

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

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Waveform Catalog
November 1985

by

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

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Introduction

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

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

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

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

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

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

With the inclusion of the Network of Autonomously 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 November 1985 with magnitudes ≥ 5.5

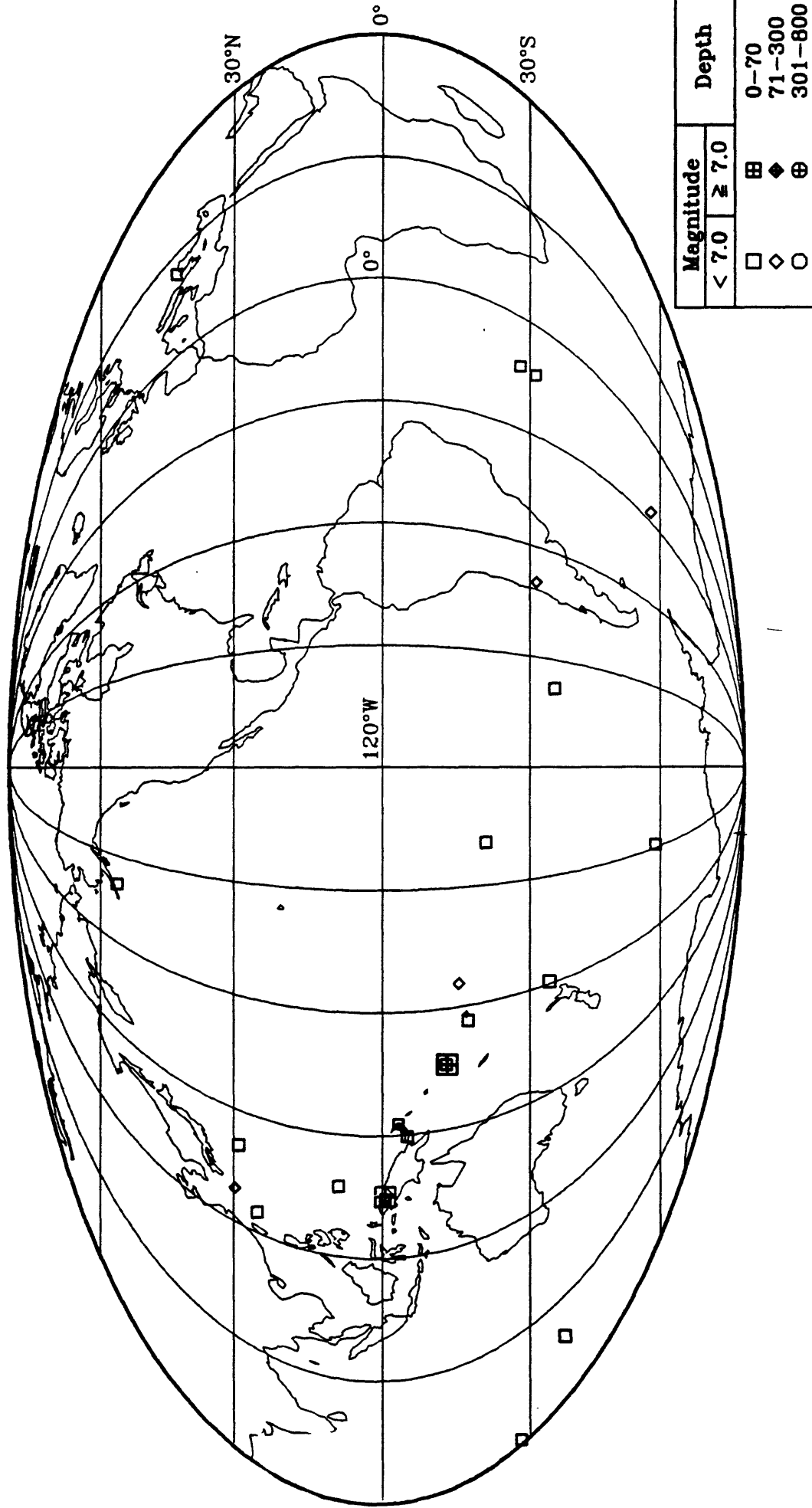
	Origin Time UTC	Latitude	Longitude	Depth (km)	Magnitude		Flinn-Engdahl Region Name
					m_b	M_{sz}	
1.	1985 11 02 19:49:22.97	18.172° S	176.238° E	10.0	5.5	5.9	Fiji Islands Region
2.	1985 11 06 08:15:43.63	58.695° S	26.188° W	169.5	5.7		South Sandwich Islands Region
3.	1985 11 07 19:12:29.81	35.198° S	179.357° W	33.0	6.2	6.4	East of North Island, N.Z.
4.	1985 11 07 23:34:34.30	7.728° N	137.071° E	33.0	5.8	5.7	West Caroline Islands
5.	1985 11 08 18:40:25.01	27.956° N	140.568° E	43.9	5.8	6.0	Bonin Islands Region
6.	1985 11 09 23:30:42.34	41.243° N	23.925° E	17.6	5.5	5.3	Greece-Bulgaria Border Region
7.	1985 11 10 19:40:33.95	29.036° S	13.191° W	10.0	5.5	5.5	South Atlantic Ridge
8.	1985 11 12 03:34:19.82	36.249° S	98.023° W	10.0	5.4	5.7	Southern Pacific Ocean
9.	1985 11 14 22:17:44.68	54.770° N	159.754° W	33.0	5.5	5.7	South of Alaska
10.	1985 11 14 22:32:52.63	32.436° S	69.595° W	117.4	5.6		Mendoza Province, Argentina
11.	1985 11 16 04:12:18.86	38.575° S	78.400° E	10.0	5.7	6.3	Mid-Indian Rise
12.	1985 11 17 09:40:21.79	1.591° S	135.012° E	12.9	5.9	7.1	West Irian Region
13.	1985 11 17 14:20:53.62	1.669° S	134.388° E	10.0	5.5	5.5	West Irian Region
14.	1985 11 18 18:18:34.96	32.249° S	13.434° W	10.0	5.4	5.5	South Atlantic Ridge
15.	1985 11 19 14:03:35.17	28.665° N	128.854° E	140.6	5.5		Ryukyu Islands
16.	1985 11 22 08:45:25.51	5.980° S	149.520° E	53.7	5.4	6.0	New Britain Region
17.	1985 11 23 12:45:06.35	59.717° S	148.699° W	10.0	5.6	4.6	South Pacific Cordillera
18.	1985 11 26 10:05:05.36	24.107° N	125.219° E	33.0	5.4	5.9	Southwestern Ryukyu Islands
19.	1985 11 26 17:41:58.28	21.904° S	138.955° W	0.0	5.8		Tuamotu Archipelago Region
20.	1985 11 28 02:25:42.31	14.012° S	166.235° E	33.0	6.1	7.0	Vanuatu Islands
21.	1985 11 28 03:49:53.98	13.956° S	166.170° E	33.0	6.2	7.1	Vanuatu Islands
22.	1985 11 28 06:37:48.69	13.842° S	166.209° E	45.5	5.6	5.8	Vanuatu Islands
23.	1985 11 28 14:54:41.91	4.265° S	152.859° E	36.7	5.4	5.5	New Britain Region
24.	1985 11 30 02:28:11.60	29.231° S	61.244° E	10.0	5.6	5.3	Atlantic-Indian Rise
25.	1985 11 30 03:04:18.78	16.381° S	174.197° W	165.4	5.6		Tonga Islands

Table 2. Network-event tape station list for November, 1985

Code	ID	Station	Latitude	Longitude	Elevation (m)	Type*
AFI	69	Afiamalua, Western Samoa	13.91° S	171.78° W	706.0	DWWSSN
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
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
NE04	204	Witteveen, Netherlands	52.813° N	6.668° E	17.0	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
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
RSO	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
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

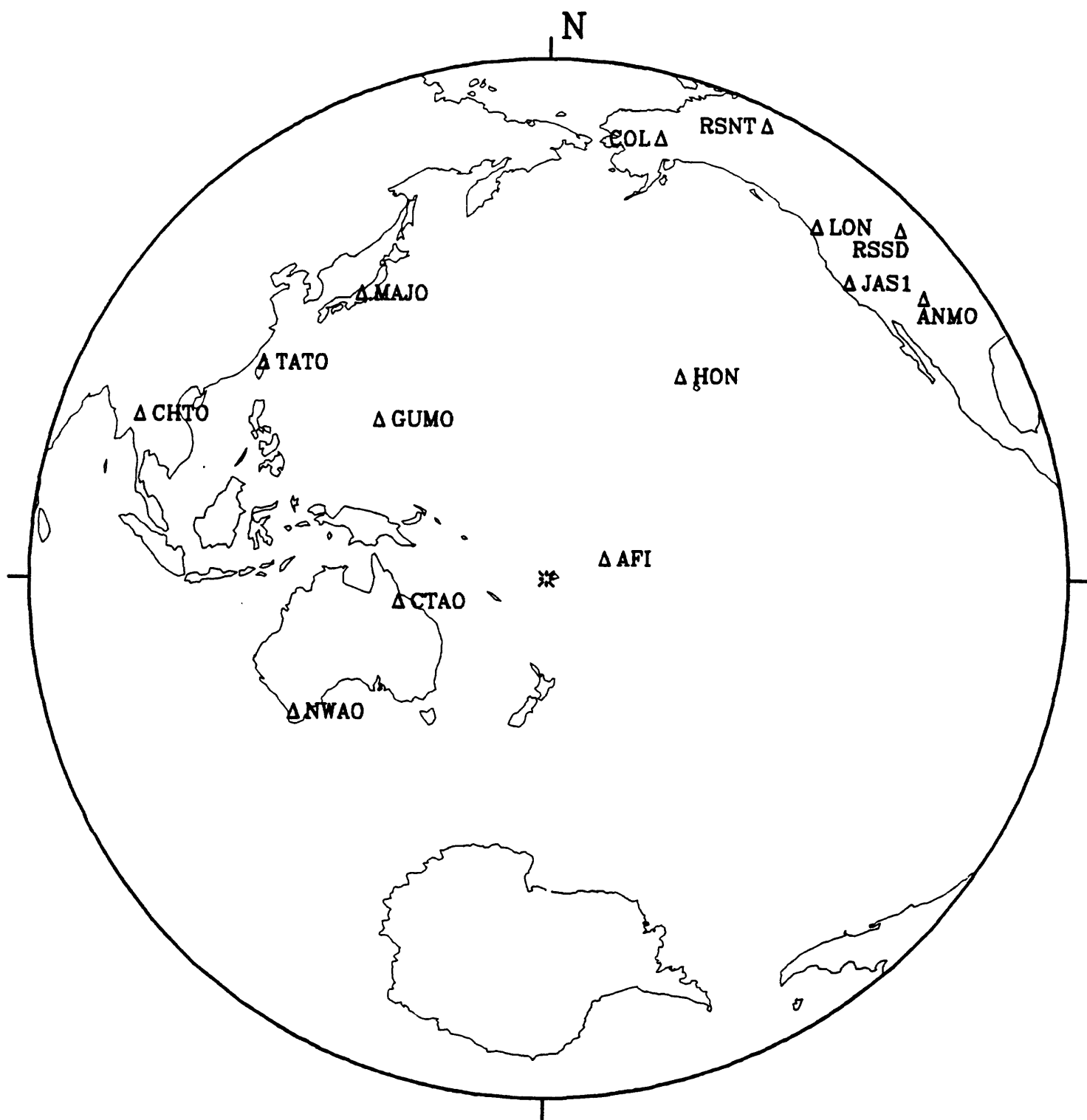
- * ASRO - Abbreviated Seismic Research Observatory
DWWSSN - Digital World Wide Standardized Seismograph Network
GRF - Graefenberg Array
NARS - Network of Autonomously Registering Stations
NRSA - Norwegian Regional Seismic Array
RSTN - Regional Seismic Test Network
SRO - Seismic Research Observatory

EARTHQUAKES - November 1985 - MAGNITUDE ≥ 5.5



02 November 1985 19:49:22.97

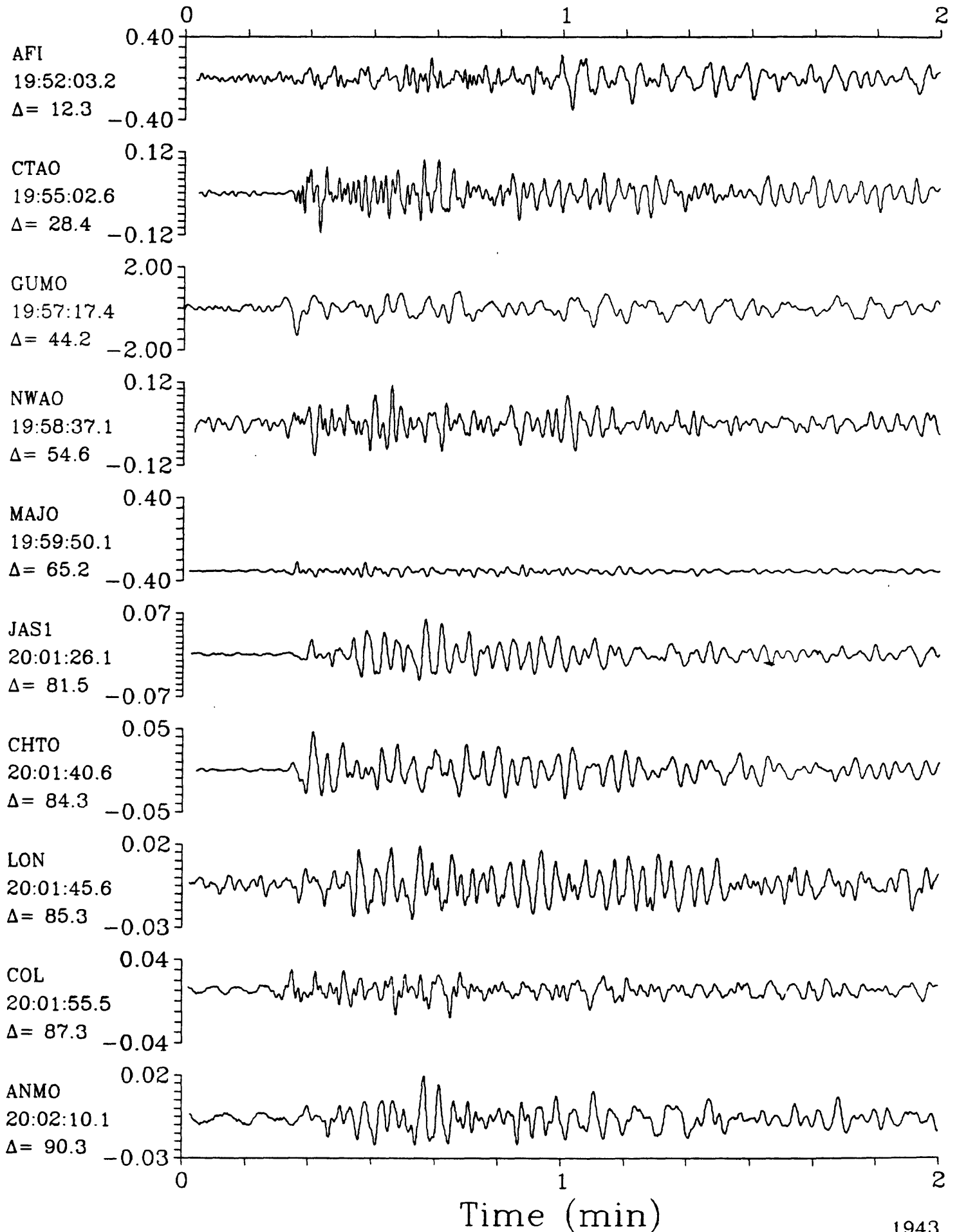
Fiji Islands Region



SPZ

02 November 1985 19:49:22.97

SPZ

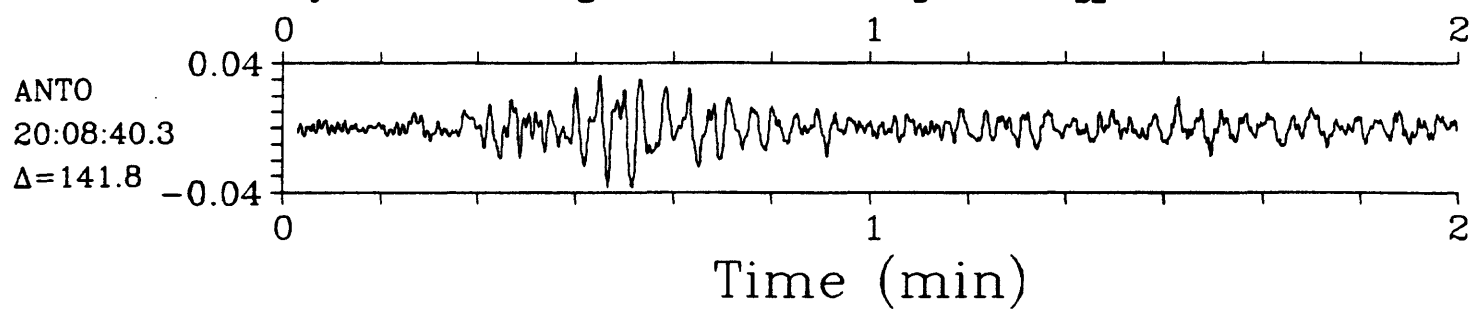
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SPZ

02 November 1985 19:49:22.97

SPZ

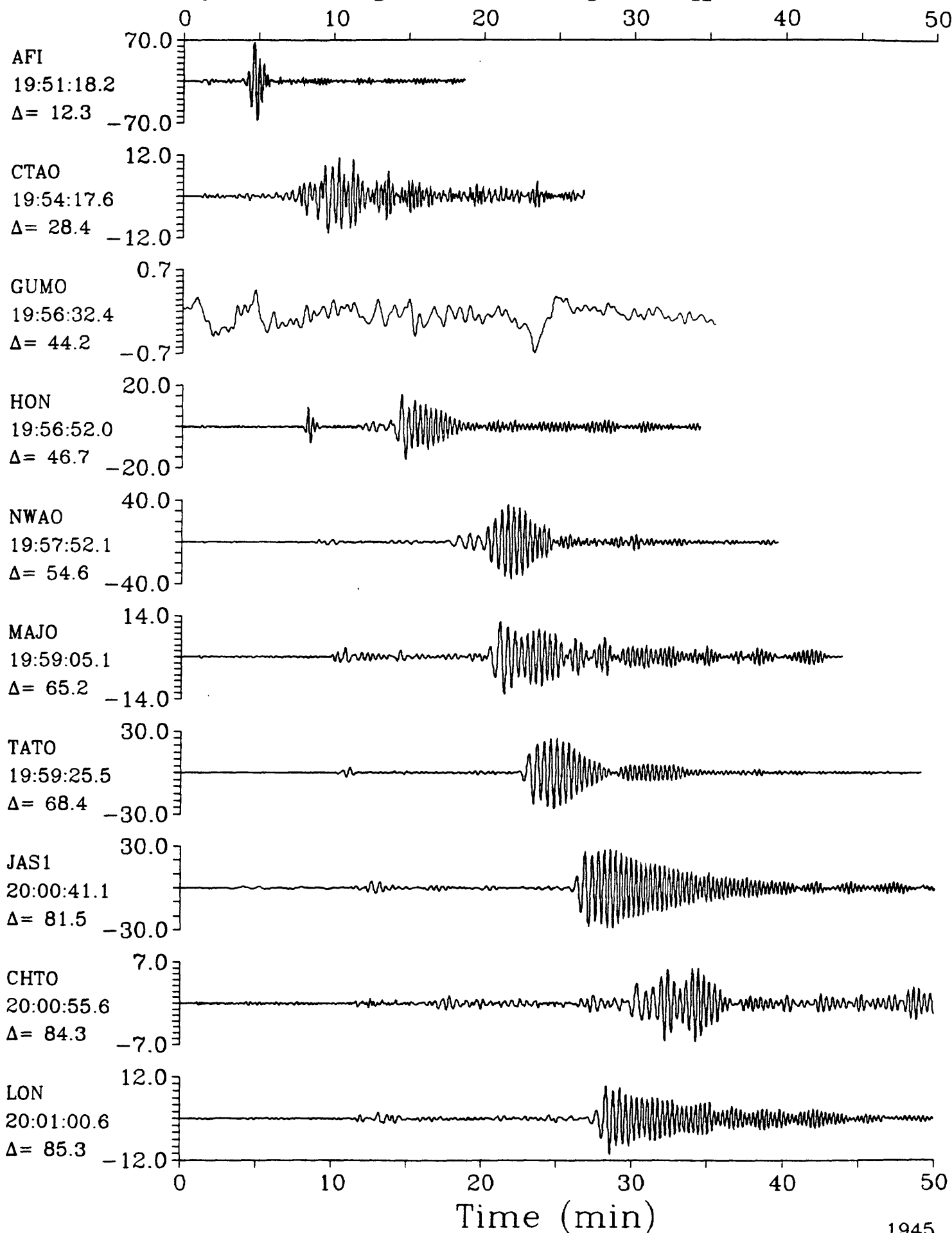
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LPZ

02 November 1985 19:49:22.97

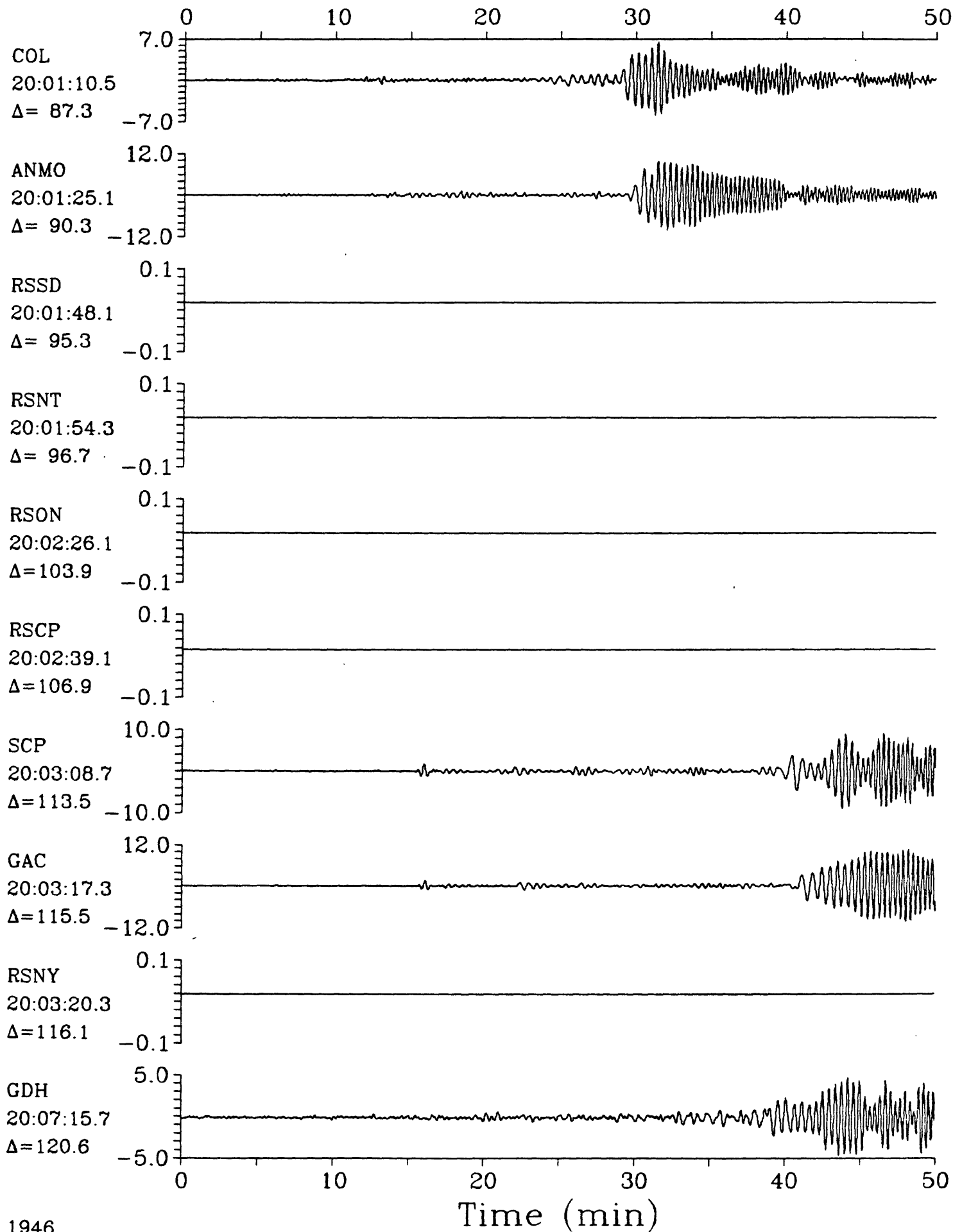
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LPZ

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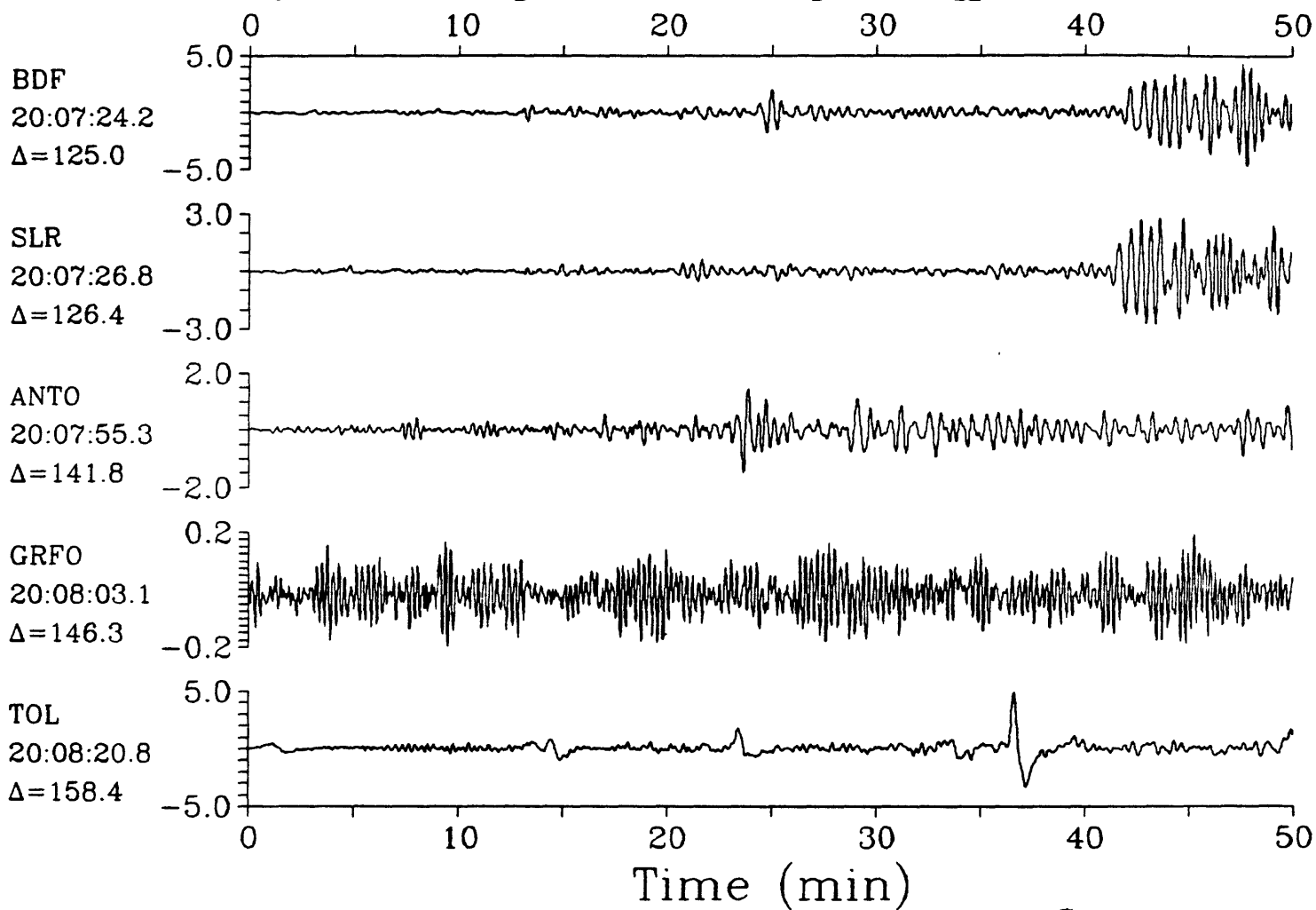
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LPZ

02 November 1985 19:49:22.97

LPZ

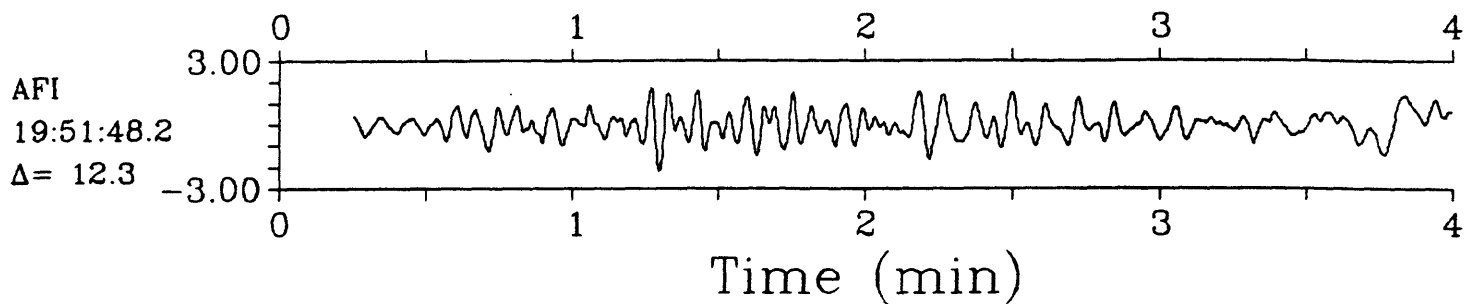
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IPZ

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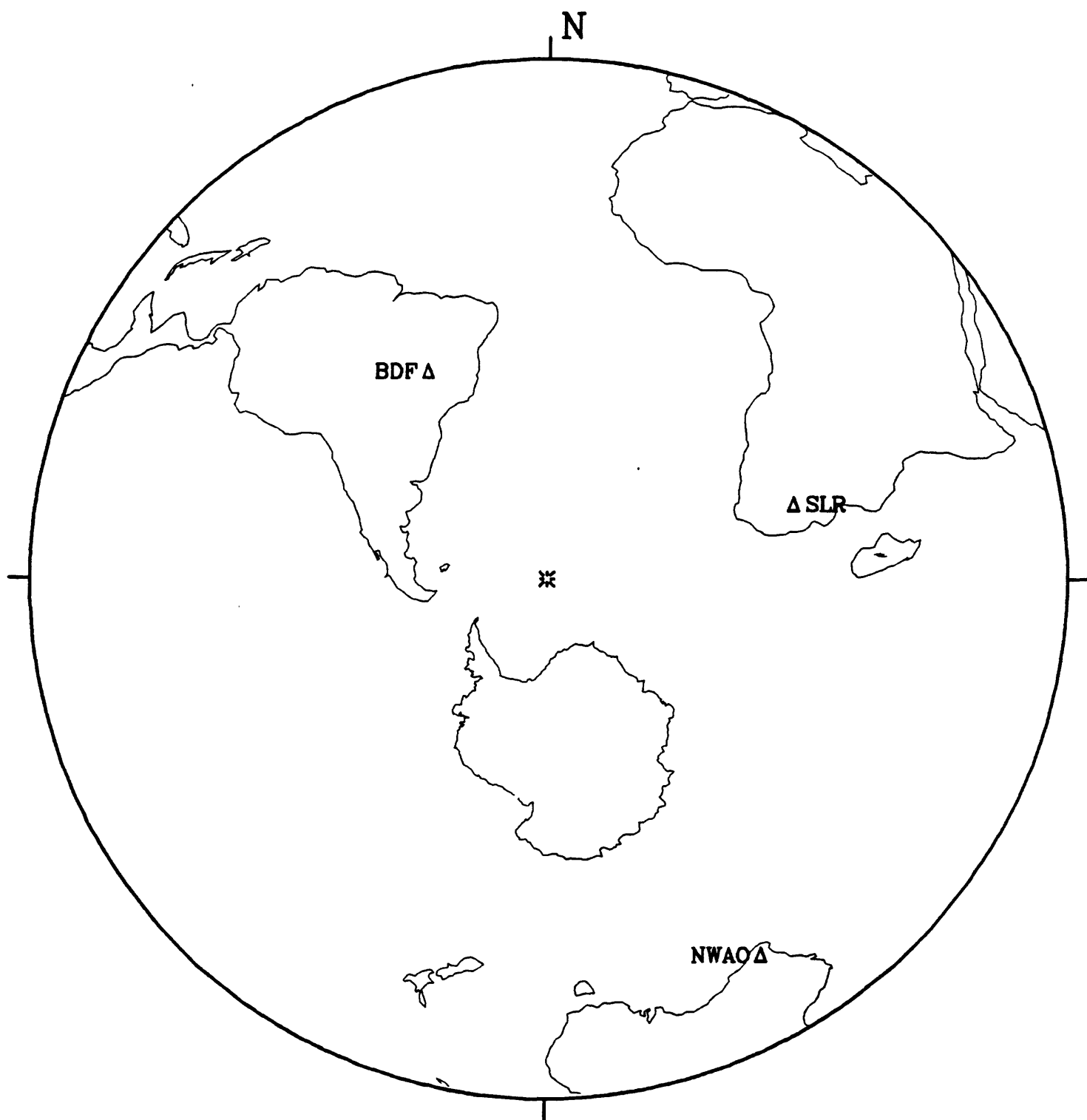
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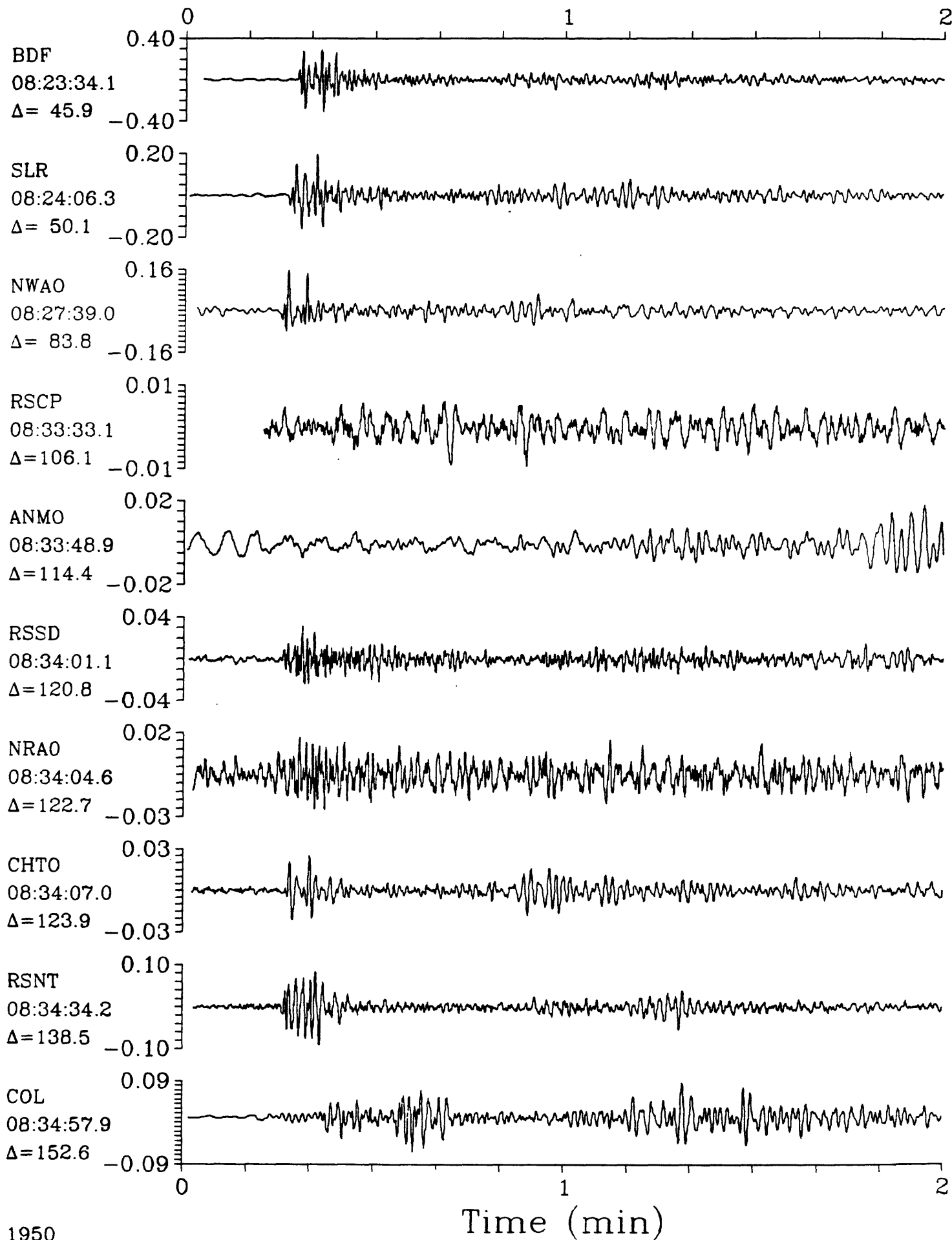
South Sandwich Islands Region



SPZ

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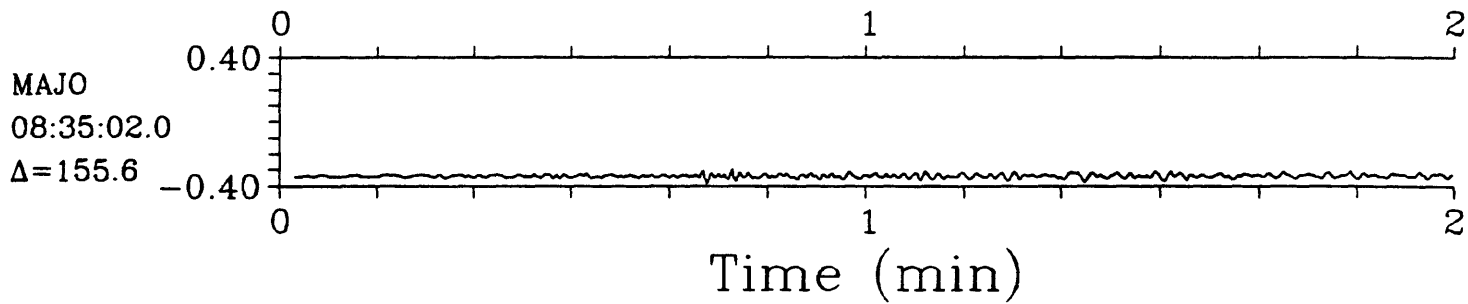
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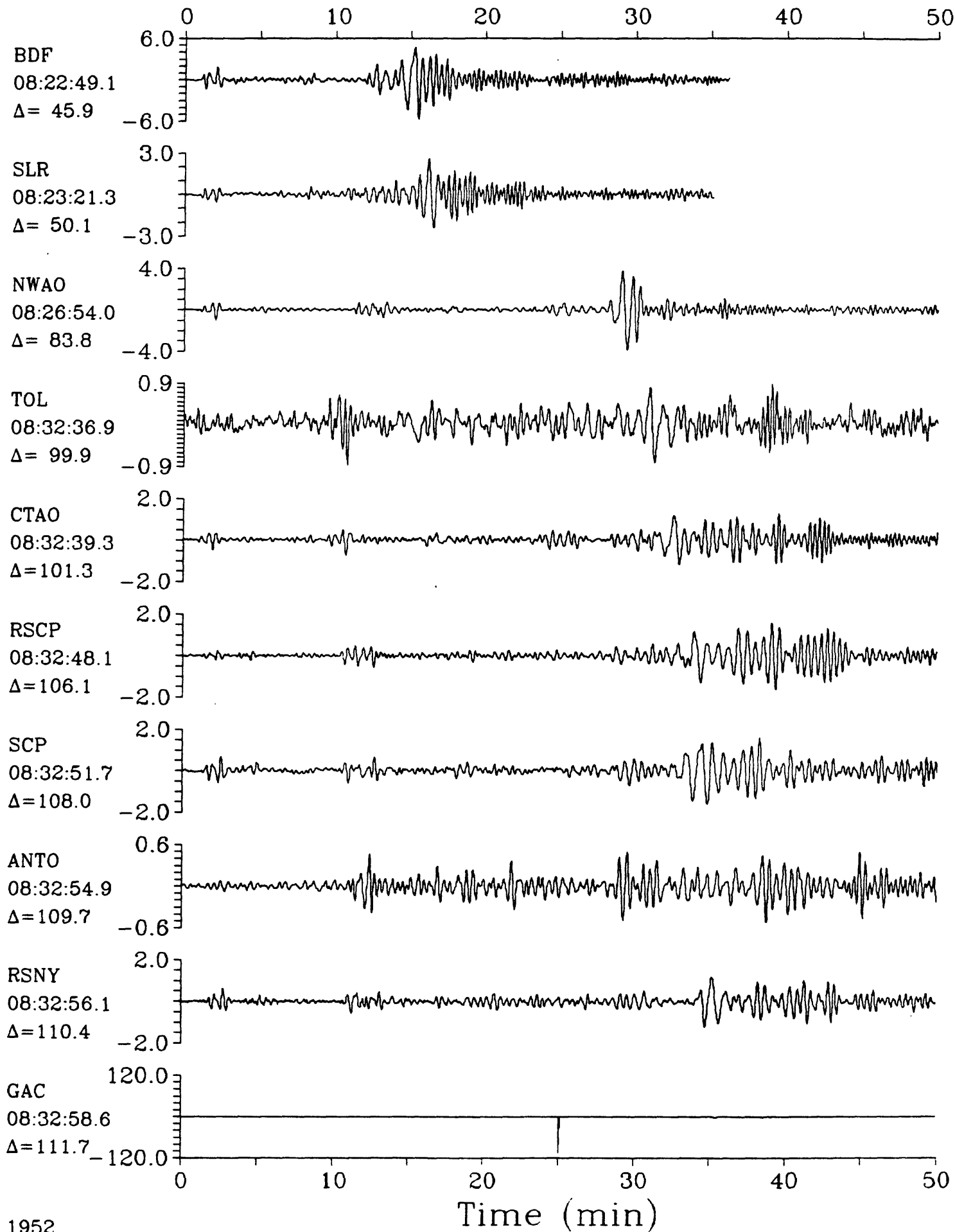
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LPZ

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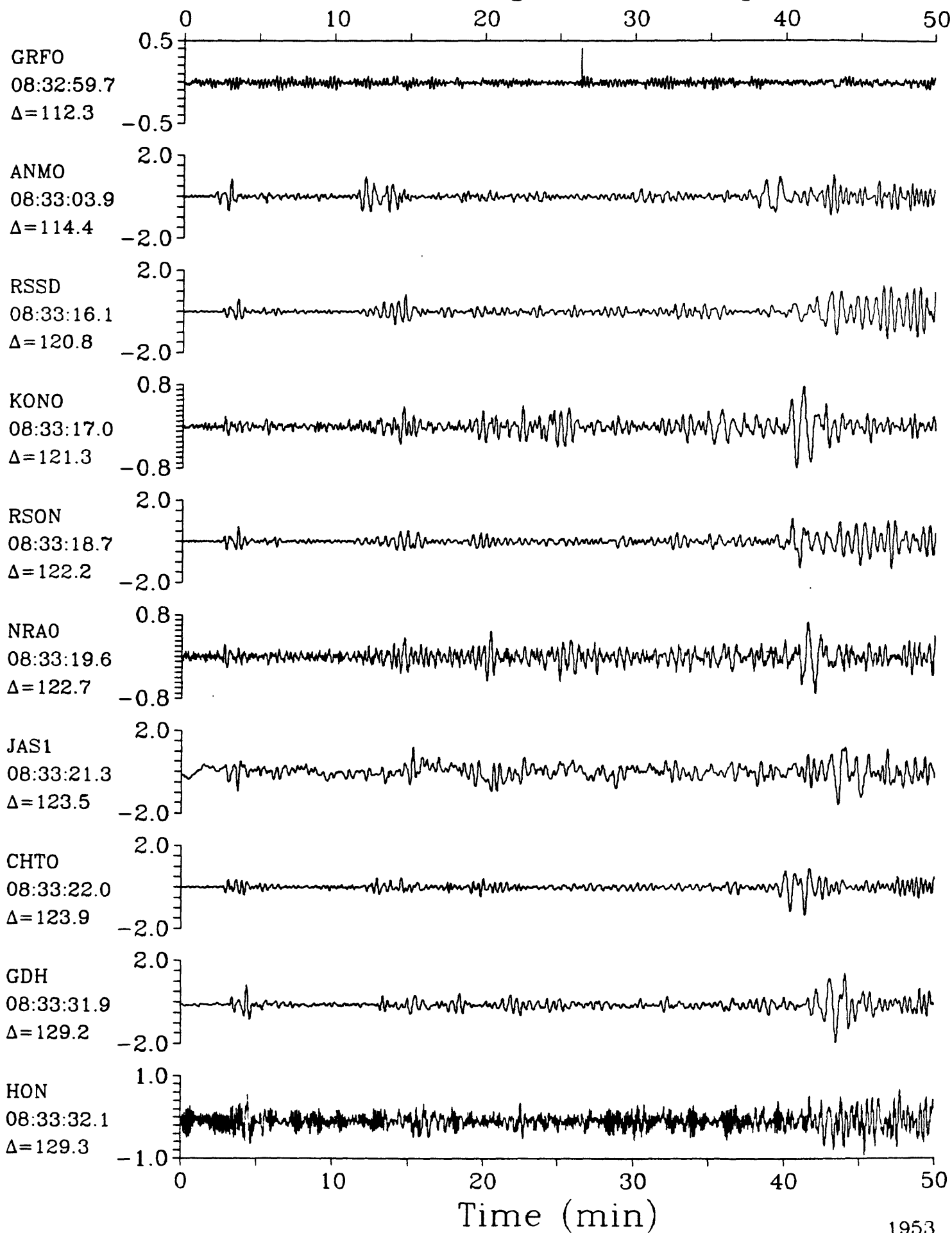
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LPZ

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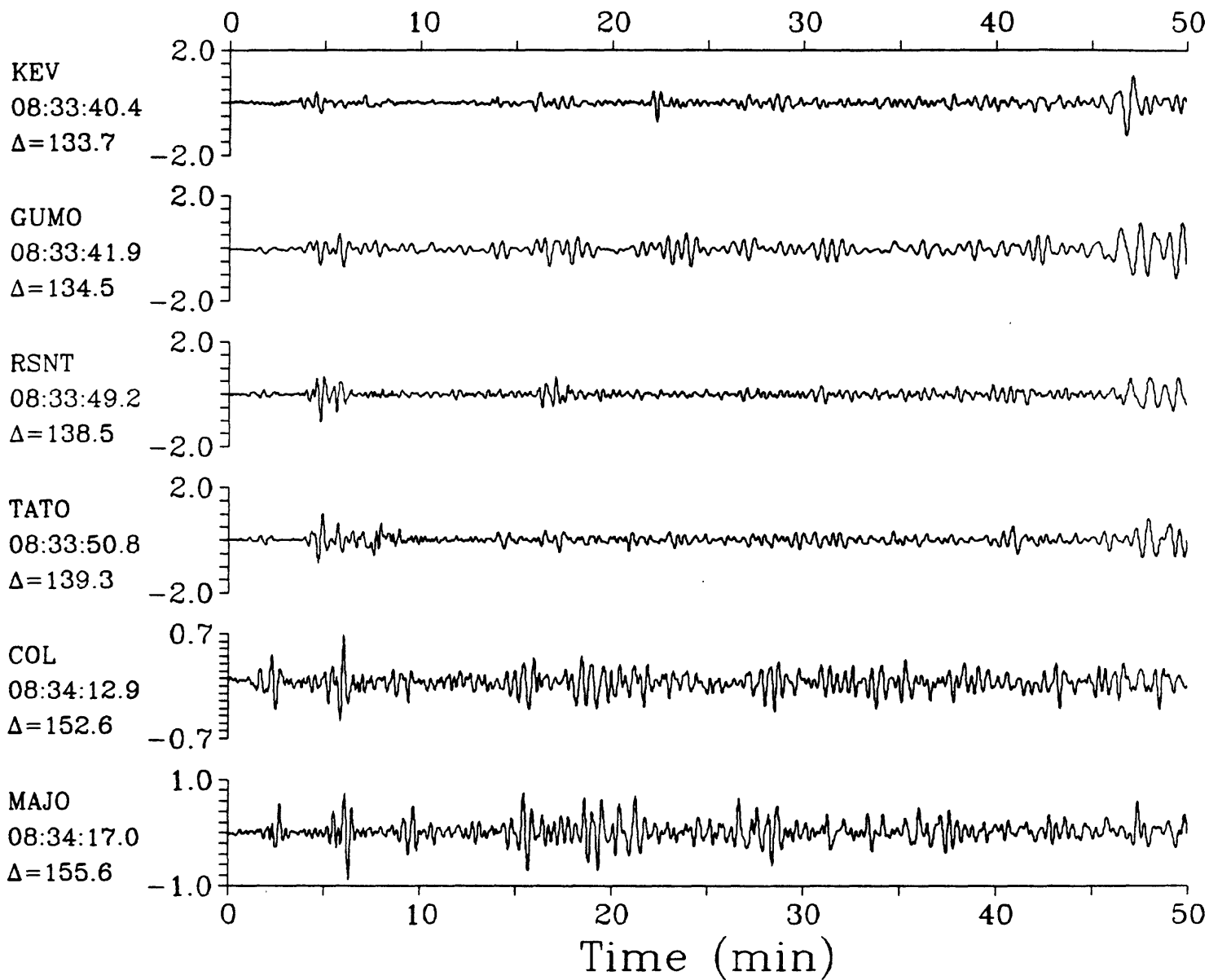
South Sandwich Islands Region $h=169.5$ $m_b=5.7$ 

1953

LPZ

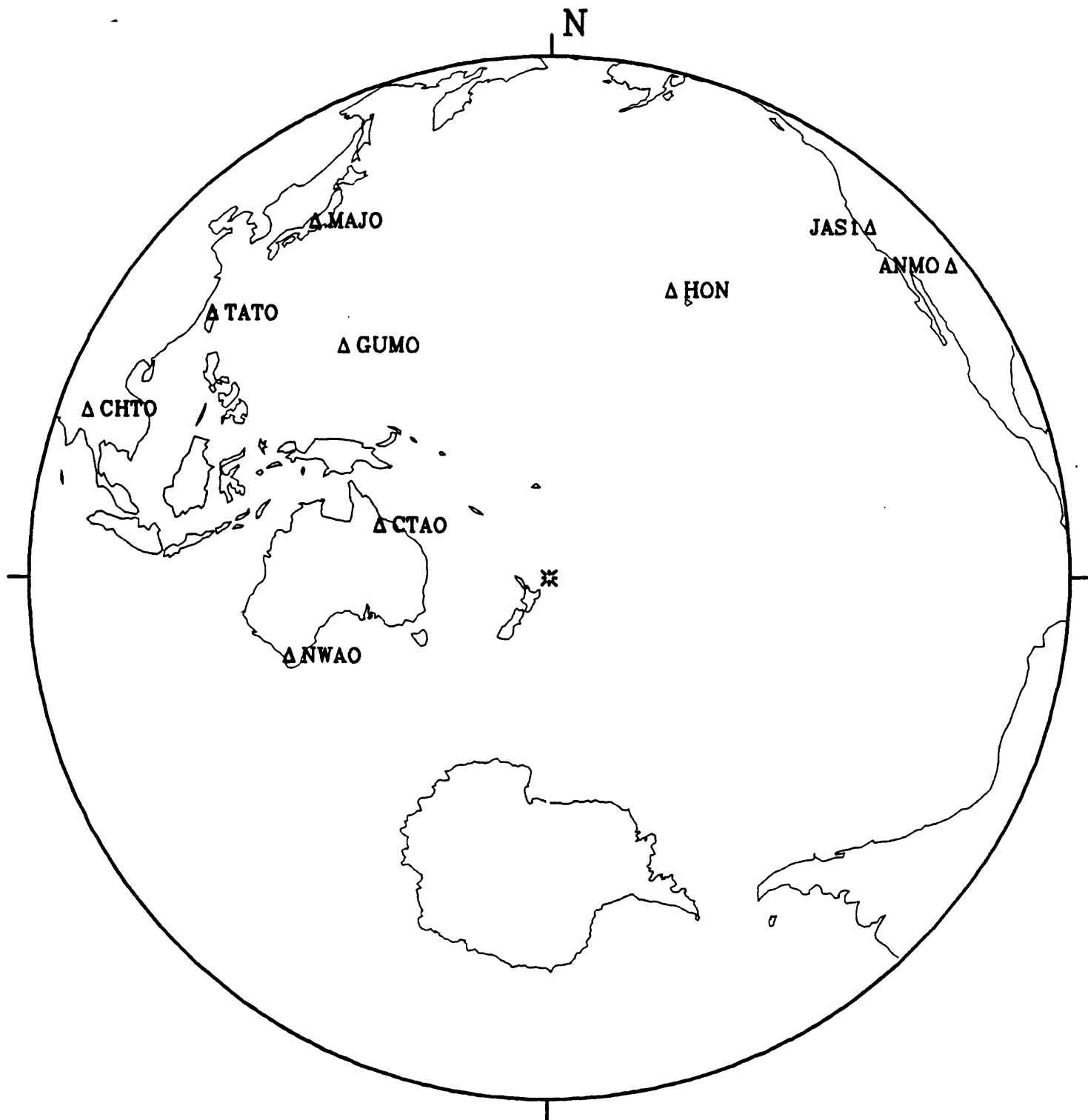
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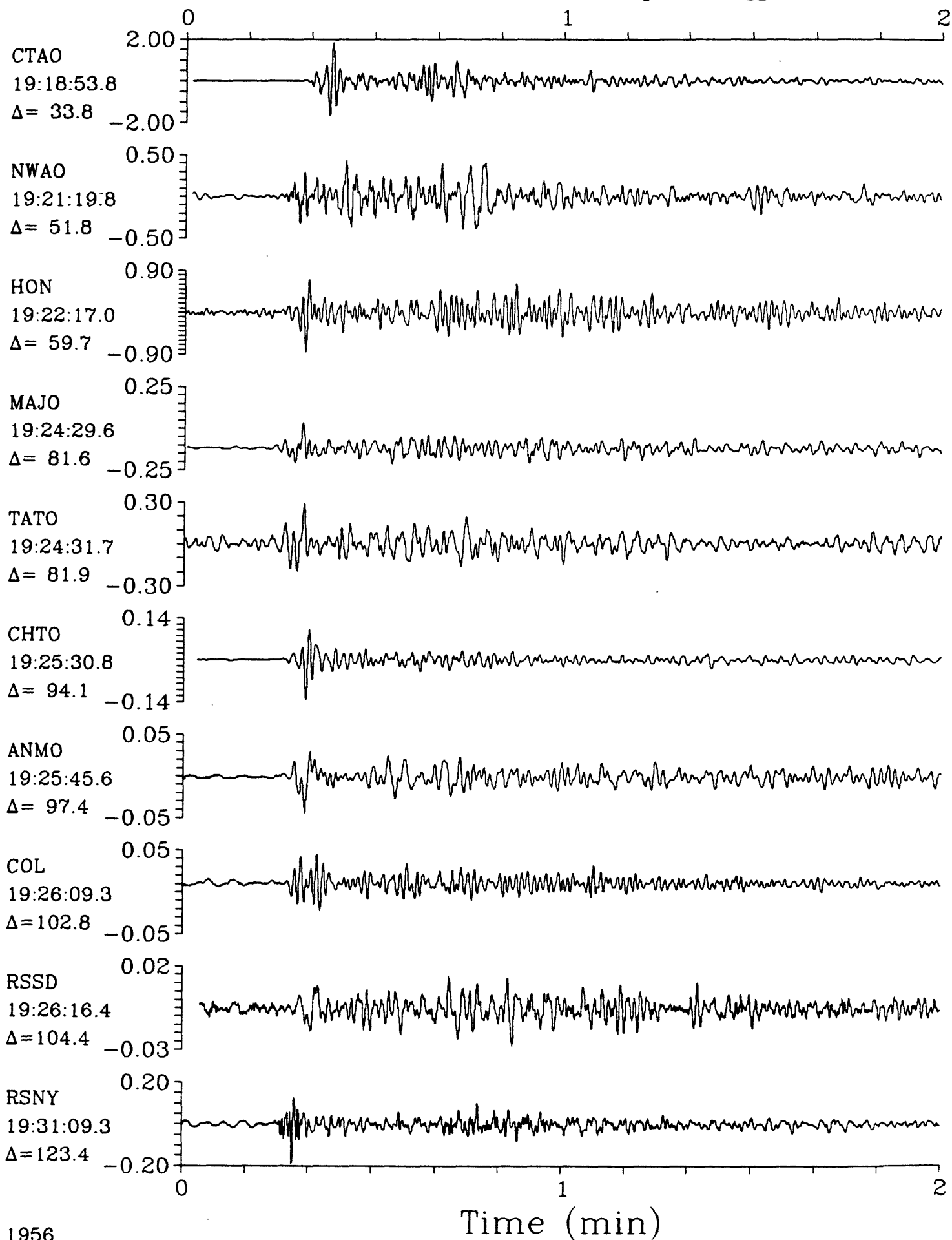
East of North Island, N.Z.



SPZ

07 November 1985 19:12:29.81

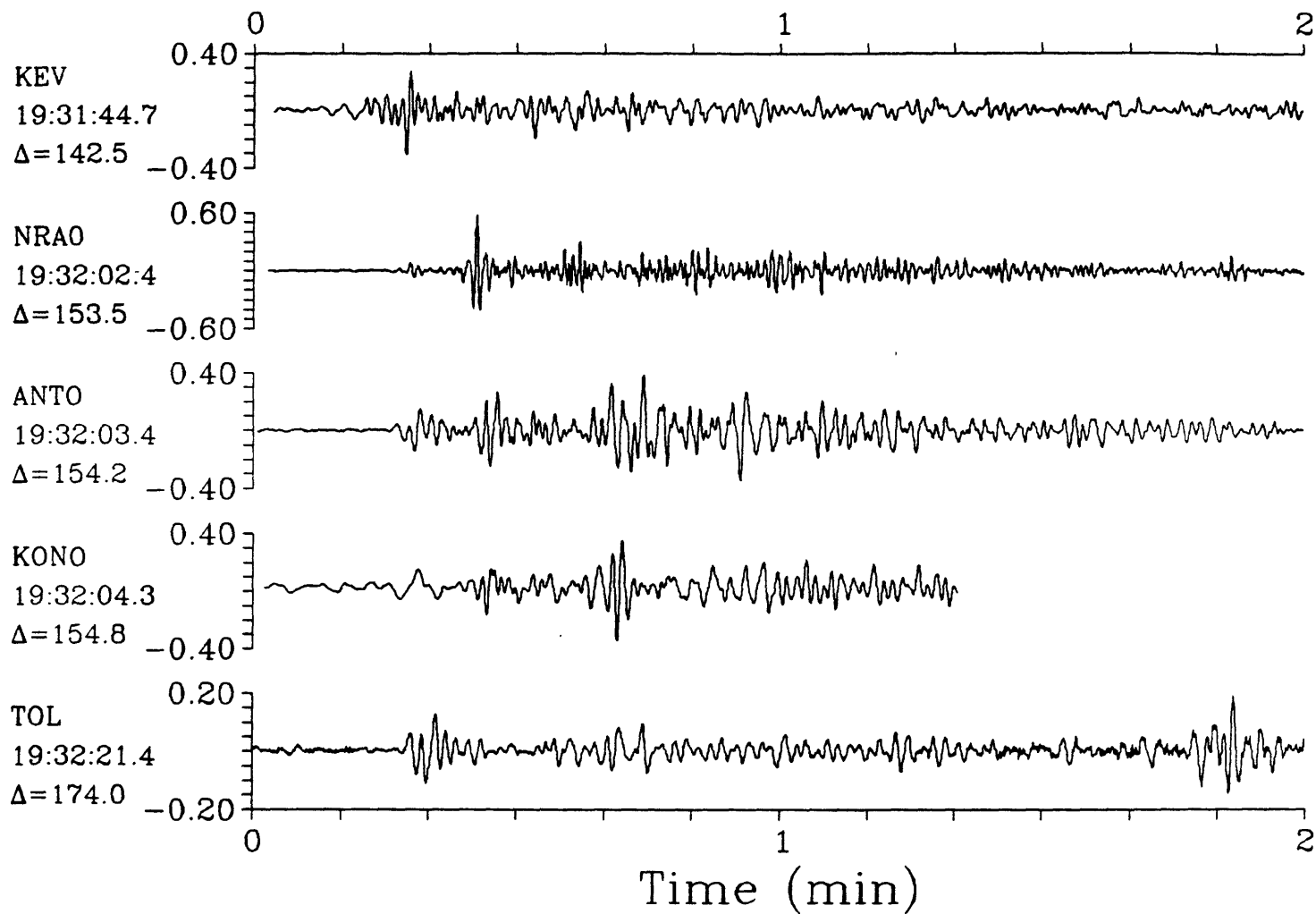
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SPZ

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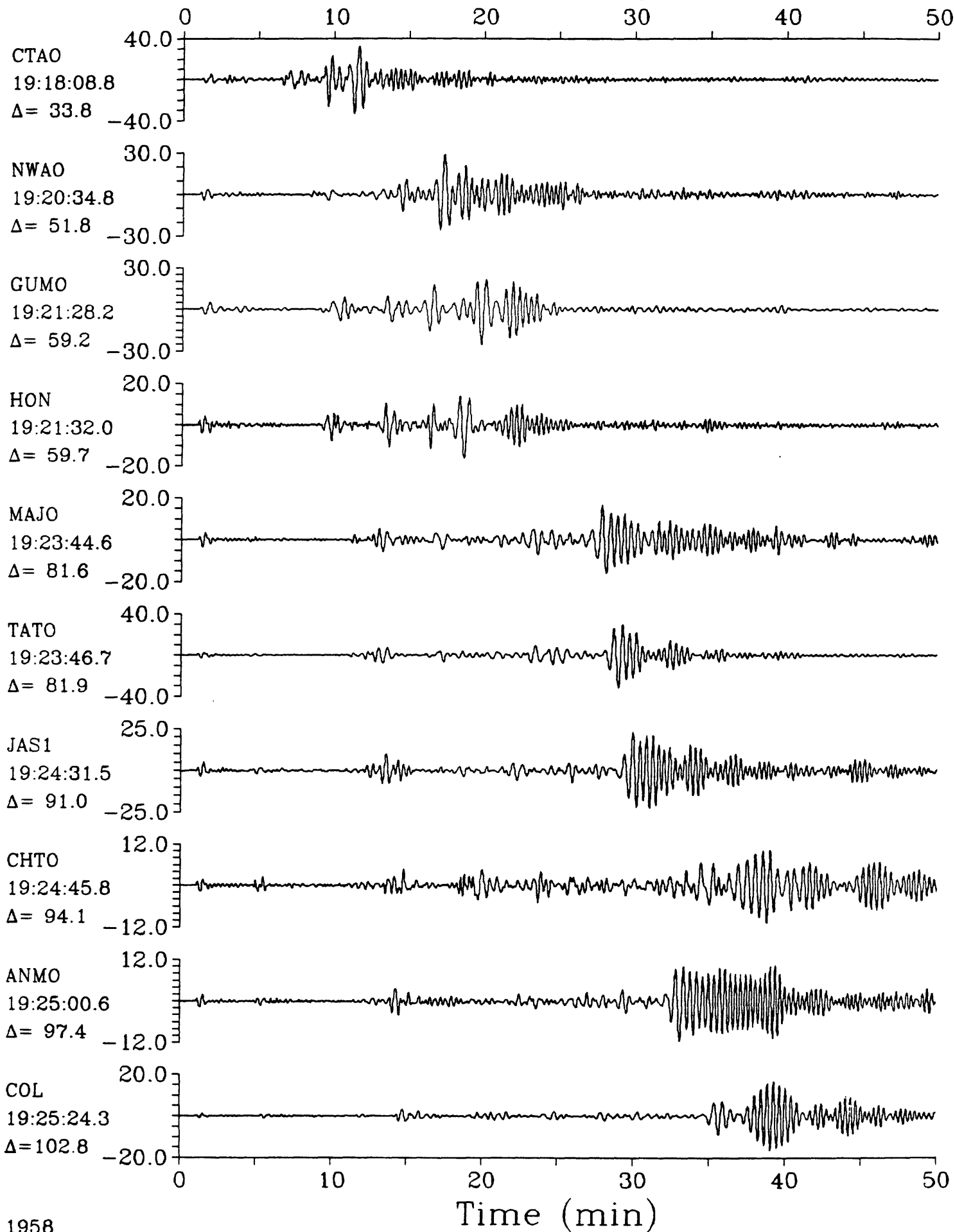
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LPZ

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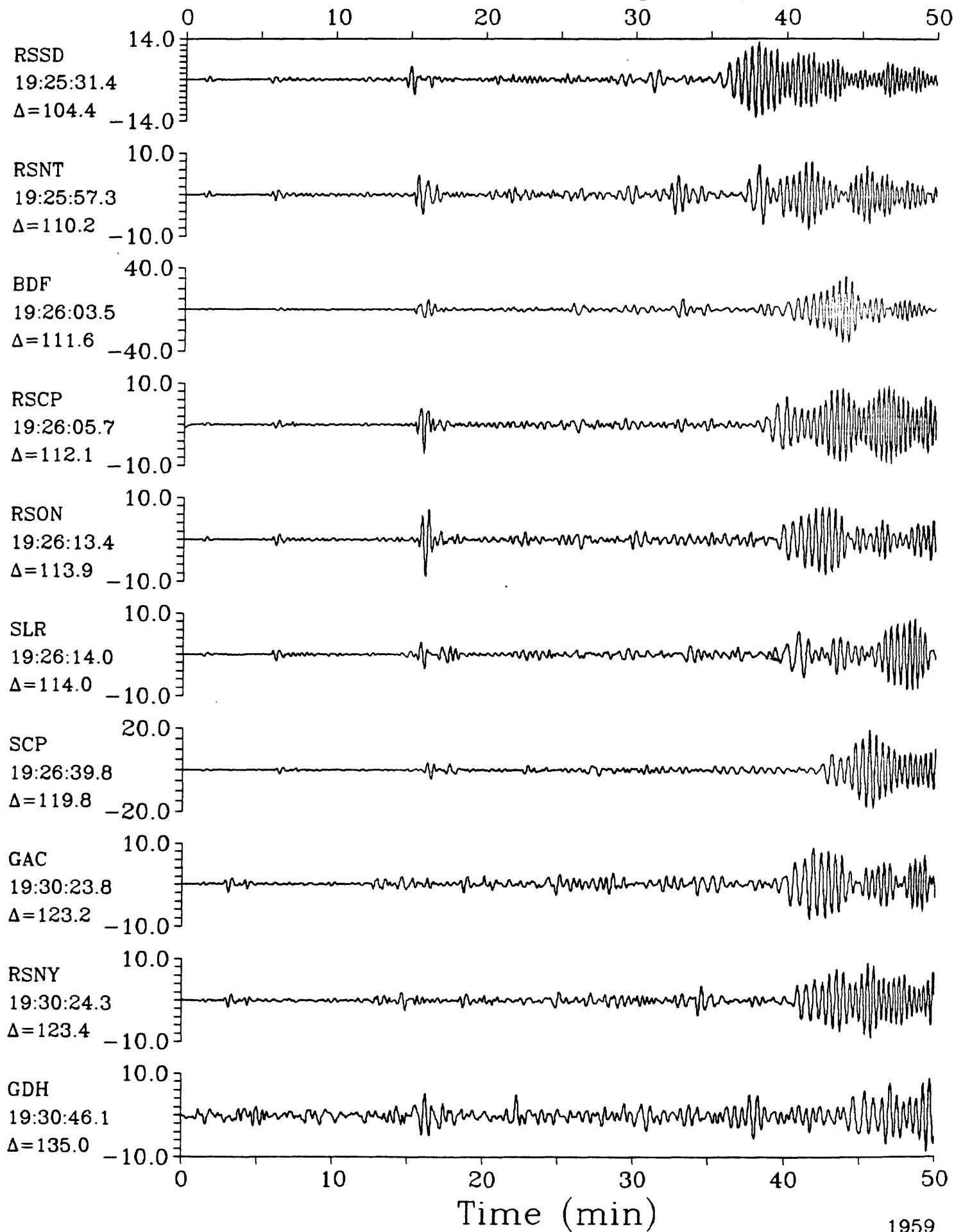
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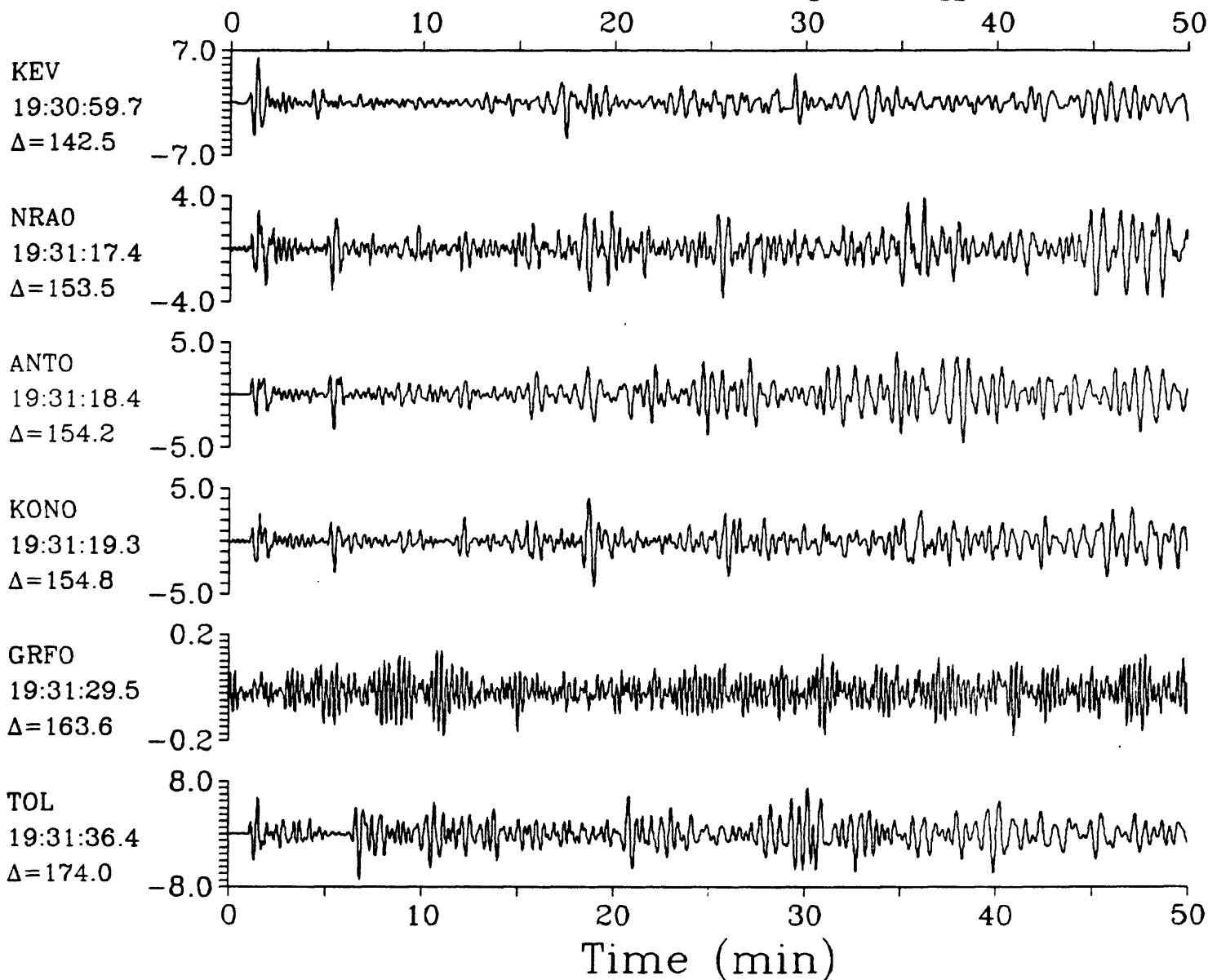
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LPZ

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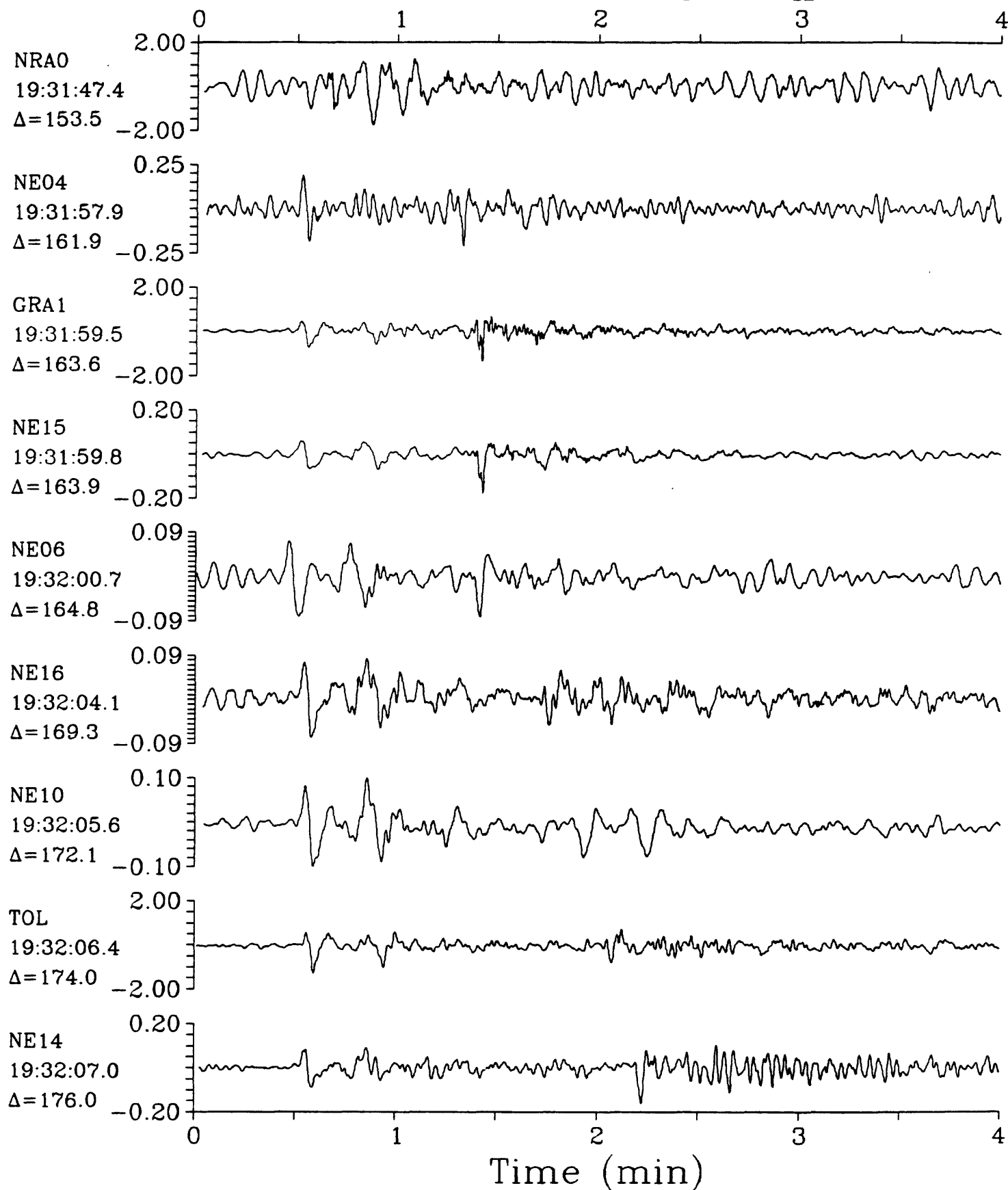
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IPZ

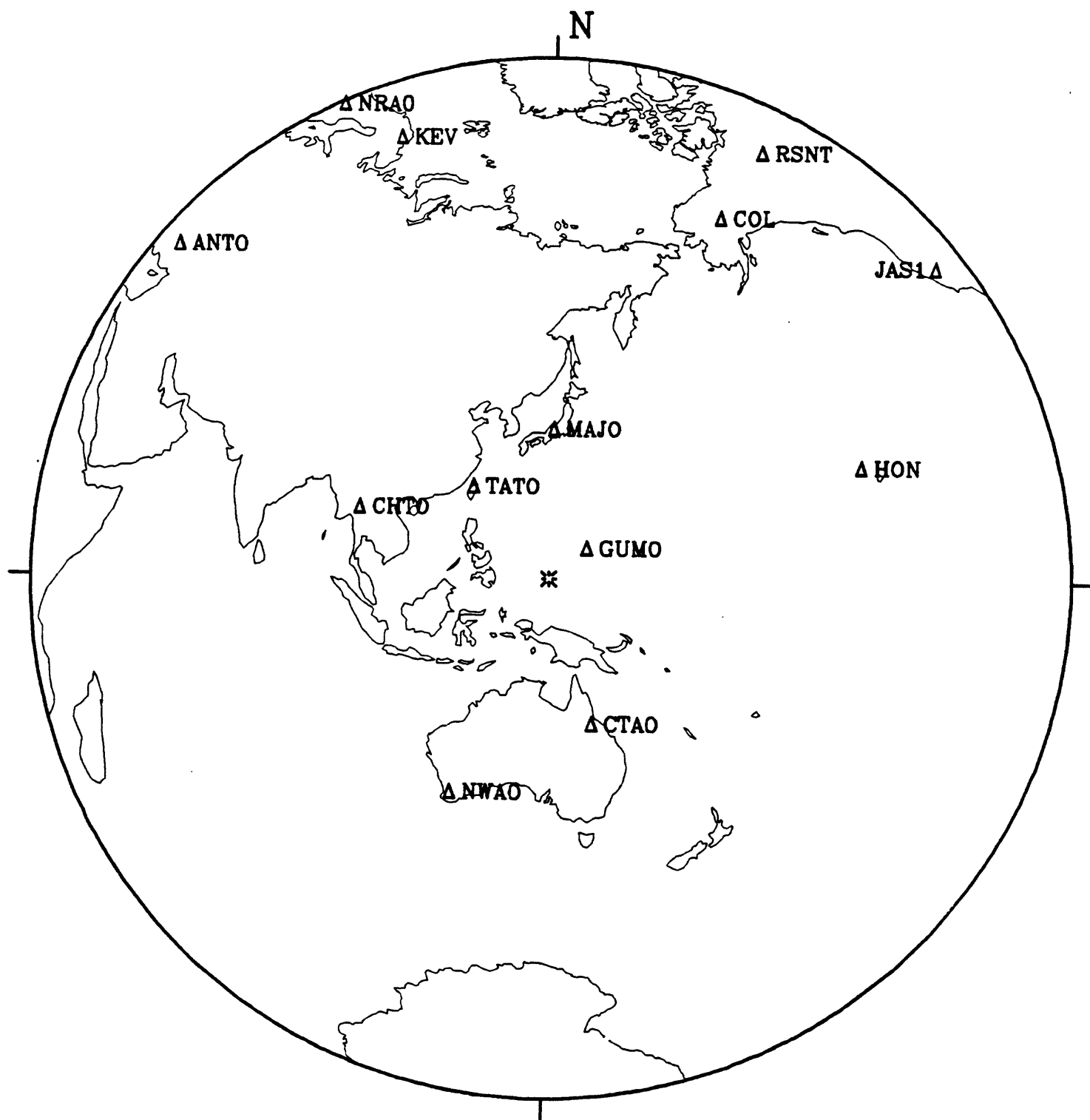
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IPZ

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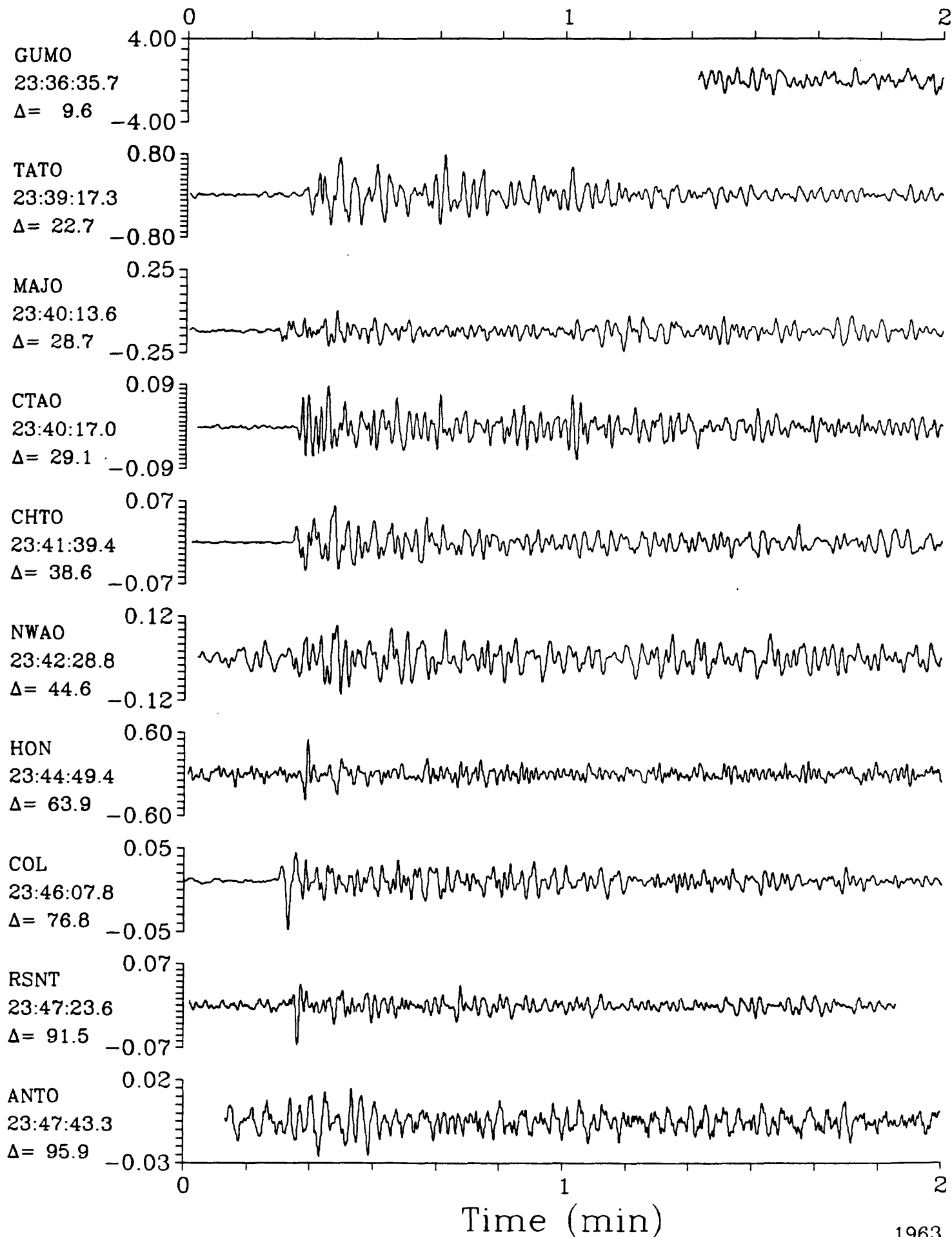
West Caroline Islands



SPZ

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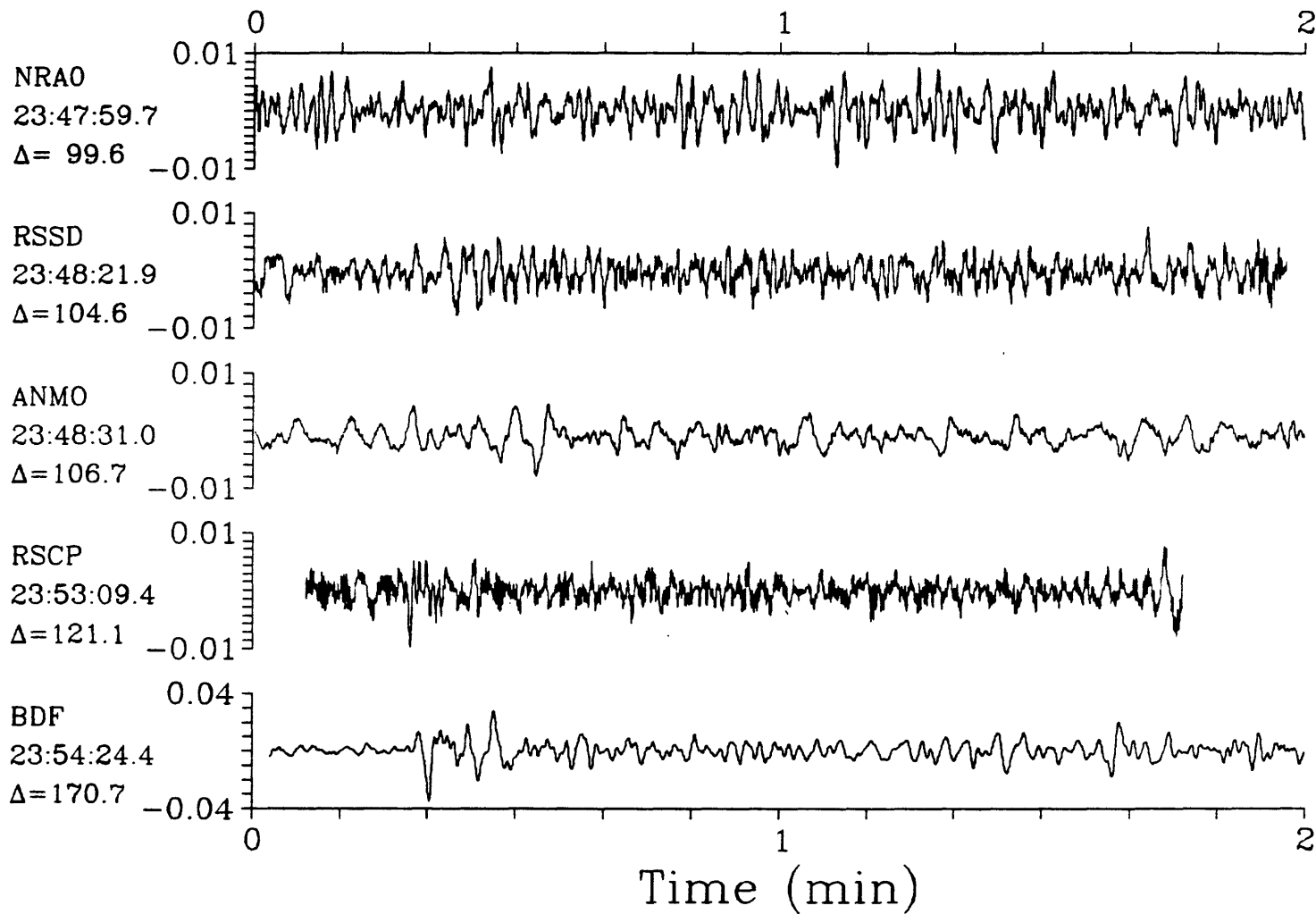
SPZ

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SPZ

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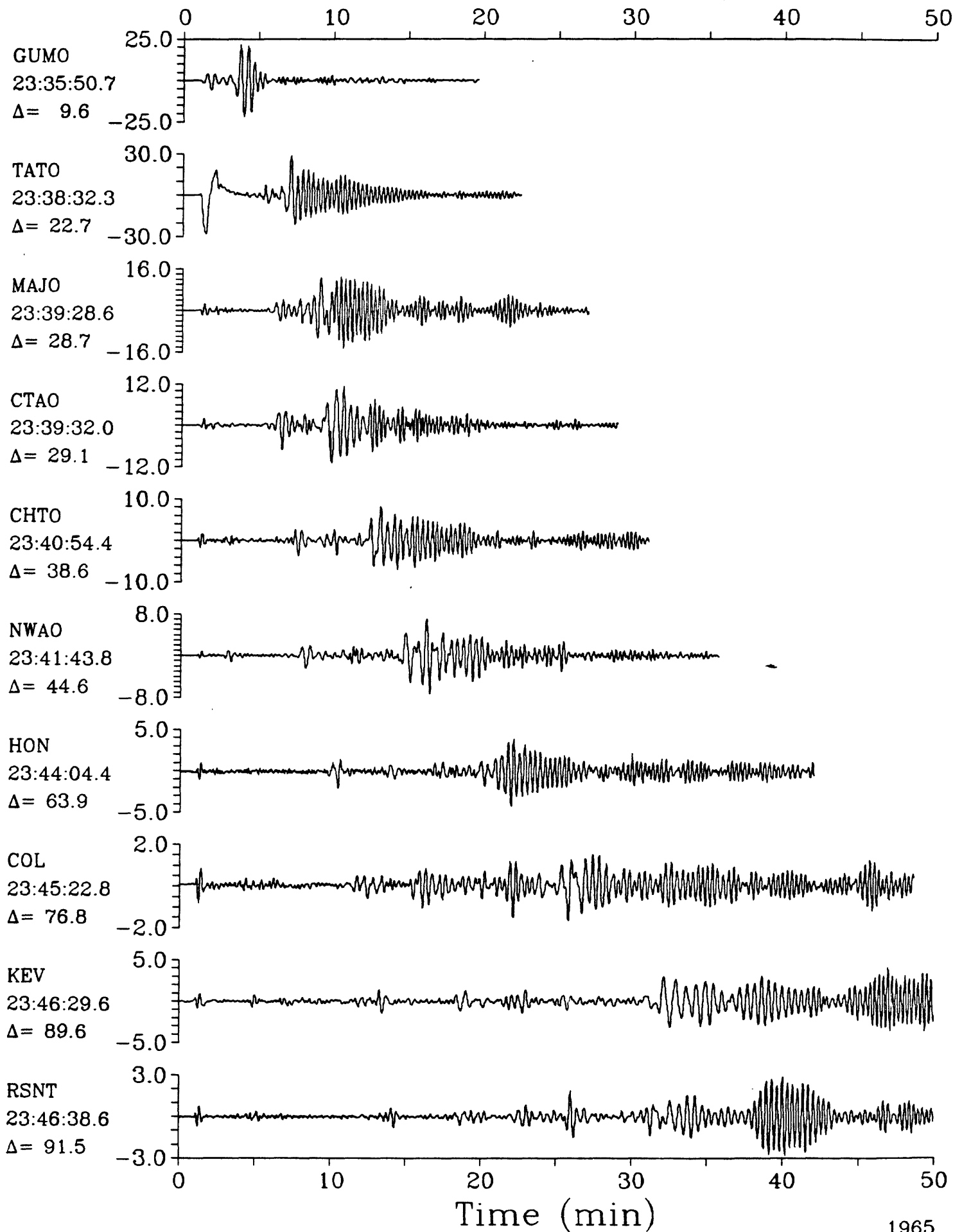
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West Caroline Islands $h=33.0$ $m_b=5.8$ $M_{sz}=5.7$ 

LPZ

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LPZ

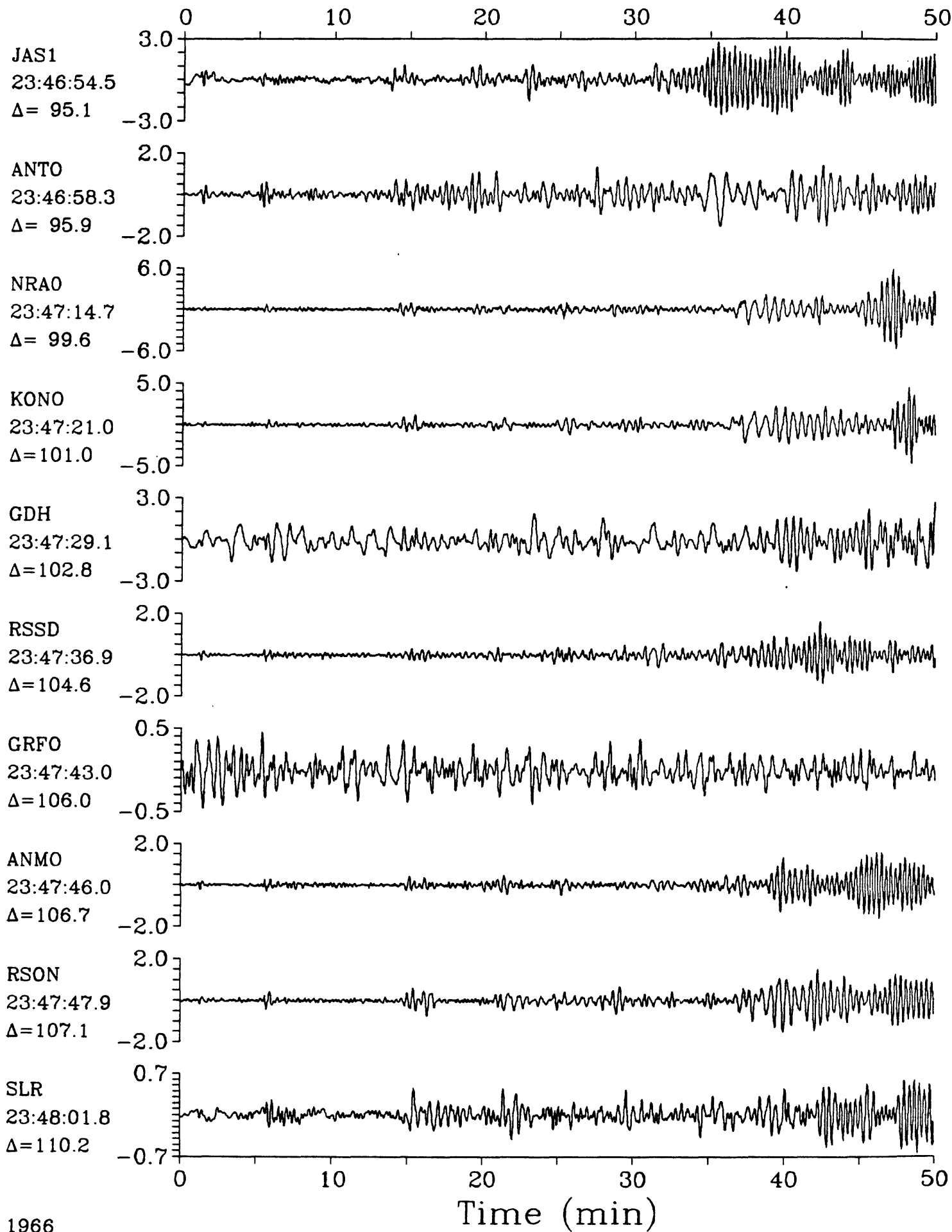
West Caroline Islands $h=33.0$ $m_b=5.8$ $M_{SZ}=5.7$ 

1965

LPZ

07 November 1985 23:34:34.30

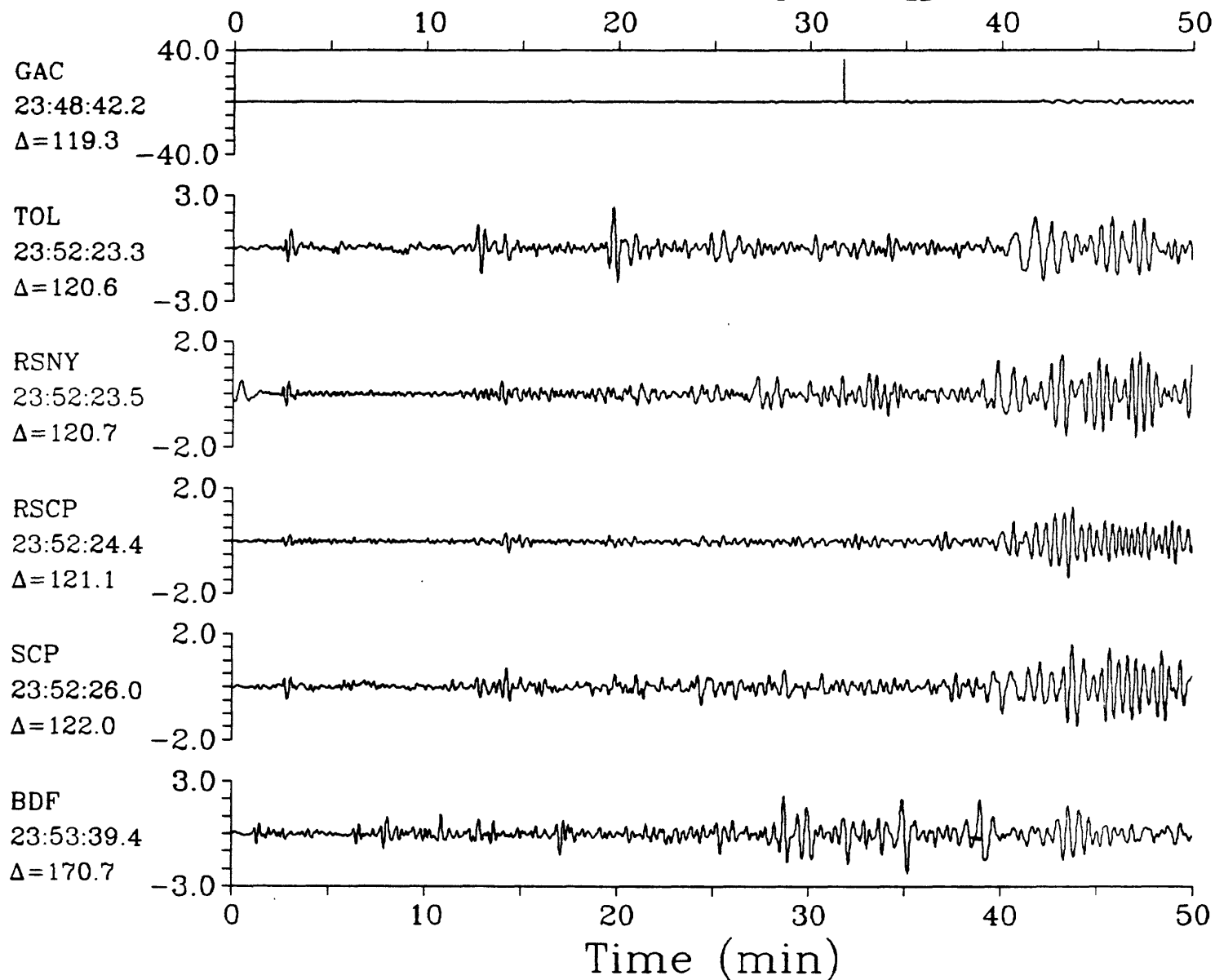
LPZ

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LPZ

07 November 1985 23:34:34.30

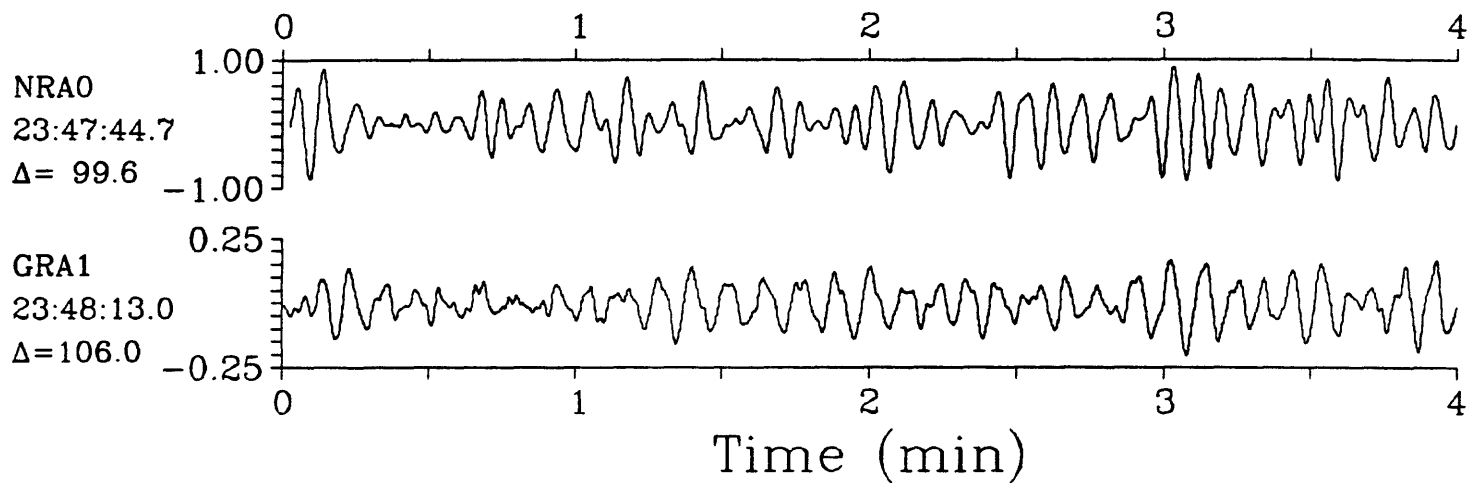
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West Caroline Islands $h=33.0$ $m_b=5.8$ $M_{sz}=5.7$ 

IPZ

07 November 1985 23:34:34.30

IPZ

West Caroline Islands $h=33.0$ $m_b=5.8$ $M_{sz}=5.7$ 

08 November 1985 18:40:25.01

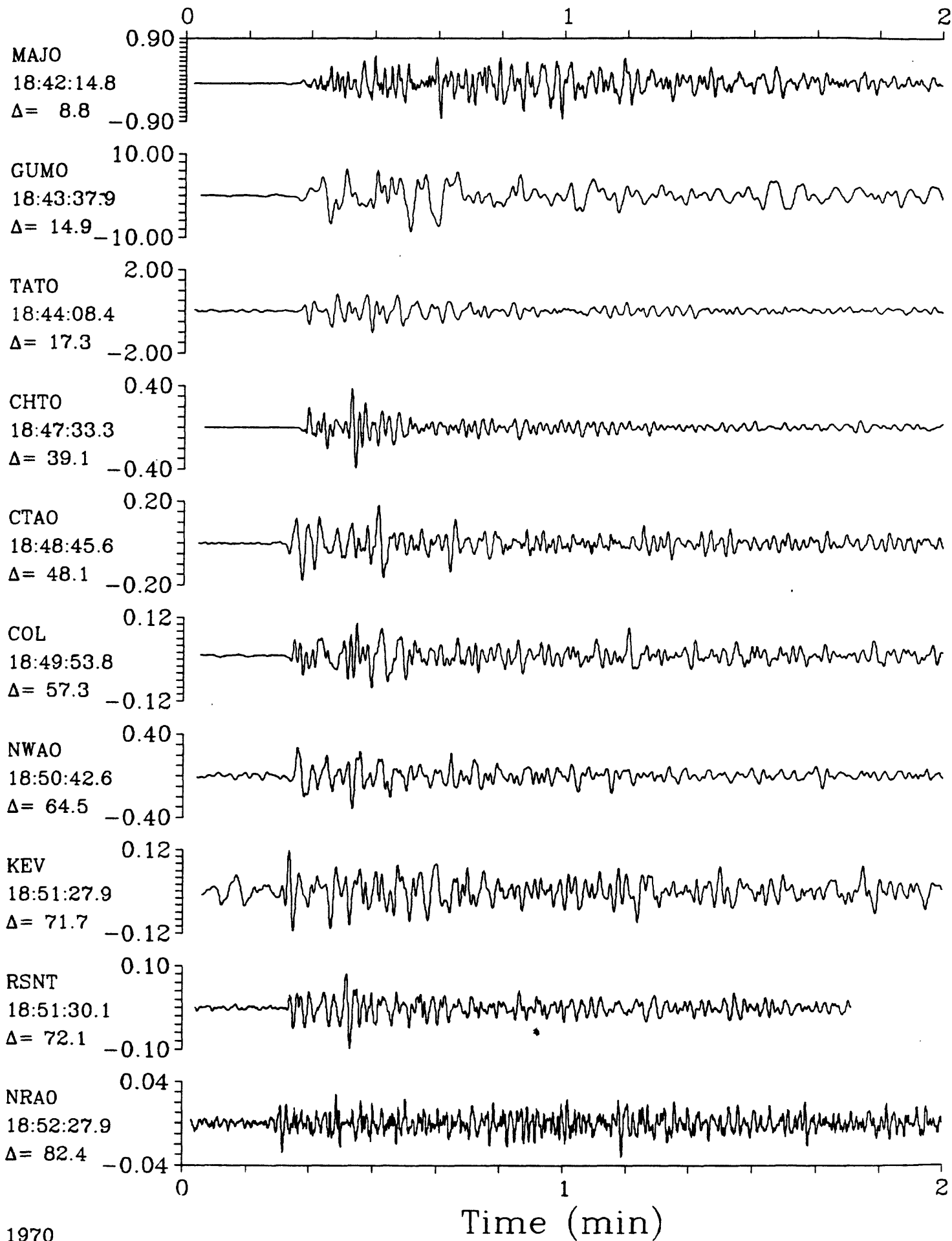
Bonin Islands Region



SPZ

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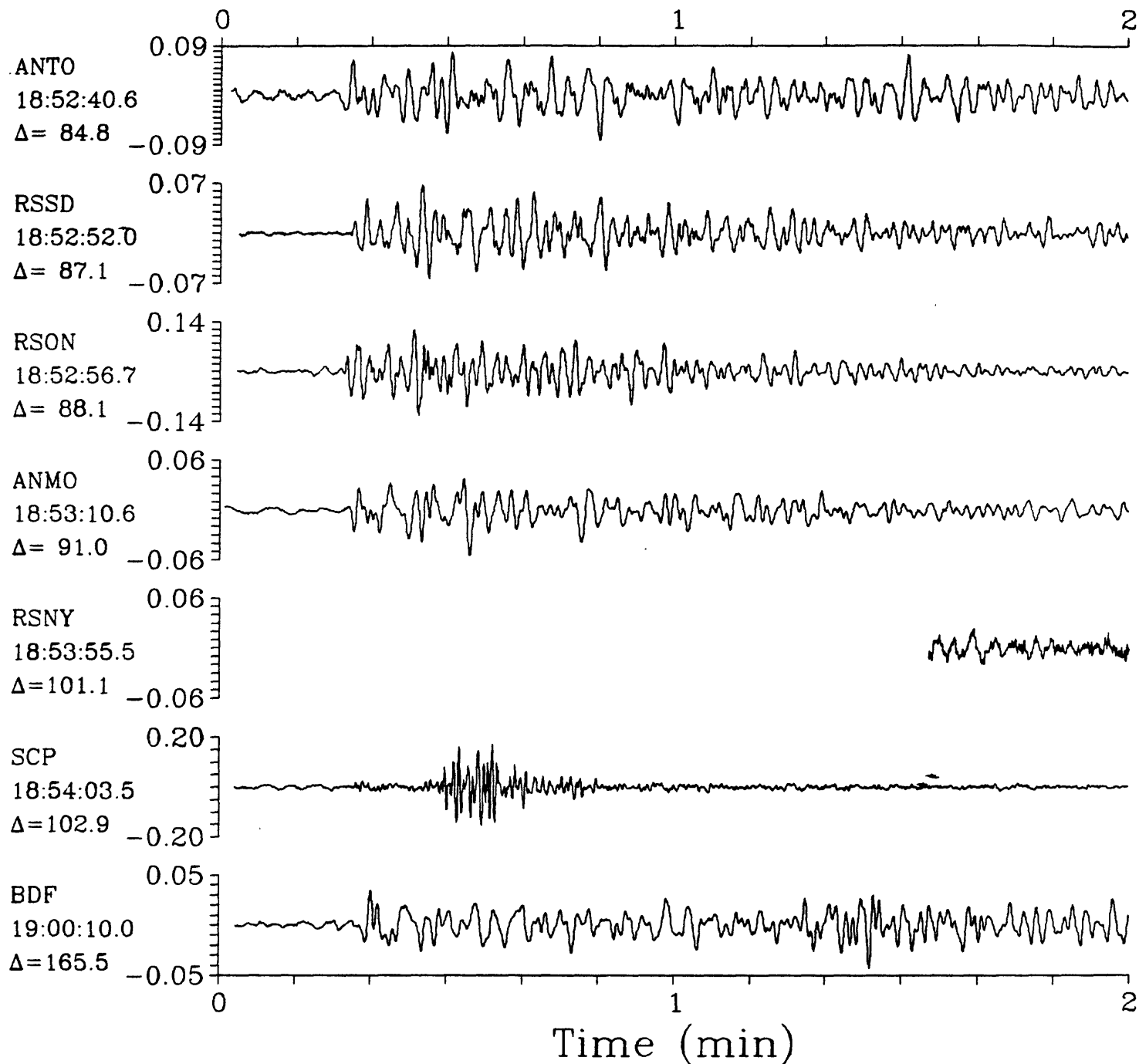
SPZ

Bonin Islands Region $h=43.9$ $m_b=5.8$ $M_{sz}=6.0$ 

SPZ

08 November 1985 18:40:25.01

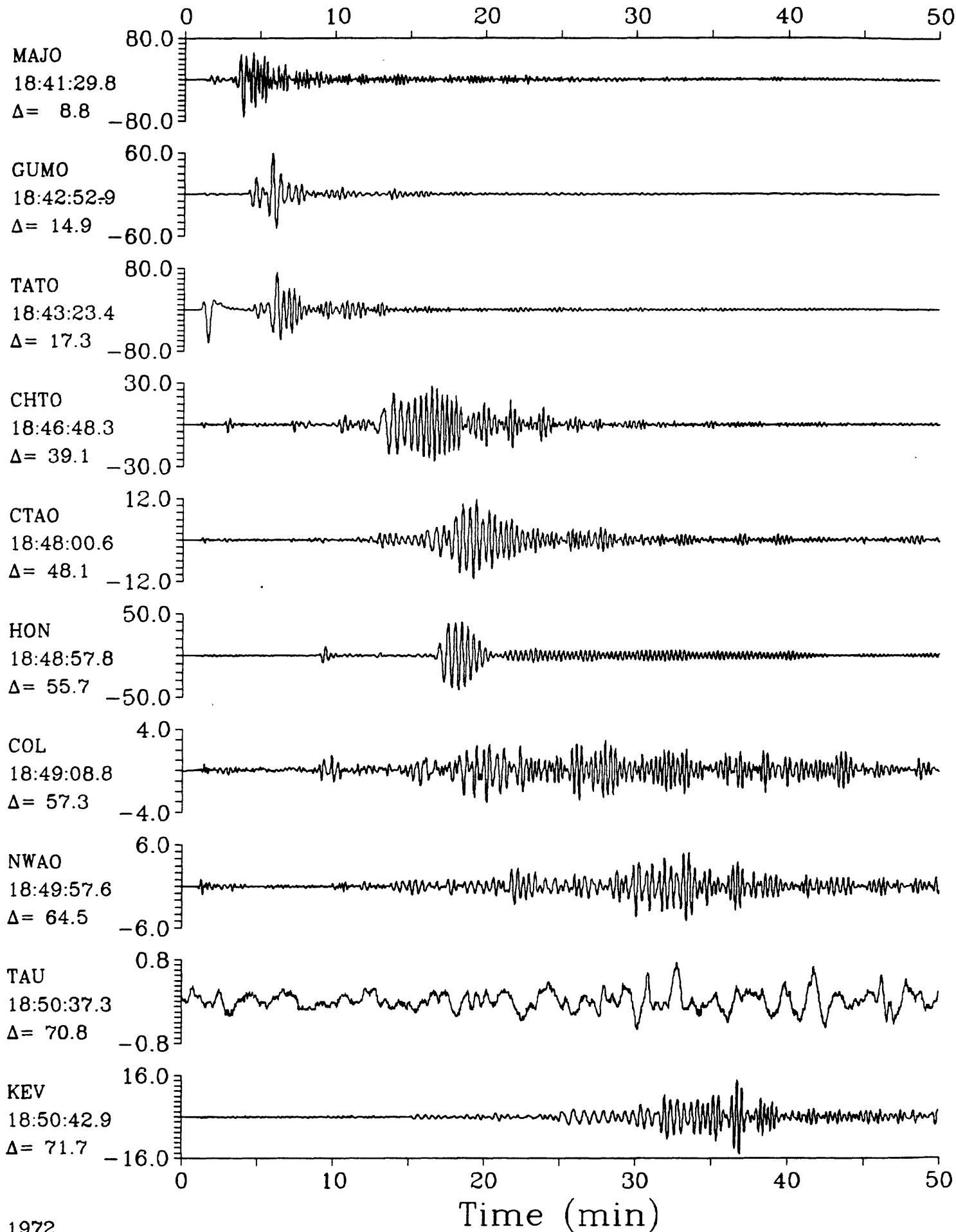
SPZ

Bonin Islands Region $h=43.9$ $m_b=5.8$ $M_{sz}=6.0$ 

LPZ

08 November 1985 18:40:25.01

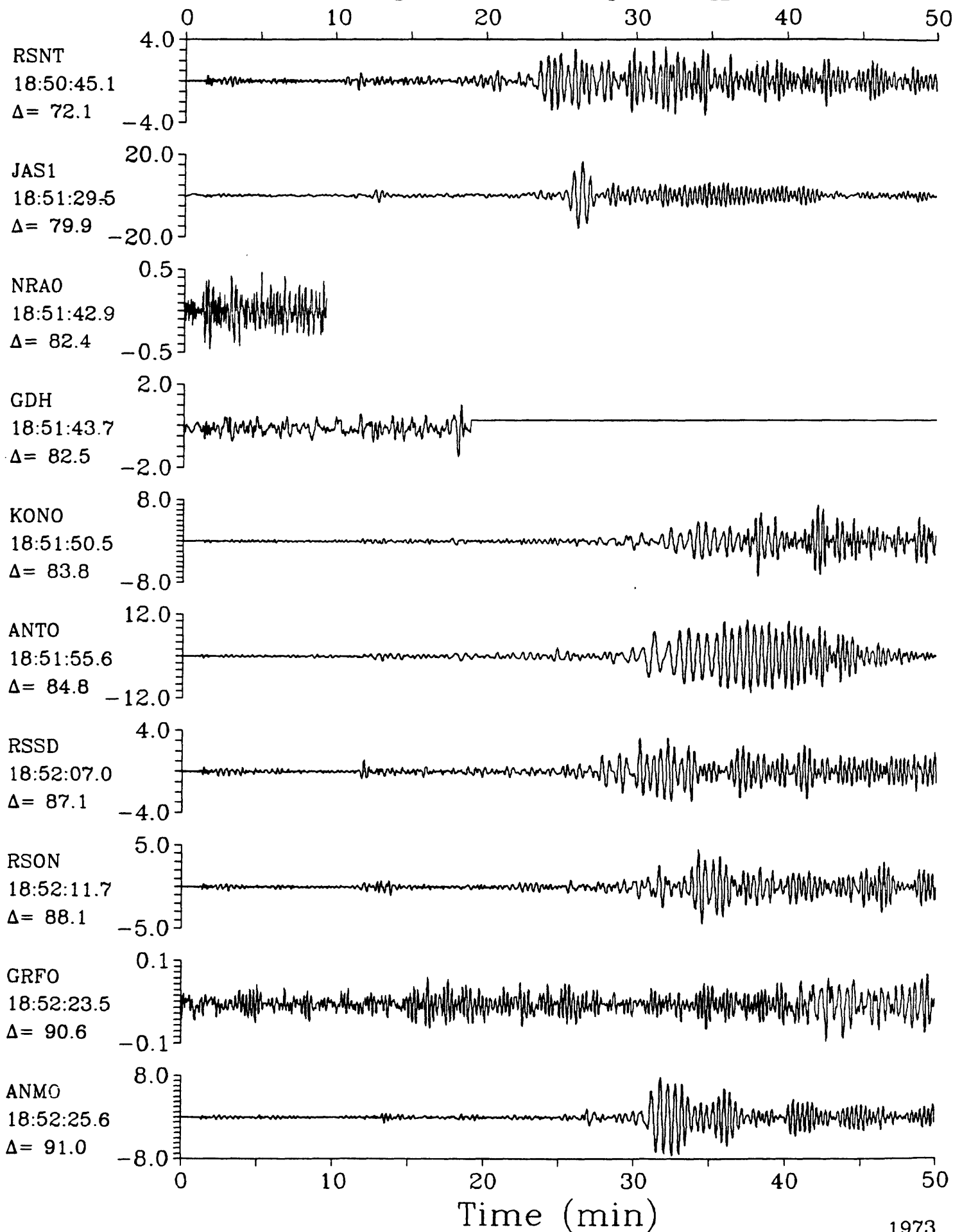
LPZ

Bonin Islands Region $h=43.9$ $m_b=5.8$ $M_{sz}=6.0$ 

LPZ

08 November 1985 18:40:25.01

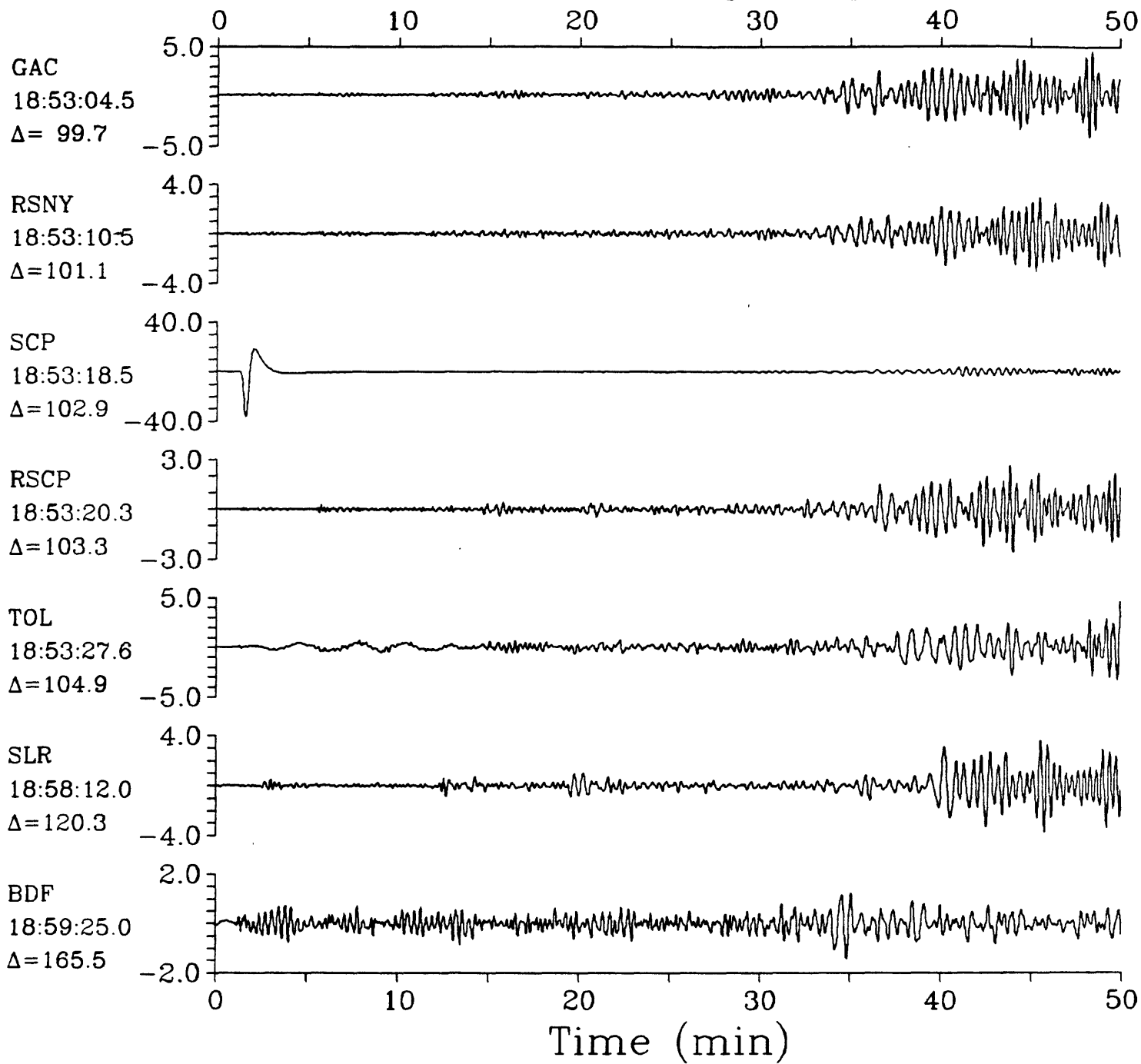
LPZ

Bonin Islands Region $h=43.9$ $m_b=5.8$ $M_{SZ}=6.0$ 

LPZ

08 November 1985 18:40:25.01

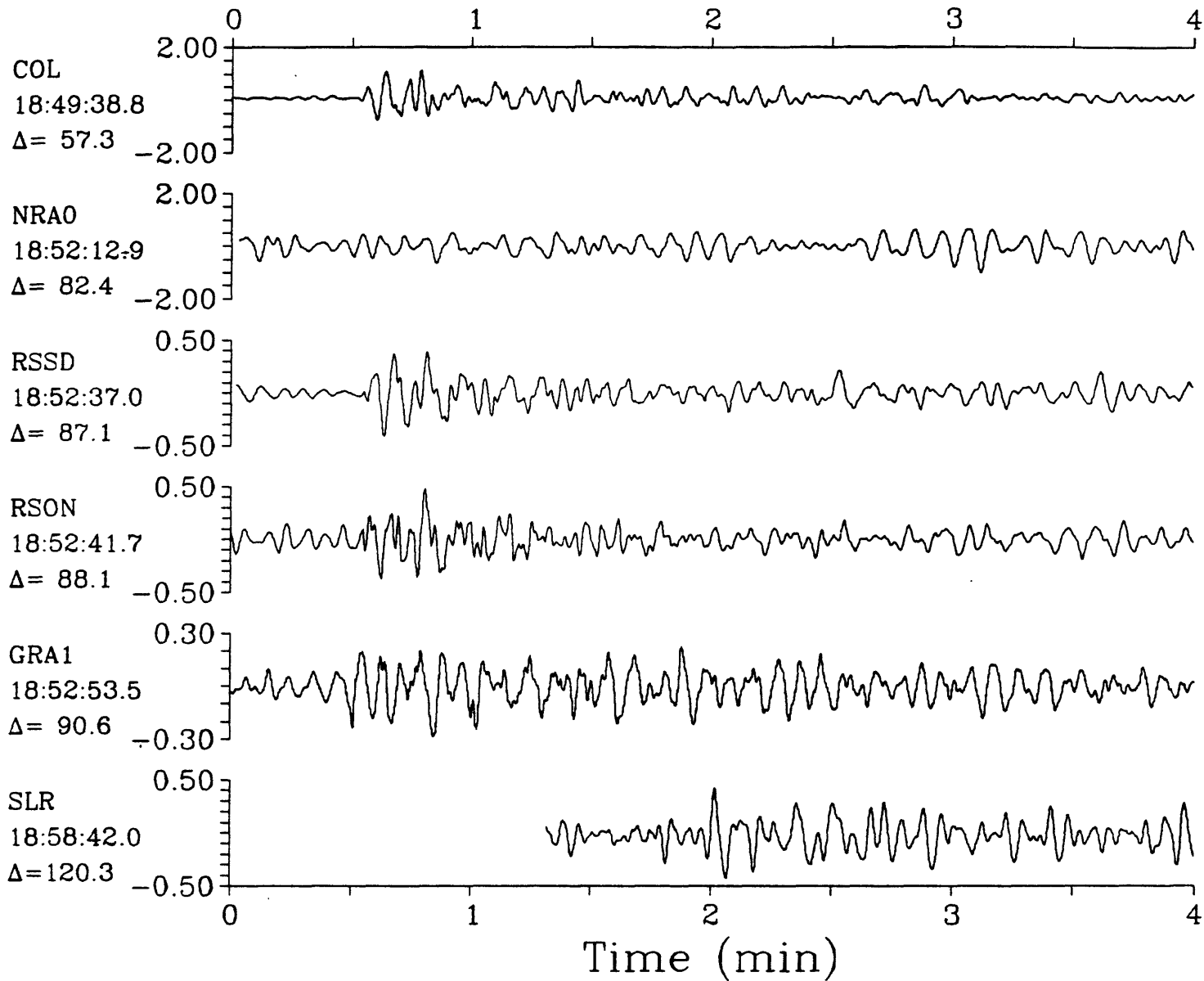
LPZ

Bonin Islands Region $h=43.9$ $m_b=5.8$ $M_{SZ}=6.0$ 

IPZ

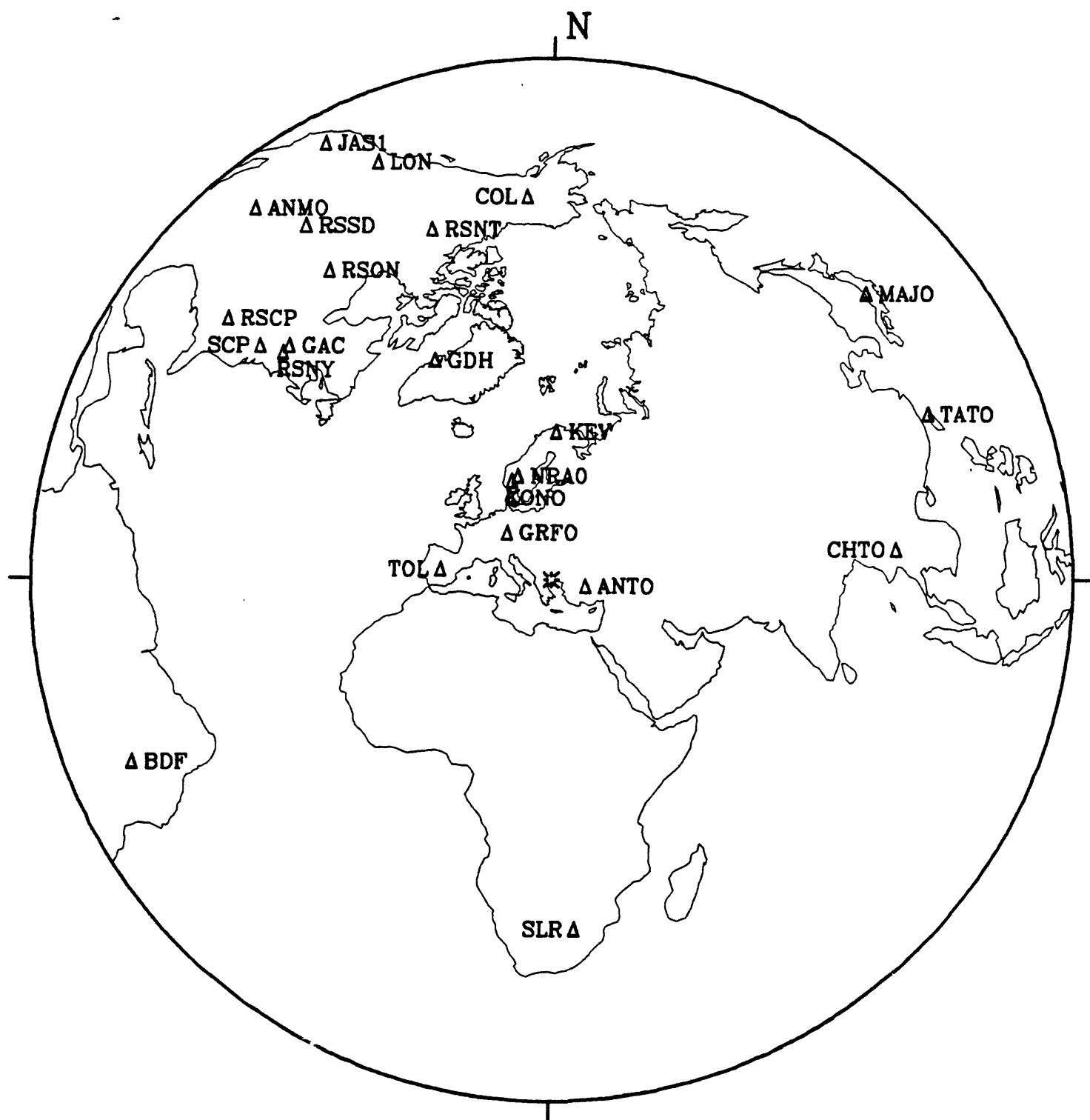
08 November 1985 18:40:25.01

IPZ

Bonin Islands Region $h=43.9$ $m_b=5.8$ $M_{sz}=6.0$ 

09 November 1985 23:30:42.34

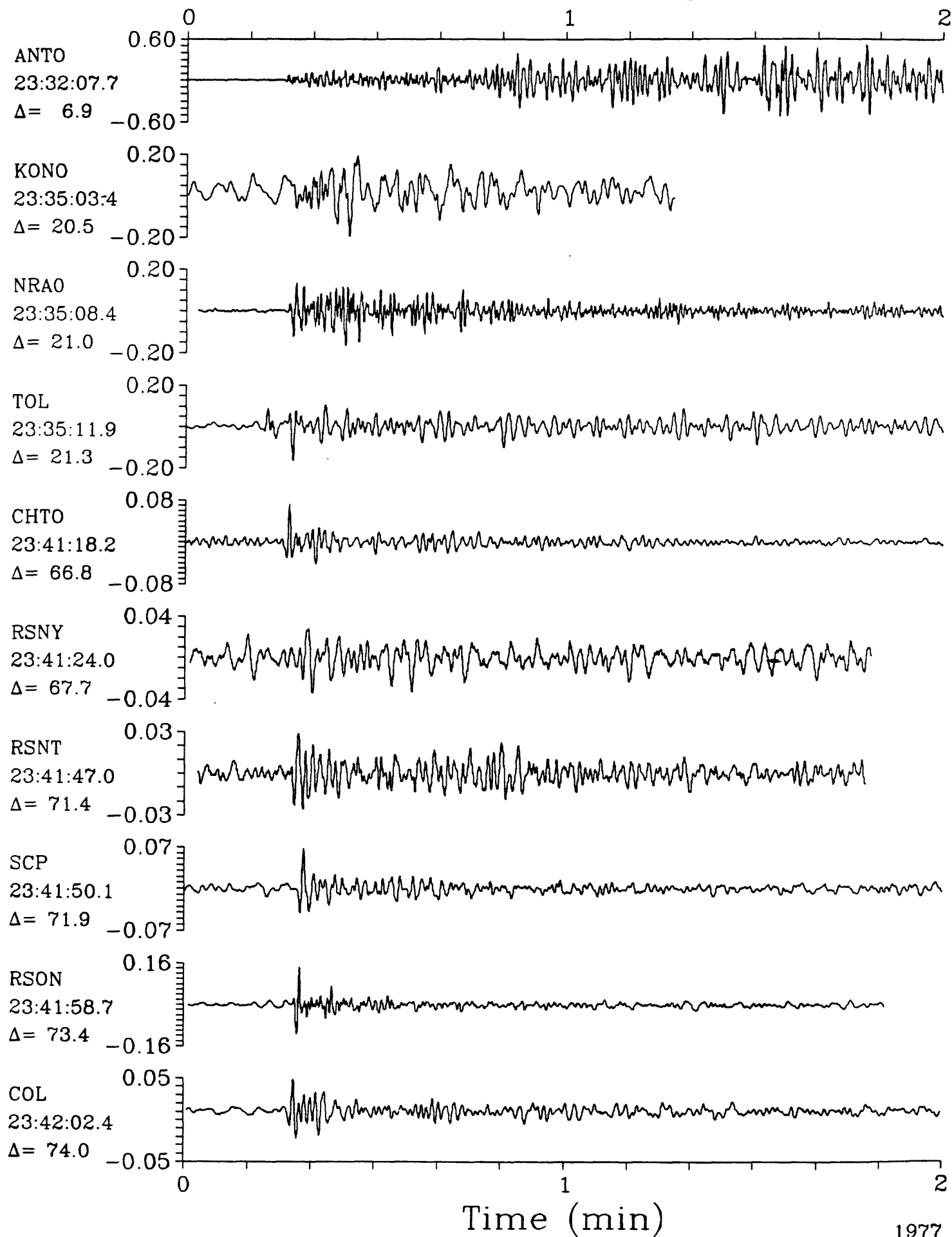
Greece-Bulgaria Border Region



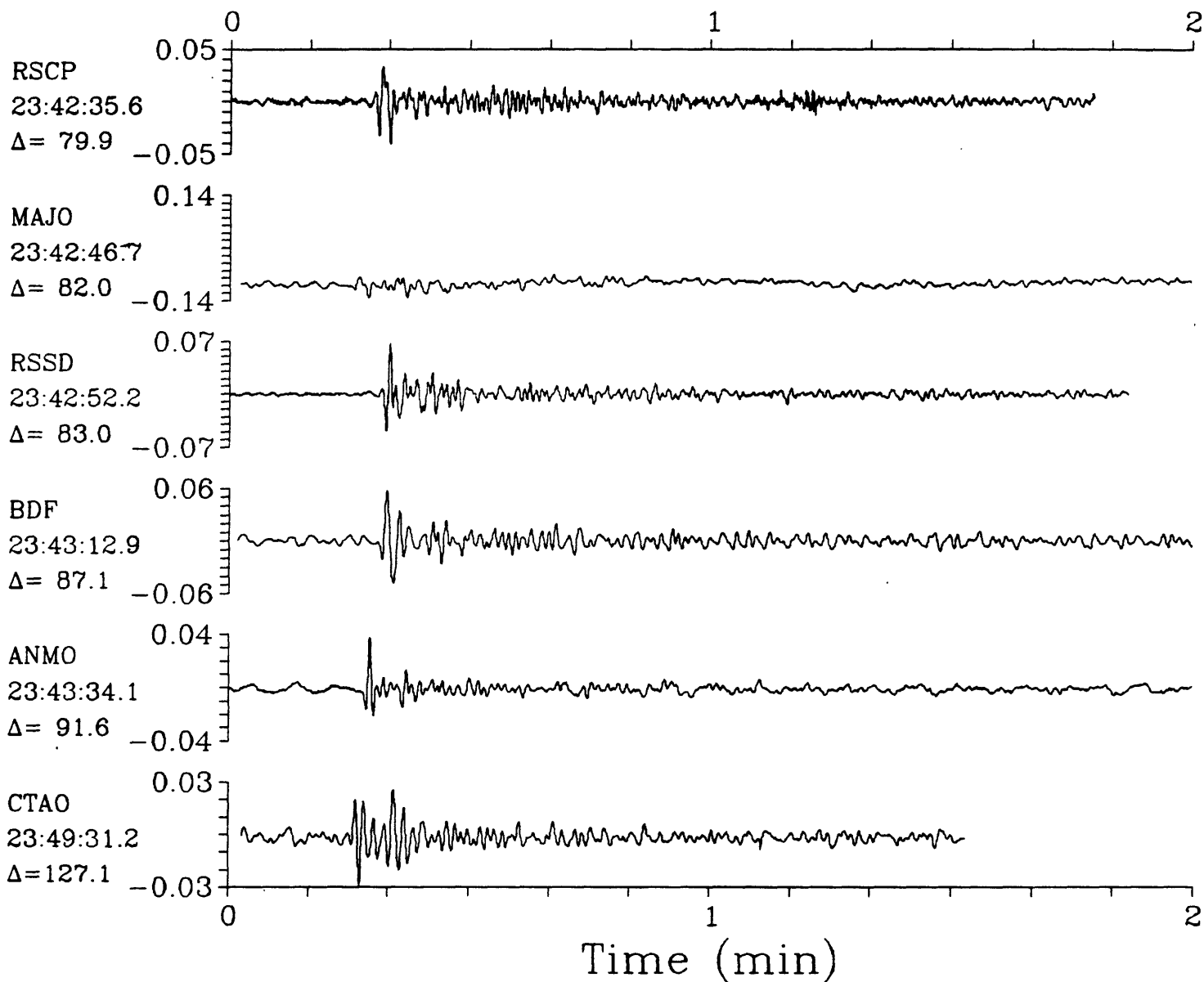
SPZ

09 November 1985 23:30:42.34

SPZ

Greece-Bulgaria Border Region $h=17.6$ $m_b=5.5$ $M_{sz}=5.3$ 

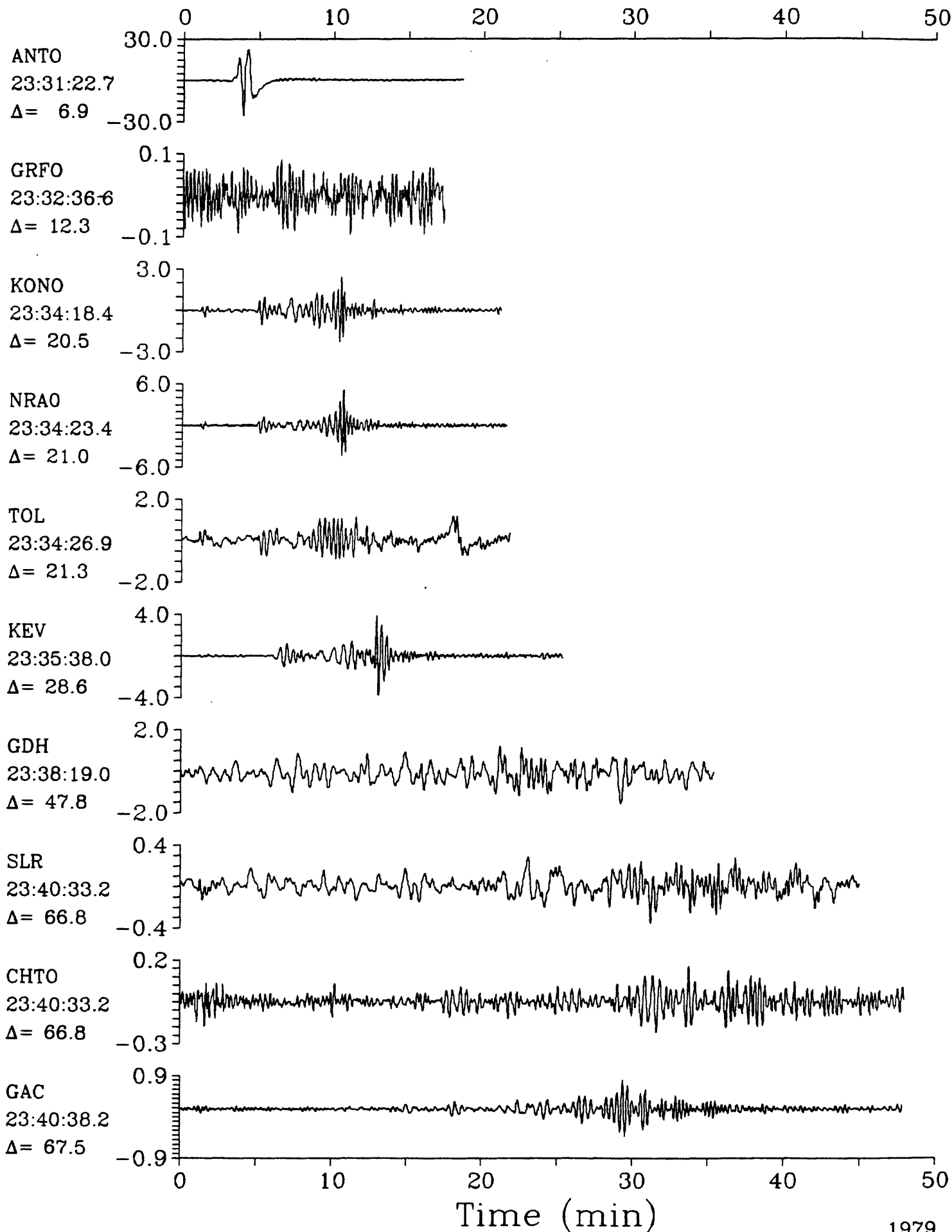
SPZ , 09 November 1985 23:30:42.34 SPZ
Greece-Bulgaria Border Region $h=17.6$ $m_b=5.5$ $M_{sz}=5.3$



LPZ

09 November 1985 23:30:42.34

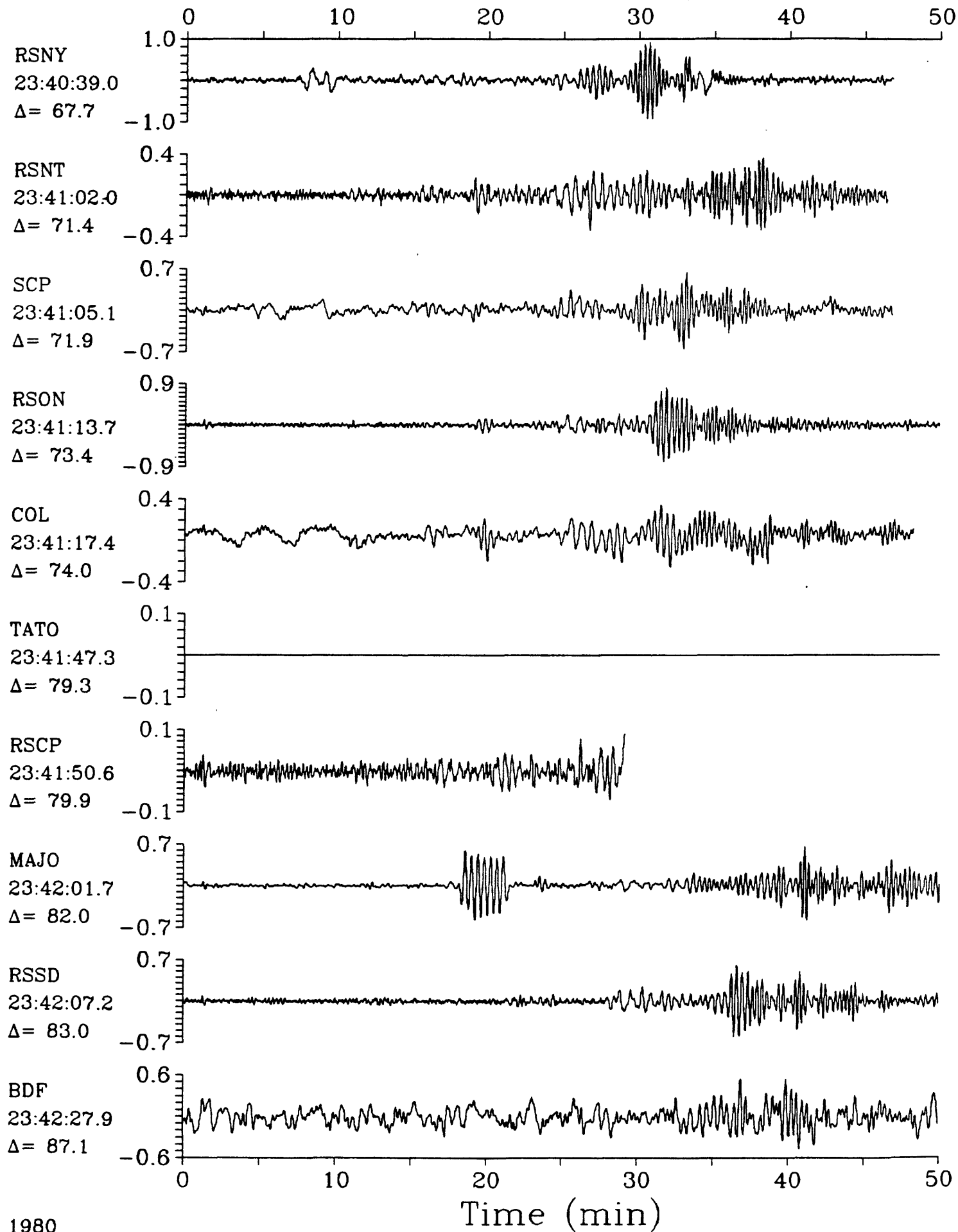
LPZ

Greece-Bulgaria Border Region $h=17.6$ $m_b=5.5$ $M_{sz}=5.3$ 

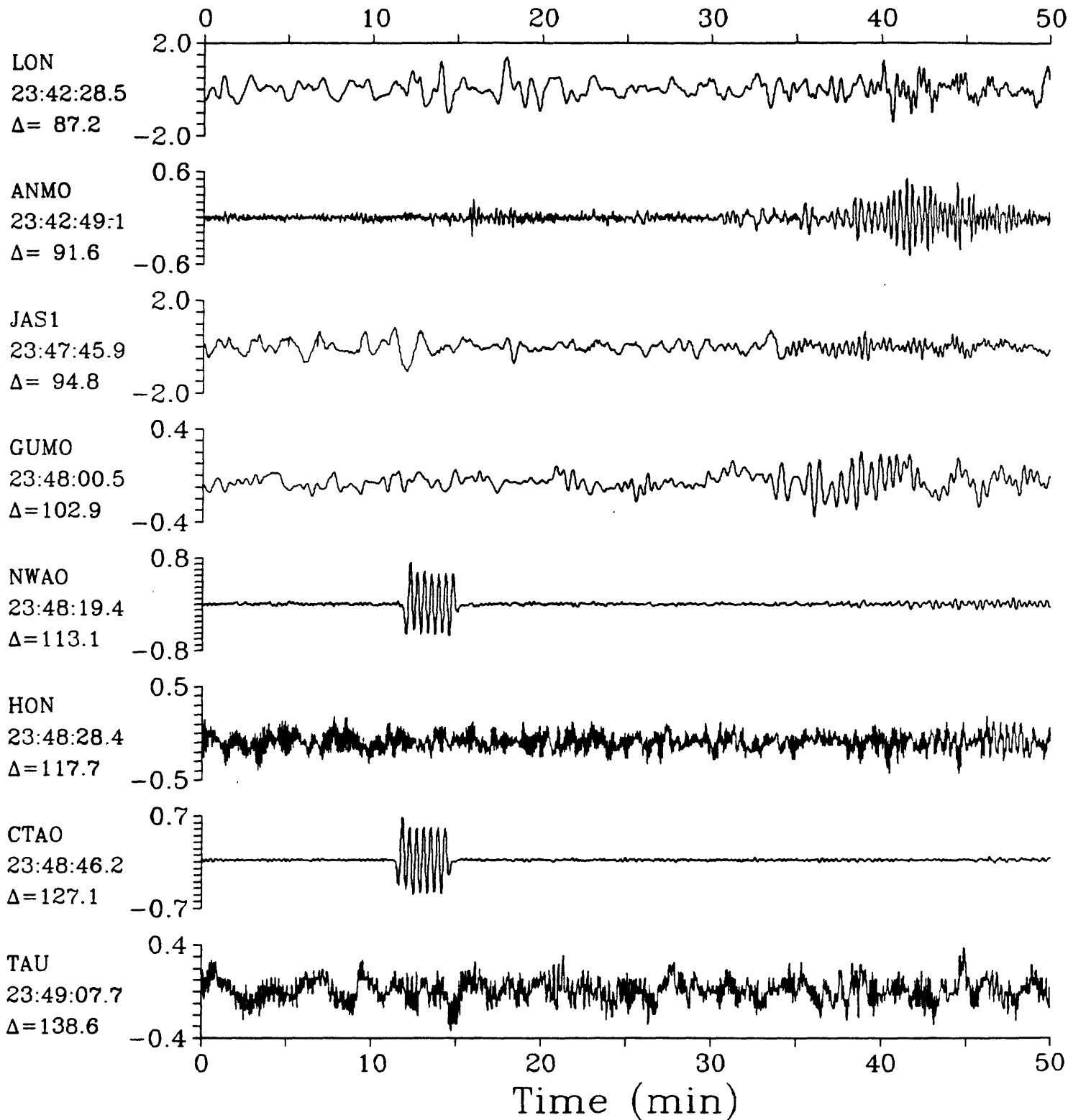
LPZ

09 November 1985 23:30:42.34

LPZ

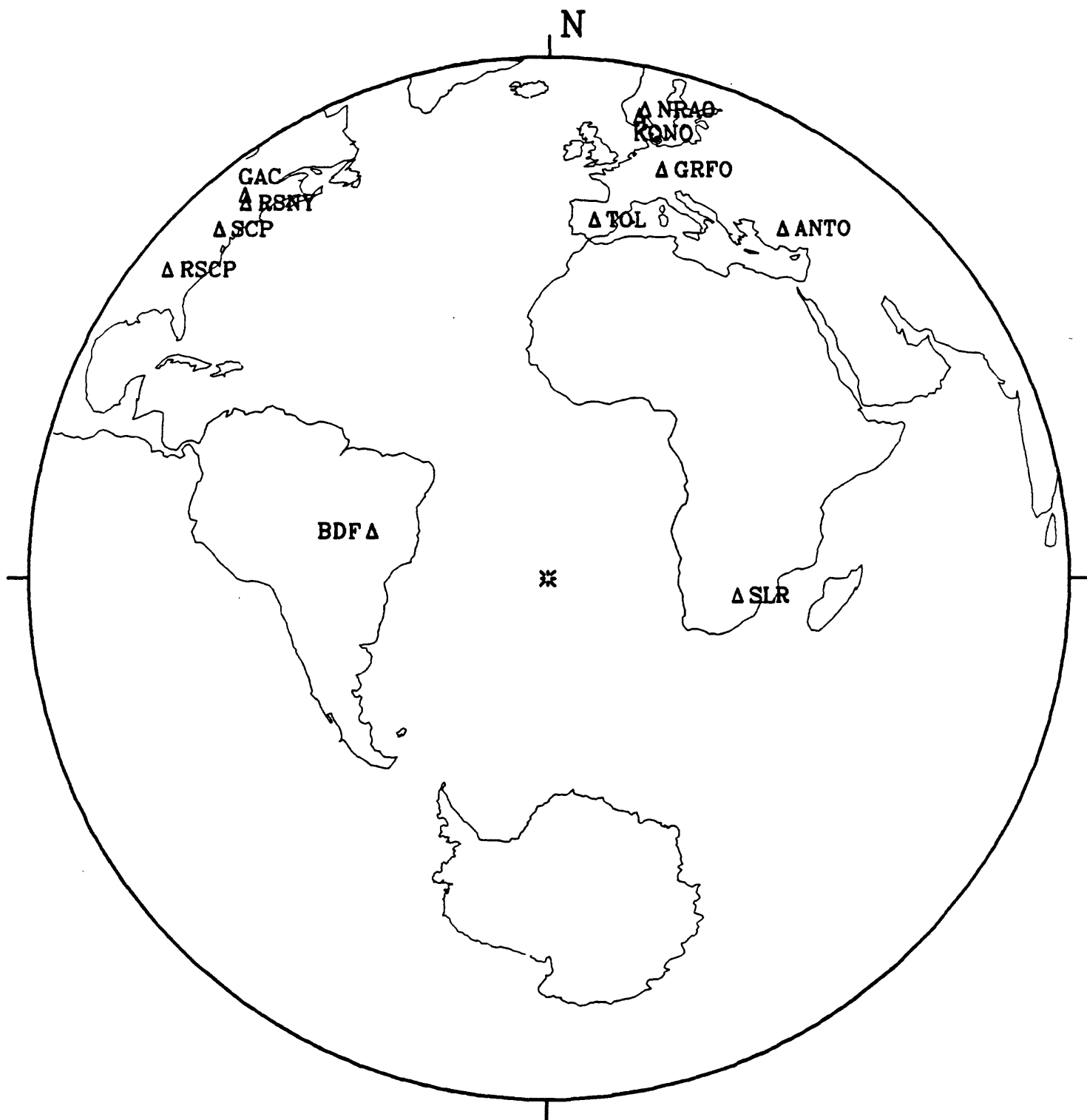
Greece-Bulgaria Border Region $h=17.6$ $m_b=5.5$ $M_{sz}=5.3$ 

1980



10 November 1985 19:40:33.95

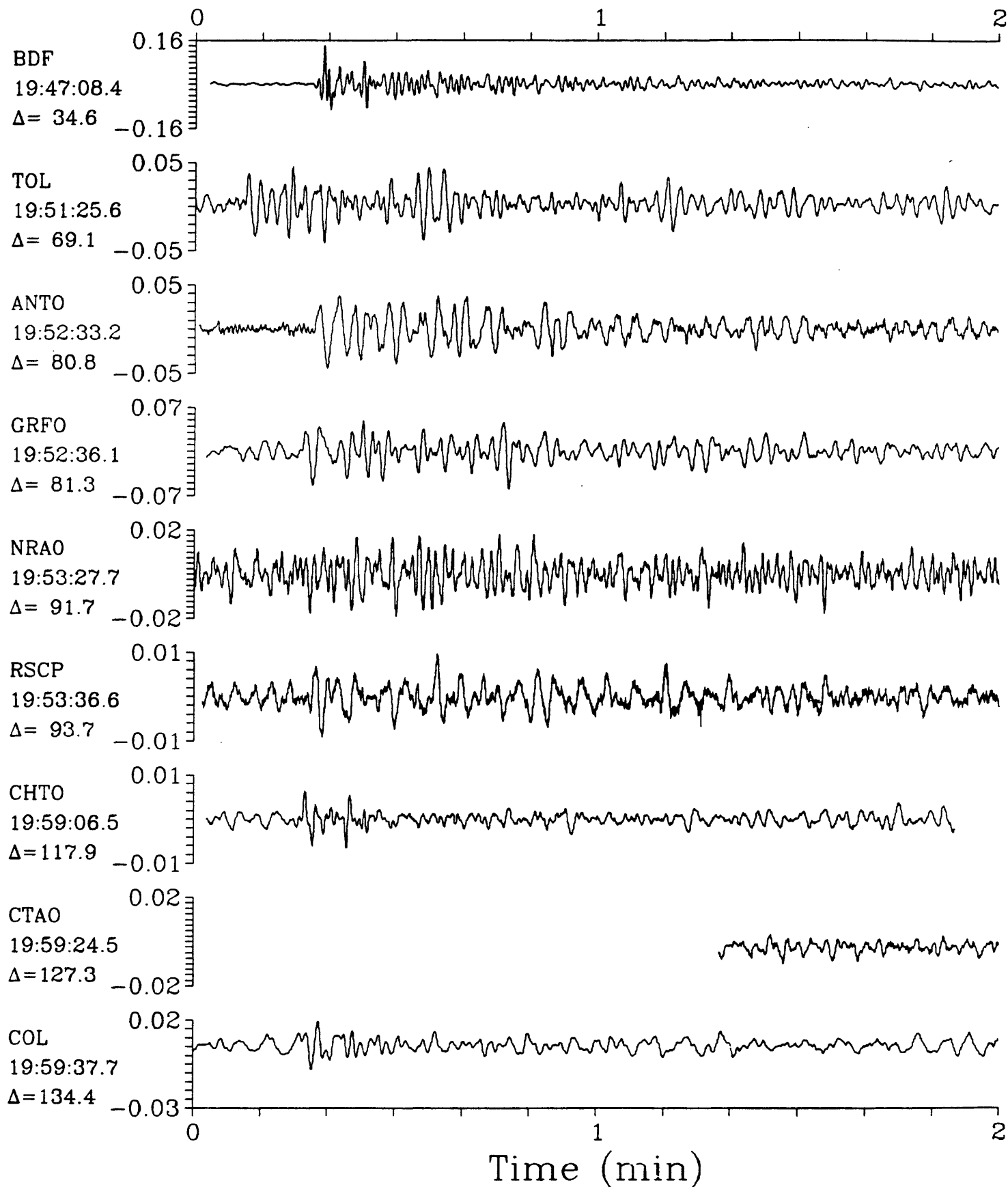
South Atlantic Ridge



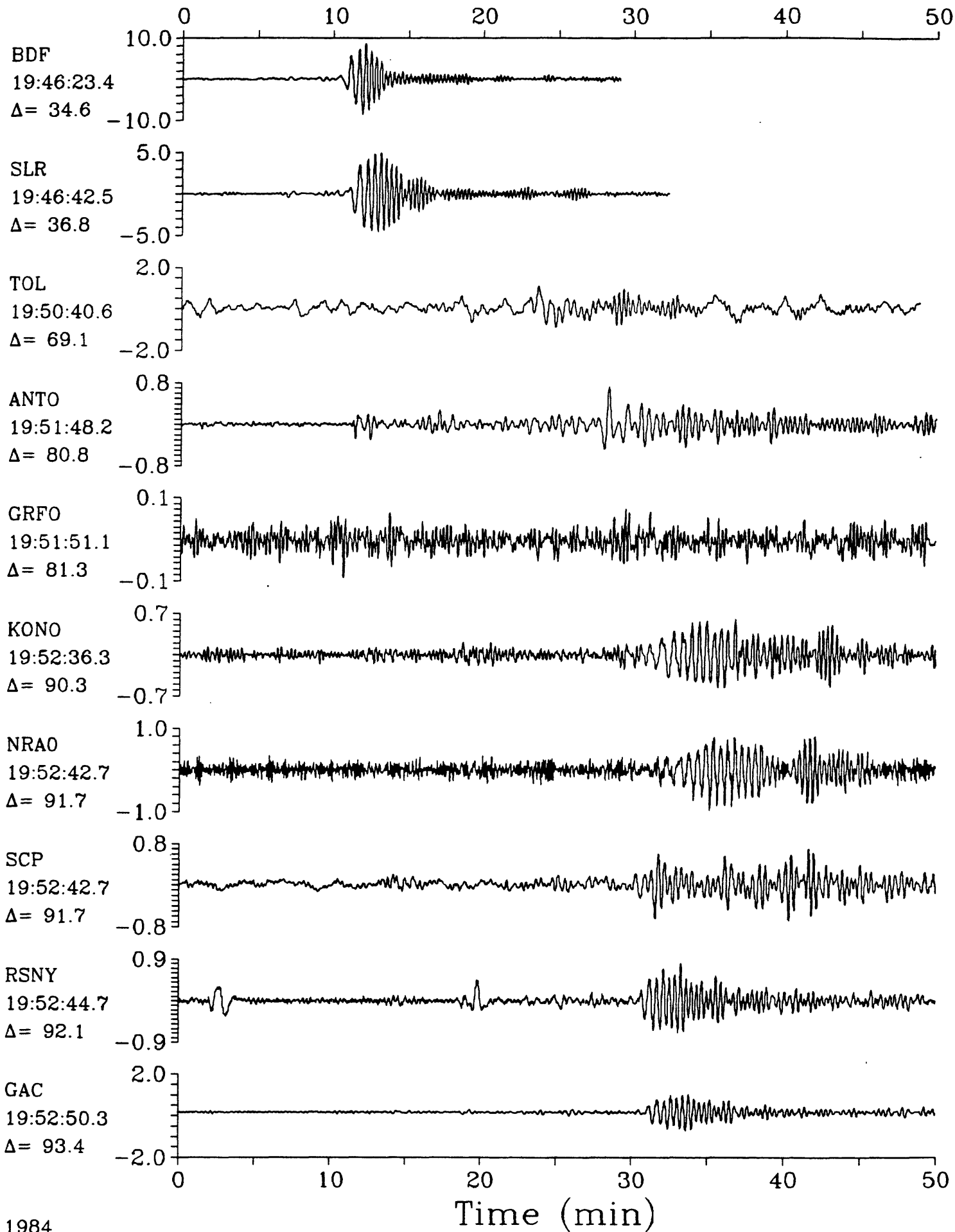
SPZ

10 November 1985 19:40:33.95

SPZ

South Atlantic Ridge $h=10.0$ $m_b=5.5$ $M_{sz}=5.5$ 

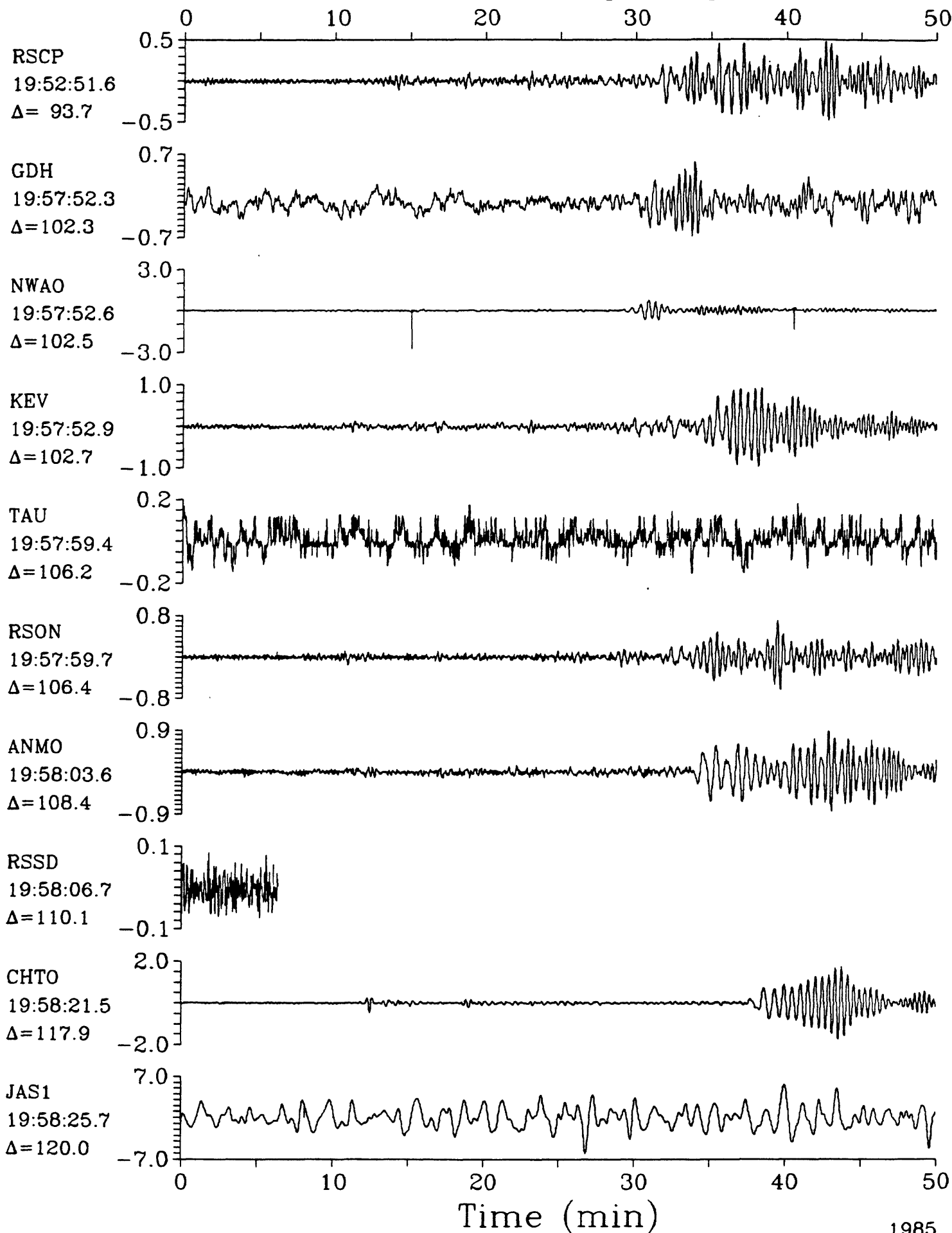
South Atlantic Ridge $h=10.0$ $m_b=5.5$ $M_{sz}=5.5$



LPZ

10 November 1985 19:40:33.95

LPZ

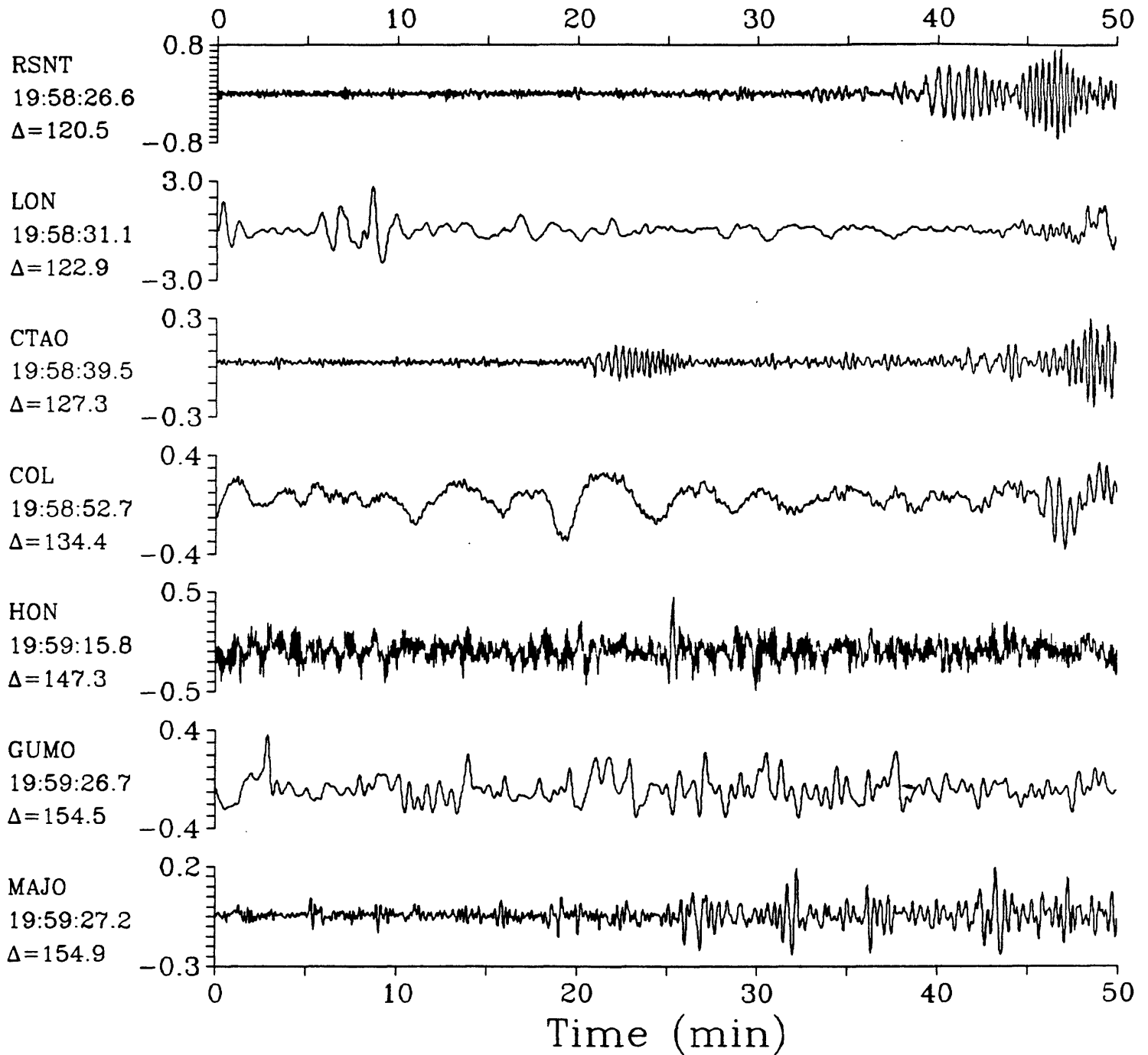
South Atlantic Ridge $h=10.0$ $m_b=5.5$ $M_{sz}=5.5$ 

1985

LPZ

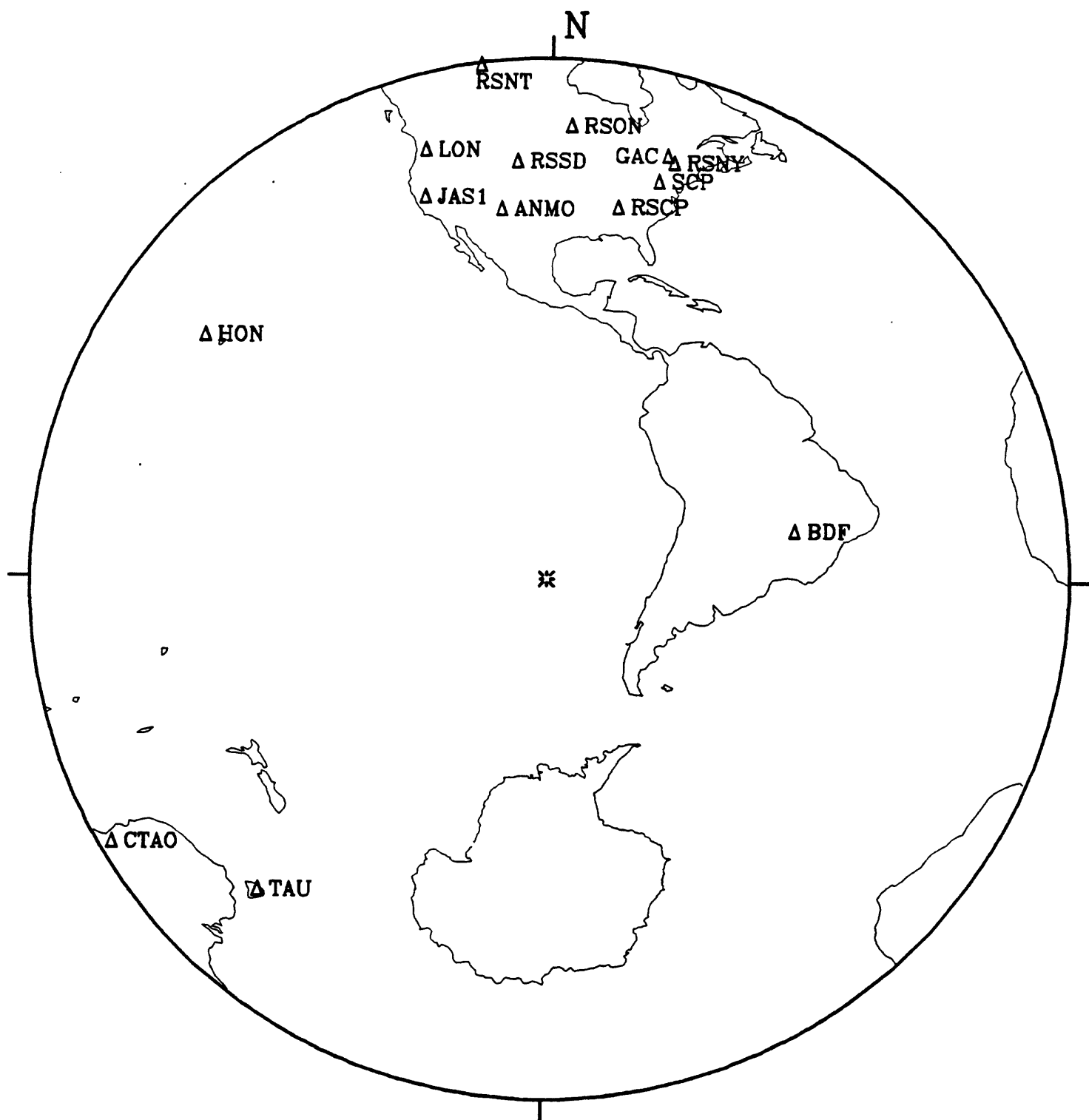
10 November 1985 19:40:33.95

LPZ

South Atlantic Ridge $h=10.0$ $m_b=5.5$ $M_{sz}=5.5$ 

12 November 1985 03:34:19.82

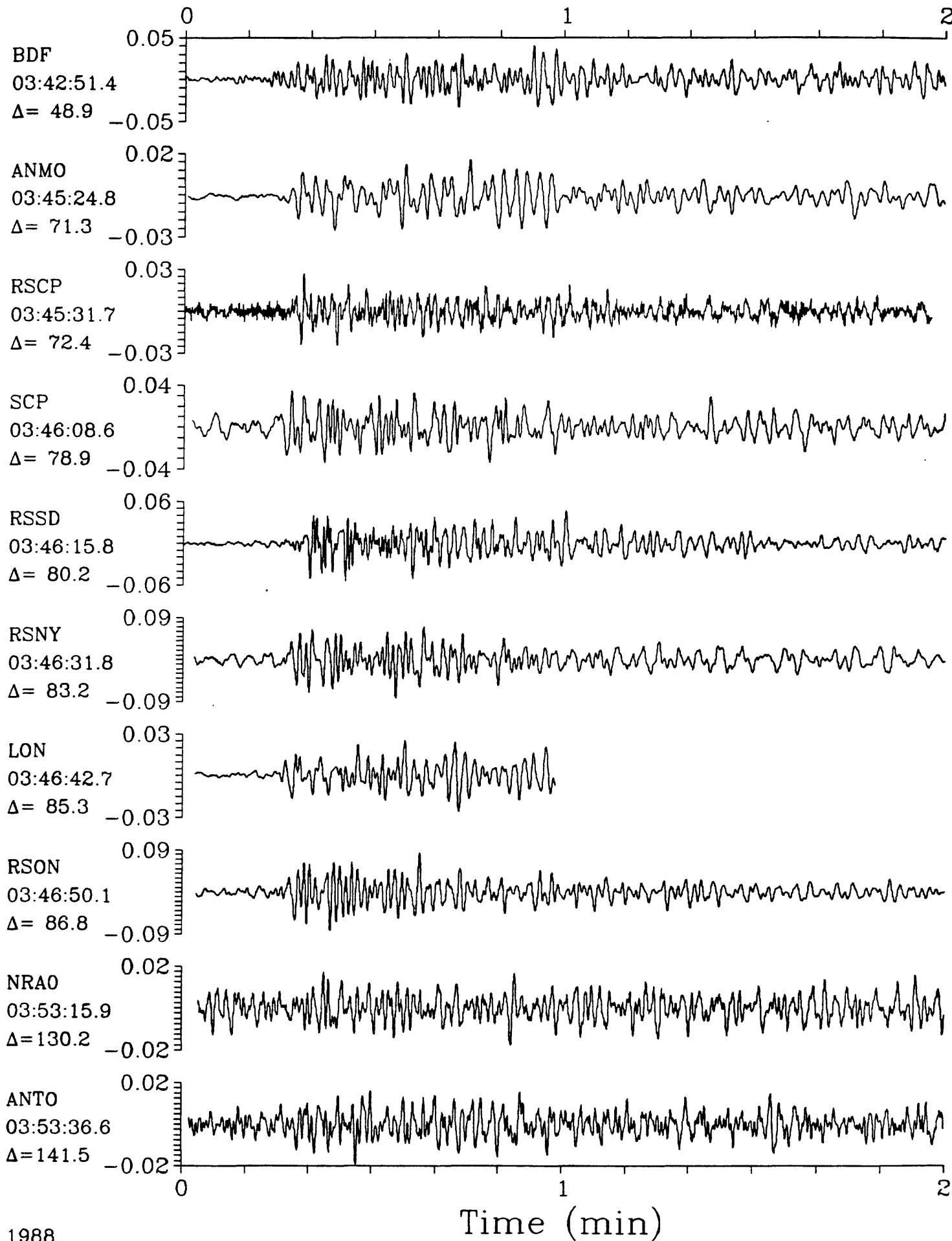
Southern Pacific Ocean



SPZ

12 November 1985 03:34:19.82

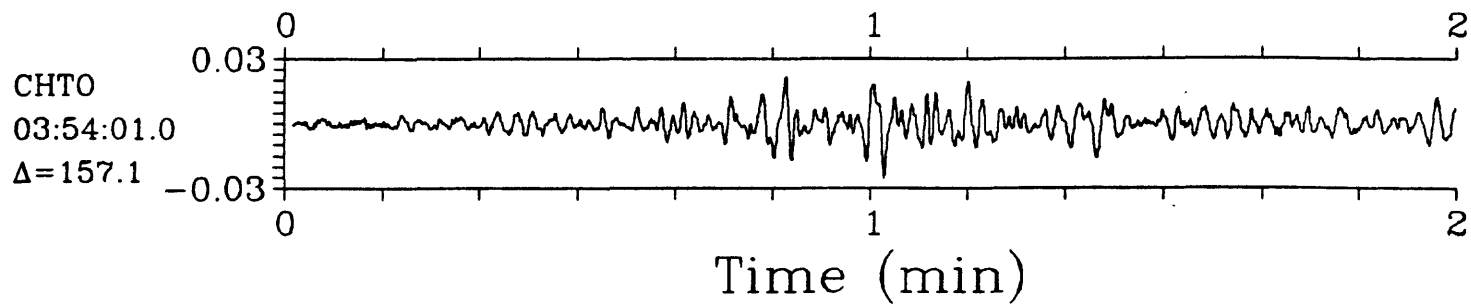
SPZ

Southern Pacific Ocean $h=10.0$ $m_b=5.4$ $M_{sz}=5.7$ 

SPZ

12 November 1985 03:34:19.82

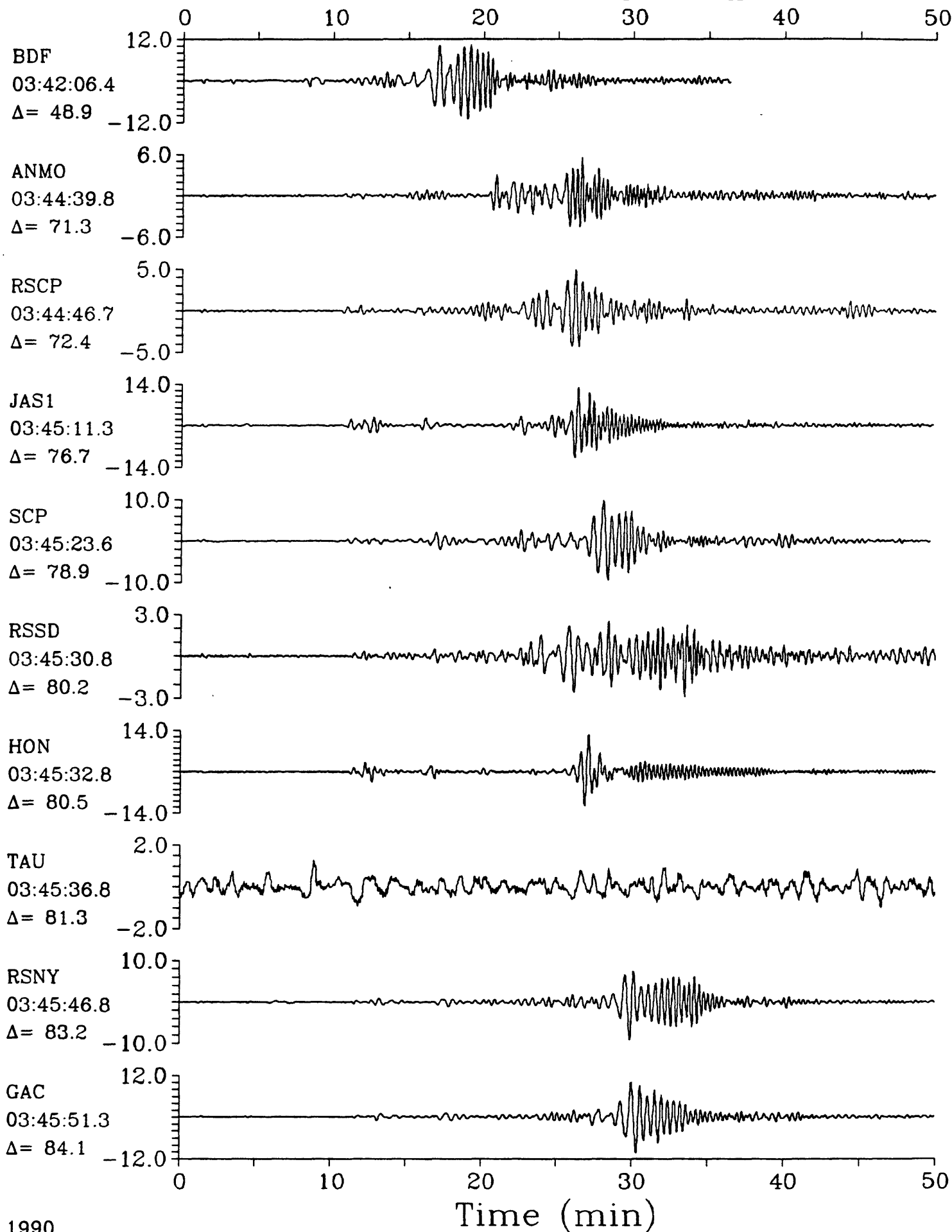
SPZ

Southern Pacific Ocean $h=10.0$ $m_b=5.4$ $M_{sz}=5.7$ 

LPZ

12 November 1985 03:34:19.82

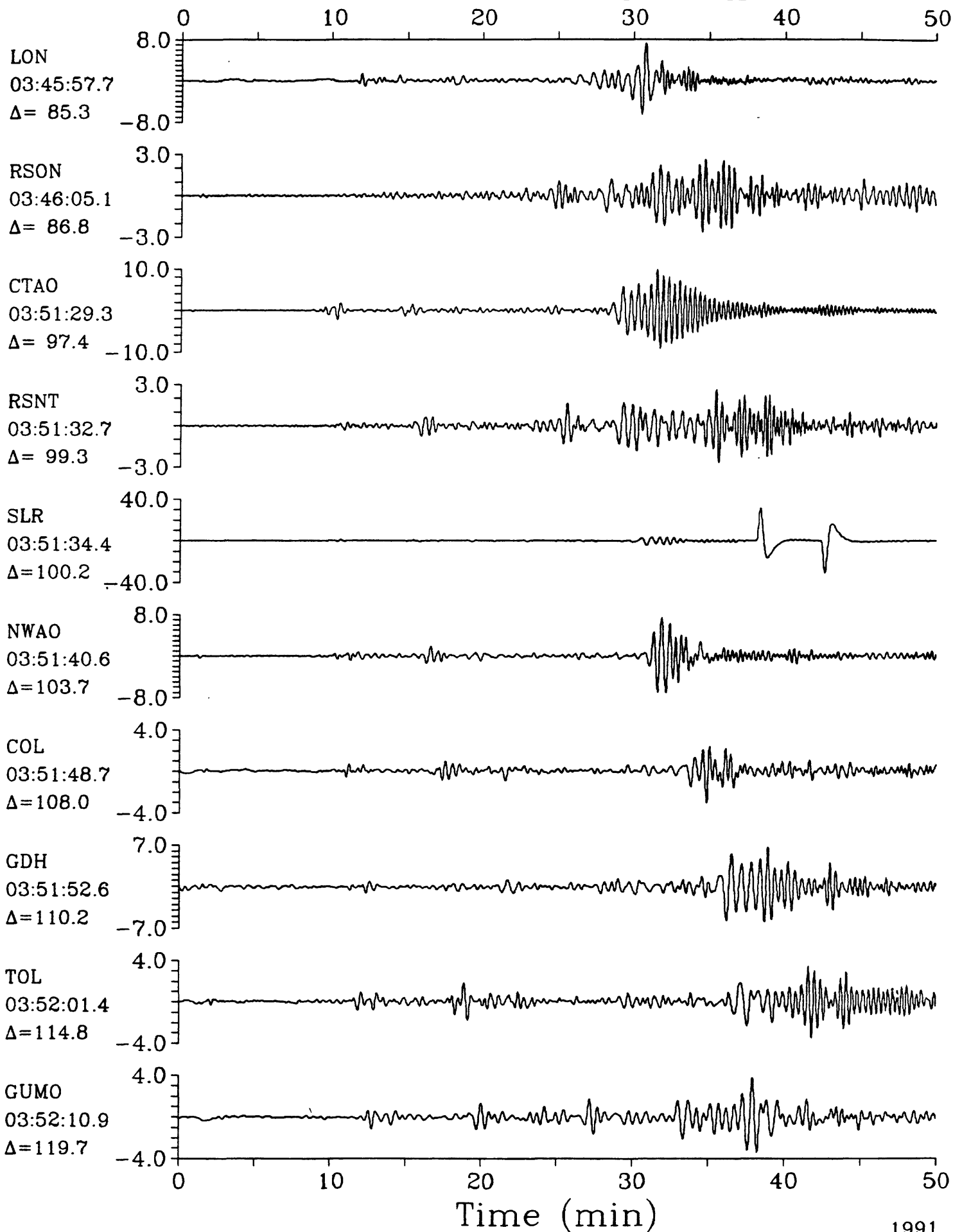
LPZ

Southern Pacific Ocean $h=10.0$ $m_b=5.4$ $M_{sz}=5.7$ 

LPZ

12 November 1985 03:34:19.82

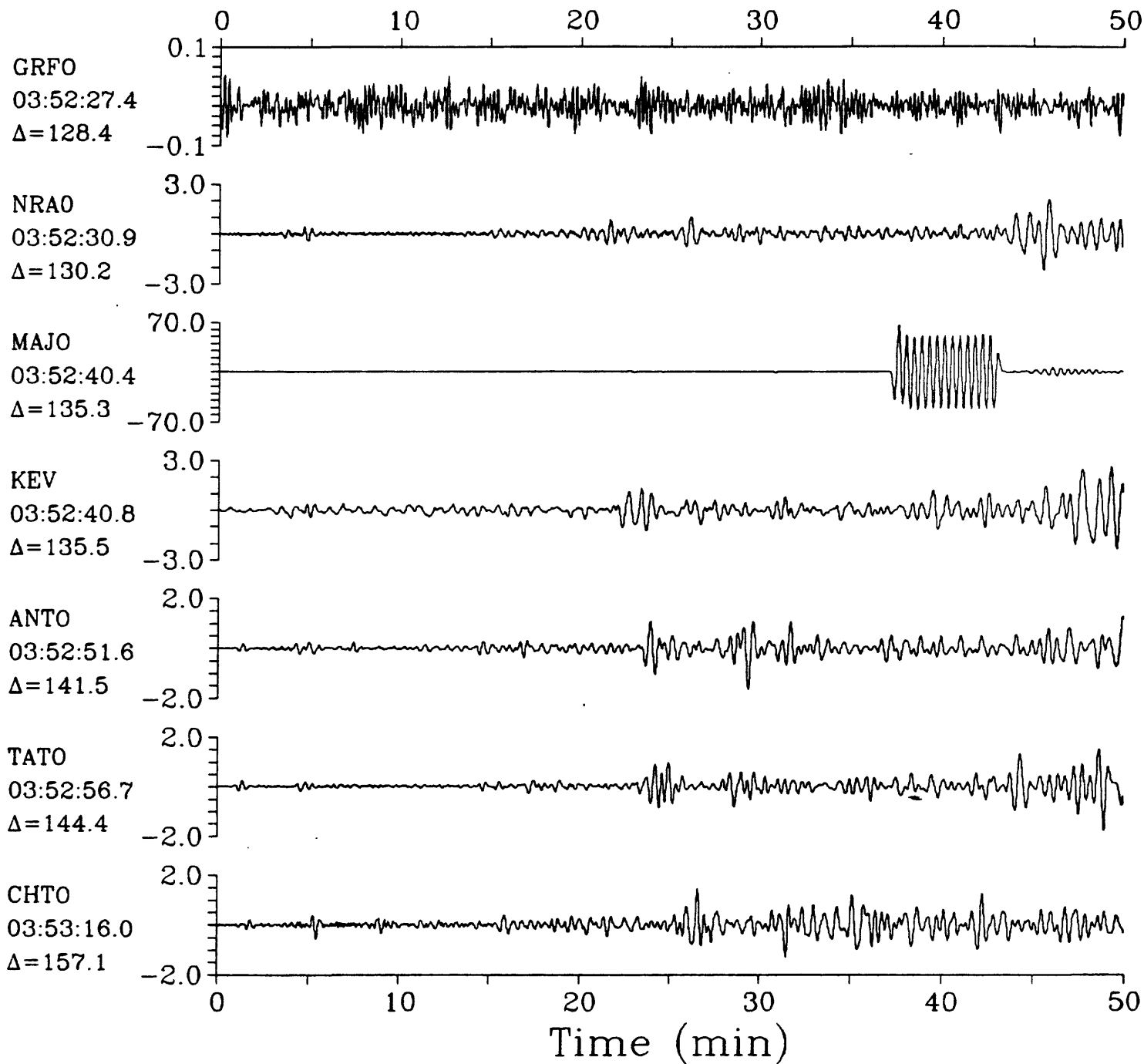
LPZ

Southern Pacific Ocean $h=10.0$ $m_b=5.4$ $M_{sz}=5.7$ 

LPZ

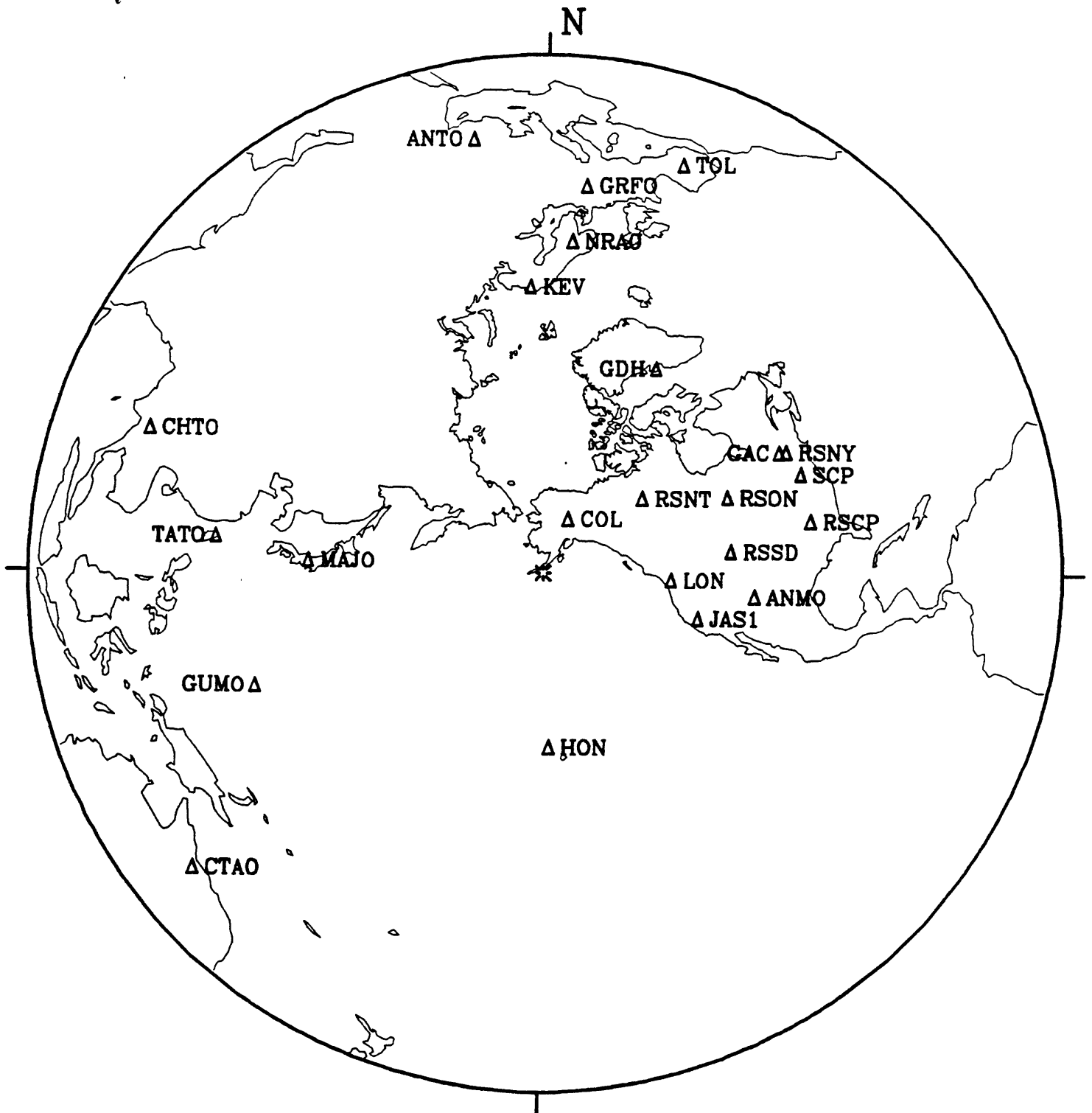
12 November 1985 03:34:19.82

LPZ

Southern Pacific Ocean $h=10.0$ $m_b=5.4$ $M_{sz}=5.7$ 

14 November 1985 22:17:44.68

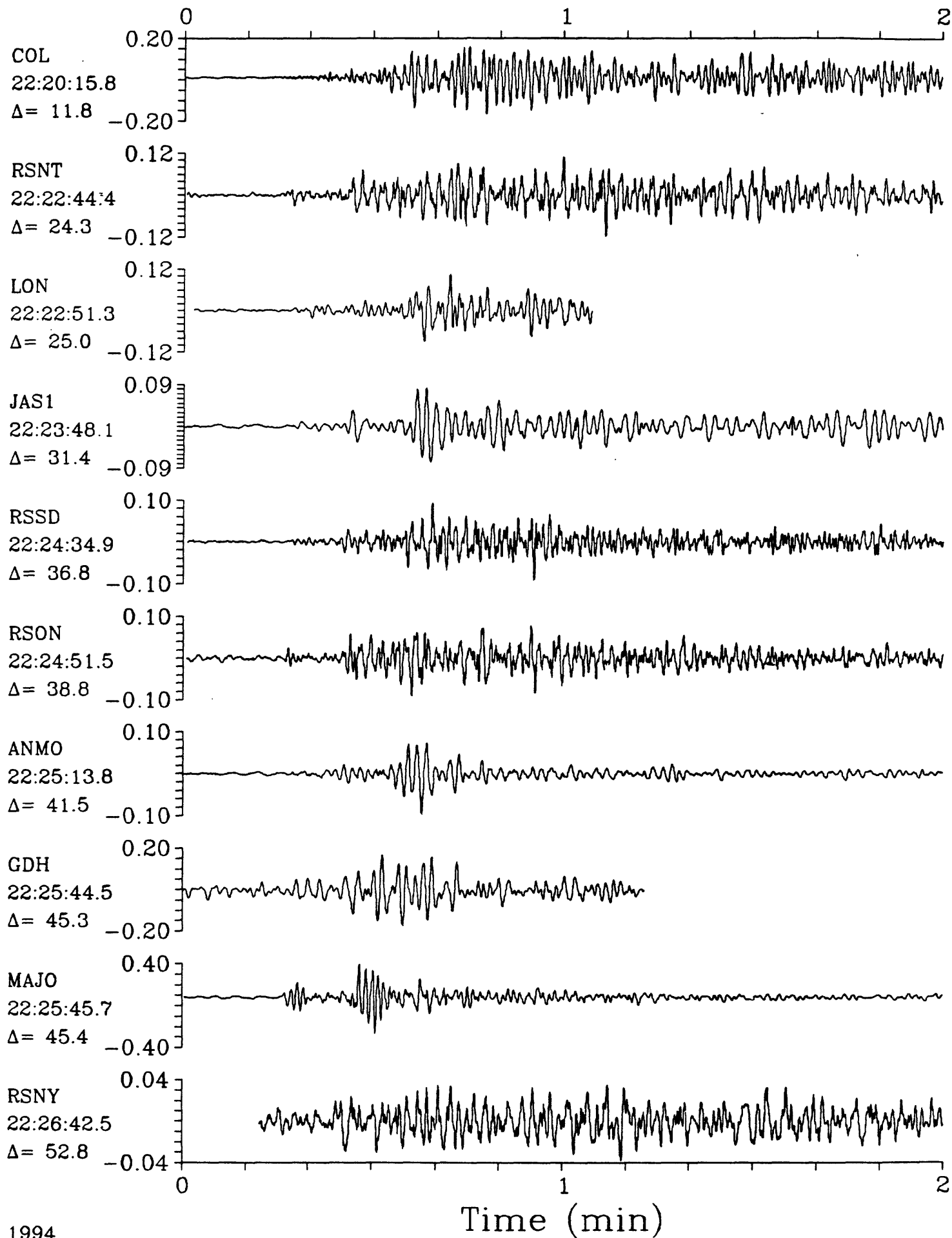
South of Alaska



SPZ

14 November 1985 22:17:44.68
South of Alaska $h=33.0$ $m_b=5.5$ $M_{sz}=5.7$

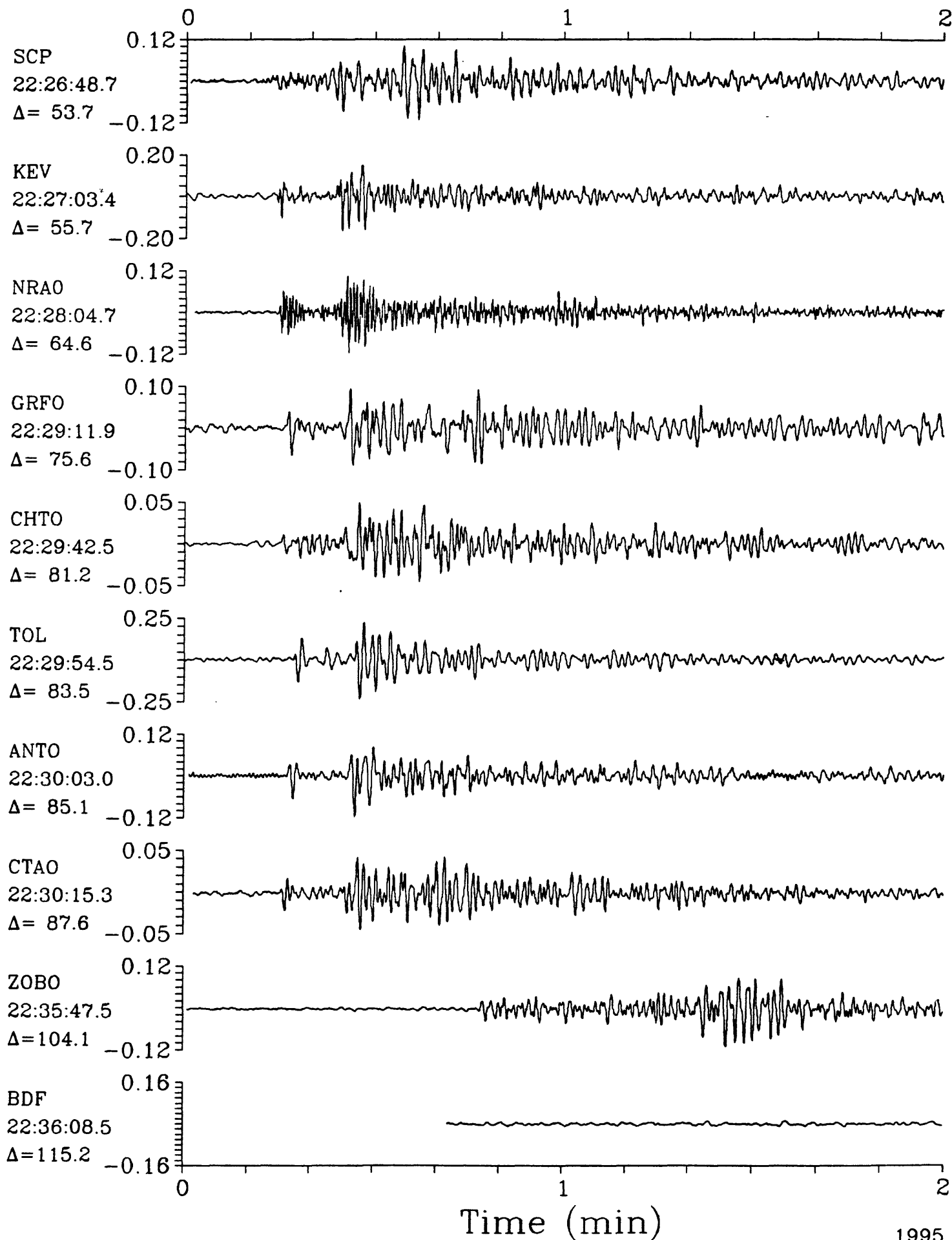
SPZ



SPZ

14 November 1985 22:17:44.68
South of Alaska $h=33.0$ $m_b=5.5$ $M_{sz}=5.7$

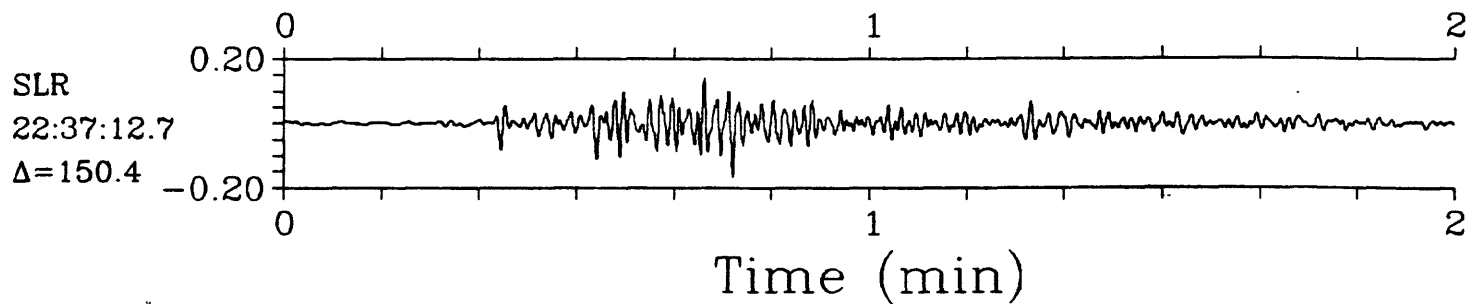
SPZ



SPZ

14 November 1985 22:17:44.68

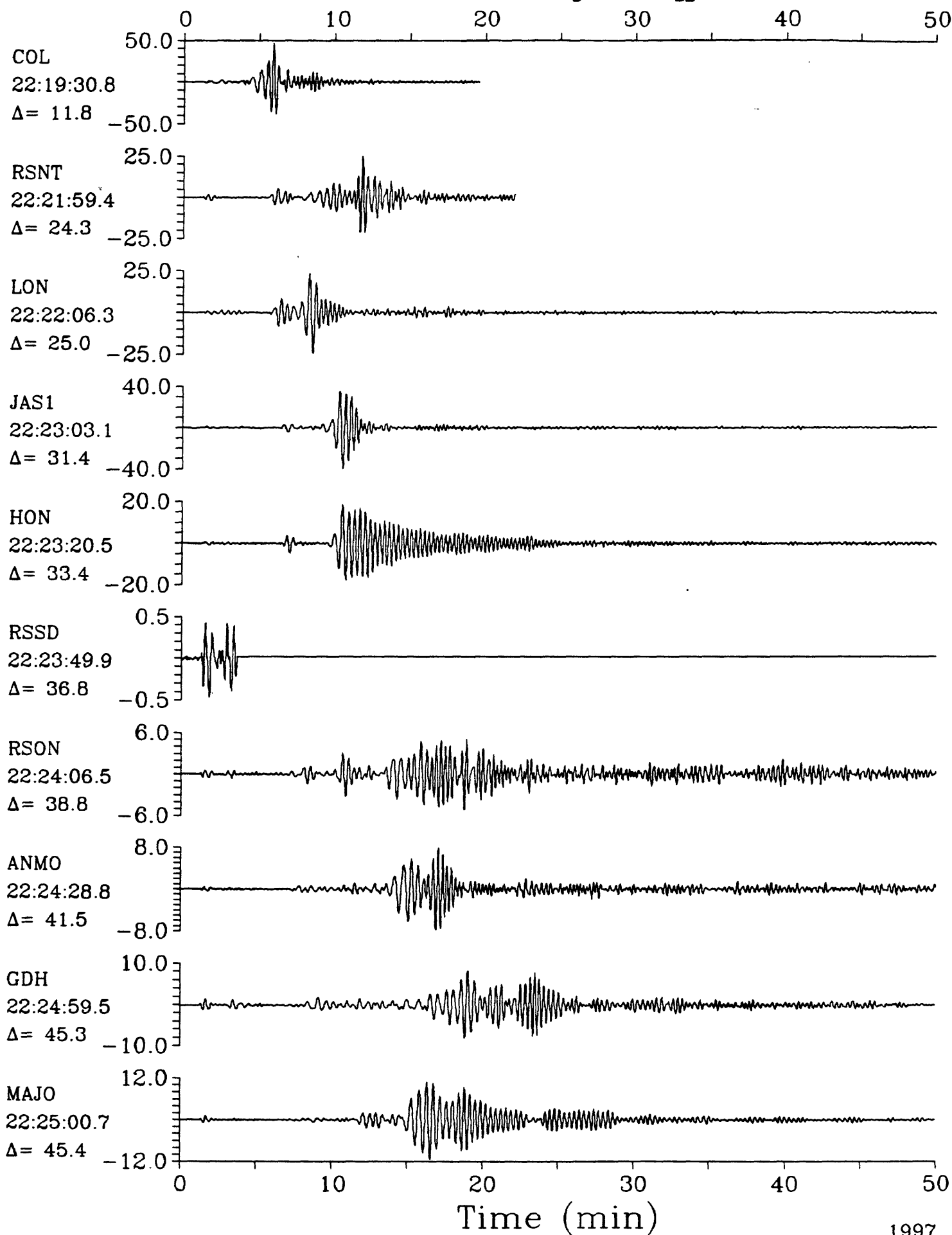
SPZ

South of Alaska $h=33.0$ $m_b=5.5$ $M_{sz}=5.7$ 

LPZ

14 November 1985 22:17:44.68
South of Alaska $h=33.0$ $m_b=5.5$ $M_{sz}=5.7$

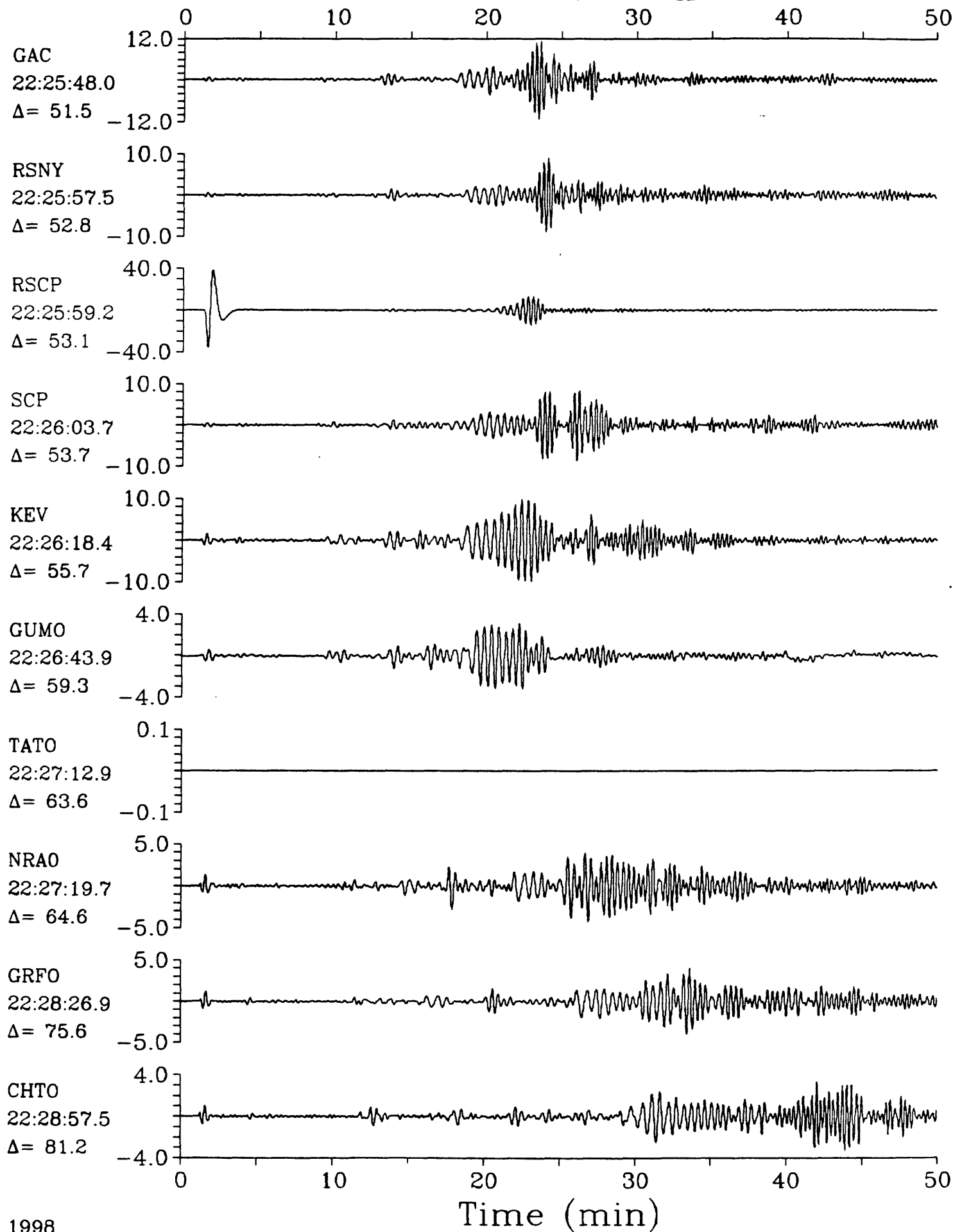
LPZ



LPZ

14 November 1985 22:17:44.68
South of Alaska $h=33.0$ $m_b=5.5$ $M_{sz}=5.7$

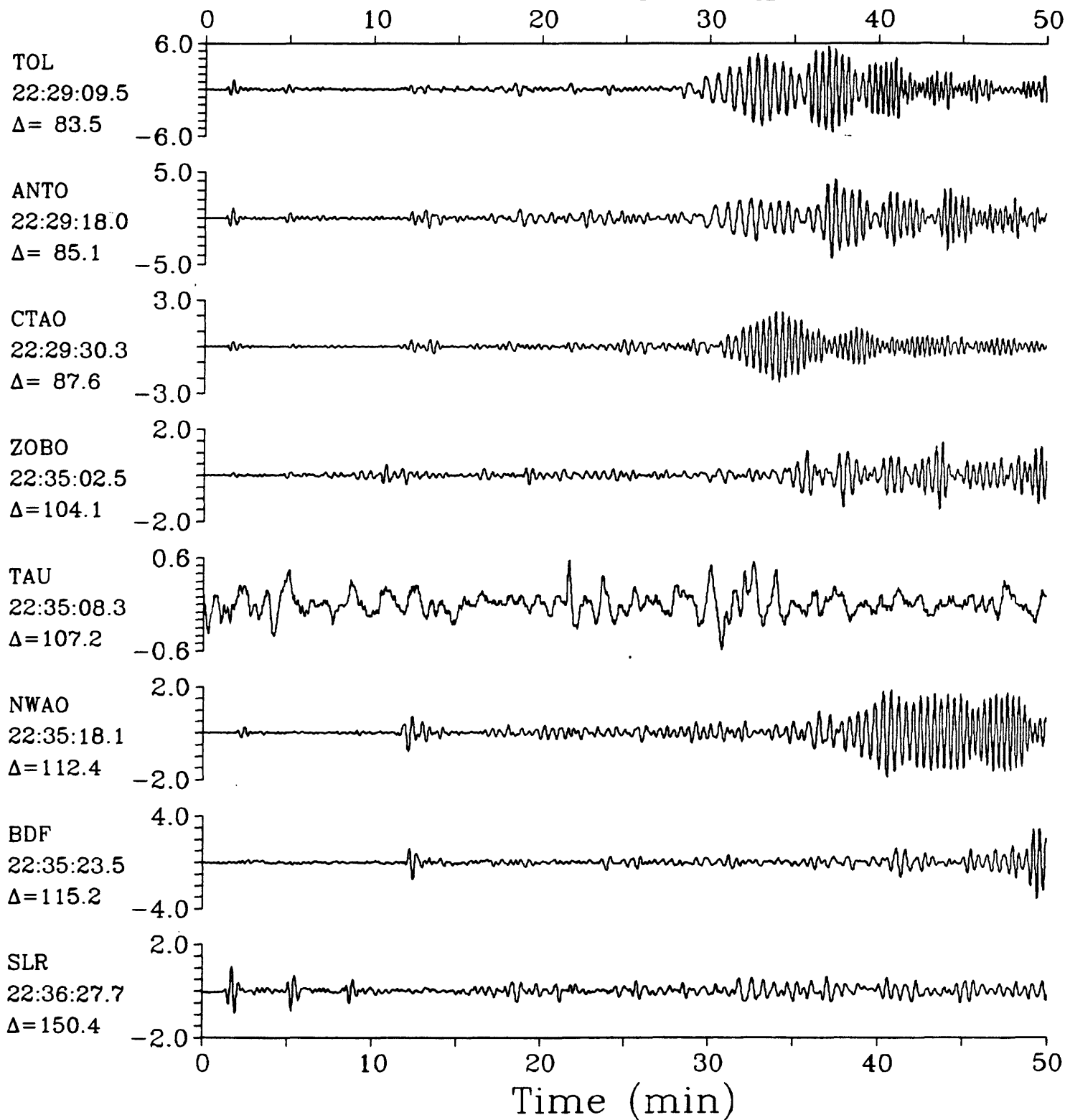
LPZ



LPZ

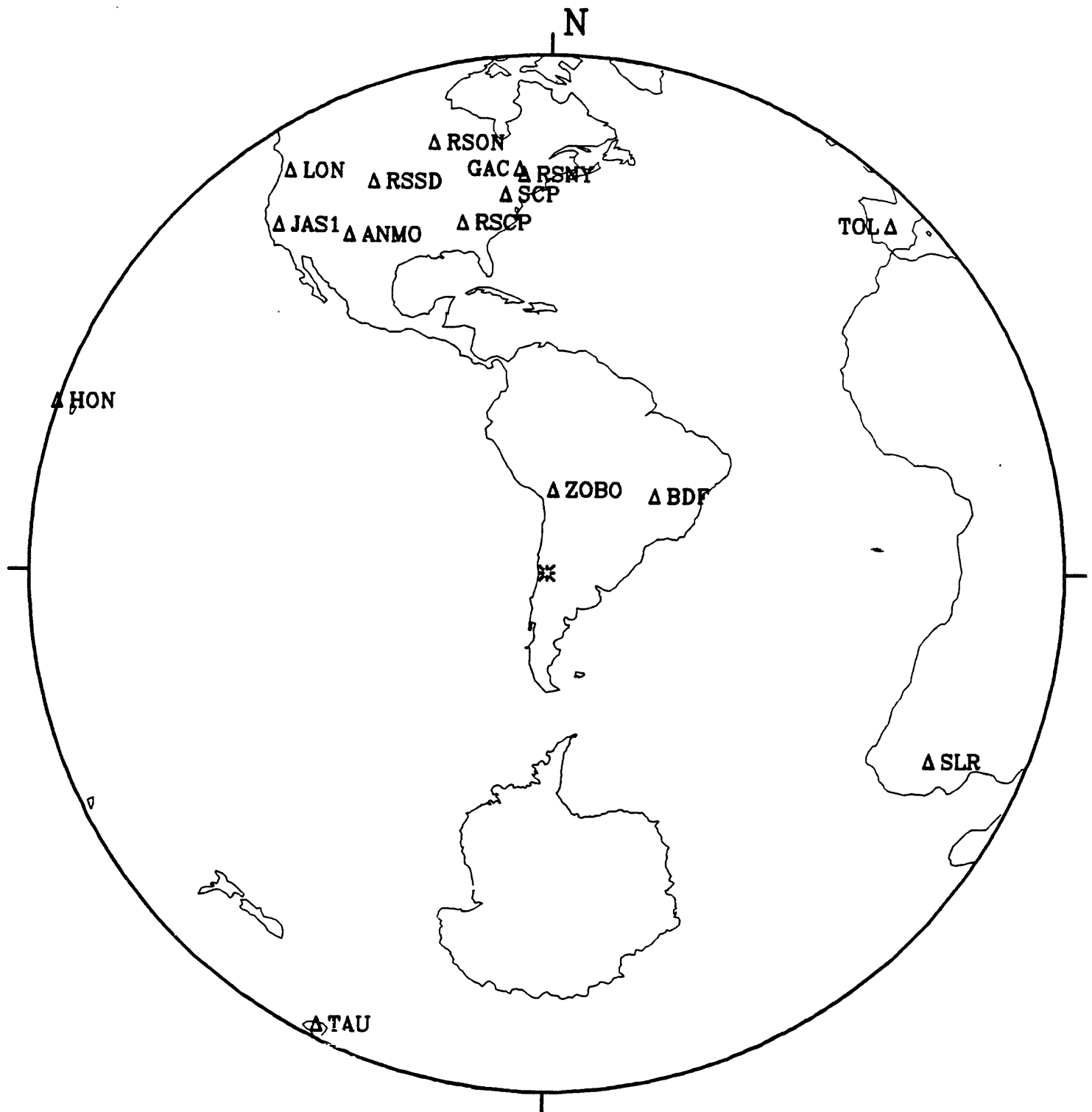
14 November 1985 22:17:44.68
South of Alaska $h=33.0$ $m_b=5.5$ $M_{sz}=5.7$

LPZ



14 November 1985 22:32:52.63

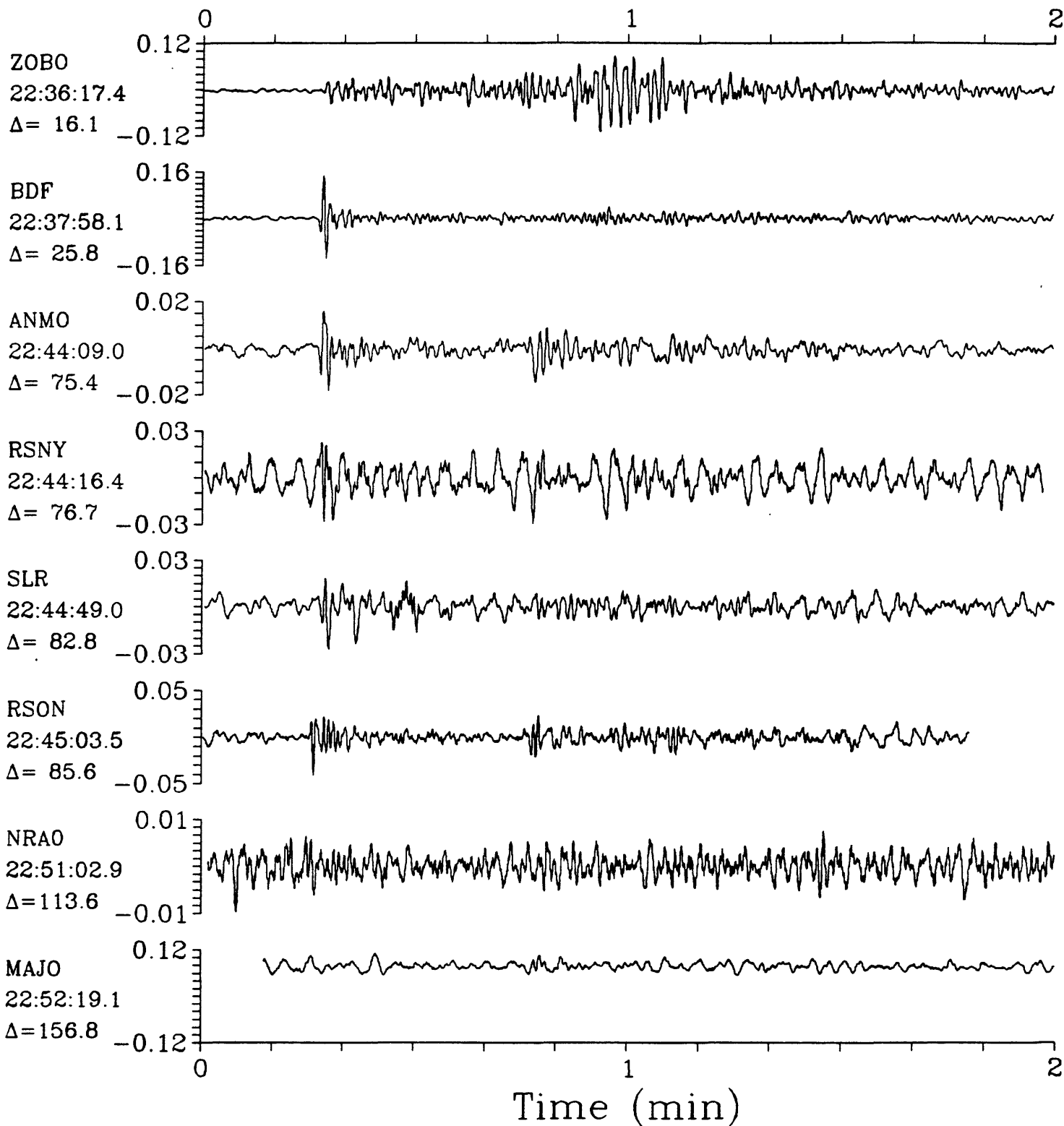
Mendoza Province, Argentina



SPZ

14 November 1985 22:32:52.63

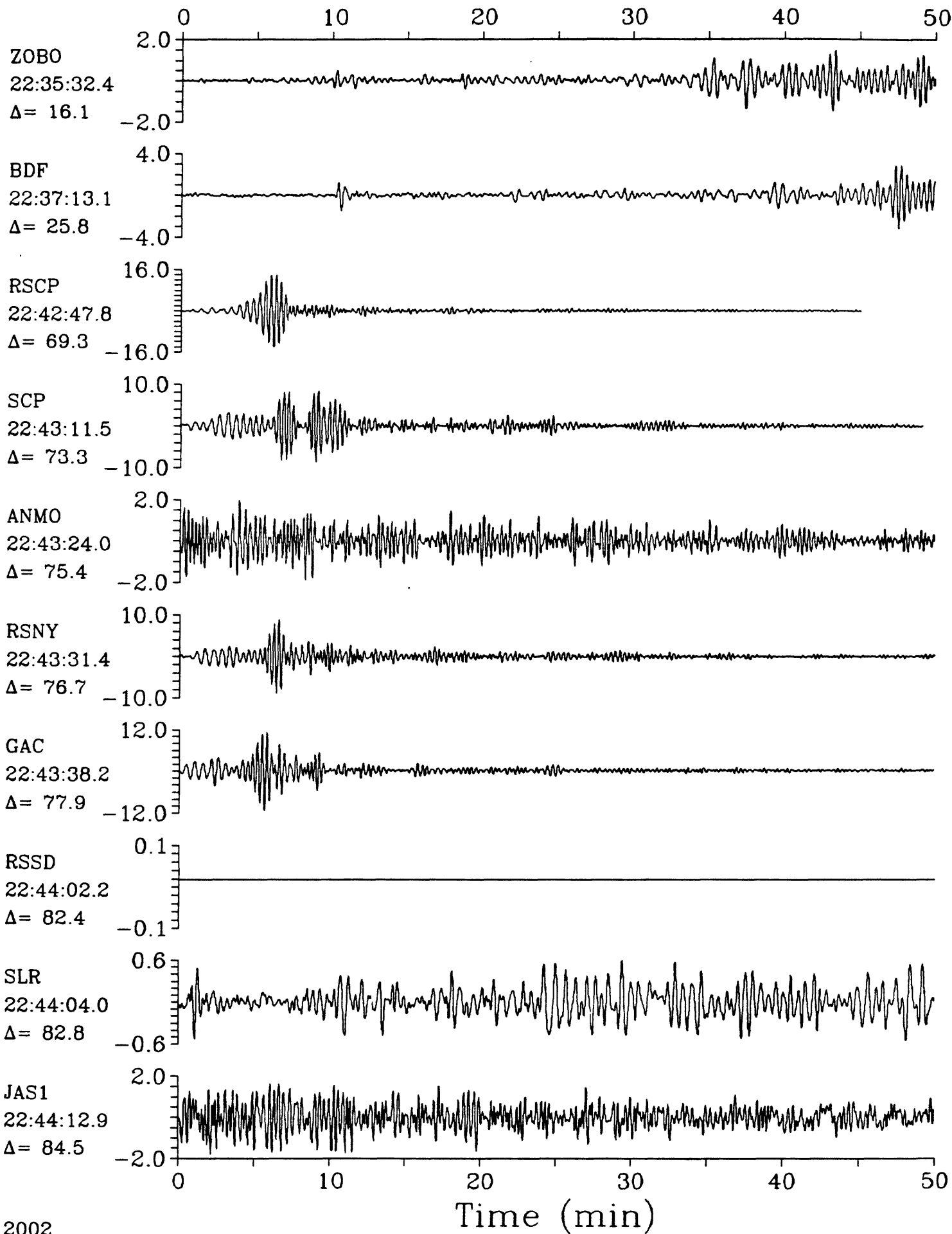
SPZ

Mendoza Province, Argentina $h=117.4$ $m_b=5.6$ 

LPZ

14 November 1985 22:32:52.63

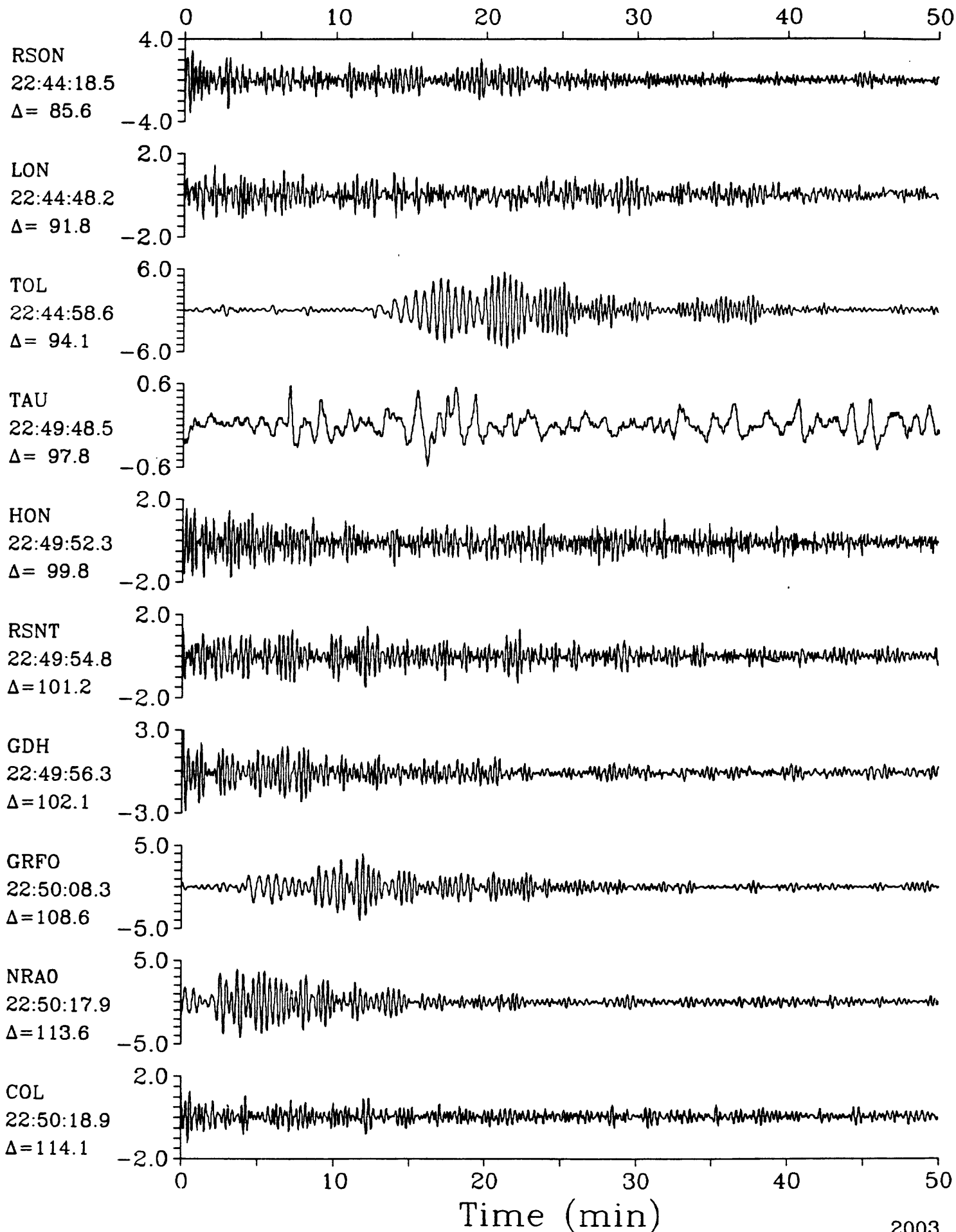
LPZ

Mendoza Province, Argentina $h=117.4$ $m_b=5.6$ 

LPZ

14 November 1985 22:32:52.63

LPZ

Mendoza Province, Argentina $h=117.4$ $m_b=5.6$ 

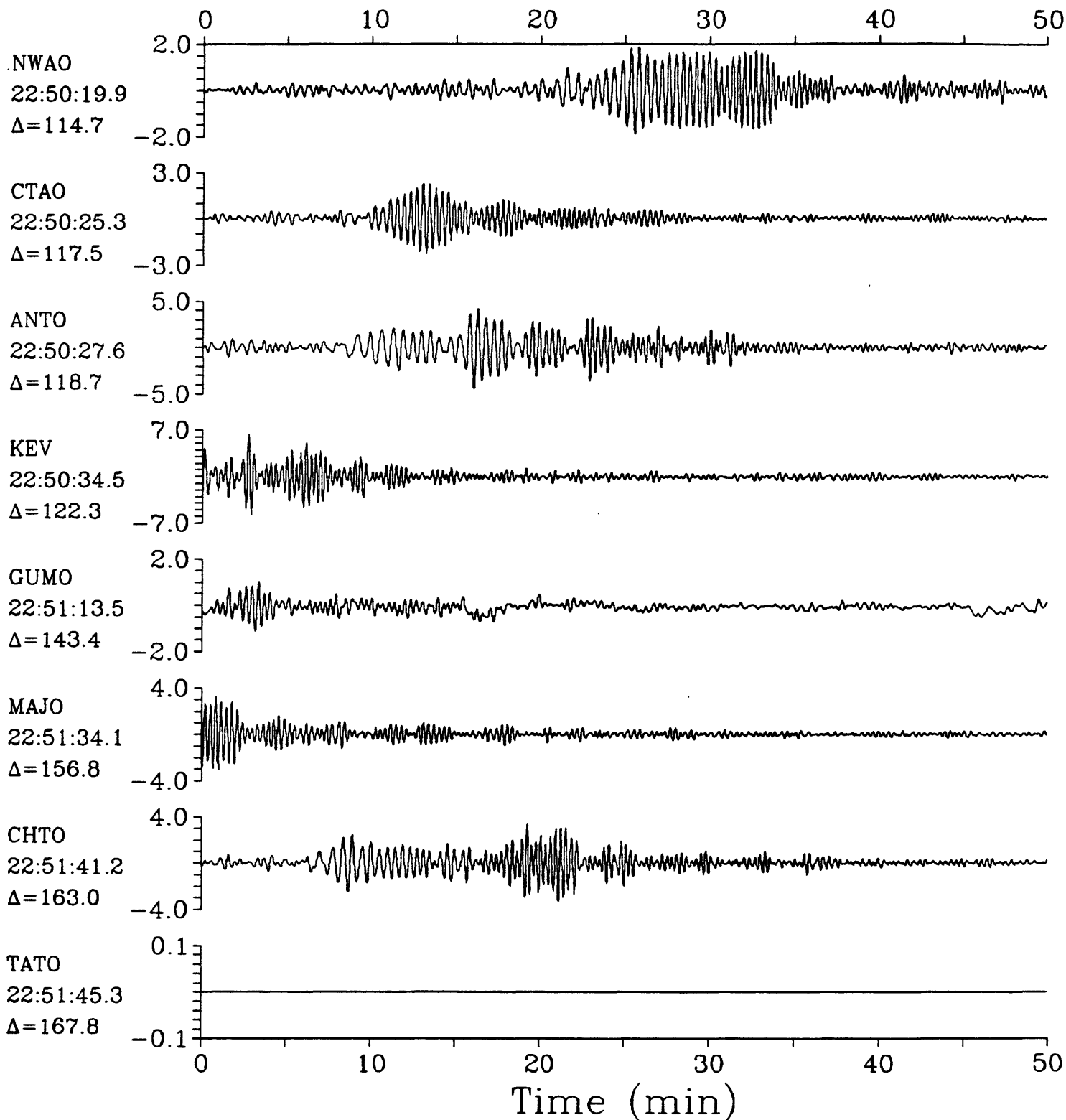
Time (min)

2003

LPZ

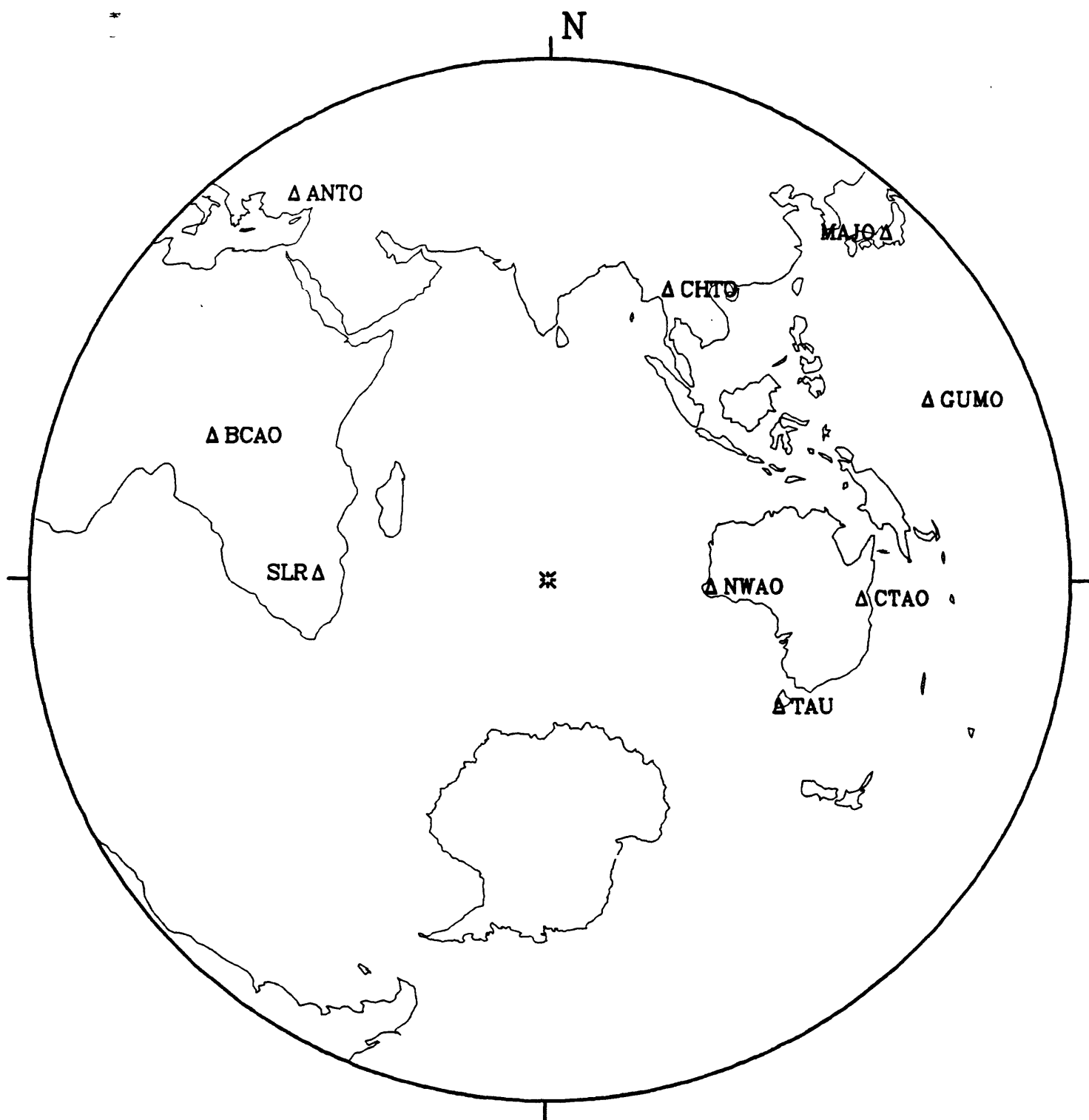
14 November 1985 22:32:52.63

LPZ

Mendoza Province, Argentina $h=117.4$ $m_b=5.6$ 

16 November 1985 04:12:18.86

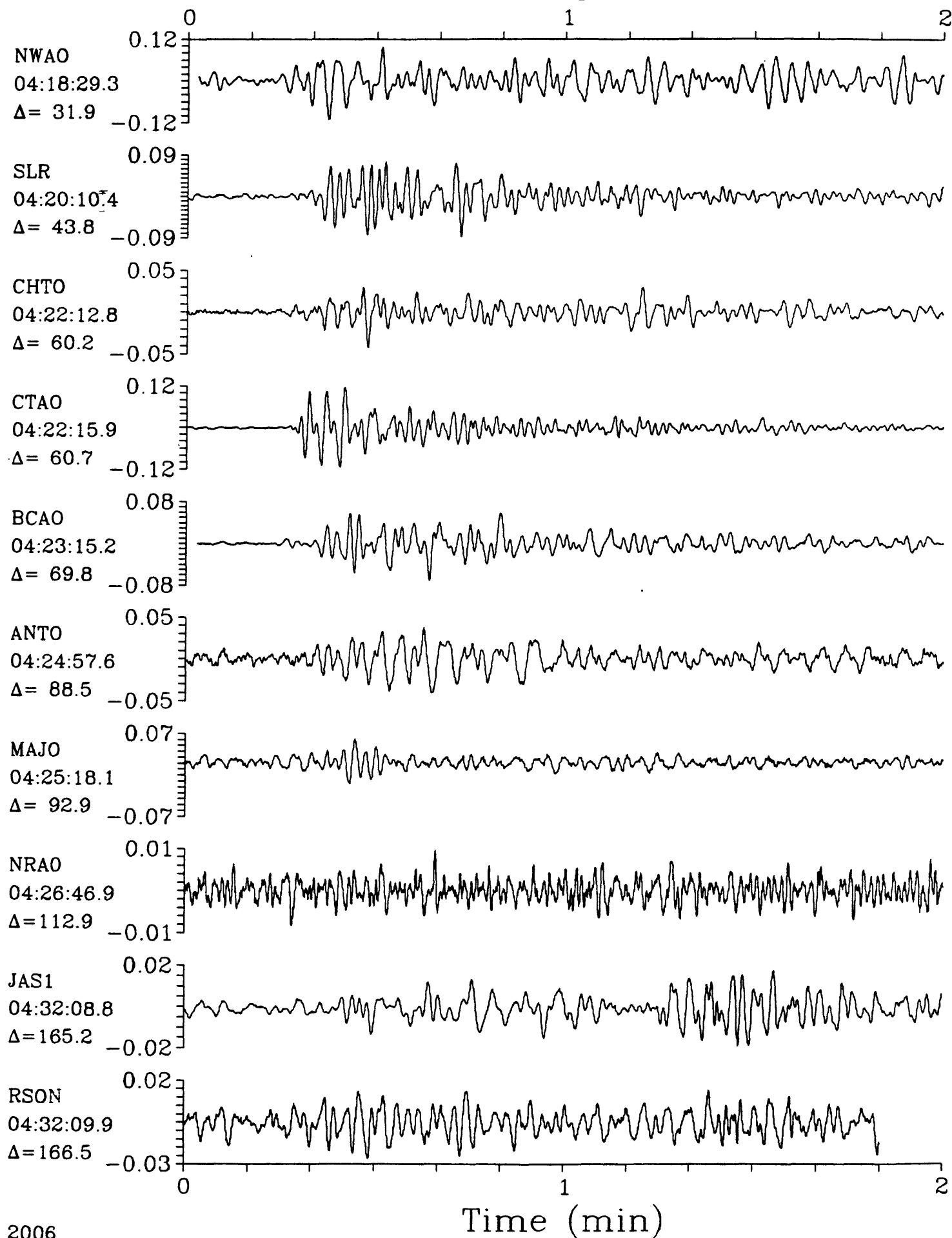
Mid-Indian Rise



SPZ

16 November 1985 04:12:18.86

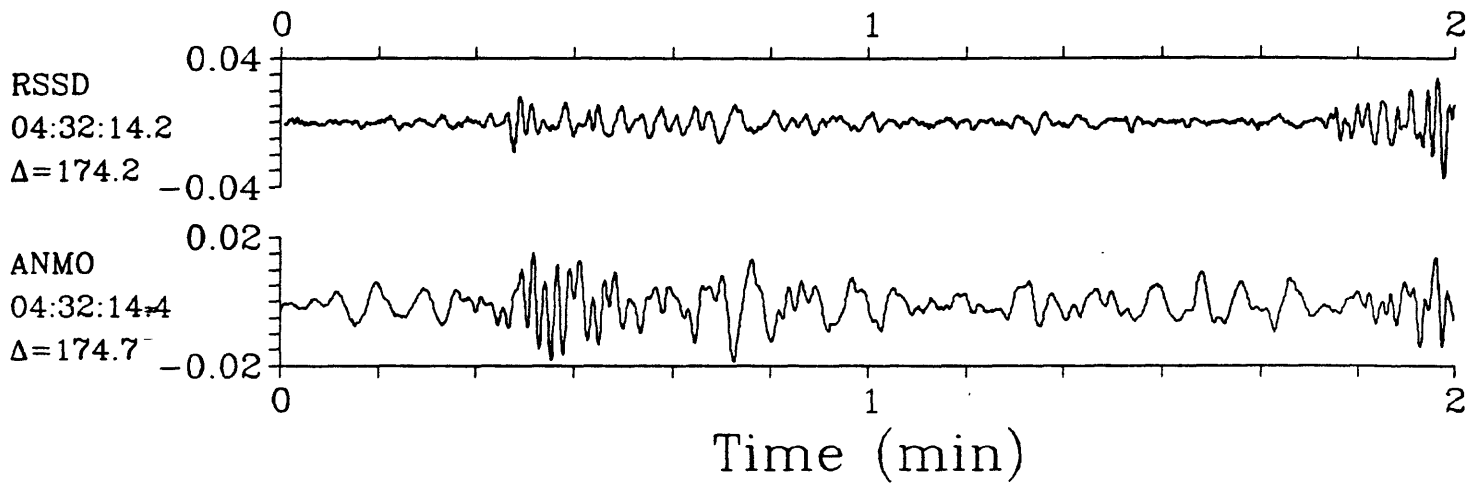
SPZ

Mid-Indian Rise $h=10.0$ $m_b=5.7$ $M_{sz}=6.3$ 

SPZ

16 November 1985 04:12:18.86
Mid-Indian Rise $h=10.0$ $m_b=5.7$ $M_{sz}=6.3$

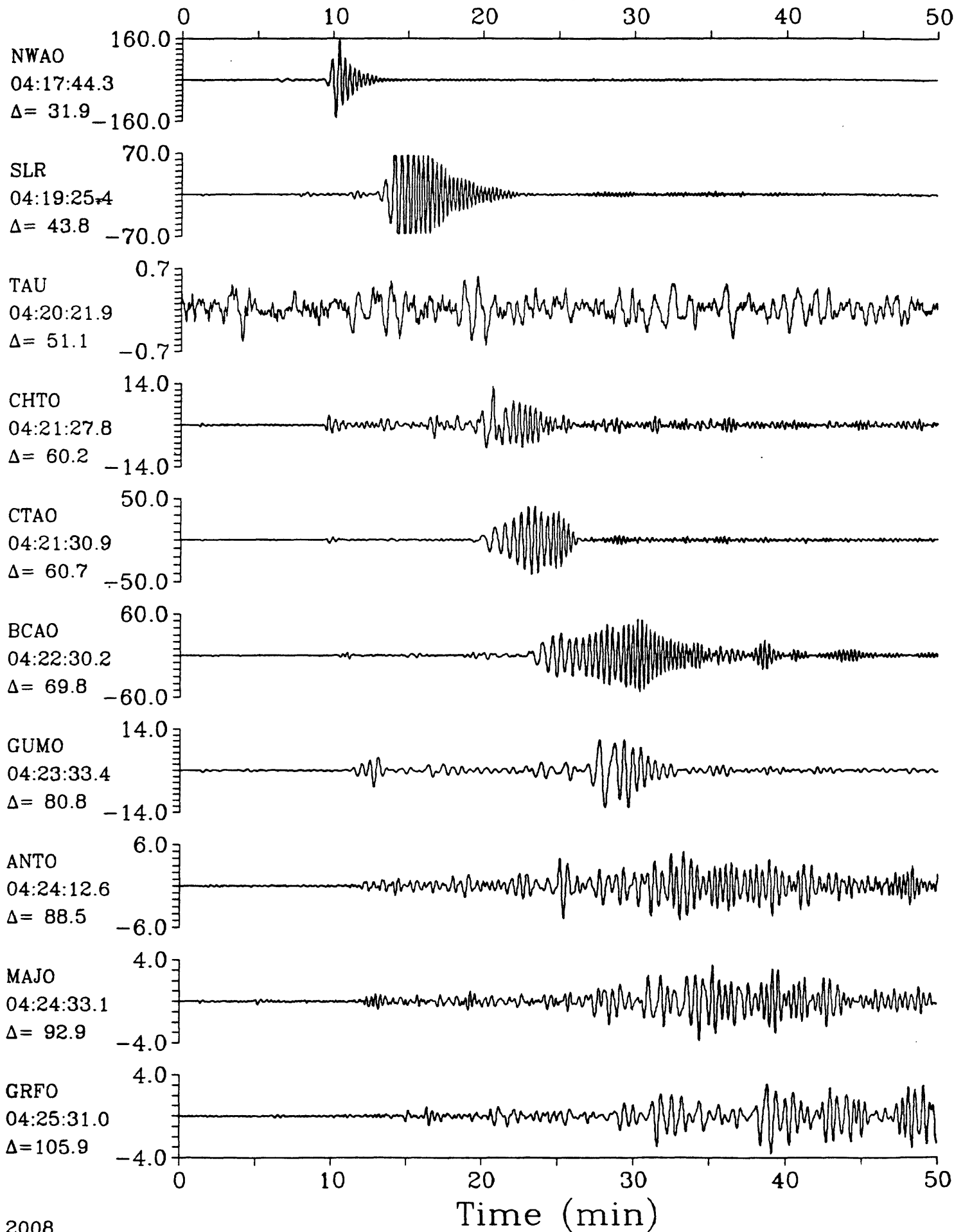
SPZ



LPZ

16 November 1985 04:12:18.86
Mid-Indian Rise $h=10.0$ $m_b=5.7$ $M_{sz}=6.3$

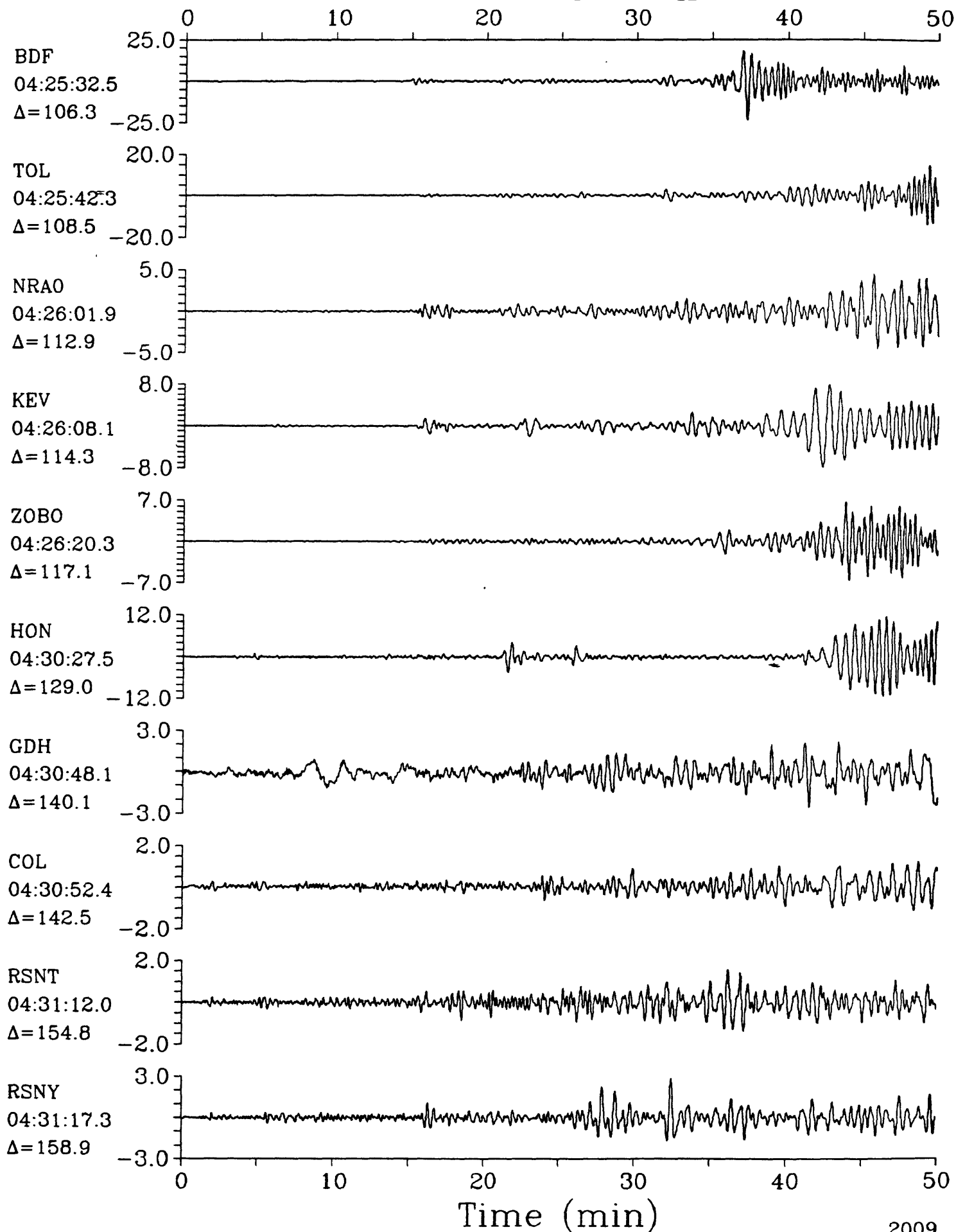
LPZ



LPZ

16 November 1985 04:12:18.86

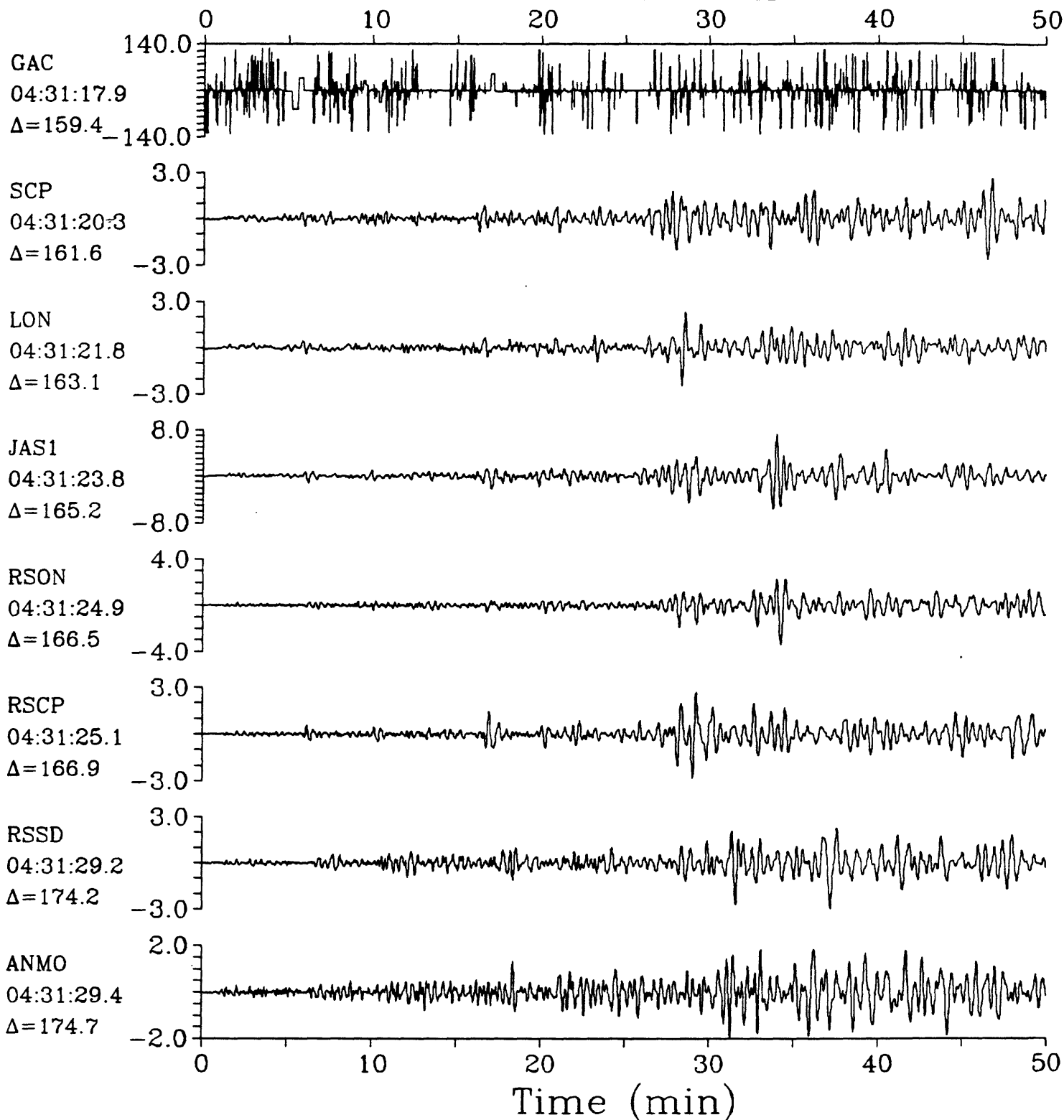
LPZ

Mid-Indian Rise $h=10.0$ $m_b=5.7$ $M_{sz}=6.3$ 

LPZ

16 November 1985 04:12:18.86

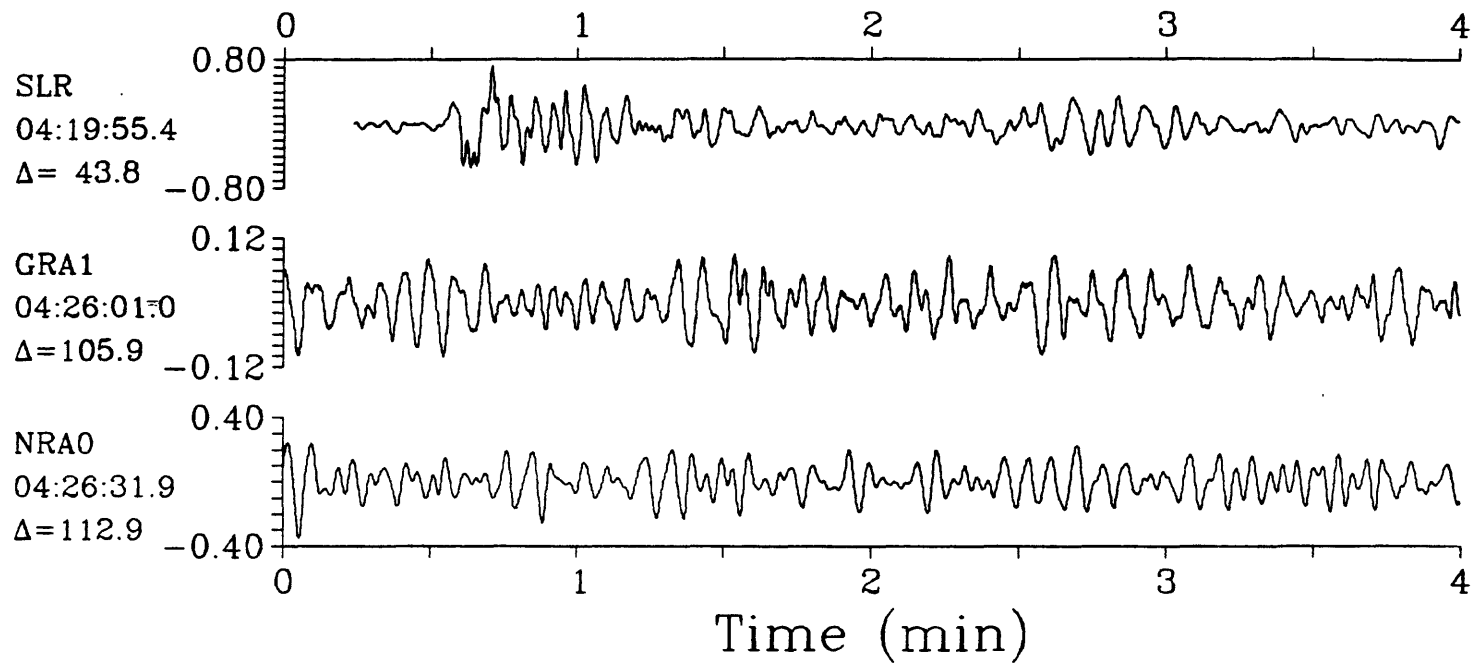
LPZ

Mid-Indian Rise $h=10.0$ $m_b=5.7$ $M_{sz}=6.3$ 

IPZ

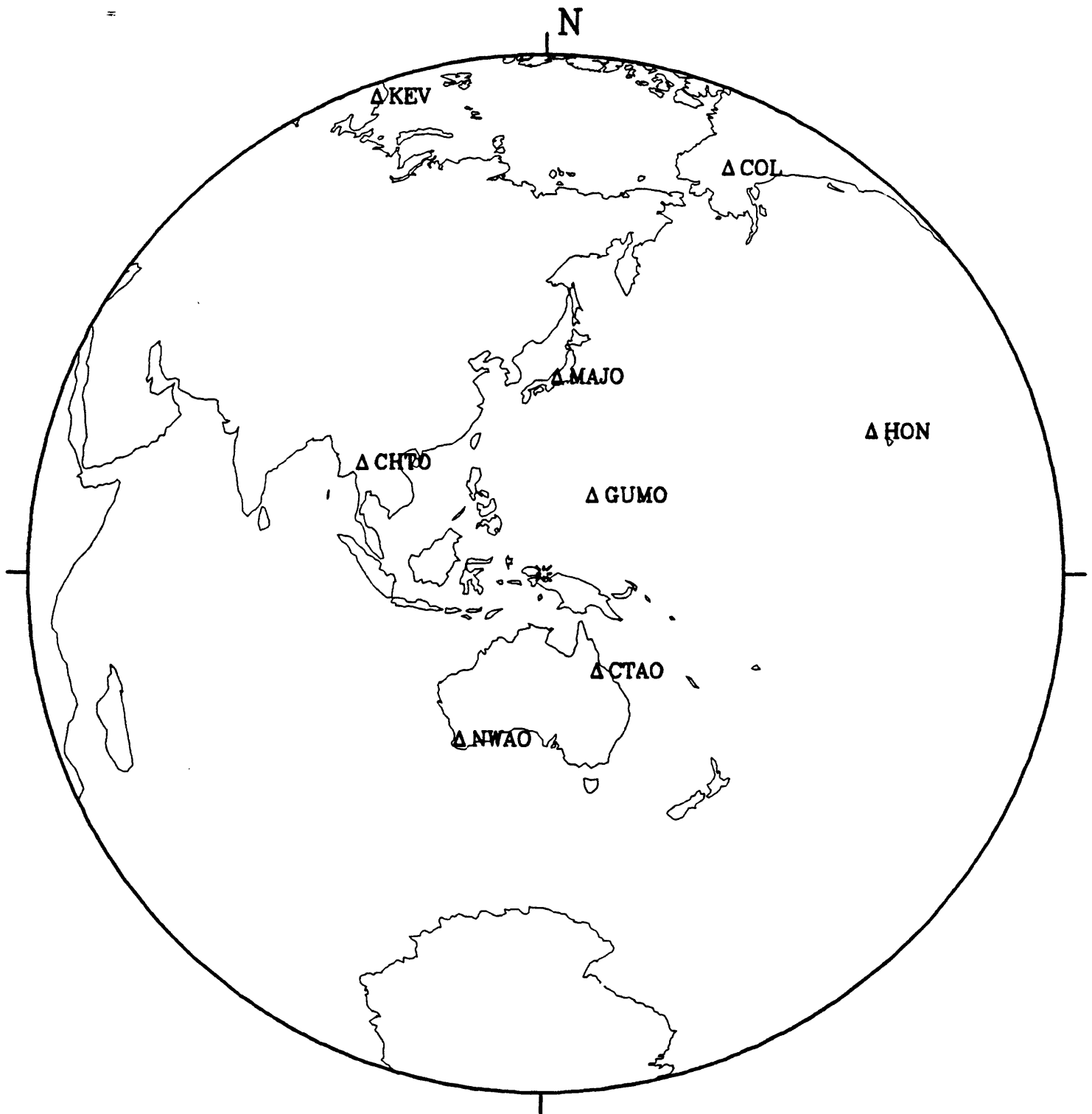
16 November 1985 04:12:18.86

IPZ

Mid-Indian Rise $h=10.0$ $m_b=5.7$ $M_{sz}=6.3$ 

17 November 1985 09:40:21.79

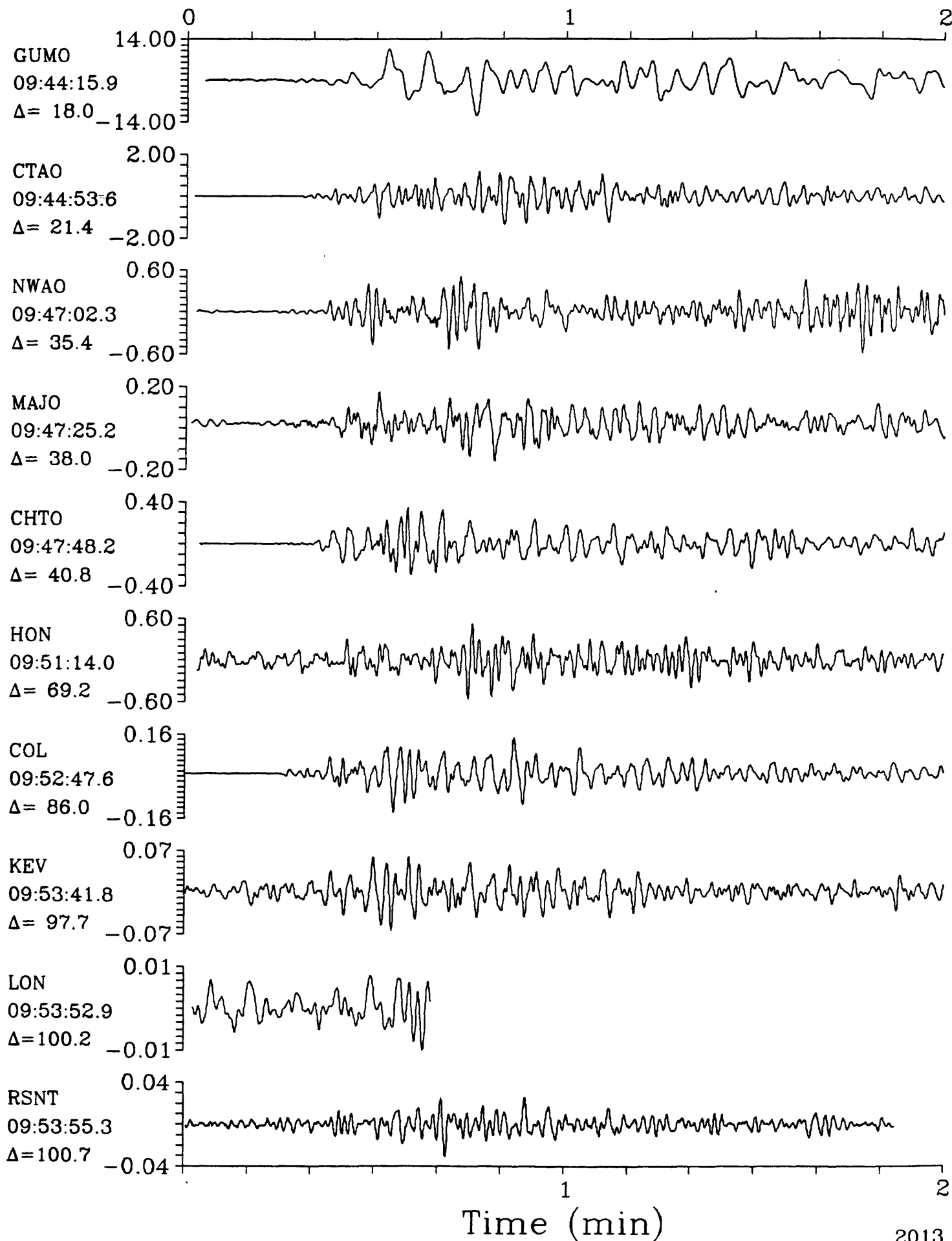
West Irian Region



SPZ

17 November 1985 09:40:21.79

SPZ

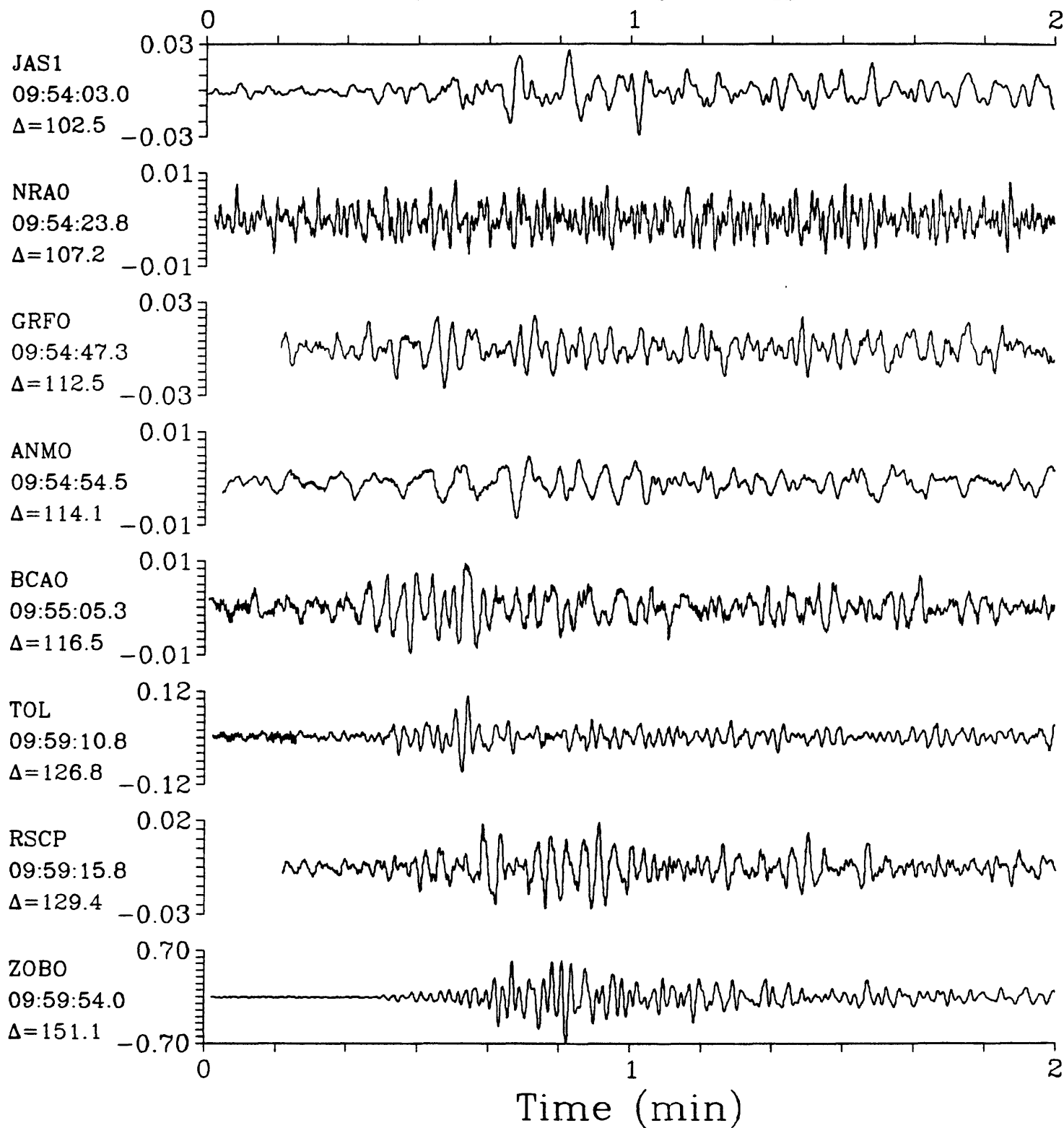
West Irian Region $h=12.9$ $m_b=5.9$ $M_{sz}=7.1$ 

2013

SPZ

17 November 1985 09:40:21.79

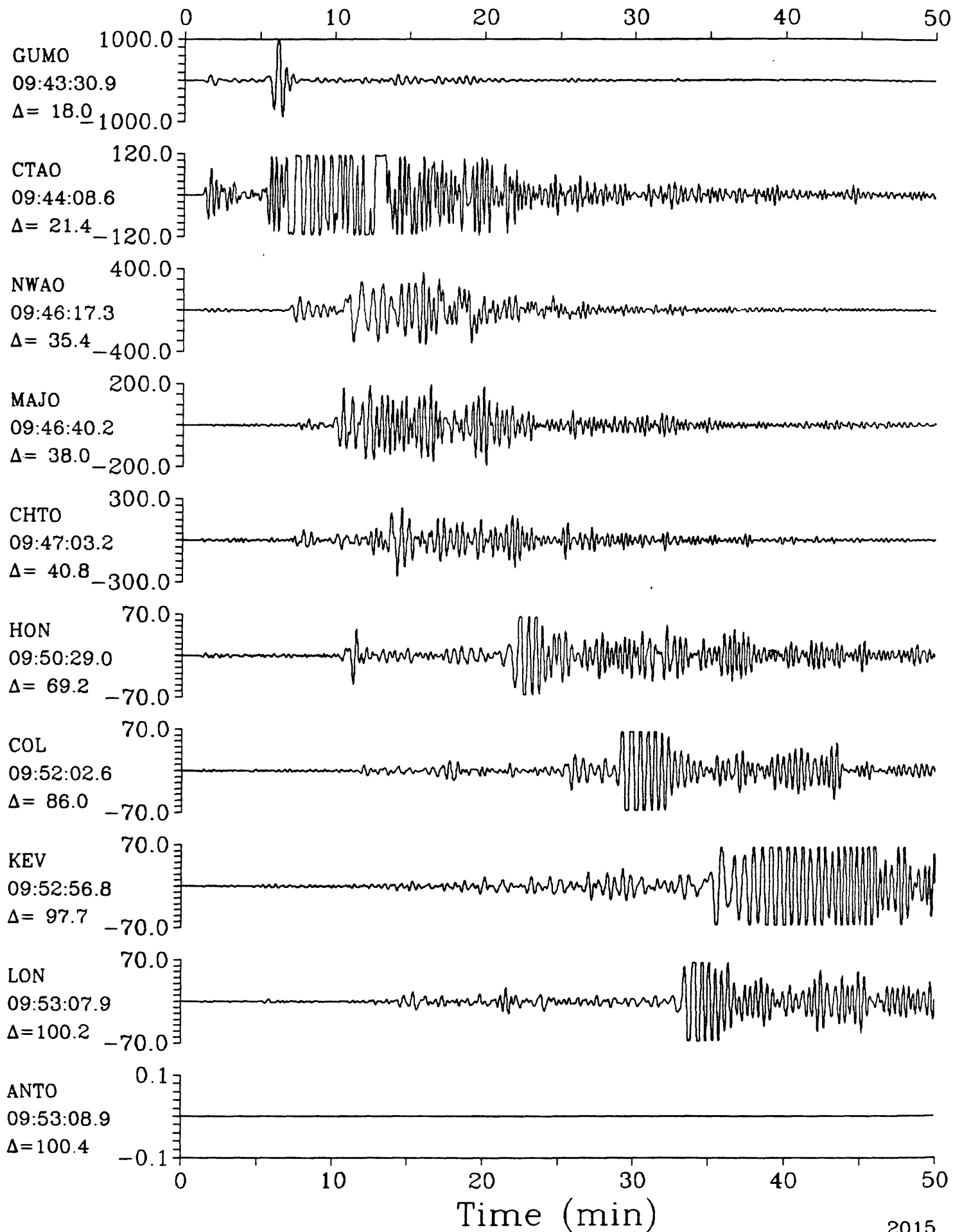
SPZ

West Irian Region $h=12.9$ $m_b=5.9$ $M_{SZ}=7.1$ 

LPZ

17 November 1985 09:40:21.79

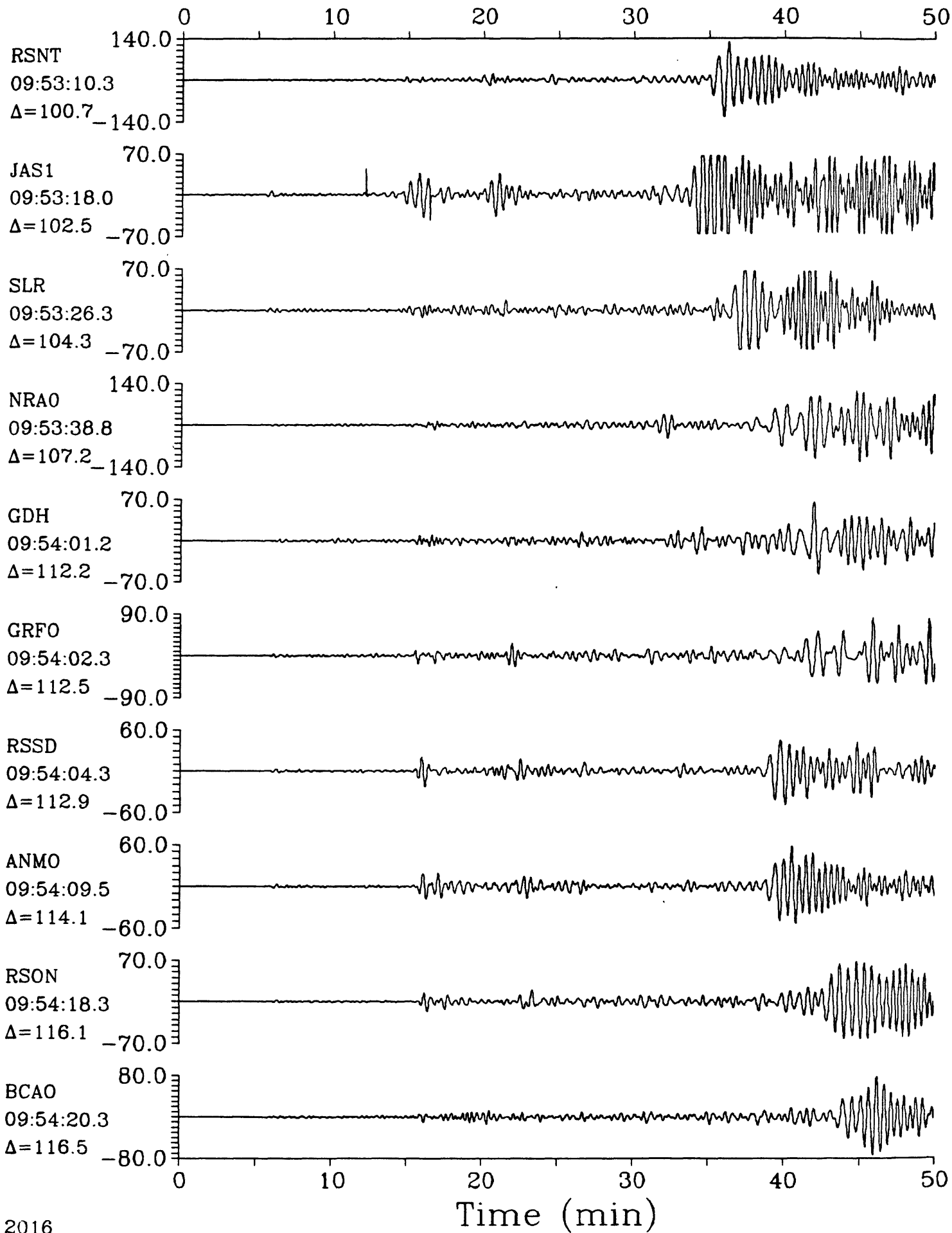
LPZ

West Irian Region $h=12.9$ $m_b=5.9$ $M_{sz}=7.1$ 

LPZ

17 November 1985 09:40:21.79

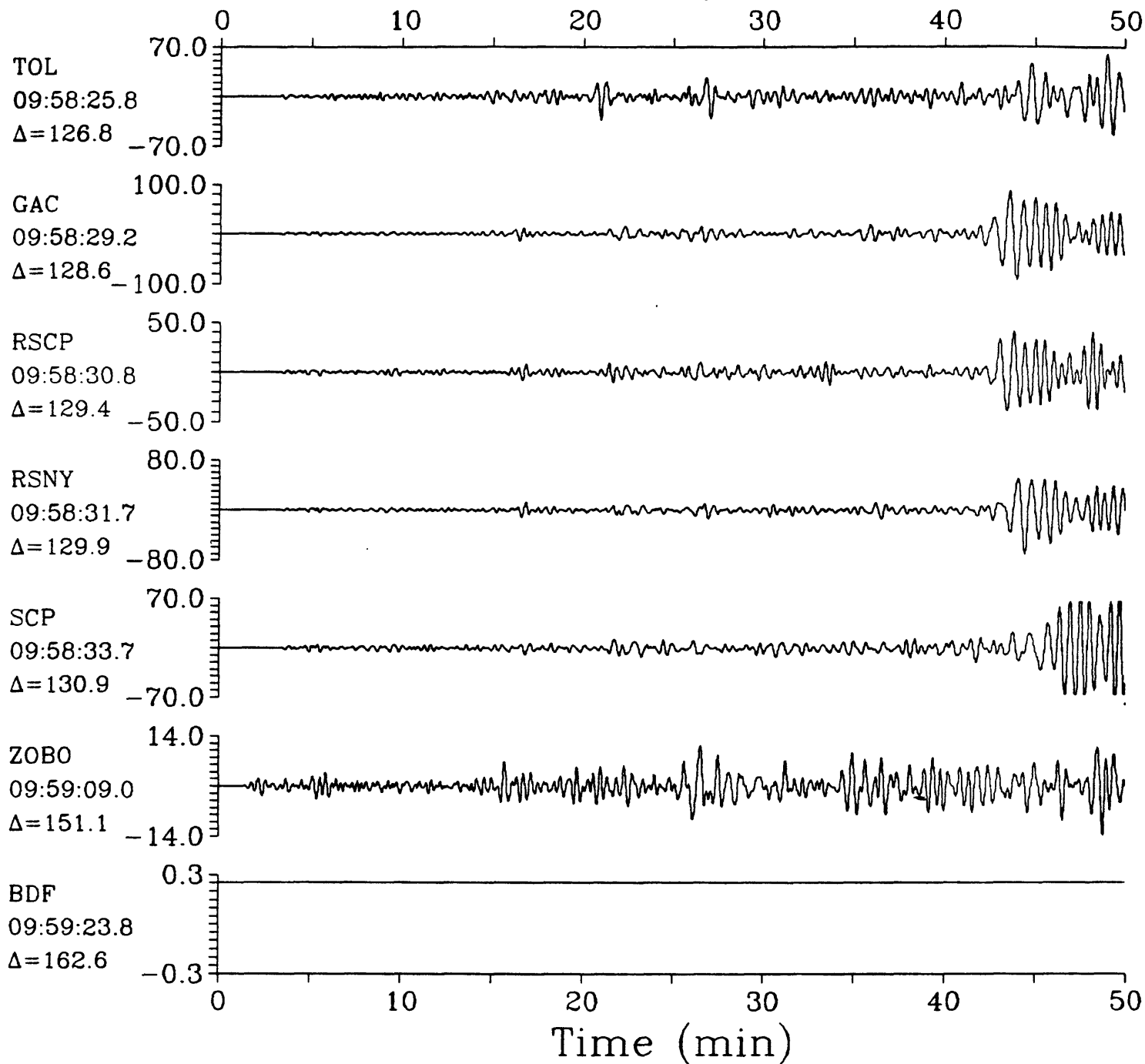
LPZ

West Irian Region $h=12.9$ $m_b=5.9$ $M_{SZ}=7.1$ 

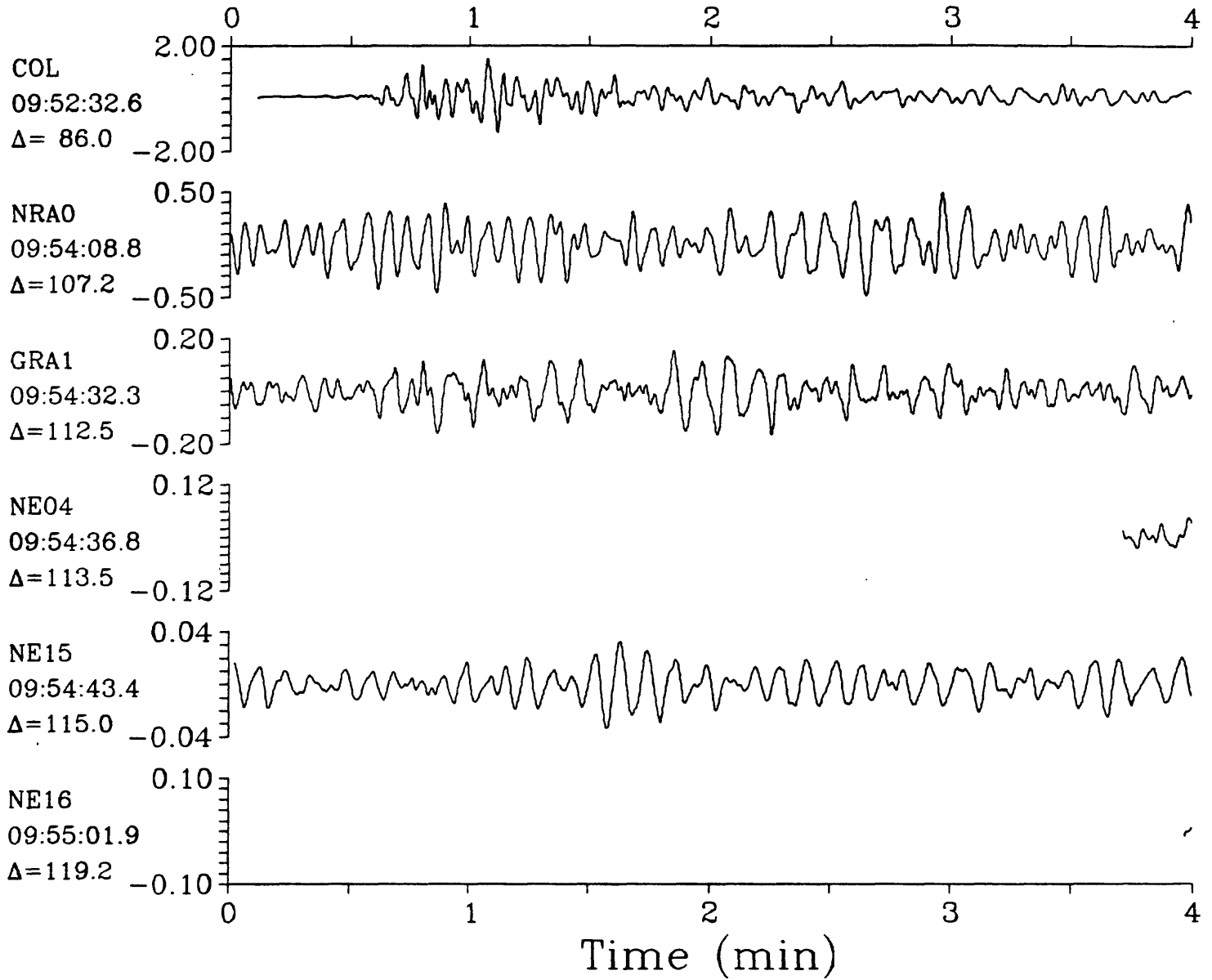
LPZ

17 November 1985 09:40:21.79

LPZ

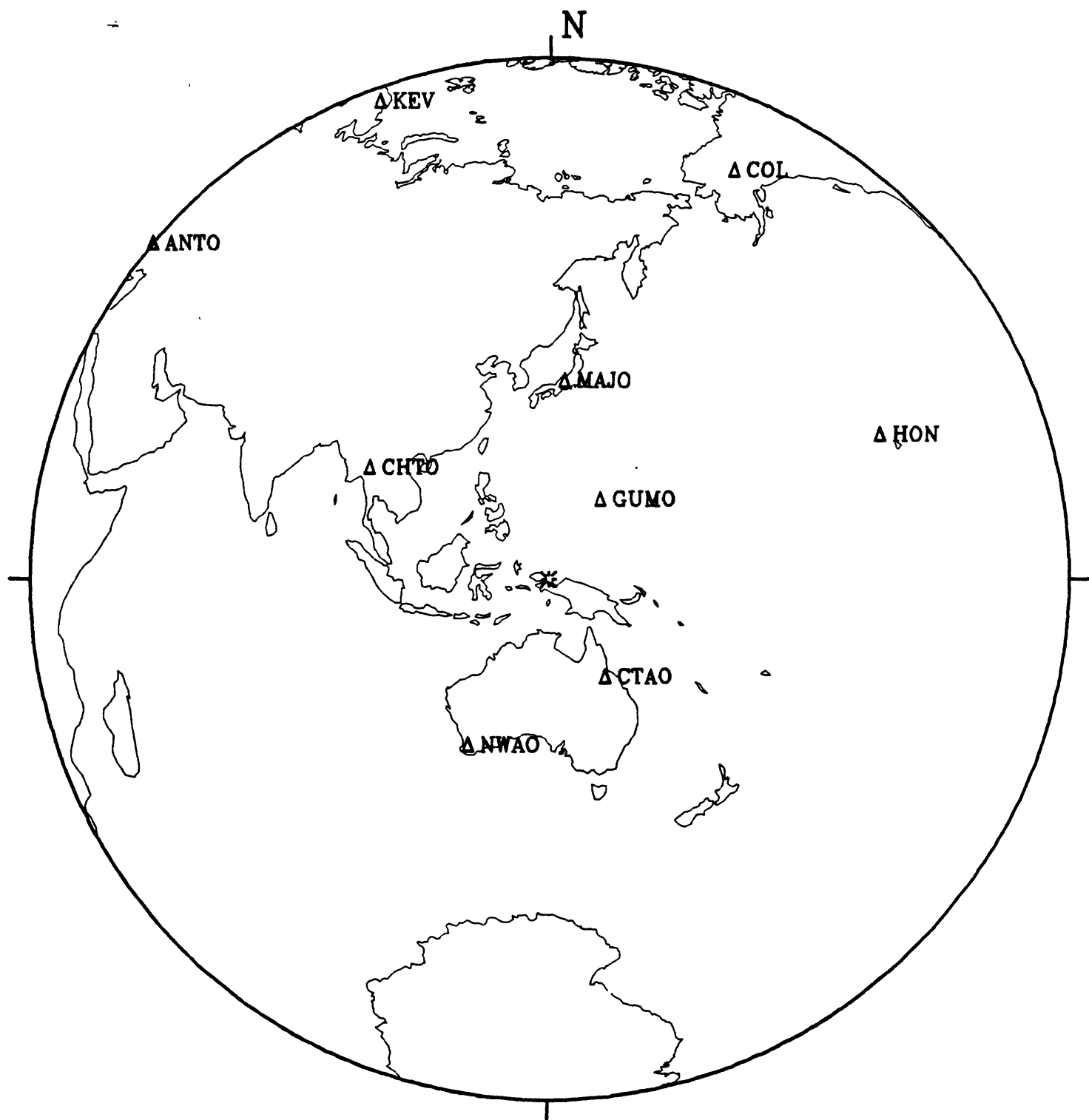
West Irian Region $h=12.9$ $m_b=5.9$ $M_{sz}=7.1$ 

West Irian Region $h=12.9$ $m_b=5.9$ $M_{sz}=7.1$



17 November 1985 14:20:53.62

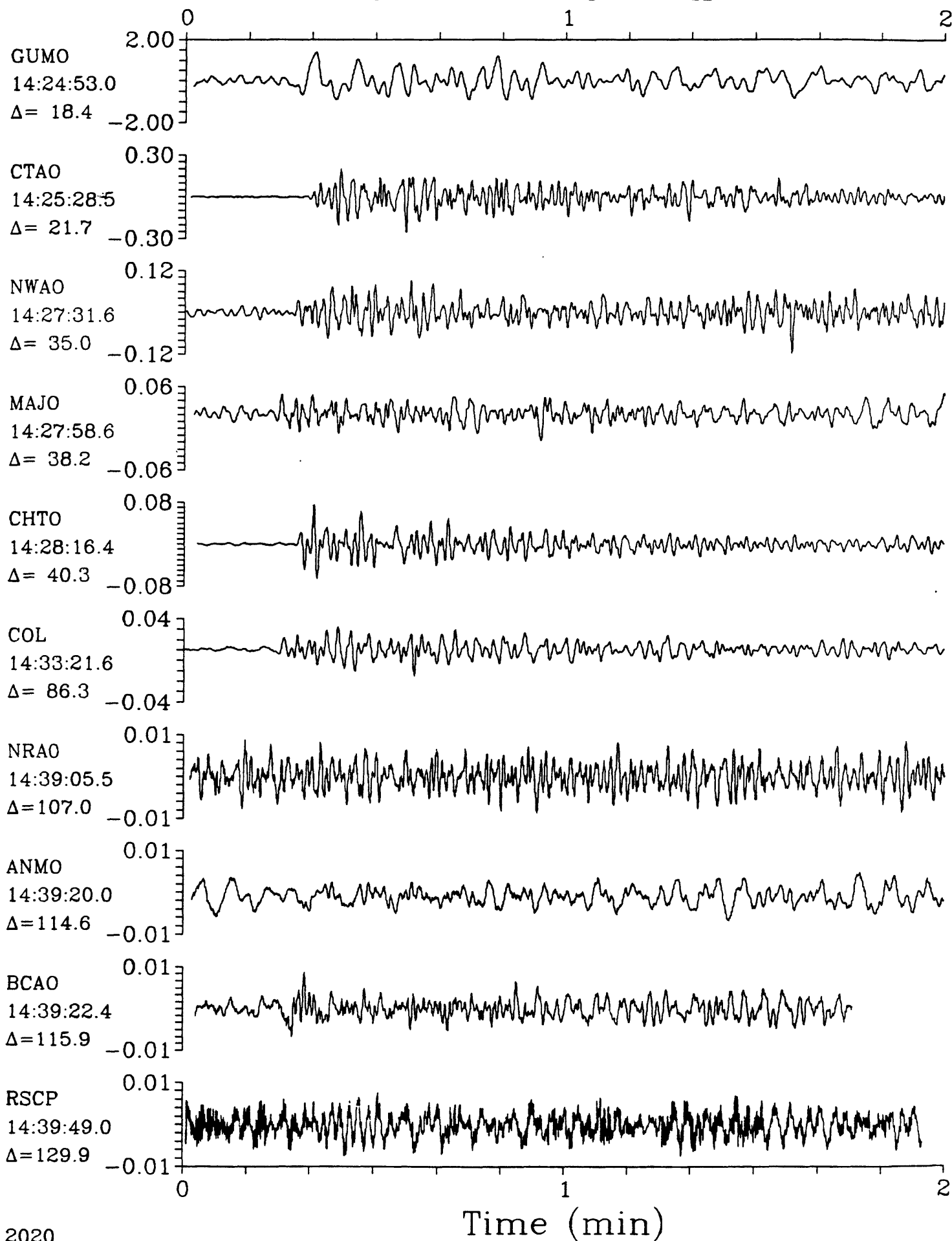
West Irian Region



SPZ

17 November 1985 14:20:53.62

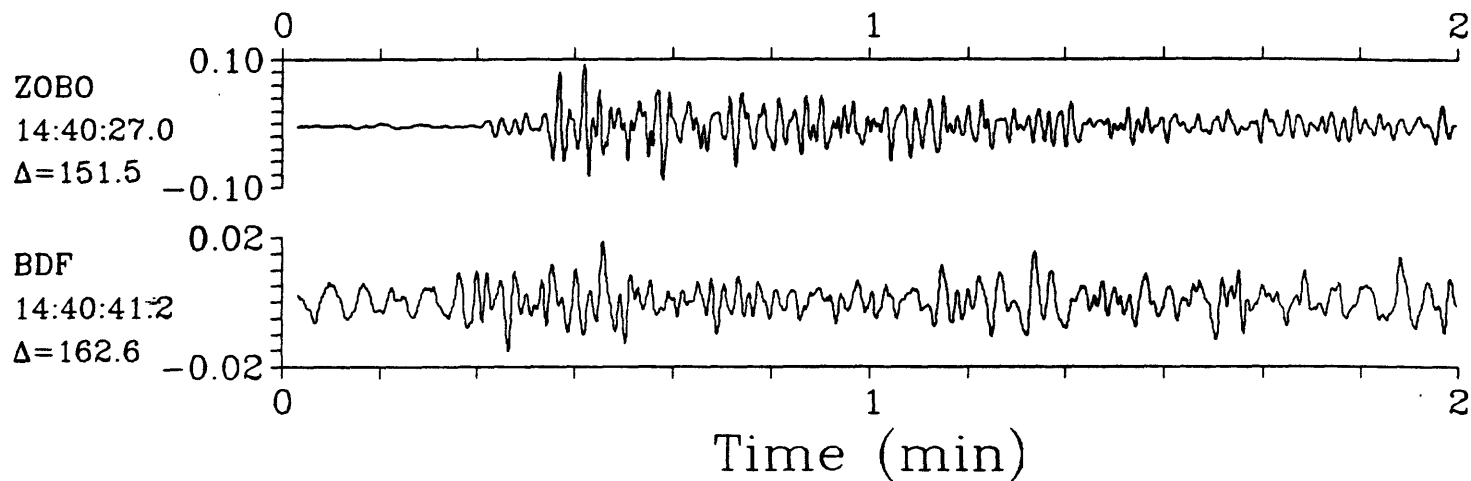
SPZ

West Irian Region $h=10.0$ $m_b=5.5$ $M_{sz}=5.5$ 

SPZ

17 November 1985 14:20:53.62

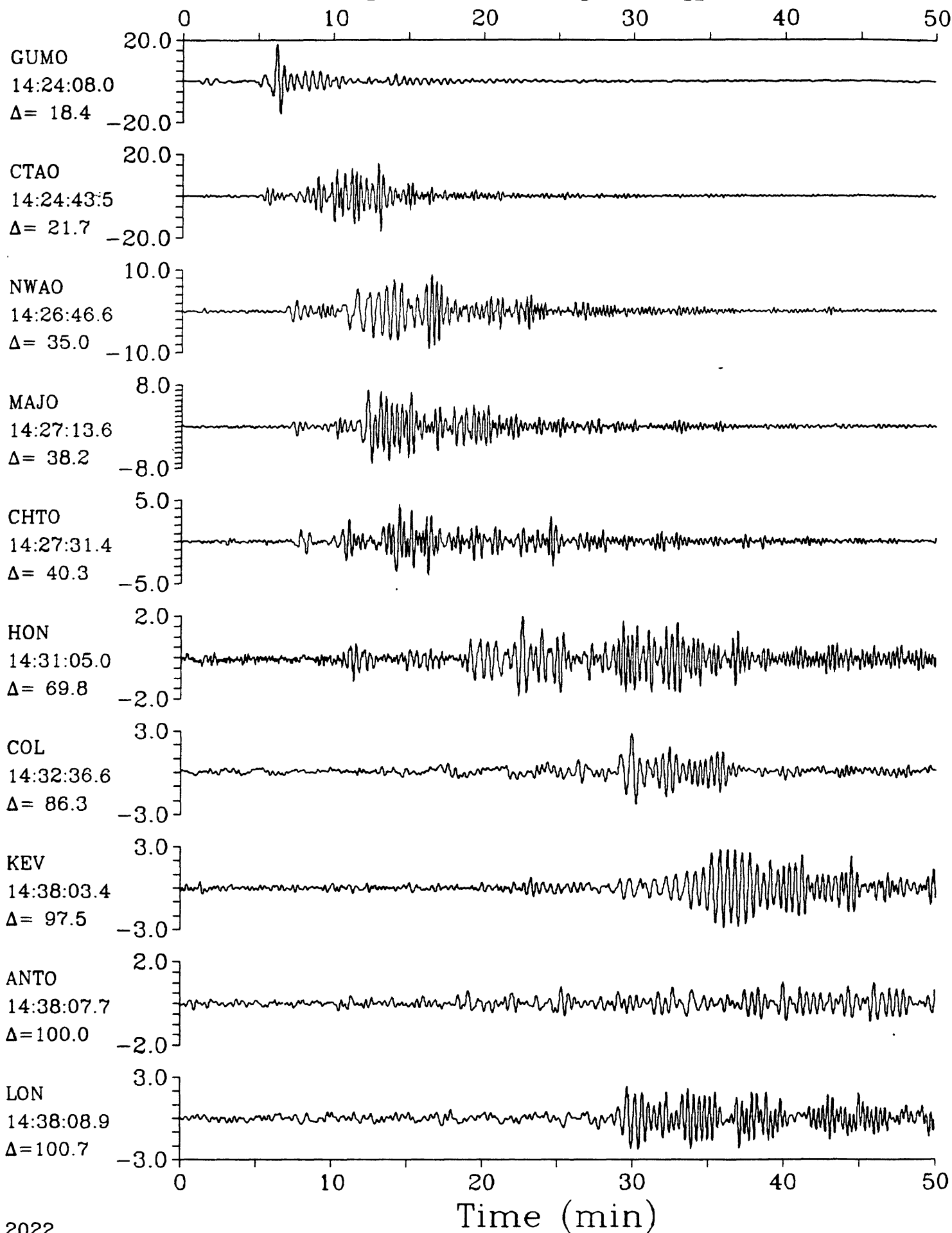
SPZ

West Irian Region $h=10.0$ $m_b=5.5$ $M_{sz}=5.5$ 

LPZ

17 November 1985 14:20:53.62

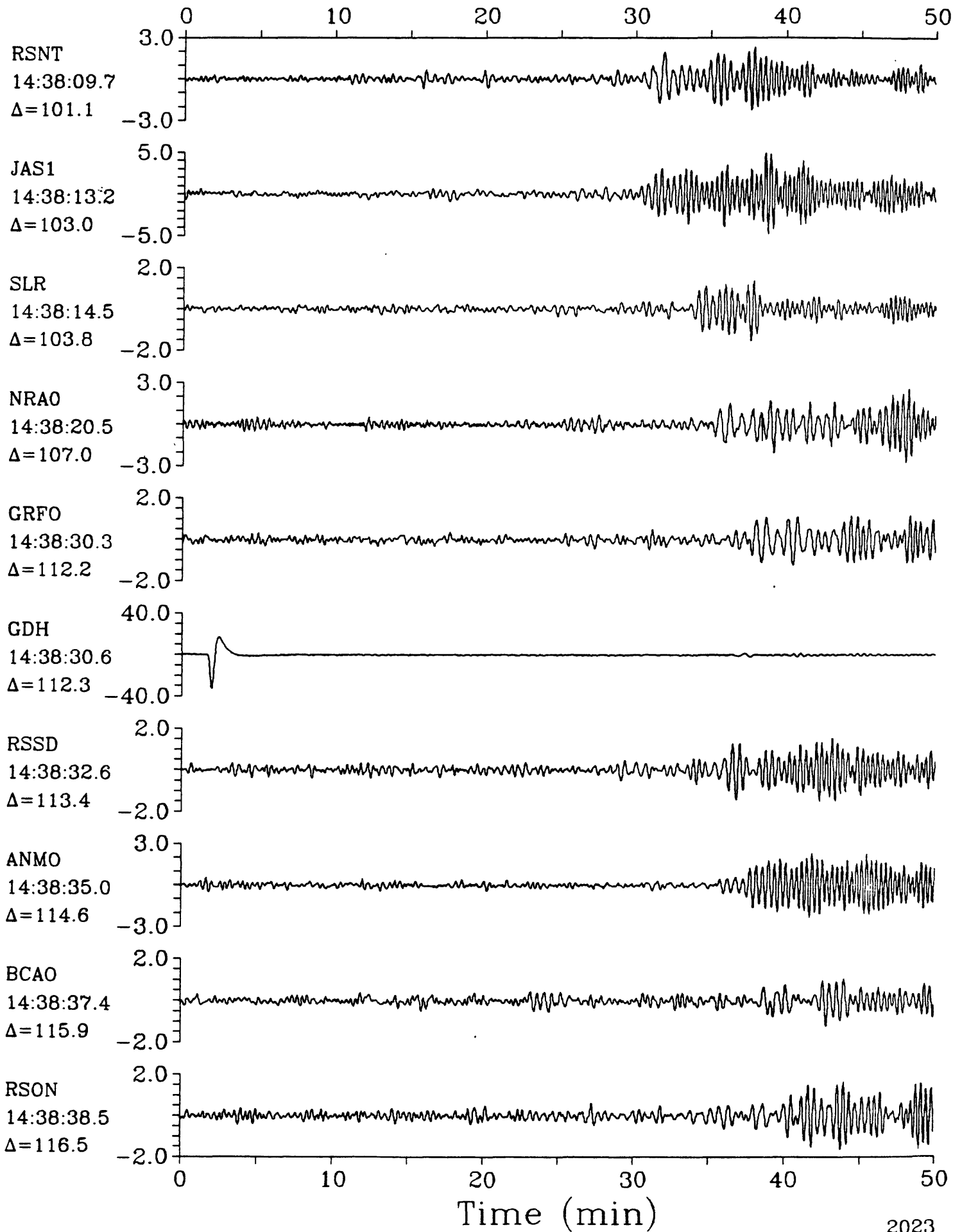
LPZ

West Irian Region $h=10.0$ $m_b=5.5$ $M_{sz}=5.5$ 

LPZ

17 November 1985 14:20:53.62
West Irian Region $h=10.0$ $m_b=5.5$ $M_{sz}=5.5$

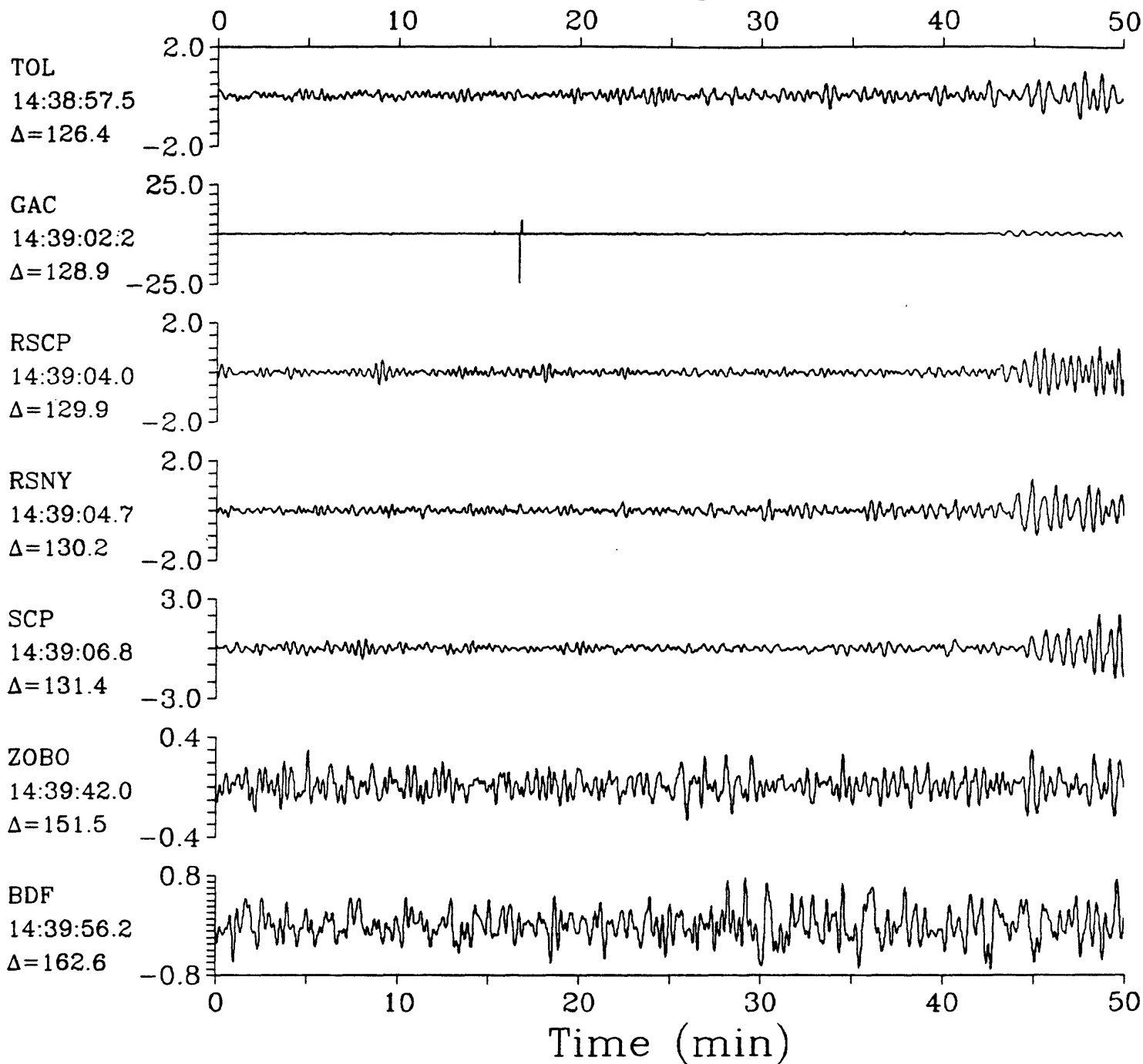
LPZ



LPZ

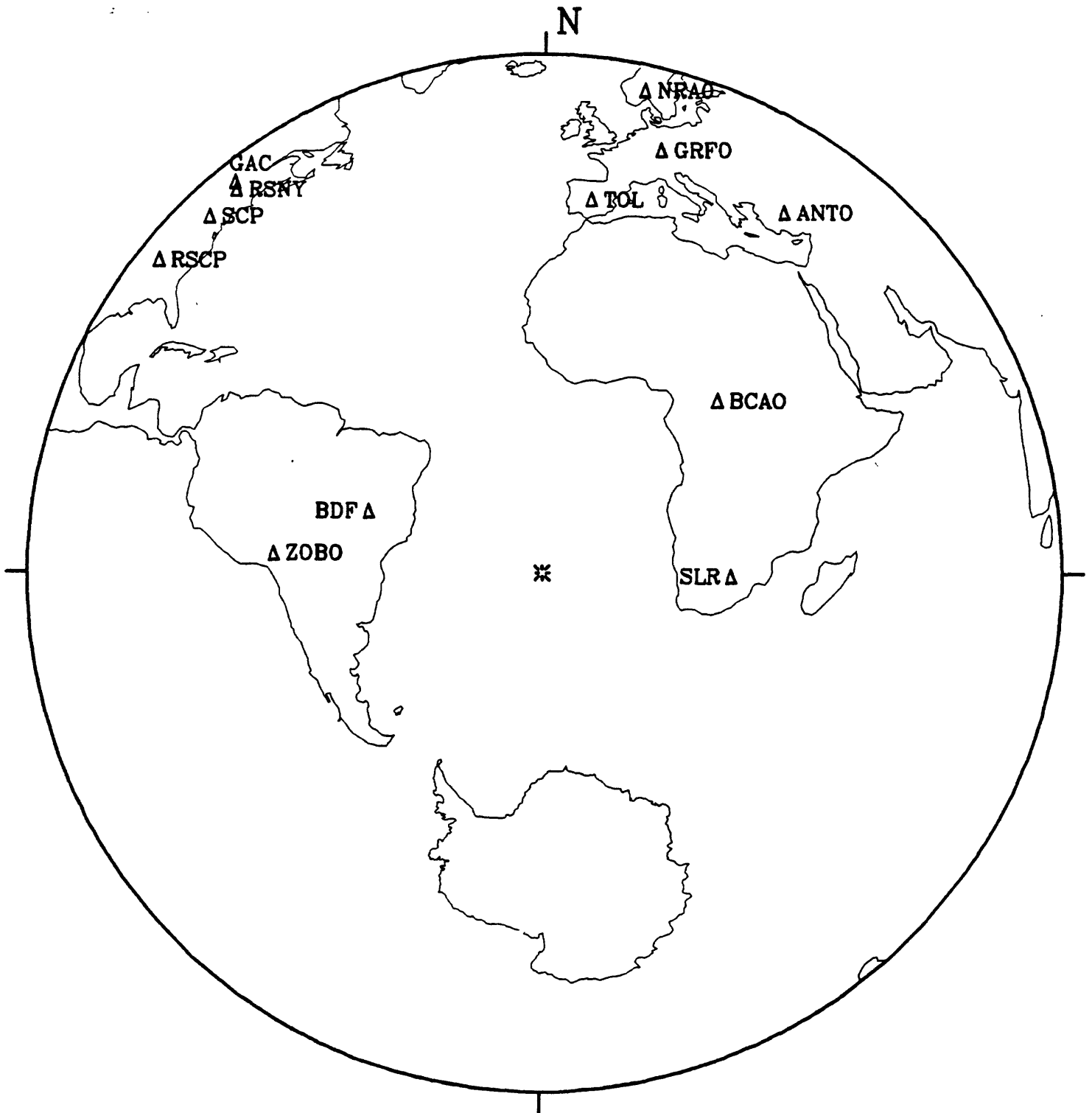
17 November 1985 14:20:53.62

LPZ

West Irian Region $h=10.0$ $m_b=5.5$ $M_{sz}=5.5$ 

18 November 1985 18:18:34.96

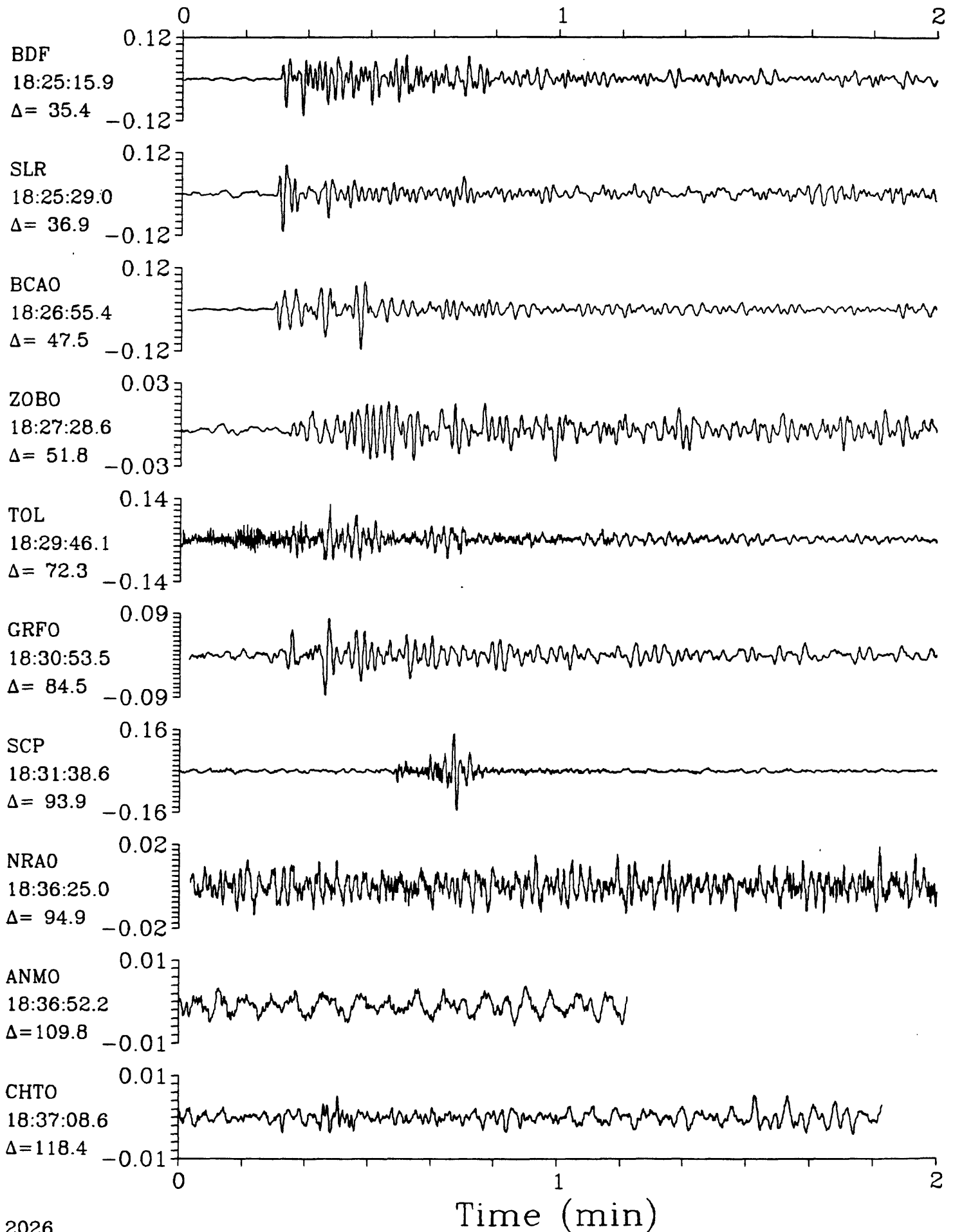
South Atlantic Ridge



SPZ

18 November 1985 18:18:34.96

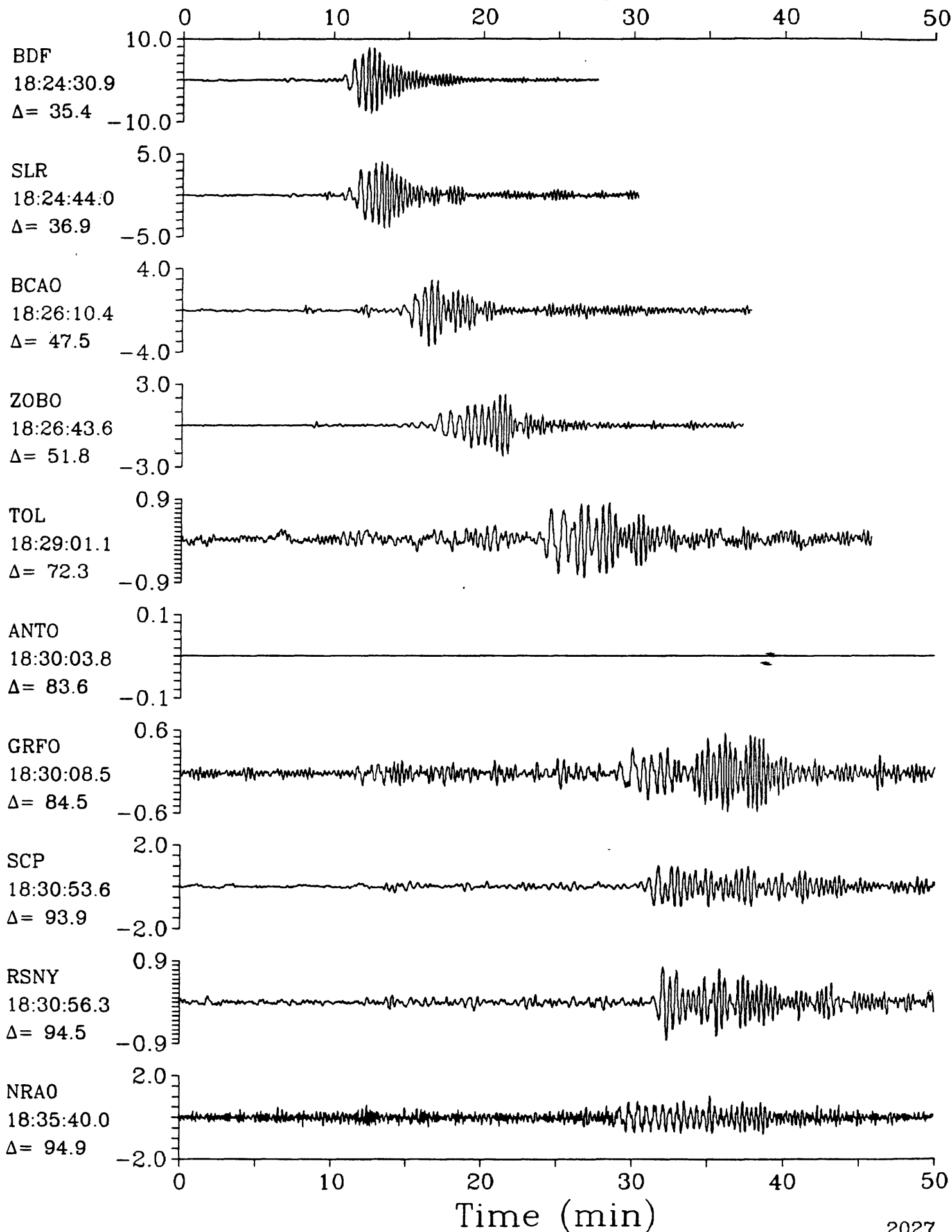
SPZ

South Atlantic Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

18 November 1985 18:18:34.96

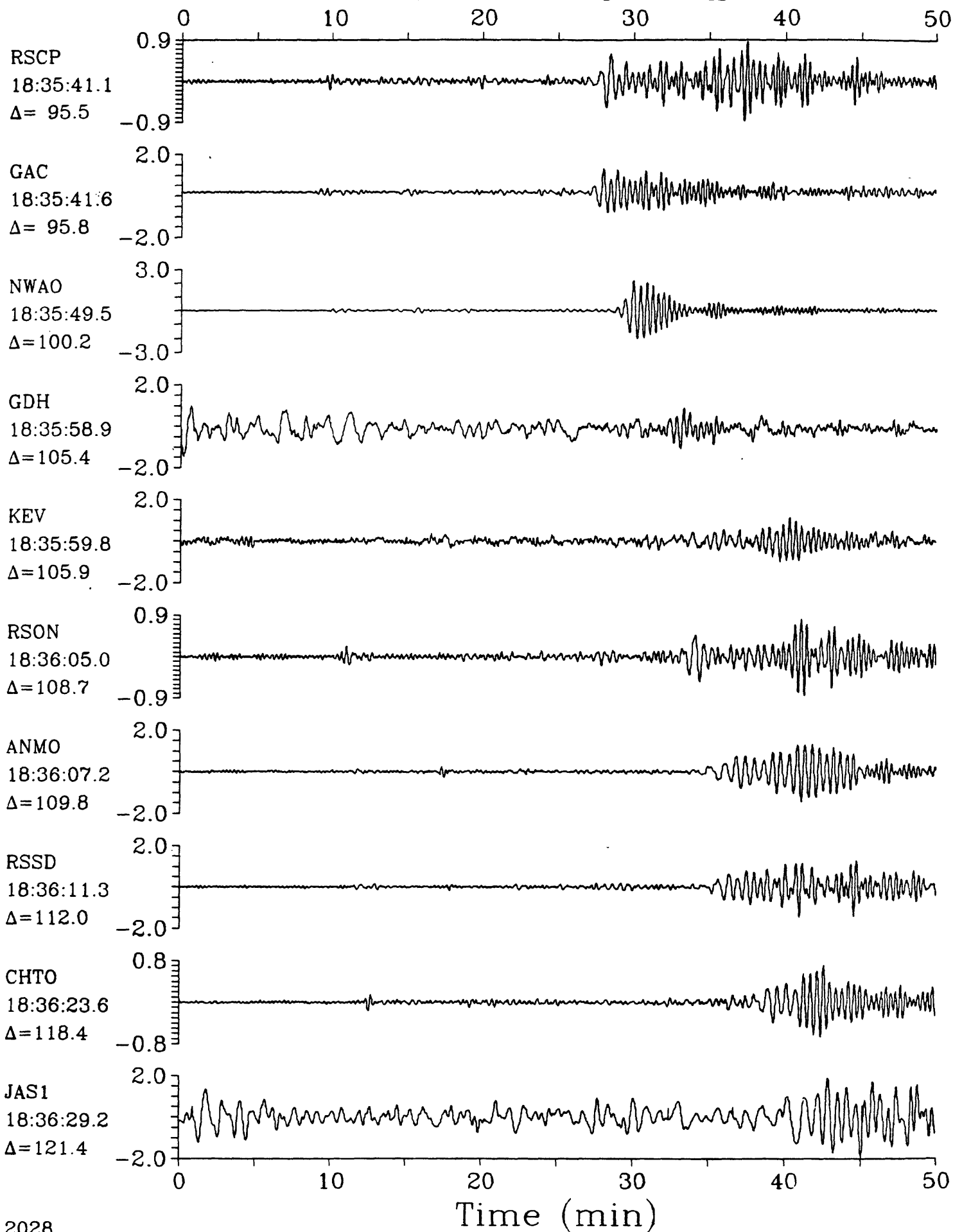
LPZ

South Atlantic Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

18 November 1985 18:18:34.96

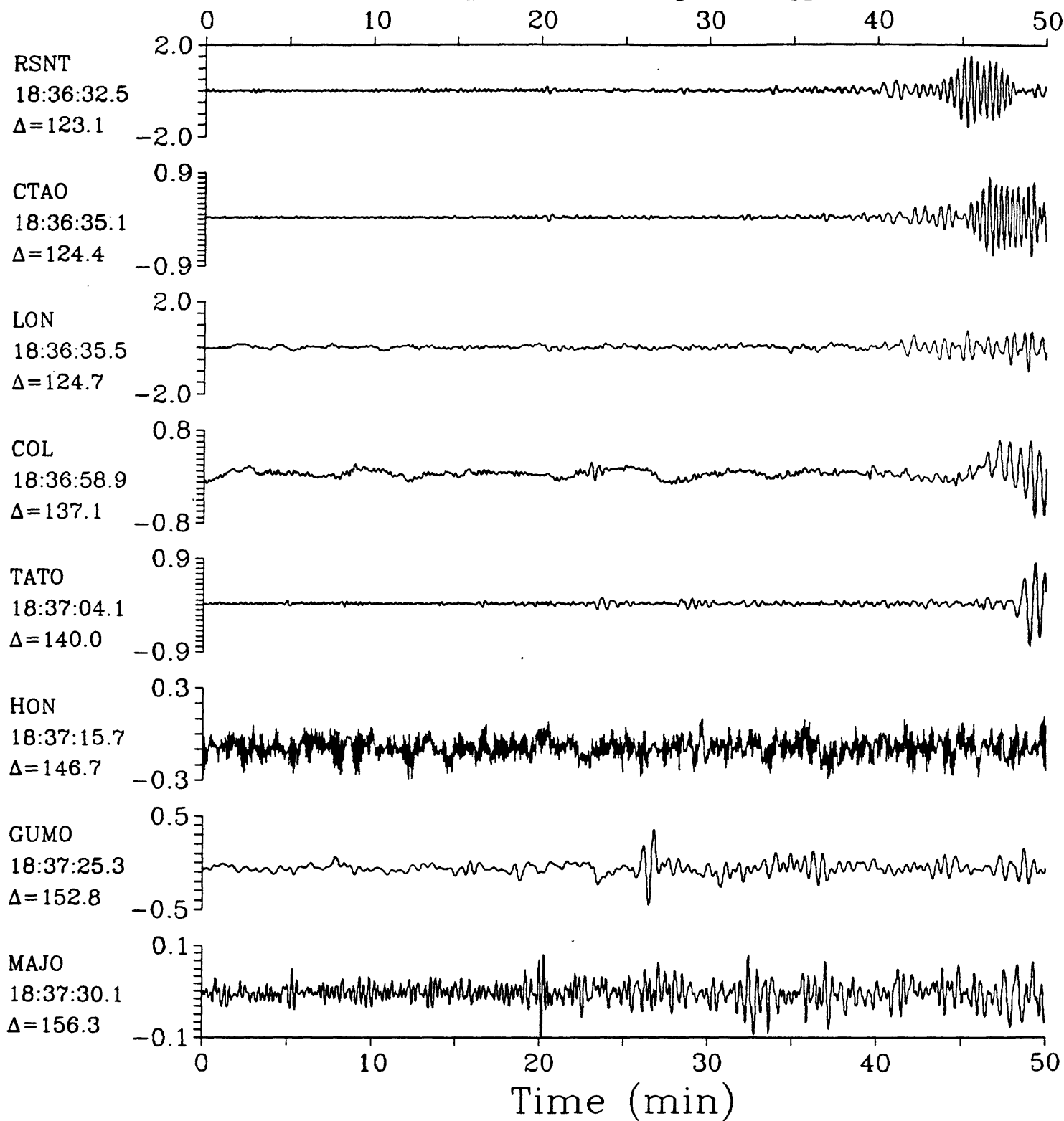
LPZ

South Atlantic Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

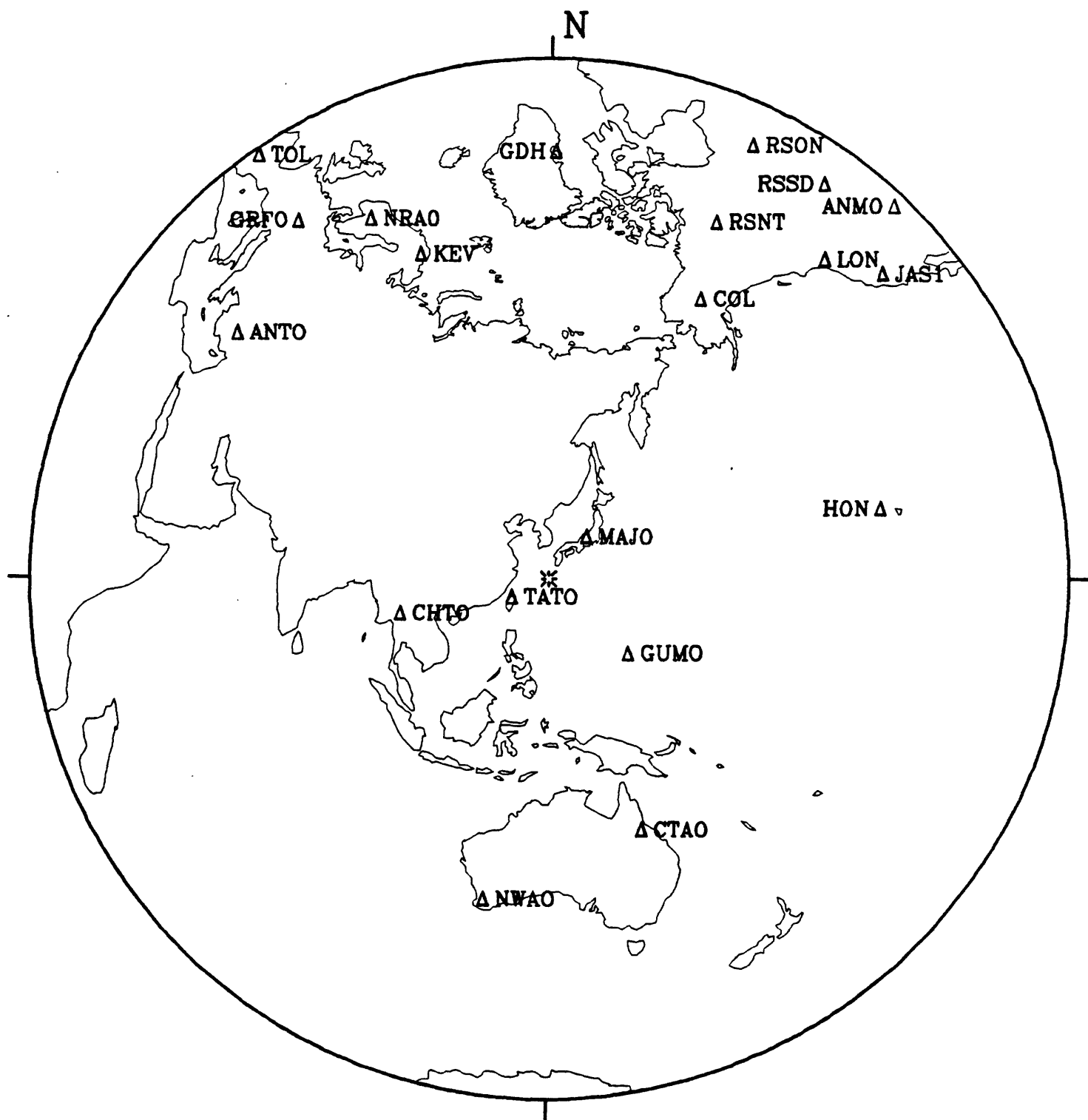
18 November 1985 18:18:34.96

LPZ

South Atlantic Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$ 

19 November 1985 14:03:35.17

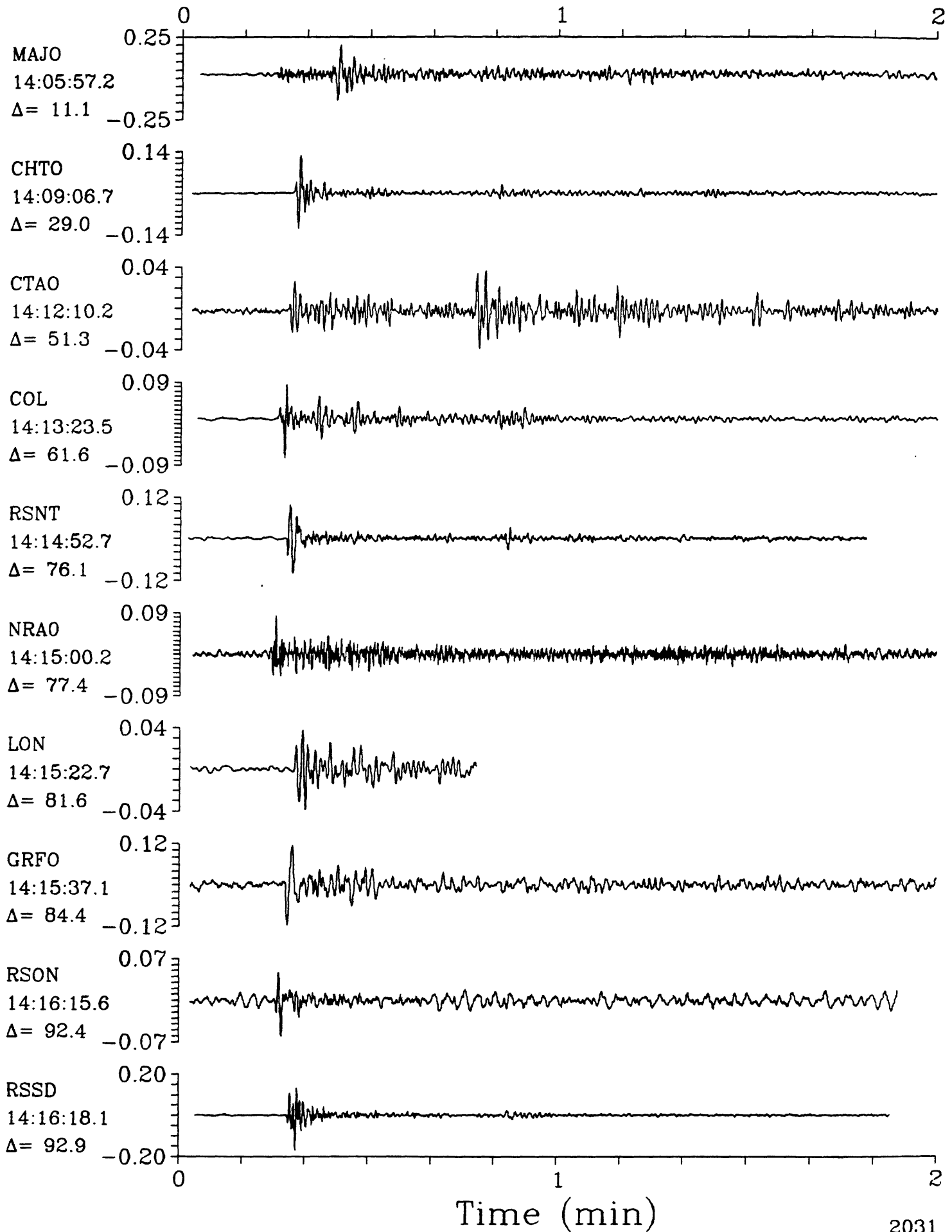
Ryukyu Islands



SPZ

19 November 1985 14:03:35.17
Ryukyu Islands $h=140.6$ $m_b=5.5$

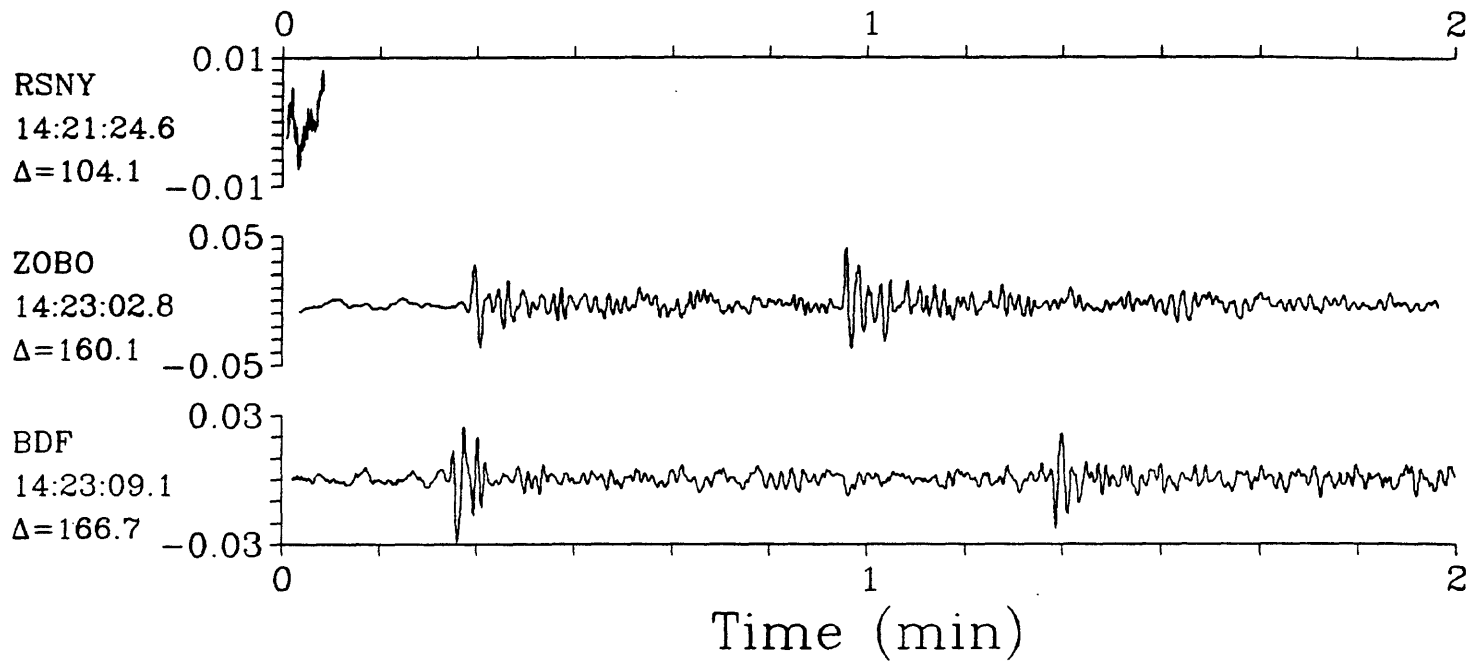
SPZ



SPZ

19 November 1985 14:03:35.17
Ryukyu Islands $h=140.6$ $m_b=5.5$

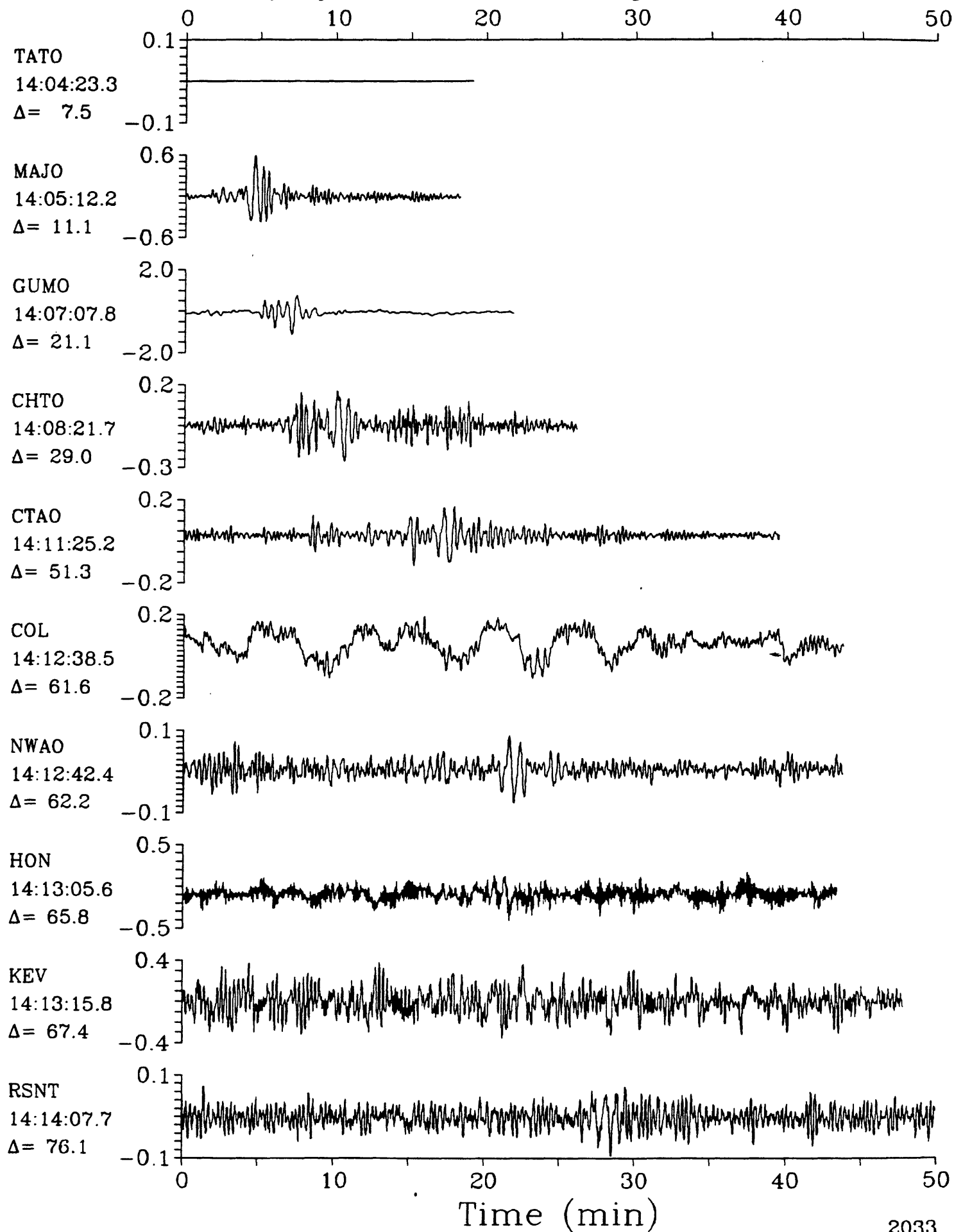
SPZ



LPZ

19 November 1985 14:03:35.17
Ryukyu Islands $h=140.6$ $m_b=5.5$

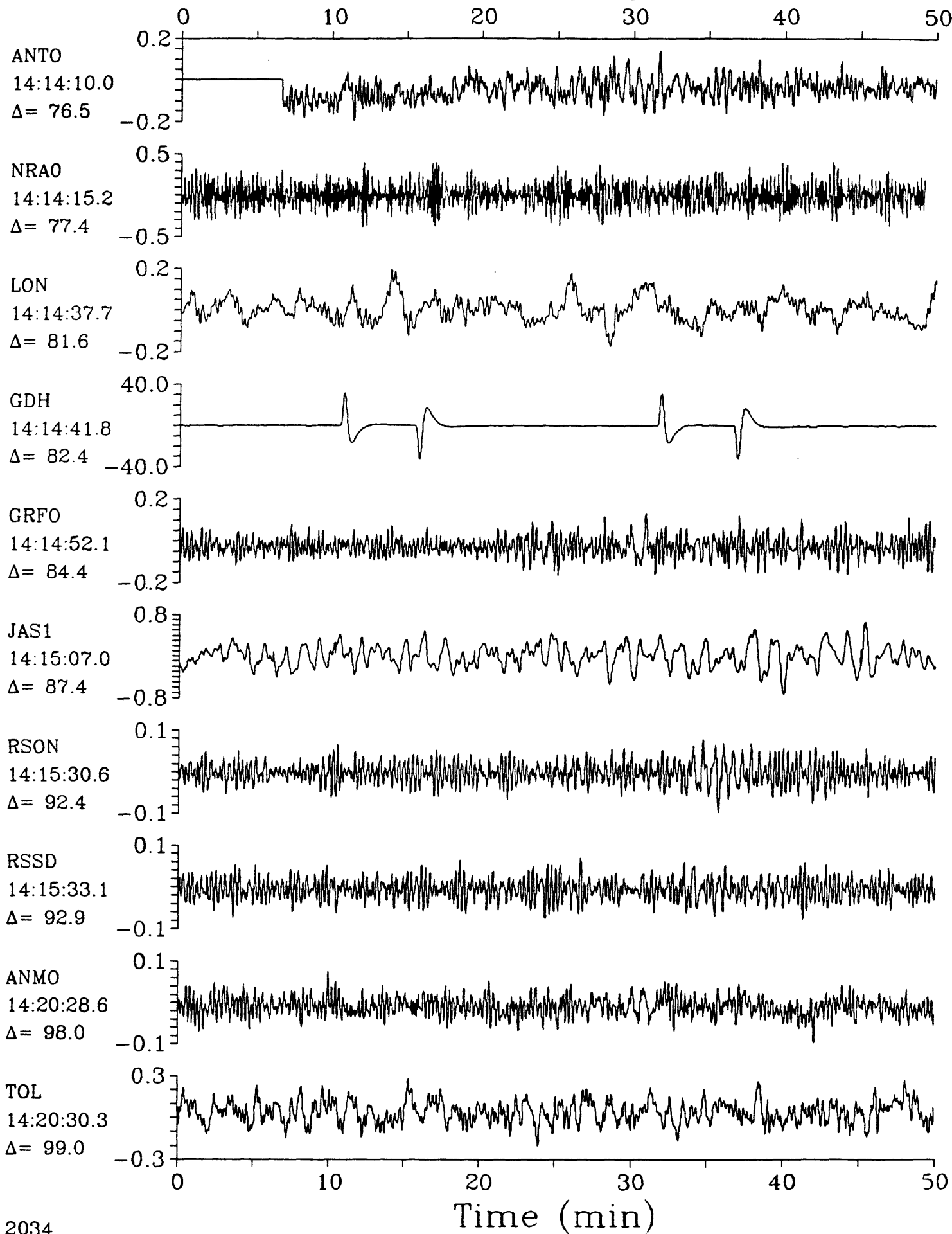
LPZ



LPZ

19 November 1985 14:03:35.17
Ryukyu Islands $h=140.6$ $m_b=5.5$

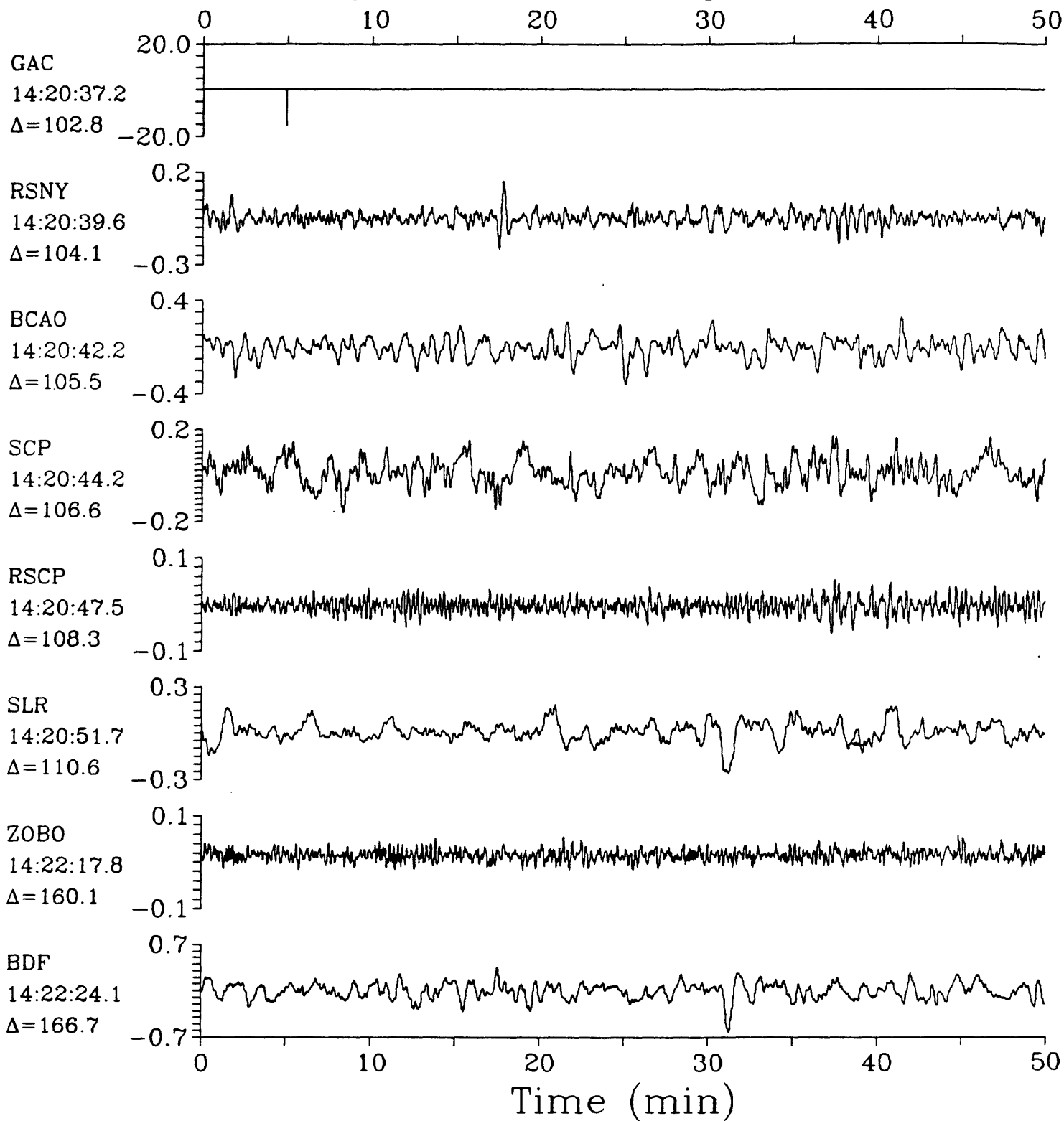
LPZ



LPZ

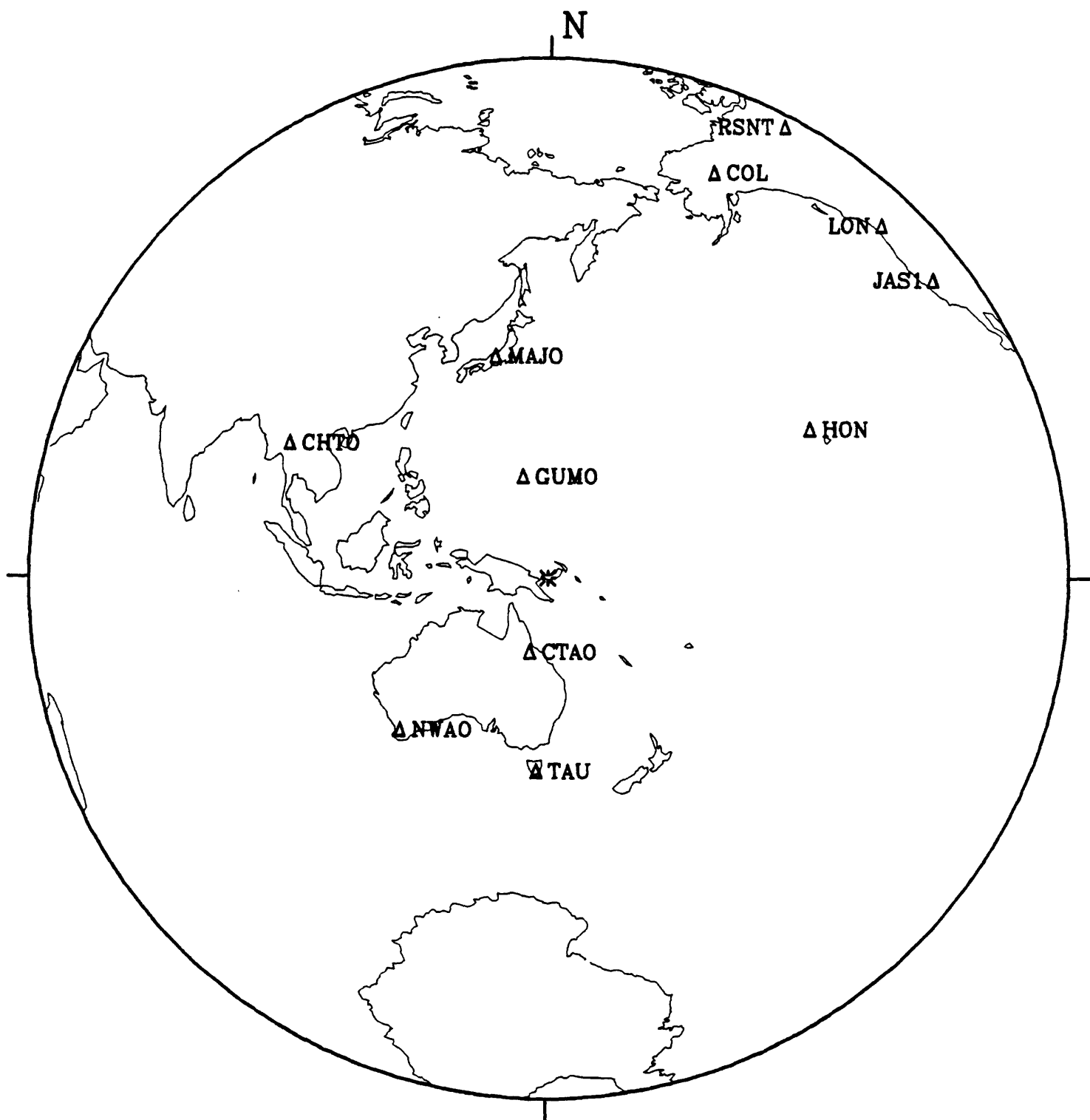
19 November 1985 14:03:35.17
Ryukyu Islands $h=140.6$ $m_b=5.5$

LPZ



22 November 1985 08:45:25.51

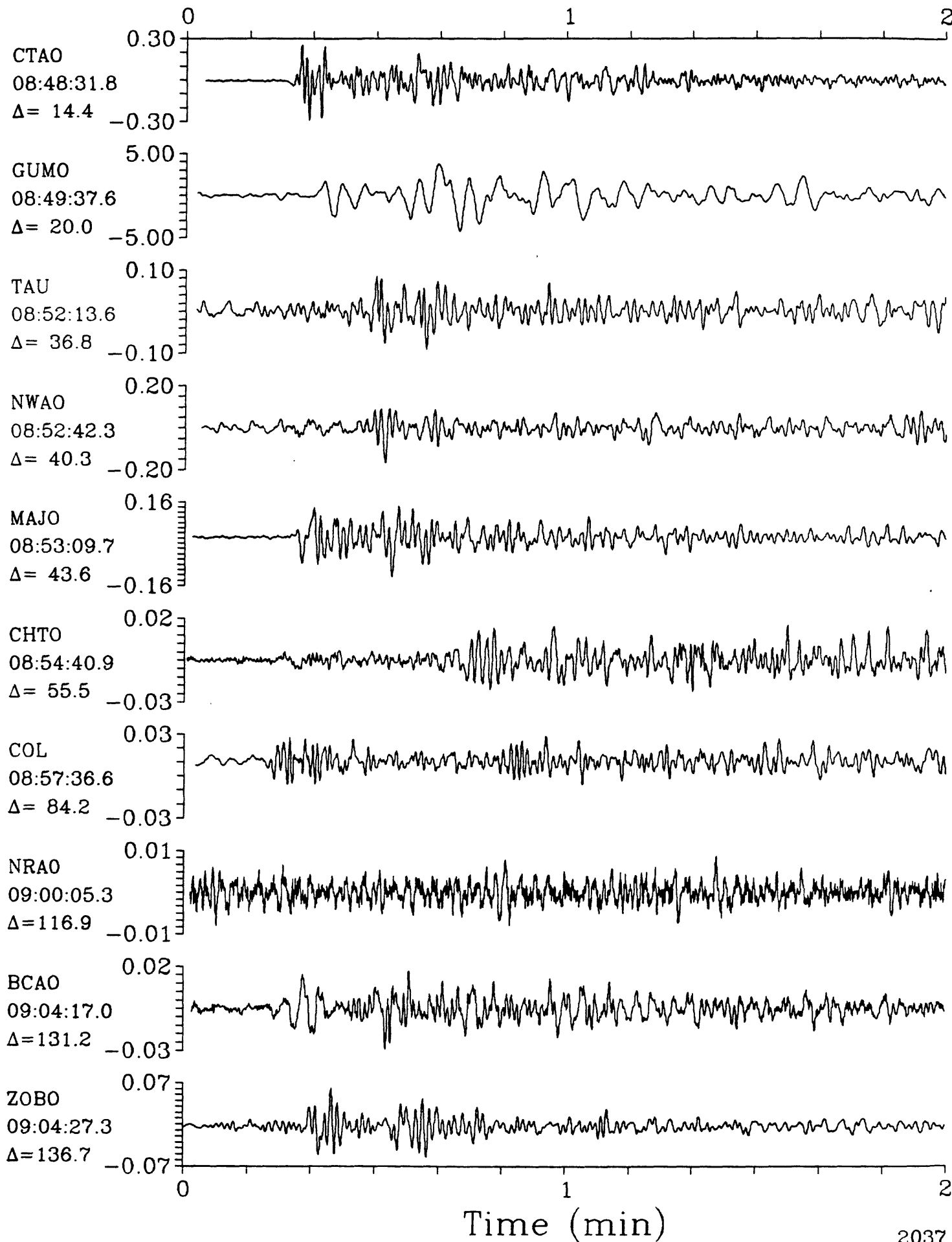
New Britain Region



SPZ

22 November 1985 08:45:25.51

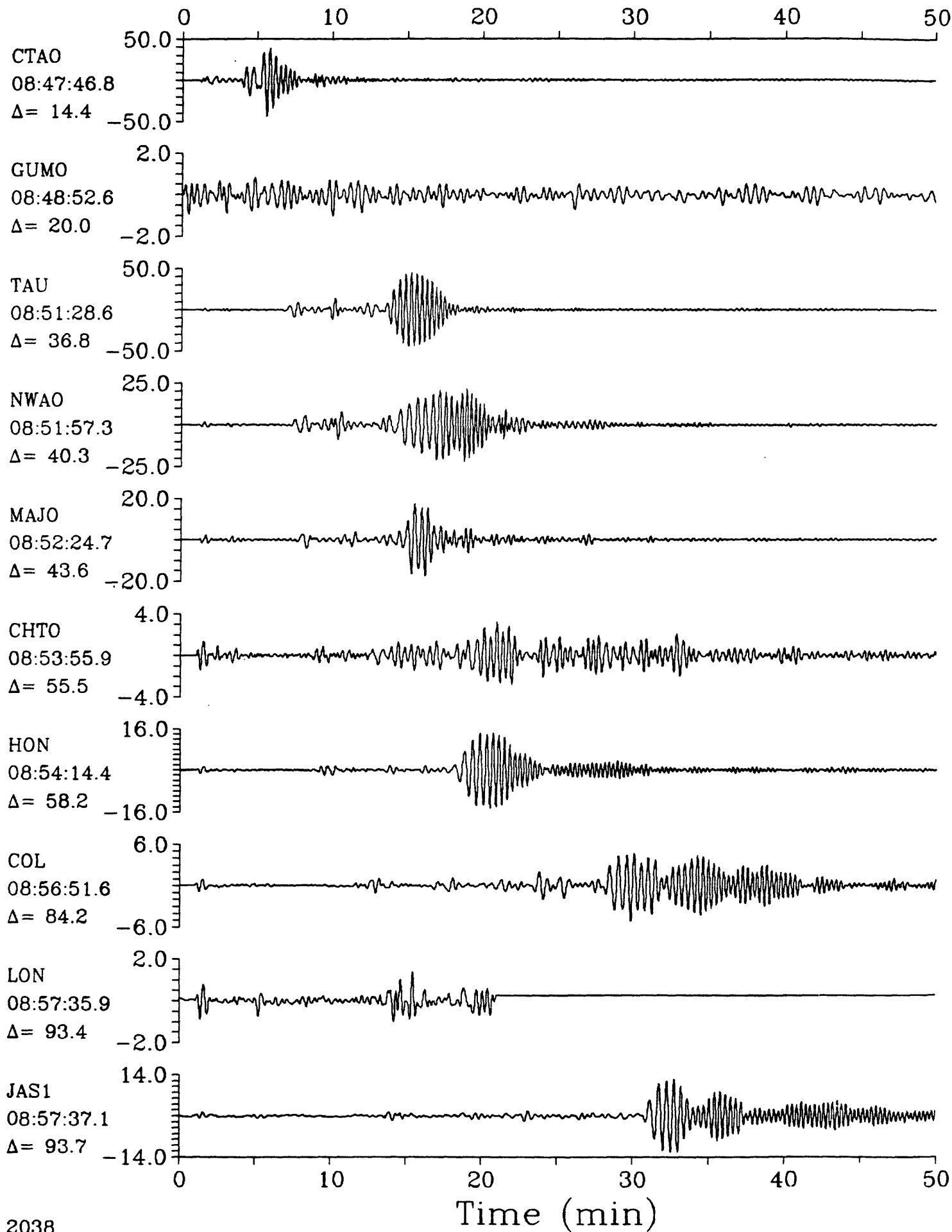
SPZ

New Britain Region $h=53.7$ $m_b=5.4$ $M_{sz}=6.0$ 

LPZ

22 November 1985 08:45:25.51

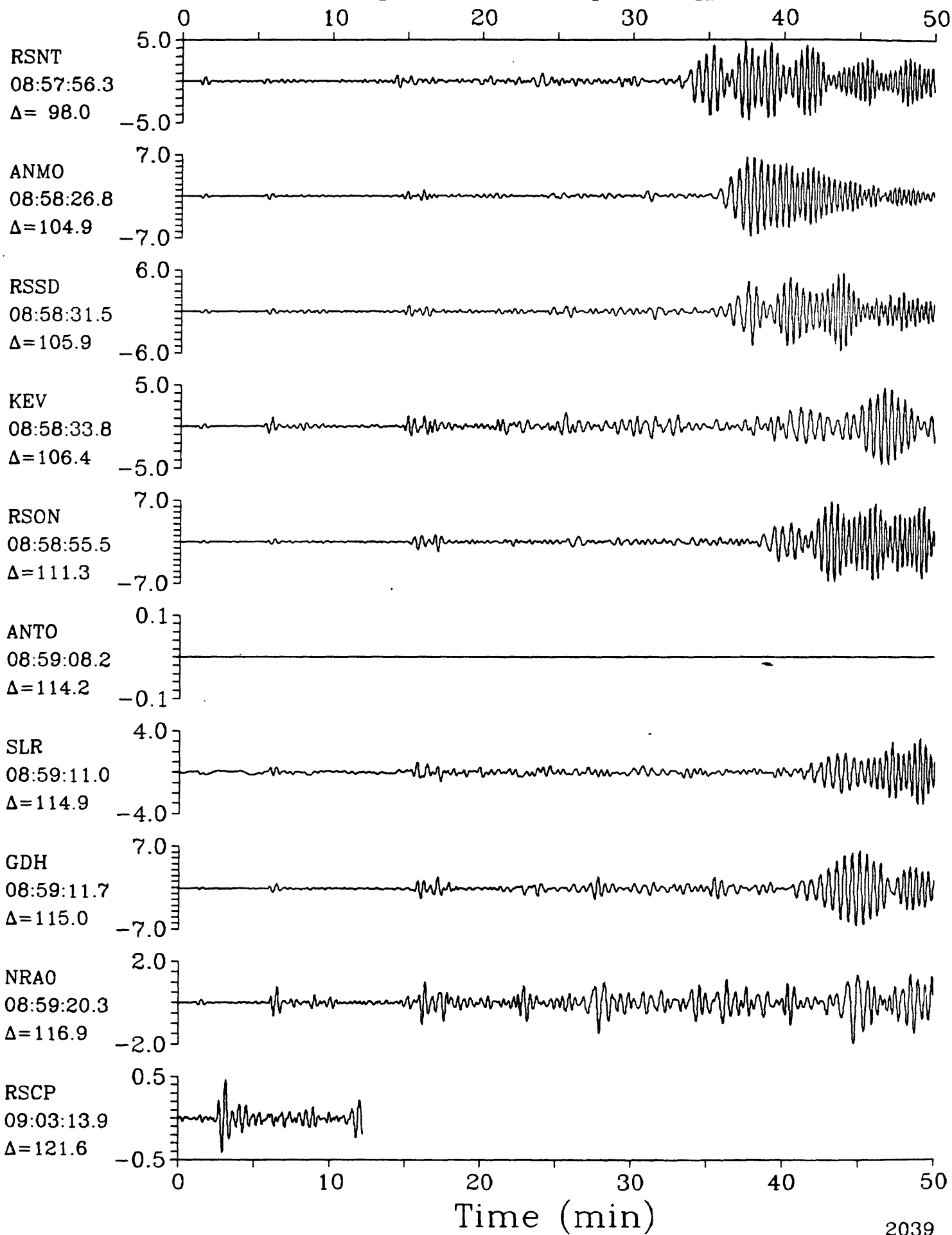
LPZ

New Britain Region $h=53.7$ $m_b=5.4$ $M_{sz}=6.0$ 

LPZ

22 November 1985 08:45:25.51

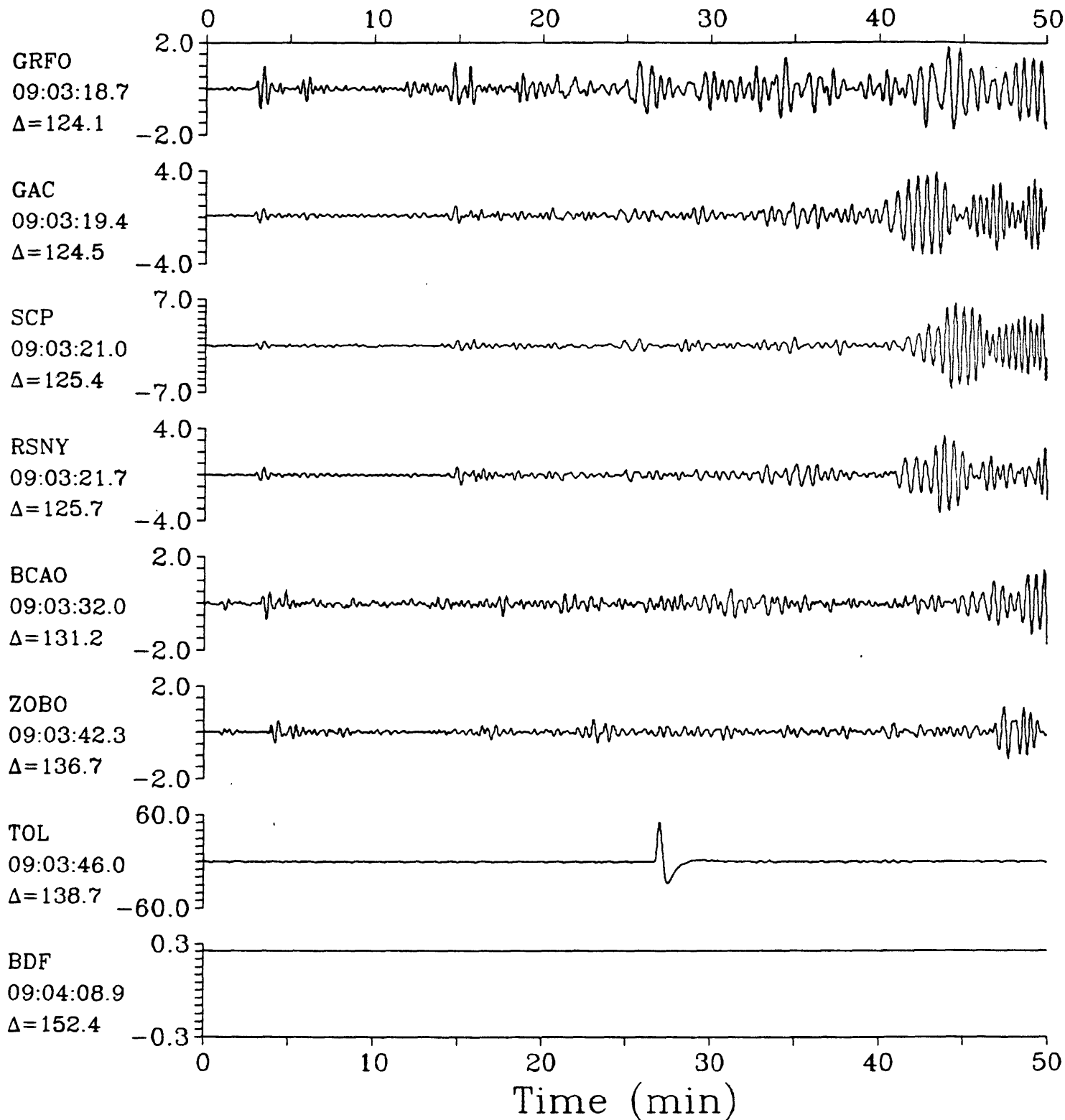
LPZ

New Britain Region $h=53.7$ $m_b=5.4$ $M_{sz}=6.0$ 

LPZ

22 November 1985 08:45:25.51

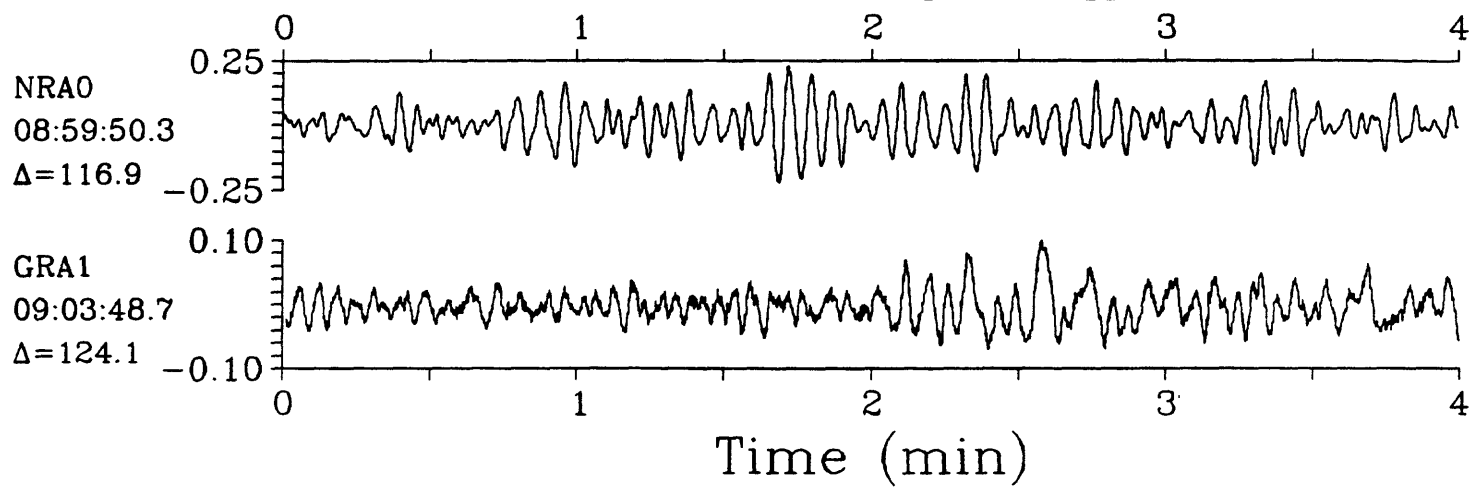
LPZ

New Britain Region $h=53.7$ $m_b=5.4$ $M_{sz}=6.0$ 

IPZ

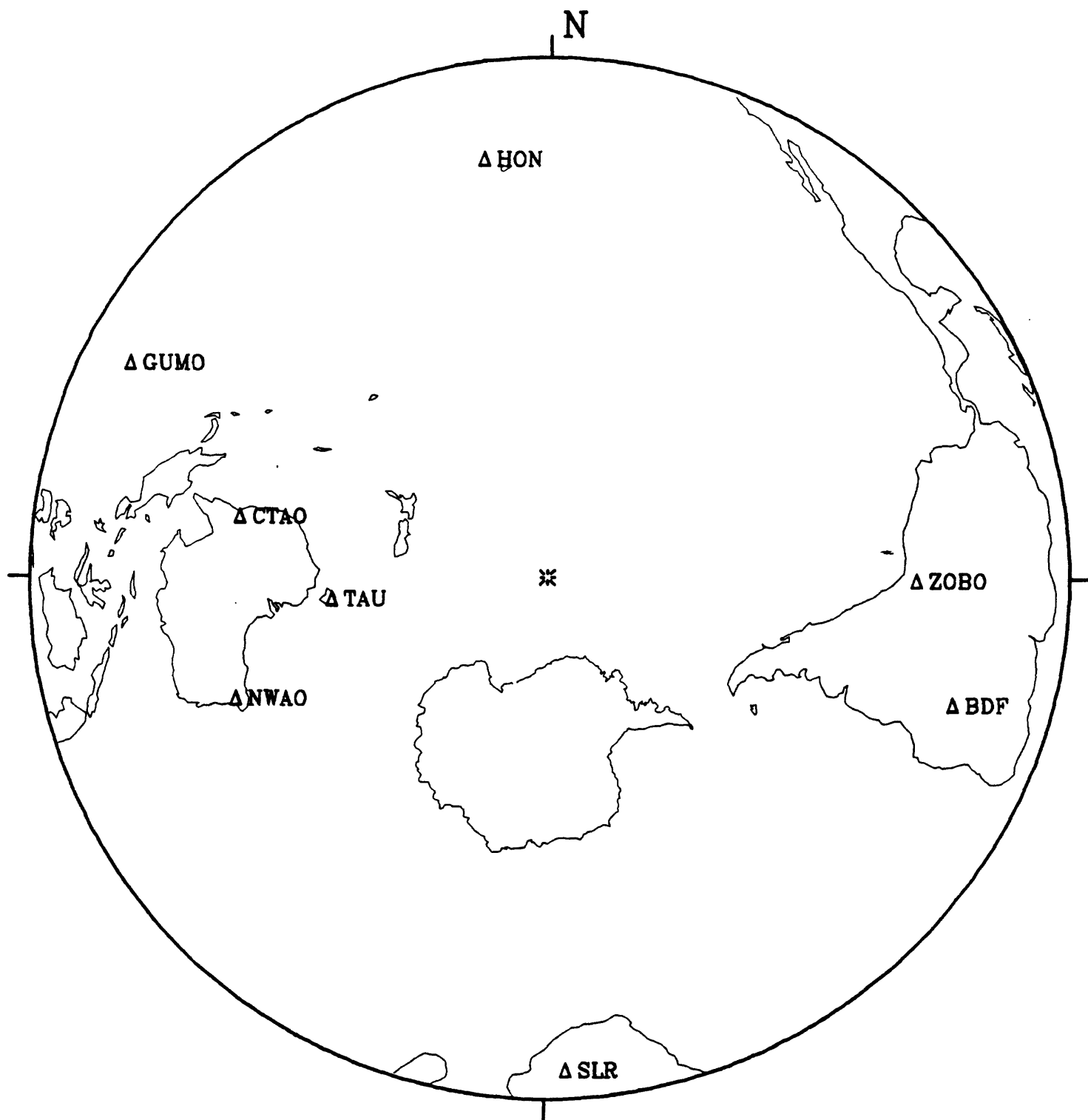
22 November 1985 08:45:25.51

IPZ

New Britain Region $h=53.7$ $m_b=5.4$ $M_{sz}=6.0$ 

23 November 1985 12:45:06.35

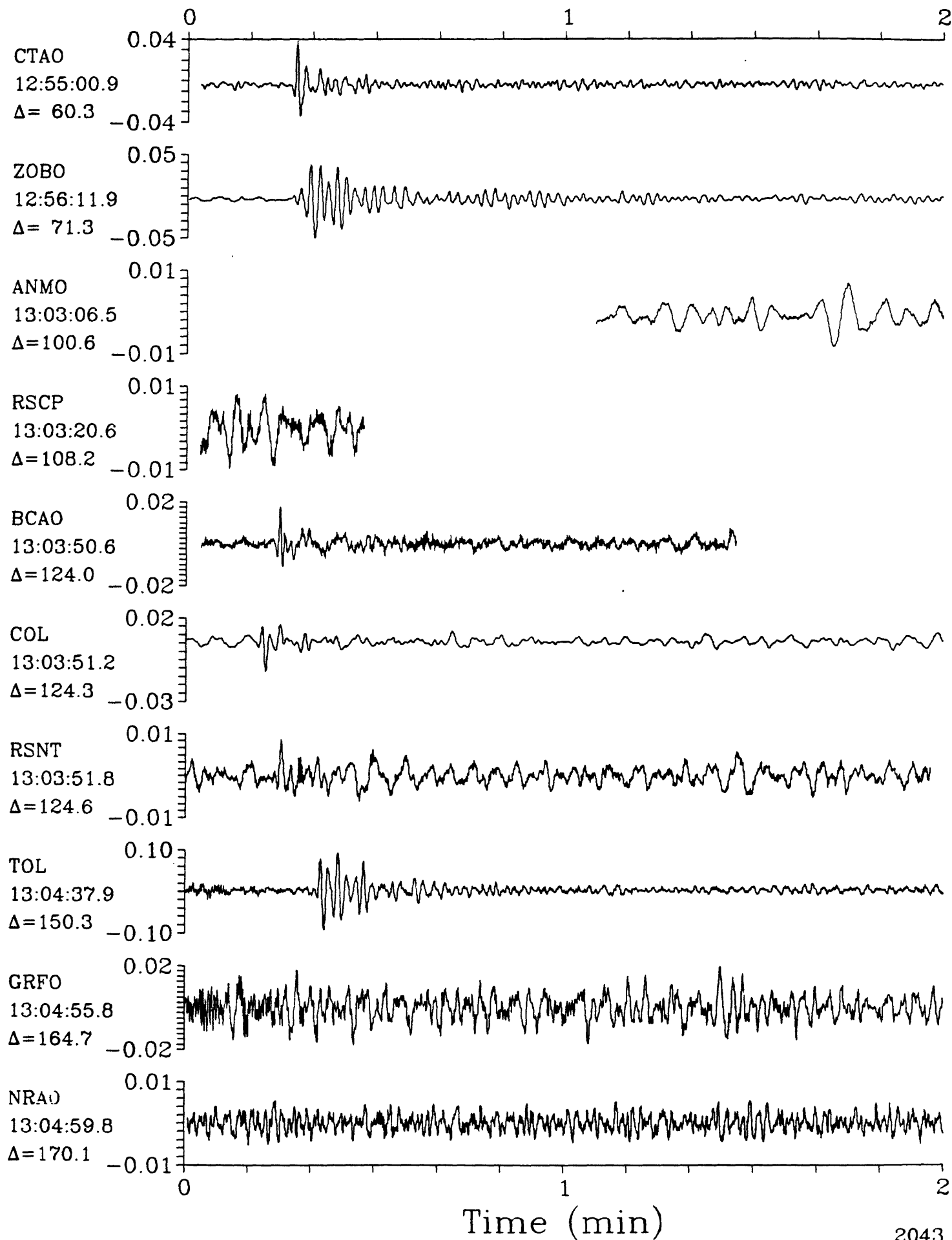
South Pacific Cordillera



SPZ

23 November 1985 12:45:06.35

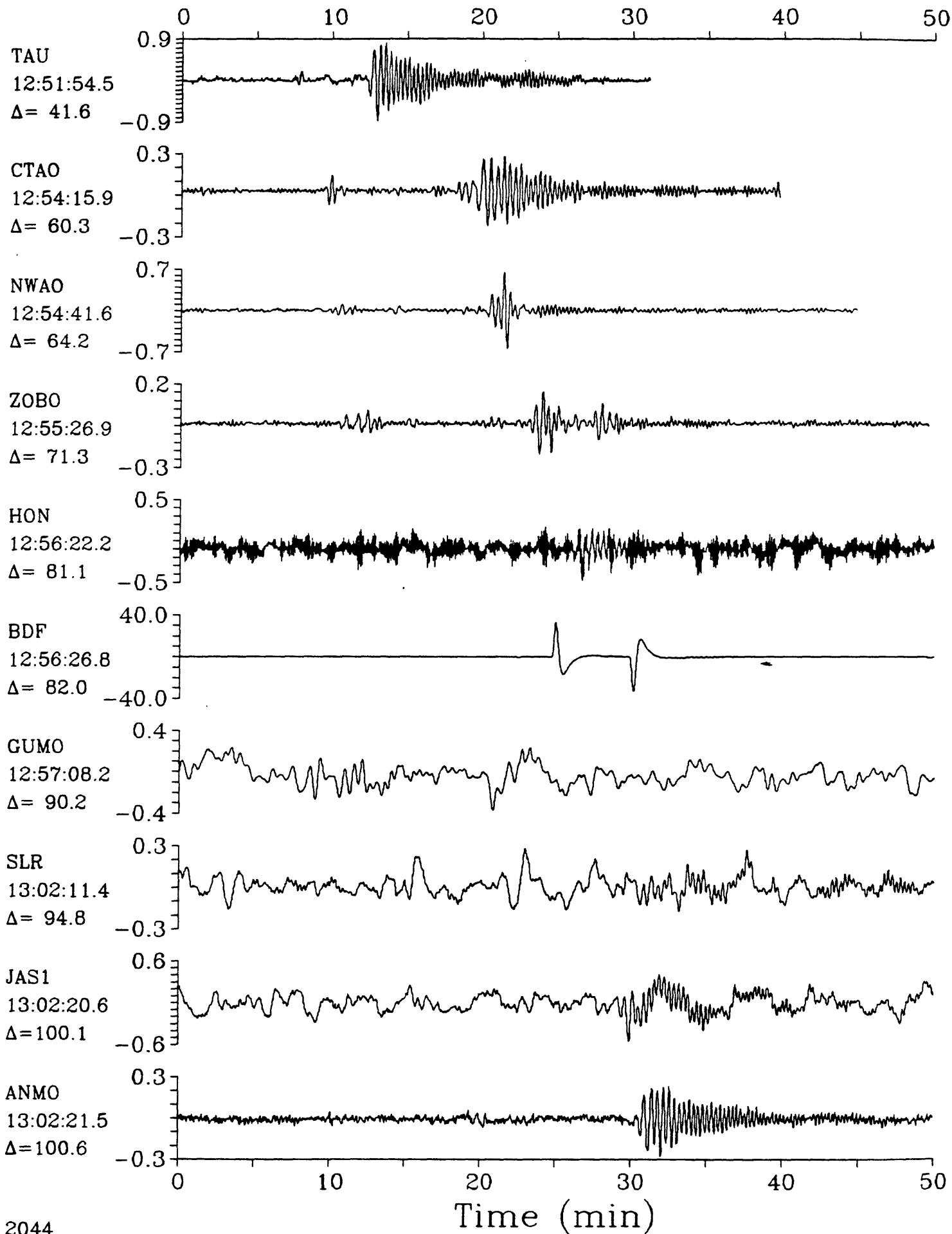
SPZ

South Pacific Cordillera $h=10.0$ $m_b=5.6$ $M_{sz}=4.6$ 

LPZ

23 November 1985 12:45:06.35

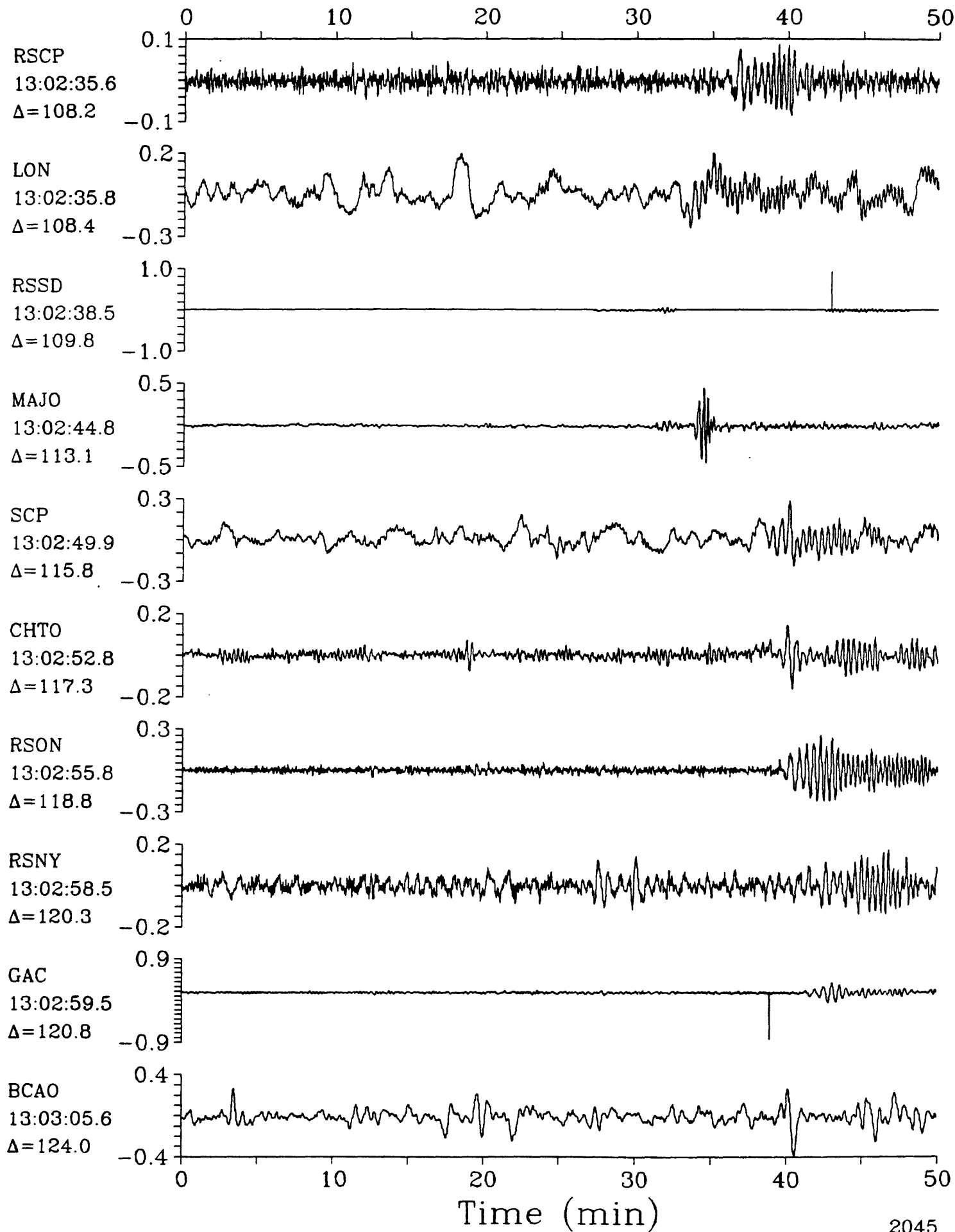
LPZ

South Pacific Cordillera $h=10.0$ $m_b=5.6$ $M_{sz}=4.6$ 

LPZ

23 November 1985 12:45:06.35

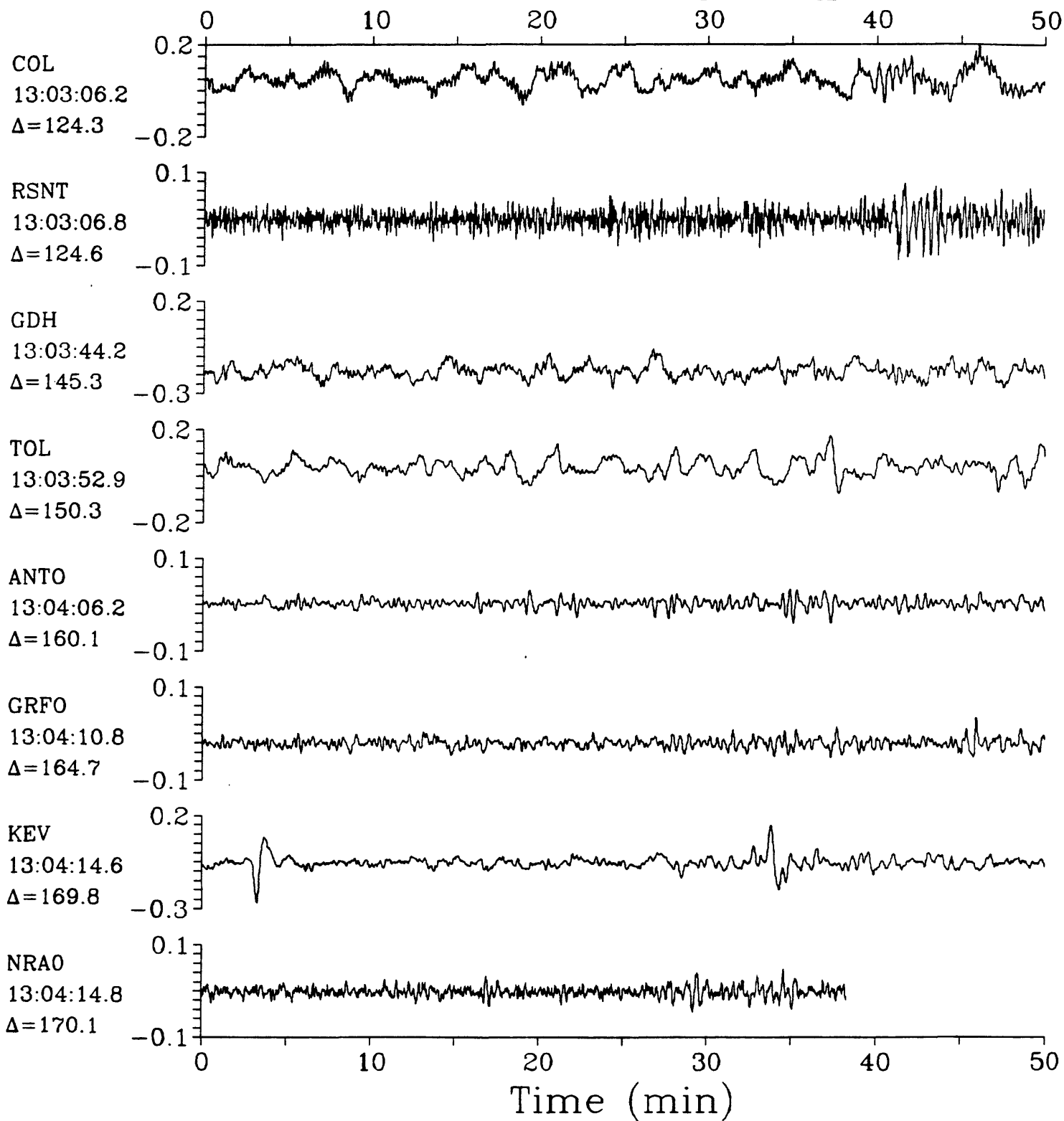
LPZ

South Pacific Cordillera $h=10.0$ $m_b=5.6$ $M_{sz}=4.6$ 

LPZ

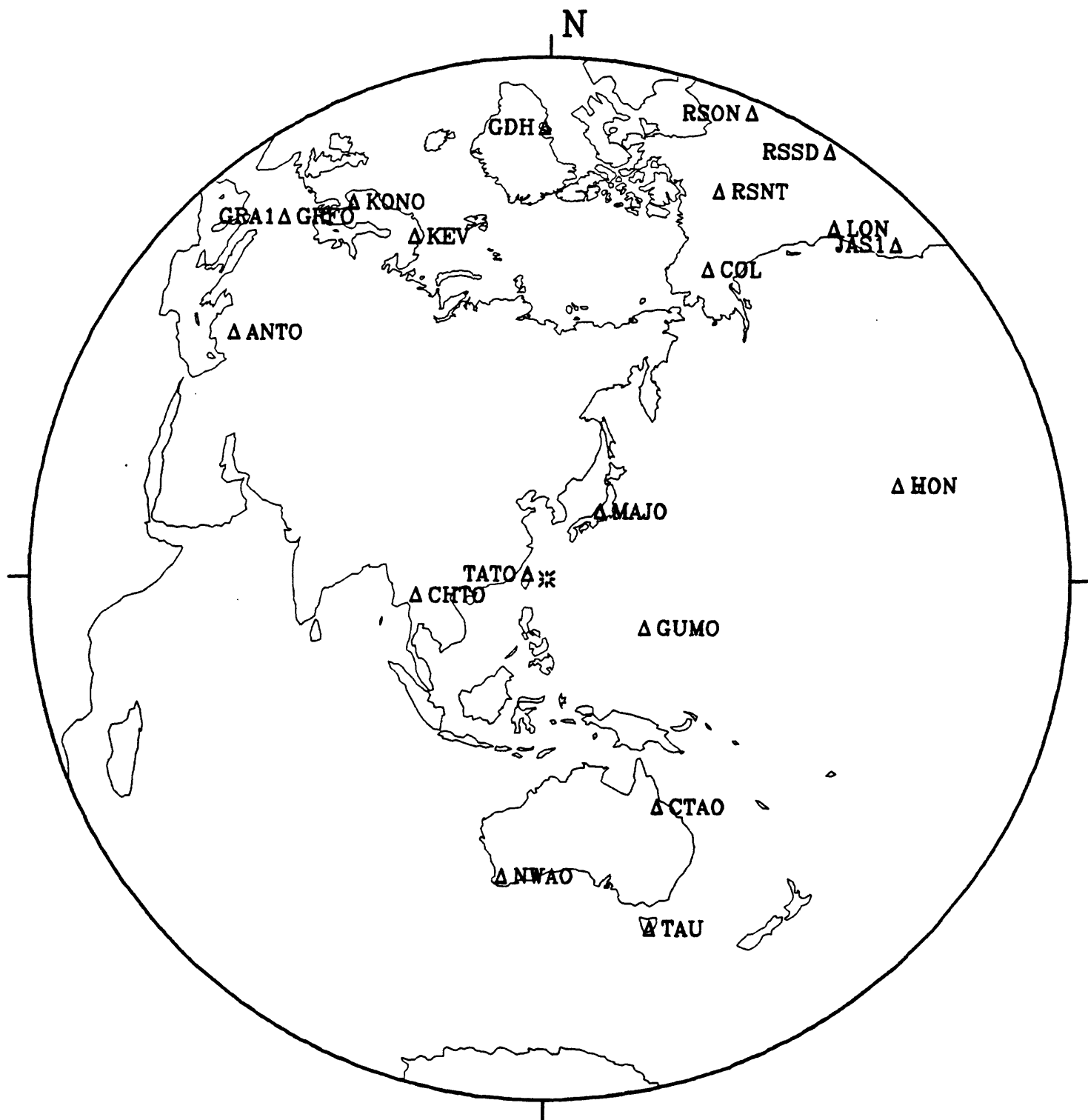
23 November 1985 12:45:06.35

LPZ

South Pacific Cordillera $h=10.0$ $m_b=5.6$ $M_{sz}=4.6$ 

26 November 1985 10:05:05.36

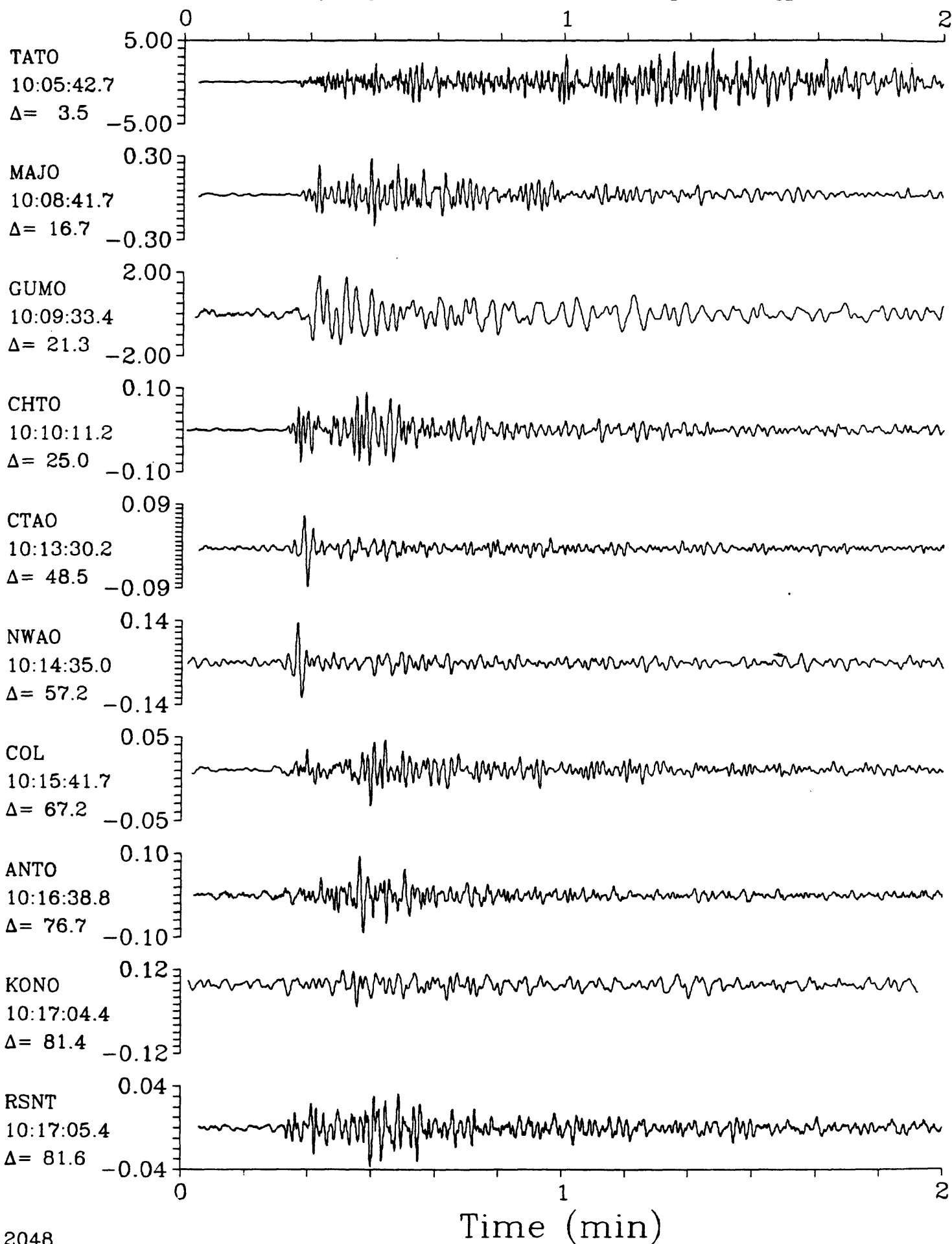
Southwestern Ryukyu Islands



SPZ

26 November 1985 10:05:05.36

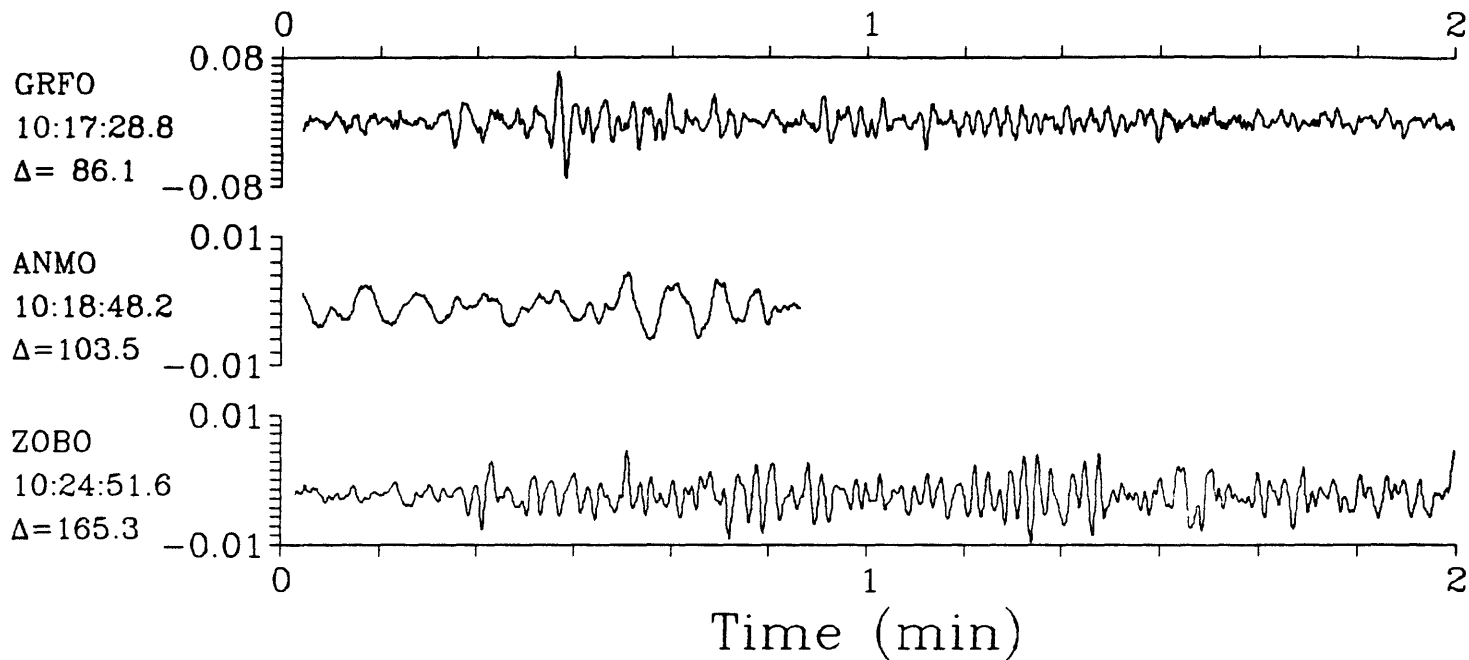
SPZ

Southwestern Ryukyu Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.9$ 

SPZ

26 November 1985 10:05:05.36

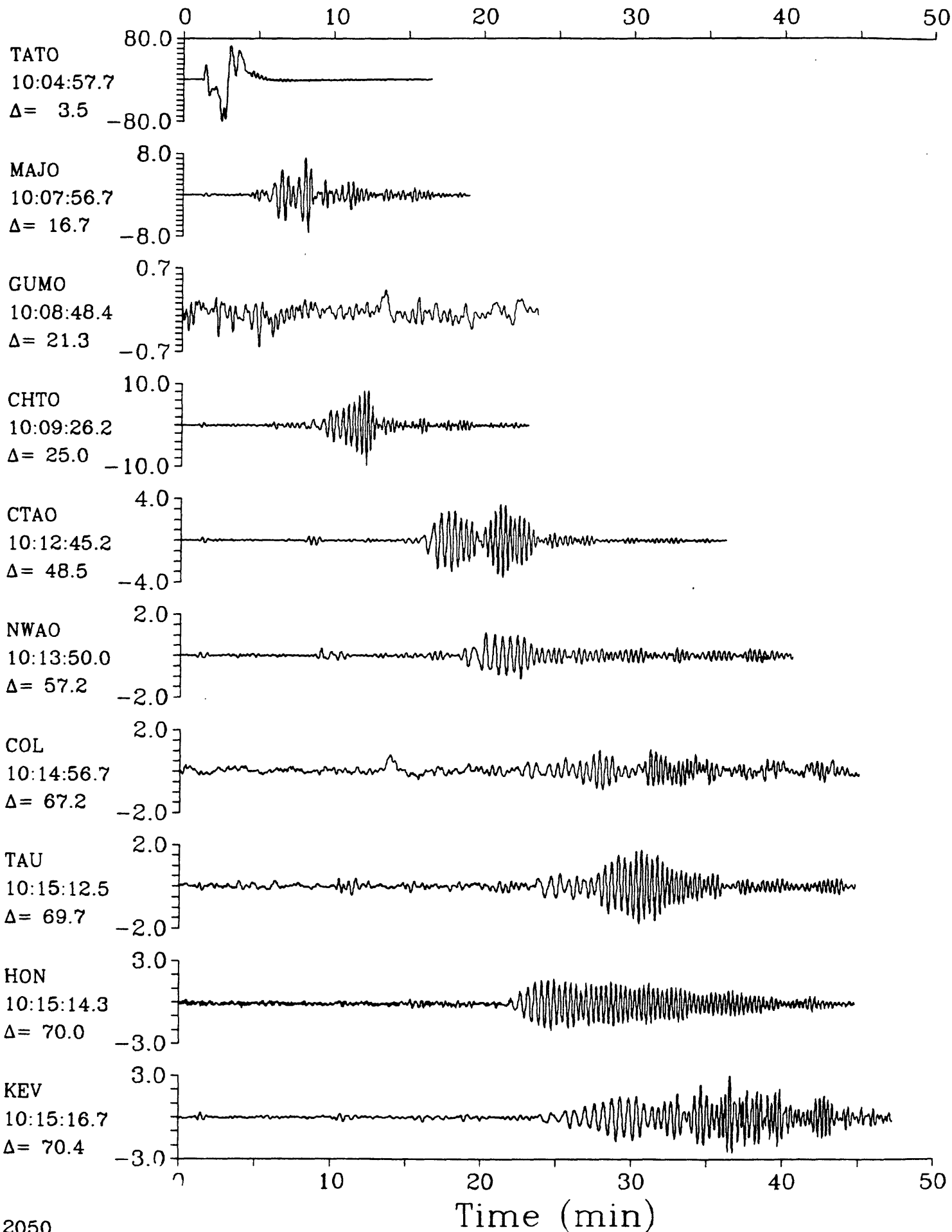
SPZ

Southwestern Ryukyu Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.9$ 

LPZ

26 November 1985 10:05:05.36

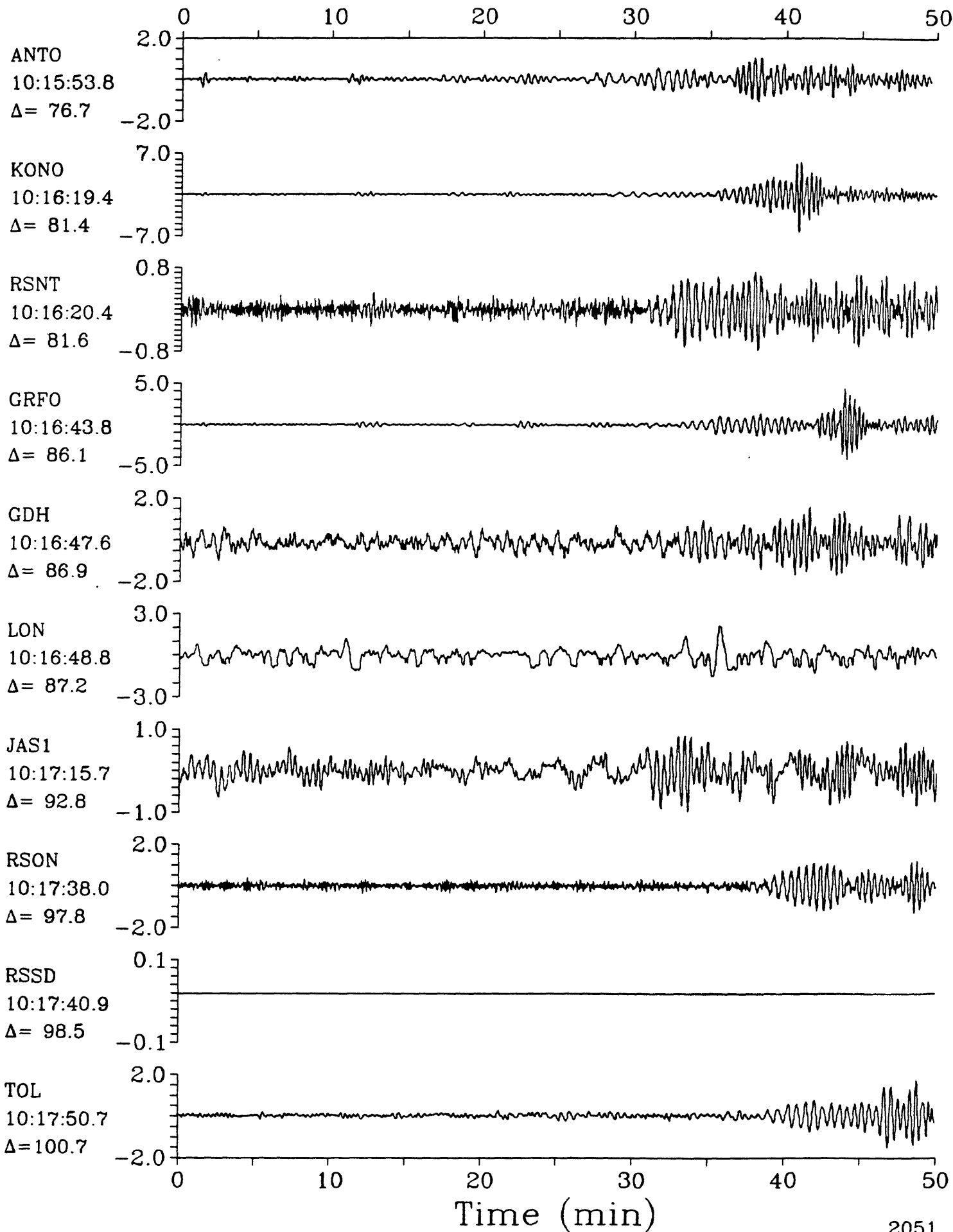
LPZ

Southwestern Ryukyu Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.9$ 

LPZ

26 November 1985 10:05:05.36

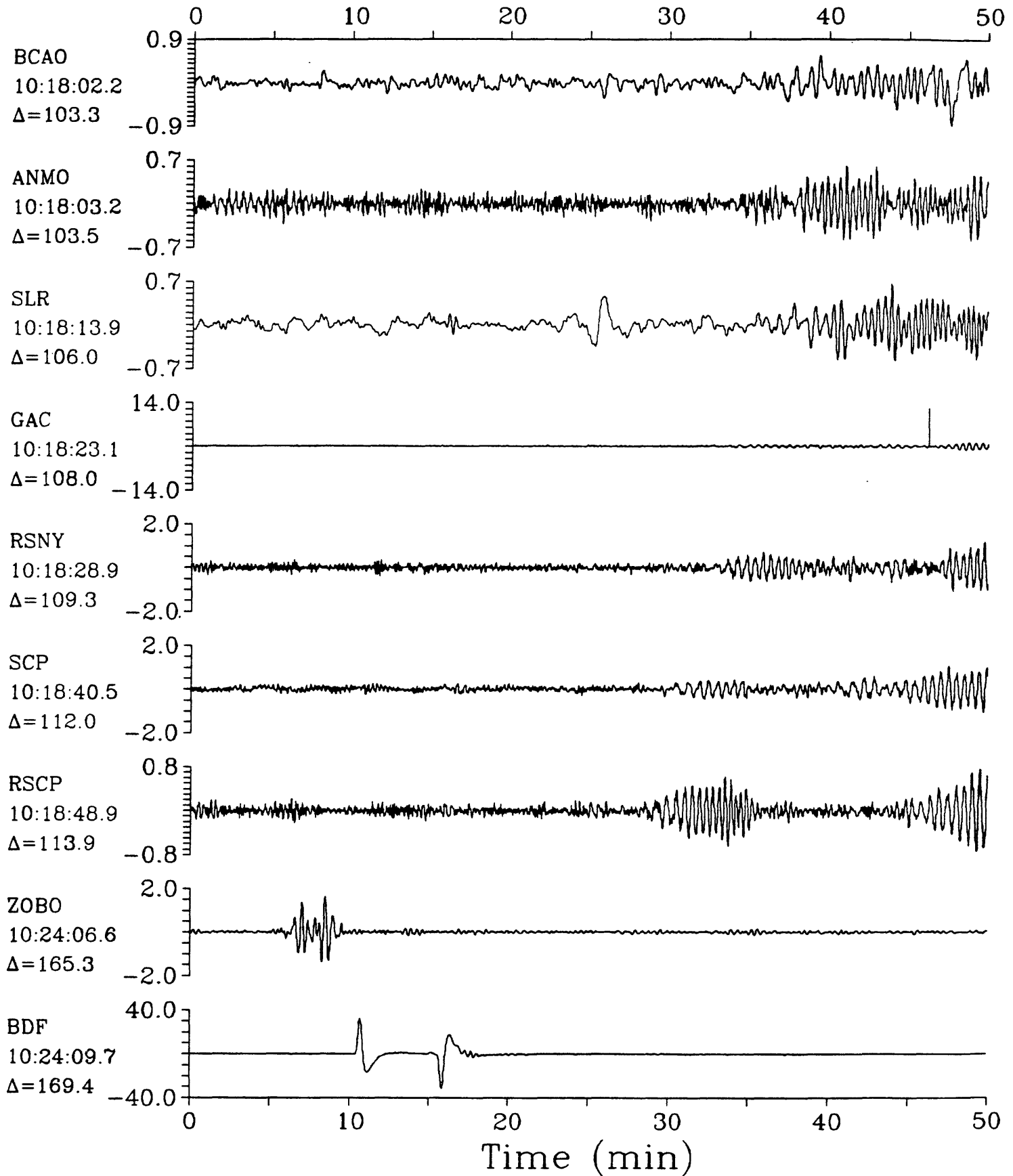
LPZ

Southwestern Ryukyu Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.9$ 

LPZ

26 November 1985 10:05:05.36

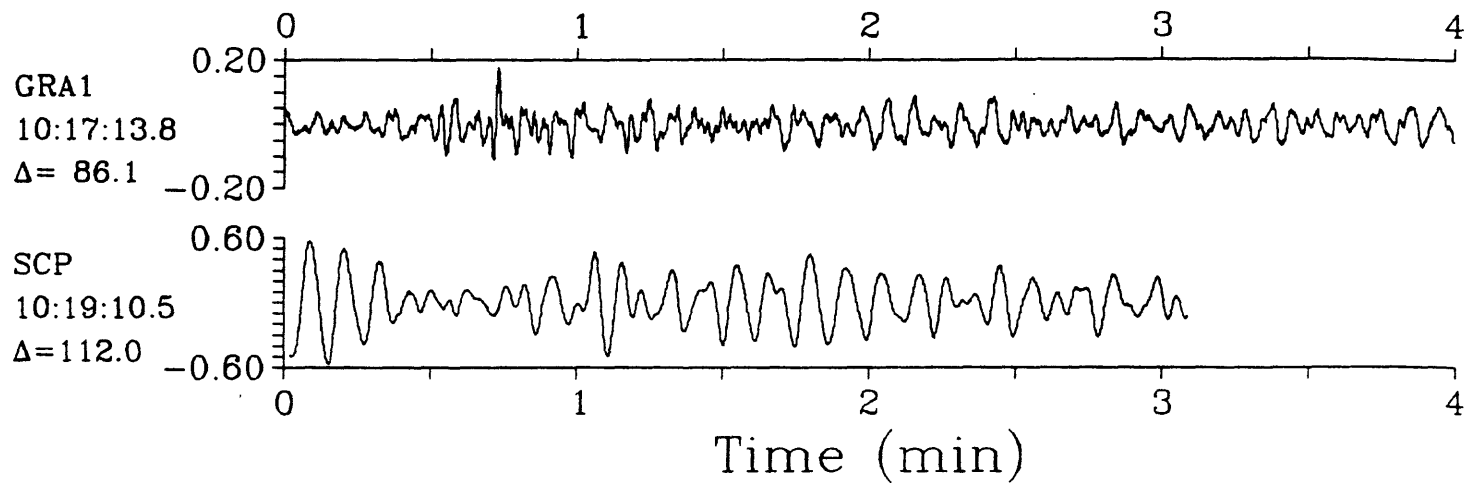
LPZ

Southwestern Ryukyu Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.9$ 

IPZ

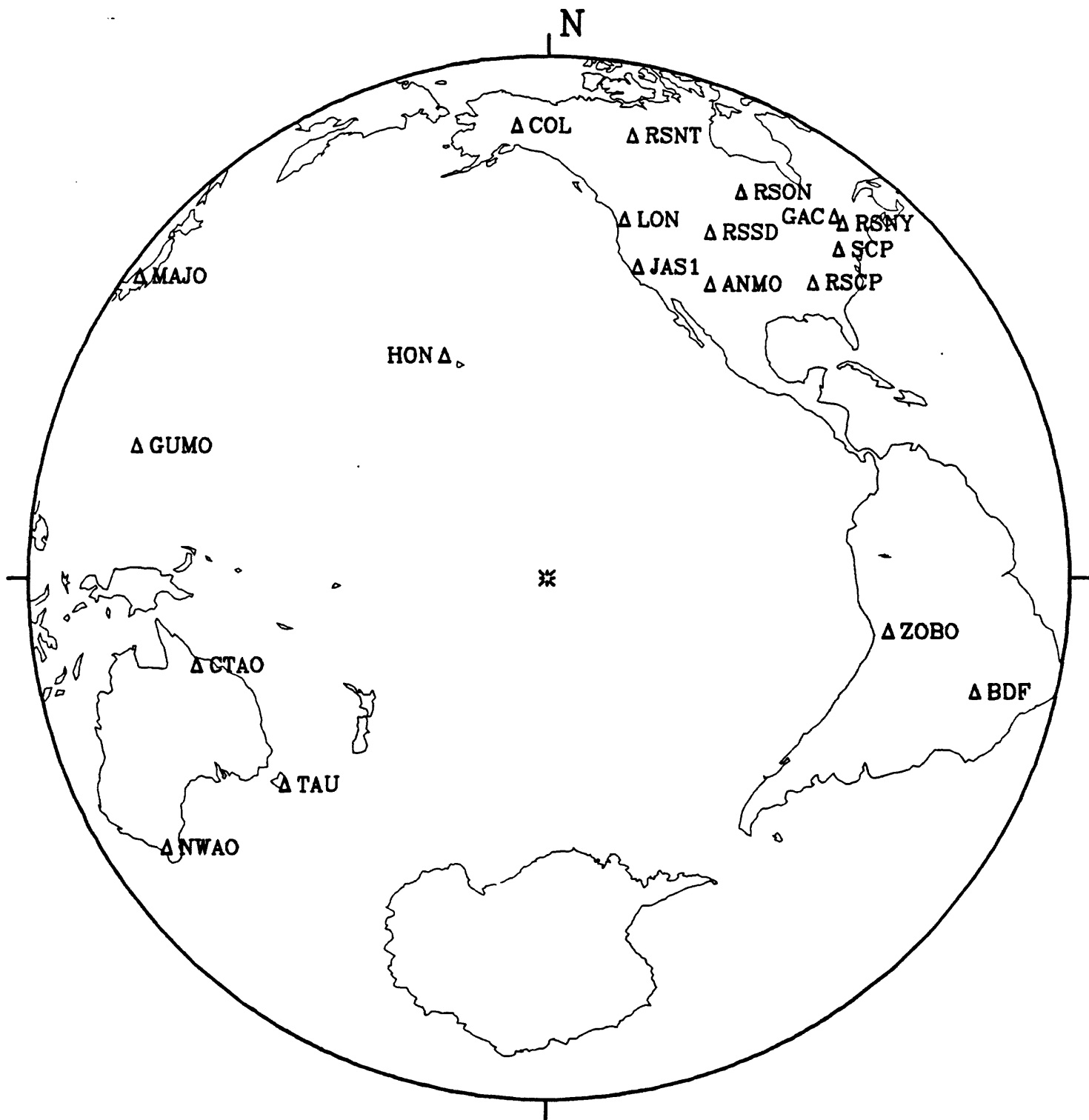
26 November 1985 10:05:05.36

IPZ

Southwestern Ryukyu Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.9$ 

26 November 1985 17:41:58.28

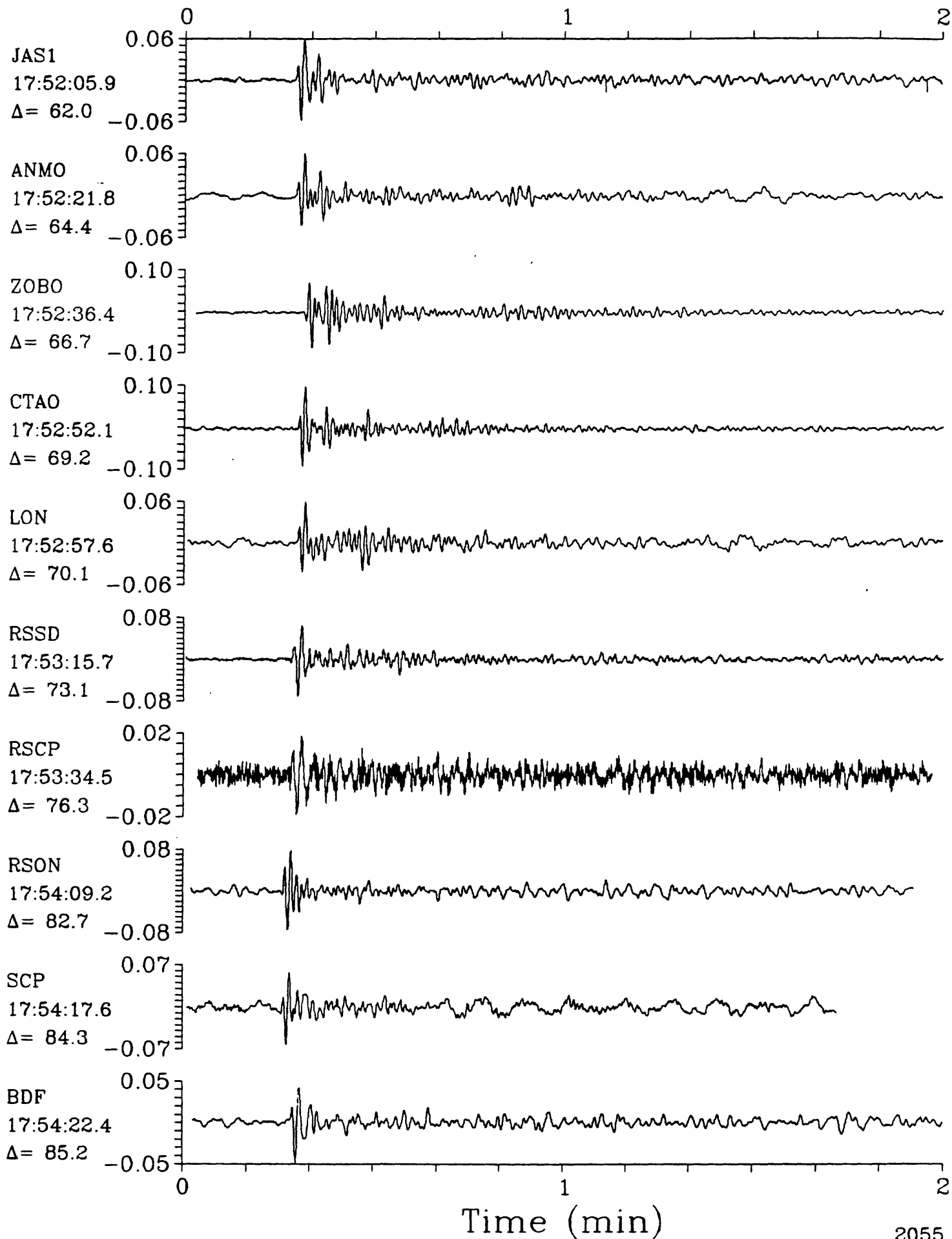
Tuamotu Archipelago Region



SPZ

26 November 1985 17:41:58.28

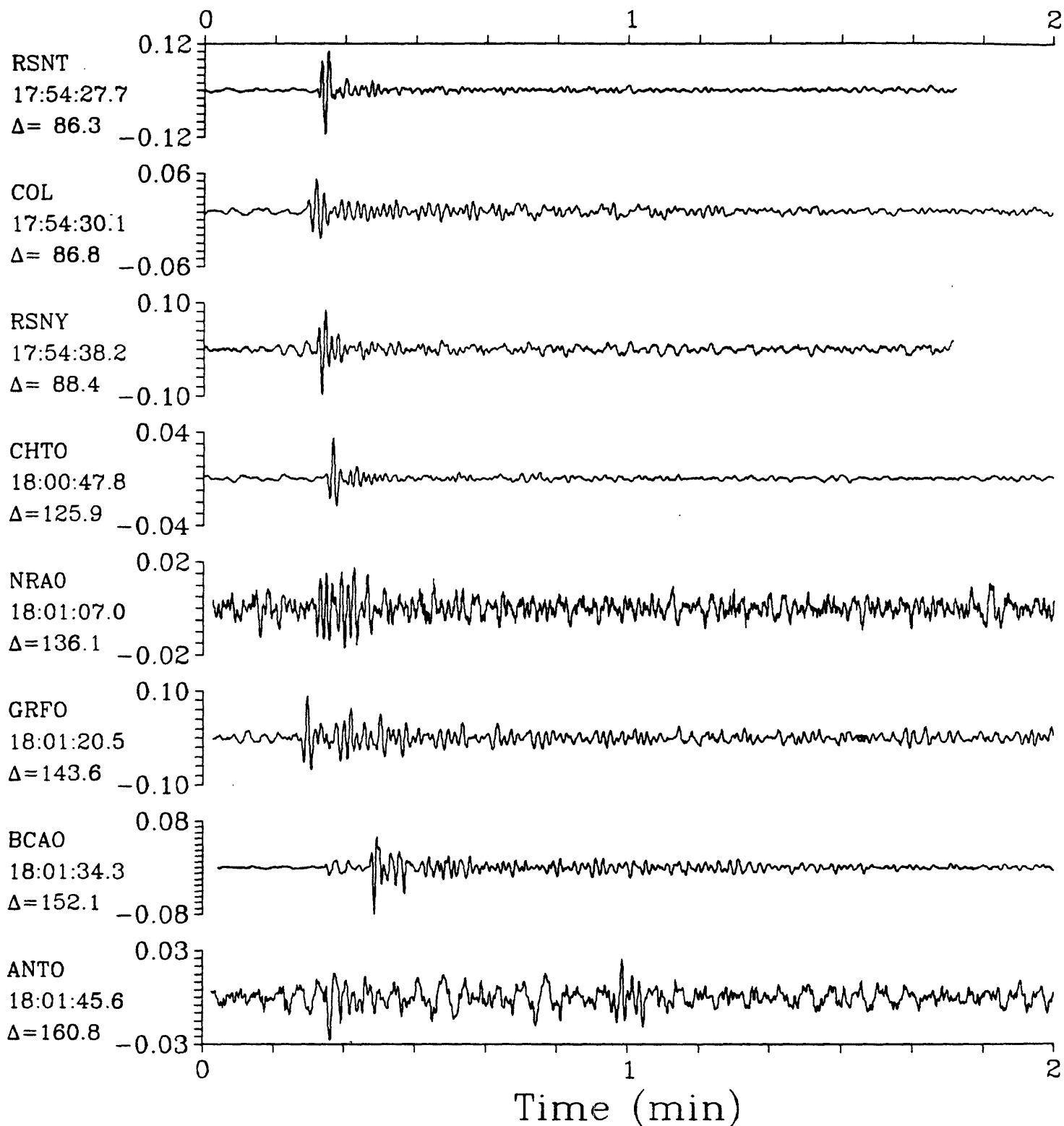
SPZ

Tuamotu Archipelago Region $h=0.0$ $m_b=5.8$ 

SPZ

26 November 1985 17:41:58.28

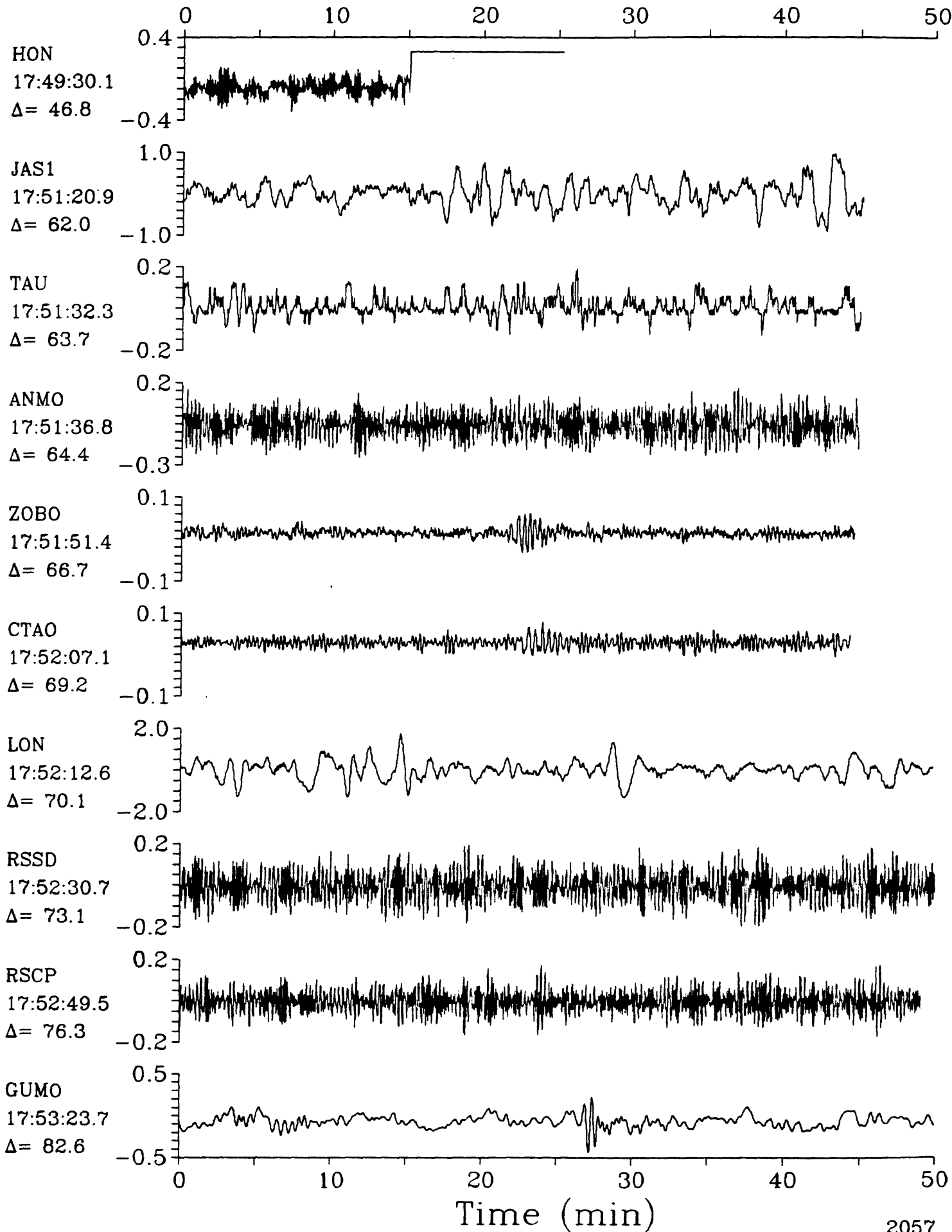
SPZ

Tuamotu Archipelago Region $h=0.0$ $m_b=5.8$ 

LPZ

26 November 1985 17:41:58.28

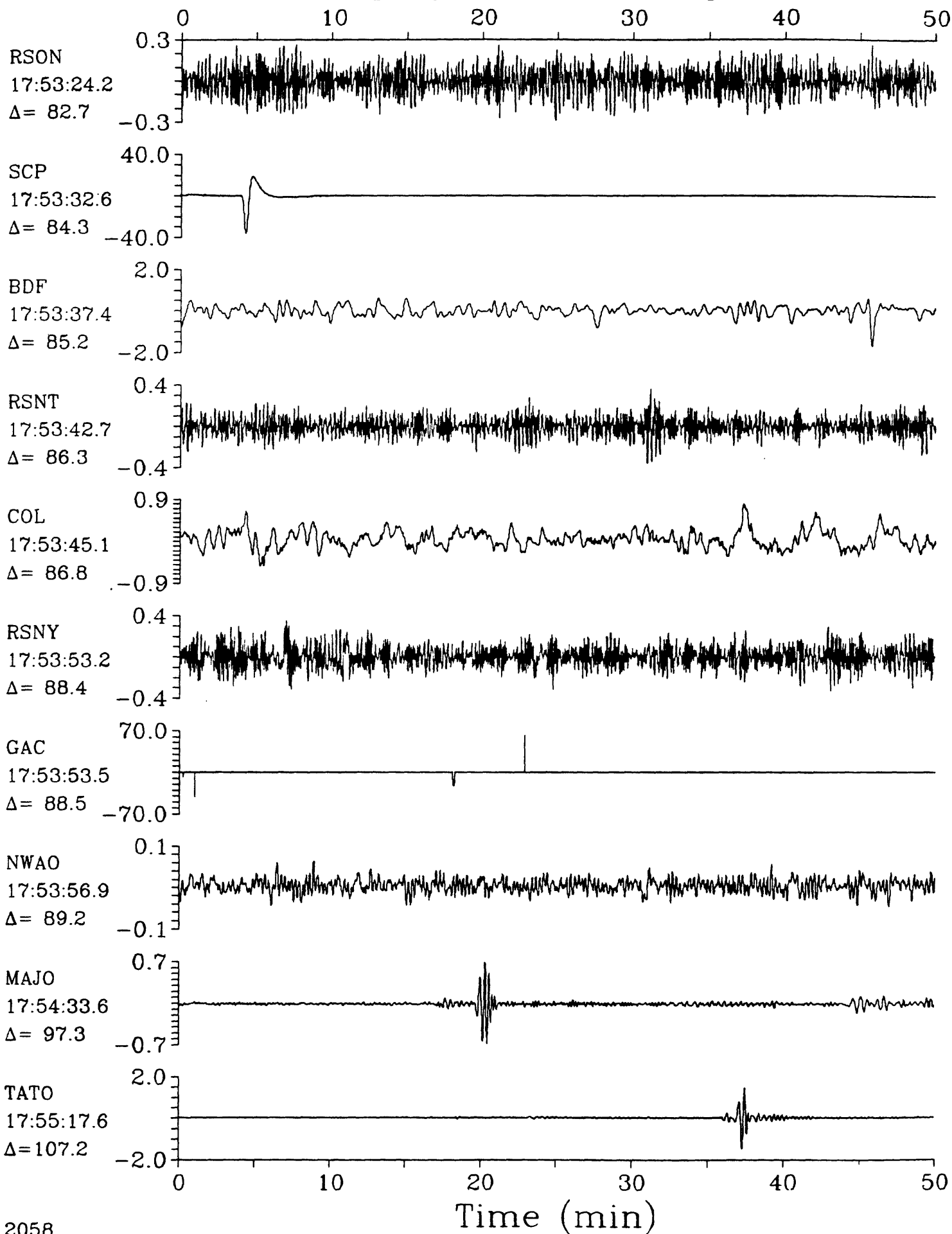
LPZ

Tuamotu Archipelago Region $h=0.0$ $m_b=5.8$ 

LPZ

26 November 1985 17:41:58.28

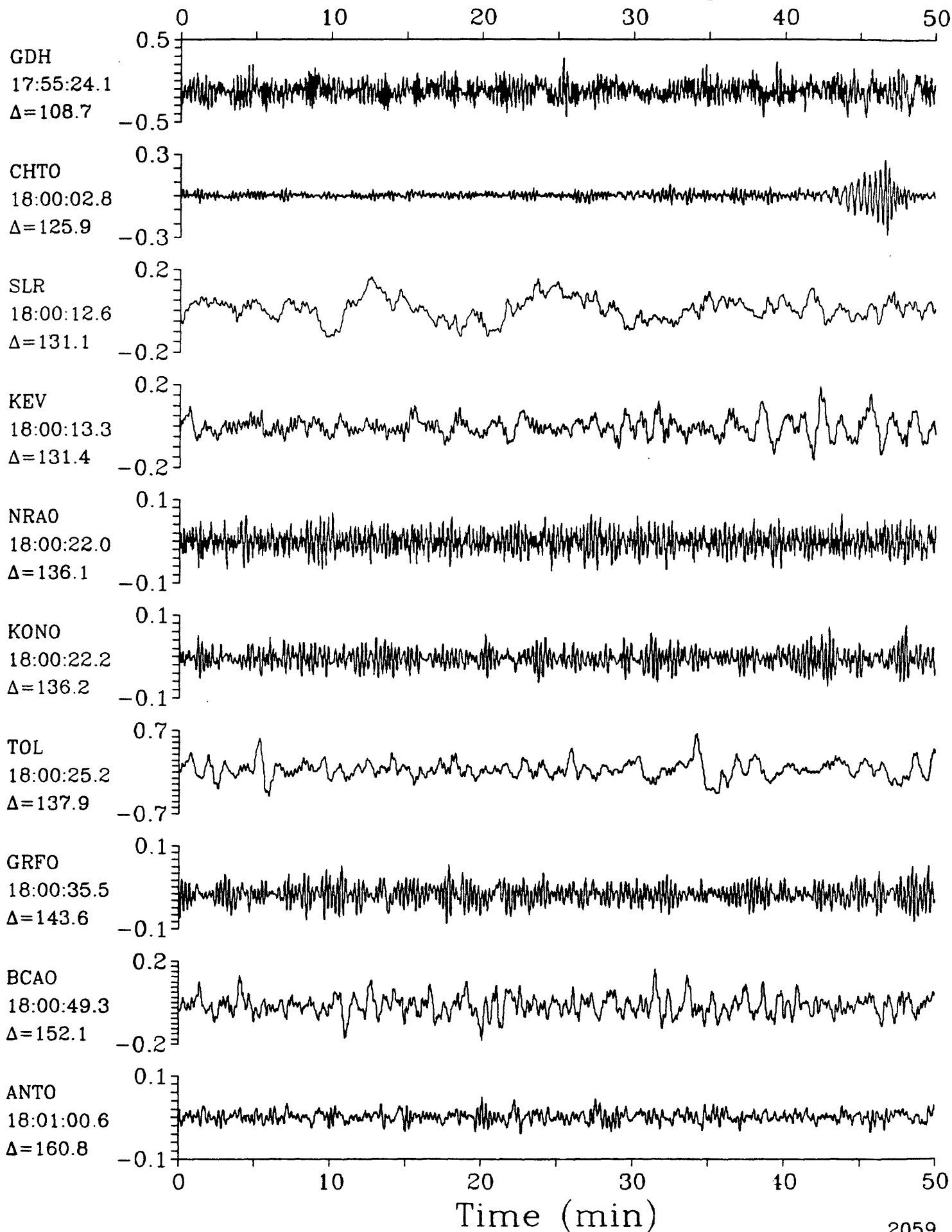
LPZ

Tuamotu Archipelago Region $h=0.0$ $m_b=5.8$ 

LPZ

26 November 1985 17:41:58.28

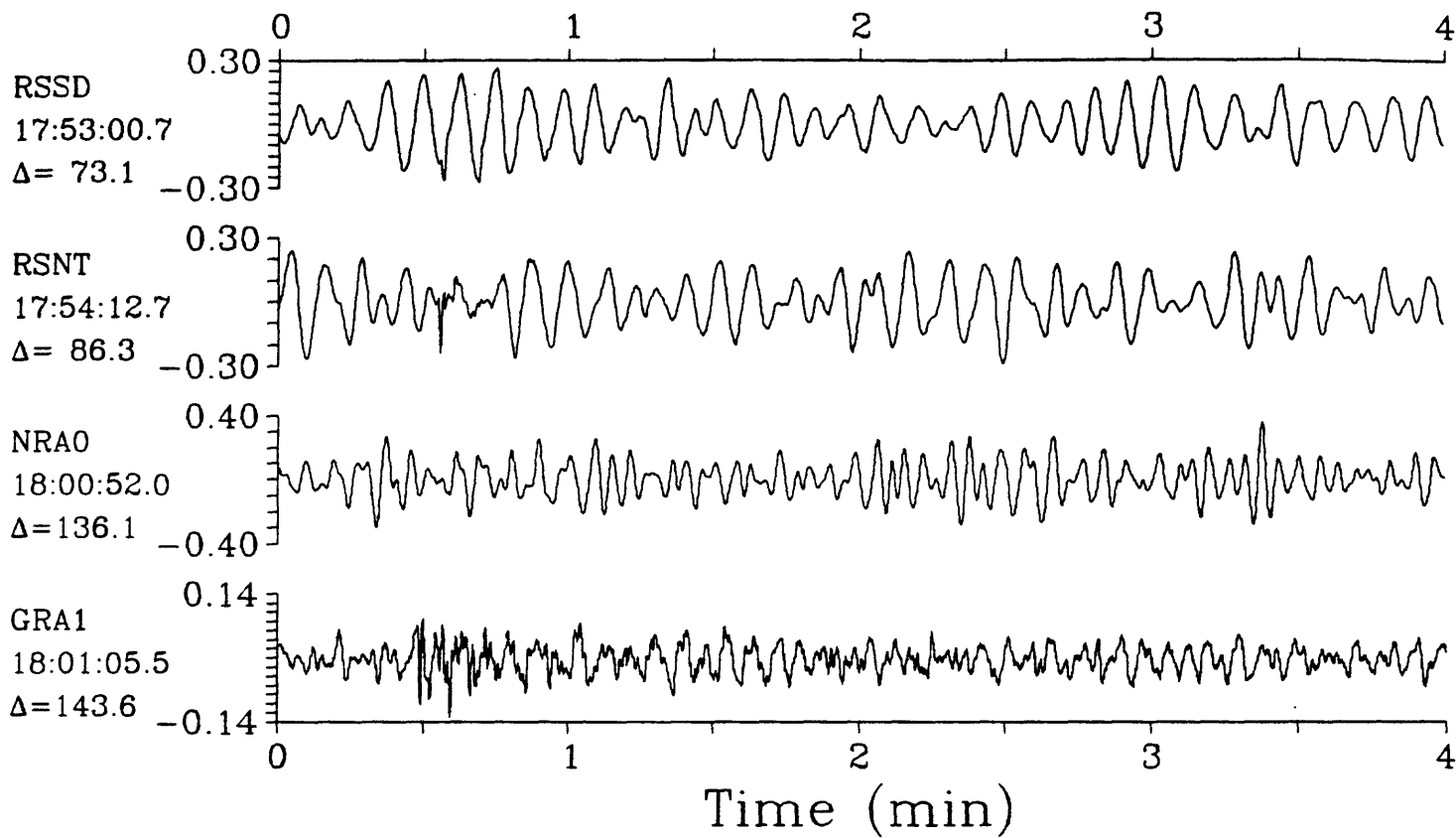
LPZ

Tuamotu Archipelago Region $h=0.0$ $m_b=5.8$ 

IPZ

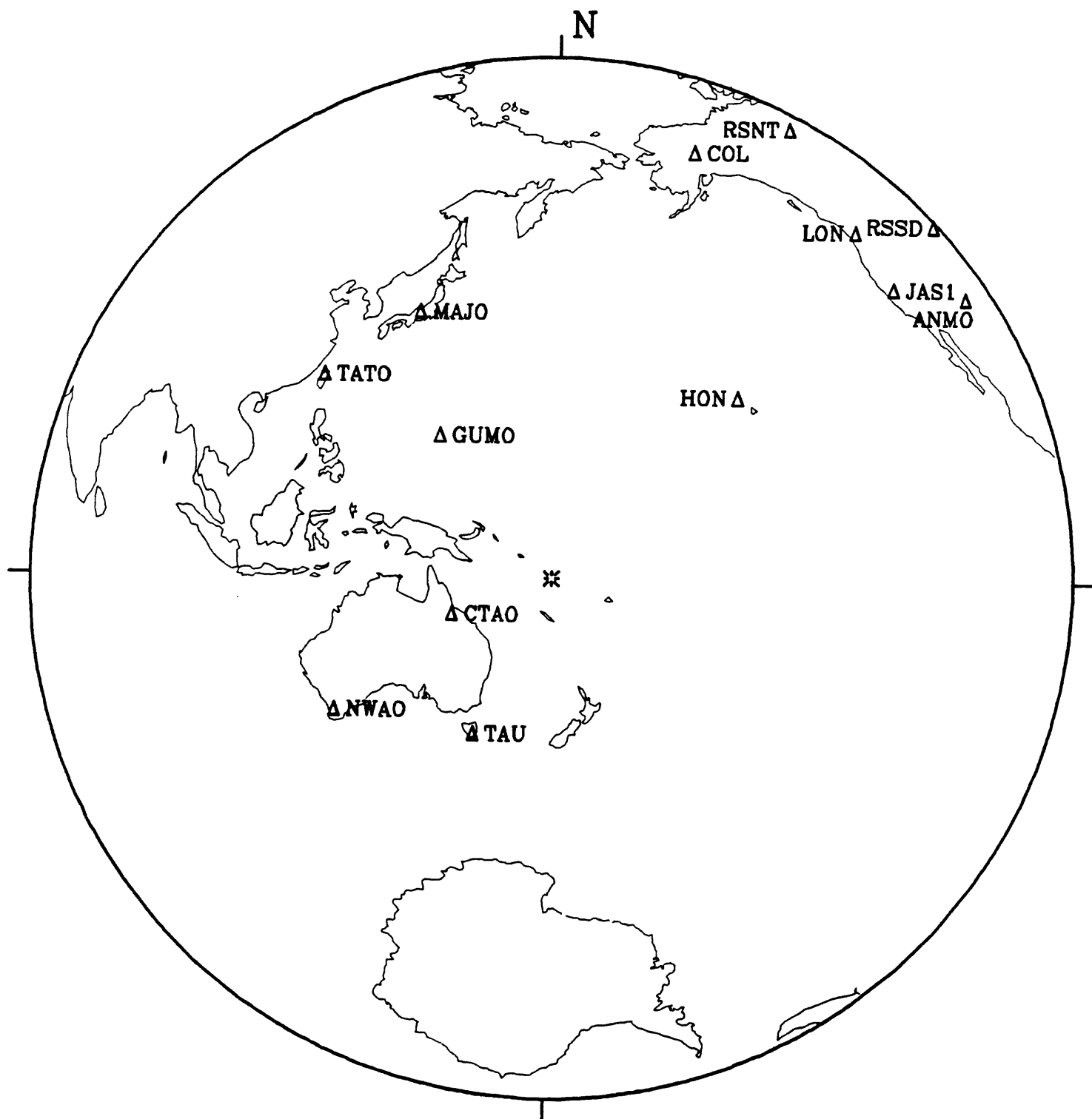
26 November 1985 17:41:58.28

IPZ

Tuamotu Archipelago Region $h=0.0$ $m_b=5.8$ 

28 November 1985 02:25:42.31

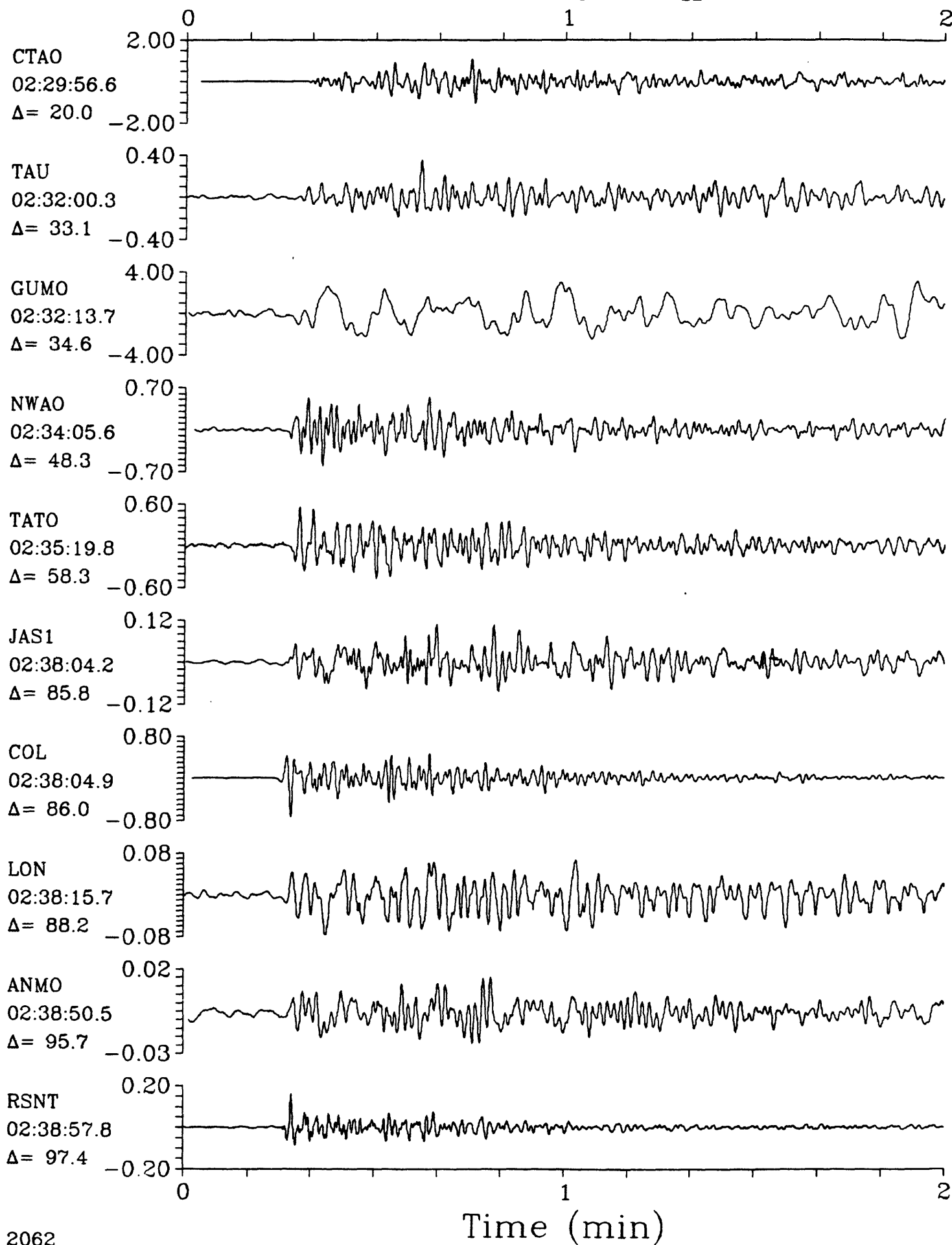
Vanuatu Islands



SPZ

28 November 1985 02:25:42.31
Vanuatu Islands $h=33.0$ $m_b=6.1$ $M_{sz}=7.0$

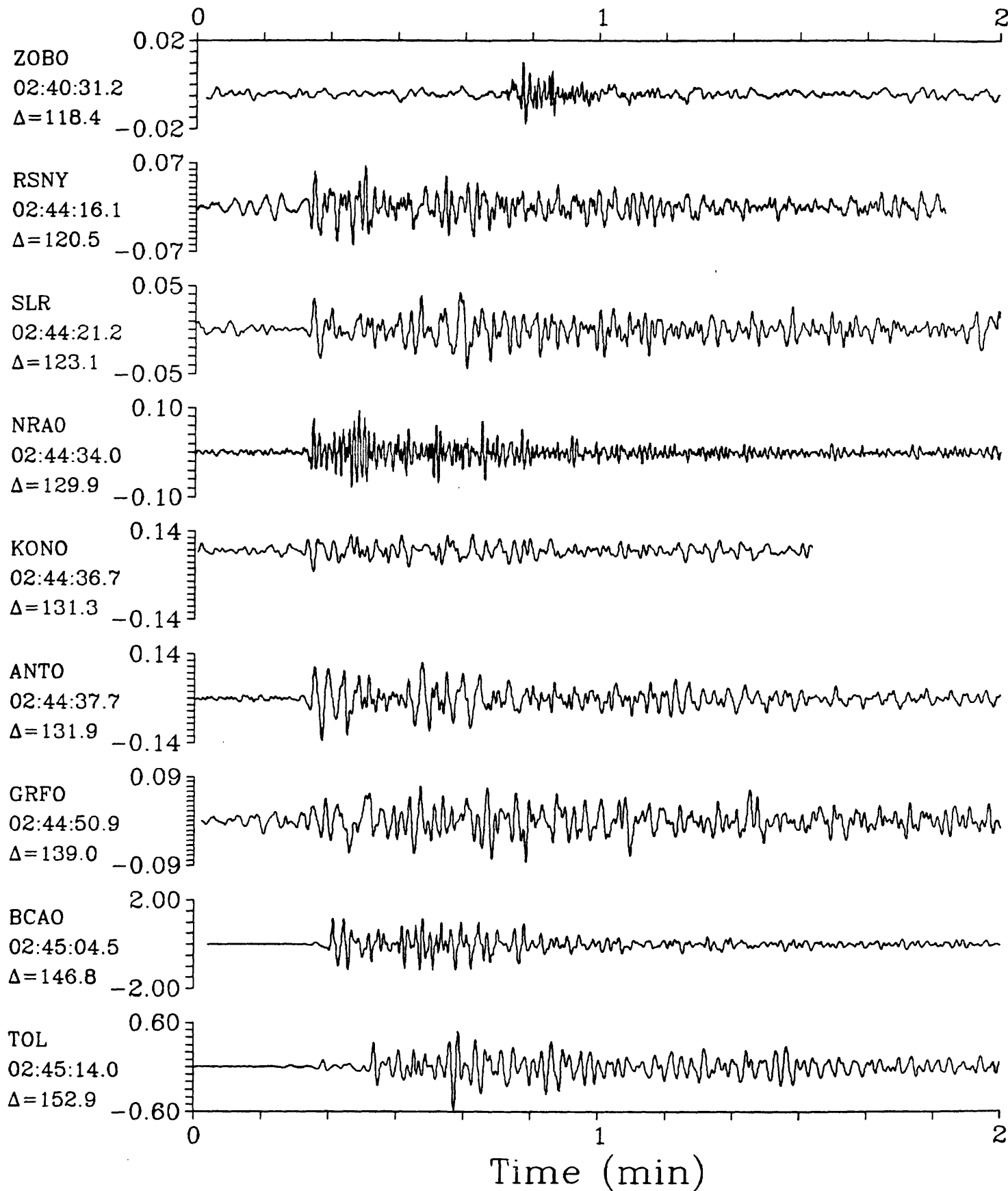
SPZ



SPZ

28 November 1985 02:25:42.31

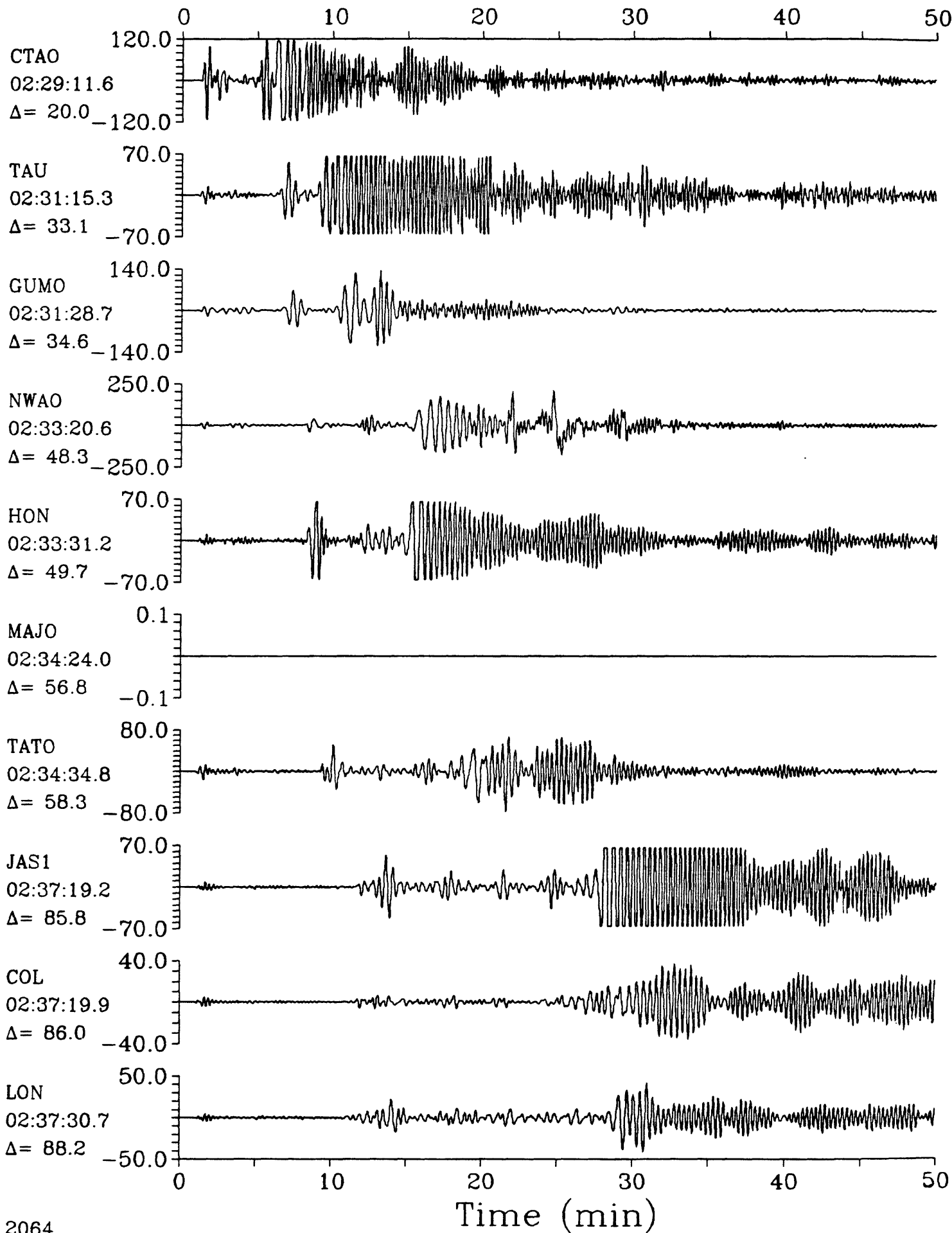
SPZ

Vanuatu Islands $h=33.0$ $m_b=6.1$ $M_{sz}=7.0$ 

LPZ

28 November 1985 02:25:42.31
Vanuatu Islands $h=33.0$ $m_b=6.1$ $M_{sz}=7.0$

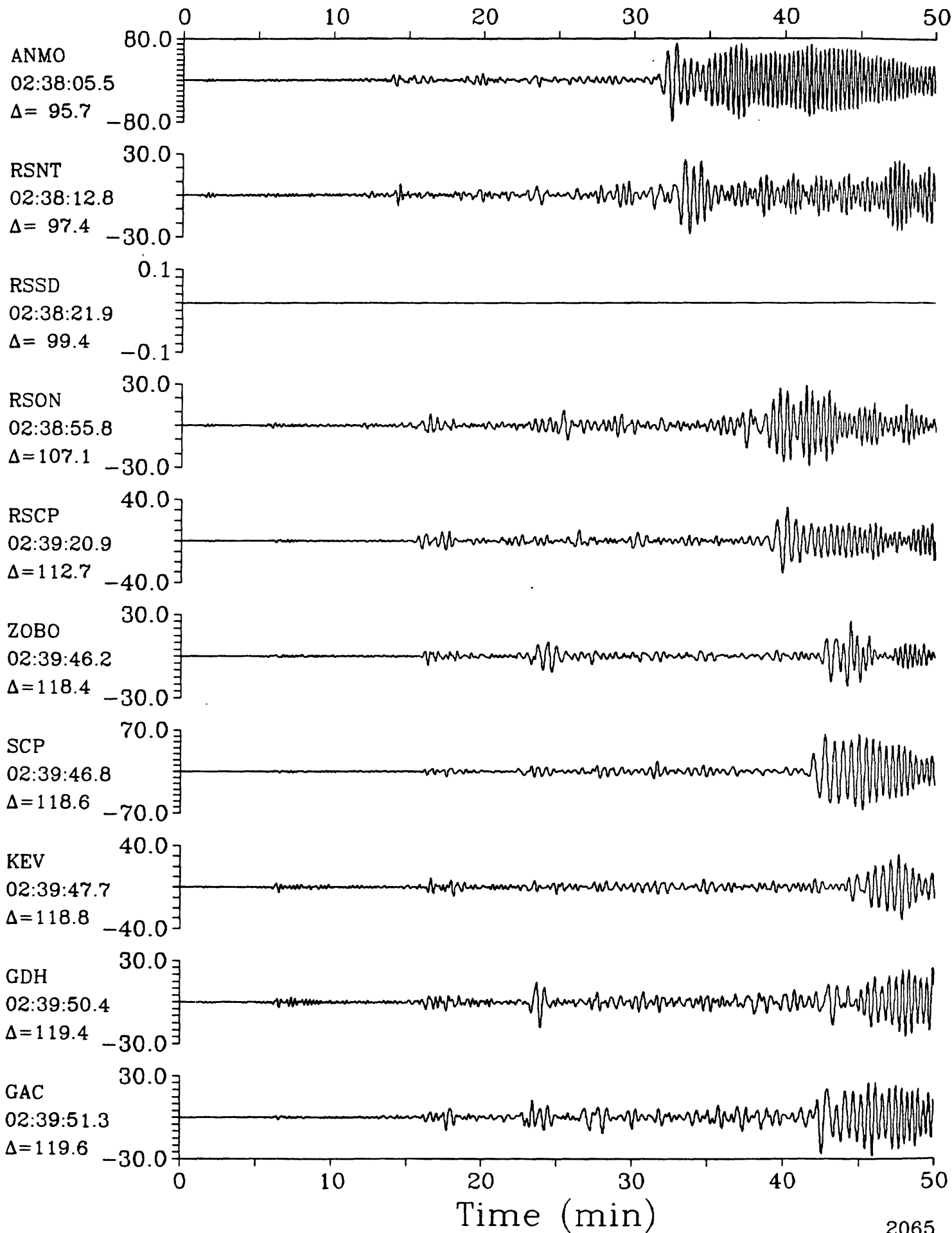
LPZ



LPZ

28 November 1985 02:25:42.31
Vanuatu Islands $h=33.0$ $m_b=6.1$ $M_{sz}=7.0$

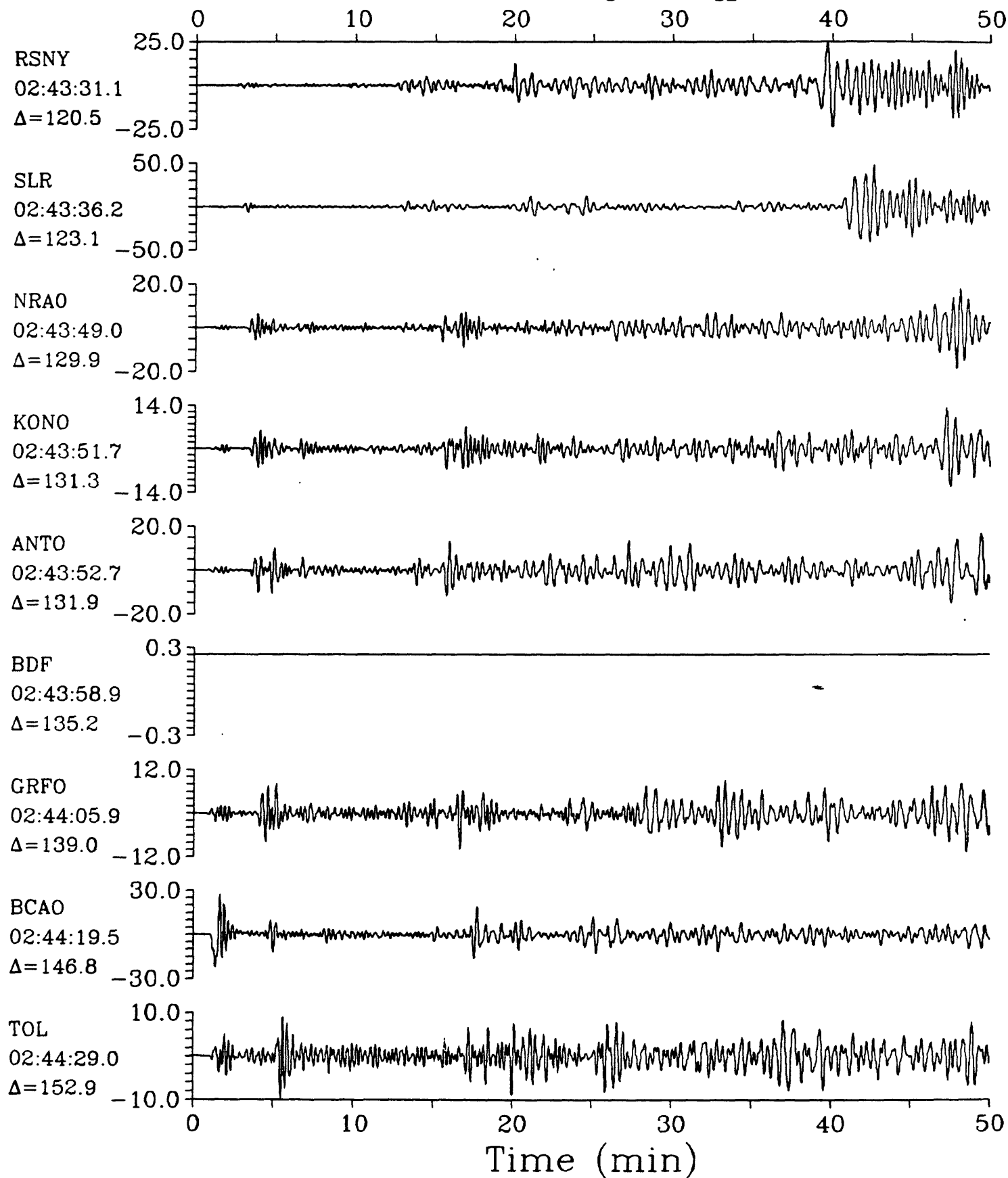
LPZ



LPZ

28 November 1985 02:25:42.31
Vanuatu Islands $h=33.0$ $m_b=6.1$ $M_{sz}=7.0$

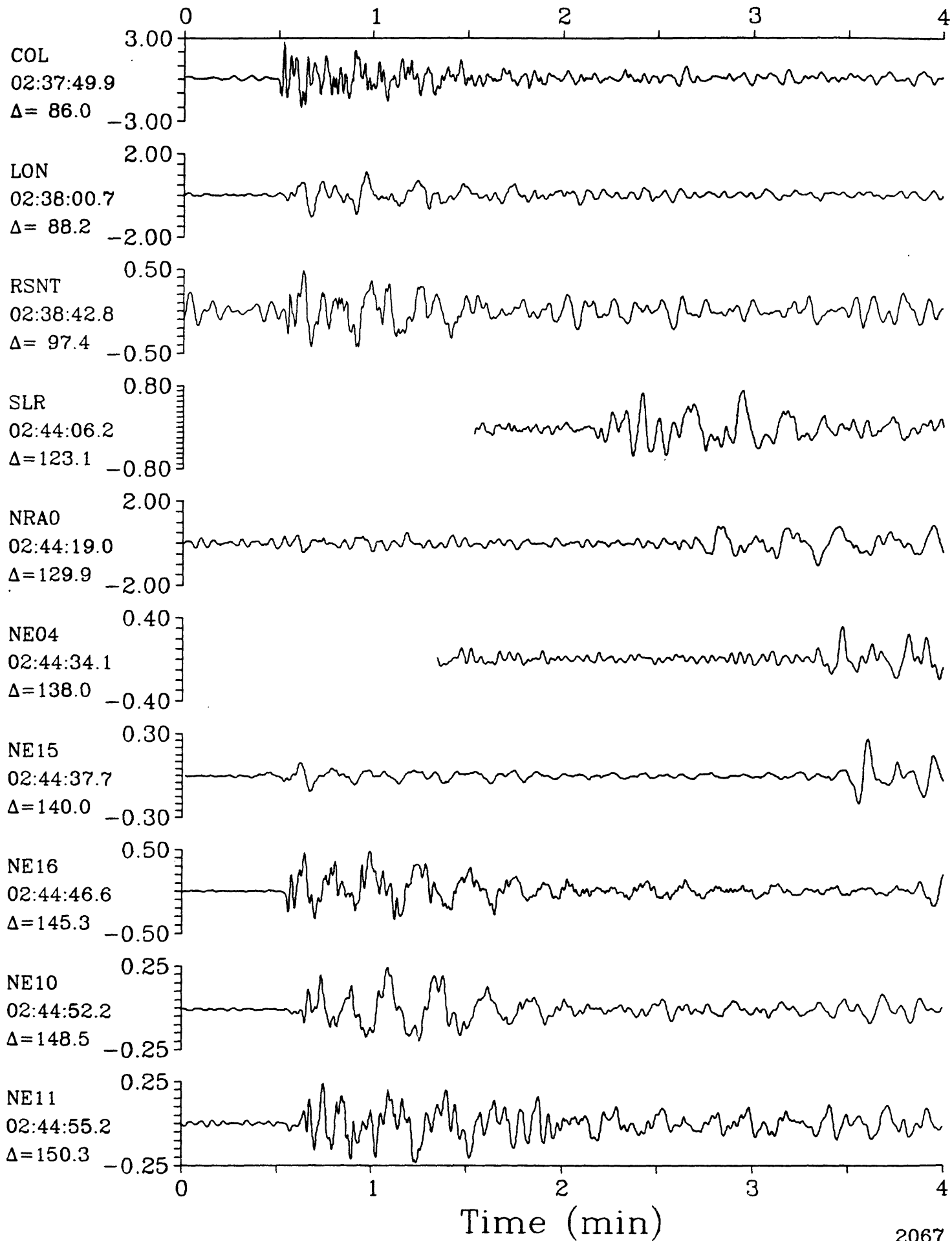
LPZ



IPZ

28 November 1985 02:25:42.31
Vanuatu Islands $h=33.0$ $m_b=6.1$ $M_{sz}=7.0$

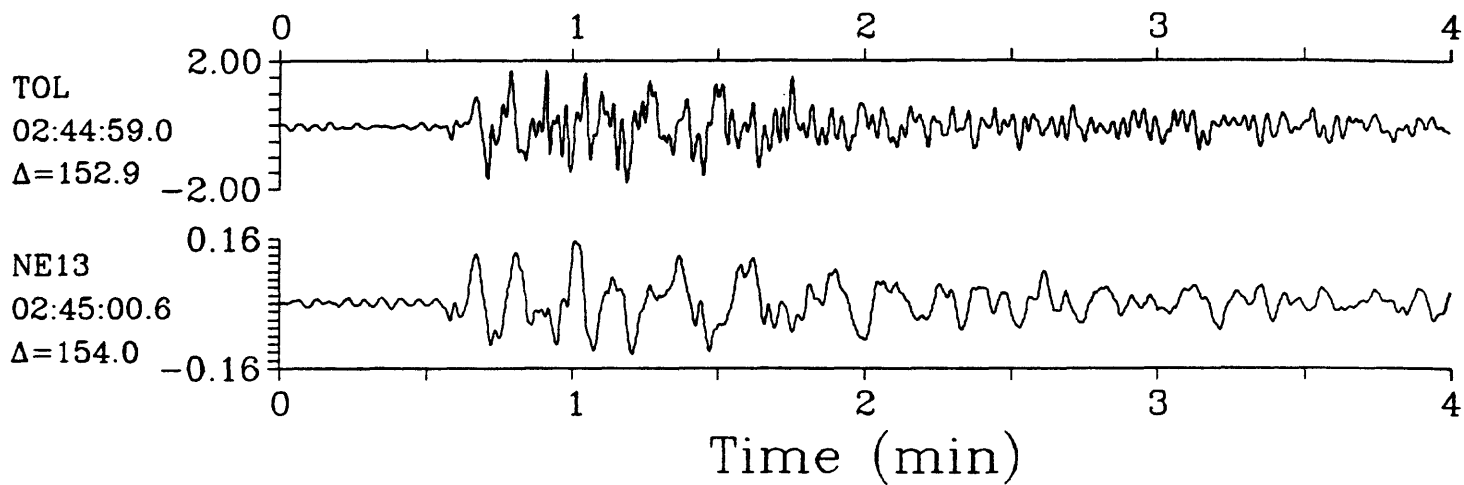
IPZ



IPZ

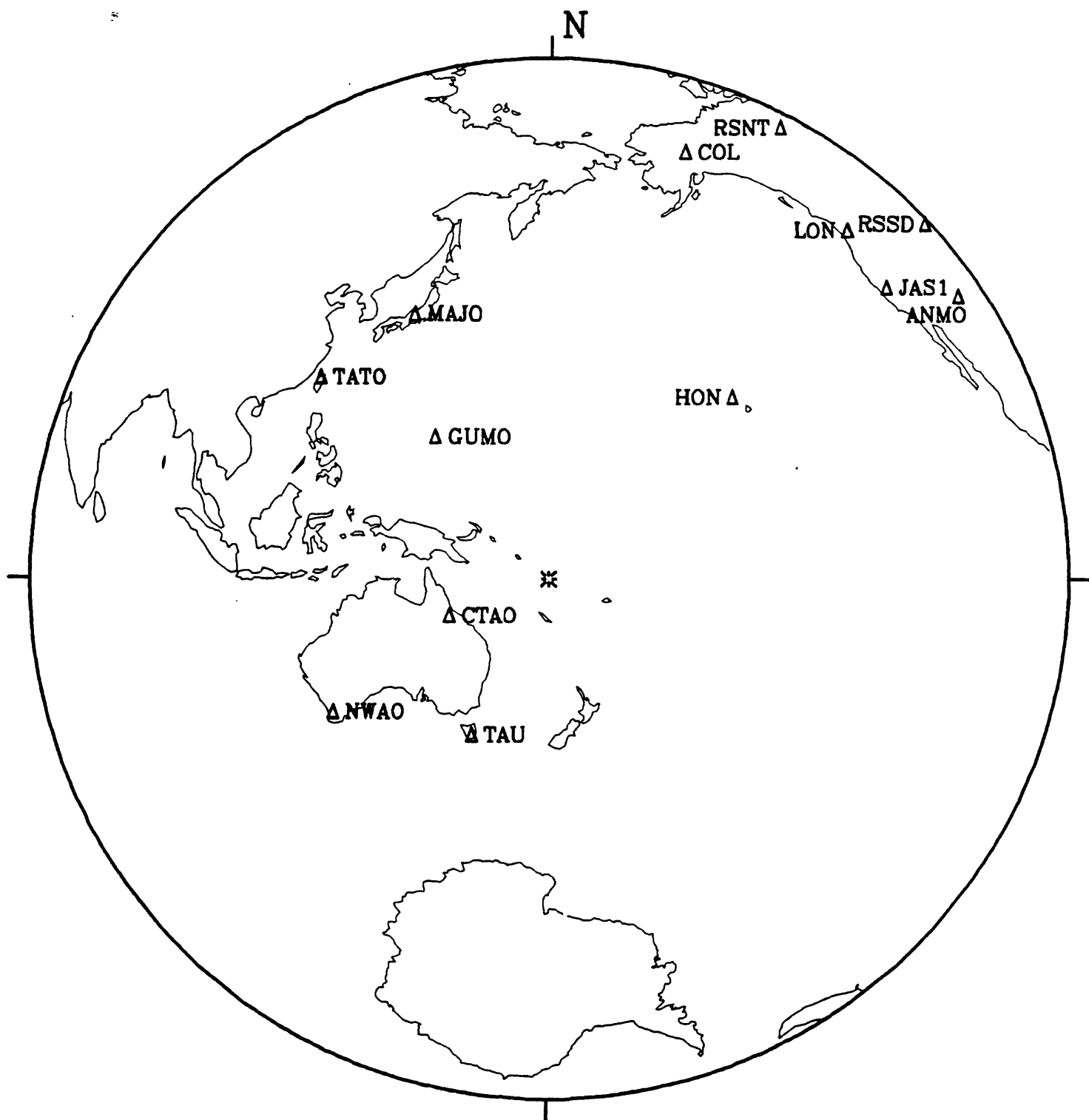
28 November 1985 02:25:42.31

IPZ

Vanuatu Islands $h=33.0$ $m_b=6.1$ $M_{sz}=7.0$ 

28 November 1985 03:49:53.98

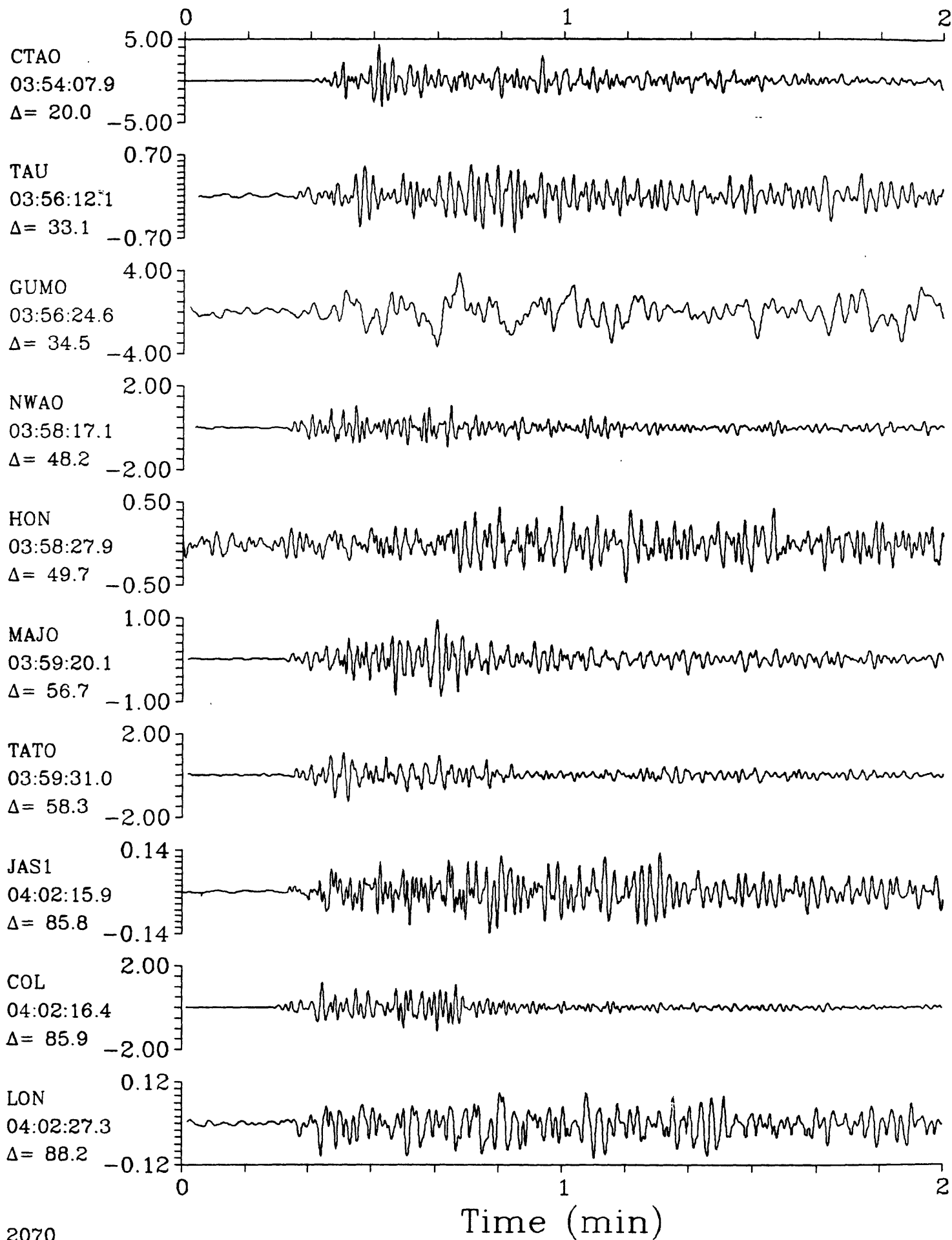
Vanuatu Islands



SPZ

28 November 1985 03:49:53.98
Vanuatu Islands $h=33.0$ $m_b=6.2$ $M_{sz}=7.1$

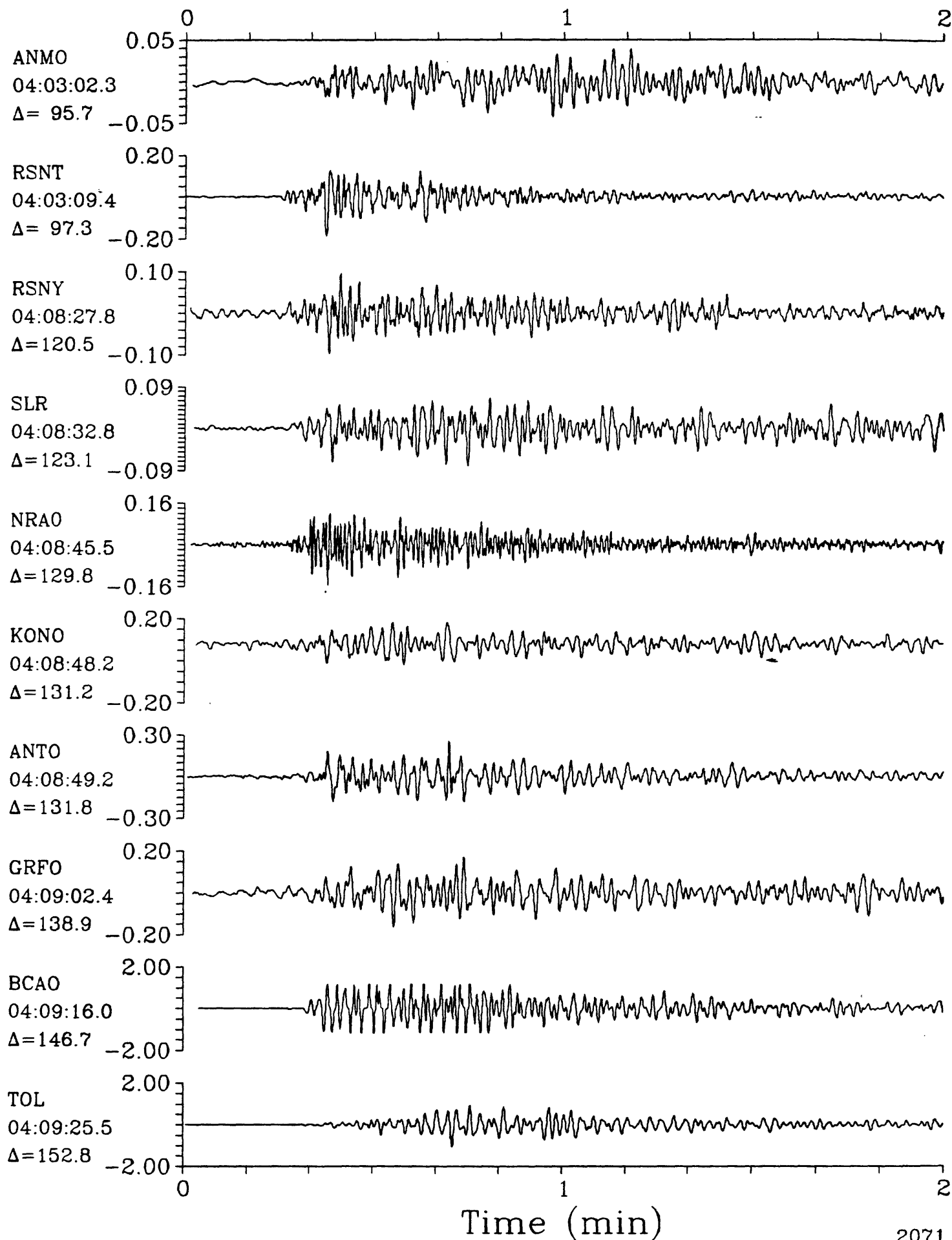
SPZ



SPZ

28 November 1985 03:49:53.98
Vanuatu Islands $h=33.0$ $m_b=6.2$ $M_{sz}=7.1$

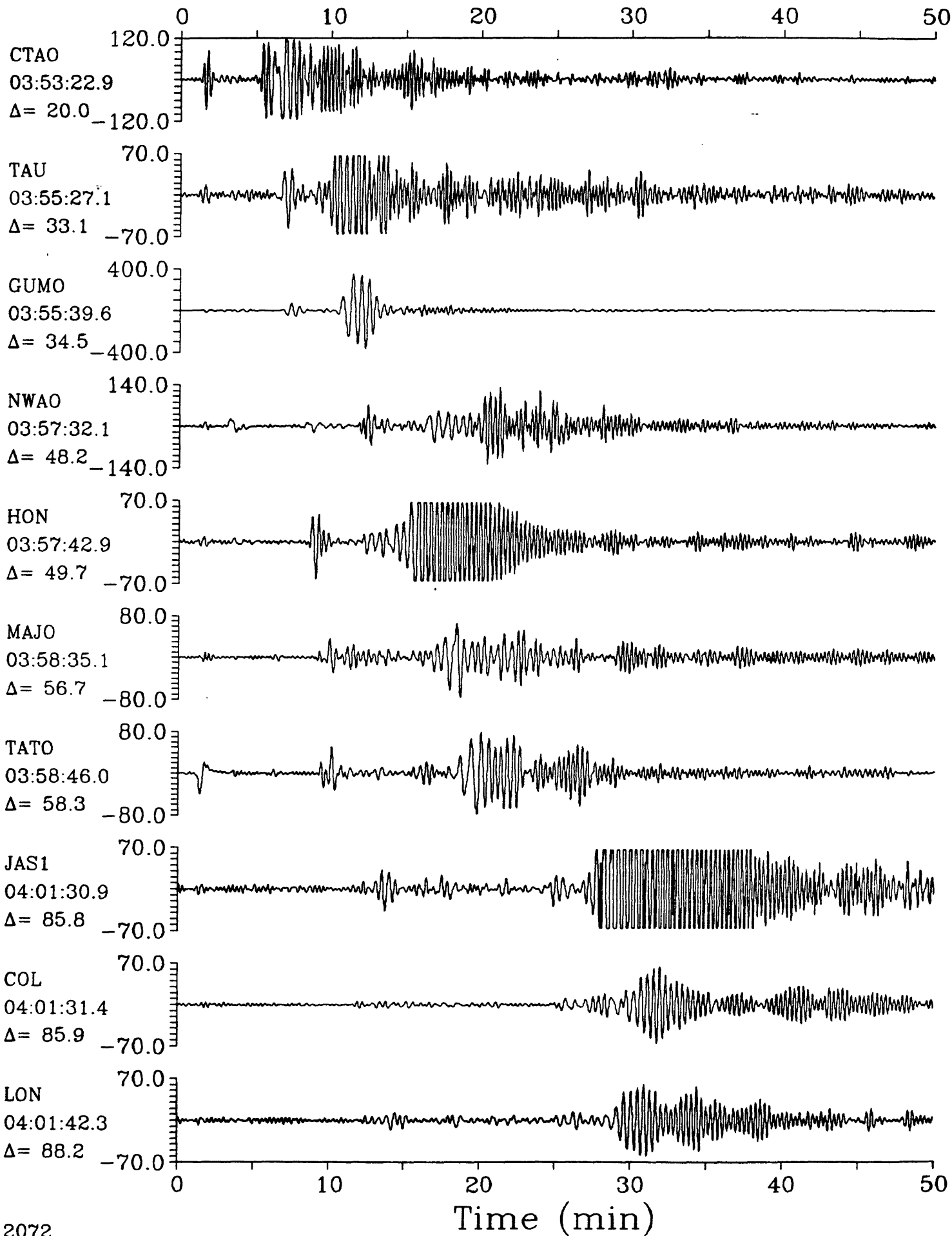
SPZ



LPZ

28 November 1985 03:49:53.98
Vanuatu Islands $h=33.0$ $m_b=6.2$ $M_{sz}=7.1$

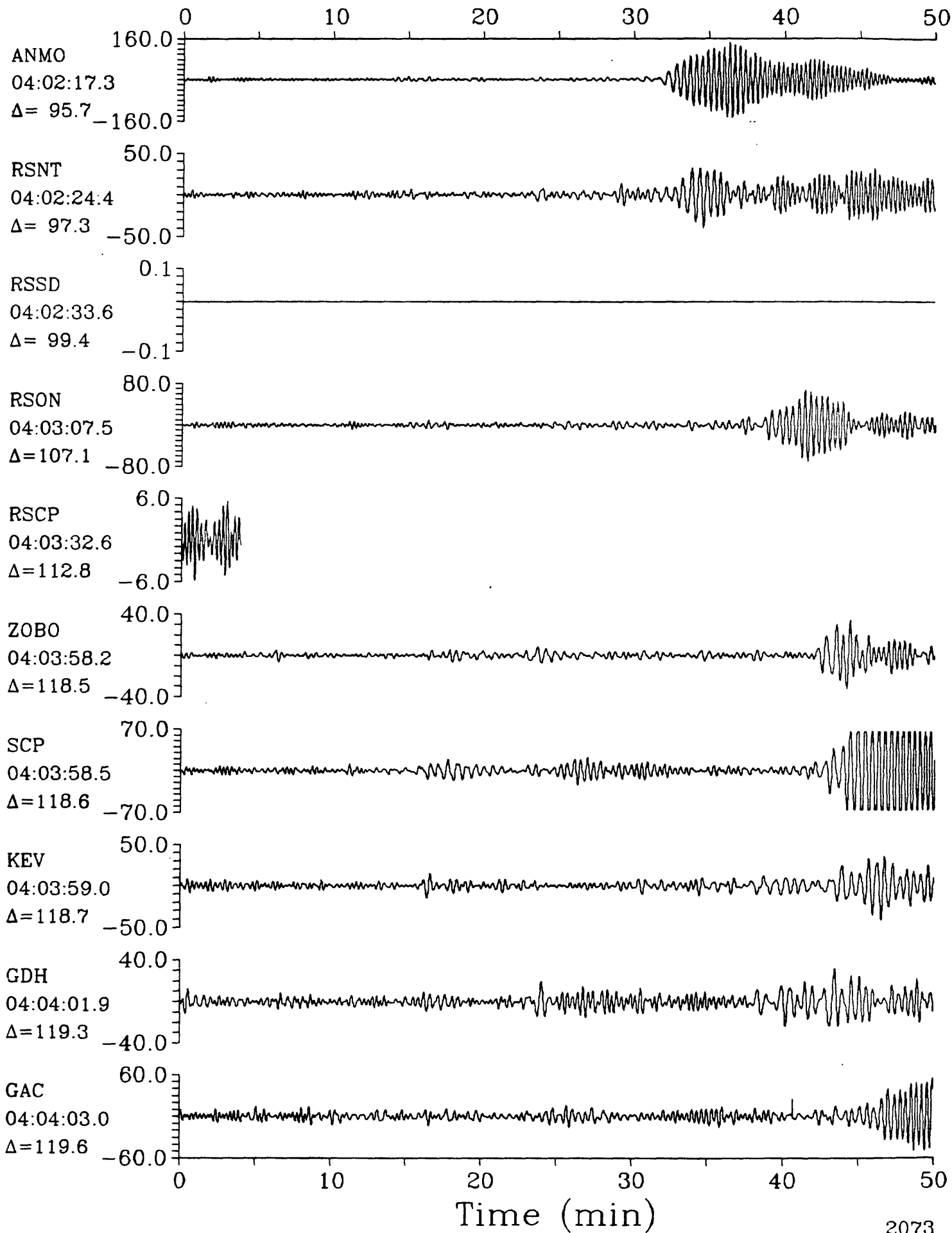
LPZ



LPZ

28 November 1985 03:49:53.98
Vanuatu Islands $h=33.0$ $m_b=6.2$ $M_{sz}=7.1$

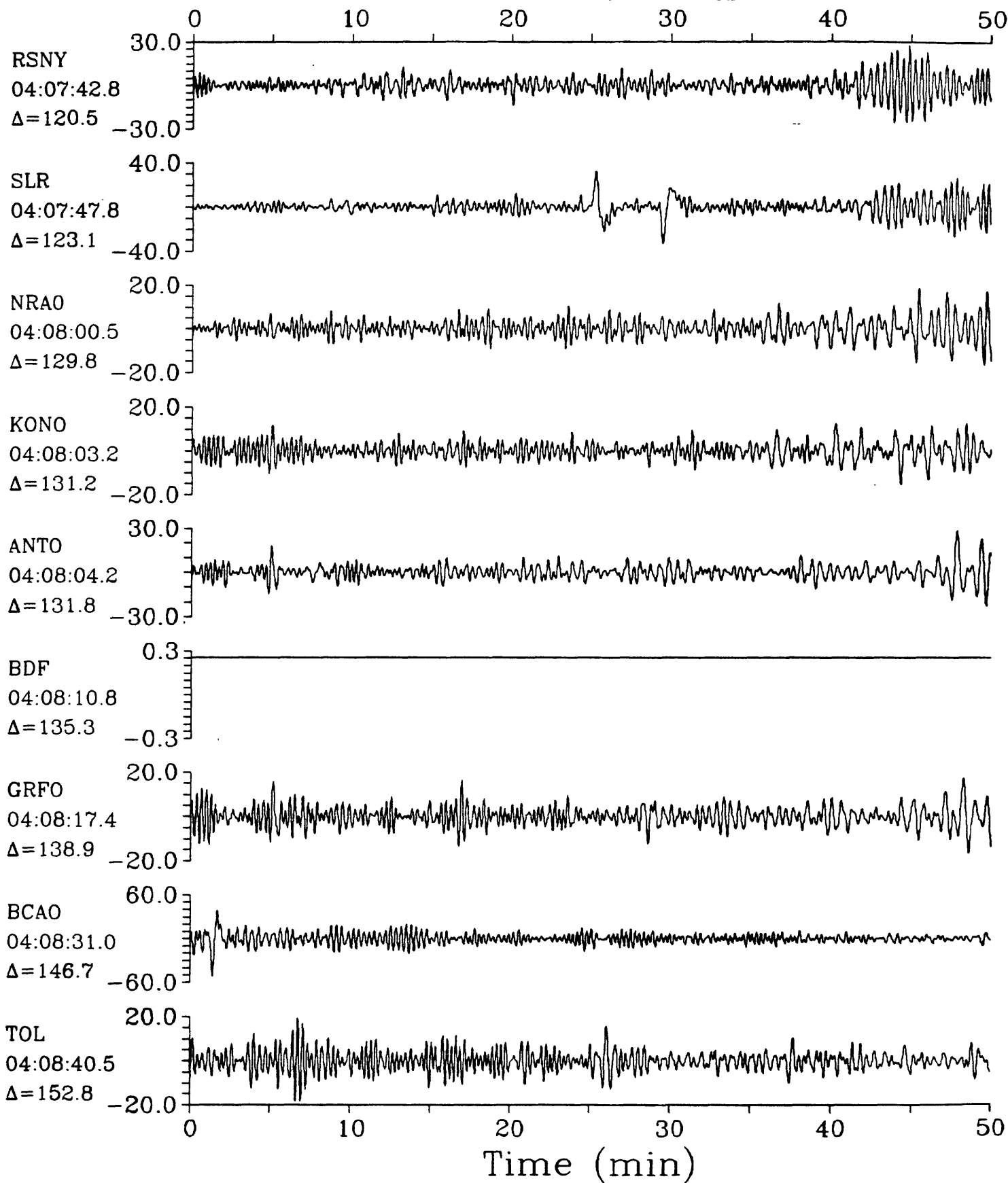
LPZ



LPZ

28 November 1985 03:49:53.98
Vanuatu Islands $h=33.0$ $m_b=6.2$ $M_{sz}=7.1$

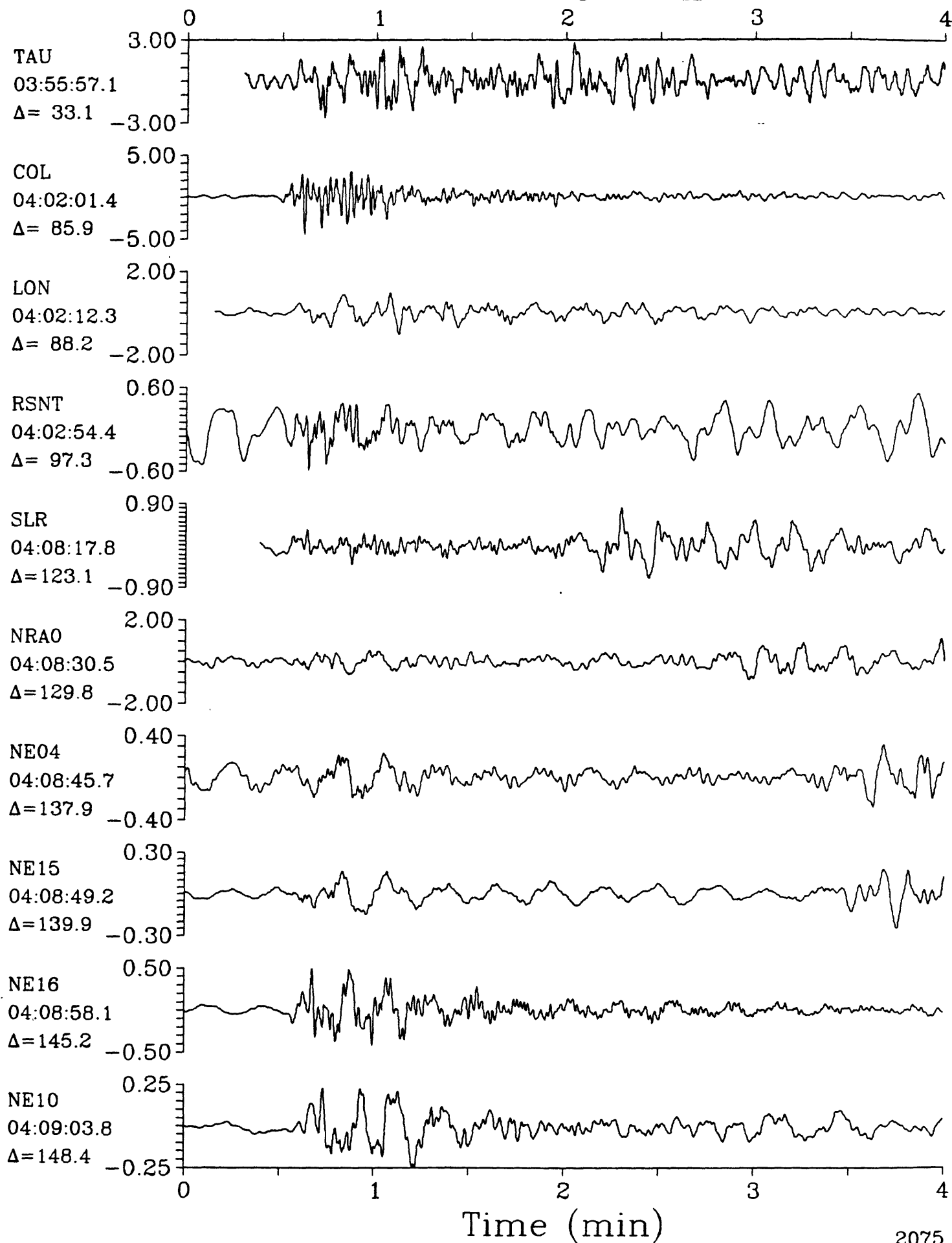
LPZ



IPZ

28 November 1985 03:49:53.98
Vanuatu Islands $h=33.0$ $m_b=6.2$ $M_{sz}=7.1$

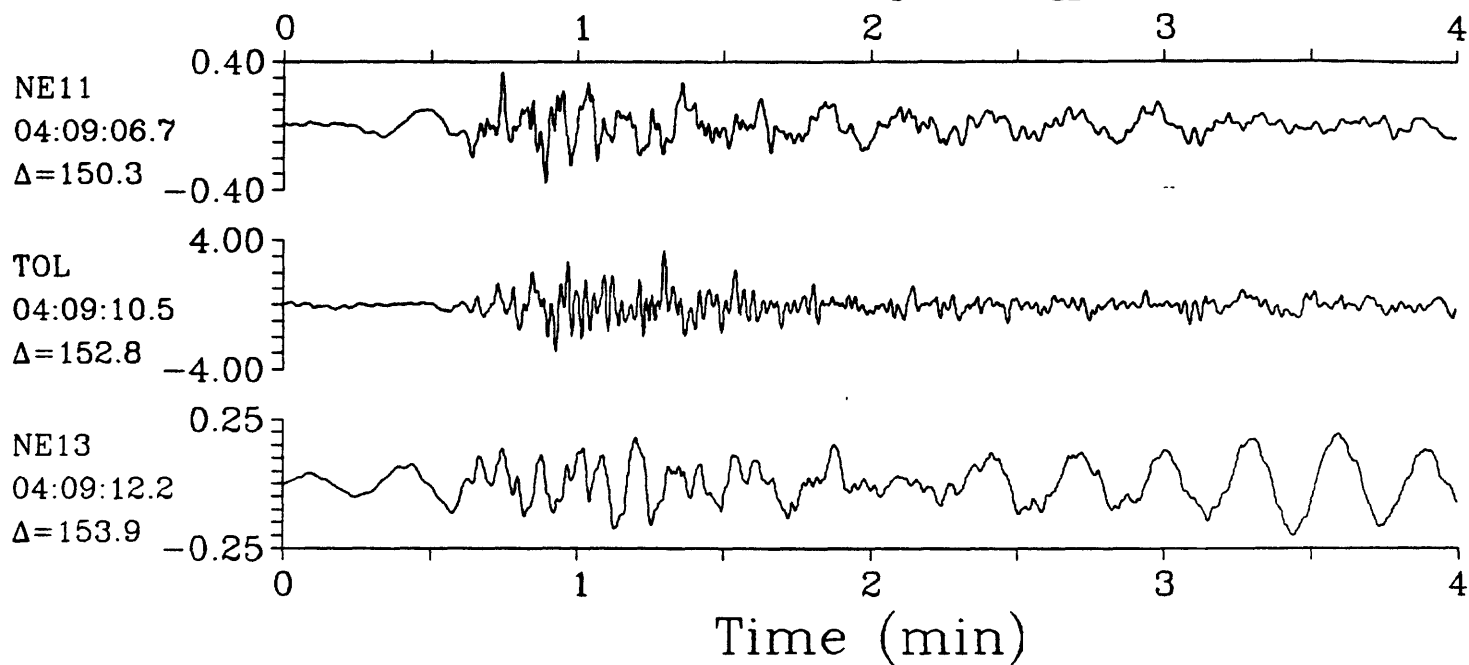
IPZ



IPZ

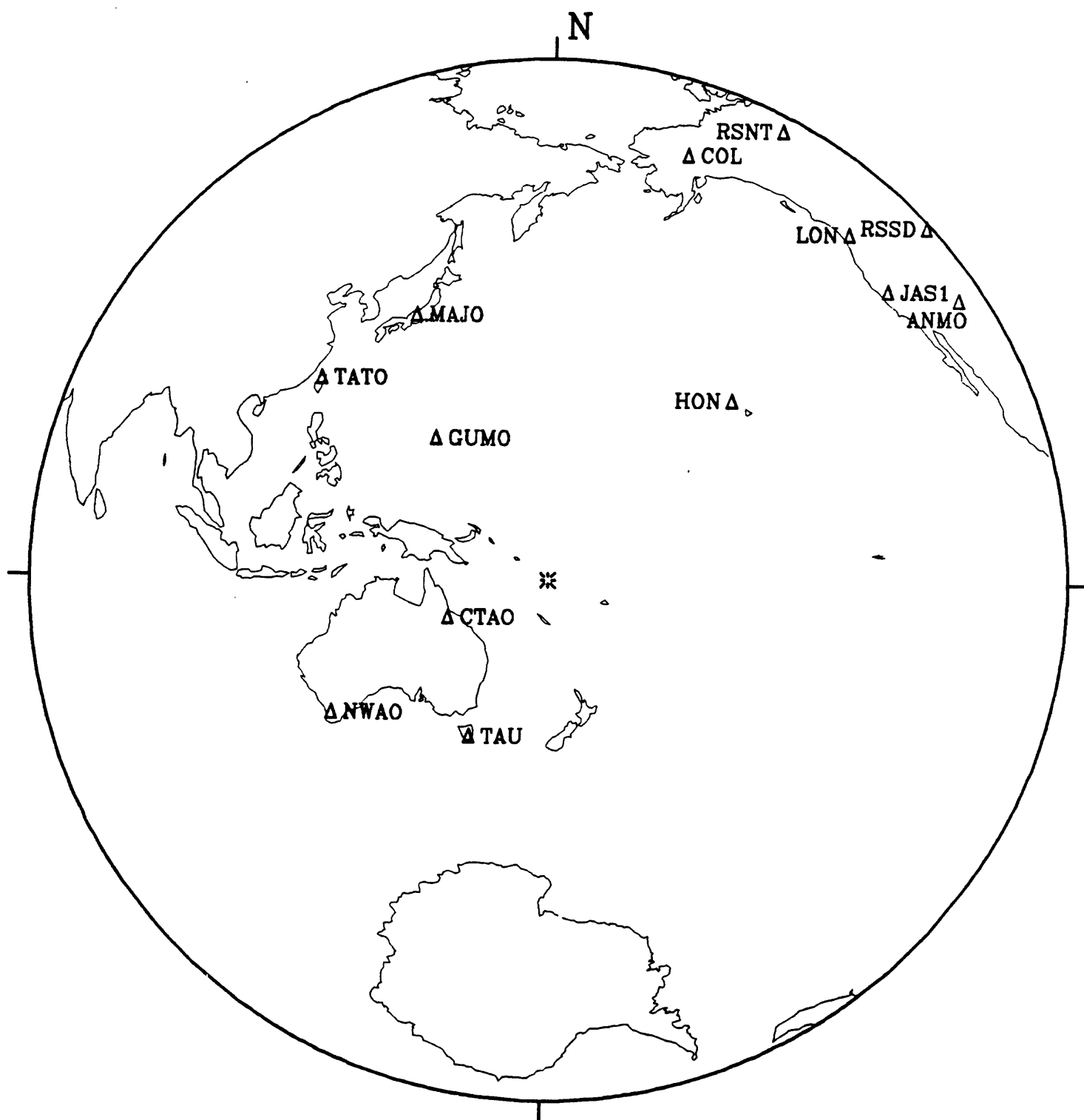
28 November 1985 03:49:53.98
Vanuatu Islands $h=33.0$ $m_b=6.2$ $M_{sz}=7.1$

IPZ



28 November 1985 06:37:48.69

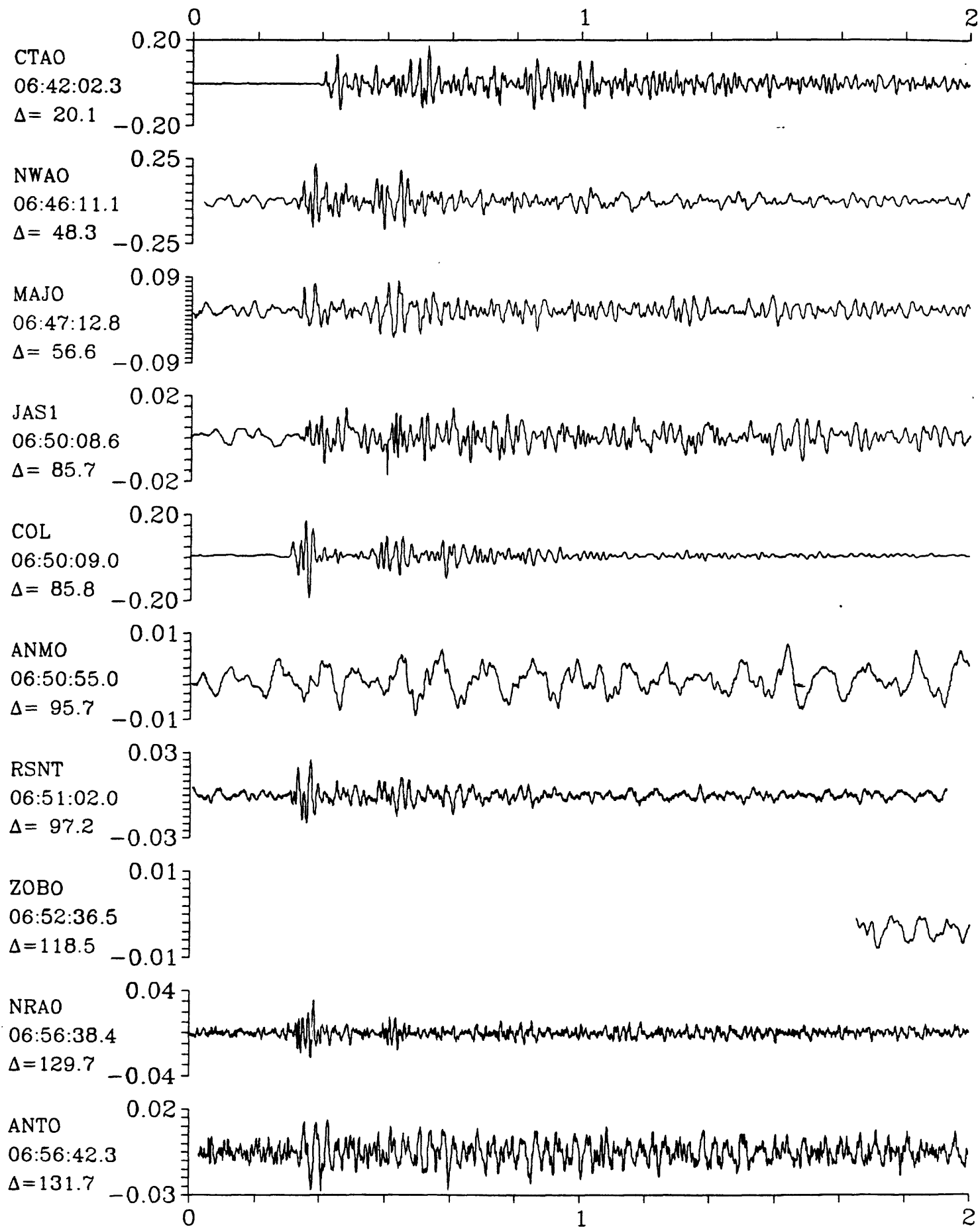
Vanuatu Islands



SPZ

28 November 1985 06:37:48.69
Vanuatu Islands $h=45.5$ $m_b=5.6$ $M_{sz}=5.8$

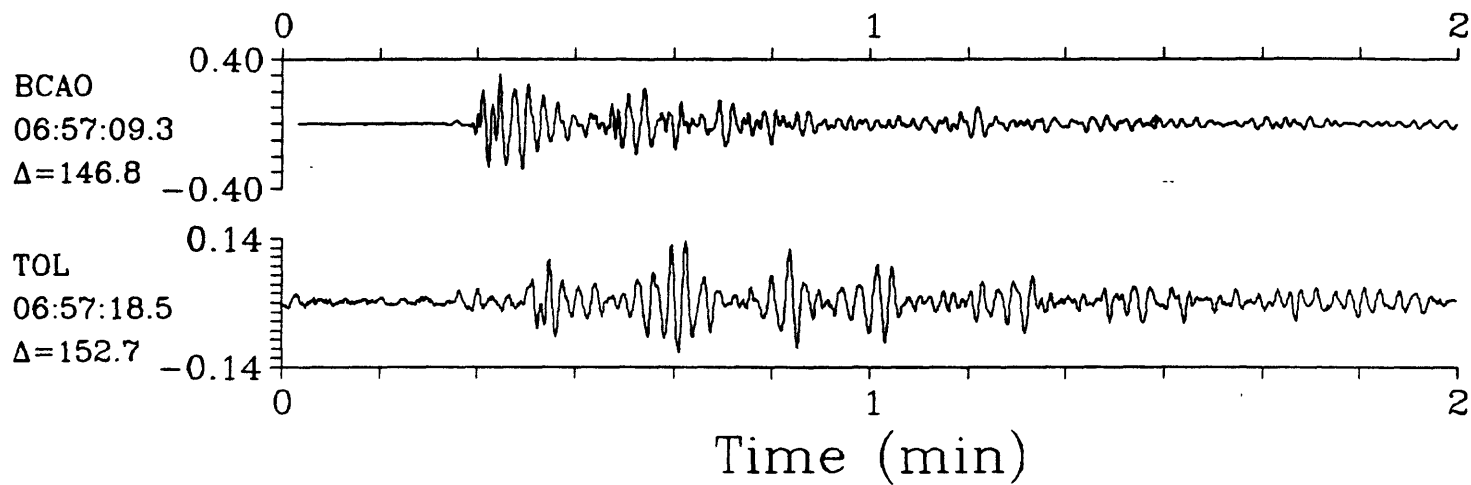
SPZ



SPZ

28 November 1985 06:37:48.69

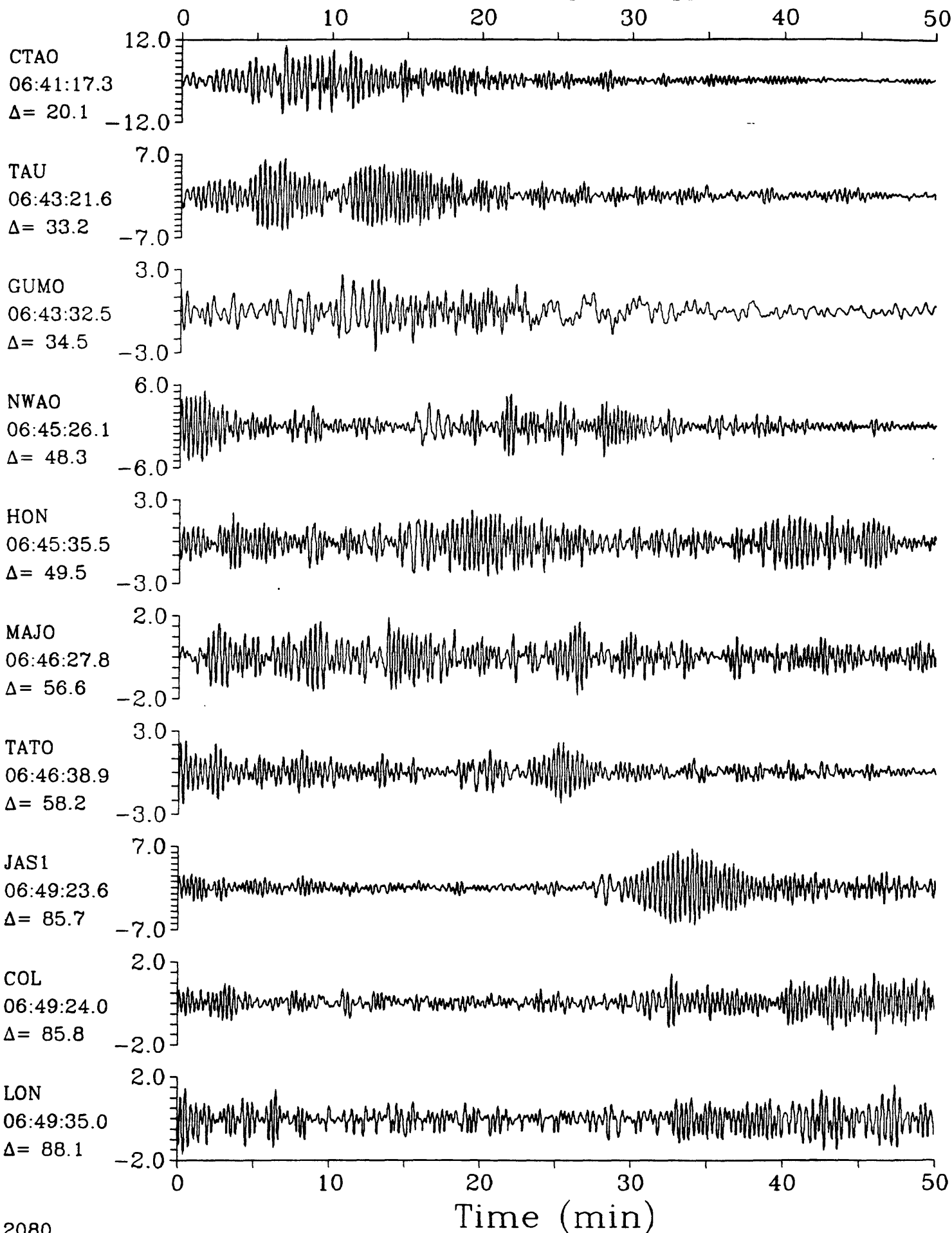
SPZ

Vanuatu Islands $h=45.5$ $m_b=5.6$ $M_{sz}=5.8$ 

LPZ

28 November 1985 06:37:48.69
Vanuatu Islands $h=45.5$ $m_b=5.6$ $M_{sz}=5.8$

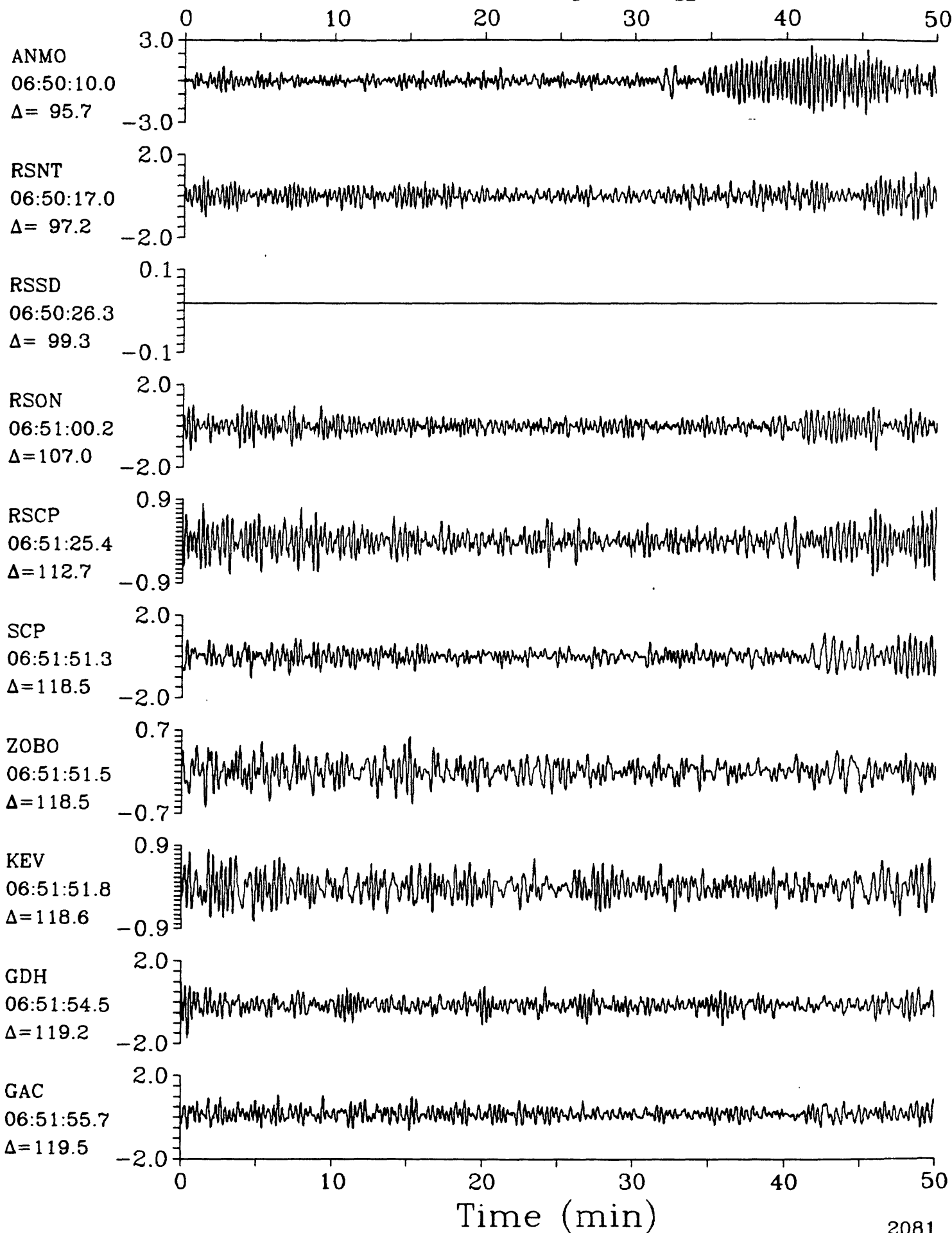
LPZ



LPZ

28 November 1985 06:37:48.69

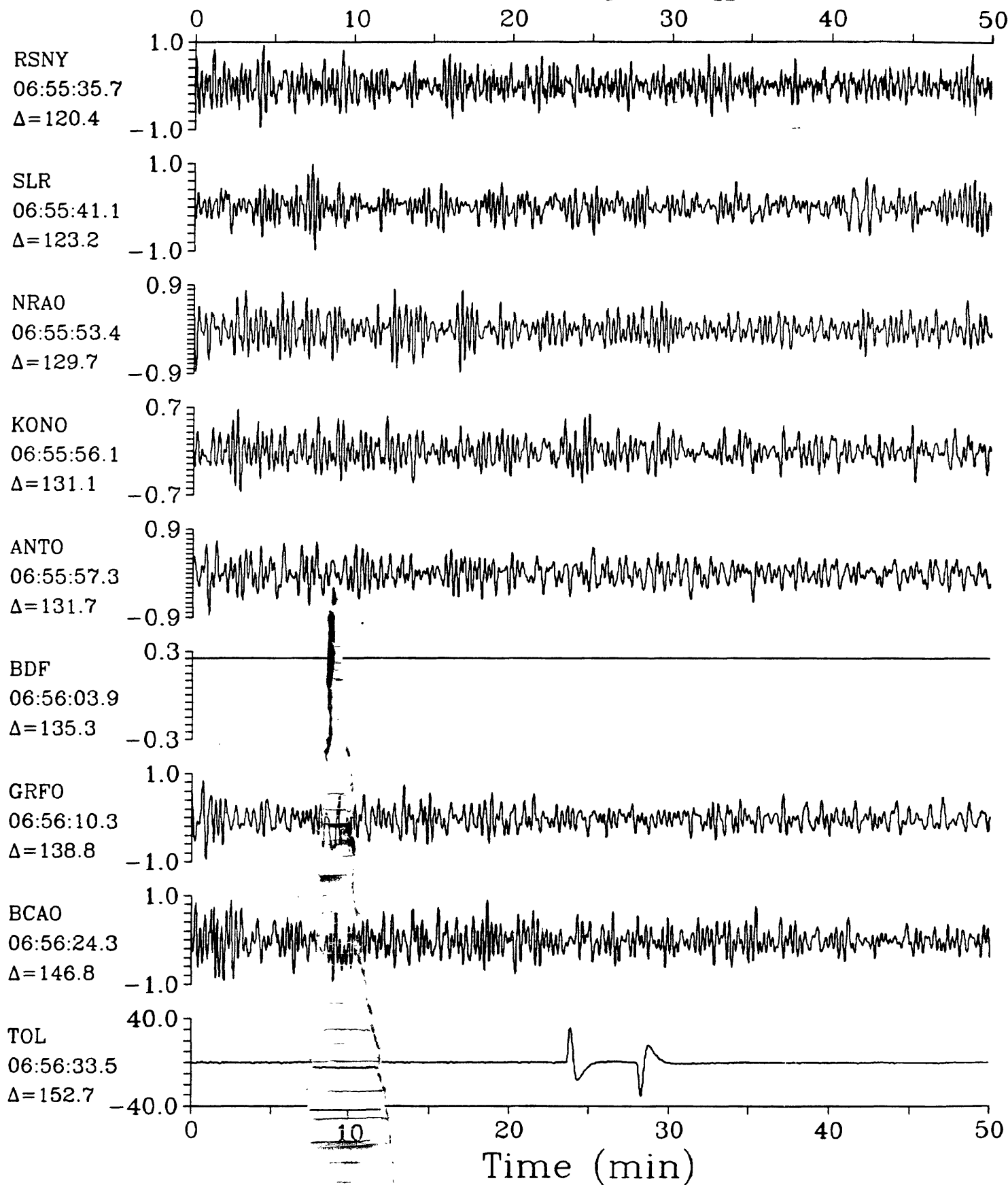
LPZ

Vanuatu Islands $h=45.5$ $m_b=5.6$ $M_{sz}=5.8$ 

LPZ

28 November 1985 06:37:48.69
Vanuatu Islands $h=45.5$ $m_b=5.6$ $M_{sz}=5.8$

LPZ

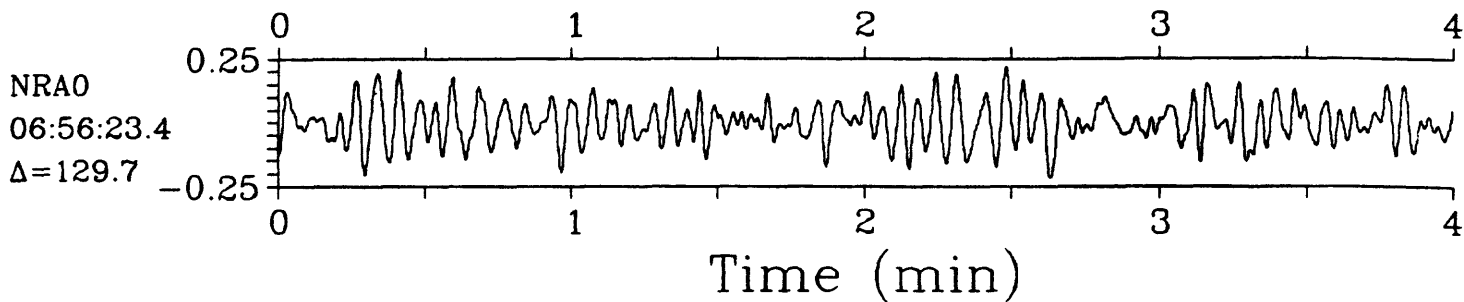


IPZ

28 November 1985 06:37:48.69

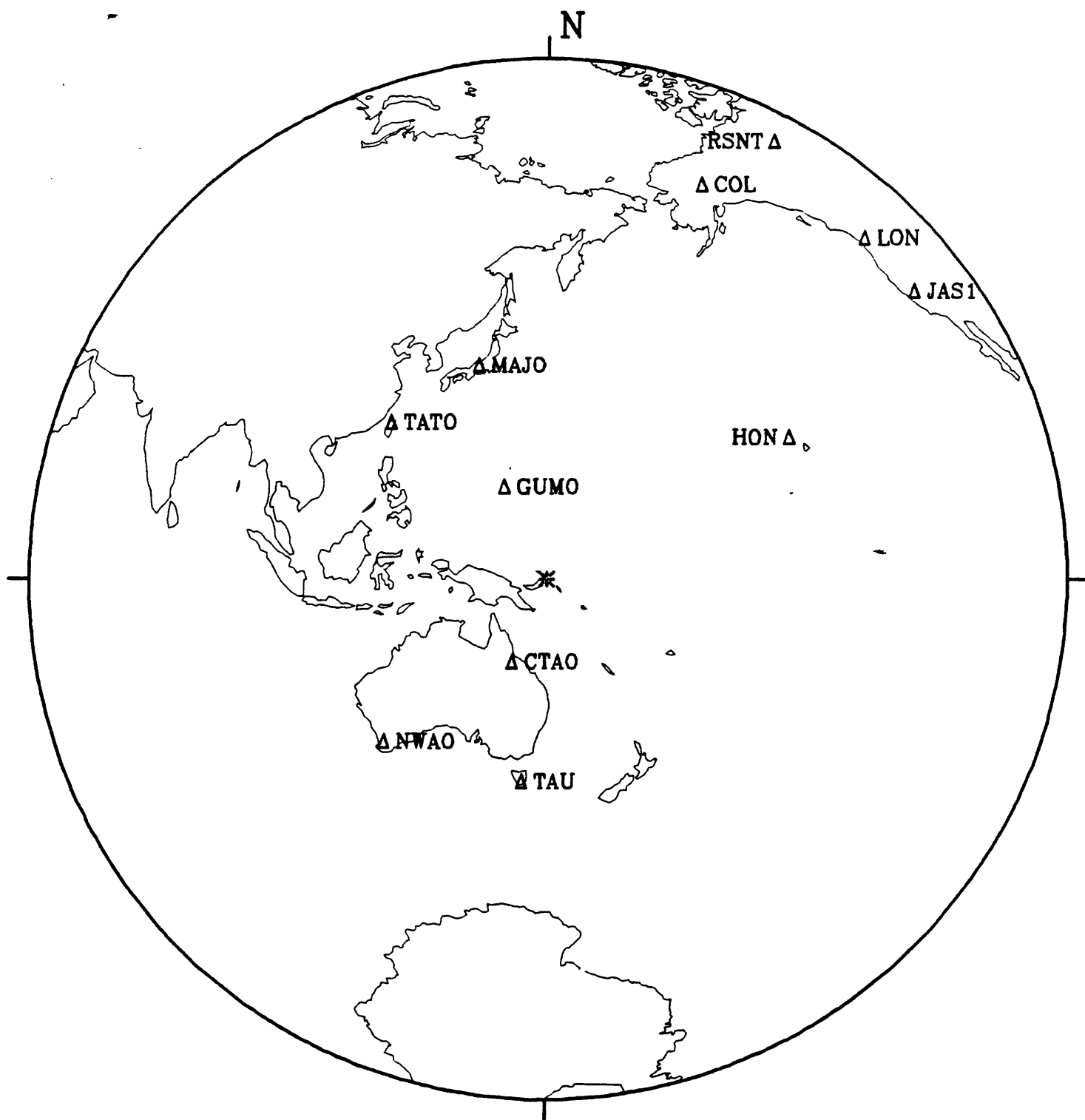
IPZ

Vanuatu Islands $h=45.5$ $m_b=5.6$ $M_{sz}=5.8$



28 November 1985 14:54:41.91

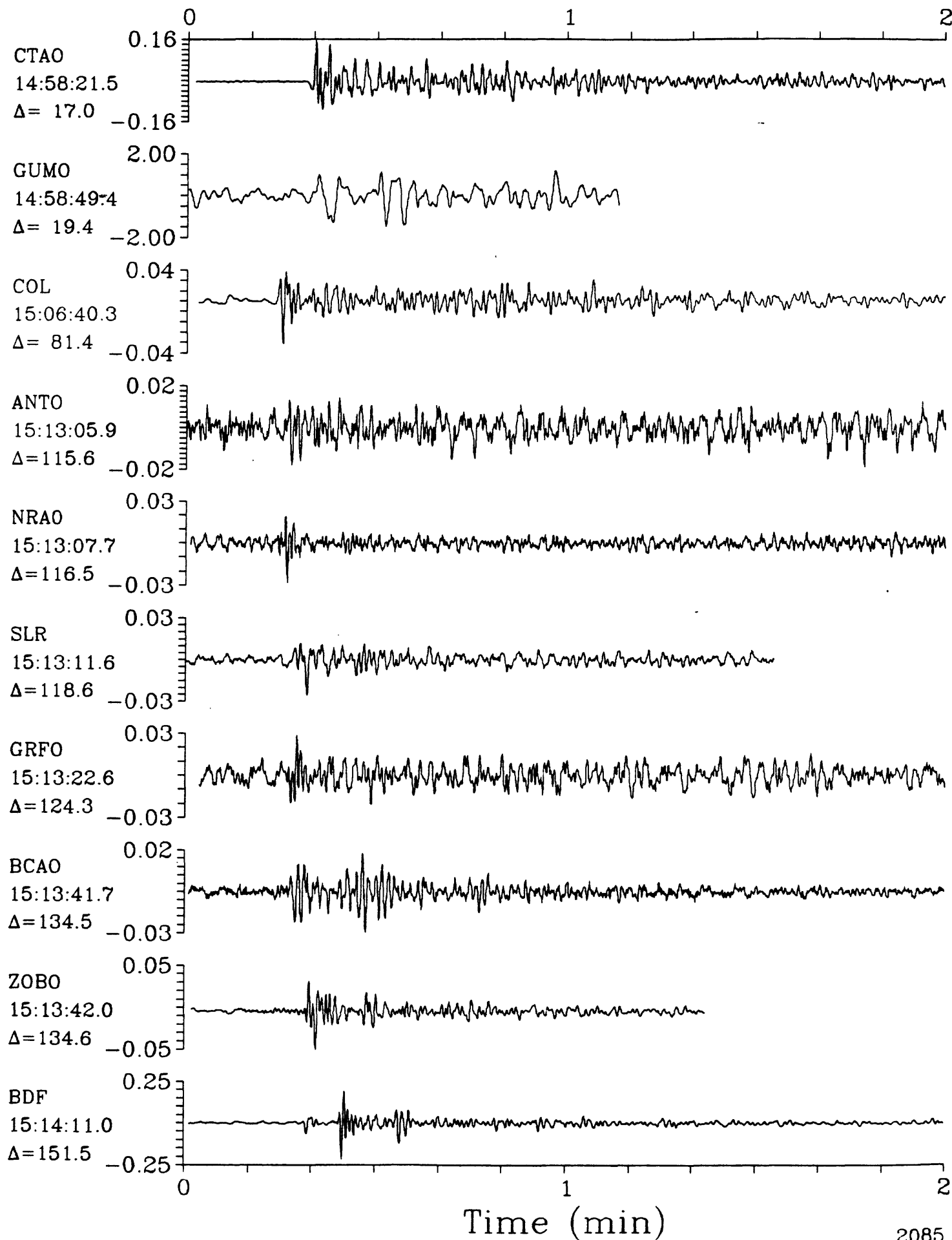
New Britain Region



SPZ

28 November 1985 14:54:41.91

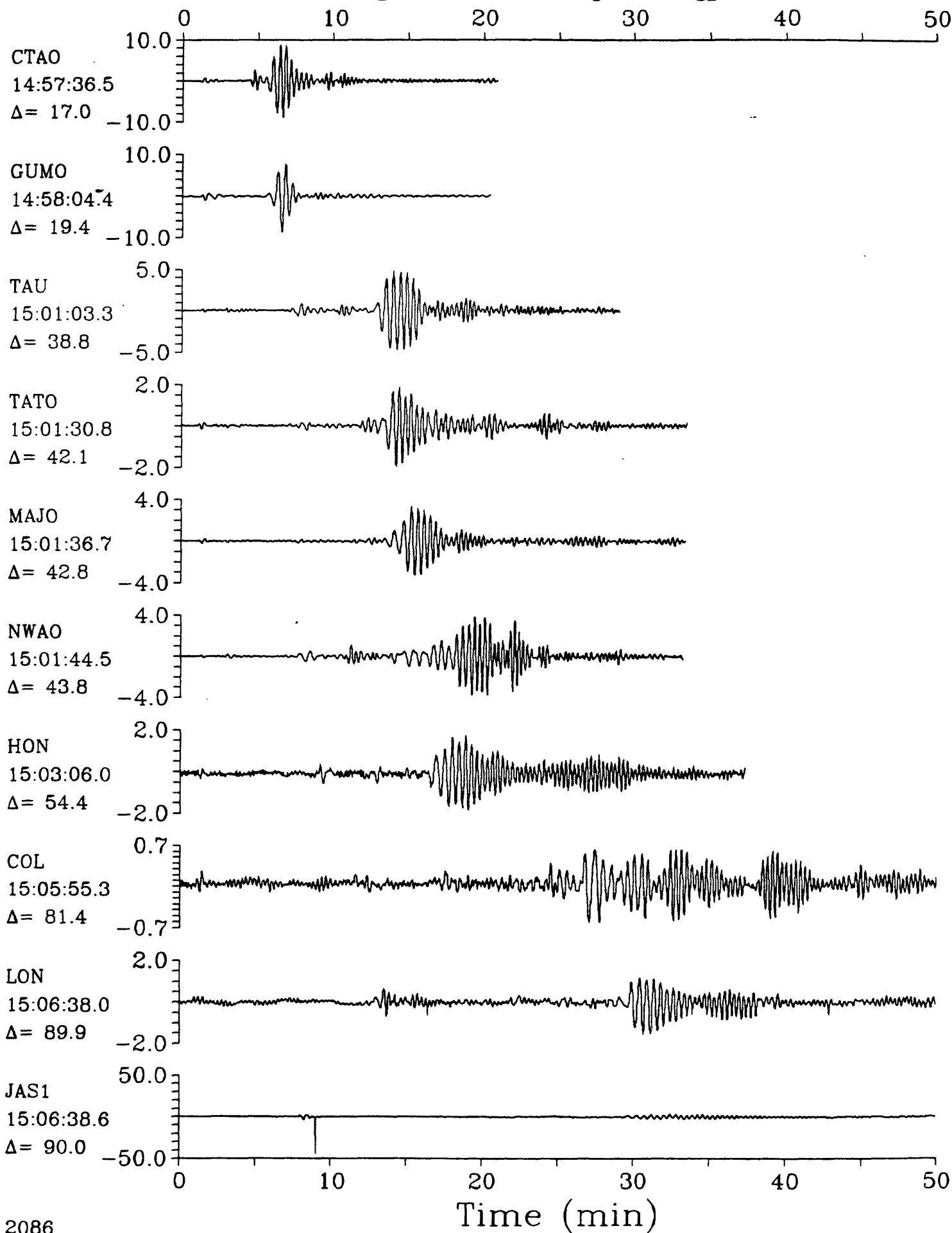
SPZ

New Britain Region $h=36.7$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

28 November 1985 14:54:41.91

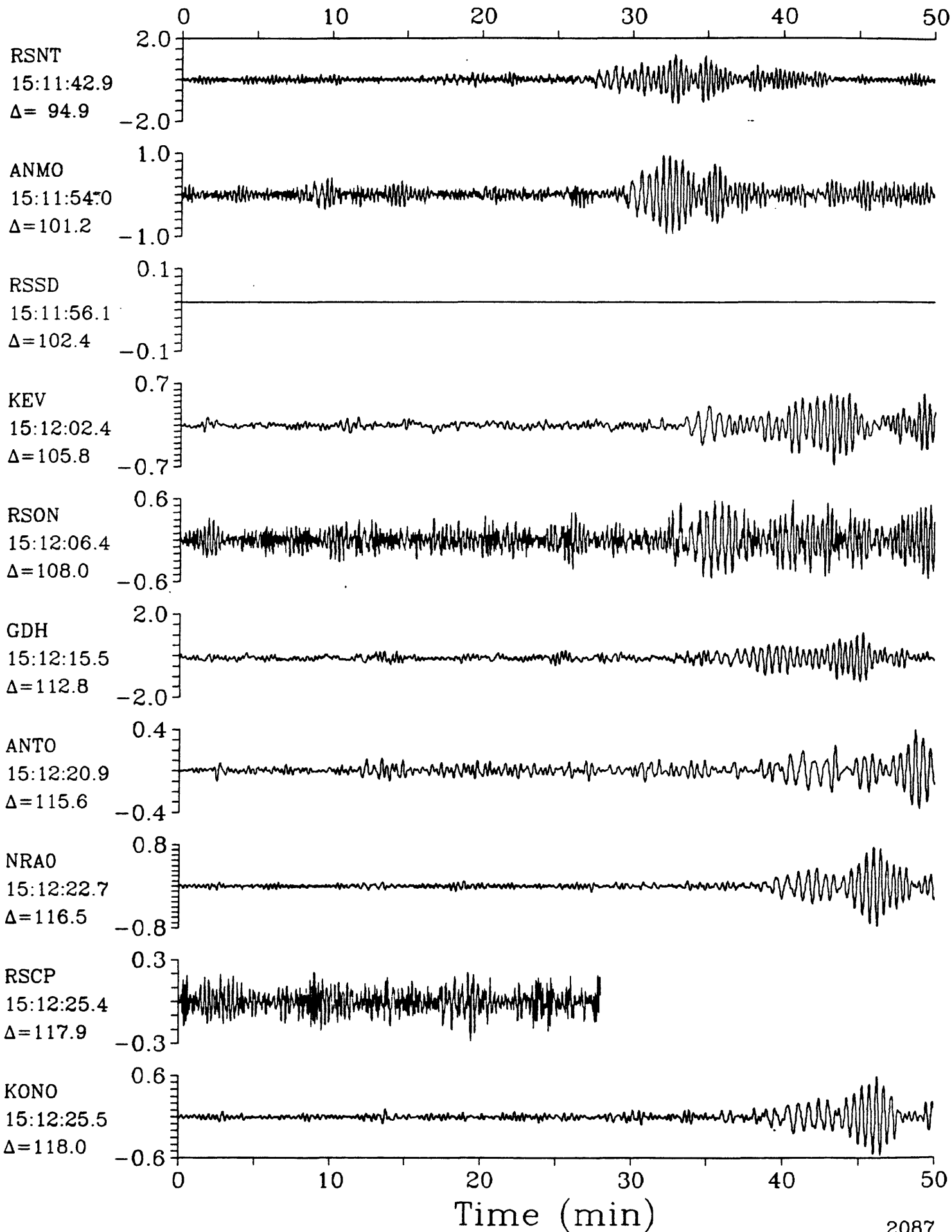
LPZ

New Britain Region $h=36.7$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

28 November 1985 14:54:41.91

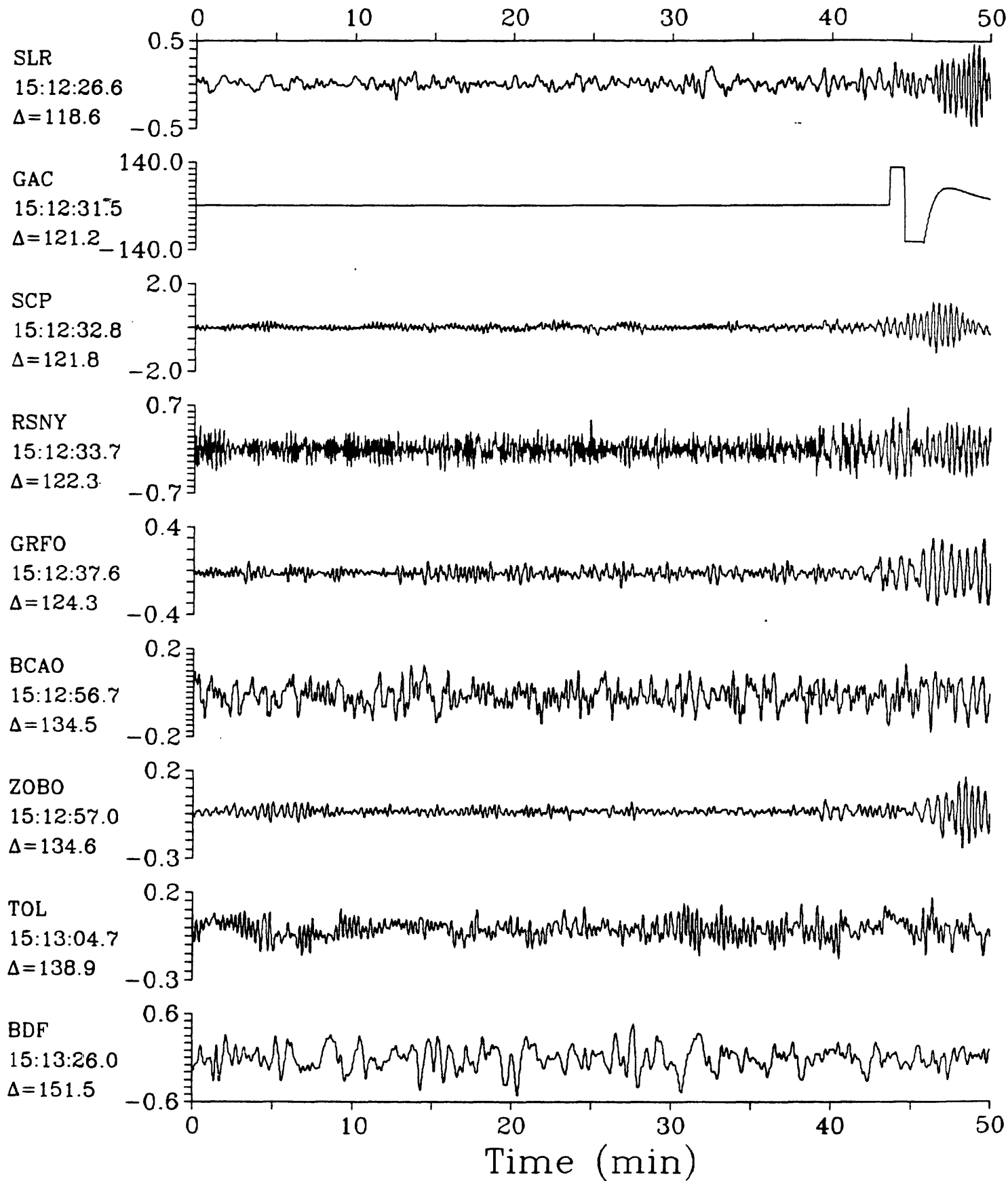
LPZ

New Britain Region $h=36.7$ $m_b=5.4$ $M_{sz}=5.5$ 

LPZ

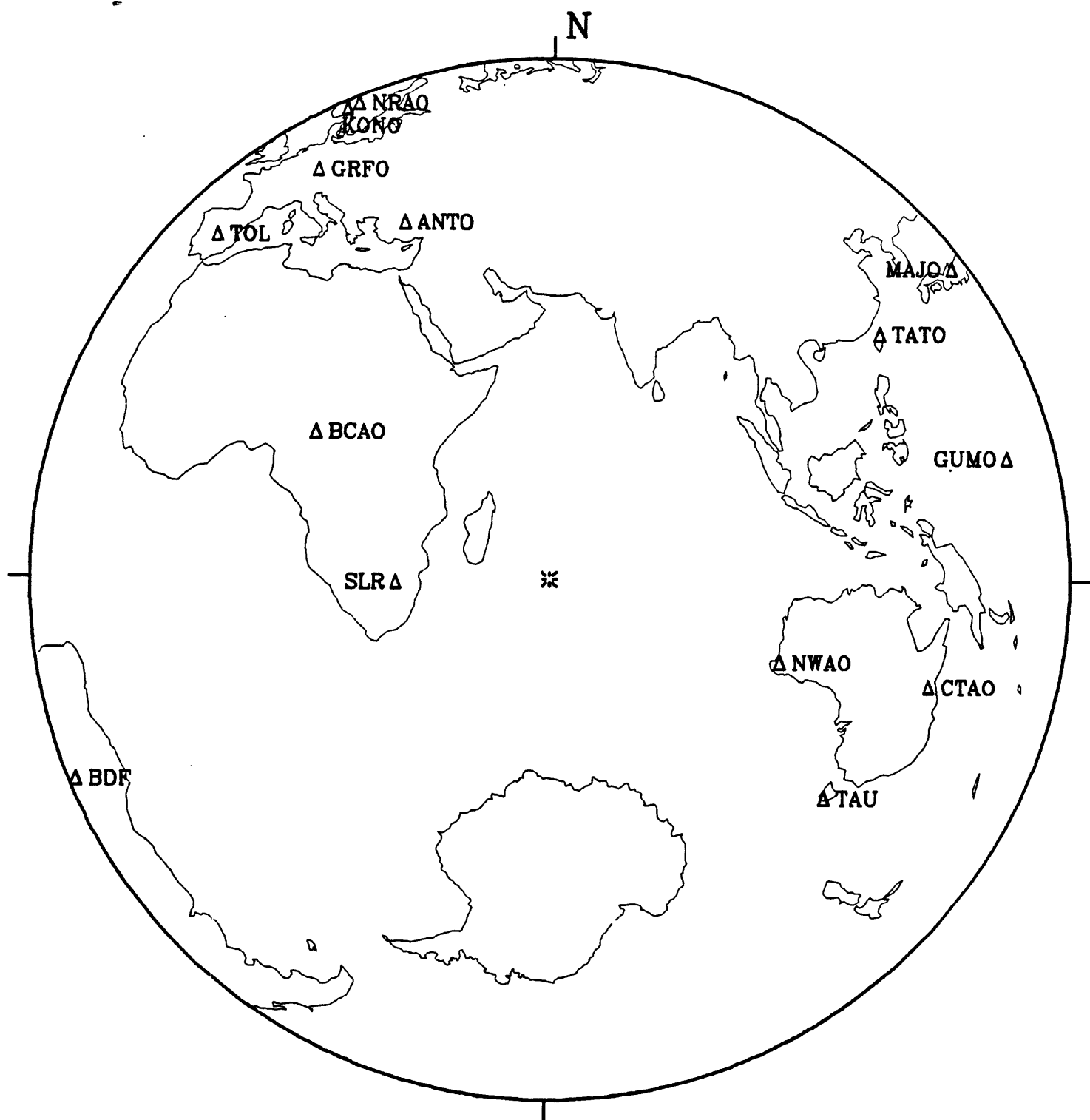
28 November 1985 14:54:41.91

LPZ

New Britain Region $h=36.7$ $m_b=5.4$ $M_{sz}=5.5$ 

30 November 1985 02:28:11.60

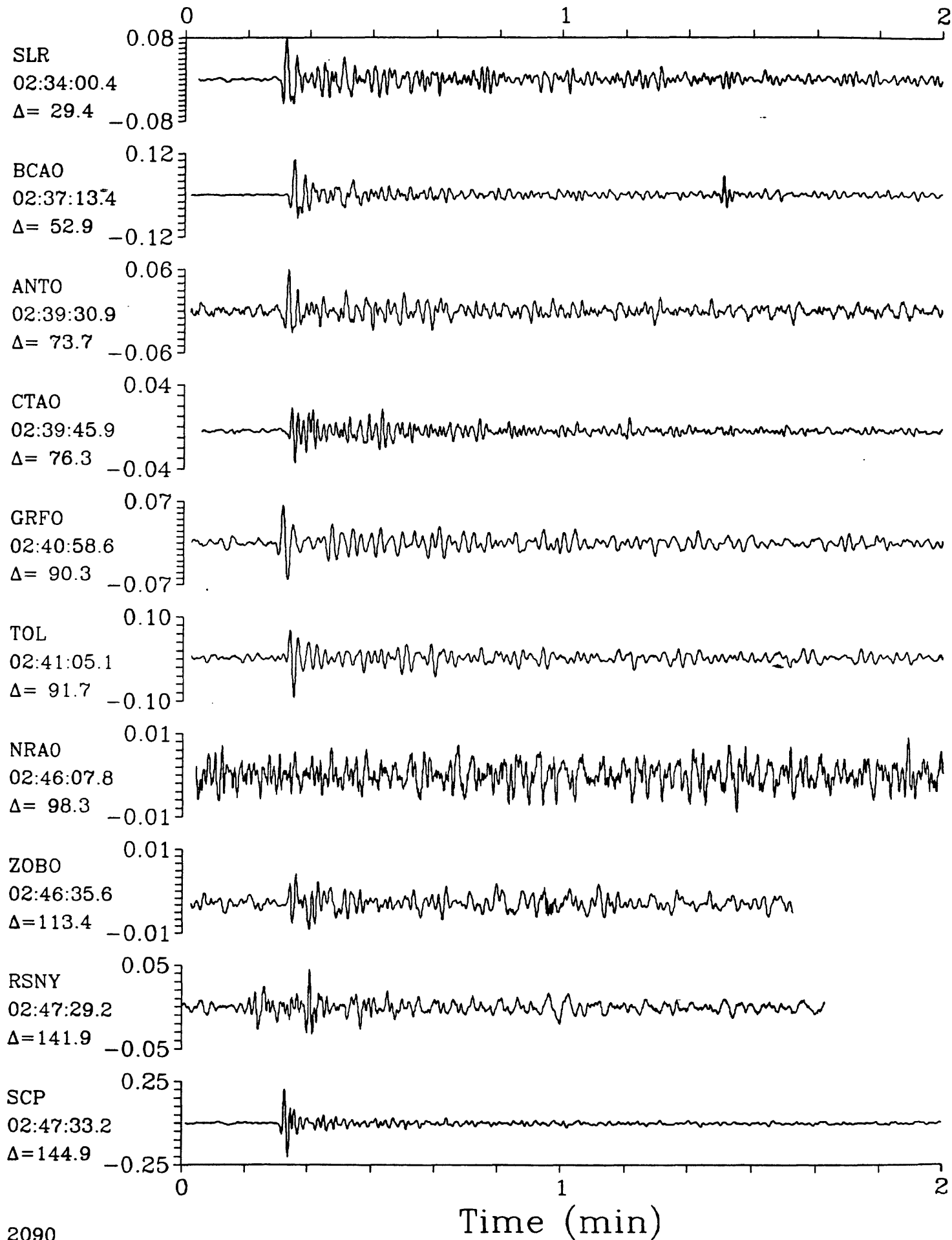
Atlantic-Indian Rise



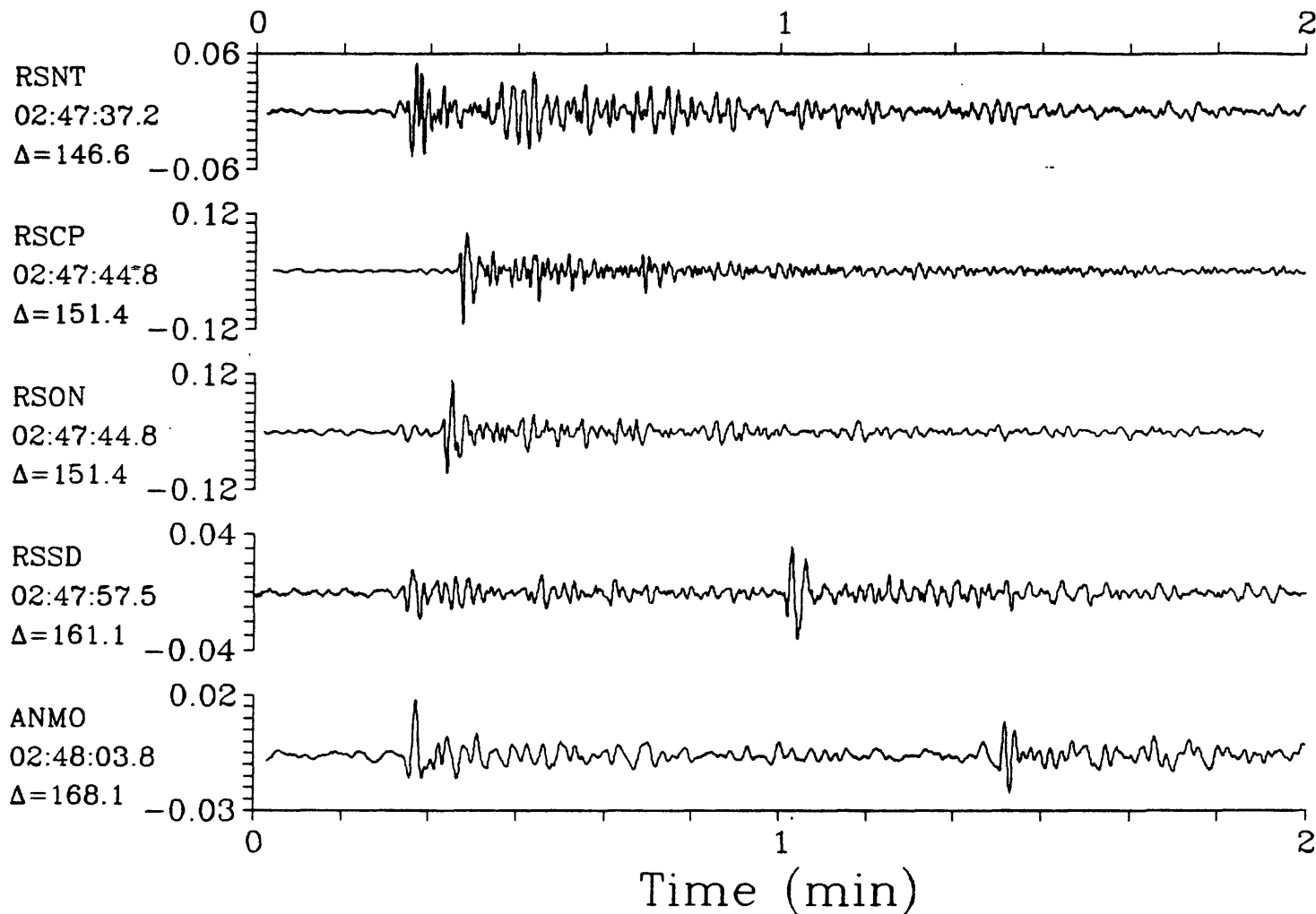
SPZ

30 November 1985 02:28:11.60

SPZ

Atlantic-Indian Rise $h=10.0$ $m_b=5.6$ $M_{sz}=5.3$ 

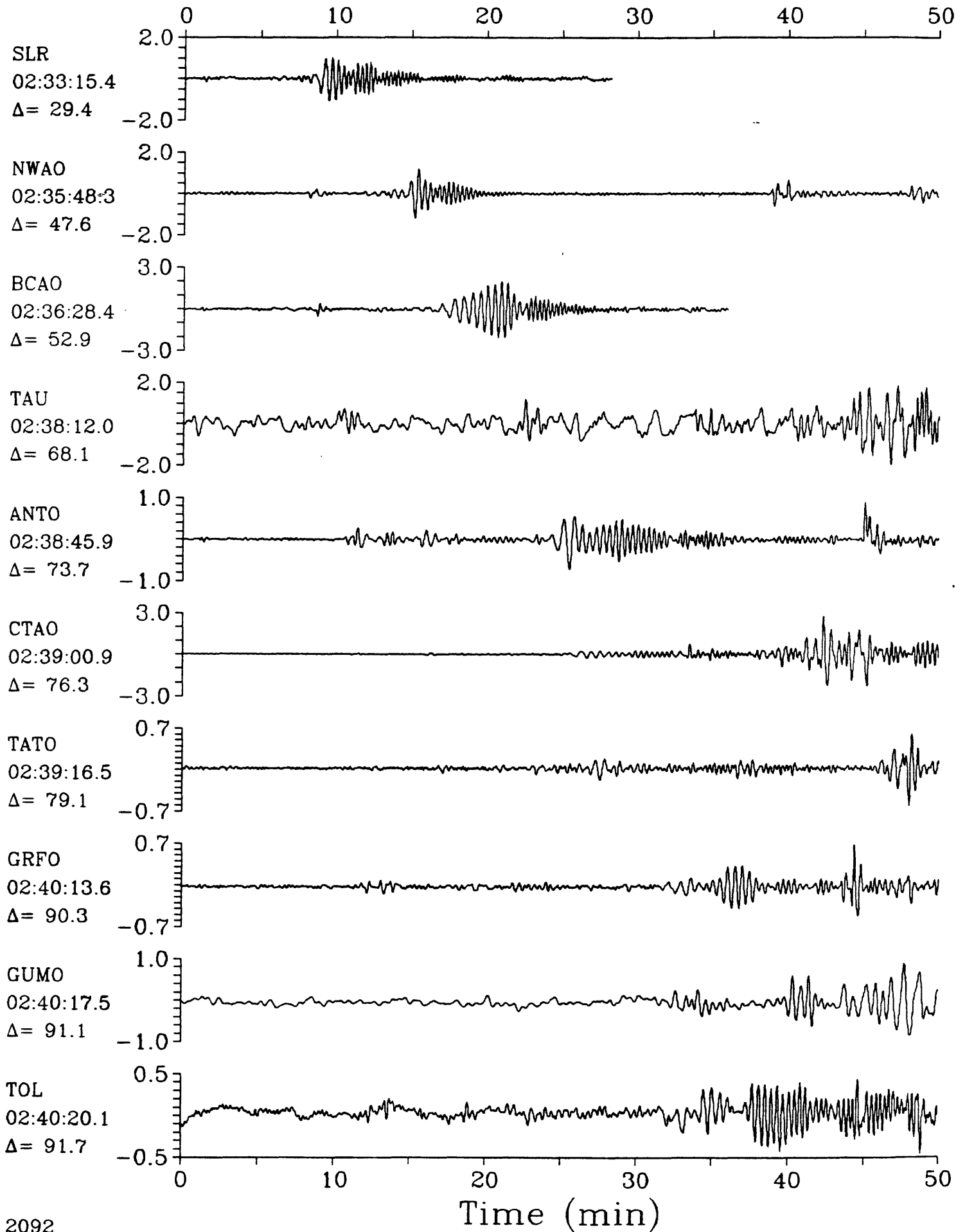
Atlantic-Indian Rise $h=10.0$ $m_b=5.6$ $M_{sz}=5.3$



LPZ

30 November 1985 02:28:11.60

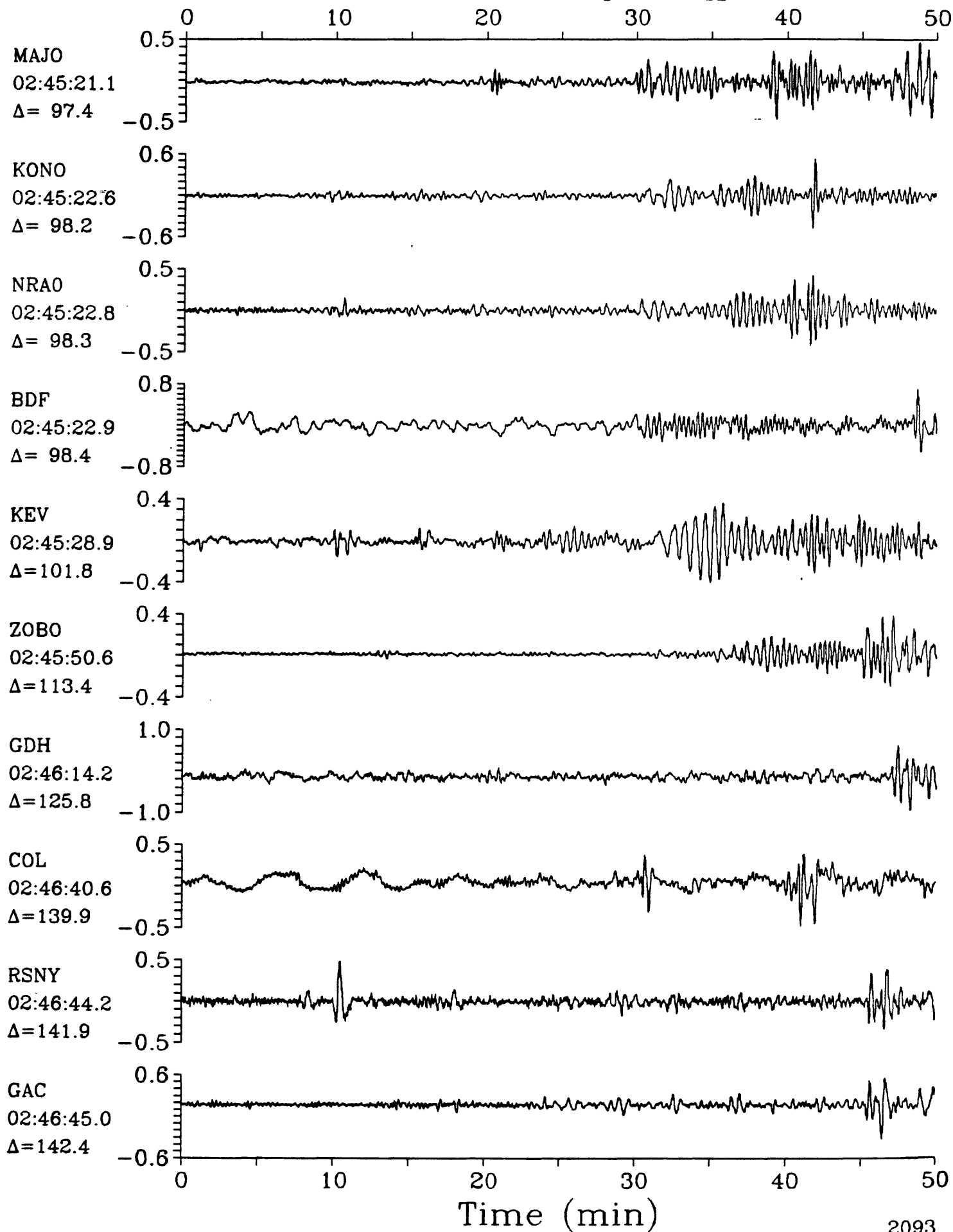
LPZ

Atlantic-Indian Rise $h=10.0$ $m_b=5.6$ $M_{sz}=5.3$ 

LPZ

30 November 1985 02:28:11.60

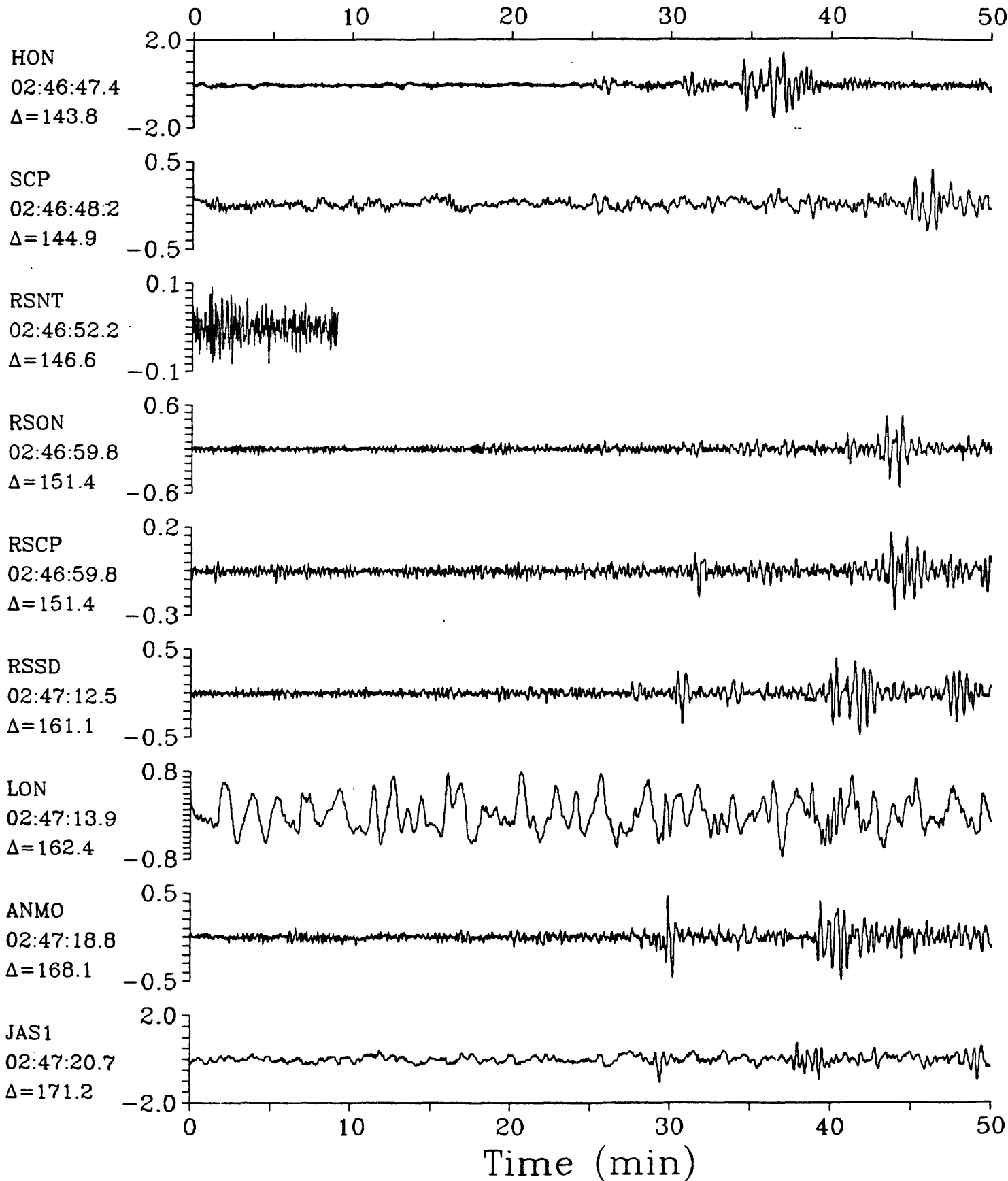
LPZ

Atlantic-Indian Rise $h=10.0$ $m_b=5.6$ $M_{sz}=5.3$ 

LPZ

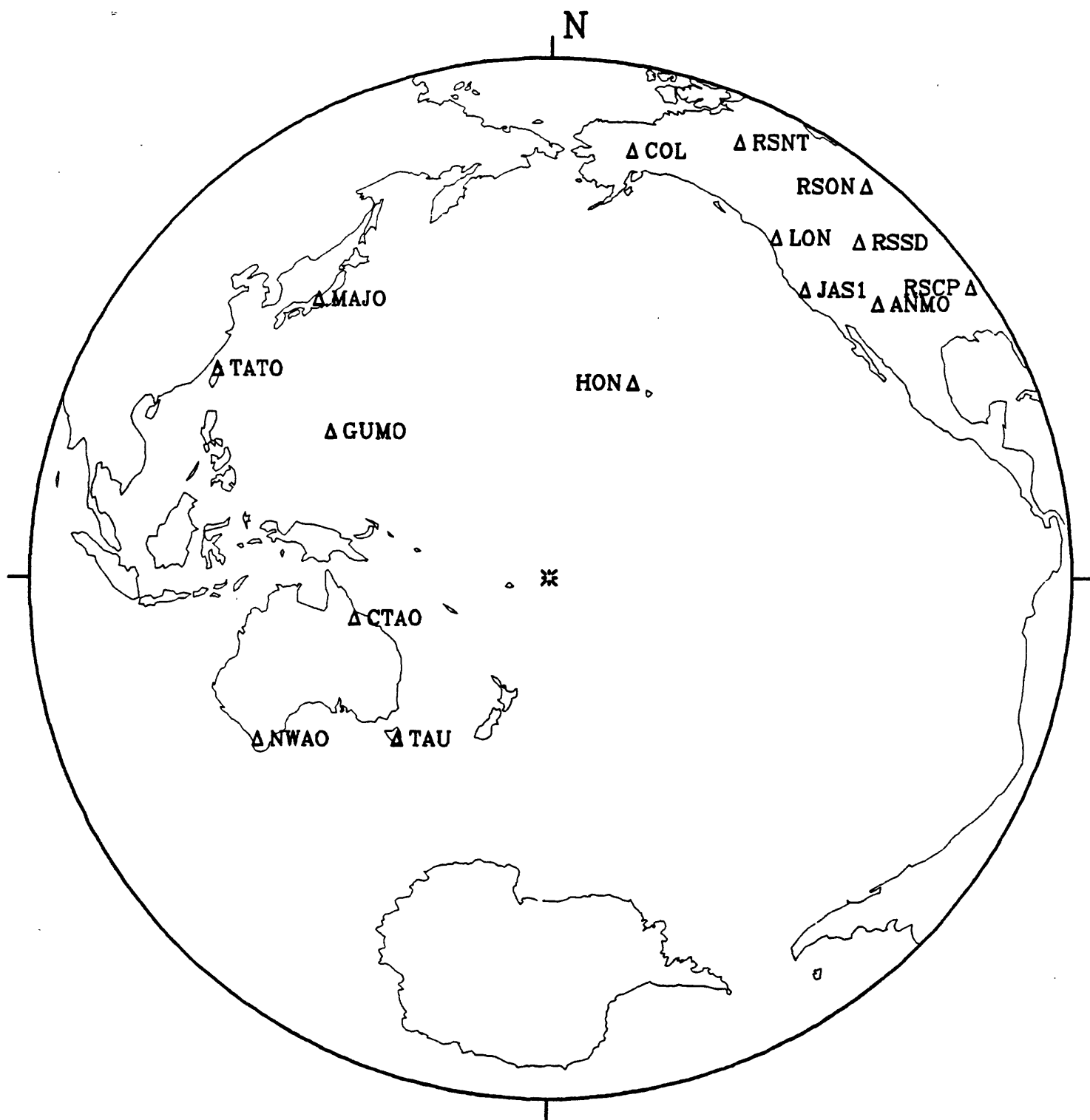
30 November 1985 02:28:11.60

LPZ

Atlantic-Indian Rise $h=10.0$ $m_b=5.6$ $M_{sz}=5.3$ 

30 November 1985 03:04:18.78

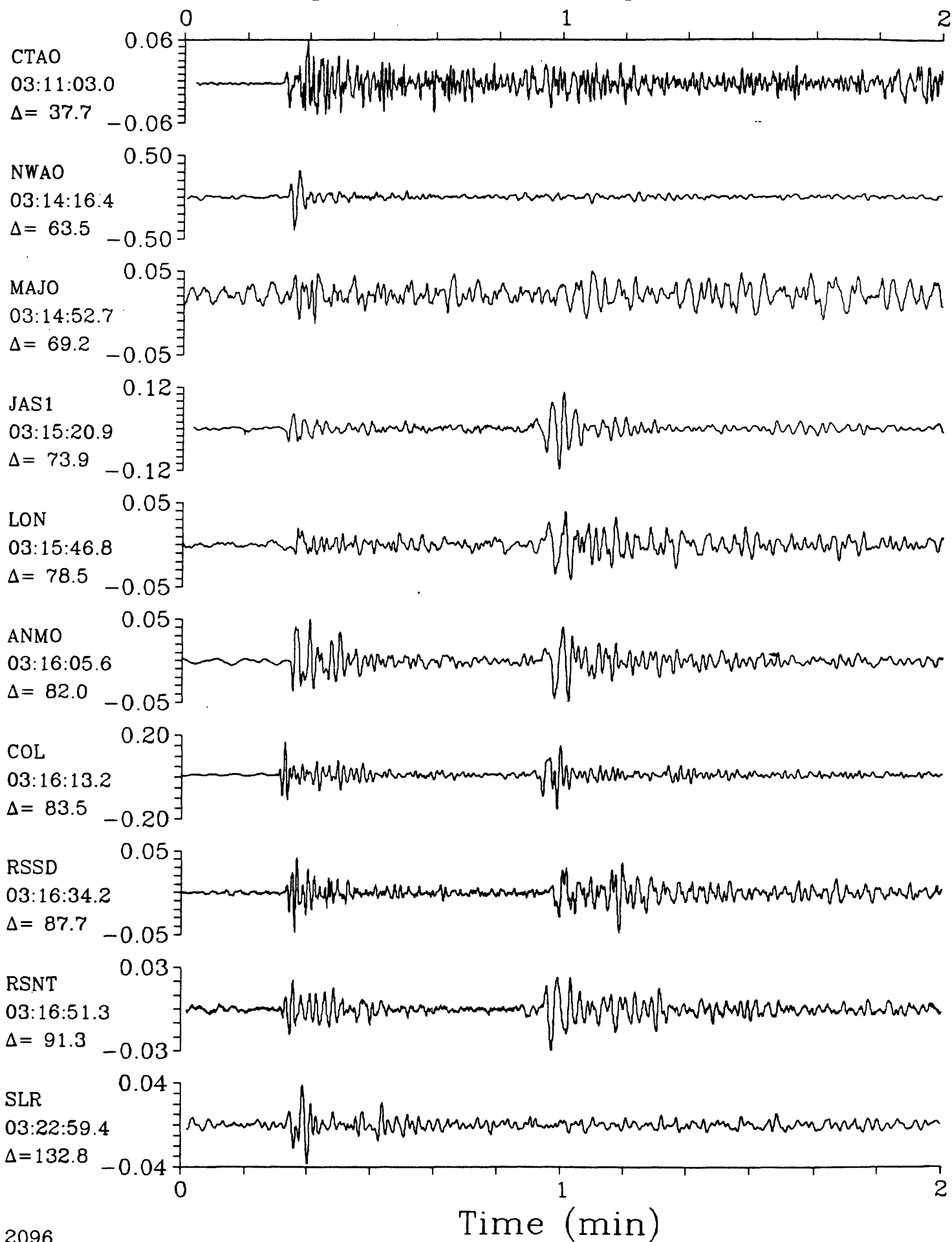
Tonga Islands



SPZ

30 November 1985 03:04:18.78
Tonga Islands $h=165.4$ $m_b=5.6$

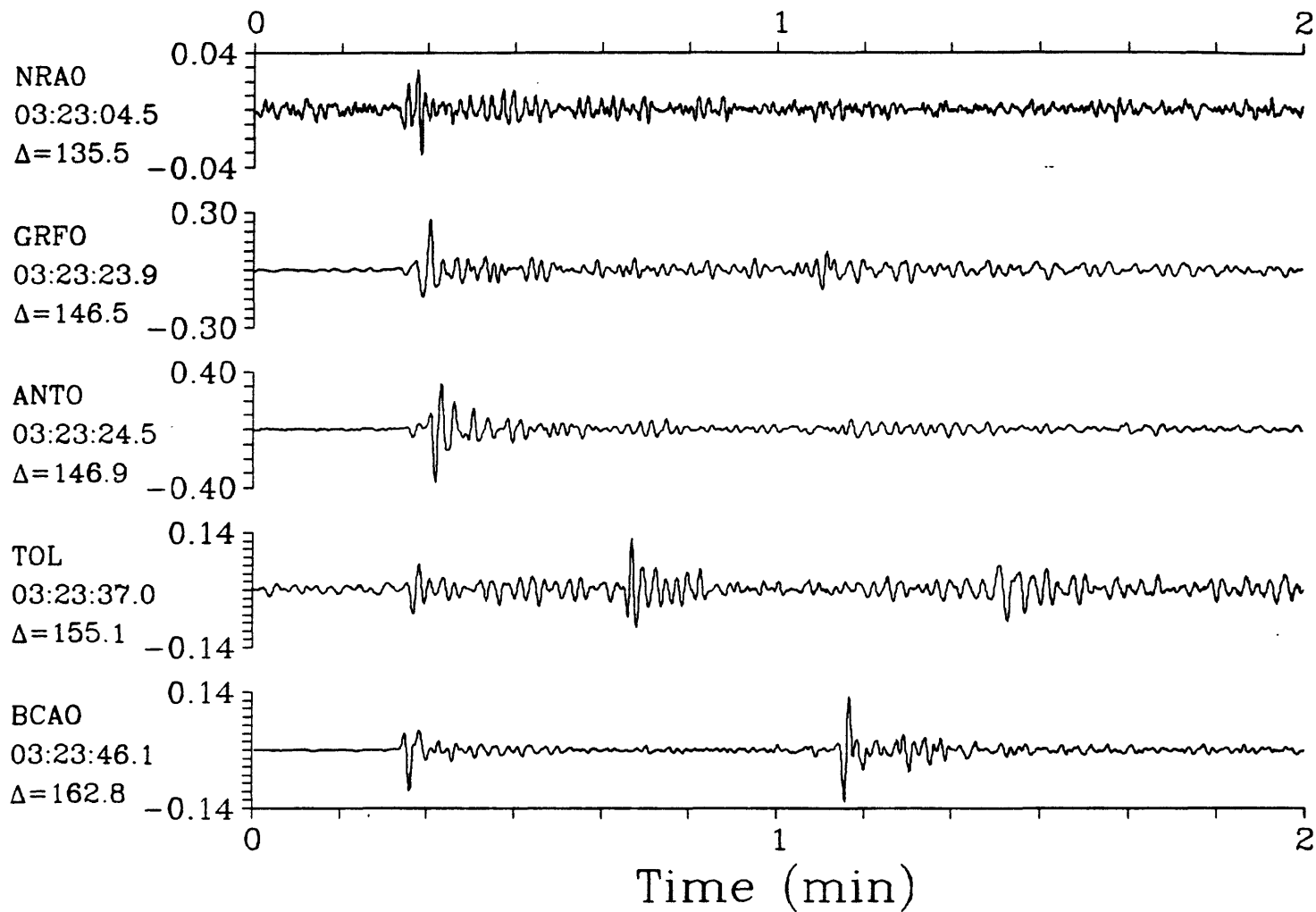
SPZ



SPZ

30 November 1985 03:04:18.78
Tonga Islands $h=165.4$ $m_b=5.6$

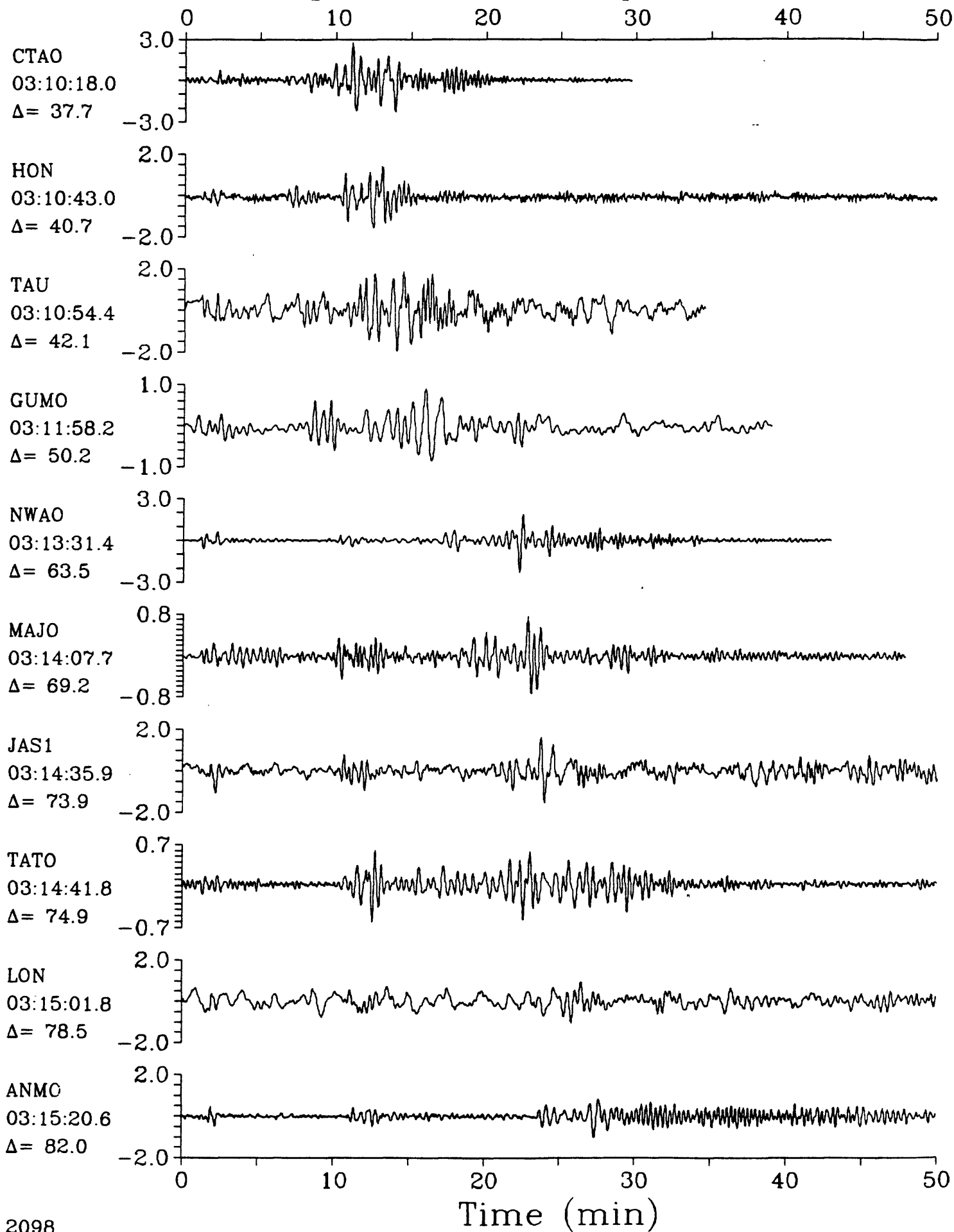
SPZ



LPZ

30 November 1985 03:04:18.78
Tonga Islands $h=165.4$ $m_b=5.6$

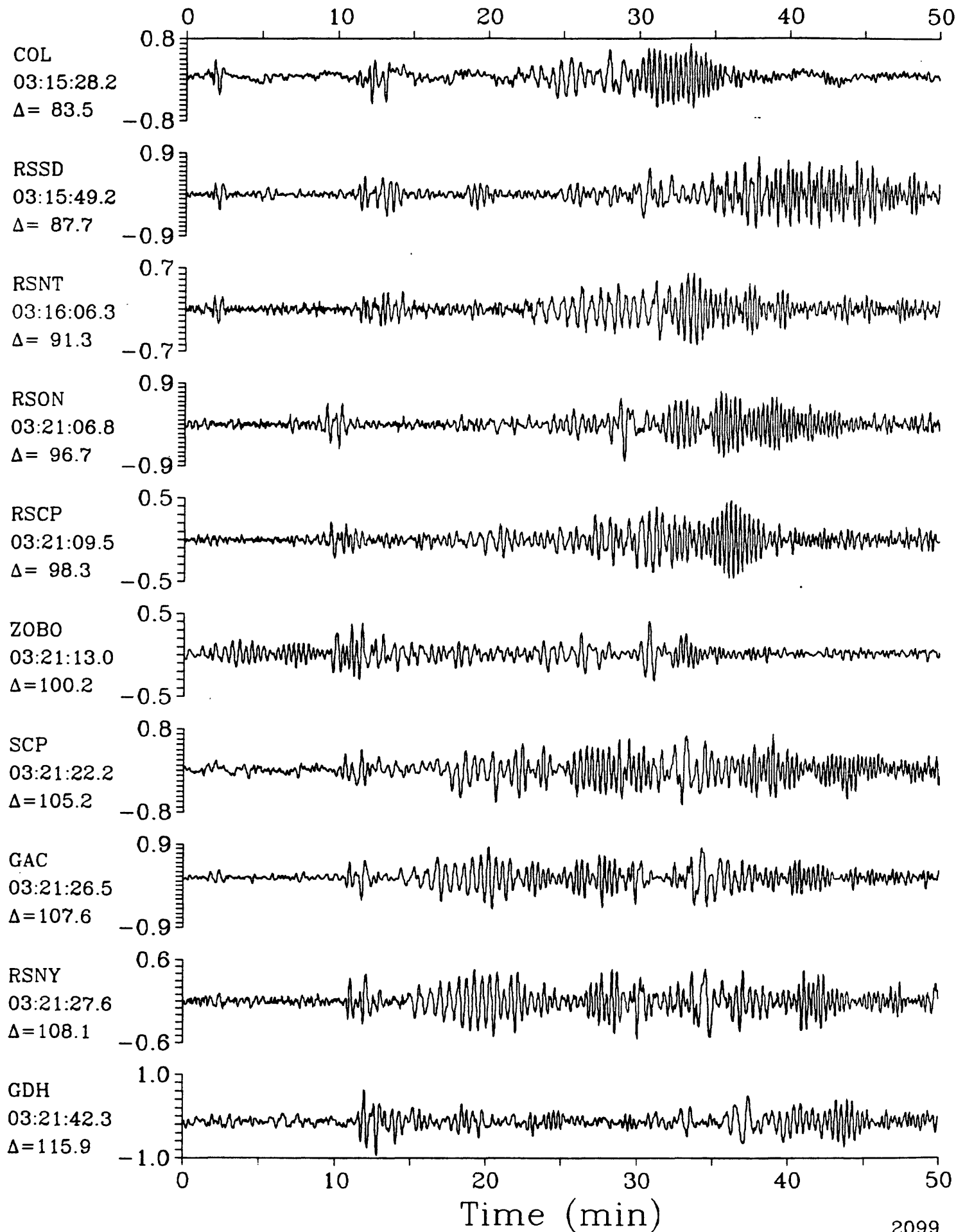
LPZ



LPZ

30 November 1985 03:04:18.78
Tonga Islands $h=165.4$ $m_b=5.6$

LPZ



LPZ

30 November 1985 03:04:18.78
Tonga Islands $h=165.4$ $m_b=5.6$

LPZ

