DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

National Earthquake Information Center Waveform Catalog December 1986

by

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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 December 1986 with magnitudes ≥ 5.5

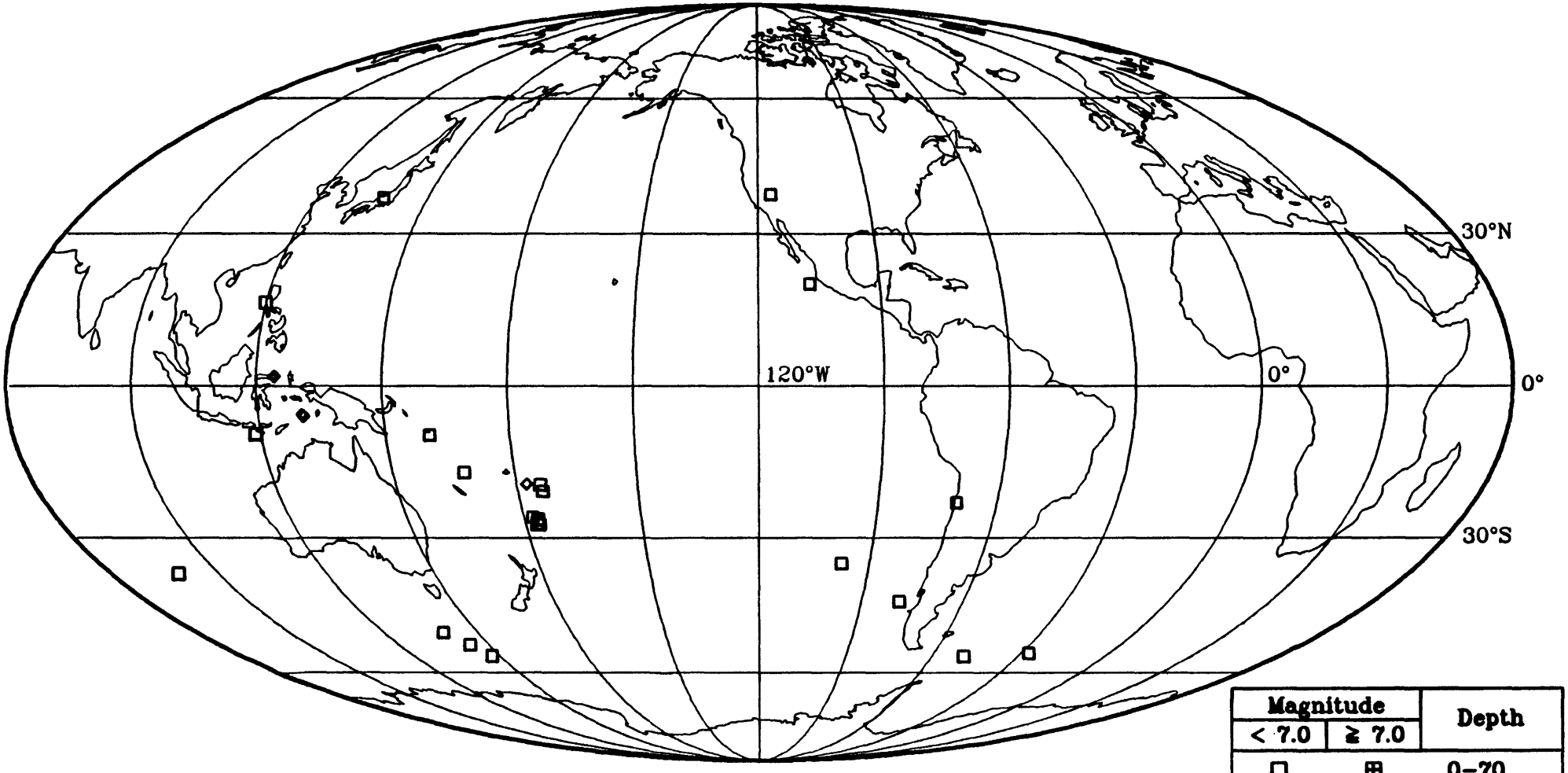
	Origin Time UTC	Latitude	Longitude	Depth (km)	Magnitude m_b	Magnitude M_{SZ}	Flinn-Engdahl Region Name
1.	1986 12 01 12:30:01.59	27.329° S	176.521° W	33.0	5.7	6.1	Kermadec Islands Region
2.	1986 12 01 12:53:48.82	27.116° S	176.493° W	33.0	5.5	6.1	Kermadec Islands Region
3.	1986 12 01 18:51:04.88	56.833° S	147.319° E	10.0	5.1	5.7	West of Macquarie Island
4.	1986 12 05 01:45:37.43	36.268° S	97.532° W	10.0	5.2	5.7	West Chile Rise
5.	1986 12 05 06:56:33.92	51.286° S	139.176° E	10.0	5.5	5.9	South of Australia
6.	1986 12 05 22:31:00.65	21.572° S	173.773° W	33.0	5.7	5.2	Tonga Islands
7.	1986 12 07 14:40:28.86	0.822° N	124.371° E	216.9	5.8		Minahassa Peninsula
8.	1986 12 07 16:56:36.42	18.901° N	107.203° W	10.0	4.8	5.6	Off Coast of Jalisco, Mexico
9.	1986 12 11 19:56:12.33	10.496° S	160.709° E	57.8	5.5		Solomon Islands
10.	1986 12 13 17:50:05.09	37.263° N	116.412° W	0.0	5.5	5.1	Southern Nevada
11.	1986 12 13 18:02:21.55	26.724° S	177.753° W	33.0	5.5	5.1	South of Fiji Islands
12.	1986 12 13 18:31:54.78	17.911° S	167.548° E	33.0	5.4	5.6	Vanuatu Islands
13.	1986 12 19 03:41:55.32	10.358° S	118.839° E	33.0	5.8	6.1	South of Sumbawa Island
14.	1986 12 20 07:58:59.33	28.201° S	176.251° W	33.0	5.4	5.5	Kermadec Islands Region
15.	1986 12 20 08:21:21.84	28.287° S	176.886° W	33.0	5.5	5.9	Kermadec Islands Region
16.	1986 12 20 14:51:03.41	20.178° S	177.495° W	163.0	5.6		Fiji Islands Region
17.	1986 12 20 21:27:00.68	28.243° S	176.532° W	33.0	5.3	5.5	Kermadec Islands Region
18.	1986 12 21 01:10:53.63	28.062° S	176.872° W	33.0	6.1	6.6	Kermadec Islands Region
19.	1986 12 22 14:18:41.25	56.949° S	48.898° W	33.0	6.0	5.9	Scotia Sea
20.	1986 12 25 17:17:39.77	44.461° S	78.843° W	10.0	5.5	5.7	Off Coast of Southern Chile
21.	1986 12 26 19:51:45.96	54.287° S	143.733° E	10.0	5.4	5.6	West of Macquarie Island
22.	1986 12 27 02:29:00.28	23.923° S	70.132° W	40.9	5.2	5.6	Near Coast of Northern Chile
23.	1986 12 27 02:43:53.99	56.203° S	27.406° W	33.0	5.6	5.4	South Sandwich Islands Region
24.	1986 12 27 15:47:00.21	6.720° S	130.856° E	76.4	5.7		Banda Sea
25.	1986 12 28 20:04:37.27	38.398° S	78.926° E	10.0	5.6	6.1	Mid-Indian Rise
26.	1986 12 29 15:49:59.57	15.194° N	119.861° E	55.4	6.1		Luzon, Philippine Islands
27.	1986 12 30 00:38:29.74	36.534° N	137.840° E	9.3	5.5	5.2	Honshu, Japan
28.	1986 12 30 09:04:44.75	6.442° S	130.695° E	100.3	5.6		Banda Sea
29.	1986 12 30 15:32:13.90	20.307° S	174.187° W	24.7	6.1	5.7	Tonga Islands

Table 2. Current network-event tape station list

Code	Station	Latitude	Longitude	Elevation (m)	Type*
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
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
NE06	Dourbes, Belgium	50.097° N	4.595° E	225.0	NARS
NE07	Villiers-Adam, France	49.074° N	2.232° E	70.0	NARS
NE10	Arette, France	43.086° N	0.699° W	480.0	NARS
NE13	Puertollano, Spain	38.685° N	4.091° W	700.0	NARS
NE14	Granada, Spain	37.190° N	3.595° W	774.0	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
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

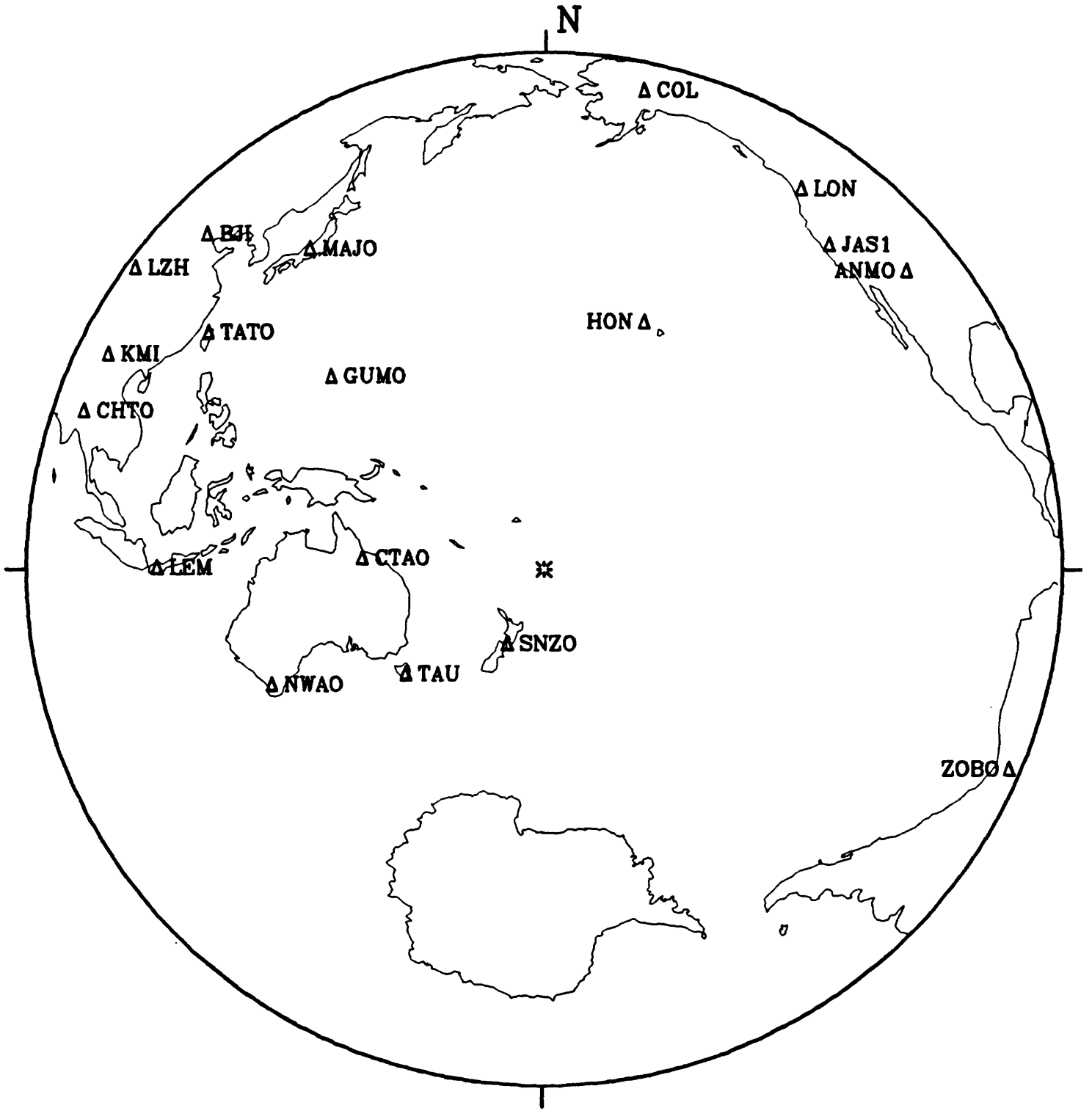
EARTHQUAKES – December 1986 – MAGNITUDE ≧ 5.5

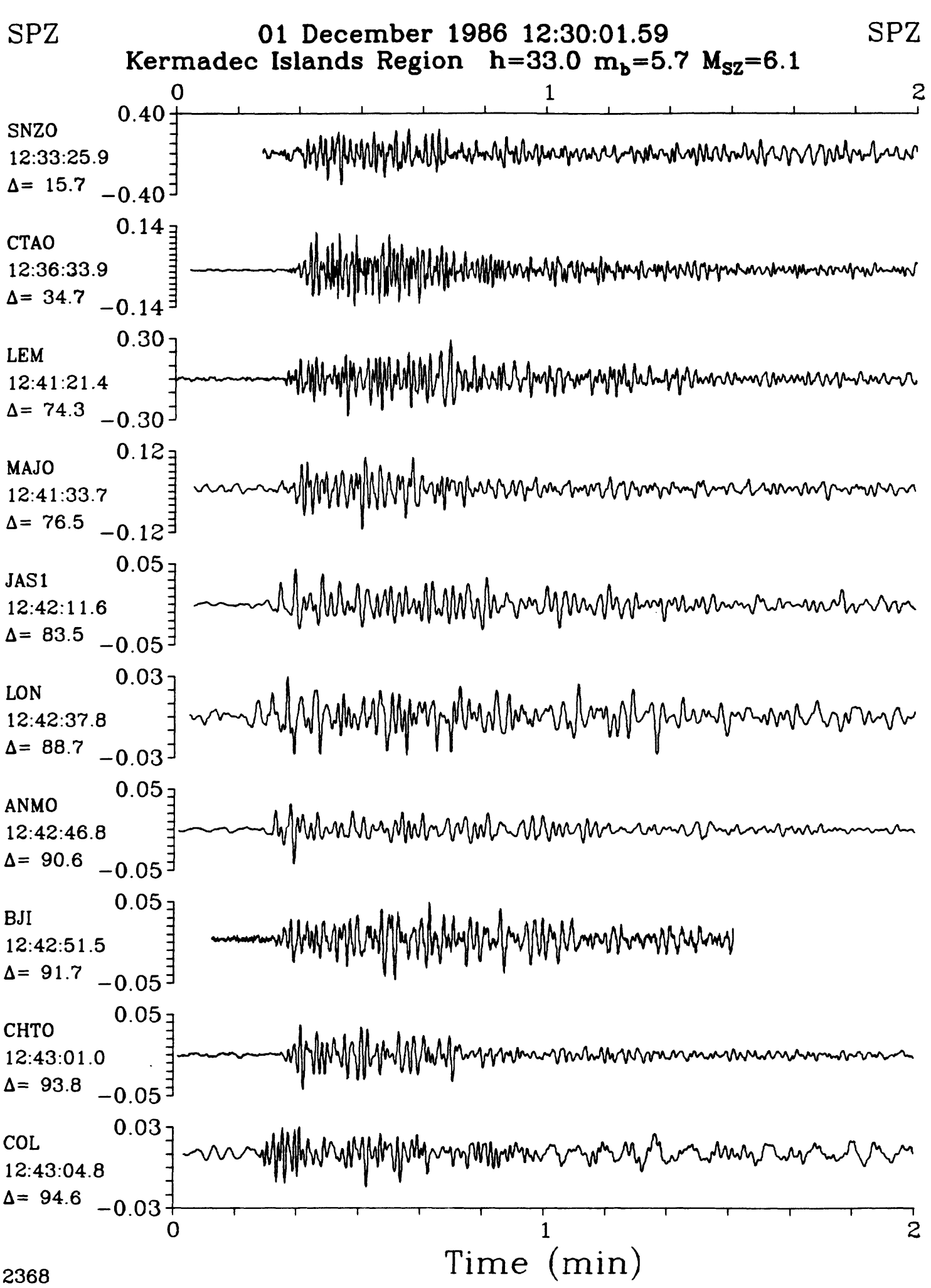


Magnitude		Depth
< 7.0	≧ 7.0	
□	⊞	0–70
◇	◆	71–300
○	⊕	301–800

01 December 1986 12:30:01.59

Kermadec Islands Region

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01 December 1986 12:30:01.59
SPZ
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0
1
2
0.40
SNZO
12:33:25.9
Δ= 15.7
−0.40
0.14
CTAO
12:36:33.9
Δ= 34.7
−0.14
0.30
LEM
12:41:21.4
Δ= 74.3
−0.30
0.12
MAJO
12:41:33.7
Δ= 76.5
−0.12
0.05
JAS1
12:42:11.6
Δ= 83.5
−0.05
0.03
LON
12:42:37.8
Δ= 88.7
−0.03
0.05
ANMO
12:42:46.8
Δ= 90.6
−0.05
0.05
BJI
12:42:51.5
Δ= 91.7
−0.05
0.05
CHTO
12:43:01.0
Δ= 93.8
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0.03
COL
12:43:04.8
Δ= 94.6
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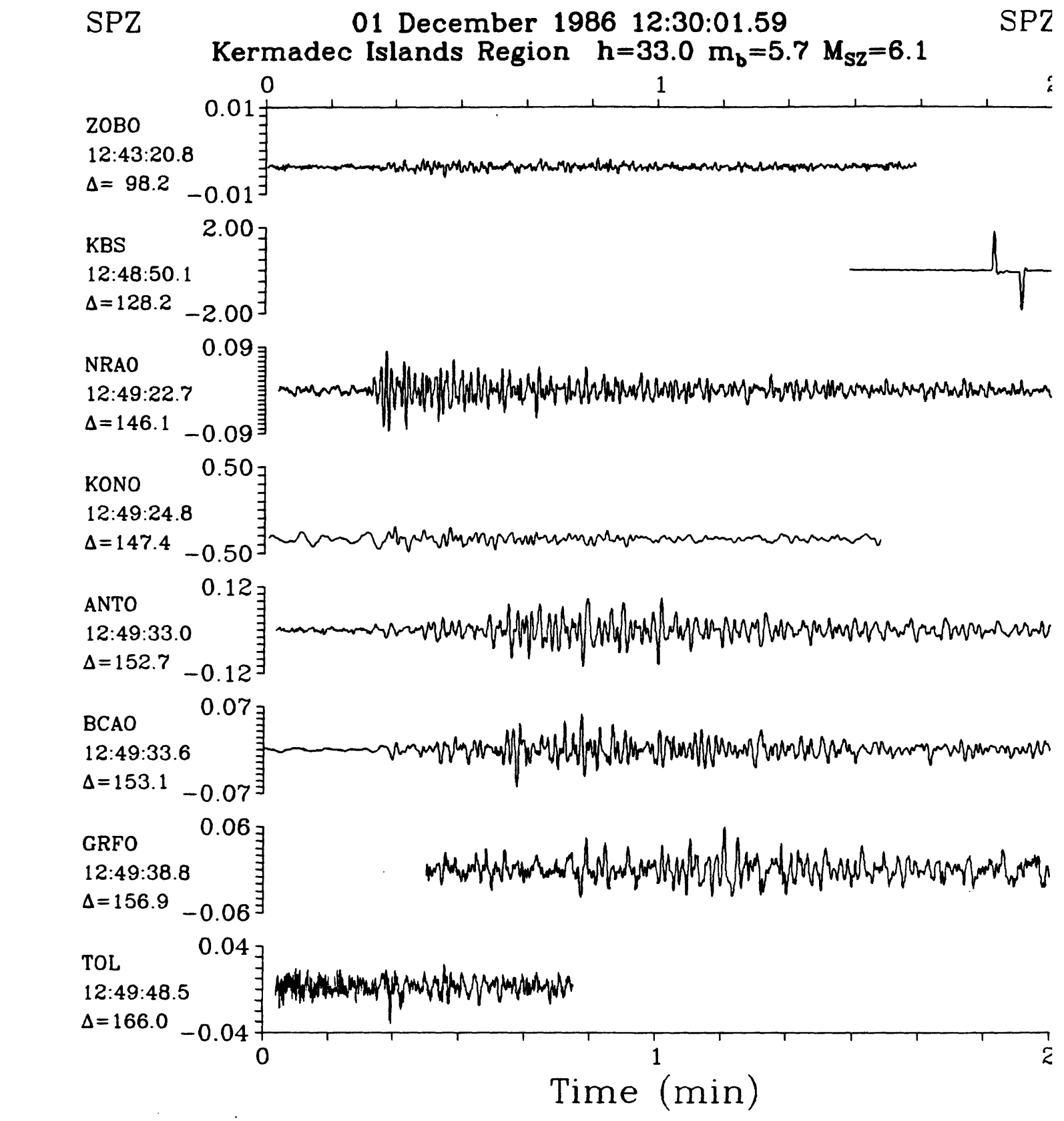
0
1
2
Time (min)

2368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01 December 1986 12:30:01.59
SPZ
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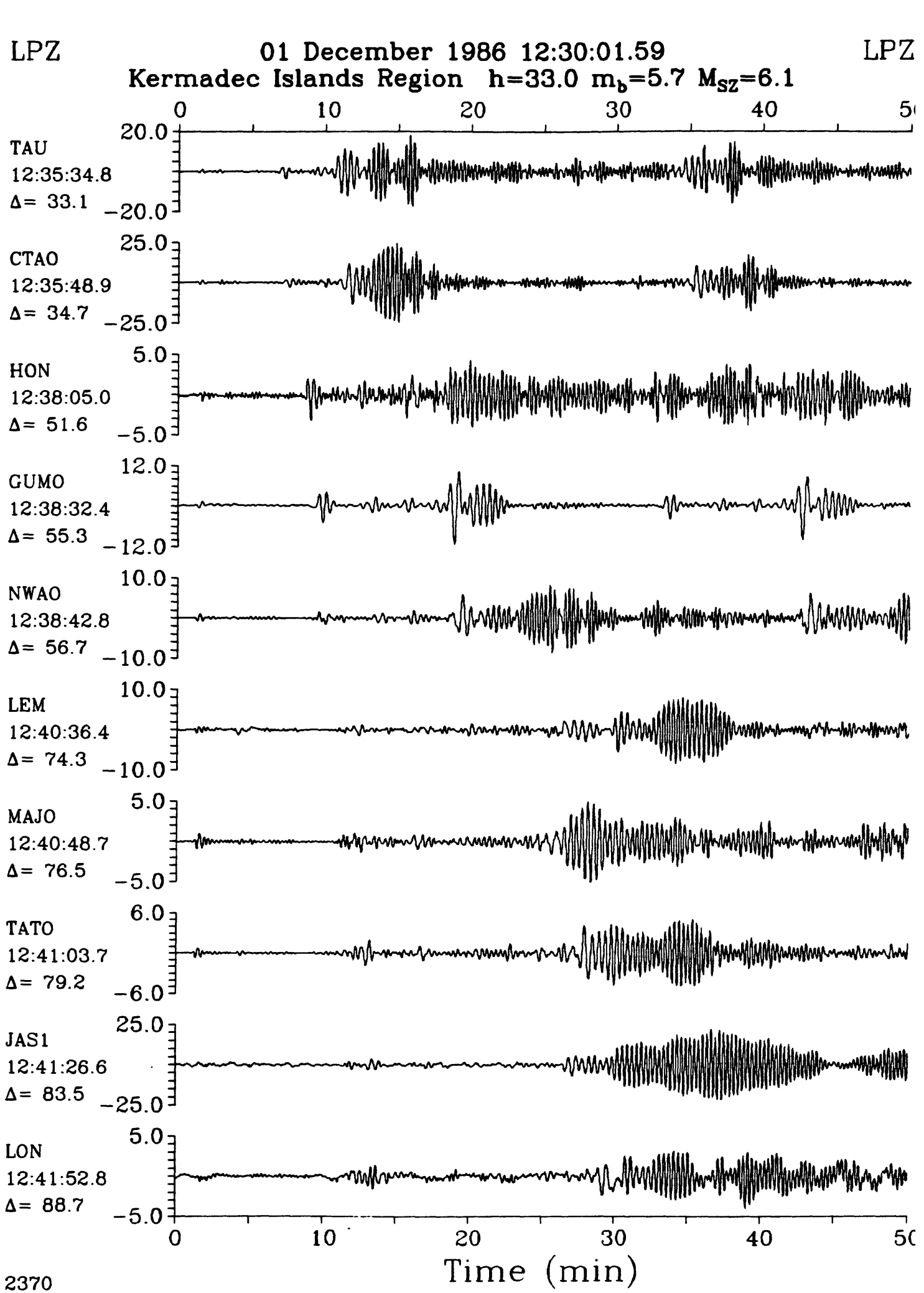
ZOBO
12:43:20.8
Δ= 98.2
KBS
12:48:50.1
Δ=128.2
NRAO
12:49:22.7
Δ=146.1
KONO
12:49:24.8
Δ=147.4
ANTO
12:49:33.0
Δ=152.7
BCAO
12:49:33.6
Δ=153.1
GRFO
12:49:38.8
Δ=156.9
TOL
12:49:48.5
Δ=166.0
Time (min)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LPZ
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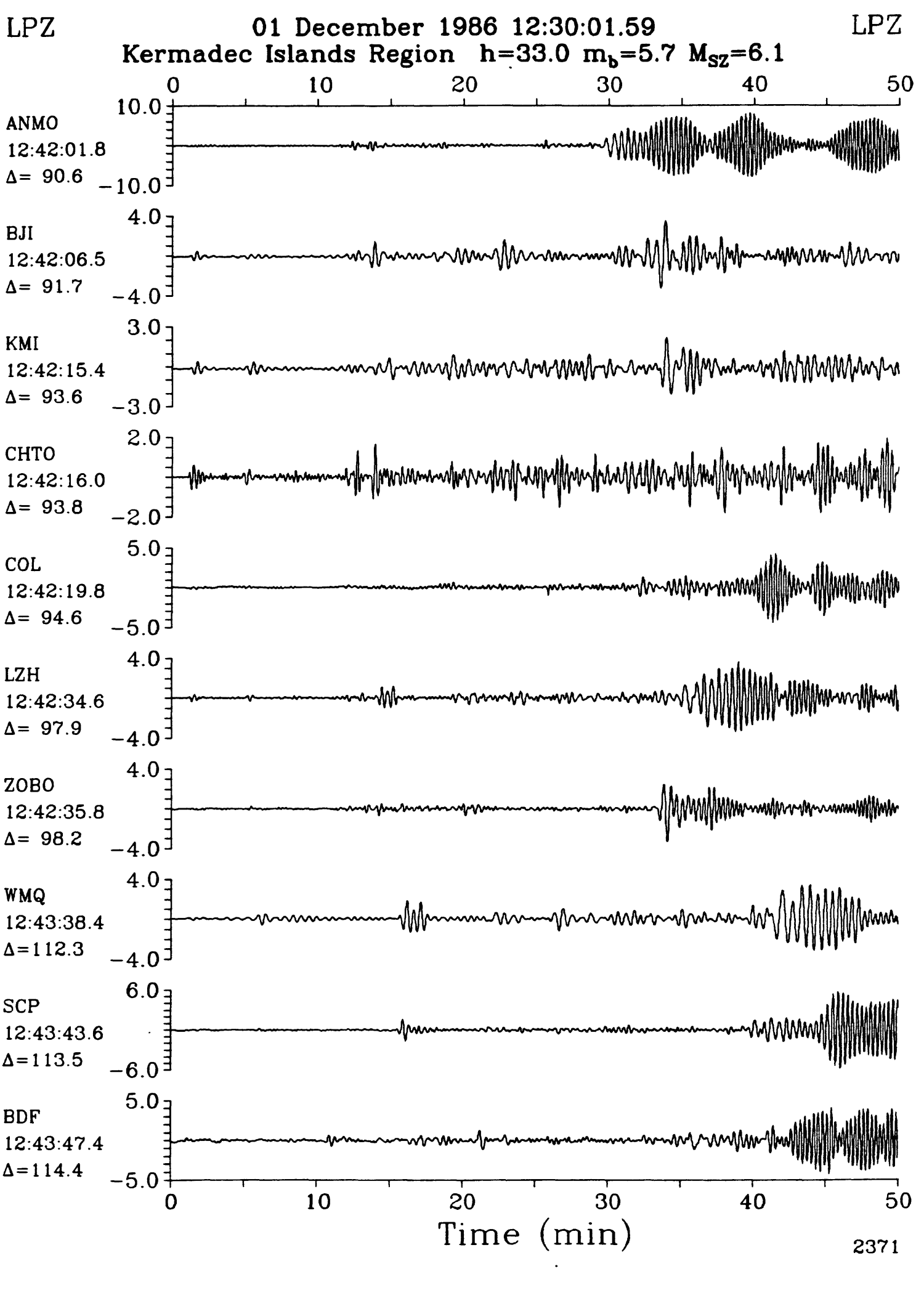
0
10
20
30
40
TAU
12:35:34.8
Δ= 33.1
20.0
-20.0
CTAO
12:35:48.9
Δ= 34.7
25.0
-25.0
HON
12:38:05.0
Δ= 51.6
5.0
-5.0
GUMO
12:38:32.4
Δ= 55.3
12.0
-12.0
NWAO
12:38:42.8
Δ= 56.7
10.0
-10.0
LEM
12:40:36.4
Δ= 74.3
10.0
-10.0
MAJO
12:40:48.7
Δ= 76.5
5.0
-5.0
TATO
12:41:03.7
Δ= 79.2
6.0
-6.0
JAS1
12:41:26.6
Δ= 83.5
25.0
-25.0
LON
12:41:52.8
Δ= 88.7
5.0
-5.0
0
10
20
30
40
Time (min)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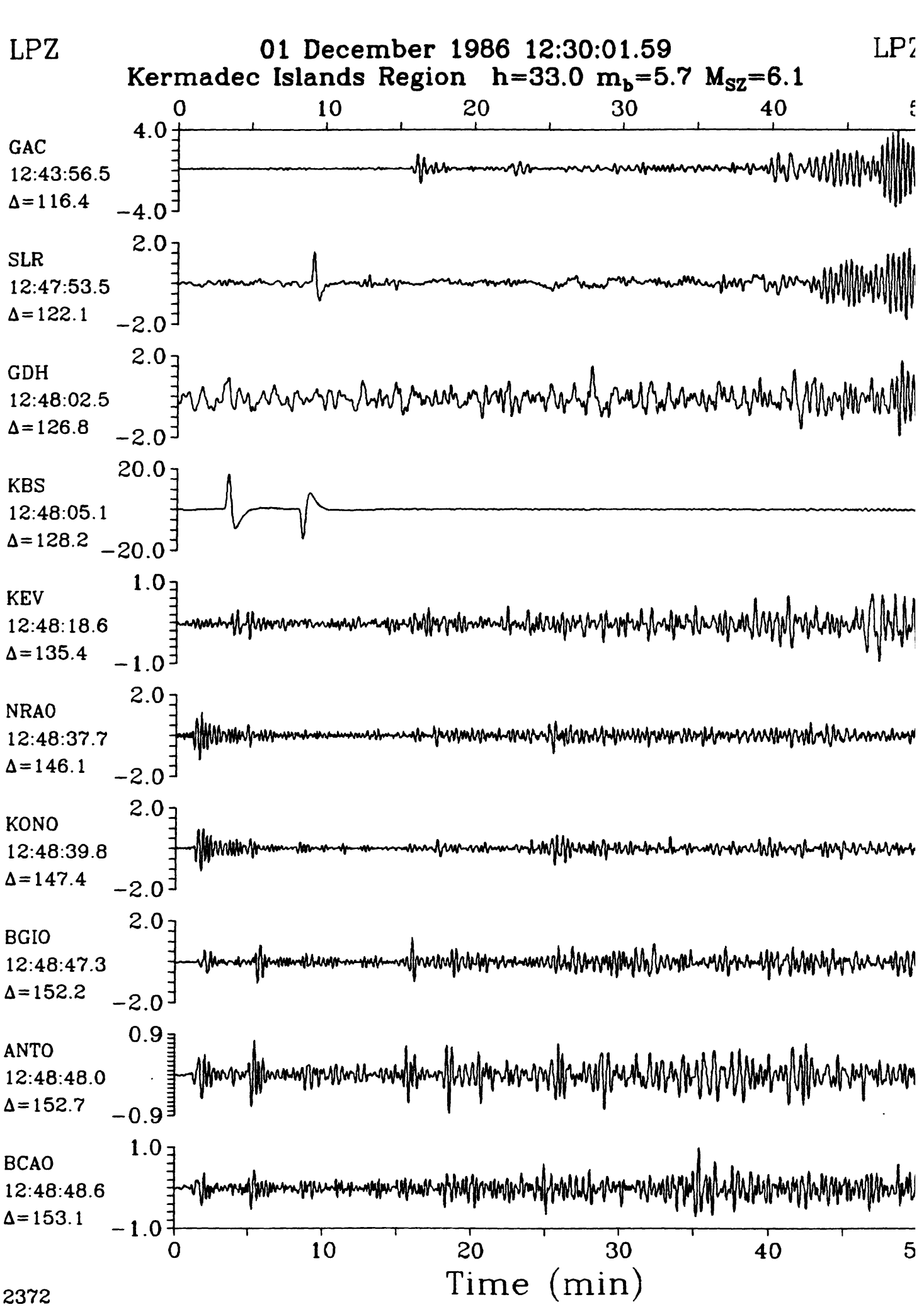
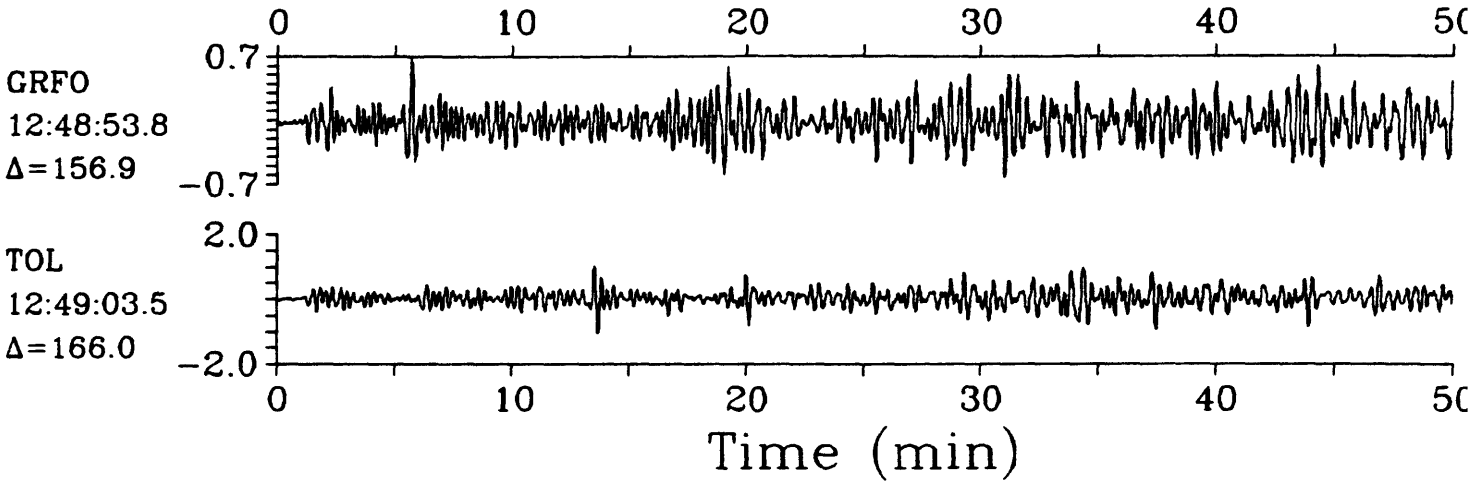
01 December 1986 12:30:01.59
LPZ
Kermadec Islands Region h=33.0 m_b=5.7 M_{SZ}=6.1
0
10
20
30
40
50
ANMO
12:42:01.8
Δ= 90.6
10.0
-10.0
BJI
12:42:06.5
Δ= 91.7
4.0
-4.0
KMI
12:42:15.4
Δ= 93.6
3.0
-3.0
CHTO
12:42:16.0
Δ= 93.8
2.0
-2.0
COL
12:42:19.8
Δ= 94.6
5.0
-5.0
LZH
12:42:34.6
Δ= 97.9
4.0
-4.0
ZOBO
12:42:35.8
Δ= 98.2
4.0
-4.0
WMQ
12:43:38.4
Δ=112.3
4.0
-4.0
SCP
12:43:43.6
Δ=113.5
6.0
-6.0
BDF
12:43:47.4
Δ=114.4
5.0
-5.0
0
10
20
30
40
50
Time (min)
2371


LPZ
01 December 1986 12:30:01.59
Kermadec Islands Region h=33.0 m_b=5.7 M_{SZ}=6.1
LPZ
0
10
20
30
40
GAC
12:43:56.5
Δ=116.4
4.0
-4.0
SLR
12:47:53.5
Δ=122.1
2.0
-2.0
GDH
12:48:02.5
Δ=126.8
2.0
-2.0
KBS
12:48:05.1
Δ=128.2
20.0
-20.0
KEV
12:48:18.6
Δ=135.4
1.0
-1.0
NRAO
12:48:37.7
Δ=146.1
2.0
-2.0
KONO
12:48:39.8
Δ=147.4
2.0
-2.0
BGIO
12:48:47.3
Δ=152.2
2.0
-2.0
ANTO
12:48:48.0
Δ=152.7
0.9
-0.9
BCAO
12:48:48.6
Δ=153.1
1.0
-1.0
0
10
20
30
40
Time (min)
2372

01 December 1986 12:30:01.59

LPZ

Kermadec Islands Region h=33.0 m_b=5.7 M_{SZ}=6.1



IPZ

01 December 1986 12:30:01.59

IPZ

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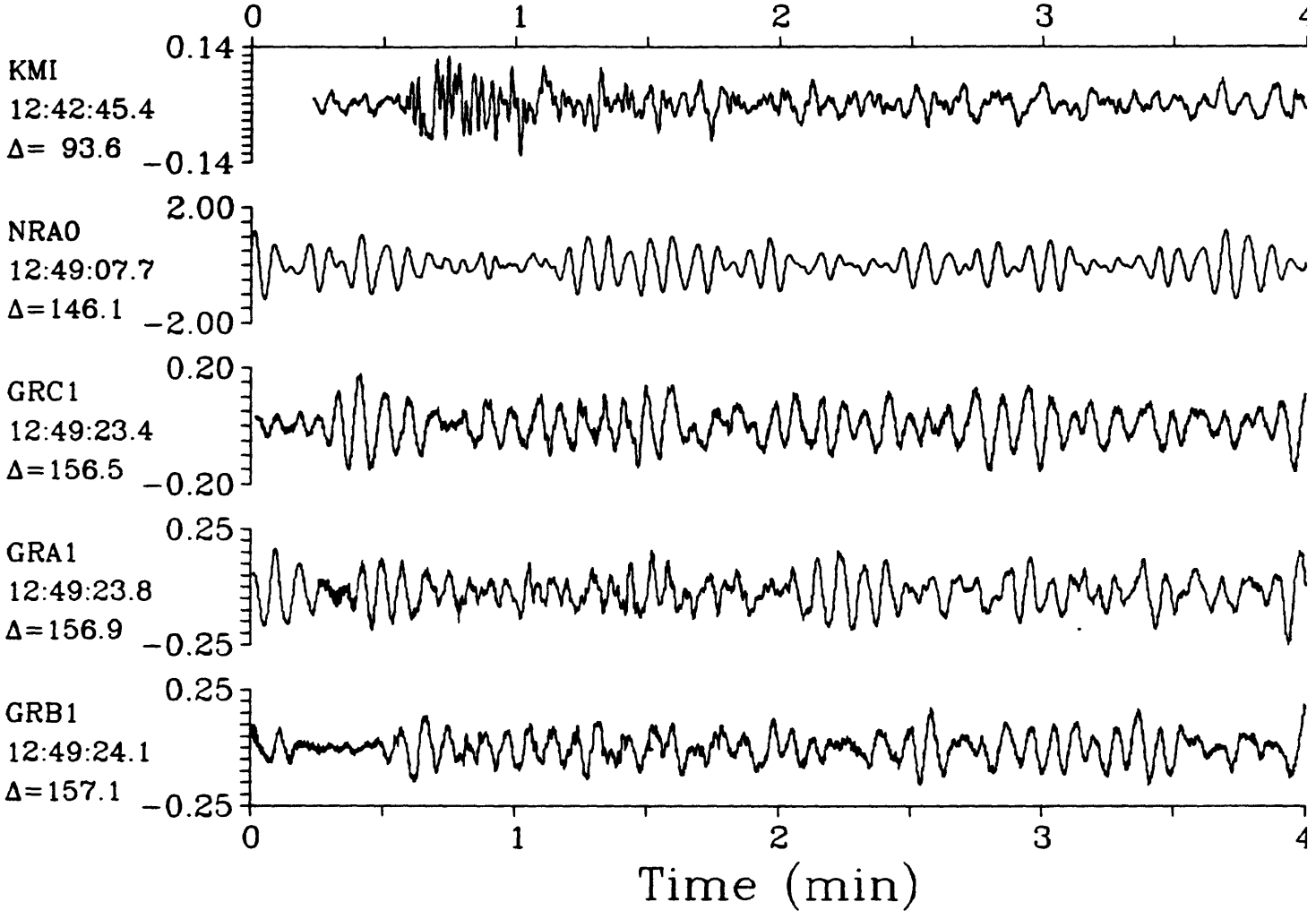
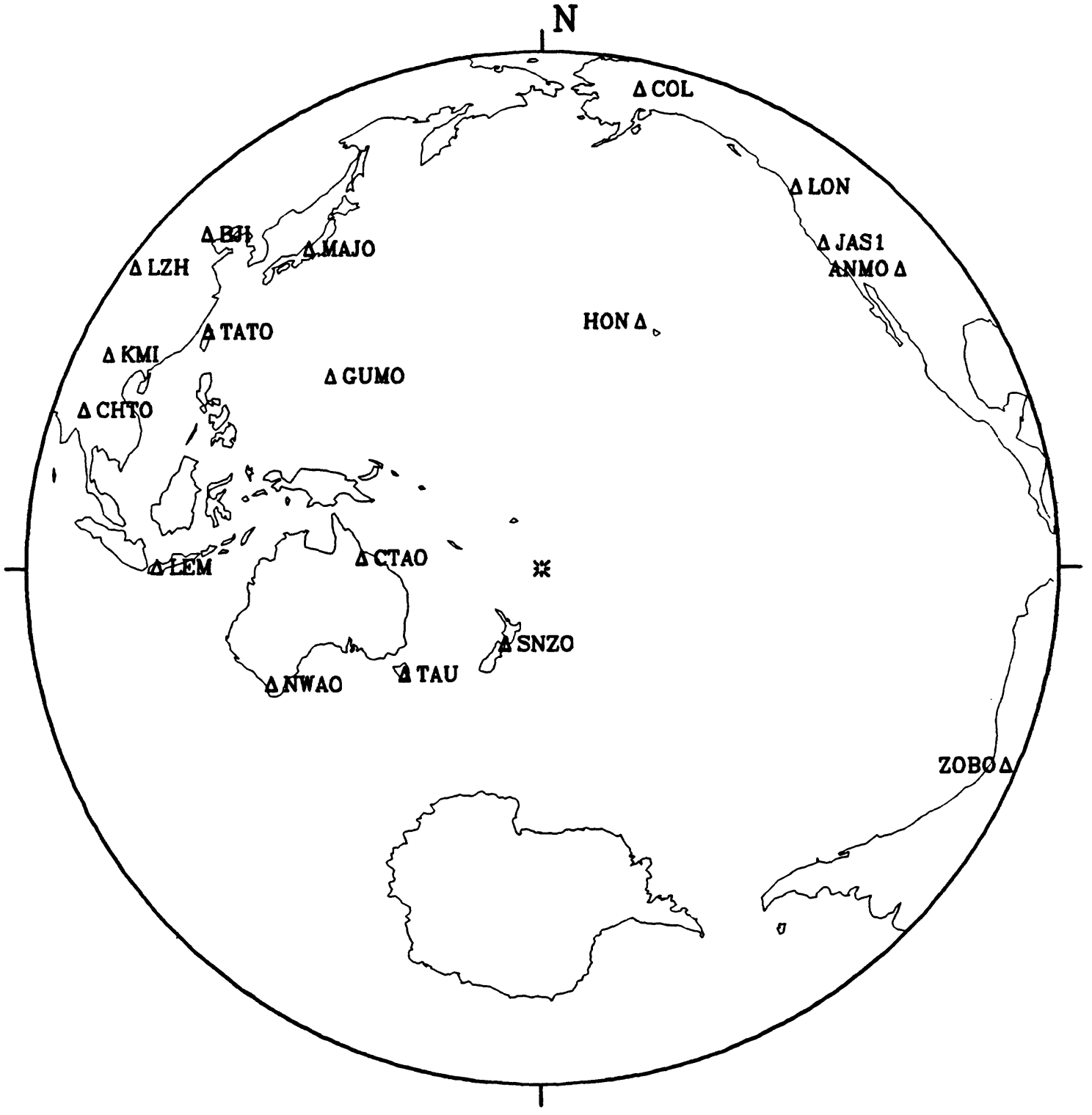
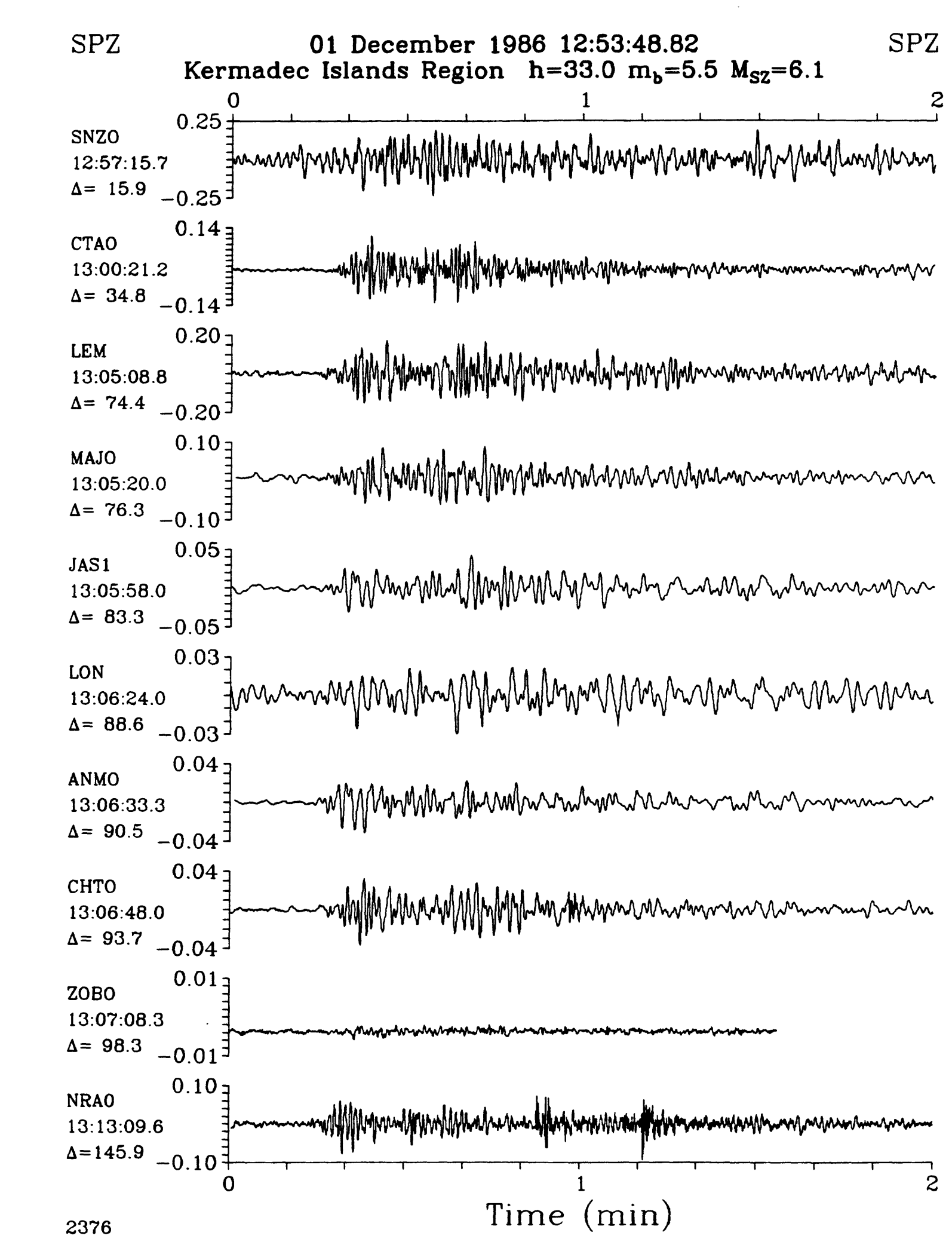


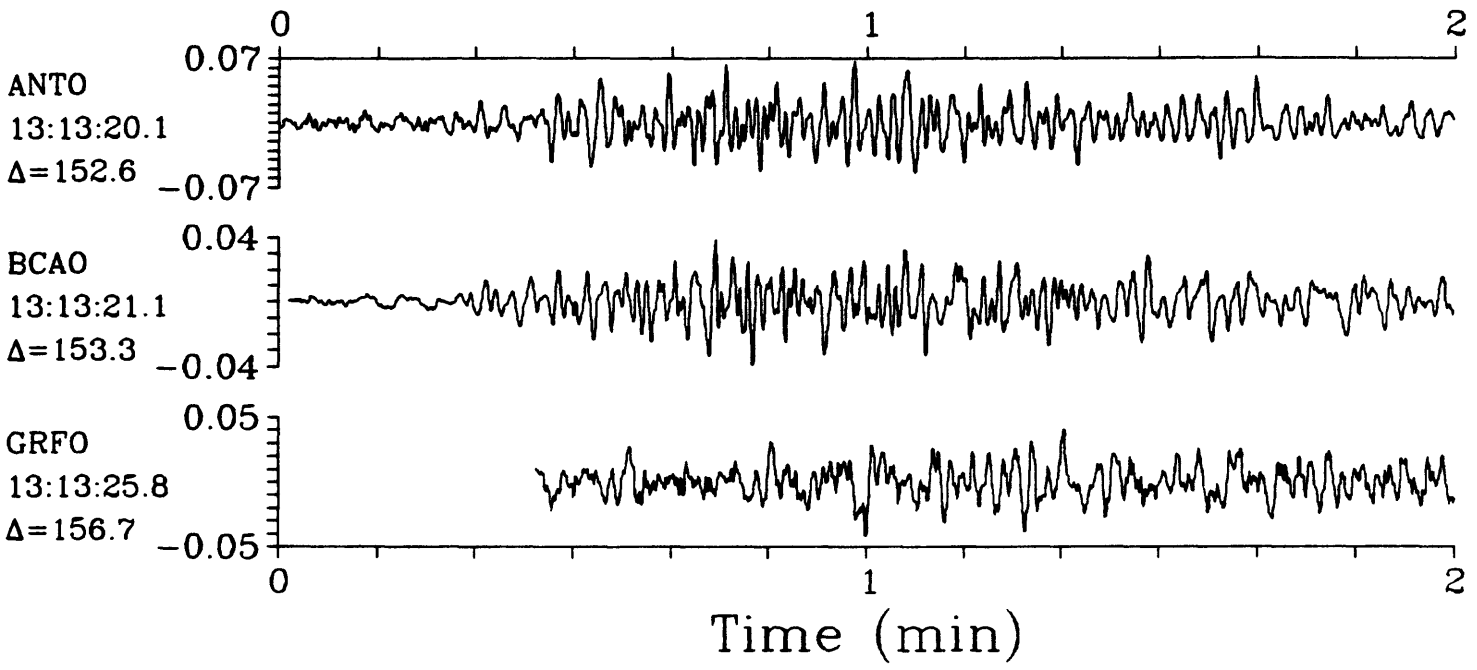
01 December 1986 12:53:48.82

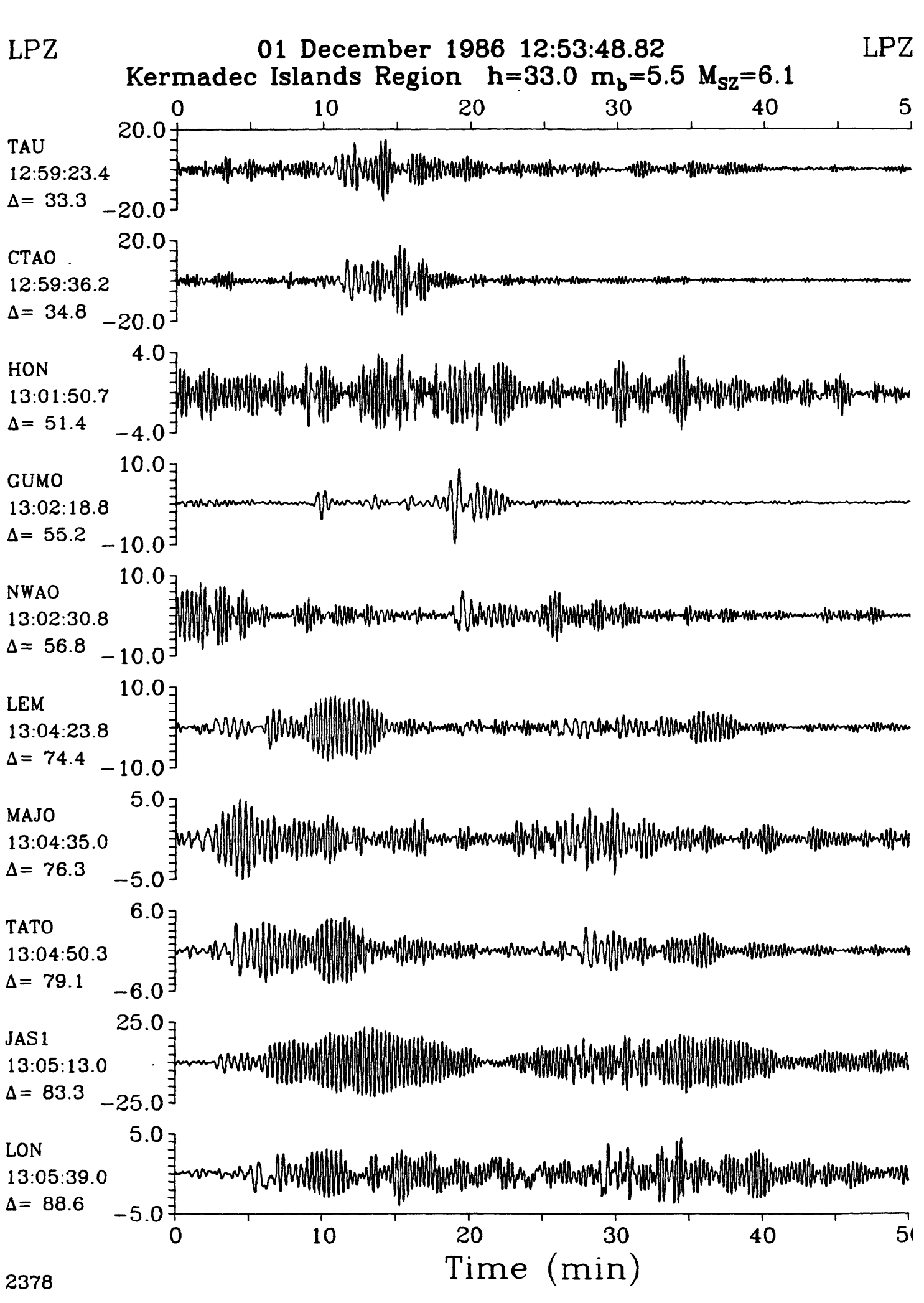
Kermadec Islands Region

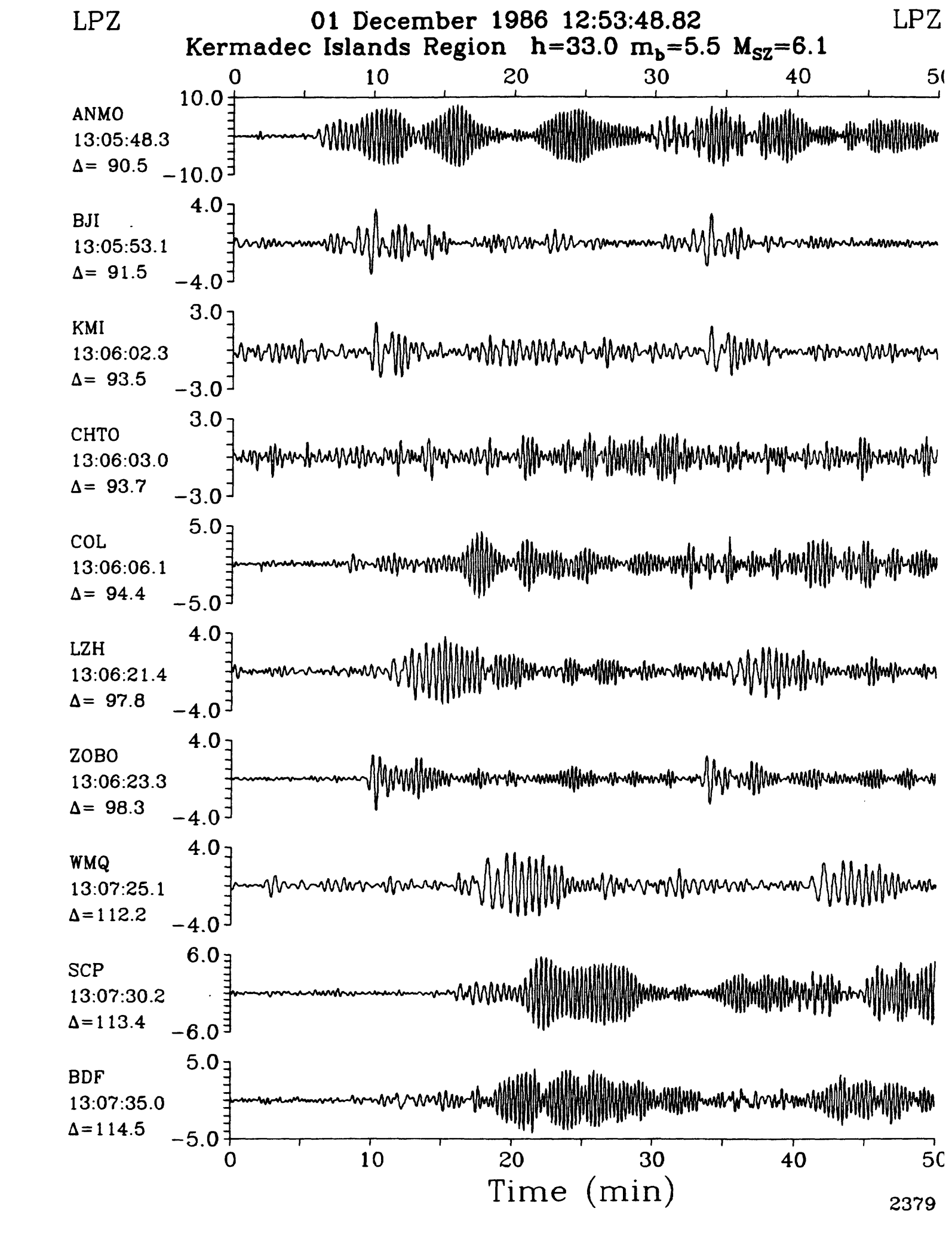


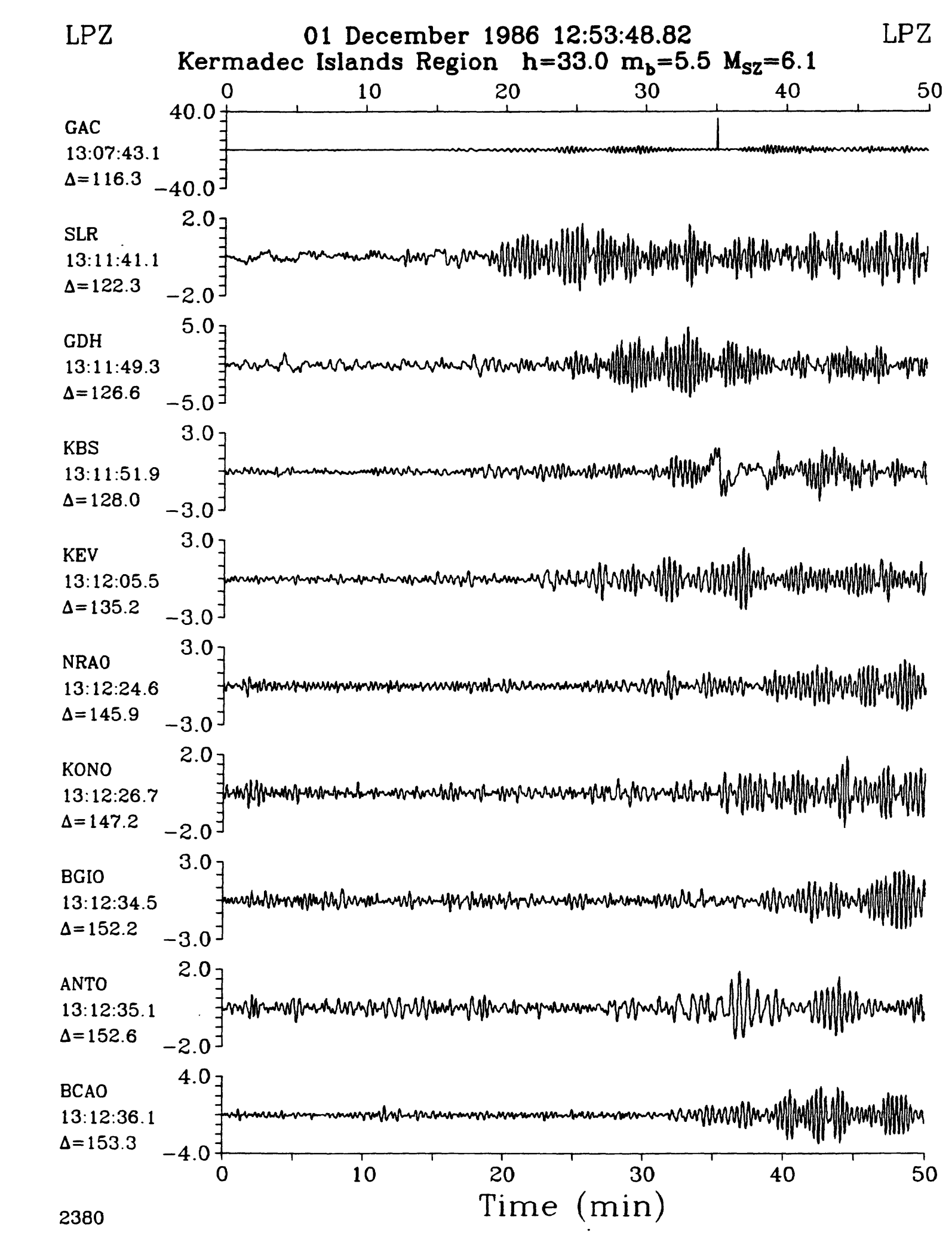

SPZ
01 December 1986 12:53:48.82
SPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=6.1
0
1
2
SNZO
12:57:15.7
Δ= 15.9
0.25
−0.25
CTAO
13:00:21.2
Δ= 34.8
0.14
−0.14
LEM
13:05:08.8
Δ= 74.4
0.20
−0.20
MAJO
13:05:20.0
Δ= 76.3
0.10
−0.10
JAS1
13:05:58.0
Δ= 83.3
0.05
−0.05
LON
13:06:24.0
Δ= 88.6
0.03
−0.03
ANMO
13:06:33.3
Δ= 90.5
0.04
−0.04
CHTO
13:06:48.0
Δ= 93.7
0.04
−0.04
ZOBO
13:07:08.3
Δ= 98.3
0.01
−0.01
NRAO
13:13:09.6
Δ=145.9
0.10
−0.10
0
1
2
Time (min)

2376


01 December 1986 12:53:48.82
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=6.1
ANTO
13:13:20.1
Δ=152.6
BCAO
13:13:21.1
Δ=153.3
GRFO
13:13:25.8
Δ=156.7
0.07
−0.07
0.04
−0.04
0.05
−0.05
0
1
2
Time (min)


LPZ
01 December 1986 12:53:48.82
LPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=6.1
0
10
20
30
40
5
TAU
12:59:23.4
Δ= 33.3
20.0
-20.0
CTAO
12:59:36.2
Δ= 34.8
20.0
-20.0
HON
13:01:50.7
Δ= 51.4
4.0
-4.0
GUMO
13:02:18.8
Δ= 55.2
10.0
-10.0
NWAO
13:02:30.8
Δ= 56.8
10.0
-10.0
LEM
13:04:23.8
Δ= 74.4
10.0
-10.0
MAJO
13:04:35.0
Δ= 76.3
5.0
-5.0
TATO
13:04:50.3
Δ= 79.1
6.0
-6.0
JAS1
13:05:13.0
Δ= 83.3
25.0
-25.0
LON
13:05:39.0
Δ= 88.6
5.0
-5.0
0
10
20
30
40
50
Time (min)

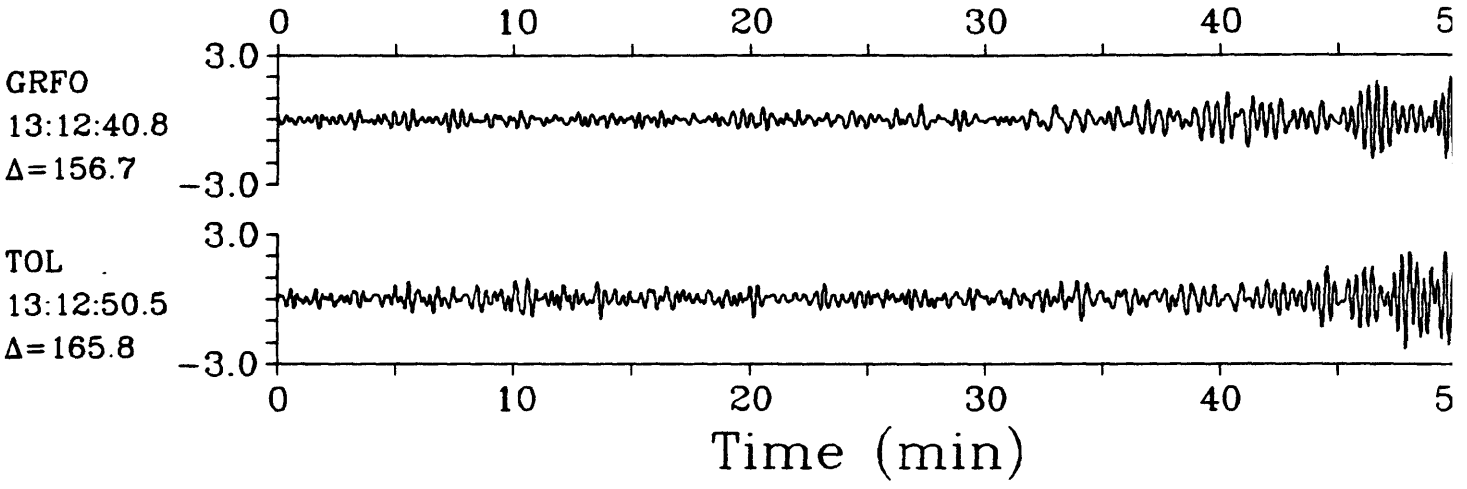

LPZ
01 December 1986 12:53:48.82
LPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=6.1
0
10
20
30
40
50
ANMO
13:05:48.3
Δ= 90.5
10.0
-10.0
BJI
13:05:53.1
Δ= 91.5
4.0
-4.0
KMI
13:06:02.3
Δ= 93.5
3.0
-3.0
CHTO
13:06:03.0
Δ= 93.7
3.0
-3.0
COL
13:06:06.1
Δ= 94.4
5.0
-5.0
LZH
13:06:21.4
Δ= 97.8
4.0
-4.0
ZOBO
13:06:23.3
Δ= 98.3
4.0
-4.0
WMQ
13:07:25.1
Δ=112.2
4.0
-4.0
SCP
13:07:30.2
Δ=113.4
6.0
-6.0
BDF
13:07:35.0
Δ=114.5
5.0
-5.0
0
10
20
30
40
50
Time (min)
2379


LPZ
01 December 1986 12:53:48.82
LPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=6.1
0
10
20
30
40
50
GAC
13:07:43.1
Δ=116.3
40.0
-40.0
SLR
13:11:41.1
Δ=122.3
2.0
-2.0
GDH
13:11:49.3
Δ=126.6
5.0
-5.0
KBS
13:11:51.9
Δ=128.0
3.0
-3.0
KEV
13:12:05.5
Δ=135.2
3.0
-3.0
NRAO
13:12:24.6
Δ=145.9
3.0
-3.0
KONO
13:12:26.7
Δ=147.2
2.0
-2.0
BGIO
13:12:34.5
Δ=152.2
3.0
-3.0
ANTO
13:12:35.1
Δ=152.6
2.0
-2.0
BCAO
13:12:36.1
Δ=153.3
4.0
-4.0
0
10
20
30
40
50
Time (min)

01 December 1986 12:53:48.82

Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=6.1

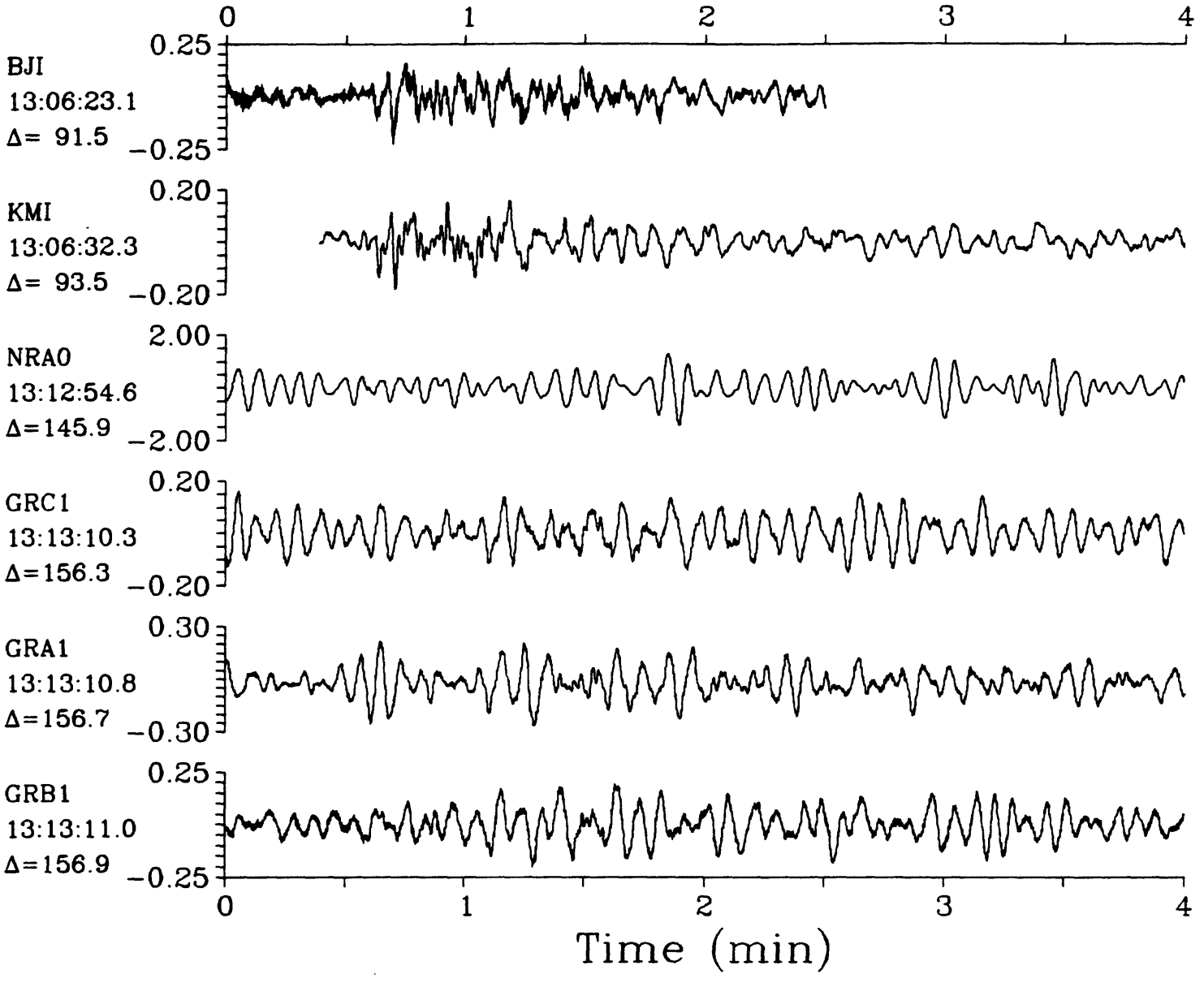
LPZ



01 December 1986 12:53:48.82

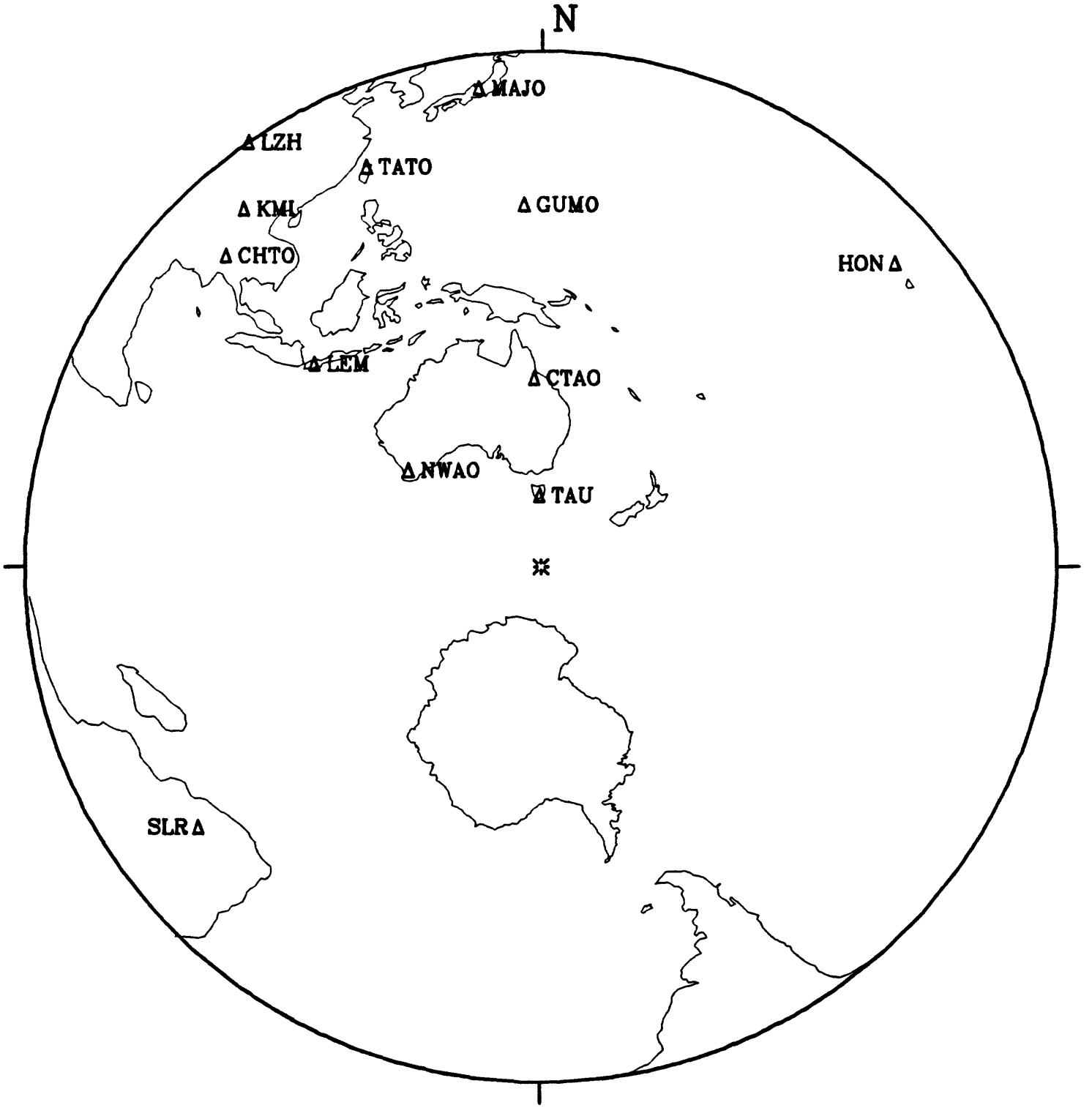
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=6.1

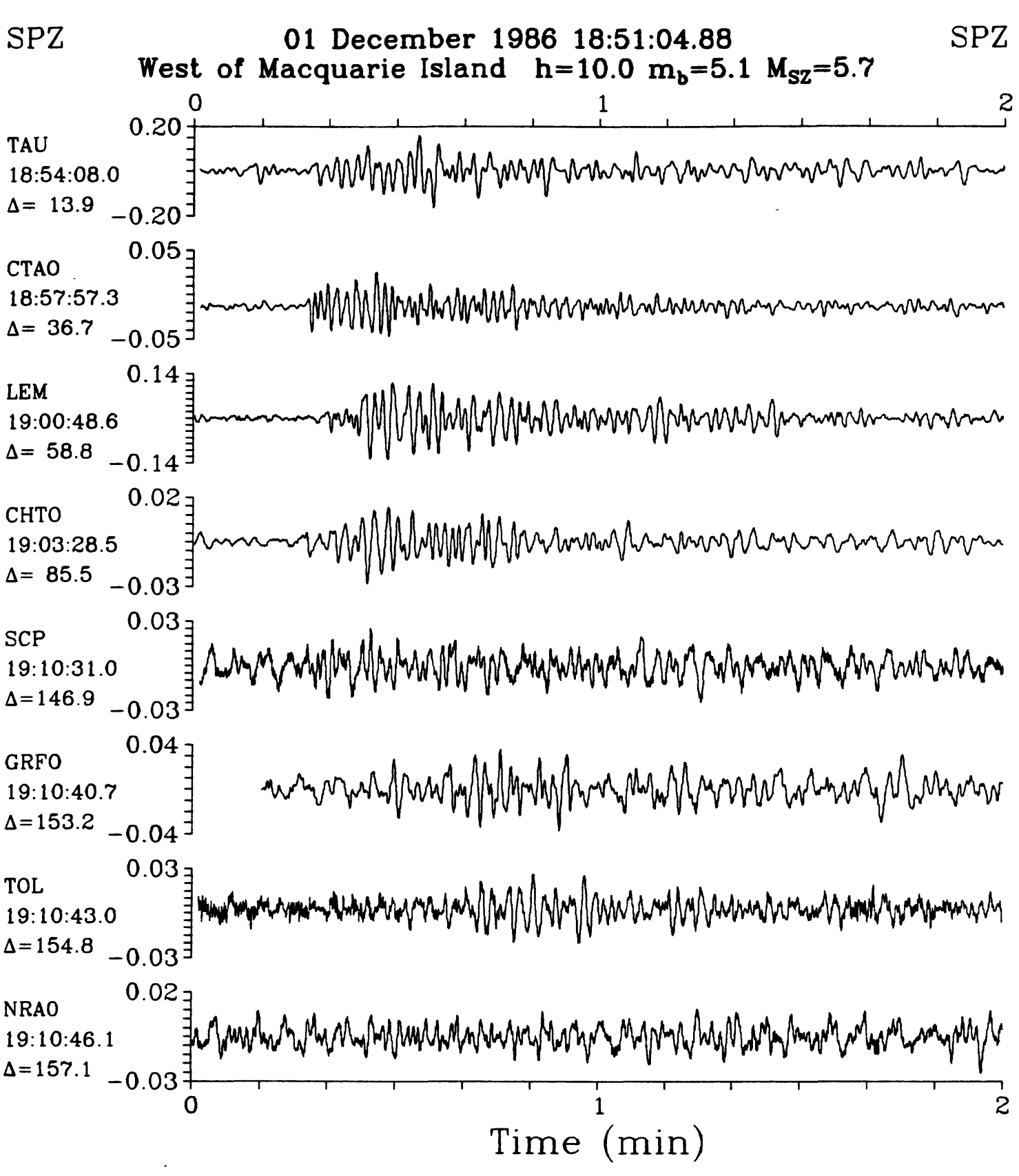
IPZ

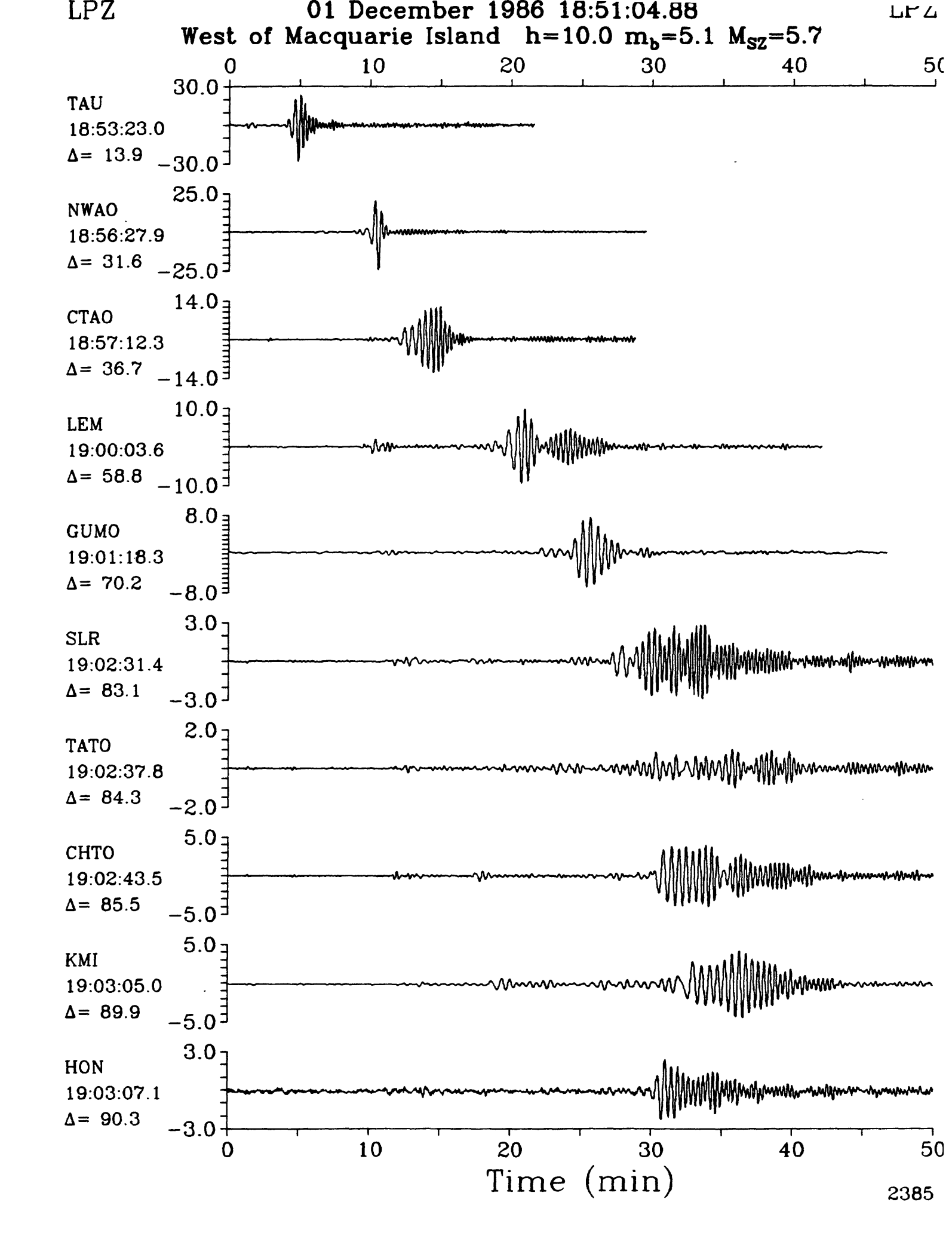


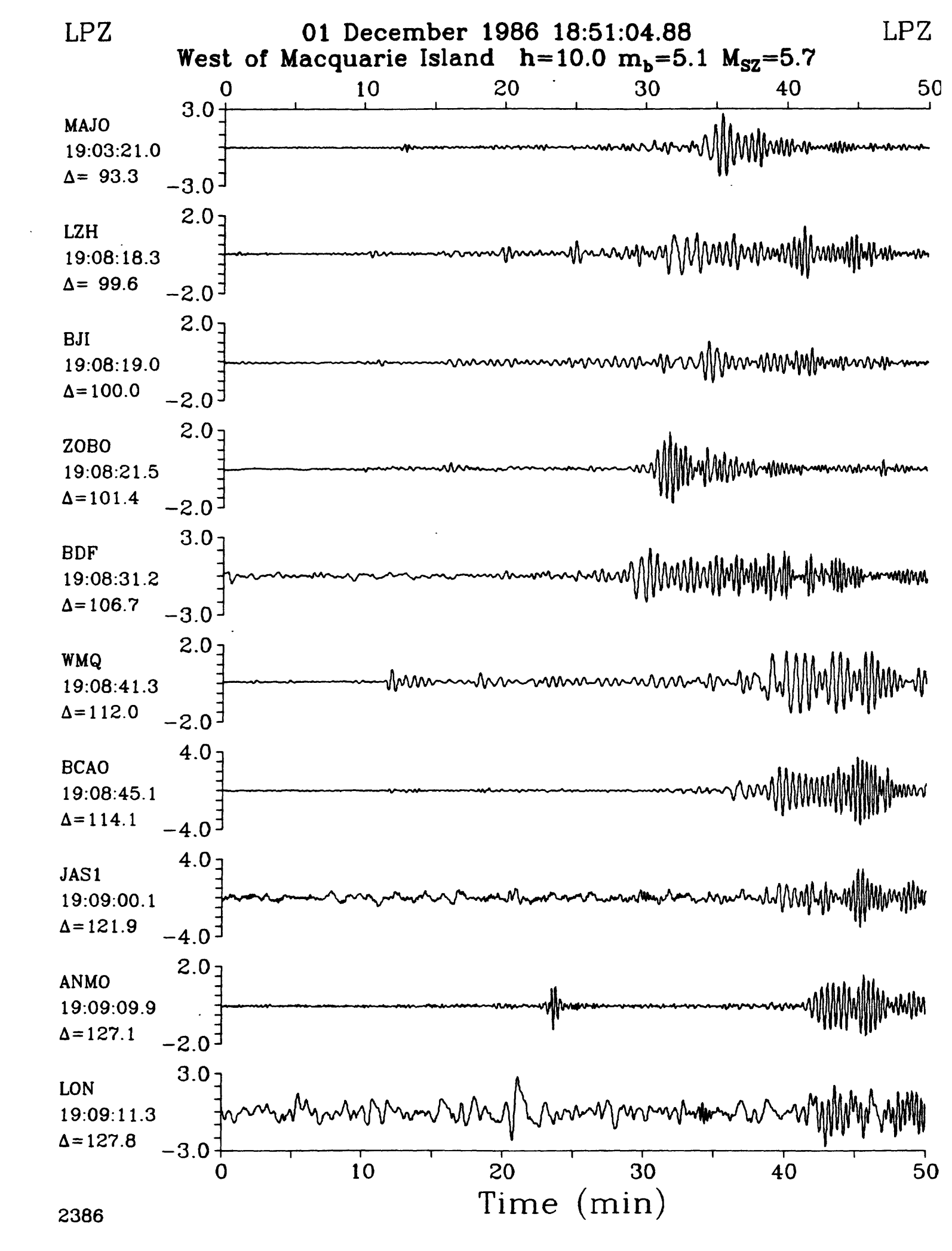
01 December 1986 18:51:04.88

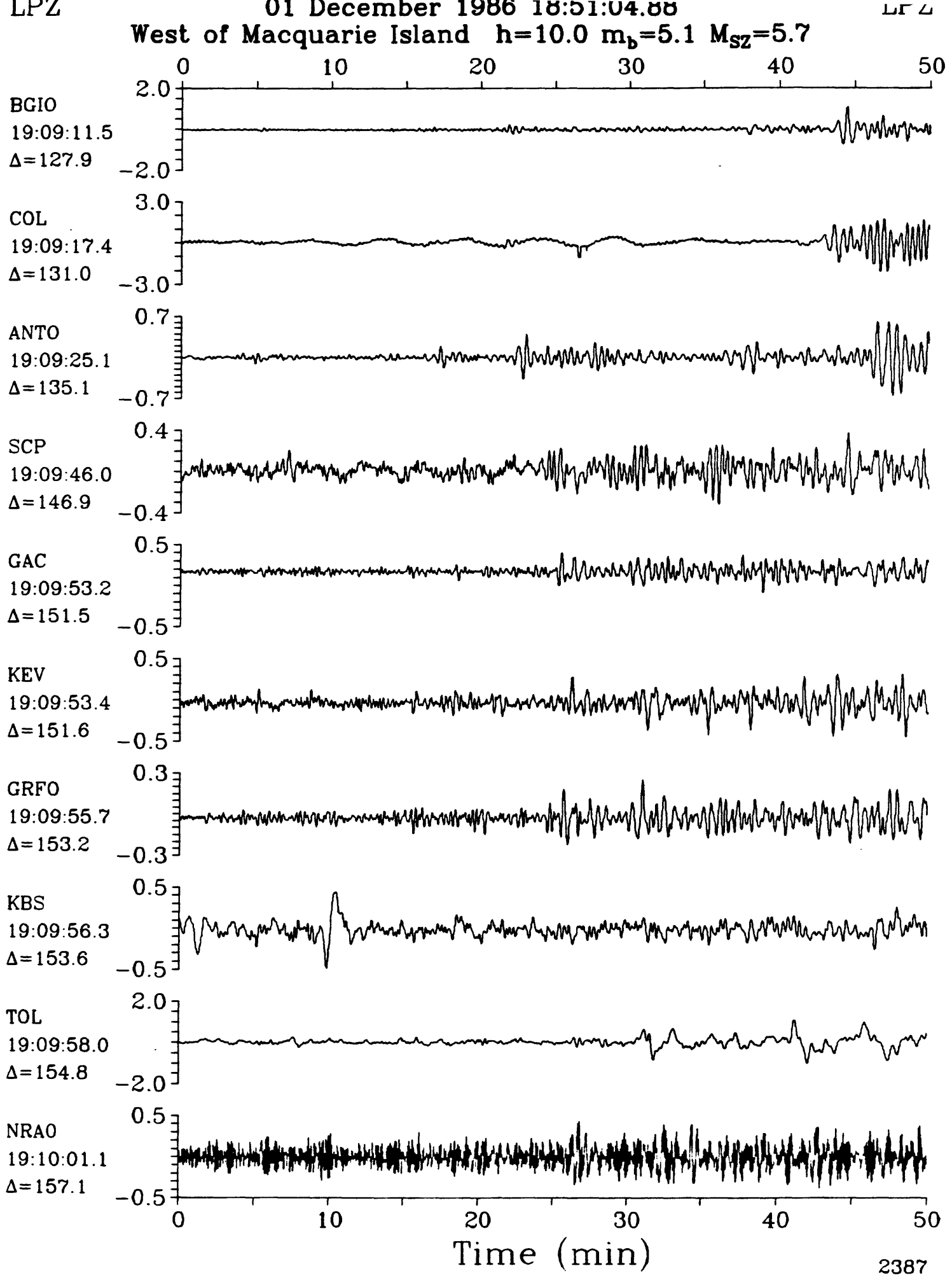
West of Macquarie Island

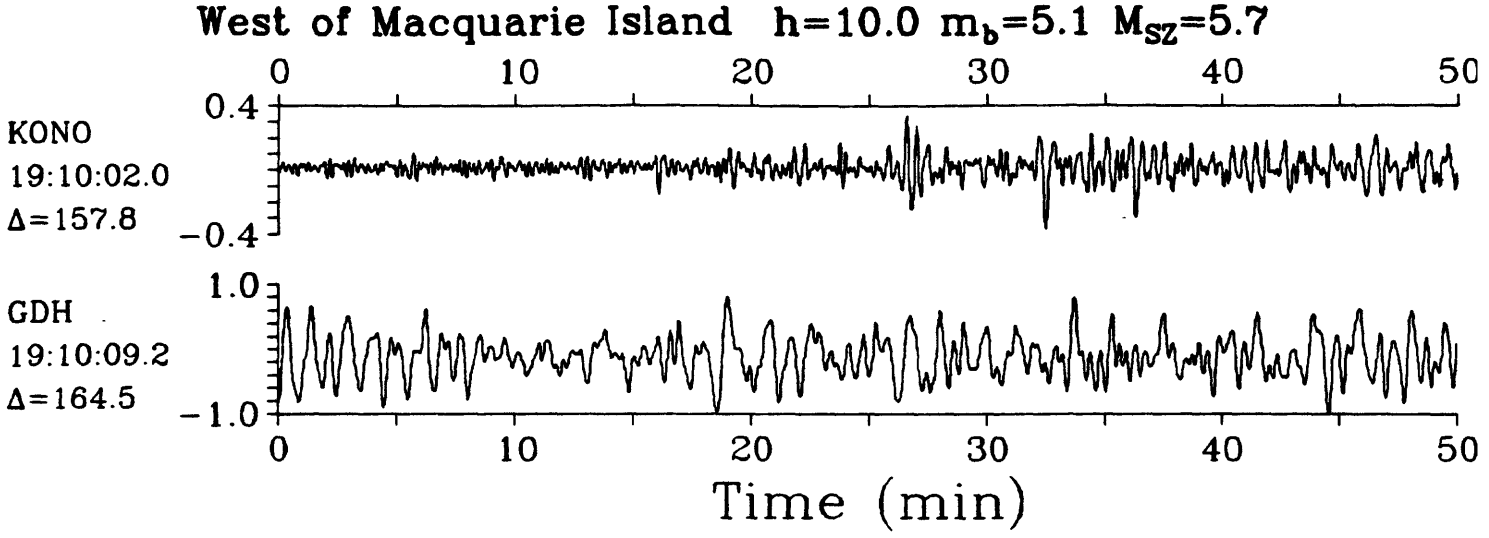



SPZ
01 December 1986 18:51:04.88
West of Macquarie Island h=10.0 m_b=5.1 M_{SZ}=5.7
SPZ
0
1
2
0.20
TAU
18:54:08.0
Δ= 13.9
−0.20
0.05
CTAO
18:57:57.3
Δ= 36.7
−0.05
0.14
LEM
19:00:48.6
Δ= 58.8
−0.14
0.02
CHTO
19:03:28.5
Δ= 85.5
−0.03
0.03
SCP
19:10:31.0
Δ=146.9
−0.03
0.04
GRFO
19:10:40.7
Δ=153.2
−0.04
0.03
TOL
19:10:43.0
Δ=154.8
−0.03
0.02
NRAO
19:10:46.1
Δ=157.1
−0.03
0
1
2
Time (min)


LPZ
01 December 1986 18:51:04.88
West of Macquarie Island h=10.0 m_b=5.1 M_{SZ}=5.7
0
10
20
30
40
50
TAU
18:53:23.0
Δ= 13.9
30.0
-30.0
NWAO
18:56:27.9
Δ= 31.6
25.0
-25.0
CTAO
18:57:12.3
Δ= 36.7
14.0
-14.0
LEM
19:00:03.6
Δ= 58.8
10.0
-10.0
GUMO
19:01:18.3
Δ= 70.2
8.0
-8.0
SLR
19:02:31.4
Δ= 83.1
3.0
-3.0
TATO
19:02:37.8
Δ= 84.3
2.0
-2.0
CHTO
19:02:43.5
Δ= 85.5
5.0
-5.0
KMI
19:03:05.0
Δ= 89.9
5.0
-5.0
HON
19:03:07.1
Δ= 90.3
3.0
-3.0
0
10
20
30
40
50
Time (min)
2385

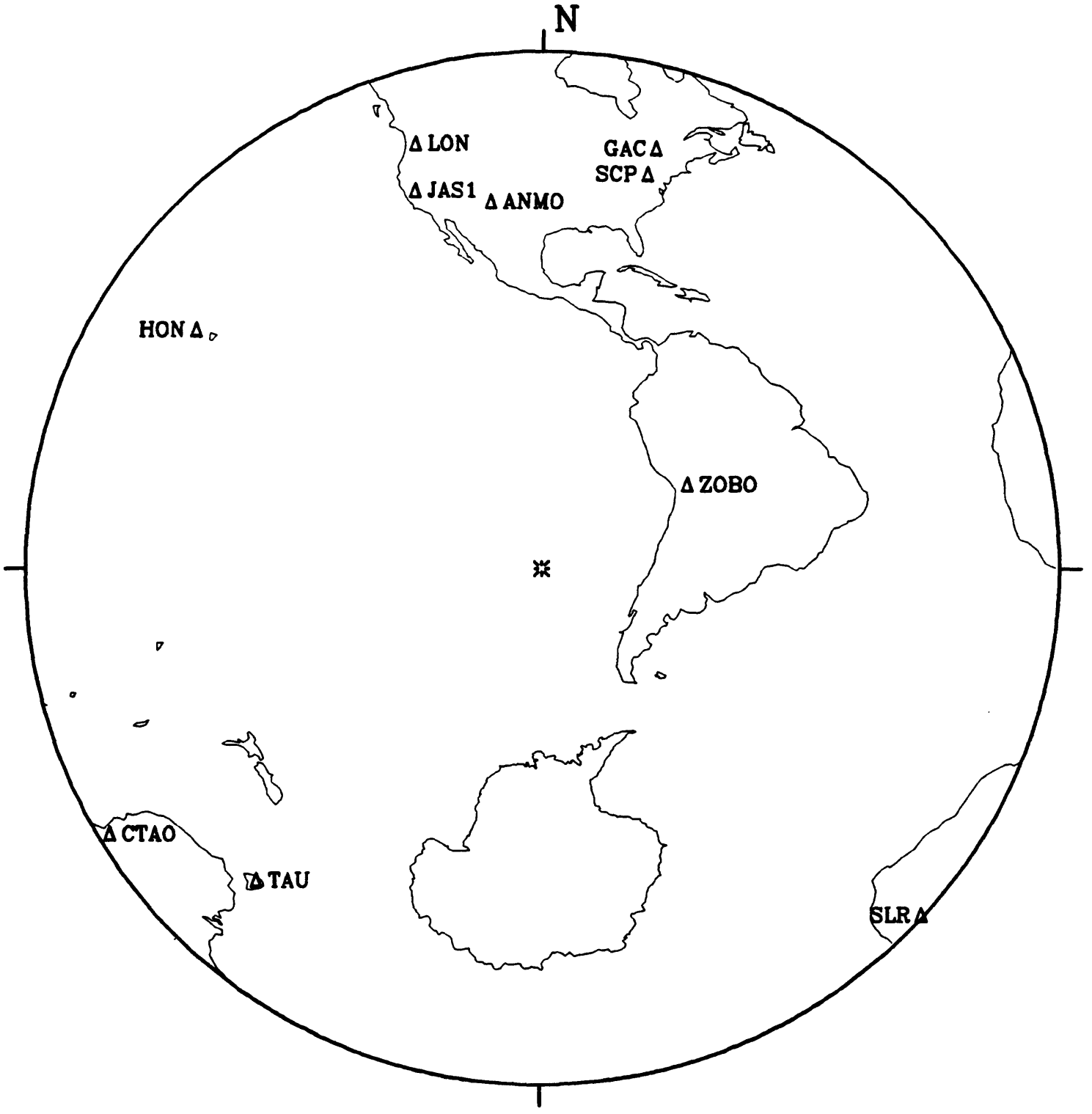

LPZ
01 December 1986 18:51:04.88
LPZ
West of Macquarie Island h=10.0 m_b=5.1 M_{SZ}=5.7
0
10
20
30
40
50
MAJO
19:03:21.0
Δ= 93.3
3.0
-3.0
LZH
19:08:18.3
Δ= 99.6
2.0
-2.0
BJI
19:08:19.0
Δ=100.0
2.0
-2.0
ZOBO
19:08:21.5
Δ=101.4
2.0
-2.0
BDF
19:08:31.2
Δ=106.7
3.0
-3.0
WMQ
19:08:41.3
Δ=112.0
2.0
-2.0
BCAO
19:08:45.1
Δ=114.1
4.0
-4.0
JAS1
19:09:00.1
Δ=121.9
4.0
-4.0
ANMO
19:09:09.9
Δ=127.1
2.0
-2.0
LON
19:09:11.3
Δ=127.8
3.0
-3.0
0
10
20
30
40
50
Time (min)
2386

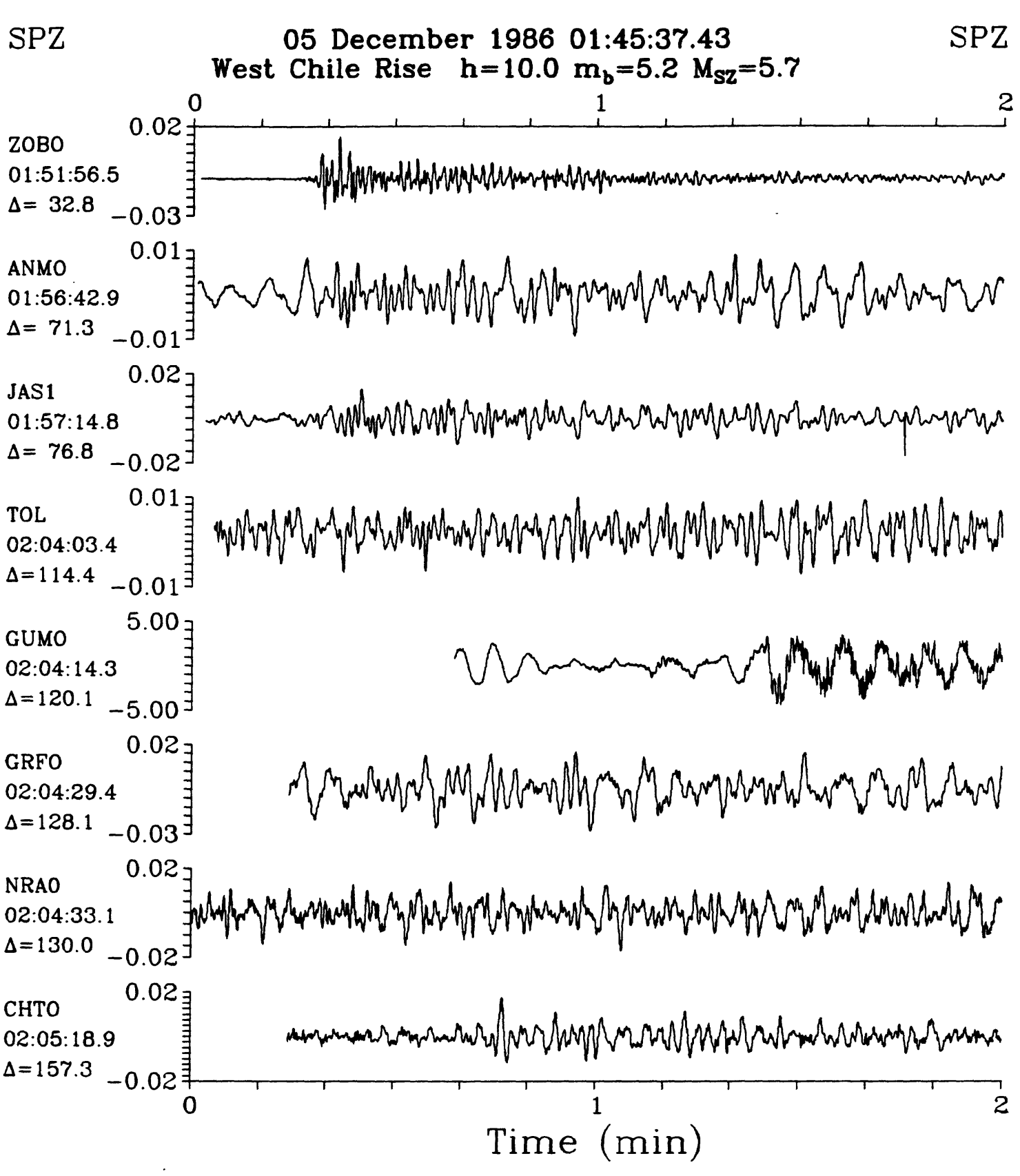

LPZ
01 December 1986 18:51:04.88
LPZ
West of Macquarie Island h=10.0 m_b=5.1 M_{SZ}=5.7
0
10
20
30
40
50
BGIO
19:09:11.5
Δ=127.9
2.0
-2.0
COL
19:09:17.4
Δ=131.0
3.0
-3.0
ANTO
19:09:25.1
Δ=135.1
0.7
-0.7
SCP
19:09:46.0
Δ=146.9
0.4
-0.4
GAC
19:09:53.2
Δ=151.5
0.5
-0.5
KEV
19:09:53.4
Δ=151.6
0.5
-0.5
GRFO
19:09:55.7
Δ=153.2
0.3
-0.3
KBS
19:09:56.3
Δ=153.6
0.5
-0.5
TOL
19:09:58.0
Δ=154.8
2.0
-2.0
NRAO
19:10:01.1
Δ=157.1
0.5
-0.5
0
10
20
30
40
50
Time (min)
2387

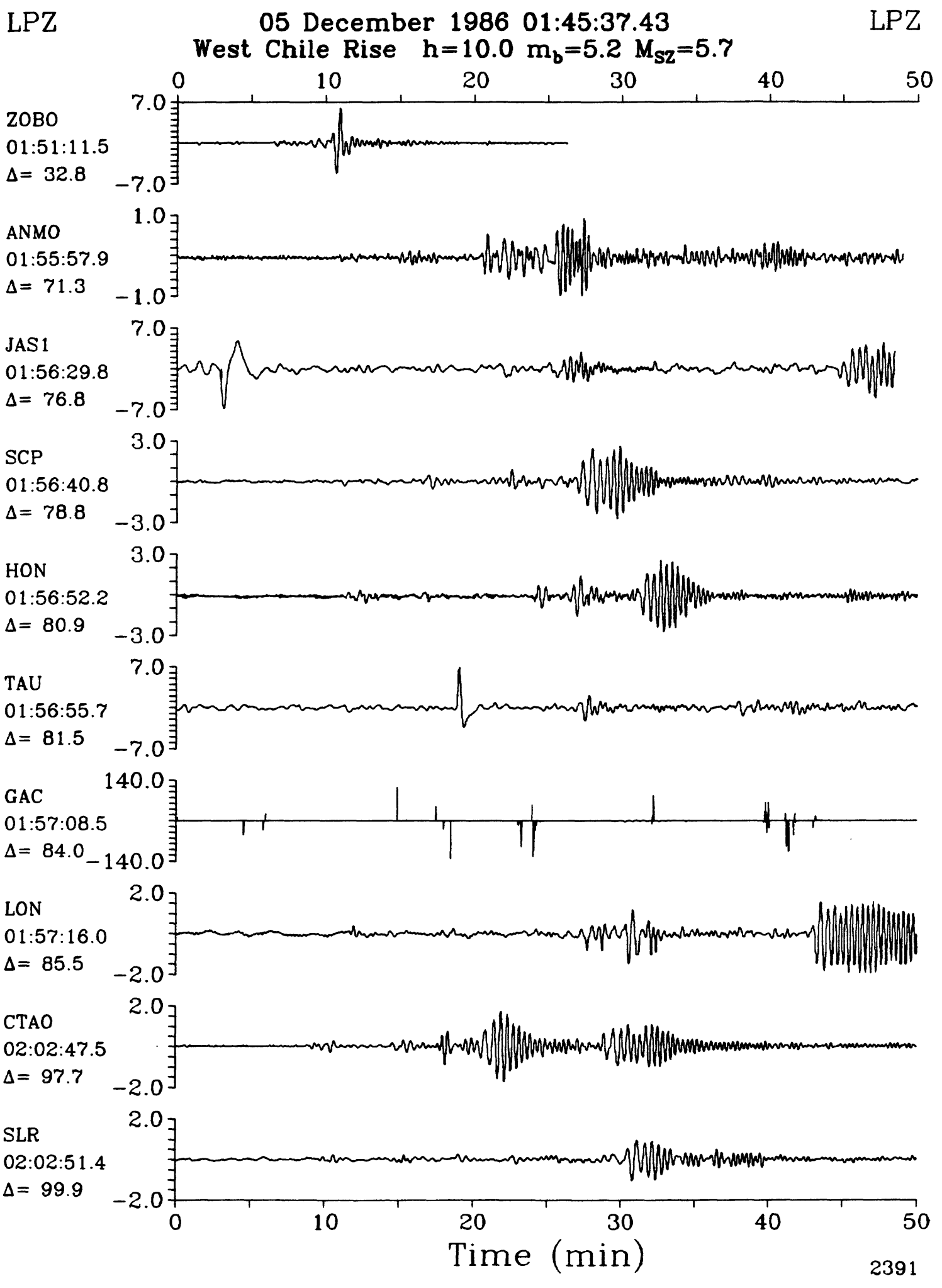

01 December 1986 18:51:04.88
West of Macquarie Island h=10.0 m_b=5.1 M_{SZ}=5.7
KONO
19:10:02.0
Δ=157.8
GDH
19:10:09.2
Δ=164.5
0.4
−0.4
1.0
−1.0
0
10
20
30
40
50
Time (min)

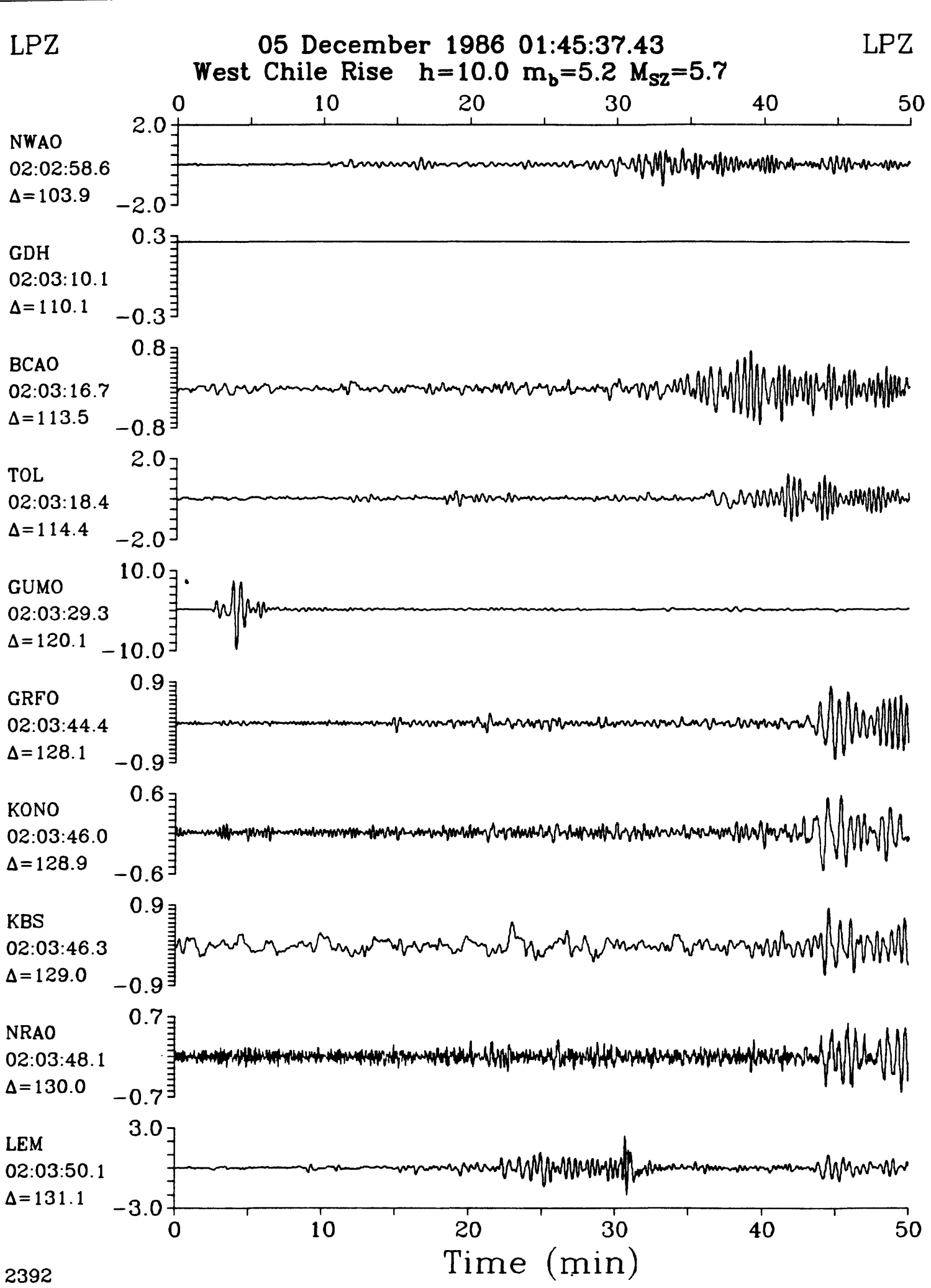
05 December 1986 01:45:37.43

West Chile Rise




SPZ
05 December 1986 01:45:37.43
West Chile Rise h=10.0 m_b=5.2 M_{SZ}=5.7
SPZ
0
1
2
0.02
ZOBO
01:51:56.5
Δ= 32.8
−0.03
0.01
ANMO
01:56:42.9
Δ= 71.3
−0.01
0.02
JAS1
01:57:14.8
Δ= 76.8
−0.02
0.01
TOL
02:04:03.4
Δ=114.4
−0.01
5.00
GUMO
02:04:14.3
Δ=120.1
−5.00
0.02
GRFO
02:04:29.4
Δ=128.1
−0.03
0.02
NRAO
02:04:33.1
Δ=130.0
−0.02
0.02
CHTO
02:05:18.9
Δ=157.3
−0.02
0
1
2
Time (min)

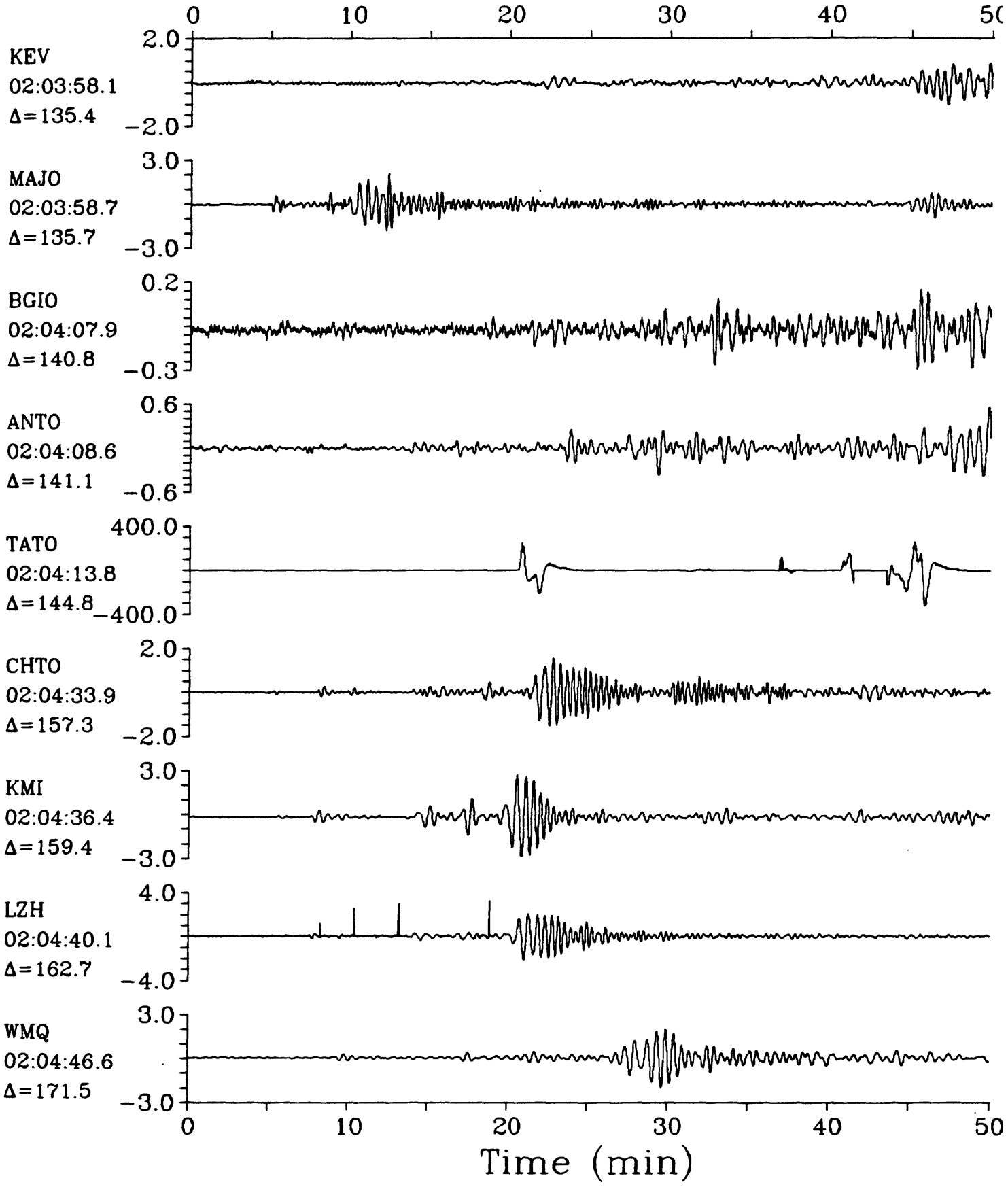

LPZ
05 December 1986 01:45:37.43
West Chile Rise h=10.0 m_b=5.2 M_{SZ}=5.7
LPZ
0
10
20
30
40
50
ZOBO
01:51:11.5
Δ= 32.8
7.0
-7.0
ANMO
01:55:57.9
Δ= 71.3
1.0
-1.0
JAS1
01:56:29.8
Δ= 76.8
7.0
-7.0
SCP
01:56:40.8
Δ= 78.8
3.0
-3.0
HON
01:56:52.2
Δ= 80.9
3.0
-3.0
TAU
01:56:55.7
Δ= 81.5
7.0
-7.0
GAC
01:57:08.5
Δ= 84.0
140.0
-140.0
LON
01:57:16.0
Δ= 85.5
2.0
-2.0
CTAO
02:02:47.5
Δ= 97.7
2.0
-2.0
SLR
02:02:51.4
Δ= 99.9
2.0
-2.0
0
10
20
30
40
50
Time (min)
2391


LPZ
05 December 1986 01:45:37.43
West Chile Rise h=10.0 m_b=5.2 M_{SZ}=5.7
LPZ
0
10
20
30
40
50
NWAO
02:02:58.6
Δ=103.9
2.0
-2.0
GDH
02:03:10.1
Δ=110.1
0.3
-0.3
BCAO
02:03:16.7
Δ=113.5
0.8
-0.8
TOL
02:03:18.4
Δ=114.4
2.0
-2.0
GUMO
02:03:29.3
Δ=120.1
10.0
-10.0
GRFO
02:03:44.4
Δ=128.1
0.9
-0.9
KONO
02:03:46.0
Δ=128.9
0.6
-0.6
KBS
02:03:46.3
Δ=129.0
0.9
-0.9
NRAO
02:03:48.1
Δ=130.0
0.7
-0.7
LEM
02:03:50.1
Δ=131.1
3.0
-3.0
0
10
20
30
40
50
Time (min)

05 December 1986 01:45:37.43

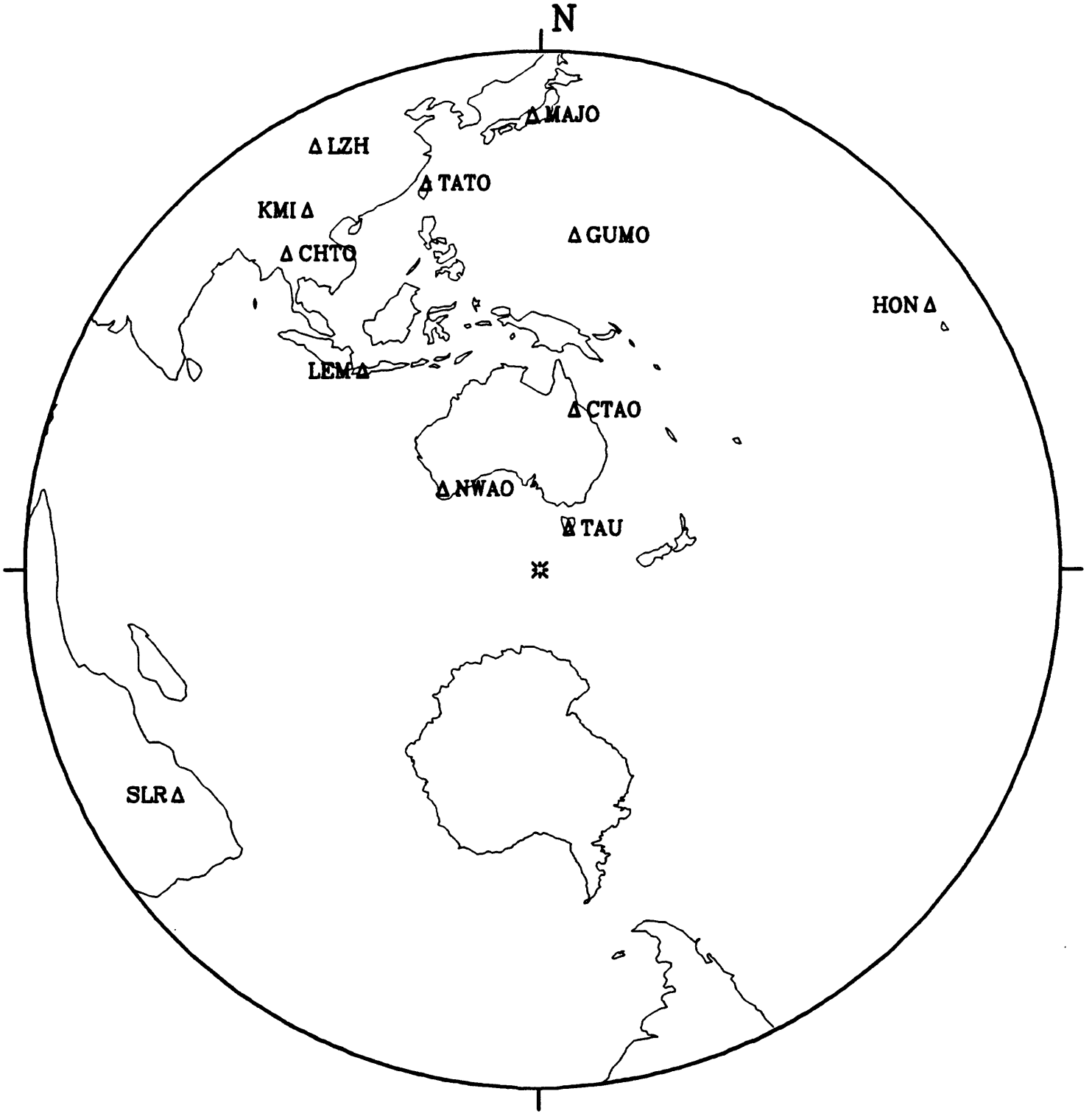
West Chile Rise h=10.0 m_b=5.2 M_{SZ}=5.7

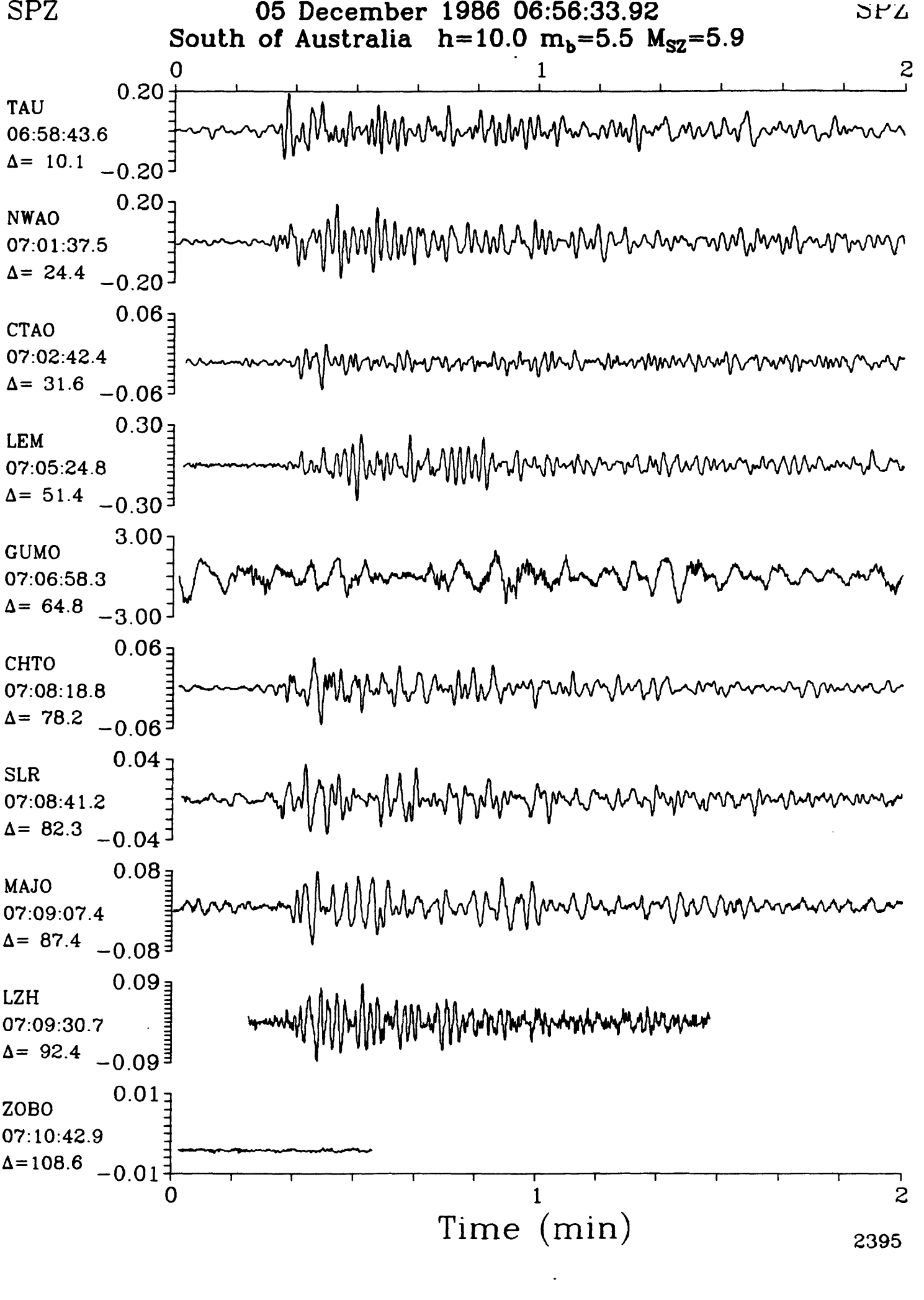
LPZ

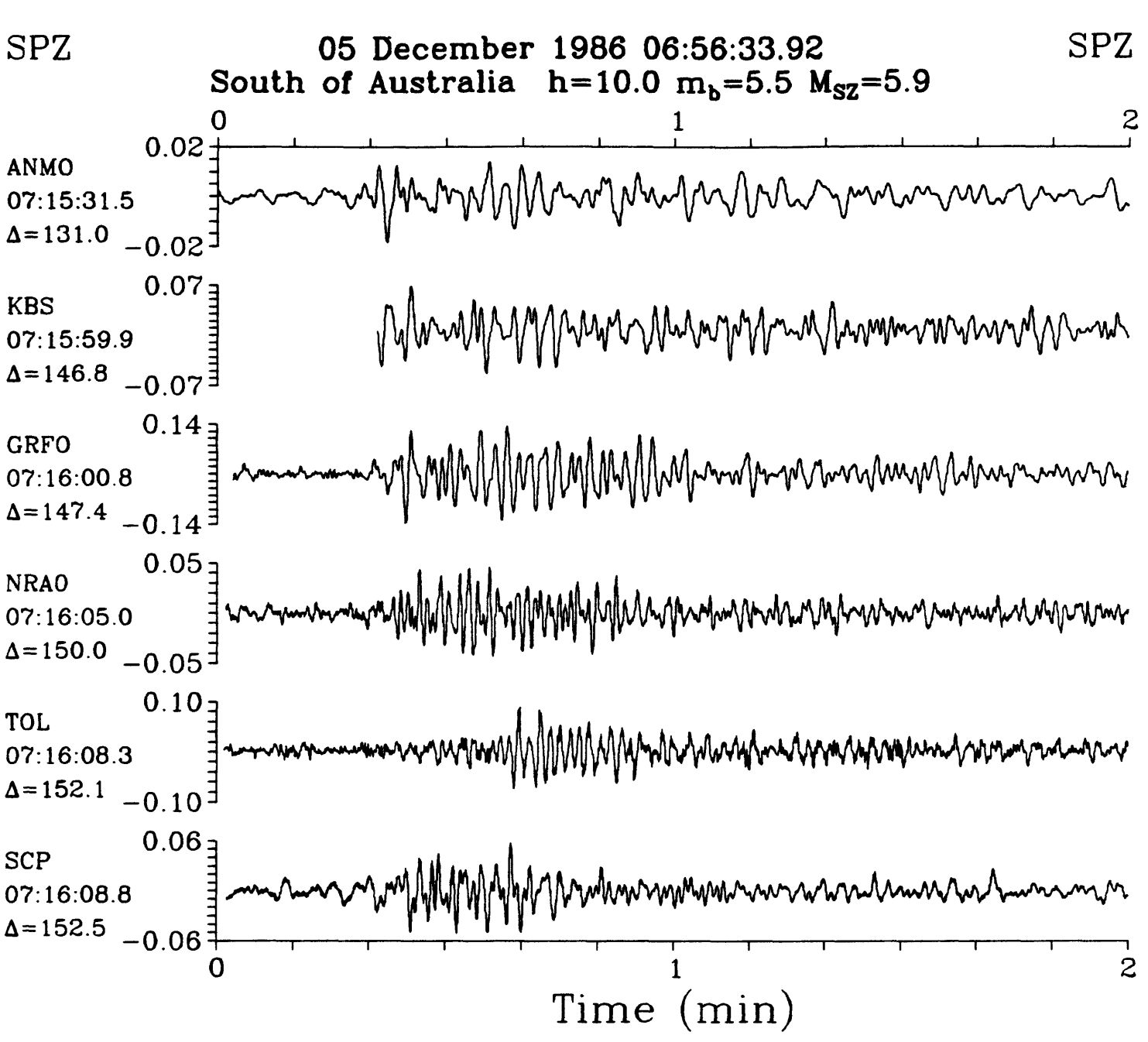


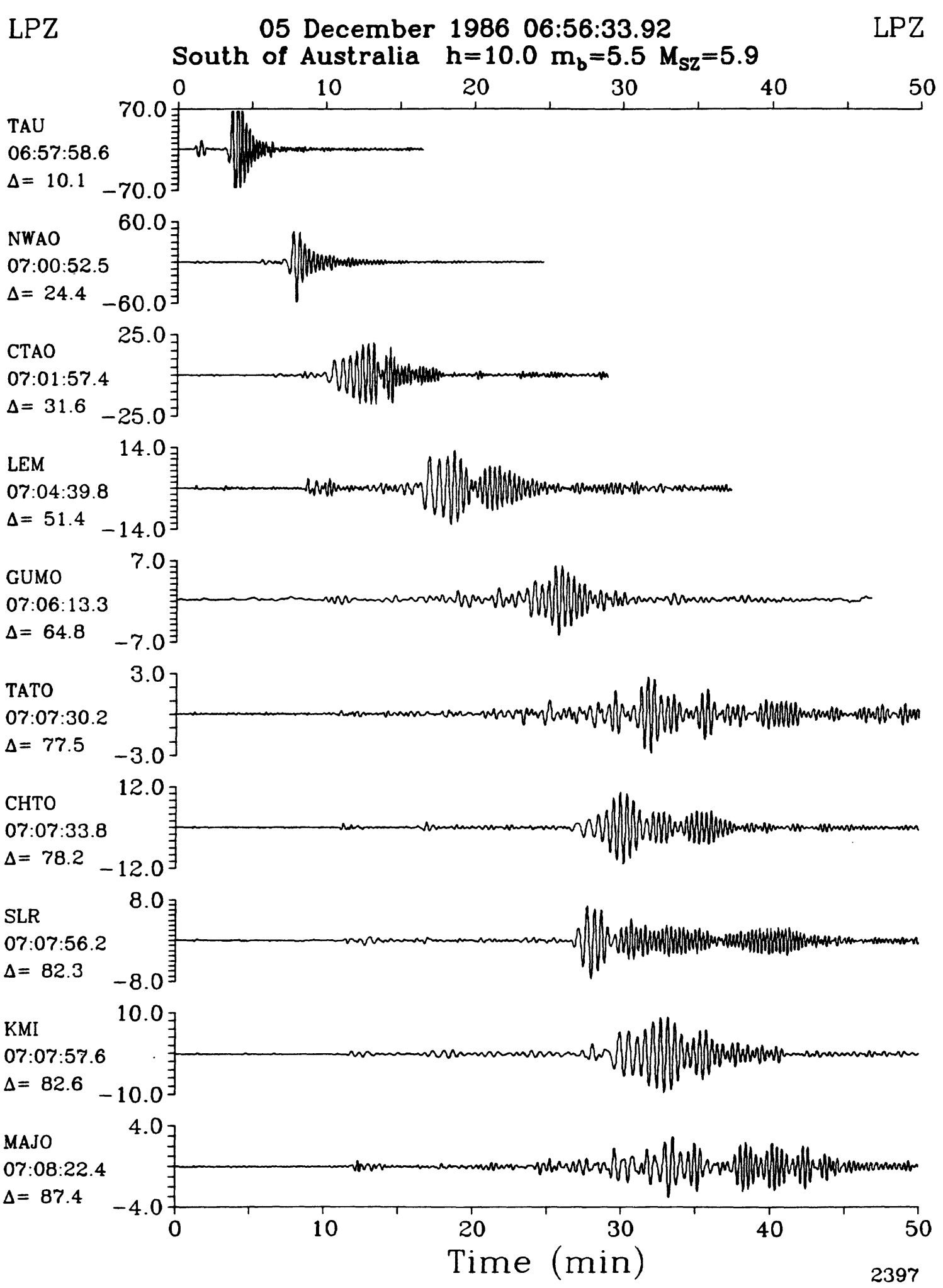
05 December 1986 06:56:33.92

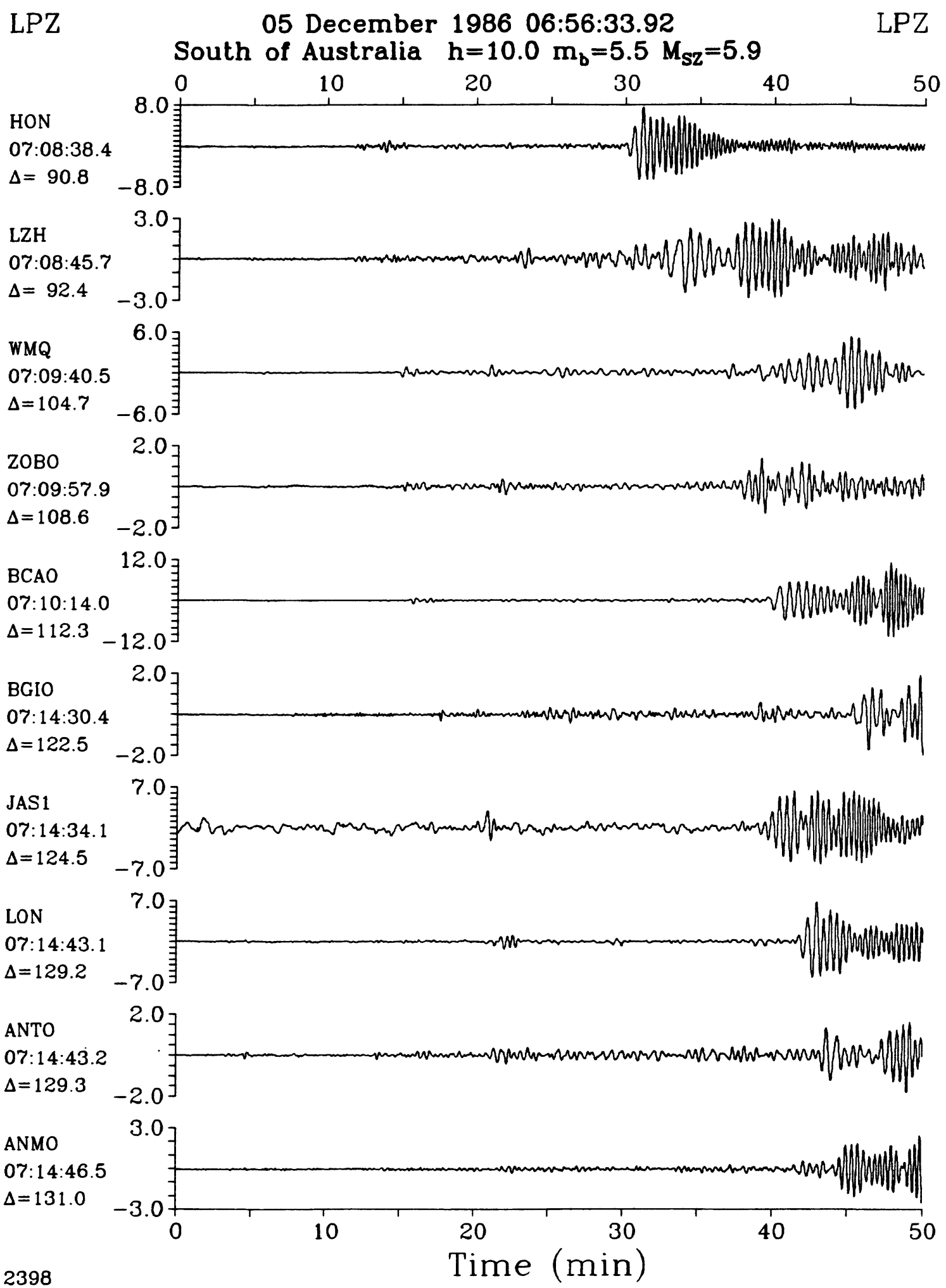
South of Australia

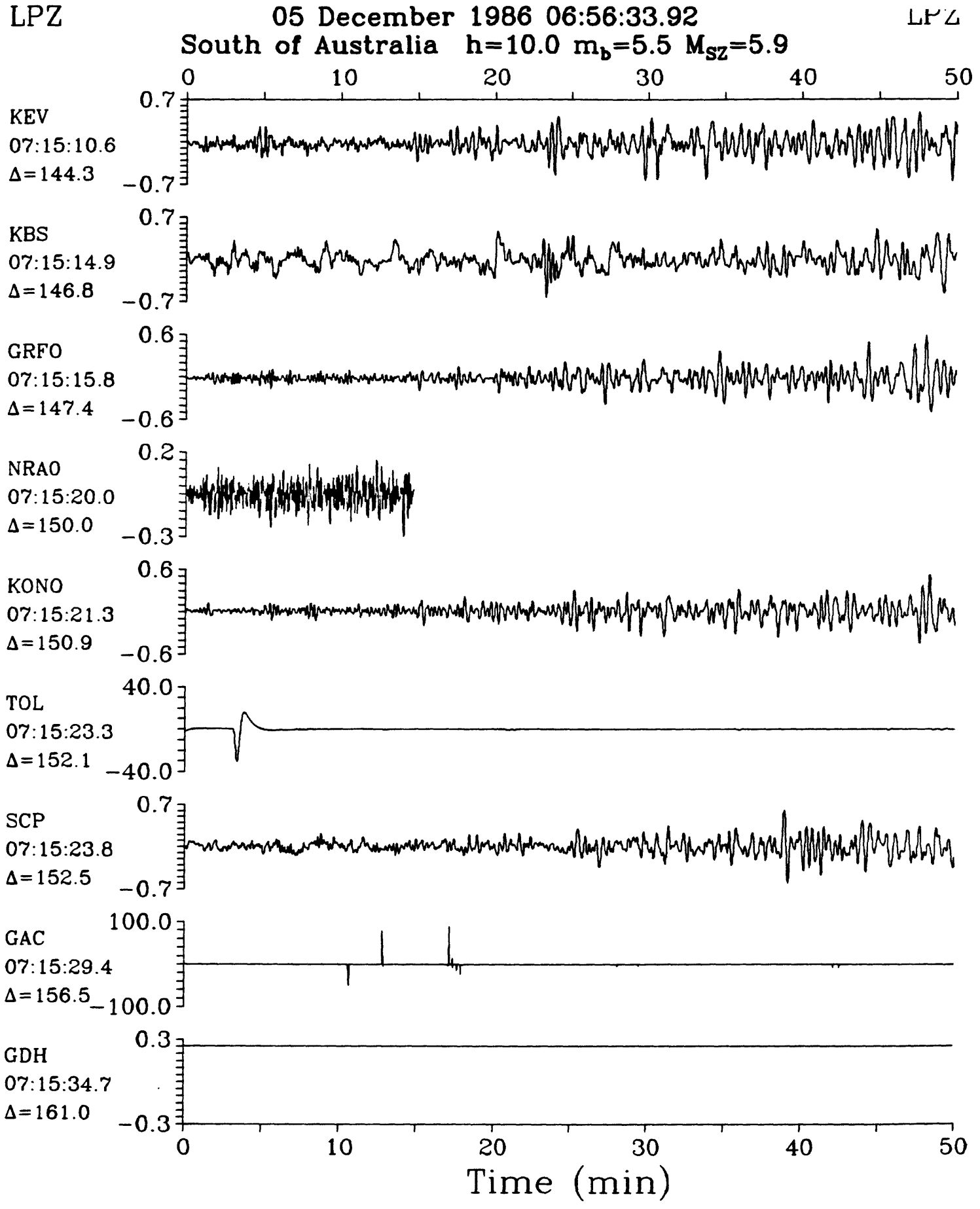



SPZ
05 December 1986 06:56:33.92
South of Australia h=10.0 m_b=5.5 M_{SZ}=5.9
SPZ
0
1
2
TAU
06:58:43.6
Δ= 10.1
0.20
-0.20
NWAO
07:01:37.5
Δ= 24.4
0.20
-0.20
CTAO
07:02:42.4
Δ= 31.6
0.06
-0.06
LEM
07:05:24.8
Δ= 51.4
0.30
-0.30
GUMO
07:06:58.3
Δ= 64.8
3.00
-3.00
CHTO
07:08:18.8
Δ= 78.2
0.06
-0.06
SLR
07:08:41.2
Δ= 82.3
0.04
-0.04
MAJO
07:09:07.4
Δ= 87.4
0.08
-0.08
LZH
07:09:30.7
Δ= 92.4
0.09
-0.09
ZOBO
07:10:42.9
Δ=108.6
0.01
-0.01
0
1
2
Time (min)
2395


SPZ
05 December 1986 06:56:33.92
South of Australia h=10.0 m_b=5.5 M_{SZ}=5.9
SPZ
0
1
2
ANMO
07:15:31.5
Δ=131.0
0.02
−0.02
KBS
07:15:59.9
Δ=146.8
0.07
−0.07
GRFO
07:16:00.8
Δ=147.4
0.14
−0.14
NRAO
07:16:05.0
Δ=150.0
0.05
−0.05
TOL
07:16:08.3
Δ=152.1
0.10
−0.10
SCP
07:16:08.8
Δ=152.5
0.06
−0.06
0
1
2
Time (min)


LPZ
05 December 1986 06:56:33.92
South of Australia h=10.0 m_b=5.5 M_{SZ}=5.9
LPZ
0
10
20
30
40
50
TAU
06:57:58.6
Δ= 10.1
70.0
-70.0
NWAO
07:00:52.5
Δ= 24.4
60.0
-60.0
CTAO
07:01:57.4
Δ= 31.6
25.0
-25.0
LEM
07:04:39.8
Δ= 51.4
14.0
-14.0
GUMO
07:06:13.3
Δ= 64.8
7.0
-7.0
TATO
07:07:30.2
Δ= 77.5
3.0
-3.0
CHTO
07:07:33.8
Δ= 78.2
12.0
-12.0
SLR
07:07:56.2
Δ= 82.3
8.0
-8.0
KMI
07:07:57.6
Δ= 82.6
10.0
-10.0
MAJO
07:08:22.4
Δ= 87.4
4.0
-4.0
0
10
20
30
40
50
Time (min)
2397

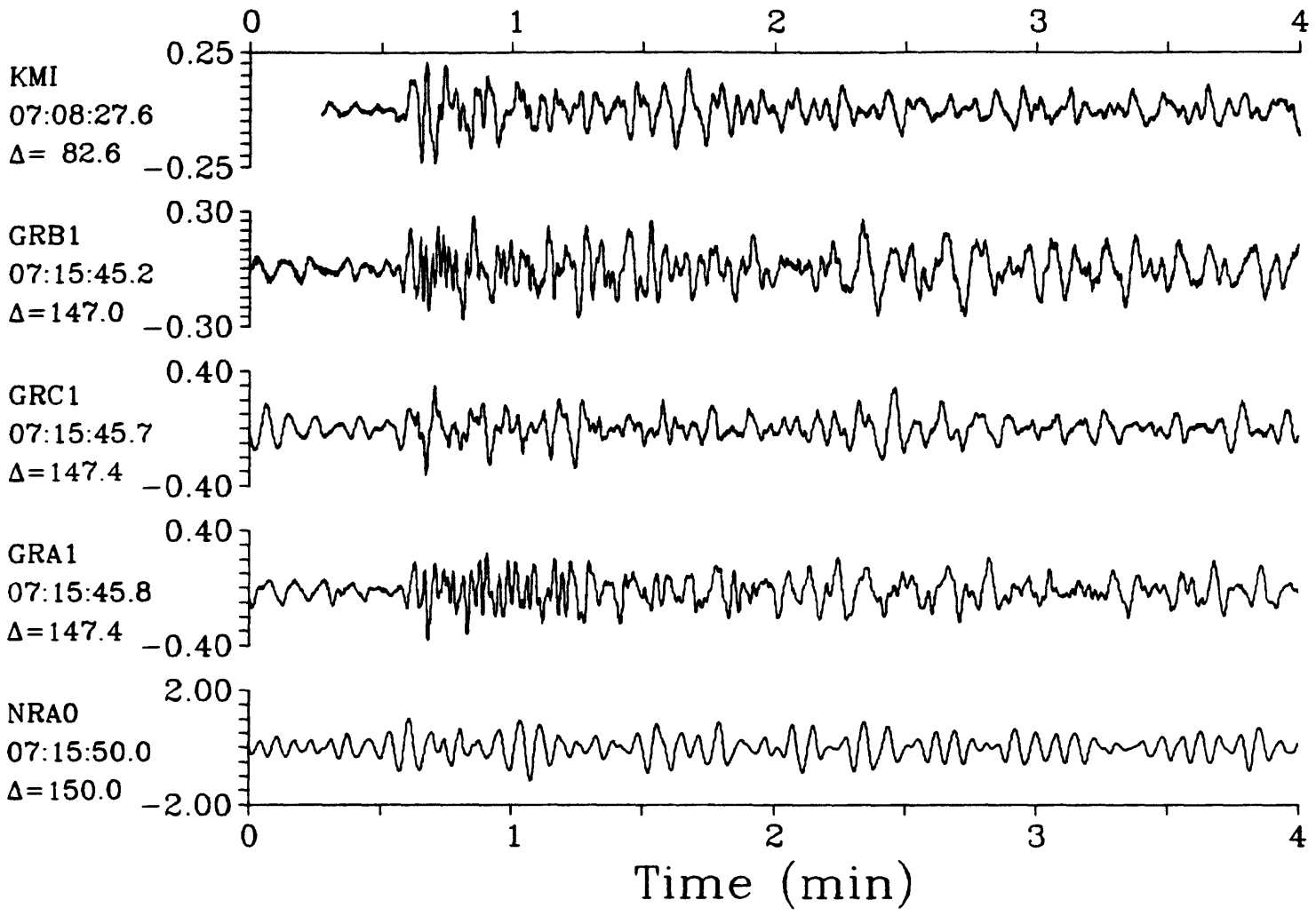

LPZ
05 December 1986 06:56:33.92
South of Australia h=10.0 m_b=5.5 M_{SZ}=5.9
LPZ
0
10
20
30
40
50
HON
07:08:38.4
Δ= 90.8
8.0
-8.0
LZH
07:08:45.7
Δ= 92.4
3.0
-3.0
WMQ
07:09:40.5
Δ=104.7
6.0
-6.0
ZOBO
07:09:57.9
Δ=108.6
2.0
-2.0
BCAO
07:10:14.0
Δ=112.3
12.0
-12.0
BGIO
07:14:30.4
Δ=122.5
2.0
-2.0
JAS1
07:14:34.1
Δ=124.5
7.0
-7.0
LON
07:14:43.1
Δ=129.2
7.0
-7.0
ANTO
07:14:43.2
Δ=129.3
2.0
-2.0
ANMO
07:14:46.5
Δ=131.0
3.0
-3.0
0
10
20
30
40
50
Time (min)


LPZ
05 December 1986 06:56:33.92
South of Australia h=10.0 m_b=5.5 M_{SZ}=5.9
LPZ
0
10
20
30
40
50
KEV
07:15:10.6
Δ=144.3
0.7
-0.7
KBS
07:15:14.9
Δ=146.8
0.7
-0.7
GRFO
07:15:15.8
Δ=147.4
0.6
-0.6
NRAO
07:15:20.0
Δ=150.0
0.2
-0.3
KONO
07:15:21.3
Δ=150.9
0.6
-0.6
TOL
07:15:23.3
Δ=152.1
40.0
-40.0
SCP
07:15:23.8
Δ=152.5
0.7
-0.7
GAC
07:15:29.4
Δ=156.5
100.0
-100.0
GDH
07:15:34.7
Δ=161.0
0.3
-0.3
0
10
20
30
40
50
Time (min)

05 December 1986 06:56:33.92

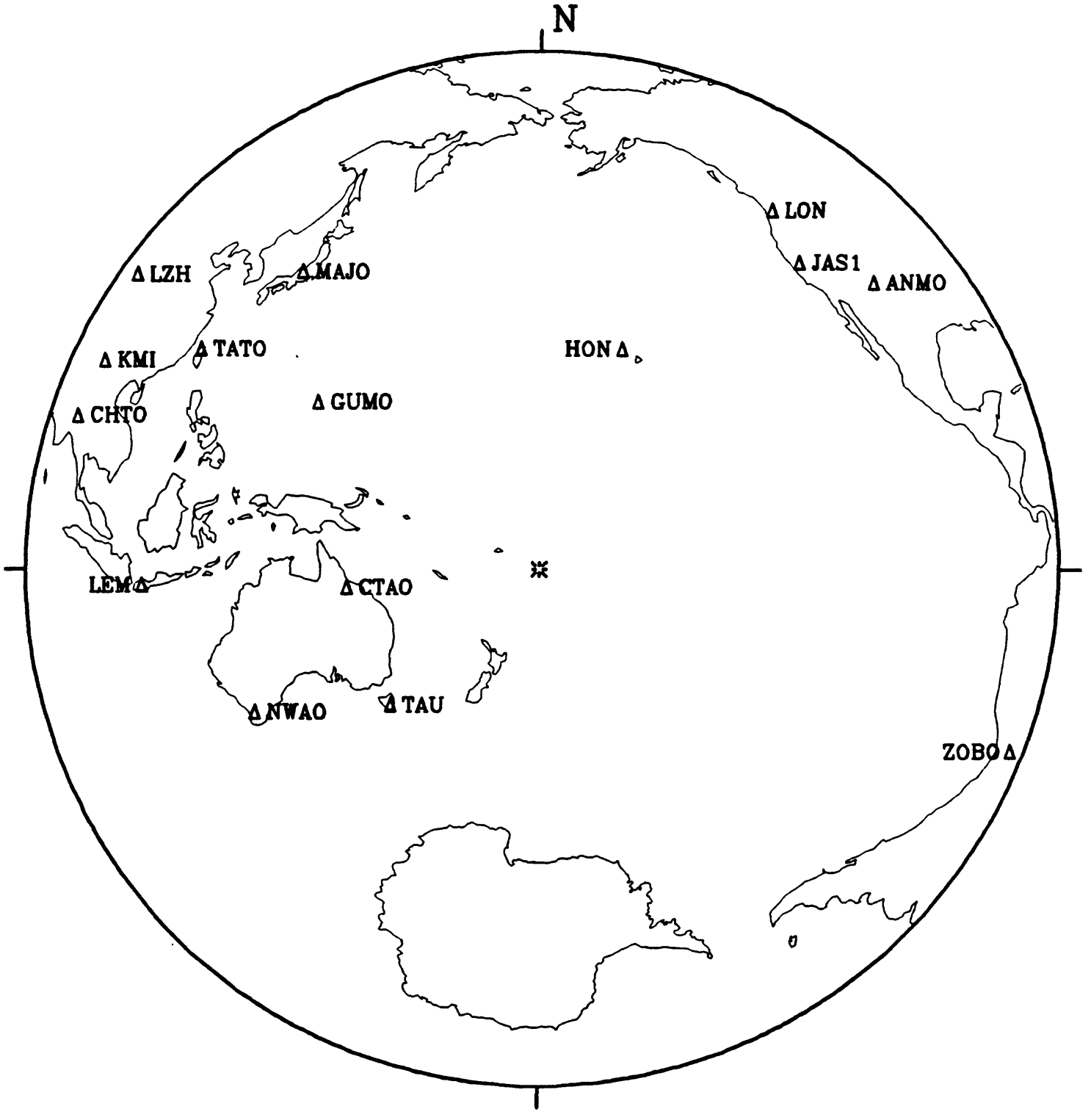
South of Australia h=10.0 m_b=5.5 M_{SZ}=5.9

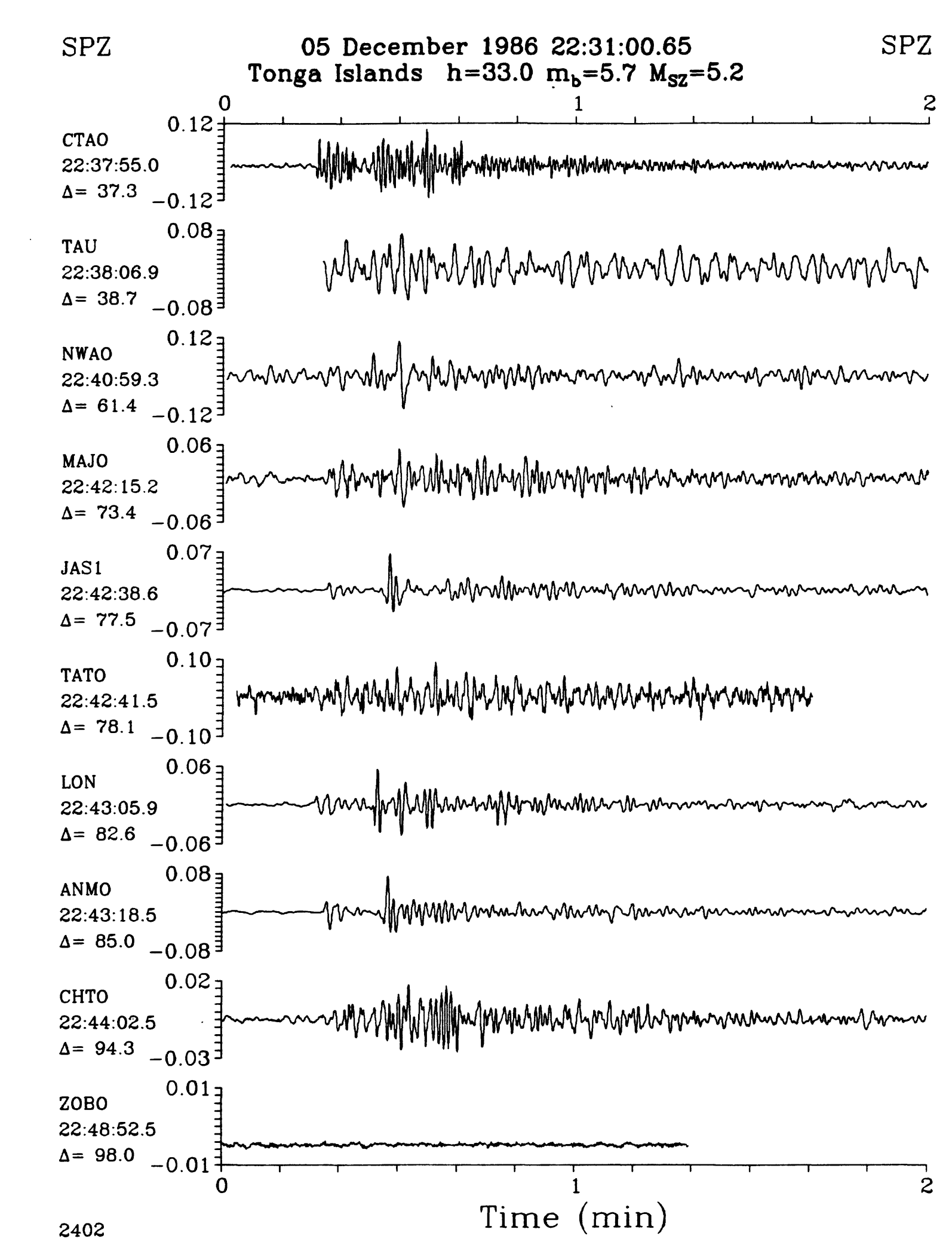
IPZ

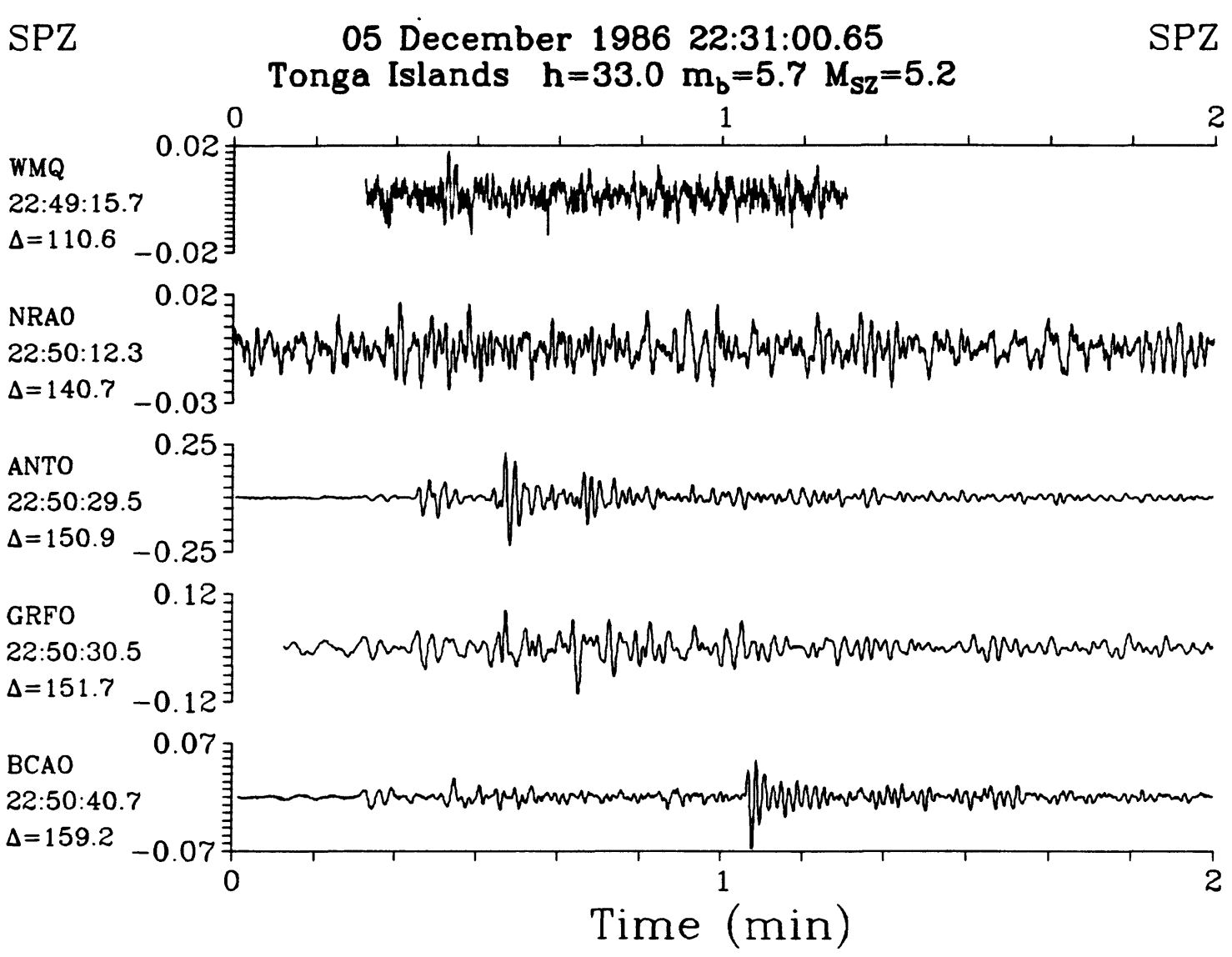


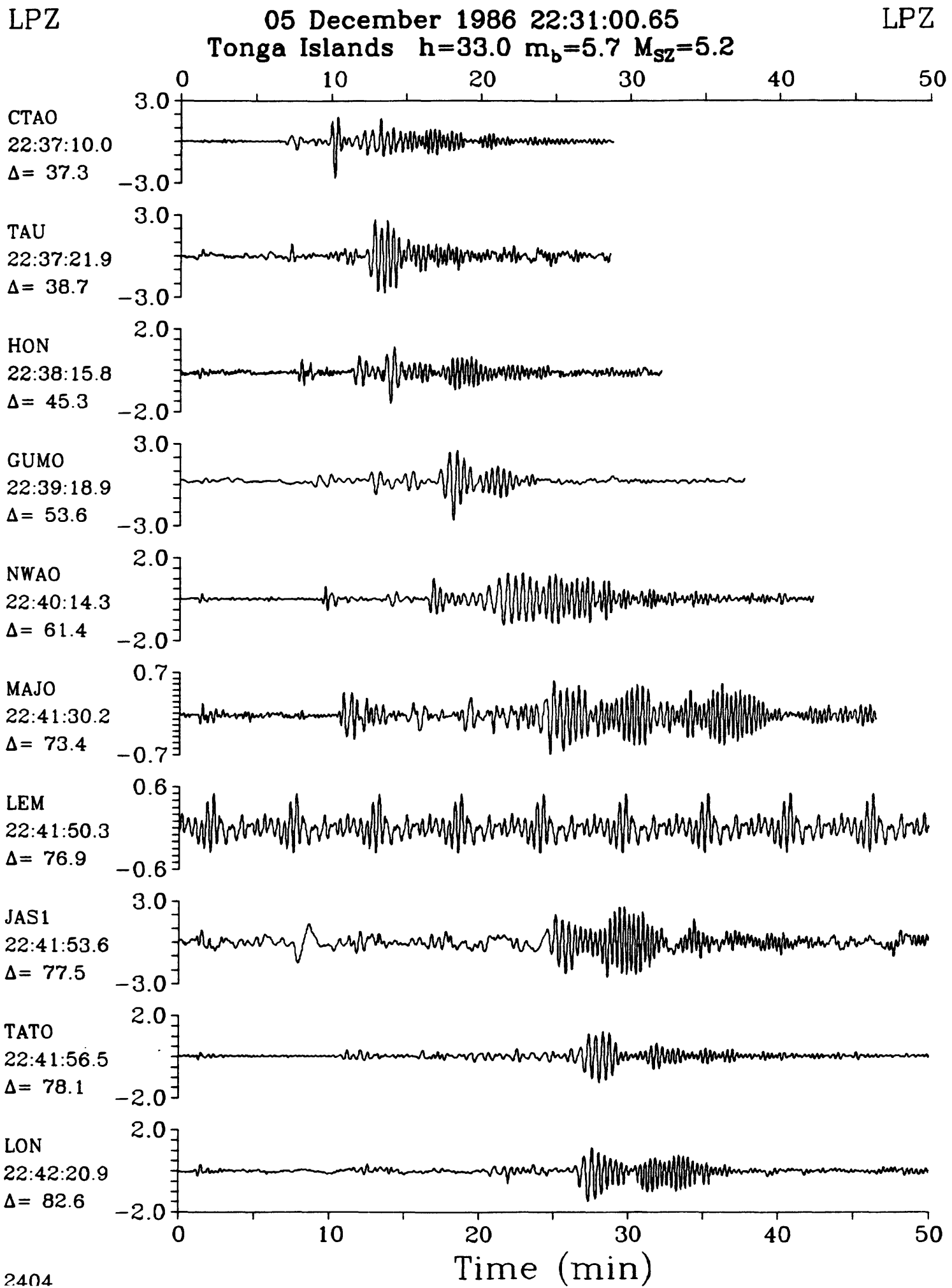
05 December 1986 22:31:00.65

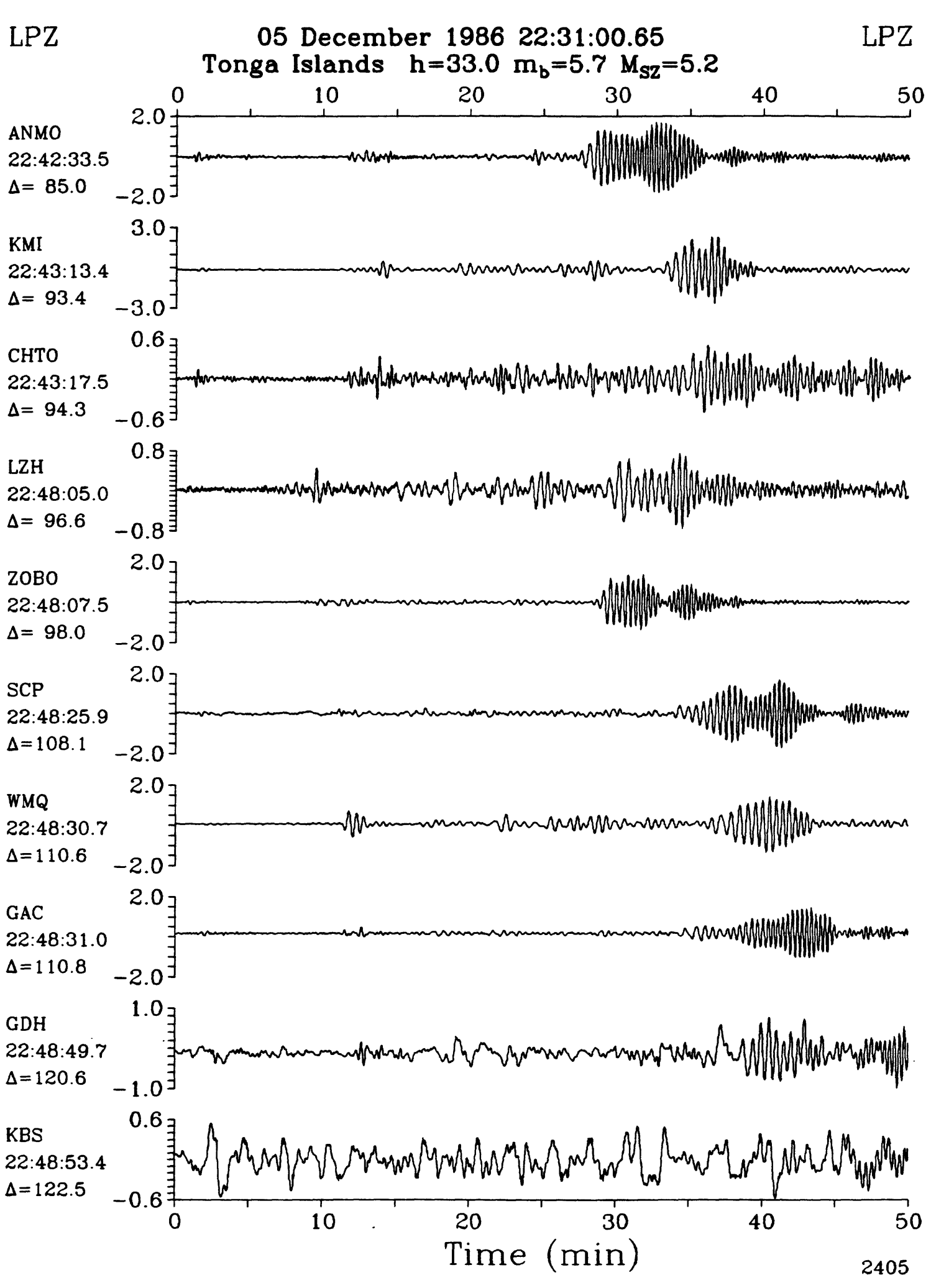
Tonga Islands

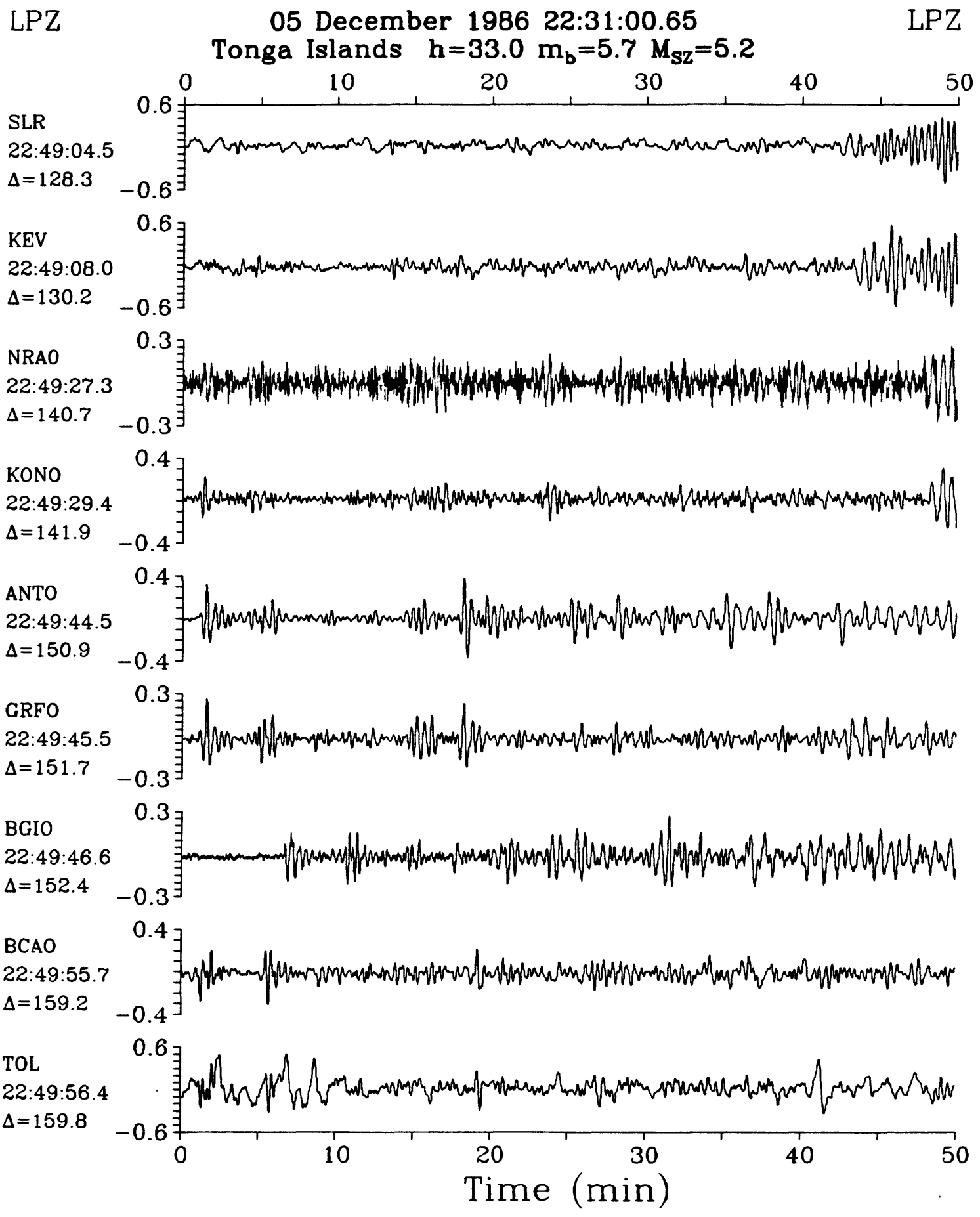



SPZ
05 December 1986 22:31:00.65
Tonga Islands h=33.0 m_b=5.7 M_{SZ}=5.2
SPZ
0
1
2
0.12
CTAO
22:37:55.0
Δ= 37.3
−0.12
0.08
TAU
22:38:06.9
Δ= 38.7
−0.08
0.12
NWAO
22:40:59.3
Δ= 61.4
−0.12
0.06
MAJO
22:42:15.2
Δ= 73.4
−0.06
0.07
JAS1
22:42:38.6
Δ= 77.5
−0.07
0.10
TATO
22:42:41.5
Δ= 78.1
−0.10
0.06
LON
22:43:05.9
Δ= 82.6
−0.06
0.08
ANMO
22:43:18.5
Δ= 85.0
−0.08
0.02
CHTO
22:44:02.5
Δ= 94.3
−0.03
0.01
ZOBO
22:48:52.5
Δ= 98.0
−0.01
0
1
2
Time (min)


SPZ
05 December 1986 22:31:00.65
Tonga Islands h=33.0 m_b=5.7 M_{SZ}=5.2
SPZ
0
1
2
WMQ
22:49:15.7
Δ=110.6
0.02
-0.02
NRAO
22:50:12.3
Δ=140.7
0.02
-0.03
ANTO
22:50:29.5
Δ=150.9
0.25
-0.25
GRFO
22:50:30.5
Δ=151.7
0.12
-0.12
BCAO
22:50:40.7
Δ=159.2
0.07
-0.07
0
1
2
Time (min)

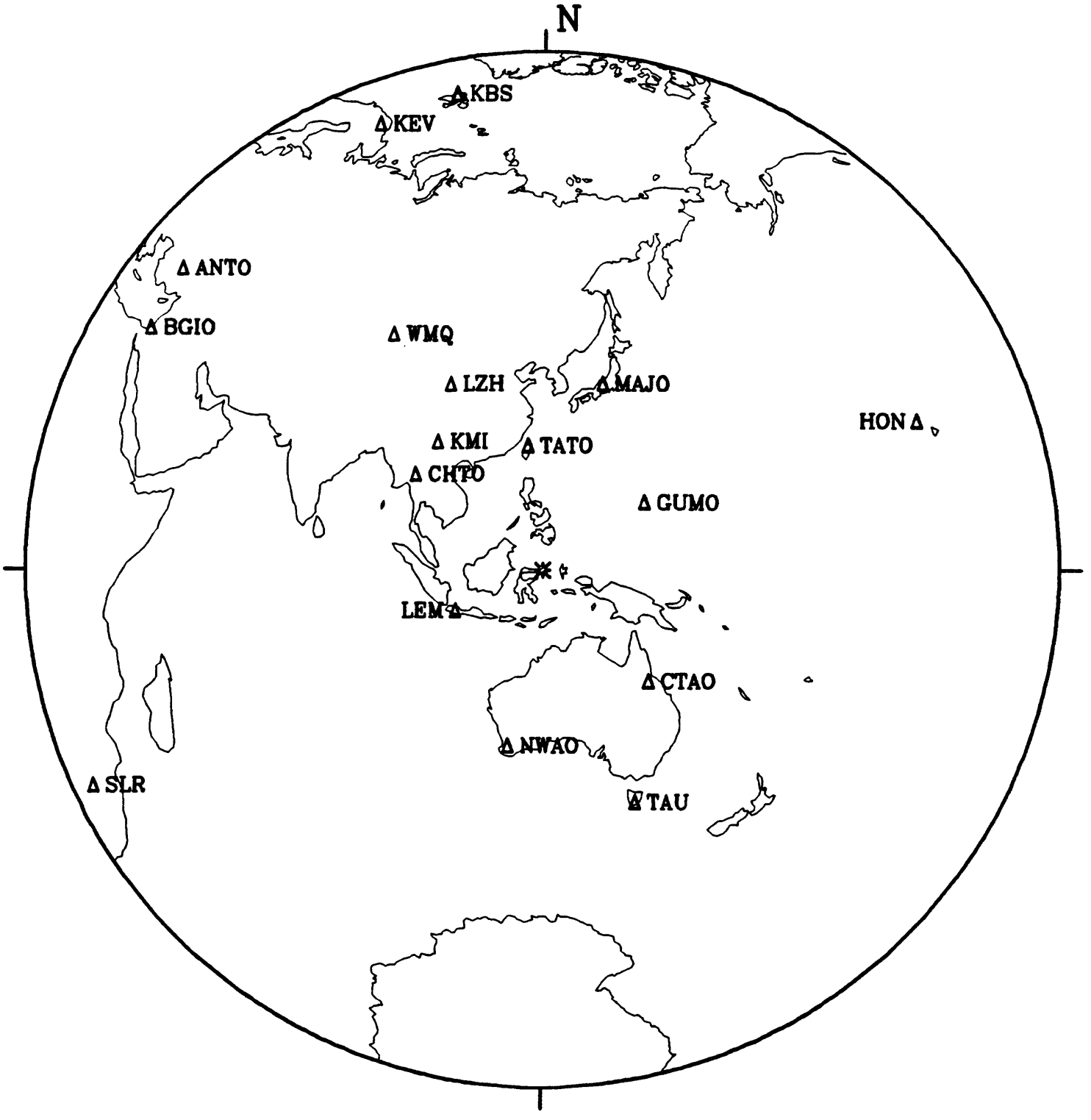

LPZ
05 December 1986 22:31:00.65
Tonga Islands h=33.0 m_b=5.7 M_{SZ}=5.2
LPZ
0
10
20
30
40
50
CTAO
22:37:10.0
Δ= 37.3
3.0
-3.0
TAU
22:37:21.9
Δ= 38.7
3.0
-3.0
HON
22:38:15.8
Δ= 45.3
2.0
-2.0
GUMO
22:39:18.9
Δ= 53.6
3.0
-3.0
NWAO
22:40:14.3
Δ= 61.4
2.0
-2.0
MAJO
22:41:30.2
Δ= 73.4
0.7
-0.7
LEM
22:41:50.3
Δ= 76.9
0.6
-0.6
JAS1
22:41:53.6
Δ= 77.5
3.0
-3.0
TATO
22:41:56.5
Δ= 78.1
2.0
-2.0
LON
22:42:20.9
Δ= 82.6
2.0
-2.0
0
10
20
30
40
50
Time (min)


LPZ
05 December 1986 22:31:00.65
Tonga Islands h=33.0 m_b=5.7 M_{SZ}=5.2
LPZ
0
10
20
30
40
50
ANMO
22:42:33.5
Δ= 85.0
2.0
-2.0
KMI
22:43:13.4
Δ= 93.4
3.0
-3.0
CHTO
22:43:17.5
Δ= 94.3
0.6
-0.6
LZH
22:48:05.0
Δ= 96.6
0.8
-0.8
ZOBO
22:48:07.5
Δ= 98.0
2.0
-2.0
SCP
22:48:25.9
Δ=108.1
2.0
-2.0
WMQ
22:48:30.7
Δ=110.6
2.0
-2.0
GAC
22:48:31.0
Δ=110.8
2.0
-2.0
GDH
22:48:49.7
Δ=120.6
1.0
-1.0
KBS
22:48:53.4
Δ=122.5
0.6
-0.6
0
10
20
30
40
50
Time (min)
2405

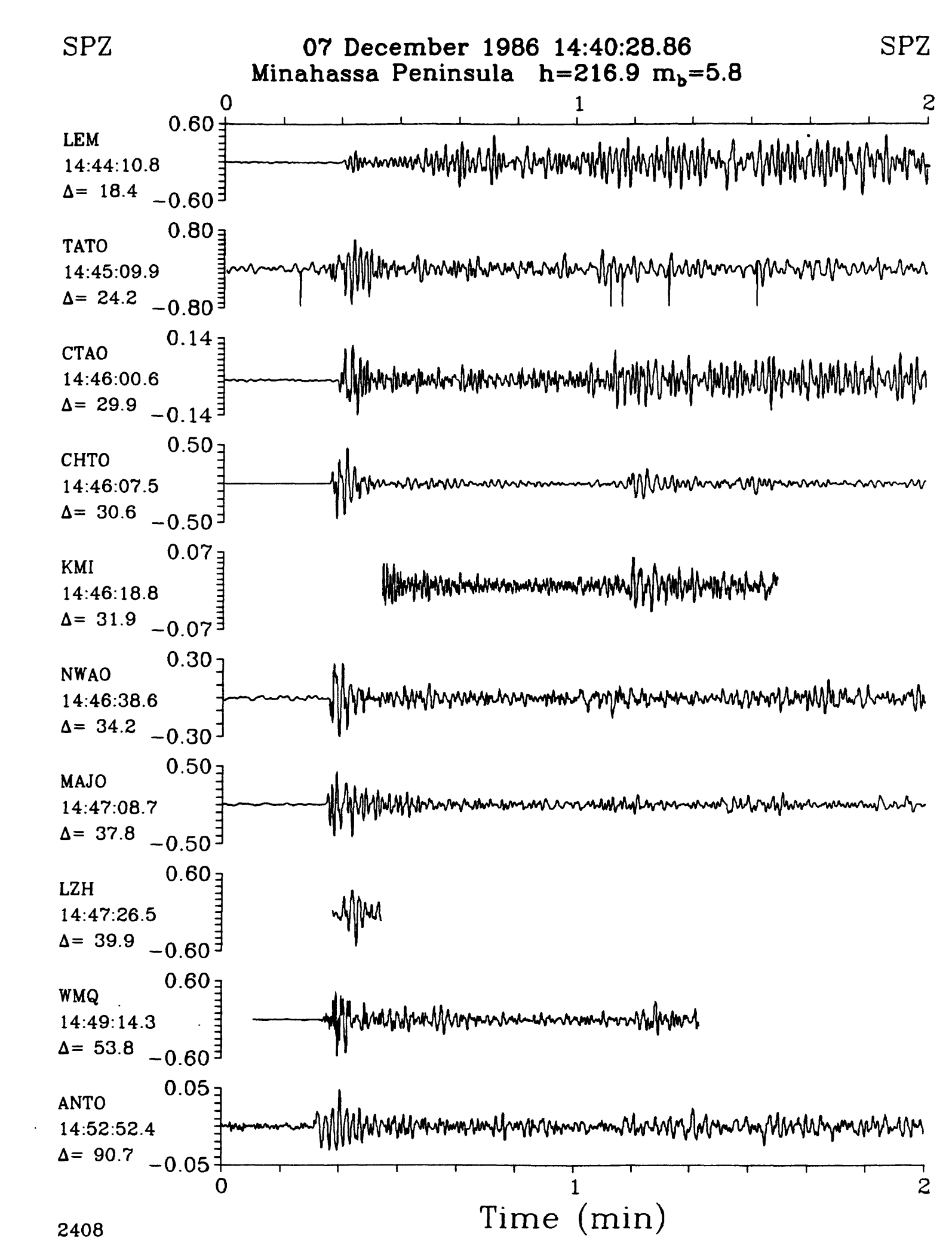

LPZ
05 December 1986 22:31:00.65
Tonga Islands h=33.0 m_b=5.7 M_{SZ}=5.2
LPZ
0
10
20
30
40
50
SLR
22:49:04.5
Δ=128.3
0.6
-0.6
KEV
22:49:08.0
Δ=130.2
0.6
-0.6
NRAO
22:49:27.3
Δ=140.7
0.3
-0.3
KONO
22:49:29.4
Δ=141.9
0.4
-0.4
ANTO
22:49:44.5
Δ=150.9
0.4
-0.4
GRFO
22:49:45.5
Δ=151.7
0.3
-0.3
BGIO
22:49:46.6
Δ=152.4
0.3
-0.3
BCAO
22:49:55.7
Δ=159.2
0.4
-0.4
TOL
22:49:56.4
Δ=159.8
0.6
-0.6
0
10
20
30
40
50
Time (min)

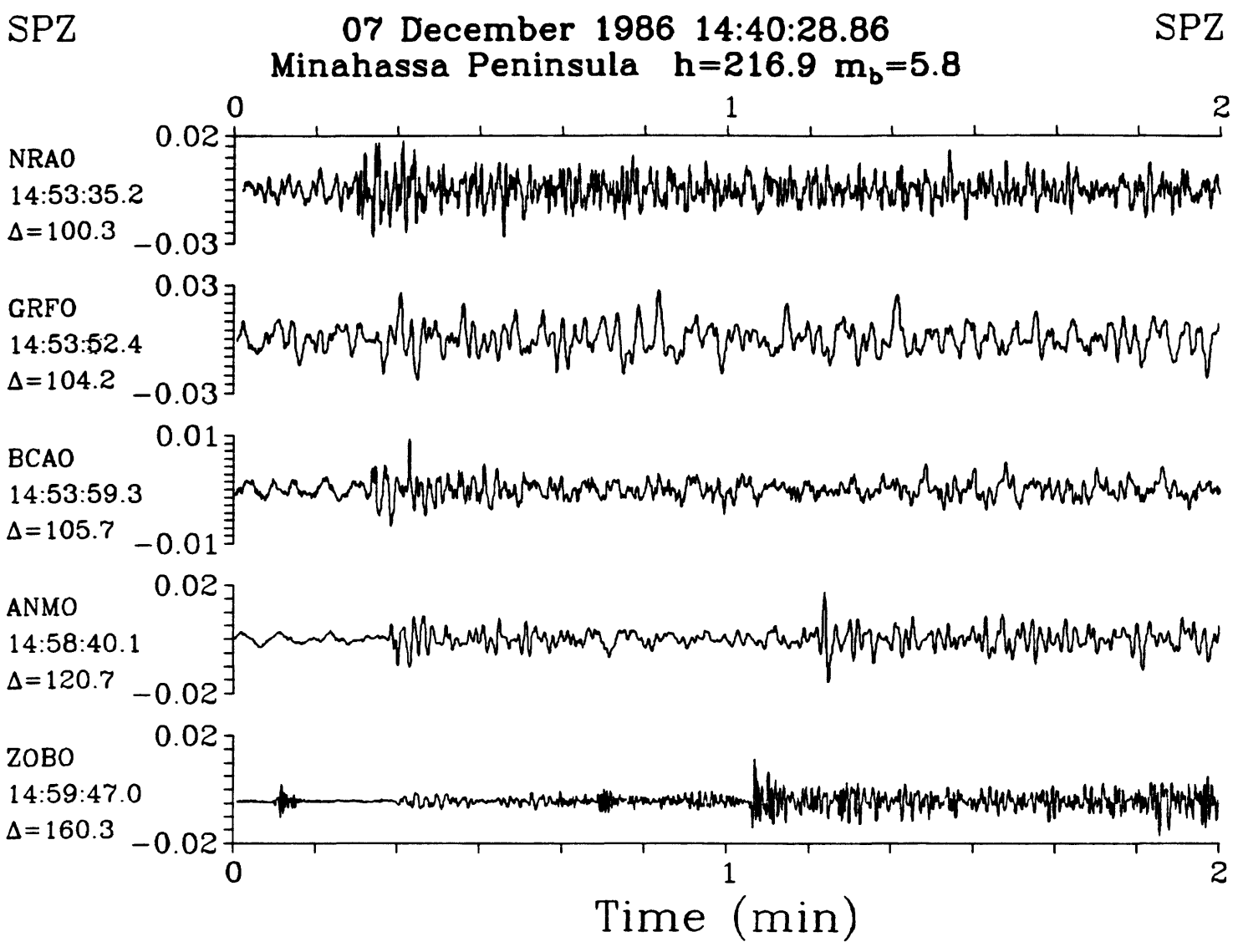
07 December 1986 14:40:28.86

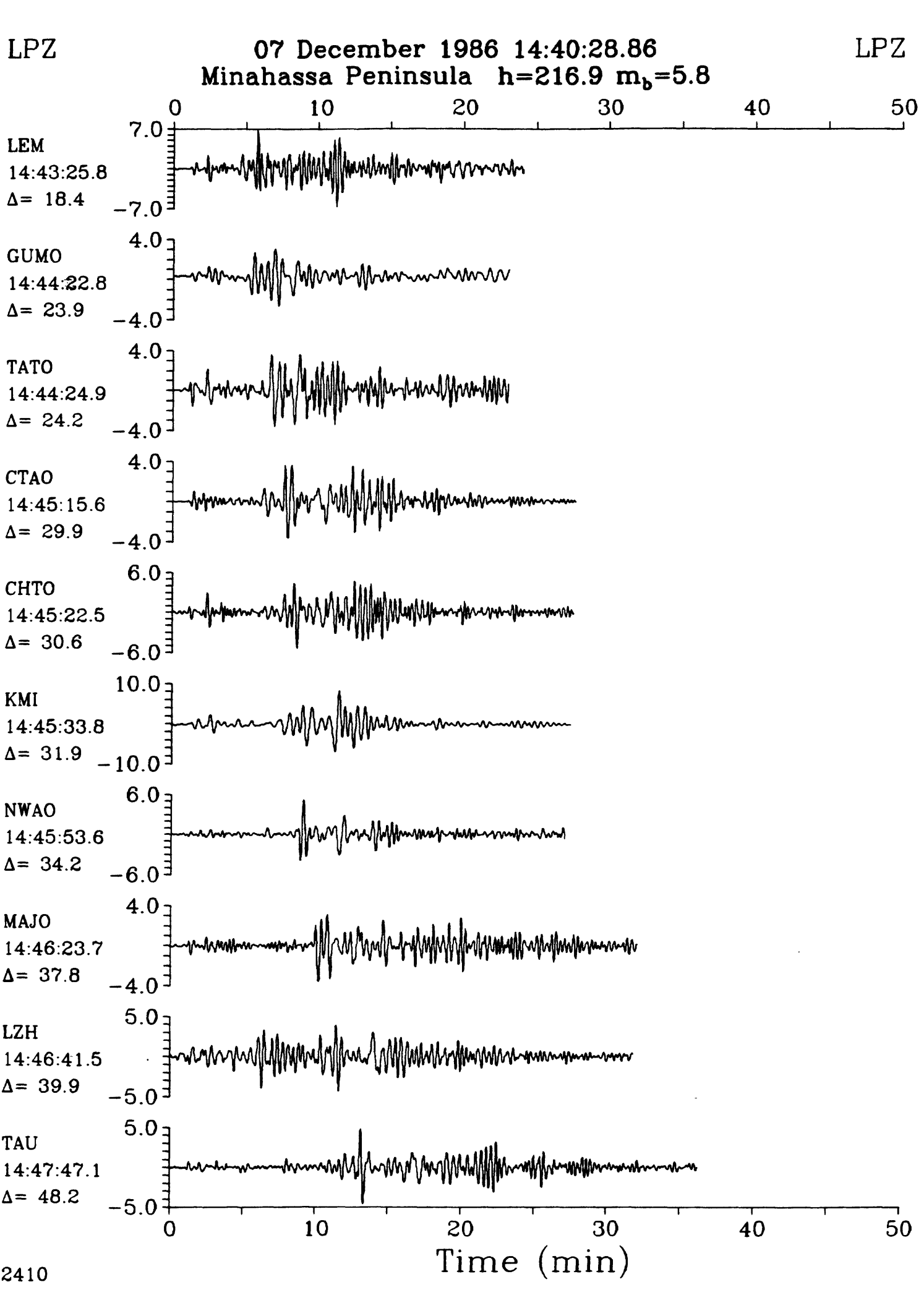
Minahassa Peninsula

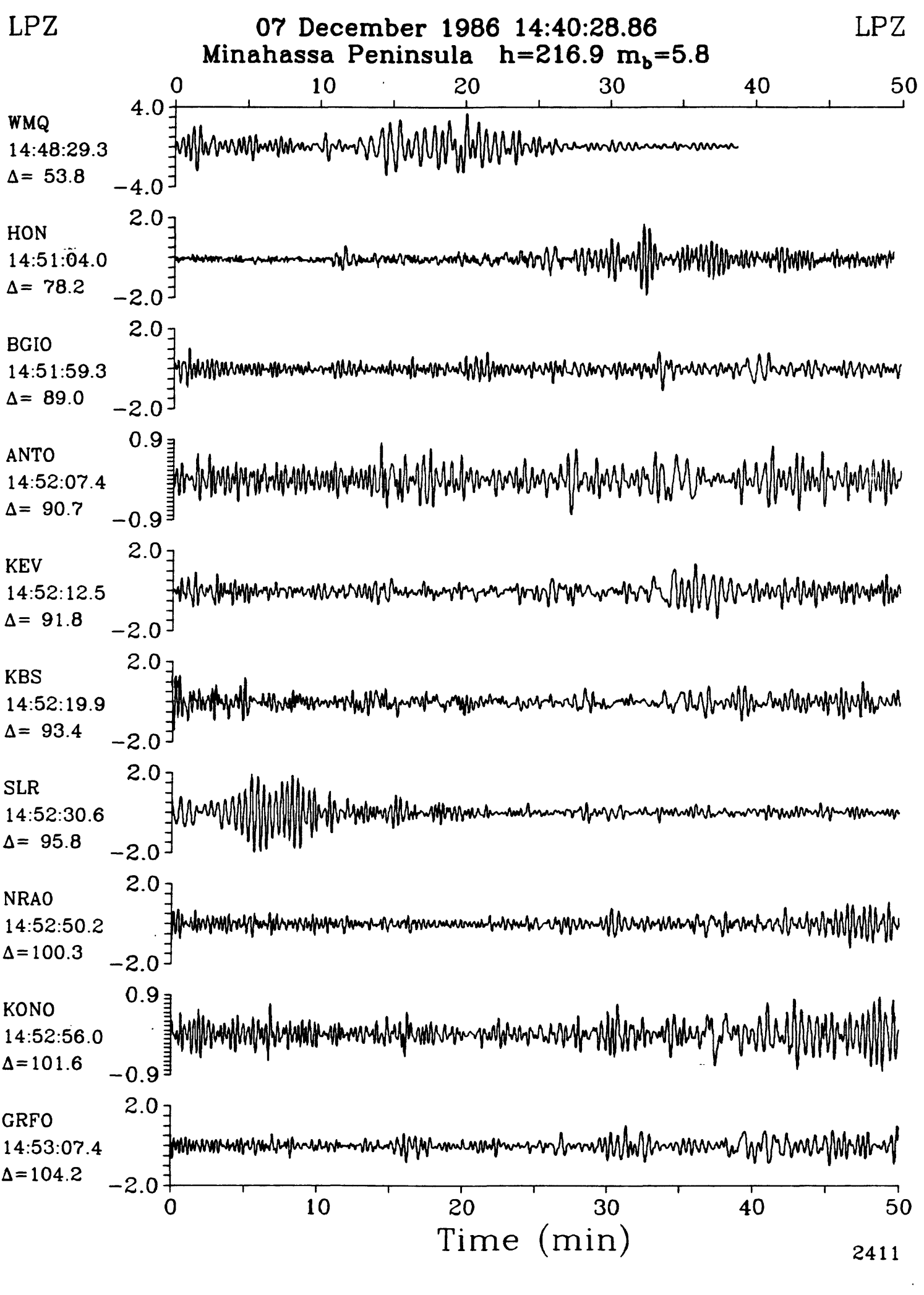


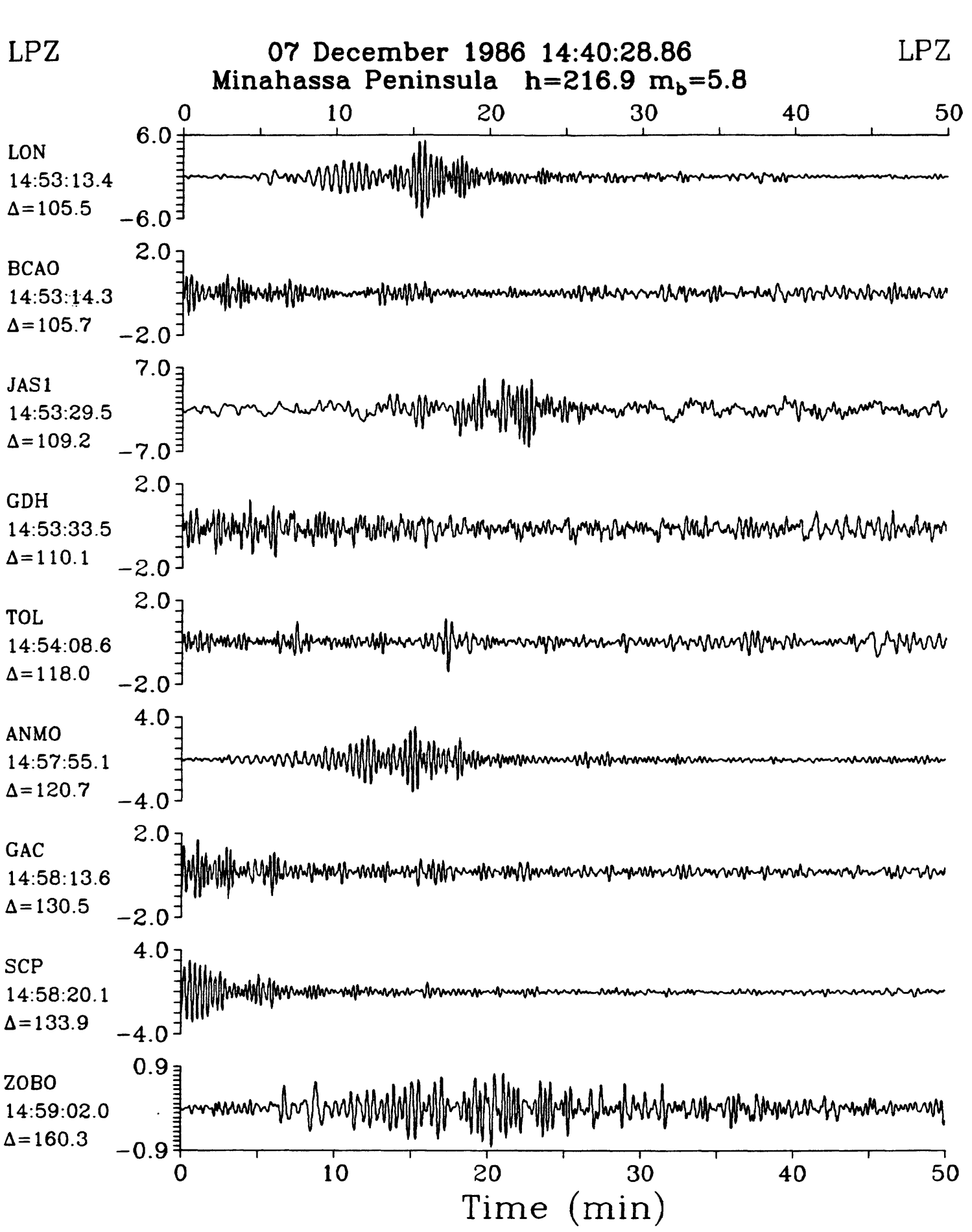
2407

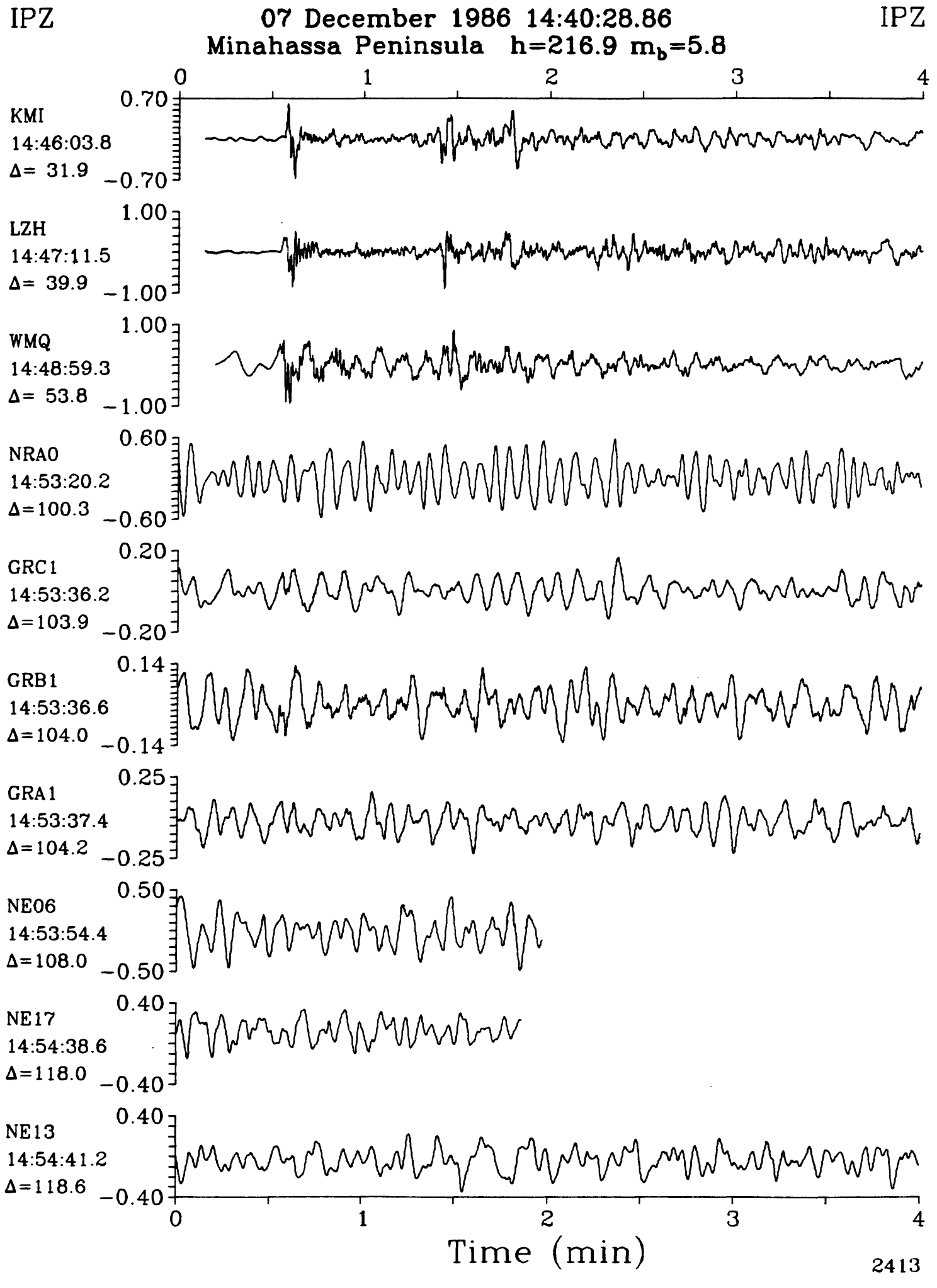

SPZ
07 December 1986 14:40:28.86
Minahassa Peninsula h=216.9 m_b=5.8
SPZ
0
1
2
LEM
14:44:10.8
Δ= 18.4
0.60
-0.60
TATO
14:45:09.9
Δ= 24.2
0.80
-0.80
CTAO
14:46:00.6
Δ= 29.9
0.14
-0.14
CHTO
14:46:07.5
Δ= 30.6
0.50
-0.50
KMI
14:46:18.8
Δ= 31.9
0.07
-0.07
NWAO
14:46:38.6
Δ= 34.2
0.30
-0.30
MAJO
14:47:08.7
Δ= 37.8
0.50
-0.50
LZH
14:47:26.5
Δ= 39.9
0.60
-0.60
WMQ
14:49:14.3
Δ= 53.8
0.60
-0.60
ANTO
14:52:52.4
Δ= 90.7
0.05
-0.05
0
1
2
Time (min)
2408


SPZ
07 December 1986 14:40:28.86
Minahassa Peninsula h=216.9 m_b=5.8
SPZ
0
1
2
NRAO
14:53:35.2
Δ=100.3
0.02
−0.03
GRFO
14:53:52.4
Δ=104.2
0.03
−0.03
BCAO
14:53:59.3
Δ=105.7
0.01
−0.01
ANMO
14:58:40.1
Δ=120.7
0.02
−0.02
ZOBO
14:59:47.0
Δ=160.3
0.02
−0.02
0
1
2
Time (min)


LPZ
07 December 1986 14:40:28.86
Minahassa Peninsula h=216.9 m_b=5.8
LPZ
0
10
20
30
40
50
LEM
14:43:25.8
Δ= 18.4
7.0
-7.0
GUMO
14:44:22.8
Δ= 23.9
4.0
-4.0
TATO
14:44:24.9
Δ= 24.2
4.0
-4.0
CTAO
14:45:15.6
Δ= 29.9
4.0
-4.0
CHTO
14:45:22.5
Δ= 30.6
6.0
-6.0
KMI
14:45:33.8
Δ= 31.9
10.0
-10.0
NWAO
14:45:53.6
Δ= 34.2
6.0
-6.0
MAJO
14:46:23.7
Δ= 37.8
4.0
-4.0
LZH
14:46:41.5
Δ= 39.9
5.0
-5.0
TAU
14:47:47.1
Δ= 48.2
5.0
-5.0
0
10
20
30
40
50
Time (min)

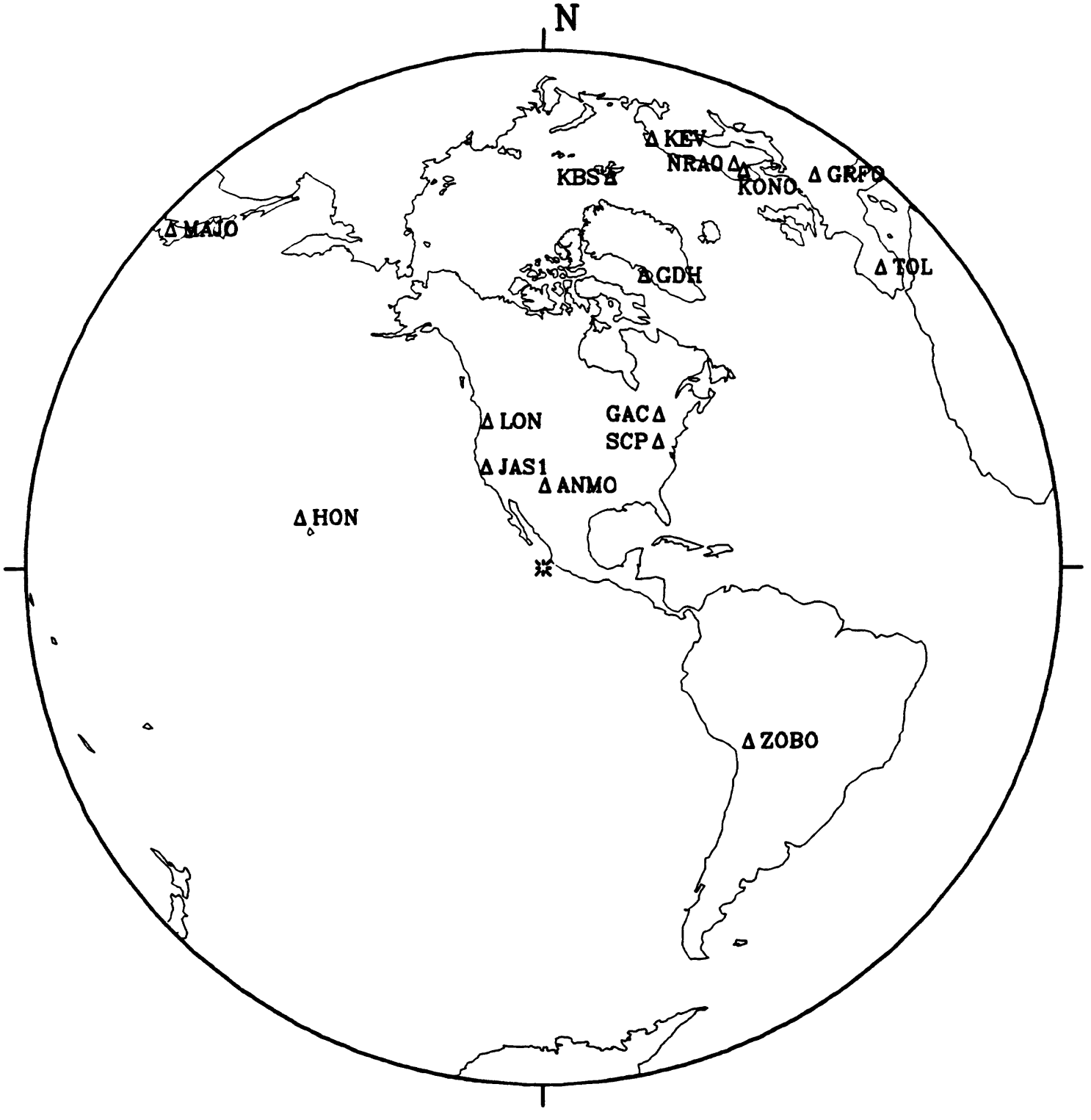

LPZ
07 December 1986 14:40:28.86
Minahassa Peninsula h=216.9 m_b=5.8
LPZ
0
10
20
30
40
50
WMQ
14:48:29.3
Δ= 53.8
4.0
-4.0
HON
14:51:04.0
Δ= 78.2
2.0
-2.0
BGIO
14:51:59.3
Δ= 89.0
2.0
-2.0
ANTO
14:52:07.4
Δ= 90.7
0.9
-0.9
KEV
14:52:12.5
Δ= 91.8
2.0
-2.0
KBS
14:52:19.9
Δ= 93.4
2.0
-2.0
SLR
14:52:30.6
Δ= 95.8
2.0
-2.0
NRAO
14:52:50.2
Δ=100.3
2.0
-2.0
KONO
14:52:56.0
Δ=101.6
0.9
-0.9
GRFO
14:53:07.4
Δ=104.2
2.0
-2.0
0
10
20
30
40
50
Time (min)
2411

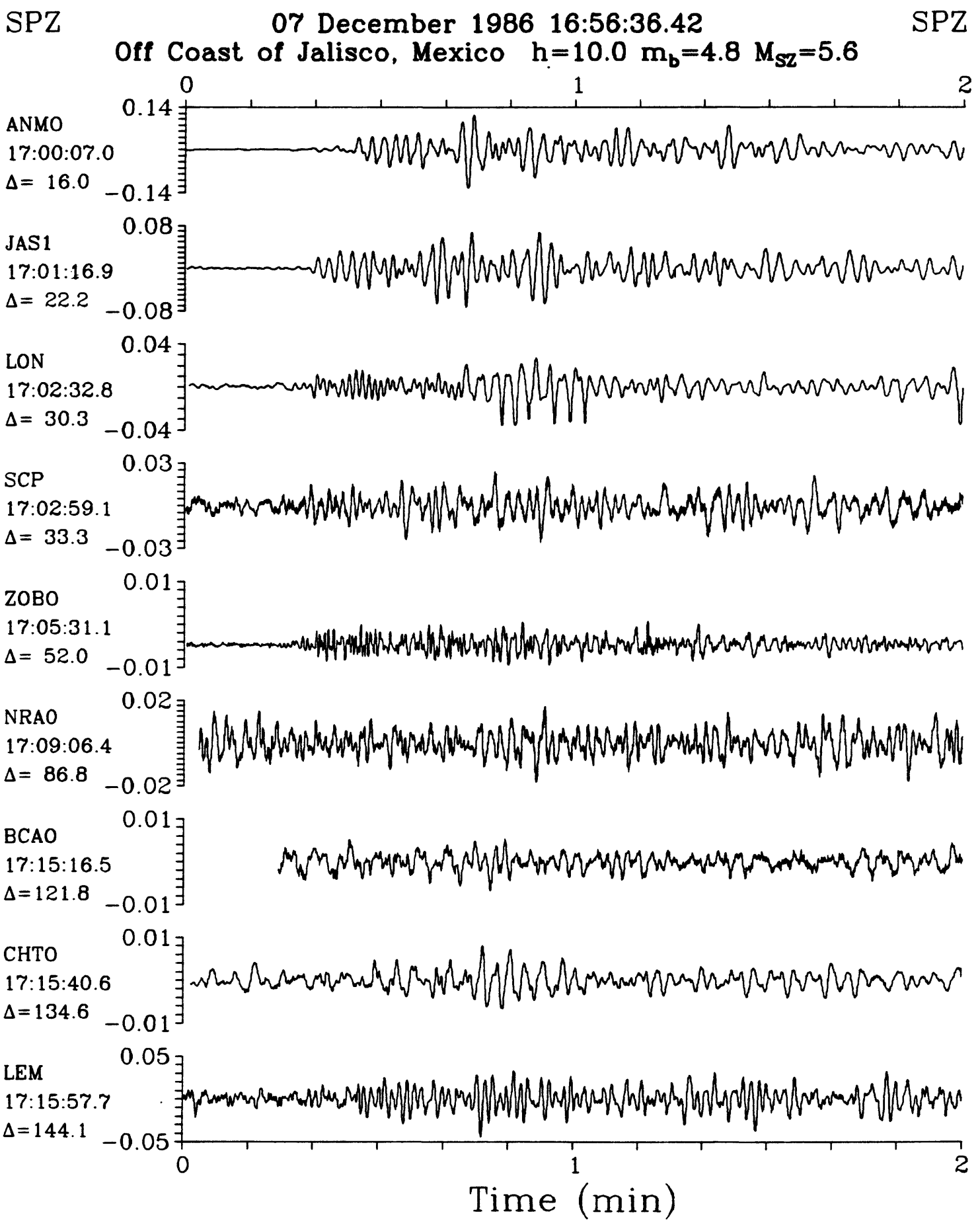

LPZ
07 December 1986 14:40:28.86
Minahassa Peninsula h=216.9 m$_b$=5.8
LPZ
0
10
20
30
40
50
LON
14:53:13.4
Δ=105.5
6.0
-6.0
BCAO
14:53:14.3
Δ=105.7
2.0
-2.0
JAS1
14:53:29.5
Δ=109.2
7.0
-7.0
GDH
14:53:33.5
Δ=110.1
2.0
-2.0
TOL
14:54:08.6
Δ=118.0
2.0
-2.0
ANMO
14:57:55.1
Δ=120.7
4.0
-4.0
GAC
14:58:13.6
Δ=130.5
2.0
-2.0
SCP
14:58:20.1
Δ=133.9
4.0
-4.0
ZOBO
14:59:02.0
Δ=160.3
0.9
-0.9
0
10
20
30
40
50
Time (min)

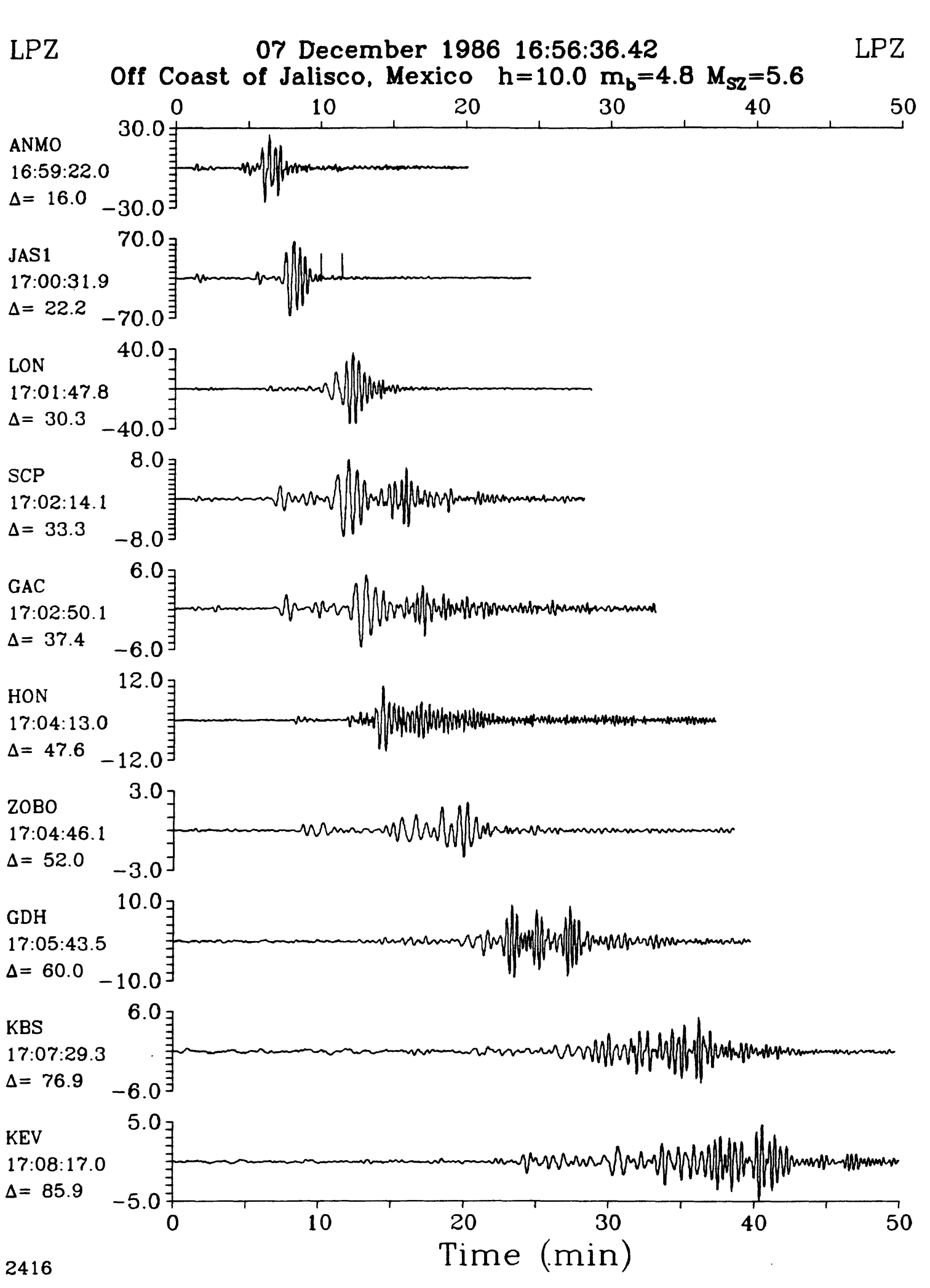

IPZ
07 December 1986 14:40:28.86
Minahassa Peninsula h=216.9 m_b=5.8
IPZ
0
1
2
3
4
0.70
KMI
14:46:03.8
Δ= 31.9
−0.70
1.00
LZH
14:47:11.5
Δ= 39.9
−1.00
1.00
WMQ
14:48:59.3
Δ= 53.8
−1.00
0.60
NRA0
14:53:20.2
Δ=100.3
−0.60
0.20
GRC1
14:53:36.2
Δ=103.9
−0.20
0.14
GRB1
14:53:36.6
Δ=104.0
−0.14
0.25
GRA1
14:53:37.4
Δ=104.2
−0.25
0.50
NE06
14:53:54.4
Δ=108.0
−0.50
0.40
NE17
14:54:38.6
Δ=118.0
−0.40
0.40
NE13
14:54:41.2
Δ=118.6
−0.40
0
1
2
3
4
Time (min)
2413

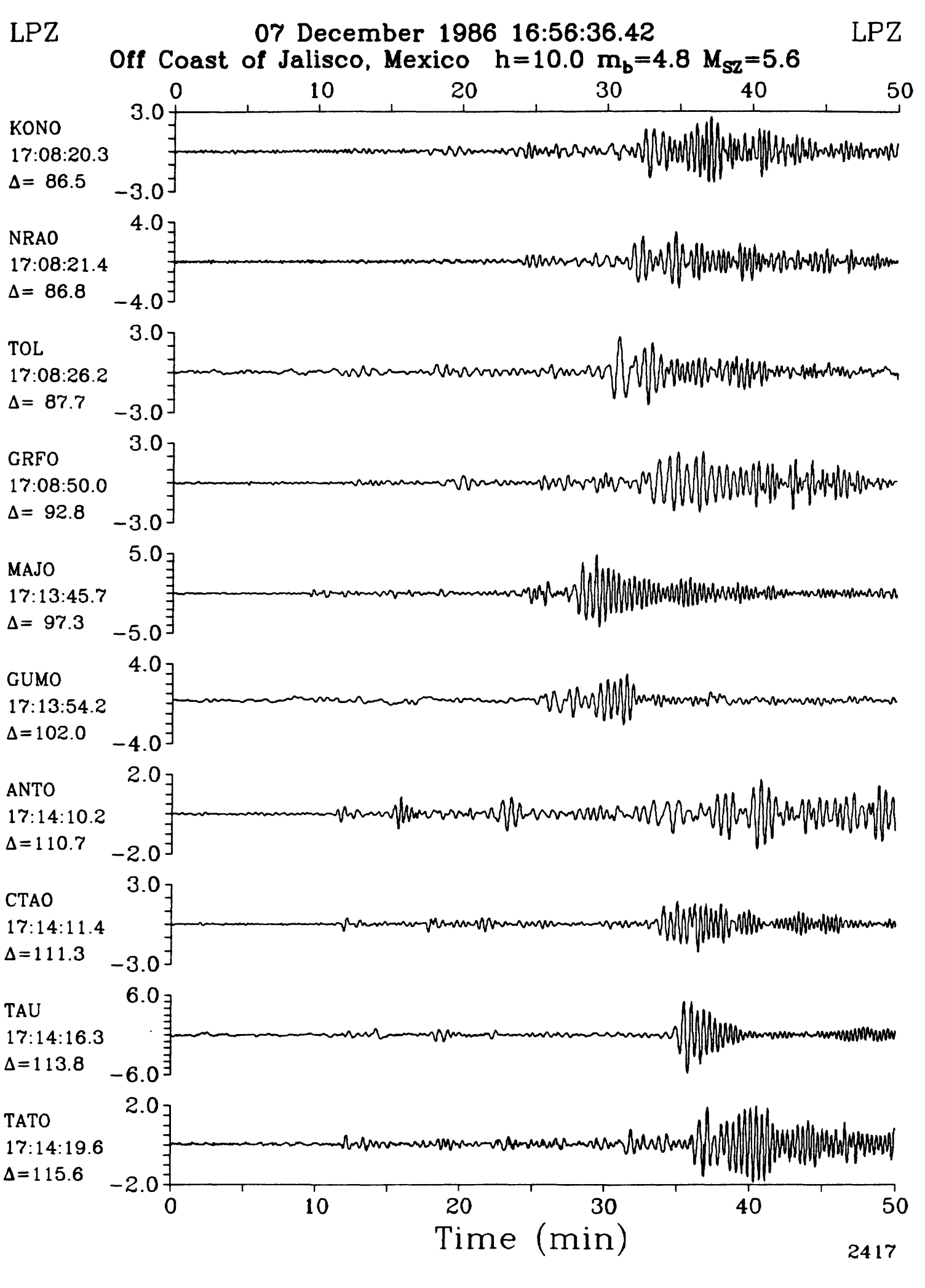
07 December 1986 16:56:36.42

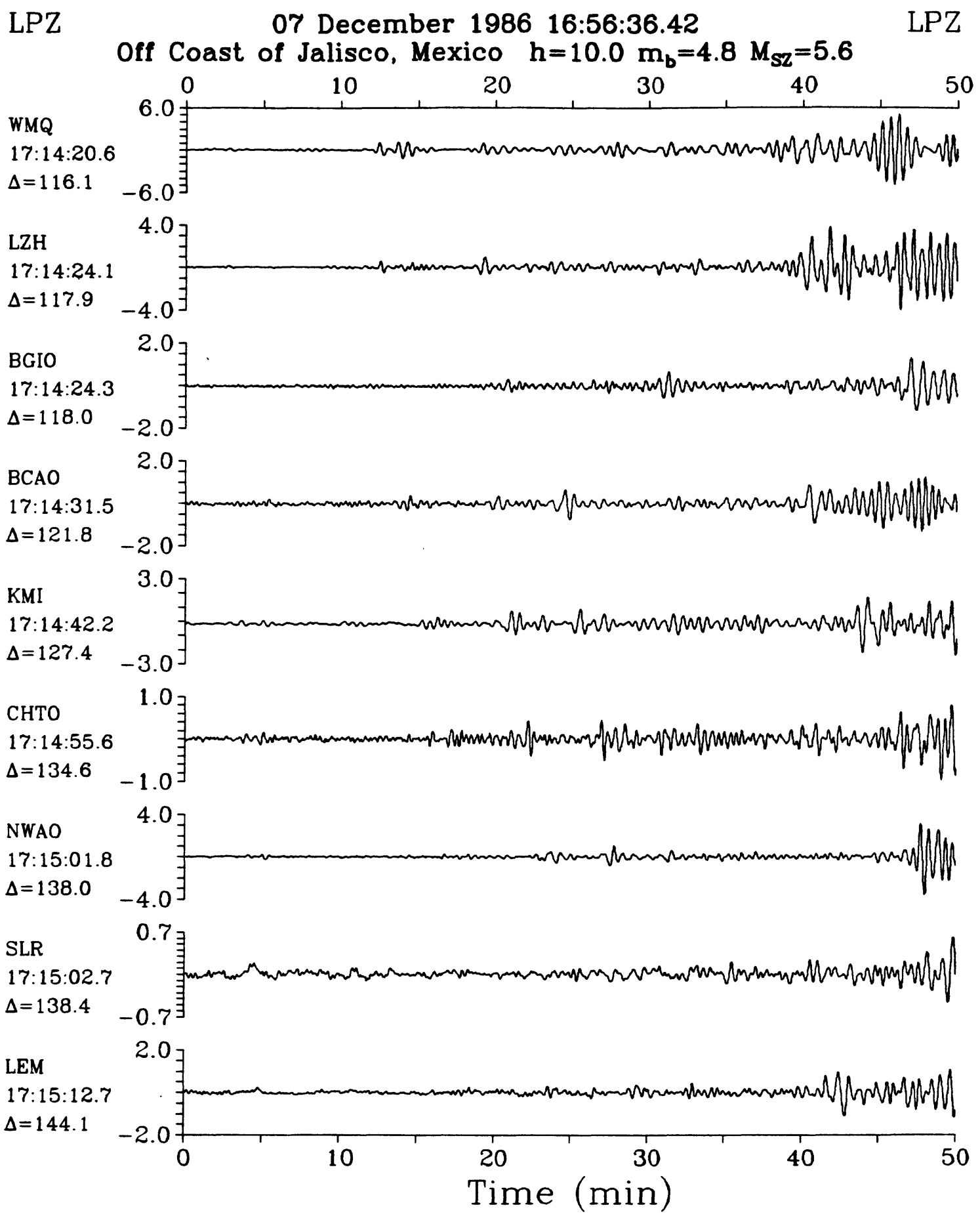
Off Coast of Jalisco, Mexico




SPZ
07 December 1986 16:56:36.42
SPZ
Off Coast of Jalisco, Mexico h=10.0 m_b=4.8 M_{SZ}=5.6
0
1
2
0.14
ANMO
17:00:07.0
Δ= 16.0
-0.14
0.08
JAS1
17:01:16.9
Δ= 22.2
-0.08
0.04
LON
17:02:32.8
Δ= 30.3
-0.04
0.03
SCP
17:02:59.1
Δ= 33.3
-0.03
0.01
ZOBO
17:05:31.1
Δ= 52.0
-0.01
0.02
NRAO
17:09:06.4
Δ= 86.8
-0.02
0.01
BCAO
17:15:16.5
Δ=121.8
-0.01
0.01
CHTO
17:15:40.6
Δ=134.6
-0.01
0.05
LEM
17:15:57.7
Δ=144.1
-0.05
0
1
2
Time (min)

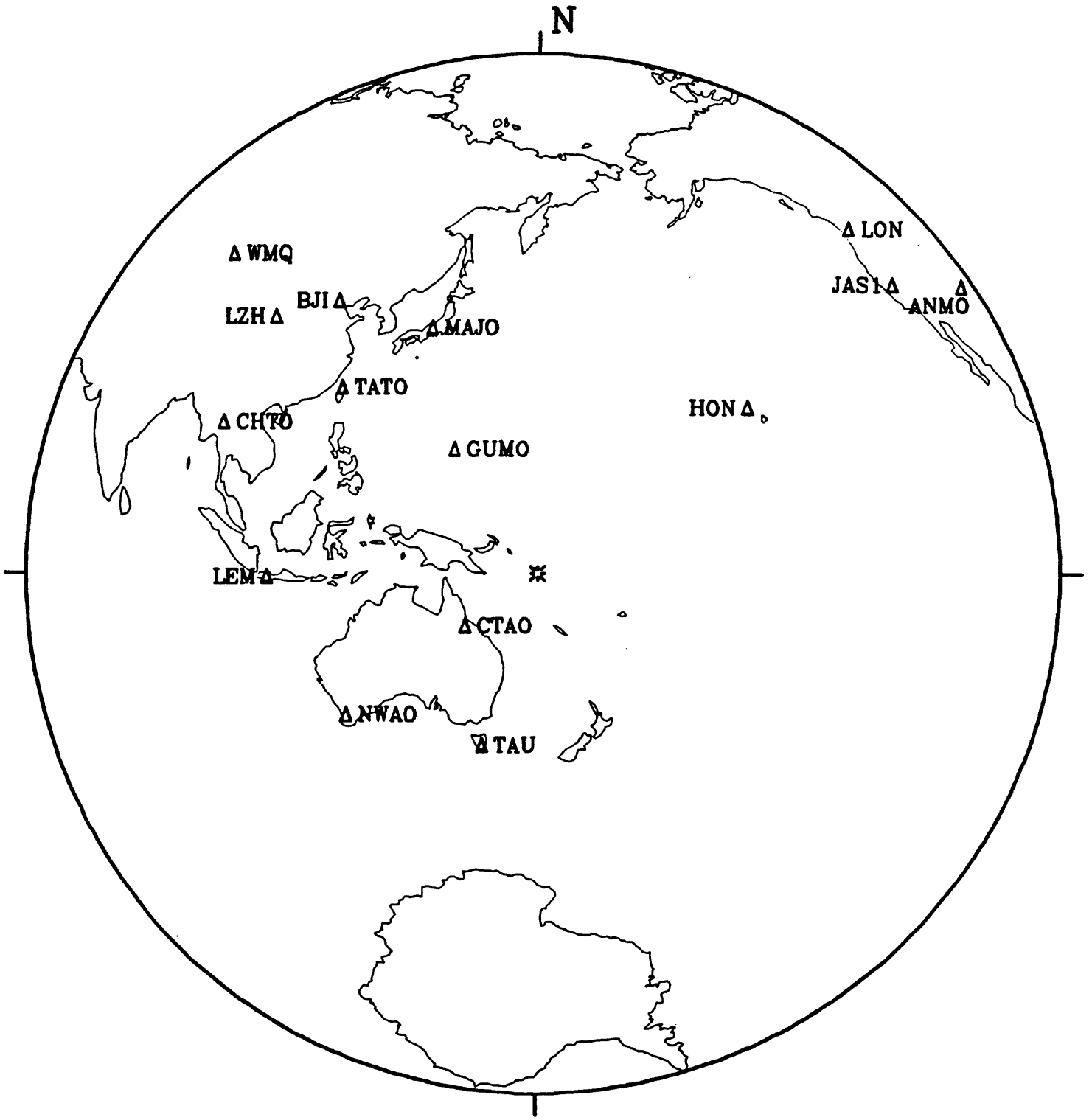

LPZ
07 December 1986 16:56:36.42
LPZ
Off Coast of Jalisco, Mexico h=10.0 m_b=4.8 M_{SZ}=5.6
0
10
20
30
40
50
ANMO
16:59:22.0
Δ= 16.0
30.0
-30.0
JAS1
17:00:31.9
Δ= 22.2
70.0
-70.0
LON
17:01:47.8
Δ= 30.3
40.0
-40.0
SCP
17:02:14.1
Δ= 33.3
8.0
-8.0
GAC
17:02:50.1
Δ= 37.4
6.0
-6.0
HON
17:04:13.0
Δ= 47.6
12.0
-12.0
ZOBO
17:04:46.1
Δ= 52.0
3.0
-3.0
GDH
17:05:43.5
Δ= 60.0
10.0
-10.0
KBS
17:07:29.3
Δ= 76.9
6.0
-6.0
KEV
17:08:17.0
Δ= 85.9
5.0
-5.0
0
10
20
30
40
50
Time (min)

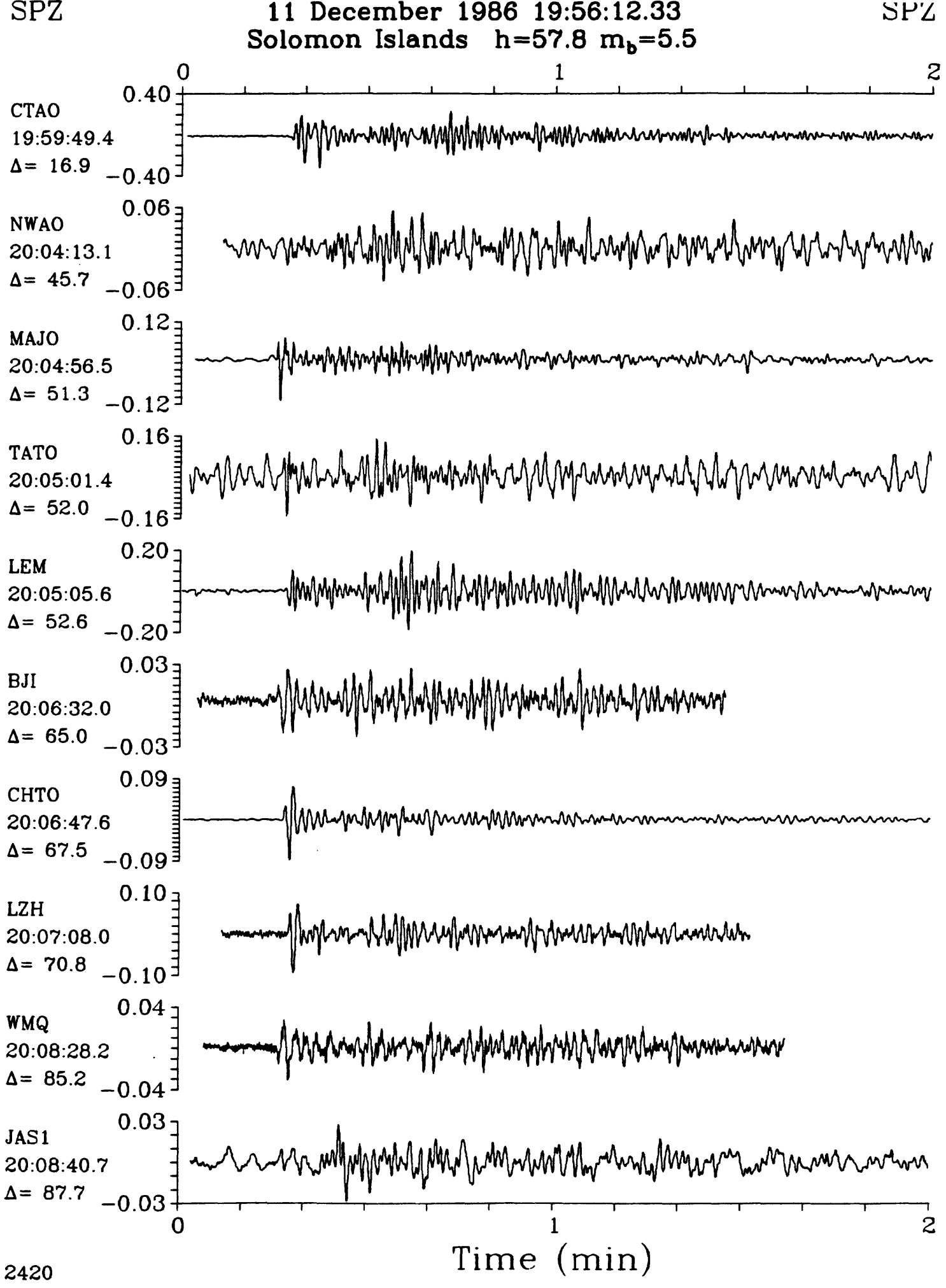

LPZ
07 December 1986 16:56:36.42
LPZ
Off Coast of Jalisco, Mexico h=10.0 m_b=4.8 M_{SZ}=5.6
0
10
20
30
40
50
KONO
17:08:20.3
Δ= 86.5
3.0
-3.0
NRAO
17:08:21.4
Δ= 86.8
4.0
-4.0
TOL
17:08:26.2
Δ= 87.7
3.0
-3.0
GRFO
17:08:50.0
Δ= 92.8
3.0
-3.0
MAJO
17:13:45.7
Δ= 97.3
5.0
-5.0
GUMO
17:13:54.2
Δ=102.0
4.0
-4.0
ANTO
17:14:10.2
Δ=110.7
2.0
-2.0
CTAO
17:14:11.4
Δ=111.3
3.0
-3.0
TAU
17:14:16.3
Δ=113.8
6.0
-6.0
TATO
17:14:19.6
Δ=115.6
2.0
-2.0
0
10
20
30
40
50
Time (min)
2417

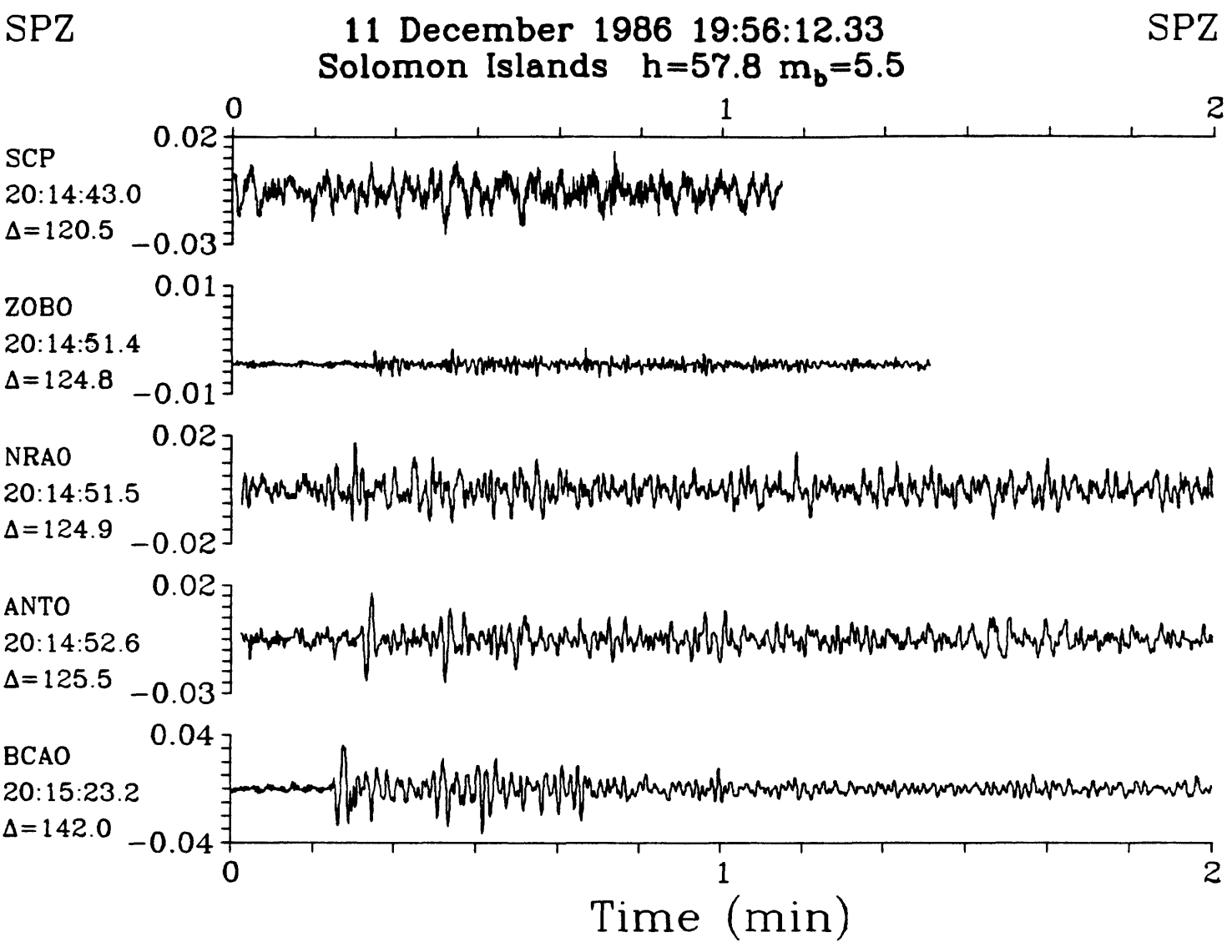

LPZ
07 December 1986 16:56:36.42
LPZ
Off Coast of Jalisco, Mexico h=10.0 m_b=4.8 M_{SZ}=5.6
0
10
20
30
40
50
WMQ
17:14:20.6
Δ=116.1
6.0
-6.0
LZH
17:14:24.1
Δ=117.9
4.0
-4.0
BGIO
17:14:24.3
Δ=118.0
2.0
-2.0
BCAO
17:14:31.5
Δ=121.8
2.0
-2.0
KMI
17:14:42.2
Δ=127.4
3.0
-3.0
CHTO
17:14:55.6
Δ=134.6
1.0
-1.0
NWAO
17:15:01.8
Δ=138.0
4.0
-4.0
SLR
17:15:02.7
Δ=138.4
0.7
-0.7
LEM
17:15:12.7
Δ=144.1
2.0
-2.0
0
10
20
30
40
50
Time (min)

11 December 1986 19:56:12.33

Solomon Islands




SPZ
11 December 1986 19:56:12.33
Solomon Islands h=57.8 m_b=5.5
SPZ
0
1
2
CTAO
19:59:49.4
Δ= 16.9
0.40
-0.40
NWAO
20:04:13.1
Δ= 45.7
0.06
-0.06
MAJO
20:04:56.5
Δ= 51.3
0.12
-0.12
TATO
20:05:01.4
Δ= 52.0
0.16
-0.16
LEM
20:05:05.6
Δ= 52.6
0.20
-0.20
BJI
20:06:32.0
Δ= 65.0
0.03
-0.03
CHTO
20:06:47.6
Δ= 67.5
0.09
-0.09
LZH
20:07:08.0
Δ= 70.8
0.10
-0.10
WMQ
20:08:28.2
Δ= 85.2
0.04
-0.04
JAS1
20:08:40.7
Δ= 87.7
0.03
-0.03
0
1
2
Time (min)

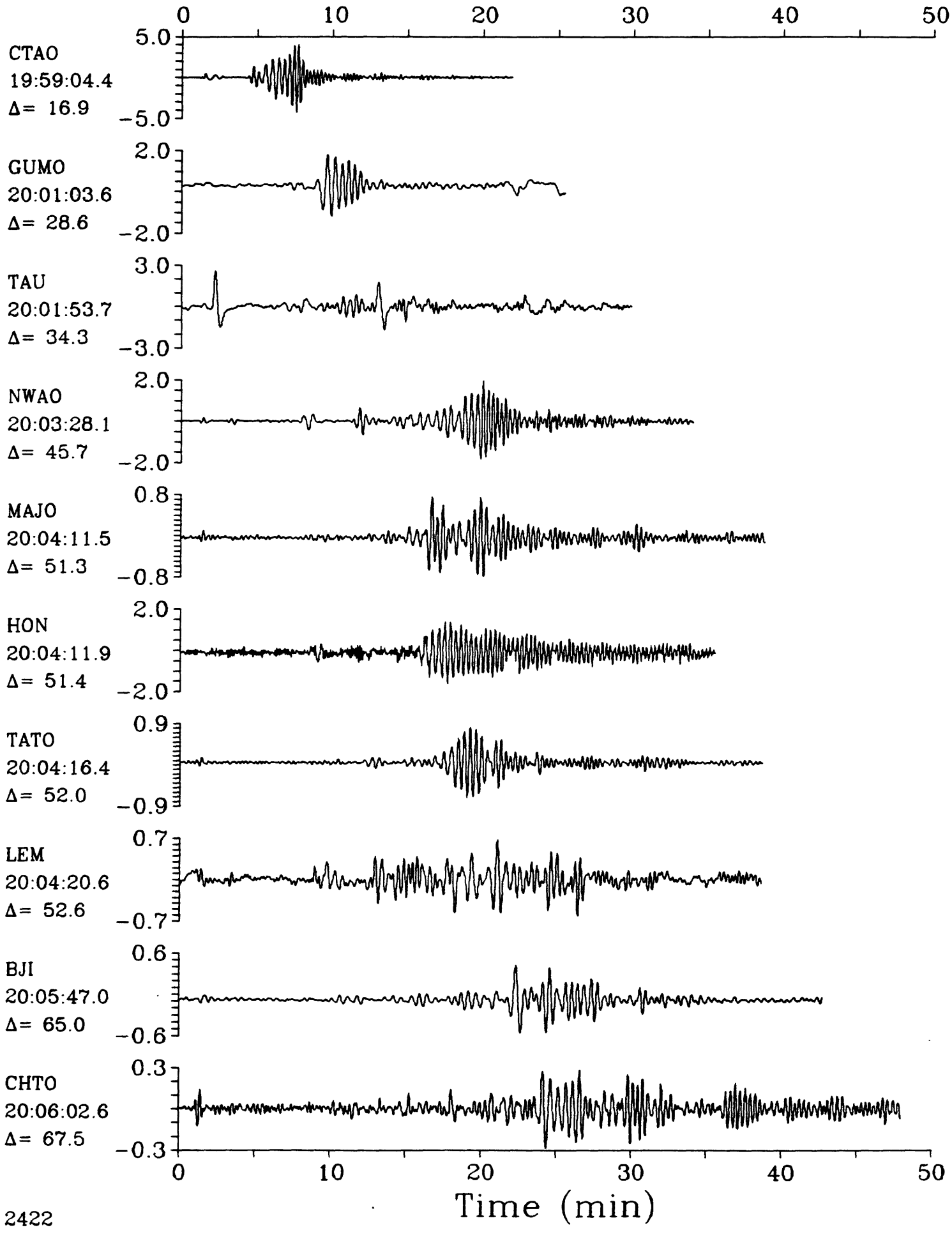

SPZ
11 December 1986 19:56:12.33
Solomon Islands h=57.8 m_b=5.5
SPZ
0
1
2
0.02
SCP
20:14:43.0
Δ=120.5
−0.03
0.01
ZOBO
20:14:51.4
Δ=124.8
−0.01
0.02
NRAO
20:14:51.5
Δ=124.9
−0.02
0.02
ANTO
20:14:52.6
Δ=125.5
−0.03
0.04
BCAO
20:15:23.2
Δ=142.0
−0.04
0
1
2
Time (min)

LPZ

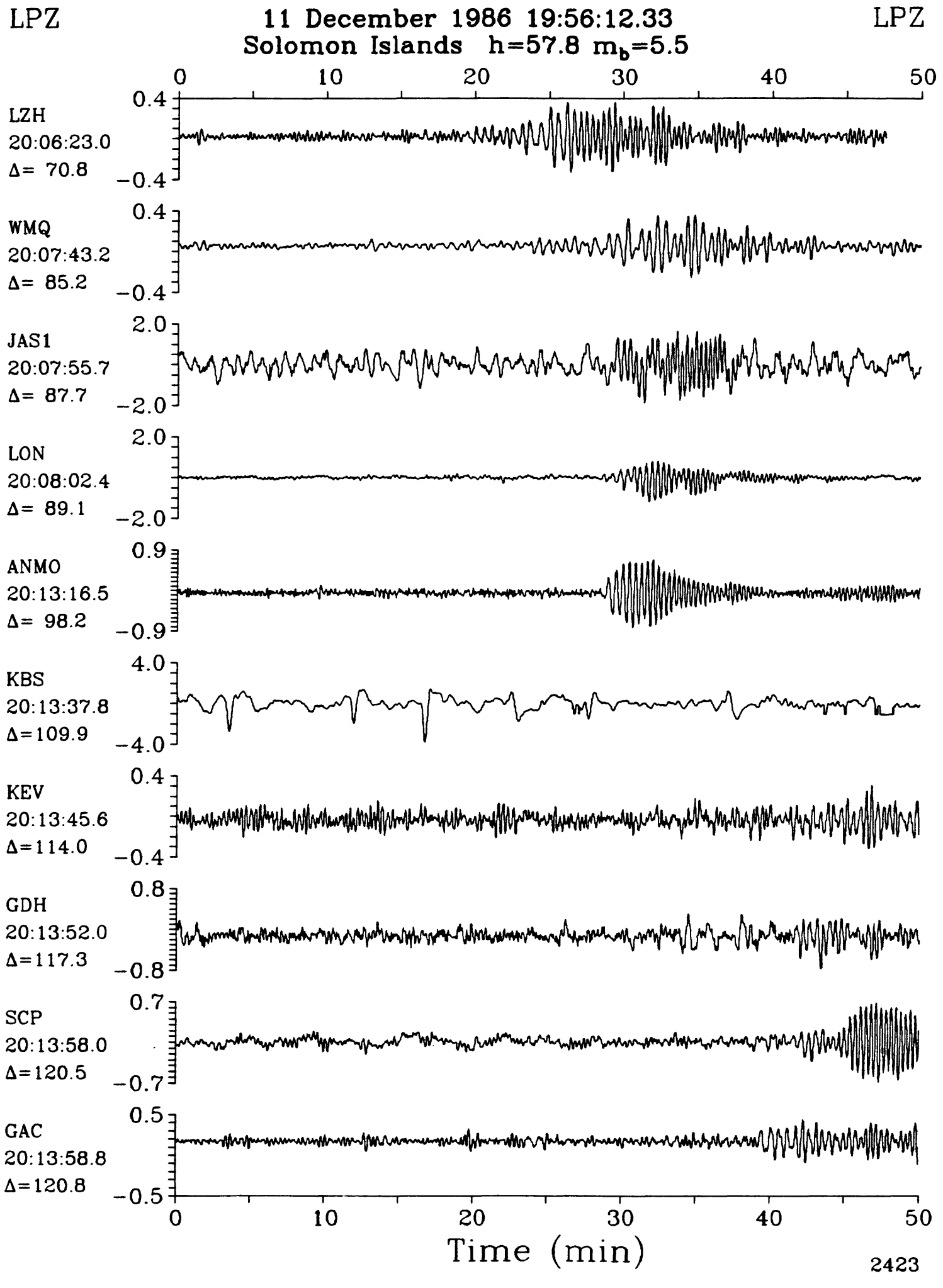
11 December 1986 19:56:12.33

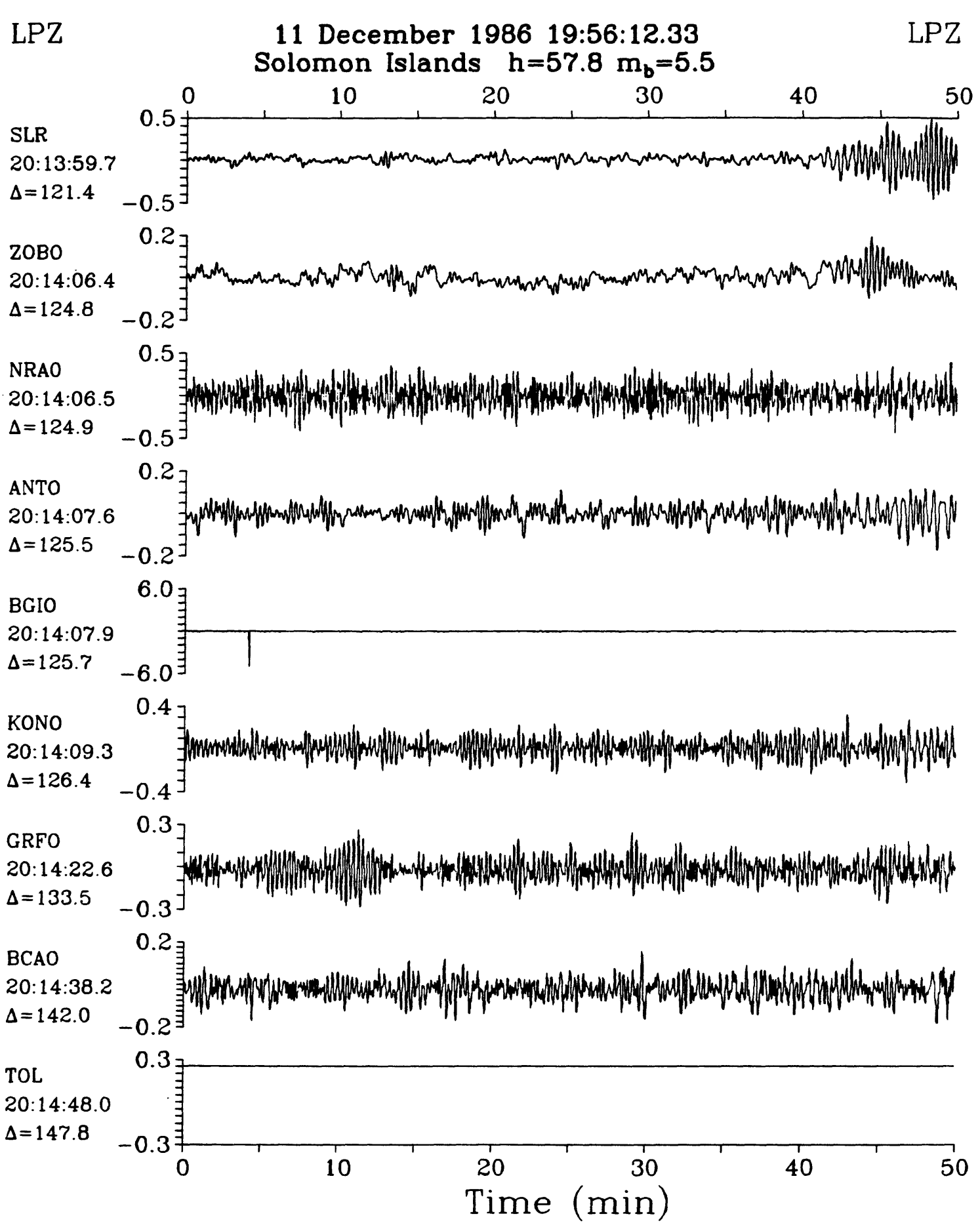
LPZ

Solomon Islands h=57.8 m_b=5.5



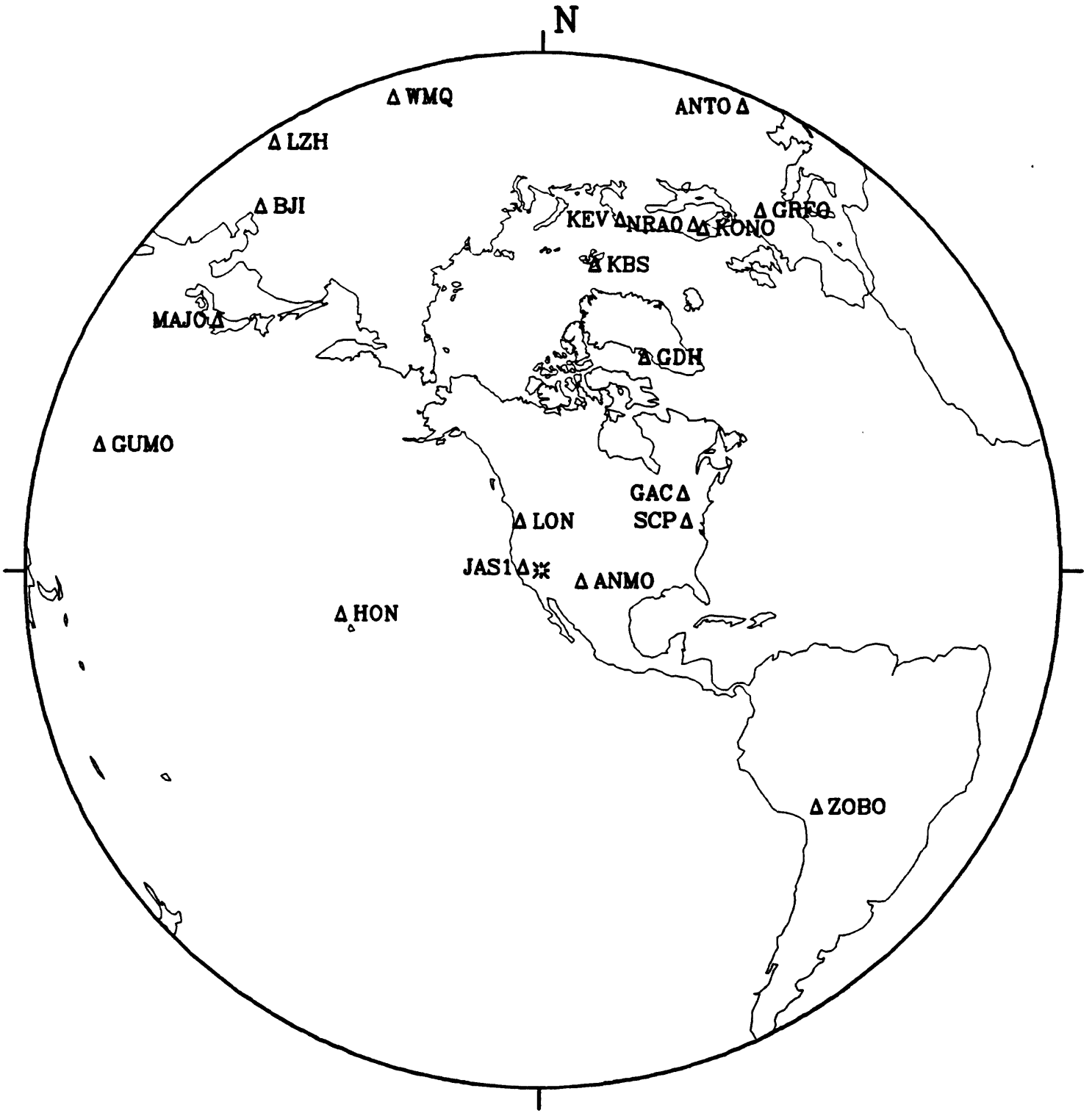
2422

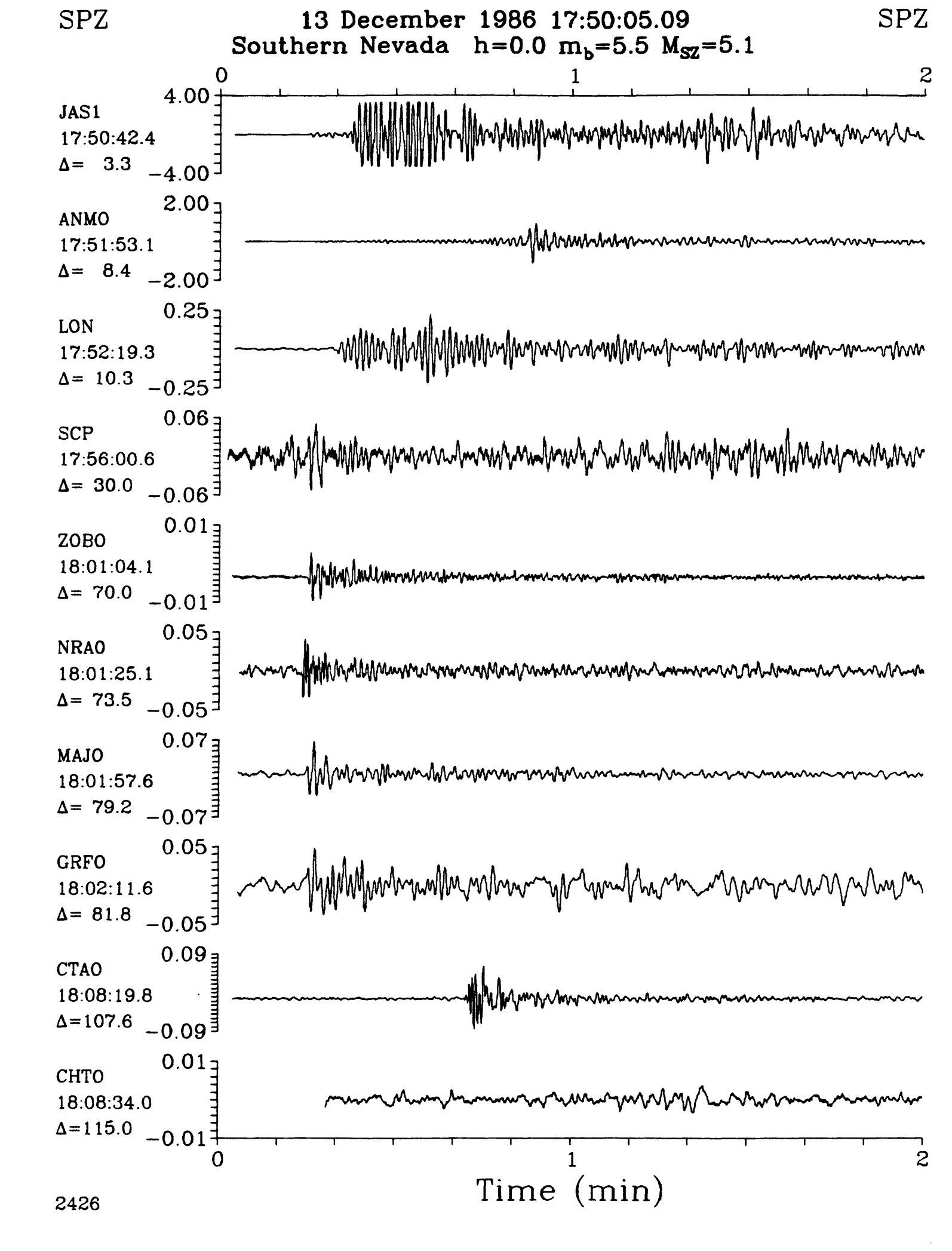

LPZ
11 December 1986 19:56:12.33
Solomon Islands h=57.8 m_b=5.5
LPZ
0
10
20
30
40
50
LZH
20:06:23.0
Δ= 70.8
0.4
-0.4
WMQ
20:07:43.2
Δ= 85.2
0.4
-0.4
JAS1
20:07:55.7
Δ= 87.7
2.0
-2.0
LON
20:08:02.4
Δ= 89.1
2.0
-2.0
ANMO
20:13:16.5
Δ= 98.2
0.9
-0.9
KBS
20:13:37.8
Δ=109.9
4.0
-4.0
KEV
20:13:45.6
Δ=114.0
0.4
-0.4
GDH
20:13:52.0
Δ=117.3
0.8
-0.8
SCP
20:13:58.0
Δ=120.5
0.7
-0.7
GAC
20:13:58.8
Δ=120.8
0.5
-0.5
0
10
20
30
40
50
Time (min)
2423


LPZ
11 December 1986 19:56:12.33
Solomon Islands h=57.8 m_b=5.5
LPZ
0
10
20
30
40
50
SLR
20:13:59.7
Δ=121.4
0.5
−0.5
ZOBO
20:14:06.4
Δ=124.8
0.2
−0.2
NRAO
20:14:06.5
Δ=124.9
0.5
−0.5
ANTO
20:14:07.6
Δ=125.5
0.2
−0.2
BGIO
20:14:07.9
Δ=125.7
6.0
−6.0
KONO
20:14:09.3
Δ=126.4
0.4
−0.4
GRFO
20:14:22.6
Δ=133.5
0.3
−0.3
BCAO
20:14:38.2
Δ=142.0
0.2
−0.2
TOL
20:14:48.0
Δ=147.8
0.3
−0.3
0
10
20
30
40
50
Time (min)

13 December 1986 17:50:05.09

Southern Nevada



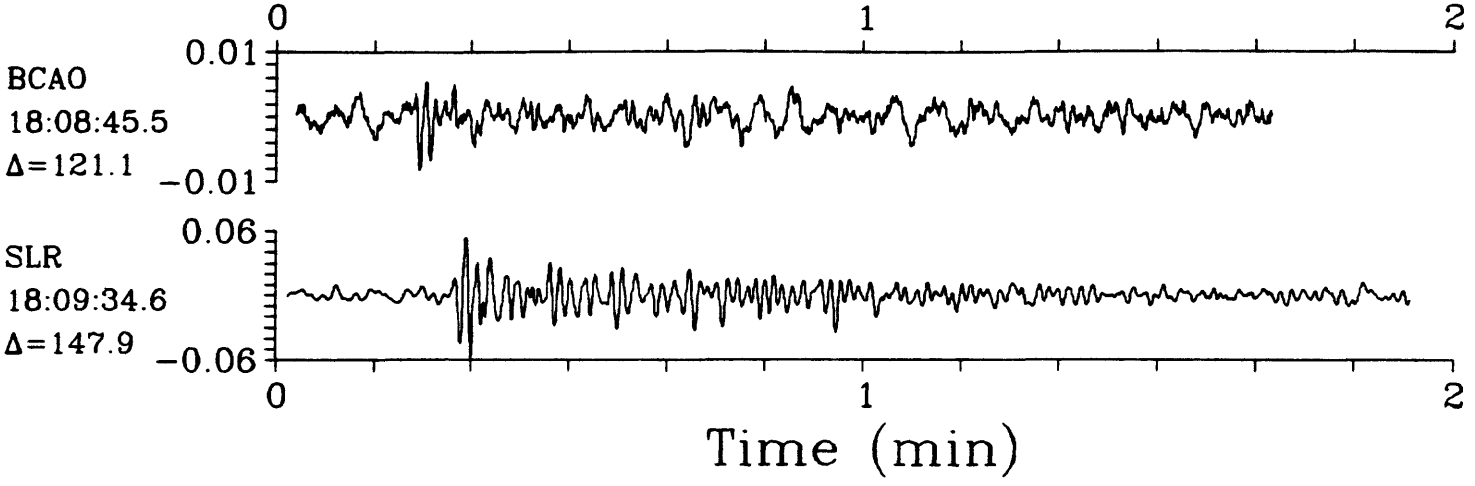

SPZ
13 December 1986 17:50:05.09
Southern Nevada h=0.0 m_b=5.5 M_{SZ}=5.1
SPZ
0
1
2
JAS1
17:50:42.4
Δ= 3.3
4.00
-4.00
ANMO
17:51:53.1
Δ= 8.4
2.00
-2.00
LON
17:52:19.3
Δ= 10.3
0.25
-0.25
SCP
17:56:00.6
Δ= 30.0
0.06
-0.06
ZOBO
18:01:04.1
Δ= 70.0
0.01
-0.01
NRAO
18:01:25.1
Δ= 73.5
0.05
-0.05
MAJO
18:01:57.6
Δ= 79.2
0.07
-0.07
GRFO
18:02:11.6
Δ= 81.8
0.05
-0.05
CTAO
18:08:19.8
Δ=107.6
0.09
-0.09
CHTO
18:08:34.0
Δ=115.0
0.01
-0.01
0
1
2
Time (min)
2426

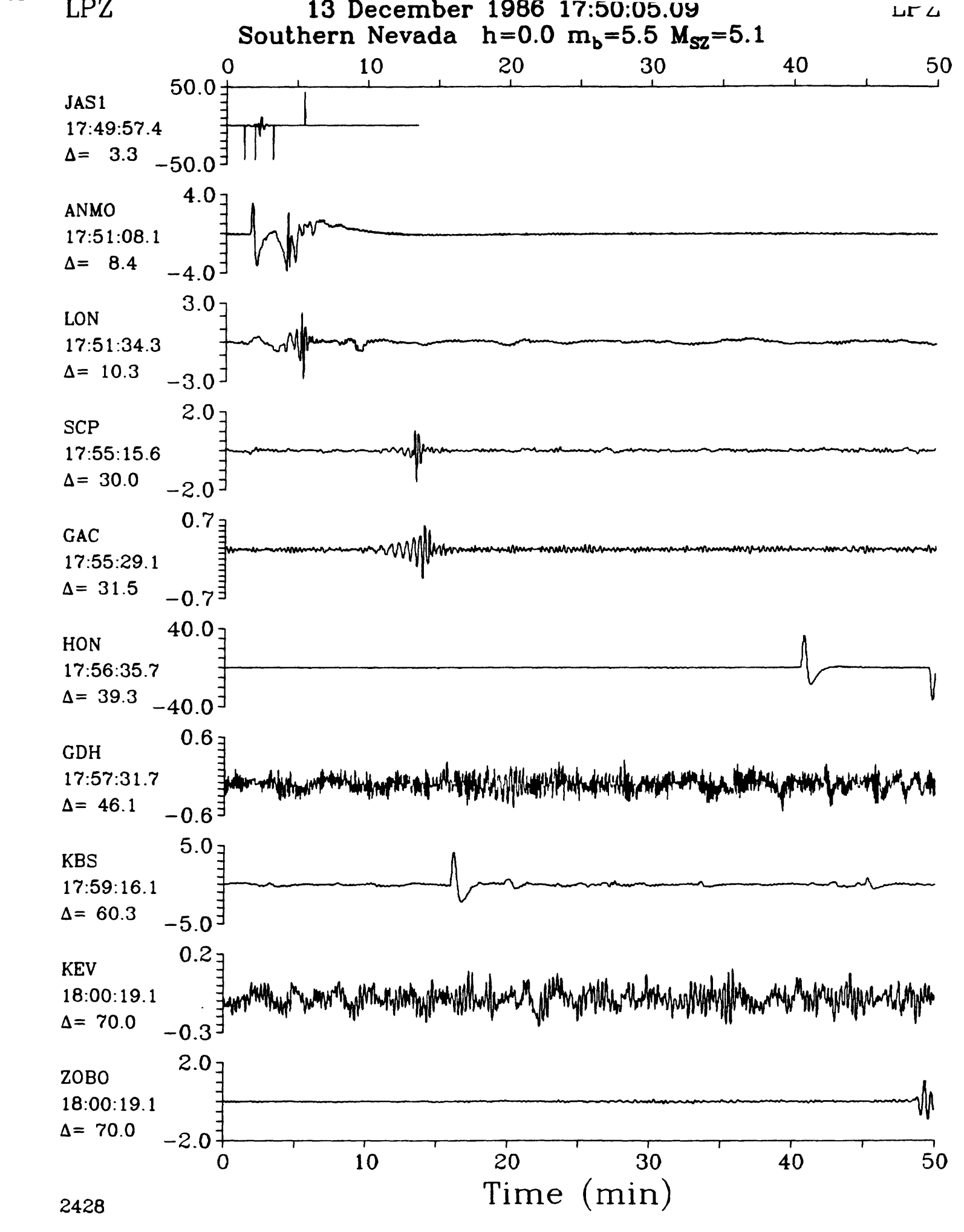
SPZ

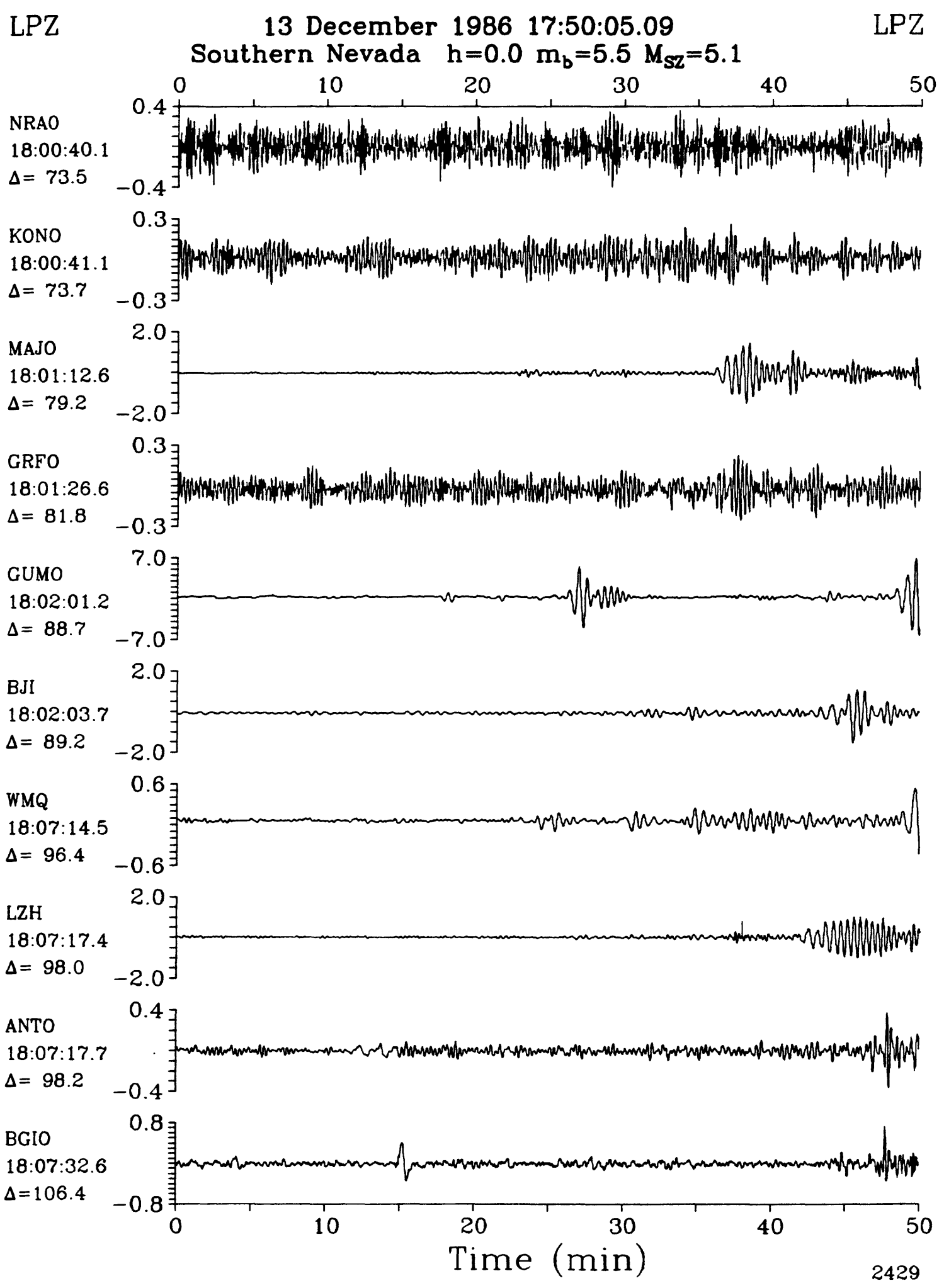
13 December 1986 17:50:05.09

Southern Nevada h=0.0 m_b=5.5 M_{SZ}=5.1

SPZ

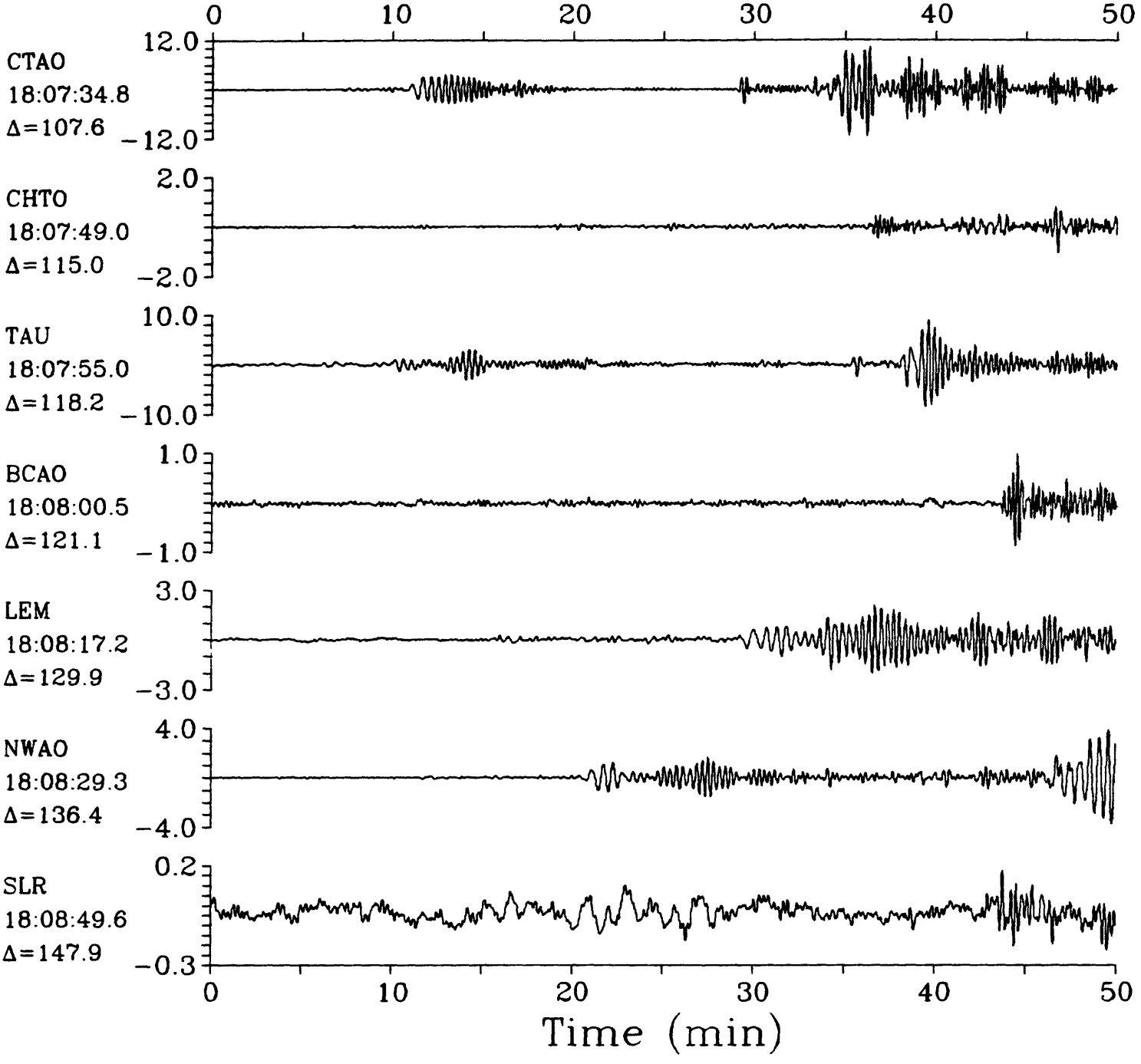



LPZ
13 December 1986 17:50:05.09
Southern Nevada h=0.0 m_b=5.5 M_{SZ}=5.1
LPZ
0
10
20
30
40
50
JAS1
17:49:57.4
Δ= 3.3
50.0
-50.0
ANMO
17:51:08.1
Δ= 8.4
4.0
-4.0
LON
17:51:34.3
Δ= 10.3
3.0
-3.0
SCP
17:55:15.6
Δ= 30.0
2.0
-2.0
GAC
17:55:29.1
Δ= 31.5
0.7
-0.7
HON
17:56:35.7
Δ= 39.3
40.0
-40.0
GDH
17:57:31.7
Δ= 46.1
0.6
-0.6
KBS
17:59:16.1
Δ= 60.3
5.0
-5.0
KEV
18:00:19.1
Δ= 70.0
0.2
-0.3
ZOBO
18:00:19.1
Δ= 70.0
2.0
-2.0
0
10
20
30
40
50
Time (min)
2428


LPZ
13 December 1986 17:50:05.09
Southern Nevada h=0.0 m_b=5.5 M_{SZ}=5.1
LPZ
0
10
20
30
40
50
NRAO
18:00:40.1
Δ= 73.5
0.4
-0.4
KONO
18:00:41.1
Δ= 73.7
0.3
-0.3
MAJO
18:01:12.6
Δ= 79.2
2.0
-2.0
GRFO
18:01:26.6
Δ= 81.8
0.3
-0.3
GUMO
18:02:01.2
Δ= 88.7
7.0
-7.0
BJI
18:02:03.7
Δ= 89.2
2.0
-2.0
WMQ
18:07:14.5
Δ= 96.4
0.6
-0.6
LZH
18:07:17.4
Δ= 98.0
2.0
-2.0
ANTO
18:07:17.7
Δ= 98.2
0.4
-0.4
BGIO
18:07:32.6
Δ=106.4
0.8
-0.8
0
10
20
30
40
50
Time (min)
2429

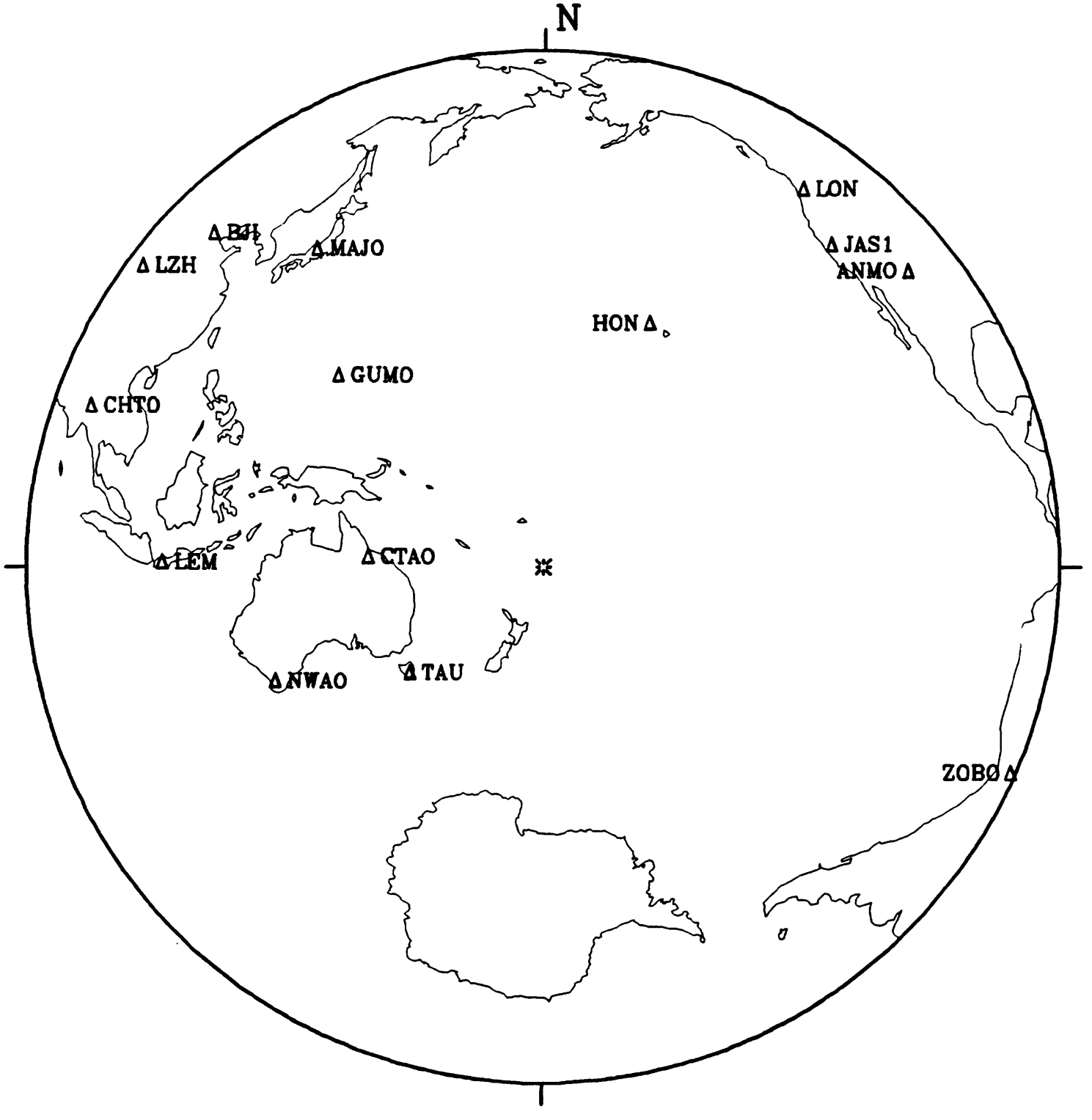
13 December 1986 17:50:05.09

Southern Nevada h=0.0 m_b=5.5 M_{SZ}=5.1

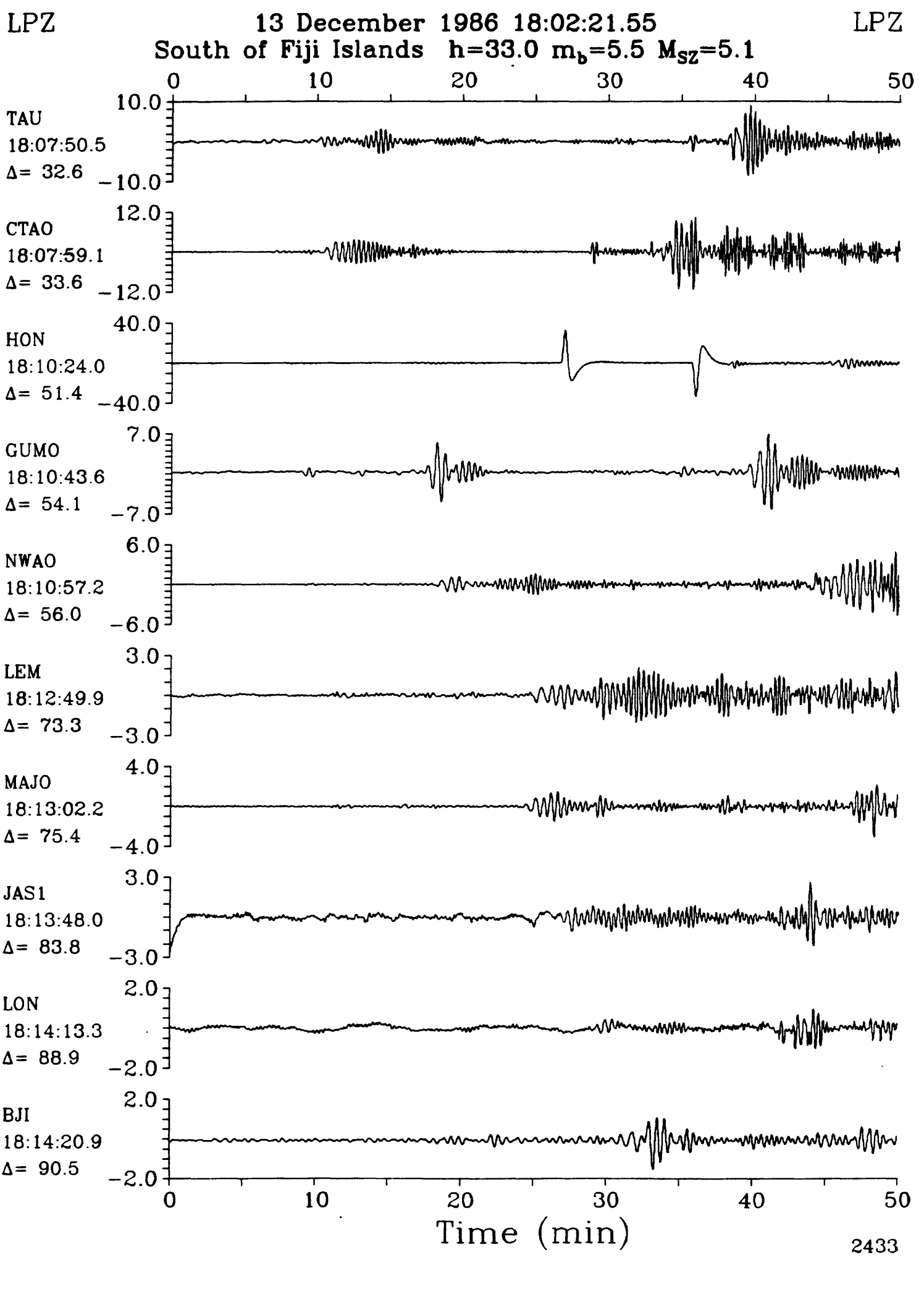


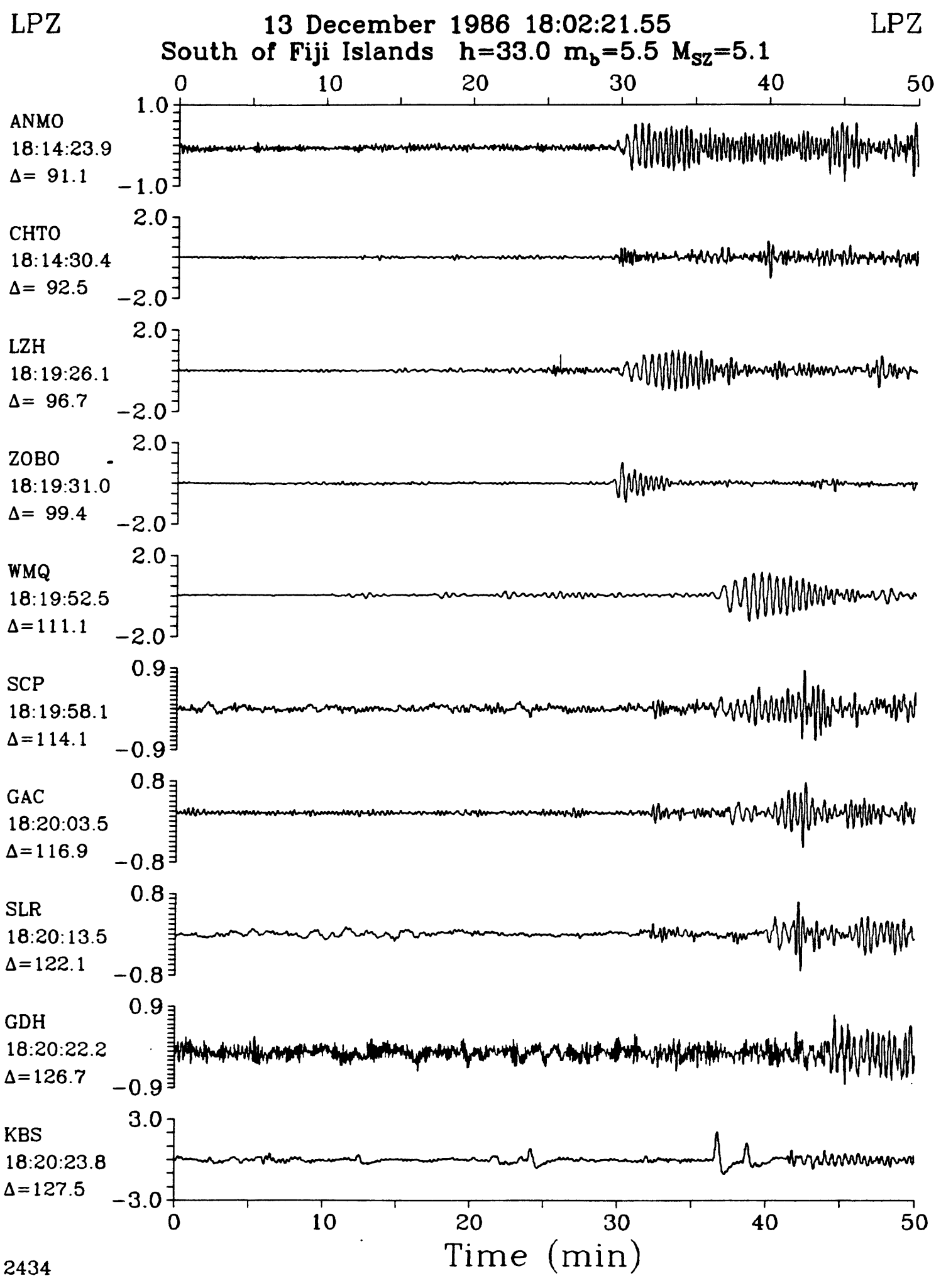
13 December 1986 18:02:21.55

South of Fiji Islands

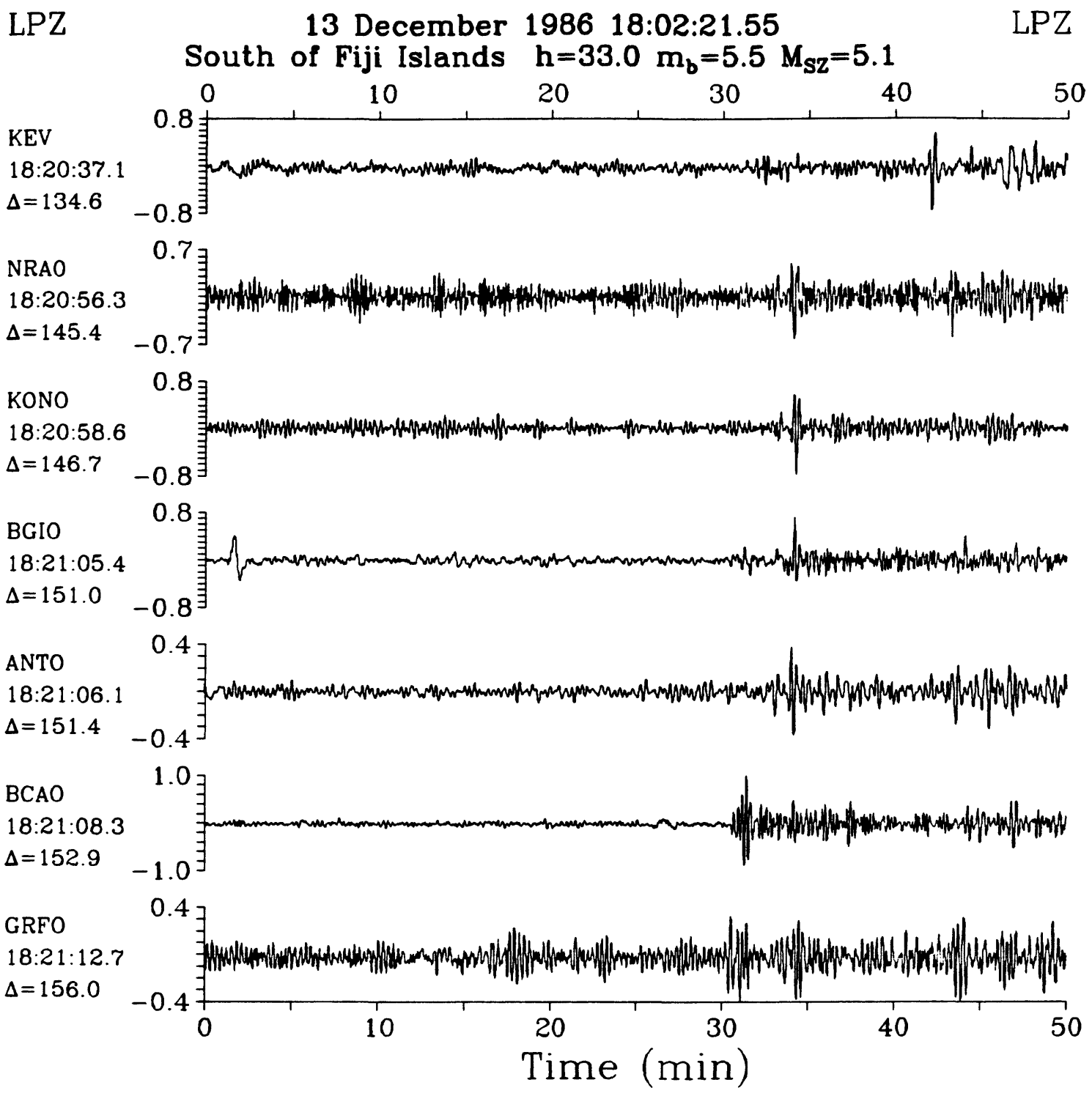


SPZ
13 December 1986 18:02:21.55
South of Fiji Islands h=33.0 m_b=5.5 M_{SZ}=5.1
SPZ
0
1
2
0.09
CTAO
18:08:44.1
Δ= 33.6
−0.09
0.02
JAS1
18:14:33.0
Δ= 83.8
−0.02
0.02
ANMO
18:15:08.9
Δ= 91.1
−0.02
0.02
CHTO
18:15:15.4
Δ= 92.5
−0.02
0.04
NRAO
18:21:41.3
Δ=145.4
−0.04
0.50
KONO
18:21:43.6
Δ=146.7
−0.50
0.06
ANTO
18:21:51.1
Δ=151.4
−0.06
0.03
BCAO
18:21:53.3
Δ=152.9
−0.03
0.04
GRFO
18:21:57.7
Δ=156.0
−0.04
0
1
2
Time (min)


LPZ
13 December 1986 18:02:21.55
South of Fiji Islands h=33.0 m_b=5.5 M_{SZ}=5.1
LPZ
0
10
20
30
40
50
TAU
18:07:50.5
Δ= 32.6
10.0
-10.0
CTAO
18:07:59.1
Δ= 33.6
12.0
-12.0
HON
18:10:24.0
Δ= 51.4
40.0
-40.0
GUMO
18:10:43.6
Δ= 54.1
7.0
-7.0
NWAO
18:10:57.2
Δ= 56.0
6.0
-6.0
LEM
18:12:49.9
Δ= 73.3
3.0
-3.0
MAJO
18:13:02.2
Δ= 75.4
4.0
-4.0
JAS1
18:13:48.0
Δ= 83.8
3.0
-3.0
LON
18:14:13.3
Δ= 88.9
2.0
-2.0
BJI
18:14:20.9
Δ= 90.5
2.0
-2.0
0
10
20
30
40
50
Time (min)
2433

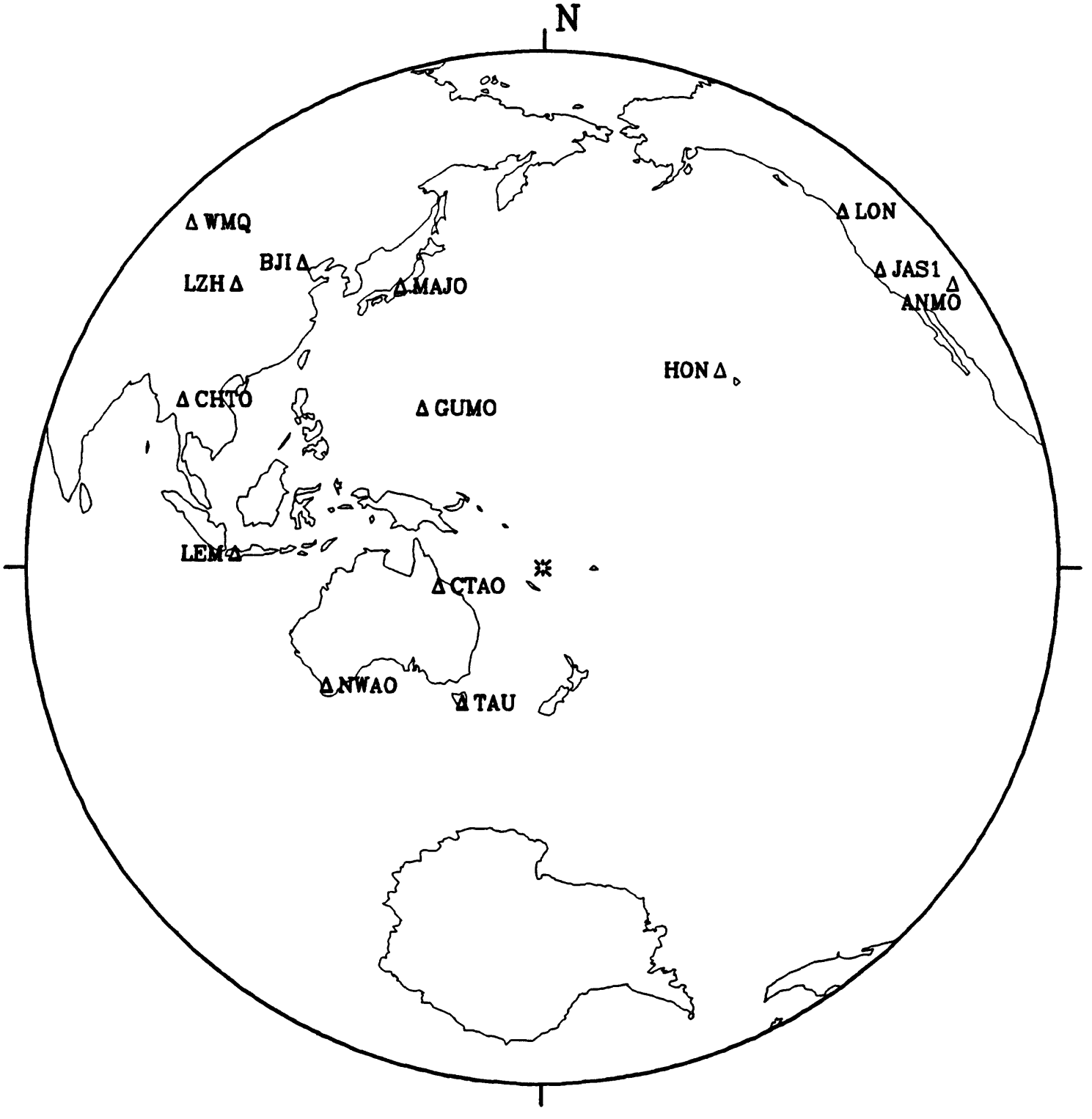

LPZ
13 December 1986 18:02:21.55
South of Fiji Islands h=33.0 m_b=5.5 M_{SZ}=5.1
LPZ
0
10
20
30
40
50
ANMO
18:14:23.9
Δ= 91.1
1.0
-1.0
CHTO
18:14:30.4
Δ= 92.5
2.0
-2.0
LZH
18:19:26.1
Δ= 96.7
2.0
-2.0
ZOBO
18:19:31.0
Δ= 99.4
2.0
-2.0
WMQ
18:19:52.5
Δ=111.1
2.0
-2.0
SCP
18:19:58.1
Δ=114.1
0.9
-0.9
GAC
18:20:03.5
Δ=116.9
0.8
-0.8
SLR
18:20:13.5
Δ=122.1
0.8
-0.8
GDH
18:20:22.2
Δ=126.7
0.9
-0.9
KBS
18:20:23.8
Δ=127.5
3.0
-3.0
0
10
20
30
40
50
Time (min)

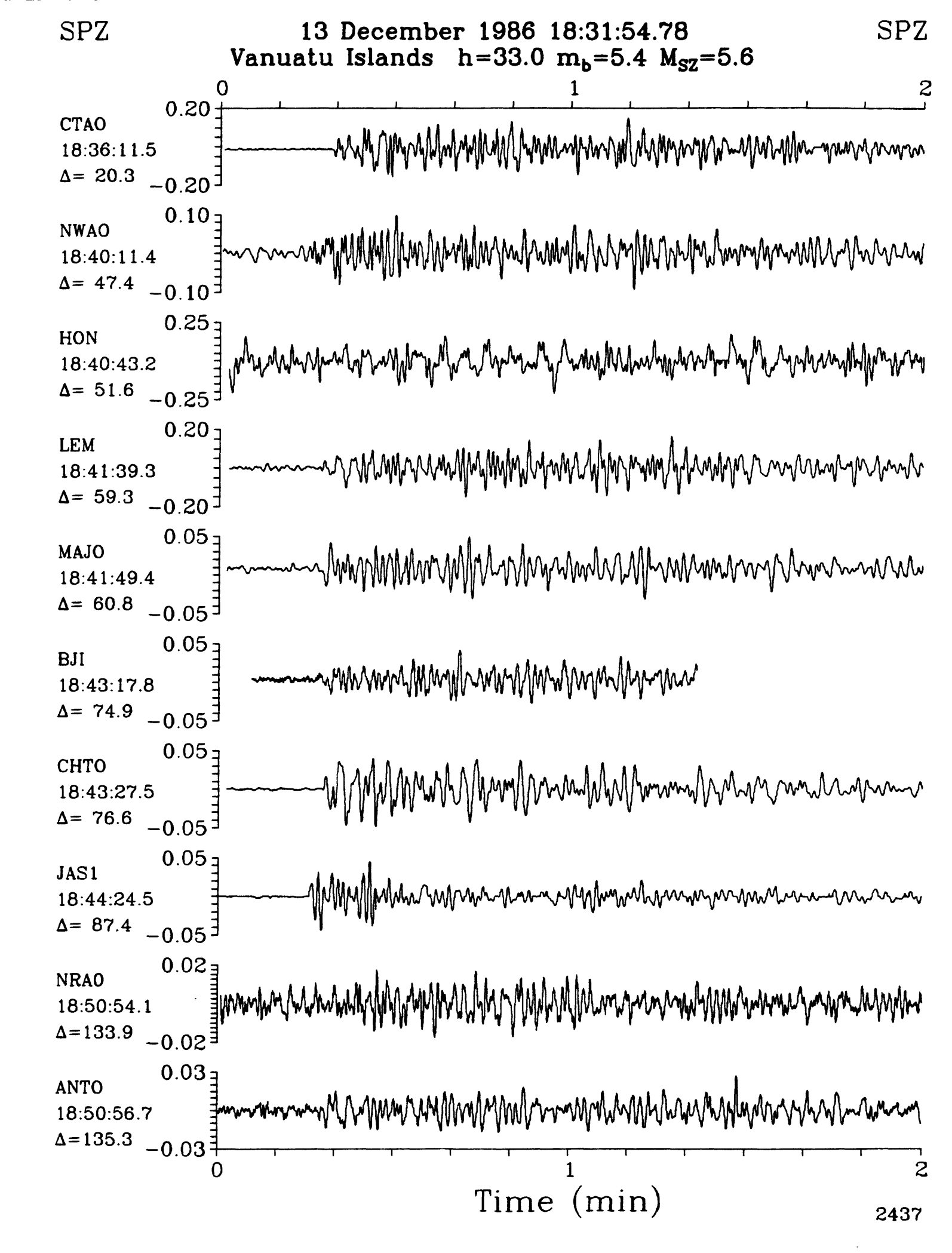
2434

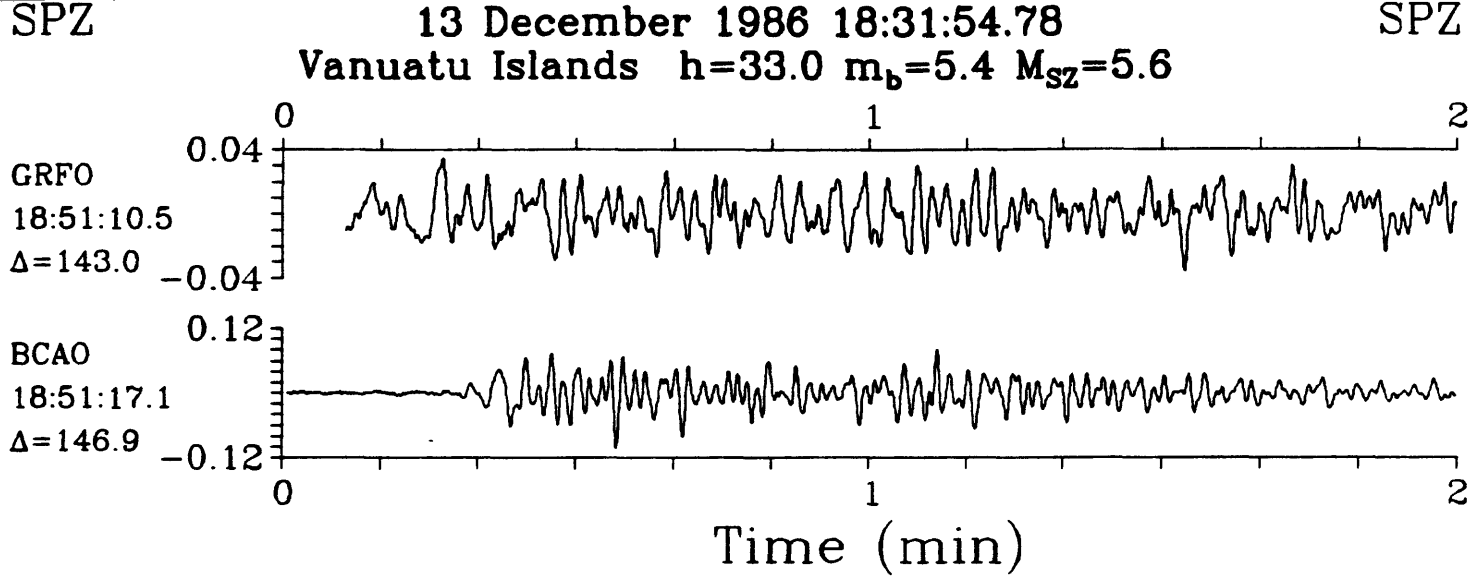

LPZ
13 December 1986 18:02:21.55
South of Fiji Islands h=33.0 m_b=5.5 M_{SZ}=5.1
LPZ
0
10
20
30
40
50
KEV
18:20:37.1
Δ=134.6
0.8
-0.8
NRAO
18:20:56.3
Δ=145.4
0.7
-0.7
KONO
18:20:58.6
Δ=146.7
0.8
-0.8
BGIO
18:21:05.4
Δ=151.0
0.8
-0.8
ANTO
18:21:06.1
Δ=151.4
0.4
-0.4
BCAO
18:21:08.3
Δ=152.9
1.0
-1.0
GRFO
18:21:12.7
Δ=156.0
0.4
-0.4
0
10
20
30
40
50
Time (min)

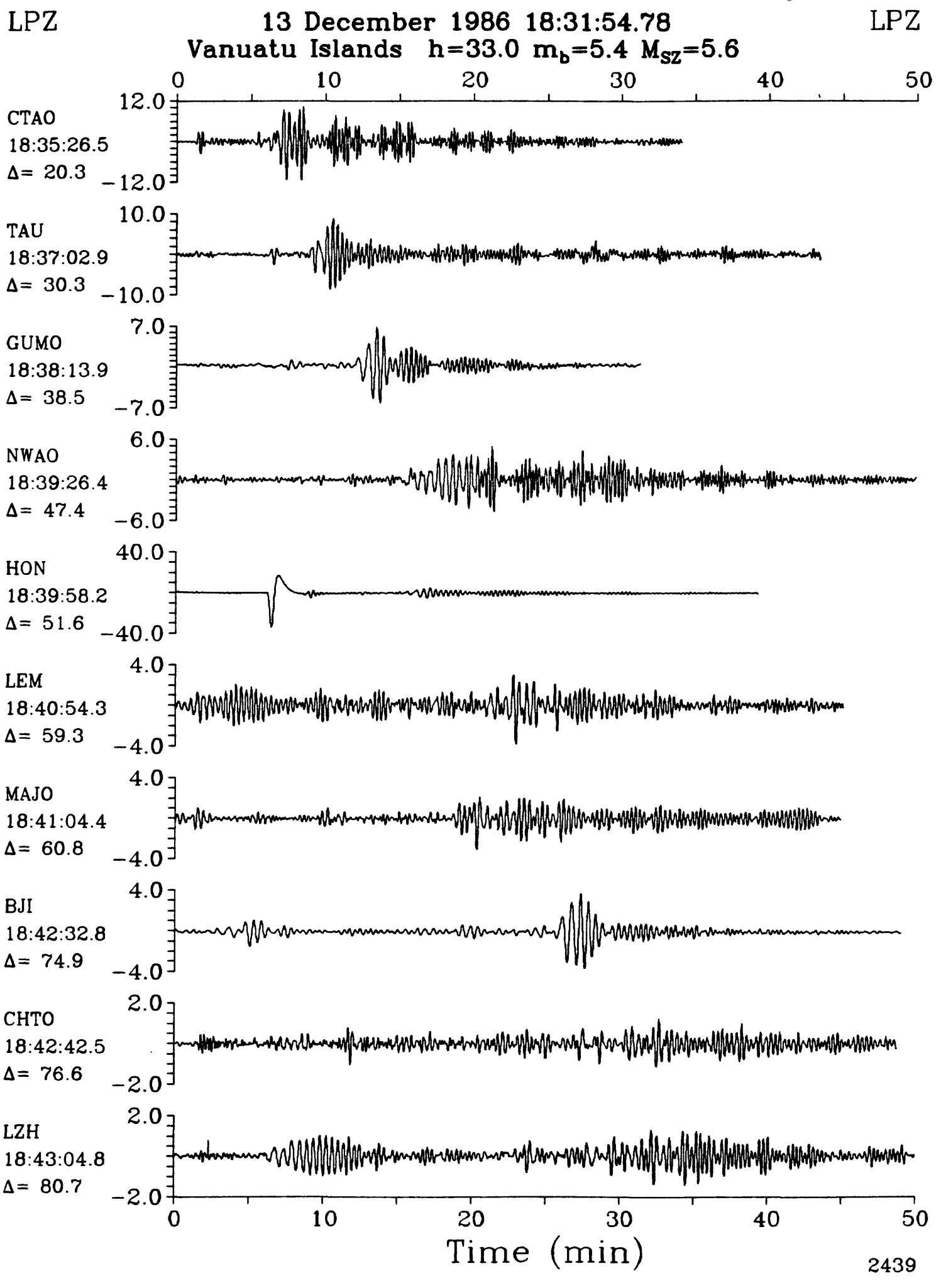
13 December 1986 18:31:54.78

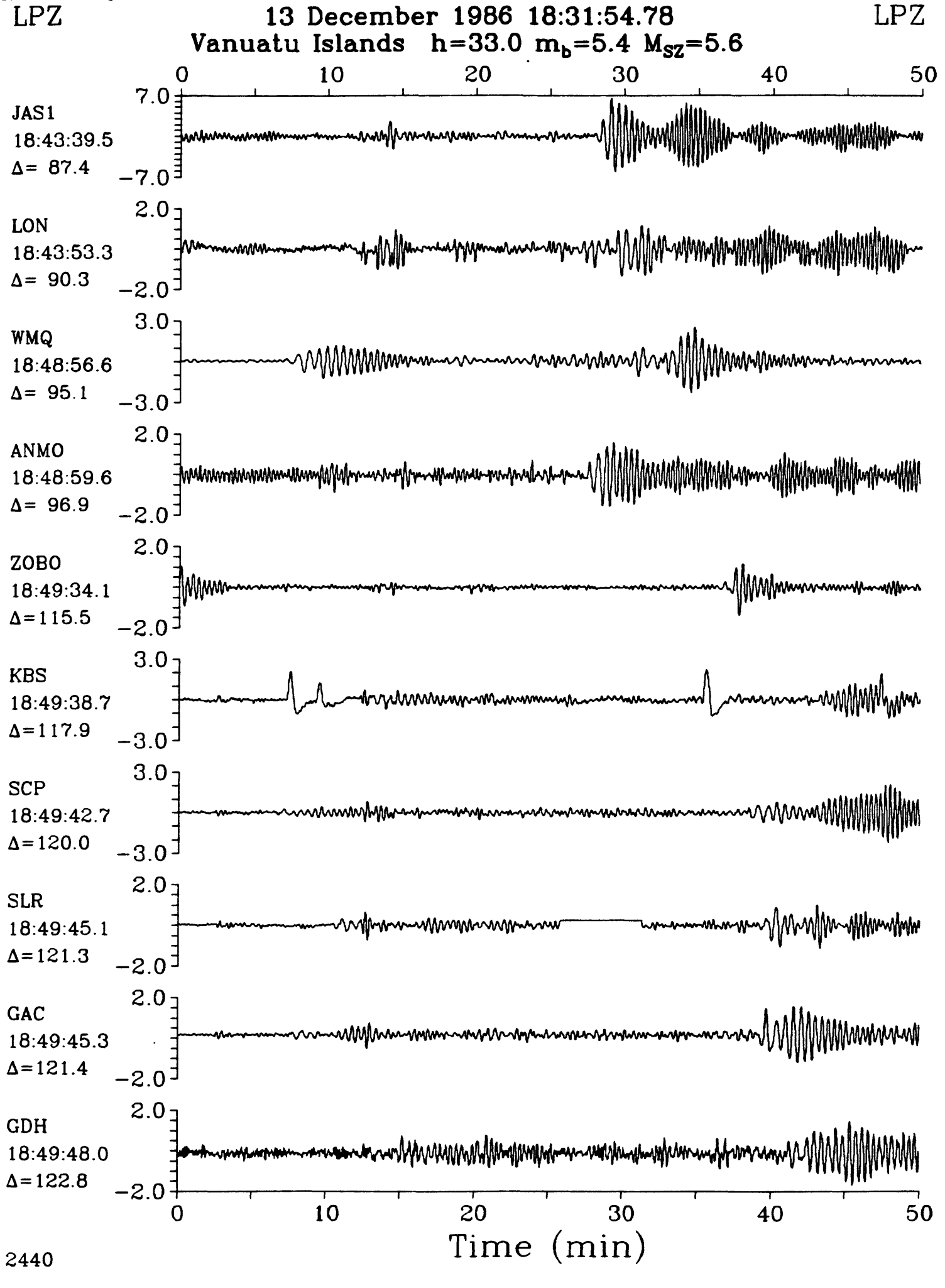
Vanuatu Islands

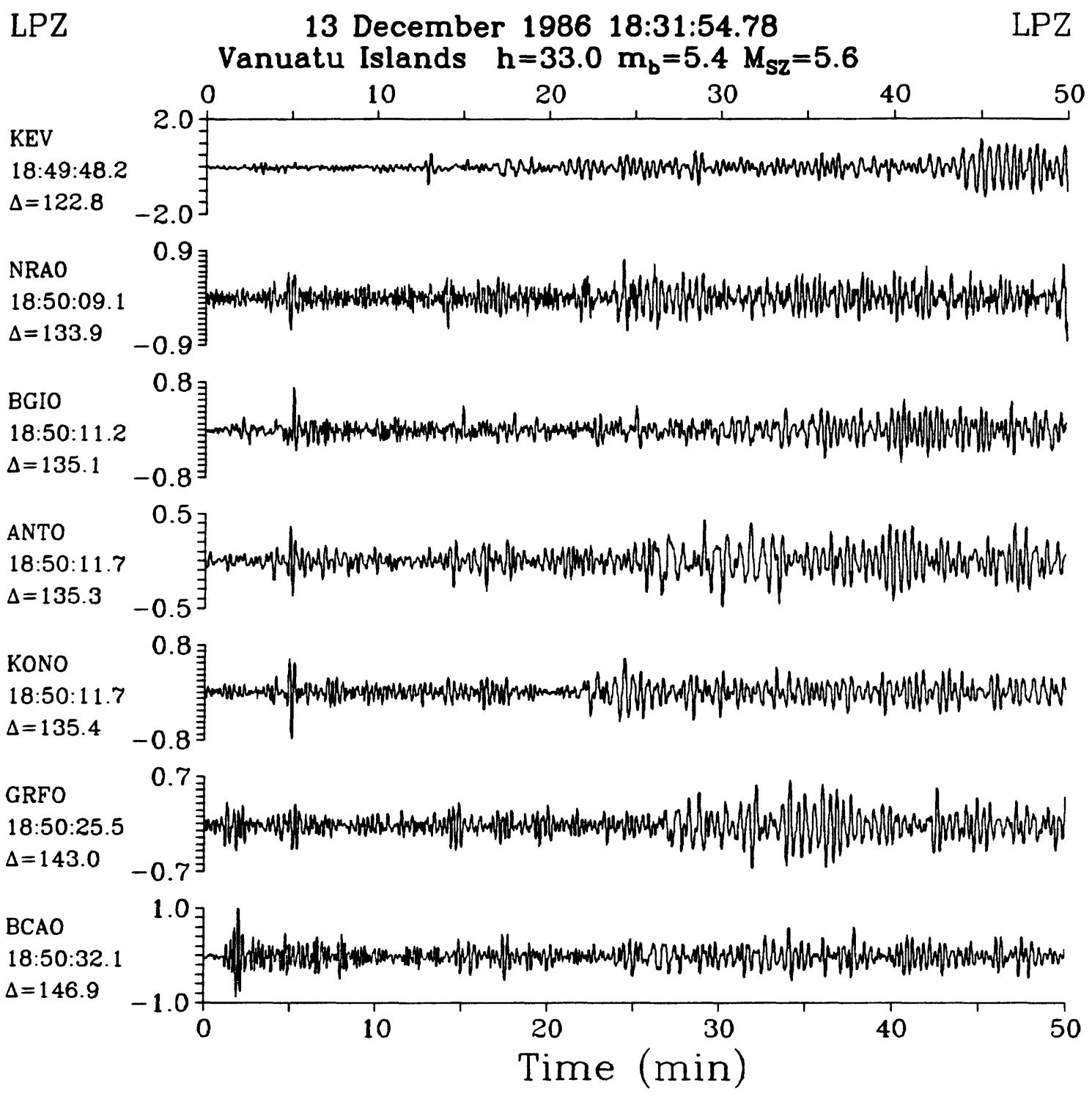



SPZ
13 December 1986 18:31:54.78
Vanuatu Islands h=33.0 m_b=5.4 M_{SZ}=5.6
SPZ
0
1
2
CTAO
18:36:11.5
Δ= 20.3
0.20
-0.20
NWAO
18:40:11.4
Δ= 47.4
0.10
-0.10
HON
18:40:43.2
Δ= 51.6
0.25
-0.25
LEM
18:41:39.3
Δ= 59.3
0.20
-0.20
MAJO
18:41:49.4
Δ= 60.8
0.05
-0.05
BJI
18:43:17.8
Δ= 74.9
0.05
-0.05
CHTO
18:43:27.5
Δ= 76.6
0.05
-0.05
JAS1
18:44:24.5
Δ= 87.4
0.05
-0.05
NRAO
18:50:54.1
Δ=133.9
0.02
-0.02
ANTO
18:50:56.7
Δ=135.3
0.03
-0.03
0
1
2
Time (min)
2437


SPZ
13 December 1986 18:31:54.78
SPZ
Vanuatu Islands h=33.0 m_b=5.4 M_{SZ}=5.6
0
1
2
0.04
GRFO
18:51:10.5
Δ=143.0
−0.04
0.12
BCAO
18:51:17.1
Δ=146.9
−0.12
0
1
2
Time (min)

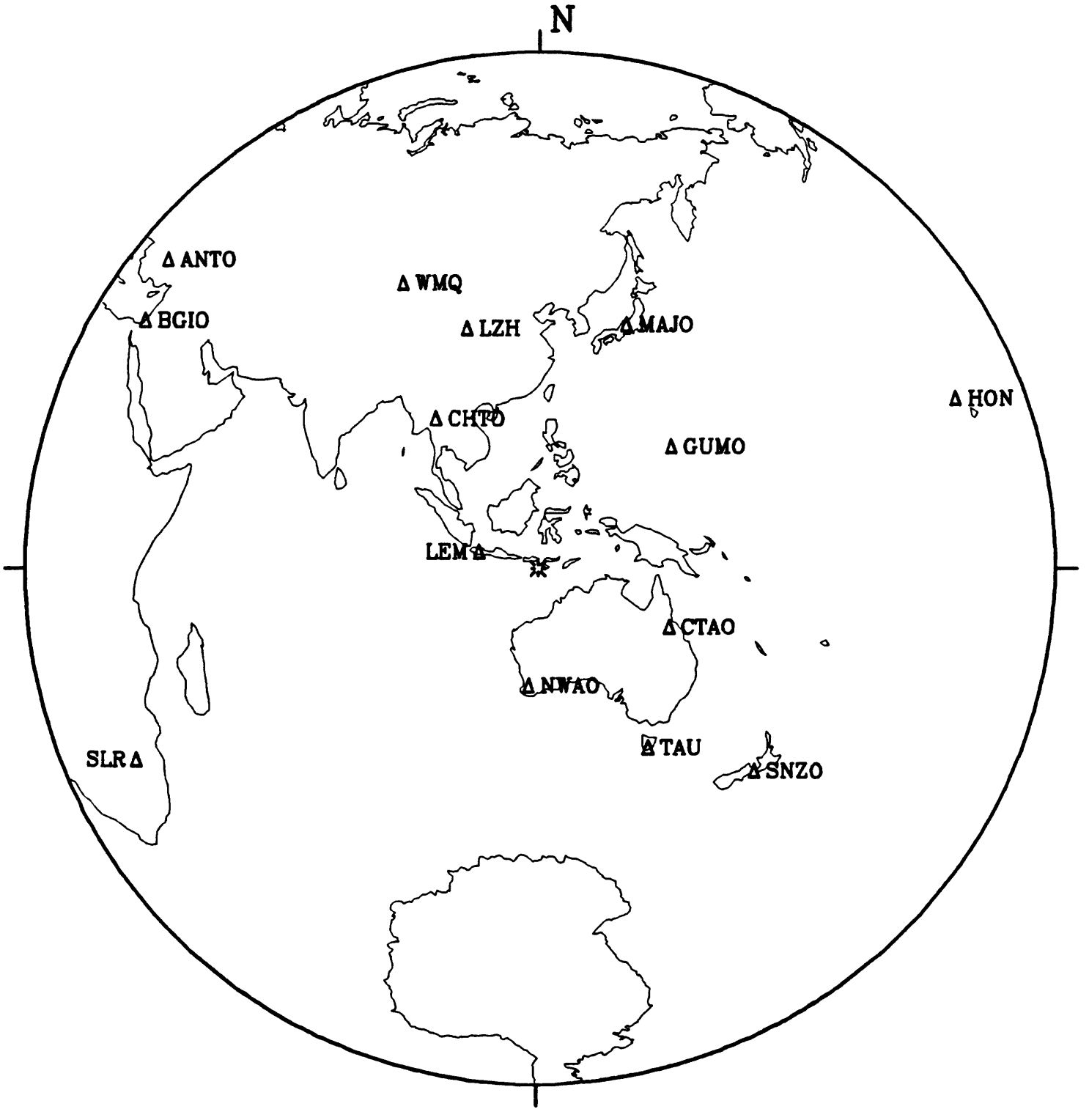

LPZ
13 December 1986 18:31:54.78
Vanuatu Islands h=33.0 m_b=5.4 M_{SZ}=5.6
LPZ
0
10
20
30
40
50
CTAO
18:35:26.5
Δ= 20.3
12.0
-12.0
TAU
18:37:02.9
Δ= 30.3
10.0
-10.0
GUMO
18:38:13.9
Δ= 38.5
7.0
-7.0
NWAO
18:39:26.4
Δ= 47.4
6.0
-6.0
HON
18:39:58.2
Δ= 51.6
40.0
-40.0
LEM
18:40:54.3
Δ= 59.3
4.0
-4.0
MAJO
18:41:04.4
Δ= 60.8
4.0
-4.0
BJI
18:42:32.8
Δ= 74.9
4.0
-4.0
CHTO
18:42:42.5
Δ= 76.6
2.0
-2.0
LZH
18:43:04.8
Δ= 80.7
2.0
-2.0
0
10
20
30
40
50
Time (min)
2439


LPZ
13 December 1986 18:31:54.78
LPZ
Vanuatu Islands h=33.0 m_b=5.4 M_{SZ}=5.6
0
10
20
30
40
50
JAS1
18:43:39.5
Δ= 87.4
7.0
-7.0
LON
18:43:53.3
Δ= 90.3
2.0
-2.0
WMQ
18:48:56.6
Δ= 95.1
3.0
-3.0
ANMO
18:48:59.6
Δ= 96.9
2.0
-2.0
ZOBO
18:49:34.1
Δ=115.5
2.0
-2.0
KBS
18:49:38.7
Δ=117.9
3.0
-3.0
SCP
18:49:42.7
Δ=120.0
3.0
-3.0
SLR
18:49:45.1
Δ=121.3
2.0
-2.0
GAC
18:49:45.3
Δ=121.4
2.0
-2.0
GDH
18:49:48.0
Δ=122.8
2.0
-2.0
0
10
20
30
40
50
Time (min)

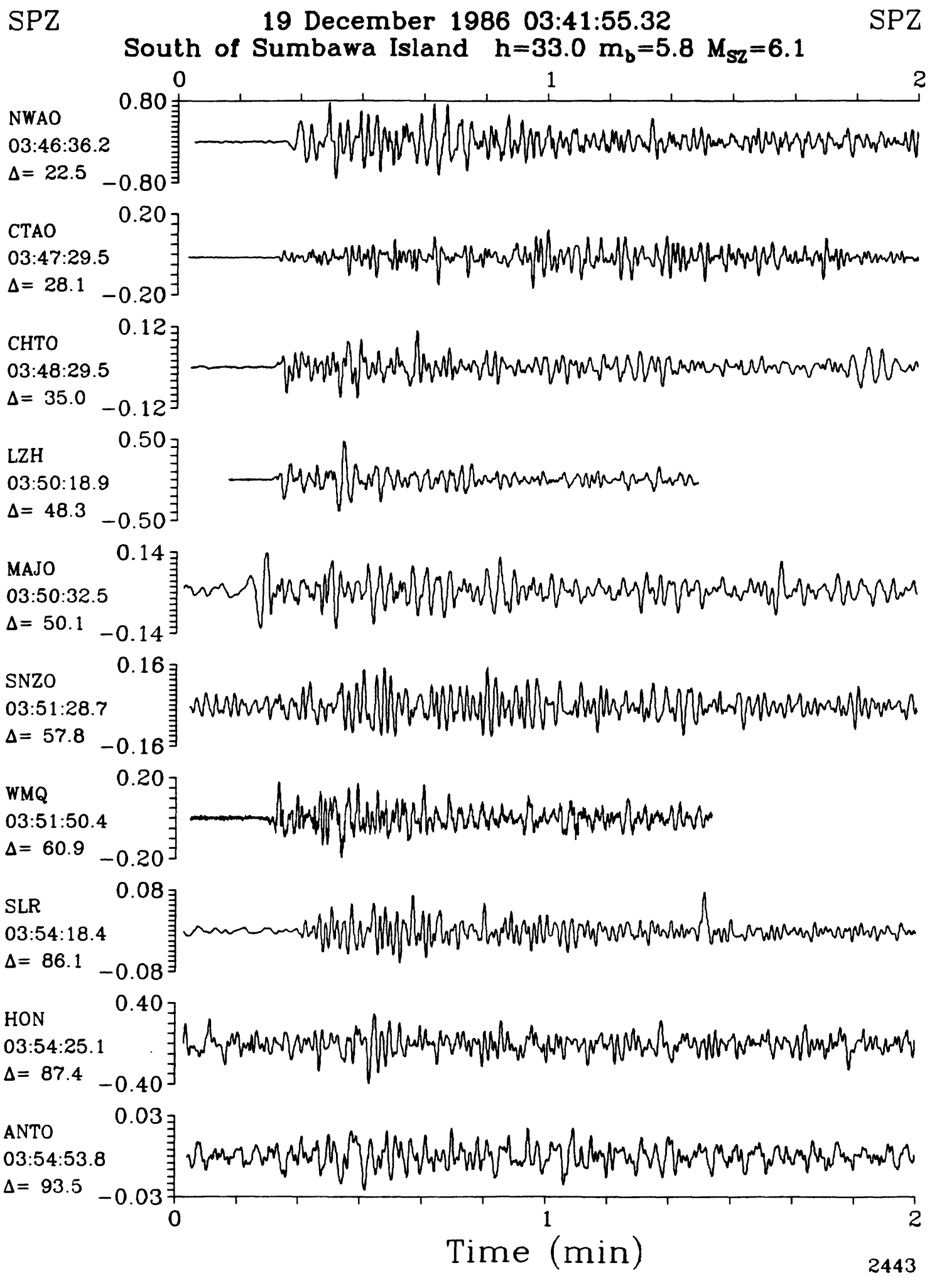

LPZ
13 December 1986 18:31:54.78
Vanuatu Islands h=33.0 m_b=5.4 M_{SZ}=5.6
LPZ
0
10
20
30
40
50
KEV
18:49:48.2
Δ=122.8
2.0
−2.0
NRAO
18:50:09.1
Δ=133.9
0.9
−0.9
BGIO
18:50:11.2
Δ=135.1
0.8
−0.8
ANTO
18:50:11.7
Δ=135.3
0.5
−0.5
KONO
18:50:11.7
Δ=135.4
0.8
−0.8
GRFO
18:50:25.5
Δ=143.0
0.7
−0.7
BCAO
18:50:32.1
Δ=146.9
1.0
−1.0
0
10
20
30
40
50
Time (min)

19 December 1986 03:41:55.32

South of Sumbawa Island

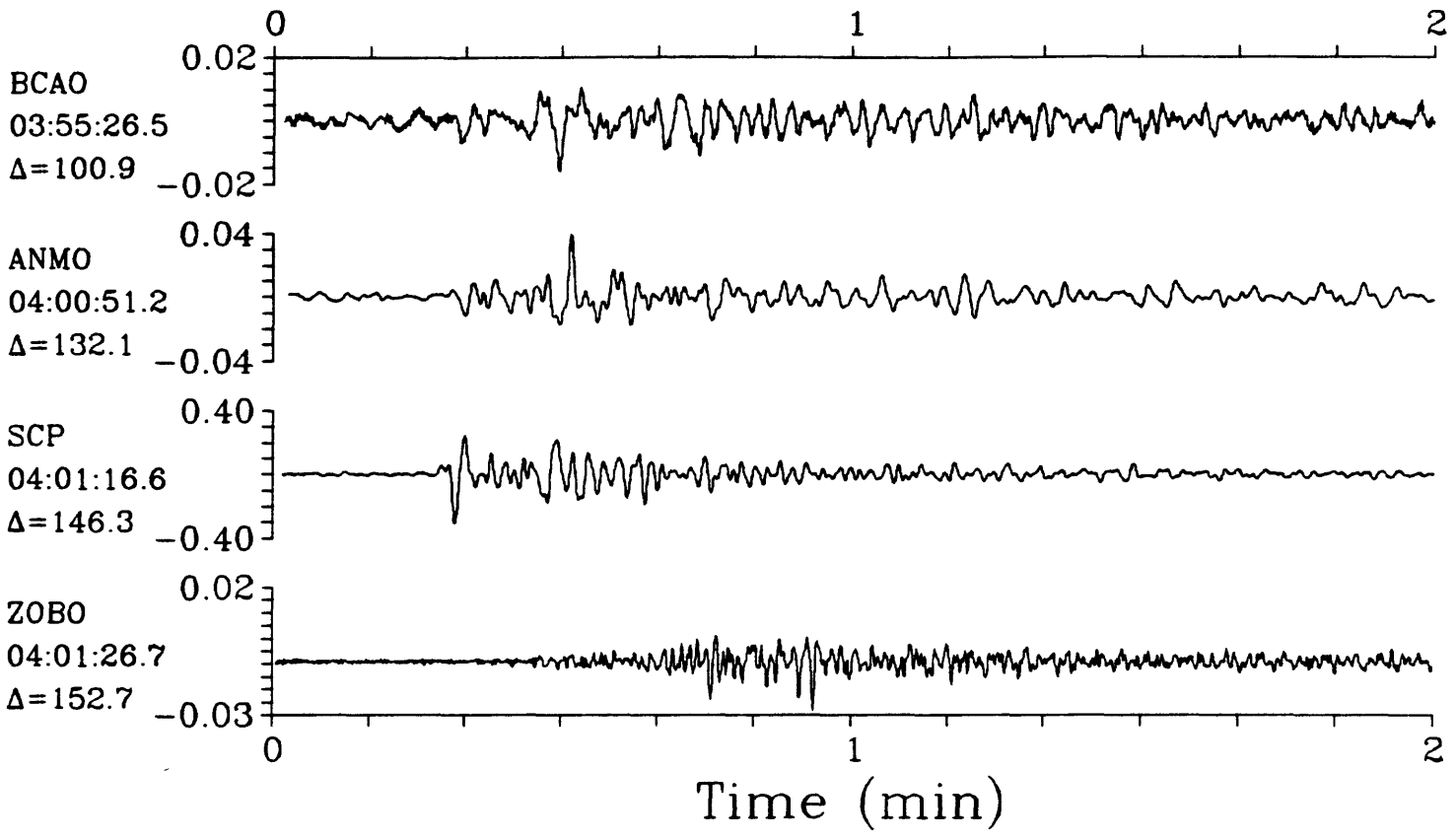


2442

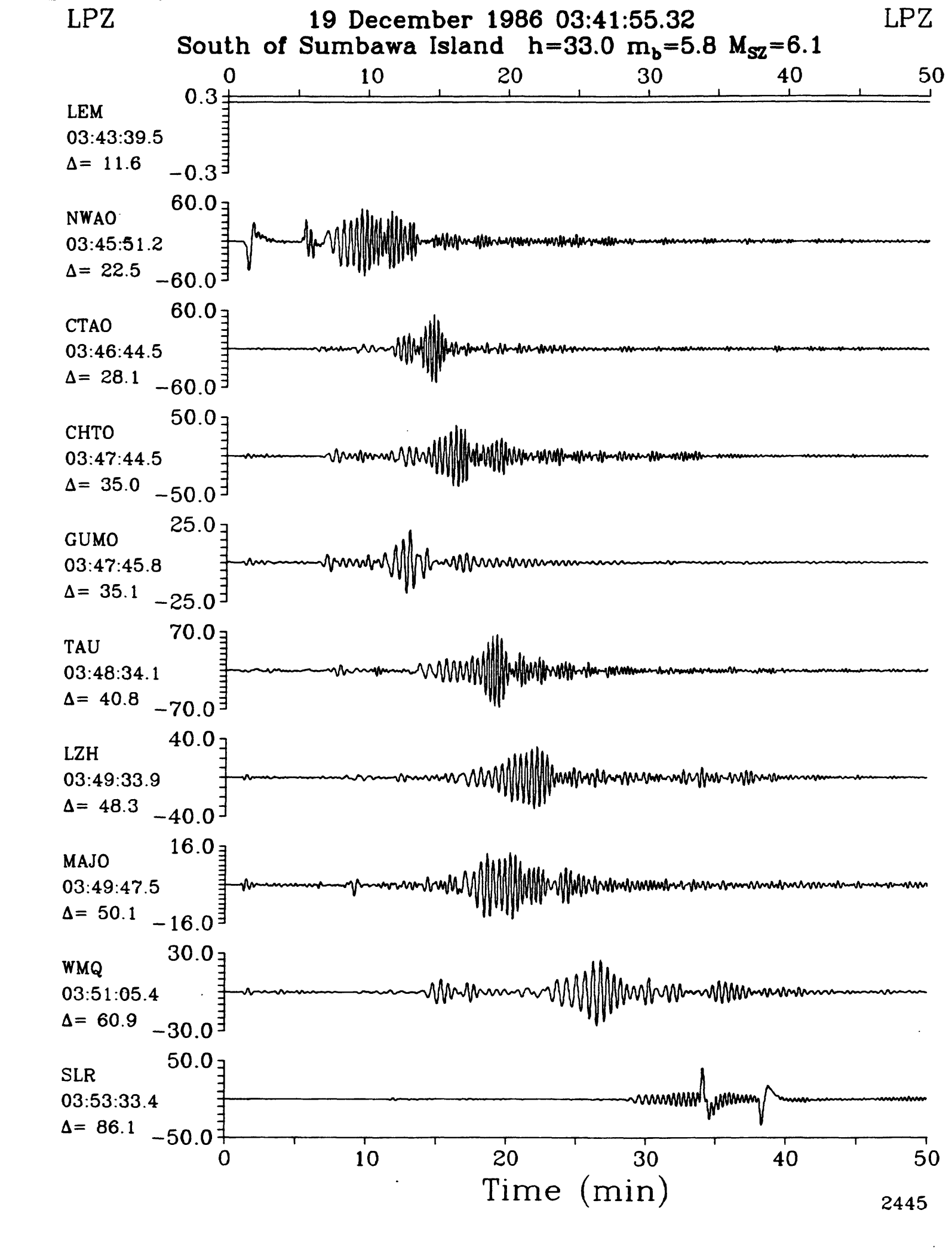

SPZ
19 December 1986 03:41:55.32
SPZ
South of Sumbawa Island h=33.0 m_b=5.8 M_{SZ}=6.1
0
1
2
0.80
NWAO
03:46:36.2
Δ= 22.5
−0.80
0.20
CTAO
03:47:29.5
Δ= 28.1
−0.20
0.12
CHTO
03:48:29.5
Δ= 35.0
−0.12
0.50
LZH
03:50:18.9
Δ= 48.3
−0.50
0.14
MAJO
03:50:32.5
Δ= 50.1
−0.14
0.16
SNZO
03:51:28.7
Δ= 57.8
−0.16
0.20
WMQ
03:51:50.4
Δ= 60.9
−0.20
0.08
SLR
03:54:18.4
Δ= 86.1
−0.08
0.40
HON
03:54:25.1
Δ= 87.4
−0.40
0.03
ANTO
03:54:53.8
Δ= 93.5
−0.03
0
1
2
Time (min)
2443

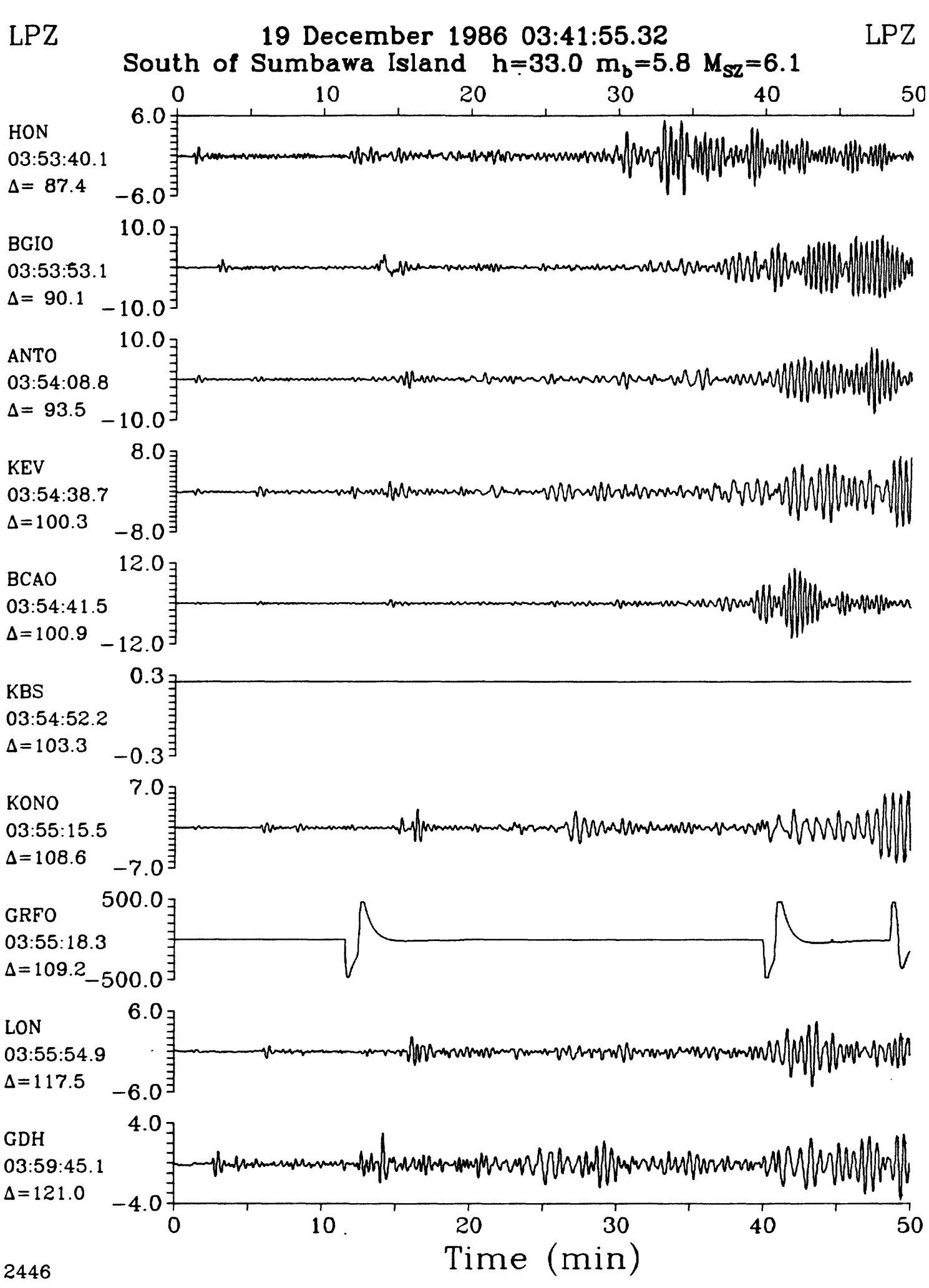
SPZ 19 December 1986 03:41:55.32 SPZ

South of Sumbawa Island h=33.0 m_b=5.8 M_{SZ}=6.1



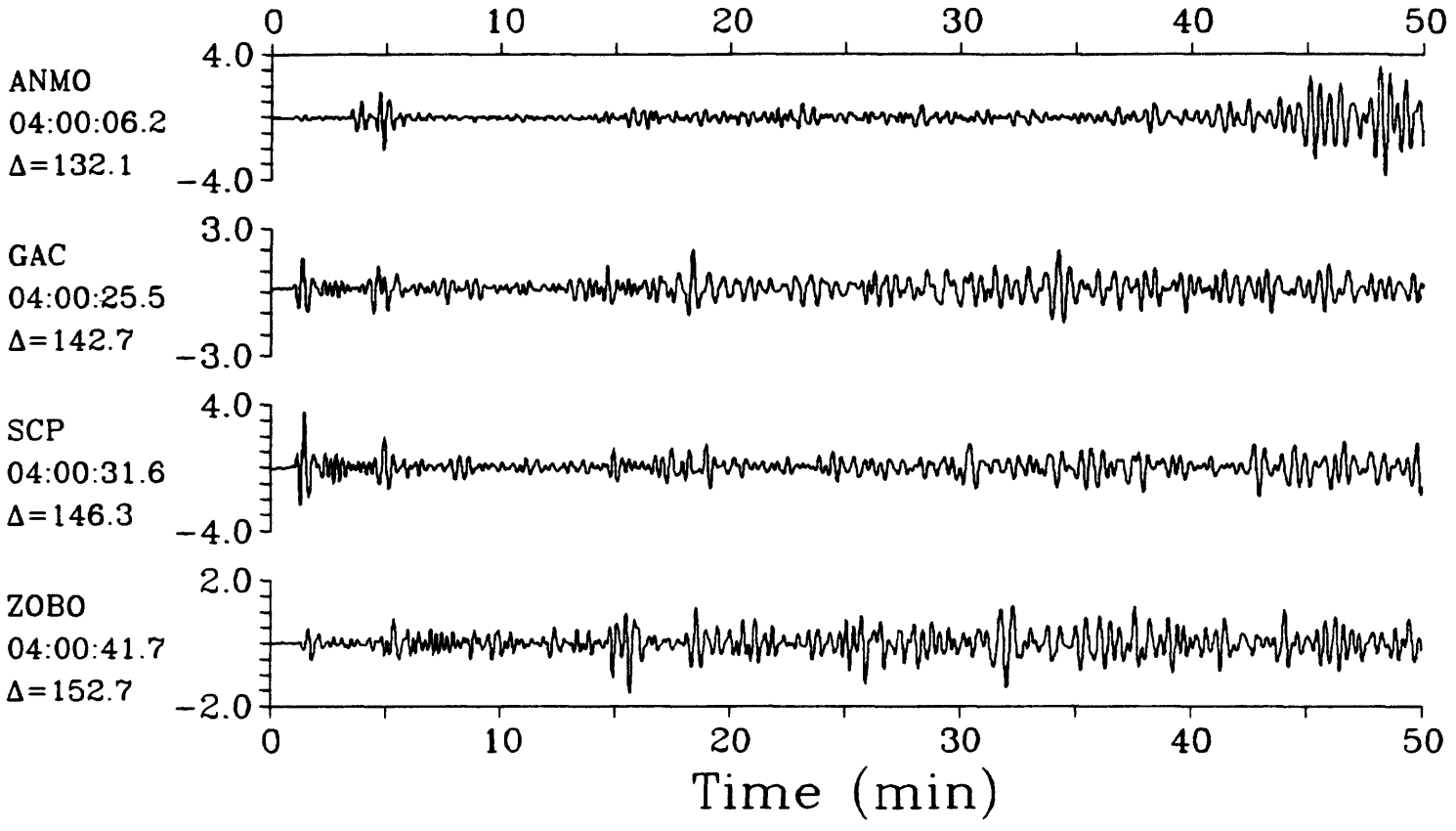
Time (min)


LPZ
19 December 1986 03:41:55.32
LPZ
South of Sumbawa Island h=33.0 m_b=5.8 M_{SZ}=6.1
0
10
20
30
40
50
0.3
LEM
03:43:39.5
Δ= 11.6
-0.3
60.0
NWAO
03:45:51.2
Δ= 22.5
-60.0
60.0
CTAO
03:46:44.5
Δ= 28.1
-60.0
50.0
CHTO
03:47:44.5
Δ= 35.0
-50.0
25.0
GUMO
03:47:45.8
Δ= 35.1
-25.0
70.0
TAU
03:48:34.1
Δ= 40.8
-70.0
40.0
LZH
03:49:33.9
Δ= 48.3
-40.0
16.0
MAJO
03:49:47.5
Δ= 50.1
-16.0
30.0
WMQ
03:51:05.4
Δ= 60.9
-30.0
50.0
SLR
03:53:33.4
Δ= 86.1
-50.0
0
10
20
30
40
50
Time (min)
2445


LPZ
19 December 1986 03:41:55.32
LPZ
South of Sumbawa Island h=33.0 m_b=5.8 M_{SZ}=6.1
0
10
20
30
40
50
HON
03:53:40.1
Δ= 87.4
6.0
-6.0
BGIO
03:53:53.1
Δ= 90.1
10.0
-10.0
ANTO
03:54:08.8
Δ= 93.5
10.0
-10.0
KEV
03:54:38.7
Δ=100.3
8.0
-8.0
BCAO
03:54:41.5
Δ=100.9
12.0
-12.0
KBS
03:54:52.2
Δ=103.3
0.3
-0.3
KONO
03:55:15.5
Δ=108.6
7.0
-7.0
GRFO
03:55:18.3
Δ=109.2
500.0
-500.0
LON
03:55:54.9
Δ=117.5
6.0
-6.0
GDH
03:59:45.1
Δ=121.0
4.0
-4.0
0
10
20
30
40
50
Time (min)
2446

LPZ 19 December 1986 03:41:55.32 LPZ

South of Sumbawa Island h=33.0 m_b=5.8 M_{SZ}=6.1

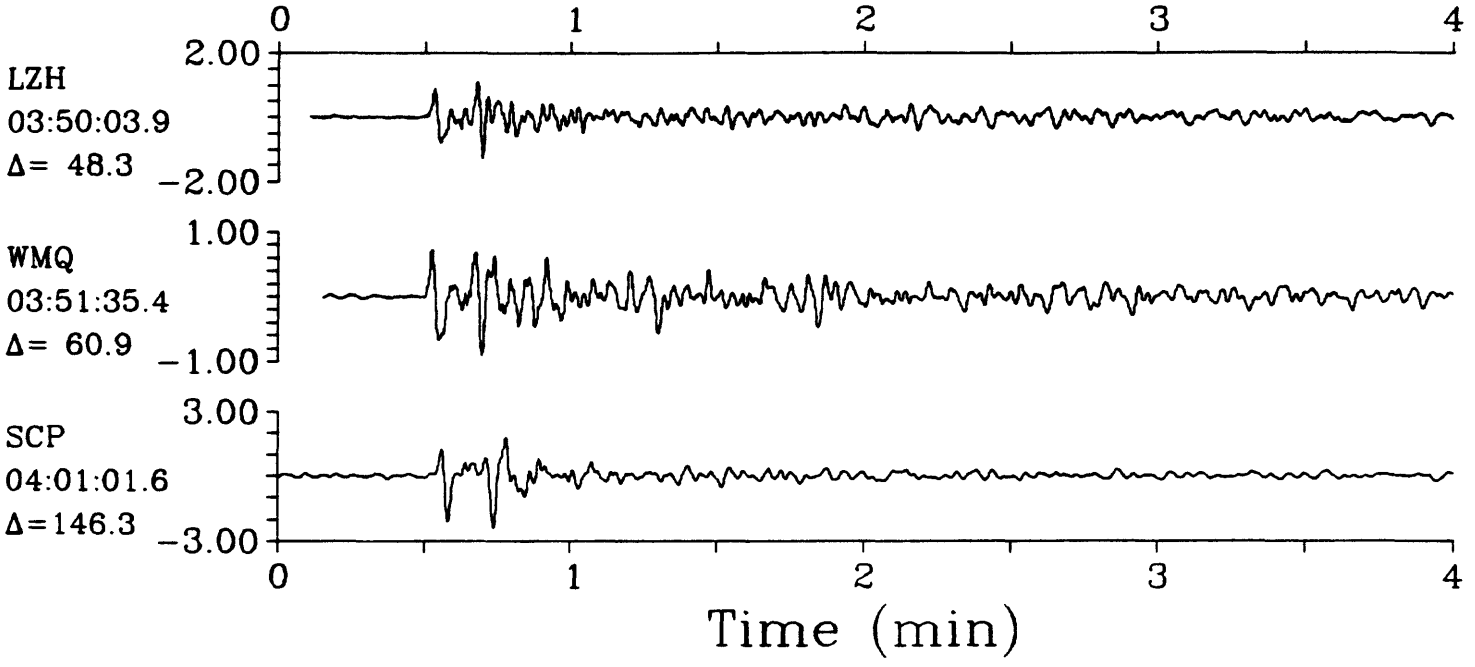


IPZ

19 December 1986 03:41:55.32

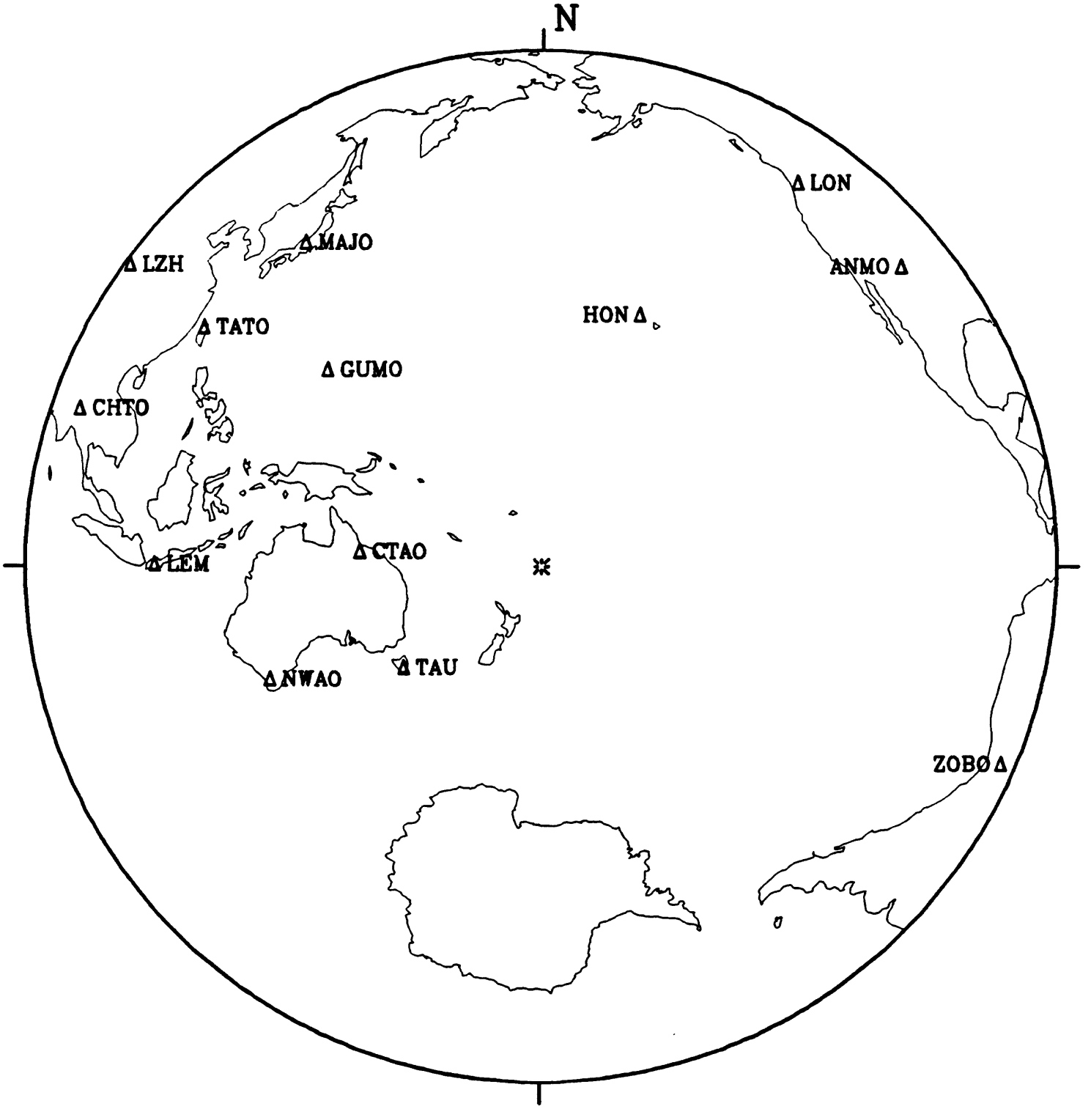
IPZ

South of Sumbawa Island h=33.0 m_b=5.8 M_{SZ}=6.1



20 December 1986 07:58:59.33

Kermadec Islands Region

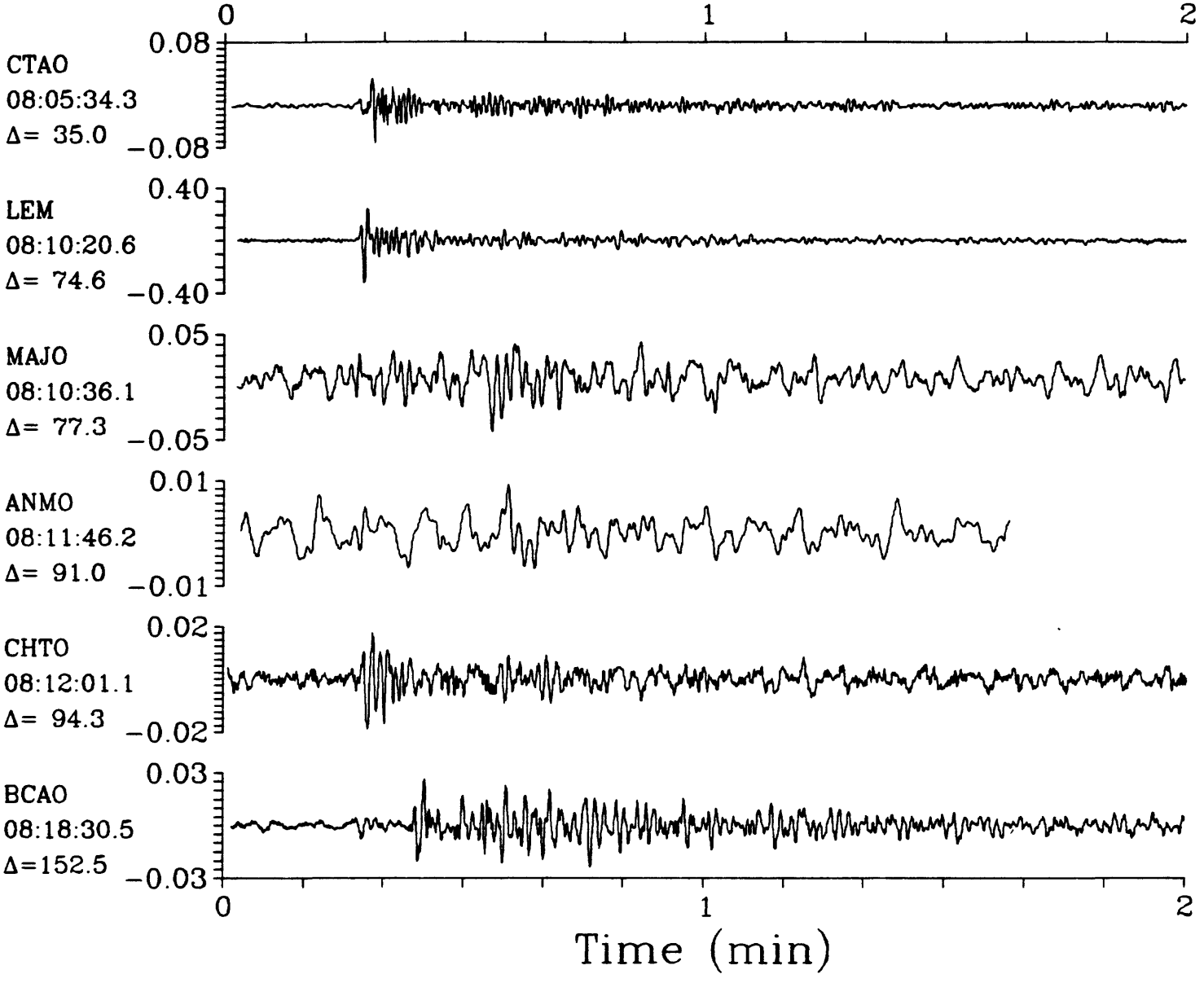


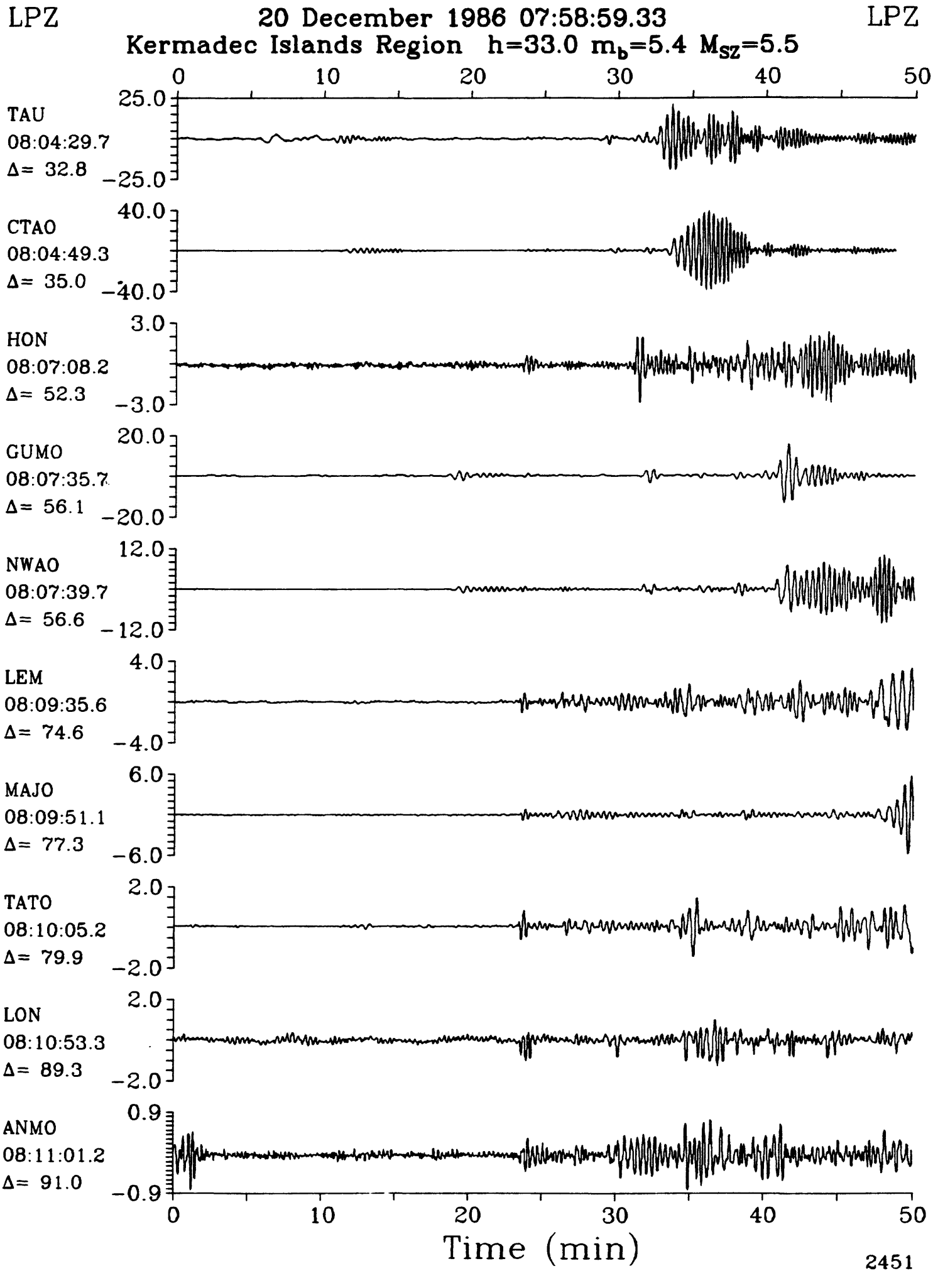
SPZ

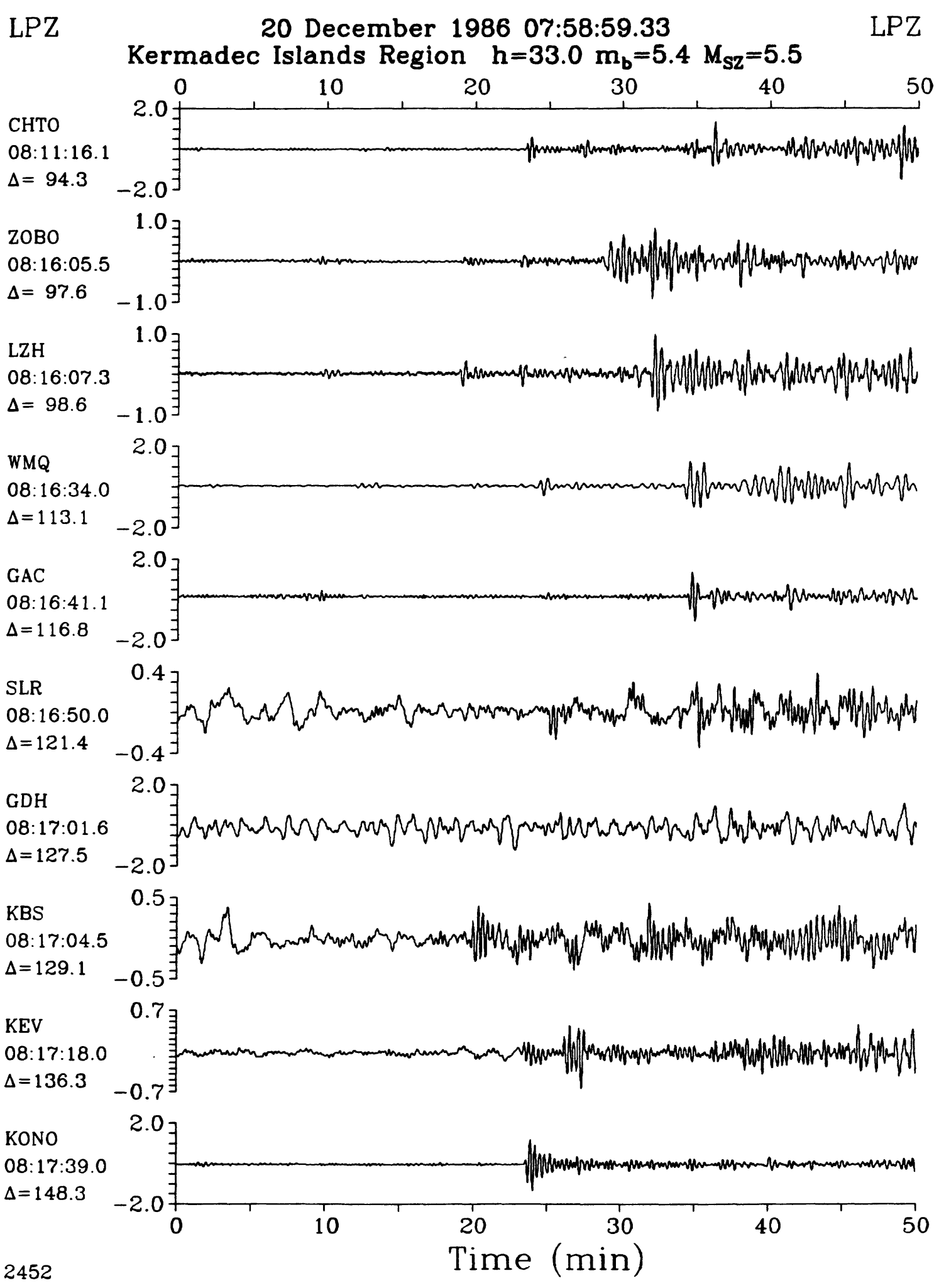
20 December 1986 07:58:59.33

SPZ

Kermadec Islands Region h=33.0 m_b=5.4 M_{SZ}=5.5



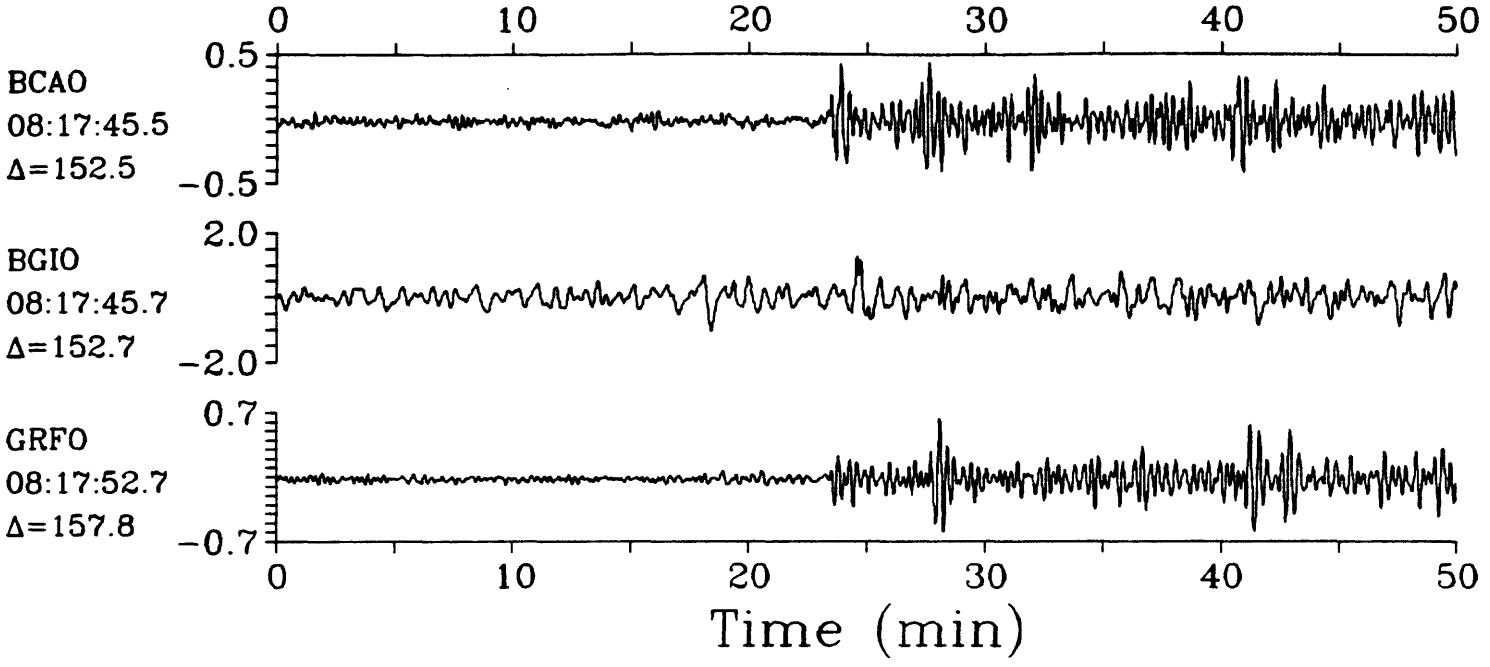

LPZ
20 December 1986 07:58:59.33
LPZ
Kermadec Islands Region h=33.0 m_b=5.4 M_{SZ}=5.5
0
10
20
30
40
50
TAU
08:04:29.7
Δ= 32.8
25.0
-25.0
CTAO
08:04:49.3
Δ= 35.0
40.0
-40.0
HON
08:07:08.2
Δ= 52.3
3.0
-3.0
GUMO
08:07:35.7
Δ= 56.1
20.0
-20.0
NWAO
08:07:39.7
Δ= 56.6
12.0
-12.0
LEM
08:09:35.6
Δ= 74.6
4.0
-4.0
MAJO
08:09:51.1
Δ= 77.3
6.0
-6.0
TATO
08:10:05.2
Δ= 79.9
2.0
-2.0
LON
08:10:53.3
Δ= 89.3
2.0
-2.0
ANMO
08:11:01.2
Δ= 91.0
0.9
-0.9
0
10
20
30
40
50
Time (min)
2451


LPZ
20 December 1986 07:58:59.33
LPZ
Kermadec Islands Region h=33.0 m_b=5.4 M_{SZ}=5.5
0
10
20
30
40
50
CHTO
08:11:16.1
Δ= 94.3
2.0
-2.0
ZOBO
08:16:05.5
Δ= 97.6
1.0
-1.0
LZH
08:16:07.3
Δ= 98.6
1.0
-1.0
WMQ
08:16:34.0
Δ=113.1
2.0
-2.0
GAC
08:16:41.1
Δ=116.8
2.0
-2.0
SLR
08:16:50.0
Δ=121.4
0.4
-0.4
GDH
08:17:01.6
Δ=127.5
2.0
-2.0
KBS
08:17:04.5
Δ=129.1
0.5
-0.5
KEV
08:17:18.0
Δ=136.3
0.7
-0.7
KONO
08:17:39.0
Δ=148.3
2.0
-2.0
0
10
20
30
40
50
Time (min)

20 December 1986 07:58:59.33

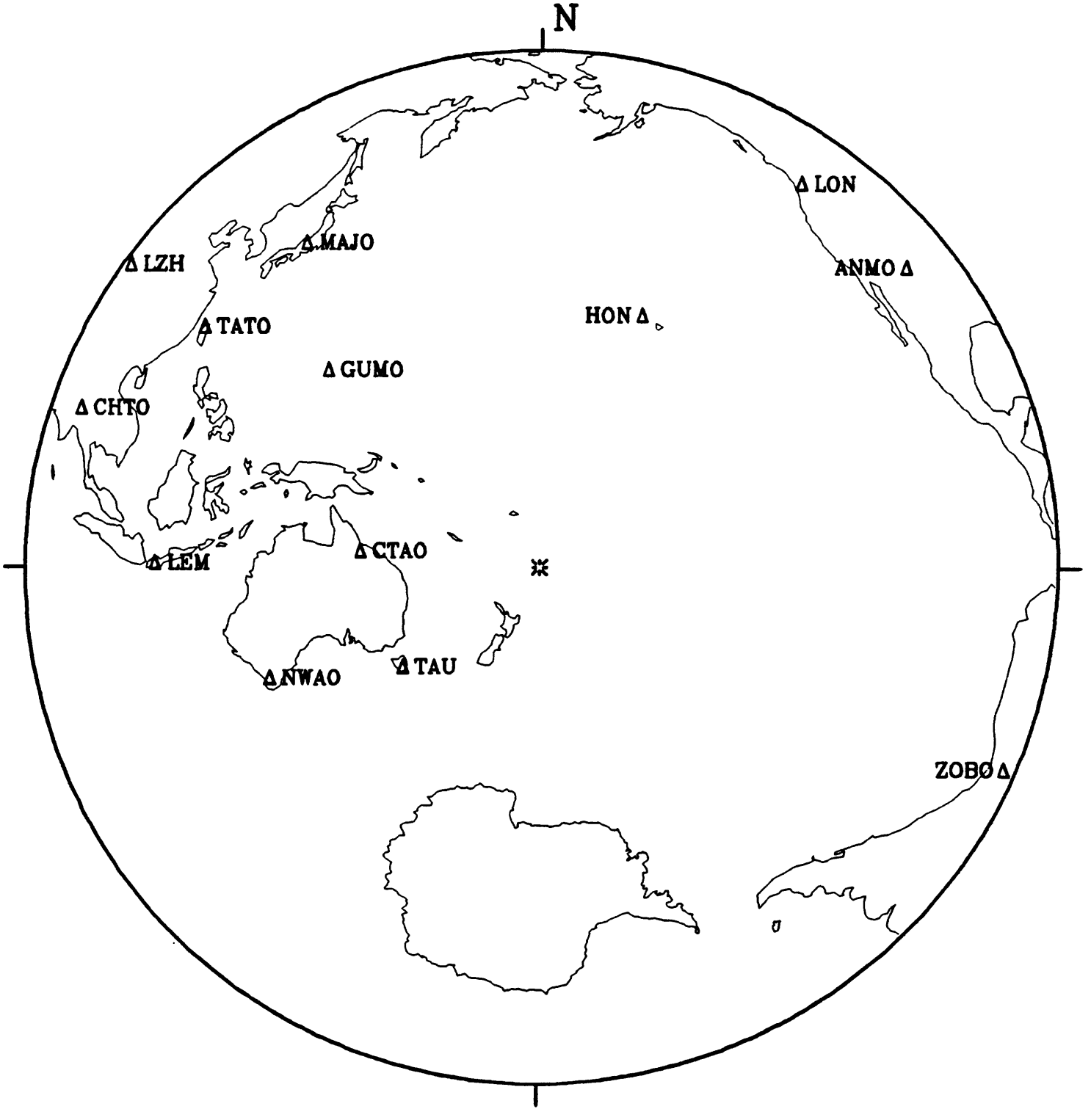
Kermadec Islands Region h=33.0 m_b=5.4 M_{SZ}=5.5

LPZ

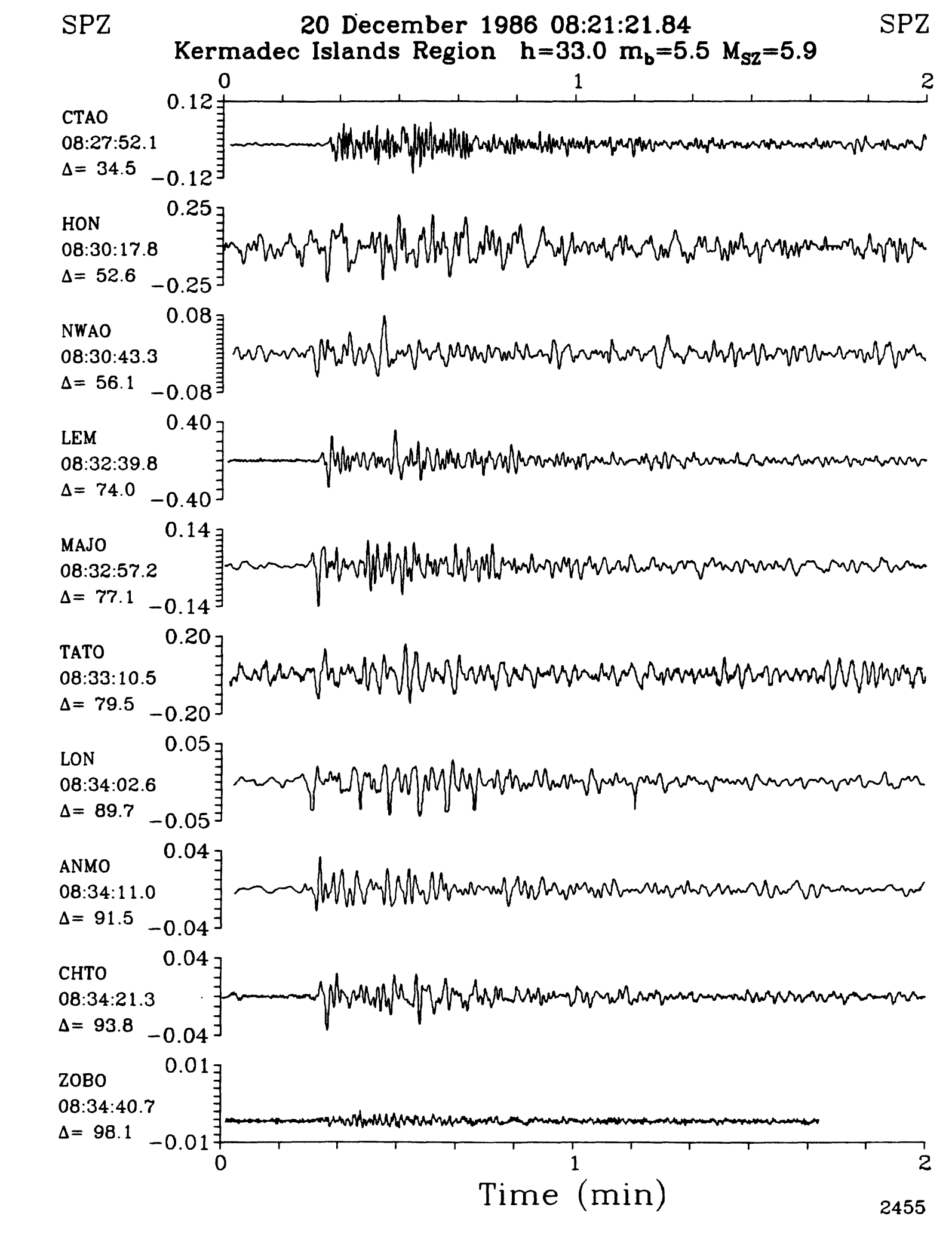


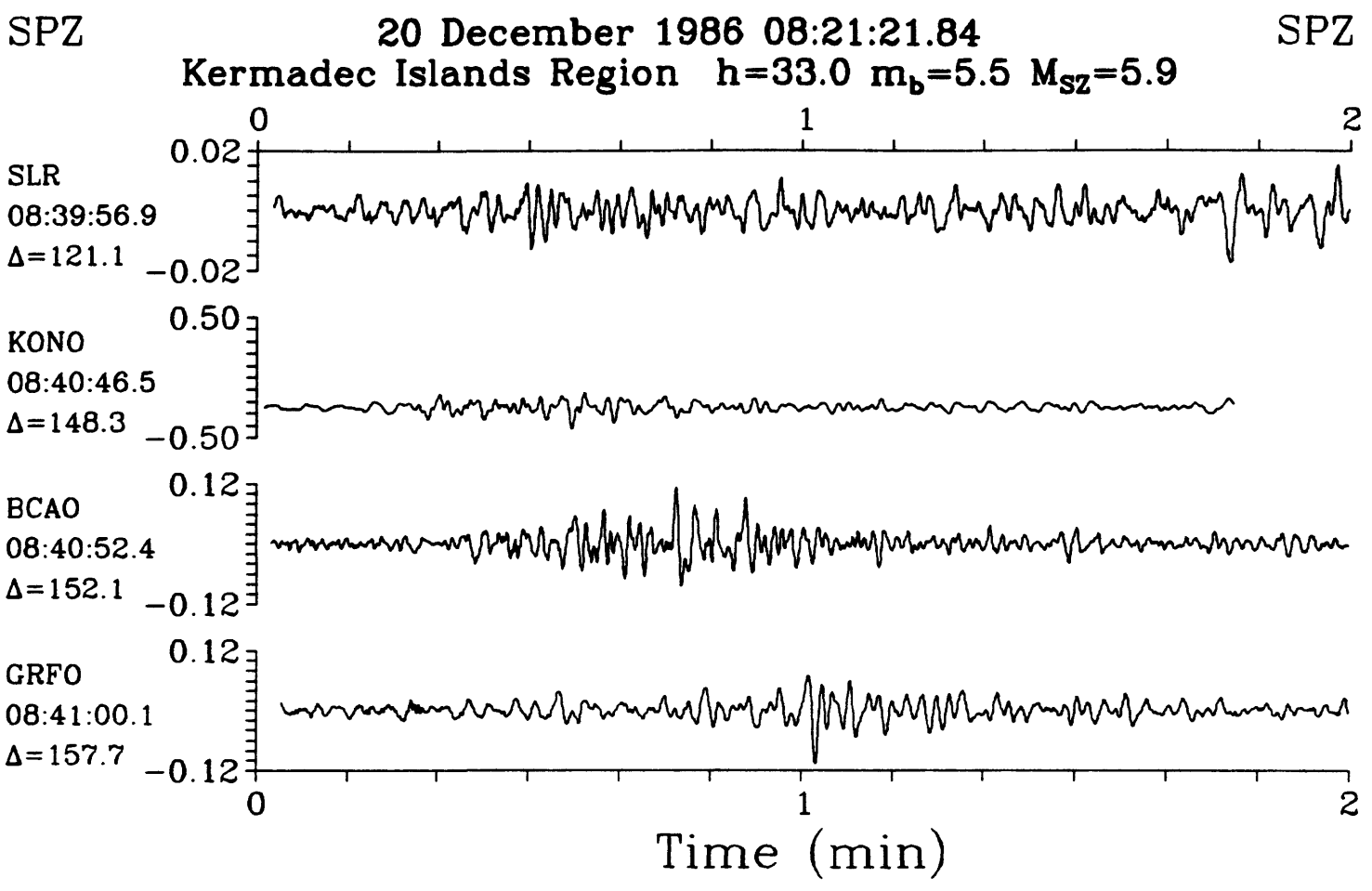
20 December 1986 08:21:21.84

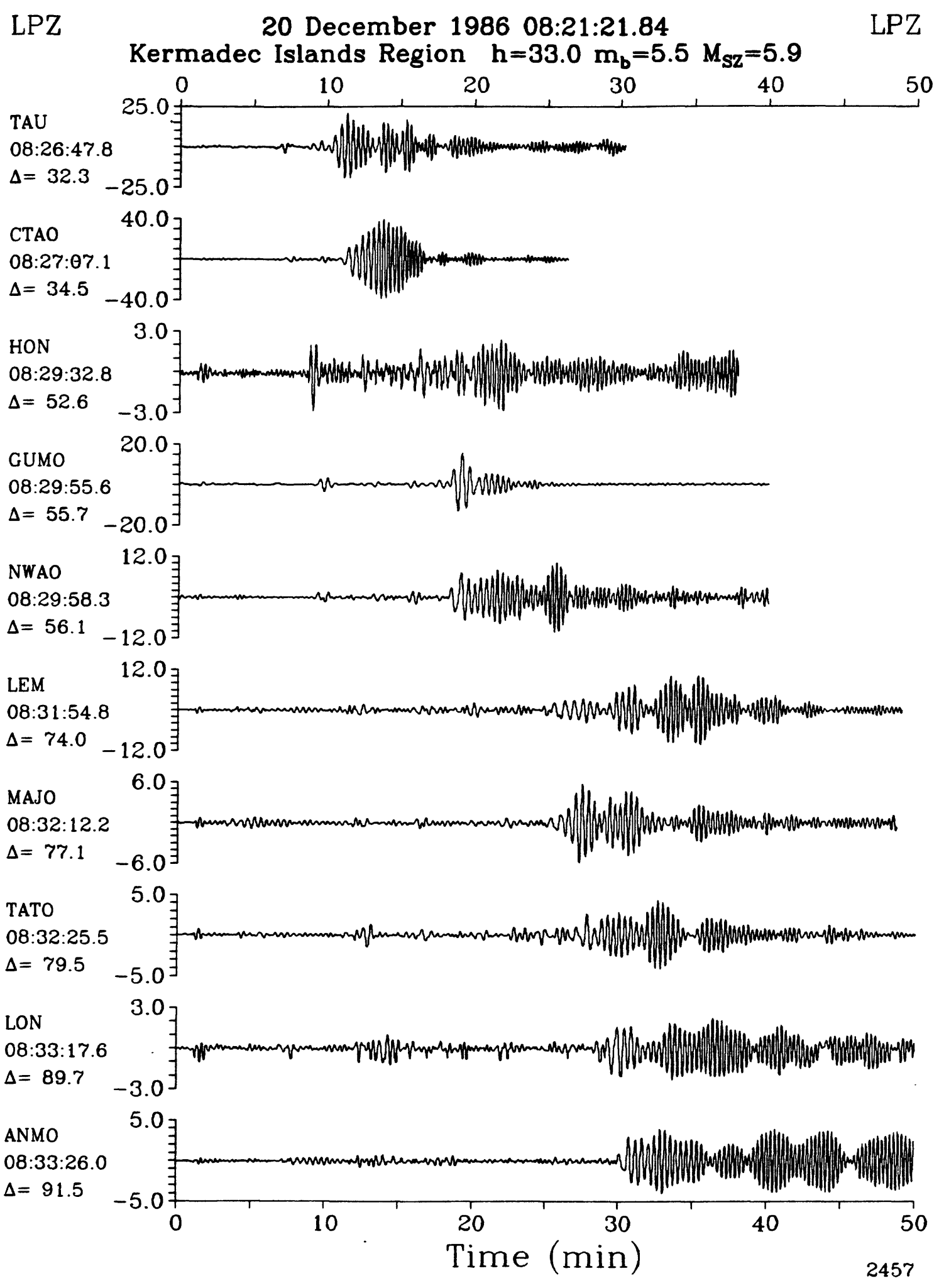
Kermadec Islands Region

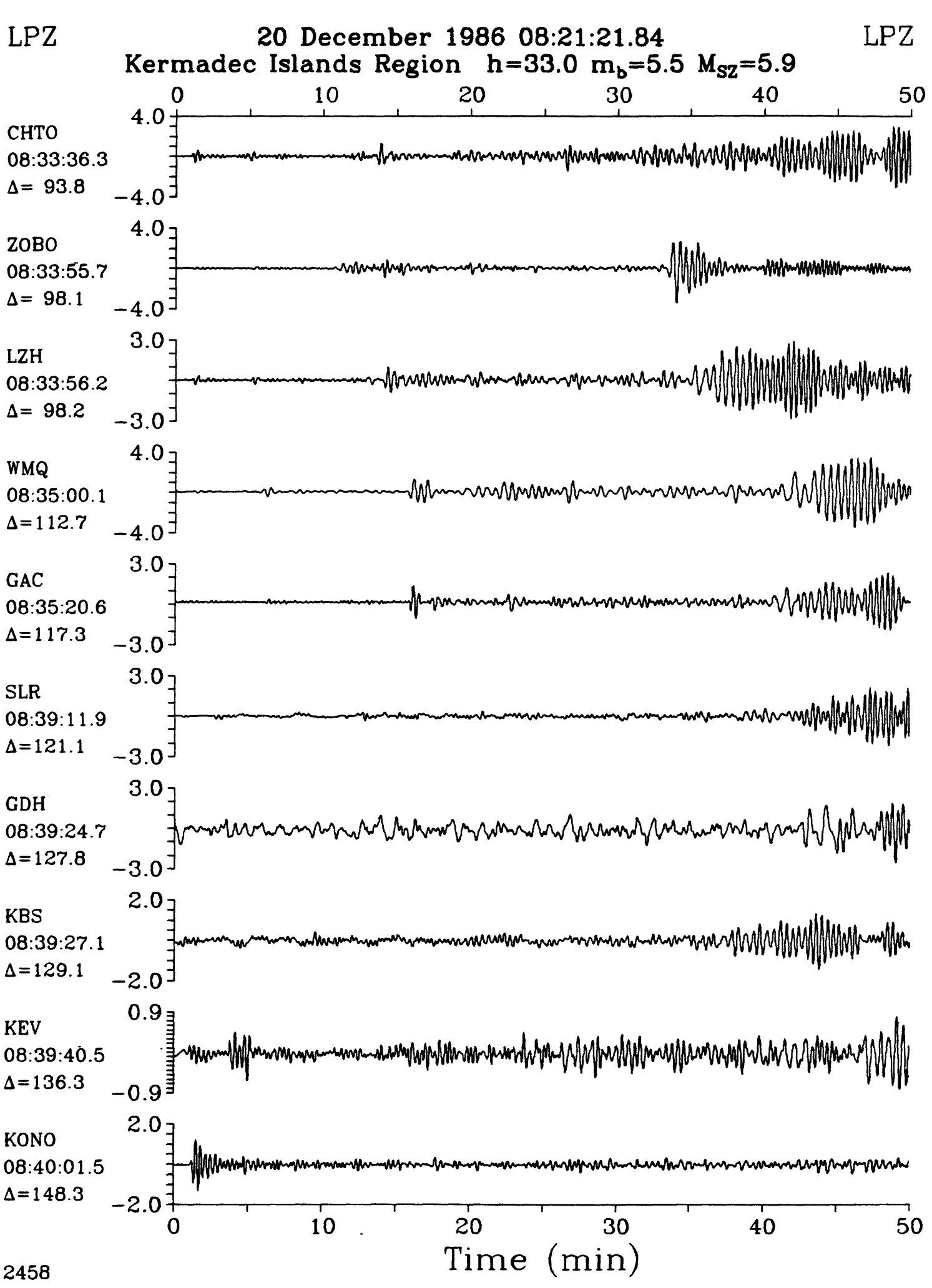


2454


SPZ
20 December 1986 08:21:21.84
SPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=5.9
0
1
2
CTAO
08:27:52.1
Δ= 34.5
0.12
−0.12
HON
08:30:17.8
Δ= 52.6
0.25
−0.25
NWAO
08:30:43.3
Δ= 56.1
0.08
−0.08
LEM
08:32:39.8
Δ= 74.0
0.40
−0.40
MAJO
08:32:57.2
Δ= 77.1
0.14
−0.14
TATO
08:33:10.5
Δ= 79.5
0.20
−0.20
LON
08:34:02.6
Δ= 89.7
0.05
−0.05
ANMO
08:34:11.0
Δ= 91.5
0.04
−0.04
CHTO
08:34:21.3
Δ= 93.8
0.04
−0.04
ZOBO
08:34:40.7
Δ= 98.1
0.01
−0.01
0
1
2
Time (min)
2455

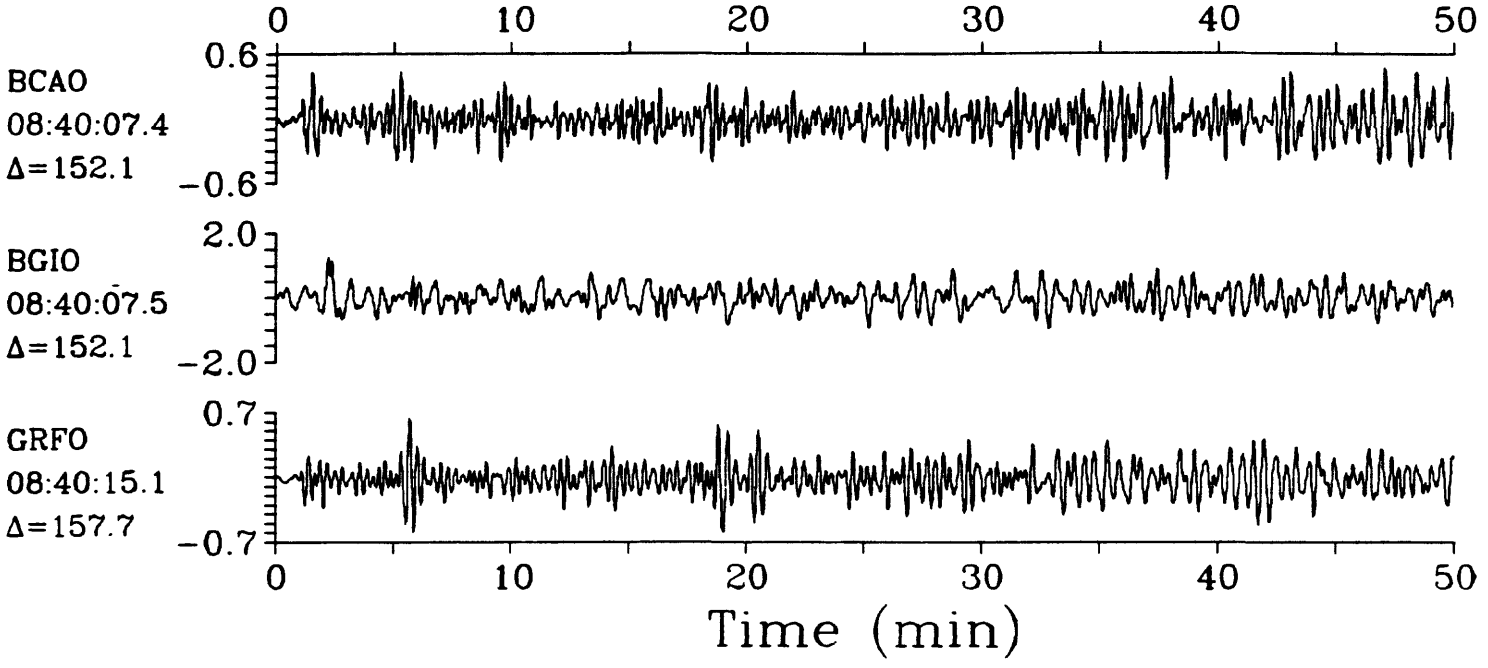

SPZ
20 December 1986 08:21:21.84
SPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=5.9
0
1
2
0.02
SLR
08:39:56.9
Δ=121.1
−0.02
0.50
KONO
08:40:46.5
Δ=148.3
−0.50
0.12
BCAO
08:40:52.4
Δ=152.1
−0.12
0.12
GRFO
08:41:00.1
Δ=157.7
−0.12
0
1
2
Time (min)

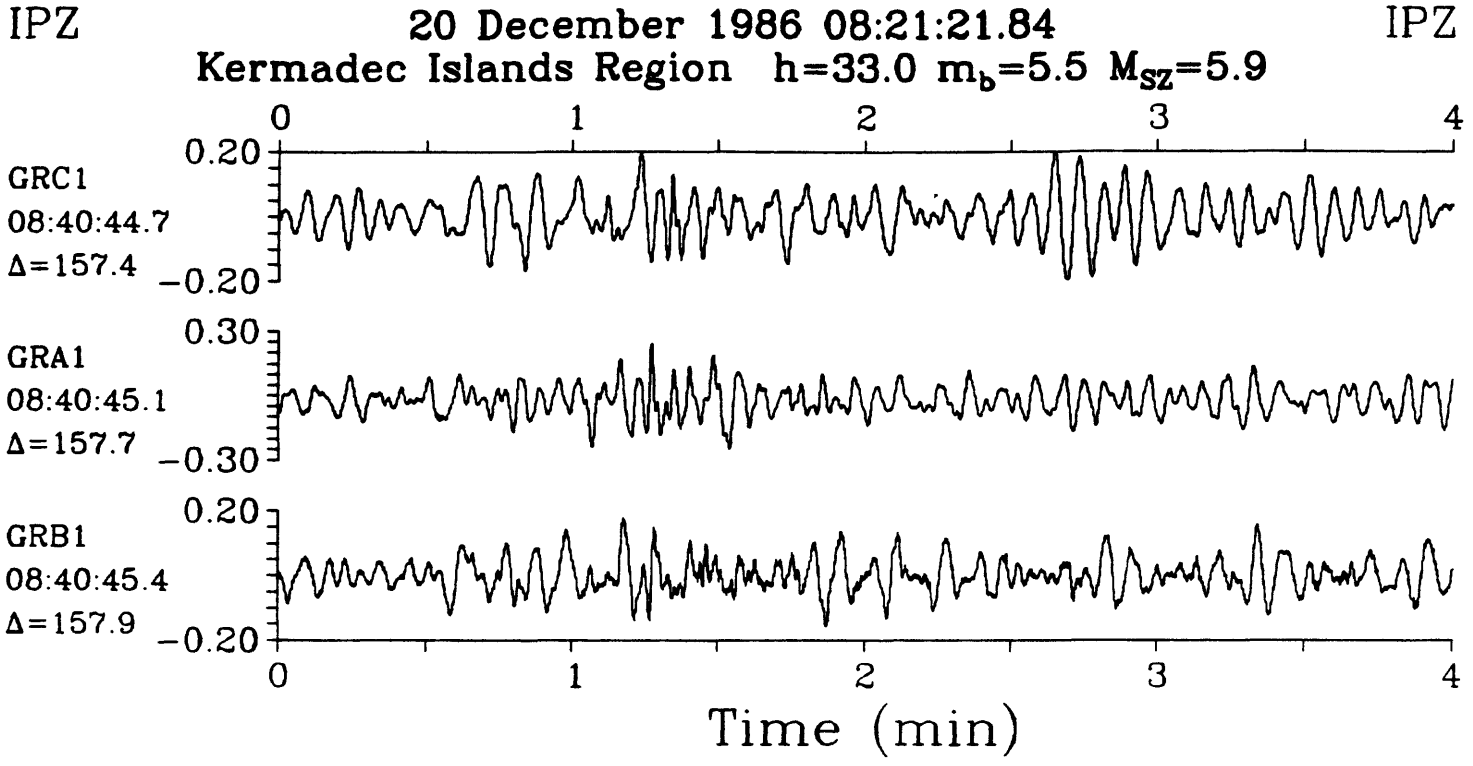

LPZ
20 December 1986 08:21:21.84
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=5.9
LPZ
0
10
20
30
40
50
TAU
08:26:47.8
Δ= 32.3
25.0
-25.0
CTAO
08:27:07.1
Δ= 34.5
40.0
-40.0
HON
08:29:32.8
Δ= 52.6
3.0
-3.0
GUMO
08:29:55.6
Δ= 55.7
20.0
-20.0
NWAO
08:29:58.3
Δ= 56.1
12.0
-12.0
LEM
08:31:54.8
Δ= 74.0
12.0
-12.0
MAJO
08:32:12.2
Δ= 77.1
6.0
-6.0
TATO
08:32:25.5
Δ= 79.5
5.0
-5.0
LON
08:33:17.6
Δ= 89.7
3.0
-3.0
ANMO
08:33:26.0
Δ= 91.5
5.0
-5.0
0
10
20
30
40
50
Time (min)
2457


LPZ
20 December 1986 08:21:21.84
LPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=5.9
0
10
20
30
40
50
CHTO
08:33:36.3
Δ= 93.8
4.0
-4.0
ZOBO
08:33:55.7
Δ= 98.1
4.0
-4.0
LZH
08:33:56.2
Δ= 98.2
3.0
-3.0
WMQ
08:35:00.1
Δ=112.7
4.0
-4.0
GAC
08:35:20.6
Δ=117.3
3.0
-3.0
SLR
08:39:11.9
Δ=121.1
3.0
-3.0
GDH
08:39:24.7
Δ=127.8
3.0
-3.0
KBS
08:39:27.1
Δ=129.1
2.0
-2.0
KEV
08:39:40.5
Δ=136.3
0.9
-0.9
KONO
08:40:01.5
Δ=148.3
2.0
-2.0
0
10
20
30
40
50
Time (min)

20 December 1986 08:21:21.84

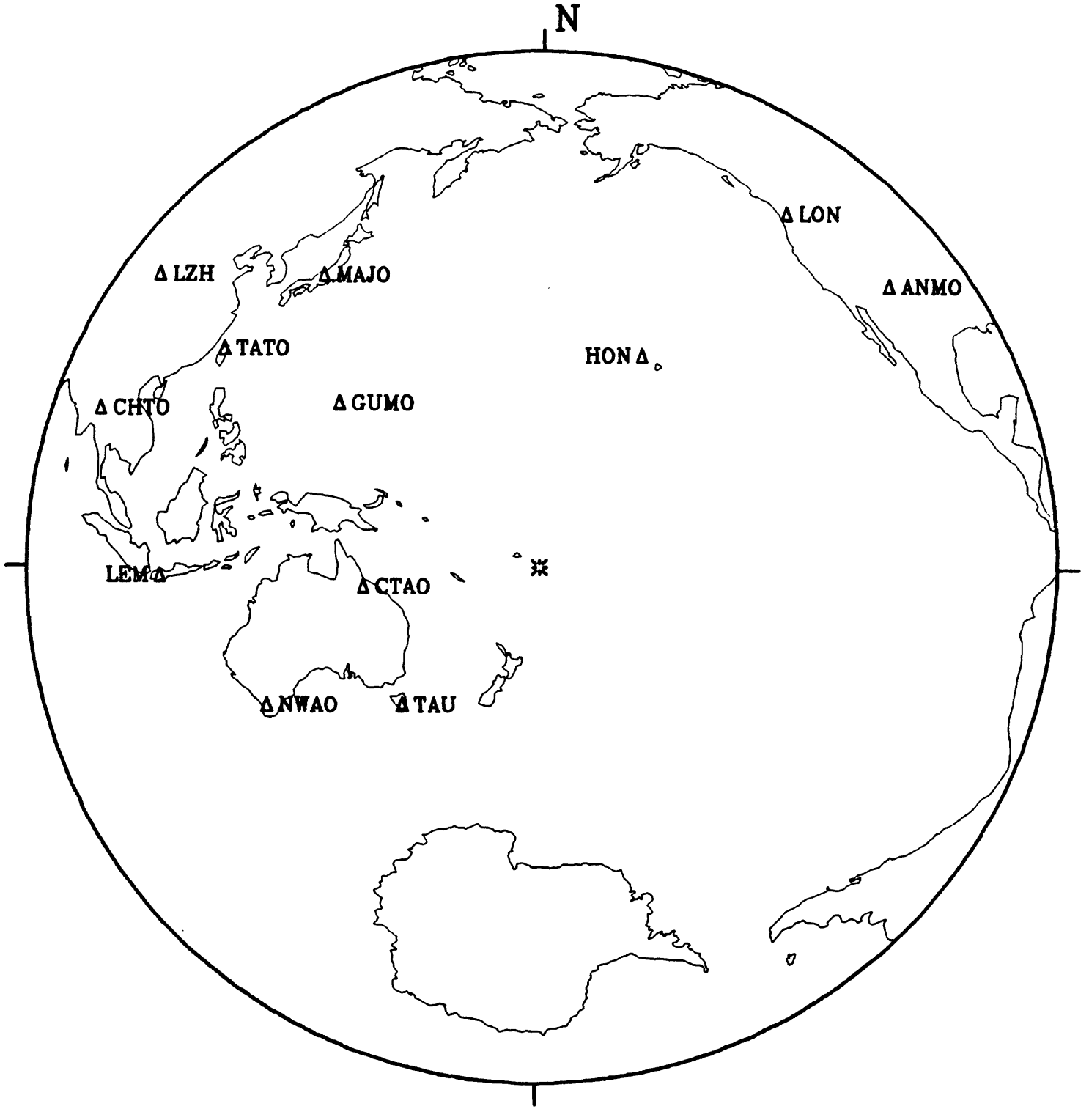
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=5.9




IPZ
20 December 1986 08:21:21.84
IPZ
Kermadec Islands Region h=33.0 m_b=5.5 M_{SZ}=5.9
0
1
2
3
4
0.20
GRC1
08:40:44.7
Δ=157.4
−0.20
0.30
GRA1
08:40:45.1
Δ=157.7
−0.30
0.20
GRB1
08:40:45.4
Δ=157.9
−0.20
0
1
2
3
4
Time (min)

20 December 1986 14:51:03.41

Fiji Islands Region

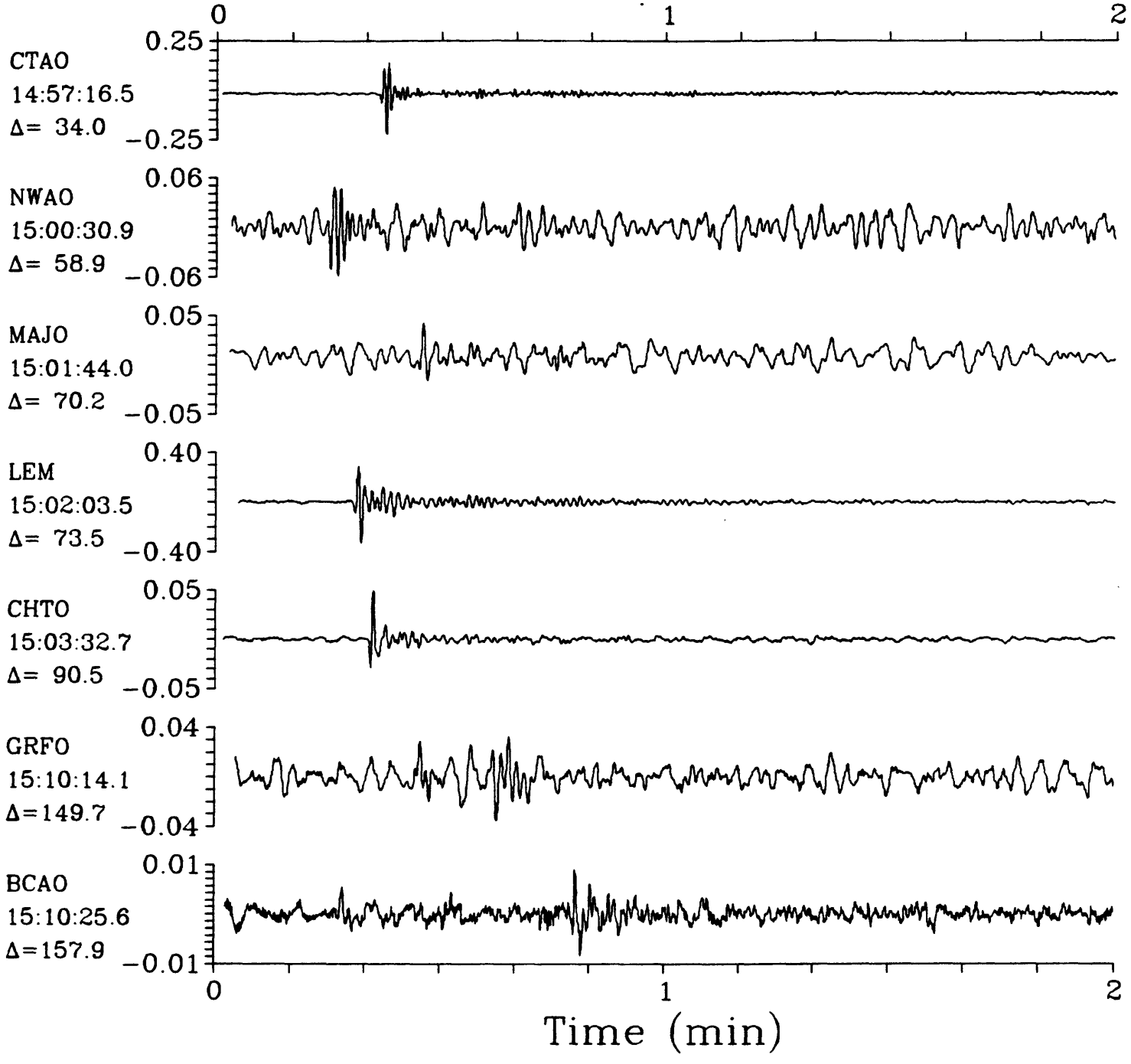


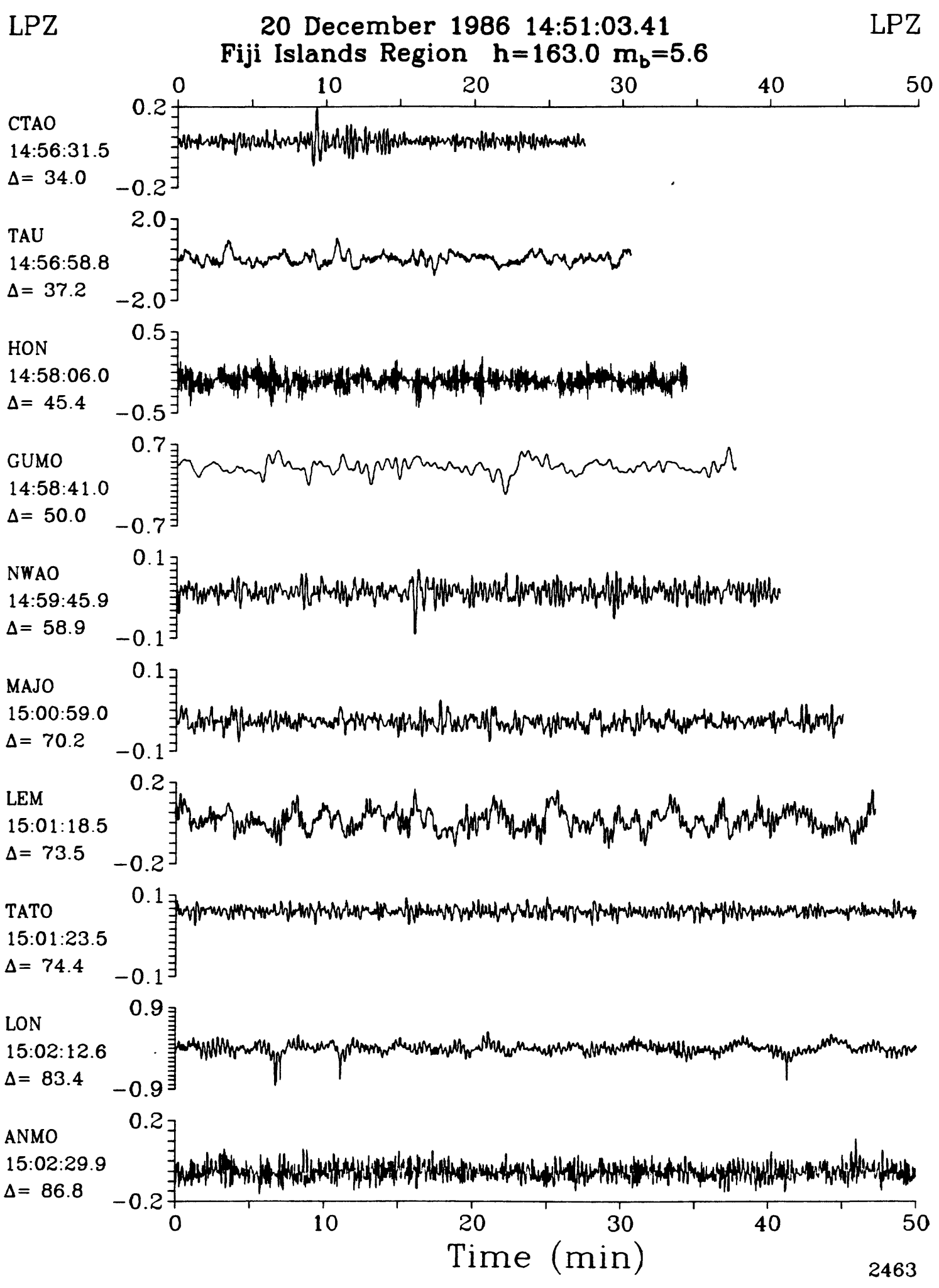
SPZ

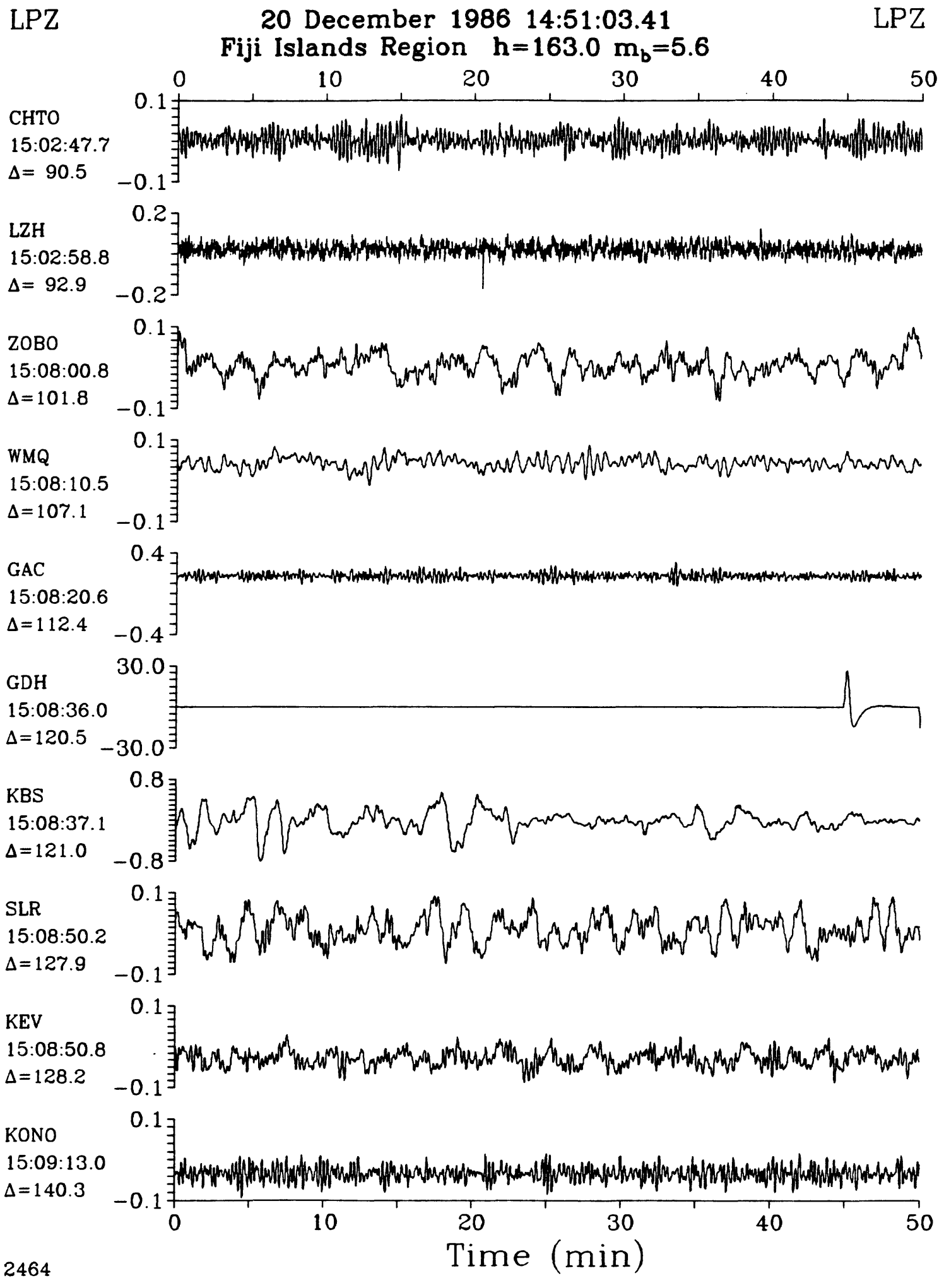
20 December 1986 14:51:03.41

Fiji Islands Region h=163.0 m_b=5.6

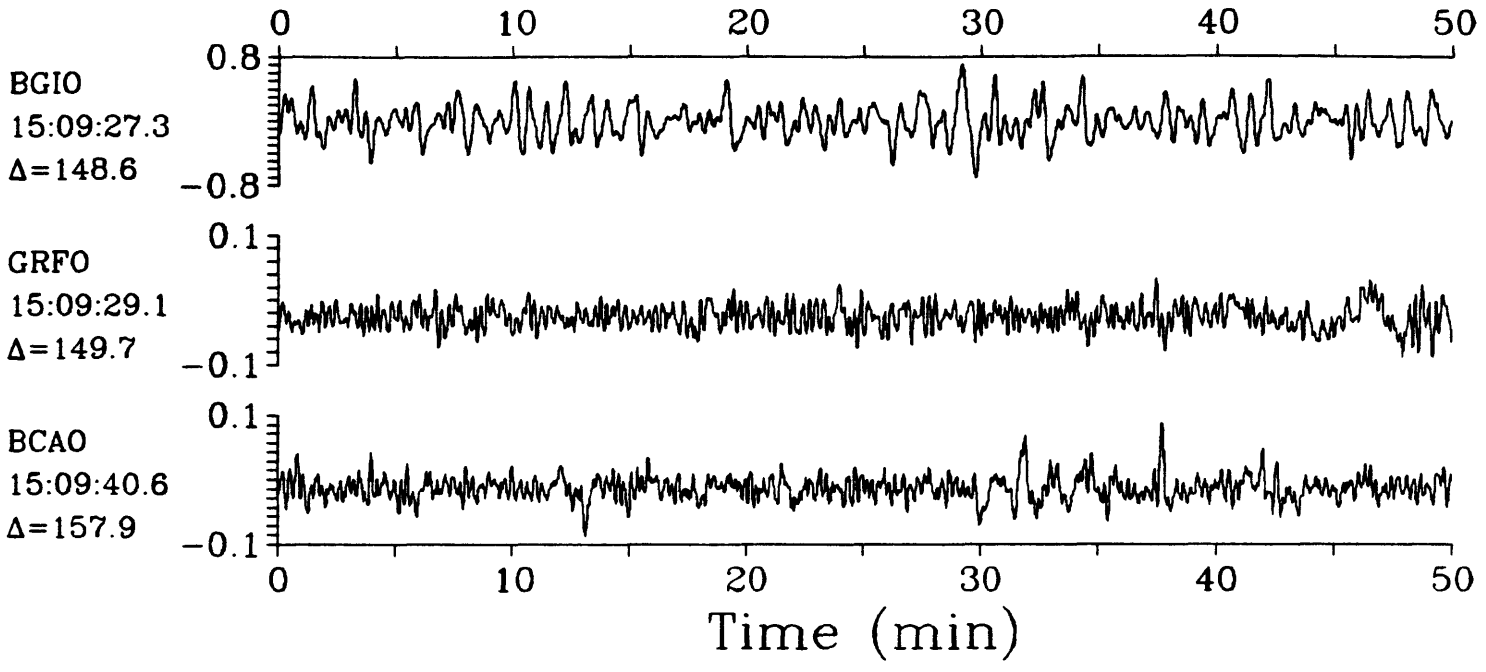
SPZ




LPZ
20 December 1986 14:51:03.41
Fiji Islands Region h=163.0 m_b=5.6
LPZ
0
10
20
30
40
50
CTAO
14:56:31.5
Δ= 34.0
0.2
−0.2
TAU
14:56:58.8
Δ= 37.2
2.0
−2.0
HON
14:58:06.0
Δ= 45.4
0.5
−0.5
GUMO
14:58:41.0
Δ= 50.0
0.7
−0.7
NWAO
14:59:45.9
Δ= 58.9
0.1
−0.1
MAJO
15:00:59.0
Δ= 70.2
0.1
−0.1
LEM
15:01:18.5
Δ= 73.5
0.2
−0.2
TATO
15:01:23.5
Δ= 74.4
0.1
−0.1
LON
15:02:12.6
Δ= 83.4
0.9
−0.9
ANMO
15:02:29.9
Δ= 86.8
0.2
−0.2
0
10
20
30
40
50
Time (min)
2463

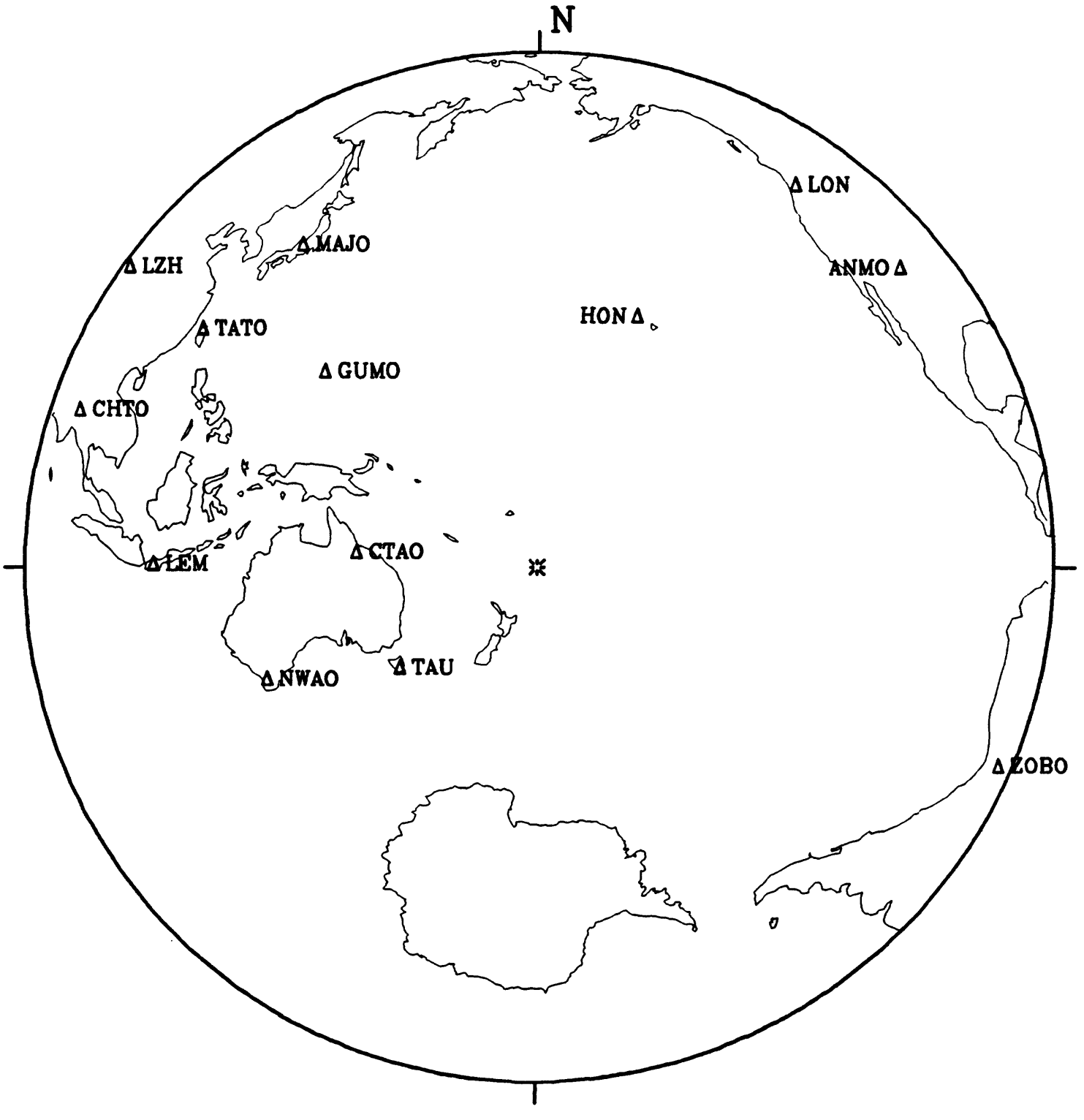

LPZ
20 December 1986 14:51:03.41
Fiji Islands Region h=163.0 m_b=5.6
LPZ
0
10
20
30
40
50
CHTO
15:02:47.7
Δ= 90.5
0.1
−0.1
LZH
15:02:58.8
Δ= 92.9
0.2
−0.2
ZOBO
15:08:00.8
Δ=101.8
0.1
−0.1
WMQ
15:08:10.5
Δ=107.1
0.1
−0.1
GAC
15:08:20.6
Δ=112.4
0.4
−0.4
GDH
15:08:36.0
Δ=120.5
30.0
−30.0
KBS
15:08:37.1
Δ=121.0
0.8
−0.8
SLR
15:08:50.2
Δ=127.9
0.1
−0.1
KEV
15:08:50.8
Δ=128.2
0.1
−0.1
KONO
15:09:13.0
Δ=140.3
0.1
−0.1
0
10
20
30
40
50
Time (min)
2464

20 December 1986 14:51:03.41
Fiji Islands Region h=163.0 m_b=5.6

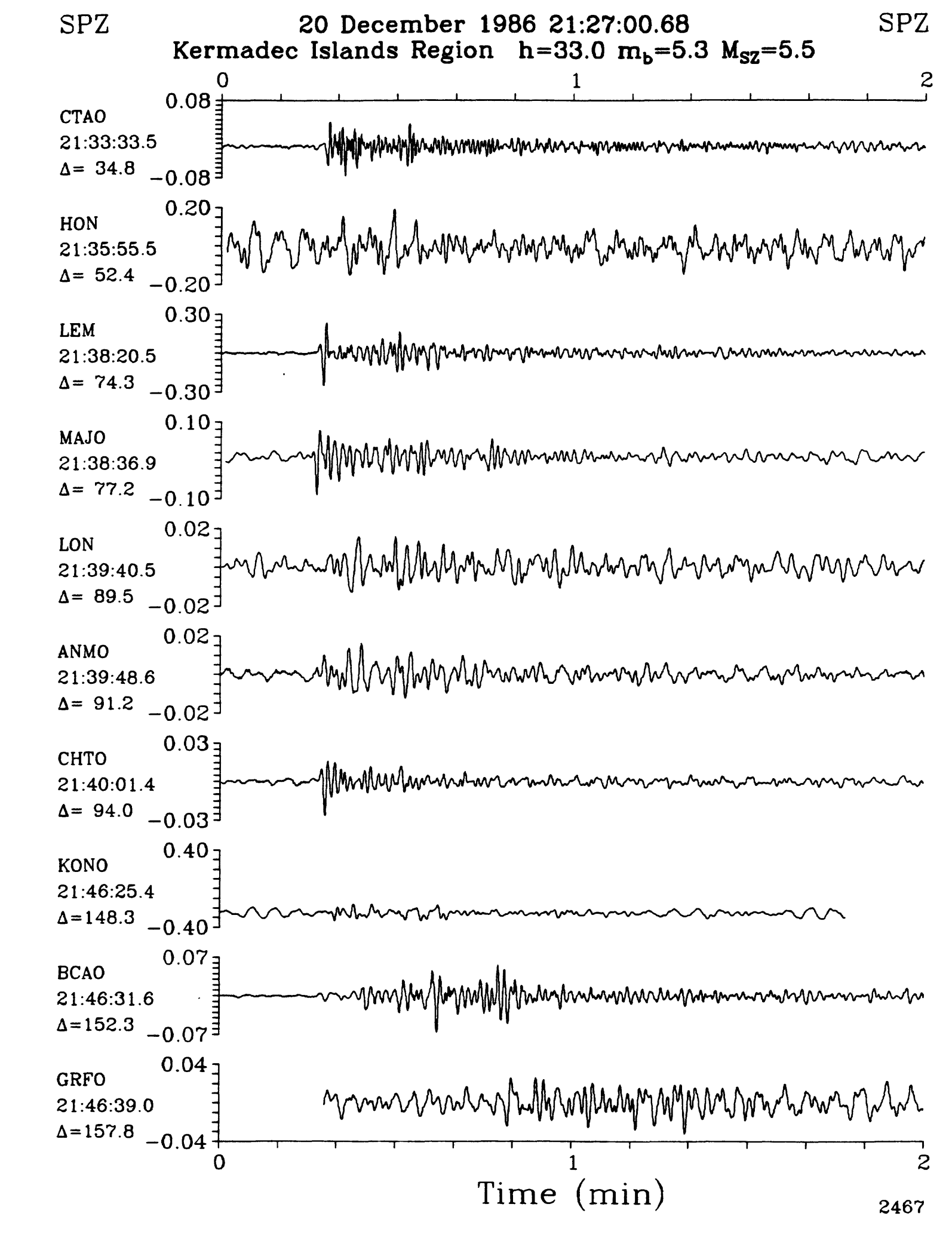


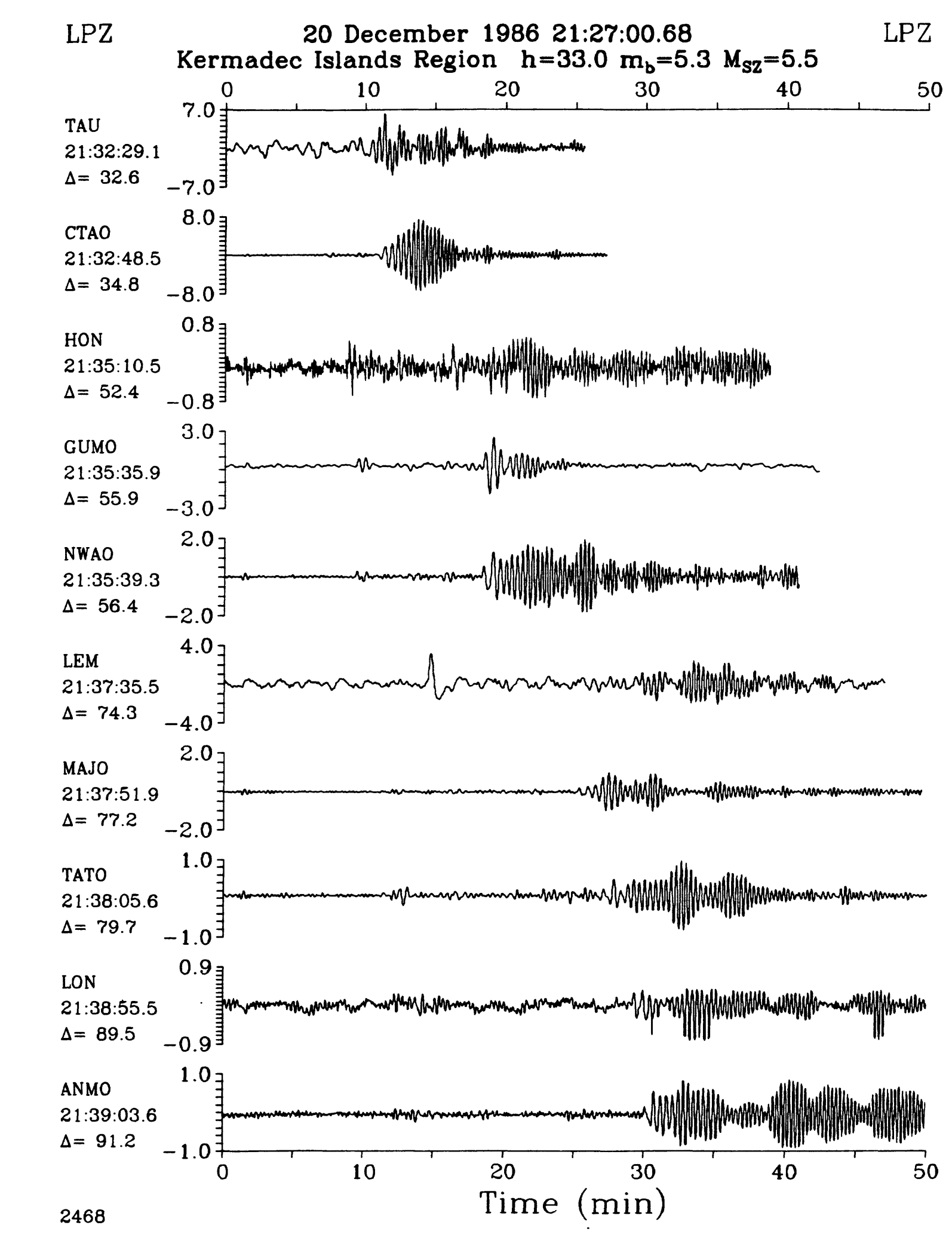
20 December 1986 21:27:00.68

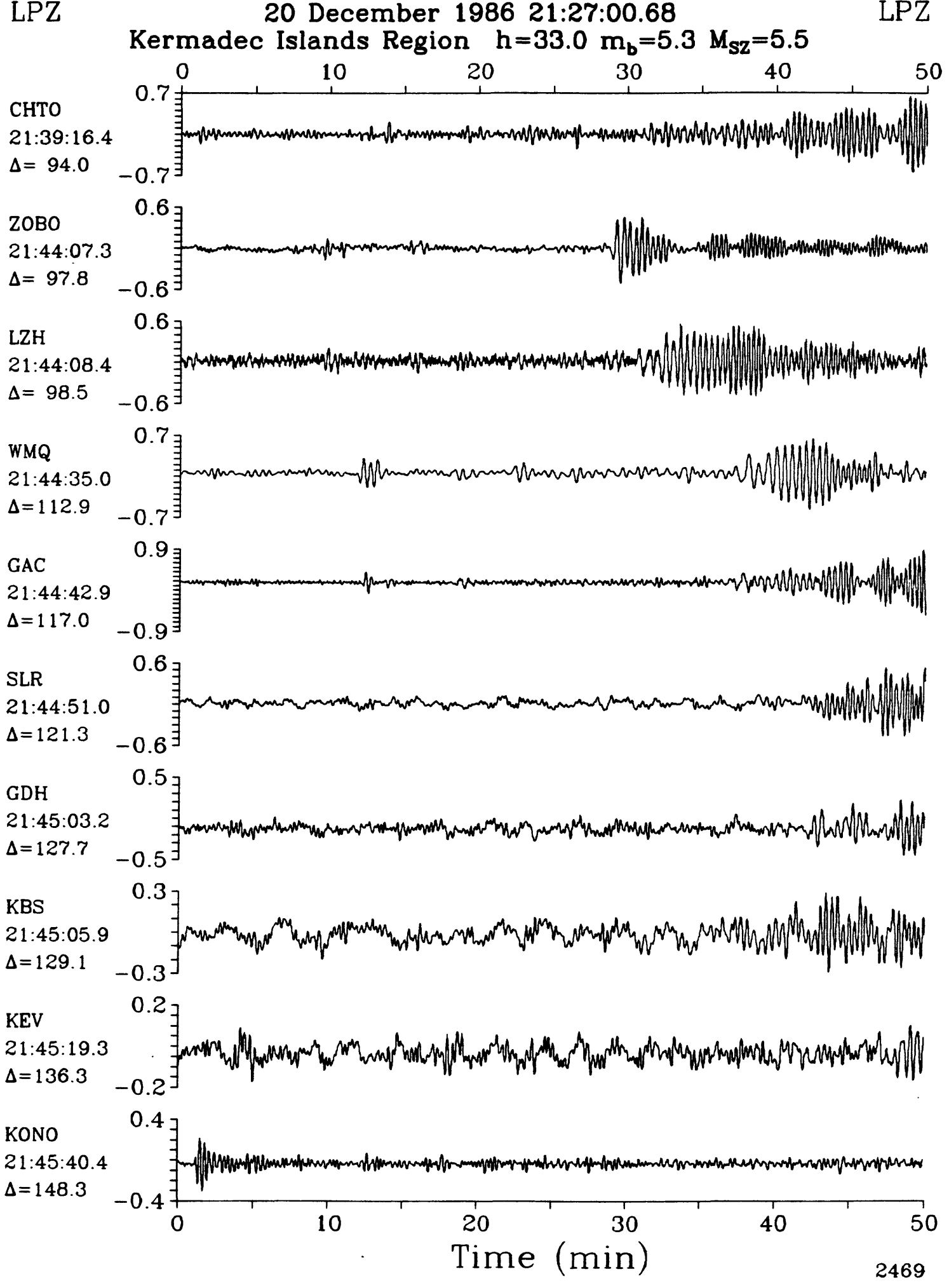
Kermadec Islands Region

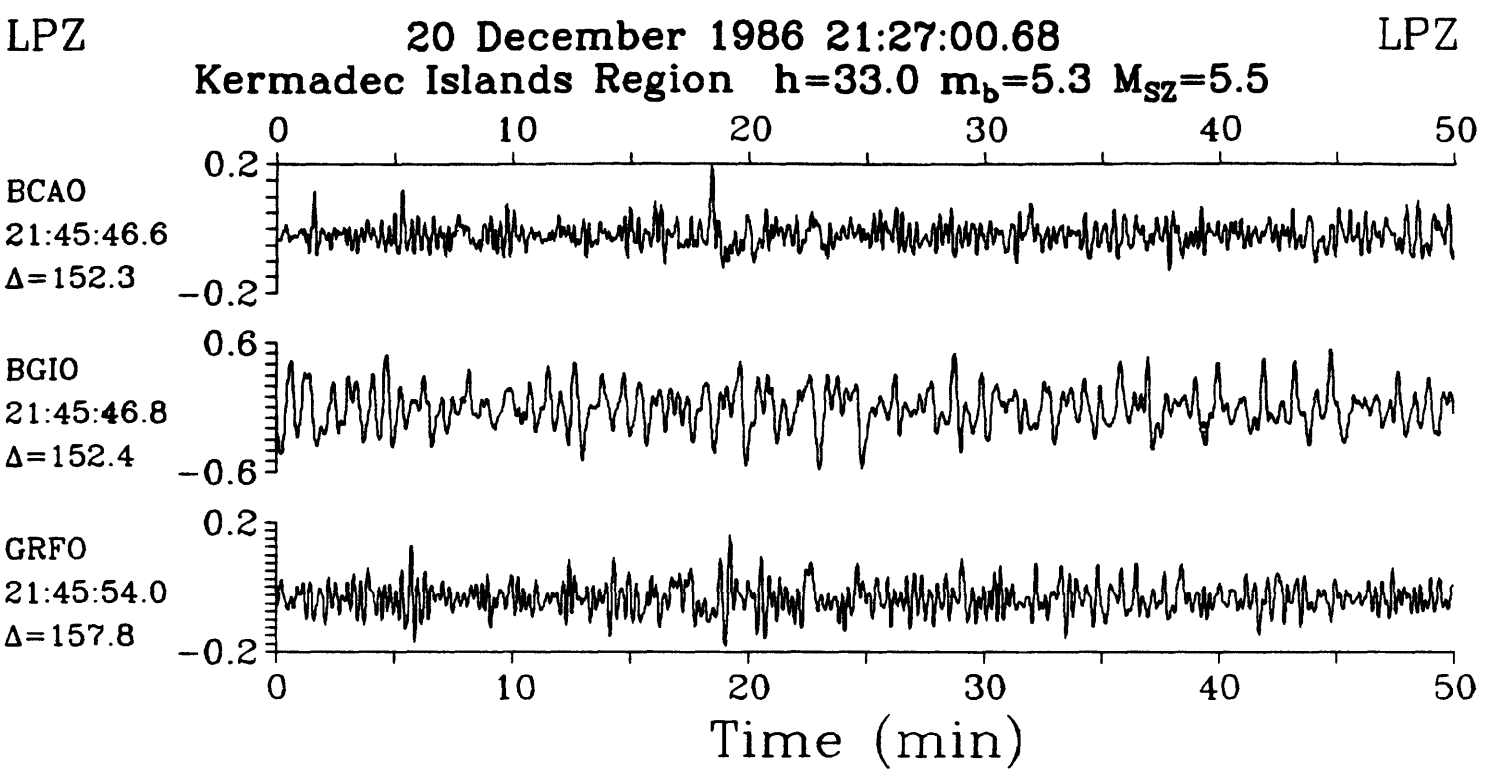


2466


SPZ
20 December 1986 21:27:00.68
SPZ
Kermadec Islands Region h=33.0 m_b=5.3 M_{SZ}=5.5
0
1
2
CTAO
21:33:33.5
Δ= 34.8
0.08
-0.08
HON
21:35:55.5
Δ= 52.4
0.20
-0.20
LEM
21:38:20.5
Δ= 74.3
0.30
-0.30
MAJO
21:38:36.9
Δ= 77.2
0.10
-0.10
LON
21:39:40.5
Δ= 89.5
0.02
-0.02
ANMO
21:39:48.6
Δ= 91.2
0.02
-0.02
CHTO
21:40:01.4
Δ= 94.0
0.03
-0.03
KONO
21:46:25.4
Δ=148.3
0.40
-0.40
BCAO
21:46:31.6
Δ=152.3
0.07
-0.07
GRFO
21:46:39.0
Δ=157.8
0.04
-0.04
0
1
2
Time (min)
2467

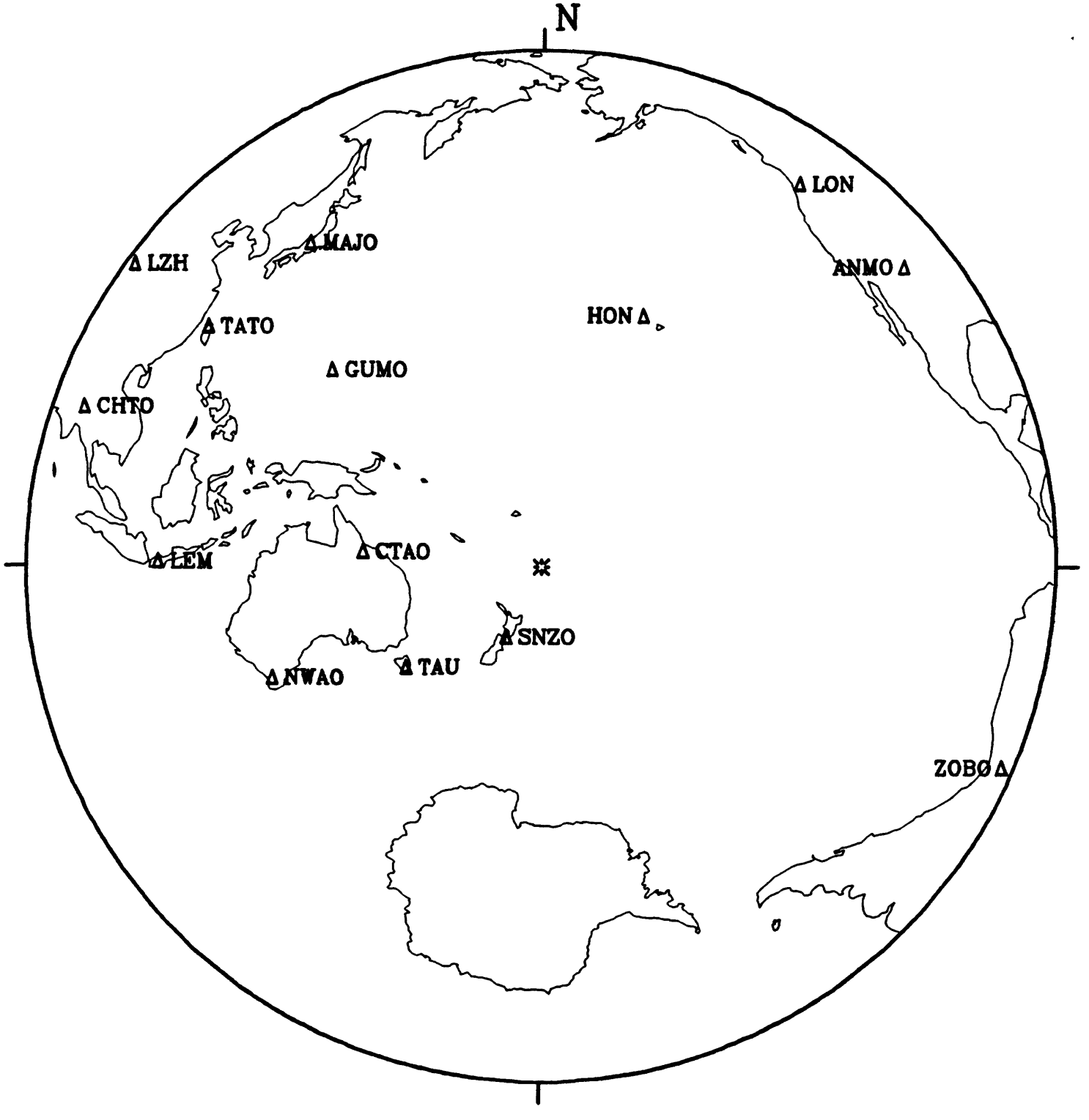

LPZ
20 December 1986 21:27:00.68
LPZ
Kermadec Islands Region h=33.0 m_b=5.3 M_{SZ}=5.5
0
10
20
30
40
50
TAU
21:32:29.1
Δ= 32.6
7.0
-7.0
CTAO
21:32:48.5
Δ= 34.8
8.0
-8.0
HON
21:35:10.5
Δ= 52.4
0.8
-0.8
GUMO
21:35:35.9
Δ= 55.9
3.0
-3.0
NWAO
21:35:39.3
Δ= 56.4
2.0
-2.0
LEM
21:37:35.5
Δ= 74.3
4.0
-4.0
MAJO
21:37:51.9
Δ= 77.2
2.0
-2.0
TATO
21:38:05.6
Δ= 79.7
1.0
-1.0
LON
21:38:55.5
Δ= 89.5
0.9
-0.9
ANMO
21:39:03.6
Δ= 91.2
1.0
-1.0
0
10
20
30
40
50
Time (min)
2468


LPZ
20 December 1986 21:27:00.68
LPZ
Kermadec Islands Region h=33.0 m_b=5.3 M_{SZ}=5.5
0
10
20
30
40
50
CHTO
21:39:16.4
Δ= 94.0
0.7
-0.7
ZOBO
21:44:07.3
Δ= 97.8
0.6
-0.6
LZH
21:44:08.4
Δ= 98.5
0.6
-0.6
WMQ
21:44:35.0
Δ=112.9
0.7
-0.7
GAC
21:44:42.9
Δ=117.0
0.9
-0.9
SLR
21:44:51.0
Δ=121.3
0.6
-0.6
GDH
21:45:03.2
Δ=127.7
0.5
-0.5
KBS
21:45:05.9
Δ=129.1
0.3
-0.3
KEV
21:45:19.3
Δ=136.3
0.2
-0.2
KONO
21:45:40.4
Δ=148.3
0.4
-0.4
0
10
20
30
40
50
Time (min)
2469

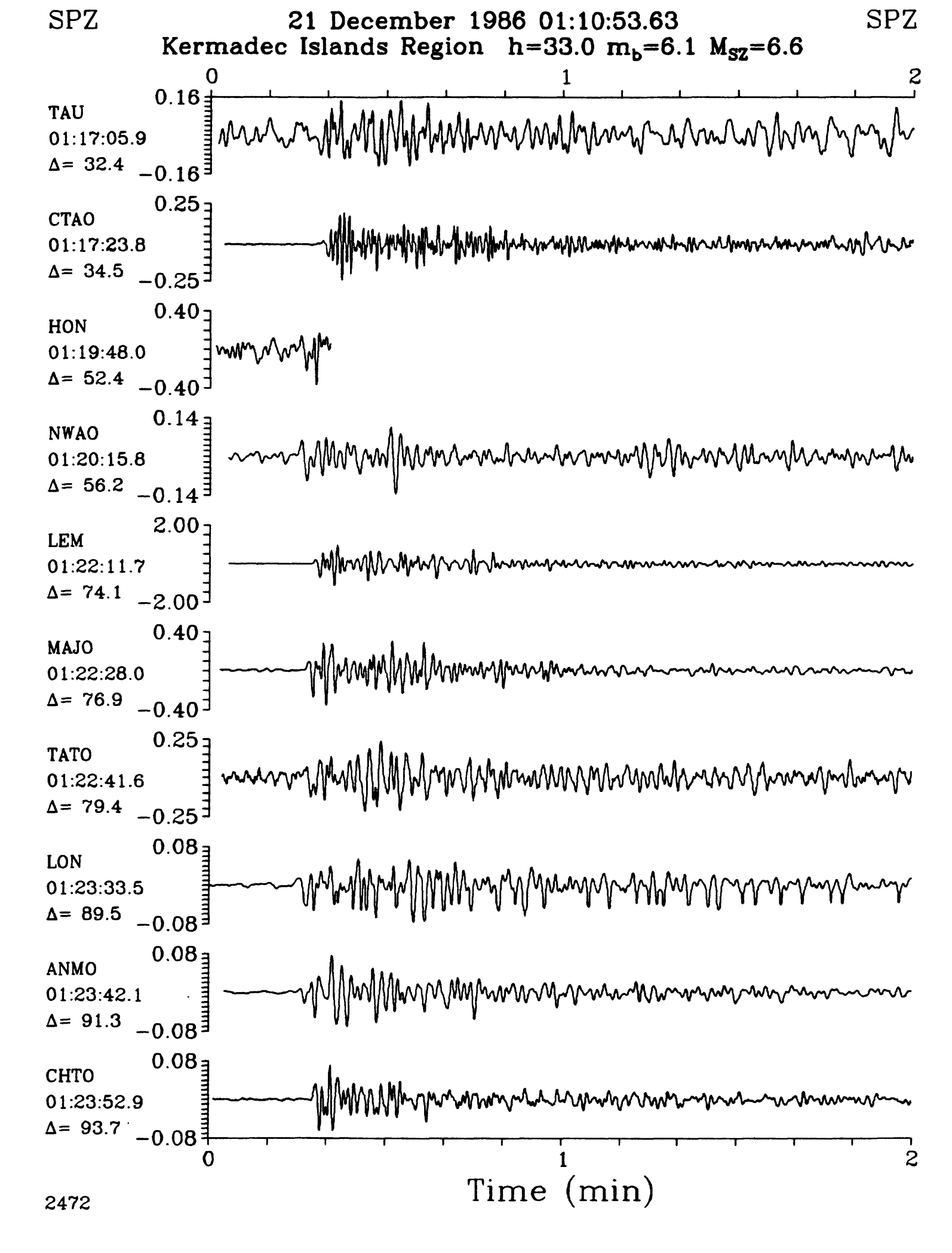

LPZ
20 December 1986 21:27:00.68
LPZ
Kermadec Islands Region h=33.0 m_b=5.3 M_{SZ}=5.5
0
10
20
30
40
50
0.2
BCAO
21:45:46.6
Δ=152.3
−0.2
0.6
BGIO
21:45:46.8
Δ=152.4
−0.6
0.2
GRFO
21:45:54.0
Δ=157.8
−0.2
0
10
20
30
40
50
Time (min)

21 December 1986 01:10:53.63

Kermadec Islands Region



2471

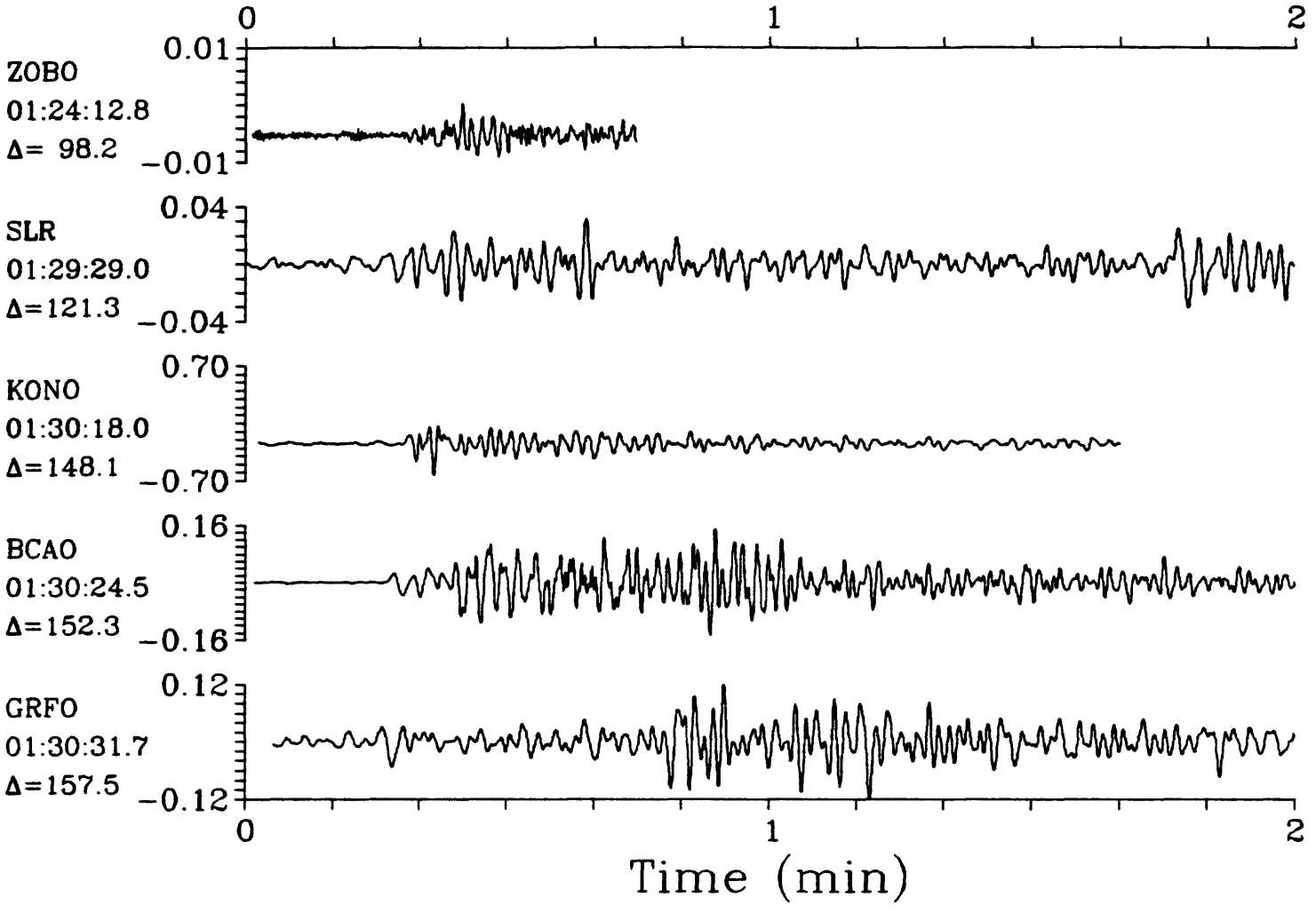

SPZ
21 December 1986 01:10:53.63
SPZ
Kermadec Islands Region h=33.0 m_b=6.1 M_{SZ}=6.6
0
1
2
TAU
01:17:05.9
Δ= 32.4
0.16
-0.16
CTAO
01:17:23.8
Δ= 34.5
0.25
-0.25
HON
01:19:48.0
Δ= 52.4
0.40
-0.40
NWAO
01:20:15.8
Δ= 56.2
0.14
-0.14
LEM
01:22:11.7
Δ= 74.1
2.00
-2.00
MAJO
01:22:28.0
Δ= 76.9
0.40
-0.40
TATO
01:22:41.6
Δ= 79.4
0.25
-0.25
LON
01:23:33.5
Δ= 89.5
0.08
-0.08
ANMO
01:23:42.1
Δ= 91.3
0.08
-0.08
CHTO
01:23:52.9
Δ= 93.7
0.08
-0.08
0
1
2
Time (min)
2472

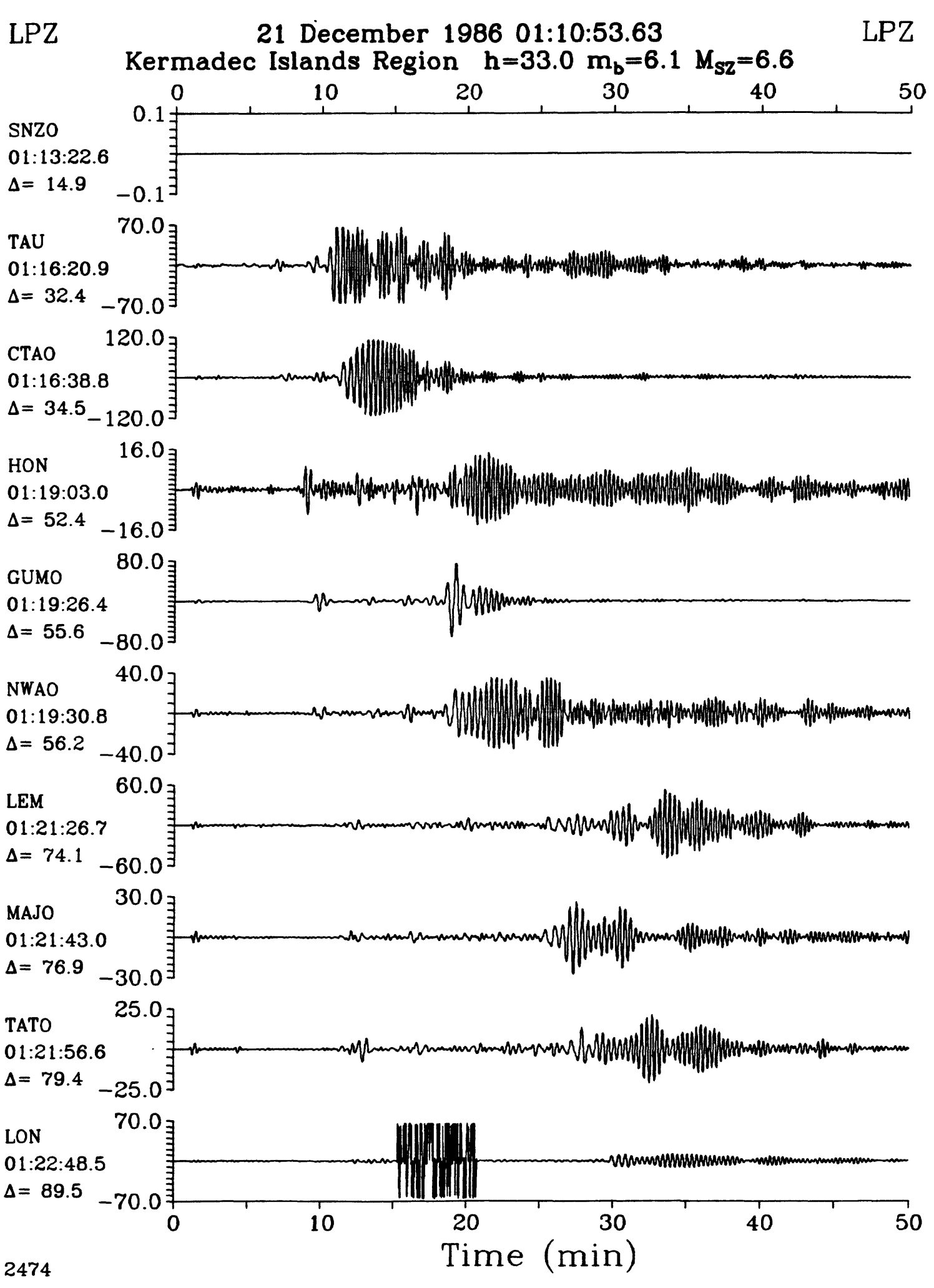
SPZ

21 December 1986 01:10:53.63

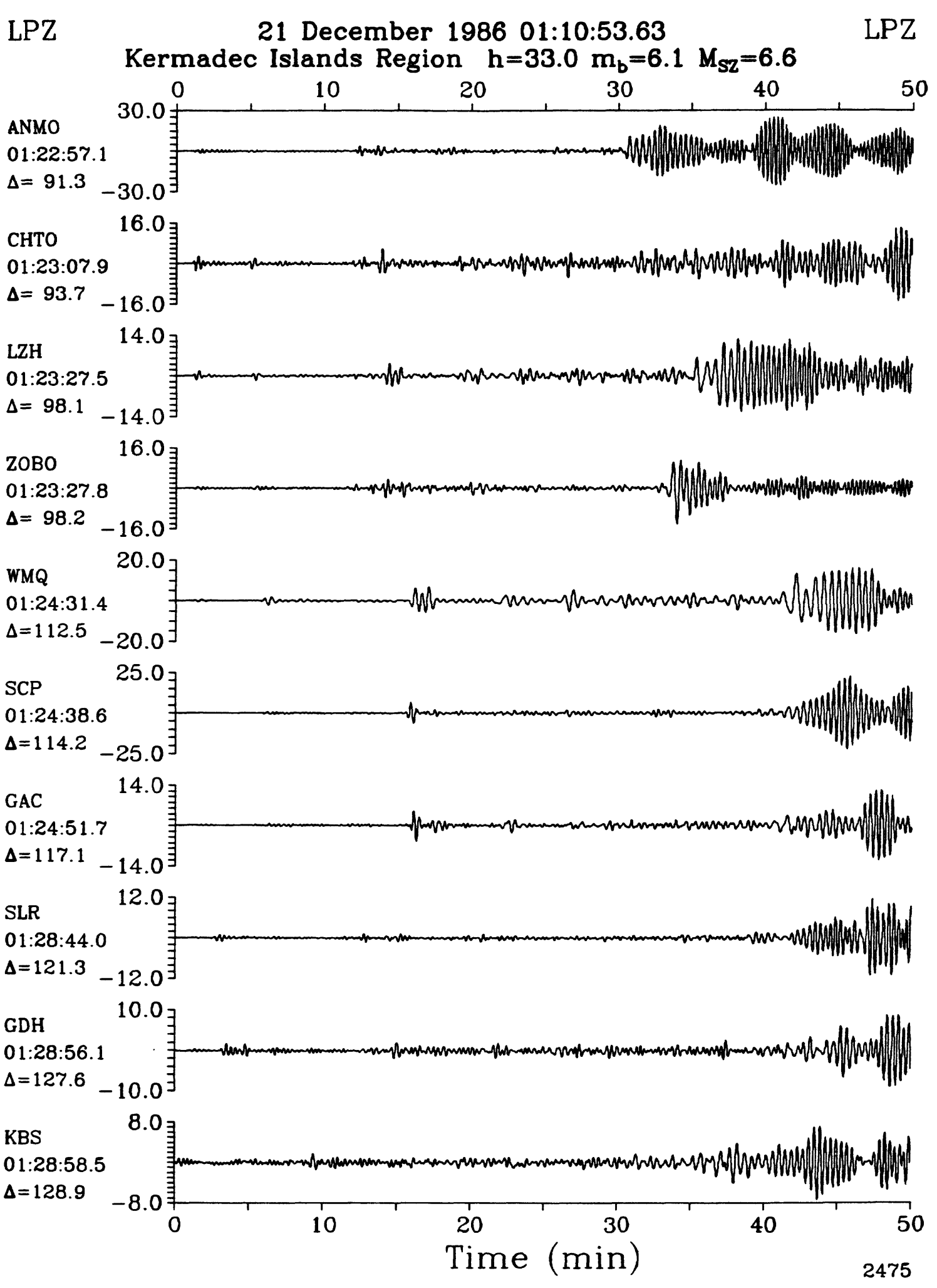
SPZ

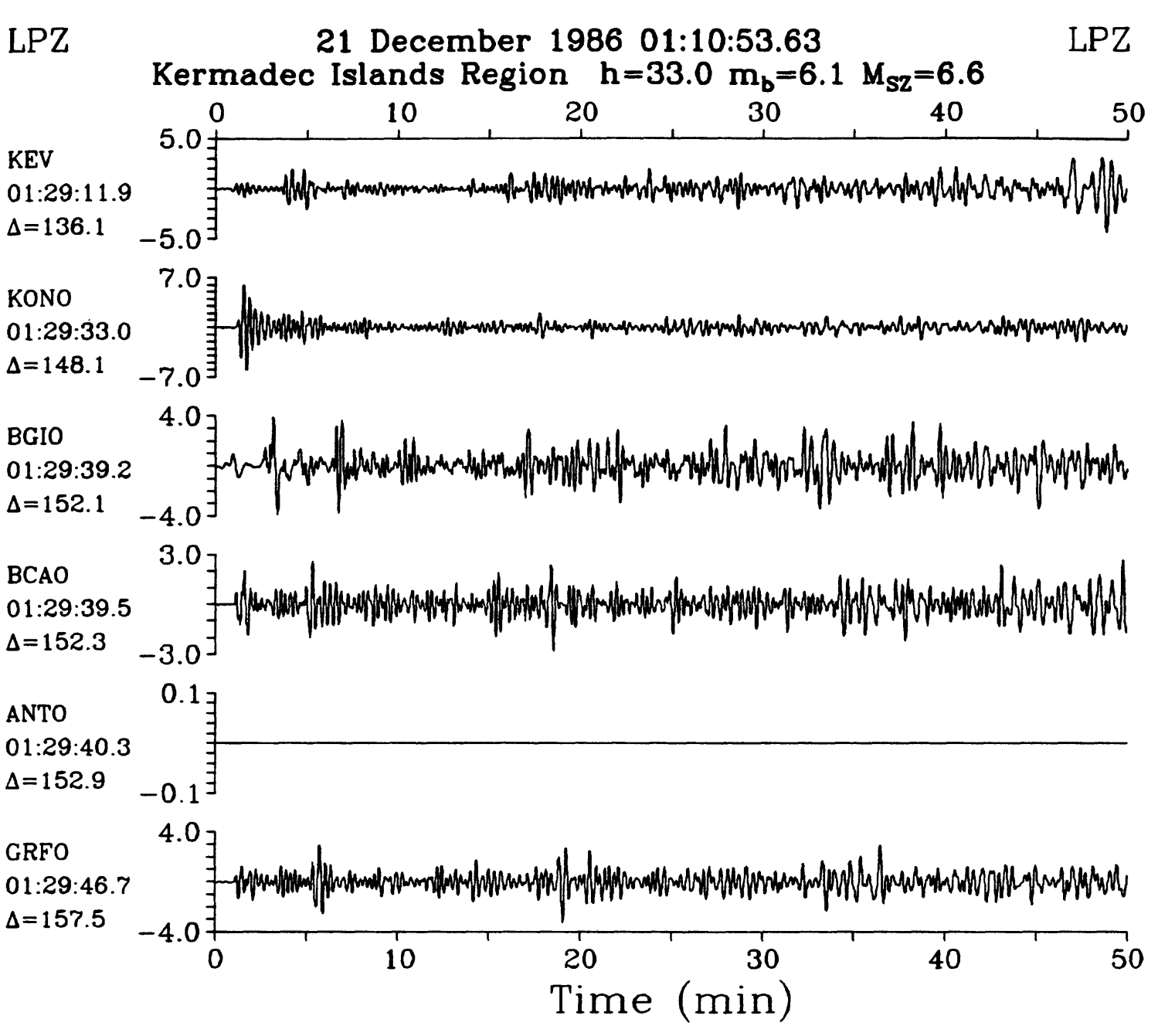
Kermadec Islands Region h=33.0 m_b=6.1 M_{SZ}=6.6

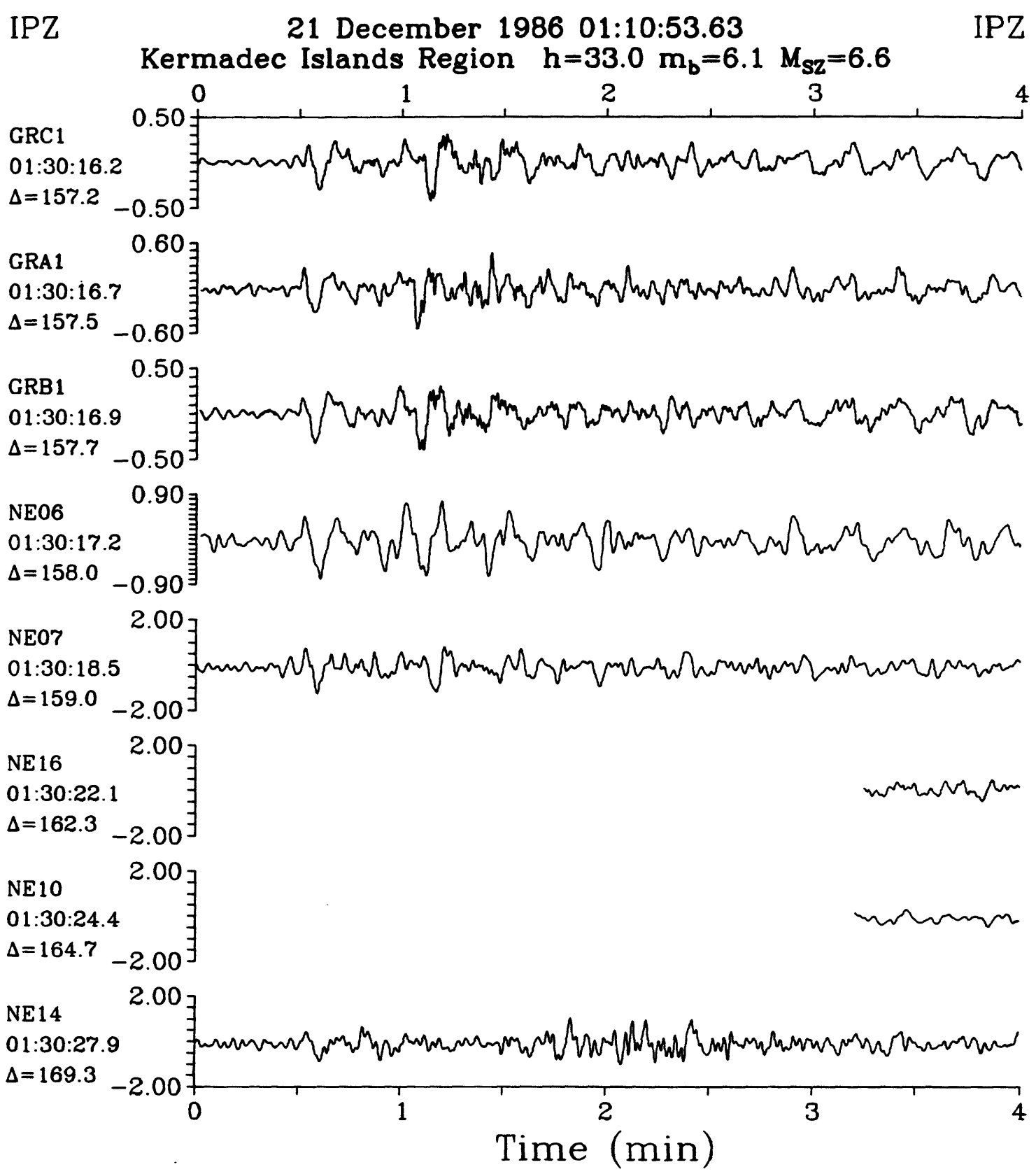



LPZ
21 December 1986 01:10:53.63
LPZ
Kermadec Islands Region h=33.0 m_b=6.1 M_{SZ}=6.6
0
10
20
30
40
50
SNZO
01:13:22.6
Δ= 14.9
0.1
-0.1
TAU
01:16:20.9
Δ= 32.4
70.0
-70.0
CTAO
01:16:38.8
Δ= 34.5
120.0
-120.0
HON
01:19:03.0
Δ= 52.4
16.0
-16.0
GUMO
01:19:26.4
Δ= 55.6
80.0
-80.0
NWAO
01:19:30.8
Δ= 56.2
40.0
-40.0
LEM
01:21:26.7
Δ= 74.1
60.0
-60.0
MAJO
01:21:43.0
Δ= 76.9
30.0
-30.0
TATO
01:21:56.6
Δ= 79.4
25.0
-25.0
LON
01:22:48.5
Δ= 89.5
70.0
-70.0
0
10
20
30
40
50
Time (min)

2474

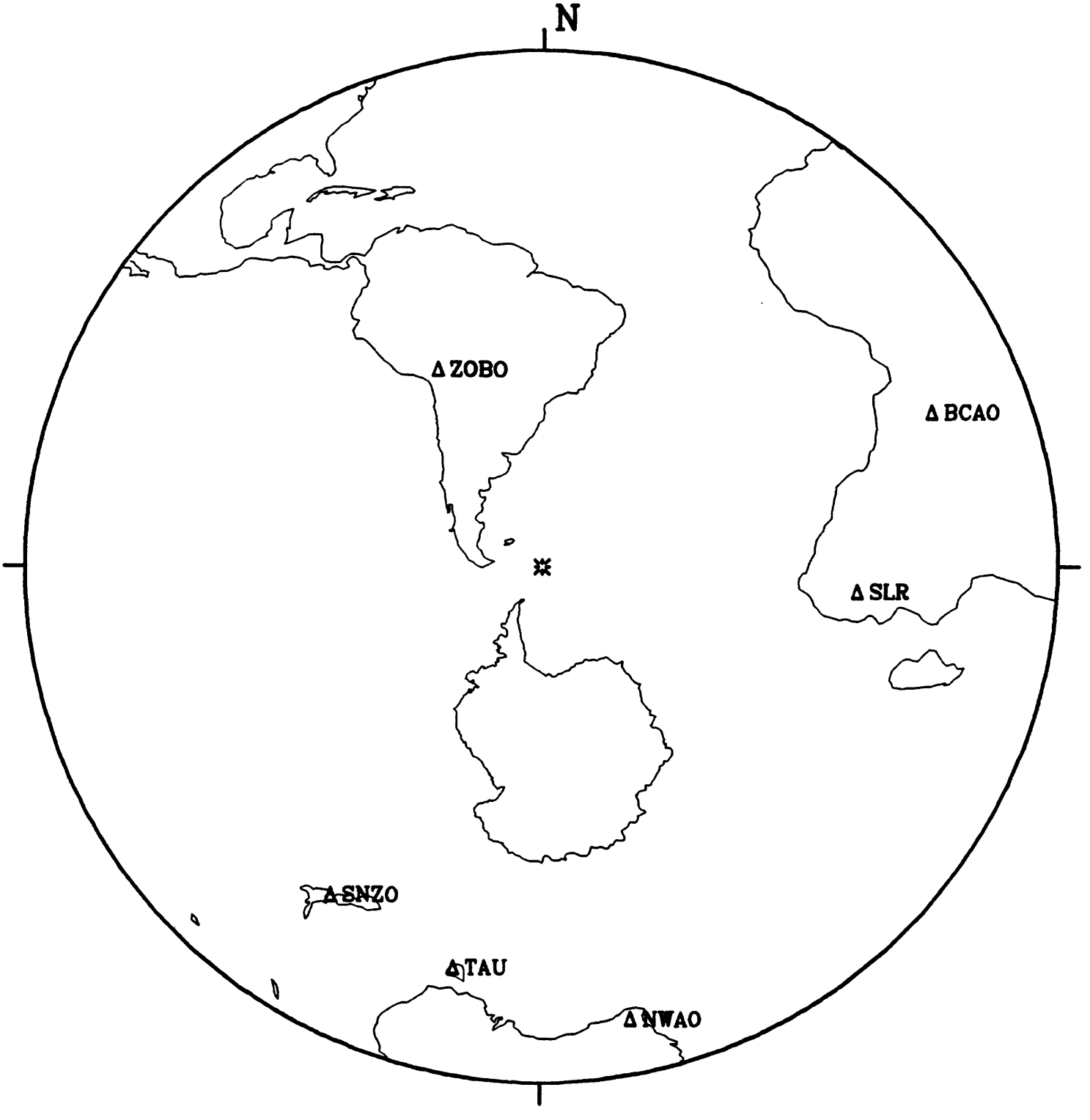

LPZ
21 December 1986 01:10:53.63
LPZ
Kermadec Islands Region h=33.0 m_b=6.1 M_{SZ}=6.6
0
10
20
30
40
50
ANMO
01:22:57.1
Δ= 91.3
30.0
-30.0
CHTO
01:23:07.9
Δ= 93.7
16.0
-16.0
LZH
01:23:27.5
Δ= 98.1
14.0
-14.0
ZOBO
01:23:27.8
Δ= 98.2
16.0
-16.0
WMQ
01:24:31.4
Δ=112.5
20.0
-20.0
SCP
01:24:38.6
Δ=114.2
25.0
-25.0
GAC
01:24:51.7
Δ=117.1
14.0
-14.0
SLR
01:28:44.0
Δ=121.3
12.0
-12.0
GDH
01:28:56.1
Δ=127.6
10.0
-10.0
KBS
01:28:58.5
Δ=128.9
8.0
-8.0
0
10
20
30
40
50
Time (min)
2475


LPZ
21 December 1986 01:10:53.63
LPZ
Kermadec Islands Region h=33.0 m_b=6.1 M_{SZ}=6.6
0
10
20
30
40
50
KEV
01:29:11.9
Δ=136.1
5.0
-5.0
KONO
01:29:33.0
Δ=148.1
7.0
-7.0
BGIO
01:29:39.2
Δ=152.1
4.0
-4.0
BCAO
01:29:39.5
Δ=152.3
3.0
-3.0
ANTO
01:29:40.3
Δ=152.9
0.1
-0.1
GRFO
01:29:46.7
Δ=157.5
4.0
-4.0
0
10
20
30
40
50
Time (min)

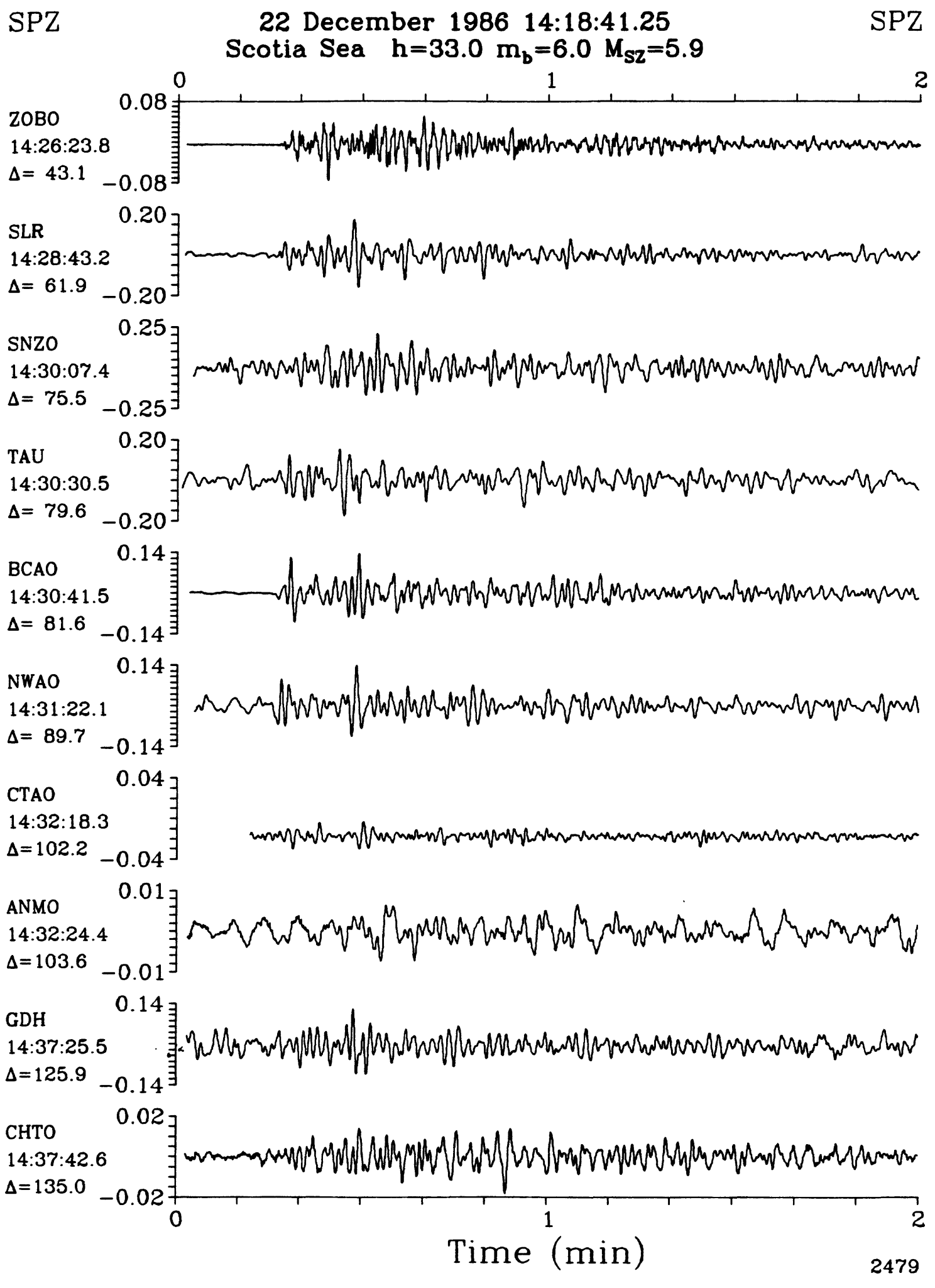

IPZ
21 December 1986 01:10:53.63
IPZ
Kermadec Islands Region h=33.0 m_b=6.1 M_{SZ}=6.6
0
1
2
3
4
GRC1
01:30:16.2
Δ=157.2
0.50
−0.50
GRA1
01:30:16.7
Δ=157.5
0.60
−0.60
GRB1
01:30:16.9
Δ=157.7
0.50
−0.50
NE06
01:30:17.2
Δ=158.0
0.90
−0.90
NE07
01:30:18.5
Δ=159.0
2.00
−2.00
NE16
01:30:22.1
Δ=162.3
2.00
−2.00
NE10
01:30:24.4
Δ=164.7
2.00
−2.00
NE14
01:30:27.9
Δ=169.3
2.00
−2.00
0
1
2
3
4
Time (min)

22 December 1986 14:18:41.25

Scotia Sea



2478

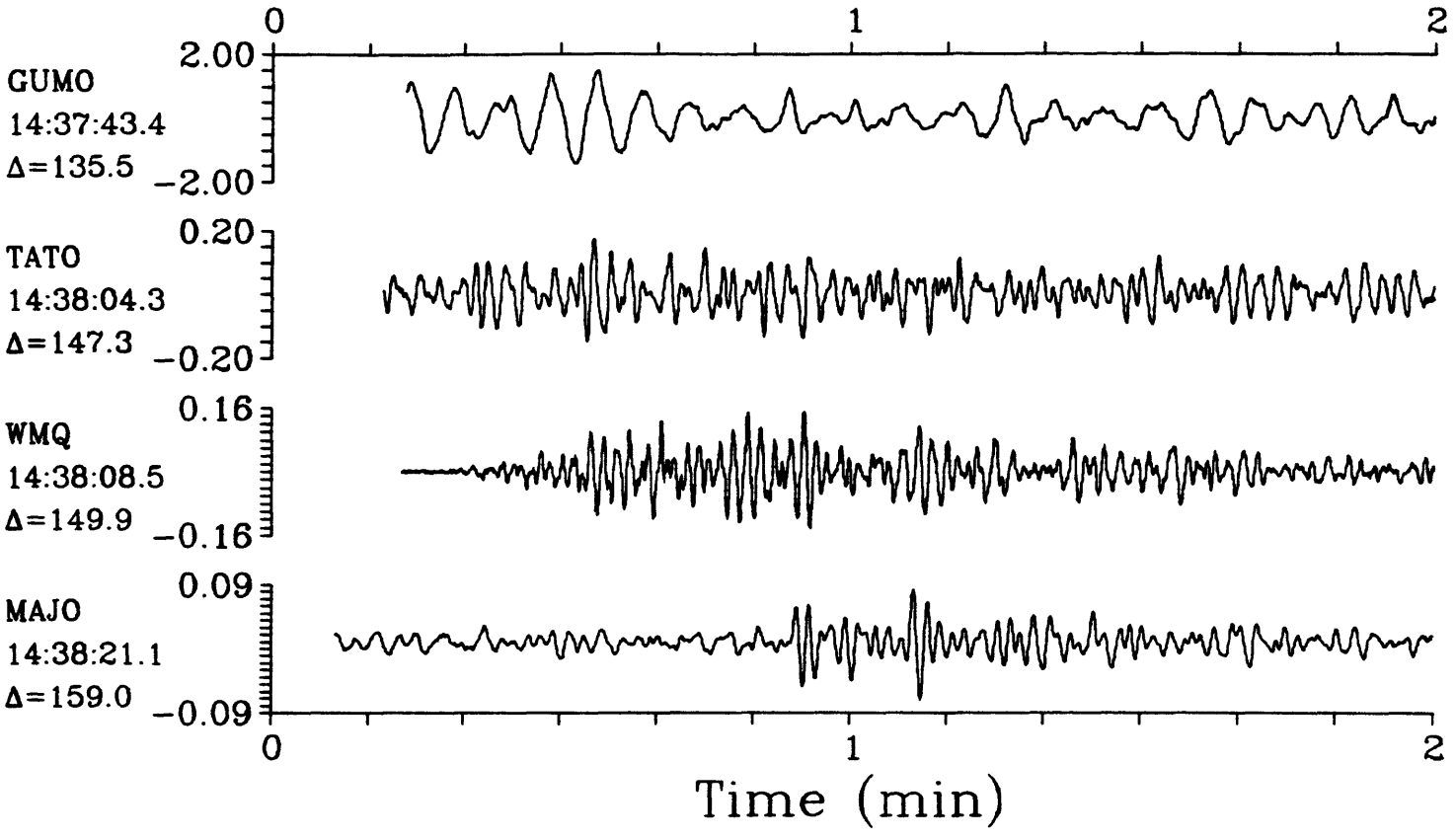

SPZ
22 December 1986 14:18:41.25
Scotia Sea h=33.0 m_b=6.0 M_{SZ}=5.9
SPZ
0
1
2
0.08
ZOBO
14:26:23.8
Δ= 43.1
−0.08
0.20
SLR
14:28:43.2
Δ= 61.9
−0.20
0.25
SNZO
14:30:07.4
Δ= 75.5
−0.25
0.20
TAU
14:30:30.5
Δ= 79.6
−0.20
0.14
BCAO
14:30:41.5
Δ= 81.6
−0.14
0.14
NWAO
14:31:22.1
Δ= 89.7
−0.14
0.04
CTAO
14:32:18.3
Δ=102.2
−0.04
0.01
ANMO
14:32:24.4
Δ=103.6
−0.01
0.14
GDH
14:37:25.5
Δ=125.9
−0.14
0.02
CHTO
14:37:42.6
Δ=135.0
−0.02
0
1
2
Time (min)
2479

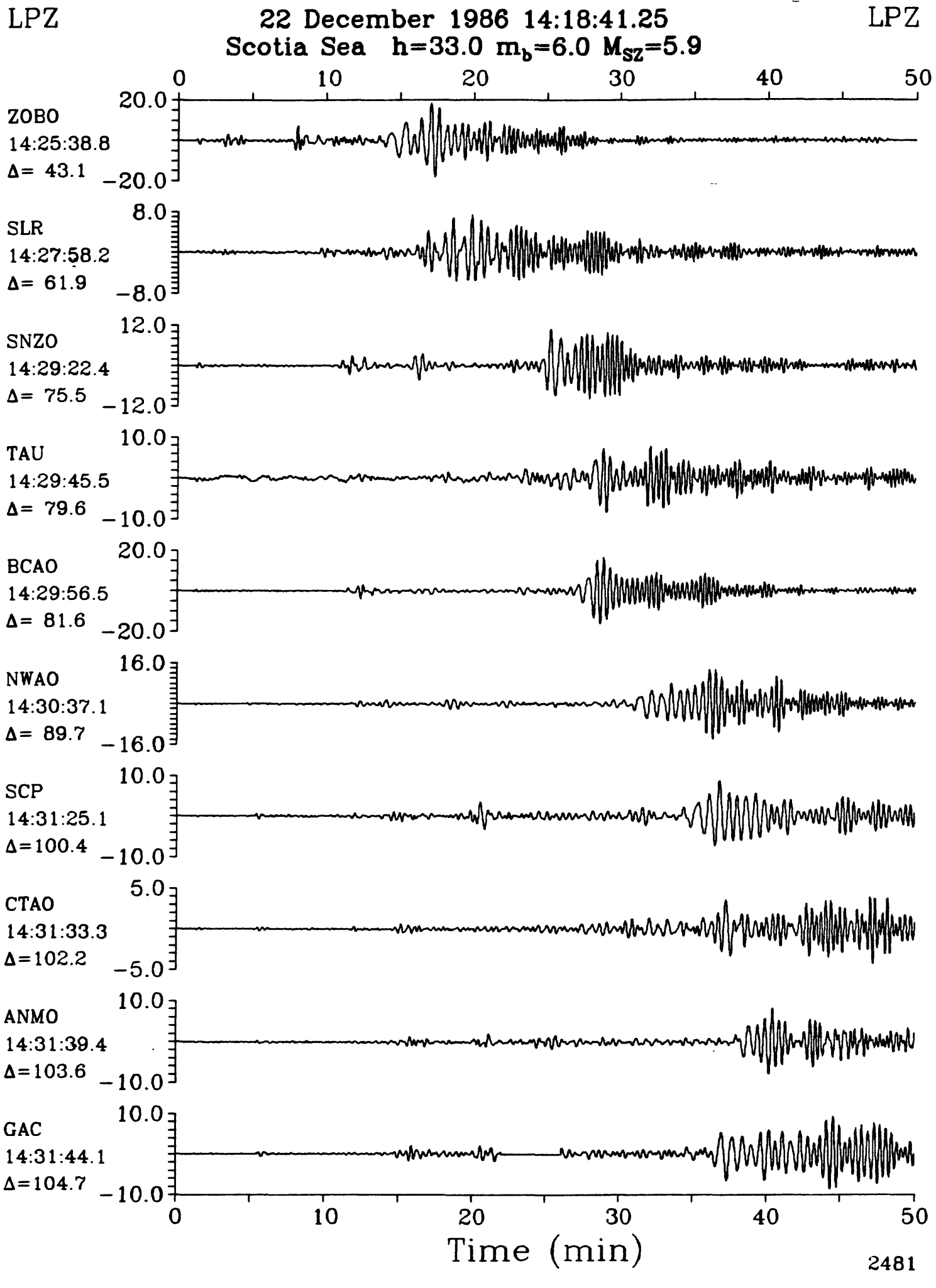
SPZ

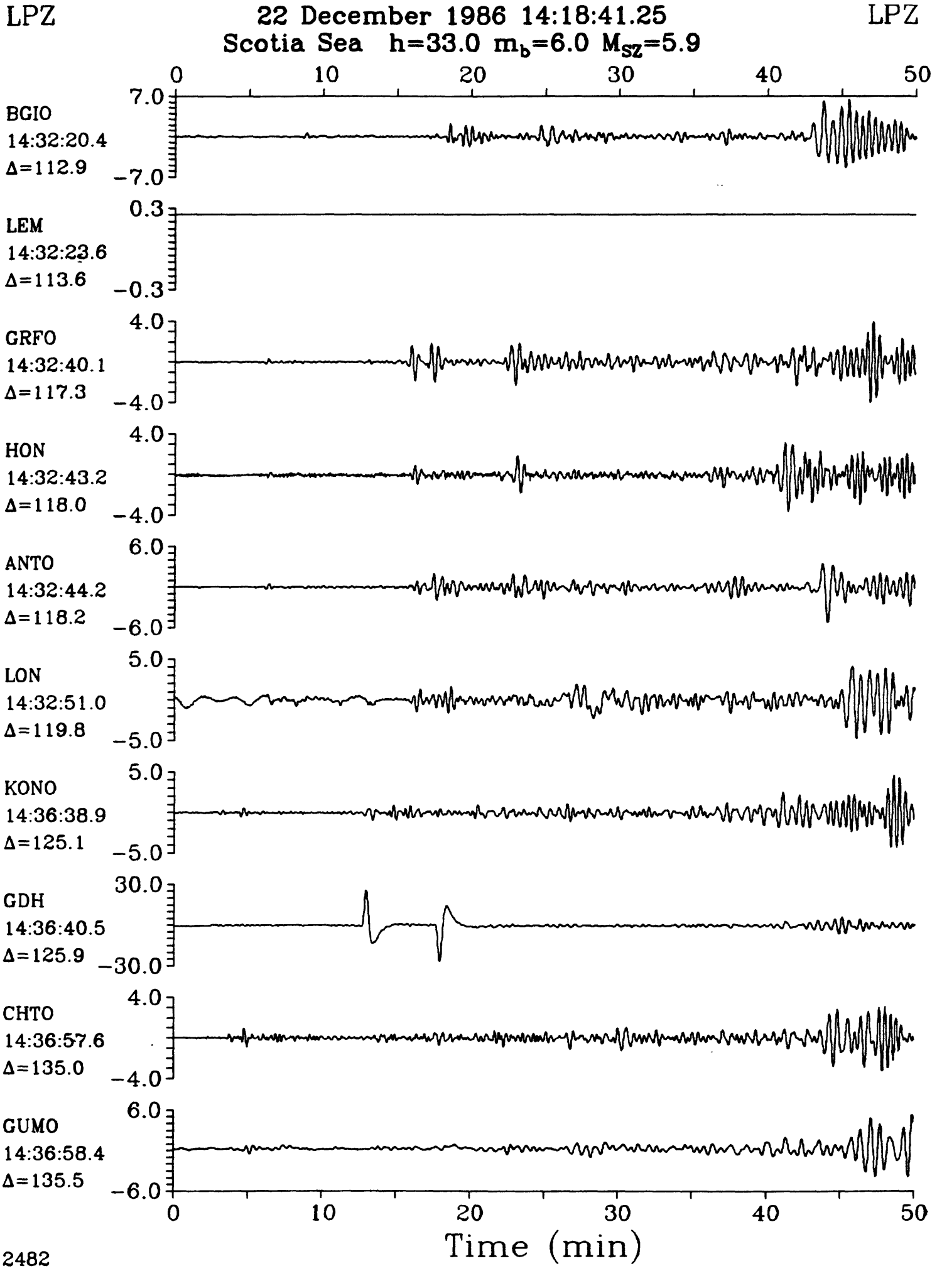
22 December 1986 14:18:41.25

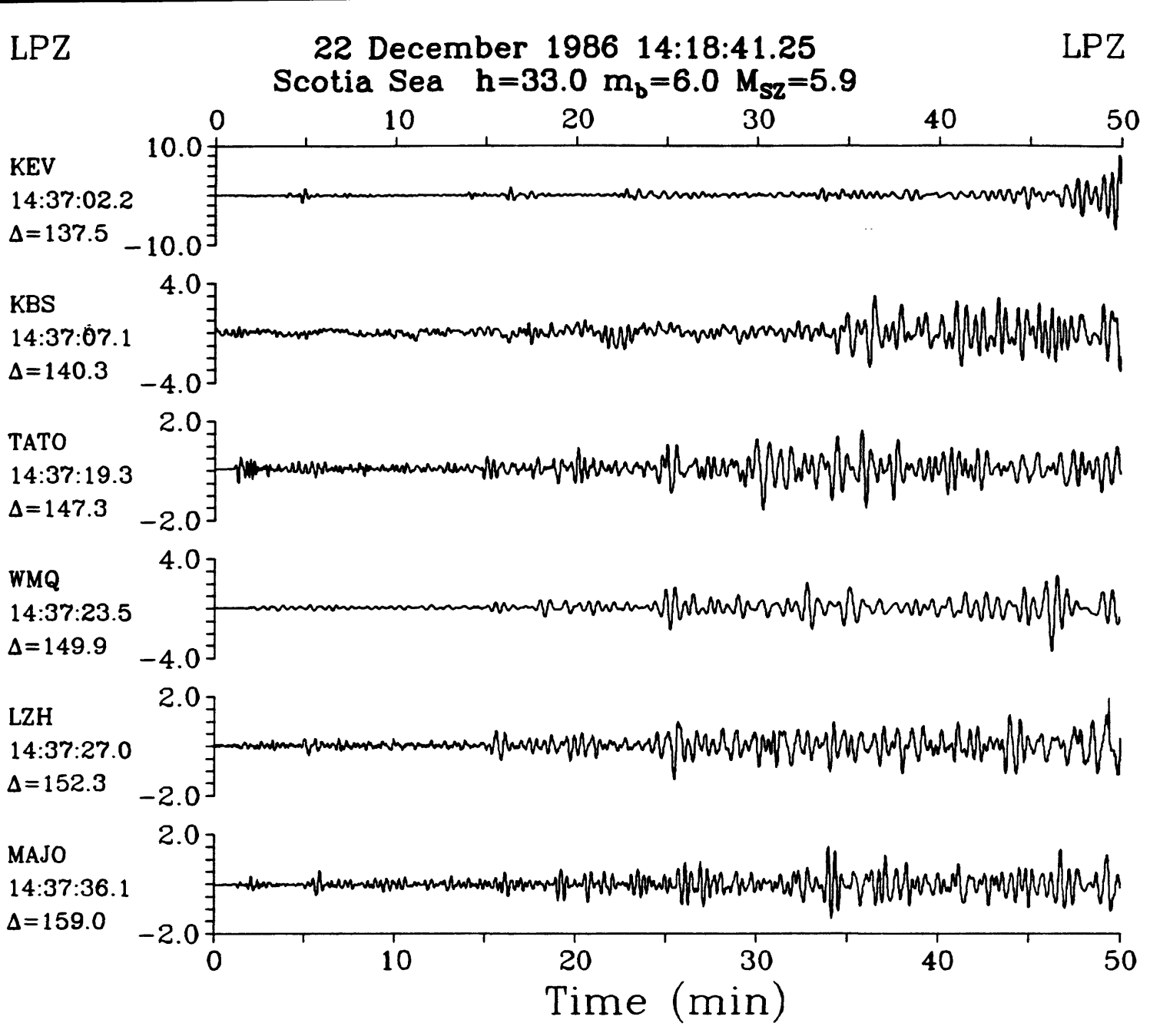
Scotia Sea h=33.0 m_b=6.0 M_{SZ}=5.9

SPZ




LPZ
22 December 1986 14:18:41.25
Scotia Sea h=33.0 m_b=6.0 M_{SZ}=5.9
LPZ
0
10
20
30
40
50
ZOBO
14:25:38.8
Δ= 43.1
20.0
-20.0
SLR
14:27:58.2
Δ= 61.9
8.0
-8.0
SNZO
14:29:22.4
Δ= 75.5
12.0
-12.0
TAU
14:29:45.5
Δ= 79.6
10.0
-10.0
BCAO
14:29:56.5
Δ= 81.6
20.0
-20.0
NWAO
14:30:37.1
Δ= 89.7
16.0
-16.0
SCP
14:31:25.1
Δ=100.4
10.0
-10.0
CTAO
14:31:33.3
Δ=102.2
5.0
-5.0
ANMO
14:31:39.4
Δ=103.6
10.0
-10.0
GAC
14:31:44.1
Δ=104.7
10.0
-10.0
0
10
20
30
40
50
Time (min)
2481


LPZ
22 December 1986 14:18:41.25
LPZ
Scotia Sea h=33.0 m_b=6.0 M_{SZ}=5.9
0
10
20
30
40
50
BGIO
14:32:20.4
Δ=112.9
7.0
-7.0
LEM
14:32:23.6
Δ=113.6
0.3
-0.3
GRFO
14:32:40.1
Δ=117.3
4.0
-4.0
HON
14:32:43.2
Δ=118.0
4.0
-4.0
ANTO
14:32:44.2
Δ=118.2
6.0
-6.0
LON
14:32:51.0
Δ=119.8
5.0
-5.0
KONO
14:36:38.9
Δ=125.1
5.0
-5.0
GDH
14:36:40.5
Δ=125.9
30.0
-30.0
CHTO
14:36:57.6
Δ=135.0
4.0
-4.0
GUMO
14:36:58.4
Δ=135.5
6.0
-6.0
0
10
20
30
40
50
Time (min)
2482

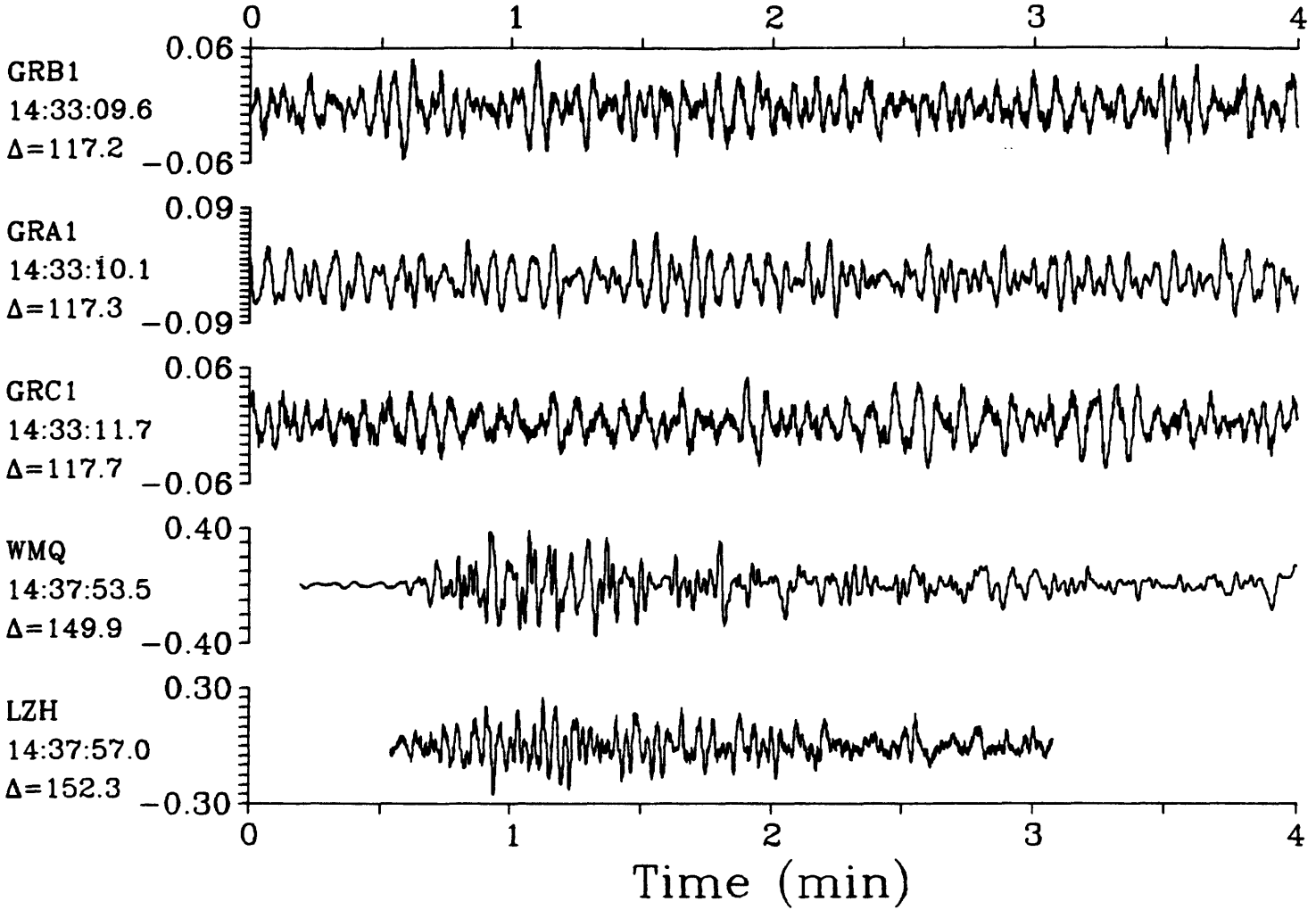

LPZ
22 December 1986 14:18:41.25
Scotia Sea h=33.0 m_b=6.0 M_{SZ}=5.9
LPZ
0
10
20
30
40
50
KEV
14:37:02.2
Δ=137.5
10.0
-10.0
KBS
14:37:07.1
Δ=140.3
4.0
-4.0
TATO
14:37:19.3
Δ=147.3
2.0
-2.0
WMQ
14:37:23.5
Δ=149.9
4.0
-4.0
LZH
14:37:27.0
Δ=152.3
2.0
-2.0
MAJO
14:37:36.1
Δ=159.0
2.0
-2.0
Time (min)

IPZ

22 December 1986 14:18:41.25

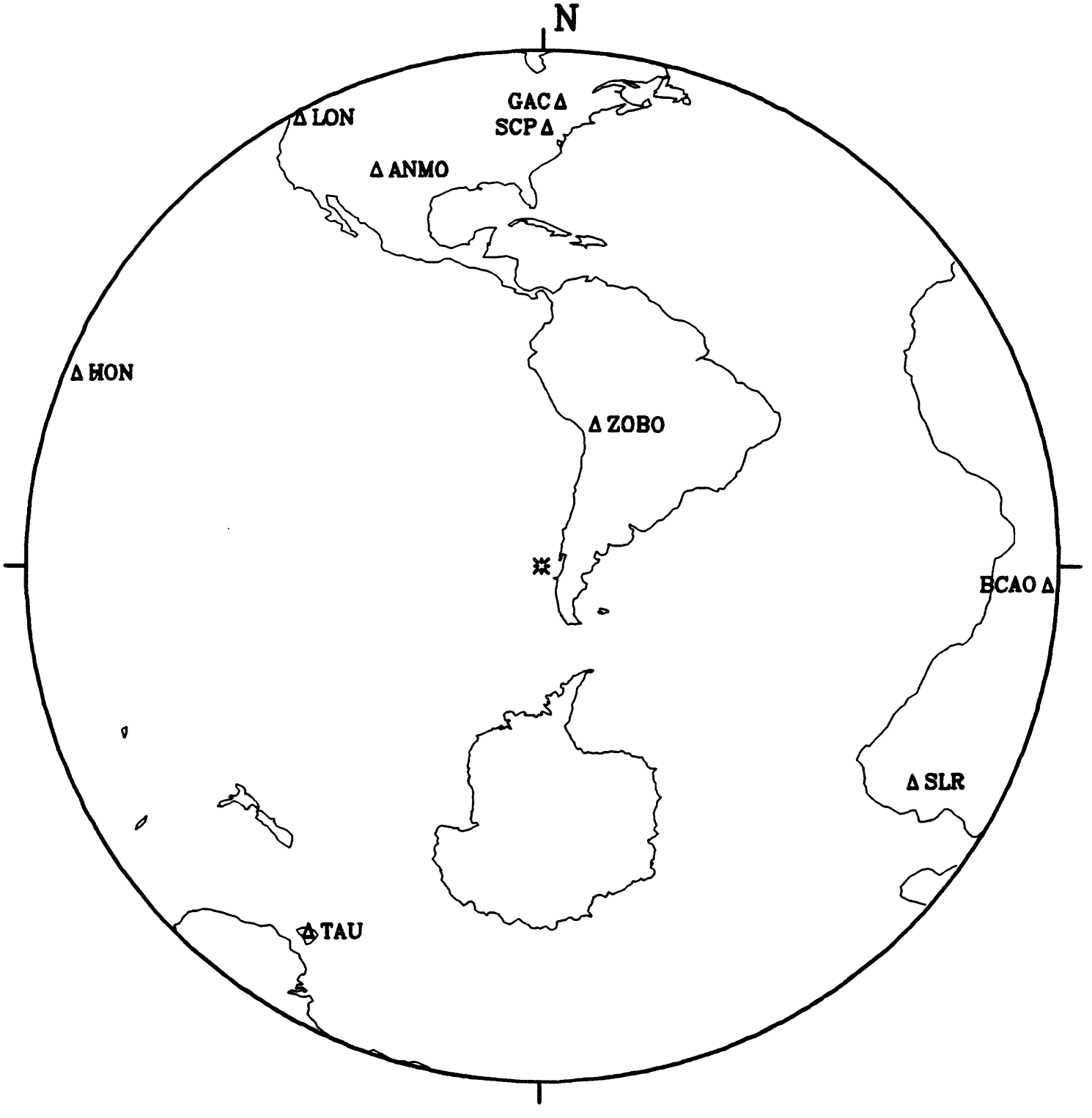
Scotia Sea h=33.0 m_b=6.0 M_{SZ}=5.9

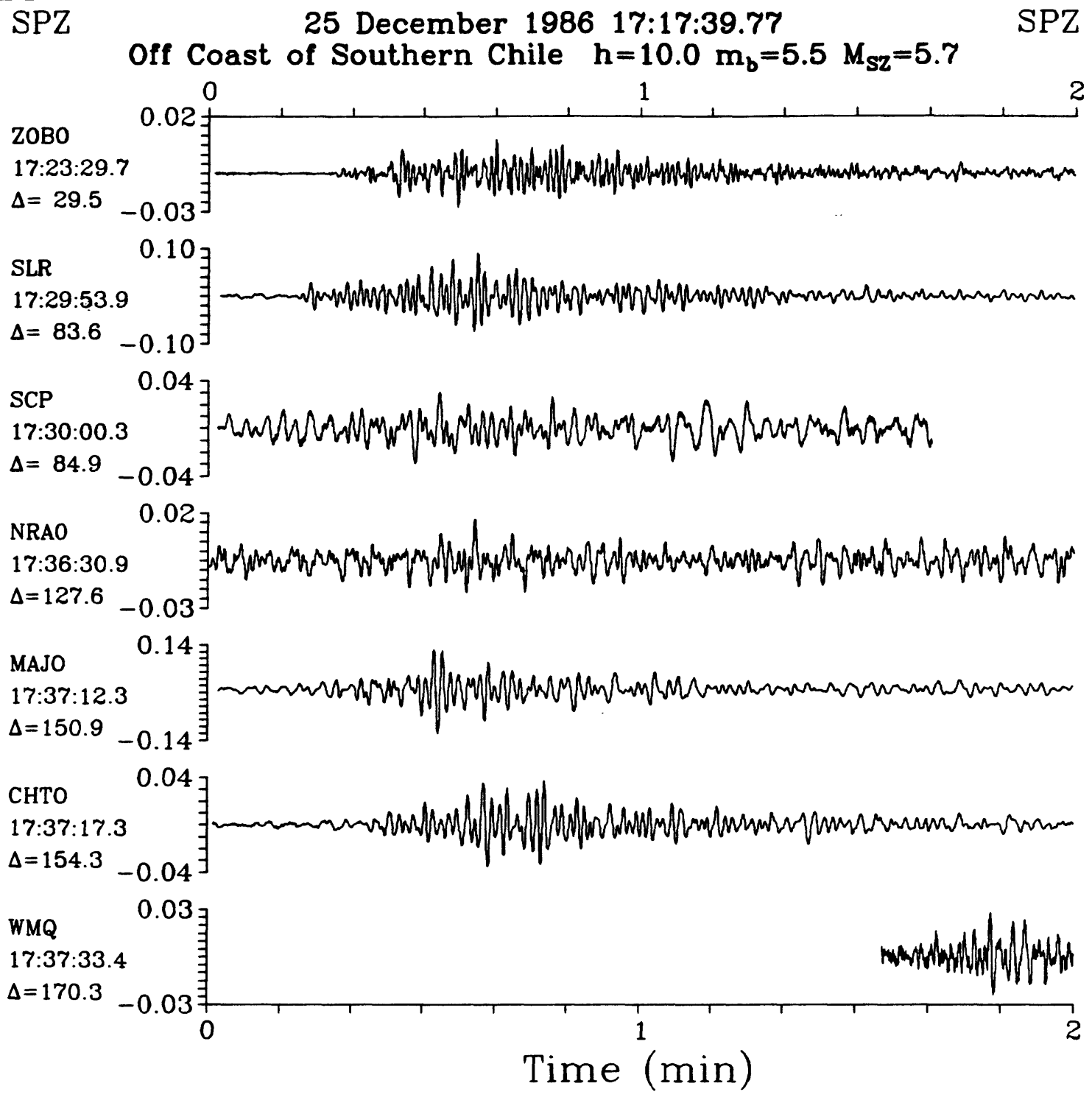
IPZ

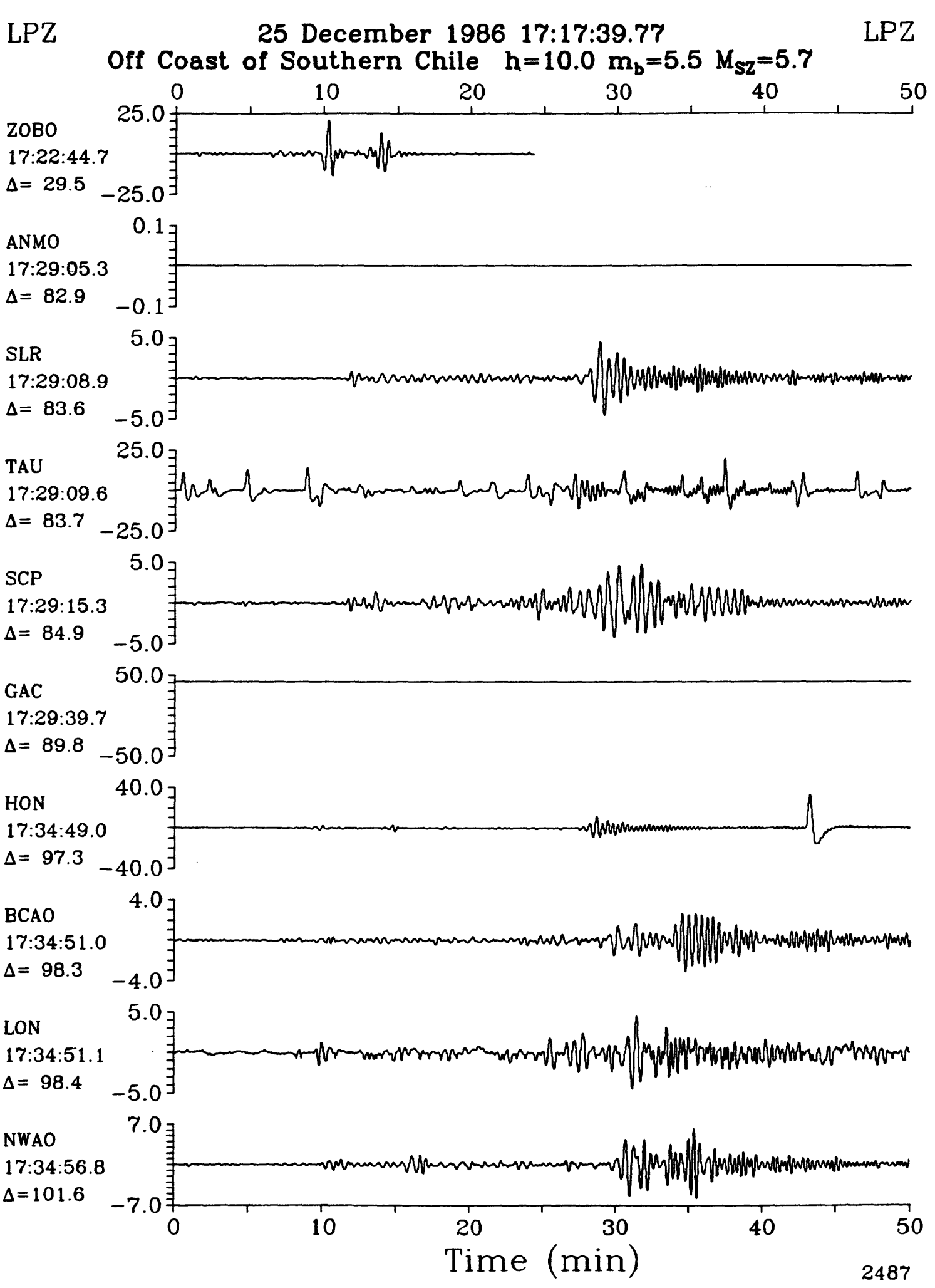


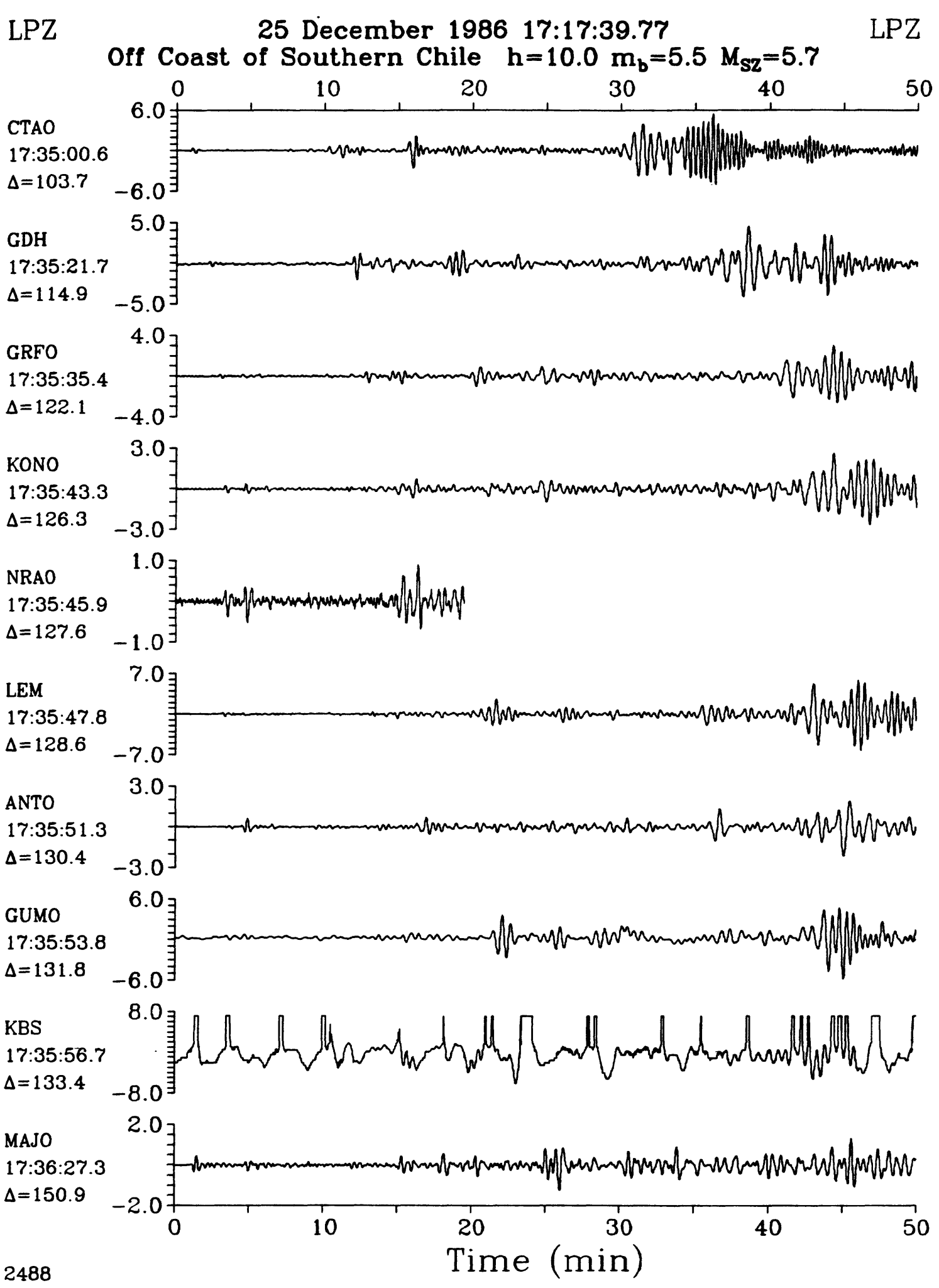
25 December 1986 17:17:39.77

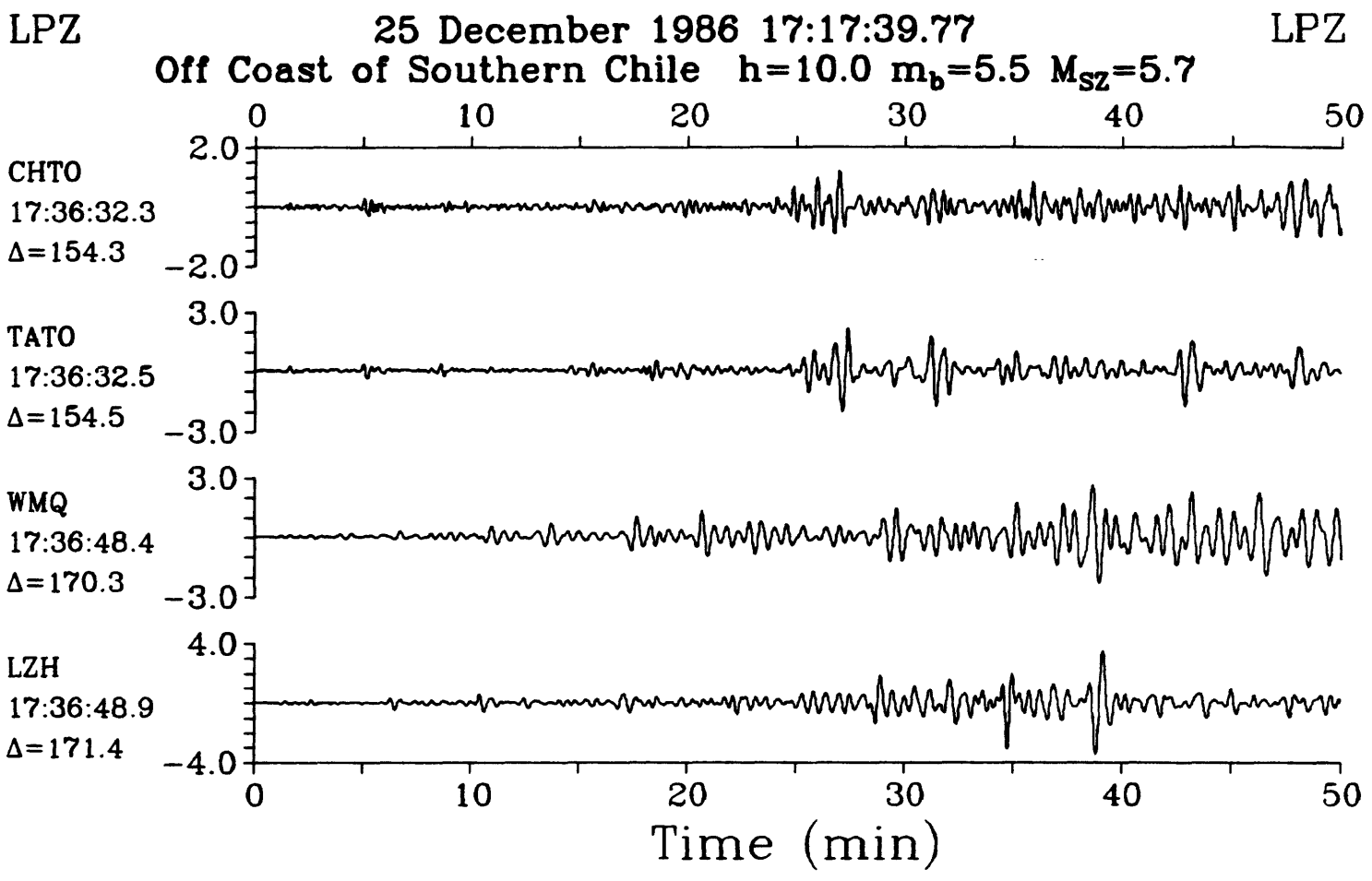
Off Coast of Southern Chile




SPZ
25 December 1986 17:17:39.77
SPZ
Off Coast of Southern Chile h=10.0 m_b=5.5 M_{SZ}=5.7
0
1
2
0.02
ZOBO
17:23:29.7
Δ= 29.5
−0.03
0.10
SLR
17:29:53.9
Δ= 83.6
−0.10
0.04
SCP
17:30:00.3
Δ= 84.9
−0.04
0.02
NRAO
17:36:30.9
Δ=127.6
−0.03
0.14
MAJO
17:37:12.3
Δ=150.9
−0.14
0.04
CHTO
17:37:17.3
Δ=154.3
−0.04
0.03
WMQ
17:37:33.4
Δ=170.3
−0.03
0
1
2
Time (min)

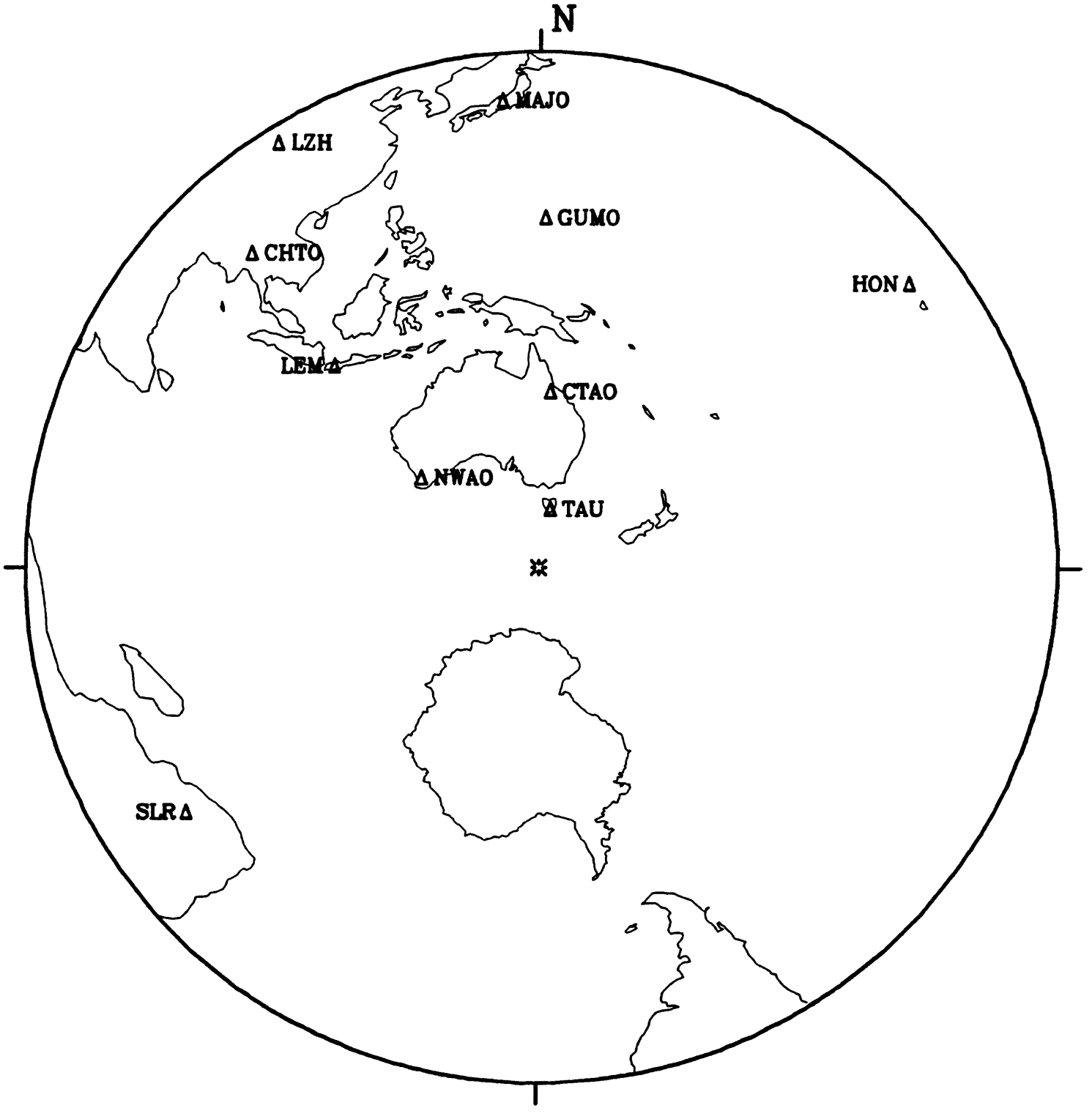

LPZ
25 December 1986 17:17:39.77
Off Coast of Southern Chile h=10.0 m_b=5.5 M_{SZ}=5.7
LPZ
0
10
20
30
40
50
ZOBO
17:22:44.7
Δ= 29.5
25.0
-25.0
ANMO
17:29:05.3
Δ= 82.9
0.1
-0.1
SLR
17:29:08.9
Δ= 83.6
5.0
-5.0
TAU
17:29:09.6
Δ= 83.7
25.0
-25.0
SCP
17:29:15.3
Δ= 84.9
5.0
-5.0
GAC
17:29:39.7
Δ= 89.8
50.0
-50.0
HON
17:34:49.0
Δ= 97.3
40.0
-40.0
BCAO
17:34:51.0
Δ= 98.3
4.0
-4.0
LON
17:34:51.1
Δ= 98.4
5.0
-5.0
NWAO
17:34:56.8
Δ=101.6
7.0
-7.0
0
10
20
30
40
50
Time (min)
2487


LPZ
25 December 1986 17:17:39.77
LPZ
Off Coast of Southern Chile h=10.0 m_b=5.5 M_{SZ}=5.7
0
10
20
30
40
50
CTAO
17:35:00.6
Δ=103.7
6.0
-6.0
GDH
17:35:21.7
Δ=114.9
5.0
-5.0
GRFO
17:35:35.4
Δ=122.1
4.0
-4.0
KONO
17:35:43.3
Δ=126.3
3.0
-3.0
NRAO
17:35:45.9
Δ=127.6
1.0
-1.0
LEM
17:35:47.8
Δ=128.6
7.0
-7.0
ANTO
17:35:51.3
Δ=130.4
3.0
-3.0
GUMO
17:35:53.8
Δ=131.8
6.0
-6.0
KBS
17:35:56.7
Δ=133.4
8.0
-8.0
MAJO
17:36:27.3
Δ=150.9
2.0
-2.0
0
10
20
30
40
50
Time (min)
2488

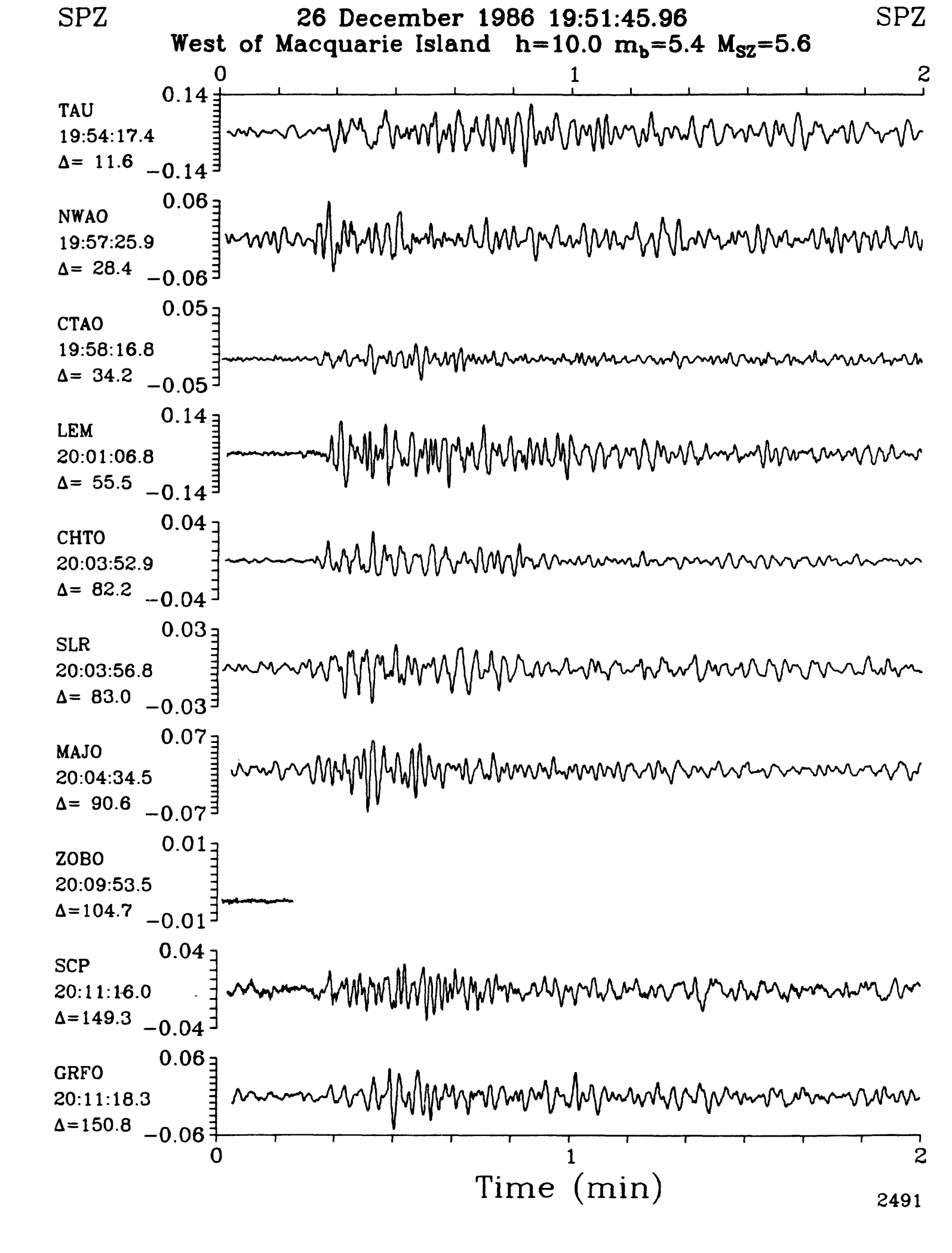

LPZ
25 December 1986 17:17:39.77
LPZ
Off Coast of Southern Chile h=10.0 m_b=5.5 M_{SZ}=5.7
0
10
20
30
40
50
2.0
CHTO
17:36:32.3
Δ=154.3
-2.0
3.0
TATO
17:36:32.5
Δ=154.5
-3.0
3.0
WMQ
17:36:48.4
Δ=170.3
-3.0
4.0
LZH
17:36:48.9
Δ=171.4
-4.0
0
10
20
30
40
50
Time (min)

26 December 1986 19:51:45.96

West of Macquarie Island

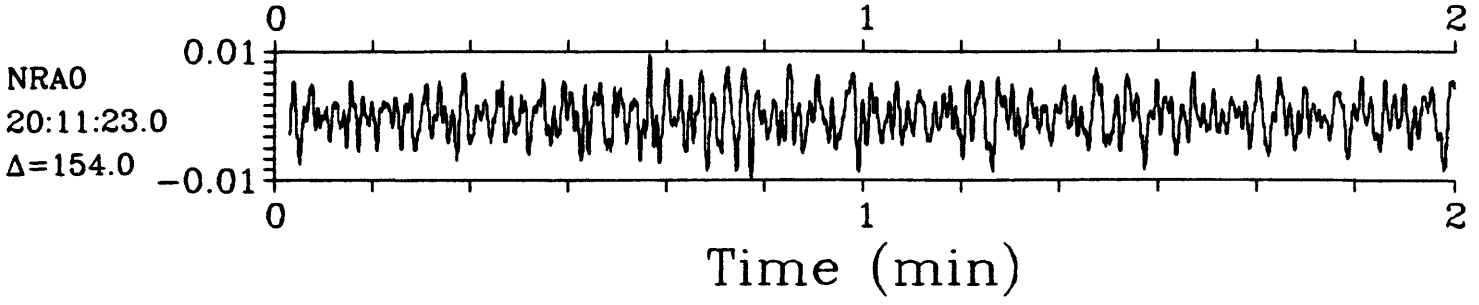


2490

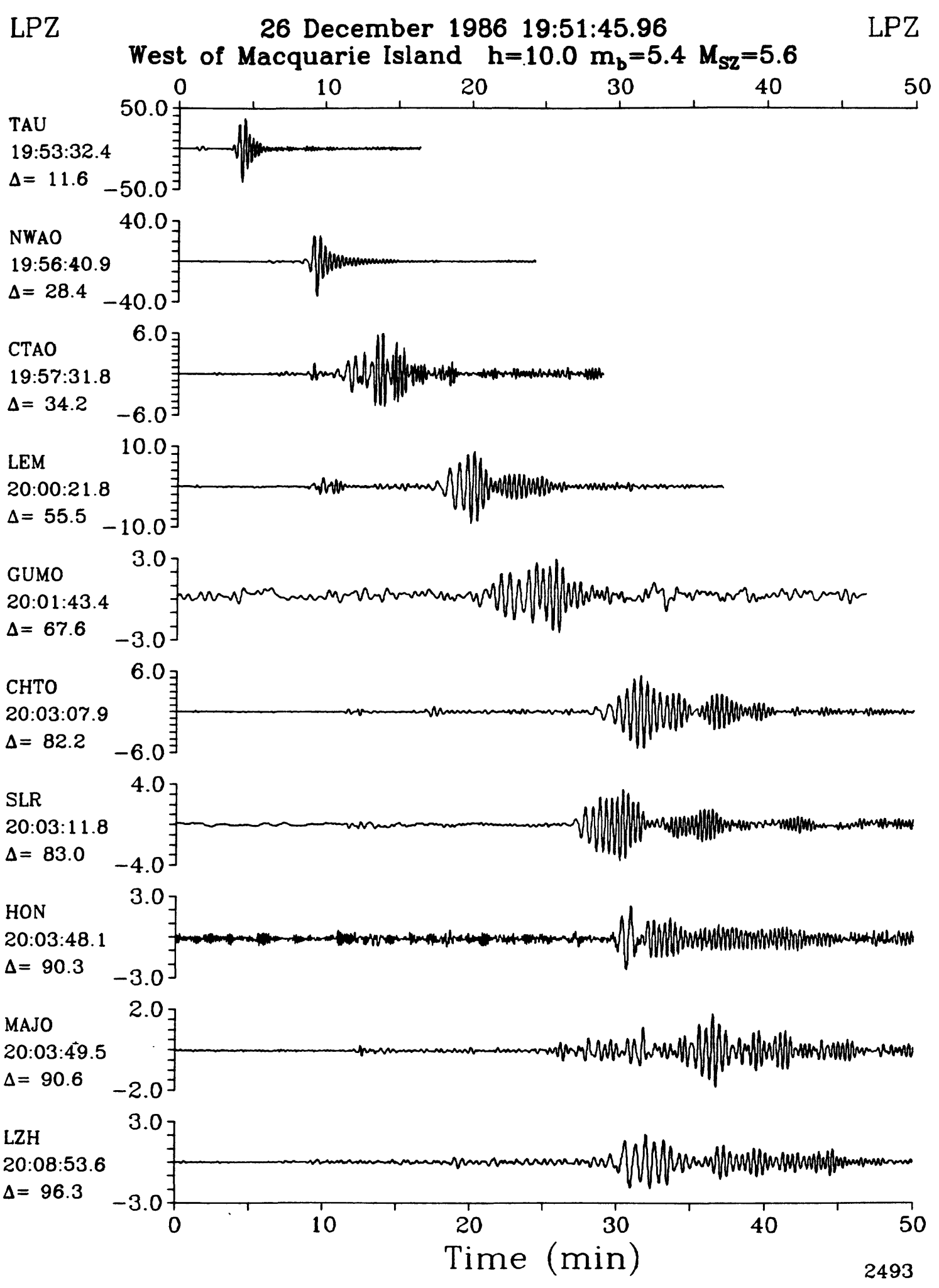

SPZ
26 December 1986 19:51:45.96
SPZ
West of Macquarie Island h=10.0 m_b=5.4 M_{SZ}=5.6
0
1
2
0.14
TAU
19:54:17.4
Δ= 11.6
−0.14
0.06
NWAO
19:57:25.9
Δ= 28.4
−0.06
0.05
CTAO
19:58:16.8
Δ= 34.2
−0.05
0.14
LEM
20:01:06.8
Δ= 55.5
−0.14
0.04
CHTO
20:03:52.9
Δ= 82.2
−0.04
0.03
SLR
20:03:56.8
Δ= 83.0
−0.03
0.07
MAJO
20:04:34.5
Δ= 90.6
−0.07
0.01
ZOBO
20:09:53.5
Δ=104.7
−0.01
0.04
SCP
20:11:16.0
Δ=149.3
−0.04
0.06
GRFO
20:11:18.3
Δ=150.8
−0.06
0
1
2
Time (min)
2491

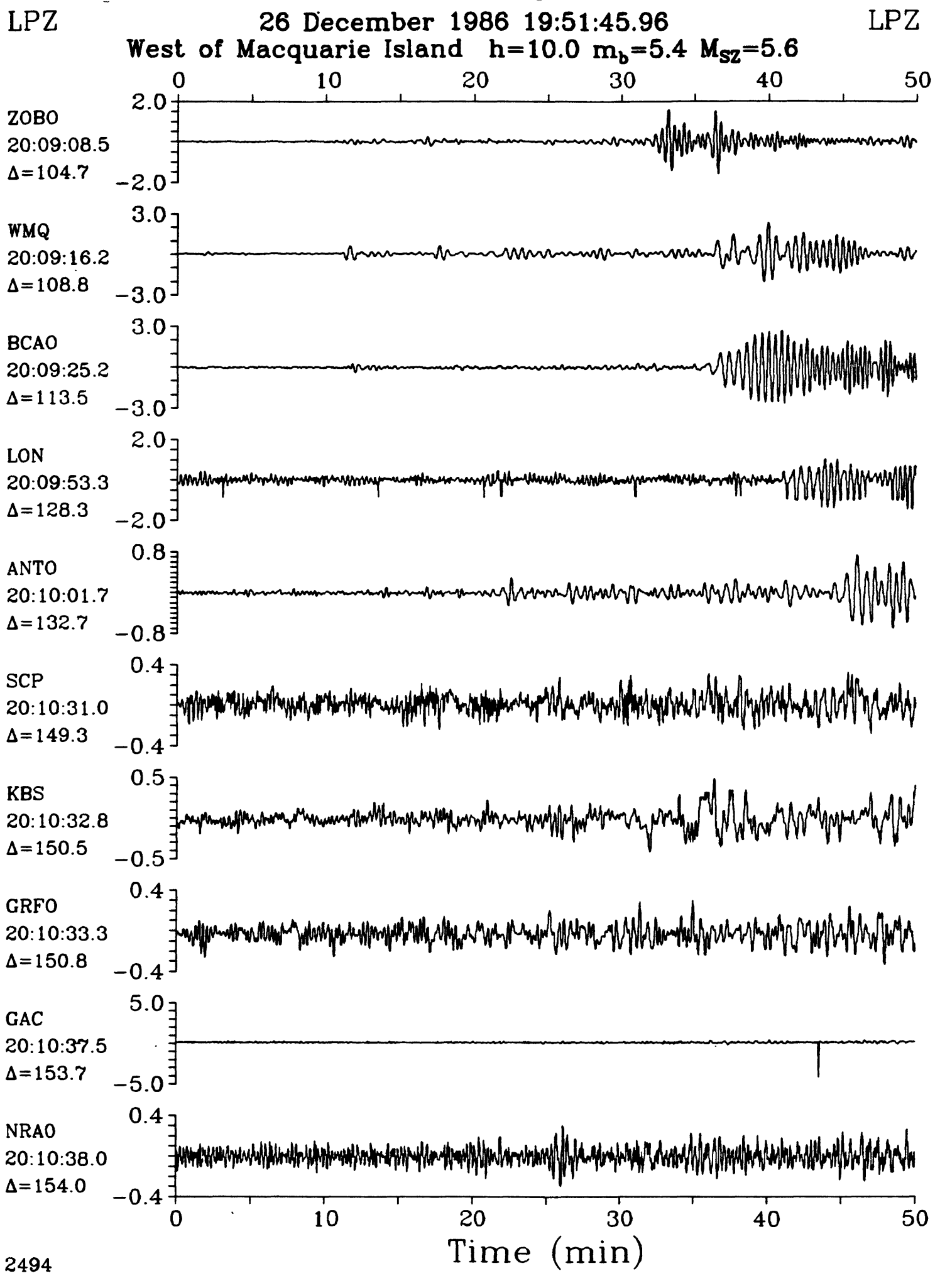
SPZ 26 December 1986 19:51:45.96 SPZ

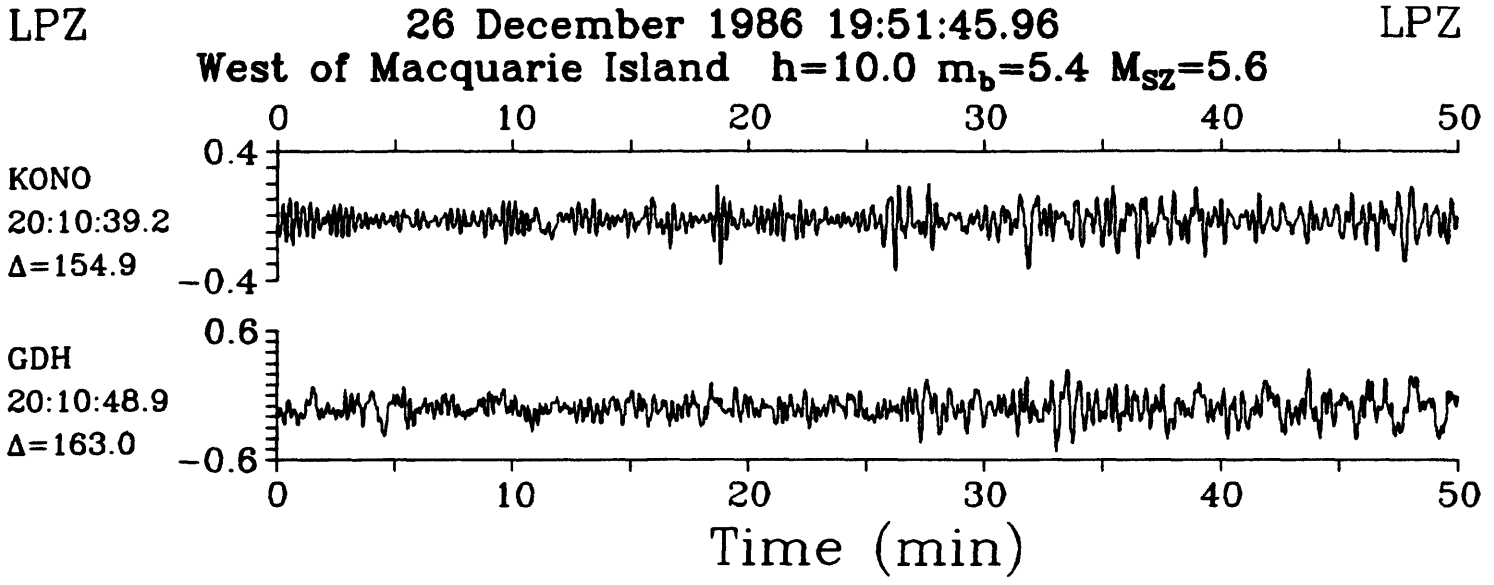
West of Macquarie Island h=10.0 m_b=5.4 M_{SZ}=5.6



Time (min)

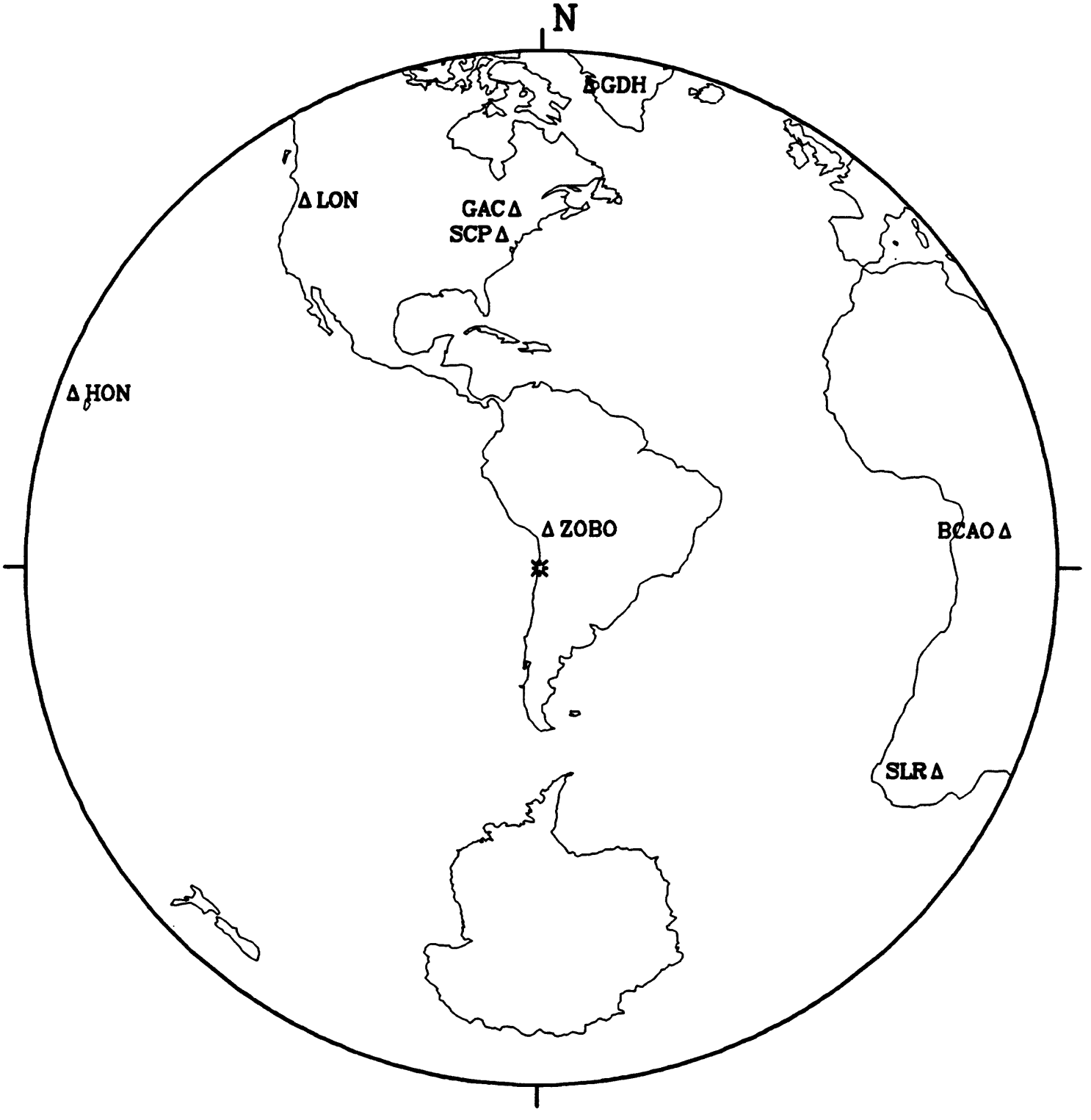

LPZ
26 December 1986 19:51:45.96
LPZ
West of Macquarie Island h=10.0 m_b=5.4 M_{SZ}=5.6
0
10
20
30
40
50
TAU
19:53:32.4
Δ= 11.6
50.0
-50.0
NWAO
19:56:40.9
Δ= 28.4
40.0
-40.0
CTAO
19:57:31.8
Δ= 34.2
6.0
-6.0
LEM
20:00:21.8
Δ= 55.5
10.0
-10.0
GUMO
20:01:43.4
Δ= 67.6
3.0
-3.0
CHTO
20:03:07.9
Δ= 82.2
6.0
-6.0
SLR
20:03:11.8
Δ= 83.0
4.0
-4.0
HON
20:03:48.1
Δ= 90.3
3.0
-3.0
MAJO
20:03:49.5
Δ= 90.6
2.0
-2.0
LZH
20:08:53.6
Δ= 96.3
3.0
-3.0
0
10
20
30
40
50
Time (min)
2493


LPZ
26 December 1986 19:51:45.96
LPZ
West of Macquarie Island h=10.0 m_b=5.4 M_{SZ}=5.6
0
10
20
30
40
50
ZOBO
20:09:08.5
Δ=104.7
2.0
-2.0
WMQ
20:09:16.2
Δ=108.8
3.0
-3.0
BCAO
20:09:25.2
Δ=113.5
3.0
-3.0
LON
20:09:53.3
Δ=128.3
2.0
-2.0
ANTO
20:10:01.7
Δ=132.7
0.8
-0.8
SCP
20:10:31.0
Δ=149.3
0.4
-0.4
KBS
20:10:32.8
Δ=150.5
0.5
-0.5
GRFO
20:10:33.3
Δ=150.8
0.4
-0.4
GAC
20:10:37.5
Δ=153.7
5.0
-5.0
NRAO
20:10:38.0
Δ=154.0
0.4
-0.4
0
10
20
30
40
50
Time (min)


LPZ
26 December 1986 19:51:45.96
LPZ
West of Macquarie Island h=10.0 m_b=5.4 M_{SZ}=5.6
0
10
20
30
40
50
0.4
KONO
20:10:39.2
Δ=154.9
−0.4
0.6
GDH
20:10:48.9
Δ=163.0
−0.6
0
10
20
30
40
50
Time (min)

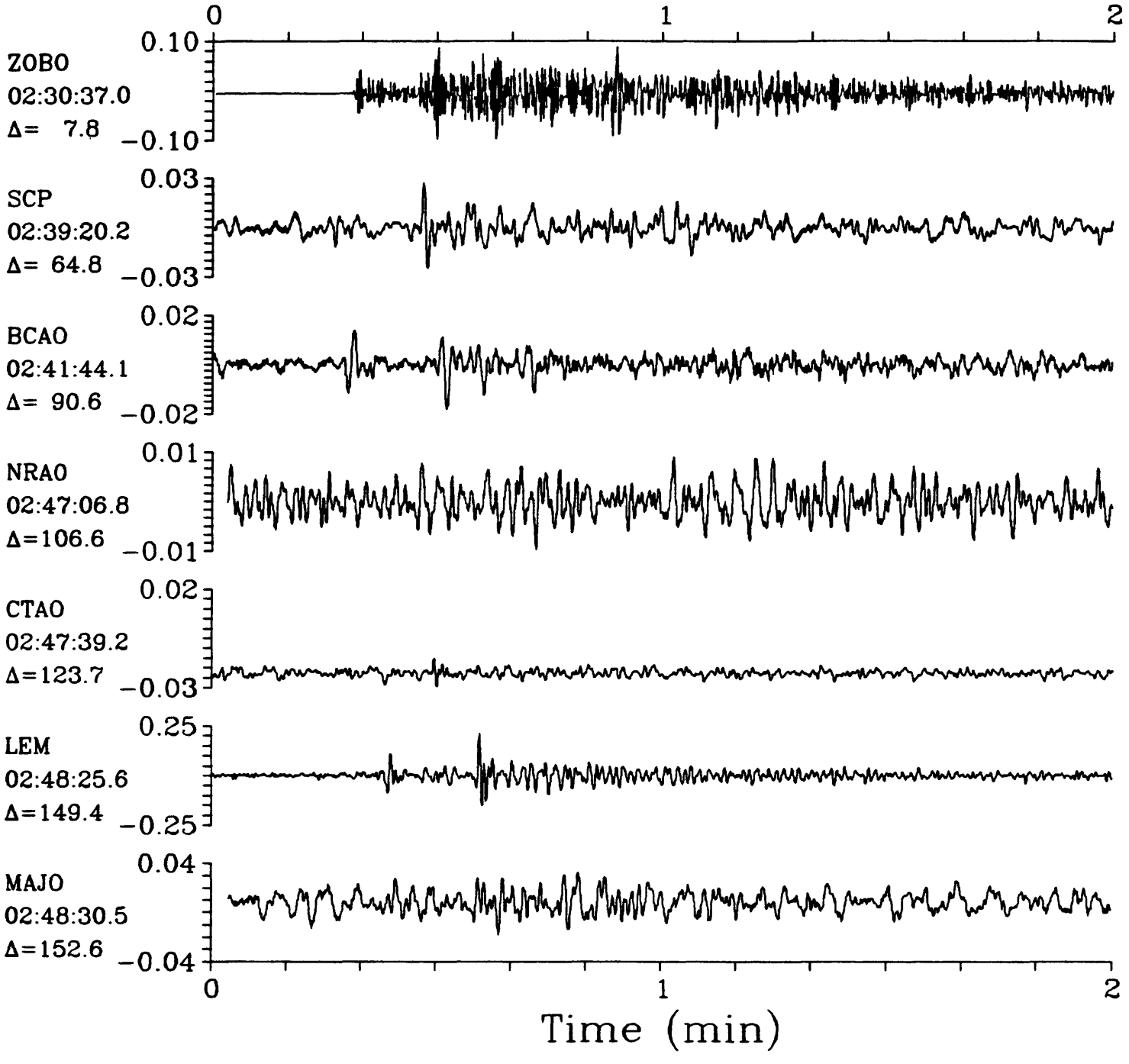
27 December 1986 02:29:00.28

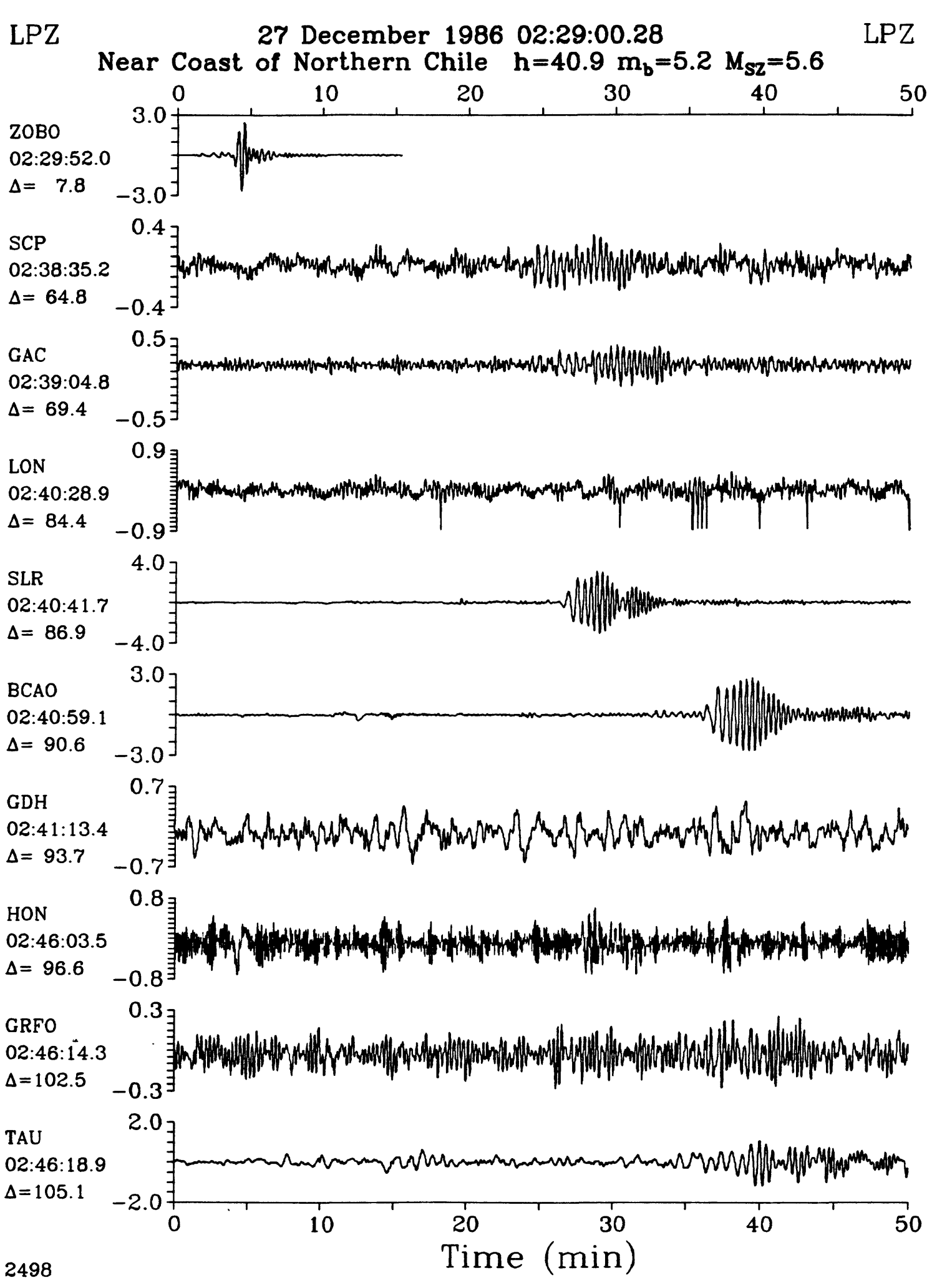
Near Coast of Northern Chile

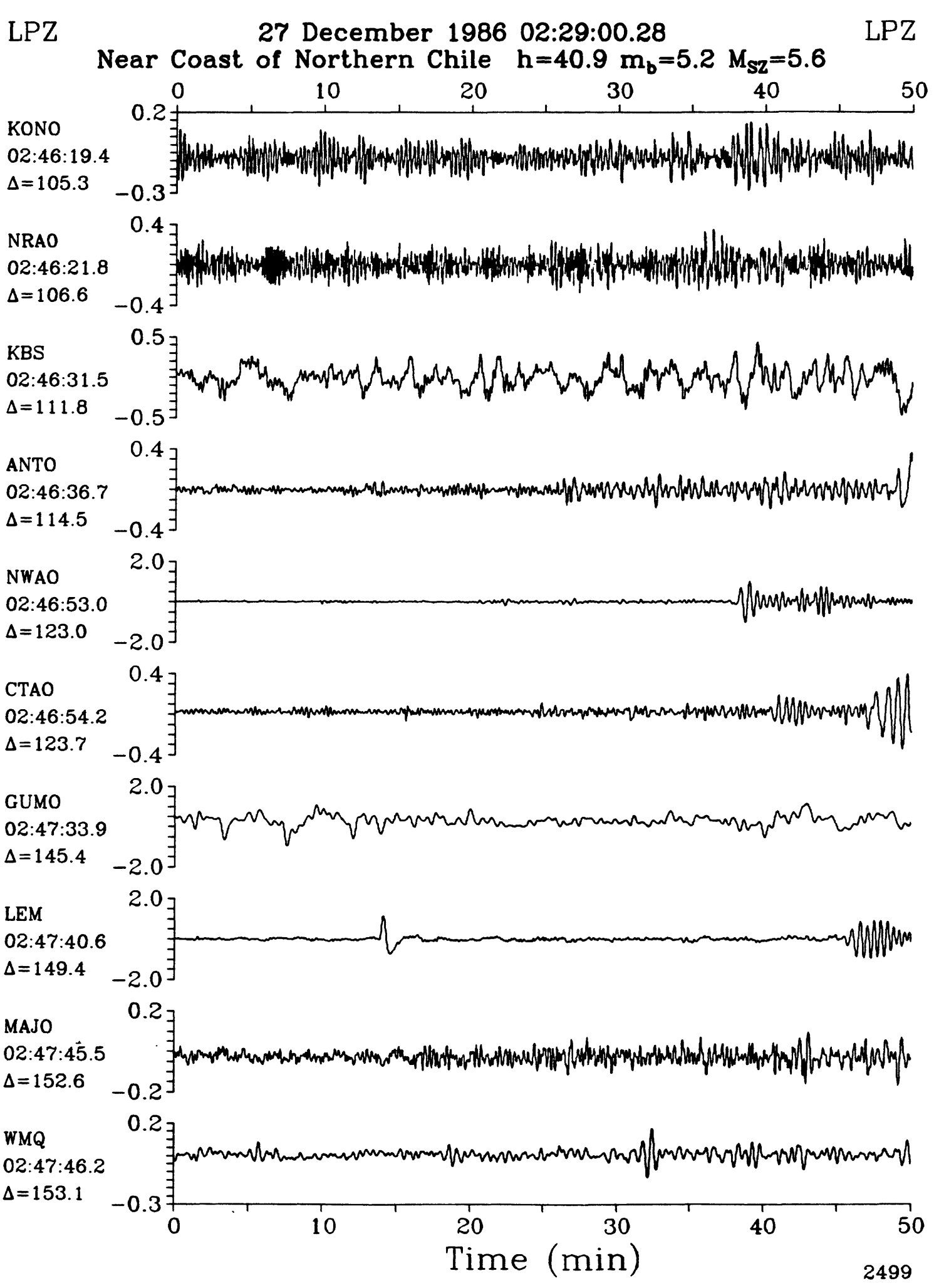


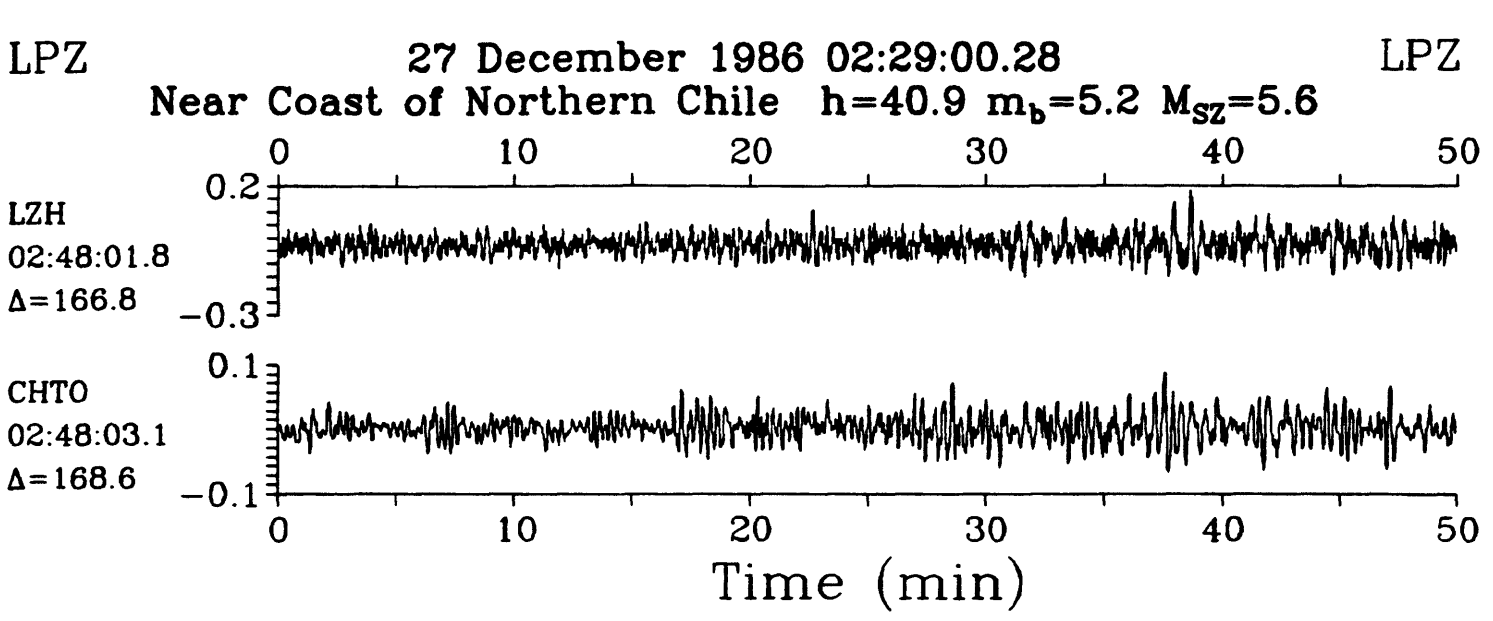
SPZ 27 December 1986 02:29:00.28 SPZ

Near Coast of Northern Chile h=40.9 m_b=5.2 M_{SZ}=5.6



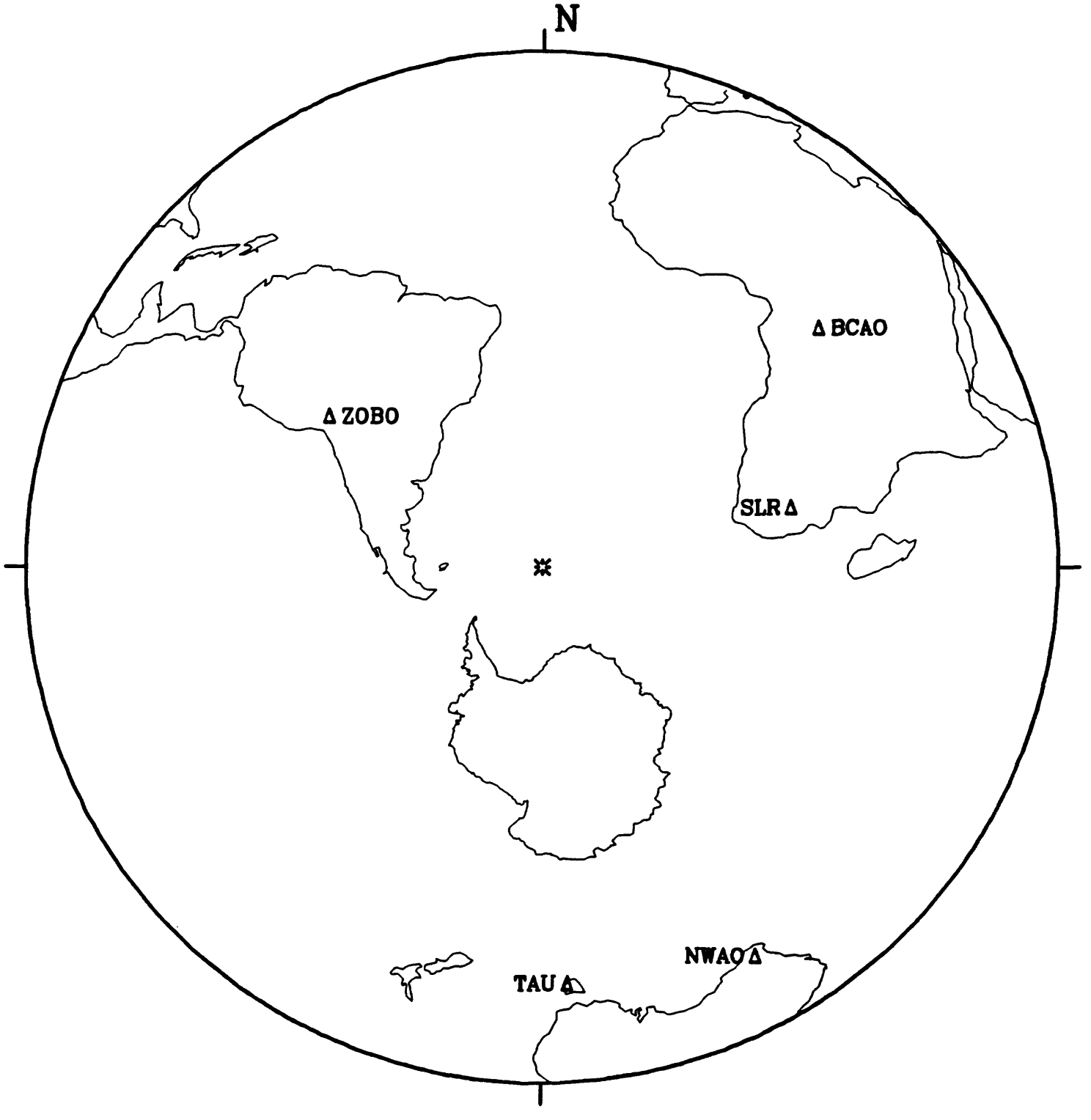

LPZ
27 December 1986 02:29:00.28
LPZ
Near Coast of Northern Chile h=40.9 m_b=5.2 M_{SZ}=5.6
0
10
20
30
40
50
ZOBO
02:29:52.0
Δ= 7.8
3.0
-3.0
SCP
02:38:35.2
Δ= 64.8
0.4
-0.4
GAC
02:39:04.8
Δ= 69.4
0.5
-0.5
LON
02:40:28.9
Δ= 84.4
0.9
-0.9
SLR
02:40:41.7
Δ= 86.9
4.0
-4.0
BCAO
02:40:59.1
Δ= 90.6
3.0
-3.0
GDH
02:41:13.4
Δ= 93.7
0.7
-0.7
HON
02:46:03.5
Δ= 96.6
0.8
-0.8
GRFO
02:46:14.3
Δ=102.5
0.3
-0.3
TAU
02:46:18.9
Δ=105.1
2.0
-2.0
0
10
20
30
40
50
Time (min)
2498


LPZ
27 December 1986 02:29:00.28
LPZ
Near Coast of Northern Chile h=40.9 m_b=5.2 M_{SZ}=5.6
0
10
20
30
40
50
KONO
02:46:19.4
Δ=105.3
0.2
-0.3
NRAO
02:46:21.8
Δ=106.6
0.4
-0.4
KBS
02:46:31.5
Δ=111.8
0.5
-0.5
ANTO
02:46:36.7
Δ=114.5
0.4
-0.4
NWAO
02:46:53.0
Δ=123.0
2.0
-2.0
CTAO
02:46:54.2
Δ=123.7
0.4
-0.4
GUMO
02:47:33.9
Δ=145.4
2.0
-2.0
LEM
02:47:40.6
Δ=149.4
2.0
-2.0
MAJO
02:47:45.5
Δ=152.6
0.2
-0.2
WMQ
02:47:46.2
Δ=153.1
0.2
-0.3
0
10
20
30
40
50
Time (min)
2499


LPZ
27 December 1986 02:29:00.28
LPZ
Near Coast of Northern Chile h=40.9 m_b=5.2 M_{SZ}=5.6
0
10
20
30
40
50
0.2
LZH
02:48:01.8
Δ=166.8
−0.3
0.1
CHTO
02:48:03.1
Δ=168.6
−0.1
0
10
20
30
40
50
Time (min)

27 December 1986 02:43:53.99

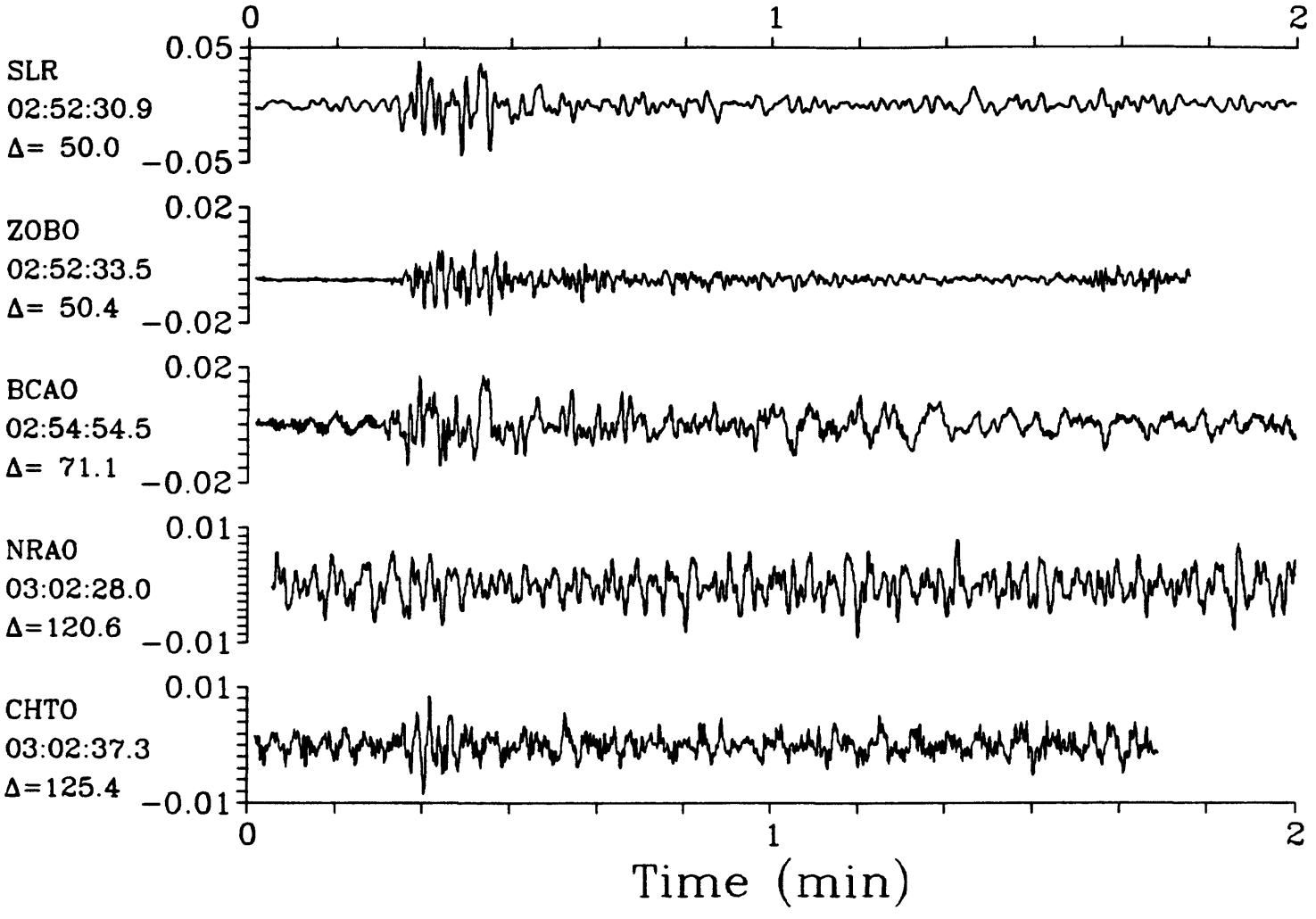
South Sandwich Islands Region

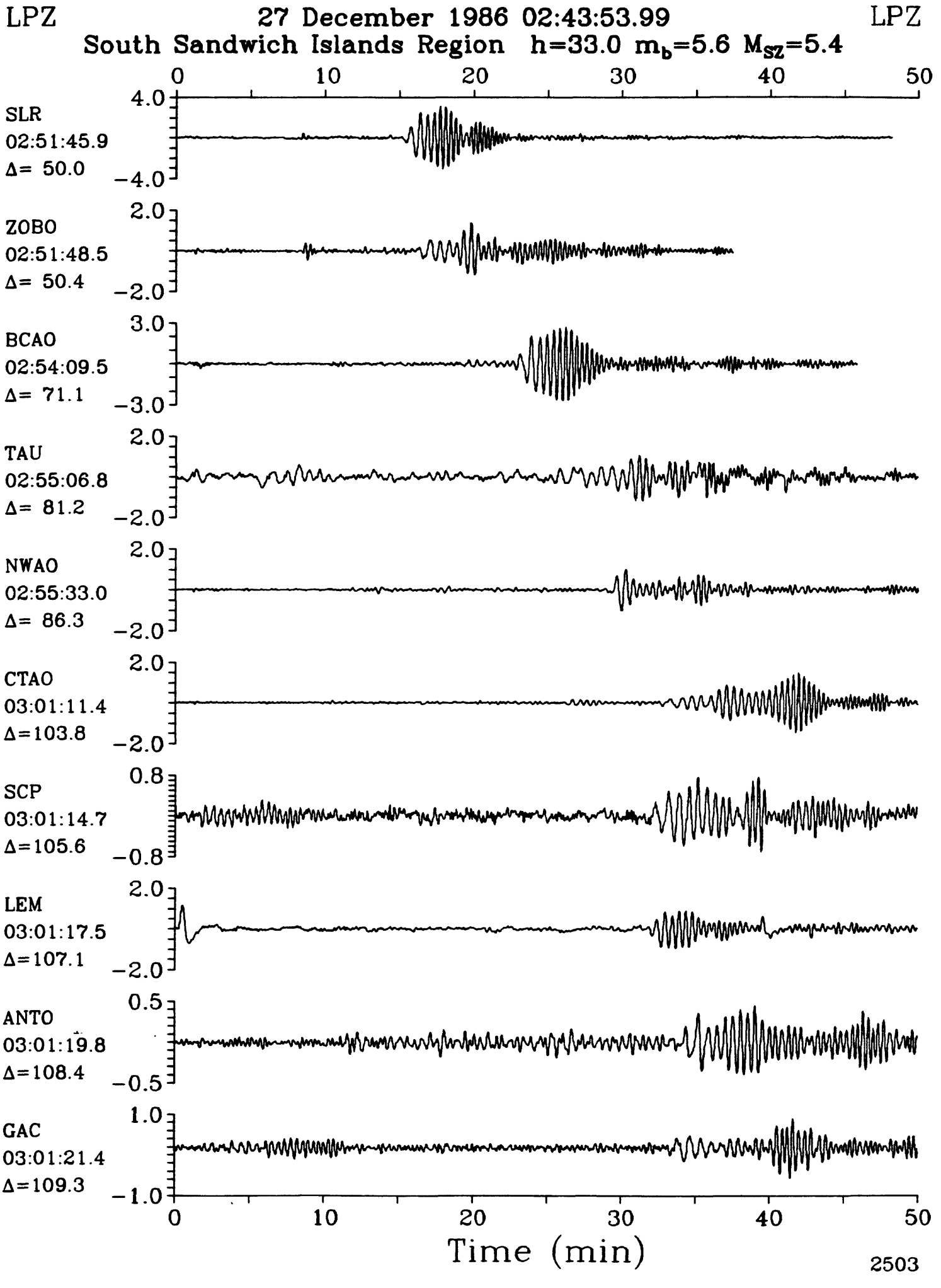


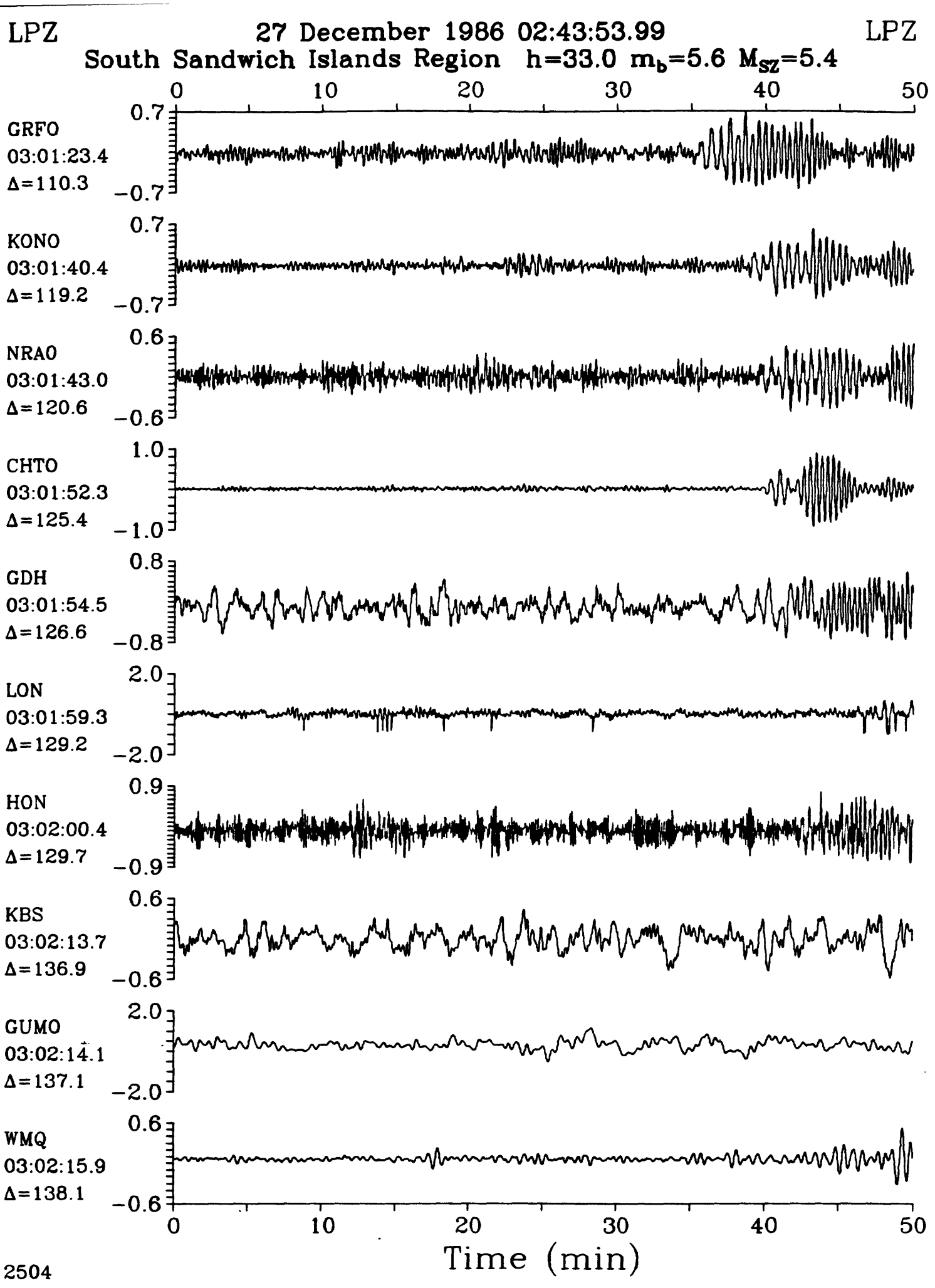
2501

SPZ 27 December 1986 02:43:53.99 SPZ

South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=5.4

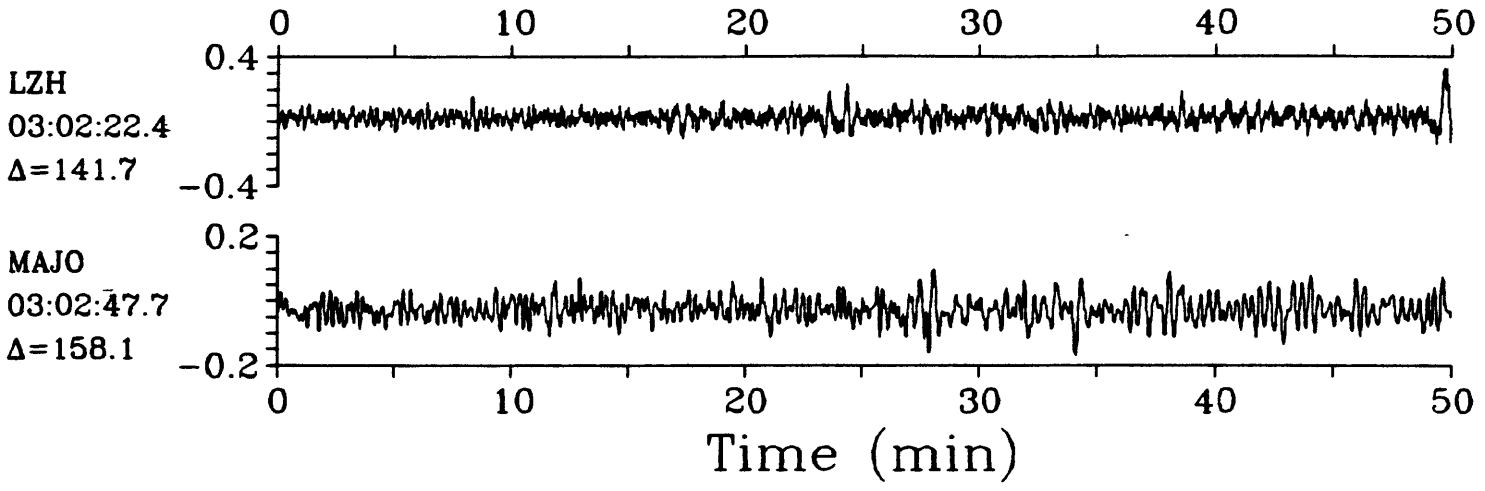



LPZ
27 December 1986 02:43:53.99
LPZ
South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=5.4
0
10
20
30
40
50
SLR
02:51:45.9
Δ= 50.0
4.0
-4.0
ZOBO
02:51:48.5
Δ= 50.4
2.0
-2.0
BCAO
02:54:09.5
Δ= 71.1
3.0
-3.0
TAU
02:55:06.8
Δ= 81.2
2.0
-2.0
NWAO
02:55:33.0
Δ= 86.3
2.0
-2.0
CTAO
03:01:11.4
Δ=103.8
2.0
-2.0
SCP
03:01:14.7
Δ=105.6
0.8
-0.8
LEM
03:01:17.5
Δ=107.1
2.0
-2.0
ANTO
03:01:19.8
Δ=108.4
0.5
-0.5
GAC
03:01:21.4
Δ=109.3
1.0
-1.0
0
10
20
30
40
50
Time (min)
2503


LPZ
27 December 1986 02:43:53.99
LPZ
South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=5.4
0
10
20
30
40
50
GRFO
03:01:23.4
Δ=110.3
0.7
-0.7
KONO
03:01:40.4
Δ=119.2
0.7
-0.7
NRAO
03:01:43.0
Δ=120.6
0.6
-0.6
CHTO
03:01:52.3
Δ=125.4
1.0
-1.0
GDH
03:01:54.5
Δ=126.6
0.8
-0.8
LON
03:01:59.3
Δ=129.2
2.0
-2.0
HON
03:02:00.4
Δ=129.7
0.9
-0.9
KBS
03:02:13.7
Δ=136.9
0.6
-0.6
GUMO
03:02:14.1
Δ=137.1
2.0
-2.0
WMQ
03:02:15.9
Δ=138.1
0.6
-0.6
0
10
20
30
40
50
Time (min)

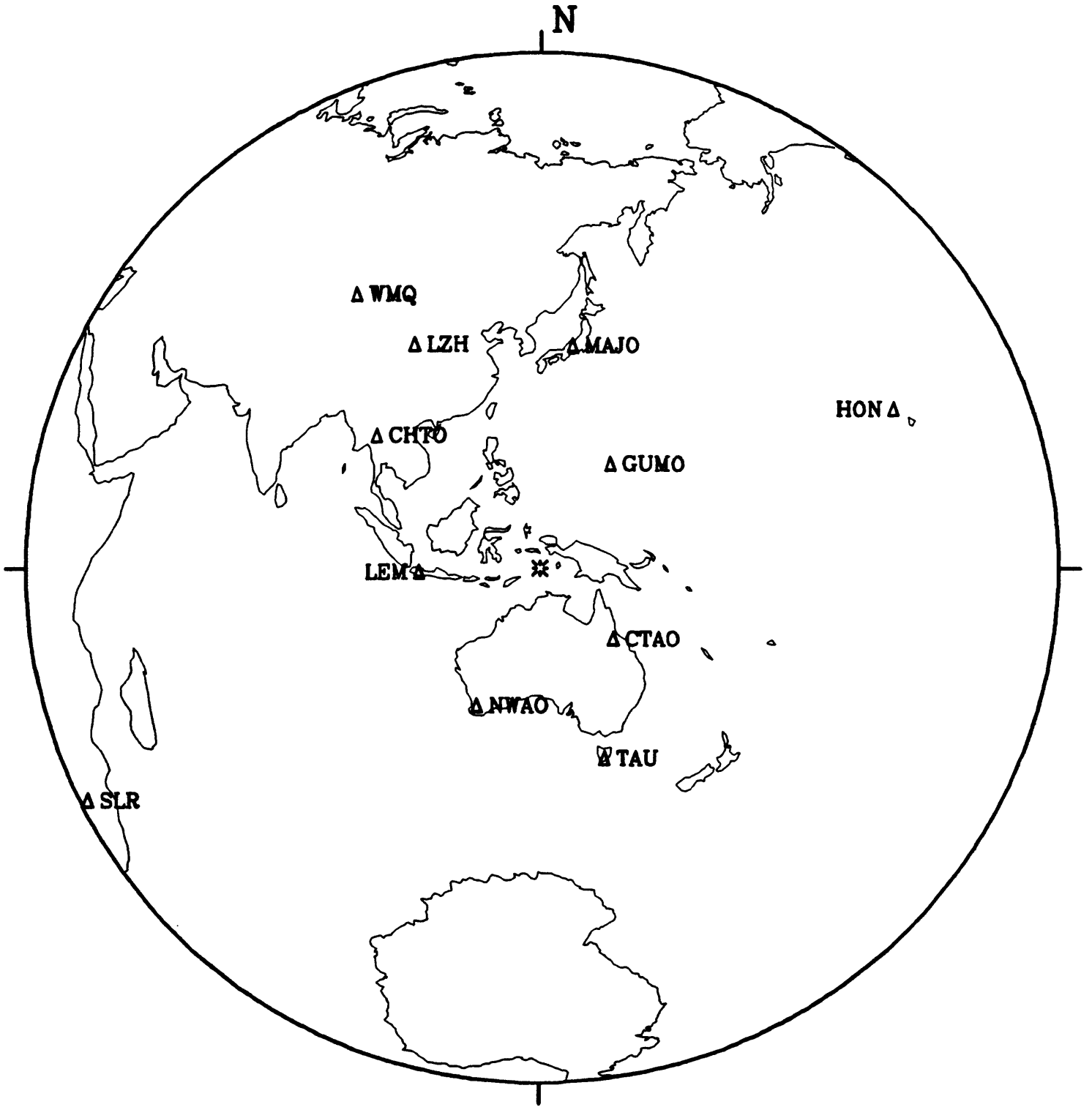
27 December 1986 02:43:53.99

South Sandwich Islands Region h=33.0 m_b=5.6 M_{SZ}=5.4

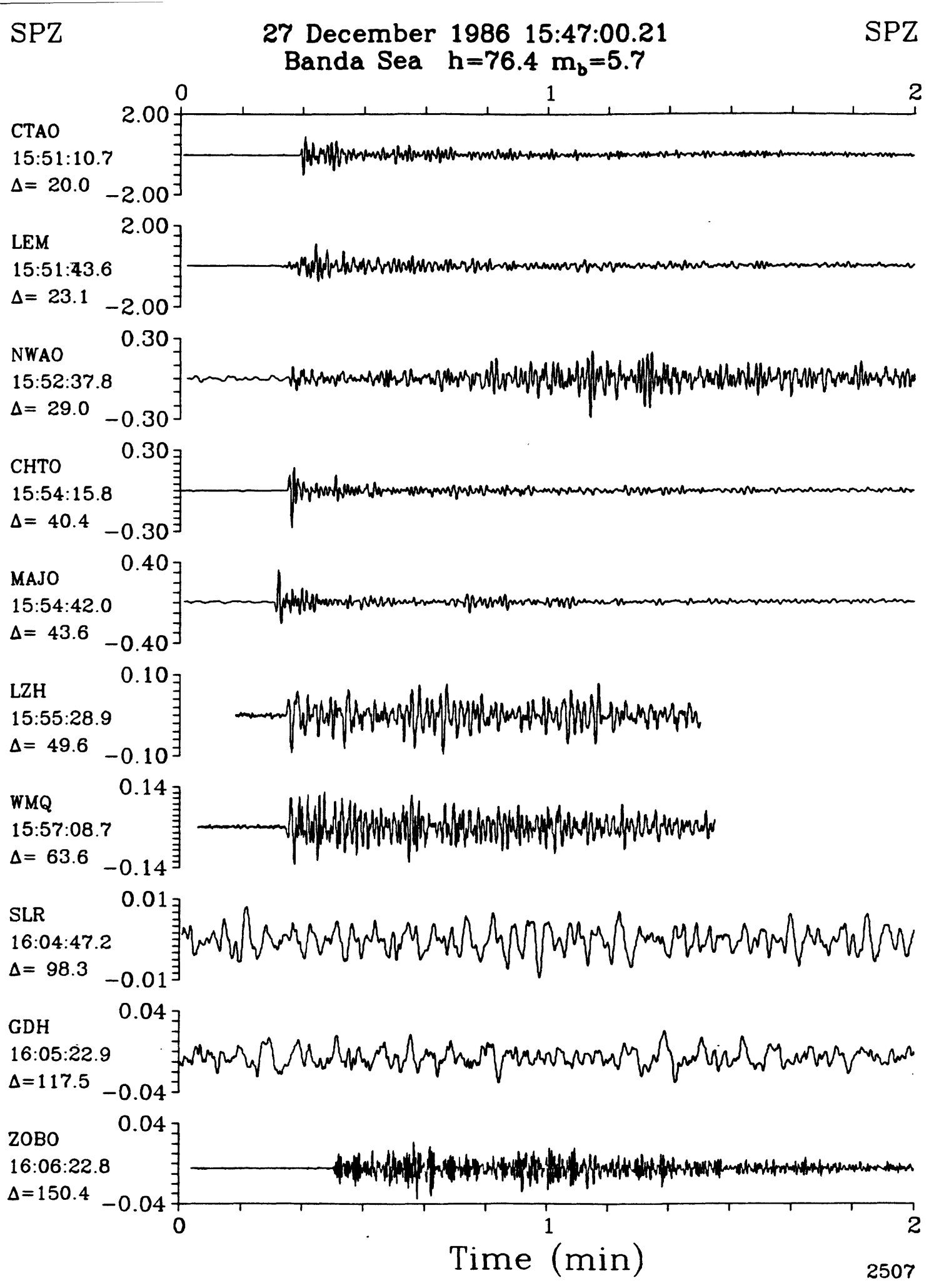


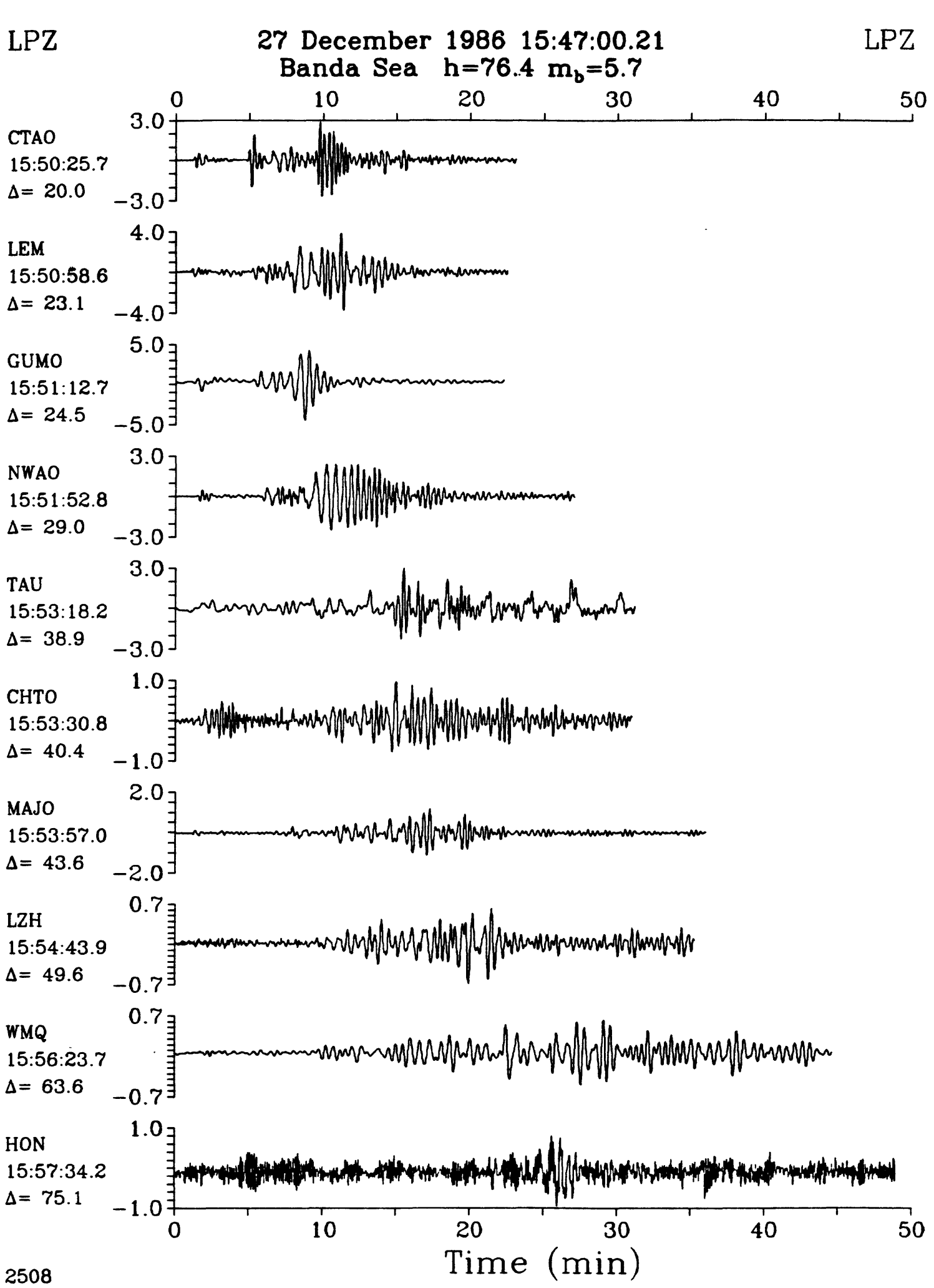
27 December 1986 15:47:00.21

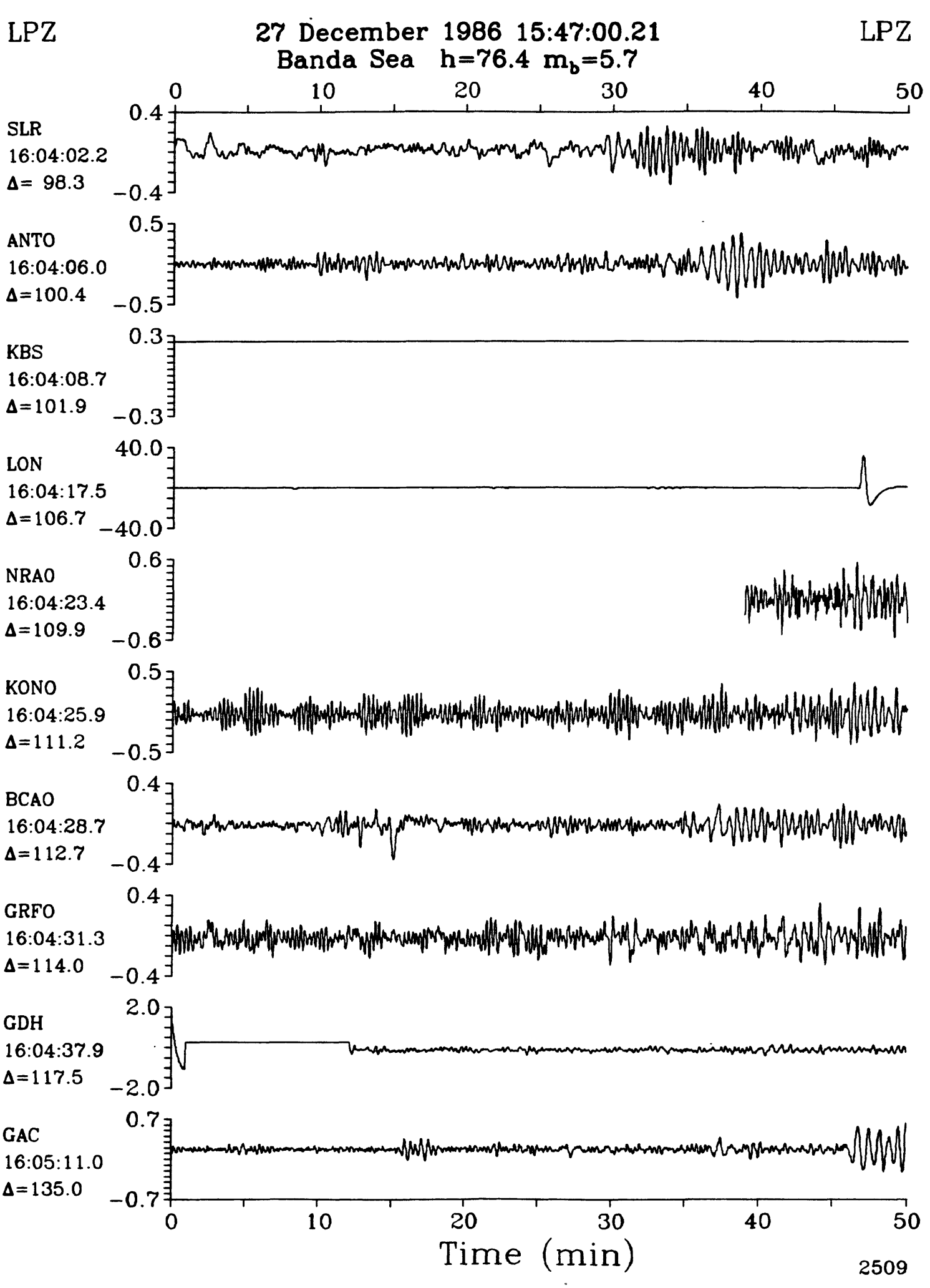
Banda Sea

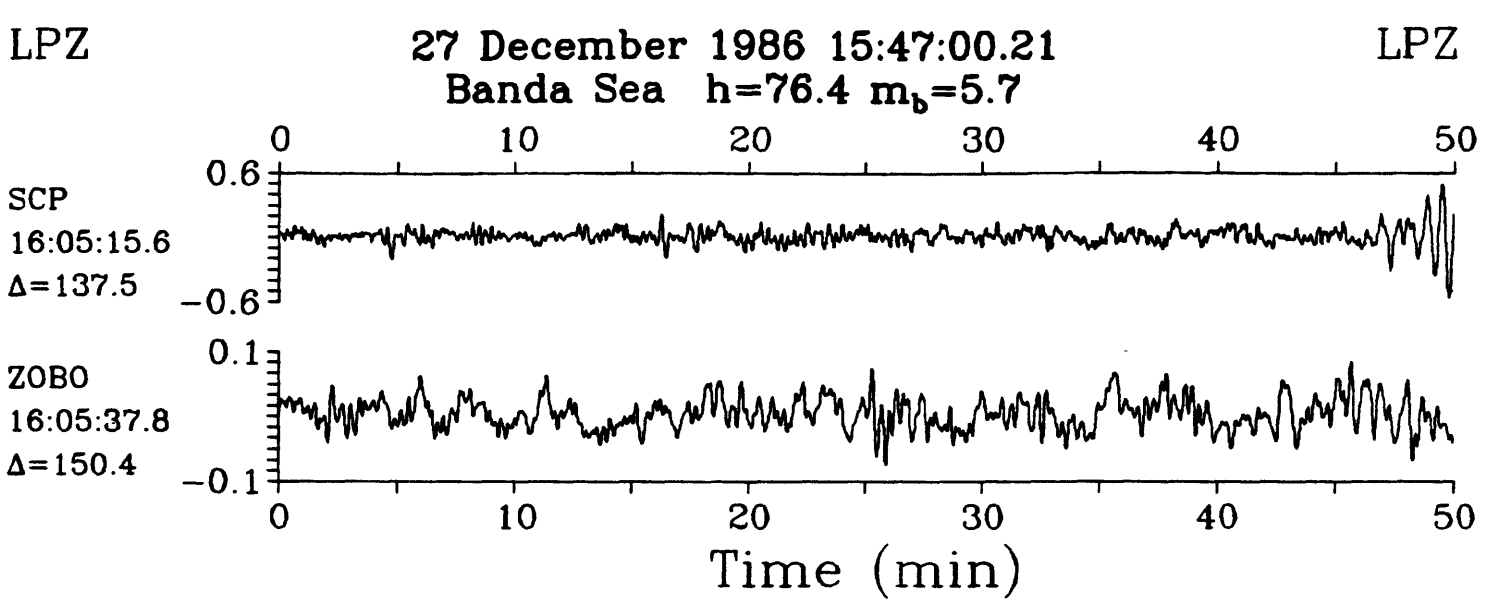


2506


SPZ
27 December 1986 15:47:00.21
Banda Sea h=76.4 m_b=5.7
SPZ
0
1
2
CTAO
15:51:10.7
Δ= 20.0
2.00
-2.00
LEM
15:51:43.6
Δ= 23.1
2.00
-2.00
NWAO
15:52:37.8
Δ= 29.0
0.30
-0.30
CHTO
15:54:15.8
Δ= 40.4
0.30
-0.30
MAJO
15:54:42.0
Δ= 43.6
0.40
-0.40
LZH
15:55:28.9
Δ= 49.6
0.10
-0.10
WMQ
15:57:08.7
Δ= 63.6
0.14
-0.14
SLR
16:04:47.2
Δ= 98.3
0.01
-0.01
GDH
16:05:22.9
Δ=117.5
0.04
-0.04
ZOBO
16:06:22.8
Δ=150.4
0.04
-0.04
0
1
2
Time (min)
2507

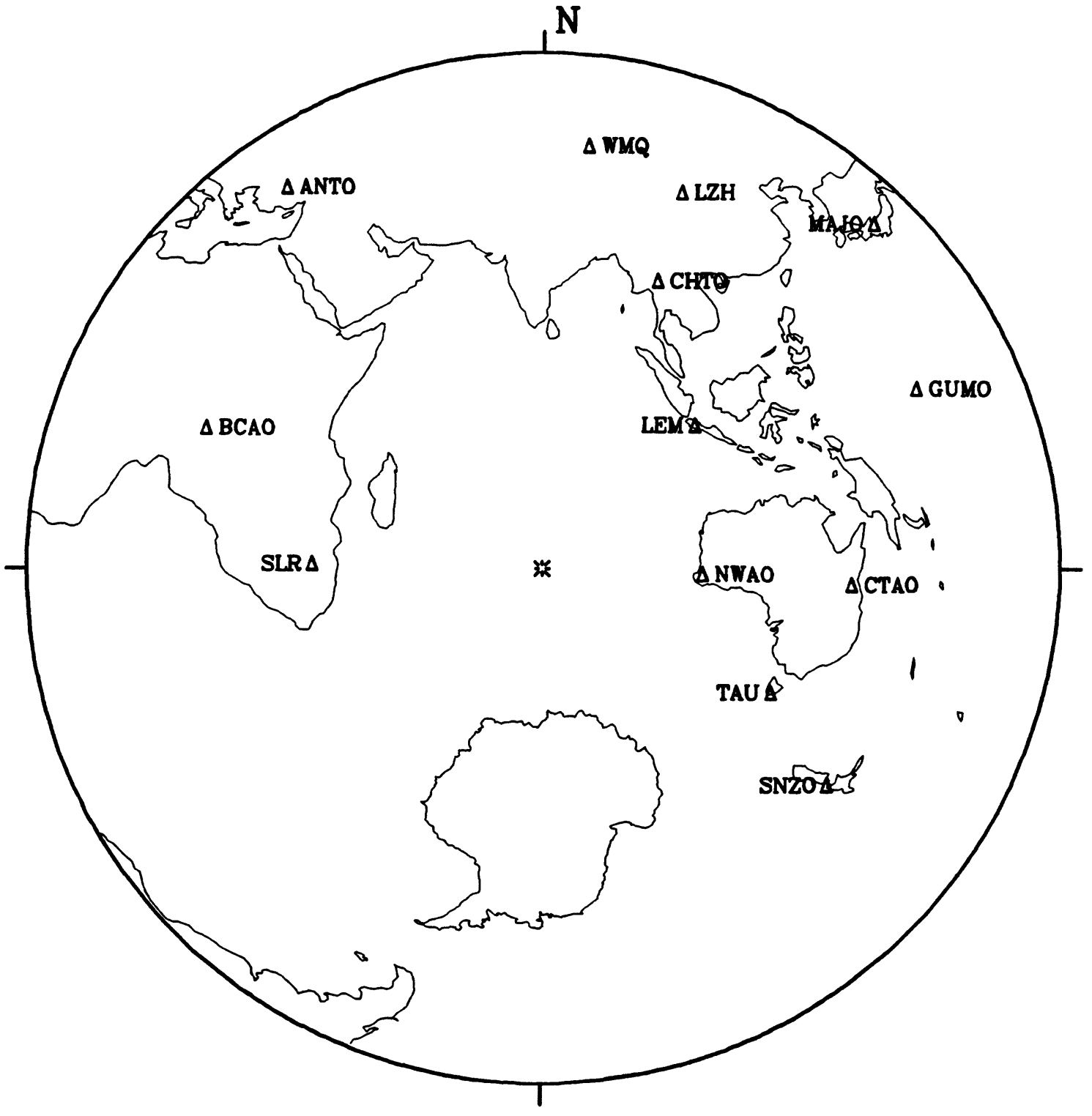

LPZ
27 December 1986 15:47:00.21
Banda Sea h=76.4 m_b=5.7
LPZ
0
10
20
30
40
50
CTAO
15:50:25.7
Δ= 20.0
3.0
-3.0
LEM
15:50:58.6
Δ= 23.1
4.0
-4.0
GUMO
15:51:12.7
Δ= 24.5
5.0
-5.0
NWAO
15:51:52.8
Δ= 29.0
3.0
-3.0
TAU
15:53:18.2
Δ= 38.9
3.0
-3.0
CHTO
15:53:30.8
Δ= 40.4
1.0
-1.0
MAJO
15:53:57.0
Δ= 43.6
2.0
-2.0
LZH
15:54:43.9
Δ= 49.6
0.7
-0.7
WMQ
15:56:23.7
Δ= 63.6
0.7
-0.7
HON
15:57:34.2
Δ= 75.1
1.0
-1.0
0
10
20
30
40
50
Time (min)

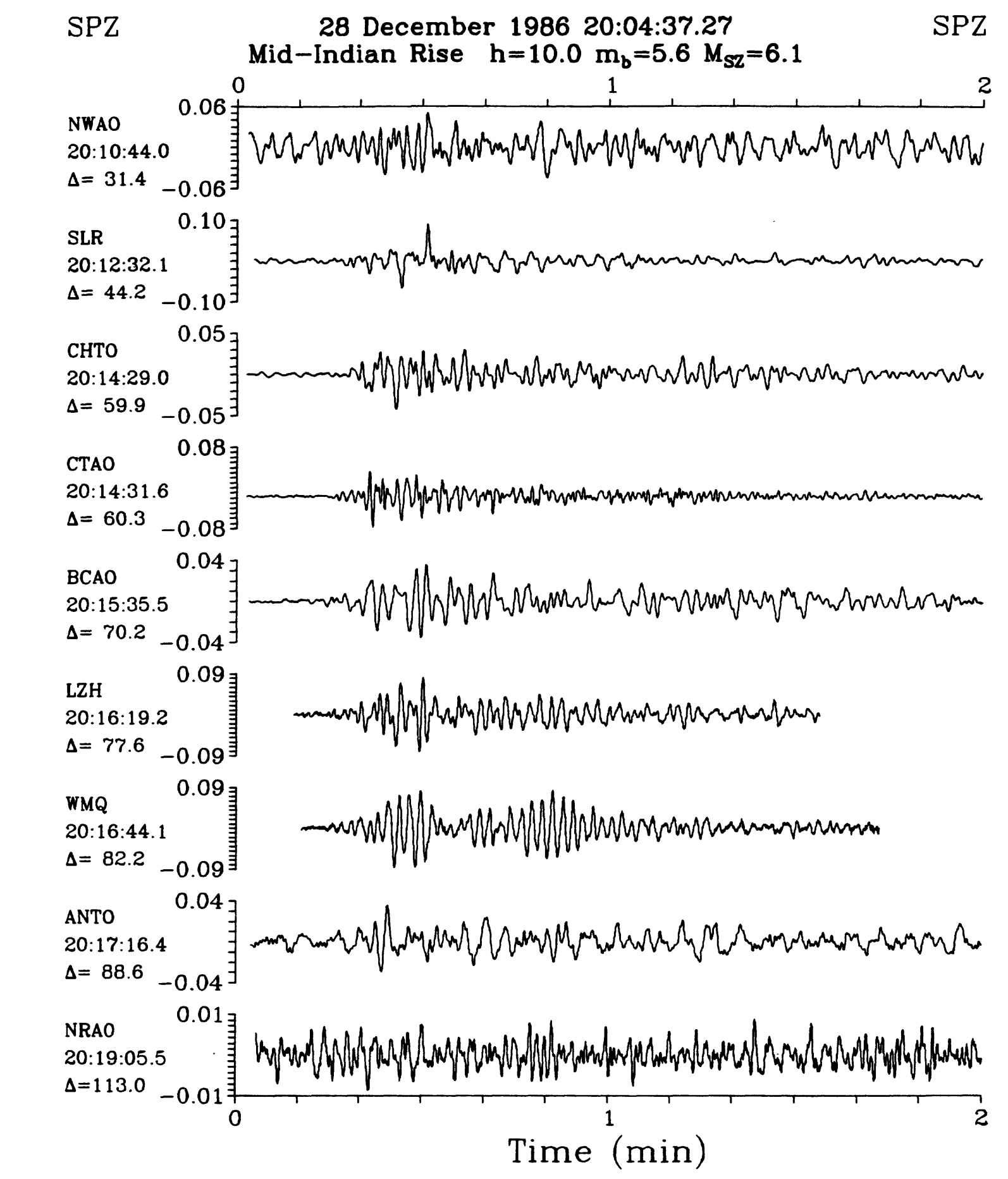

LPZ
27 December 1986 15:47:00.21
Banda Sea h=76.4 m_b=5.7
LPZ
0
10
20
30
40
50
SLR
16:04:02.2
Δ= 98.3
0.4
-0.4
ANTO
16:04:06.0
Δ=100.4
0.5
-0.5
KBS
16:04:08.7
Δ=101.9
0.3
-0.3
LON
16:04:17.5
Δ=106.7
40.0
-40.0
NRAO
16:04:23.4
Δ=109.9
0.6
-0.6
KONO
16:04:25.9
Δ=111.2
0.5
-0.5
BCAO
16:04:28.7
Δ=112.7
0.4
-0.4
GRFO
16:04:31.3
Δ=114.0
0.4
-0.4
GDH
16:04:37.9
Δ=117.5
2.0
-2.0
GAC
16:05:11.0
Δ=135.0
0.7
-0.7
0
10
20
30
40
50
Time (min)
2509

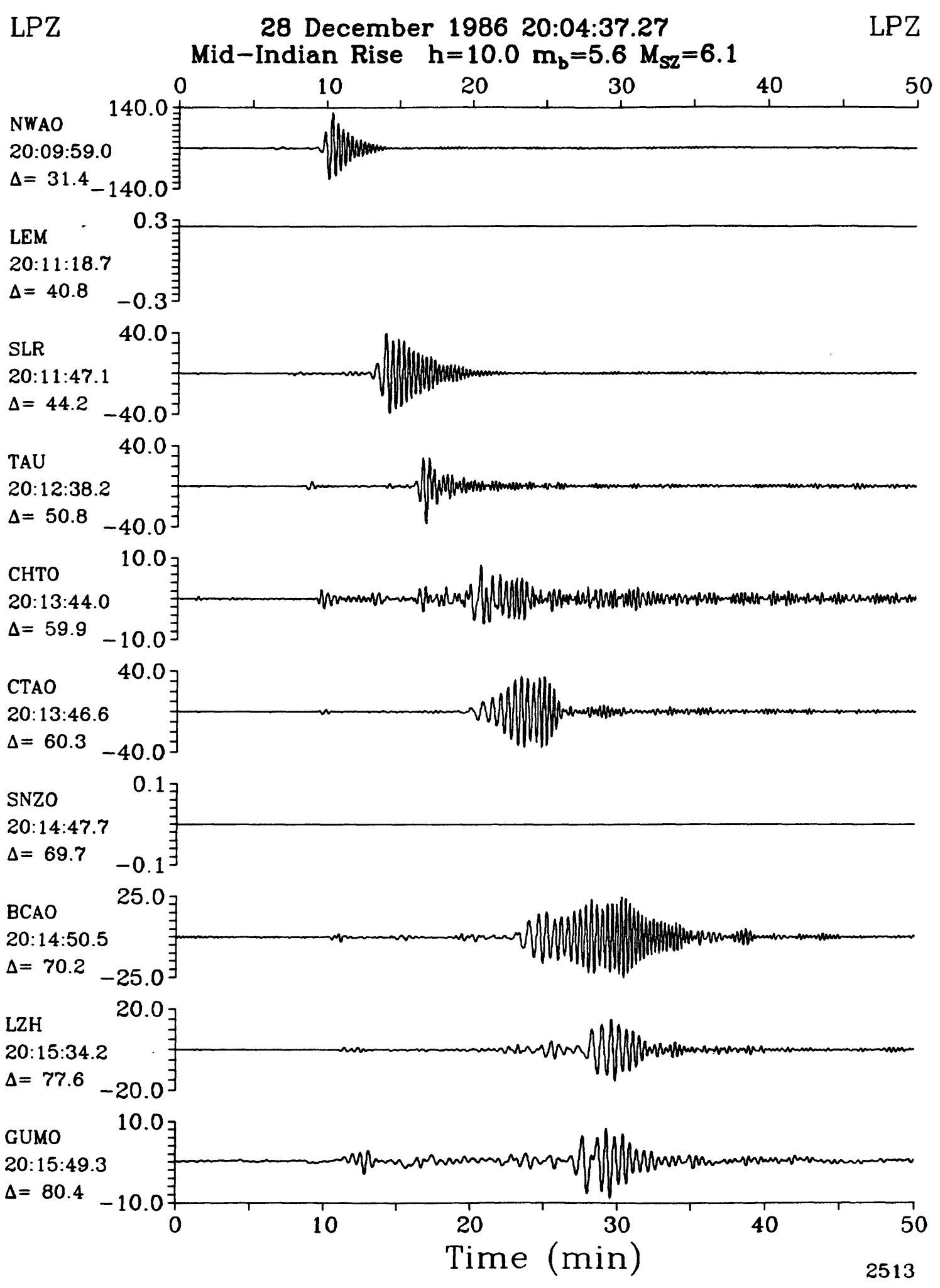

27 December 1986 15:47:00.21
Banda Sea h=76.4 m_b=5.7
SCP
16:05:15.6
Δ=137.5
ZOBO
16:05:37.8
Δ=150.4
0.6
−0.6
0.1
−0.1
0
10
20
30
40
50
Time (min)

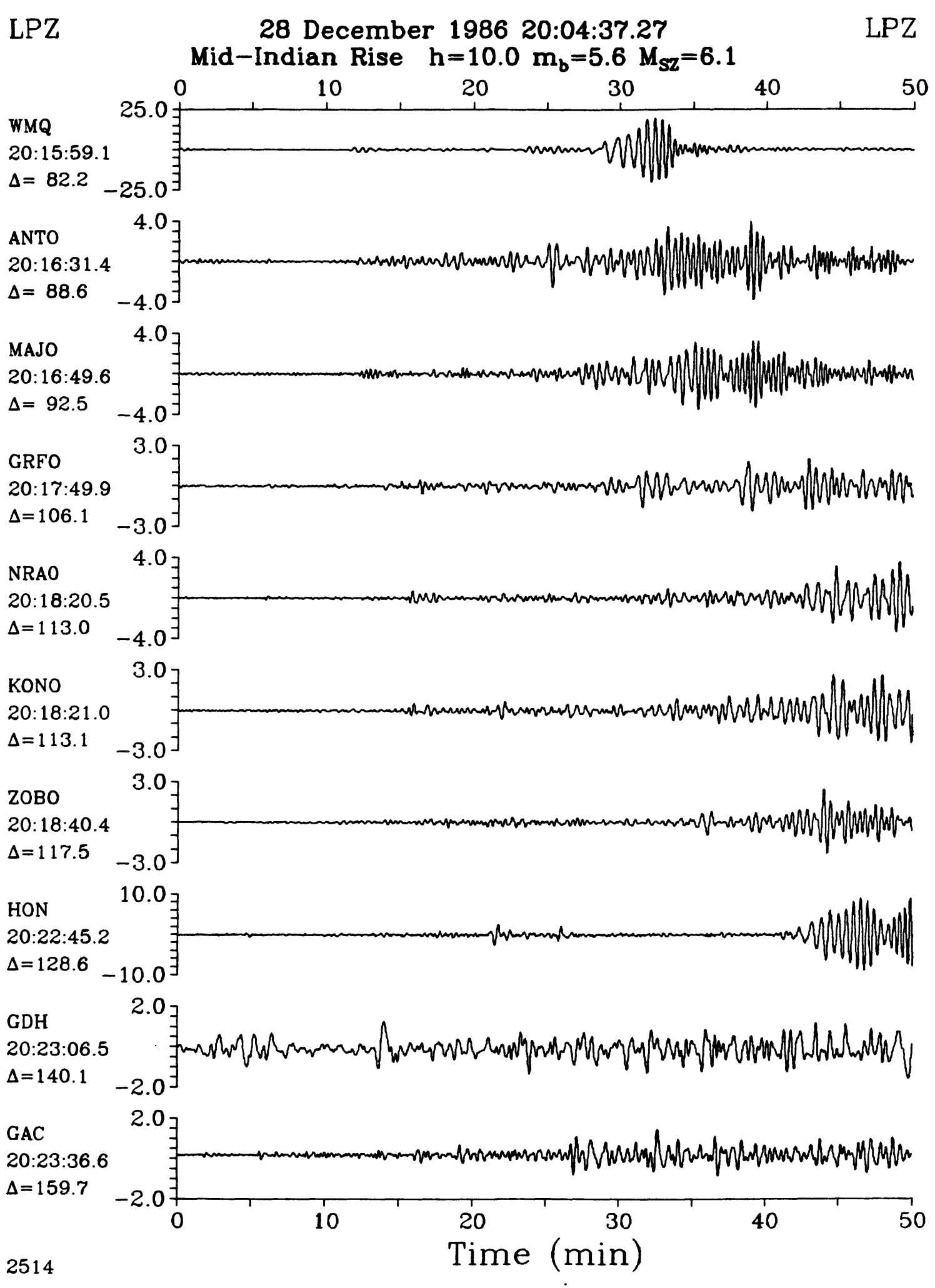
28 December 1986 20:04:37.27

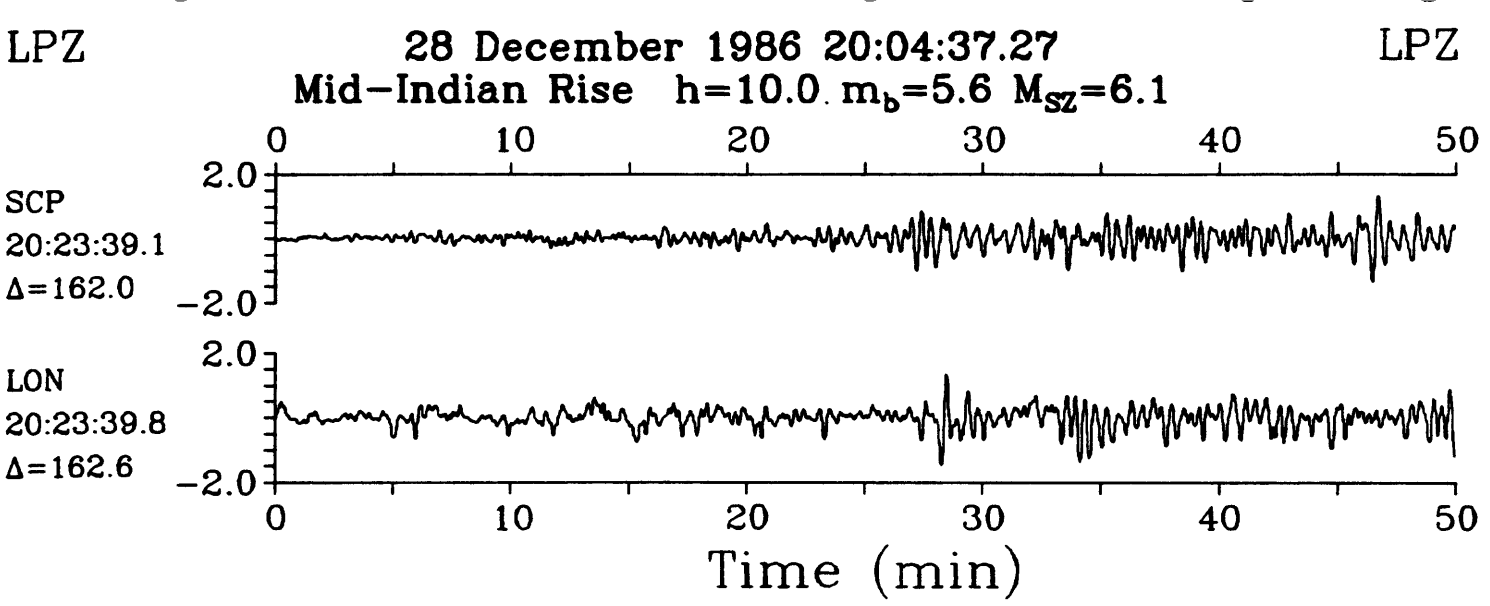
Mid-Indian Rise




SPZ
28 December 1986 20:04:37.27
SPZ
Mid-Indian Rise h=10.0 m_b=5.6 M_{SZ}=6.1
0
1
2
0.06
NWAO
20:10:44.0
Δ= 31.4
−0.06
0.10
SLR
20:12:32.1
Δ= 44.2
−0.10
0.05
CHTO
20:14:29.0
Δ= 59.9
−0.05
0.08
CTAO
20:14:31.6
Δ= 60.3
−0.08
0.04
BCAO
20:15:35.5
Δ= 70.2
−0.04
0.09
LZH
20:16:19.2
Δ= 77.6
−0.09
0.09
WMQ
20:16:44.1
Δ= 82.2
−0.09
0.04
ANTO
20:17:16.4
Δ= 88.6
−0.04
0.01
NRAO
20:19:05.5
Δ=113.0
−0.01
0
1
2
Time (min)


LPZ
28 December 1986 20:04:37.27
LPZ
Mid-Indian Rise h=10.0 m_b=5.6 M_{SZ}=6.1
0
10
20
30
40
50
NWAO
20:09:59.0
Δ= 31.4
140.0
-140.0
LEM
20:11:18.7
Δ= 40.8
0.3
-0.3
SLR
20:11:47.1
Δ= 44.2
40.0
-40.0
TAU
20:12:38.2
Δ= 50.8
40.0
-40.0
CHTO
20:13:44.0
Δ= 59.9
10.0
-10.0
CTAO
20:13:46.6
Δ= 60.3
40.0
-40.0
SNZO
20:14:47.7
Δ= 69.7
0.1
-0.1
BCAO
20:14:50.5
Δ= 70.2
25.0
-25.0
LZH
20:15:34.2
Δ= 77.6
20.0
-20.0
GUMO
20:15:49.3
Δ= 80.4
10.0
-10.0
0
10
20
30
40
50
Time (min)
2513


LPZ
28 December 1986 20:04:37.27
LPZ
Mid-Indian Rise h=10.0 m_b=5.6 M_{SZ}=6.1
0
10
20
30
40
50
WMQ
20:15:59.1
Δ= 82.2
25.0
-25.0
ANTO
20:16:31.4
Δ= 88.6
4.0
-4.0
MAJO
20:16:49.6
Δ= 92.5
4.0
-4.0
GRFO
20:17:49.9
Δ=106.1
3.0
-3.0
NRAO
20:18:20.5
Δ=113.0
4.0
-4.0
KONO
20:18:21.0
Δ=113.1
3.0
-3.0
ZOBO
20:18:40.4
Δ=117.5
3.0
-3.0
HON
20:22:45.2
Δ=128.6
10.0
-10.0
GDH
20:23:06.5
Δ=140.1
2.0
-2.0
GAC
20:23:36.6
Δ=159.7
2.0
-2.0
0
10
20
30
40
50
Time (min)
2514

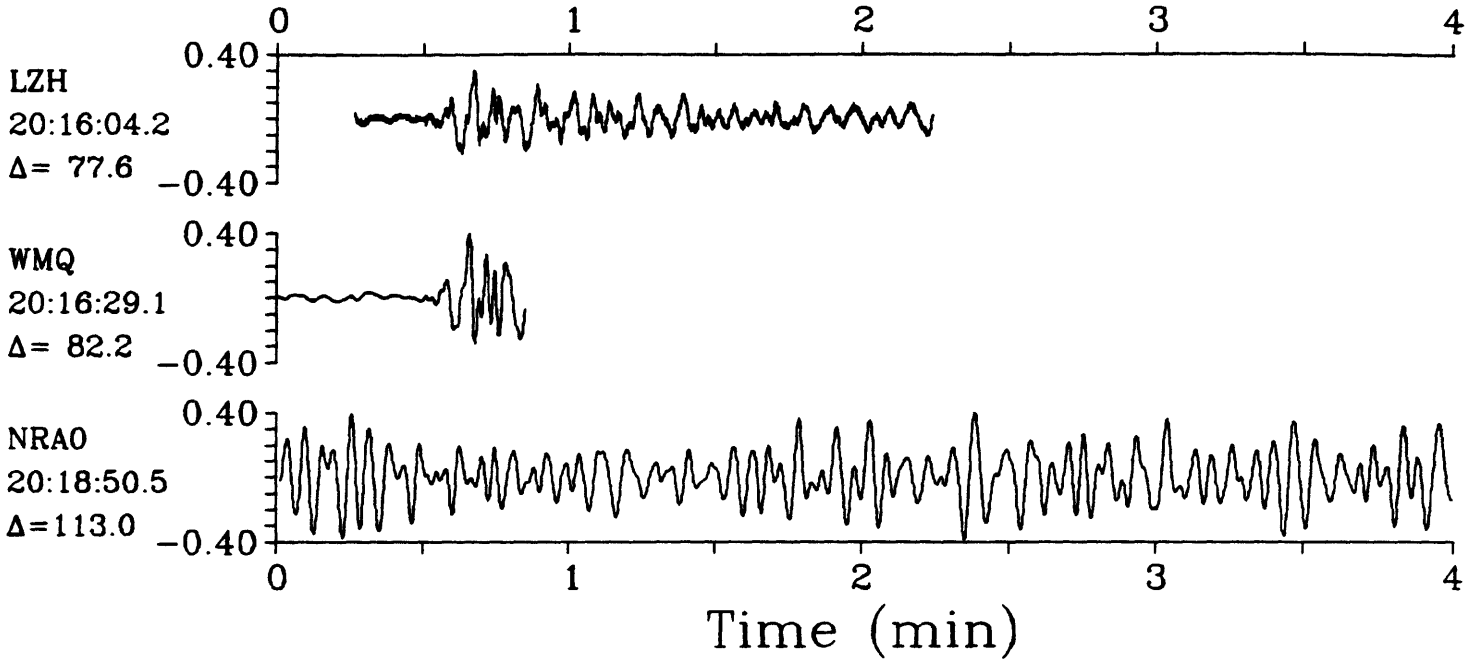

LPZ
28 December 1986 20:04:37.27
LPZ
Mid−Indian Rise h=10.0 m_b=5.6 M_{SZ}=6.1
0
10
20
30
40
50
2.0
SCP
20:23:39.1
Δ=162.0
−2.0
2.0
LON
20:23:39.8
Δ=162.6
−2.0
0
10
20
30
40
50
Time (min)

IPZ

28 December 1986 20:04:37.27

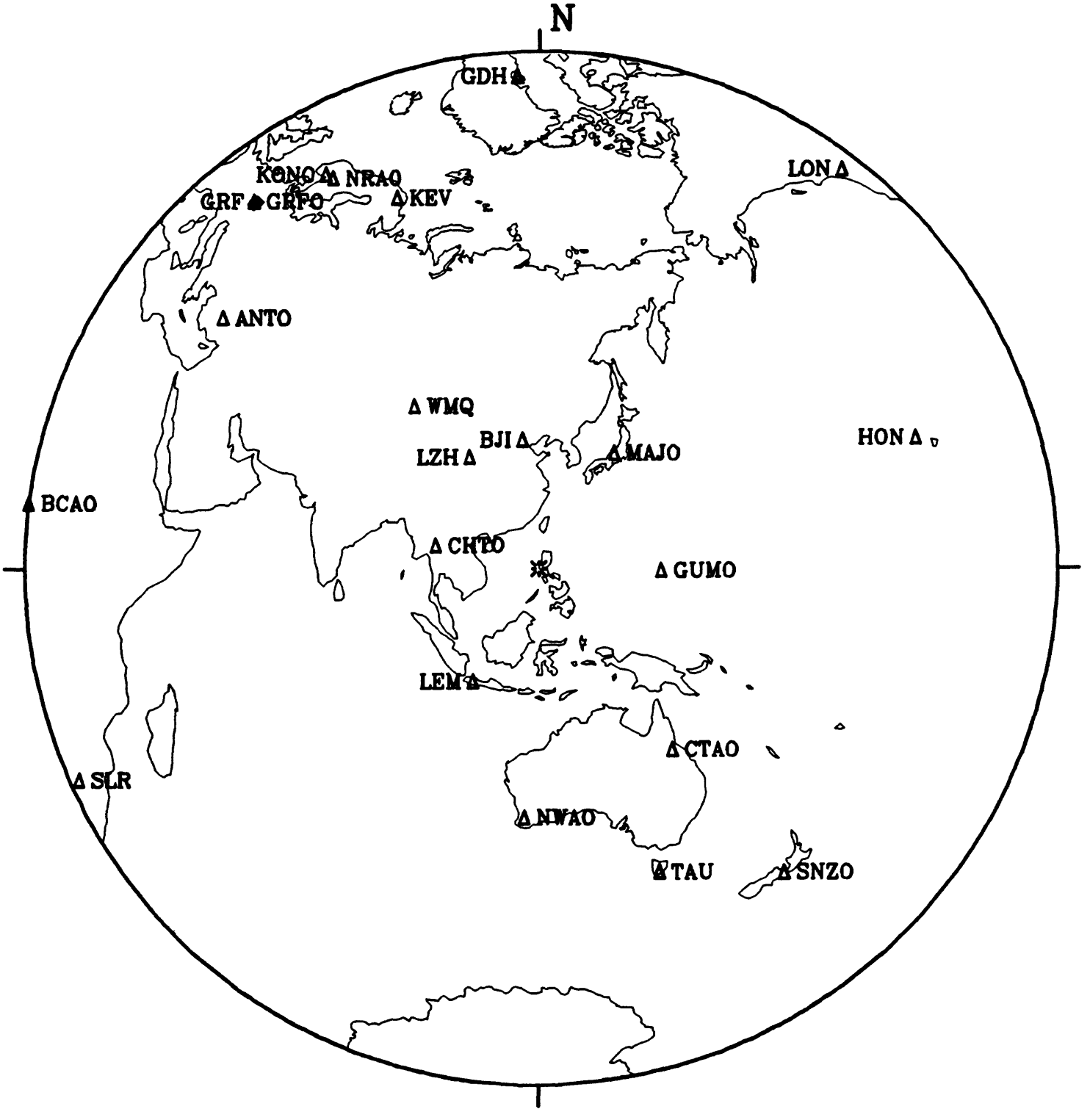
IPZ

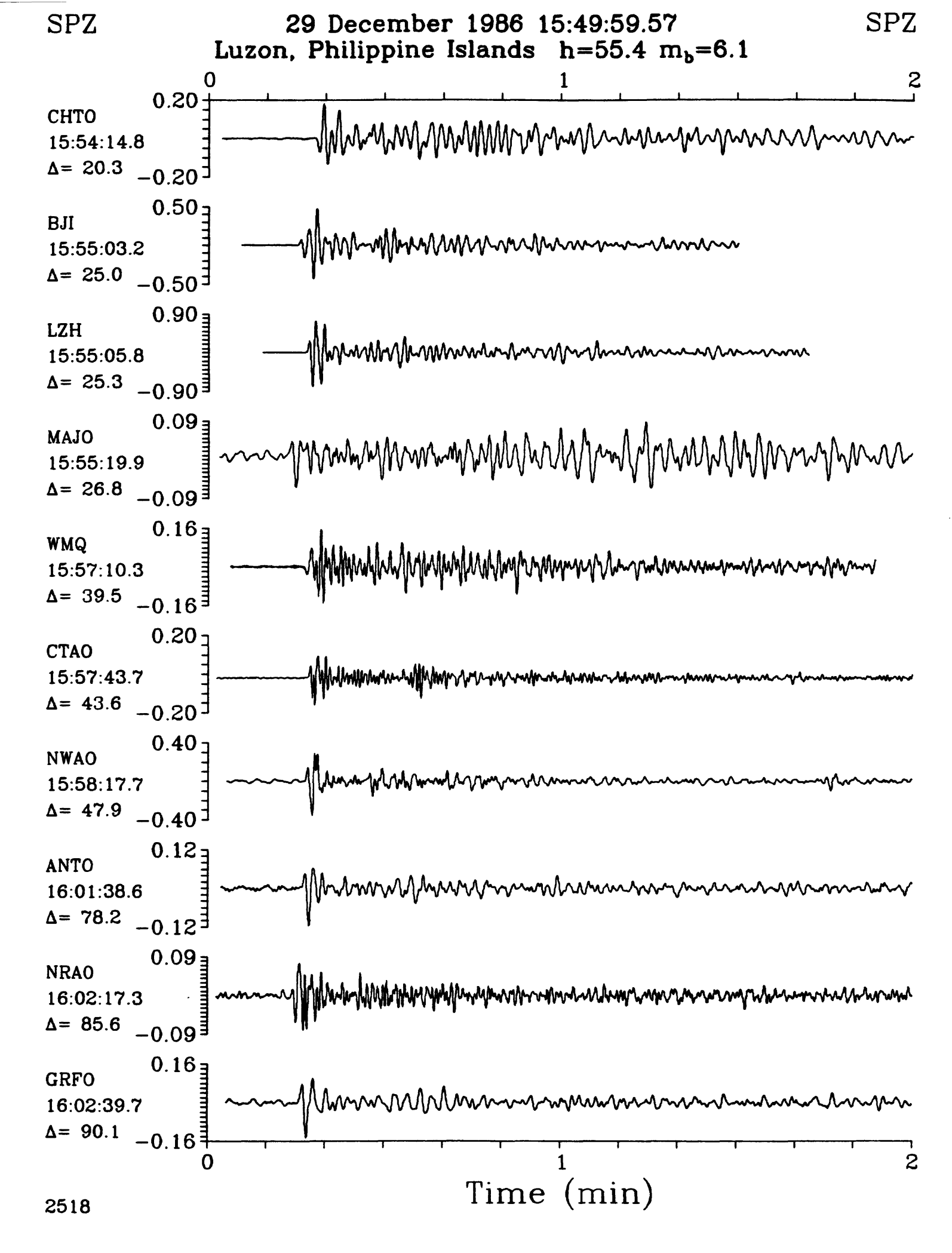
Mid-Indian Rise h=10.0 m_b=5.6 M_{SZ}=6.1



29 December 1986 15:49:59.57

Luzon, Philippine Islands



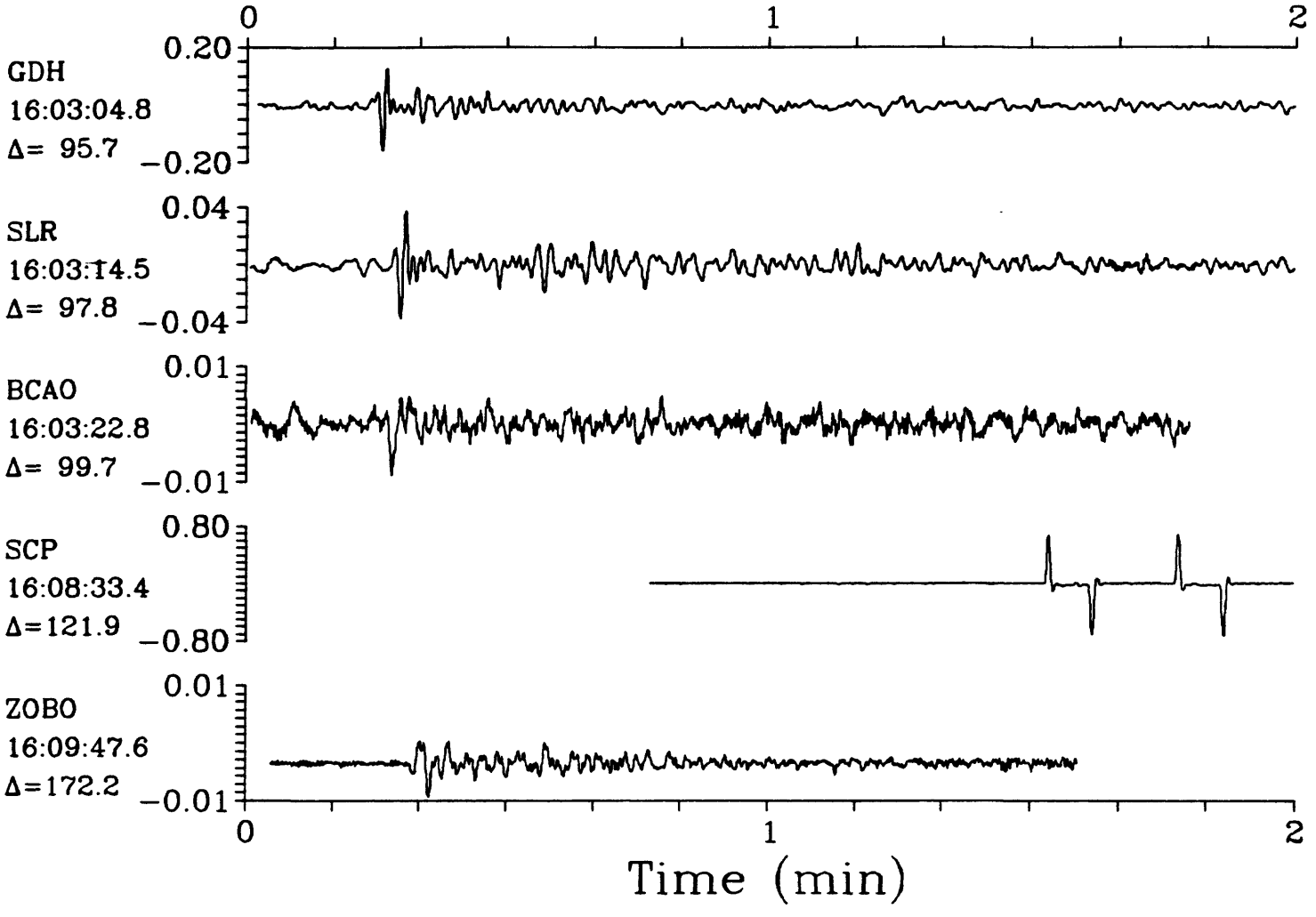

SPZ
29 December 1986 15:49:59.57
Luzon, Philippine Islands h=55.4 m_b=6.1
SPZ
0
1
2
0.20
CHTO
15:54:14.8
Δ= 20.3
−0.20
0.50
BJI
15:55:03.2
Δ= 25.0
−0.50
0.90
LZH
15:55:05.8
Δ= 25.3
−0.90
0.09
MAJO
15:55:19.9
Δ= 26.8
−0.09
0.16
WMQ
15:57:10.3
Δ= 39.5
−0.16
0.20
CTAO
15:57:43.7
Δ= 43.6
−0.20
0.40
NWAO
15:58:17.7
Δ= 47.9
−0.40
0.12
ANTO
16:01:38.6
Δ= 78.2
−0.12
0.09
NRAO
16:02:17.3
Δ= 85.6
−0.09
0.16
GRFO
16:02:39.7
Δ= 90.1
−0.16
0
1
2
Time (min)
2518

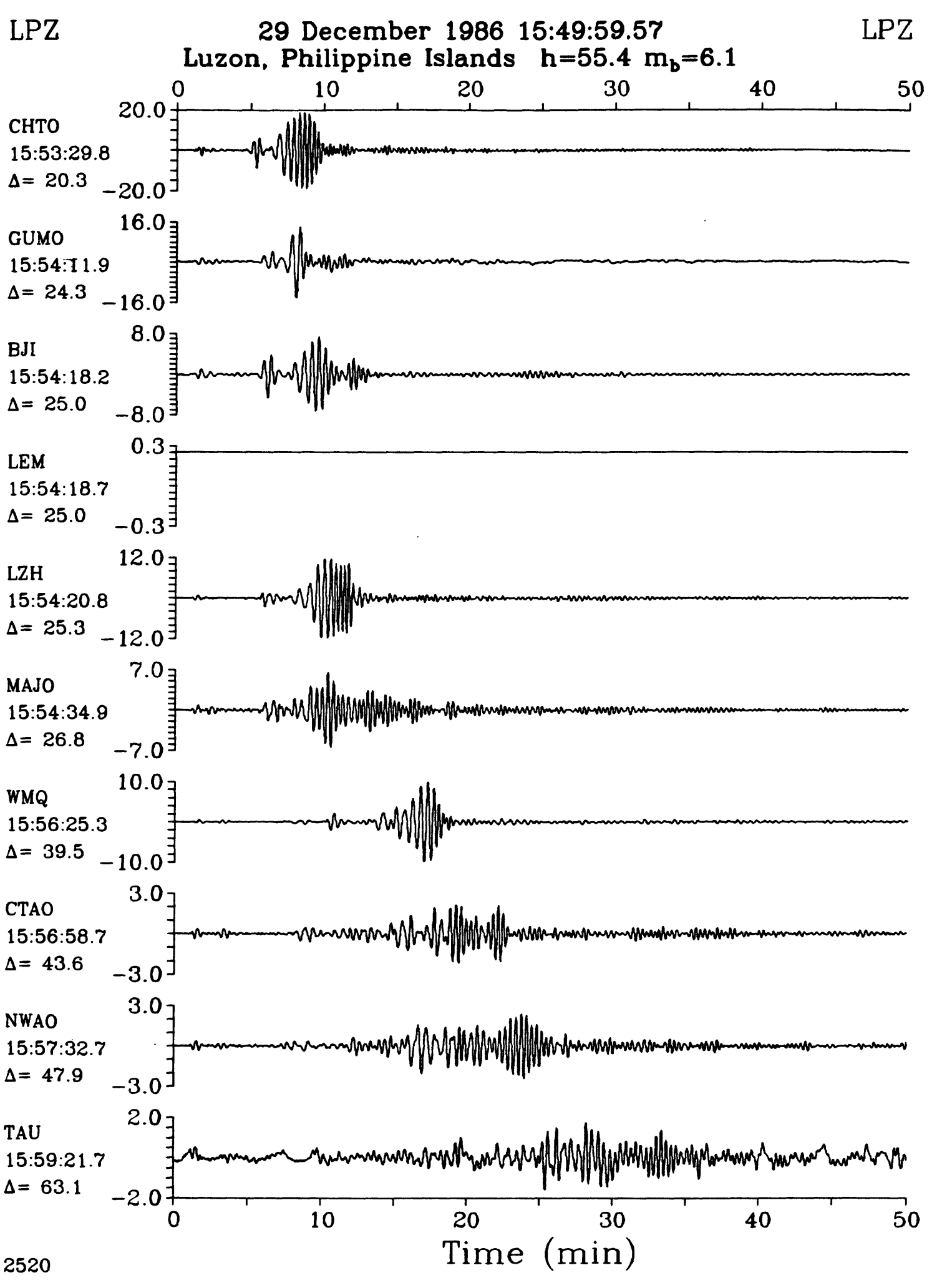
SPZ

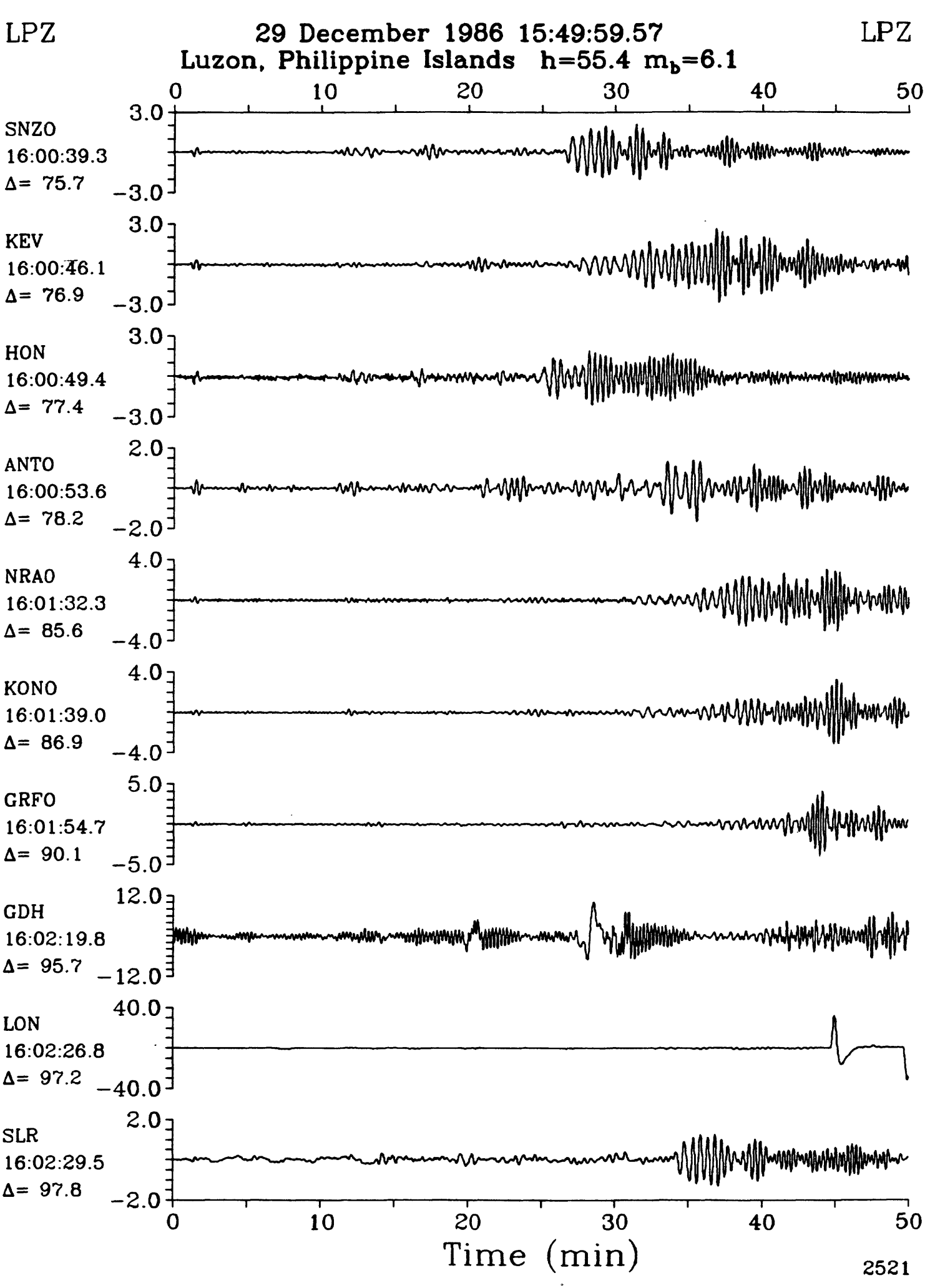
29 December 1986 15:49:59.57

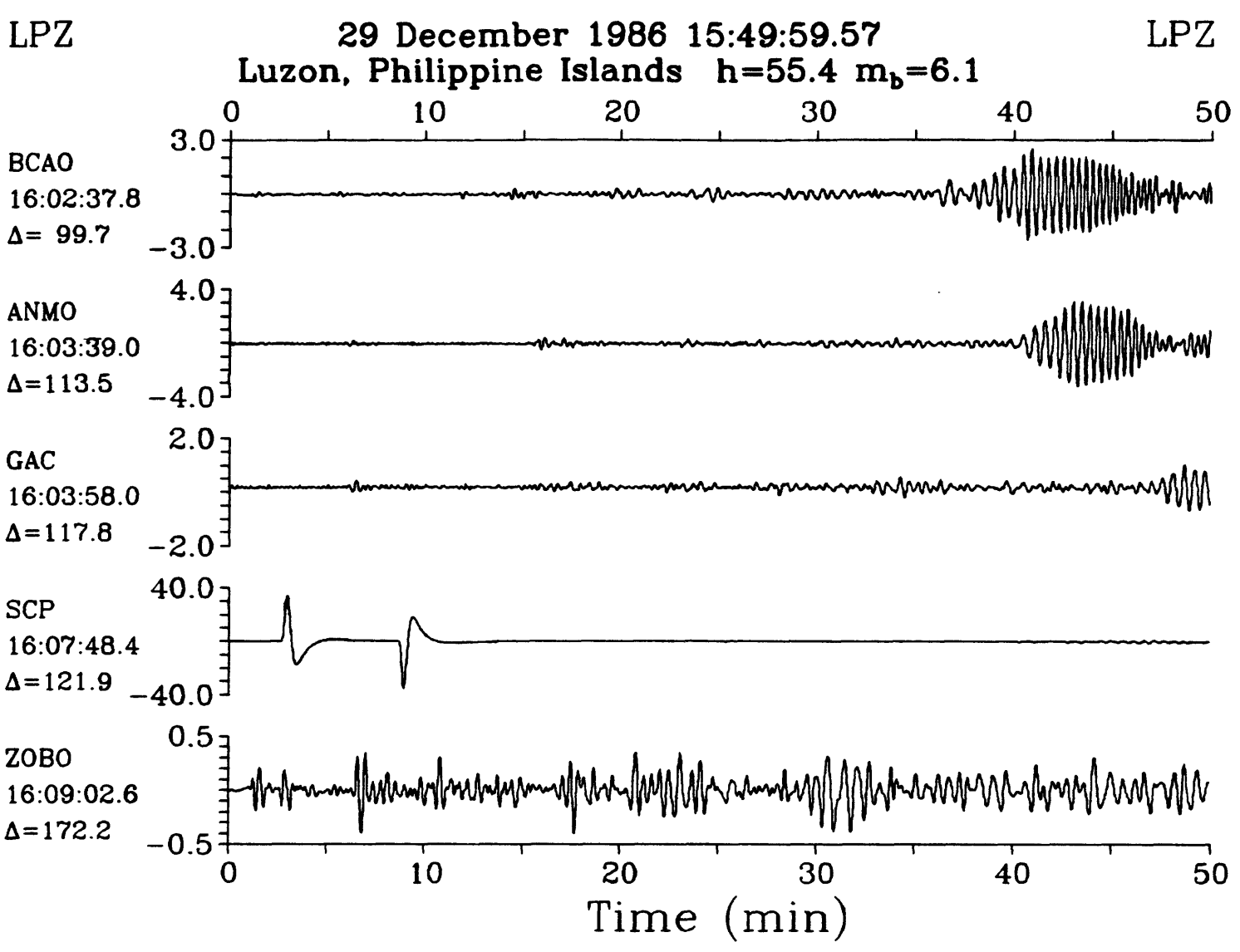
Luzon, Philippine Islands h=55.4 m_b=6.1

SPZ




LPZ
29 December 1986 15:49:59.57
LPZ
Luzon, Philippine Islands h=55.4 m_b=6.1
0
10
20
30
40
50
CHTO
15:53:29.8
Δ= 20.3
20.0
-20.0
GUMO
15:54:11.9
Δ= 24.3
16.0
-16.0
BJI
15:54:18.2
Δ= 25.0
8.0
-8.0
LEM
15:54:18.7
Δ= 25.0
0.3
-0.3
LZH
15:54:20.8
Δ= 25.3
12.0
-12.0
MAJO
15:54:34.9
Δ= 26.8
7.0
-7.0
WMQ
15:56:25.3
Δ= 39.5
10.0
-10.0
CTAO
15:56:58.7
Δ= 43.6
3.0
-3.0
NWAO
15:57:32.7
Δ= 47.9
3.0
-3.0
TAU
15:59:21.7
Δ= 63.1
2.0
-2.0
0
10
20
30
40
50
Time (min)
2520


LPZ
29 December 1986 15:49:59.57
Luzon, Philippine Islands h=55.4 m_b=6.1
LPZ
0
10
20
30
40
50
SNZO
16:00:39.3
Δ= 75.7
3.0
-3.0
KEV
16:00:46.1
Δ= 76.9
3.0
-3.0
HON
16:00:49.4
Δ= 77.4
3.0
-3.0
ANTO
16:00:53.6
Δ= 78.2
2.0
-2.0
NRAO
16:01:32.3
Δ= 85.6
4.0
-4.0
KONO
16:01:39.0
Δ= 86.9
4.0
-4.0
GRFO
16:01:54.7
Δ= 90.1
5.0
-5.0
GDH
16:02:19.8
Δ= 95.7
12.0
-12.0
LON
16:02:26.8
Δ= 97.2
40.0
-40.0
SLR
16:02:29.5
Δ= 97.8
2.0
-2.0
0
10
20
30
40
50
Time (min)
2521

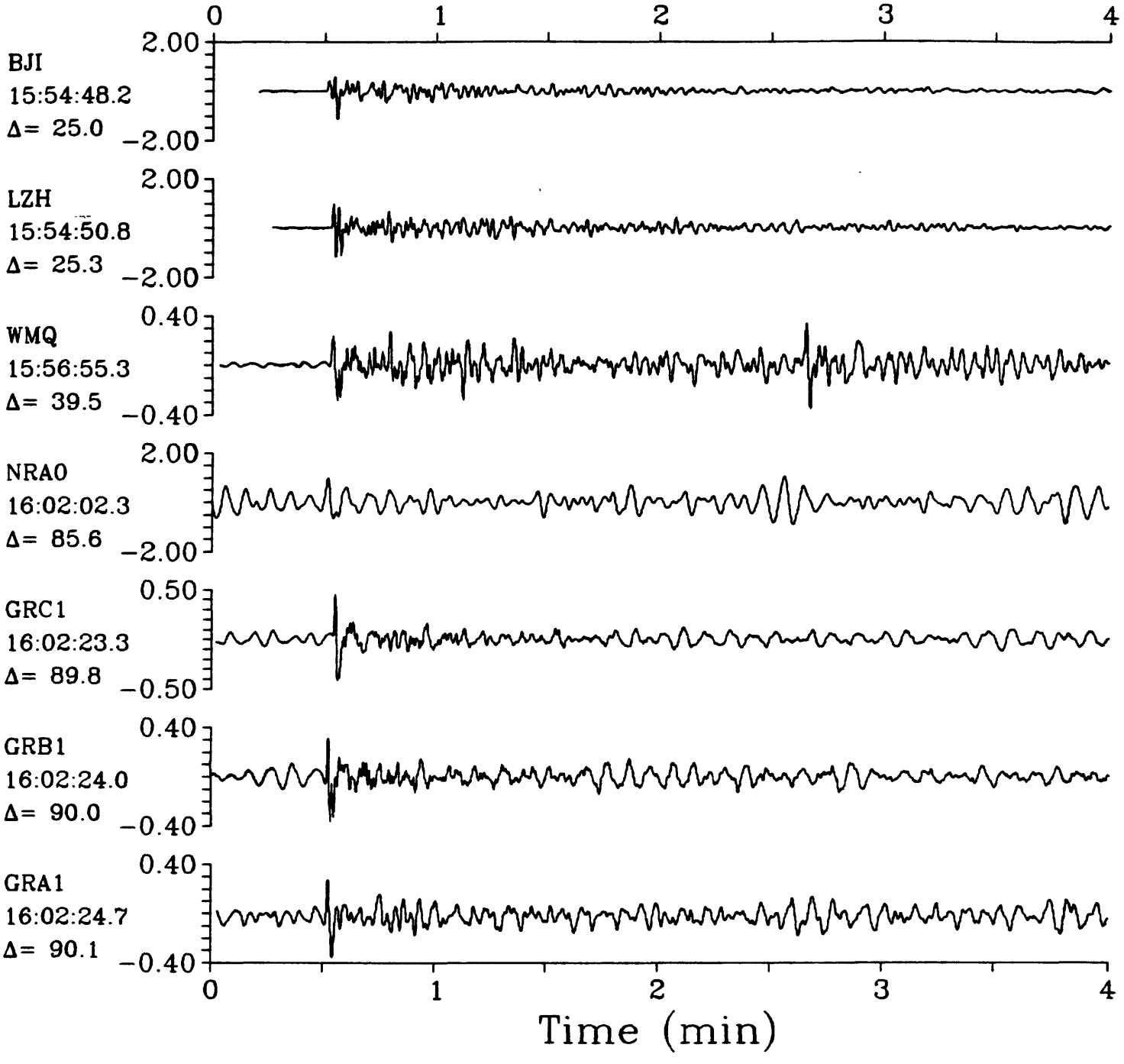

LPZ
29 December 1986 15:49:59.57
LPZ
Luzon, Philippine Islands h=55.4 m_b=6.1
0
10
20
30
40
50
BCAO
16:02:37.8
Δ= 99.7
3.0
-3.0
ANMO
16:03:39.0
Δ=113.5
4.0
-4.0
GAC
16:03:58.0
Δ=117.8
2.0
-2.0
SCP
16:07:48.4
Δ=121.9
40.0
-40.0
ZOBO
16:09:02.6
Δ=172.2
0.5
-0.5
Time (min)

IPZ

29 December 1986 15:49:59.57

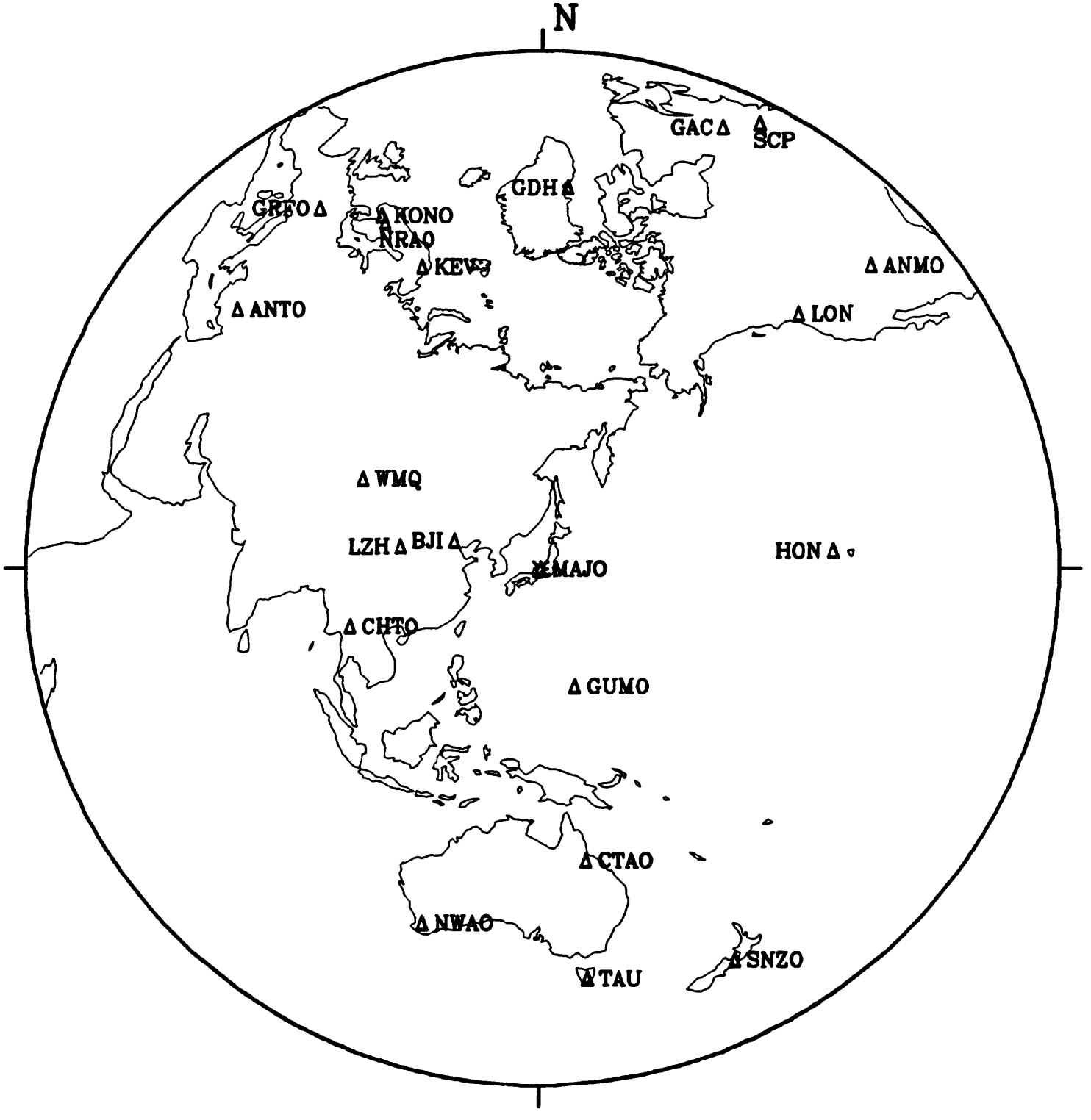
Luzon, Philippine Islands h=55.4 m_b=6.1

IPZ

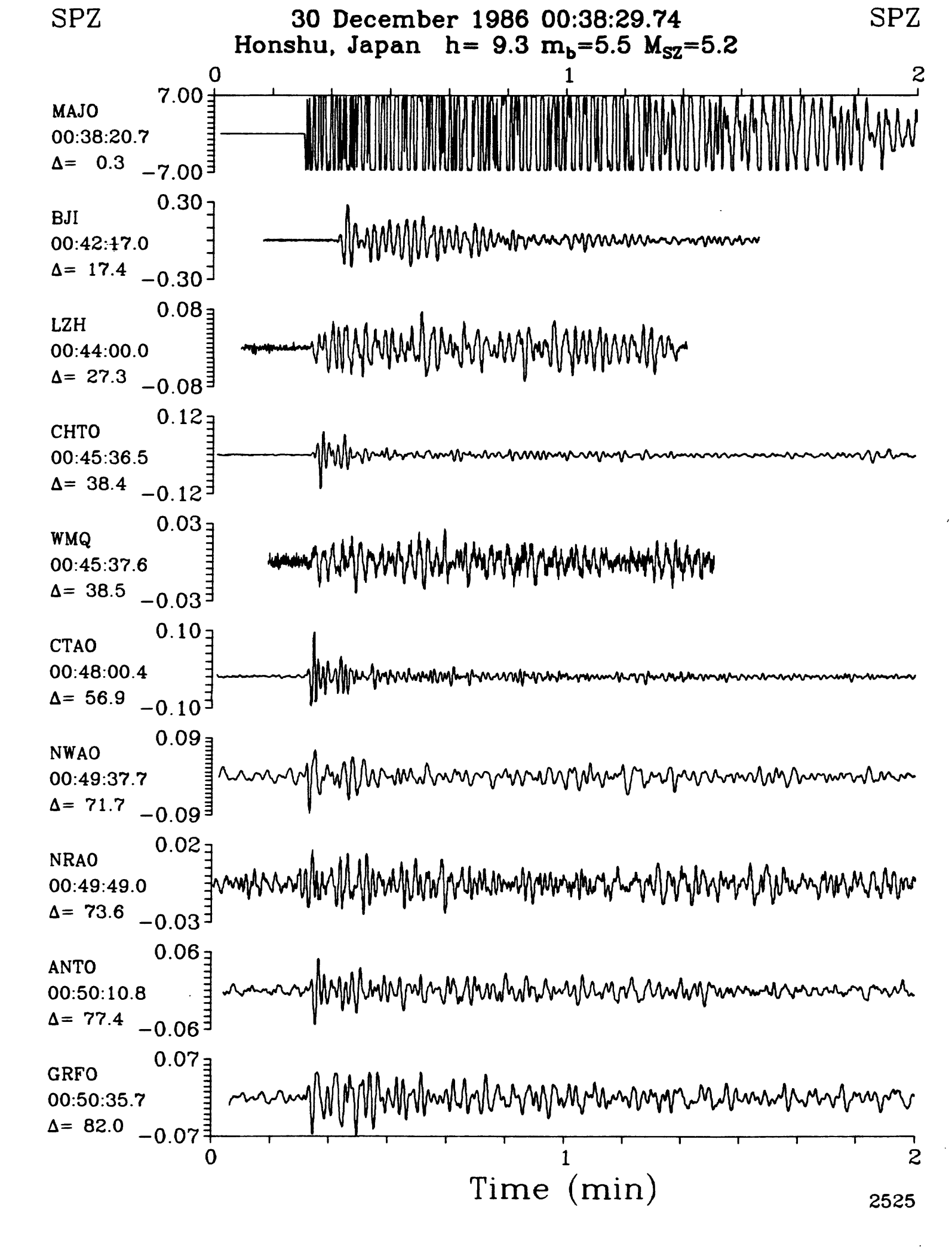


30 December 1986 00:38:29.74

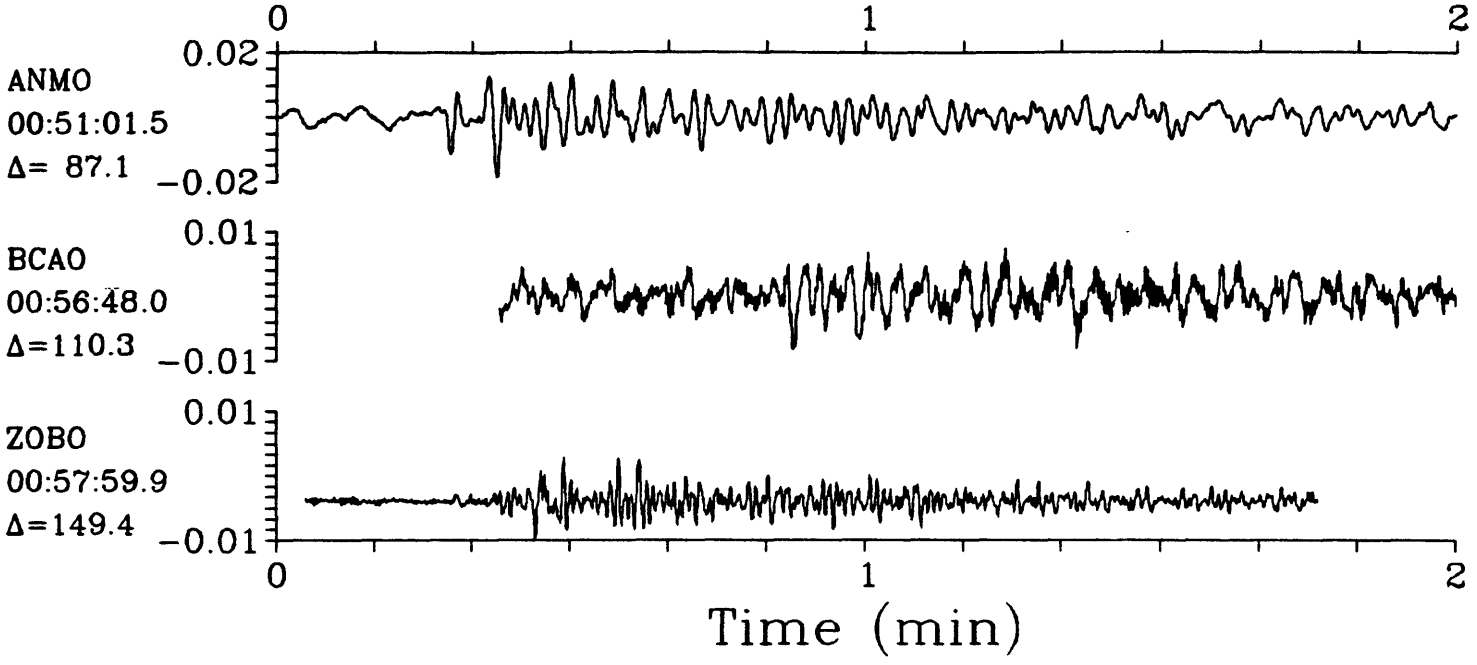
Honshu, Japan

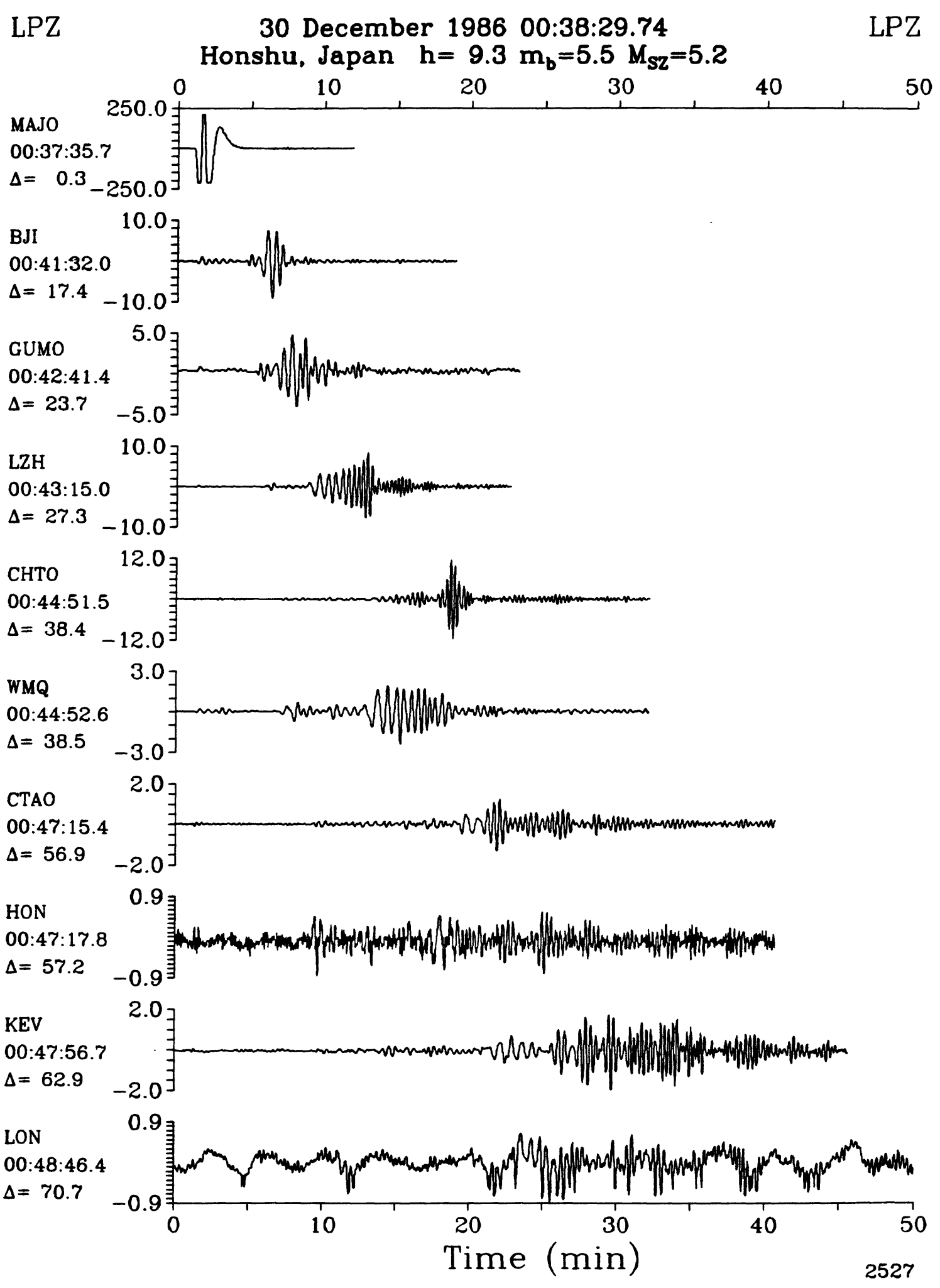


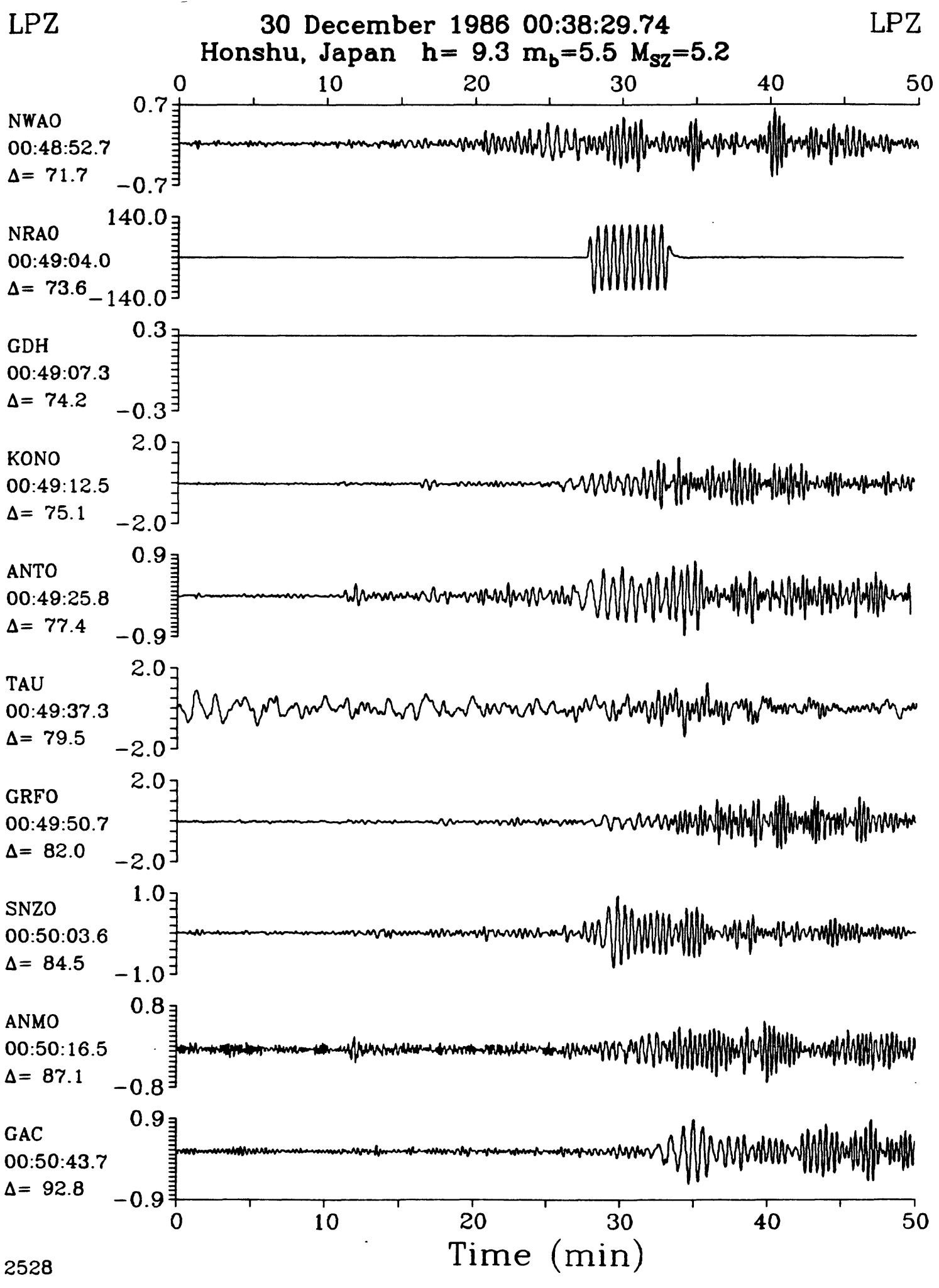
2524


SPZ
30 December 1986 00:38:29.74
Honshu, Japan h= 9.3 m_b=5.5 M_{SZ}=5.2
SPZ
0
1
2
MAJO
00:38:20.7
Δ= 0.3
7.00
-7.00
BJI
00:42:17.0
Δ= 17.4
0.30
-0.30
LZH
00:44:00.0
Δ= 27.3
0.08
-0.08
CHTO
00:45:36.5
Δ= 38.4
0.12
-0.12
WMQ
00:45:37.6
Δ= 38.5
0.03
-0.03
CTAO
00:48:00.4
Δ= 56.9
0.10
-0.10
NWAO
00:49:37.7
Δ= 71.7
0.09
-0.09
NRAO
00:49:49.0
Δ= 73.6
0.02
-0.03
ANTO
00:50:10.8
Δ= 77.4
0.06
-0.06
GRFO
00:50:35.7
Δ= 82.0
0.07
-0.07
0
1
2
Time (min)
2525

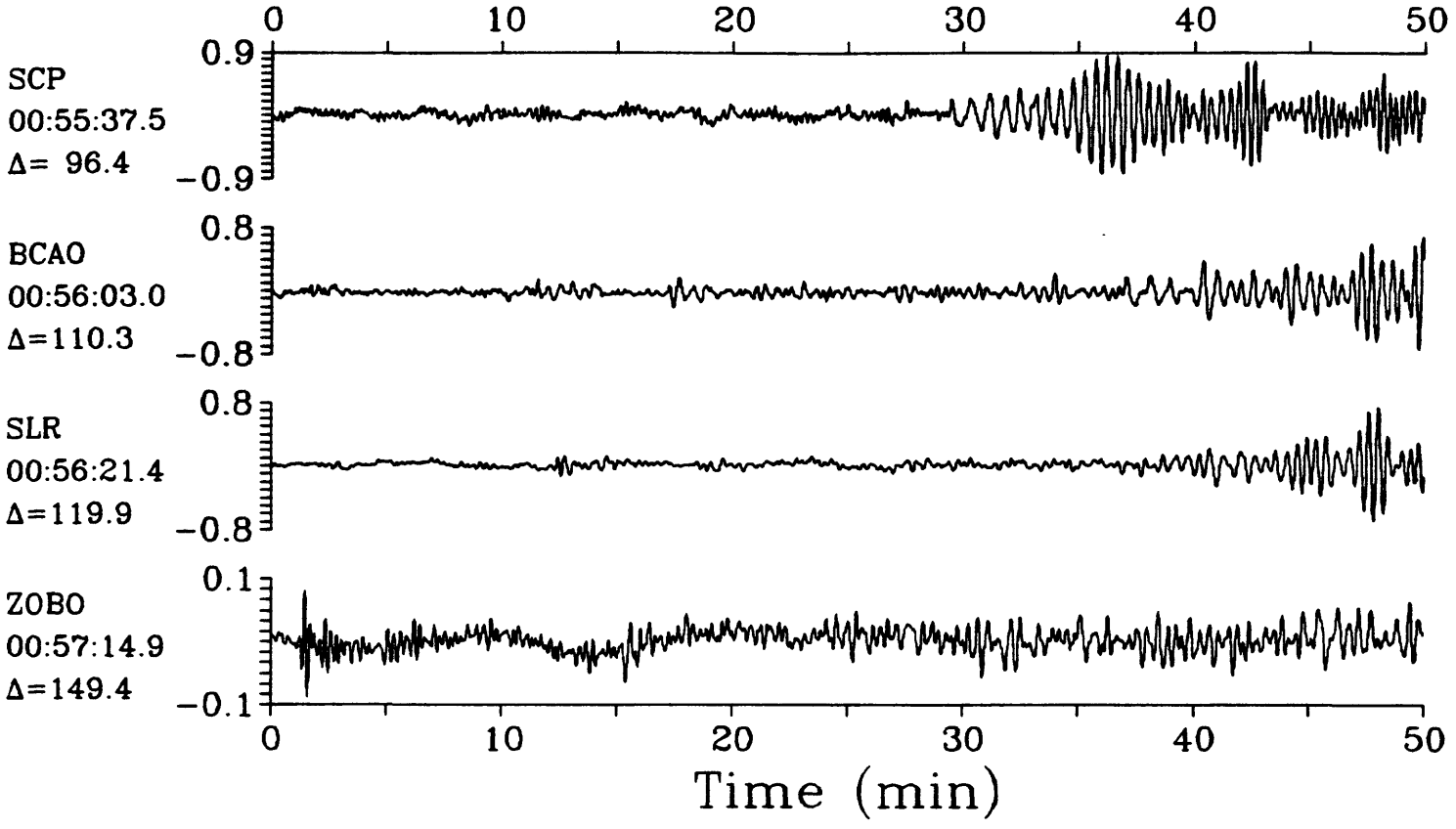
30 December 1986 00:38:29.74
Honshu, Japan h= 9.3 m_b=5.5 M_{SZ}=5.2

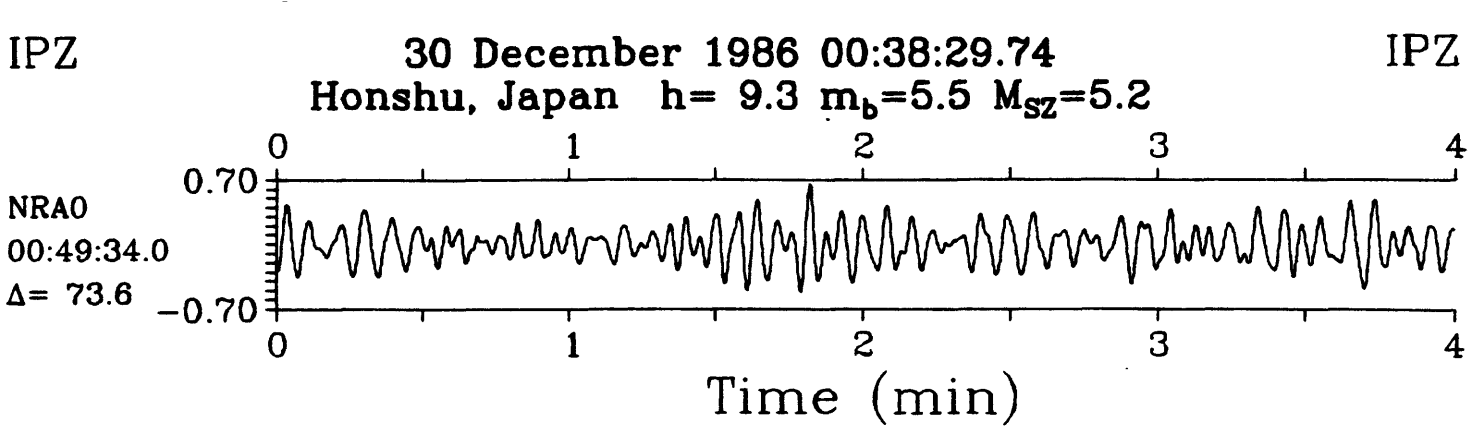



LPZ
30 December 1986 00:38:29.74
Honshu, Japan h= 9.3 m_b=5.5 M_{SZ}=5.2
LPZ
0
10
20
30
40
50
MAJO
00:37:35.7
Δ= 0.3
250.0
-250.0
BJI
00:41:32.0
Δ= 17.4
10.0
-10.0
GUMO
00:42:41.4
Δ= 23.7
5.0
-5.0
LZH
00:43:15.0
Δ= 27.3
10.0
-10.0
CHTO
00:44:51.5
Δ= 38.4
12.0
-12.0
WMQ
00:44:52.6
Δ= 38.5
3.0
-3.0
CTAO
00:47:15.4
Δ= 56.9
2.0
-2.0
HON
00:47:17.8
Δ= 57.2
0.9
-0.9
KEV
00:47:56.7
Δ= 62.9
2.0
-2.0
LON
00:48:46.4
Δ= 70.7
0.9
-0.9
0
10
20
30
40
50
Time (min)
2527


LPZ
30 December 1986 00:38:29.74
Honshu, Japan h= 9.3 m_b=5.5 M_{SZ}=5.2
LPZ
0
10
20
30
40
50
NWAO
00:48:52.7
Δ= 71.7
0.7
-0.7
NRAO
00:49:04.0
Δ= 73.6
140.0
-140.0
GDH
00:49:07.3
Δ= 74.2
0.3
-0.3
KONO
00:49:12.5
Δ= 75.1
2.0
-2.0
ANTO
00:49:25.8
Δ= 77.4
0.9
-0.9
TAU
00:49:37.3
Δ= 79.5
2.0
-2.0
GRFO
00:49:50.7
Δ= 82.0
2.0
-2.0
SNZO
00:50:03.6
Δ= 84.5
1.0
-1.0
ANMO
00:50:16.5
Δ= 87.1
0.8
-0.8
GAC
00:50:43.7
Δ= 92.8
0.9
-0.9
0
10
20
30
40
50
Time (min)
2528

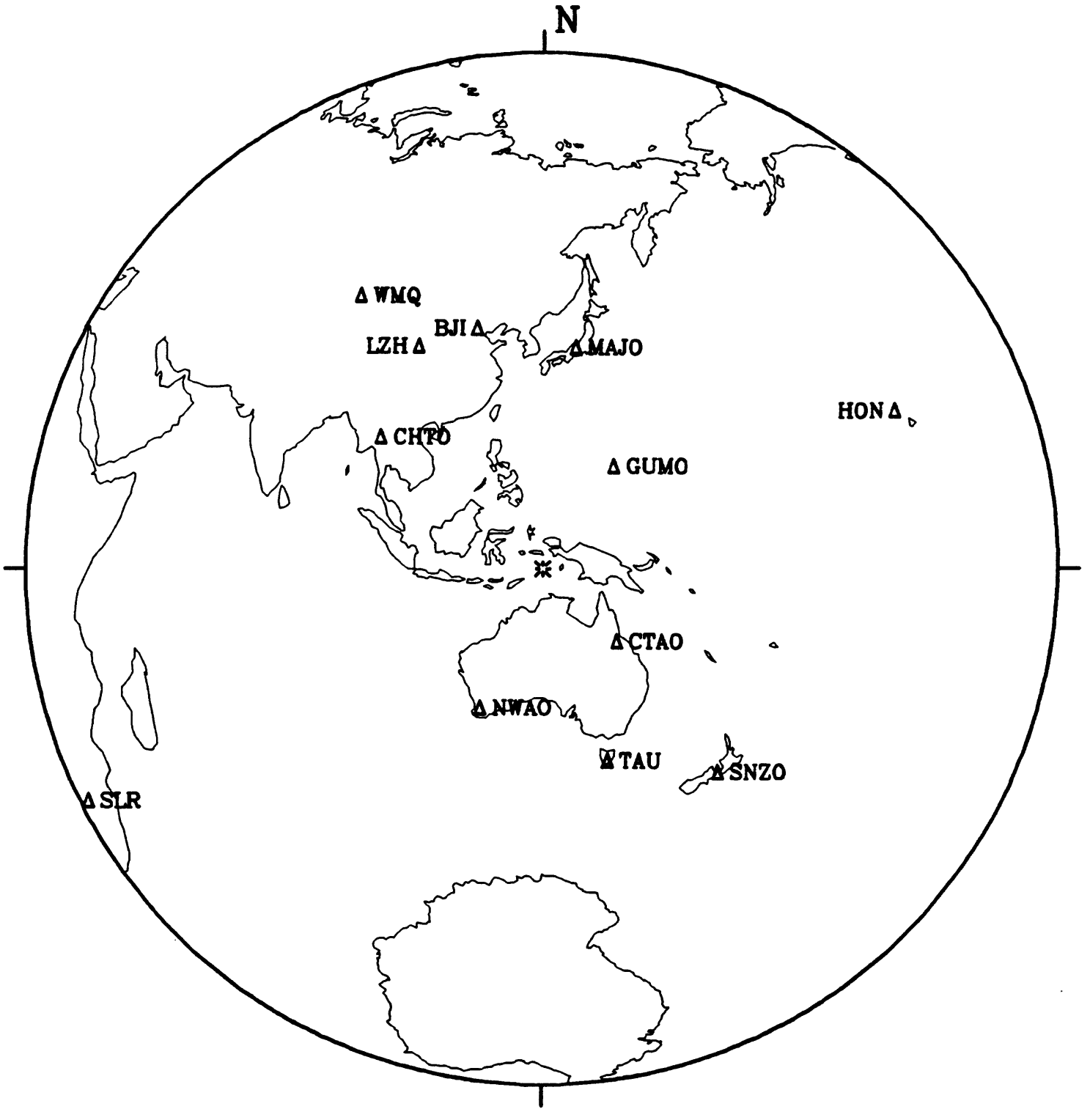
30 December 1986 00:38:29.74
Honshu, Japan h= 9.3 m_b=5.5 M_{SZ}=5.2



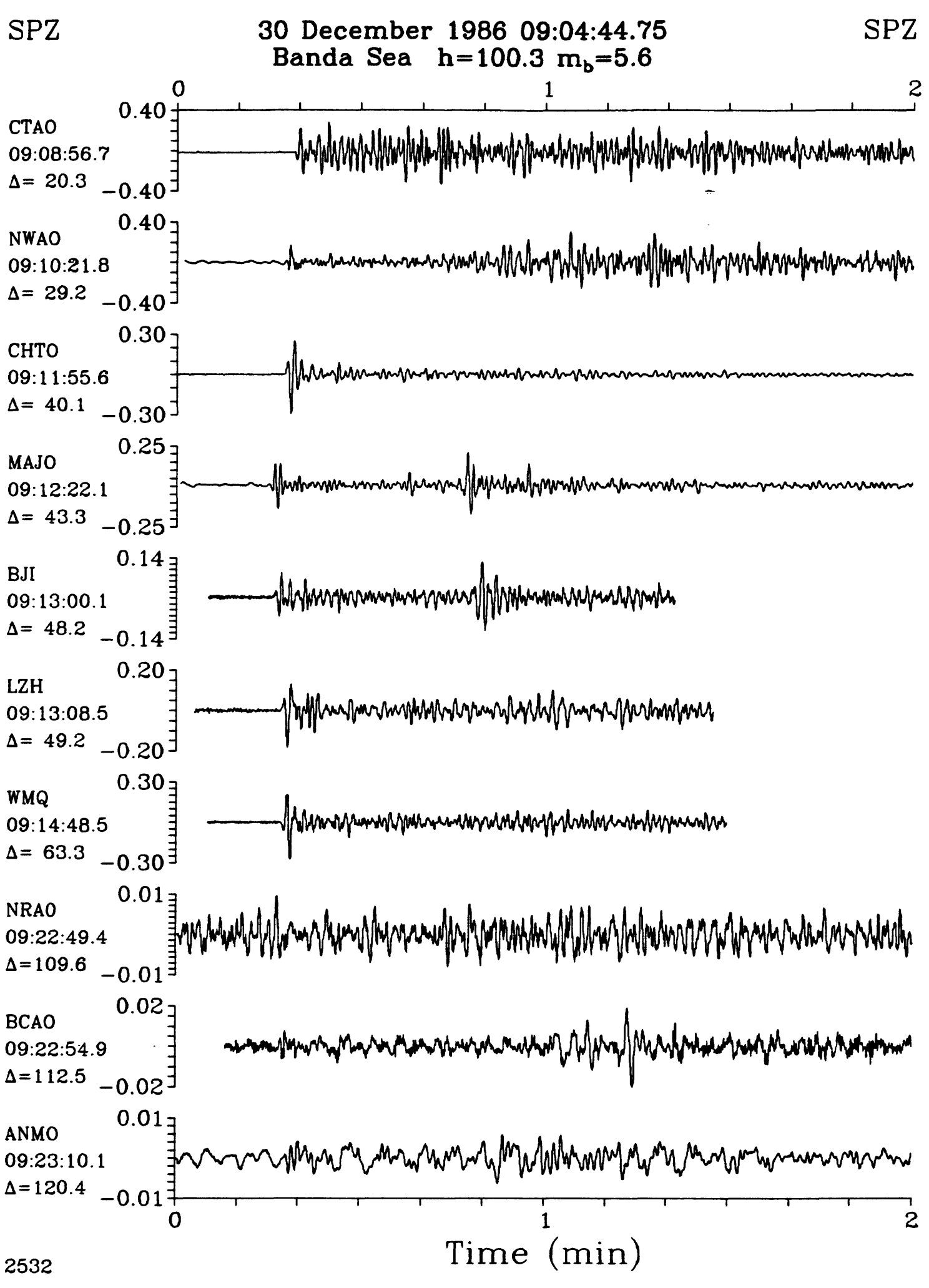

IPZ
30 December 1986 00:38:29.74
Honshu, Japan h= 9.3 m_b=5.5 M_{SZ}=5.2
IPZ
0
1
2
3
4
0.70
NRA0
00:49:34.0
Δ= 73.6
−0.70
0
1
2
3
4
Time (min)

30 December 1986 09:04:44.75

Banda Sea



2531

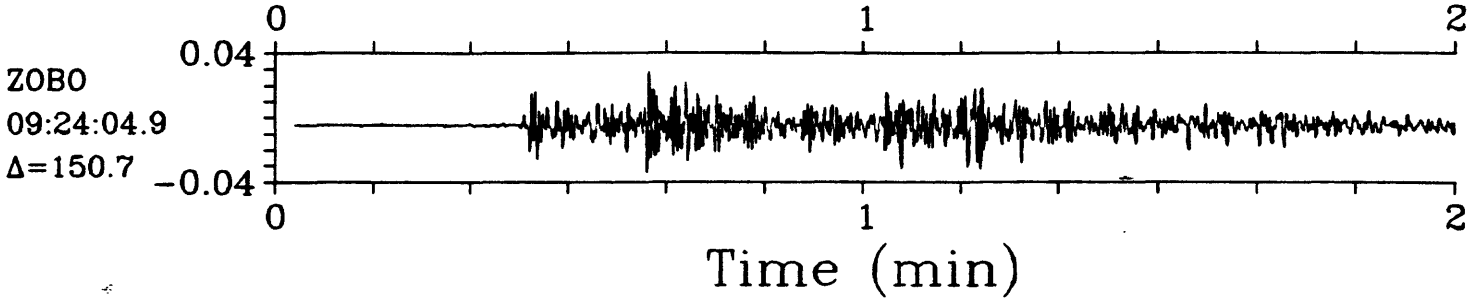

SPZ
30 December 1986 09:04:44.75
Banda Sea h=100.3 m_b=5.6
SPZ
0
1
2
CTAO
09:08:56.7
Δ= 20.3
0.40
-0.40
NWAO
09:10:21.8
Δ= 29.2
0.40
-0.40
CHTO
09:11:55.6
Δ= 40.1
0.30
-0.30
MAJO
09:12:22.1
Δ= 43.3
0.25
-0.25
BJI
09:13:00.1
Δ= 48.2
0.14
-0.14
LZH
09:13:08.5
Δ= 49.2
0.20
-0.20
WMQ
09:14:48.5
Δ= 63.3
0.30
-0.30
NRAO
09:22:49.4
Δ=109.6
0.01
-0.01
BCAO
09:22:54.9
Δ=112.5
0.02
-0.02
ANMO
09:23:10.1
Δ=120.4
0.01
-0.01
0
1
2
Time (min)

2532

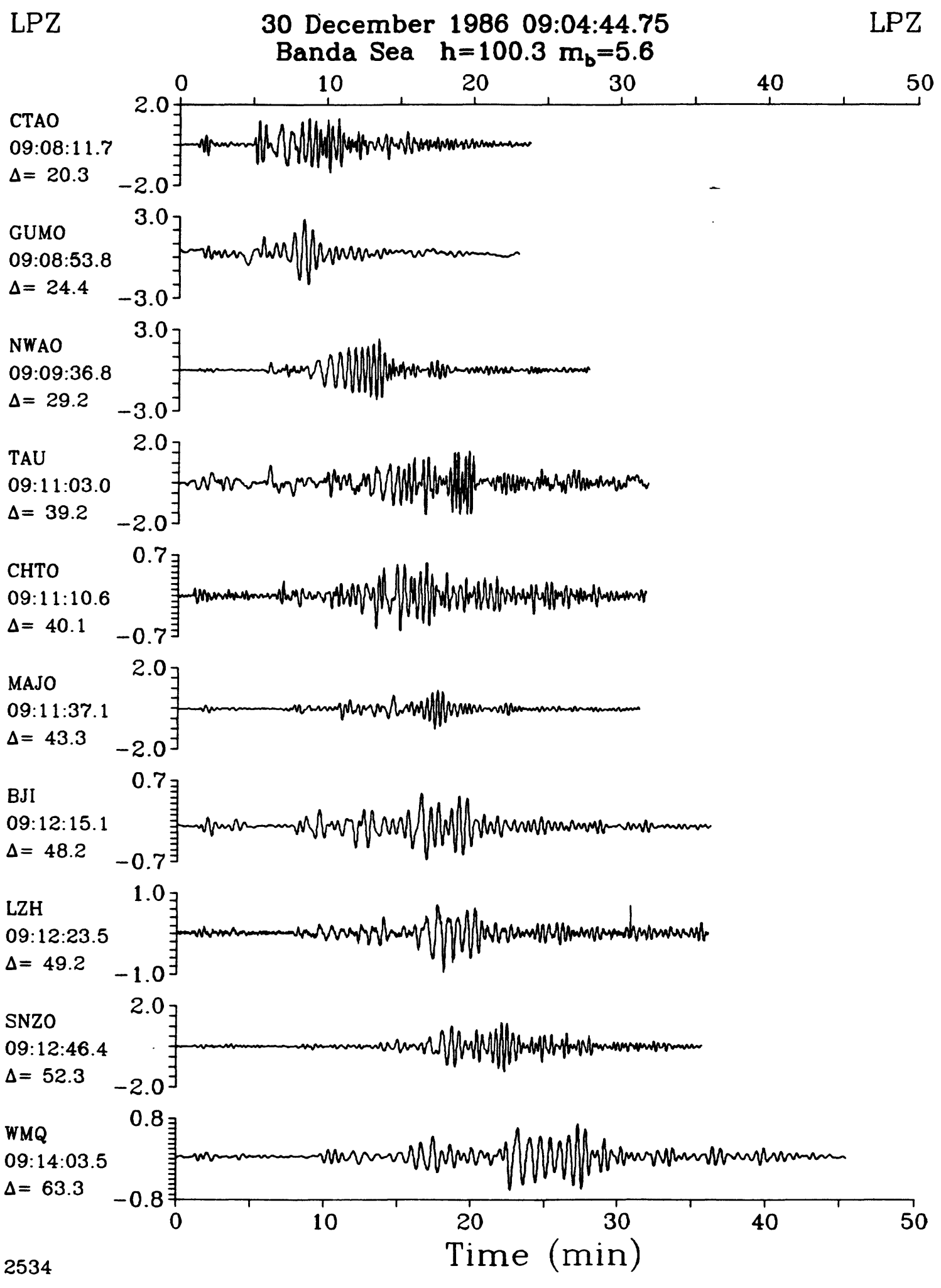
SPZ

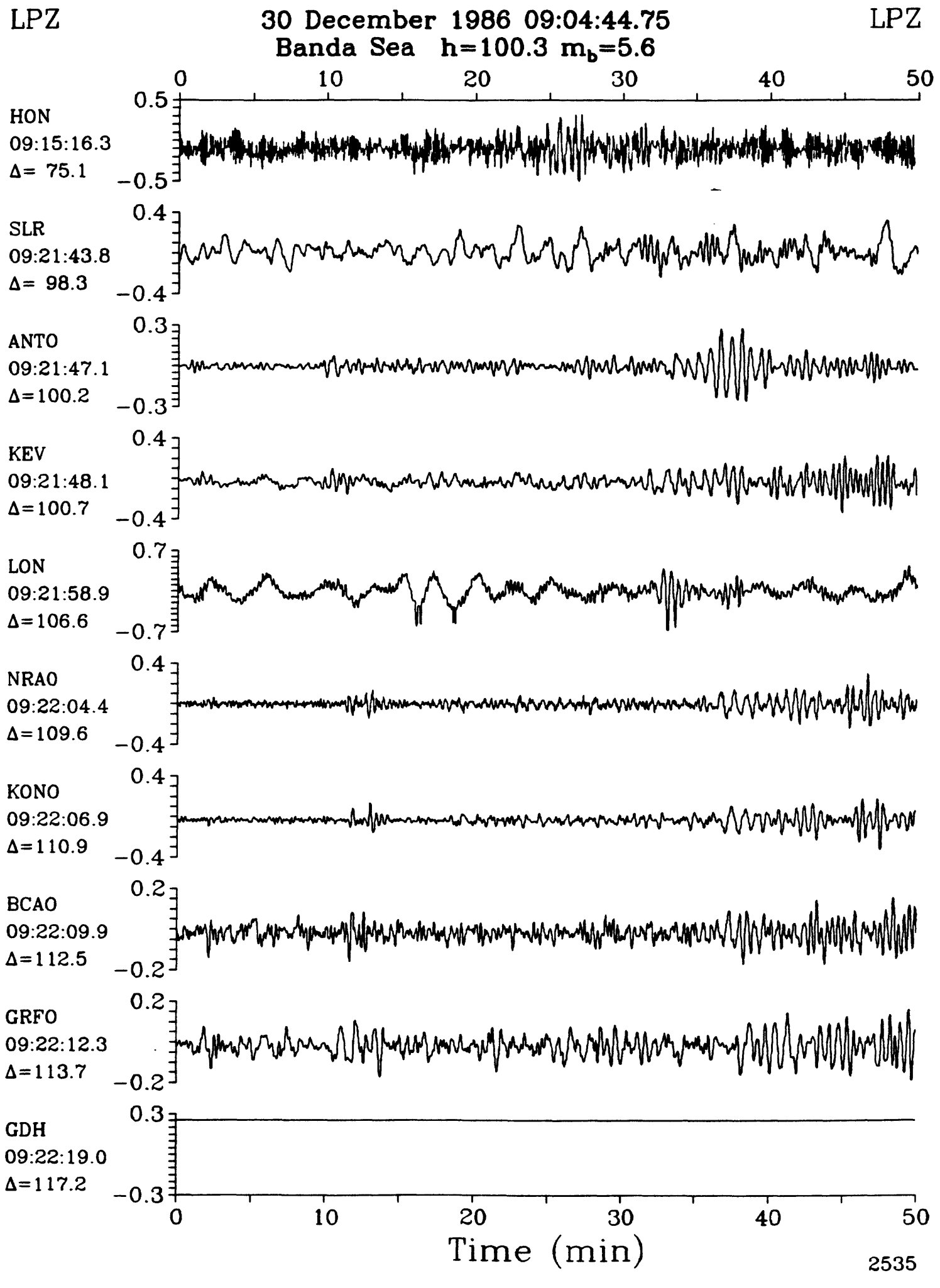
30 December 1986 09:04:44.75
Banda Sea h=100.3 m_b=5.6

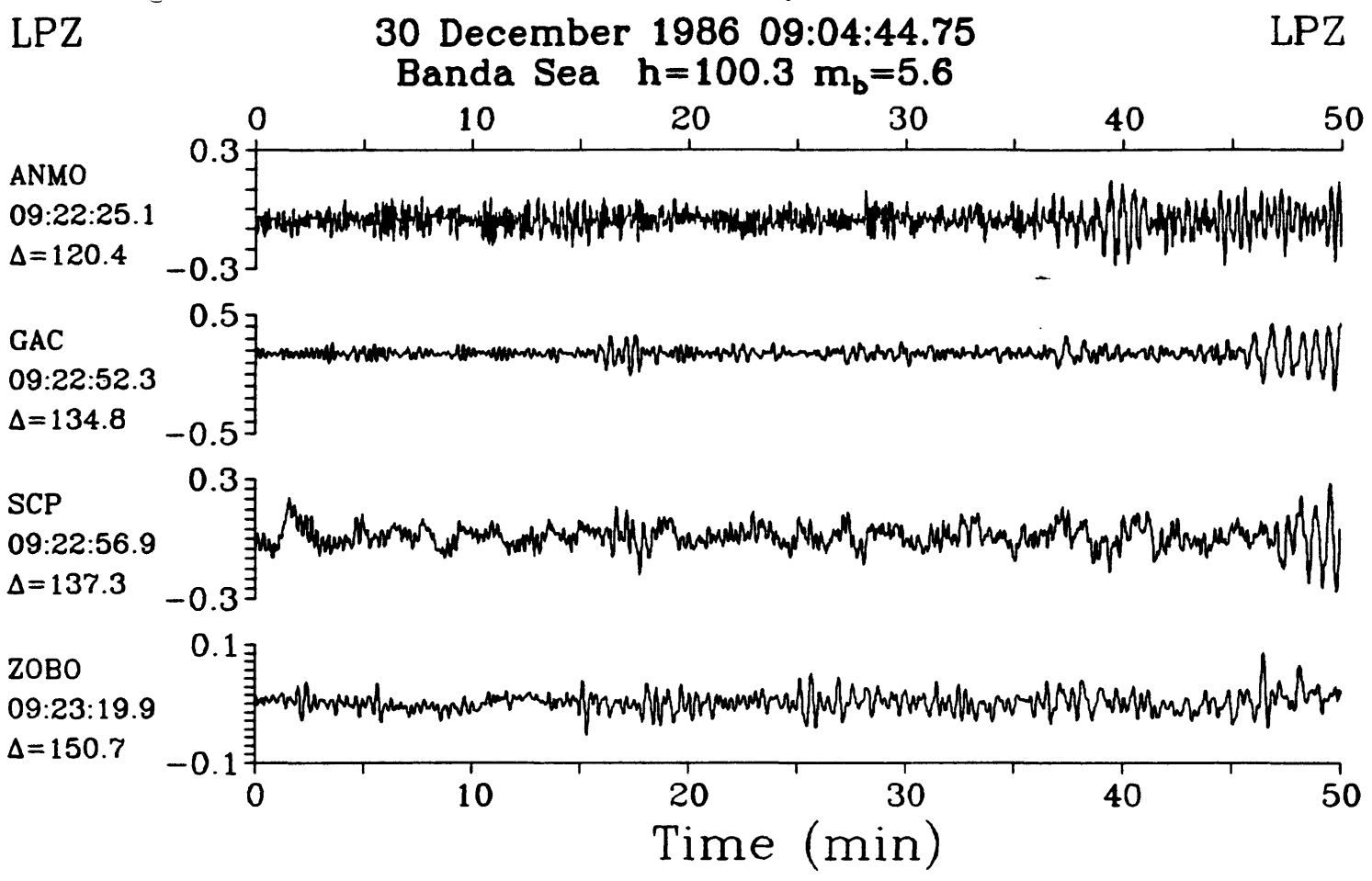
SPZ



Time (min)


LPZ
30 December 1986 09:04:44.75
Banda Sea h=100.3 m_b=5.6
LPZ
0
10
20
30
40
50
CTAO
09:08:11.7
Δ= 20.3
2.0
-2.0
GUMO
09:08:53.8
Δ= 24.4
3.0
-3.0
NWAO
09:09:36.8
Δ= 29.2
3.0
-3.0
TAU
09:11:03.0
Δ= 39.2
2.0
-2.0
CHTO
09:11:10.6
Δ= 40.1
0.7
-0.7
MAJO
09:11:37.1
Δ= 43.3
2.0
-2.0
BJI
09:12:15.1
Δ= 48.2
0.7
-0.7
LZH
09:12:23.5
Δ= 49.2
1.0
-1.0
SNZO
09:12:46.4
Δ= 52.3
2.0
-2.0
WMQ
09:14:03.5
Δ= 63.3
0.8
-0.8
0
10
20
30
40
50
Time (min)
2534


LPZ
30 December 1986 09:04:44.75
Banda Sea h=100.3 m_b=5.6
LPZ
0
10
20
30
40
50
HON
09:15:16.3
Δ= 75.1
0.5
−0.5
SLR
09:21:43.8
Δ= 98.3
0.4
−0.4
ANTO
09:21:47.1
Δ=100.2
0.3
−0.3
KEV
09:21:48.1
Δ=100.7
0.4
−0.4
LON
09:21:58.9
Δ=106.6
0.7
−0.7
NRAO
09:22:04.4
Δ=109.6
0.4
−0.4
KONO
09:22:06.9
Δ=110.9
0.4
−0.4
BCAO
09:22:09.9
Δ=112.5
0.2
−0.2
GRFO
09:22:12.3
Δ=113.7
0.2
−0.2
GDH
09:22:19.0
Δ=117.2
0.3
−0.3
0
10
20
30
40
50
Time (min)
2535

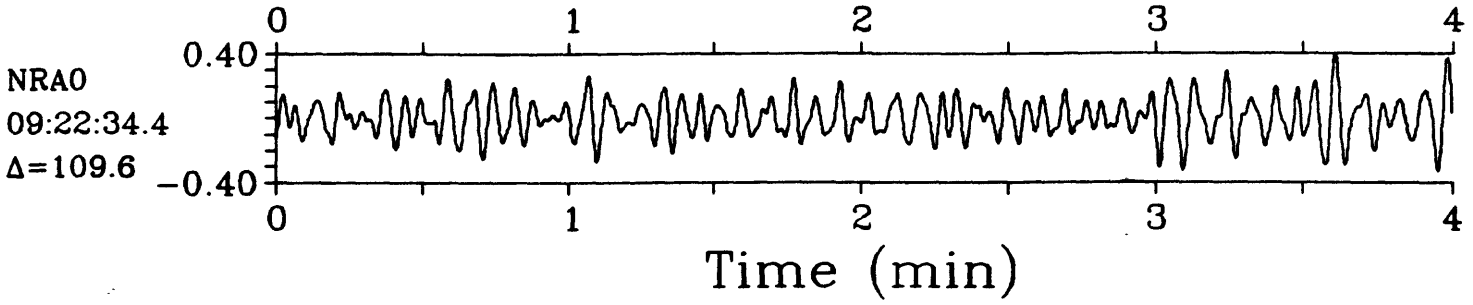

LPZ
30 December 1986 09:04:44.75
Banda Sea h=100.3 m_b=5.6
LPZ
0
10
20
30
40
50
0.3
ANMO
09:22:25.1
Δ=120.4
−0.3
0.5
GAC
09:22:52.3
Δ=134.8
−0.5
0.3
SCP
09:22:56.9
Δ=137.3
−0.3
0.1
ZOBO
09:23:19.9
Δ=150.7
−0.1
0
10
20
30
40
50
Time (min)

IPZ

30 December 1986 09:04:44.75

Banda Sea h=100.3 m_b=5.6

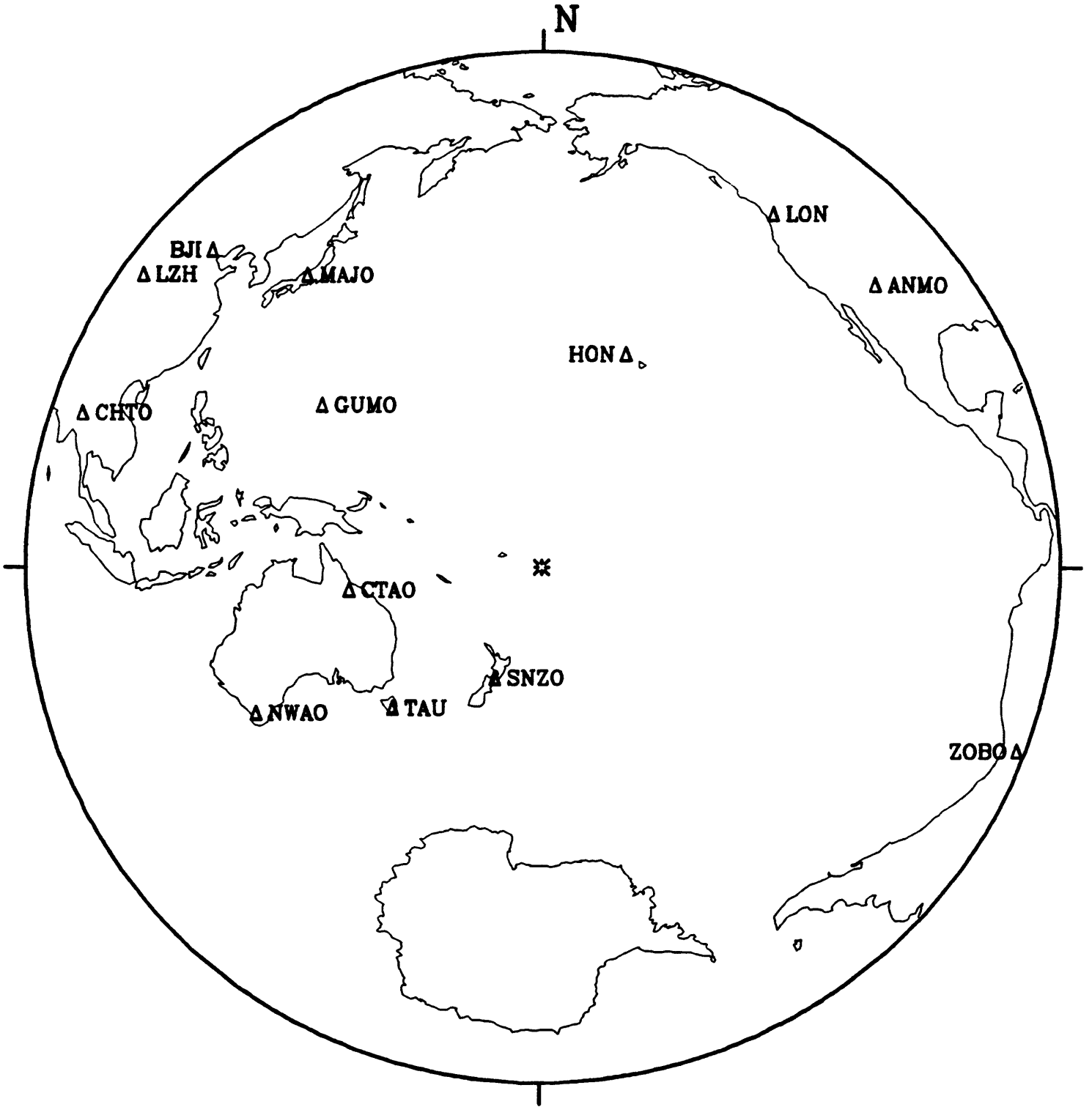
IPZ

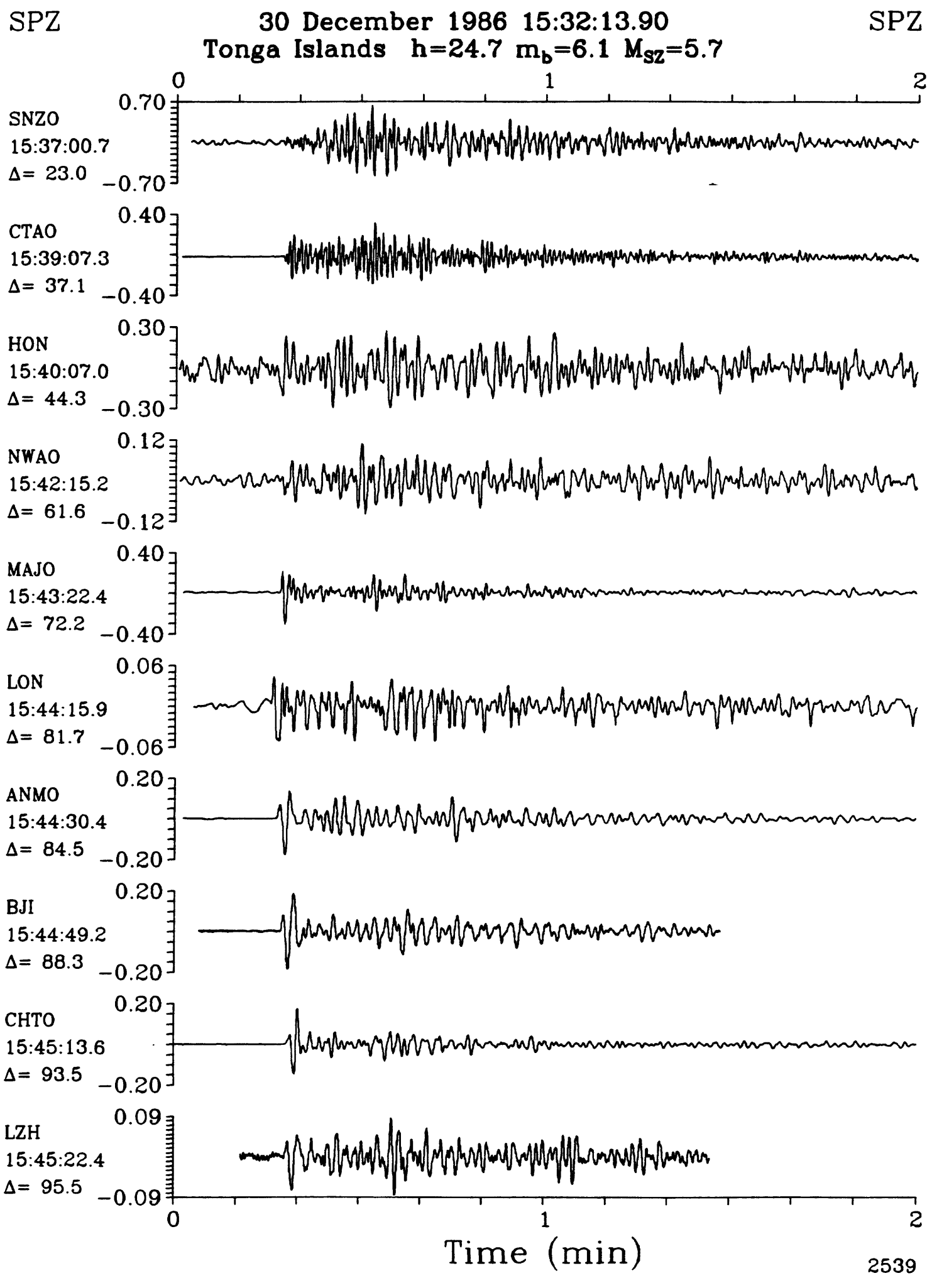


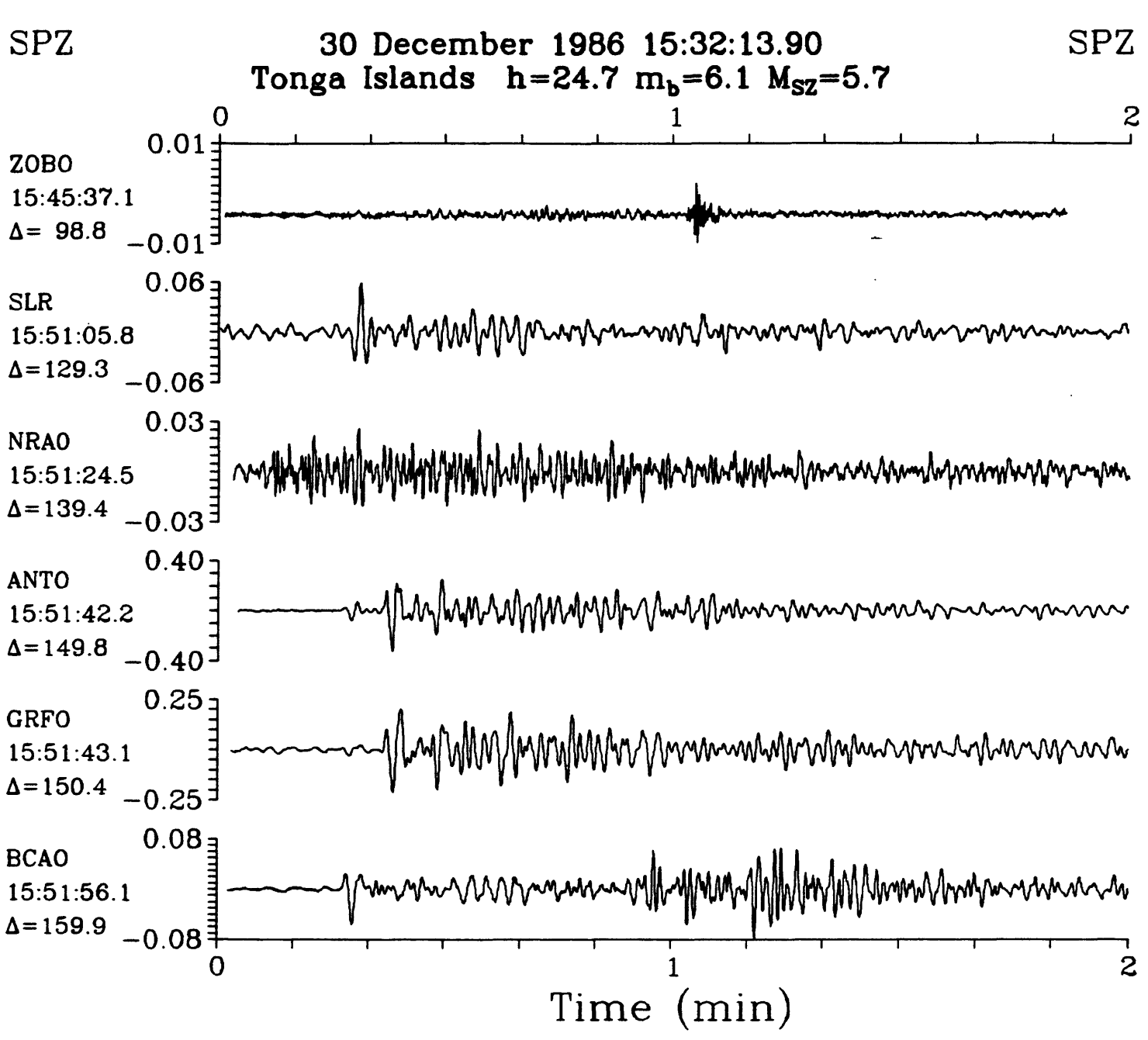
Time (min)

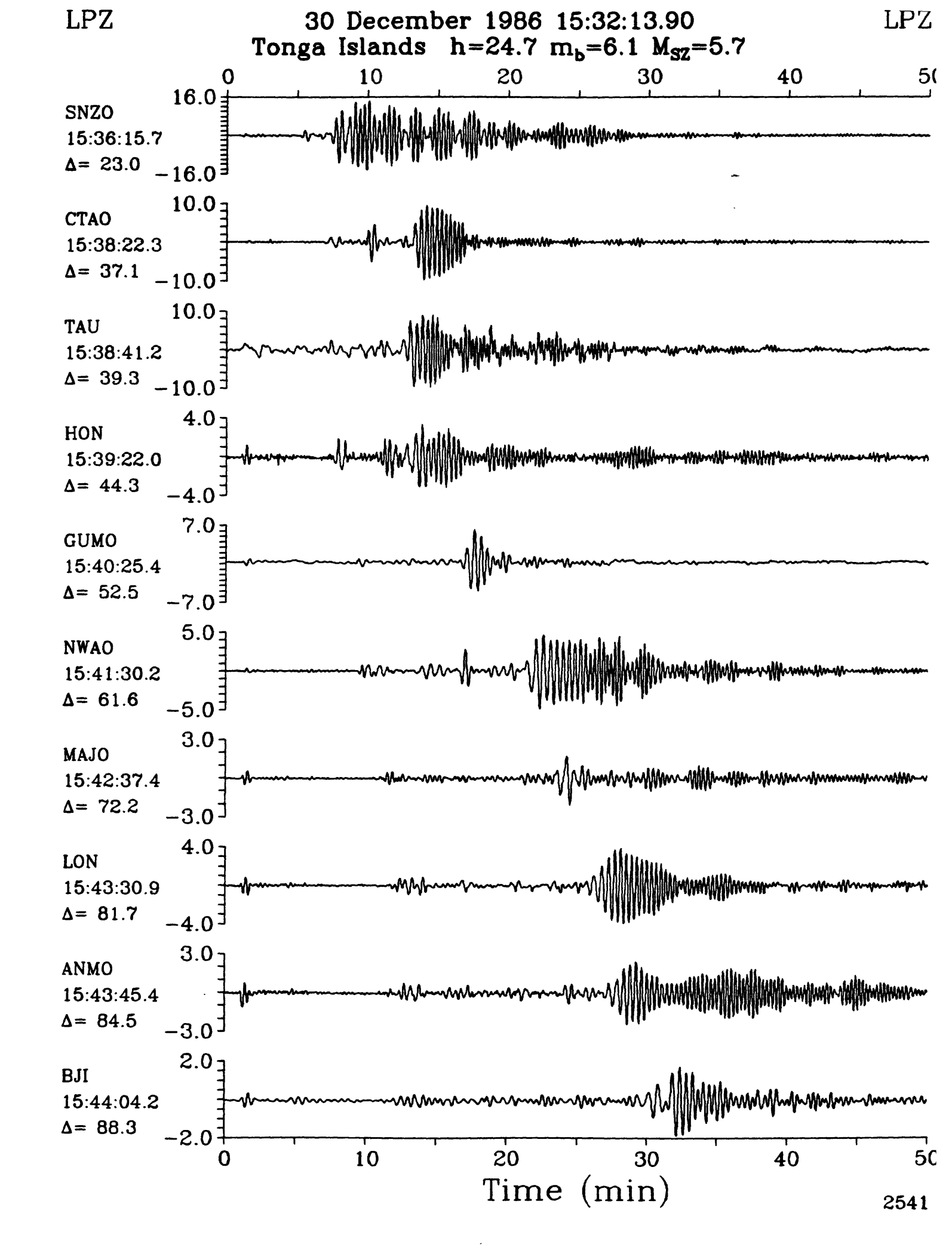
30 December 1986 15:32:13.90

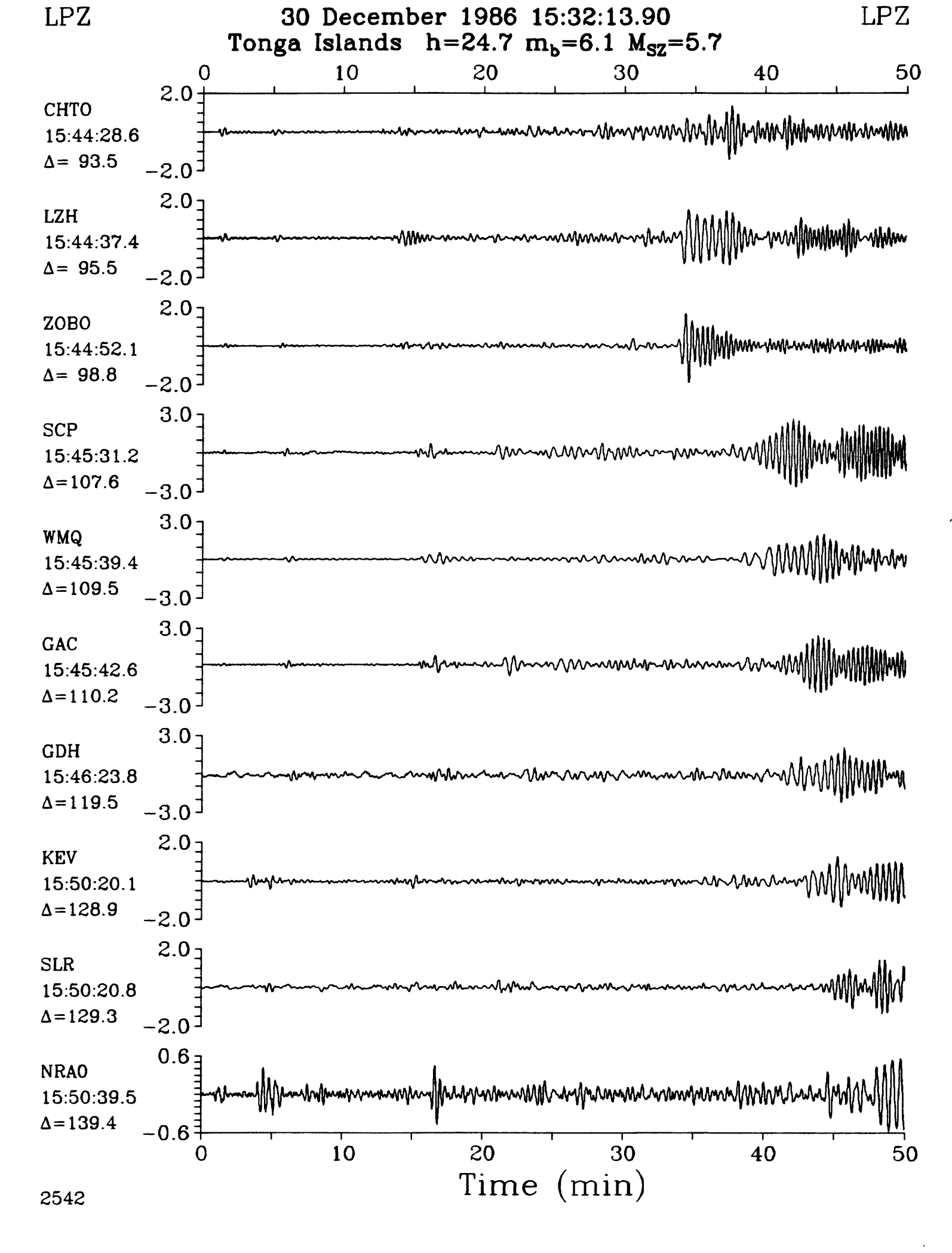
Tonga Islands

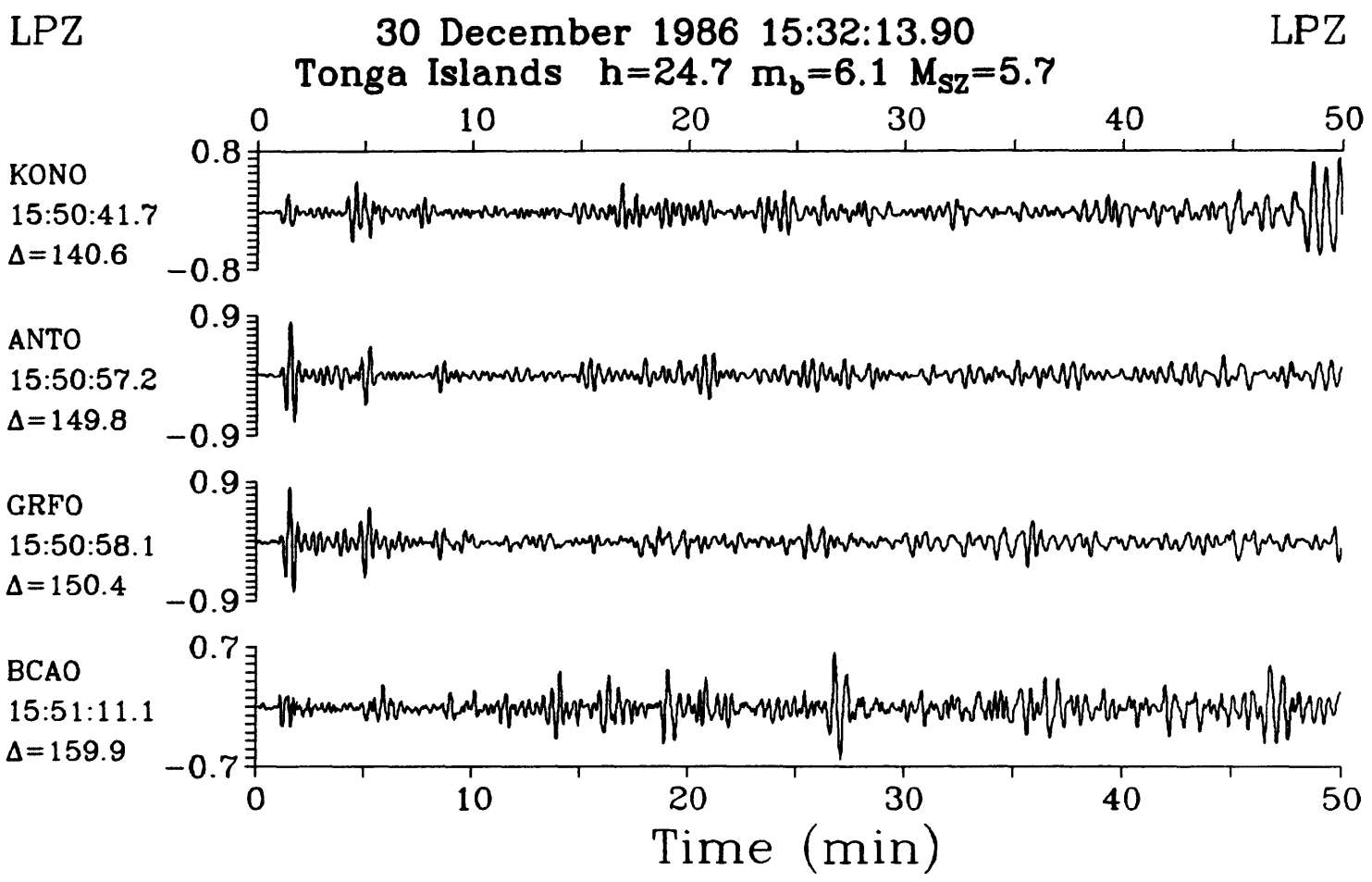


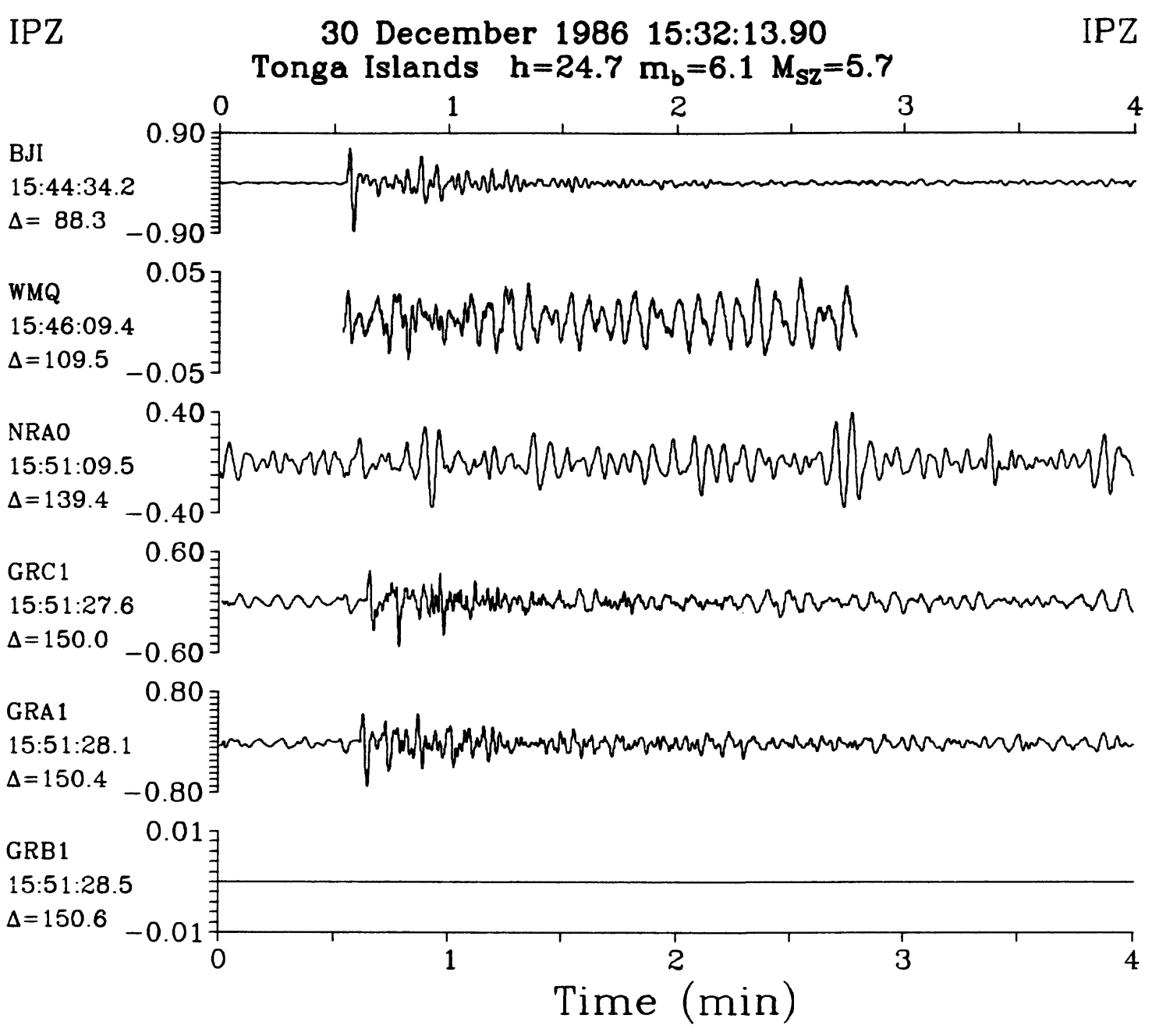

SPZ
30 December 1986 15:32:13.90
Tonga Islands h=24.7 m_b=6.1 M_{SZ}=5.7
SPZ
0
1
2
0.70
SNZO
15:37:00.7
Δ= 23.0
-0.70
0.40
CTAO
15:39:07.3
Δ= 37.1
-0.40
0.30
HON
15:40:07.0
Δ= 44.3
-0.30
0.12
NWAO
15:42:15.2
Δ= 61.6
-0.12
0.40
MAJO
15:43:22.4
Δ= 72.2
-0.40
0.06
LON
15:44:15.9
Δ= 81.7
-0.06
0.20
ANMO
15:44:30.4
Δ= 84.5
-0.20
0.20
BJI
15:44:49.2
Δ= 88.3
-0.20
0.20
CHTO
15:45:13.6
Δ= 93.5
-0.20
0.09
LZH
15:45:22.4
Δ= 95.5
-0.09
0
1
2
Time (min)
2539


SPZ
30 December 1986 15:32:13.90
Tonga Islands h=24.7 m_b=6.1 M_{SZ}=5.7
SPZ
0
1
2
0.01
ZOBO
15:45:37.1
Δ= 98.8
−0.01
0.06
SLR
15:51:05.8
Δ=129.3
−0.06
0.03
NRAO
15:51:24.5
Δ=139.4
−0.03
0.40
ANTO
15:51:42.2
Δ=149.8
−0.40
0.25
GRFO
15:51:43.1
Δ=150.4
−0.25
0.08
BCAO
15:51:56.1
Δ=159.9
−0.08
0
1
2
Time (min)


LPZ
30 December 1986 15:32:13.90
Tonga Islands h=24.7 m_b=6.1 M_{SZ}=5.7
LPZ
0
10
20
30
40
50
SNZO
15:36:15.7
Δ= 23.0
16.0
-16.0
CTAO
15:38:22.3
Δ= 37.1
10.0
-10.0
TAU
15:38:41.2
Δ= 39.3
10.0
-10.0
HON
15:39:22.0
Δ= 44.3
4.0
-4.0
GUMO
15:40:25.4
Δ= 52.5
7.0
-7.0
NWAO
15:41:30.2
Δ= 61.6
5.0
-5.0
MAJO
15:42:37.4
Δ= 72.2
3.0
-3.0
LON
15:43:30.9
Δ= 81.7
4.0
-4.0
ANMO
15:43:45.4
Δ= 84.5
3.0
-3.0
BJI
15:44:04.2
Δ= 88.3
2.0
-2.0
0
10
20
30
40
50
Time (min)
2541


LPZ
30 December 1986 15:32:13.90
Tonga Islands h=24.7 m_b=6.1 M_{SZ}=5.7
LPZ
0
10
20
30
40
50
CHTO
15:44:28.6
Δ= 93.5
2.0
-2.0
LZH
15:44:37.4
Δ= 95.5
2.0
-2.0
ZOBO
15:44:52.1
Δ= 98.8
2.0
-2.0
SCP
15:45:31.2
Δ=107.6
3.0
-3.0
WMQ
15:45:39.4
Δ=109.5
3.0
-3.0
GAC
15:45:42.6
Δ=110.2
3.0
-3.0
GDH
15:46:23.8
Δ=119.5
3.0
-3.0
KEV
15:50:20.1
Δ=128.9
2.0
-2.0
SLR
15:50:20.8
Δ=129.3
2.0
-2.0
NRAO
15:50:39.5
Δ=139.4
0.6
-0.6
0
10
20
30
40
50
Time (min)
2542


LPZ
30 December 1986 15:32:13.90
Tonga Islands h=24.7 m_b=6.1 M_{SZ}=5.7
LPZ
0
10
20
30
40
50
KONO
15:50:41.7
Δ=140.6
0.8
−0.8
ANTO
15:50:57.2
Δ=149.8
0.9
−0.9
GRFO
15:50:58.1
Δ=150.4
0.9
−0.9
BCAO
15:51:11.1
Δ=159.9
0.7
−0.7
0
10
20
30
40
50
Time (min)


IPZ
30 December 1986 15:32:13.90
Tonga Islands h=24.7 m_b=6.1 M_{SZ}=5.7
IPZ
0
1
2
3
4
BJI
15:44:34.2
Δ= 88.3
0.90
-0.90
WMQ
15:46:09.4
Δ=109.5
0.05
-0.05
NRA0
15:51:09.5
Δ=139.4
0.40
-0.40
GRC1
15:51:27.6
Δ=150.0
0.60
-0.60
GRA1
15:51:28.1
Δ=150.4
0.80
-0.80
GRB1
15:51:28.5
Δ=150.6
0.01
-0.01
Time (min)