DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

National Earthquake Information Center Waveform Catalog November 1986

by

Madeleine D. Zirbes

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Contents

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 (□) 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 1986 with magnitudes ≥ 5.5

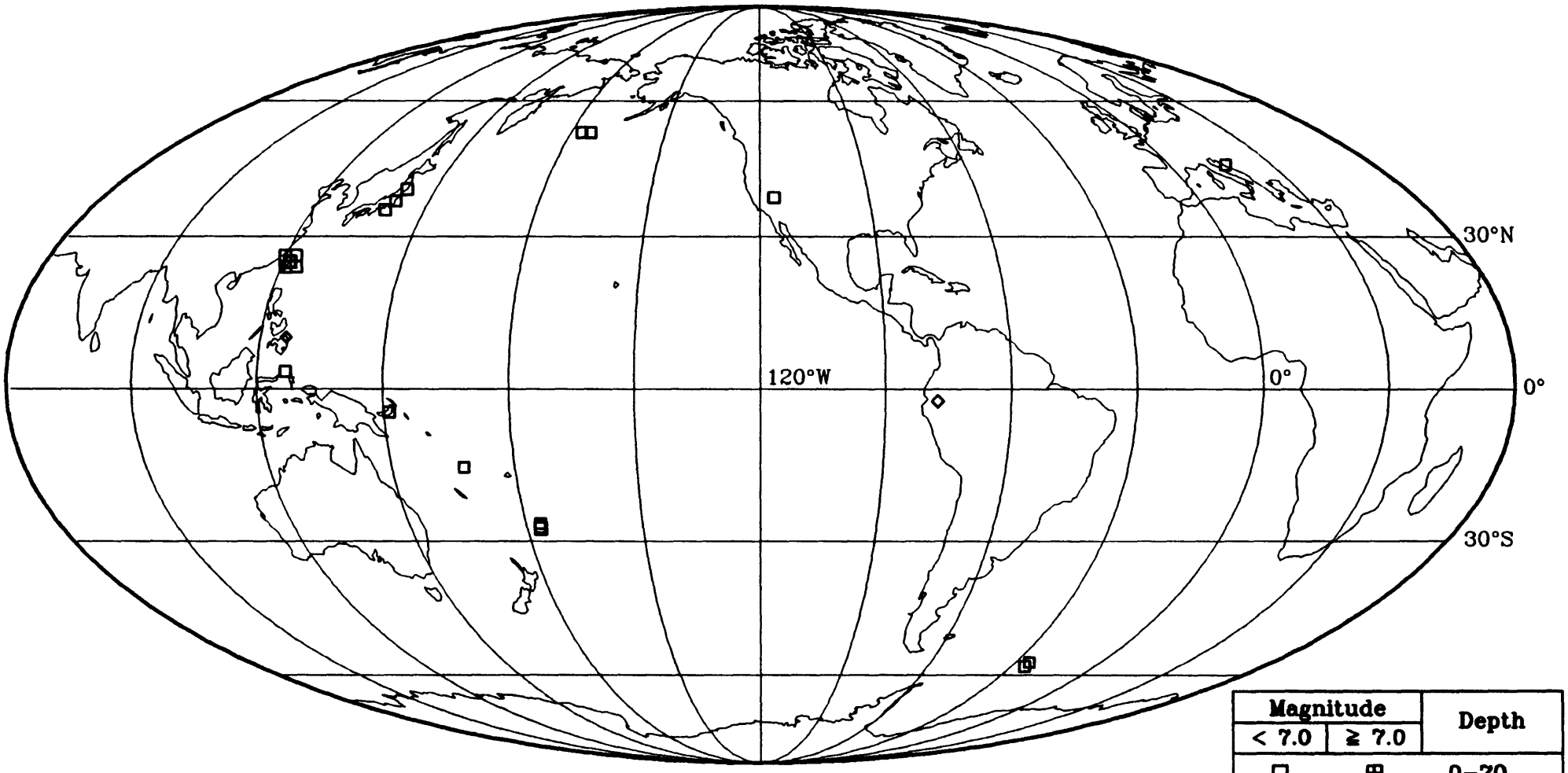
	Origin Time UTC	Latitude	Longitude	Depth (km)	Magnitude m_b	Magnitude M_{SZ}	Flinn-Engdahl Region Name
1.	1986 11 03 02:06:19.75	27.410° S	176.240° W	33.0	5.3	5.6	Kermadec Islands Region
2.	1986 11 06 02:48:25.21	8.931° N	126.237° E	76.8	5.6		Mindanao, Philippine Islands
3.	1986 11 06 18:27:00.24	51.471° N	176.674° W	33.0	5.1	5.5	Andreanof Islands, Aleutian Is.
4.	1986 11 07 19:48:59.15	28.480° S	176.577° W	33.0	5.6	6.4	Kermadec Islands Region
5.	1986 11 10 04:22:24.46	5.476° S	151.271° E	33.0	5.7		New Britain Region
6.	1986 11 10 20:38:46.28	28.307° S	176.573° W	33.0	5.5	5.6	Kermadec Islands Region
7.	1986 11 11 00:02:27.40	2.359° N	126.743° E	33.0	5.7	5.2	Molucca Passage
8.	1986 11 12 20:54:27.75	28.169° S	176.660° W	33.0	5.1	5.6	Kermadec Islands Region
9.	1986 11 14 06:33:25.04	58.768° S	25.176° W	33.0	5.6	5.1	South Sandwich Islands Region
10.	1986 11 14 16:00:00.07	37.100° N	116.048° W	0.0	5.7	4.5	Southern Nevada
11.	1986 11 14 21:20:04.67	23.963° N	121.822° E	33.0	6.2	7.8	Taiwan
12.	1986 11 14 21:42:44.13	51.447° N	173.823° W	33.0	5.5		Andreanof Islands, Aleutian Is.
13.	1986 11 14 23:04:36.66	23.880° N	121.817° E	33.0	6.1	6.3	Taiwan
14.	1986 11 15 07:24:07.74	23.815° N	121.671° E	33.0	5.5	5.8	Taiwan
15.	1986 11 18 12:02:23.51	57.779° S	25.189° W	33.0	5.6	4.5	South Sandwich Islands Region
16.	1986 11 20 13:14:21.74	16.271° S	167.593° E	33.0	5.5	5.2	Vanuatu Islands
17.	1986 11 22 00:41:43.10	34.430° N	139.520° E	10.0	5.9	5.7	Near S. Coast of Honshu, Japan
18.	1986 11 23 01:39:25.94	3.358° S	77.474° W	125.5	6.4		Peru-Ecuador Border Region
19.	1986 11 25 13:59:42.17	44.135° N	16.407° E	27.0	5.3	5.5	Yugoslavia
20.	1986 11 28 22:29:36.01	36.313° N	141.014° E	48.8	5.7	5.5	Near East Coast of Honshu, Japan
21.	1986 11 30 20:15:33.27	38.861° N	141.971° E	62.2	5.9		Near East Coast of Honshu, Japan

Table 2. Current network-event tape station list

Code	Station	Latitude	Longitude	Elevation (m)	Type
AFI	Afiamalu, Western Samoa	13.91° S	171.78° W	706.0	DWWSSN
ANMO	Albuquerque, New Mexico	34.95° N	106.46° W	1740.0	SRO
ANTO	Ankara, Turkey	39.87° N	32.79° E	883.0	SRO
BCAO	Bangui, Central African Republic	4.43° N	18.54° E	336.0	SRO
BDF	Brasilia, Brazil	15.66° S	47.90° W	1500.0	DWWSSN
BGIO	Bar-Giyyora, Israel	31.72° N	35.09° E	651.7	SRO
BJI	Beijing, China	40.04° N	116.18° E	43.0	CDSN
BOCO	Bogota, Columbia	4.59° N	74.04° W	3071.0	SRO
CHTO	Chiang Mai, Thailand	18.79° N	98.98° E	316.0	SRO
COL	College, Alaska	64.90° N	147.79° W	320.0	DWWSSN
CTAO	Charters Towers, Australia	20.09° S	146.25° E	357.0	ASRO
GAC	Glen Almond, Quebec, Canada	45.70° N	75.48° W	620.0	SRO
GDH	Godhavn, Greenland	69.25° N	53.53° W	23.0	DWWSSN
GRA1	Haidhof, Germany	49.69° N	11.22° E	500.0	GRF
GRB1	Bruennthal, Germany	49.39° N	11.65° E	494.0	GRF
GRC1	Eglofsdorf, Germany	48.99° N	11.52° E	512.0	GRF
GRFO	Graefenberg, Germany	49.69° N	11.22° E	500.0	SRO
GUMO	Guam, Mariana Islands	13.59° N	144.87° E	14.0	SRO
HON	Honolulu, Hawaii	21.32° N	158.01° W	2.0	DWWSSN
JAS1	Jamestown, California	37.93° N	120.42° W	425.0	DWWSSN
KBS	Kingsbay, Norway	78.92° N	11.92° E	46.0	DWWSSN
KEV	Kevo, Finland	69.76° N	27.01° E	80.0	DWWSSN
KMI	Kunming, China	25.12° N	102.74° E	1945.0	CDSN
KONO	Kongsberg, Norway	59.65° N	9.60° E	216.0	ASRO
LEM	Lembang, Indonesia	6.833° S	107.62° E	1247.0	DWWSSN
LON	Longmire, Washington	46.75° N	121.81° W	854.0	DWWSSN
LZH	Lanzhou, China	36.09° N	103.84° E	1560.0	CDSN
MAJO	Matsushiro, Japan	36.54° N	138.21° E	422.0	ASRO
NE03	Logumkloster, Denmark	55.045° N	9.153° E	25.0	NARS
NE04	Witteveen, Netherlands	52.813° N	6.668° E	17.0	NARS
NE05	Utrecht, Netherlands	52.088° N	5.172° E	2.0	NARS
NE06	Dourbes, Belgium	50.097° N	4.595° E	225.0	NARS
NE10	Arette, France	43.086° N	0.699° W	480.0	NARS
NE11	Ainzon, France	41.814° N	1.517° W	440.0	NARS
NE14	Granada, Spain	37.190° N	3.595° W	774.0	NARS
NE15	Valkenburg, Netherlands	50.867° N	5.785° E	100.0	NARS
NE16	Clermont-Ferand, France	45.763° N	3.103° E	80.0	NARS
NE17	Toledo, Spain	39.881° N	4.049° W	480.0	NARS
NE18	Les Rejaudoux, France	45.304° N	1.516° E	410.0	NARS
NRA0	NORESS array site A0	60.735° N	11.541° E	302.0	NRSA
NWAO	Mundaring (Narrogin), Australia	32.93° S	117.24° E	265.0	SRO
SCP	State College, Pennsylvania	40.79° N	77.87° W	352.0	DWWSSN
SLR	Silverton, South Africa	25.73° S	28.28° E	1348.0	DWWSSN
SNZO	Wellington (South Karori), New Zealand	41.31° S	174.70° E	-12.0	SRO
TATO	Taipei, Taiwan	24.98° N	121.49° E	53.0	SRO
TAU	Hobart, Tasmania	42.91° S	147.32° E	132.0	DWWSSN
TOL	Toledo, Spain	39.88° N	4.05° W	480.0	DWWSSN
WMQ	Urumqi, China	43.82° N	87.70° E	970.0	CDSN
ZOBO	La Paz (Zongo), Bolivia	16.27° S	68.13° W	4450.0	ASRO

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

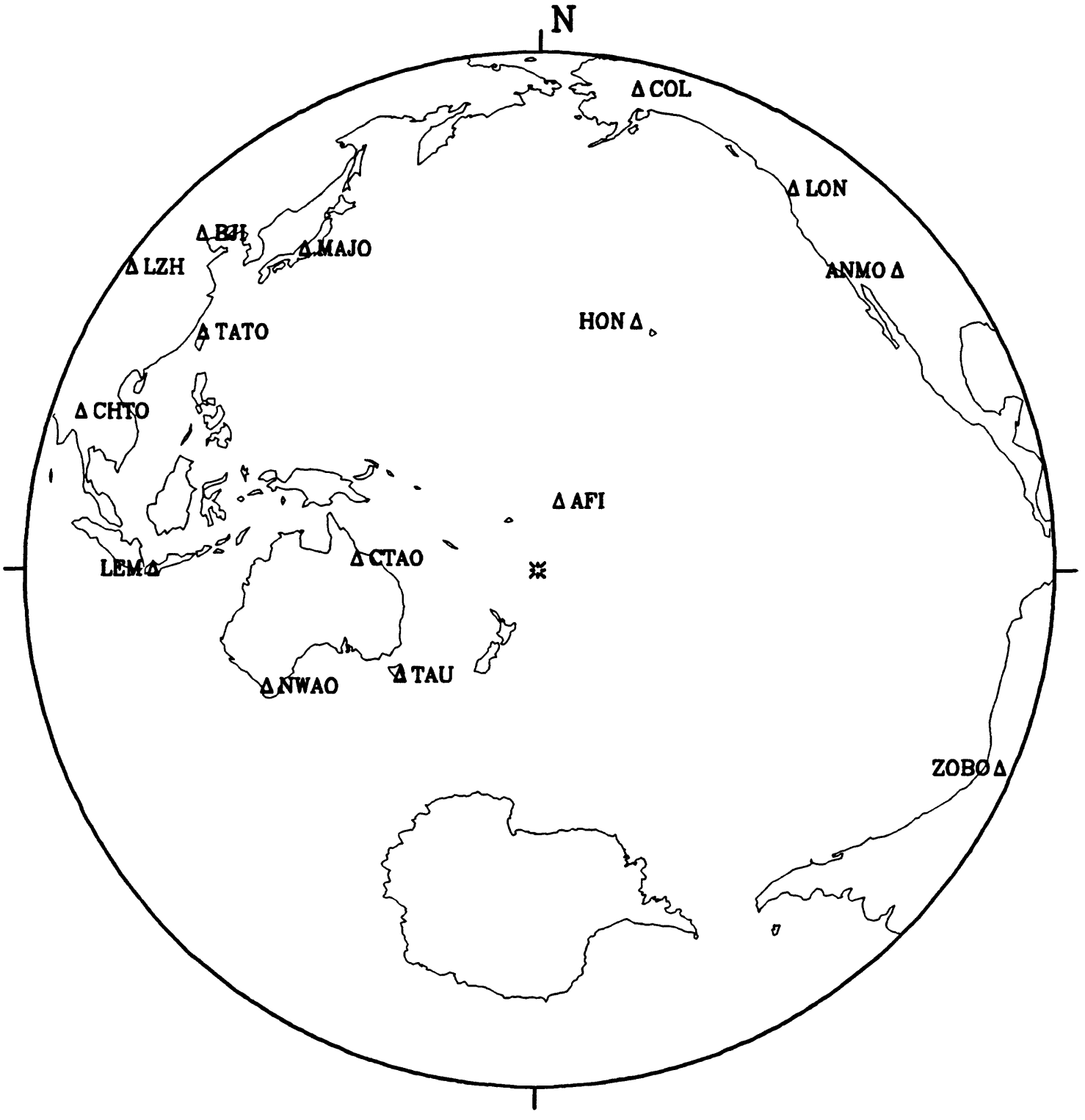
EARTHQUAKES – November 1986 – MAGNITUDE ≧ 5.5

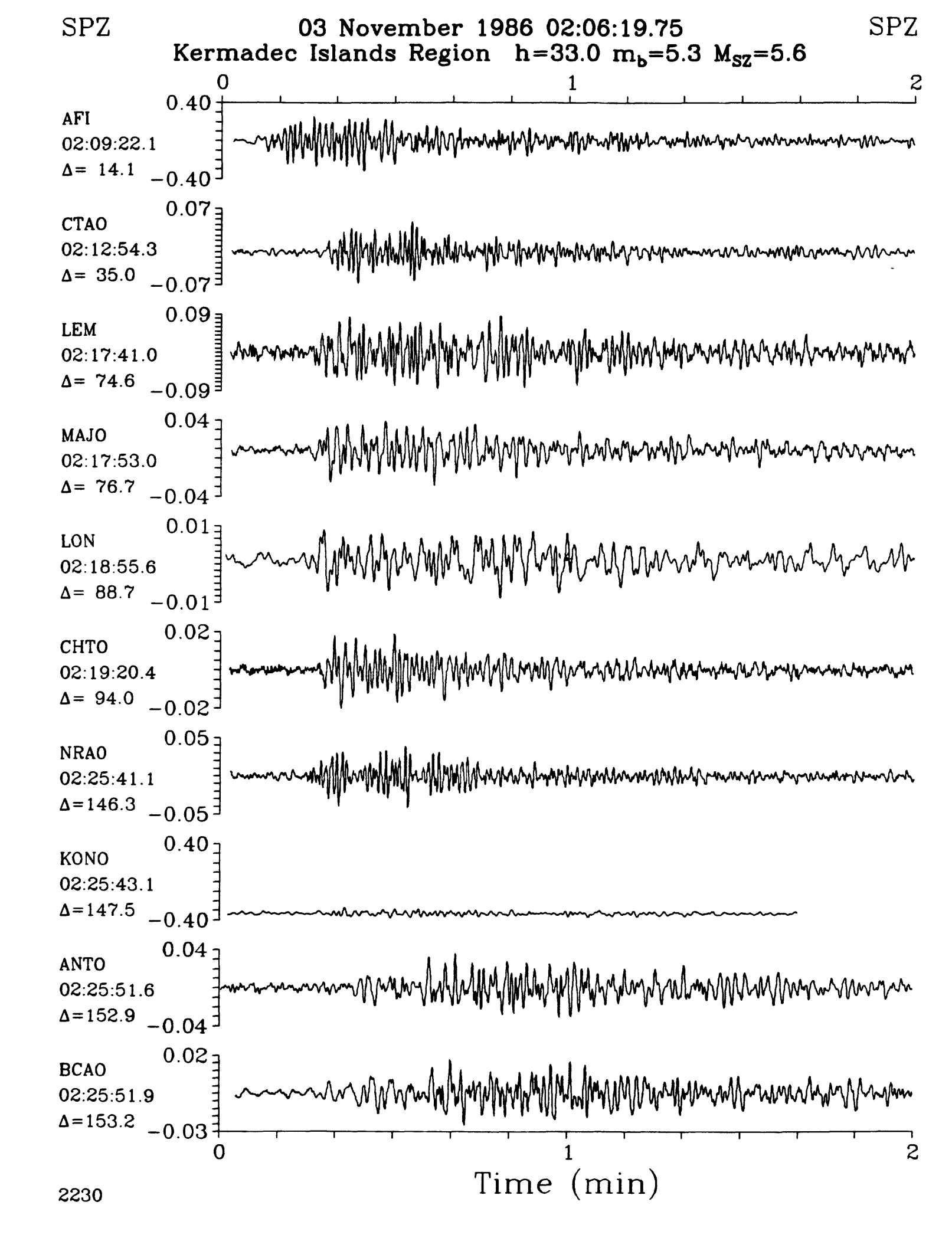


Magnitude		Depth
< 7.0	≧ 7.0	
□	⊞	0–70
◇	◆	71–300
○	⊕	301–800

03 November 1986 02:06:19.75

Kermadec Islands Region



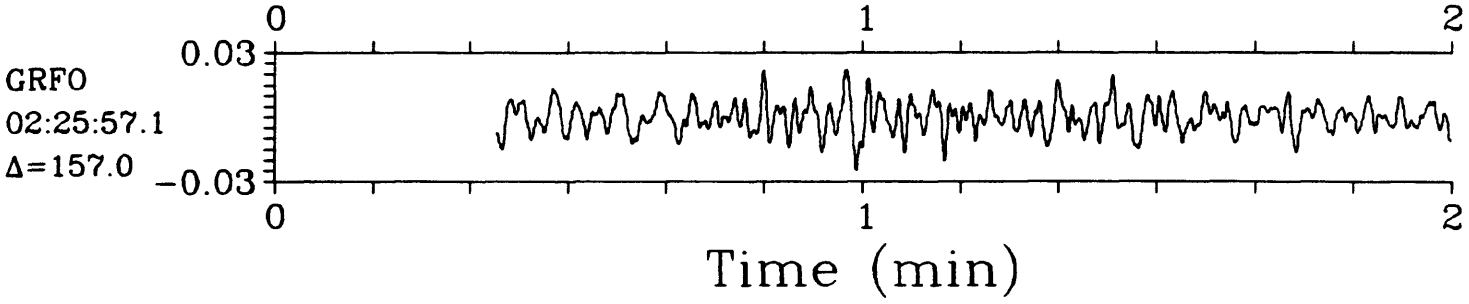

SPZ
03 November 1986 02:06:19.75
SPZ
Kermadec Islands Region h=33.0 m_b=5.3 M_{SZ}=5.6
0
1
2
0.40
AFI
02:09:22.1
Δ= 14.1
−0.40
0.07
CTAO
02:12:54.3
Δ= 35.0
−0.07
0.09
LEM
02:17:41.0
Δ= 74.6
−0.09
0.04
MAJO
02:17:53.0
Δ= 76.7
−0.04
0.01
LON
02:18:55.6
Δ= 88.7
−0.01
0.02
CHTO
02:19:20.4
Δ= 94.0
−0.02
0.05
NRAO
02:25:41.1
Δ=146.3
−0.05
0.40
KONO
02:25:43.1
Δ=147.5
−0.40
0.04
ANTO
02:25:51.6
Δ=152.9
−0.04
0.02
BCAO
02:25:51.9
Δ=153.2
−0.03
0
1
2
Time (min)
2230

SPZ

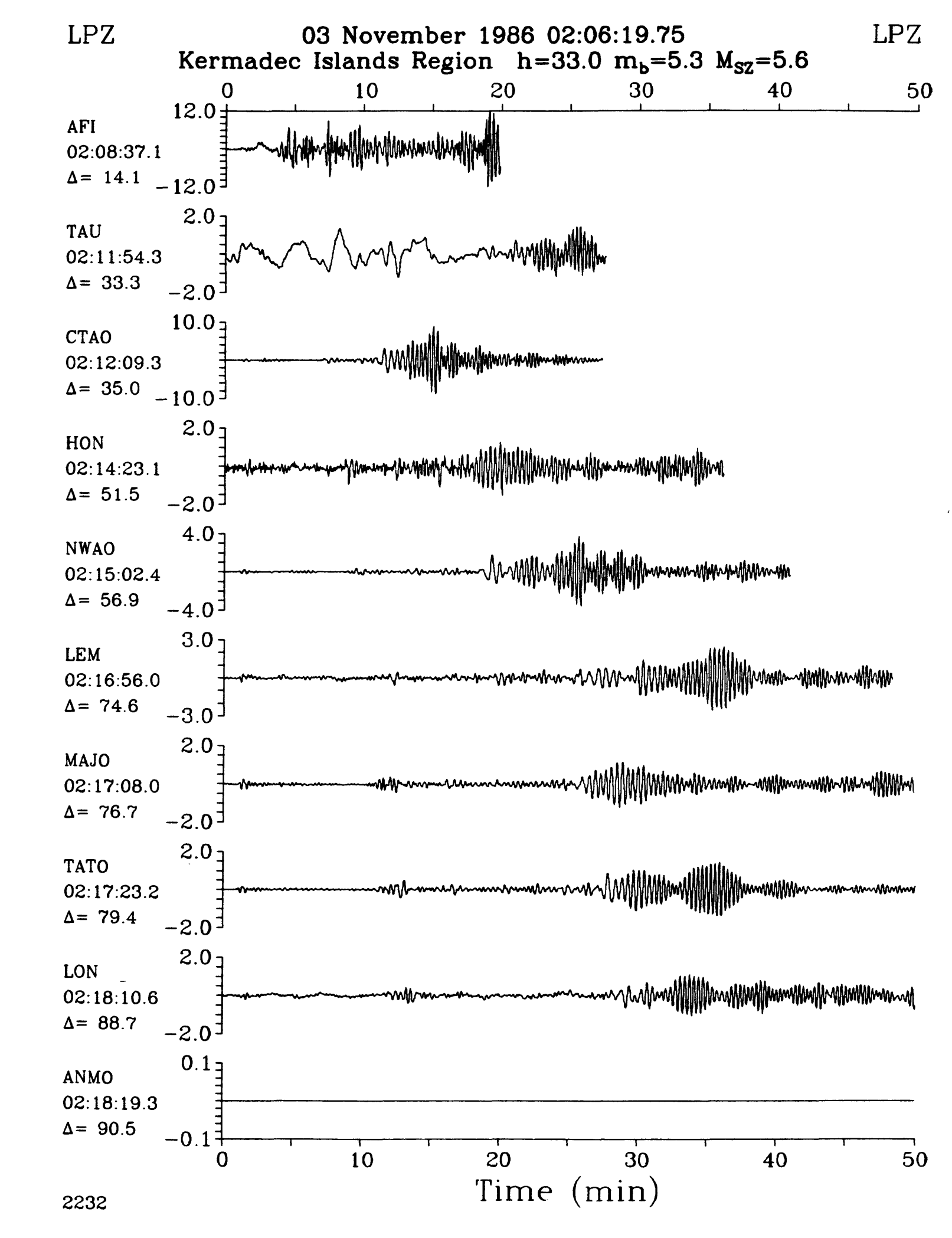
03 November 1986 02:06:19.75

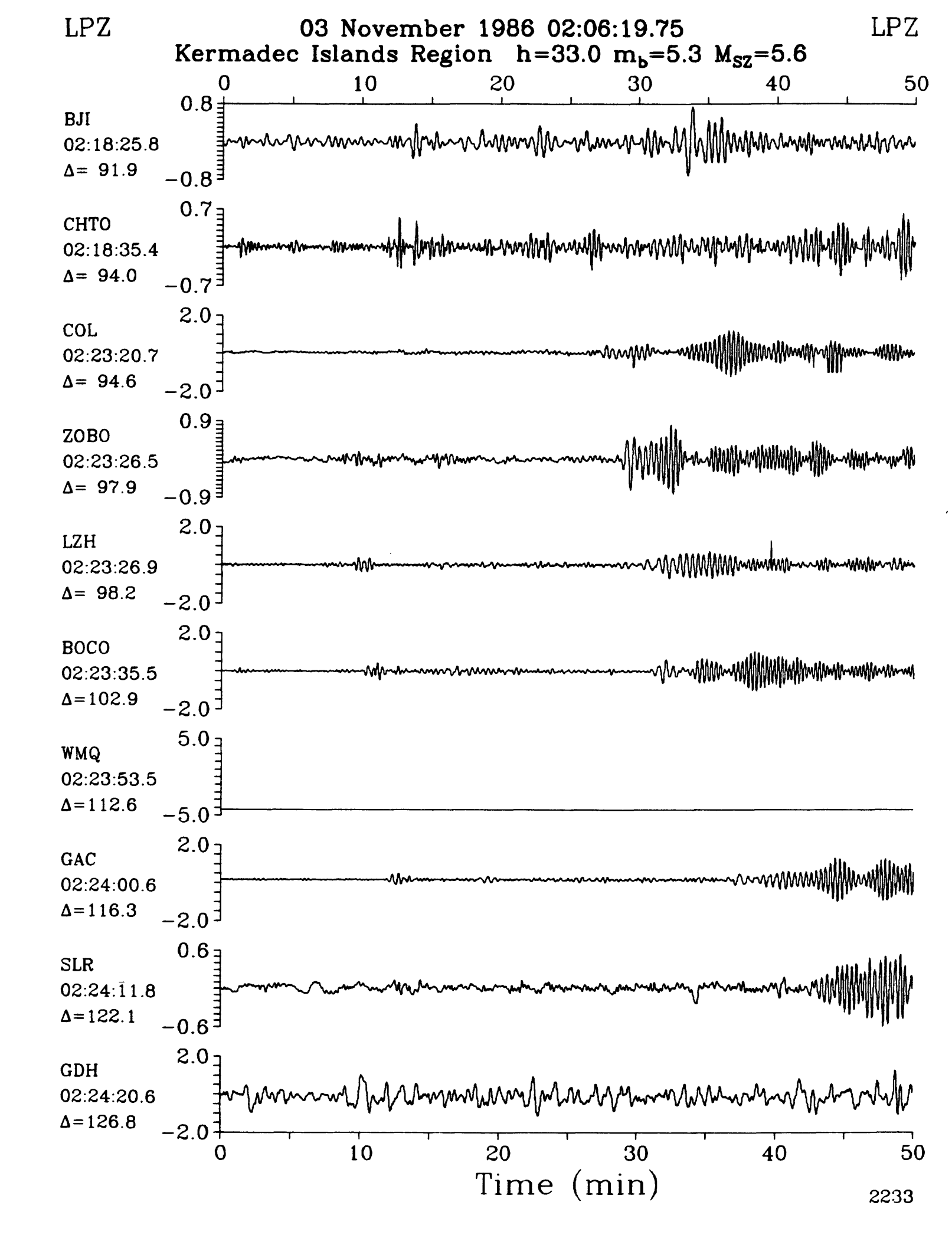
SPZ

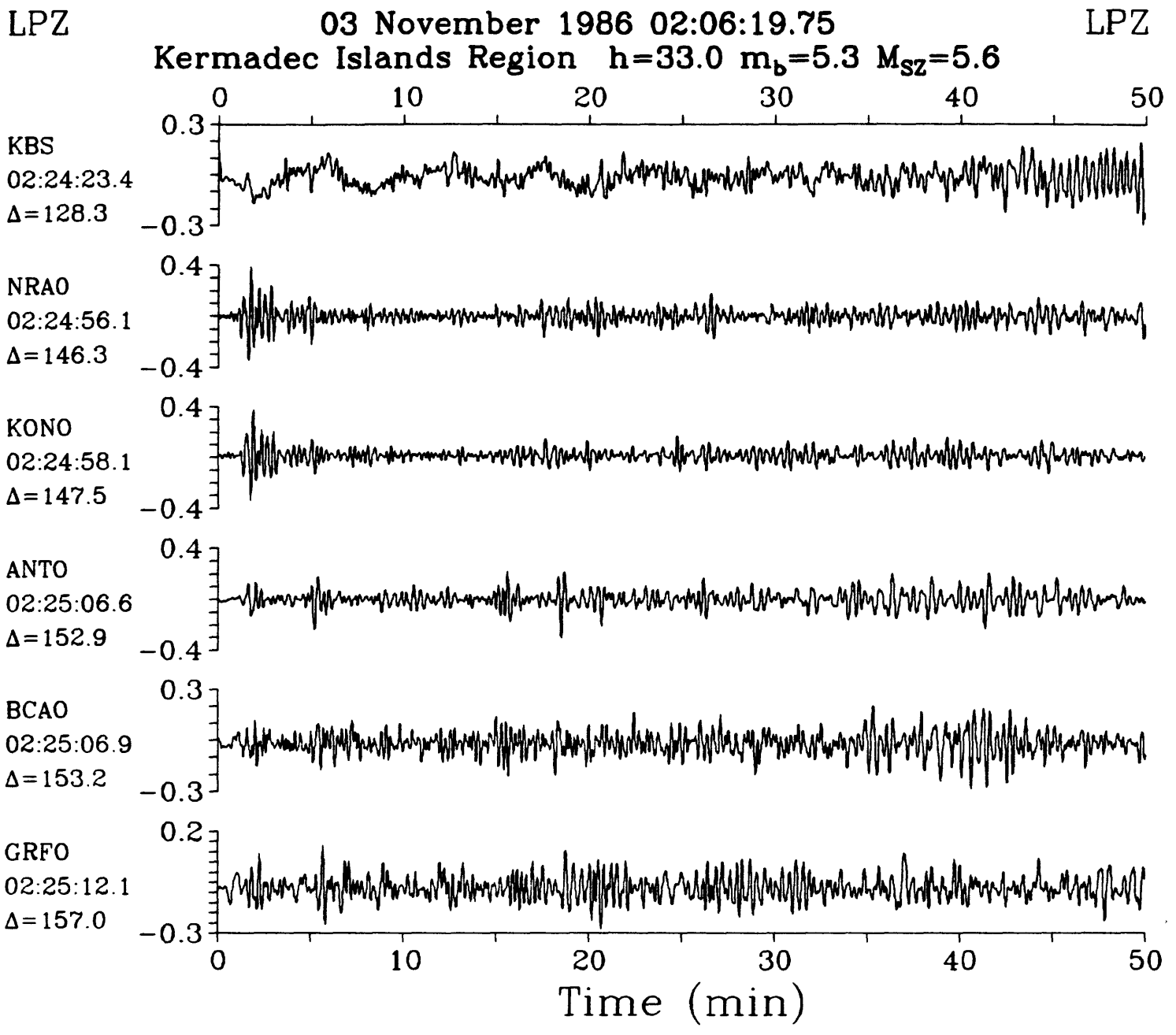
Kermadec Islands Region h=33.0 m_b=5.3 M_{SZ}=5.6



Time (min)

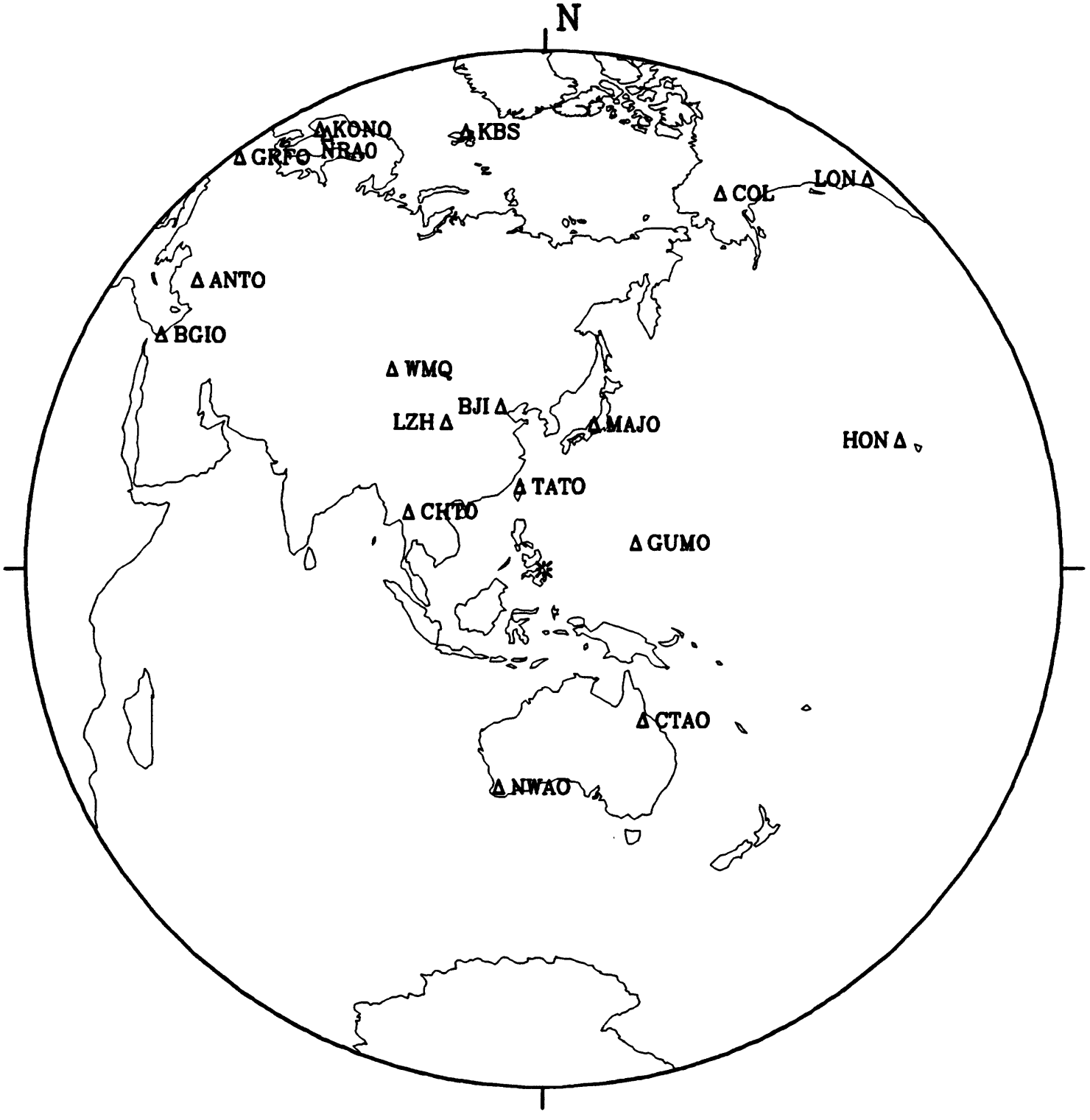

LPZ
03 November 1986 02:06:19.75
LPZ
Kermadec Islands Region h=33.0 m_b=5.3 M_{SZ}=5.6
0
10
20
30
40
50
AFI
02:08:37.1
Δ= 14.1
12.0
-12.0
TAU
02:11:54.3
Δ= 33.3
2.0
-2.0
CTAO
02:12:09.3
Δ= 35.0
10.0
-10.0
HON
02:14:23.1
Δ= 51.5
2.0
-2.0
NWAO
02:15:02.4
Δ= 56.9
4.0
-4.0
LEM
02:16:56.0
Δ= 74.6
3.0
-3.0
MAJO
02:17:08.0
Δ= 76.7
2.0
-2.0
TATO
02:17:23.2
Δ= 79.4
2.0
-2.0
LON
02:18:10.6
Δ= 88.7
2.0
-2.0
ANMO
02:18:19.3
Δ= 90.5
0.1
-0.1
0
10
20
30
40
50
Time (min)
2232

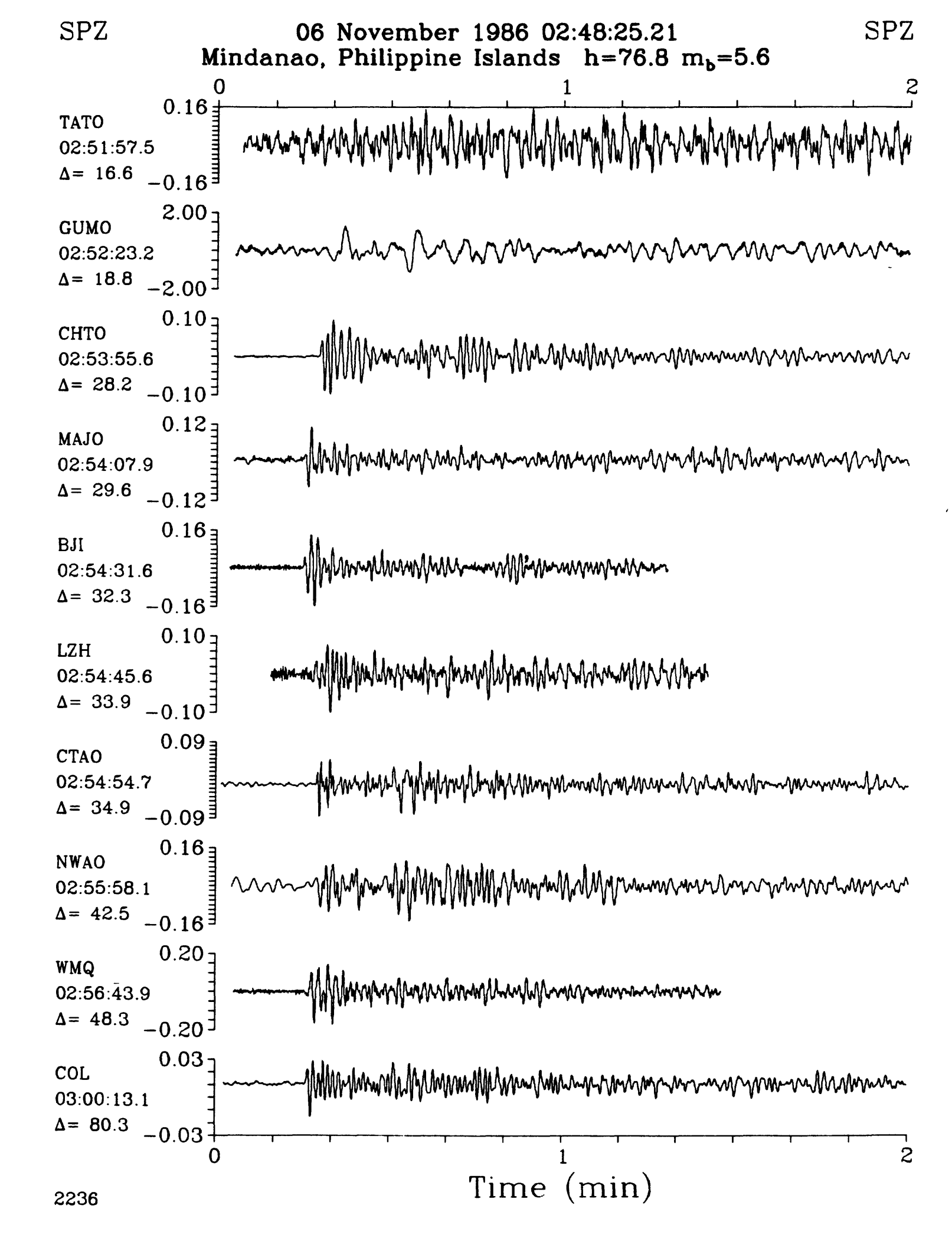

LPZ
03 November 1986 02:06:19.75
LPZ
Kermadec Islands Region h=33.0 m_b=5.3 M_{SZ}=5.6
0
10
20
30
40
50
BJI
02:18:25.8
Δ= 91.9
0.8
-0.8
CHTO
02:18:35.4
Δ= 94.0
0.7
-0.7
COL
02:23:20.7
Δ= 94.6
2.0
-2.0
ZOBO
02:23:26.5
Δ= 97.9
0.9
-0.9
LZH
02:23:26.9
Δ= 98.2
2.0
-2.0
BOCO
02:23:35.5
Δ=102.9
2.0
-2.0
WMQ
02:23:53.5
Δ=112.6
5.0
-5.0
GAC
02:24:00.6
Δ=116.3
2.0
-2.0
SLR
02:24:11.8
Δ=122.1
0.6
-0.6
GDH
02:24:20.6
Δ=126.8
2.0
-2.0
0
10
20
30
40
50
Time (min)
2233


LPZ
03 November 1986 02:06:19.75
LPZ
Kermadec Islands Region h=33.0 m_b=5.3 M_{SZ}=5.6
0
10
20
30
40
50
KBS
02:24:23.4
Δ=128.3
0.3
−0.3
NRAO
02:24:56.1
Δ=146.3
0.4
−0.4
KONO
02:24:58.1
Δ=147.5
0.4
−0.4
ANTO
02:25:06.6
Δ=152.9
0.4
−0.4
BCAO
02:25:06.9
Δ=153.2
0.3
−0.3
GRFO
02:25:12.1
Δ=157.0
0.2
−0.3
0
10
20
30
40
50
Time (min)

06 November 1986 02:48:25.21

Mindanao, Philippine Islands



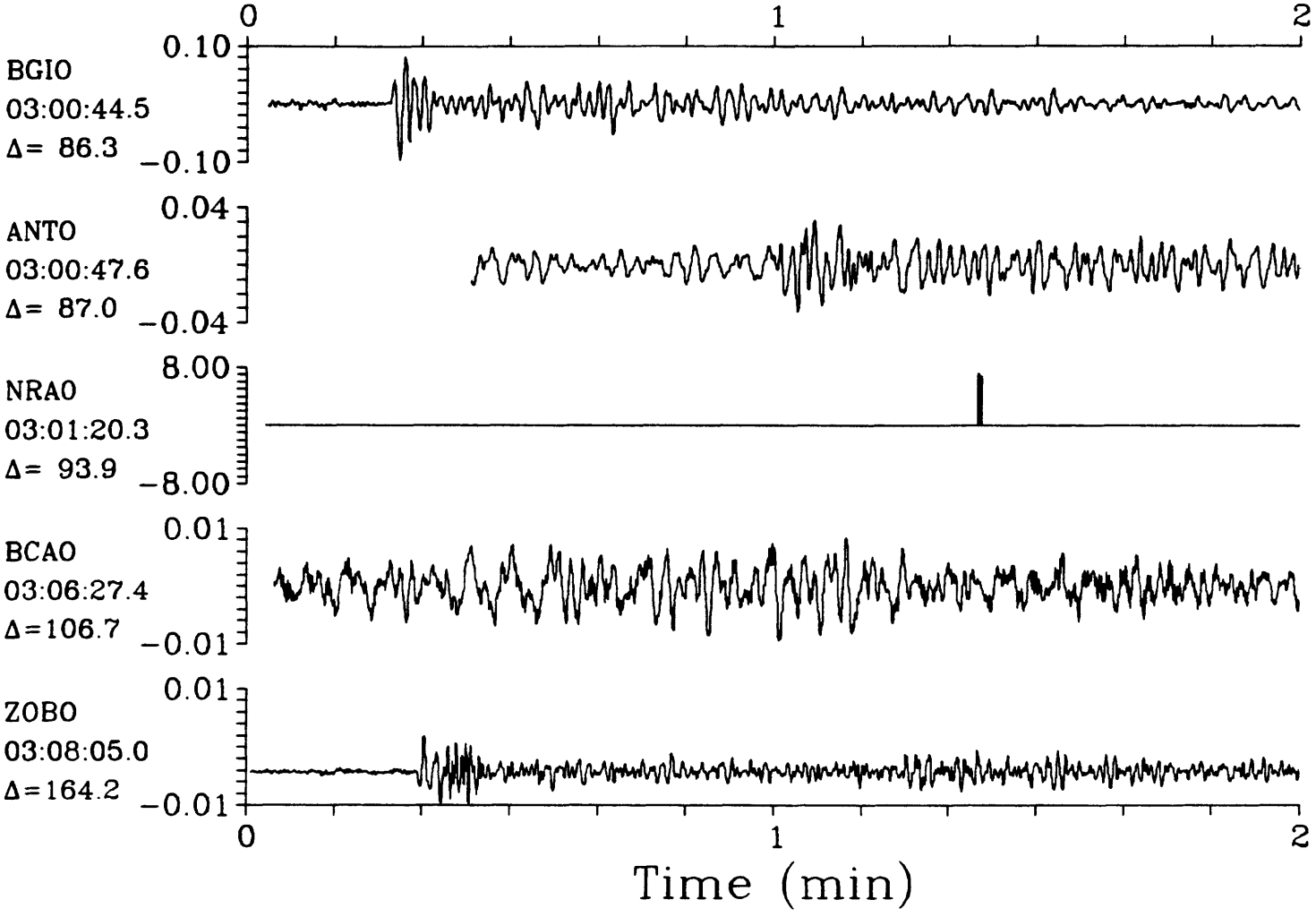

SPZ
06 November 1986 02:48:25.21
Mindanao, Philippine Islands h=76.8 m_b=5.6
SPZ
0
1
2
TATO
02:51:57.5
Δ= 16.6
0.16
-0.16
GUMO
02:52:23.2
Δ= 18.8
2.00
-2.00
CHTO
02:53:55.6
Δ= 28.2
0.10
-0.10
MAJO
02:54:07.9
Δ= 29.6
0.12
-0.12
BJI
02:54:31.6
Δ= 32.3
0.16
-0.16
LZH
02:54:45.6
Δ= 33.9
0.10
-0.10
CTAO
02:54:54.7
Δ= 34.9
0.09
-0.09
NWAO
02:55:58.1
Δ= 42.5
0.16
-0.16
WMQ
02:56:43.9
Δ= 48.3
0.20
-0.20
COL
03:00:13.1
Δ= 80.3
0.03
-0.03
0
1
2
Time (min)
2236

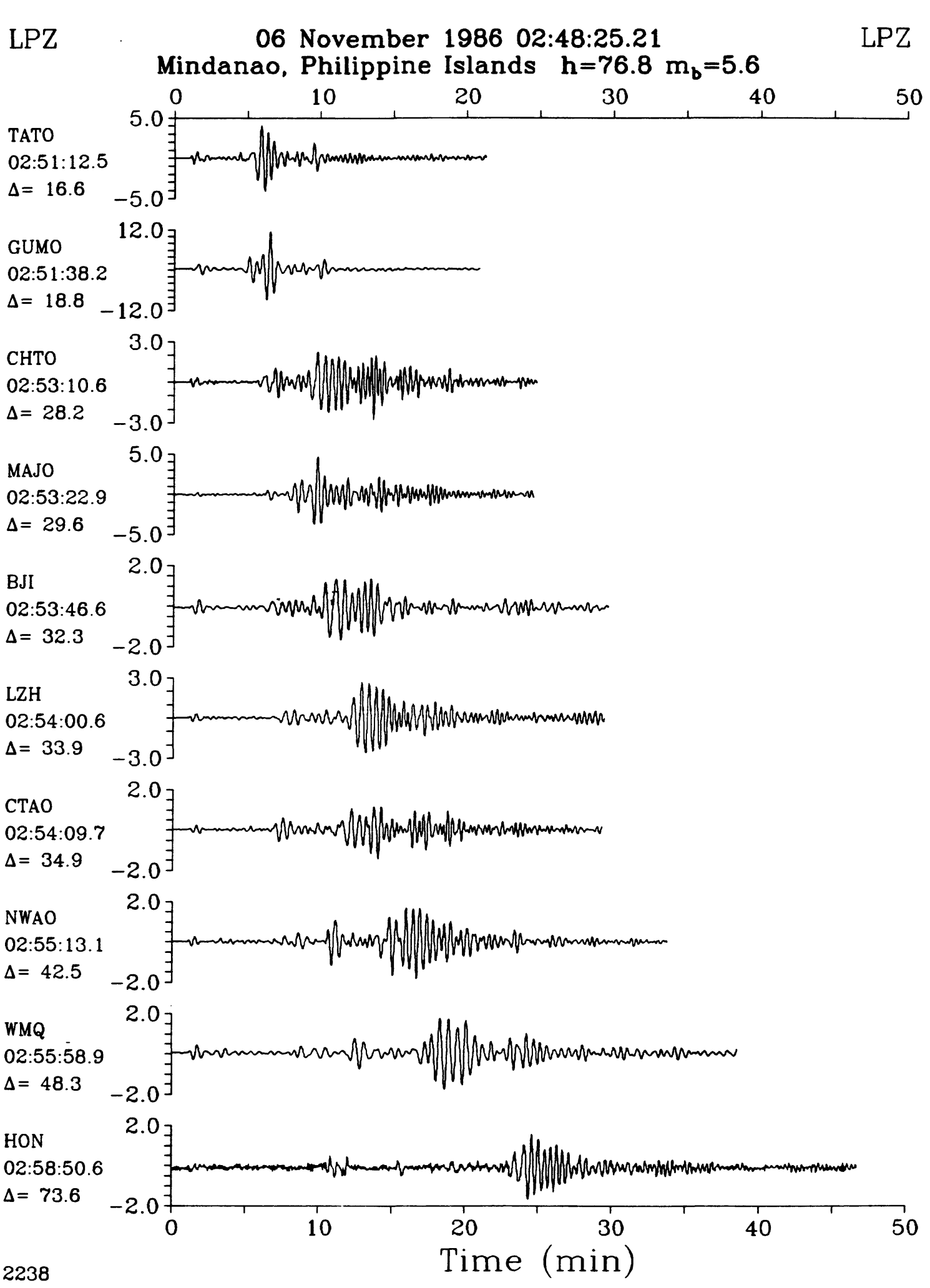
SPZ

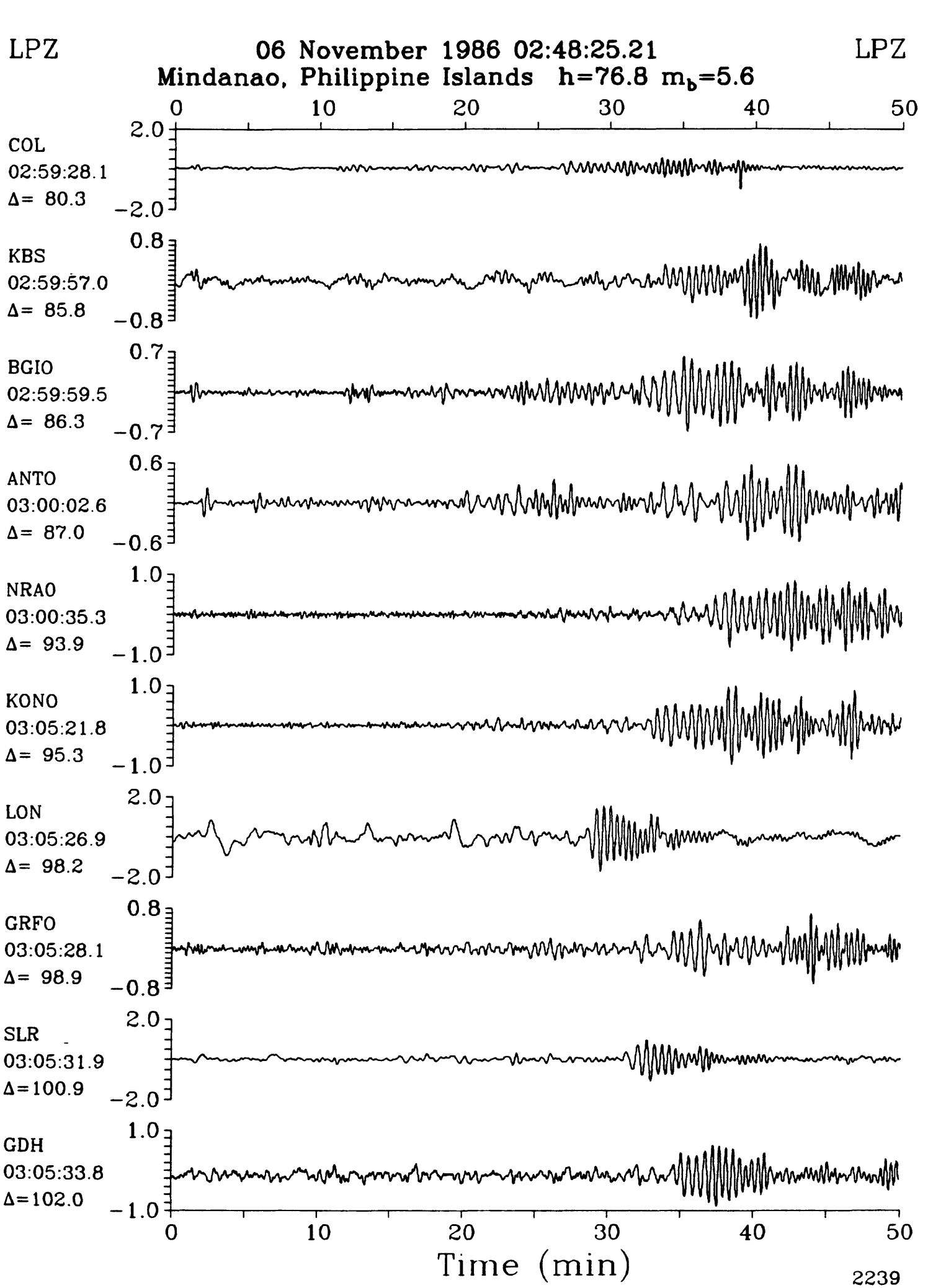
06 November 1986 02:48:25.21

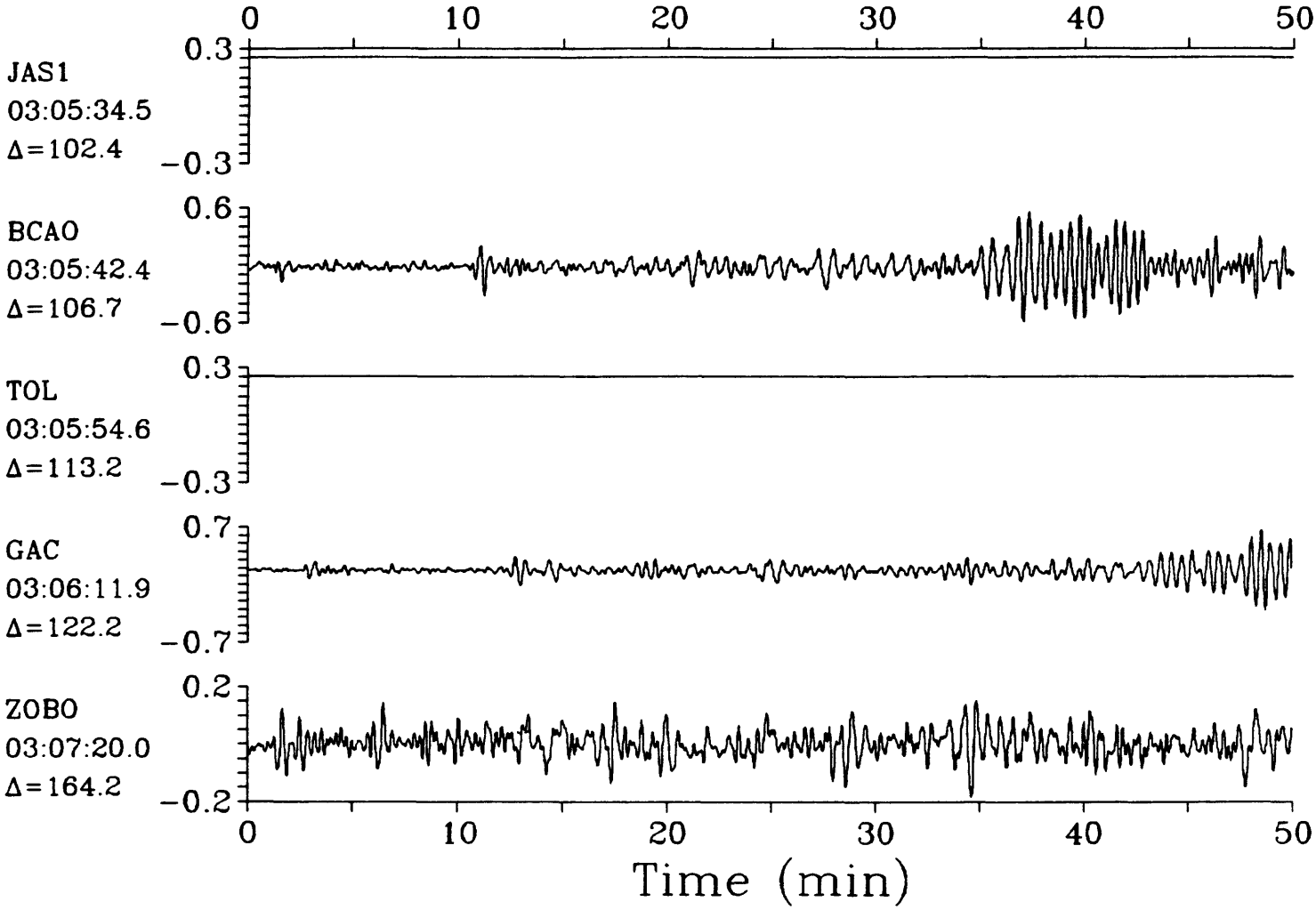
SPZ

Mindanao, Philippine Islands h=76.8 m_b=5.6



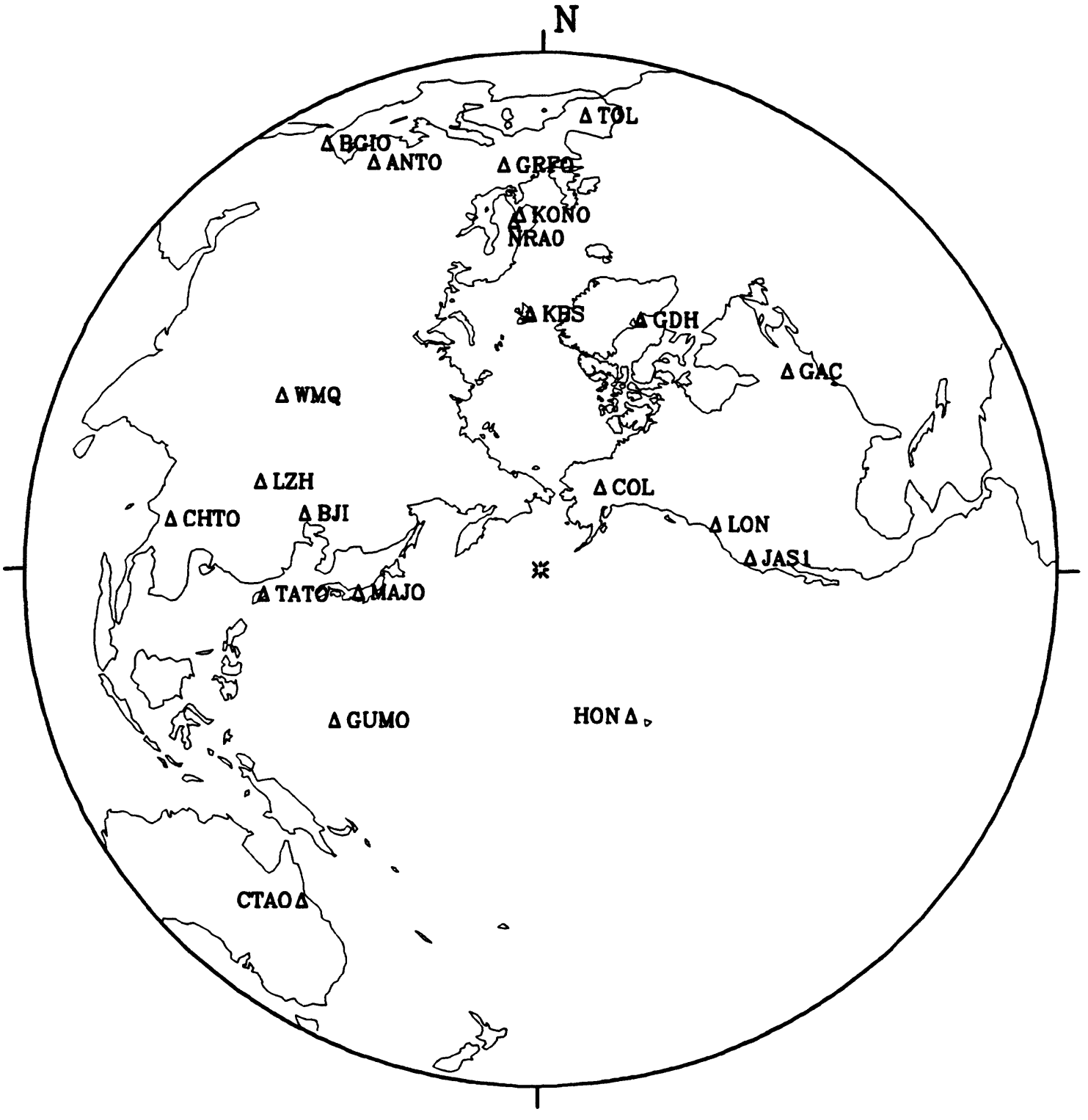

LPZ
06 November 1986 02:48:25.21
LPZ
Mindanao, Philippine Islands h=76.8 m_b=5.6
0
10
20
30
40
50
TATO
02:51:12.5
Δ= 16.6
5.0
-5.0
GUMO
02:51:38.2
Δ= 18.8
12.0
-12.0
CHTO
02:53:10.6
Δ= 28.2
3.0
-3.0
MAJO
02:53:22.9
Δ= 29.6
5.0
-5.0
BJI
02:53:46.6
Δ= 32.3
2.0
-2.0
LZH
02:54:00.6
Δ= 33.9
3.0
-3.0
CTAO
02:54:09.7
Δ= 34.9
2.0
-2.0
NWAO
02:55:13.1
Δ= 42.5
2.0
-2.0
WMQ
02:55:58.9
Δ= 48.3
2.0
-2.0
HON
02:58:50.6
Δ= 73.6
2.0
-2.0
0
10
20
30
40
50
Time (min)

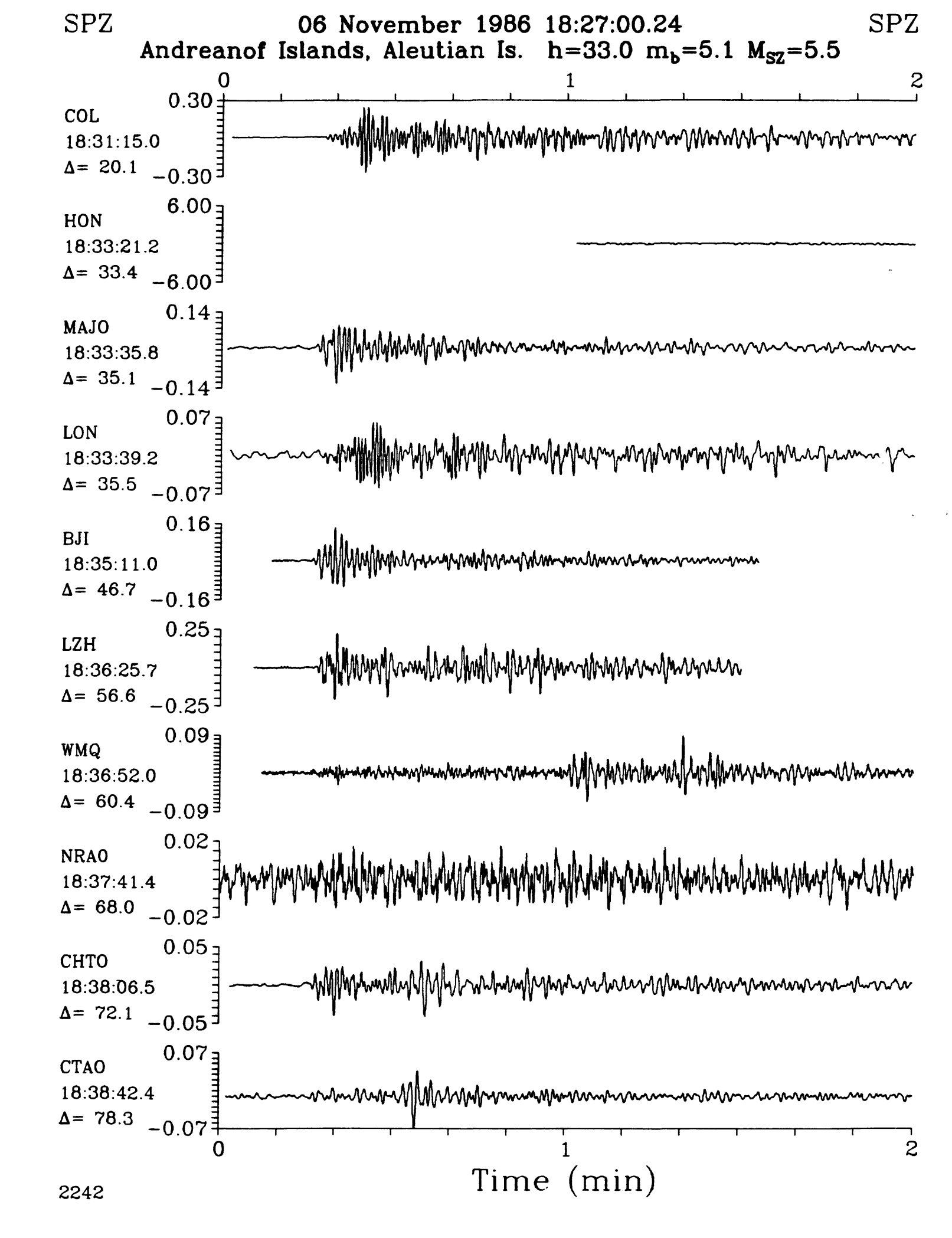

LPZ
06 November 1986 02:48:25.21
Mindanao, Philippine Islands h=76.8 m_b=5.6
LPZ
0
10
20
30
40
50
COL
02:59:28.1
Δ= 80.3
2.0
-2.0
KBS
02:59:57.0
Δ= 85.8
0.8
-0.8
BGIO
02:59:59.5
Δ= 86.3
0.7
-0.7
ANTO
03:00:02.6
Δ= 87.0
0.6
-0.6
NRAO
03:00:35.3
Δ= 93.9
1.0
-1.0
KONO
03:05:21.8
Δ= 95.3
1.0
-1.0
LON
03:05:26.9
Δ= 98.2
2.0
-2.0
GRFO
03:05:28.1
Δ= 98.9
0.8
-0.8
SLR
03:05:31.9
Δ=100.9
2.0
-2.0
GDH
03:05:33.8
Δ=102.0
1.0
-1.0
0
10
20
30
40
50
Time (min)
2239


06 November 1986 02:48:25.21
Mindanao, Philippine Islands h=76.8 m_b=5.6
0
10
20
30
40
50
JAS1
03:05:34.5
Δ=102.4
0.3
−0.3
BCAO
03:05:42.4
Δ=106.7
0.6
−0.6
TOL
03:05:54.6
Δ=113.2
0.3
−0.3
GAC
03:06:11.9
Δ=122.2
0.7
−0.7
ZOBO
03:07:20.0
Δ=164.2
0.2
−0.2
Time (min)

06 November 1986 18:27:00.24

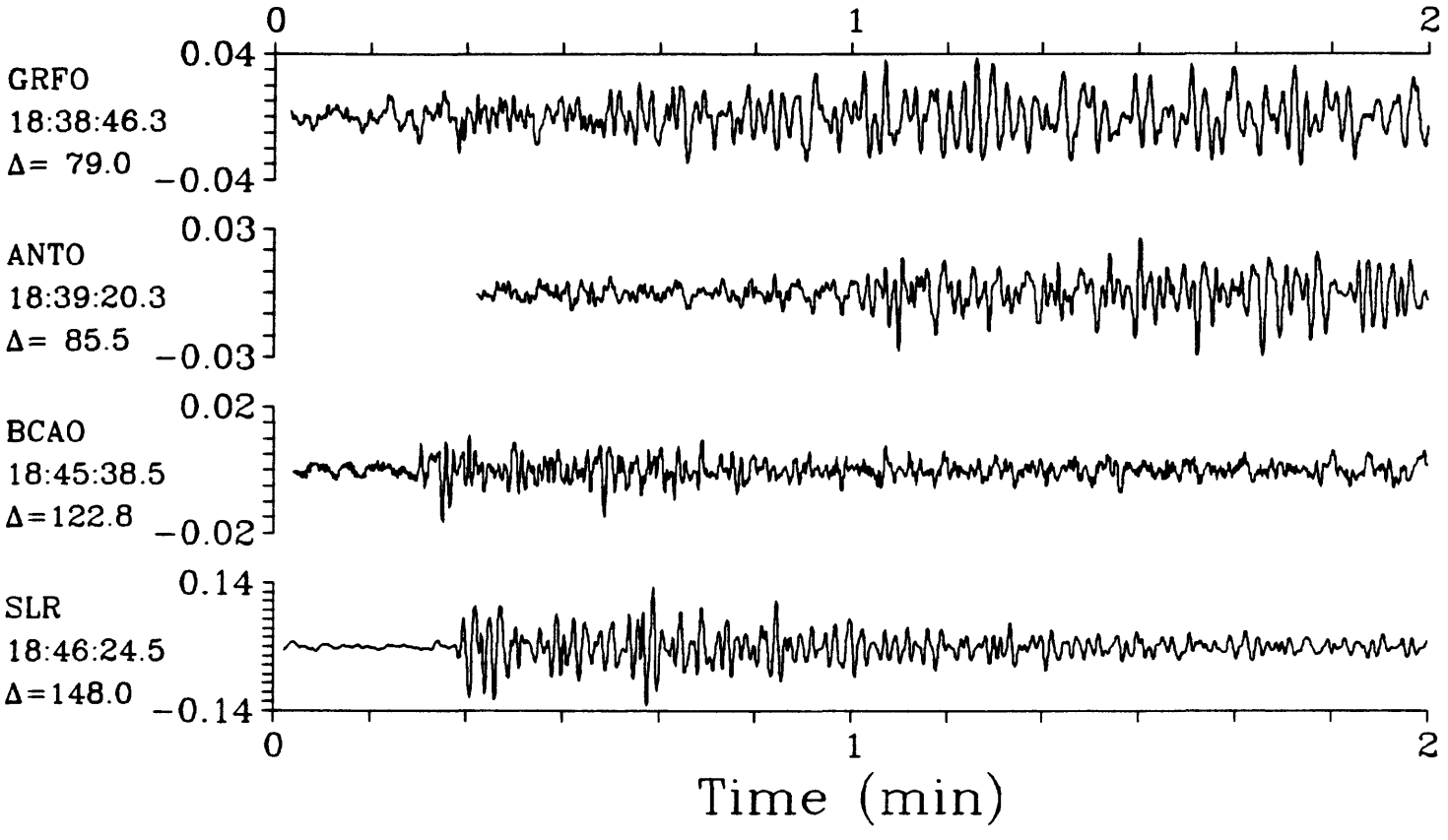
Andreanof Islands, Aleutian Is.

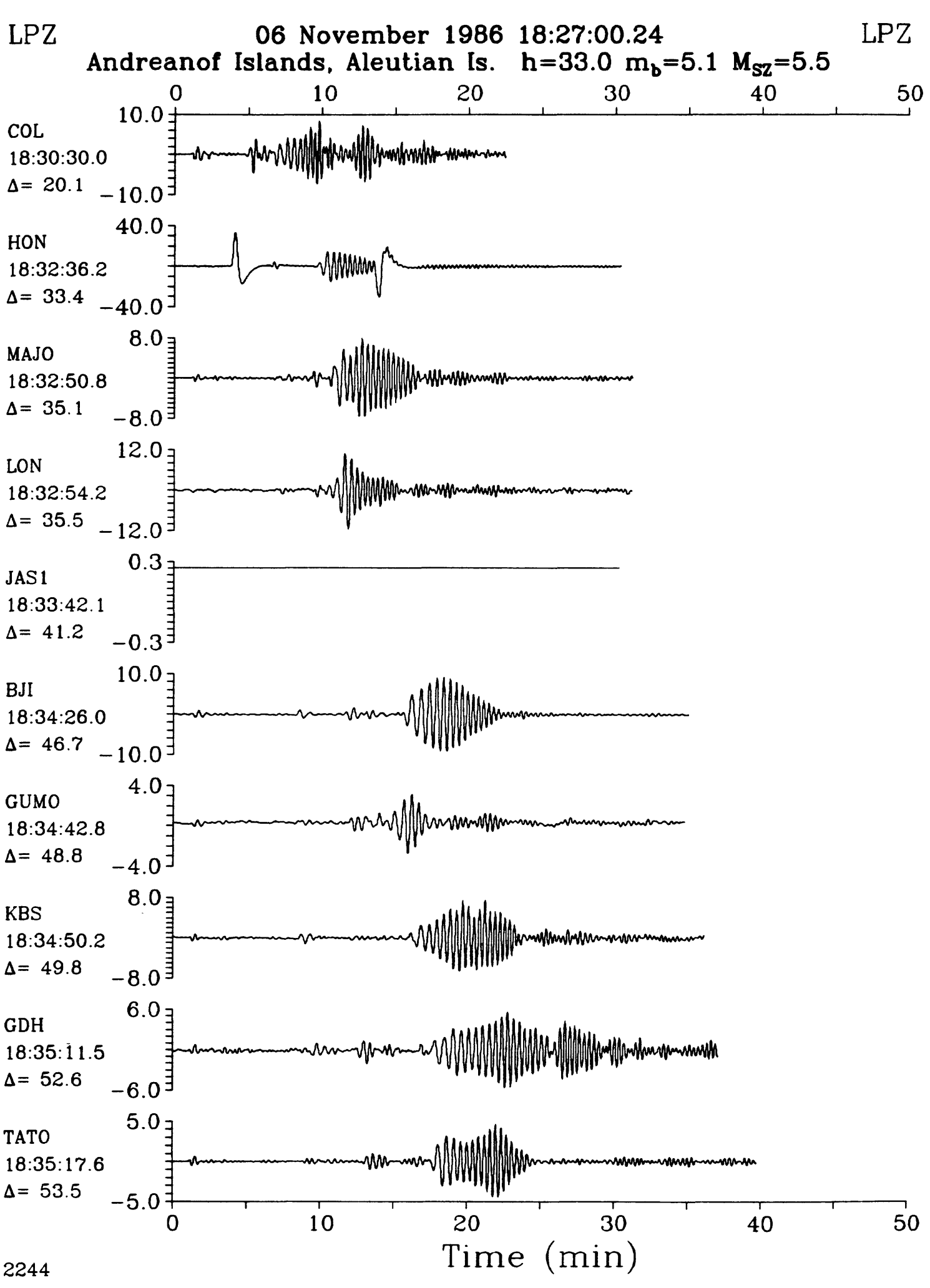


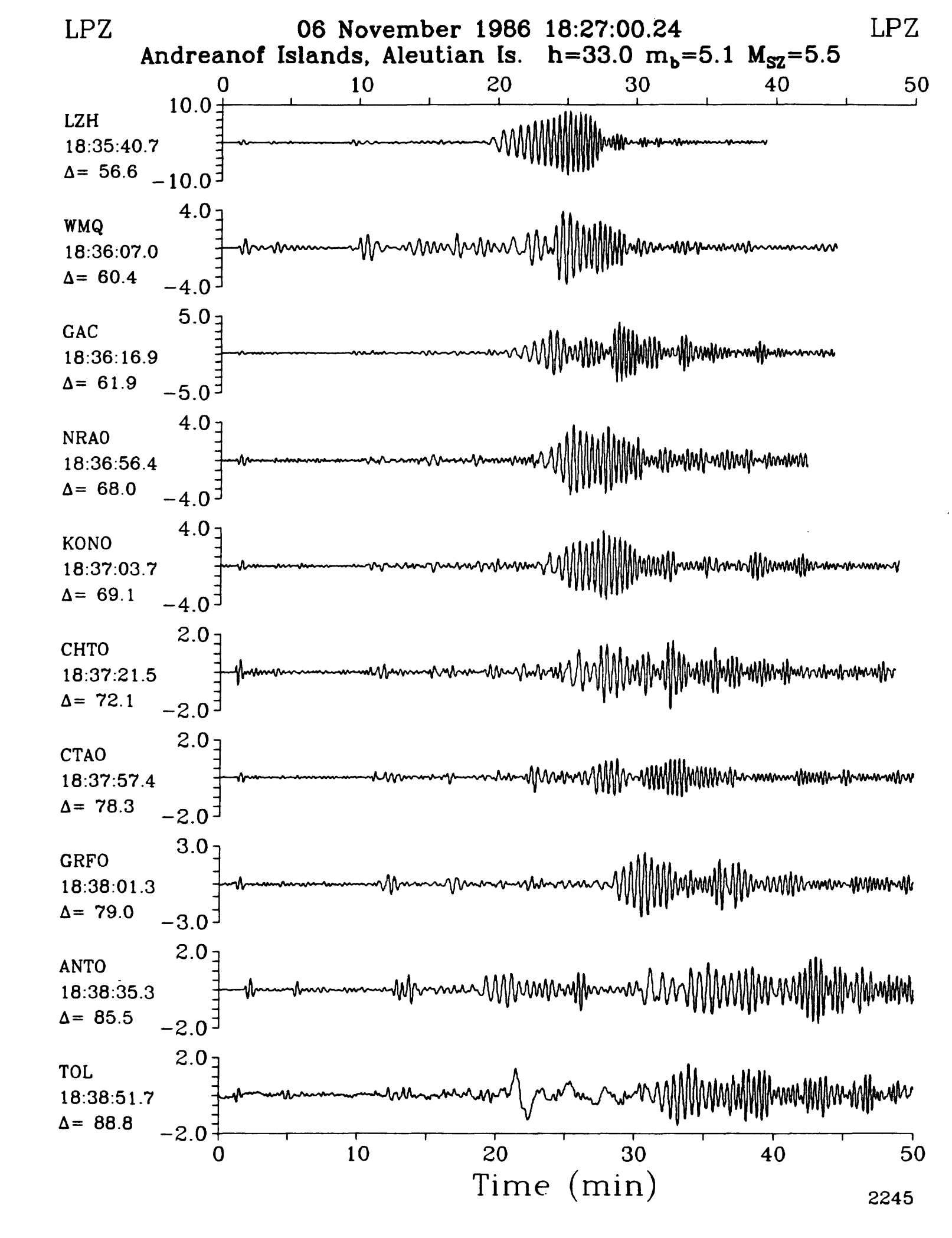

SPZ
06 November 1986 18:27:00.24
SPZ
Andreanof Islands, Aleutian Is. h=33.0 m_b=5.1 M_{SZ}=5.5
0
1
2
COL
18:31:15.0
Δ= 20.1
0.30
-0.30
HON
18:33:21.2
Δ= 33.4
6.00
-6.00
MAJO
18:33:35.8
Δ= 35.1
0.14
-0.14
LON
18:33:39.2
Δ= 35.5
0.07
-0.07
BJI
18:35:11.0
Δ= 46.7
0.16
-0.16
LZH
18:36:25.7
Δ= 56.6
0.25
-0.25
WMQ
18:36:52.0
Δ= 60.4
0.09
-0.09
NRAO
18:37:41.4
Δ= 68.0
0.02
-0.02
CHTO
18:38:06.5
Δ= 72.1
0.05
-0.05
CTAO
18:38:42.4
Δ= 78.3
0.07
-0.07
0
1
2
Time (min)
2242

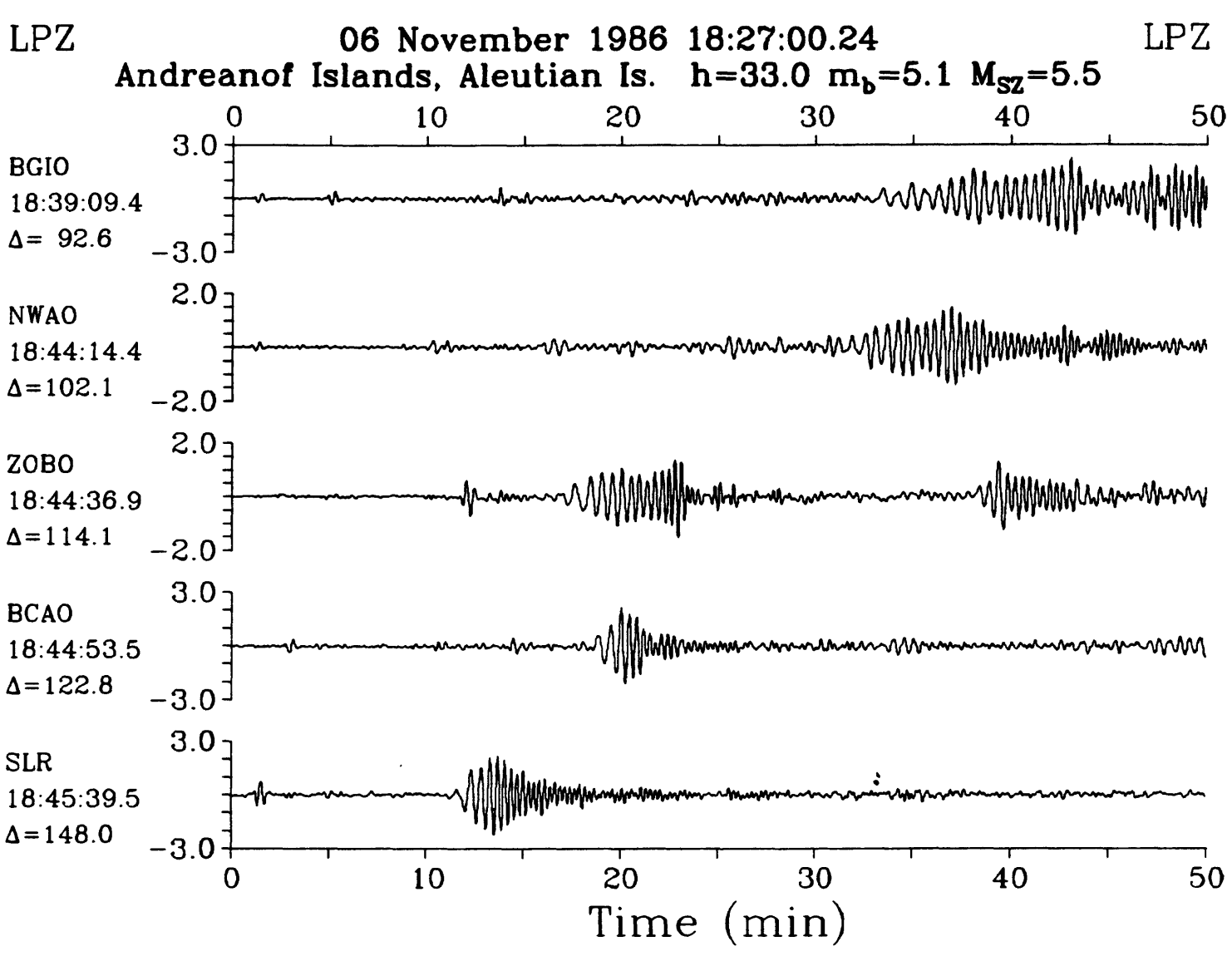
SPZ 06 November 1986 18:27:00.24 SPZ

Andreanof Islands, Aleutian Is. h=33.0 m_b=5.1 M_{SZ}=5.5



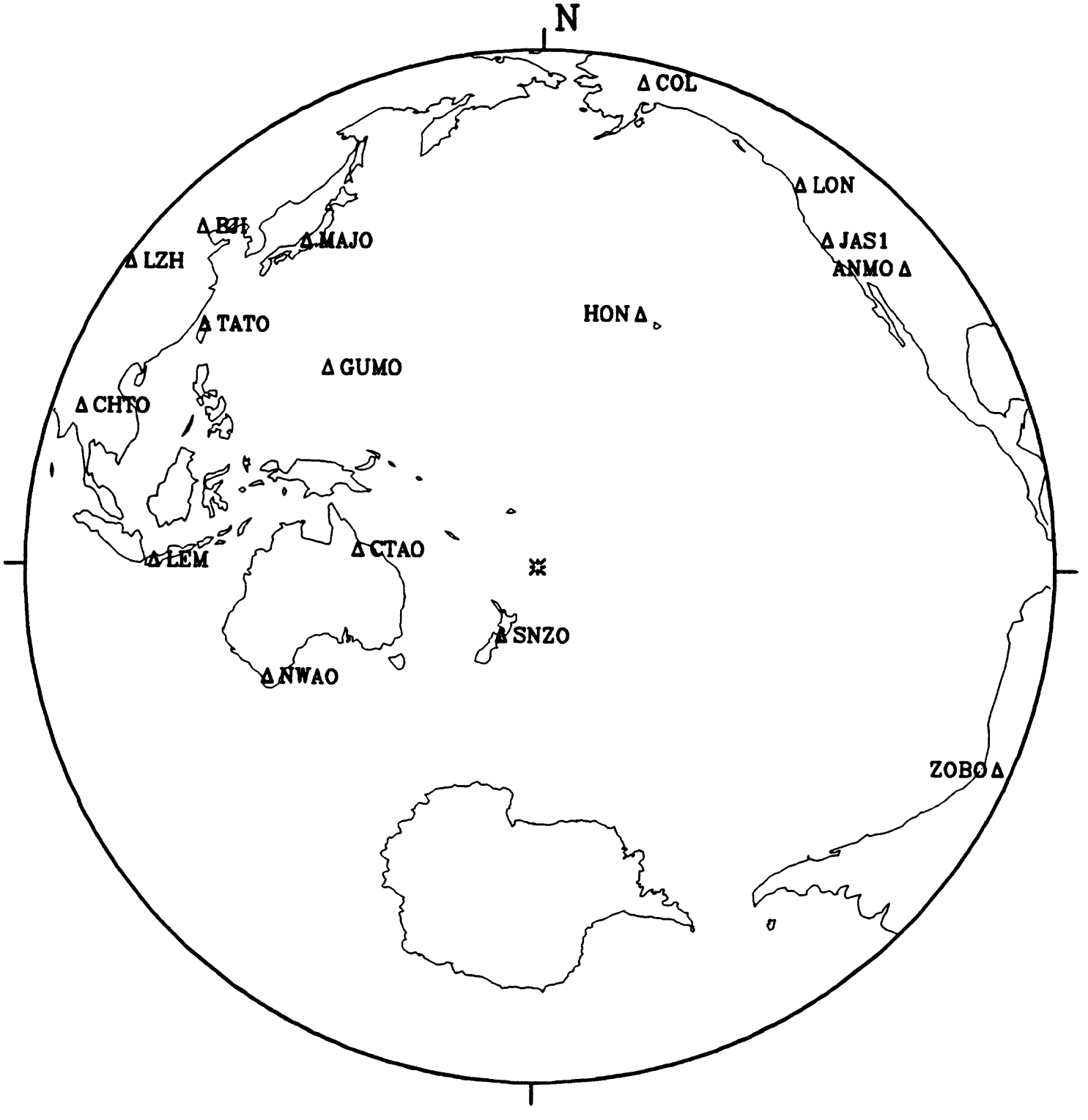

LPZ
06 November 1986 18:27:00.24
LPZ
Andreanof Islands, Aleutian Is. h=33.0 m_b=5.1 M_{SZ}=5.5
0
10
20
30
40
50
COL
18:30:30.0
Δ= 20.1
10.0
-10.0
HON
18:32:36.2
Δ= 33.4
40.0
-40.0
MAJO
18:32:50.8
Δ= 35.1
8.0
-8.0
LON
18:32:54.2
Δ= 35.5
12.0
-12.0
JAS1
18:33:42.1
Δ= 41.2
0.3
-0.3
BJI
18:34:26.0
Δ= 46.7
10.0
-10.0
GUMO
18:34:42.8
Δ= 48.8
4.0
-4.0
KBS
18:34:50.2
Δ= 49.8
8.0
-8.0
GDH
18:35:11.5
Δ= 52.6
6.0
-6.0
TATO
18:35:17.6
Δ= 53.5
5.0
-5.0
0
10
20
30
40
50
Time (min)
2244

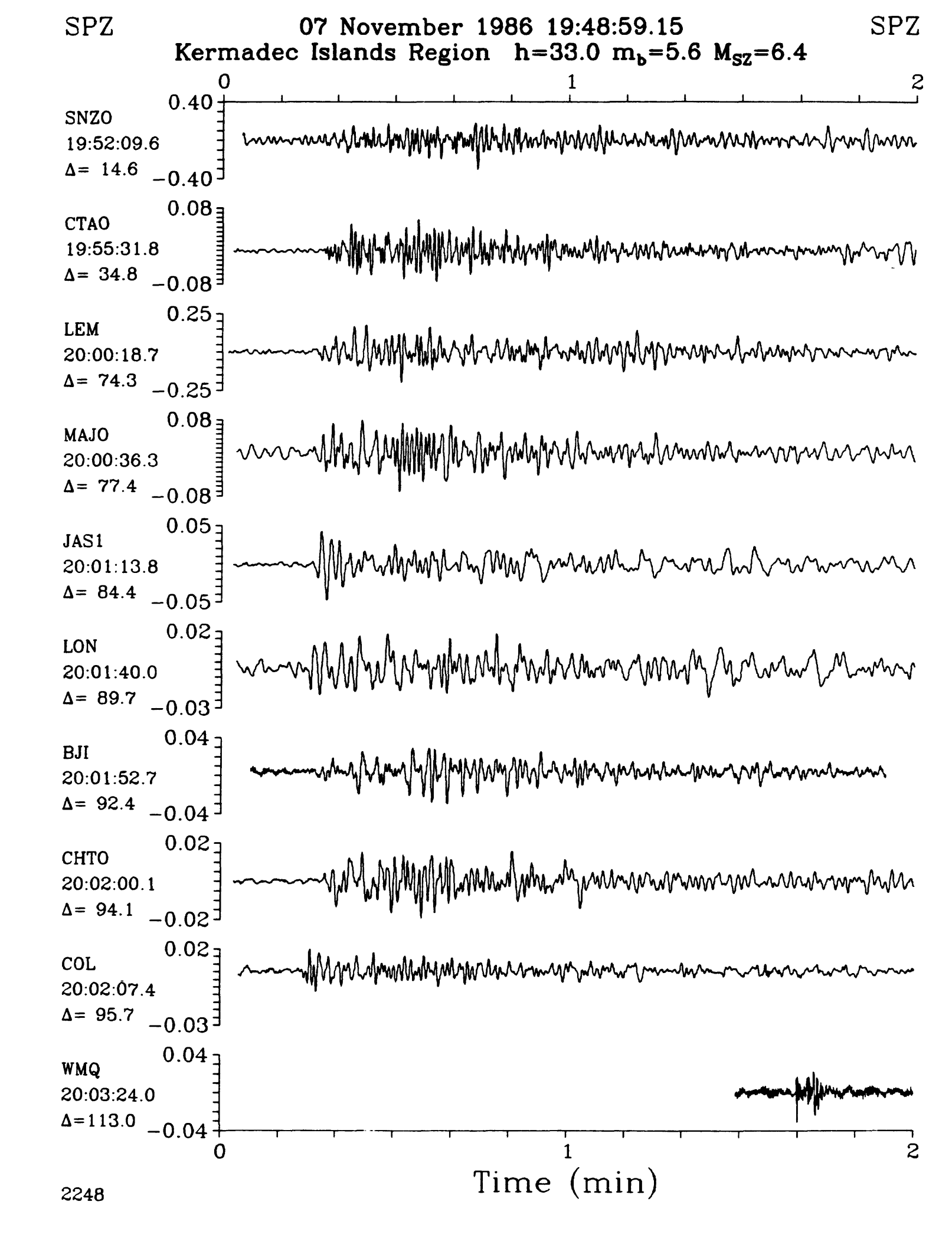

LPZ
06 November 1986 18:27:00.24
LPZ
Andreanof Islands, Aleutian Is. h=33.0 m_b=5.1 M_{SZ}=5.5
0
10
20
30
40
50
LZH
18:35:40.7
Δ= 56.6
10.0
-10.0
WMQ
18:36:07.0
Δ= 60.4
4.0
-4.0
GAC
18:36:16.9
Δ= 61.9
5.0
-5.0
NRAO
18:36:56.4
Δ= 68.0
4.0
-4.0
KONO
18:37:03.7
Δ= 69.1
4.0
-4.0
CHTO
18:37:21.5
Δ= 72.1
2.0
-2.0
CTAO
18:37:57.4
Δ= 78.3
2.0
-2.0
GRFO
18:38:01.3
Δ= 79.0
3.0
-3.0
ANTO
18:38:35.3
Δ= 85.5
2.0
-2.0
TOL
18:38:51.7
Δ= 88.8
2.0
-2.0
0
10
20
30
40
50
Time (min)
2245


LPZ
06 November 1986 18:27:00.24
LPZ
Andreanof Islands, Aleutian Is. h=33.0 m_b=5.1 M_{SZ}=5.5
BGIO
18:39:09.4
Δ= 92.6
NWAO
18:44:14.4
Δ=102.1
ZOBO
18:44:36.9
Δ=114.1
BCAO
18:44:53.5
Δ=122.8
SLR
18:45:39.5
Δ=148.0
3.0
-3.0
2.0
-2.0
0
10
20
30
40
50
Time (min)

07 November 1986 19:48:59.15

Kermadec Islands Region



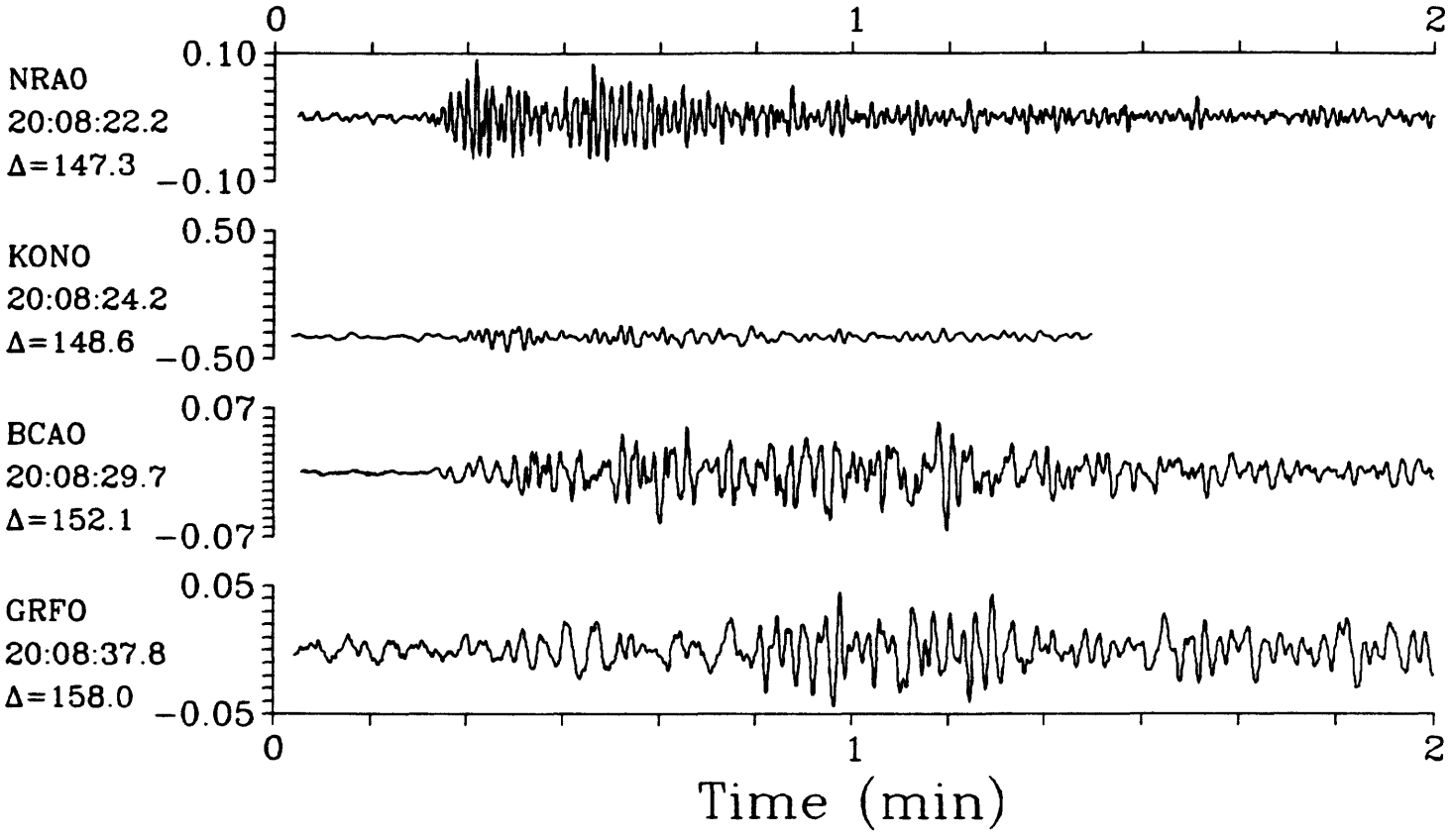

SPZ
07 November 1986 19:48:59.15
SPZ
Kermadec Islands Region h=33.0 m_b=5.6 M_{SZ}=6.4
0
1
2
0.40
SNZO
19:52:09.6
Δ= 14.6
-0.40
0.08
CTAO
19:55:31.8
Δ= 34.8
-0.08
0.25
LEM
20:00:18.7
Δ= 74.3
-0.25
0.08
MAJO
20:00:36.3
Δ= 77.4
-0.08
0.05
JAS1
20:01:13.8
Δ= 84.4
-0.05
0.02
LON
20:01:40.0
Δ= 89.7
-0.03
0.04
BJI
20:01:52.7
Δ= 92.4
-0.04
0.02
CHTO
20:02:00.1
Δ= 94.1
-0.02
0.02
COL
20:02:07.4
Δ= 95.7
-0.03
0.04
WMQ
20:03:24.0
Δ=113.0
-0.04
0
1
2
Time (min)
2248

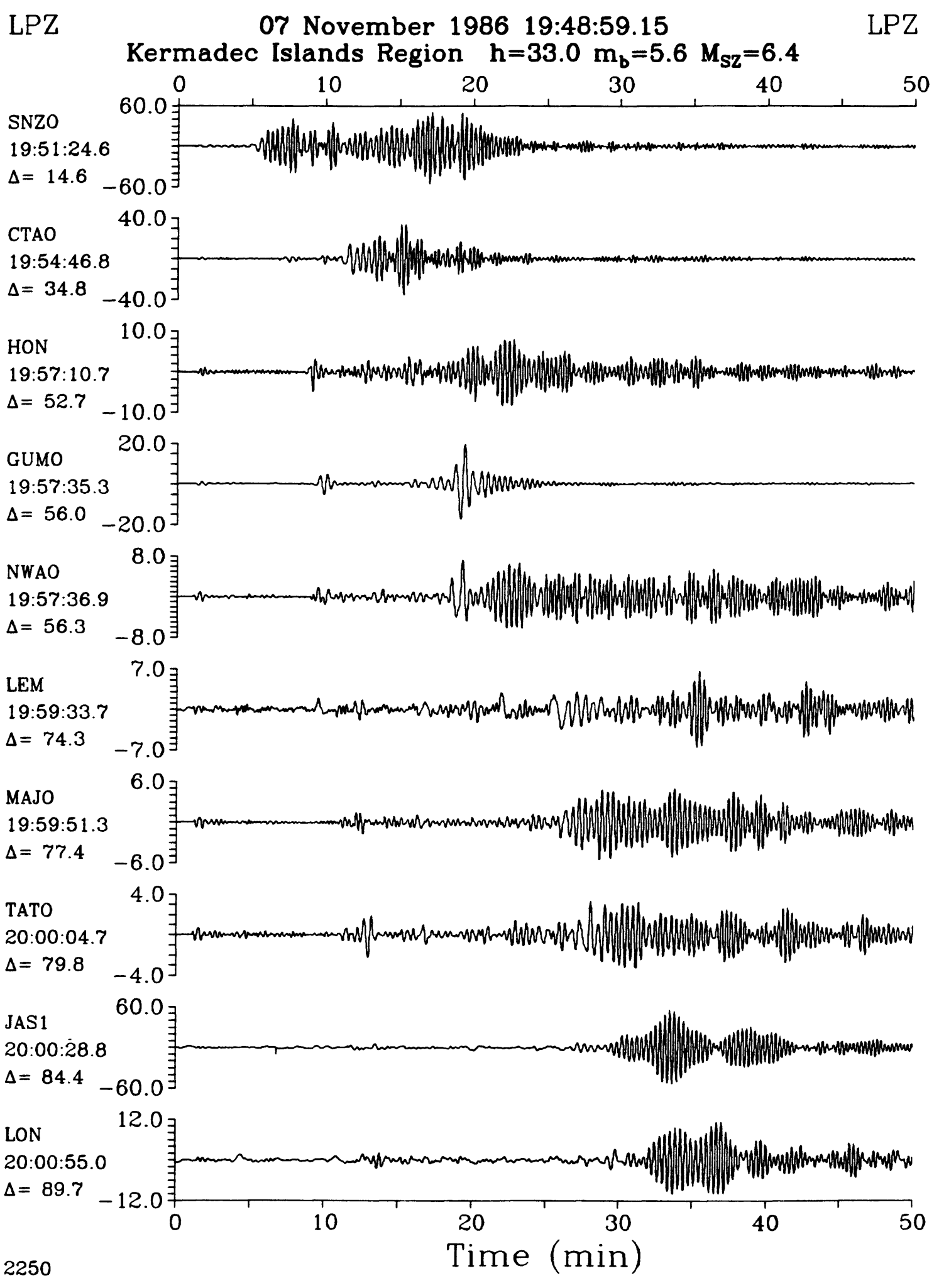
SPZ

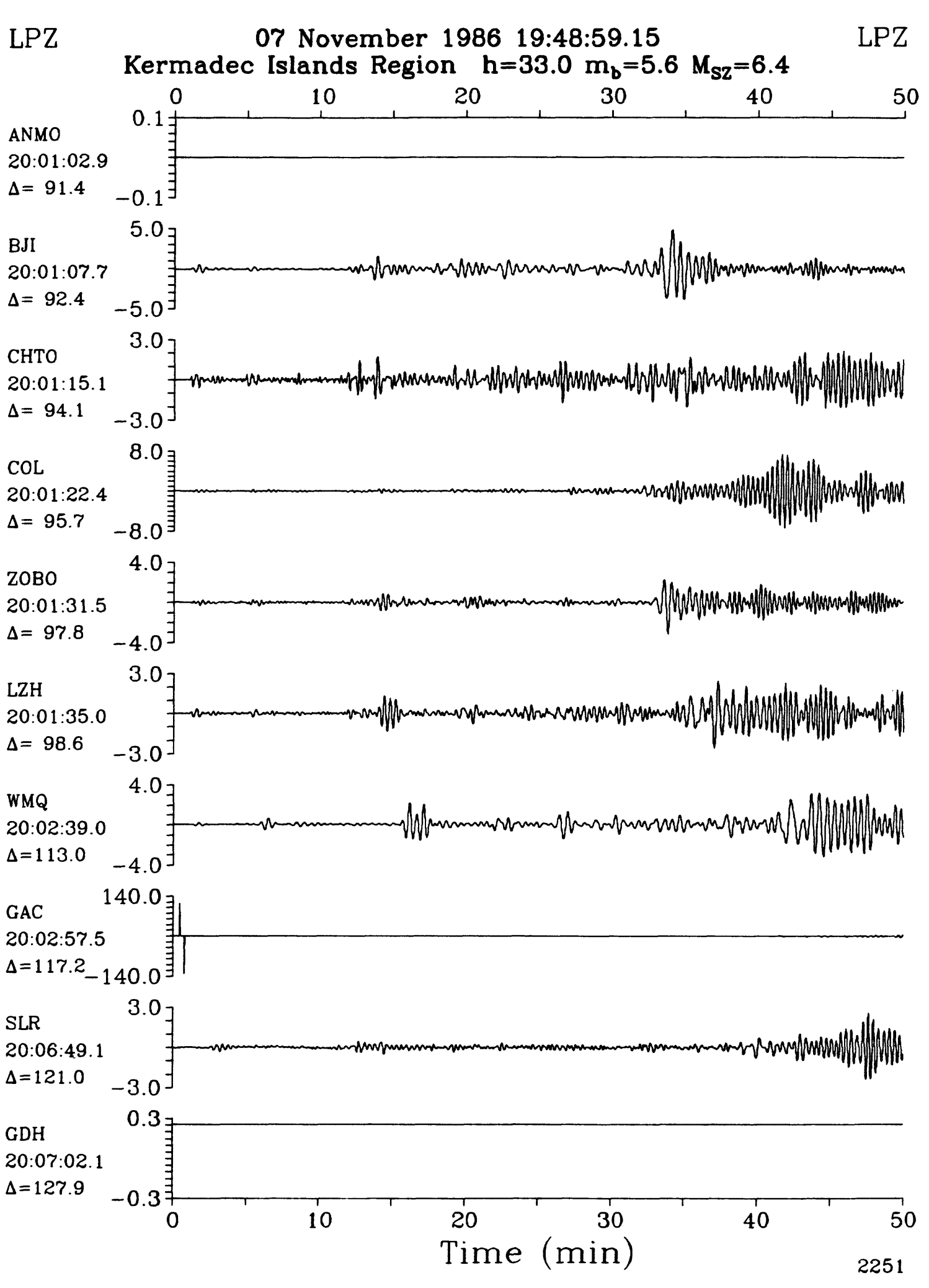
07 November 1986 19:48:59.15

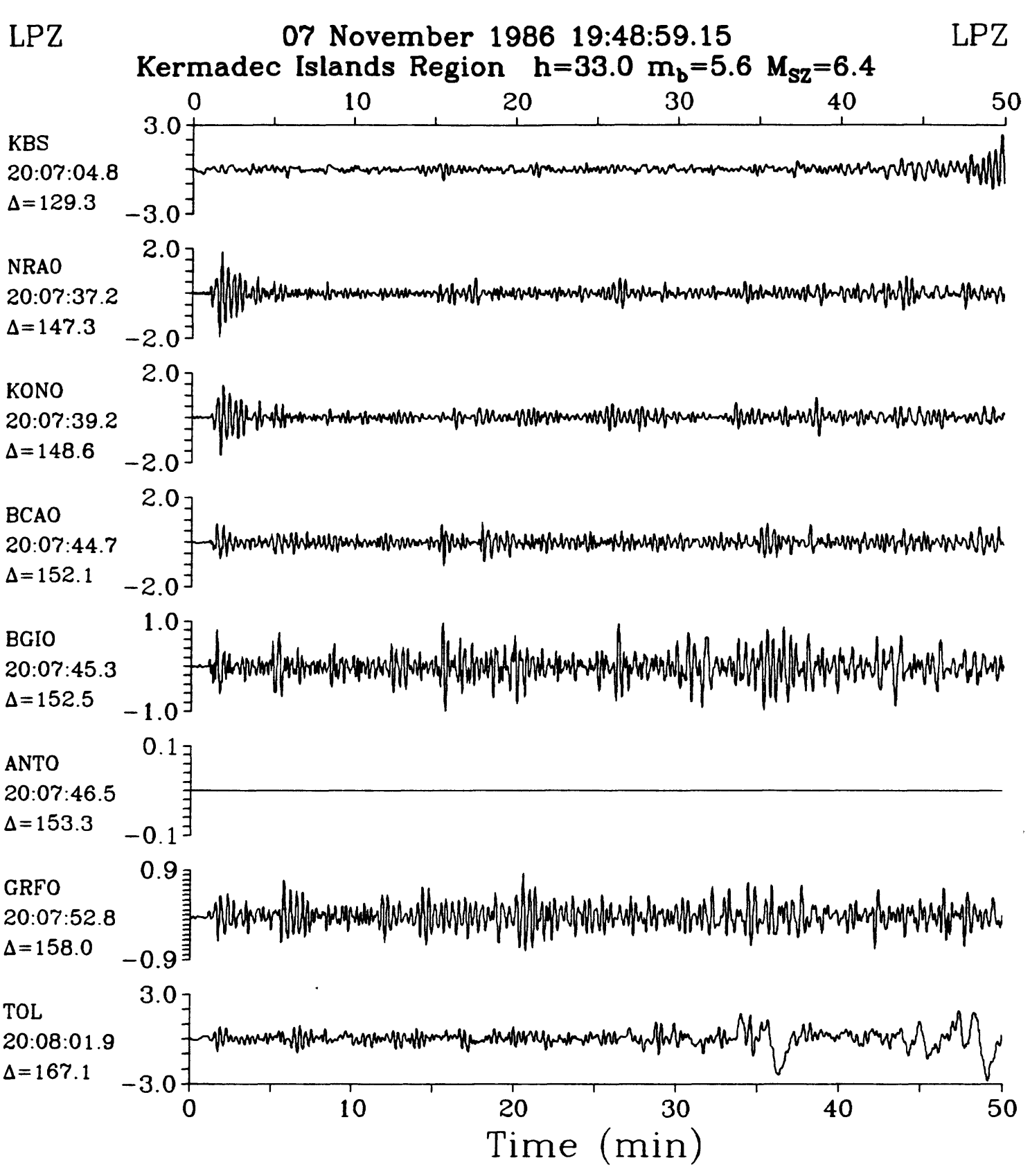
SPZ

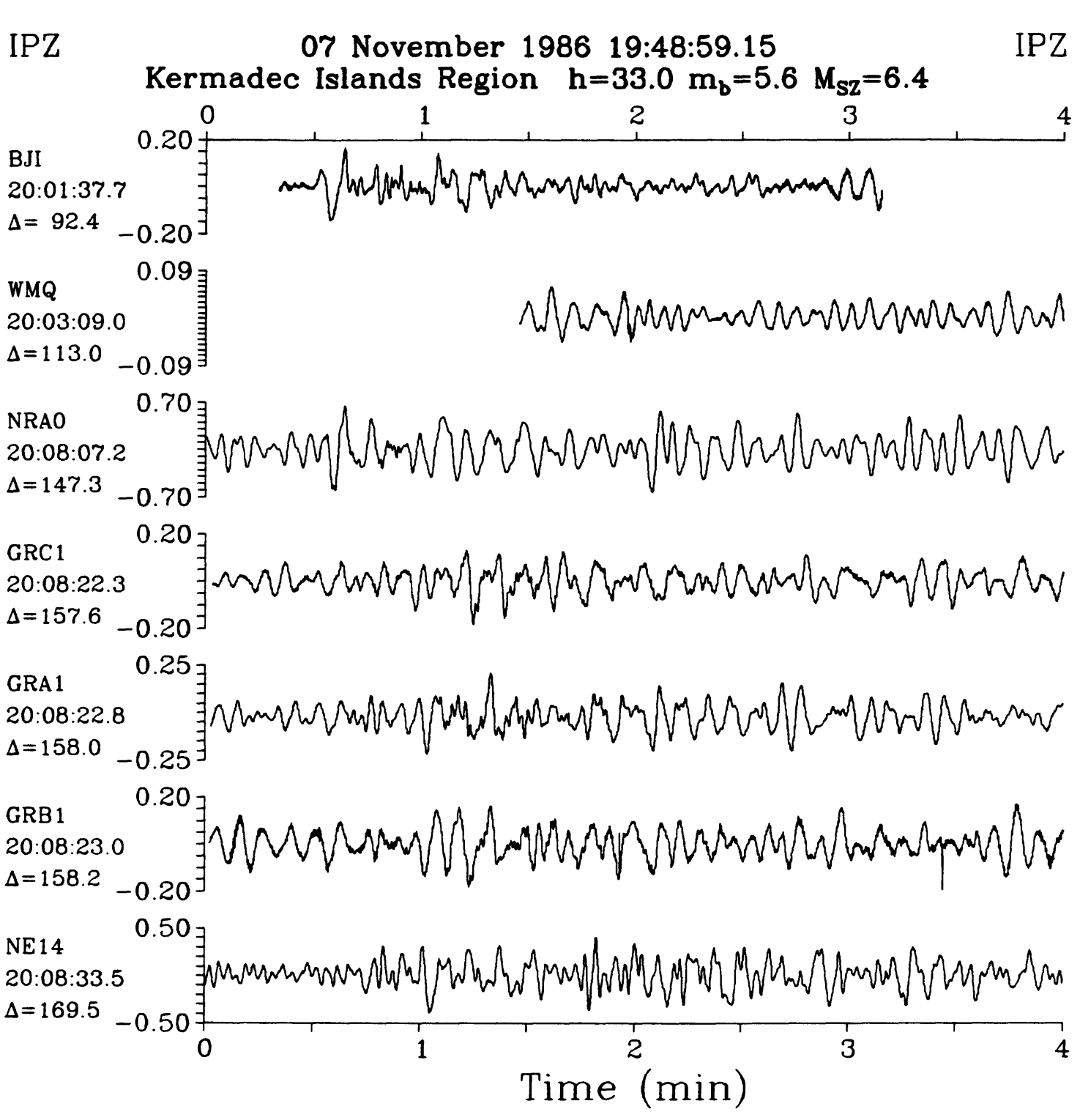
Kermadec Islands Region h=33.0 m_b=5.6 M_{SZ}=6.4




LPZ
07 November 1986 19:48:59.15
LPZ
Kermadec Islands Region h=33.0 m_b=5.6 M_{SZ}=6.4
0
10
20
30
40
50
SNZO
19:51:24.6
Δ= 14.6
60.0
-60.0
CTAO
19:54:46.8
Δ= 34.8
40.0
-40.0
HON
19:57:10.7
Δ= 52.7
10.0
-10.0
GUMO
19:57:35.3
Δ= 56.0
20.0
-20.0
NWAO
19:57:36.9
Δ= 56.3
8.0
-8.0
LEM
19:59:33.7
Δ= 74.3
7.0
-7.0
MAJO
19:59:51.3
Δ= 77.4
6.0
-6.0
TATO
20:00:04.7
Δ= 79.8
4.0
-4.0
JAS1
20:00:28.8
Δ= 84.4
60.0
-60.0
LON
20:00:55.0
Δ= 89.7
12.0
-12.0
0
10
20
30
40
50
Time (min)
2250

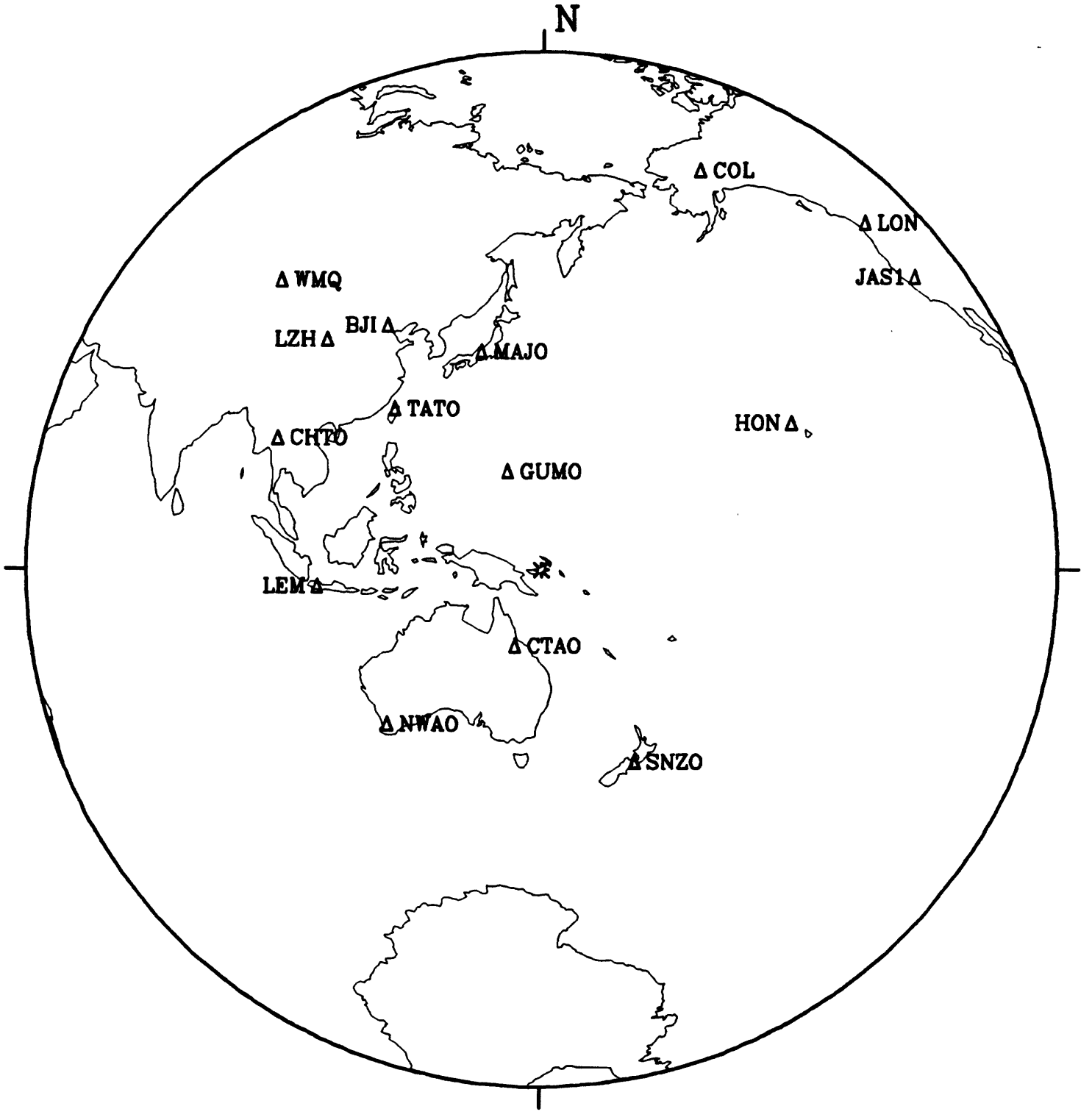

LPZ
07 November 1986 19:48:59.15
LPZ
Kermadec Islands Region h=33.0 m_b=5.6 M_{SZ}=6.4
0
10
20
30
40
50
ANMO
20:01:02.9
Δ= 91.4
0.1
-0.1
BJI
20:01:07.7
Δ= 92.4
5.0
-5.0
CHTO
20:01:15.1
Δ= 94.1
3.0
-3.0
COL
20:01:22.4
Δ= 95.7
8.0
-8.0
ZOBO
20:01:31.5
Δ= 97.8
4.0
-4.0
LZH
20:01:35.0
Δ= 98.6
3.0
-3.0
WMQ
20:02:39.0
Δ=113.0
4.0
-4.0
GAC
20:02:57.5
Δ=117.2
140.0
-140.0
SLR
20:06:49.1
Δ=121.0
3.0
-3.0
GDH
20:07:02.1
Δ=127.9
0.3
-0.3
0
10
20
30
40
50
Time (min)
2251

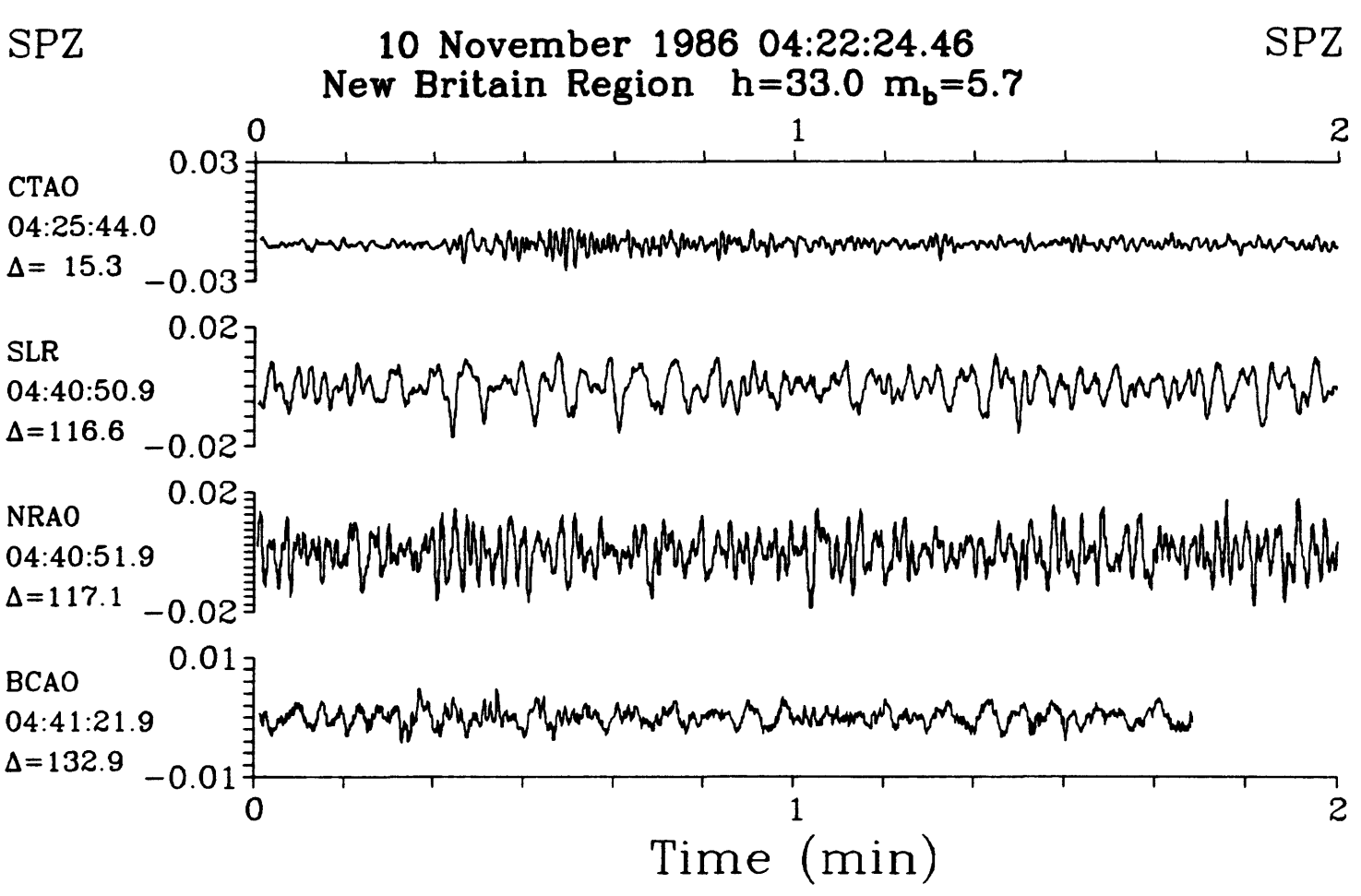

LPZ
07 November 1986 19:48:59.15
LPZ
Kermadec Islands Region h=33.0 m_b=5.6 M_{SZ}=6.4
KBS
20:07:04.8
Δ=129.3
NRAO
20:07:37.2
Δ=147.3
KONO
20:07:39.2
Δ=148.6
BCAO
20:07:44.7
Δ=152.1
BGIO
20:07:45.3
Δ=152.5
ANTO
20:07:46.5
Δ=153.3
GRFO
20:07:52.8
Δ=158.0
TOL
20:08:01.9
Δ=167.1
Time (min)

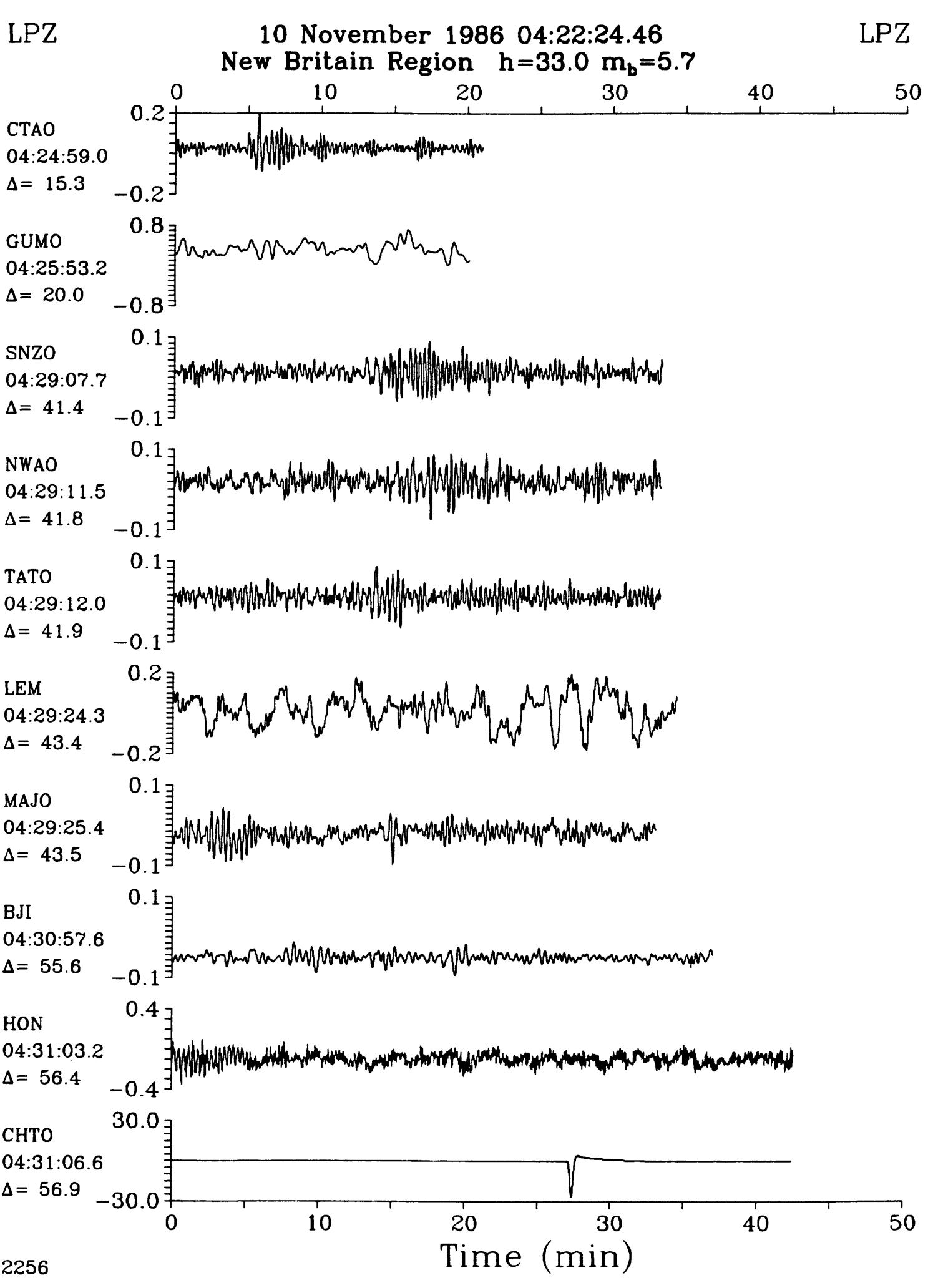

IPZ
07 November 1986 19:48:59.15
IPZ
Kermadec Islands Region h=33.0 m_b=5.6 M_{SZ}=6.4
0
1
2
3
4
BJI
20:01:37.7
Δ= 92.4
0.20
-0.20
WMQ
20:03:09.0
Δ=113.0
0.09
-0.09
NRA0
20:08:07.2
Δ=147.3
0.70
-0.70
GRC1
20:08:22.3
Δ=157.6
0.20
-0.20
GRA1
20:08:22.8
Δ=158.0
0.25
-0.25
GRB1
20:08:23.0
Δ=158.2
0.20
-0.20
NE14
20:08:33.5
Δ=169.5
0.50
-0.50
0
1
2
3
4
Time (min)

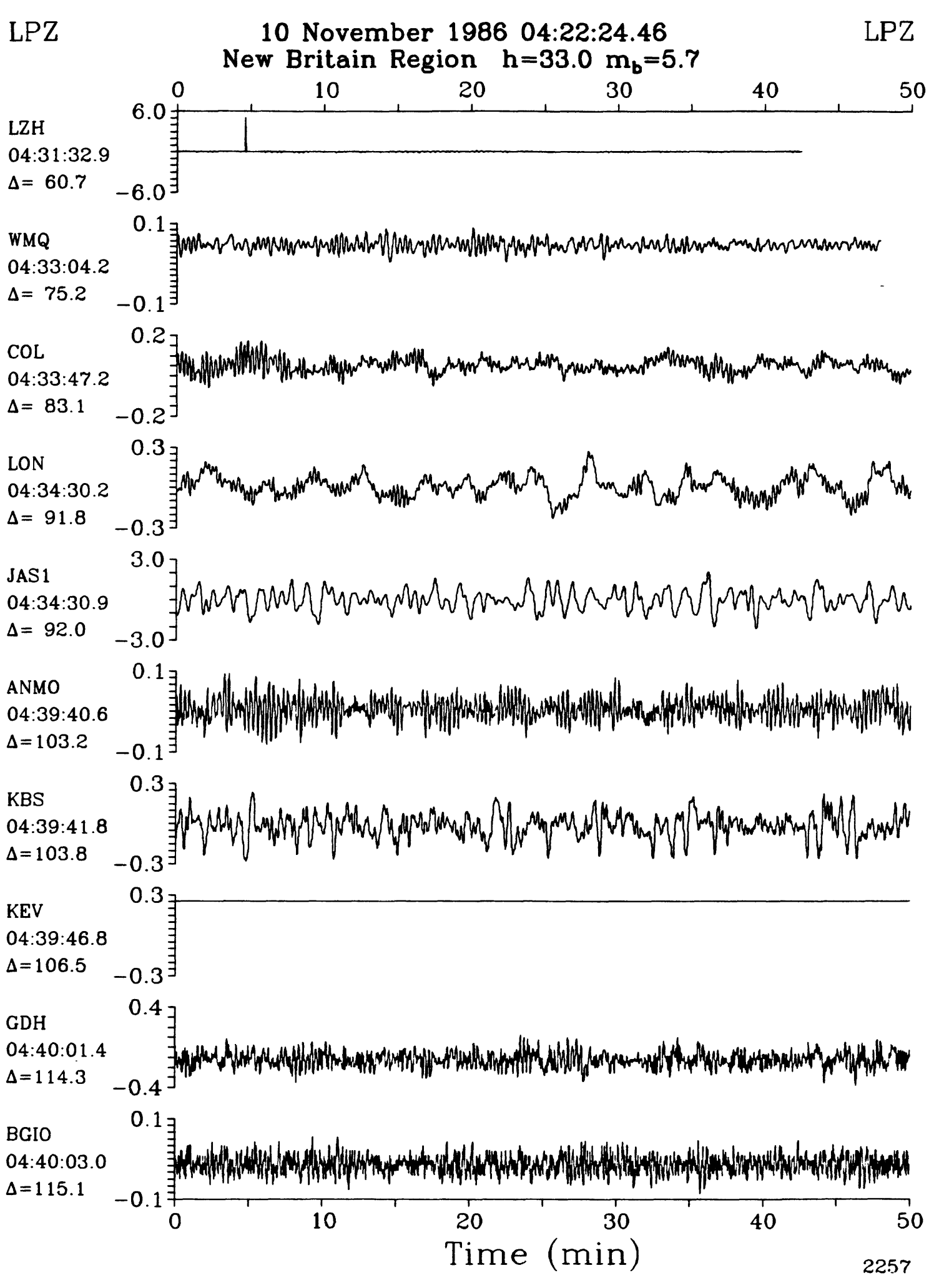
10 November 1986 04:22:24.46

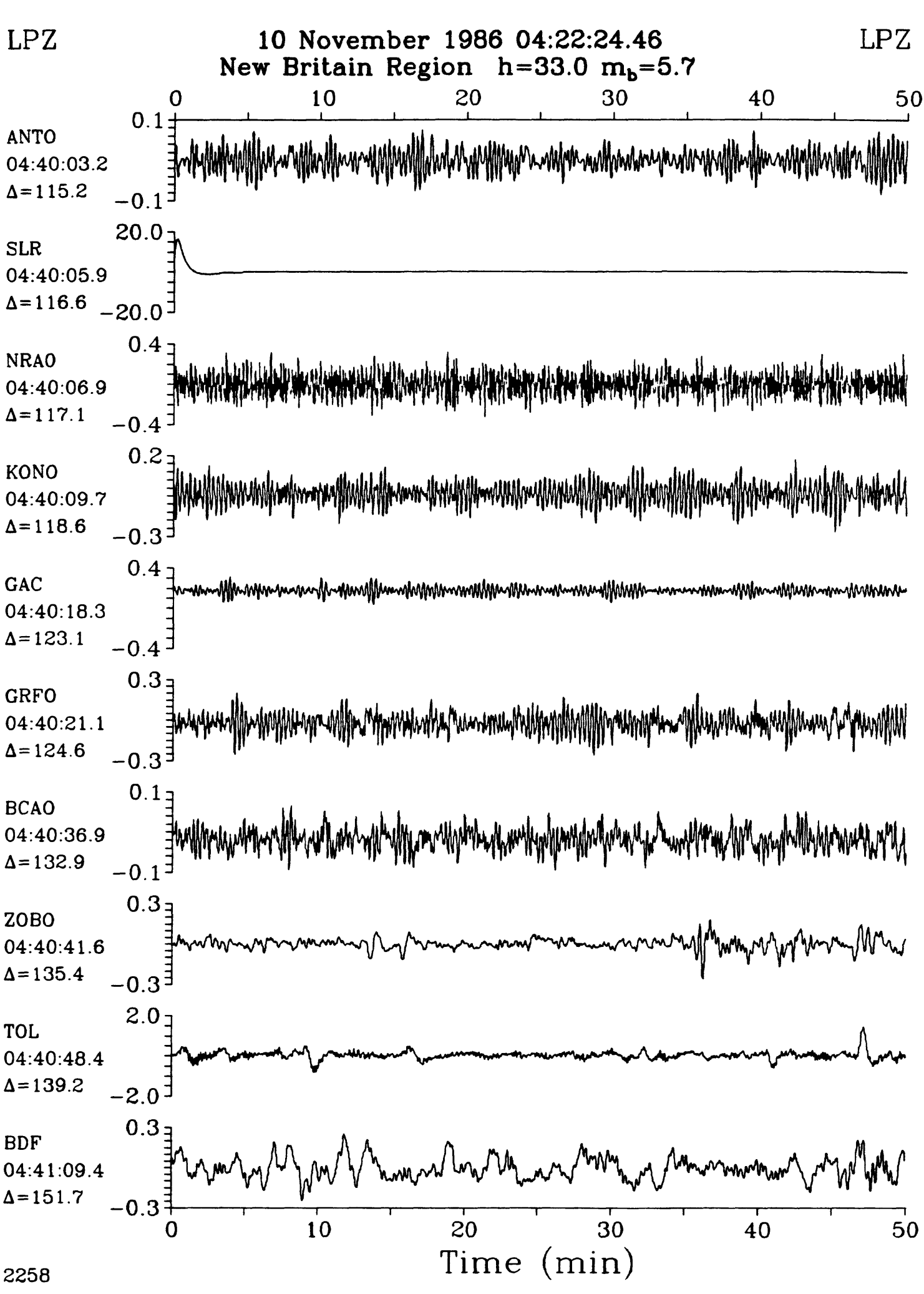
New Britain Region




10 November 1986 04:22:24.46
New Britain Region h=33.0 m_b=5.7
CTAO
04:25:44.0
Δ= 15.3
SLR
04:40:50.9
Δ=116.6
NRAO
04:40:51.9
Δ=117.1
BCAO
04:41:21.9
Δ=132.9
0.03
-0.03
0.02
-0.02
0.02
-0.02
0.01
-0.01
0
1
2
Time (min)

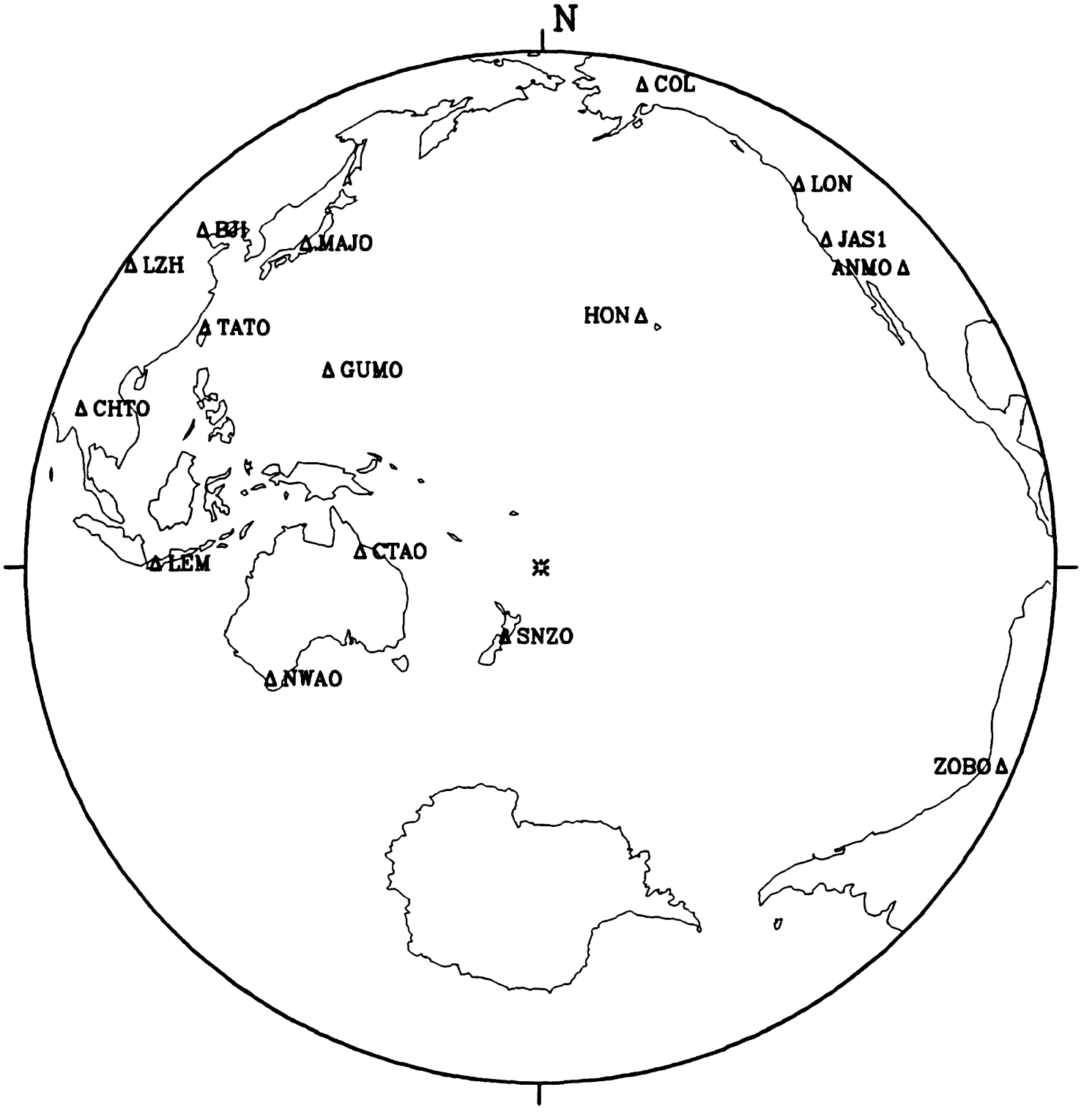

LPZ
10 November 1986 04:22:24.46
New Britain Region h=33.0 m_b=5.7
LPZ
0
10
20
30
40
50
CTAO
04:24:59.0
Δ= 15.3
0.2
−0.2
GUMO
04:25:53.2
Δ= 20.0
0.8
−0.8
SNZO
04:29:07.7
Δ= 41.4
0.1
−0.1
NWAO
04:29:11.5
Δ= 41.8
0.1
−0.1
TATO
04:29:12.0
Δ= 41.9
0.1
−0.1
LEM
04:29:24.3
Δ= 43.4
0.2
−0.2
MAJO
04:29:25.4
Δ= 43.5
0.1
−0.1
BJI
04:30:57.6
Δ= 55.6
0.1
−0.1
HON
04:31:03.2
Δ= 56.4
0.4
−0.4
CHTO
04:31:06.6
Δ= 56.9
30.0
−30.0
0
10
20
30
40
50
Time (min)
2256

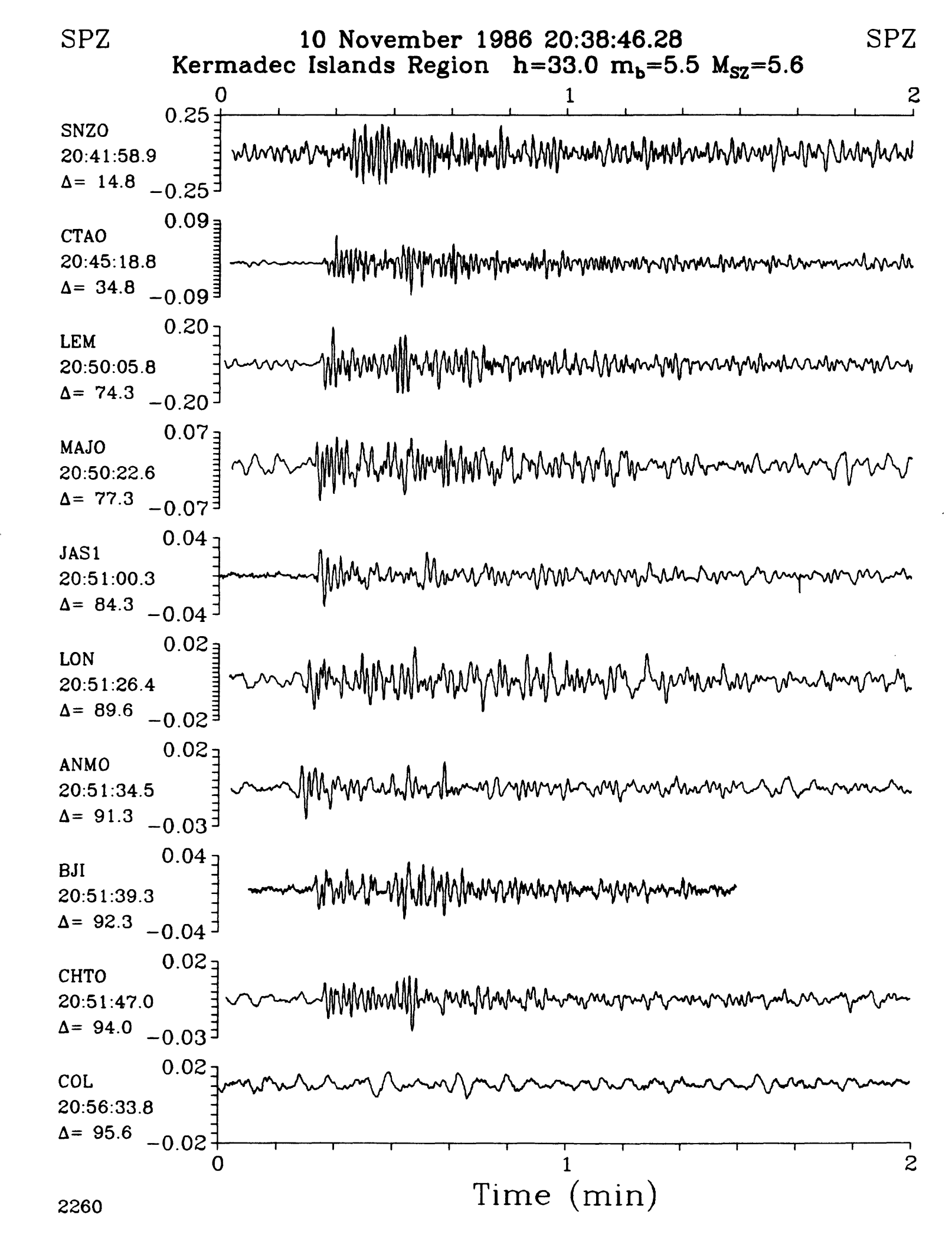

LPZ
10 November 1986 04:22:24.46
New Britain Region h=33.0 m_b=5.7
LPZ
0
10
20
30
40
50
LZH
04:31:32.9
Δ= 60.7
6.0
-6.0
WMQ
04:33:04.2
Δ= 75.2
0.1
-0.1
COL
04:33:47.2
Δ= 83.1
0.2
-0.2
LON
04:34:30.2
Δ= 91.8
0.3
-0.3
JAS1
04:34:30.9
Δ= 92.0
3.0
-3.0
ANMO
04:39:40.6
Δ=103.2
0.1
-0.1
KBS
04:39:41.8
Δ=103.8
0.3
-0.3
KEV
04:39:46.8
Δ=106.5
0.3
-0.3
GDH
04:40:01.4
Δ=114.3
0.4
-0.4
BGIO
04:40:03.0
Δ=115.1
0.1
-0.1
0
10
20
30
40
50
Time (min)
2257


LPZ
10 November 1986 04:22:24.46
New Britain Region h=33.0 m_b=5.7
LPZ
0
10
20
30
40
50
ANTO
04:40:03.2
Δ=115.2
0.1
-0.1
SLR
04:40:05.9
Δ=116.6
20.0
-20.0
NRAO
04:40:06.9
Δ=117.1
0.4
-0.4
KONO
04:40:09.7
Δ=118.6
0.2
-0.3
GAC
04:40:18.3
Δ=123.1
0.4
-0.4
GRFO
04:40:21.1
Δ=124.6
0.3
-0.3
BCAO
04:40:36.9
Δ=132.9
0.1
-0.1
ZOBO
04:40:41.6
Δ=135.4
0.3
-0.3
TOL
04:40:48.4
Δ=139.2
2.0
-2.0
BDF
04:41:09.4
Δ=151.7
0.3
-0.3
0
10
20
30
40
50
Time (min)

10 November 1986 20:38:46.28

Kermadec Islands Region



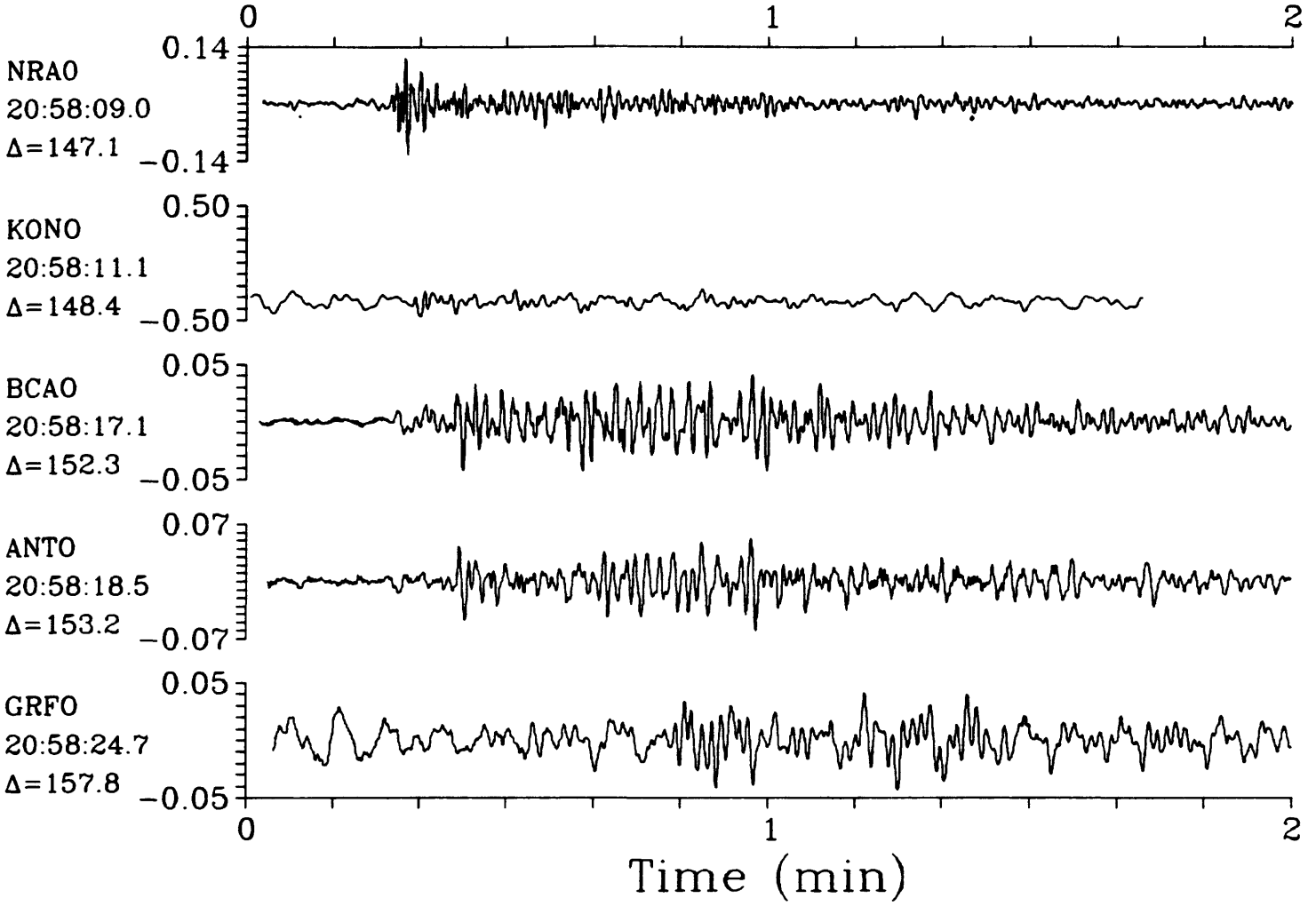

SPZ
10 November 1986 20:38:46.28
SPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=5.6
0
1
2
SNZO
20:41:58.9
Δ= 14.8
0.25
−0.25
CTAO
20:45:18.8
Δ= 34.8
0.09
−0.09
LEM
20:50:05.8
Δ= 74.3
0.20
−0.20
MAJO
20:50:22.6
Δ= 77.3
0.07
−0.07
JAS1
20:51:00.3
Δ= 84.3
0.04
−0.04
LON
20:51:26.4
Δ= 89.6
0.02
−0.02
ANMO
20:51:34.5
Δ= 91.3
0.02
−0.03
BJI
20:51:39.3
Δ= 92.3
0.04
−0.04
CHTO
20:51:47.0
Δ= 94.0
0.02
−0.03
COL
20:56:33.8
Δ= 95.6
0.02
−0.02
0
1
2
Time (min)

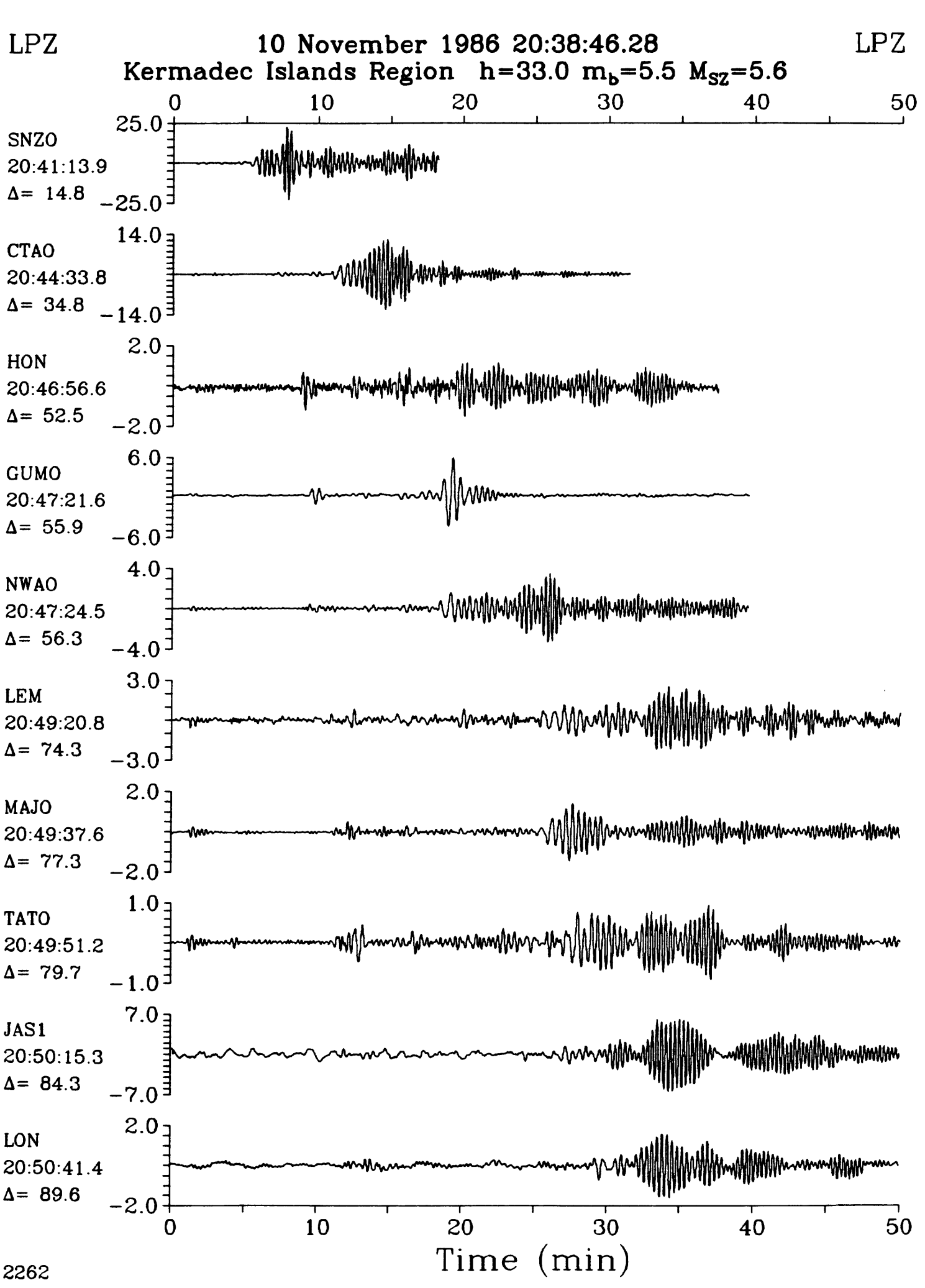
SPZ

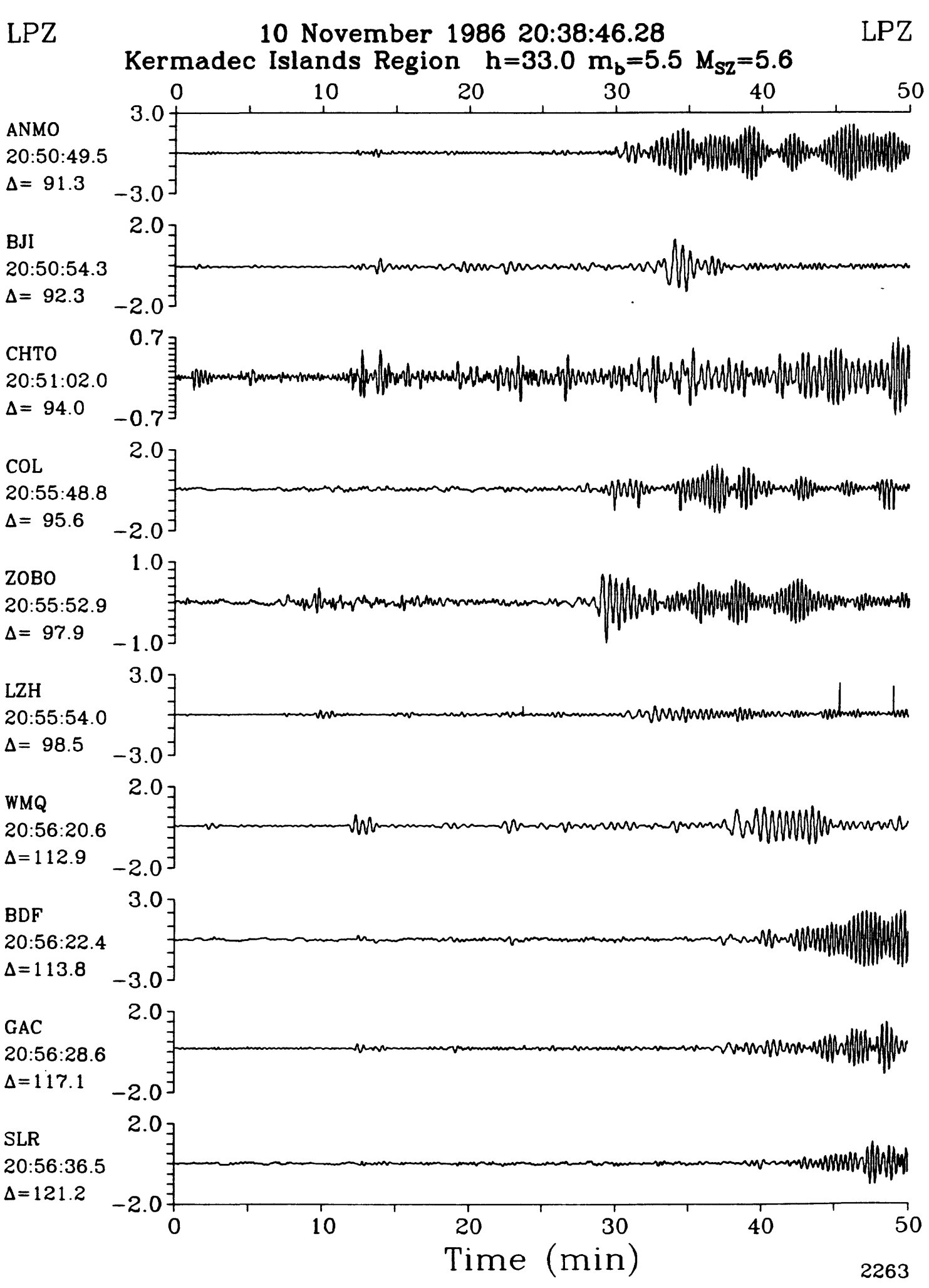
10 November 1986 20:38:46.28

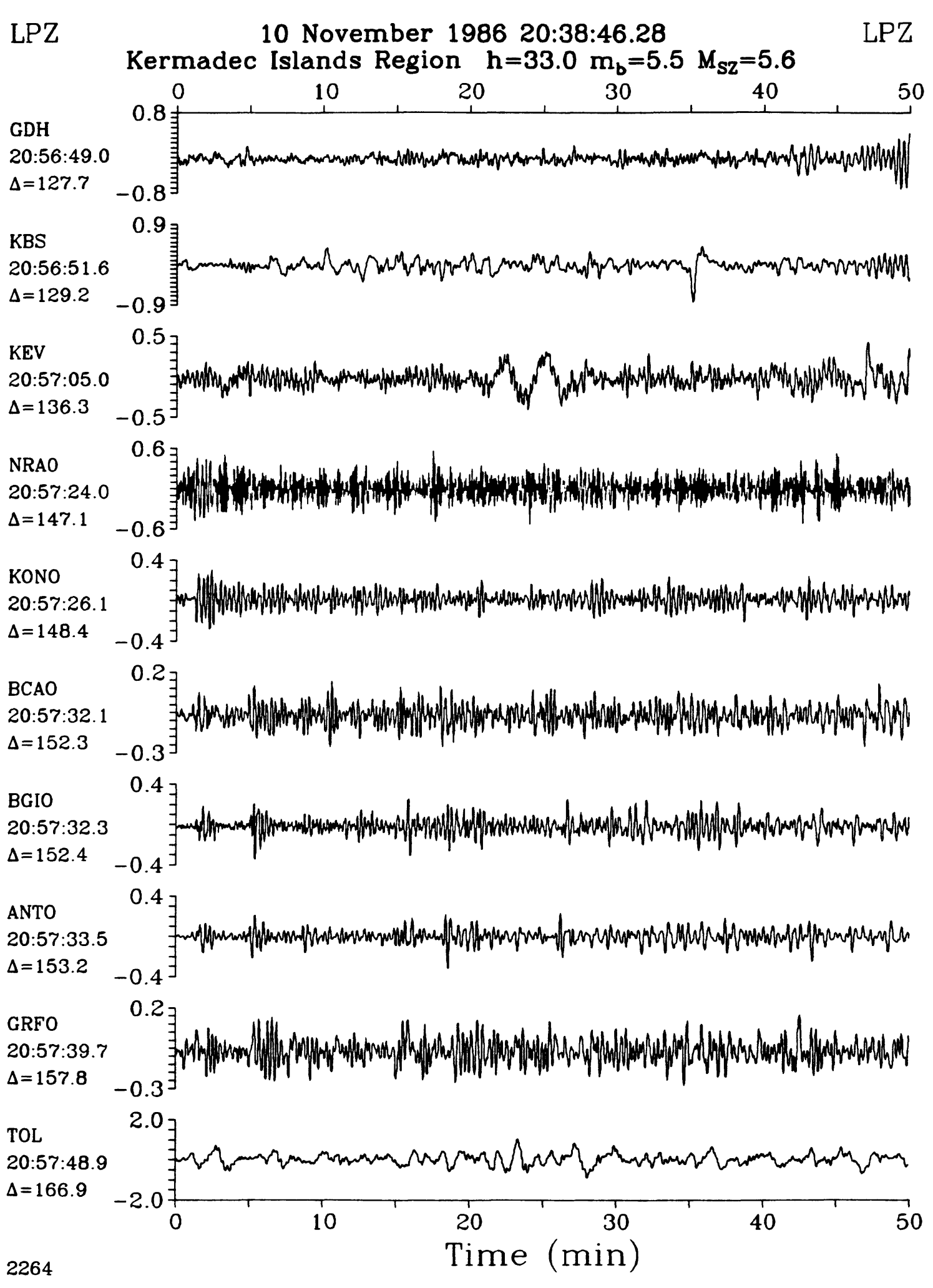
SPZ

Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=5.6



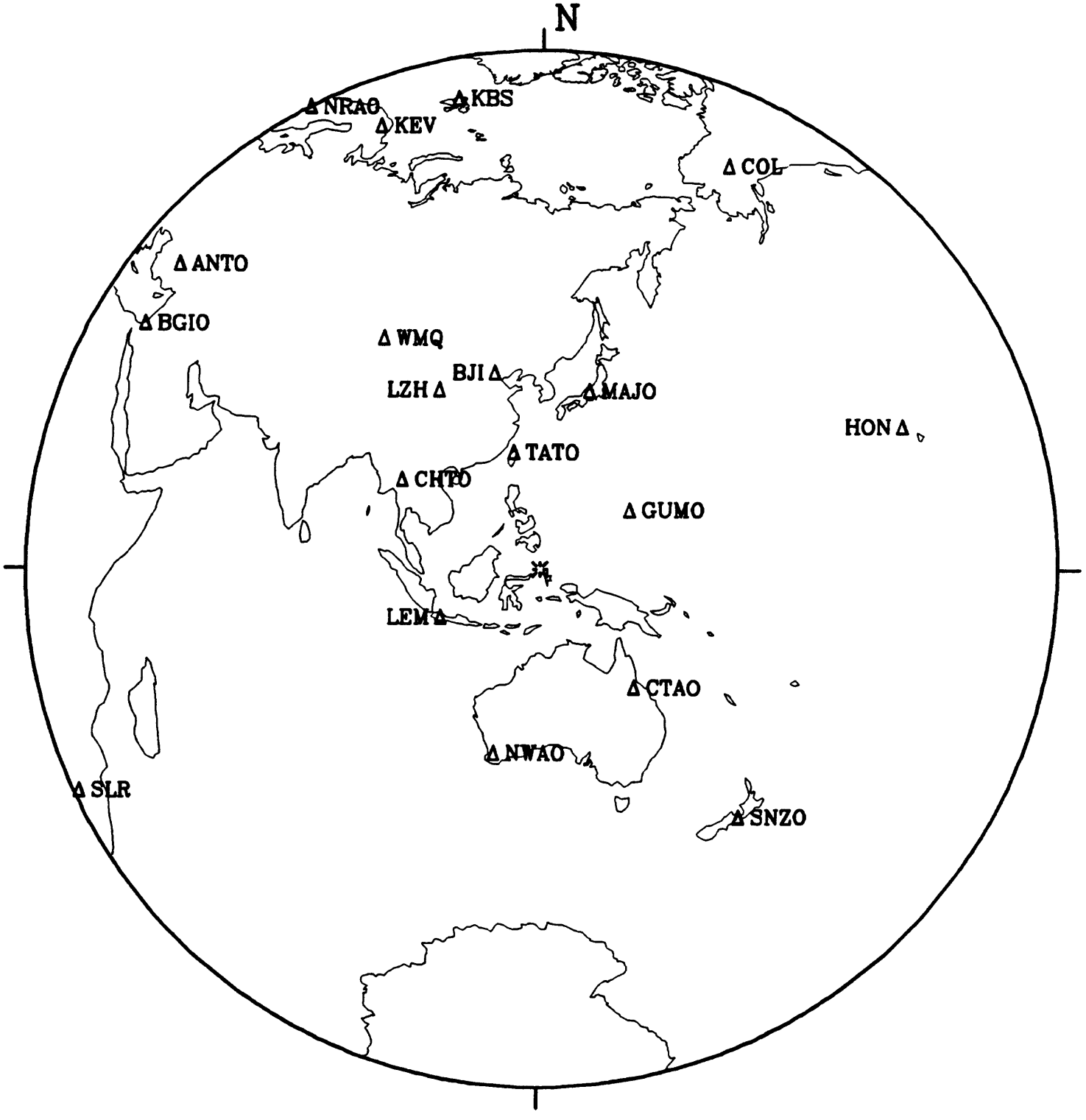

LPZ
10 November 1986 20:38:46.28
LPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=5.6
0
10
20
30
40
50
SNZO
20:41:13.9
Δ= 14.8
25.0
-25.0
CTAO
20:44:33.8
Δ= 34.8
14.0
-14.0
HON
20:46:56.6
Δ= 52.5
2.0
-2.0
GUMO
20:47:21.6
Δ= 55.9
6.0
-6.0
NWAO
20:47:24.5
Δ= 56.3
4.0
-4.0
LEM
20:49:20.8
Δ= 74.3
3.0
-3.0
MAJO
20:49:37.6
Δ= 77.3
2.0
-2.0
TATO
20:49:51.2
Δ= 79.7
1.0
-1.0
JAS1
20:50:15.3
Δ= 84.3
7.0
-7.0
LON
20:50:41.4
Δ= 89.6
2.0
-2.0
0
10
20
30
40
50
Time (min)

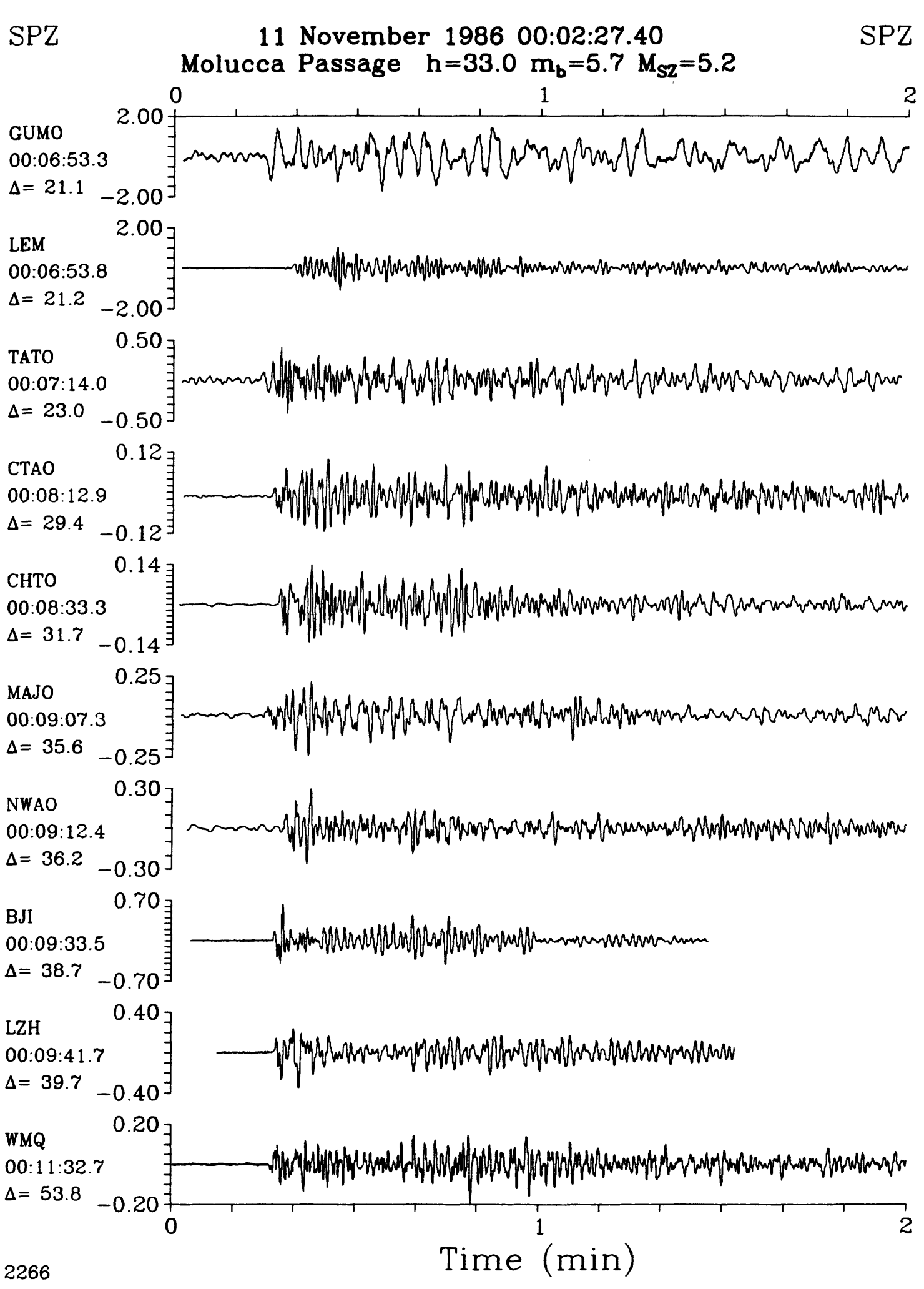

LPZ
10 November 1986 20:38:46.28
LPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=5.6
0
10
20
30
40
50
ANMO
20:50:49.5
Δ= 91.3
3.0
-3.0
BJI
20:50:54.3
Δ= 92.3
2.0
-2.0
CHTO
20:51:02.0
Δ= 94.0
0.7
-0.7
COL
20:55:48.8
Δ= 95.6
2.0
-2.0
ZOBO
20:55:52.9
Δ= 97.9
1.0
-1.0
LZH
20:55:54.0
Δ= 98.5
3.0
-3.0
WMQ
20:56:20.6
Δ=112.9
2.0
-2.0
BDF
20:56:22.4
Δ=113.8
3.0
-3.0
GAC
20:56:28.6
Δ=117.1
2.0
-2.0
SLR
20:56:36.5
Δ=121.2
2.0
-2.0
0
10
20
30
40
50
Time (min)
2263

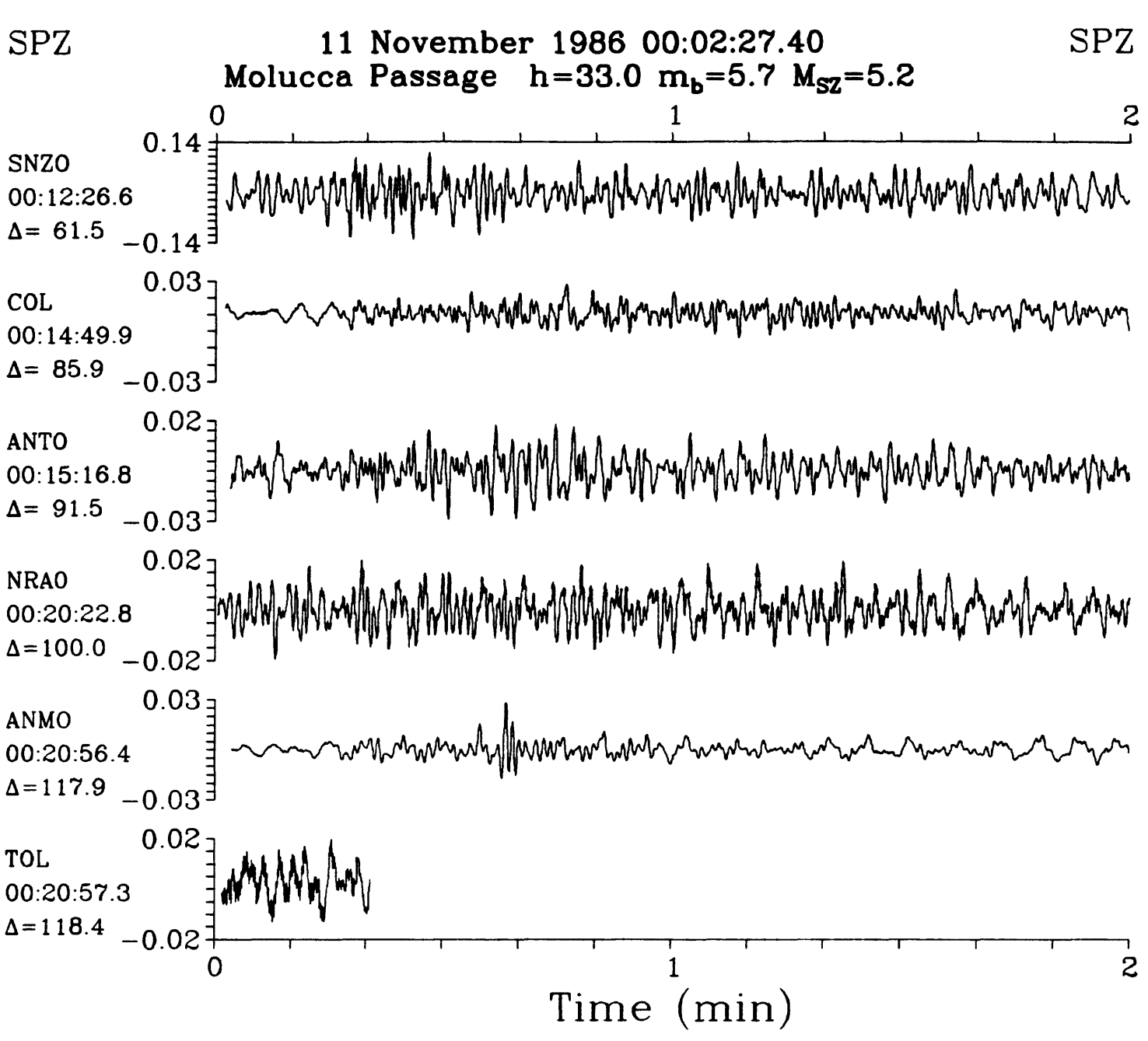

LPZ
10 November 1986 20:38:46.28
LPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=5.6
0
10
20
30
40
50
GDH
20:56:49.0
Δ=127.7
0.8
−0.8
KBS
20:56:51.6
Δ=129.2
0.9
−0.9
KEV
20:57:05.0
Δ=136.3
0.5
−0.5
NRAO
20:57:24.0
Δ=147.1
0.6
−0.6
KONO
20:57:26.1
Δ=148.4
0.4
−0.4
BCAO
20:57:32.1
Δ=152.3
0.2
−0.3
BGIO
20:57:32.3
Δ=152.4
0.4
−0.4
ANTO
20:57:33.5
Δ=153.2
0.4
−0.4
GRFO
20:57:39.7
Δ=157.8
0.2
−0.3
TOL
20:57:48.9
Δ=166.9
2.0
−2.0
0
10
20
30
40
50
Time (min)
2264

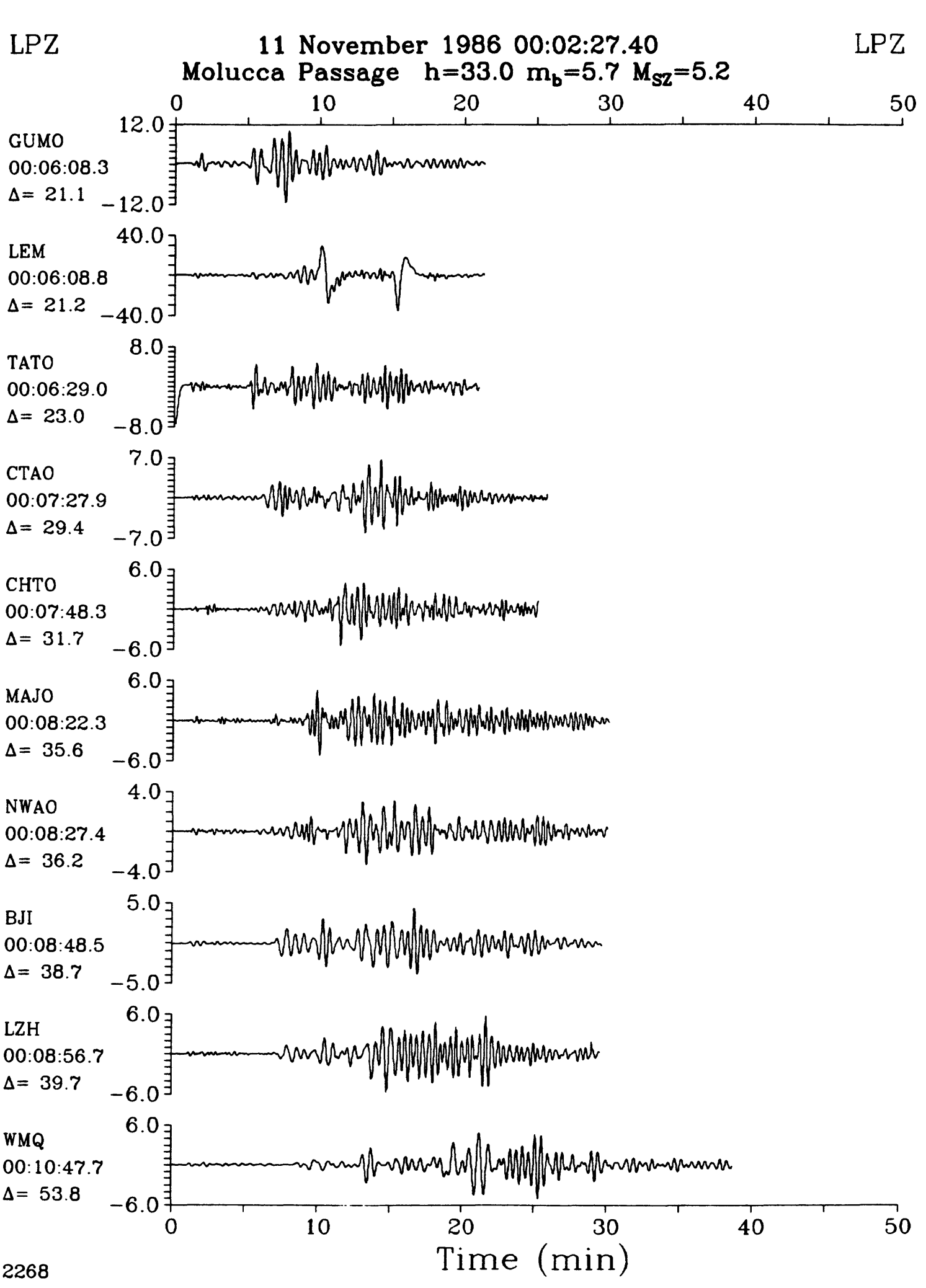
11 November 1986 00:02:27.40

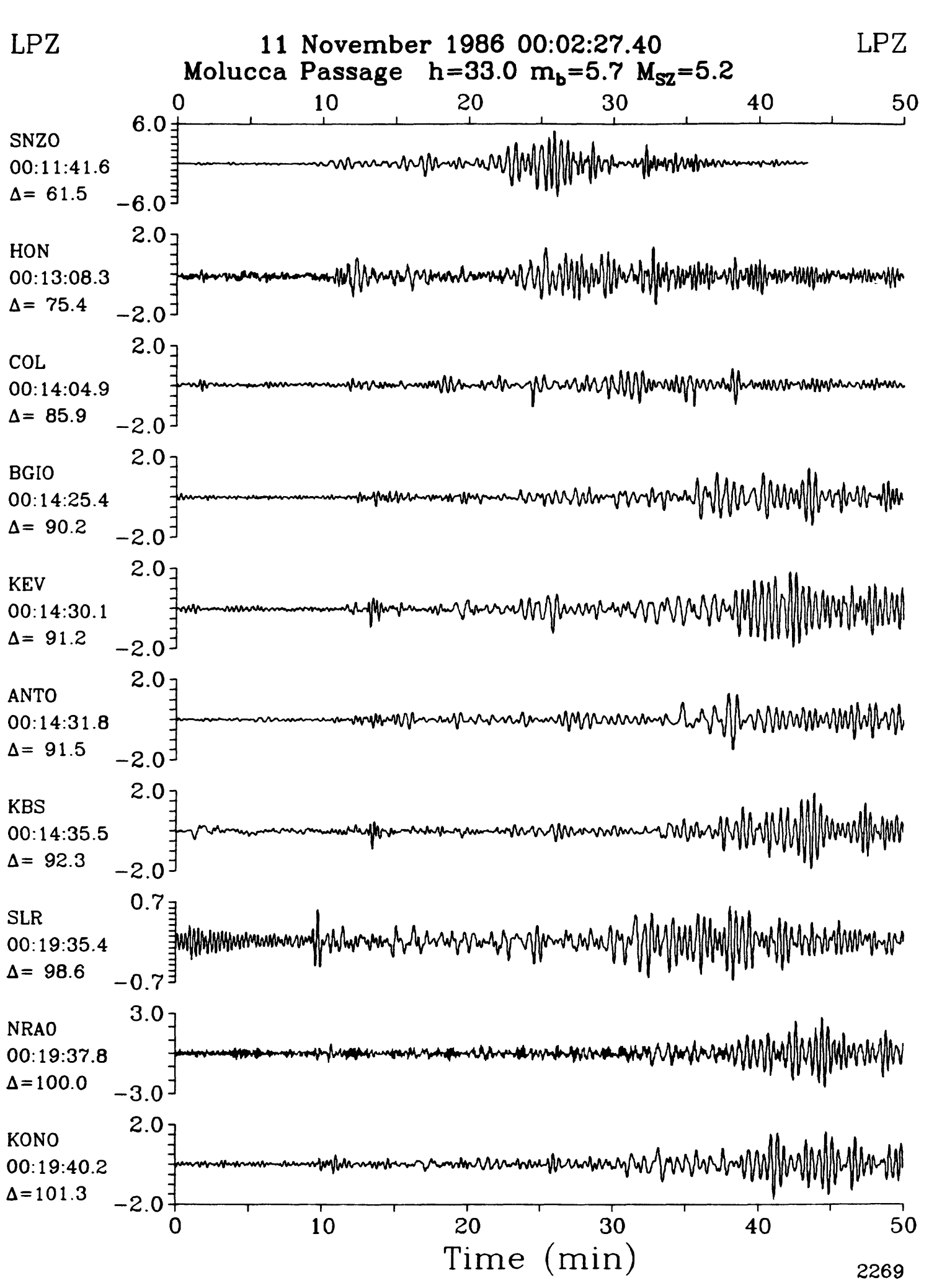
Molucca Passage

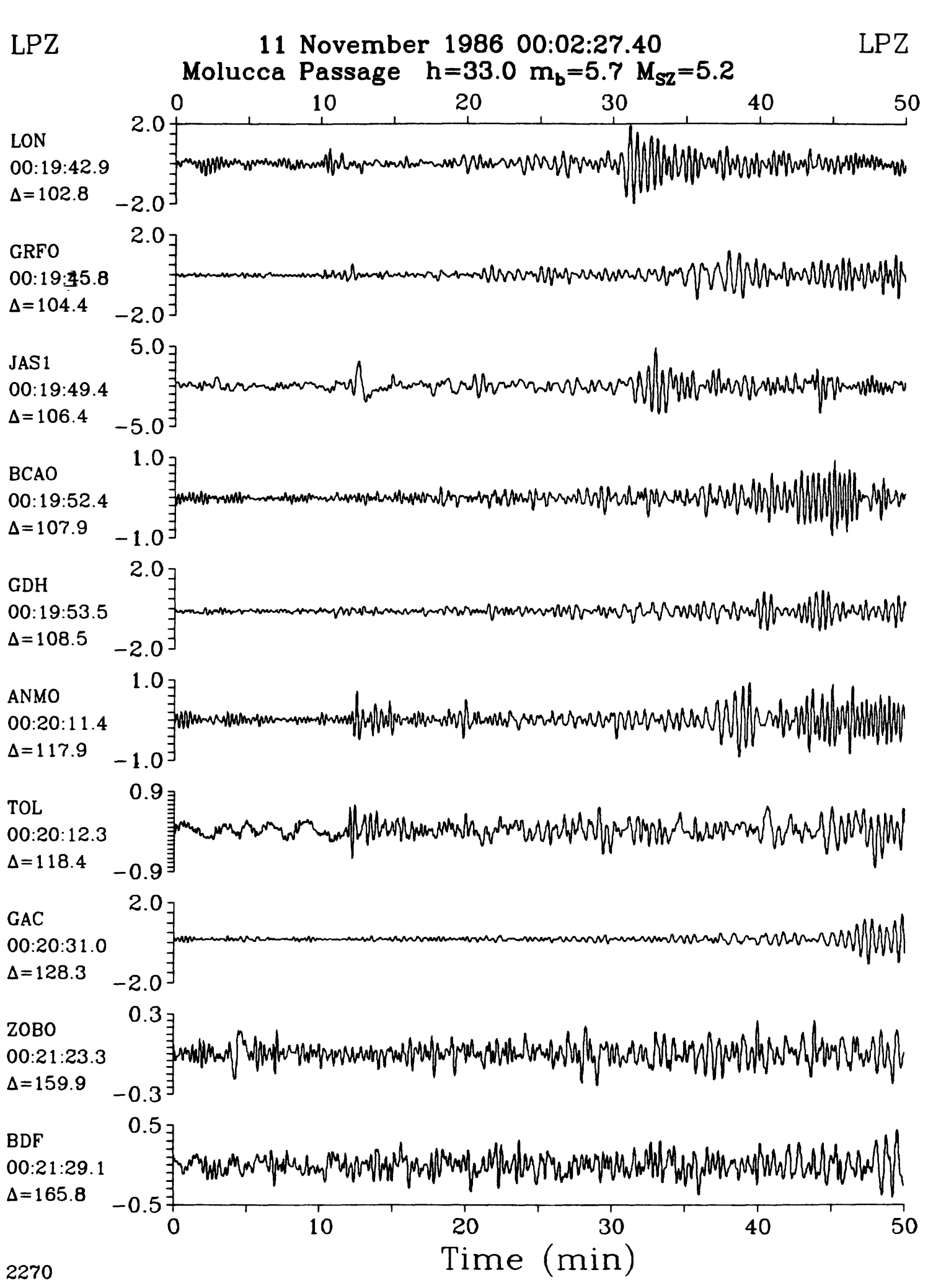



SPZ
11 November 1986 00:02:27.40
Molucca Passage h=33.0 m_b=5.7 M_{SZ}=5.2
SPZ
0
1
2
GUMO
00:06:53.3
Δ= 21.1
2.00
-2.00
LEM
00:06:53.8
Δ= 21.2
2.00
-2.00
TATO
00:07:14.0
Δ= 23.0
0.50
-0.50
CTAO
00:08:12.9
Δ= 29.4
0.12
-0.12
CHTO
00:08:33.3
Δ= 31.7
0.14
-0.14
MAJO
00:09:07.3
Δ= 35.6
0.25
-0.25
NWAO
00:09:12.4
Δ= 36.2
0.30
-0.30
BJI
00:09:33.5
Δ= 38.7
0.70
-0.70
LZH
00:09:41.7
Δ= 39.7
0.40
-0.40
WMQ
00:11:32.7
Δ= 53.8
0.20
-0.20
0
1
2
Time (min)


SPZ
11 November 1986 00:02:27.40
SPZ
Molucca Passage h=33.0 m_b=5.7 M_{SZ}=5.2
0
1
2
0.14
SNZO
00:12:26.6
Δ= 61.5
−0.14
0.03
COL
00:14:49.9
Δ= 85.9
−0.03
0.02
ANTO
00:15:16.8
Δ= 91.5
−0.03
0.02
NRAO
00:20:22.8
Δ=100.0
−0.02
0.03
ANMO
00:20:56.4
Δ=117.9
−0.03
0.02
TOL
00:20:57.3
Δ=118.4
−0.02
0
1
2
Time (min)

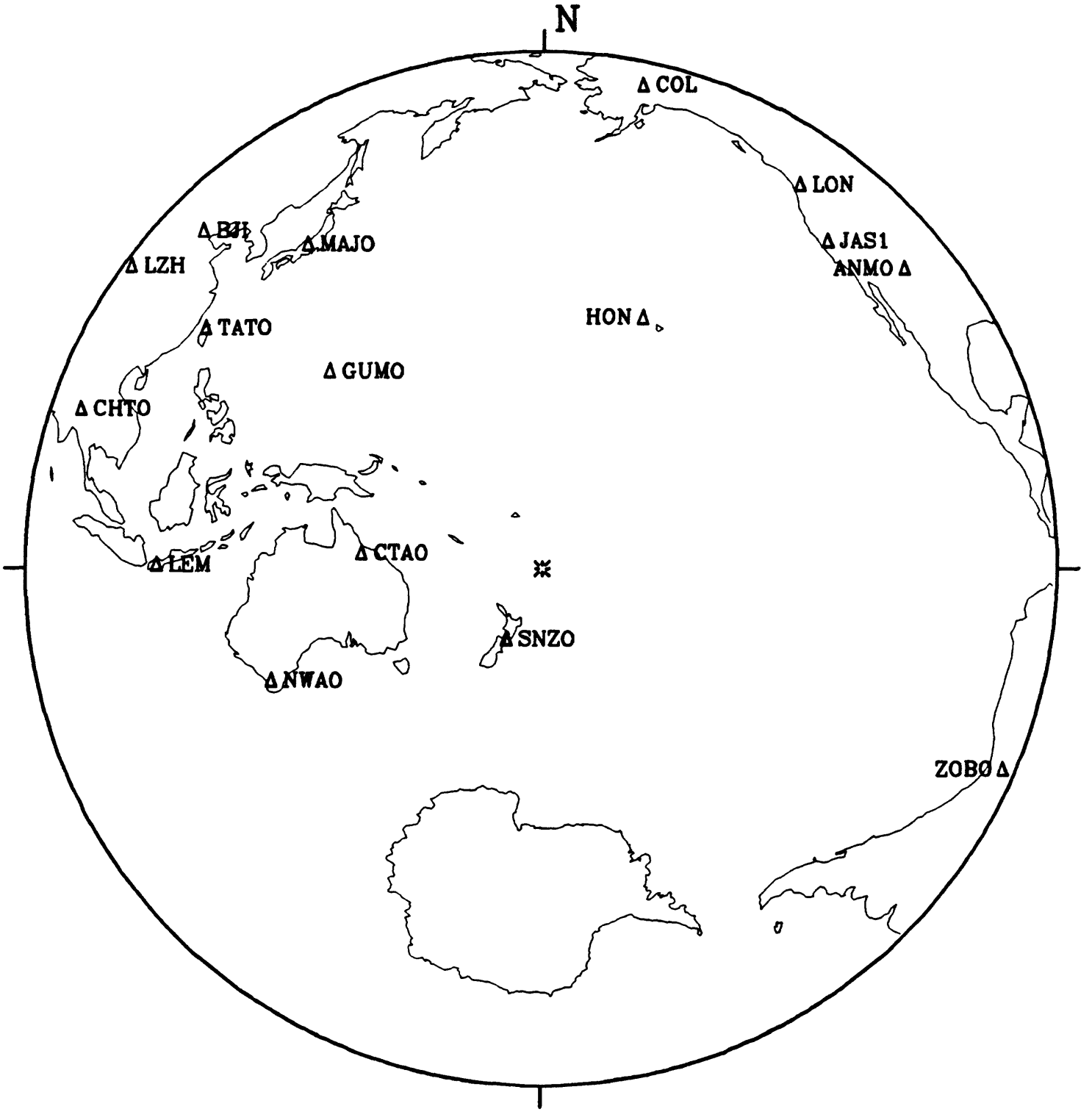

LPZ
11 November 1986 00:02:27.40
Molucca Passage h=33.0 m_b=5.7 M_{SZ}=5.2
LPZ
0
10
20
30
40
50
GUMO
00:06:08.3
Δ= 21.1
12.0
-12.0
LEM
00:06:08.8
Δ= 21.2
40.0
-40.0
TATO
00:06:29.0
Δ= 23.0
8.0
-8.0
CTAO
00:07:27.9
Δ= 29.4
7.0
-7.0
CHTO
00:07:48.3
Δ= 31.7
6.0
-6.0
MAJO
00:08:22.3
Δ= 35.6
6.0
-6.0
NWAO
00:08:27.4
Δ= 36.2
4.0
-4.0
BJI
00:08:48.5
Δ= 38.7
5.0
-5.0
LZH
00:08:56.7
Δ= 39.7
6.0
-6.0
WMQ
00:10:47.7
Δ= 53.8
6.0
-6.0
0
10
20
30
40
50
Time (min)

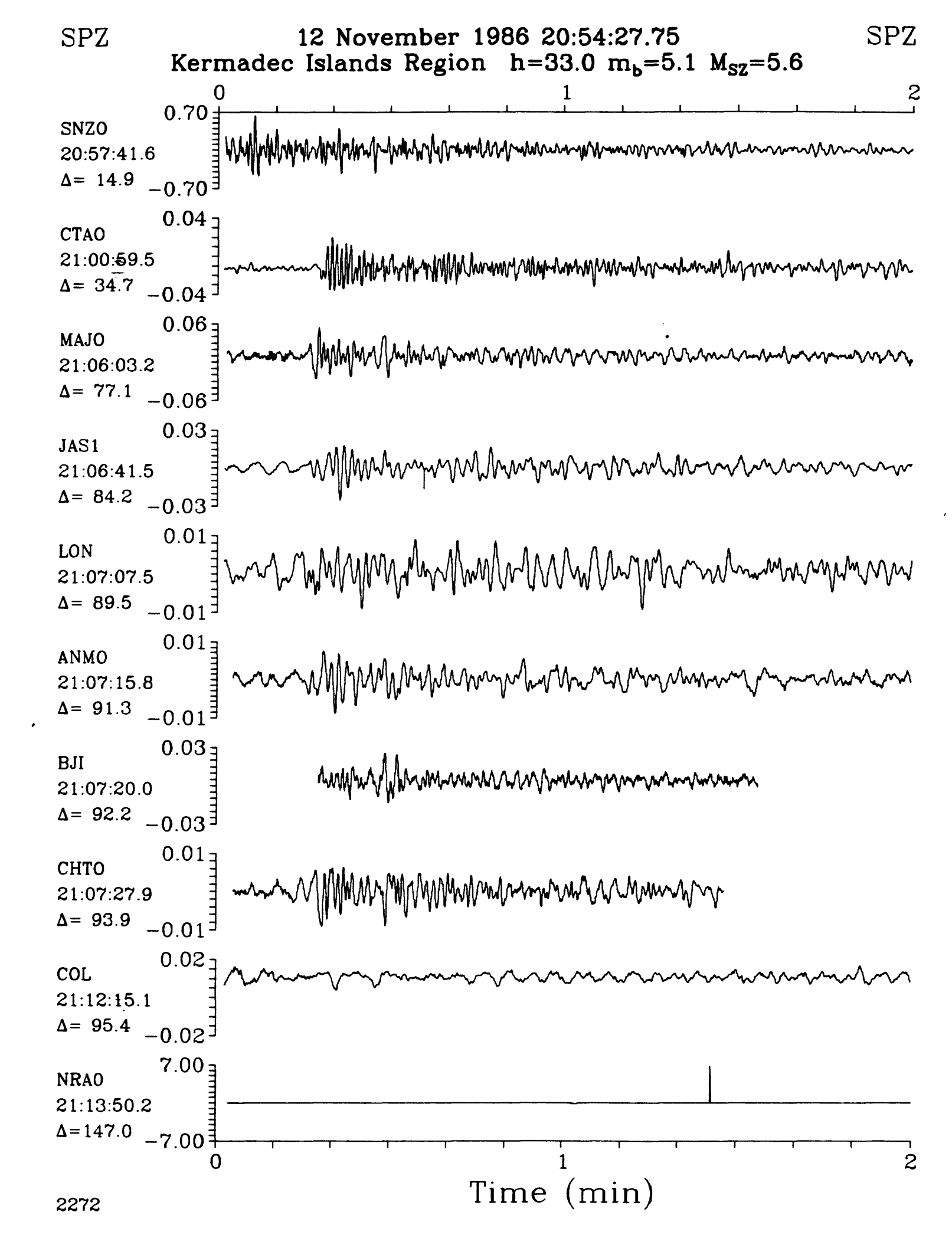

LPZ
11 November 1986 00:02:27.40
Molucca Passage h=33.0 m_b=5.7 M_{SZ}=5.2
LPZ
0
10
20
30
40
50
SNZO
00:11:41.6
Δ= 61.5
6.0
-6.0
HON
00:13:08.3
Δ= 75.4
2.0
-2.0
COL
00:14:04.9
Δ= 85.9
2.0
-2.0
BGIO
00:14:25.4
Δ= 90.2
2.0
-2.0
KEV
00:14:30.1
Δ= 91.2
2.0
-2.0
ANTO
00:14:31.8
Δ= 91.5
2.0
-2.0
KBS
00:14:35.5
Δ= 92.3
2.0
-2.0
SLR
00:19:35.4
Δ= 98.6
0.7
-0.7
NRAO
00:19:37.8
Δ=100.0
3.0
-3.0
KONO
00:19:40.2
Δ=101.3
2.0
-2.0
0
10
20
30
40
50
Time (min)
2269

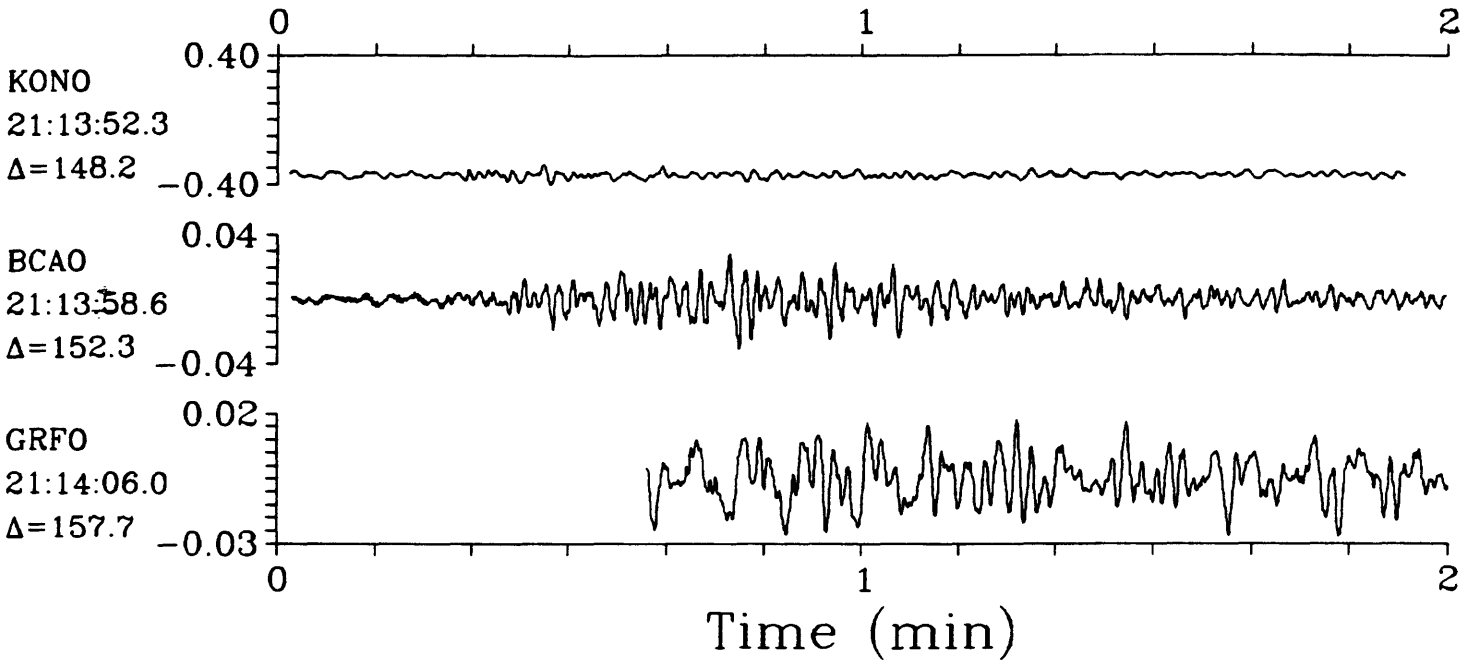

LPZ
11 November 1986 00:02:27.40
Molucca Passage h=33.0 m_b=5.7 M_{SZ}=5.2
LPZ
0
10
20
30
40
50
LON
00:19:42.9
Δ=102.8
2.0
-2.0
GRFO
00:19:45.8
Δ=104.4
2.0
-2.0
JAS1
00:19:49.4
Δ=106.4
5.0
-5.0
BCAO
00:19:52.4
Δ=107.9
1.0
-1.0
GDH
00:19:53.5
Δ=108.5
2.0
-2.0
ANMO
00:20:11.4
Δ=117.9
1.0
-1.0
TOL
00:20:12.3
Δ=118.4
0.9
-0.9
GAC
00:20:31.0
Δ=128.3
2.0
-2.0
ZOBO
00:21:23.3
Δ=159.9
0.3
-0.3
BDF
00:21:29.1
Δ=165.8
0.5
-0.5
0
10
20
30
40
50
Time (min)

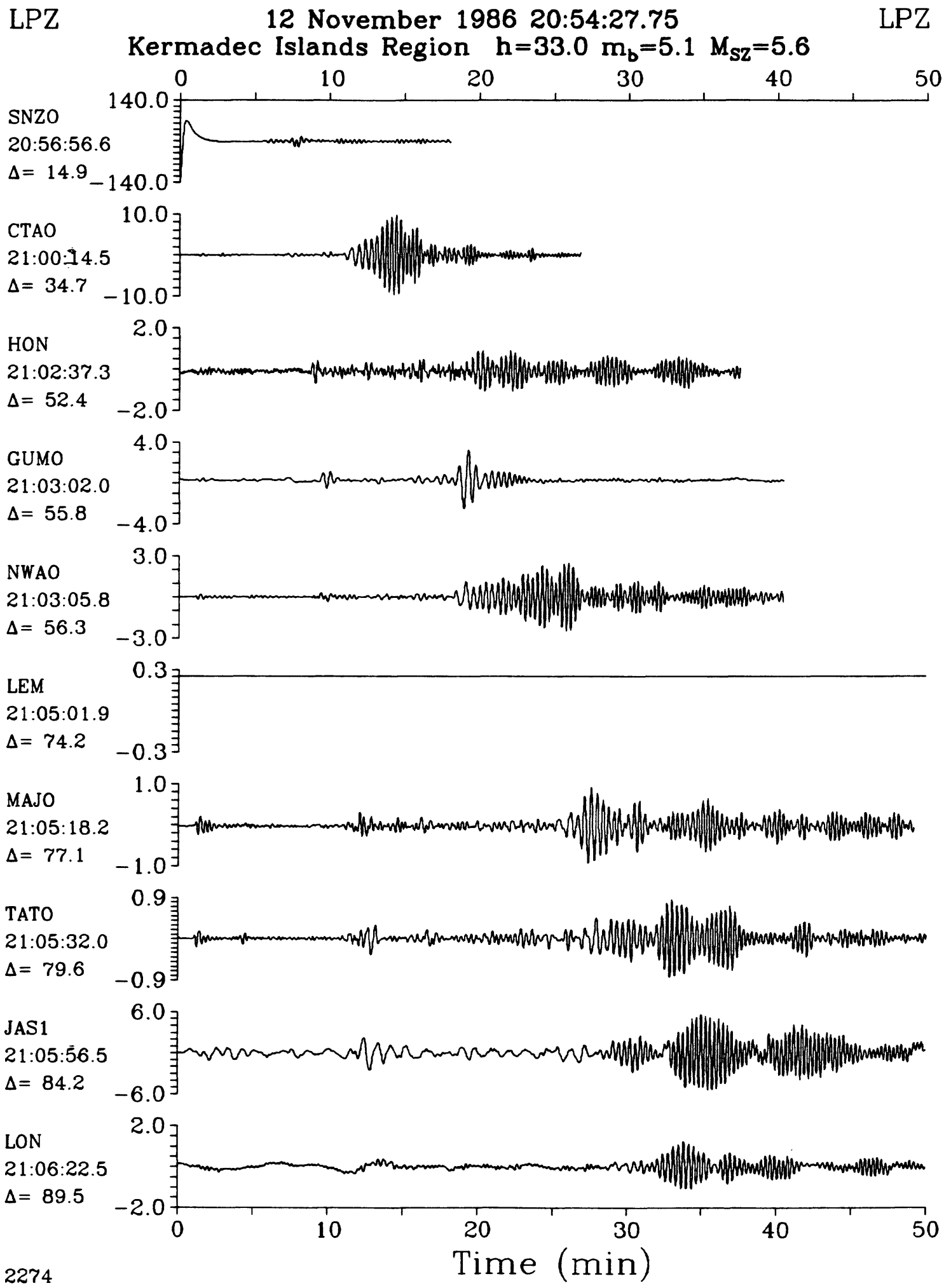
12 November 1986 20:54:27.75

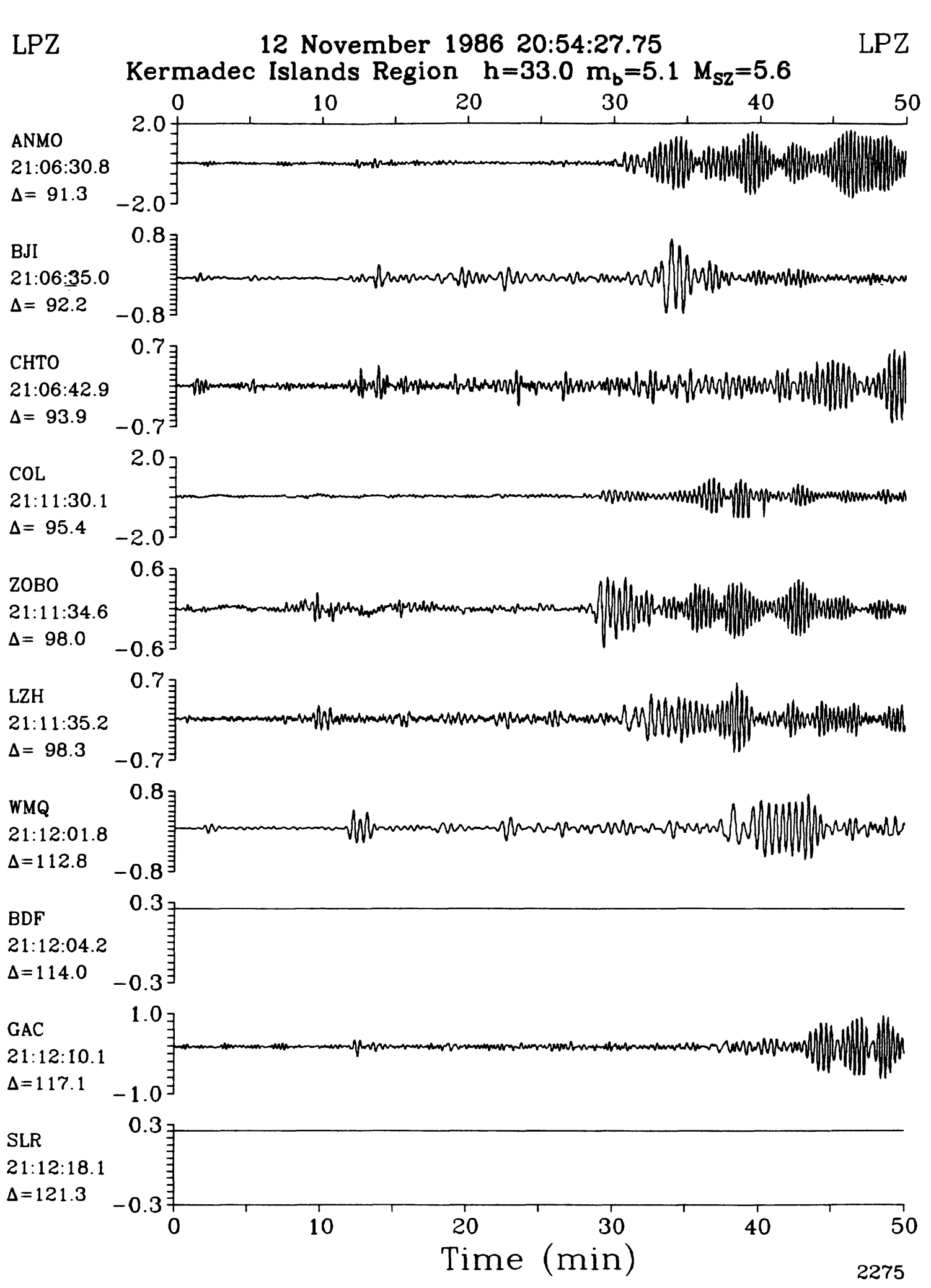
Kermadec Islands Region

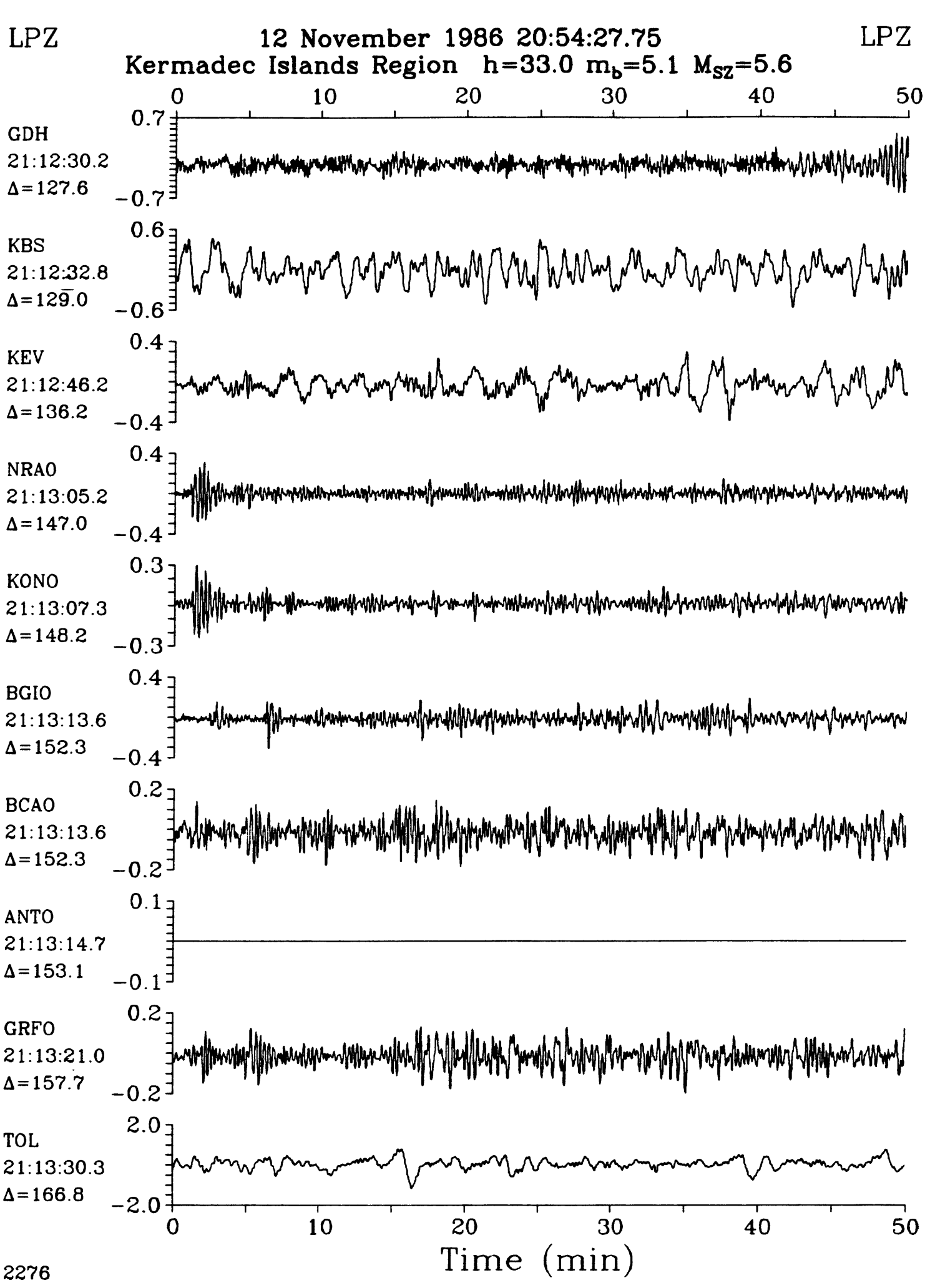



SPZ
12 November 1986 20:54:27.75
SPZ
Kermadec Islands Region h=33.0 m_b=5.1 M_{SZ}=5.6
0
1
2
0.70
SNZO
20:57:41.6
Δ= 14.9
−0.70
0.04
CTAO
21:00:59.5
Δ= 34.7
−0.04
0.06
MAJO
21:06:03.2
Δ= 77.1
−0.06
0.03
JAS1
21:06:41.5
Δ= 84.2
−0.03
0.01
LON
21:07:07.5
Δ= 89.5
−0.01
0.01
ANMO
21:07:15.8
Δ= 91.3
−0.01
0.03
BJI
21:07:20.0
Δ= 92.2
−0.03
0.01
CHTO
21:07:27.9
Δ= 93.9
−0.01
0.02
COL
21:12:15.1
Δ= 95.4
−0.02
7.00
NRAO
21:13:50.2
Δ=147.0
−7.00
0
1
2
Time (min)
2272


12 November 1986 20:54:27.75
Kermadec Islands Region h=33.0 m_b=5.1 M_{SZ}=5.6
KONO
21:13:52.3
Δ=148.2
BCAO
21:13:58.6
Δ=152.3
GRFO
21:14:06.0
Δ=157.7
0.40
−0.40
0.04
−0.04
0.02
−0.03
0
1
2
Time (min)

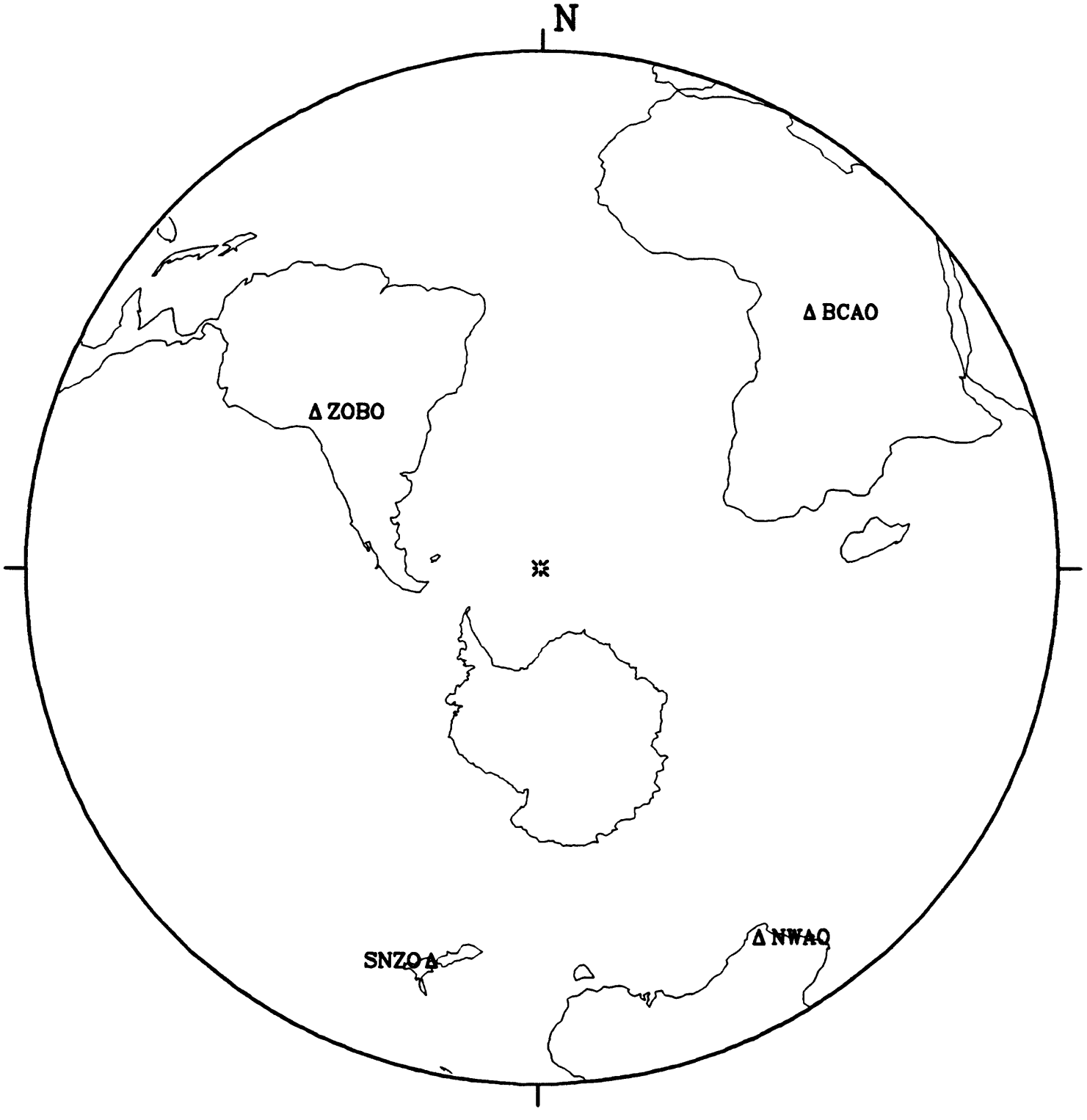

LPZ
12 November 1986 20:54:27.75
LPZ
Kermadec Islands Region h=33.0 m_b=5.1 M_{SZ}=5.6
0
10
20
30
40
50
SNZO
20:56:56.6
Δ= 14.9
140.0
-140.0
CTAO
21:00:14.5
Δ= 34.7
10.0
-10.0
HON
21:02:37.3
Δ= 52.4
2.0
-2.0
GUMO
21:03:02.0
Δ= 55.8
4.0
-4.0
NWAO
21:03:05.8
Δ= 56.3
3.0
-3.0
LEM
21:05:01.9
Δ= 74.2
0.3
-0.3
MAJO
21:05:18.2
Δ= 77.1
1.0
-1.0
TATO
21:05:32.0
Δ= 79.6
0.9
-0.9
JAS1
21:05:56.5
Δ= 84.2
6.0
-6.0
LON
21:06:22.5
Δ= 89.5
2.0
-2.0
0
10
20
30
40
50
Time (min)

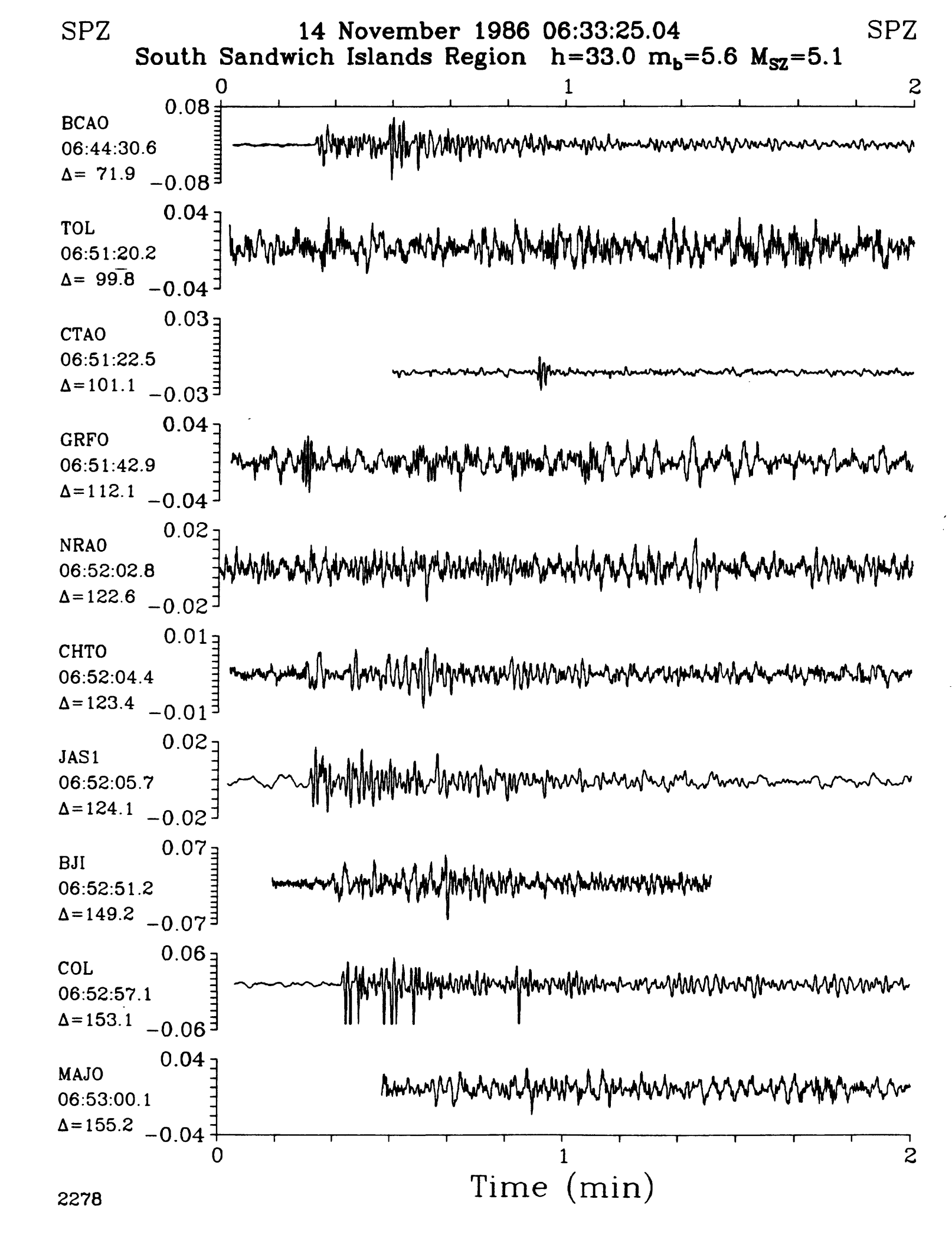

LPZ
12 November 1986 20:54:27.75
LPZ
Kermadec Islands Region h=33.0 m_b=5.1 M_{SZ}=5.6
0
10
20
30
40
50
ANMO
21:06:30.8
Δ= 91.3
2.0
-2.0
BJI
21:06:35.0
Δ= 92.2
0.8
-0.8
CHTO
21:06:42.9
Δ= 93.9
0.7
-0.7
COL
21:11:30.1
Δ= 95.4
2.0
-2.0
ZOBO
21:11:34.6
Δ= 98.0
0.6
-0.6
LZH
21:11:35.2
Δ= 98.3
0.7
-0.7
WMQ
21:12:01.8
Δ=112.8
0.8
-0.8
BDF
21:12:04.2
Δ=114.0
0.3
-0.3
GAC
21:12:10.1
Δ=117.1
1.0
-1.0
SLR
21:12:18.1
Δ=121.3
0.3
-0.3
0
10
20
30
40
50
Time (min)
2275

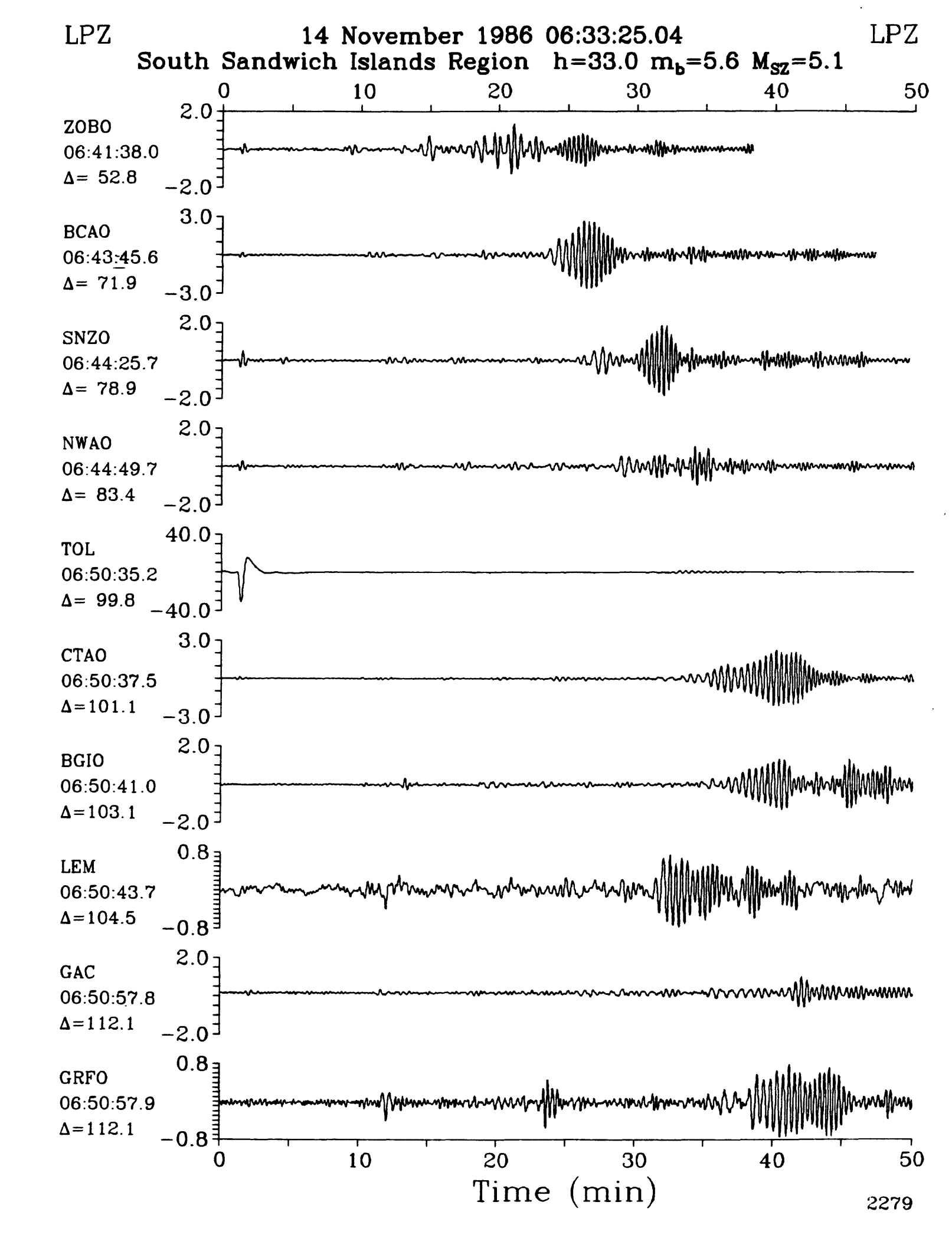

LPZ
12 November 1986 20:54:27.75
LPZ
Kermadec Islands Region h=33.0 m_b=5.1 M_{SZ}=5.6
0
10
20
30
40
50
GDH
21:12:30.2
Δ=127.6
0.7
-0.7
KBS
21:12:32.8
Δ=129.0
0.6
-0.6
KEV
21:12:46.2
Δ=136.2
0.4
-0.4
NRAO
21:13:05.2
Δ=147.0
0.4
-0.4
KONO
21:13:07.3
Δ=148.2
0.3
-0.3
BGIO
21:13:13.6
Δ=152.3
0.4
-0.4
BCAO
21:13:13.6
Δ=152.3
0.2
-0.2
ANTO
21:13:14.7
Δ=153.1
0.1
-0.1
GRFO
21:13:21.0
Δ=157.7
0.2
-0.2
TOL
21:13:30.3
Δ=166.8
2.0
-2.0
0
10
20
30
40
50
Time (min)

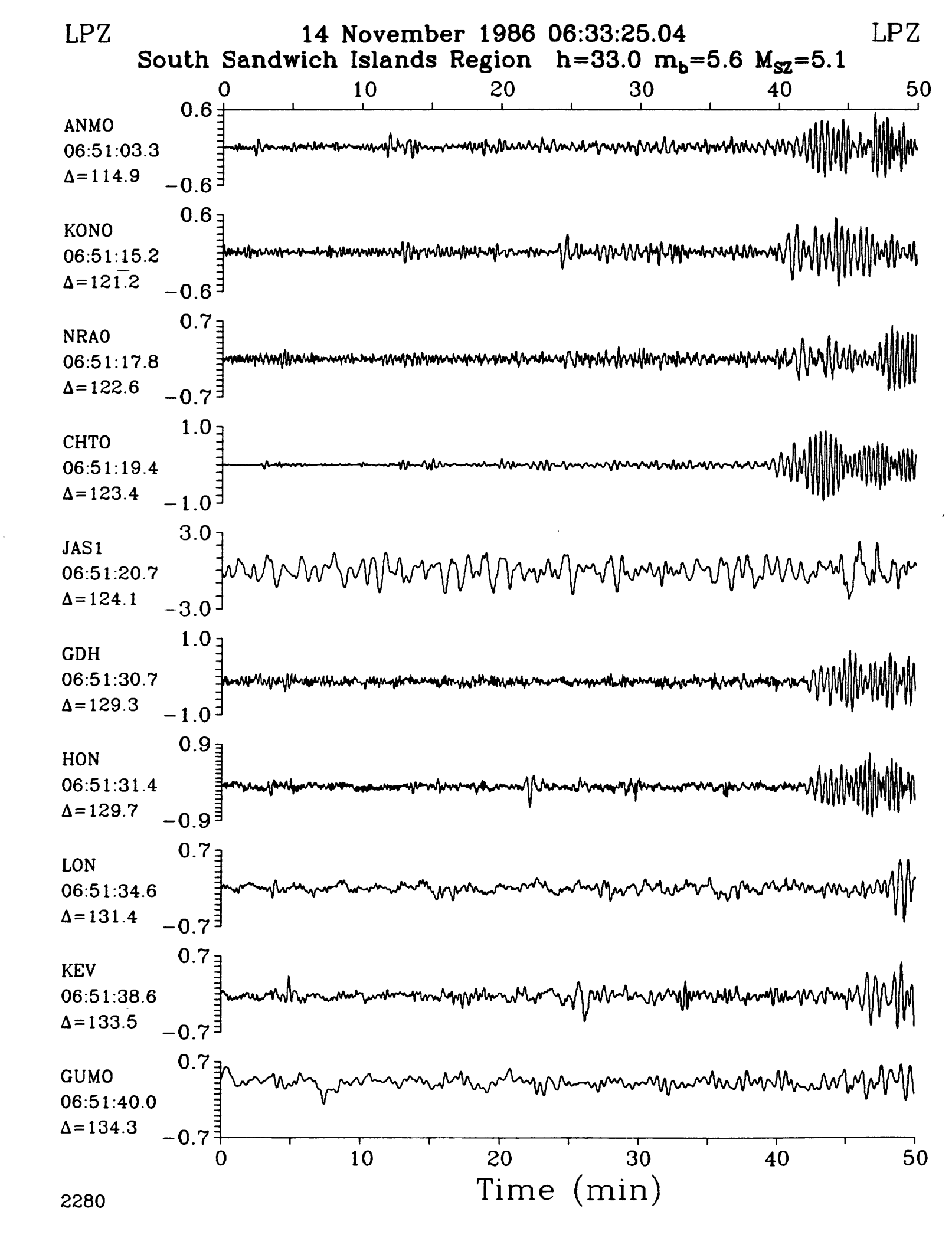
14 November 1986 06:33:25.04

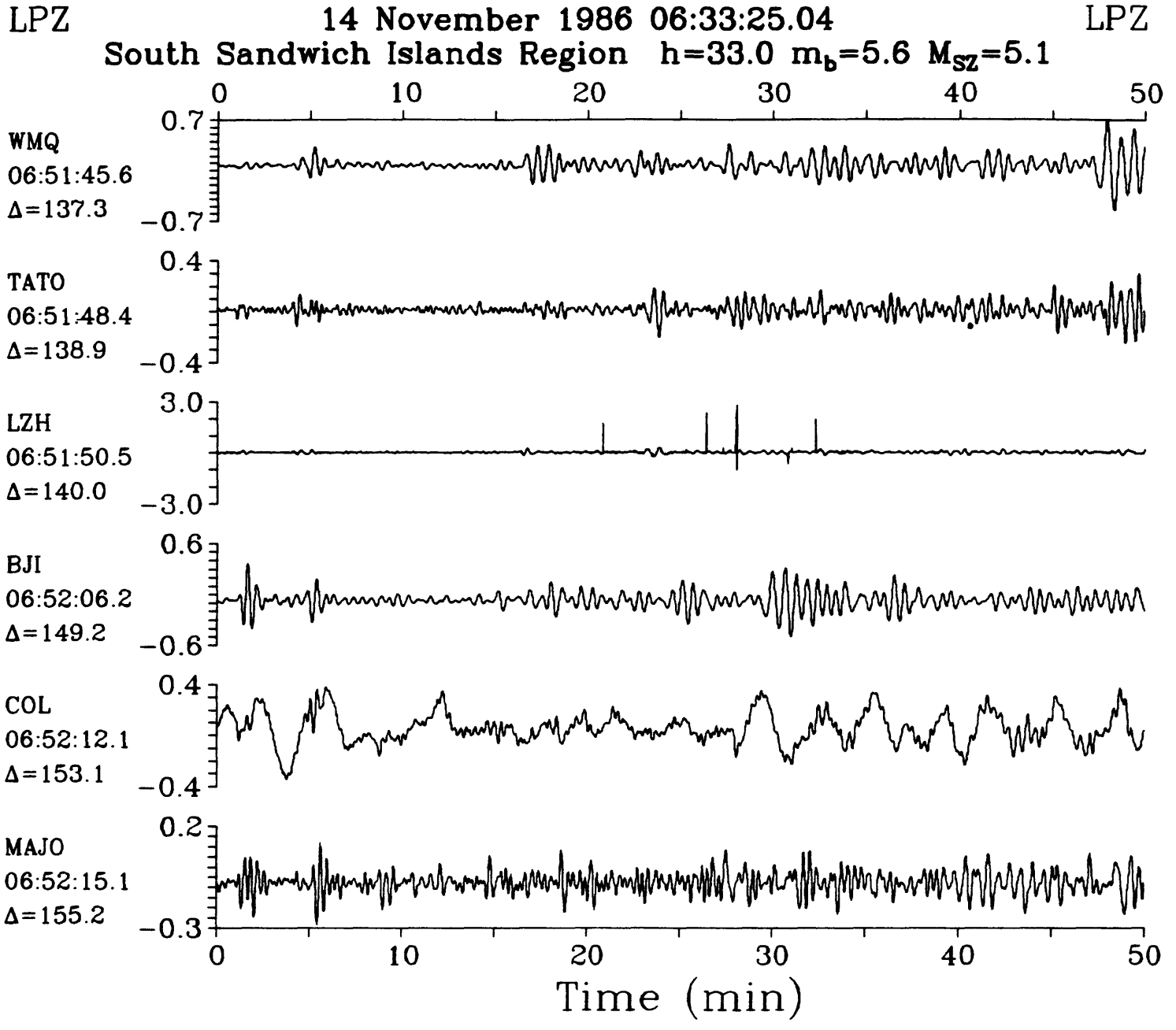
South Sandwich Islands Region




SPZ
14 November 1986 06:33:25.04
SPZ
South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=5.1
0
1
2
0.08
BCAO
06:44:30.6
Δ= 71.9
−0.08
0.04
TOL
06:51:20.2
Δ= 99.8
−0.04
0.03
CTAO
06:51:22.5
Δ=101.1
−0.03
0.04
GRFO
06:51:42.9
Δ=112.1
−0.04
0.02
NRAO
06:52:02.8
Δ=122.6
−0.02
0.01
CHTO
06:52:04.4
Δ=123.4
−0.01
0.02
JAS1
06:52:05.7
Δ=124.1
−0.02
0.07
BJI
06:52:51.2
Δ=149.2
−0.07
0.06
COL
06:52:57.1
Δ=153.1
−0.06
0.04
MAJO
06:53:00.1
Δ=155.2
−0.04
0
1
2
Time (min)
2278

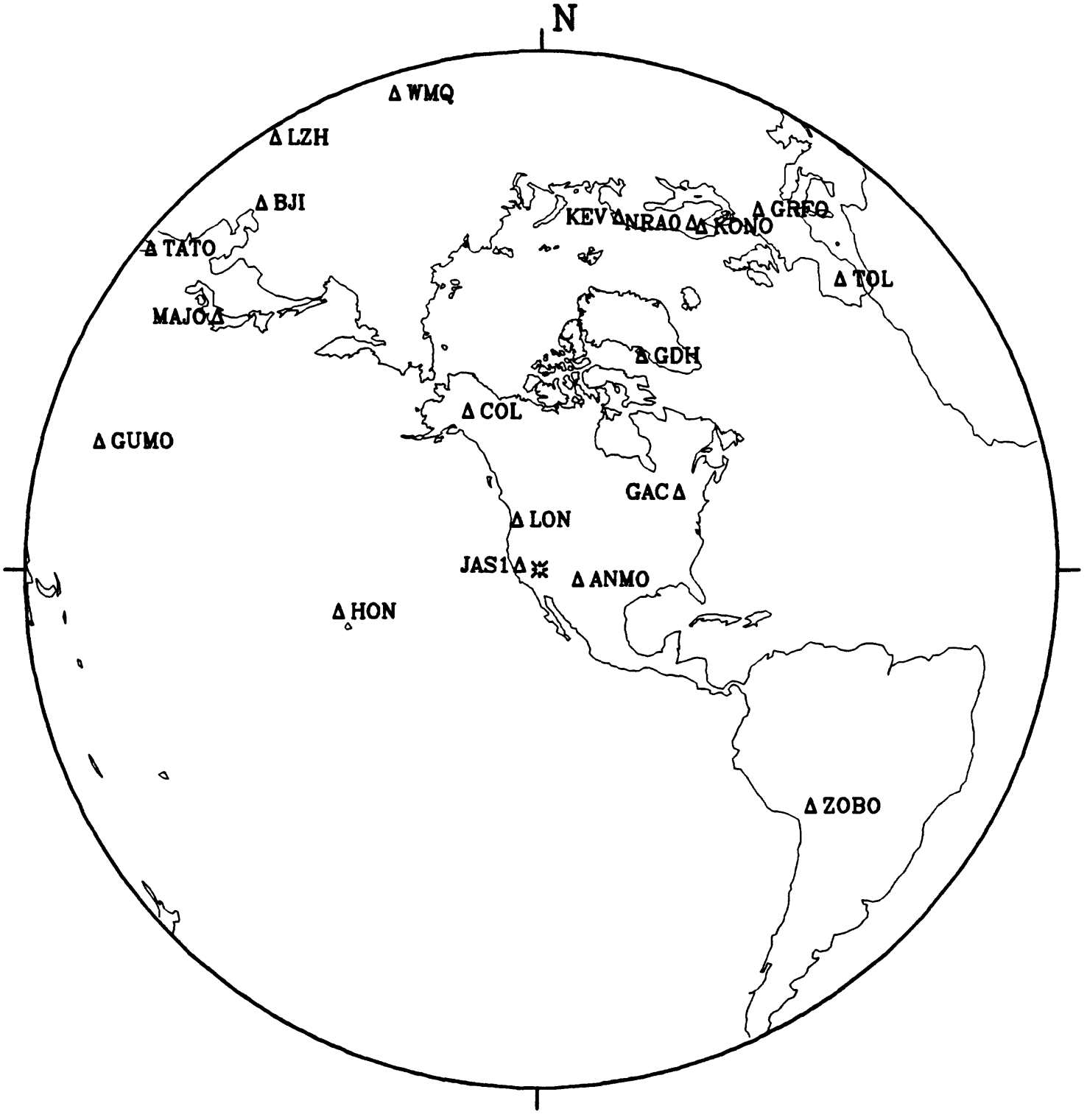

LPZ
14 November 1986 06:33:25.04
LPZ
South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=5.1
0
10
20
30
40
50
ZOBO
06:41:38.0
Δ= 52.8
2.0
-2.0
BCAO
06:43:45.6
Δ= 71.9
3.0
-3.0
SNZO
06:44:25.7
Δ= 78.9
2.0
-2.0
NWAO
06:44:49.7
Δ= 83.4
2.0
-2.0
TOL
06:50:35.2
Δ= 99.8
40.0
-40.0
CTAO
06:50:37.5
Δ=101.1
3.0
-3.0
BGIO
06:50:41.0
Δ=103.1
2.0
-2.0
LEM
06:50:43.7
Δ=104.5
0.8
-0.8
GAC
06:50:57.8
Δ=112.1
2.0
-2.0
GRFO
06:50:57.9
Δ=112.1
0.8
-0.8
0
10
20
30
40
50
Time (min)
2279

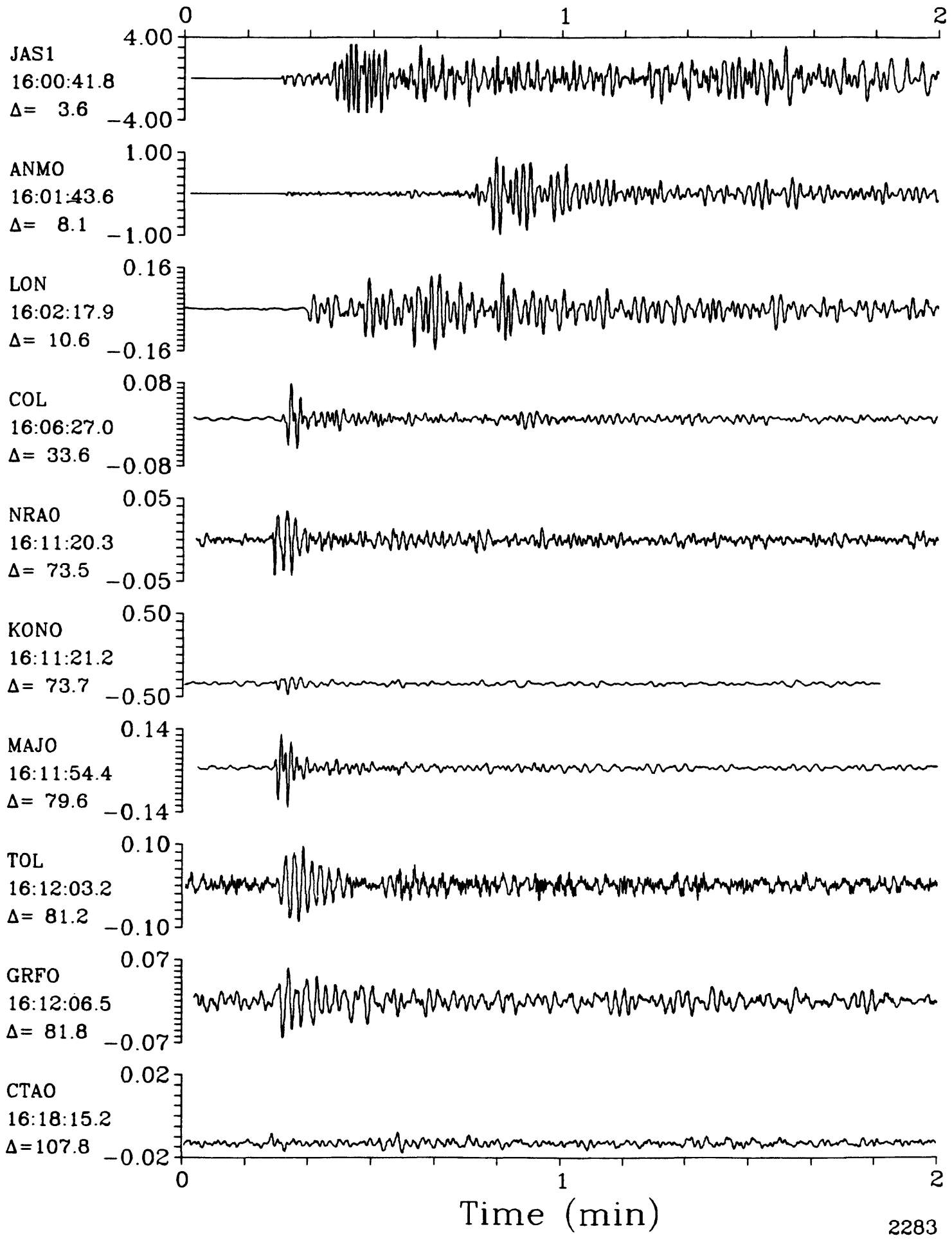

LPZ
14 November 1986 06:33:25.04
LPZ
South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=5.1
0
10
20
30
40
50
ANMO
06:51:03.3
Δ=114.9
0.6
-0.6
KONO
06:51:15.2
Δ=121.2
0.6
-0.6
NRAO
06:51:17.8
Δ=122.6
0.7
-0.7
CHTO
06:51:19.4
Δ=123.4
1.0
-1.0
JAS1
06:51:20.7
Δ=124.1
3.0
-3.0
GDH
06:51:30.7
Δ=129.3
1.0
-1.0
HON
06:51:31.4
Δ=129.7
0.9
-0.9
LON
06:51:34.6
Δ=131.4
0.7
-0.7
KEV
06:51:38.6
Δ=133.5
0.7
-0.7
GUMO
06:51:40.0
Δ=134.3
0.7
-0.7
0
10
20
30
40
50
Time (min)
2280

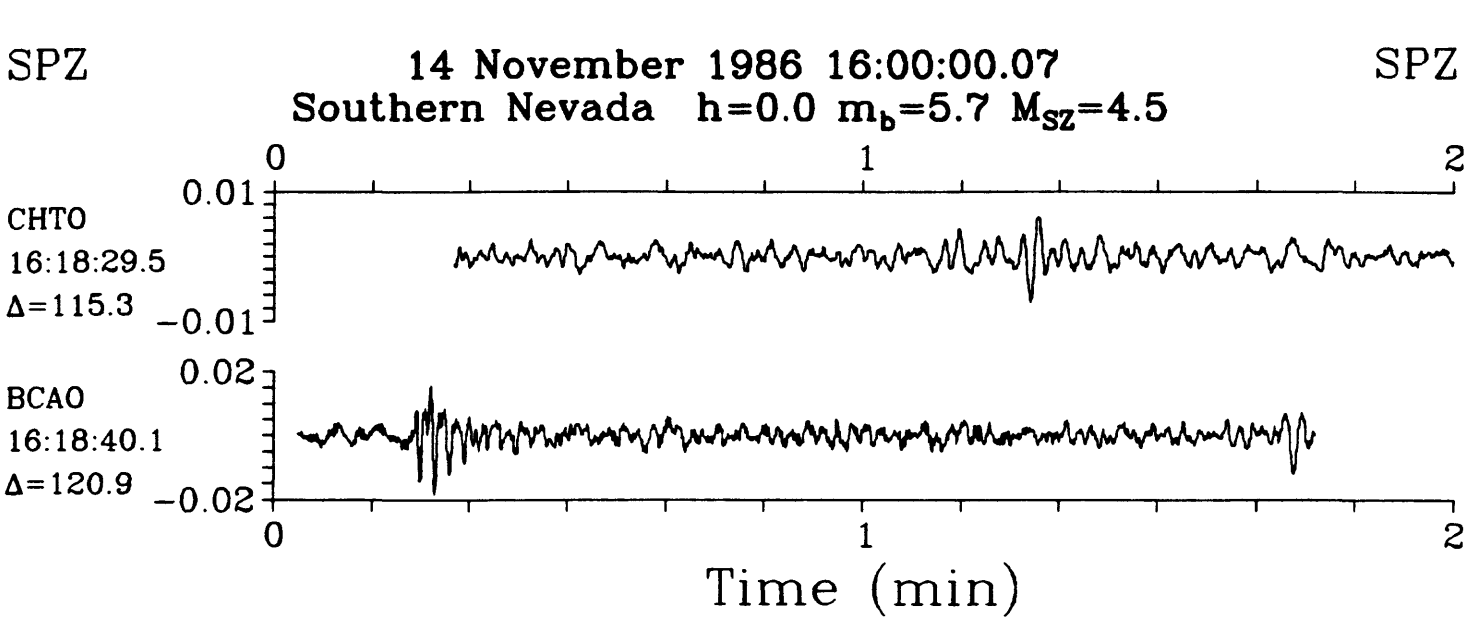

LPZ
14 November 1986 06:33:25.04
LPZ
South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=5.1
0
10
20
30
40
50
WMQ
06:51:45.6
Δ=137.3
0.7
-0.7
TATO
06:51:48.4
Δ=138.9
0.4
-0.4
LZH
06:51:50.5
Δ=140.0
3.0
-3.0
BJI
06:52:06.2
Δ=149.2
0.6
-0.6
COL
06:52:12.1
Δ=153.1
0.4
-0.4
MAJO
06:52:15.1
Δ=155.2
0.2
-0.3
Time (min)

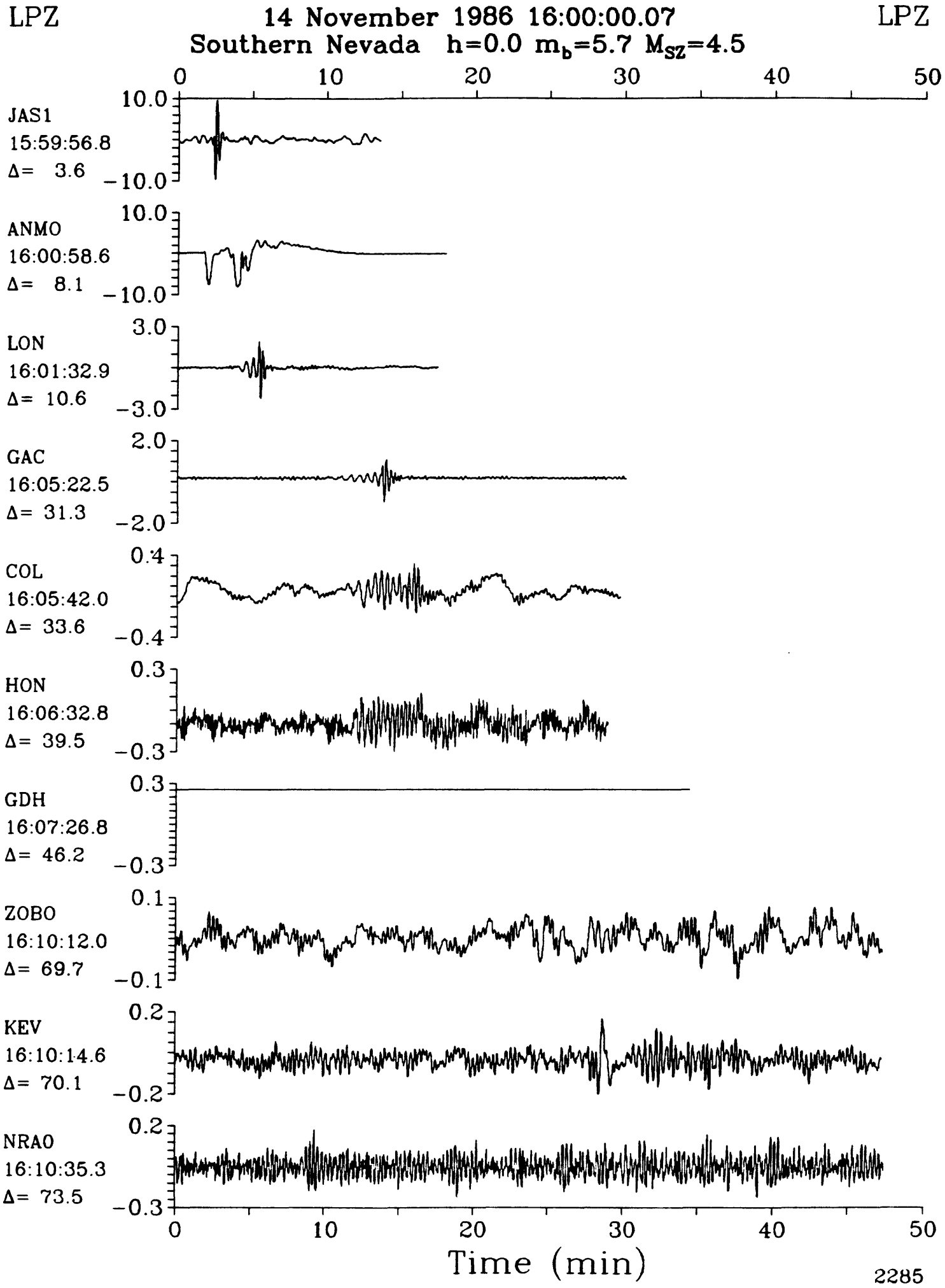
14 November 1986 16:00:00.07

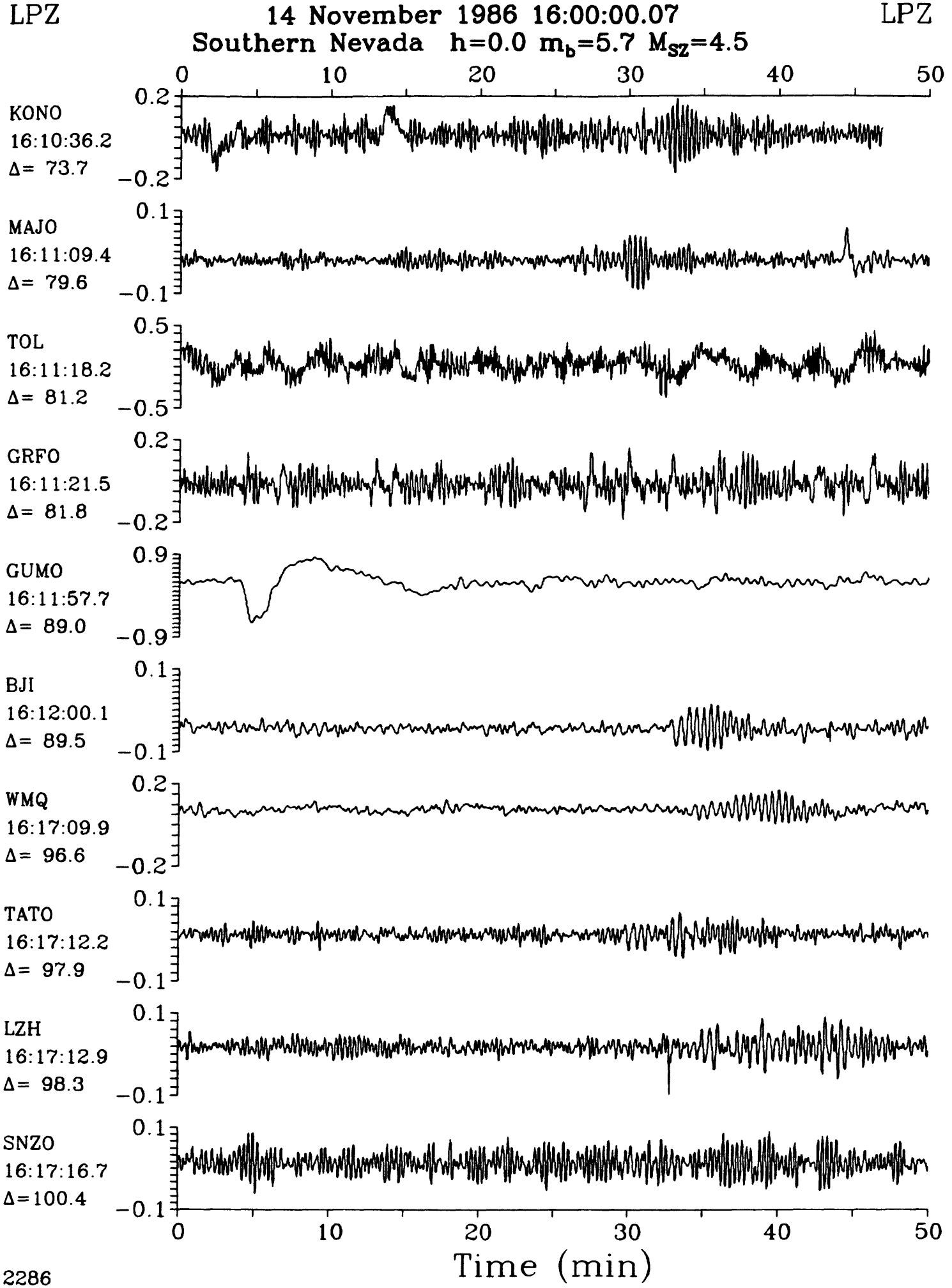
Southern Nevada

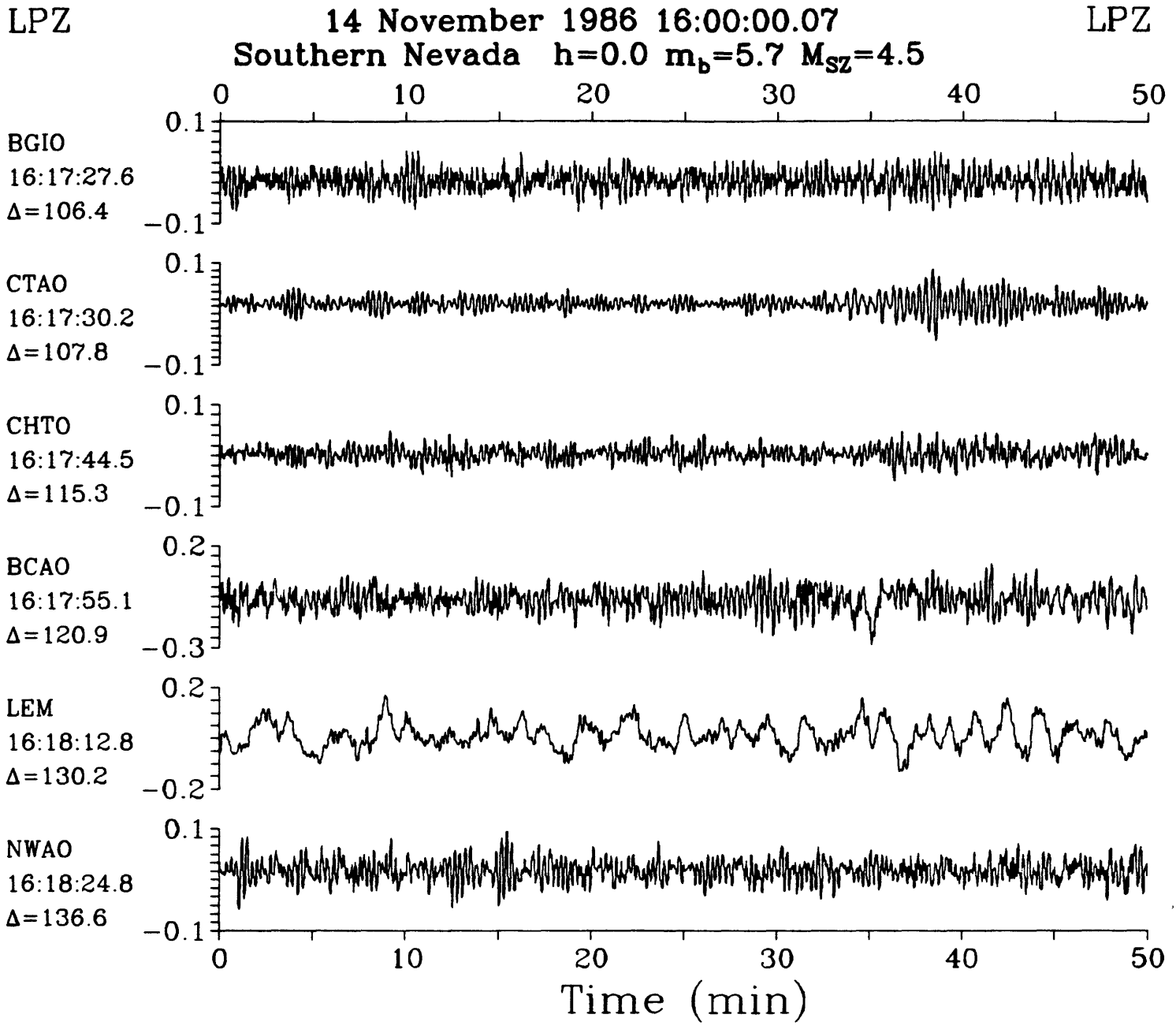



SPZ
14 November 1986 16:00:00.07
Southern Nevada h=0.0 m_b=5.7 M_{SZ}=4.5
SPZ
0
1
2
JAS1
16:00:41.8
Δ= 3.6
4.00
-4.00
ANMO
16:01:43.6
Δ= 8.1
1.00
-1.00
LON
16:02:17.9
Δ= 10.6
0.16
-0.16
COL
16:06:27.0
Δ= 33.6
0.08
-0.08
NRAO
16:11:20.3
Δ= 73.5
0.05
-0.05
KONO
16:11:21.2
Δ= 73.7
0.50
-0.50
MAJO
16:11:54.4
Δ= 79.6
0.14
-0.14
TOL
16:12:03.2
Δ= 81.2
0.10
-0.10
GRFO
16:12:06.5
Δ= 81.8
0.07
-0.07
CTAO
16:18:15.2
Δ=107.8
0.02
-0.02
0
1
2
Time (min)
2283


SPZ
14 November 1986 16:00:00.07
Southern Nevada h=0.0 m_b=5.7 M_{SZ}=4.5
SPZ
0
1
2
0.01
CHTO
16:18:29.5
Δ=115.3
−0.01
0.02
BCAO
16:18:40.1
Δ=120.9
−0.02
0
1
2
Time (min)

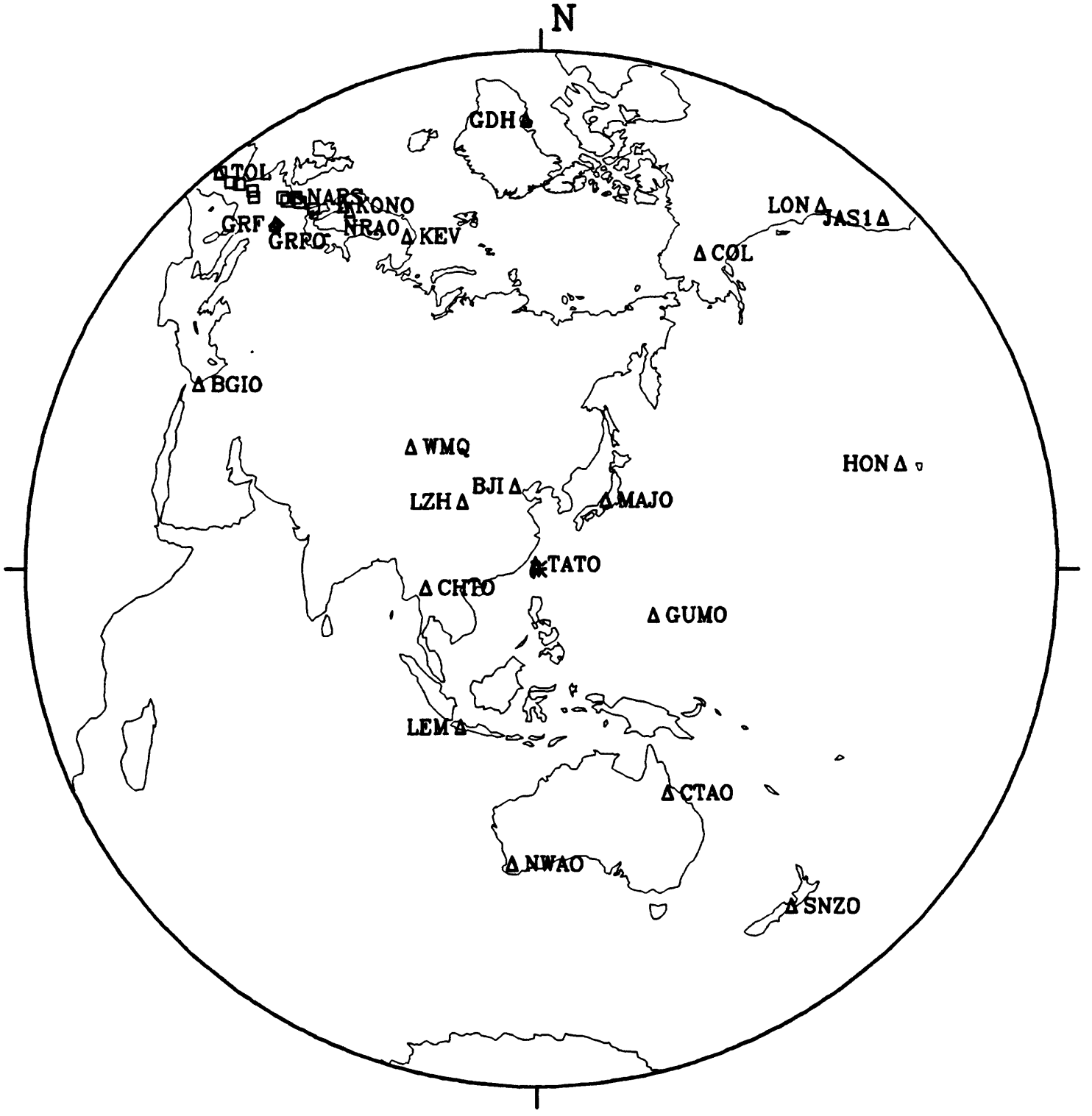

LPZ
14 November 1986 16:00:00.07
Southern Nevada h=0.0 m_b=5.7 M_{SZ}=4.5
LPZ
0
10
20
30
40
50
JAS1
15:59:56.8
Δ= 3.6
10.0
-10.0
ANMO
16:00:58.6
Δ= 8.1
10.0
-10.0
LON
16:01:32.9
Δ= 10.6
3.0
-3.0
GAC
16:05:22.5
Δ= 31.3
2.0
-2.0
COL
16:05:42.0
Δ= 33.6
0.4
-0.4
HON
16:06:32.8
Δ= 39.5
0.3
-0.3
GDH
16:07:26.8
Δ= 46.2
0.3
-0.3
ZOBO
16:10:12.0
Δ= 69.7
0.1
-0.1
KEV
16:10:14.6
Δ= 70.1
0.2
-0.2
NRAO
16:10:35.3
Δ= 73.5
0.2
-0.3
0
10
20
30
40
50
Time (min)
2285

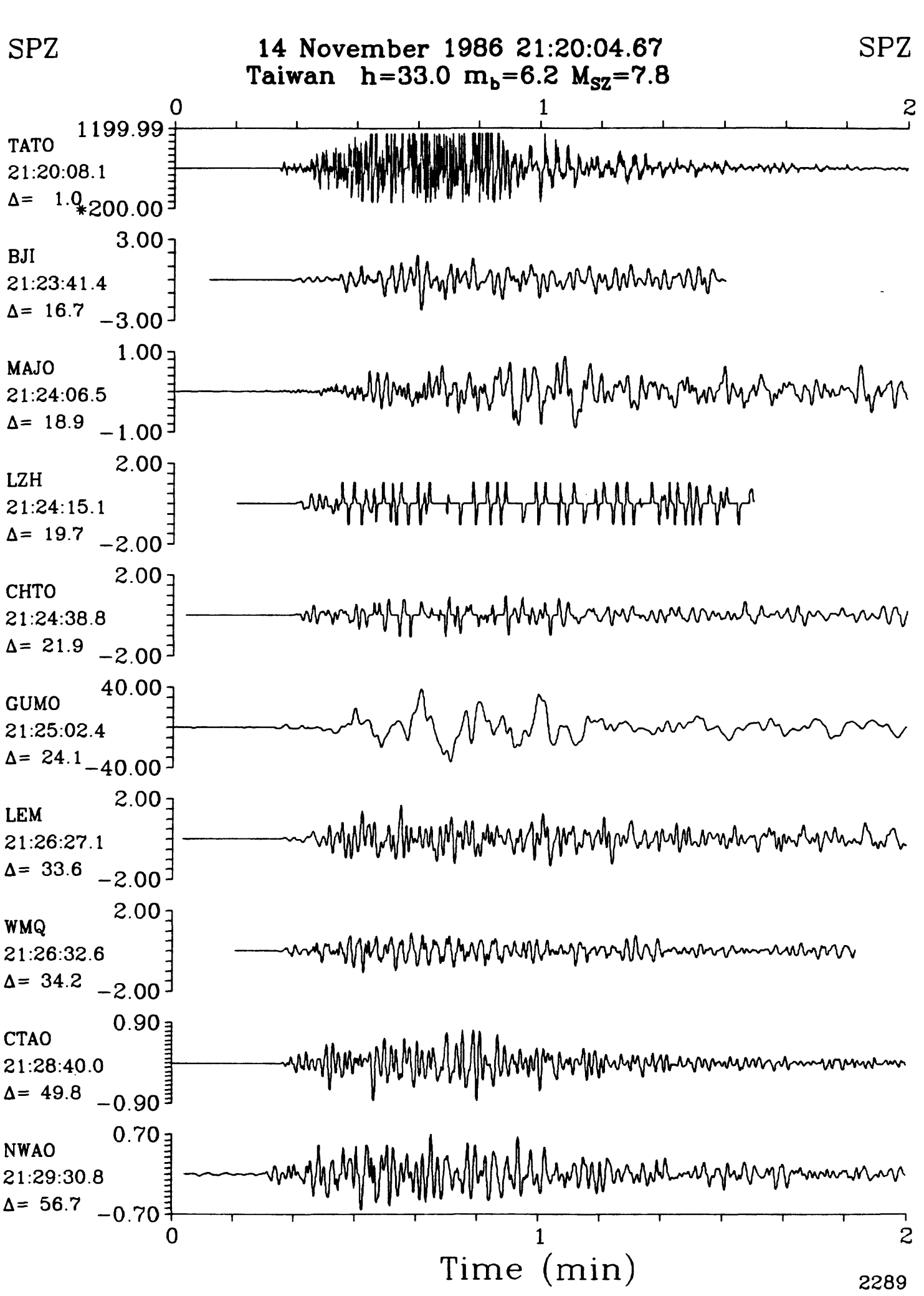

LPZ
14 November 1986 16:00:00.07
Southern Nevada h=0.0 m_b=5.7 M_{SZ}=4.5
LPZ
0
10
20
30
40
50
KONO
16:10:36.2
Δ= 73.7
0.2
−0.2
MAJO
16:11:09.4
Δ= 79.6
0.1
−0.1
TOL
16:11:18.2
Δ= 81.2
0.5
−0.5
GRFO
16:11:21.5
Δ= 81.8
0.2
−0.2
GUMO
16:11:57.7
Δ= 89.0
0.9
−0.9
BJI
16:12:00.1
Δ= 89.5
0.1
−0.1
WMQ
16:17:09.9
Δ= 96.6
0.2
−0.2
TATO
16:17:12.2
Δ= 97.9
0.1
−0.1
LZH
16:17:12.9
Δ= 98.3
0.1
−0.1
SNZO
16:17:16.7
Δ=100.4
0.1
−0.1
0
10
20
30
40
50
Time (min)

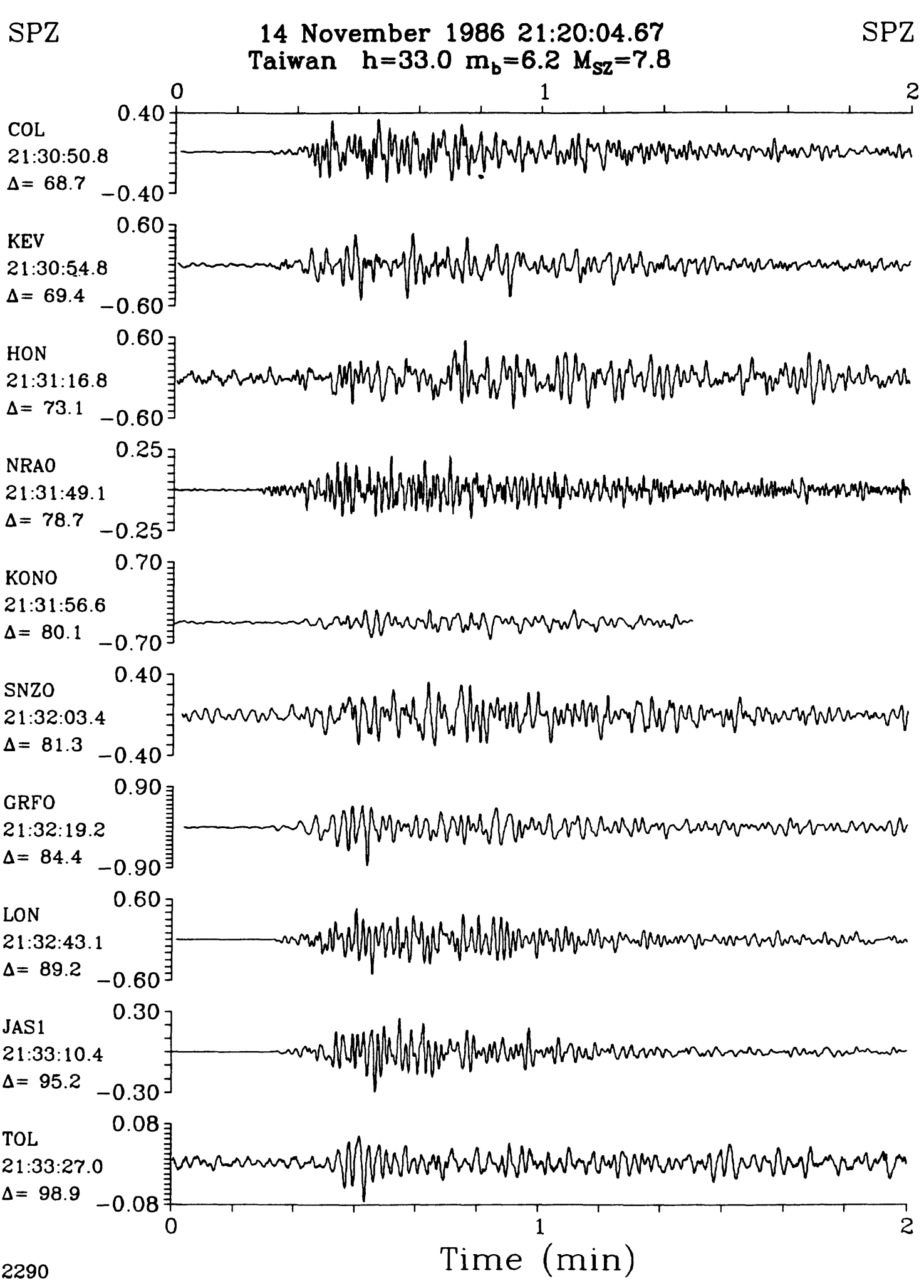

LPZ
14 November 1986 16:00:00.07
Southern Nevada h=0.0 m_b=5.7 M_{SZ}=4.5
LPZ
0
10
20
30
40
50
BGIO
16:17:27.6
Δ=106.4
0.1
−0.1
CTAO
16:17:30.2
Δ=107.8
0.1
−0.1
CHTO
16:17:44.5
Δ=115.3
0.1
−0.1
BCAO
16:17:55.1
Δ=120.9
0.2
−0.3
LEM
16:18:12.8
Δ=130.2
0.2
−0.2
NWAO
16:18:24.8
Δ=136.6
0.1
−0.1
0
10
20
30
40
50
Time (min)

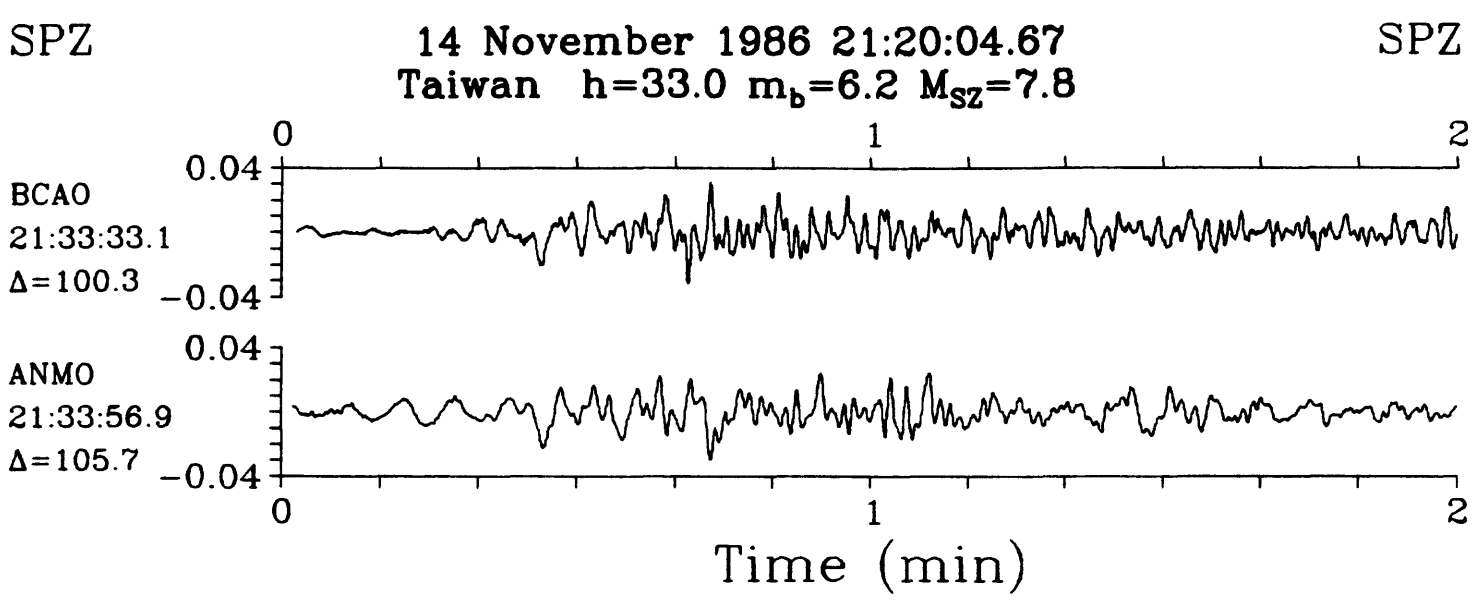
14 November 1986 21:20:04.67

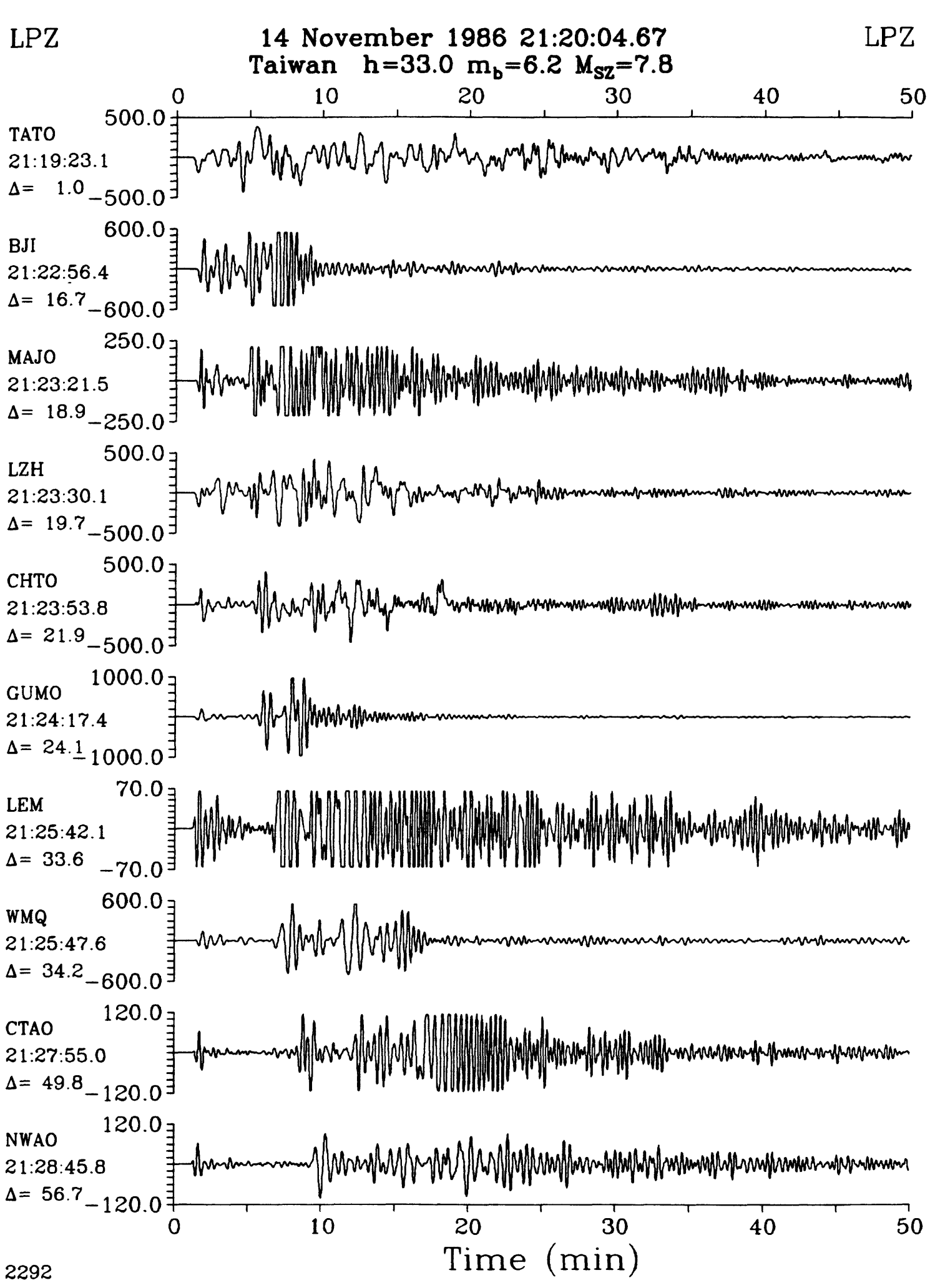
Taiwan

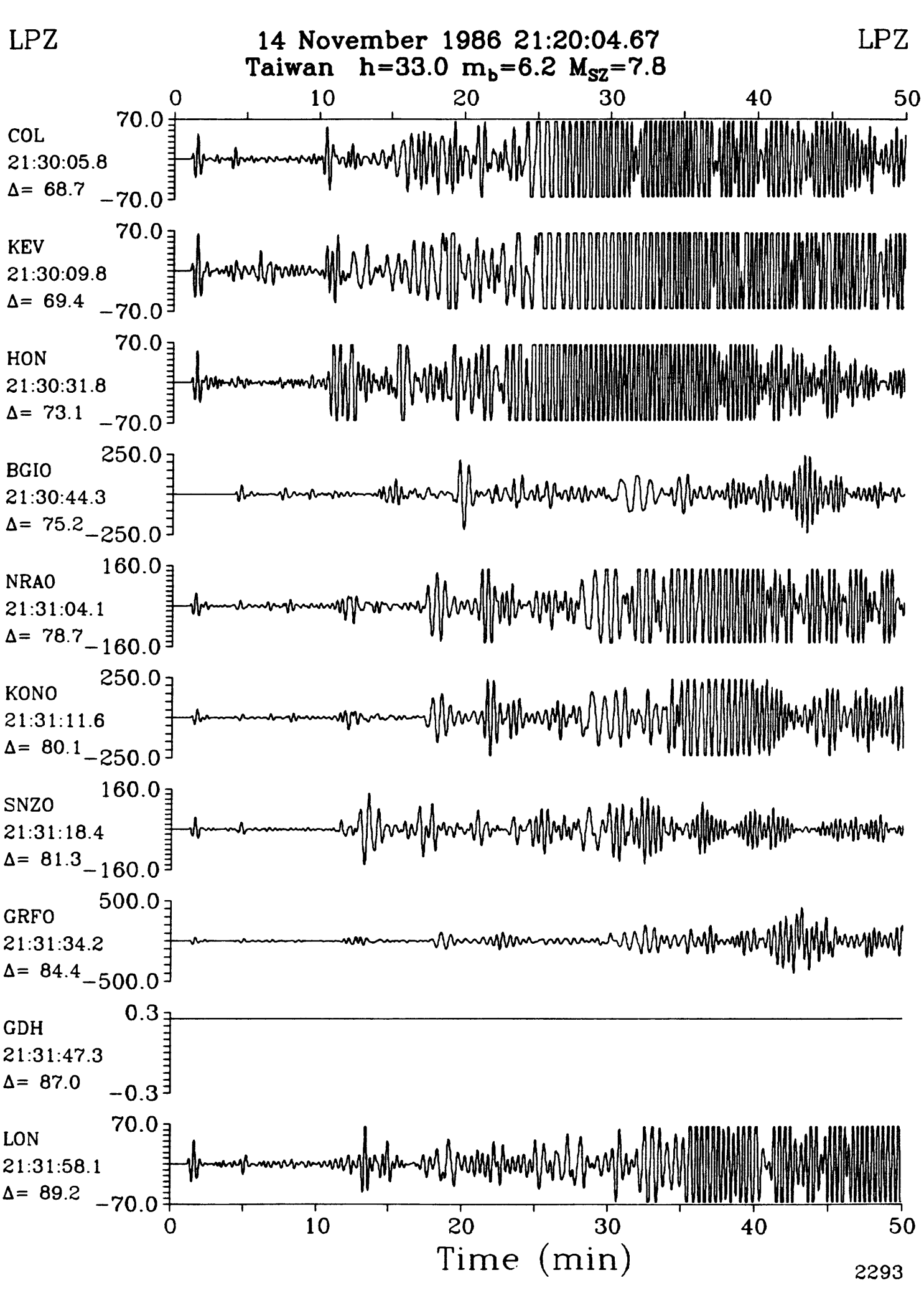


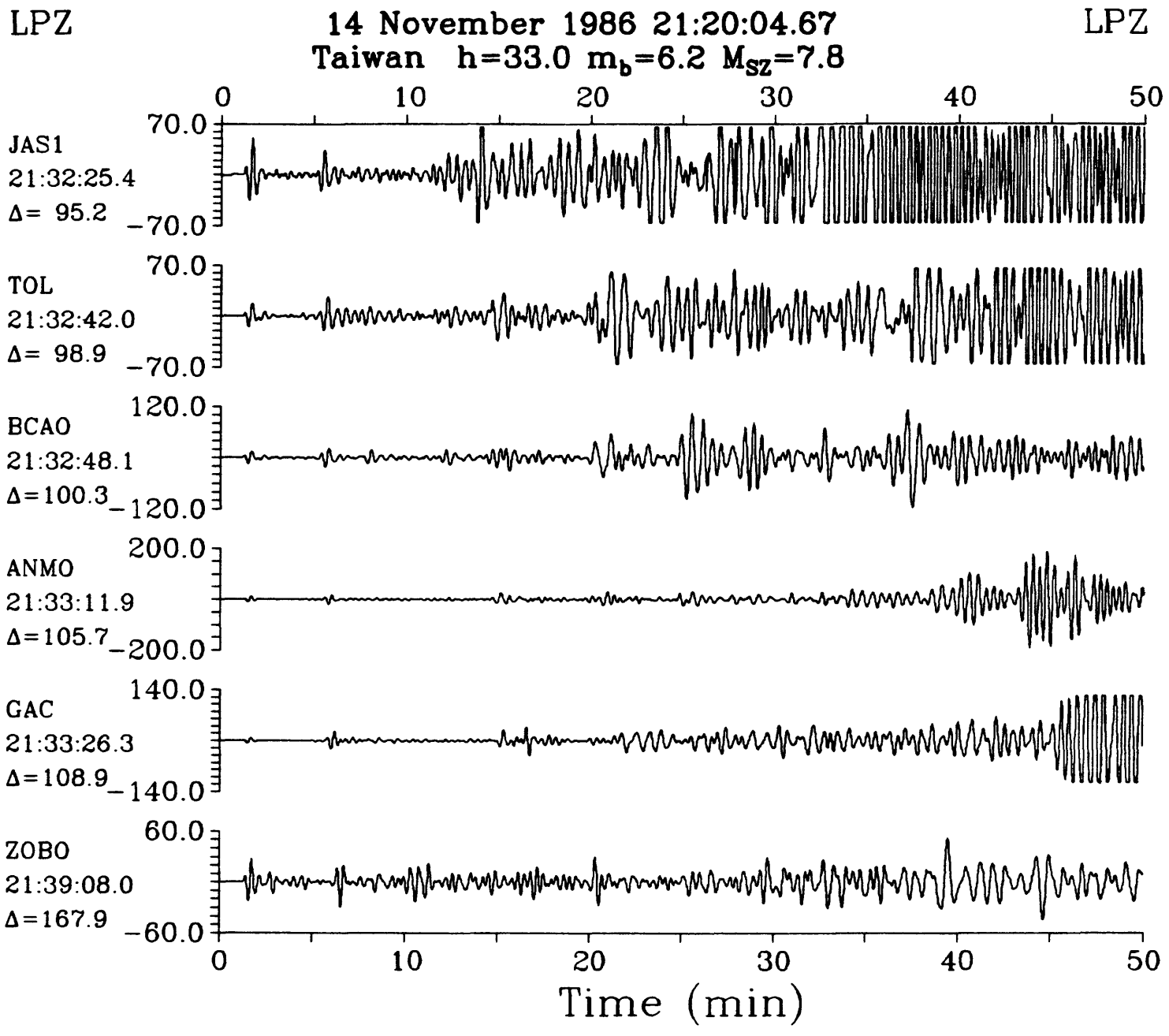

SPZ
14 November 1986 21:20:04.67
Taiwan h=33.0 m_b=6.2 M_{SZ}=7.8
SPZ
0
1
2
1199.99
TATO
21:20:08.1
Δ= 1.0
*200.00
3.00
BJI
21:23:41.4
Δ= 16.7
-3.00
1.00
MAJO
21:24:06.5
Δ= 18.9
-1.00
2.00
LZH
21:24:15.1
Δ= 19.7
-2.00
2.00
CHTO
21:24:38.8
Δ= 21.9
-2.00
40.00
GUMO
21:25:02.4
Δ= 24.1
-40.00
2.00
LEM
21:26:27.1
Δ= 33.6
-2.00
2.00
WMQ
21:26:32.6
Δ= 34.2
-2.00
0.90
CTAO
21:28:40.0
Δ= 49.8
-0.90
0.70
NWAO
21:29:30.8
Δ= 56.7
-0.70
0
1
2
Time (min)
2289

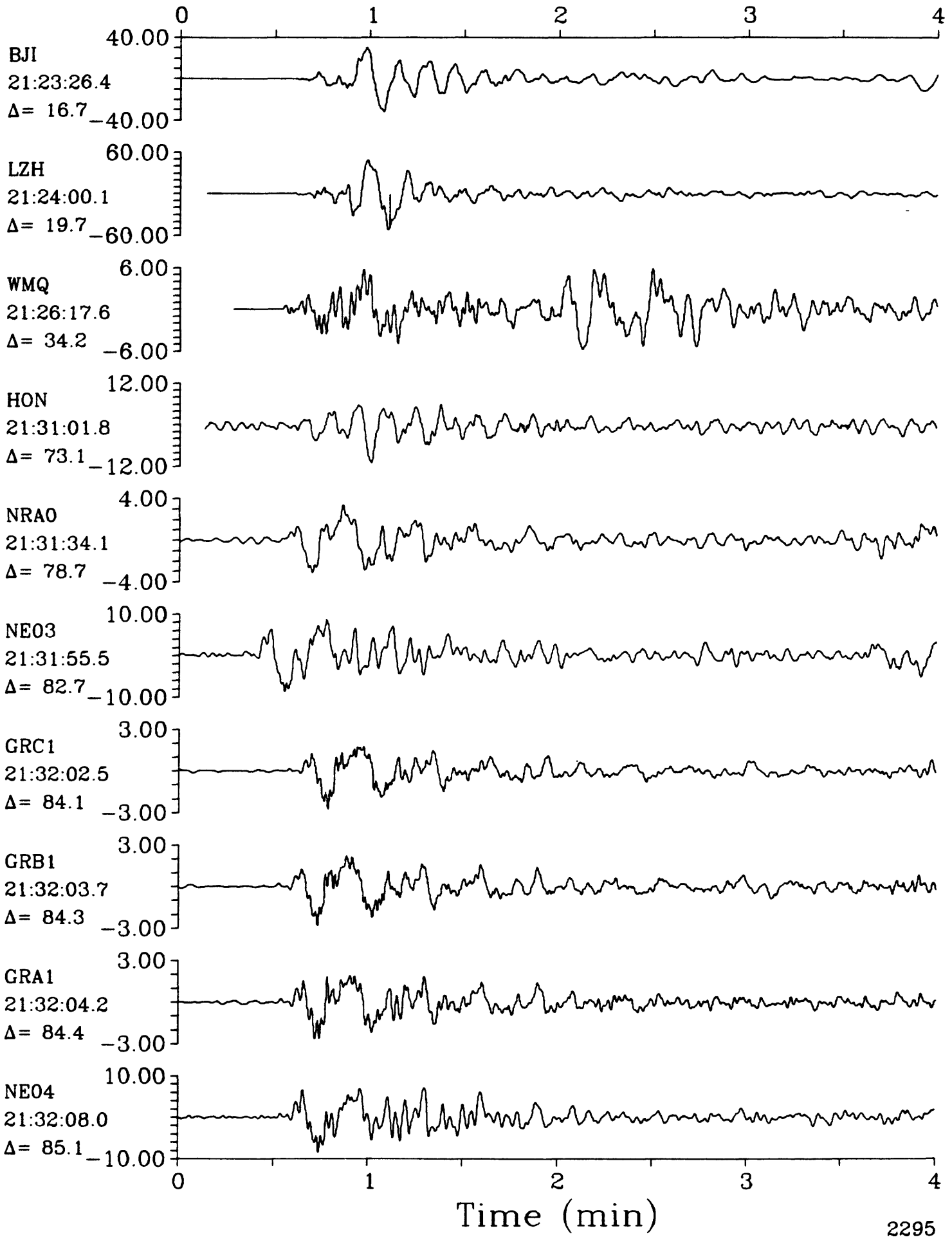

SPZ
14 November 1986 21:20:04.67
Taiwan h=33.0 m_b=6.2 M_{SZ}=7.8
SPZ
0
1
2
COL
21:30:50.8
Δ= 68.7
0.40
-0.40
KEV
21:30:54.8
Δ= 69.4
0.60
-0.60
HON
21:31:16.8
Δ= 73.1
0.60
-0.60
NRA0
21:31:49.1
Δ= 78.7
0.25
-0.25
KONO
21:31:56.6
Δ= 80.1
0.70
-0.70
SNZO
21:32:03.4
Δ= 81.3
0.40
-0.40
GRFO
21:32:19.2
Δ= 84.4
0.90
-0.90
LON
21:32:43.1
Δ= 89.2
0.60
-0.60
JAS1
21:33:10.4
Δ= 95.2
0.30
-0.30
TOL
21:33:27.0
Δ= 98.9
0.08
-0.08
0
1
2
Time (min)
2290


SPZ
14 November 1986 21:20:04.67
Taiwan h=33.0 m_b=6.2 M_{SZ}=7.8
SPZ
0
1
2
0.04
BCAO
21:33:33.1
Δ=100.3
−0.04
0.04
ANMO
21:33:56.9
Δ=105.7
−0.04
0
1
2
Time (min)


LPZ
14 November 1986 21:20:04.67
Taiwan h=33.0 m_b=6.2 M_{SZ}=7.8
LPZ
0
10
20
30
40
50
TATO
21:19:23.1
Δ= 1.0
500.0
-500.0
BJI
21:22:56.4
Δ= 16.7
600.0
-600.0
MAJO
21:23:21.5
Δ= 18.9
250.0
-250.0
LZH
21:23:30.1
Δ= 19.7
500.0
-500.0
CHTO
21:23:53.8
Δ= 21.9
500.0
-500.0
GUMO
21:24:17.4
Δ= 24.1
1000.0
-1000.0
LEM
21:25:42.1
Δ= 33.6
70.0
-70.0
WMQ
21:25:47.6
Δ= 34.2
600.0
-600.0
CTAO
21:27:55.0
Δ= 49.8
120.0
-120.0
NWAO
21:28:45.8
Δ= 56.7
120.0
-120.0
0
10
20
30
40
50
Time (min)
2292

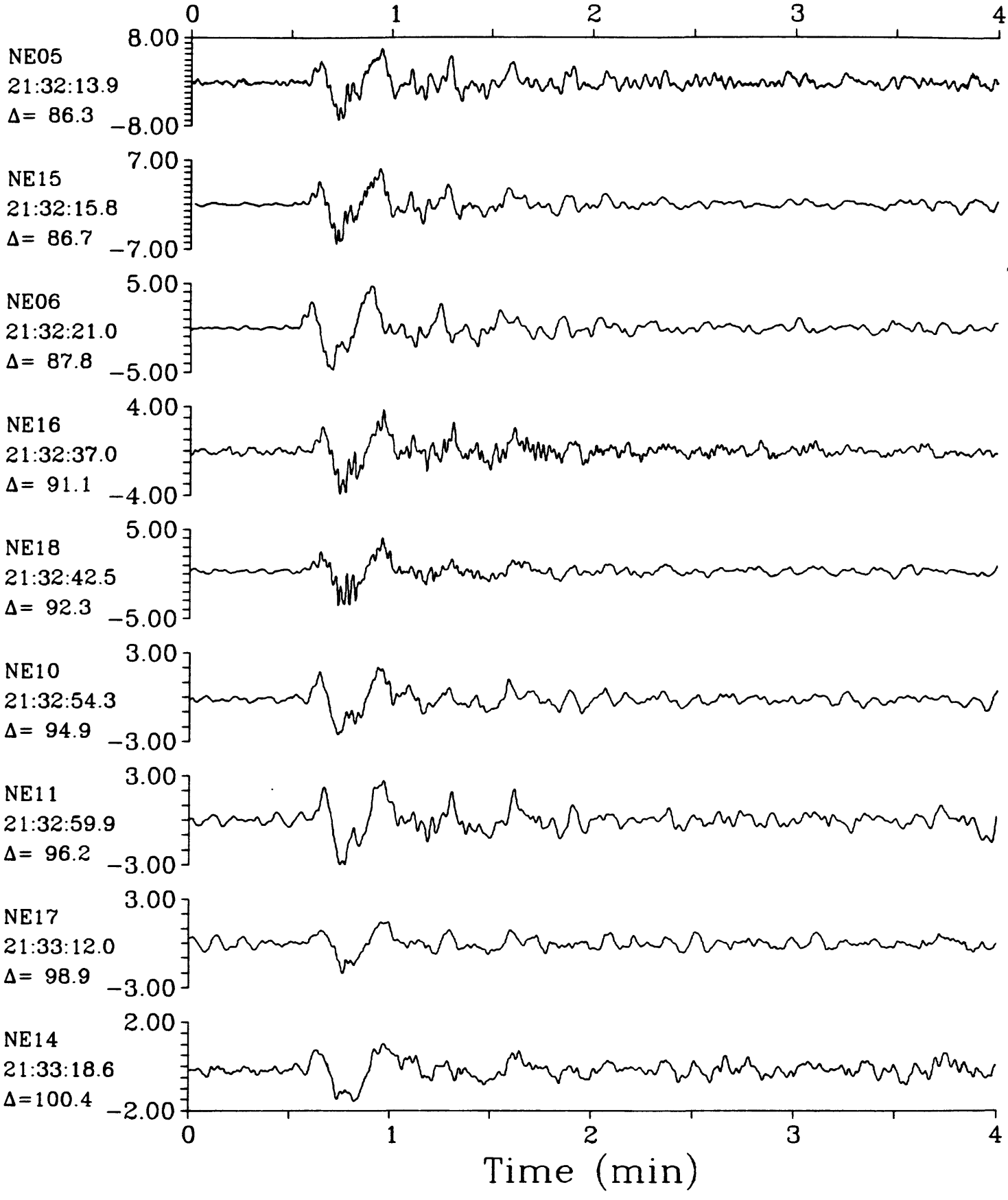

LPZ
14 November 1986 21:20:04.67
Taiwan h=33.0 m_b=6.2 M_{SZ}=7.8
LPZ
0
10
20
30
40
50
COL
21:30:05.8
Δ= 68.7
70.0
-70.0
KEV
21:30:09.8
Δ= 69.4
70.0
-70.0
HON
21:30:31.8
Δ= 73.1
70.0
-70.0
BGIO
21:30:44.3
Δ= 75.2
250.0
-250.0
NRAO
21:31:04.1
Δ= 78.7
160.0
-160.0
KONO
21:31:11.6
Δ= 80.1
250.0
-250.0
SNZO
21:31:18.4
Δ= 81.3
160.0
-160.0
GRFO
21:31:34.2
Δ= 84.4
500.0
-500.0
GDH
21:31:47.3
Δ= 87.0
0.3
-0.3
LON
21:31:58.1
Δ= 89.2
70.0
-70.0
0
10
20
30
40
50
Time (min)
2293


LPZ
14 November 1986 21:20:04.67
Taiwan h=33.0 m_b=6.2 M_{SZ}=7.8
LPZ
0
10
20
30
40
50
JAS1
21:32:25.4
Δ= 95.2
70.0
-70.0
TOL
21:32:42.0
Δ= 98.9
70.0
-70.0
BCAO
21:32:48.1
Δ=100.3
120.0
-120.0
ANMO
21:33:11.9
Δ=105.7
200.0
-200.0
GAC
21:33:26.3
Δ=108.9
140.0
-140.0
ZOBO
21:39:08.0
Δ=167.9
60.0
-60.0
Time (min)


IPZ
14 November 1986 21:20:04.67
Taiwan h=33.0 m_b=6.2 M_{SZ}=7.8
IPZ
0
1
2
3
4
BJI
21:23:26.4
Δ= 16.7
40.00
-40.00
LZH
21:24:00.1
Δ= 19.7
60.00
-60.00
WMQ
21:26:17.6
Δ= 34.2
6.00
-6.00
HON
21:31:01.8
Δ= 73.1
12.00
-12.00
NRA0
21:31:34.1
Δ= 78.7
4.00
-4.00
NE03
21:31:55.5
Δ= 82.7
10.00
-10.00
GRC1
21:32:02.5
Δ= 84.1
3.00
-3.00
GRB1
21:32:03.7
Δ= 84.3
3.00
-3.00
GRA1
21:32:04.2
Δ= 84.4
3.00
-3.00
NE04
21:32:08.0
Δ= 85.1
10.00
-10.00
0
1
2
3
4
Time (min)
2295

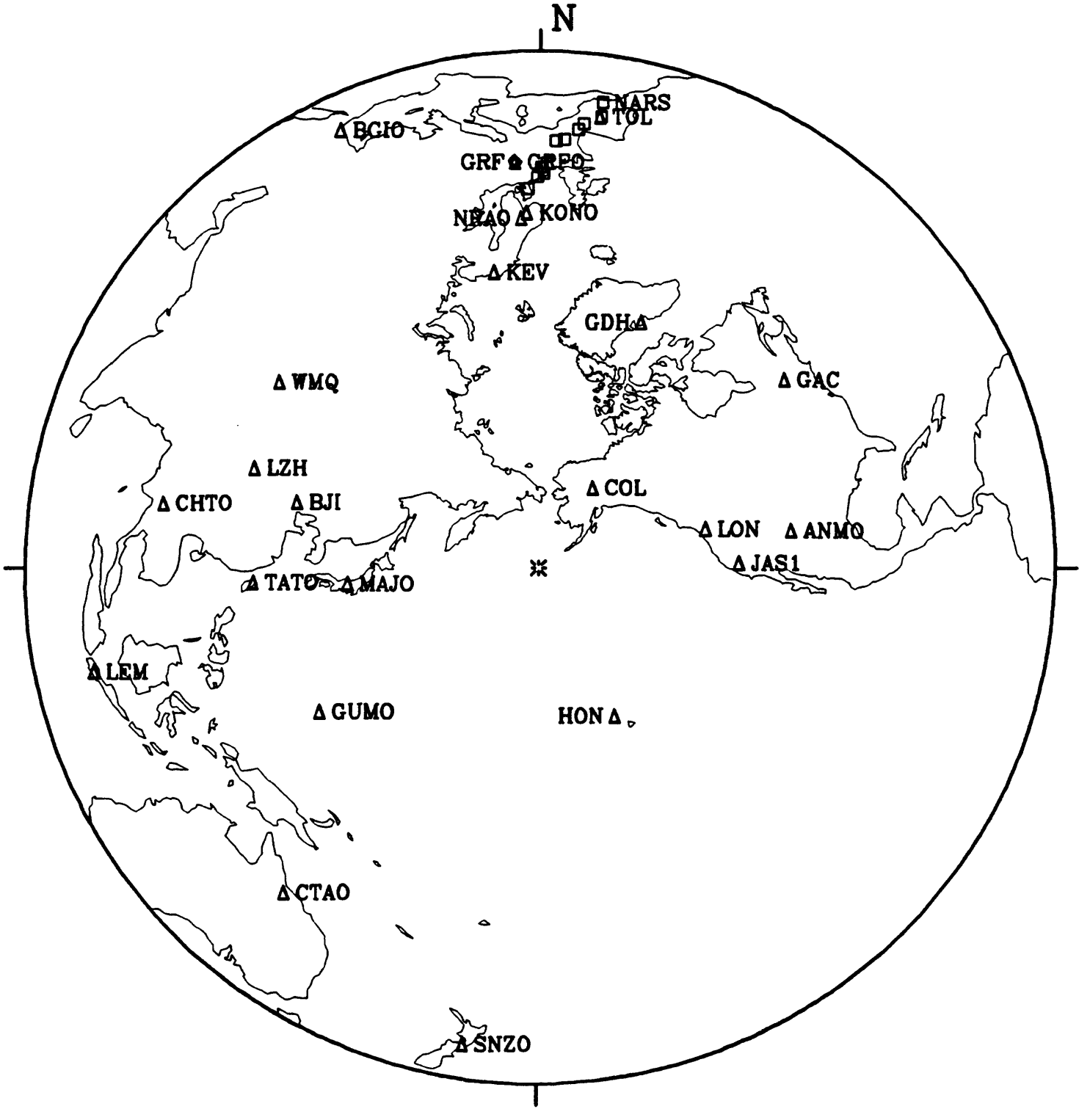
14 November 1986 21:20:04.67
Taiwan h=33.0 m_b=6.2 M_{SZ}=7.8

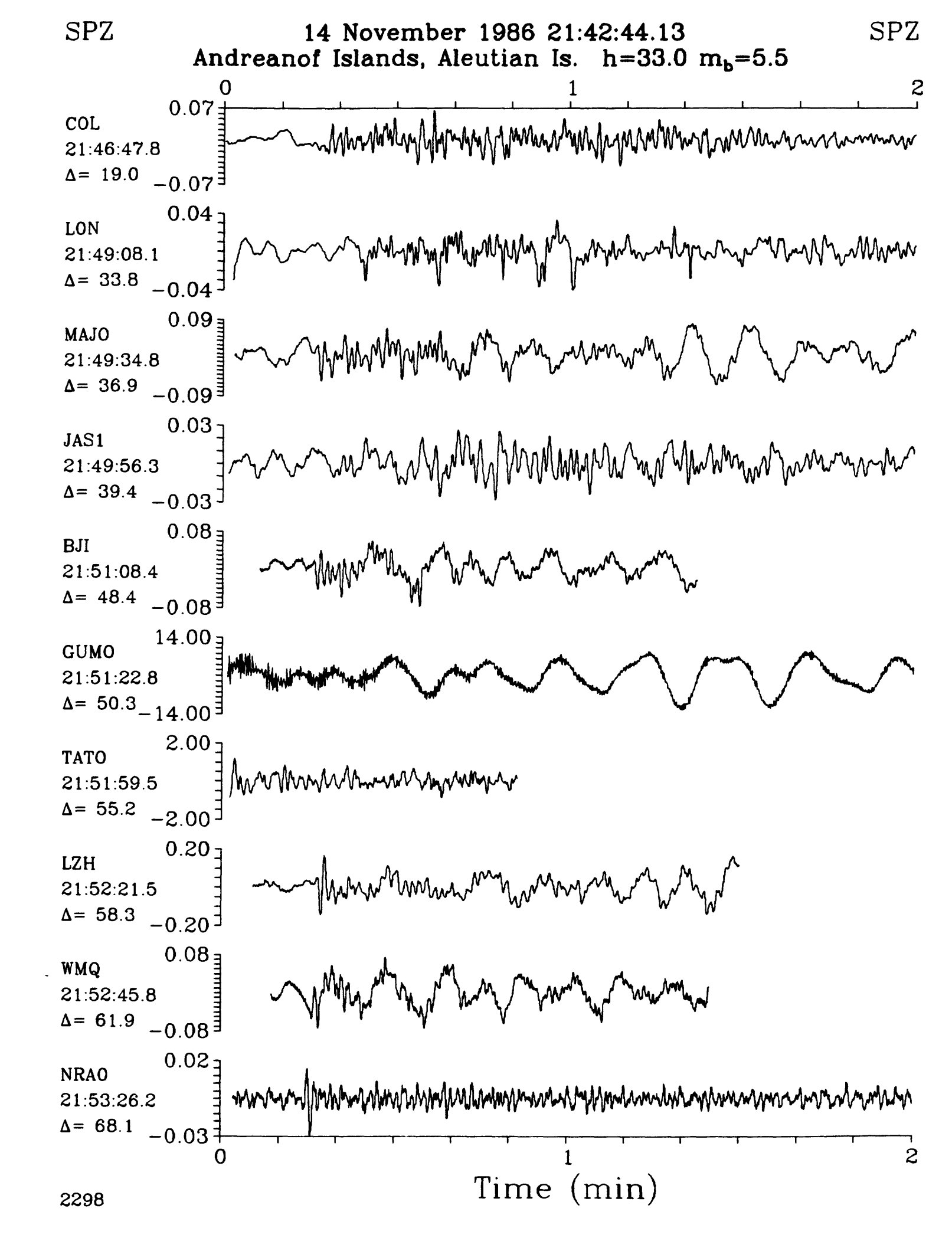
IPZ

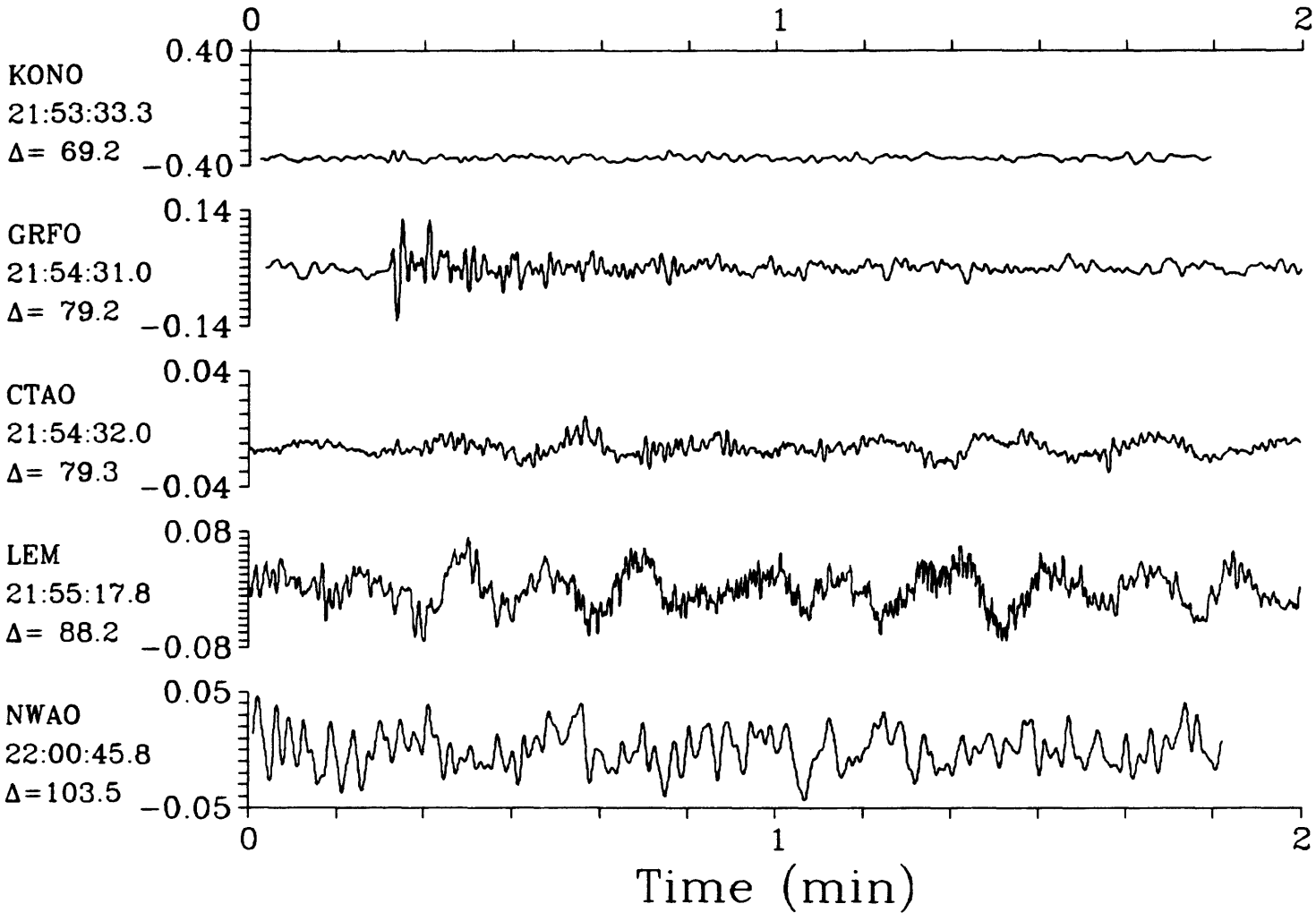


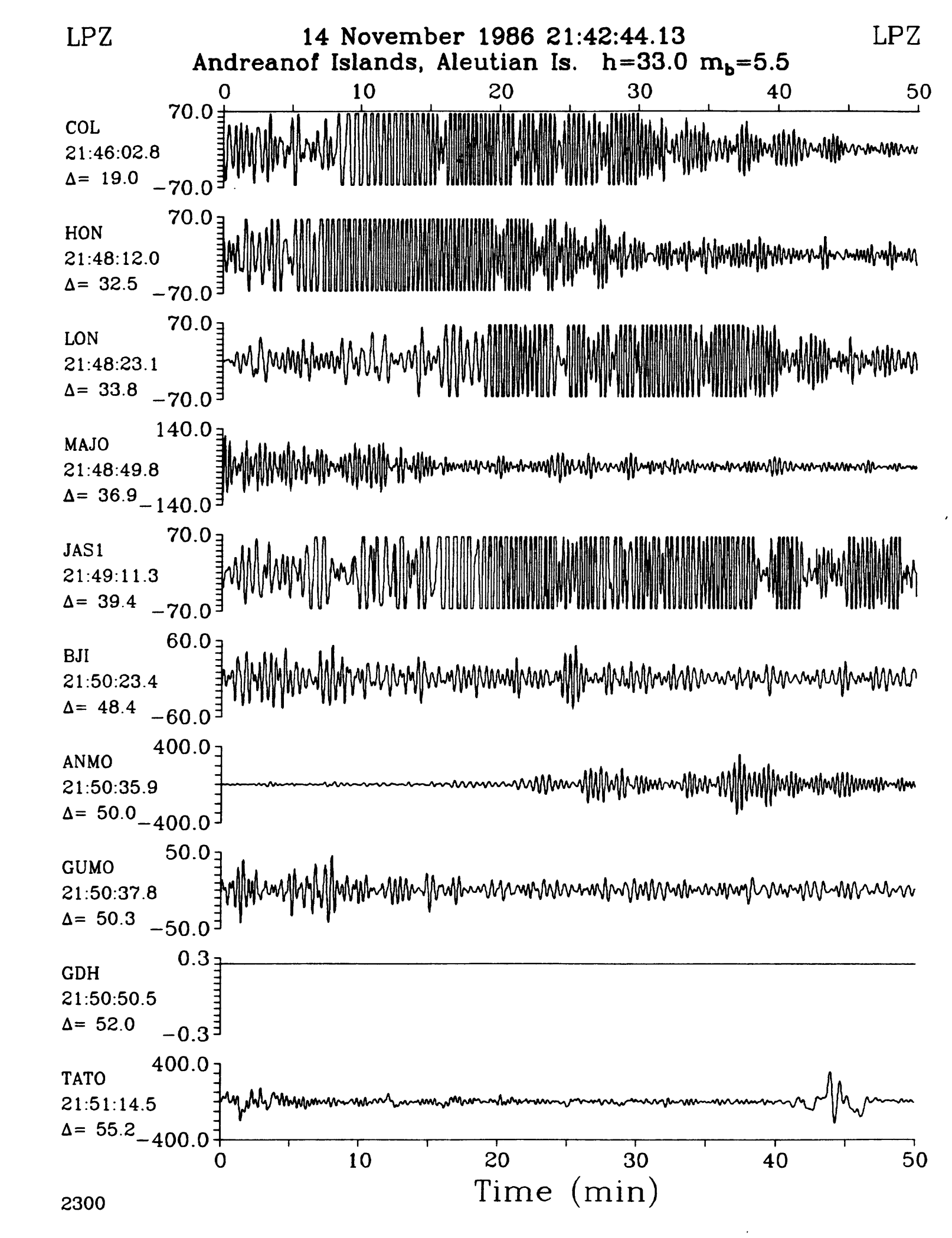
14 November 1986 21:42:44.13

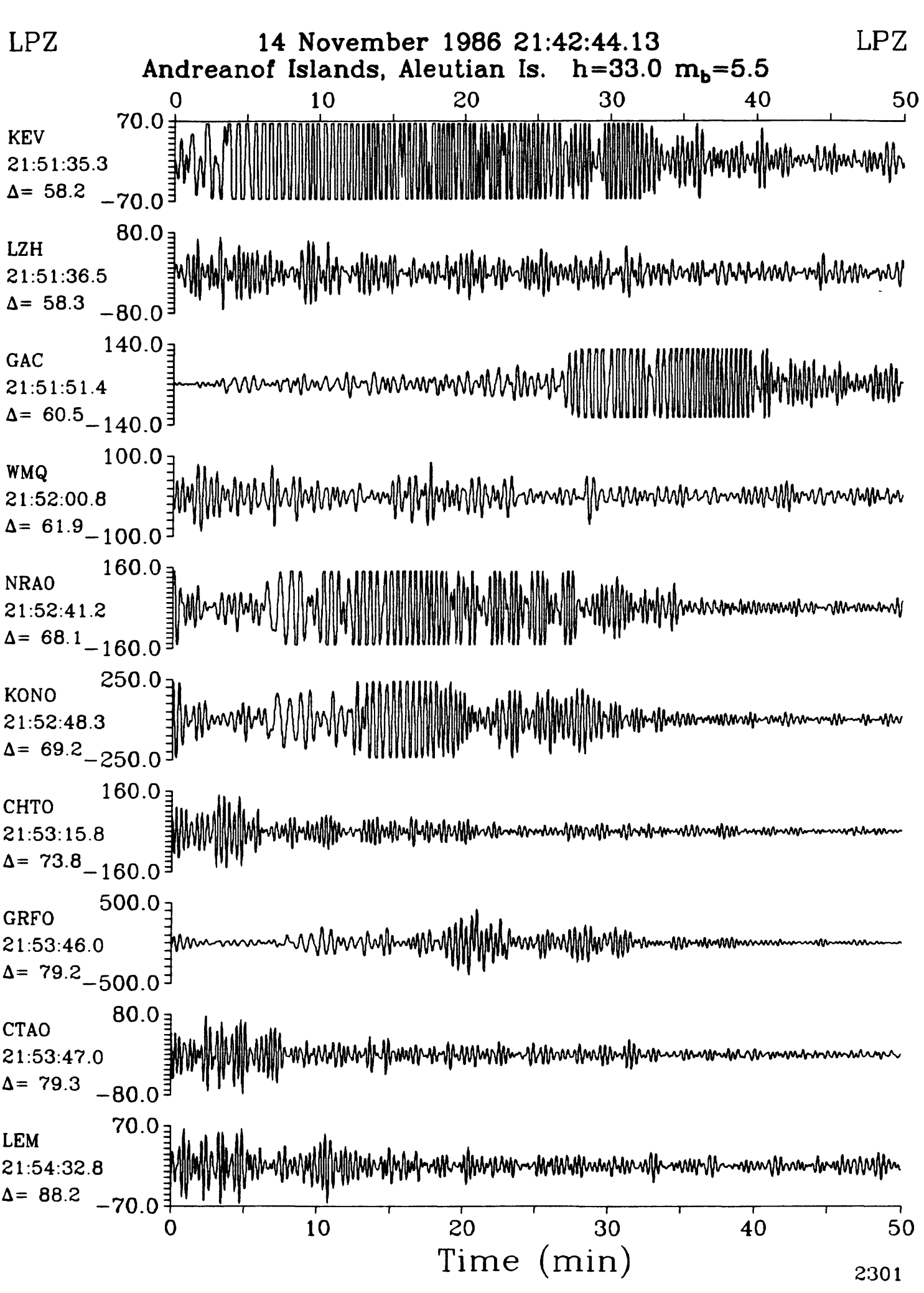
Andreanof Islands, Aleutian Is.




SPZ
14 November 1986 21:42:44.13
Andreanof Islands, Aleutian Is. h=33.0 m_b=5.5
SPZ
0
1
2
COL
21:46:47.8
Δ= 19.0
0.07
-0.07
LON
21:49:08.1
Δ= 33.8
0.04
-0.04
MAJO
21:49:34.8
Δ= 36.9
0.09
-0.09
JAS1
21:49:56.3
Δ= 39.4
0.03
-0.03
BJI
21:51:08.4
Δ= 48.4
0.08
-0.08
GUMO
21:51:22.8
Δ= 50.3
14.00
-14.00
TATO
21:51:59.5
Δ= 55.2
2.00
-2.00
LZH
21:52:21.5
Δ= 58.3
0.20
-0.20
WMQ
21:52:45.8
Δ= 61.9
0.08
-0.08
NRAO
21:53:26.2
Δ= 68.1
0.02
-0.03
0
1
2
Time (min)
2298


14 November 1986 21:42:44.13
Andreanof Islands, Aleutian Is. h=33.0 m_b=5.5
KONO
21:53:33.3
Δ= 69.2
GRFO
21:54:31.0
Δ= 79.2
CTAO
21:54:32.0
Δ= 79.3
LEM
21:55:17.8
Δ= 88.2
NWAO
22:00:45.8
Δ=103.5
0.40
-0.40
0.14
-0.14
0.04
-0.04
0.08
-0.08
0.05
-0.05
0
1
2
Time (min)


LPZ
14 November 1986 21:42:44.13
Andreanof Islands, Aleutian Is. h=33.0 m_b=5.5
LPZ
0
10
20
30
40
50
COL
21:46:02.8
Δ= 19.0
70.0
-70.0
HON
21:48:12.0
Δ= 32.5
70.0
-70.0
LON
21:48:23.1
Δ= 33.8
70.0
-70.0
MAJO
21:48:49.8
Δ= 36.9
140.0
-140.0
JAS1
21:49:11.3
Δ= 39.4
70.0
-70.0
BJI
21:50:23.4
Δ= 48.4
60.0
-60.0
ANMO
21:50:35.9
Δ= 50.0
400.0
-400.0
GUMO
21:50:37.8
Δ= 50.3
50.0
-50.0
GDH
21:50:50.5
Δ= 52.0
0.3
-0.3
TATO
21:51:14.5
Δ= 55.2
400.0
-400.0
0
10
20
30
40
50
Time (min)
2300

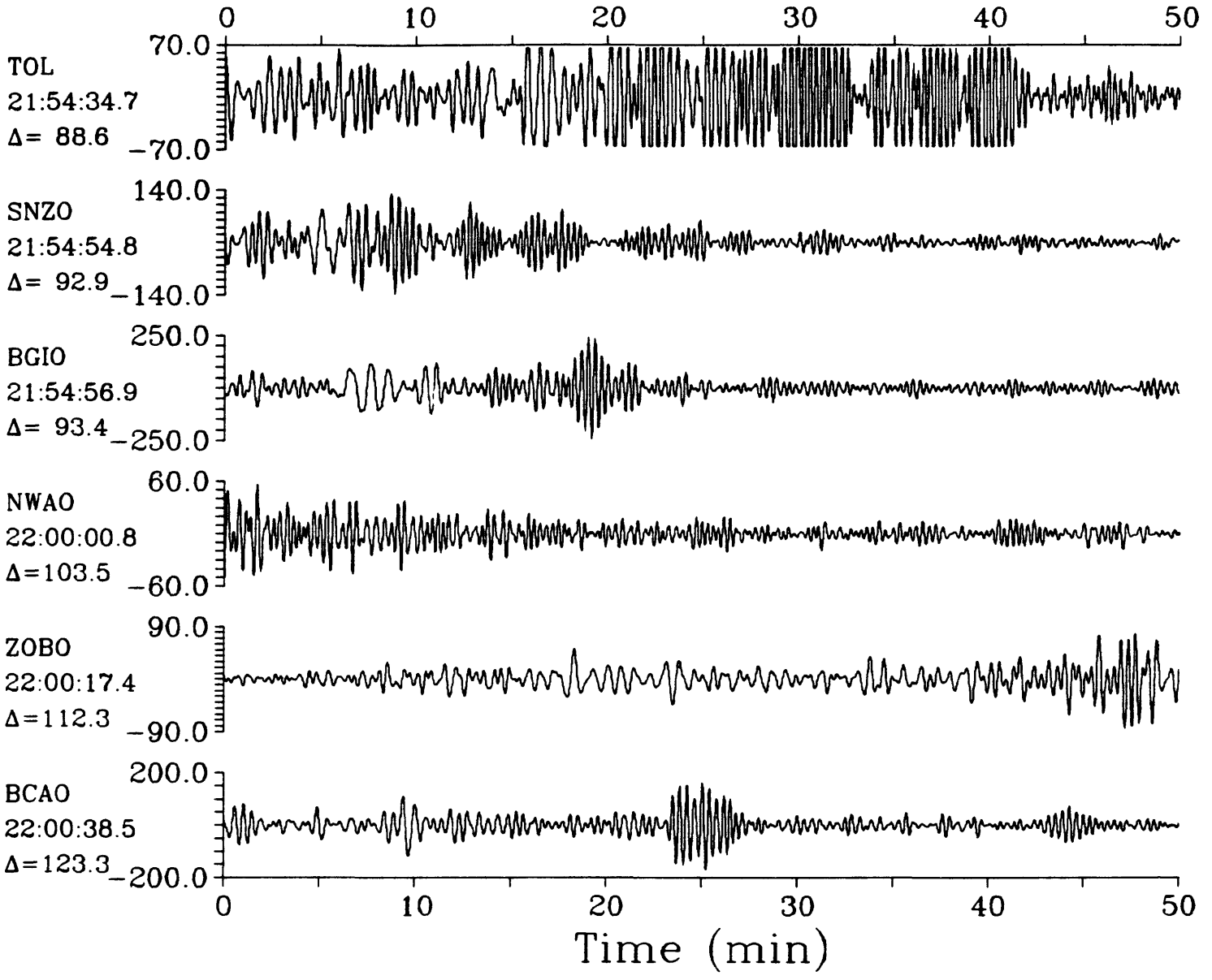

LPZ
14 November 1986 21:42:44.13
Andreanof Islands, Aleutian Is. h=33.0 m_b=5.5
LPZ
0
10
20
30
40
50
KEV
21:51:35.3
Δ= 58.2
70.0
-70.0
LZH
21:51:36.5
Δ= 58.3
80.0
-80.0
GAC
21:51:51.4
Δ= 60.5
140.0
-140.0
WMQ
21:52:00.8
Δ= 61.9
100.0
-100.0
NRAO
21:52:41.2
Δ= 68.1
160.0
-160.0
KONO
21:52:48.3
Δ= 69.2
250.0
-250.0
CHTO
21:53:15.8
Δ= 73.8
160.0
-160.0
GRFO
21:53:46.0
Δ= 79.2
500.0
-500.0
CTAO
21:53:47.0
Δ= 79.3
80.0
-80.0
LEM
21:54:32.8
Δ= 88.2
70.0
-70.0
0
10
20
30
40
50
Time (min)
2301

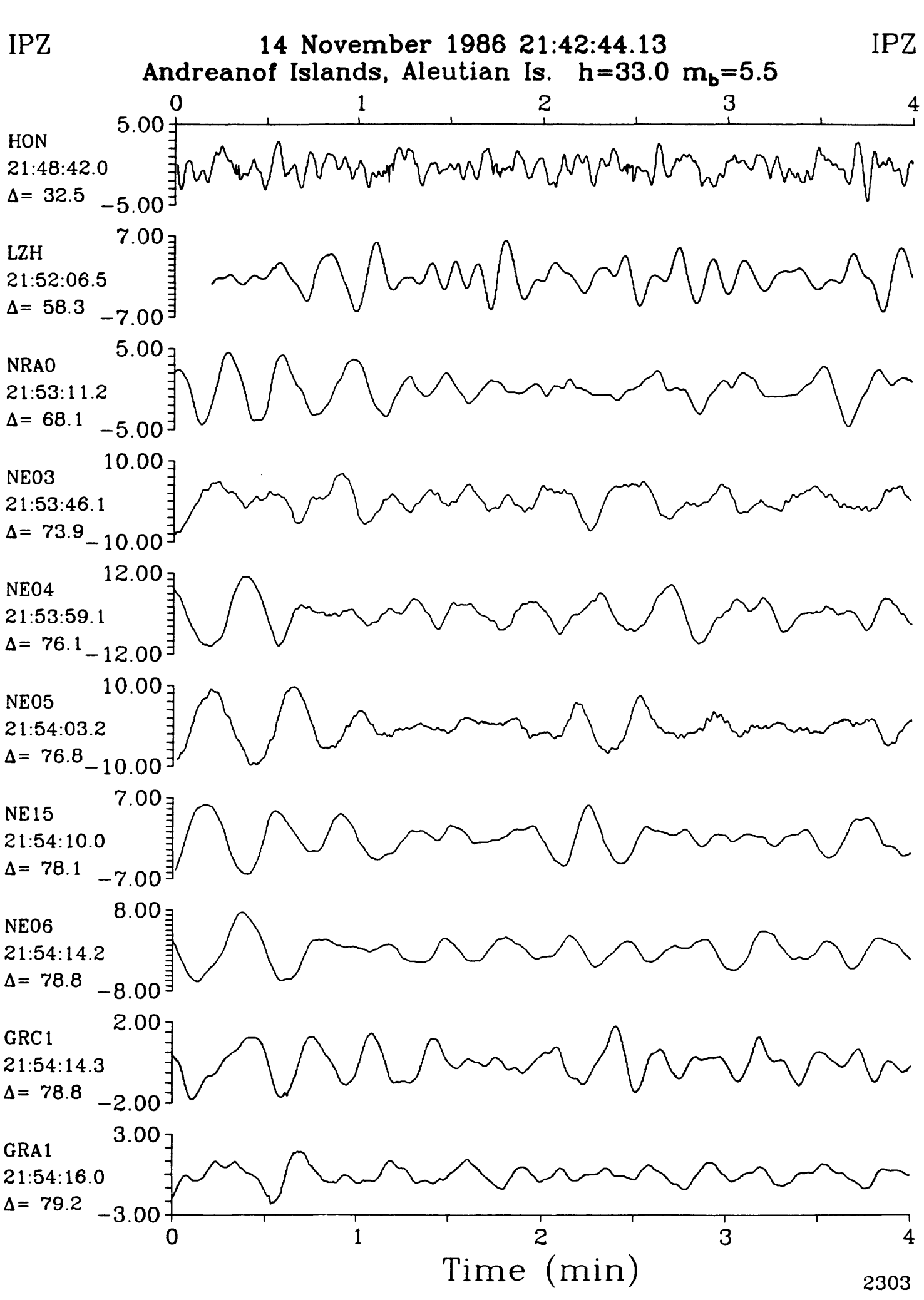
LPZ

14 November 1986 21:42:44.13

LPZ

Andreanof Islands, Aleutian Is. h=33.0 m_b=5.5



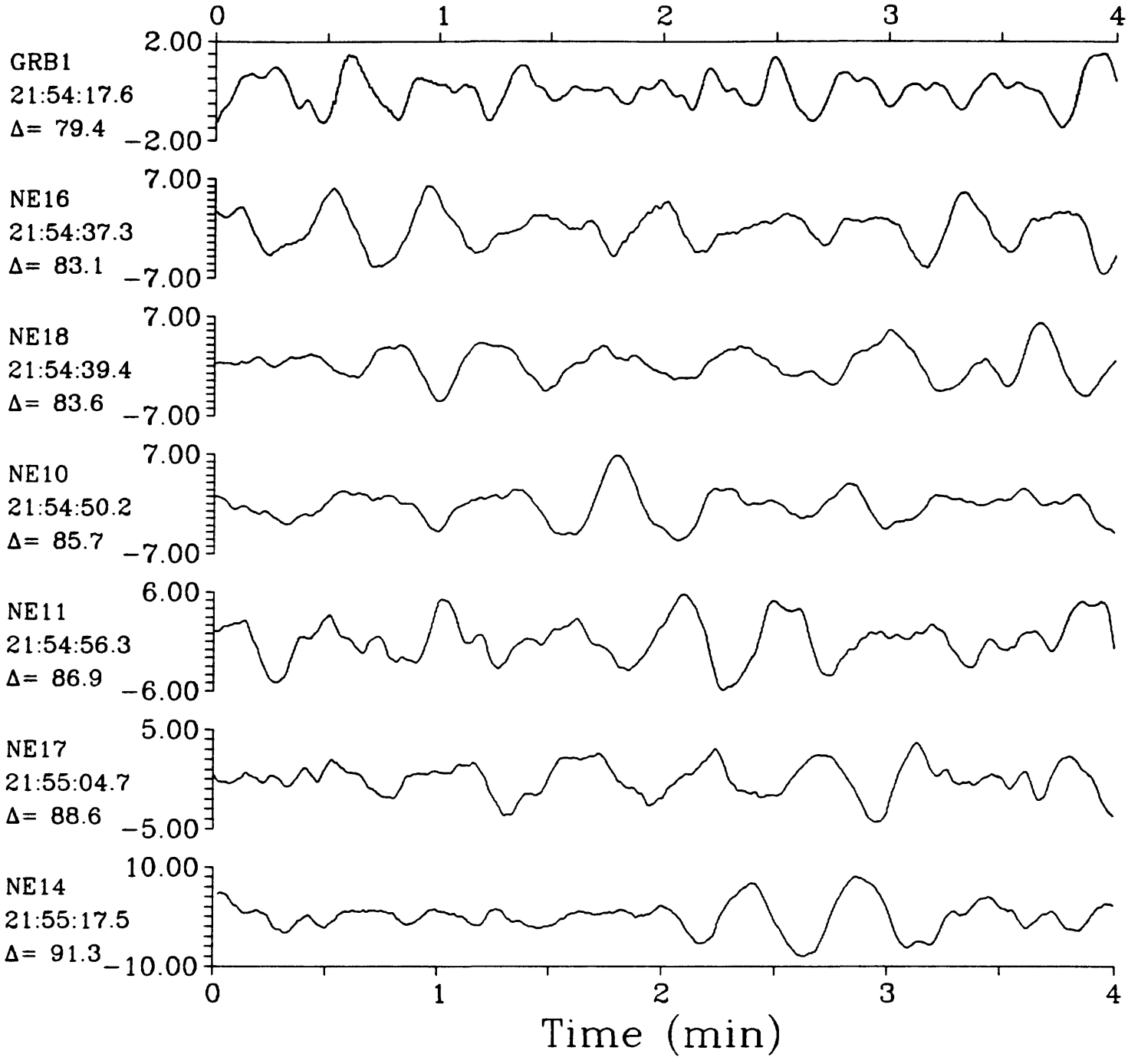

IPZ
14 November 1986 21:42:44.13
Andreanof Islands, Aleutian Is. h=33.0 m_b=5.5
IPZ
0
1
2
3
4
HON
21:48:42.0
Δ= 32.5
5.00
-5.00
LZH
21:52:06.5
Δ= 58.3
7.00
-7.00
NRA0
21:53:11.2
Δ= 68.1
5.00
-5.00
NE03
21:53:46.1
Δ= 73.9
10.00
-10.00
NE04
21:53:59.1
Δ= 76.1
12.00
-12.00
NE05
21:54:03.2
Δ= 76.8
10.00
-10.00
NE15
21:54:10.0
Δ= 78.1
7.00
-7.00
NE06
21:54:14.2
Δ= 78.8
8.00
-8.00
GRC1
21:54:14.3
Δ= 78.8
2.00
-2.00
GRA1
21:54:16.0
Δ= 79.2
3.00
-3.00
0
1
2
3
4
Time (min)
2303

IPZ

14 November 1986 21:42:44.13

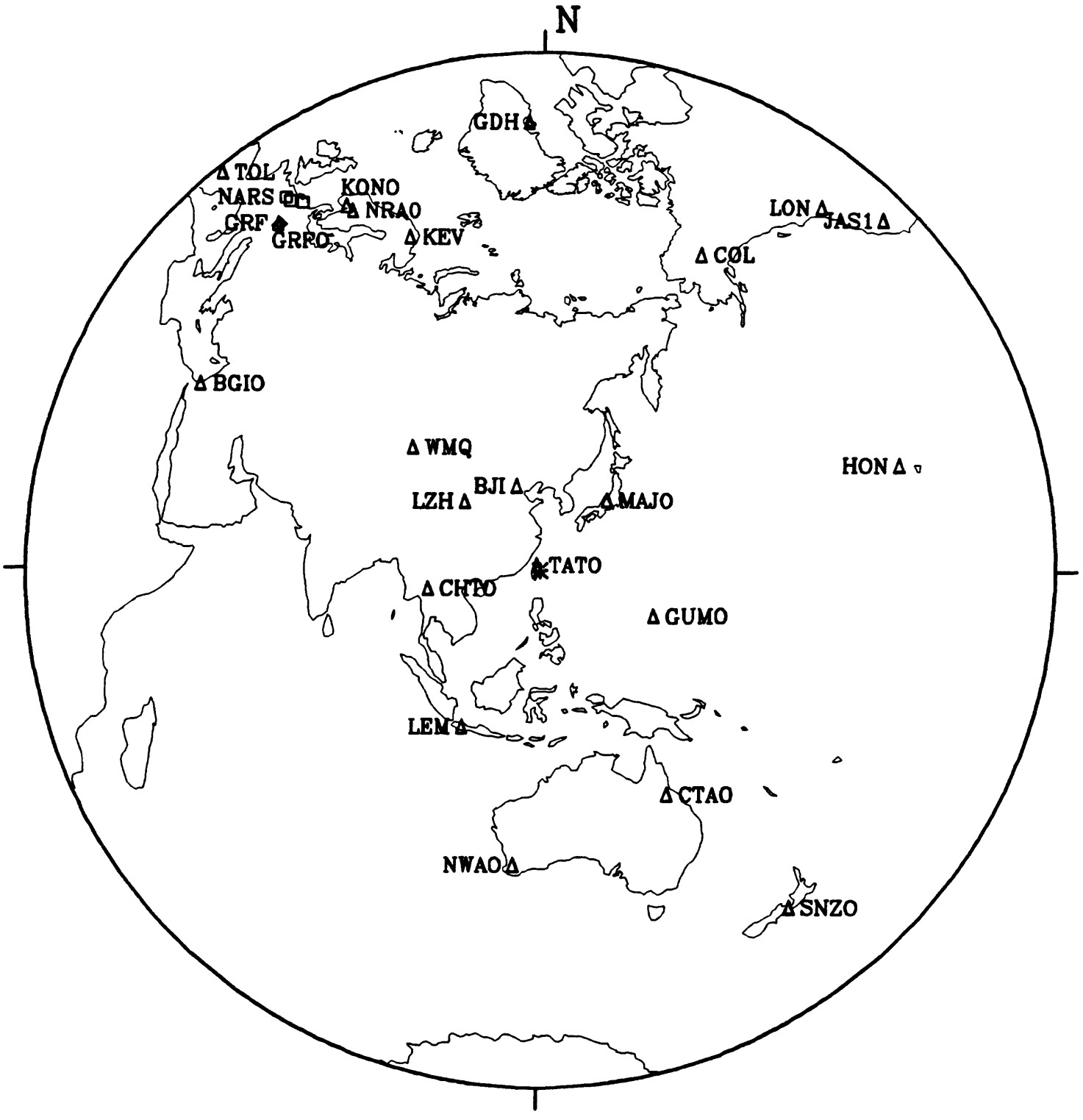
Andreanof Islands, Aleutian Is. h=33.0 m_b=5.5

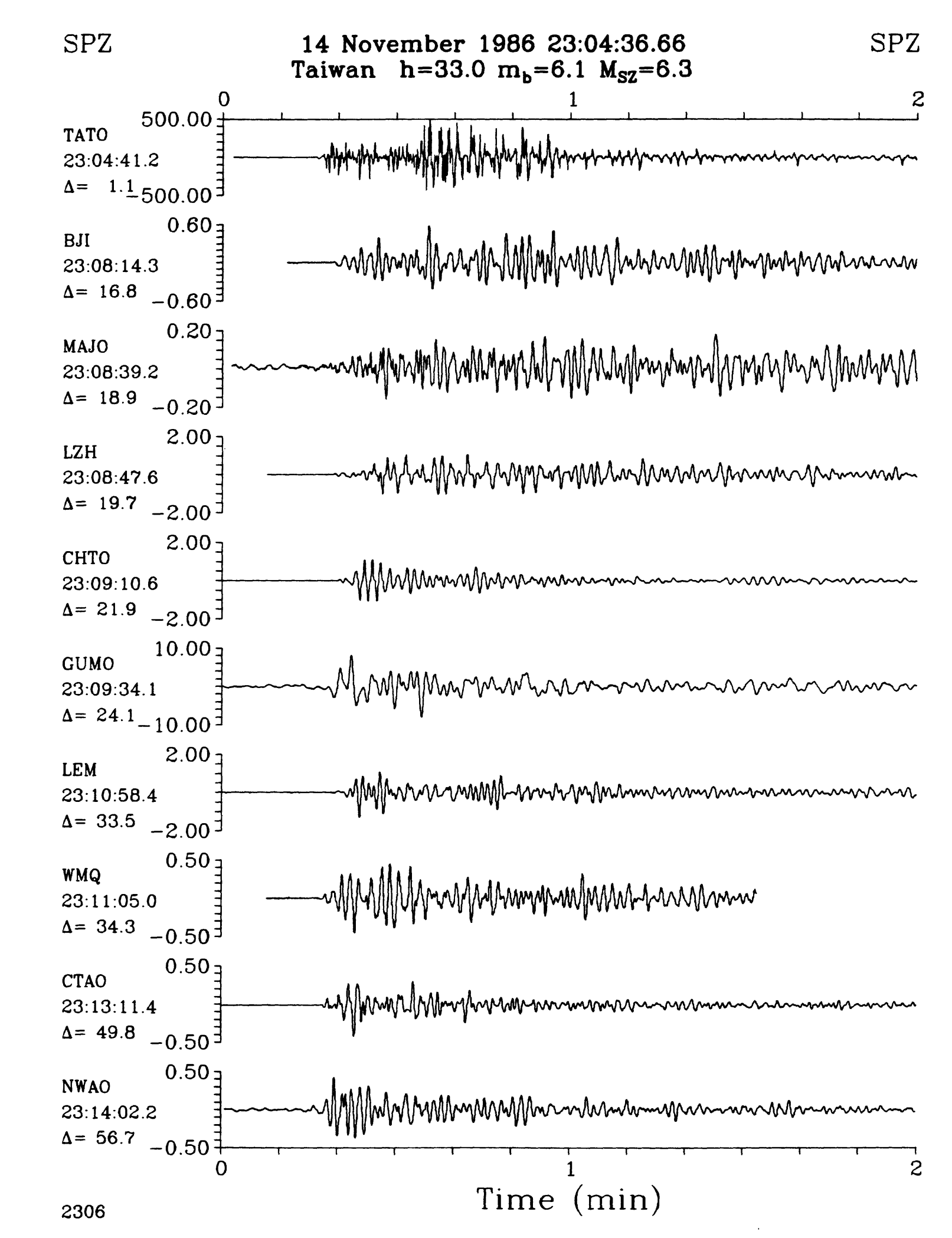
IPZ

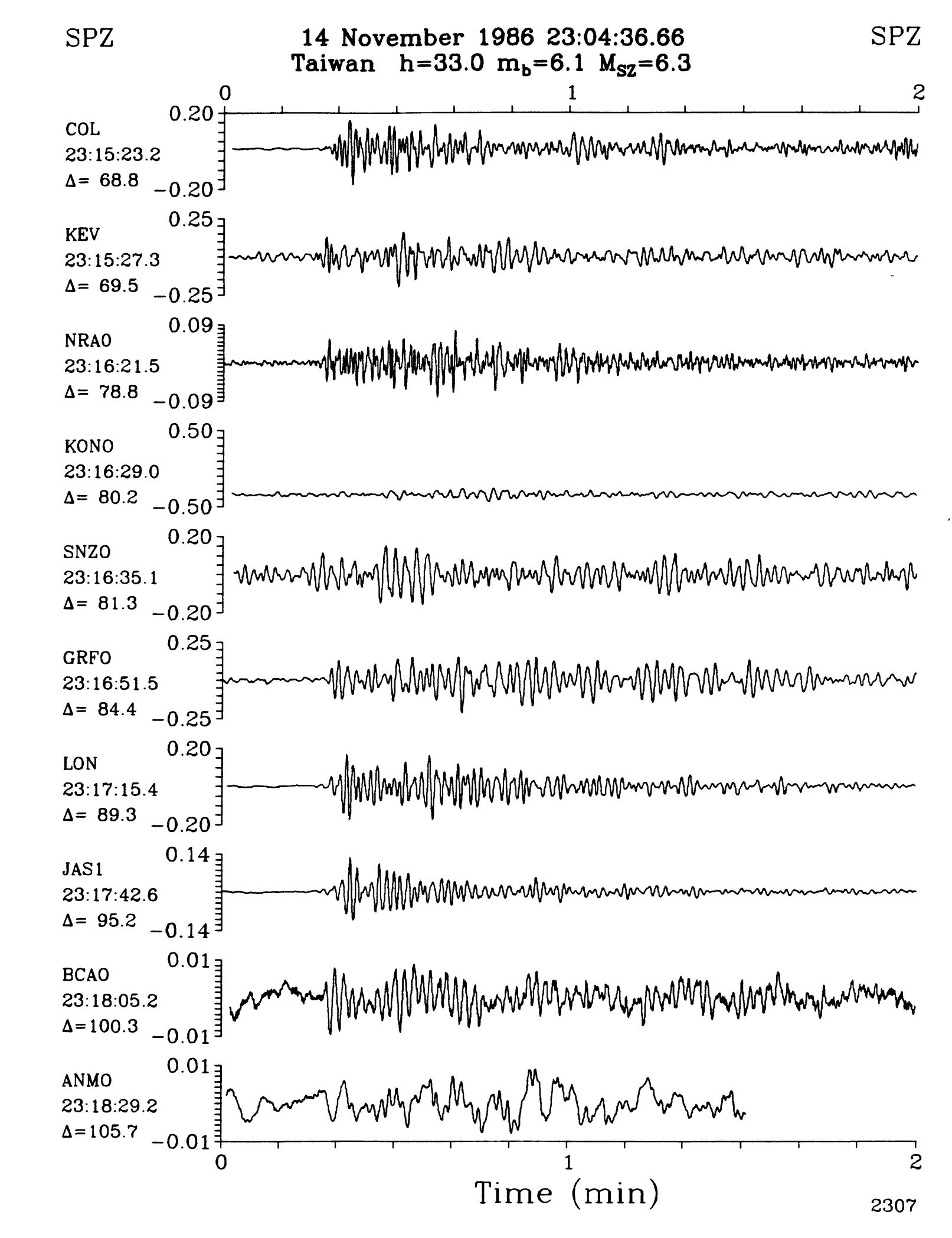


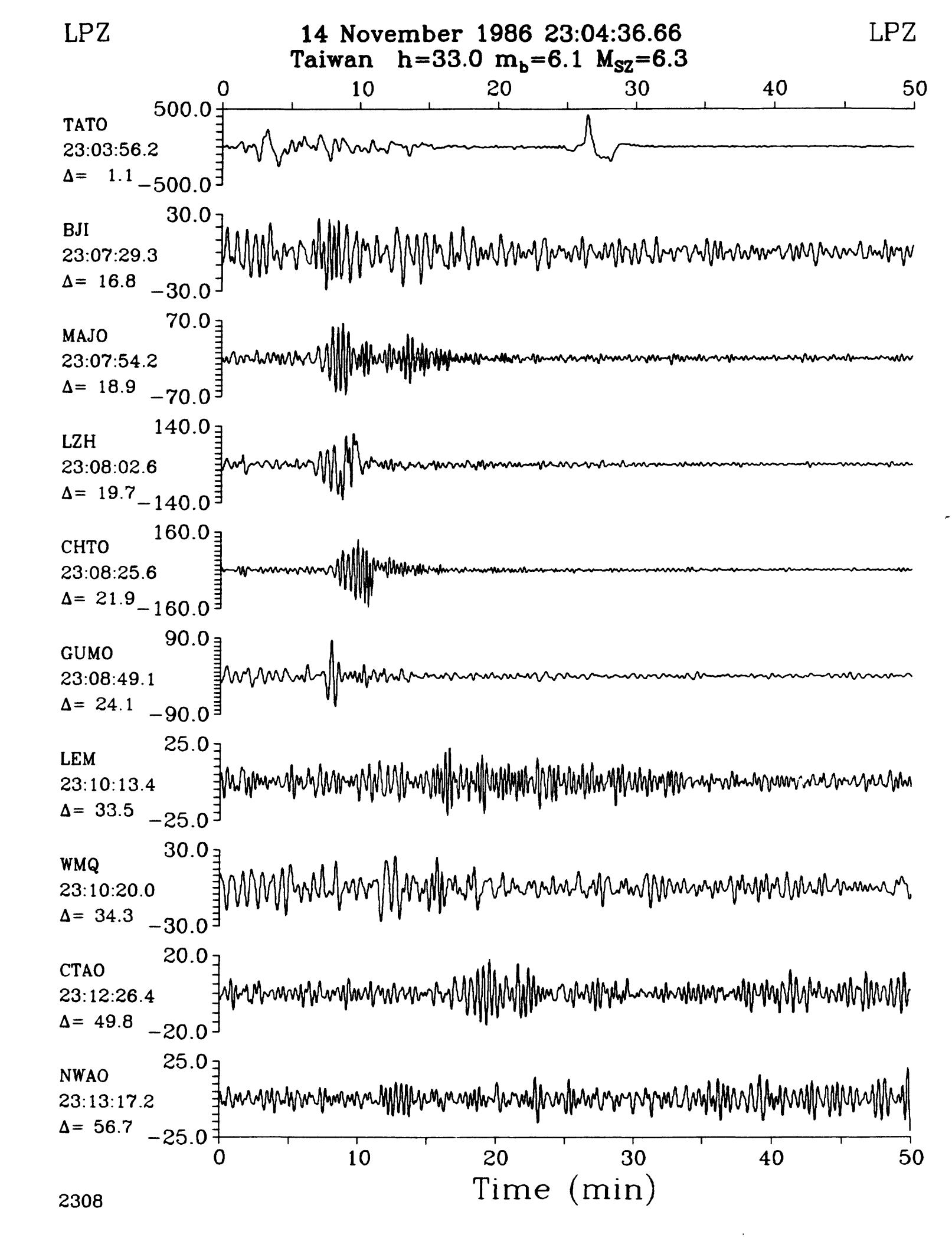
14 November 1986 23:04:36.66

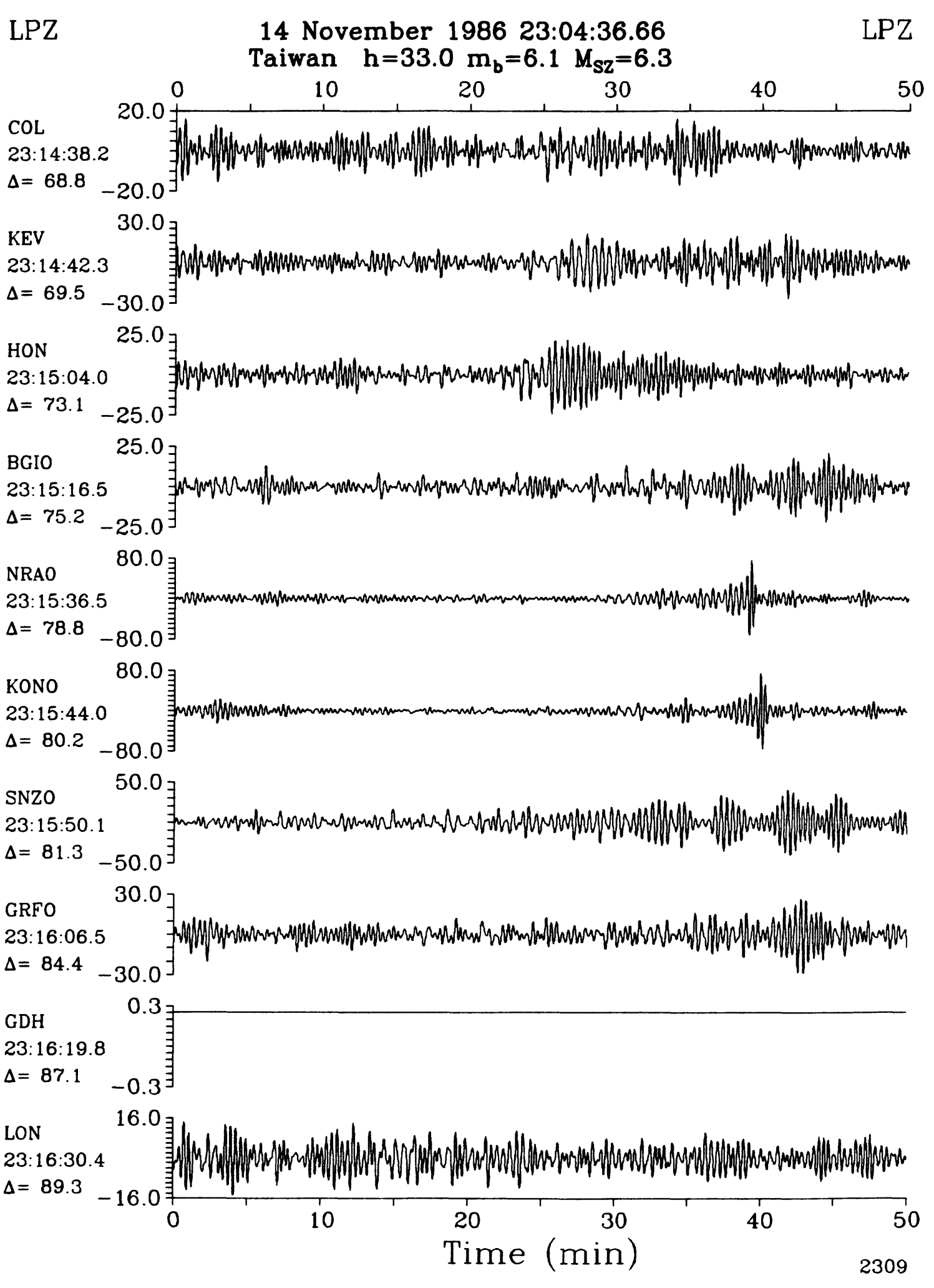
Taiwan

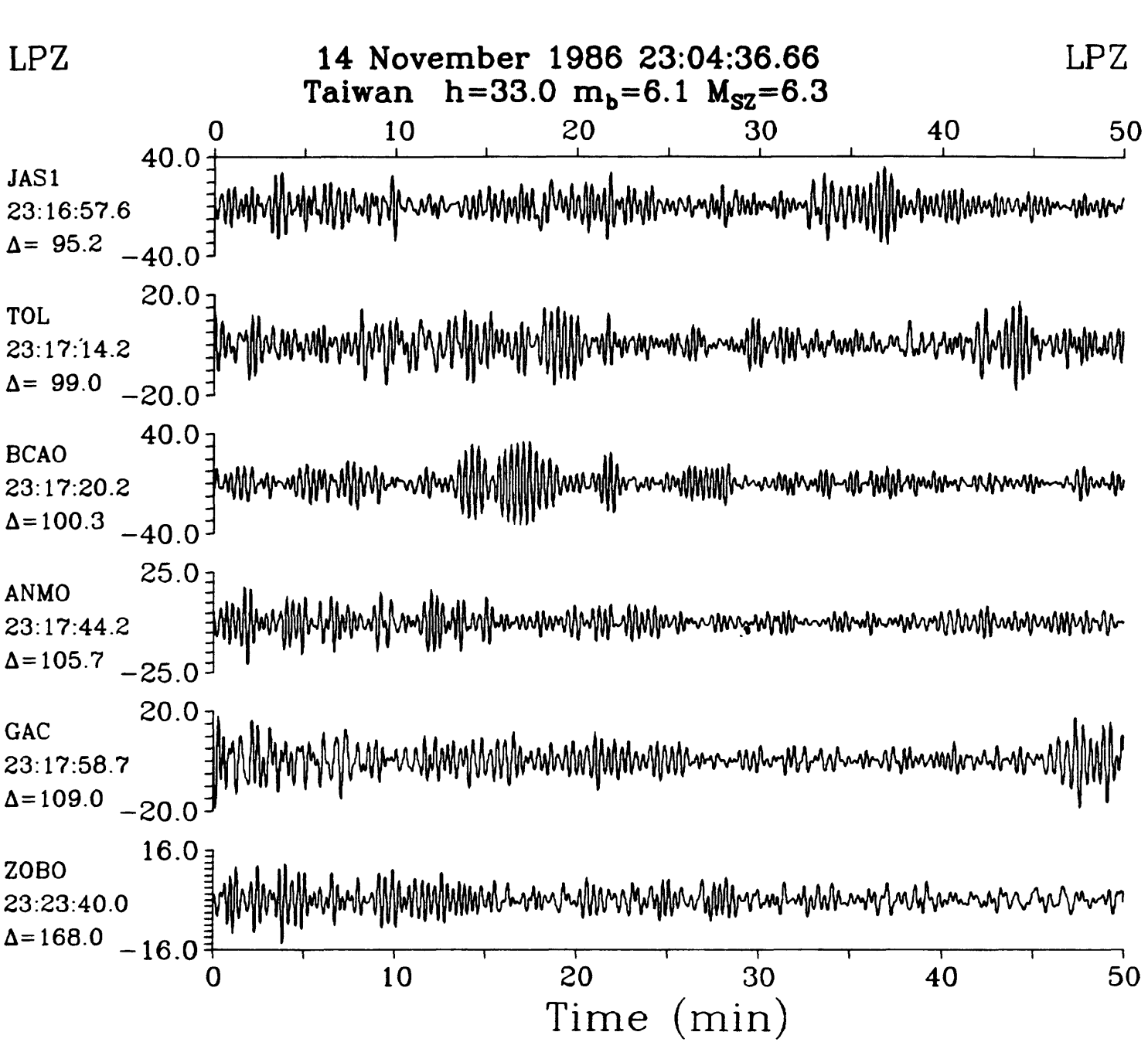


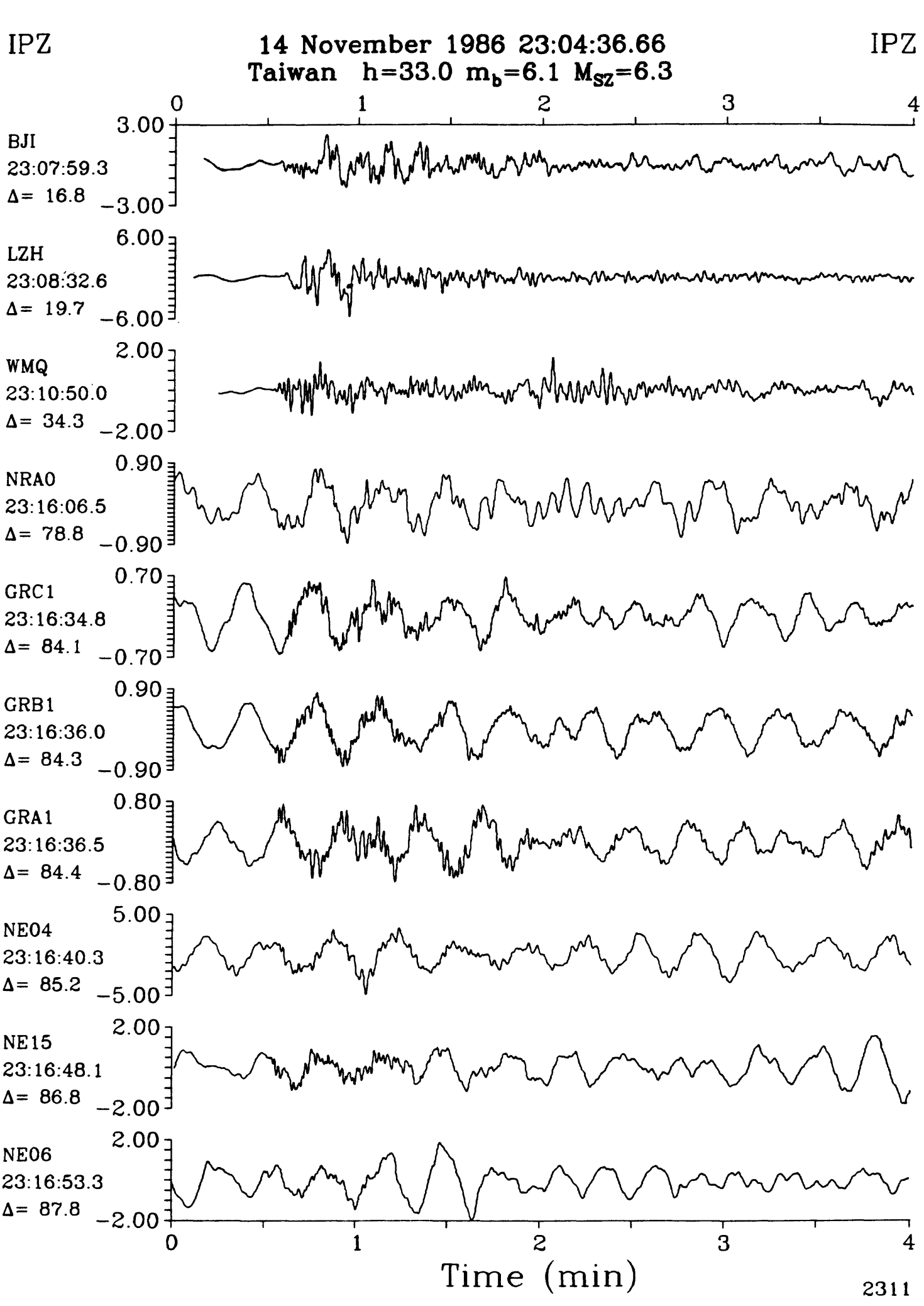

SPZ
14 November 1986 23:04:36.66
Taiwan h=33.0 m_b=6.1 M_{SZ}=6.3
SPZ
0
1
2
TATO
23:04:41.2
Δ= 1.1
500.00
-500.00
BJI
23:08:14.3
Δ= 16.8
0.60
-0.60
MAJO
23:08:39.2
Δ= 18.9
0.20
-0.20
LZH
23:08:47.6
Δ= 19.7
2.00
-2.00
CHTO
23:09:10.6
Δ= 21.9
2.00
-2.00
GUMO
23:09:34.1
Δ= 24.1
10.00
-10.00
LEM
23:10:58.4
Δ= 33.5
2.00
-2.00
WMQ
23:11:05.0
Δ= 34.3
0.50
-0.50
CTAO
23:13:11.4
Δ= 49.8
0.50
-0.50
NWAO
23:14:02.2
Δ= 56.7
0.50
-0.50
0
1
2
Time (min)
2306


SPZ
14 November 1986 23:04:36.66
Taiwan h=33.0 m_b=6.1 M_{SZ}=6.3
SPZ
0
1
2
COL
23:15:23.2
Δ= 68.8
0.20
-0.20
KEV
23:15:27.3
Δ= 69.5
0.25
-0.25
NRAO
23:16:21.5
Δ= 78.8
0.09
-0.09
KONO
23:16:29.0
Δ= 80.2
0.50
-0.50
SNZO
23:16:35.1
Δ= 81.3
0.20
-0.20
GRFO
23:16:51.5
Δ= 84.4
0.25
-0.25
LON
23:17:15.4
Δ= 89.3
0.20
-0.20
JAS1
23:17:42.6
Δ= 95.2
0.14
-0.14
BCAO
23:18:05.2
Δ=100.3
0.01
-0.01
ANMO
23:18:29.2
Δ=105.7
0.01
-0.01
0
1
2
Time (min)
2307


LPZ
14 November 1986 23:04:36.66
Taiwan h=33.0 m_b=6.1 M_{SZ}=6.3
LPZ
0
10
20
30
40
50
TATO
23:03:56.2
Δ= 1.1
500.0
-500.0
BJI
23:07:29.3
Δ= 16.8
30.0
-30.0
MAJO
23:07:54.2
Δ= 18.9
70.0
-70.0
LZH
23:08:02.6
Δ= 19.7
140.0
-140.0
CHTO
23:08:25.6
Δ= 21.9
160.0
-160.0
GUMO
23:08:49.1
Δ= 24.1
90.0
-90.0
LEM
23:10:13.4
Δ= 33.5
25.0
-25.0
WMQ
23:10:20.0
Δ= 34.3
30.0
-30.0
CTAO
23:12:26.4
Δ= 49.8
20.0
-20.0
NWAO
23:13:17.2
Δ= 56.7
25.0
-25.0
0
10
20
30
40
50
Time (min)
2308

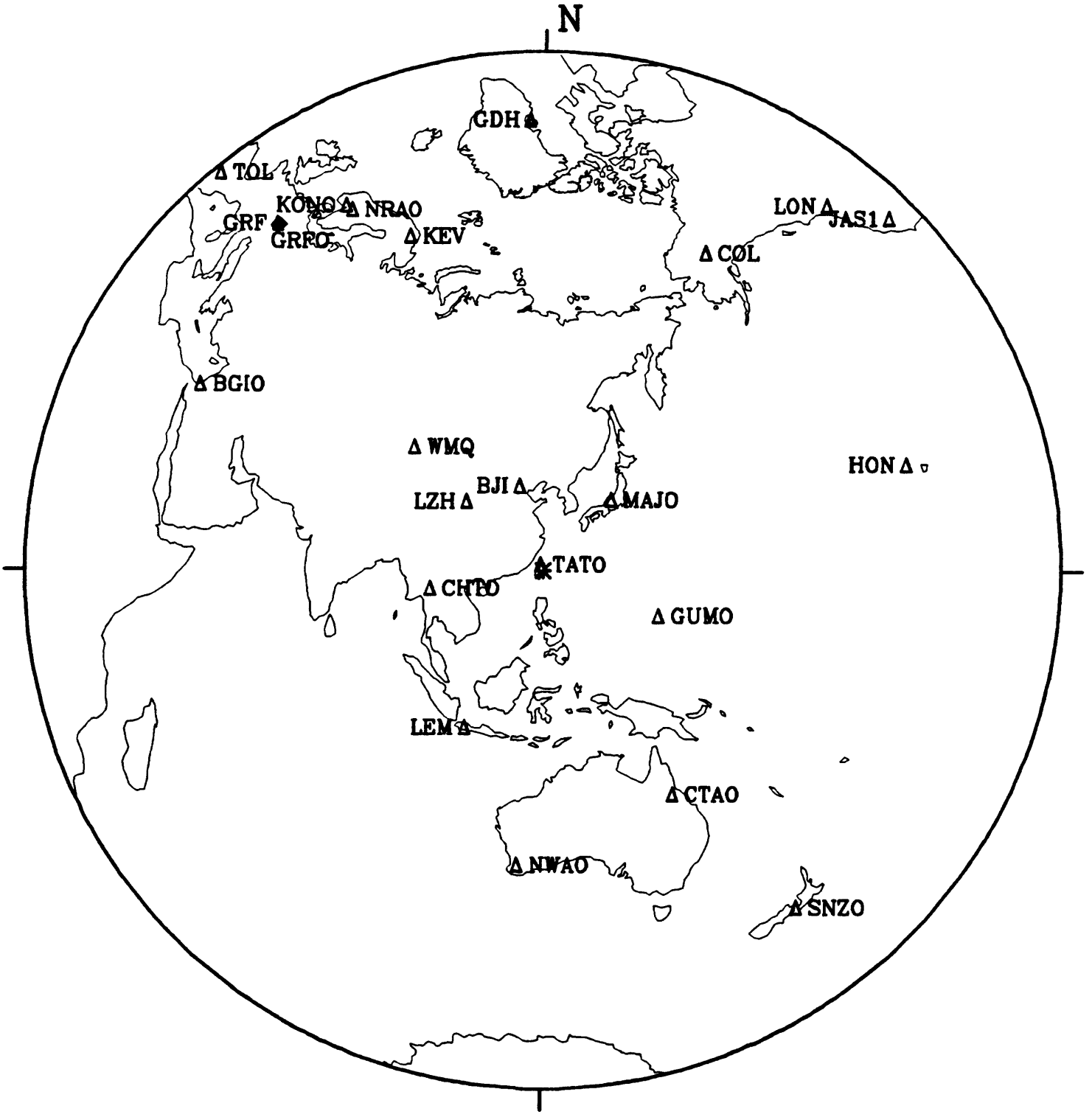

LPZ
14 November 1986 23:04:36.66
Taiwan h=33.0 m_b=6.1 M_{SZ}=6.3
LPZ
0
10
20
30
40
50
COL
23:14:38.2
Δ= 68.8
20.0
-20.0
KEV
23:14:42.3
Δ= 69.5
30.0
-30.0
HON
23:15:04.0
Δ= 73.1
25.0
-25.0
BGIO
23:15:16.5
Δ= 75.2
25.0
-25.0
NRAO
23:15:36.5
Δ= 78.8
80.0
-80.0
KONO
23:15:44.0
Δ= 80.2
80.0
-80.0
SNZO
23:15:50.1
Δ= 81.3
50.0
-50.0
GRFO
23:16:06.5
Δ= 84.4
30.0
-30.0
GDH
23:16:19.8
Δ= 87.1
0.3
-0.3
LON
23:16:30.4
Δ= 89.3
16.0
-16.0
0
10
20
30
40
50
Time (min)
2309

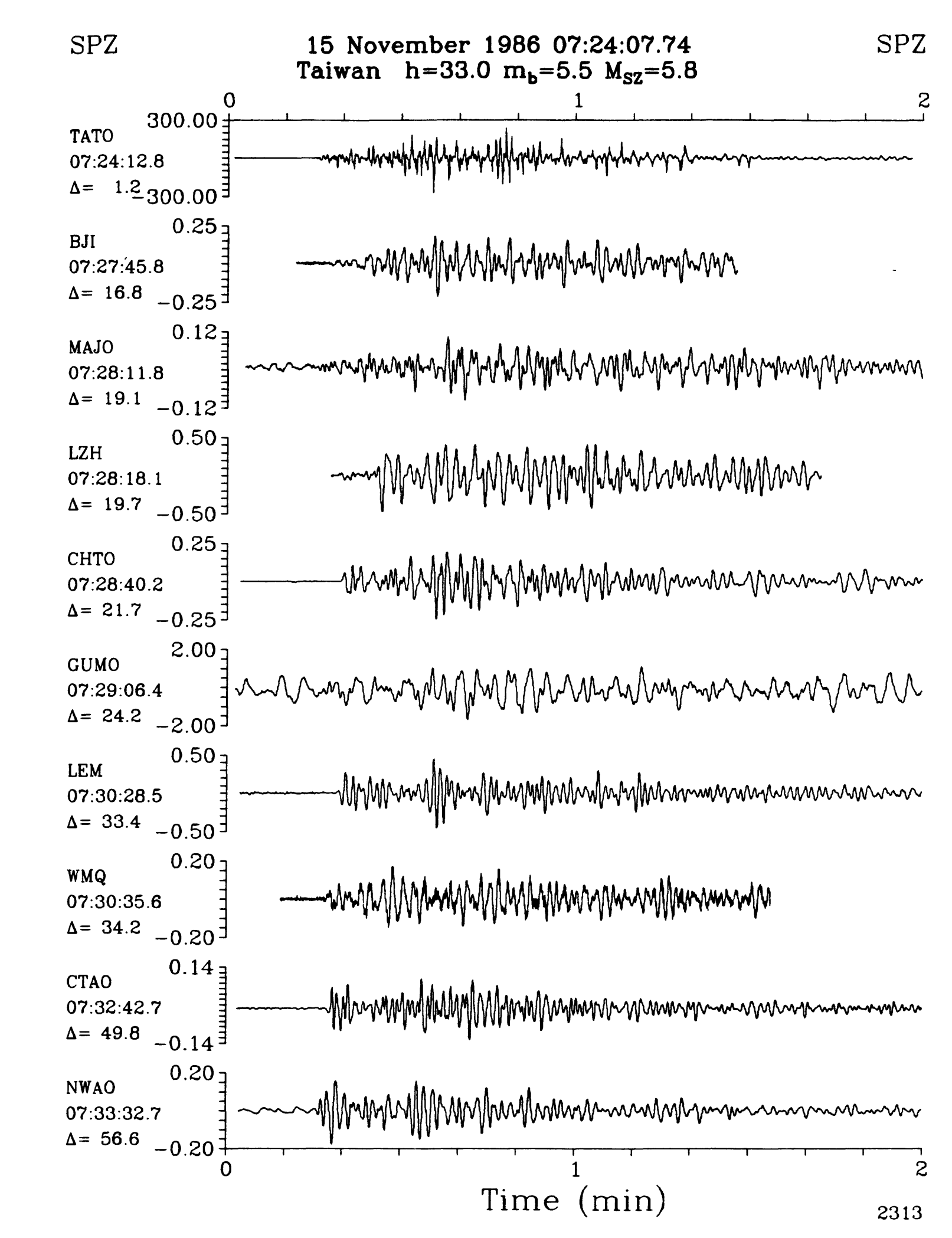

LPZ
14 November 1986 23:04:36.66
Taiwan h=33.0 m_b=6.1 M_{SZ}=6.3
LPZ
0
10
20
30
40
50
JAS1
23:16:57.6
Δ= 95.2
40.0
-40.0
TOL
23:17:14.2
Δ= 99.0
20.0
-20.0
BCAO
23:17:20.2
Δ=100.3
40.0
-40.0
ANMO
23:17:44.2
Δ=105.7
25.0
-25.0
GAC
23:17:58.7
Δ=109.0
20.0
-20.0
ZOBO
23:23:40.0
Δ=168.0
16.0
-16.0
0
10
20
30
40
50
Time (min)


IPZ
14 November 1986 23:04:36.66
Taiwan h=33.0 m_b=6.1 M_{SZ}=6.3
IPZ
0
1
2
3
4
BJI
23:07:59.3
Δ= 16.8
3.00
-3.00
LZH
23:08:32.6
Δ= 19.7
6.00
-6.00
WMQ
23:10:50.0
Δ= 34.3
2.00
-2.00
NRA0
23:16:06.5
Δ= 78.8
0.90
-0.90
GRC1
23:16:34.8
Δ= 84.1
0.70
-0.70
GRB1
23:16:36.0
Δ= 84.3
0.90
-0.90
GRA1
23:16:36.5
Δ= 84.4
0.80
-0.80
NE04
23:16:40.3
Δ= 85.2
5.00
-5.00
NE15
23:16:48.1
Δ= 86.8
2.00
-2.00
NE06
23:16:53.3
Δ= 87.8
2.00
-2.00
0
1
2
3
4
Time (min)
2311

15 November 1986 07:24:07.74

Taiwan

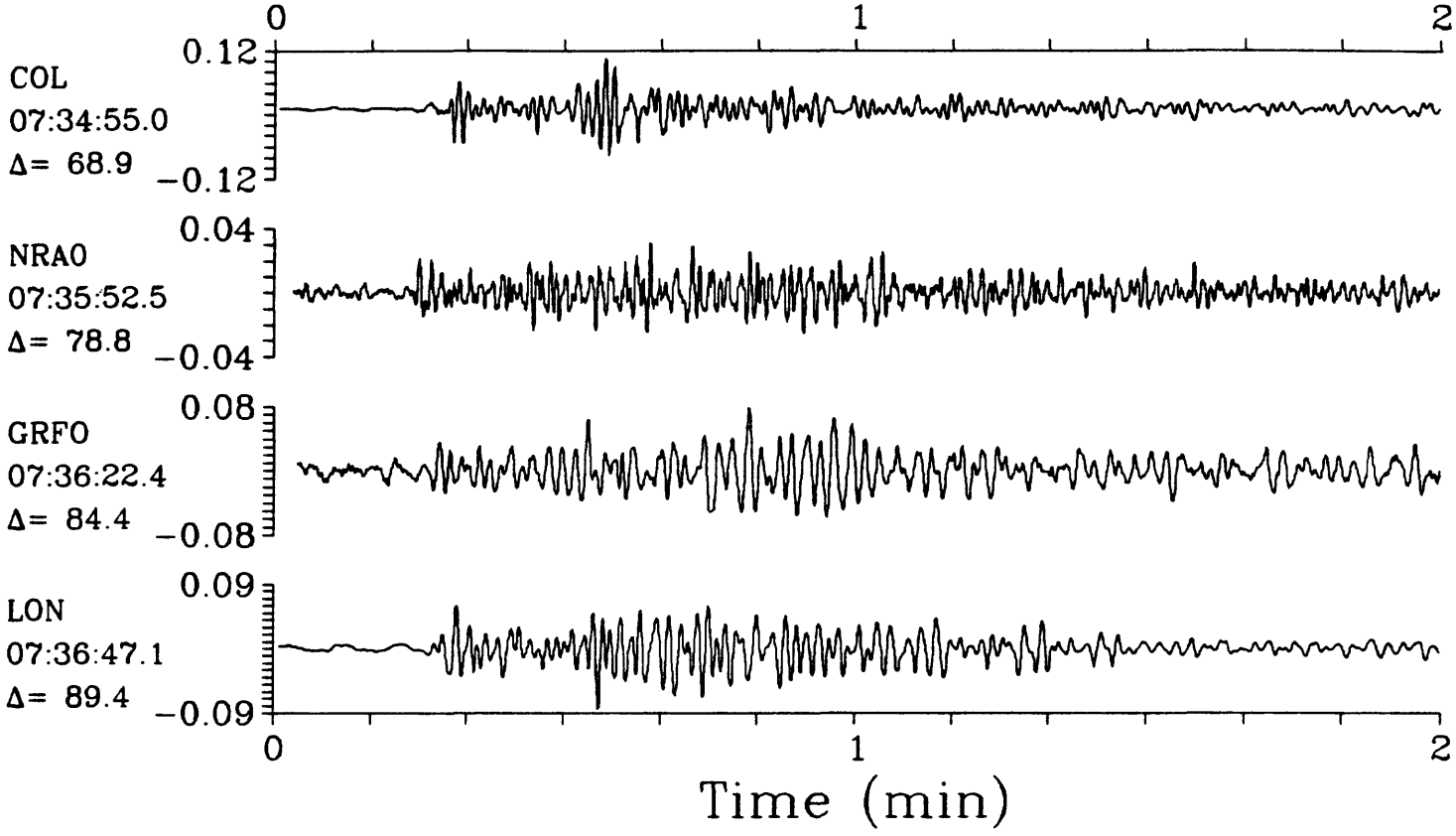


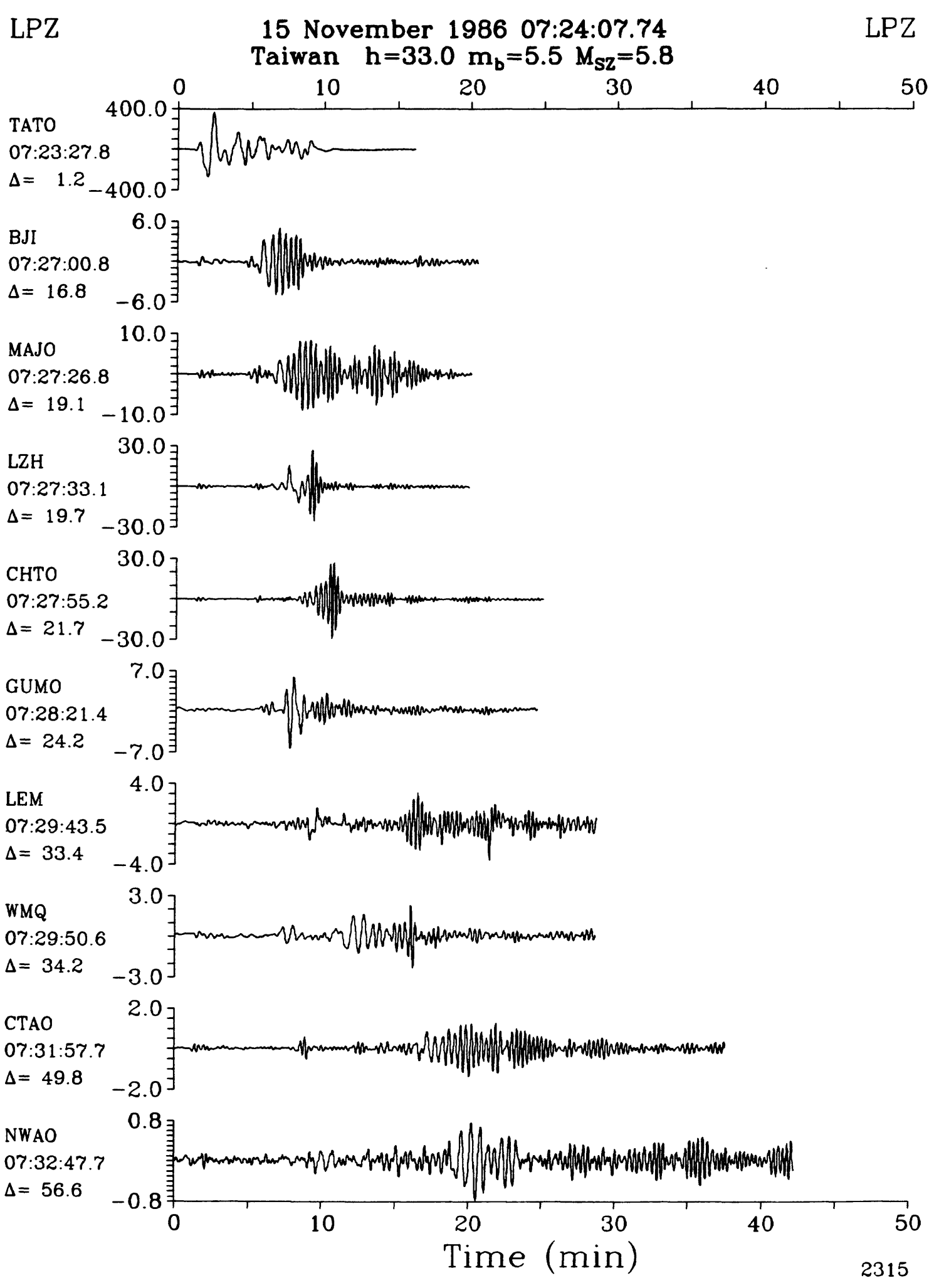

SPZ
15 November 1986 07:24:07.74
Taiwan h=33.0 m_b=5.5 M_{SZ}=5.8
SPZ
0
1
2
TATO
07:24:12.8
Δ= 1.2
300.00
-300.00
BJI
07:27:45.8
Δ= 16.8
0.25
-0.25
MAJO
07:28:11.8
Δ= 19.1
0.12
-0.12
LZH
07:28:18.1
Δ= 19.7
0.50
-0.50
CHTO
07:28:40.2
Δ= 21.7
0.25
-0.25
GUMO
07:29:06.4
Δ= 24.2
2.00
-2.00
LEM
07:30:28.5
Δ= 33.4
0.50
-0.50
WMQ
07:30:35.6
Δ= 34.2
0.20
-0.20
CTAO
07:32:42.7
Δ= 49.8
0.14
-0.14
NWAO
07:33:32.7
Δ= 56.6
0.20
-0.20
0
1
2
Time (min)
2313

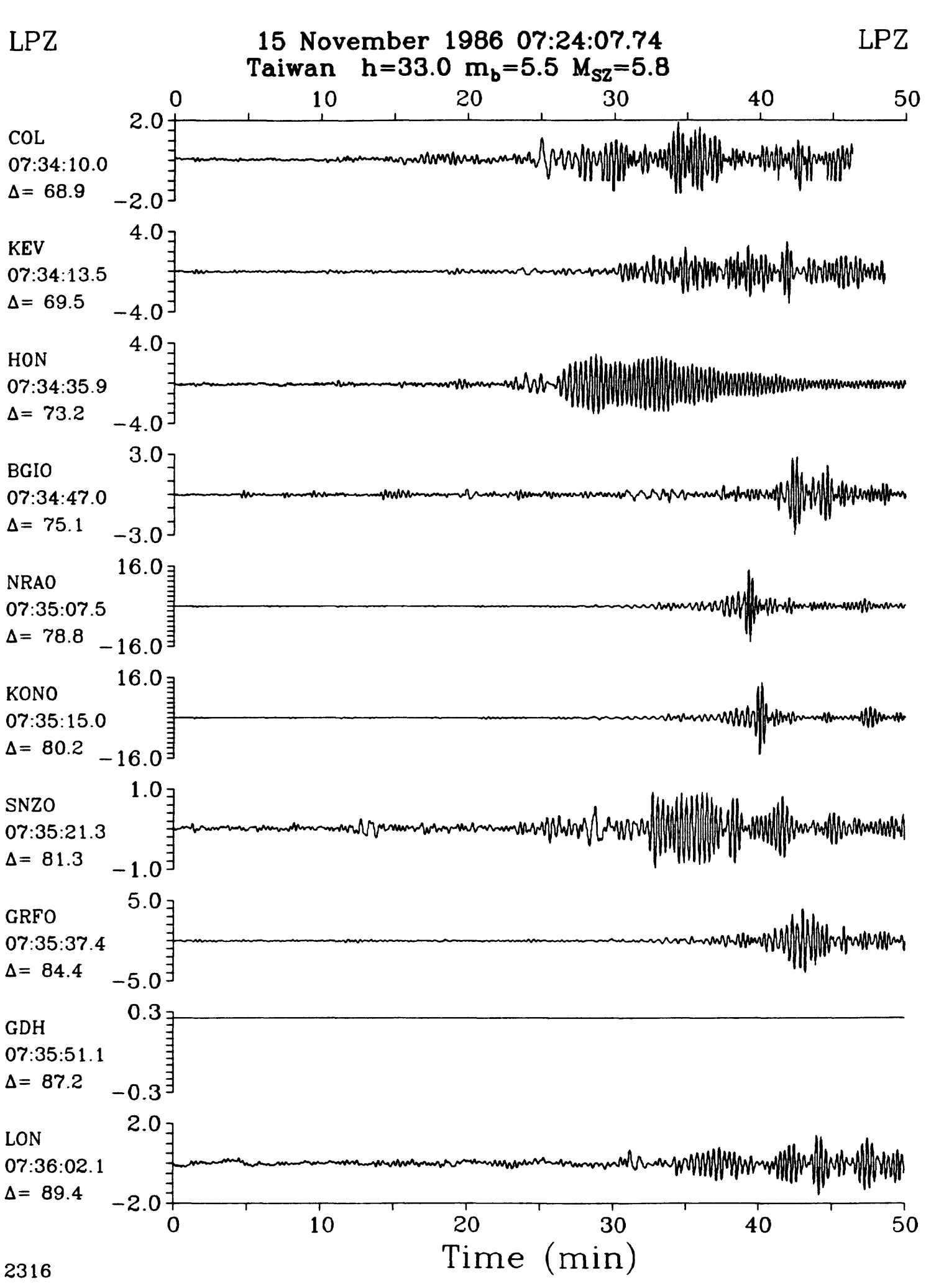
SPZ

15 November 1986 07:24:07.74
Taiwan h=33.0 m_b=5.5 M_{SZ}=5.8

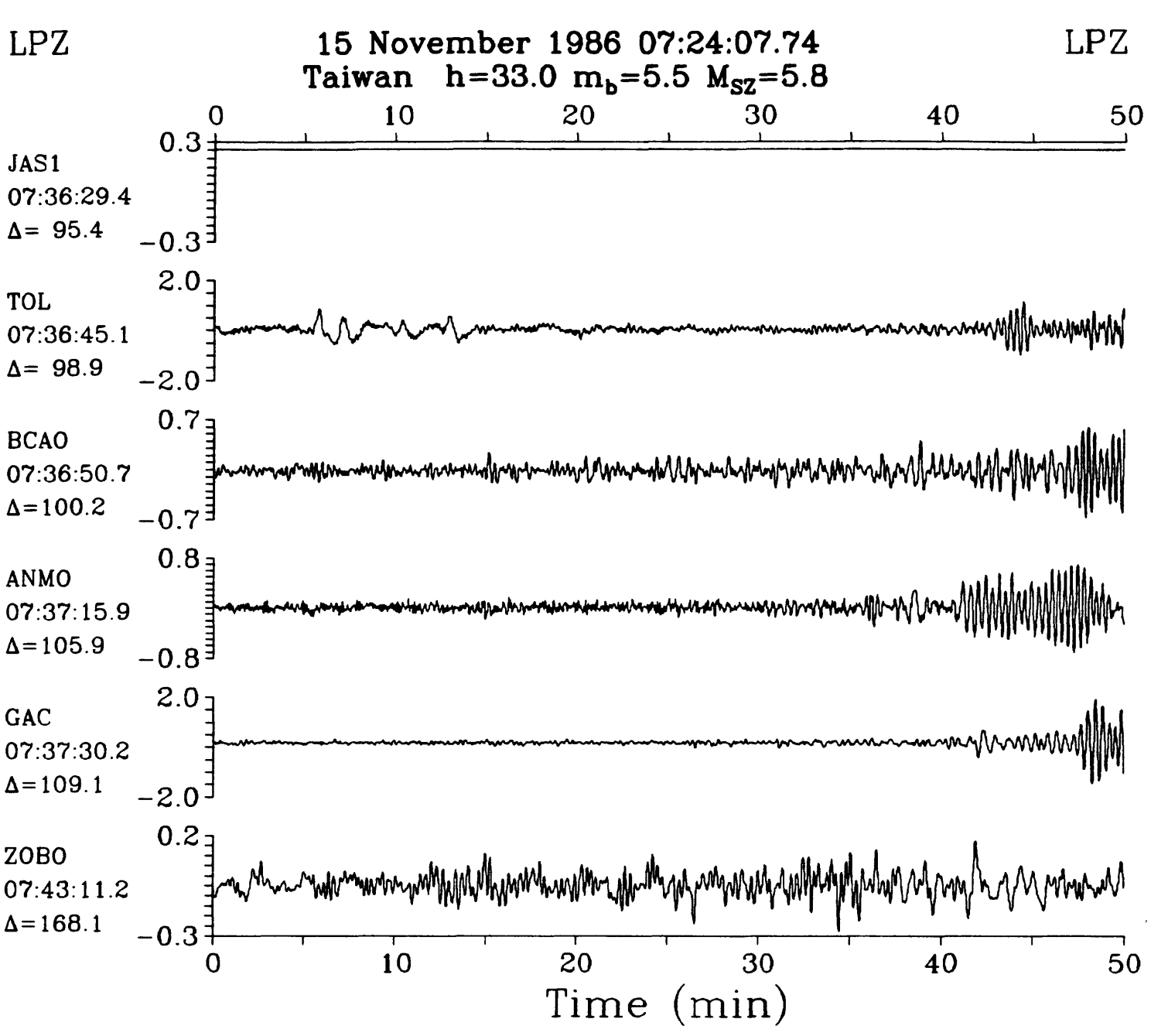
SPZ

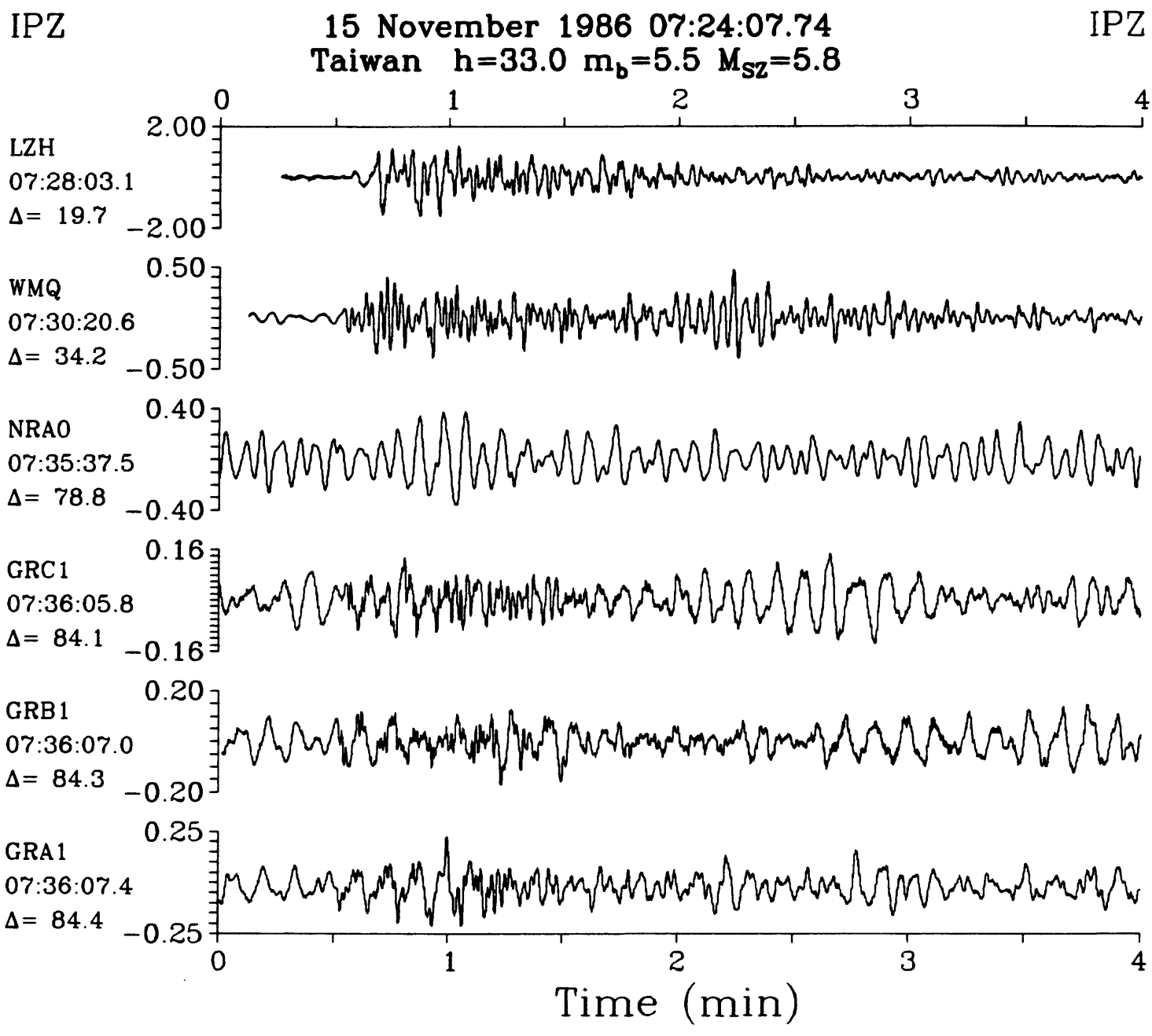



LPZ
15 November 1986 07:24:07.74
Taiwan h=33.0 m_b=5.5 M_{SZ}=5.8
LPZ
0
10
20
30
40
50
TATO
07:23:27.8
Δ= 1.2
400.0
-400.0
BJI
07:27:00.8
Δ= 16.8
6.0
-6.0
MAJO
07:27:26.8
Δ= 19.1
10.0
-10.0
LZH
07:27:33.1
Δ= 19.7
30.0
-30.0
CHTO
07:27:55.2
Δ= 21.7
30.0
-30.0
GUMO
07:28:21.4
Δ= 24.2
7.0
-7.0
LEM
07:29:43.5
Δ= 33.4
4.0
-4.0
WMQ
07:29:50.6
Δ= 34.2
3.0
-3.0
CTAO
07:31:57.7
Δ= 49.8
2.0
-2.0
NWAO
07:32:47.7
Δ= 56.6
0.8
-0.8
0
10
20
30
40
50
Time (min)
2315


LPZ
15 November 1986 07:24:07.74
Taiwan h=33.0 m_b=5.5 M_{SZ}=5.8
LPZ
0
10
20
30
40
50
COL
07:34:10.0
Δ= 68.9
2.0
-2.0
KEV
07:34:13.5
Δ= 69.5
4.0
-4.0
HON
07:34:35.9
Δ= 73.2
4.0
-4.0
BGIO
07:34:47.0
Δ= 75.1
3.0
-3.0
NRAO
07:35:07.5
Δ= 78.8
16.0
-16.0
KONO
07:35:15.0
Δ= 80.2
16.0
-16.0
SNZO
07:35:21.3
Δ= 81.3
1.0
-1.0
GRFO
07:35:37.4
Δ= 84.4
5.0
-5.0
GDH
07:35:51.1
Δ= 87.2
0.3
-0.3
LON
07:36:02.1
Δ= 89.4
2.0
-2.0
0
10
20
30
40
50
Time (min)

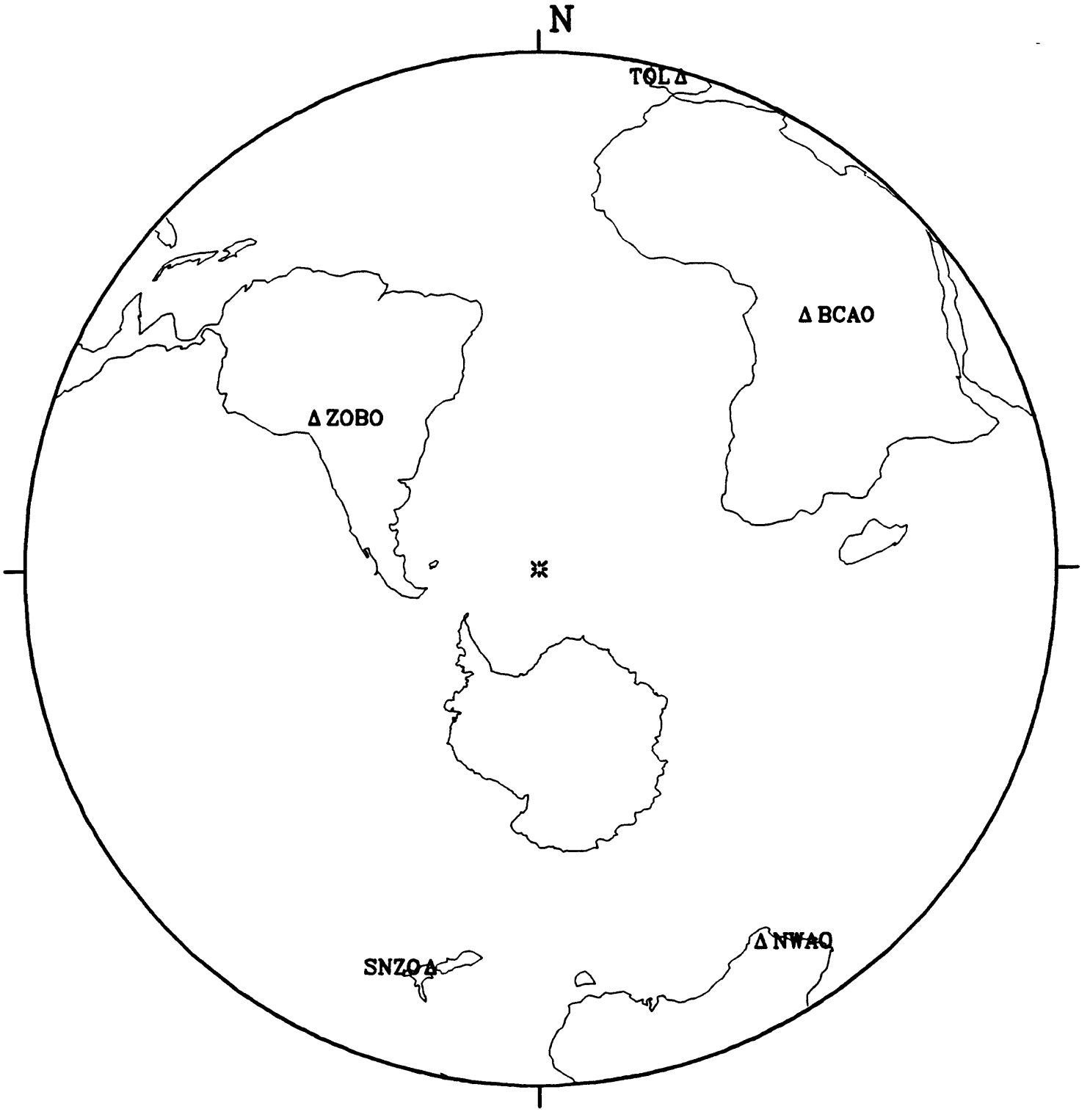
2316


LPZ
15 November 1986 07:24:07.74
Taiwan h=33.0 m_b=5.5 M_{SZ}=5.8
LPZ
0
10
20
30
40
50
JAS1
07:36:29.4
Δ= 95.4
0.3
-0.3
TOL
07:36:45.1
Δ= 98.9
2.0
-2.0
BCAO
07:36:50.7
Δ=100.2
0.7
-0.7
ANMO
07:37:15.9
Δ=105.9
0.8
-0.8
GAC
07:37:30.2
Δ=109.1
2.0
-2.0
ZOBO
07:43:11.2
Δ=168.1
0.2
-0.3
Time (min)


IPZ
15 November 1986 07:24:07.74
Taiwan h=33.0 m_b=5.5 M_{SZ}=5.8
IPZ
0
1
2
3
4
LZH
07:28:03.1
Δ= 19.7
2.00
-2.00
WMQ
07:30:20.6
Δ= 34.2
0.50
-0.50
NRA0
07:35:37.5
Δ= 78.8
0.40
-0.40
GRC1
07:36:05.8
Δ= 84.1
0.16
-0.16
GRB1
07:36:07.0
Δ= 84.3
0.20
-0.20
GRA1
07:36:07.4
Δ= 84.4
0.25
-0.25
Time (min)

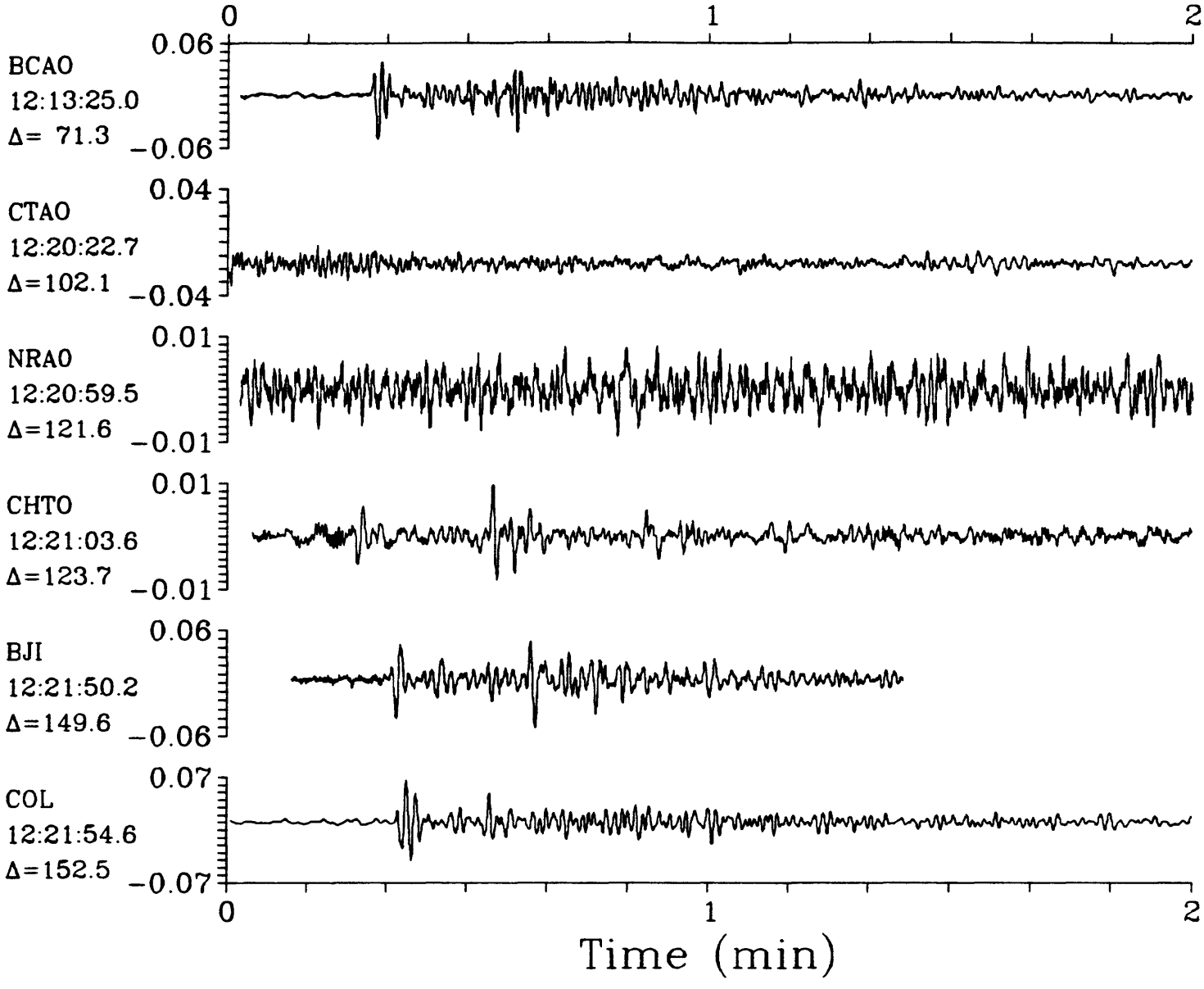
18 November 1986 12:02:23.51

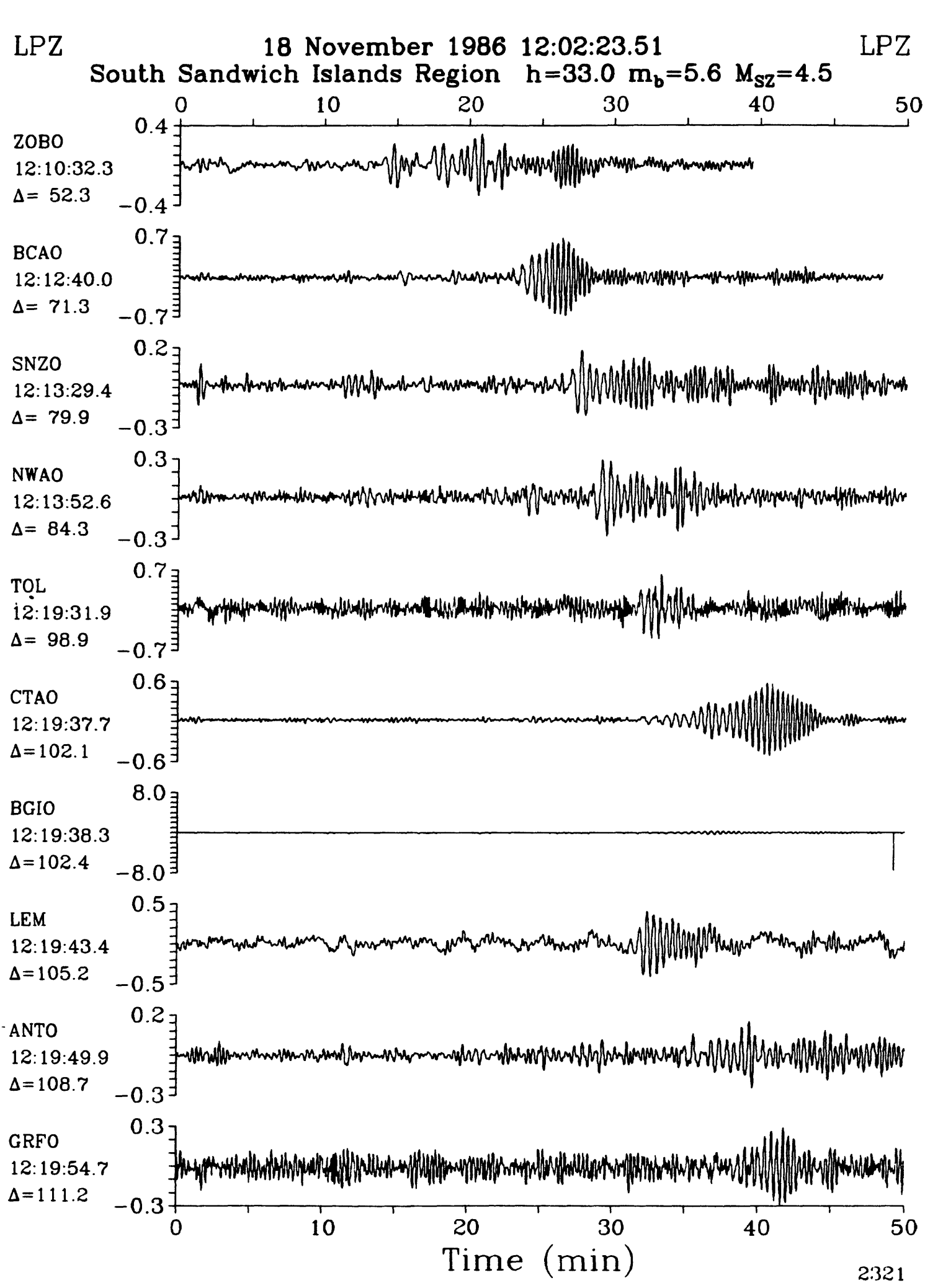
South Sandwich Islands Region

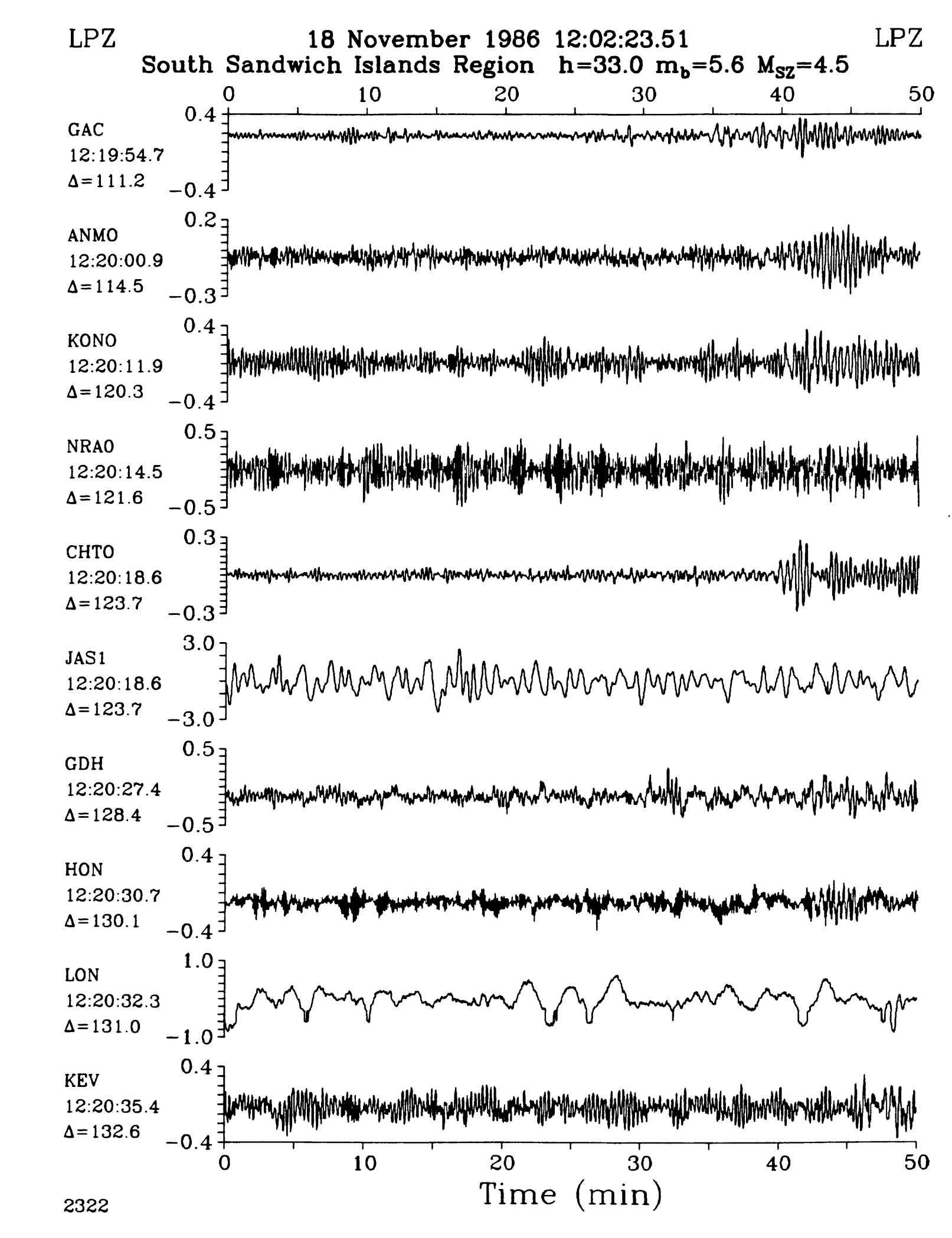


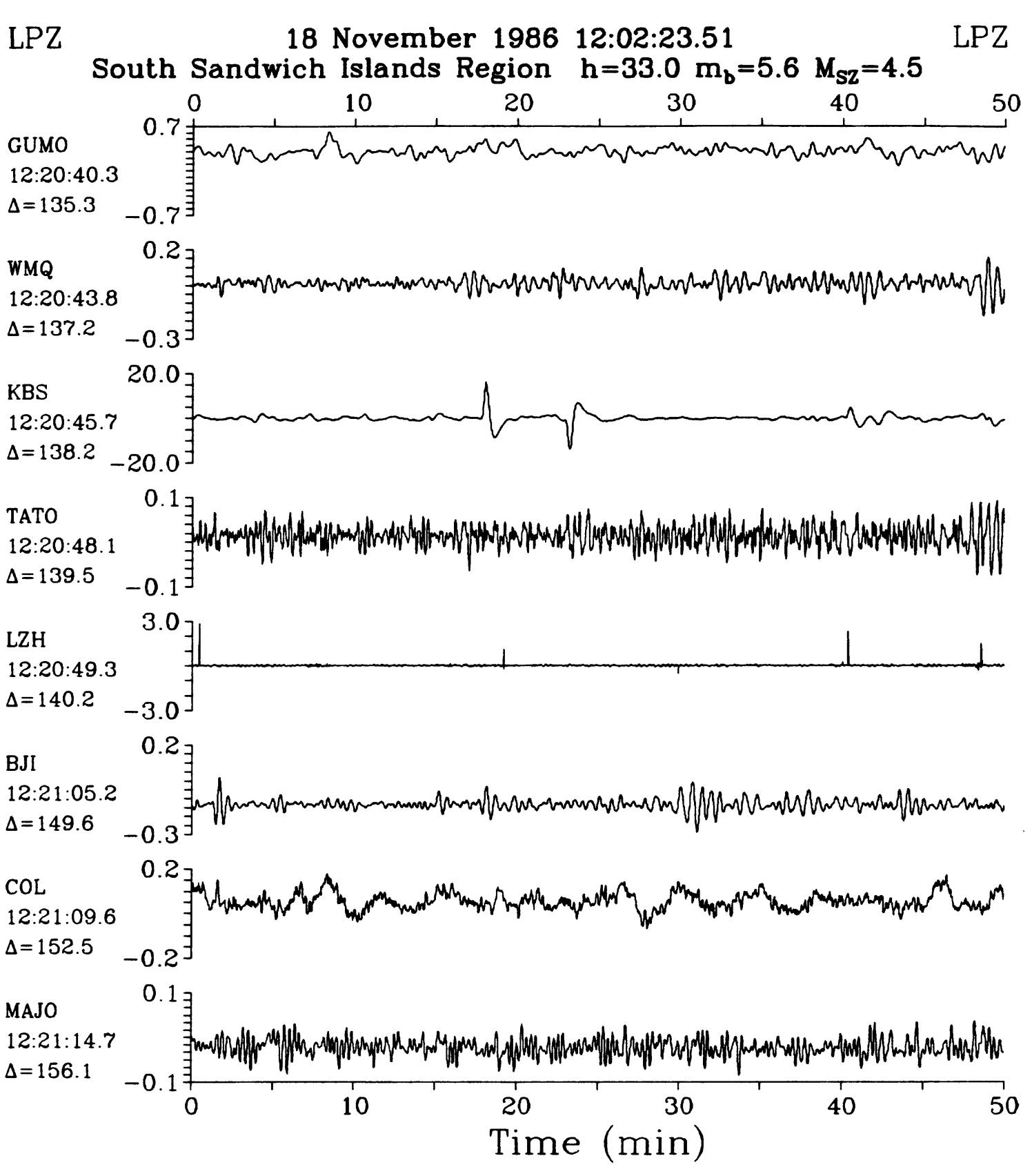
SPZ 18 November 1986 12:02:23.51 SPZ

South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=4.5



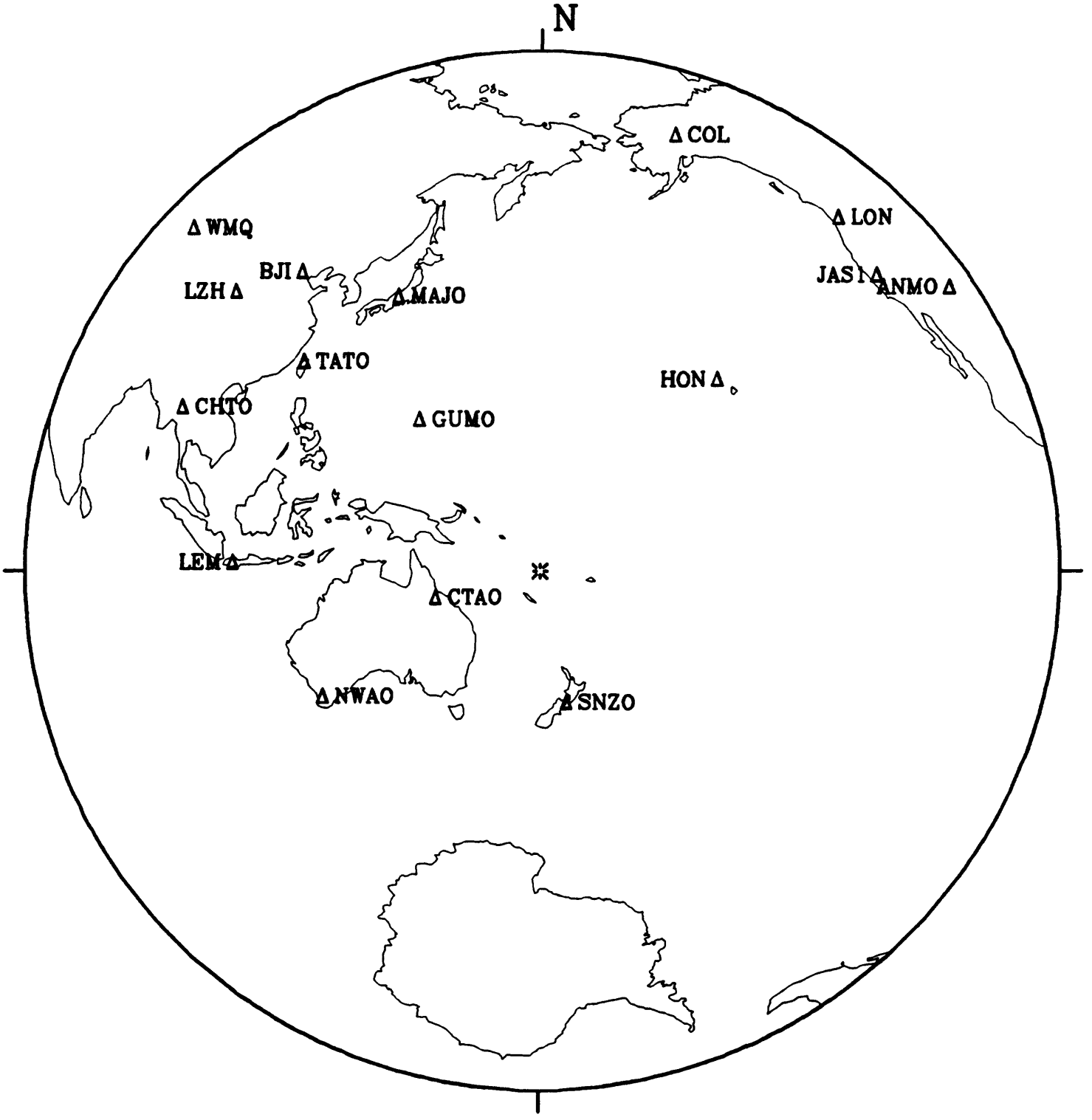

LPZ
18 November 1986 12:02:23.51
LPZ
South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=4.5
0
10
20
30
40
50
ZOBO
12:10:32.3
Δ= 52.3
0.4
-0.4
BCAO
12:12:40.0
Δ= 71.3
0.7
-0.7
SNZO
12:13:29.4
Δ= 79.9
0.2
-0.3
NWAO
12:13:52.6
Δ= 84.3
0.3
-0.3
TOL
12:19:31.9
Δ= 98.9
0.7
-0.7
CTAO
12:19:37.7
Δ=102.1
0.6
-0.6
BGIO
12:19:38.3
Δ=102.4
8.0
-8.0
LEM
12:19:43.4
Δ=105.2
0.5
-0.5
ANTO
12:19:49.9
Δ=108.7
0.2
-0.3
GRFO
12:19:54.7
Δ=111.2
0.3
-0.3
0
10
20
30
40
50
Time (min)
2321

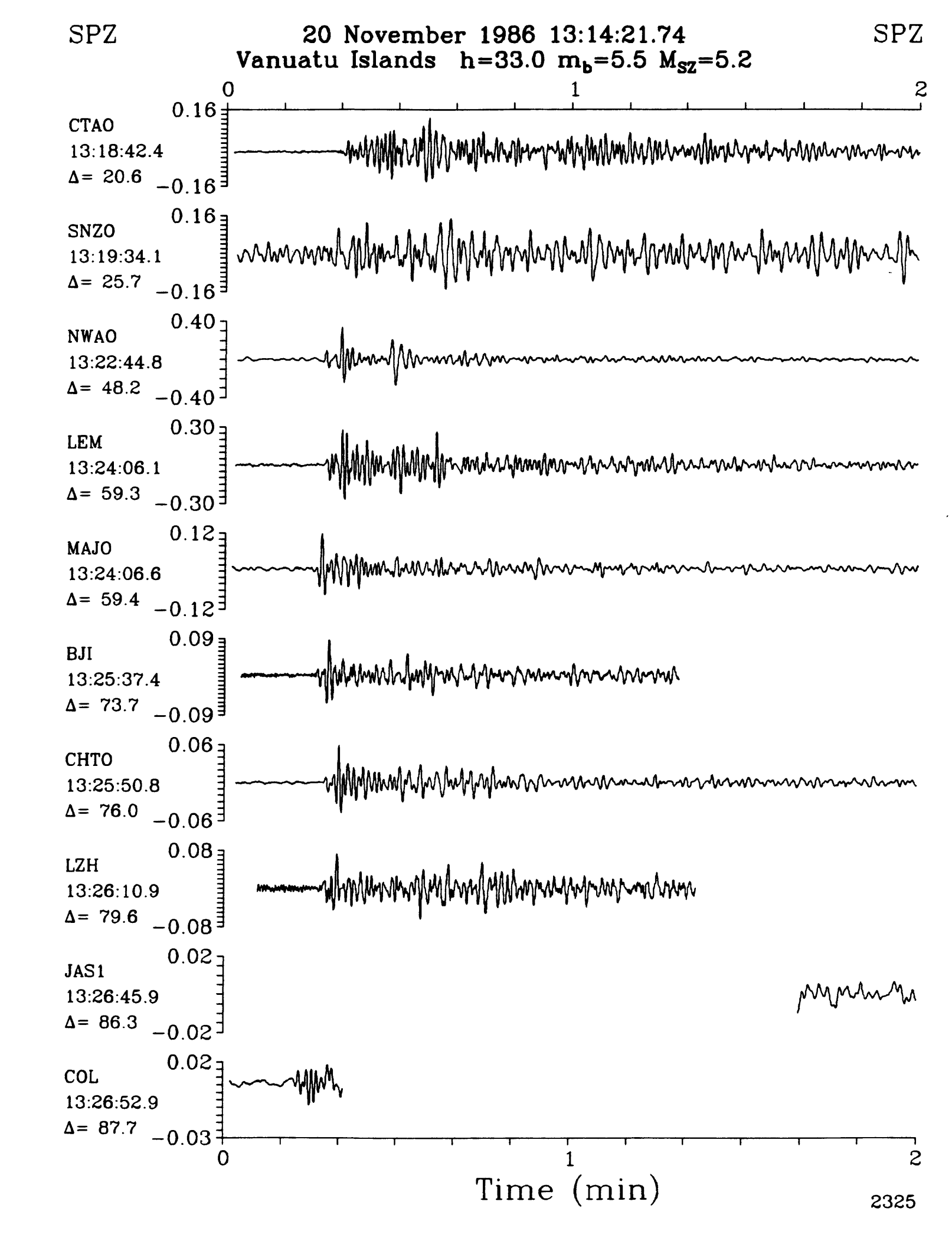

LPZ
18 November 1986 12:02:23.51
LPZ
South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=4.5
0
10
20
30
40
50
GAC
12:19:54.7
Δ=111.2
0.4
−0.4
ANMO
12:20:00.9
Δ=114.5
0.2
−0.3
KONO
12:20:11.9
Δ=120.3
0.4
−0.4
NRAO
12:20:14.5
Δ=121.6
0.5
−0.5
CHTO
12:20:18.6
Δ=123.7
0.3
−0.3
JAS1
12:20:18.6
Δ=123.7
3.0
−3.0
GDH
12:20:27.4
Δ=128.4
0.5
−0.5
HON
12:20:30.7
Δ=130.1
0.4
−0.4
LON
12:20:32.3
Δ=131.0
1.0
−1.0
KEV
12:20:35.4
Δ=132.6
0.4
−0.4
0
10
20
30
40
50
Time (min)


LPZ
18 November 1986 12:02:23.51
LPZ
South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=4.5
0
10
20
30
40
50
GUMO
12:20:40.3
Δ=135.3
0.7
-0.7
WMQ
12:20:43.8
Δ=137.2
0.2
-0.3
KBS
12:20:45.7
Δ=138.2
20.0
-20.0
TATO
12:20:48.1
Δ=139.5
0.1
-0.1
LZH
12:20:49.3
Δ=140.2
3.0
-3.0
BJI
12:21:05.2
Δ=149.6
0.2
-0.3
COL
12:21:09.6
Δ=152.5
0.2
-0.2
MAJO
12:21:14.7
Δ=156.1
0.1
-0.1
0
10
20
30
40
50
Time (min)

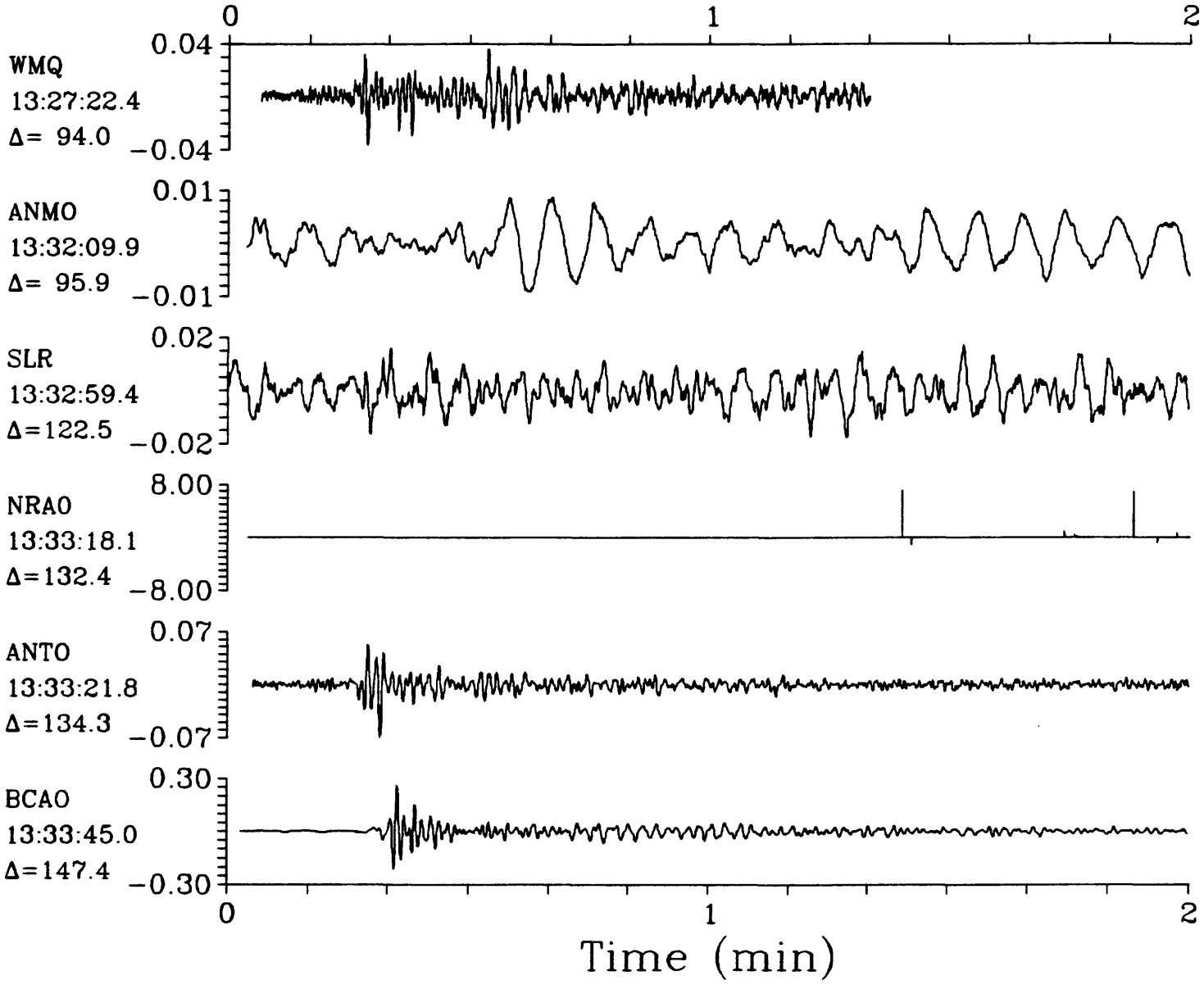
20 November 1986 13:14:21.74

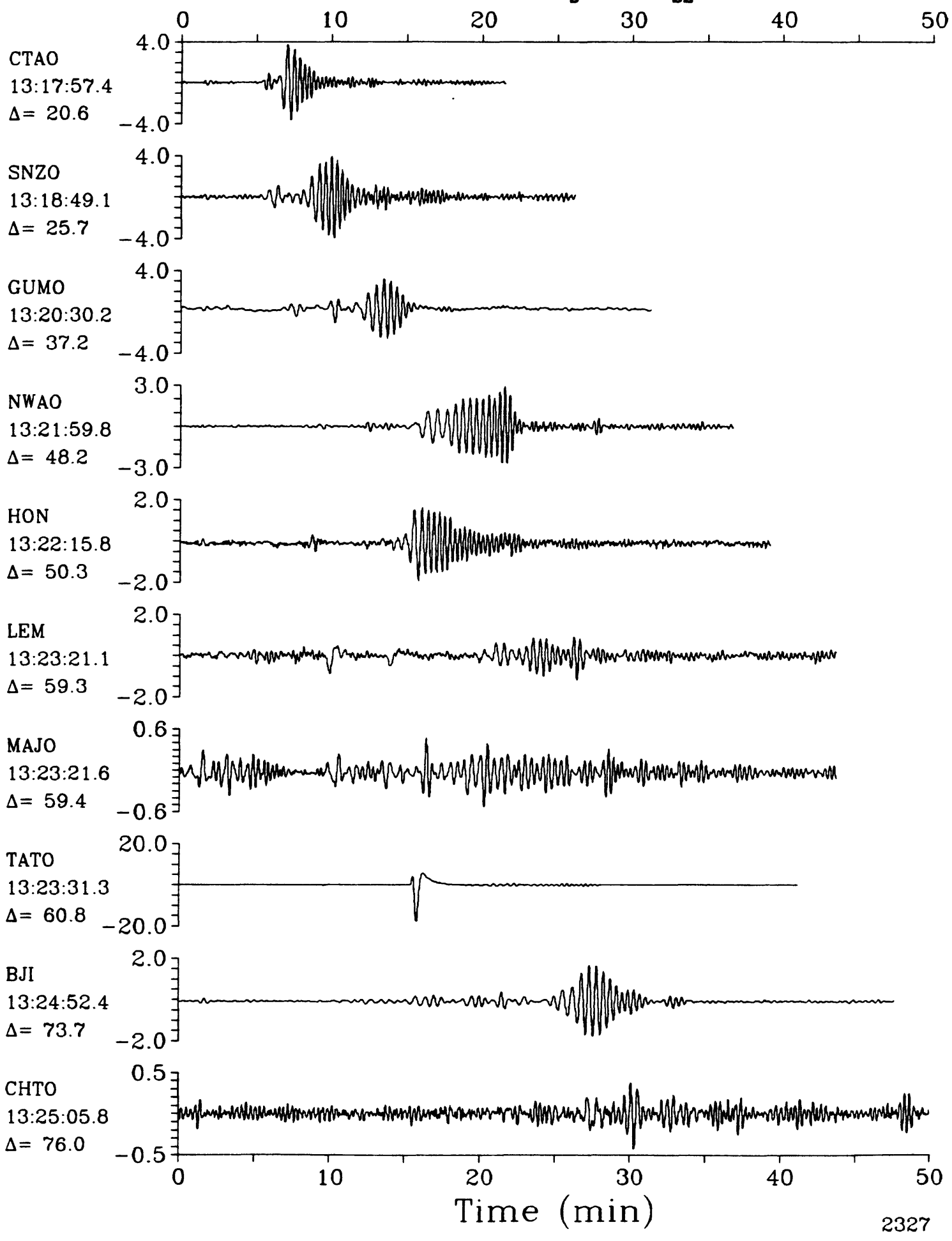
Vanuatu Islands

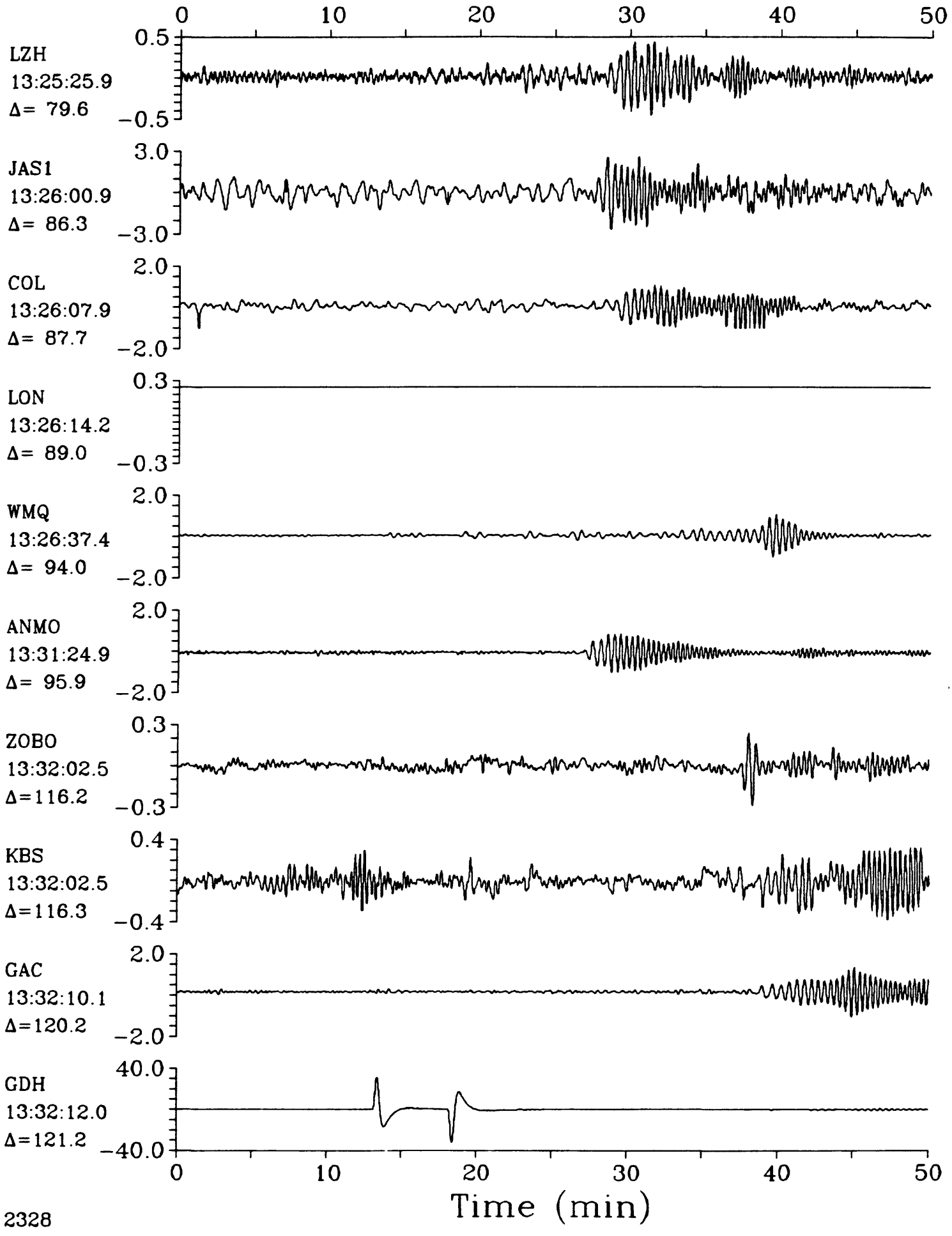


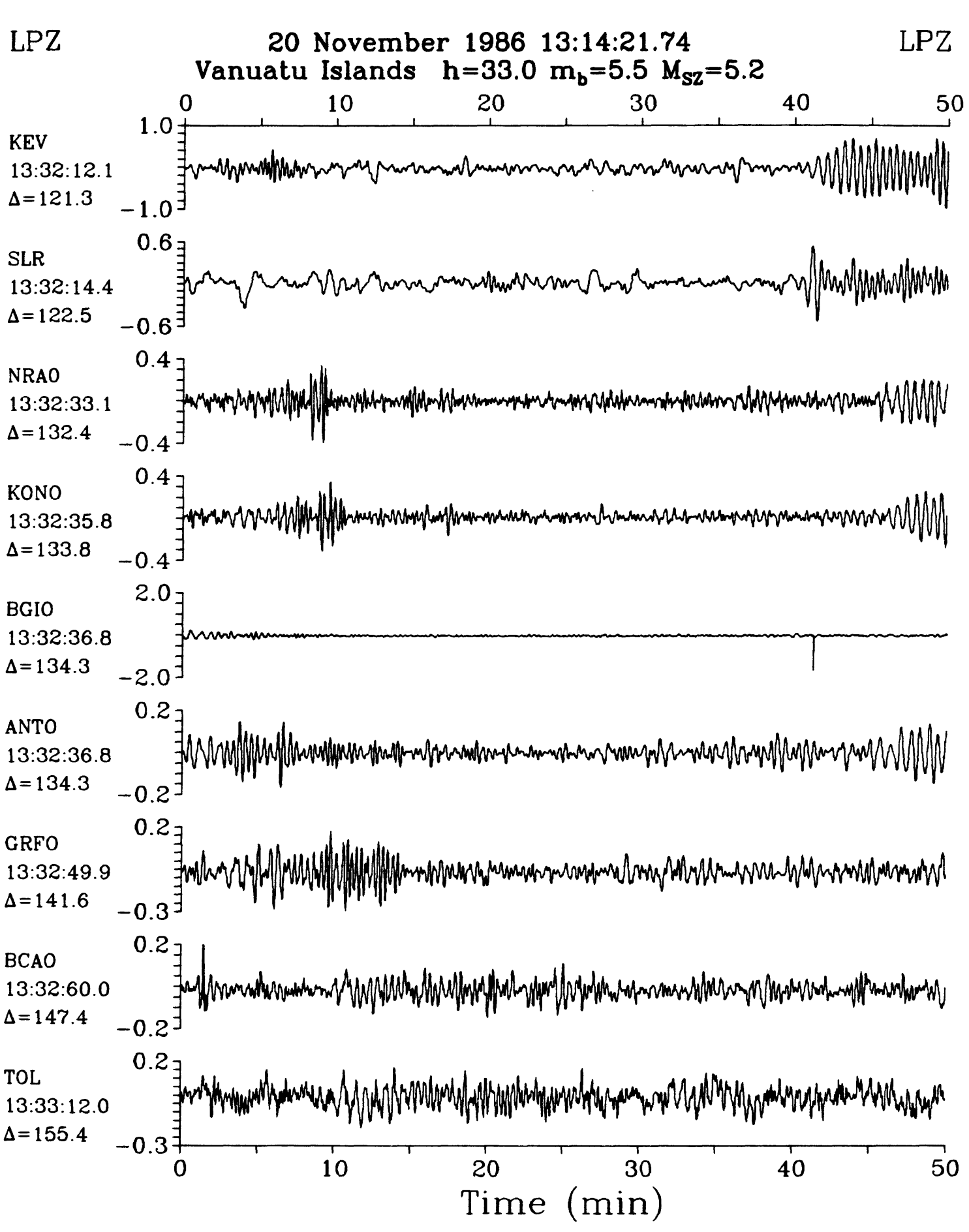

SPZ
20 November 1986 13:14:21.74
Vanuatu Islands h=33.0 m_b=5.5 M_{SZ}=5.2
SPZ
0
1
2
CTAO
13:18:42.4
Δ= 20.6
0.16
-0.16
SNZO
13:19:34.1
Δ= 25.7
0.16
-0.16
NWAO
13:22:44.8
Δ= 48.2
0.40
-0.40
LEM
13:24:06.1
Δ= 59.3
0.30
-0.30
MAJO
13:24:06.6
Δ= 59.4
0.12
-0.12
BJI
13:25:37.4
Δ= 73.7
0.09
-0.09
CHTO
13:25:50.8
Δ= 76.0
0.06
-0.06
LZH
13:26:10.9
Δ= 79.6
0.08
-0.08
JAS1
13:26:45.9
Δ= 86.3
0.02
-0.02
COL
13:26:52.9
Δ= 87.7
0.02
-0.03
0
1
2
Time (min)
2325

20 November 1986 13:14:21.74
Vanuatu Islands h=33.0 m_b=5.5 M_{SZ}=5.2



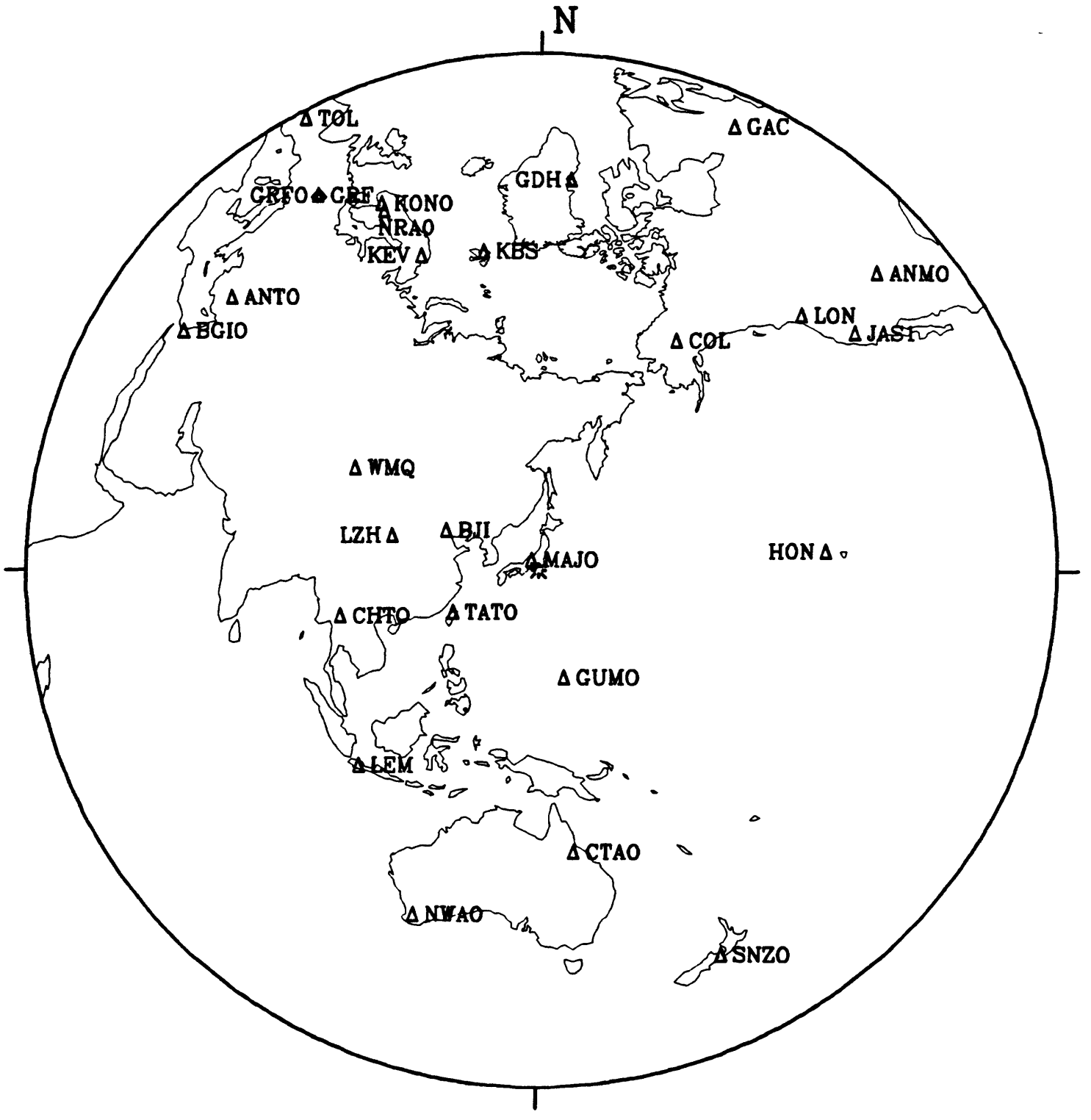

LPZ
20 November 1986 13:14:21.74
Vanuatu Islands h=33.0 m_b=5.5 M_{SZ}=5.2
LPZ
0
10
20
30
40
50
CTAO
13:17:57.4
Δ= 20.6
4.0
-4.0
SNZO
13:18:49.1
Δ= 25.7
4.0
-4.0
GUMO
13:20:30.2
Δ= 37.2
4.0
-4.0
NWAO
13:21:59.8
Δ= 48.2
3.0
-3.0
HON
13:22:15.8
Δ= 50.3
2.0
-2.0
LEM
13:23:21.1
Δ= 59.3
2.0
-2.0
MAJO
13:23:21.6
Δ= 59.4
0.6
-0.6
TATO
13:23:31.3
Δ= 60.8
20.0
-20.0
BJI
13:24:52.4
Δ= 73.7
2.0
-2.0
CHTO
13:25:05.8
Δ= 76.0
0.5
-0.5
0
10
20
30
40
50
Time (min)
2327

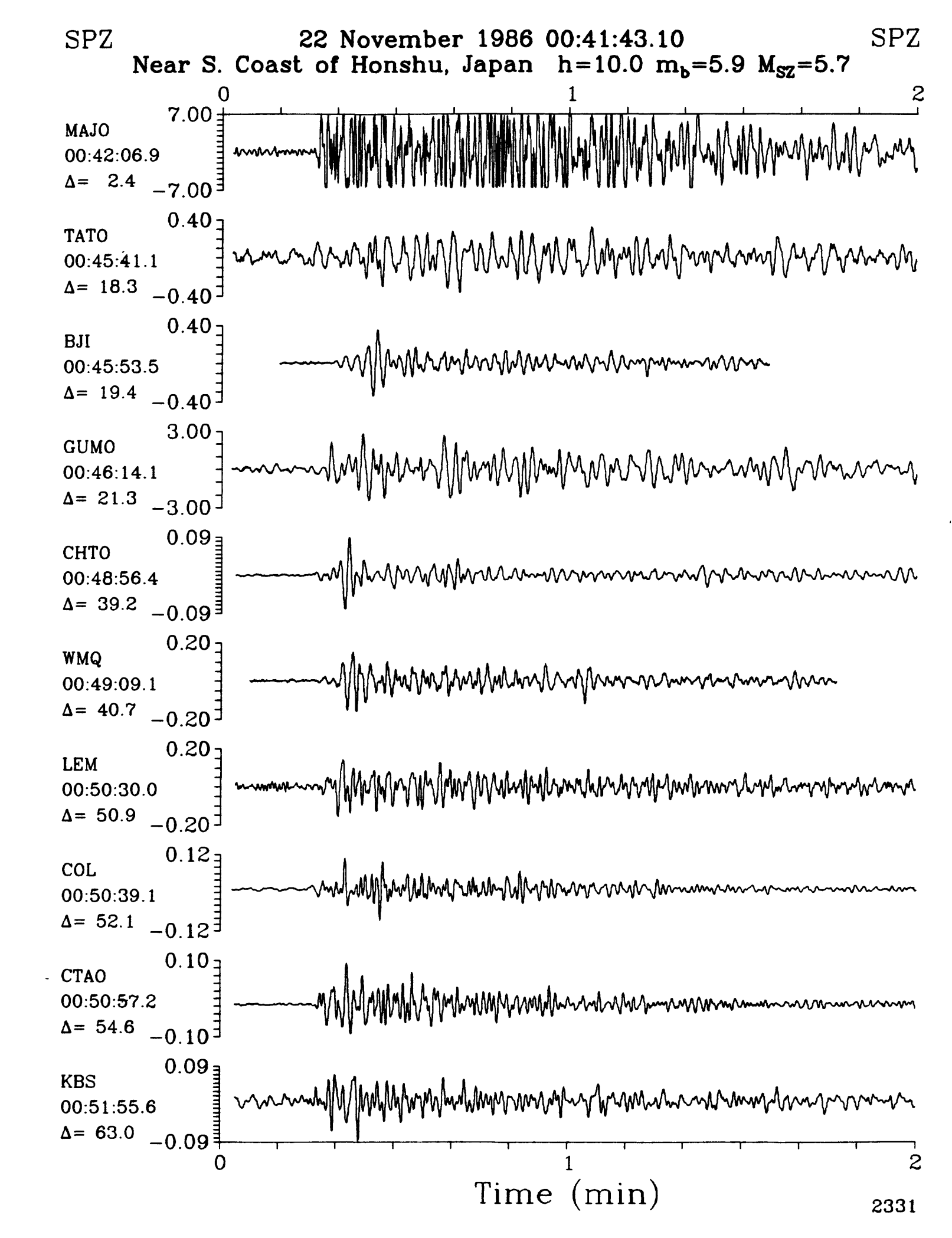

LPZ
20 November 1986 13:14:21.74
Vanuatu Islands h=33.0 m_b=5.5 M_{SZ}=5.2
LPZ
0
10
20
30
40
50
LZH
13:25:25.9
Δ= 79.6
0.5
-0.5
JAS1
13:26:00.9
Δ= 86.3
3.0
-3.0
COL
13:26:07.9
Δ= 87.7
2.0
-2.0
LON
13:26:14.2
Δ= 89.0
0.3
-0.3
WMQ
13:26:37.4
Δ= 94.0
2.0
-2.0
ANMO
13:31:24.9
Δ= 95.9
2.0
-2.0
ZOBO
13:32:02.5
Δ=116.2
0.3
-0.3
KBS
13:32:02.5
Δ=116.3
0.4
-0.4
GAC
13:32:10.1
Δ=120.2
2.0
-2.0
GDH
13:32:12.0
Δ=121.2
40.0
-40.0
0
10
20
30
40
50
Time (min)

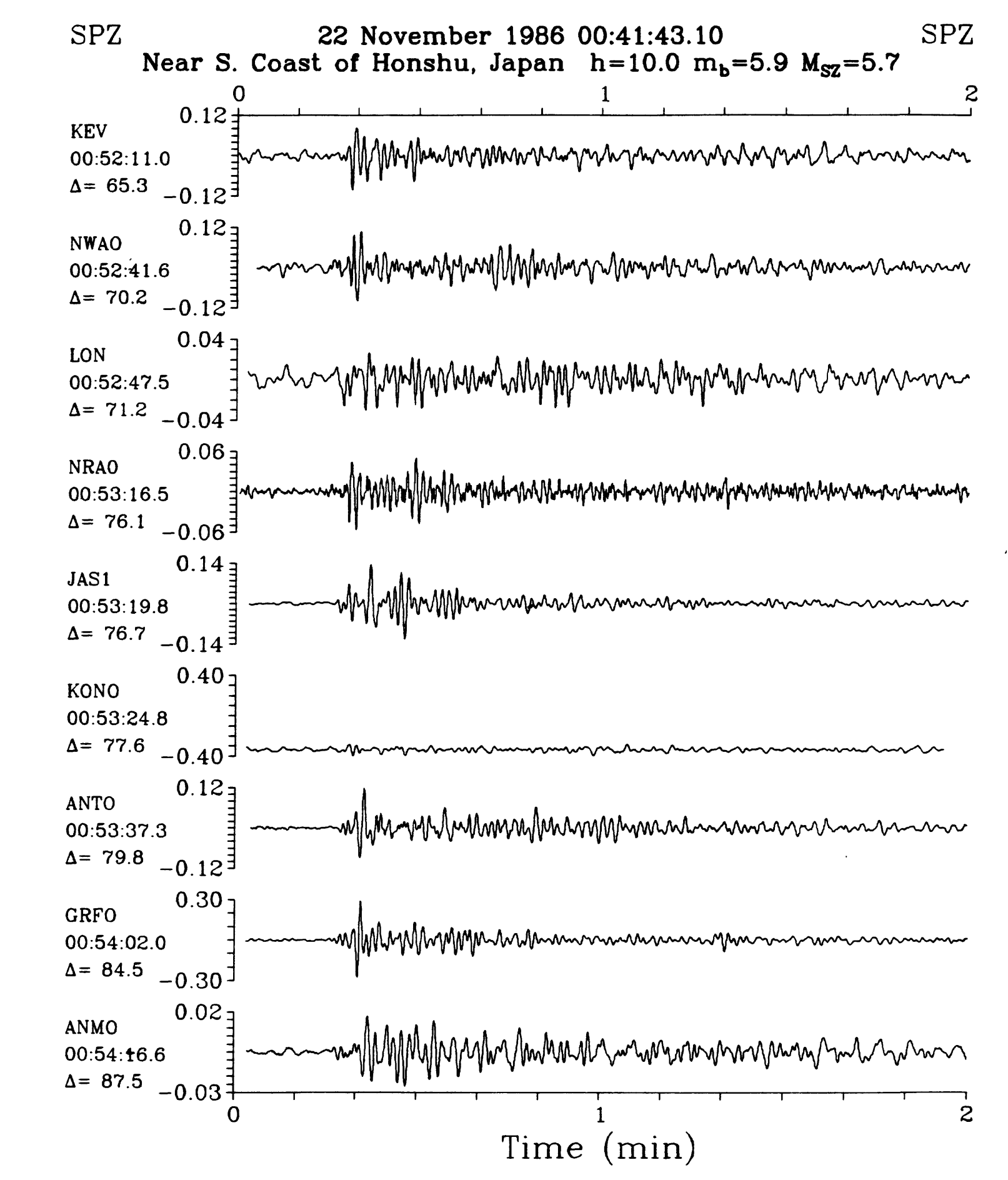

LPZ
20 November 1986 13:14:21.74
Vanuatu Islands h=33.0 m_b=5.5 M_{SZ}=5.2
LPZ
0
10
20
30
40
50
KEV
13:32:12.1
Δ=121.3
1.0
-1.0
SLR
13:32:14.4
Δ=122.5
0.6
-0.6
NRAO
13:32:33.1
Δ=132.4
0.4
-0.4
KONO
13:32:35.8
Δ=133.8
0.4
-0.4
BGIO
13:32:36.8
Δ=134.3
2.0
-2.0
ANTO
13:32:36.8
Δ=134.3
0.2
-0.2
GRFO
13:32:49.9
Δ=141.6
0.2
-0.3
BCAO
13:32:60.0
Δ=147.4
0.2
-0.2
TOL
13:33:12.0
Δ=155.4
0.2
-0.3
0
10
20
30
40
50
Time (min)

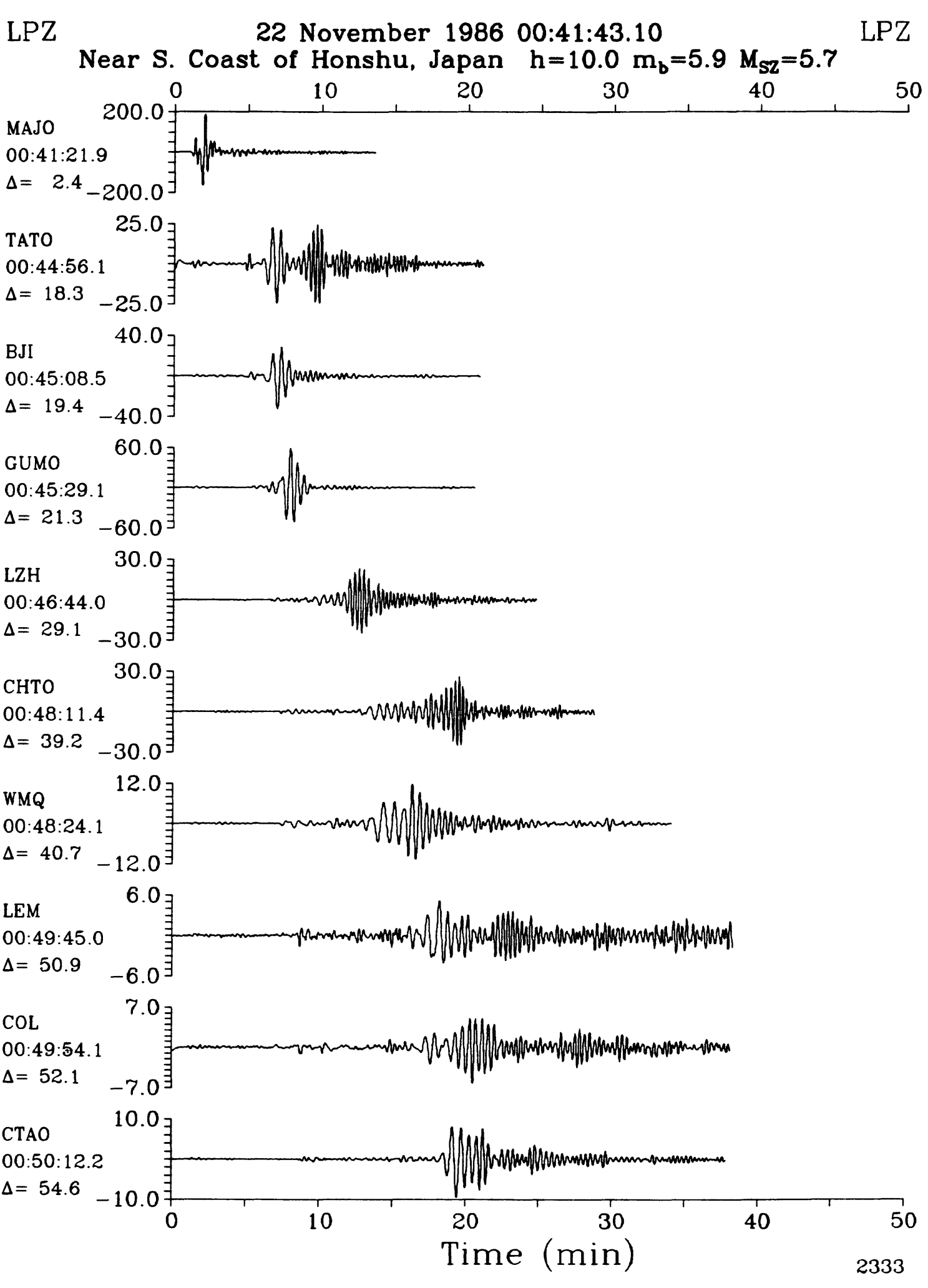
22 November 1986 00:41:43.10

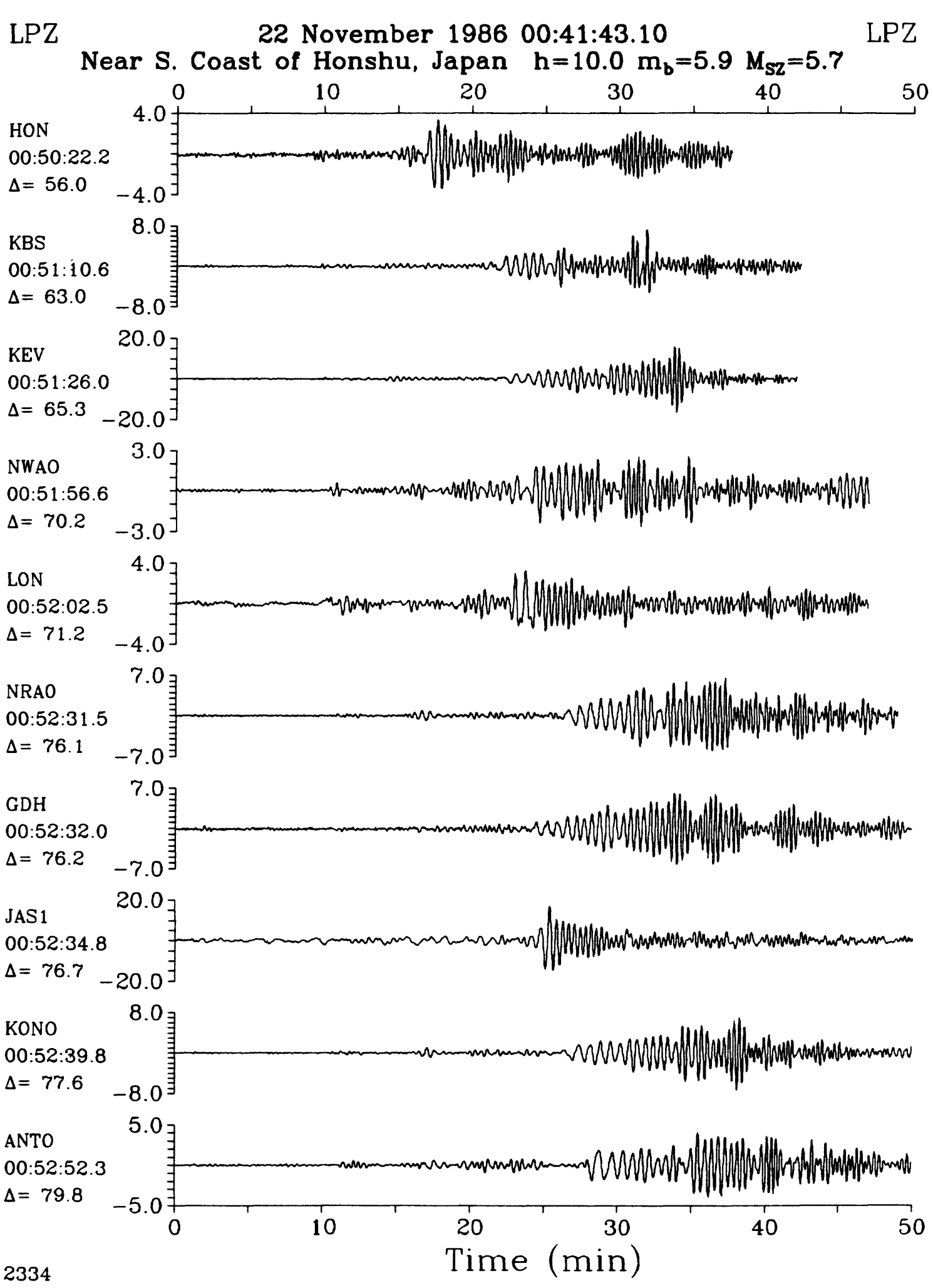
Near S. Coast of Honshu, Japan

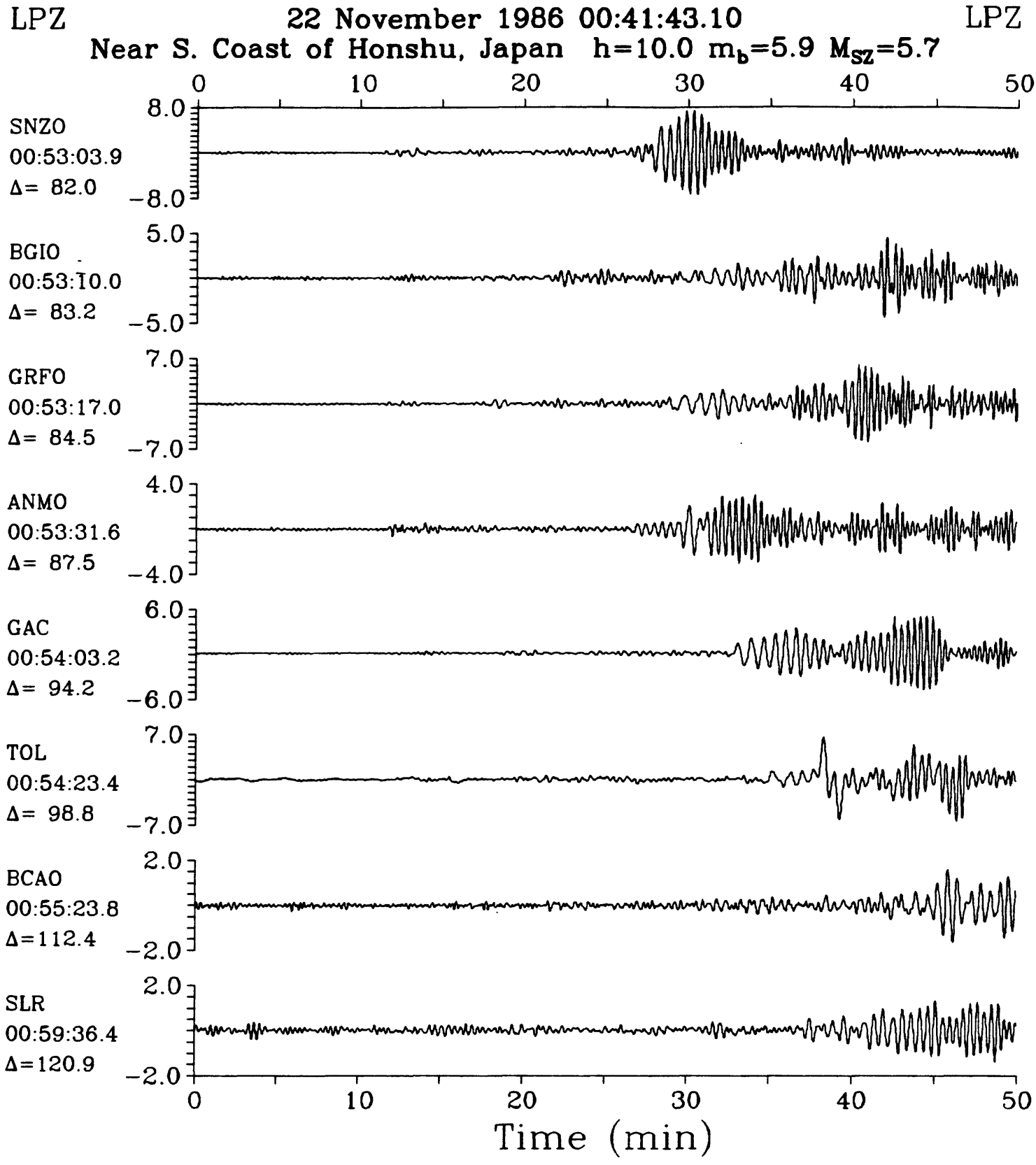


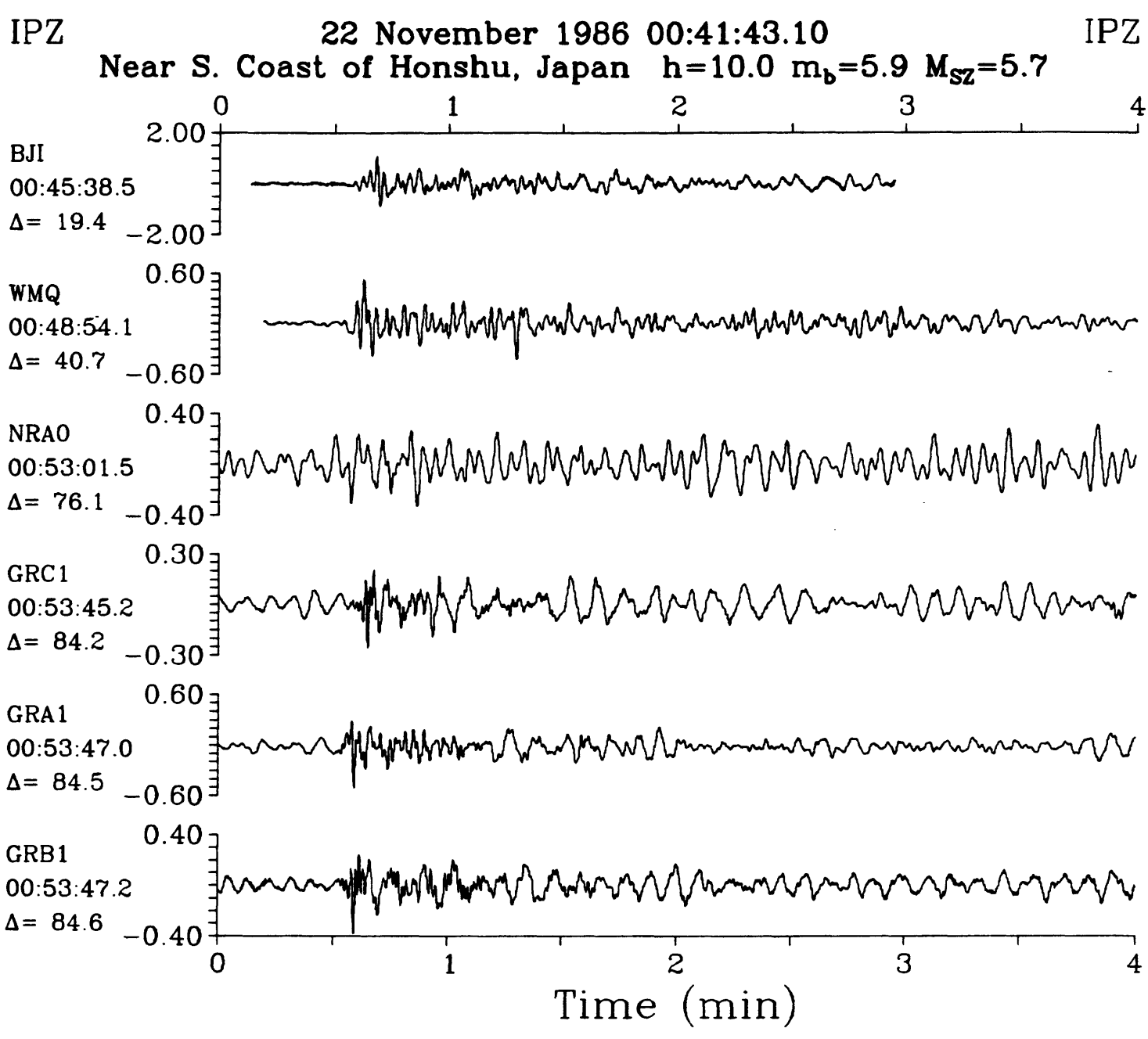

SPZ
22 November 1986 00:41:43.10
SPZ
Near S. Coast of Honshu, Japan h=10.0 m_b=5.9 M_{SZ}=5.7
0
1
2
MAJO
00:42:06.9
Δ= 2.4
7.00
-7.00
TATO
00:45:41.1
Δ= 18.3
0.40
-0.40
BJI
00:45:53.5
Δ= 19.4
0.40
-0.40
GUMO
00:46:14.1
Δ= 21.3
3.00
-3.00
CHTO
00:48:56.4
Δ= 39.2
0.09
-0.09
WMQ
00:49:09.1
Δ= 40.7
0.20
-0.20
LEM
00:50:30.0
Δ= 50.9
0.20
-0.20
COL
00:50:39.1
Δ= 52.1
0.12
-0.12
CTAO
00:50:57.2
Δ= 54.6
0.10
-0.10
KBS
00:51:55.6
Δ= 63.0
0.09
-0.09
0
1
2
Time (min)
2331


SPZ
22 November 1986 00:41:43.10
SPZ
Near S. Coast of Honshu, Japan h=10.0 m_b=5.9 M_{SZ}=5.7
0
1
2
KEV
00:52:11.0
Δ= 65.3
0.12
-0.12
NWAO
00:52:41.6
Δ= 70.2
0.12
-0.12
LON
00:52:47.5
Δ= 71.2
0.04
-0.04
NRAO
00:53:16.5
Δ= 76.1
0.06
-0.06
JAS1
00:53:19.8
Δ= 76.7
0.14
-0.14
KONO
00:53:24.8
Δ= 77.6
0.40
-0.40
ANTO
00:53:37.3
Δ= 79.8
0.12
-0.12
GRFO
00:54:02.0
Δ= 84.5
0.30
-0.30
ANMO
00:54:16.6
Δ= 87.5
0.02
-0.03
0
1
2
Time (min)


LPZ
22 November 1986 00:41:43.10
LPZ
Near S. Coast of Honshu, Japan h=10.0 m_b=5.9 M_{SZ}=5.7
0
10
20
30
40
50
200.0
MAJO
00:41:21.9
Δ= 2.4
-200.0
25.0
TATO
00:44:56.1
Δ= 18.3
-25.0
40.0
BJI
00:45:08.5
Δ= 19.4
-40.0
60.0
GUMO
00:45:29.1
Δ= 21.3
-60.0
30.0
LZH
00:46:44.0
Δ= 29.1
-30.0
30.0
CHTO
00:48:11.4
Δ= 39.2
-30.0
12.0
WMQ
00:48:24.1
Δ= 40.7
-12.0
6.0
LEM
00:49:45.0
Δ= 50.9
-6.0
7.0
COL
00:49:54.1
Δ= 52.1
-7.0
10.0
CTAO
00:50:12.2
Δ= 54.6
-10.0
0
10
20
30
40
50
Time (min)
2333

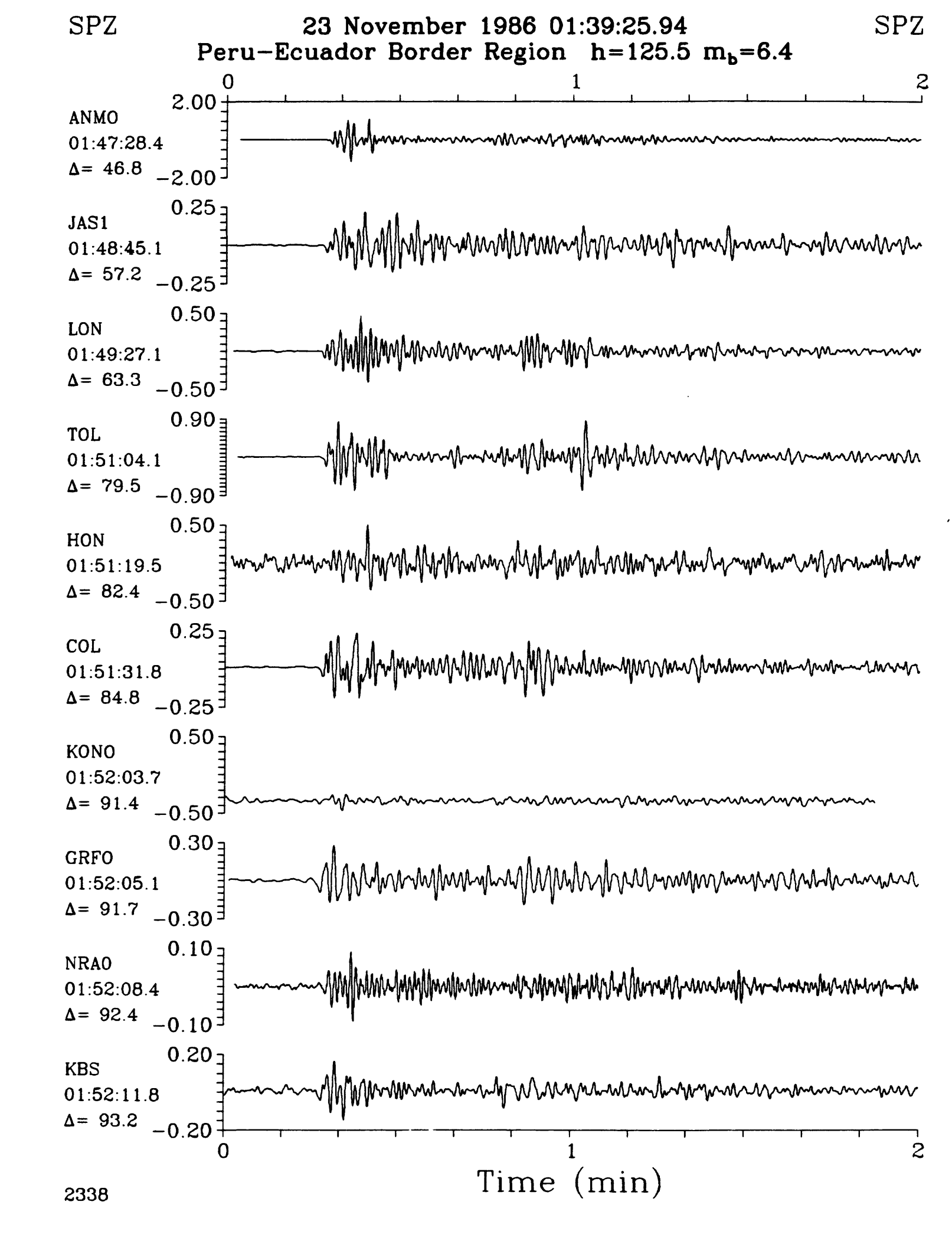

LPZ
22 November 1986 00:41:43.10
LPZ
Near S. Coast of Honshu, Japan h=10.0 m_b=5.9 M_{SZ}=5.7
0
10
20
30
40
50
HON
00:50:22.2
Δ= 56.0
4.0
-4.0
KBS
00:51:10.6
Δ= 63.0
8.0
-8.0
KEV
00:51:26.0
Δ= 65.3
20.0
-20.0
NWAO
00:51:56.6
Δ= 70.2
3.0
-3.0
LON
00:52:02.5
Δ= 71.2
4.0
-4.0
NRAO
00:52:31.5
Δ= 76.1
7.0
-7.0
GDH
00:52:32.0
Δ= 76.2
7.0
-7.0
JAS1
00:52:34.8
Δ= 76.7
20.0
-20.0
KONO
00:52:39.8
Δ= 77.6
8.0
-8.0
ANTO
00:52:52.3
Δ= 79.8
5.0
-5.0
0
10
20
30
40
50
Time (min)
2334

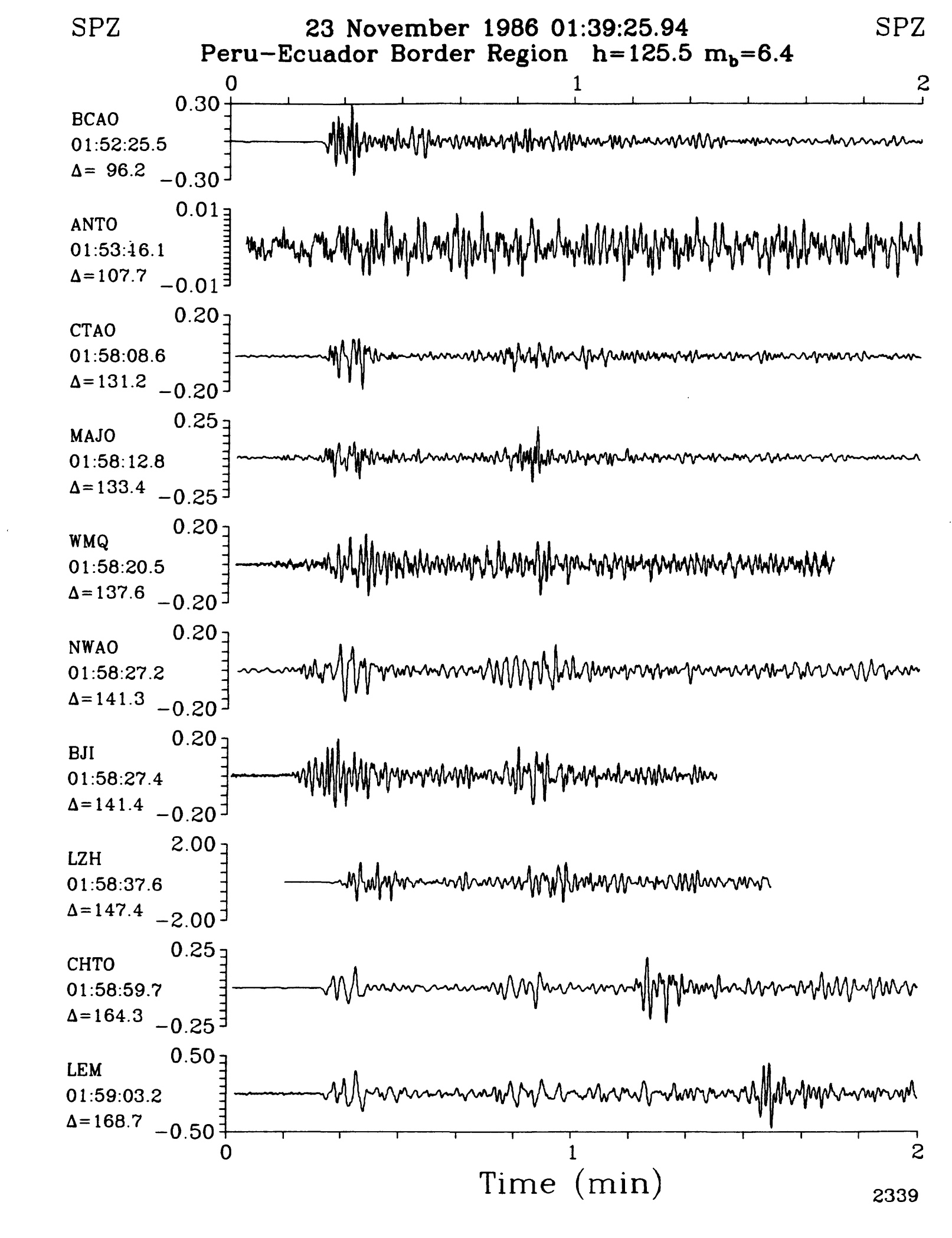

LPZ
22 November 1986 00:41:43.10
LPZ
Near S. Coast of Honshu, Japan h=10.0 m_b=5.9 M_{SZ}=5.7
0
10
20
30
40
50
SNZO
00:53:03.9
Δ= 82.0
8.0
-8.0
BGIO
00:53:10.0
Δ= 83.2
5.0
-5.0
GRFO
00:53:17.0
Δ= 84.5
7.0
-7.0
ANMO
00:53:31.6
Δ= 87.5
4.0
-4.0
GAC
00:54:03.2
Δ= 94.2
6.0
-6.0
TOL
00:54:23.4
Δ= 98.8
7.0
-7.0
BCAO
00:55:23.8
Δ=112.4
2.0
-2.0
SLR
00:59:36.4
Δ=120.9
2.0
-2.0
0
10
20
30
40
50
Time (min)

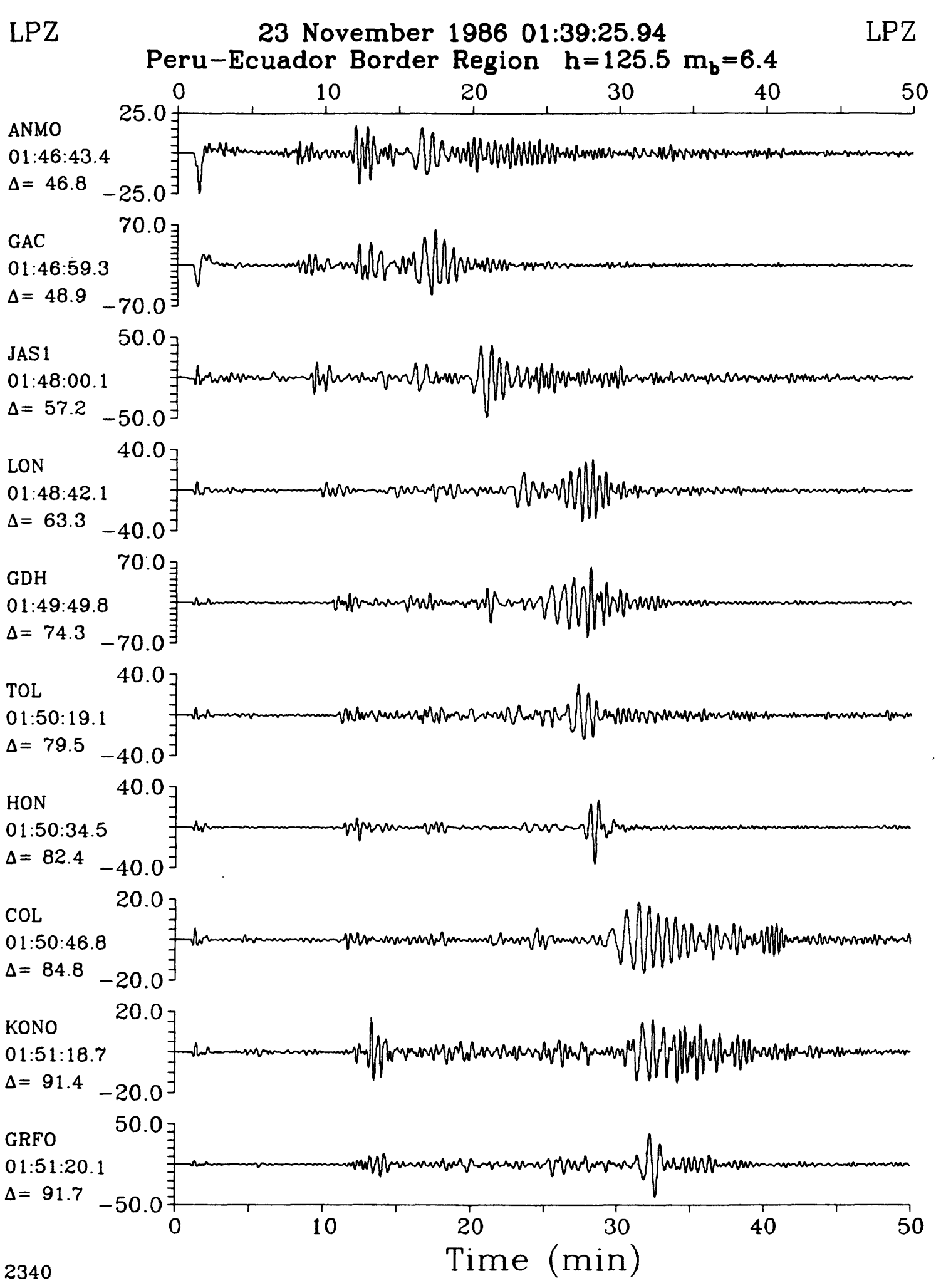

IPZ
22 November 1986 00:41:43.10
IPZ
Near S. Coast of Honshu, Japan h=10.0 m_b=5.9 M_{SZ}=5.7
BJI
00:45:38.5
Δ= 19.4
WMQ
00:48:54.1
Δ= 40.7
NRAO
00:53:01.5
Δ= 76.1
GRC1
00:53:45.2
Δ= 84.2
GRA1
00:53:47.0
Δ= 84.5
GRB1
00:53:47.2
Δ= 84.6
2.00
-2.00
0.60
-0.60
0.40
-0.40
0.30
-0.30
0.60
-0.60
0.40
-0.40
0
1
2
3
4
Time (min)

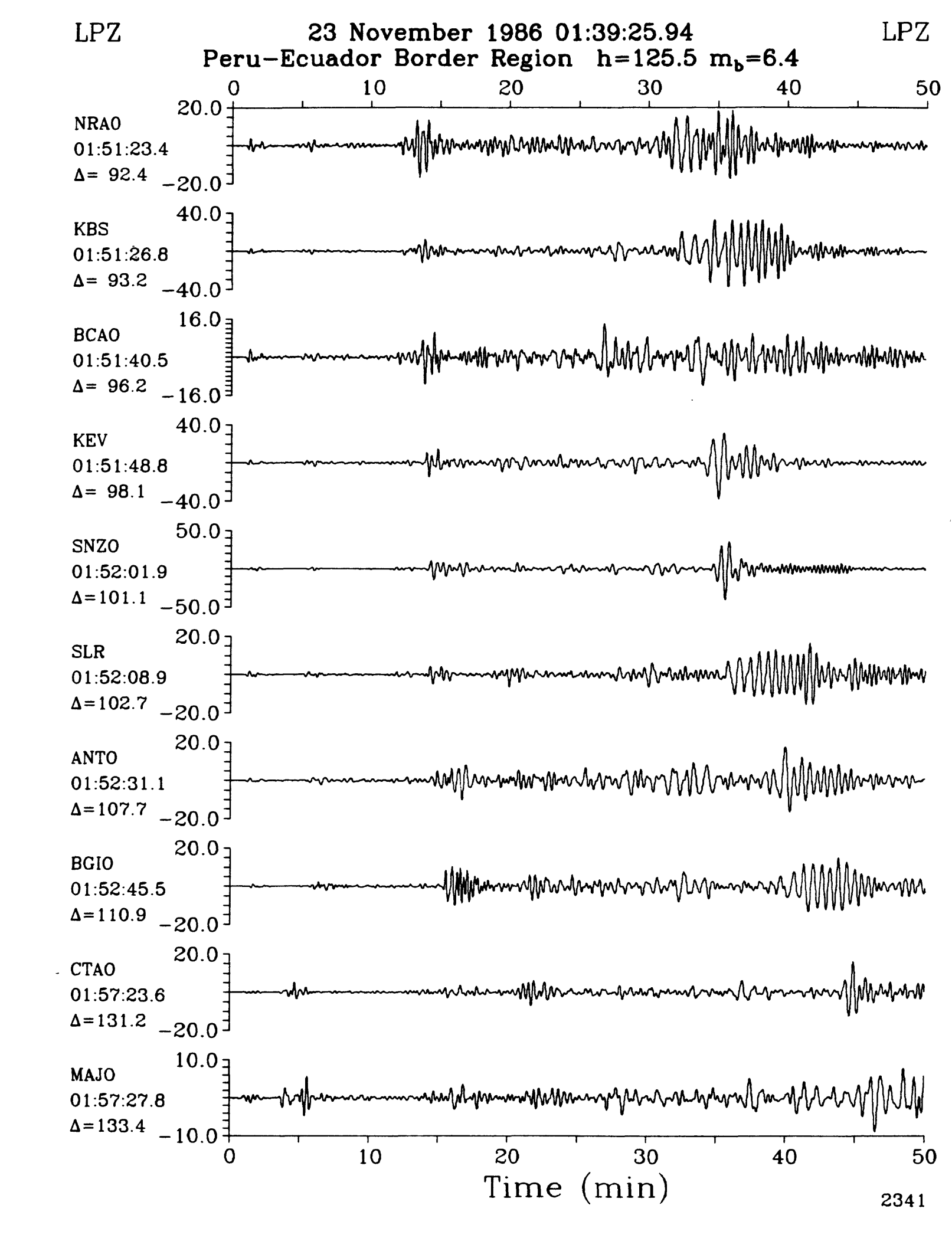
23 November 1986 01:39:25.94

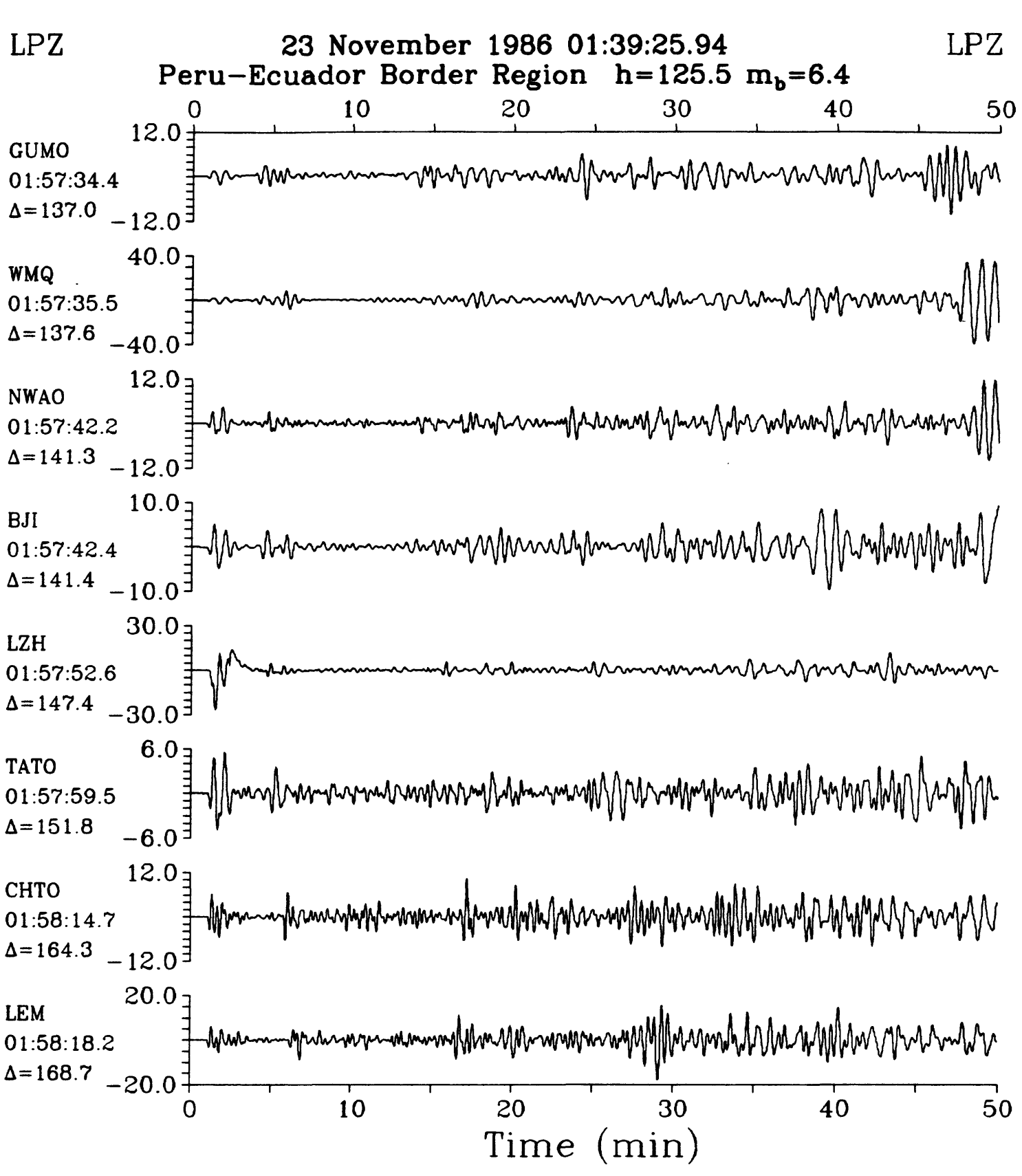
Peru–Ecuador Border Region

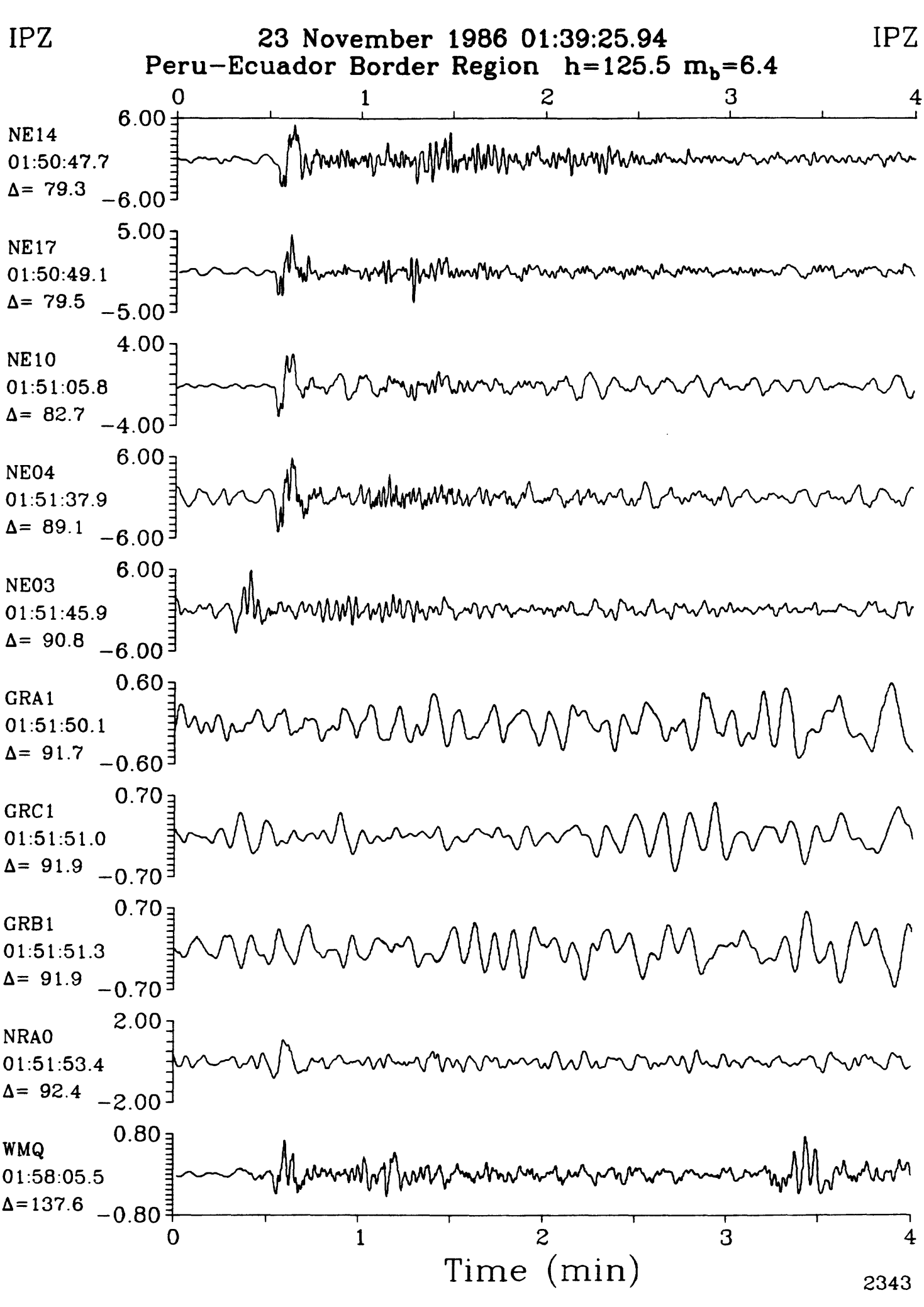

SPZ
23 November 1986 01:39:25.94
SPZ
Peru–Ecuador Border Region h=125.5 m_b=6.4
0
1
2
ANMO
01:47:28.4
Δ= 46.8
2.00
-2.00
JAS1
01:48:45.1
Δ= 57.2
0.25
-0.25
LON
01:49:27.1
Δ= 63.3
0.50
-0.50
TOL
01:51:04.1
Δ= 79.5
0.90
-0.90
HON
01:51:19.5
Δ= 82.4
0.50
-0.50
COL
01:51:31.8
Δ= 84.8
0.25
-0.25
KONO
01:52:03.7
Δ= 91.4
0.50
-0.50
GRFO
01:52:05.1
Δ= 91.7
0.30
-0.30
NRAO
01:52:08.4
Δ= 92.4
0.10
-0.10
KBS
01:52:11.8
Δ= 93.2
0.20
-0.20
0
1
2
Time (min)
2338

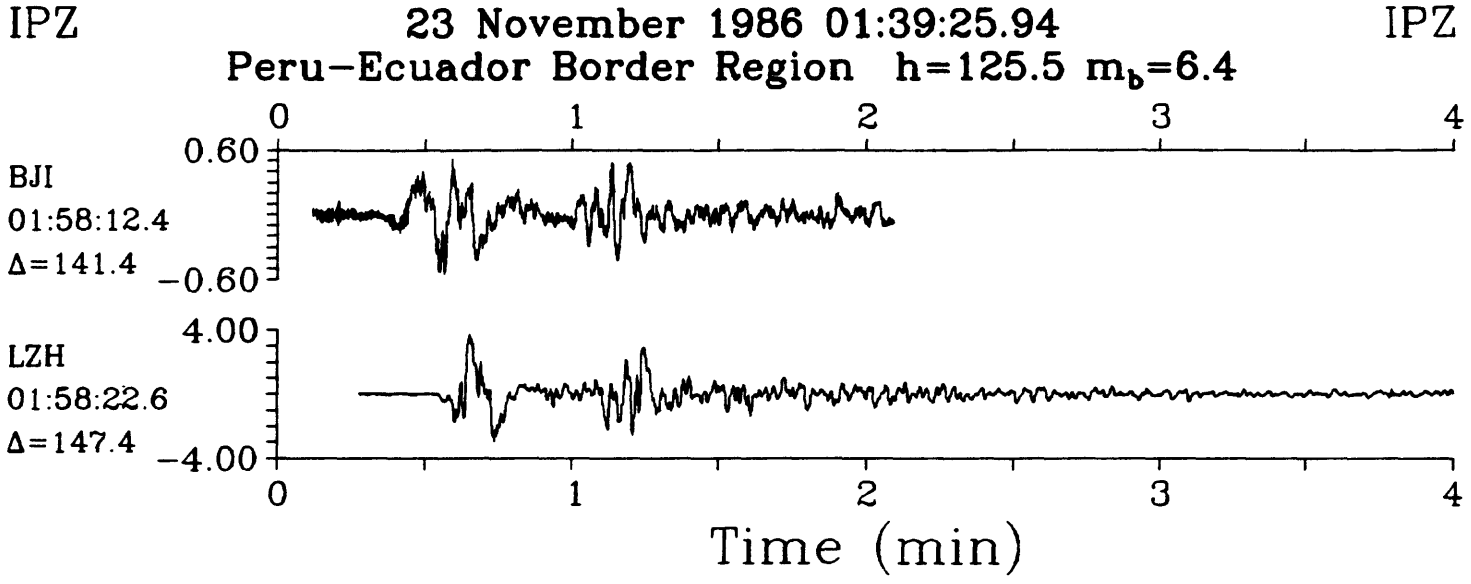

SPZ
23 November 1986 01:39:25.94
Peru–Ecuador Border Region h=125.5 m_b=6.4
SPZ
0
1
2
BCAO
01:52:25.5
Δ= 96.2
0.30
-0.30
ANTO
01:53:16.1
Δ=107.7
0.01
-0.01
CTAO
01:58:08.6
Δ=131.2
0.20
-0.20
MAJO
01:58:12.8
Δ=133.4
0.25
-0.25
WMQ
01:58:20.5
Δ=137.6
0.20
-0.20
NWAO
01:58:27.2
Δ=141.3
0.20
-0.20
BJI
01:58:27.4
Δ=141.4
0.20
-0.20
LZH
01:58:37.6
Δ=147.4
2.00
-2.00
CHTO
01:58:59.7
Δ=164.3
0.25
-0.25
LEM
01:59:03.2
Δ=168.7
0.50
-0.50
0
1
2
Time (min)
2339


LPZ
23 November 1986 01:39:25.94
Peru–Ecuador Border Region h=125.5 m_b=6.4
LPZ
0
10
20
30
40
50
ANMO
01:46:43.4
Δ= 46.8
25.0
-25.0
GAC
01:46:59.3
Δ= 48.9
70.0
-70.0
JAS1
01:48:00.1
Δ= 57.2
50.0
-50.0
LON
01:48:42.1
Δ= 63.3
40.0
-40.0
GDH
01:49:49.8
Δ= 74.3
70.0
-70.0
TOL
01:50:19.1
Δ= 79.5
40.0
-40.0
HON
01:50:34.5
Δ= 82.4
40.0
-40.0
COL
01:50:46.8
Δ= 84.8
20.0
-20.0
KONO
01:51:18.7
Δ= 91.4
20.0
-20.0
GRFO
01:51:20.1
Δ= 91.7
50.0
-50.0
0
10
20
30
40
50
Time (min)
2340


LPZ
23 November 1986 01:39:25.94
Peru–Ecuador Border Region h=125.5 m_b=6.4
LPZ
0
10
20
30
40
50
NRAO
01:51:23.4
Δ= 92.4
20.0
-20.0
KBS
01:51:26.8
Δ= 93.2
40.0
-40.0
BCAO
01:51:40.5
Δ= 96.2
16.0
-16.0
KEV
01:51:48.8
Δ= 98.1
40.0
-40.0
SNZO
01:52:01.9
Δ=101.1
50.0
-50.0
SLR
01:52:08.9
Δ=102.7
20.0
-20.0
ANTO
01:52:31.1
Δ=107.7
20.0
-20.0
BGIO
01:52:45.5
Δ=110.9
20.0
-20.0
CTAO
01:57:23.6
Δ=131.2
20.0
-20.0
MAJO
01:57:27.8
Δ=133.4
10.0
-10.0
0
10
20
30
40
50
Time (min)
2341

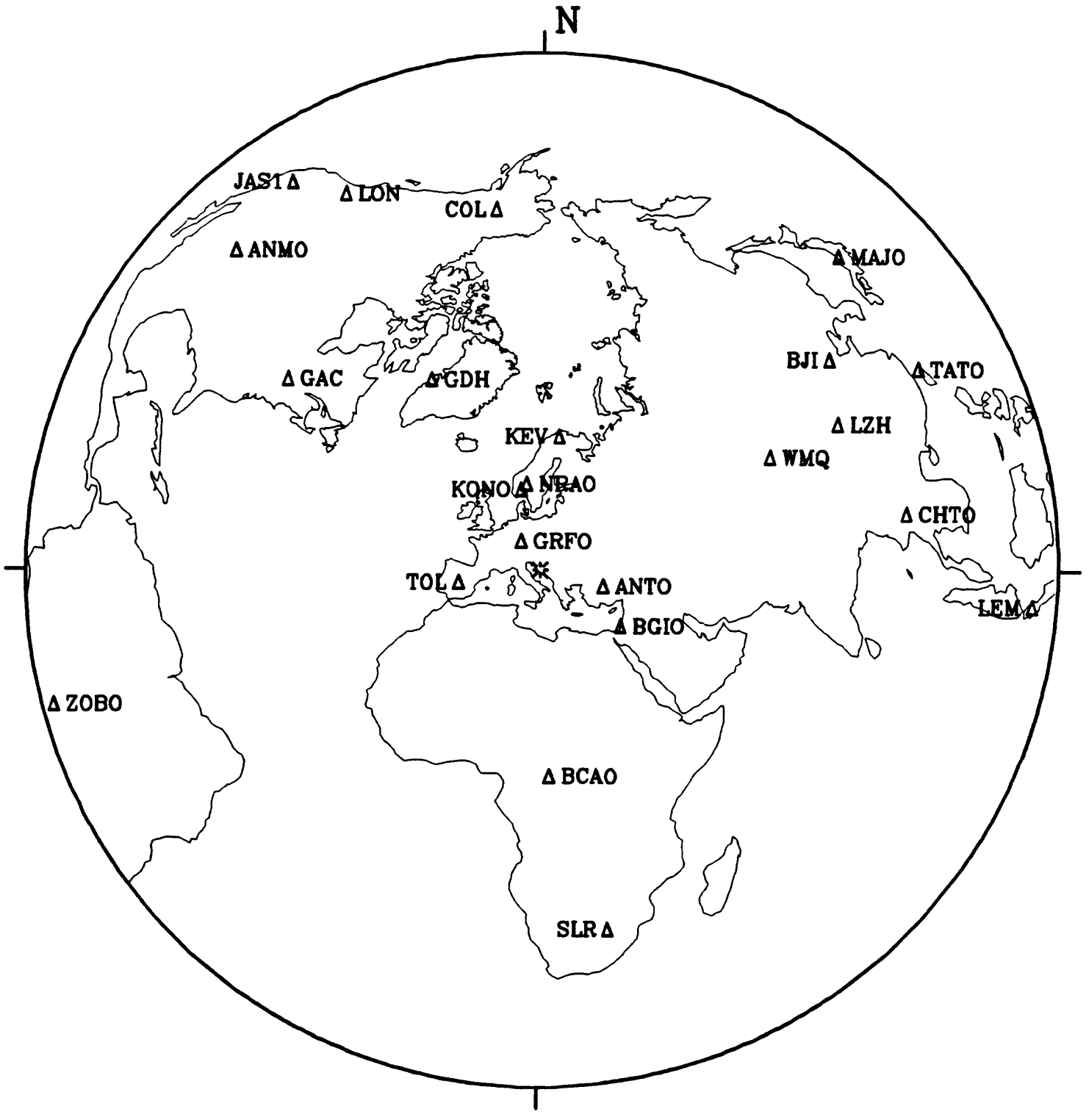

LPZ
23 November 1986 01:39:25.94
LPZ
Peru–Ecuador Border Region h=125.5 m_b=6.4
0
10
20
30
40
50
GUMO
01:57:34.4
Δ=137.0
12.0
-12.0
WMQ
01:57:35.5
Δ=137.6
40.0
-40.0
NWAO
01:57:42.2
Δ=141.3
12.0
-12.0
BJI
01:57:42.4
Δ=141.4
10.0
-10.0
LZH
01:57:52.6
Δ=147.4
30.0
-30.0
TATO
01:57:59.5
Δ=151.8
6.0
-6.0
CHTO
01:58:14.7
Δ=164.3
12.0
-12.0
LEM
01:58:18.2
Δ=168.7
20.0
-20.0
0
10
20
30
40
50
Time (min)

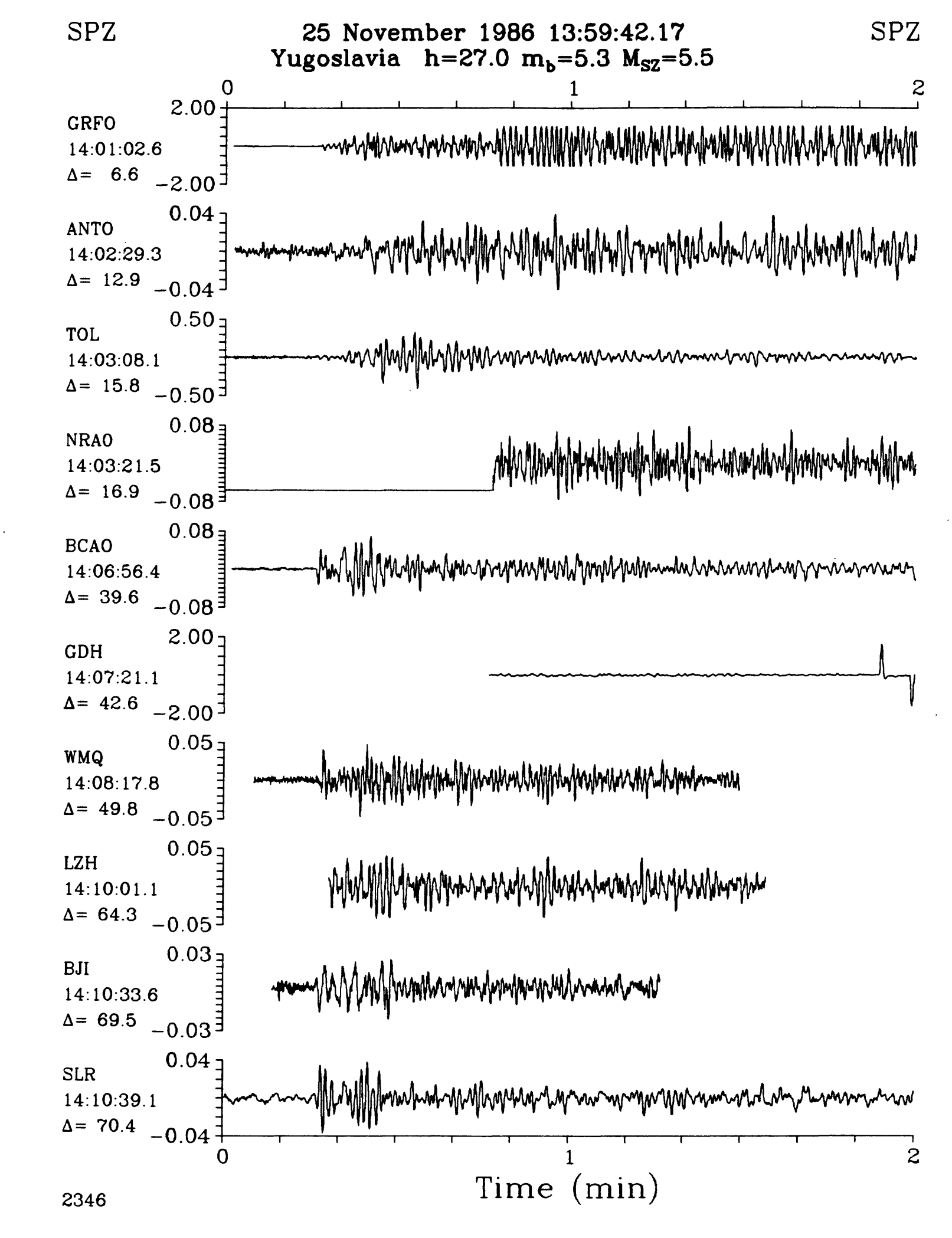

IPZ
23 November 1986 01:39:25.94
Peru–Ecuador Border Region h=125.5 m_b=6.4
IPZ
0
1
2
3
4
NE14
01:50:47.7
Δ= 79.3
6.00
-6.00
NE17
01:50:49.1
Δ= 79.5
5.00
-5.00
NE10
01:51:05.8
Δ= 82.7
4.00
-4.00
NE04
01:51:37.9
Δ= 89.1
6.00
-6.00
NE03
01:51:45.9
Δ= 90.8
6.00
-6.00
GRA1
01:51:50.1
Δ= 91.7
0.60
-0.60
GRC1
01:51:51.0
Δ= 91.9
0.70
-0.70
GRB1
01:51:51.3
Δ= 91.9
0.70
-0.70
NRA0
01:51:53.4
Δ= 92.4
2.00
-2.00
WMQ
01:58:05.5
Δ=137.6
0.80
-0.80
0
1
2
3
4
Time (min)
2343

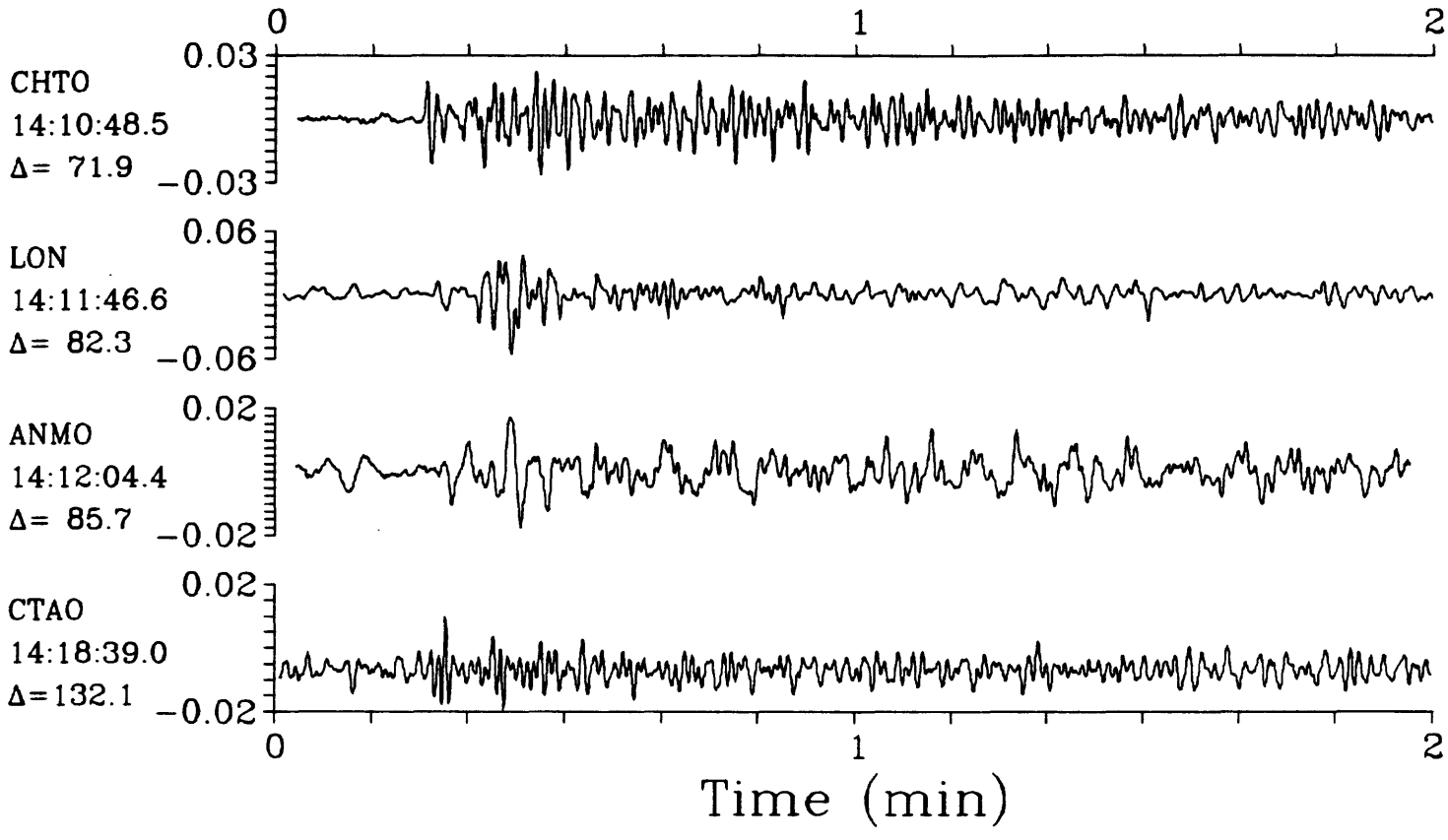

23 November 1986 01:39:25.94
Peru–Ecuador Border Region h=125.5 m_b=6.4
BJI
01:58:12.4
Δ=141.4
LZH
01:58:22.6
Δ=147.4
0.60
−0.60
4.00
−4.00
0
1
2
3
4
Time (min)

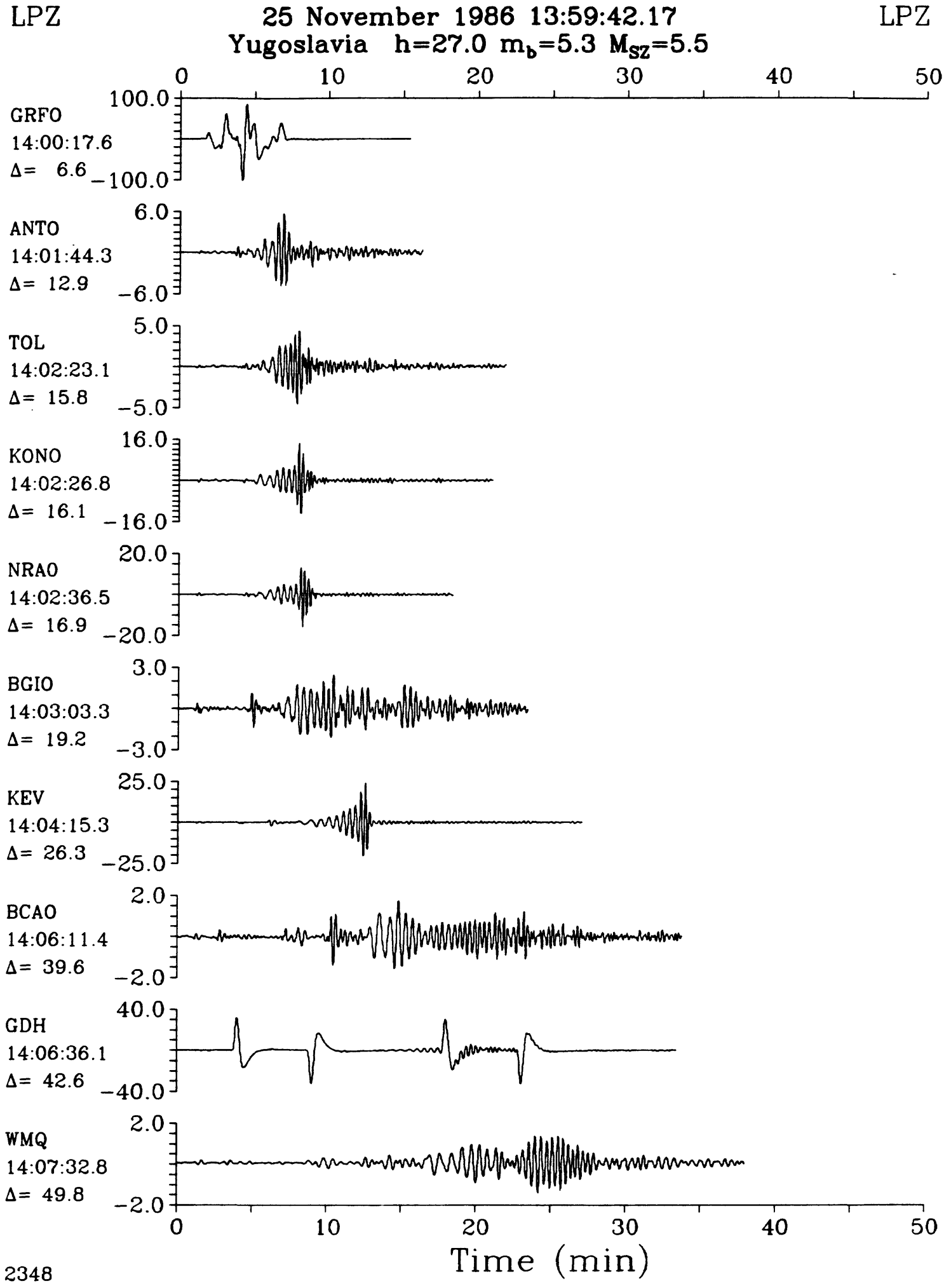
25 November 1986 13:59:42.17

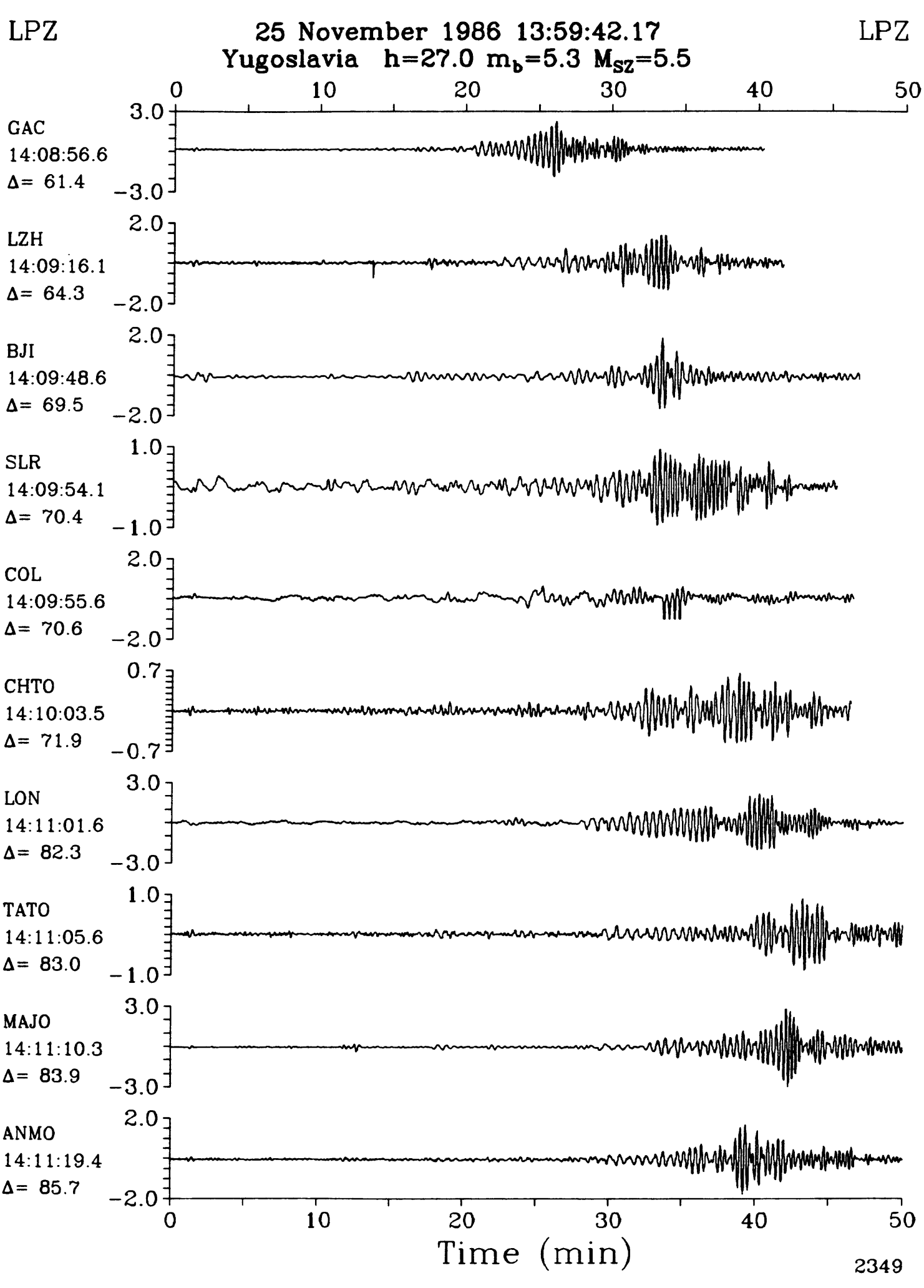
Yugoslavia

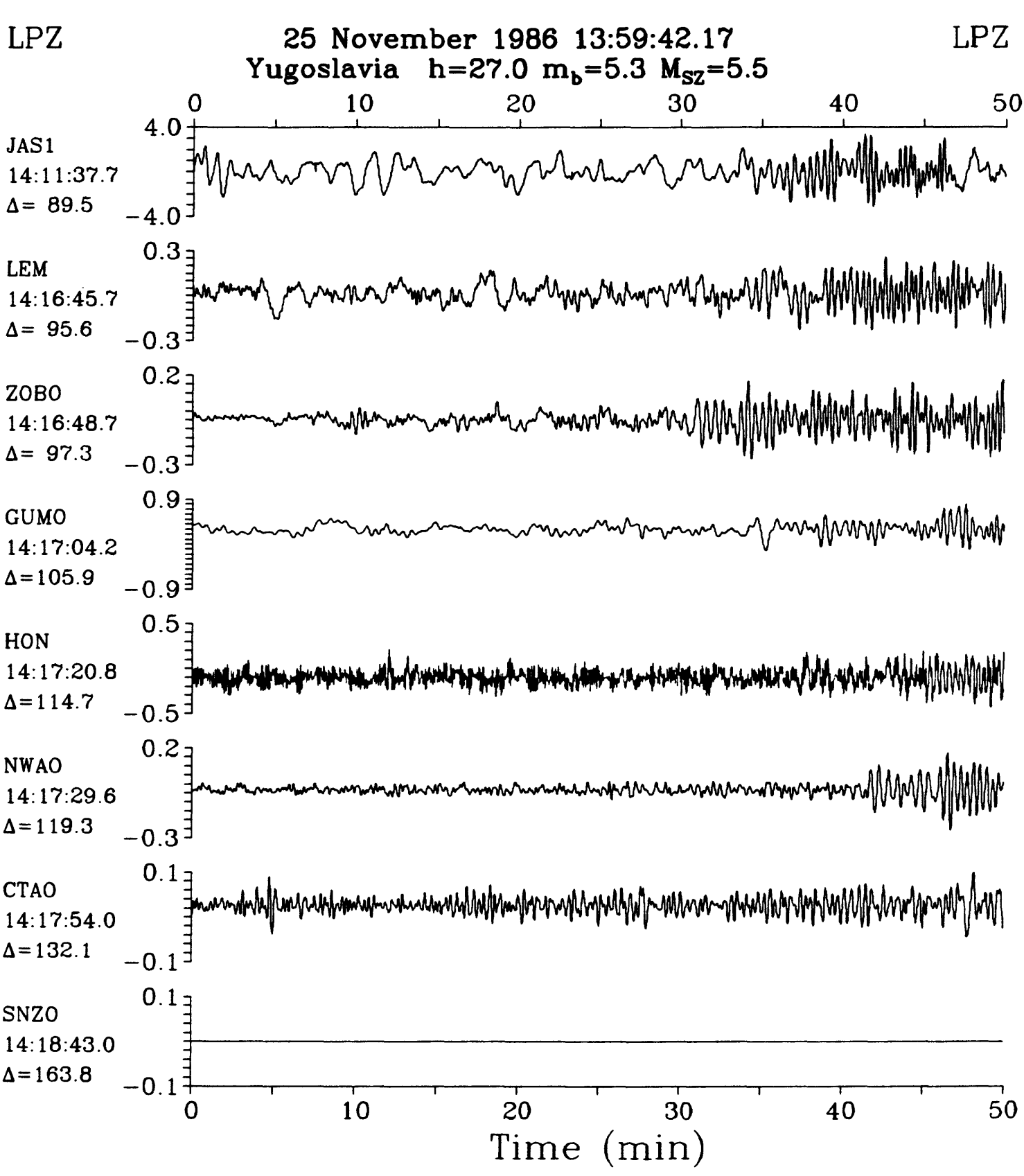



SPZ
25 November 1986 13:59:42.17
Yugoslavia h=27.0 m_b=5.3 M_{SZ}=5.5
SPZ
0
1
2
GRFO
14:01:02.6
Δ= 6.6
2.00
-2.00
ANTO
14:02:29.3
Δ= 12.9
0.04
-0.04
TOL
14:03:08.1
Δ= 15.8
0.50
-0.50
NRAO
14:03:21.5
Δ= 16.9
0.08
-0.08
BCAO
14:06:56.4
Δ= 39.6
0.08
-0.08
GDH
14:07:21.1
Δ= 42.6
2.00
-2.00
WMQ
14:08:17.8
Δ= 49.8
0.05
-0.05
LZH
14:10:01.1
Δ= 64.3
0.05
-0.05
BJI
14:10:33.6
Δ= 69.5
0.03
-0.03
SLR
14:10:39.1
Δ= 70.4
0.04
-0.04
0
1
2
Time (min)
2346


25 November 1986 13:59:42.17
Yugoslavia h=27.0 m_b=5.3 M_{SZ}=5.5
0
1
2
0.03
CHTO
14:10:48.5
Δ= 71.9
−0.03
0.06
LON
14:11:46.6
Δ= 82.3
−0.06
0.02
ANMO
14:12:04.4
Δ= 85.7
−0.02
0.02
CTAO
14:18:39.0
Δ=132.1
−0.02
0
1
2
Time (min)

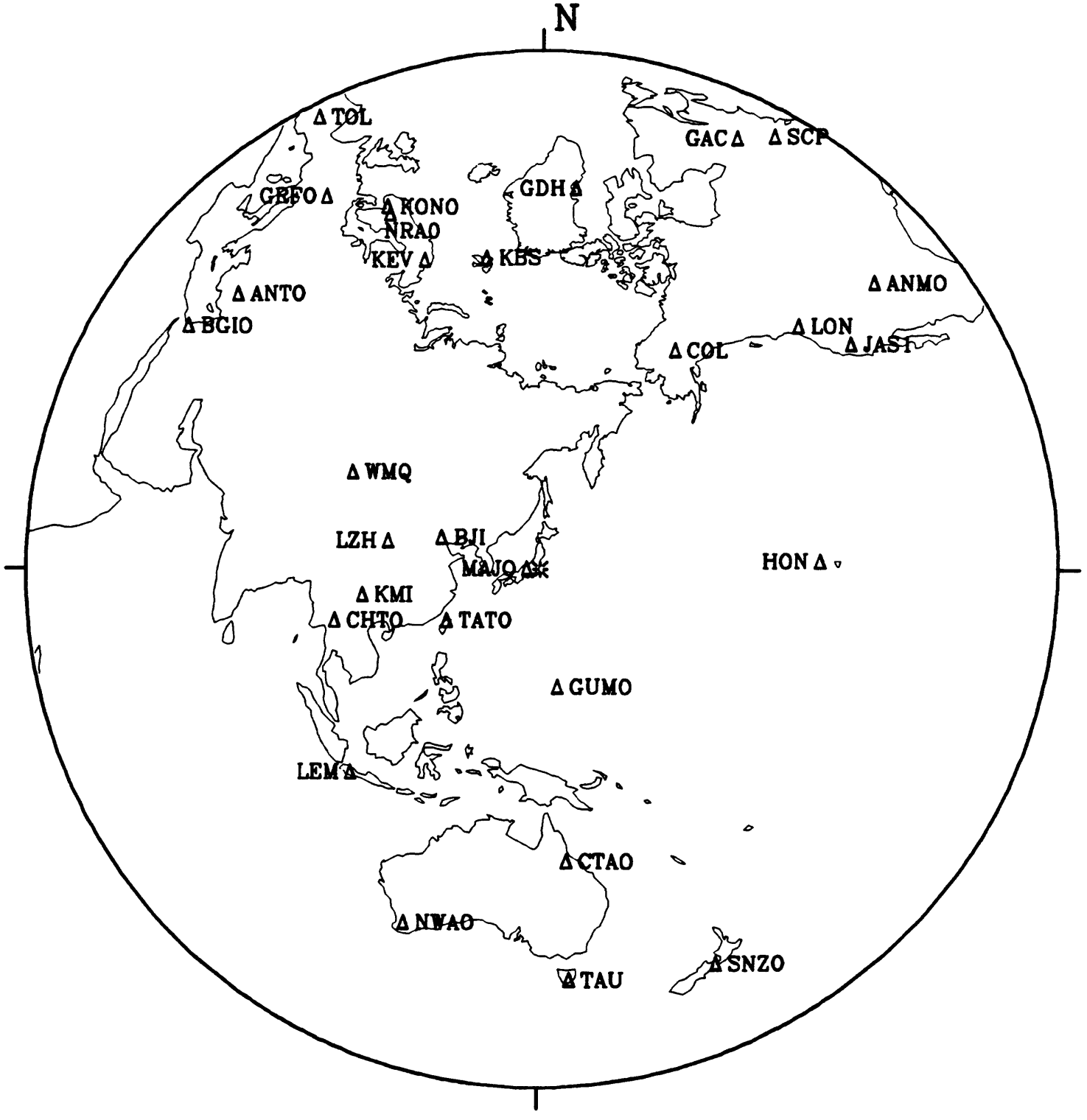

LPZ
25 November 1986 13:59:42.17
Yugoslavia h=27.0 m_b=5.3 M_{SZ}=5.5
LPZ
0
10
20
30
40
50
GRFO
14:00:17.6
Δ= 6.6
100.0
-100.0
ANTO
14:01:44.3
Δ= 12.9
6.0
-6.0
TOL
14:02:23.1
Δ= 15.8
5.0
-5.0
KONO
14:02:26.8
Δ= 16.1
16.0
-16.0
NRAO
14:02:36.5
Δ= 16.9
20.0
-20.0
BGIO
14:03:03.3
Δ= 19.2
3.0
-3.0
KEV
14:04:15.3
Δ= 26.3
25.0
-25.0
BCAO
14:06:11.4
Δ= 39.6
2.0
-2.0
GDH
14:06:36.1
Δ= 42.6
40.0
-40.0
WMQ
14:07:32.8
Δ= 49.8
2.0
-2.0
0
10
20
30
40
50
Time (min)

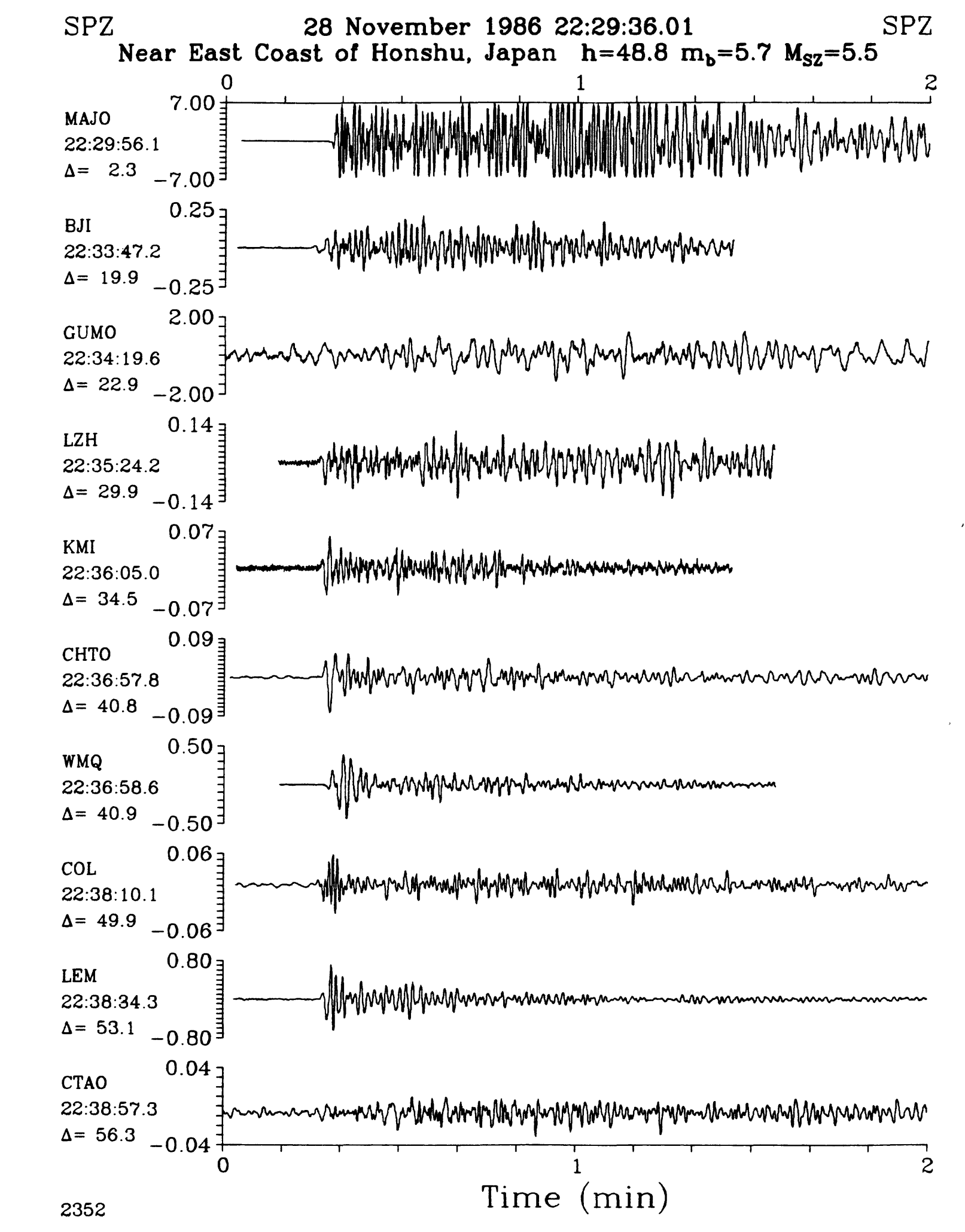

LPZ
25 November 1986 13:59:42.17
Yugoslavia h=27.0 m_b=5.3 M_{SZ}=5.5
LPZ
0
10
20
30
40
50
GAC
14:08:56.6
Δ= 61.4
3.0
-3.0
LZH
14:09:16.1
Δ= 64.3
2.0
-2.0
BJI
14:09:48.6
Δ= 69.5
2.0
-2.0
SLR
14:09:54.1
Δ= 70.4
1.0
-1.0
COL
14:09:55.6
Δ= 70.6
2.0
-2.0
CHTO
14:10:03.5
Δ= 71.9
0.7
-0.7
LON
14:11:01.6
Δ= 82.3
3.0
-3.0
TATO
14:11:05.6
Δ= 83.0
1.0
-1.0
MAJO
14:11:10.3
Δ= 83.9
3.0
-3.0
ANMO
14:11:19.4
Δ= 85.7
2.0
-2.0
0
10
20
30
40
50
Time (min)
2349


LPZ
25 November 1986 13:59:42.17
Yugoslavia h=27.0 m_b=5.3 M_{SZ}=5.5
LPZ
0
10
20
30
40
50
JAS1
14:11:37.7
Δ= 89.5
4.0
-4.0
LEM
14:16:45.7
Δ= 95.6
0.3
-0.3
ZOBO
14:16:48.7
Δ= 97.3
0.2
-0.3
GUMO
14:17:04.2
Δ=105.9
0.9
-0.9
HON
14:17:20.8
Δ=114.7
0.5
-0.5
NWAO
14:17:29.6
Δ=119.3
0.2
-0.3
CTAO
14:17:54.0
Δ=132.1
0.1
-0.1
SNZO
14:18:43.0
Δ=163.8
0.1
-0.1
0
10
20
30
40
50
Time (min)

28 November 1986 22:29:36.01

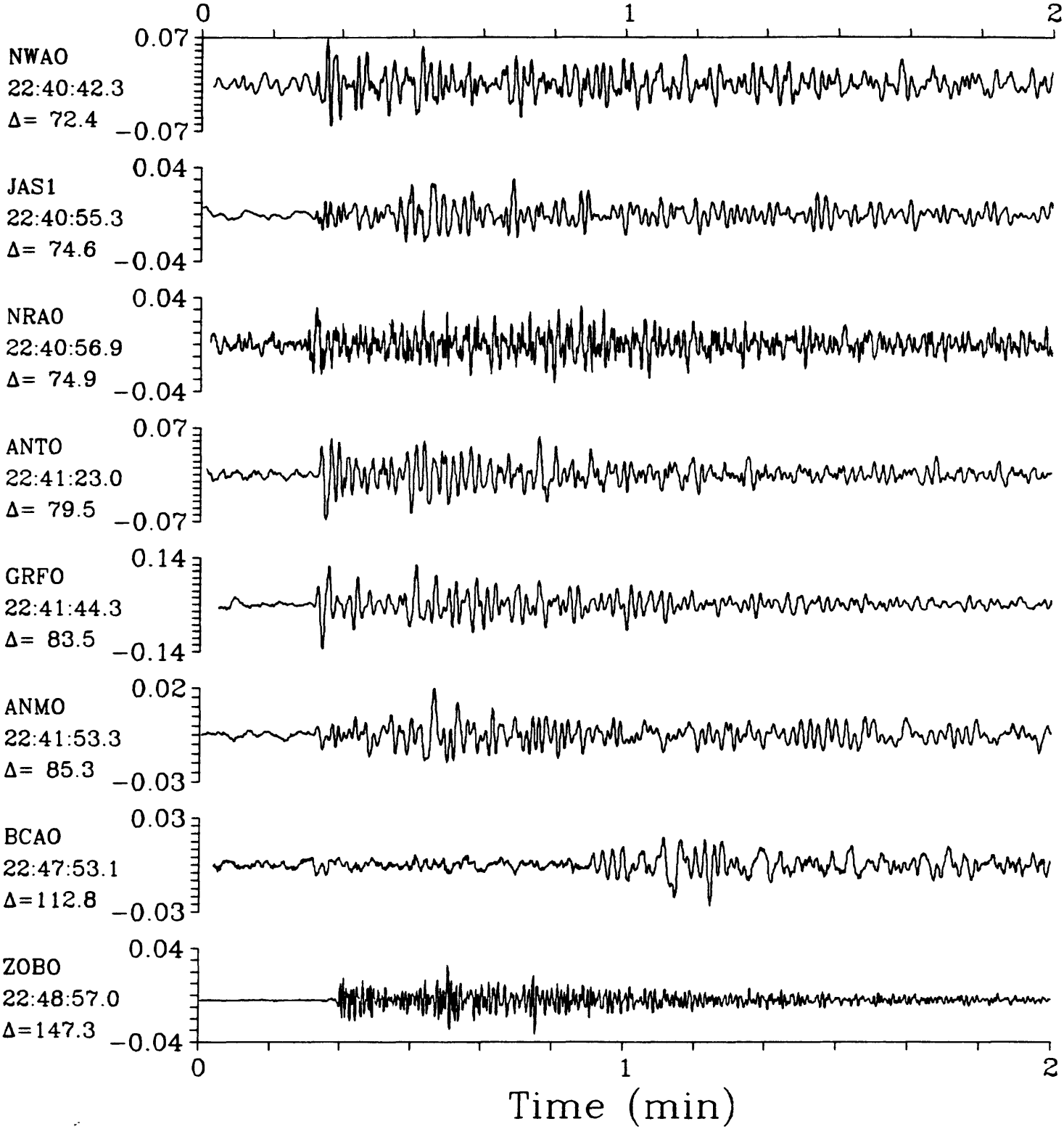
Near East Coast of Honshu, Japan

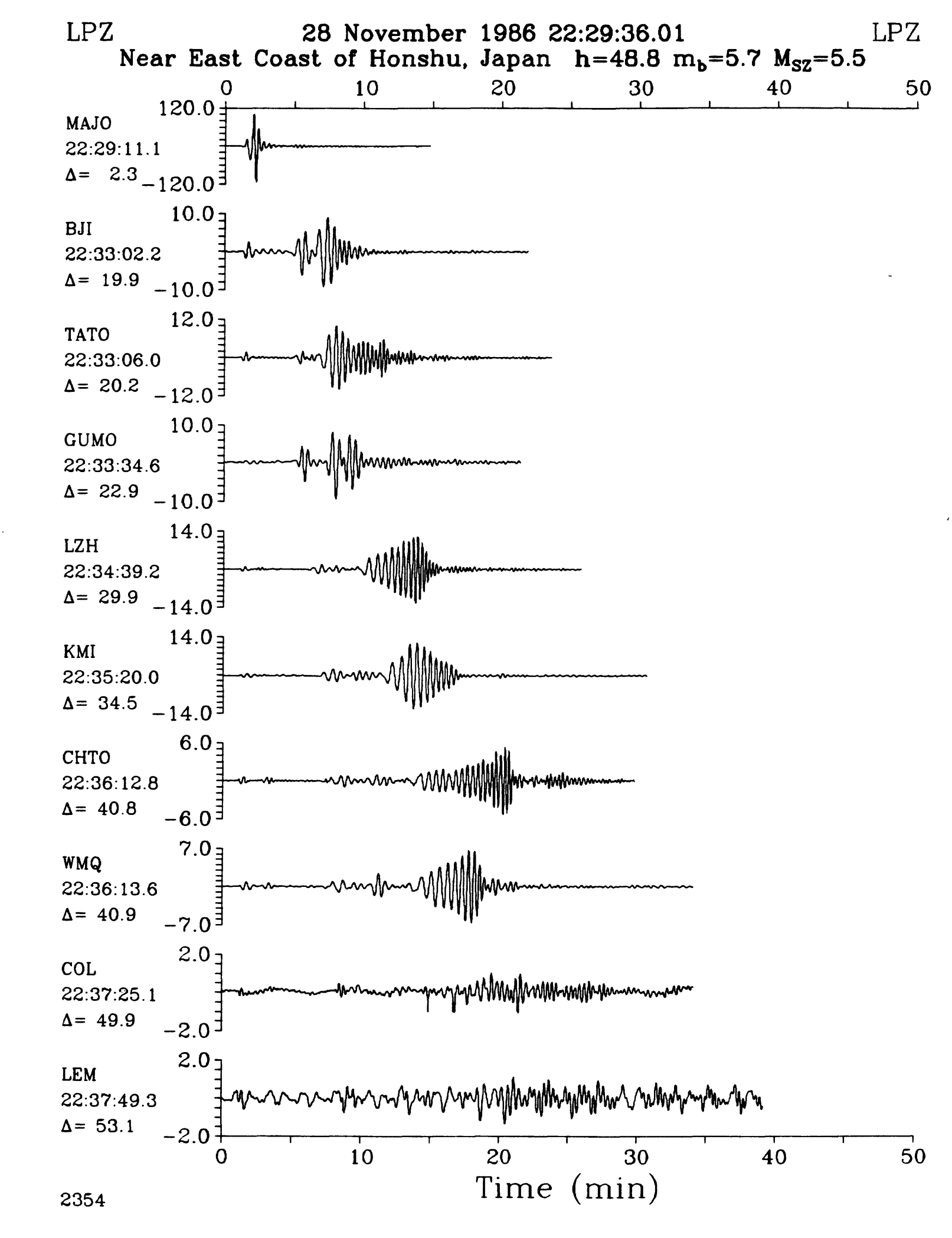


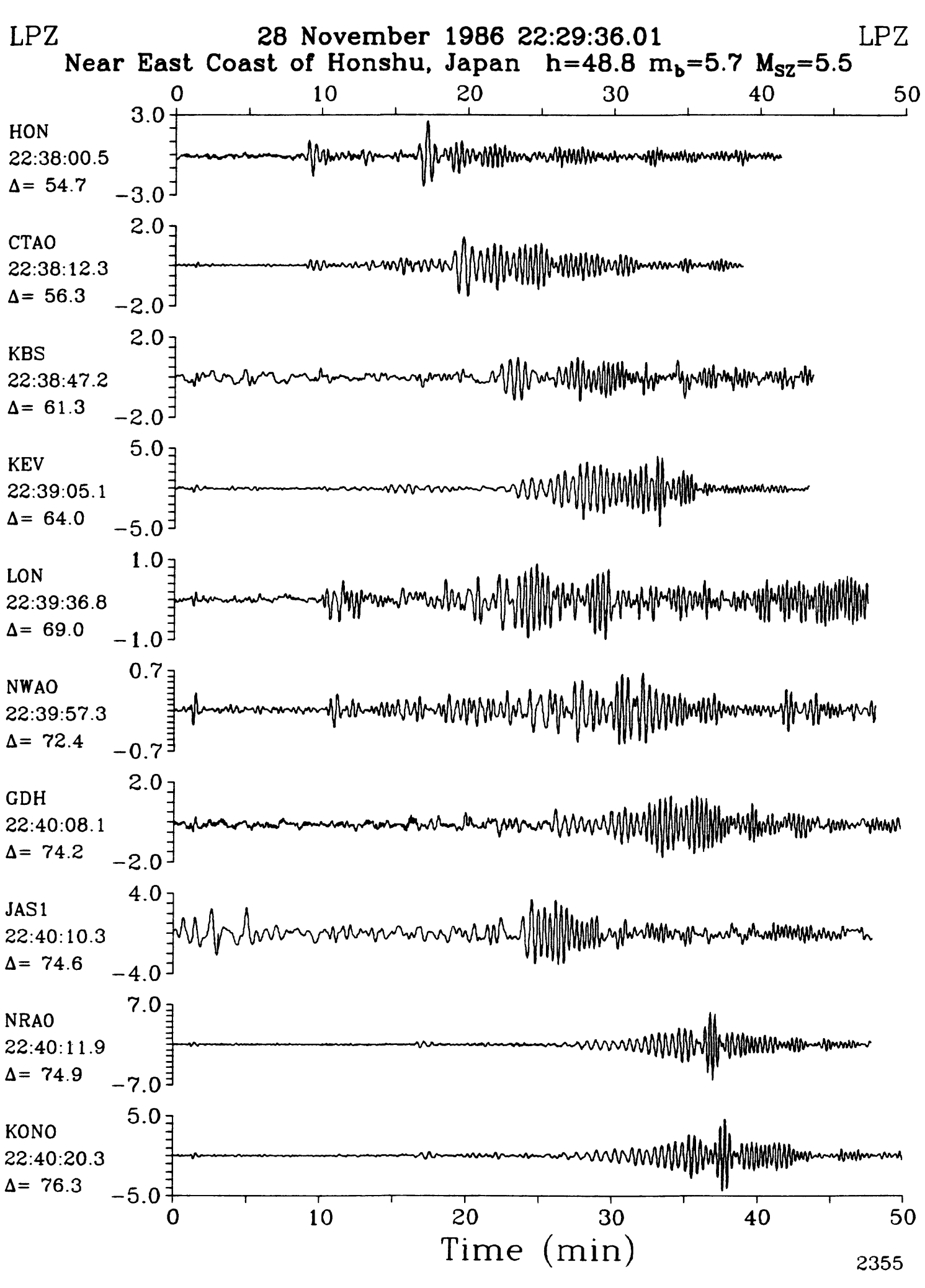

SPZ
28 November 1986 22:29:36.01
SPZ
Near East Coast of Honshu, Japan h=48.8 m_b=5.7 M_{SZ}=5.5
0
1
2
MAJO
22:29:56.1
Δ= 2.3
7.00
-7.00
BJI
22:33:47.2
Δ= 19.9
0.25
-0.25
GUMO
22:34:19.6
Δ= 22.9
2.00
-2.00
LZH
22:35:24.2
Δ= 29.9
0.14
-0.14
KMI
22:36:05.0
Δ= 34.5
0.07
-0.07
CHTO
22:36:57.8
Δ= 40.8
0.09
-0.09
WMQ
22:36:58.6
Δ= 40.9
0.50
-0.50
COL
22:38:10.1
Δ= 49.9
0.06
-0.06
LEM
22:38:34.3
Δ= 53.1
0.80
-0.80
CTAO
22:38:57.3
Δ= 56.3
0.04
-0.04
0
1
2
Time (min)
2352

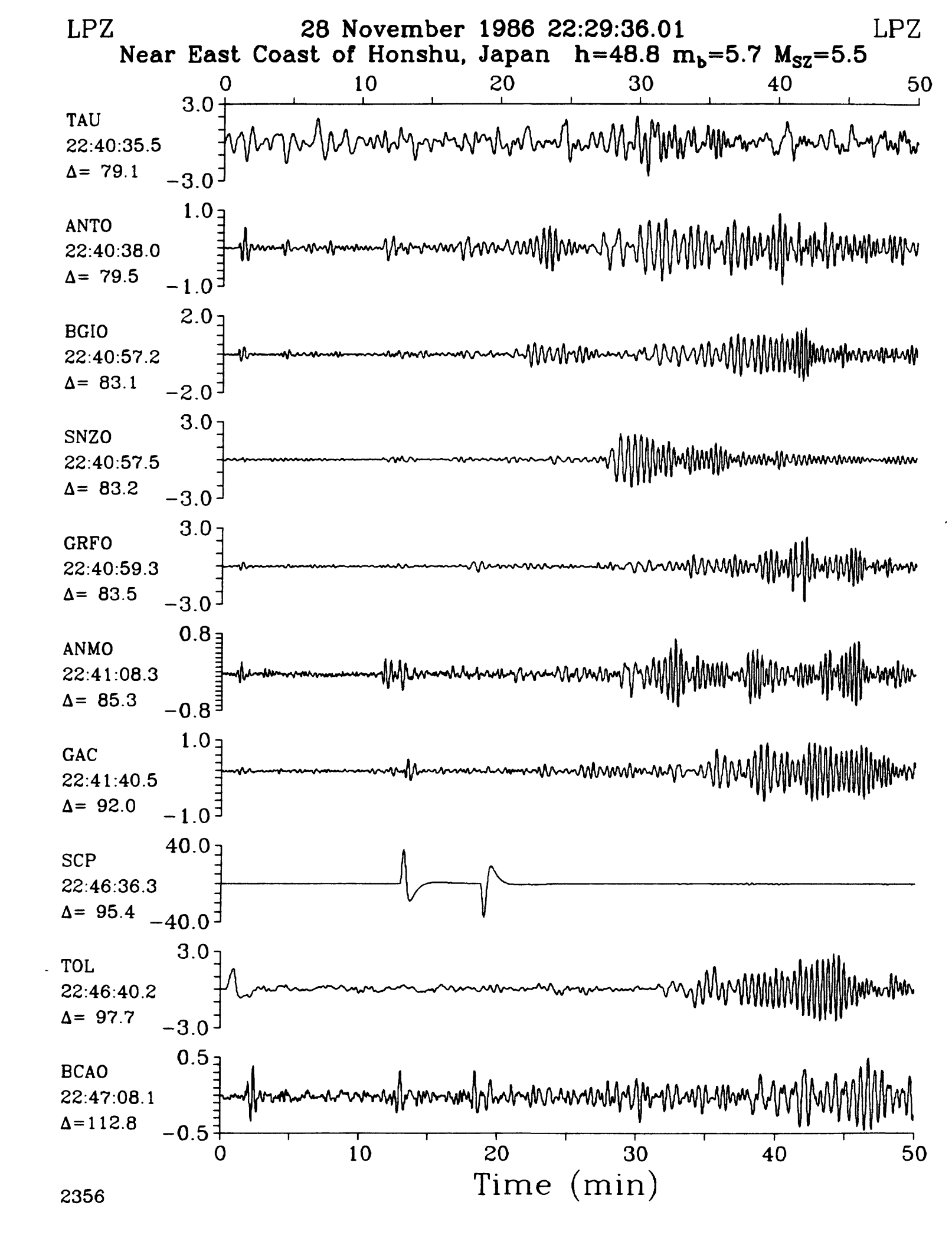
SPZ 28 November 1986 22:29:36.01 SPZ

Near East Coast of Honshu, Japan h=48.8 m_b=5.7 M_{SZ}=5.5



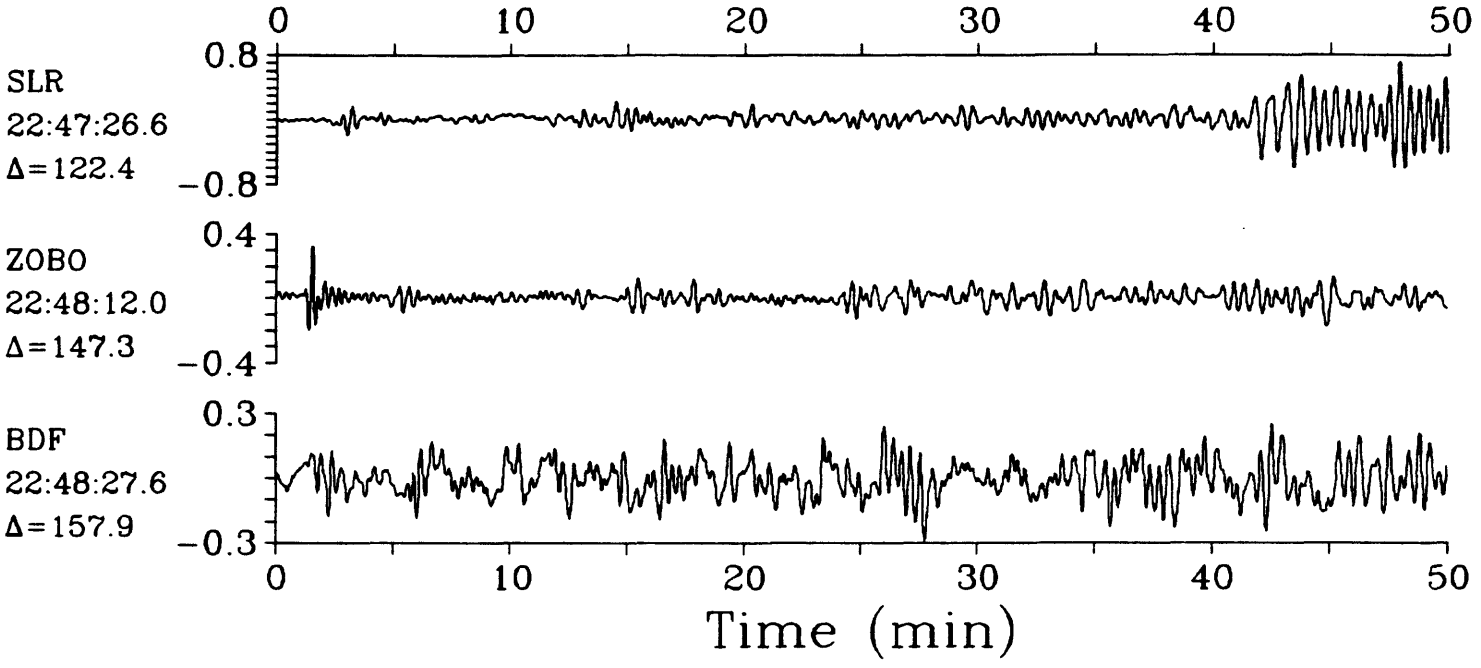

LPZ
28 November 1986 22:29:36.01
LPZ
Near East Coast of Honshu, Japan h=48.8 m_b=5.7 M_{SZ}=5.5
0
10
20
30
40
50
MAJO
22:29:11.1
Δ= 2.3
120.0
-120.0
BJI
22:33:02.2
Δ= 19.9
10.0
-10.0
TATO
22:33:06.0
Δ= 20.2
12.0
-12.0
GUMO
22:33:34.6
Δ= 22.9
10.0
-10.0
LZH
22:34:39.2
Δ= 29.9
14.0
-14.0
KMI
22:35:20.0
Δ= 34.5
14.0
-14.0
CHTO
22:36:12.8
Δ= 40.8
6.0
-6.0
WMQ
22:36:13.6
Δ= 40.9
7.0
-7.0
COL
22:37:25.1
Δ= 49.9
2.0
-2.0
LEM
22:37:49.3
Δ= 53.1
2.0
-2.0
0
10
20
30
40
50
Time (min)
2354


LPZ
28 November 1986 22:29:36.01
LPZ
Near East Coast of Honshu, Japan h=48.8 m_b=5.7 M_{SZ}=5.5
0
10
20
30
40
50
HON
22:38:00.5
Δ= 54.7
3.0
-3.0
CTAO
22:38:12.3
Δ= 56.3
2.0
-2.0
KBS
22:38:47.2
Δ= 61.3
2.0
-2.0
KEV
22:39:05.1
Δ= 64.0
5.0
-5.0
LON
22:39:36.8
Δ= 69.0
1.0
-1.0
NWAO
22:39:57.3
Δ= 72.4
0.7
-0.7
GDH
22:40:08.1
Δ= 74.2
2.0
-2.0
JAS1
22:40:10.3
Δ= 74.6
4.0
-4.0
NRAO
22:40:11.9
Δ= 74.9
7.0
-7.0
KONO
22:40:20.3
Δ= 76.3
5.0
-5.0
0
10
20
30
40
50
Time (min)
2355


LPZ
28 November 1986 22:29:36.01
LPZ
Near East Coast of Honshu, Japan h=48.8 m_b=5.7 M_{SZ}=5.5
0
10
20
30
40
50
TAU
22:40:35.5
Δ= 79.1
3.0
-3.0
ANTO
22:40:38.0
Δ= 79.5
1.0
-1.0
BGIO
22:40:57.2
Δ= 83.1
2.0
-2.0
SNZO
22:40:57.5
Δ= 83.2
3.0
-3.0
GRFO
22:40:59.3
Δ= 83.5
3.0
-3.0
ANMO
22:41:08.3
Δ= 85.3
0.8
-0.8
GAC
22:41:40.5
Δ= 92.0
1.0
-1.0
SCP
22:46:36.3
Δ= 95.4
40.0
-40.0
TOL
22:46:40.2
Δ= 97.7
3.0
-3.0
BCAO
22:47:08.1
Δ=112.8
0.5
-0.5
0
10
20
30
40
50
Time (min)
2356

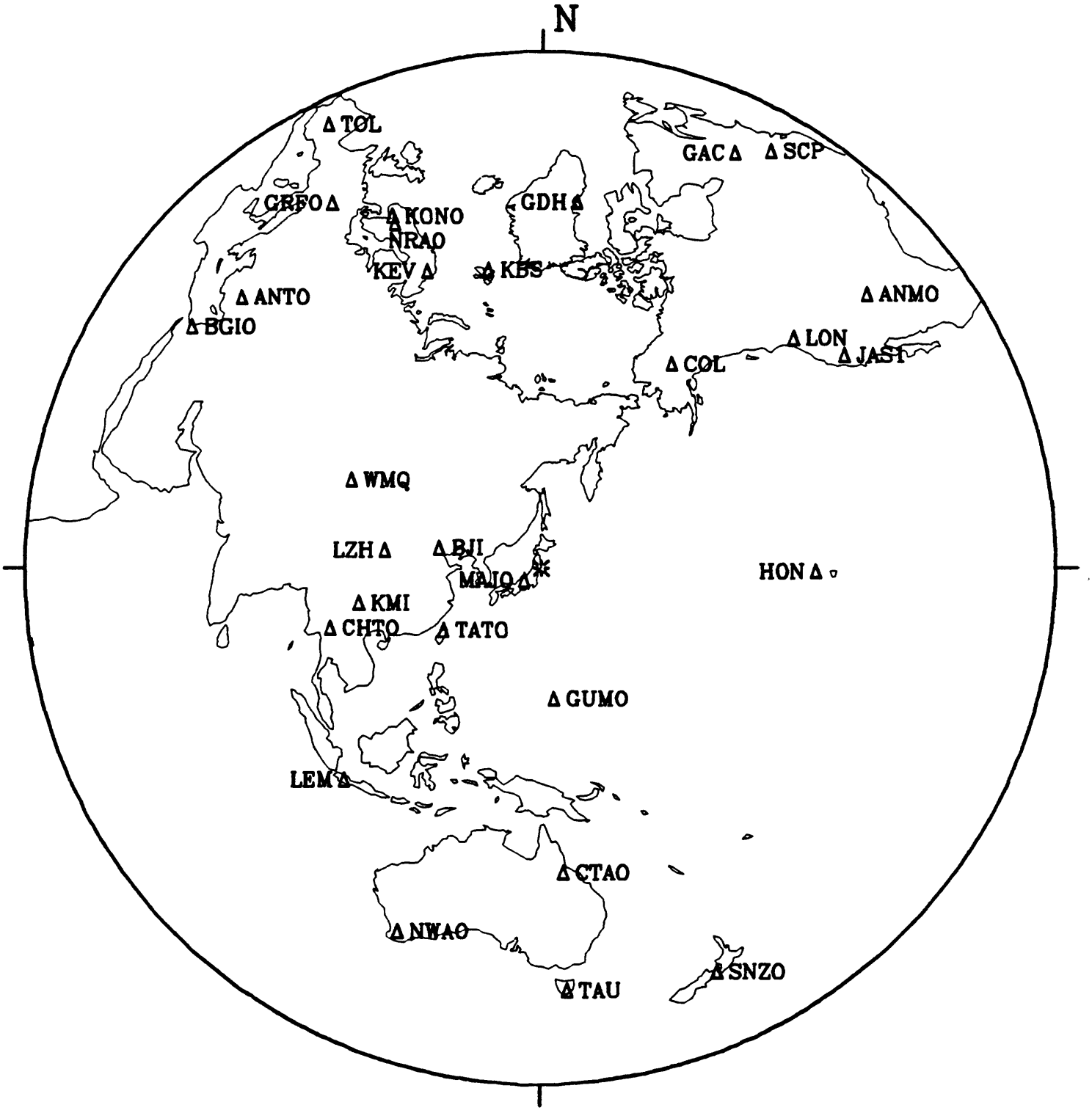
LPZ 28 November 1986 22:29:36.01 LPZ

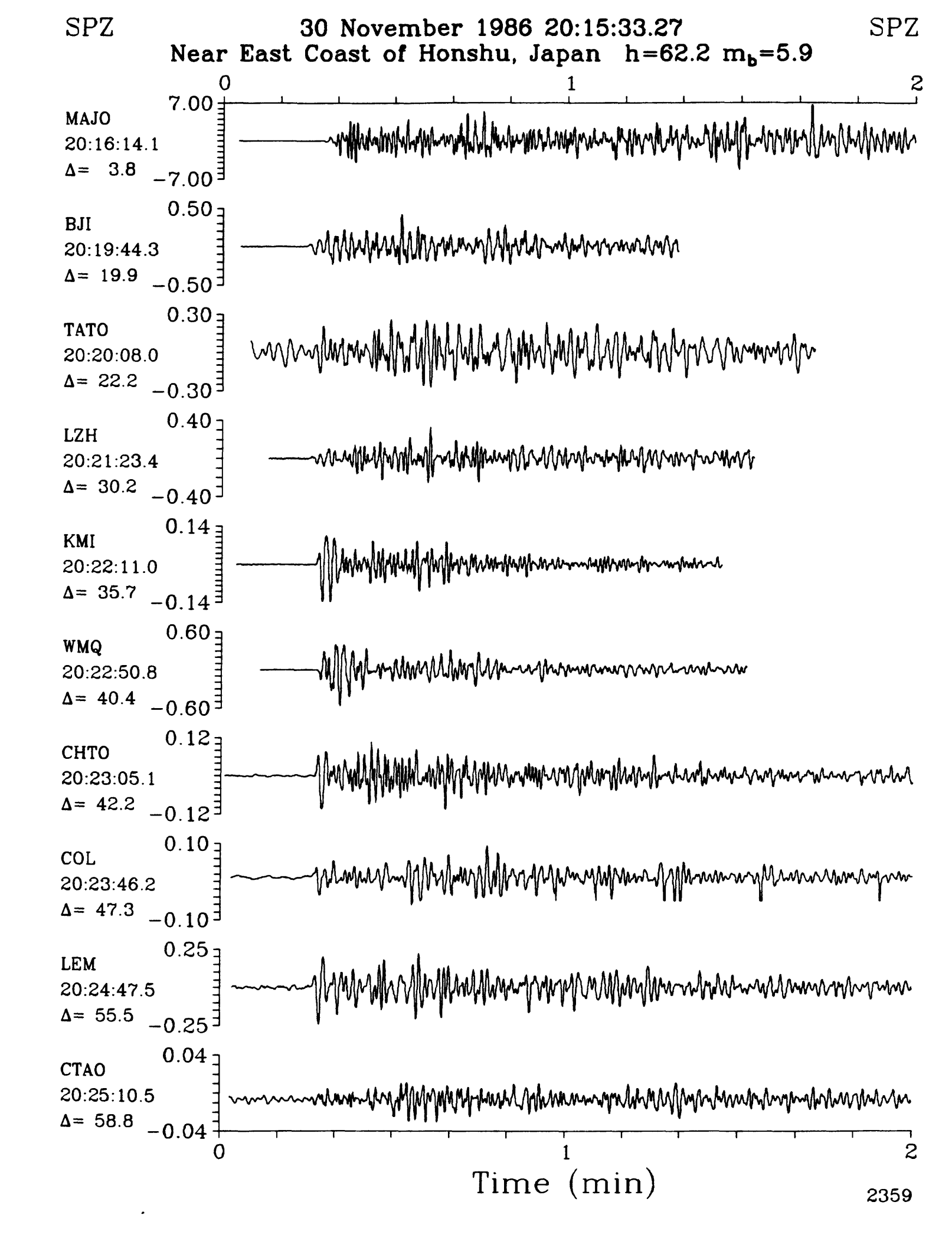
Near East Coast of Honshu, Japan h=48.8 m_b=5.7 M_{SZ}=5.5

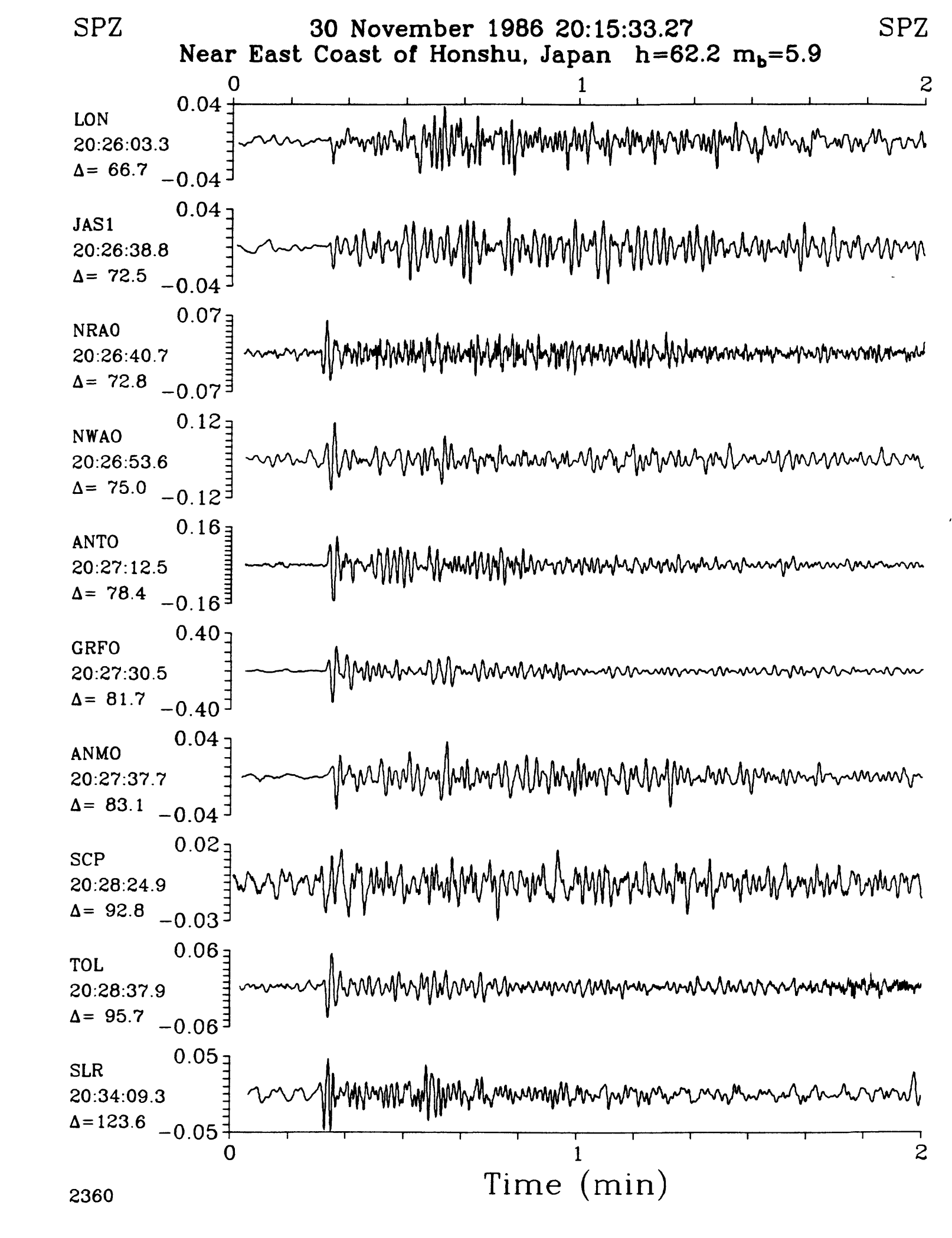


30 November 1986 20:15:33.27

Near East Coast of Honshu, Japan




SPZ
30 November 1986 20:15:33.27
SPZ
Near East Coast of Honshu, Japan h=62.2 m_b=5.9
0
1
2
7.00
MAJO
20:16:14.1
Δ= 3.8
-7.00
0.50
BJI
20:19:44.3
Δ= 19.9
-0.50
0.30
TATO
20:20:08.0
Δ= 22.2
-0.30
0.40
LZH
20:21:23.4
Δ= 30.2
-0.40
0.14
KMI
20:22:11.0
Δ= 35.7
-0.14
0.60
WMQ
20:22:50.8
Δ= 40.4
-0.60
0.12
CHTO
20:23:05.1
Δ= 42.2
-0.12
0.10
COL
20:23:46.2
Δ= 47.3
-0.10
0.25
LEM
20:24:47.5
Δ= 55.5
-0.25
0.04
CTAO
20:25:10.5
Δ= 58.8
-0.04
0
1
2
Time (min)
2359

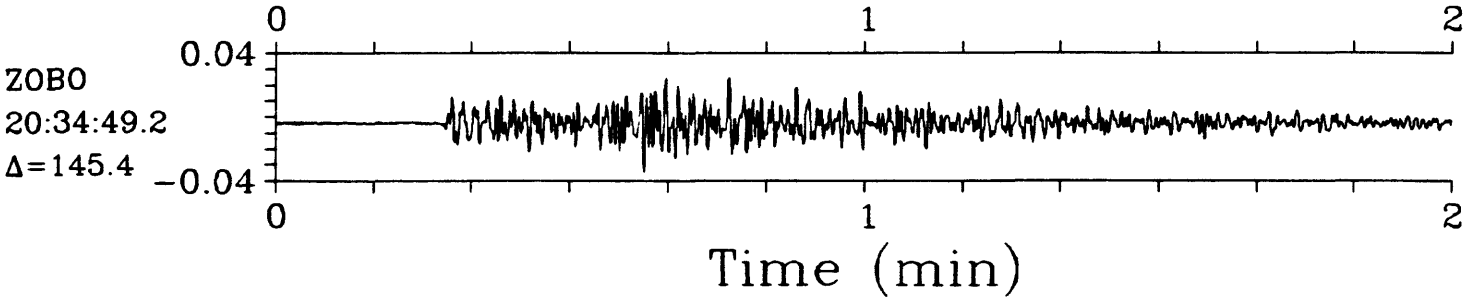

SPZ
30 November 1986 20:15:33.27
SPZ
Near East Coast of Honshu, Japan h=62.2 m_b=5.9
0
1
2
0.04
LON
20:26:03.3
Δ= 66.7
-0.04
0.04
JAS1
20:26:38.8
Δ= 72.5
-0.04
0.07
NRAO
20:26:40.7
Δ= 72.8
-0.07
0.12
NWAO
20:26:53.6
Δ= 75.0
-0.12
0.16
ANTO
20:27:12.5
Δ= 78.4
-0.16
0.40
GRFO
20:27:30.5
Δ= 81.7
-0.40
0.04
ANMO
20:27:37.7
Δ= 83.1
-0.04
0.02
SCP
20:28:24.9
Δ= 92.8
-0.03
0.06
TOL
20:28:37.9
Δ= 95.7
-0.06
0.05
SLR
20:34:09.3
Δ=123.6
-0.05
0
1
2
Time (min)
2360

SPZ

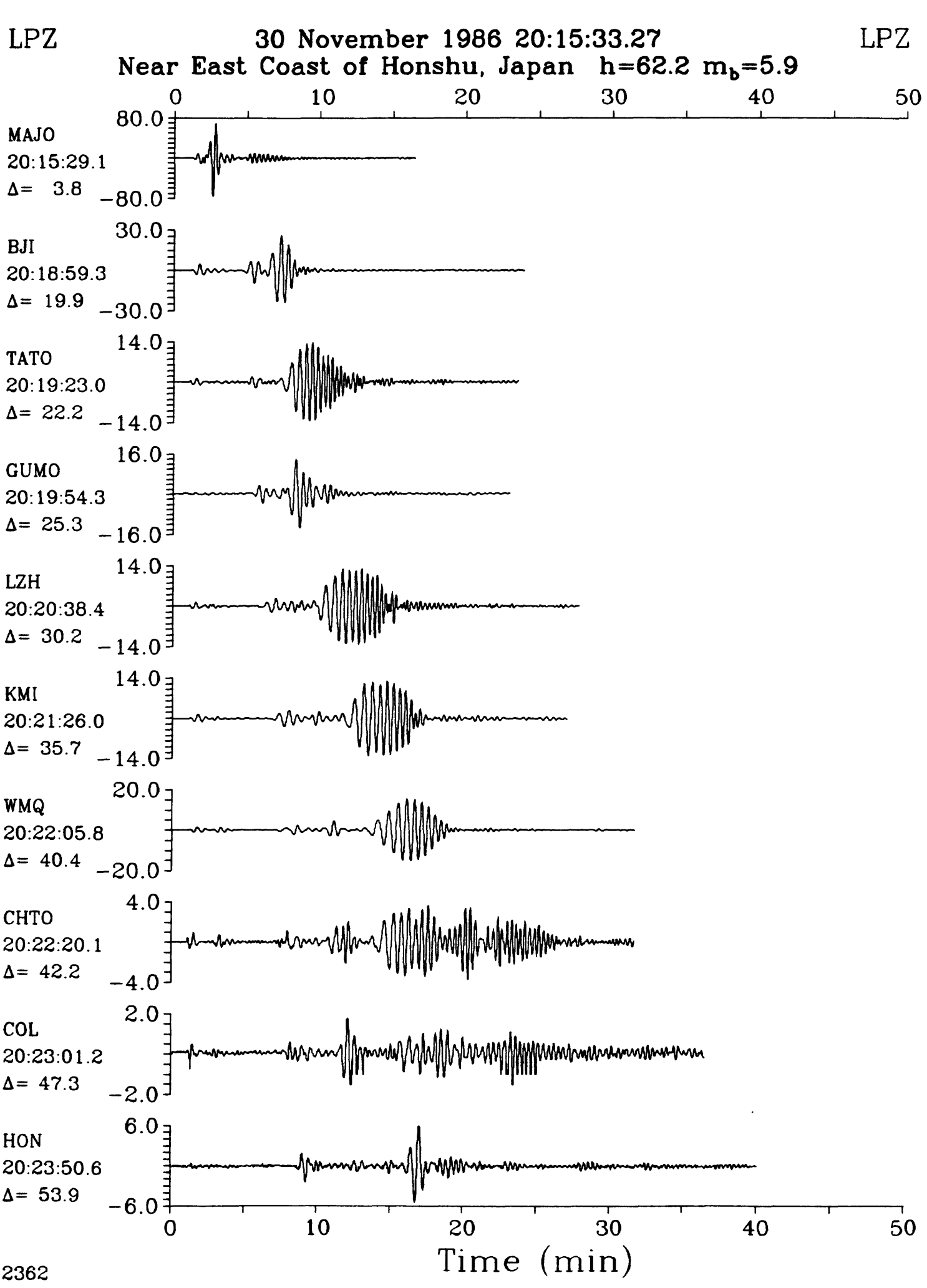
30 November 1986 20:15:33.27

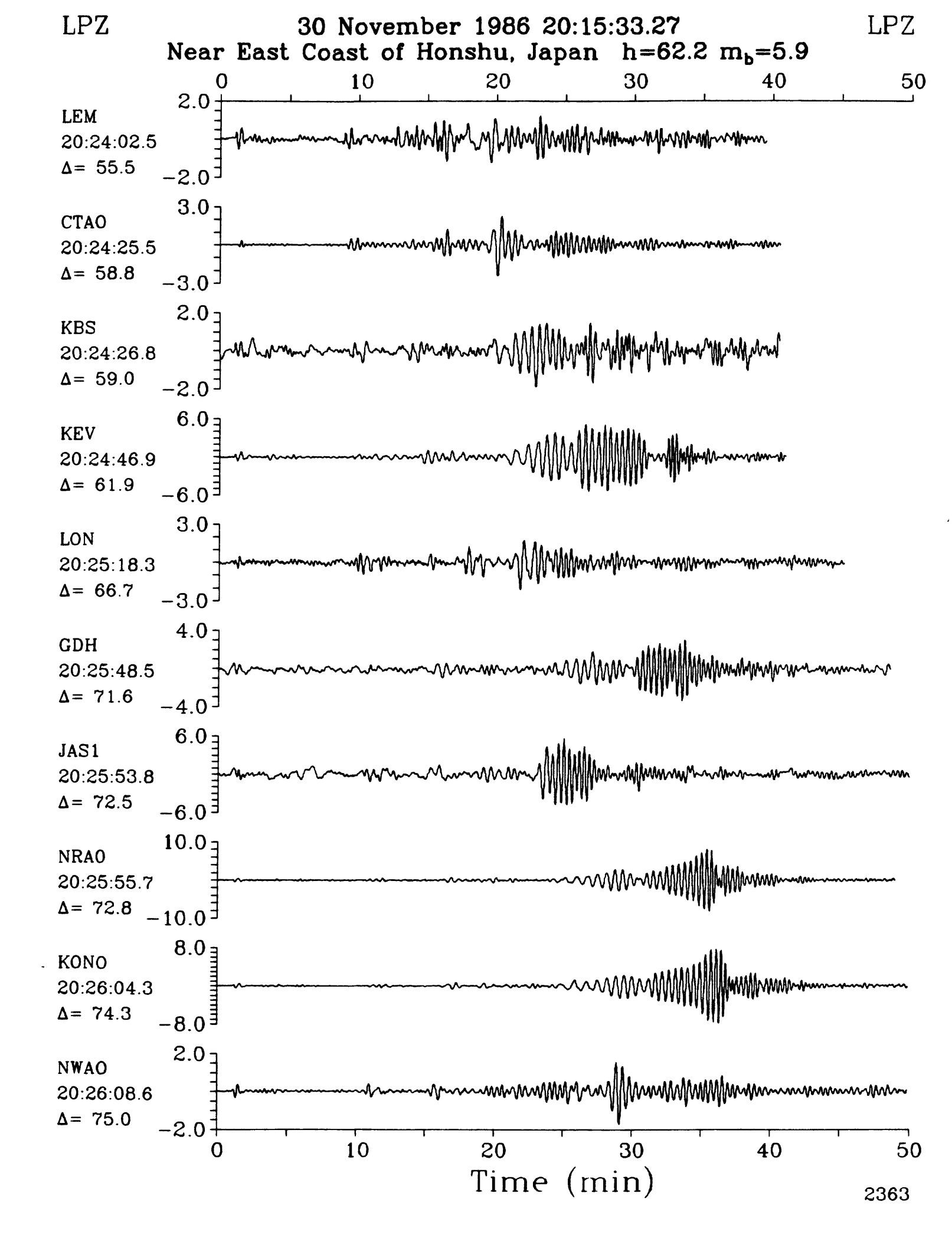
SPZ

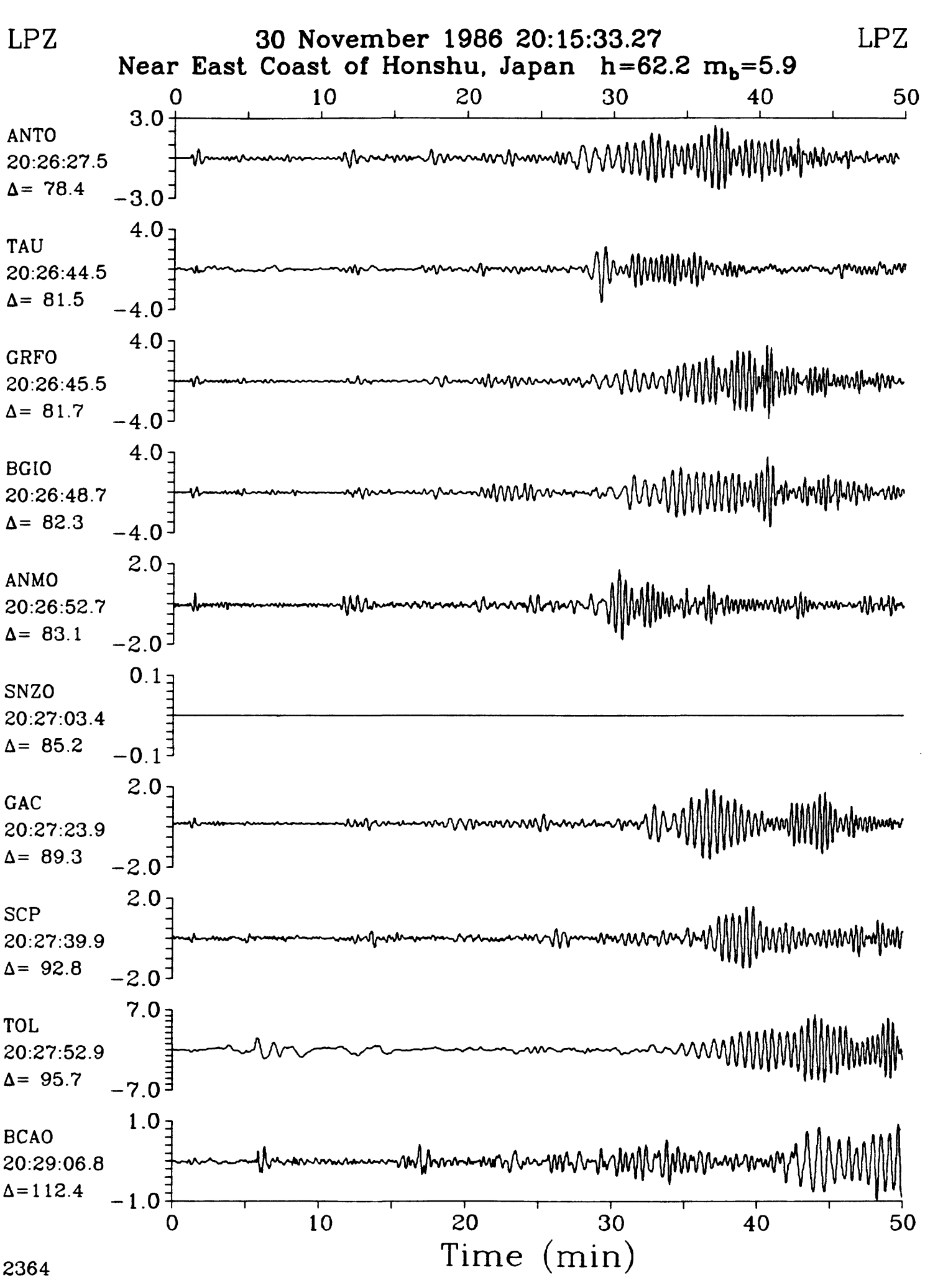
Near East Coast of Honshu, Japan h=62.2 m_b=5.9



Time (min)


LPZ
30 November 1986 20:15:33.27
LPZ
Near East Coast of Honshu, Japan h=62.2 m_b=5.9
0
10
20
30
40
50
MAJO
20:15:29.1
Δ= 3.8
80.0
-80.0
BJI
20:18:59.3
Δ= 19.9
30.0
-30.0
TATO
20:19:23.0
Δ= 22.2
14.0
-14.0
GUMO
20:19:54.3
Δ= 25.3
16.0
-16.0
LZH
20:20:38.4
Δ= 30.2
14.0
-14.0
KMI
20:21:26.0
Δ= 35.7
14.0
-14.0
WMQ
20:22:05.8
Δ= 40.4
20.0
-20.0
CHTO
20:22:20.1
Δ= 42.2
4.0
-4.0
COL
20:23:01.2
Δ= 47.3
2.0
-2.0
HON
20:23:50.6
Δ= 53.9
6.0
-6.0
0
10
20
30
40
50
Time (min)


LPZ
30 November 1986 20:15:33.27
LPZ
Near East Coast of Honshu, Japan h=62.2 m_b=5.9
0
10
20
30
40
50
LEM
20:24:02.5
Δ= 55.5
2.0
-2.0
CTAO
20:24:25.5
Δ= 58.8
3.0
-3.0
KBS
20:24:26.8
Δ= 59.0
2.0
-2.0
KEV
20:24:46.9
Δ= 61.9
6.0
-6.0
LON
20:25:18.3
Δ= 66.7
3.0
-3.0
GDH
20:25:48.5
Δ= 71.6
4.0
-4.0
JAS1
20:25:53.8
Δ= 72.5
6.0
-6.0
NRA0
20:25:55.7
Δ= 72.8
10.0
-10.0
KONO
20:26:04.3
Δ= 74.3
8.0
-8.0
NWAO
20:26:08.6
Δ= 75.0
2.0
-2.0
0
10
20
30
40
50
Time (min)
2363

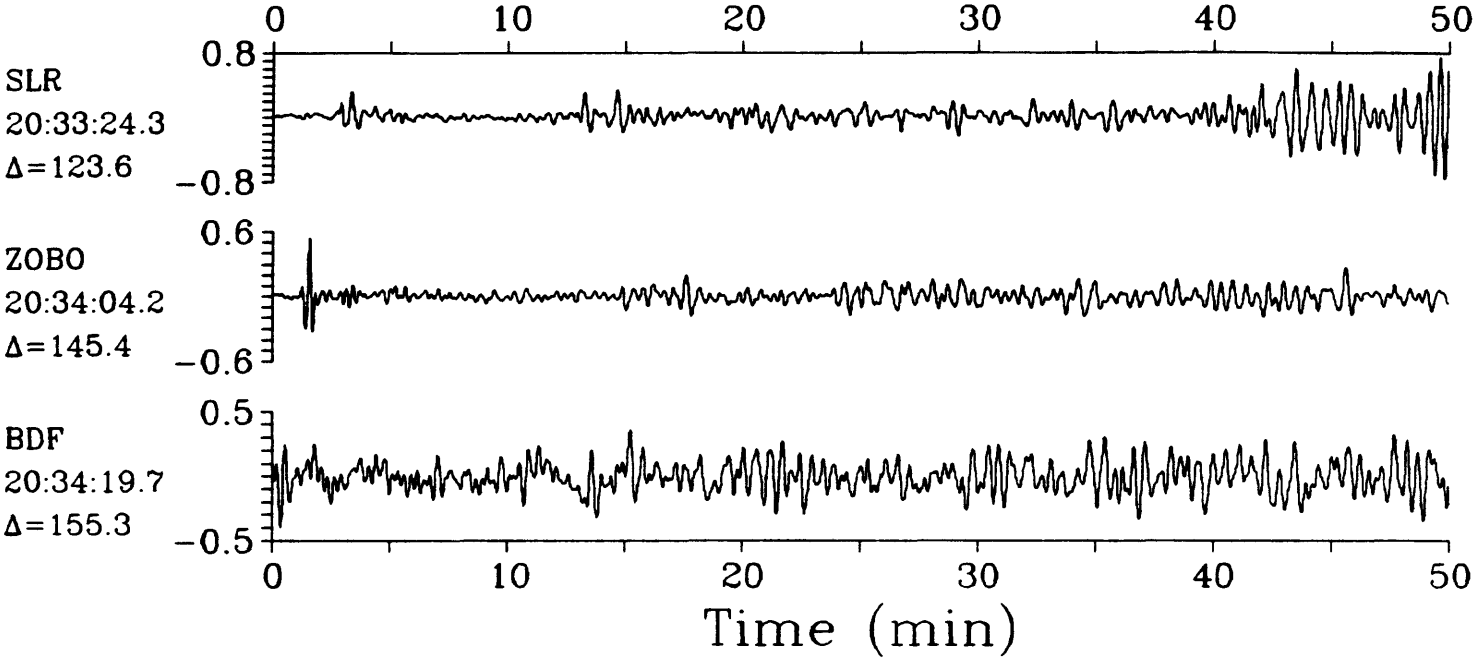

LPZ
30 November 1986 20:15:33.27
LPZ
Near East Coast of Honshu, Japan h=62.2 m_b=5.9
0
10
20
30
40
50
ANTO
20:26:27.5
Δ= 78.4
3.0
-3.0
TAU
20:26:44.5
Δ= 81.5
4.0
-4.0
GRFO
20:26:45.5
Δ= 81.7
4.0
-4.0
BGIO
20:26:48.7
Δ= 82.3
4.0
-4.0
ANMO
20:26:52.7
Δ= 83.1
2.0
-2.0
SNZO
20:27:03.4
Δ= 85.2
0.1
-0.1
GAC
20:27:23.9
Δ= 89.3
2.0
-2.0
SCP
20:27:39.9
Δ= 92.8
2.0
-2.0
TOL
20:27:52.9
Δ= 95.7
7.0
-7.0
BCAO
20:29:06.8
Δ=112.4
1.0
-1.0
0
10
20
30
40
50
Time (min)

LPZ

30 November 1986 20:15:33.27

LPZ

Near East Coast of Honshu, Japan h=62.2 m_b=5.9



IPZ

30 November 1986 20:15:33.27

IPZ

Near East Coast of Honshu, Japan h=62.2 m_b=5.9