

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

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

by

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

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Introduction

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

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

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

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

time, and epicentral distance, Δ , in degrees. The start time is chosen to be about 15 seconds before the earliest theoretical arrival time of interest (P, Pdiff, or PKP_{df}, 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 Registrating 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 March 1986 with magnitudes ≥ 5.5

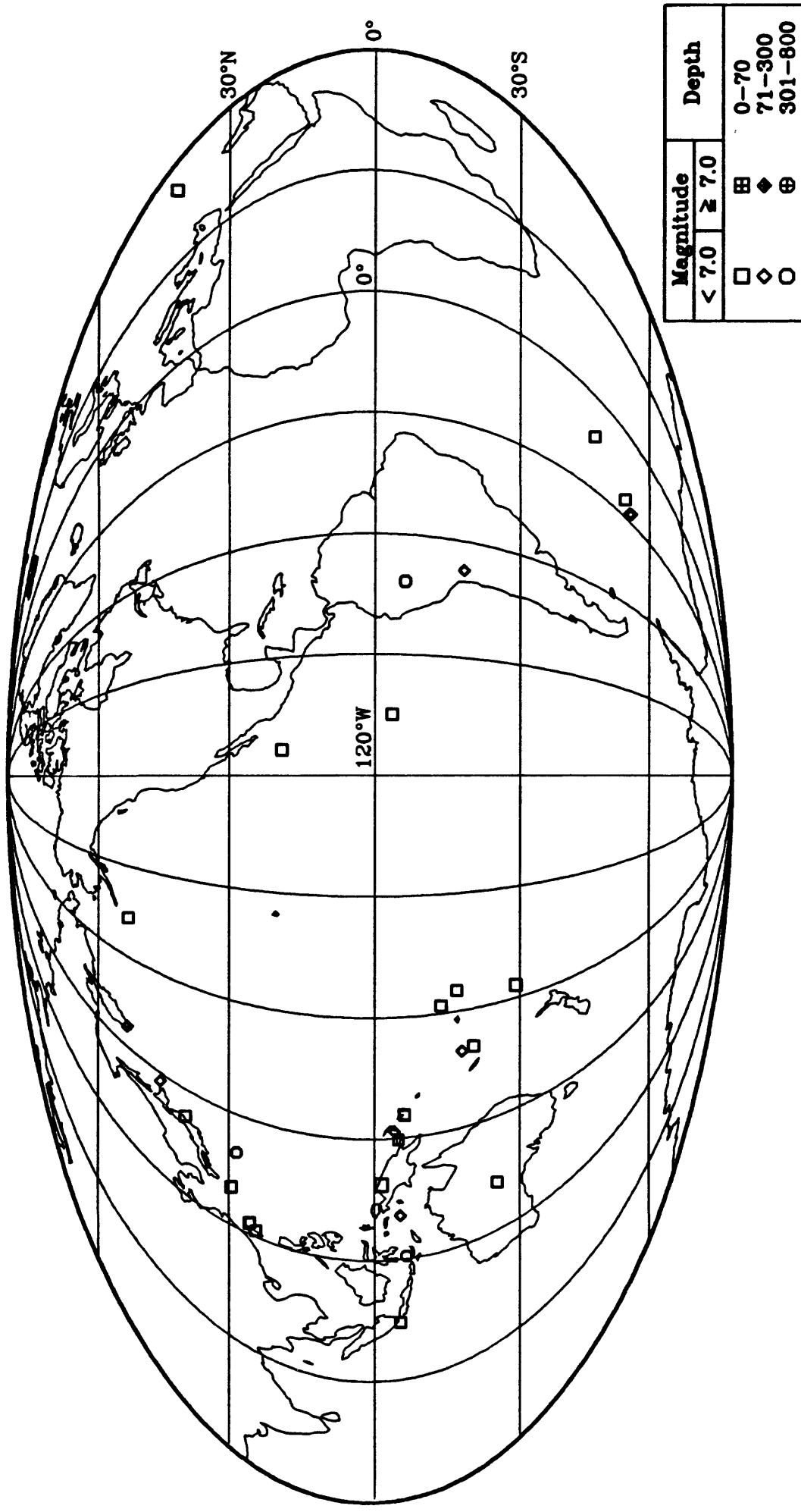
	Origin Time UTC	Latitude	Longitude	Depth (km)	Magnitude m_b	Magnitude M_{SZ}	Flinn-Engdahl Region Name
1.	1986 03 01 16:41:40.81	6.298° S	130.904° E	80.0	5.6		Banda Sea
2.	1986 03 02 03:14:41.82	51.668° N	156.911° E	117.3	5.6		Kamchatka
3.	1986 03 02 07:09:27.31	38.426° N	142.212° E	39.4	5.6	5.7	Near East Coast of Honshu, Japan
4.	1986 03 04 08:47:14.85	51.593° N	166.948° W	33.0	5.6	4.6	Aleutian Islands Region
5.	1986 03 05 15:47:07.46	18.795° S	169.578° E	289.5	5.7		Vanuatu Islands
6.	1986 03 06 00:05:38.39	40.393° N	51.534° E	33.0	6.2	6.2	Caspian Sea
7.	1986 03 06 12:31:23.70	7.017° S	155.801° E	67.8	5.7		Solomon Islands
8.	1986 03 06 12:34:45.93	21.211° S	170.208° E	33.0	5.9	5.6	Loyalty Islands Region
9.	1986 03 07 02:46:51.54	5.010° S	151.763° E	110.0	5.8		New Britain Region
10.	1986 03 13 05:36:28.81	7.051° S	155.604° E	66.2	5.6		Solomon Islands
11.	1986 03 14 08:42:15.39	43.939° N	147.650° E	84.7	5.8		Kuril Islands
12.	1986 03 14 10:30:50.19	47.647° S	12.925° W	10.0	5.4	5.7	South Atlantic Ridge
13.	1986 03 14 16:55:54.19	30.166° S	176.652° W	53.3	5.5	6.1	Kermadec Islands Region
14.	1986 03 14 21:28:27.38	54.705° S	23.833° W	33.0	5.6	4.7	South Sandwich Islands Region
15.	1986 03 15 11:29:40.25	19.158° S	67.460° W	213.3	5.6		Southern Bolivia
16.	1986 03 15 18:32:13.62	55.824° S	27.273° W	115.6	5.8		South Sandwich Islands Region
17.	1986 03 17 09:18:27.20	27.365° N	139.827° E	499.7	5.5		Bonin Islands Region
18.	1986 03 21 21:35:36.82	7.487° S	120.669° E	630.8	5.5		Flores Sea
19.	1986 03 22 04:45:31.43	23.406° N	121.579° E	33.0	5.6	5.1	Taiwan
20.	1986 03 22 10:31:07.23	24.733° N	122.914° E	33.0	5.2	5.7	Taiwan Region
21.	1986 03 22 12:06:33.22	24.710° N	122.922° E	33.0	5.3	5.7	Taiwan Region
22.	1986 03 22 14:27:17.27	24.584° N	122.953° E	33.0	4.9	5.5	Taiwan Region
23.	1986 03 22 16:56:50.99	4.452° S	104.821° W	10.0	5.3	5.8	Northern Easter I. Cordillera
24.	1986 03 24 02:01:29.76	28.505° N	130.001° E	33.0	5.6	5.9	Ryukyu Islands
25.	1986 03 24 19:31:39.83	2.484° S	138.711° E	33.0	5.8	6.8	West Irian
26.	1986 03 24 19:43:23.41	18.009° N	113.443° W	10.0	5.0	5.7	Revilla Gigedo Islands Region
27.	1986 03 25 17:10:57.71	6.235° S	104.243° E	47.9	5.6	5.6	Sunda Strait
28.	1986 03 26 21:49:56.91	56.353° S	26.617° W	110.1	5.7		South Sandwich Islands Region
29.	1986 03 26 22:06:57.48	7.136° S	71.707° W	608.9	5.9		Western Brasil
30.	1986 03 27 11:58:19.51	14.440° S	178.072° W	33.0	5.7	5.8	Fiji Islands Region
31.	1986 03 28 16:03:03.16	5.884° S	149.666° E	63.5	5.5		New Britain Region
32.	1986 03 29 15:05:44.76	17.659° S	174.610° W	33.0	5.4	5.5	Tonga Islands
33.	1986 03 30 08:53:53.20	26.234° S	132.697° E	10.0	5.7	5.8	South Australia

Table 2. Network-event tape station list for March 1986.

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
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
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
KEV	67	Kevo, Finland	69.76° N	27.01° E	80.0	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
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
SCP	61	State College, Pennsylvania	40.79° N	77.87° W	352.0	DWWSSN
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

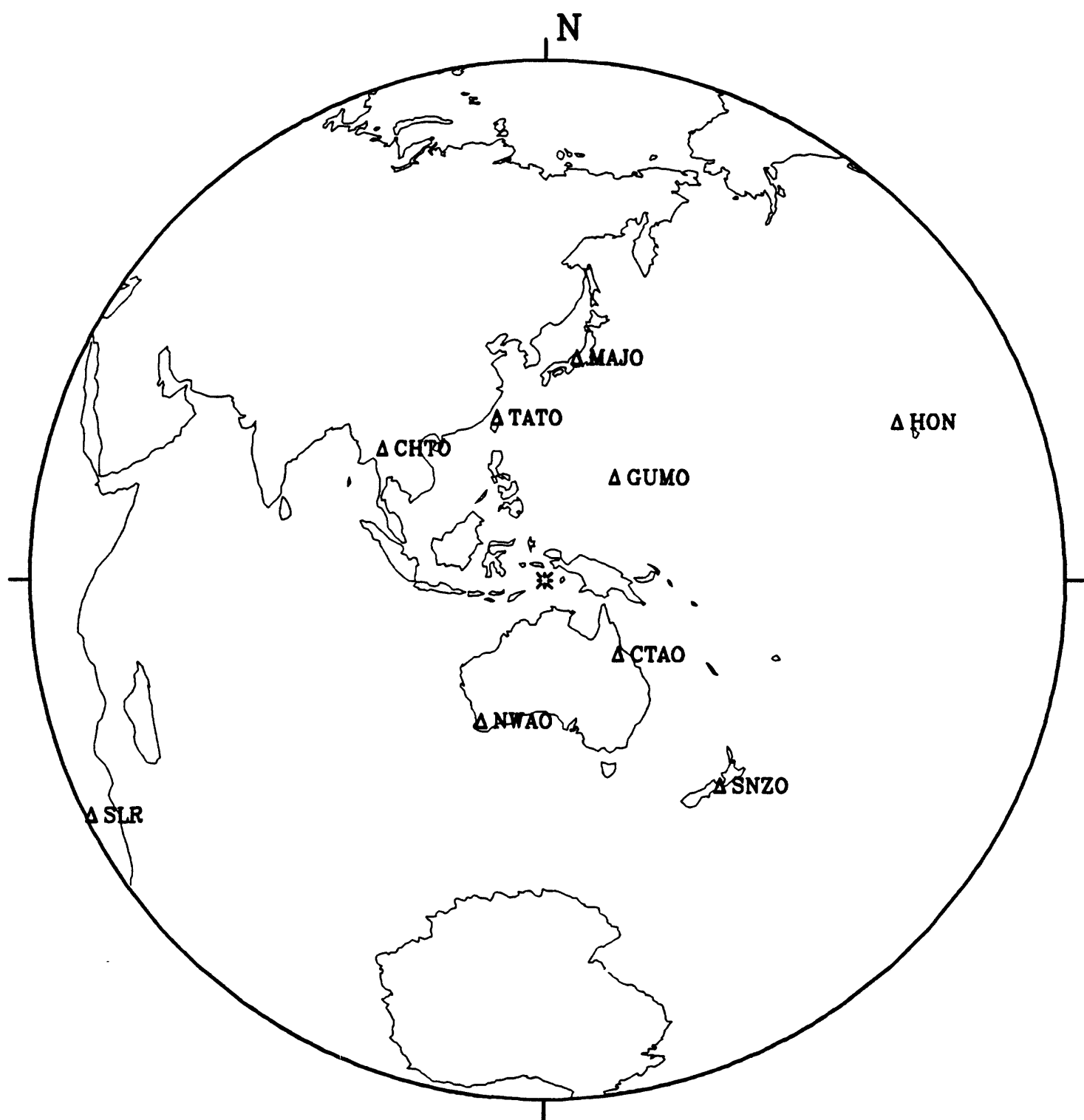
- * ASRO - Abbreviated Seismic Research Observatory
DWWSSN - Digital World Wide Standardized Seismograph Network
GRF - Graefenberg Array
NARS - Network of Autonomously Registrating Stations
NRSA - Norwegian Regional Seismic Array
RSTN - Regional Seismic Test Network
SRO - Seismic Research Observatory

EARTHQUAKES – March 1986 – MAGNITUDE ≥ 5.5



01 March 1986 16:41:40.81

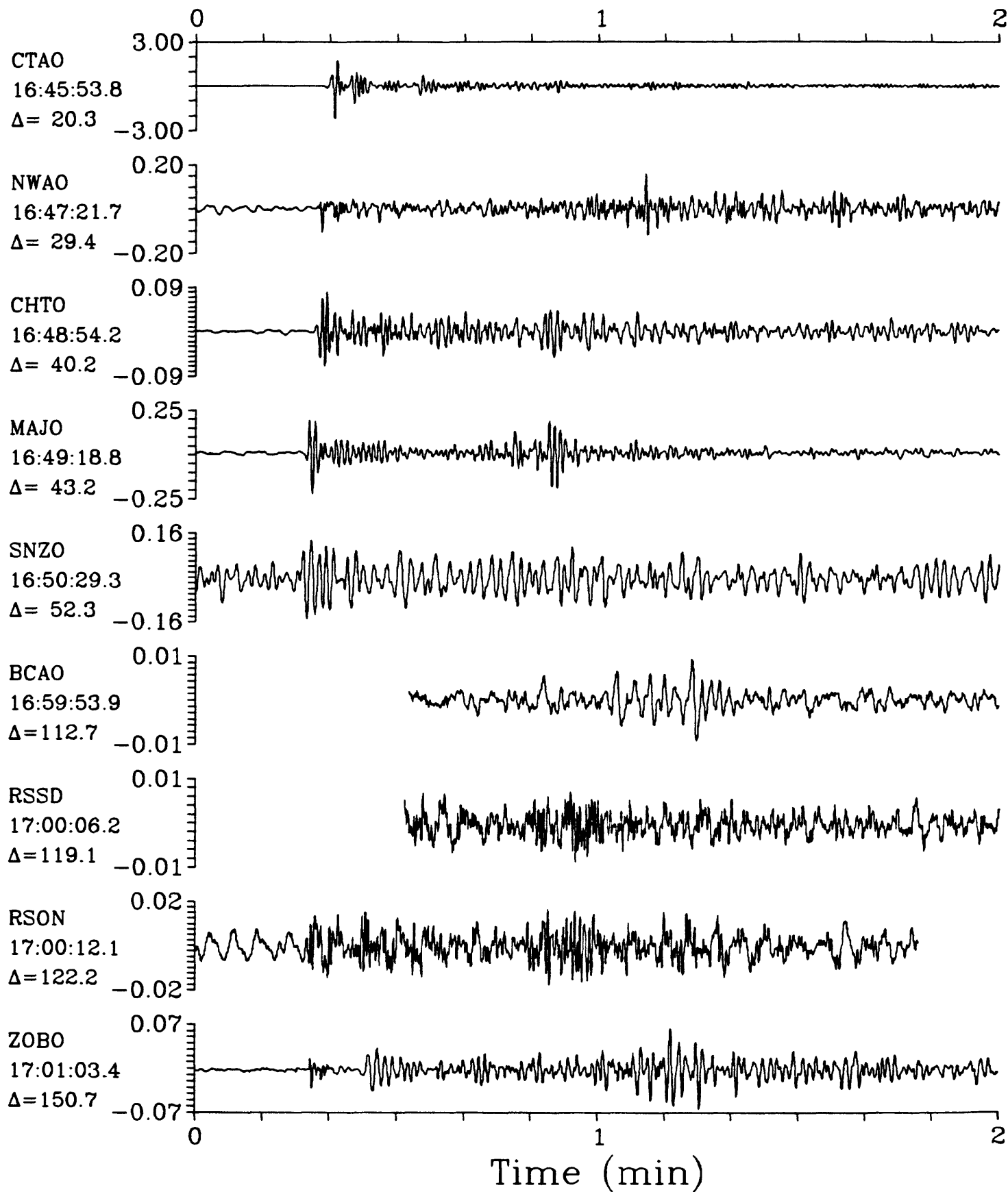
Banda Sea



SPZ

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Banda Sea $h=80.0$ $m_b=5.6$

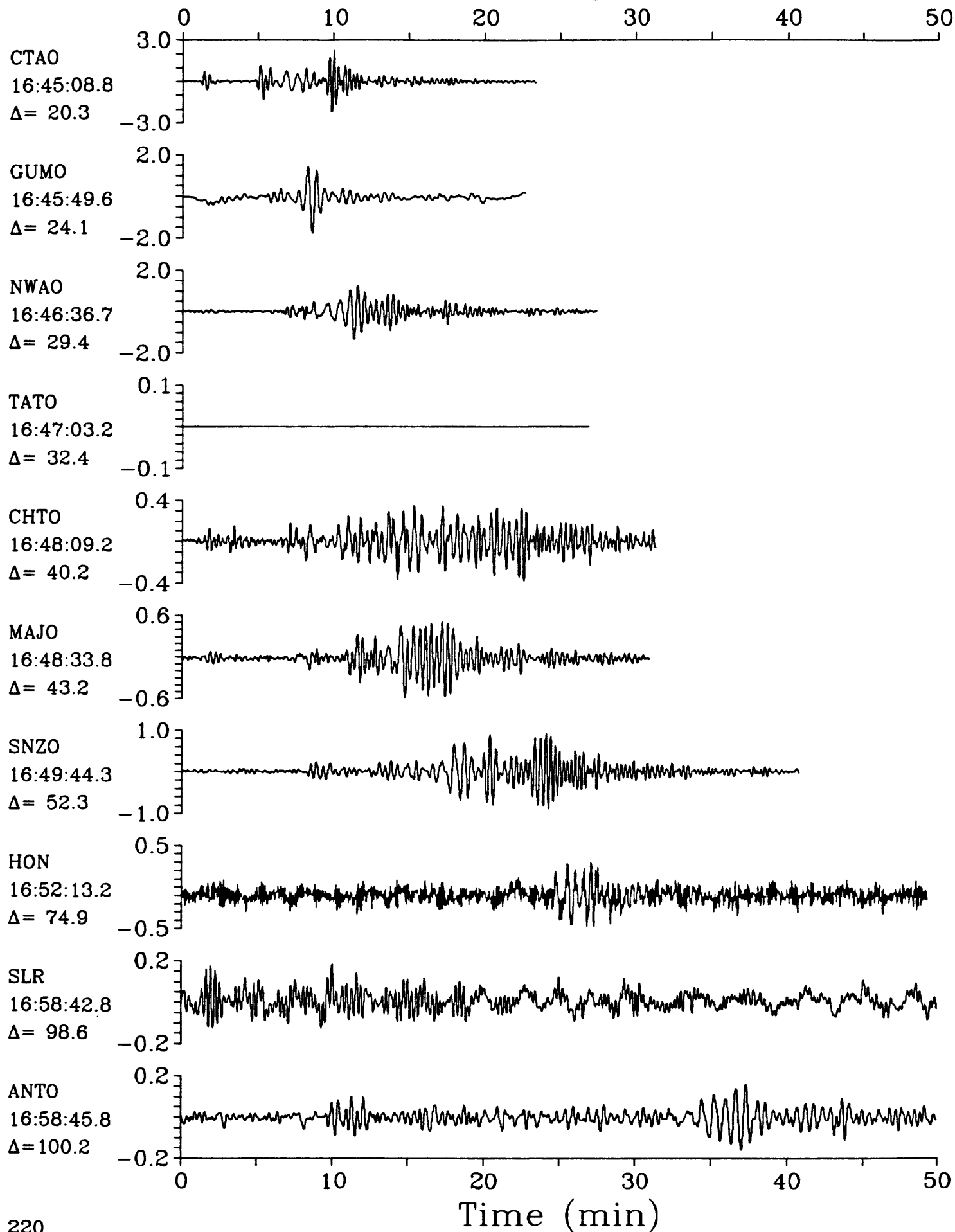
SPZ



LPZ

01 March 1986 16:41:40.81
Banda Sea $h=80.0$ $m_b=5.6$

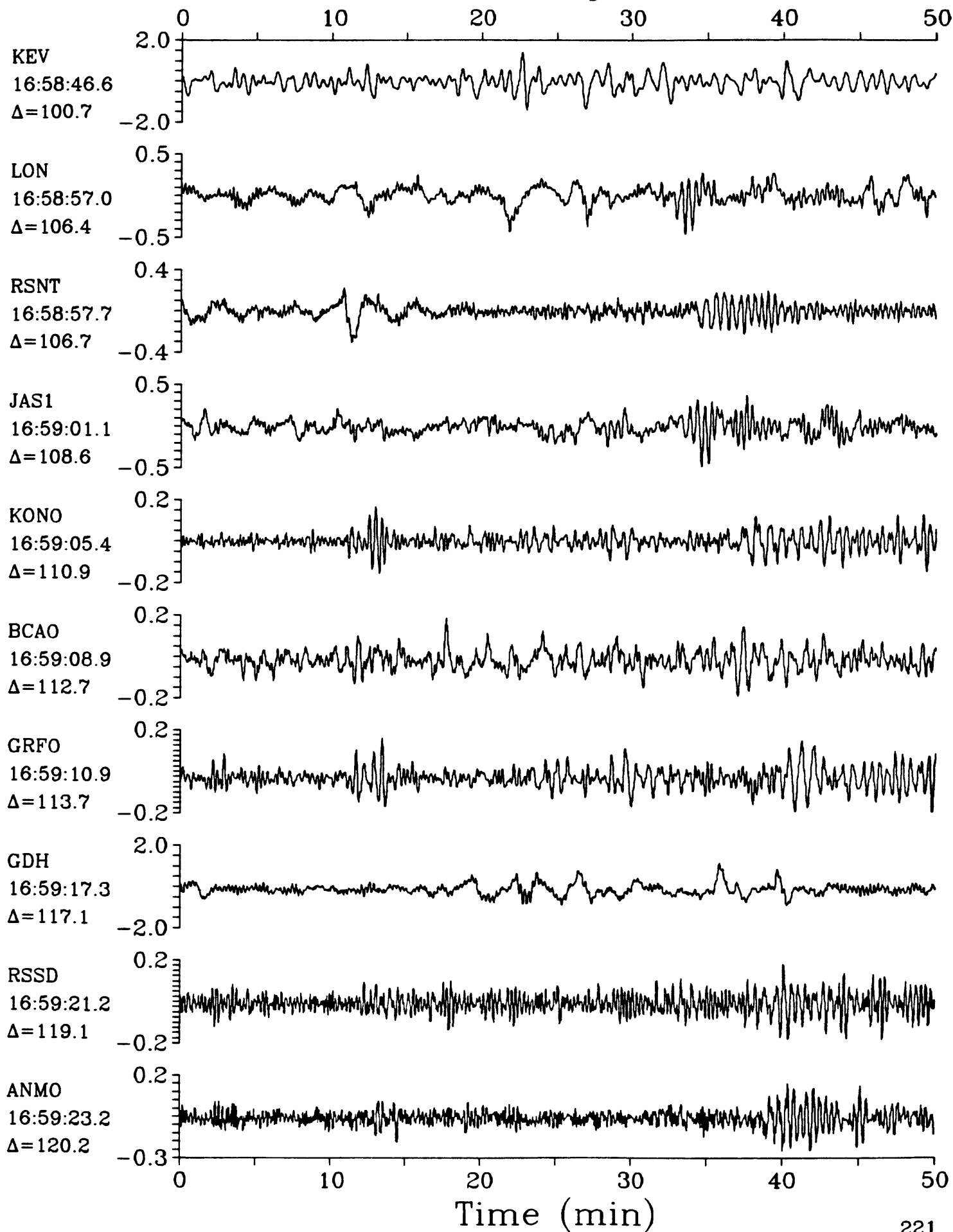
LPZ



LPZ

01 March 1986 16:41:40.81
Banda Sea $h=80.0$ $m_b=5.6$

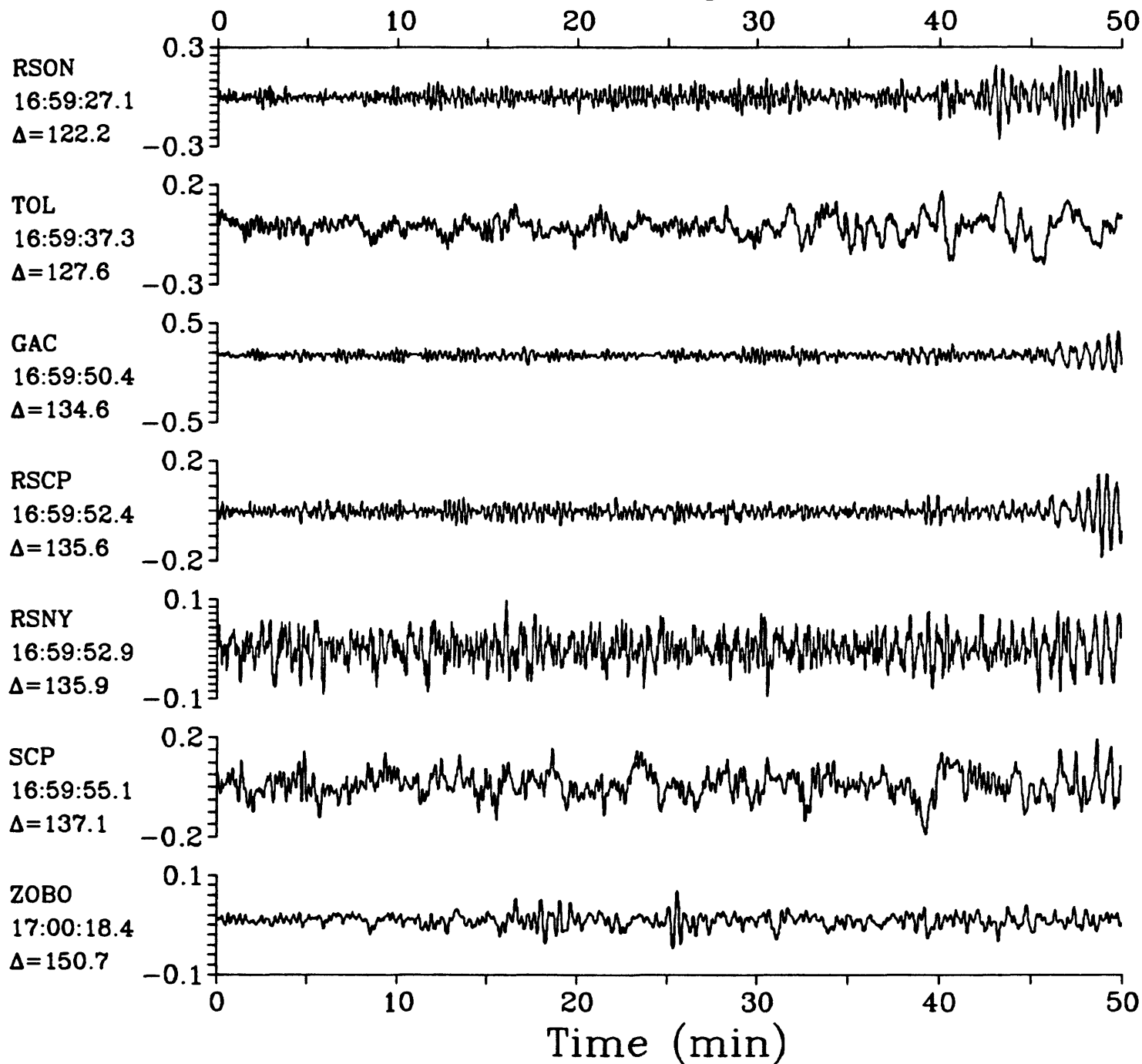
LPZ



LPZ

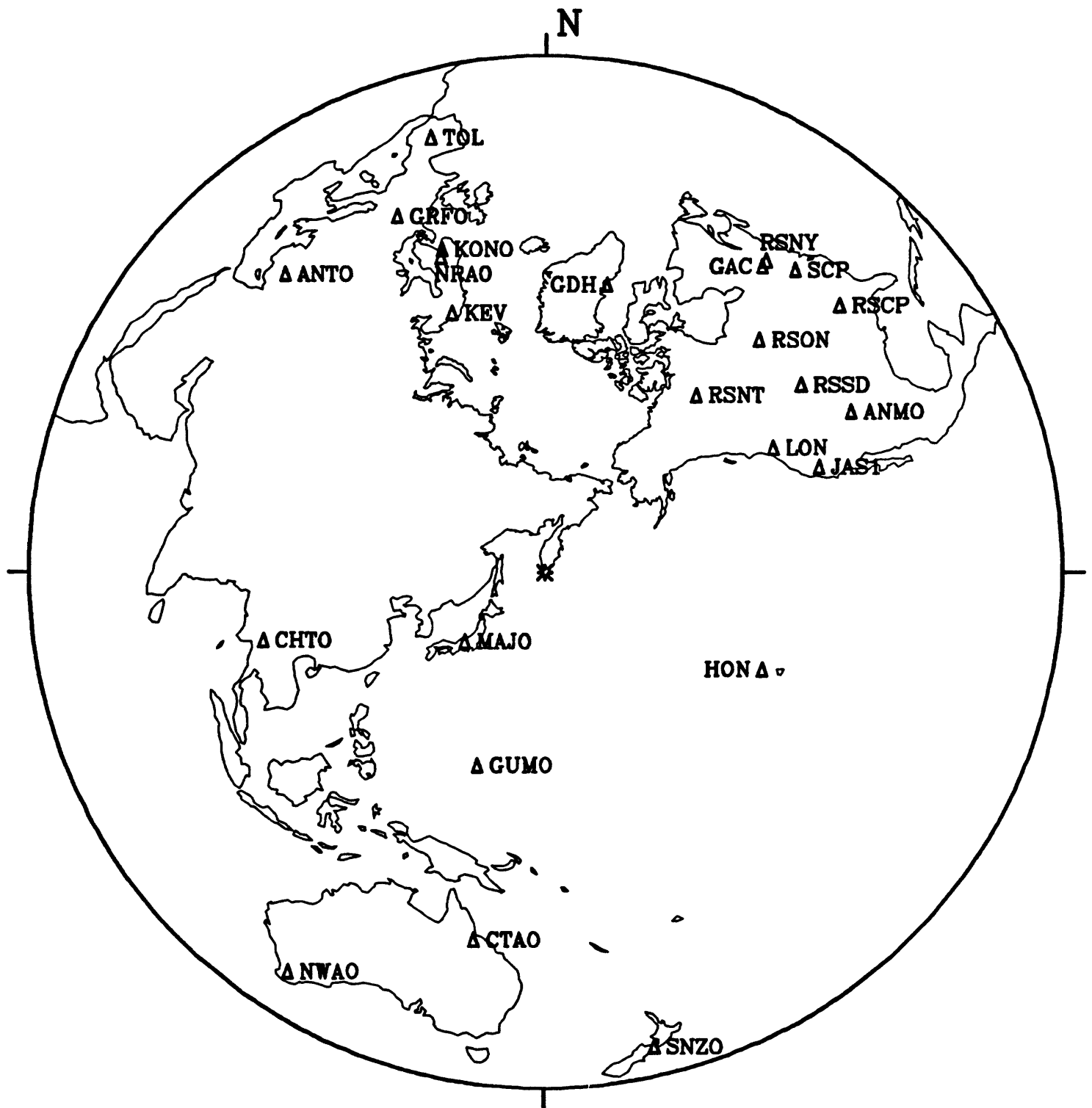
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Banda Sea $h=80.0$ $m_b=5.6$

LPZ



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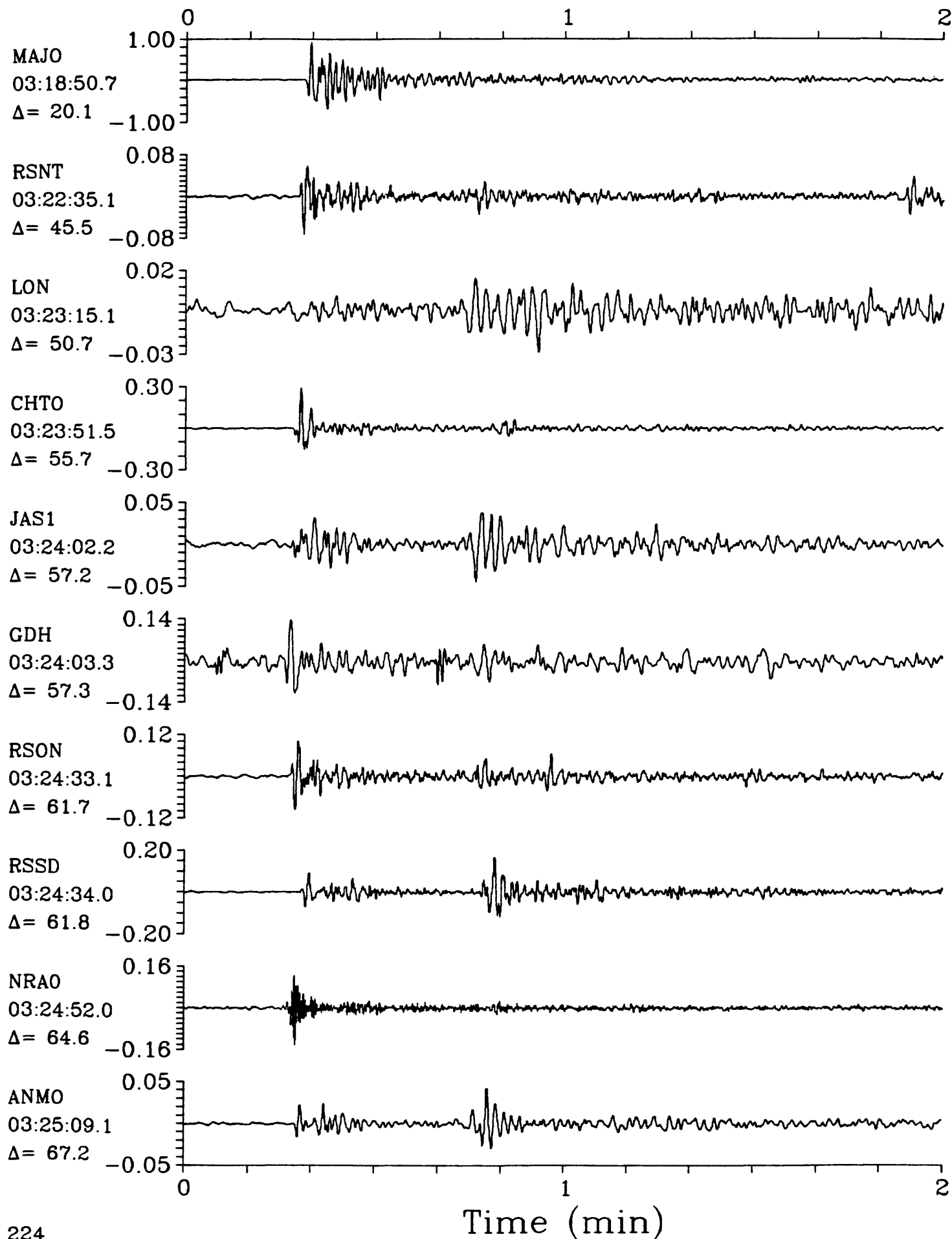
Kamchatka



SPZ

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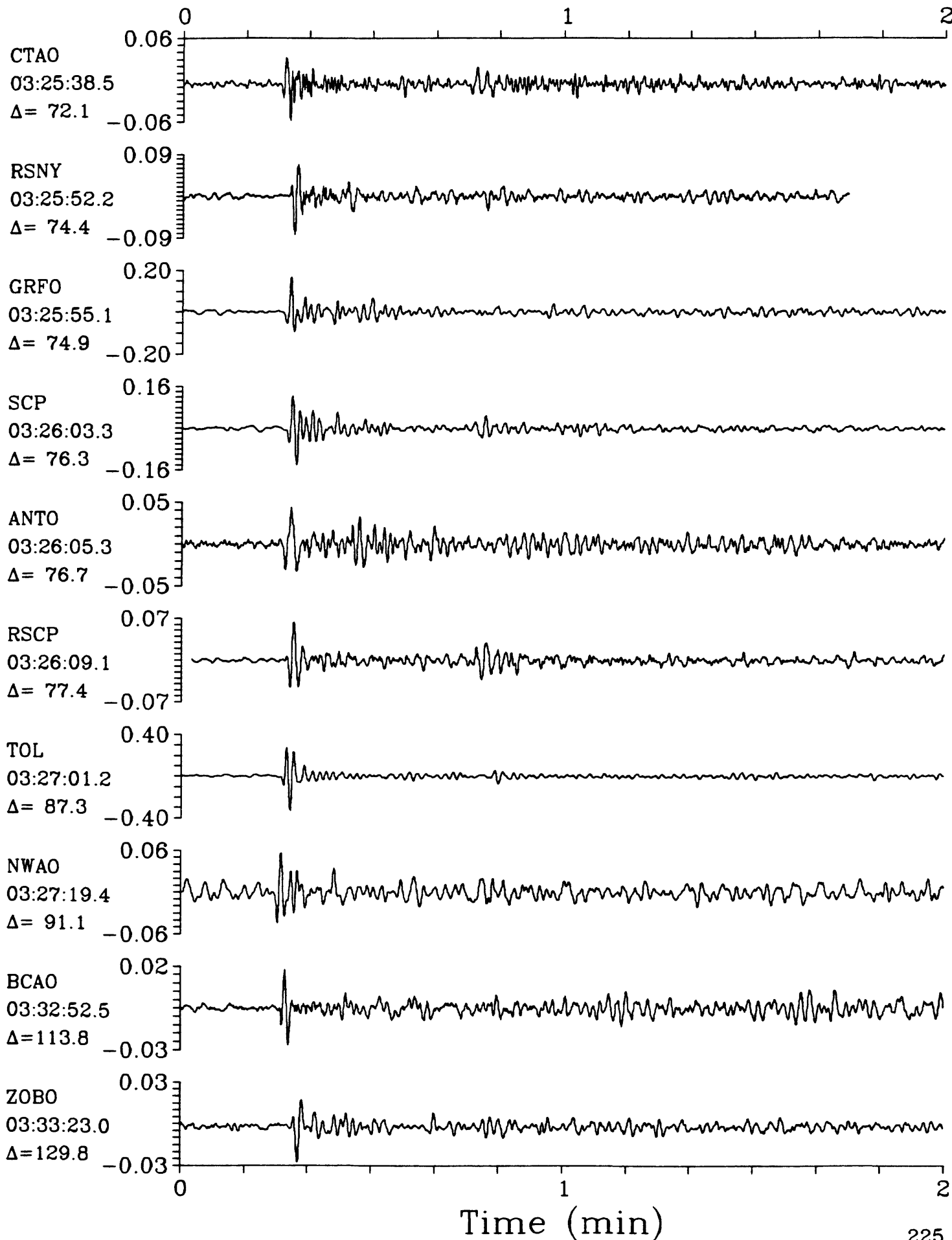
SPZ



SPZ

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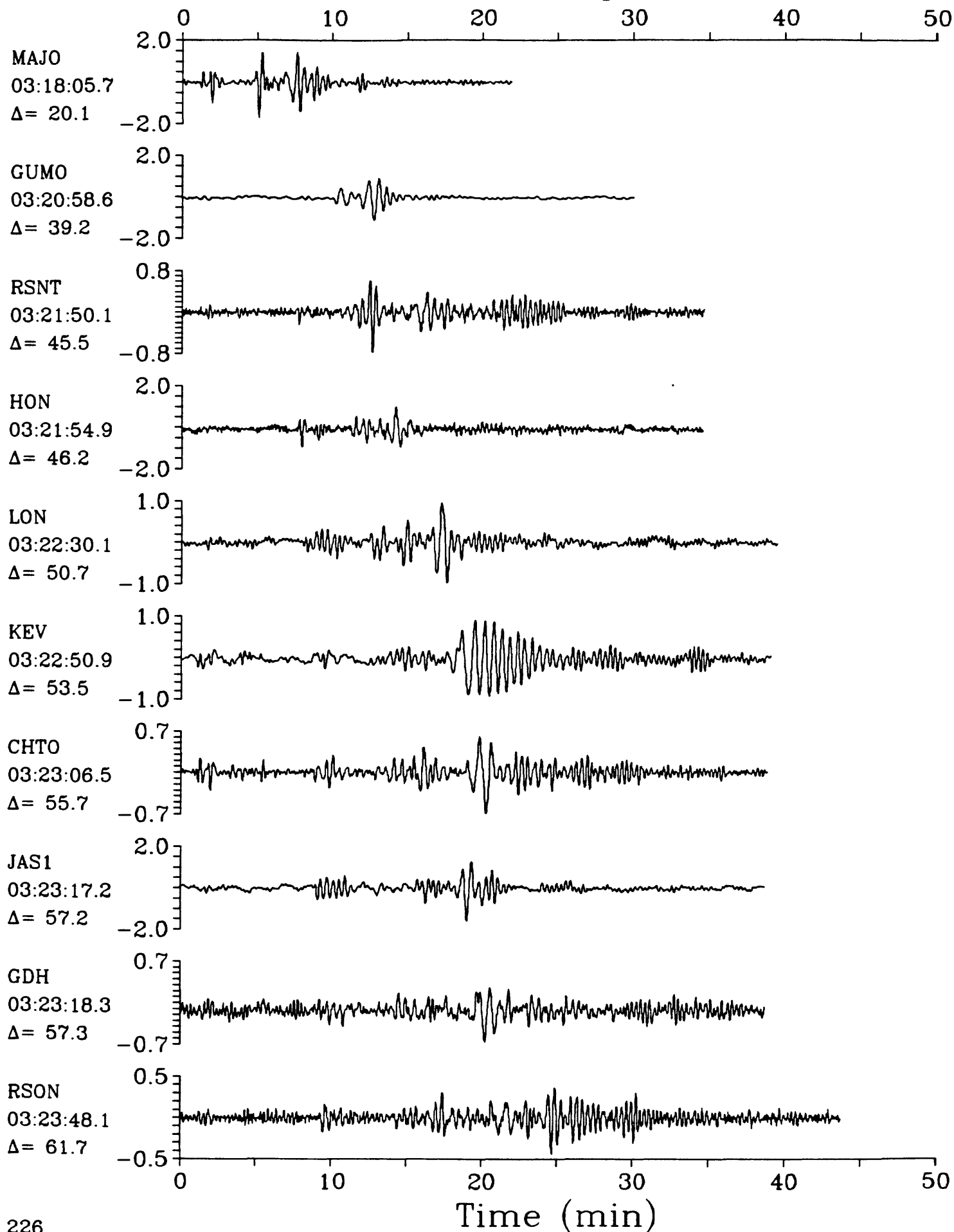
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LPZ

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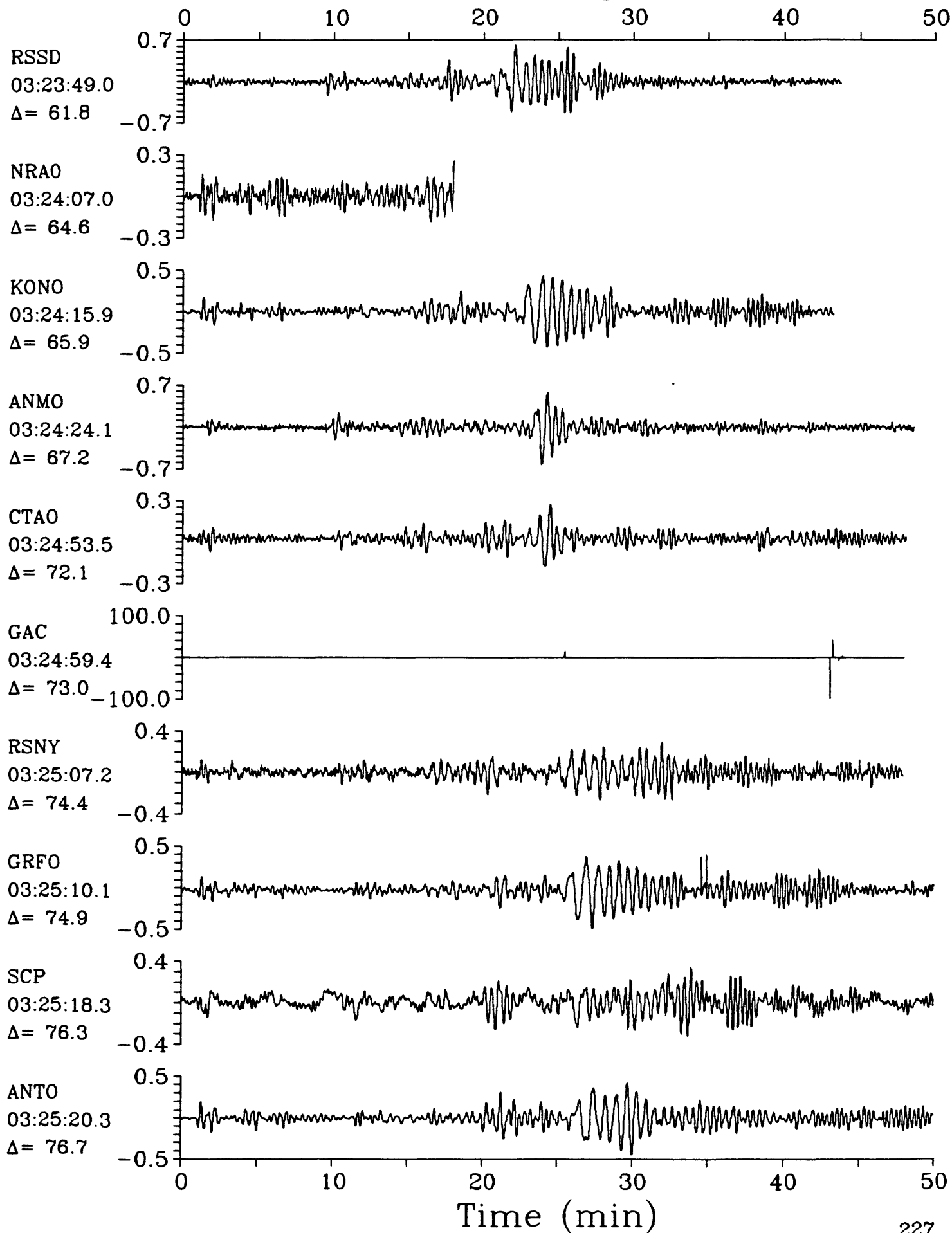
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LPZ

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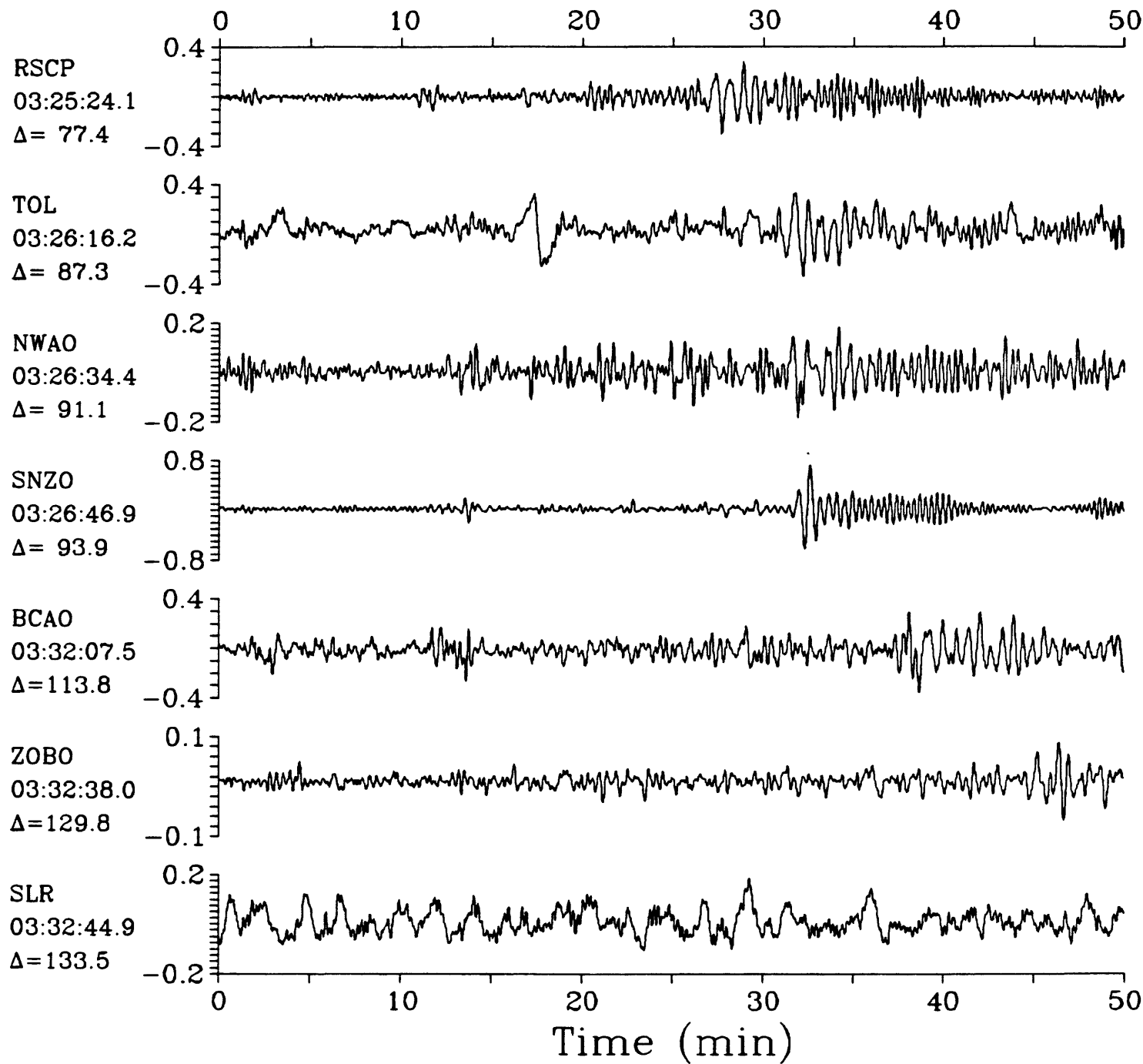
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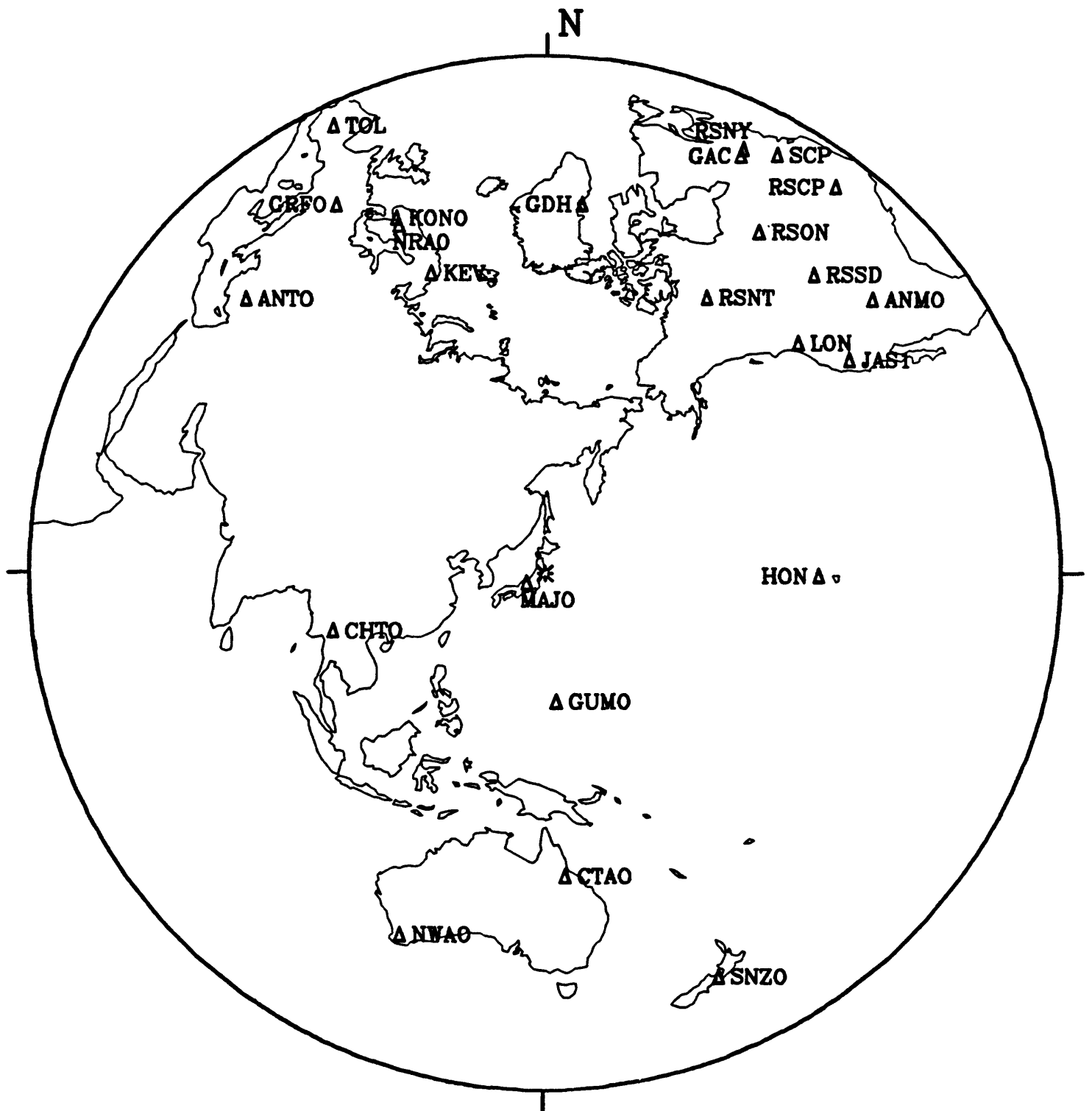
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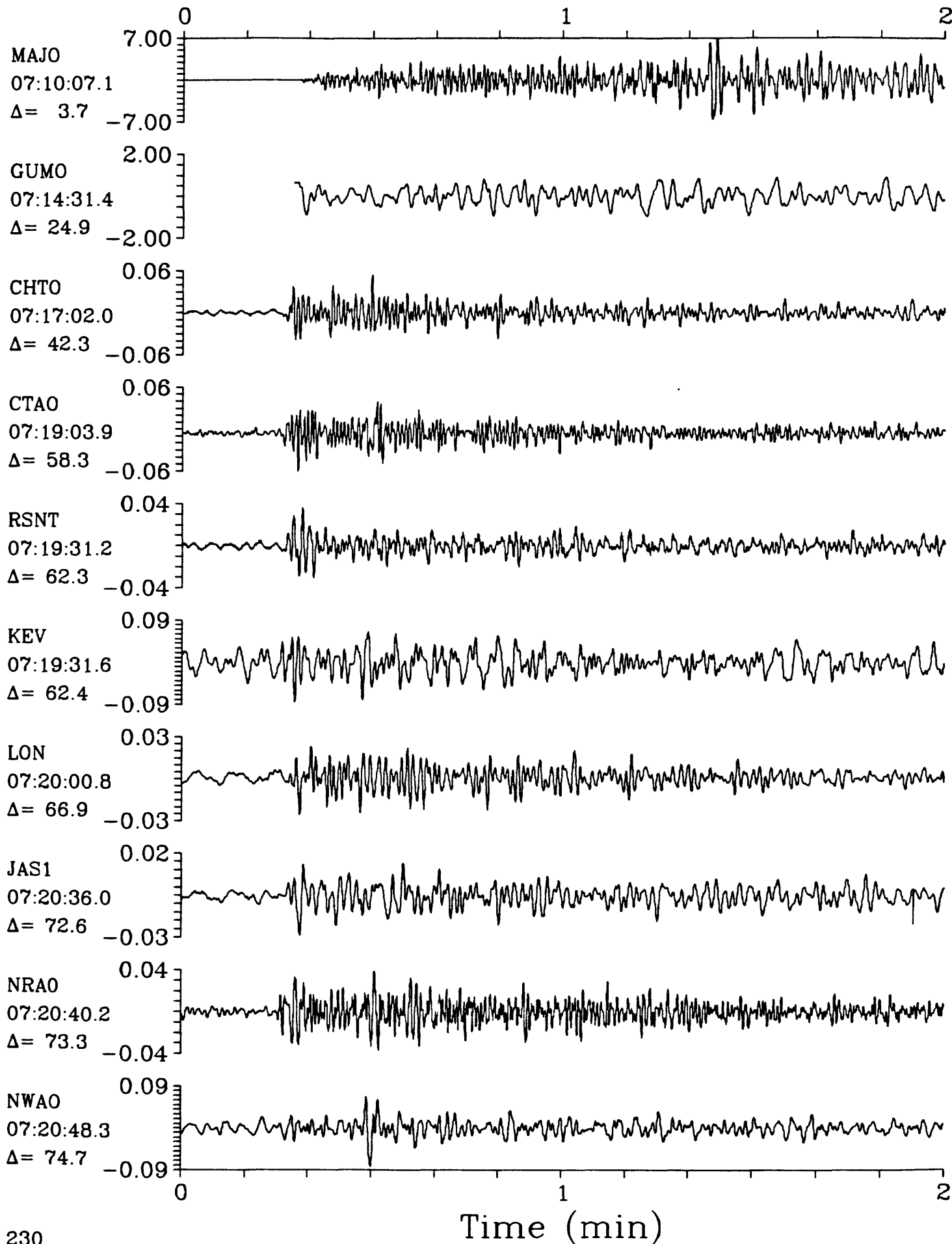
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02 March 1986 07:09:27.31

Near East Coast of Honshu, Japan

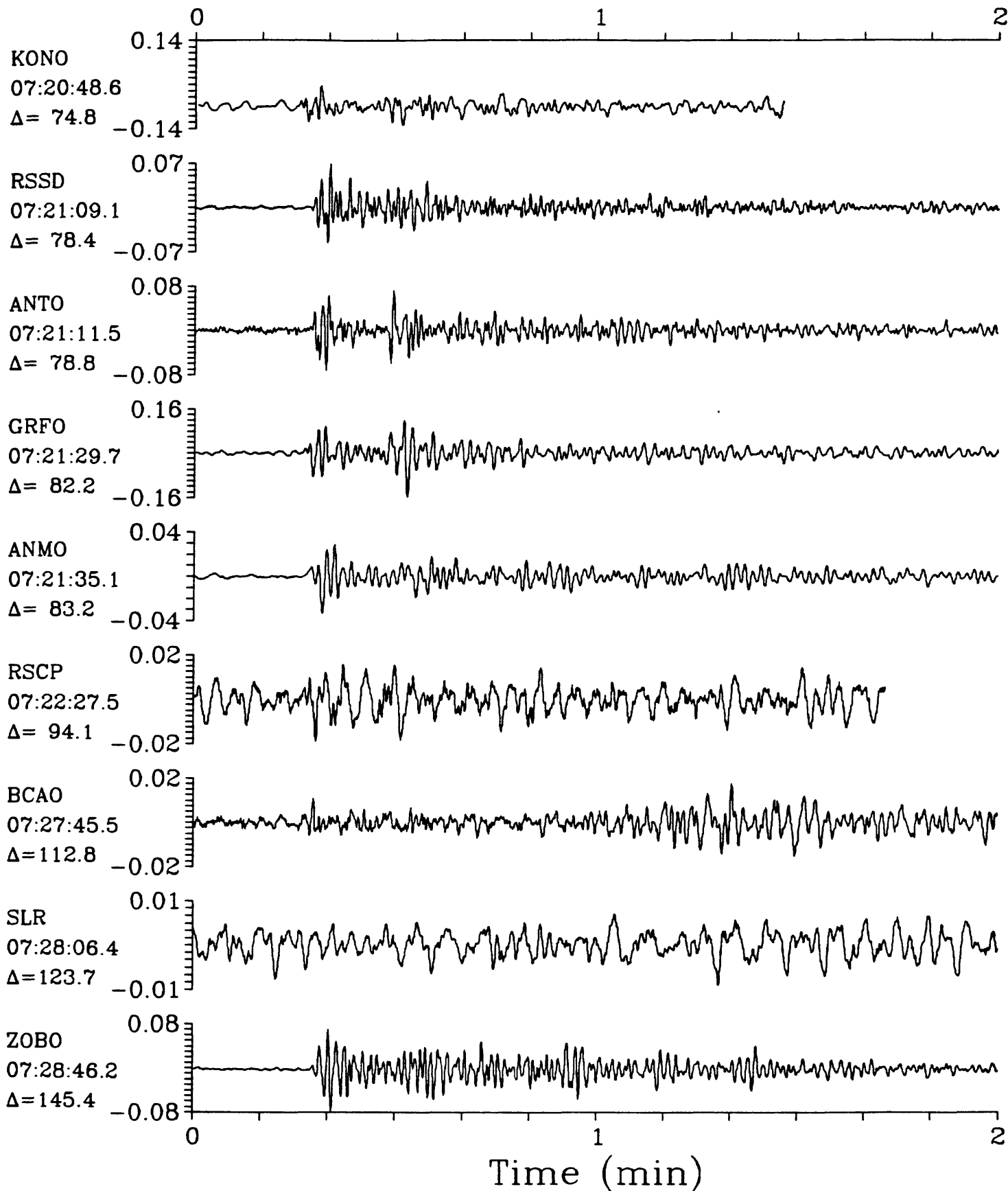




SPZ

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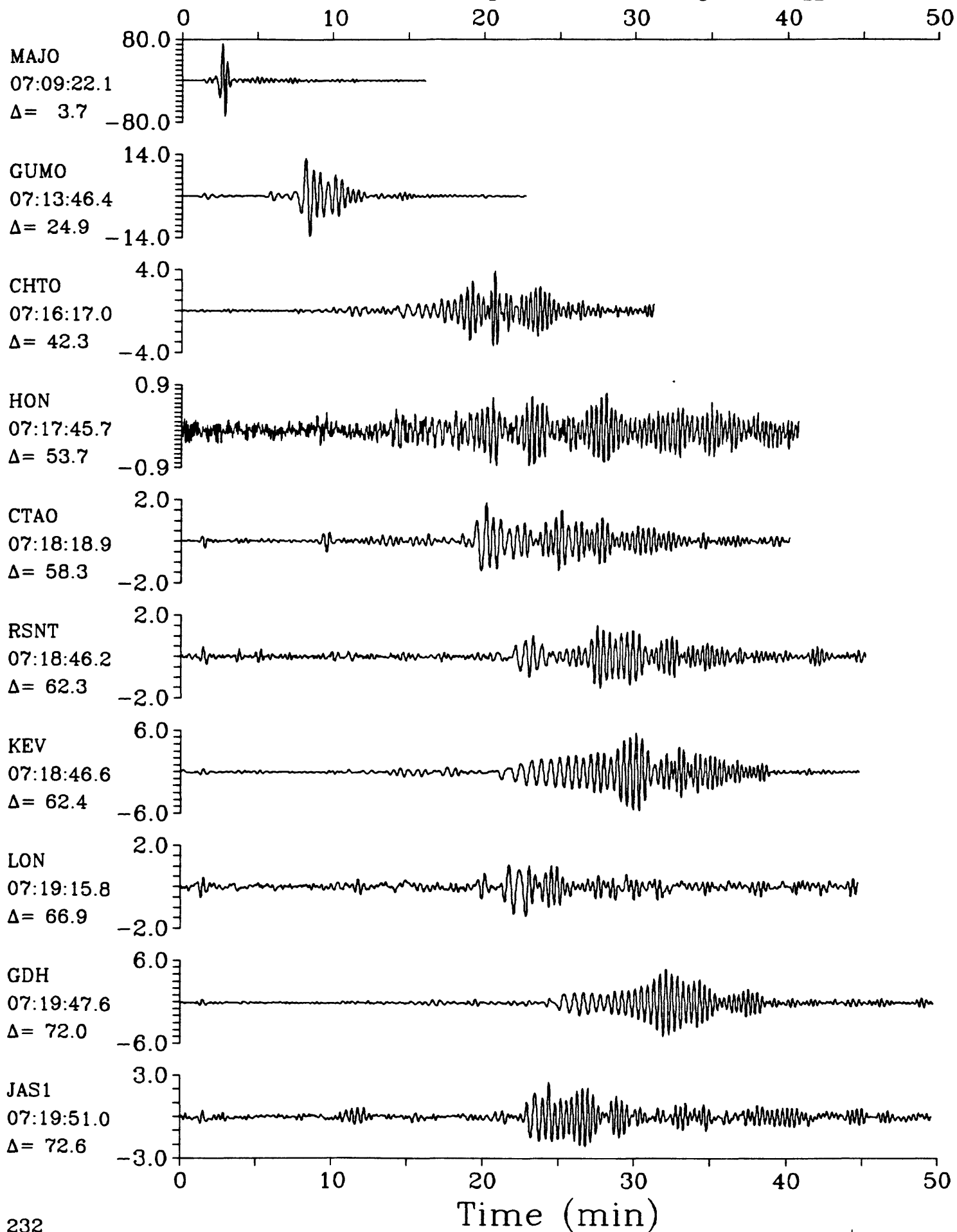
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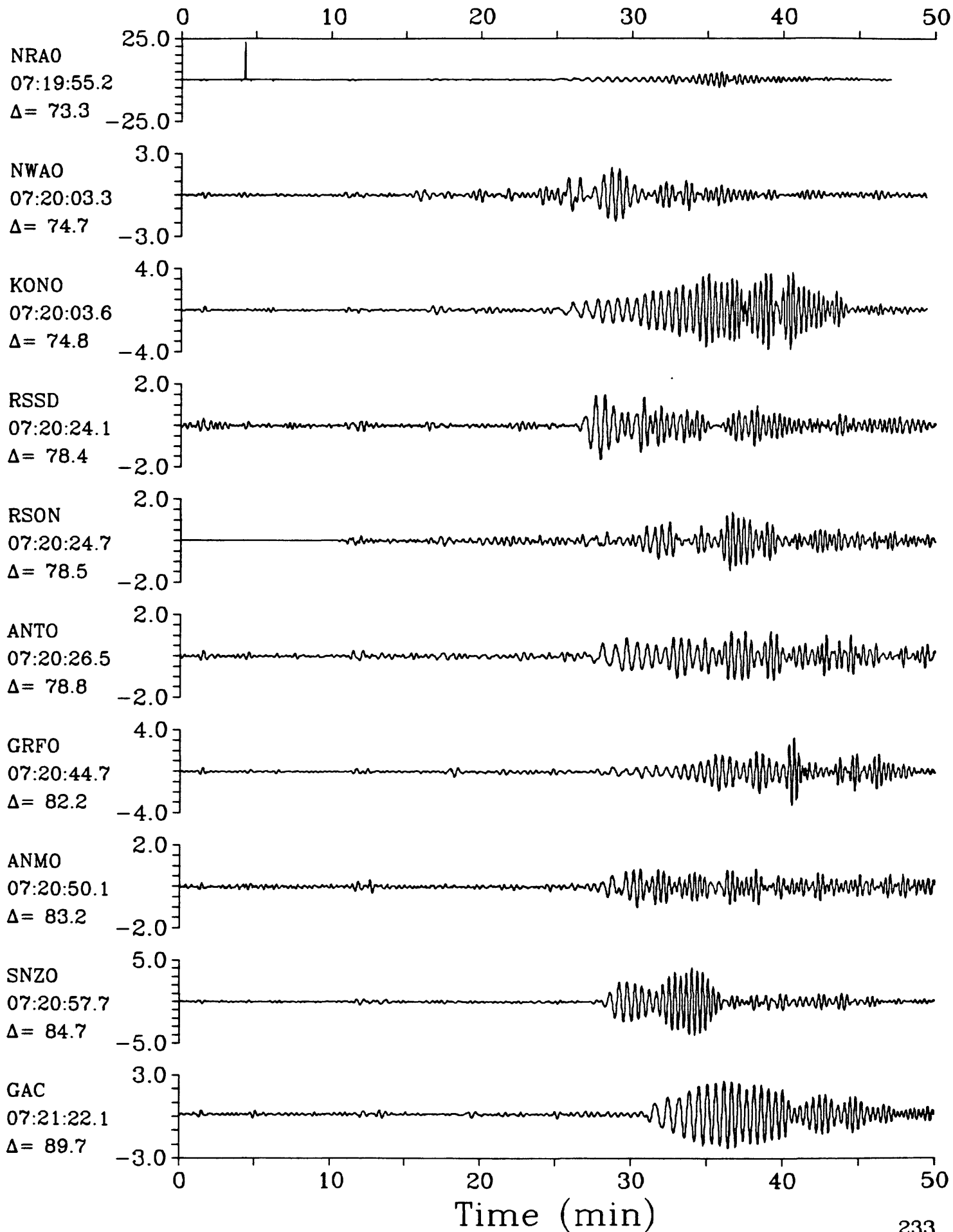
Near East Coast of Honshu, Japan $h=39.4$ $m_b=5.6$ $M_{sz}=5.7$ 

LPZ

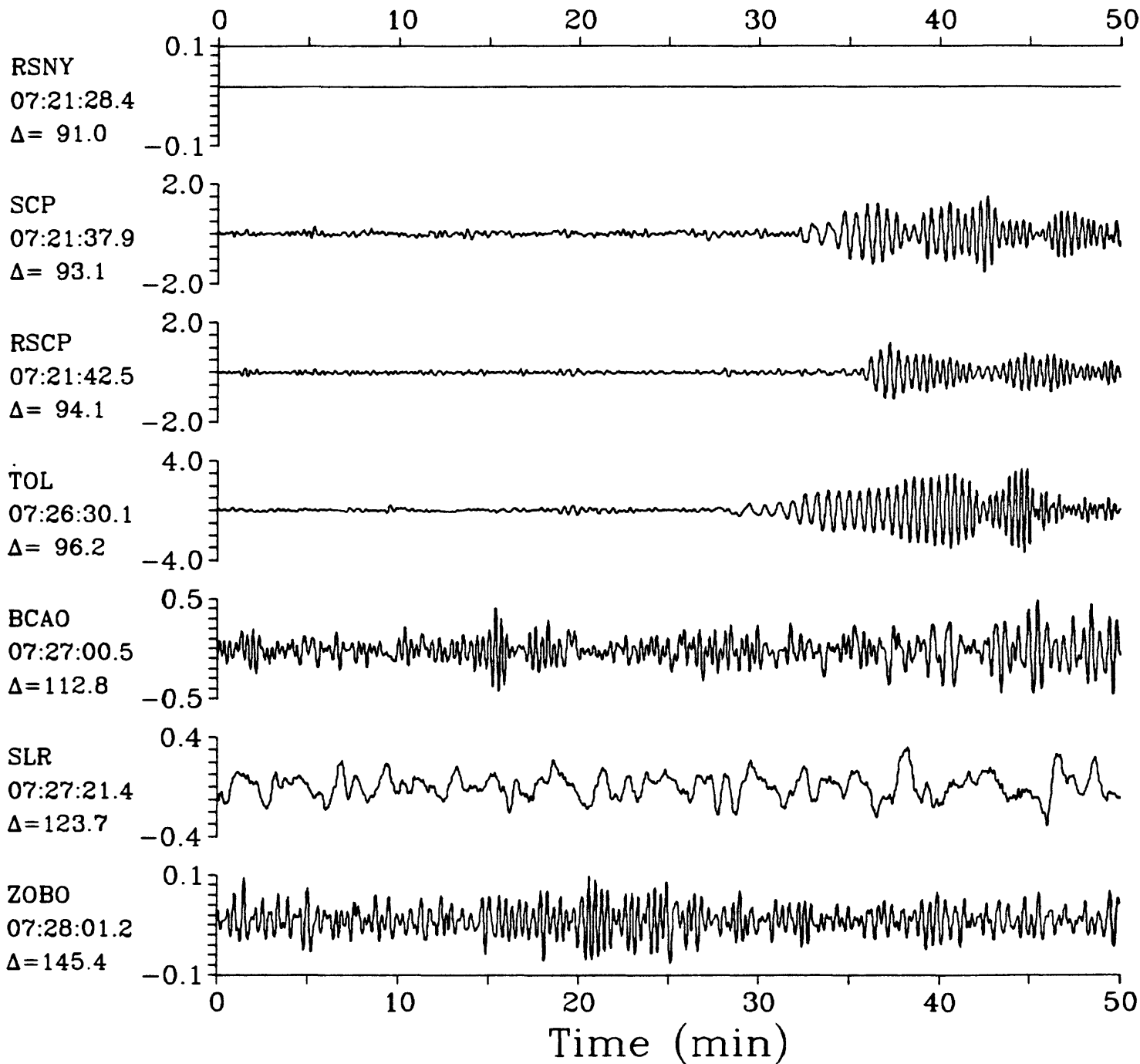
02 March 1986 07:09:27.31

LPZ

Near East Coast of Honshu, Japan $h=39.4$ $m_b=5.6$ $M_{sz}=5.7$ 

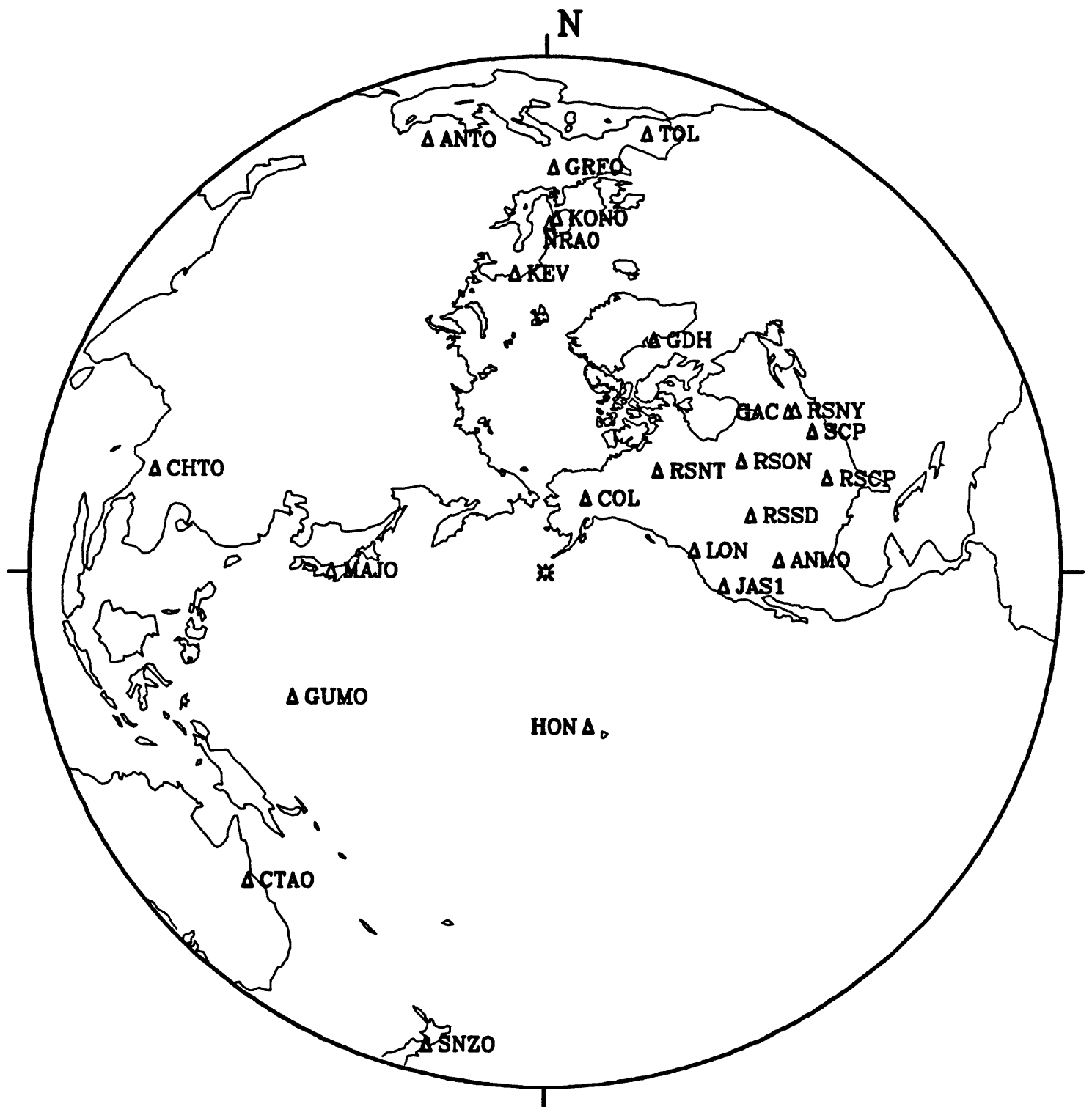


LPZ 02 March 1986 07:09:27.31 LPZ
Near East Coast of Honshu, Japan $h=39.4$ $m_b=5.6$ $M_{sz}=5.7$



04 March 1986 08:47:14.85

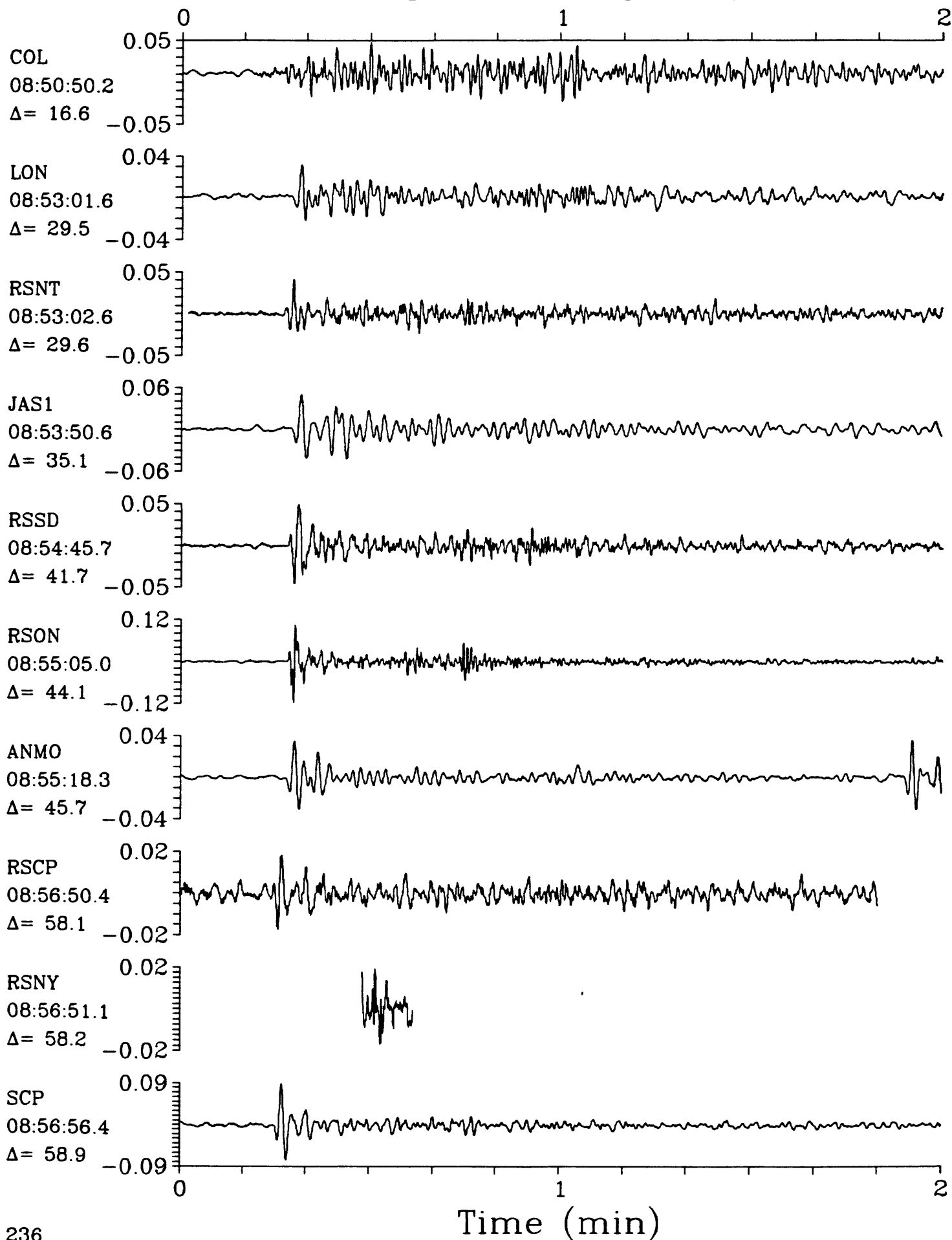
Aleutian Islands Region



SPZ

04 March 1986 08:47:14.85

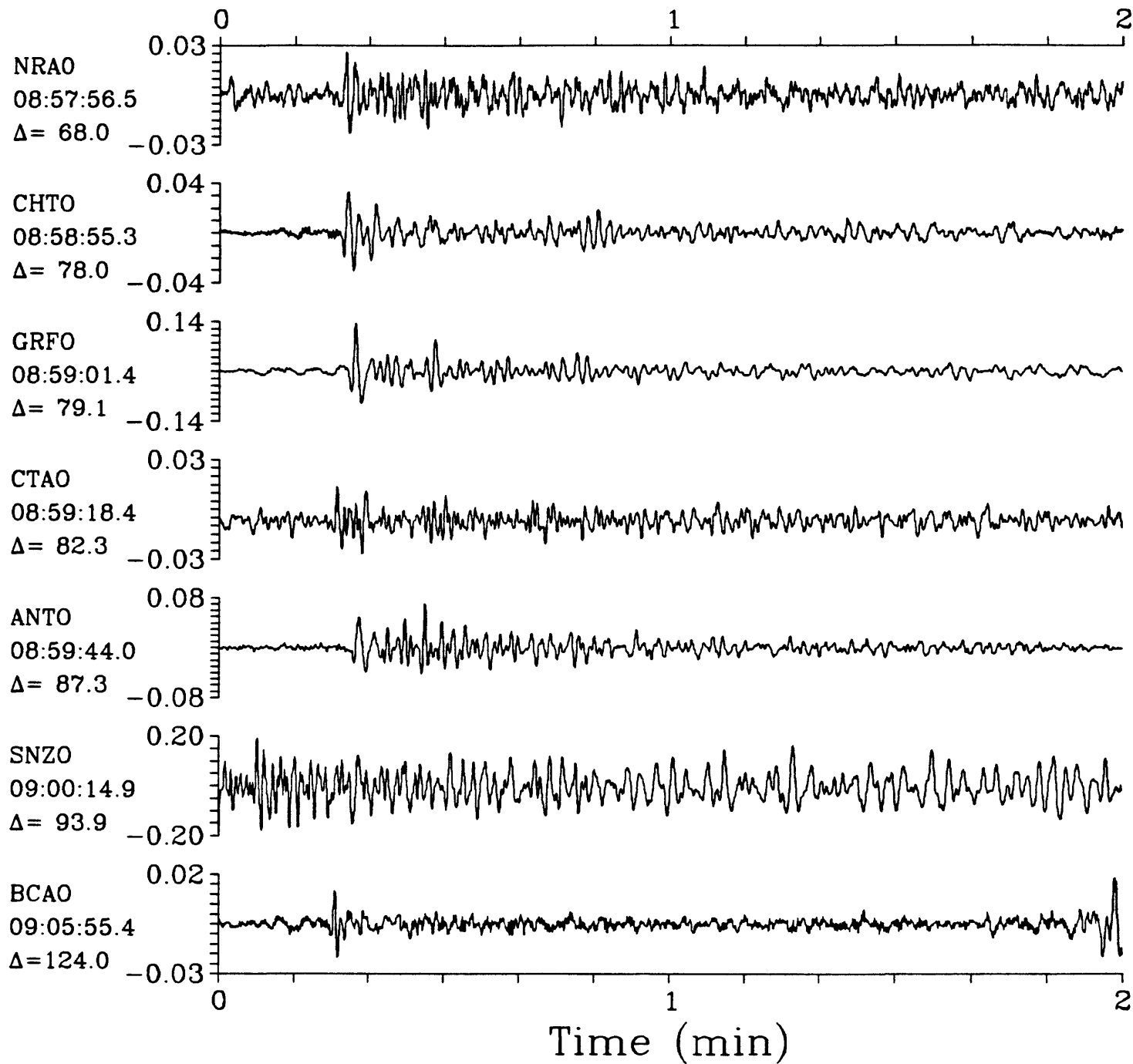
SPZ

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SPZ

04 March 1986 08:47:14.85

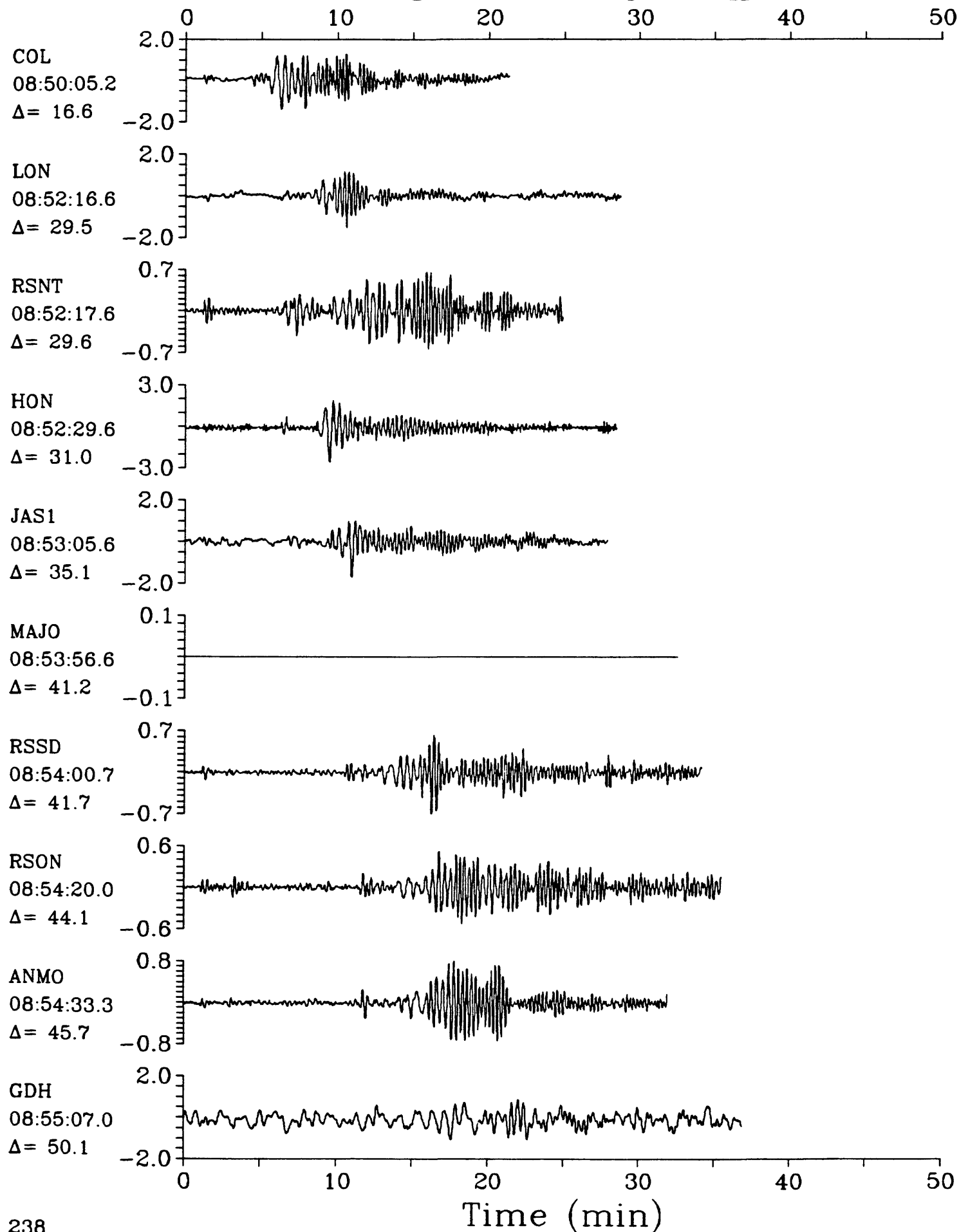
SPZ

Aleutian Islands Region $h=33.0$ $m_b=5.6$ $M_{SZ}=4.6$ 

LPZ

04 March 1986 08:47:14.85

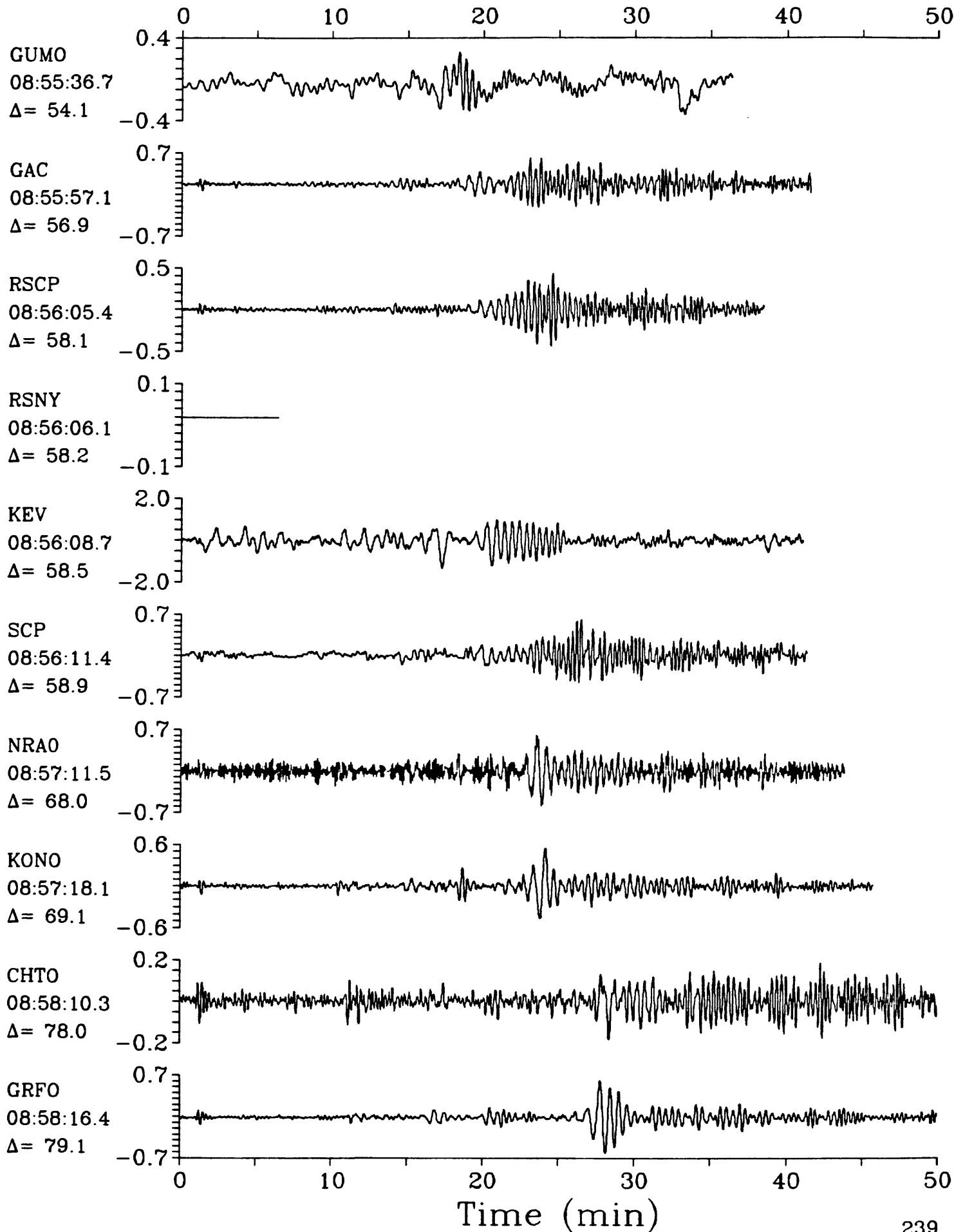
LPZ

Aleutian Islands Region $h=33.0$ $m_b=5.6$ $M_{SZ}=4.6$ 

LPZ

04 March 1986 08:47:14.85

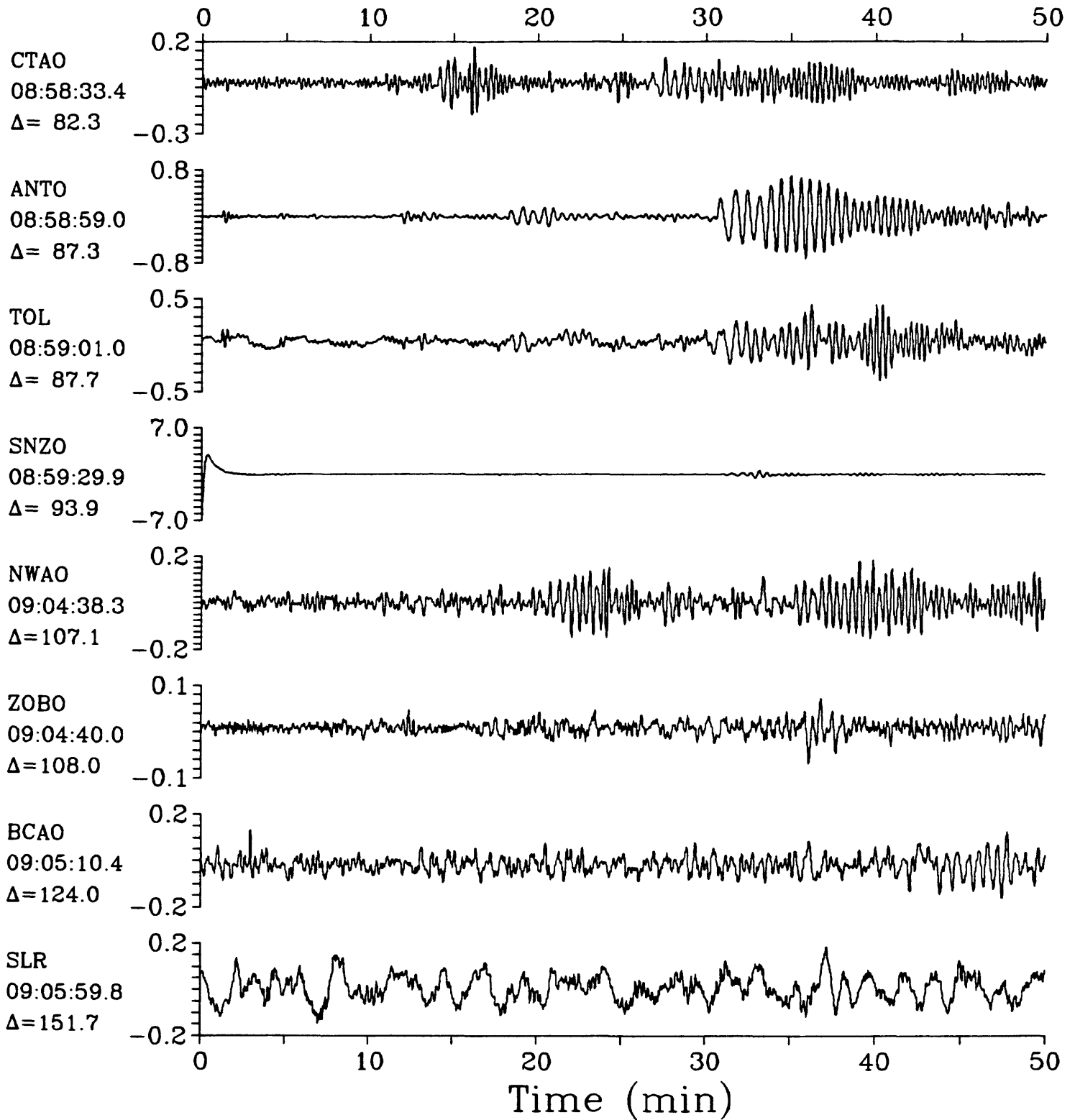
LPZ

Aleutian Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=4.6$ 

LPZ

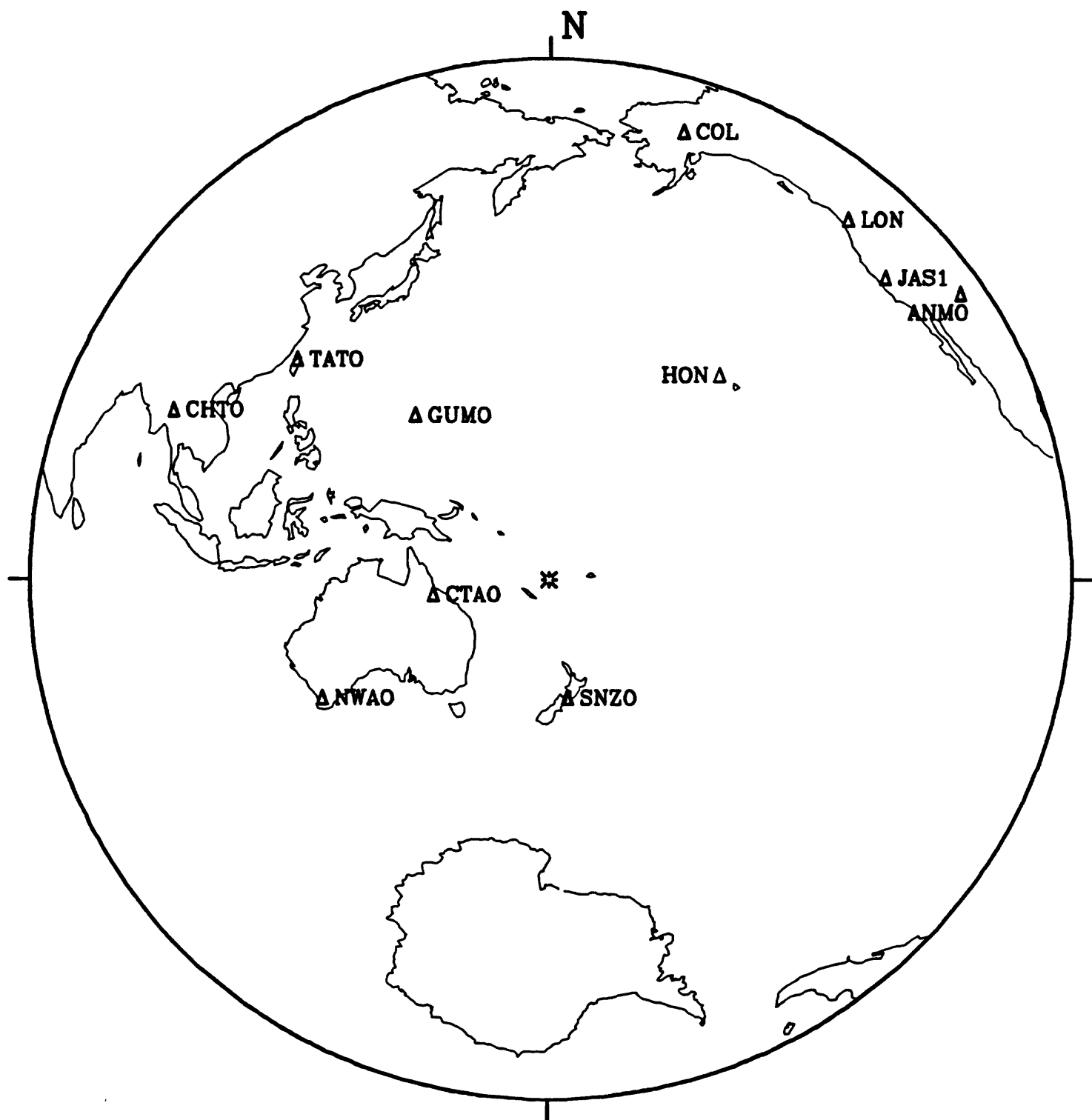
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LPZ

Aleutian Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=4.6$ 

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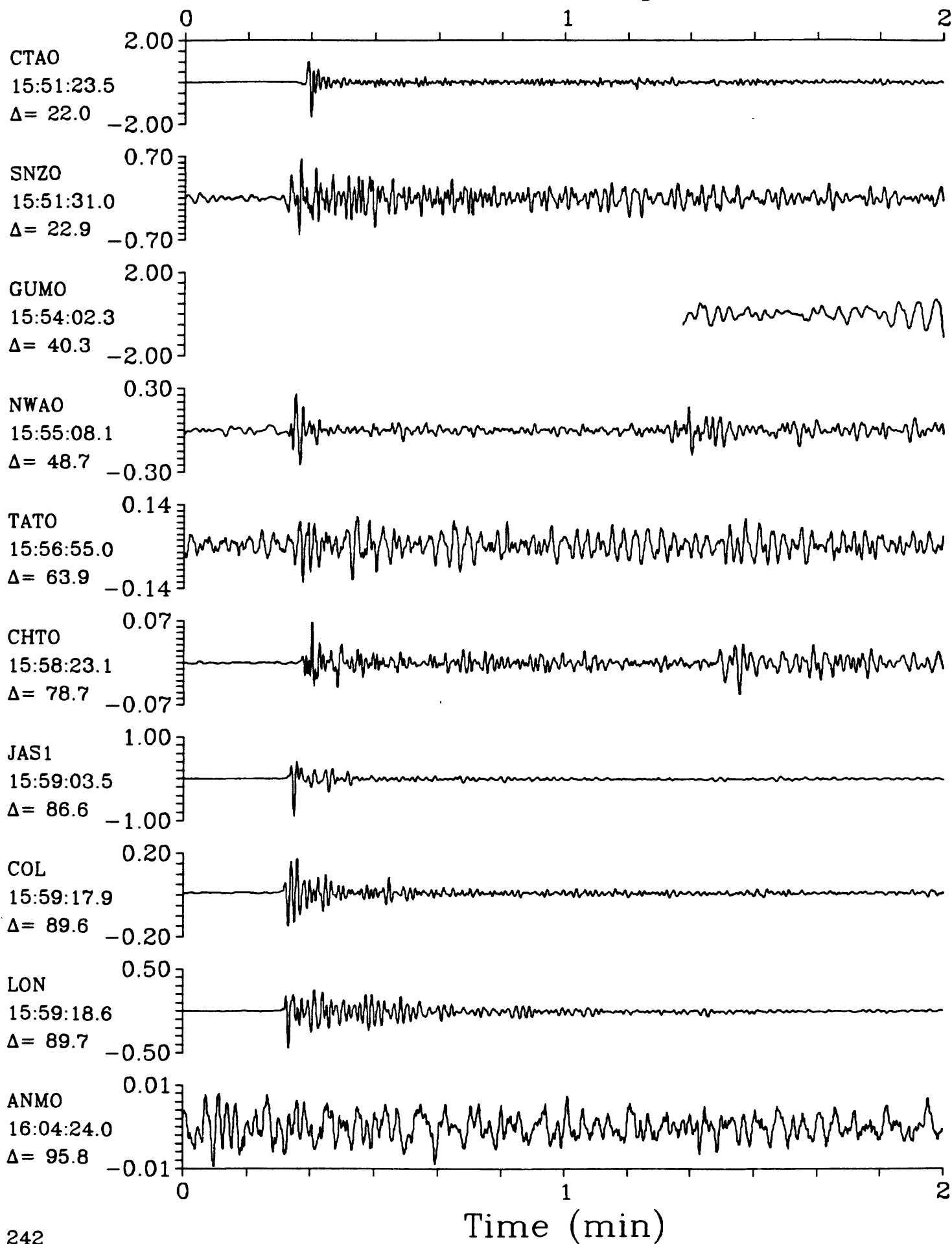
Vanuatu Islands



SPZ

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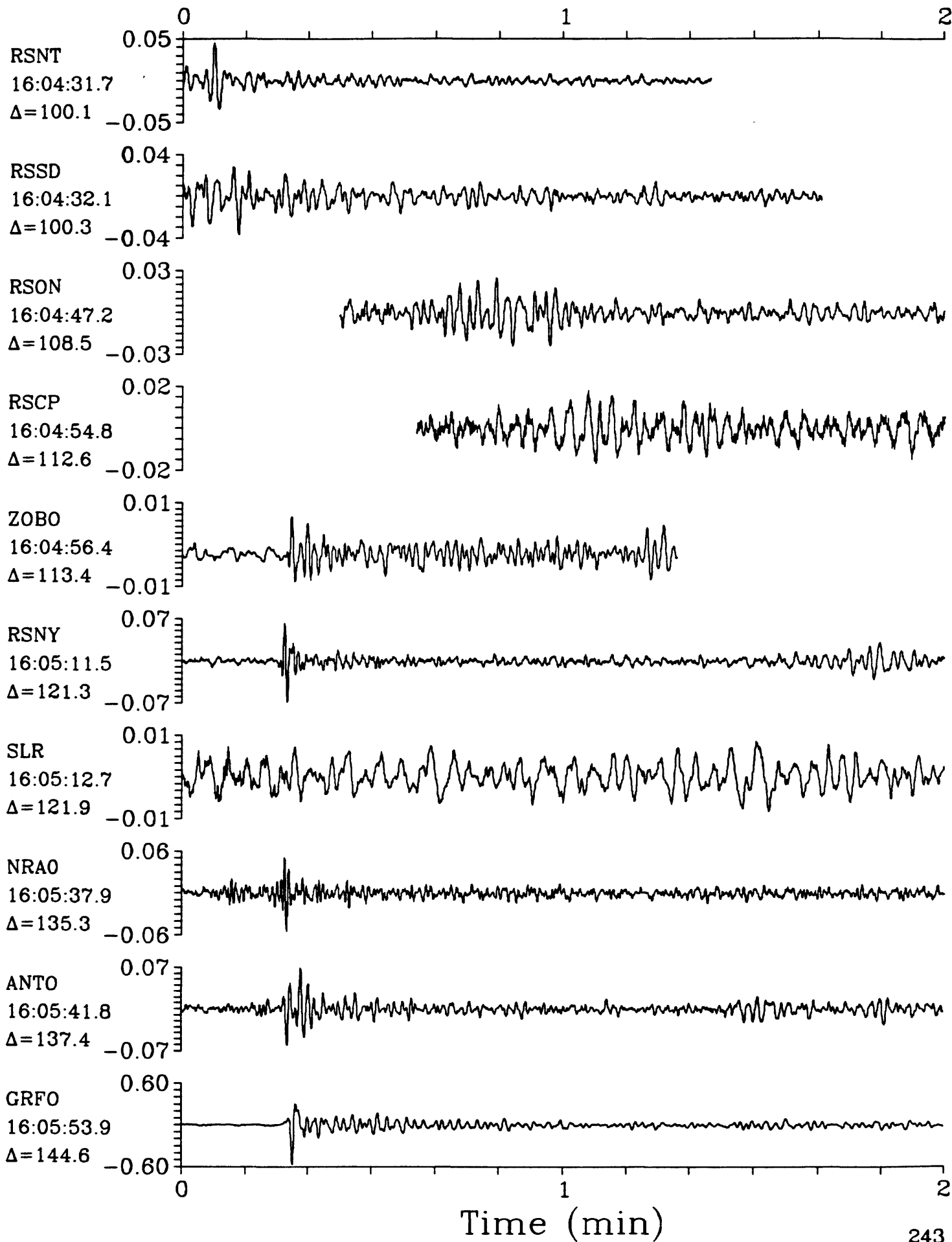
SPZ



SPZ

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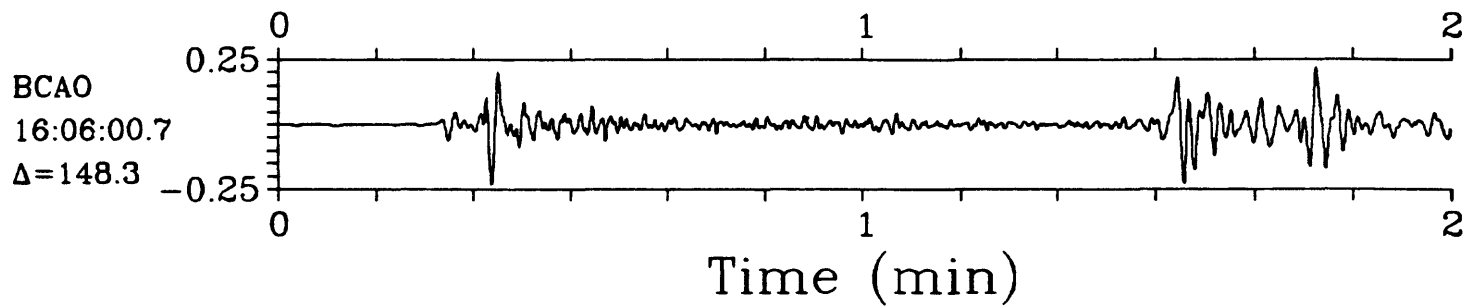
SPZ



SPZ

05 March 1986 15:47:07.46
Vanuatu Islands $h=289.5$ $m_b=5.7$

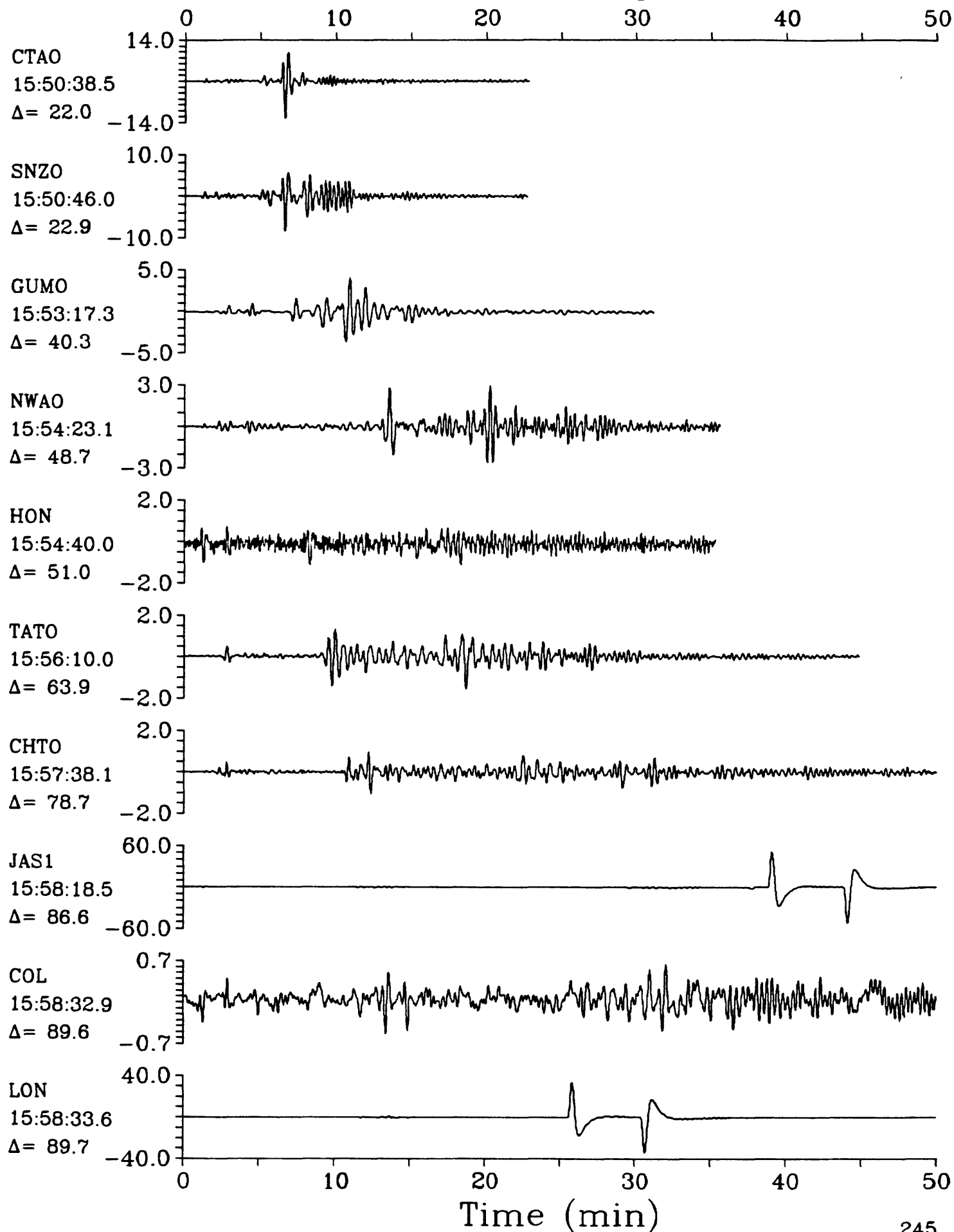
SPZ



LPZ

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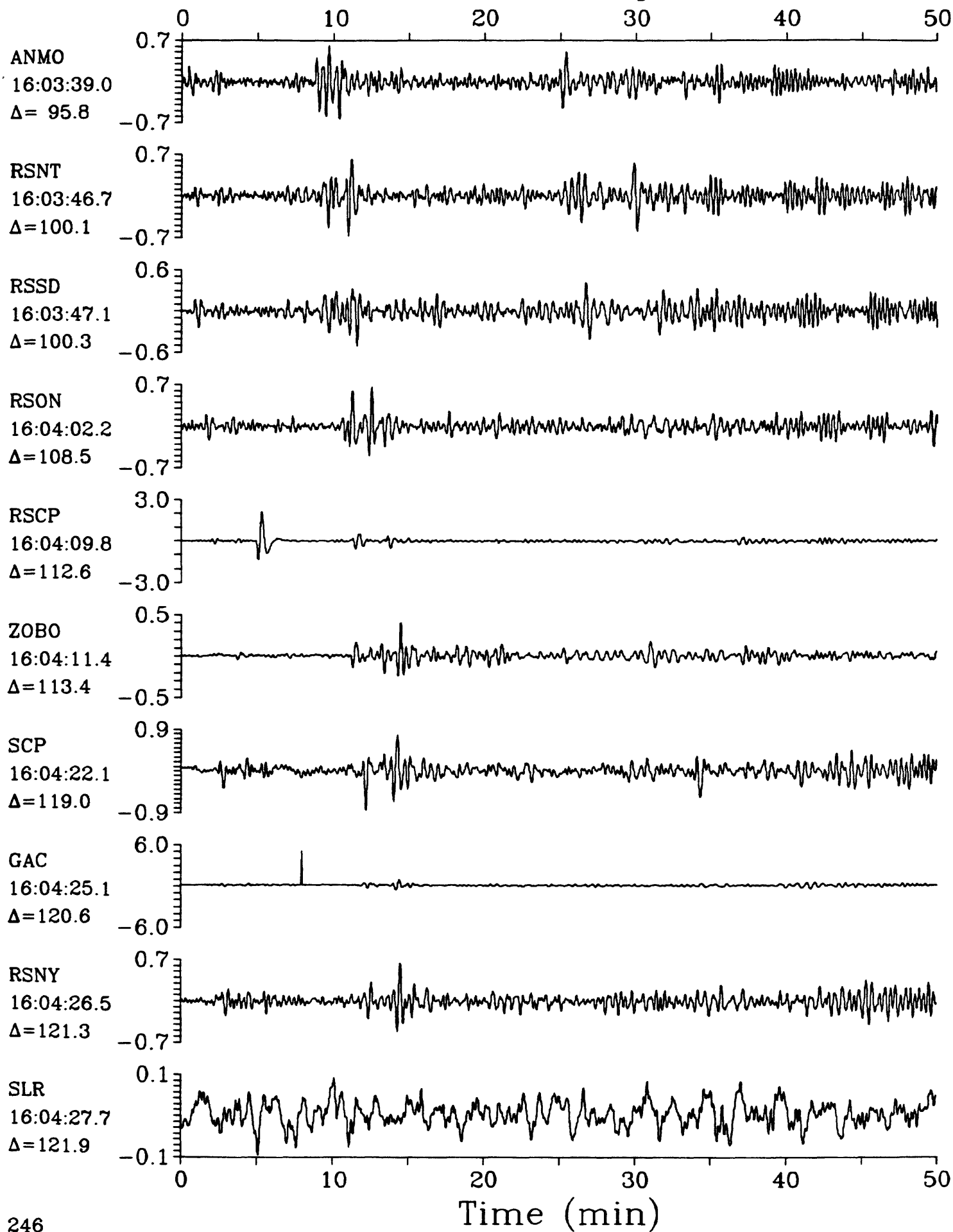
LPZ



LPZ

05 March 1986 15:47:07.46
Vanuatu Islands $h=289.5$ $m_b=5.7$

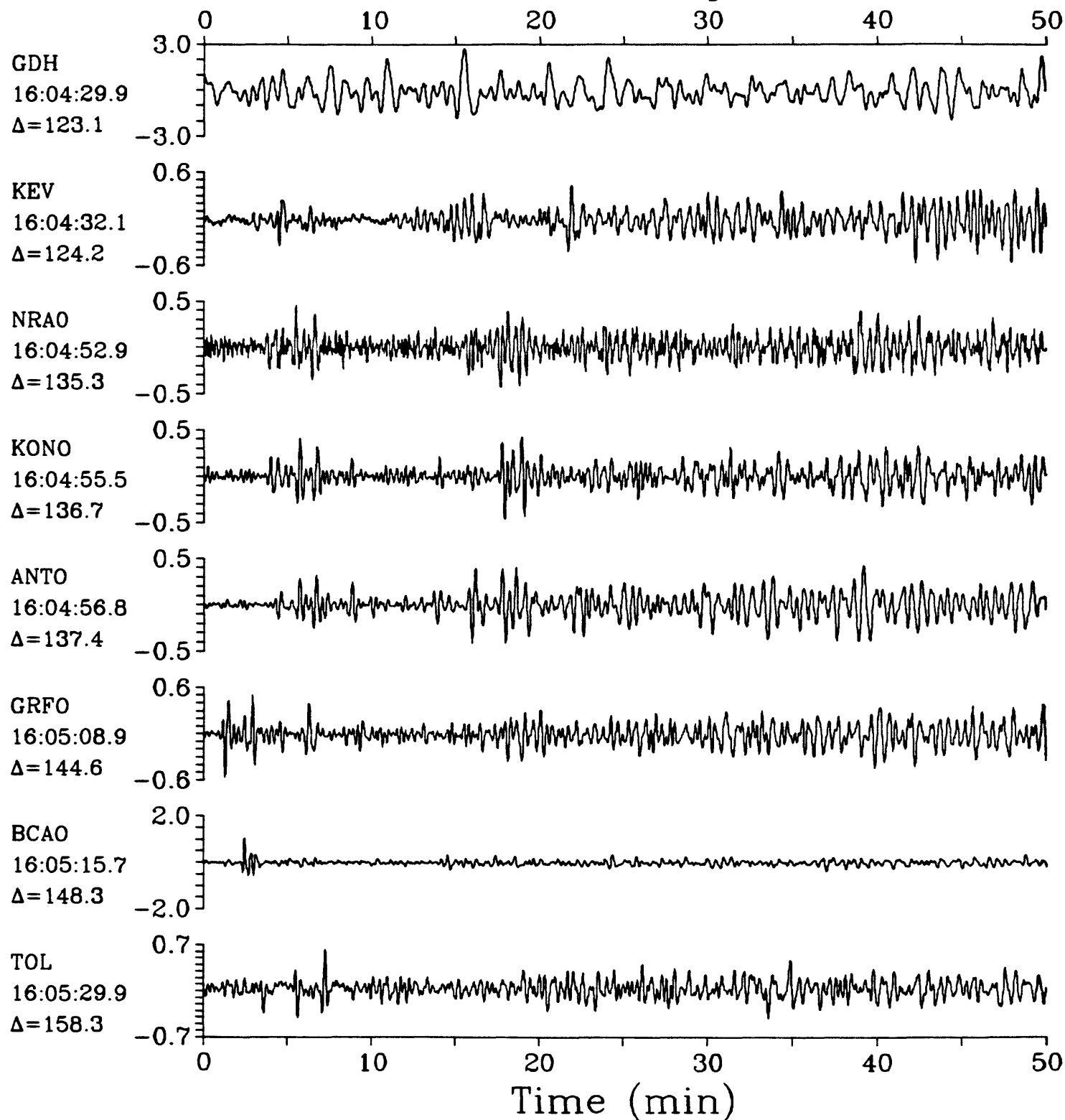
LPZ



LPZ

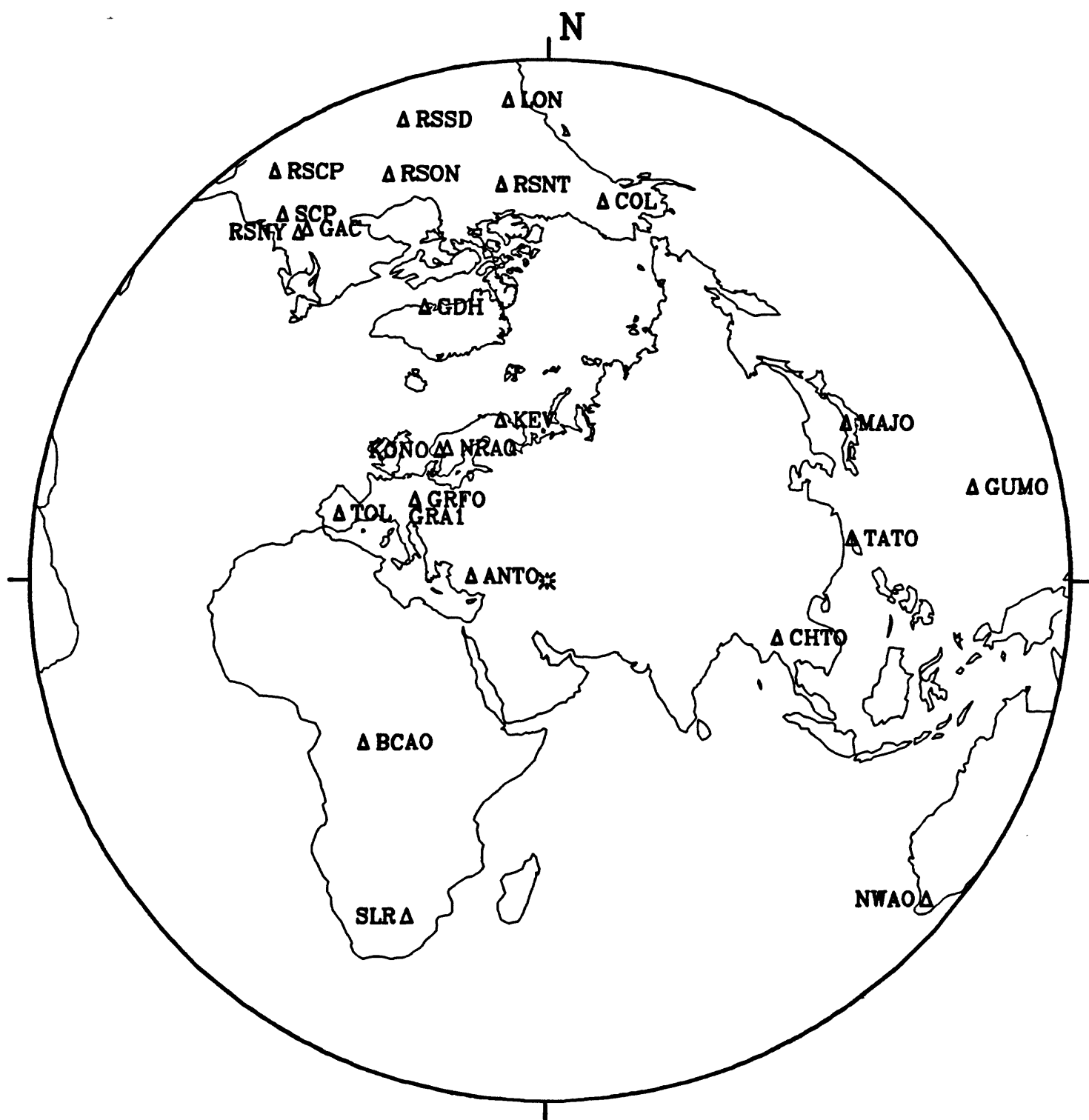
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LPZ



06 March 1986 00:05:38.39

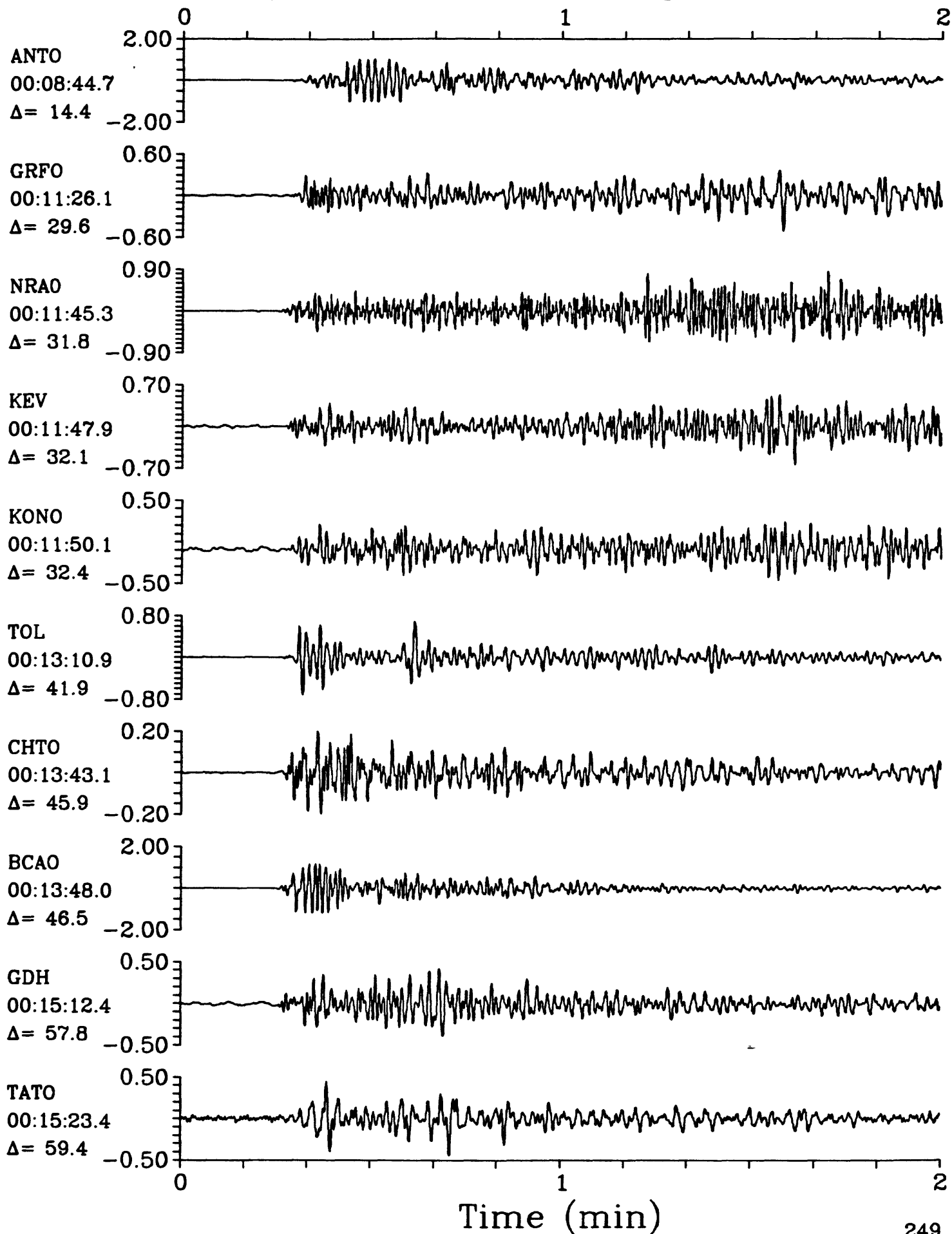
Caspian Sea



SPZ

06 March 1986 00:05:38.39
Caspian Sea $h=33.0$ $m_b=6.2$ $M_{sz}=6.2$

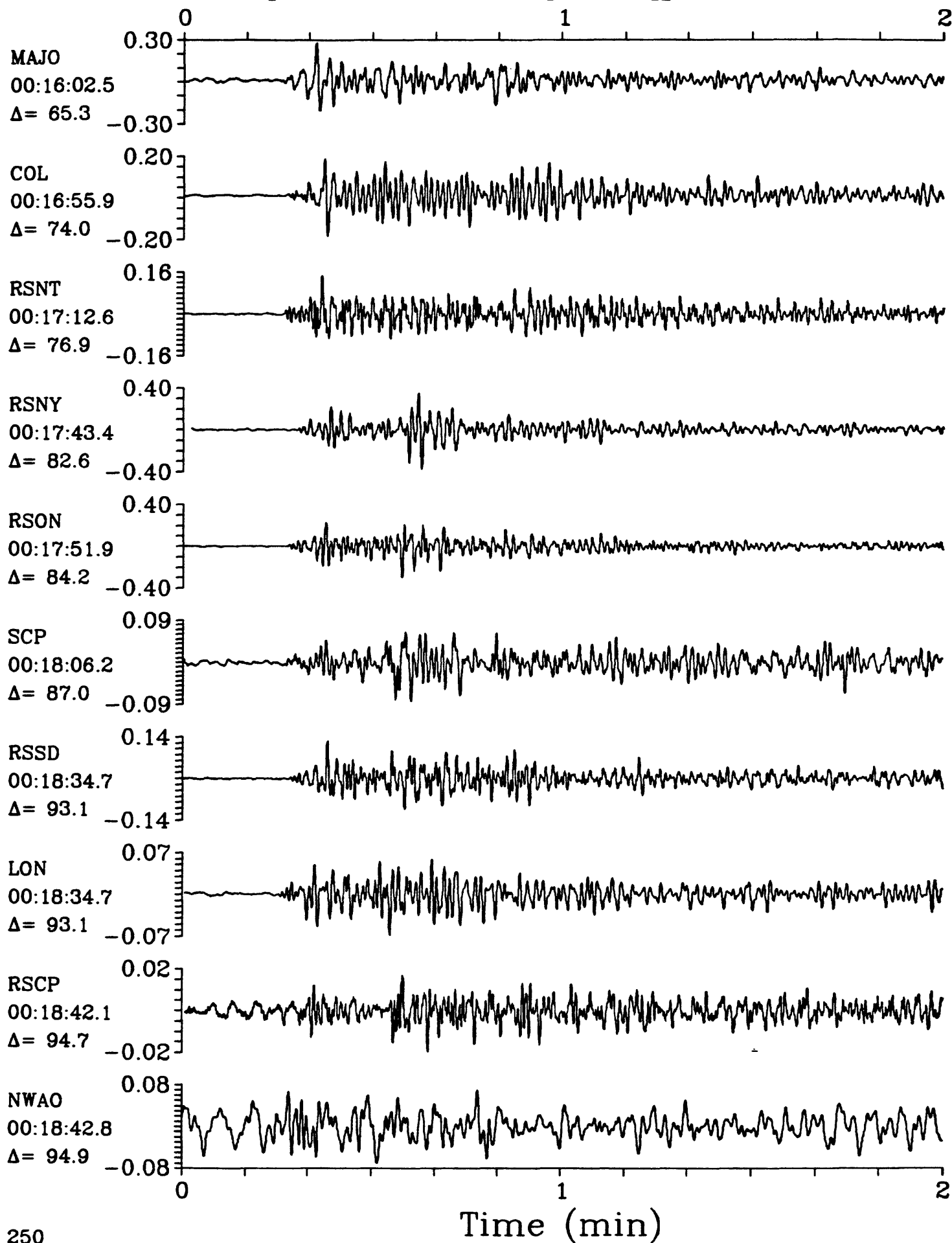
SPZ



SPZ

06 March 1986 00:05:38.39
Caspian Sea $h=33.0$ $m_b=6.2$ $M_{sz}=6.2$

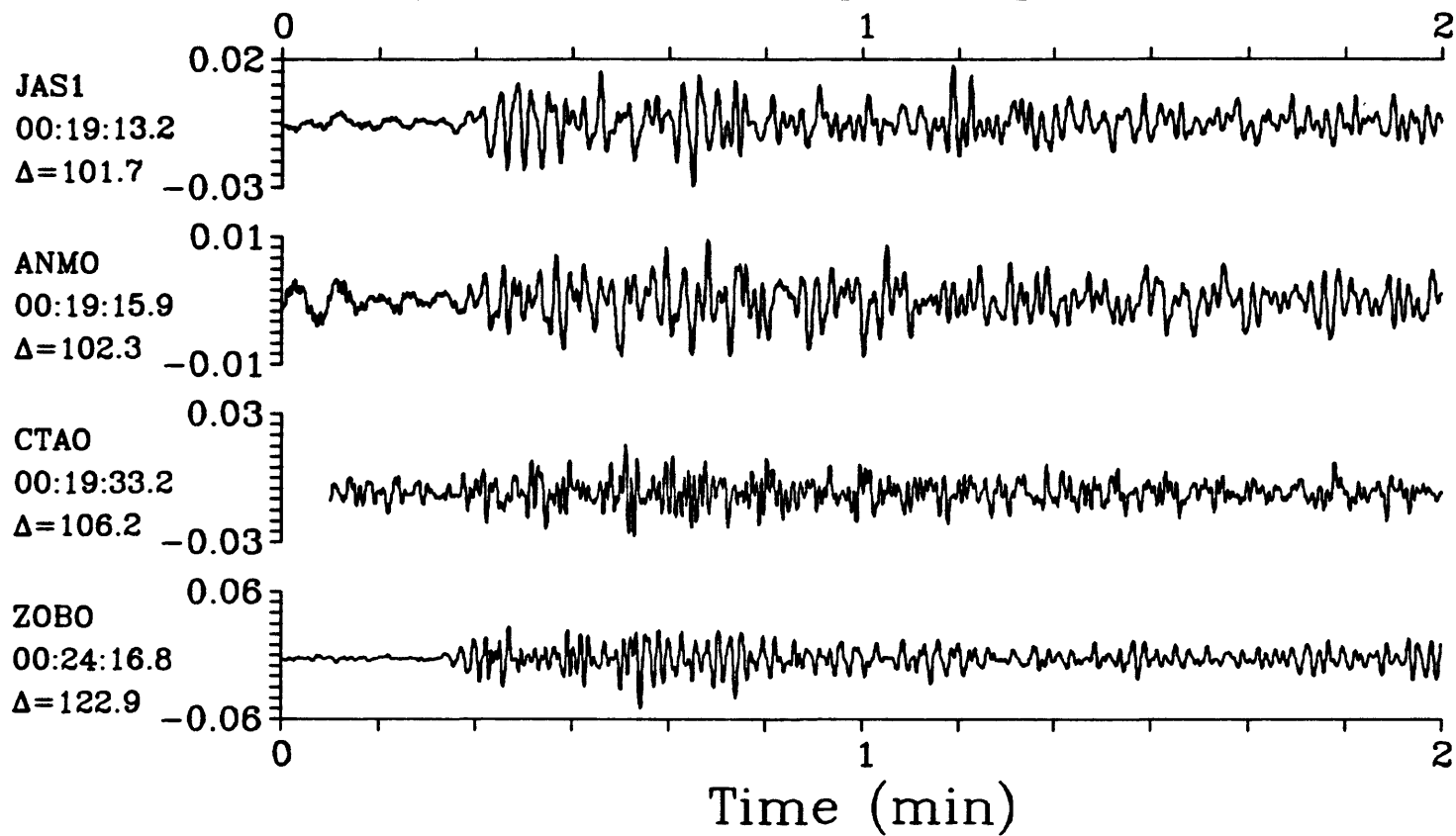
SPZ



SPZ

06 March 1986 00:05:38.39
Caspian Sea $h=33.0$ $m_b=6.2$ $M_{sz}=6.2$

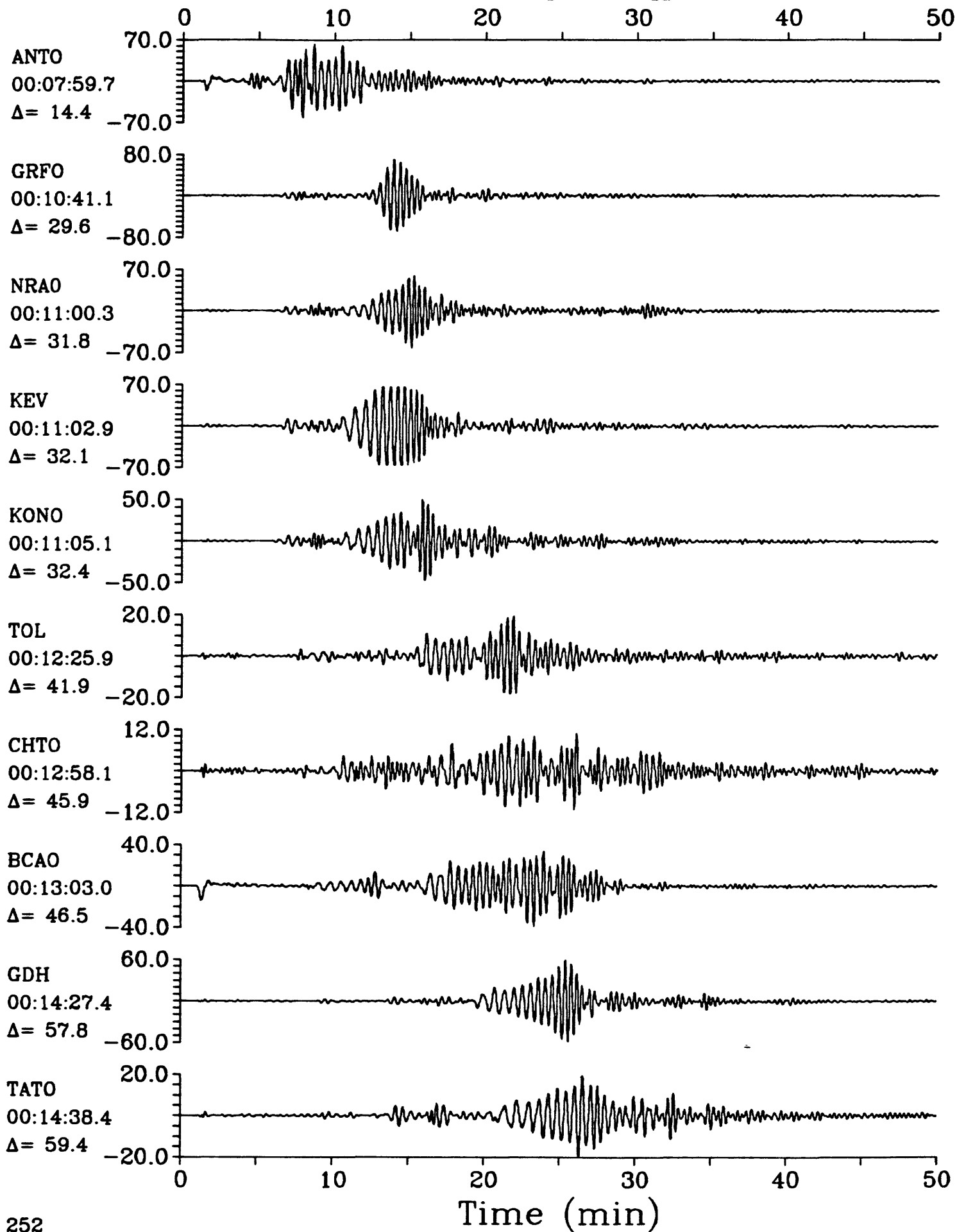
SPZ



LPZ

06 March 1986 00:05:38.39
Caspian Sea $h=33.0$ $m_b=6.2$ $M_{sz}=6.2$

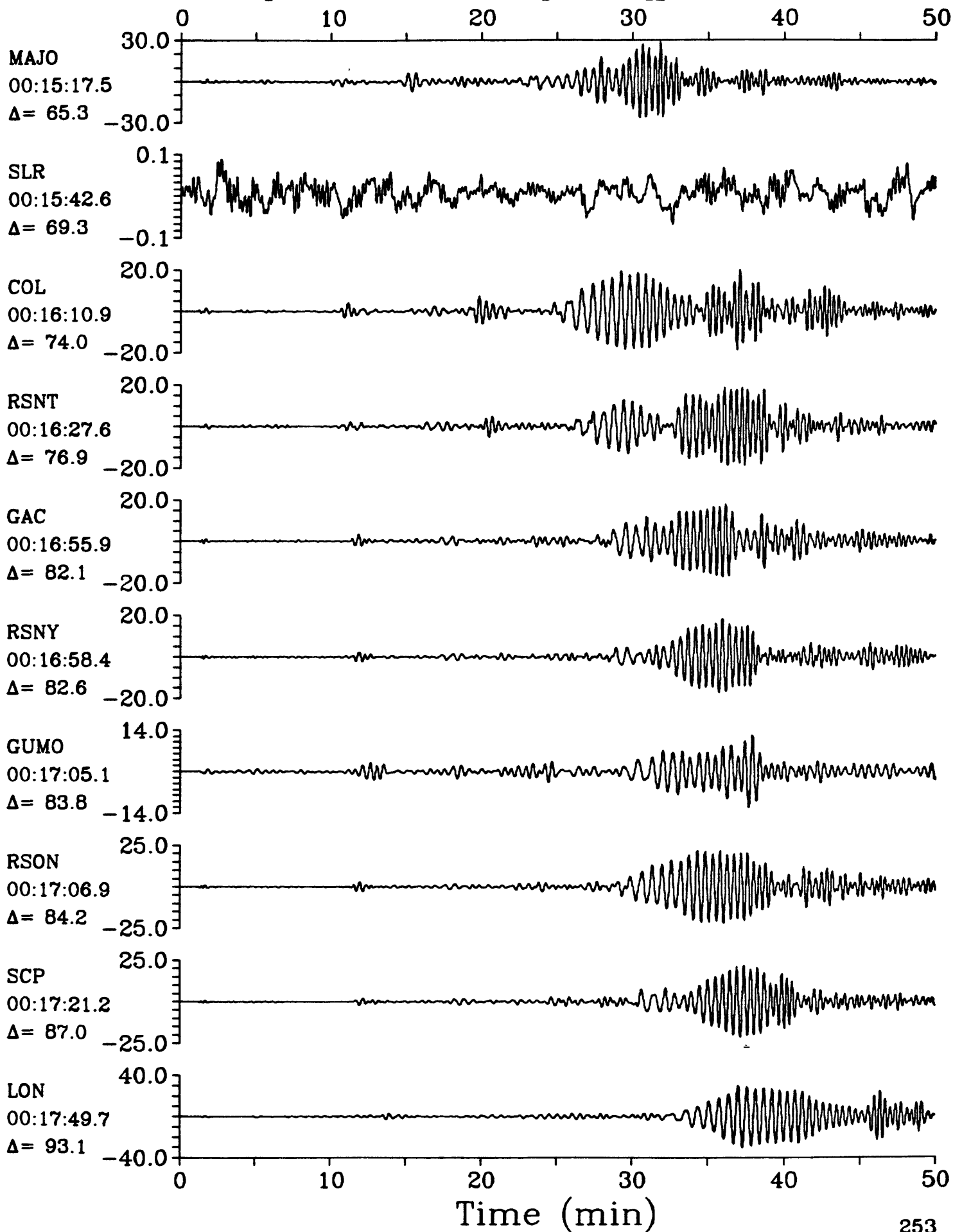
LPZ



LPZ

06 March 1986 00:05:38.39
Caspian Sea $h=33.0$ $m_b=6.2$ $M_{sz}=6.2$

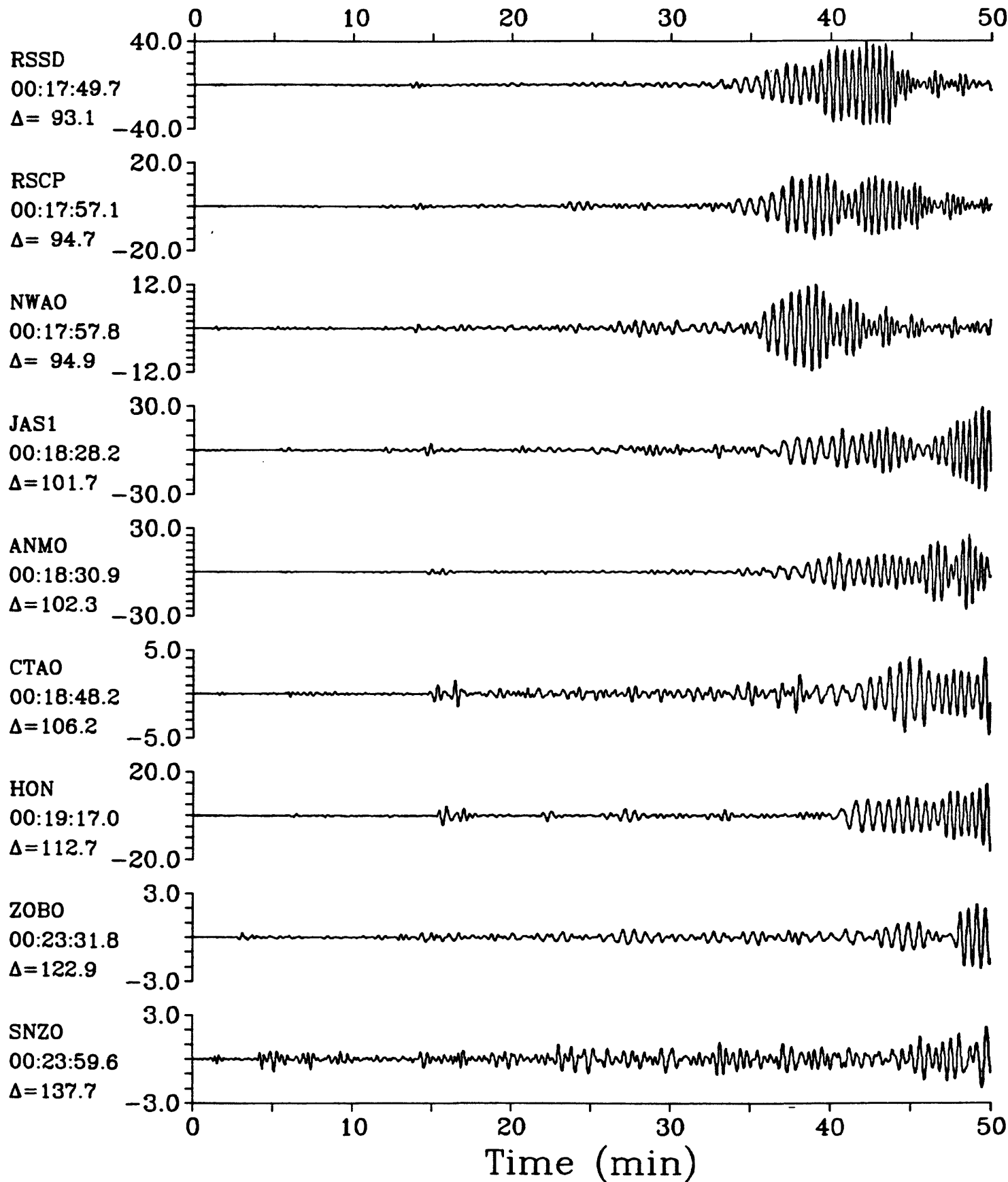
LPZ



LPZ

06 March 1986 00:05:38.39
Caspian Sea $h=33.0$ $m_b=6.2$ $M_{sz}=6.2$

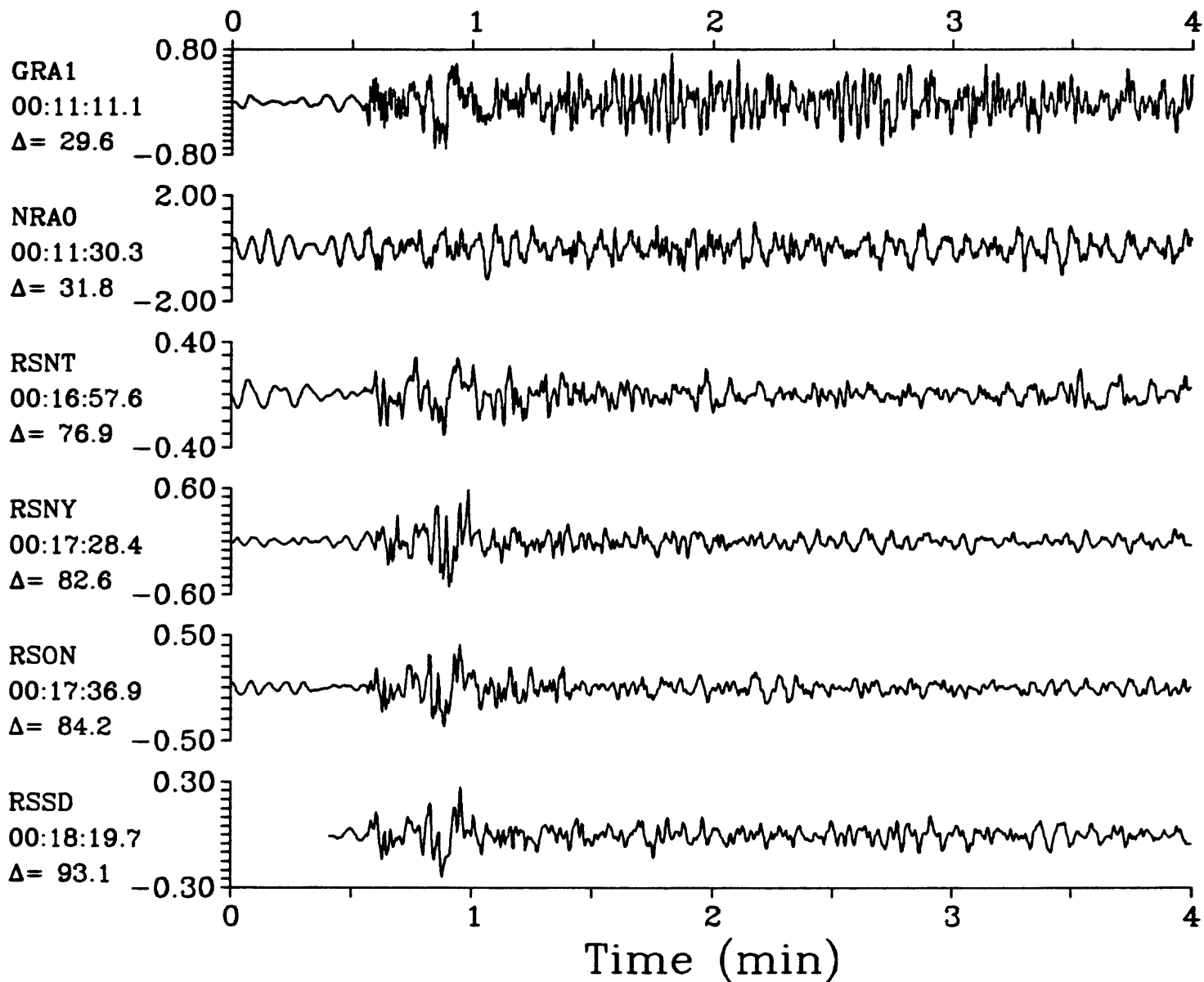
LPZ



IPZ

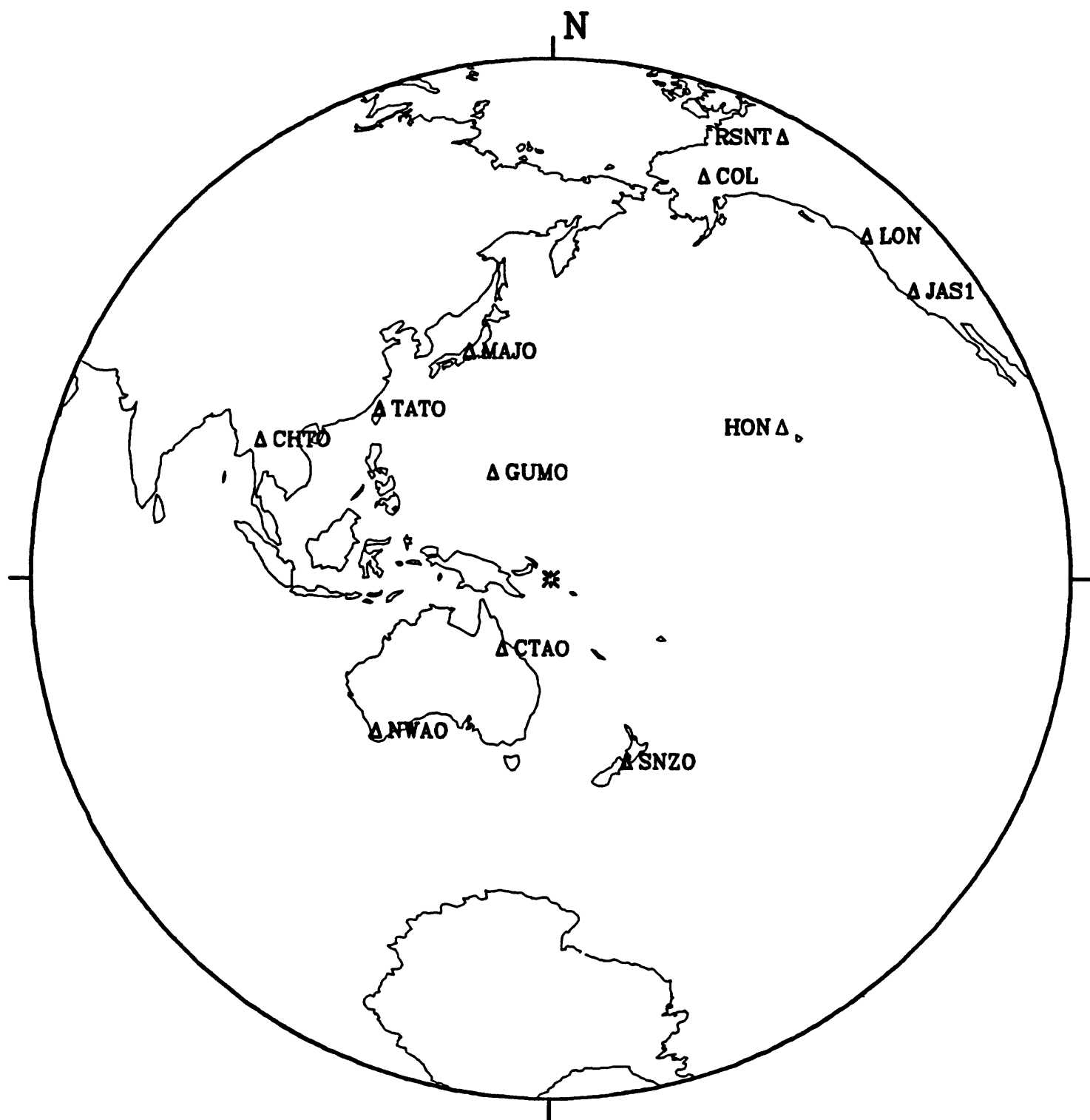
06 March 1986 00:05:38.39
Caspian Sea $h=33.0$ $m_b=6.2$ $M_{sz}=6.2$

IPZ



06 March 1986 12:31:23.70

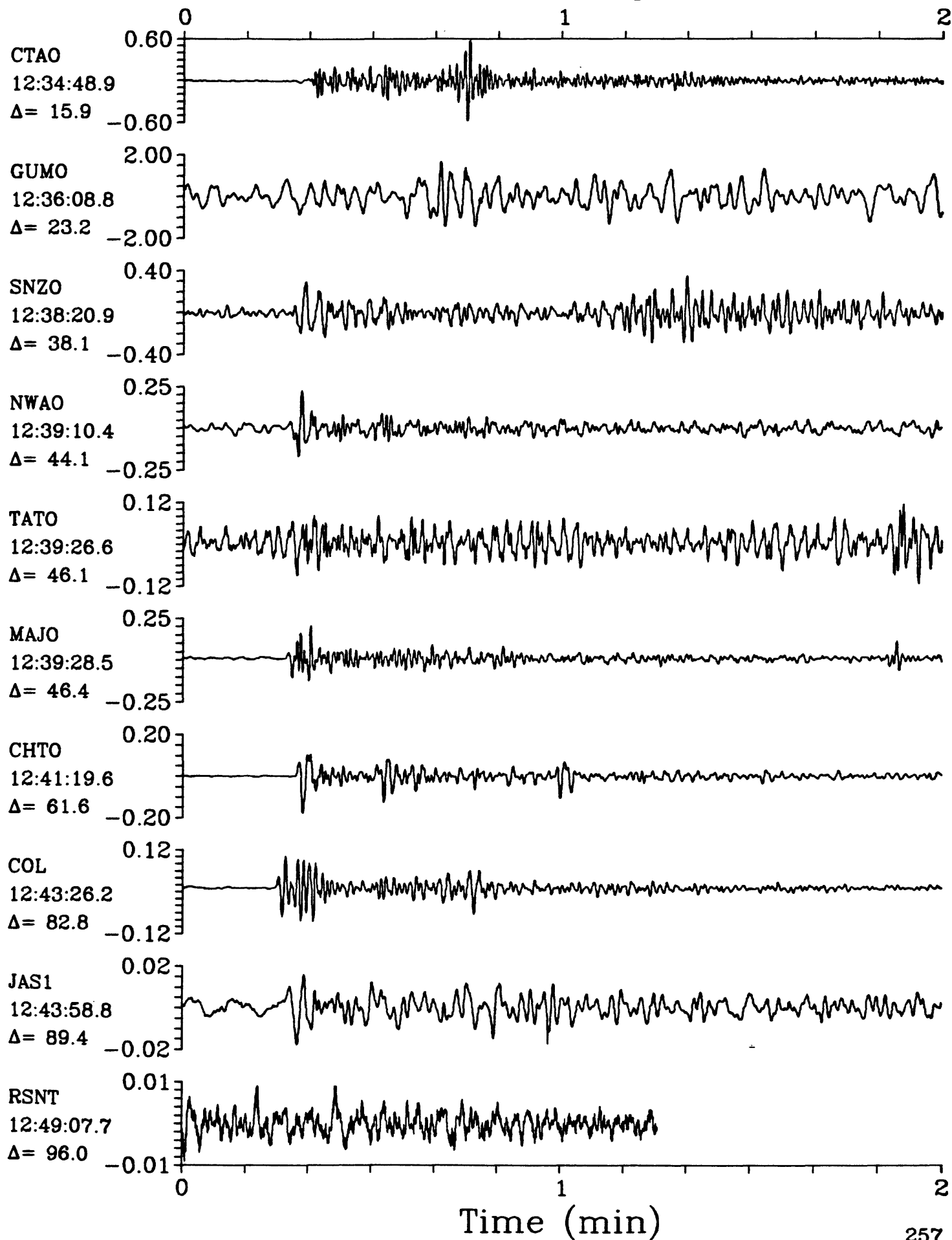
Solomon Islands



SPZ

06 March 1986 12:31:23.70
Solomon Islands $h=67.8$ $m_b=5.7$

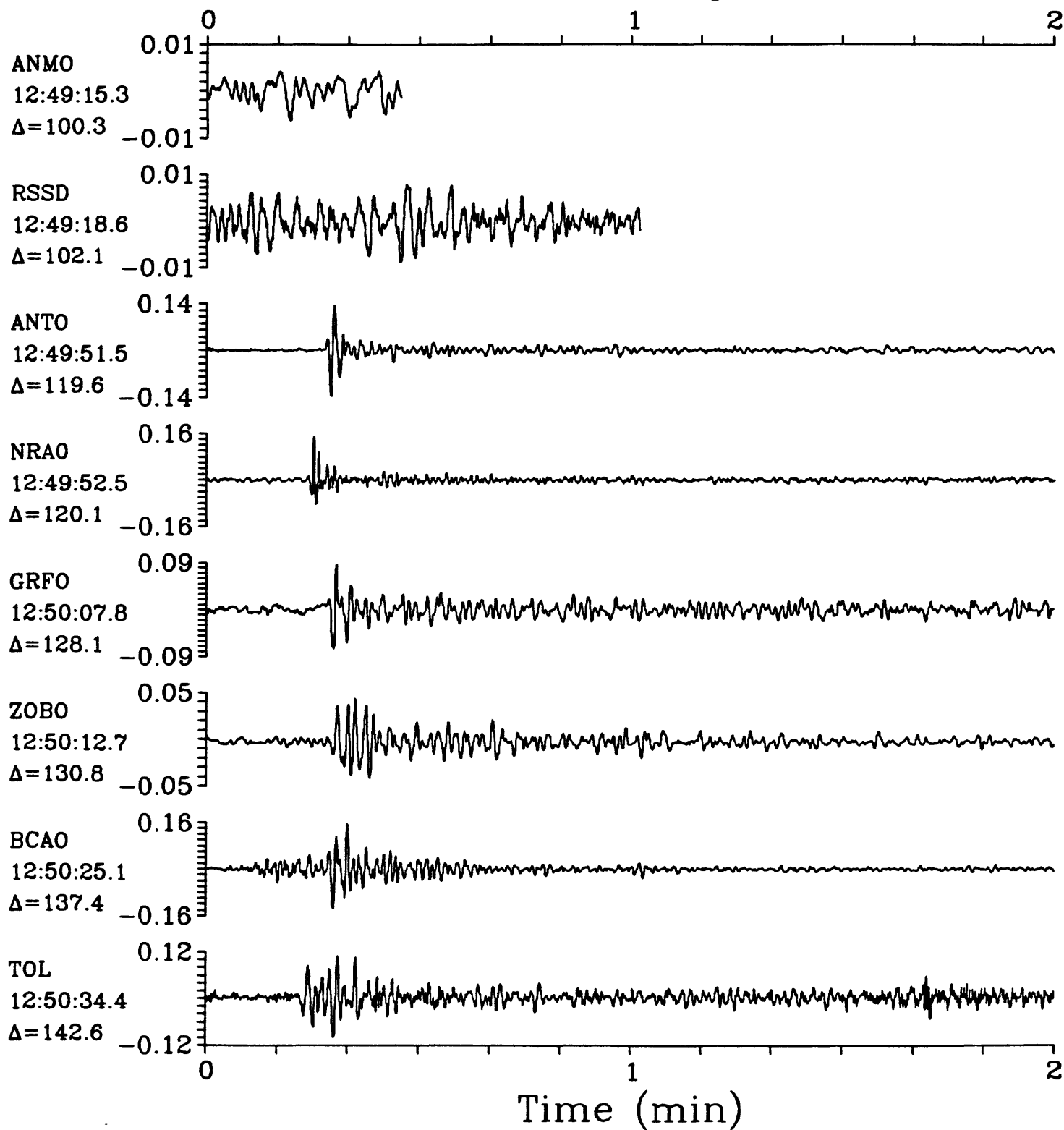
SPZ



SPZ

06 March 1986 12:31:23.70
Solomon Islands $h=67.8$ $m_b=5.7$

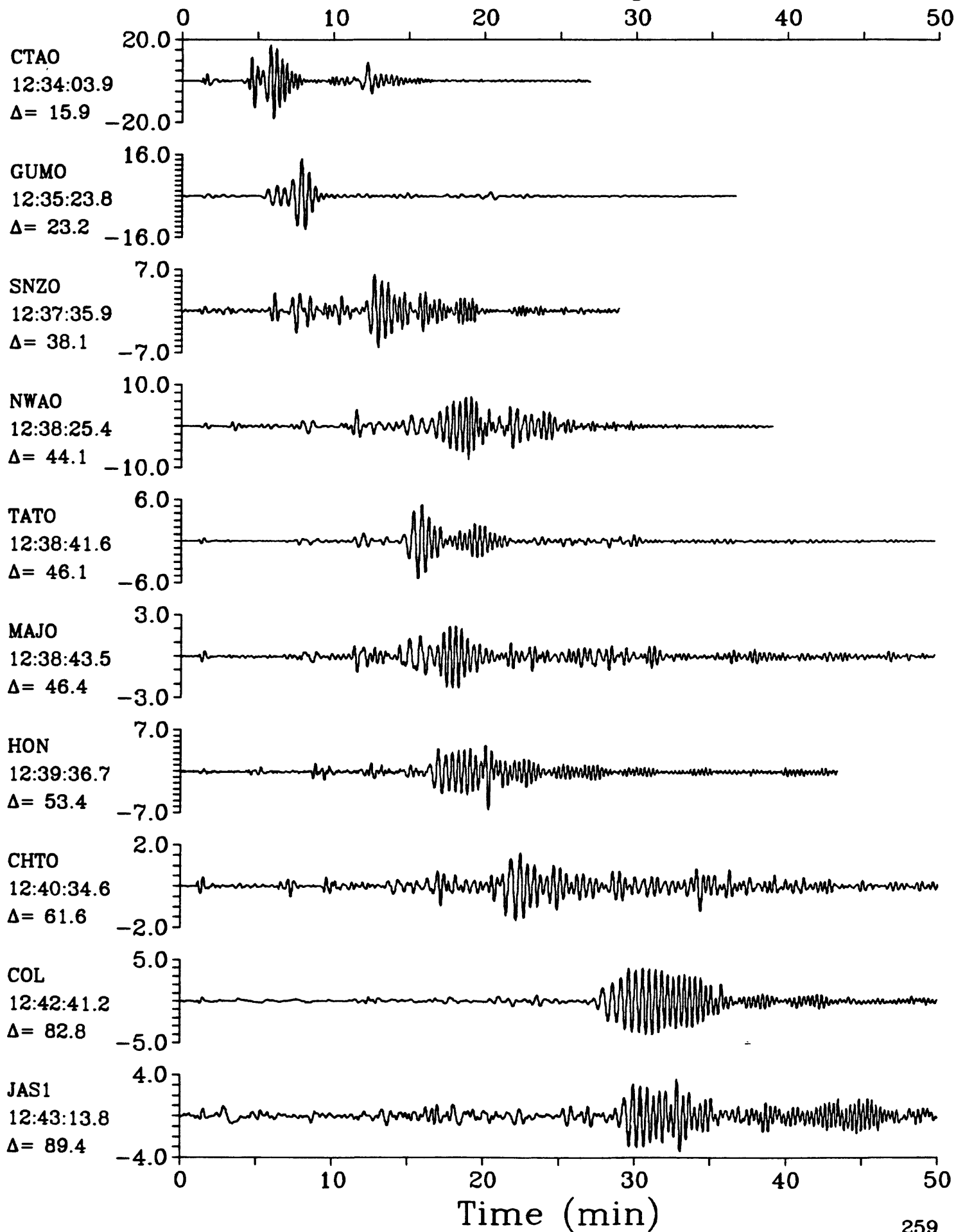
SPZ



LPZ

06 March 1986 12:31:23.70
Solomon Islands $h=67.8$ $m_b=5.7$

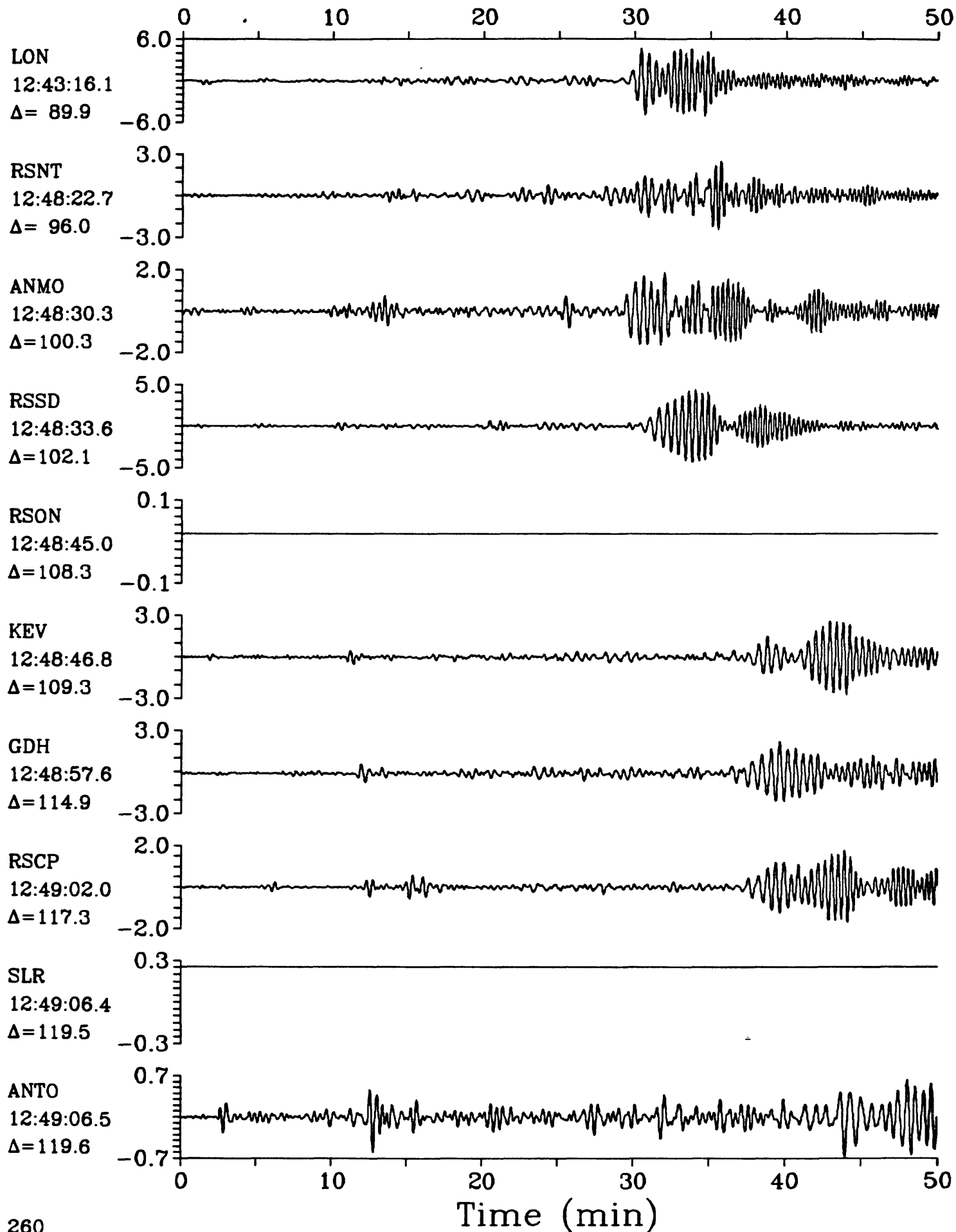
LPZ



LPZ

06 March 1986 12:31:23.70
Solomon Islands $h=67.8$ $m_b=5.7$

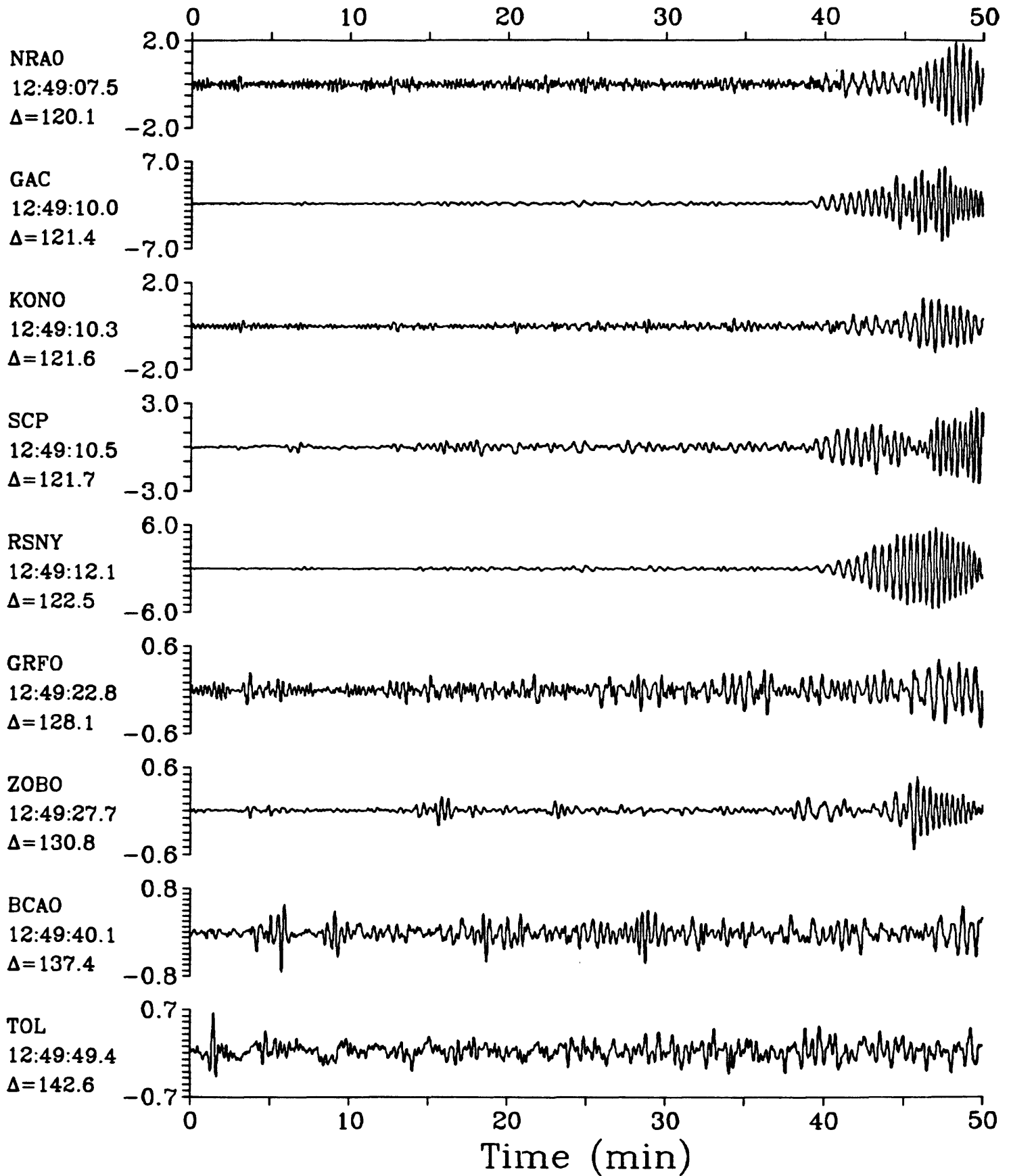
LPZ



LPZ

06 March 1986 12:31:23.70
Solomon Islands $h=67.8$ $m_b=5.7$

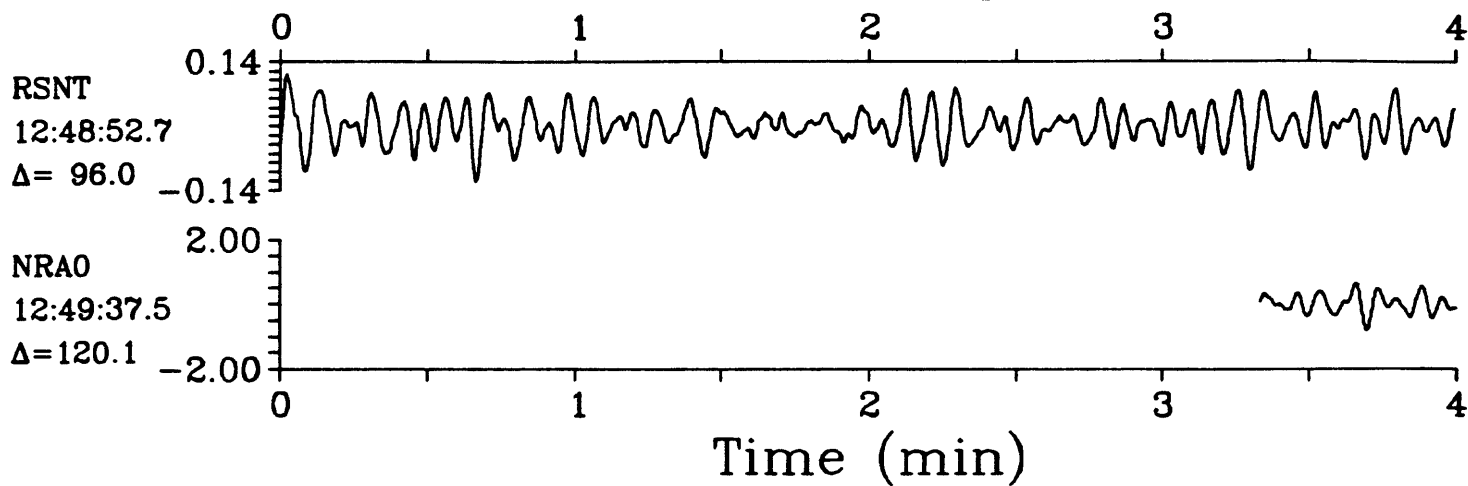
LPZ



IPZ

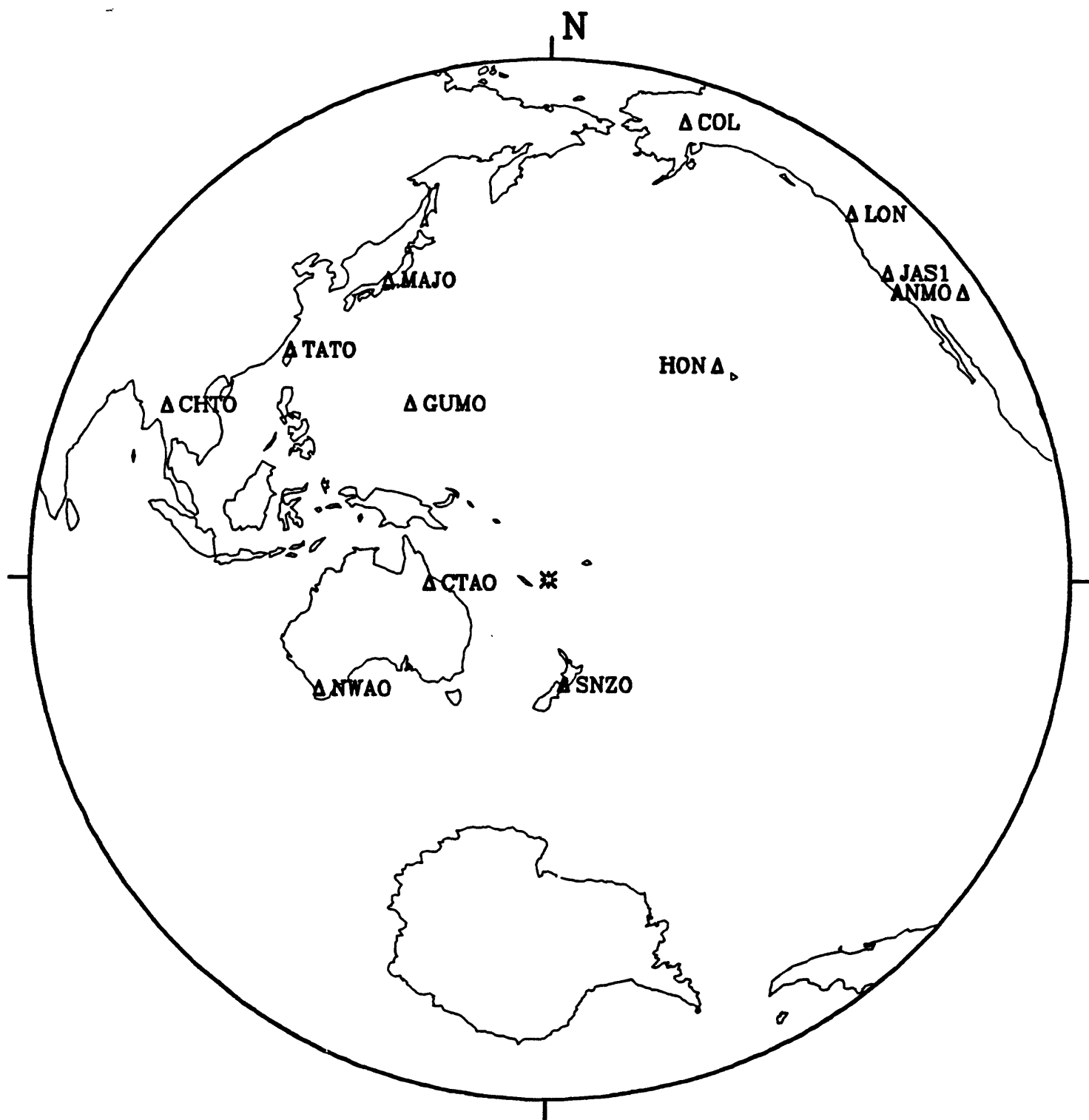
06 March 1986 12:31:23.70
Solomon Islands $h=67.8$ $m_p=5.7$

IPZ



06 March 1986 12:34:45.93

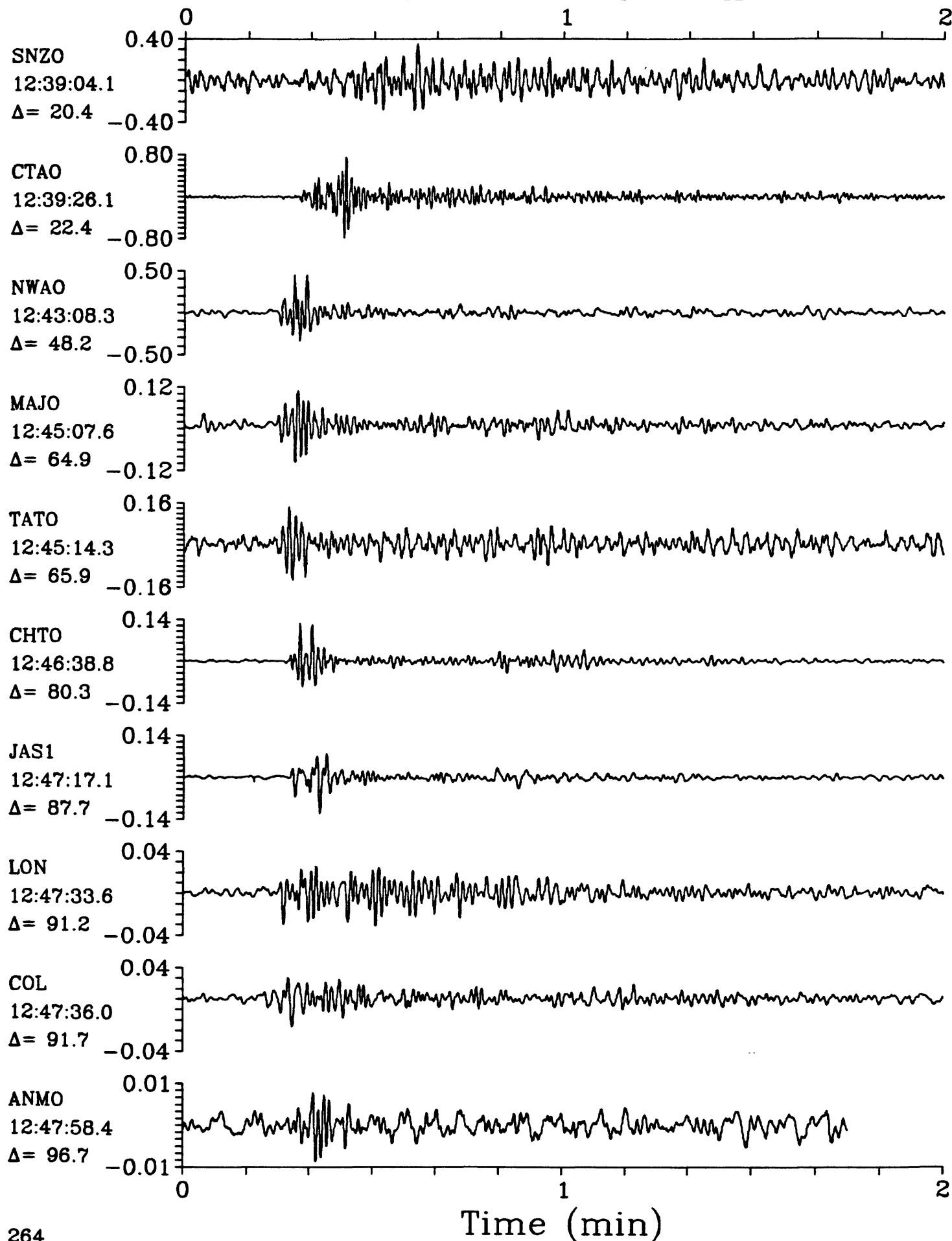
Loyalty Islands Region



SPZ

06 March 1986 12:34:45.93

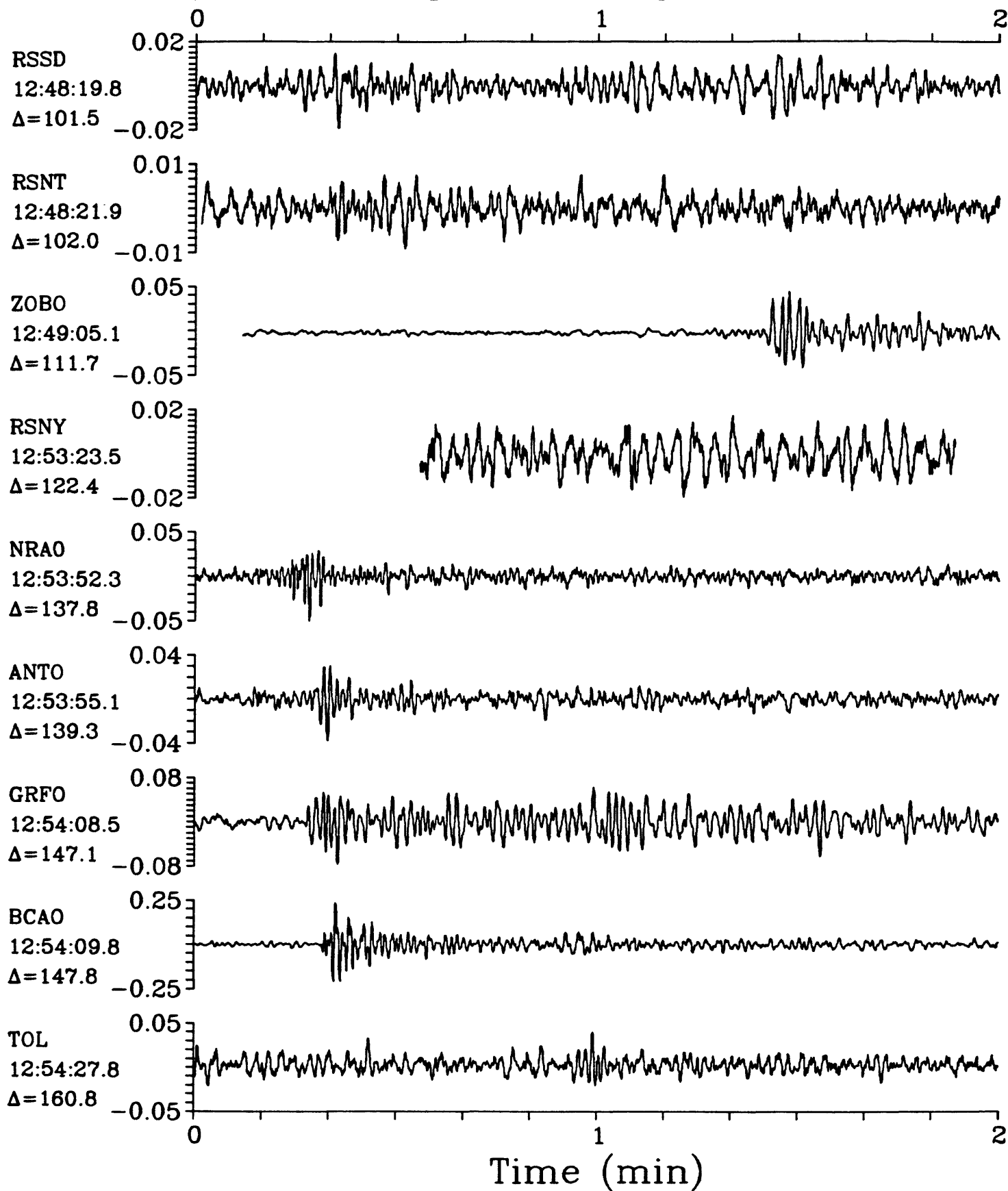
SPZ

Loyalty Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.6$ 

SPZ

06 March 1986 12:34:45.93

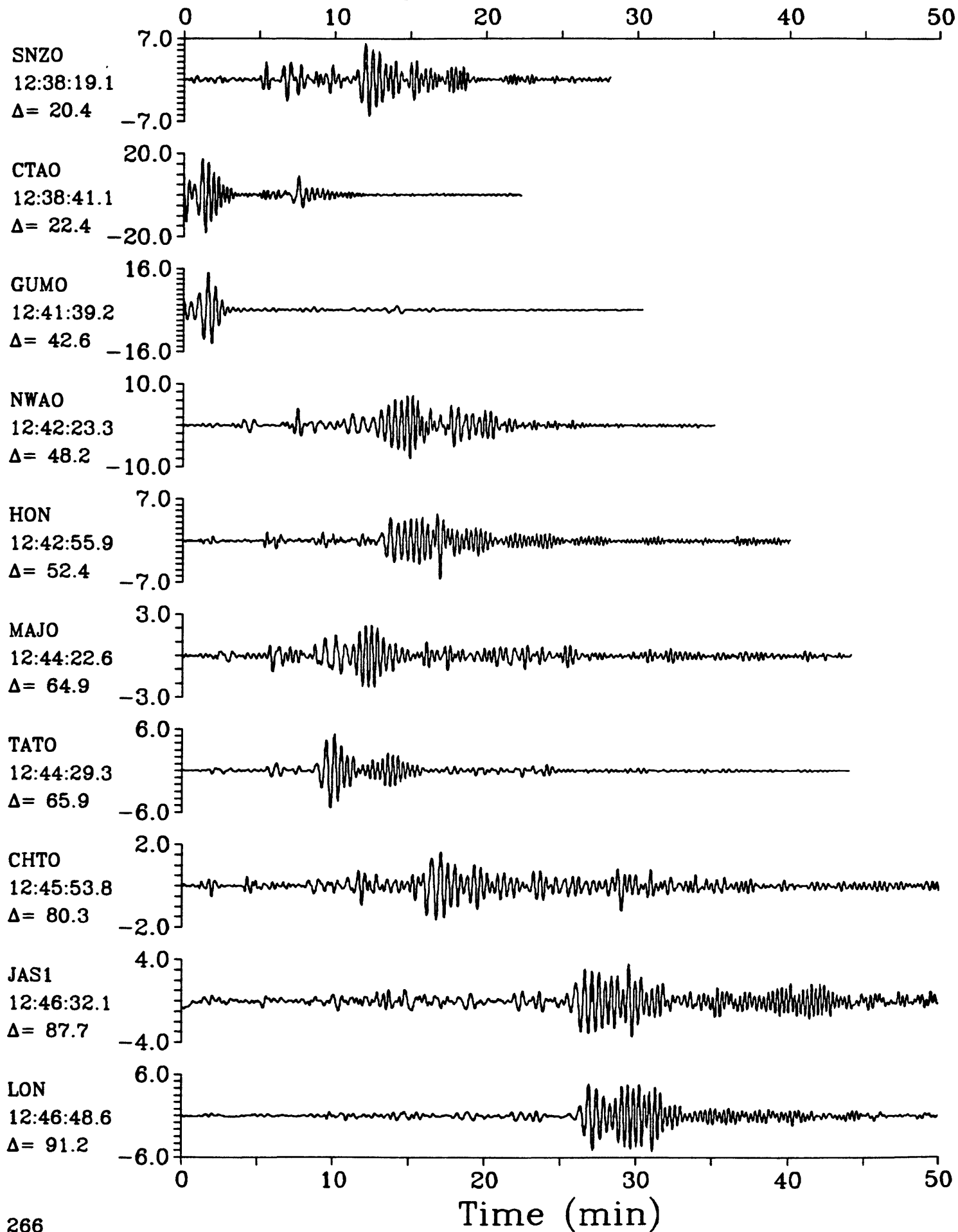
SPZ

Loyalty Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.6$ 

LPZ

06 March 1986 12:34:45.93

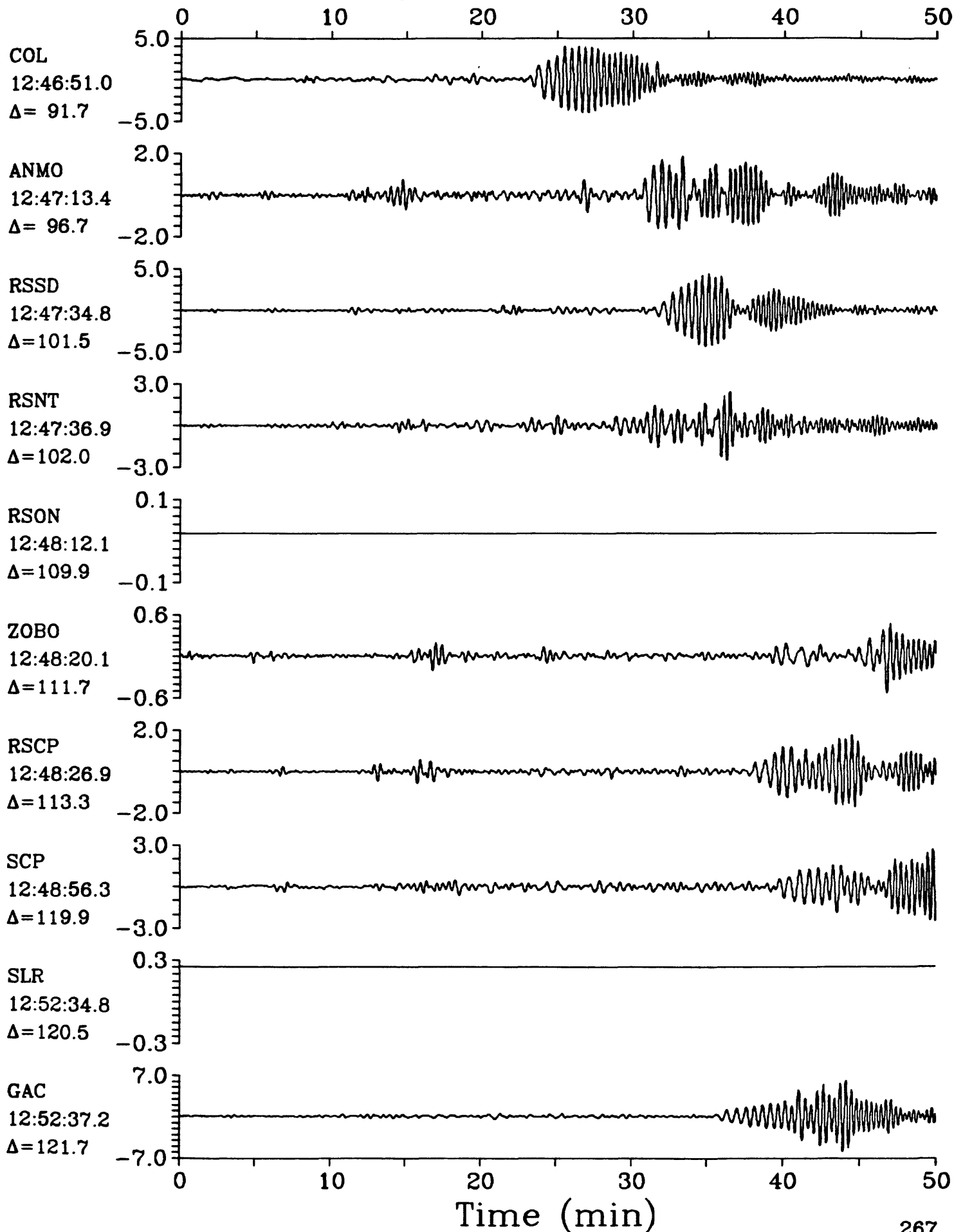
LPZ

Loyalty Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.6$ 

LPZ

06 March 1986 12:34:45.93

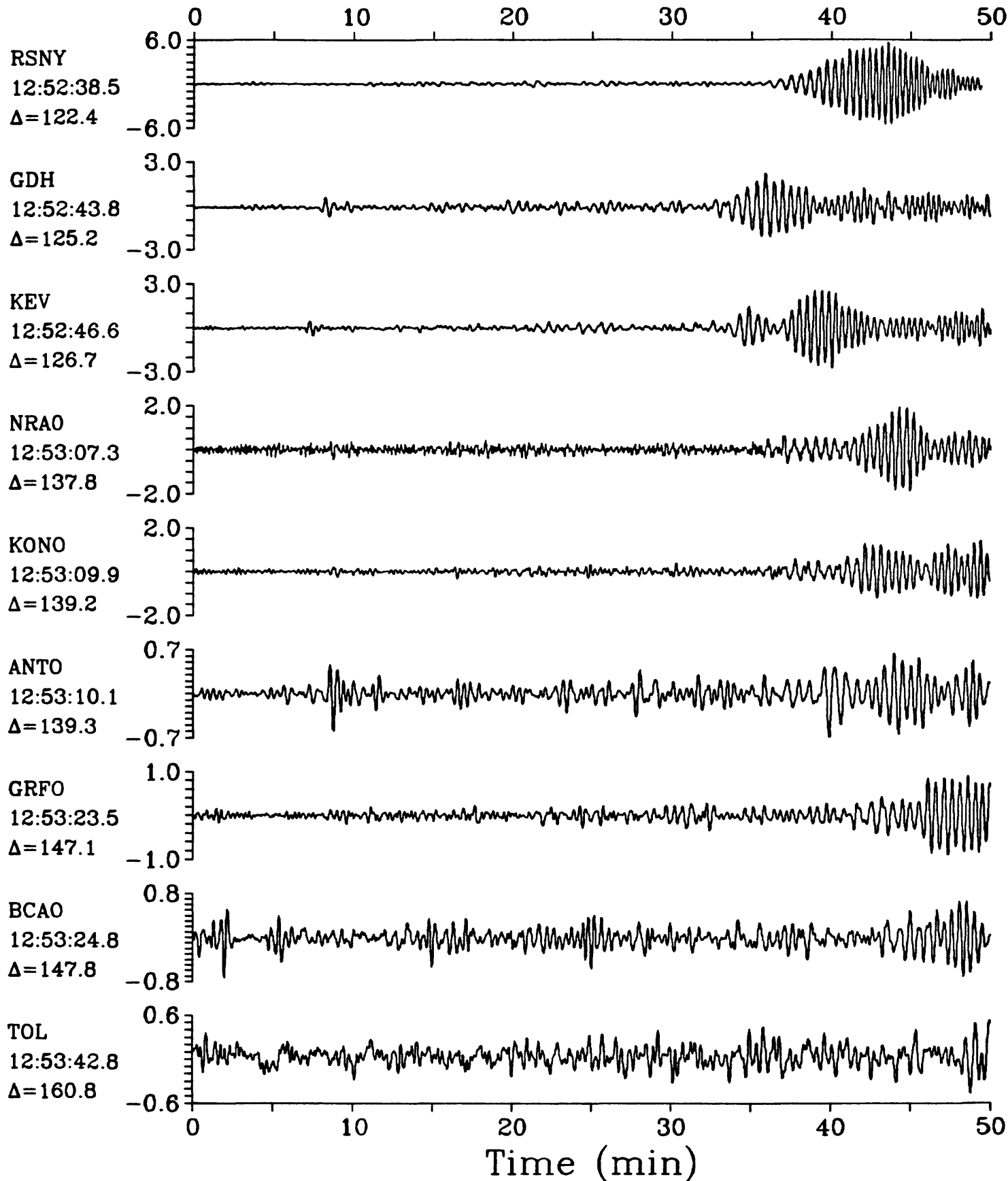
LPZ

Loyalty Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.6$ 

LPZ

06 March 1986 12:34:45.93

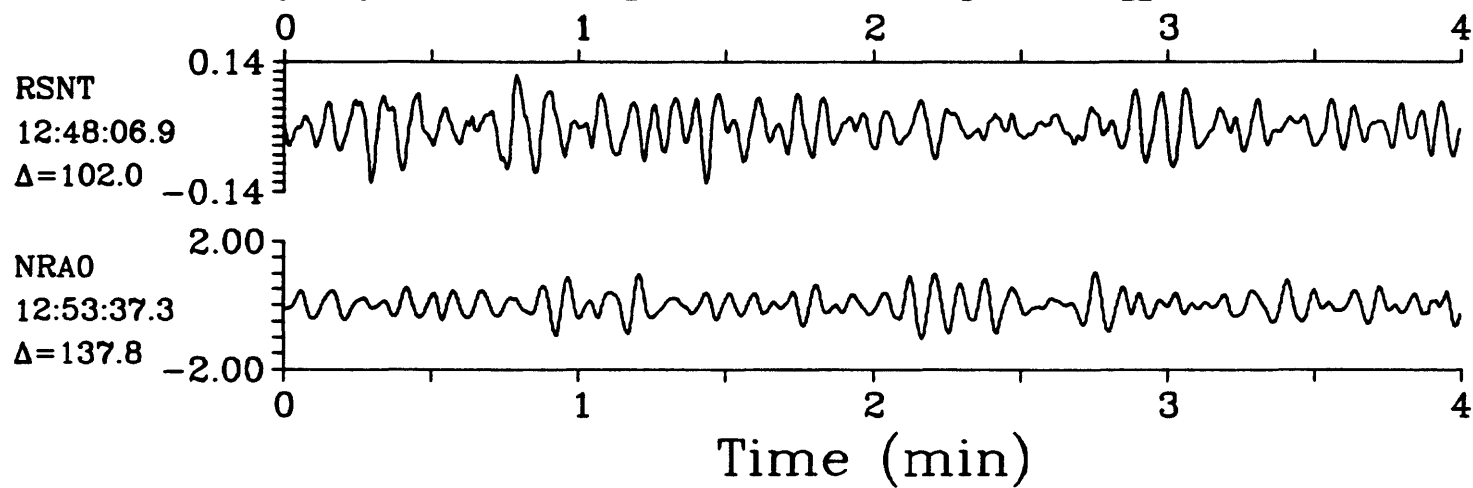
LPZ

Loyalty Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.6$ 

IPZ

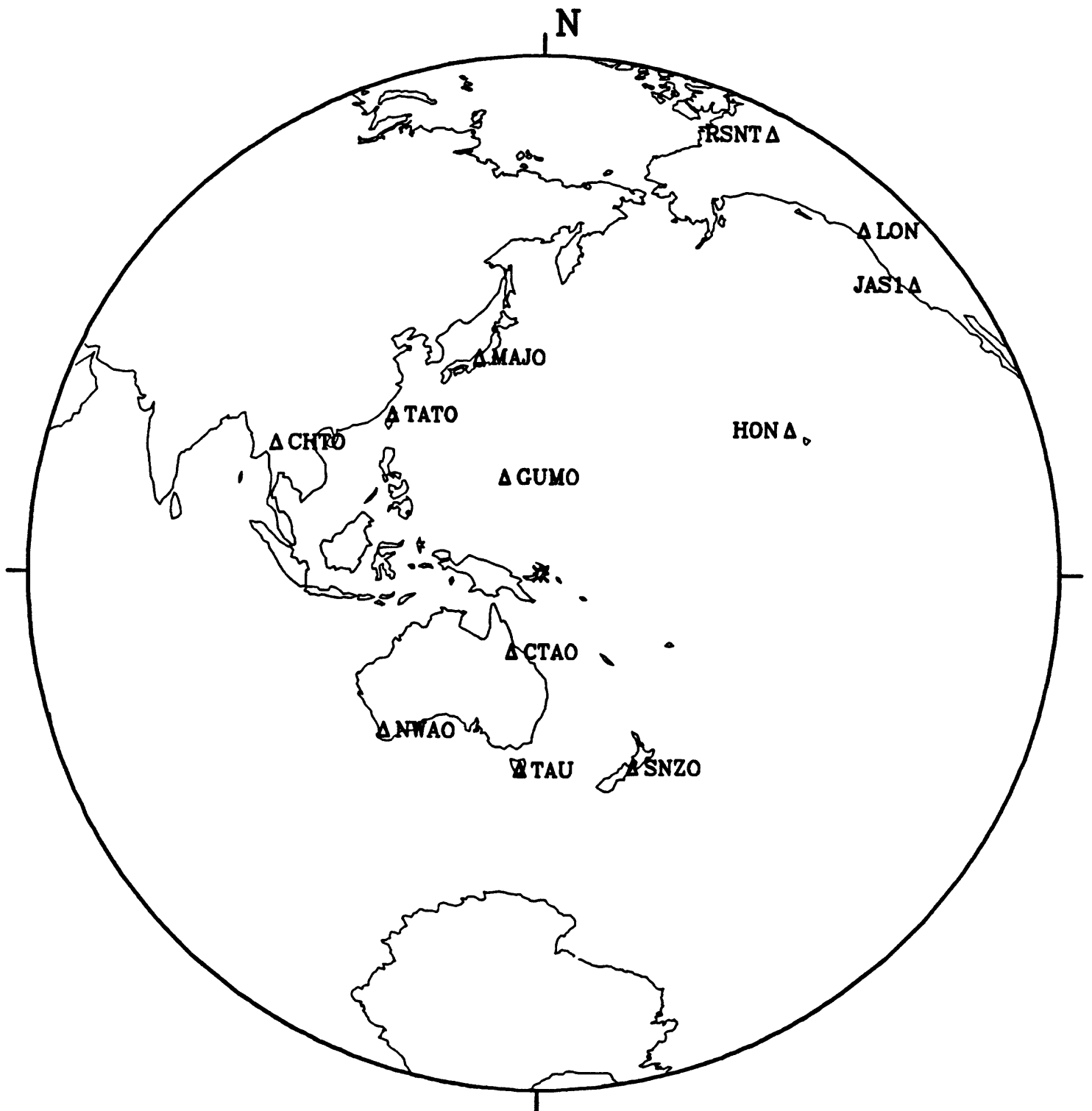
06 March 1986 12:34:45.93

IPZ

Loyalty Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.6$ 

07 March 1986 02:46:51.54

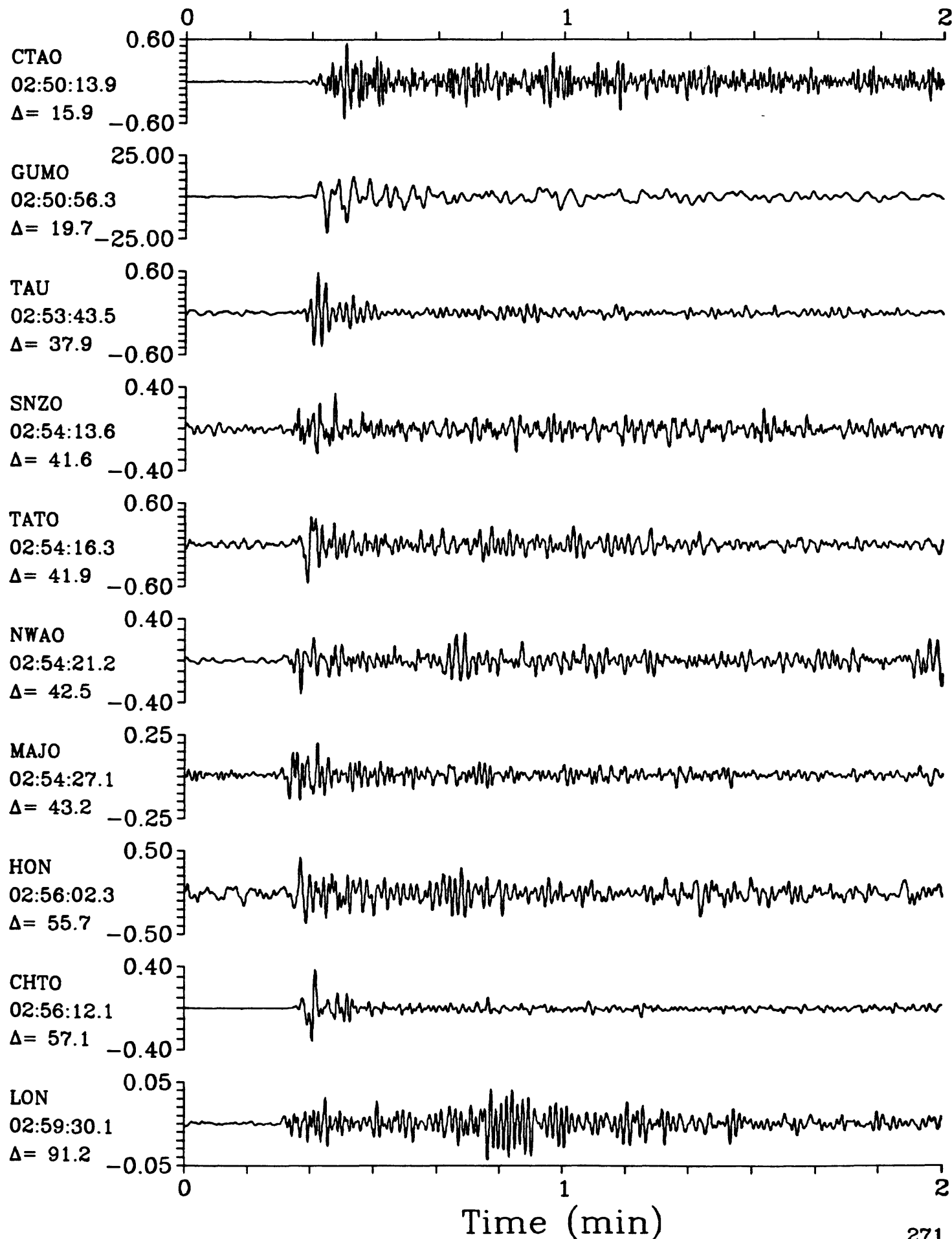
New Britain Region

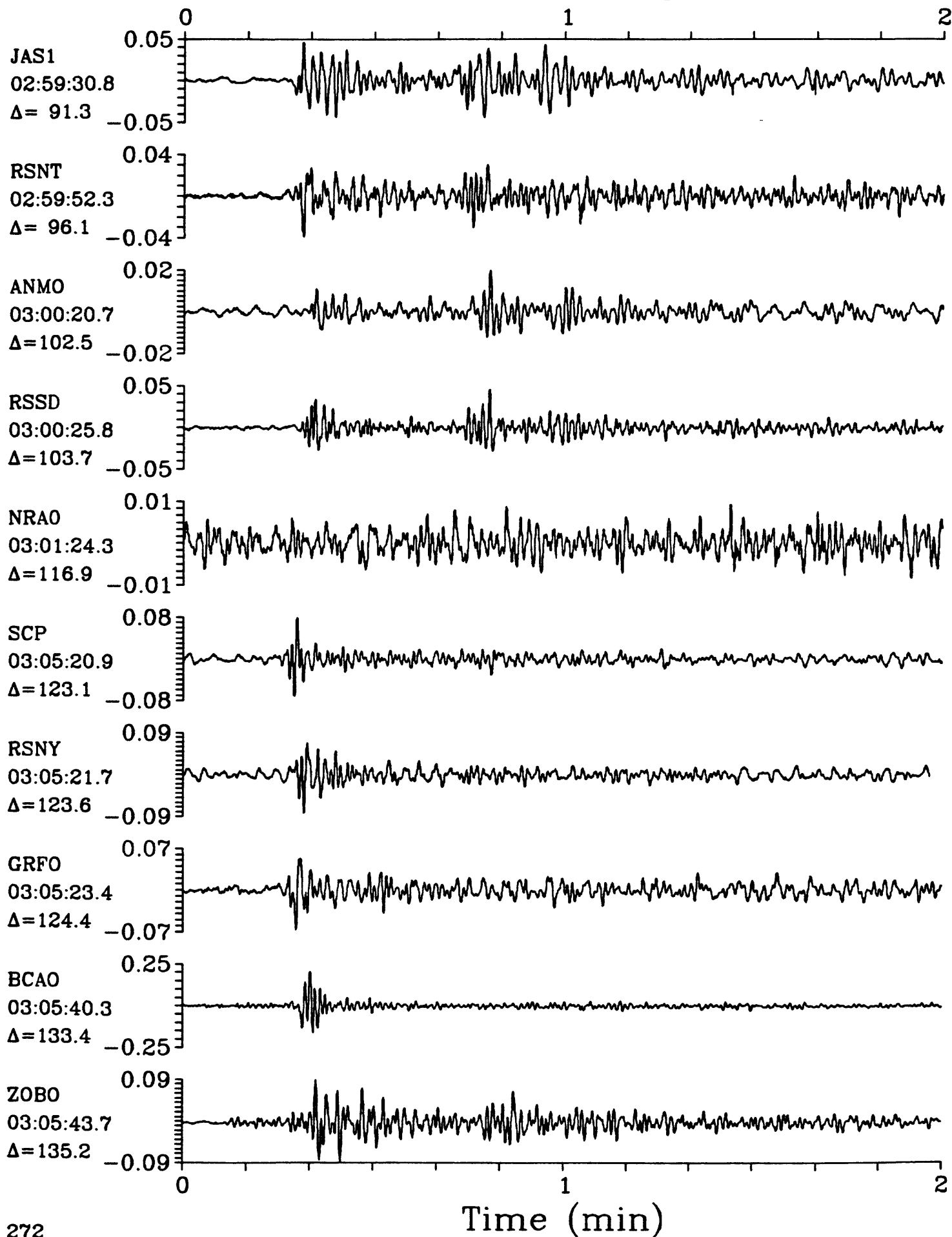


SPZ

07 March 1986 02:46:51.54
New Britain Region $h=110.0$ $m_b=5.8$

SPZ



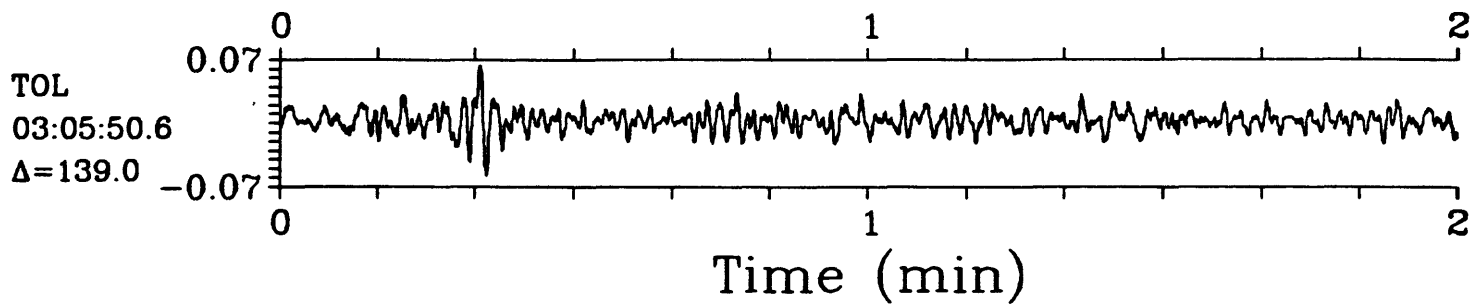


SPZ

07 March 1986 02:46:51.54

SPZ

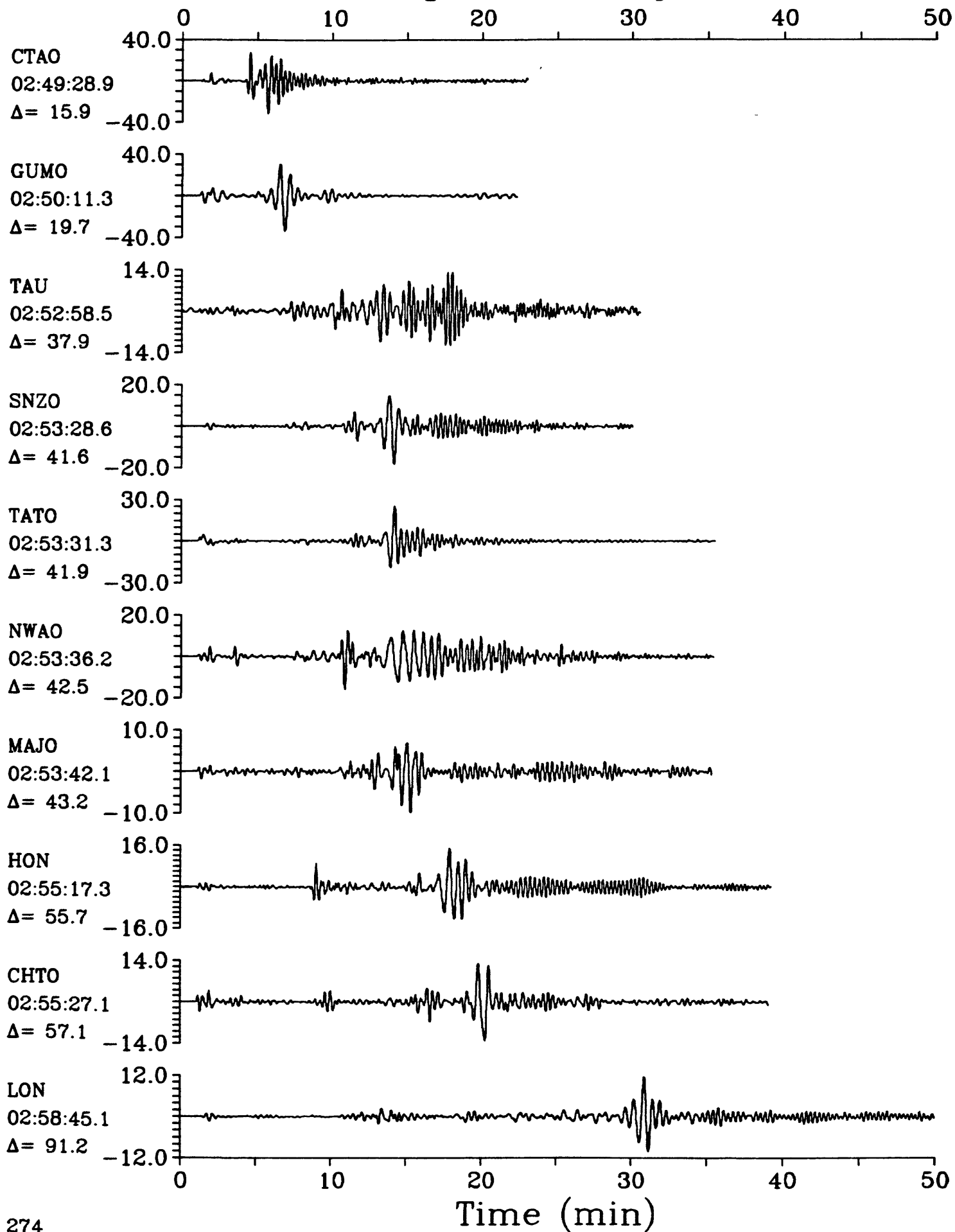
New Britain Region $h=110.0$ $m_b=5.8$



LPZ

07 March 1986 02:46:51.54
New Britain Region $h=110.0$ $m_b=5.8$

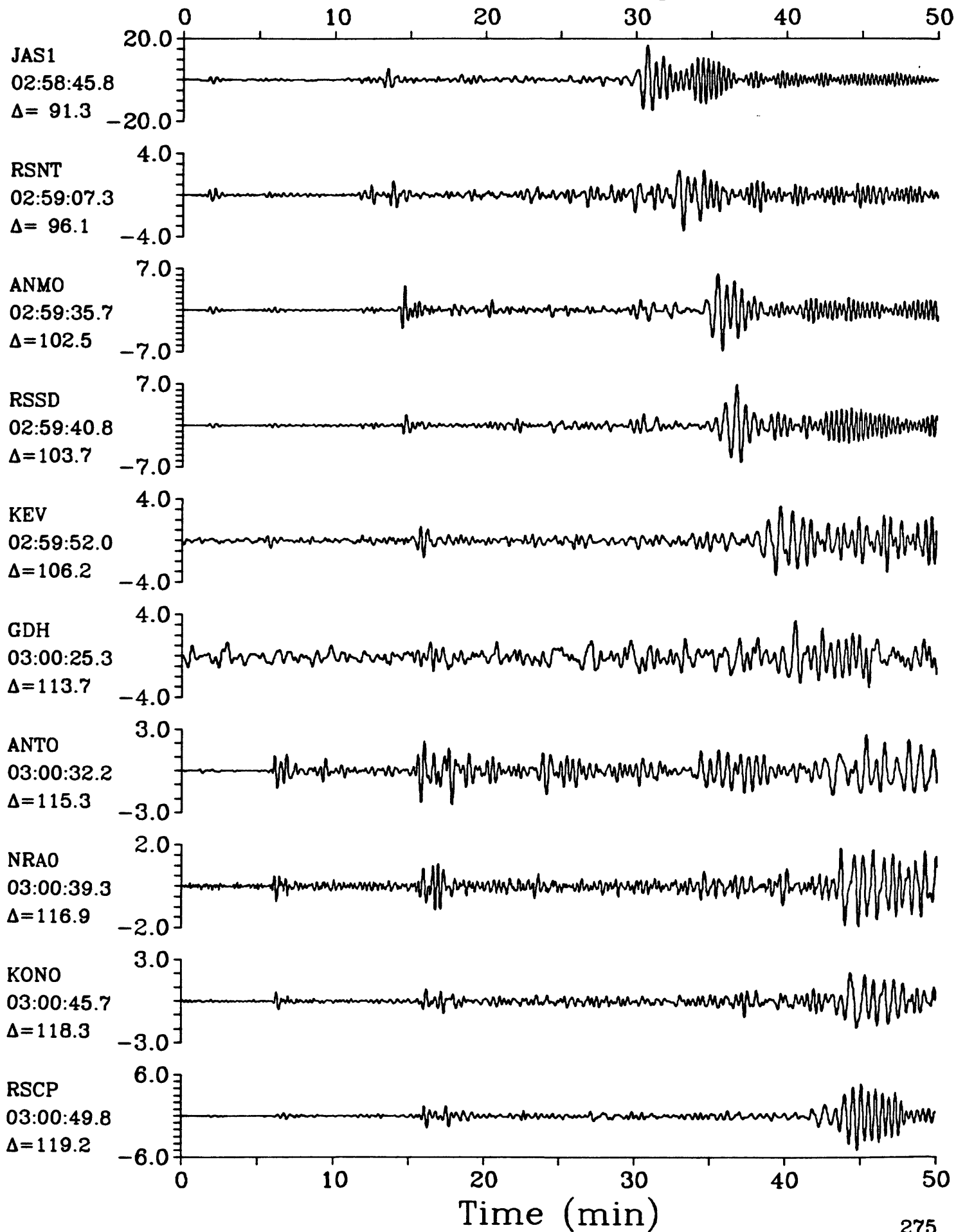
LPZ



LPZ

07 March 1986 02:46:51.54
New Britain Region $h=110.0$ $m_b=5.8$

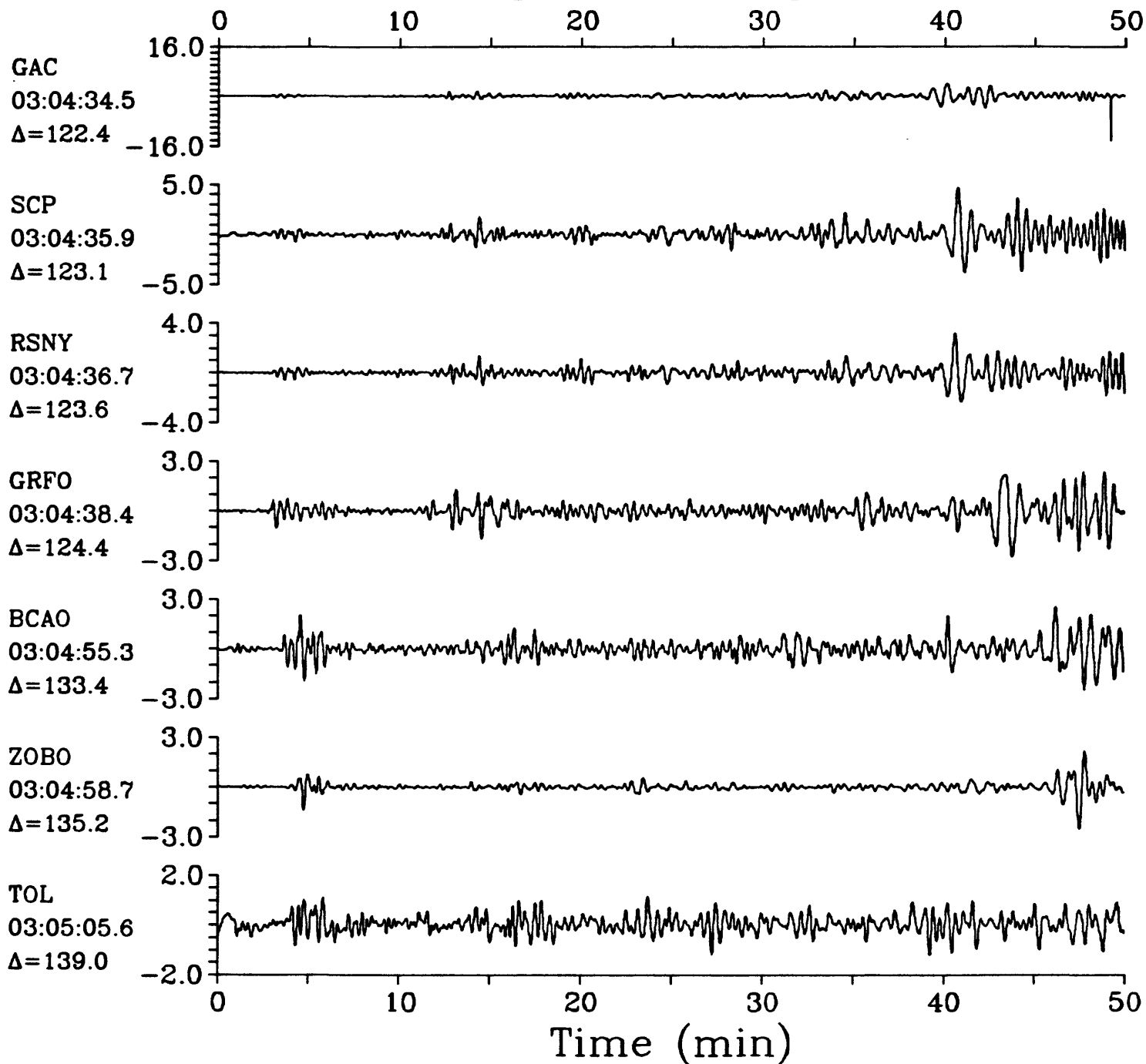
LPZ



LPZ

07 March 1986 02:46:51.54
New Britain Region $h=110.0$ $m_b=5.8$

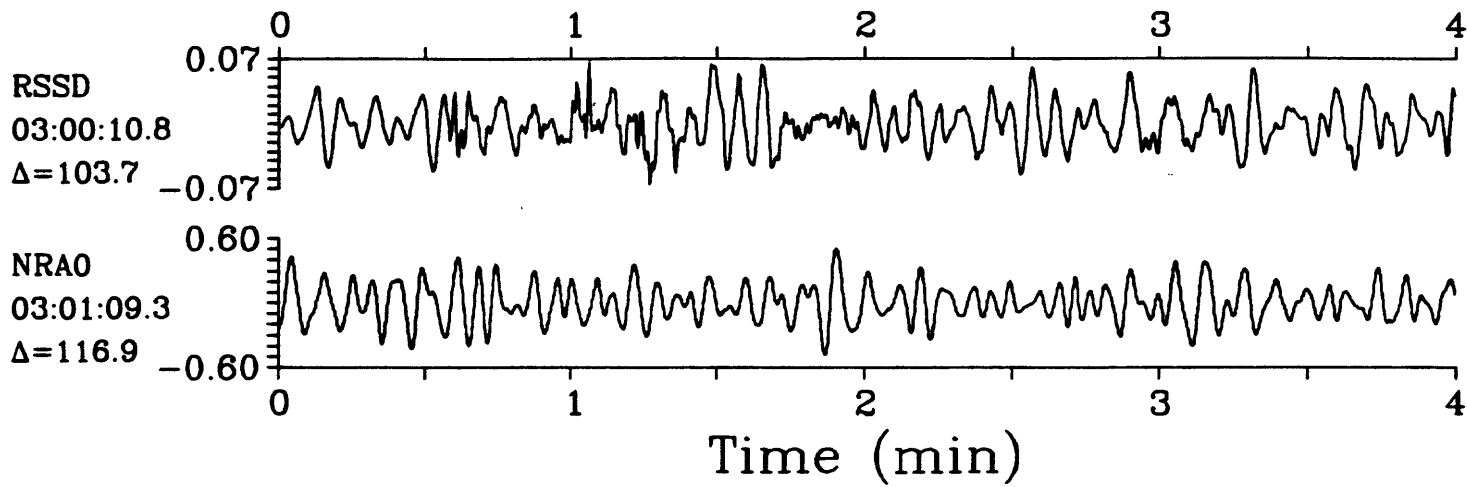
LPZ



IPZ

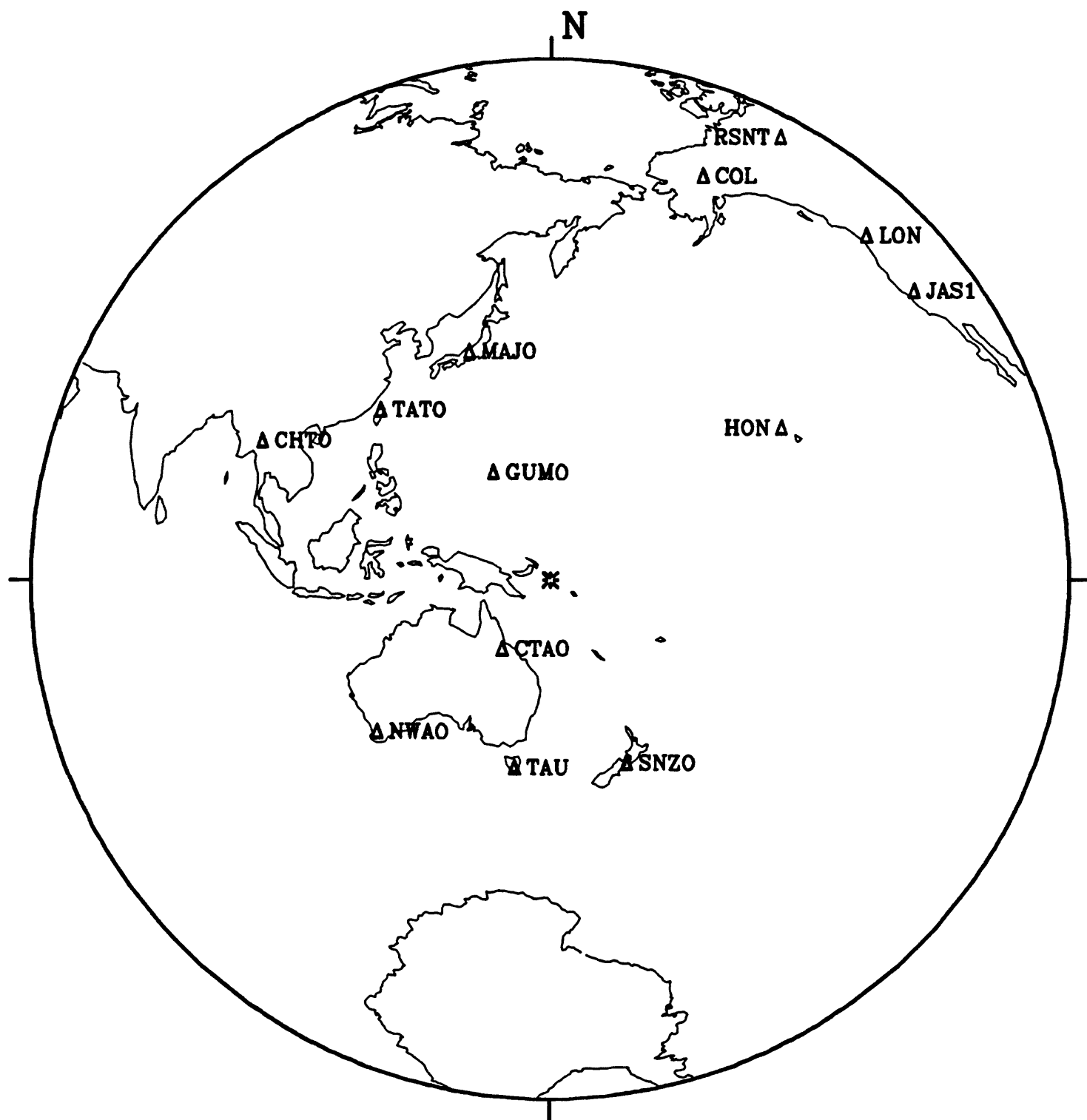
07 March 1986 02:46:51.54
New Britain Region $h=110.0$ $m_b=5.8$

IPZ



13 March 1986 05:36:28.81

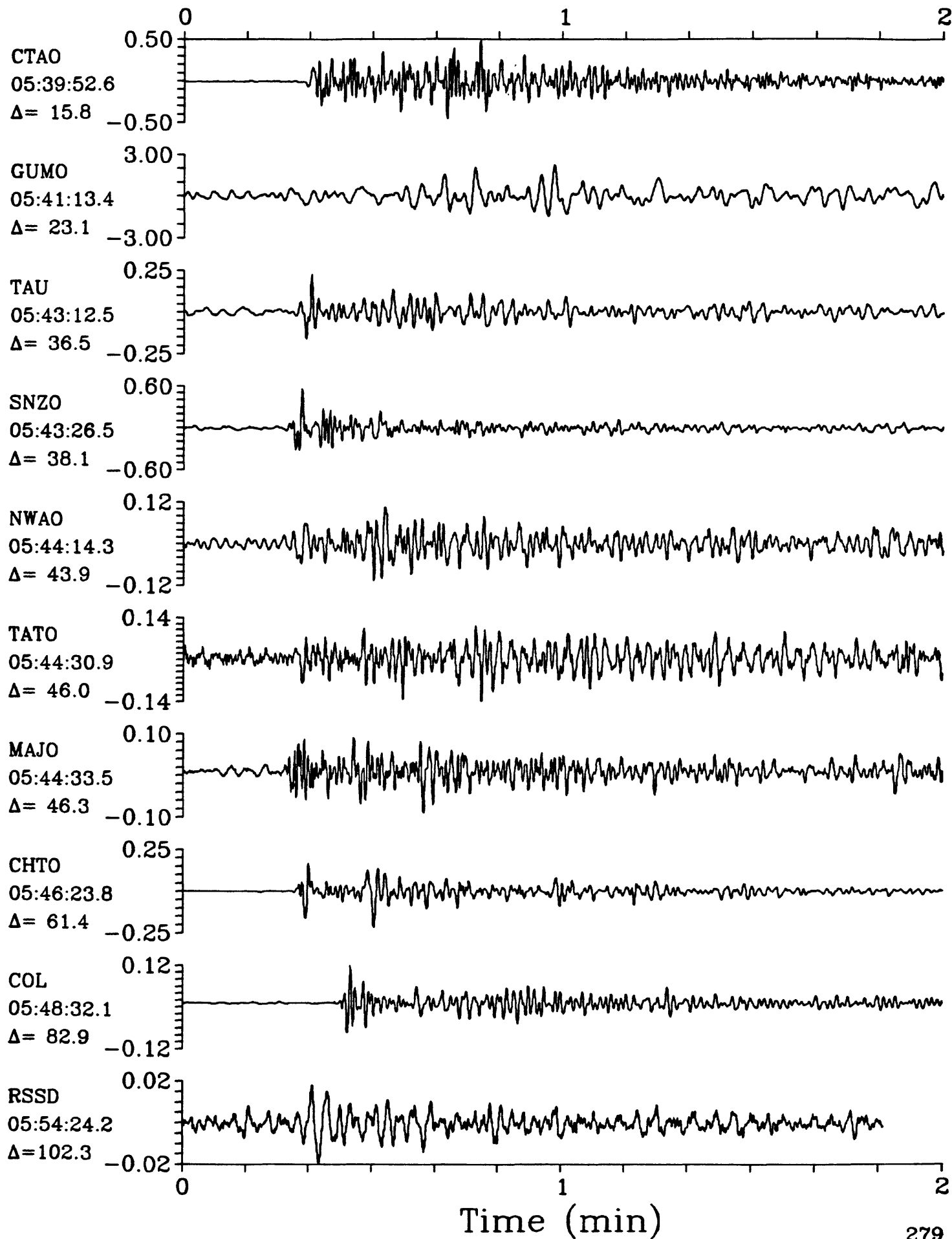
Solomon Islands



SPZ

13 March 1986 05:36:28.81
Solomon Islands $h=66.2$ $m_b=5.6$

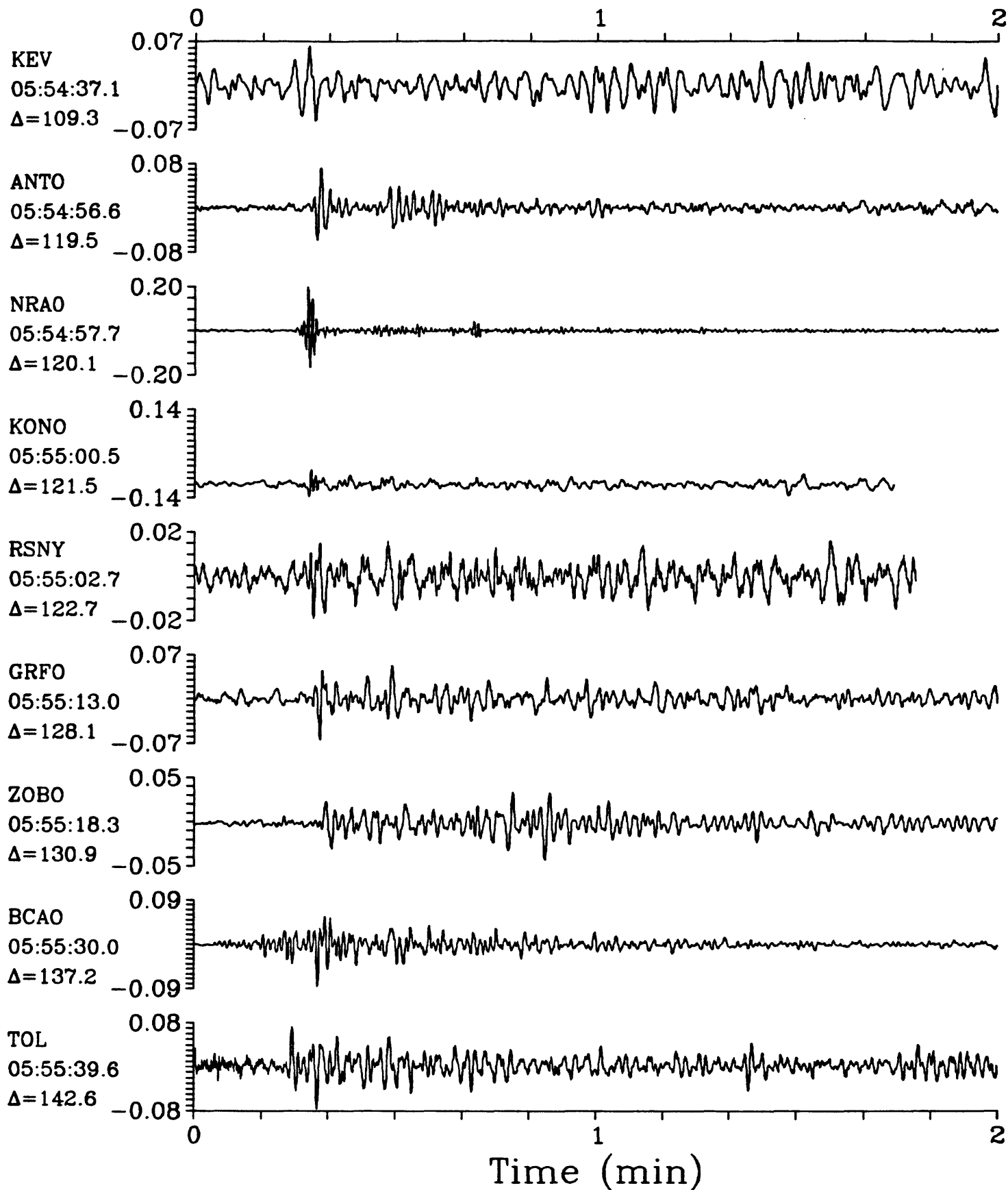
SPZ



SPZ

13 March 1986 05:36:28.81
Solomon Islands $h=66.2$ $m_b=5.6$

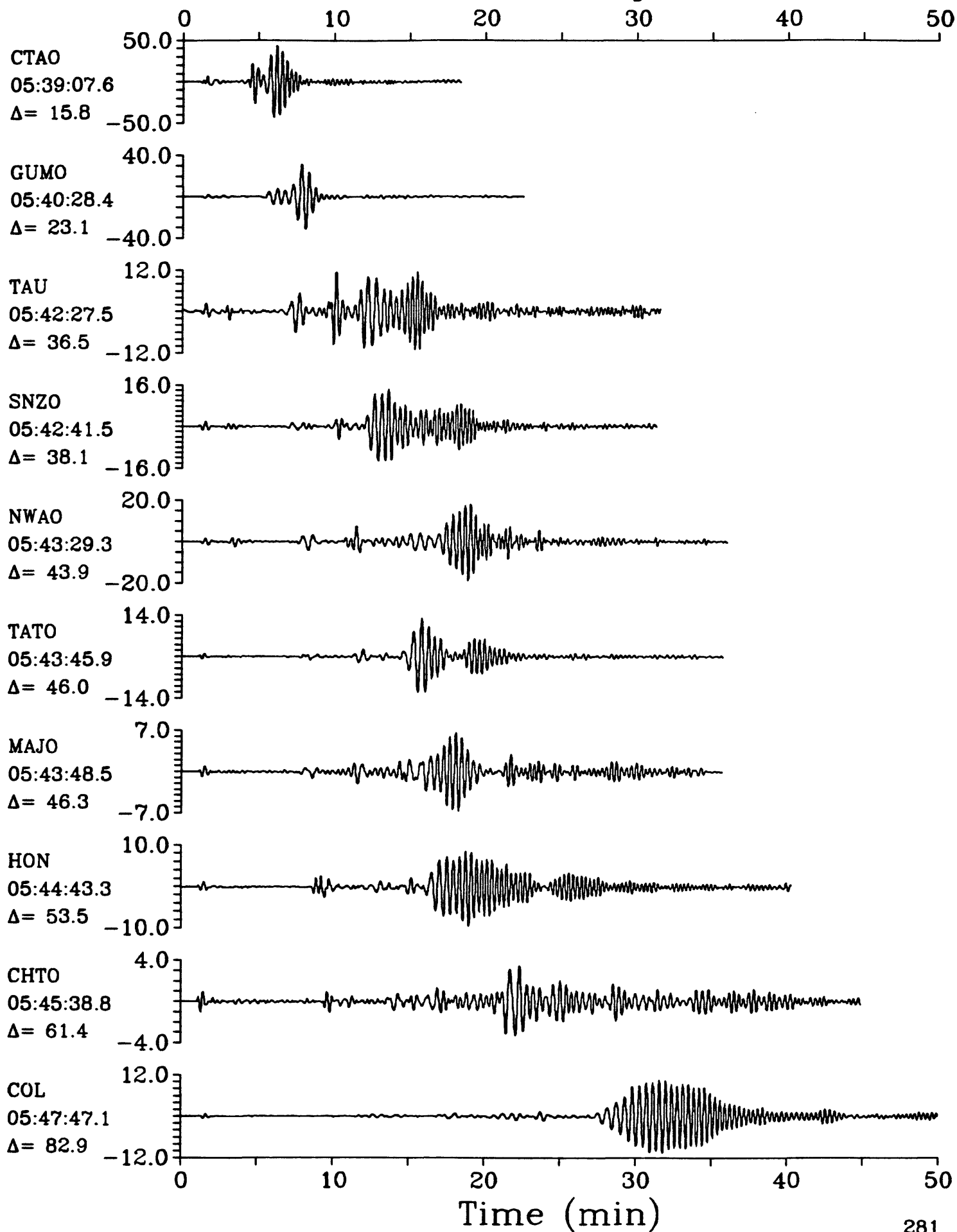
SPZ



LPZ

13 March 1986 05:36:28.81
Solomon Islands $h=66.2$ $m_b=5.6$

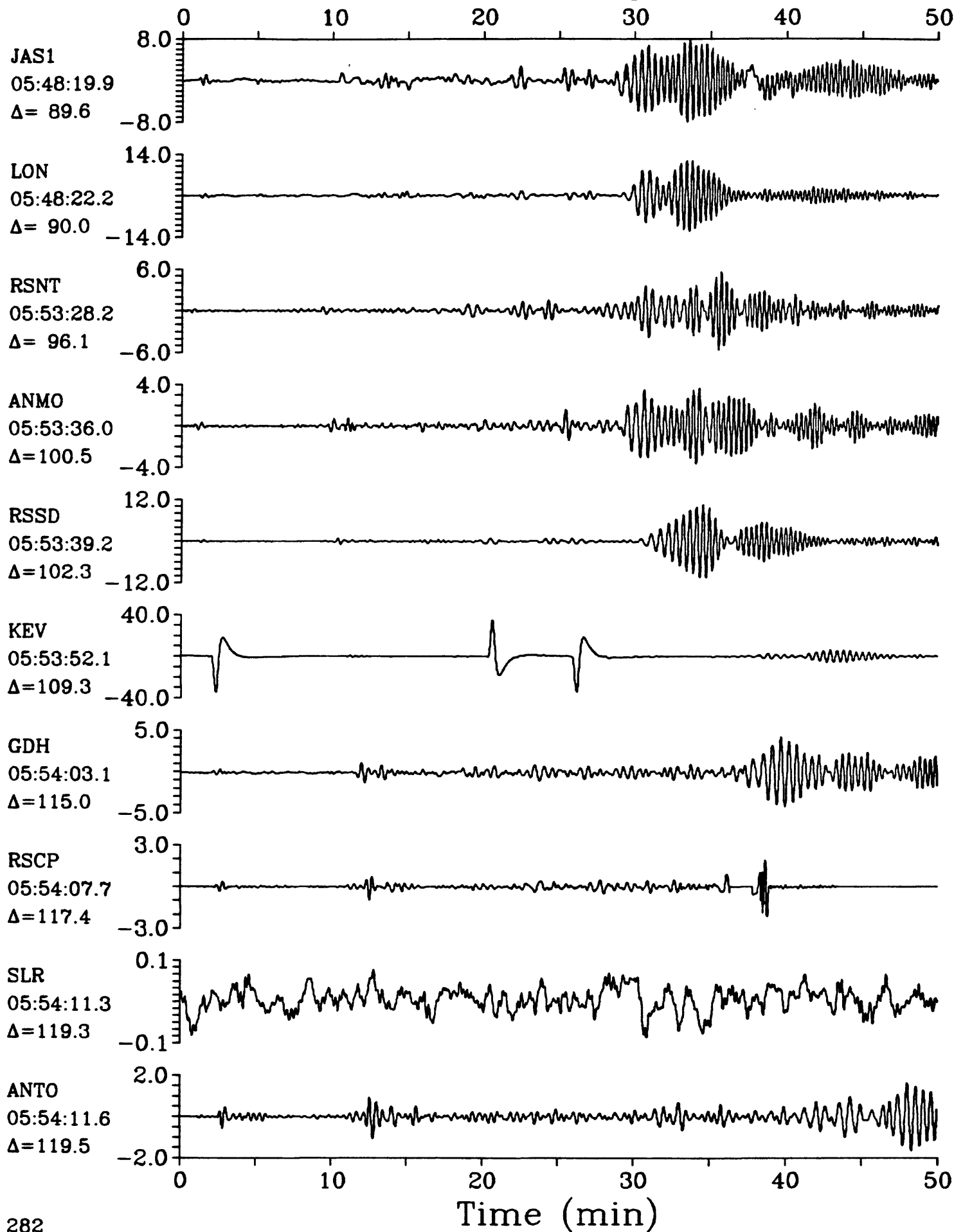
LPZ



LPZ

13 March 1986 05:36:28.81
Solomon Islands $h=66.2$ $m_b=5.6$

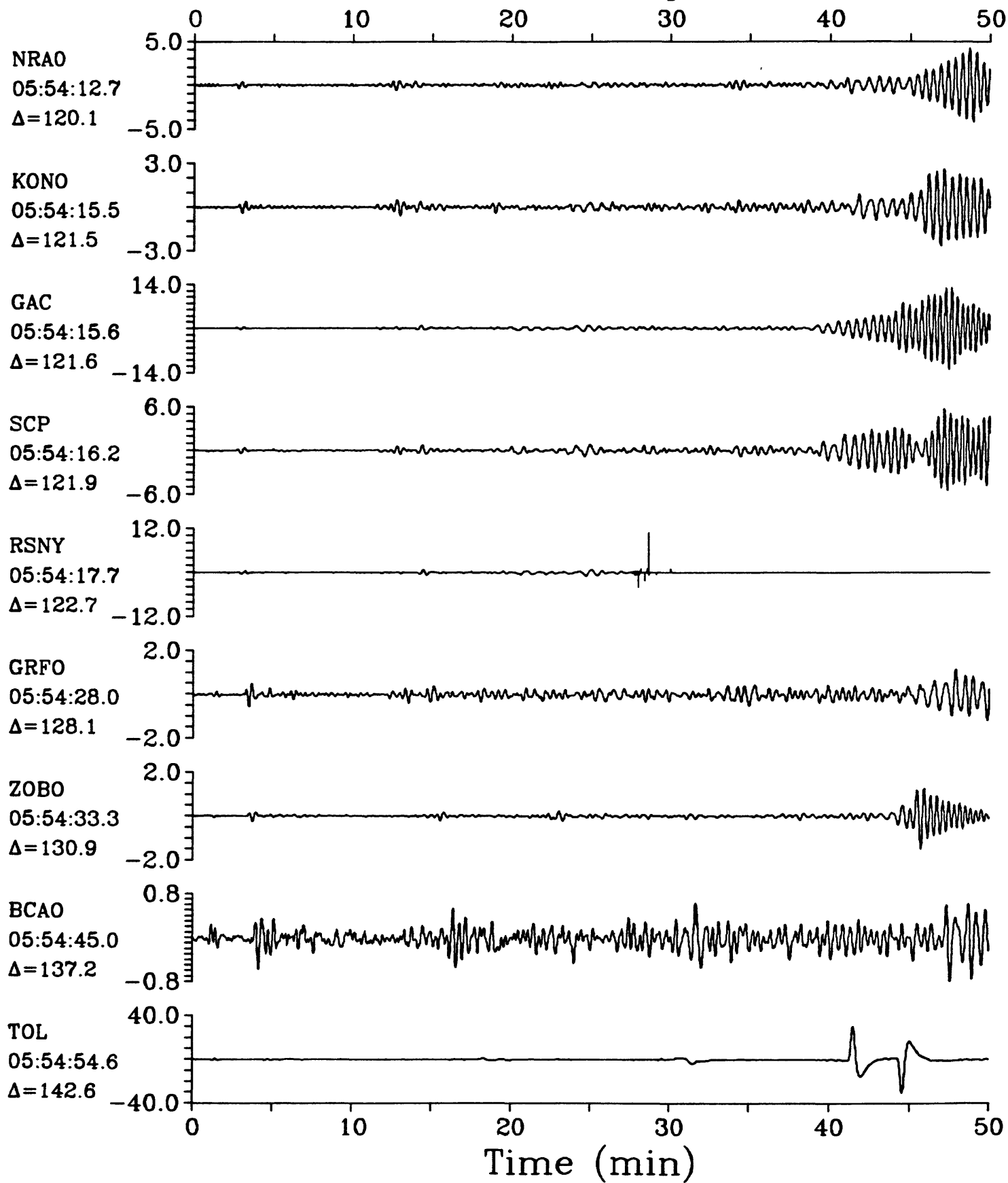
LPZ



LPZ

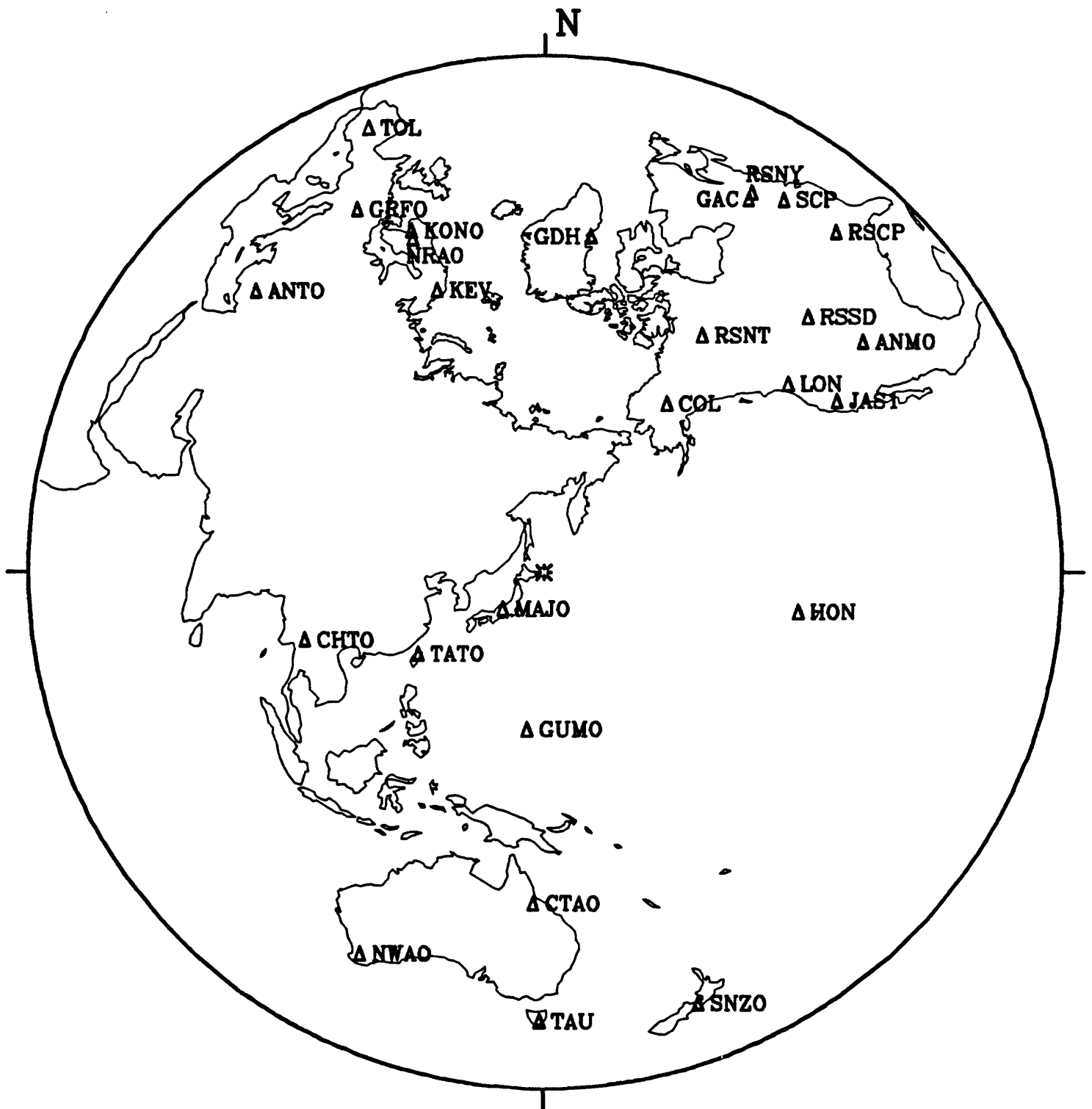
13 March 1986 05:36:28.81
Solomon Islands $h=66.2$ $m_b=5.6$

LPZ



14 March 1986 08:42:15.39

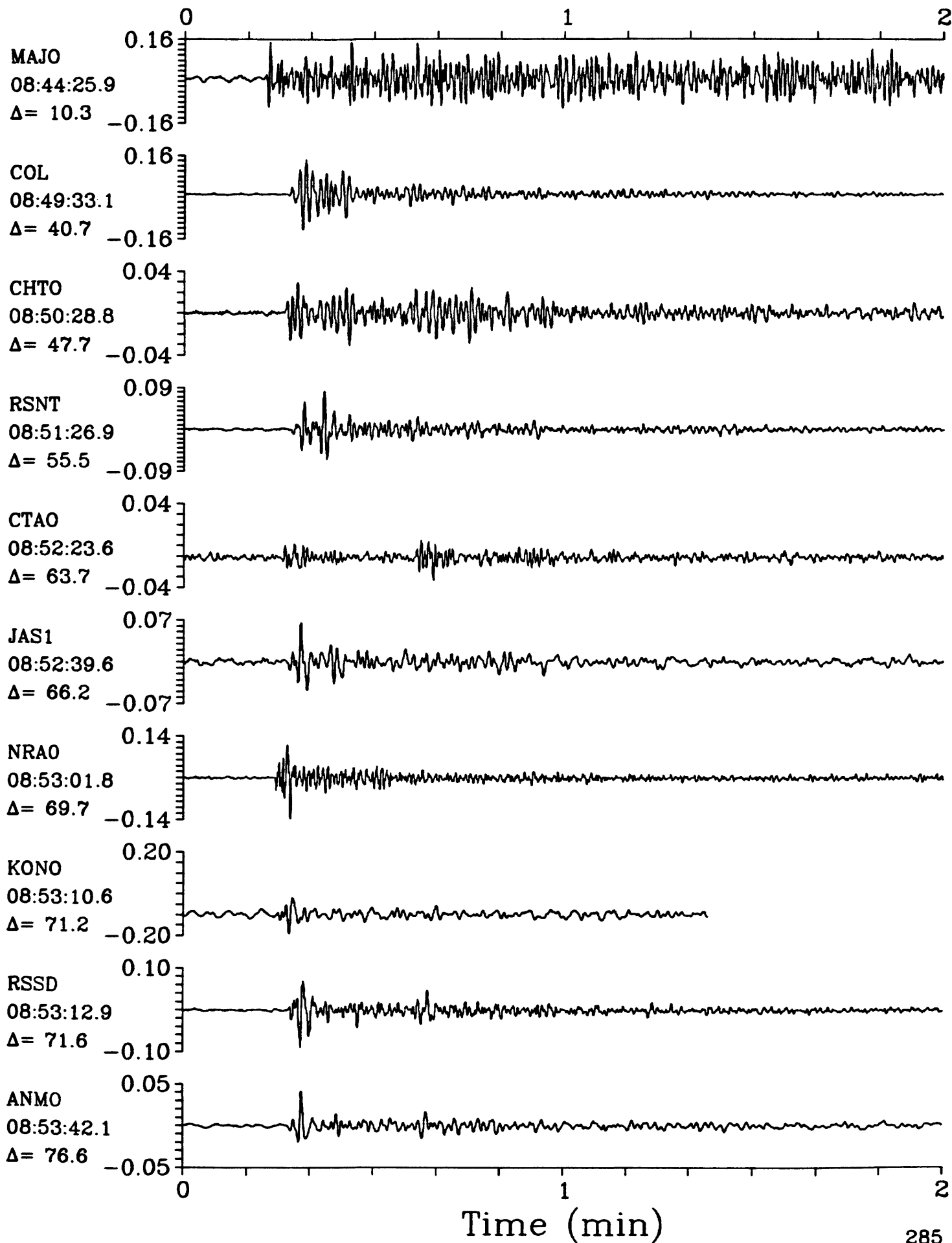
Kuril Islands



SPZ

14 March 1986 08:42:15.39
Kuril Islands $h=84.7$ $m_b=5.8$

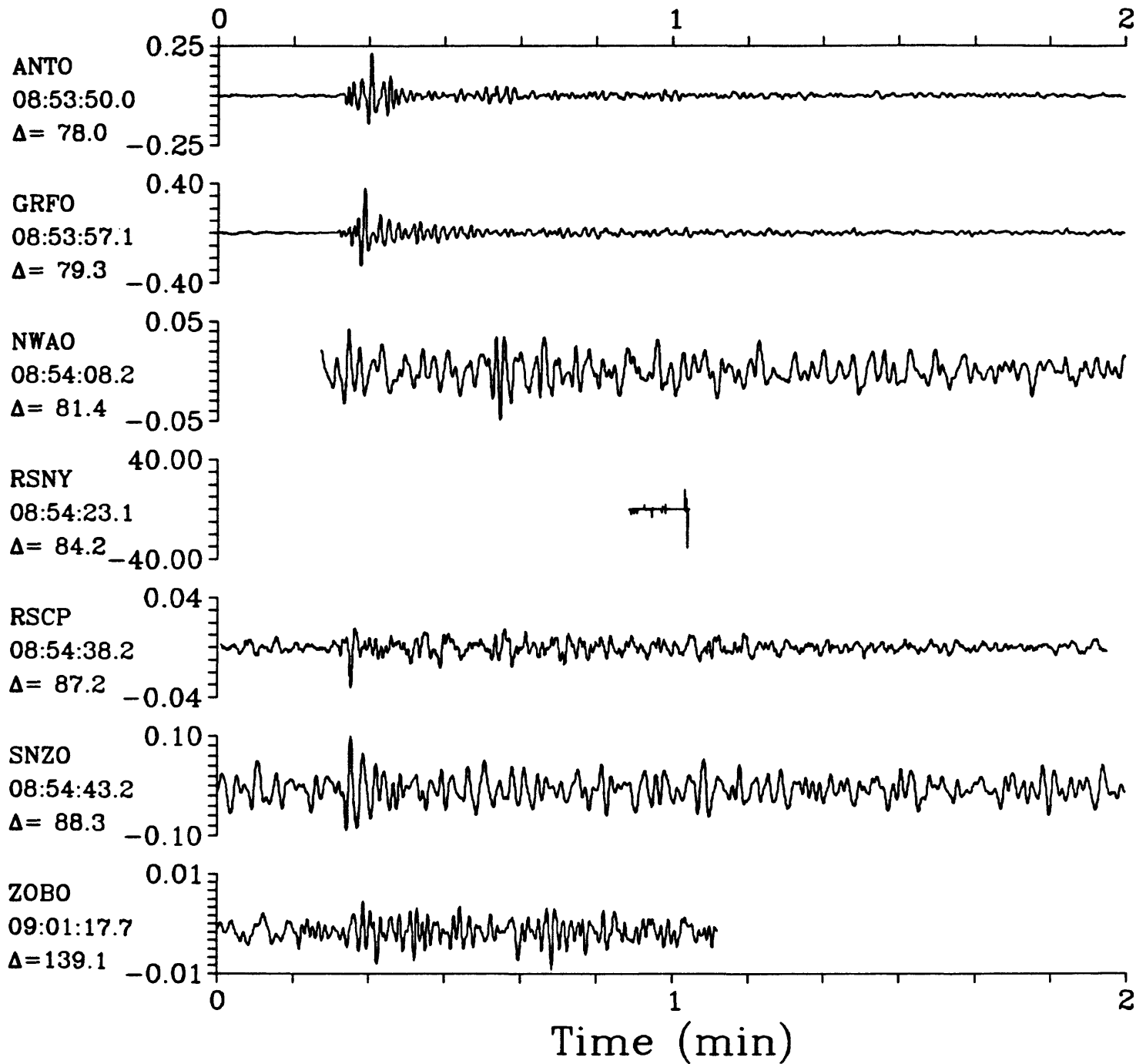
SPZ



SPZ

14 March 1986 08:42:15.39
Kuril Islands $h=84.7$ $m_b=5.8$

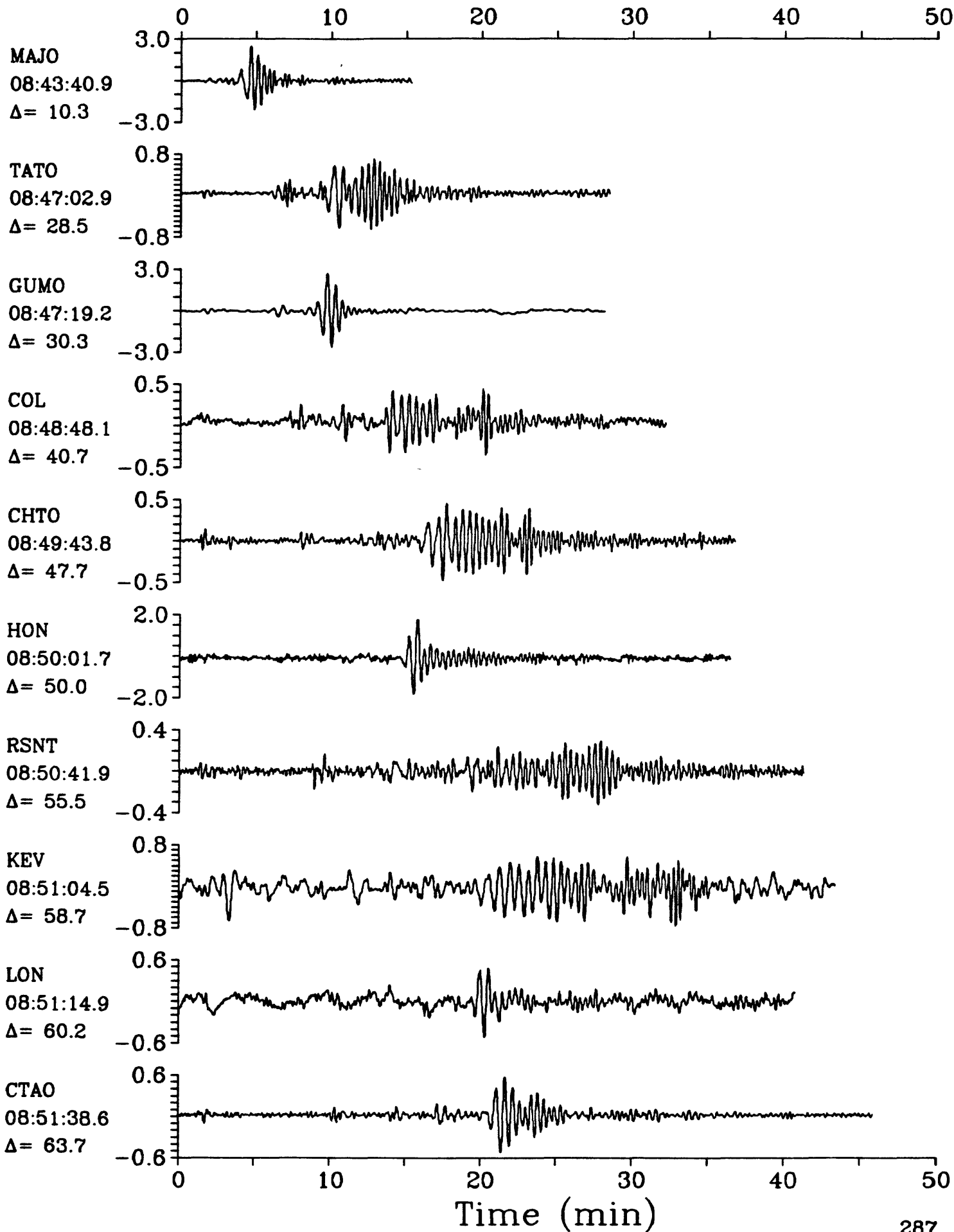
SPZ



LPZ

14 March 1986 08:42:15.39
Kuril Islands $h=84.7$ $m_b=5.8$

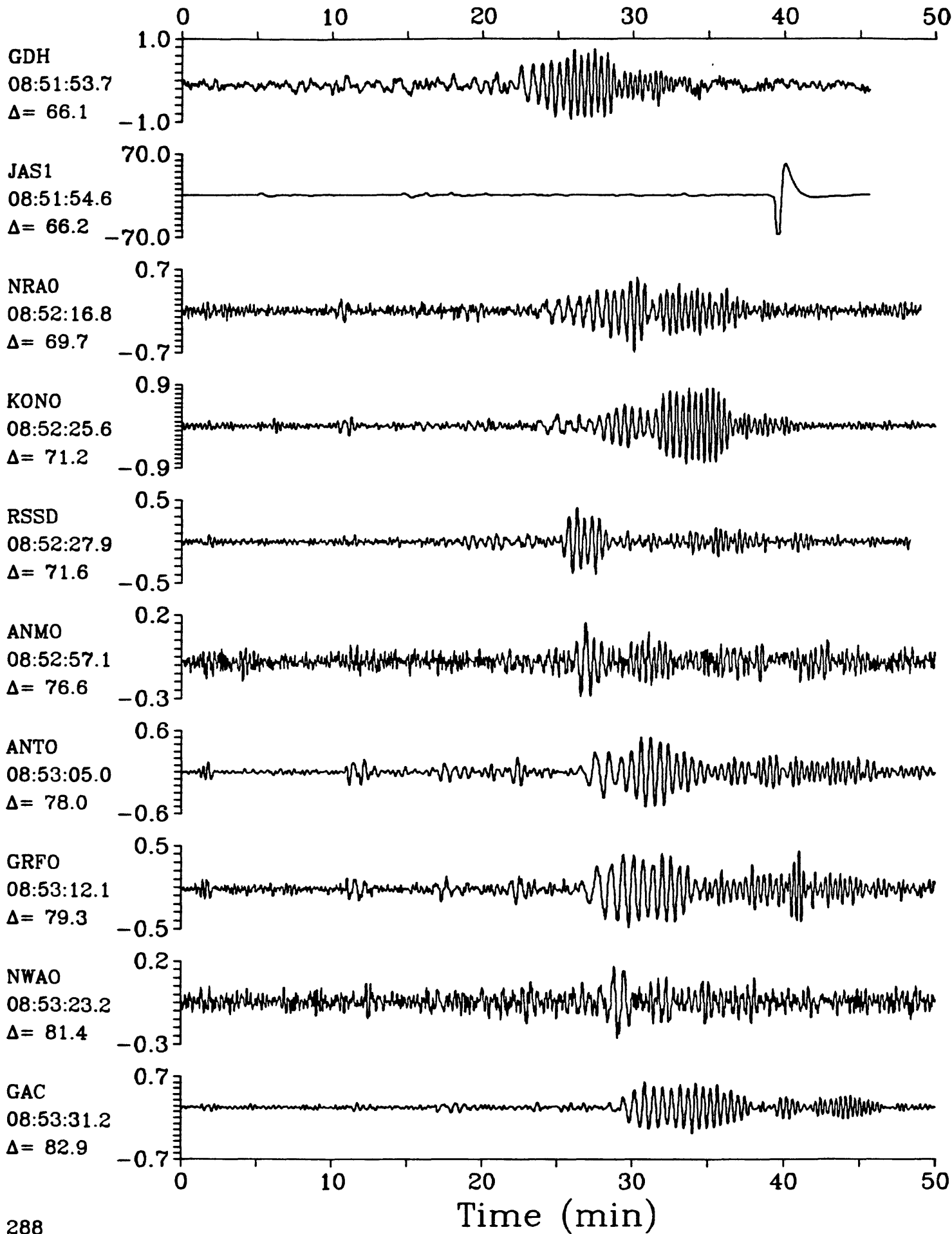
LPZ



LPZ

14 March 1986 08:42:15.39
Kuril Islands $h=84.7$ $m_b=5.8$

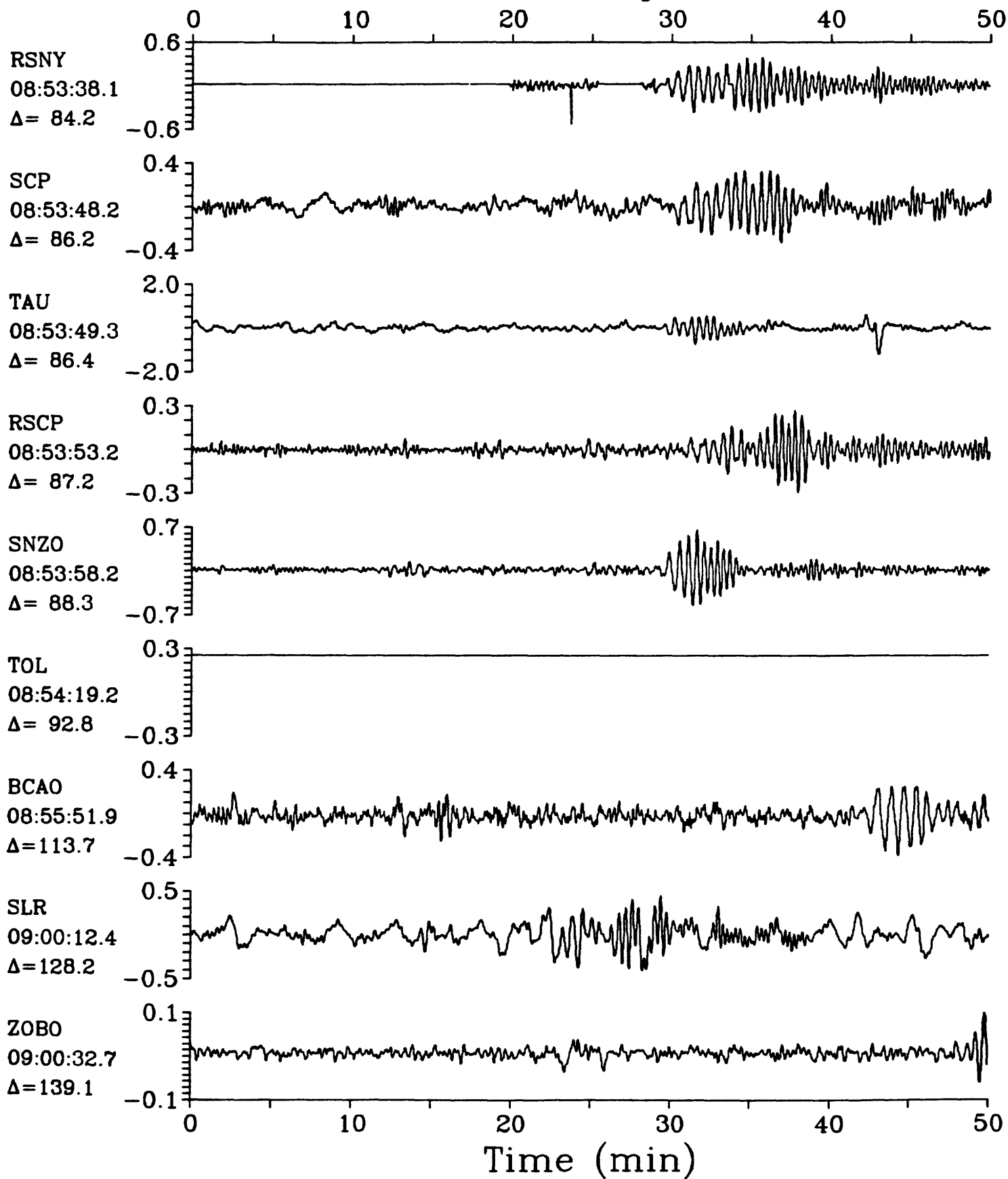
LPZ



LPZ

14 March 1986 08:42:15.39
Kuril Islands $h=84.7$ $m_b=5.8$

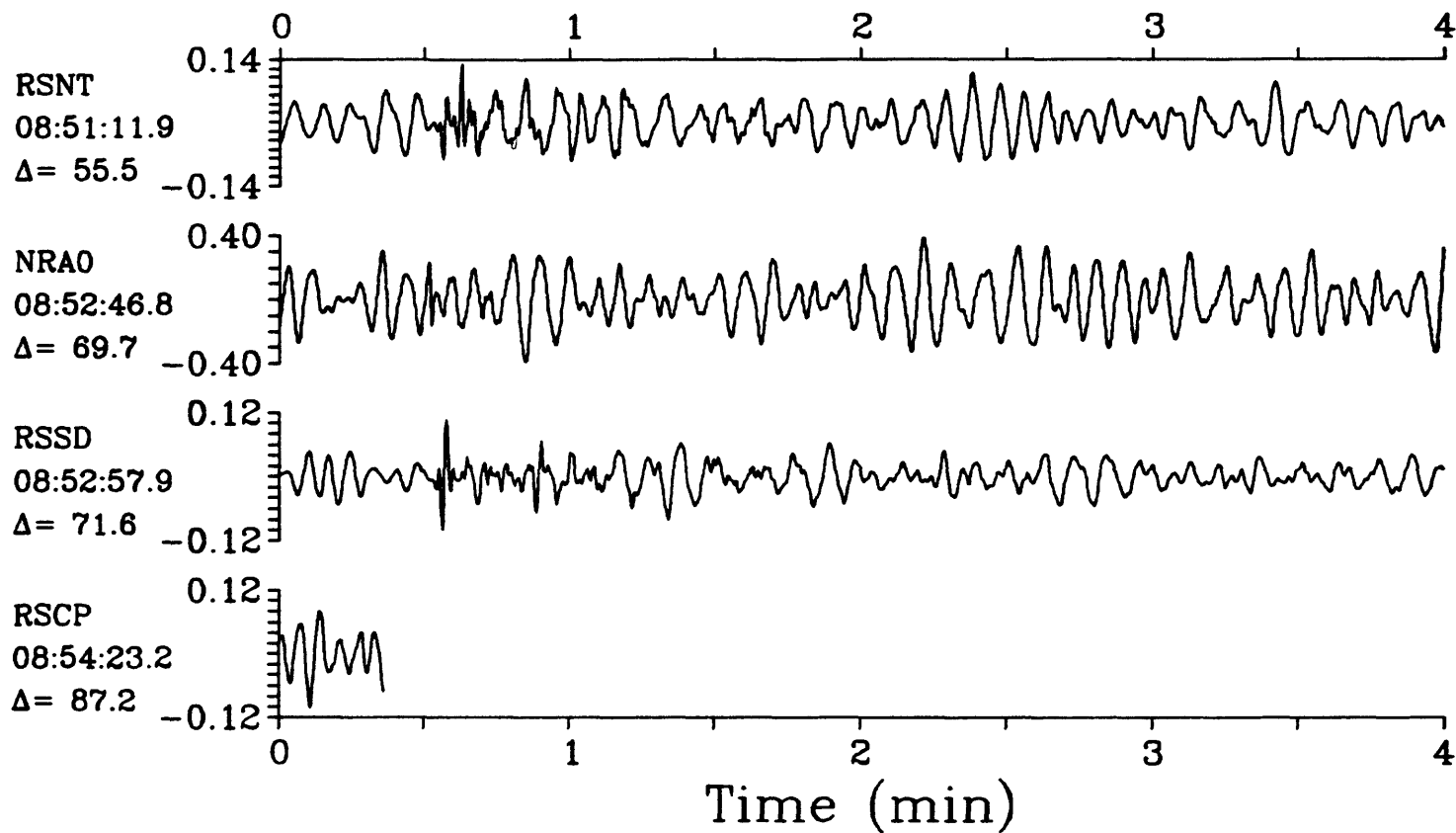
LPZ



IPZ

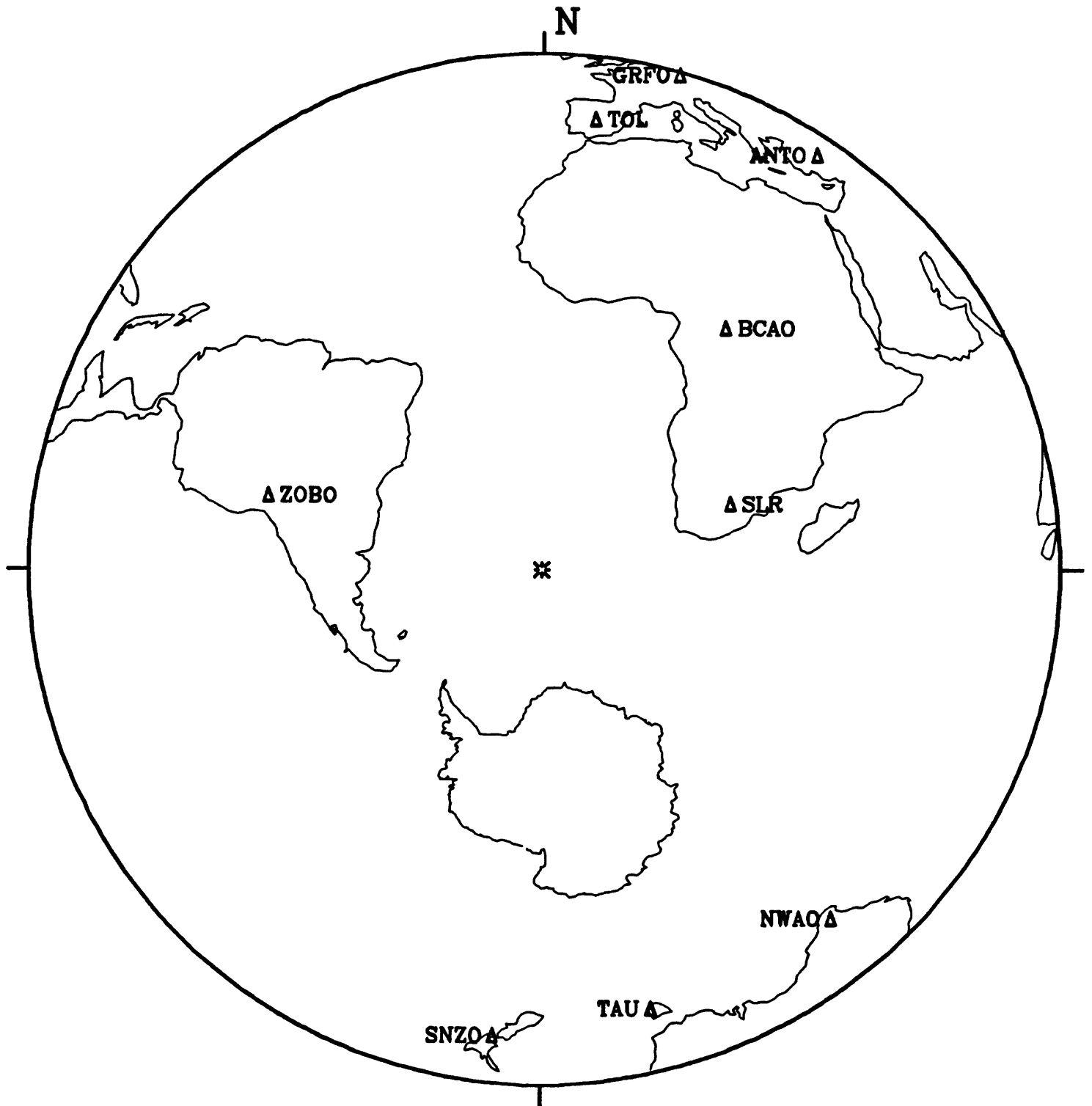
14 March 1986 08:42:15.39
Kuril Islands $h=84.7$ $m_b=5.8$

IPZ



14 March 1986 10:30:50.19

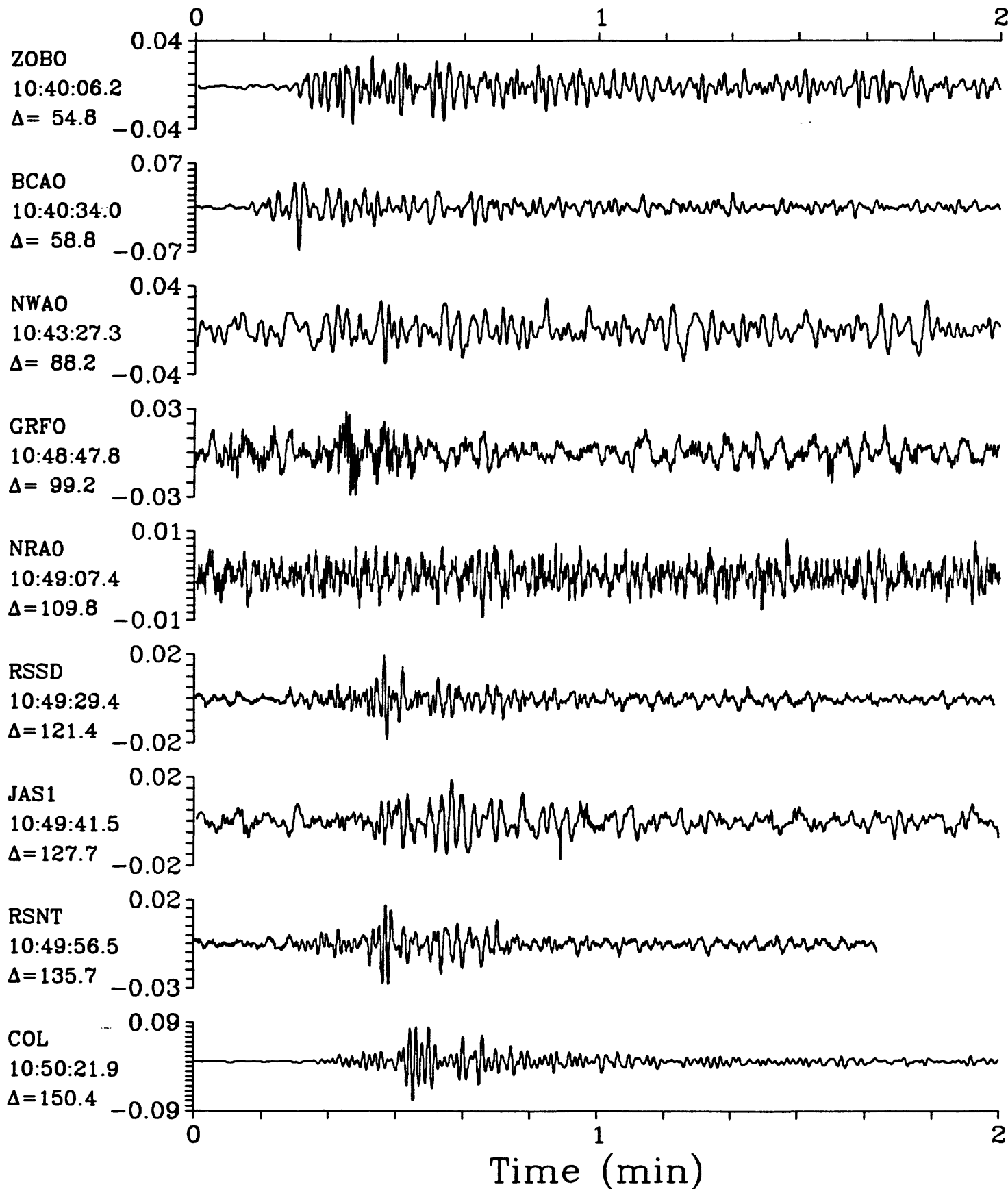
South Atlantic Ridge



SPZ

14 March 1986 10:30:50.19

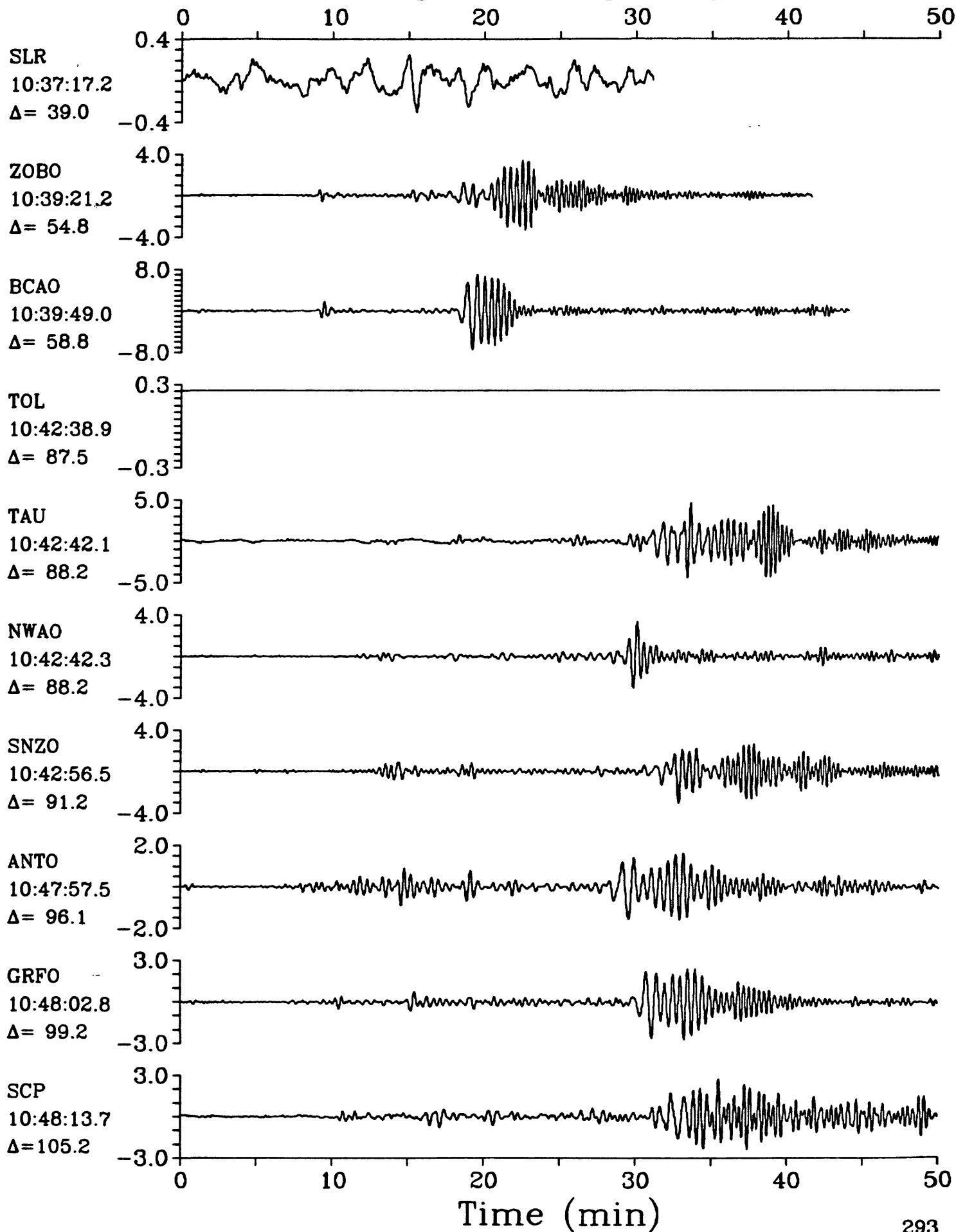
SPZ

South Atlantic Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.7$ 

LPZ

14 March 1986 10:30:50.19

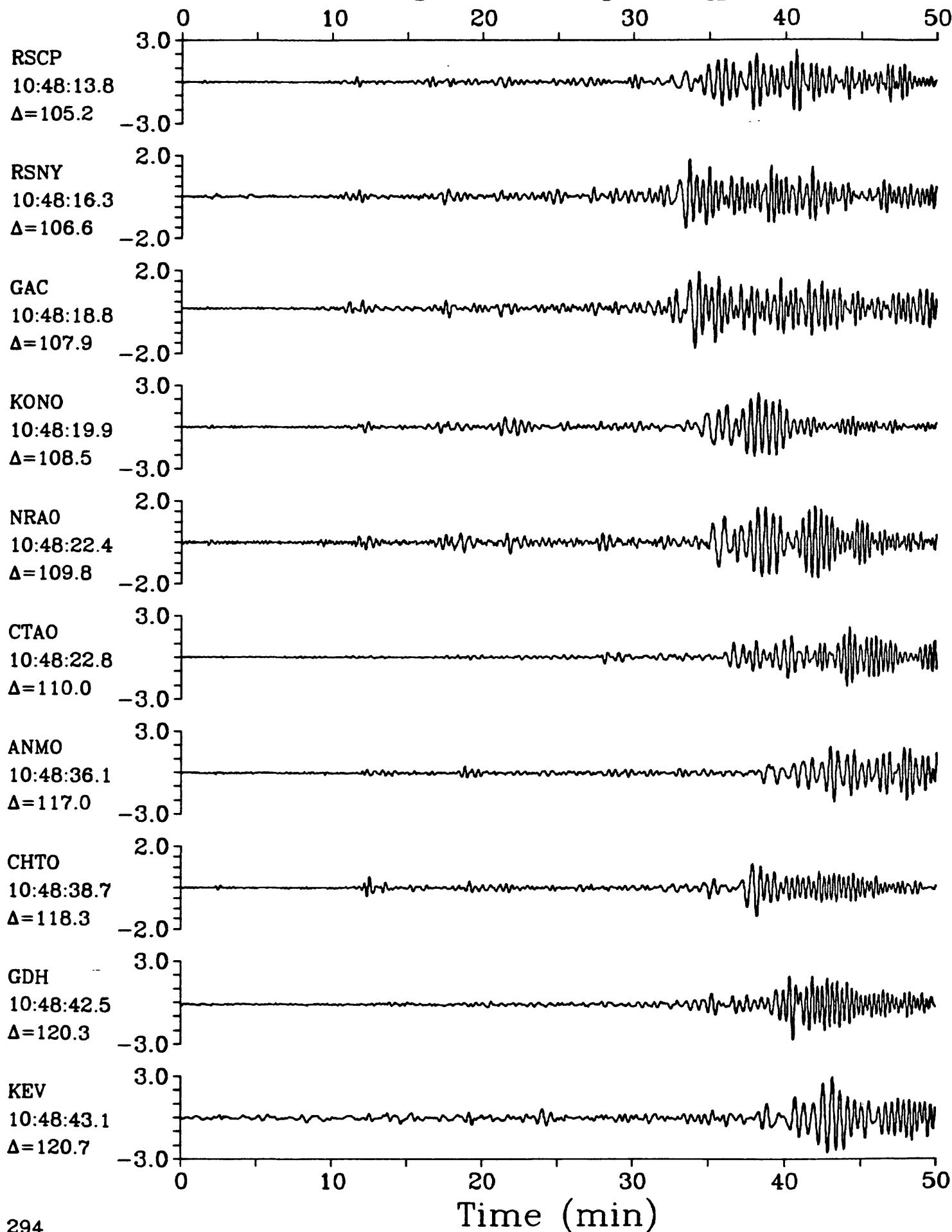
LPZ

South Atlantic Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.7$ 

LPZ

14 March 1986 10:30:50.19

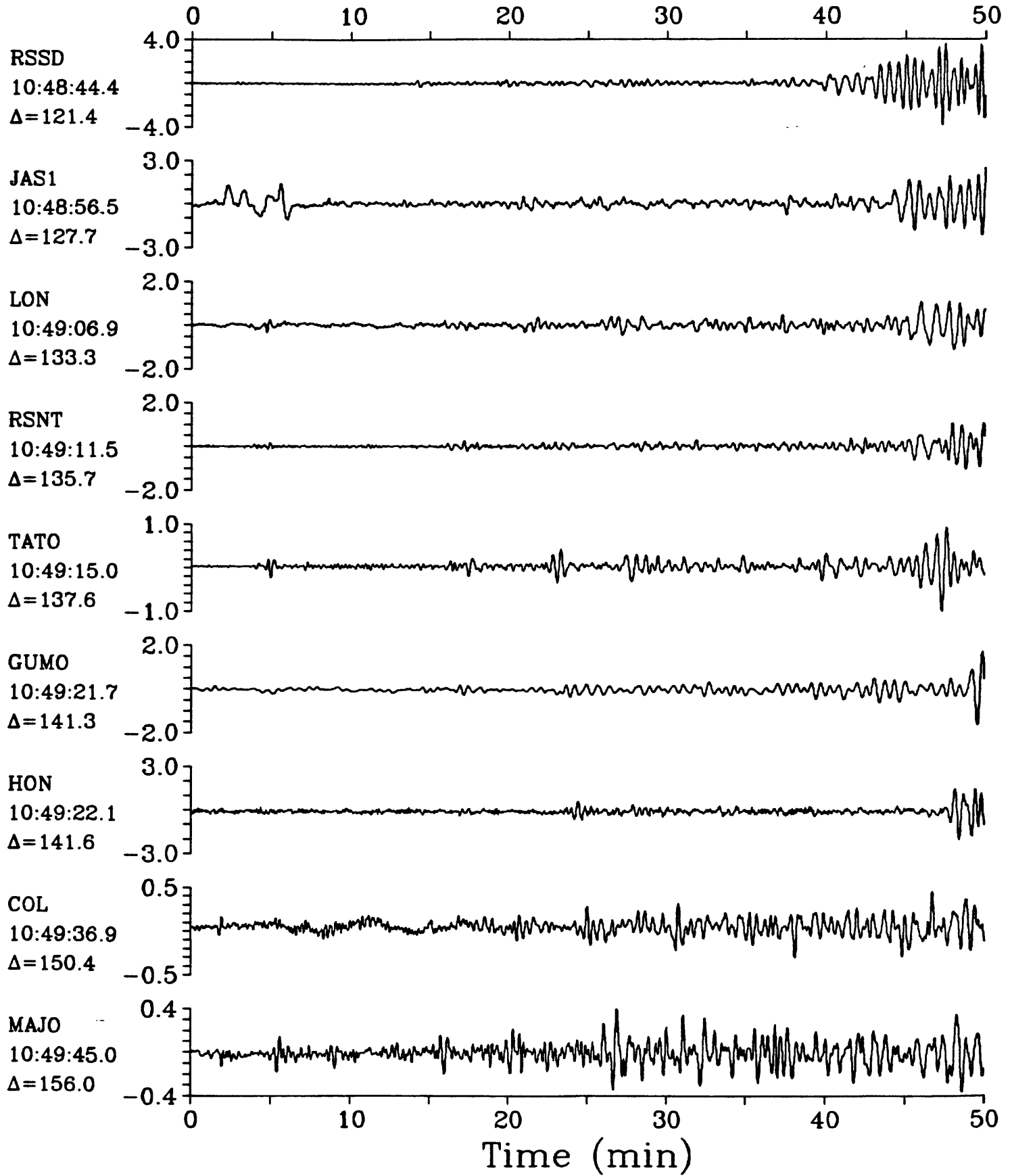
LPZ

South Atlantic Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.7$ 

LPZ

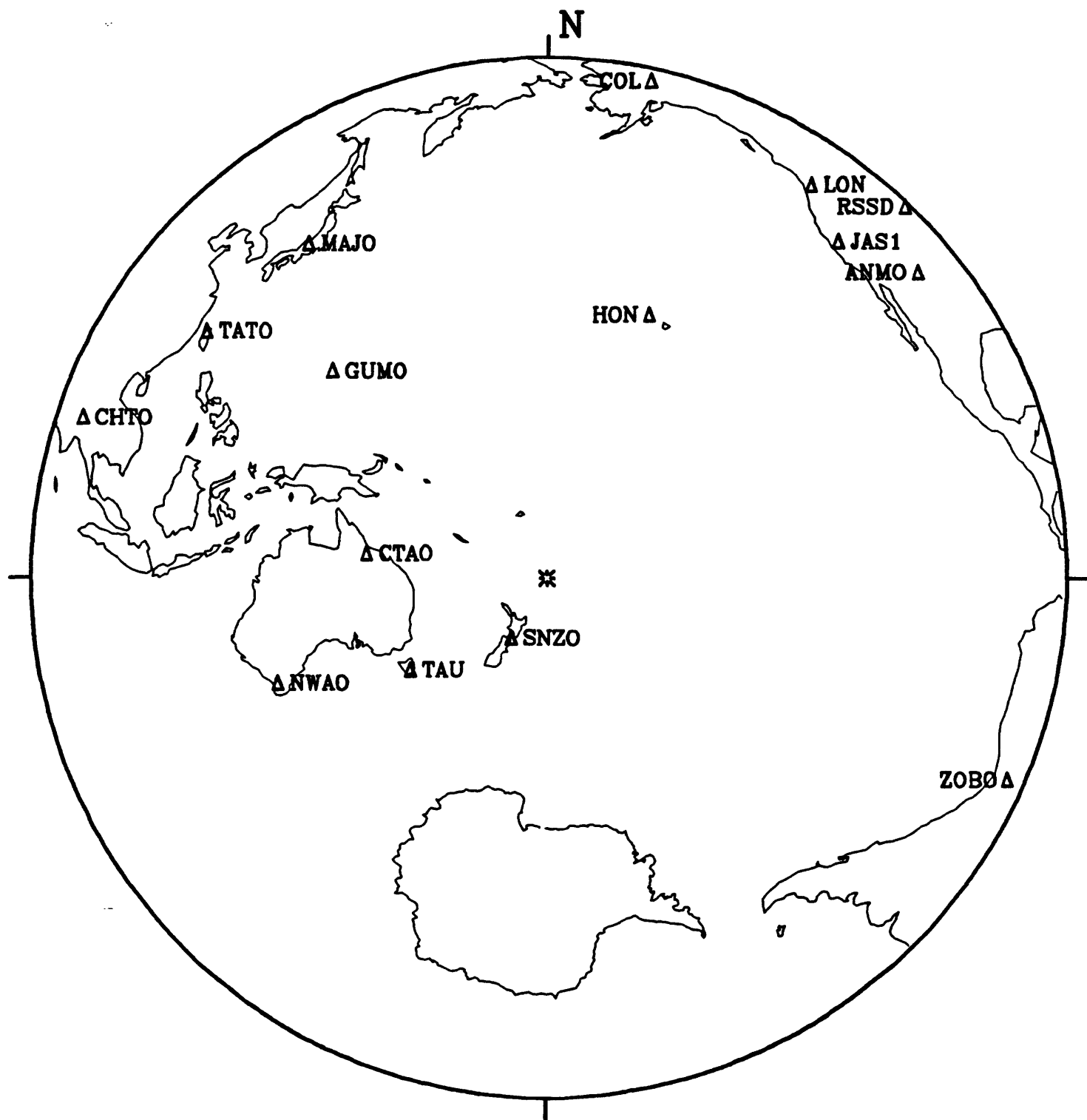
14 March 1986 10:30:50.19

LPZ

South Atlantic Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.7$ 

14 March 1986 16:55:54.19

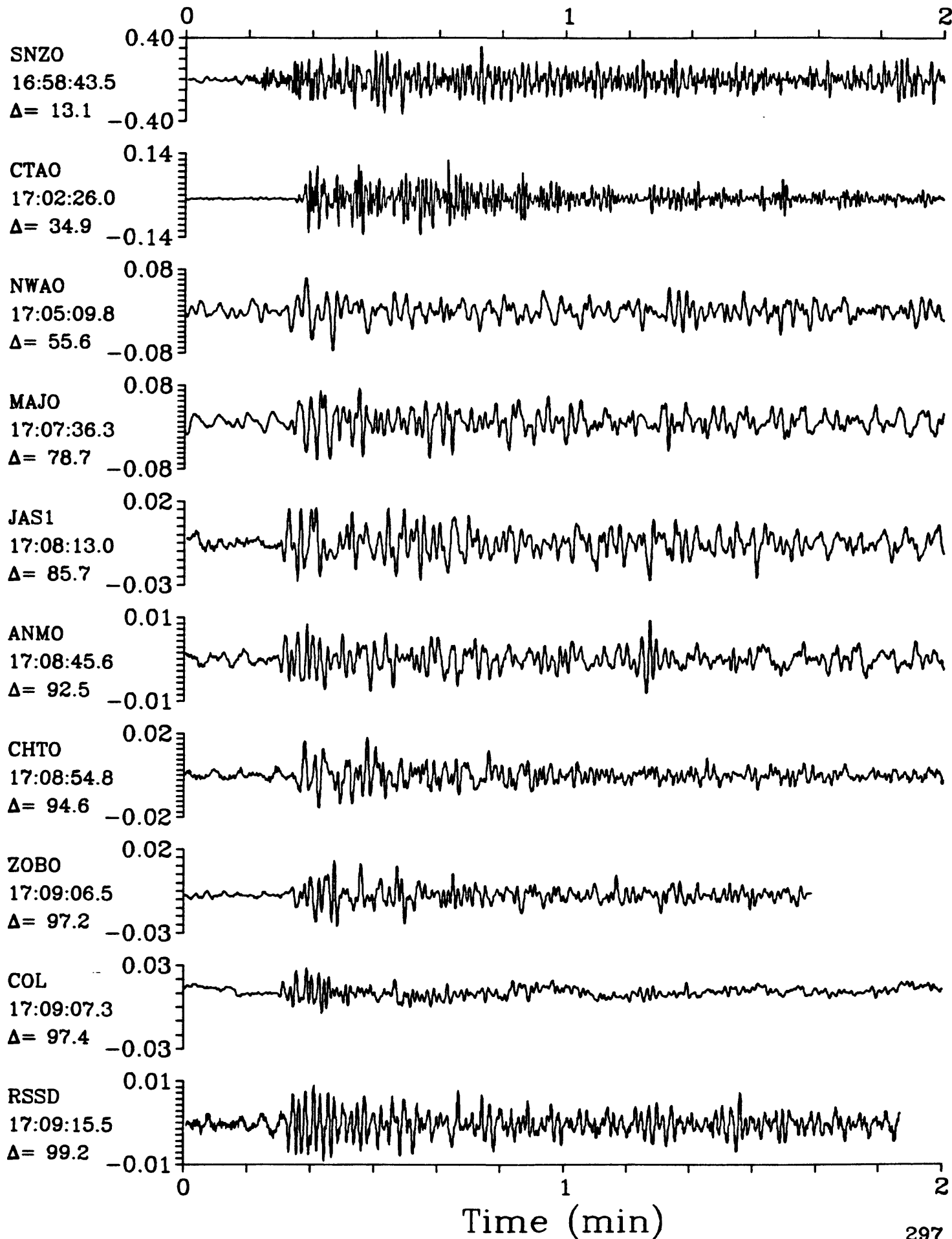
Kermadec Islands Region



SPZ

14 March 1986 16:55:54.19

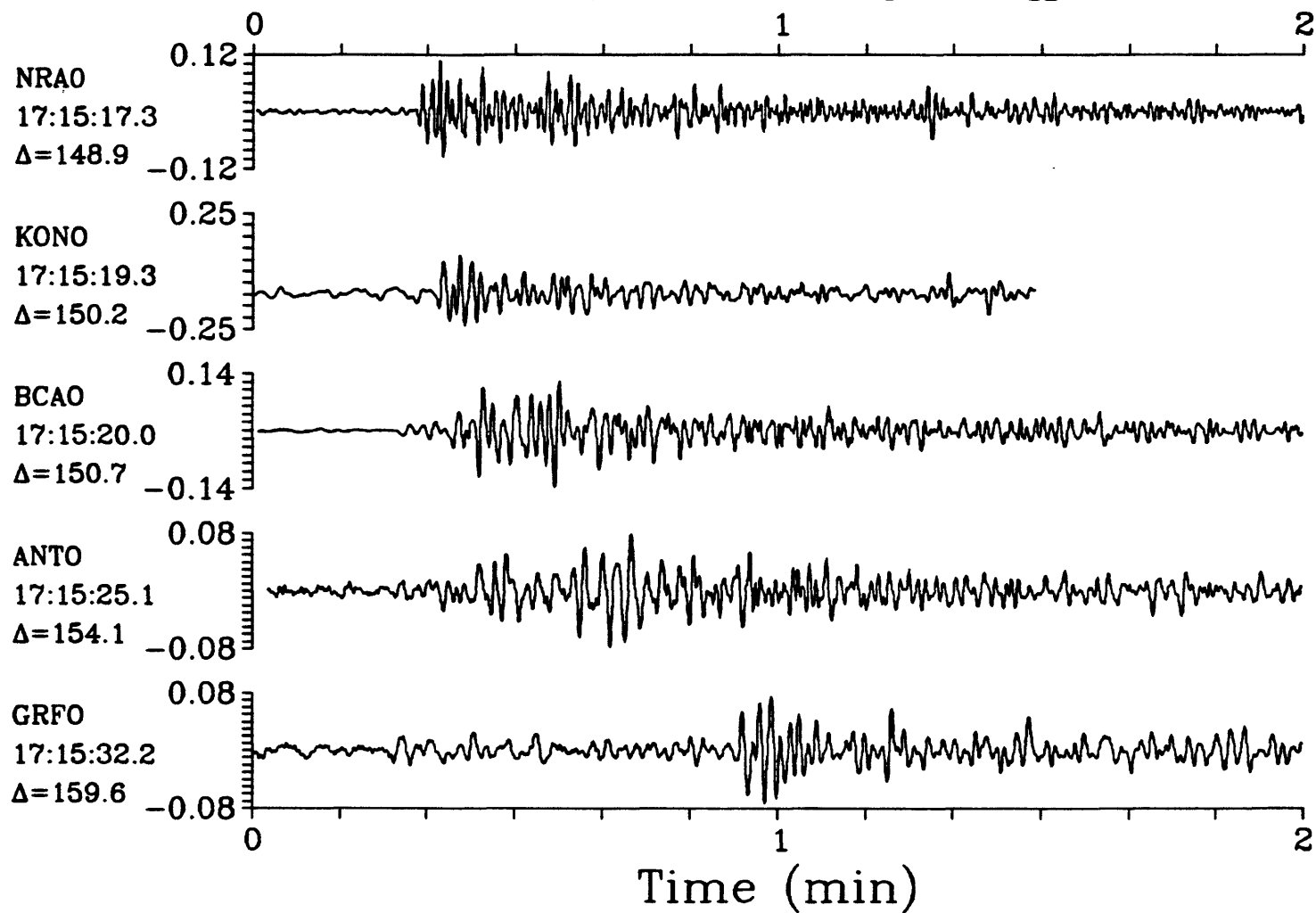
SPZ

Kermadec Islands Region $h=53.3$ $m_b=5.5$ $M_{sz}=6.1$ 

SPZ

14 March 1986 16:55:54.19

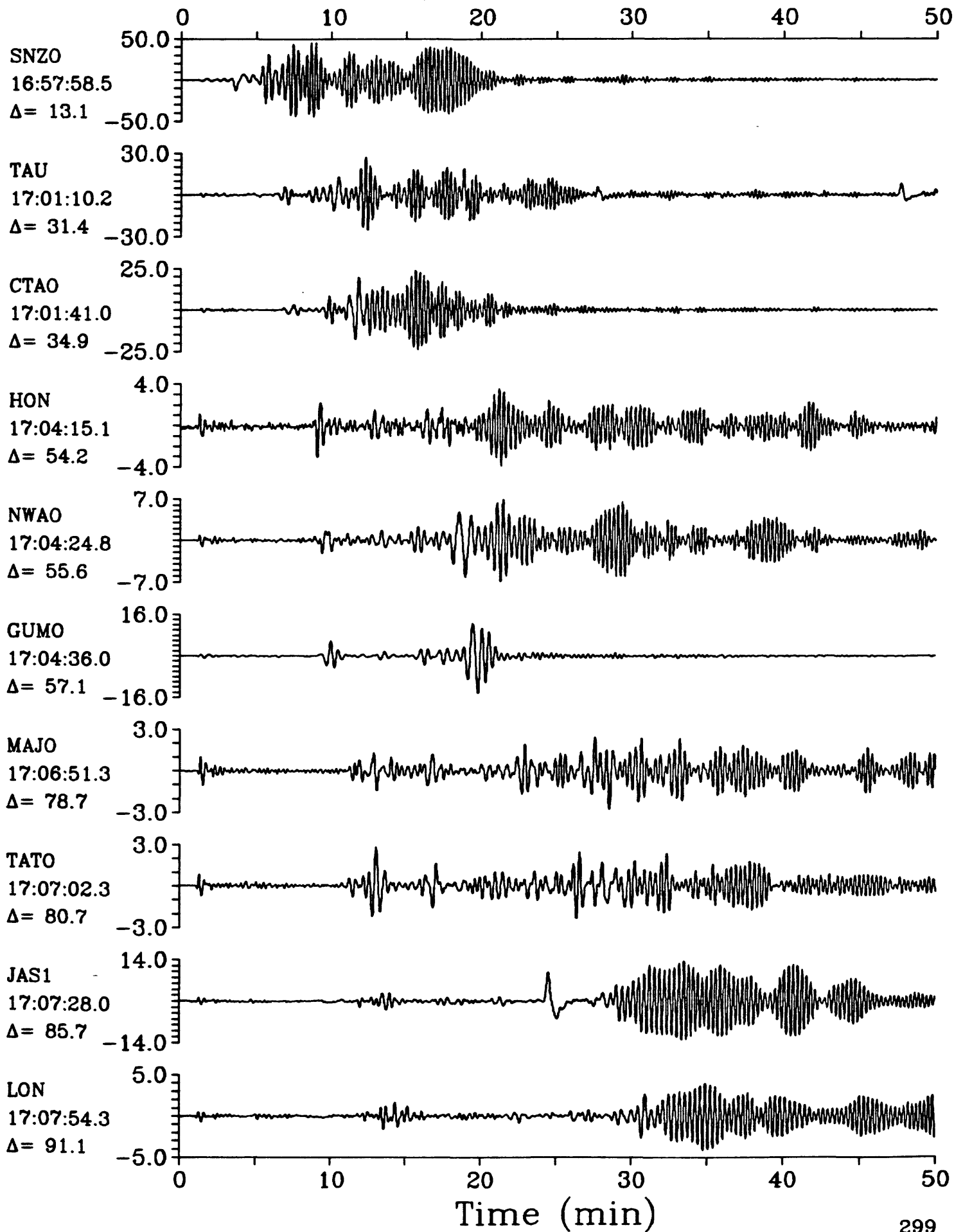
SPZ

Kermadec Islands Region $h=53.3$ $m_b=5.5$ $M_{sz}=6.1$ 

LPZ

14 March 1986 16:55:54.19

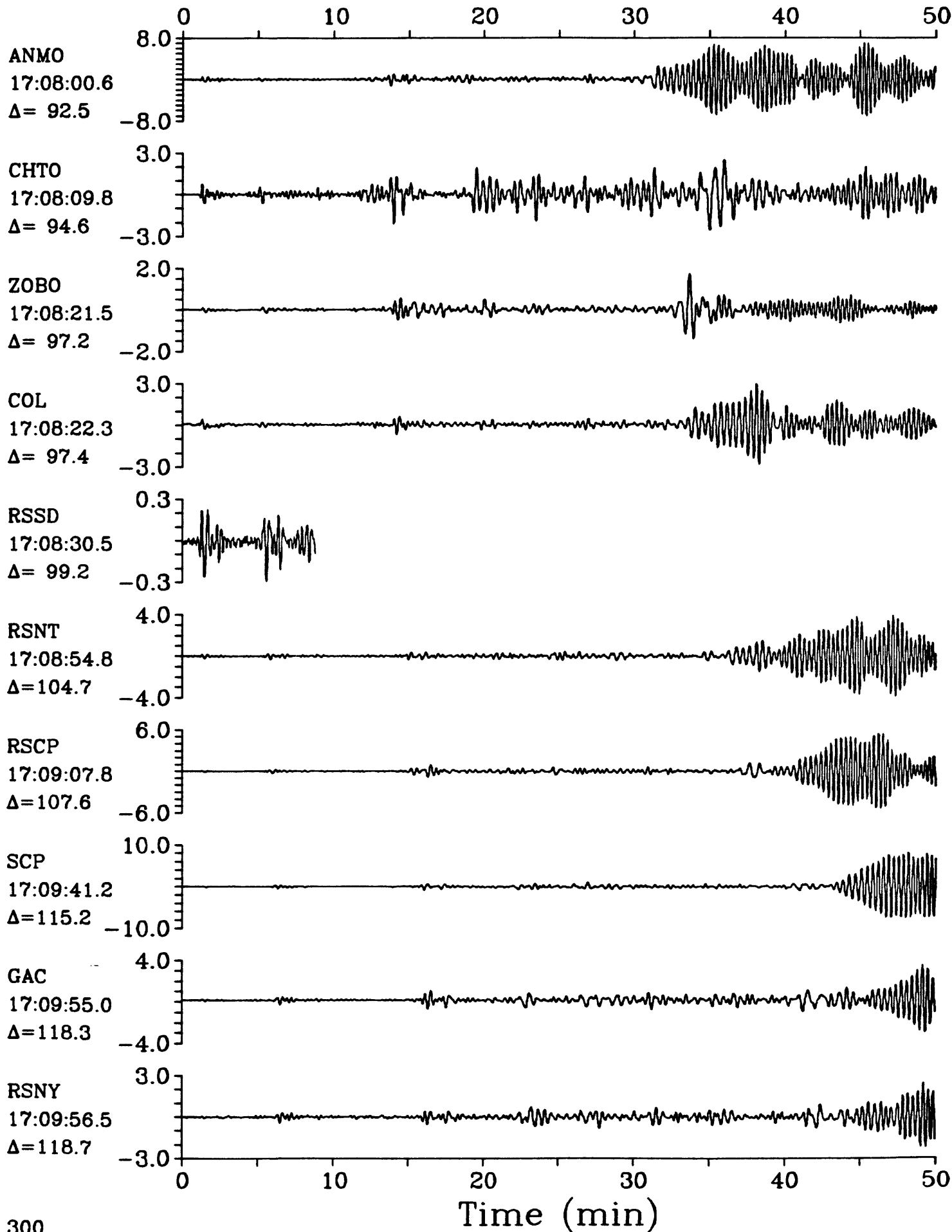
LPZ

Kermadec Islands Region $h=53.3$ $m_b=5.5$ $M_{sz}=6.1$ 

LPZ

14 March 1986 16:55:54.19

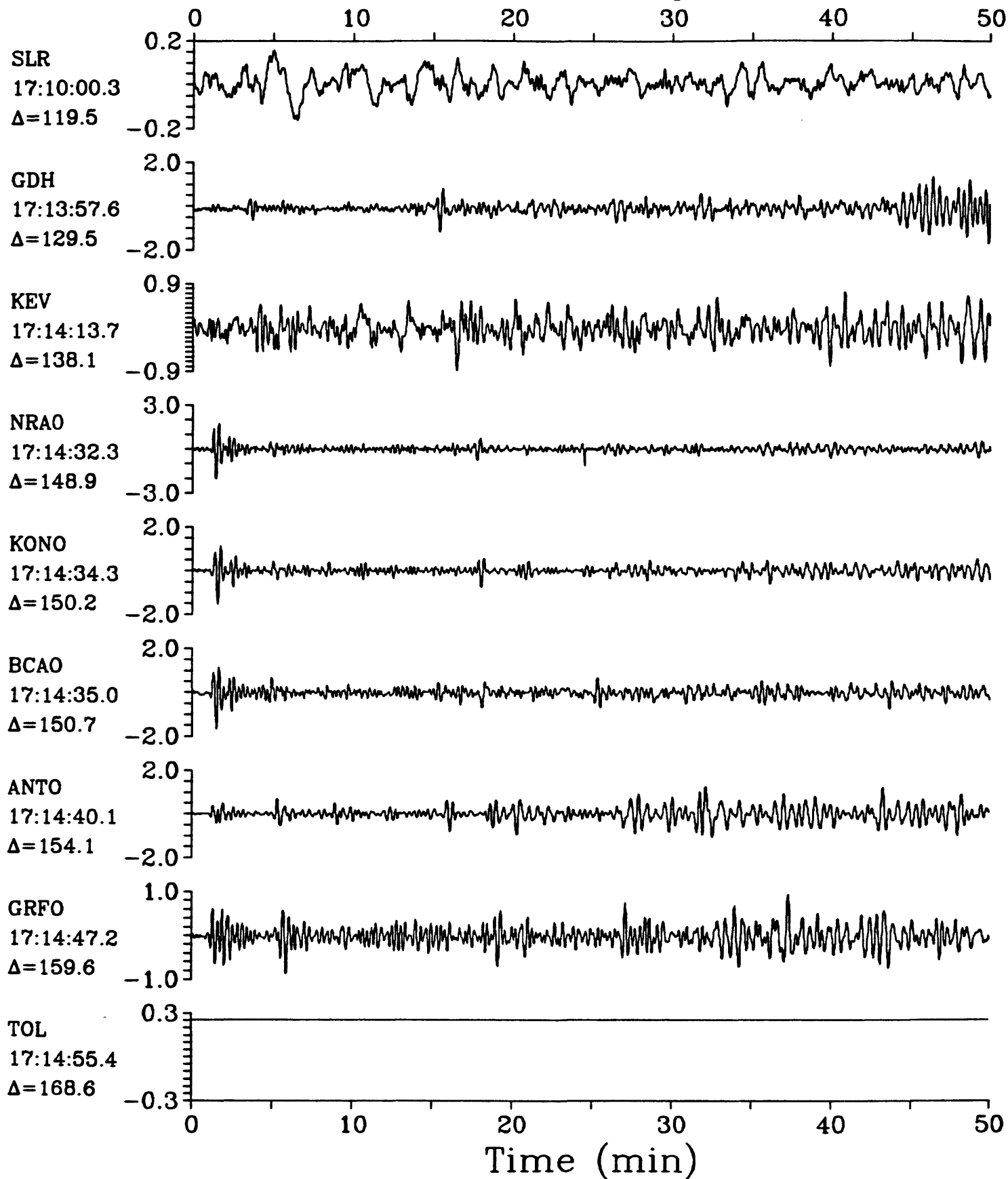
LPZ

Kermadec Islands Region $h=53.3$ $m_b=5.5$ $M_{sz}=6.1$ 

LPZ

14 March 1986 16:55:54.19

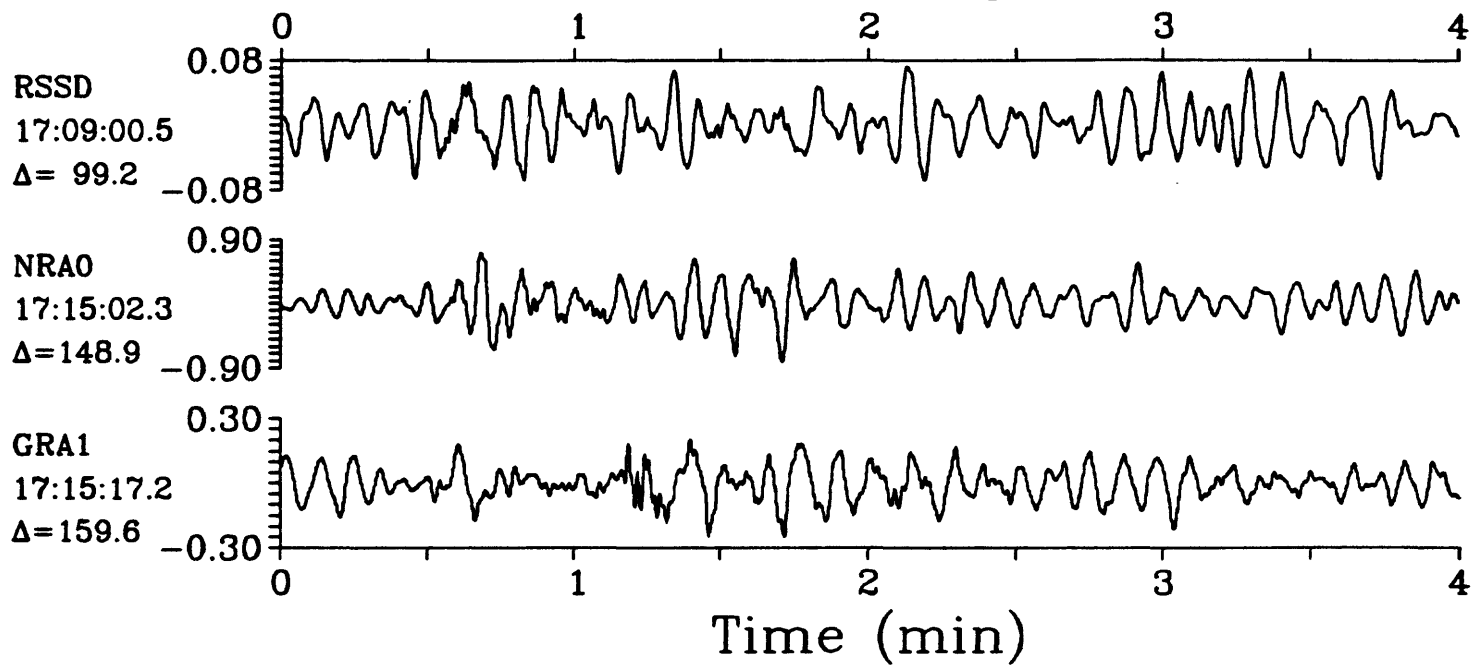
LPZ

Kermadec Islands Region $h=53.3$ $m_b=5.5$ $M_{sz}=6.1$ 

IPZ

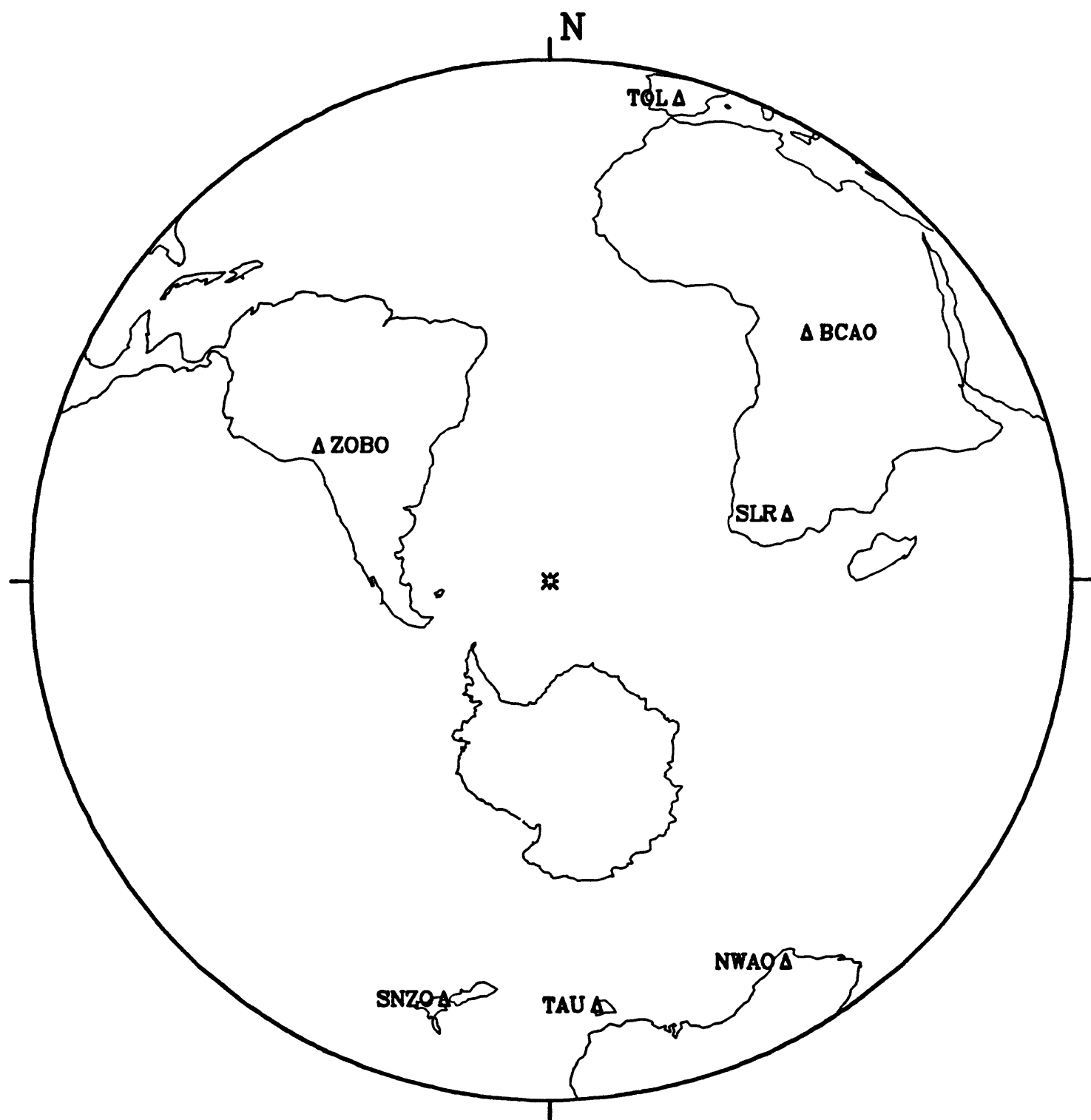
14 March 1986 16:55:54.19

IPZ

Kermadec Islands Region $h=53.3$ $m_b=5.5$ $M_{sz}=6.1$ 

14 March 1986 21:28:27.38

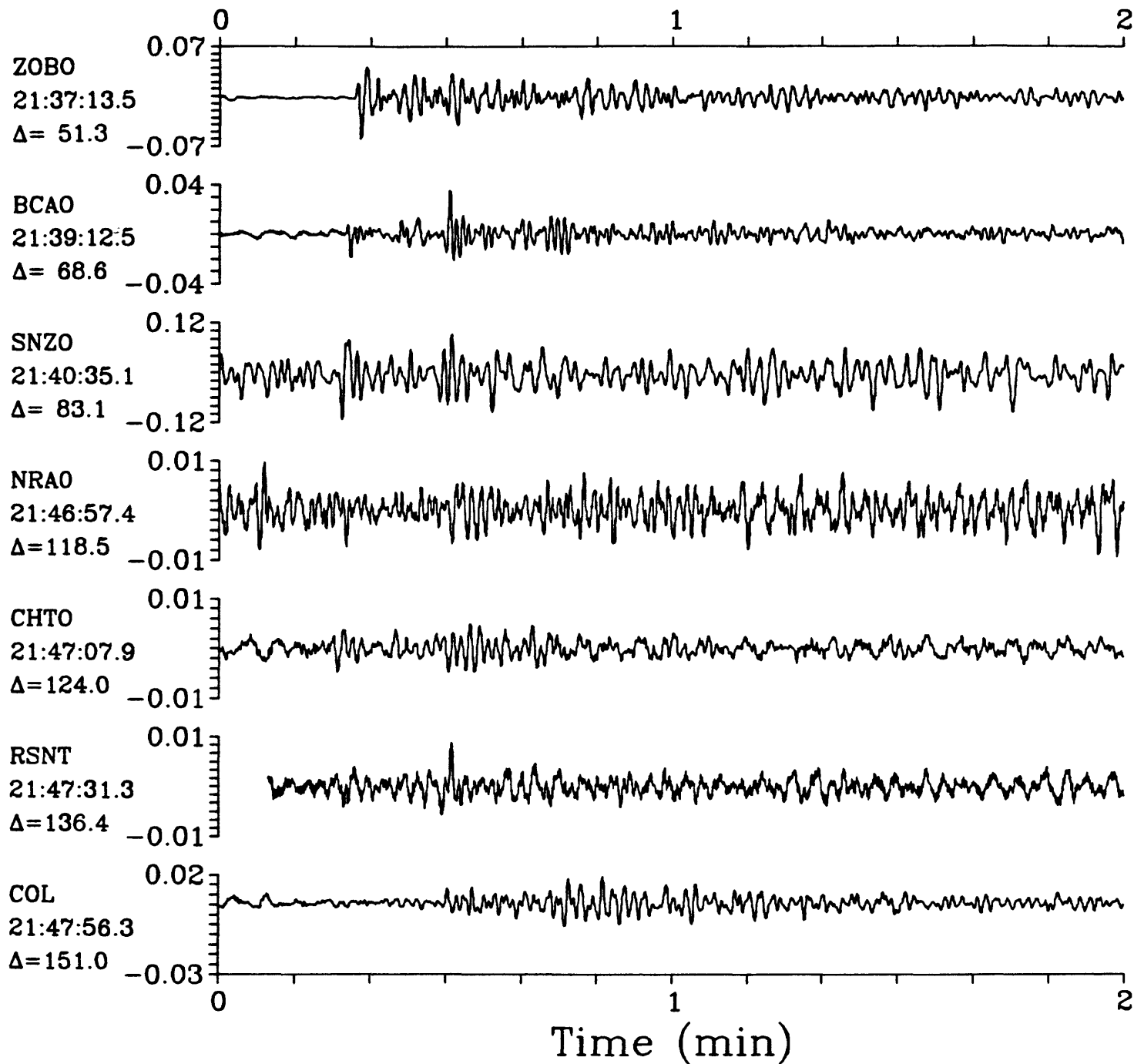
South Sandwich Islands Region



SPZ

14 March 1986 21:28:27.38

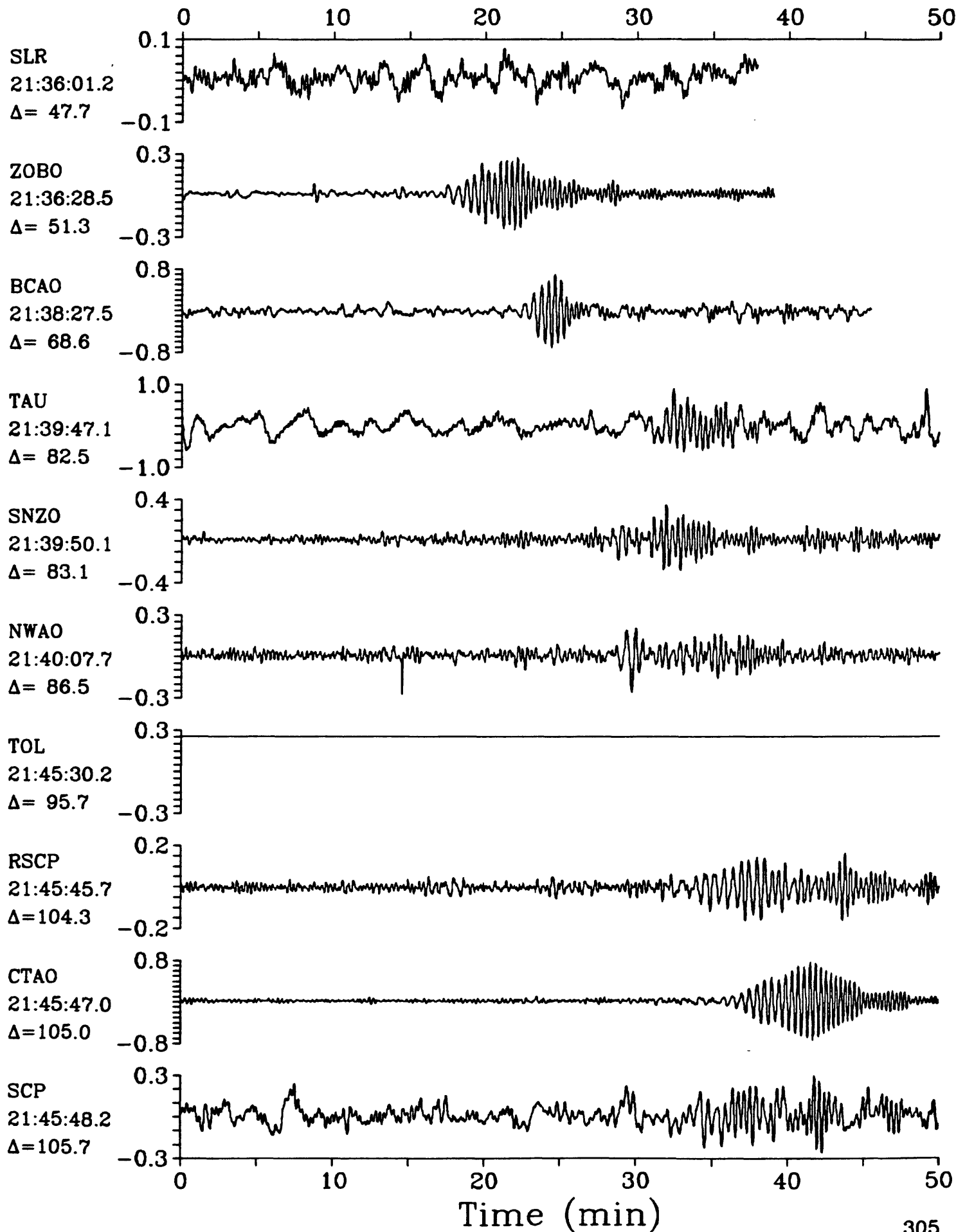
SPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{SZ}=4.7$ 

LPZ

14 March 1986 21:28:27.38

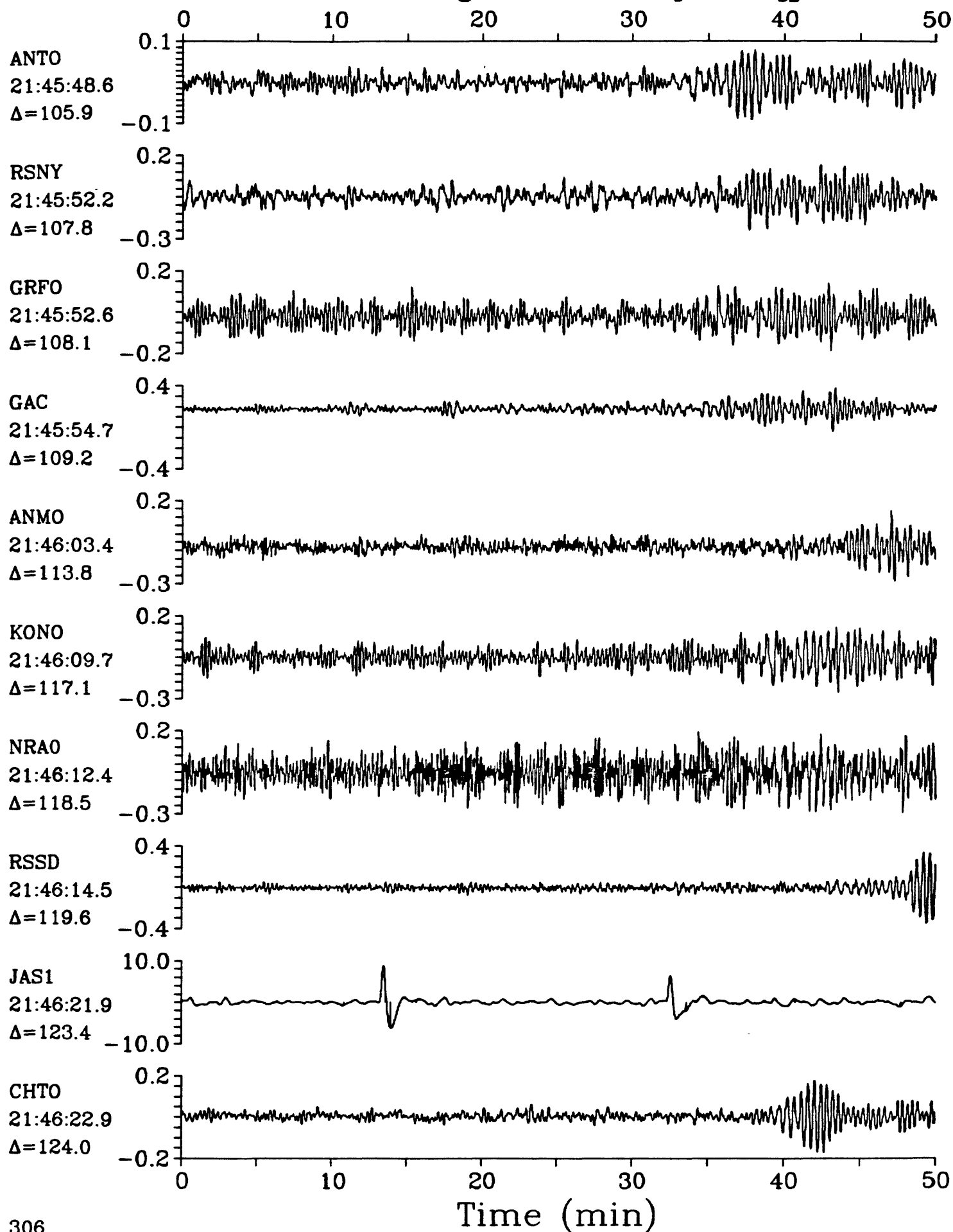
LPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=4.7$ 

LPZ

14 March 1986 21:28:27.38

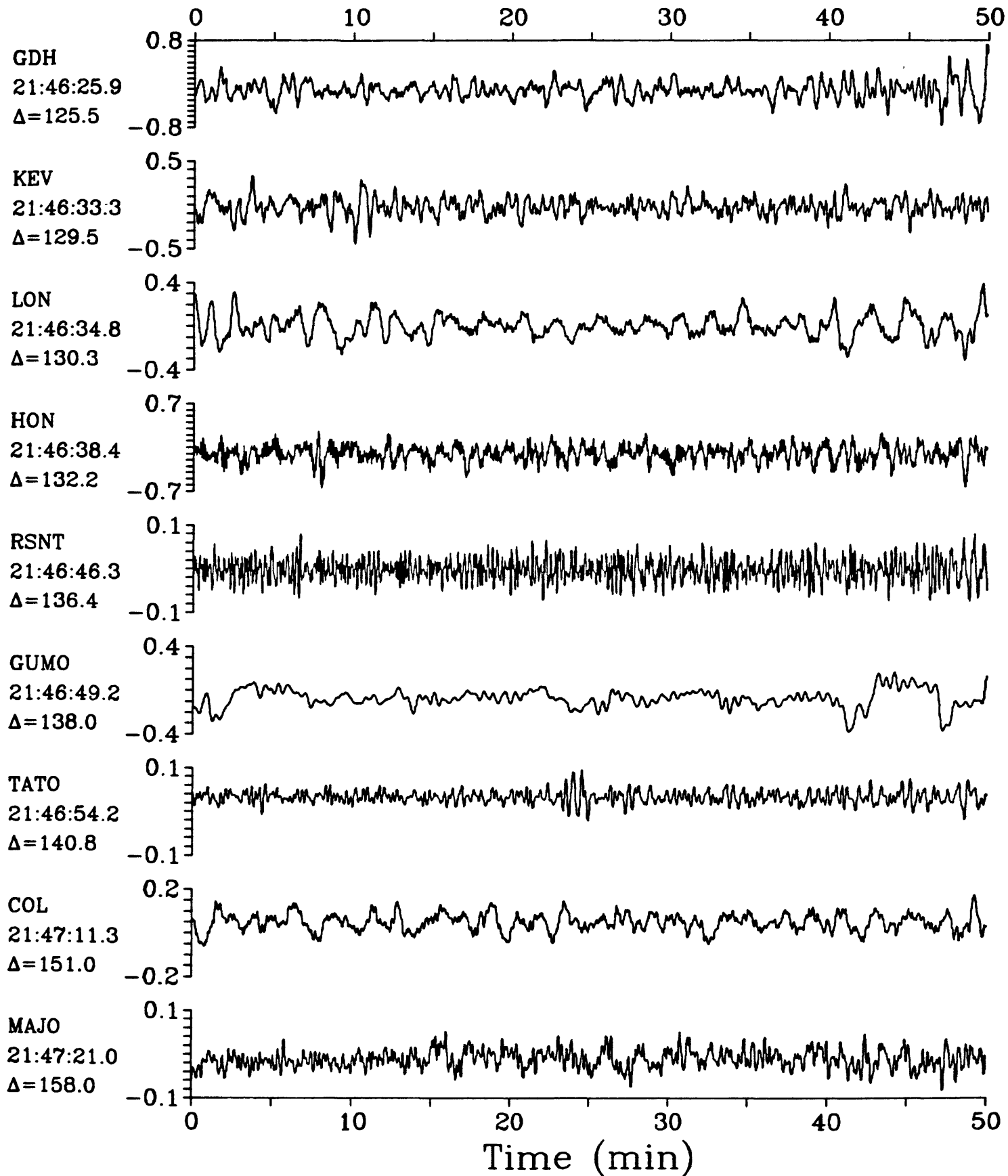
LPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=4.7$ 

LPZ

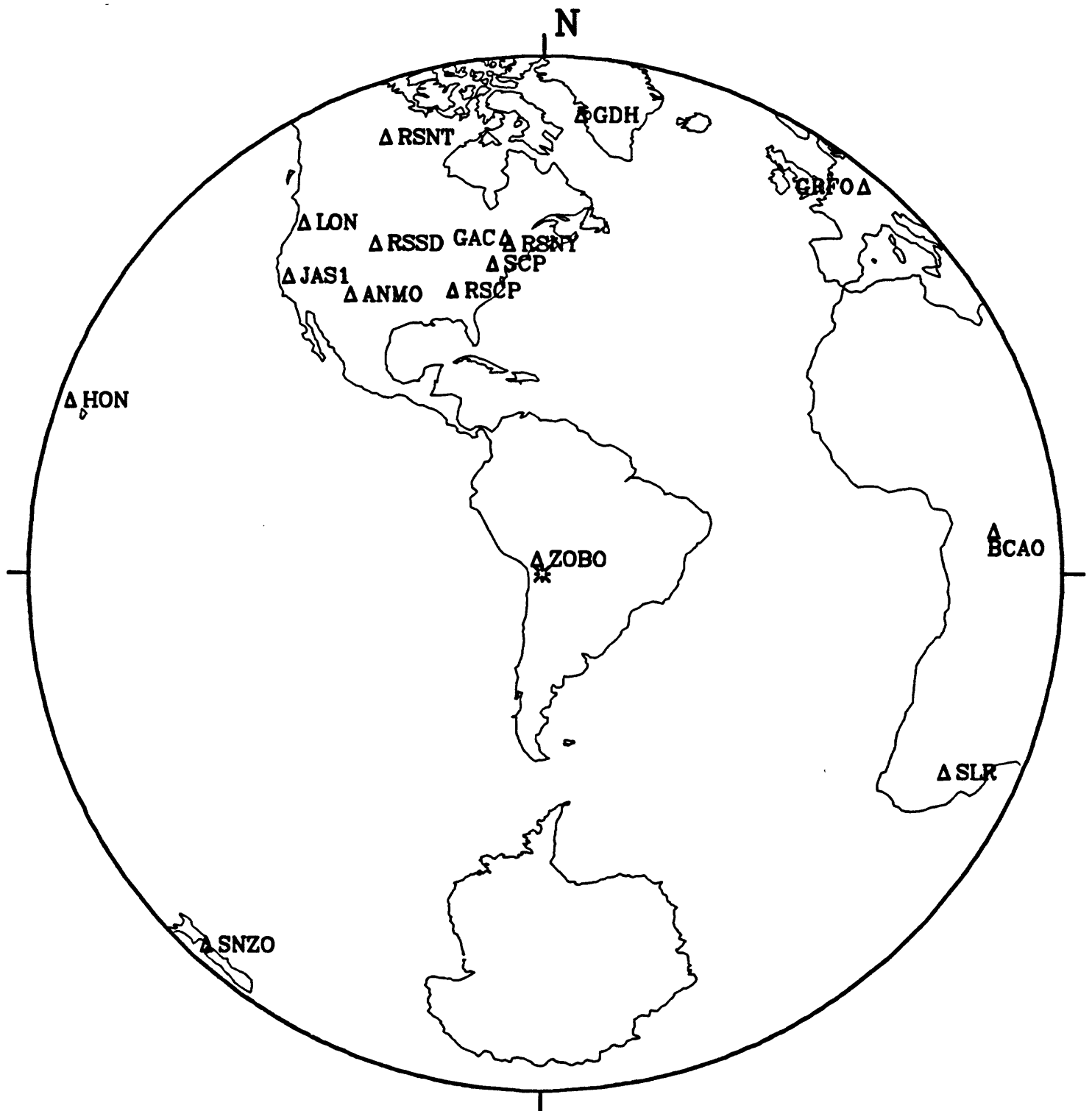
14 March 1986 21:28:27.38

LPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.6$ $M_{sz}=4.7$ 

15 March 1986 11:29:40.25

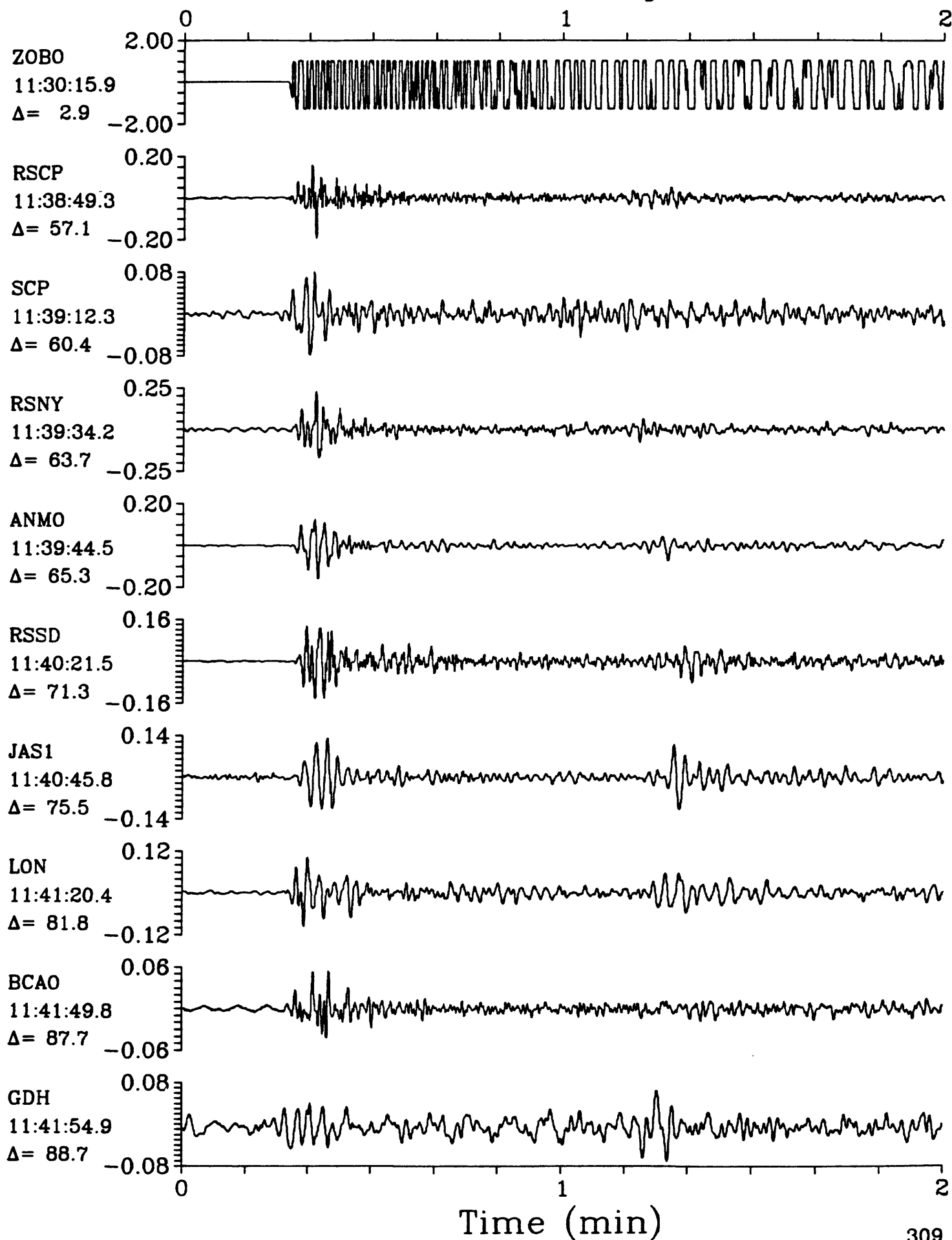
Southern Bolivia



SPZ

15 March 1986 11:29:40.25
Southern Bolivia $h=213.3$ $m_b=5.6$

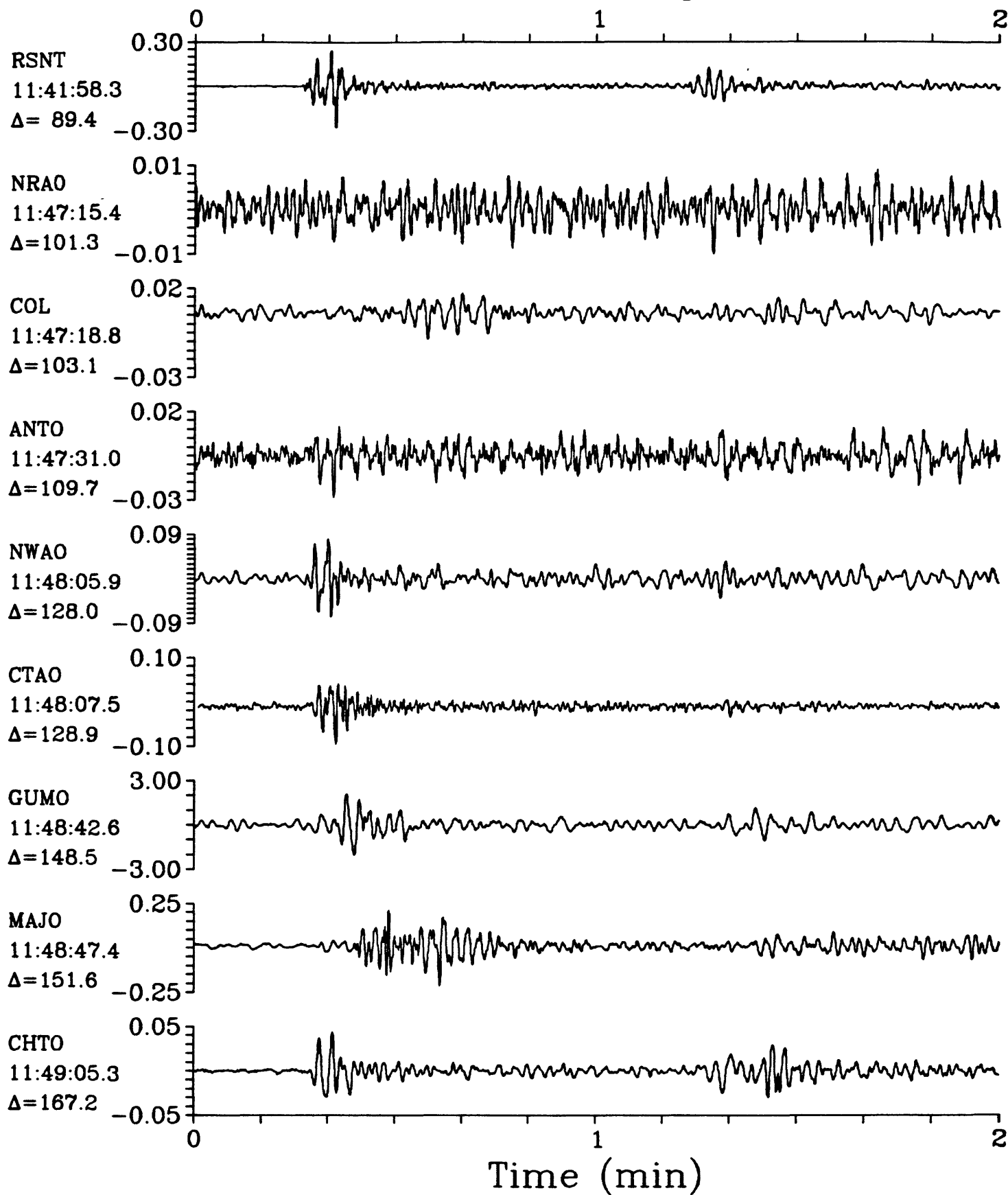
SPZ



SPZ

15 March 1986 11:29:40.25
Southern Bolivia $h=213.3$ $m_b=5.6$

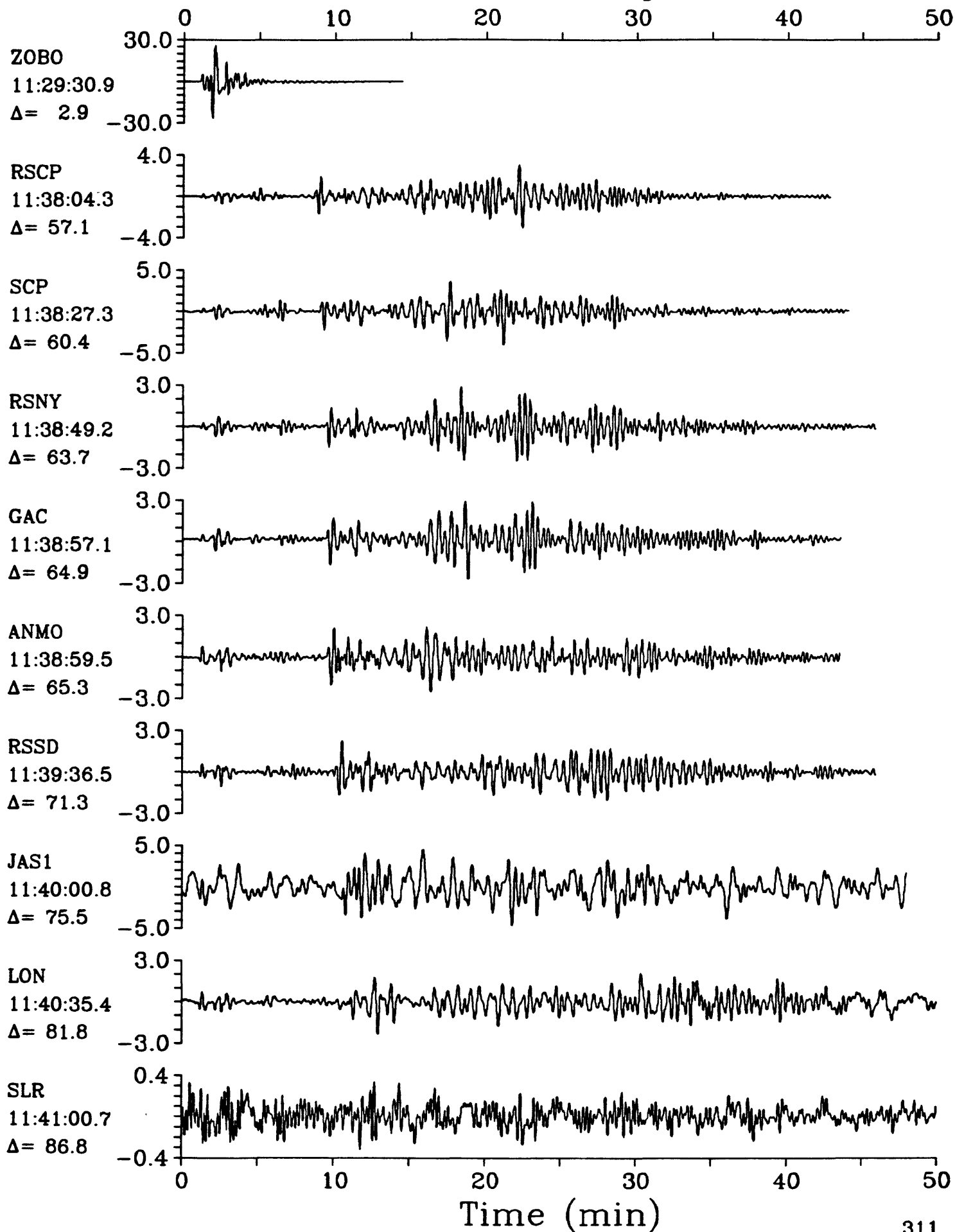
SPZ



LPZ

15 March 1986 11:29:40.25
Southern Bolivia $h=213.3$ $m_b=5.6$

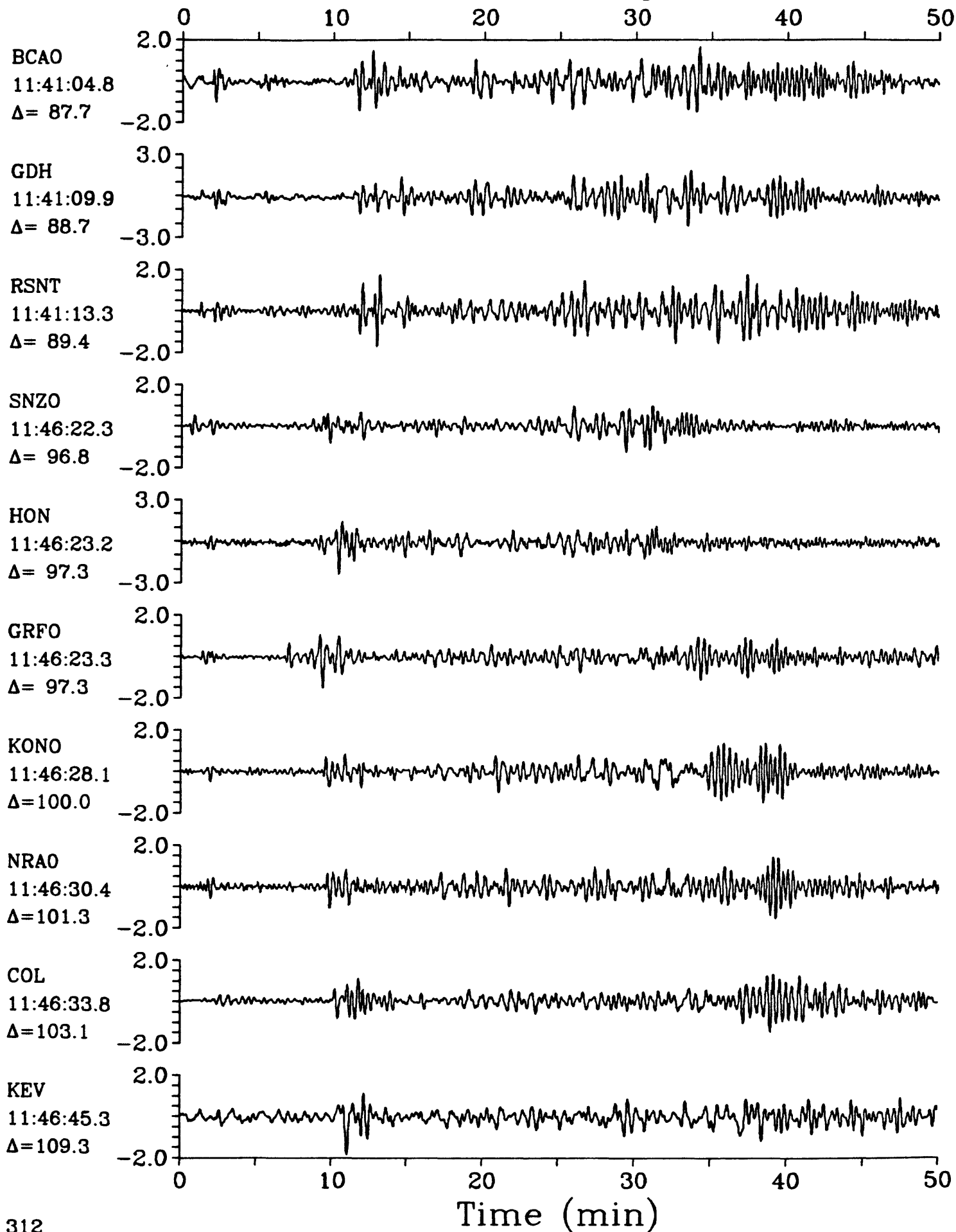
LPZ



LPZ

15 March 1986 11:29:40.25
Southern Bolivia $h=213.3$ $m_b=5.6$

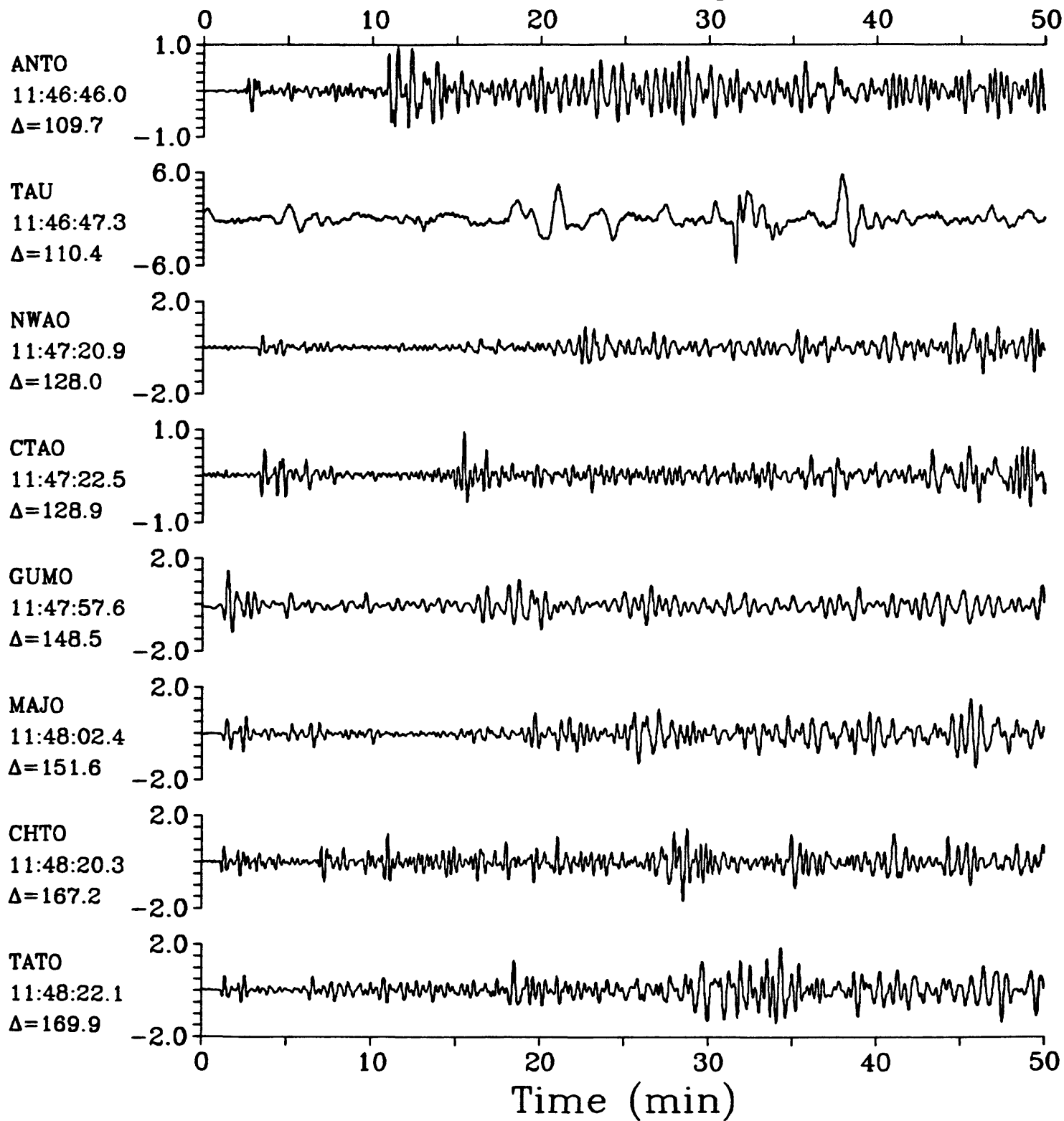
LPZ



LPZ

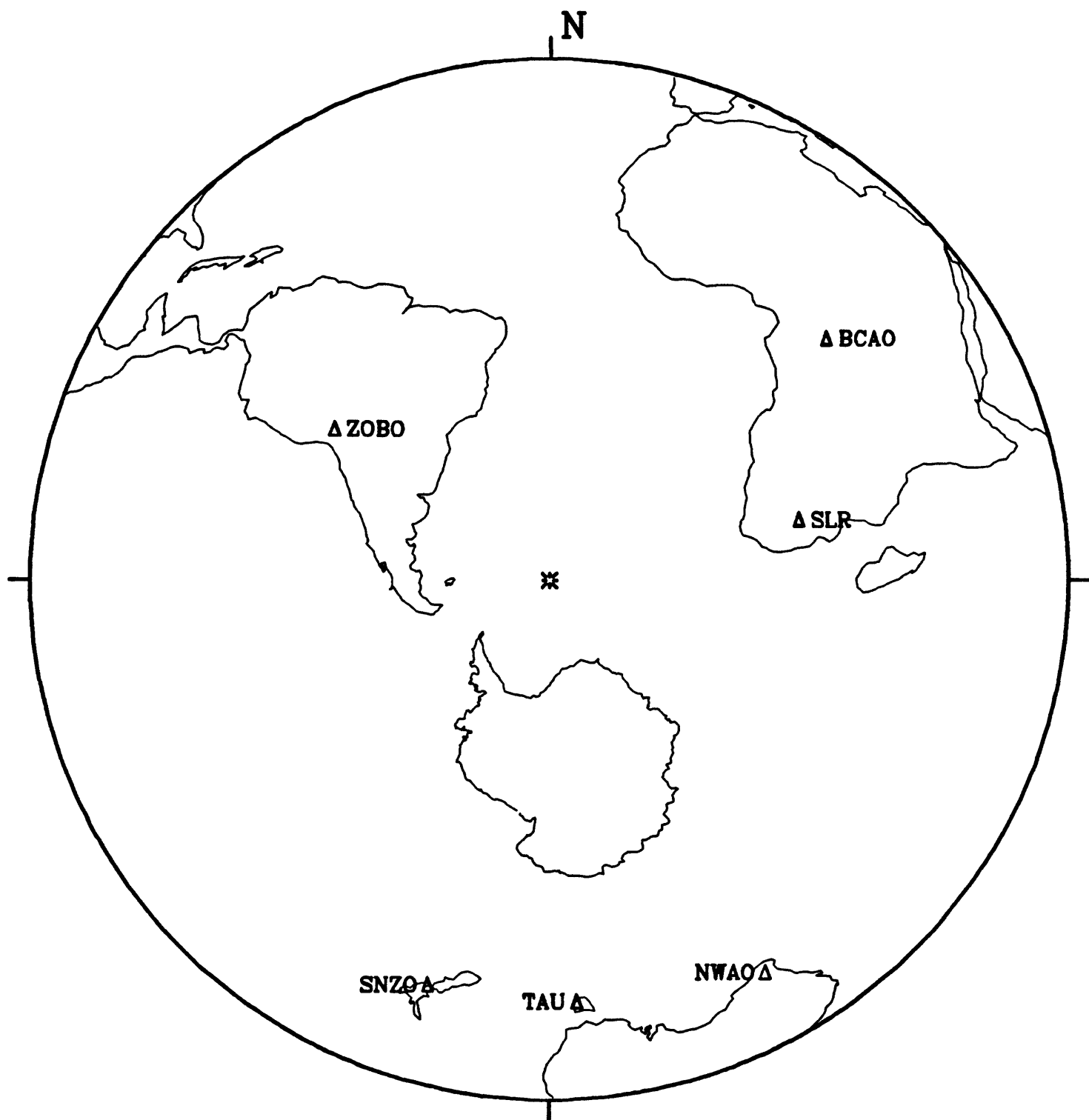
15 March 1986 11:29:40.25
Southern Bolivia $h=213.3$ $m_b=5.6$

LPZ



15 March 1986 18:32:13.62

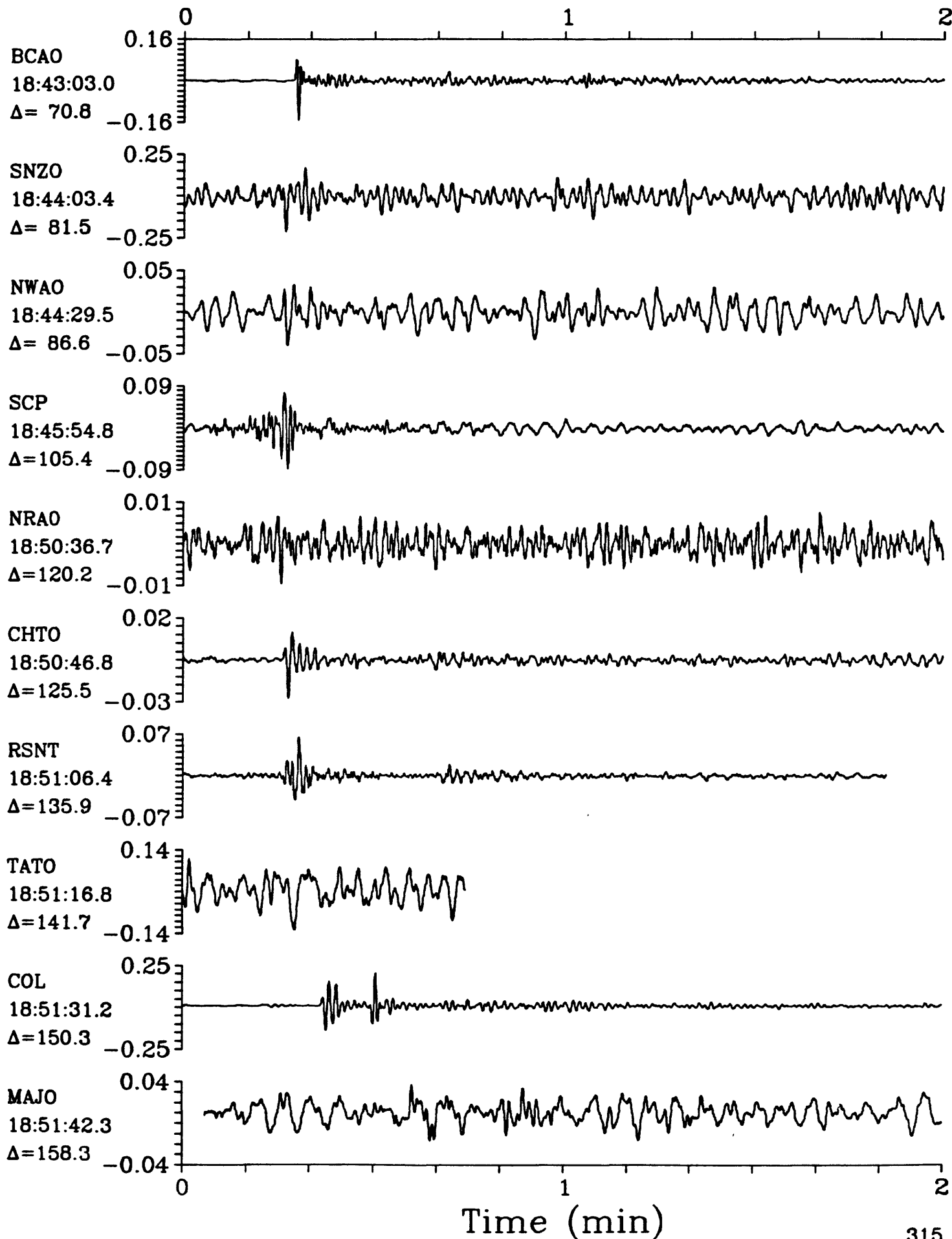
South Sandwich Islands Region



SPZ

15 March 1986 18:32:13.62

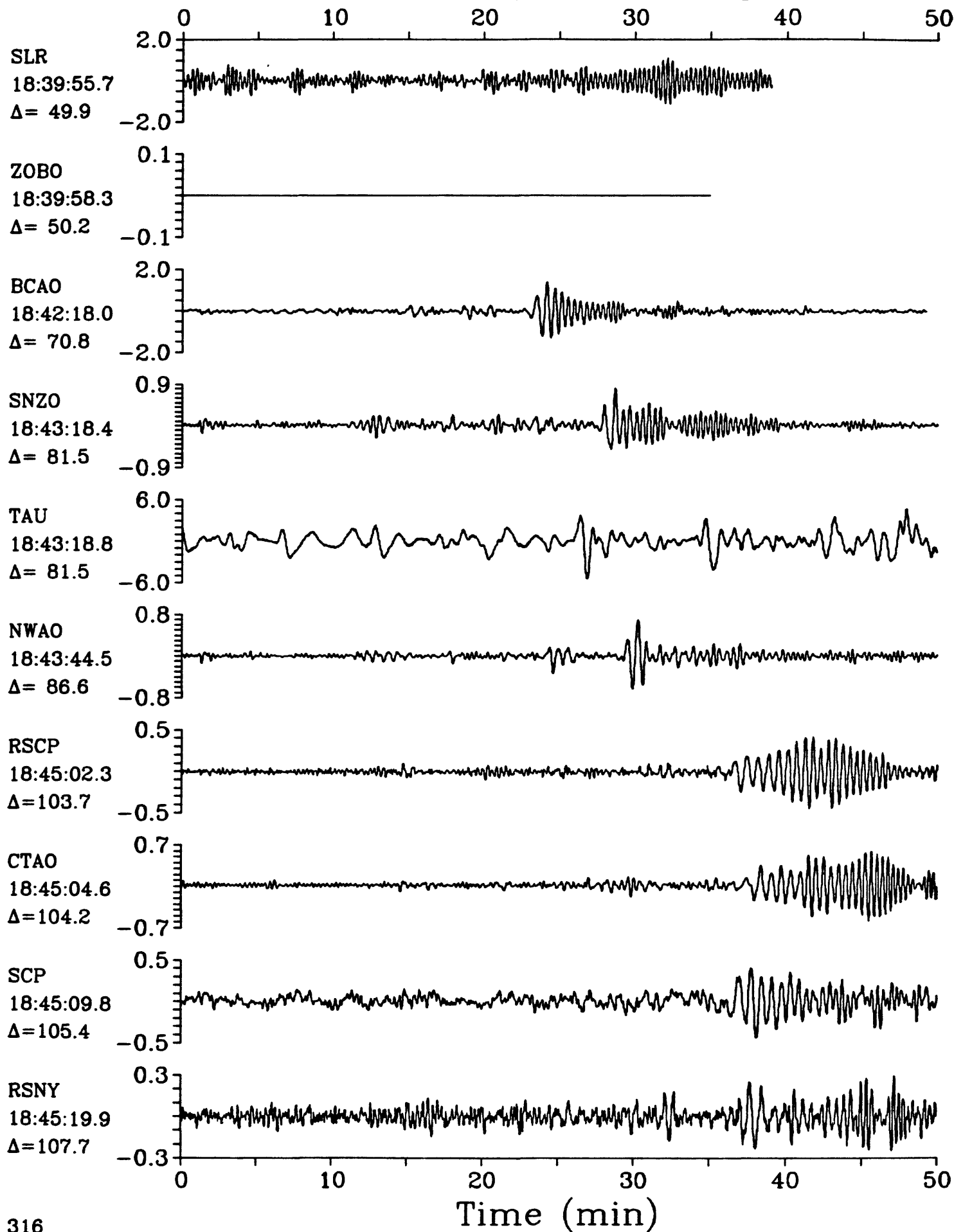
SPZ

South Sandwich Islands Region $h=115.6$ $m_b=5.8$ 

LPZ

15 March 1986 18:32:13.62

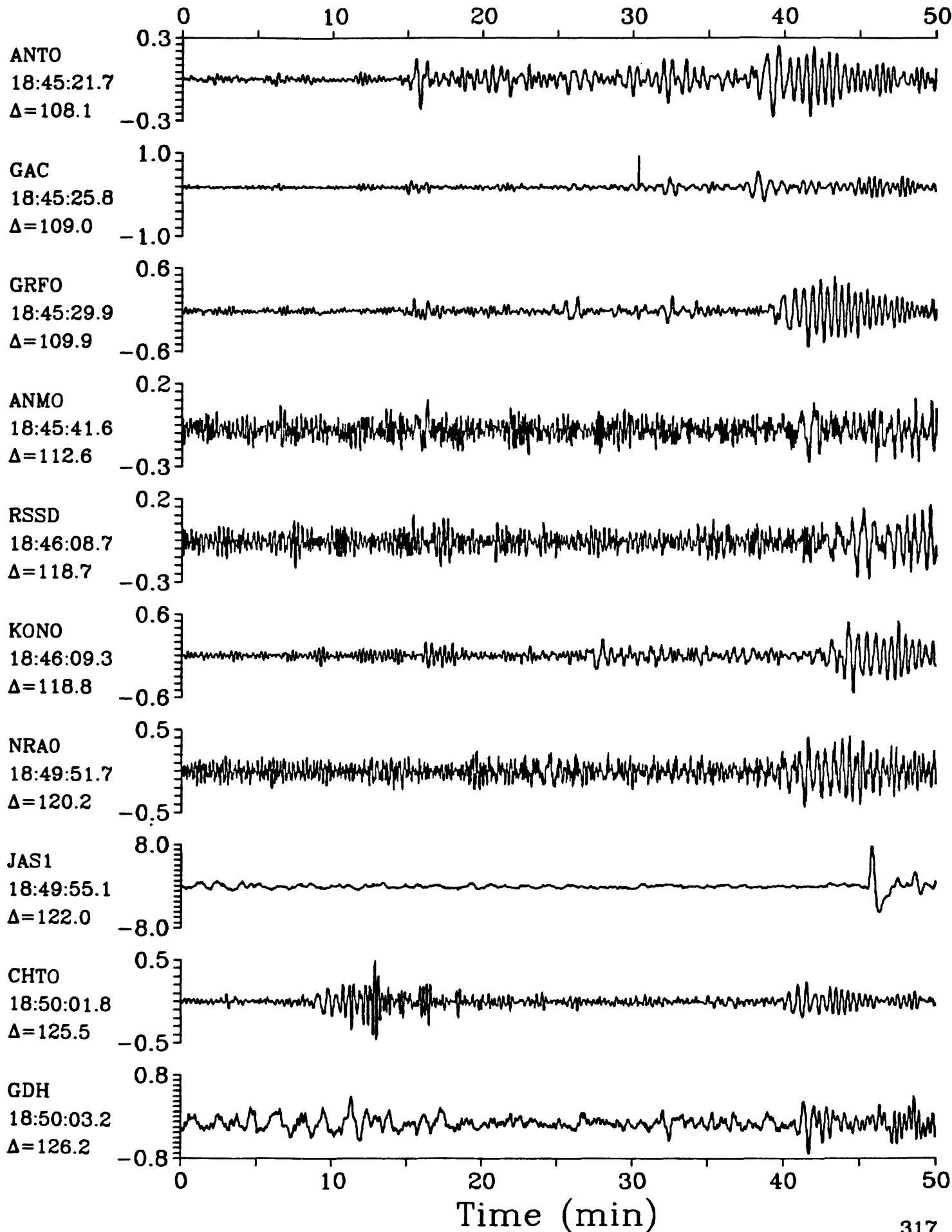
LPZ

South Sandwich Islands Region $h=115.6$ $m_b=5.8$ 

LPZ

15 March 1986 18:32:13.62

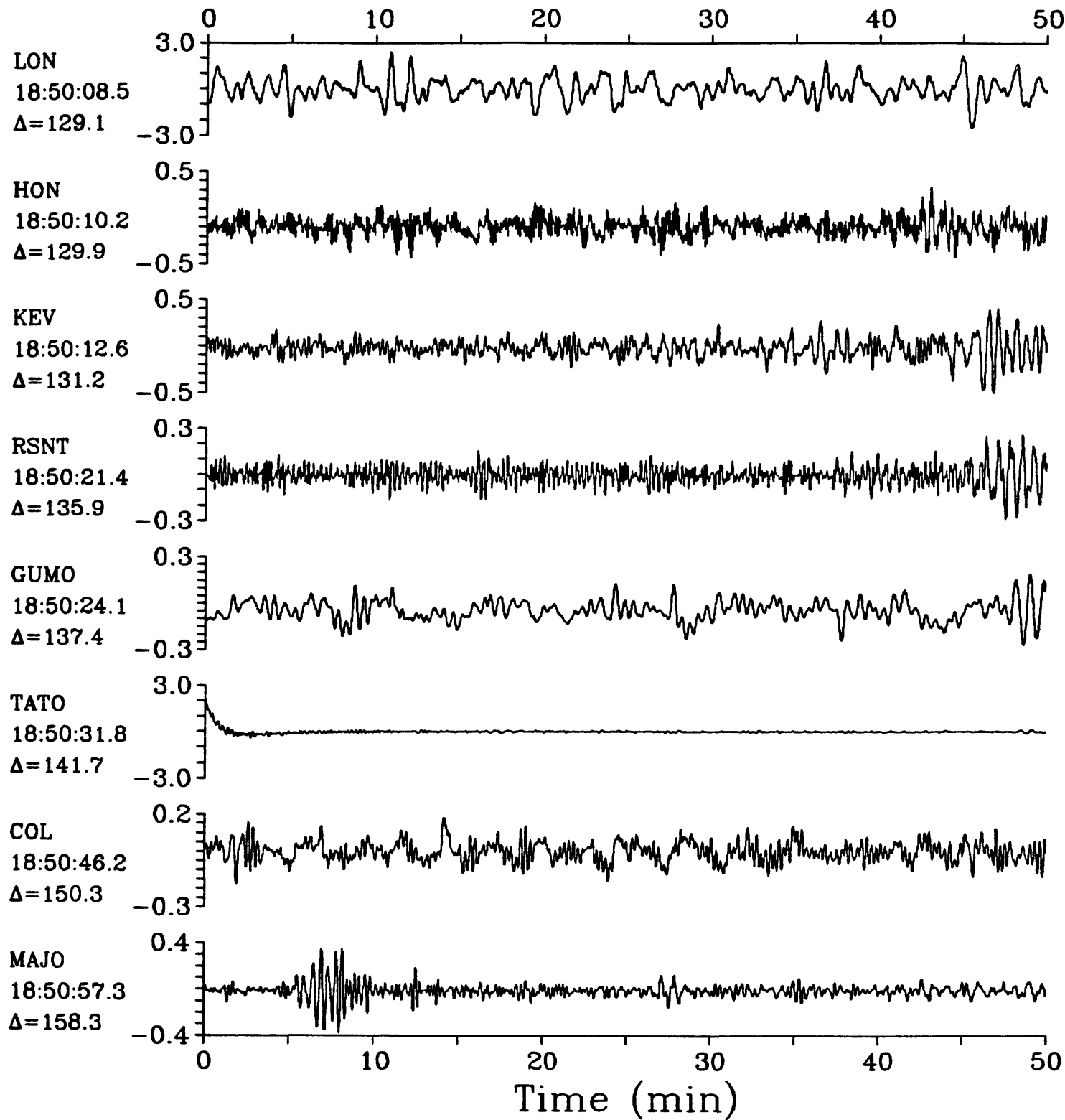
LPZ

South Sandwich Islands Region $h=115.6$ $m_b=5.8$ 

LPZ

15 March 1986 18:32:13.62

LPZ

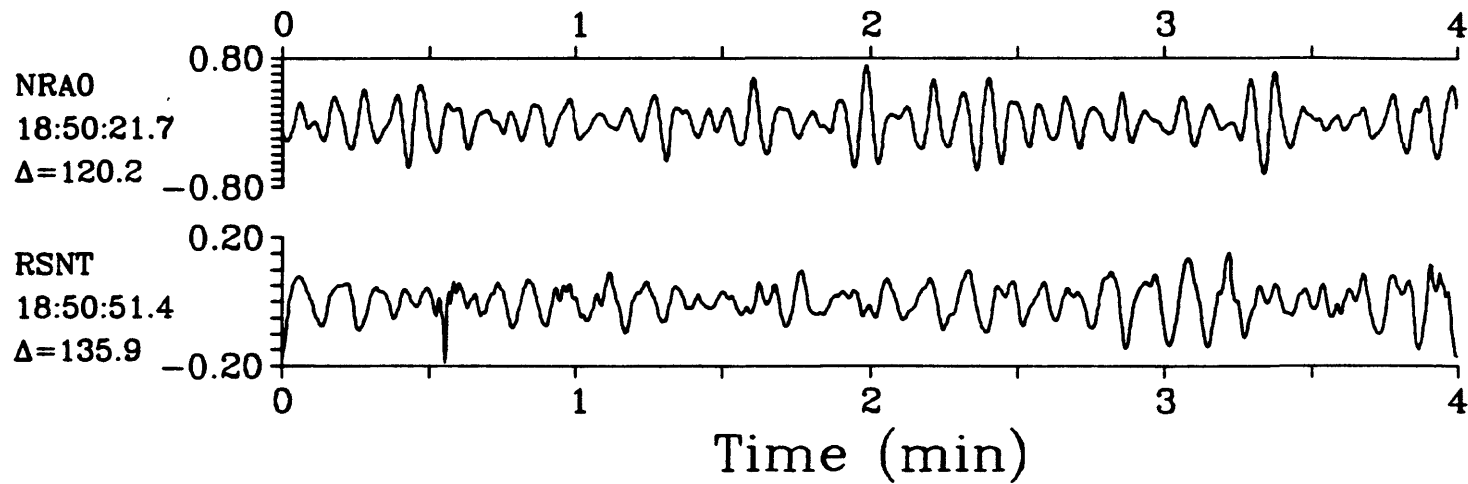
South Sandwich Islands Region $h=115.6$ $m_b=5.8$ 

IPZ

15 March 1986 18:32:13.62

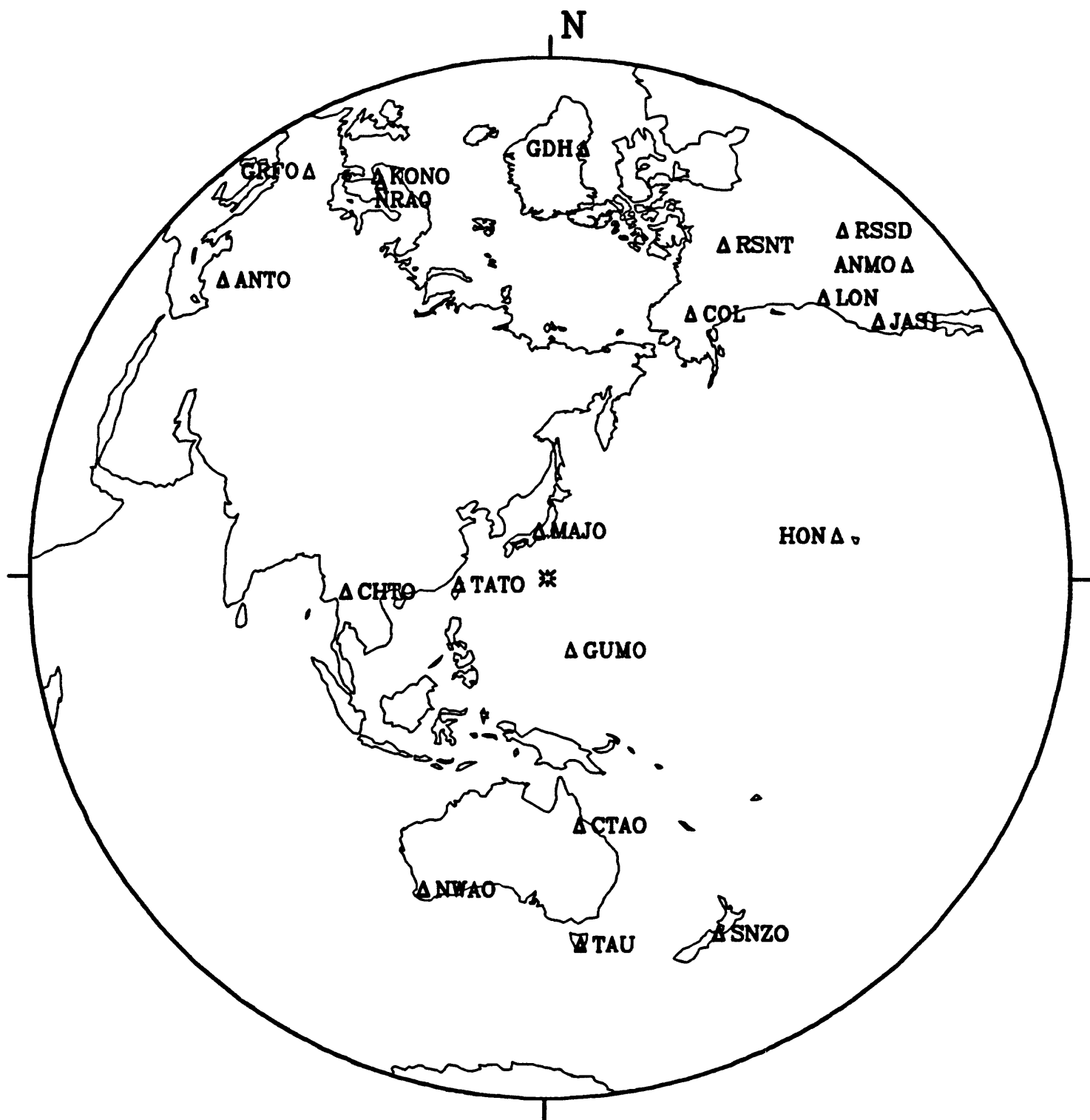
IPZ

South Sandwich Islands Region $h=115.6$ $m_b=5.8$



17 March 1986 09:18:27.20

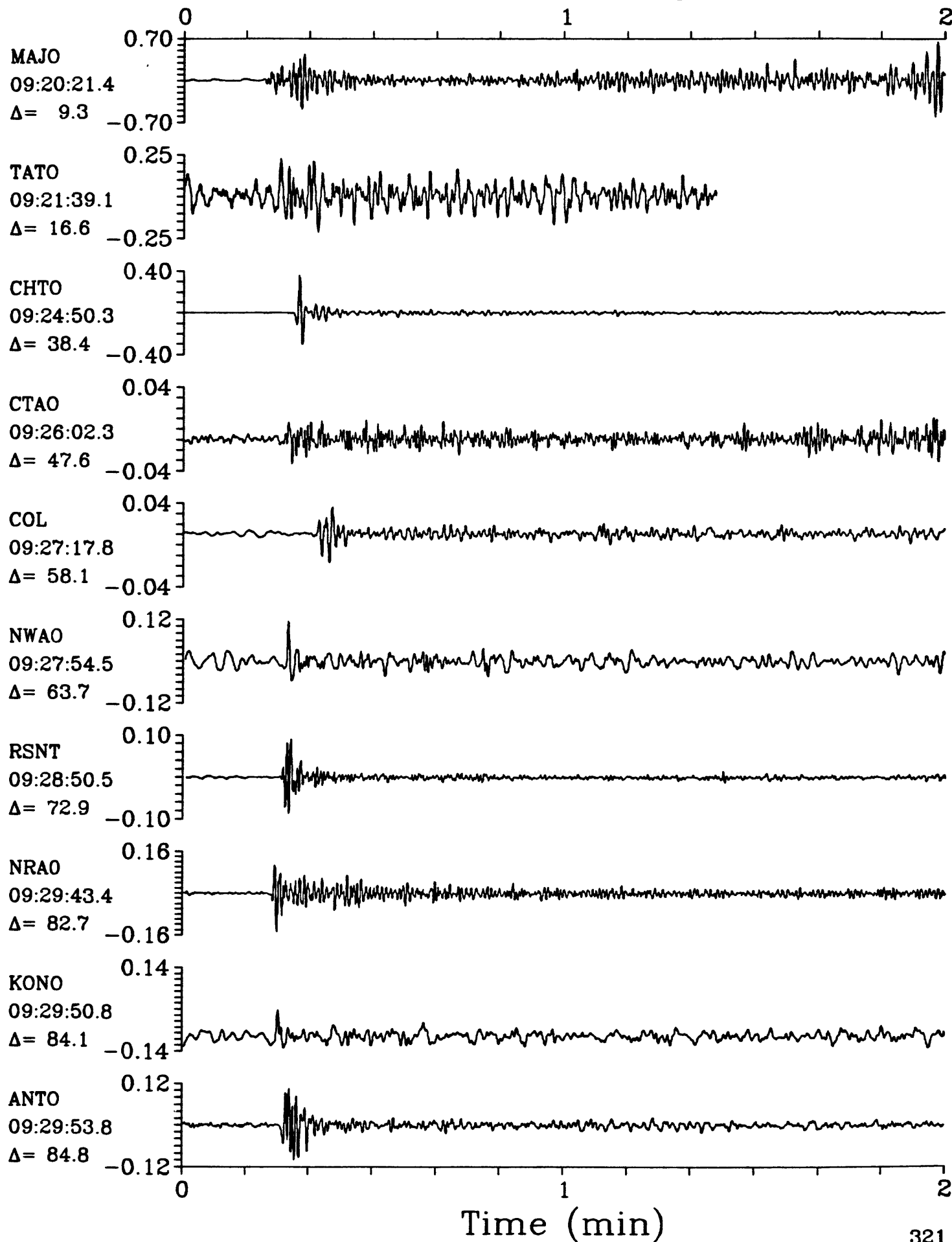
Bonin Islands Region



SPZ

17 March 1986 09:18:27.20
Bonin Islands Region $h=499.7$ $m_b=5.5$

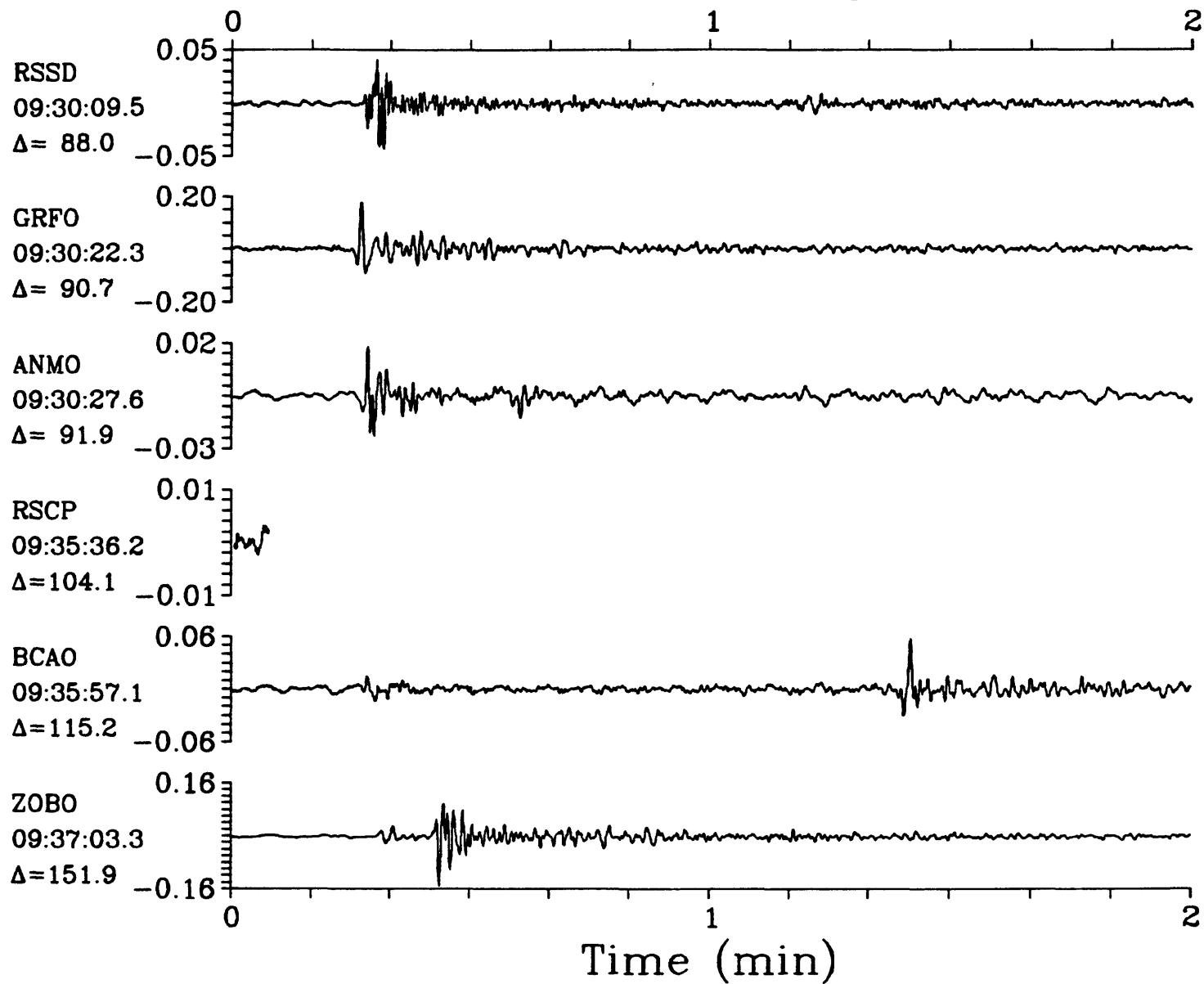
SPZ



SPZ

17 March 1986 09:18:27.20

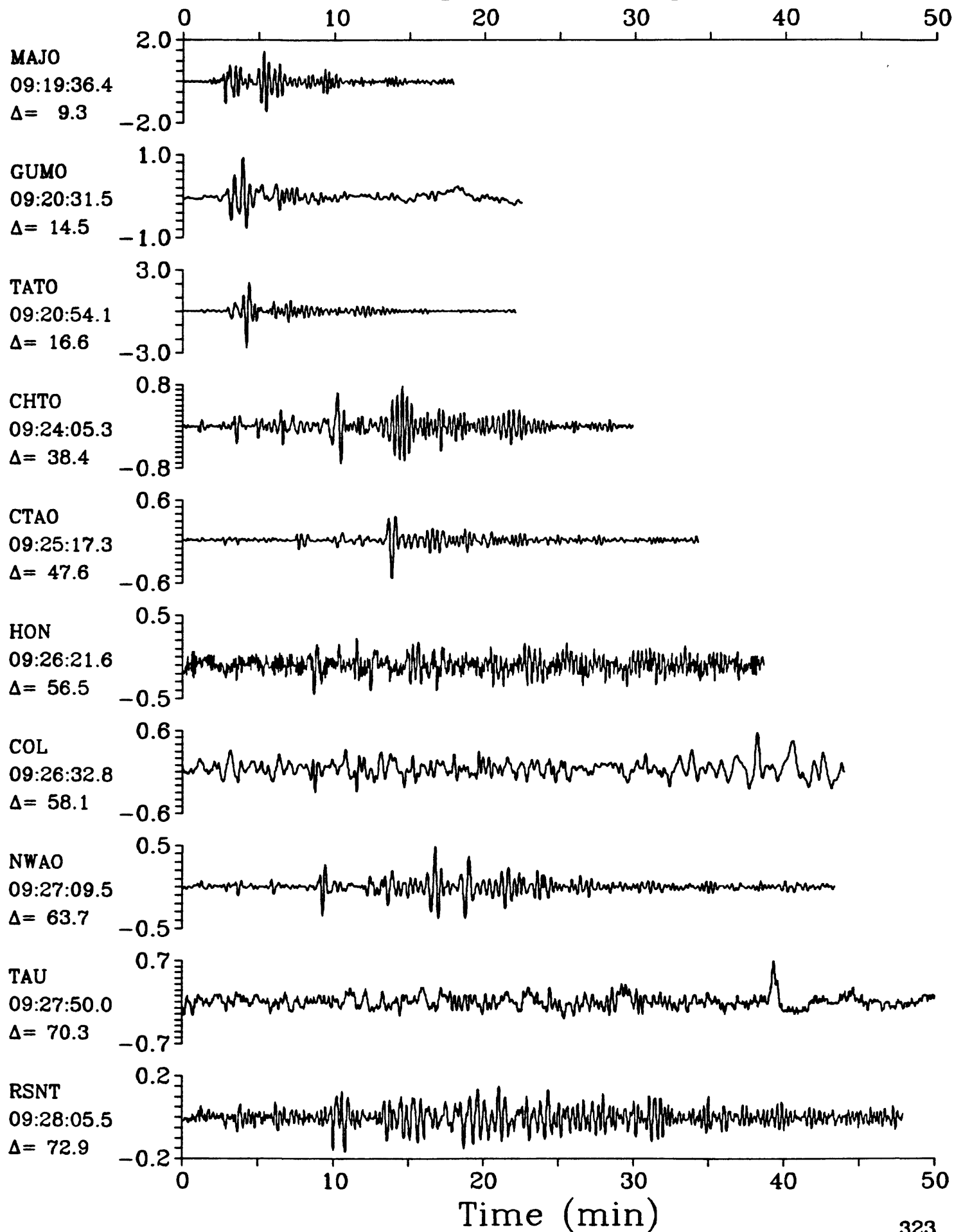
SPZ

Bonin Islands Region $h=499.7$ $m_b=5.5$ 

LPZ

17 March 1986 09:18:27.20

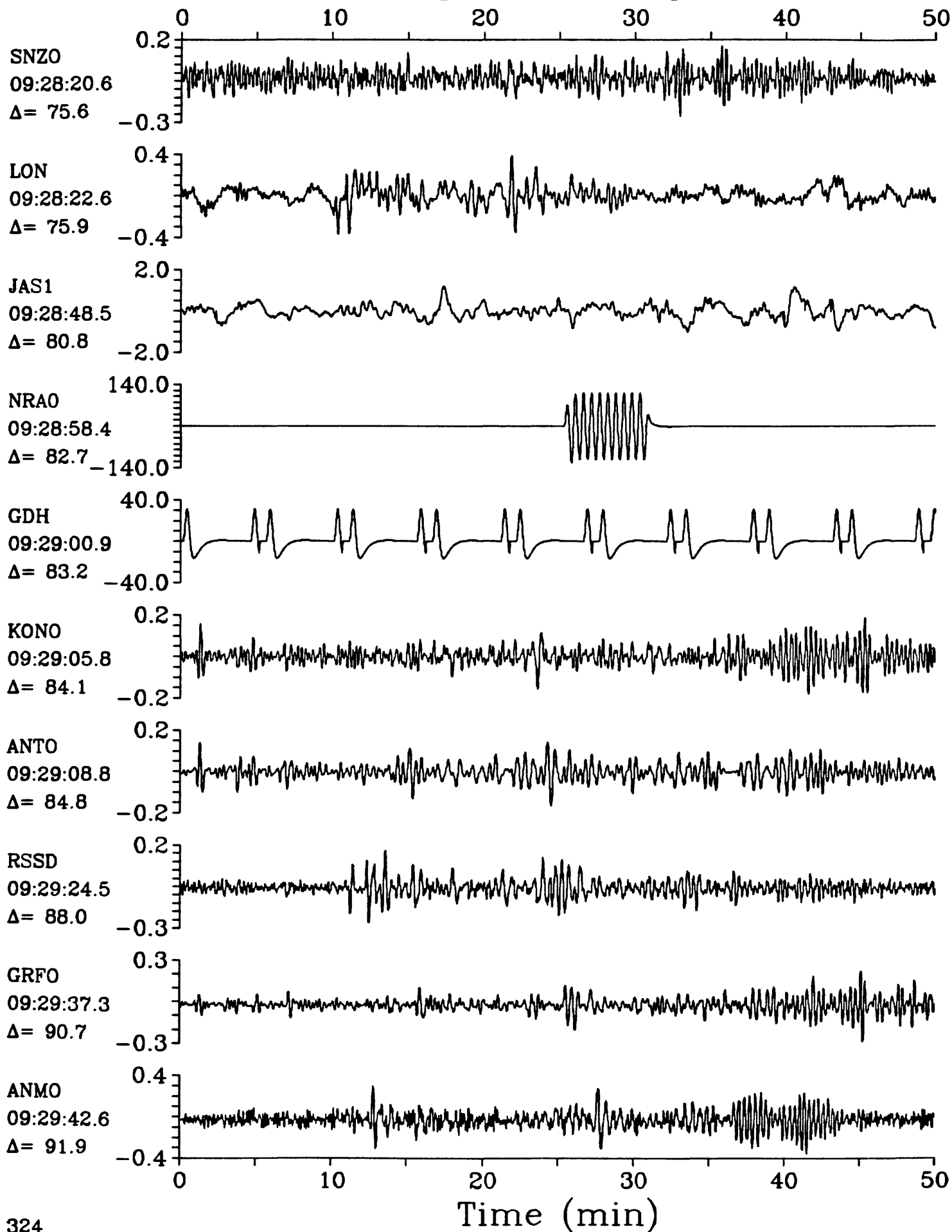
LPZ

Bonin Islands Region $h=499.7$ $m_b=5.5$ 

LPZ

17 March 1986 09:18:27.20
Bonin Islands Region $h=499.7$ $m_b=5.5$

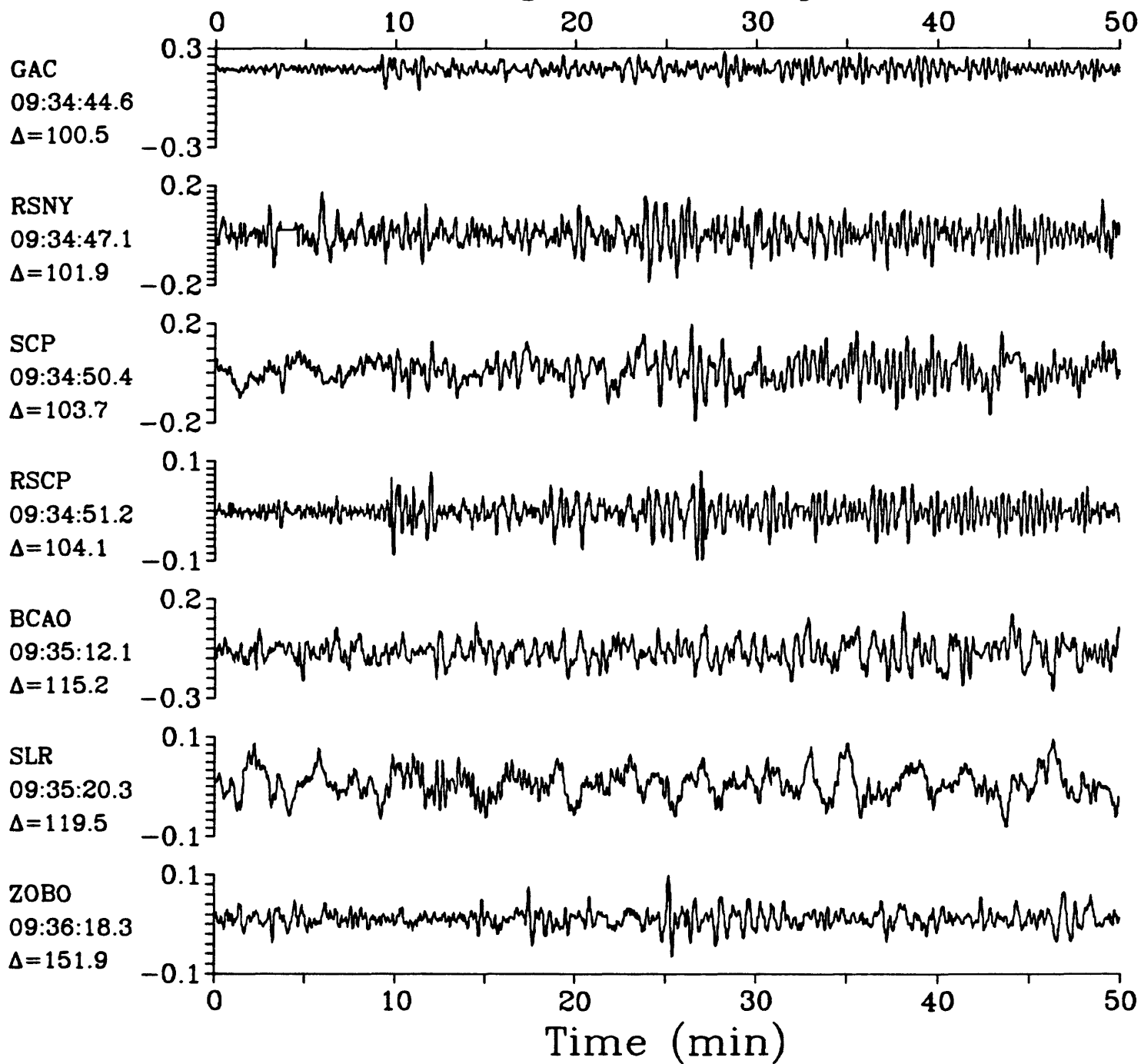
LPZ



LPZ

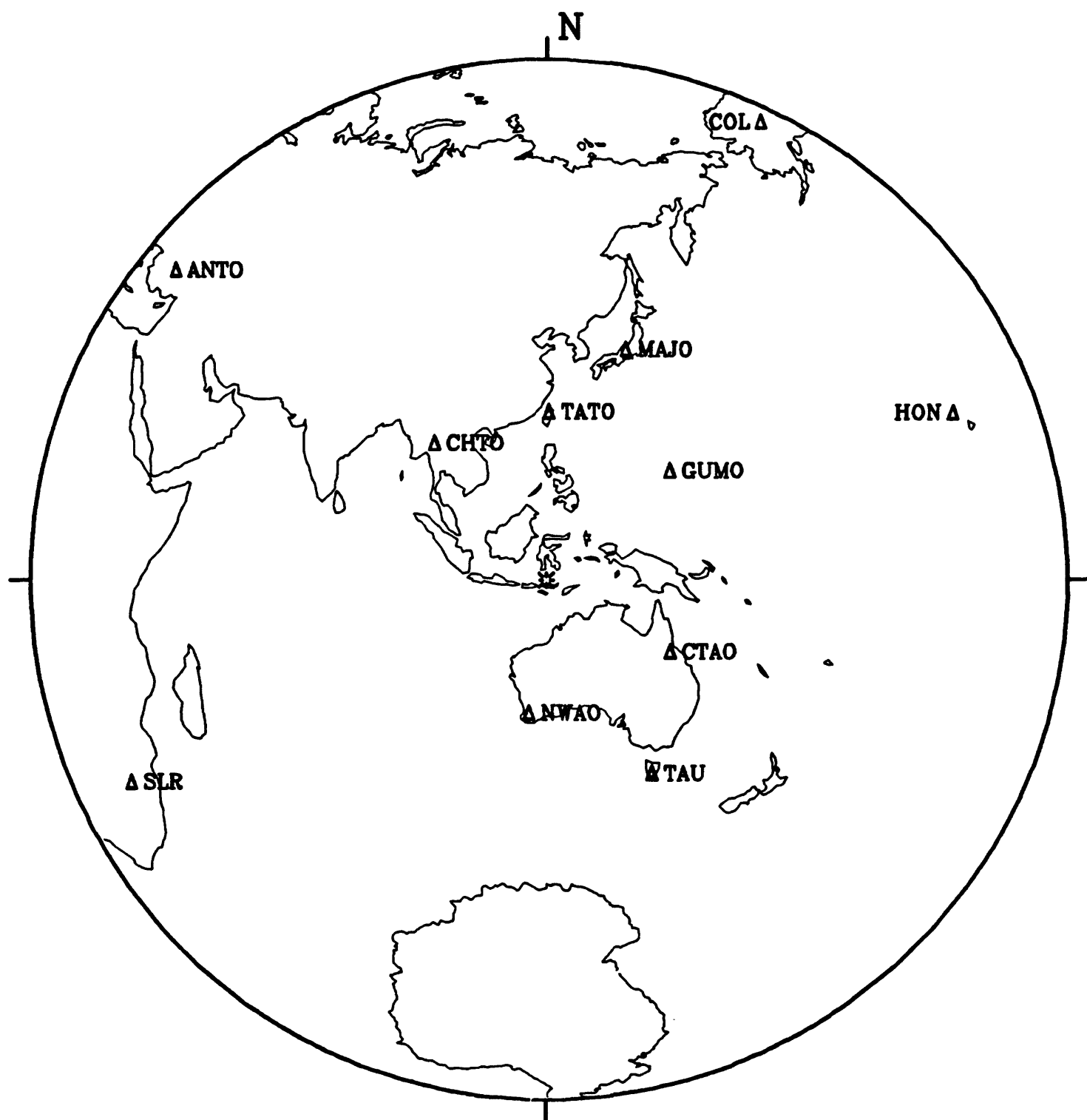
17 March 1986 09:18:27.20

LPZ

Bonin Islands Region $h=499.7$ $m_b=5.5$ 

21 March 1986 21:35:36.82

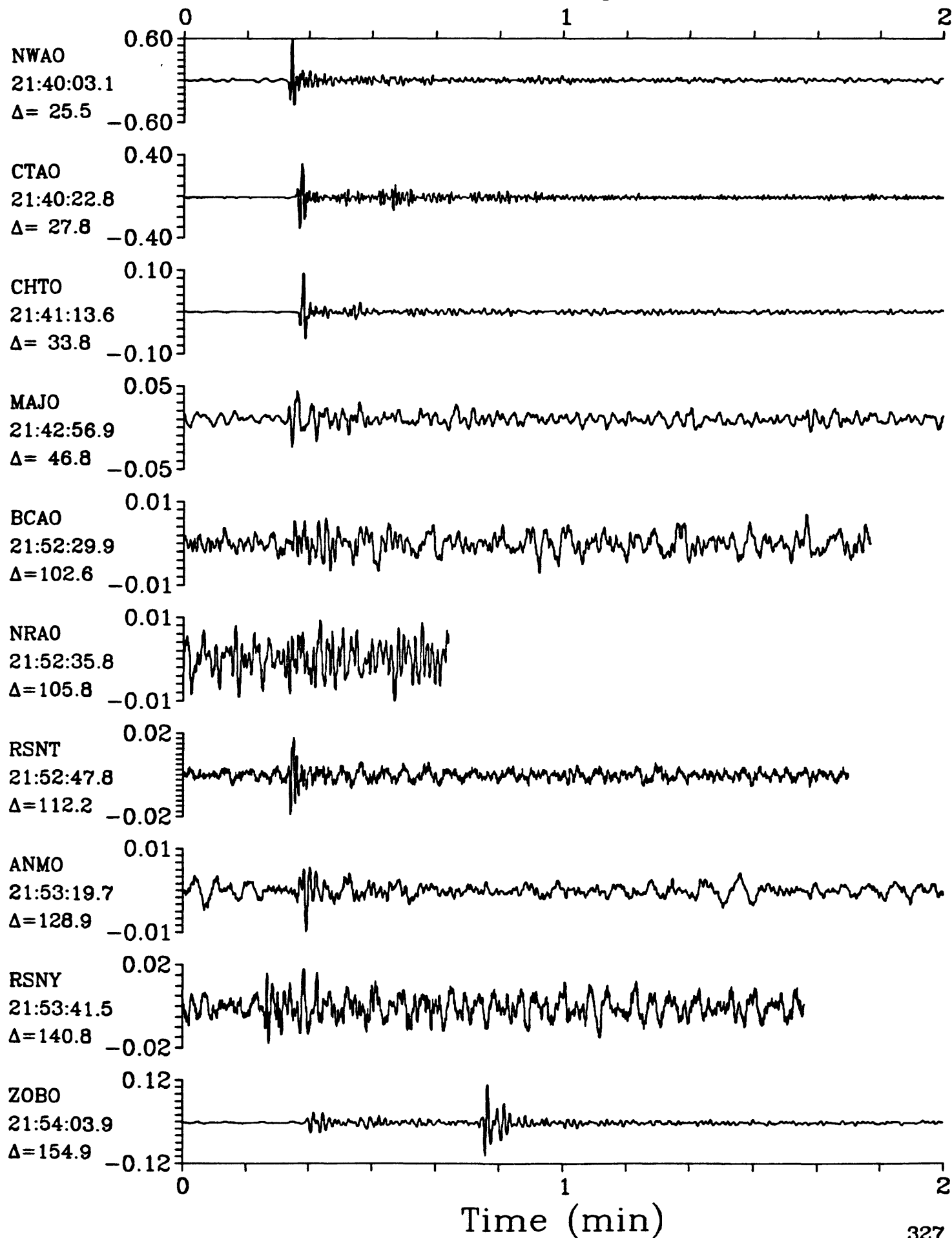
Flores Sea



SPZ

21 March 1986 21:35:36.82
Flores Sea $h=630.8$ $m_b=5.5$

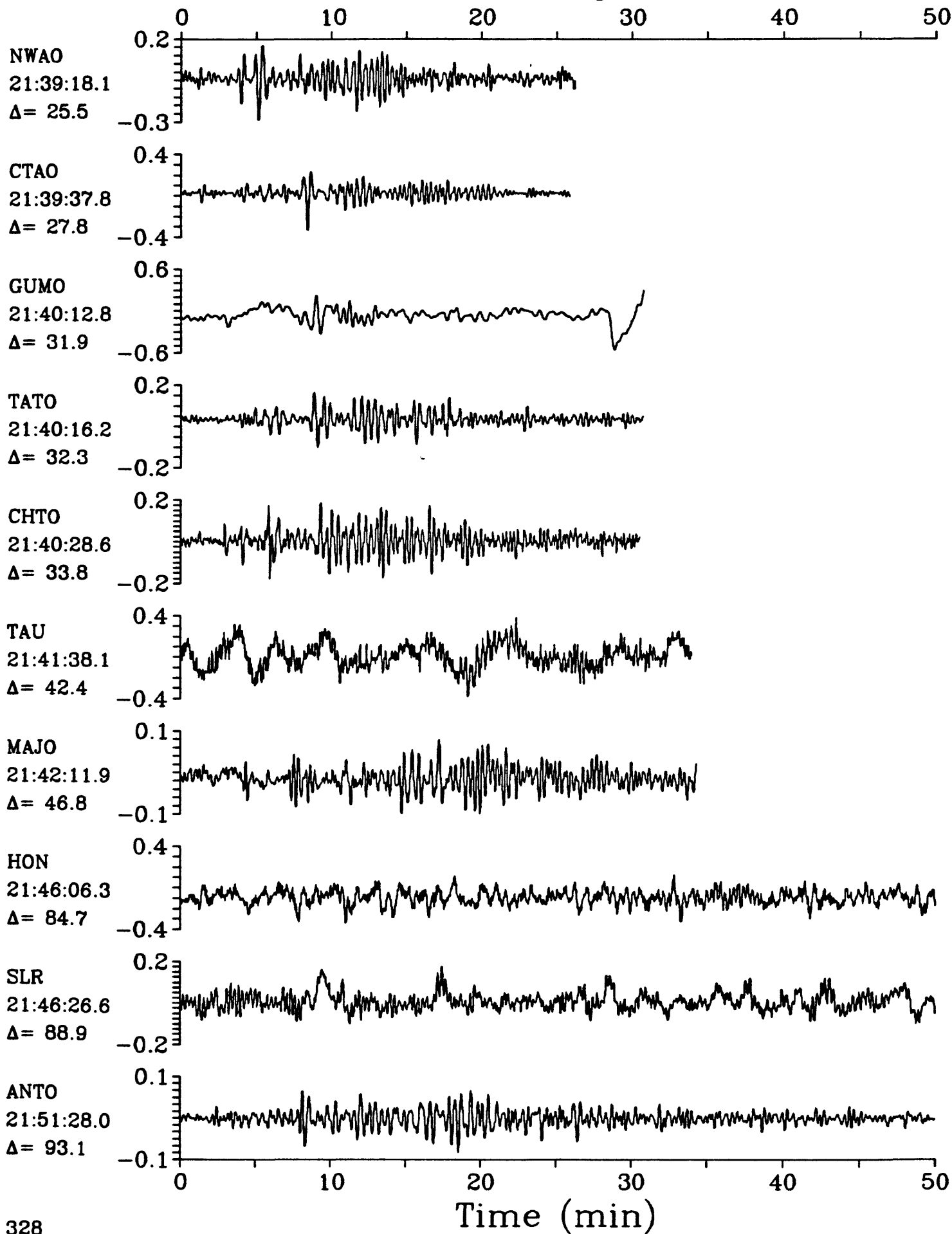
SPZ



LPZ

21 March 1986 21:35:36.82
Flores Sea $h=630.8$ $m_b=5.5$

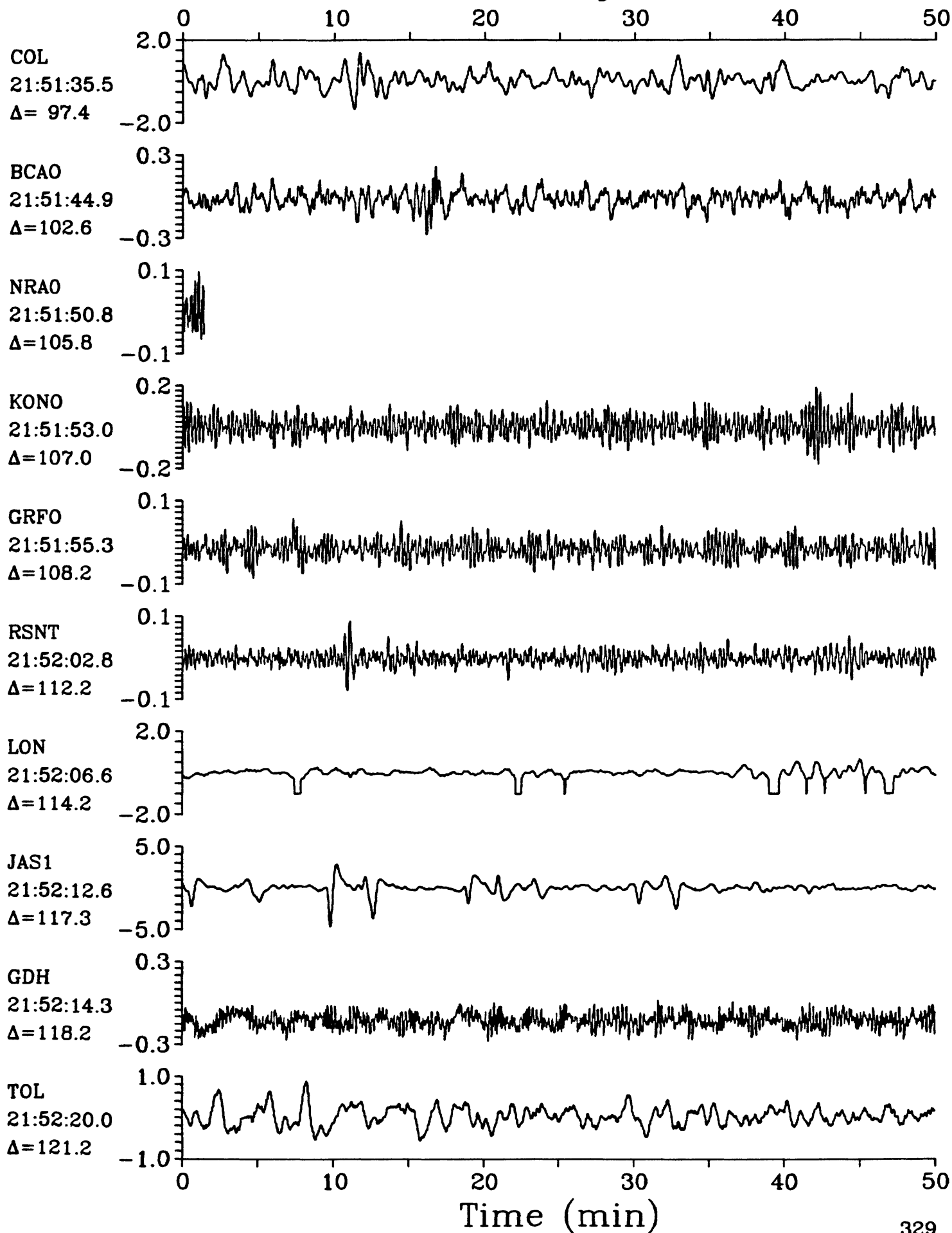
LPZ



LPZ

21 March 1986 21:35:36.82
Flores Sea $h=630.8$ $m_b=5.5$

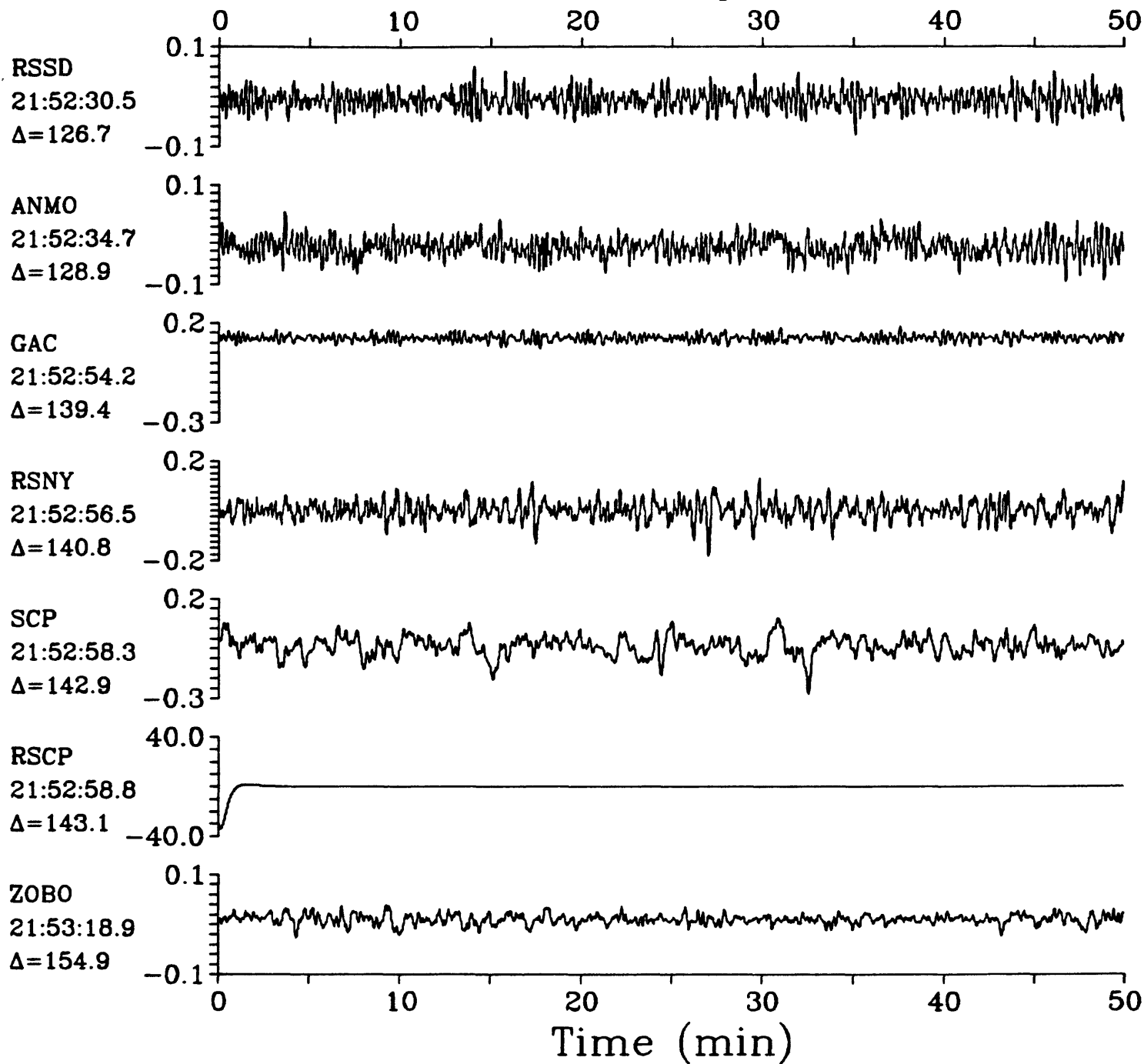
LPZ



LPZ

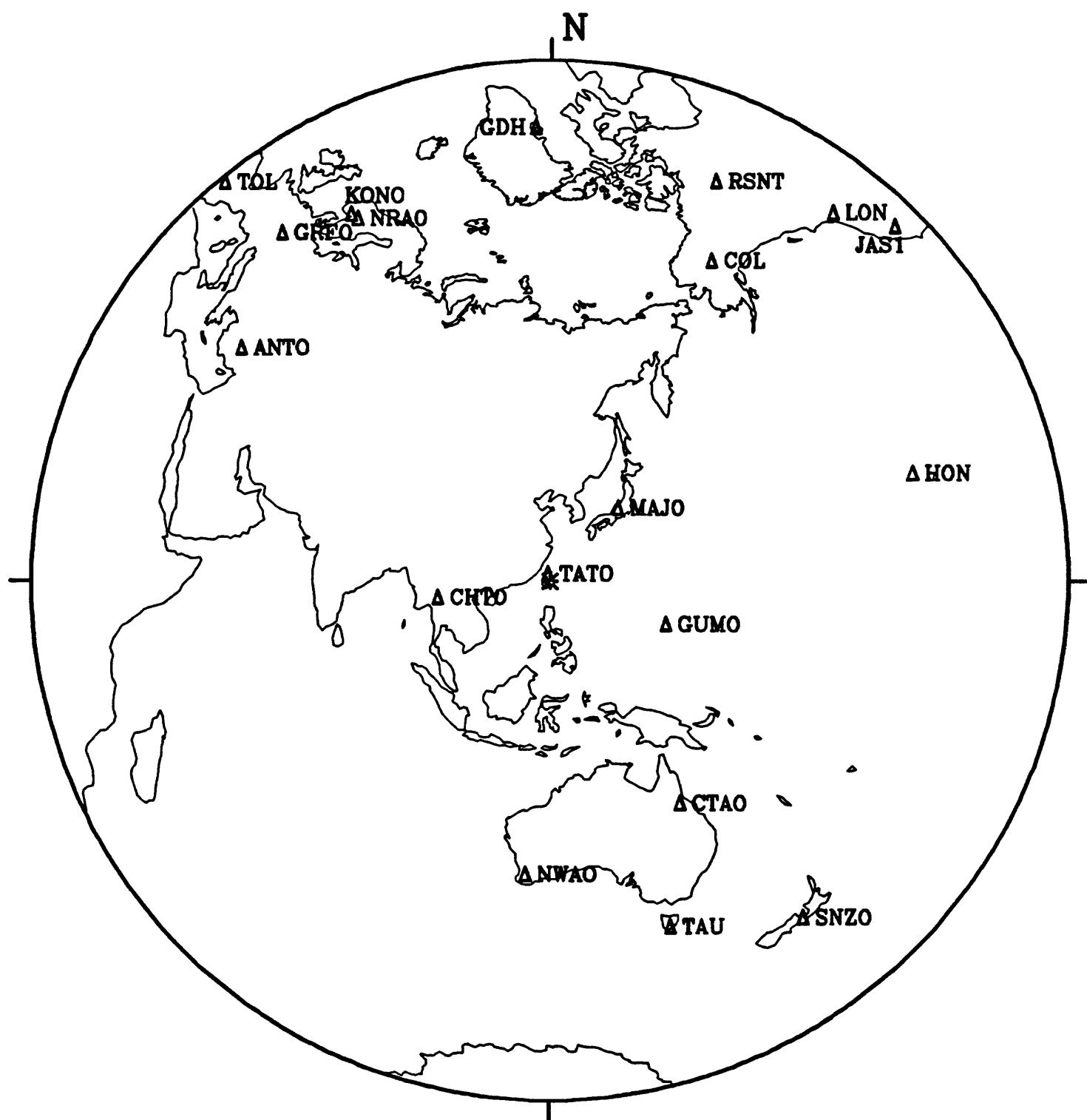
21 March 1986 21:35:36.82
Flores Sea $h=630.8$ $m_b=5.5$

LPZ



22 March 1986 04:45:31.43

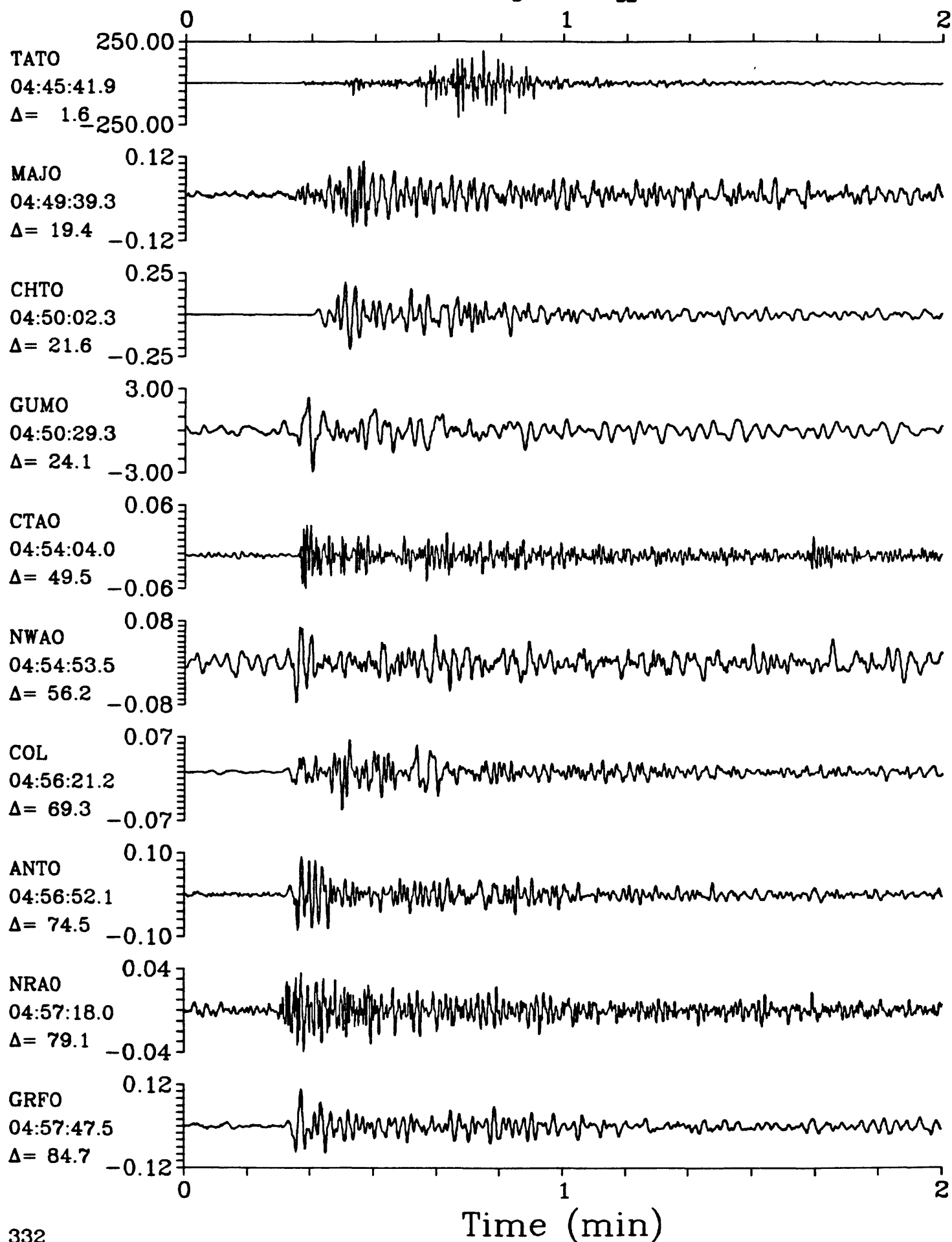
Taiwan



SPZ

22 March 1986 04:45:31.43
Taiwan $h=33.0$ $m_b=5.6$ $M_{sz}=5.1$

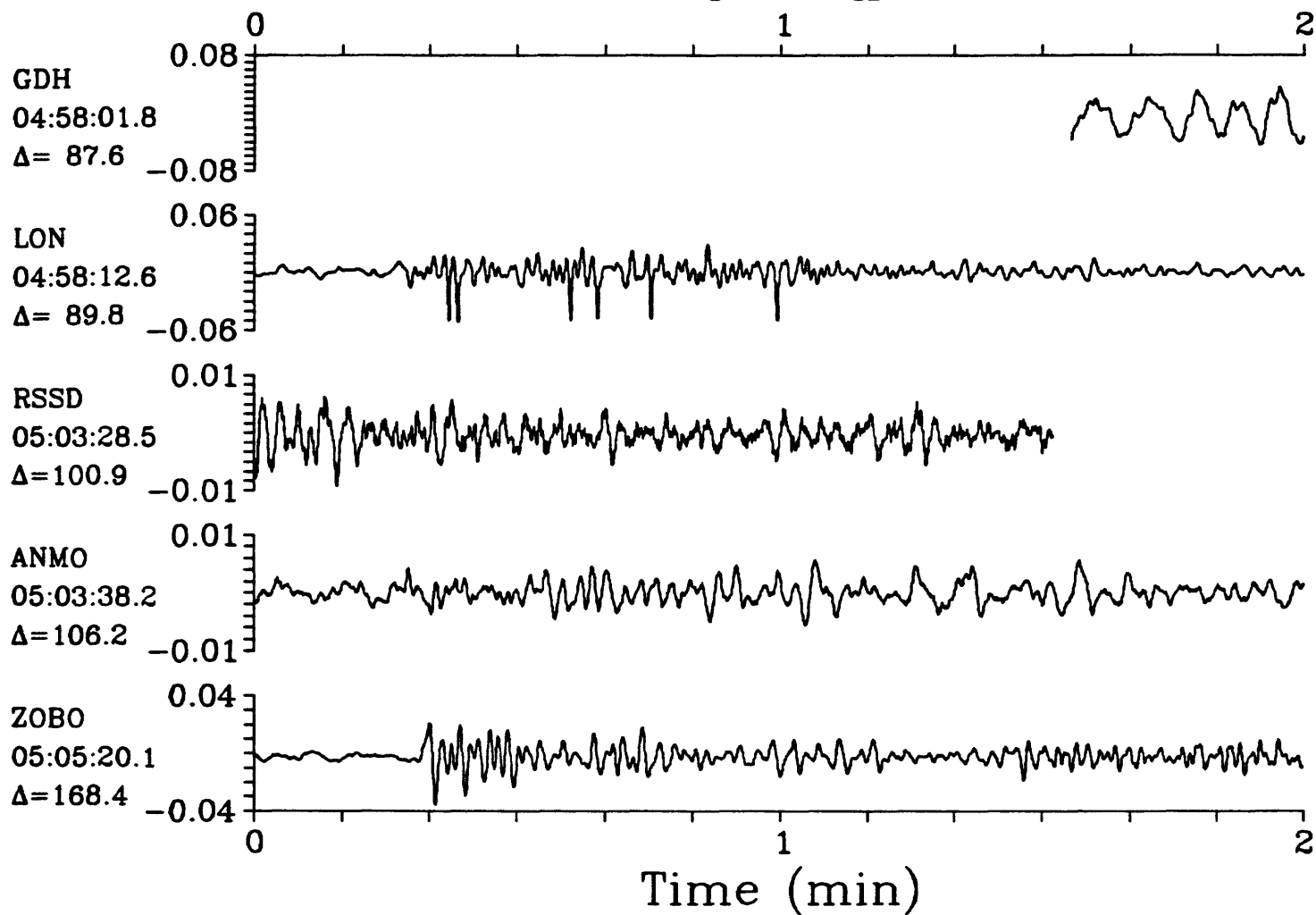
SPZ



SPZ

22 March 1986 04:45:31.43
Taiwan $h=33.0$ $m_b=5.6$ $M_{sz}=5.1$

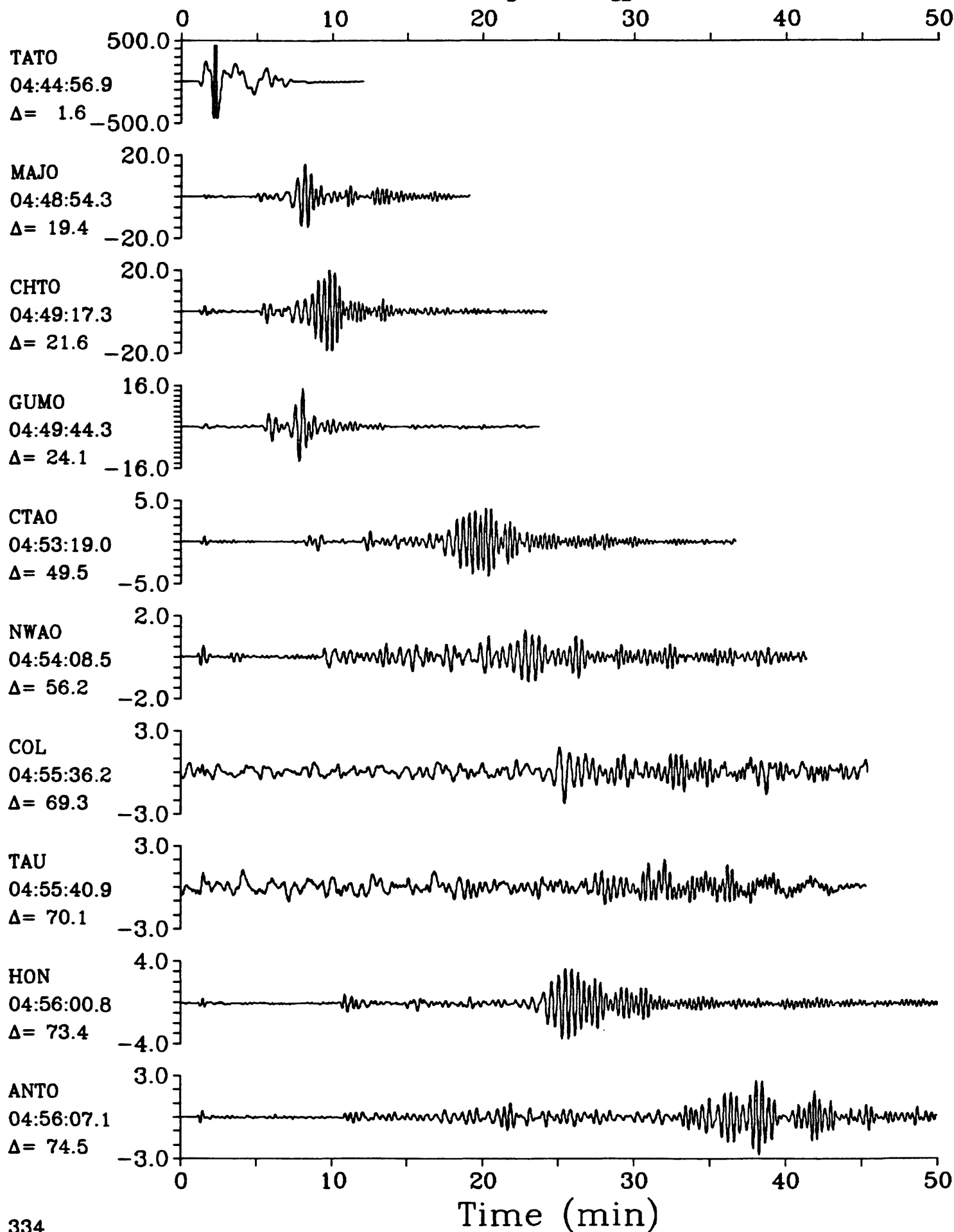
SPZ



LPZ

22 March 1986 04:45:31.43
Taiwan $h=33.0$ $m_b=5.6$ $M_{sz}=5.1$

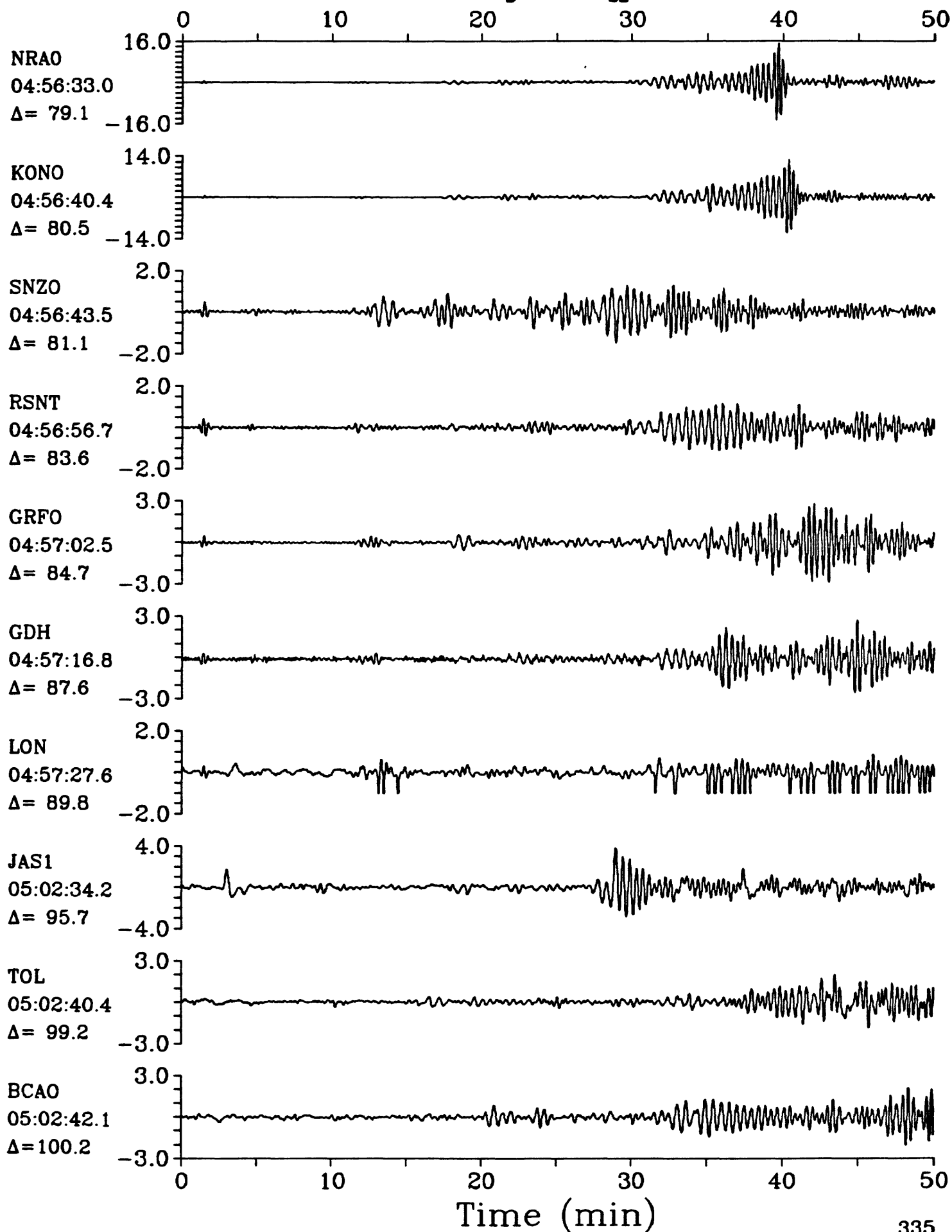
LPZ



LPZ

22 March 1986 04:45:31.43
Taiwan $h=33.0$ $m_b=5.6$ $M_{sz}=5.1$

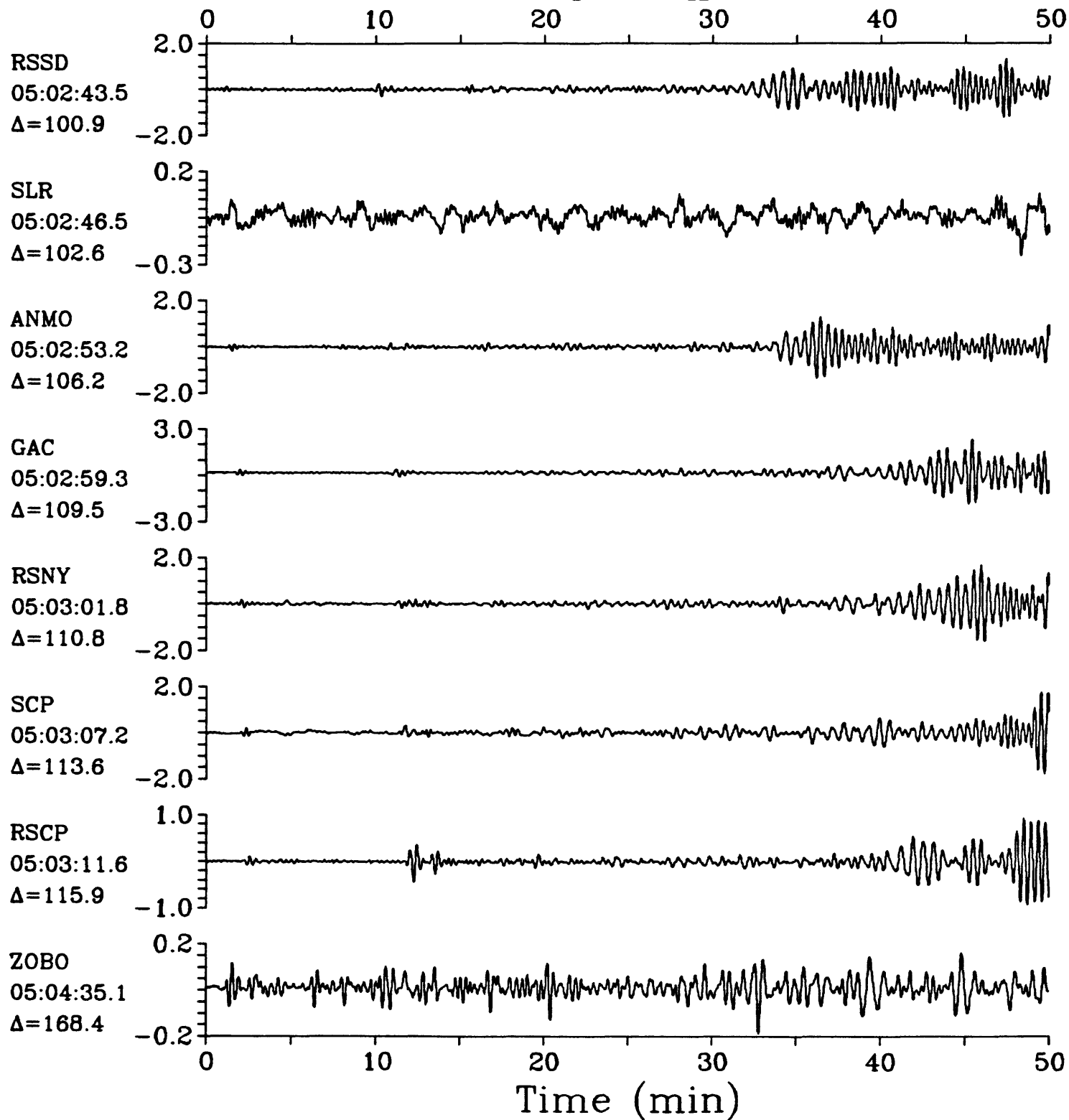
LPZ



LPZ

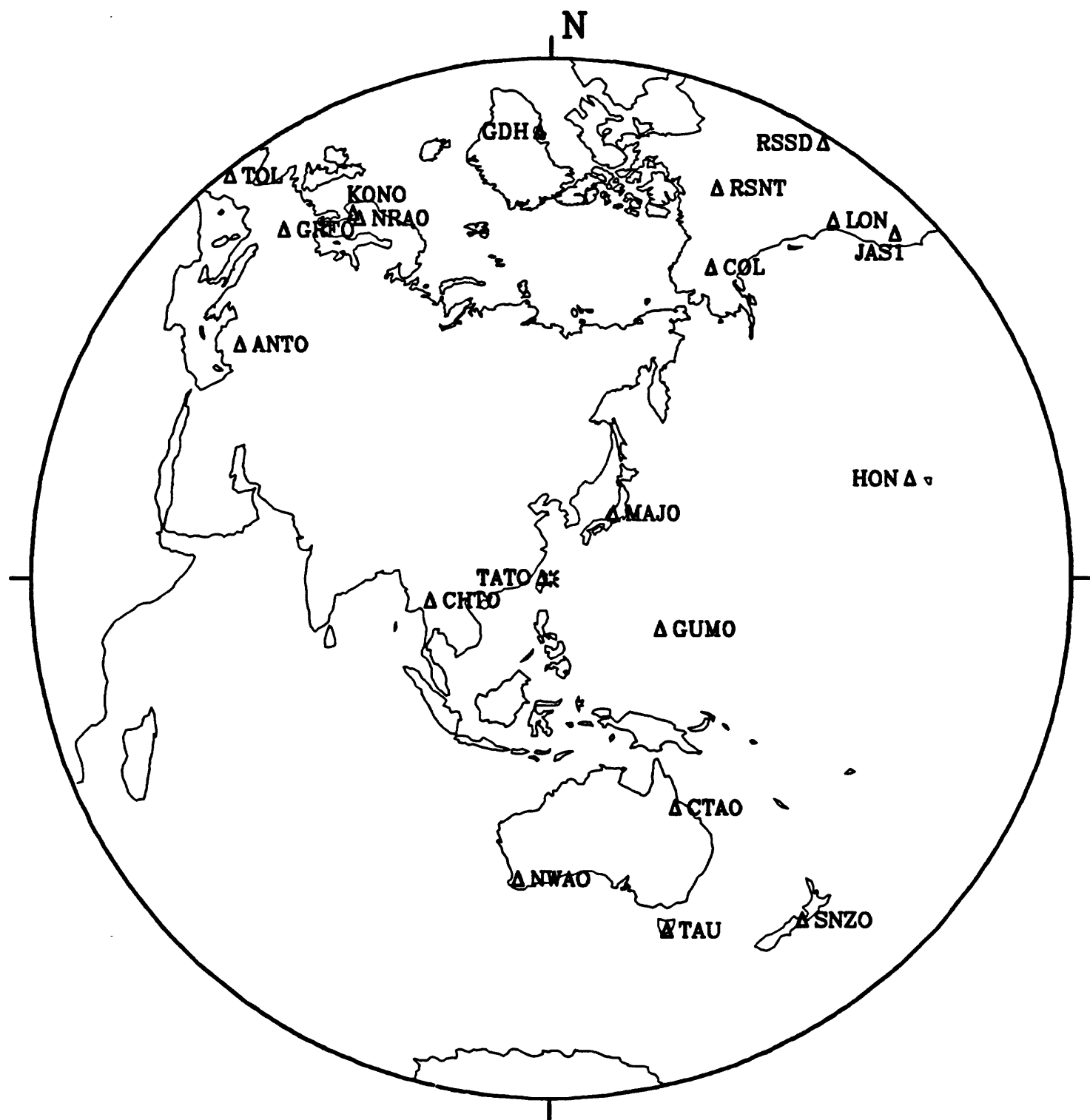
22 March 1986 04:45:31.43
Taiwan $h=33.0$ $m_b=5.6$ $M_{sz}=5.1$

LPZ



22 March 1986 10:31:07.23

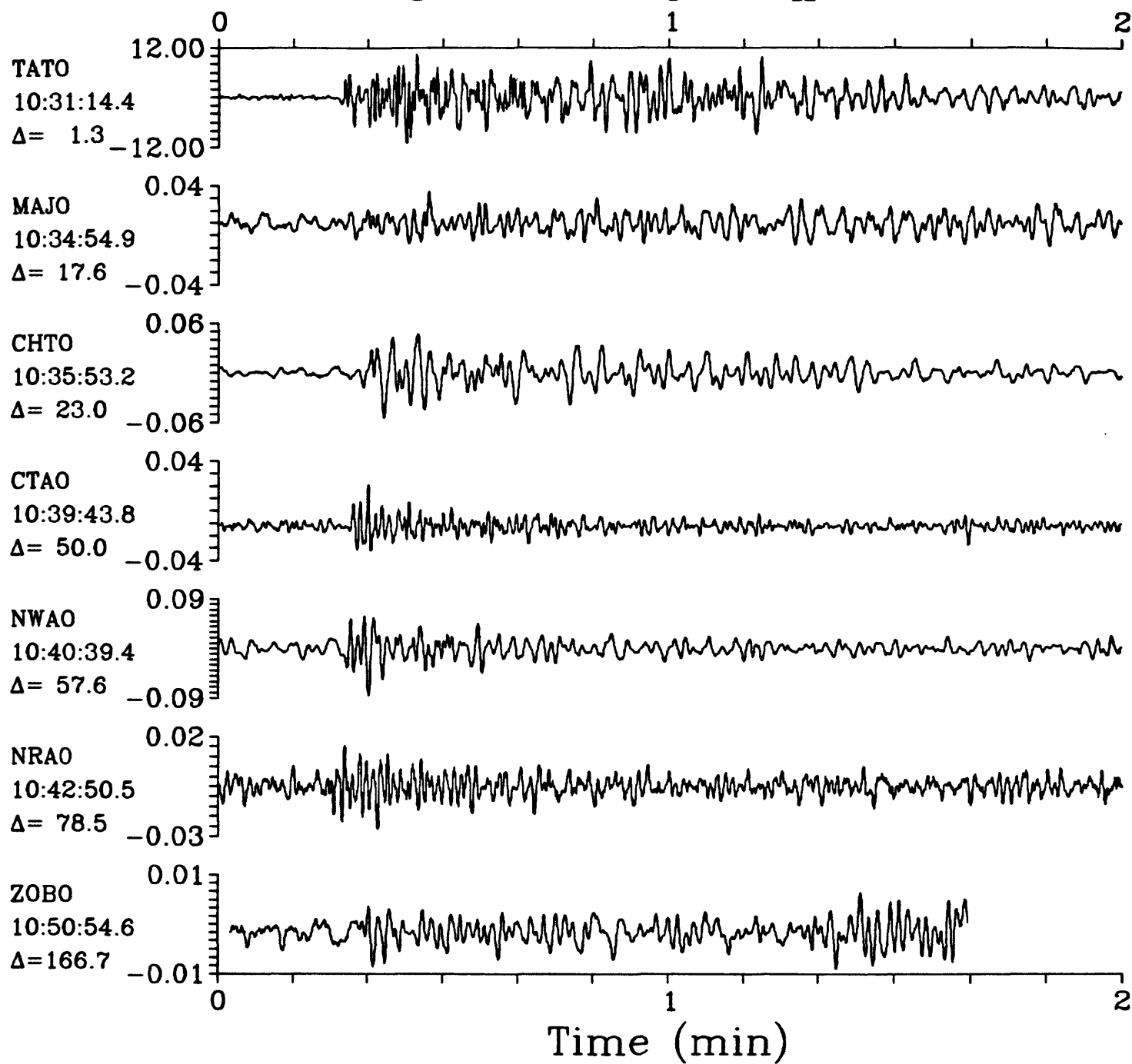
Taiwan Region



SPZ

22 March 1986 10:31:07.23
Taiwan Region $h=33.0$ $m_b=5.2$ $M_{SZ}=5.7$

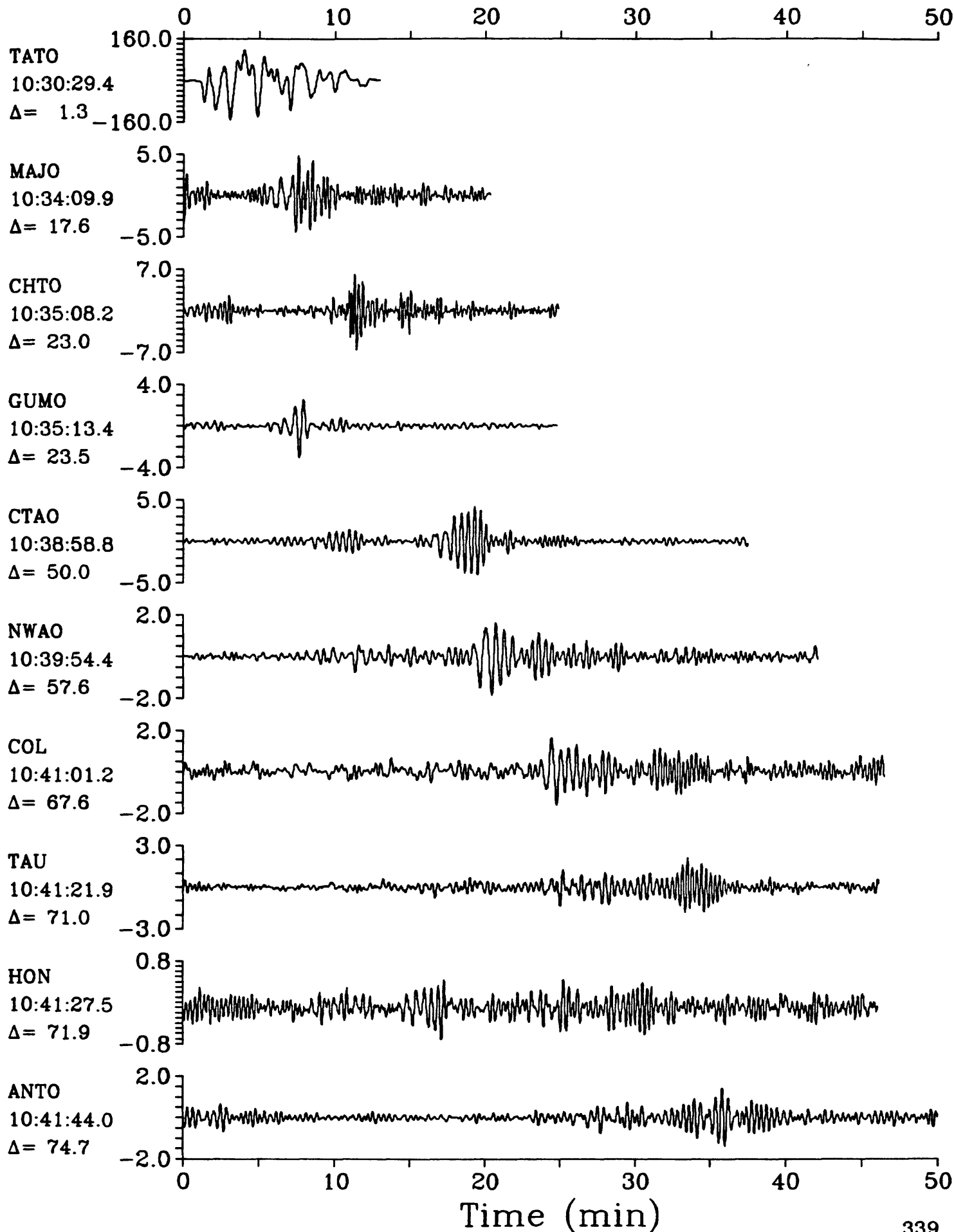
SPZ



LPZ

22 March 1986 10:31:07.23
Taiwan Region $h=33.0$ $m_b=5.2$ $M_{sz}=5.7$

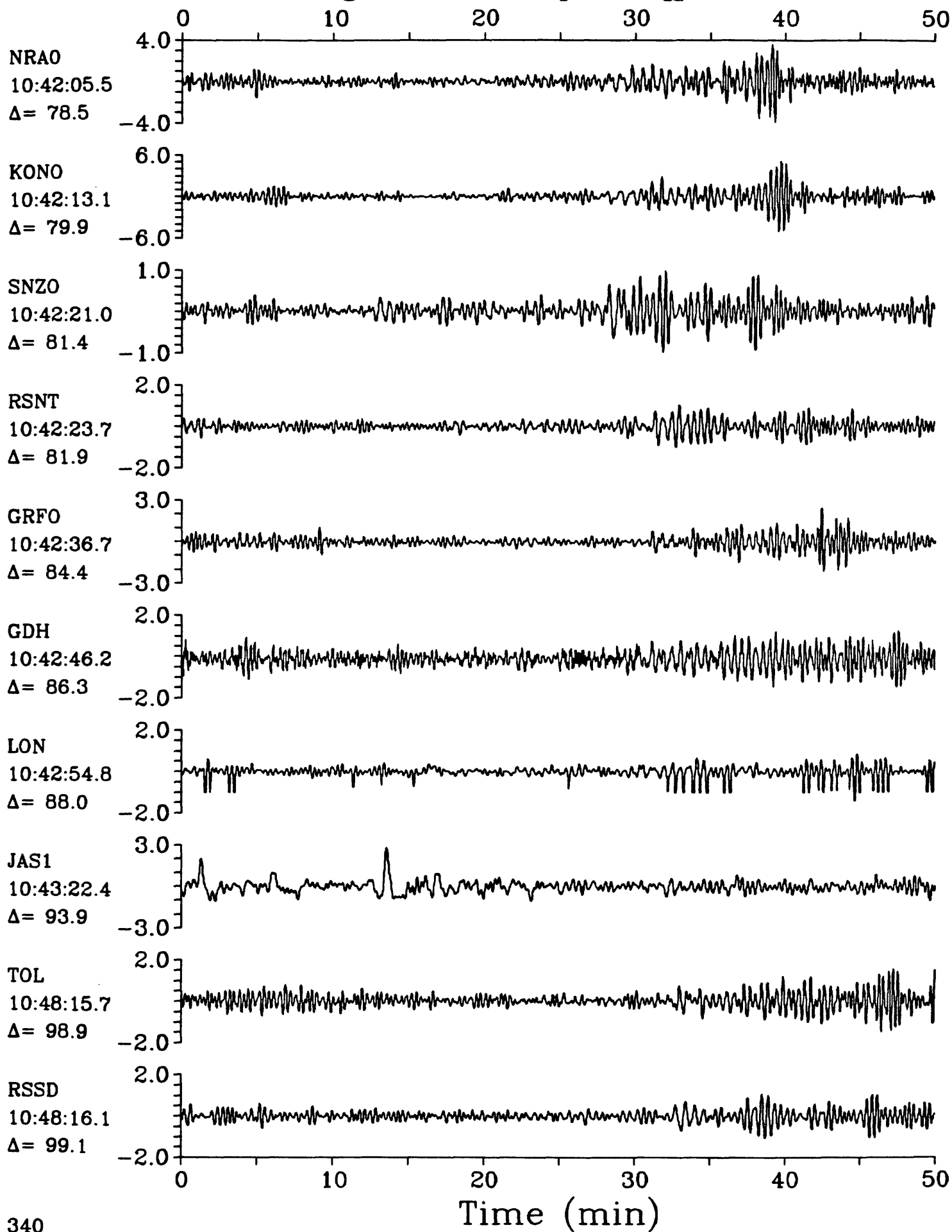
LPZ



LPZ

22 March 1986 10:31:07.23
Taiwan Region $h=33.0$ $m_b=5.2$ $M_{sz}=5.7$

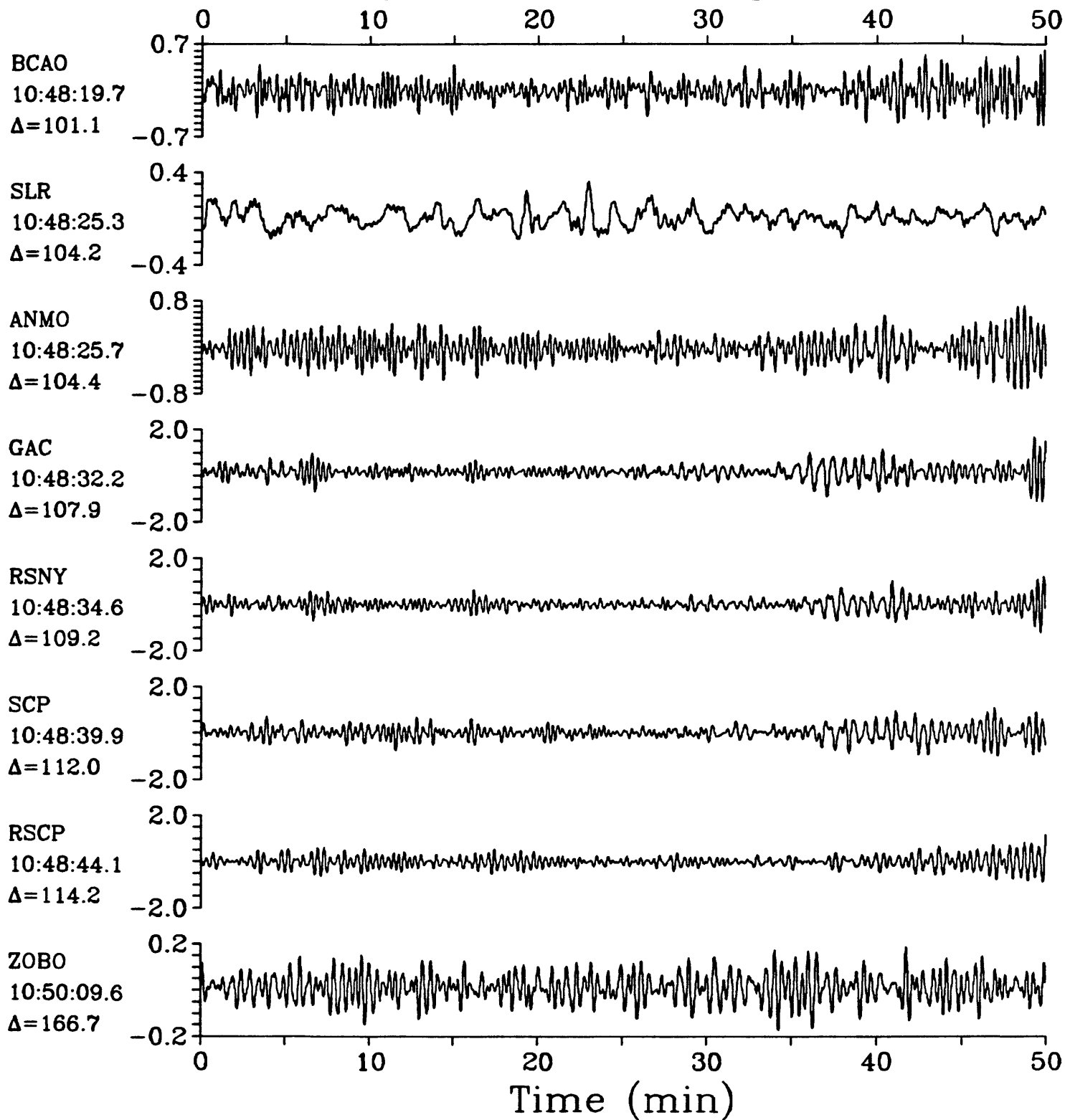
LPZ



LPZ

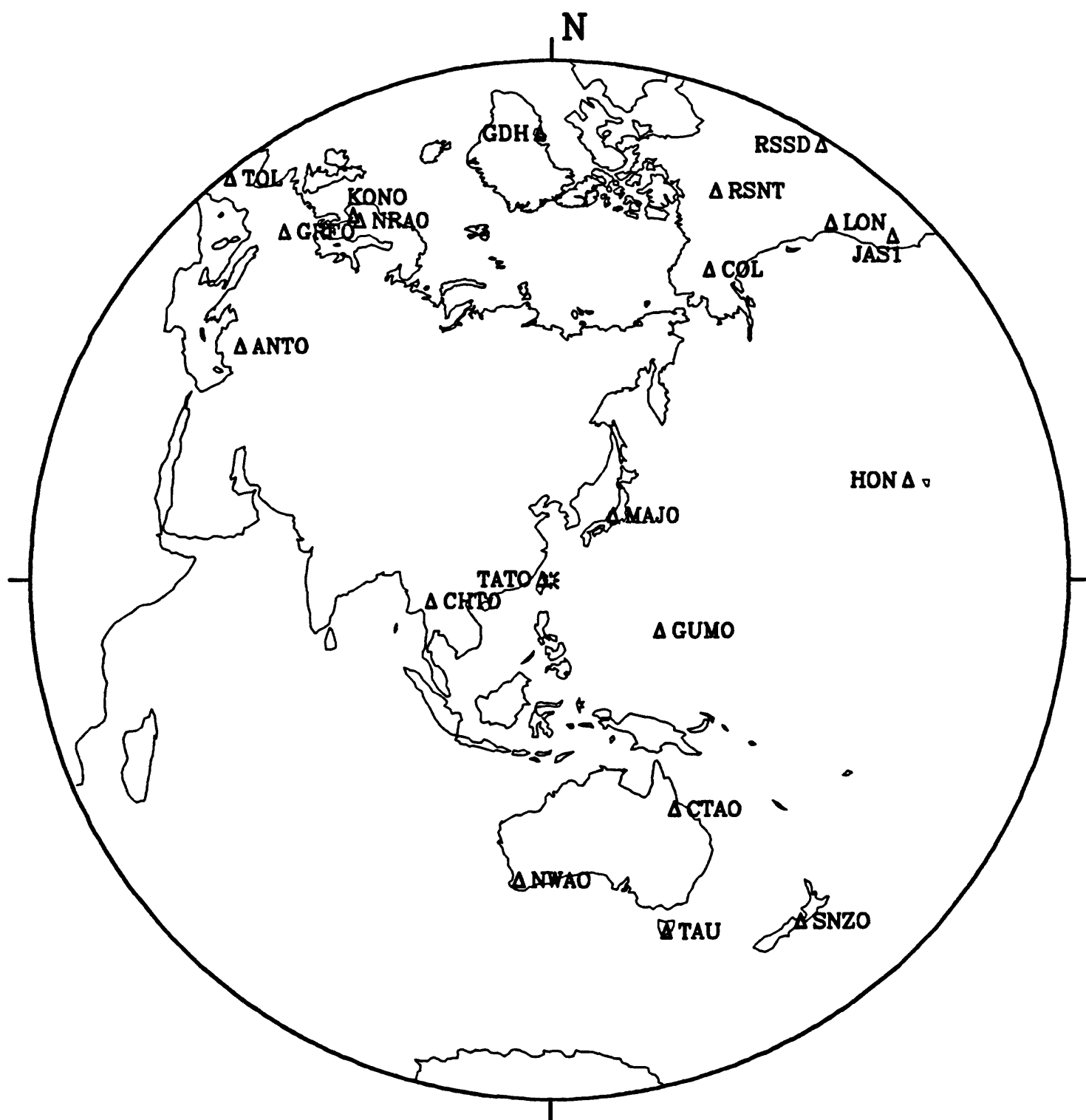
22 March 1986 10:31:07.23

LPZ

Taiwan Region $h=33.0$ $m_b=5.2$ $M_{sz}=5.7$ 

22 March 1986 12:06:33.22

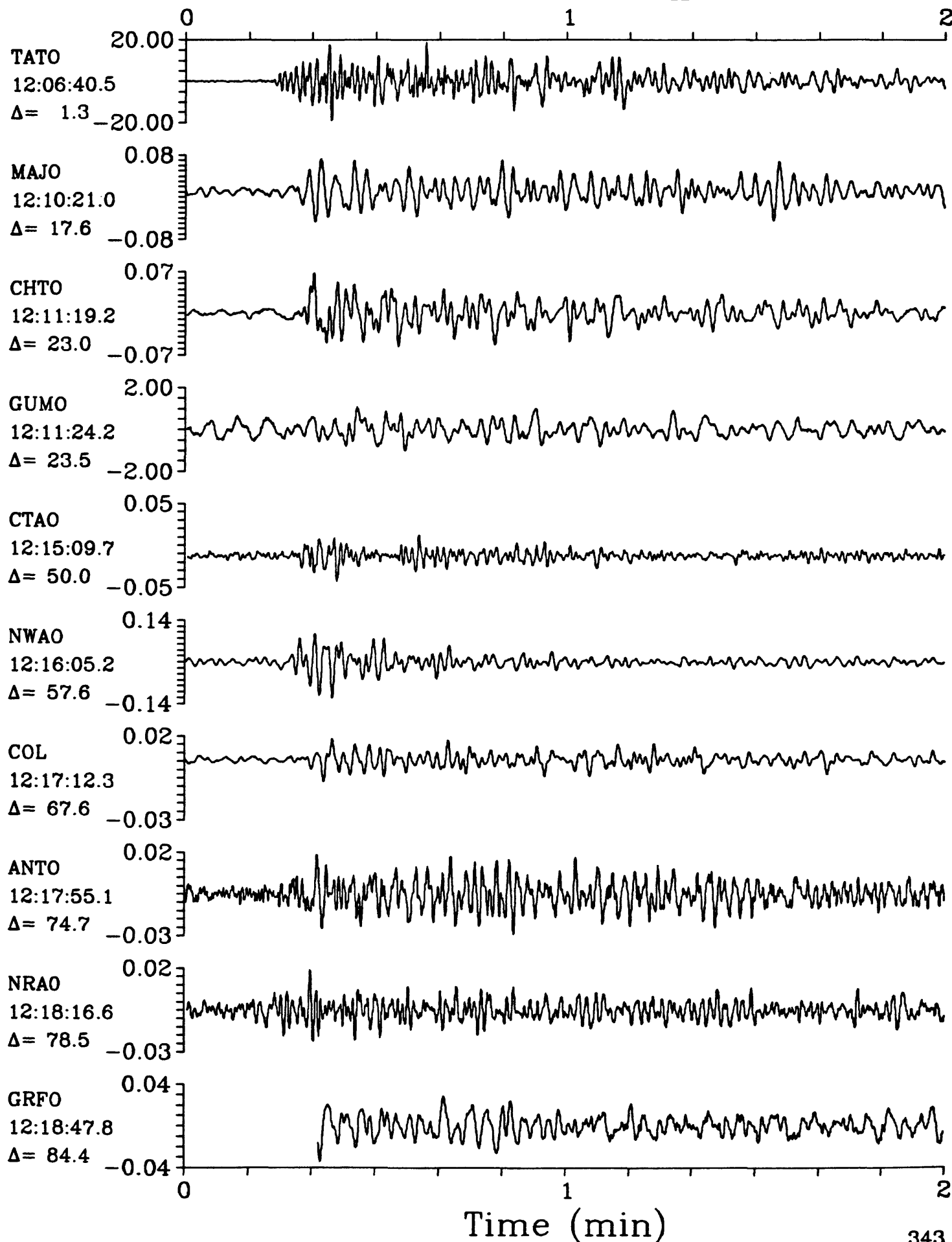
Taiwan Region



SPZ

22 March 1986 12:06:33.22

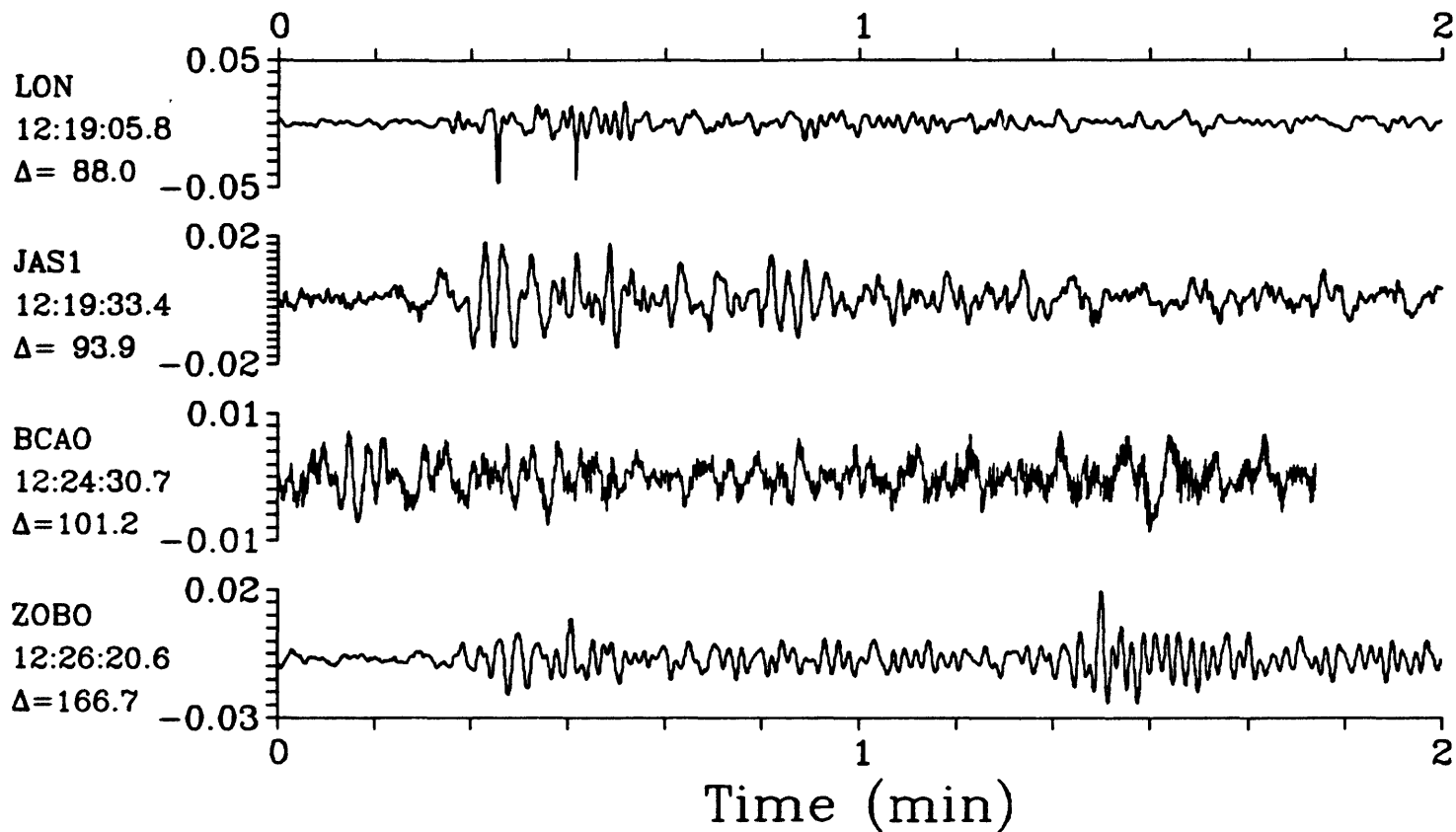
SPZ

Taiwan Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.7$ 

SPZ

22 March 1986 12:06:33.22

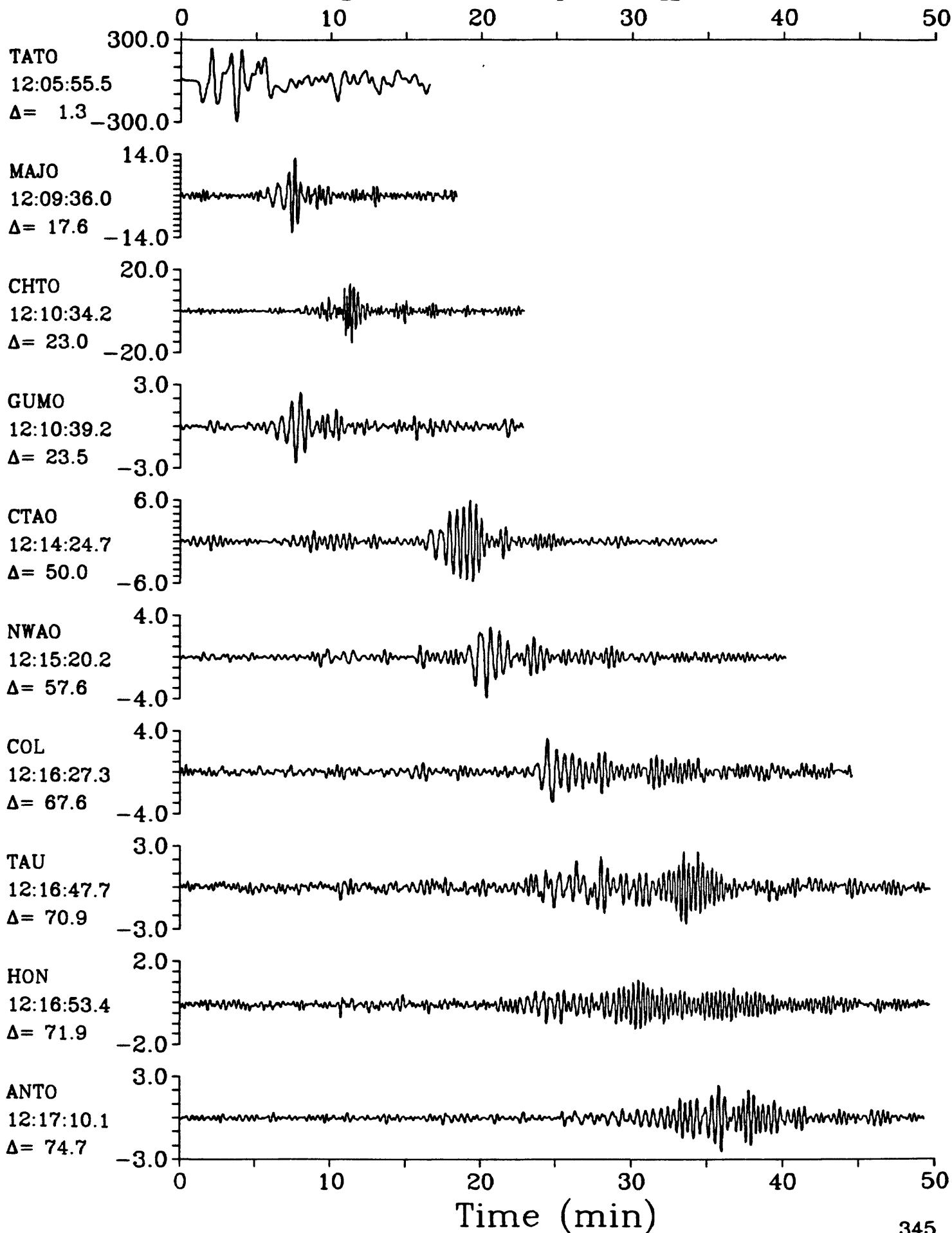
SPZ

Taiwan Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.7$ 

LPZ

22 March 1986 12:06:33.22

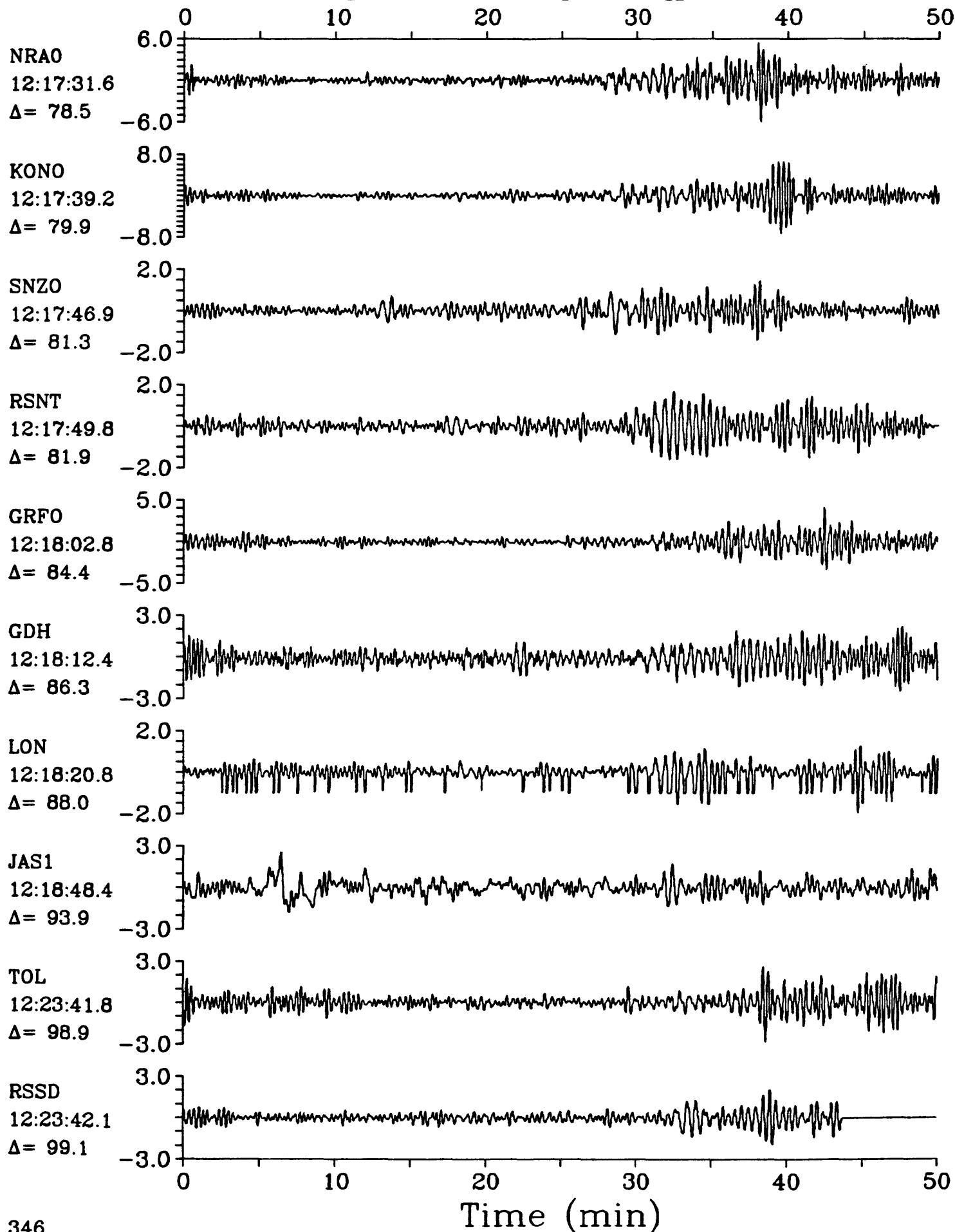
LPZ

Taiwan Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.7$ 

LPZ

22 March 1986 12:06:33.22

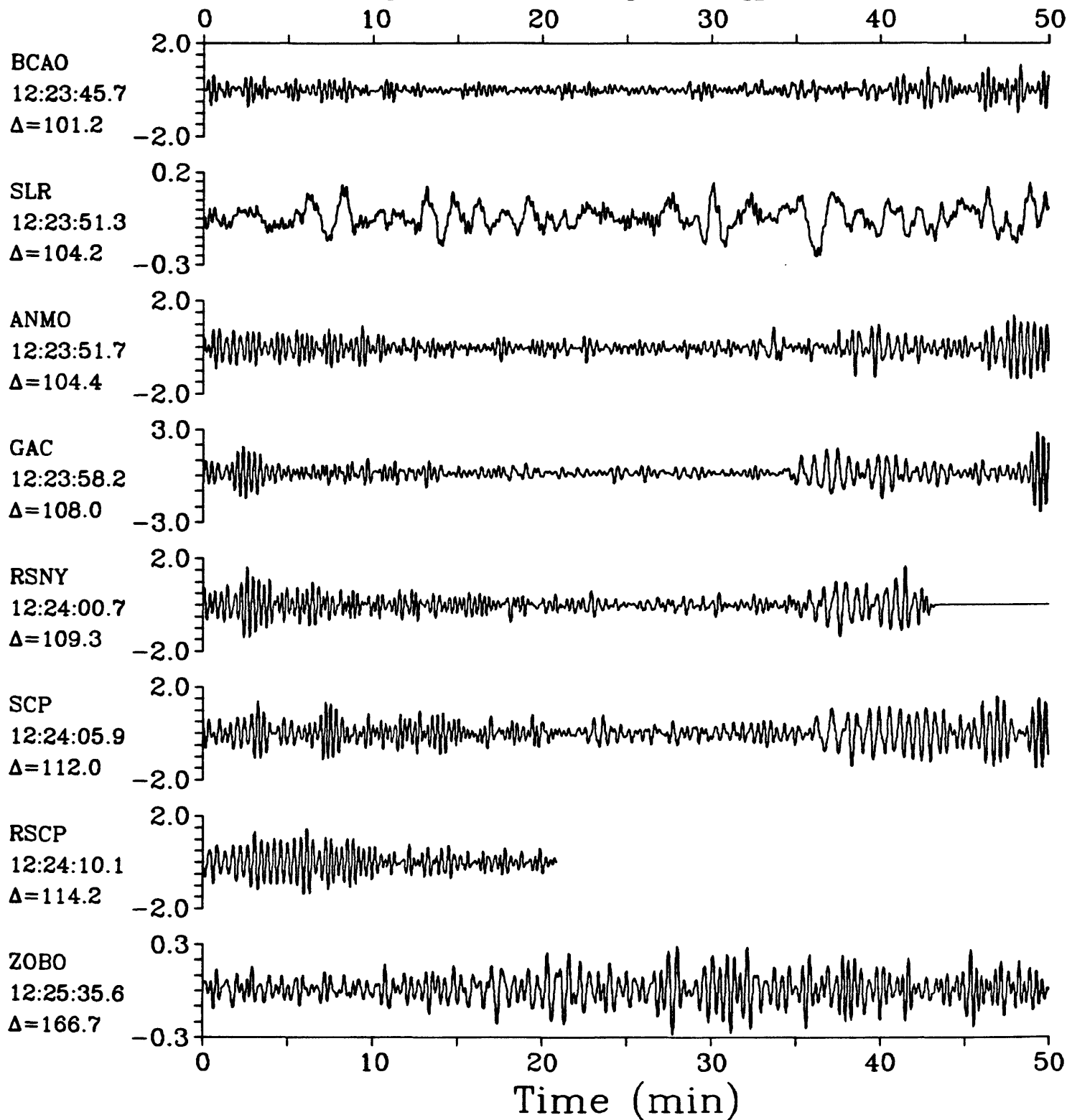
LPZ

Taiwan Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.7$ 

LPZ

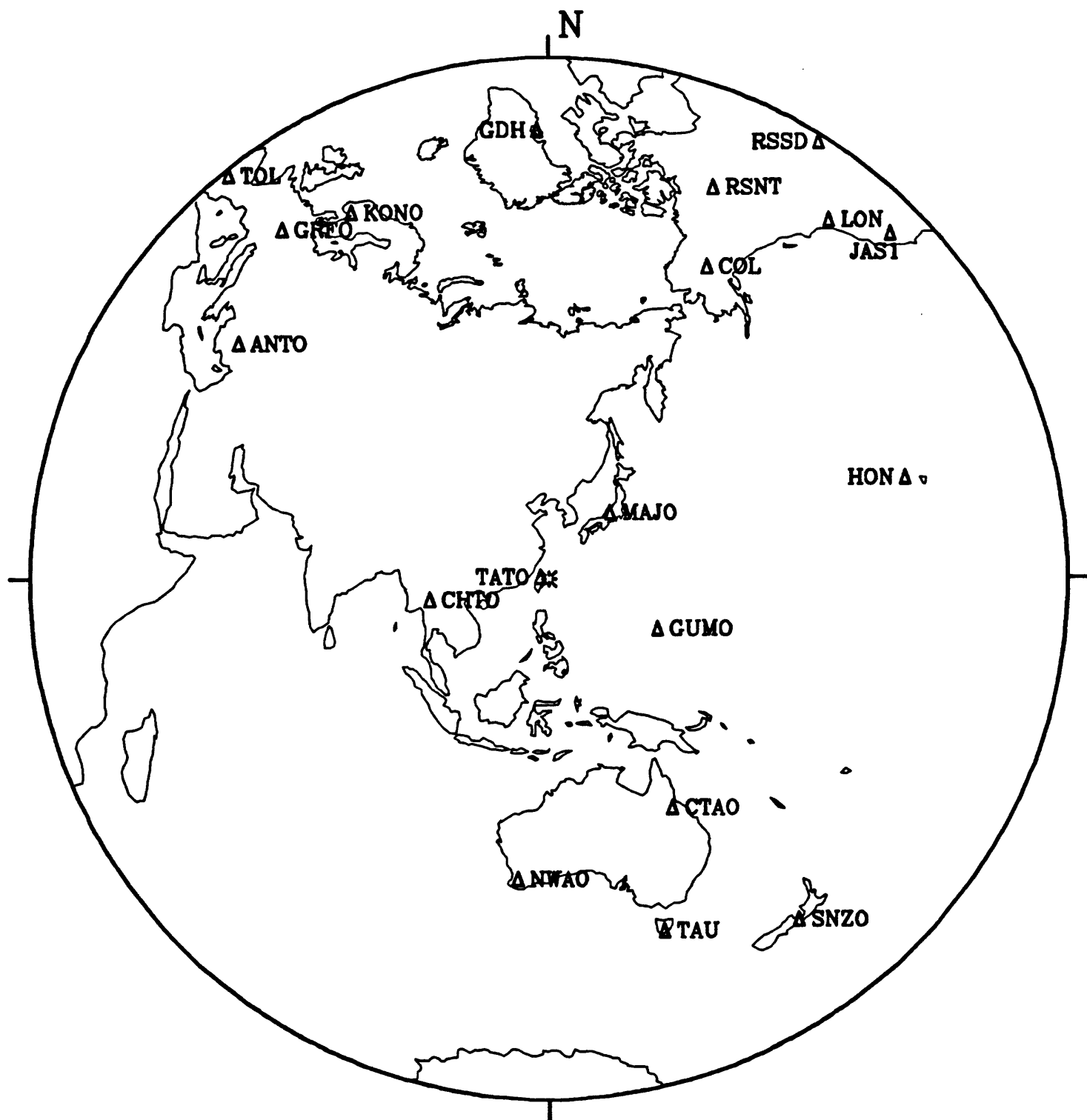
22 March 1986 12:06:33.22

LPZ

Taiwan Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.7$ 

22 March 1986 14:27:17.27

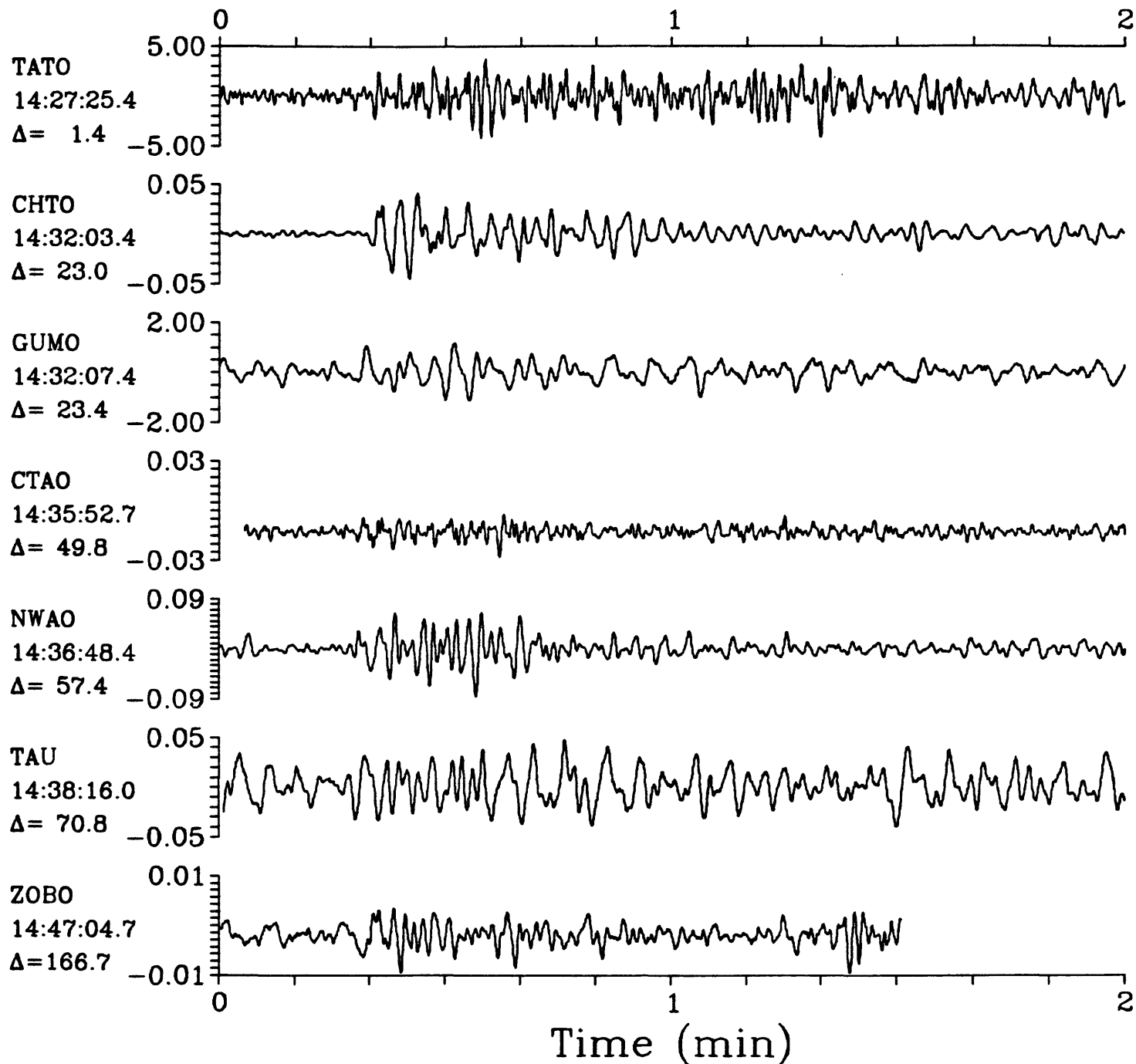
Taiwan Region



SPZ

22 March 1986 14:27:17.27

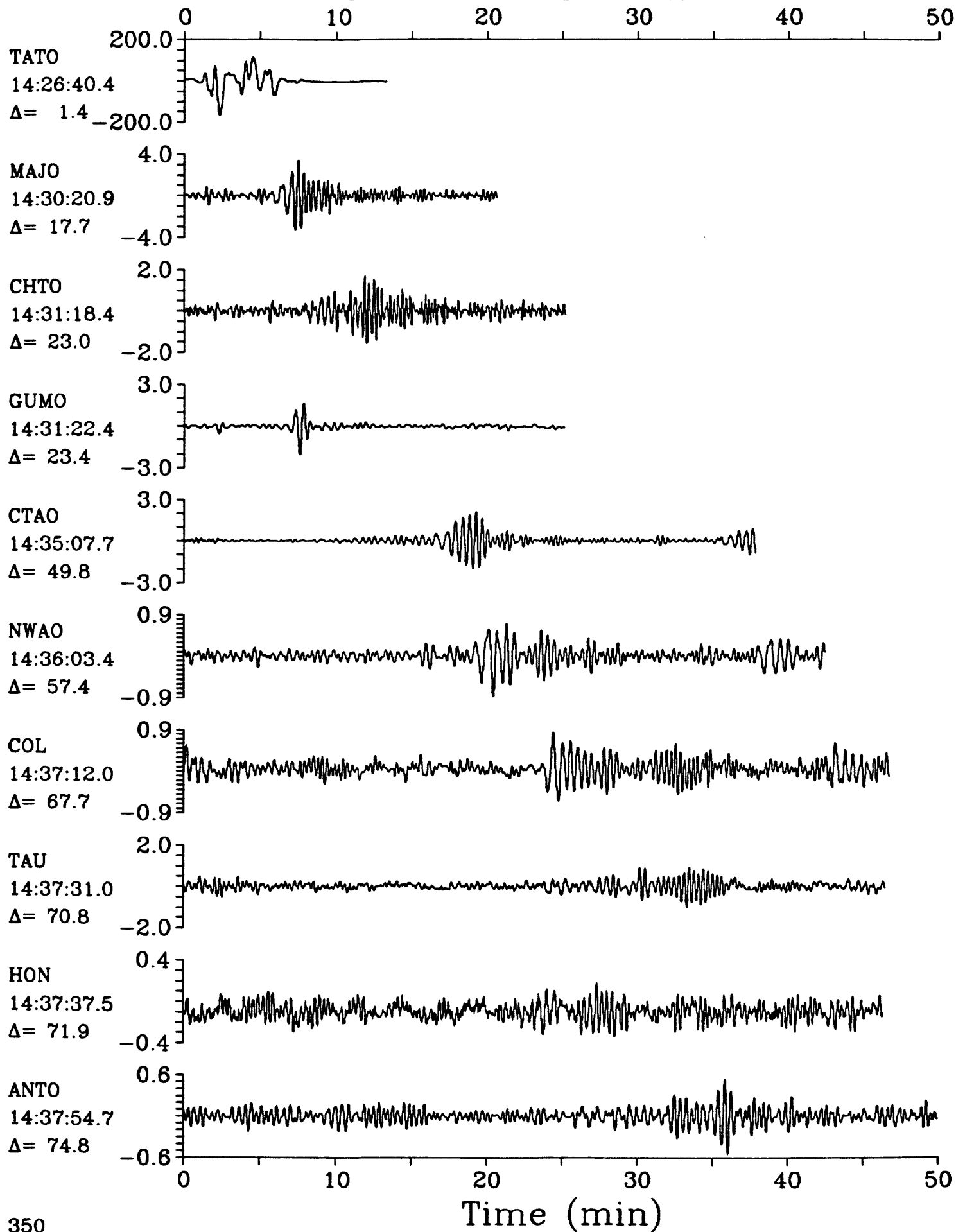
SPZ

Taiwan Region $h=33.0$ $m_b=4.9$ $M_{sz}=5.5$ 

LPZ

22 March 1986 14:27:17.27
Taiwan Region $h=33.0$ $m_b=4.9$ $M_{sz}=5.5$

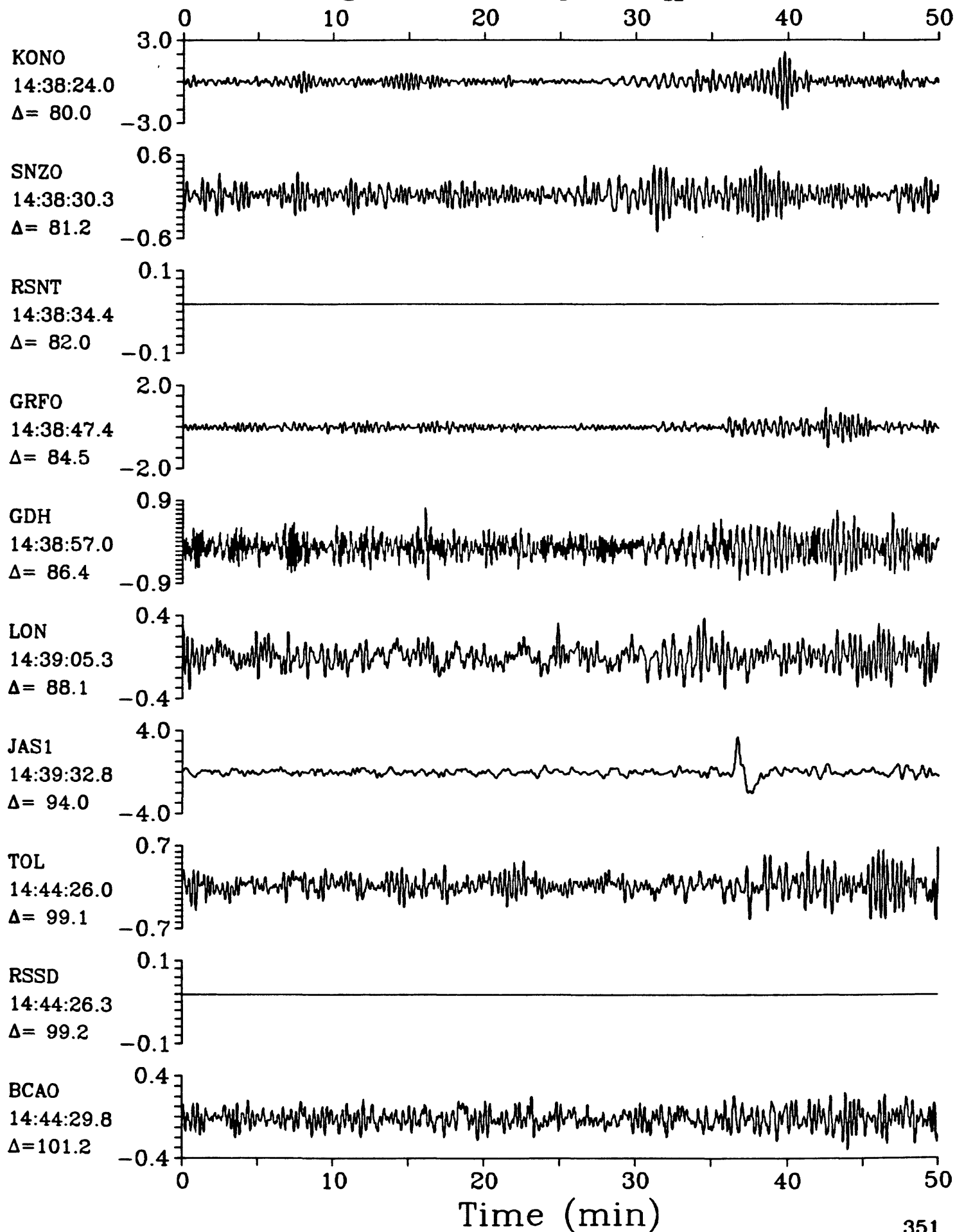
LPZ



LPZ

22 March 1986 14:27:17.27
Taiwan Region $h=33.0$ $m_b=4.9$ $M_{sz}=5.5$

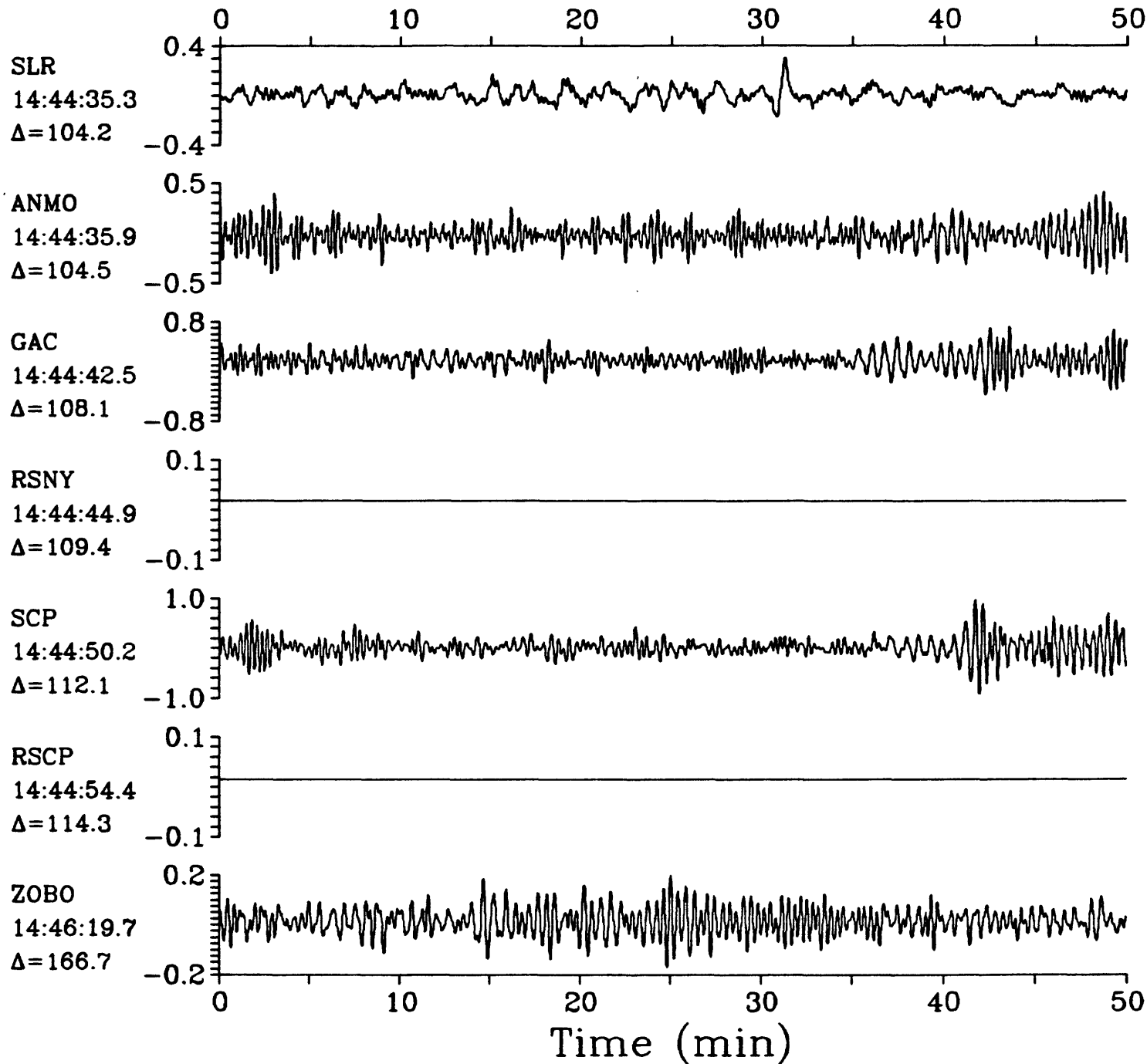
LPZ



LPZ

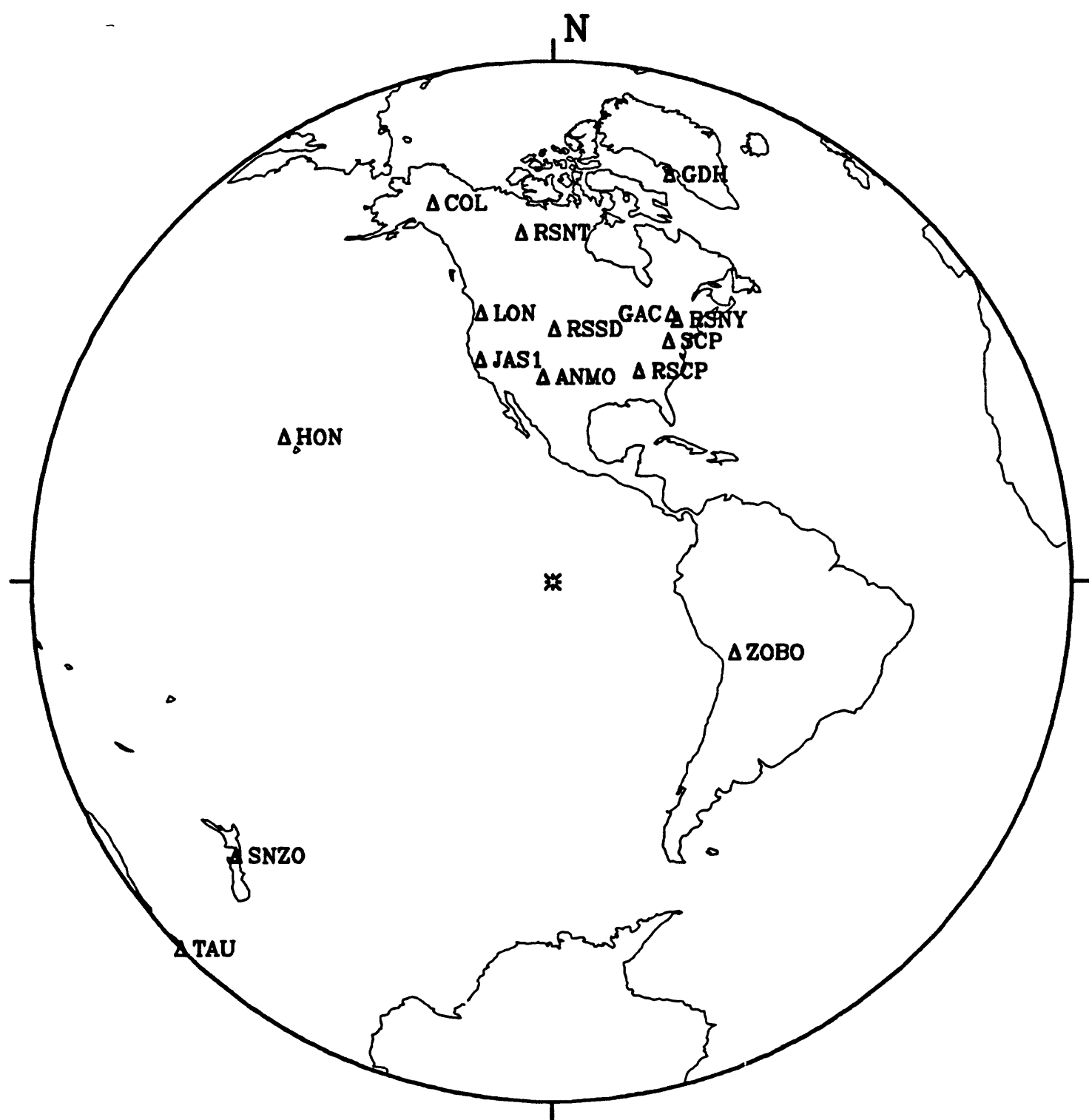
22 March 1986 14:27:17.27

LPZ

Taiwan Region $h=33.0$ $m_b=4.9$ $M_{sz}=5.5$ 

22 March 1986 16:56:50.99

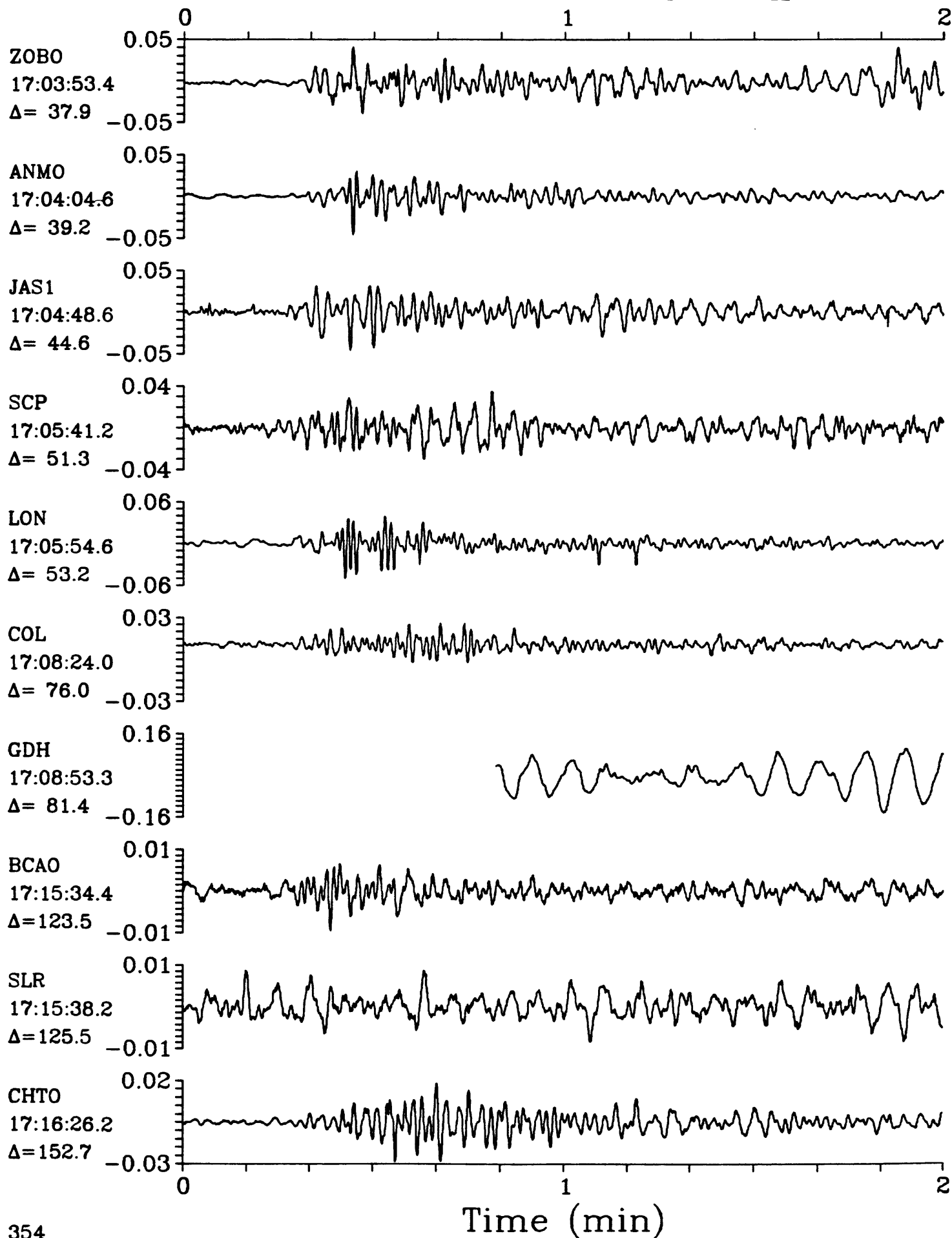
Northern Easter I. Cordillera



SPZ

22 March 1986 16:56:50.99

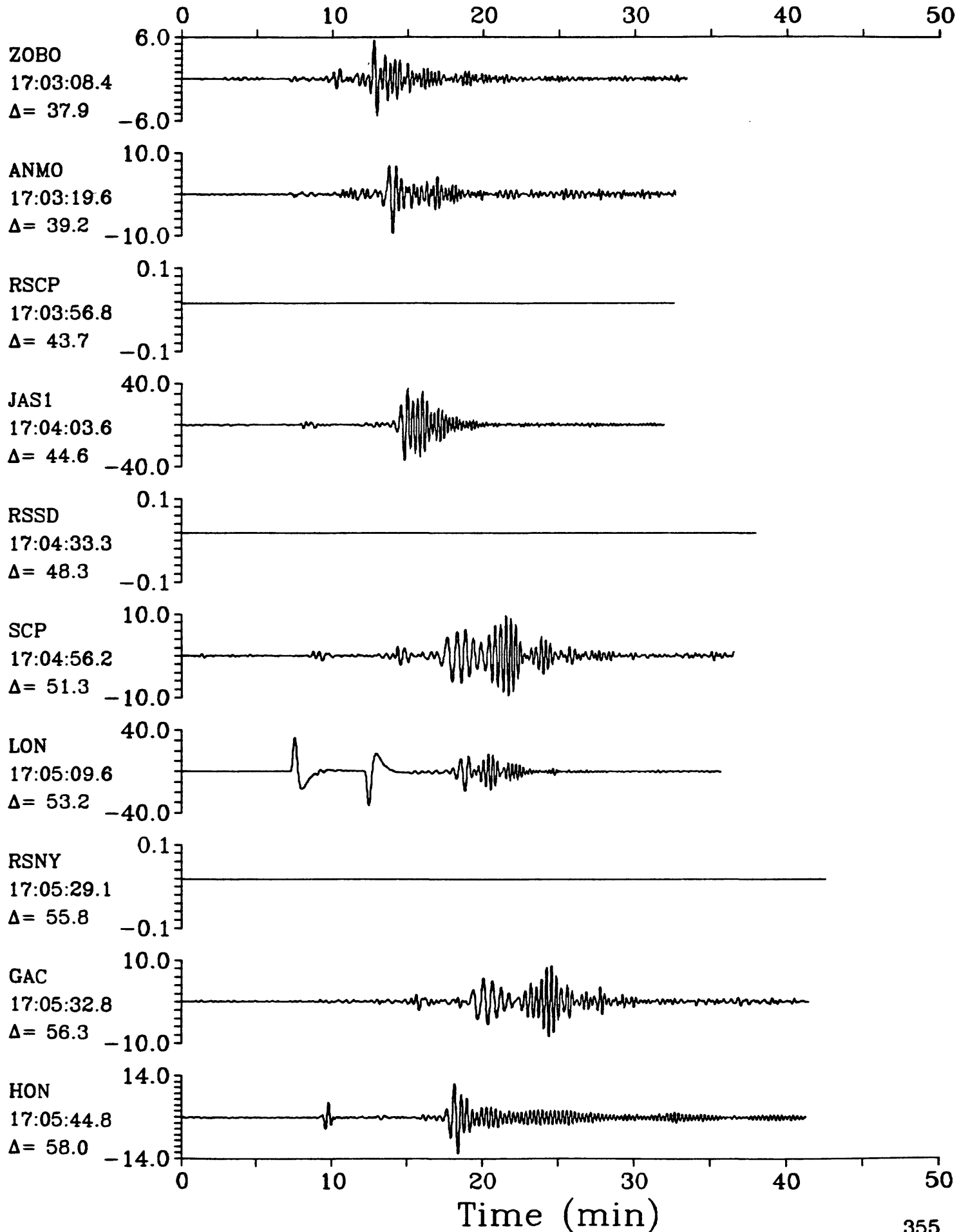
SPZ

Northern Easter I. Cordillera $h=10.0$ $m_b=5.3$ $M_{sz}=5.8$ 

LPZ

22 March 1986 16:56:50.99

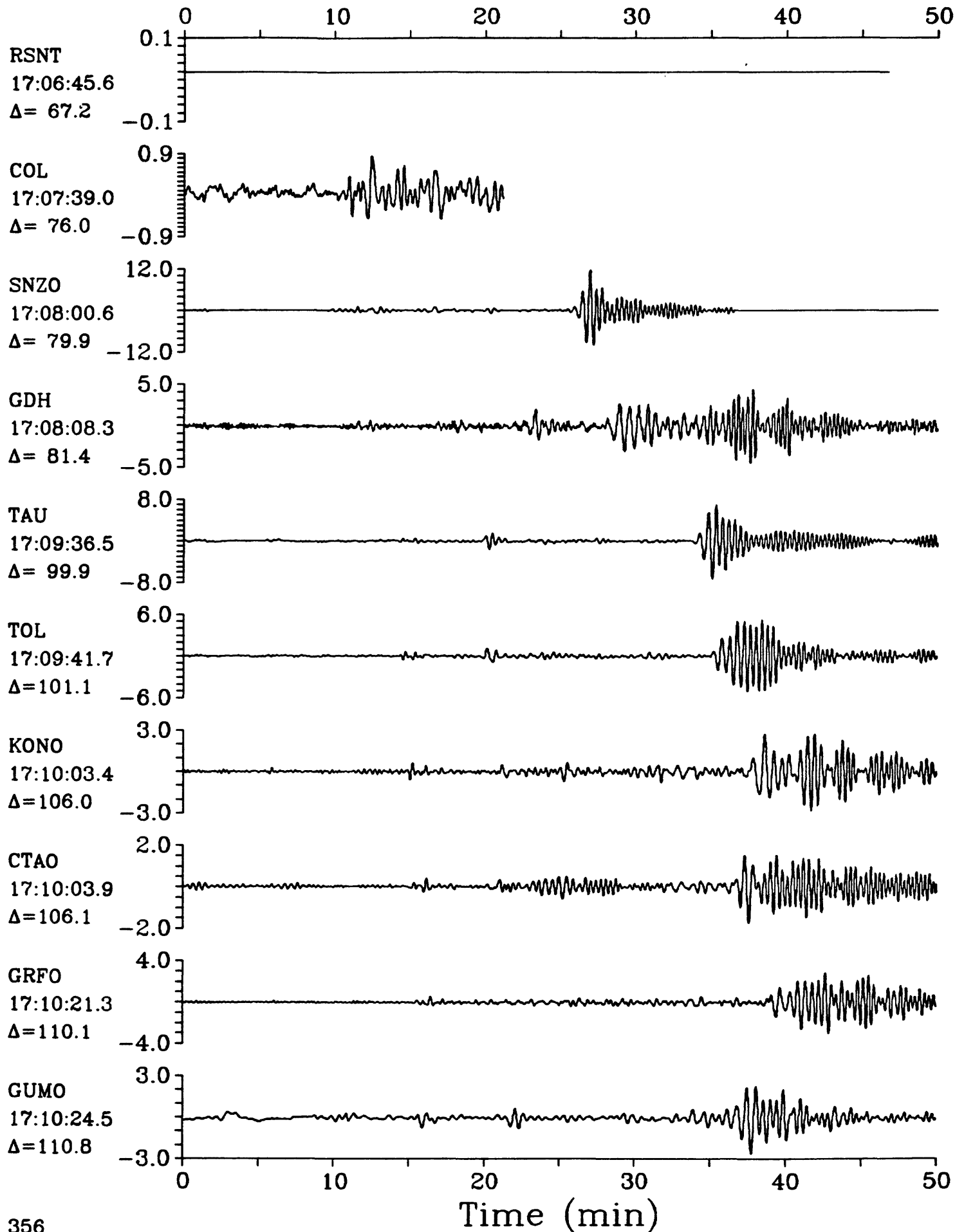
LPZ

Northern Easter I. Cordillera $h=10.0$ $m_b=5.3$ $M_{sz}=5.8$ 

LPZ

22 March 1986 16:56:50.99

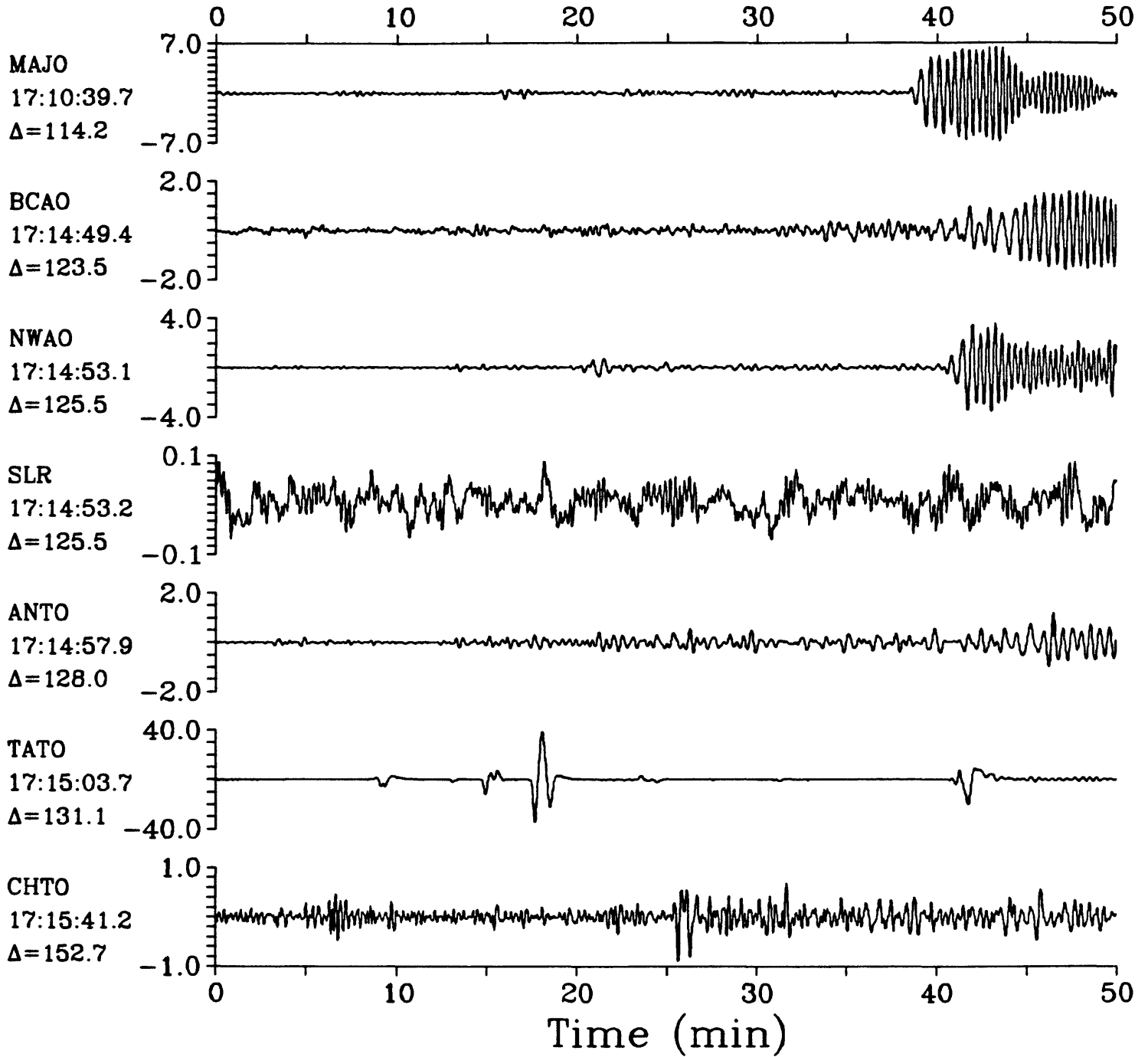
LPZ

Northern Easter I. Cordillera $h=10.0$ $m_b=5.3$ $M_{sz}=5.8$ 

LPZ

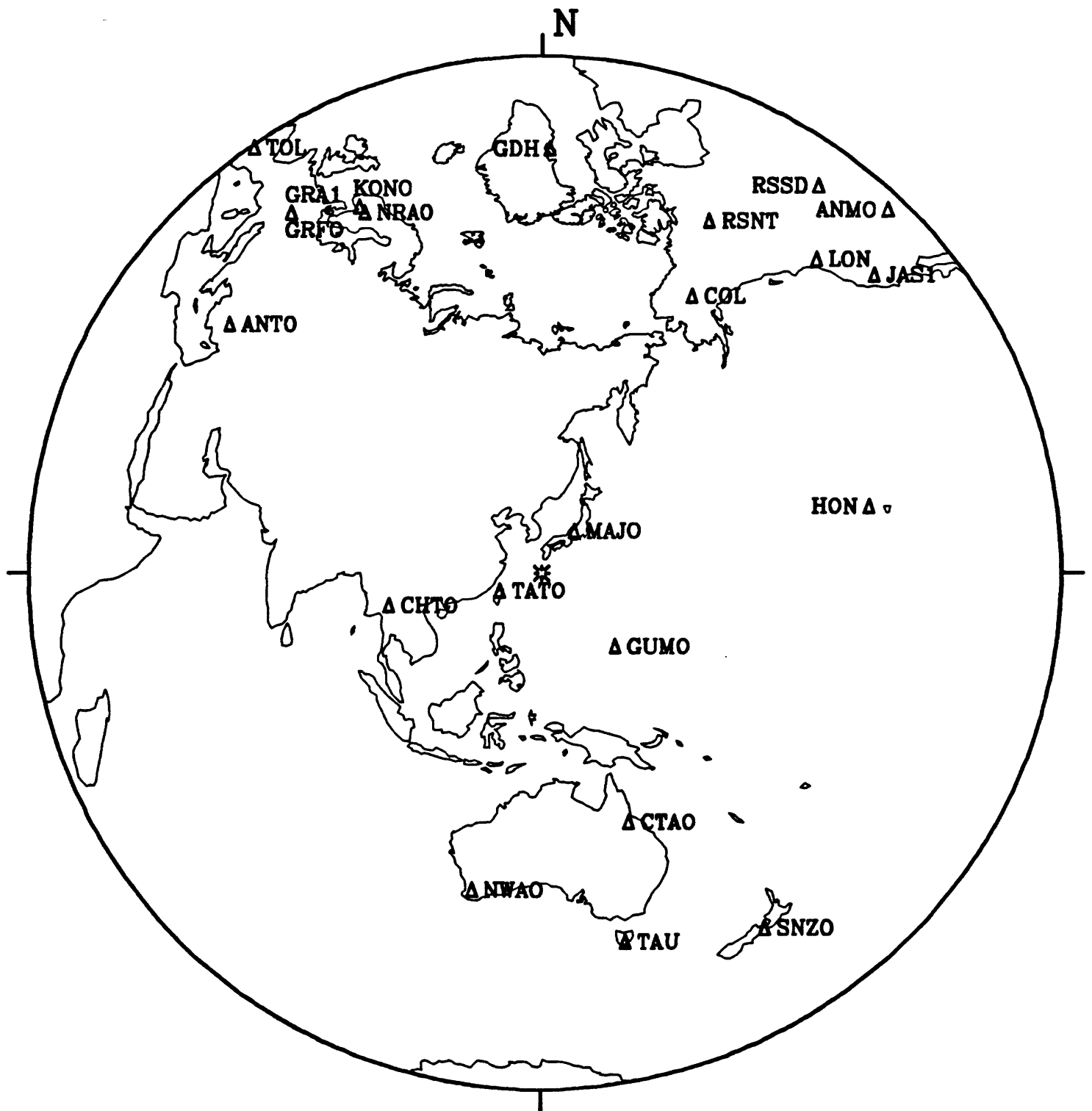
22 March 1986 16:56:50.99

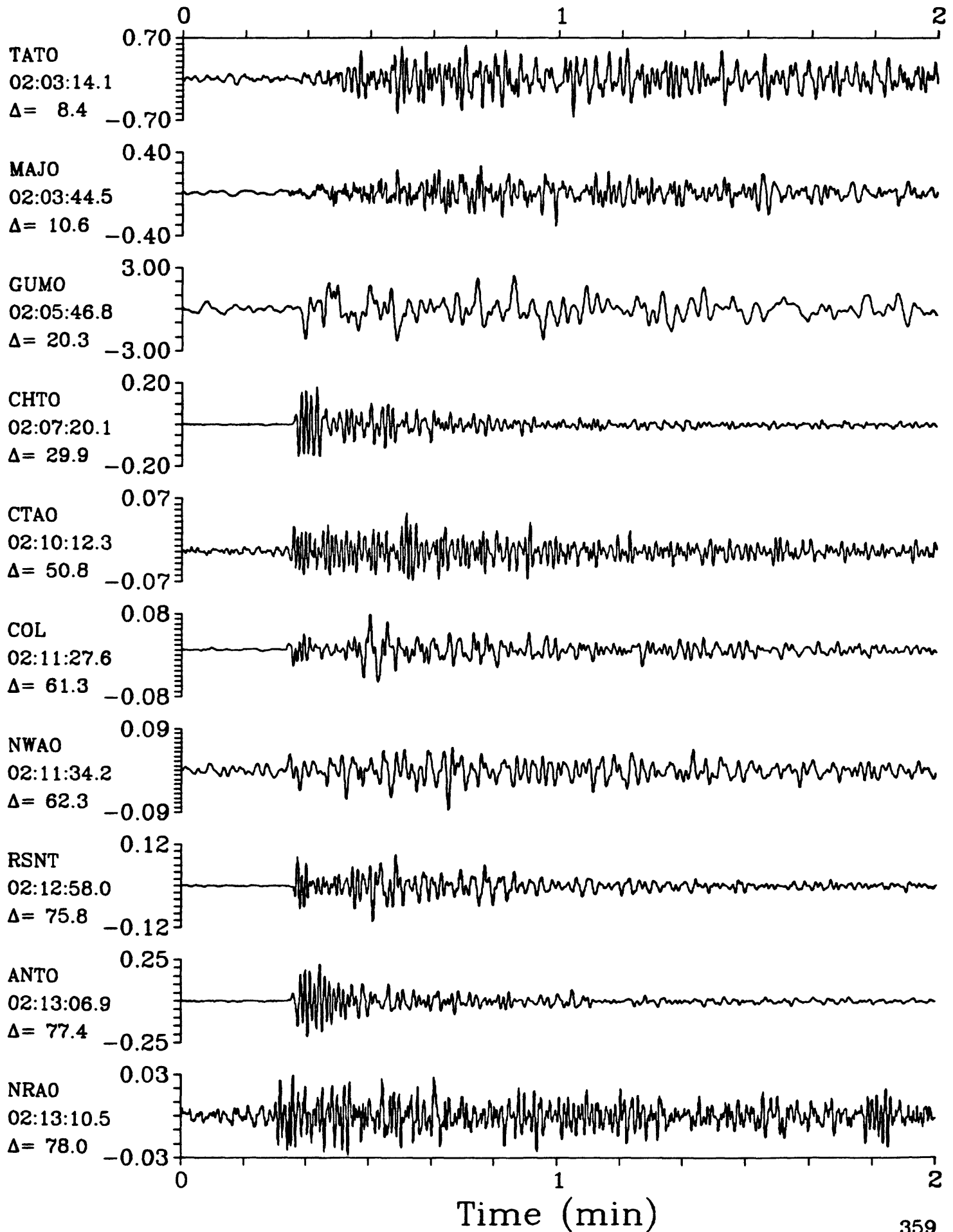
LPZ

Northern Easter I. Cordillera $h=10.0$ $m_b=5.3$ $M_{sz}=5.8$ 

24 March 1986 02:01:29.76

Ryukyu Islands

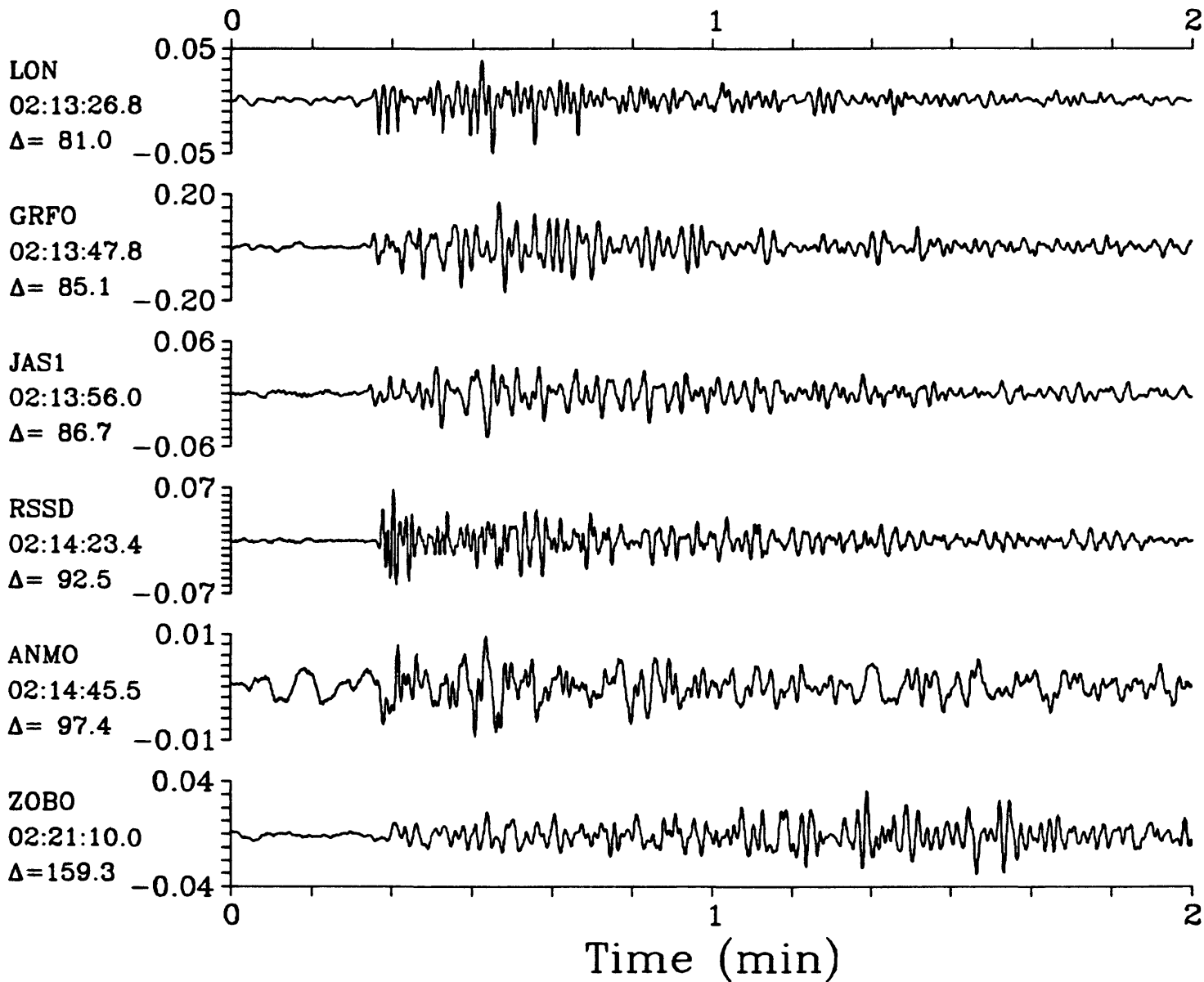


Ryukyu Islands $h=33.0$ $m_b=5.6$ $M_{sz}=5.9$ 

SPZ

24 March 1986 02:01:29.76

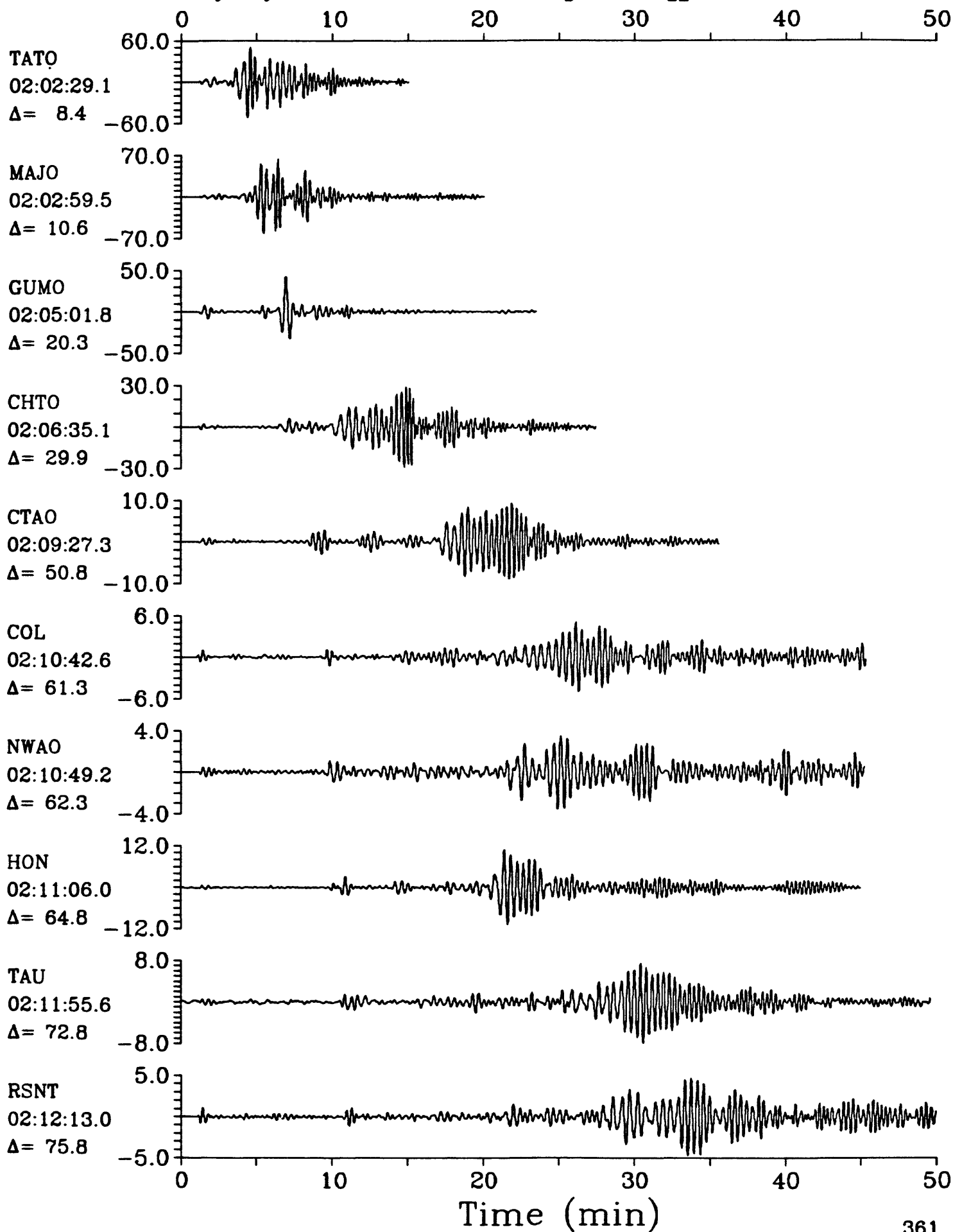
SPZ

Ryukyu Islands $h=33.0$ $m_b=5.6$ $M_{sz}=5.9$ 

LPZ

24 March 1986 02:01:29.76

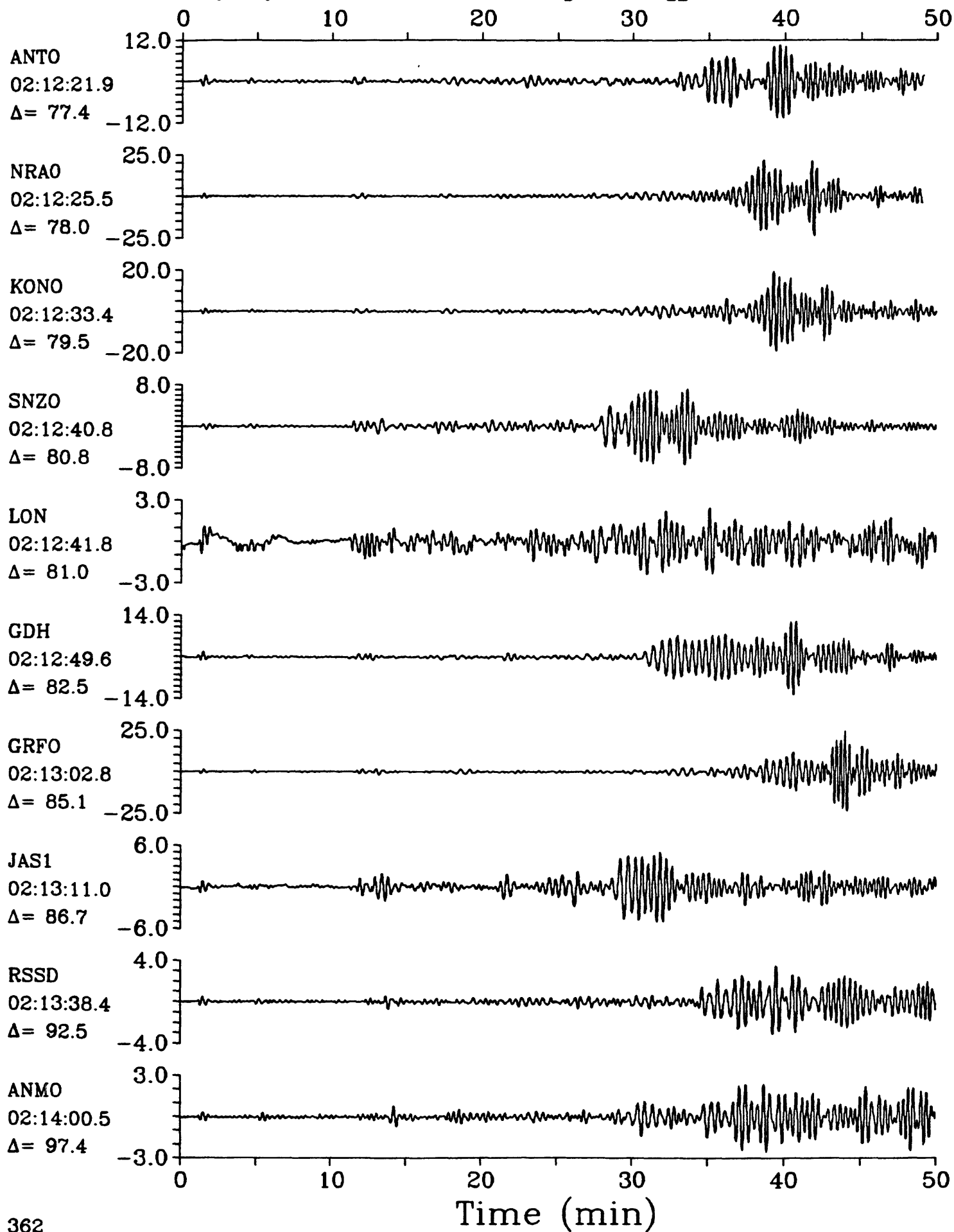
LPZ

Ryukyu Islands $h=33.0$ $m_b=5.6$ $M_{sz}=5.9$ 

LPZ

24 March 1986 02:01:29.76

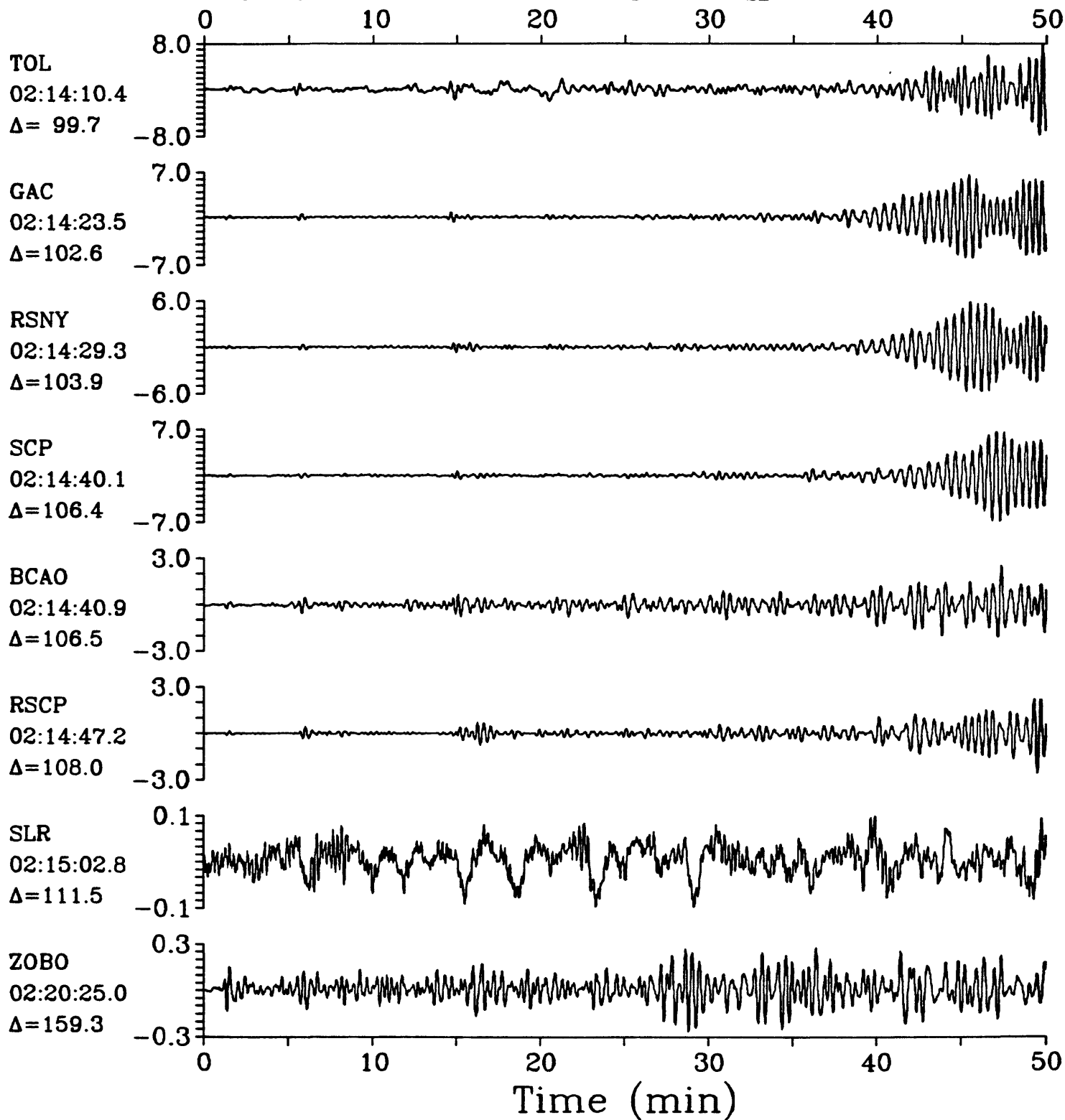
LPZ

Ryukyu Islands $h=33.0$ $m_b=5.6$ $M_{sz}=5.9$ 

LPZ

24 March 1986 02:01:29.76

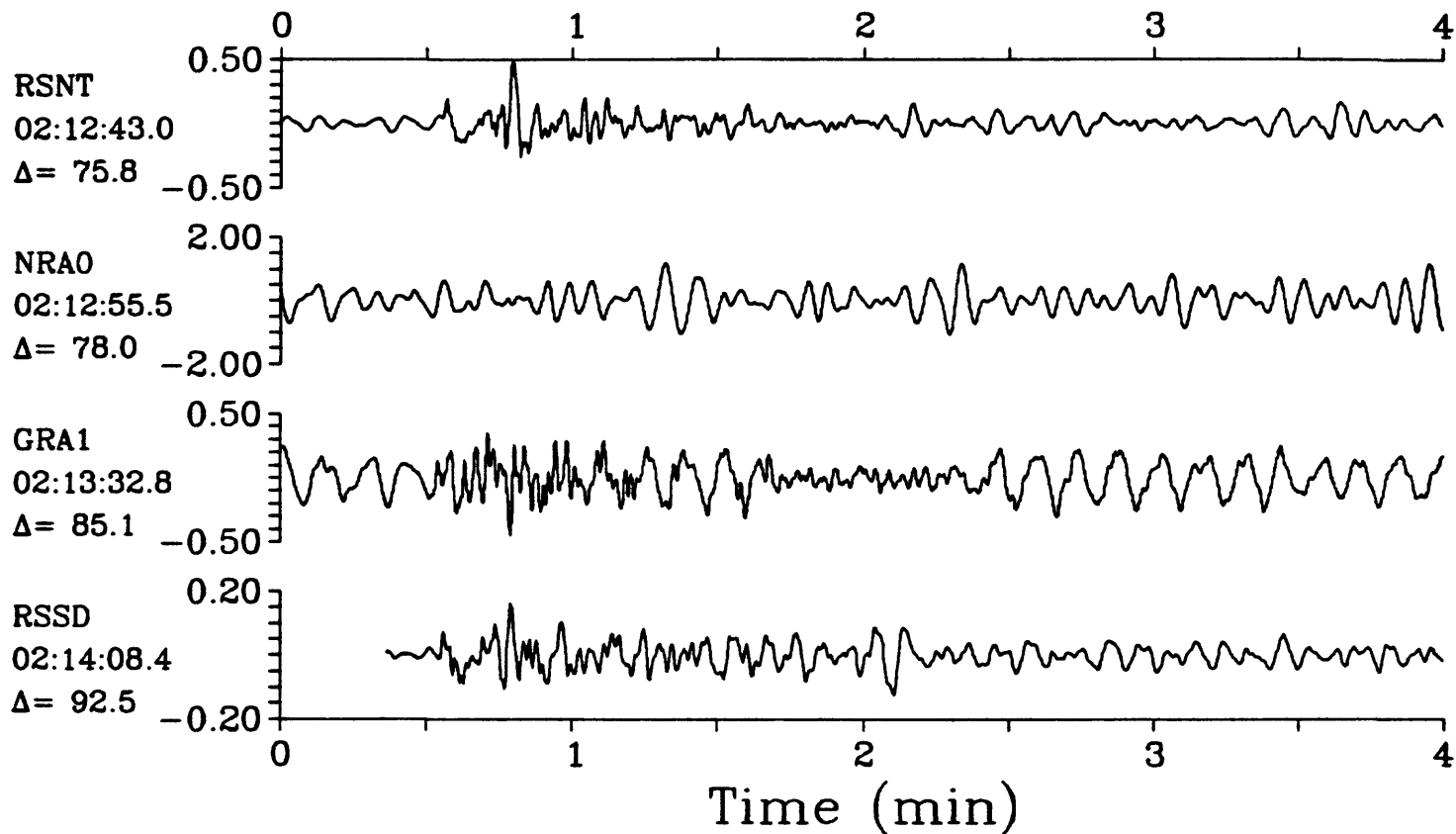
LPZ

Ryukyu Islands $h=33.0$ $m_b=5.6$ $M_{sz}=5.9$ 

IPZ

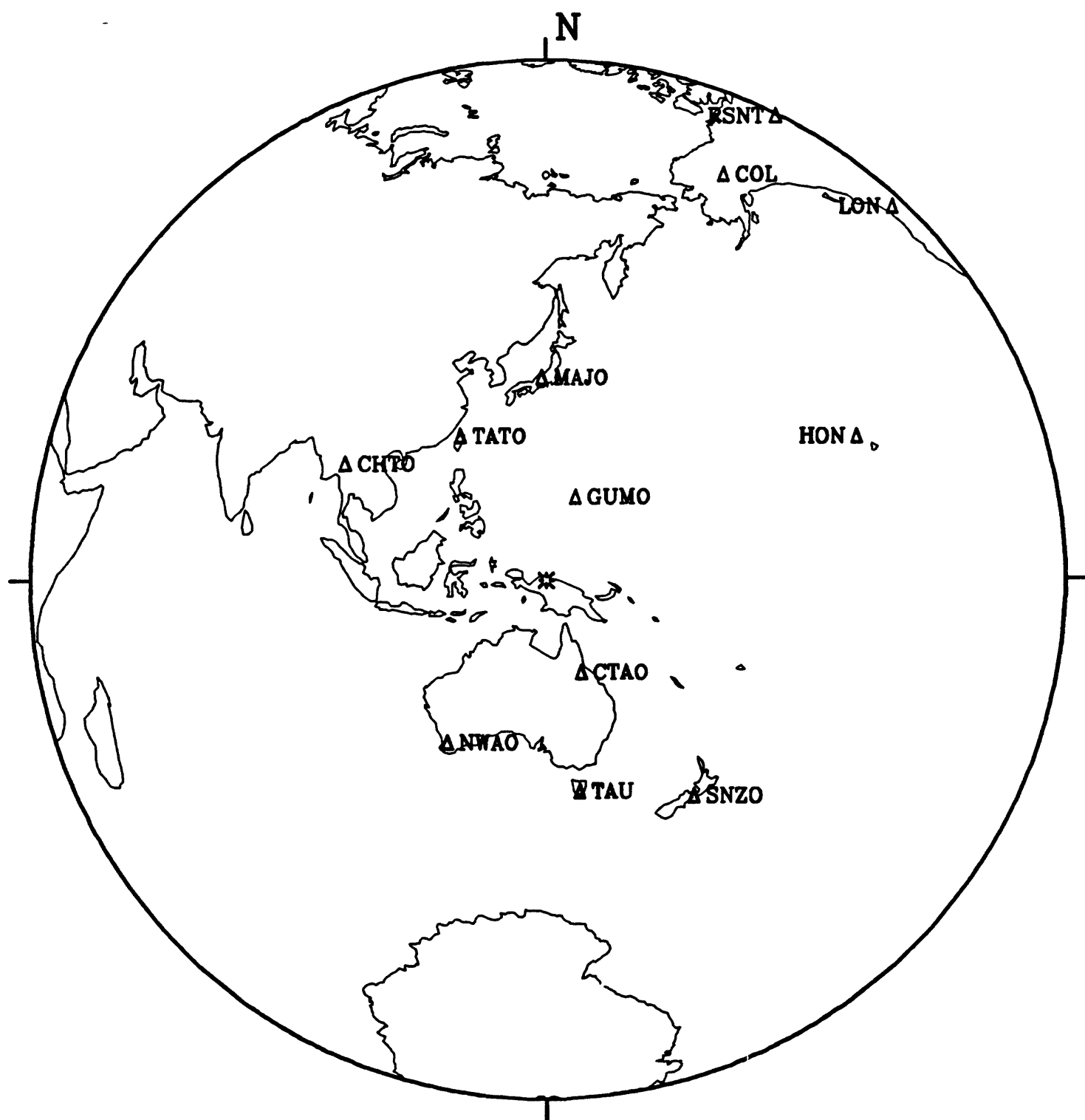
24 March 1986 02:01:29.76

IPZ

Ryukyu Islands $h=33.0$ $m_b=5.6$ $M_{sz}=5.9$ 

24 March 1986 19:31:39.83

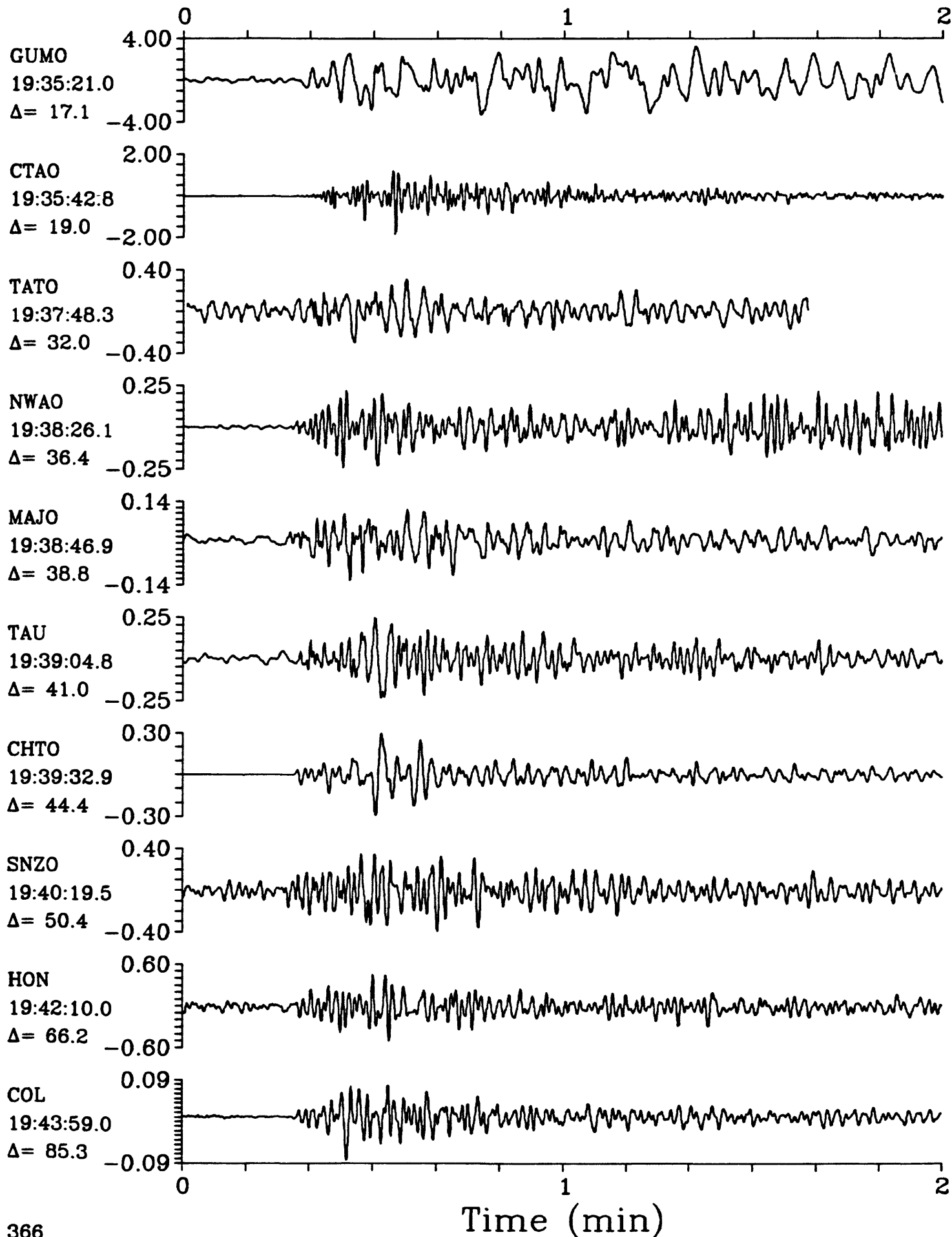
West Irian



SPZ

24 March 1986 19:31:39.83
West Irian $h=33.0$ $m_b=5.8$ $M_{sz}=6.8$

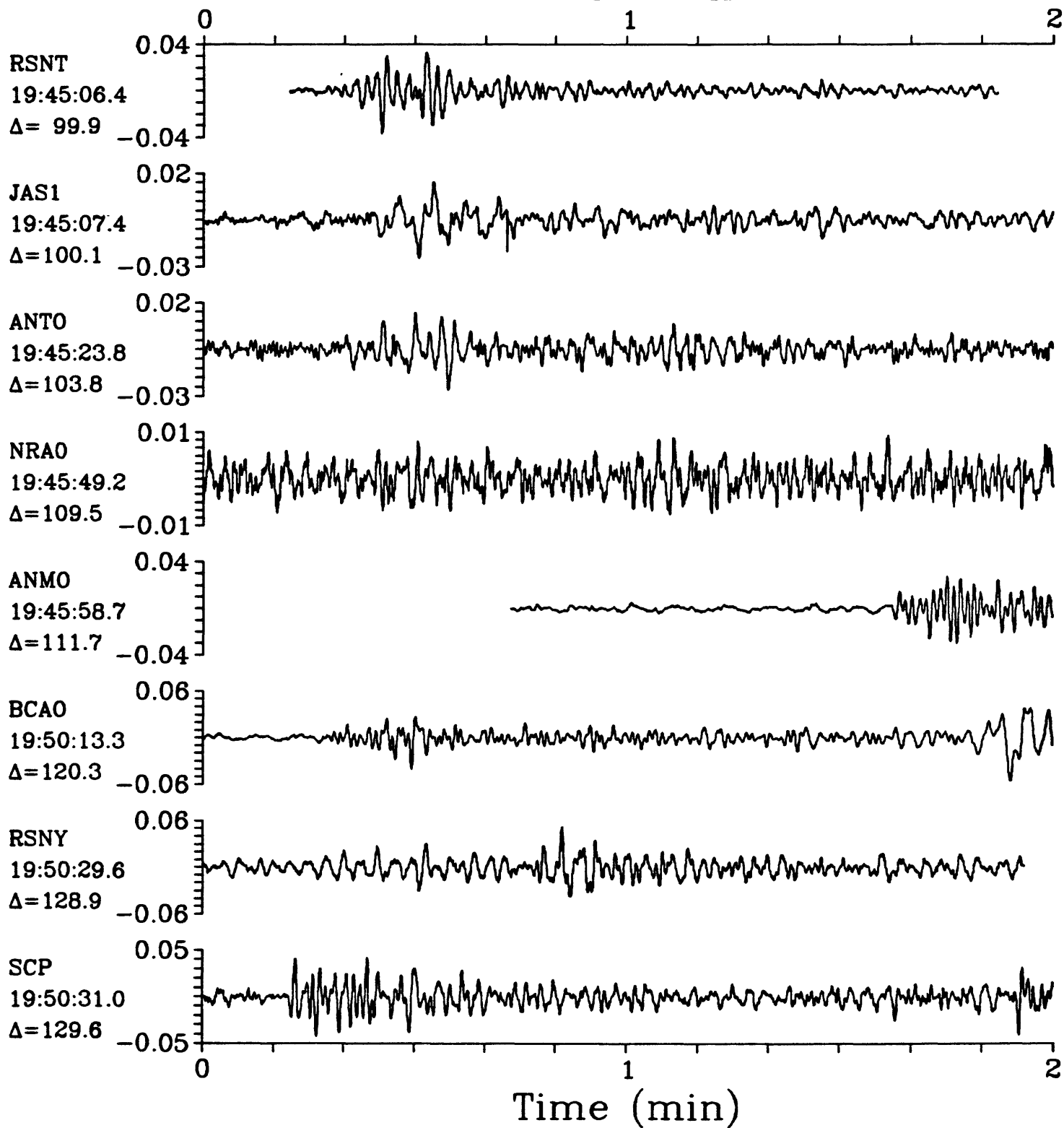
SPZ



SPZ

24 March 1986 19:31:39.83
West Irian $h=33.0$ $m_b=5.8$ $M_{sz}=6.8$

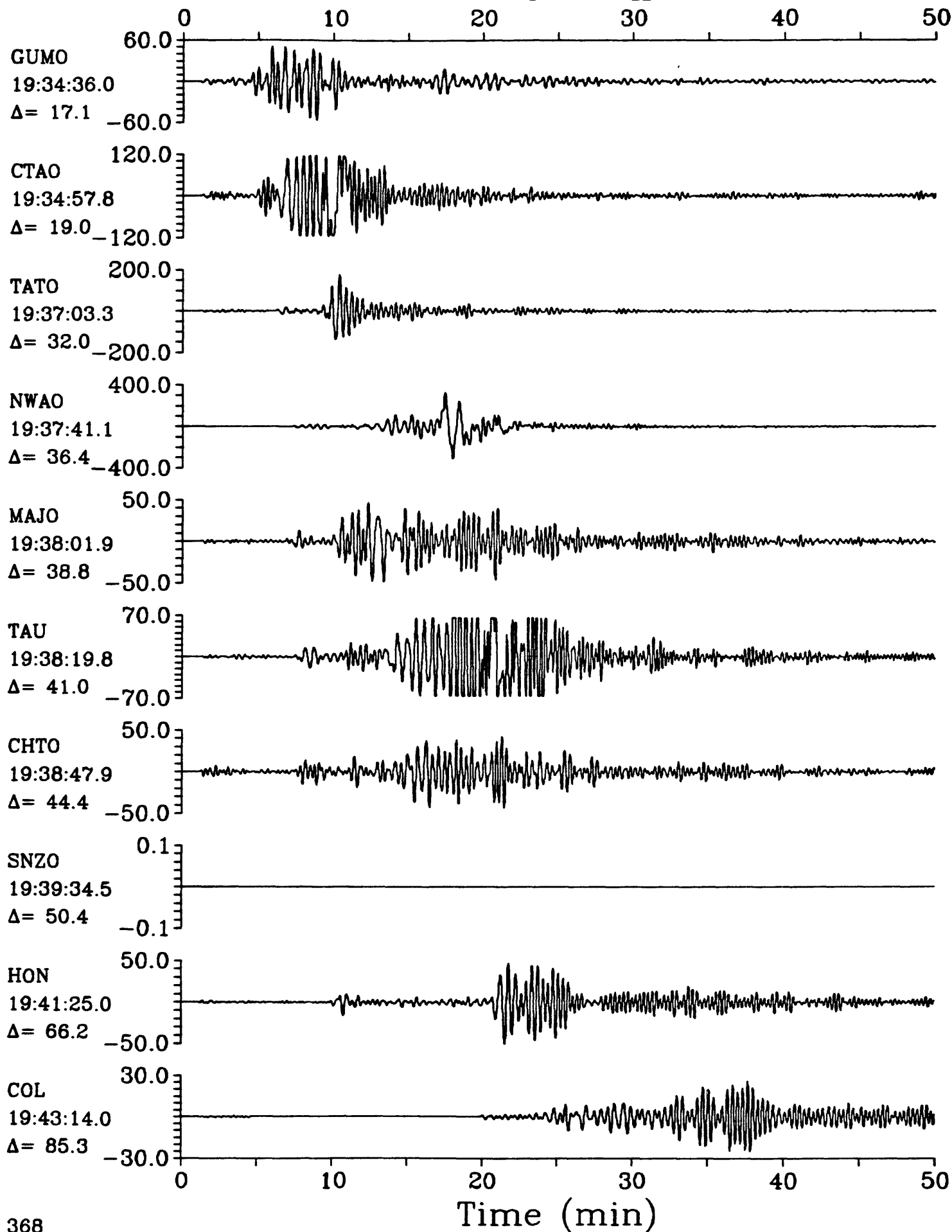
SPZ



LPZ

24 March 1986 19:31:39.83
West Irian $h=33.0$ $m_b=5.8$ $M_{sz}=6.8$

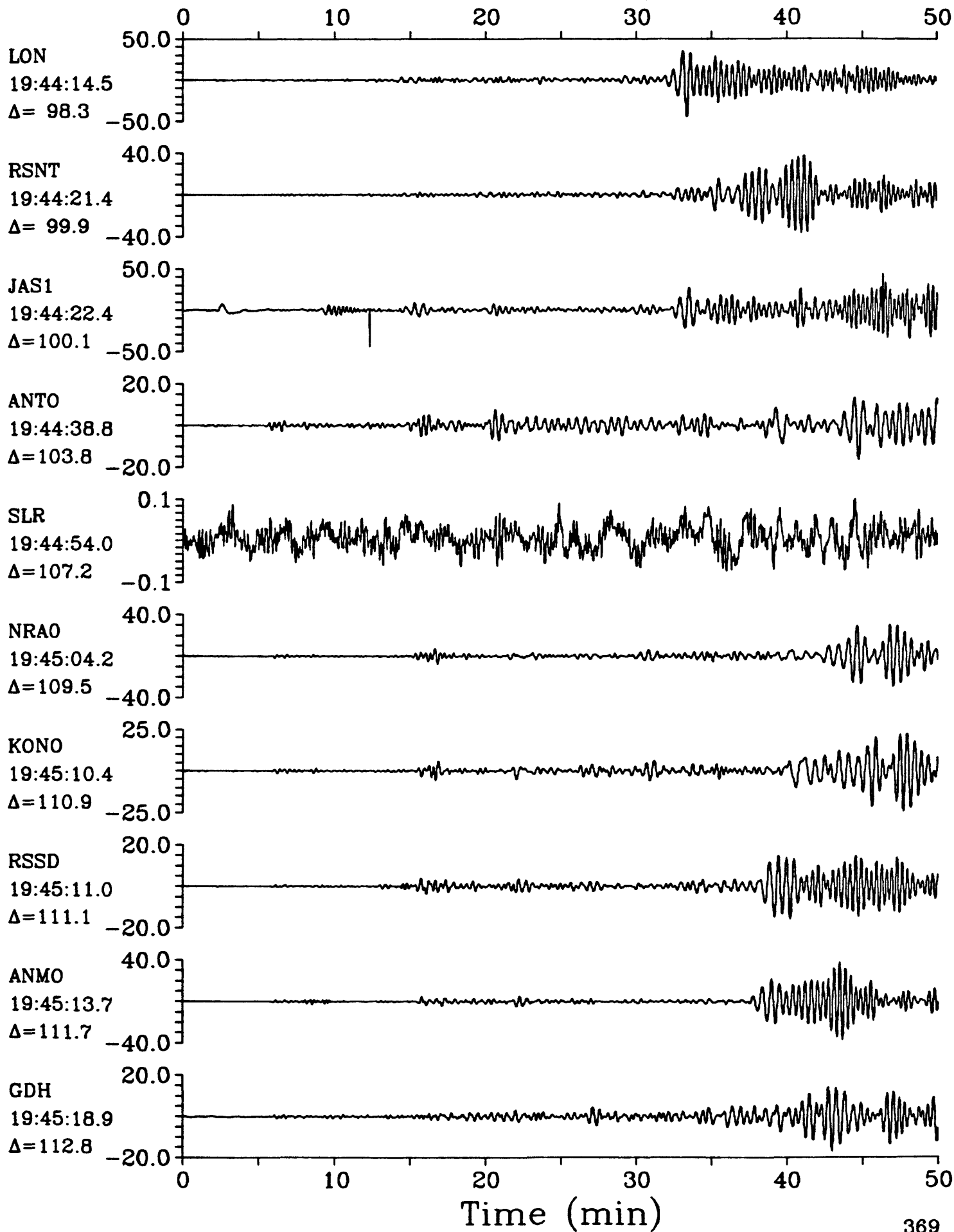
LPZ



LPZ

24 March 1986 19:31:39.83
West Irian $h=33.0$ $m_b=5.8$ $M_{sz}=6.8$

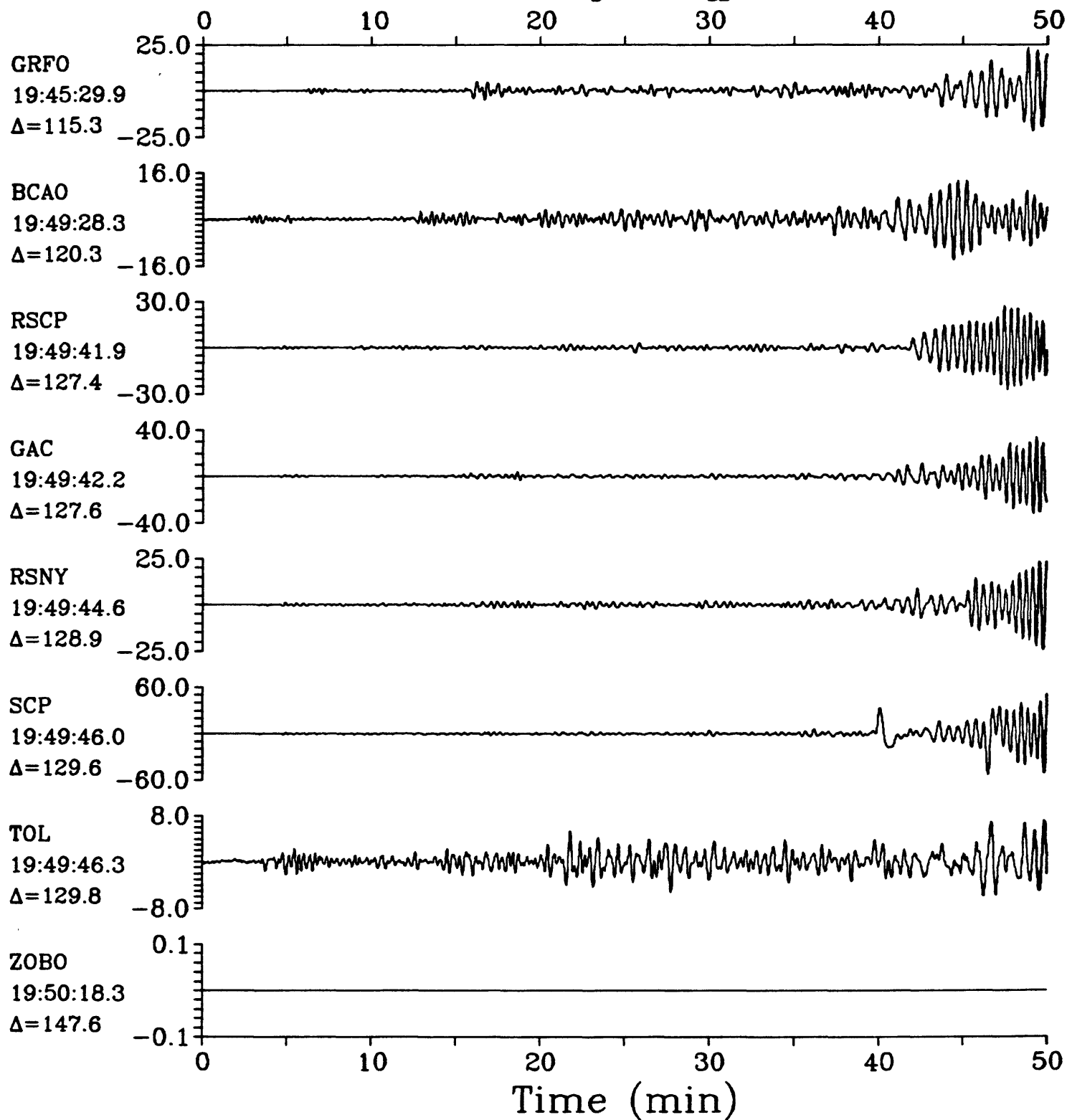
LPZ



LPZ

24 March 1986 19:31:39.83
West Irian $h=33.0$ $m_b=5.8$ $M_{sz}=6.8$

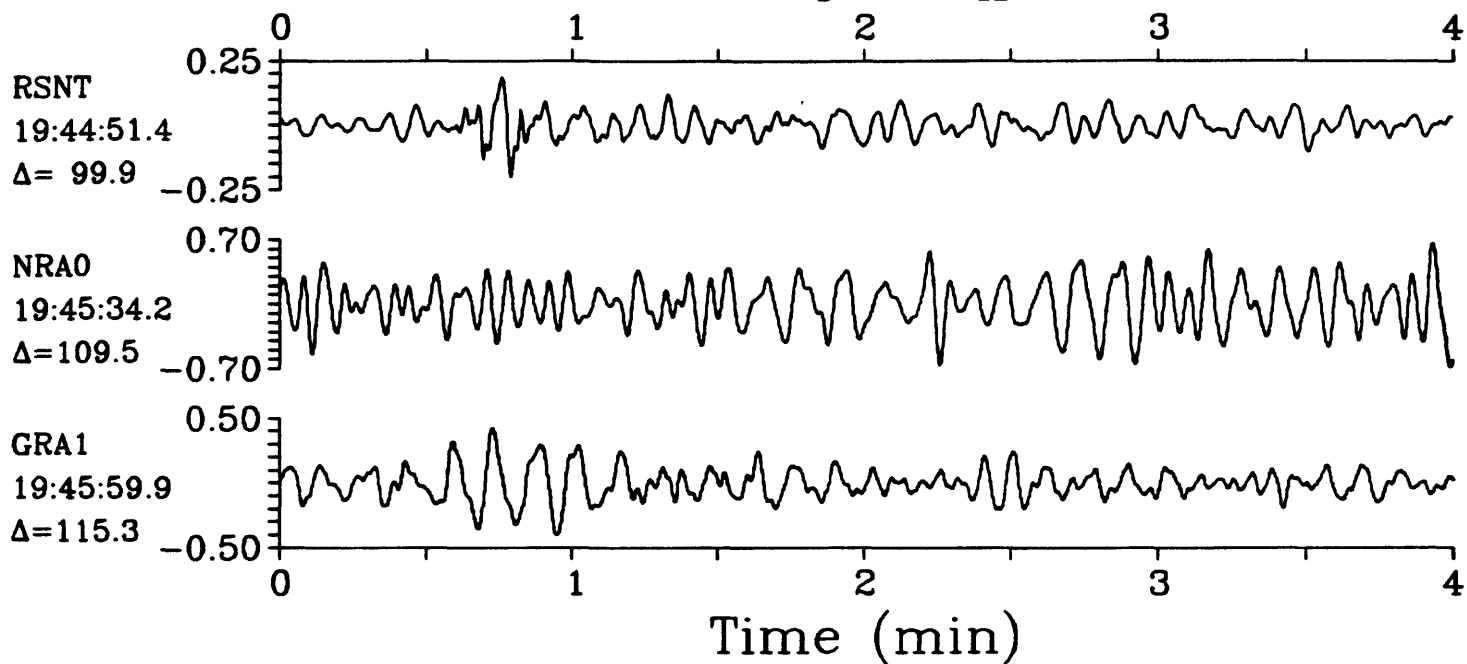
LPZ



IPZ

24 March 1986 19:31:39.83
West Irian $h=33.0$ $m_b=5.8$ $M_{sz}=6.8$

IPZ



24 March 1986 19:43:23.41

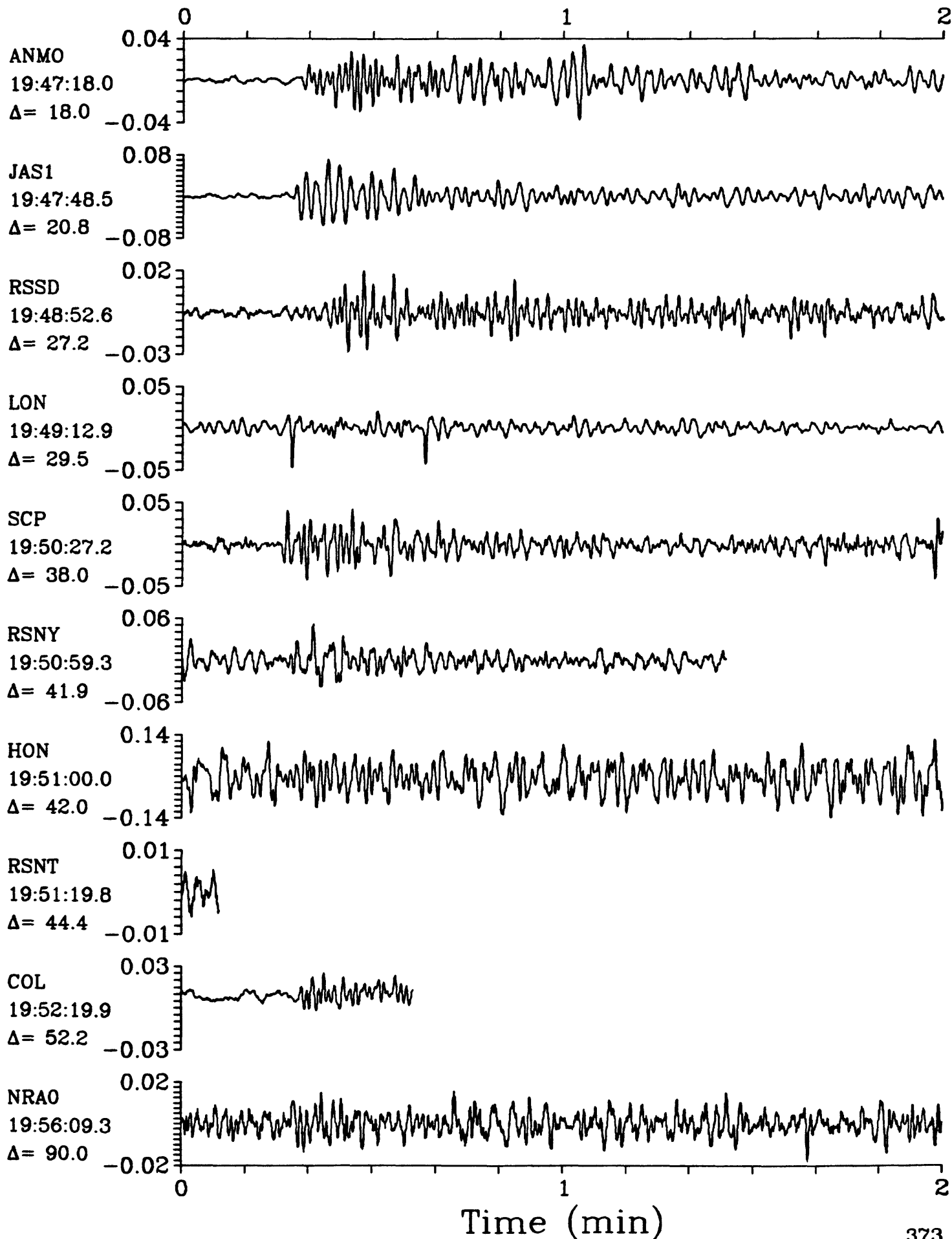
Revilla Gigedo Islands Region



SPZ

24 March 1986 19:43:23.41

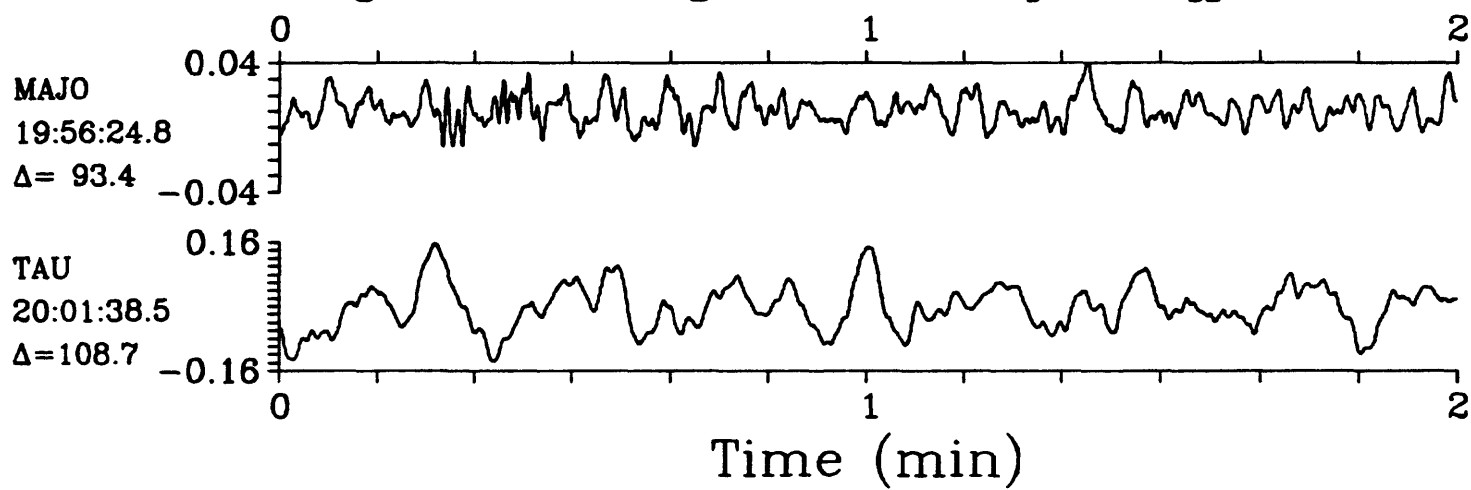
SPZ

Revilla Ggedo Islands Region $h=10.0$ $m_b=5.0$ $M_{sz}=5.7$ 

SPZ

24 March 1986 19:43:23.41

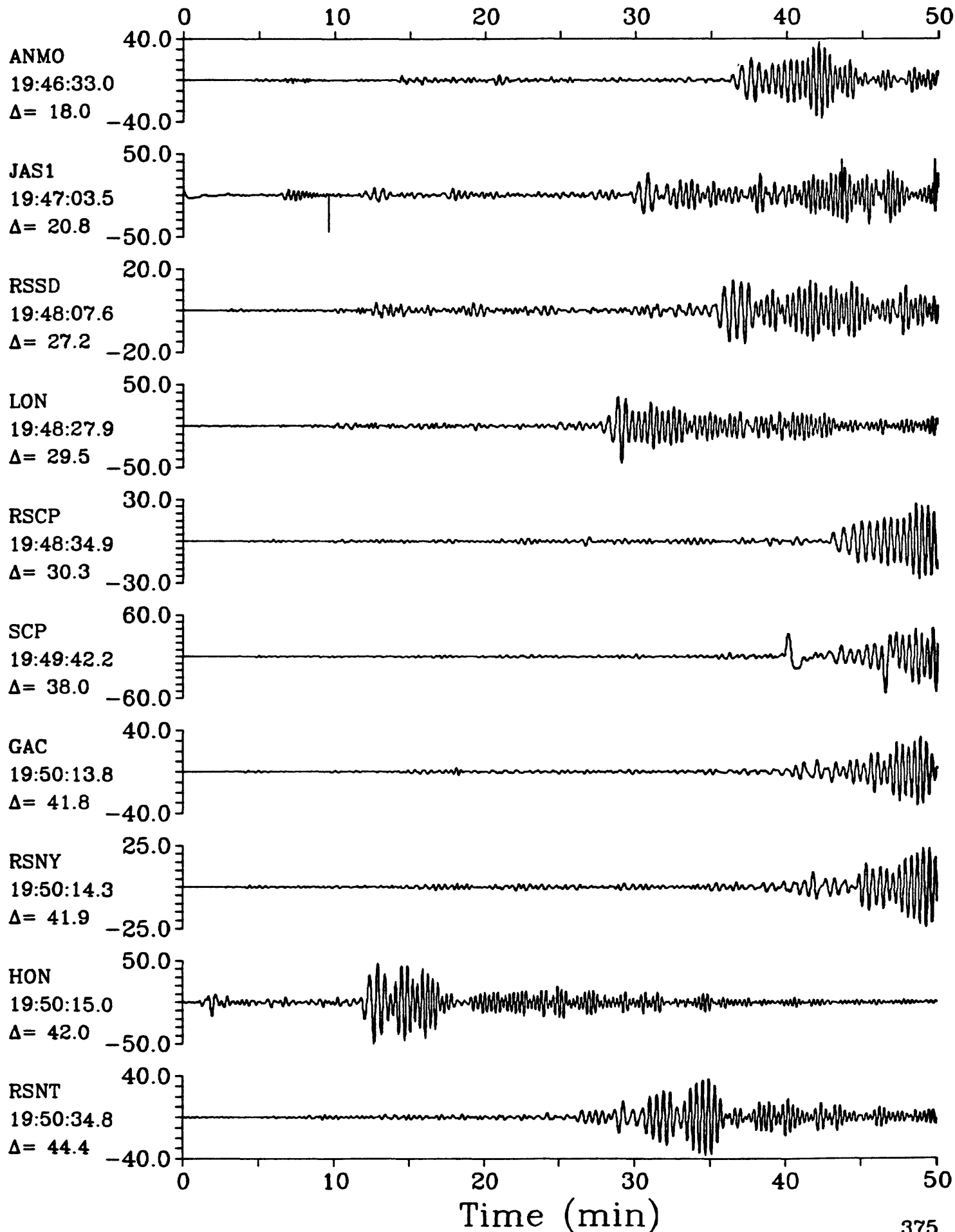
SPZ

Revilla Gigedo Islands Region $h=10.0$ $m_b=5.0$ $M_{sz}=5.7$ 

LPZ

24 March 1986 19:43:23.41

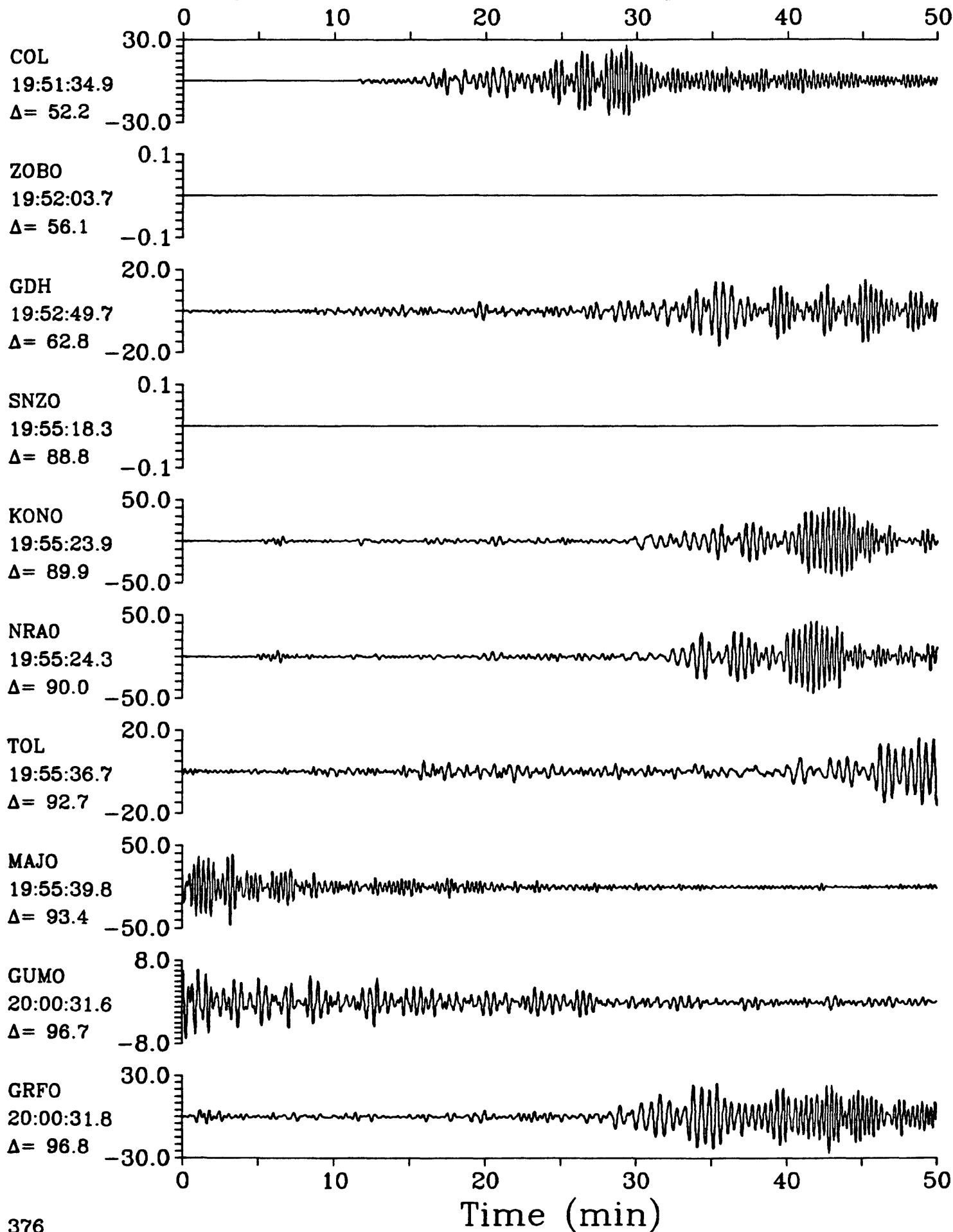
LPZ

Revilla Gigedo Islands Region $h=10.0$ $m_b=5.0$ $M_{sz}=5.7$ 

LPZ

24 March 1986 19:43:23.41

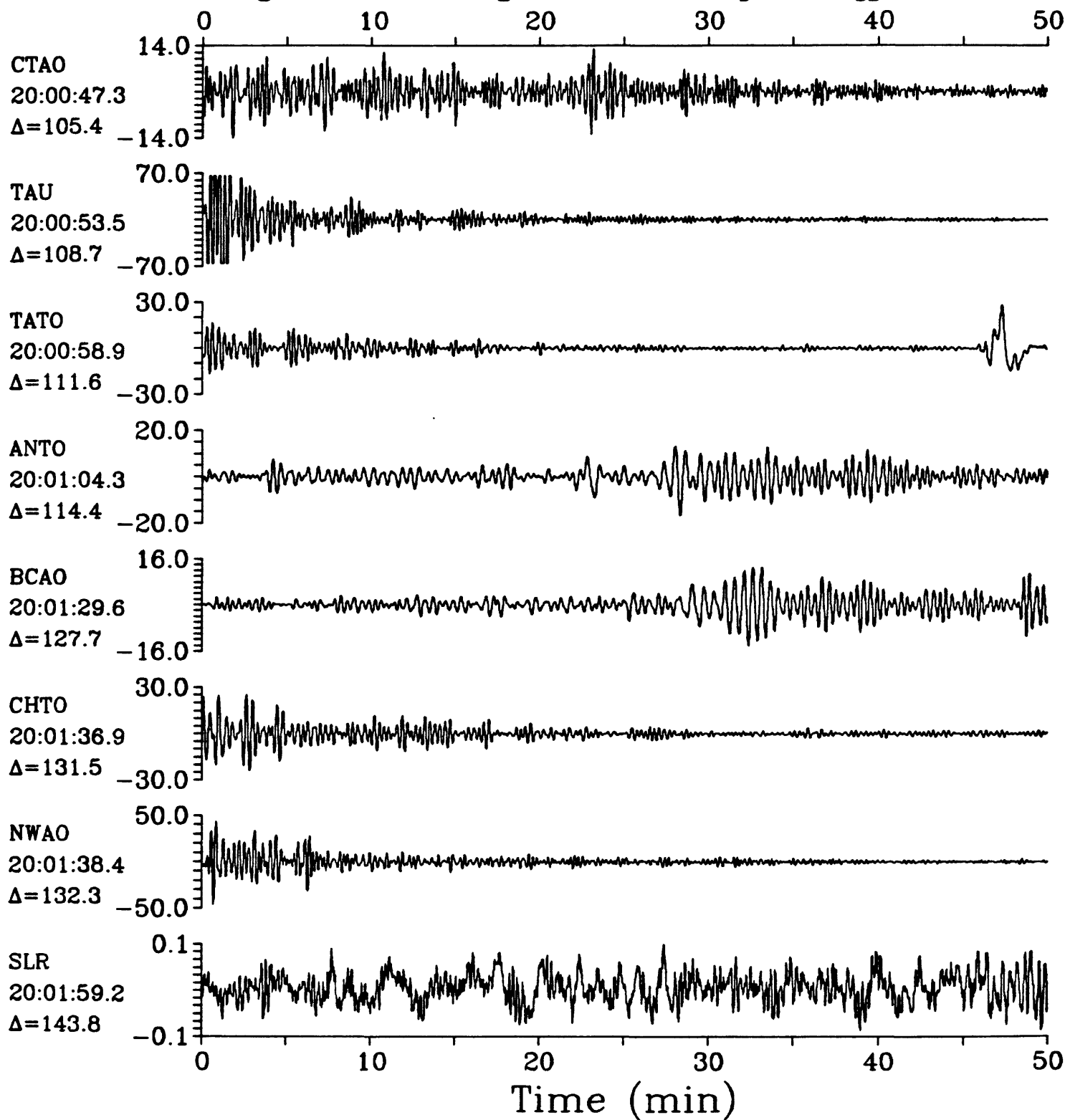
LPZ

Revilla Gigedo Islands Region $h=10.0$ $m_b=5.0$ $M_{sz}=5.7$ 

LPZ

24 March 1986 19:43:23.41

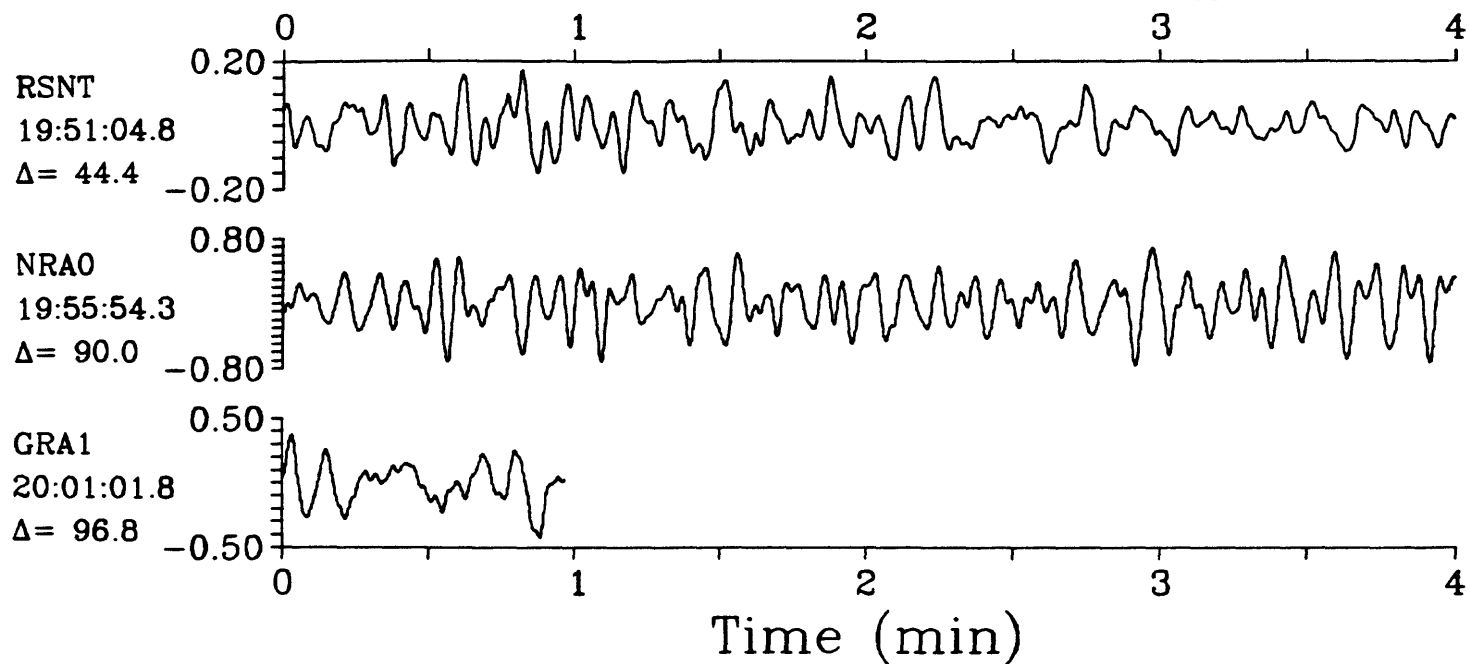
LPZ

Revilla Gigedo Islands Region $h=10.0$ $m_b=5.0$ $M_{sz}=5.7$ 

IPZ

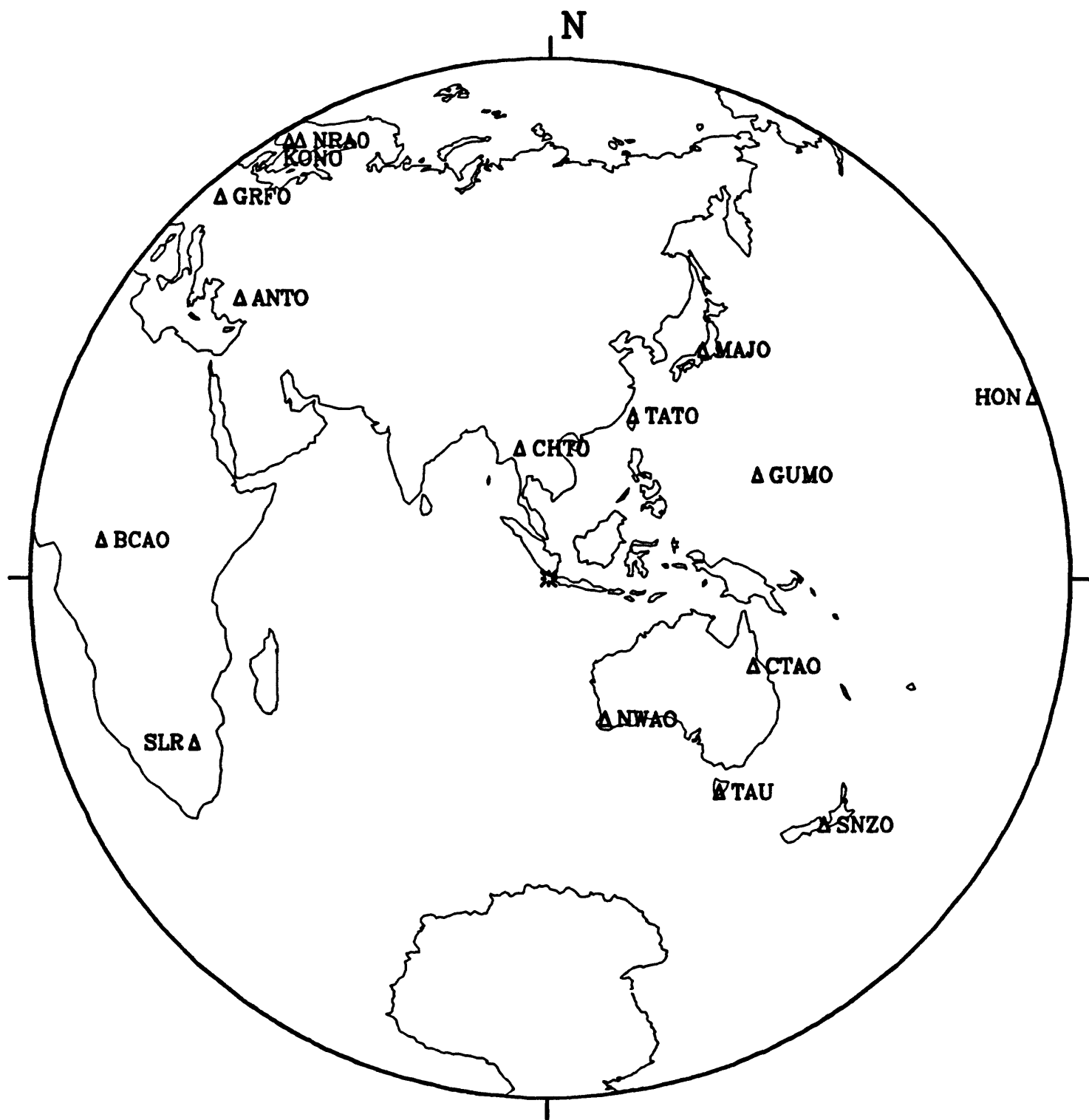
24 March 1986 19:43:23.41

IPZ

Revilla Gigedo Islands Region $h=10.0$ $m_b=5.0$ $M_{sz}=5.7$ 

25 March 1986 17:10:57.71

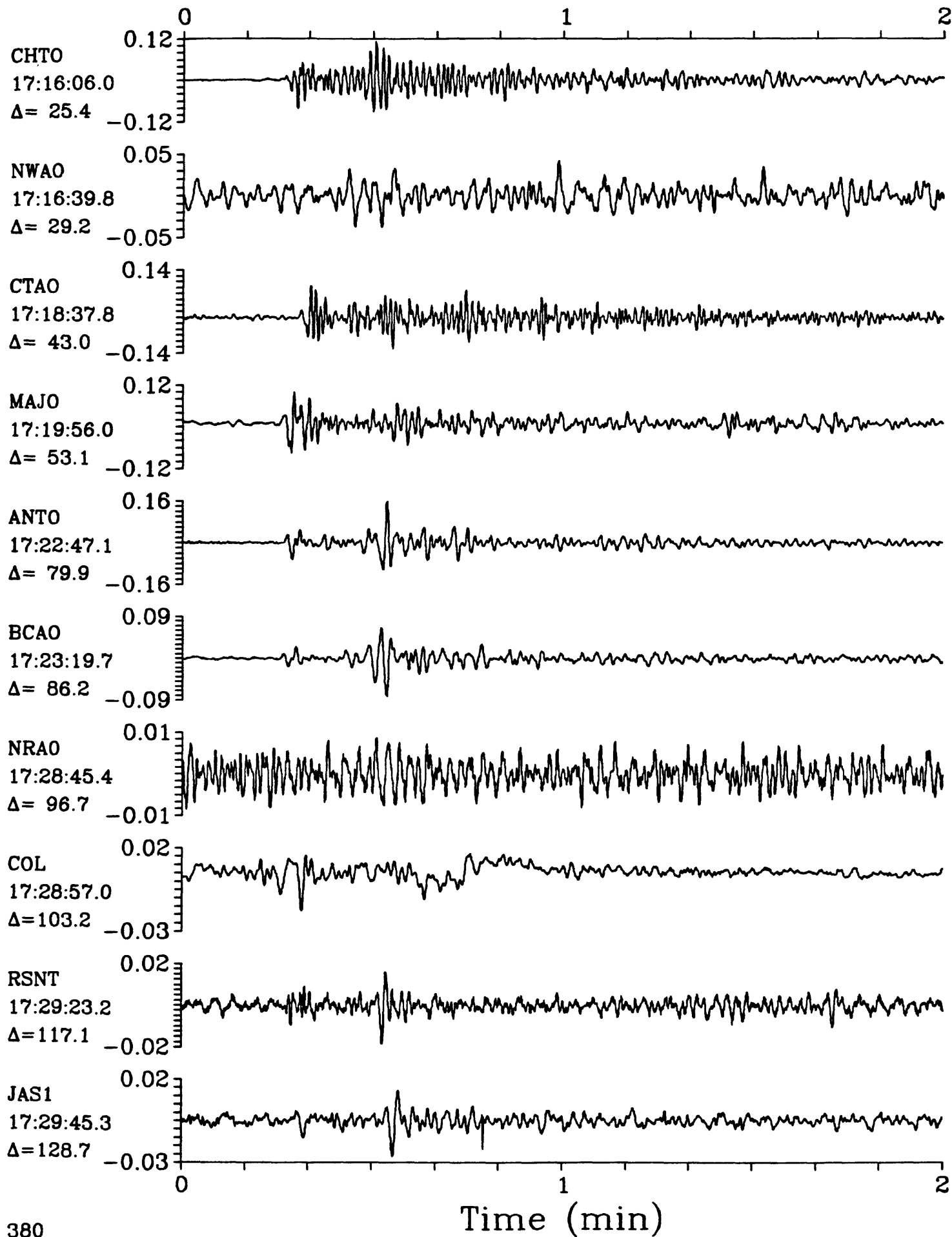
Sunda Strait



SPZ

25 March 1986 17:10:57.71
Sunda Strait $h=47.9$ $m_b=5.6$ $M_{sz}=5.6$

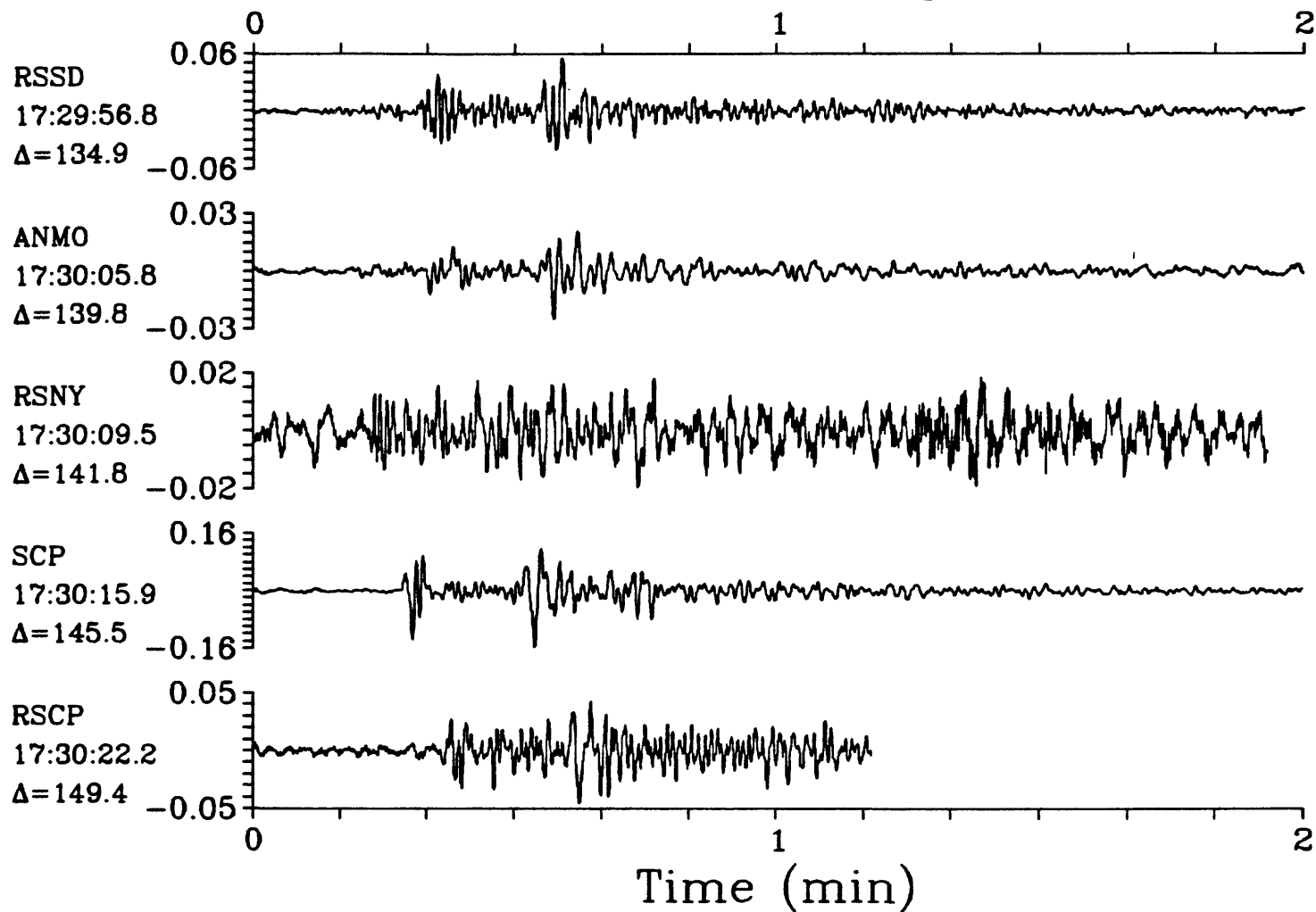
SPZ



SPZ

25 March 1986 17:10:57.71
Sunda Strait $h=47.9$ $m_b=5.6$ $M_{sz}=5.6$

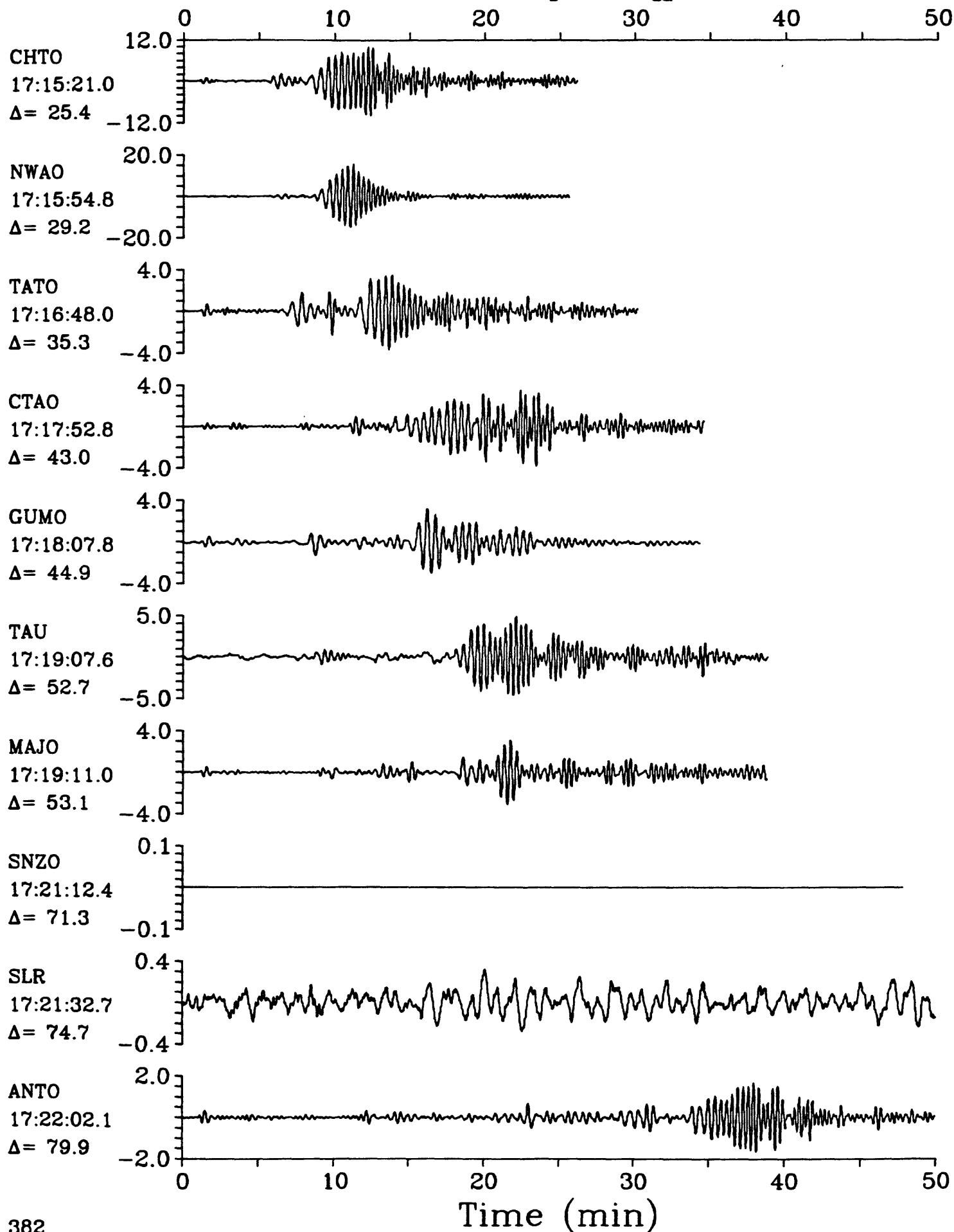
SPZ



LPZ

25 March 1986 17:10:57.71
Sunda Strait $h=47.9$ $m_b=5.6$ $M_{sz}=5.6$

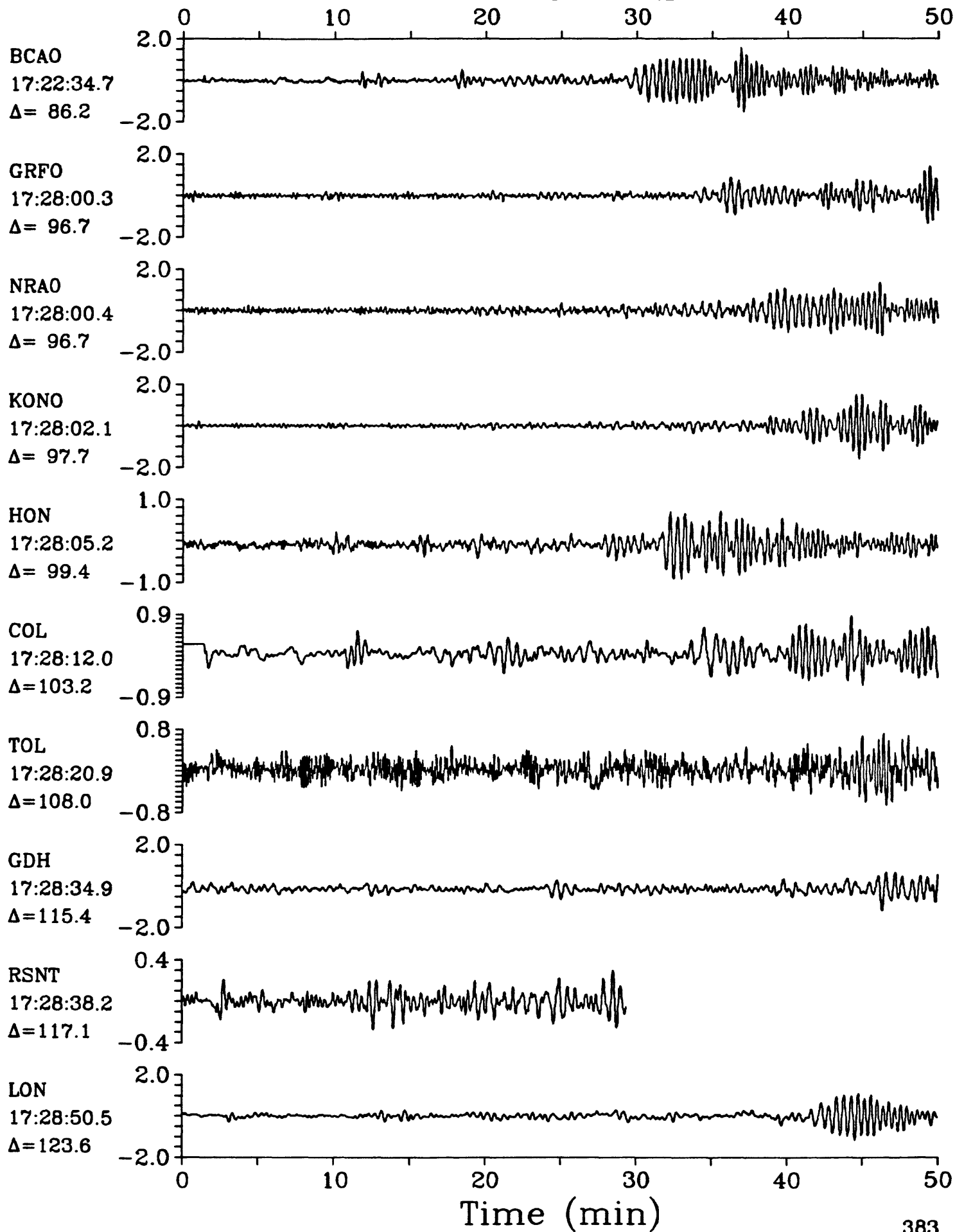
LPZ



LPZ

25 March 1986 17:10:57.71
Sunda Strait $h=47.9$ $m_b=5.6$ $M_{sz}=5.6$

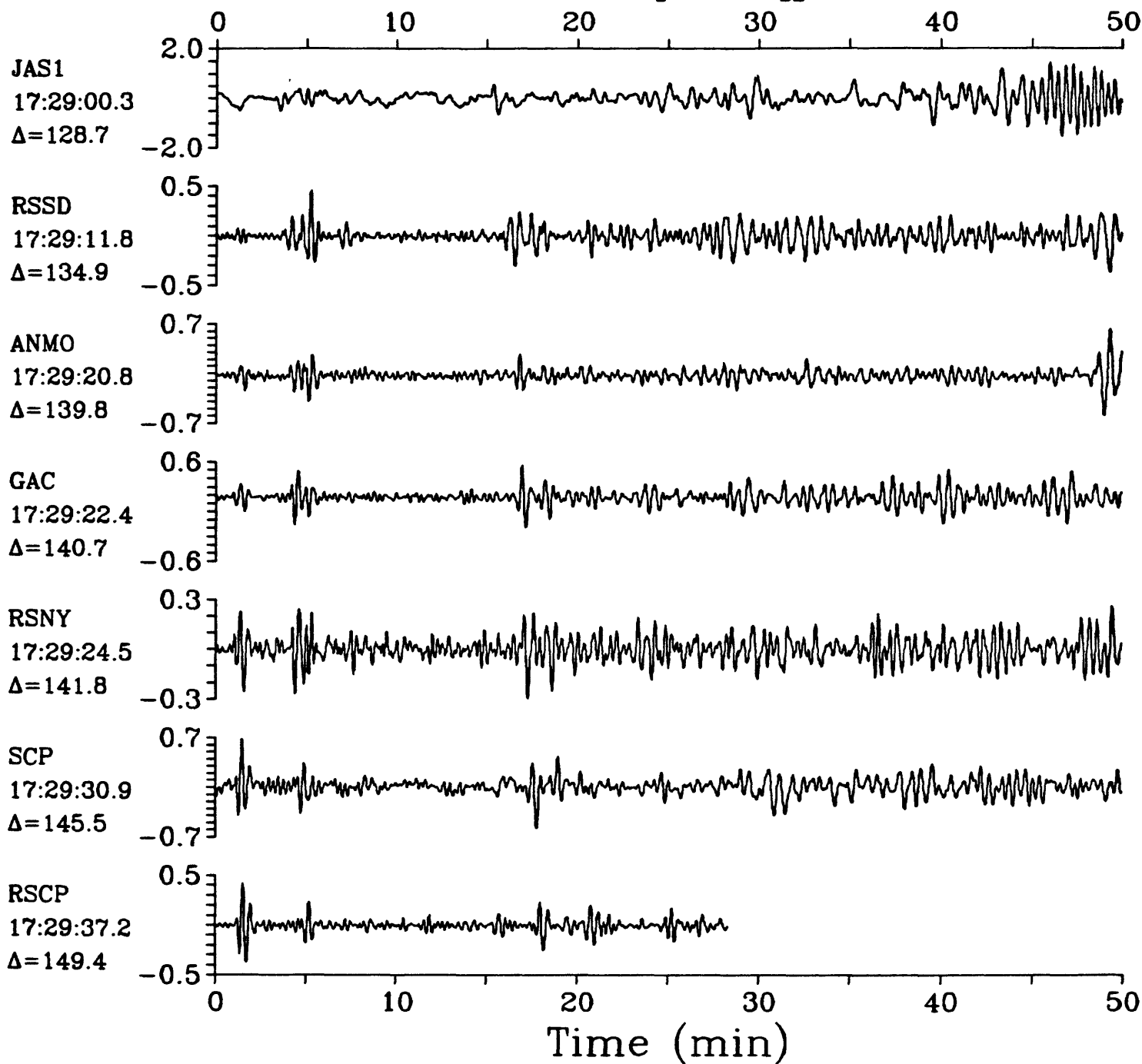
LPZ



LPZ

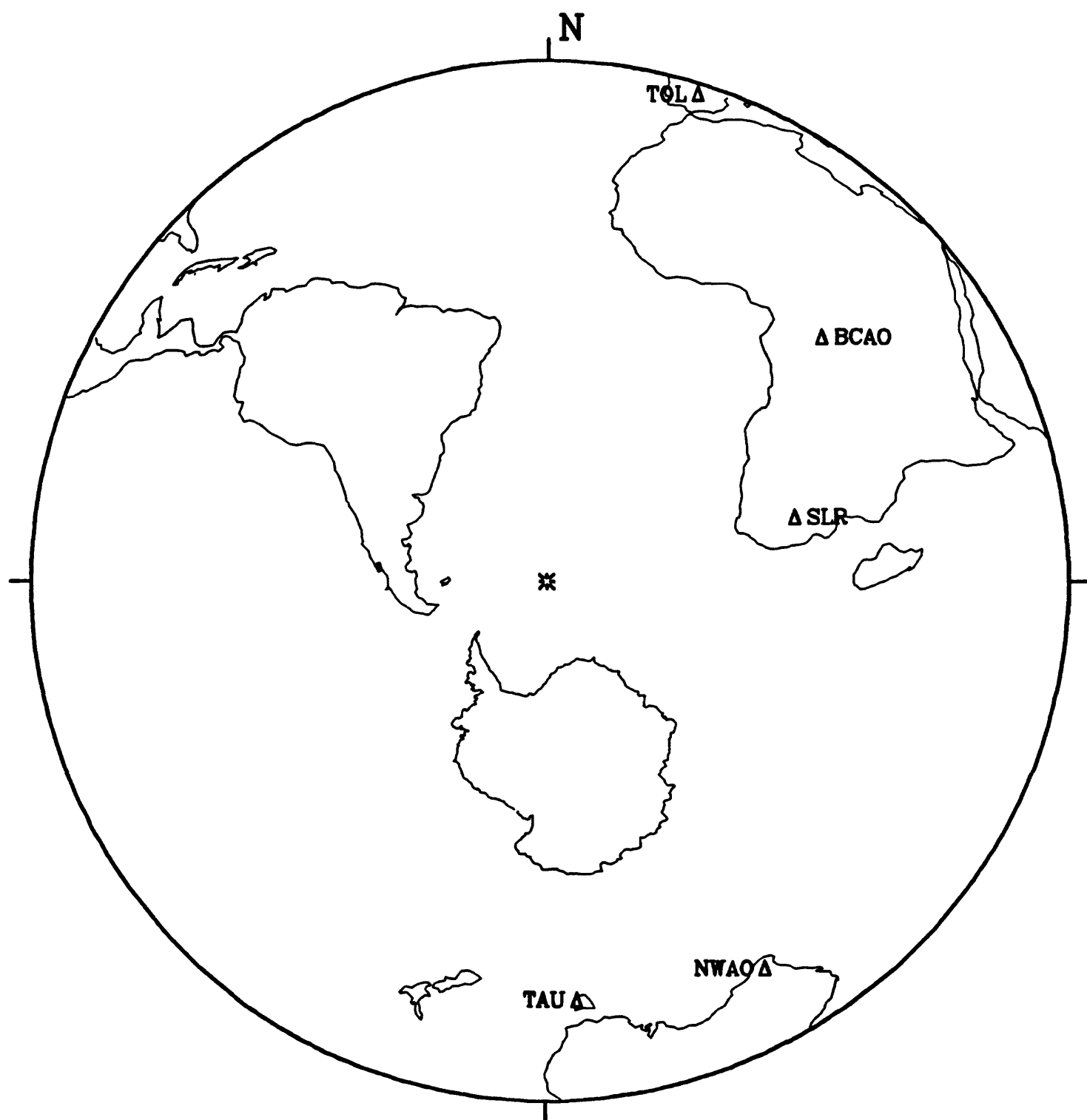
25 March 1986 17:10:57.71
Sunda Strait $h=47.9$ $m_b=5.6$ $M_{sz}=5.6$

LPZ



26 March 1986 21:49:56.91

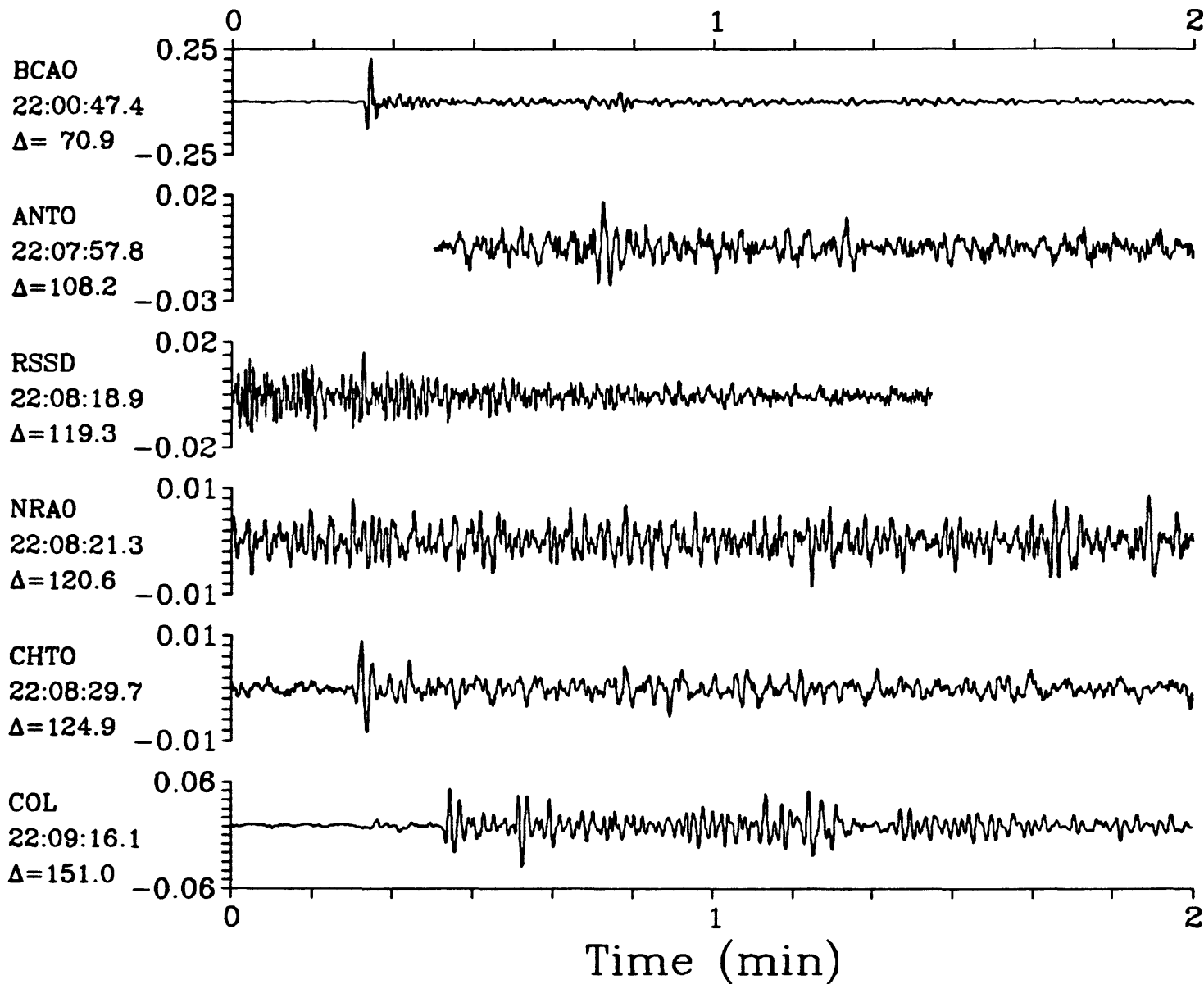
South Sandwich Islands Region



SPZ

26 March 1986 21:49:56.91

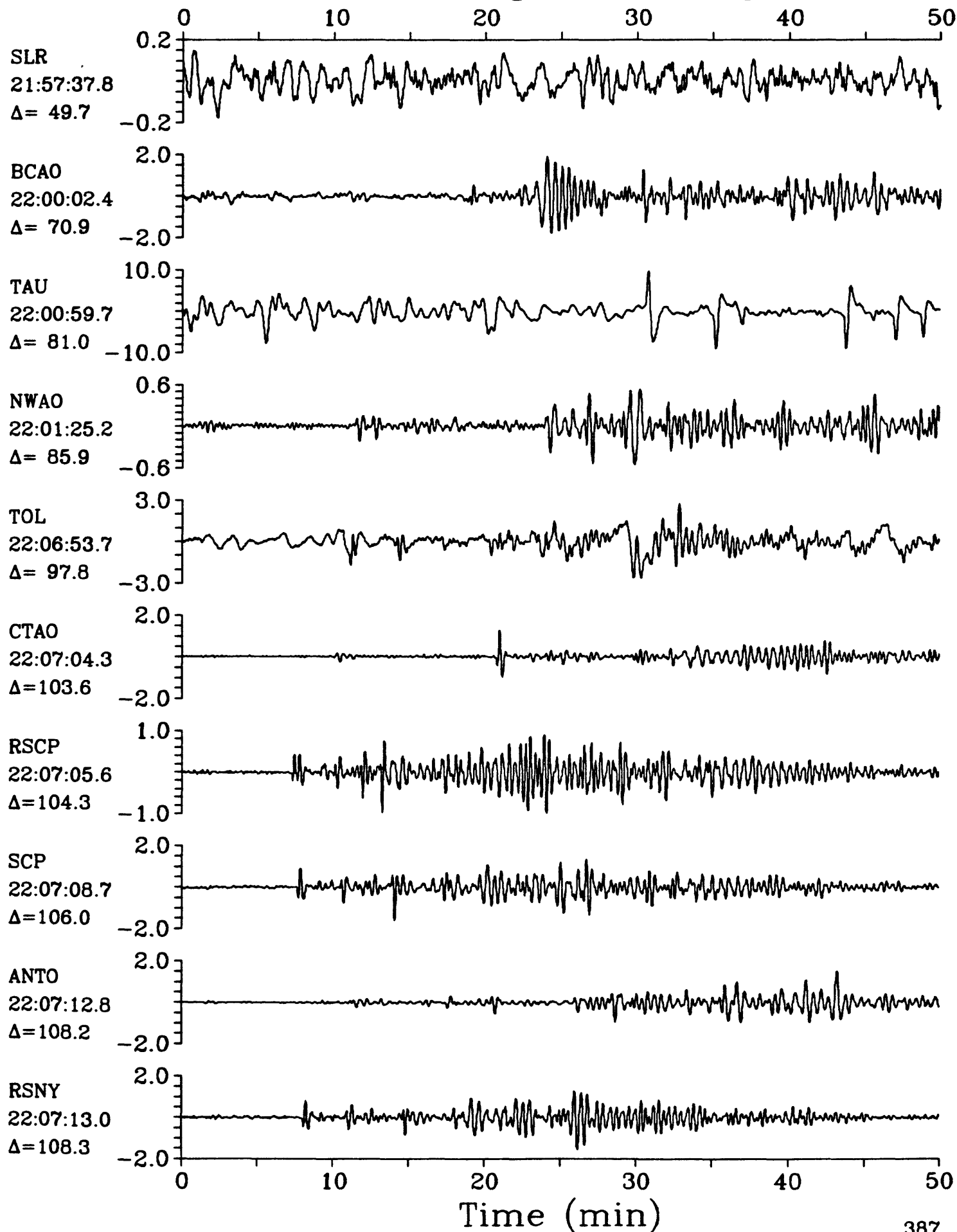
SPZ

South Sandwich Islands Region $h=110.1$ $m_b=5.7$ 

LPZ

26 March 1986 21:49:56.91

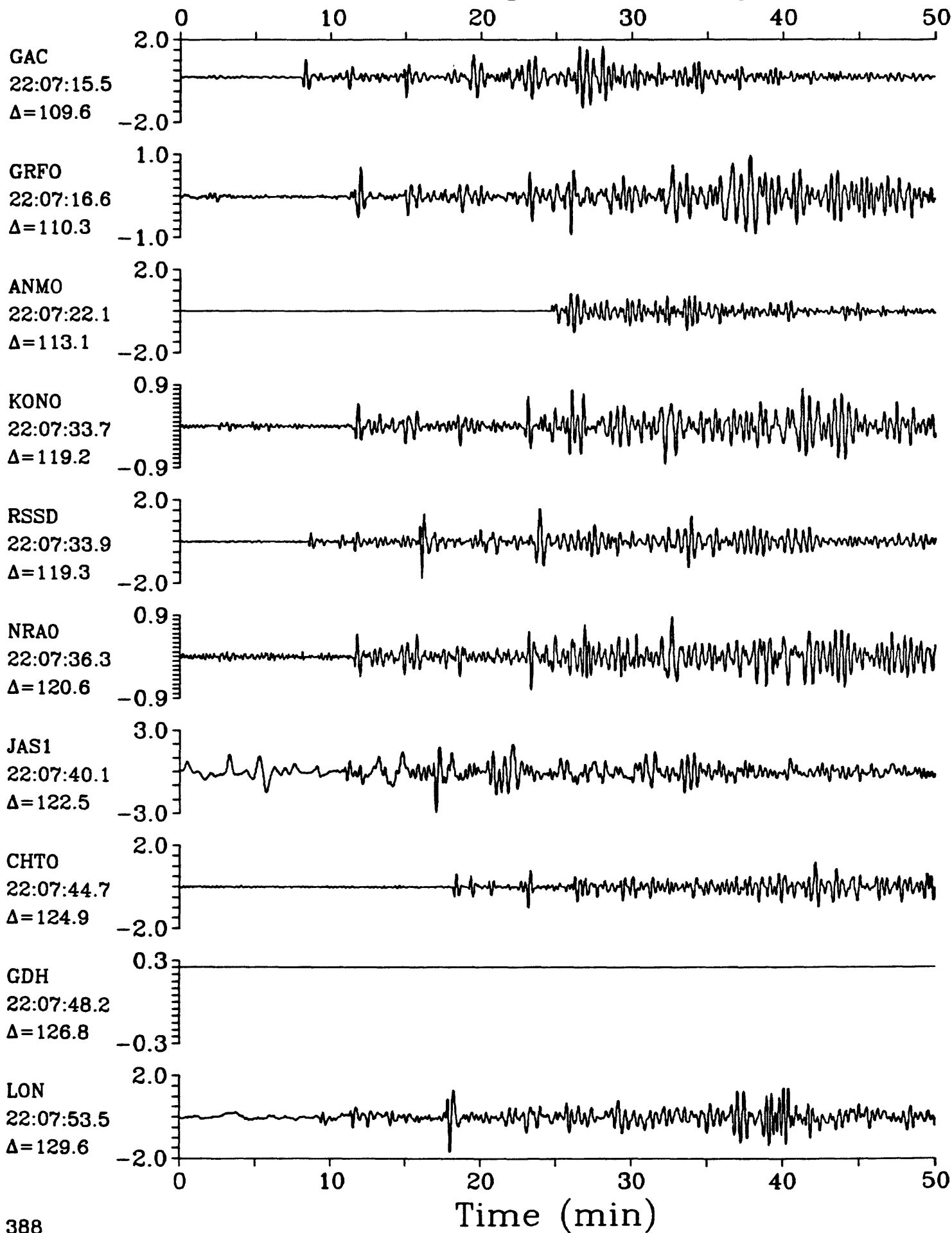
LPZ

South Sandwich Islands Region $h=110.1$ $m_b=5.7$ 

LPZ

26 March 1986 21:49:56.91

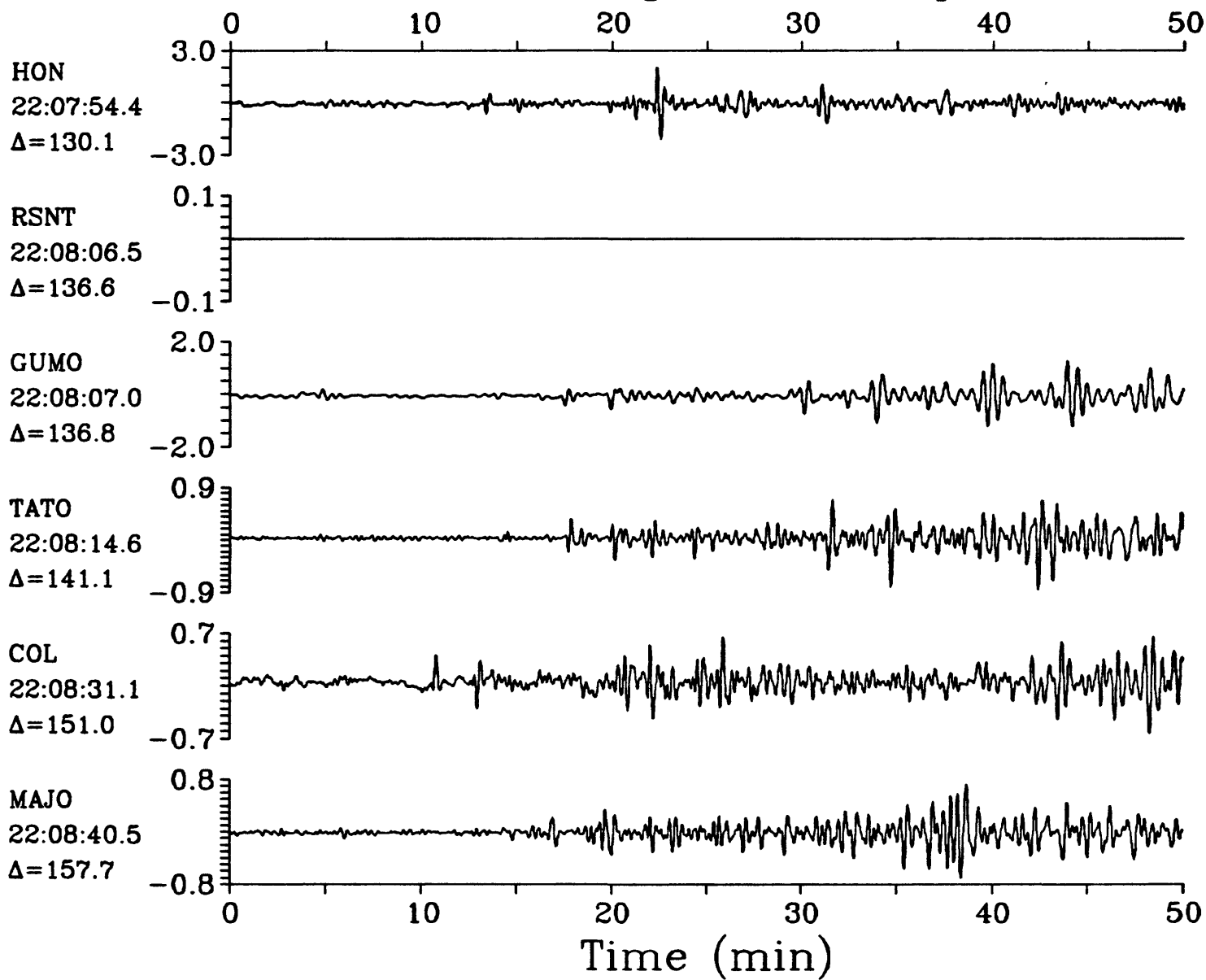
LPZ

South Sandwich Islands Region $h=110.1$ $m_b=5.7$ 

LPZ

26 March 1986 21:49:56.91

LPZ

South Sandwich Islands Region $h=110.1$ $m_b=5.7$ 

26 March 1986 22:06:57.48

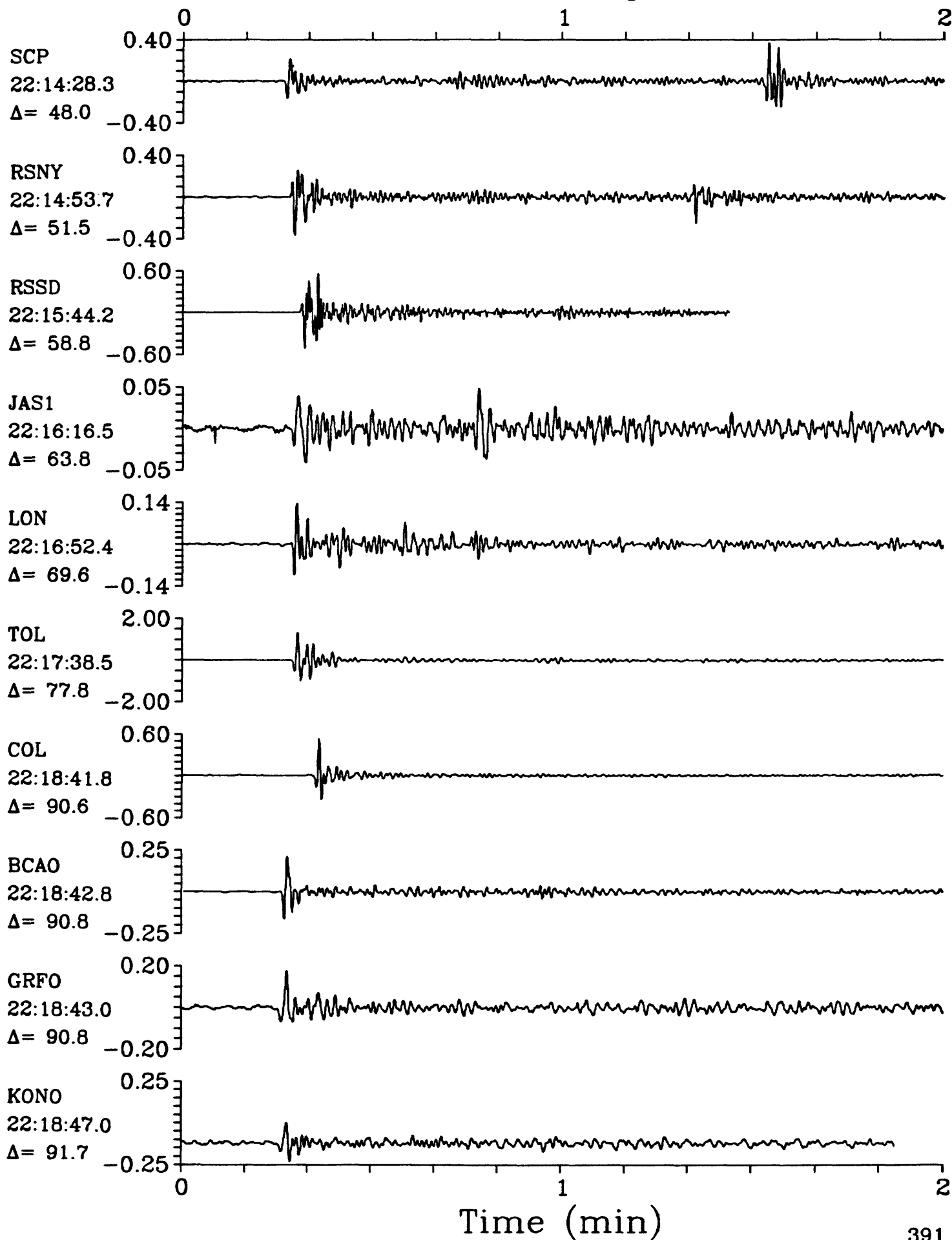
Western Brazil



SPZ

26 March 1986 22:06:57.48
Western Brazil $h=608.9$ $m_b=5.9$

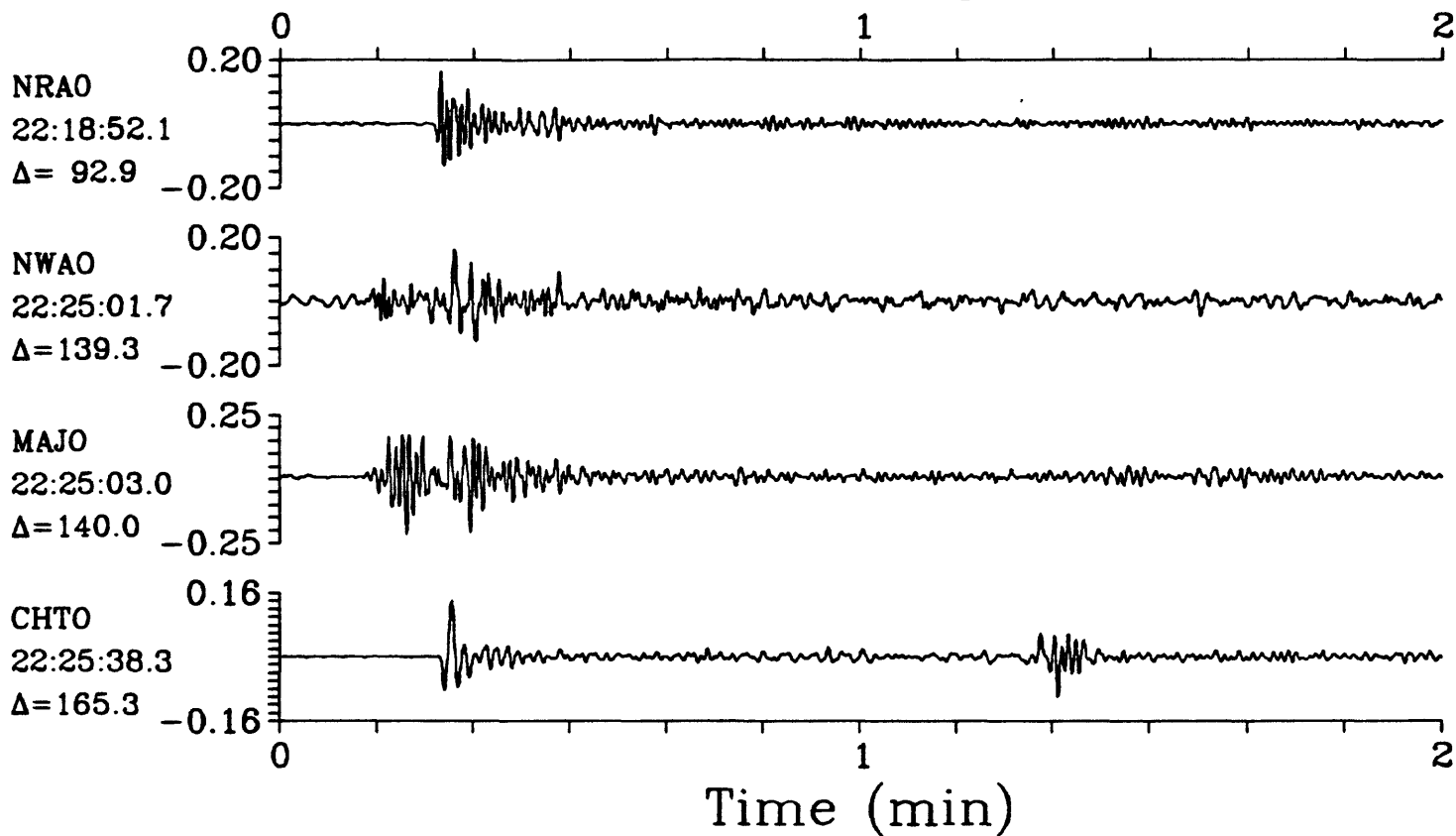
SPZ



SPZ

26 March 1986 22:06:57.48
Western Brazil $h=608.9$ $m_b=5.9$

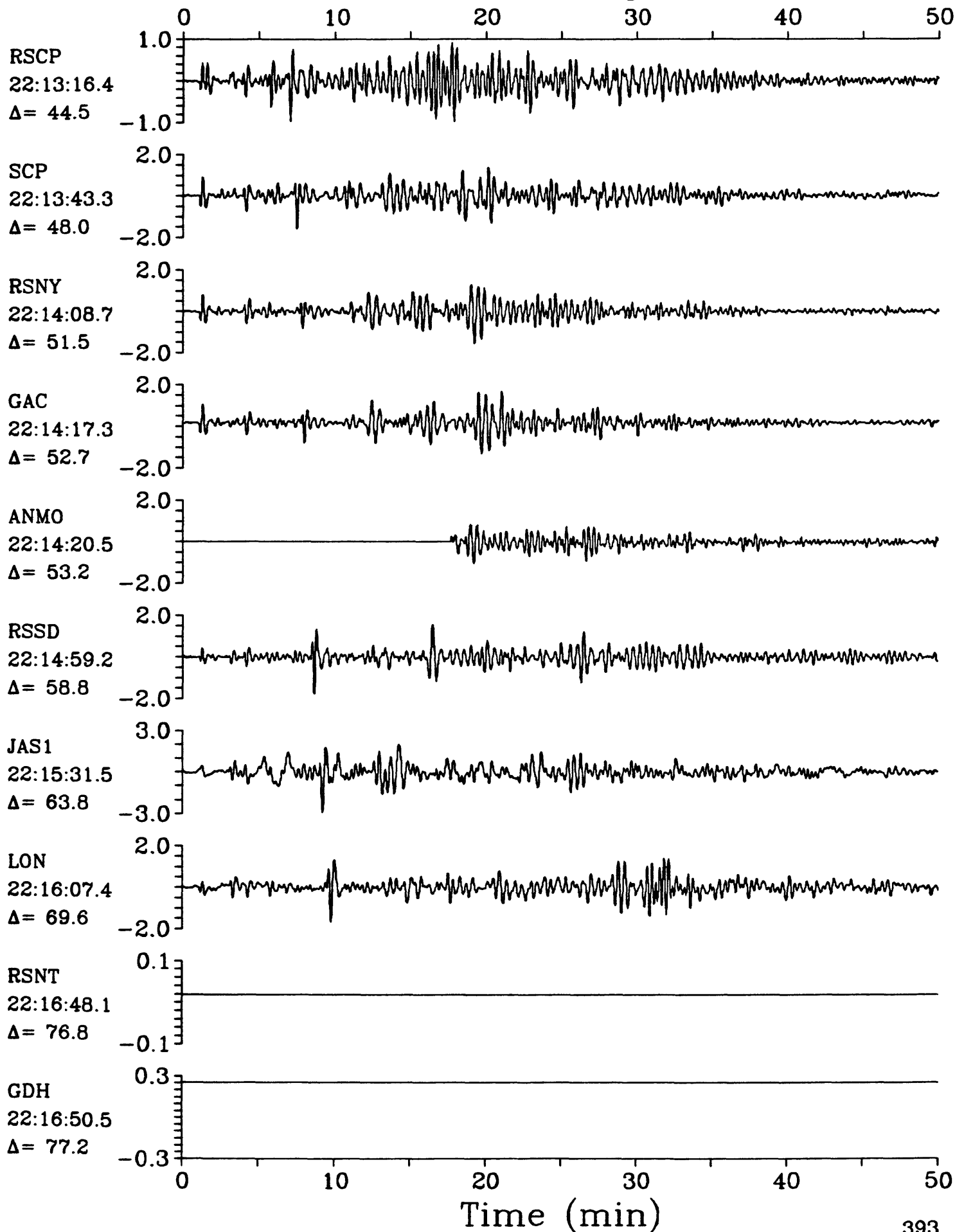
SPZ



LPZ

26 March 1986 22:06:57.48
Western Brazil $h=608.9$ $m_b=5.9$

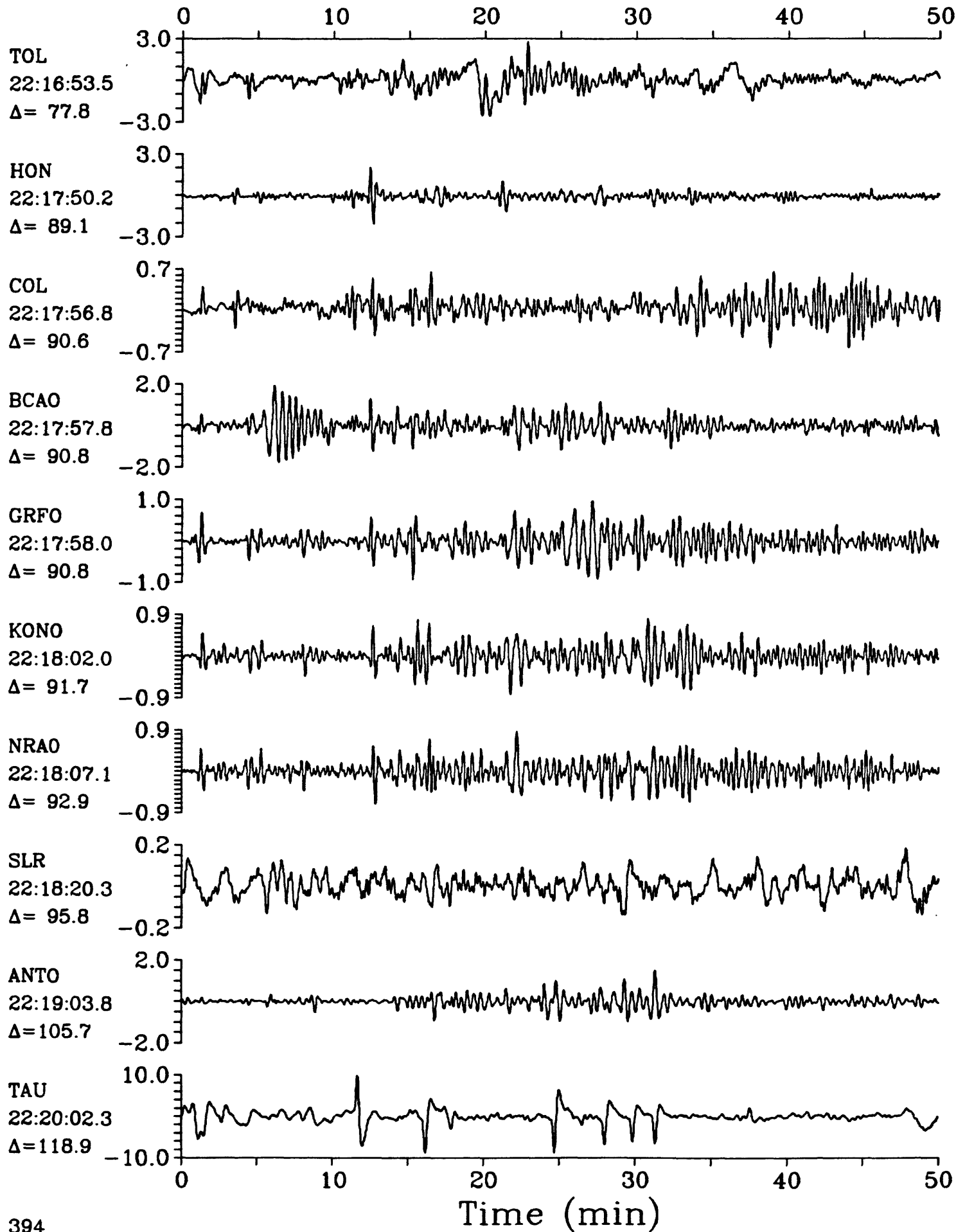
LPZ



LPZ

26 March 1986 22:06:57.48
Western Brazil $h=608.9$ $m_b=5.9$

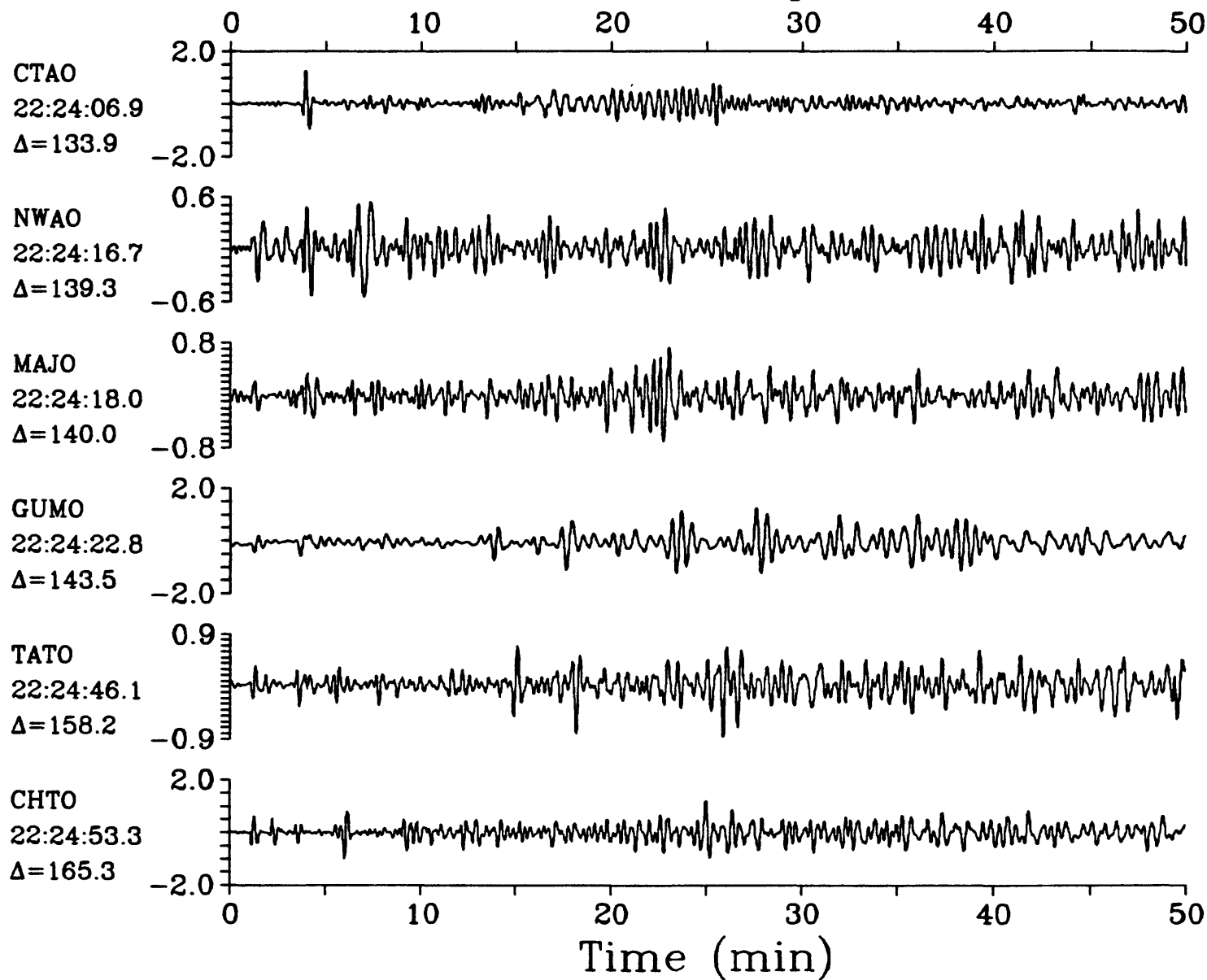
LPZ



LPZ

26 March 1986 22:06:57.48
Western Brazil $h=608.9$ $m_b=5.9$

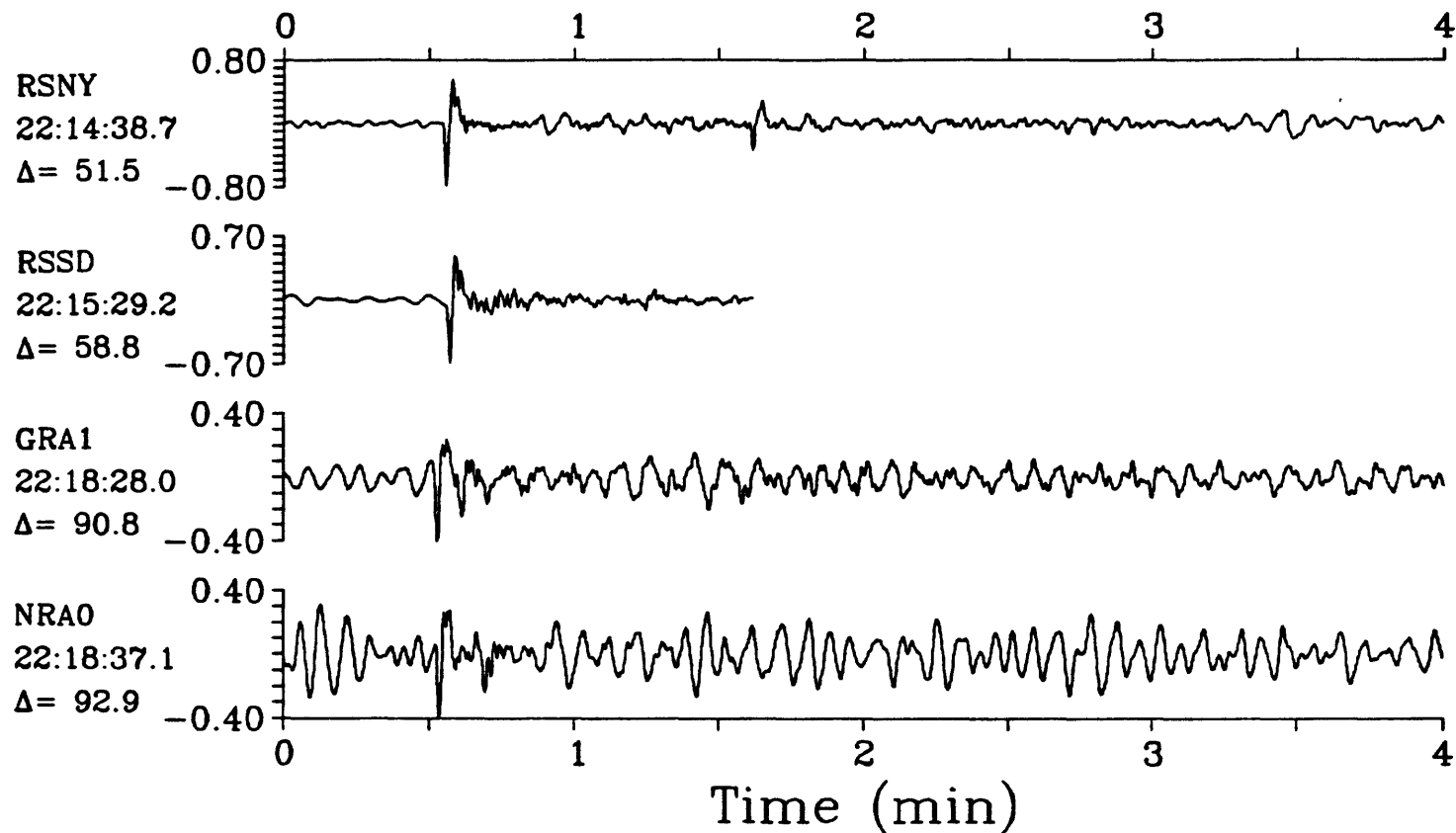
LPZ



IPZ

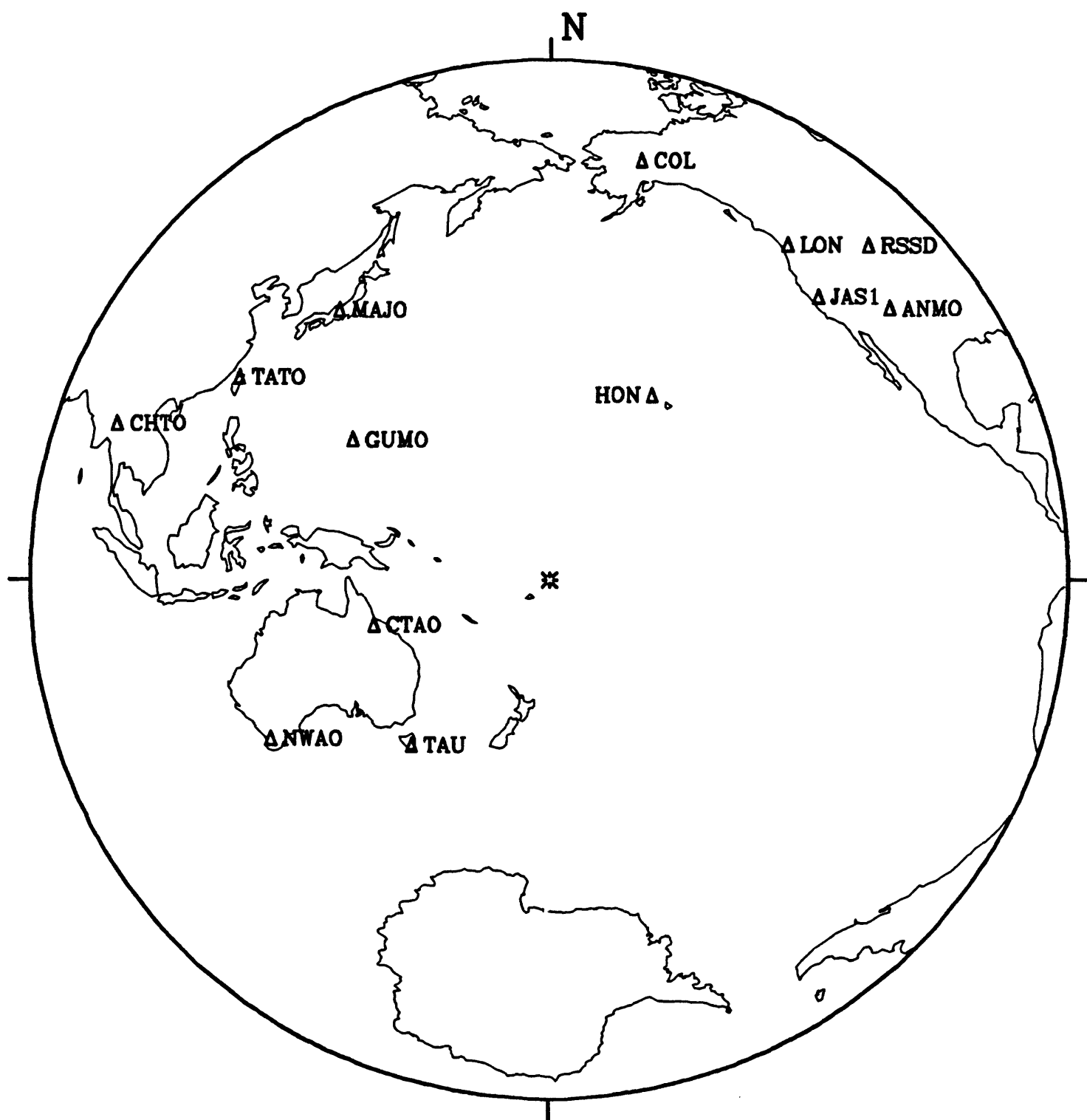
26 March 1986 22:06:57.48
Western Brazil $h=608.9$ $m_b=5.9$

IPZ



27 March 1986 11:58:19.51

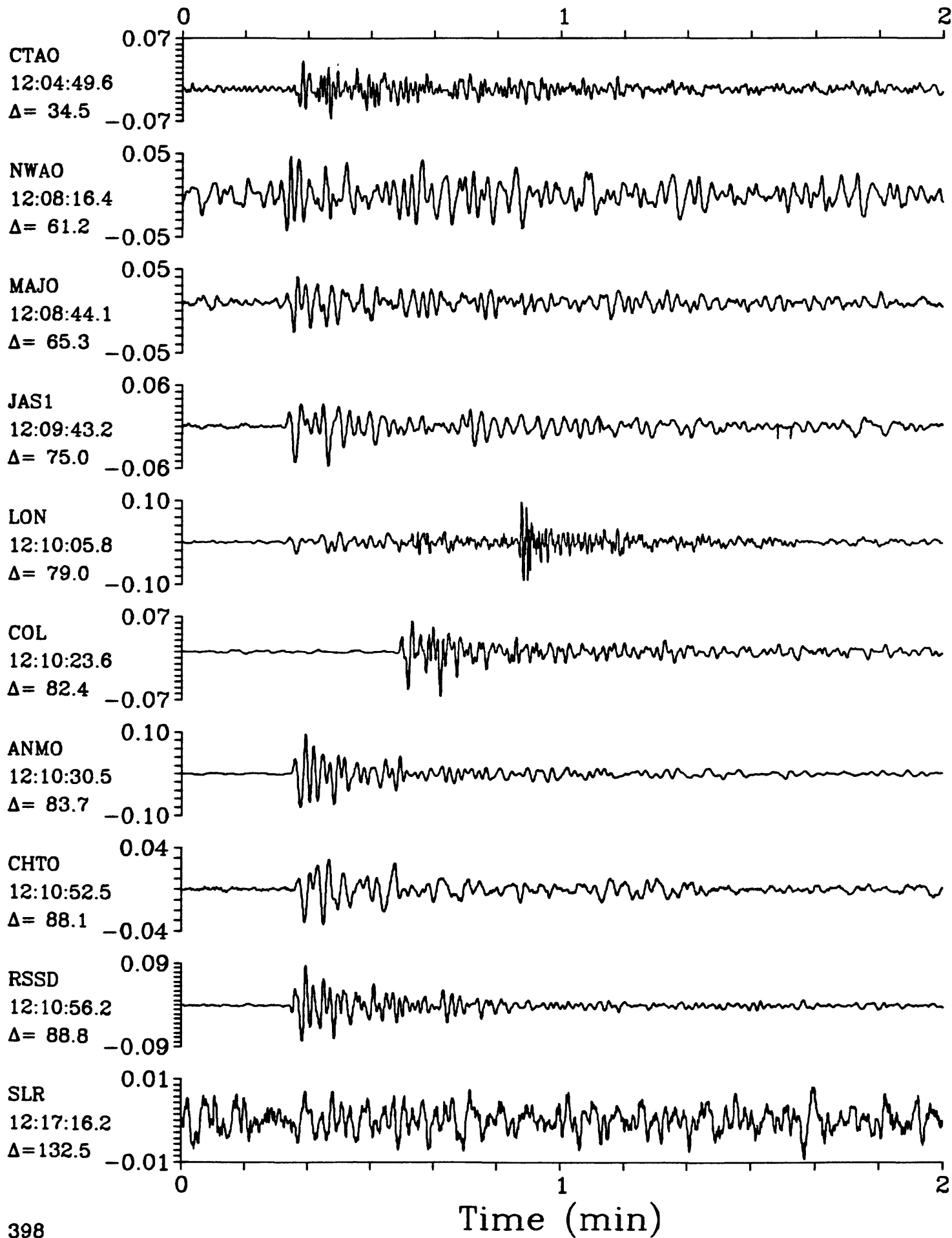
Fiji Islands Region



SPZ

27 March 1986 11:58:19.51

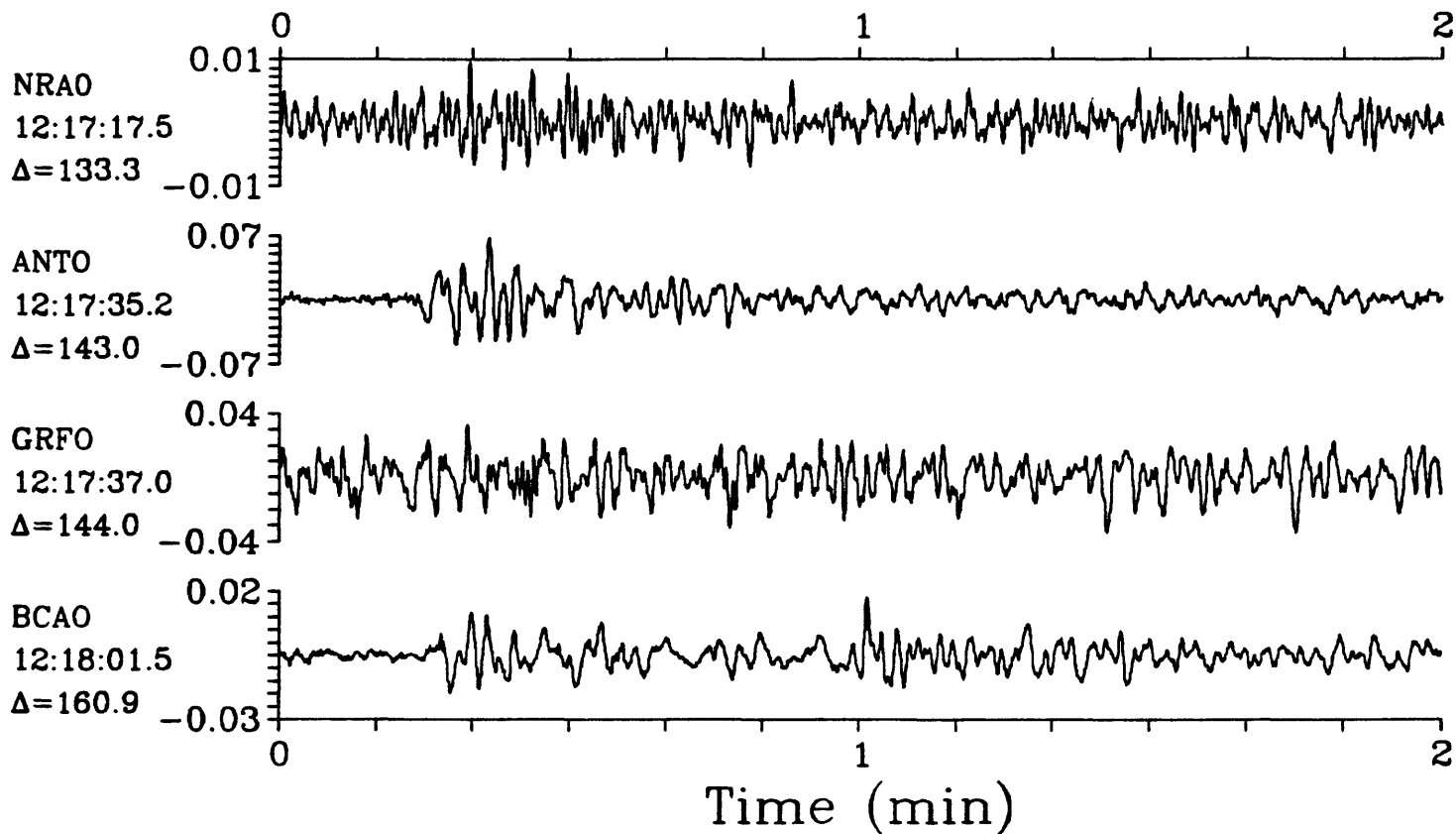
SPZ

Fiji Islands Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.8$ 

SPZ

27 March 1986 11:58:19.51

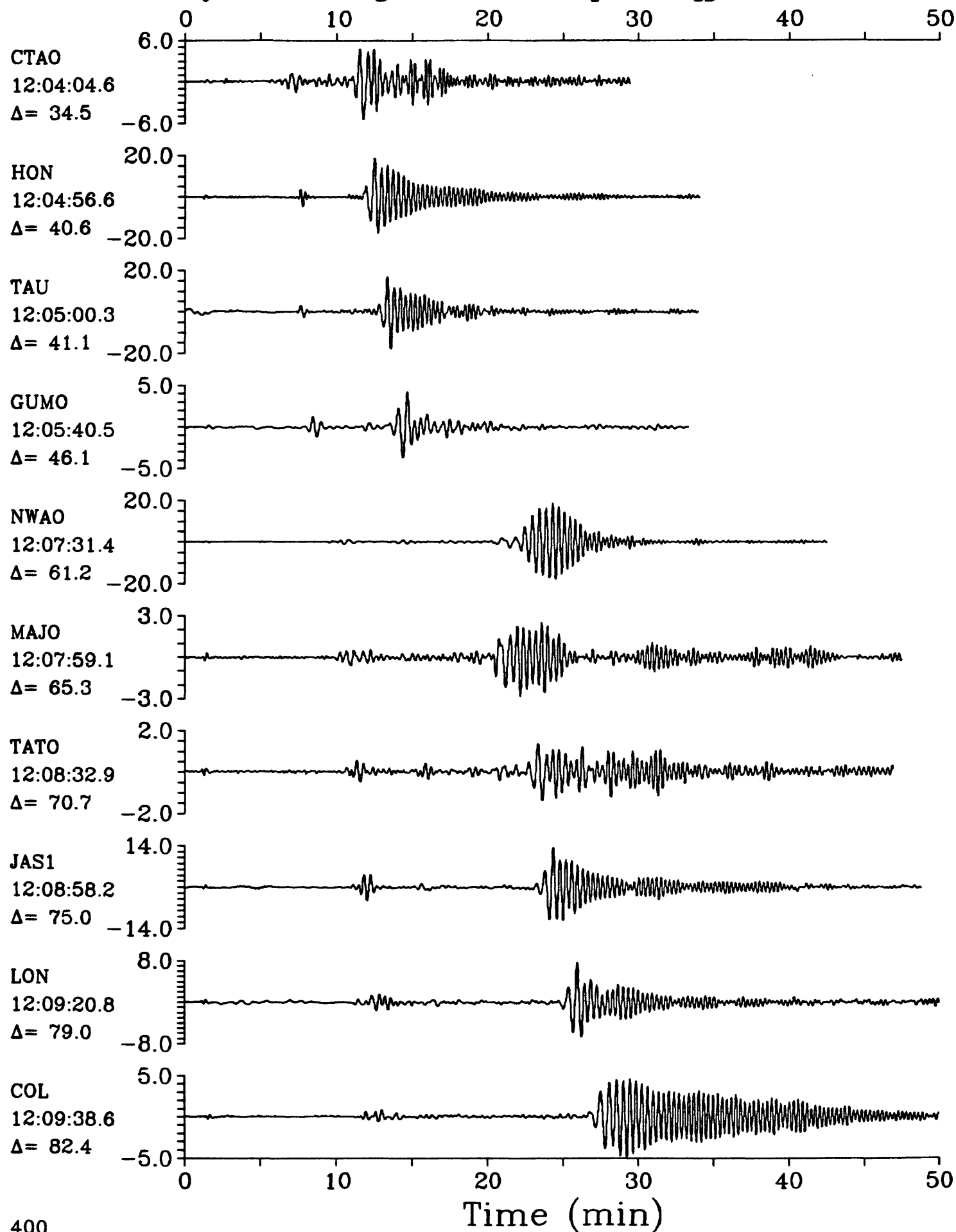
SPZ

Fiji Islands Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.8$ 

LPZ

27 March 1986 11:58:19.51

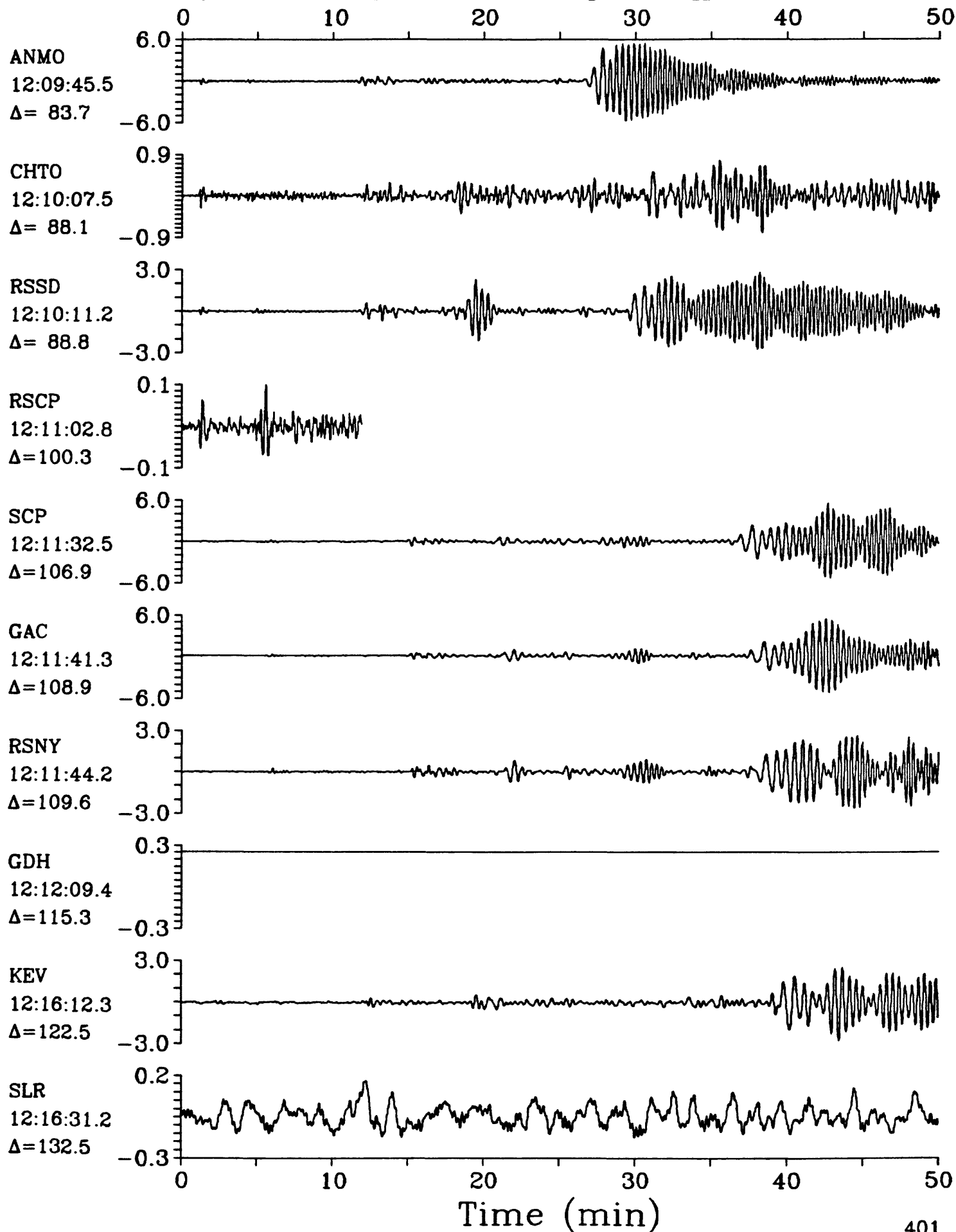
LPZ

Fiji Islands Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.8$ 

LPZ

27 March 1986 11:58:19.51

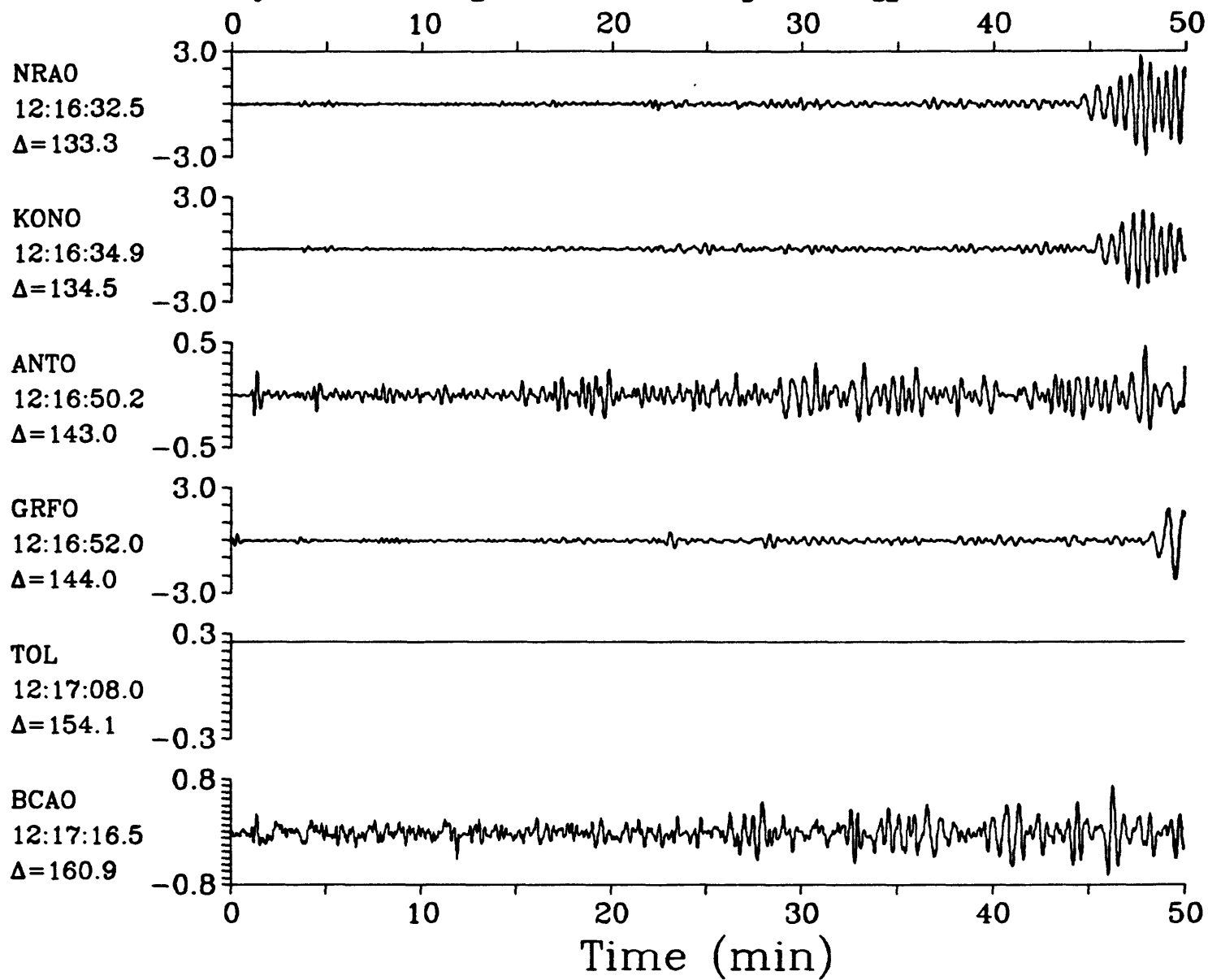
LPZ

Fiji Islands Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.8$ 

LPZ

27 March 1986 11:58:19.51

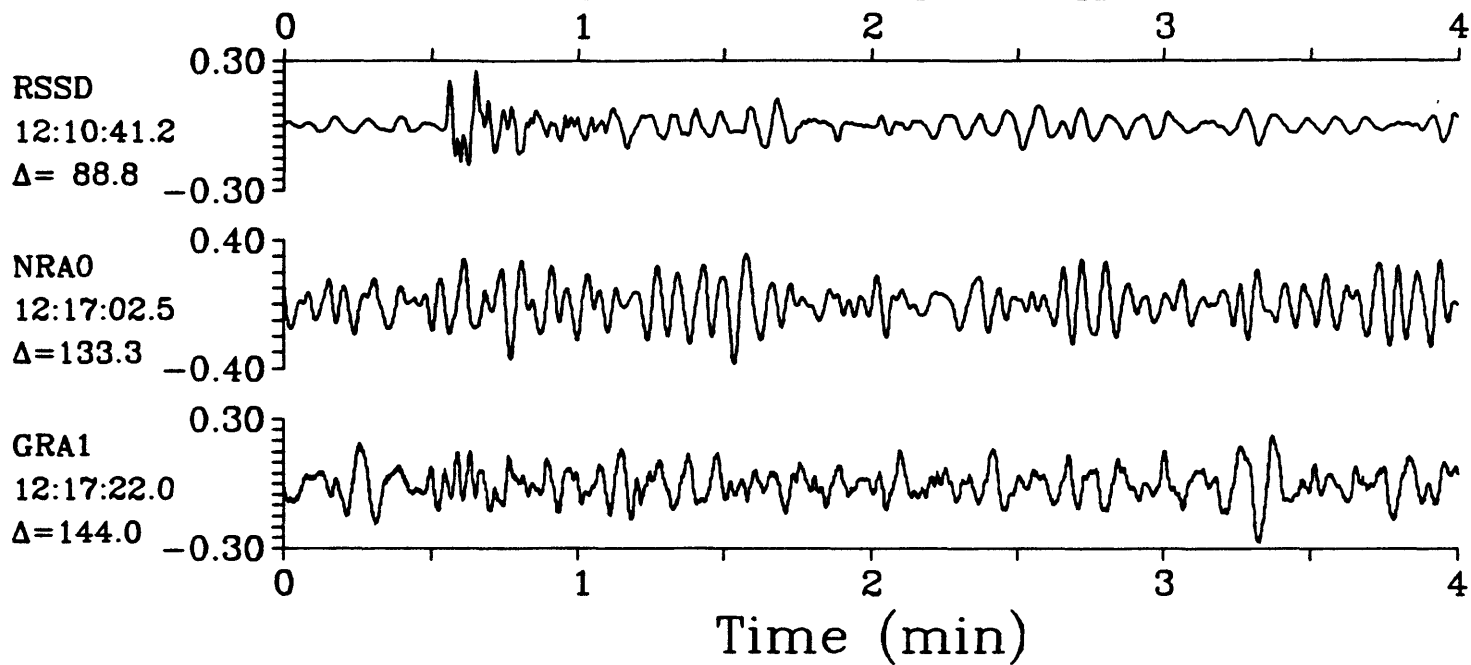
LPZ

Fiji Islands Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.8$ 

IPZ

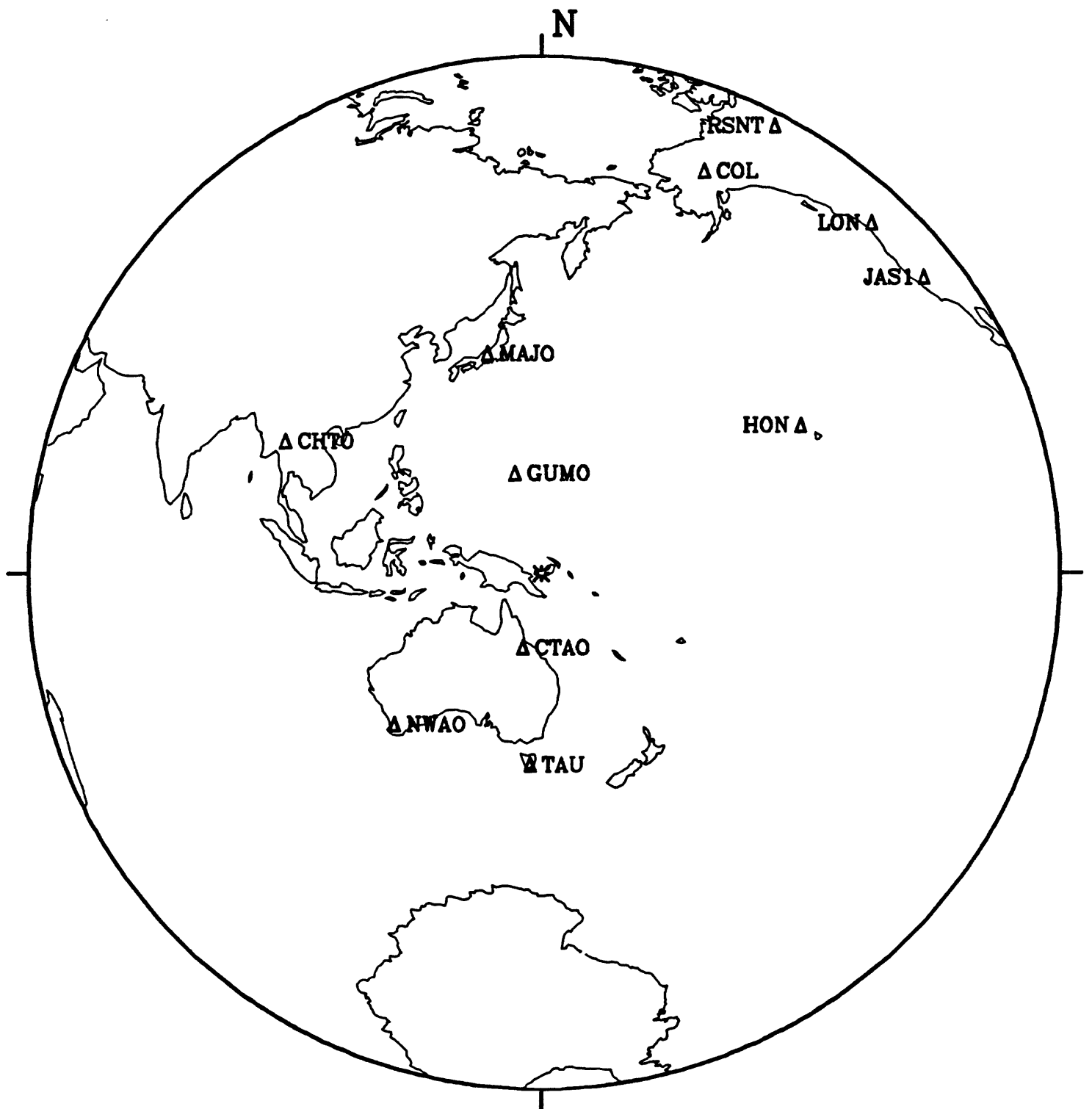
27 March 1986 11:58:19.51

IPZ

Fiji Islands Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.8$ 

28 March 1986 16:03:03.16

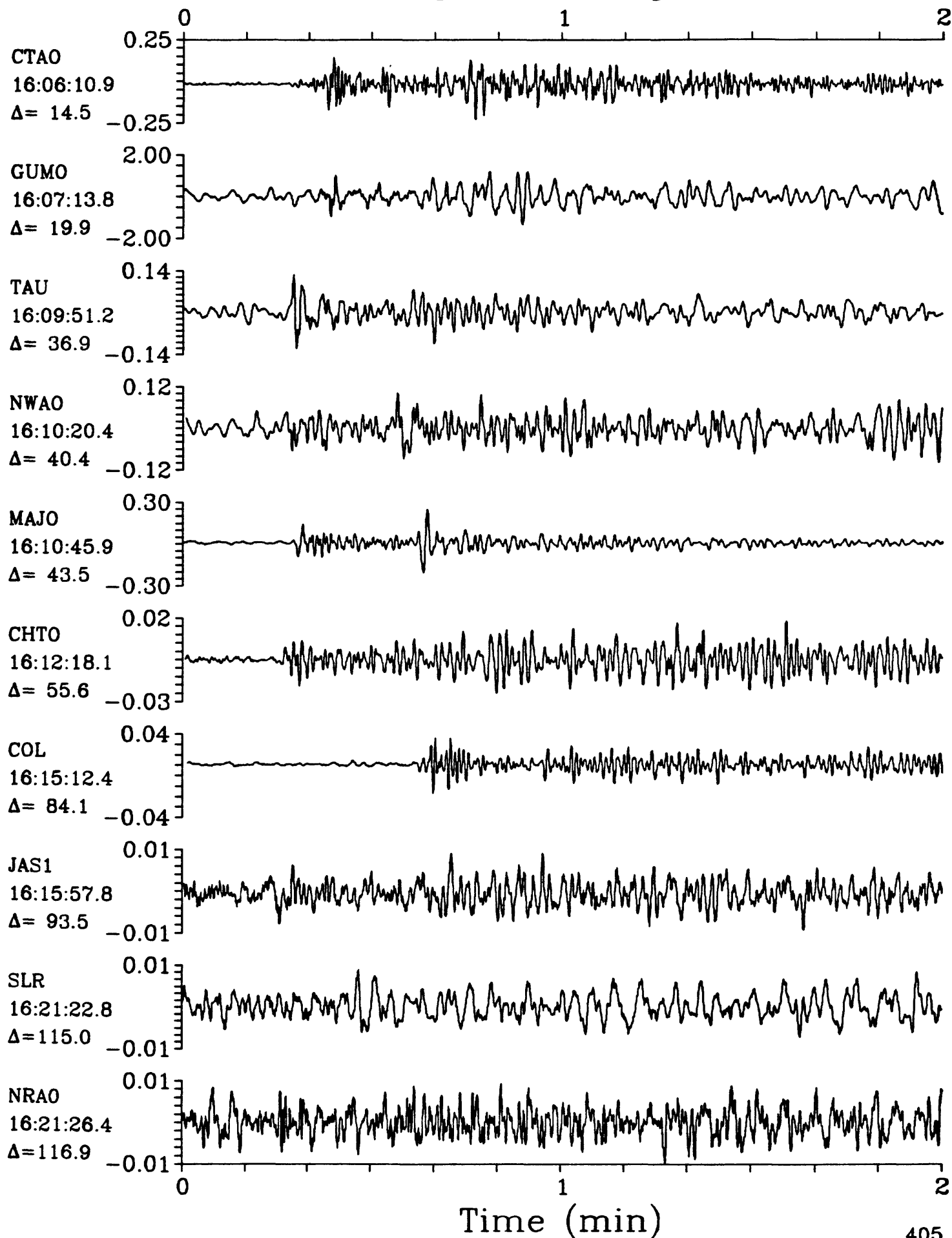
New Britain Region



SPZ

28 March 1986 16:03:03.16
New Britain Region $h=63.5$ $m_b=5.5$

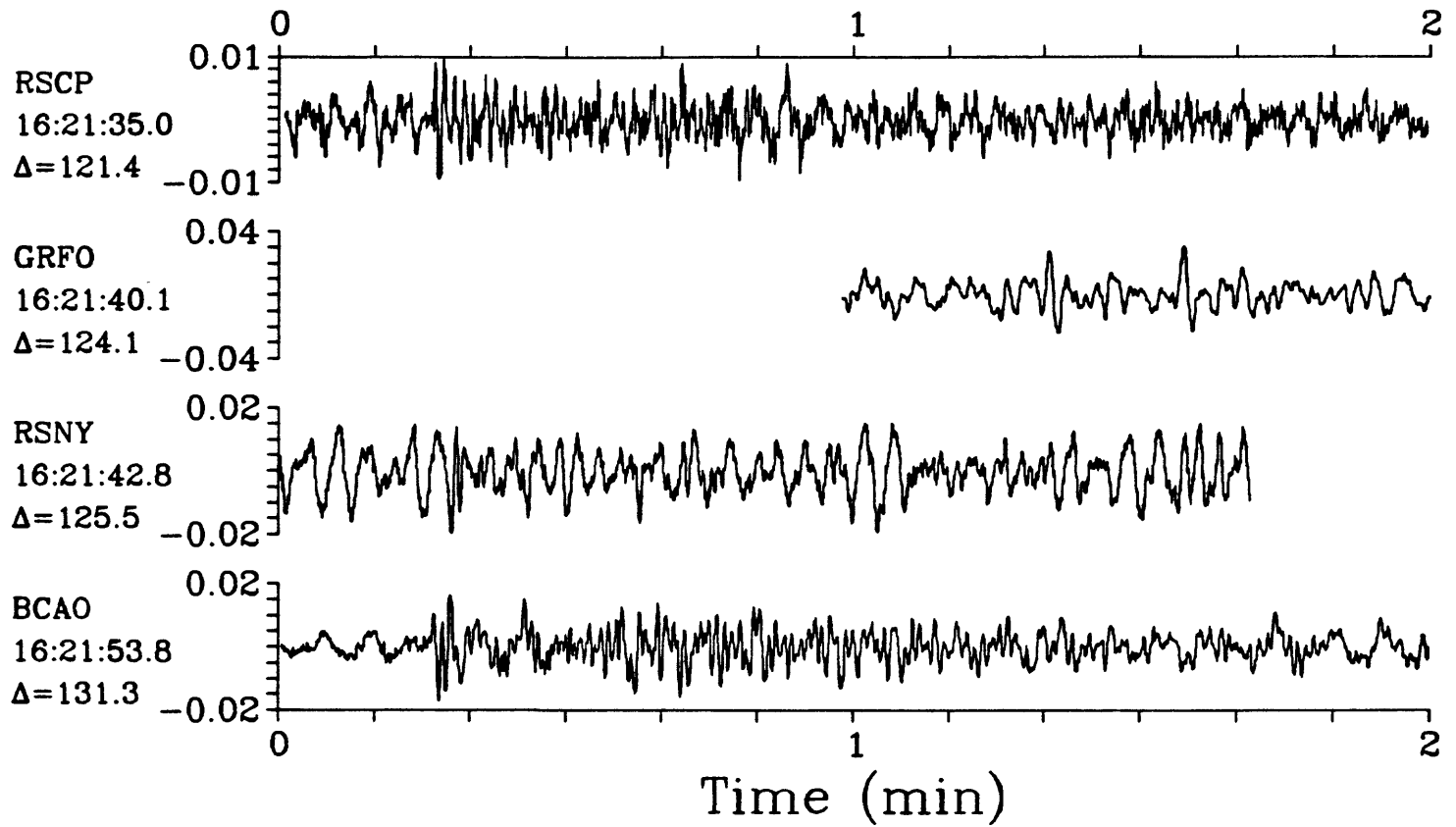
SPZ



SPZ

28 March 1986 16:03:03.16
New Britain Region $h=63.5$ $m_b=5.5$

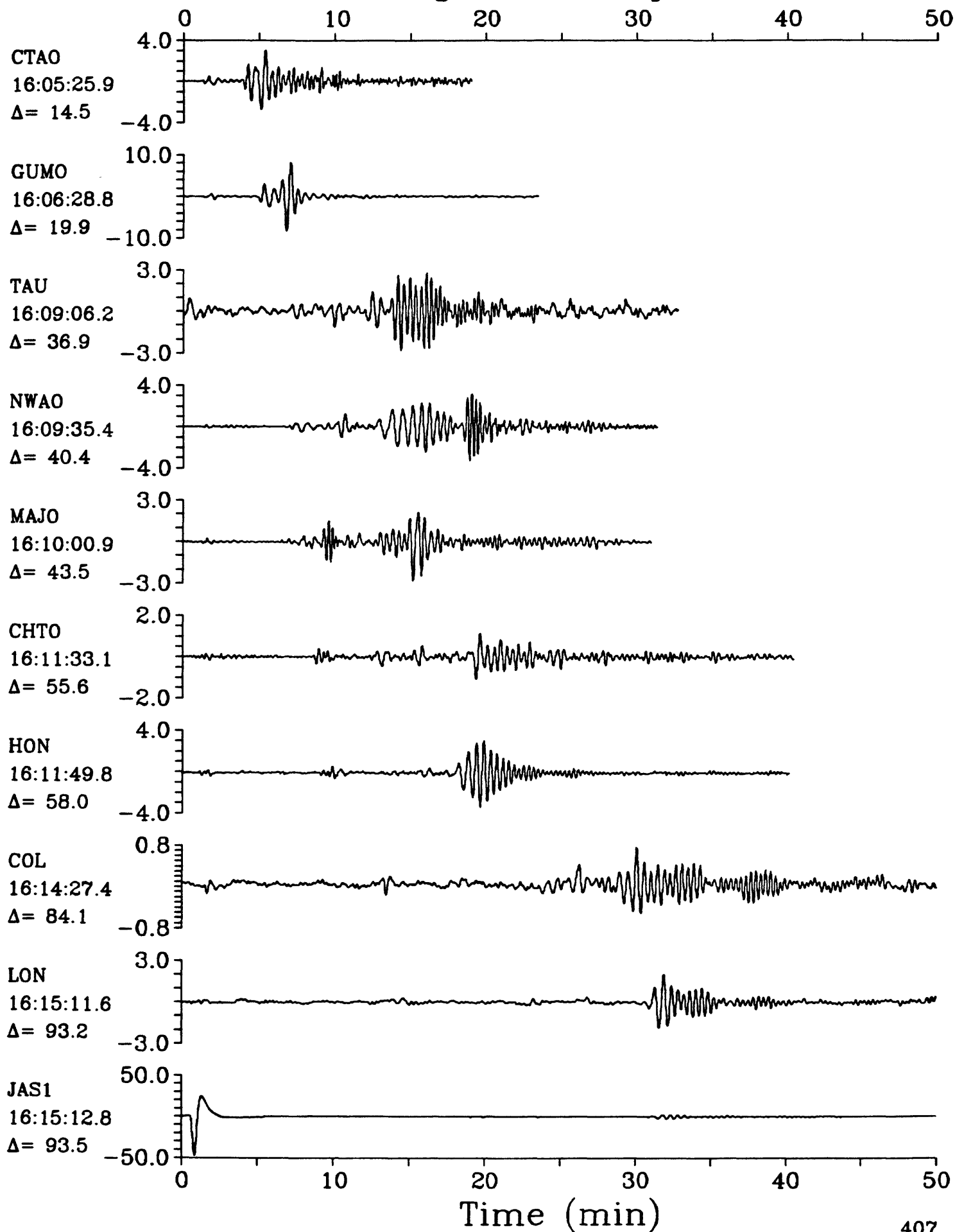
SPZ



LPZ

28 March 1986 16:03:03.16
New Britain Region $h=63.5$ $m_b=5.5$

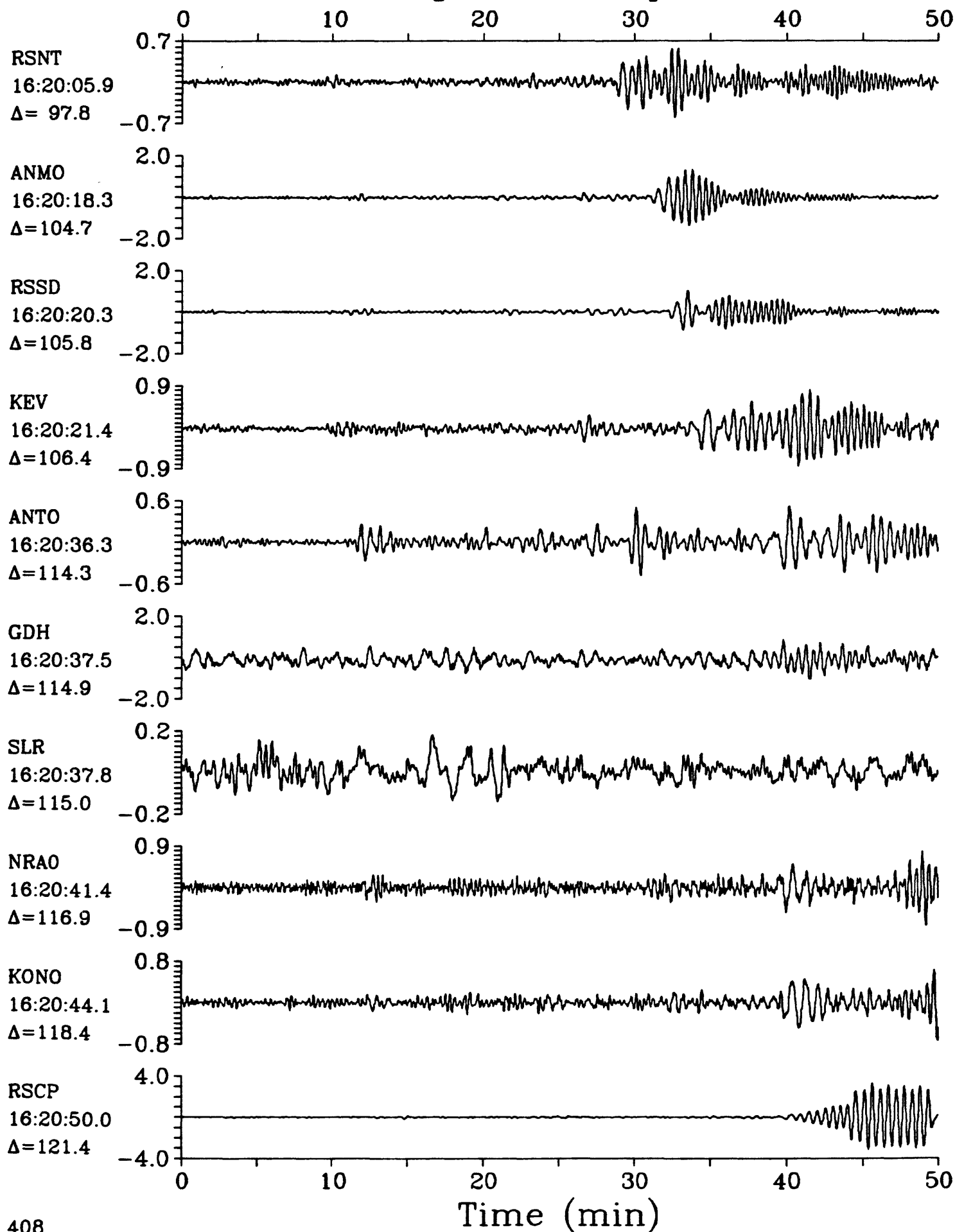
LPZ



LPZ

28 March 1986 16:03:03.16
New Britain Region $h=63.5$ $m_b=5.5$

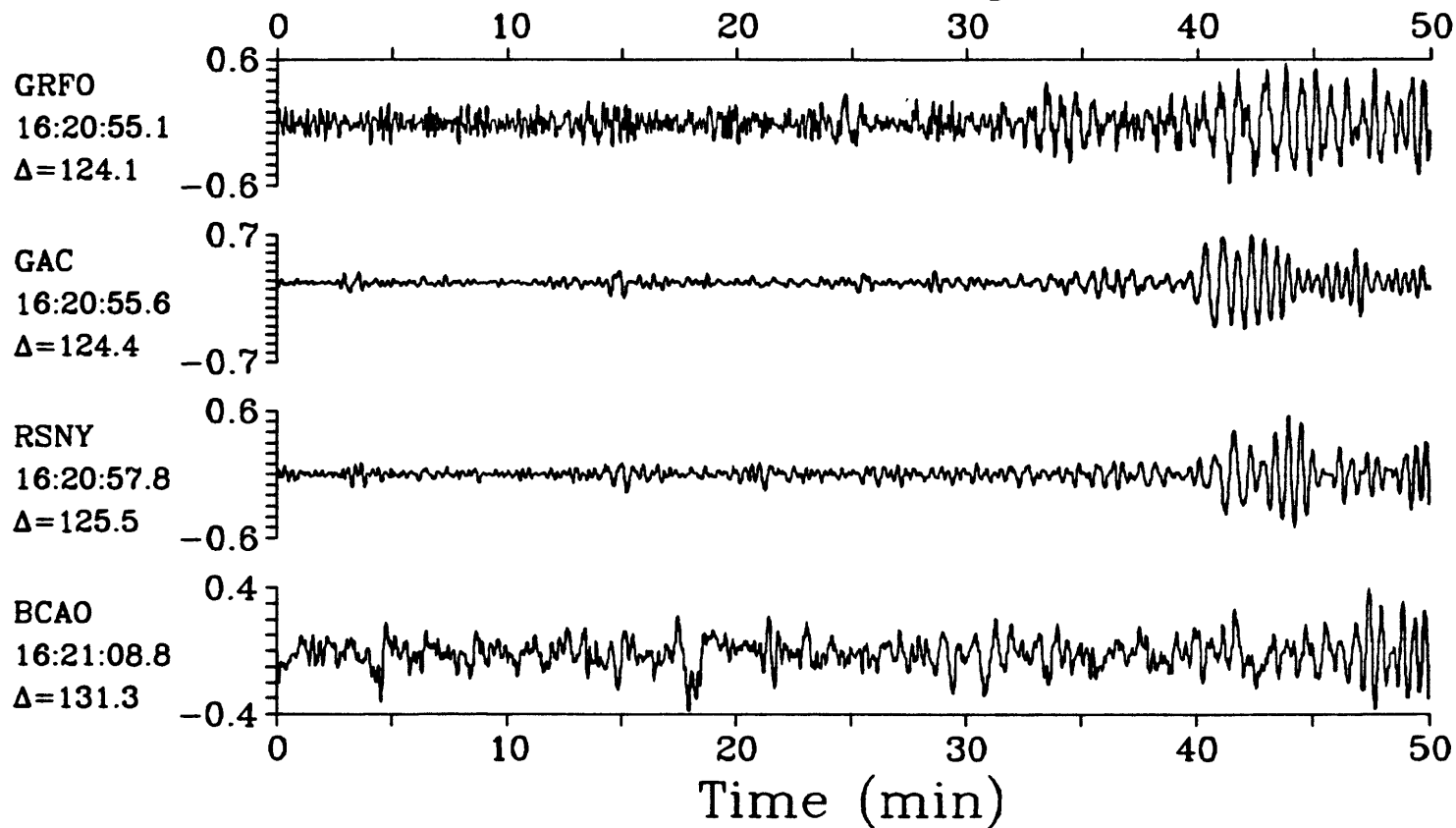
LPZ



LPZ

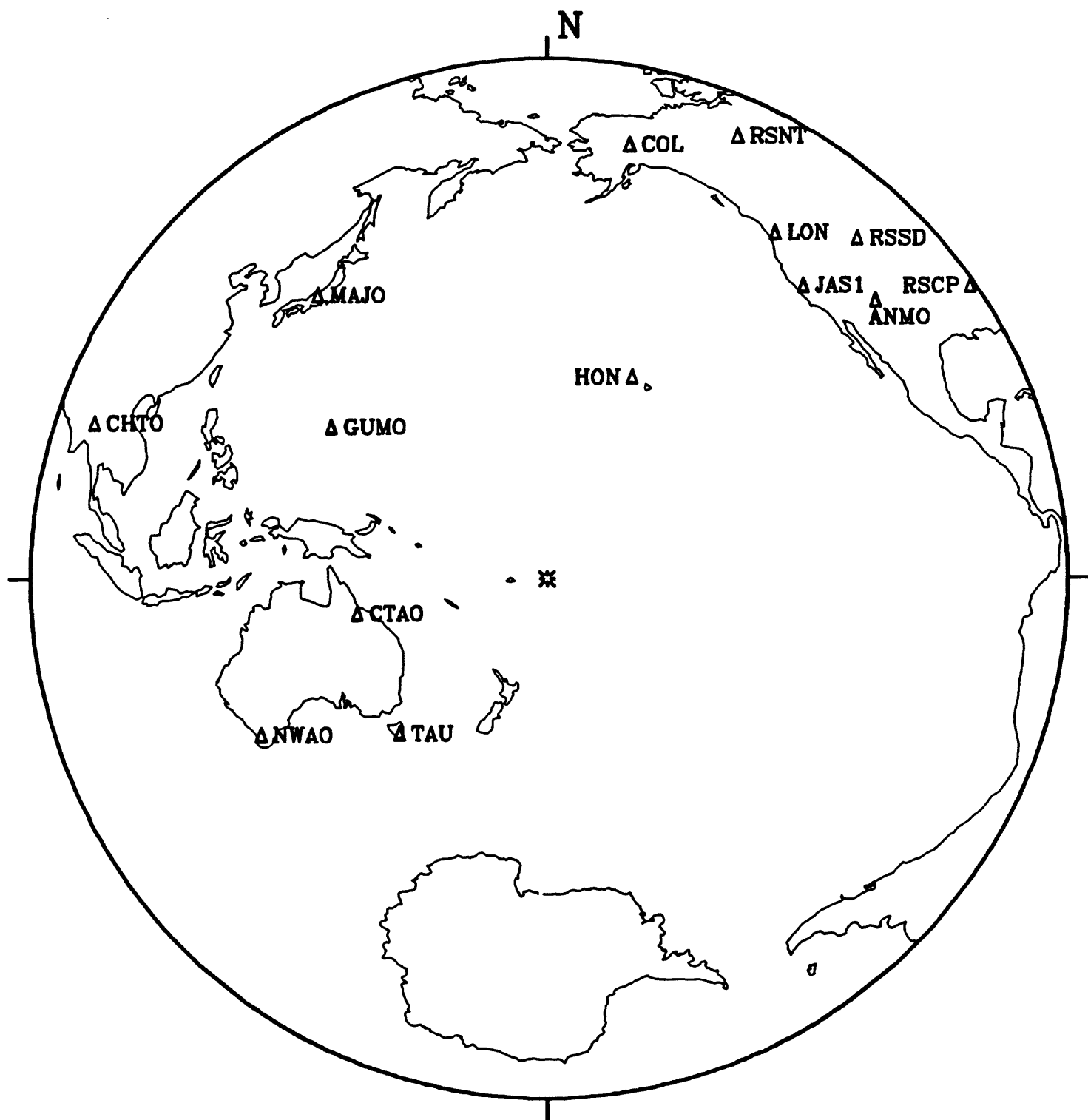
28 March 1986 16:03:03.16
New Britain Region $h=63.5$ $m_b=5.5$

LPZ



29 March 1986 15:05:44.76

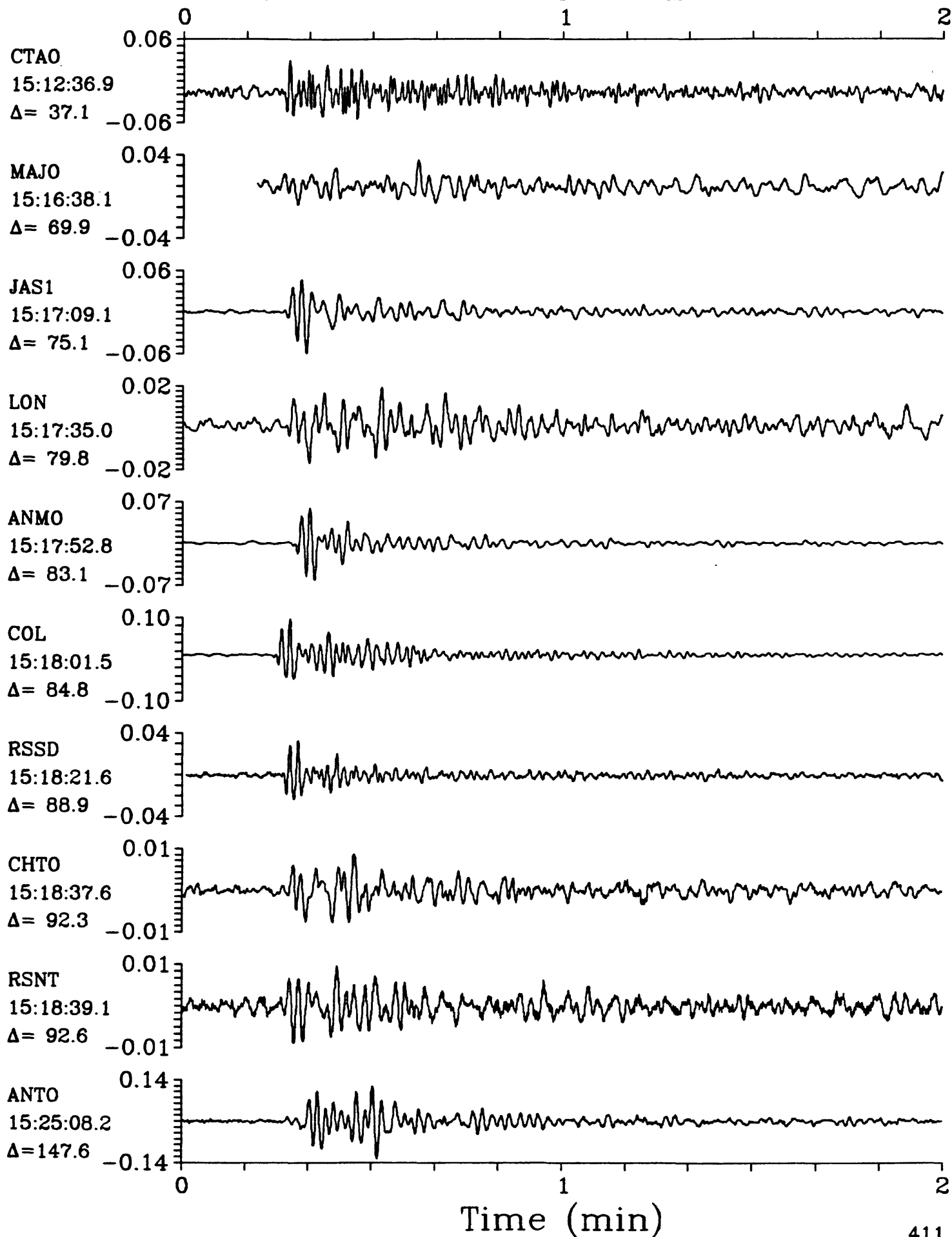
Tonga Islands



SPZ

29 March 1986 15:05:44.76
Tonga Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.5$

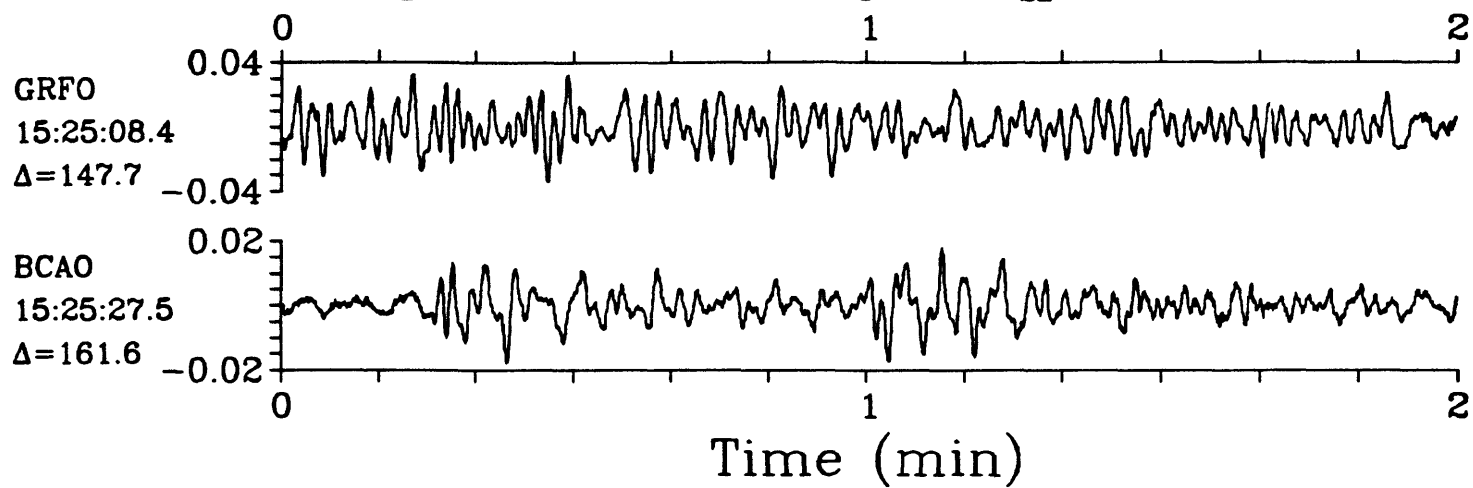
SPZ



SPZ

29 March 1986 15:05:44.76

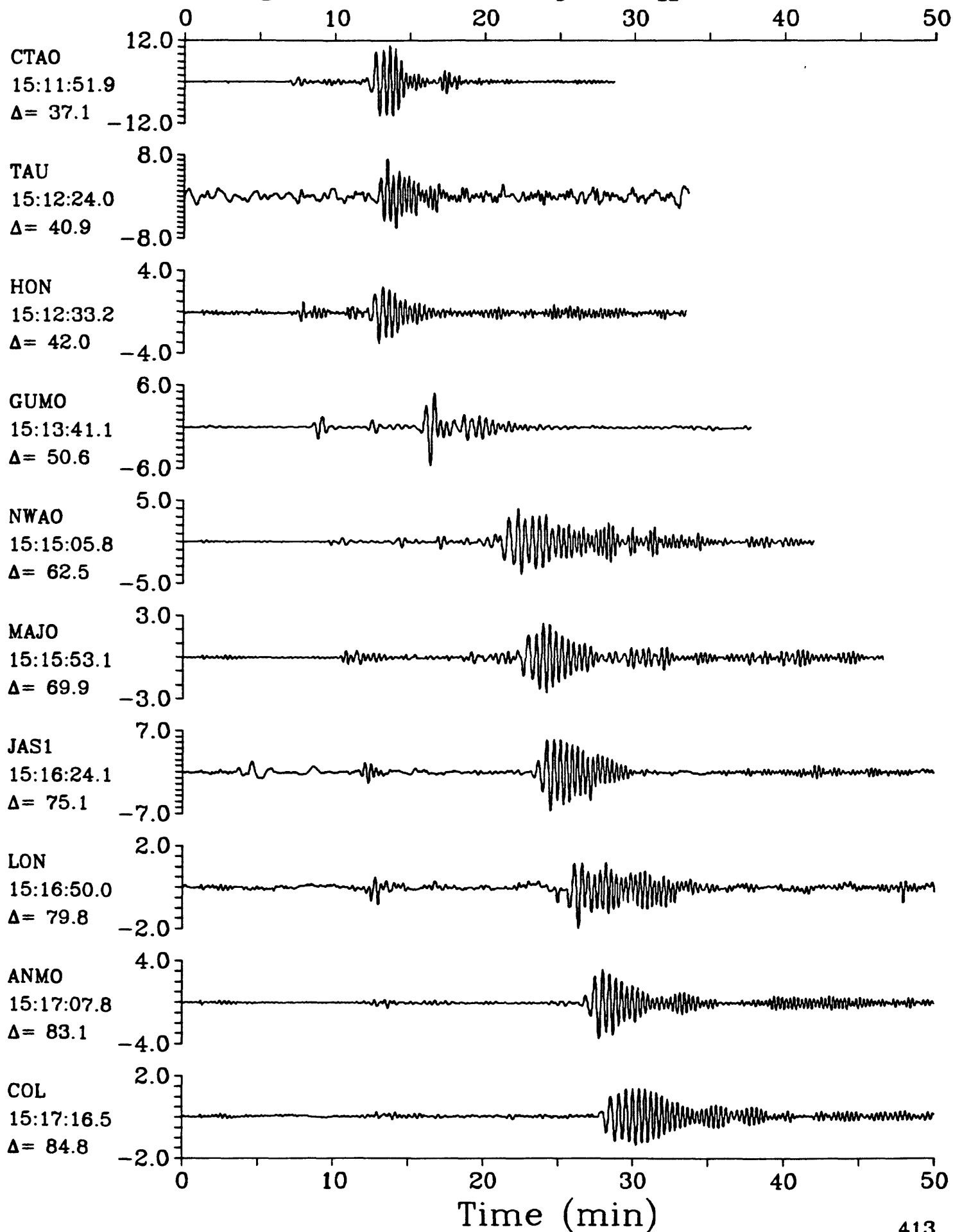
SPZ

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

LPZ

29 March 1986 15:05:44.76
Tonga Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.5$

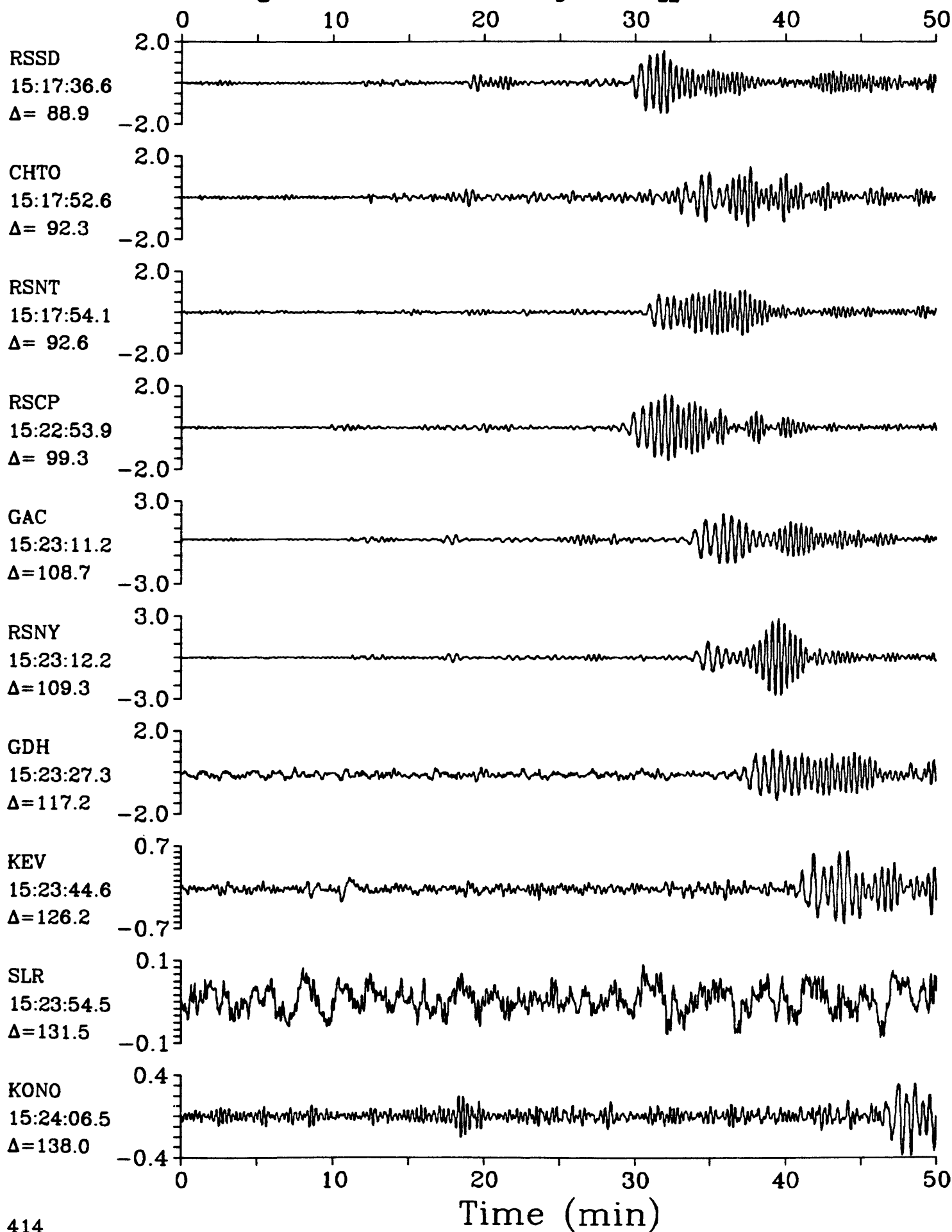
LPZ



LPZ

29 March 1986 15:05:44.76
Tonga Islands $h=33.0$ $m_b=5.4$ $M_{SZ}=5.5$

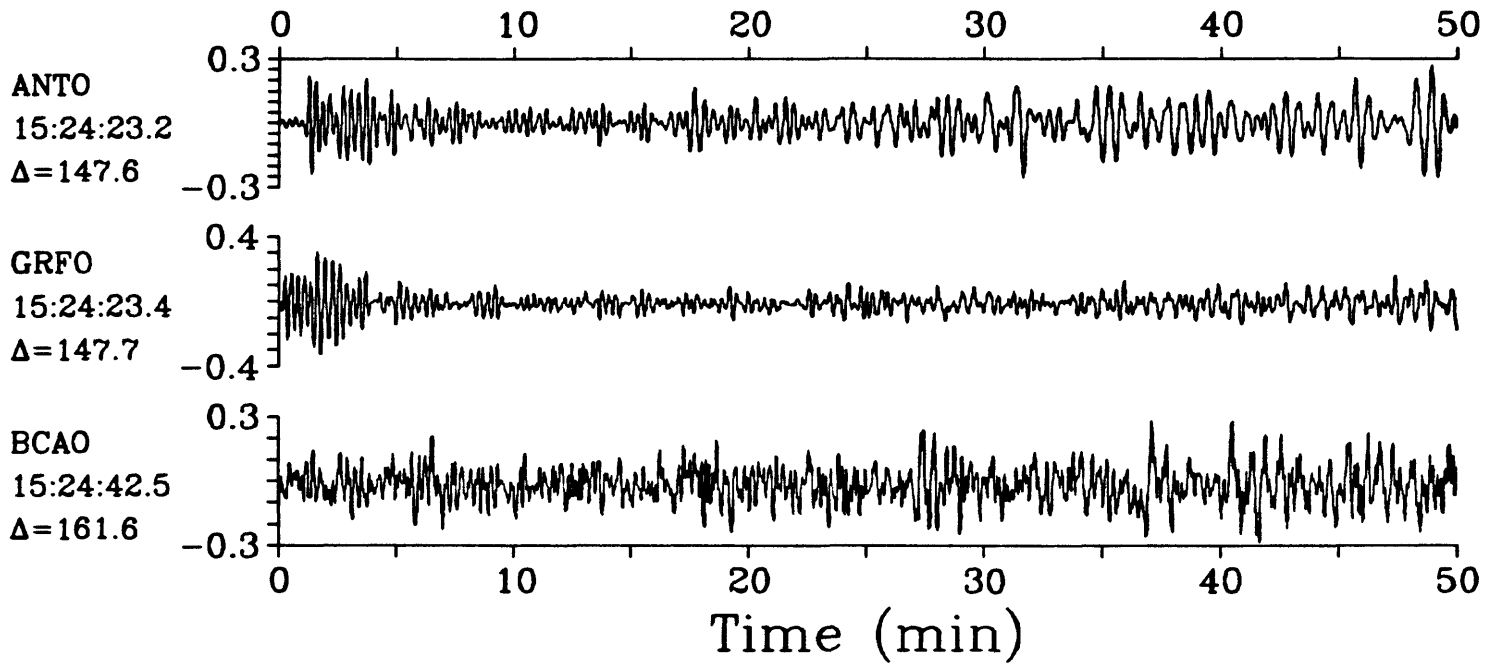
LPZ



LPZ

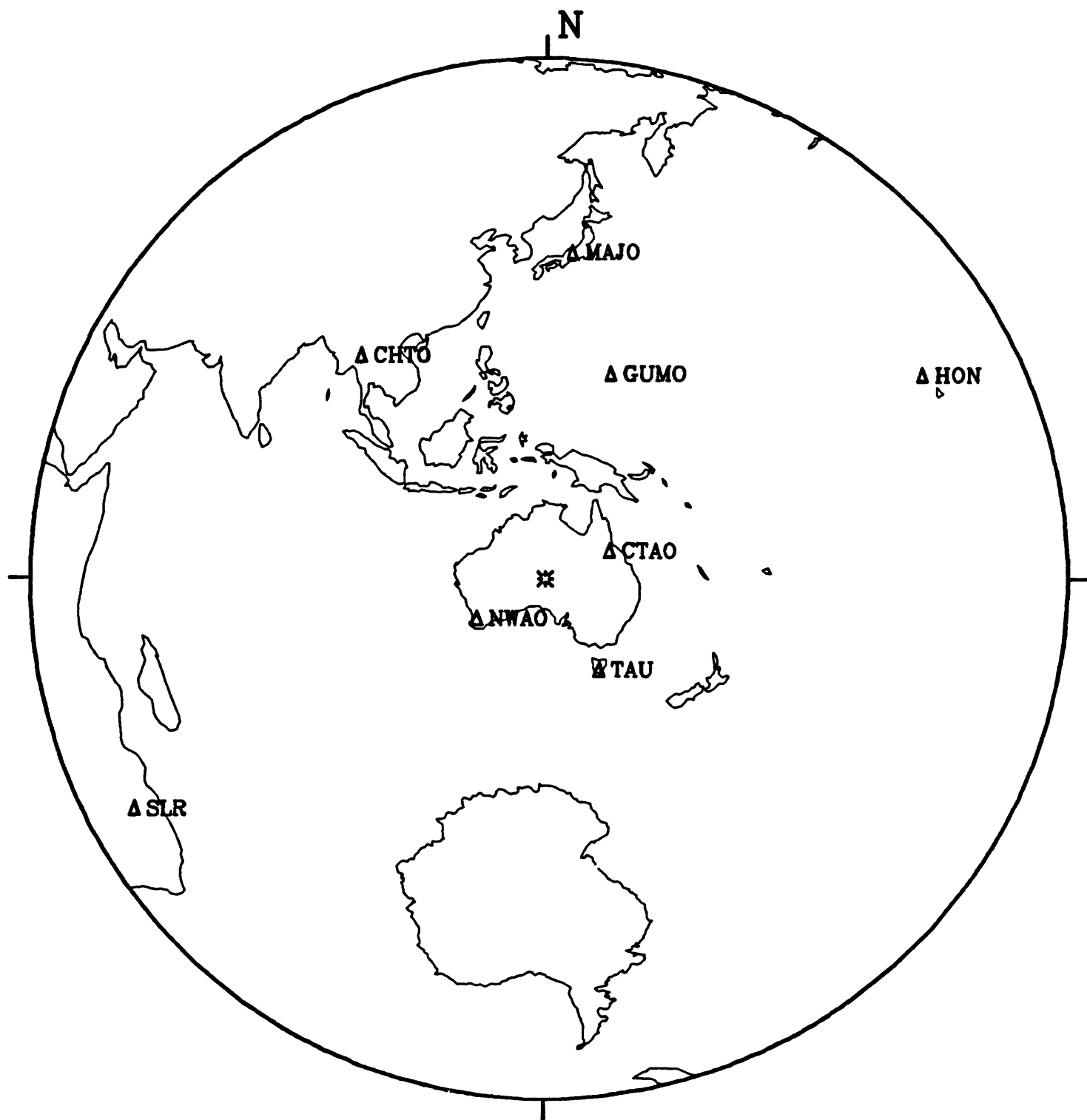
29 March 1986 15:05:44.76

LPZ

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

30 March 1986 08:53:53.20

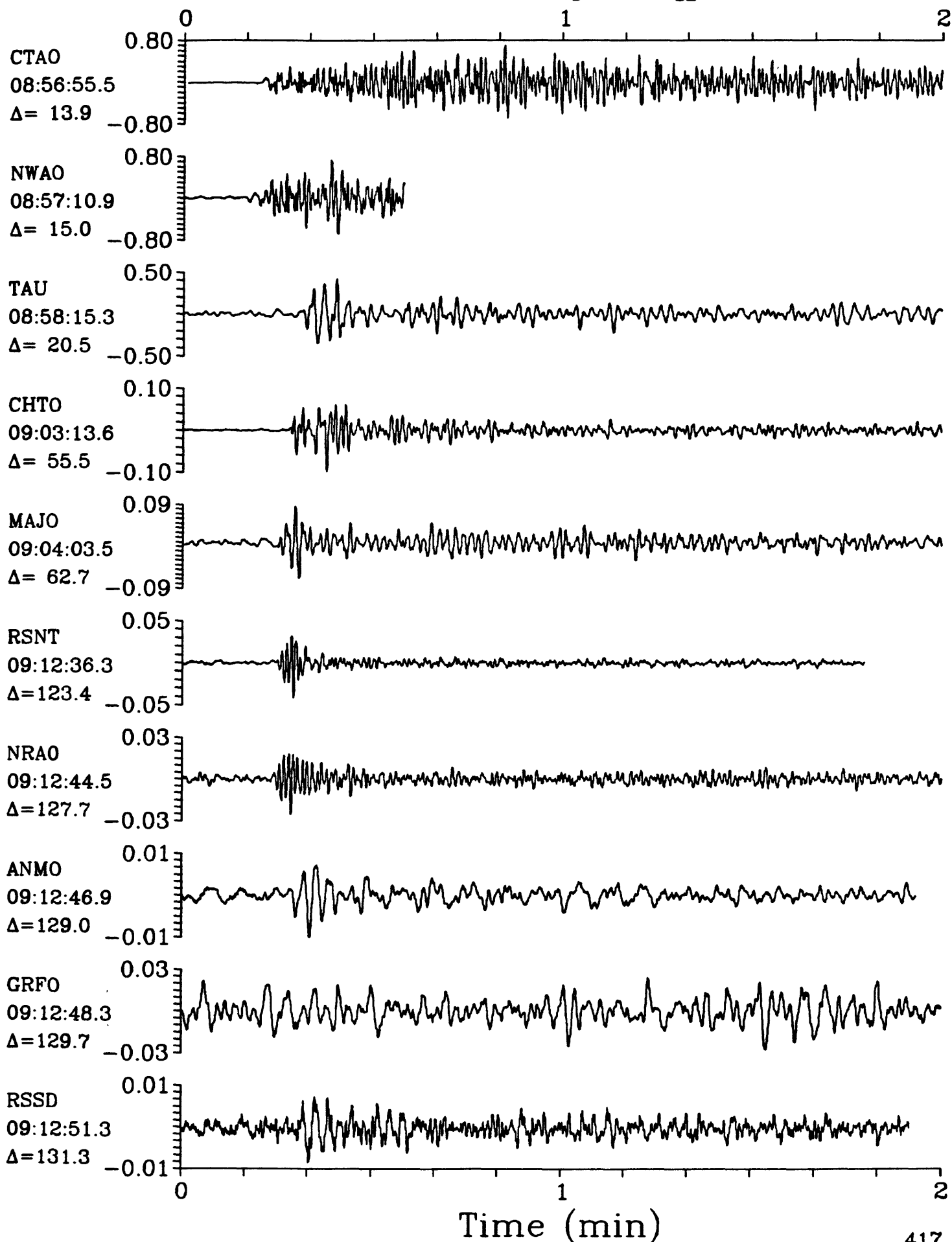
South Australia



SPZ

30 March 1986 08:53:53.20
South Australia $h=10.0$ $m_b=5.7$ $M_{sz}=5.8$

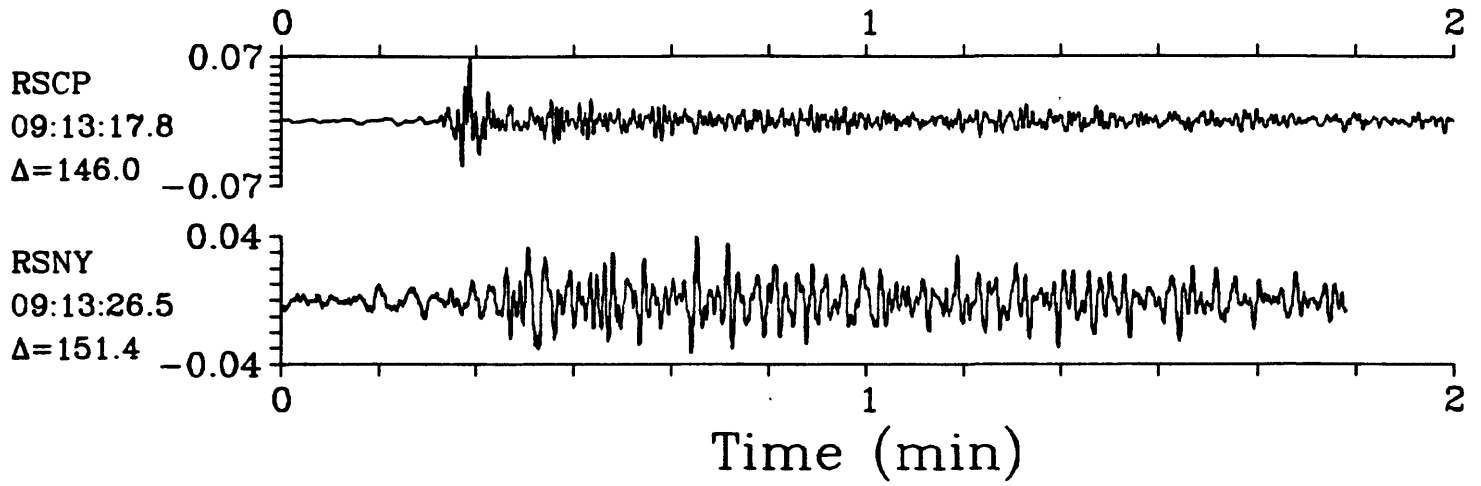
SPZ



SPZ

30 March 1986 08:53:53.20

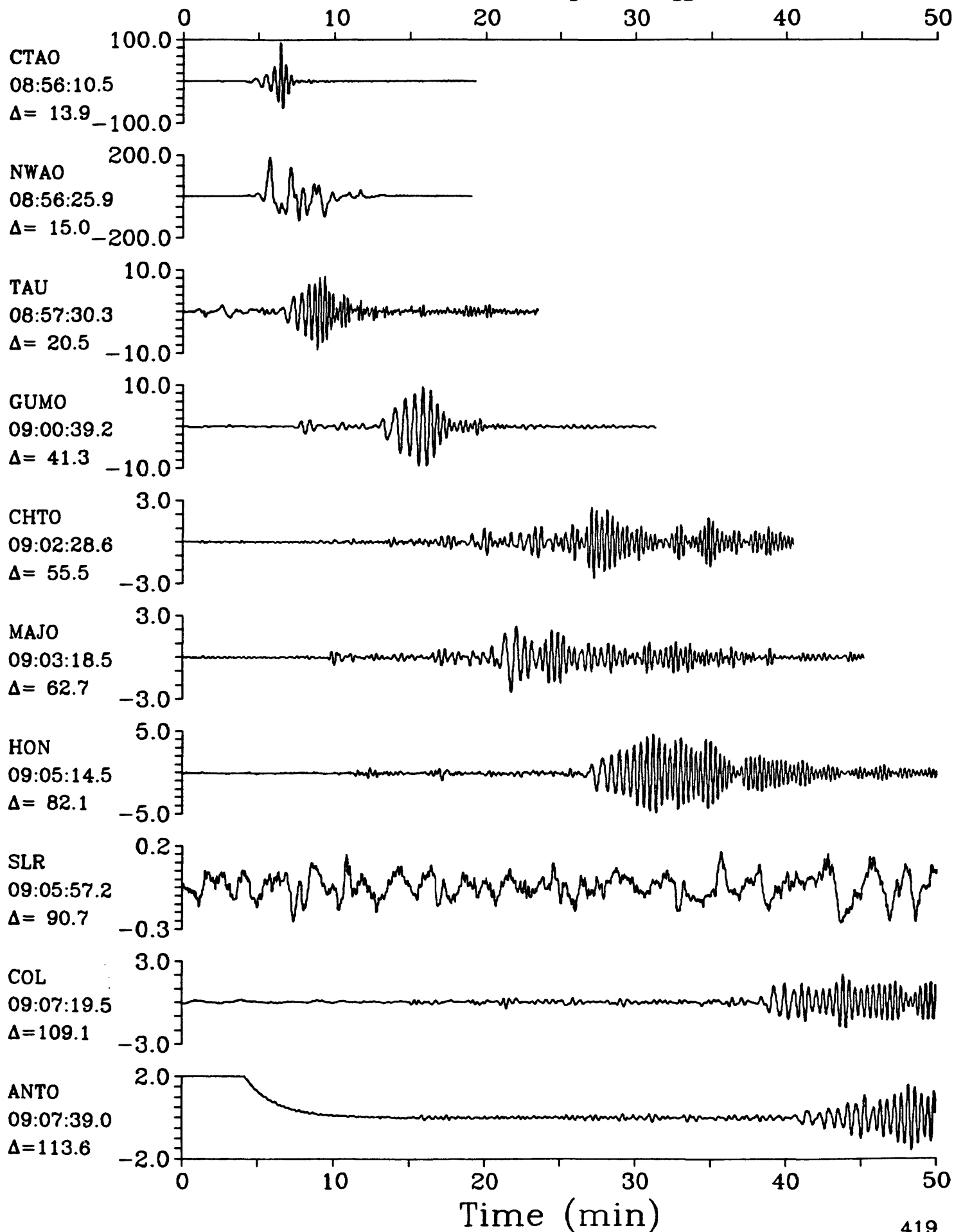
SPZ

South Australia $h=10.0$ $m_b=5.7$ $M_{sz}=5.8$ 

LPZ

30 March 1986 08:53:53.20
South Australia $h=10.0$ $m_b=5.7$ $M_{sz}=5.8$

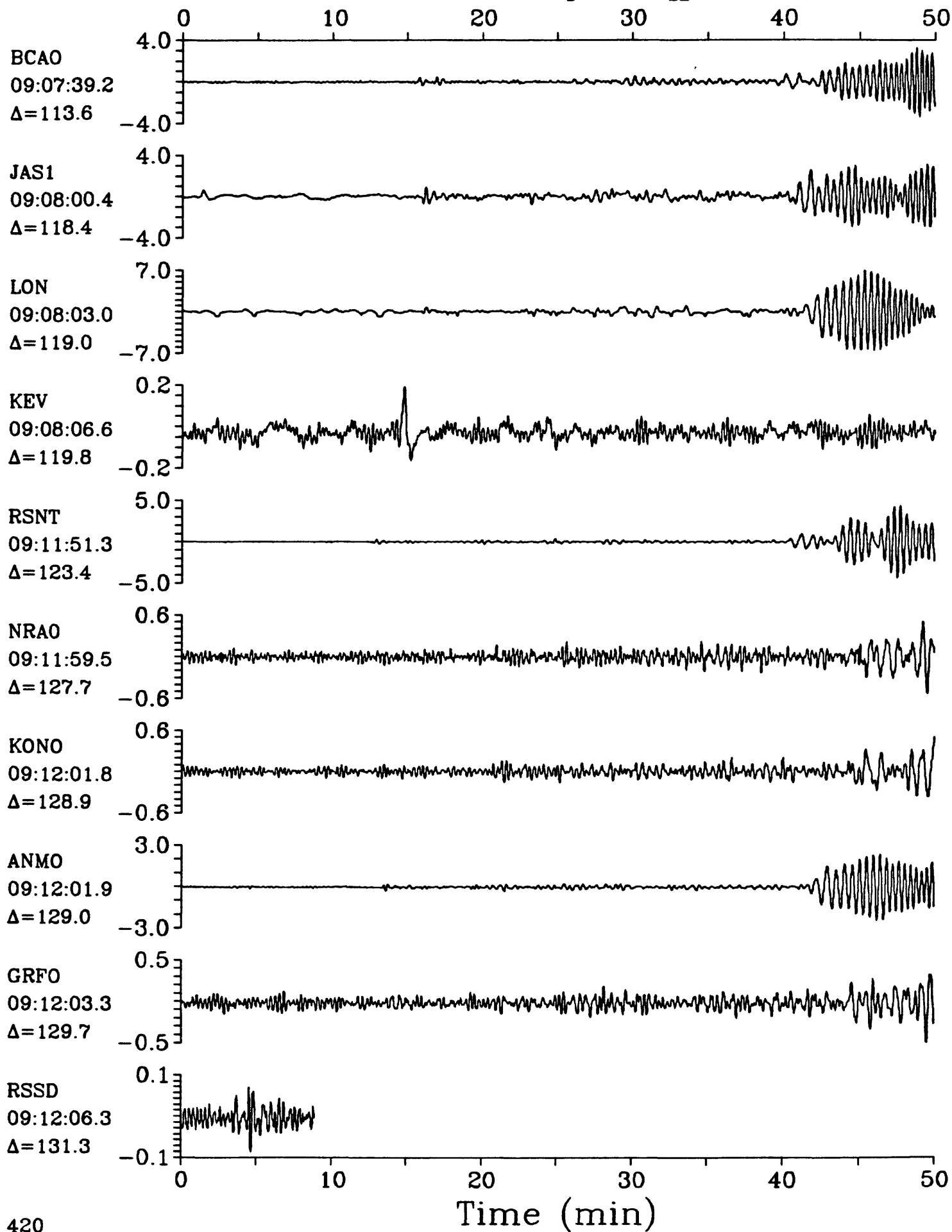
LPZ

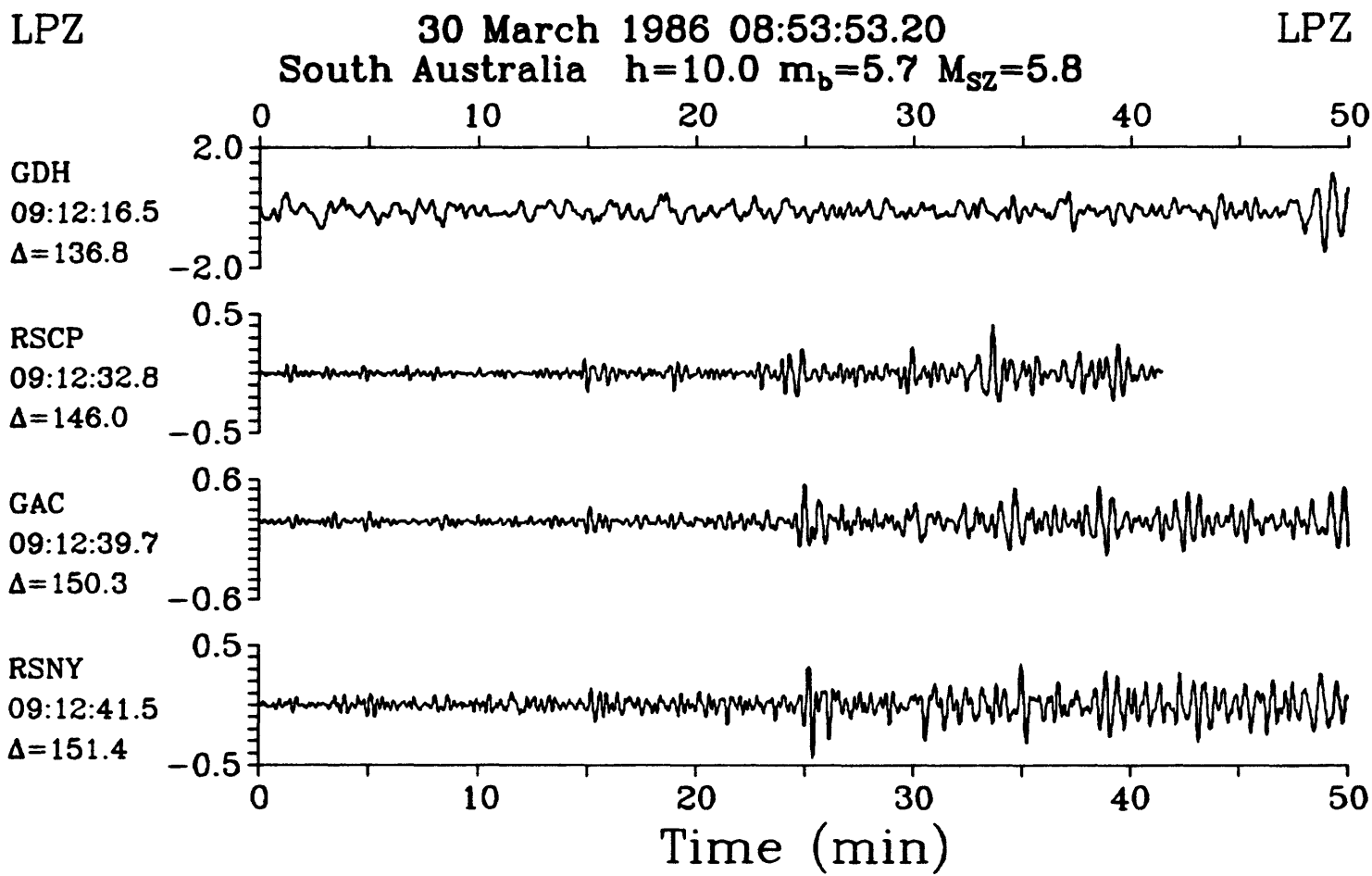


LPZ

30 March 1986 08:53:53.20

LPZ

South Australia $h=10.0$ $m_b=5.7$ $M_{sz}=5.8$ 



IPZ

30 March 1986 08:53:53.20

IPZ

South Australia $h=10.0$ $m_b=5.7$ $M_{sz}=5.8$ 