

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

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

by

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**Open-File Report 86-660I
1986**

**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 PKPdf, 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 September 1986 with magnitudes ≥ 5.5

	Origin Time UTC	Latitude	Longitude	Depth (km)	m _b	Magnitude M _{SZ}	Flinn-Engdahl Region Name
1.	1986 09 05 02:47:18.25	59.434° S	29.466° W	33.0	5.9	6.0	South Sandwich Islands Region
2.	1986 09 05 06:06:15.86	37.054° S	71.760° W	93.6	5.6		S. Chile-Argentina Border Region
3.	1986 09 06 08:52:31.30	23.129° S	176.968° W	172.7	5.6		South of Fiji Islands
4.	1986 09 10 22:20:48.50	8.843° S	157.505° E	10.0	5.5		Solomon Islands
5.	1986 09 11 00:18:24.27	5.297° S	152.633° E	47.2	5.9	6.4	New Britain Region
6.	1986 09 11 00:27:57.10	5.417° S	152.766° E	33.6	5.6		New Britain Region
7.	1986 09 12 23:57:16.13	56.211° N	153.344° W	33.0	6.0	6.1	Kodiak Island Region
8.	1986 09 13 09:28:24.21	60.904° S	37.022° W	10.0	5.8	6.1	Scotia Sea
9.	1986 09 13 15:17:24.96	31.647° S	179.967° W	243.2	5.8		Kermadec Islands Region
10.	1986 09 13 17:24:33.78	37.028° N	22.200° E	29.2	5.8	5.9	Southern Greece
11.	1986 09 14 20:58:23.05	6.497° S	154.900° E	58.0	5.5		Solomon Islands
12.	1986 09 15 08:48:11.42	22.711° S	175.327° W	33.0	5.9	5.8	Tonga Islands Region
13.	1986 09 15 21:42:29.97	36.674° N	71.088° E	95.2	5.8		Afghanistan-USSR Border Region
14.	1986 09 16 18:20:21.58	19.285° N	146.334° E	83.0	6.4		Mariana Islands Region
15.	1986 09 16 20:57:22.96	56.369° N	153.292° W	33.0	5.3	5.5	Kodiak Island Region
16.	1986 09 17 06:44:53.51	3.824° S	128.817° E	33.0	5.5		Ceram
17.	1986 09 17 11:01:18.59	26.537° N	128.639° E	33.8	5.3	5.5	Ryukyu Islands
18.	1986 09 17 12:08:09.22	37.270° N	71.785° E	119.5	5.5		Afghanistan-USSR Border Region
19.	1986 09 17 21:25:15.28	10.521° N	56.911° E	10.0	5.8	6.0	Carlsberg Ridge
20.	1986 09 22 16:14:56.35	6.696° S	130.302° E	33.0	5.7	4.7	Banda Sea
21.	1986 09 23 13:30:17.34	16.589° S	167.230° E	33.0	5.4	5.6	Vanuatu Islands
22.	1986 09 25 06:15:53.77	22.900° N	108.067° W	10.0	5.3	5.7	Off Coast of Central Mexico
23.	1986 09 25 20:06:11.58	3.637° N	126.857° E	35.7	5.6	5.6	Talud Islands
24.	1986 09 30 22:30:00.10	37.300° N	116.307° W	0.0	5.5	4.5	Southern Nevada

Table 2. Current network-event tape station list

Code	ID	Station	Latitude	Longitude	Elevation (m)	Type [*]
AFI	69	Afiamalu, 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
BGIO	34	Bar-Giyora, Israel	31.72° N	35.09° E	651.7	SRO
BOCO	32	Bogota, Columbia	4.59° N	74.04° W	3071.0	SRO
CHTO	33	Chiang Mai, Thailand	18.79° N	98.98° E	316.0	SRO
COL	62	College, Alaska	64.90° N	147.79° W	320.0	DWWSSN
CTAO	50	Charters Towers, Australia	20.09° S	146.25° E	357.0	ASRO
GAC	43	Glen Almond, Quebec, Canada	45.70° N	75.48° W	620.0	SRO
GDH	70	Godhavn, Greenland	69.25° N	53.53° W	23.0	DWWSSN
GRA1	302	Haidhof, Germany	49.69° N	11.22° E	500.0	GRF
GRB1	303	Brunnthal, Germany	49.39° N	11.65° E	494.0	GRF
GRC1	304	Eglofsdorf, Germany	48.99° N	11.52° E	512.0	GRF
GRFO	39	Graefenberg, Germany	49.69° N	11.22° E	500.0	SRO
GUMO	35	Guam, Mariana Islands	13.59° N	144.87° E	14.0	SRO
HON	66	Honolulu, Hawaii	21.32° N	158.01° W	2.0	DWWSSN
JAS1	64	Jamestown, California	37.93° N	120.42° W	425.0	DWWSSN
KONO	54	Kongsberg, Norway	59.65° N	9.60° E	216.0	ASRO
LEM	76	Lembang, Indonesia	6.833° S	107.62° E	1247.0	DWWSSN
LON	63	Longmire, Washington	46.75° N	121.81° W	854.0	DWWSSN
MAJO	53	Matsushiro, Japan	36.54° N	138.21° E	422.0	ASRO
NE03	203	Logumkloster, Denmark	55.045° N	9.153° E	25.0	NARS
NE04	204	Witteveen, Netherlands	52.813° N	6.668° E	17.0	NARS
NE05	205	Utrecht, Netherlands	52.088° N	5.172° E	2.0	NARS
NE06	206	Dourbes, Belgium	50.097° N	4.595° E	225.0	NARS
NE07	207	Villiers-Adam, France	49.074° N	2.232° E	70.0	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
NE14	214	Granada, Spain	37.190° N	3.595° W	774.0	NARS
NE15	215	Valkenburg, Netherlands	50.867° N	5.785° E	100.0	NARS
NE16	216	Clermont-Ferand, France	45.763° N	3.103° E	80.0	NARS
NE17	217	Toledo, Spain	39.881° N	4.049° W	480.0	NARS
NRA0	301	NORESS array site A0	60.735° N	11.541° E	302.0	NRSA
NWAO	38	Mundaring (Narrogin), Australia	32.93° S	117.24° E	265.0	SRO
RSCP	81	Cumberland Plateau, Tennessee,	35.60° N	85.57° W	481.0	RSTN
RSNT	82	Yellowknife, Northwest Territories	62.48° N	114.59° W	90.0	RSTN
RSNY	84	Adirondack, New York	44.55° N	74.53° W	351.0	RSTN
RSON	85	Red Lake, Ontario	50.86° N	93.70° W	302.0	RSTN
RSSD	83	Black Hills, South Dakota	44.12° N	104.04° W	1948.0	RSTN
SLR	71	Silverton, South Africa	25.73° S	28.28° E	1348.0	DWWSSN
SNZO	42	Wellington (South Karori), New Zealand	41.31° S	174.70° E	-12.0	SRO
TATO	41	Taipei, Taiwan	24.98° N	121.49° E	53.0	SRO
TAU	74	Hobart, Tasmania	42.91° S	147.32° E	132.0	DWWSSN
TOL	73	Toledo, Spain	39.88° N	4.05° W	480.0	DWWSSN
ZOBO	51	La Paz (Zongo), Bolivia	16.27° S	68.13° W	4450.0	ASRO

^{*} ASRO - Abbreviated Seismic Research Observatory

DWWSSN - Digital World Wide Standardized Seismograph Network

GRF - Graefenberg Array

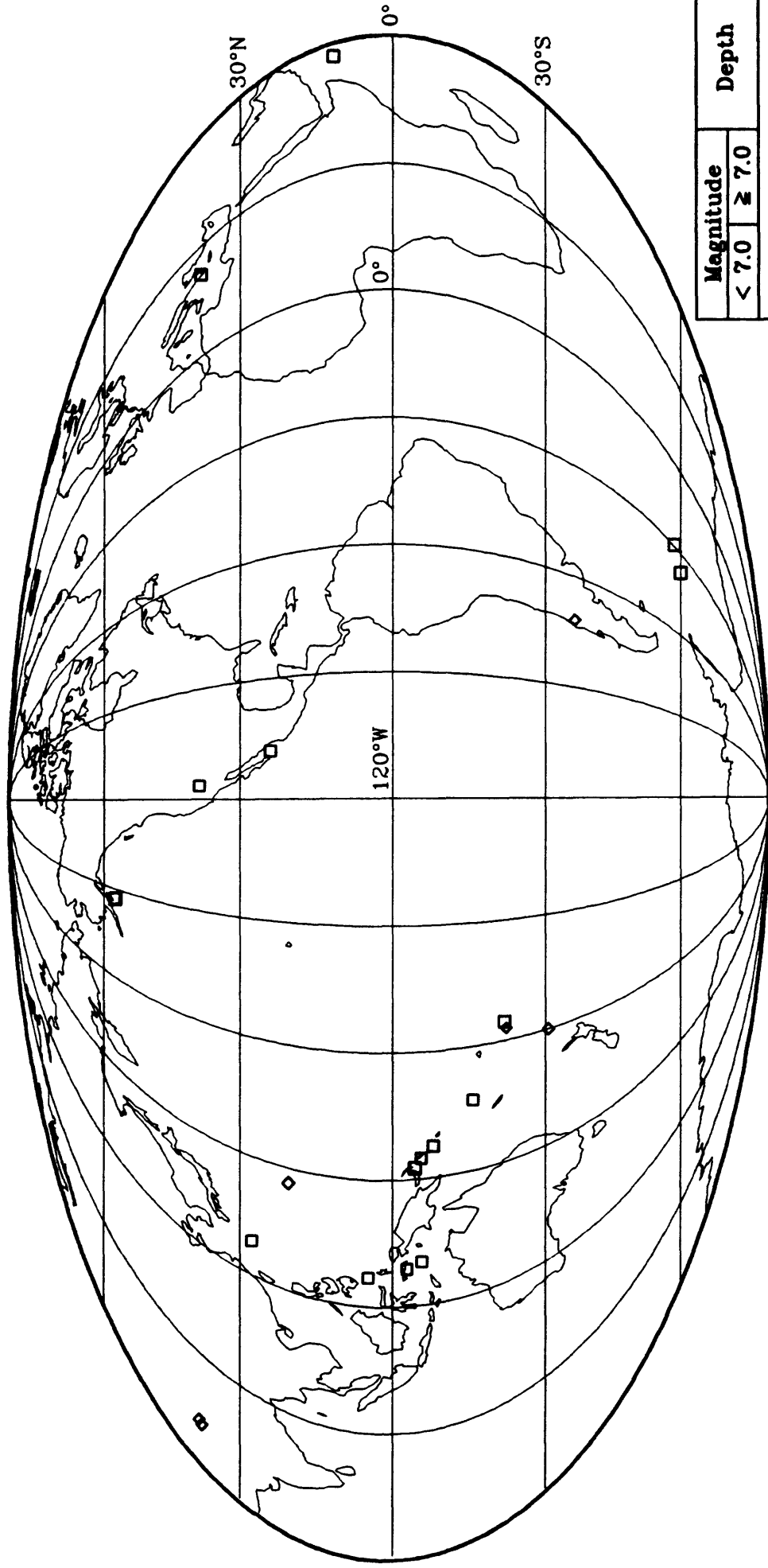
NARS - Network of Autonomously Registrating Stations

NRSA - Norwegian Regional Seismic Array

RSTN - Regional Seismic Test Network

SRO - Seismic Research Observatory

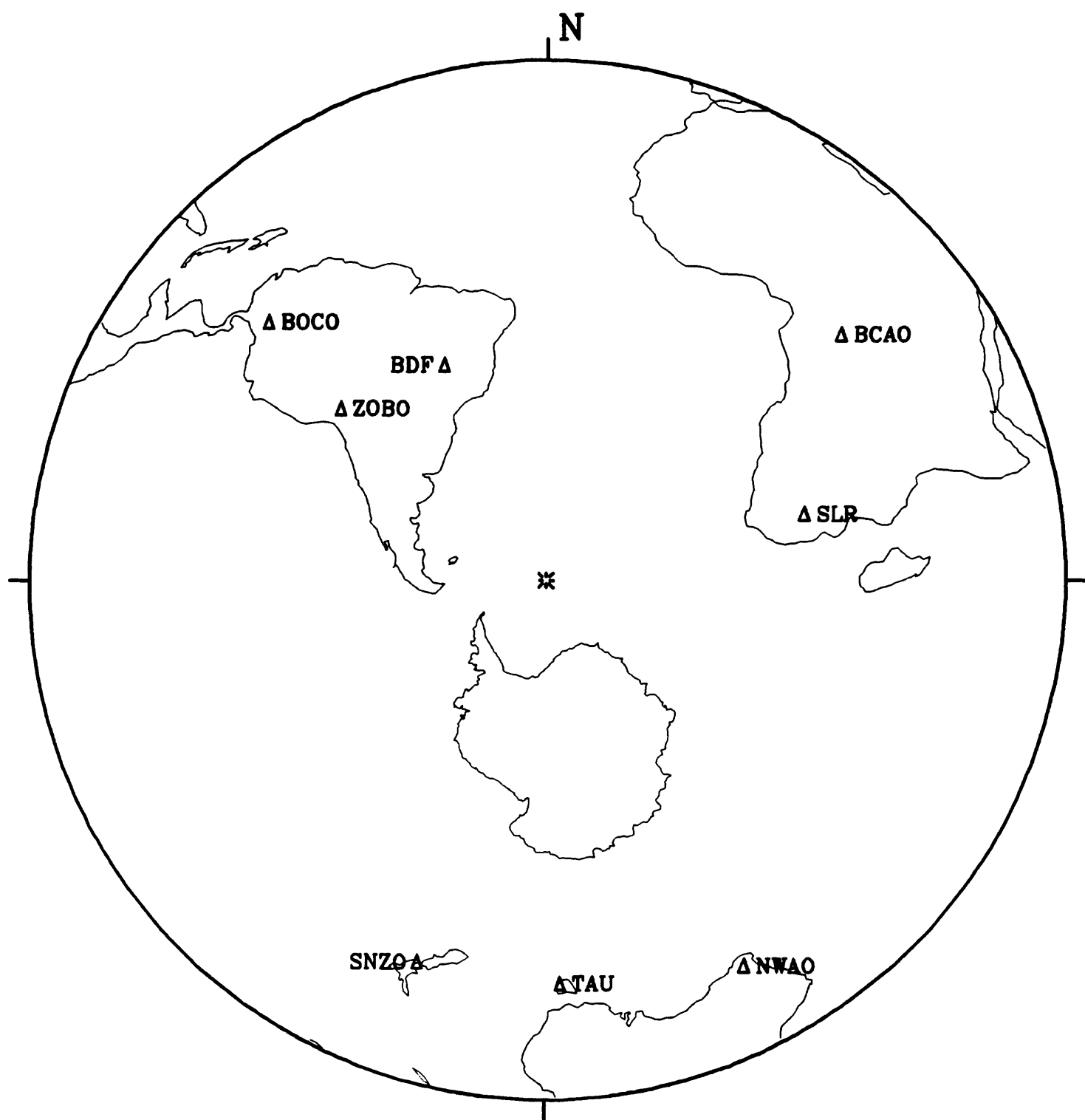
EARTHQUAKES – September 1986 – MAGNITUDE ≥ 5.5



Magnitude		Depth
< 7.0	≥ 7.0	
□	⊠	0-70
◊	◊	71-300
○	⊕	301-800

05 September 1986 02:47:18.25

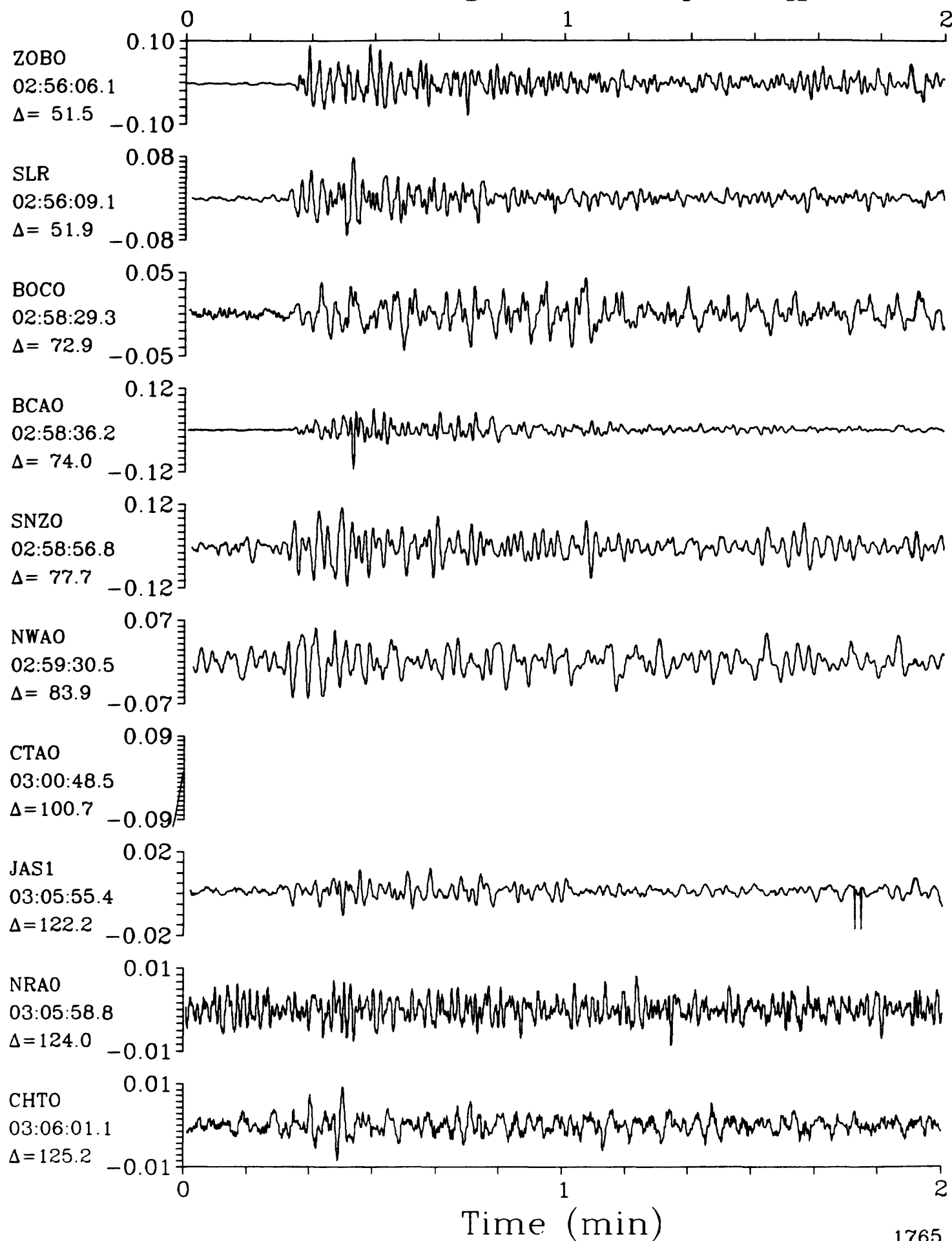
South Sandwich Islands Region



SPZ

05 September 1986 02:47:18.25

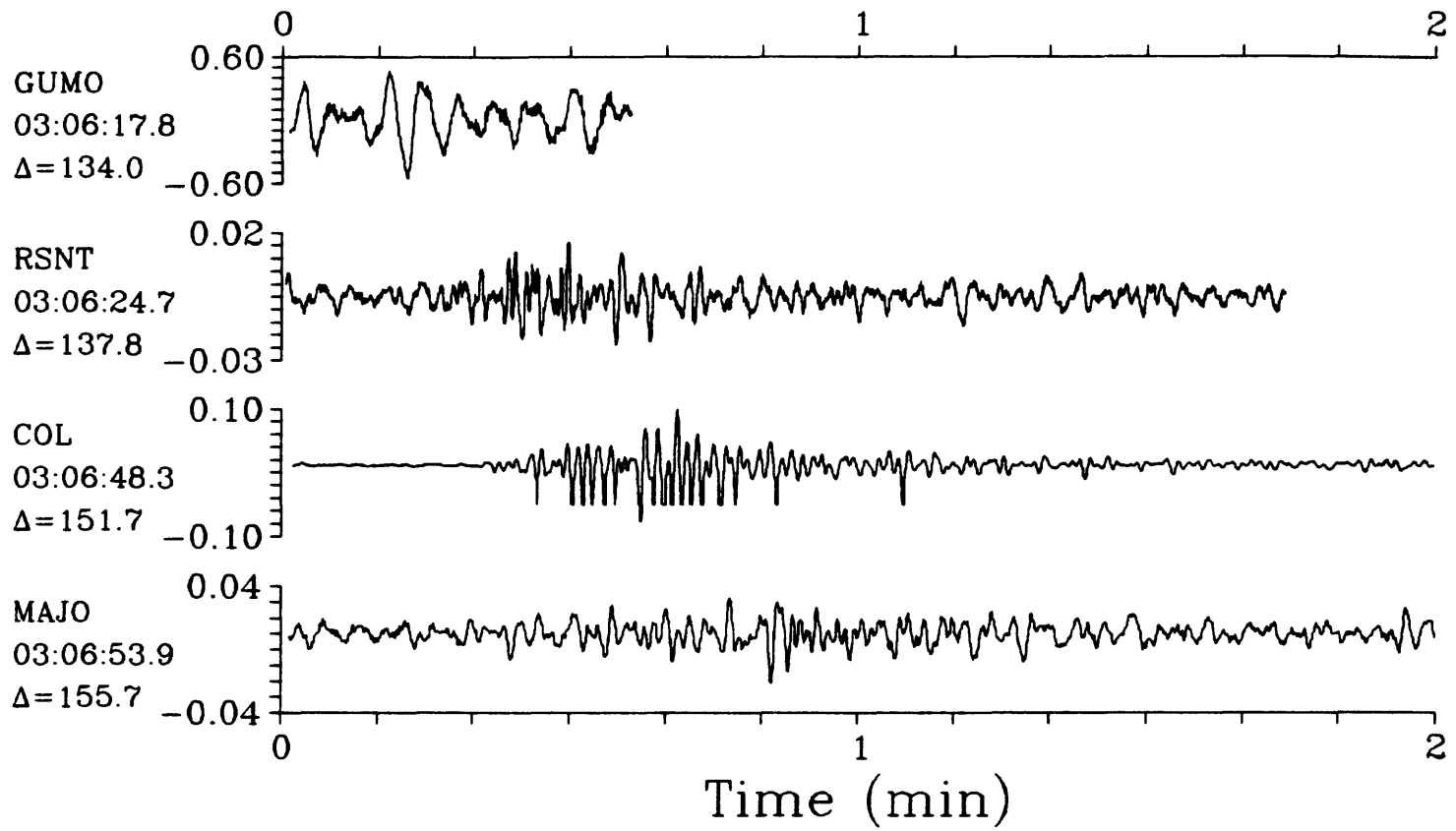
SPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=6.0$ 

SPZ

05 September 1986 02:47:18.25

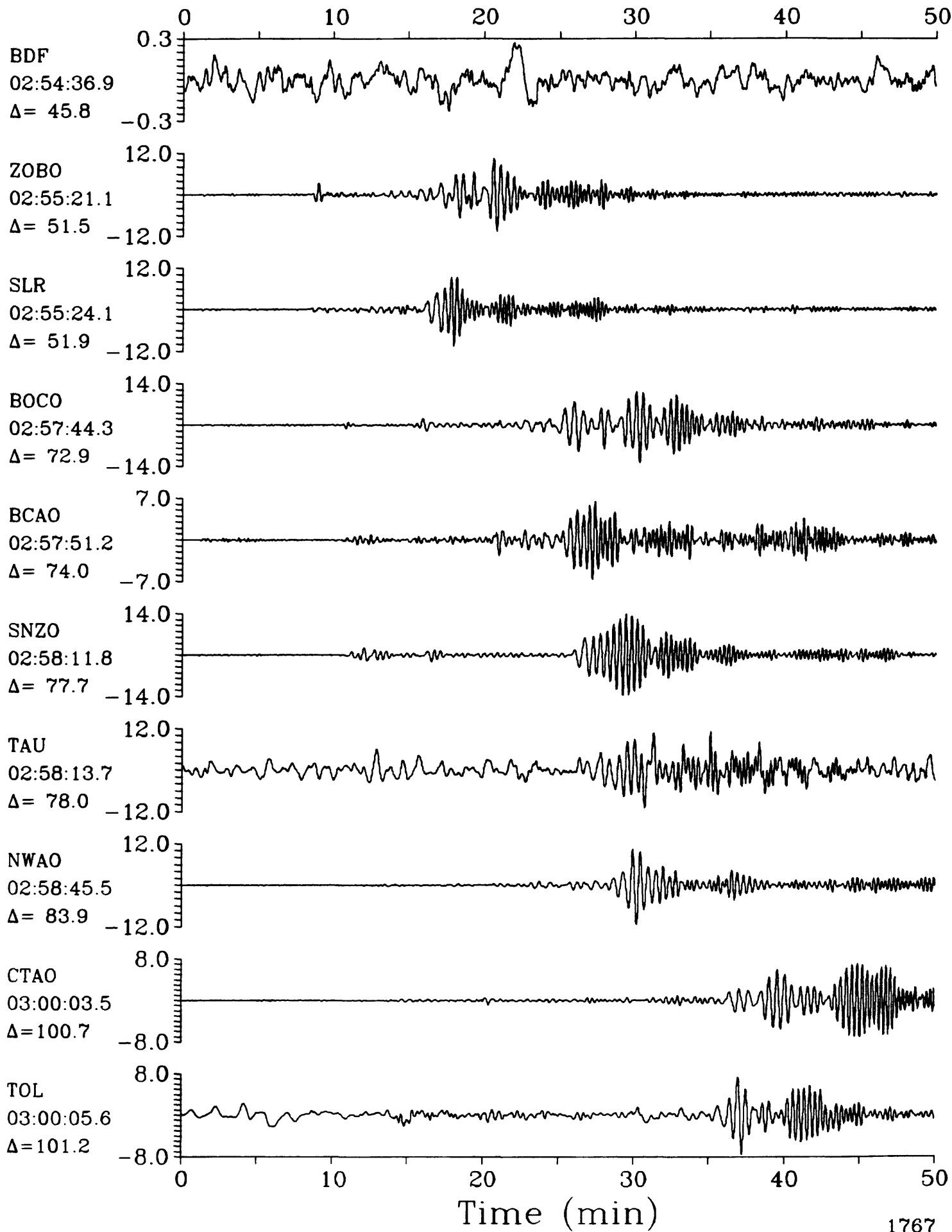
SPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.9$ $M_{SZ}=6.0$ 

LPZ

05 September 1986 02:47:18.25

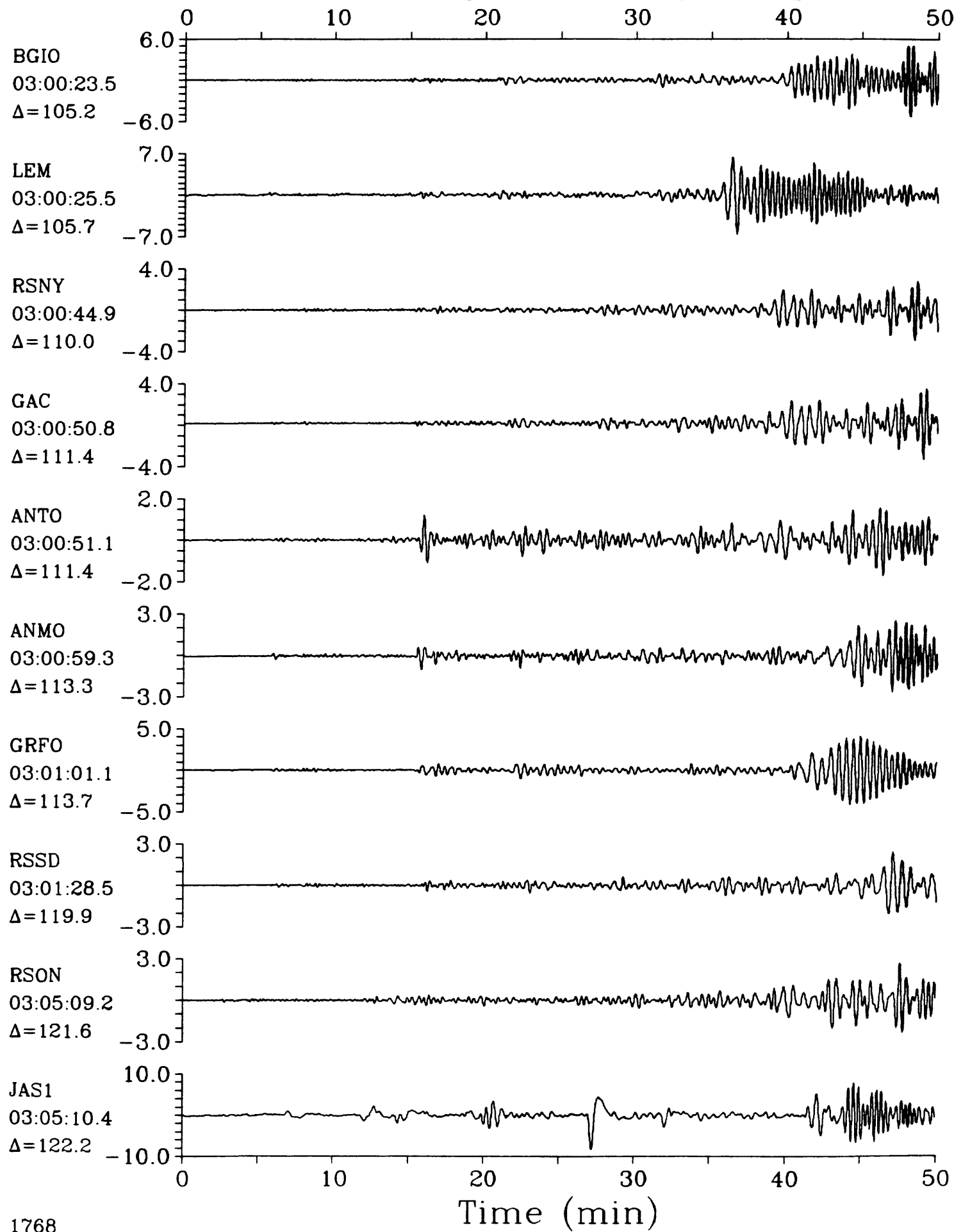
LPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=6.0$ 

LPZ

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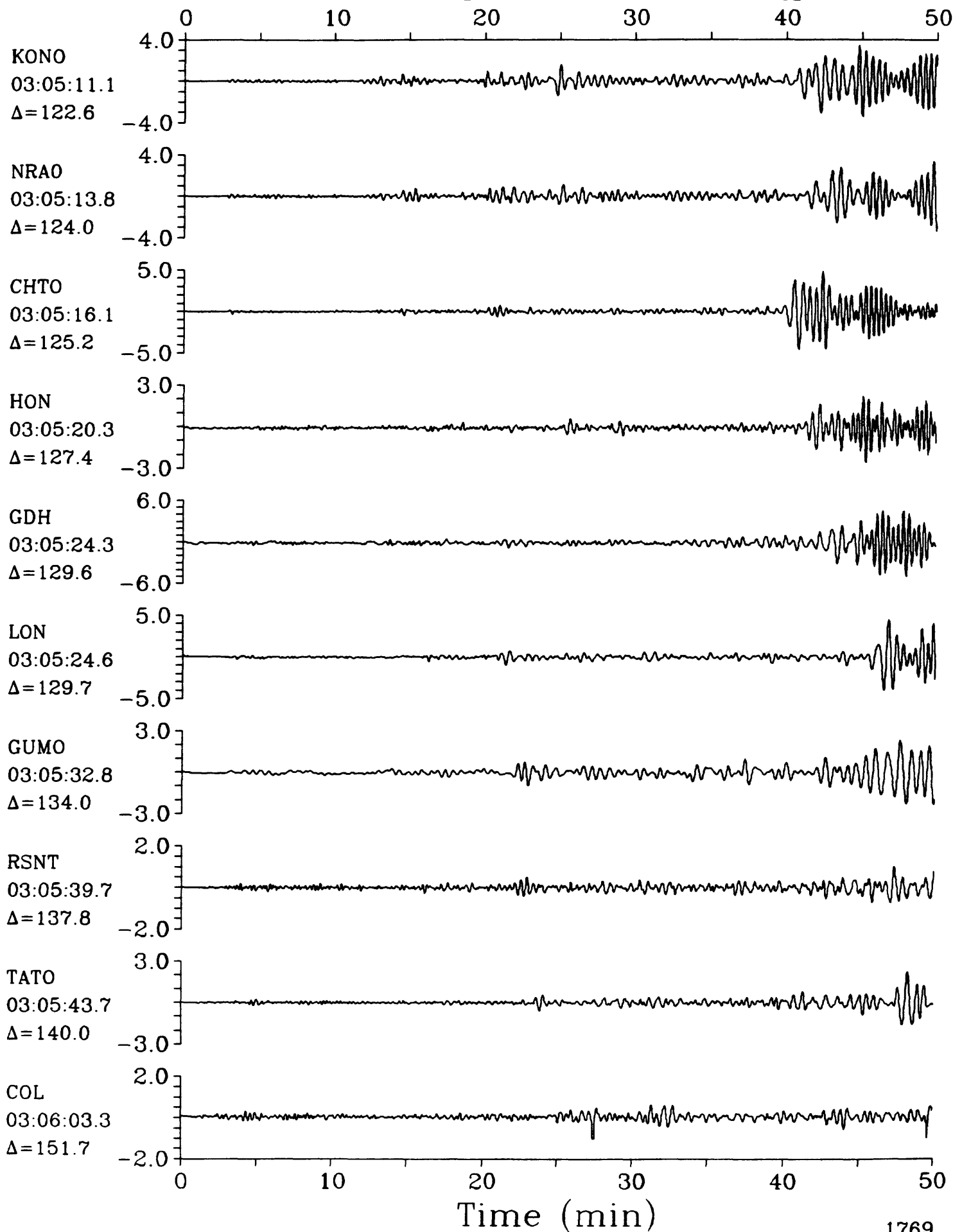
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LPZ

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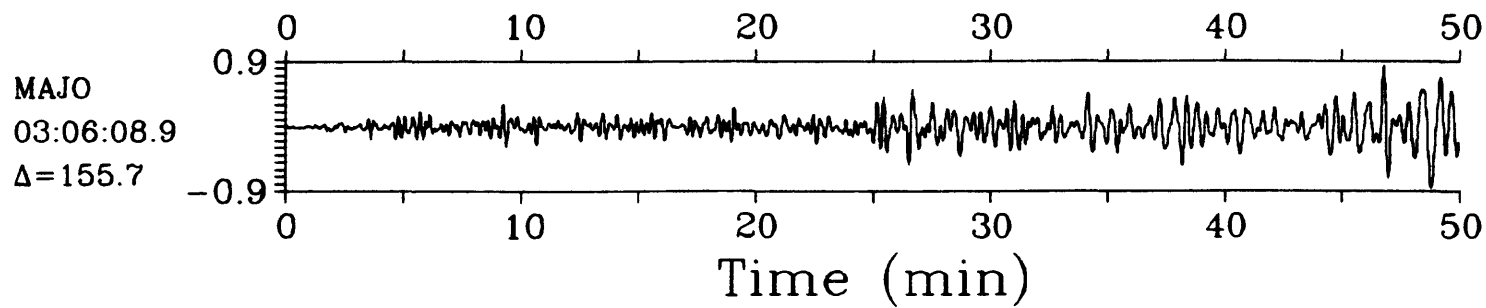
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LPZ

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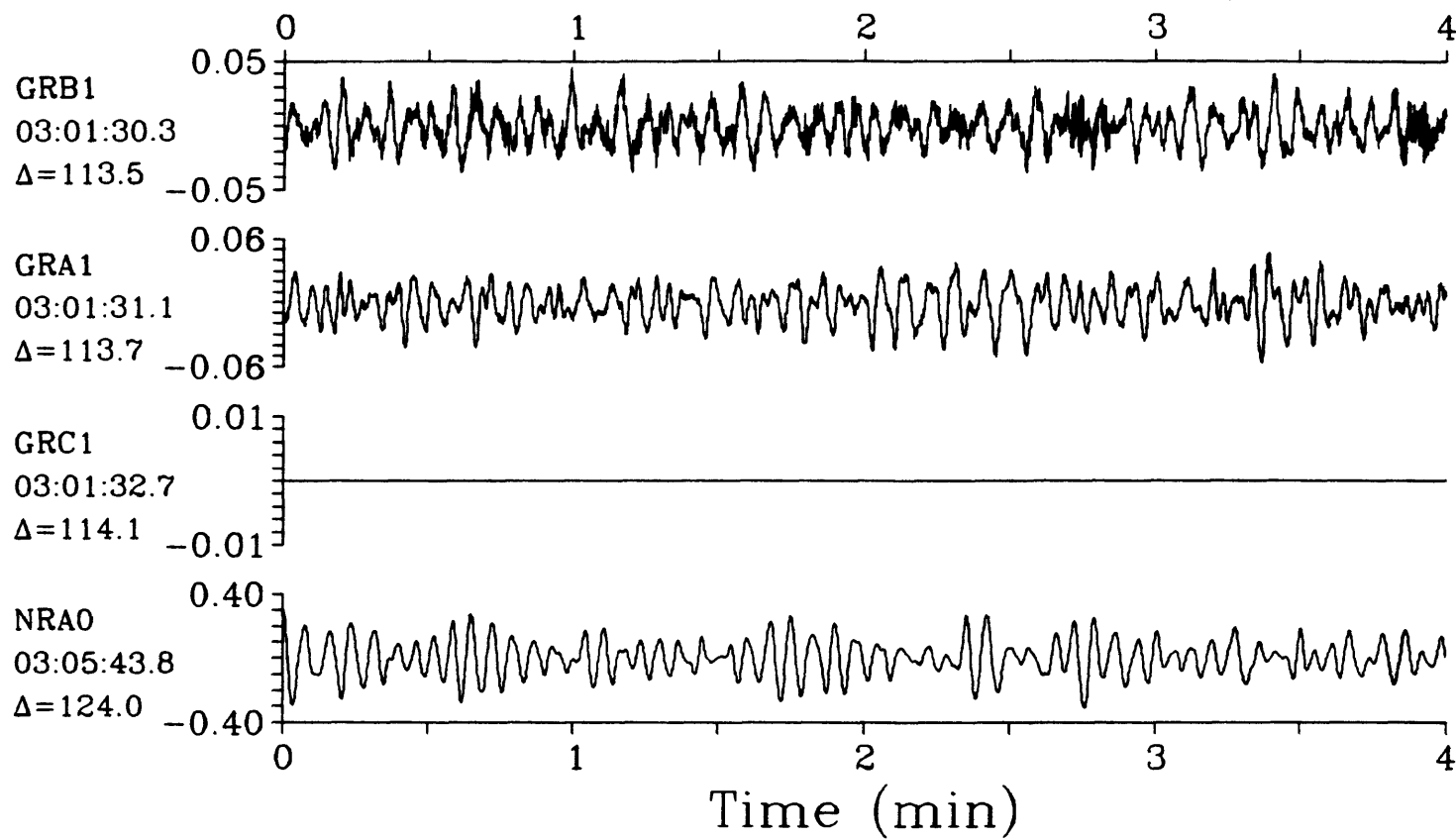
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South Sandwich Islands Region $h=33.0$ $m_b=5.9$ $M_{SZ}=6.0$ 

IPZ

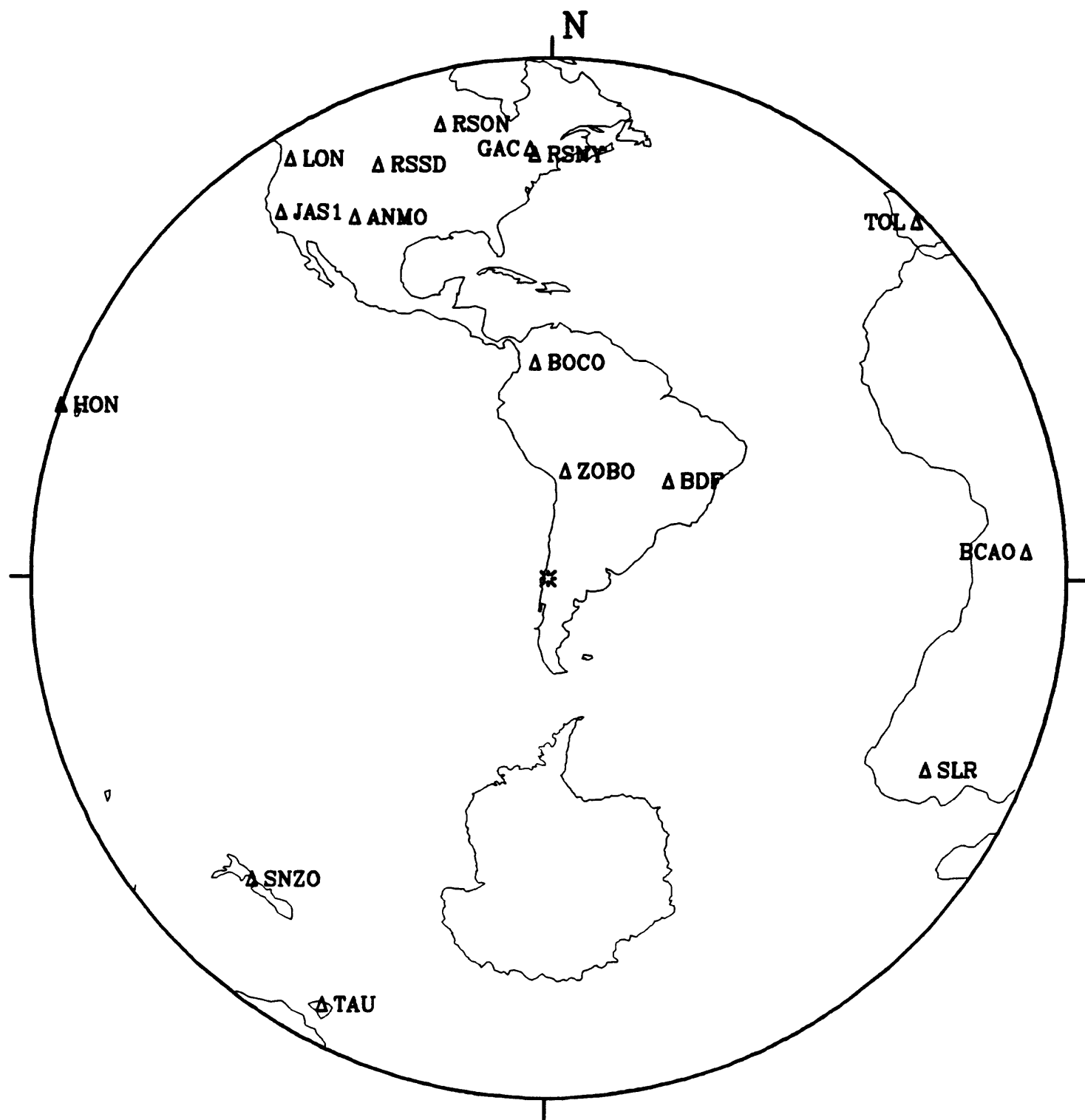
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IPZ

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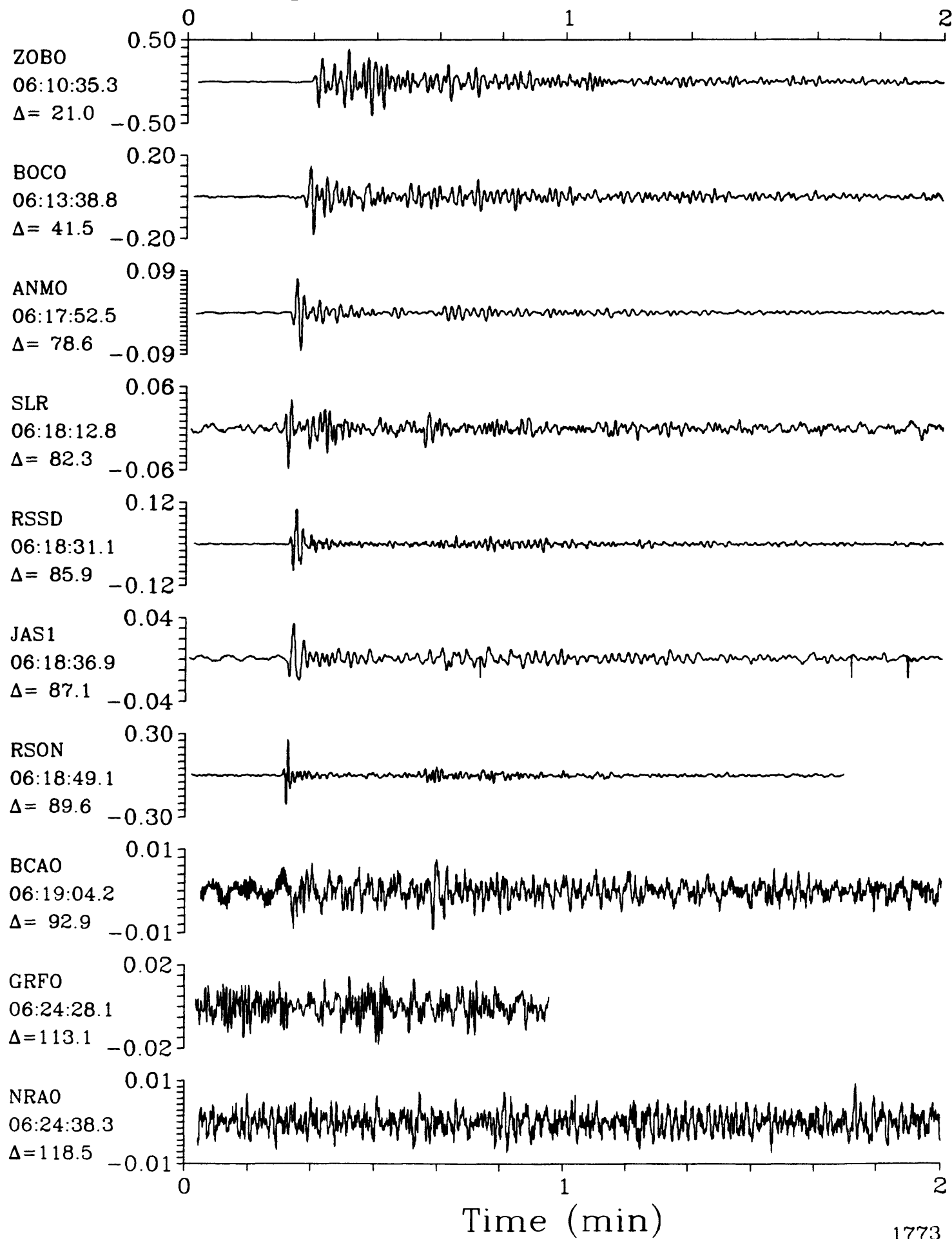
S. Chile–Argentina Border Region



SPZ

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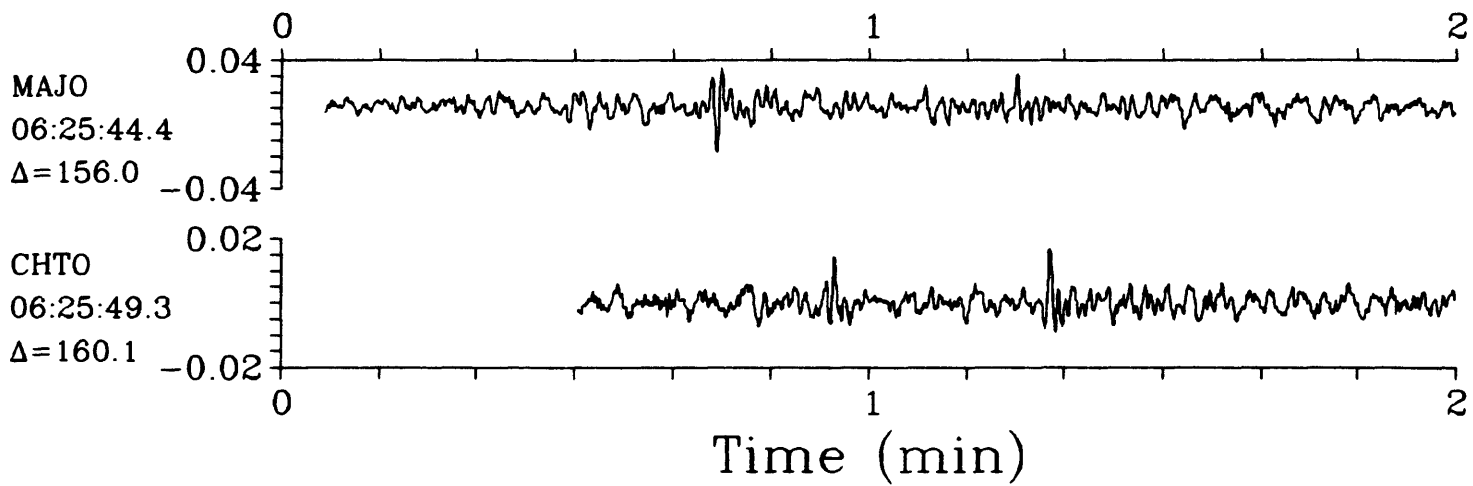
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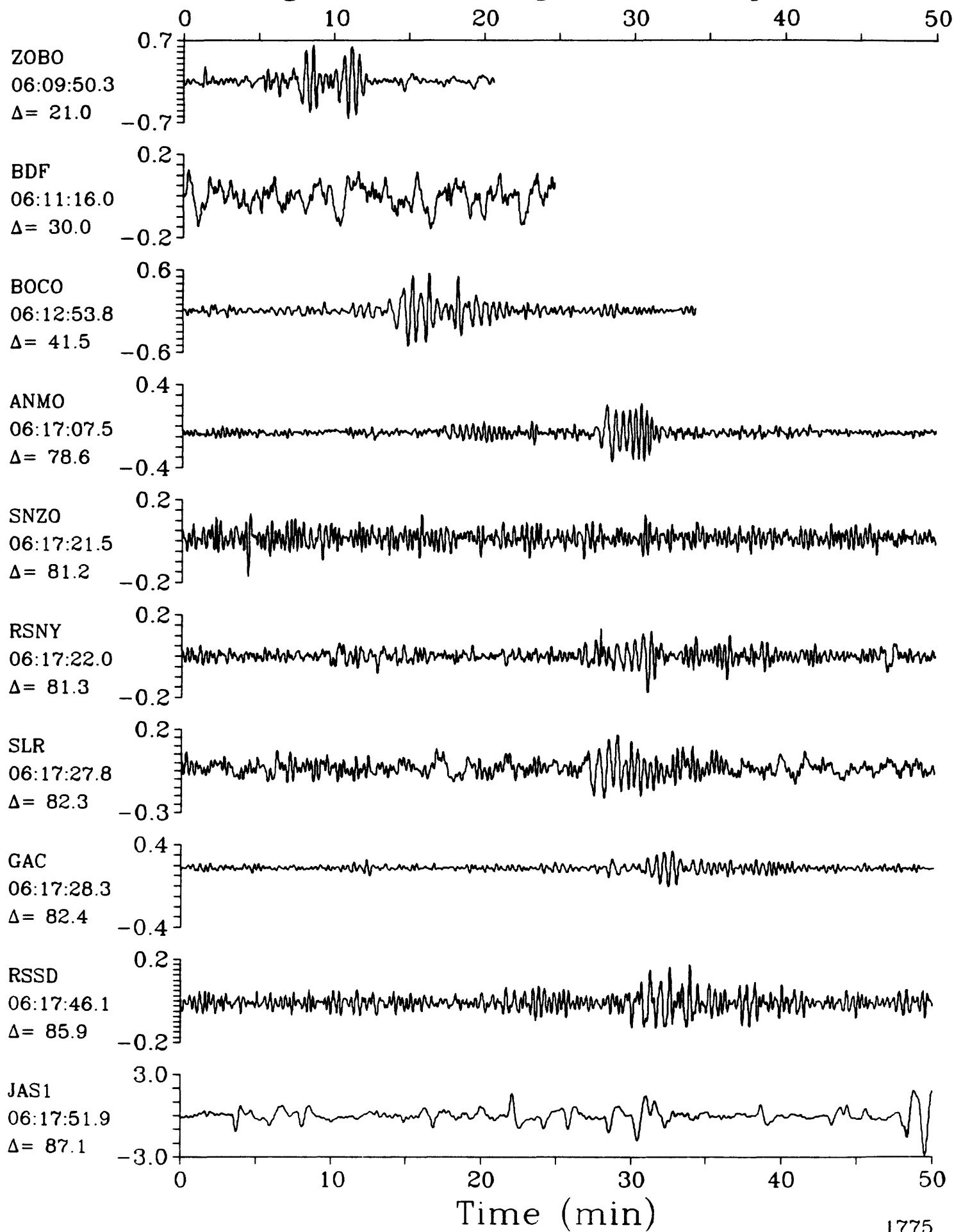
S. Chile-Argentina Border Region $h=93.6$ $m_b=5.6$ 

SPZ

05 September 1986 06:06:15.86

SPZ

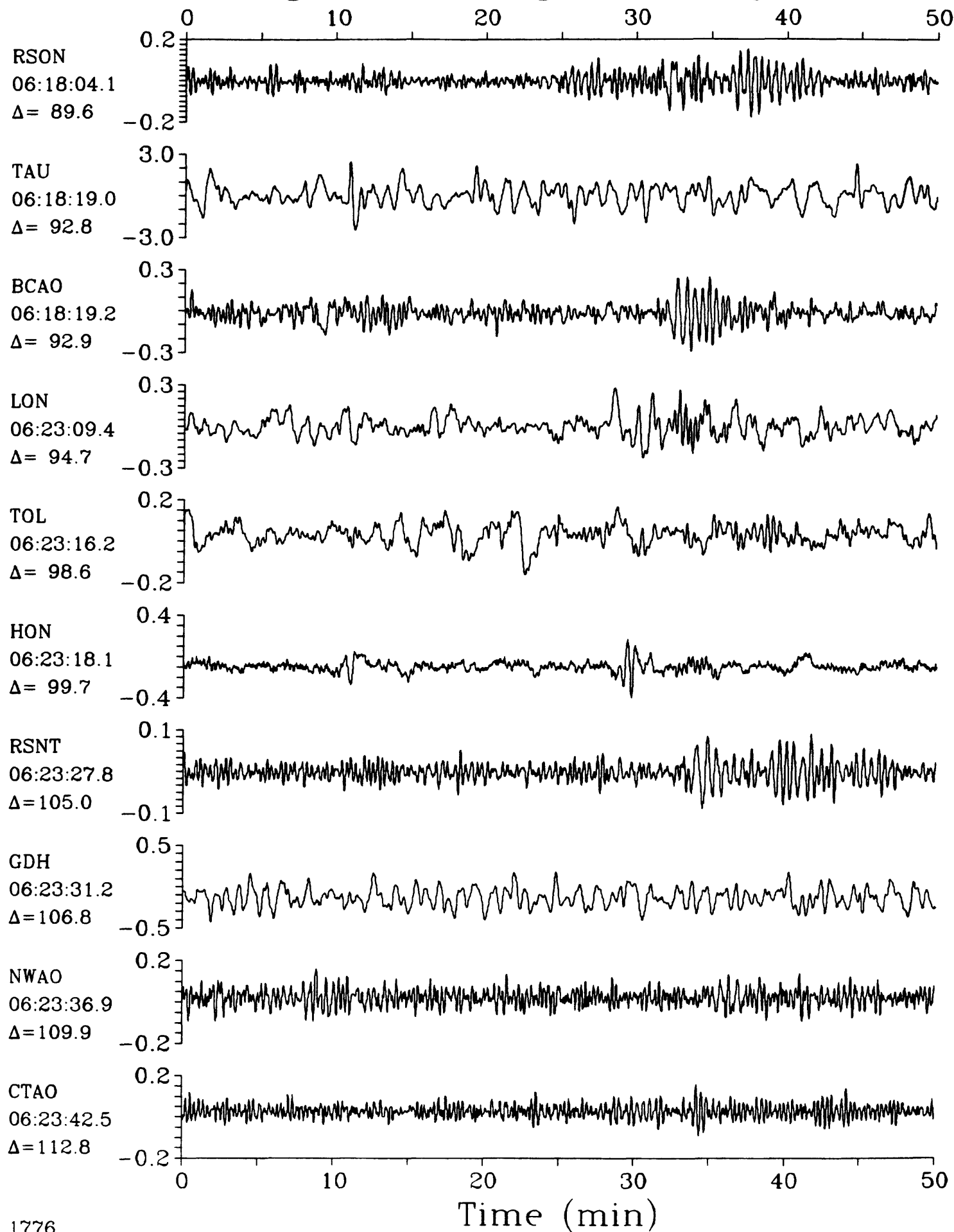
S. Chile-Argentina Border Region $h=93.6$ $m_b=5.6$ 

S. Chile-Argentina Border Region $h=93.6$ $m_b=5.6$ 

LPZ

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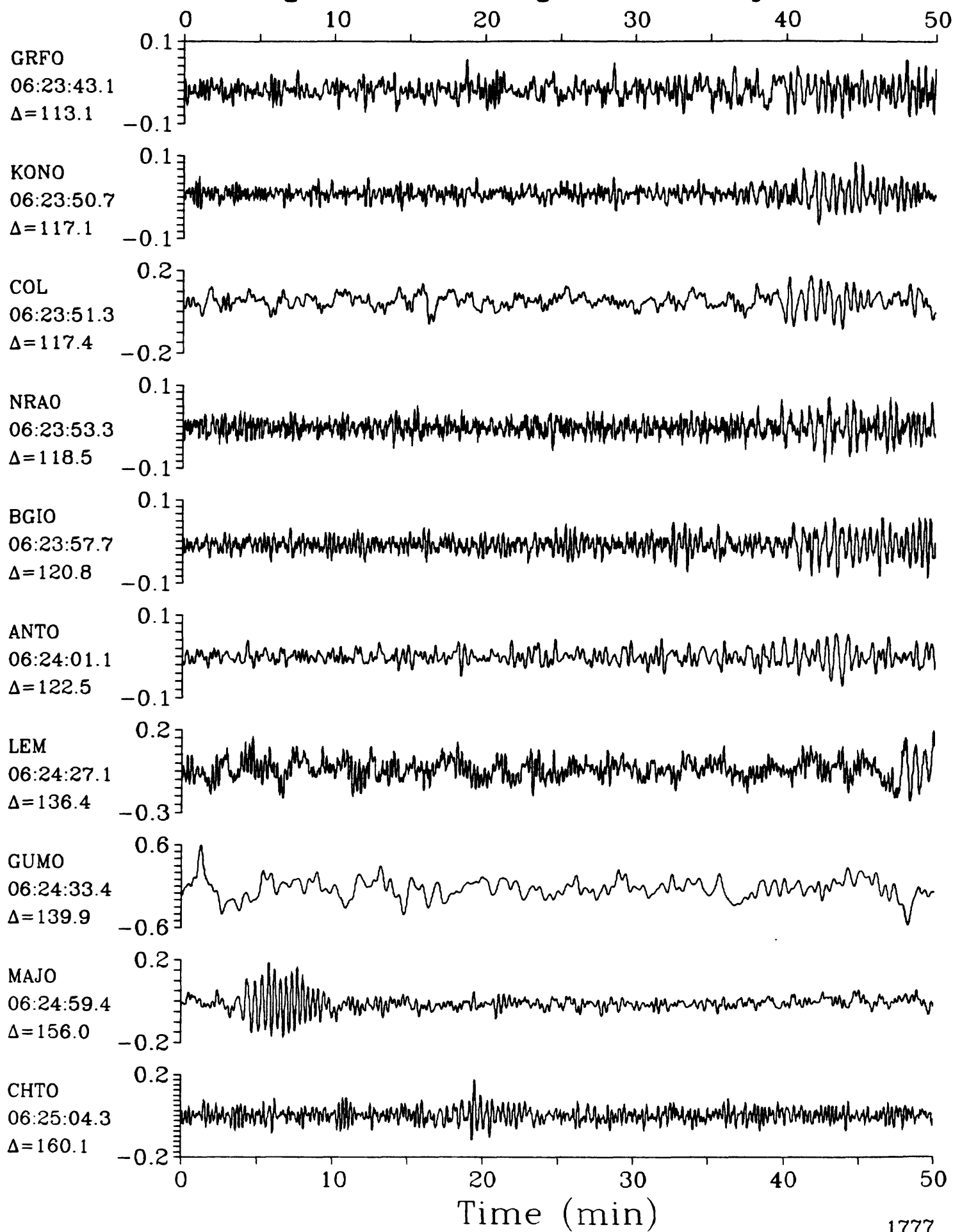
LPZ

S. Chile-Argentina Border Region $h=93.6$ $m_b=5.6$ 

LPZ

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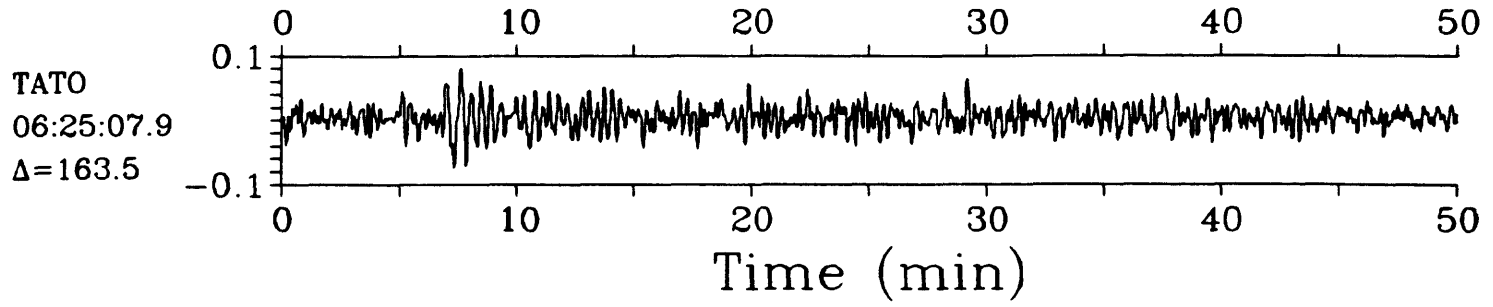
LPZ

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LPZ

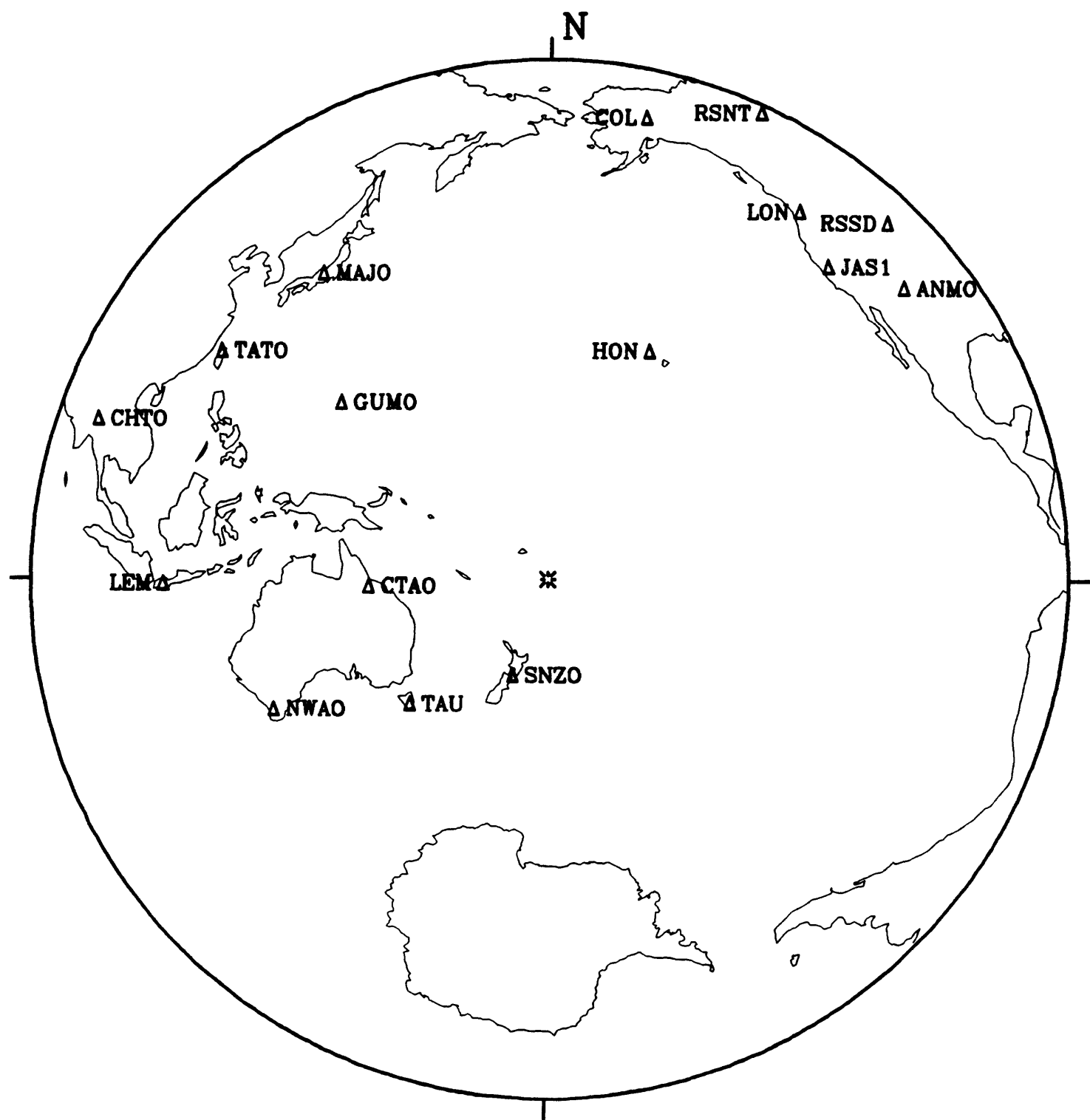
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LPZ

S. Chile-Argentina Border Region $h=93.6$ $m_b=5.6$ 

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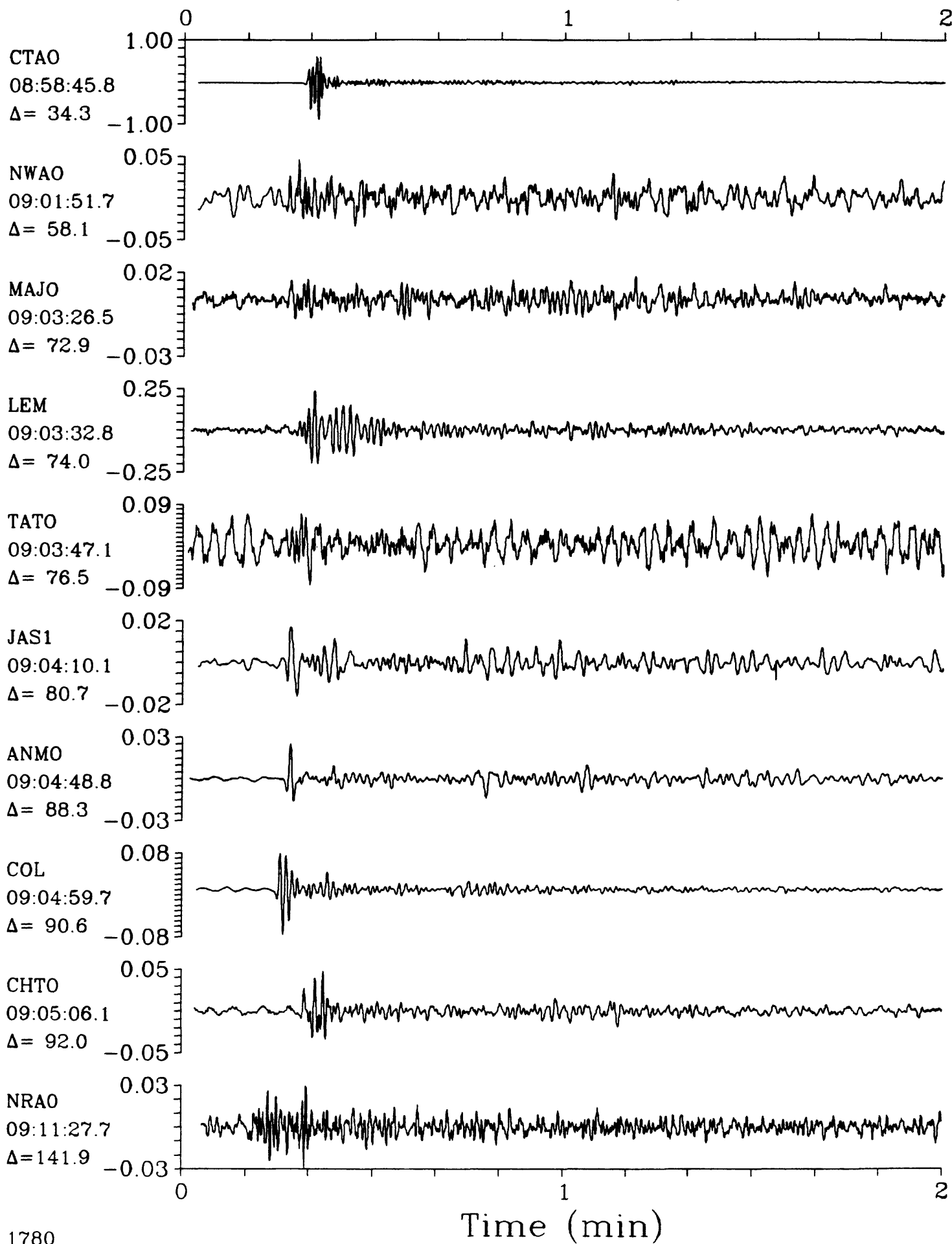
South of Fiji Islands



SPZ

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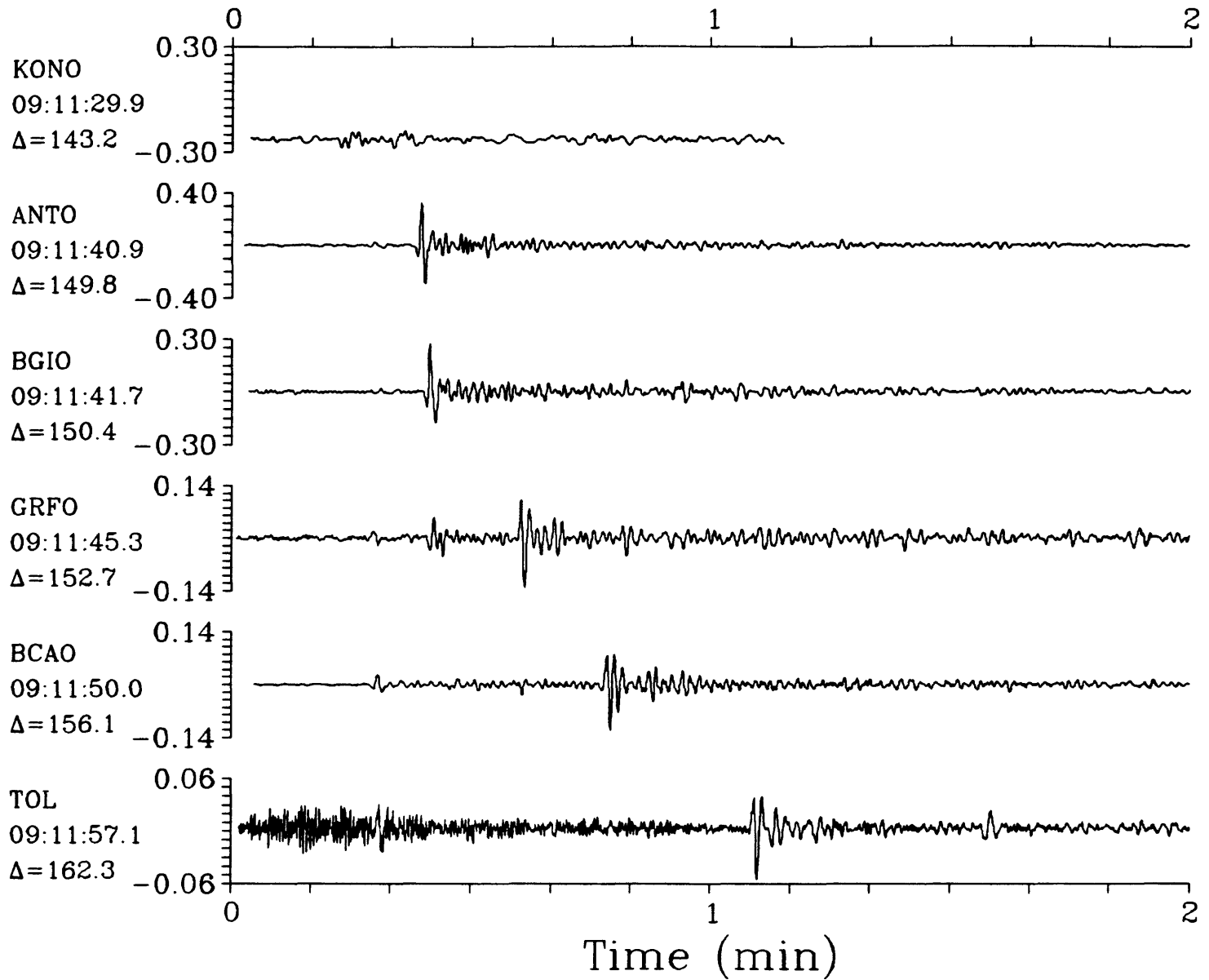
SPZ



SPZ

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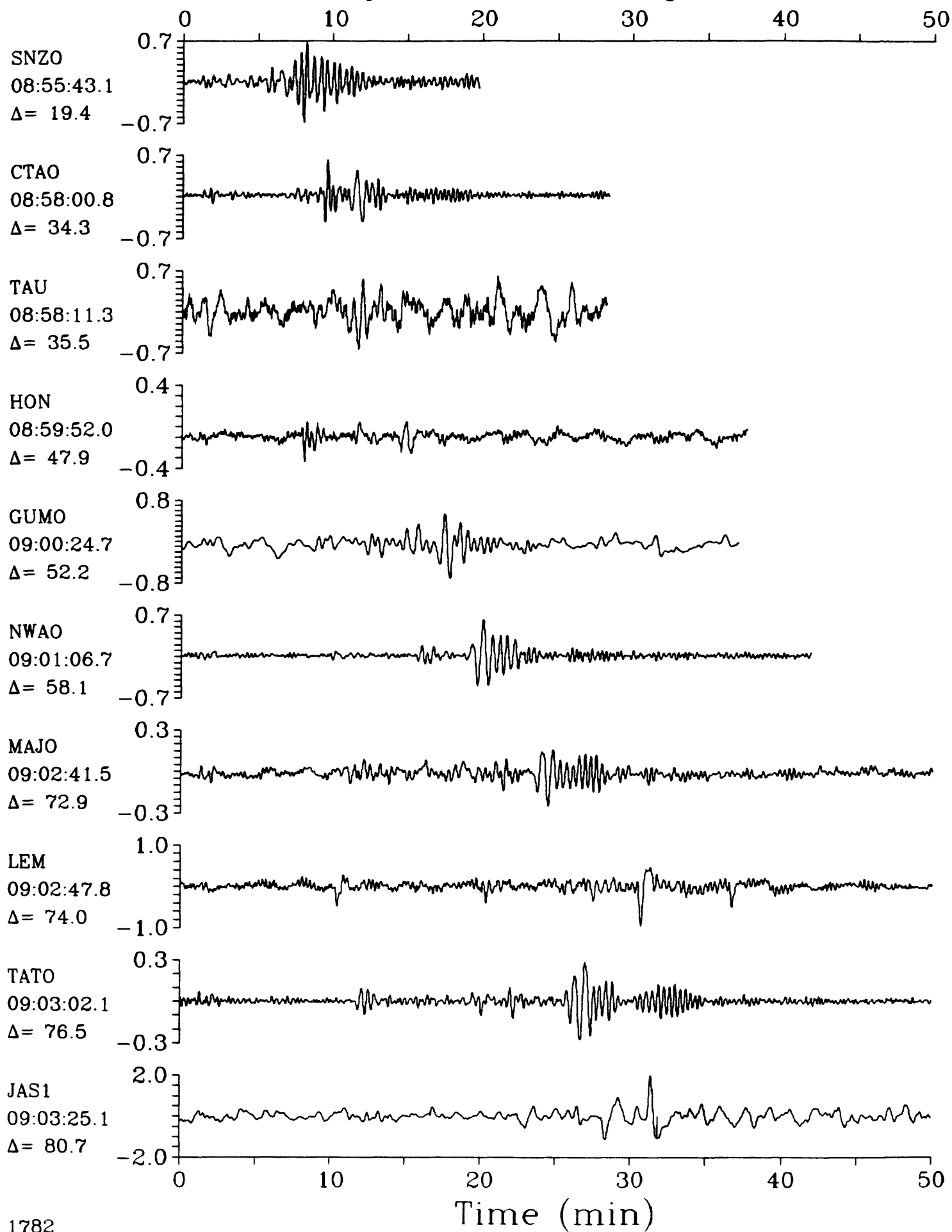
SPZ



LPZ

06 September 1986 08:52:31.30
South of Fiji Islands $h=172.7$ $m_b=5.6$

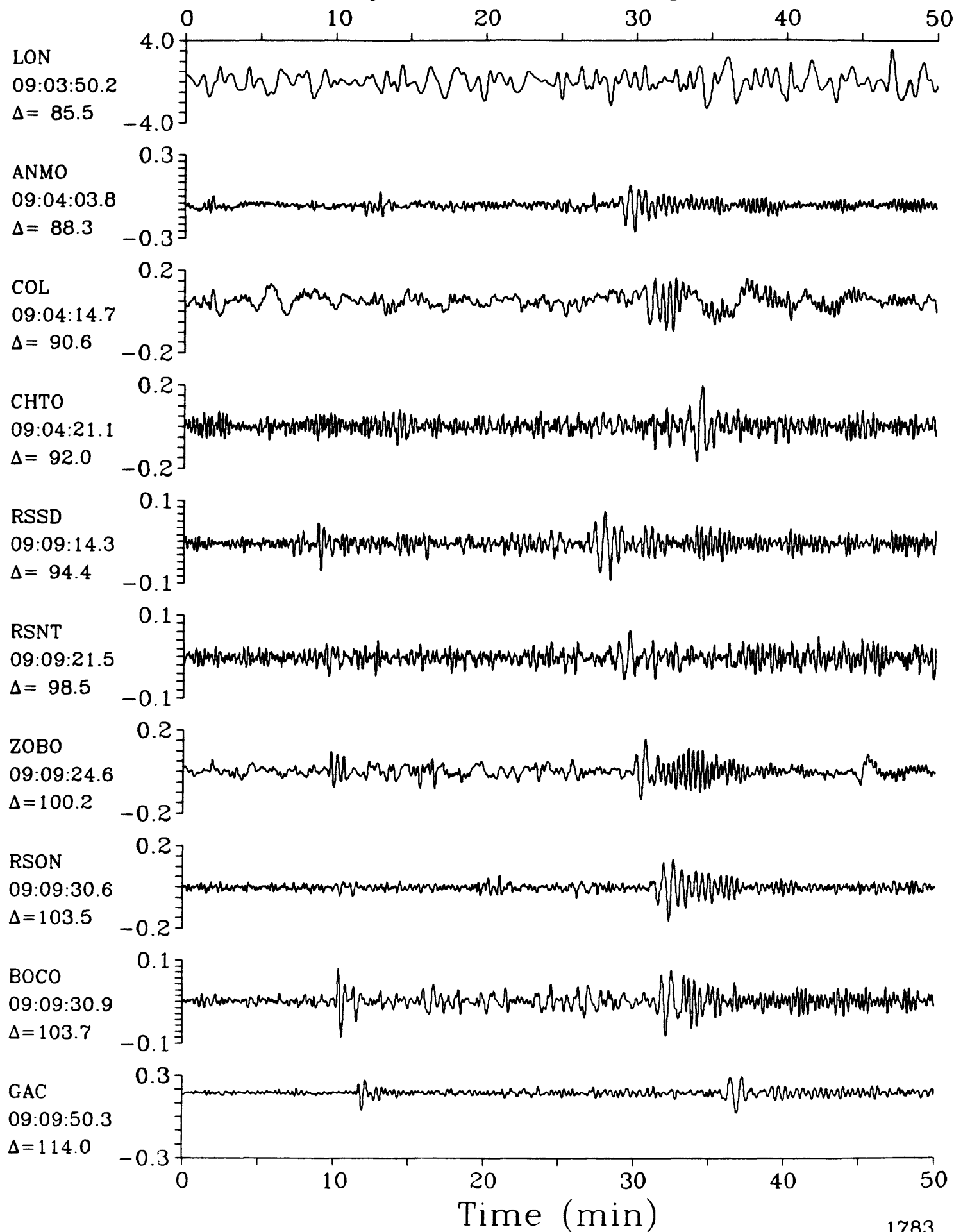
LPZ



LPZ

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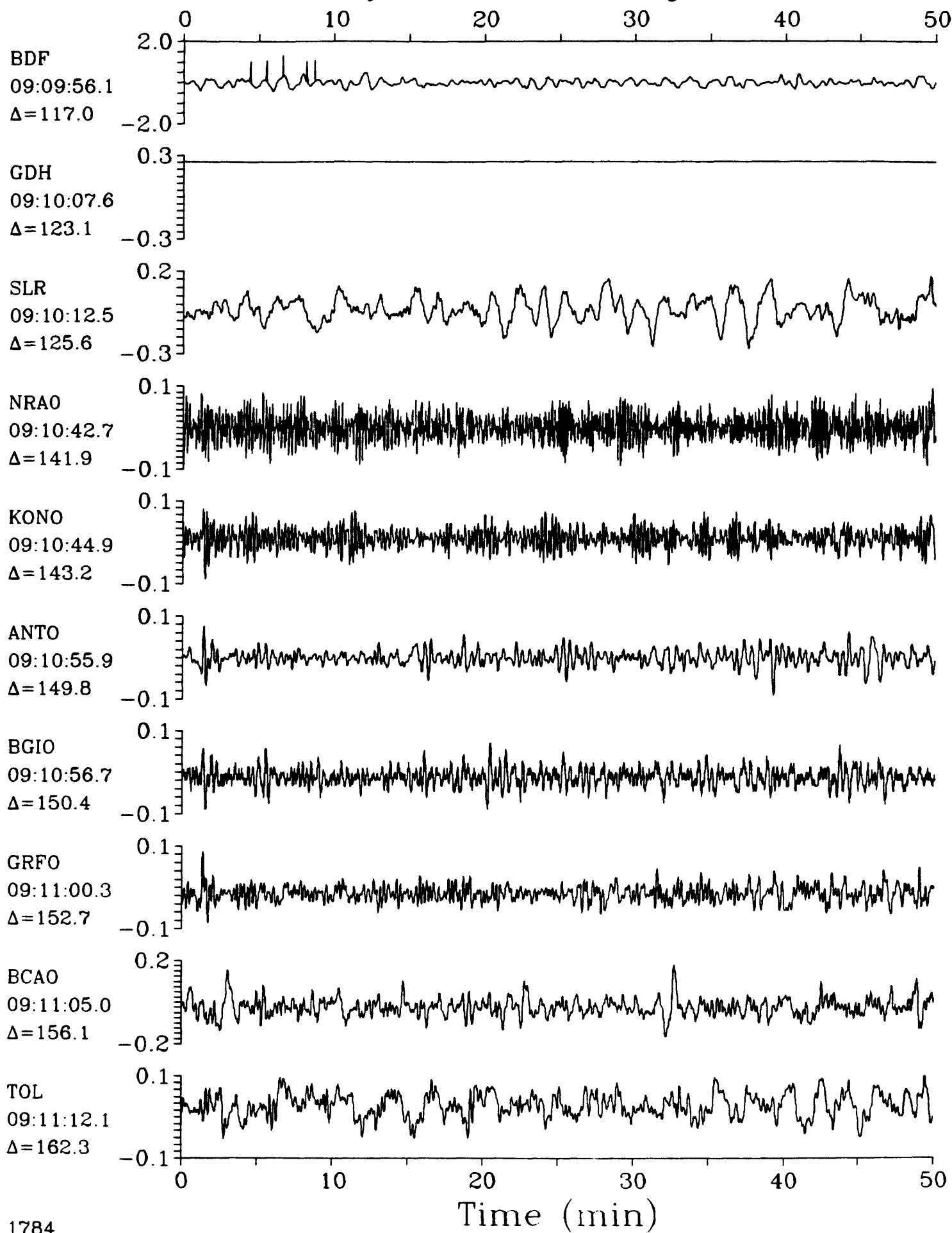
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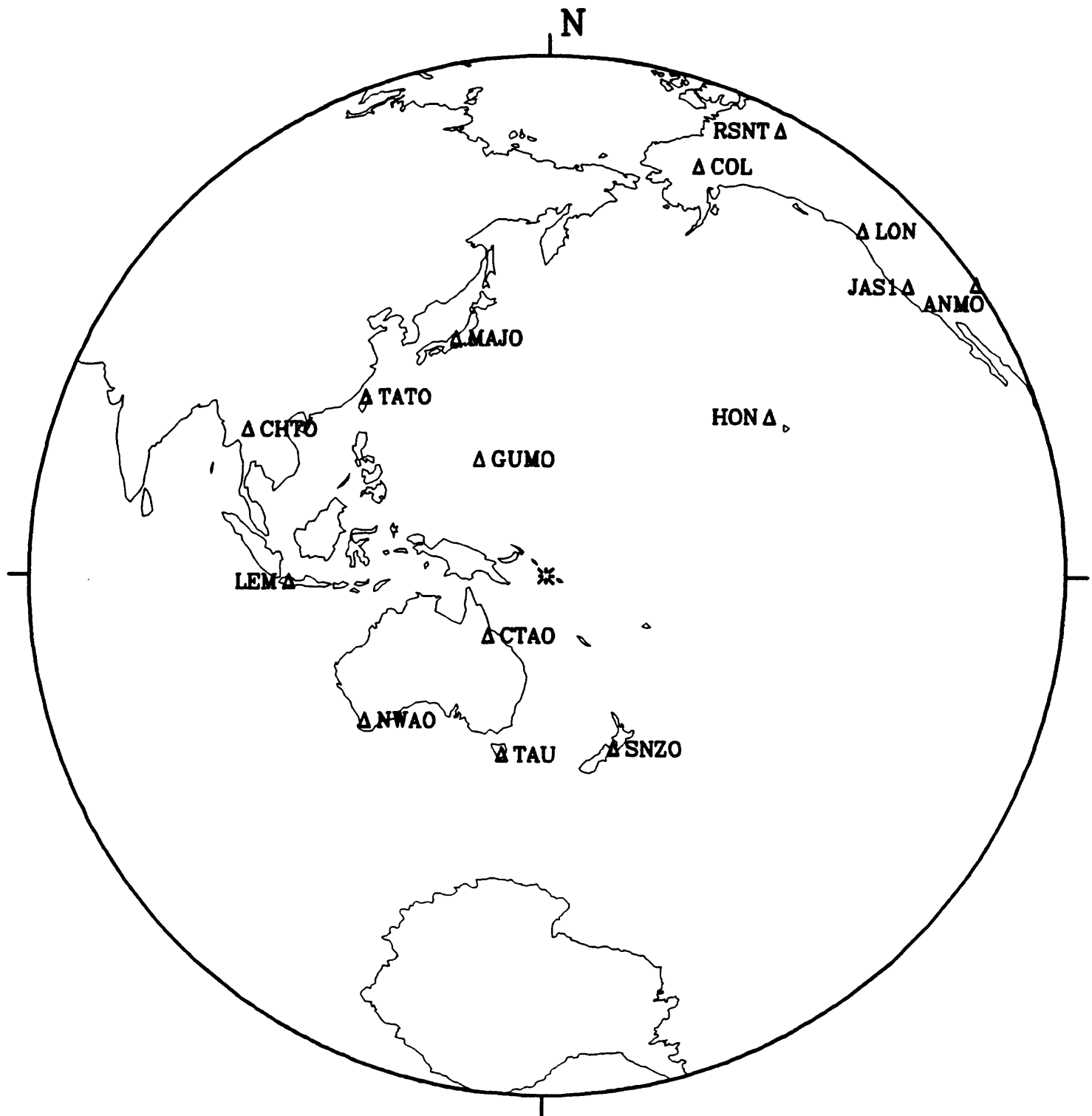
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LPZ



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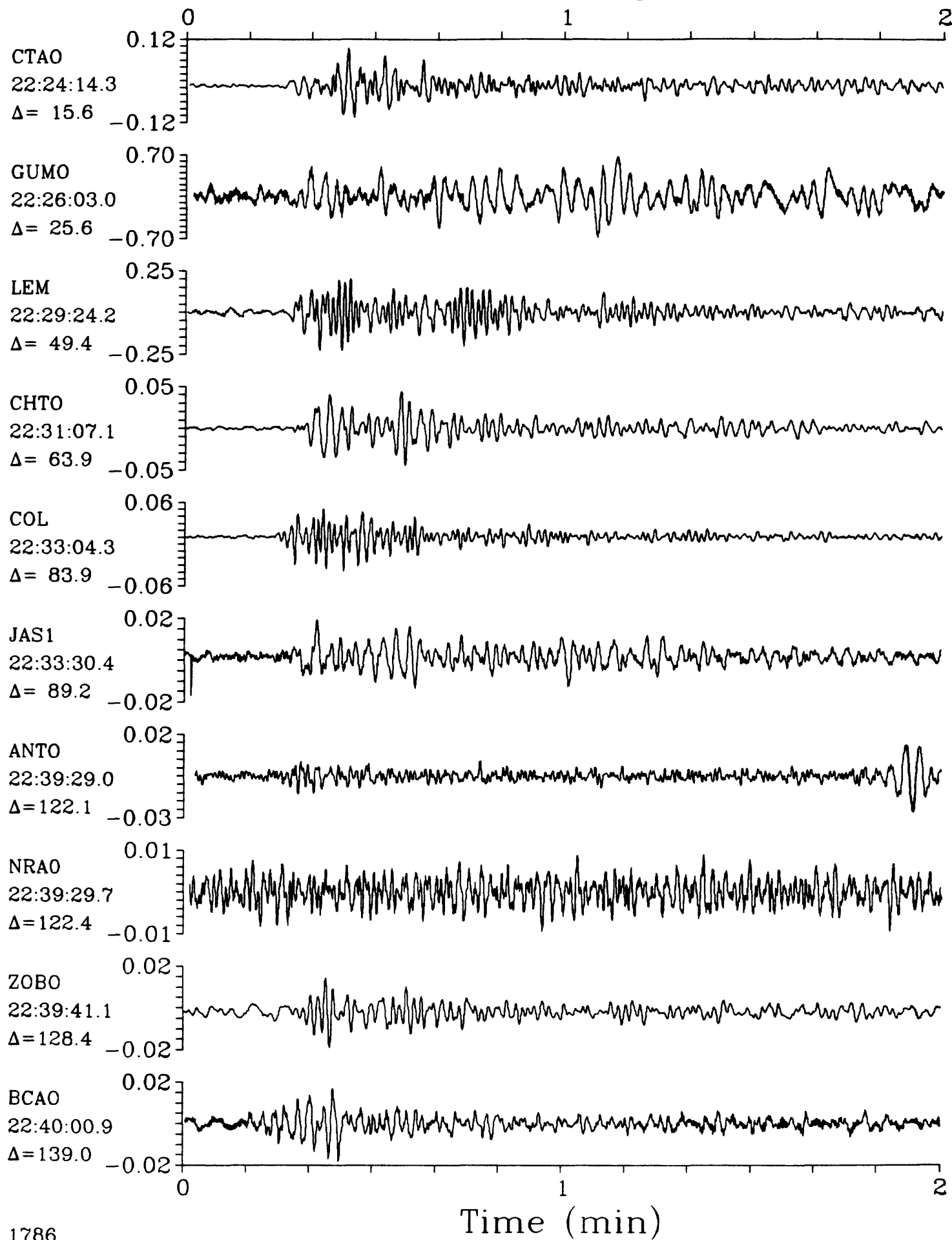
Solomon Islands



SPZ

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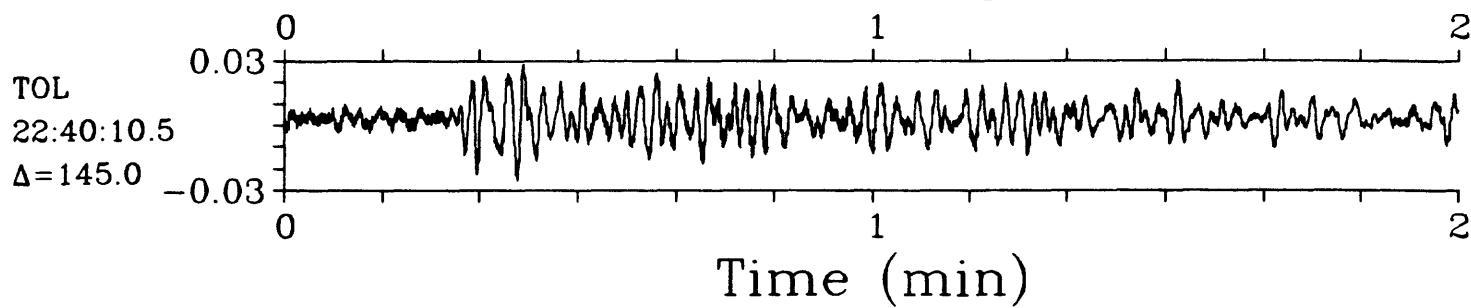
SPZ



SPZ

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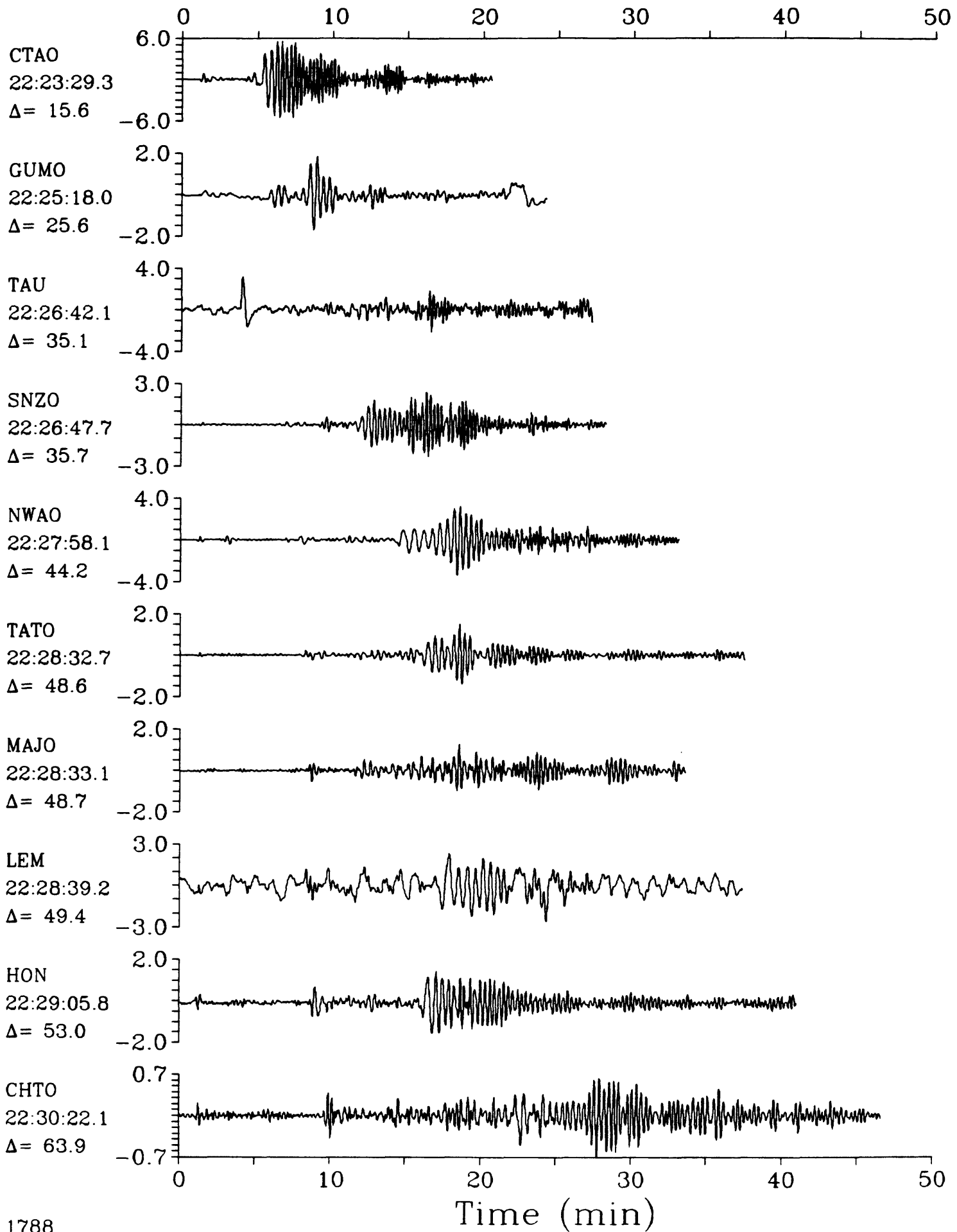
SPZ



LPZ

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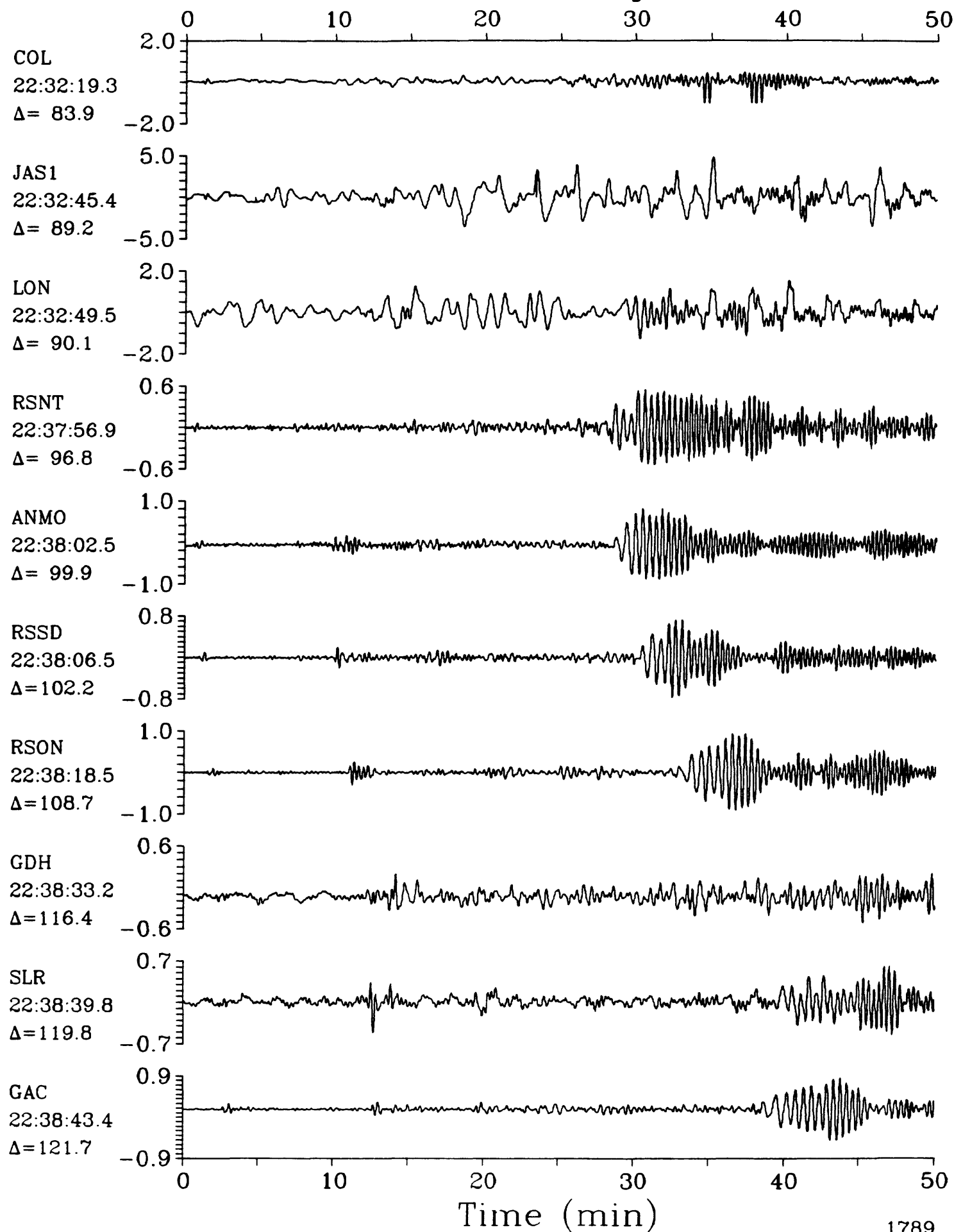
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LPZ

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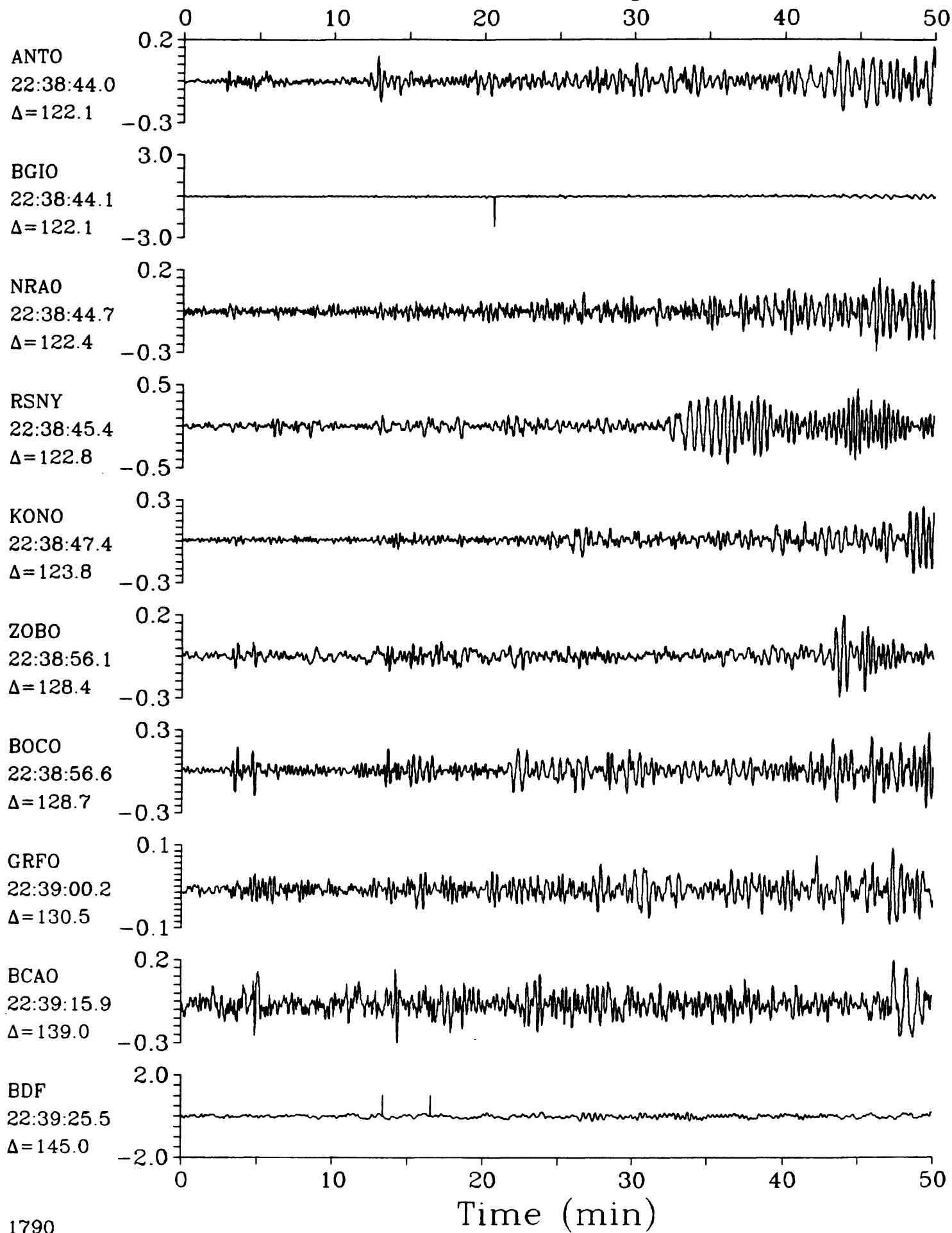
LPZ



LPZ

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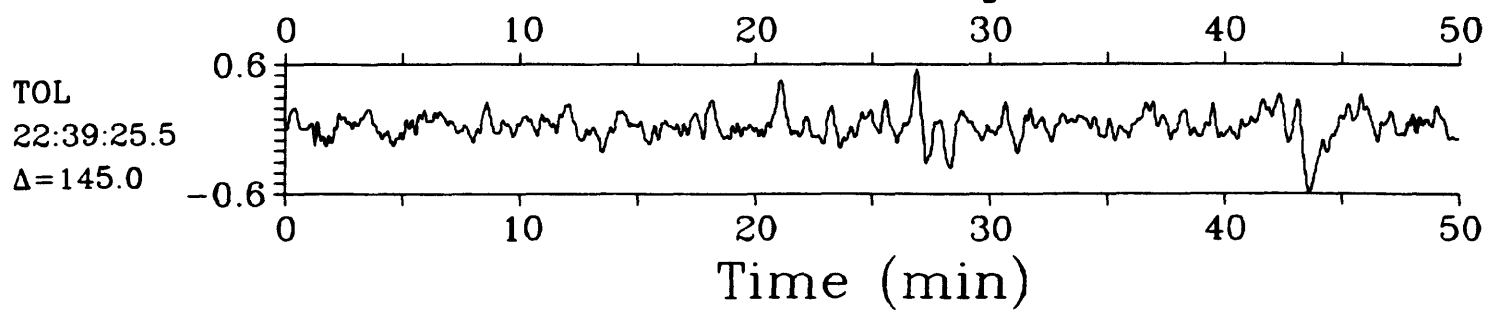
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LPZ

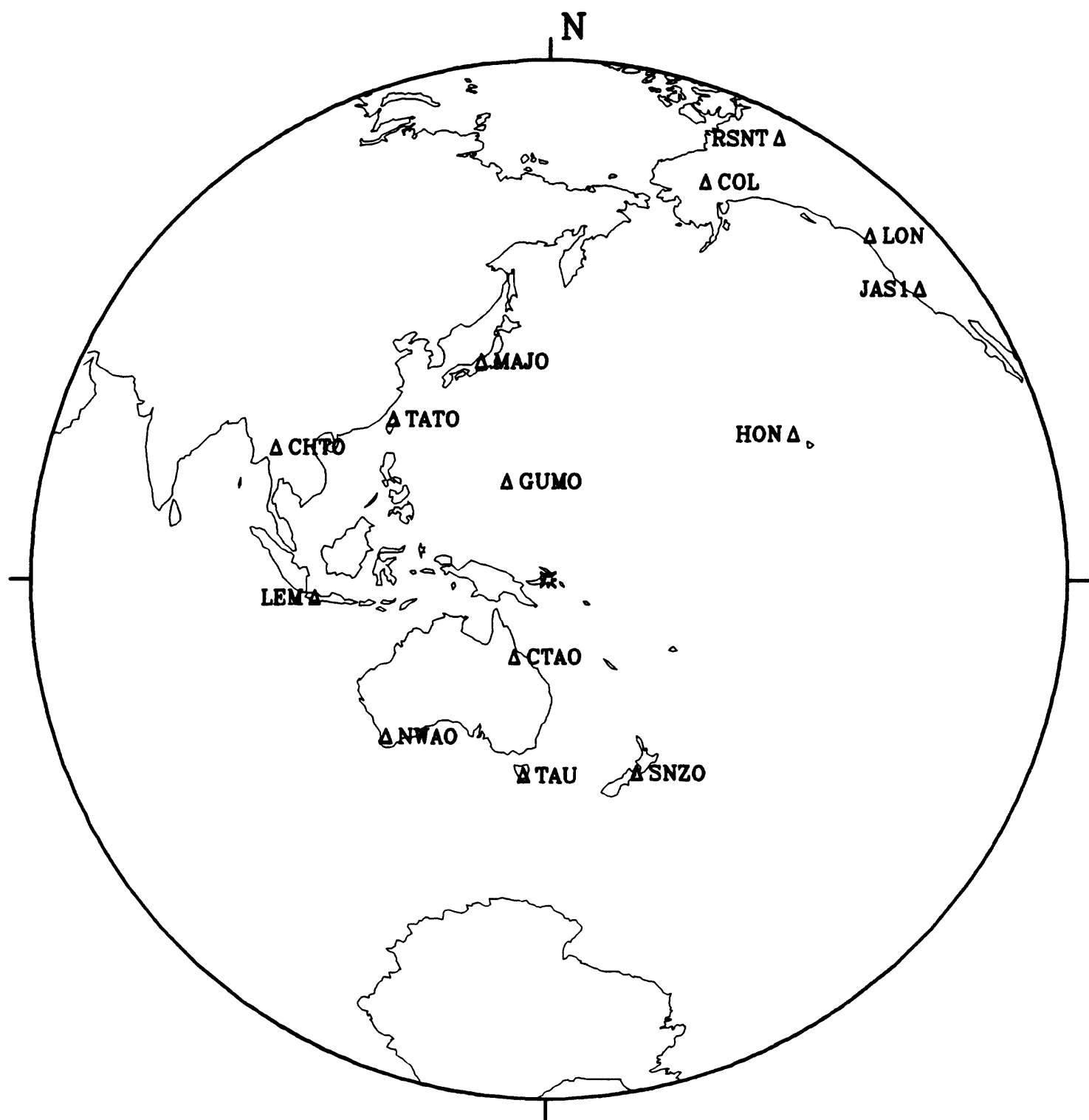
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Solomon Islands $h=10.0$ $m_b=5.5$

LPZ



11 September 1986 00:18:24.27

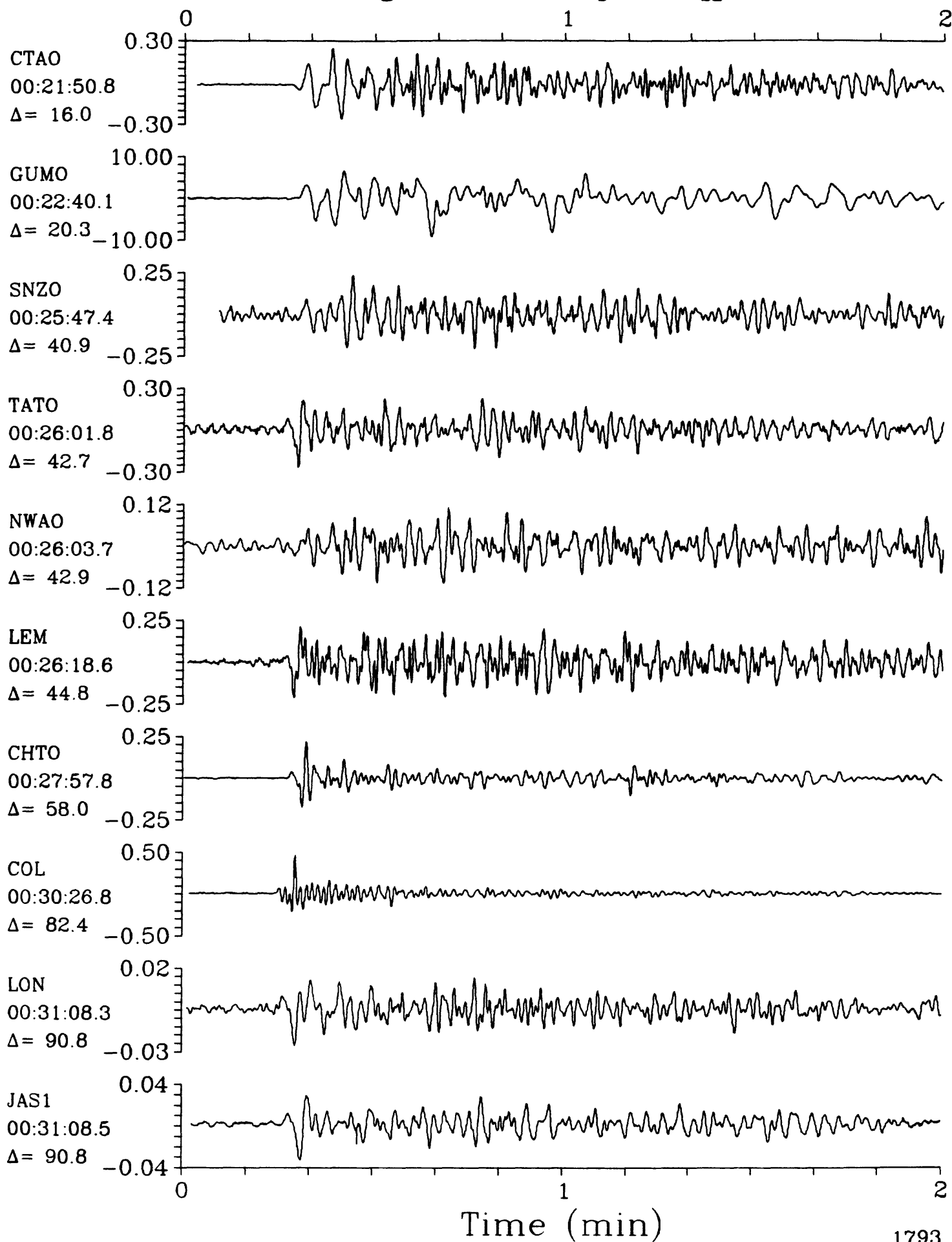
New Britain Region

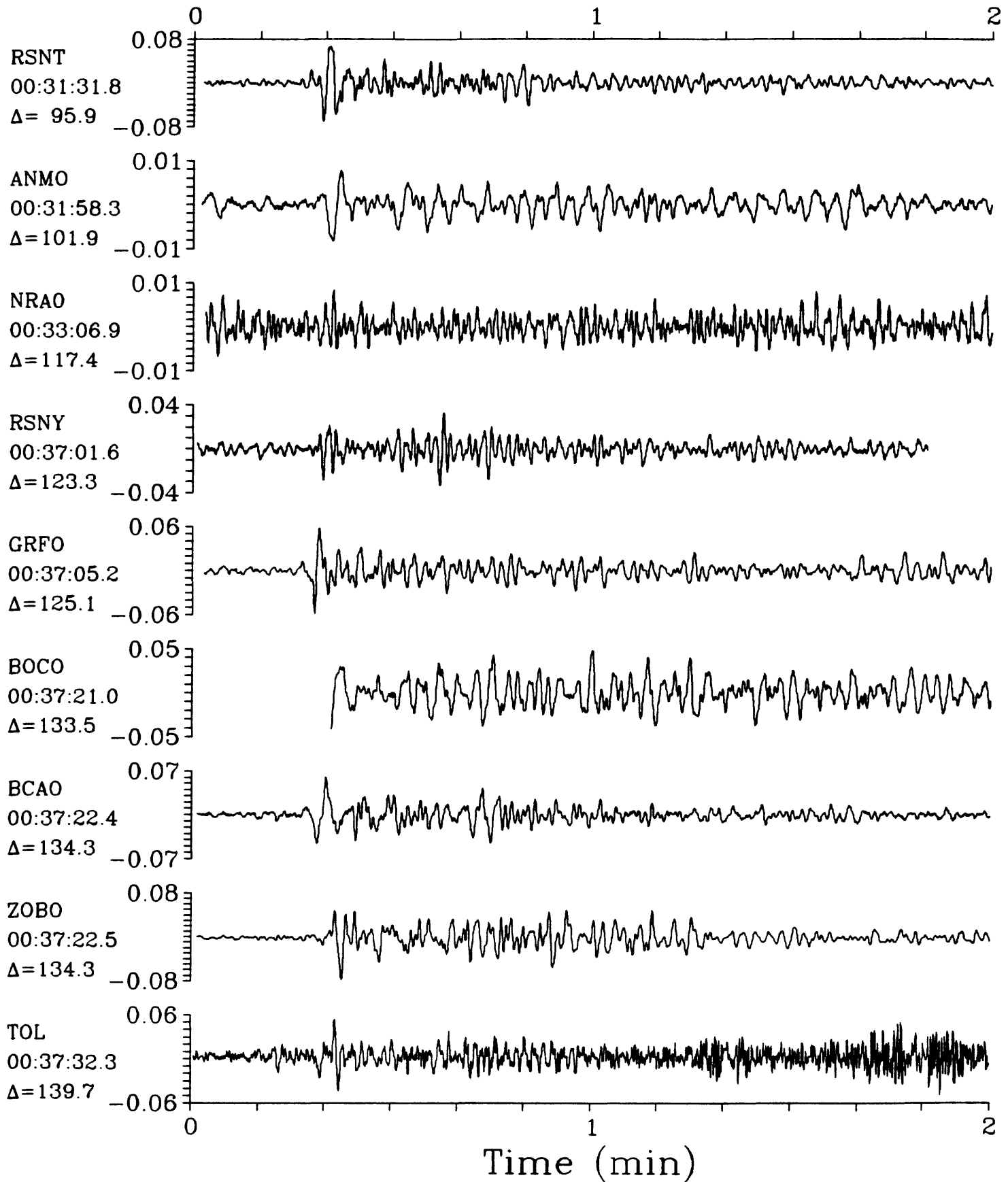


SPZ

11 September 1986 00:18:24.27
New Britain Region $h=47.2$ $m_b=5.9$ $M_{sz}=6.4$

SPZ

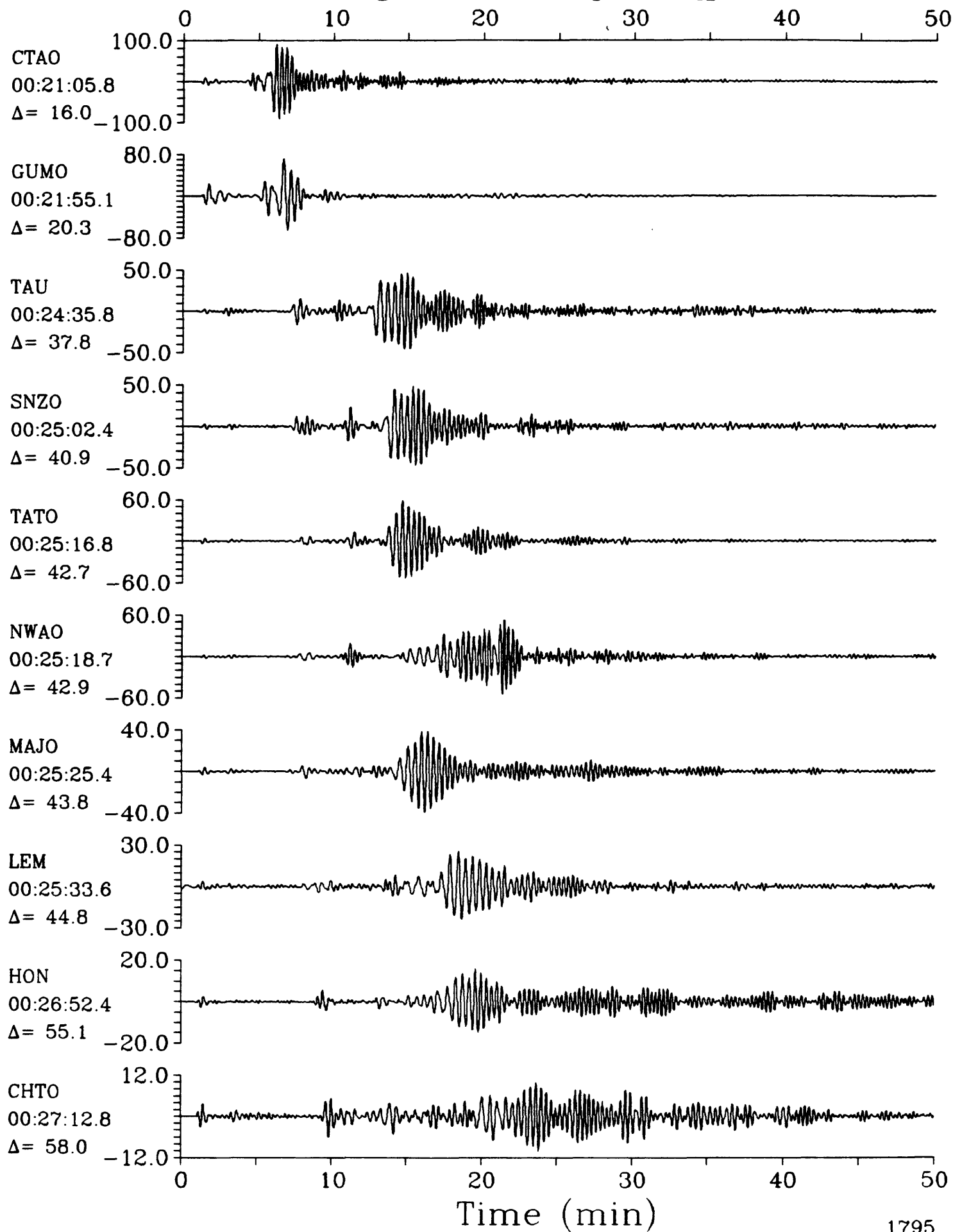




LPZ

11 September 1986 00:18:24.27
New Britain Region $h=47.2$ $m_b=5.9$ $M_{SZ}=6.4$

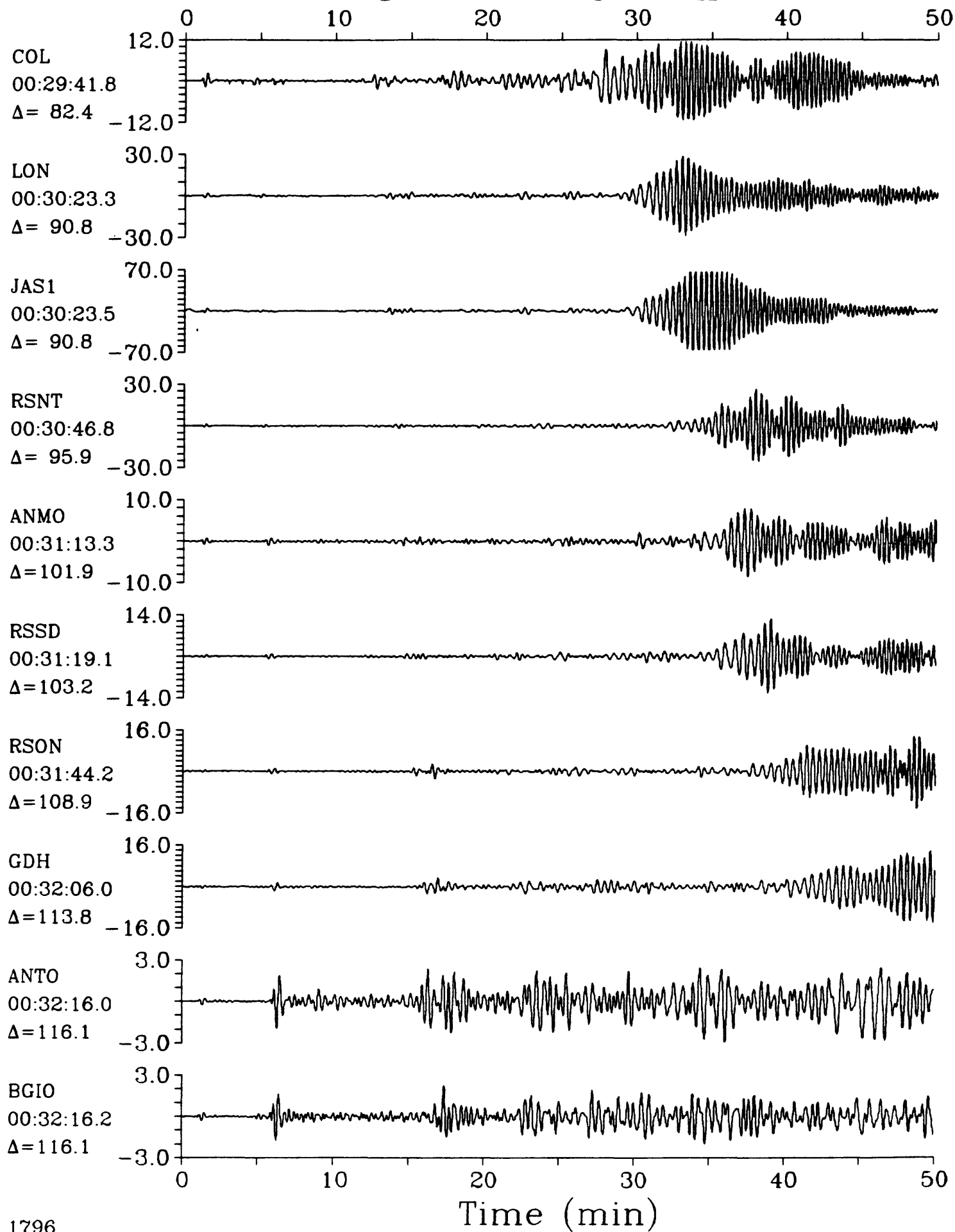
LPZ



LPZ

11 September 1986 00:18:24.27
New Britain Region $h=47.2$ $m_b=5.9$ $M_{sz}=6.4$

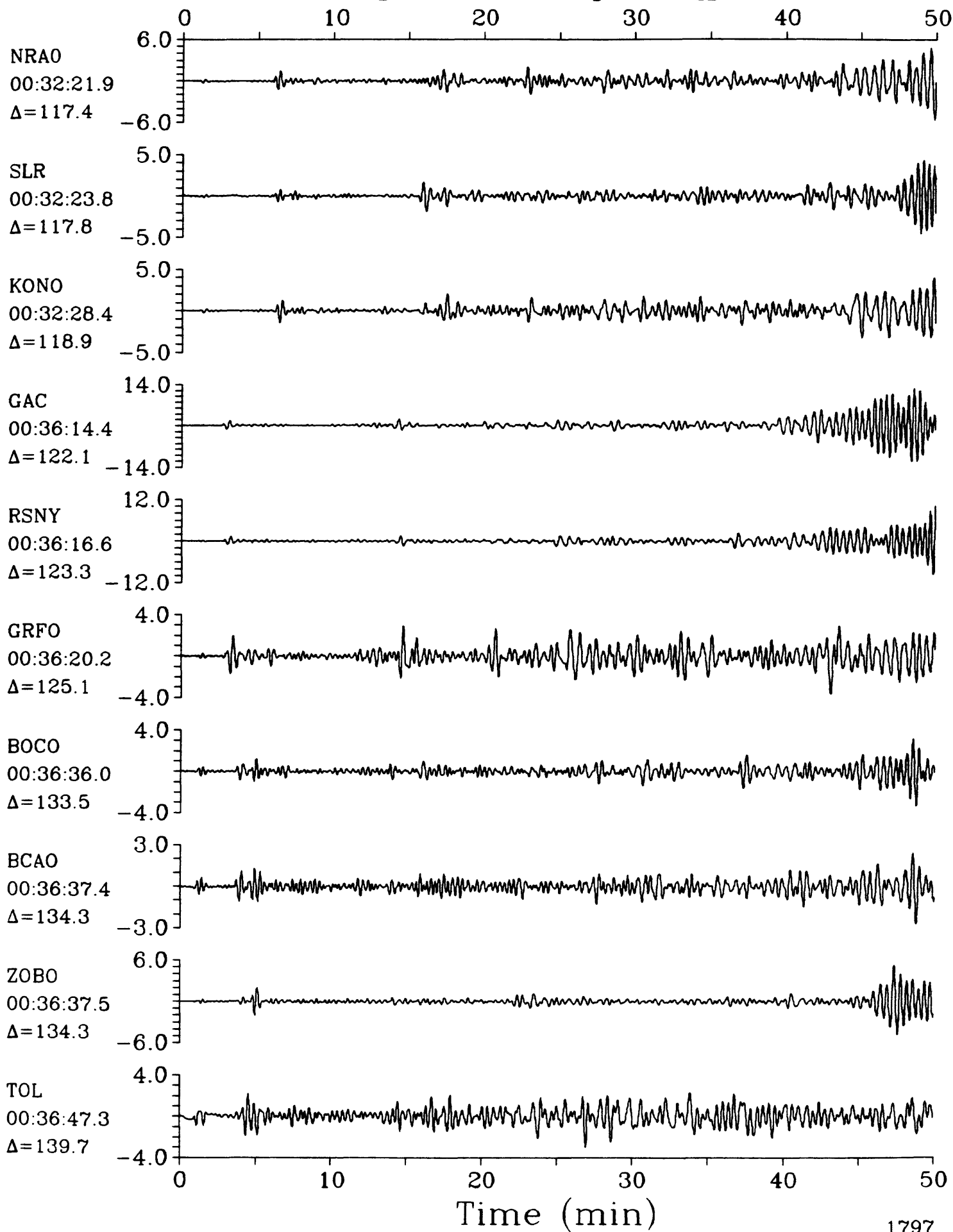
LPZ



LPZ

11 September 1986 00:18:24.27
New Britain Region $h=47.2$ $m_b=5.9$ $M_{sz}=6.4$

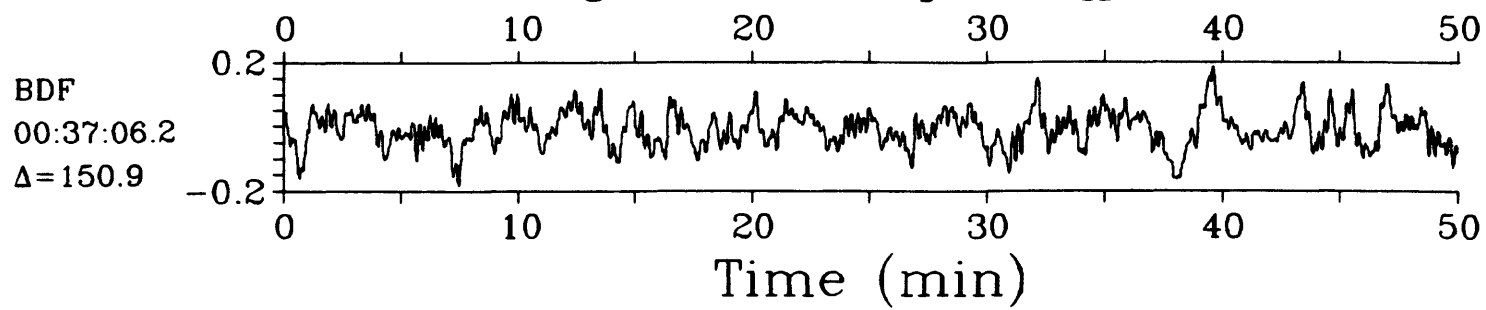
LPZ



LPZ

11 September 1986 00:18:24.27
New Britain Region $h=47.2$ $m_b=5.9$ $M_{sz}=6.4$

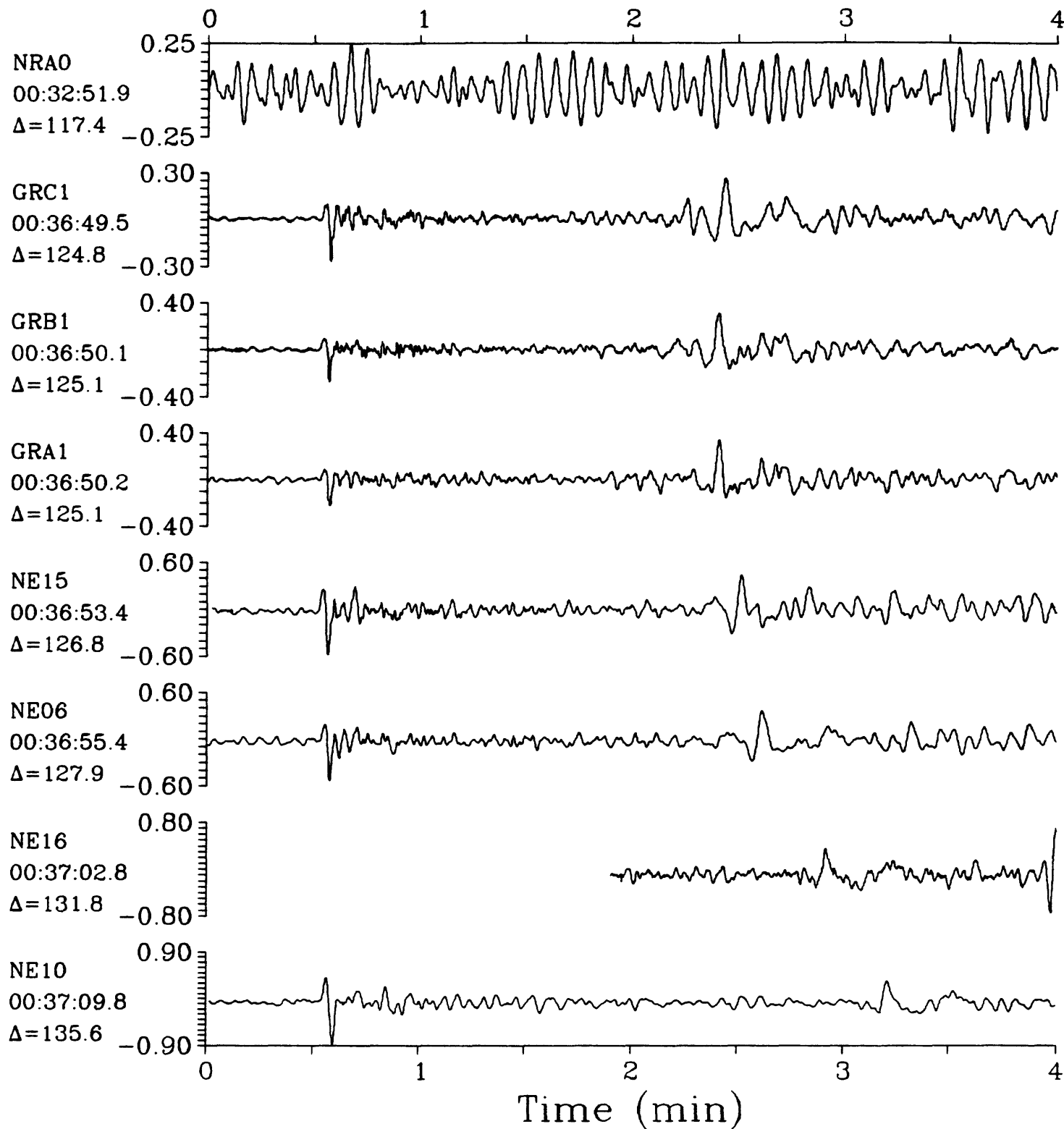
LPZ



IPZ

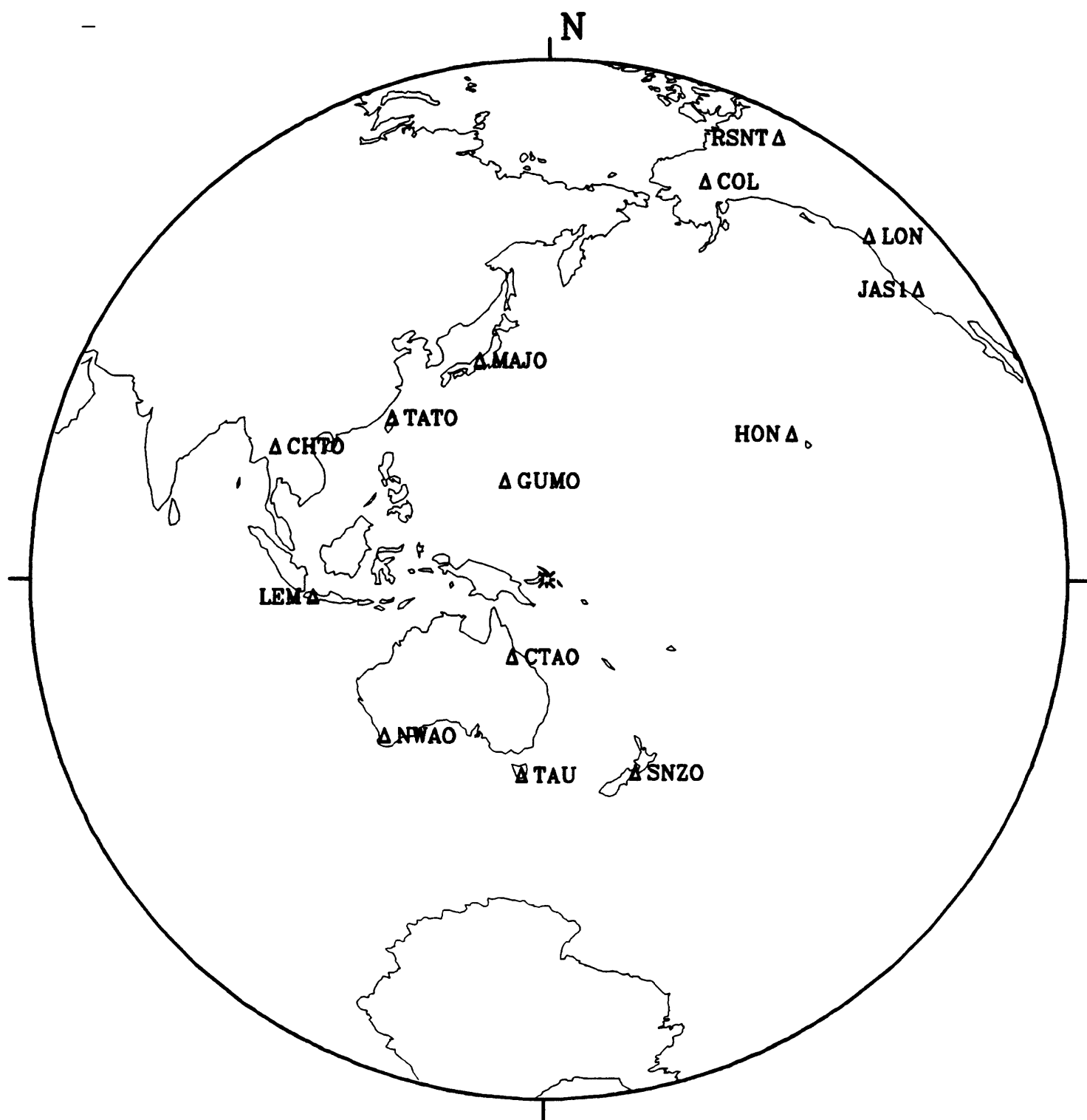
11 September 1986 00:18:24.27
New Britain Region $h=47.2$ $m_b=5.9$ $M_{sz}=6.4$

IPZ



11 September 1986 00:27:57.10

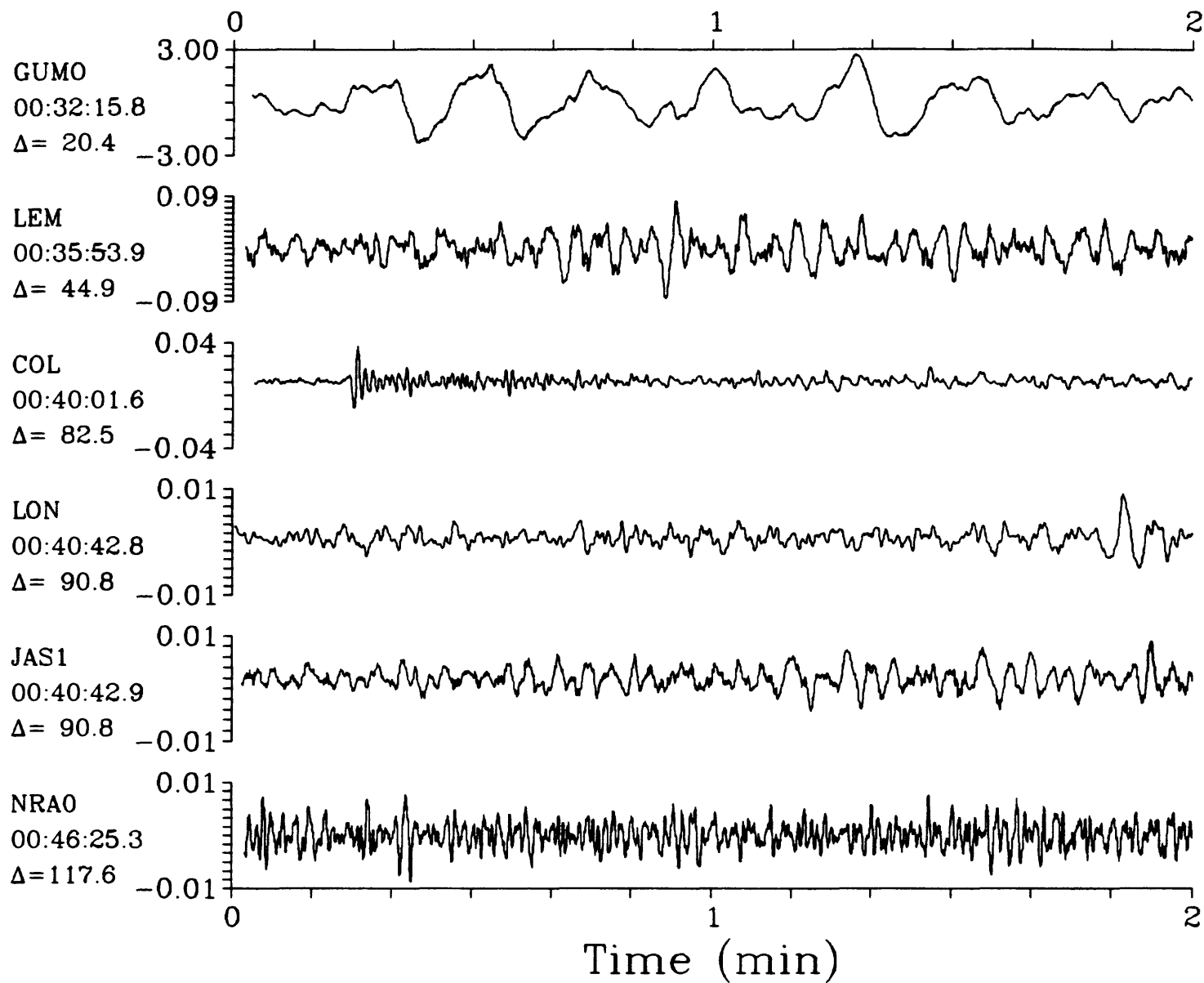
New Britain Region

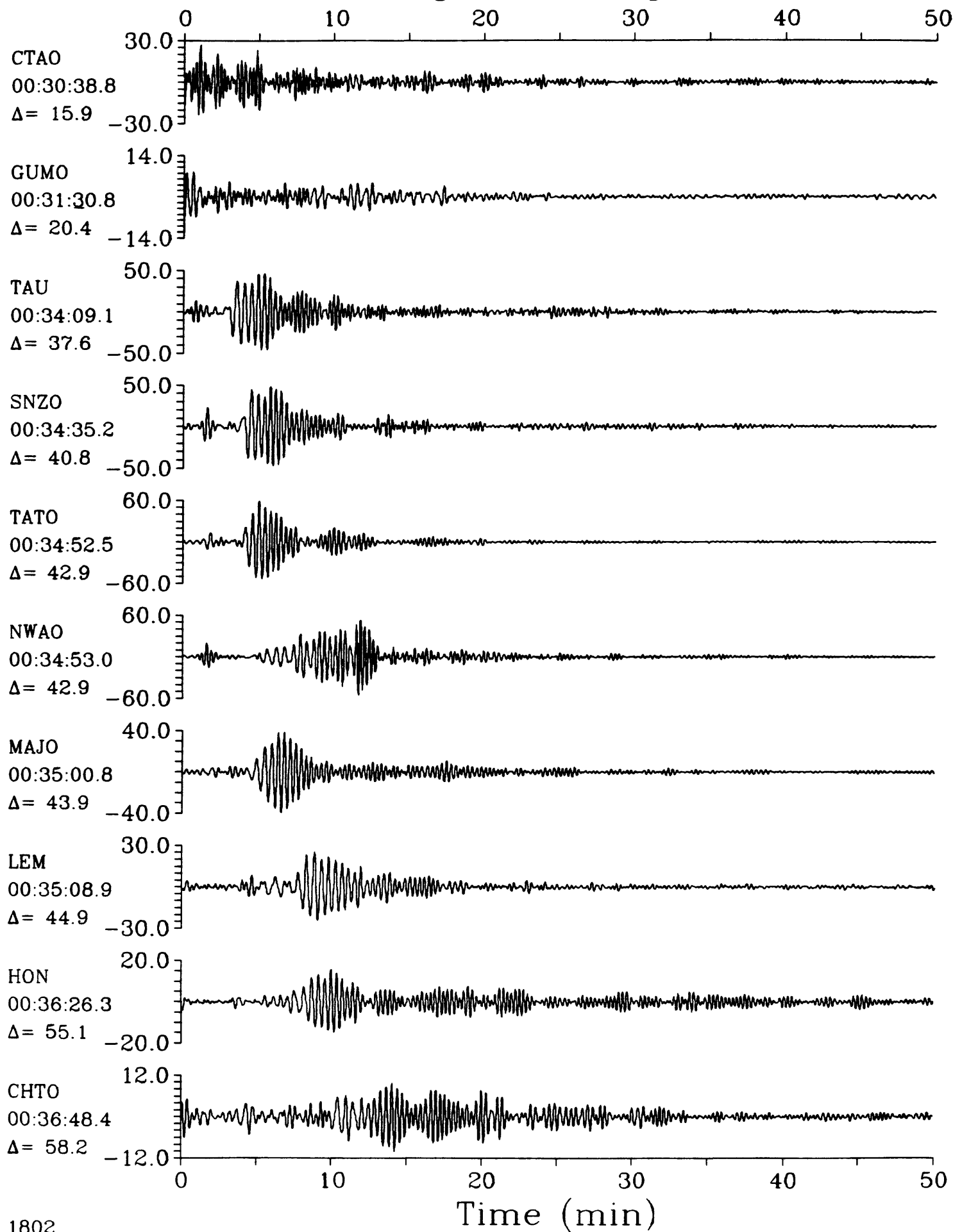


SPZ

11 September 1986 00:27:57.10
New Britain Region $h=33.6$ $m_b=5.6$

SPZ

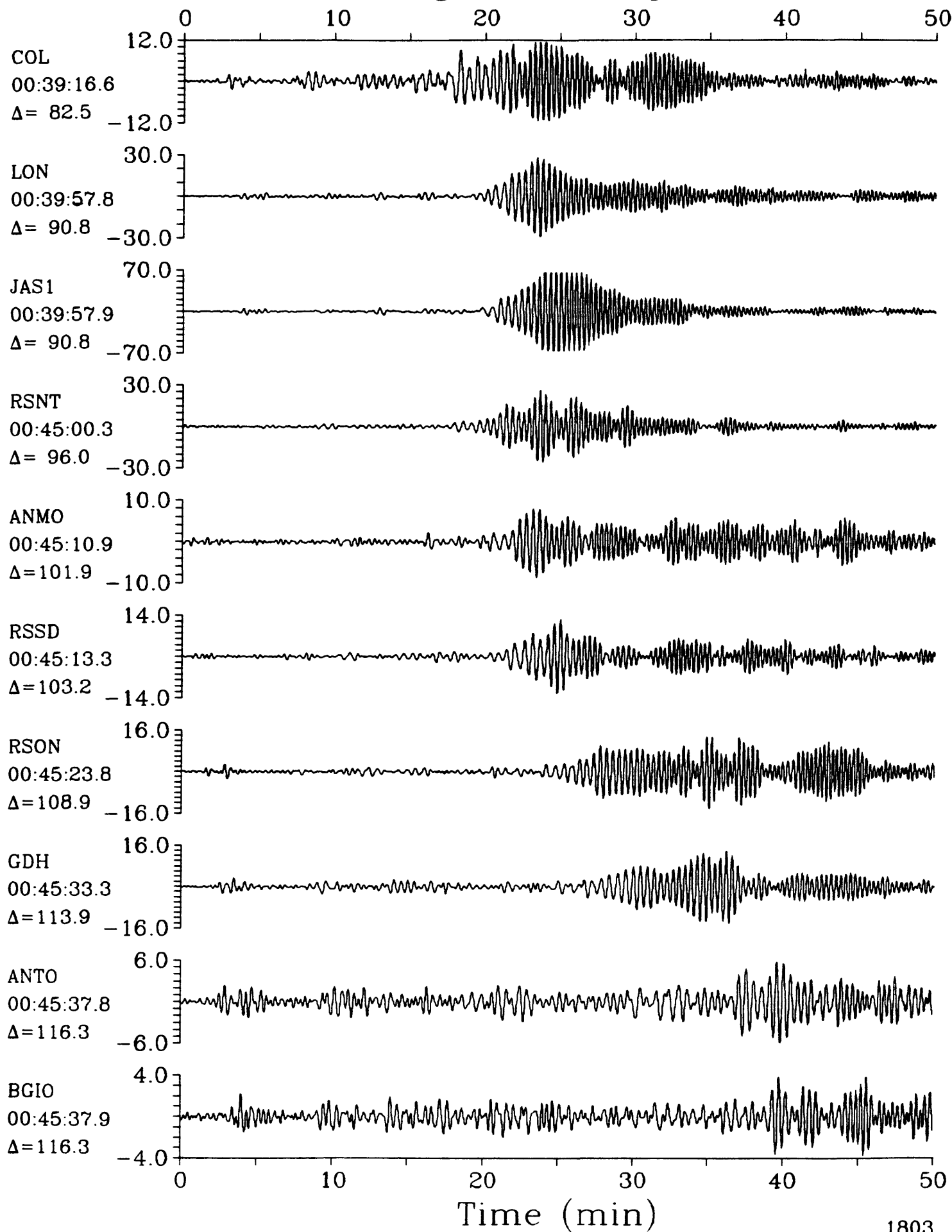




LPZ

11 September 1986 00:27:57.10
New Britain Region $h=33.6$ $m_b=5.6$

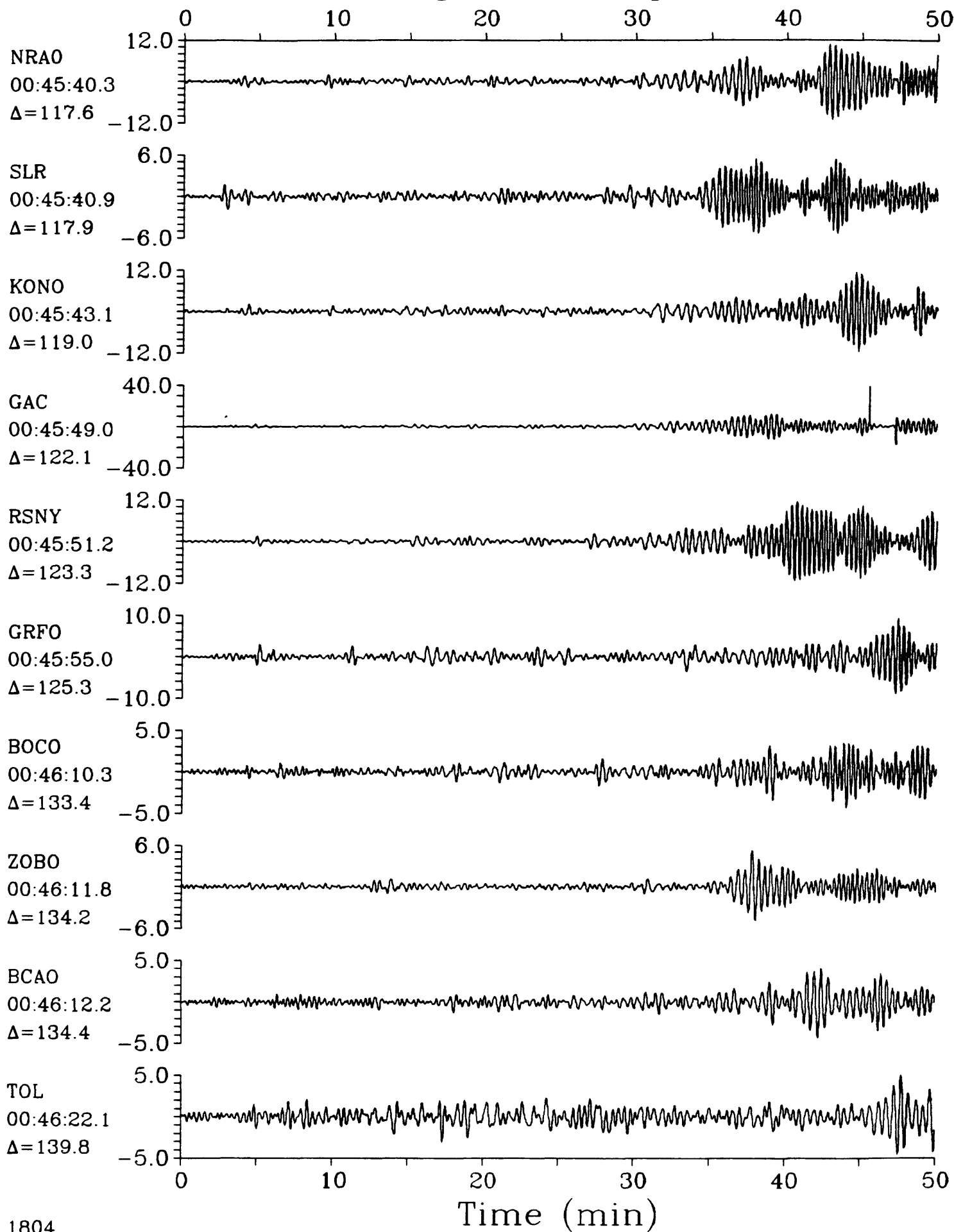
LPZ



LPZ

11 September 1986 00:27:57.10
New Britain Region $h=33.6$ $m_b=5.6$

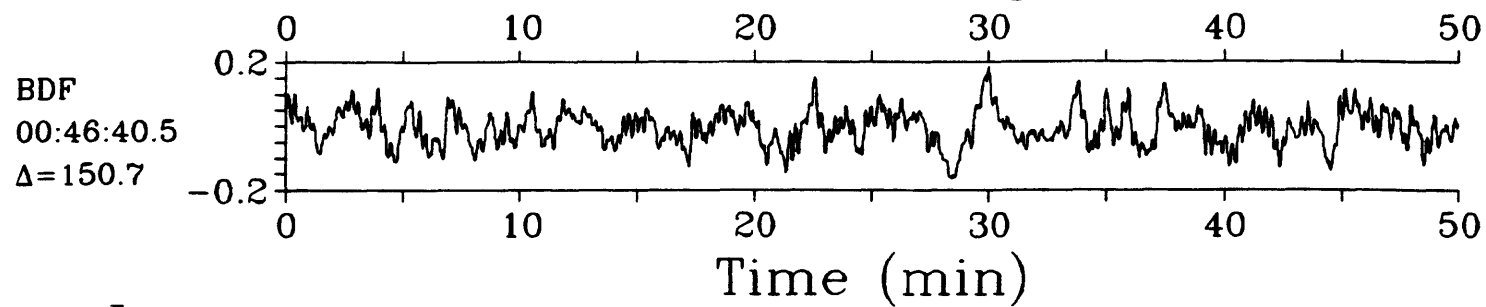
LPZ



LPZ

11 September 1986 00:27:57.10
New Britain Region $h=33.6$ $m_b=5.6$

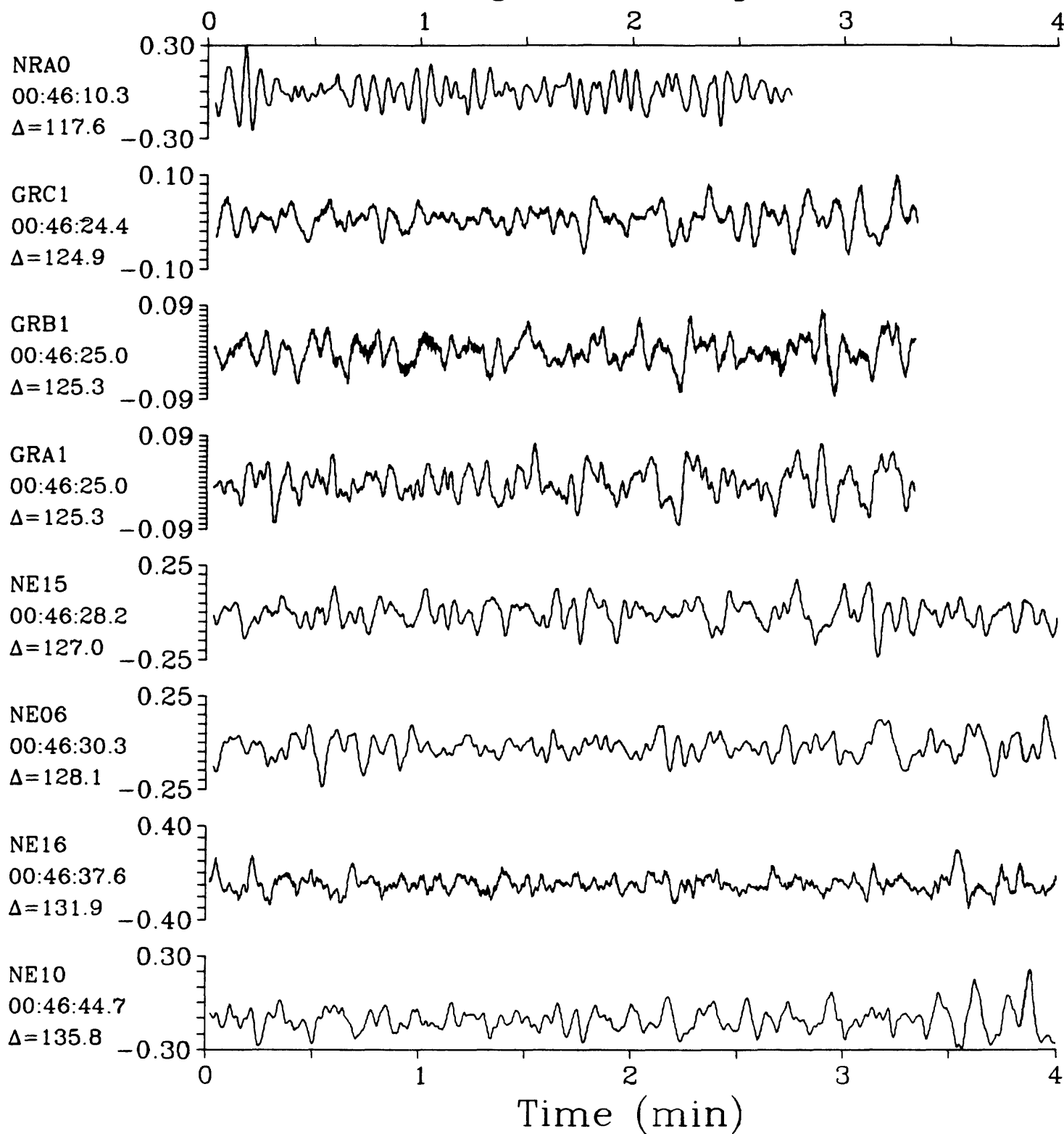
LPZ



IPZ

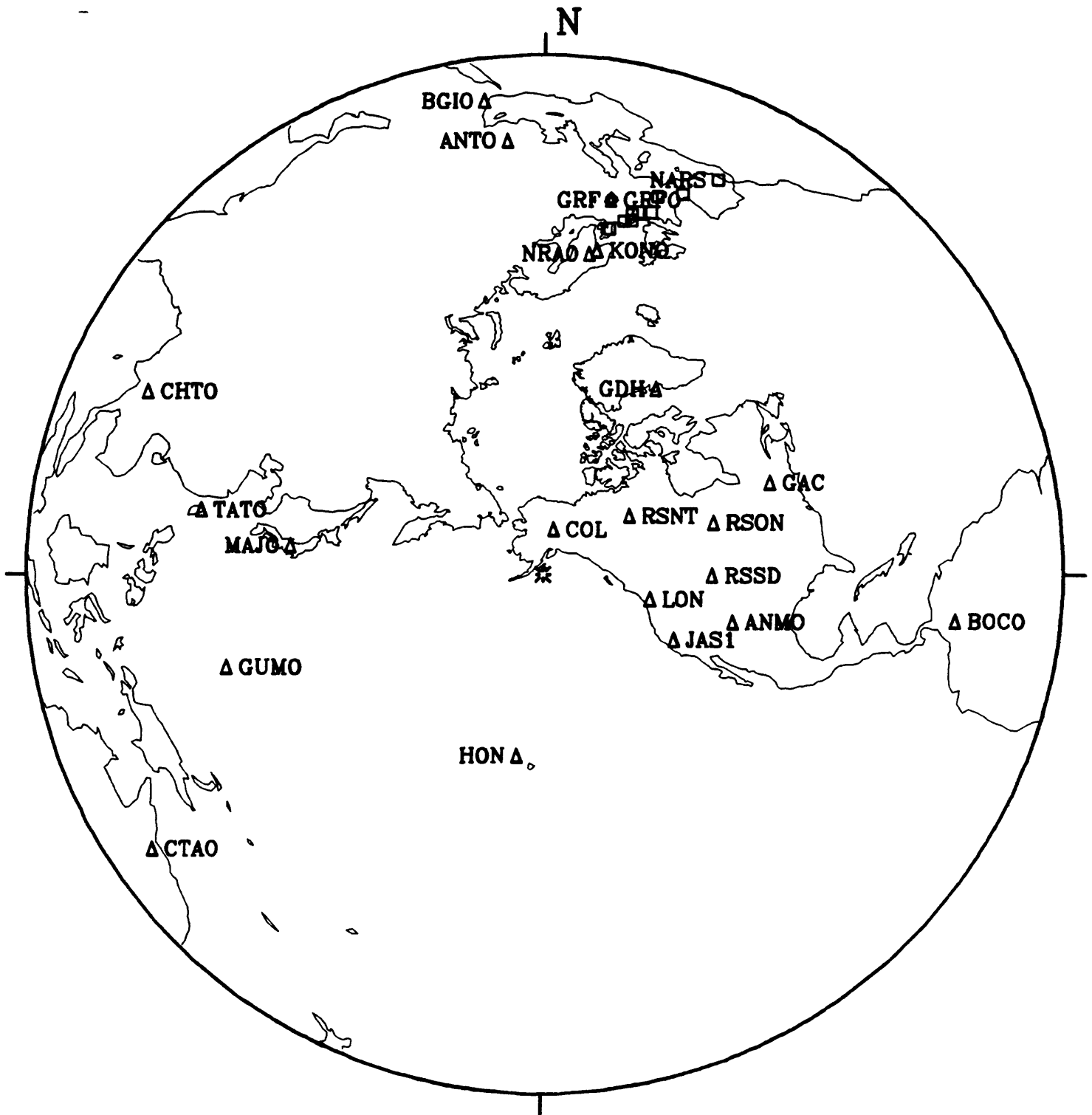
11 September 1986 00:27:57.10
New Britain Region $h=33.6$ $m_b=5.6$

IPZ



12 September 1986 23:57:16.13

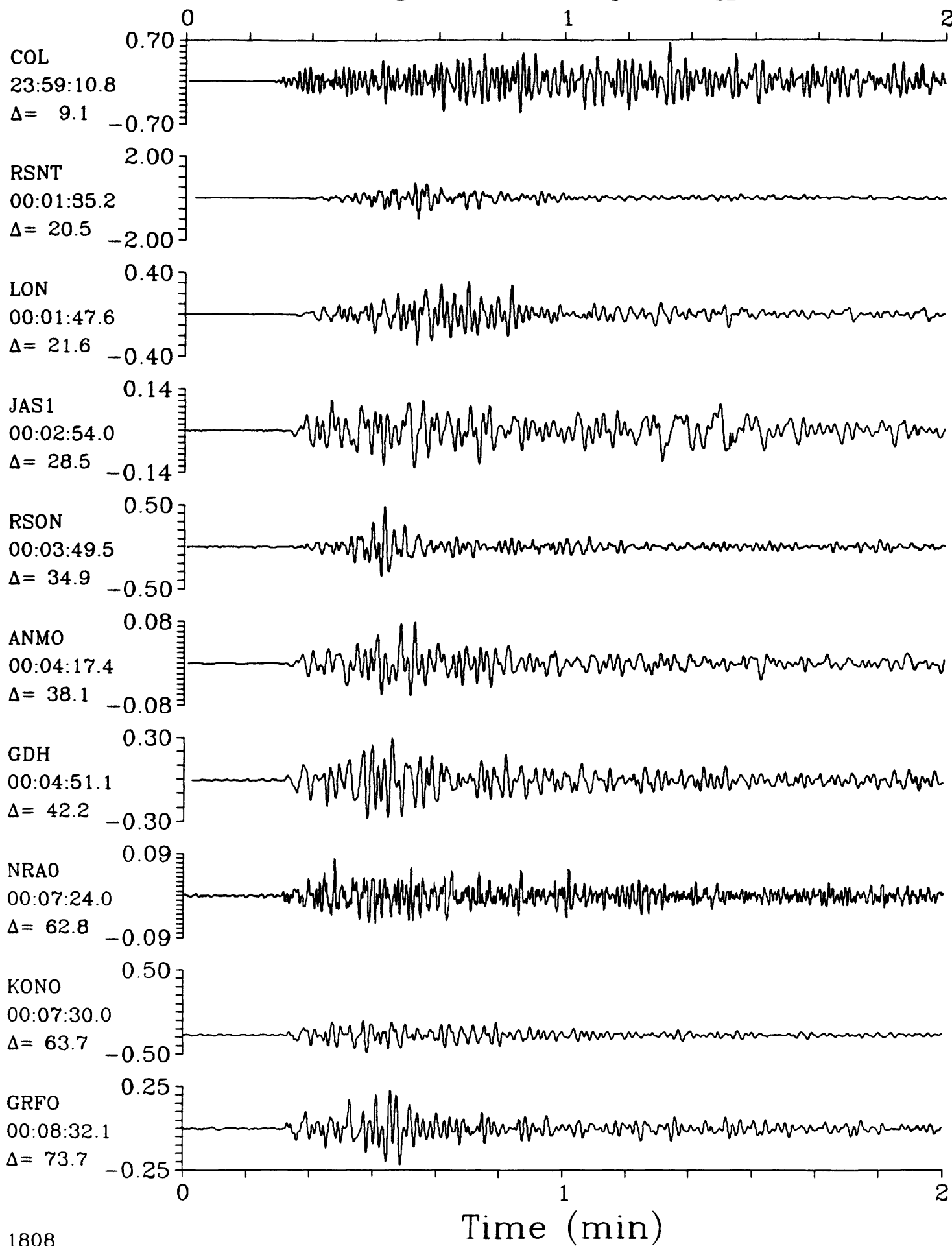
Kodiak Island Region



SPZ

12 September 1986 23:57:16.13

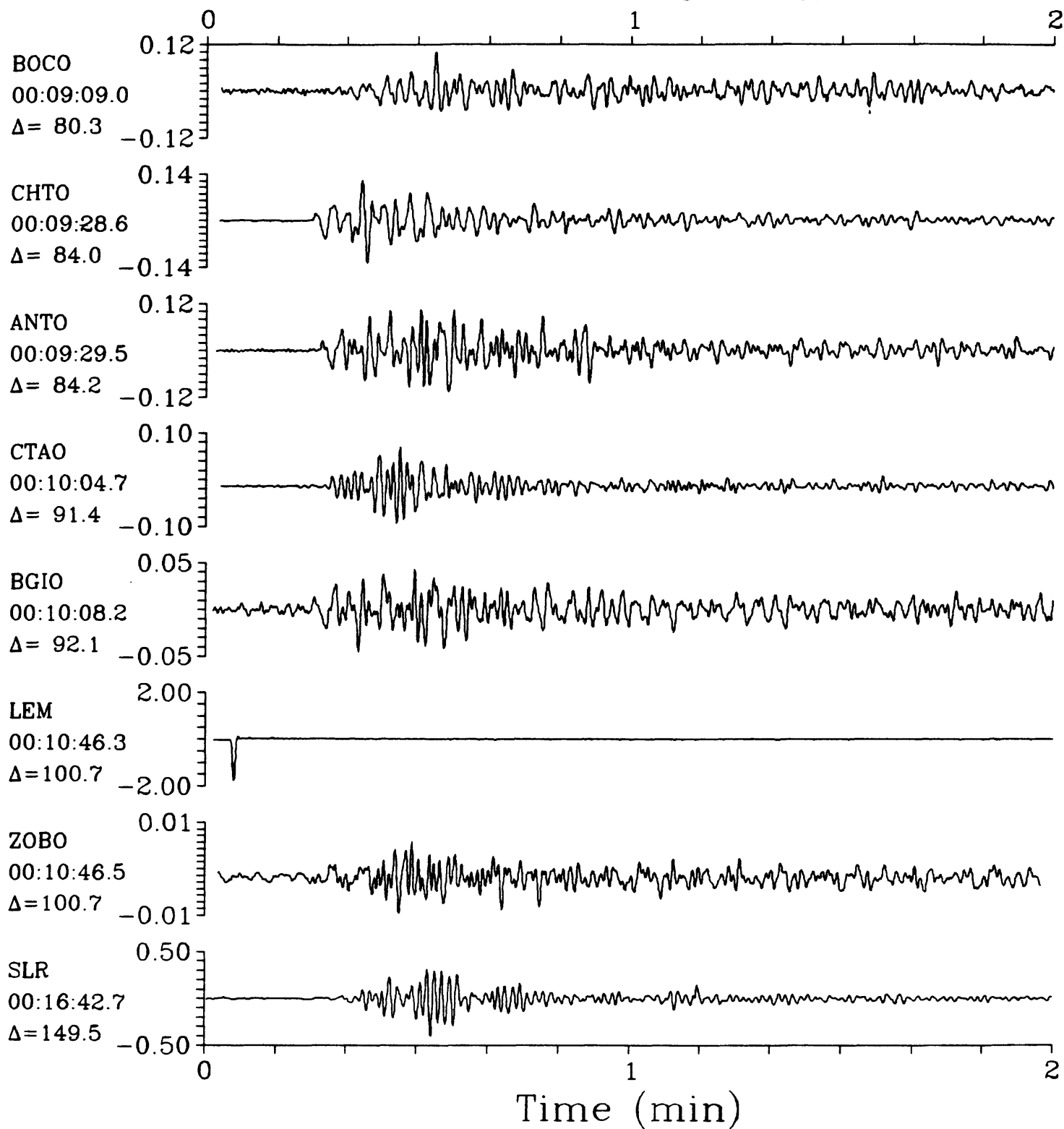
SPZ

Kodiak Island Region $h=33.0$ $m_b=6.0$ $M_{sz}=6.4$ 

SPZ

12 September 1986 23:57:16.13

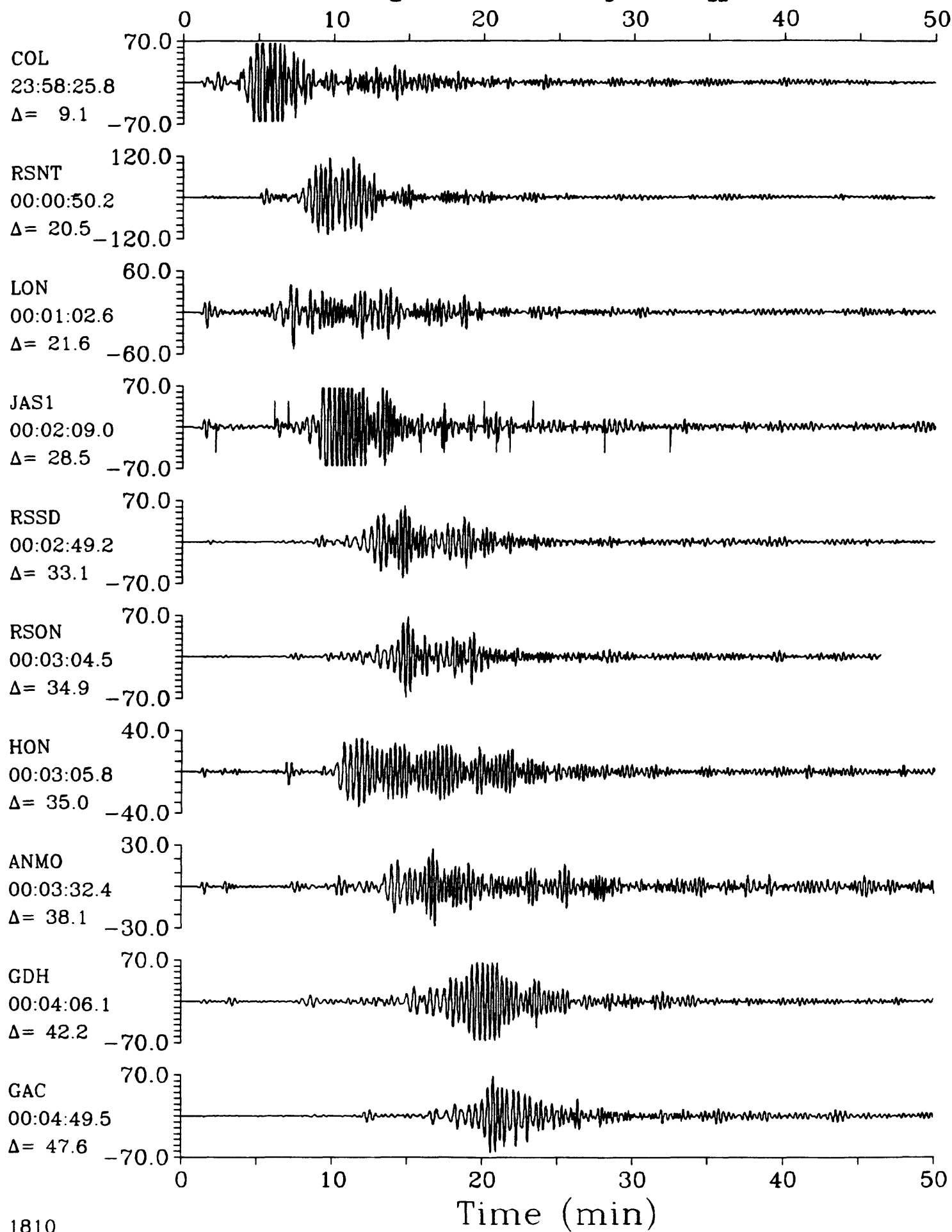
SPZ

Kodiak Island Region $h=33.0$ $m_b=6.0$ $M_{sz}=6.4$ 

LPZ

12 September 1986 23:57:16.13
Kodiak Island Region $h=33.0$ $m_b=6.0$ $M_{sz}=6.4$

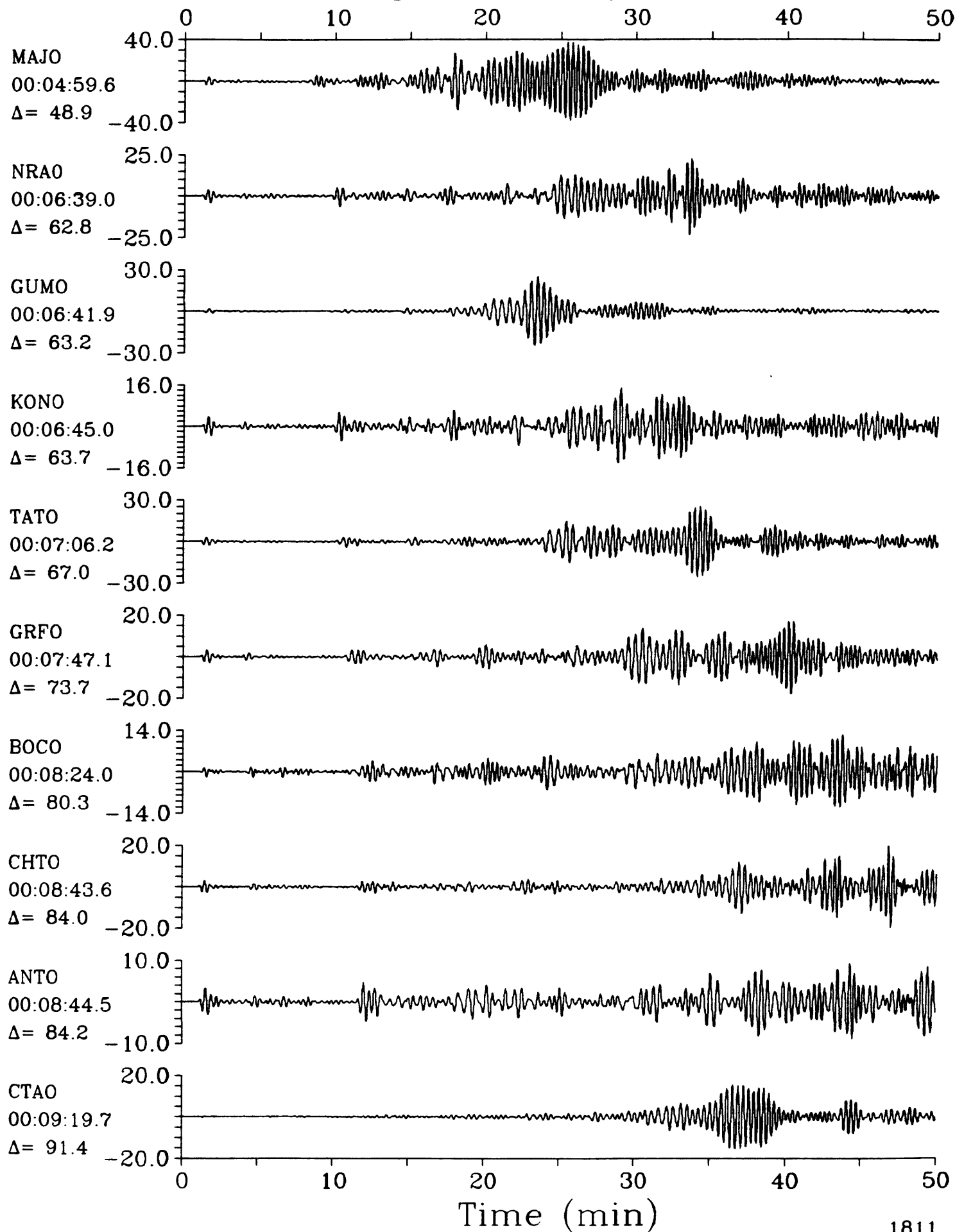
LPZ



LPZ

12 September 1986 23:57:16.13

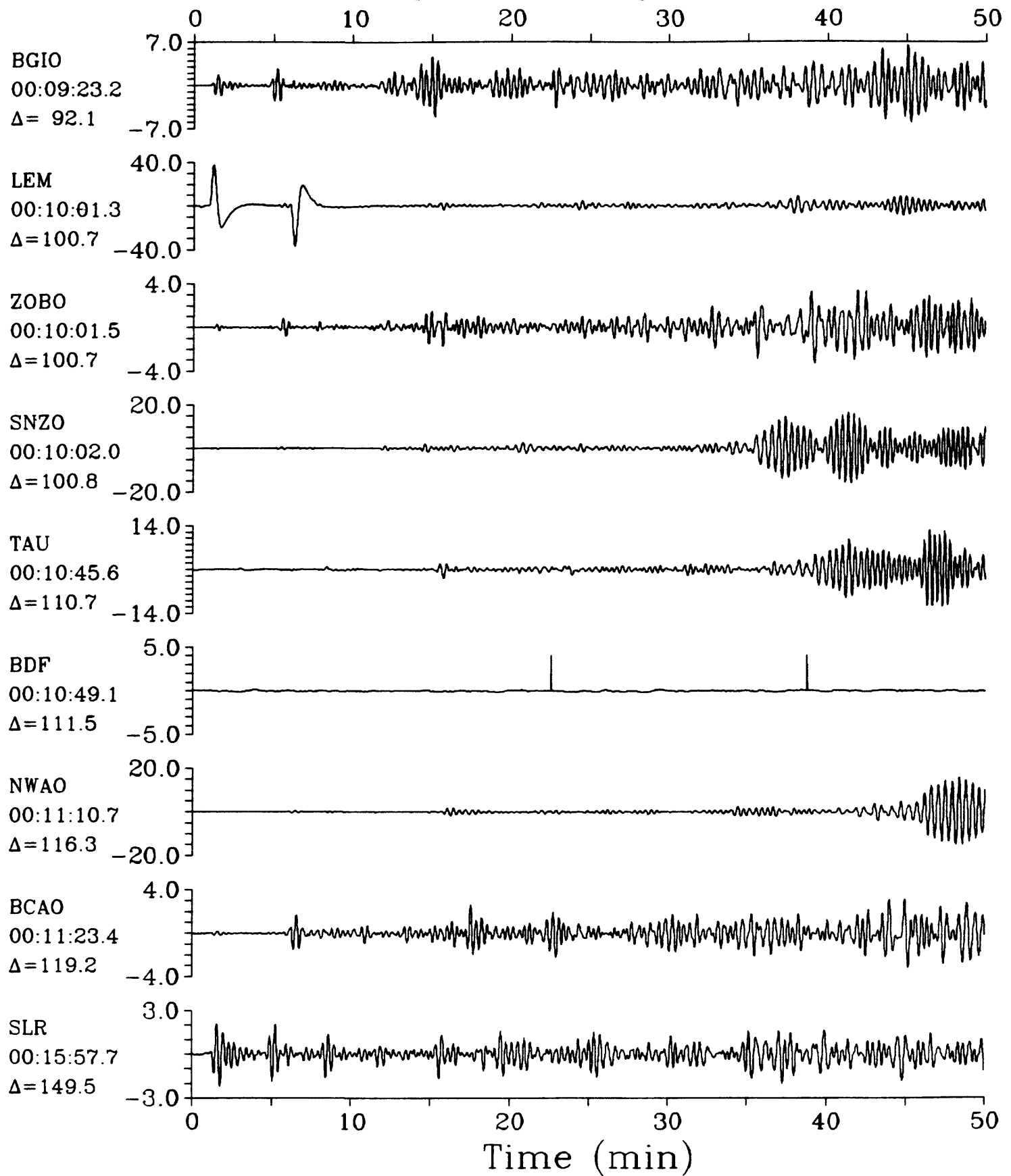
LPZ

Kodiak Island Region $h=33.0$ $m_b=6.0$ $M_{sz}=6.4$ 

LPZ

12 September 1986 23:57:16.13

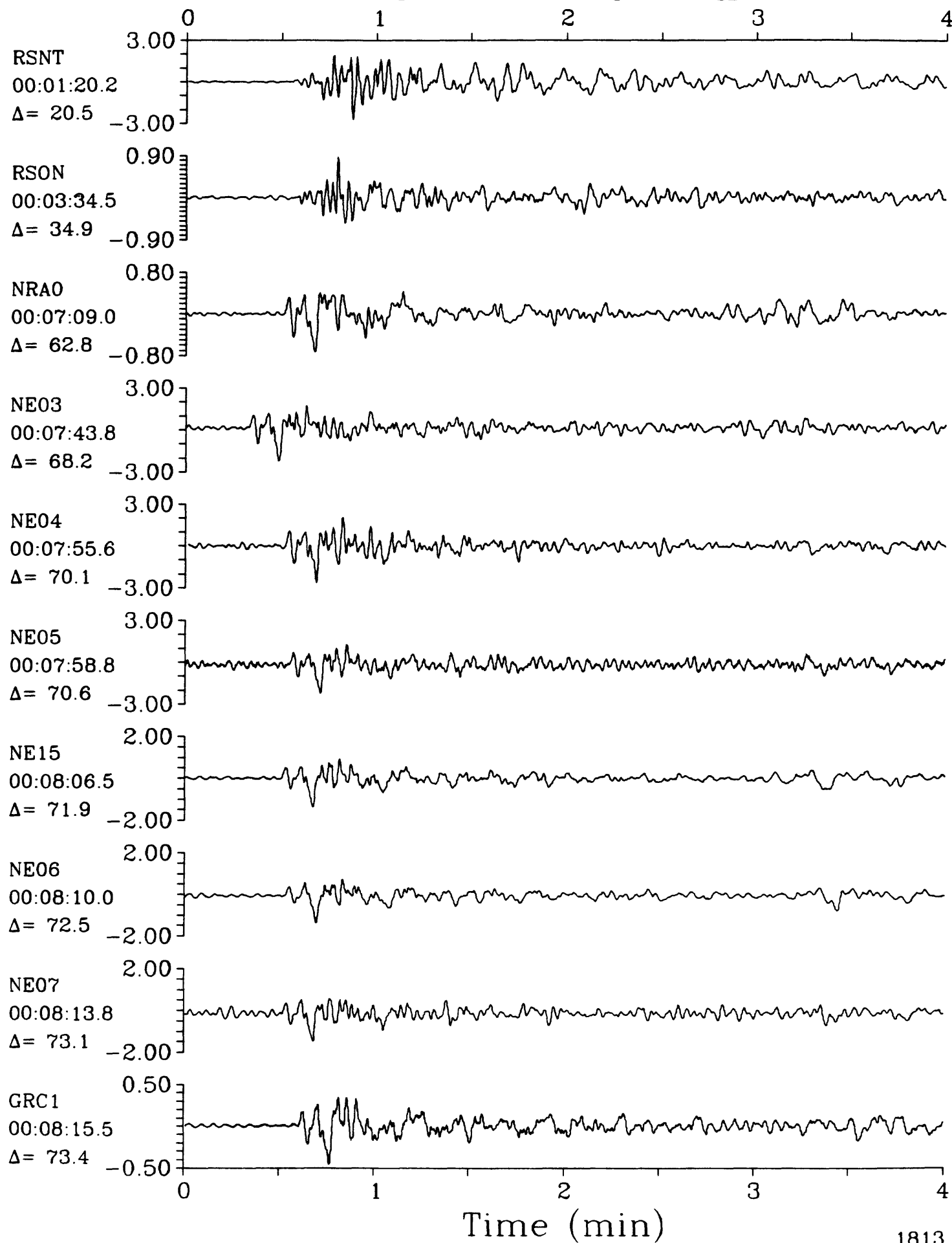
LPZ

Kodiak Island Region $h=33.0$ $m_b=6.0$ $M_{sz}=6.4$ 

IPZ

12 September 1986 23:57:16.13

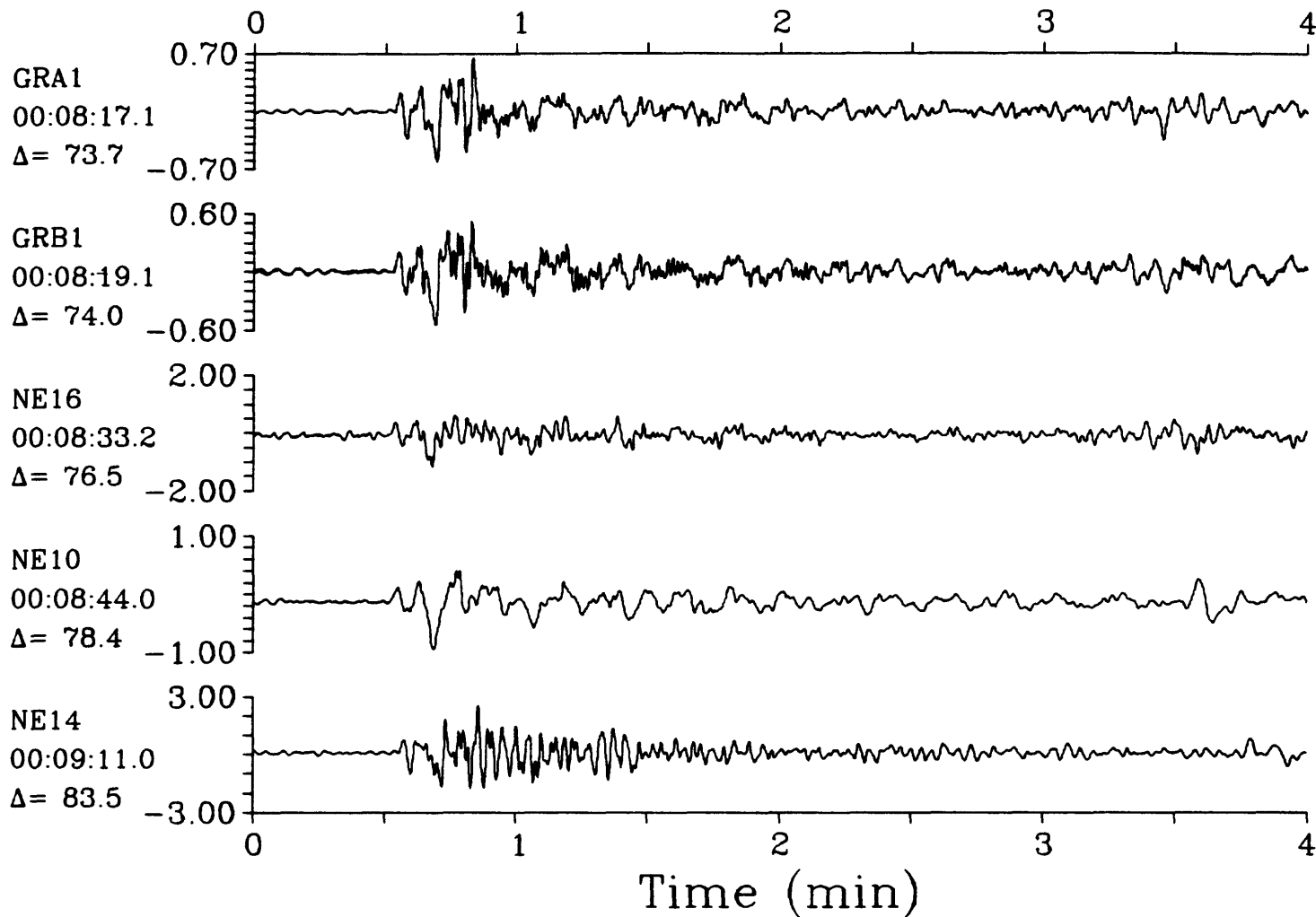
IPZ

Kodiak Island Region $h=33.0$ $m_b=6.0$ $M_{sz}=6.4$ 

IPZ

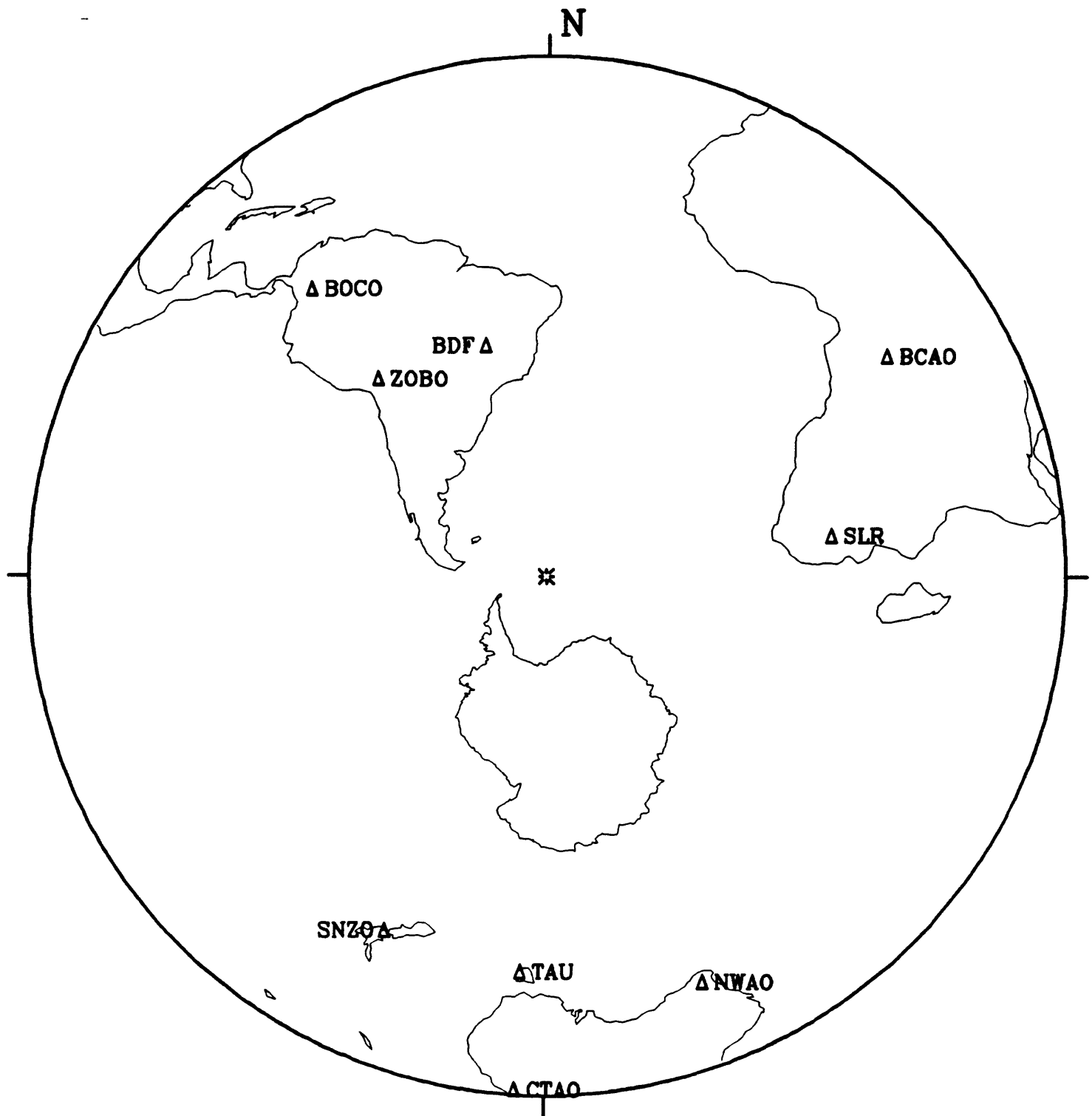
12 September 1986 23:57:16.13

IPZ

Kodiak Island Region $h=33.0$ $m_b=6.0$ $M_{sz}=6.4$ 

13 September 1986 09:28:24.21

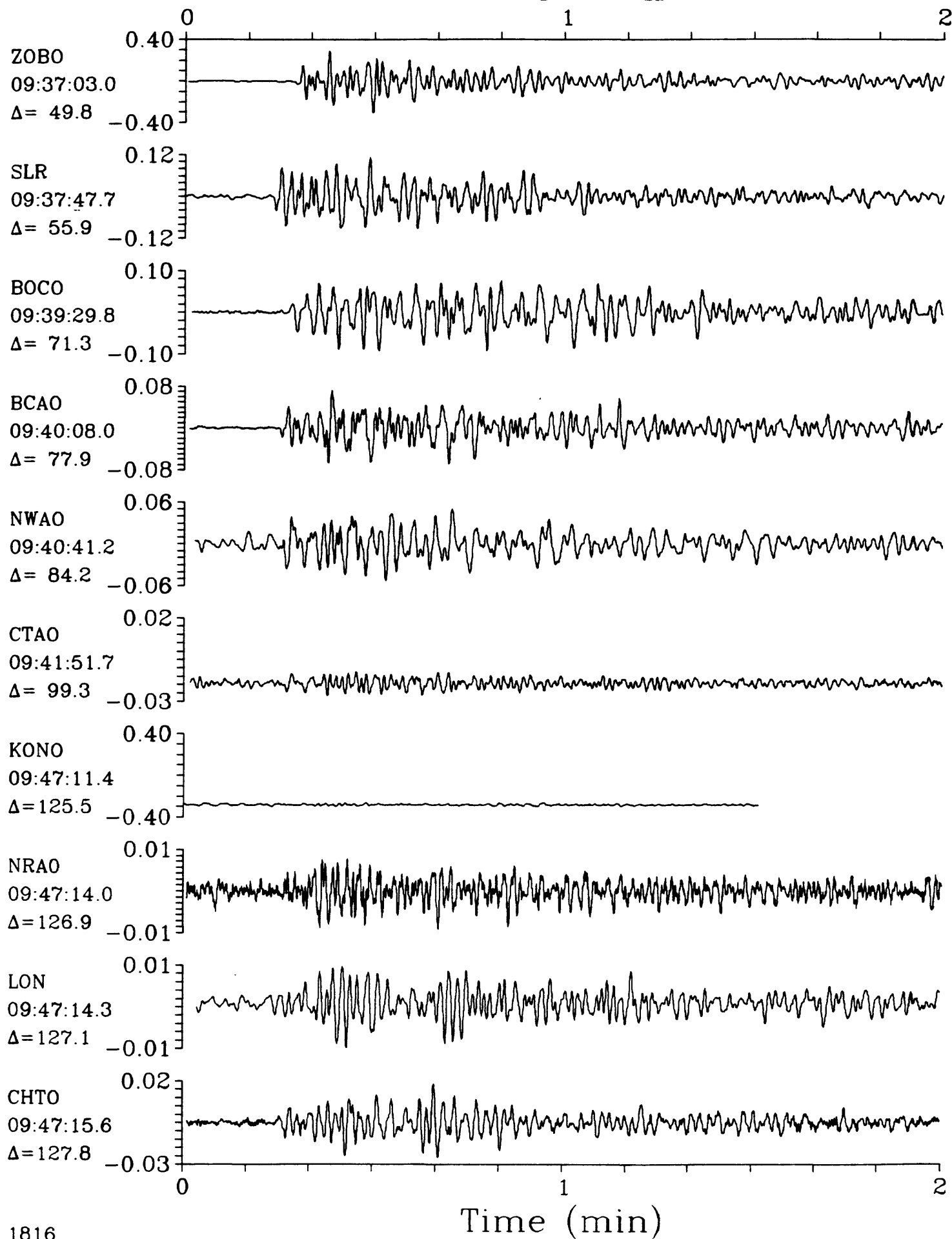
Scotia Sea



SPZ

13 September 1986 09:28:24.21
Scotia Sea $h=10.0$ $m_b=5.8$ $M_{sz}=6.1$

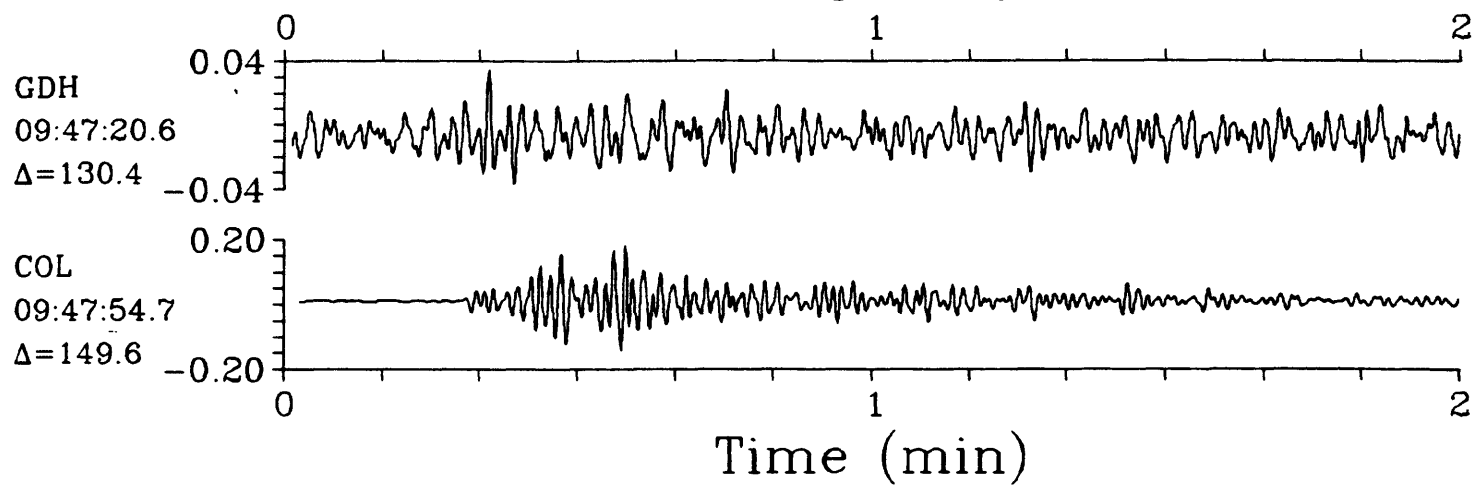
SPZ



SPZ

13 September 1986 09:28:24.21
Scotia Sea $h=10.0$ $m_b=5.8$ $M_{SZ}=6.1$

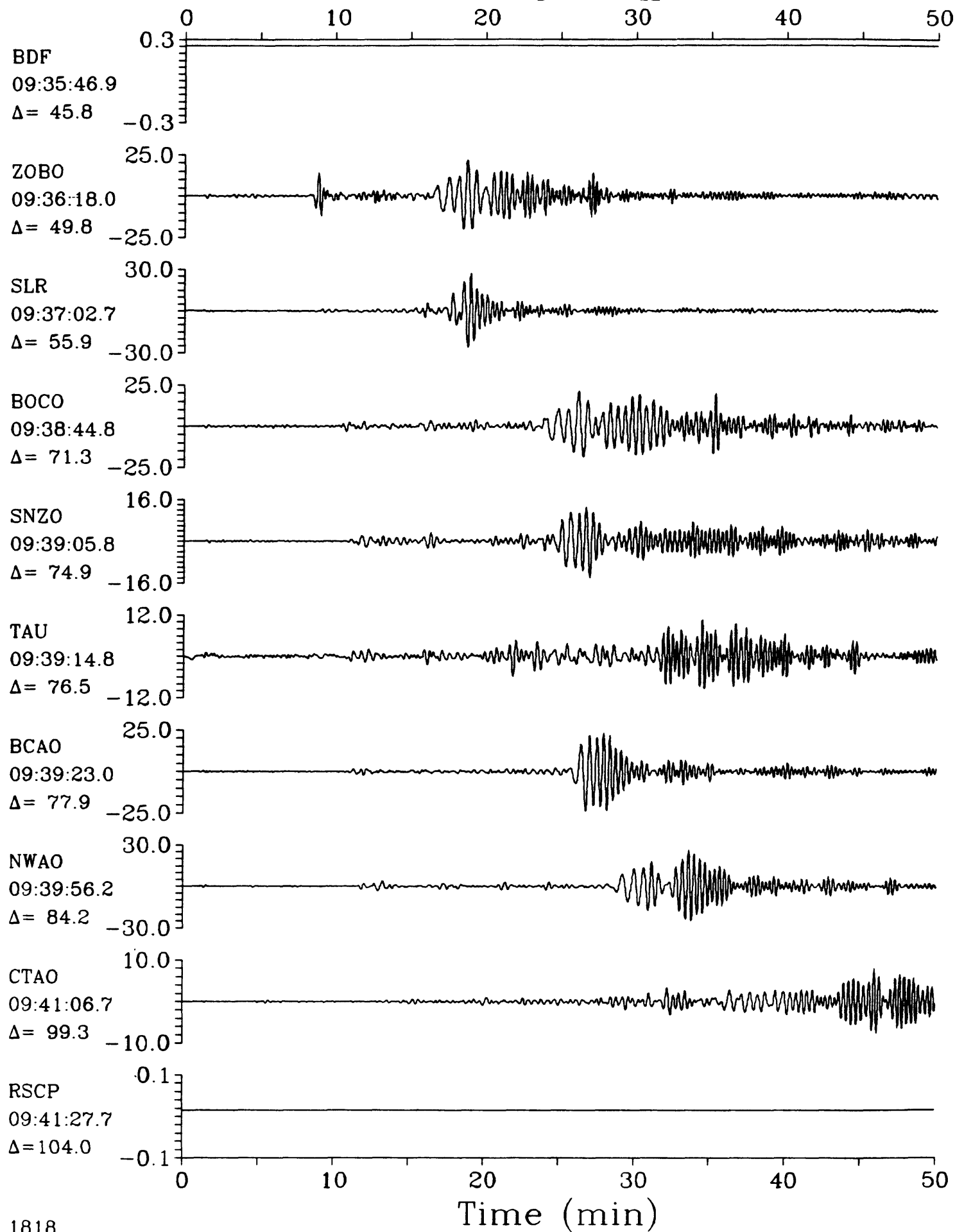
SPZ



LPZ

13 September 1986 09:28:24.21
Scotia Sea $h=10.0$ $m_b=5.8$ $M_{sz}=6.1$

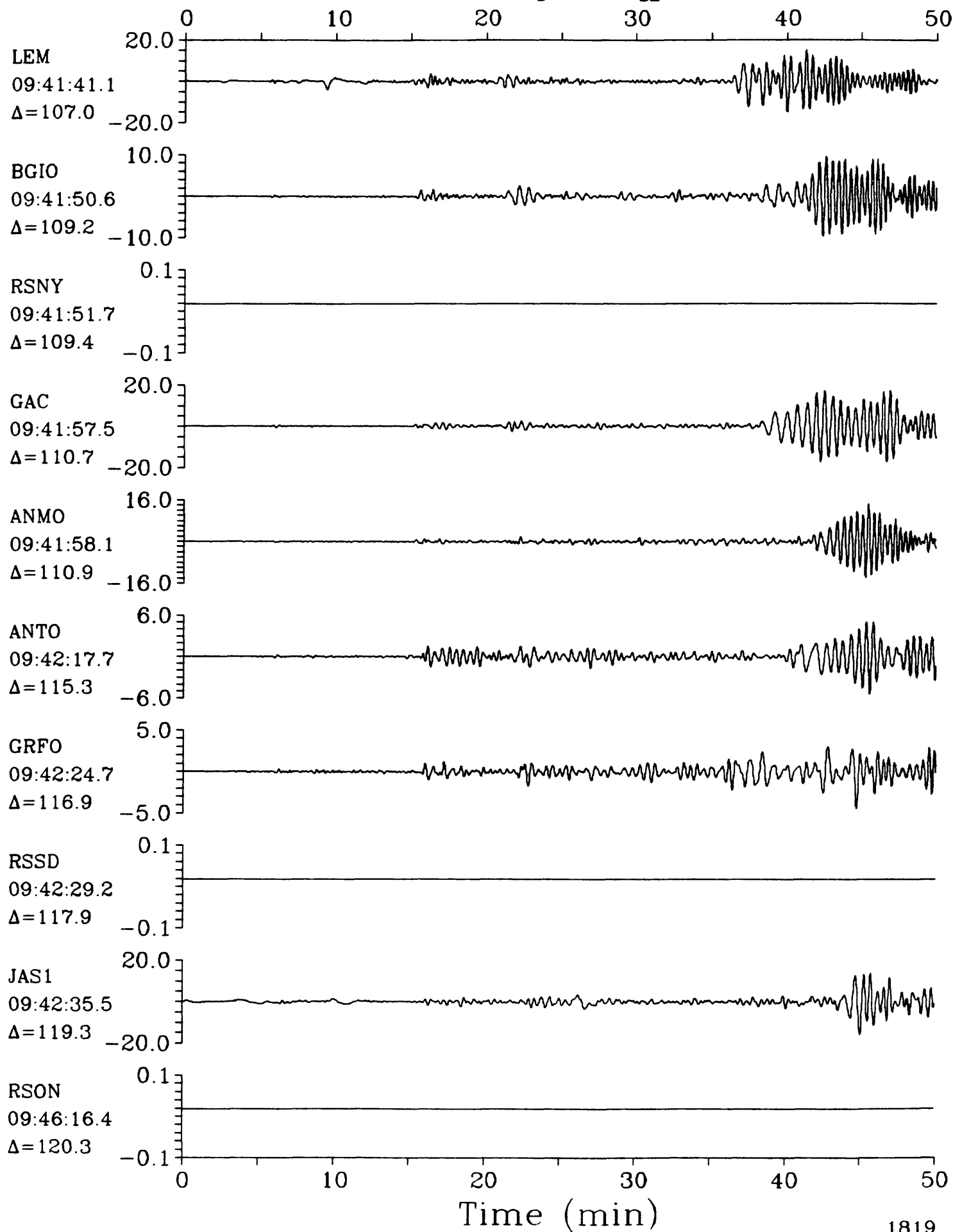
LPZ



LPZ

13 September 1986 09:28:24.21
Scotia Sea $h=10.0$ $m_b=5.8$ $M_{SZ}=6.1$

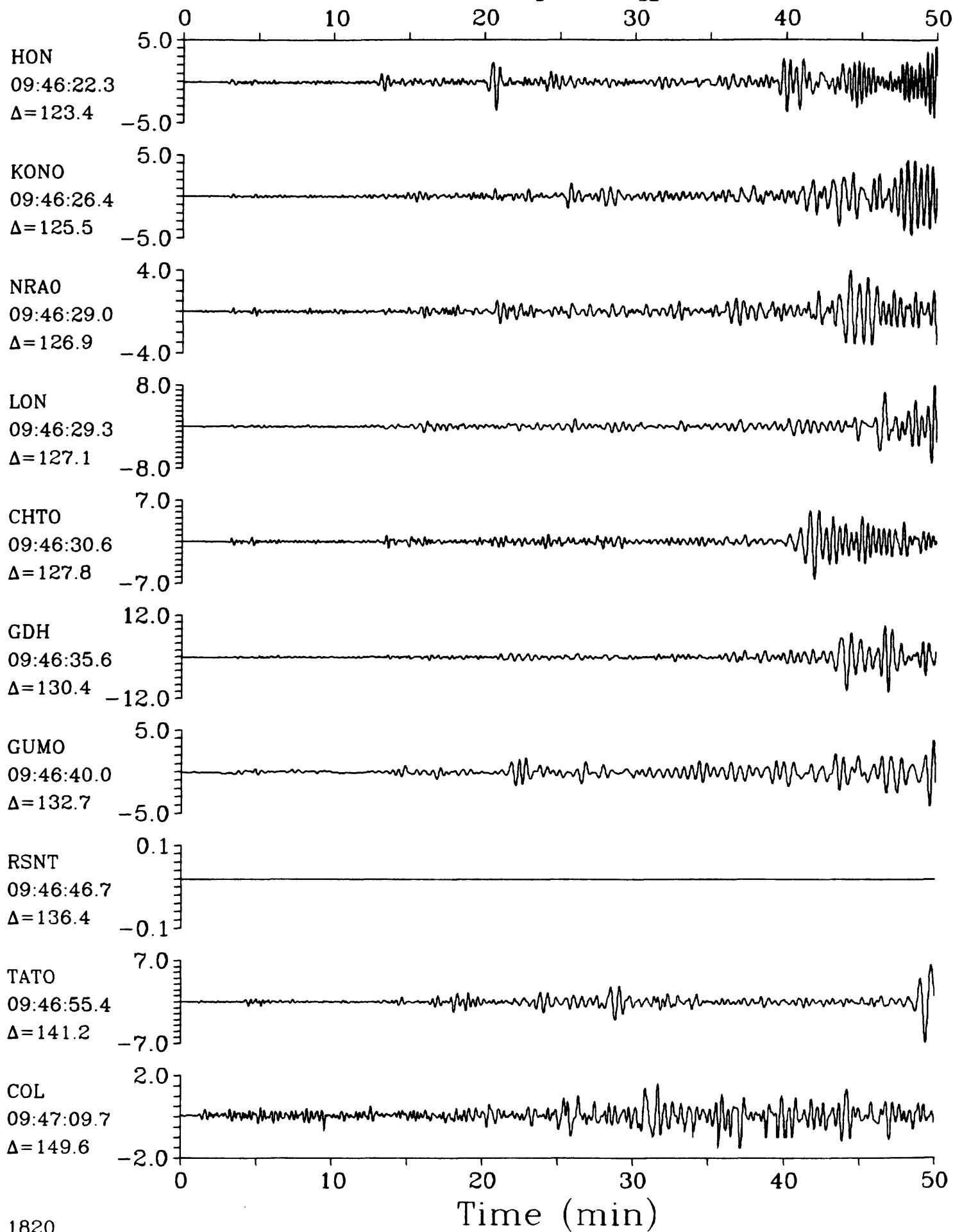
LPZ



LPZ

13 September 1986 09:28:24.21
Scotia Sea $h=10.0$ $m_b=5.8$ $M_{sz}=6.1$

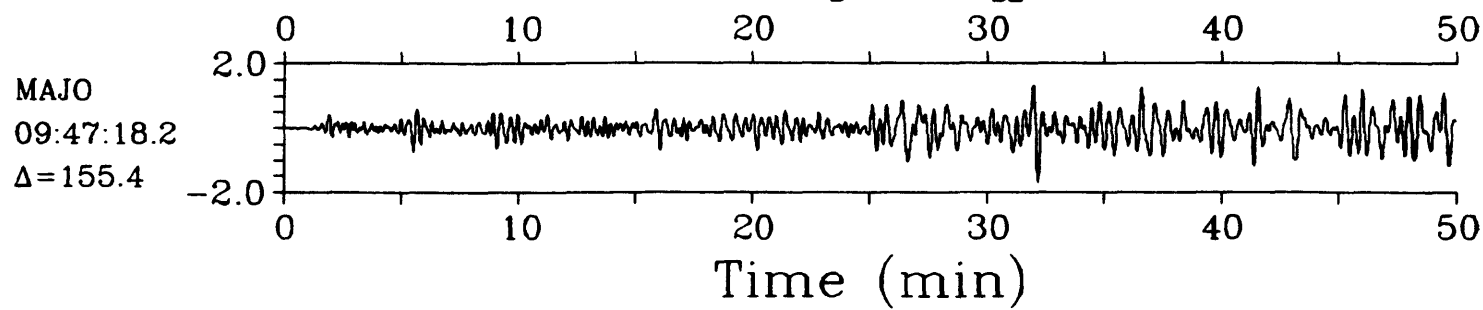
LPZ



LPZ

13 September 1986 09:28:24.21
Scotia Sea $h=10.0$ $m_b=5.8$ $M_{sz}=6.1$

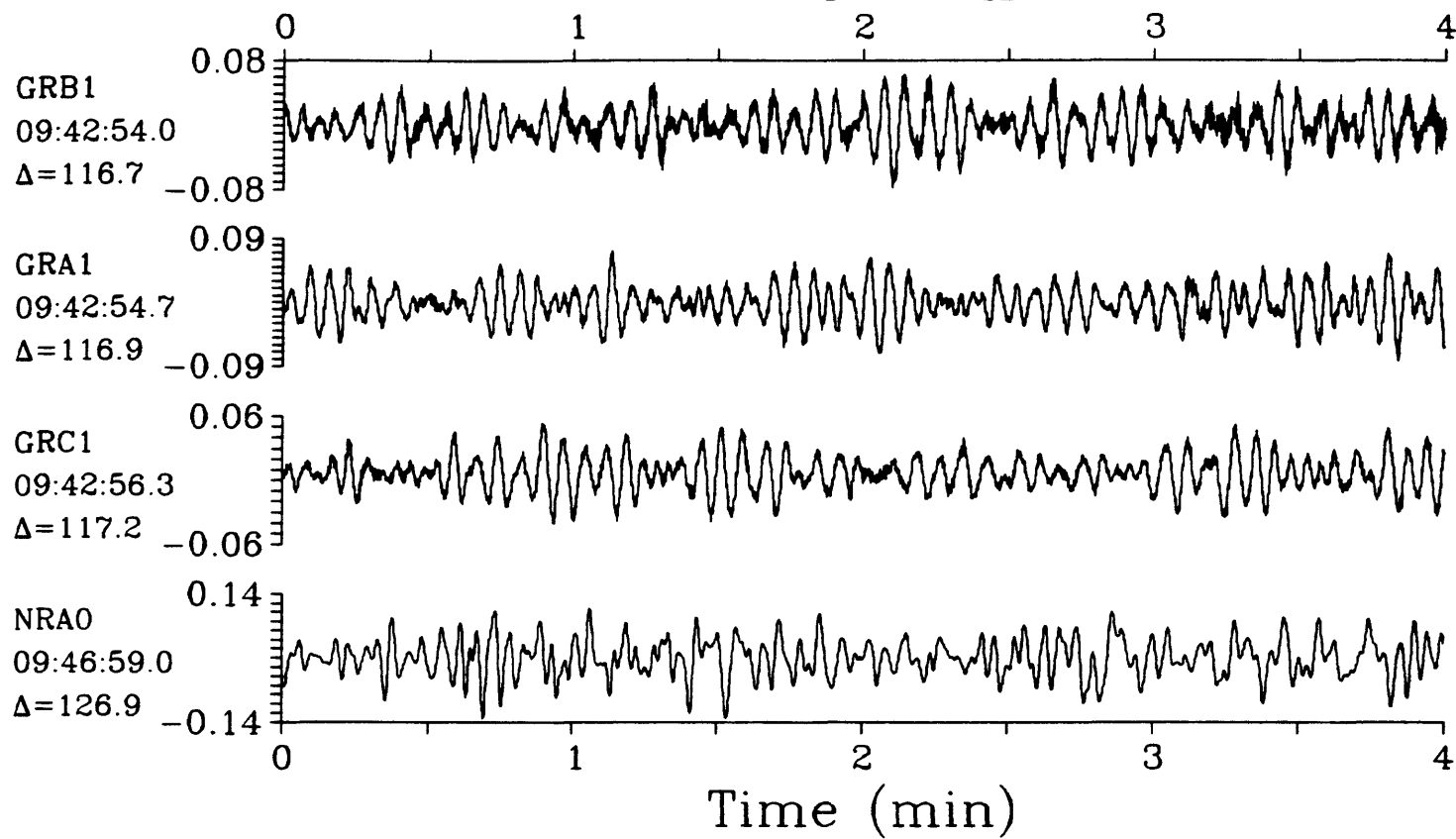
LPZ



IPZ

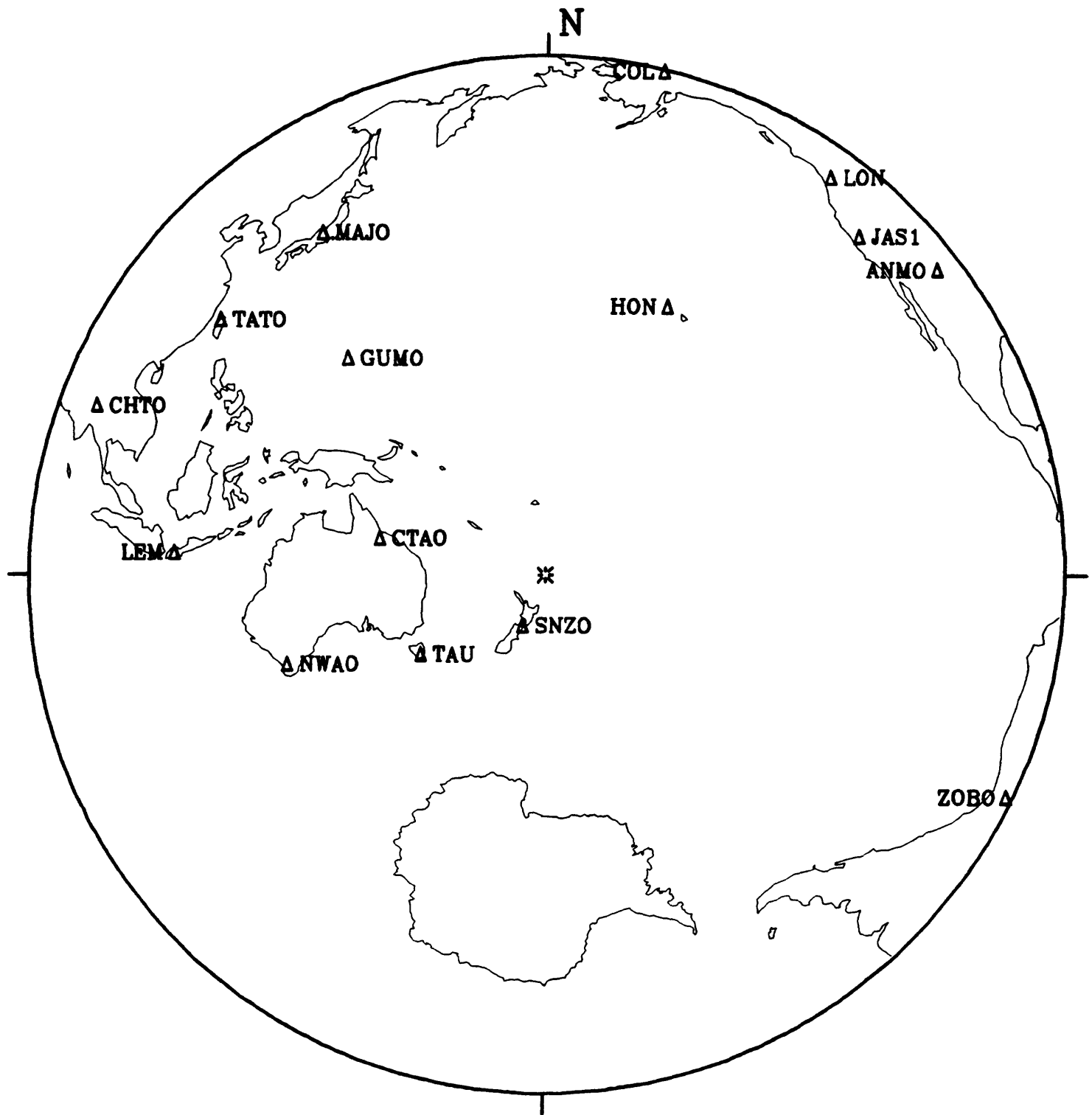
13 September 1986 09:28:24.21
Scotia Sea $h=10.0$ $m_b=5.8$ $M_{sz}=6.1$

IPZ



13 September 1986 15:17:24.96

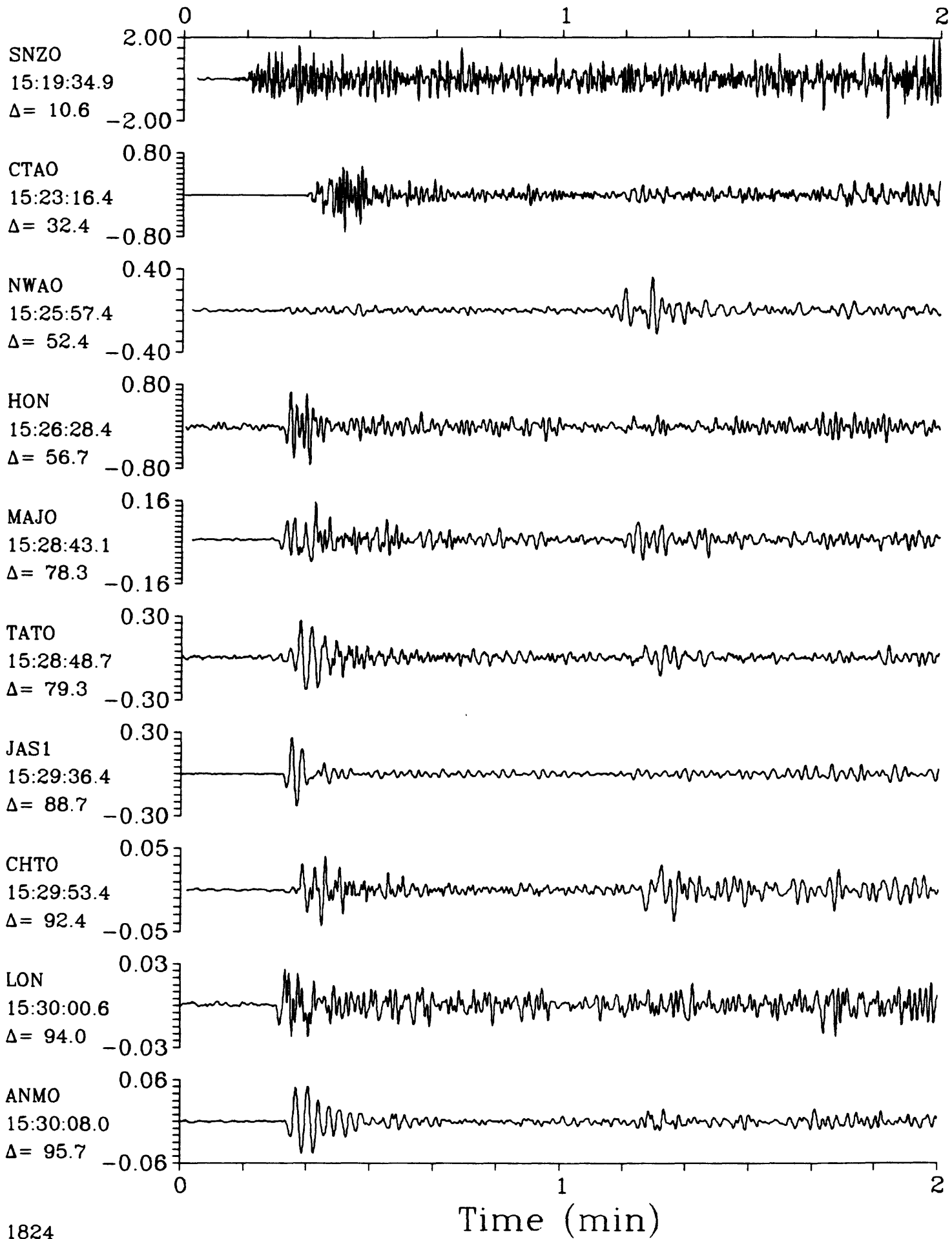
Kermadec Islands Region



SPZ

13 September 1986 15:17:24.96
Kermadec Islands Region $h=243.2$ $m_b=5.8$

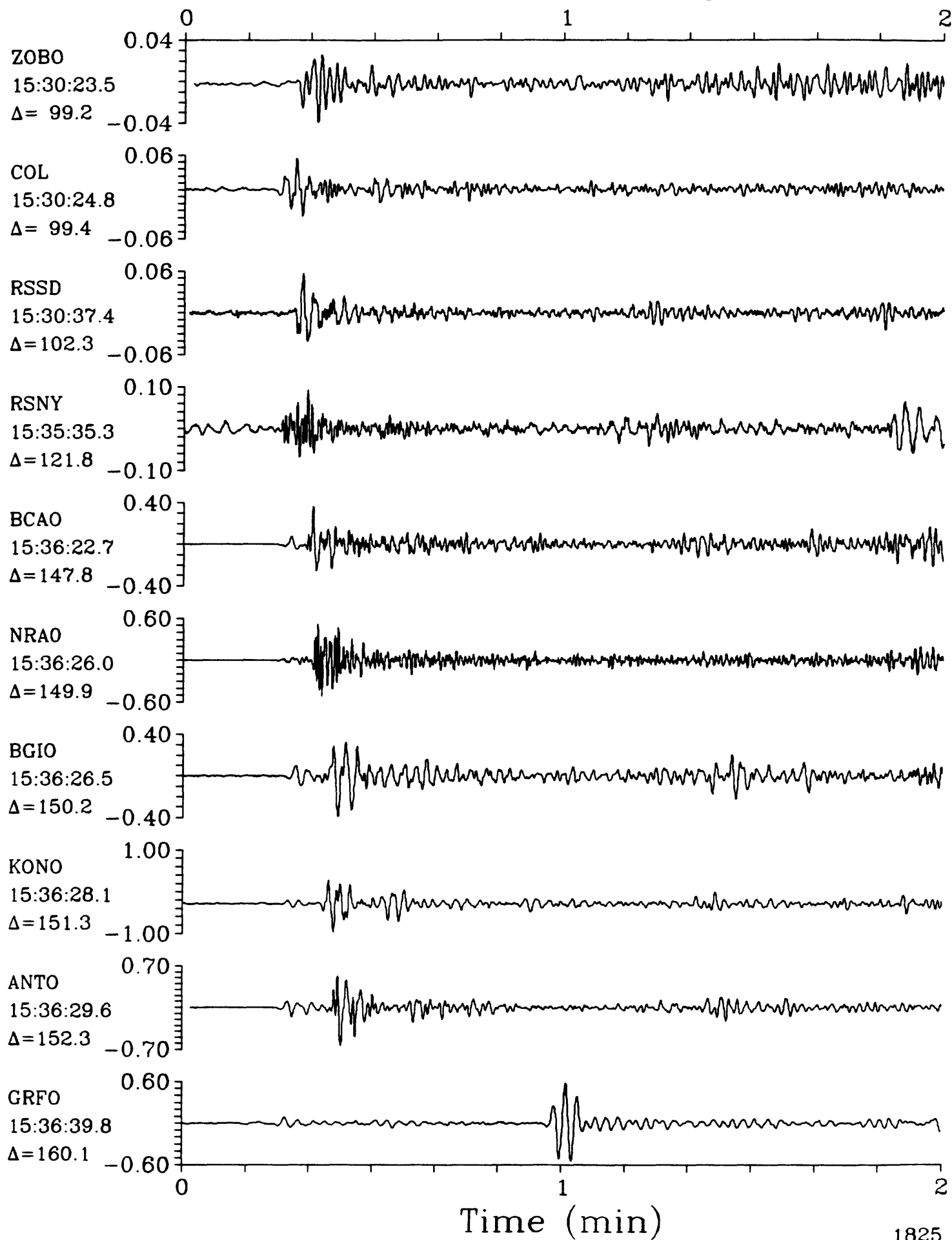
SPZ



SPZ

13 September 1986 15:17:24.96
Kermadec Islands Region $h=243.2$ $m_b=5.8$

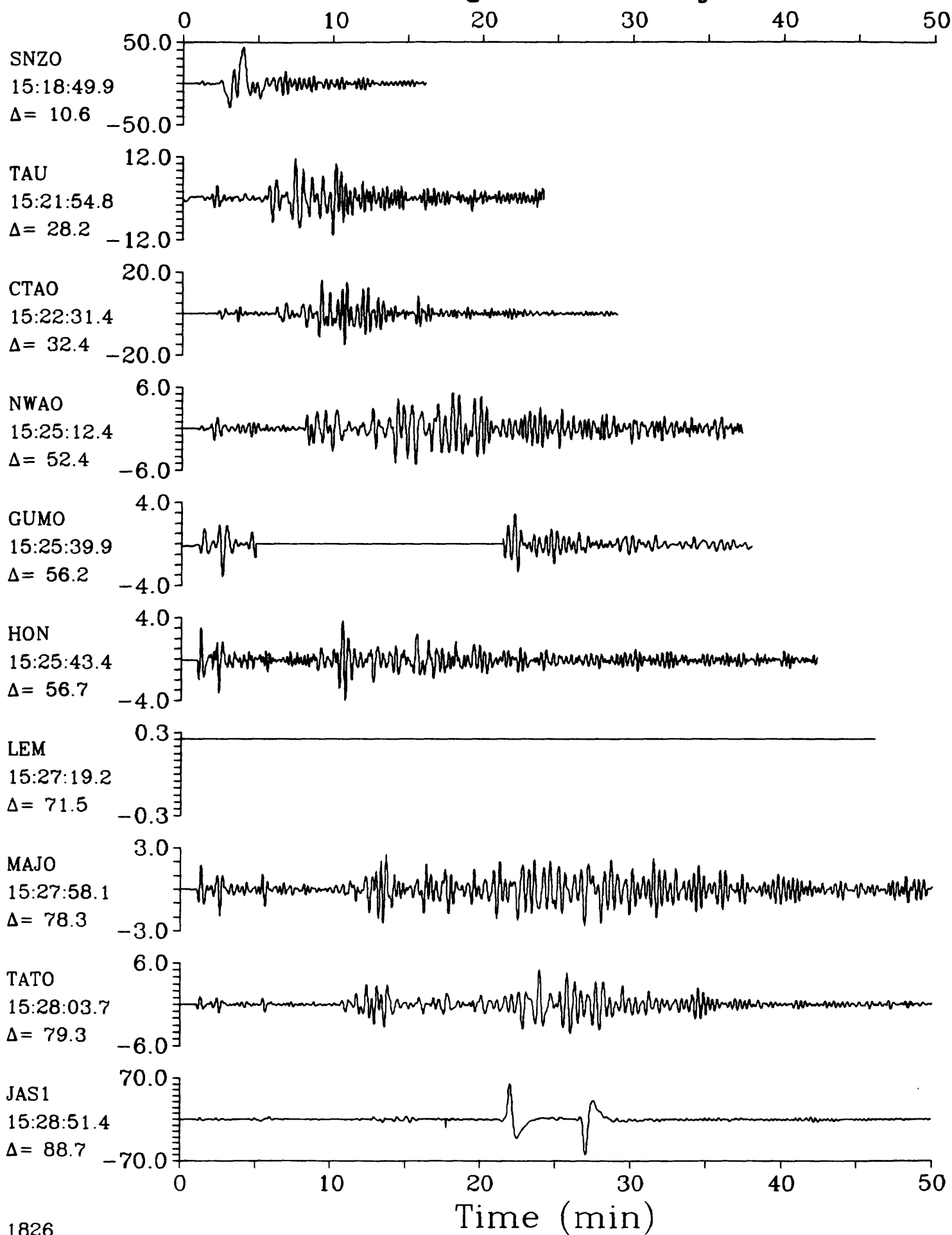
SPZ



LPZ

13 September 1986 15:17:24.96

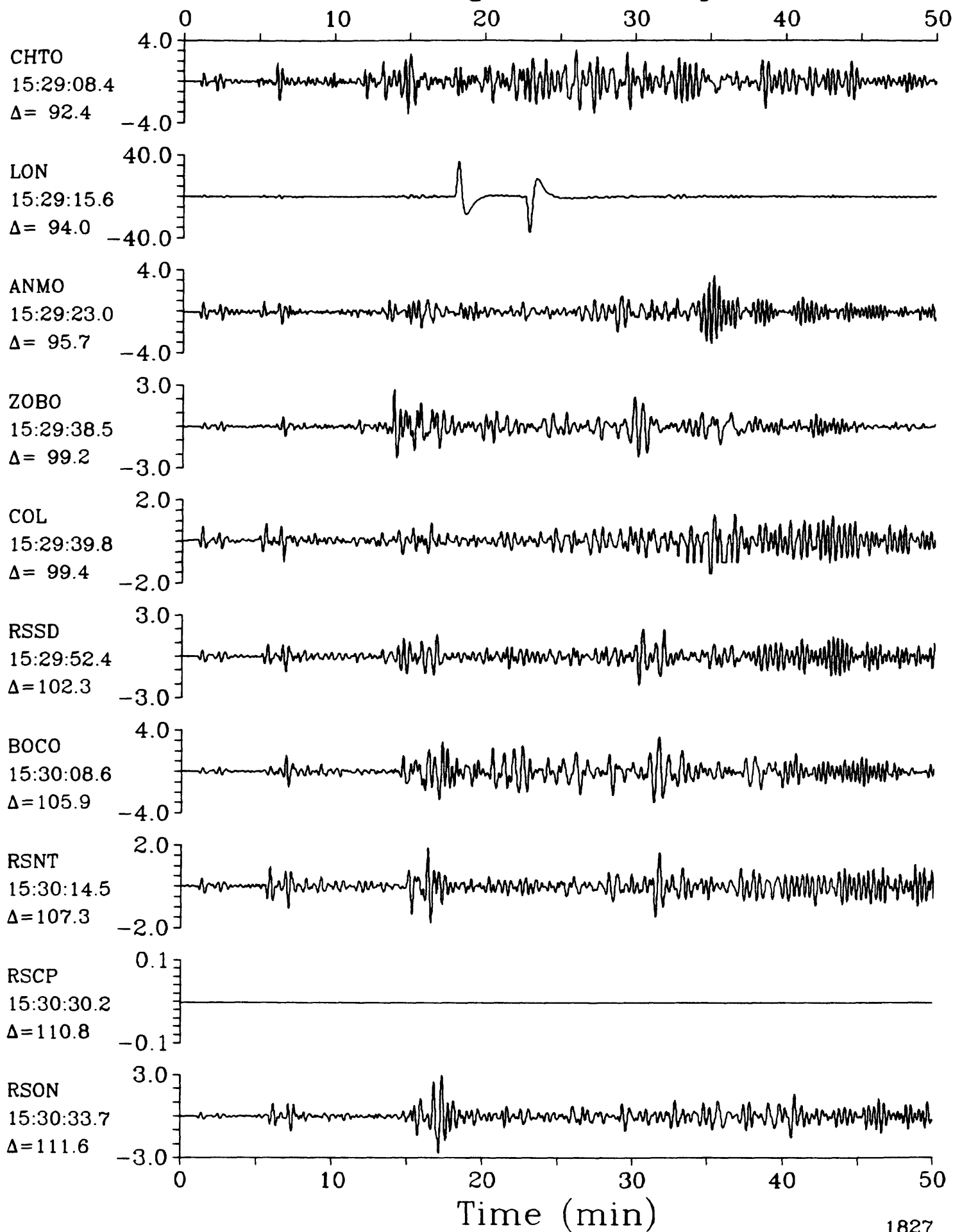
LPZ

Kermadec Islands Region $h=243.2$ $m_b=5.8$ 

LPZ

13 September 1986 15:17:24.96
Kermadec Islands Region $h=243.2$ $m_b=5.8$

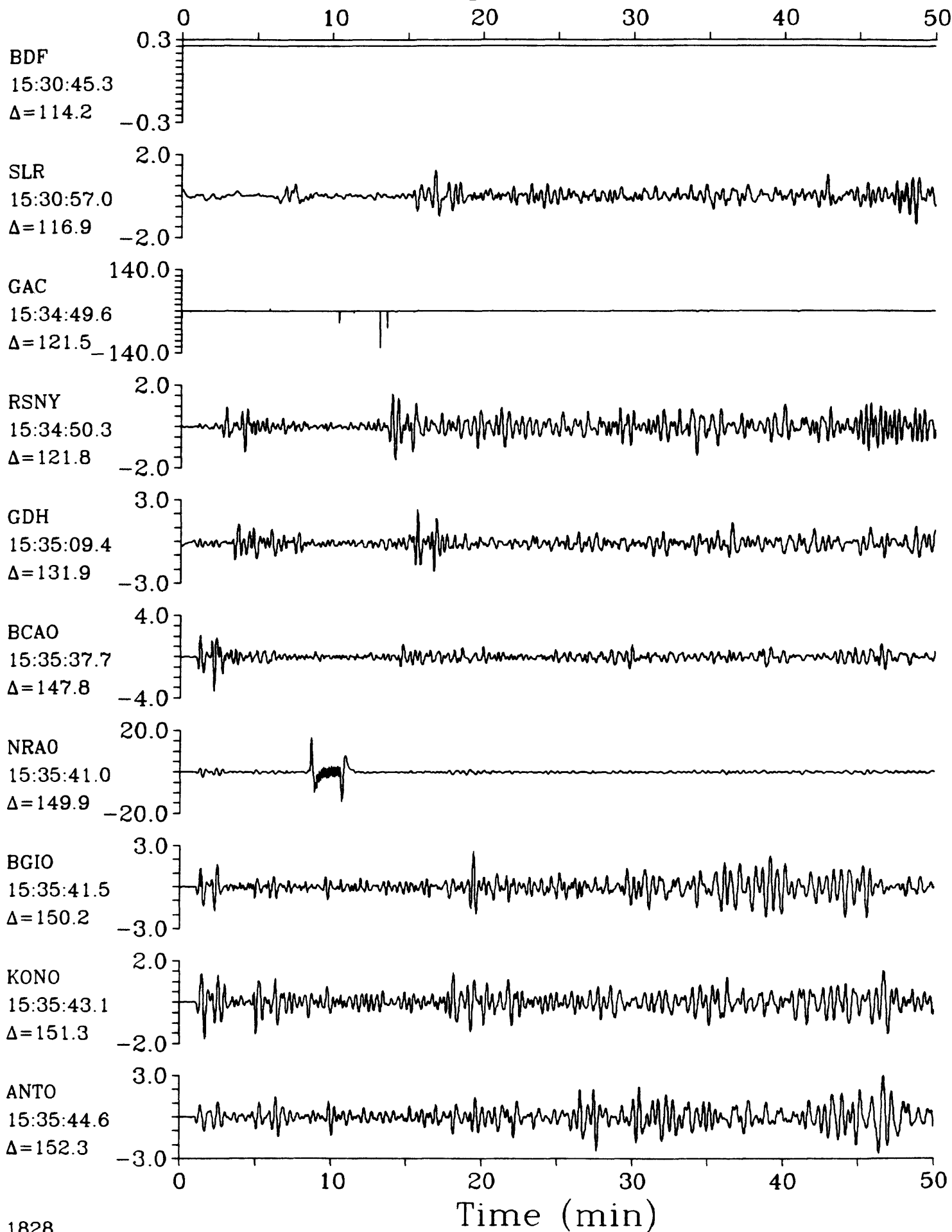
LPZ



LPZ

13 September 1986 15:17:24.96
Kermadec Islands Region $h=243.2$ $m_b=5.8$

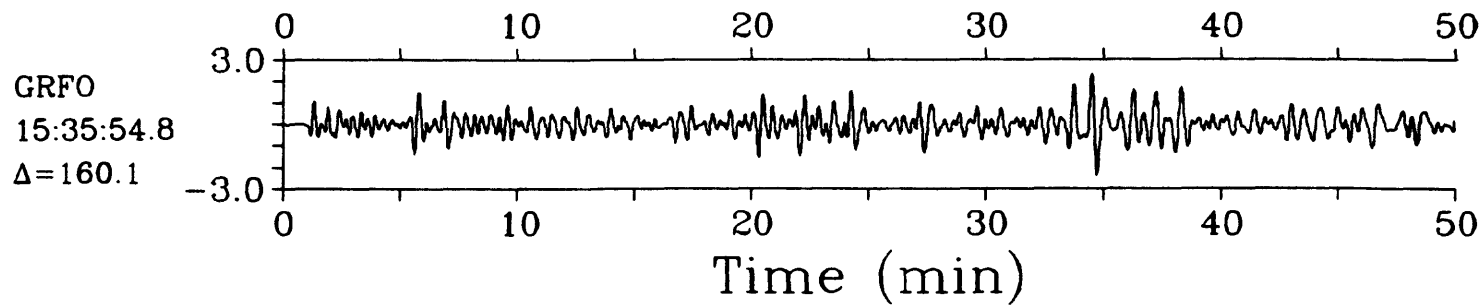
LPZ



LPZ

13 September 1986 15:17:24.96

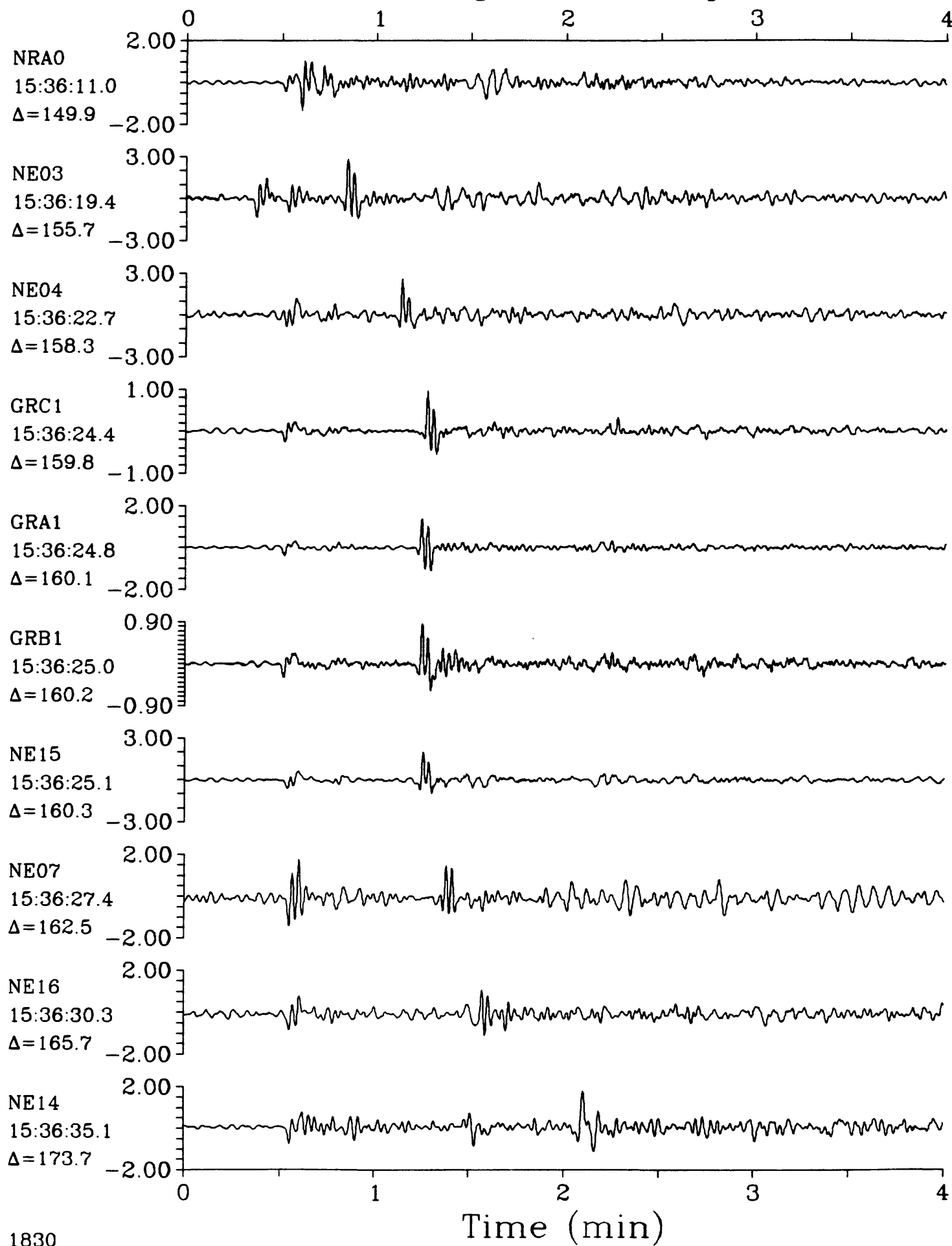
LPZ

Kermadec Islands Region $h=243.2$ $m_b=5.8$ 

IPZ

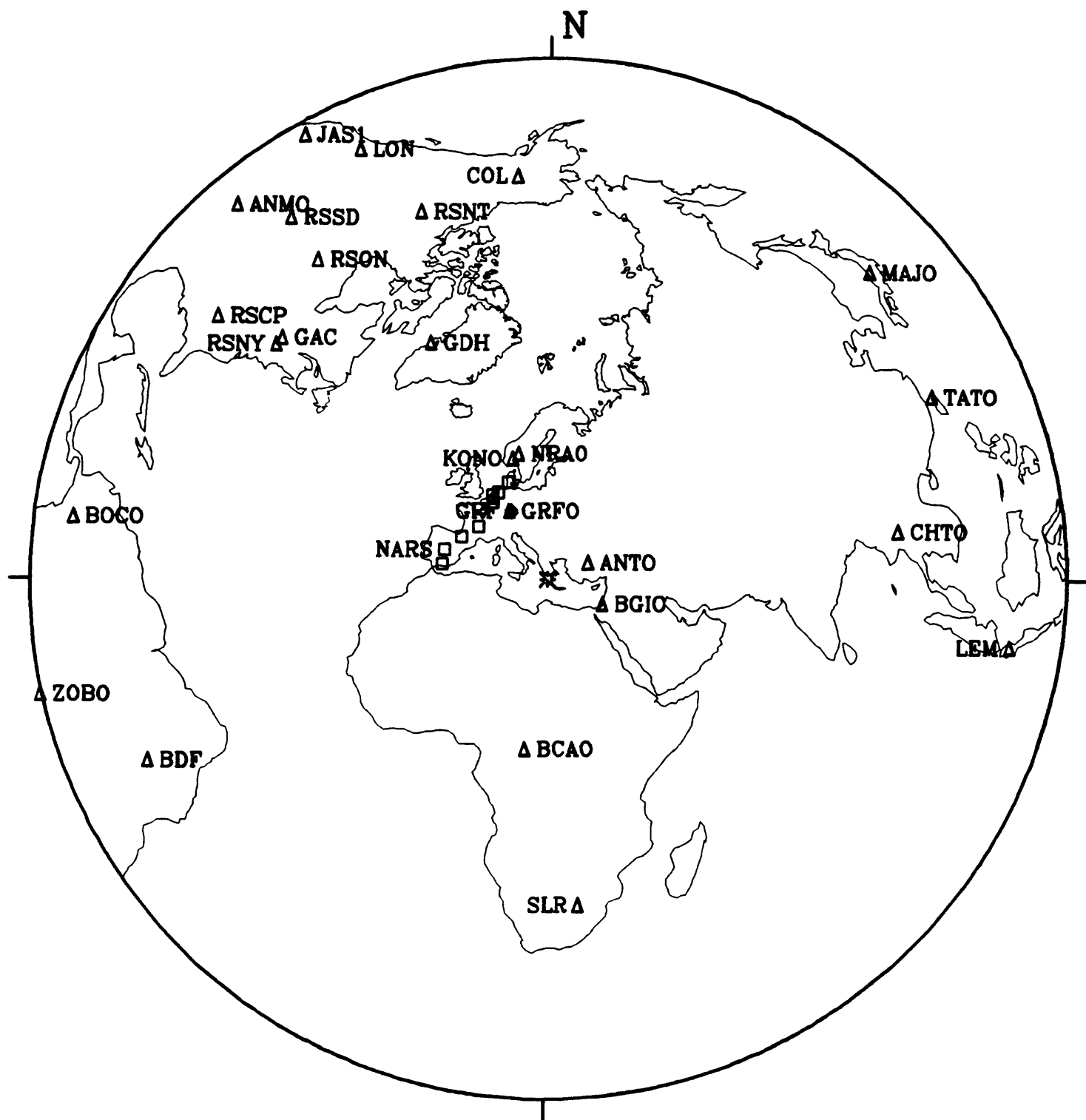
13 September 1986 15:17:24.96

IPZ

Kermadec Islands Region $h=243.2$ $m_b=5.8$ 

13 September 1986 17:24:33.78

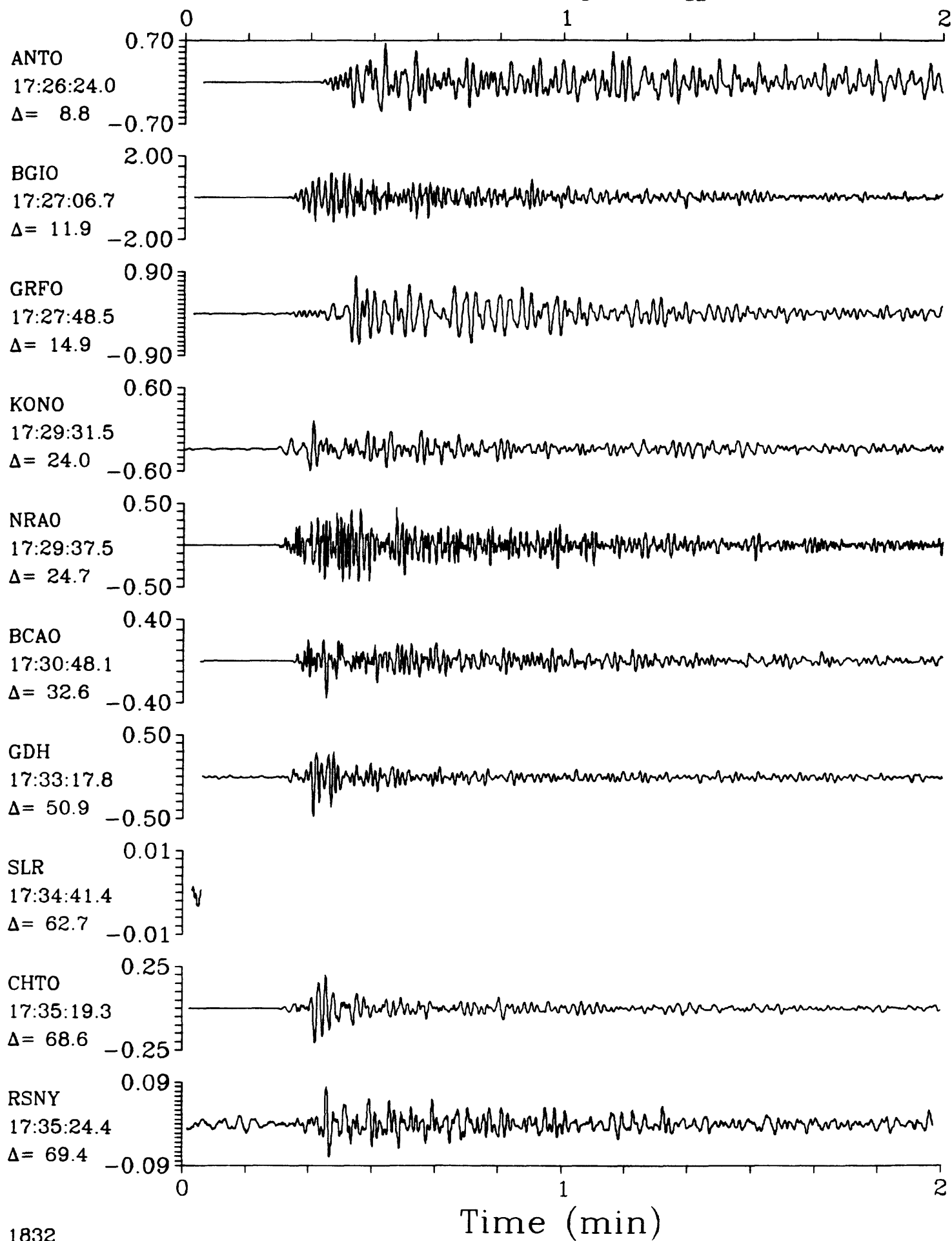
Southern Greece



SPZ

13 September 1986 17:24:33.78
Southern Greece $h=29.2$ $m_b=5.8$ $M_{sz}=5.9$

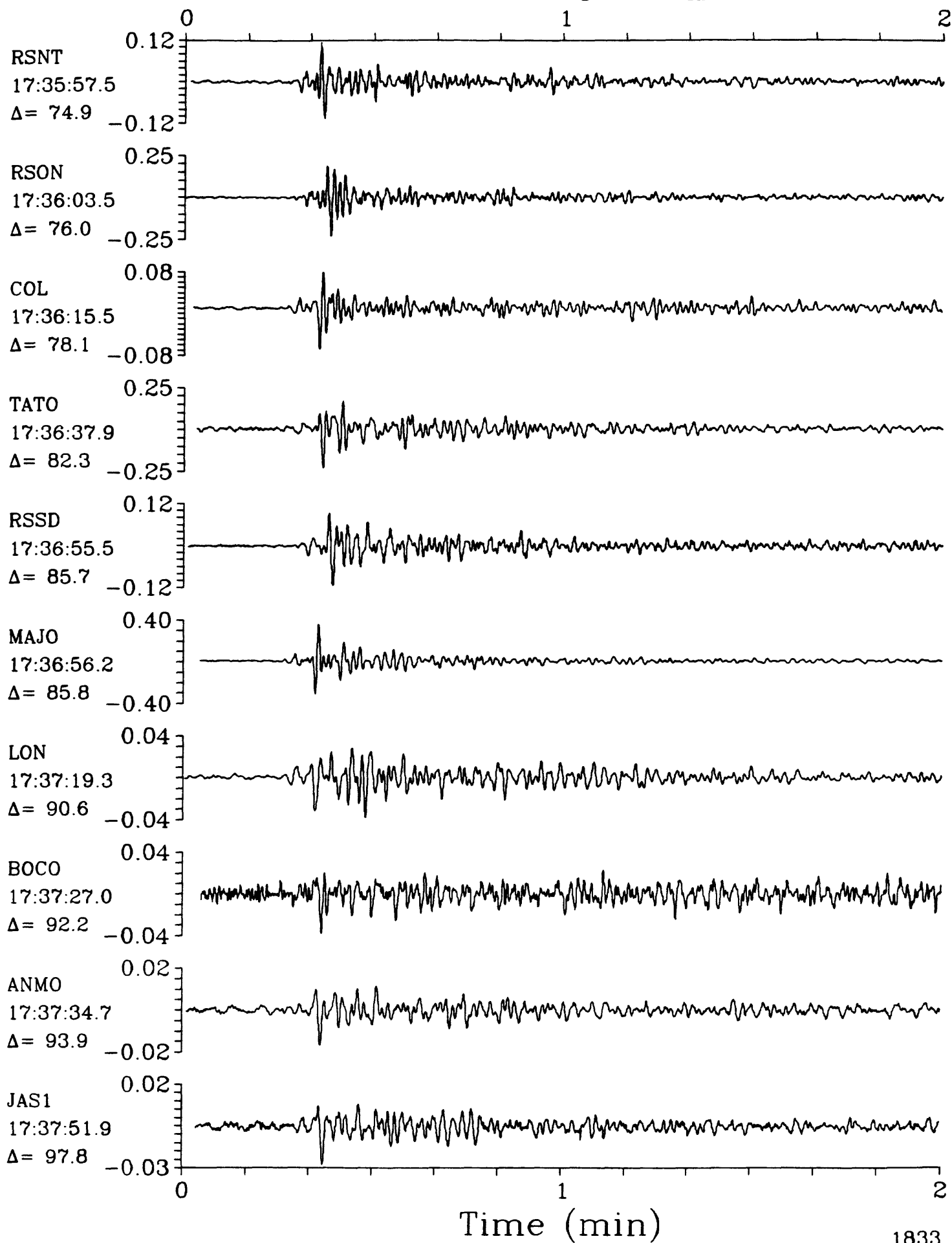
SPZ



SPZ

13 September 1986 17:24:33.78
Southern Greece $h=29.2$ $m_b=5.8$ $M_{sz}=5.9$

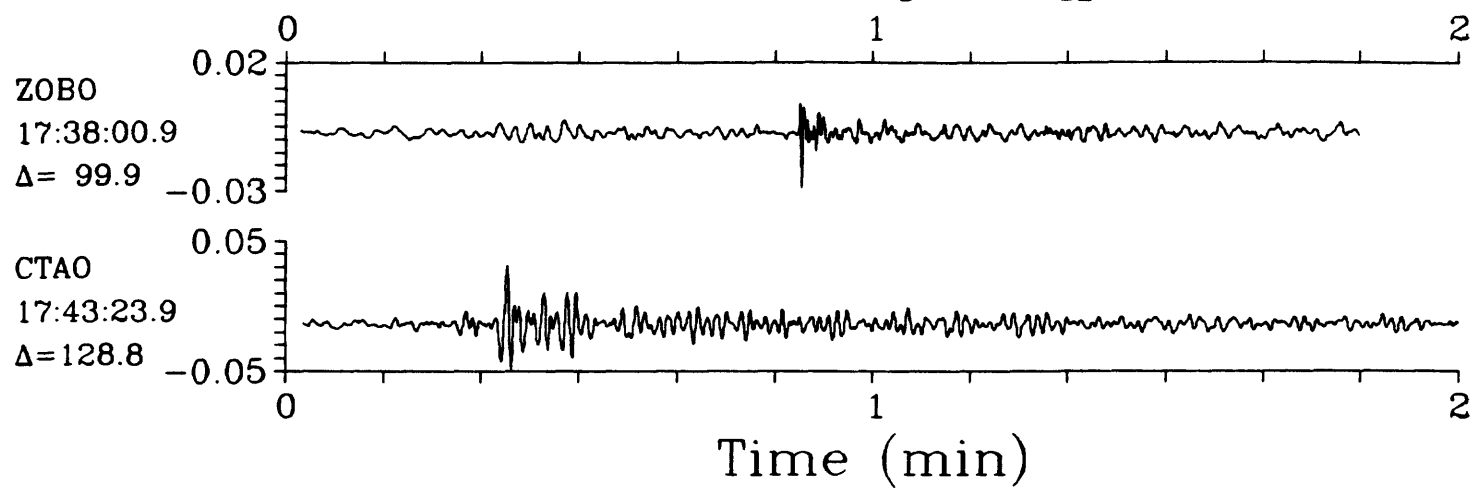
SPZ



SPZ

13 September 1986 17:24:33.78
Southern Greece $h=29.2$ $m_b=5.8$ $M_{SZ}=5.9$

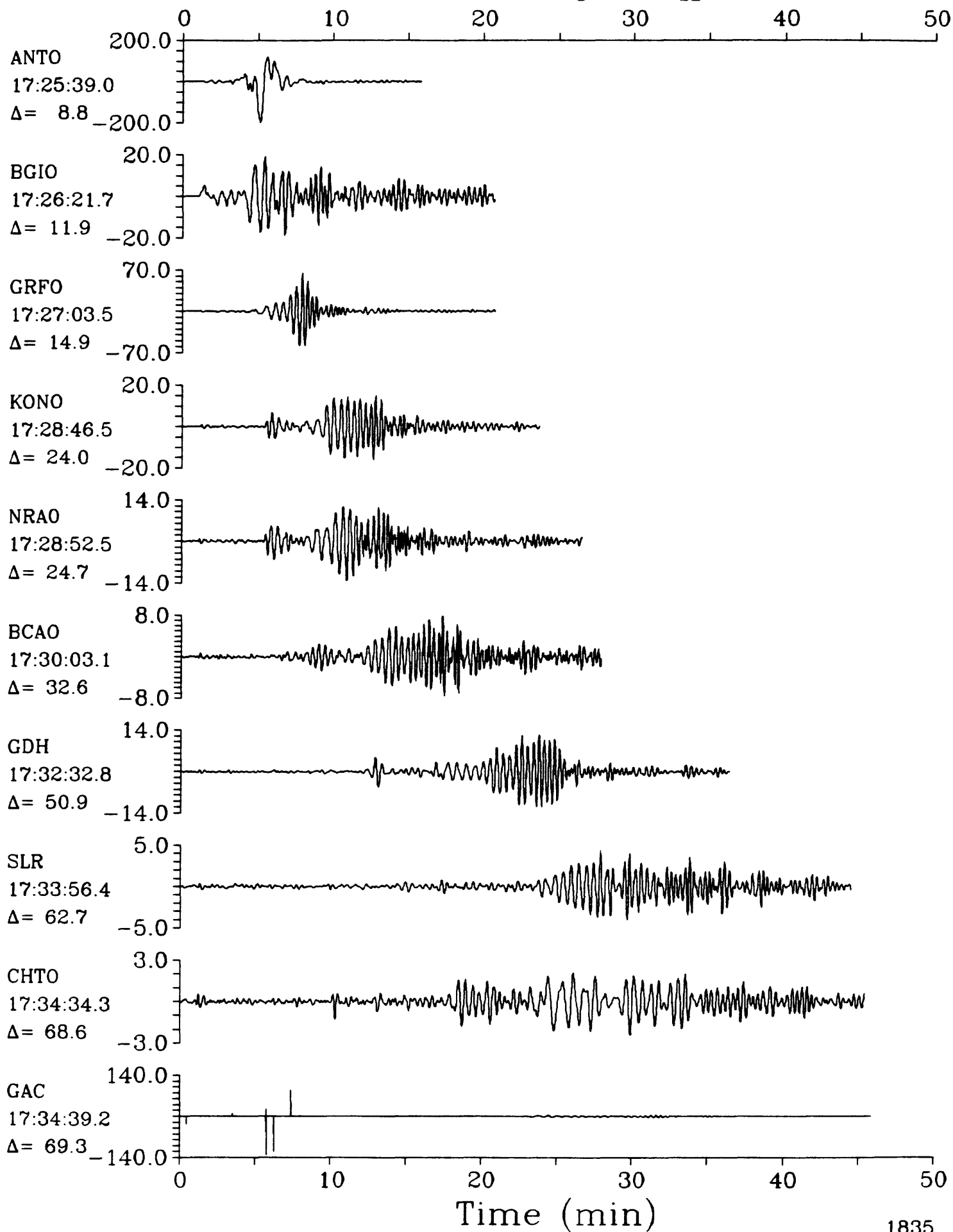
SPZ



LPZ

13 September 1986 17:24:33.78
Southern Greece $h=29.2$ $m_b=5.8$ $M_{sz}=5.9$

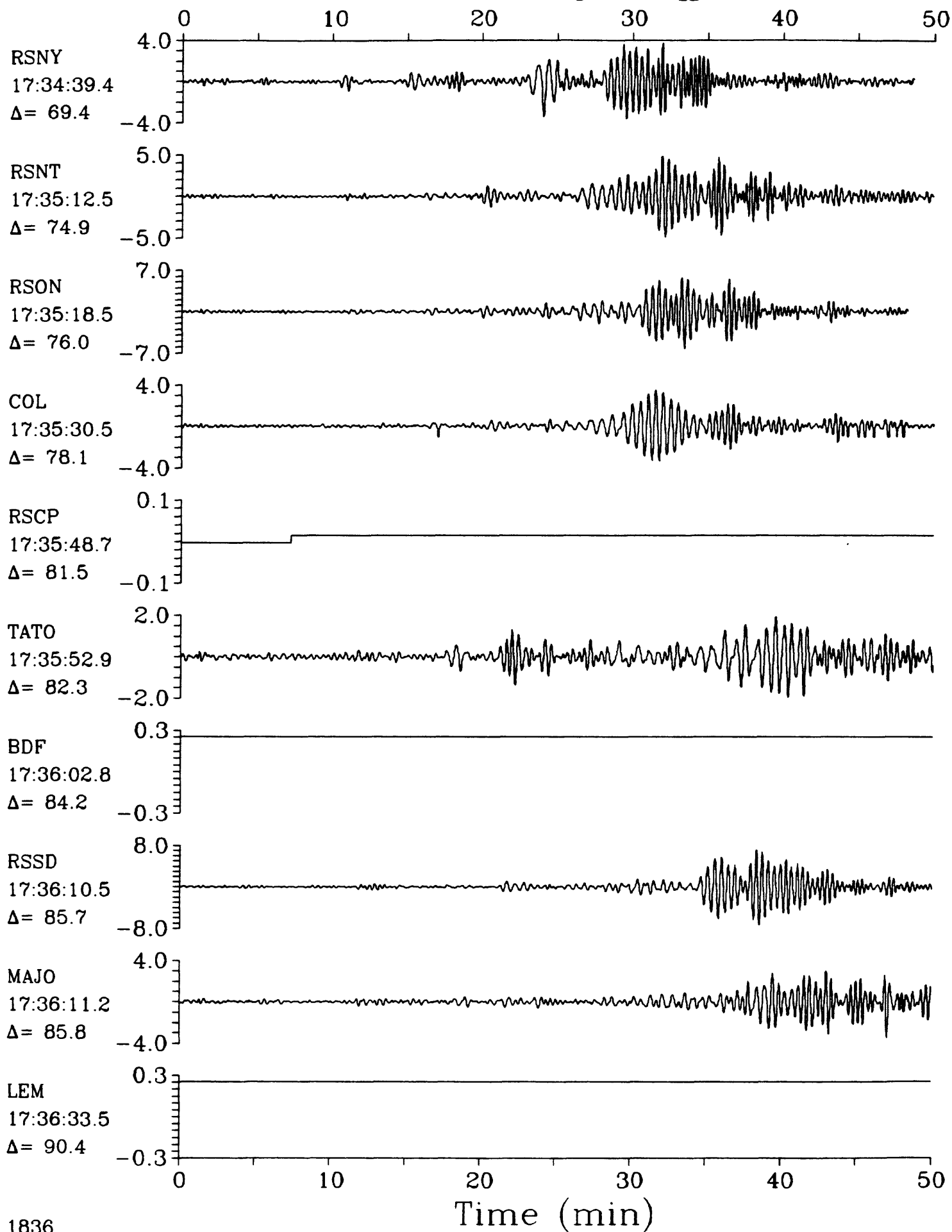
LPZ



LPZ

13 September 1986 17:24:33.78
Southern Greece $h=29.2$ $m_b=5.8$ $M_{sz}=5.9$

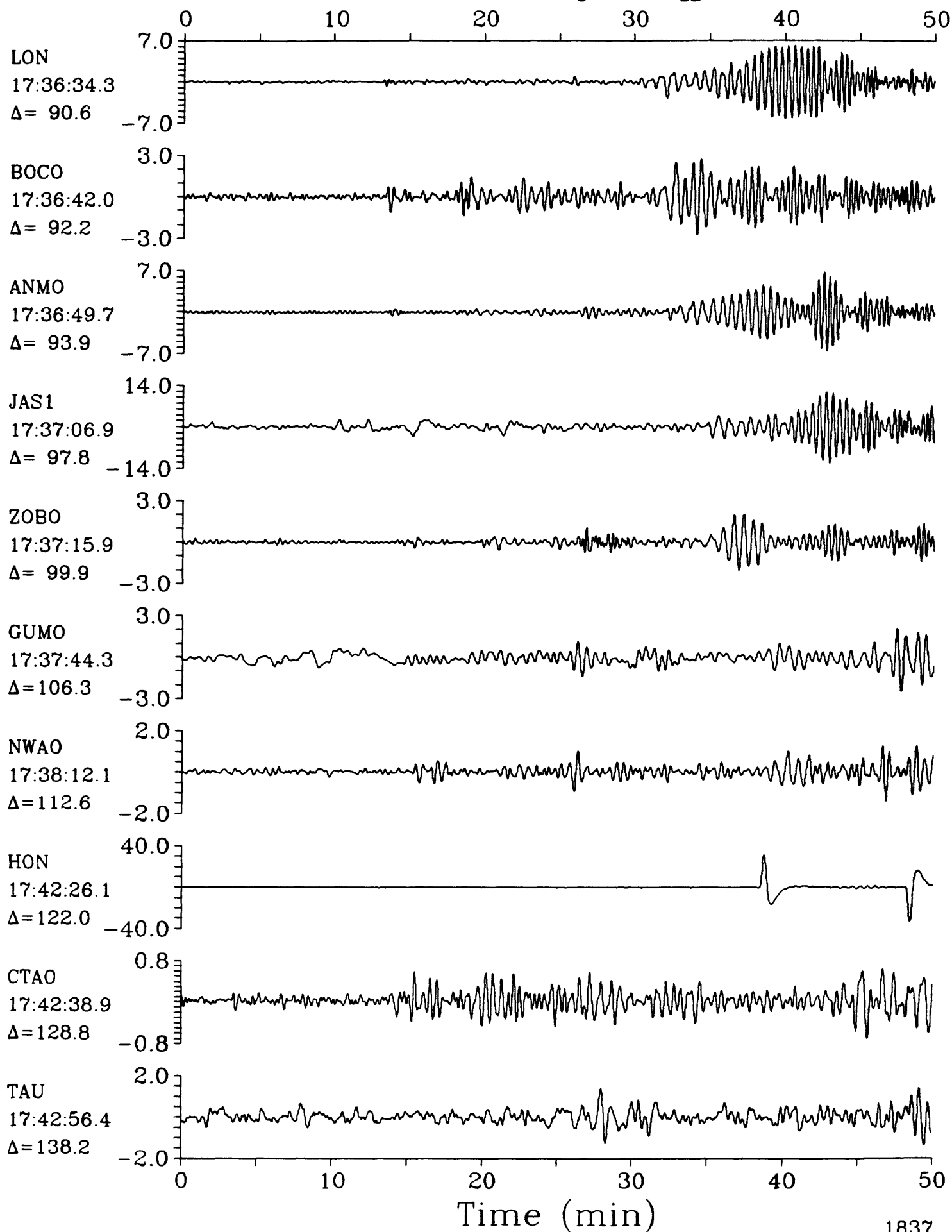
LPZ



LPZ

13 September 1986 17:24:33.78
Southern Greece $h=29.2$ $m_b=5.8$ $M_{sz}=5.9$

LPZ



LPZ

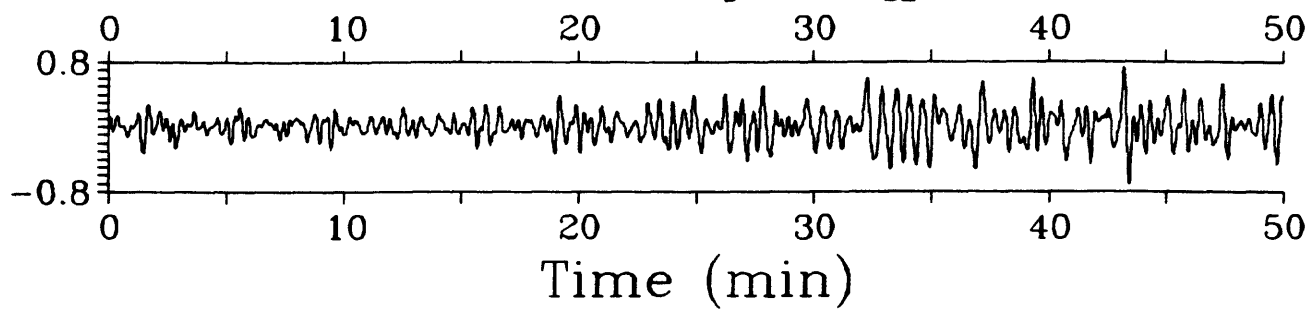
13 September 1986 17:24:33.78

LPZ

Southern Greece $h=29.2$ $m_b=5.8$ $M_{sz}=5.9$

SNZO

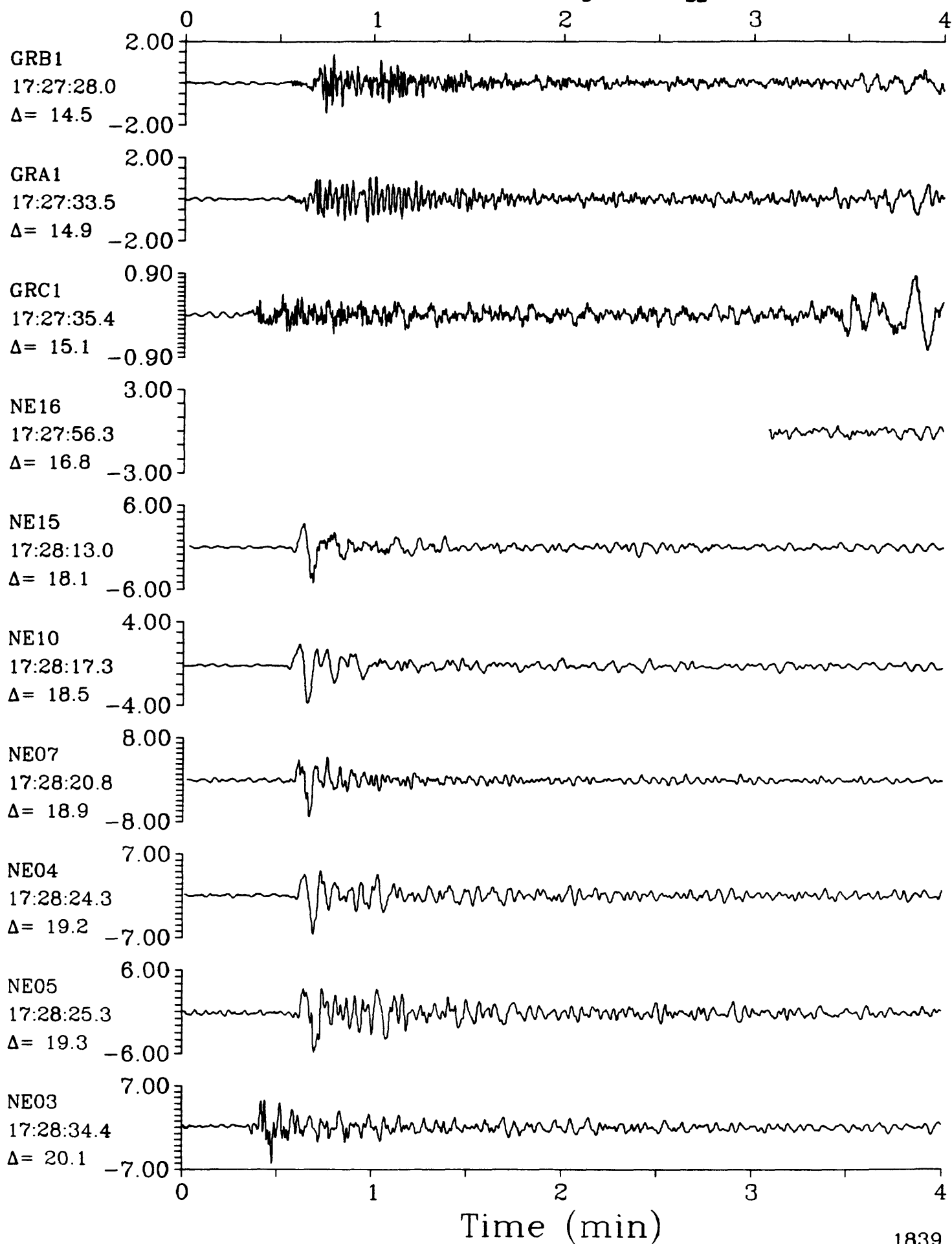
17:43:28.4

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IPZ

13 September 1986 17:24:33.78
Southern Greece $h=29.2$ $m_b=5.8$ $M_{sz}=5.9$

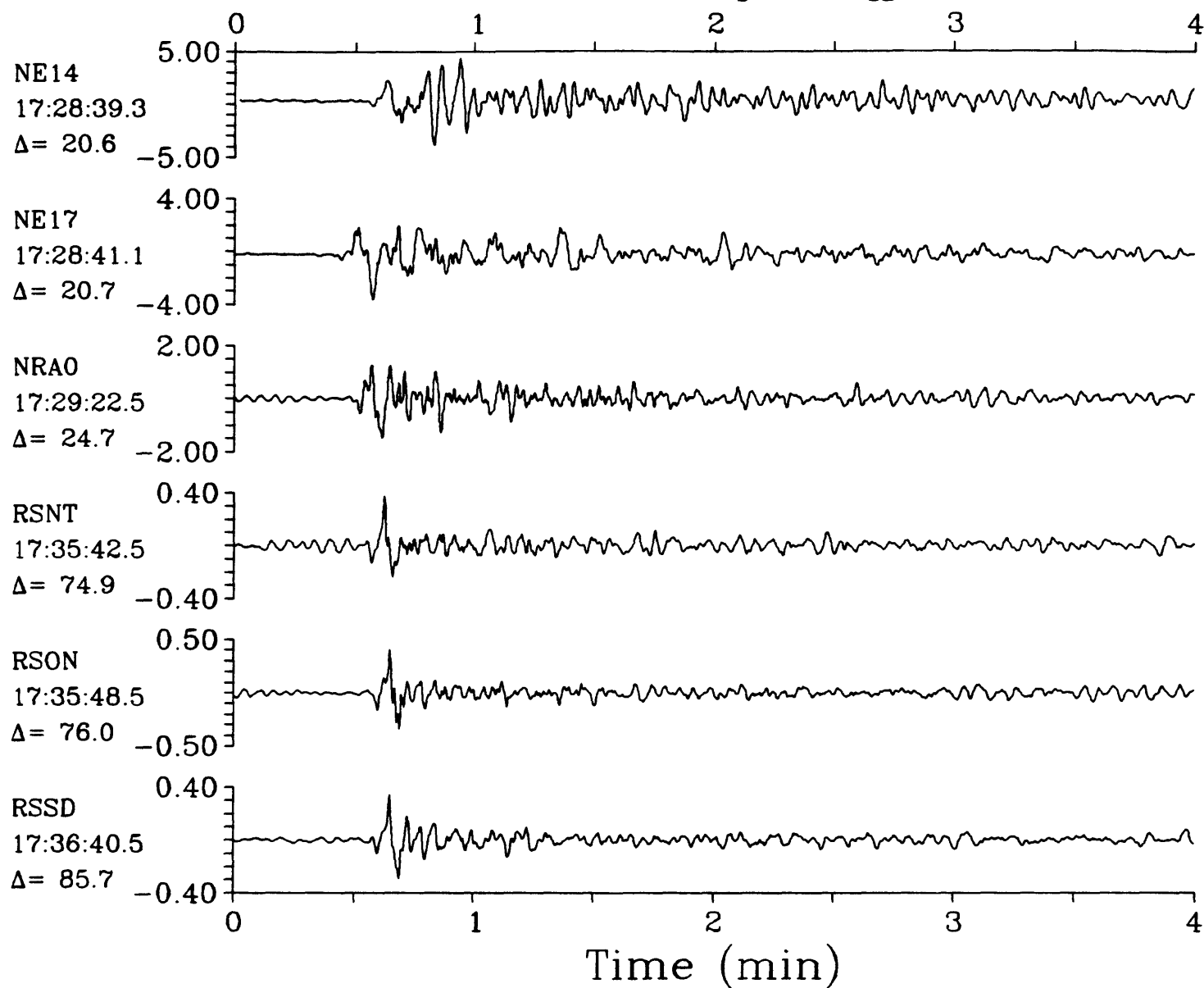
IPZ



IPZ

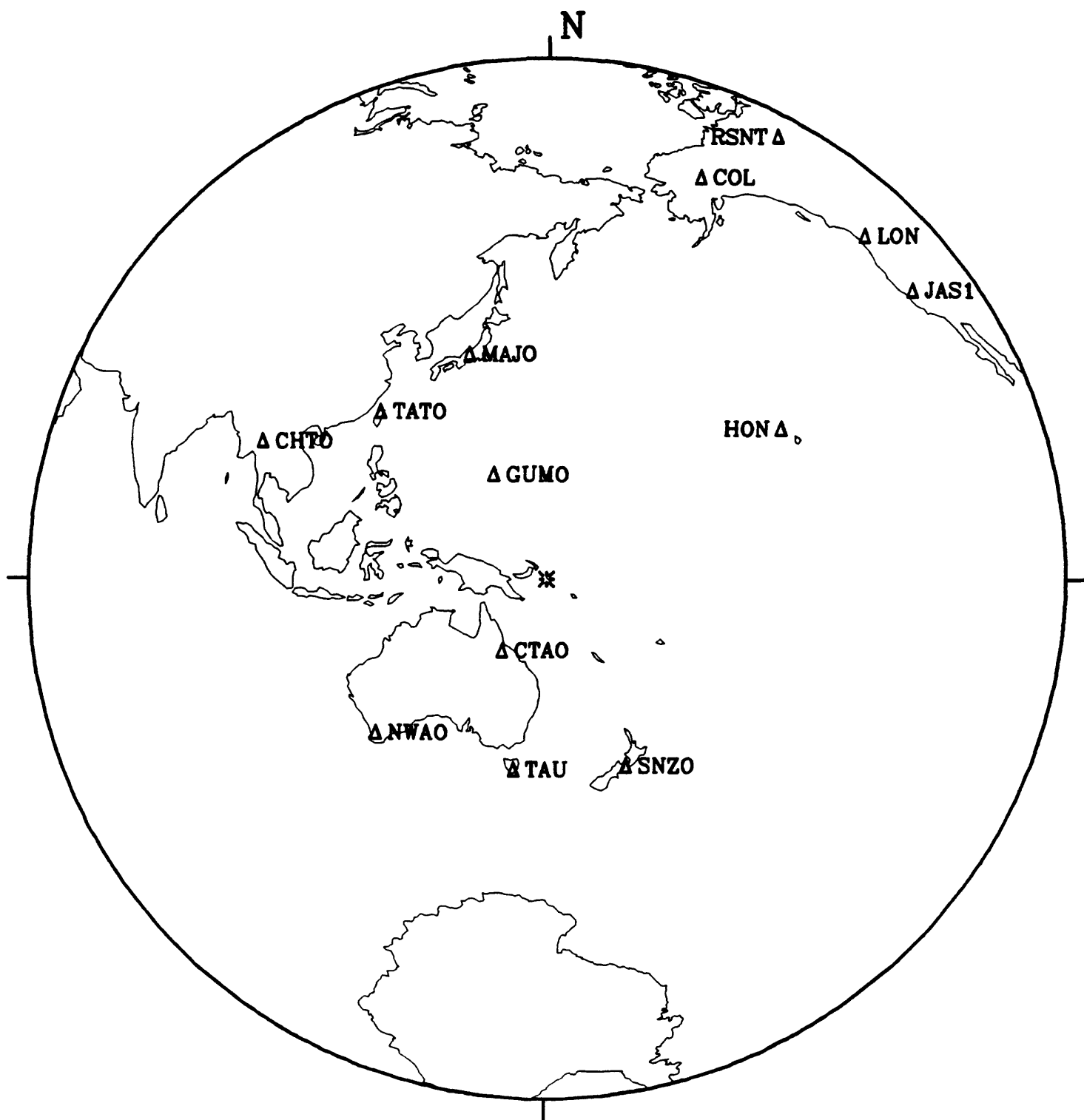
13 September 1986 17:24:33.78
Southern Greece $h=29.2$ $m_b=5.8$ $M_{sz}=5.9$

IPZ



14 September 1986 20:58:23.05

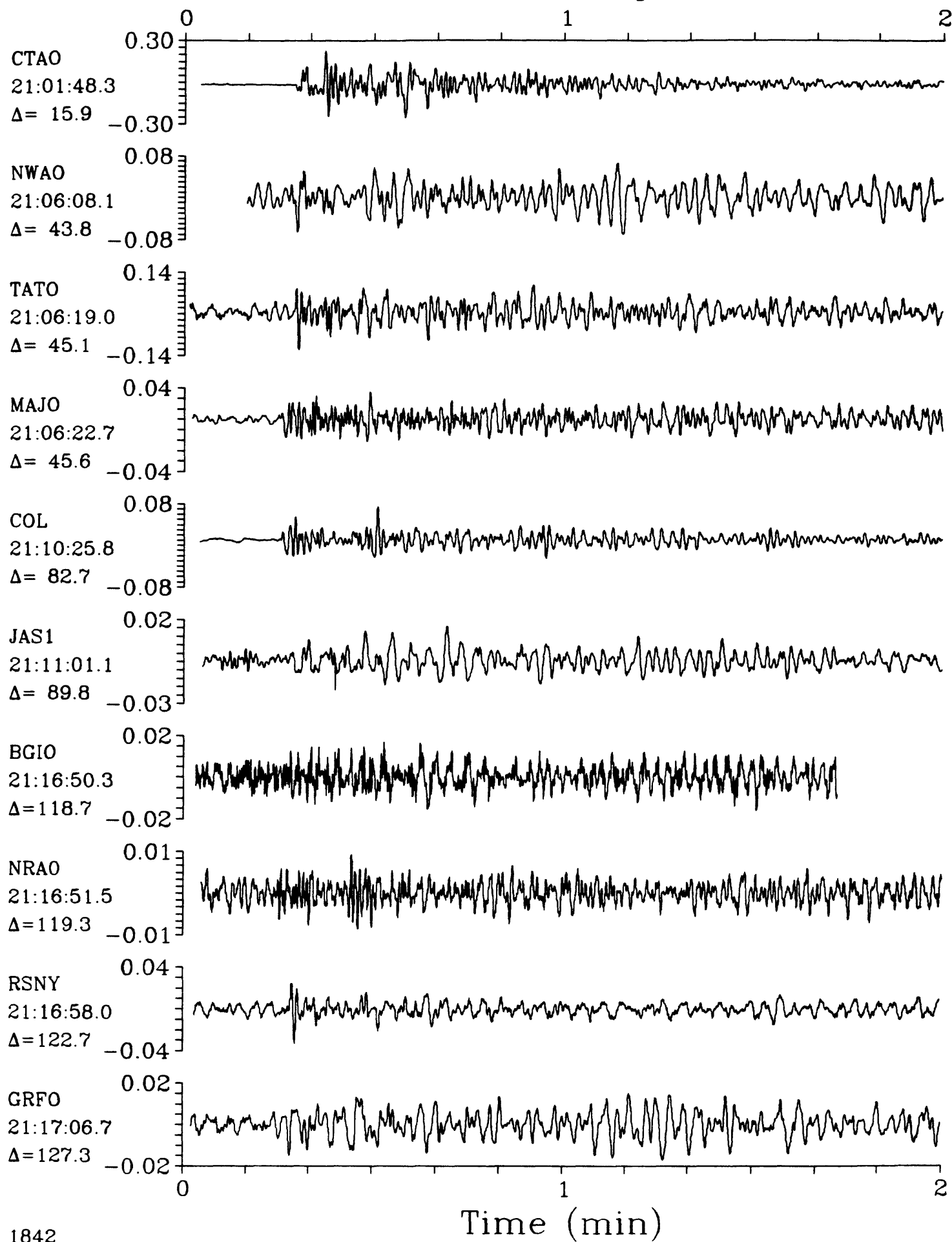
Solomon Islands



SPZ

14 September 1986 20:58:23.05
Solomon Islands $h=58.0$ $m_b=5.5$

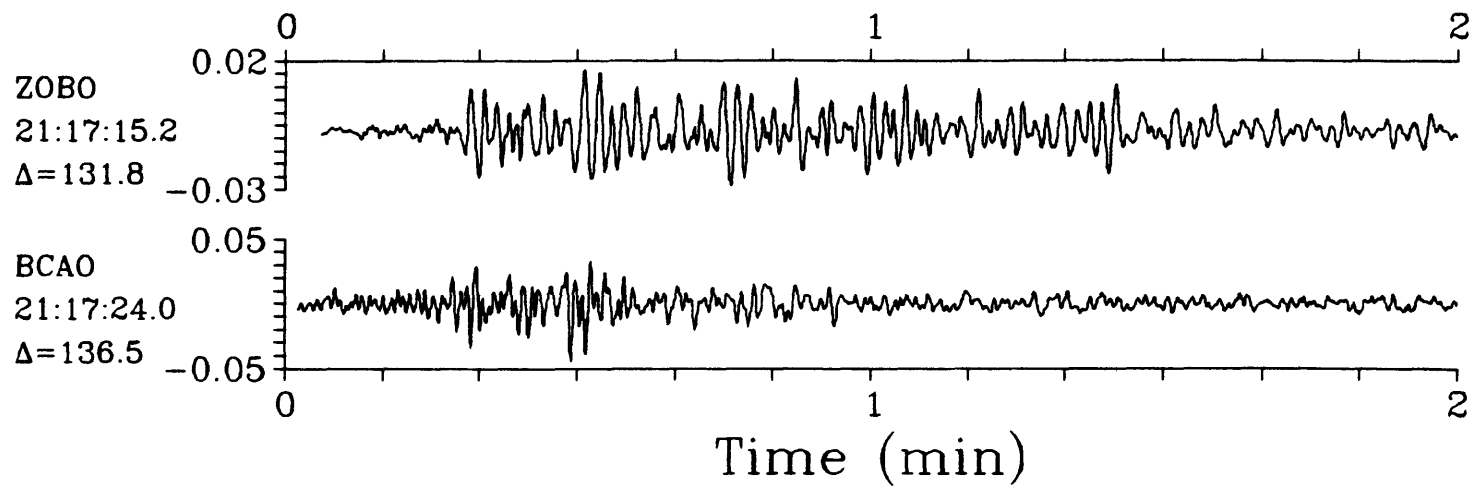
SPZ



SPZ

14 September 1986 20:58:23.05
Solomon Islands $h=58.0$ $m_b=5.5$

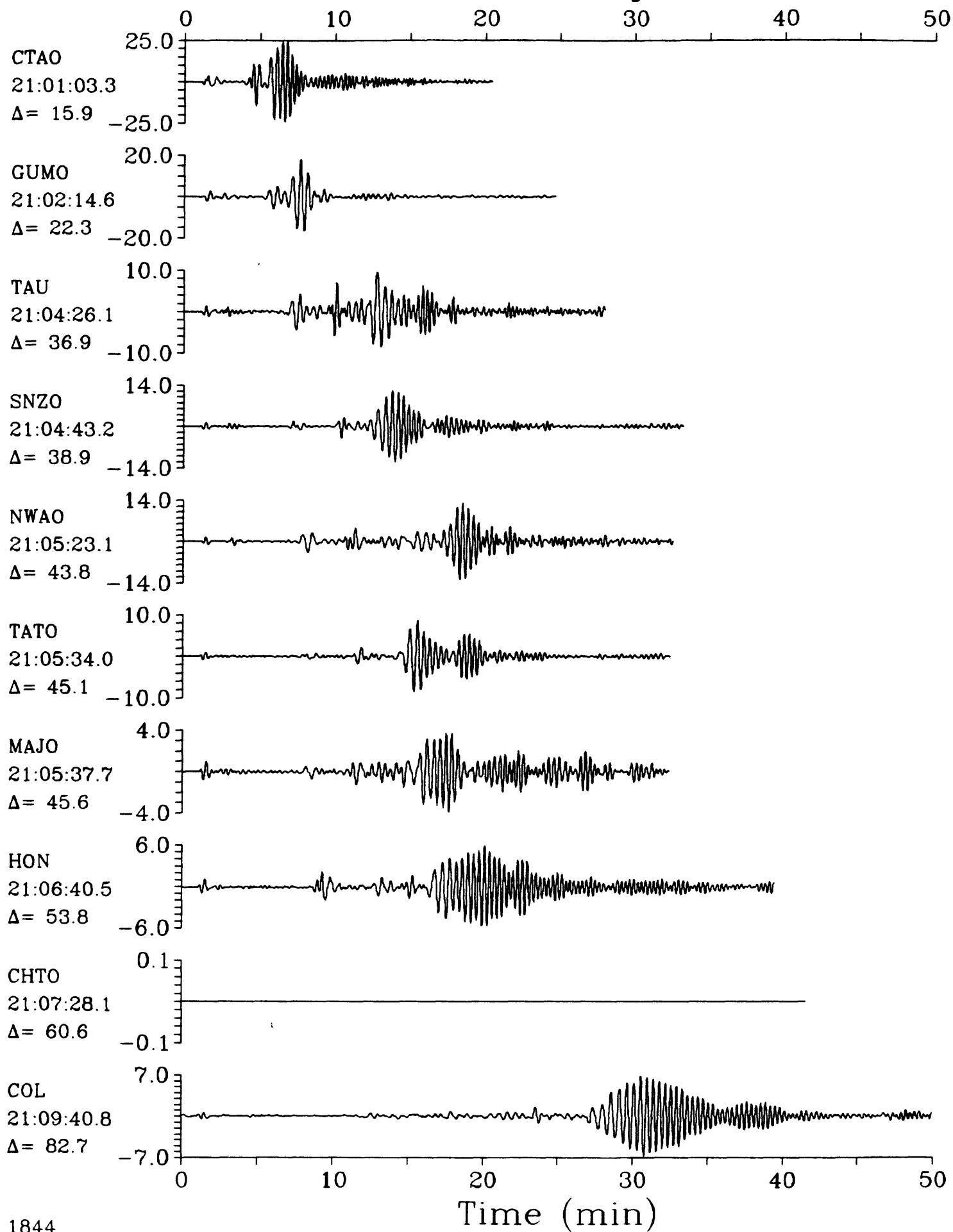
SPZ



LPZ

14 September 1986 20:58:23.05
Solomon Islands $h=58.0$ $m_b=5.5$

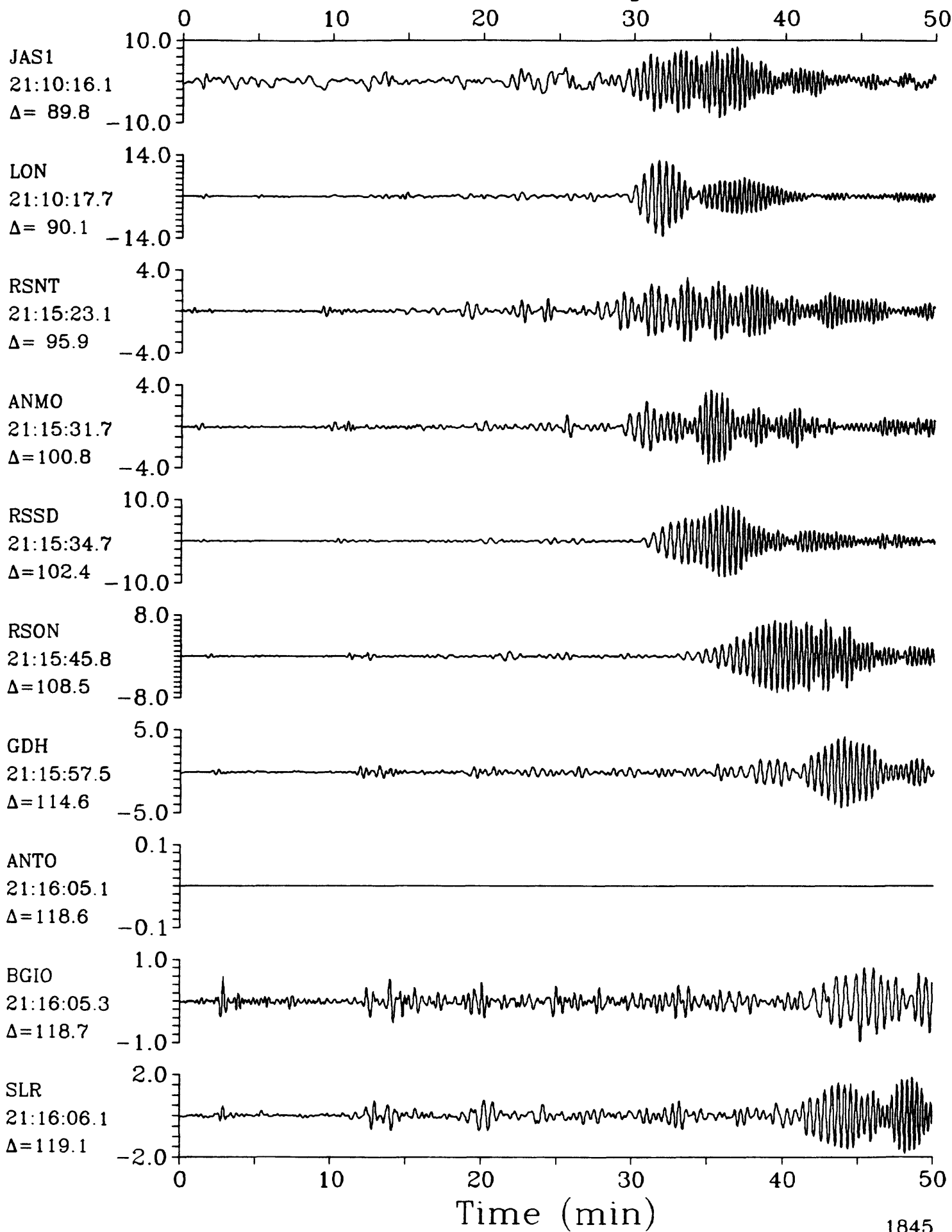
LPZ



LPZ

14 September 1986 20:58:23.05
Solomon Islands $h=58.0$ $m_b=5.5$

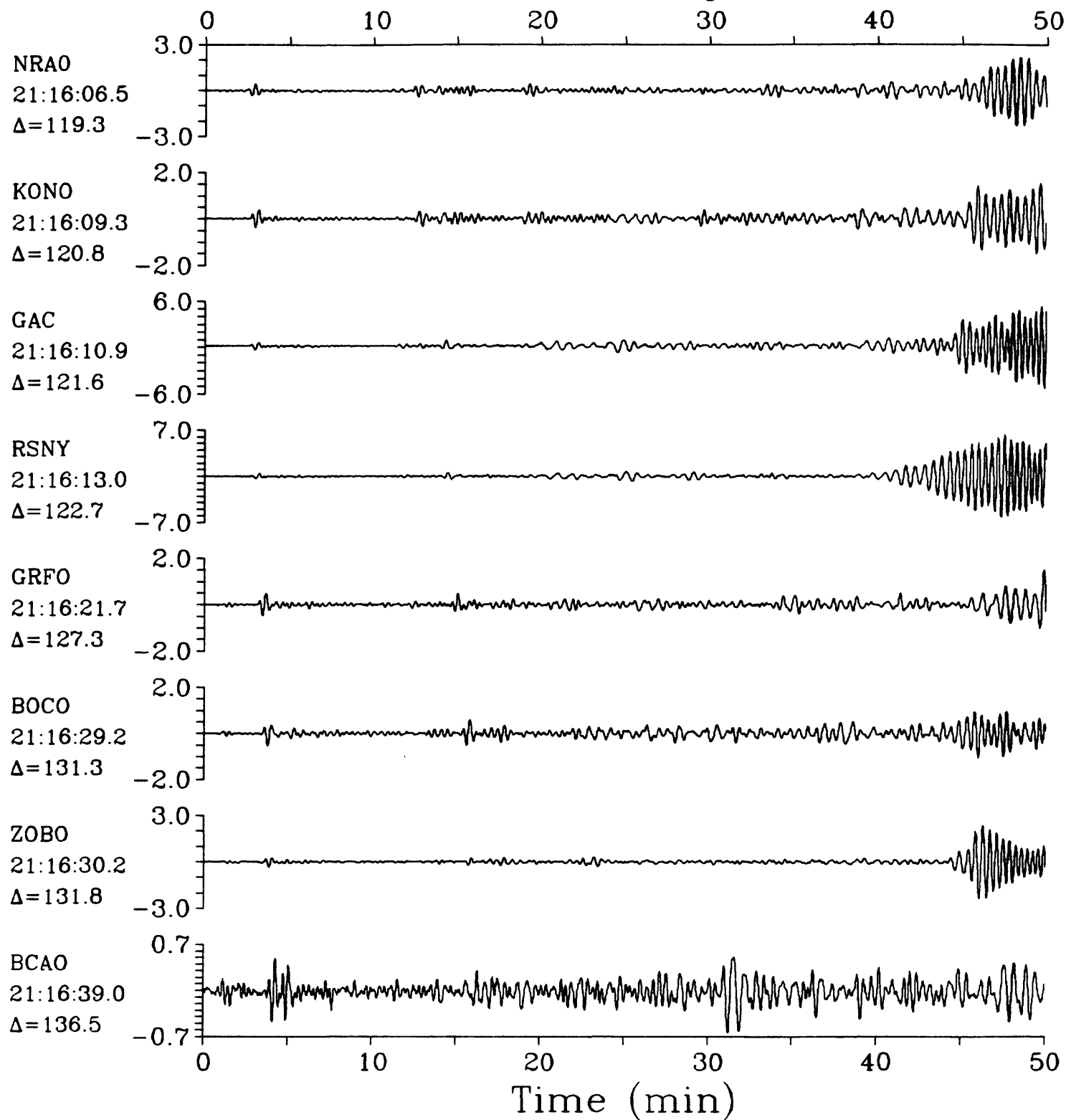
LPZ



LPZ

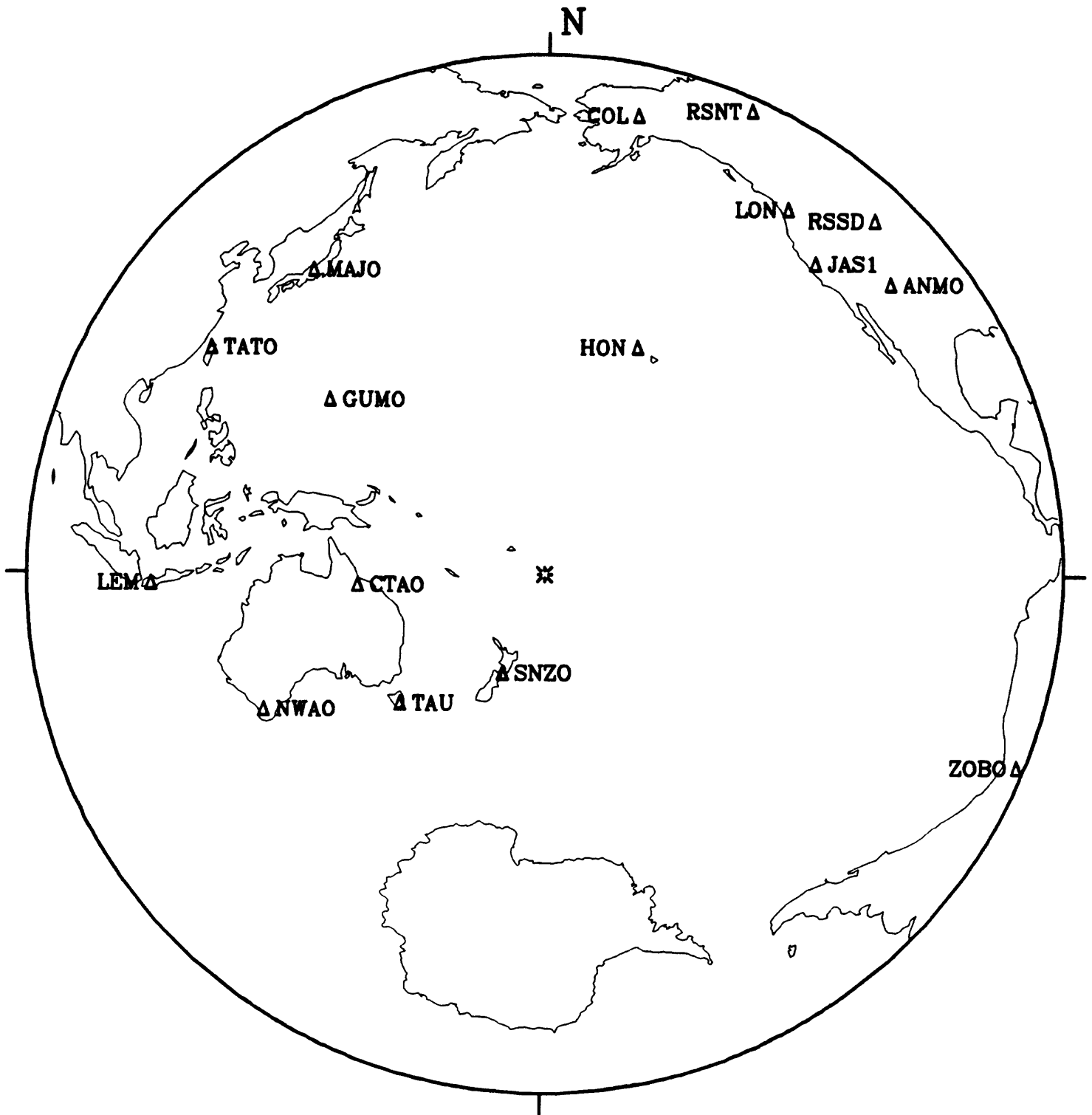
14 September 1986 20:58:23.05
Solomon Islands $h=58.0$ $m_b=5.5$

LPZ



15 September 1986 08:48:11.42

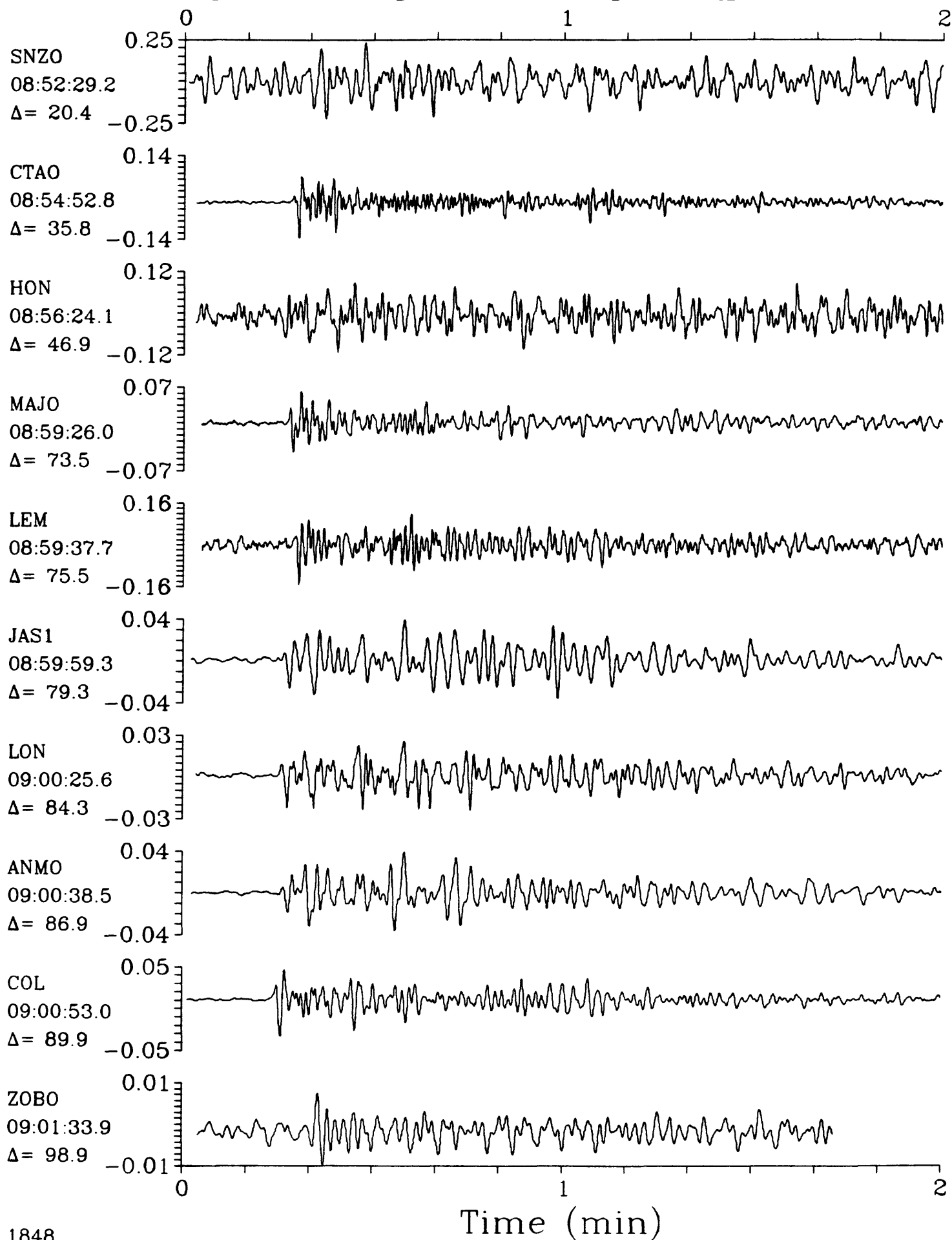
Tonga Islands Region



SPZ

15 September 1986 08:48:11.42

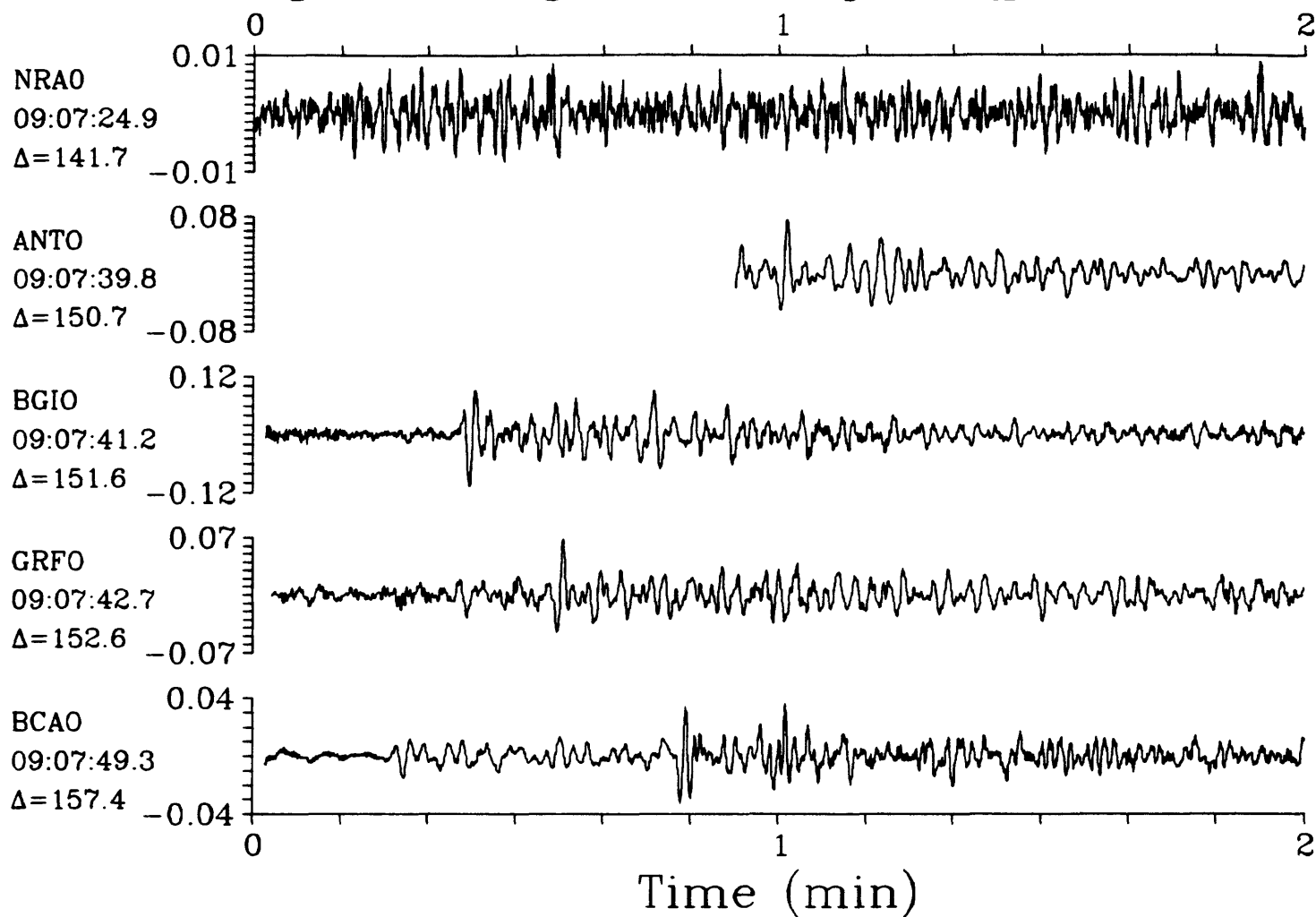
SPZ

Tonga Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.8$ 

SPZ

15 September 1986 08:48:11.42

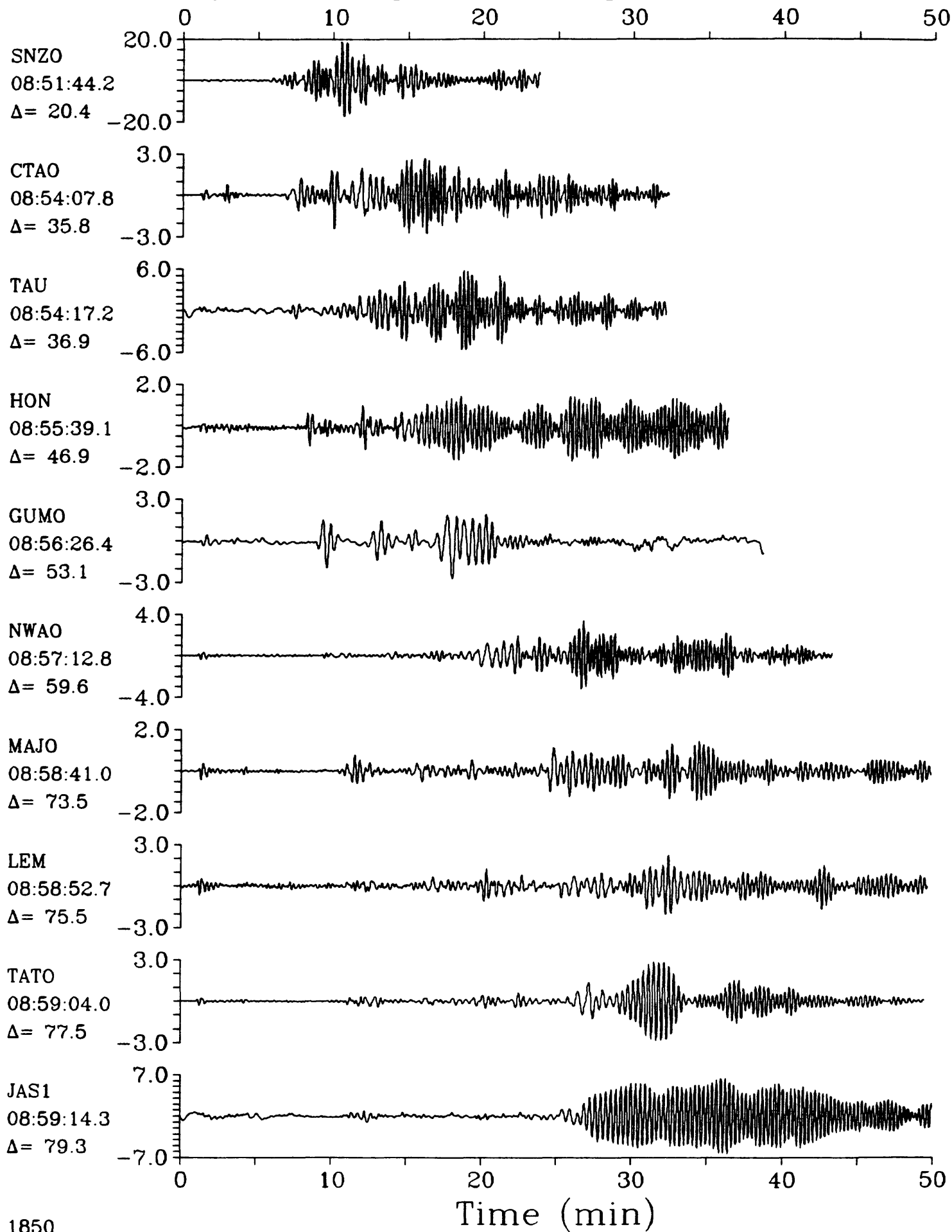
SPZ

Tonga Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.8$ 

LPZ

15 September 1986 08:48:11.42
Tonga Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.8$

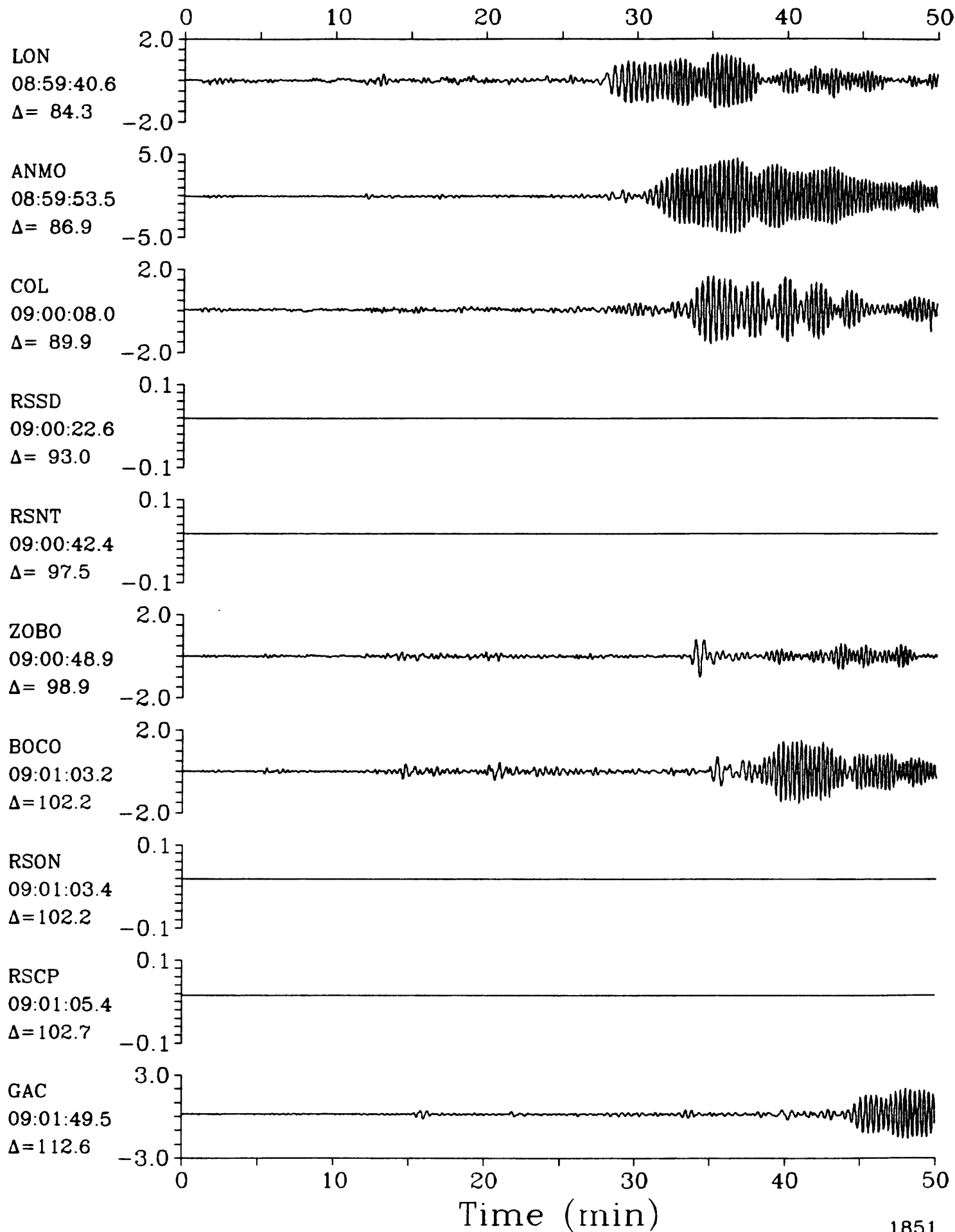
LPZ



LPZ

15 September 1986 08:48:11.42

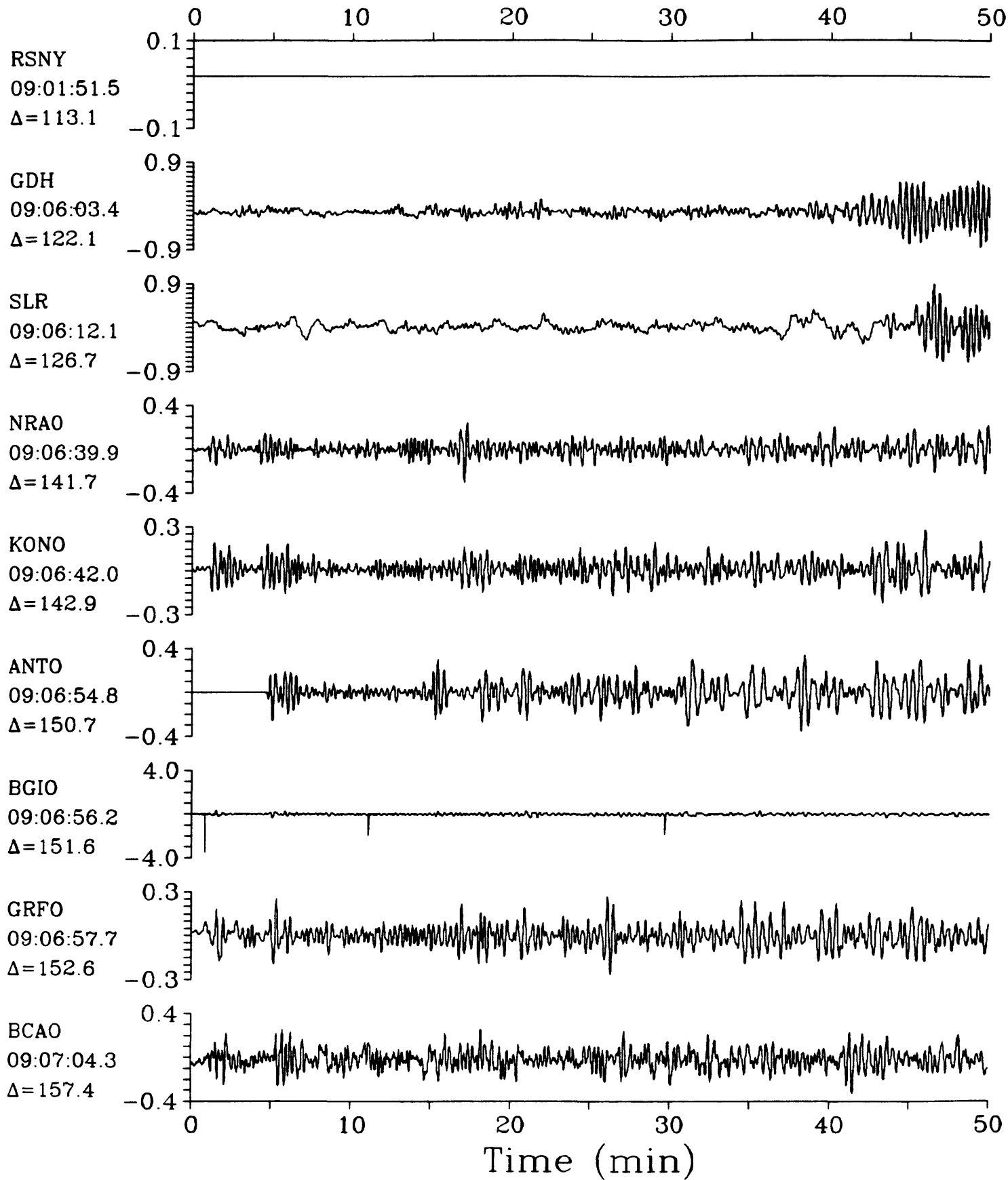
LPZ

Tonga Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.8$ 

LPZ

15 September 1986 08:48:11.42

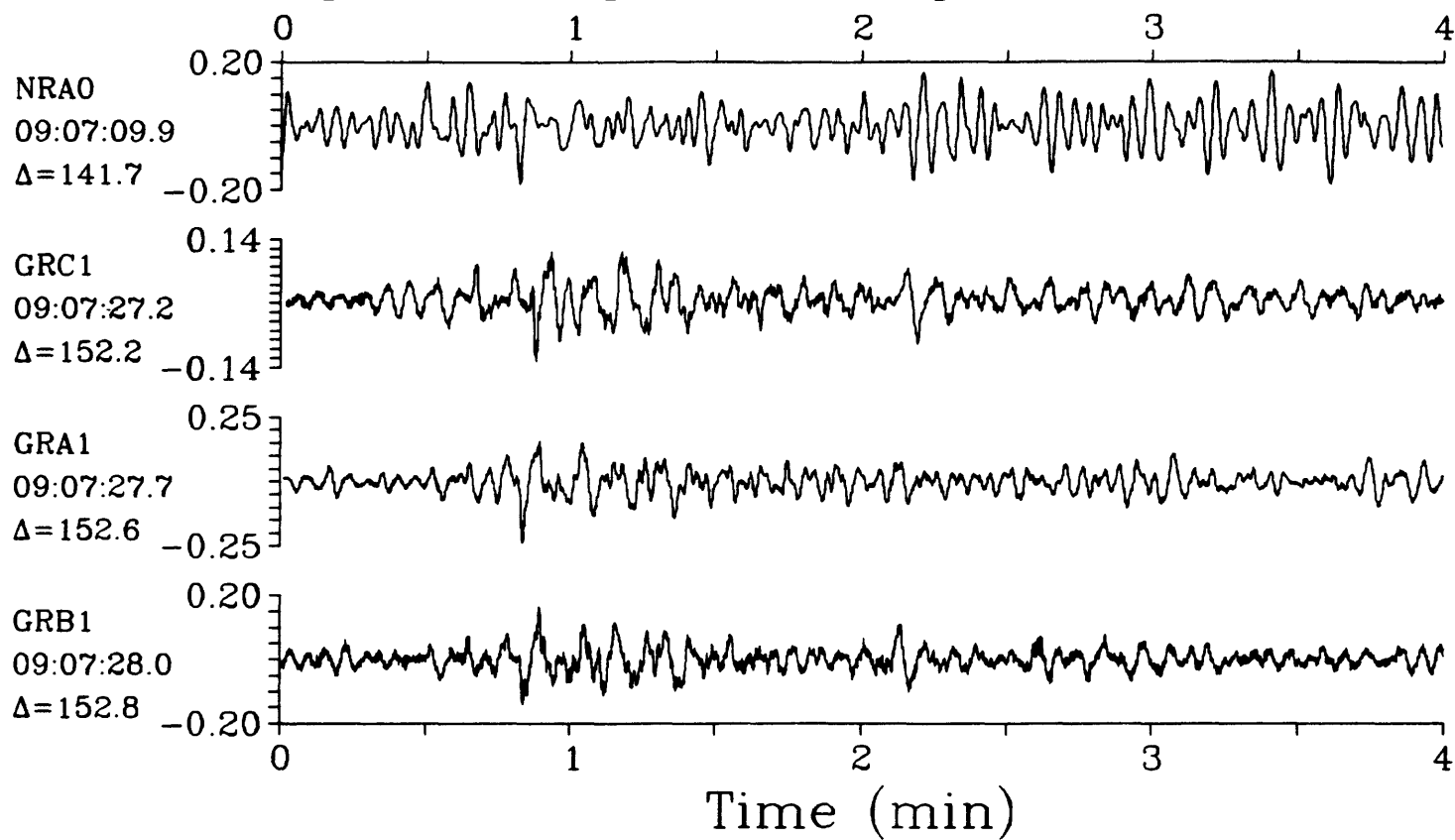
LPZ

Tonga Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.8$ 

IPZ

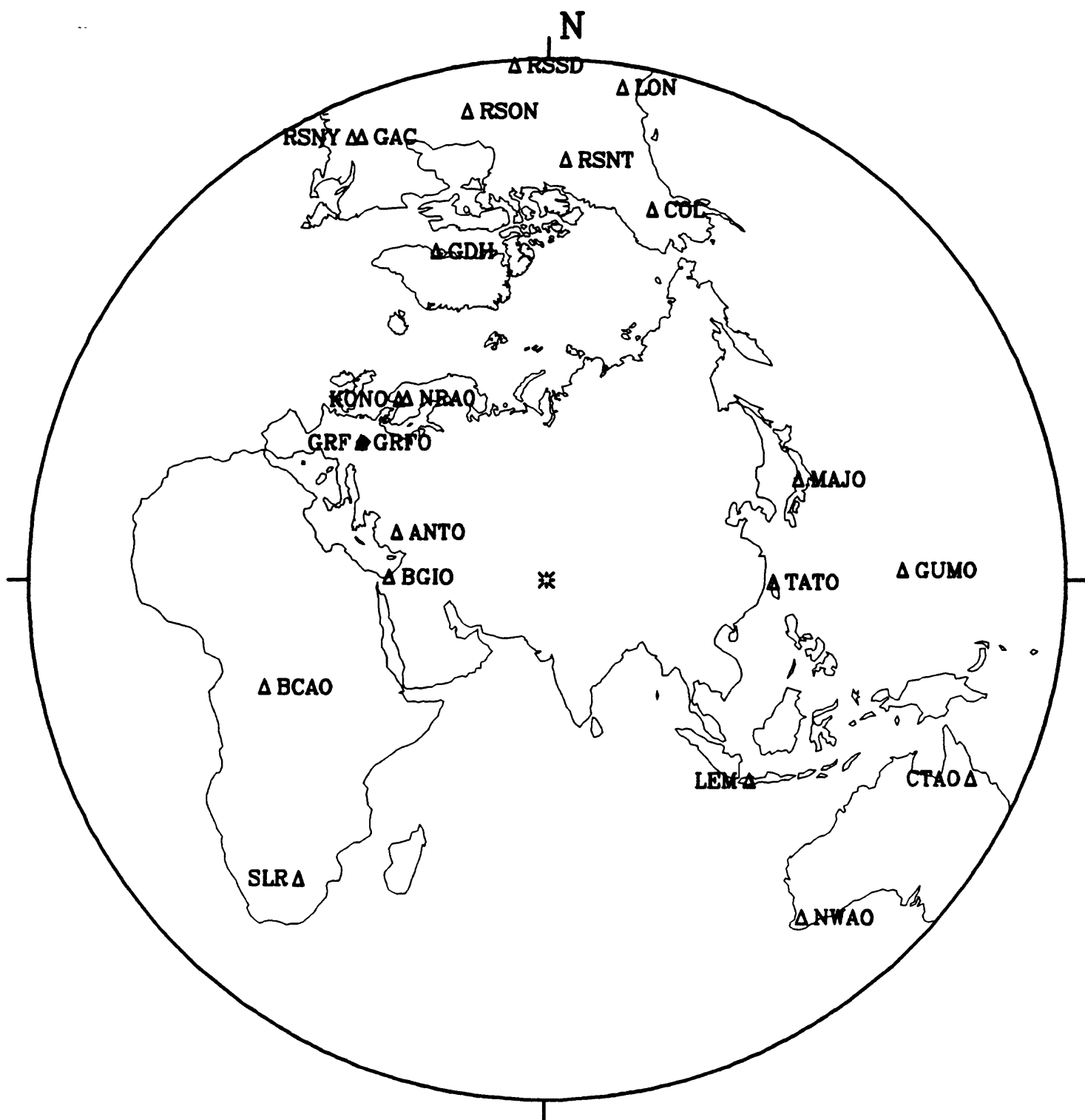
15 September 1986 08:48:11.42

IPZ

Tonga Islands Region $h=33.0$ $m_b=5.9$ $M_{sz}=5.8$ 

15 September 1986 21:42:29.97

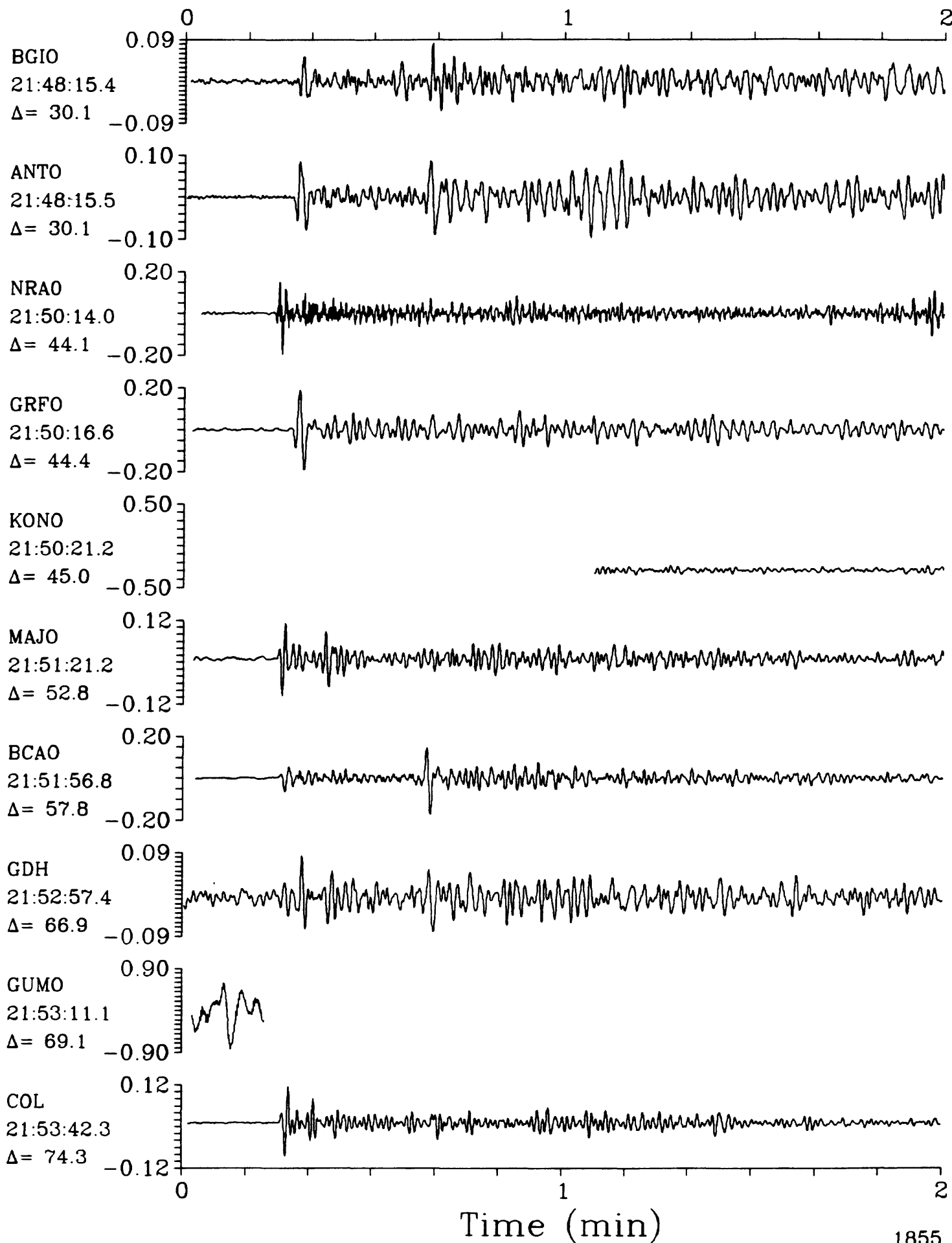
Afghanistan-USSR Border Region



SPZ

15 September 1986 21:42:29.97

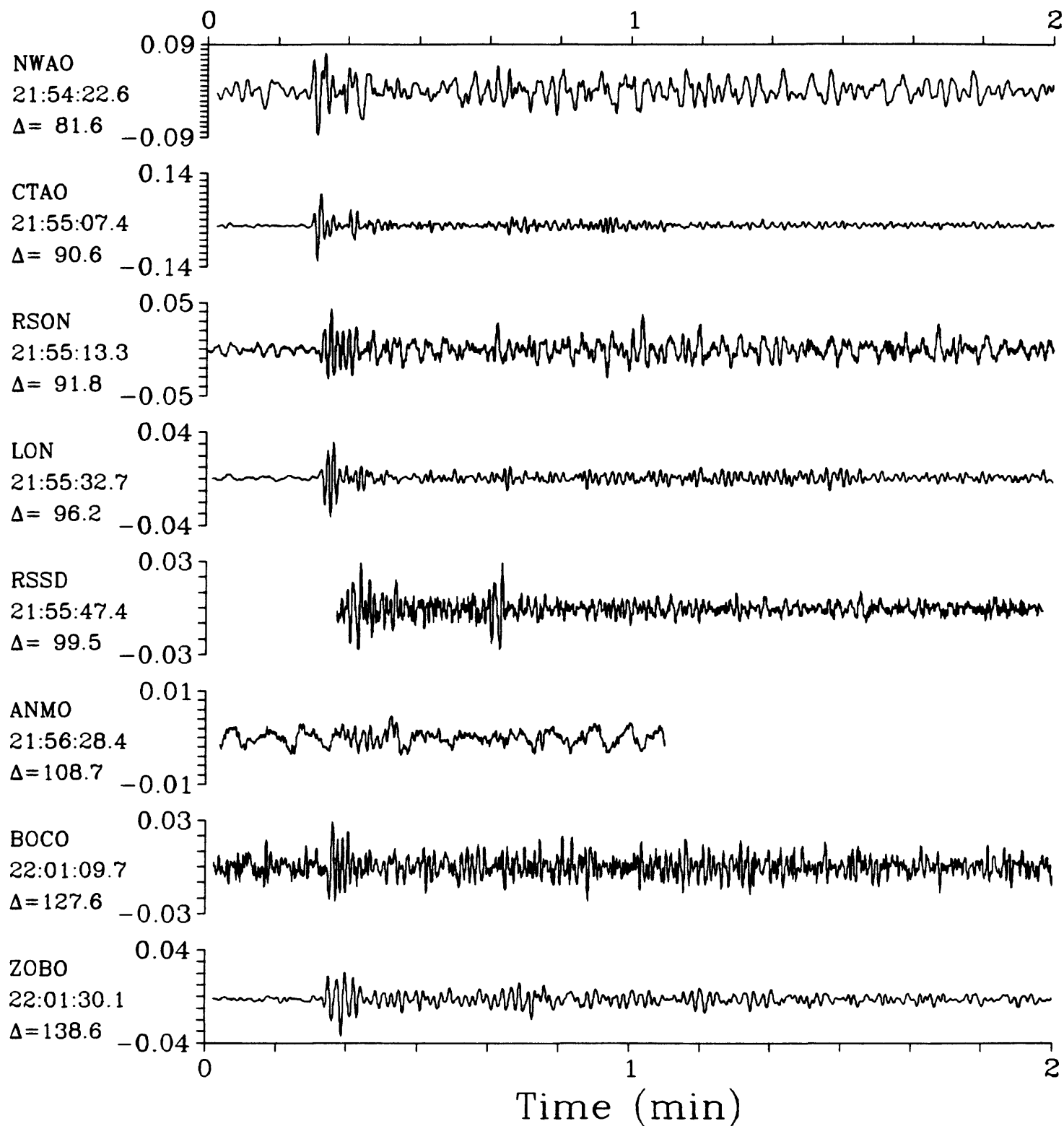
SPZ

Afghanistan-USSR Border Region $h=95.2$ $m_b=5.8$ 

SPZ

15 September 1986 21:42:29.97

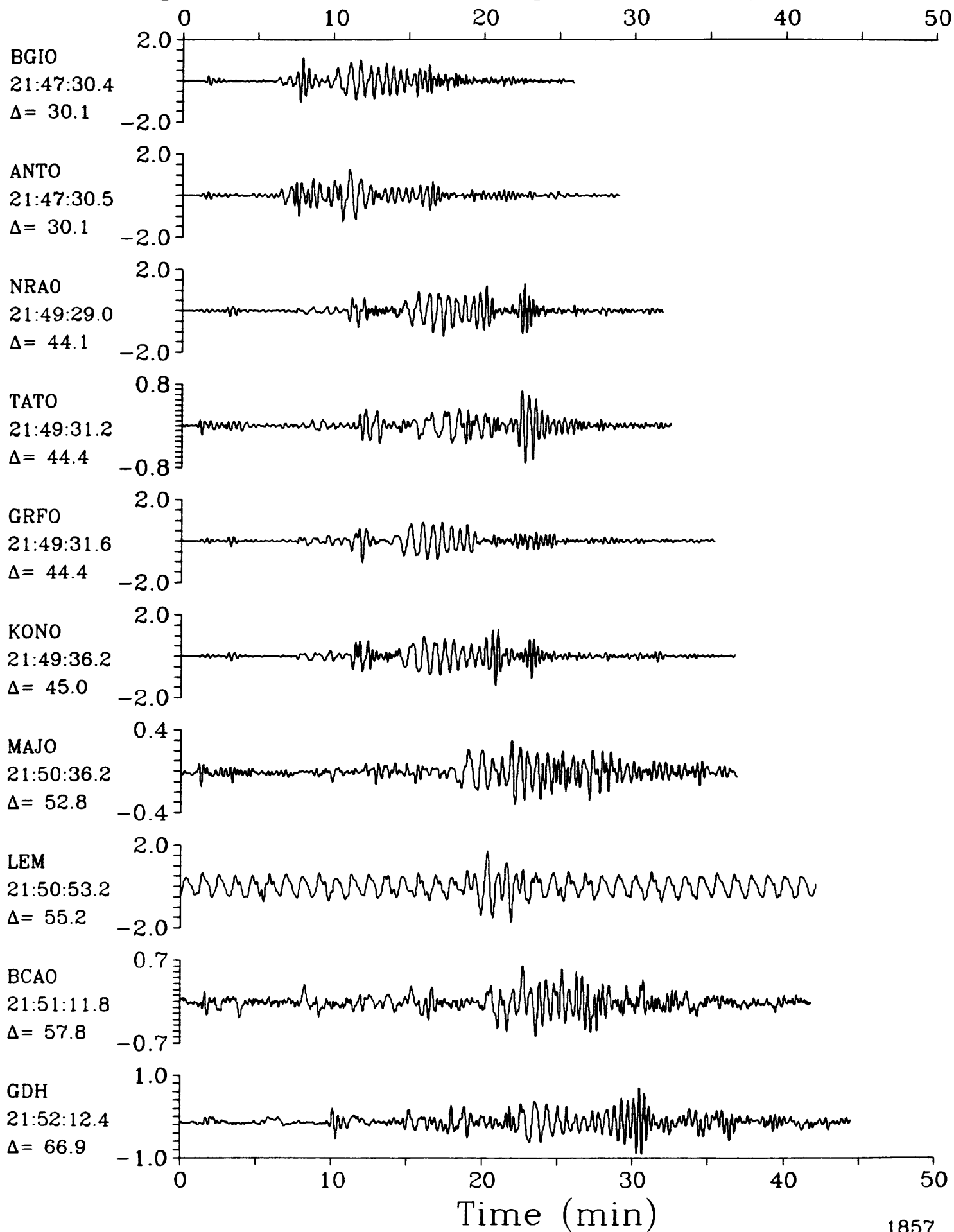
SPZ

Afghanistan-USSR Border Region $h=95.2$ $m_b=5.8$ 

LPZ

15 September 1986 21:42:29.97

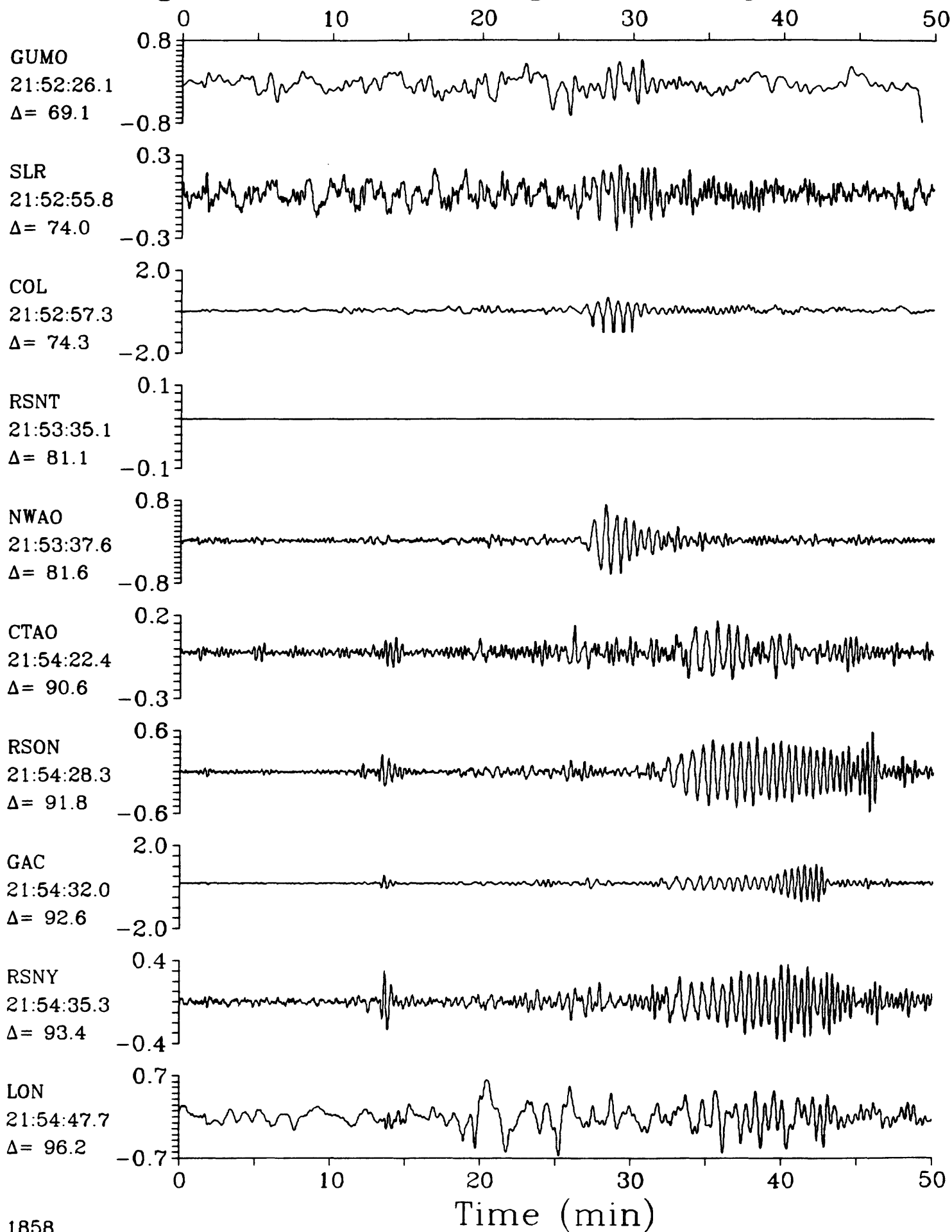
LPZ

Afghanistan-USSR Border Region $h=95.2$ $m_b=5.8$ 

LPZ

15 September 1986 21:42:29.97

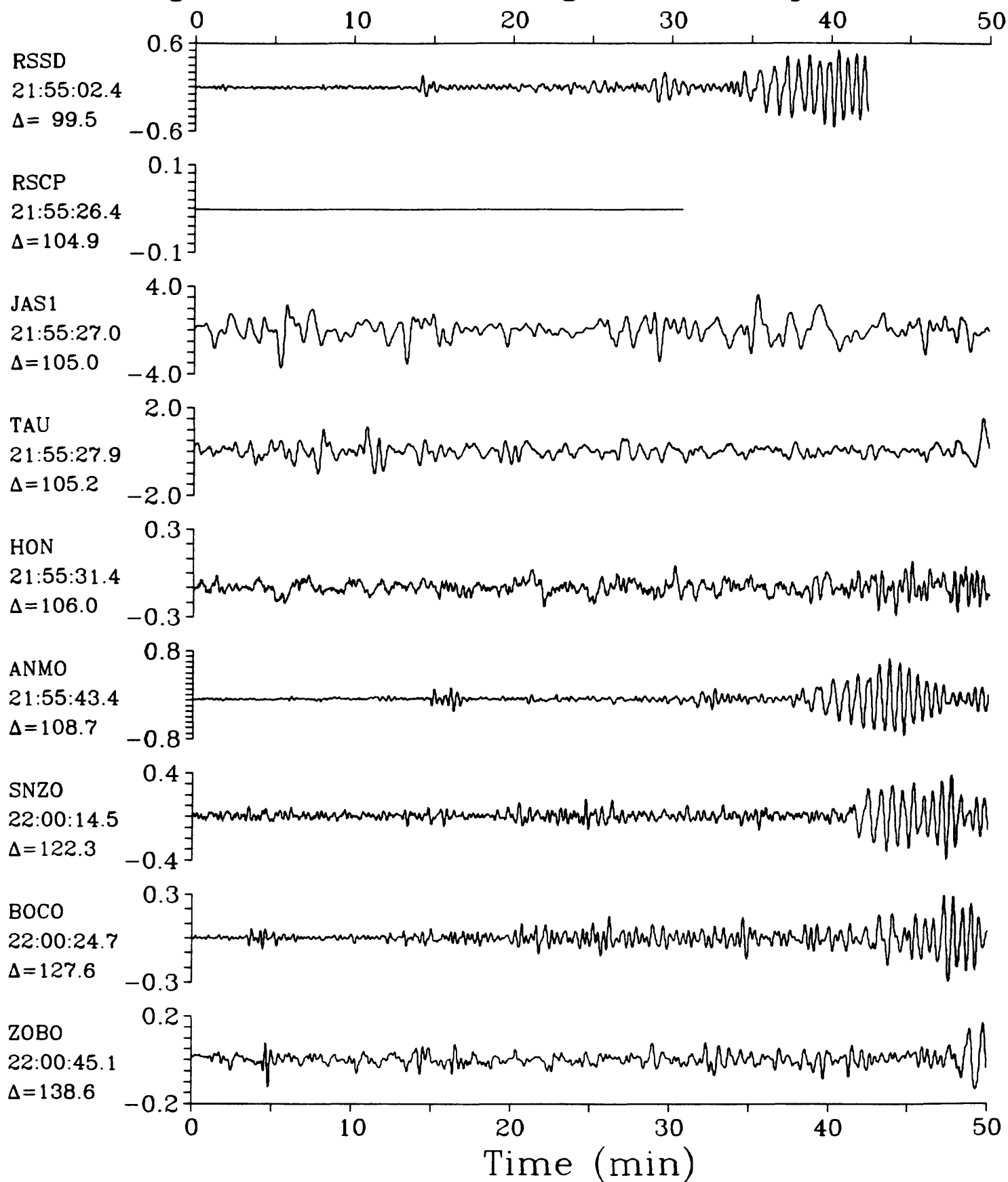
LPZ

Afghanistan-USSR Border Region $h=95.2$ $m_b=5.8$ 

LPZ

15 September 1986 21:42:29.97

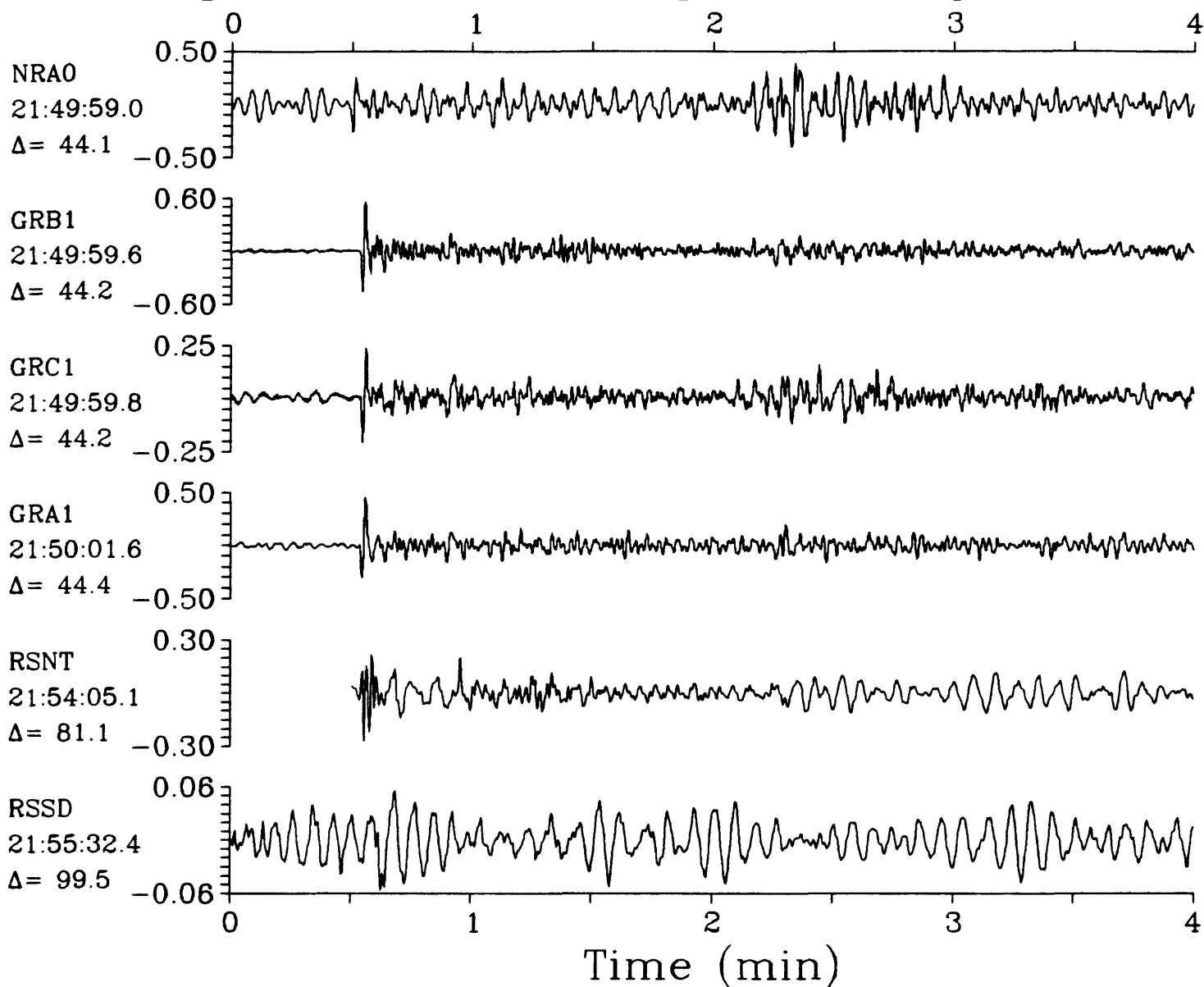
LPZ

Afghanistan-USSR Border Region $h=95.2$ $m_b=5.8$ 

IPZ

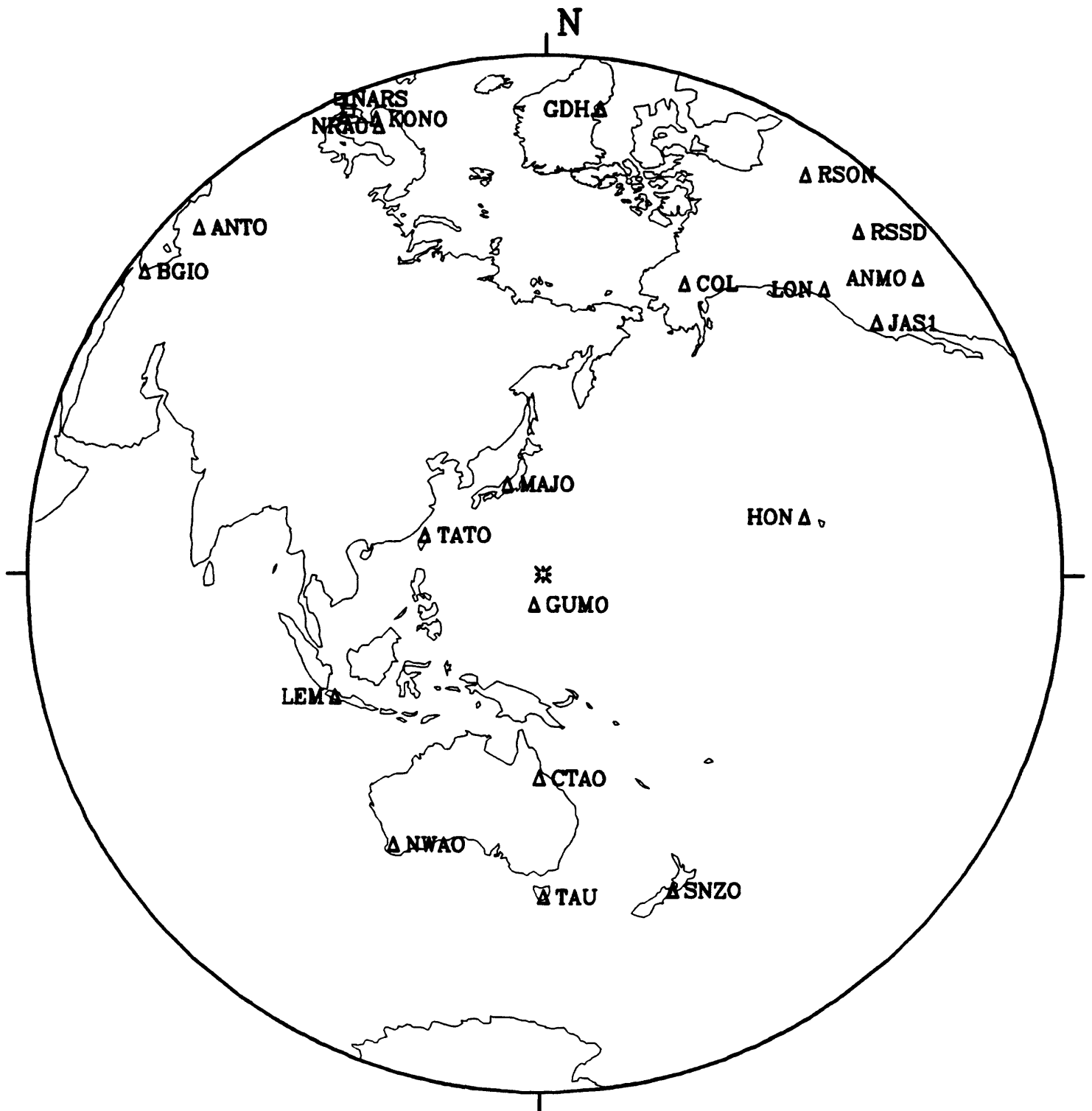
15 September 1986 21:42:29.97

IPZ

Afghanistan-USSR Border Region $h=95.2$ $m_b=5.8$ 

16 September 1986 18:20:21.58

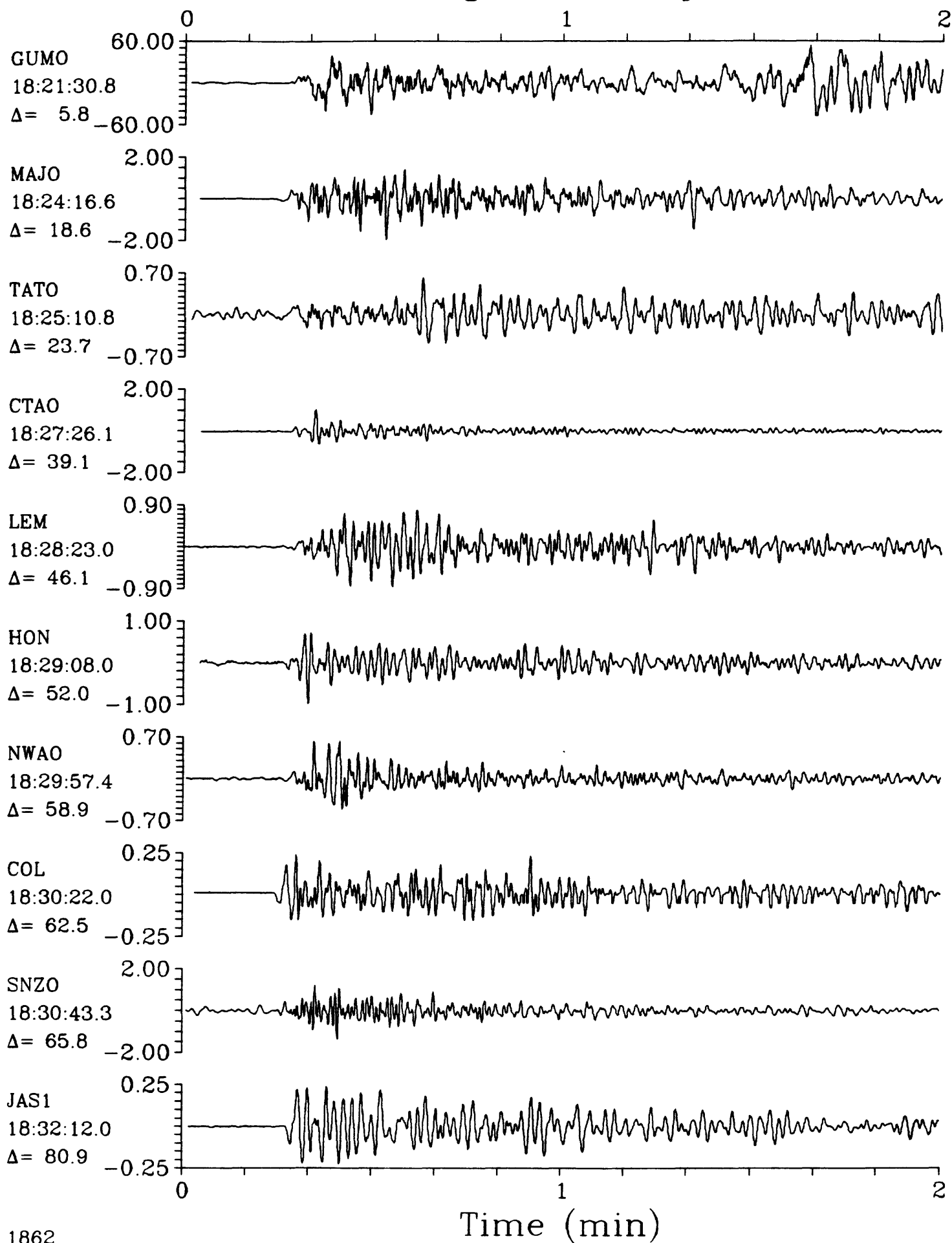
Mariana Islands Region



SPZ

16 September 1986 18:20:21.58
Mariana Islands Region $h=83.0$ $m_b=6.4$

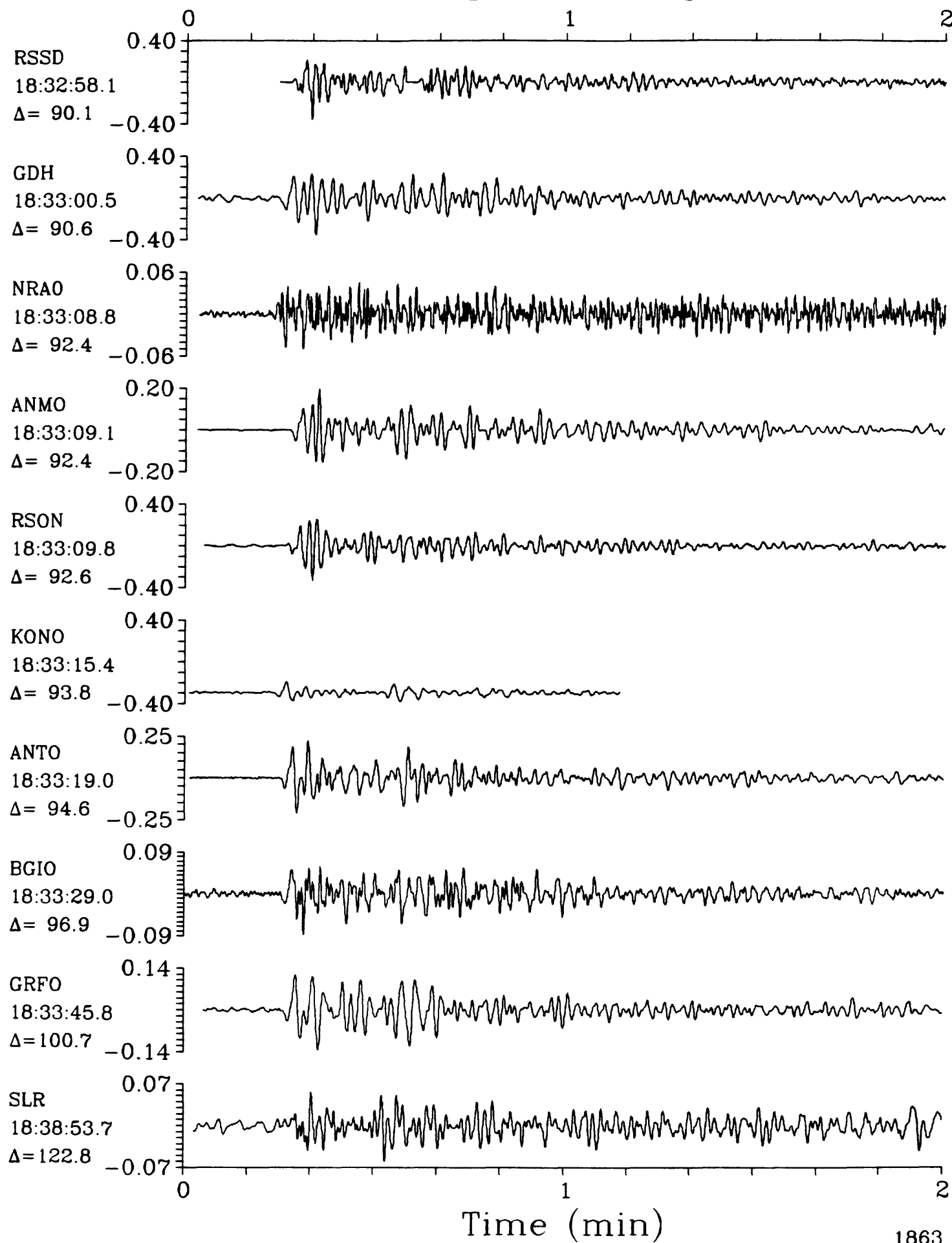
SPZ



SPZ

16 September 1986 18:20:21.58
Mariana Islands Region $h=83.0$ $m_b=6.4$

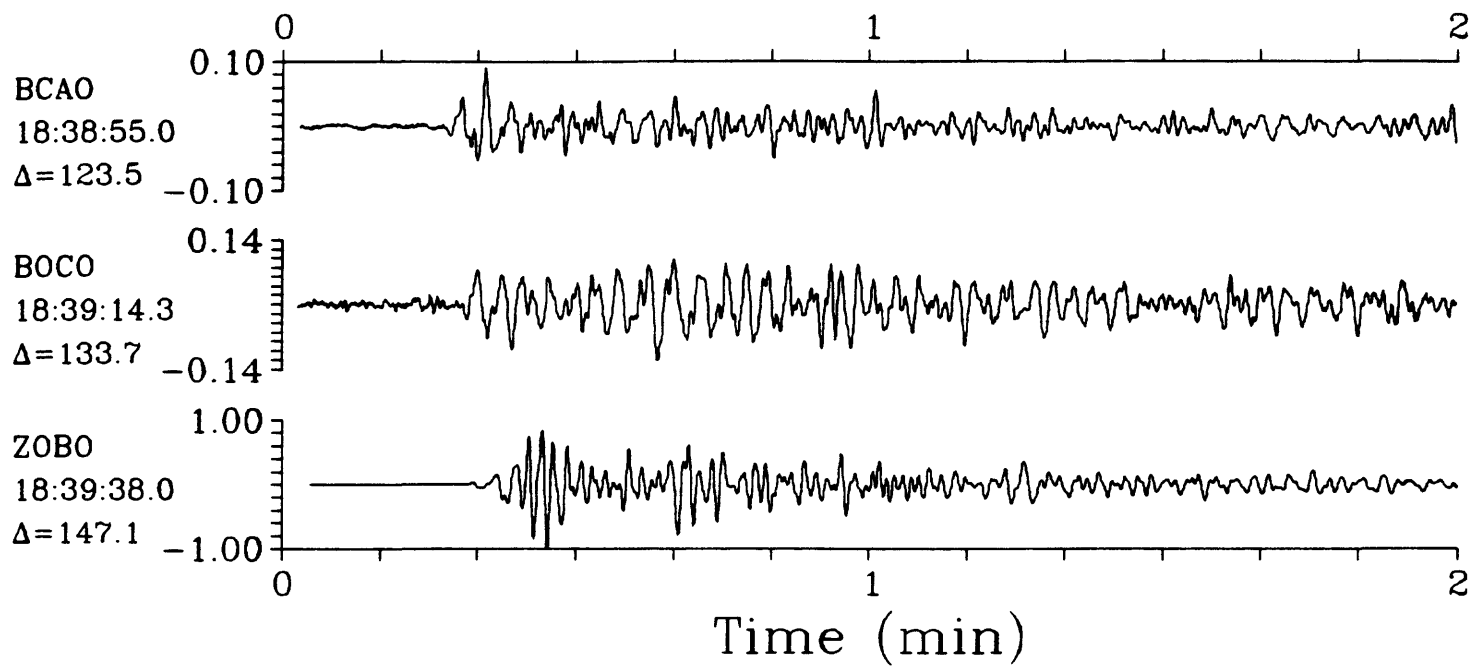
SPZ



SPZ

16 September 1986 18:20:21.58
Mariana Islands Region $h=83.0$ $m_b=6.4$

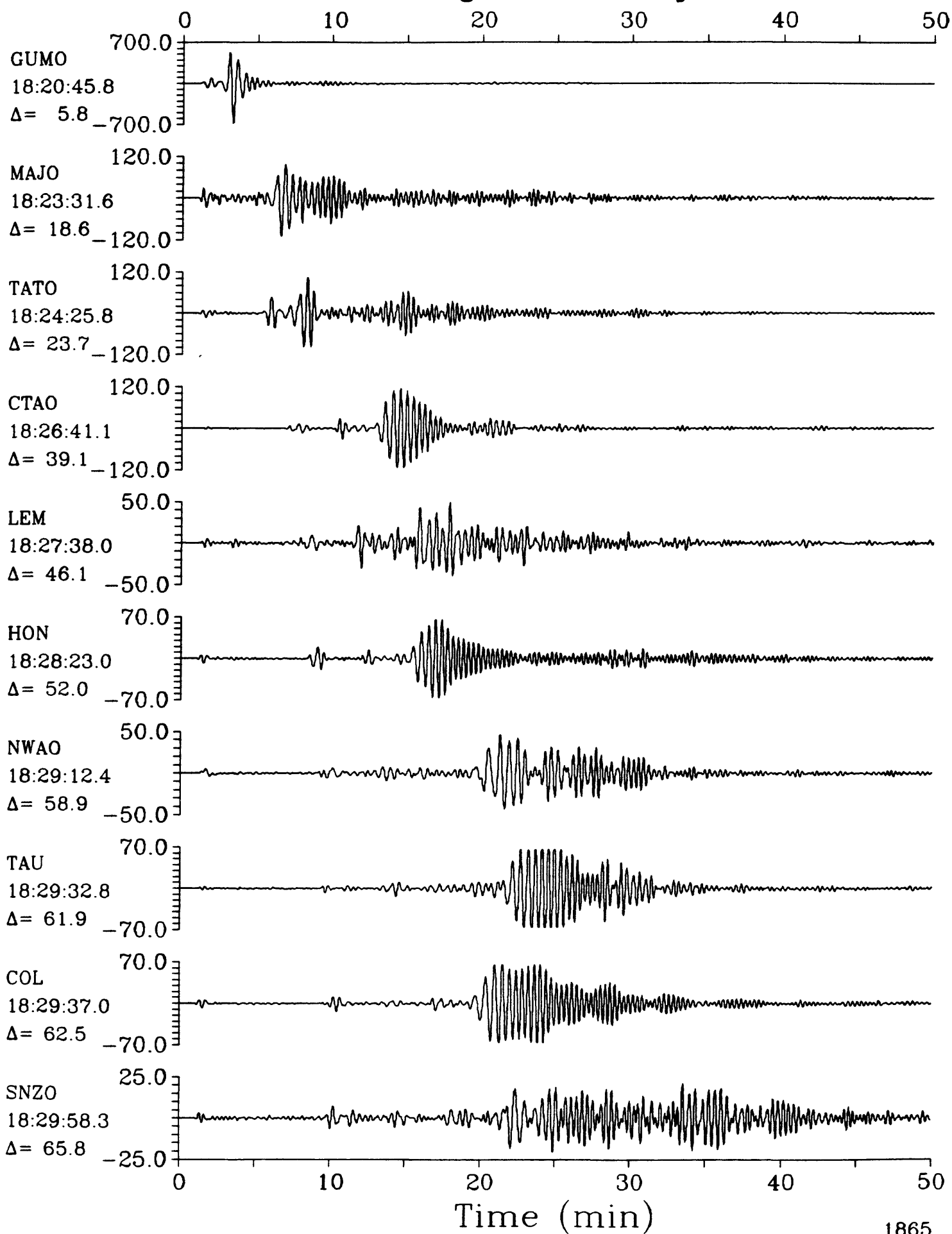
SPZ



LPZ

16 September 1986 18:20:21.58
Mariana Islands Region $h=83.0$ $m_b=6.4$

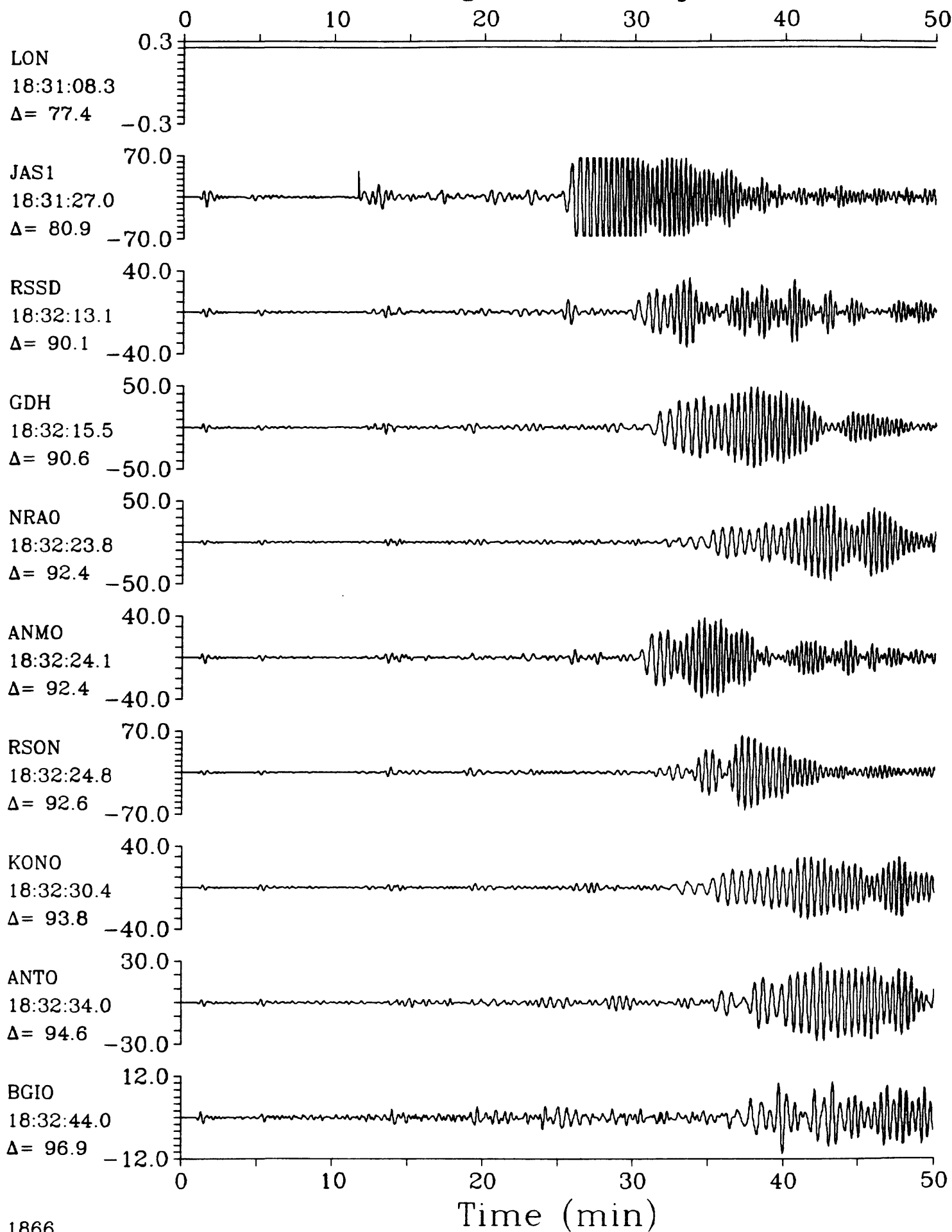
LPZ



LPZ

16 September 1986 18:20:21.58
Mariana Islands Region $h=83.0$ $m_b=6.4$

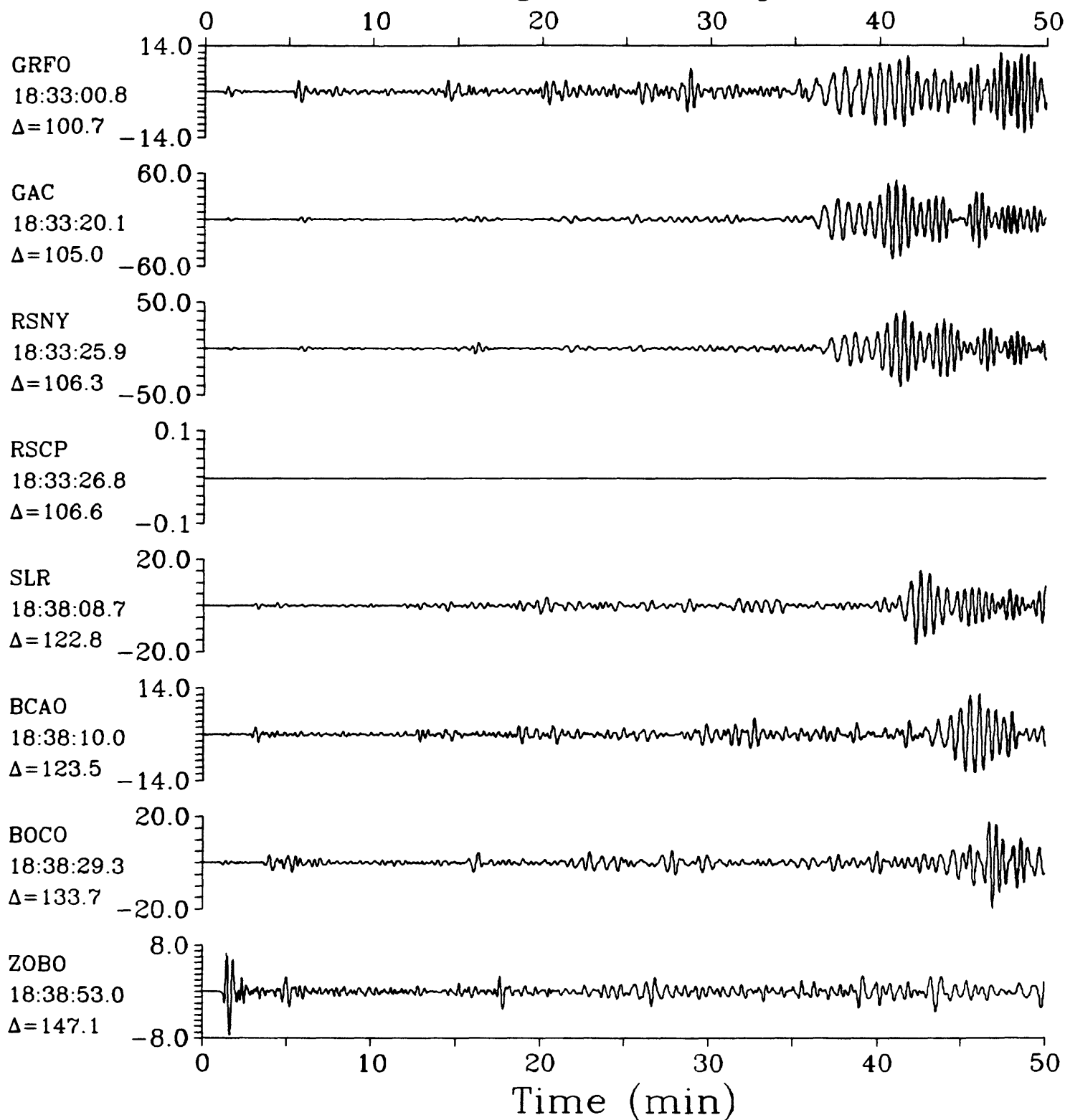
LPZ



LPZ

16 September 1986 18:20:21.58
Mariana Islands Region $h=83.0$ $m_b=6.4$

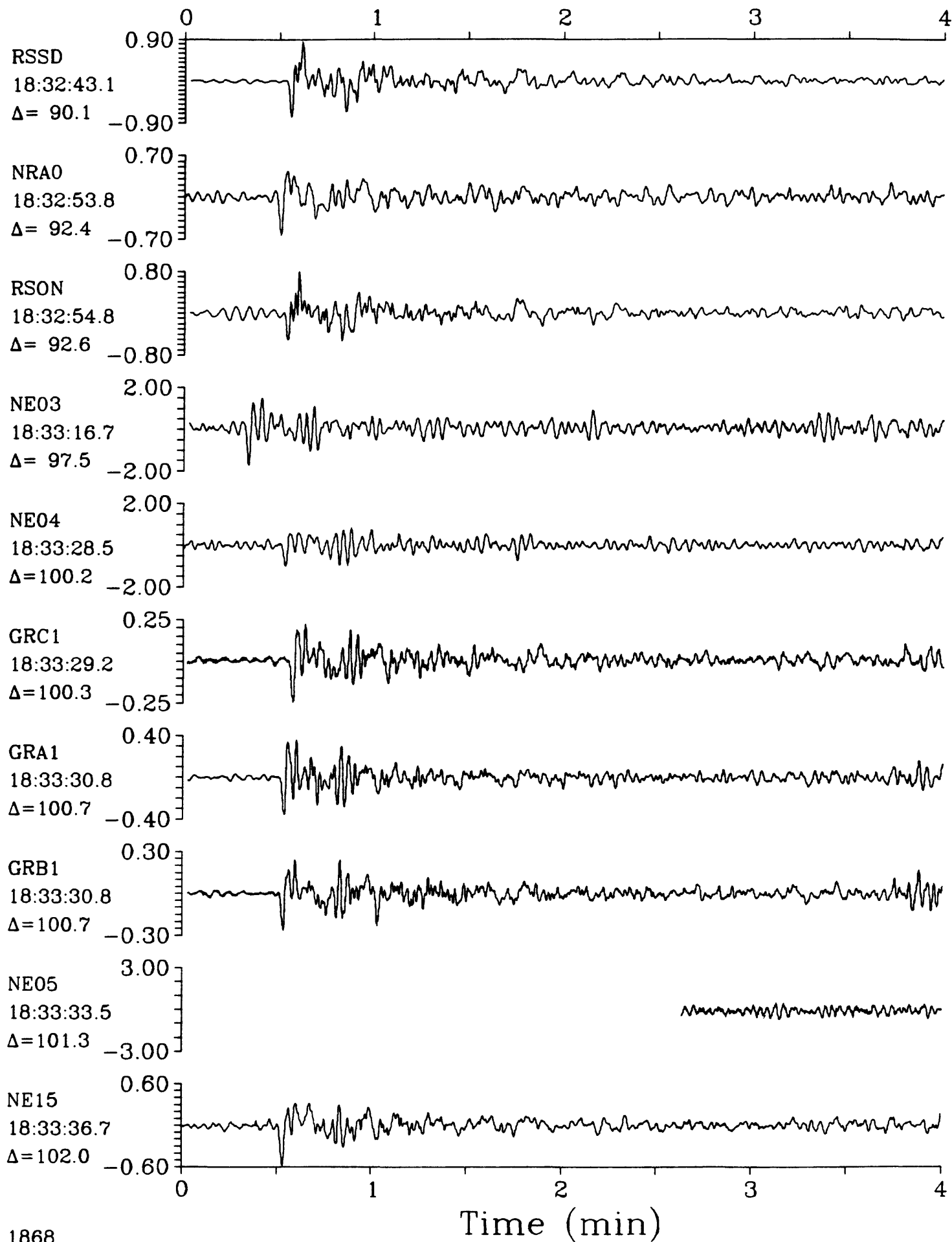
LPZ



IPZ

16 September 1986 18:20:21.58
Mariana Islands Region $h=83.0$ $m_b=6.4$

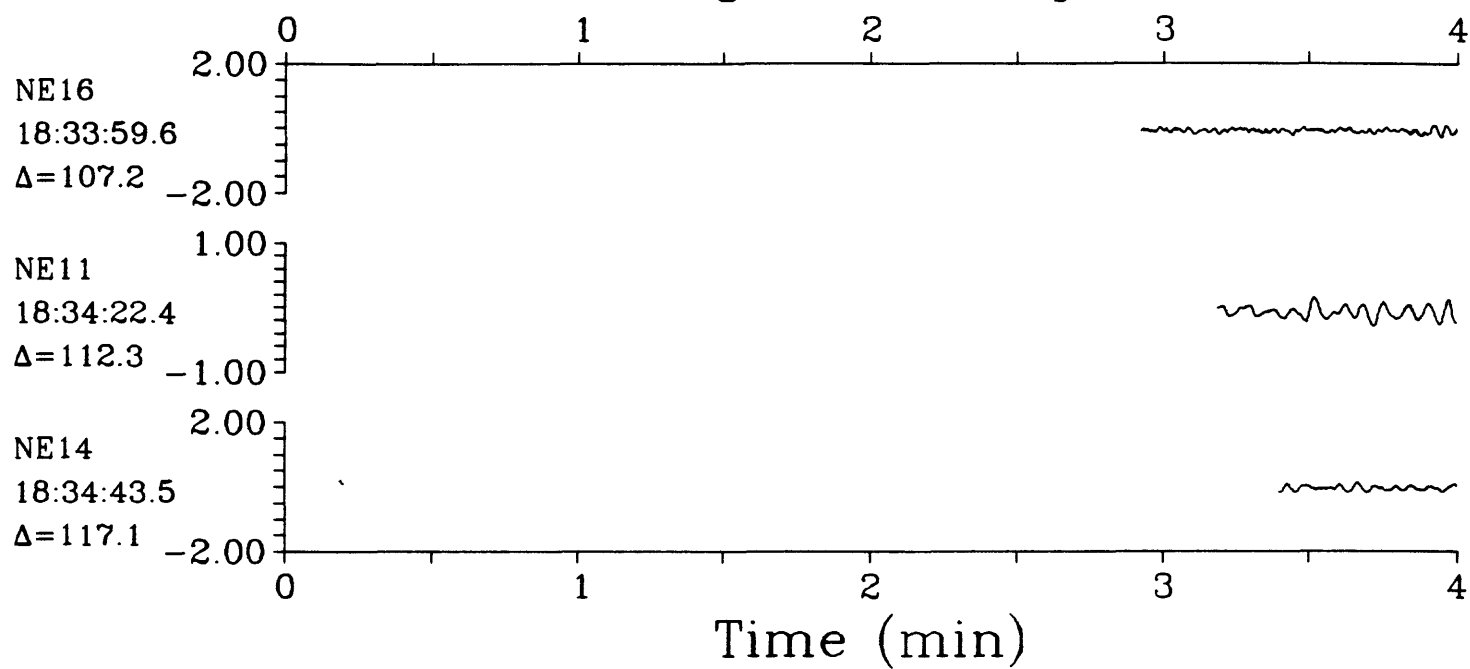
IPZ



IPZ

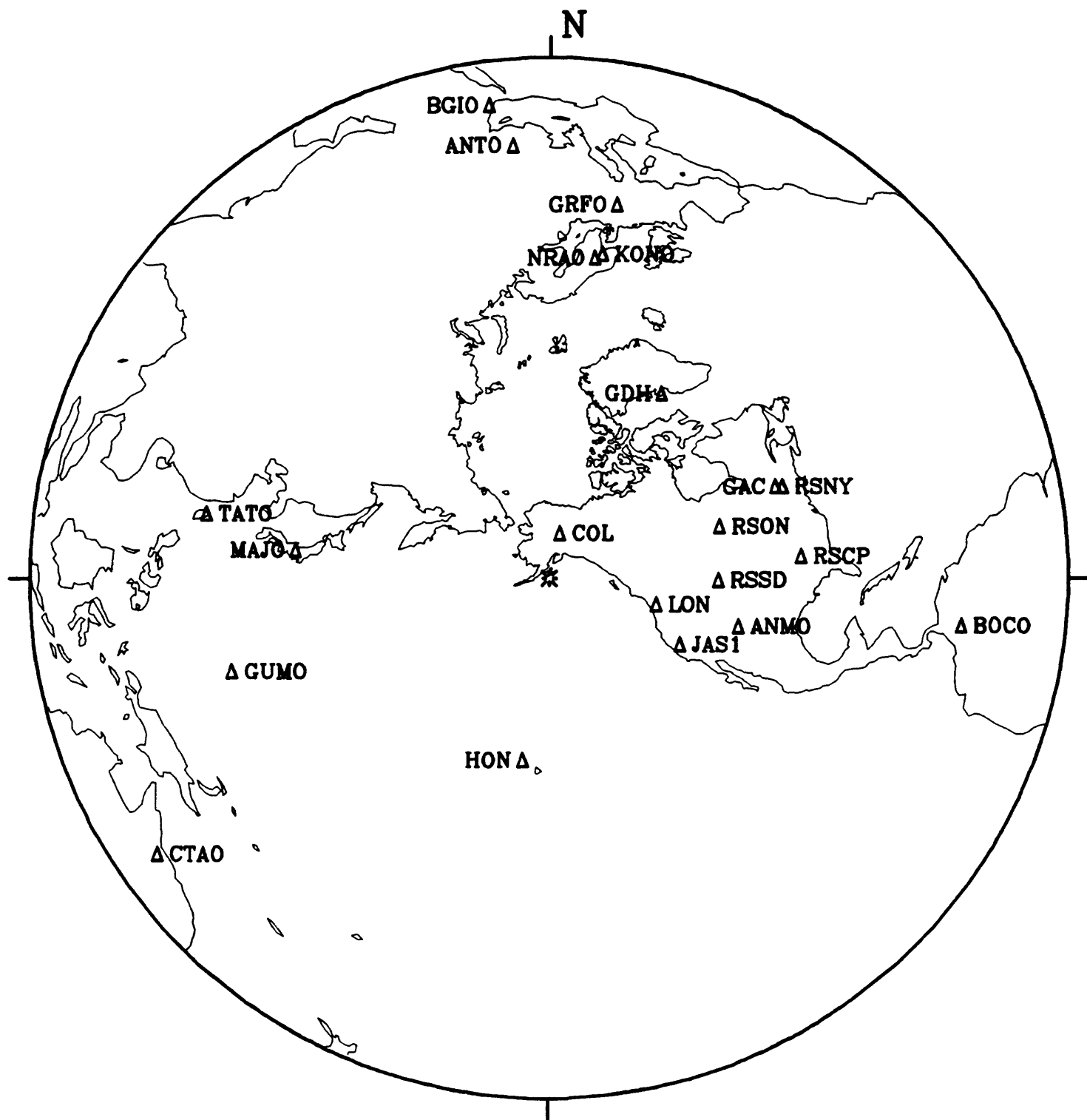
16 September 1986 18:20:21.58
Mariana Islands Region $h=83.0$ $m_b=6.4$

IPZ



16 September 1986 20:57:22.96

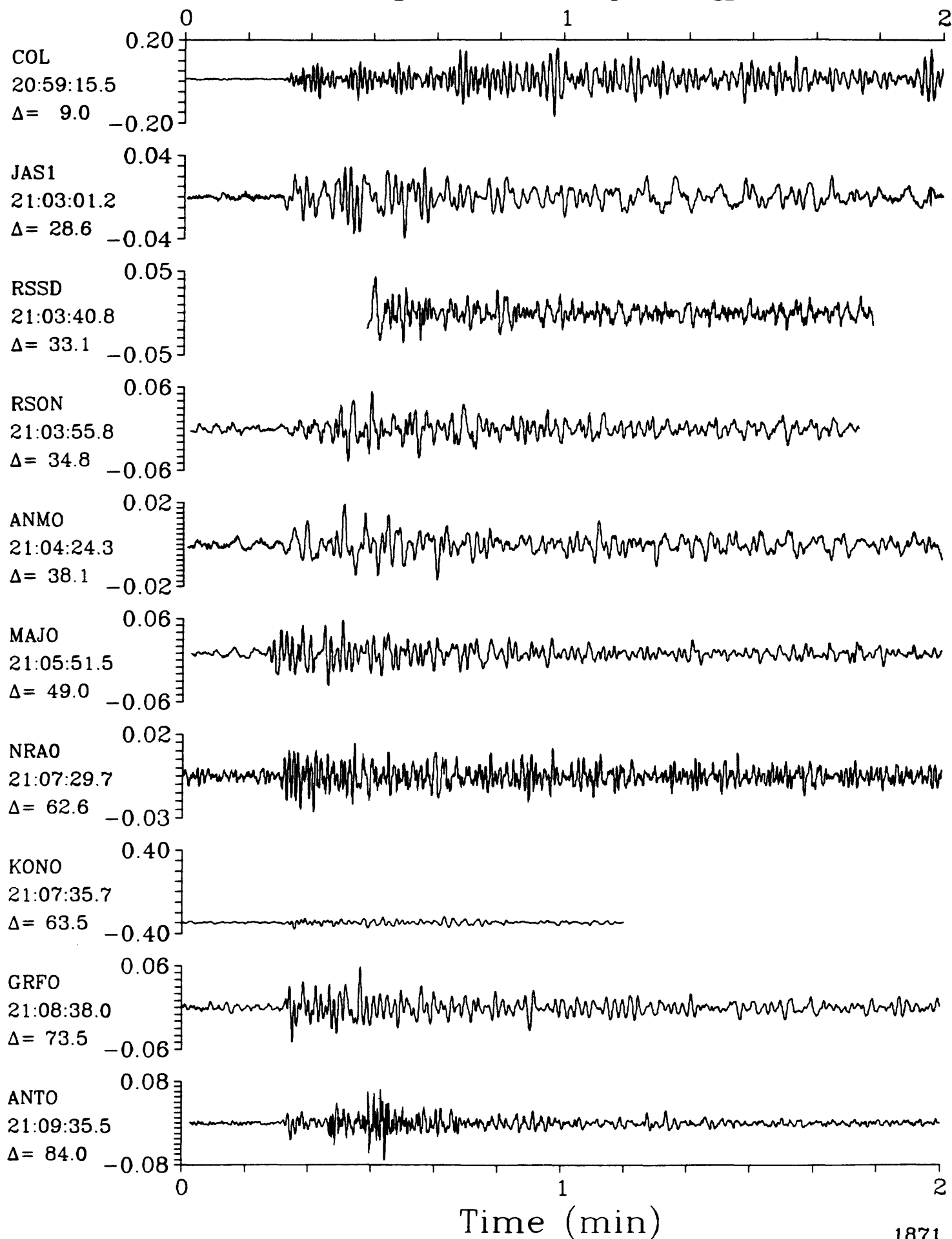
Kodiak Island Region



SPZ

16 September 1986 20:57:22.96

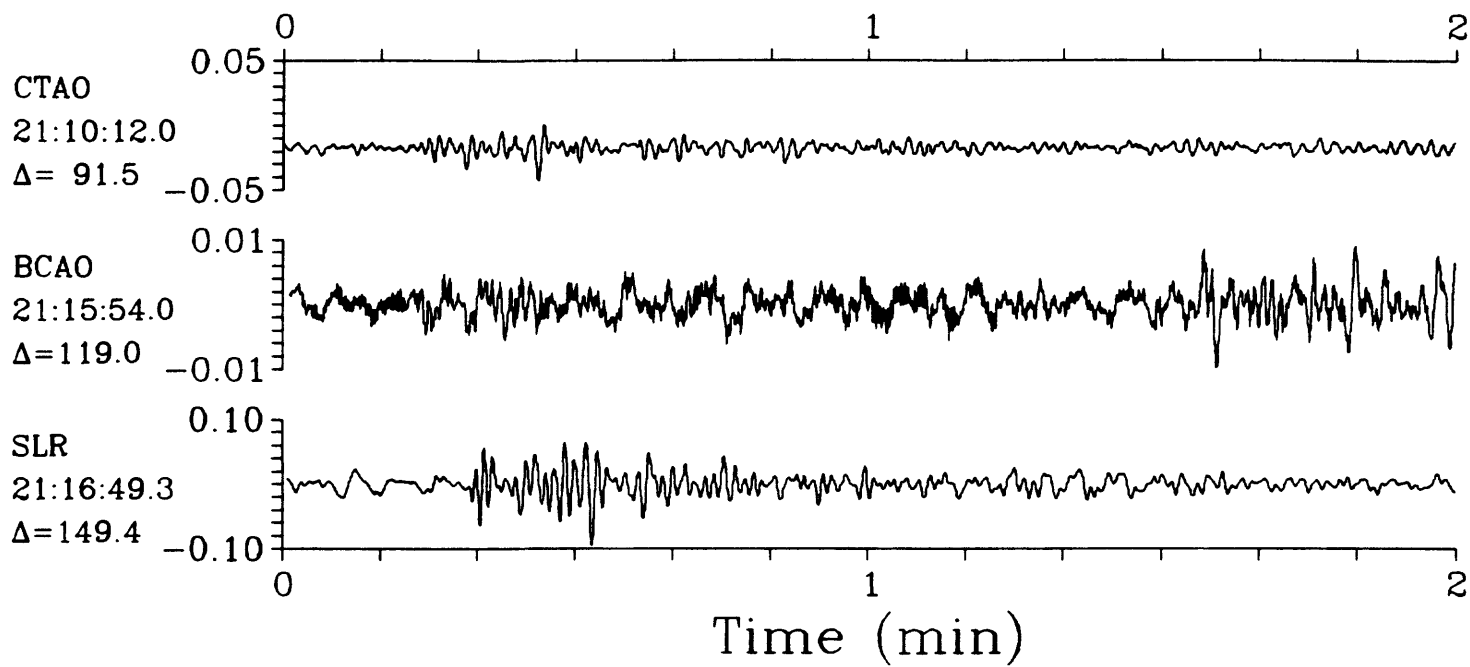
SPZ

Kodiak Island Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.5$ 

SPZ

16 September 1986 20:57:22.96
Kodiak Island Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.5$

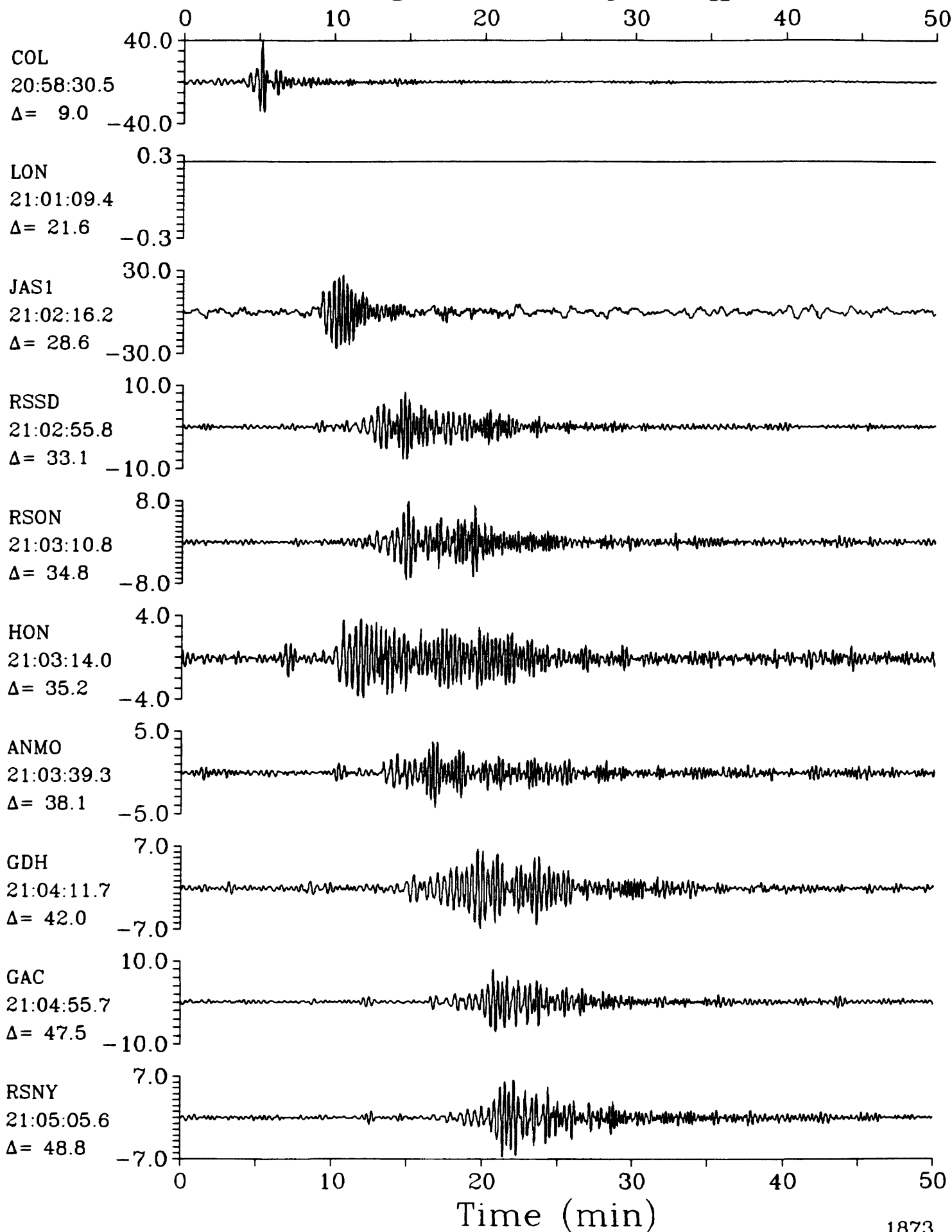
SPZ



LPZ

16 September 1986 20:57:22.96

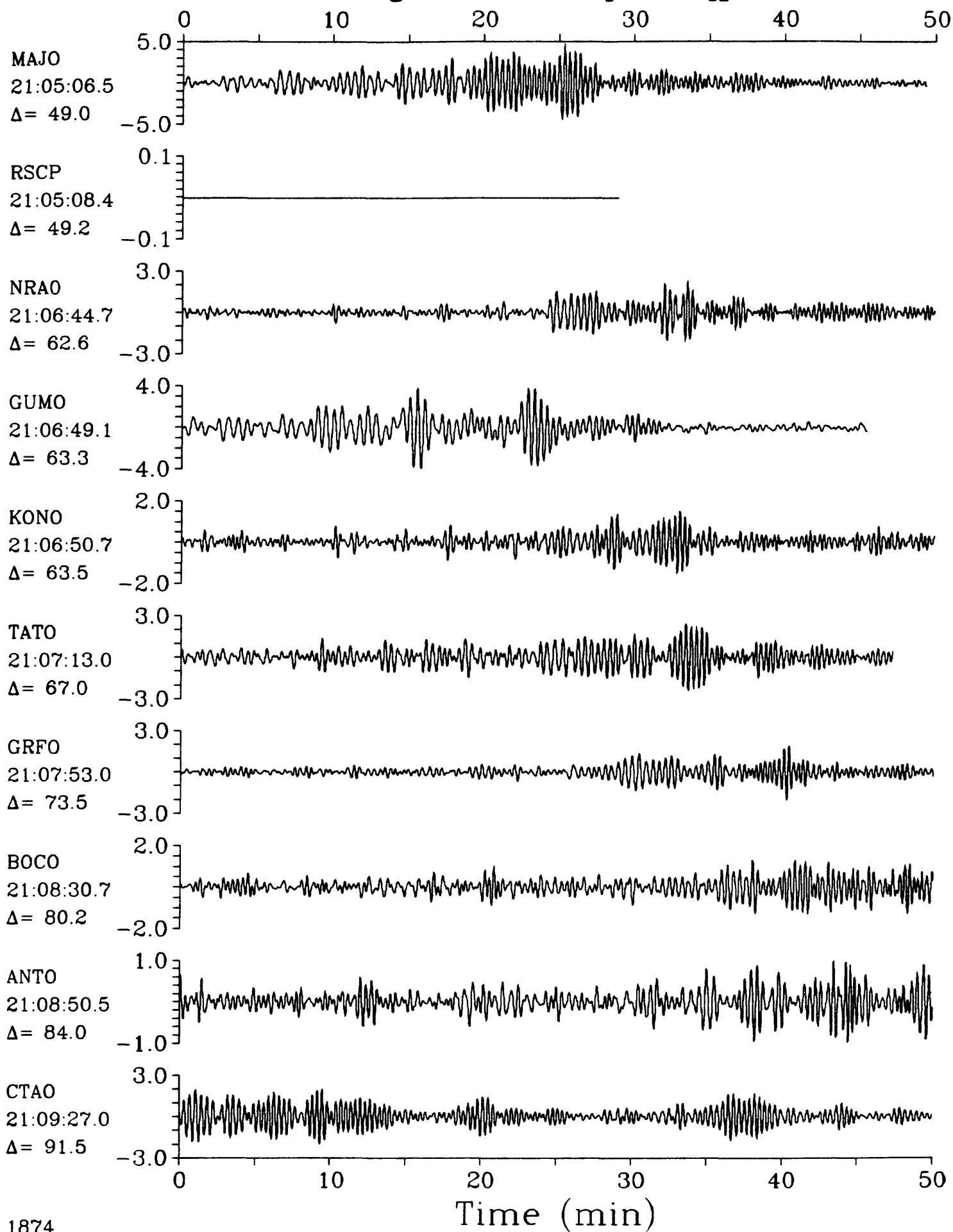
LPZ

Kodiak Island Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.5$ 

LPZ

16 September 1986 20:57:22.96
Kodiak Island Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.5$

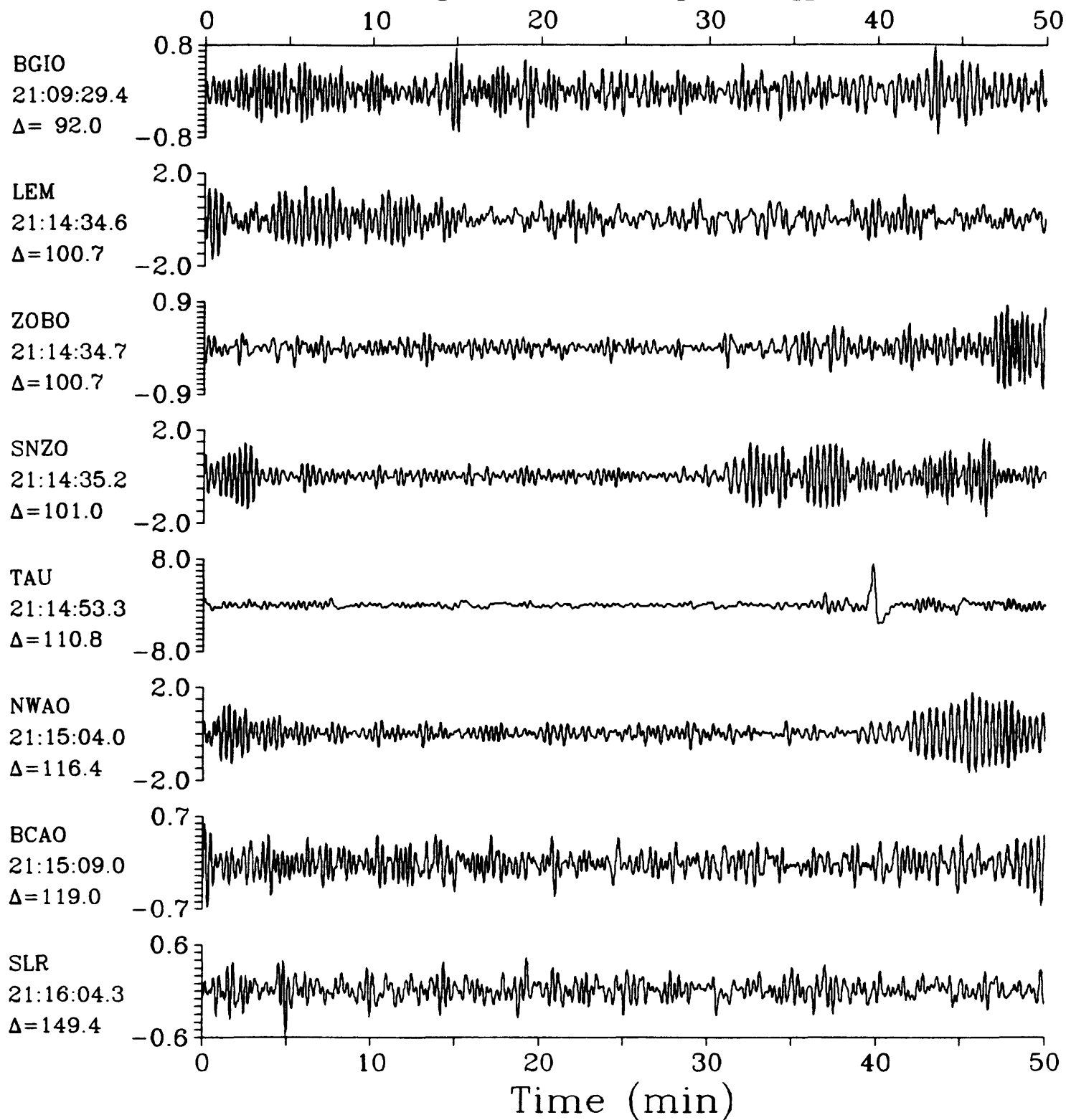
LPZ



LPZ

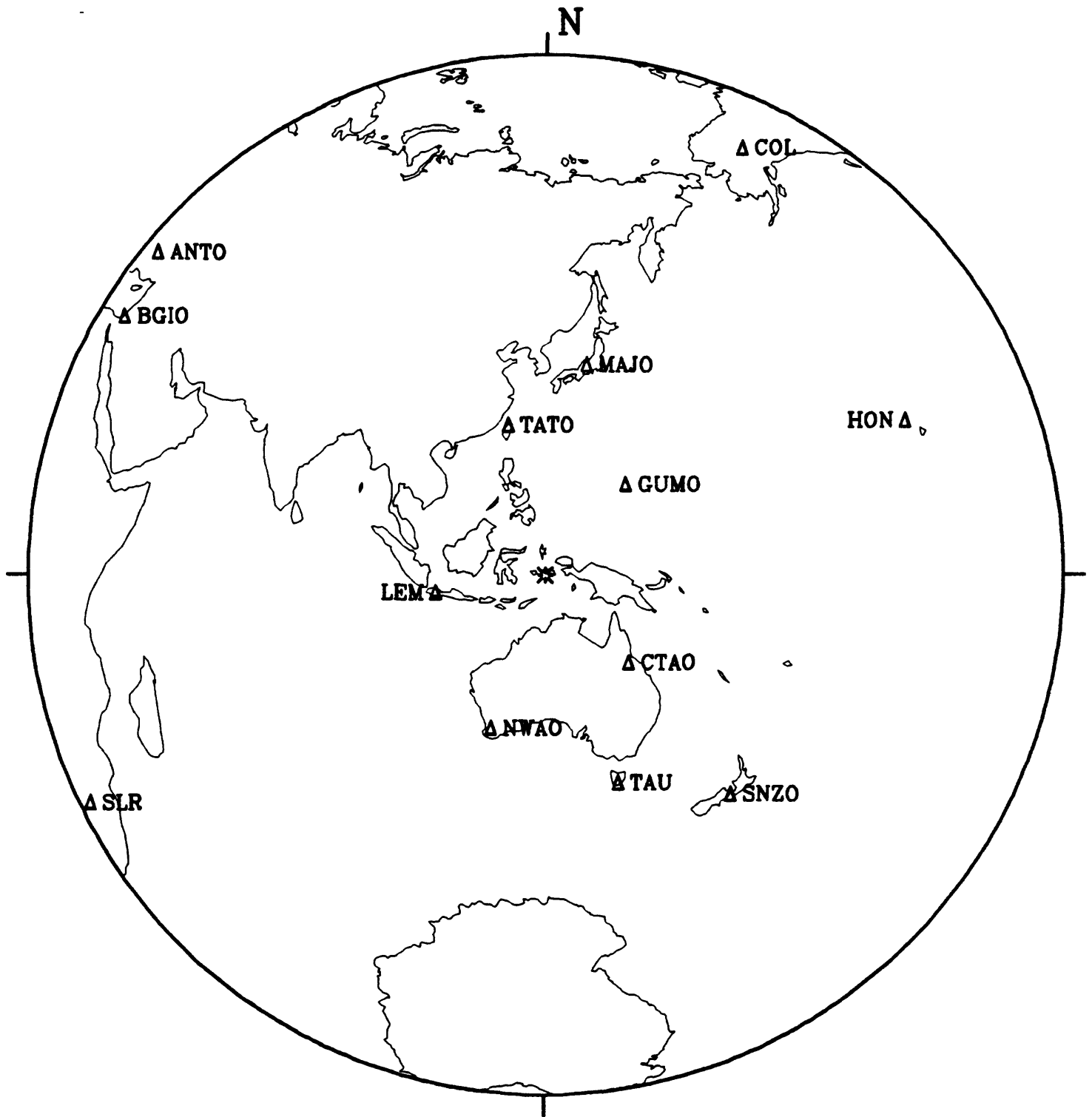
16 September 1986 20:57:22.96

LPZ

Kodiak Island Region $h=33.0$ $m_b=5.3$ $M_{sz}=5.5$ 

17 September 1986 06:44:53.51

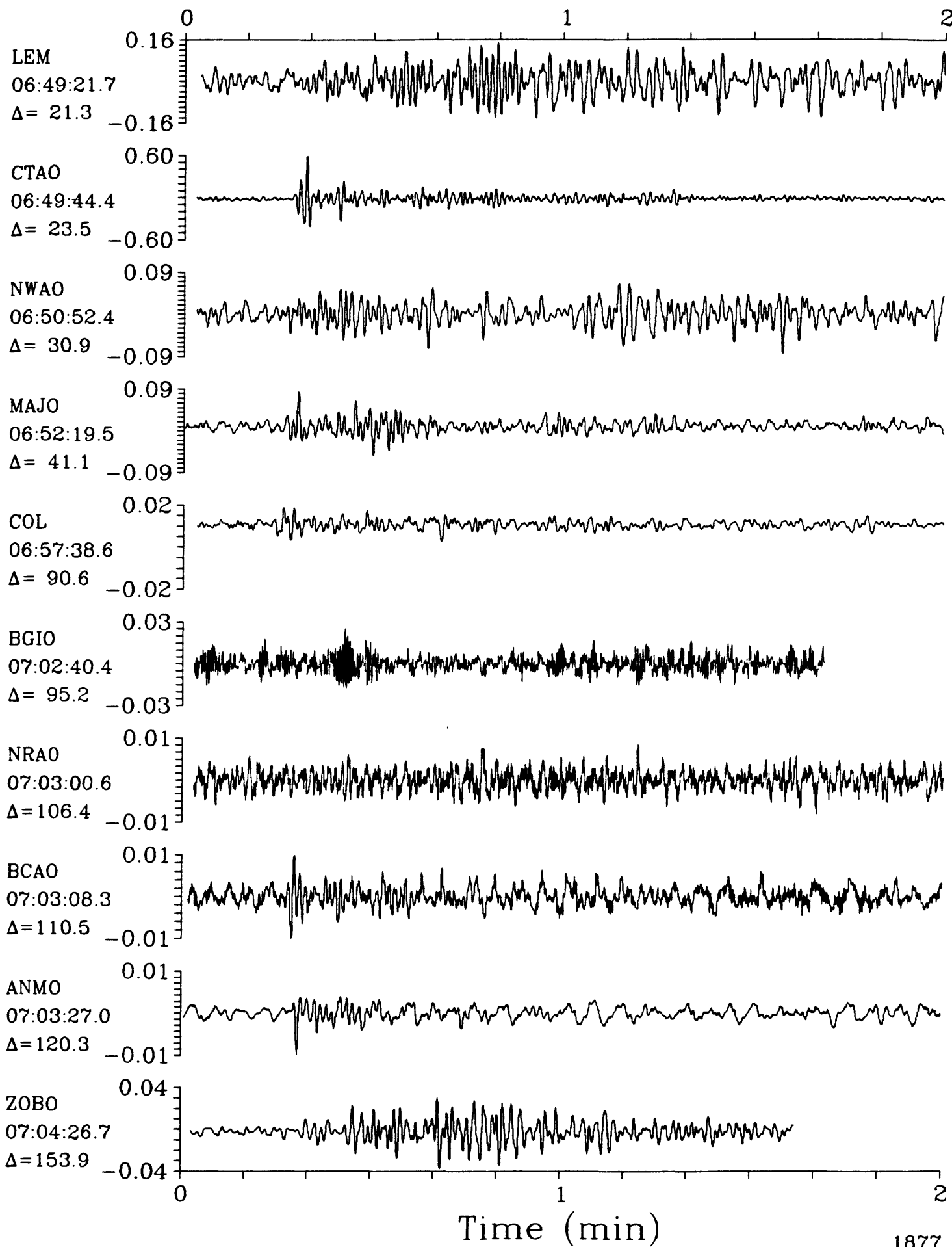
Ceram



SPZ

17 September 1986 06:44:53.51

SPZ

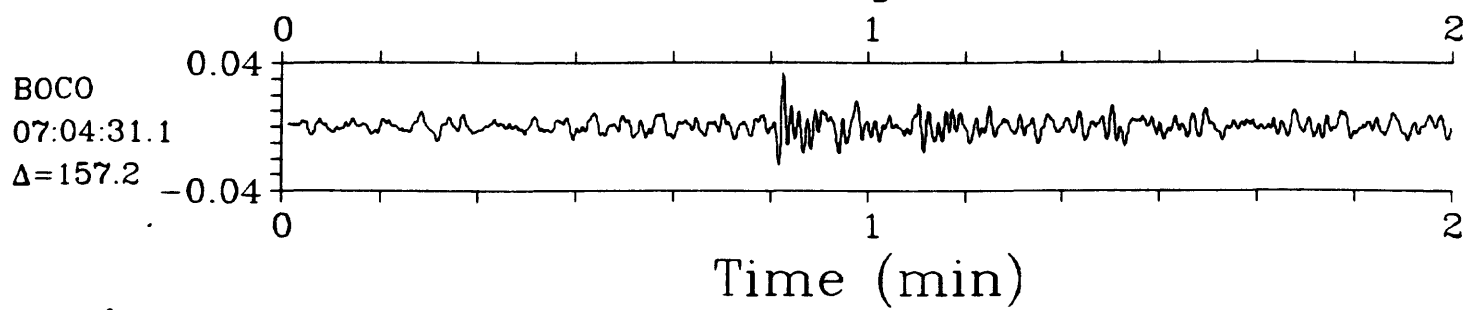
Ceram $h=33.0$ $m_b=5.5$ 

SPZ

17 September 1986 06:44:53.51

SPZ

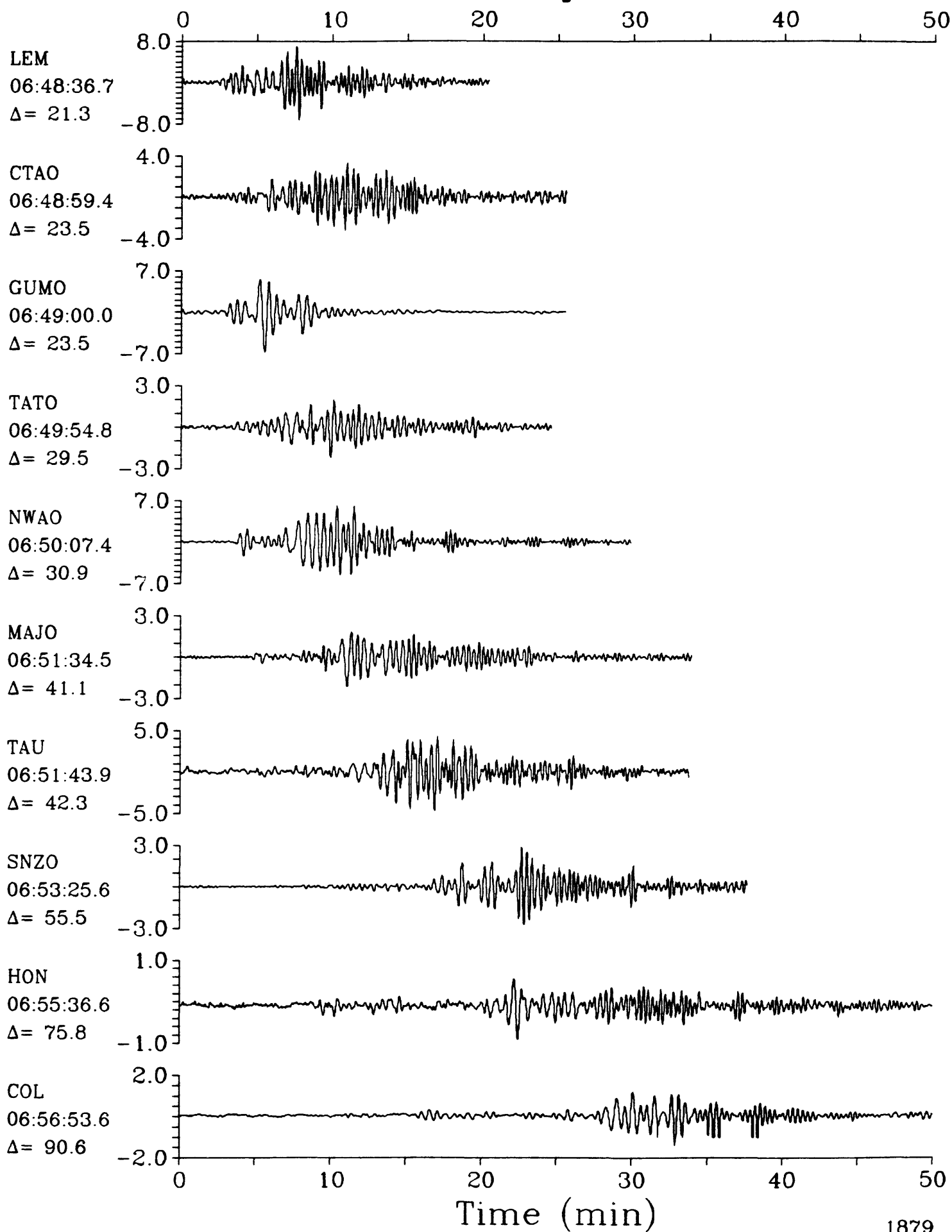
Ceram $h=33.0$ $m_b=5.5$



LPZ

17 September 1986 06:44:53.51

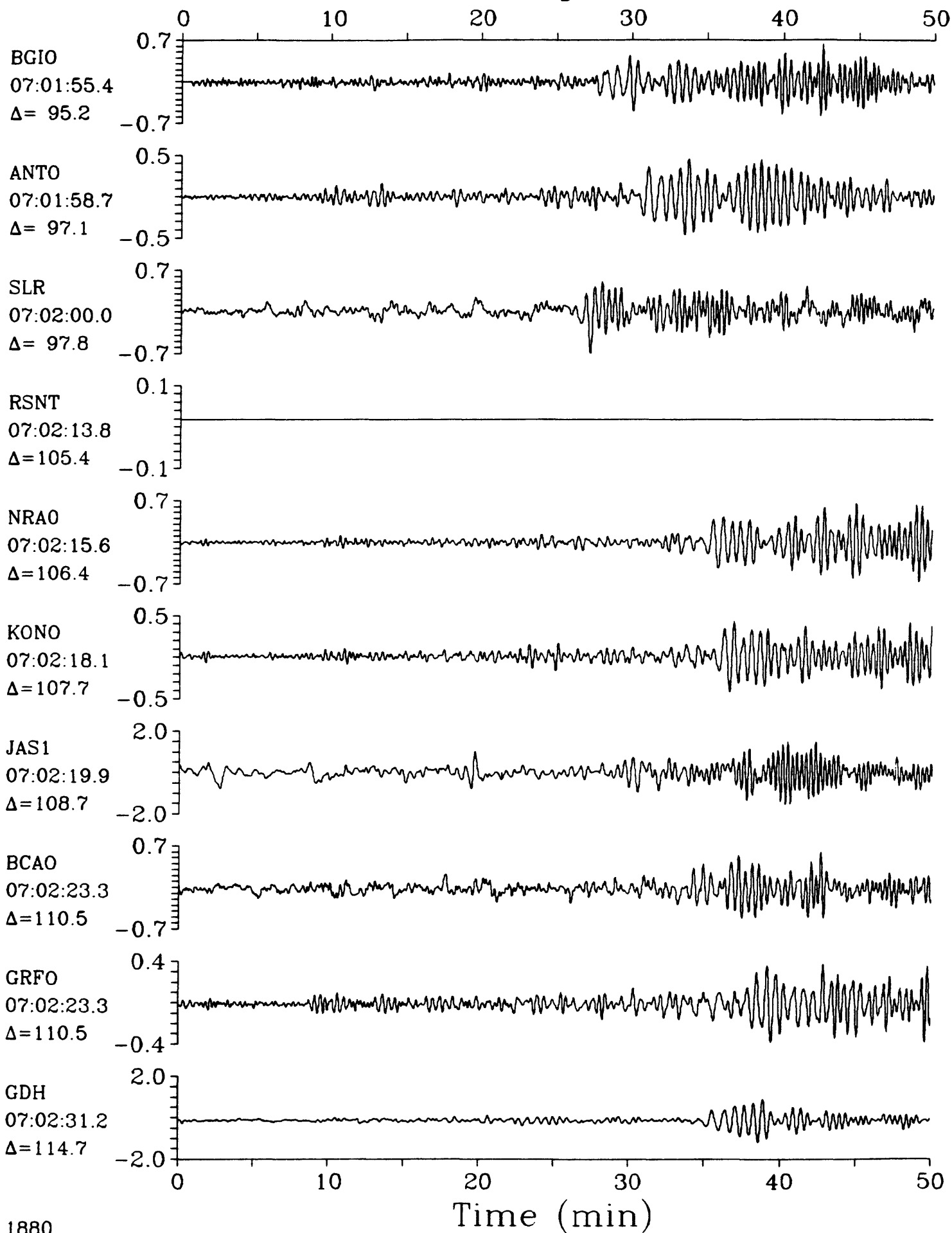
LPZ

Ceram $h=33.0$ $m_b=5.5$ 

LPZ

17 September 1986 06:44:53.51

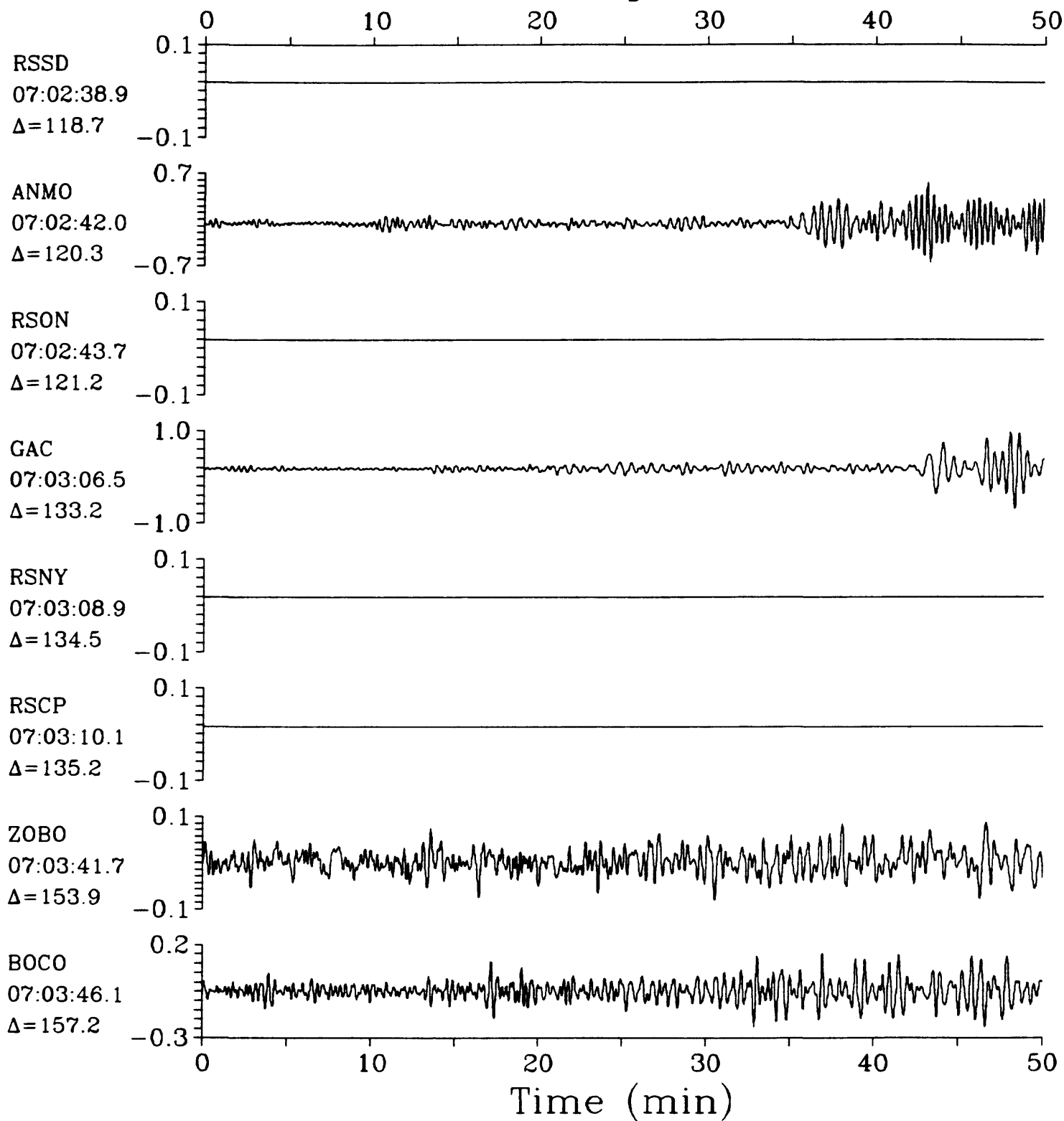
LPZ

Ceram $h=33.0$ $m_b=5.5$ 

LPZ

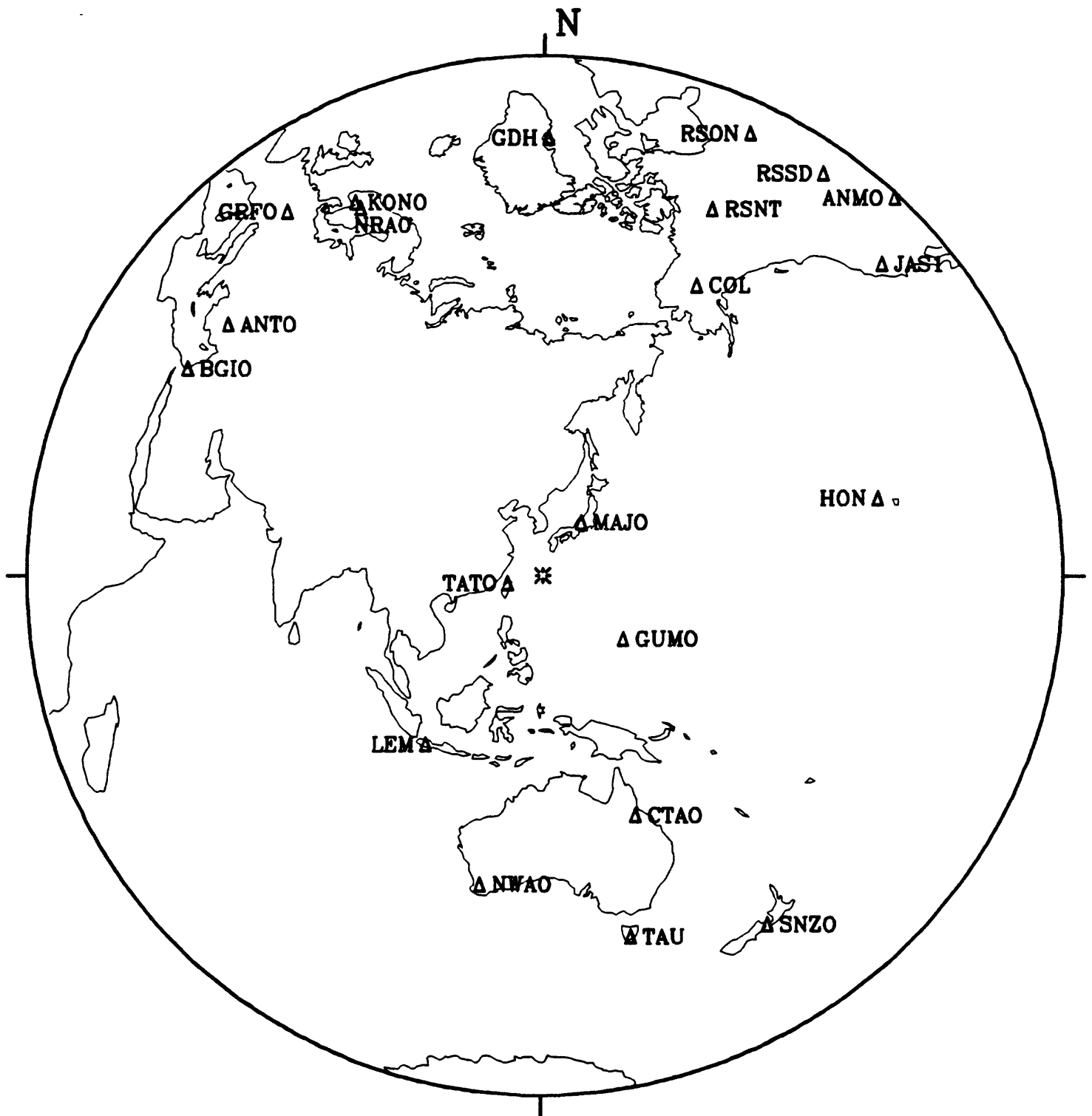
17 September 1986 06:44:53.51

LPZ

Ceram $h=33.0$ $m_b=5.5$ 

17 September 1986 11:01:18.59

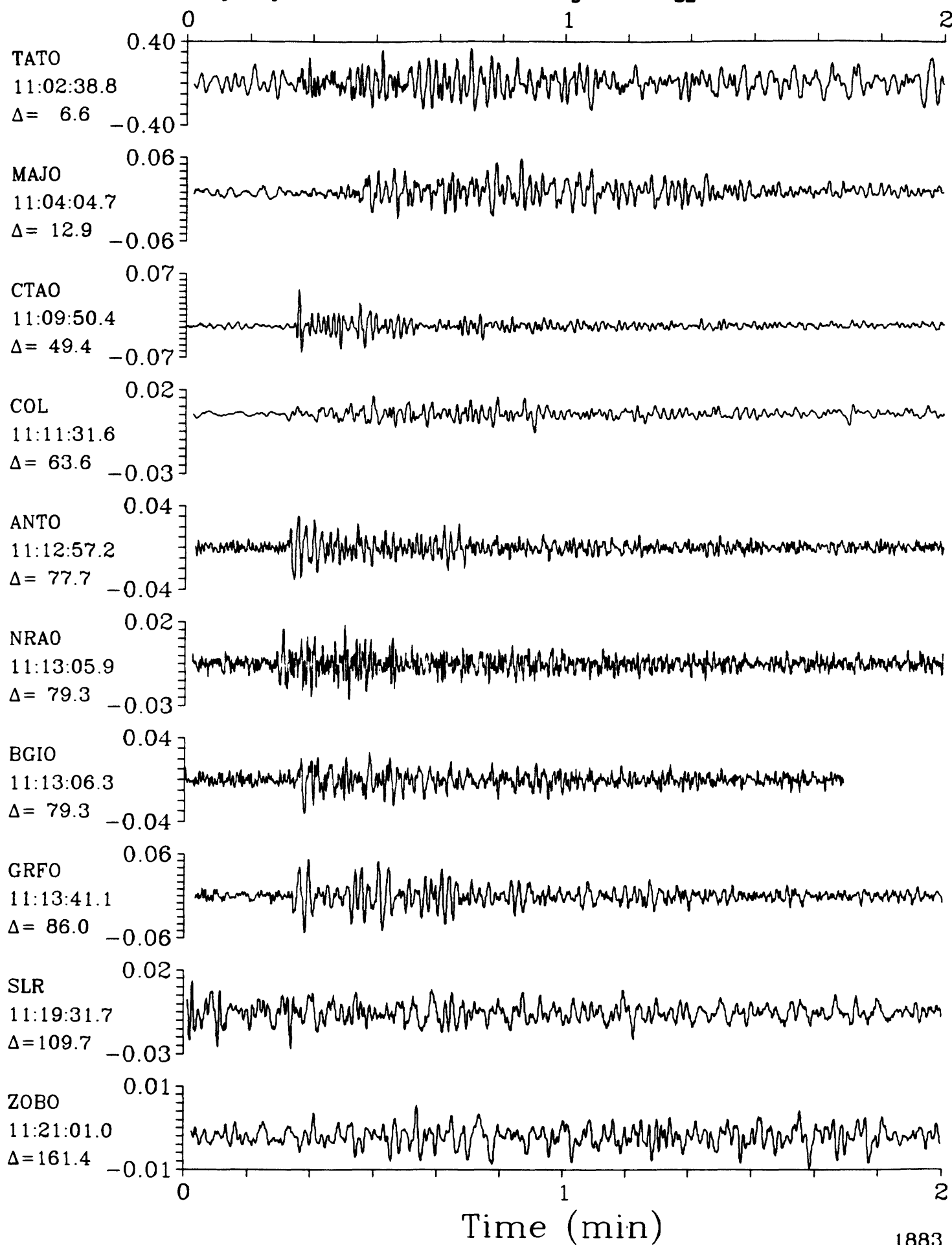
Ryukyu Islands



SPZ

17 September 1986 11:01:18.59
Ryukyu Islands $h=33.8$ $m_b=5.3$ $M_{sz}=5.5$

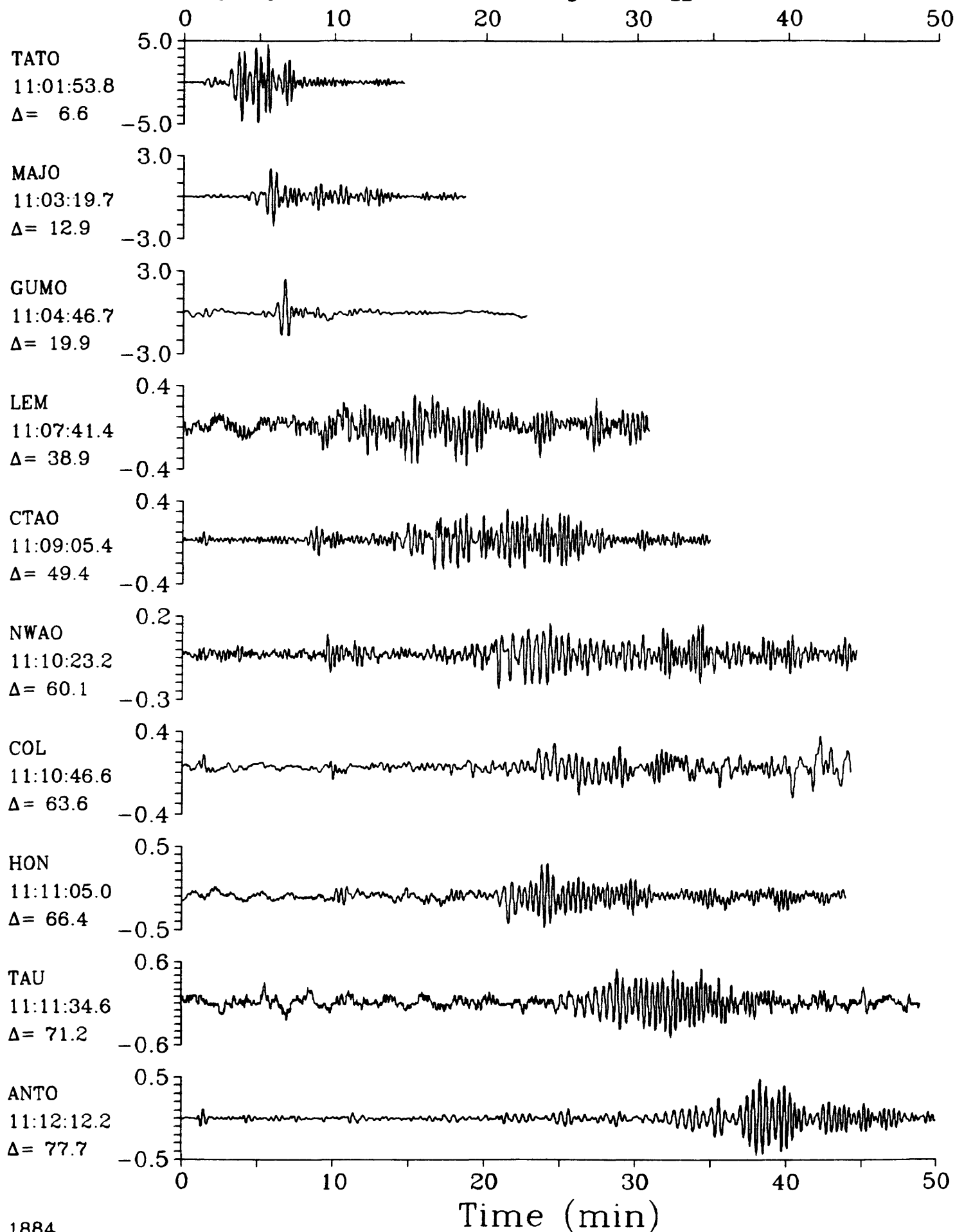
SPZ



LPZ

17 September 1986 11:01:18.59
Ryukyu Islands $h=33.8$ $m_b=5.3$ $M_{sz}=5.5$

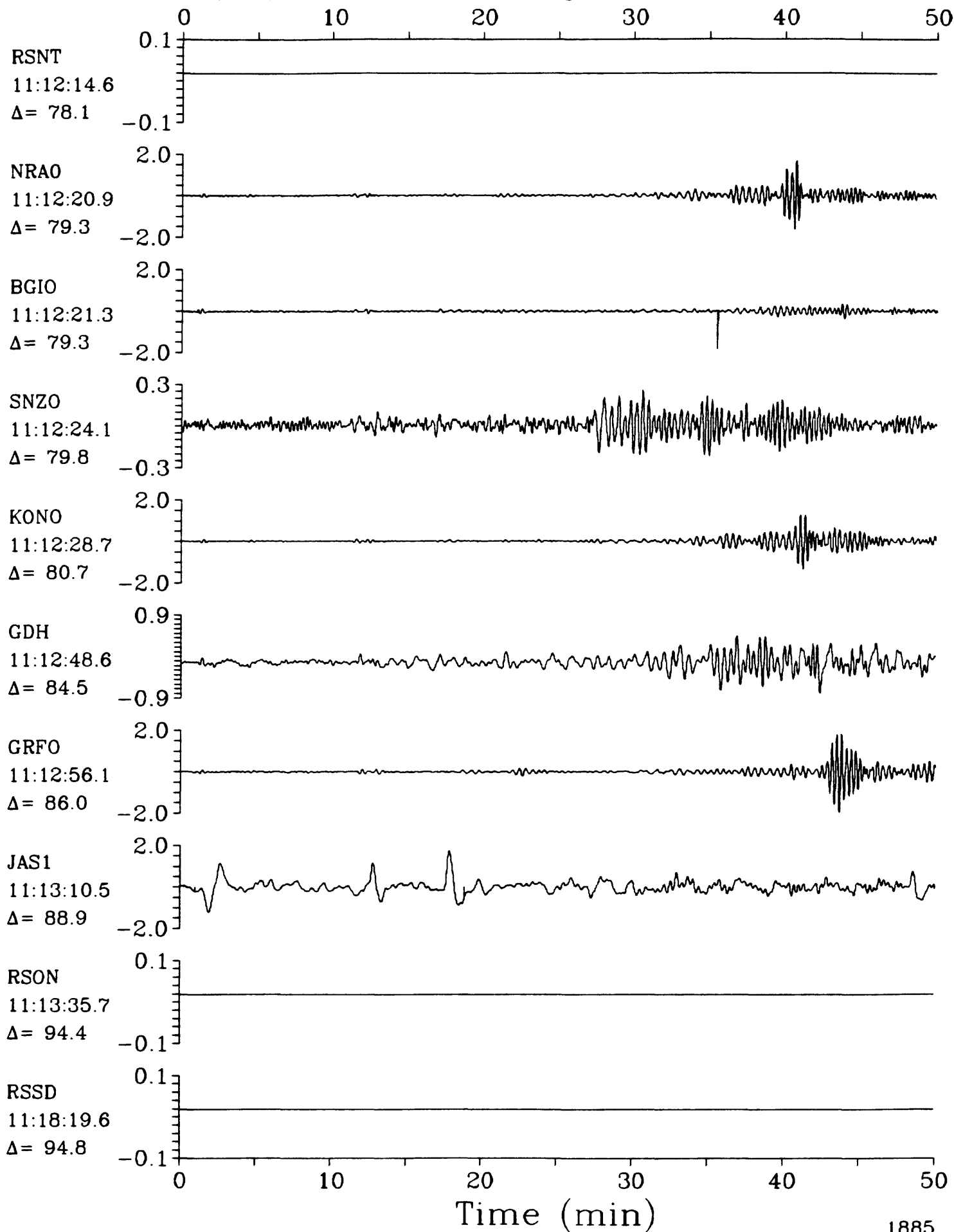
LPZ



LPZ

17 September 1986 11:01:18.59
Ryukyu Islands $h=33.8$ $m_b=5.3$ $M_{sz}=5.5$

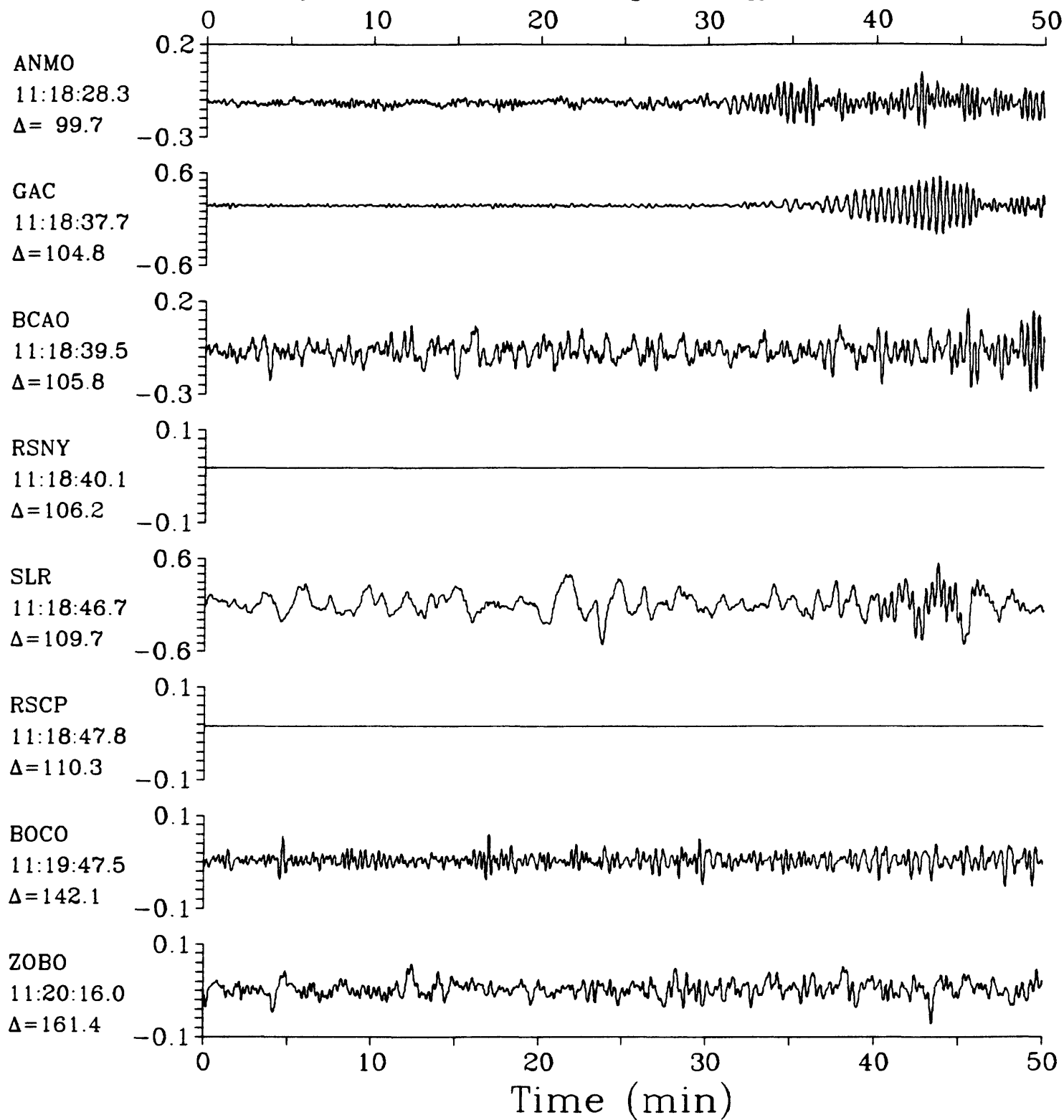
LPZ



LPZ

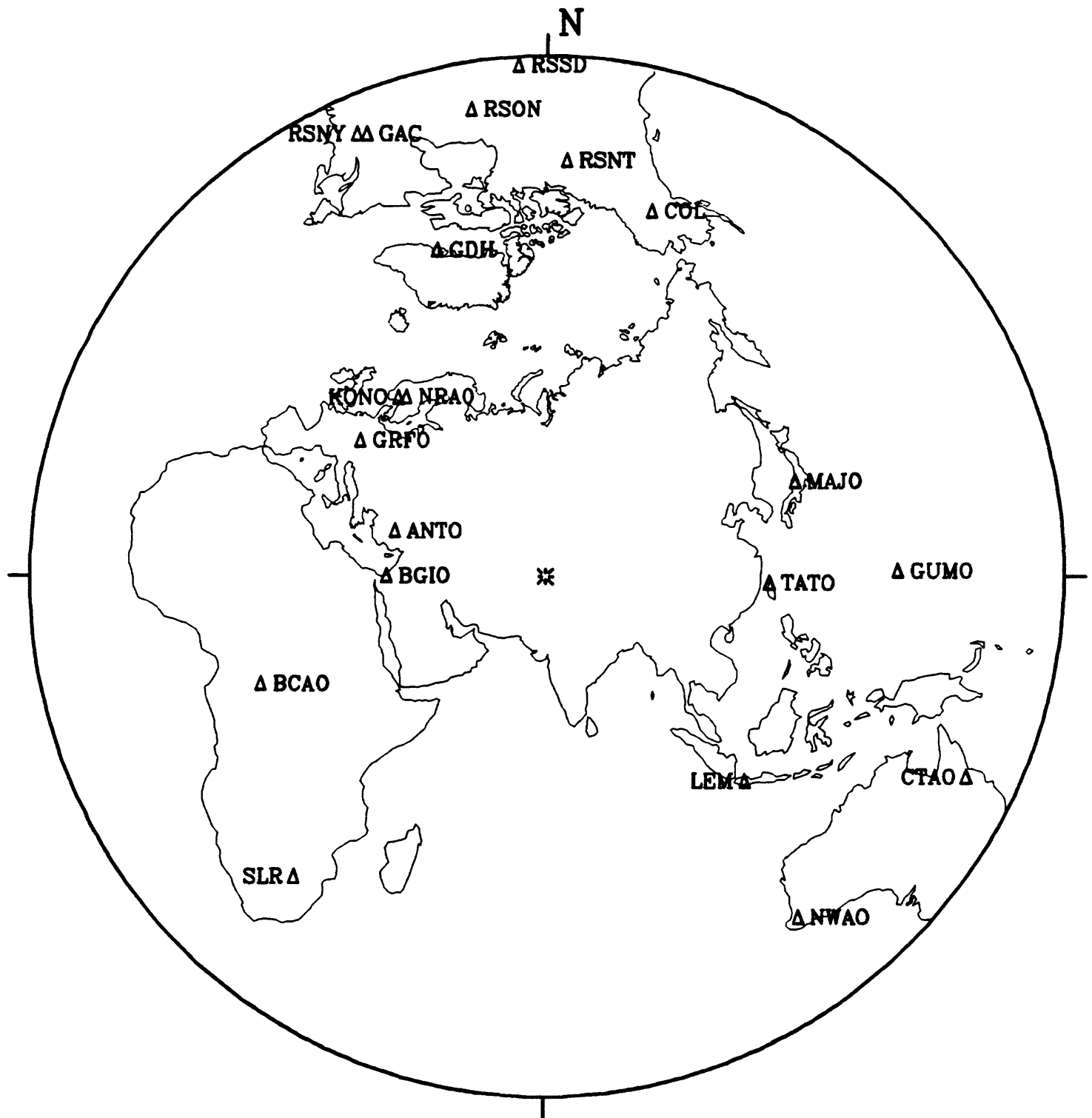
17 September 1986 11:01:18.59
Ryukyu Islands $h=33.8$ $m_b=5.3$ $M_{sz}=5.5$

LPZ



17 September 1986 12:08:09.22

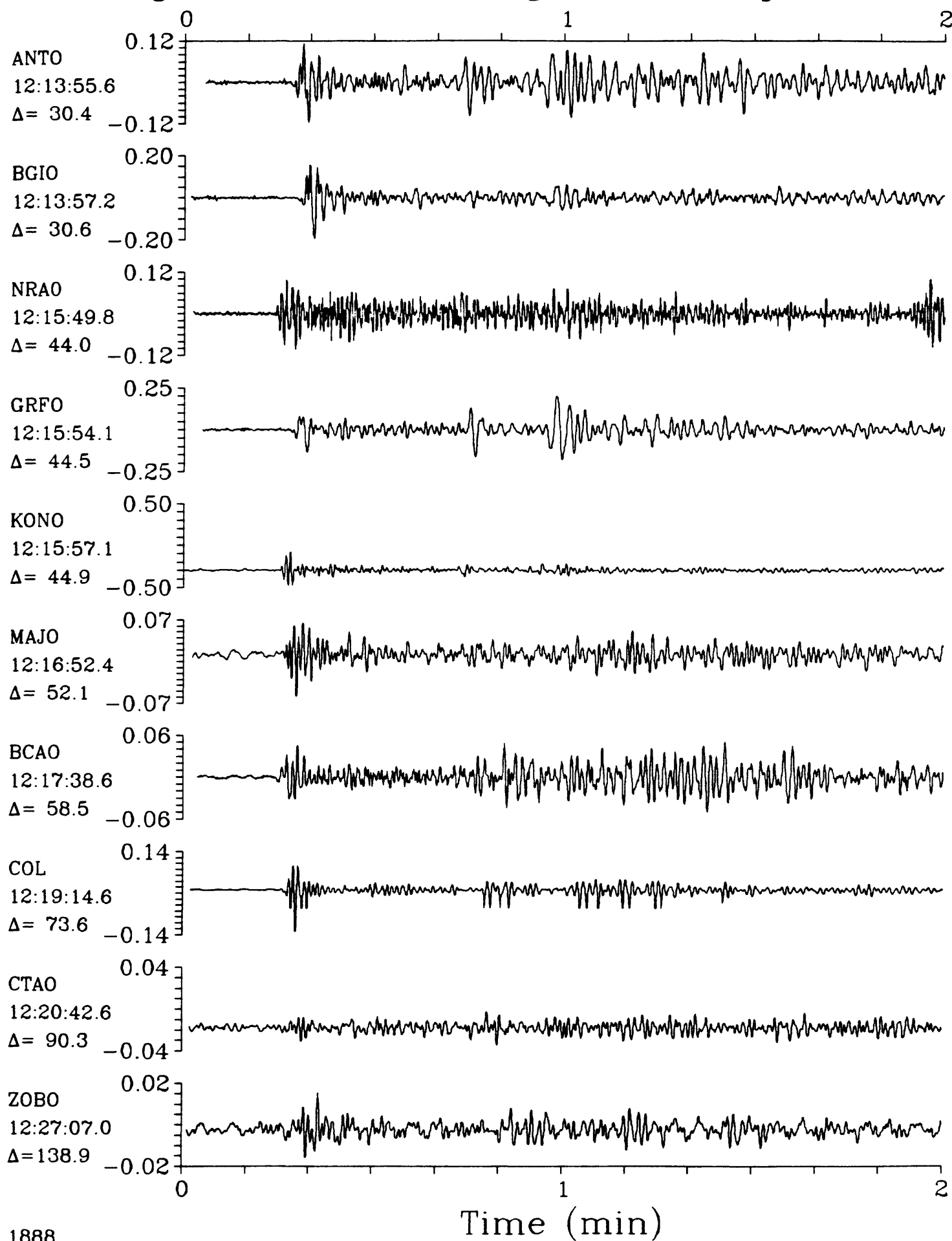
Afghanistan-USSR Border Region



SPZ

17 September 1986 12:08:09.22

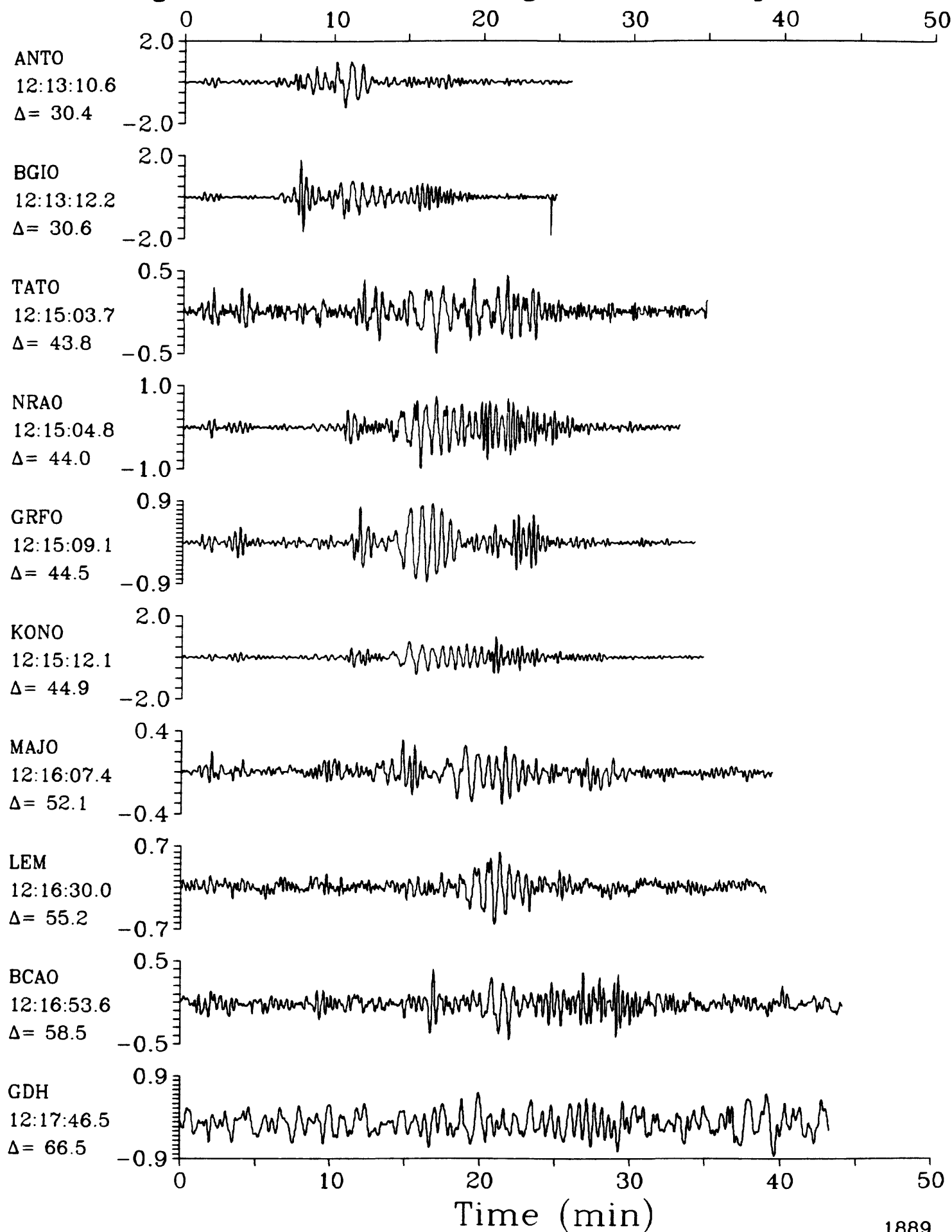
SPZ

Afghanistan-USSR Border Region $h=119.5$ $m_b=5.5$ 

LPZ

17 September 1986 12:08:09.22

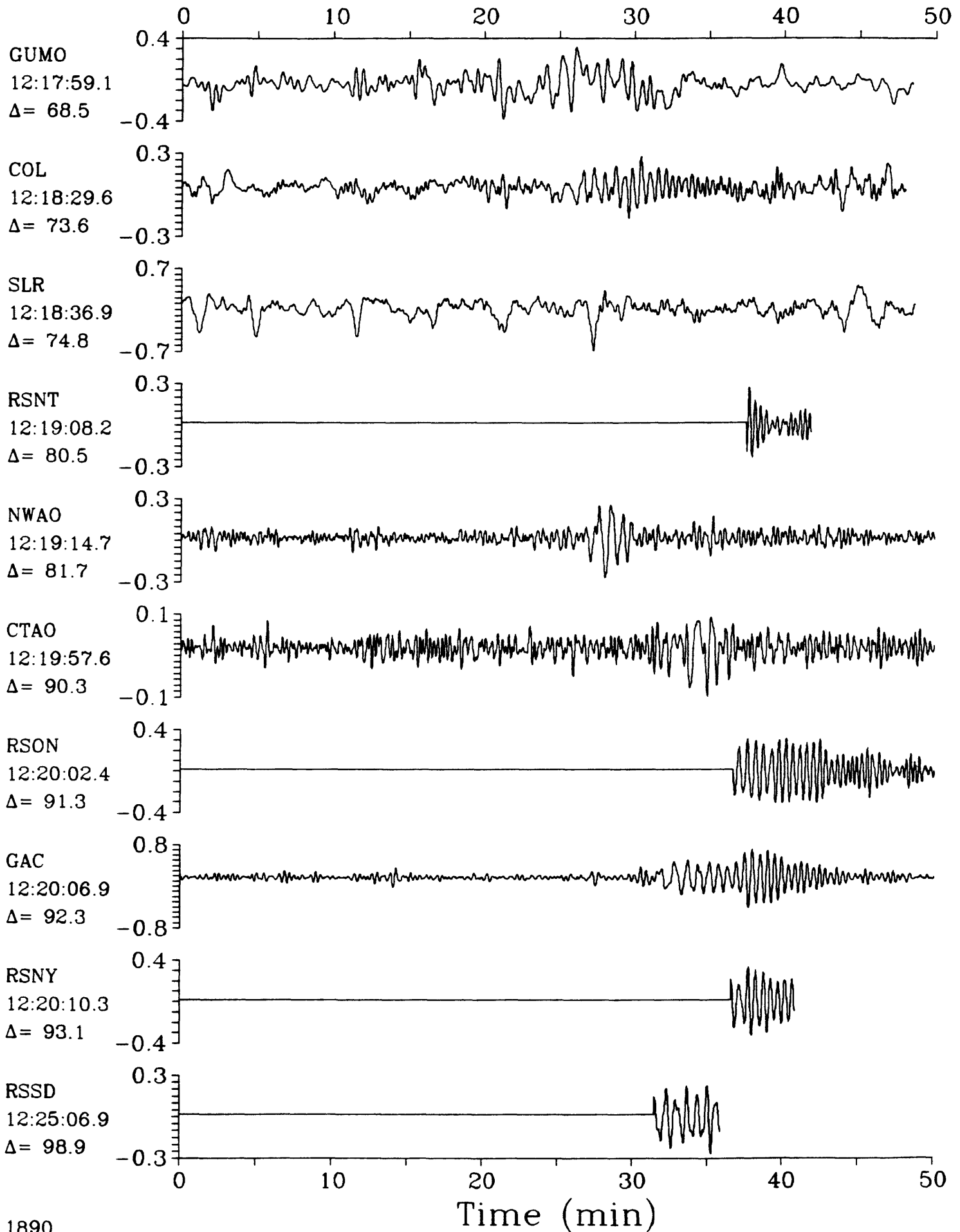
LPZ

Afghanistan-USSR Border Region $h=119.5$ $m_b=5.5$ 

LPZ

17 September 1986 12:08:09.22

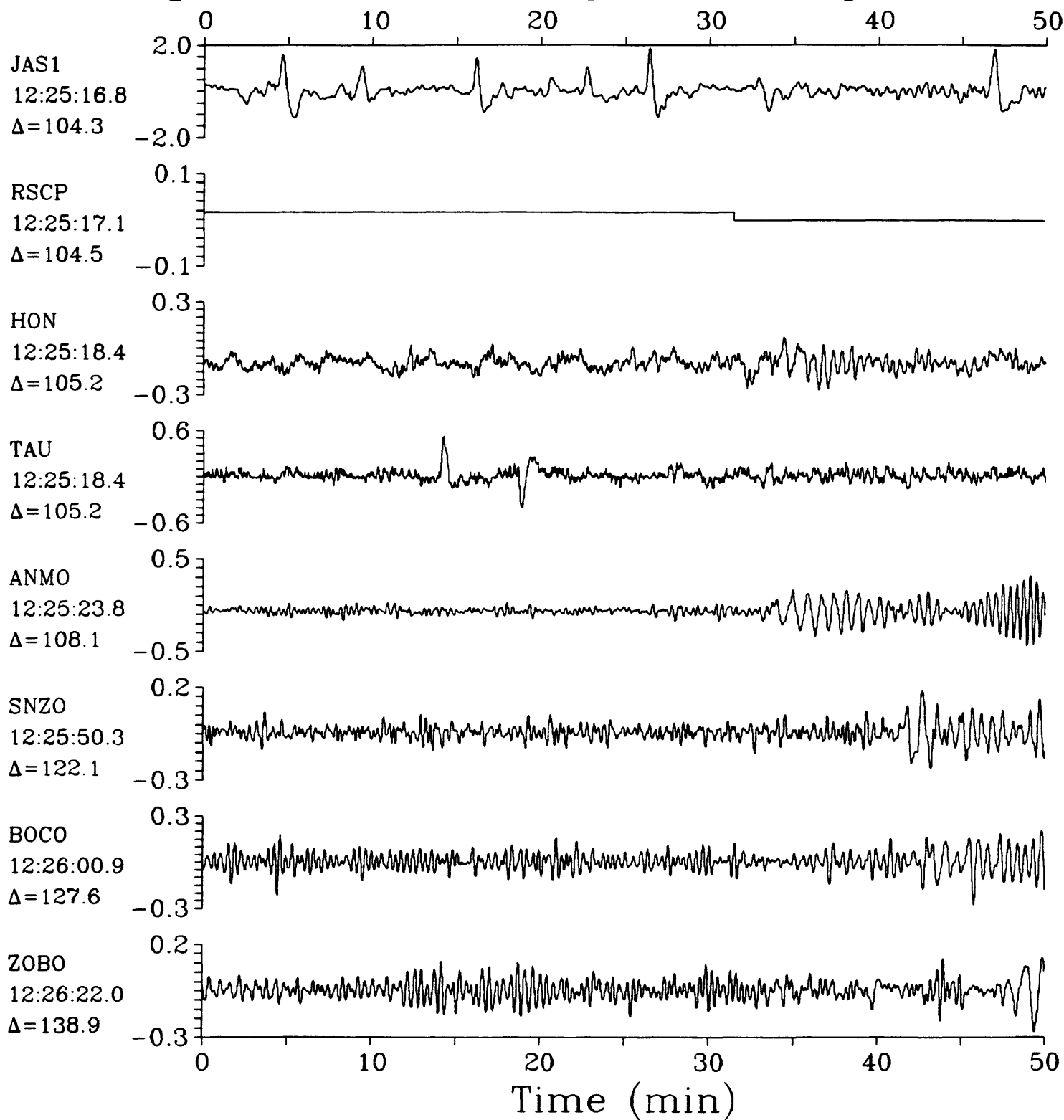
LPZ

Afghanistan-USSR Border Region $h=119.5$ $m_b=5.5$ 

LPZ

17 September 1986 12:08:09.22

LPZ

Afghanistan-USSR Border Region $h=119.5$ $m_b=5.5$ 

17 September 1986 21:25:15.28

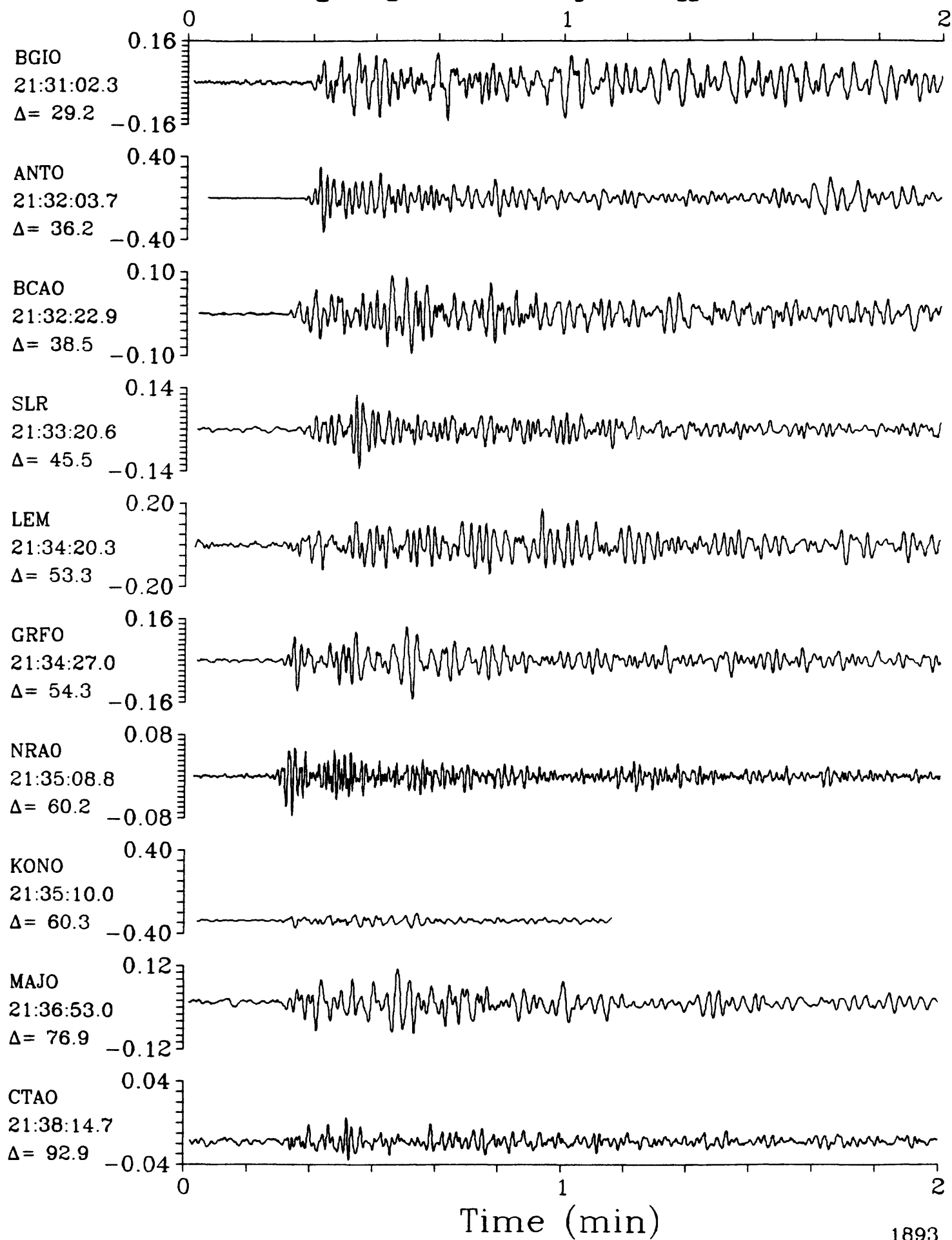
Carlsberg Ridge



SPZ

17 September 1986 21:25:15.28
Carlsberg Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=6.0$

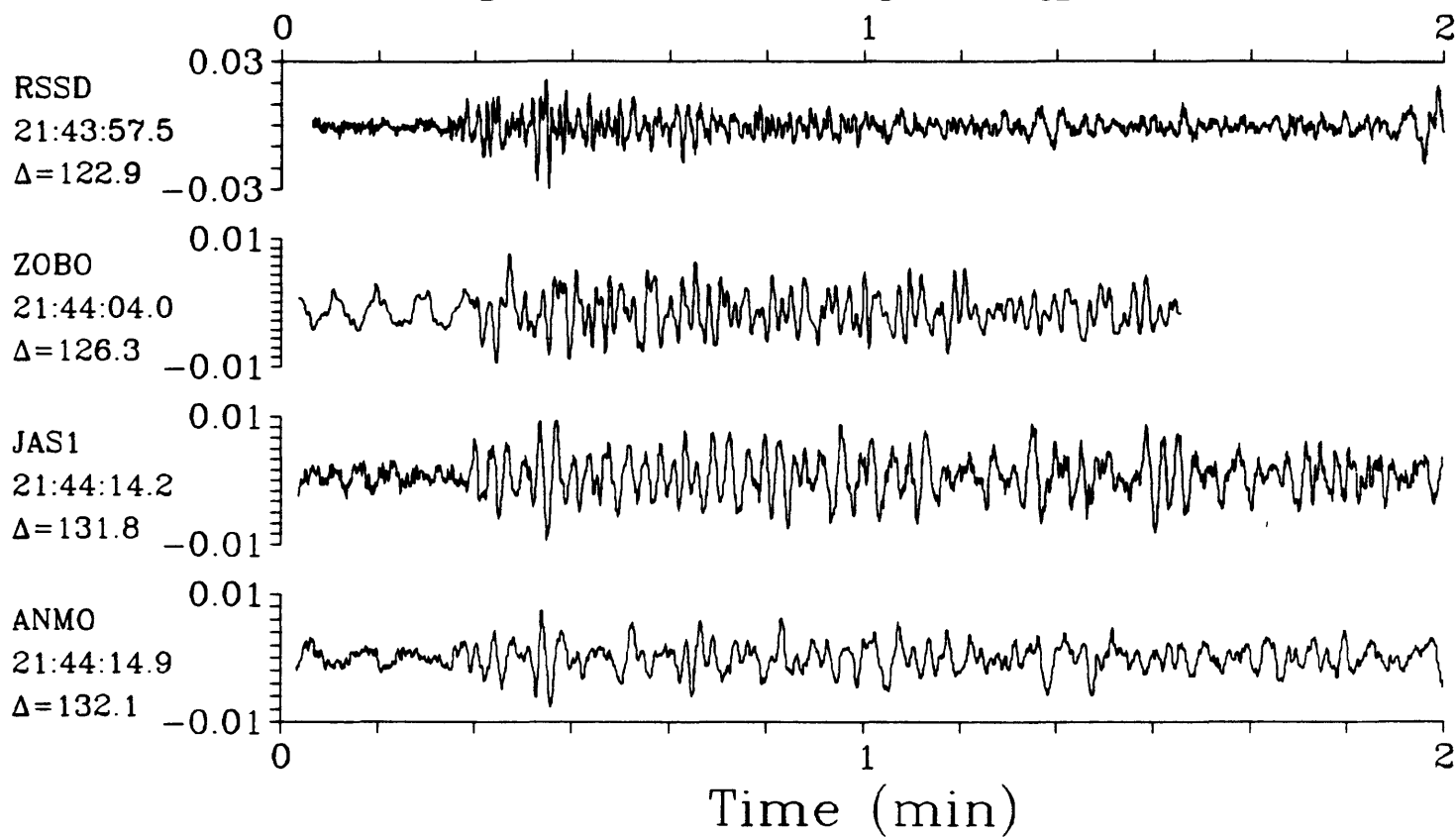
SPZ



SPZ

17 September 1986 21:25:15.28
Carlsberg Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=6.0$

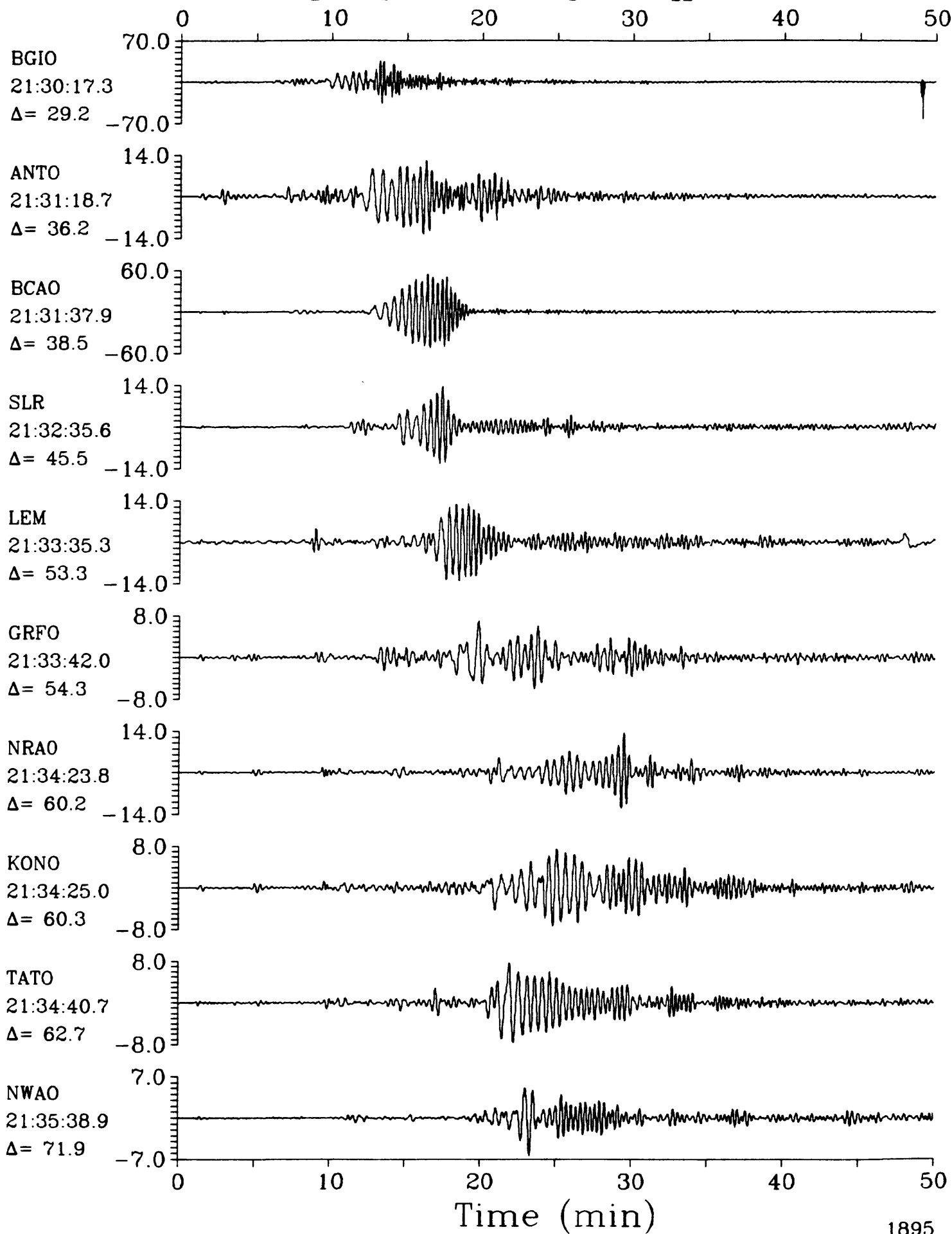
SPZ



LPZ

17 September 1986 21:25:15.28
Carlsberg Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=6.0$

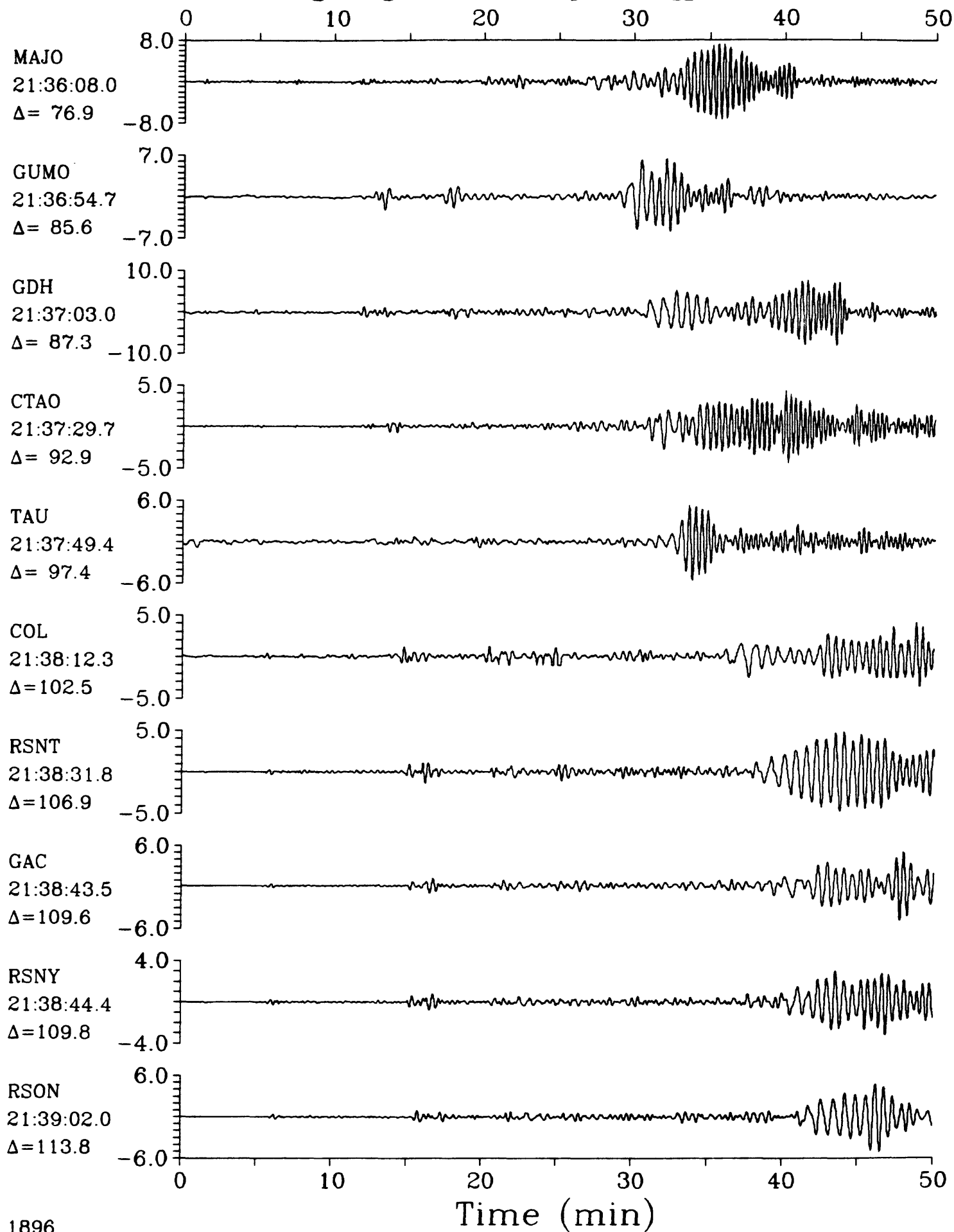
LPZ



LPZ

17 September 1986 21:25:15.28
Carlsberg Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=6.0$

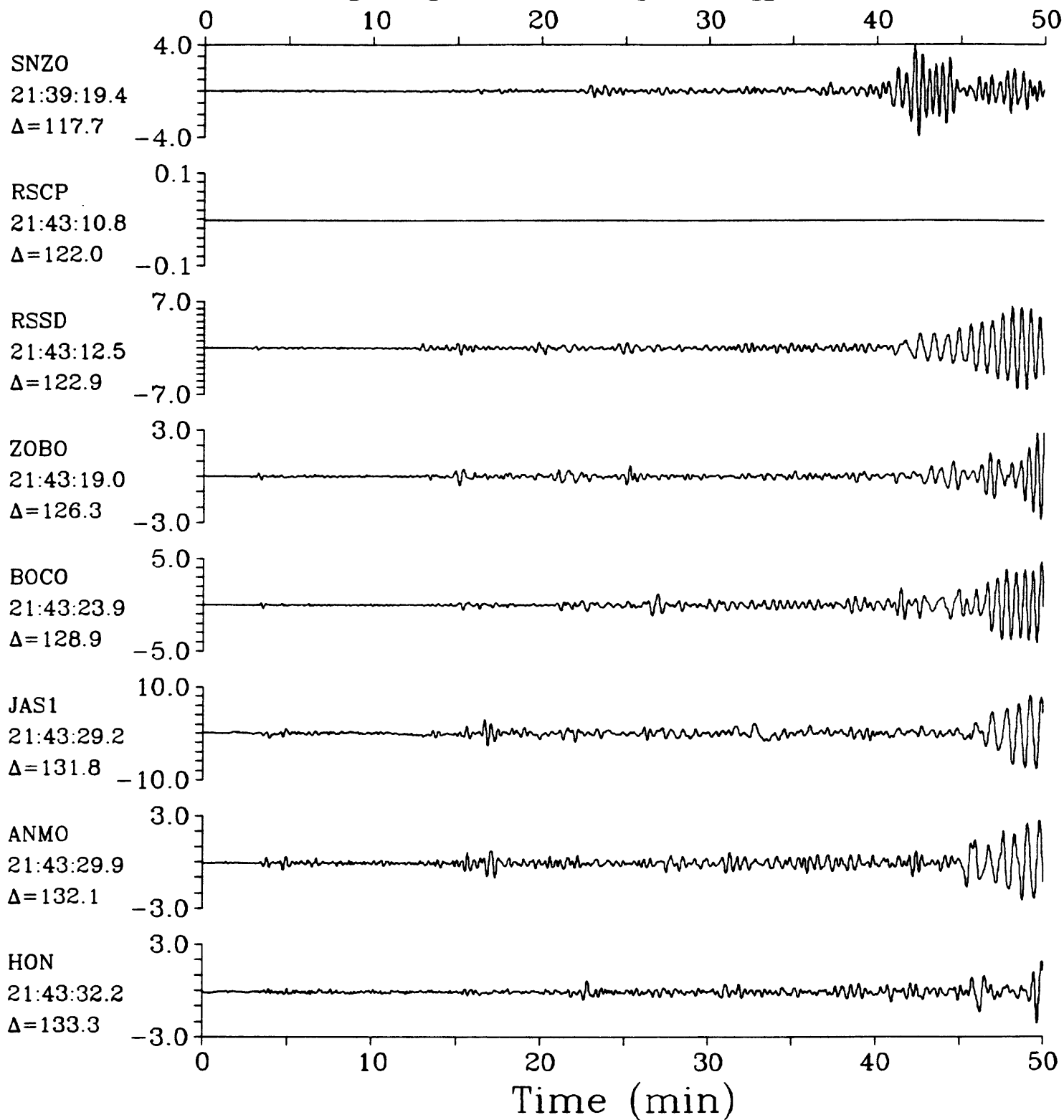
LPZ



LPZ

17 September 1986 21:25:15.28
Carlsberg Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=6.0$

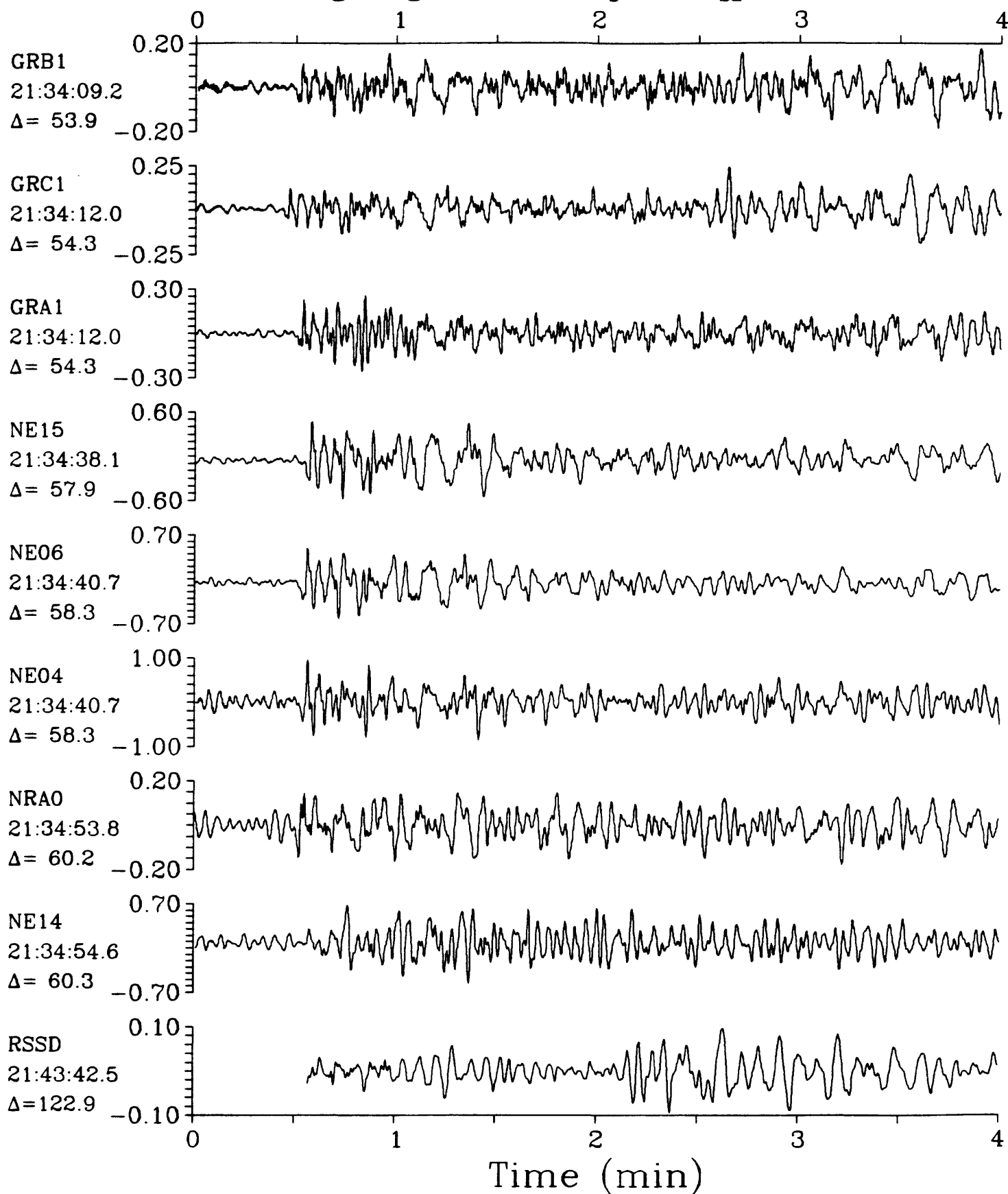
LPZ



IPZ

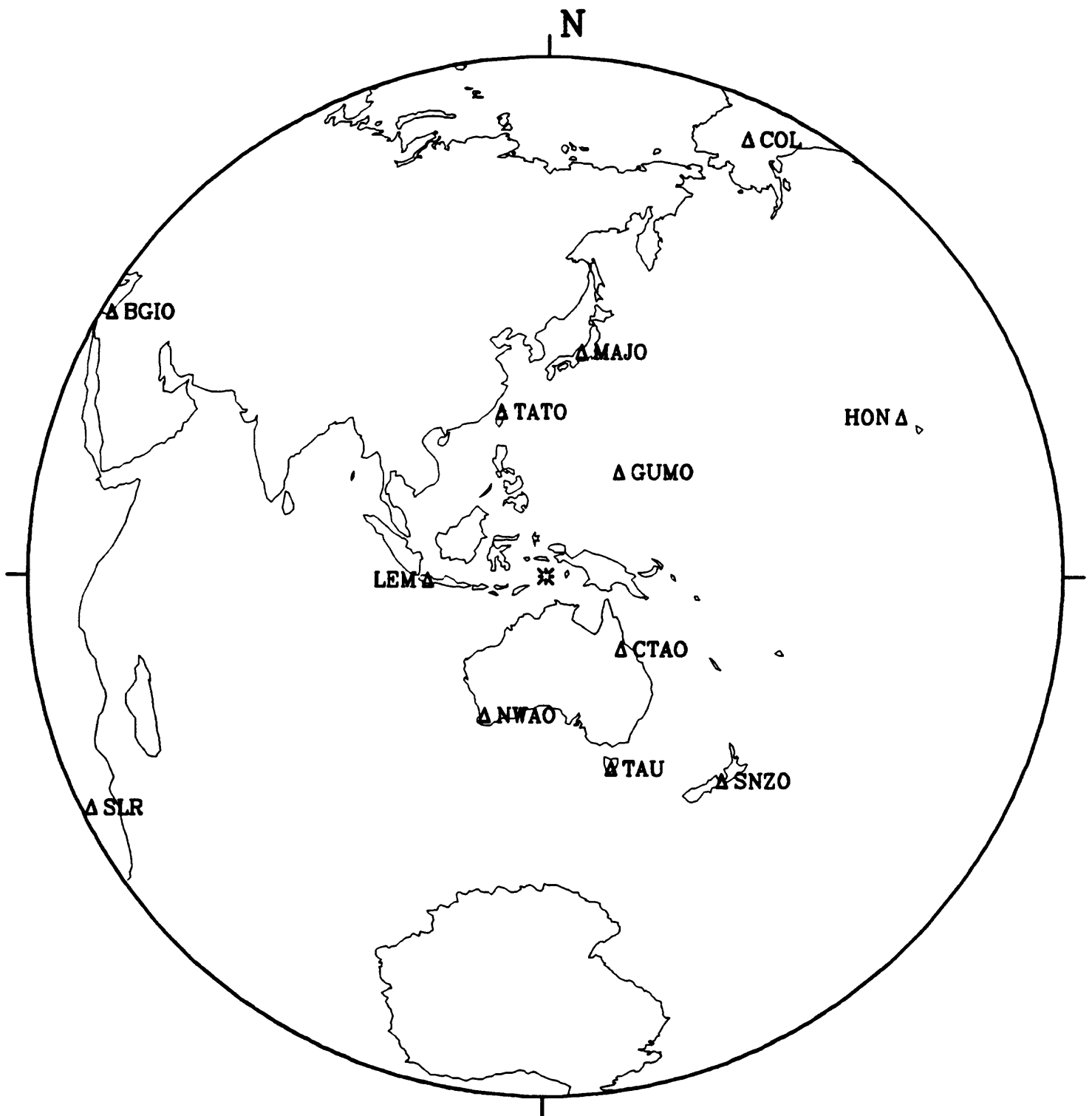
17 September 1986 21:25:15.28
Carlsberg Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=6.0$

IPZ



22 September 1986 16:14:56.35

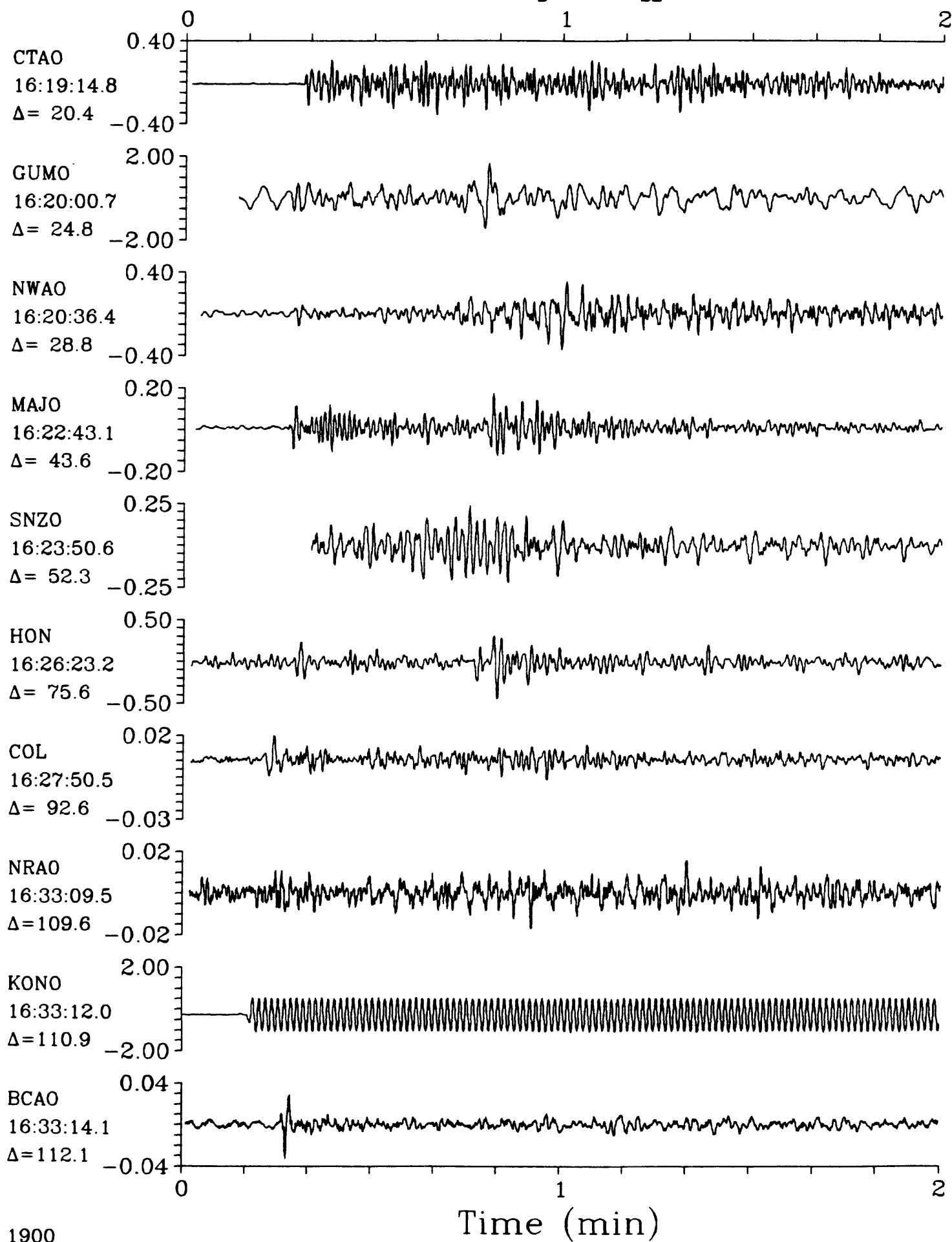
Banda Sea



SPZ

22 September 1986 16:14:56.35
Banda Sea $h=33.0$ $m_b=5.7$ $M_{sz}=4.7$

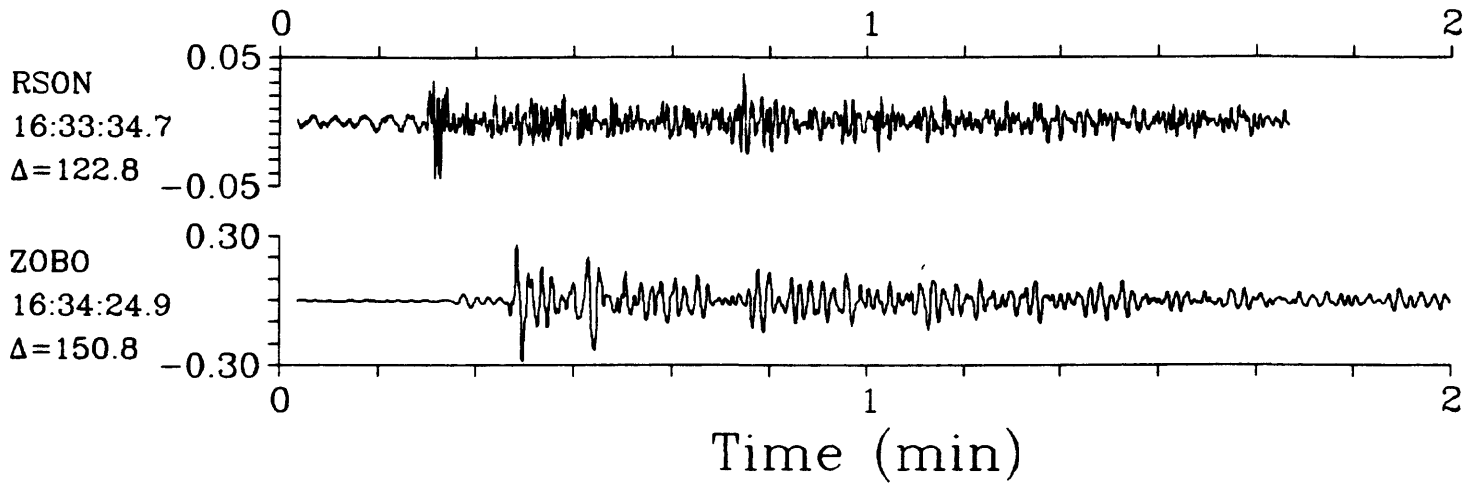
SPZ



SPZ

22 September 1986 16:14:56.35
Banda Sea $h=33.0$ $m_b=5.7$ $M_{sz}=4.7$

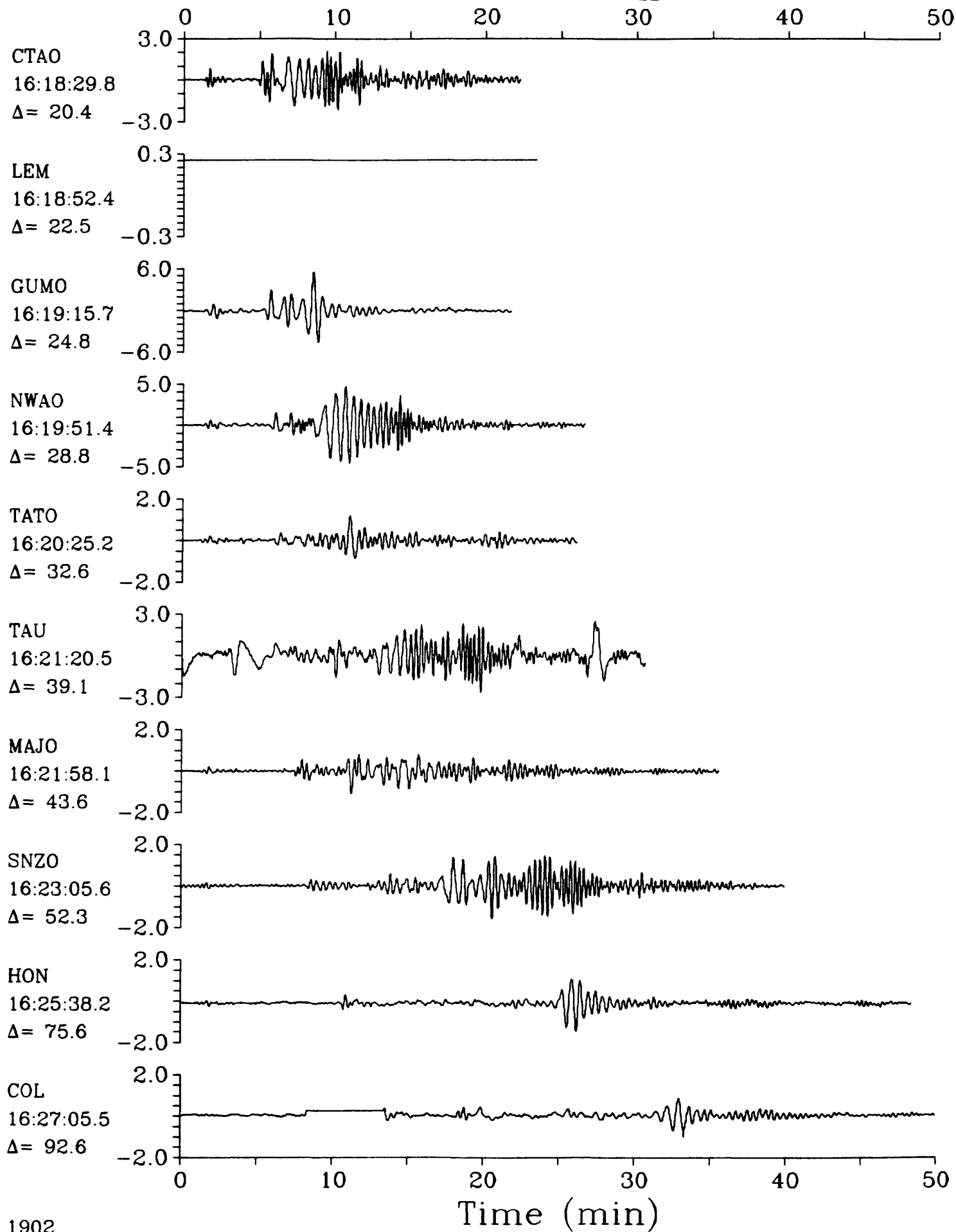
SPZ



LPZ

22 September 1986 16:14:56.35
Banda Sea $h=33.0$ $m_b=5.7$ $M_{sz}=4.7$

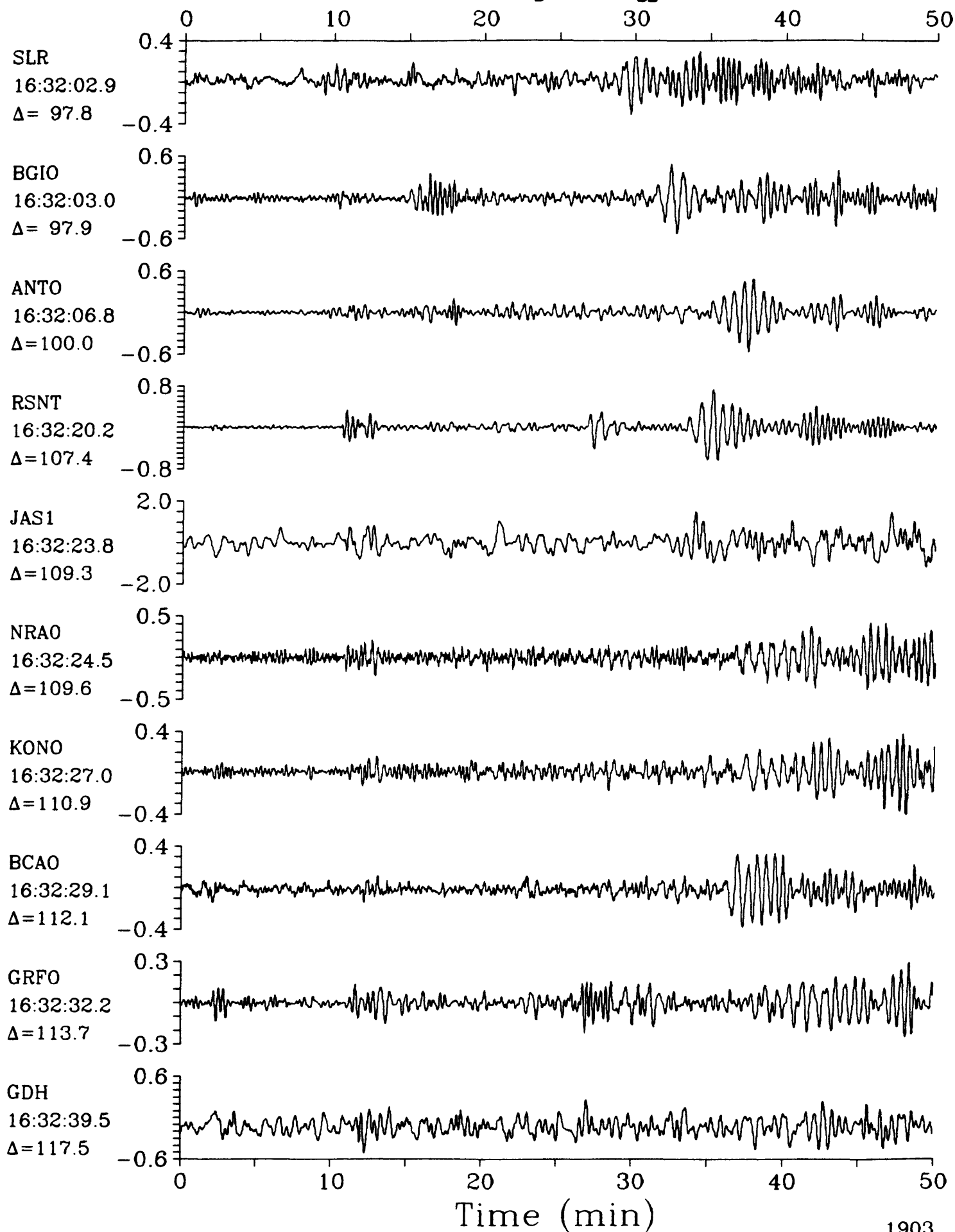
LPZ



LPZ

22 September 1986 16:14:56.35
Banda Sea $h=33.0$ $m_b=5.7$ $M_{sz}=4.7$

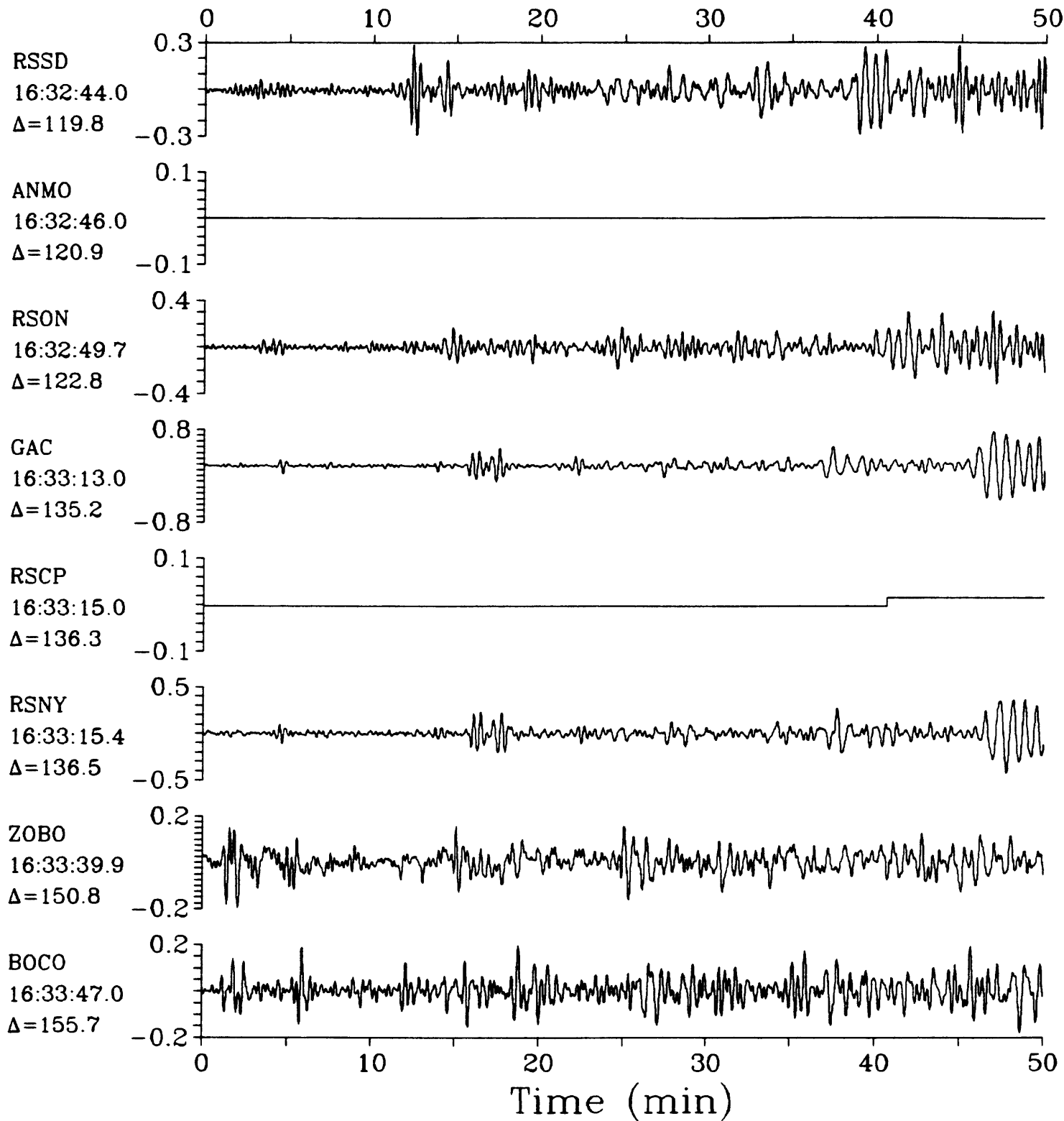
LPZ



LPZ

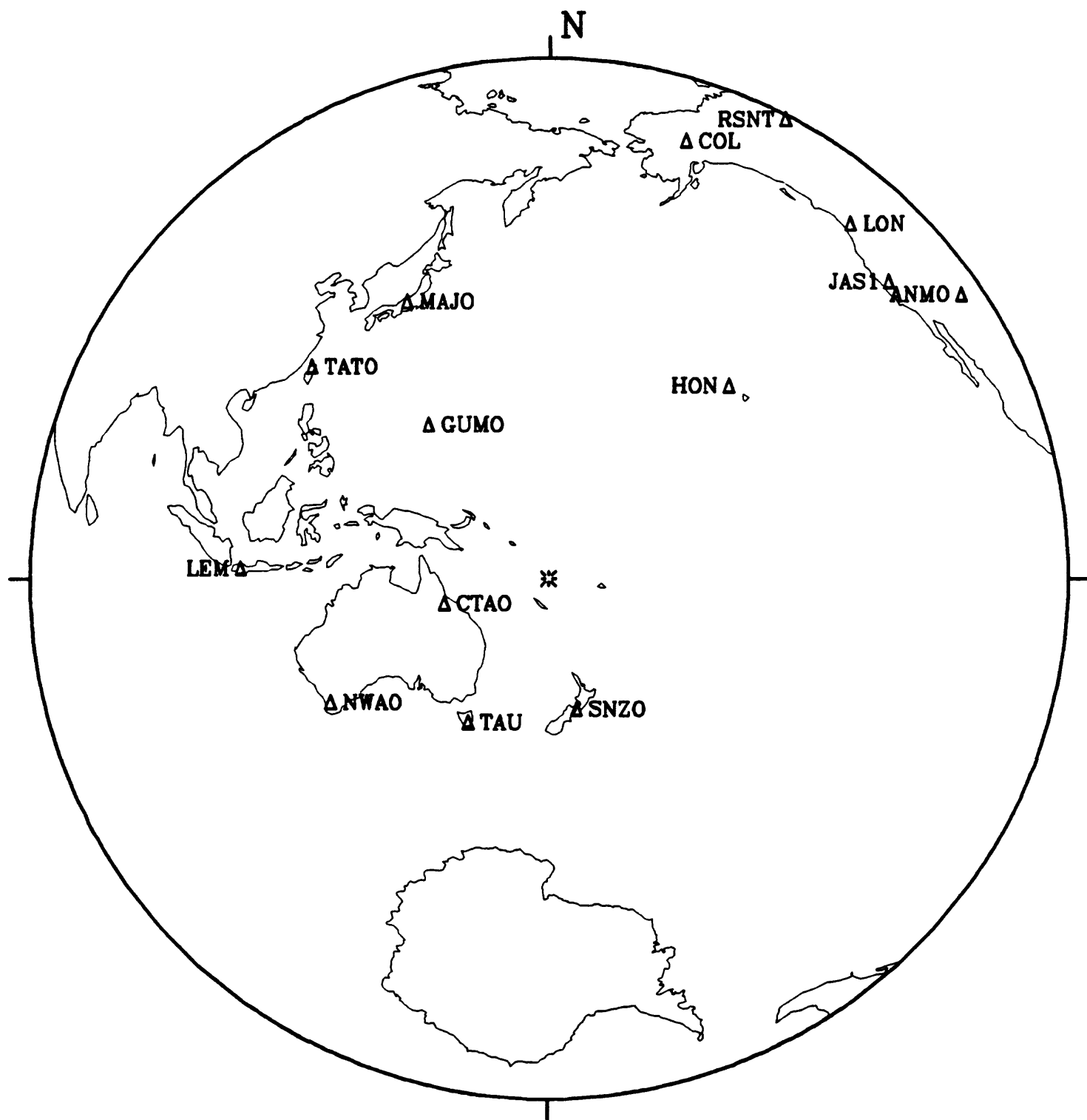
22 September 1986 16:14:56.35
Banda Sea $h=33.0$ $m_b=5.7$ $M_{sz}=4.7$

LPZ



23 September 1986 13:30:17.34

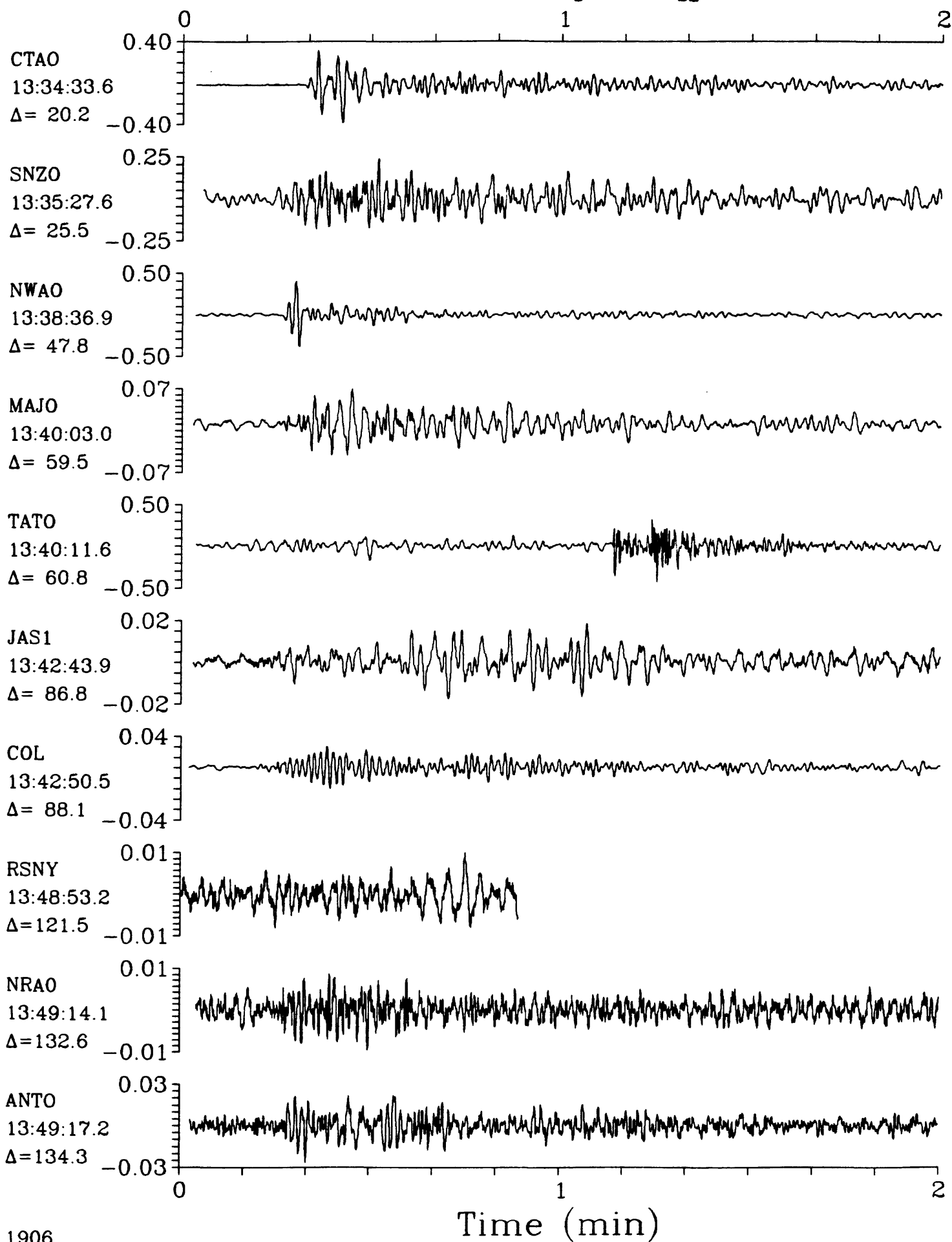
Vanuatu Islands



SPZ

23 September 1986 13:30:17.34
Vanuatu Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.6$

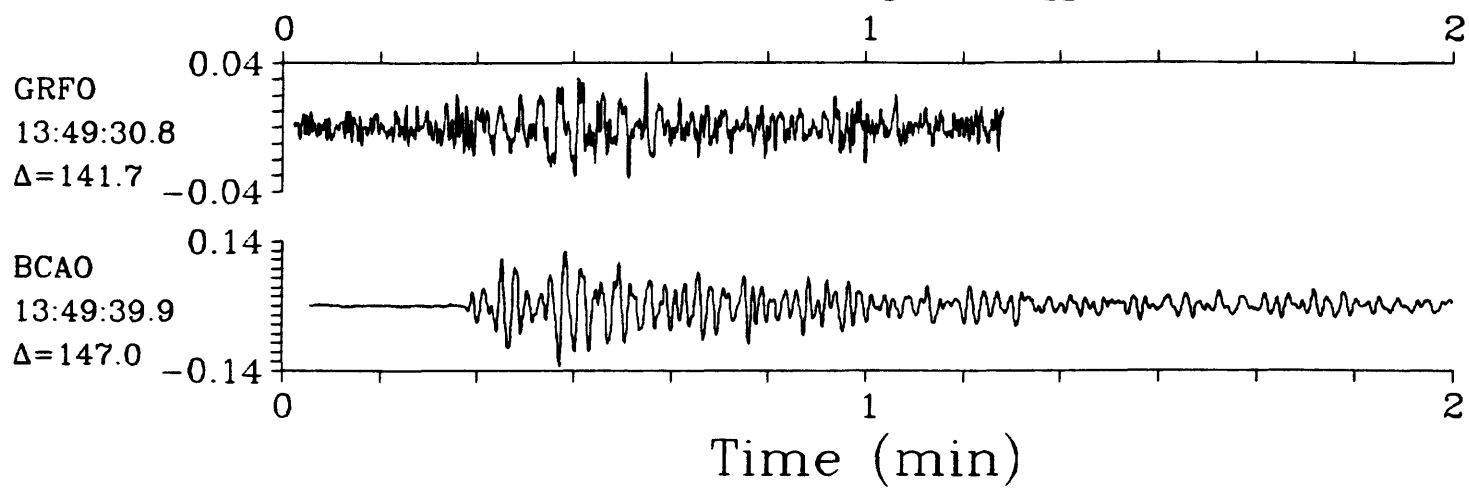
SPZ



SPZ

23 September 1986 13:30:17.34
Vanuatu Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.6$

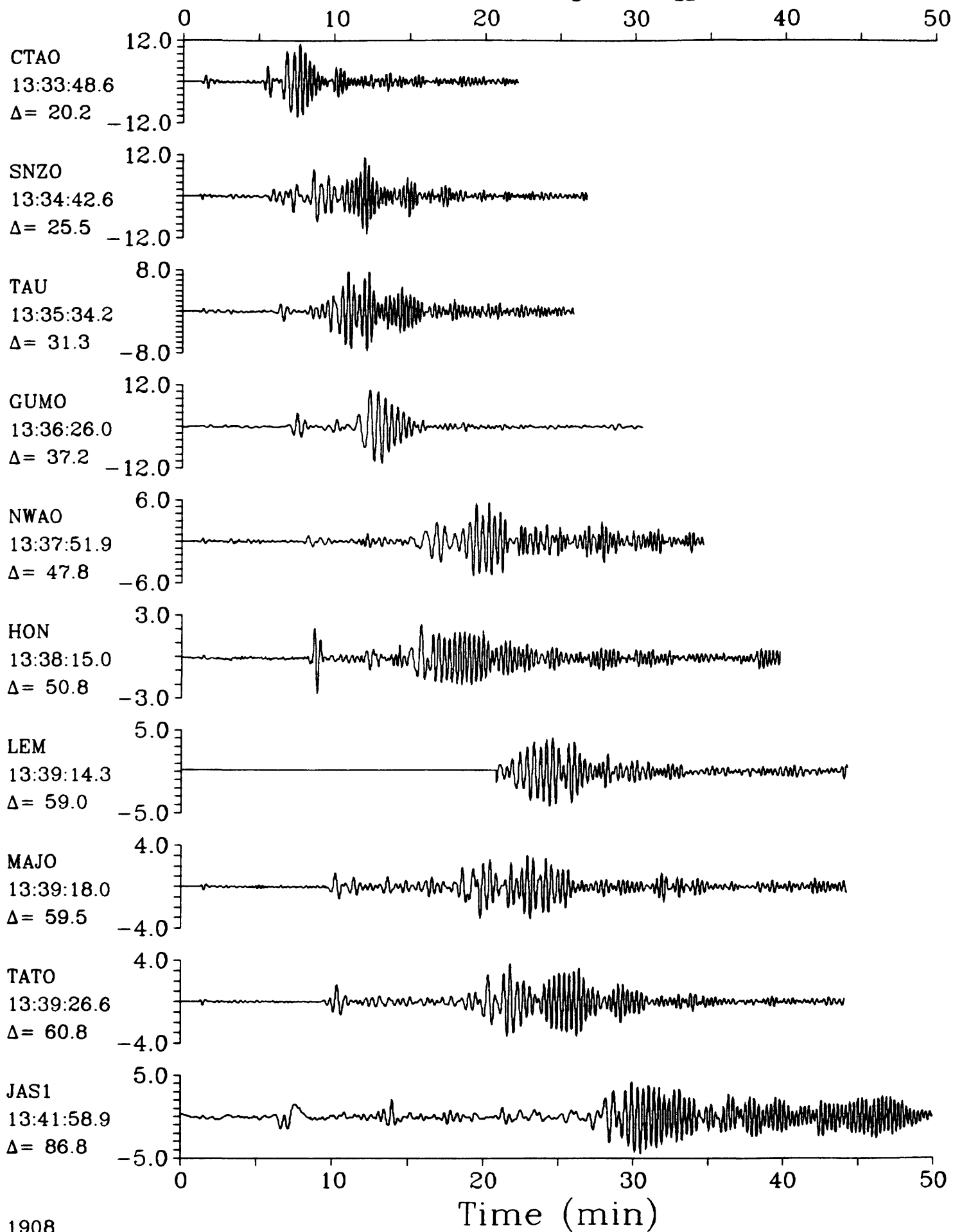
SPZ



LPZ

23 September 1986 13:30:17.34
Vanuatu Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.6$

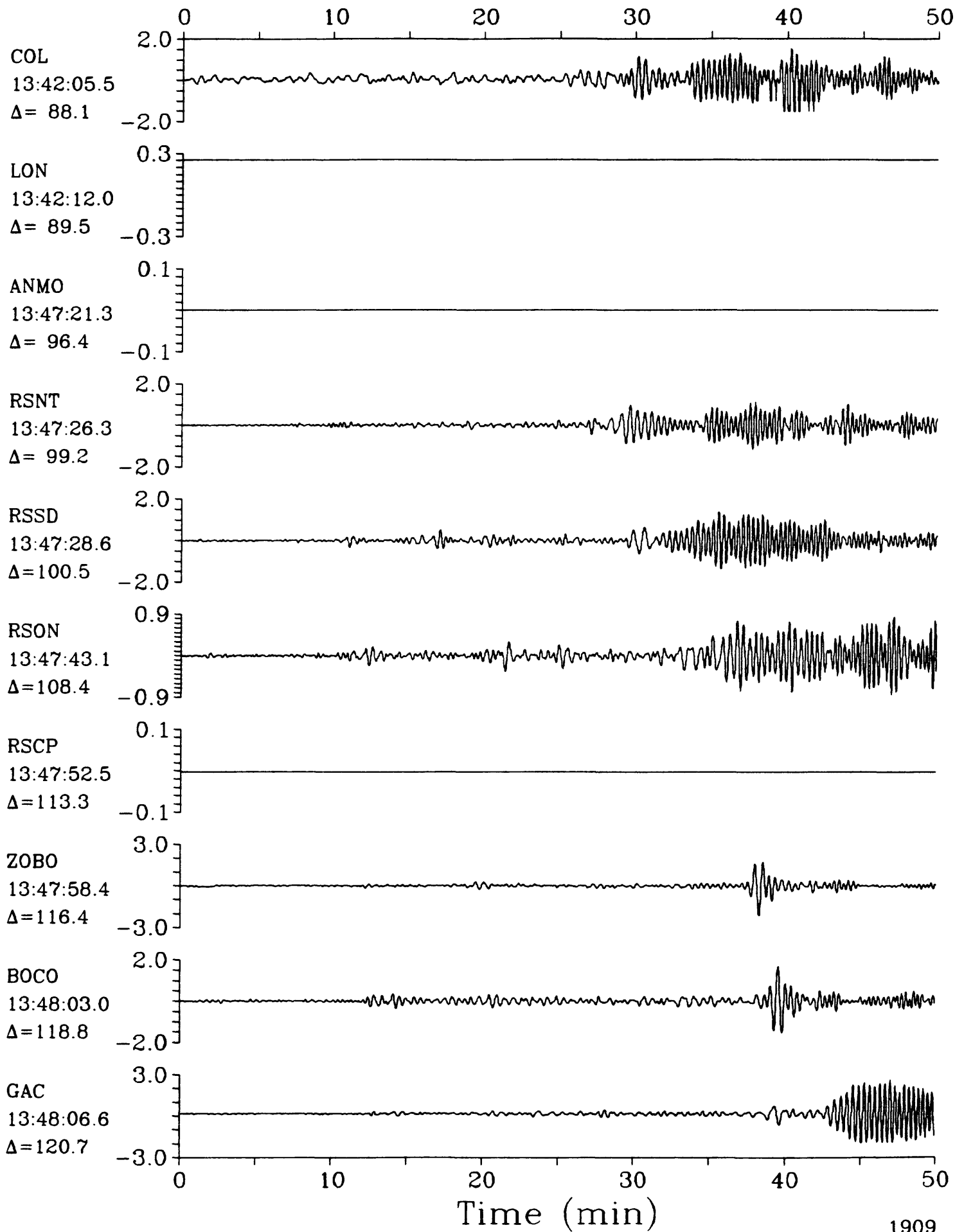
LPZ



LPZ

23 September 1986 13:30:17.34
Vanuatu Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.6$

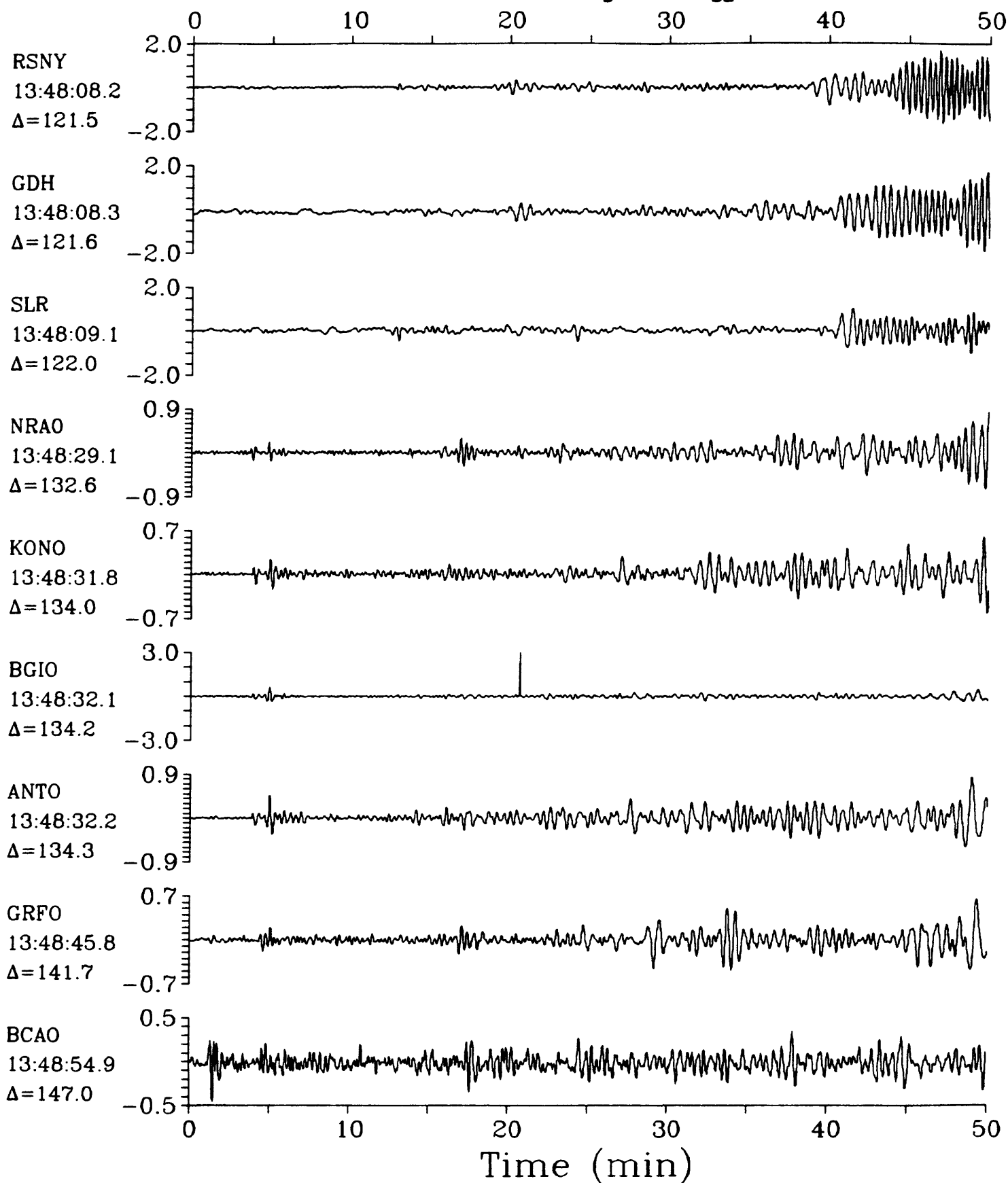
LPZ



LPZ

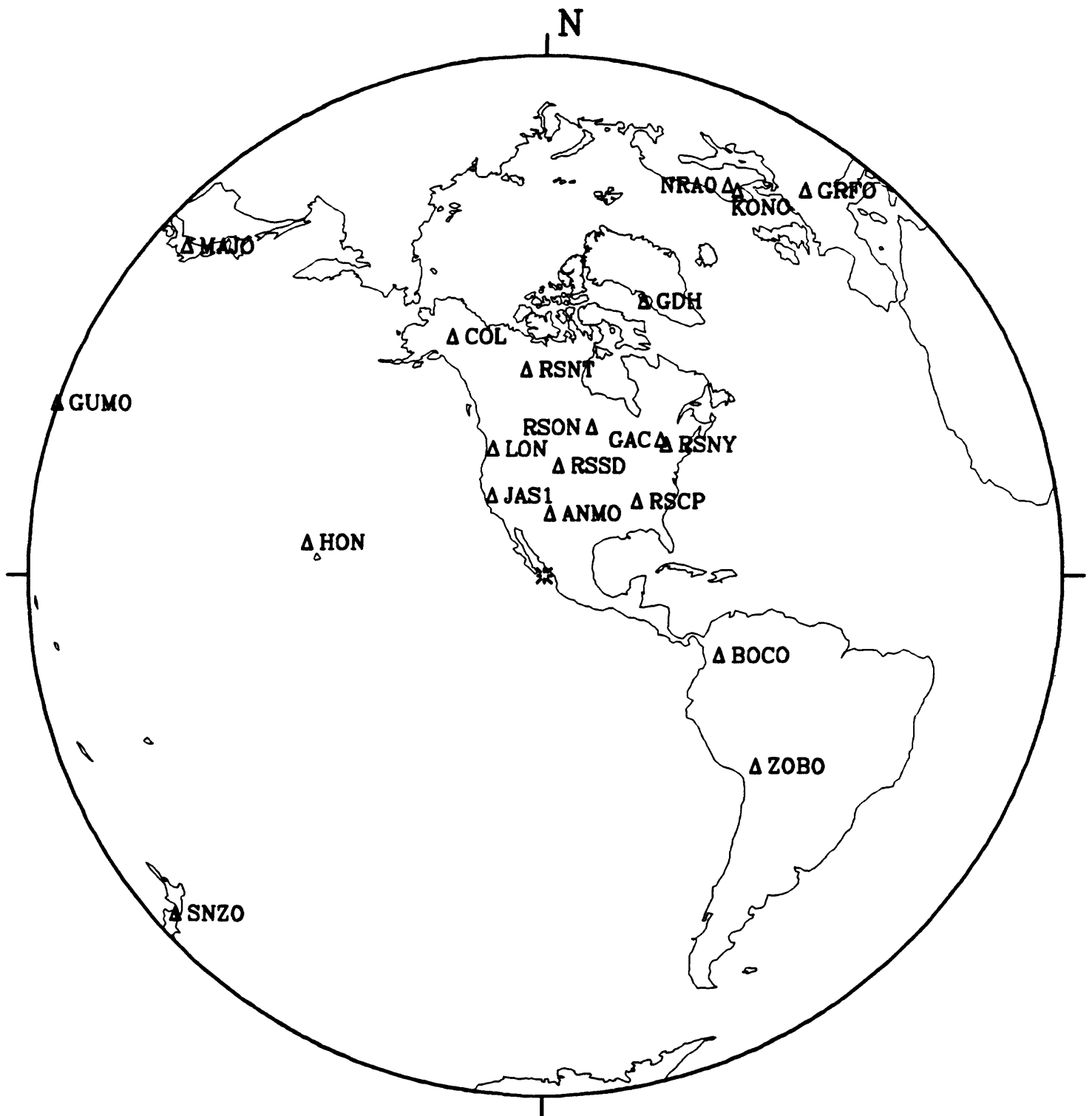
23 September 1986 13:30:17.34
Vanuatu Islands $h=33.0$ $m_b=5.4$ $M_{sz}=5.6$

LPZ



25 September 1986 06:15:53.77

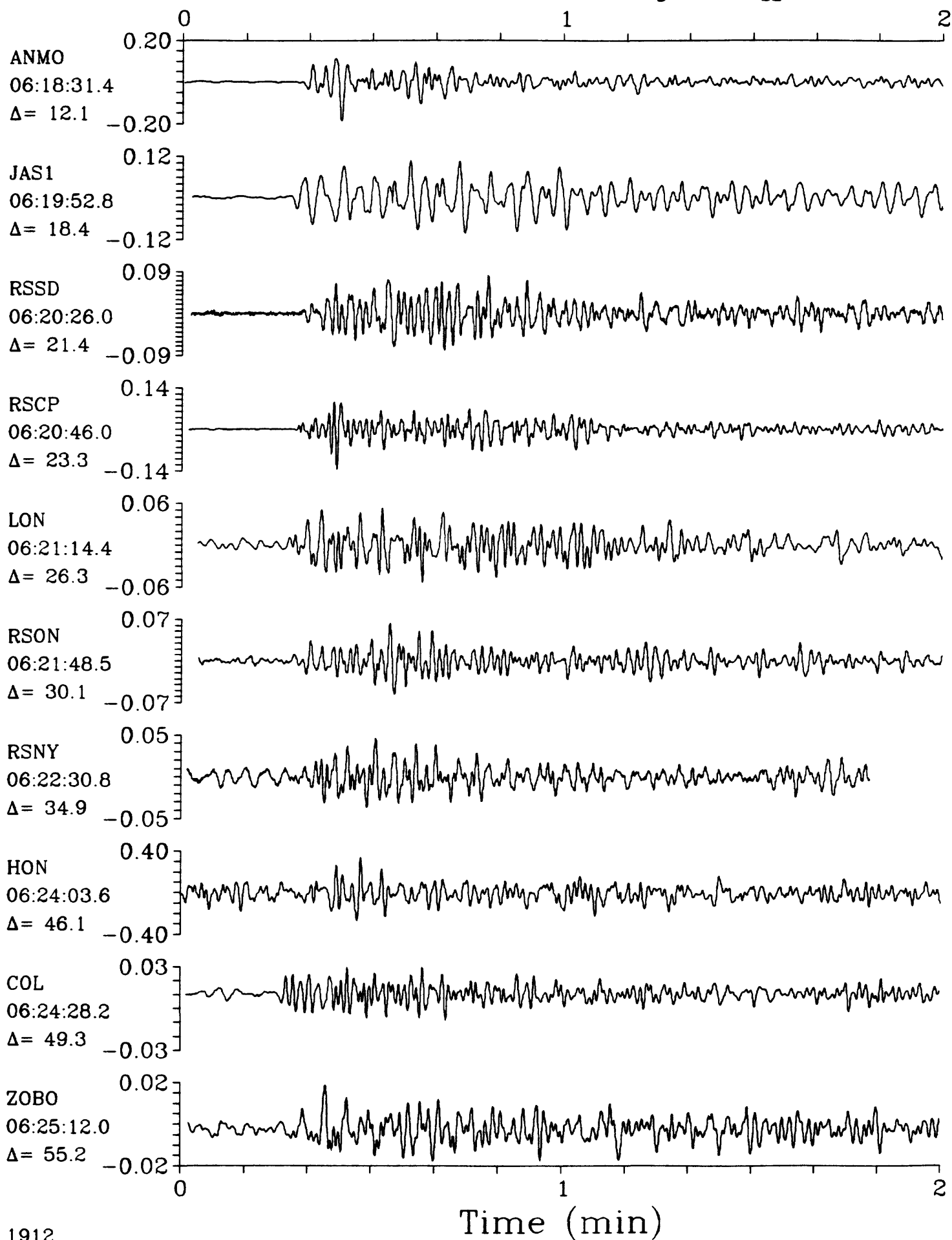
Off Coast of Central Mexico



SPZ

25 September 1986 06:15:53.77

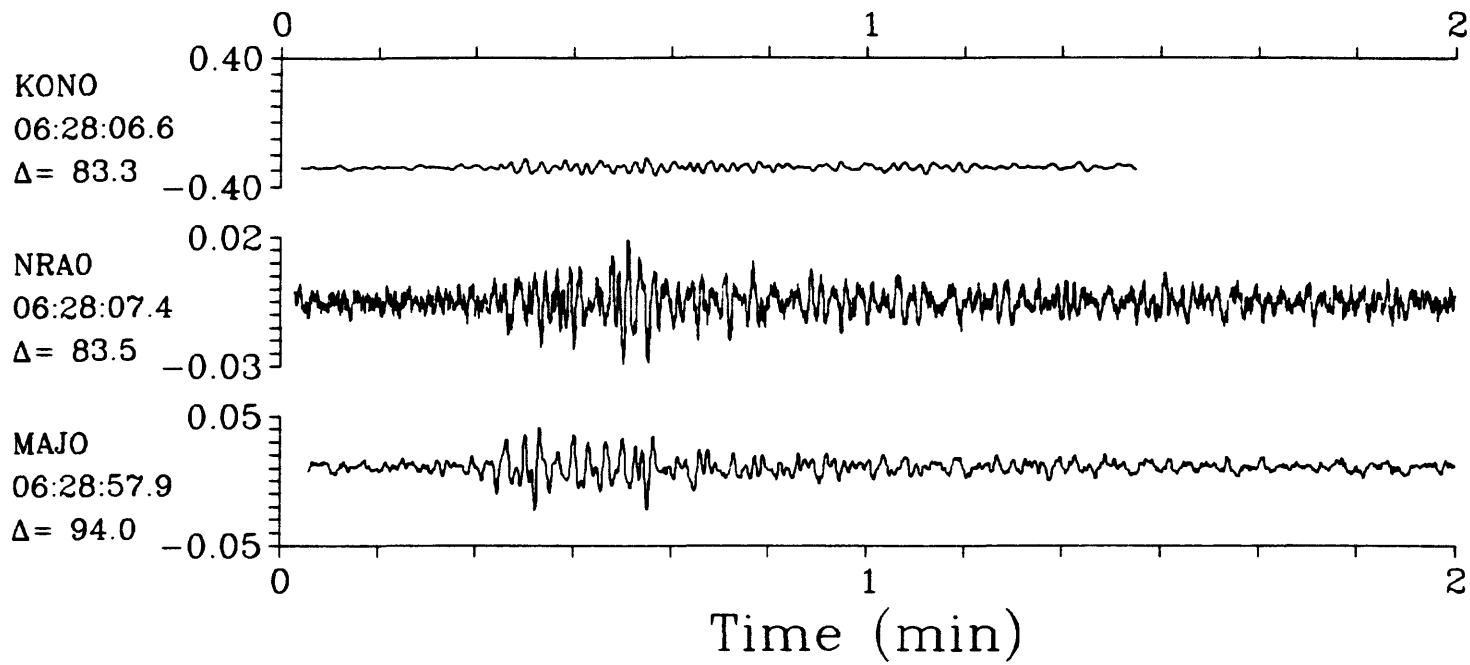
SPZ

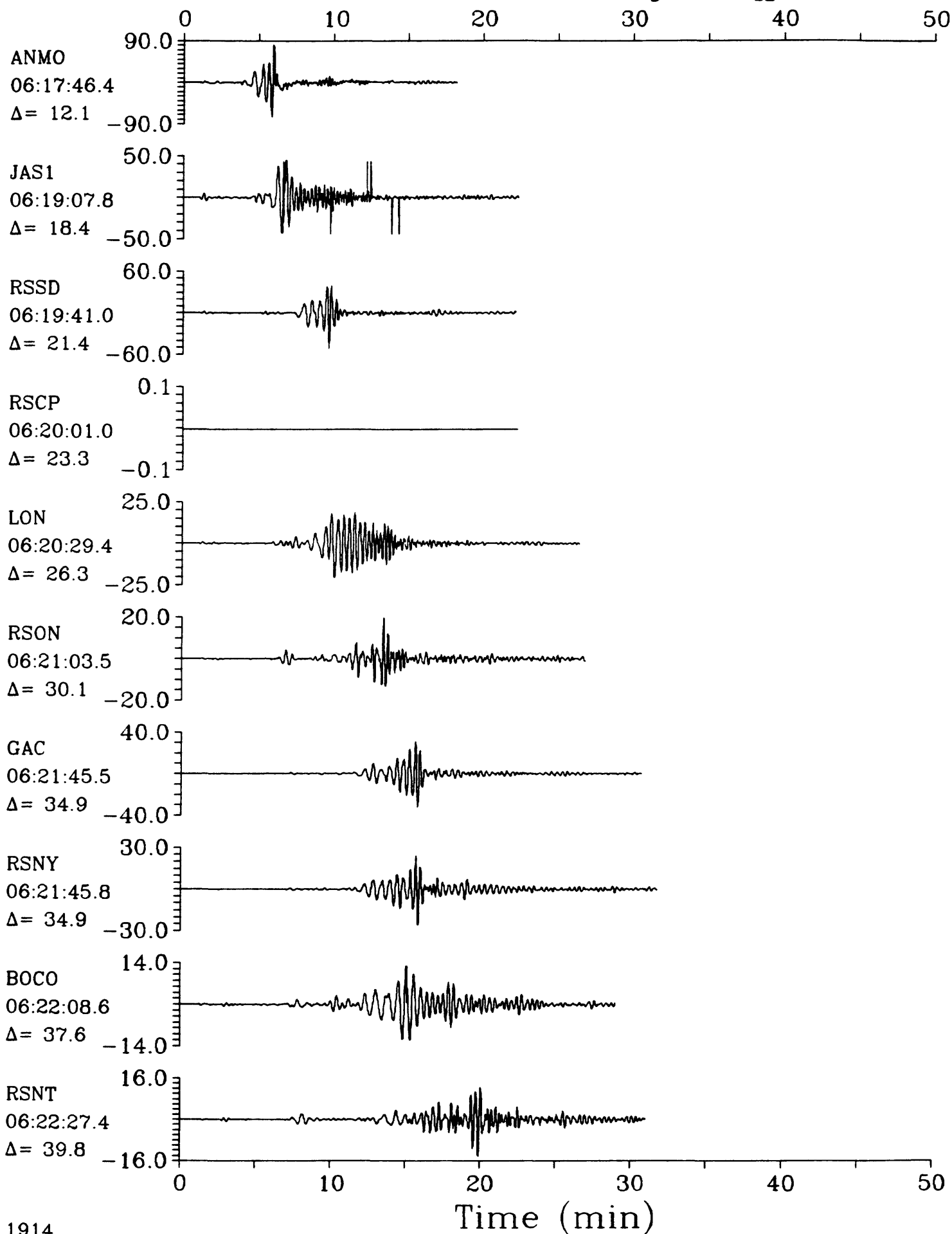
Off Coast of Central Mexico $h=10.0$ $m_b=5.3$ $M_{sz}=5.7$ 

SPZ

25 September 1986 06:15:53.77

SPZ

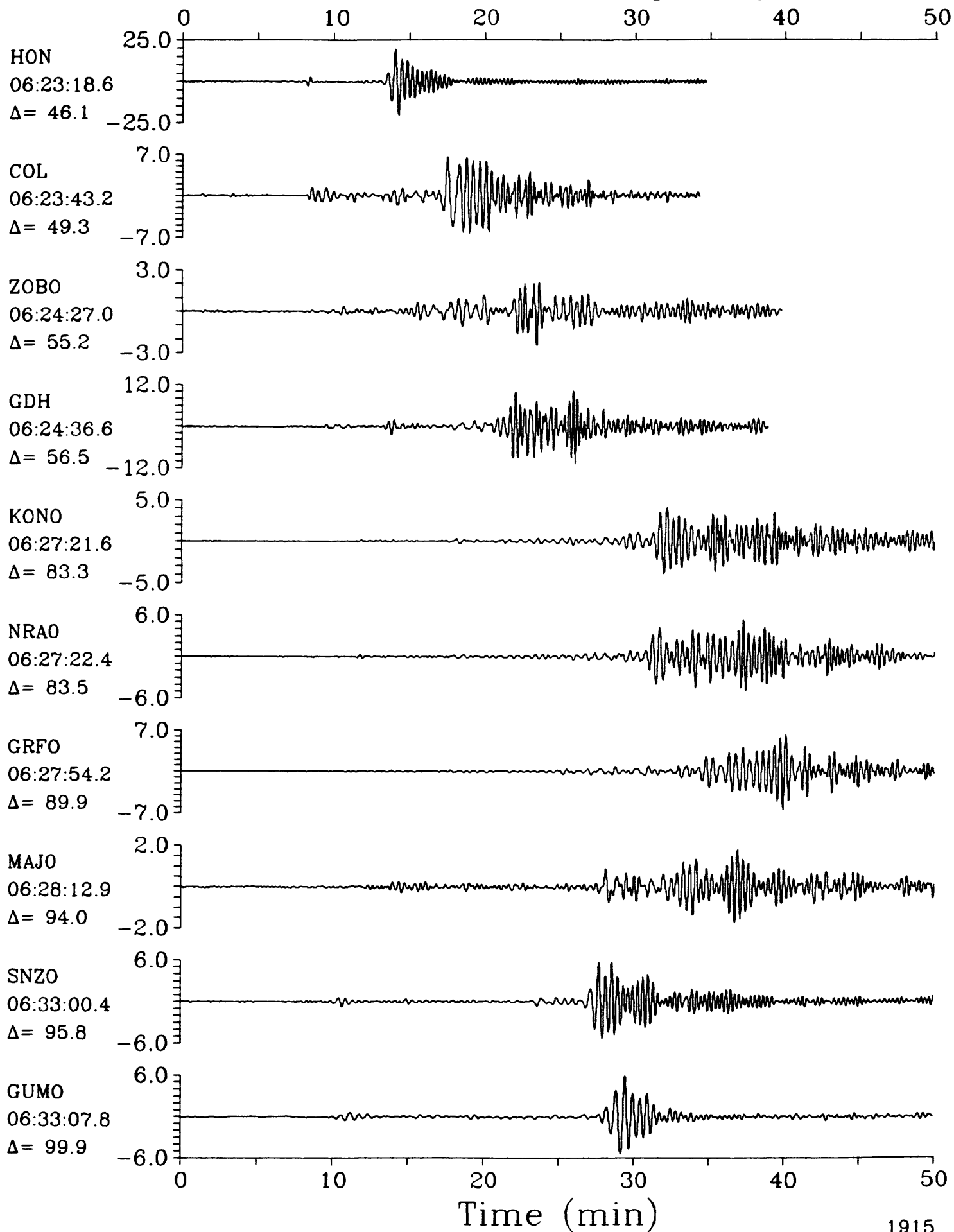
Off Coast of Central Mexico $h=10.0$ $m_b=5.3$ $M_{sz}=5.7$ 



LPZ

25 September 1986 06:15:53.77

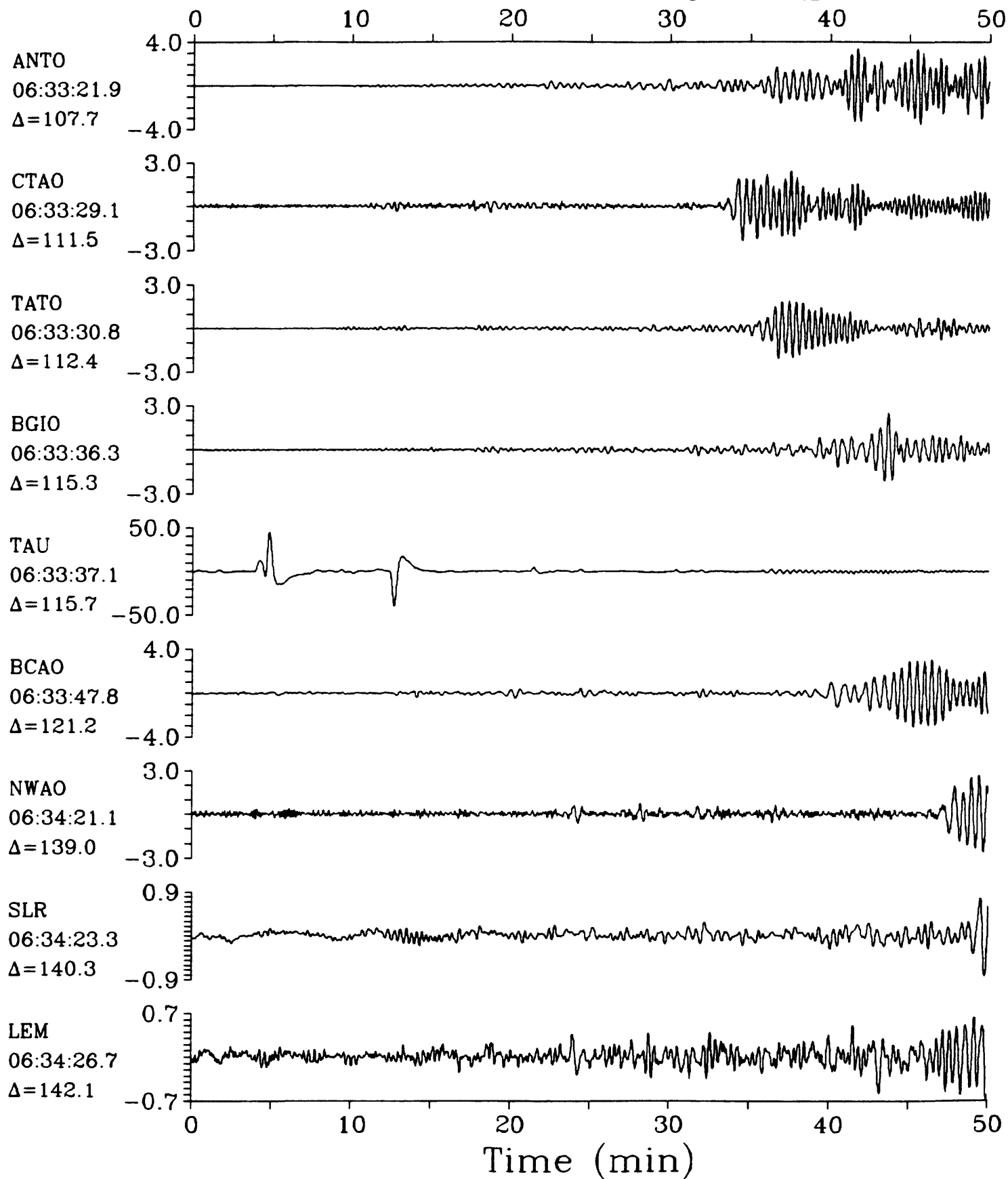
LPZ

Off Coast of Central Mexico $h=10.0$ $m_b=5.3$ $M_{sz}=5.7$ 

LPZ

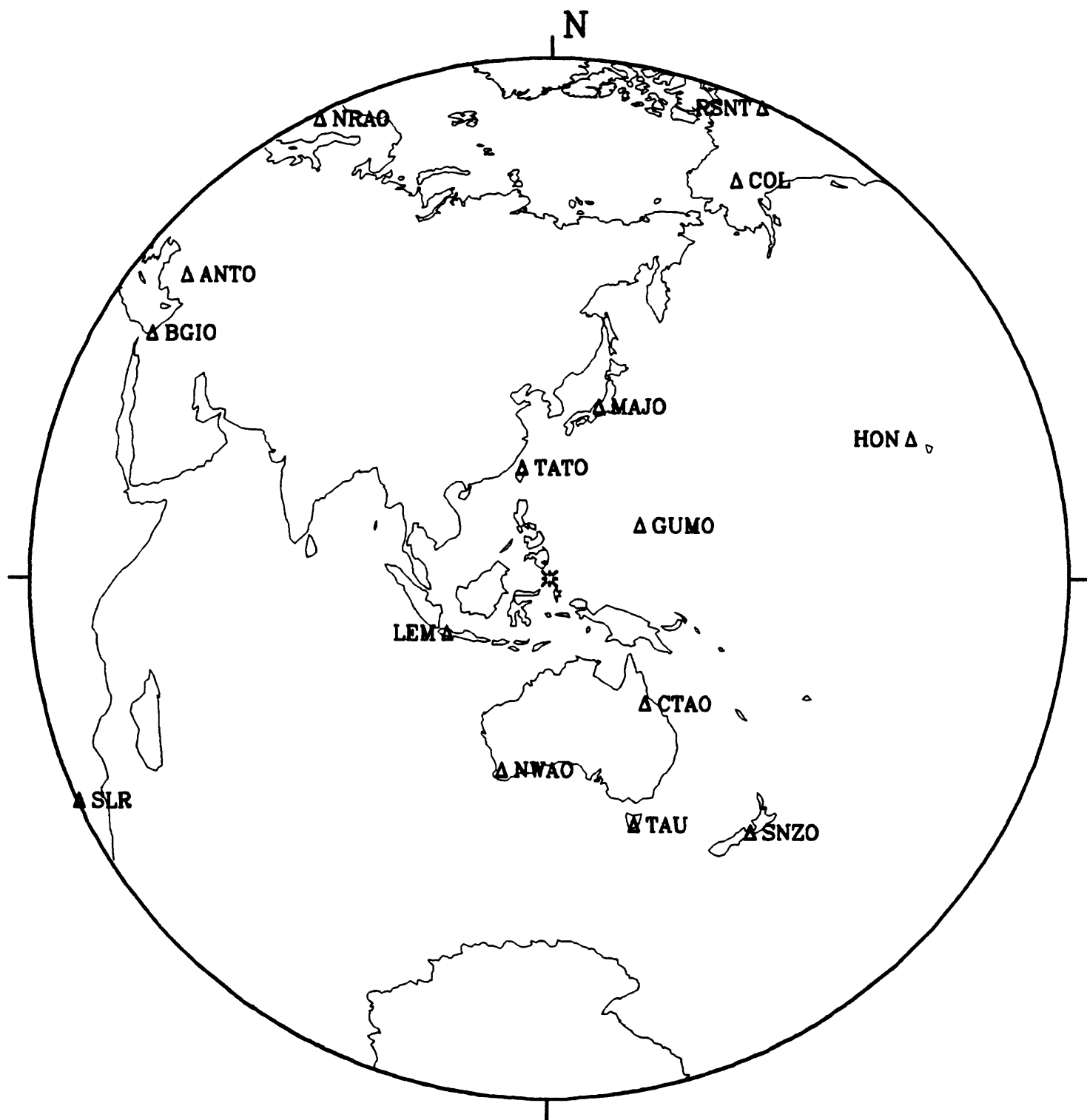
25 September 1986 06:15:53.77

LPZ

Off Coast of Central Mexico $h=10.0$ $m_b=5.3$ $M_{sz}=5.7$ 

25 September 1986 20:06:11.58

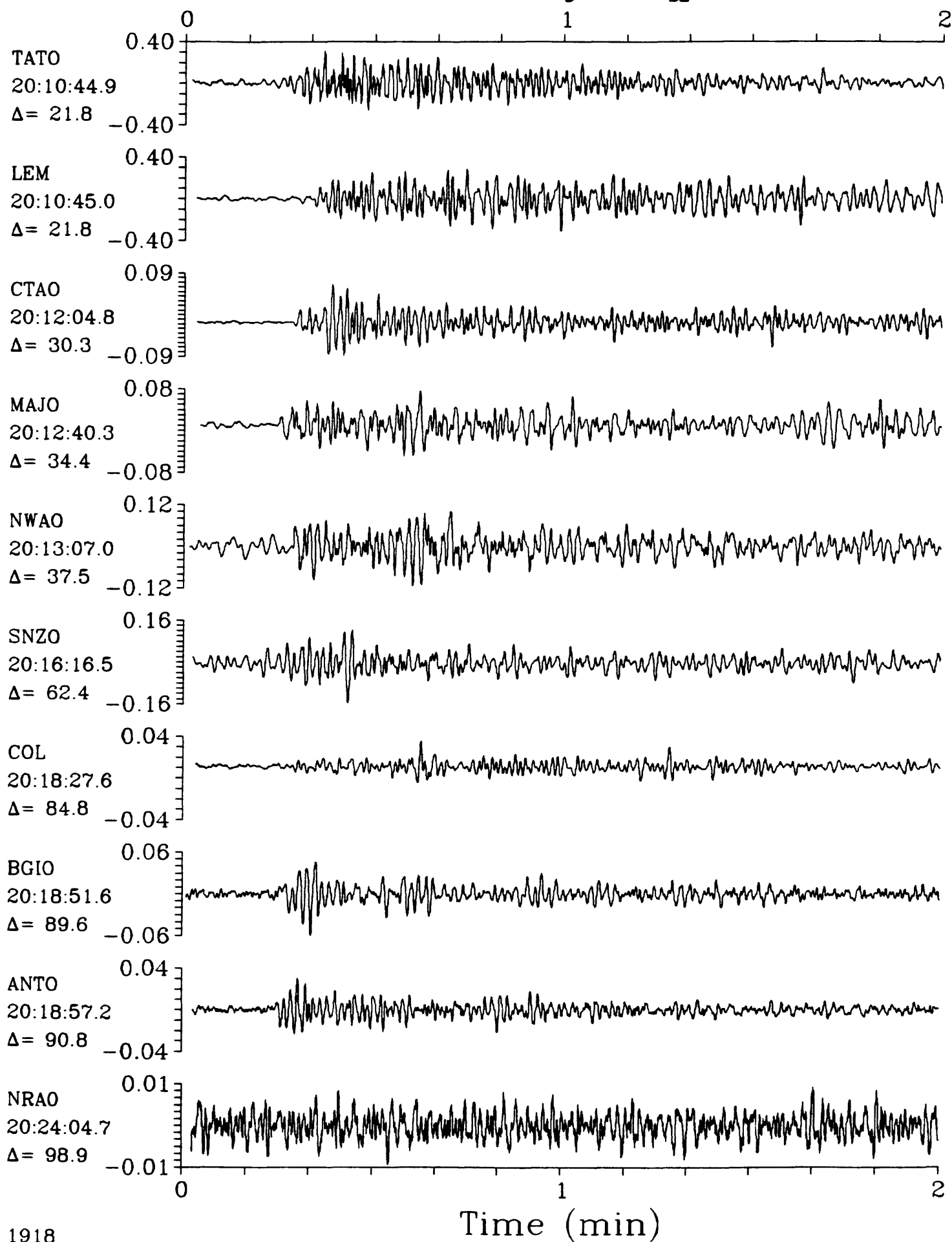
Talau Islands



SPZ

25 September 1986 20:06:11.58
Talaud Islands $h=35.7$ $m_b=5.6$ $M_{SZ}=5.6$

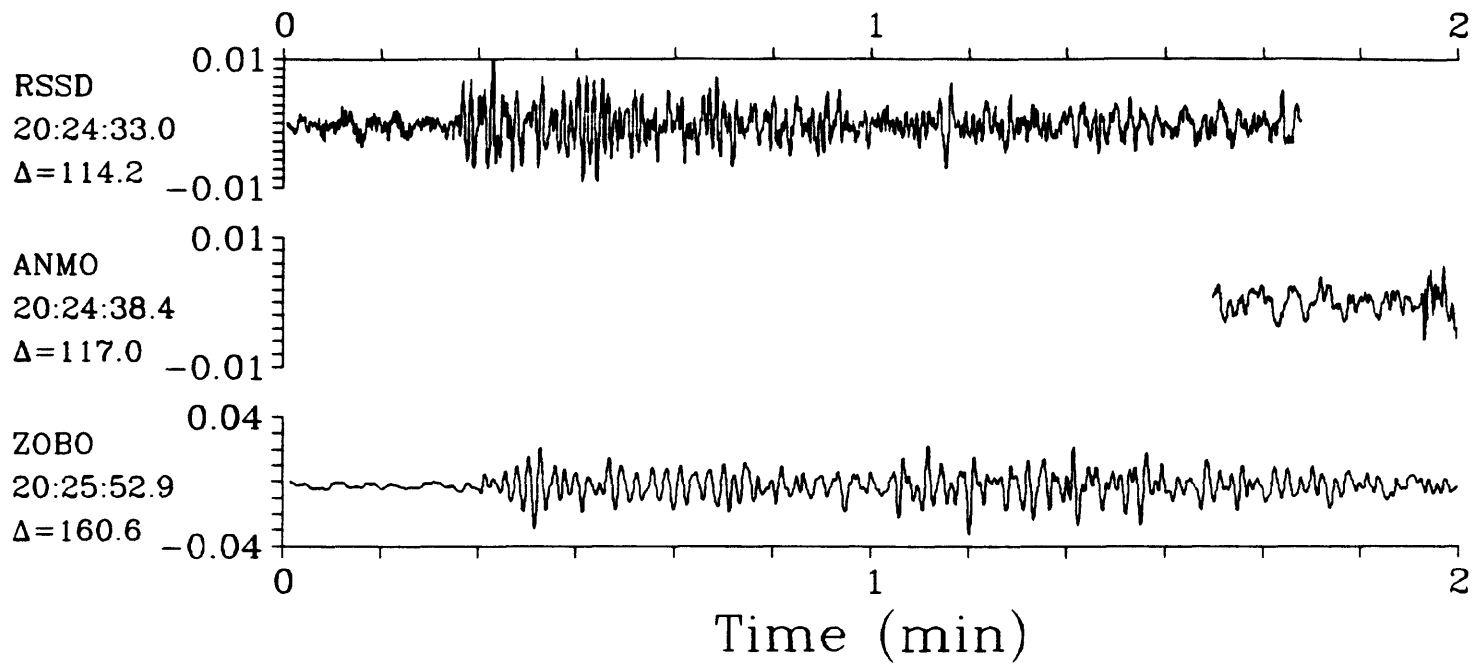
SPZ



SPZ

25 September 1986 20:06:11.58
Talaud Islands $h=35.7$ $m_b=5.6$ $M_{sz}=5.6$

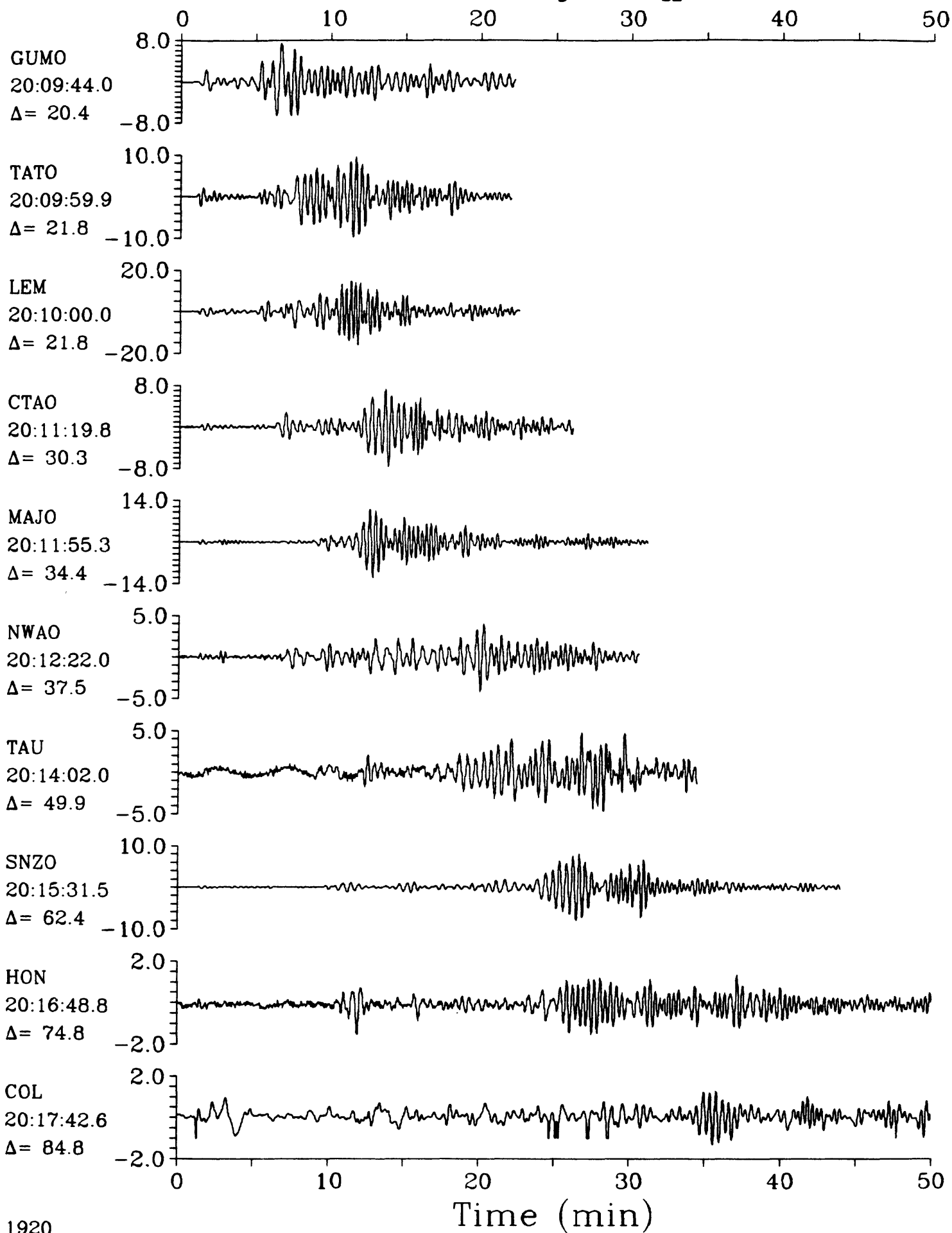
SPZ



LPZ

25 September 1986 20:06:11.58
Talaud Islands $h=35.7$ $m_b=5.6$ $M_{sz}=5.6$

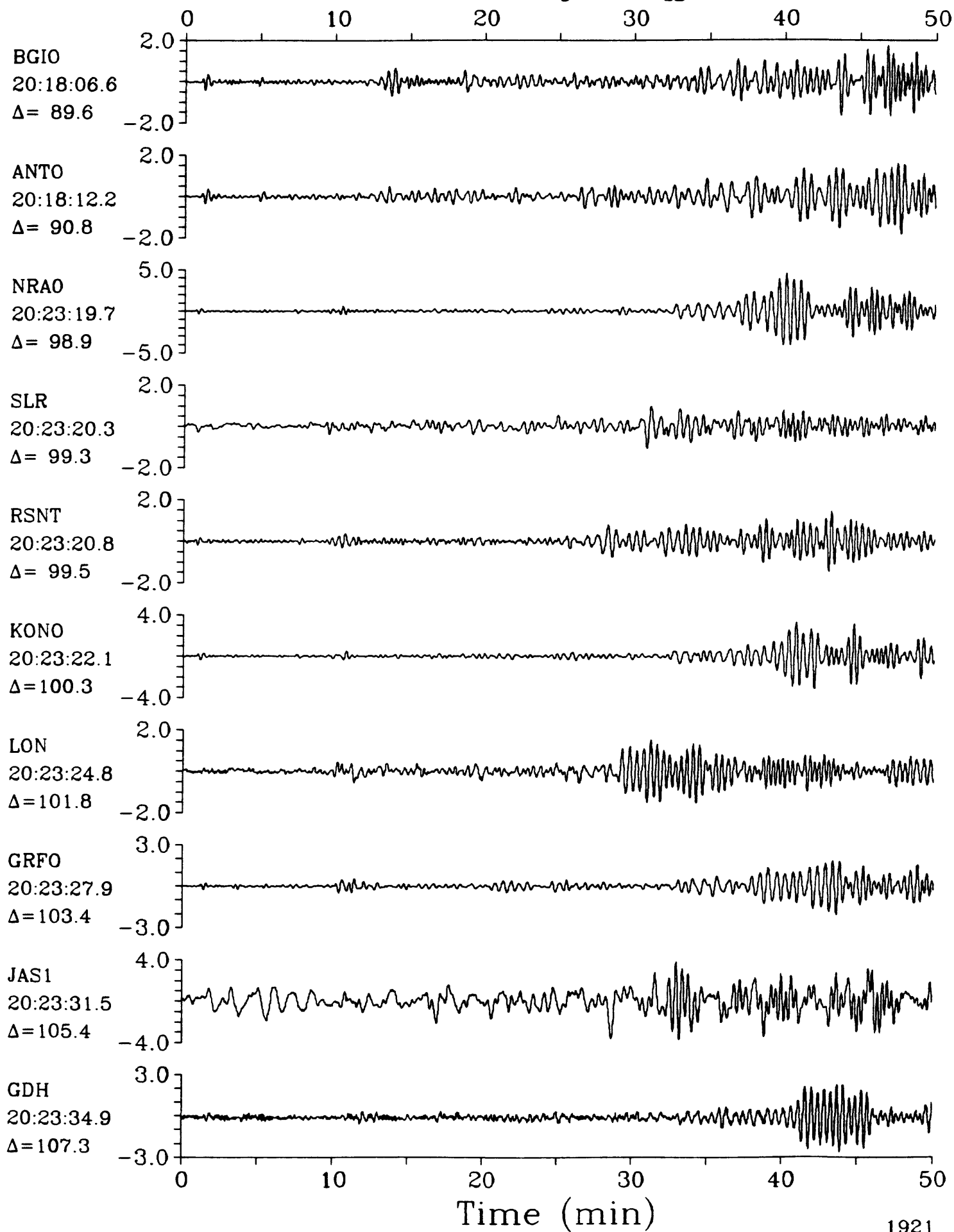
LPZ



LPZ

25 September 1986 20:06:11.58
Talaud Islands $h=35.7$ $m_b=5.6$ $M_{sz}=5.6$

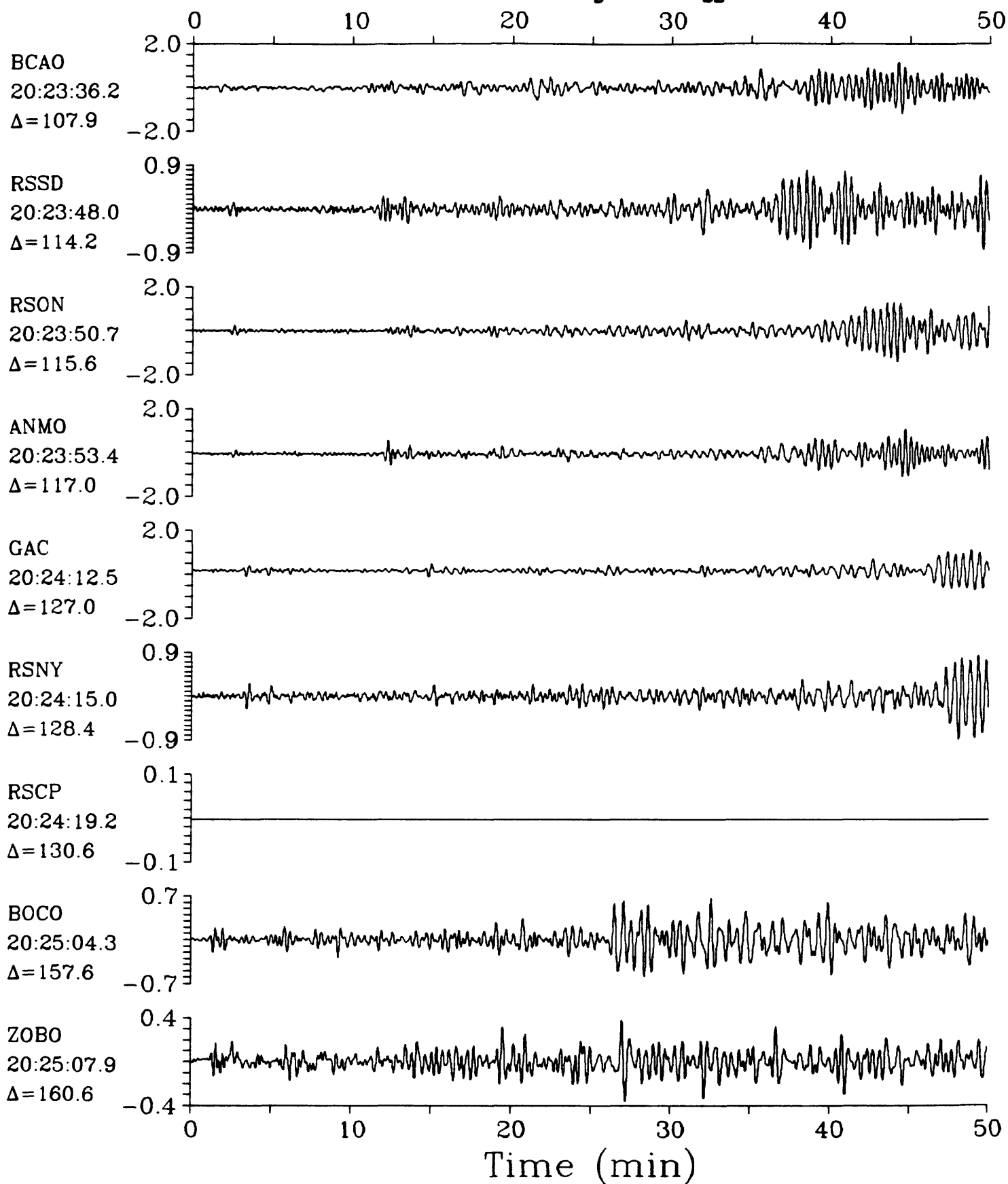
LPZ



LPZ

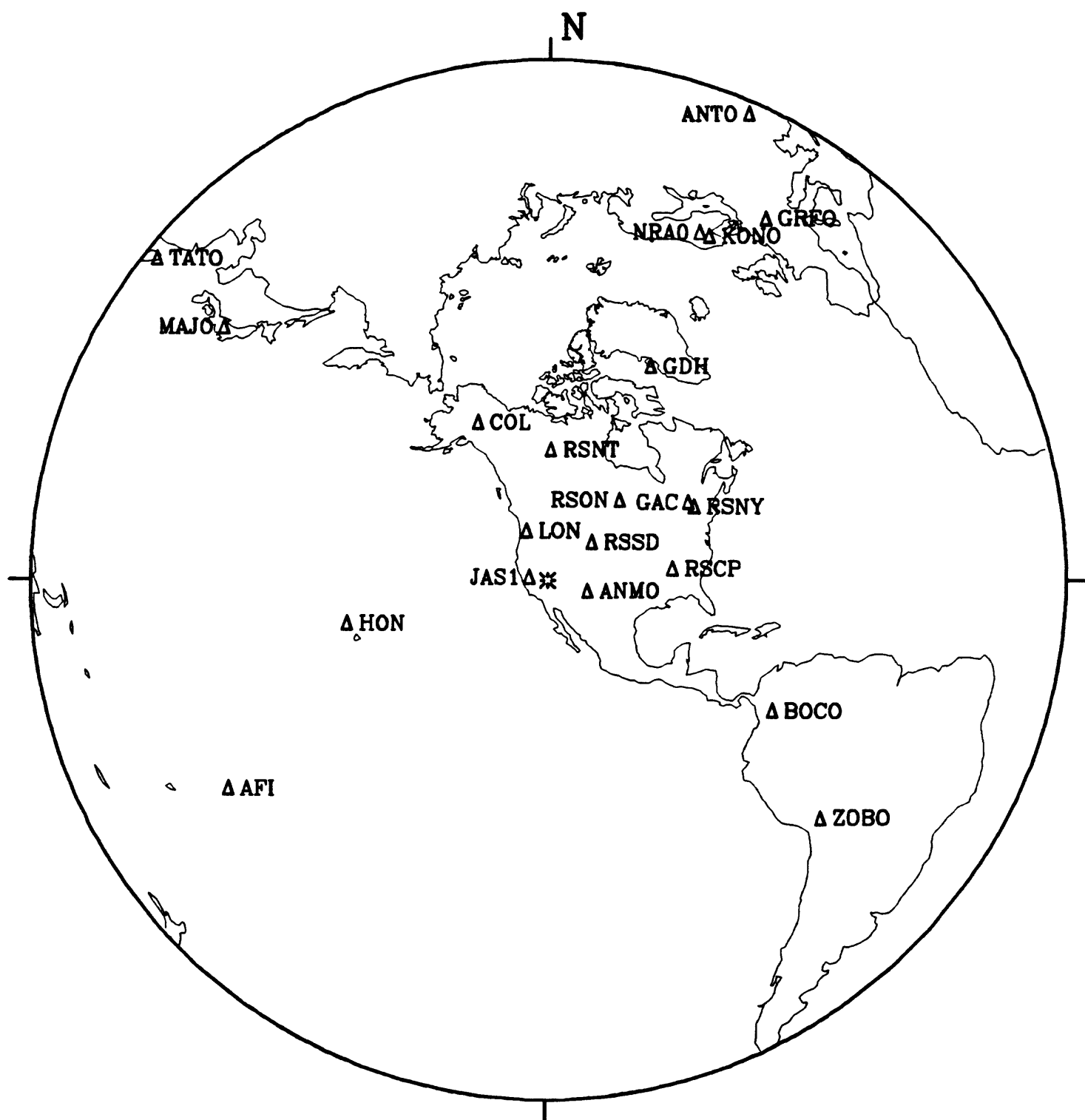
25 September 1986 20:06:11.58
Talaud Islands $h=35.7$ $m_b=5.6$ $M_{sz}=5.6$

LPZ



30 September 1986 22:30:00.10

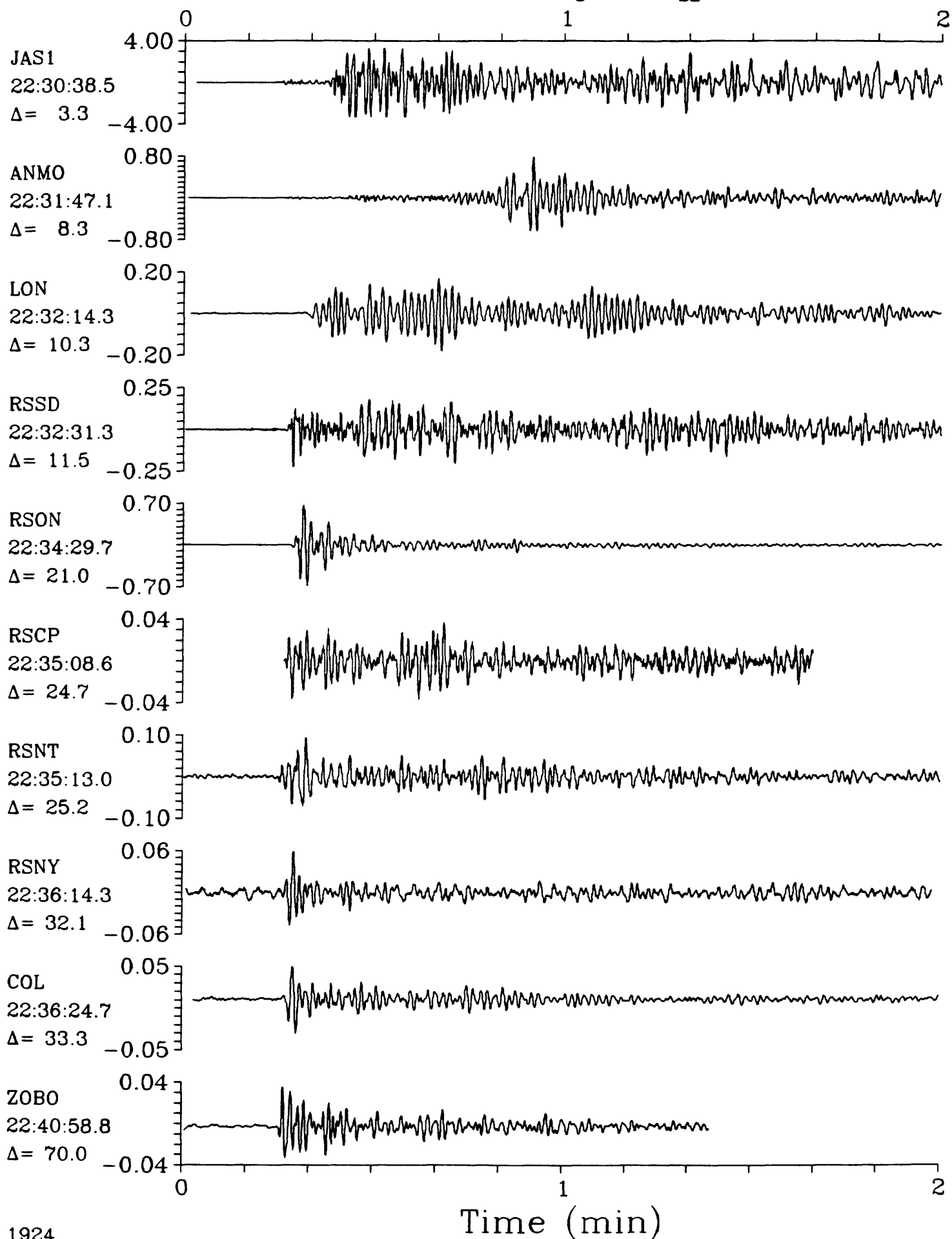
Southern Nevada



SPZ

30 September 1986 22:30:00.10
Southern Nevada $h=0.0$ $m_b=5.5$ $M_{sz}=4.5$

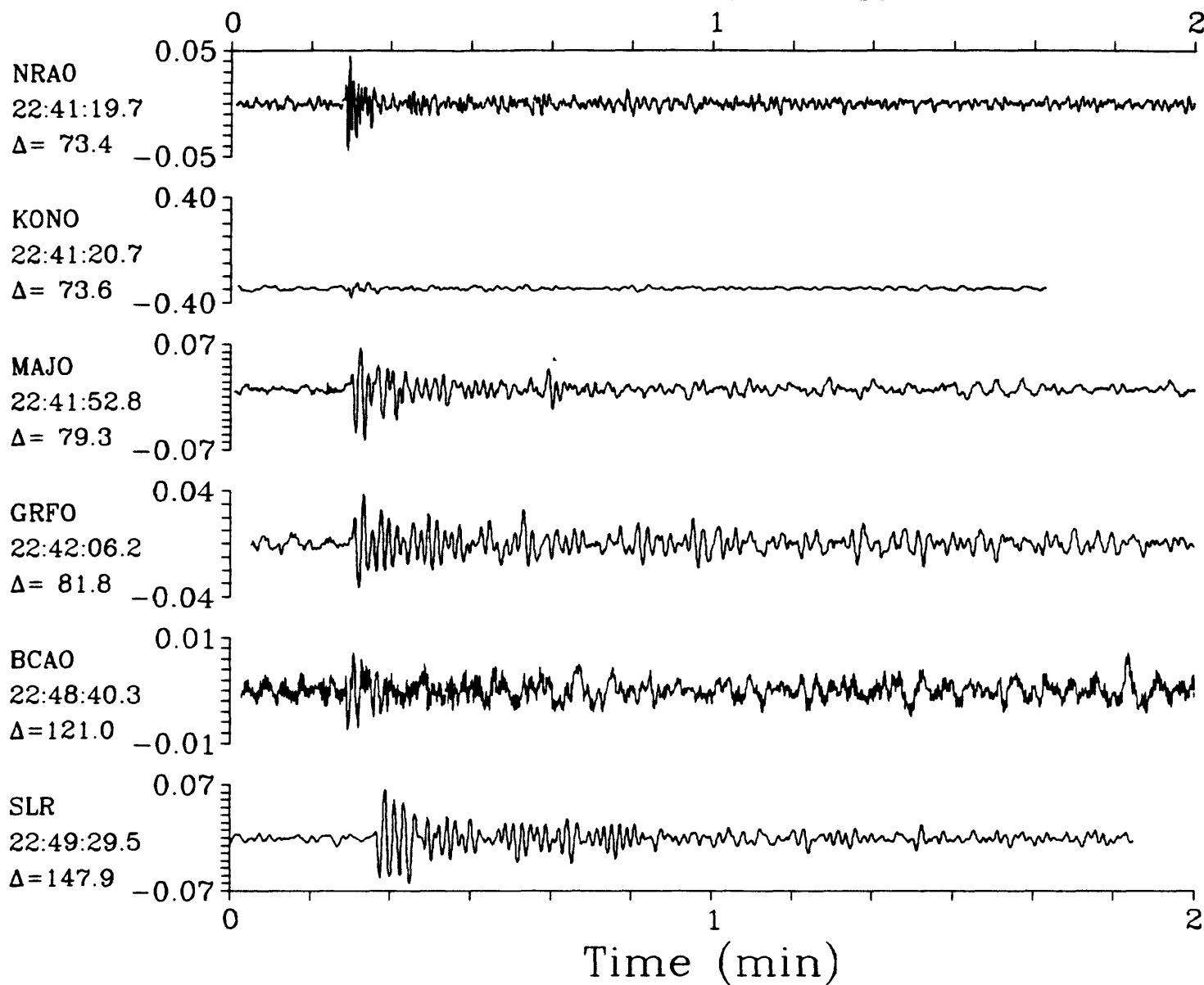
SPZ



SPZ

30 September 1986 22:30:00.10
Southern Nevada $h=0.0$ $m_b=5.5$ $M_{sz}=4.5$

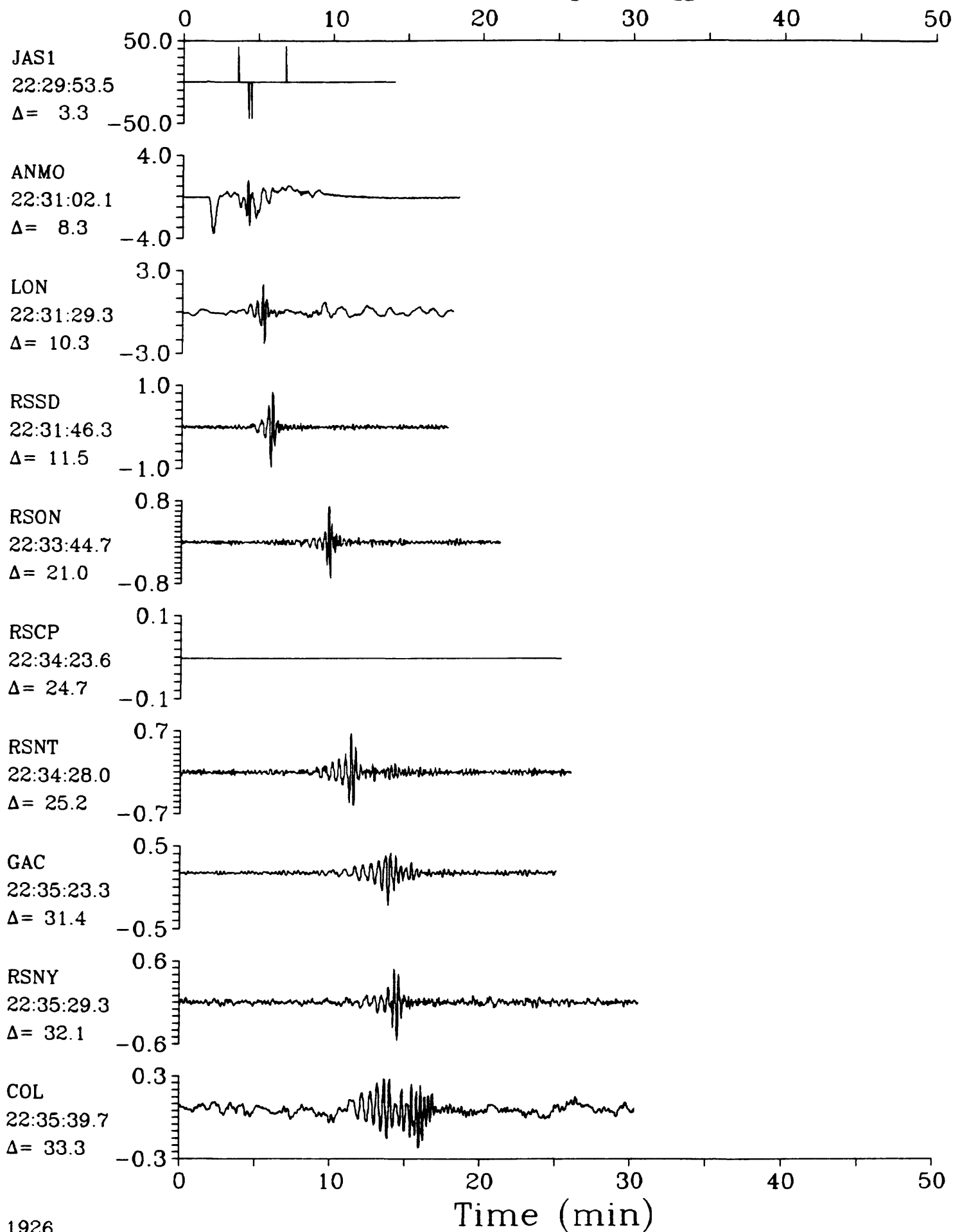
SPZ



LPZ

30 September 1986 22:30:00.10
Southern Nevada $h=0.0$ $m_b=5.5$ $M_{sz}=4.5$

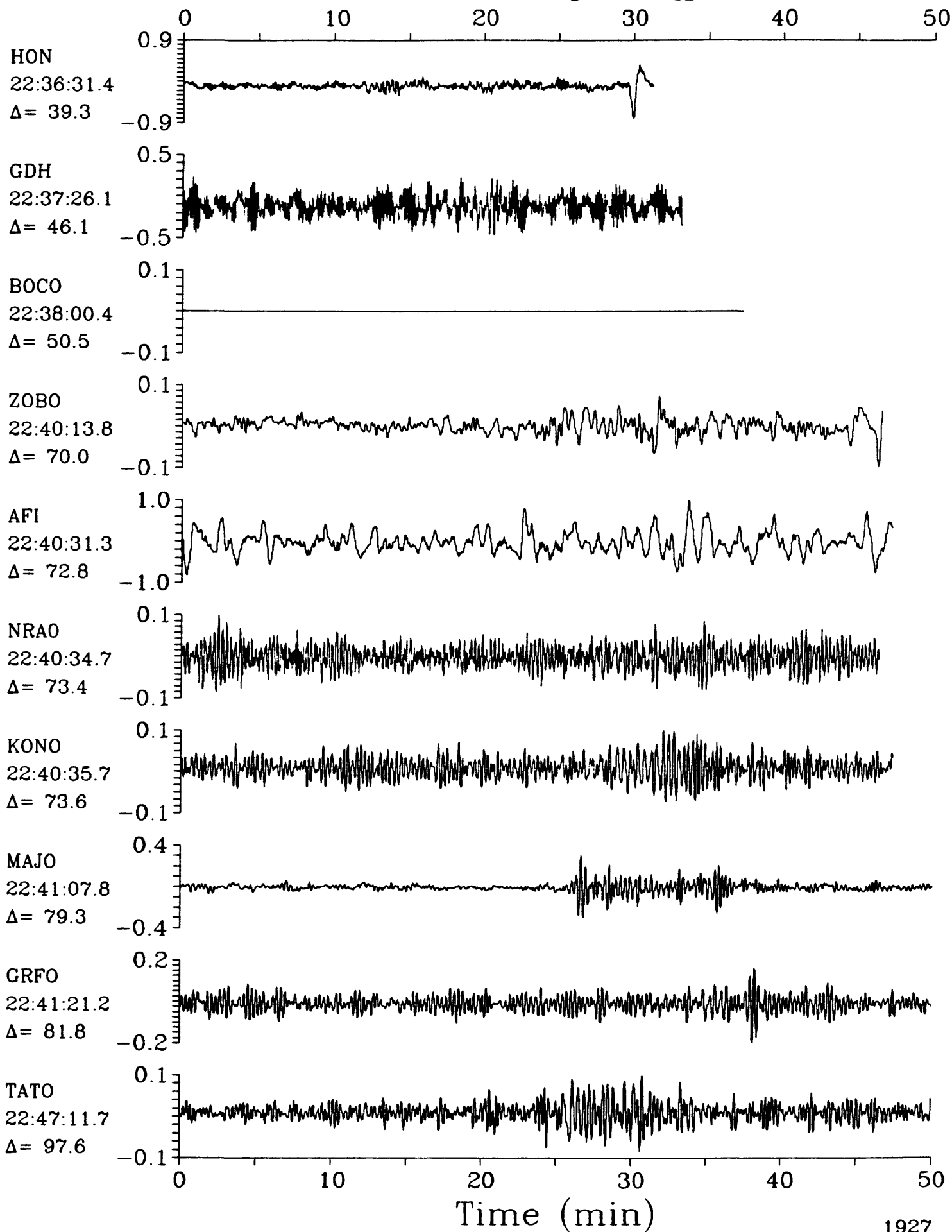
LPZ



LPZ

30 September 1986 22:30:00.10
Southern Nevada $h=0.0$ $m_b=5.5$ $M_{sz}=4.5$

LPZ



LPZ

30 September 1986 22:30:00.10
Southern Nevada $h=0.0$ $m_b=5.5$ $M_{sz}=4.5$

LPZ

