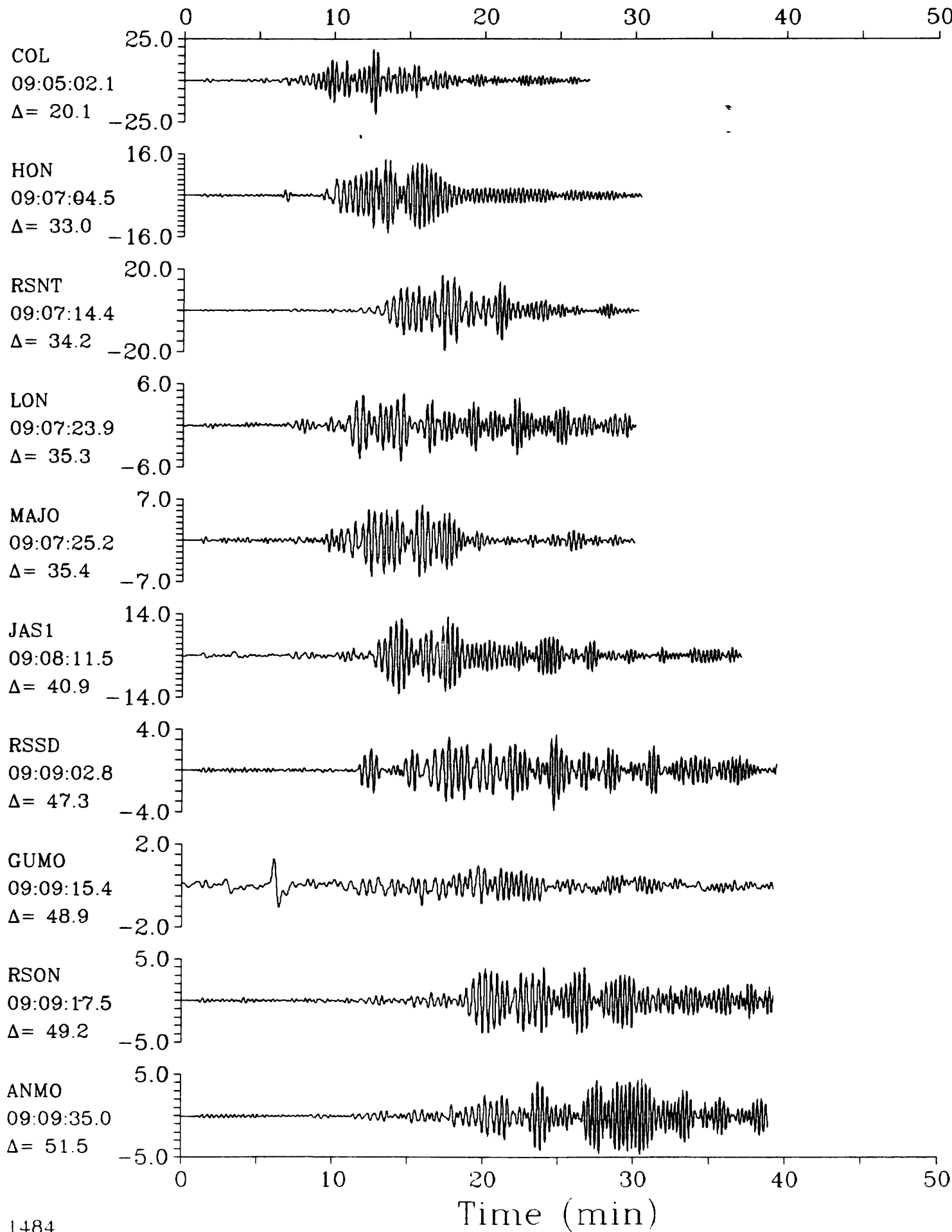
SPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.3$   $M_{sz}=5.5$ 

LPZ

25 July 1986 09:01:32.10

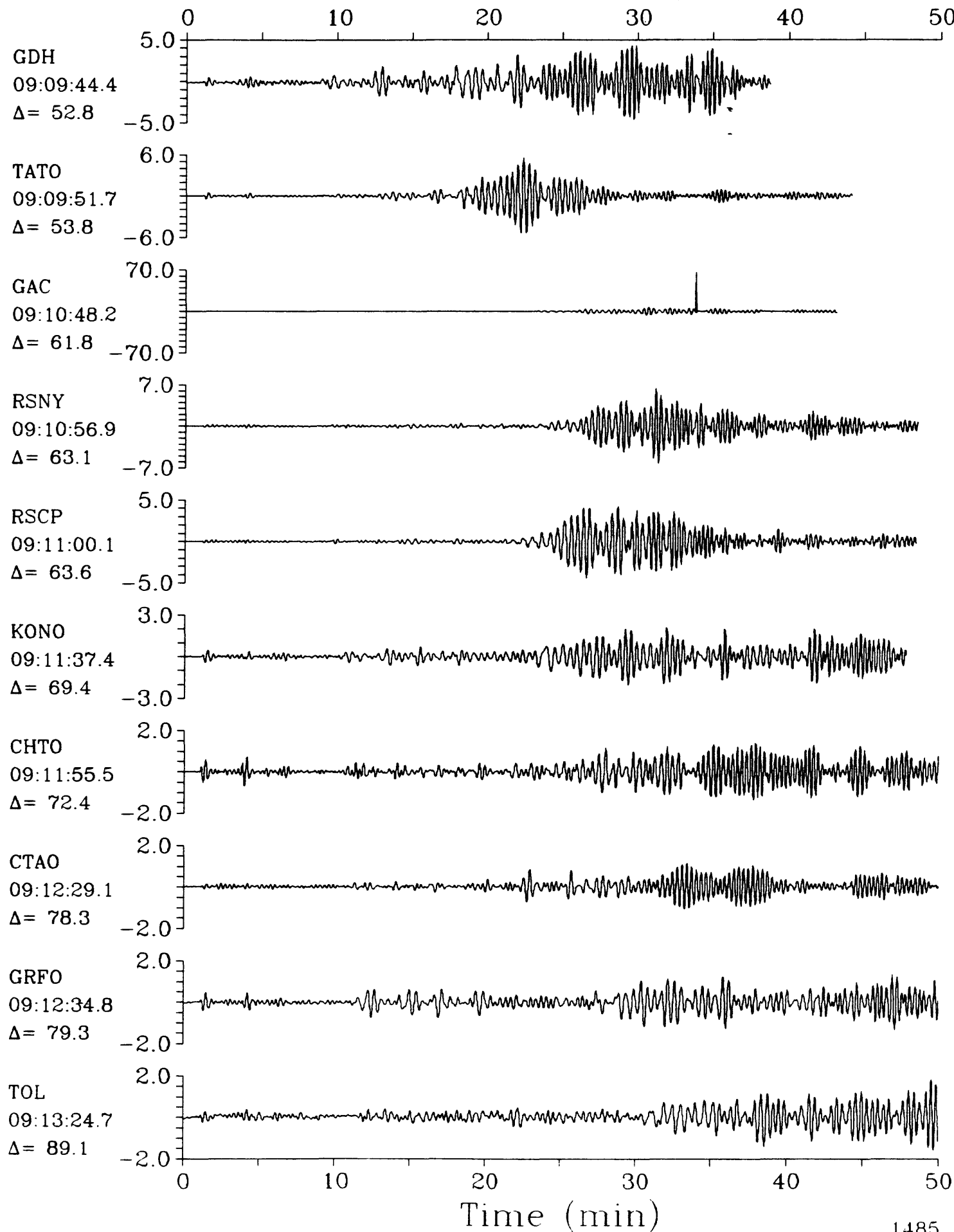
LPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.3$   $M_{SZ}=5.5$ 

LPZ

25 July 1986 09:01:32.10

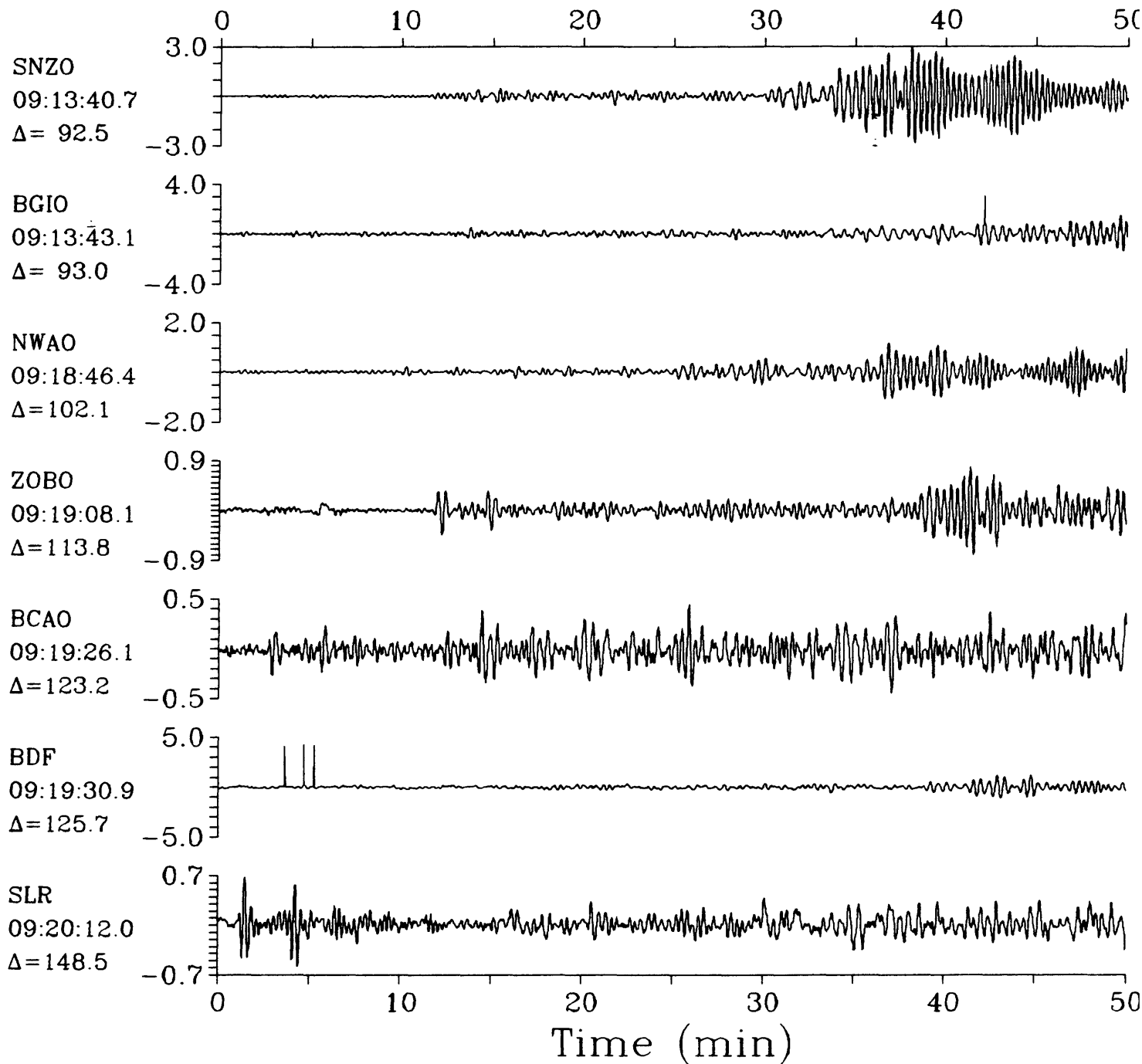
LPZ

Andreasof Islands, Aleutian Is.  $h=33.0$   $m_b=5.3$   $M_{sz}=5.5$ 

LPZ

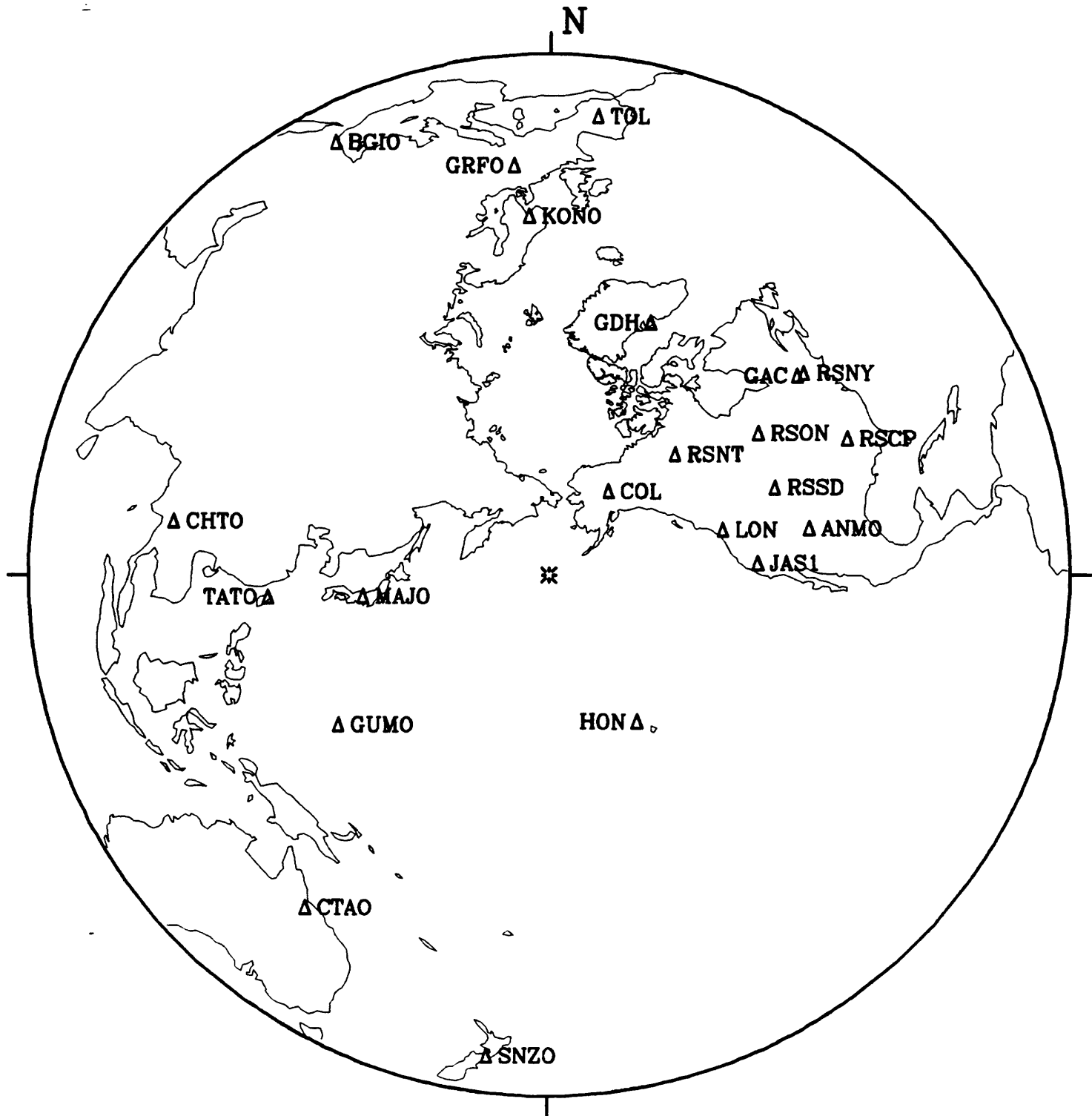
25 July 1986 09:01:32.10

LPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.3$   $M_{sz}=5.5$ 

25 July 1986 09:04:16.68

# Andreanof Islands, Aleutian Is.

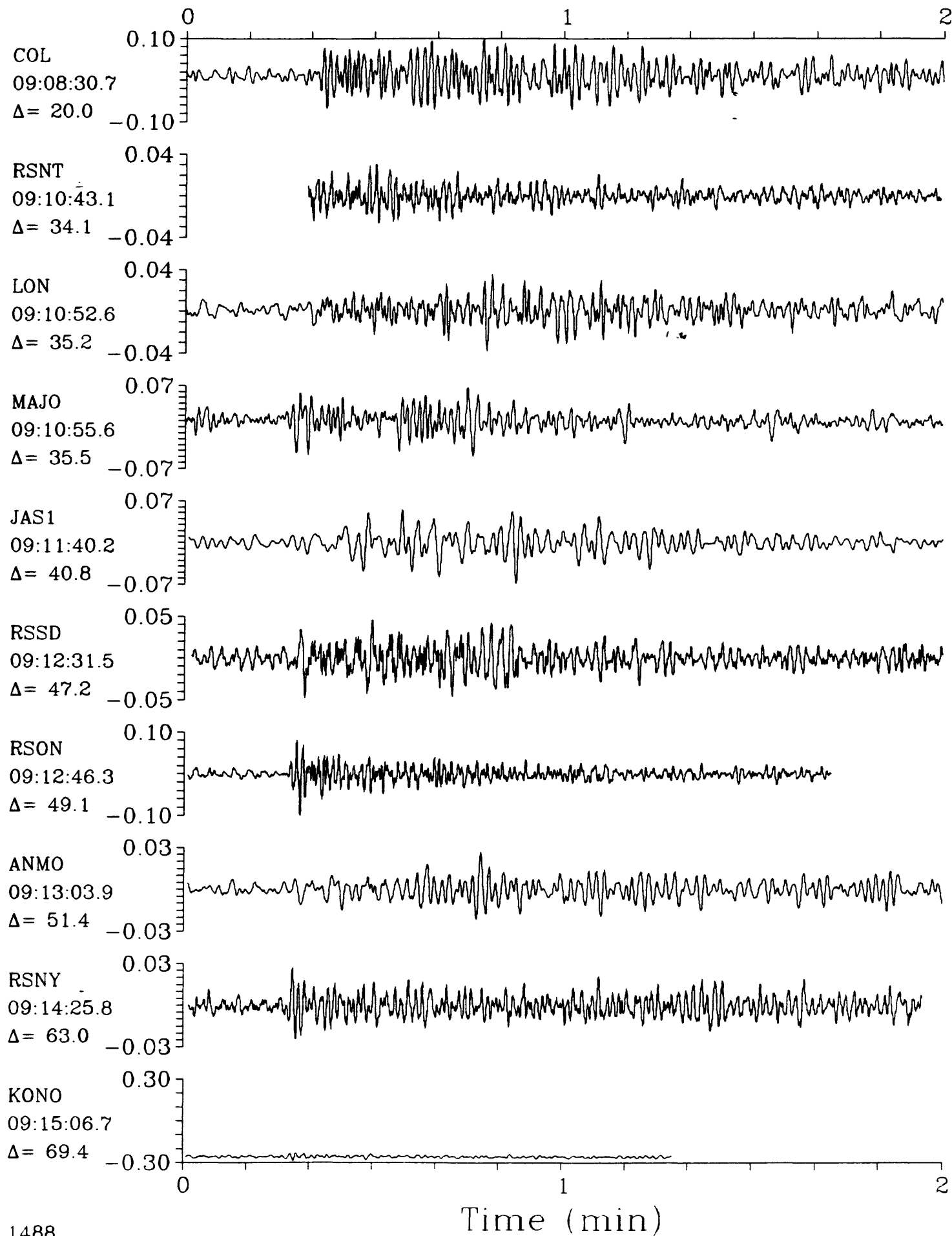




SPZ

25 July 1986 09:04:16.68

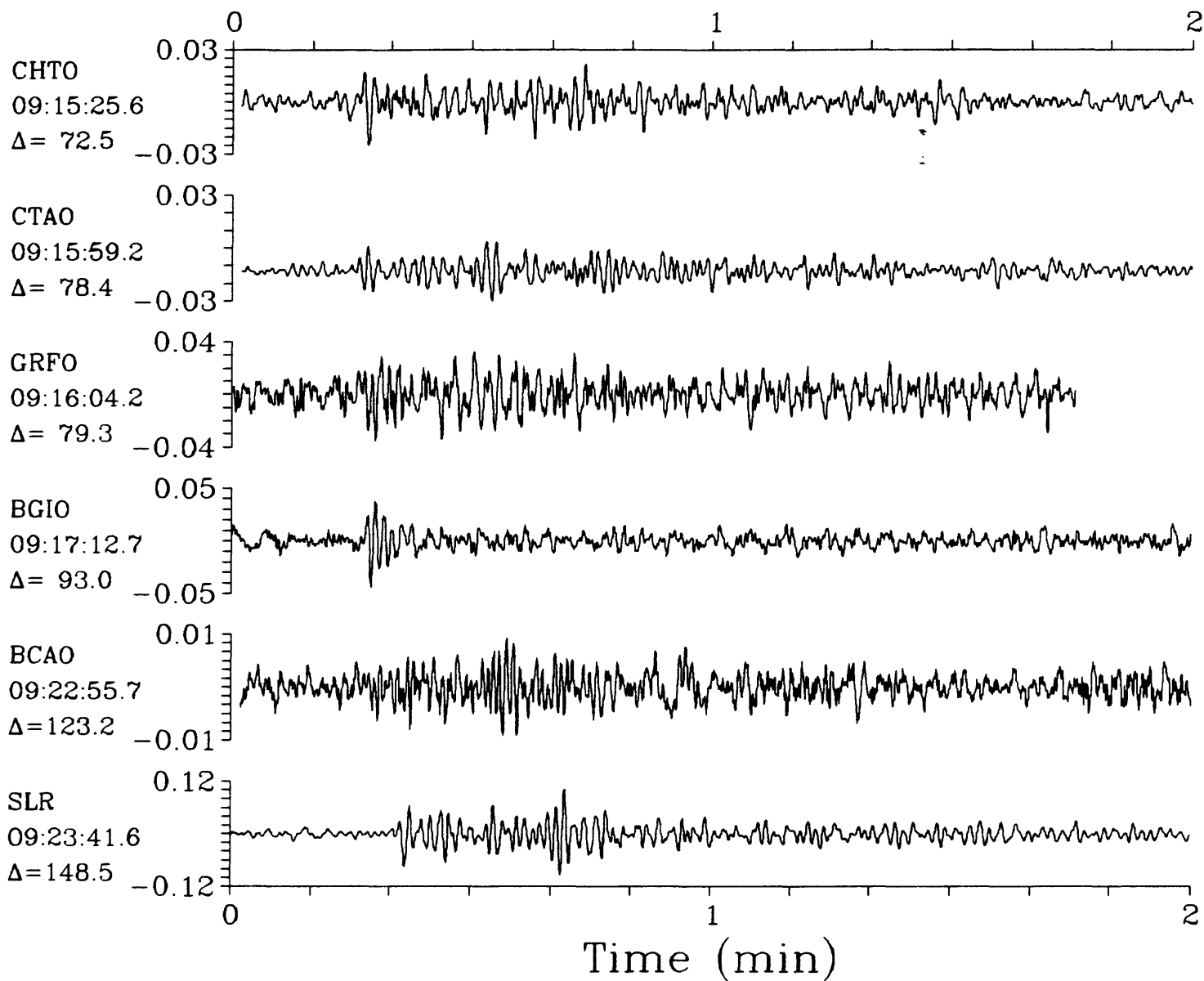
SPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.4$   $M_{sz}=5.6$ 

SPZ

25 July 1986 09:04:16.68

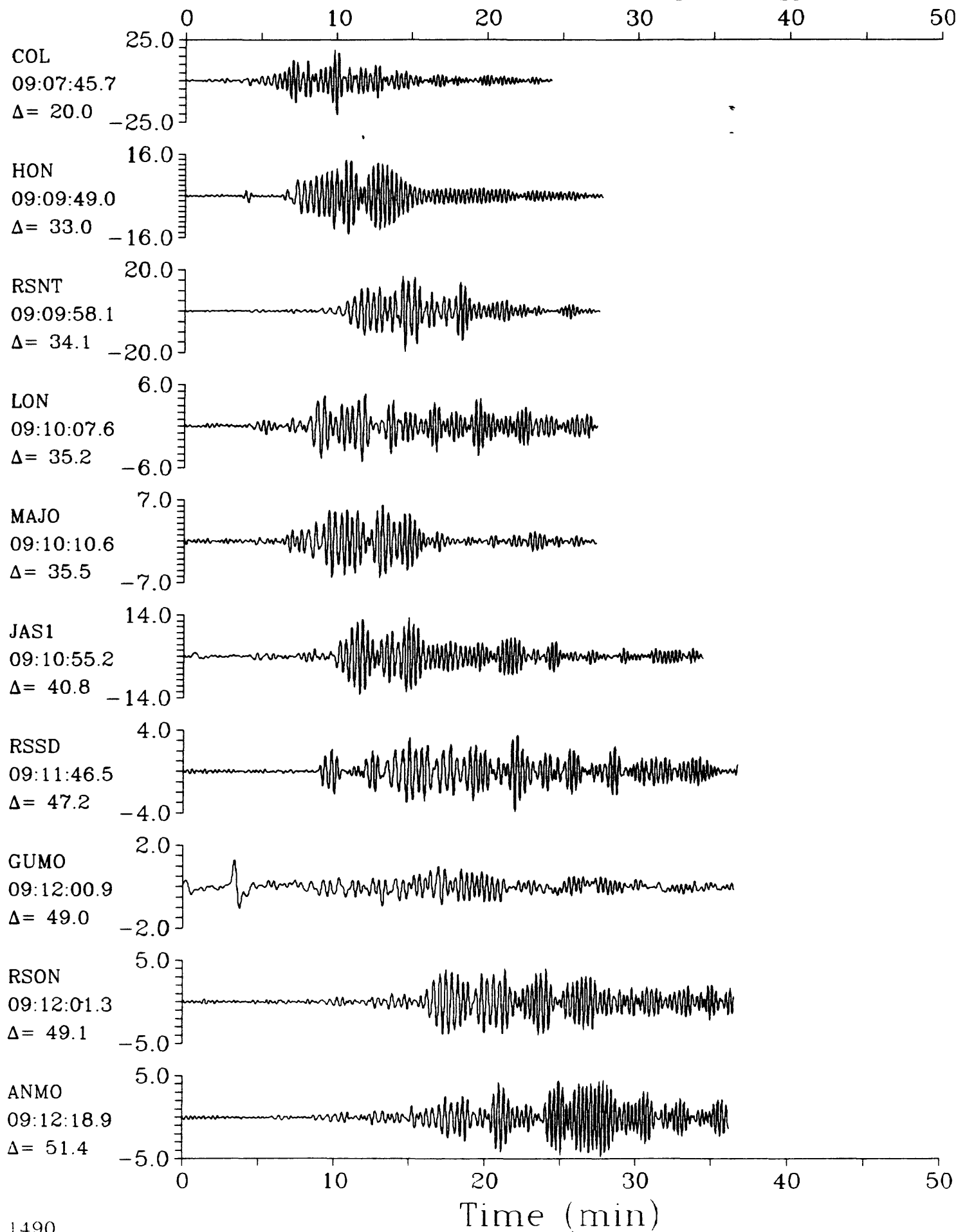
SPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.4$   $M_{sz}=5.6$ 

LPZ

25 July 1986 09:04:16.68

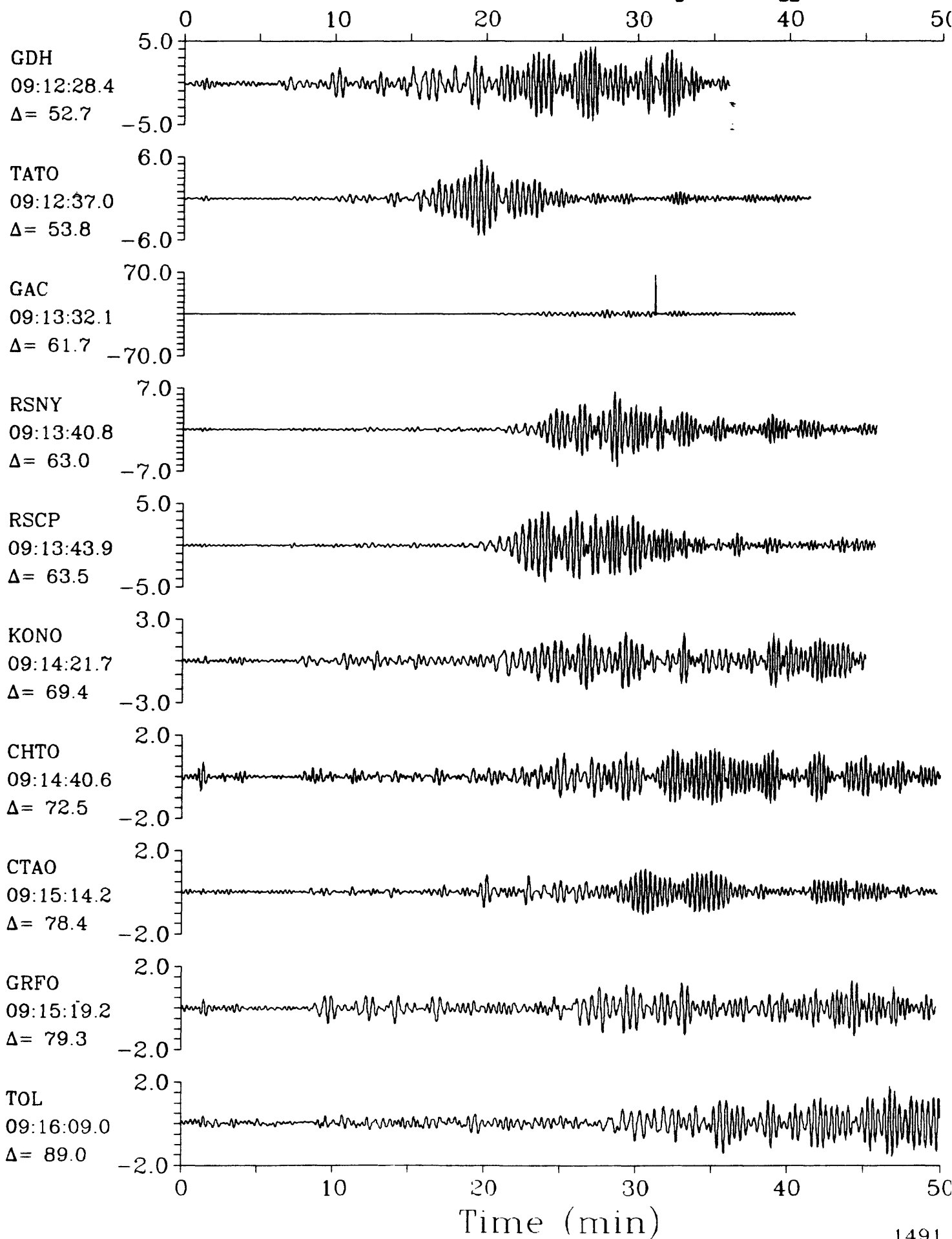
LPZ

Andreasof Islands, Aleutian Is.  $h=33.0$   $m_b=5.4$   $M_{sz}=5.6$ 

LPZ

25 July 1986 09:04:16.68

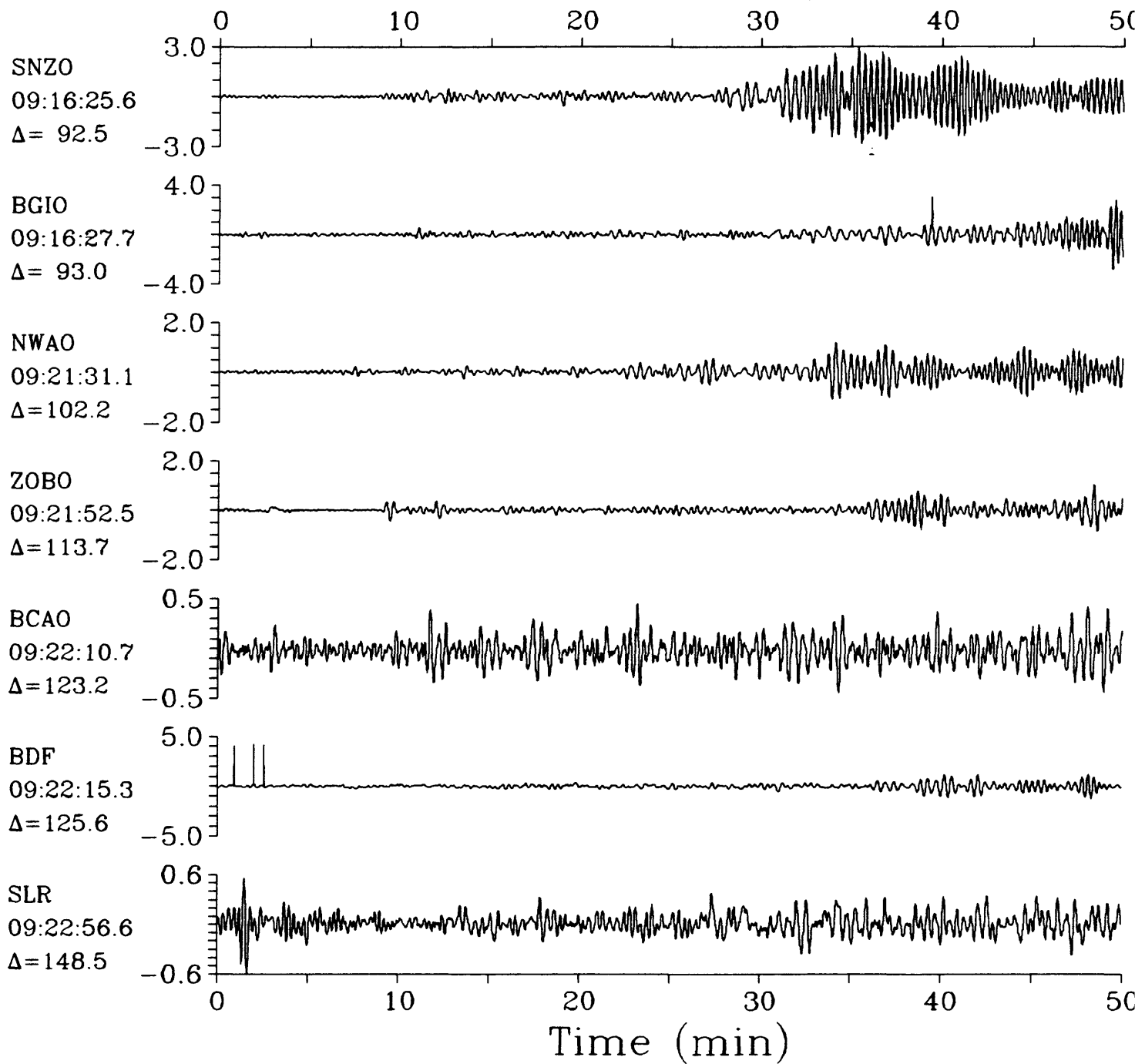
LPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.4$   $M_{sz}=5.6$ 

LPZ

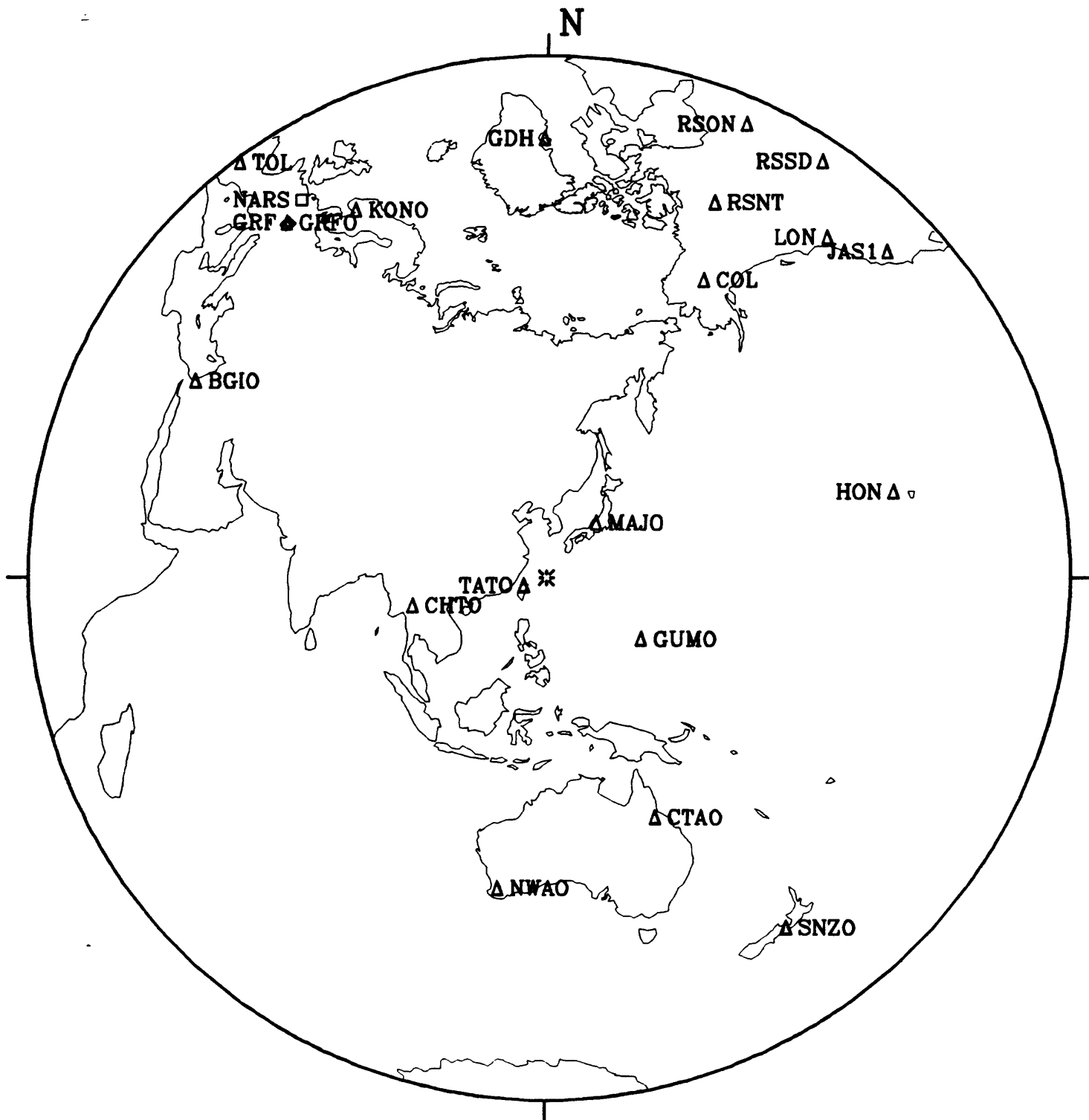
25 July 1986 09:04:16.68

LPZ

Andreanof Islands, Aleutian Is.  $h=33.0$   $m_b=5.4$   $M_{sz}=5.6$ 

25 July 1986 23:41:10.42

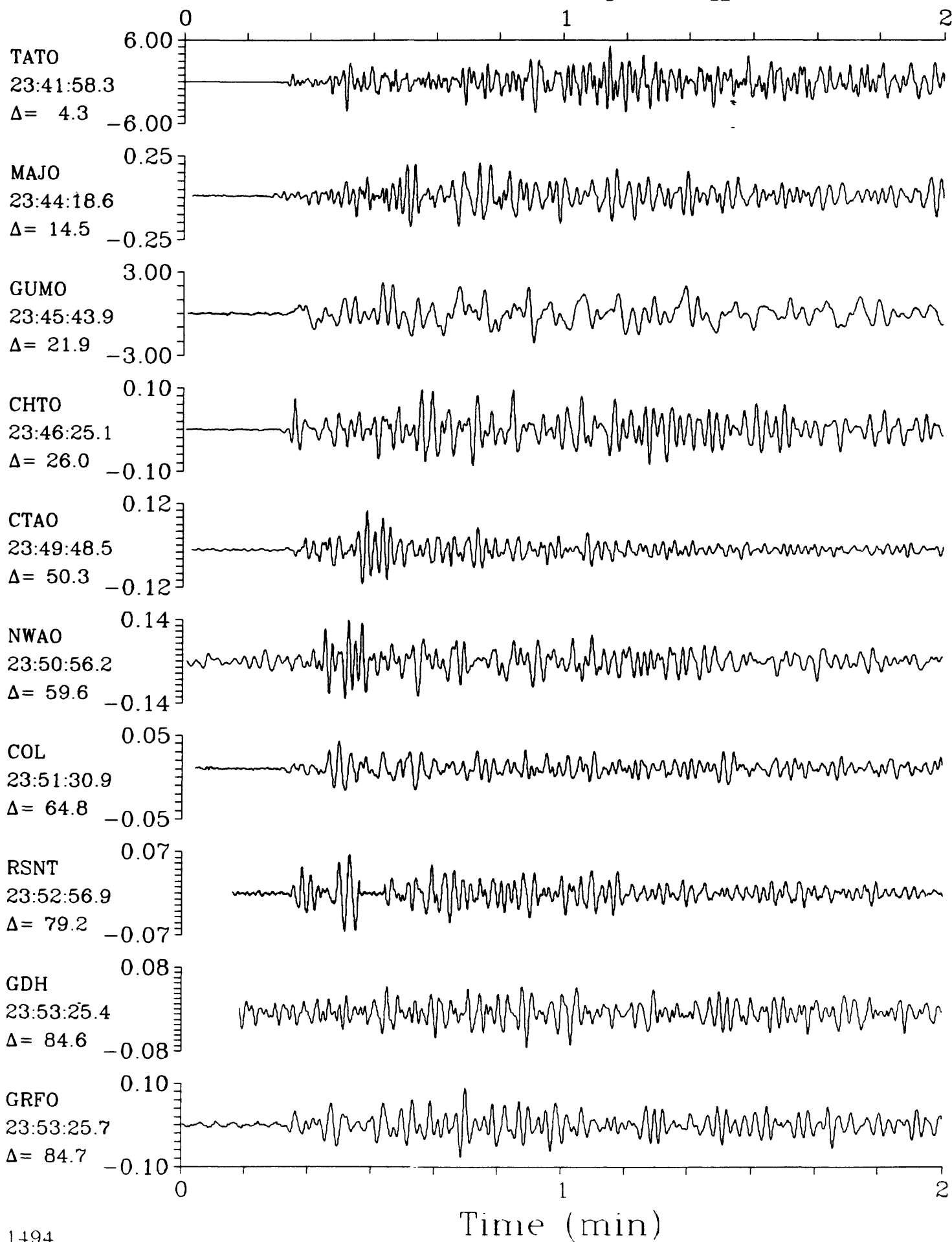
# Northeast of Taiwan



SPZ

25 July 1986 23:41:10.42

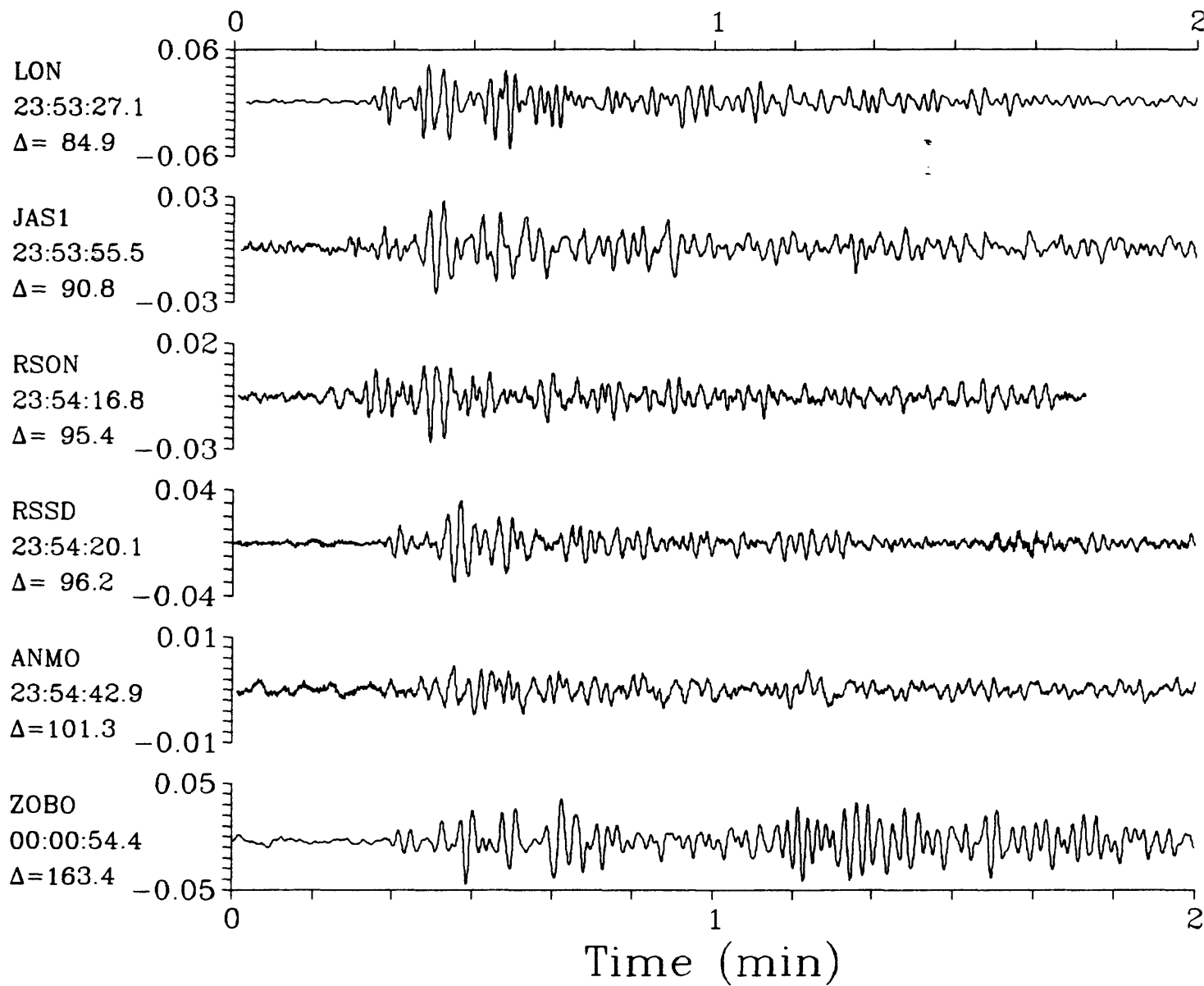
SPZ

Northeast of Taiwan  $h=38.0$   $m_b=5.5$   $M_{SZ}=6.1$ 

SPZ

25 July 1986 23:41:10.42

SPZ

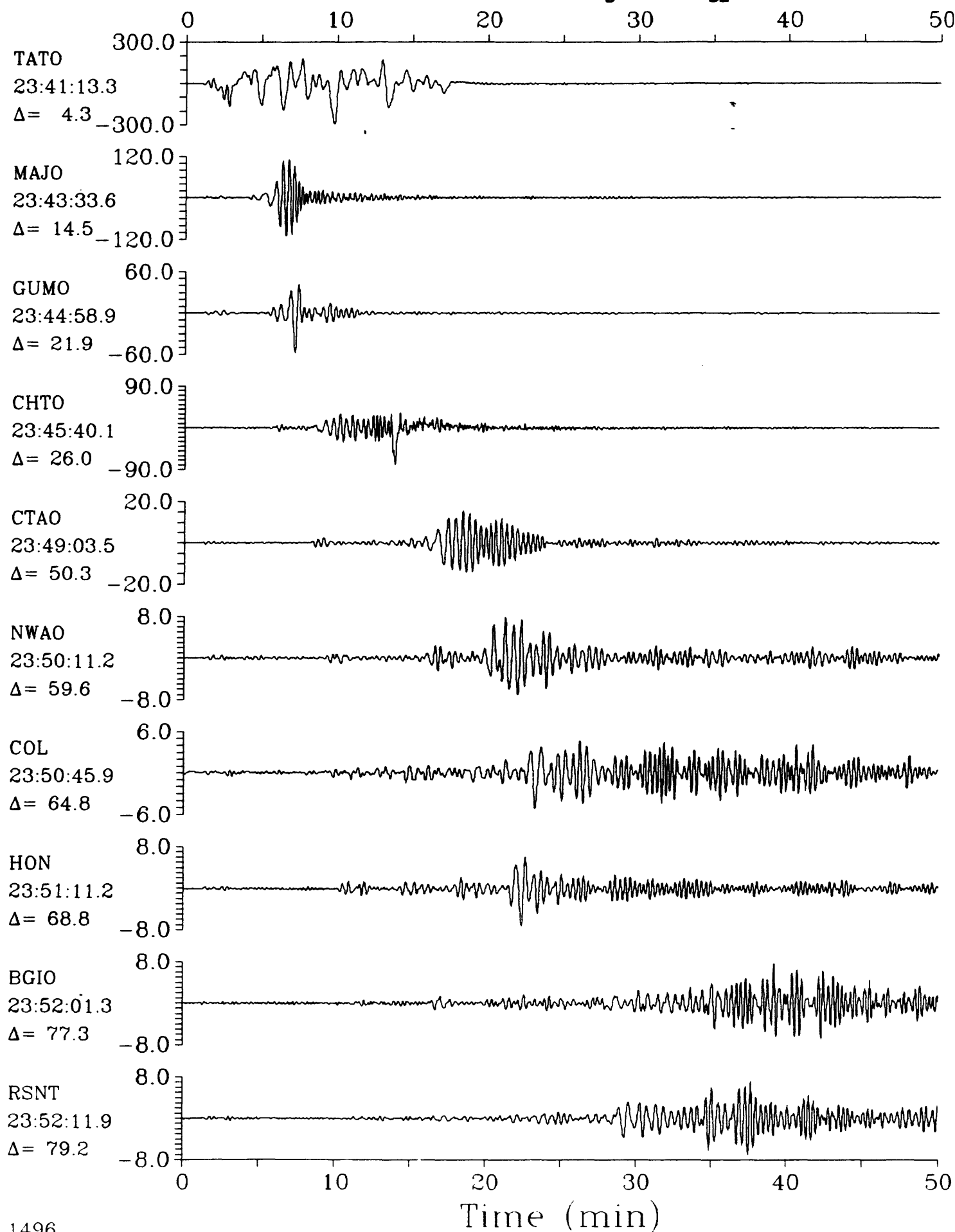
Northeast of Taiwan  $h=38.0$   $m_b=5.5$   $M_{sz}=6.1$ 



LPZ

25 July 1986 23:41:10.42

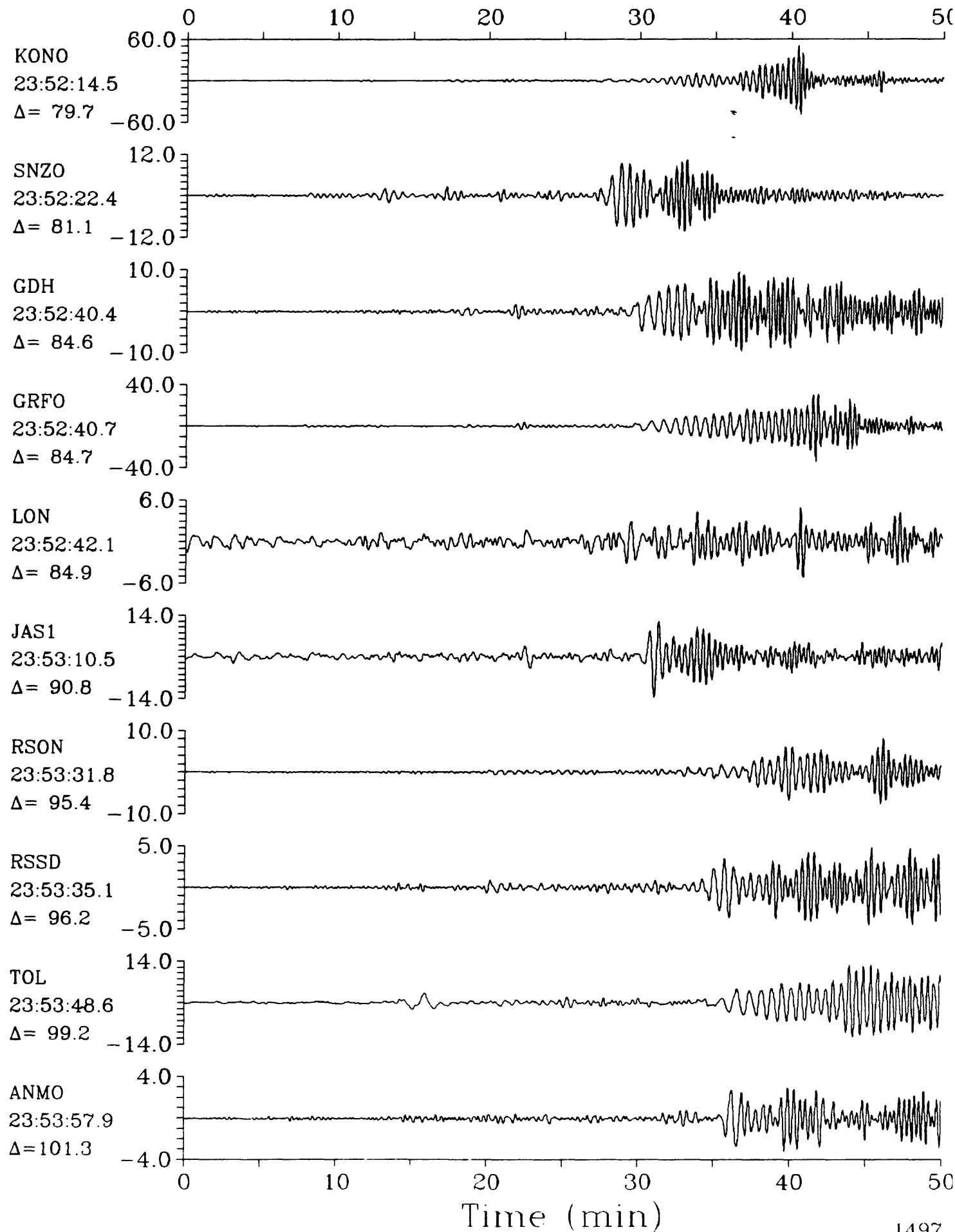
LPZ

Northeast of Taiwan  $h=38.0$   $m_b=5.5$   $M_{sz}=6.1$ 

LPZ

25 July 1986 23:41:10.42

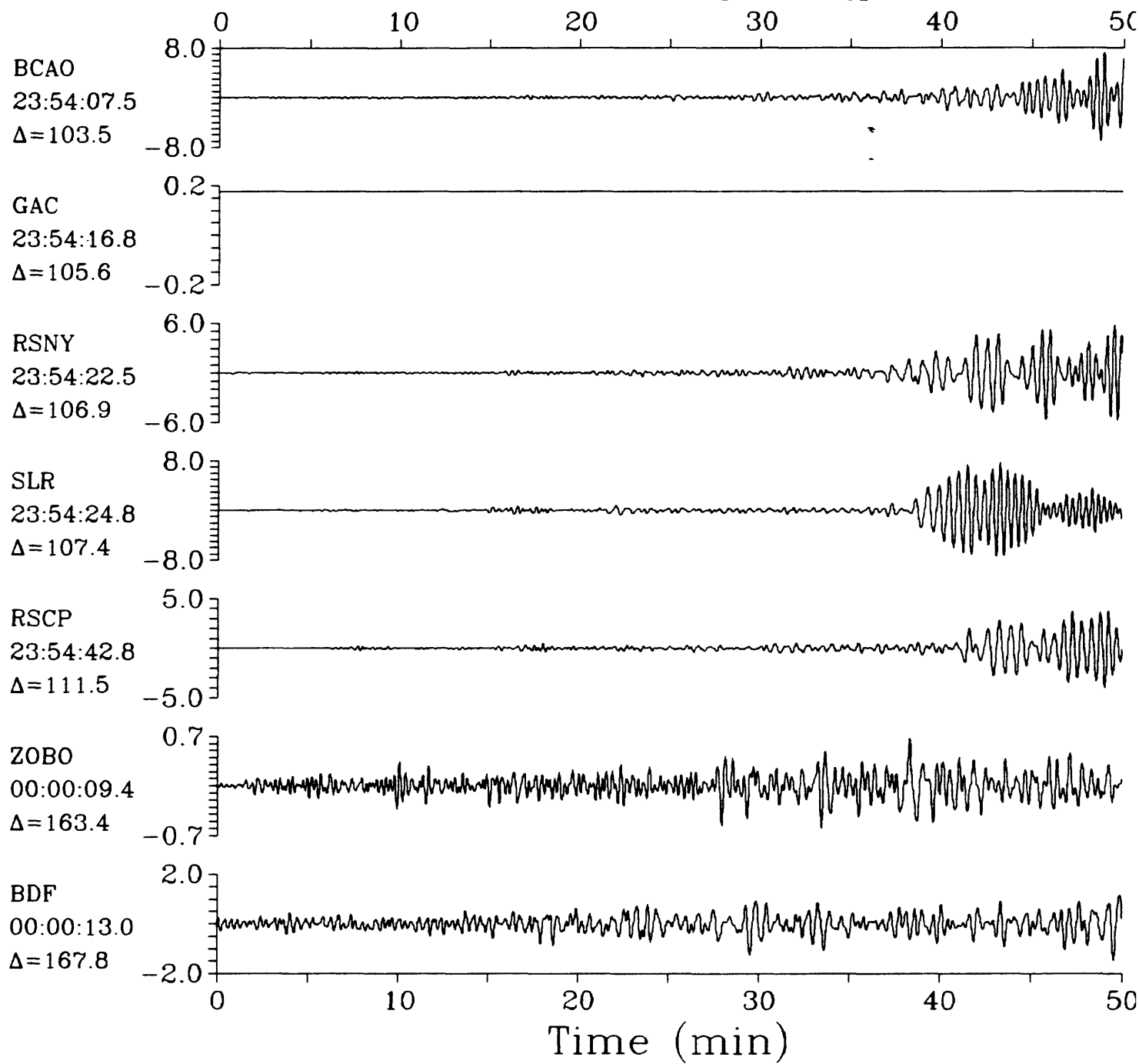
LPZ

Northeast of Taiwan  $h=38.0$   $m_b=5.5$   $M_{sz}=6.1$ 

LPZ

25 July 1986 23:41:10.42

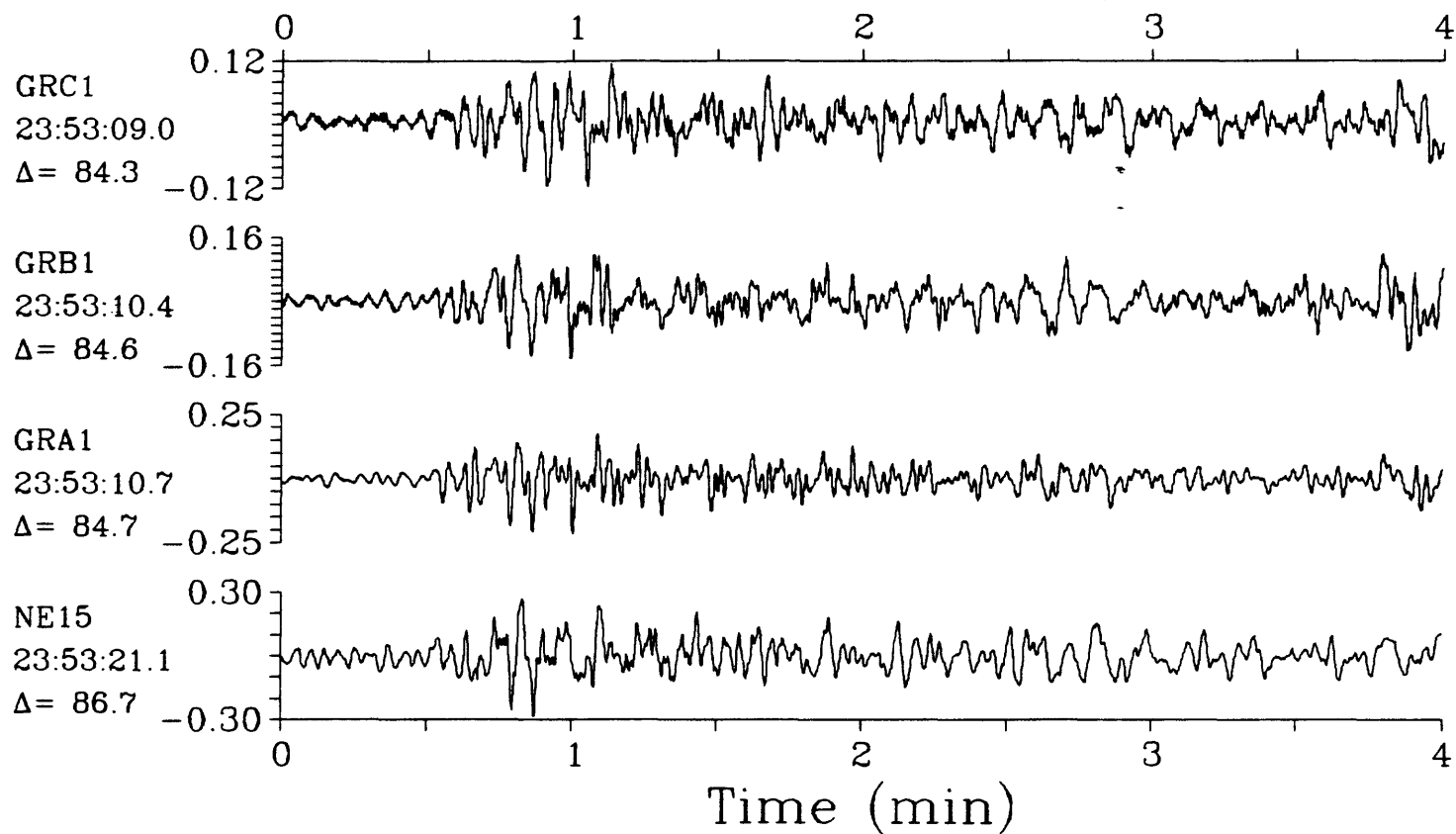
LPZ

Northeast of Taiwan  $h=38.0$   $m_b=5.5$   $M_{sz}=6.1$ 

IPZ

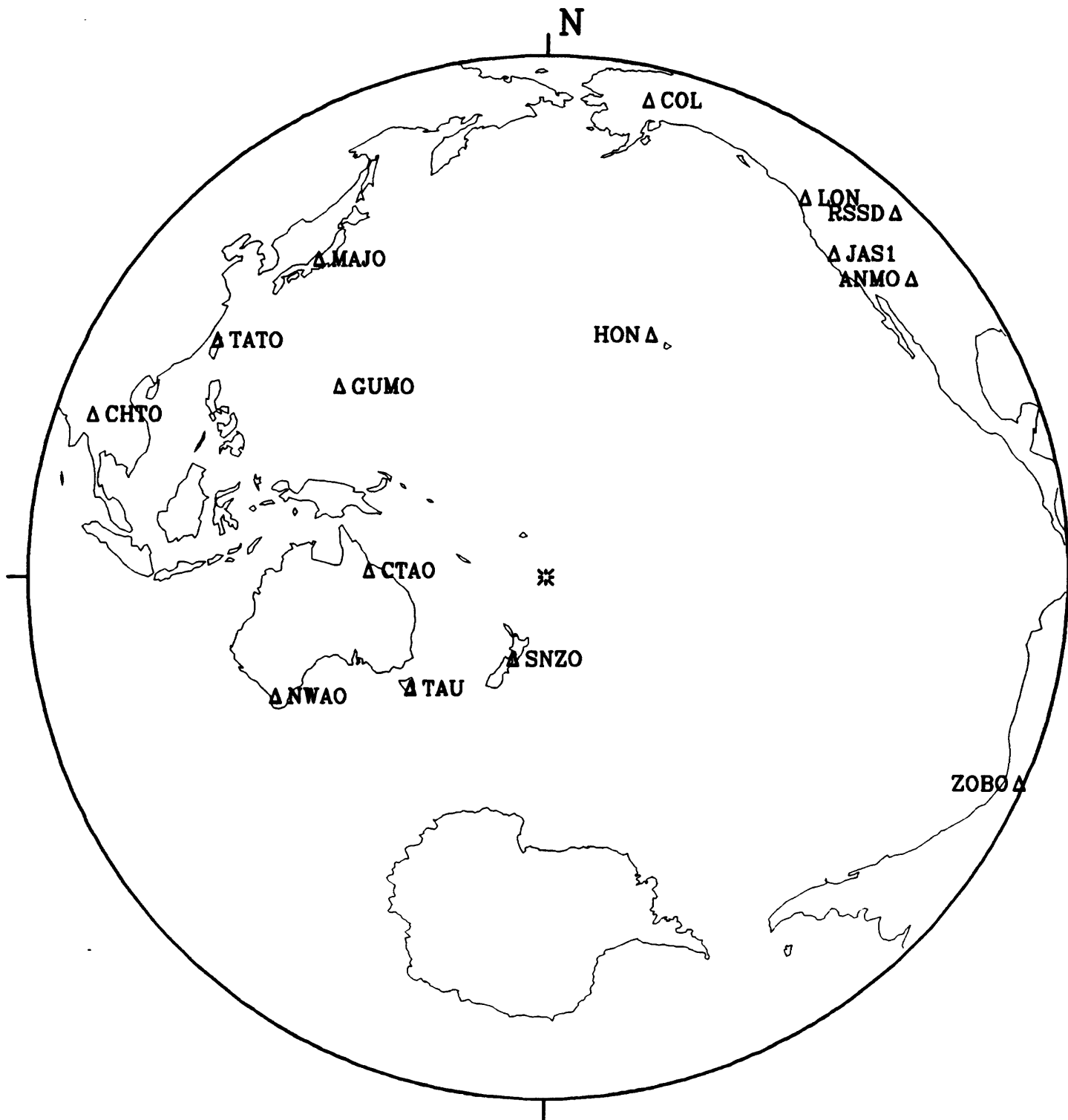
25 July 1986 23:41:10.42

IPZ

Northeast of Taiwan  $h=38.0$   $m_b=5.5$   $M_{SZ}=6.1$ 

27 July 1986 10:43:24.08

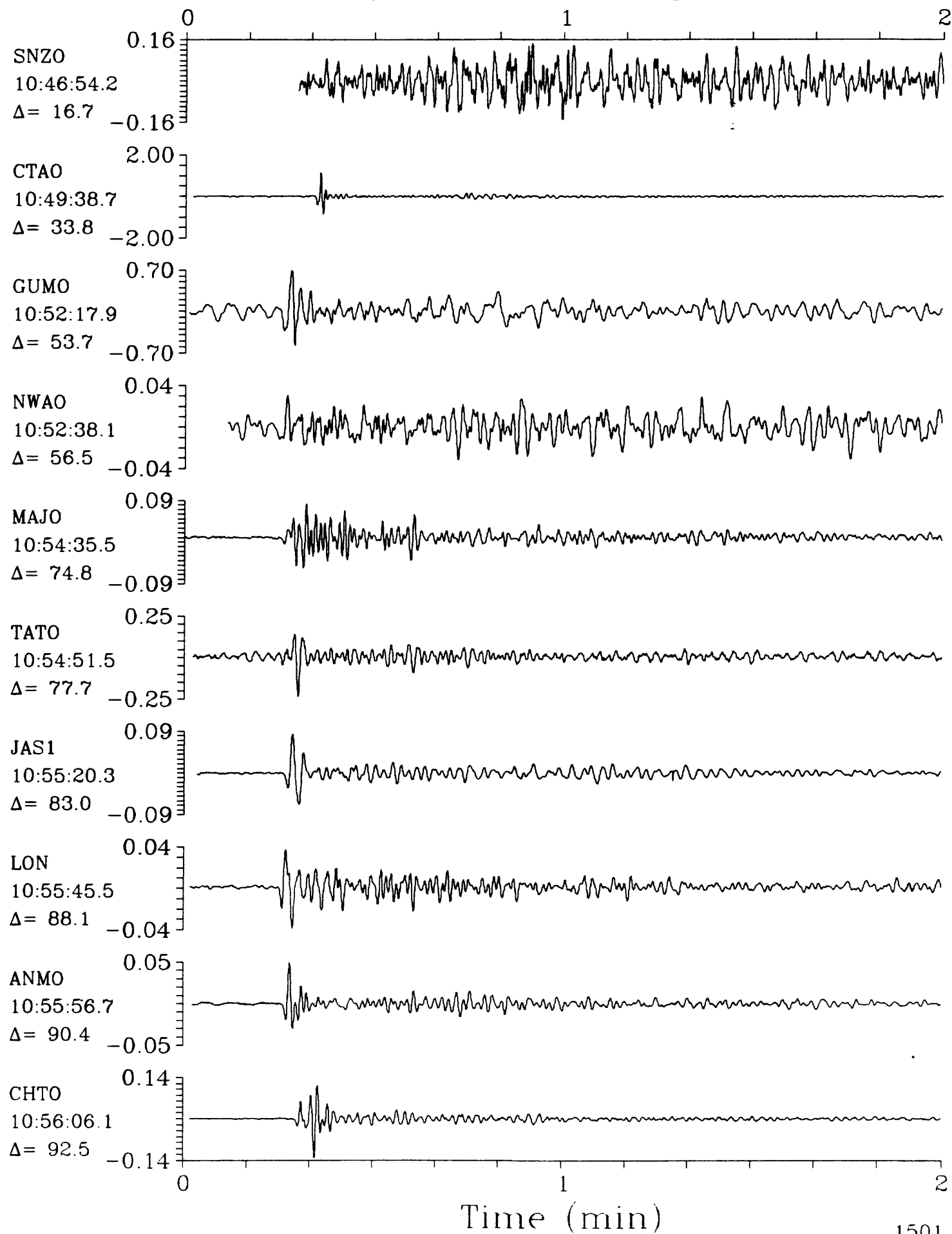
# South of Fiji Islands



SPZ

27 July 1986 10:43:24.08  
South of Fiji Islands  $h=130.5$   $m_b=5.8$ 

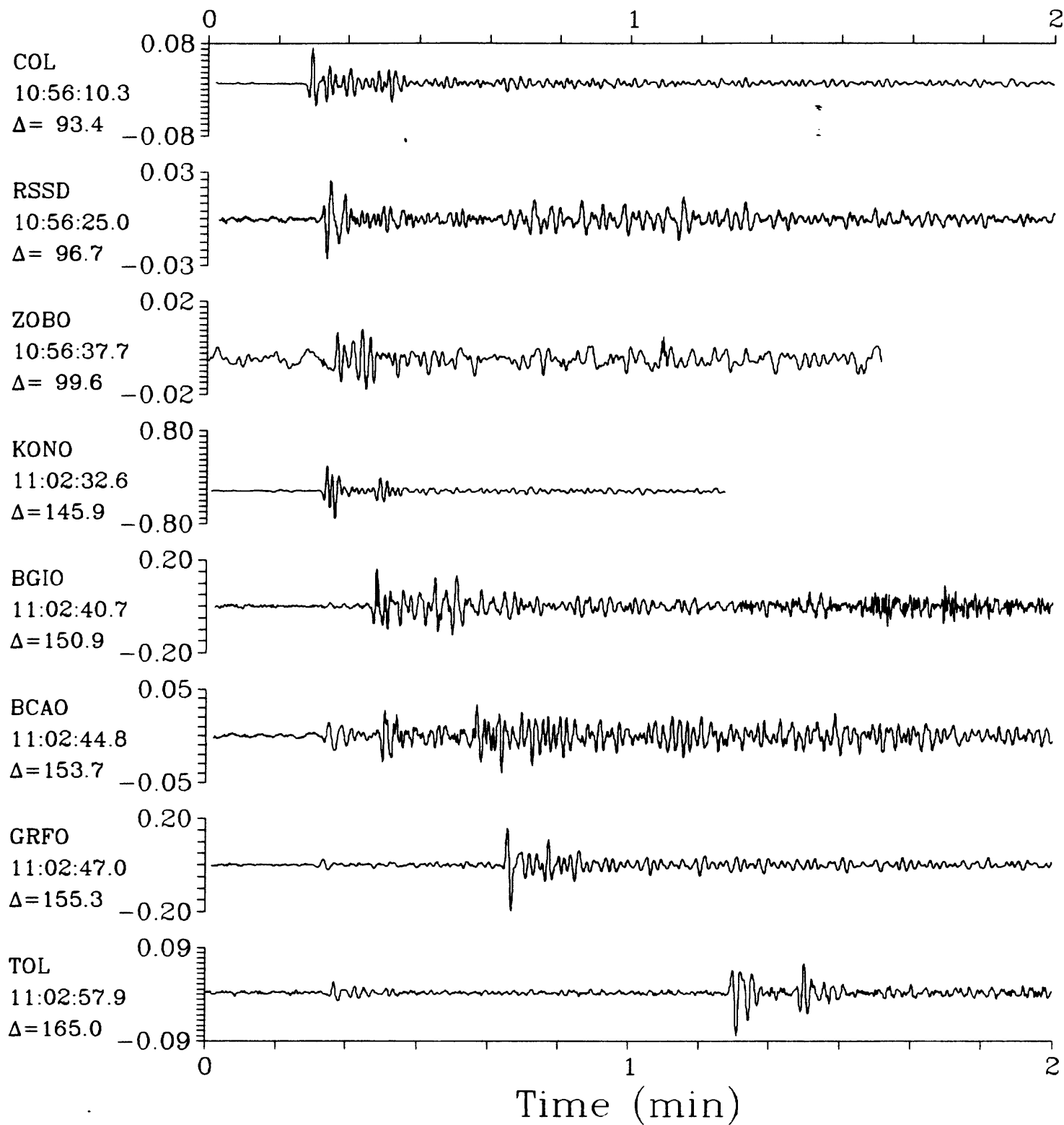
SPZ



SPZ

27 July 1986 10:43:24.08  
South of Fiji Islands  $h=130.5$   $m_b=5.8$ 

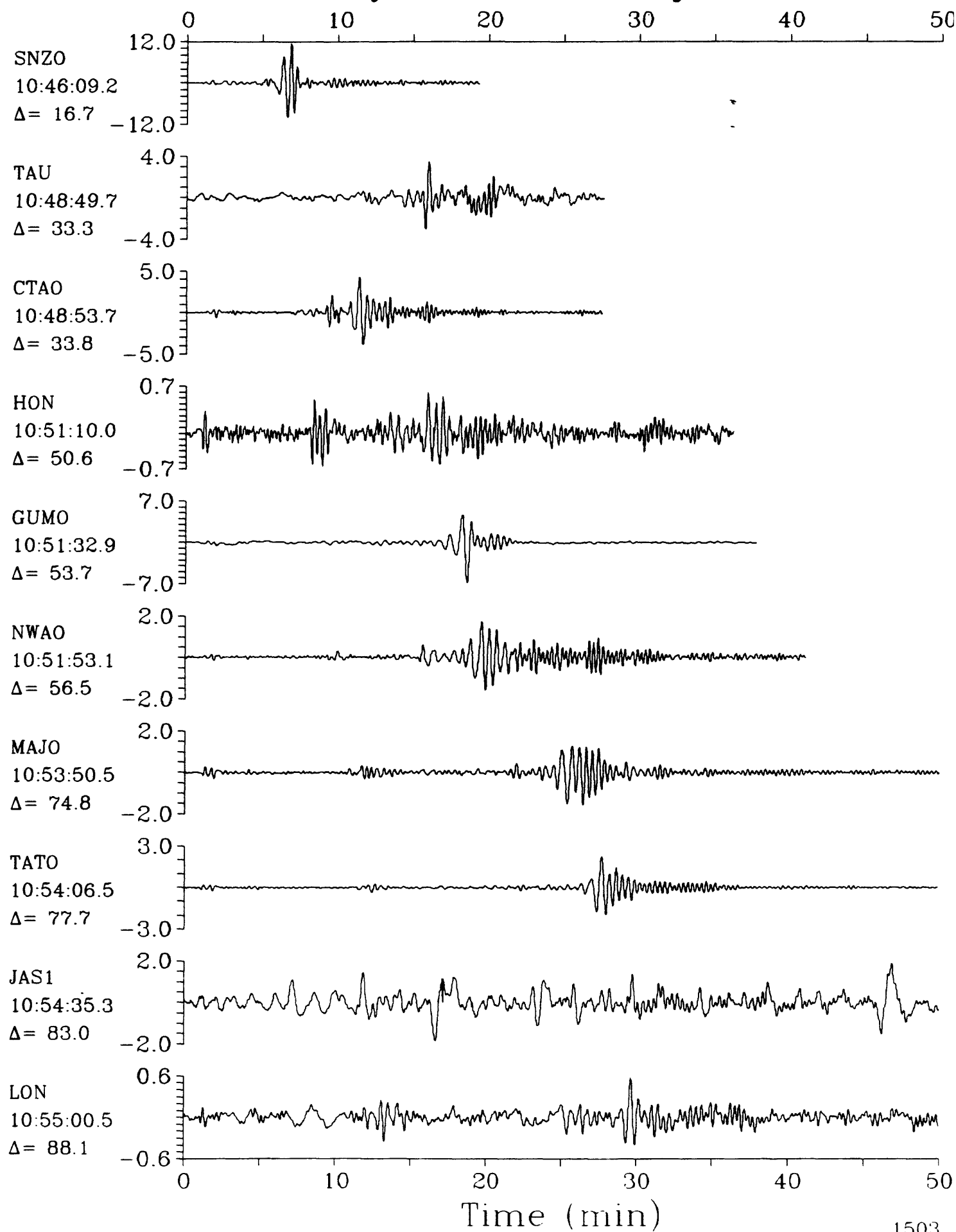
SPZ



LPZ

27 July 1986 10:43:24.08  
South of Fiji Islands  $h=130.5$   $m_b=5.8$ 

LPZ

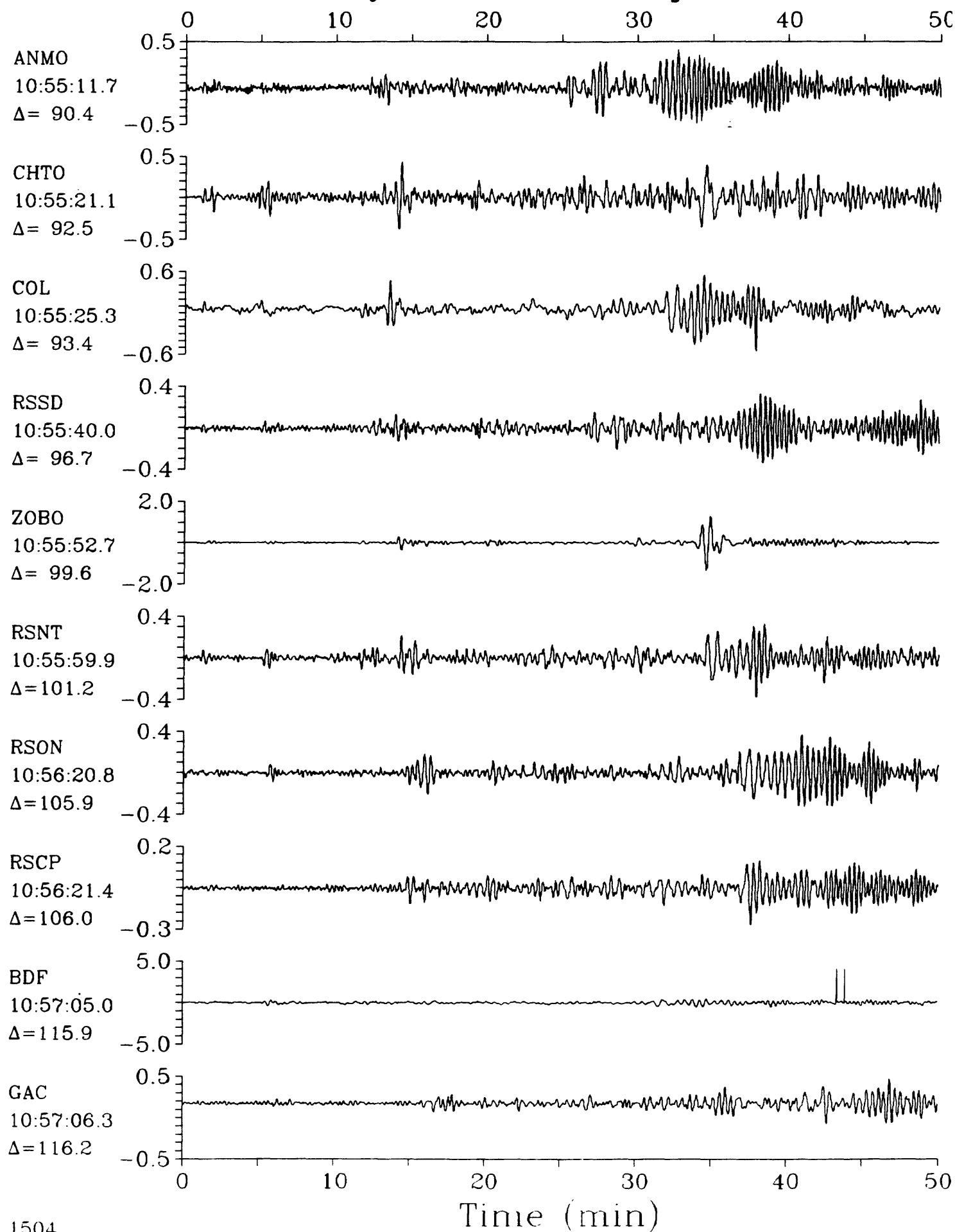




LPZ

27 July 1986 10:43:24.08  
South of Fiji Islands  $h=130.5$   $m_b=5.8$ 

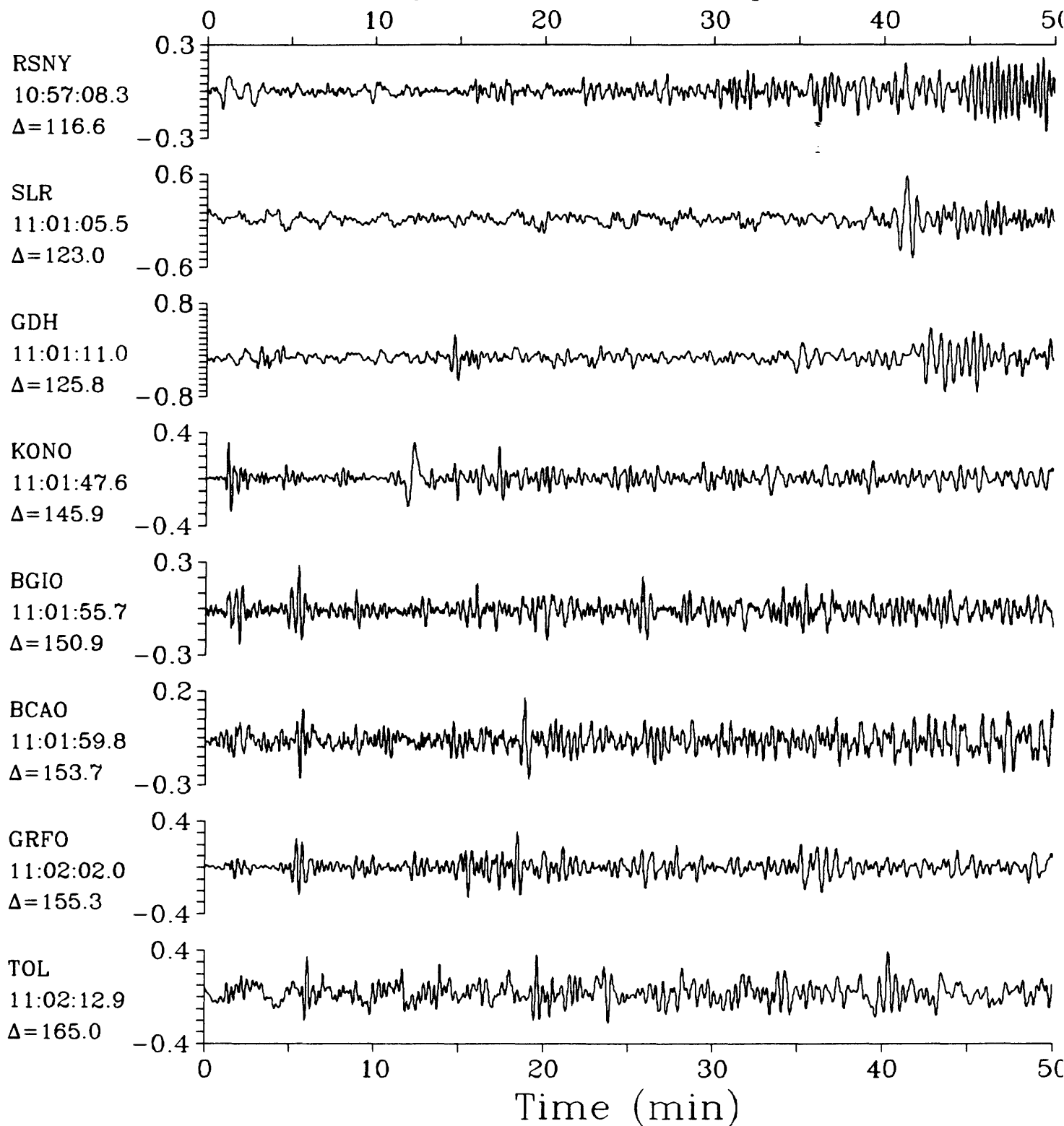
LPZ



LPZ

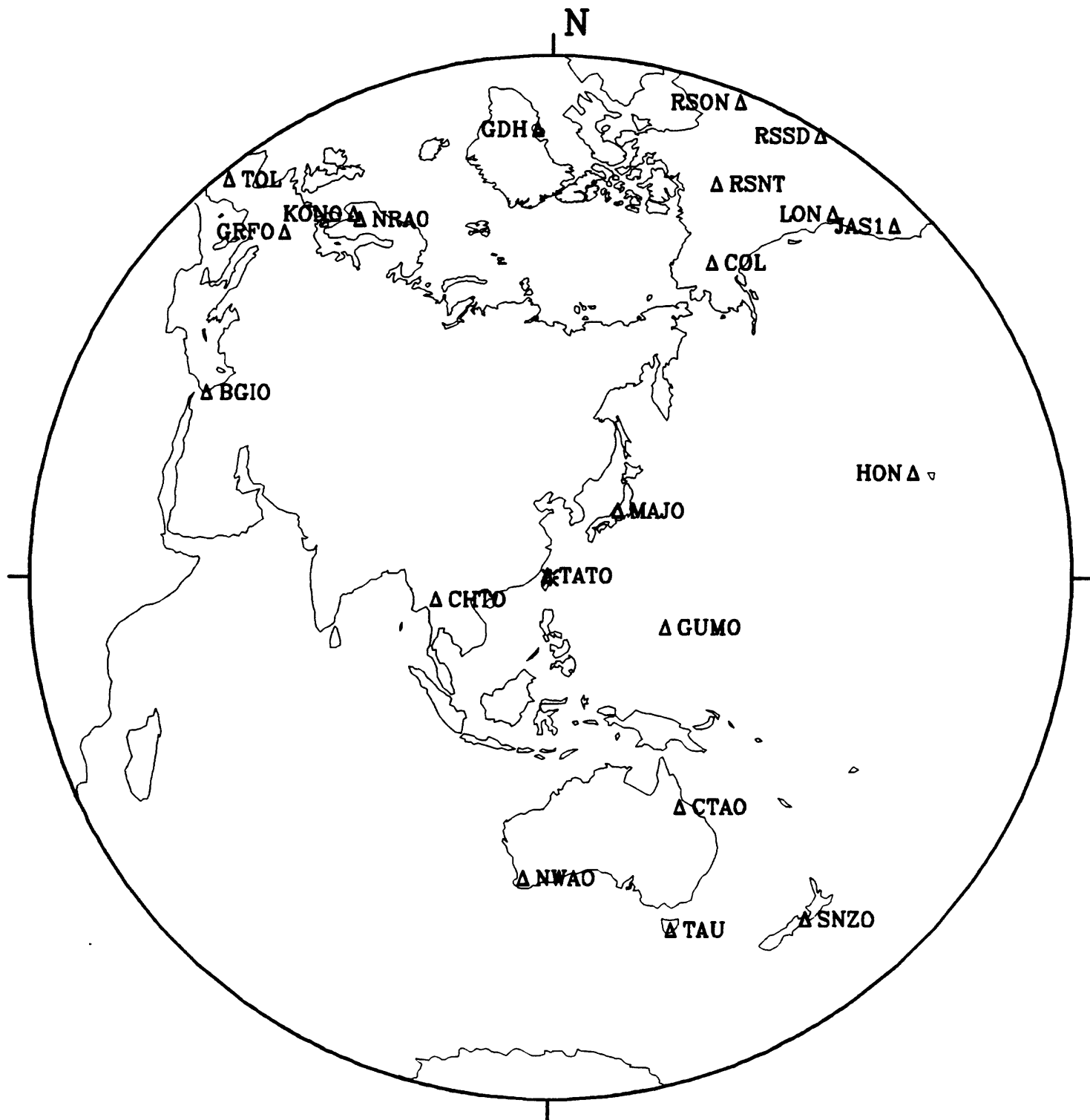
27 July 1986 10:43:24.08

LPZ

South of Fiji Islands  $h=130.5$   $m_b=5.8$ 

30 July 1986 11:31:50.23

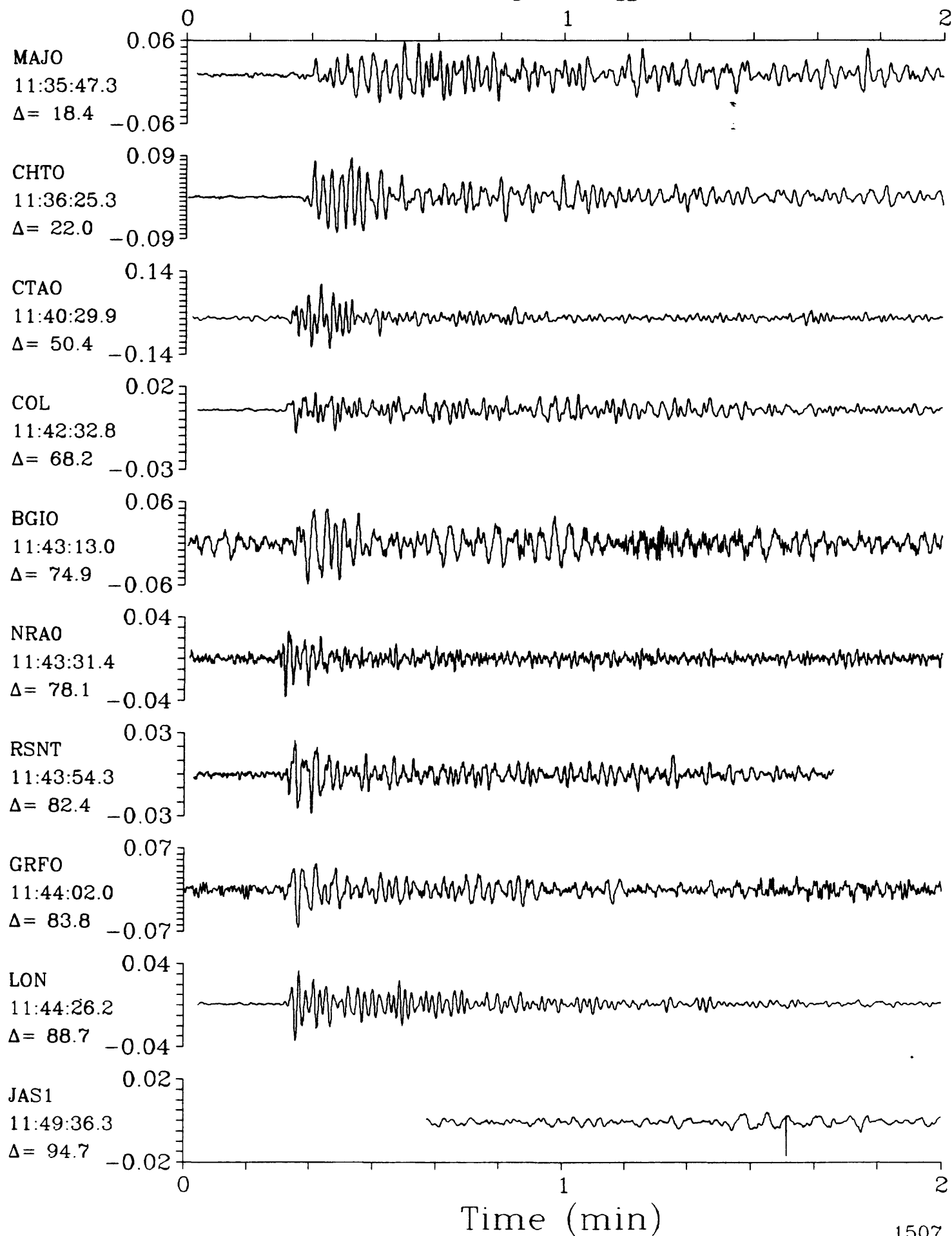
# Taiwan



SPZ

30 July 1986 11:31:50.23  
Taiwan  $h=33.0$   $m_b=5.6$   $M_{sz}=5.6$ 

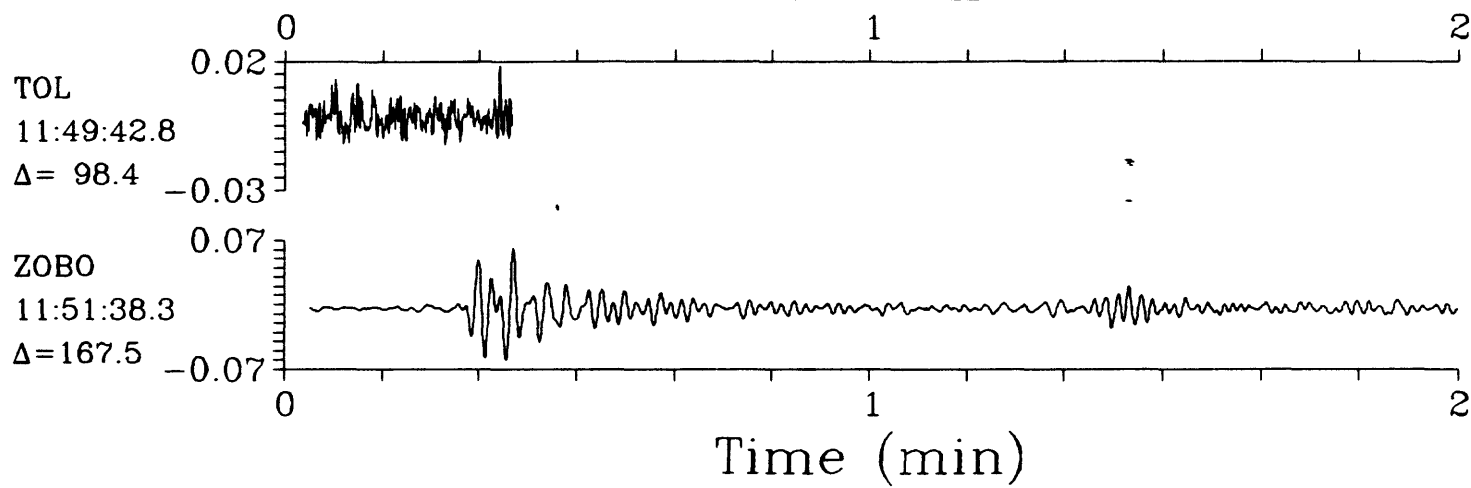
SPZ



SPZ

30 July 1986 11:31:50.23  
Taiwan  $h=33.0$   $m_b=5.6$   $M_{sz}=5.6$ 

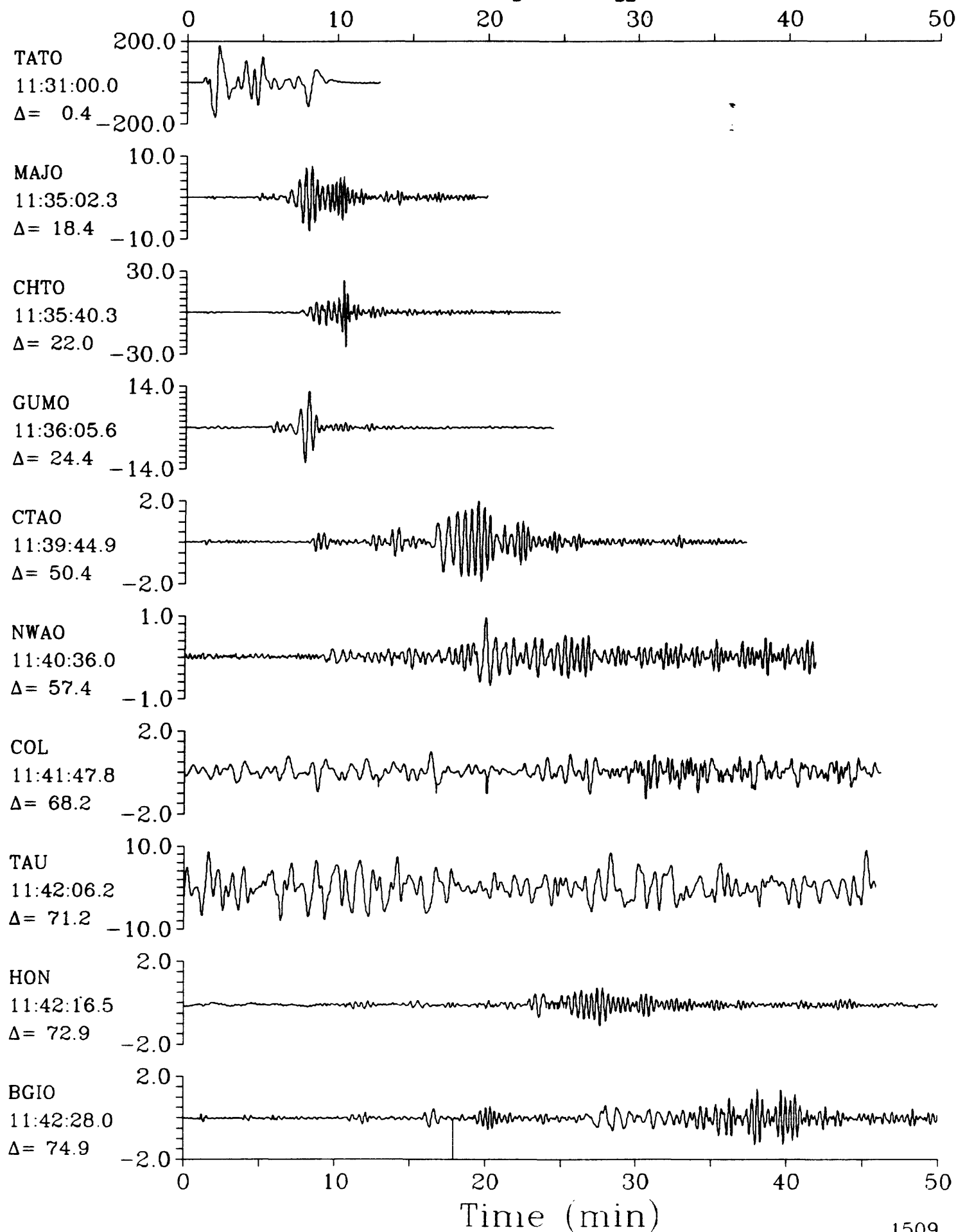
SPZ



LPZ

30 July 1986 11:31:50.23  
Taiwan  $h=33.0$   $m_b=5.6$   $M_{sz}=5.6$ 

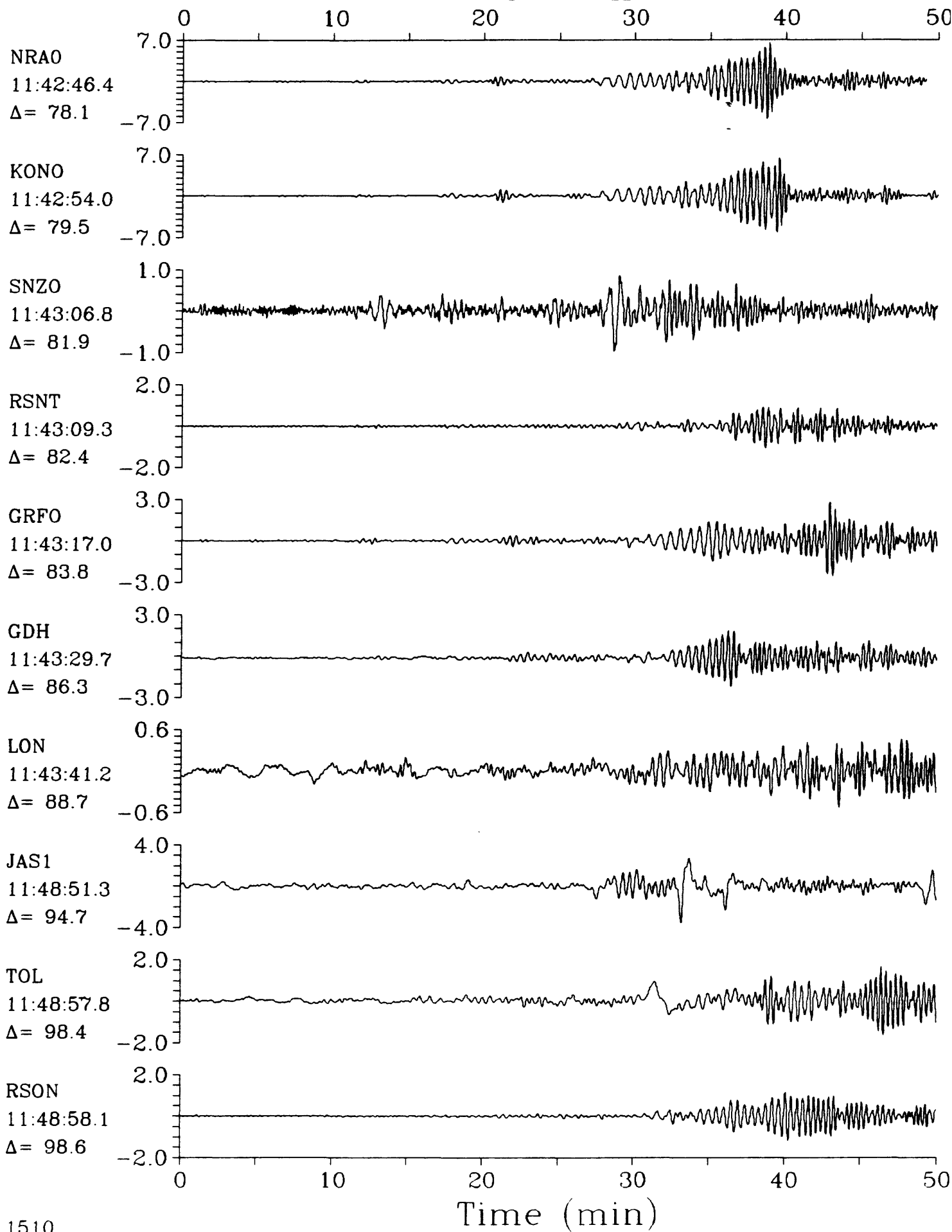
LPZ



LPZ

30 July 1986 11:31:50.23  
Taiwan  $h=33.0$   $m_b=5.6$   $M_{sz}=5.6$ 

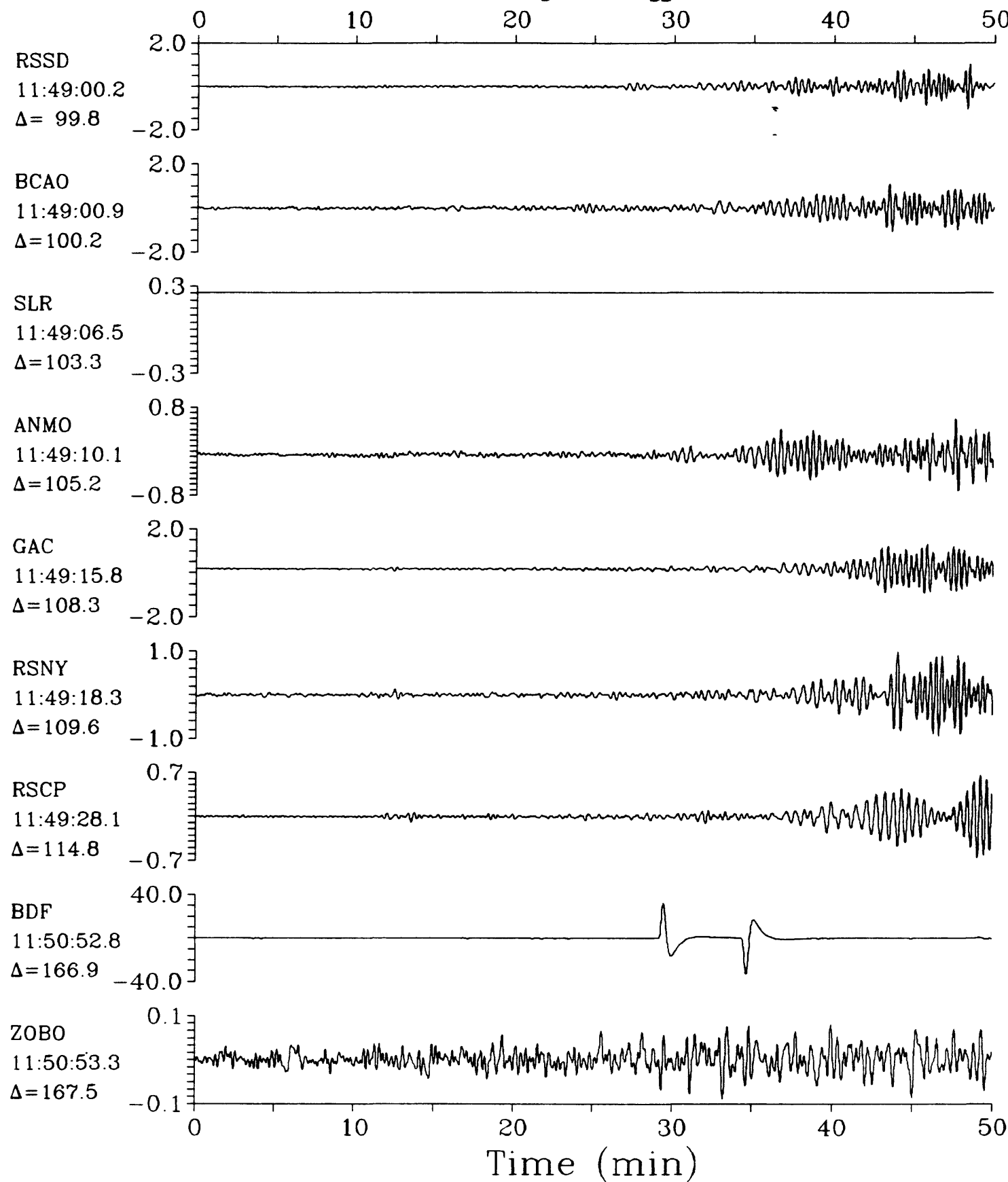
LPZ



LPZ

30 July 1986 11:31:50.23  
Taiwan  $h=33.0$   $m_b=5.6$   $M_{sz}=5.6$ 

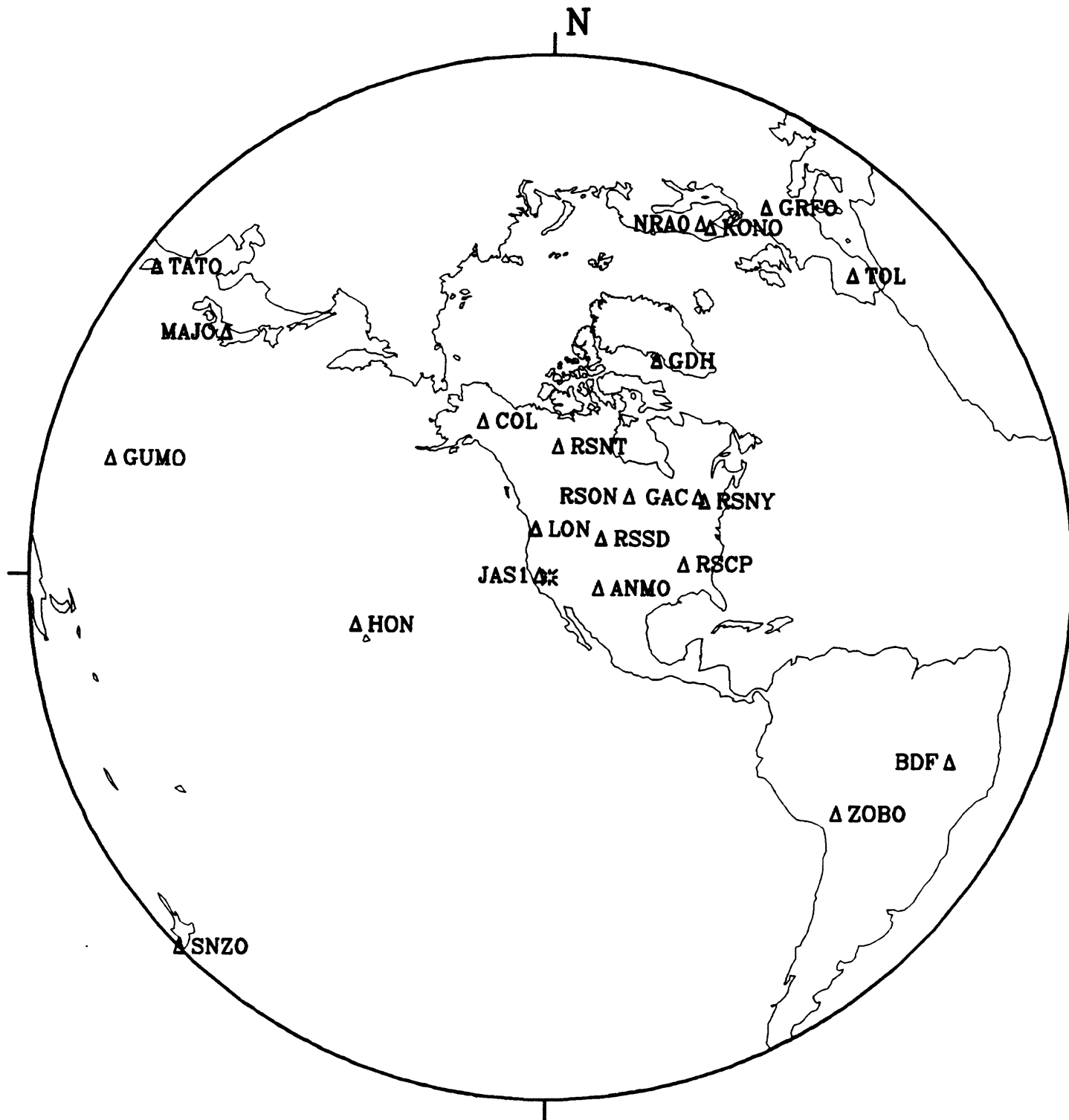
LPZ





31 July 1986 07:22:40.34

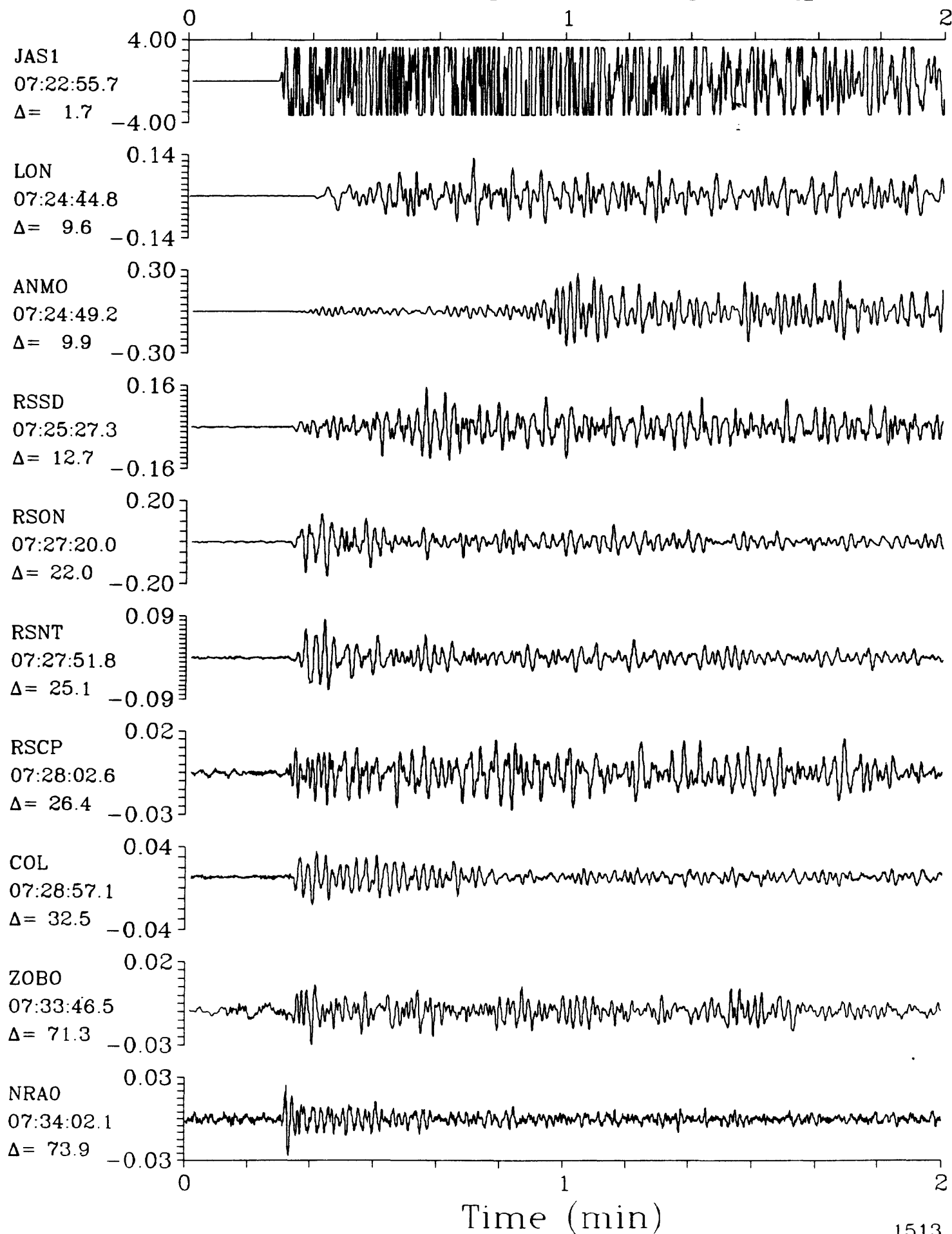
# California–Nevada Border Region



SPZ

31 July 1986 07:22:40.34

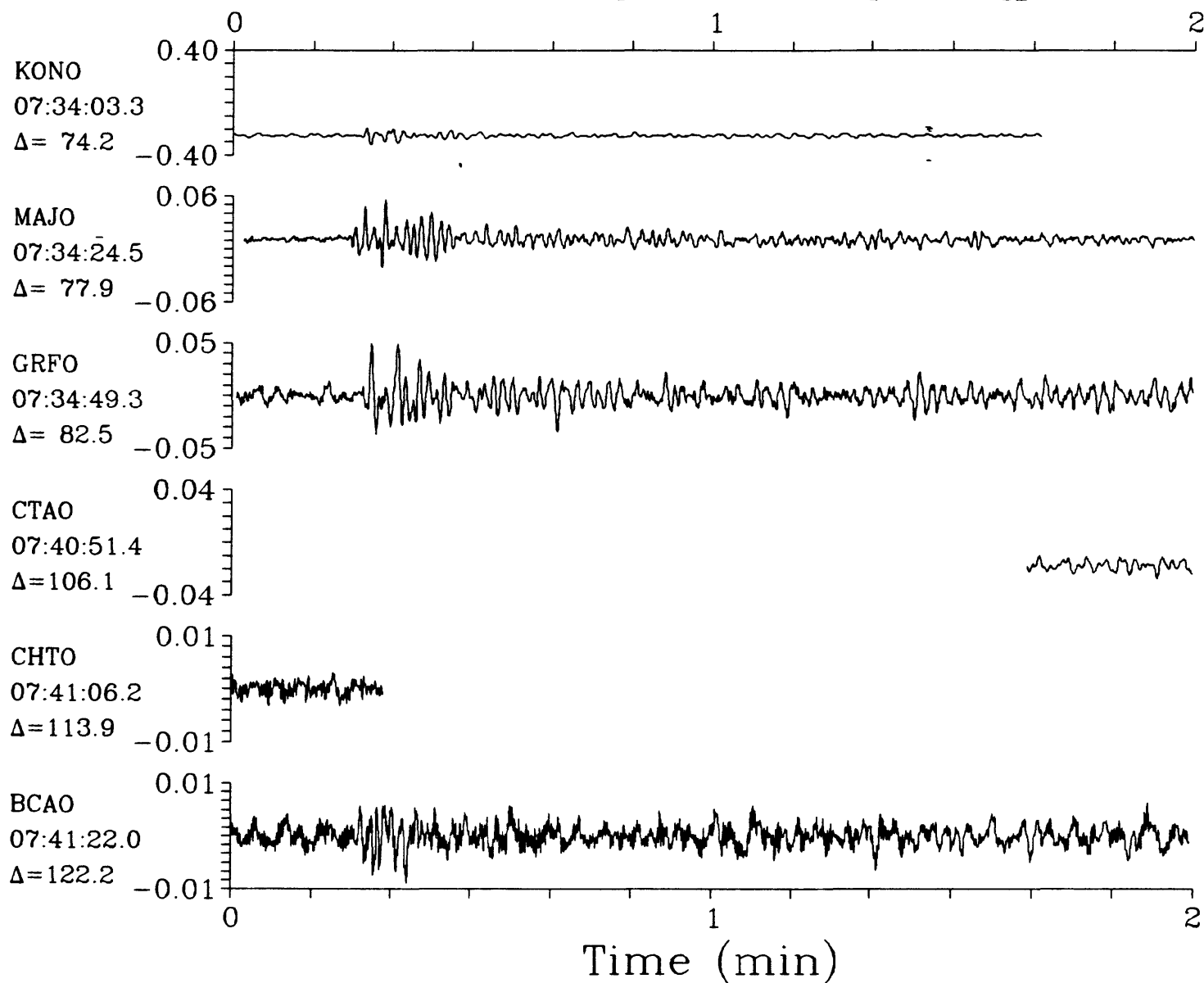
SPZ

California-Nevada Border Region  $h=5.0$   $m_b=5.5$   $M_{sz}=5.2$ 

SPZ

31 July 1986 07:22:40.34

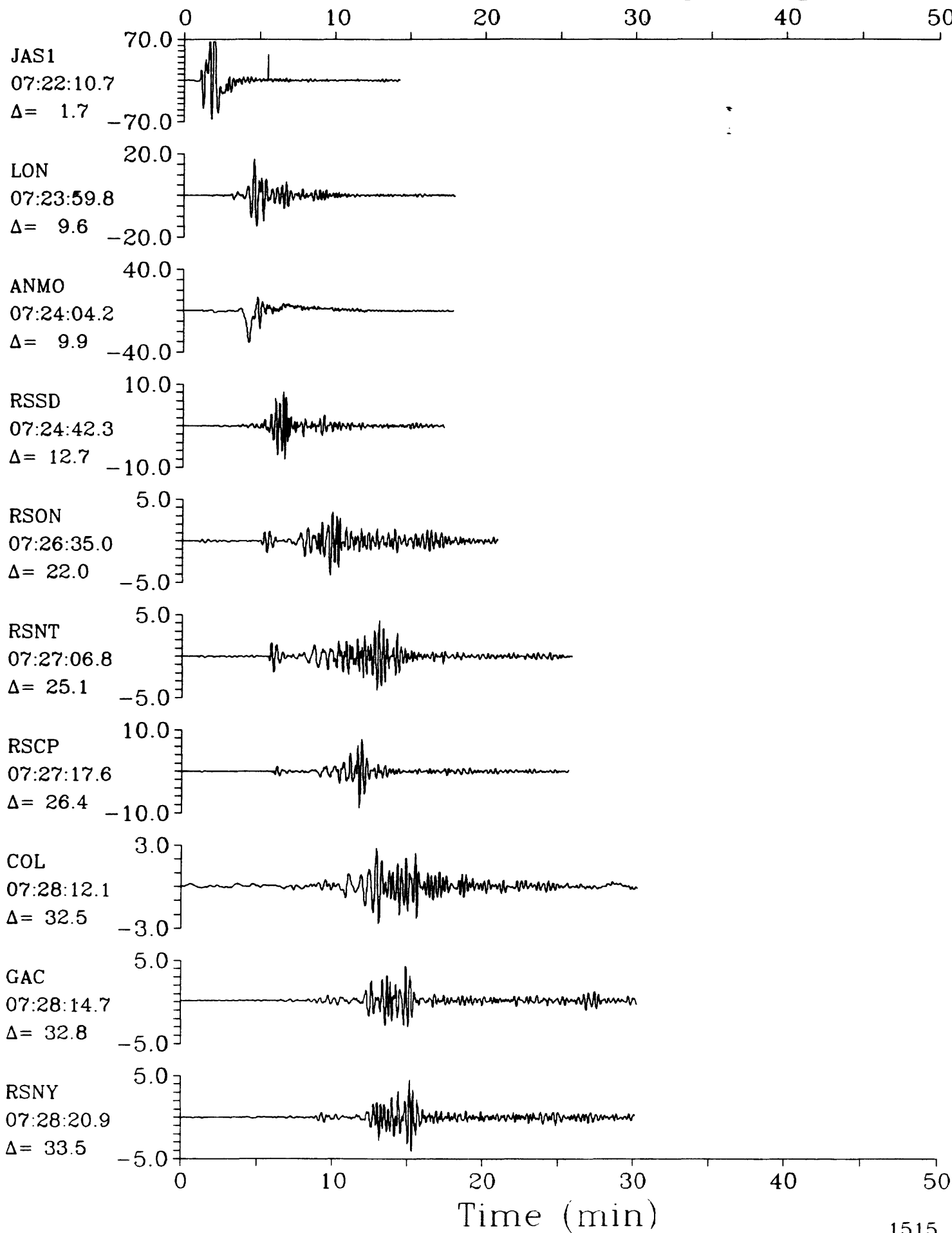
SPZ

California-Nevada Border Region  $h=5.0$   $m_b=5.5$   $M_{sz}=5.2$ 

LPZ

31 July 1986 07:22:40.34

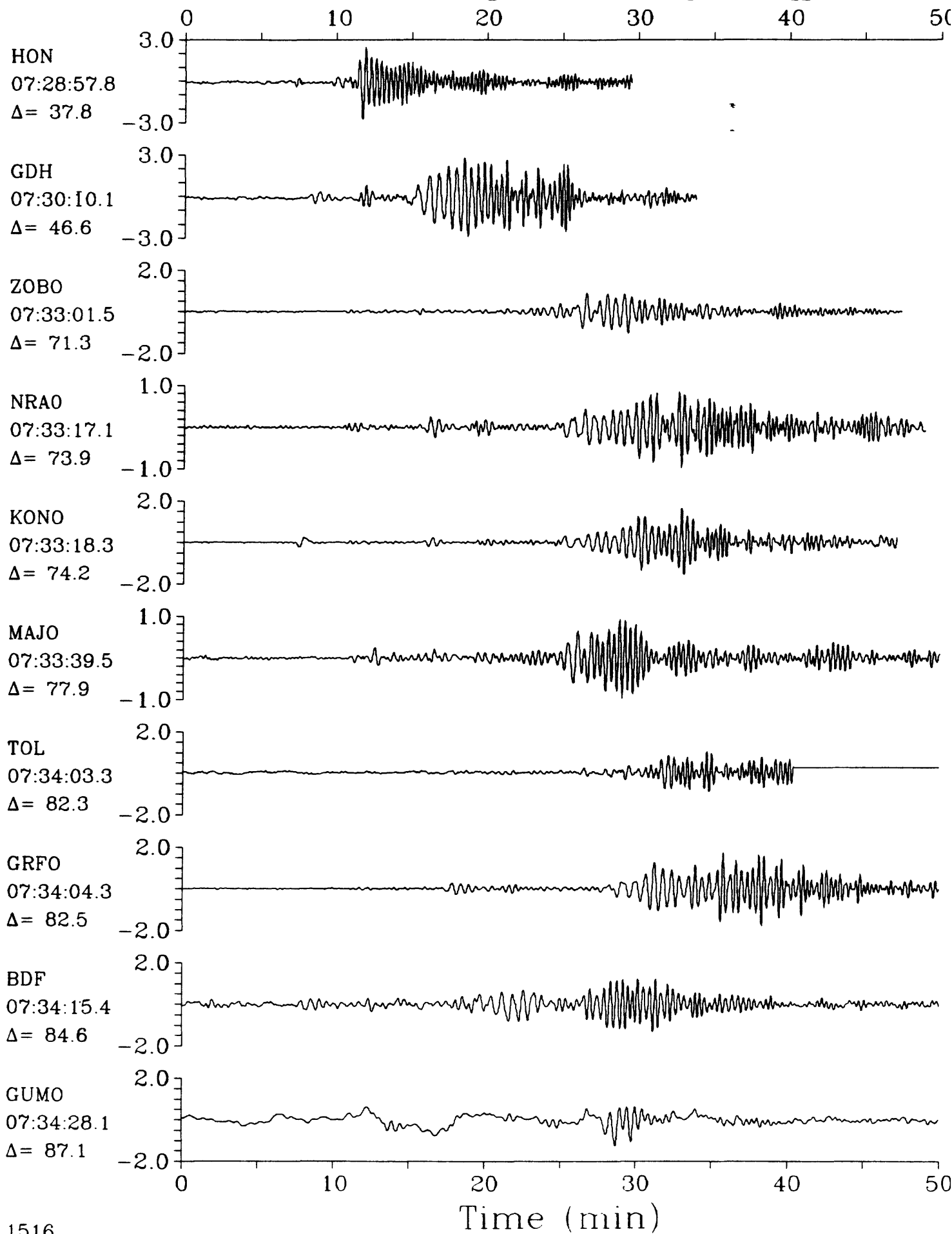
LPZ

California-Nevada Border Region  $h=5.0$   $m_b=5.5$   $M_{SZ}=5.2$ 

LPZ

31 July 1986 07:22:40.34

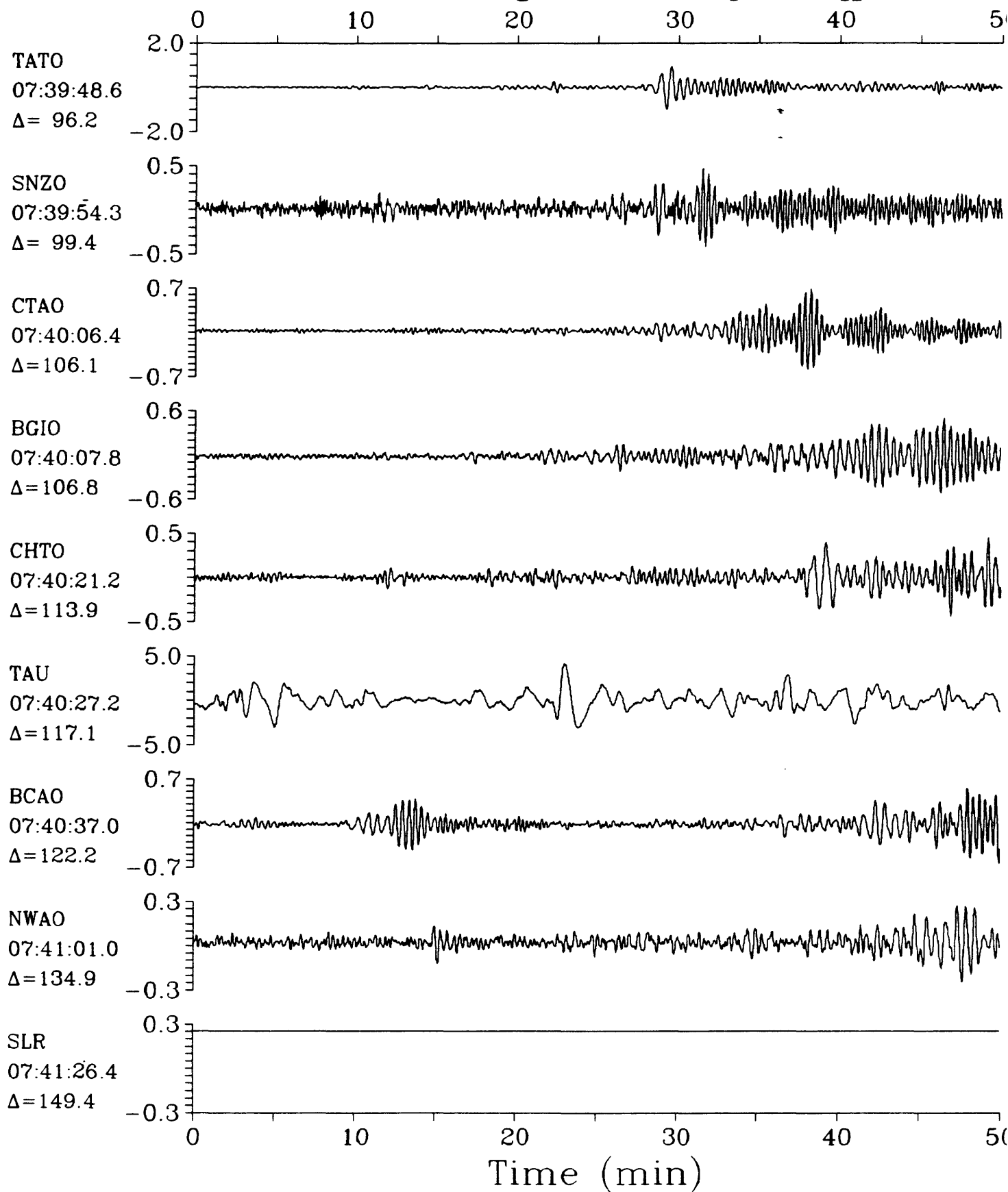
LPZ

California-Nevada Border Region  $h=5.0$   $m_b=5.5$   $M_{sz}=5.2$ 

LPZ

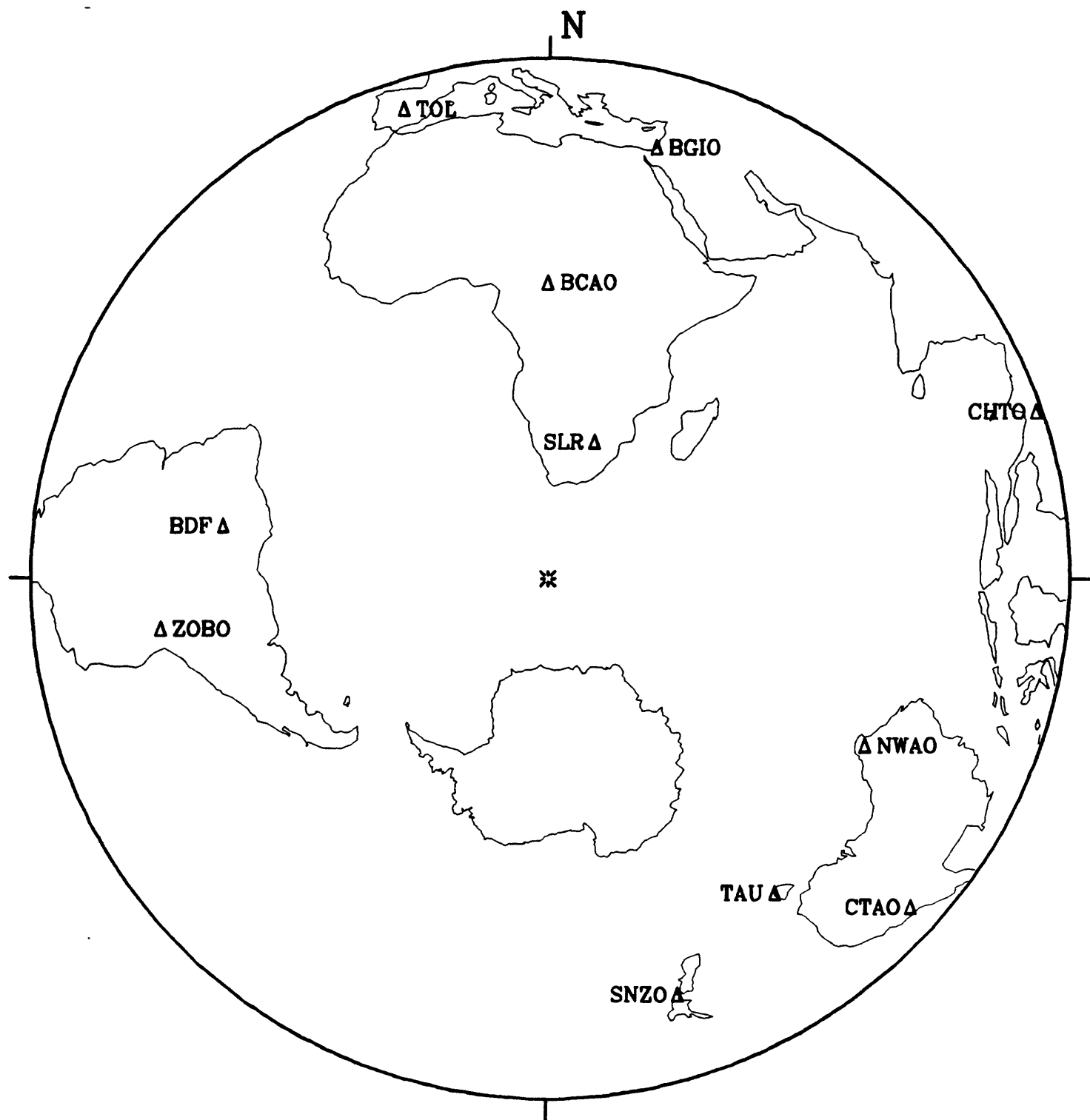
31 July 1986 07:22:40.34

LPZ

California-Nevada Border Region  $h=5.0$   $m_b=5.5$   $M_{sz}=5.2$ 

31 July 1986 09:37:23.95

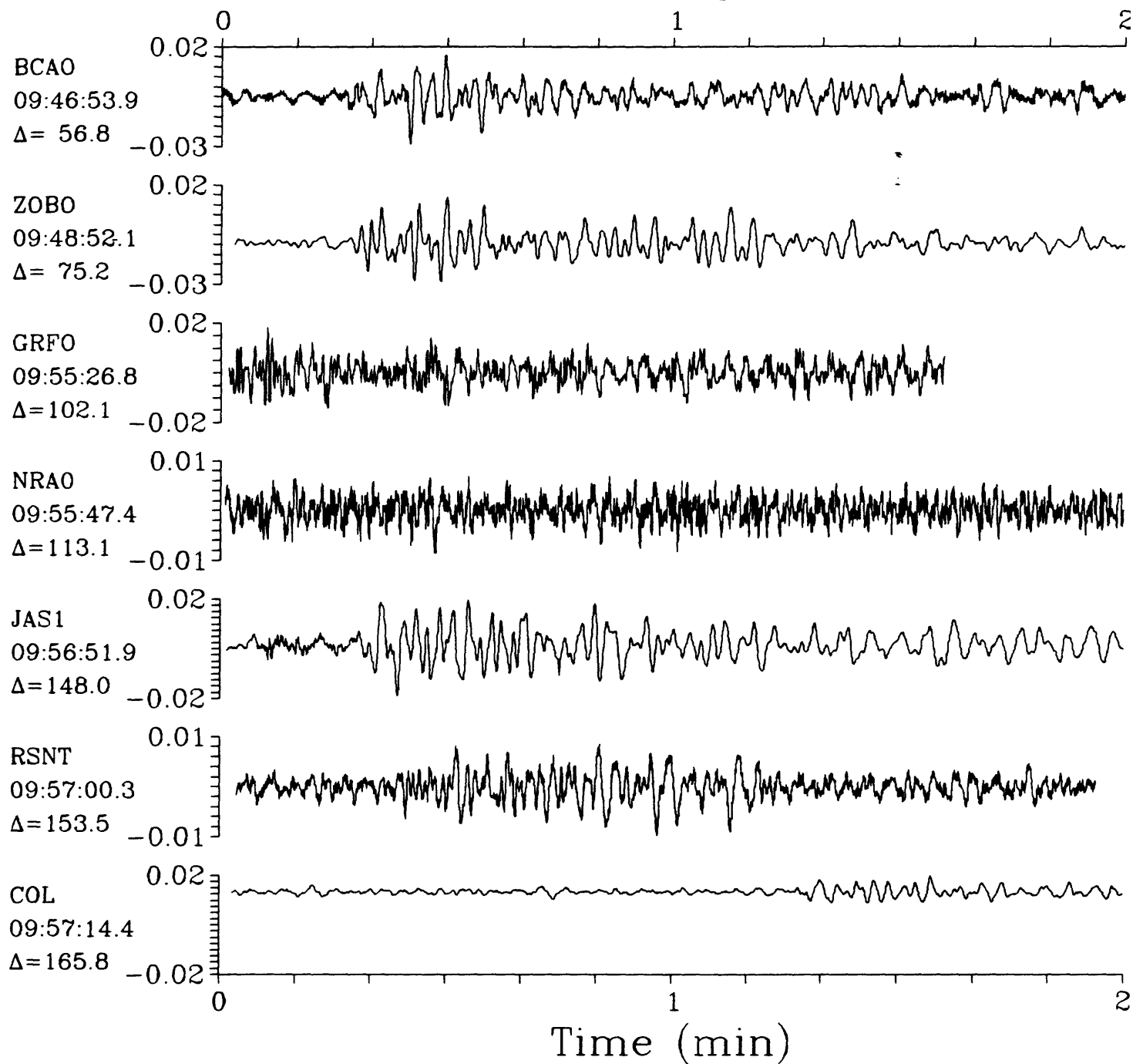
## Southwest of Africa



SPZ

31 July 1986 09:37:23.95

SPZ

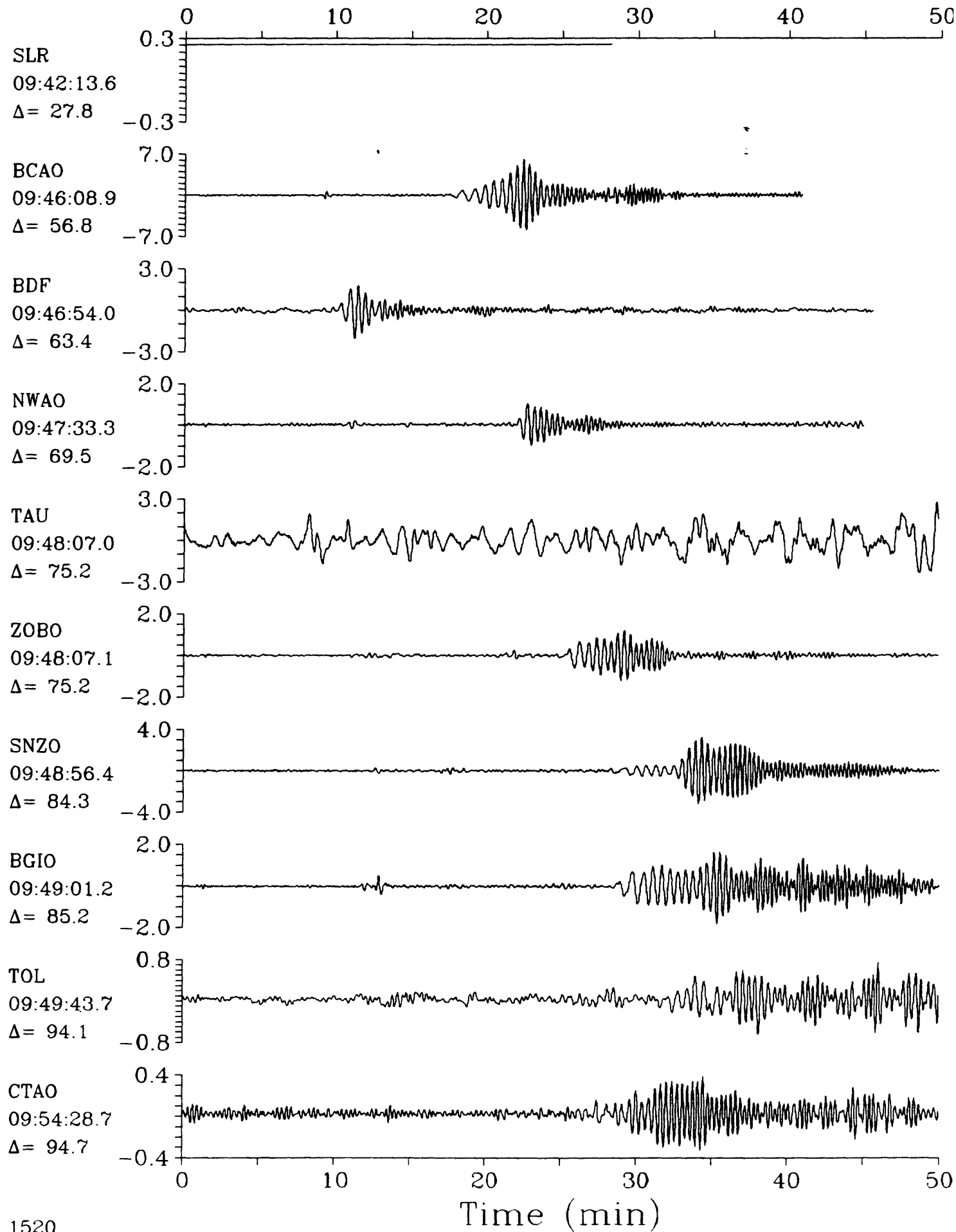
Southwest of Africa  $h=10.0$   $m_b=5.0$   $M_{sz}=5.5$ 



LPZ

31 July 1986 09:37:23.95

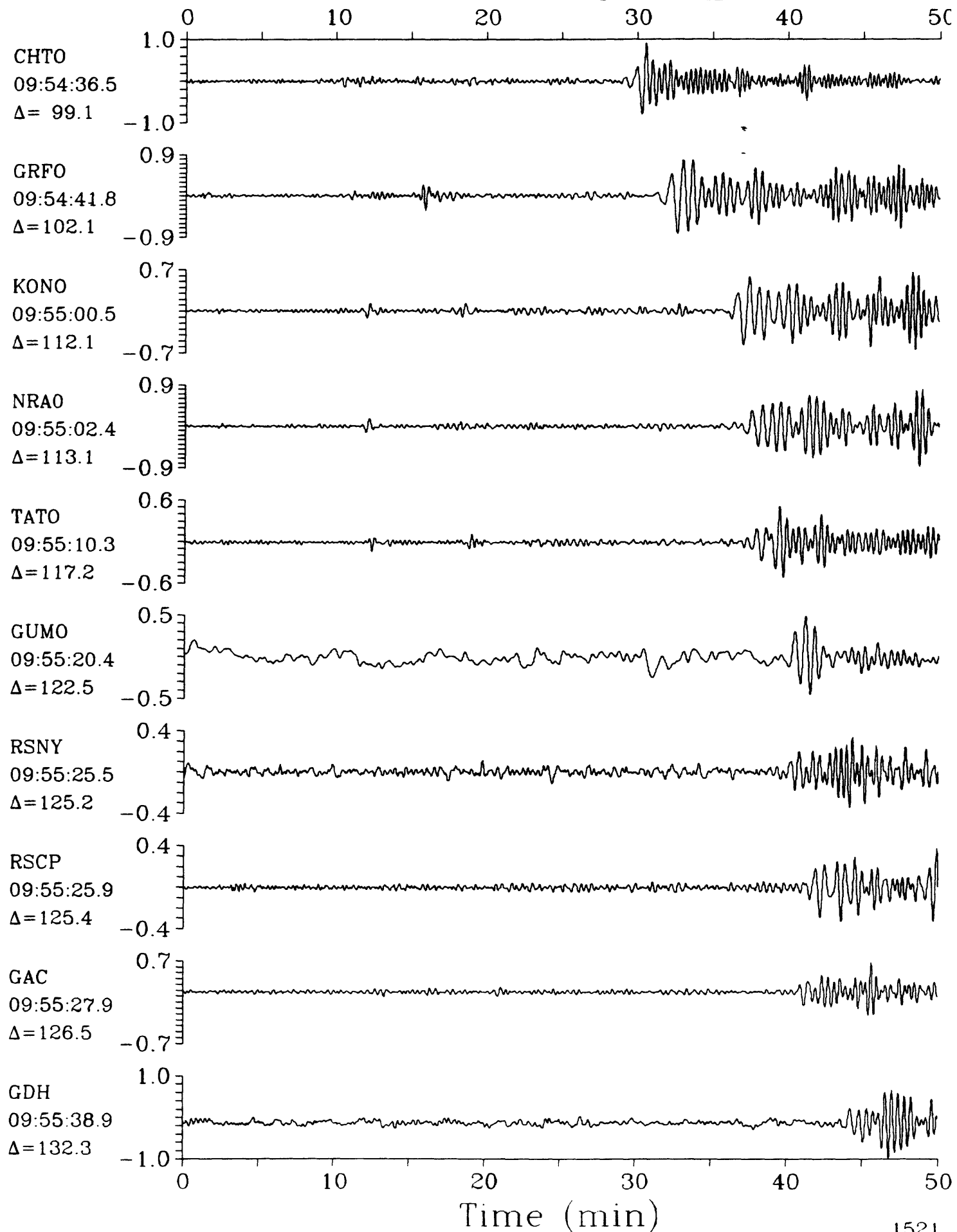
LPZ

Southwest of Africa  $h=10.0$   $m_b=5.0$   $M_{sz}=5.5$ 

LPZ

31 July 1986 09:37:23.95

LPZ

Southwest of Africa  $h=10.0$   $m_b=5.0$   $M_{sz}=5.5$ 

LPZ

31 July 1986 09:37:23.95

LPZ

Southwest of Africa  $h=10.0$   $m_b=5.0$   $M_{SZ}=5.5$ 