

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

**National Earthquake Information Center
Waveform Catalog
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by

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

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Introduction

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

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

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

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

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

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

Table 1. Earthquakes for January 1985 with magnitudes ≥ 5.5

	Origin Time UTC	Latitude	Longitude	Depth (km)	M _b	M _{SZ}	Flinn-Engdahl Region Name
1.	1985 01 02 05:32:49.27	55.449° N	157.797° W	33.0	5.6	5.6	Alaska Peninsula
2.	1985 01 02 22:29:26.57	14.216° S	175.706° W	33.0	5.2	5.6	Samoa Islands Region
3.	1985 01 03 23:58:36.64	21.675° S	174.198° W	53.6	5.5	5.5	Tonga Islands
4.	1985 01 05 07:39:09.06	0.654° S	67.307° E	10.0	5.6	5.0	Carlsberg Ridge
5.	1985 01 05 11:11:31.15	10.168° N	80.016° W	32.3	6.2	5.7	North of Panama
6.	1985 01 05 15:45:37.67	34.129° N	135.484° E	71.2	5.6		Near S. Coast of Southern Honshu
7.	1985 01 07 16:13:05.21	27.216° N	92.013° E	10.9	5.6	4.7	India-China Border Region
8.	1985 01 09 19:28:20.63	60.309° N	140.784° W	13.1	5.7	5.0	Southeastern Alaska
9.	1985 01 10 17:47:56.10	10.830° N	43.429° W	10.0	5.8	5.8	North Atlantic Ridge
10.	1985 01 11 06:25:48.65	54.173° S	143.802° E	10.0	5.1	5.7	West of Macquarie Island
11.	1985 01 11 14:30:59.55	2.678° S	67.905° E	10.0	5.4	5.5	Carlsberg Ridge
12.	1985 01 11 14:41:57.09	0.157° N	123.636° E	176.5	6.0		Minahassa Peninsula
13.	1985 01 13 16:01:00.71	36.602° S	177.654° E	33.0	5.7		Off E. Coast of N. Island, N.Z.
14.	1985 01 13 21:51:21.70	24.111° N	122.463° E	39.3	5.8	5.3	Taiwan Region
15.	1985 01 14 02:36:31.26	46.131° N	149.421° E	21.9	5.2	5.8	Kuril Islands
16.	1985 01 15 13:01:57.54	6.265° S	154.806° E	56.8	5.5		Solomon Islands
17.	1985 01 15 22:36:35.59	10.282° S	164.906° E	41.0	5.5	5.7	Santa Cruz Islands Region
18.	1985 01 17 21:33:10.19	3.787° S	141.744° E	38.7	5.7	5.8	Papua New Guinea
19.	1985 01 17 21:44:11.53	3.709° S	141.740° E	29.7	5.9	5.8	Papua New Guinea
20.	1985 01 18 15:00:08.39	29.409° S	70.706° W	81.5	5.8		Central Chile
21.	1985 01 20 14:44:18.83	4.380° N	125.916° E	174.5	5.5		Taloud Islands
22.	1985 01 21 00:55:22.07	1.014° S	128.528° E	33.0	5.9	6.7	Halmahera
23.	1985 01 22 07:57:36.27	5.900° S	104.541° E	33.0	5.6		Southern Sumatra
24.	1985 01 23 20:36:18.27	3.914° S	151.590° E	18.2	5.5	5.4	New Ireland Region
25.	1985 01 23 20:44:39.29	15.098° S	173.410° W	33.0	5.2	5.5	Tonga Islands
26.	1985 01 24 12:29:32.40	7.523° S	130.164° E	19.4	5.8	5.3	Tanibar Islands Region
27.	1985 01 25 21:15:34.31	22.874° S	177.562° W	244.7	5.5		South of Fiji Islands
28.	1985 01 26 03:07:02.51	33.147° S	68.537° W	38.2	6.1	5.8	Mendoza Province, Argentina
29.	1985 01 26 21:36:09.36	32.554° N	131.010° E	106.9	5.8		Kyushu, Japan
30.	1985 01 31 04:32:57.68	46.115° S	165.128° E	10.0	5.8	6.1	Off W. Coast of S. Island, N.Z.
31.	1985 01 31 06:35:09.41	62.058° S	163.432° E	10.0	5.5	6.1	Balleney Islands Region

Table 2. Current network-event tape station list

Code	ID	Station	Latitude	Longitude	Elevation (m)	Type*
AFI	69	Afiamalua, Western Samoa	13.91° S	171.78° W	706.0	DWWSSN
ANMO	30	Albuquerque, New Mexico	34.95° N	106.46° W	1740.0	SRO
ANTO	31	Ankara, Turkey	39.87° N	32.79° E	883.0	SRO
BCAO	37	Bangui, Central African Republic	4.43° N	18.54° E	336.0	SRO
BDF	72	Brasilia, Brazil	15.66° S	47.90° W	1500.0	DWWSSN
CHTO	33	Chiang Mai, Thailand	18.79° N	98.98° E	316.0	SRO
COL	62	College, Alaska	64.90° N	147.79° W	320.0	DWWSSN
CTAO	50	Charters Towers, Australia	20.09° S	146.25° E	357.0	ASRO
GAC	43	Glen Almond, Quebec, Canada	45.70° N	75.48° W	620.0	SRO
GDH	70	Godhavn, Greenland	69.25° N	53.53° W	23.0	DWWSSN
GRFO	39	Graefenberg, Germany	49.69° N	11.22° E	500.0	SRO
GUMO	35	Guam, Mariana Islands	13.59° N	144.87° E	14.0	SRO
HON	66	Honolulu, Hawaii	21.32° N	158.01° W	2.0	DWWSSN
JAS	64	Jamestown, California	37.93° N	120.42° W	425.0	DWWSSN
KEV	67	Kevo, Finland	69.76° N	27.01° E	80.0	DWWSSN
KONO	54	Kongsberg, Norway	59.65° N	9.60° E	216.0	ASRO
LON	63	Longmire, Washington	46.75° N	121.81° W	854.0	DWWSSN
MAJO	53	Matsushiro, Japan	36.54° N	138.21° E	422.0	ASRO
NWAO	38	Mundaring (Narrogin), Australia	32.93° S	117.24° E	265.0	SRO
RSNT	82	Yellowknife, Northwest Territories	62.48° N	114.59° W	90.0	RSTN
RSNY	84	Adirondack, New York	44.55° N	74.53° W	351.0	RSTN
RSO	85	Red Lake, Ontario	50.86° N	93.70° W	302.0	RSTN
RSSD	83	Black Hills, South Dakota	44.12° N	104.04° W	1948.0	RSTN
SCP	61	State College, Pennsylvania	40.79° N	77.87° W	352.0	DWWSSN
SLR	71	Silverton, South Africa	25.73° S	28.28° E	1348.0	DWWSSN
TATO	41	Taipei, Taiwan	24.98° N	121.49° E	53.0	SRO
TAU	74	Hobart, Tasmania	42.91° S	147.32° E	132.0	DWWSSN
TOL	73	Toledo, Spain	39.88° N	4.05° W	480.0	DWWSSN

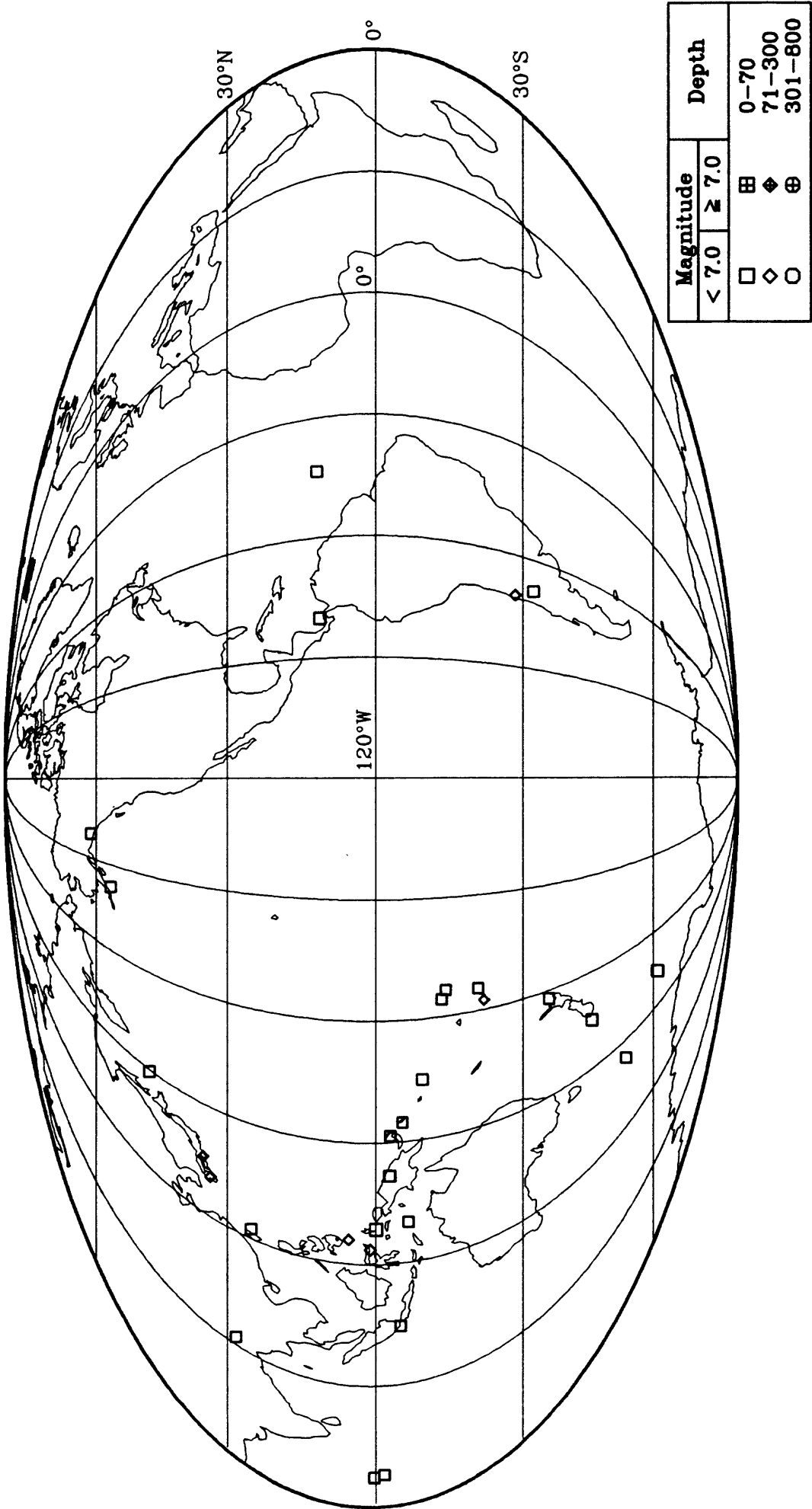
* SRO - Seismic Research Observatory

ASRO - Abbreviated Seismic Research Observatory

DWWSSN - Digital World Wide Standardized Seismograph Network

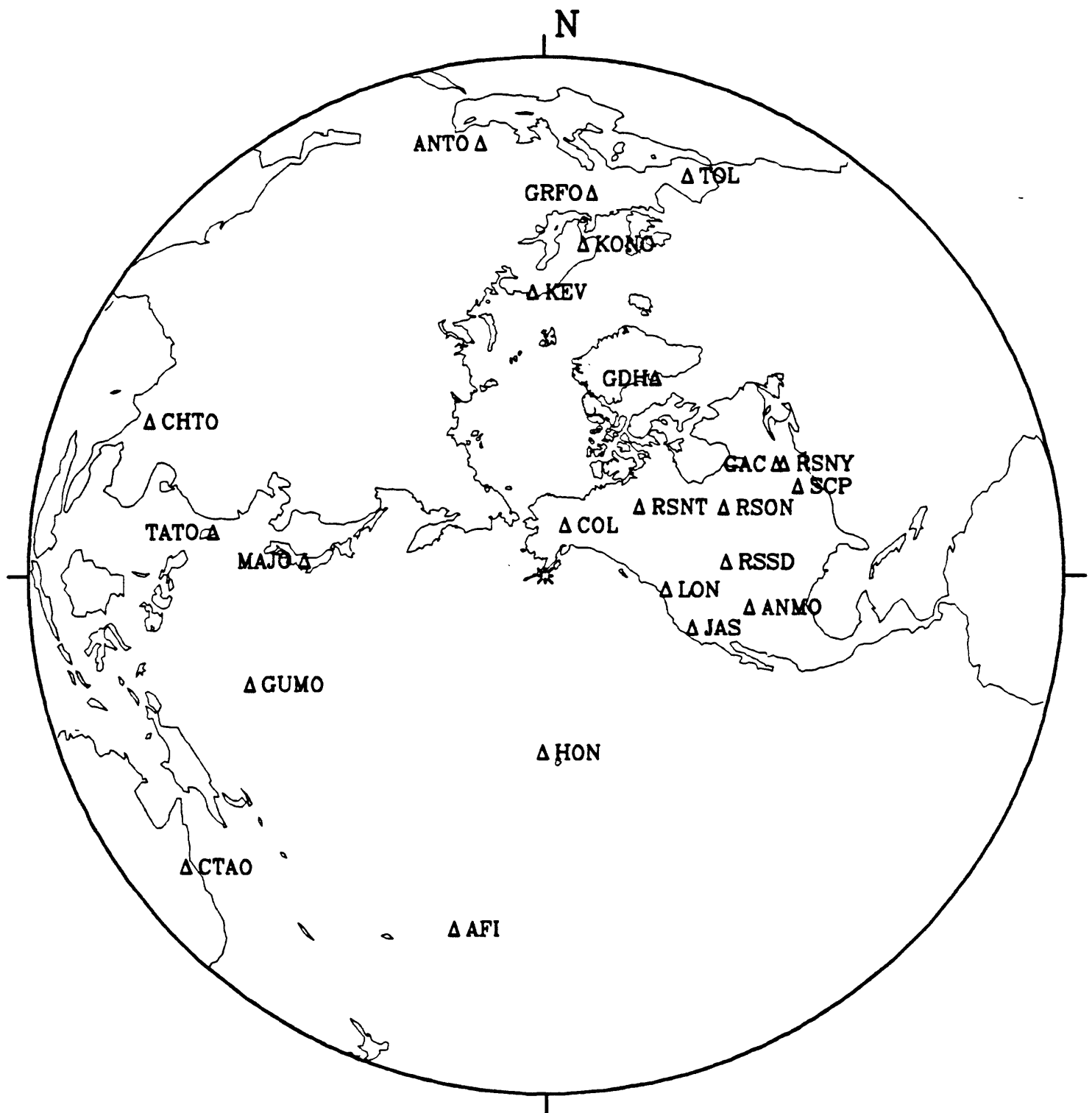
RSTN - Regional Seismic Test Network

EARTHQUAKES – January 1985 – MAGNITUDE ≥ 5.5



02 January 1985 05:32:49.27

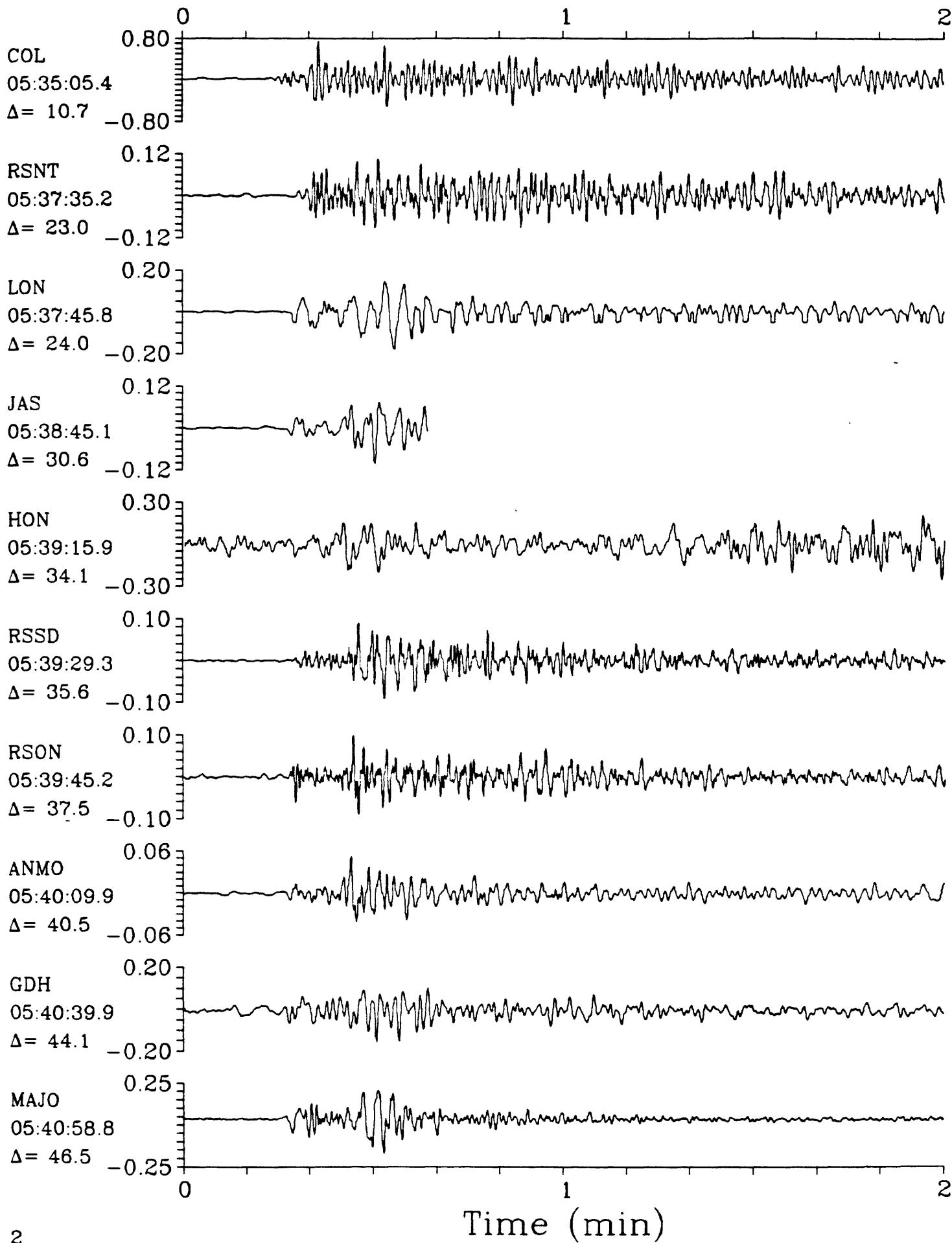
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SPZ

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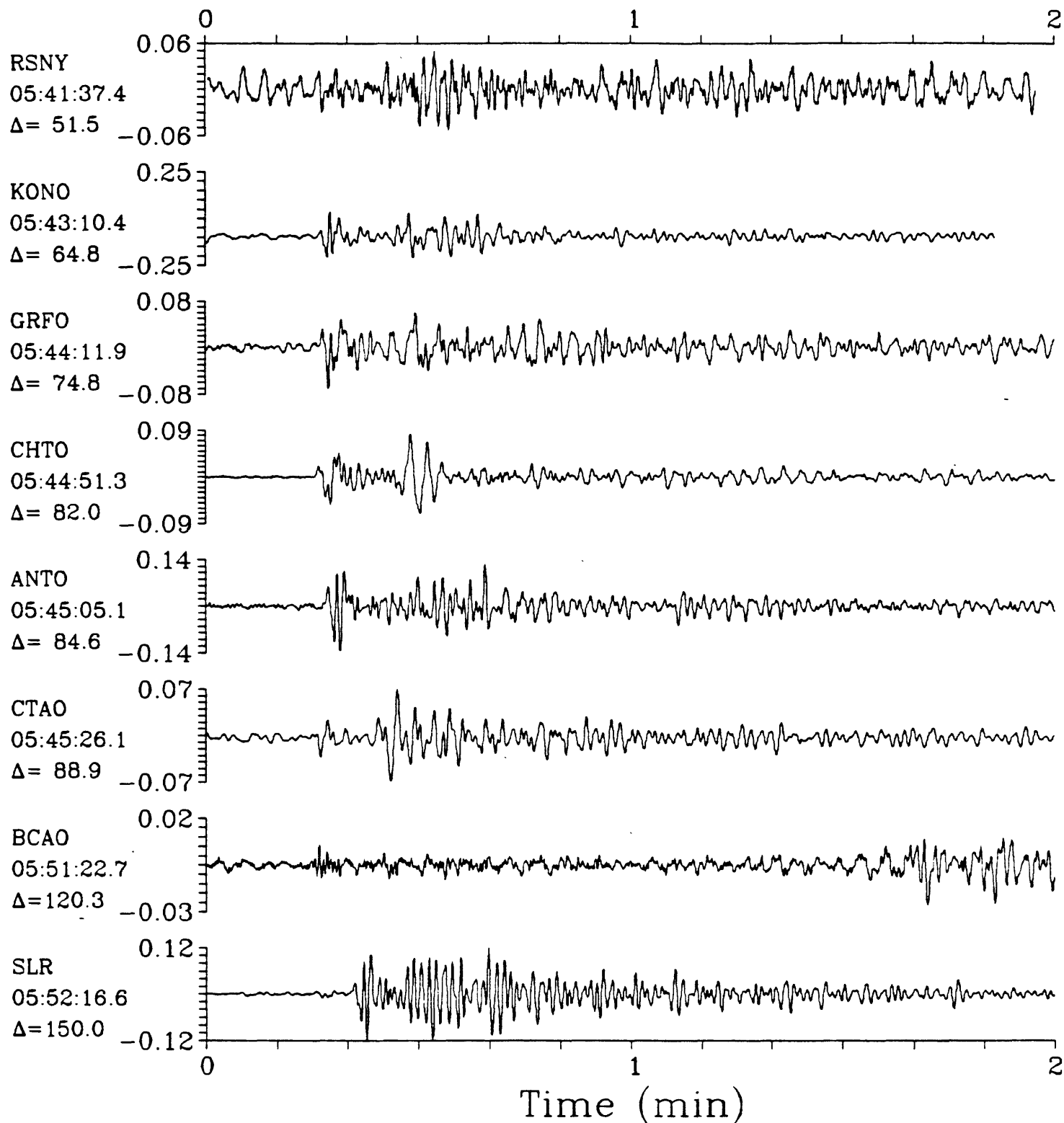
SPZ



SPZ

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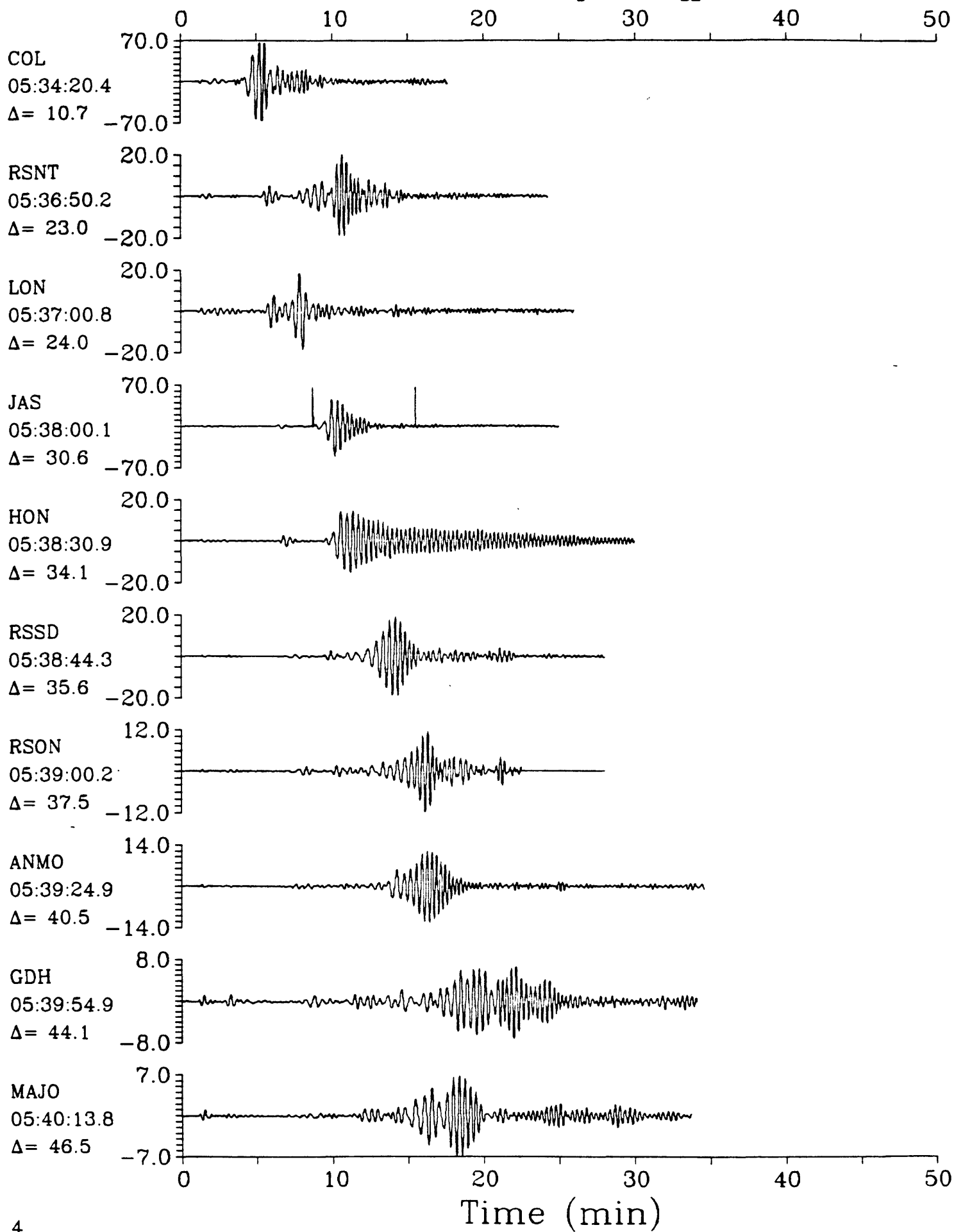
SPZ

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LPZ

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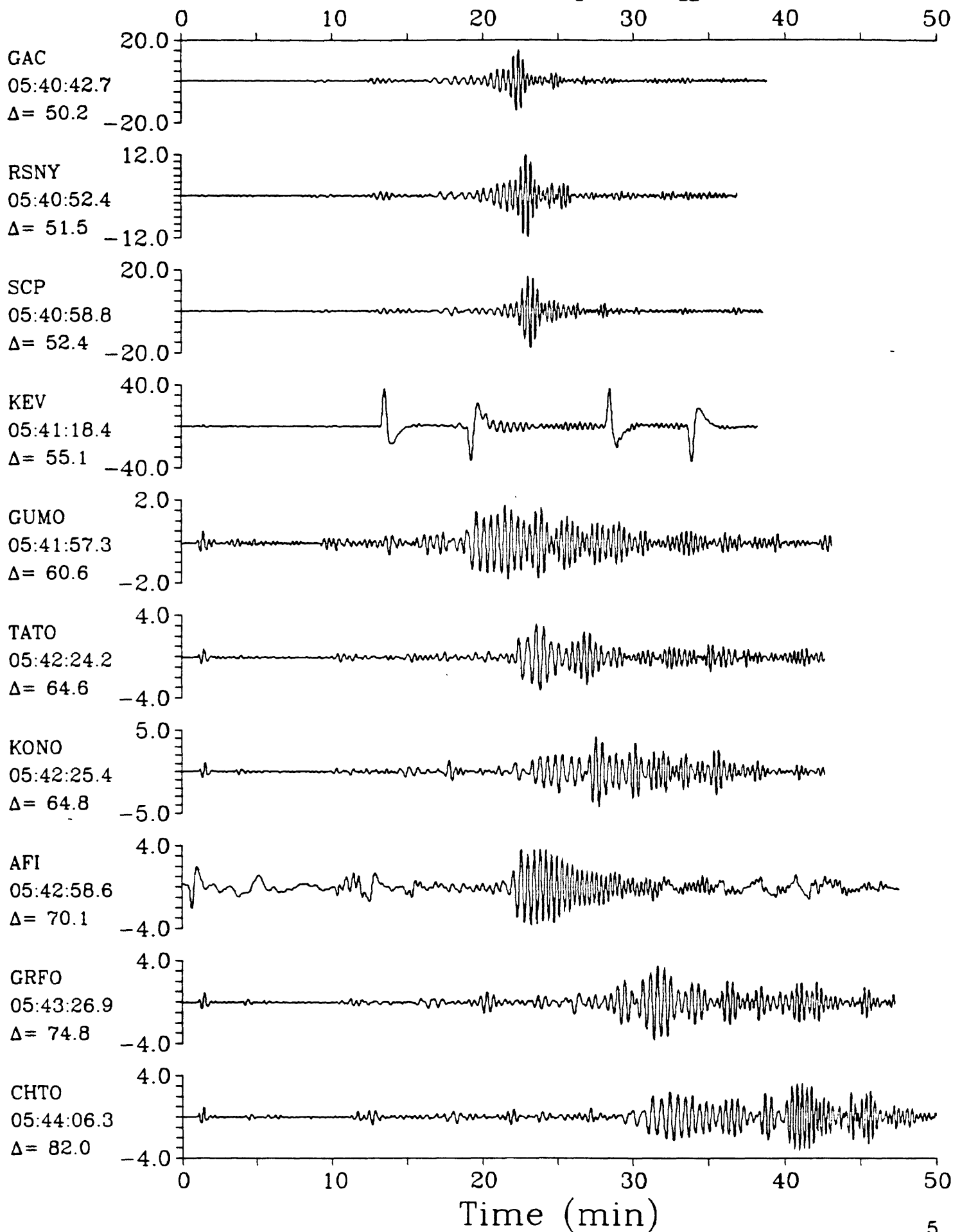
LPZ

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LPZ

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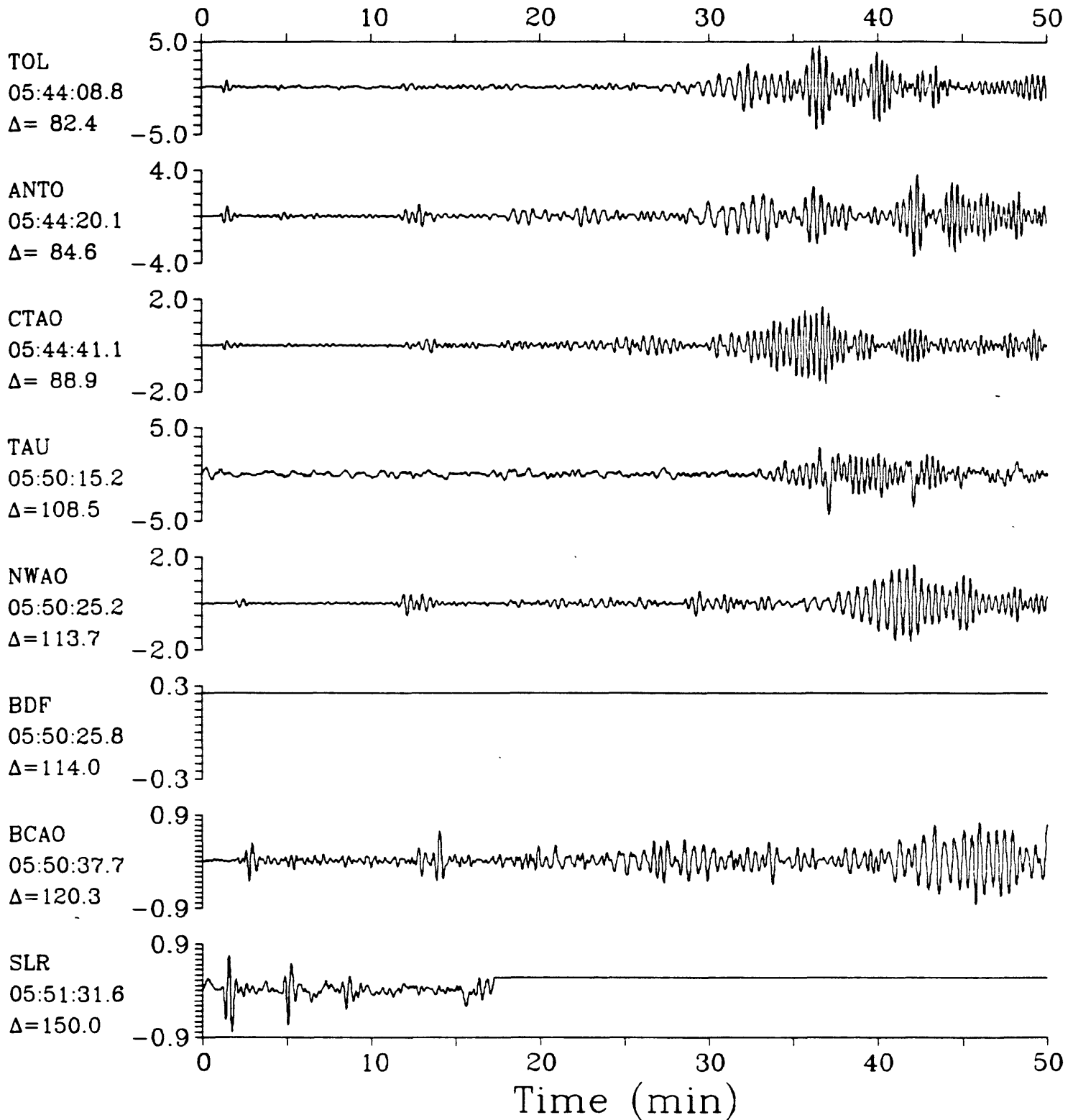
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LPZ

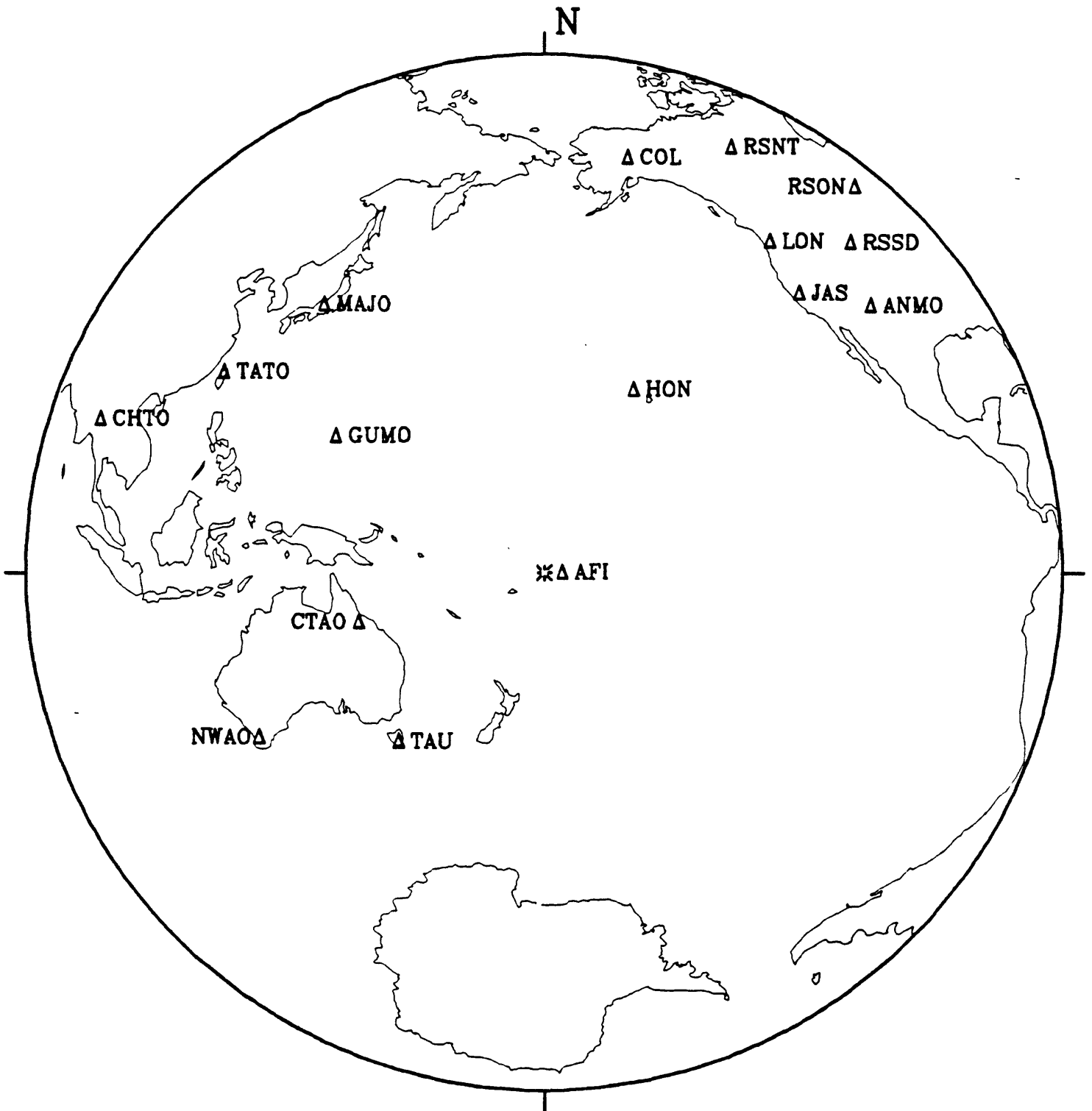
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LPZ



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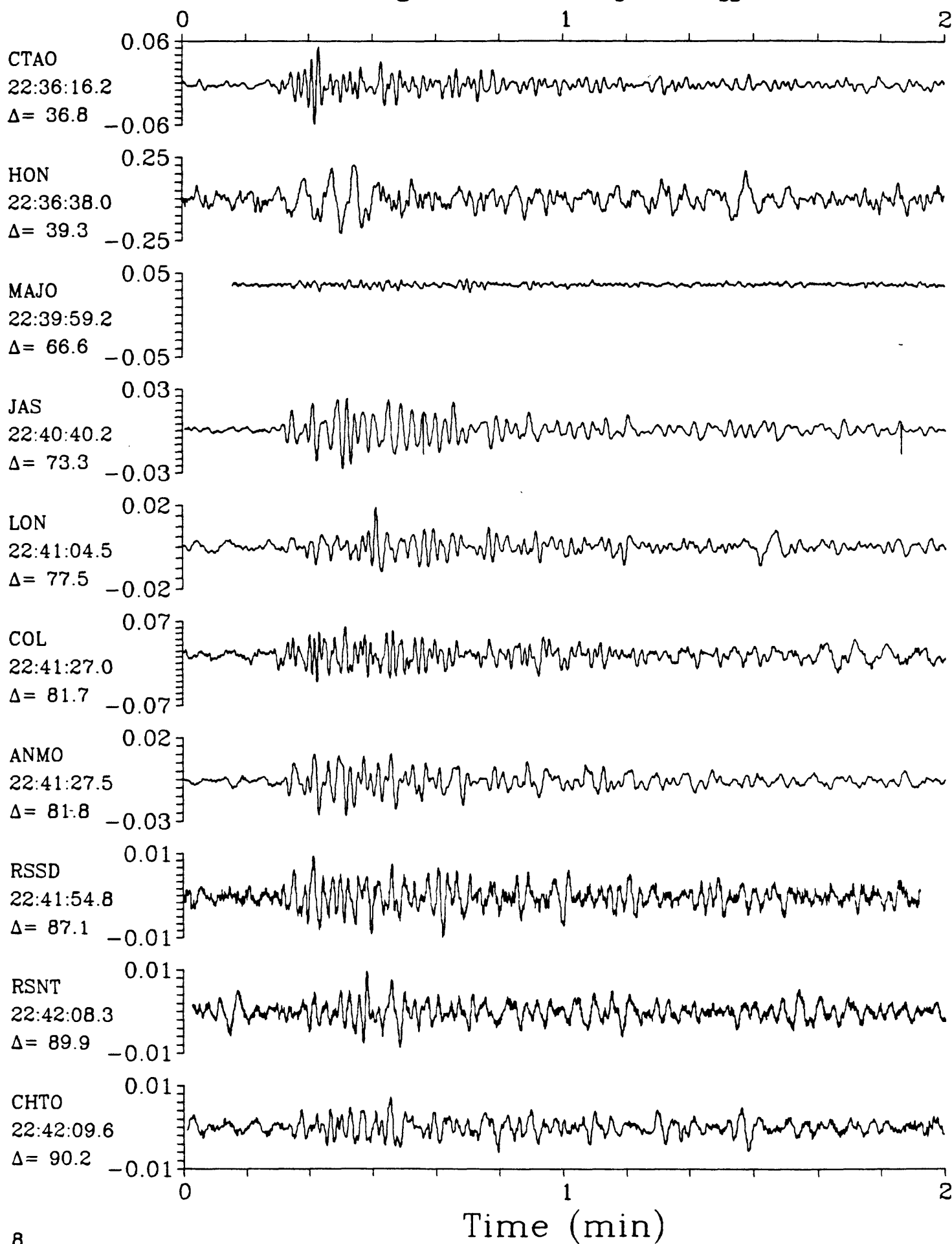
Samoa Islands Region



SPZ

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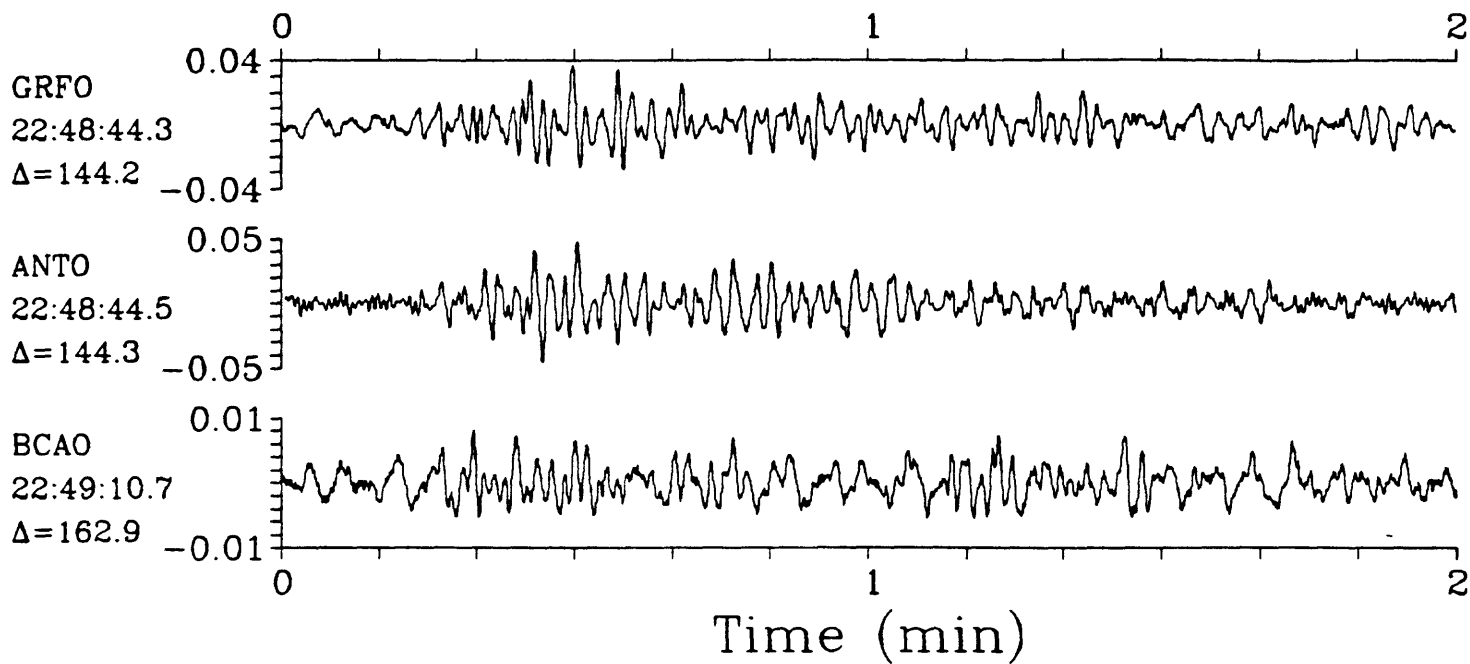
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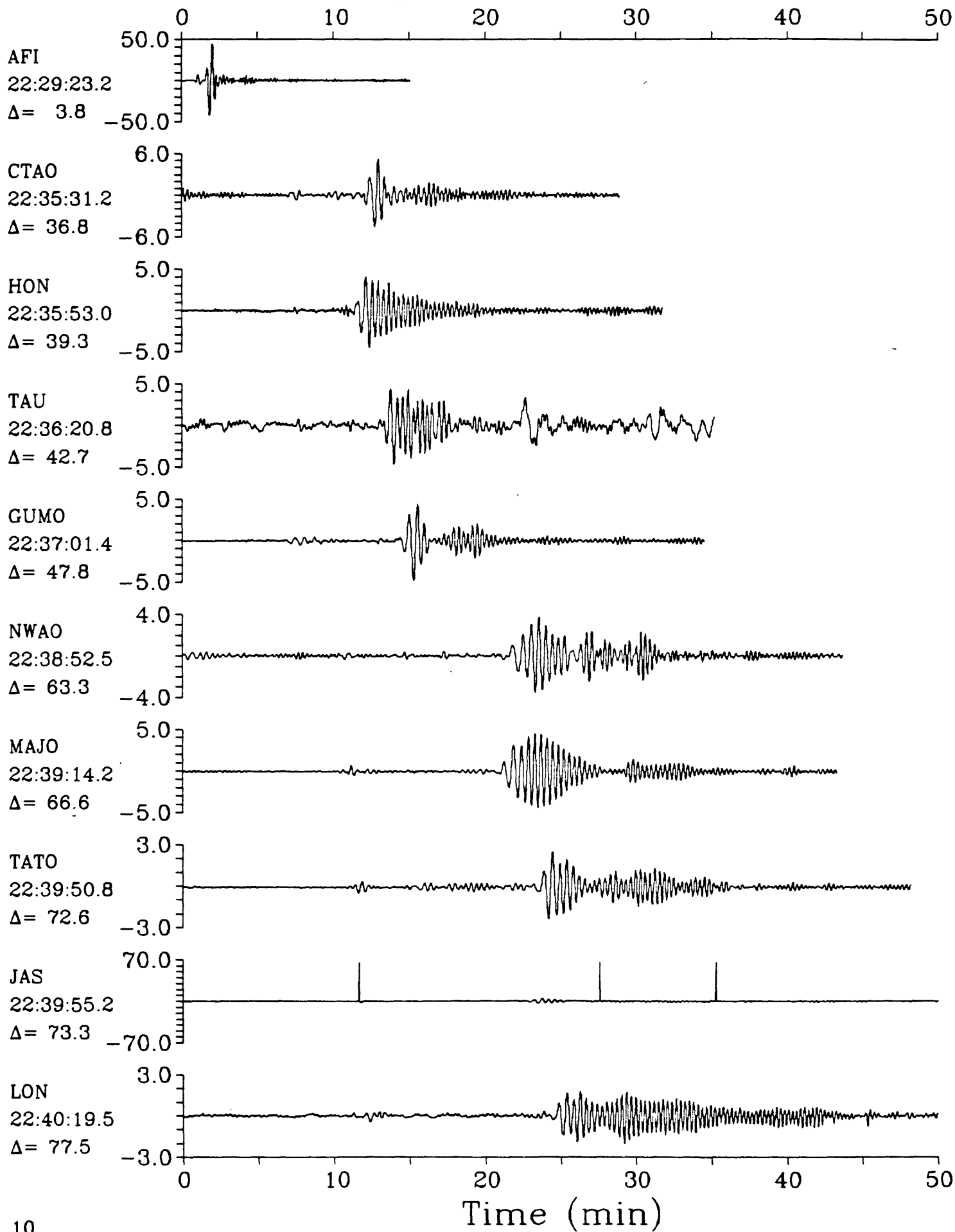
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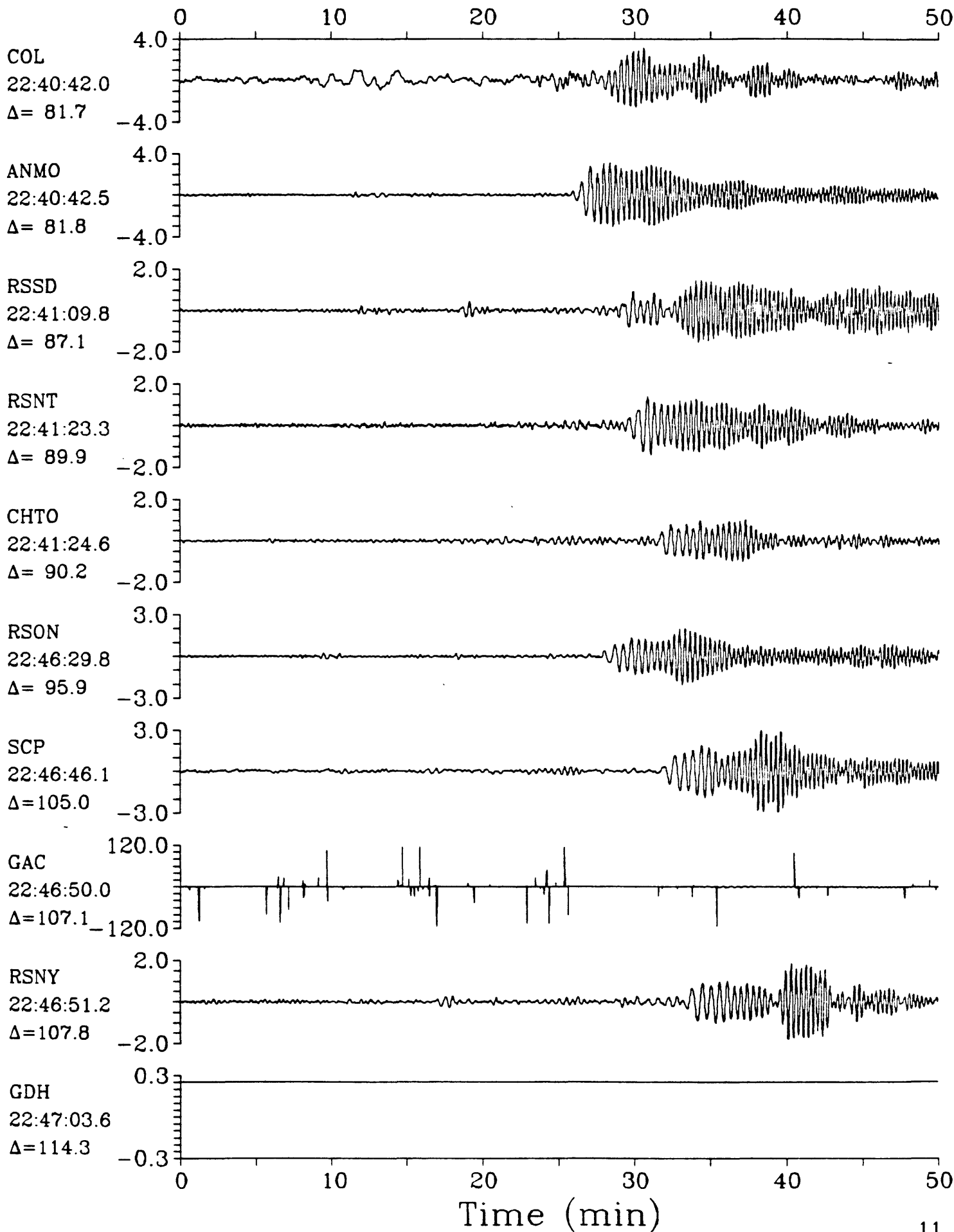
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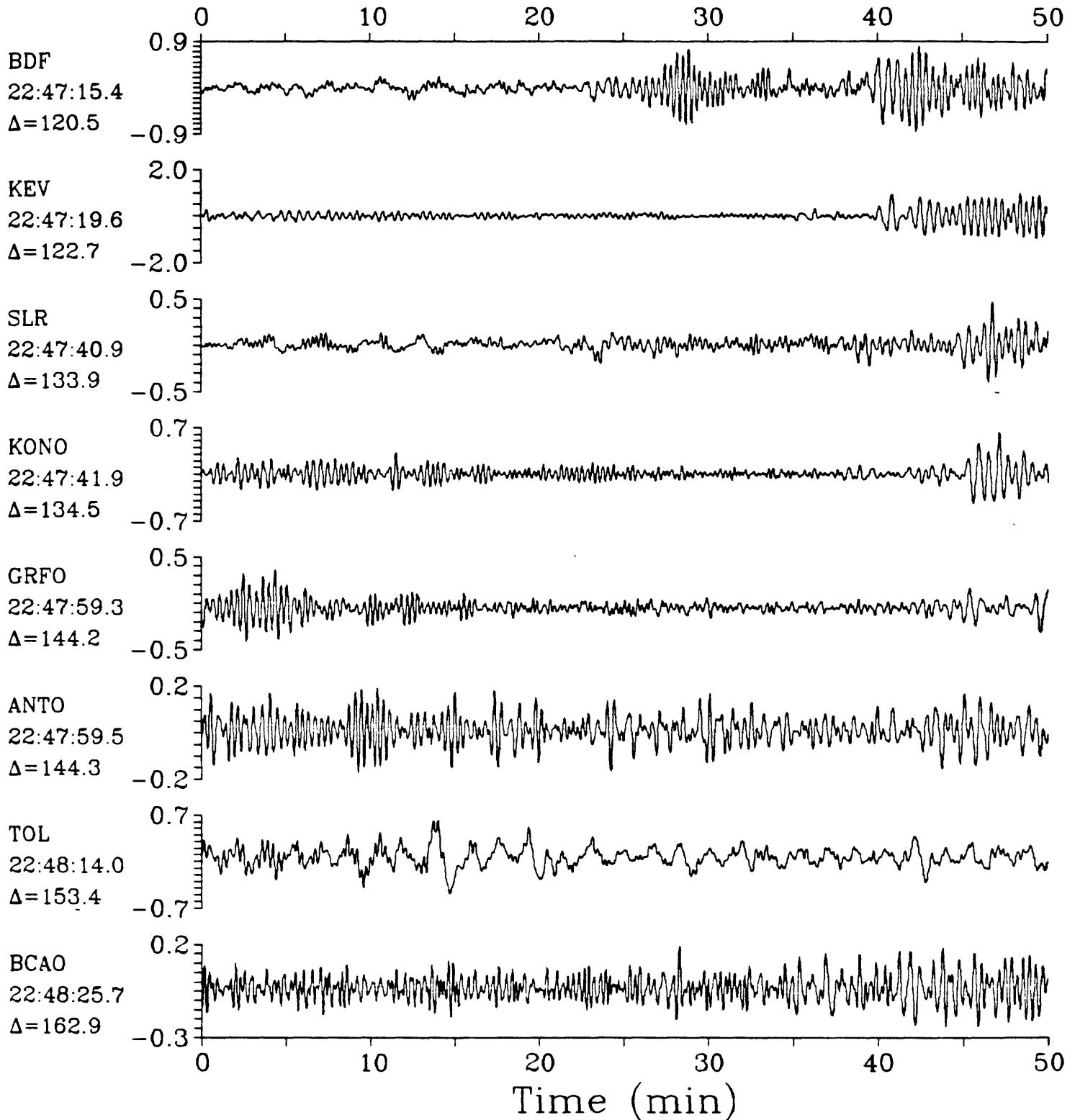
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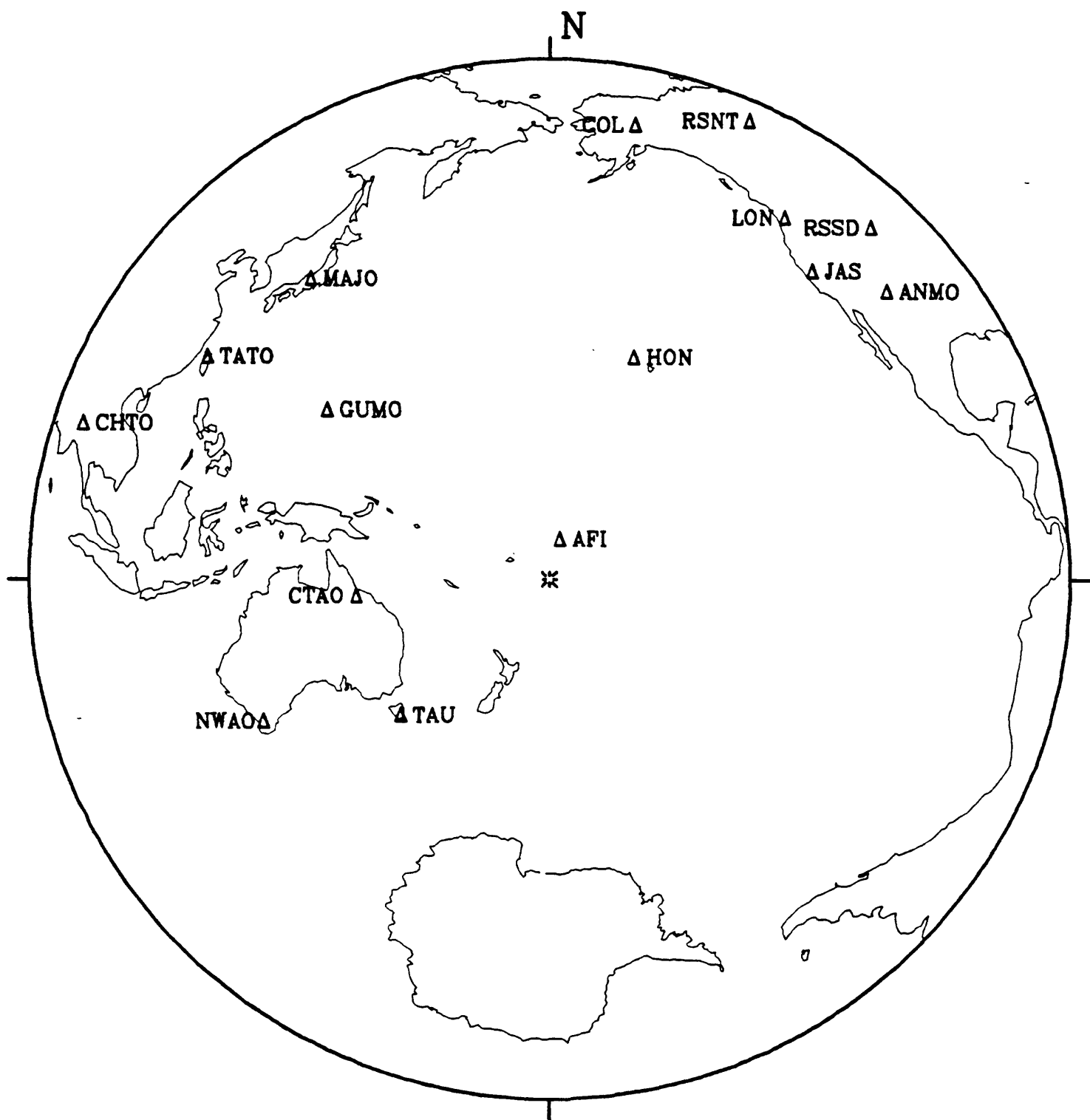
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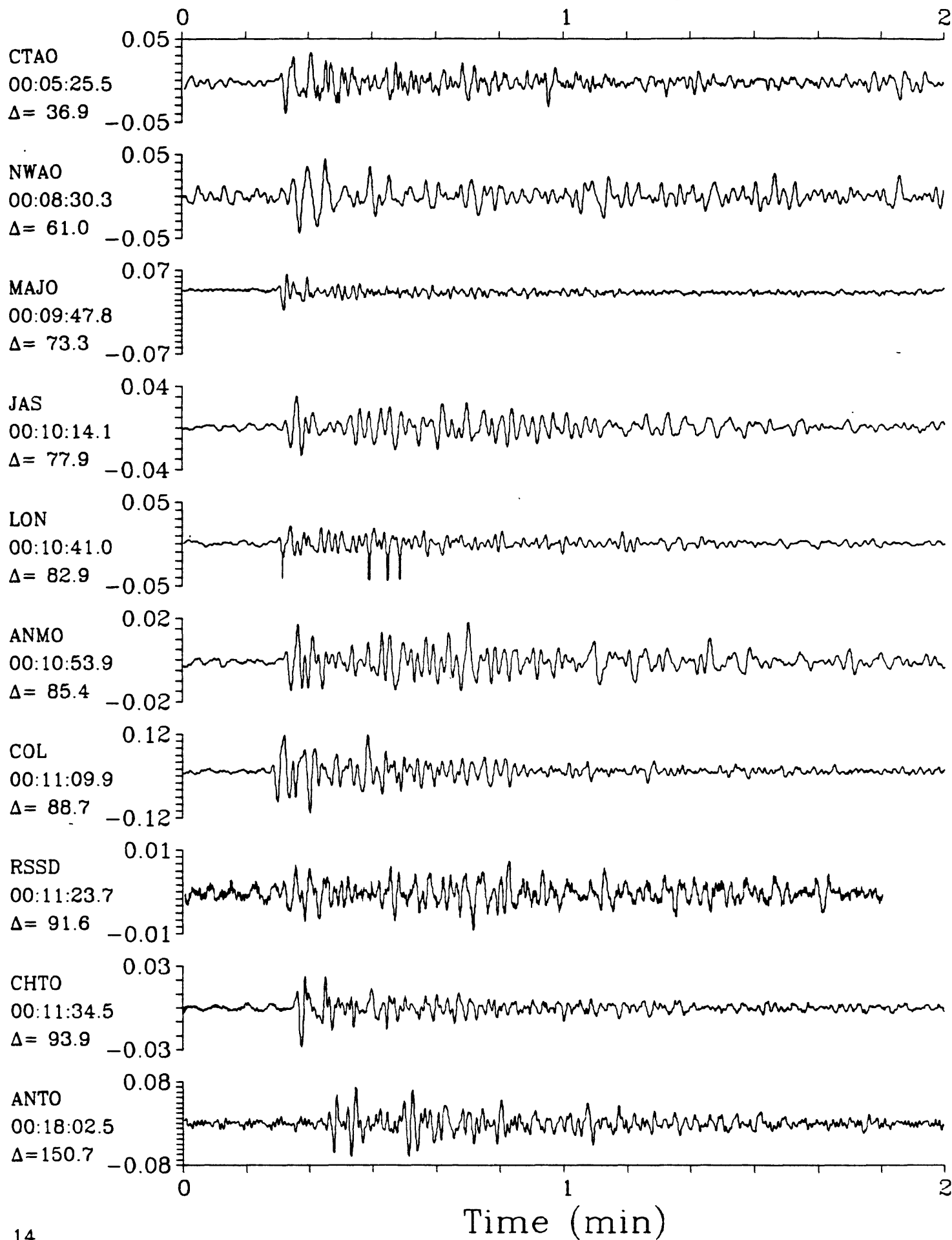
Tonga Islands



SPZ

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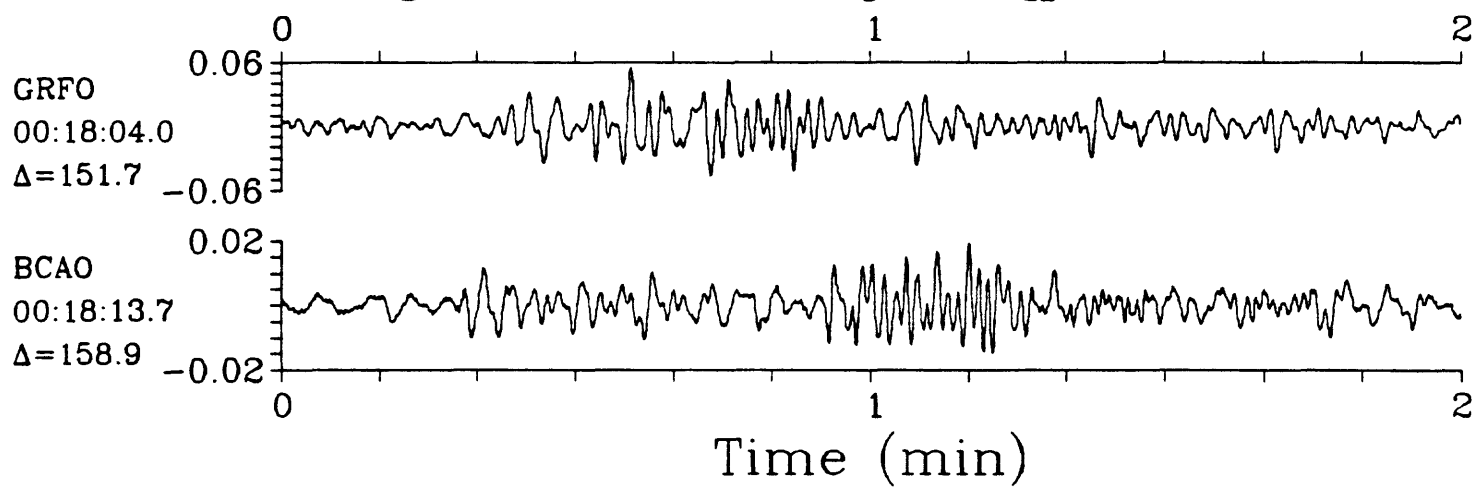
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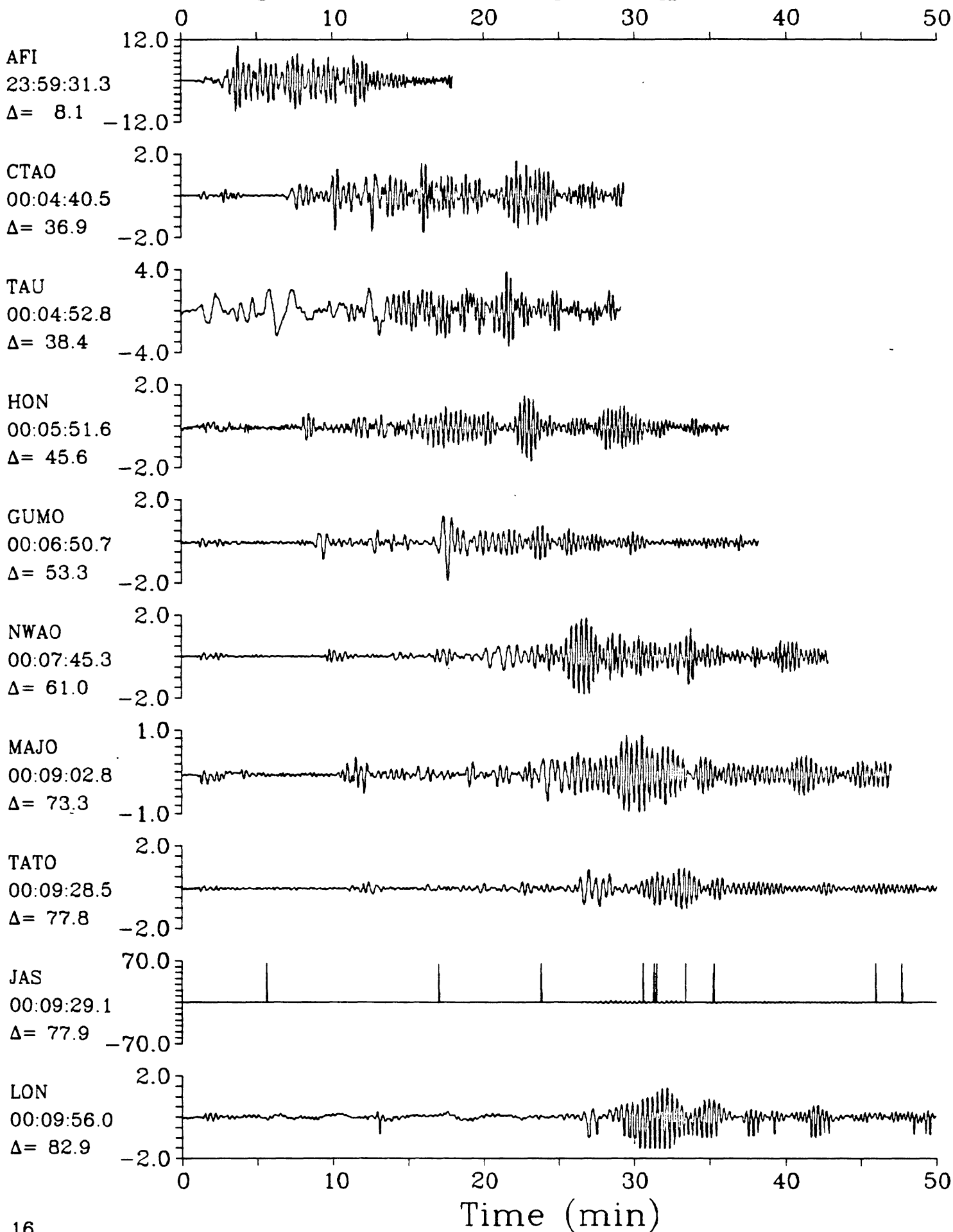
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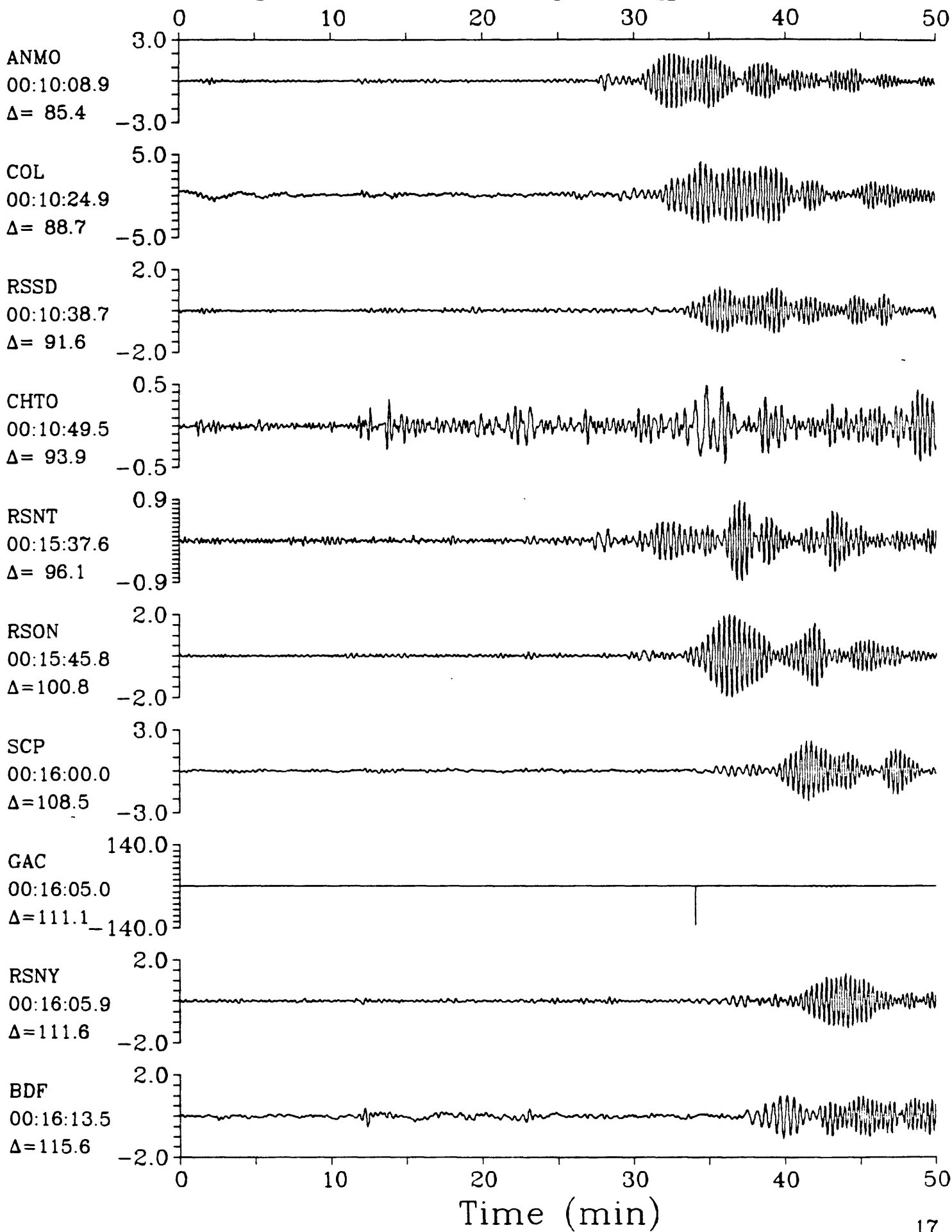
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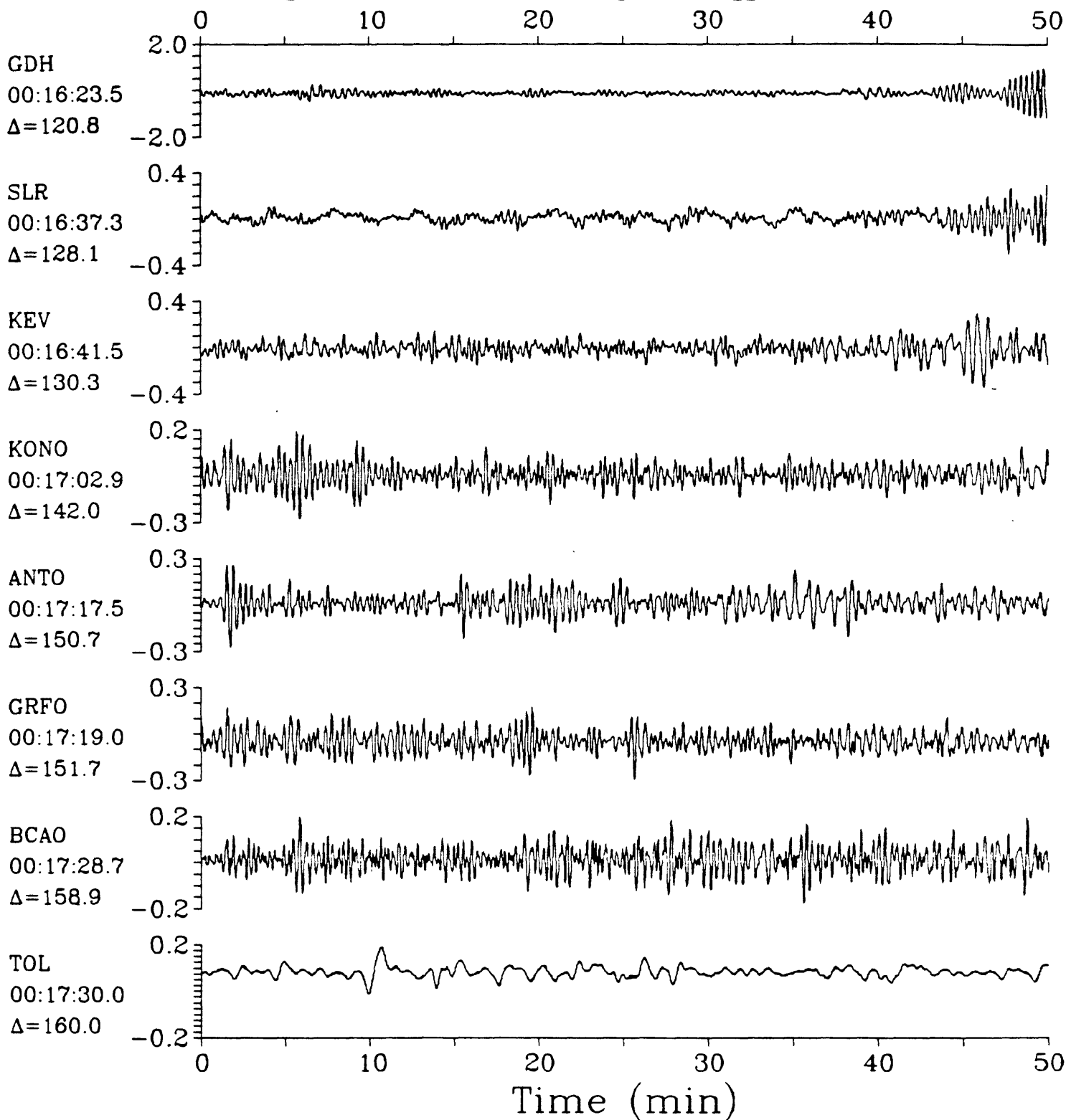
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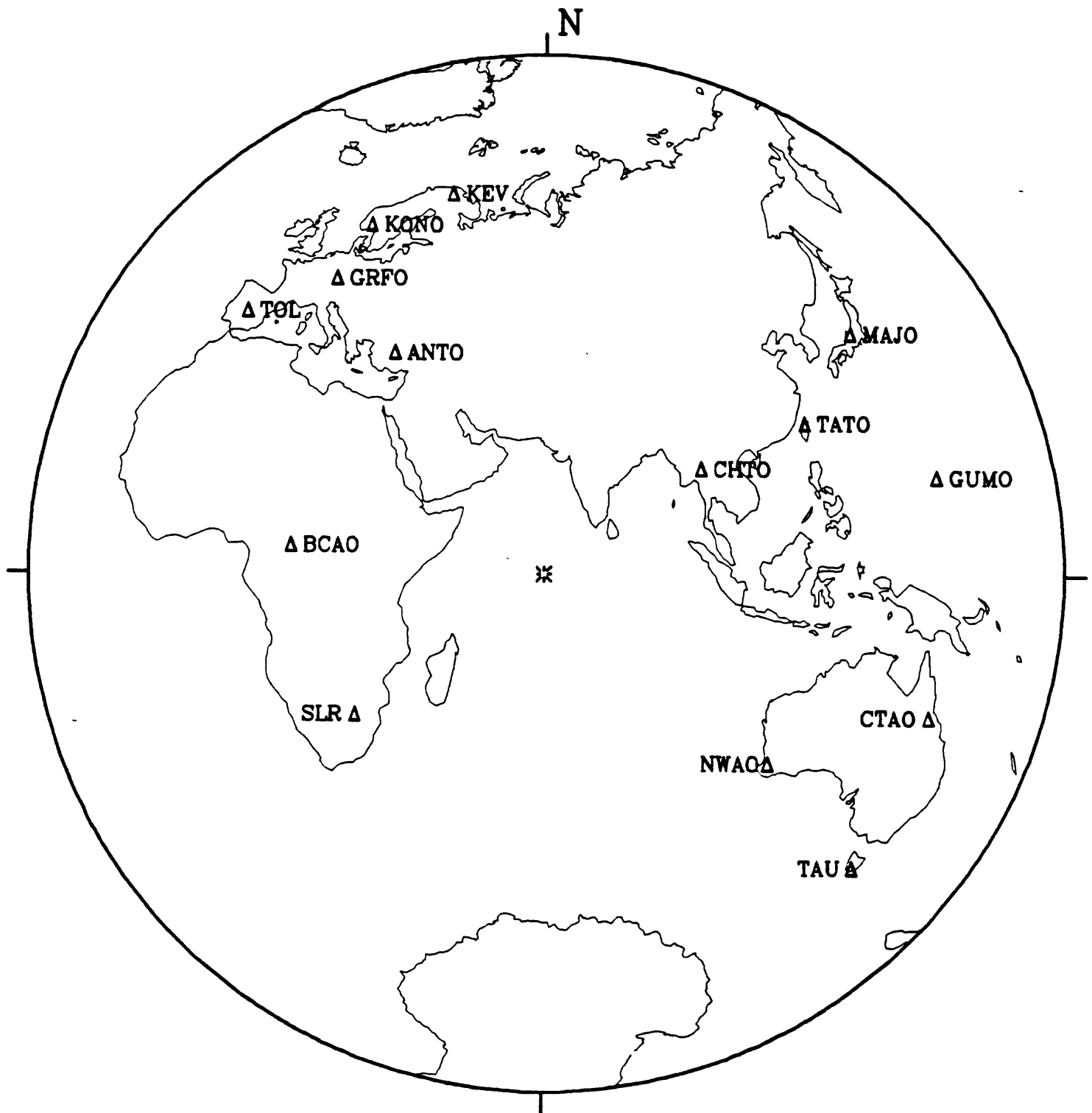
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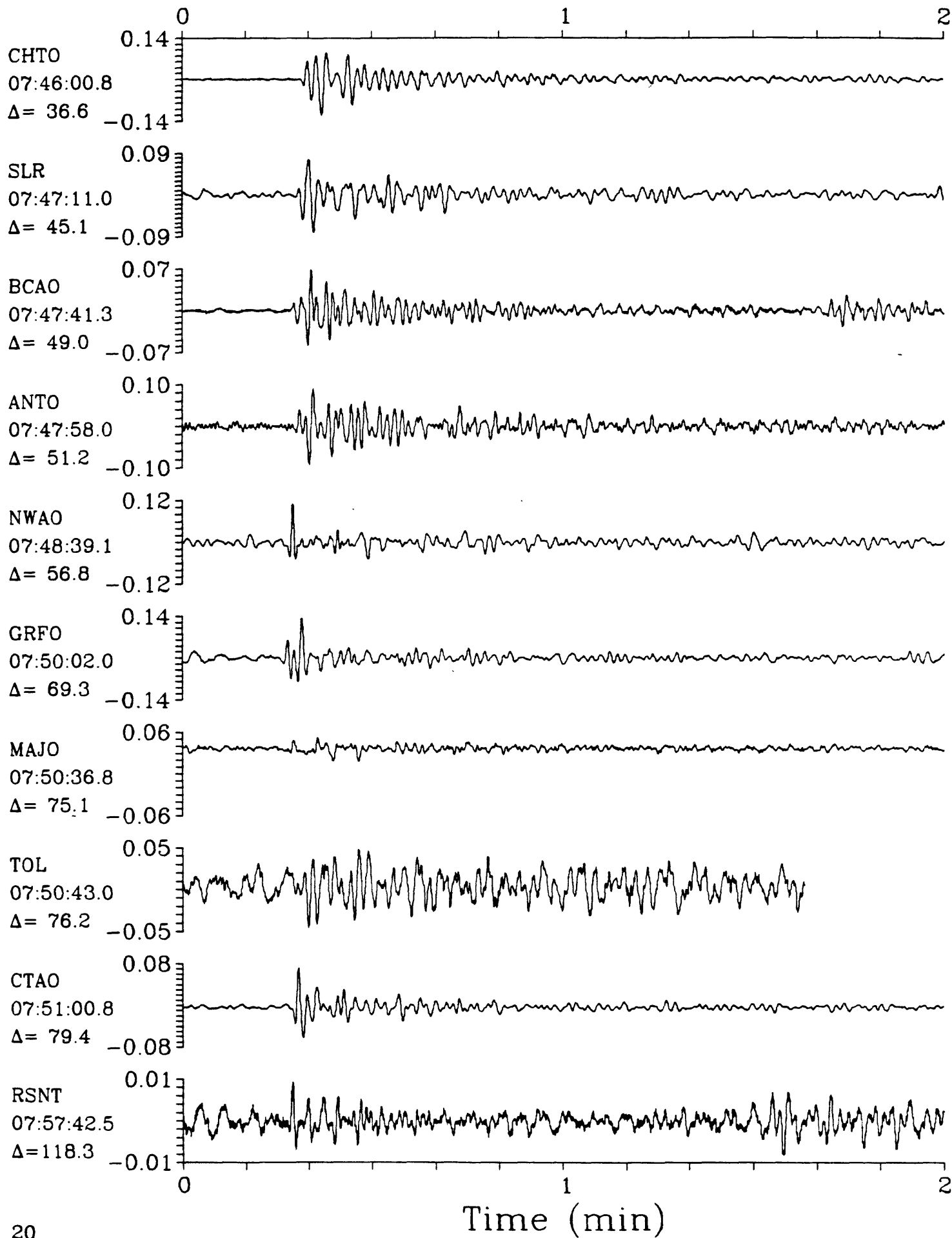
Carlsberg Ridge



SPZ

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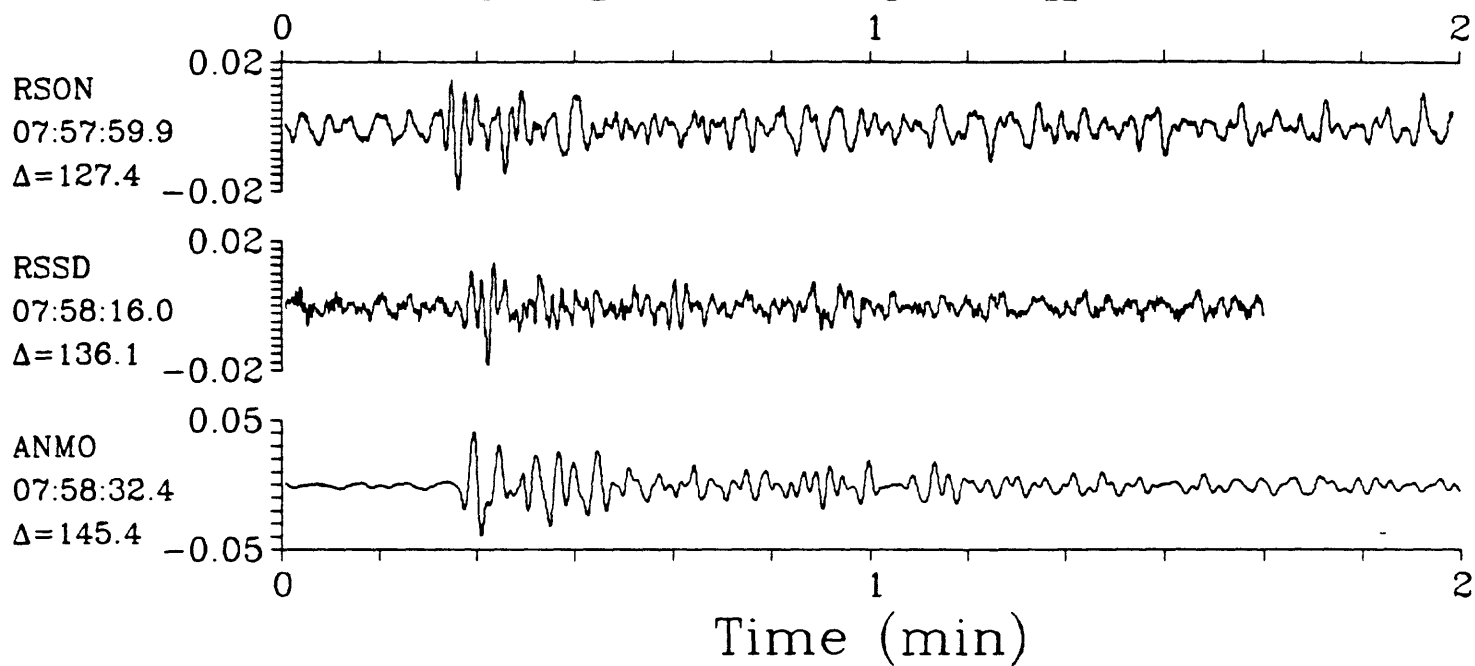
SPZ



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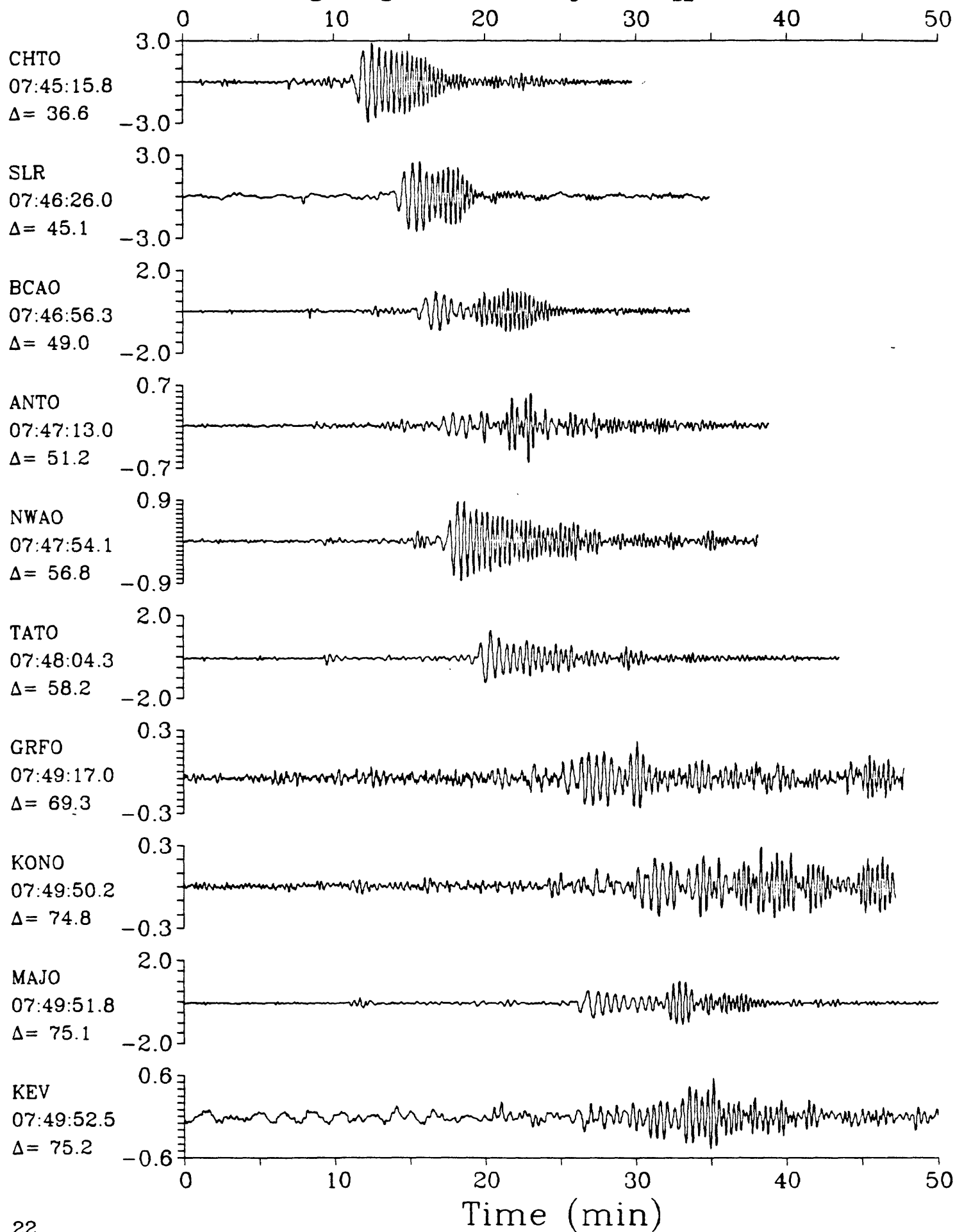
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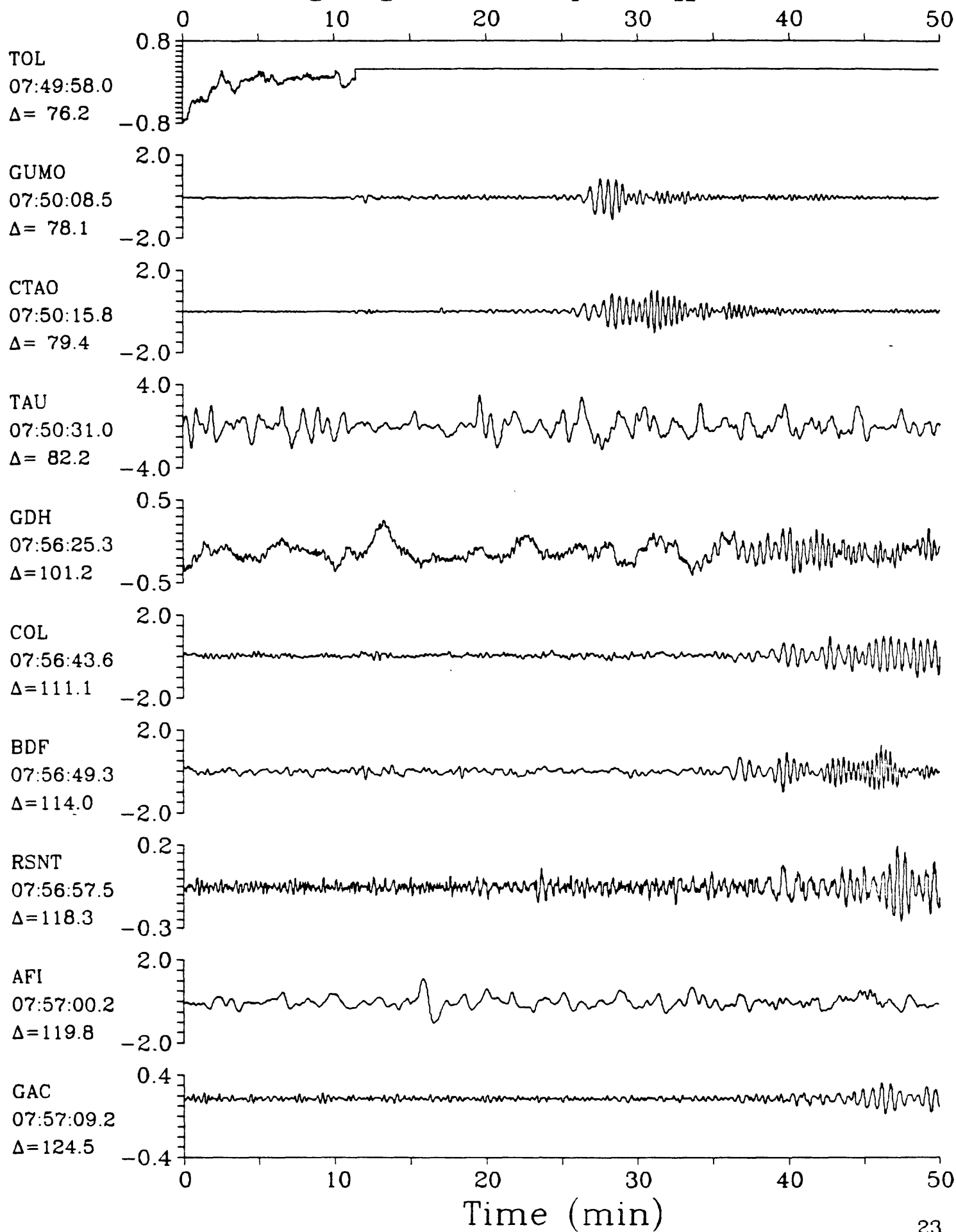
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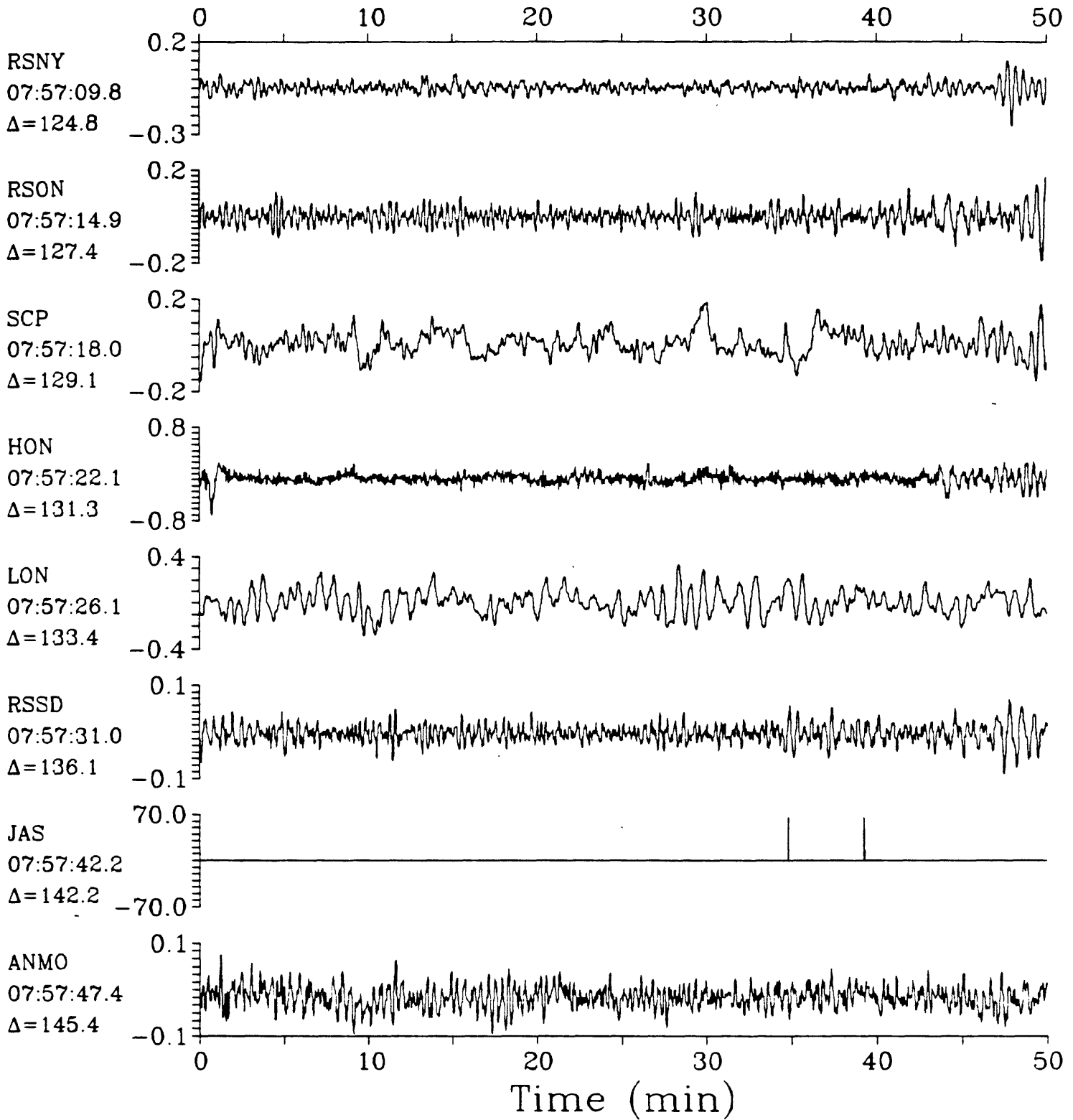
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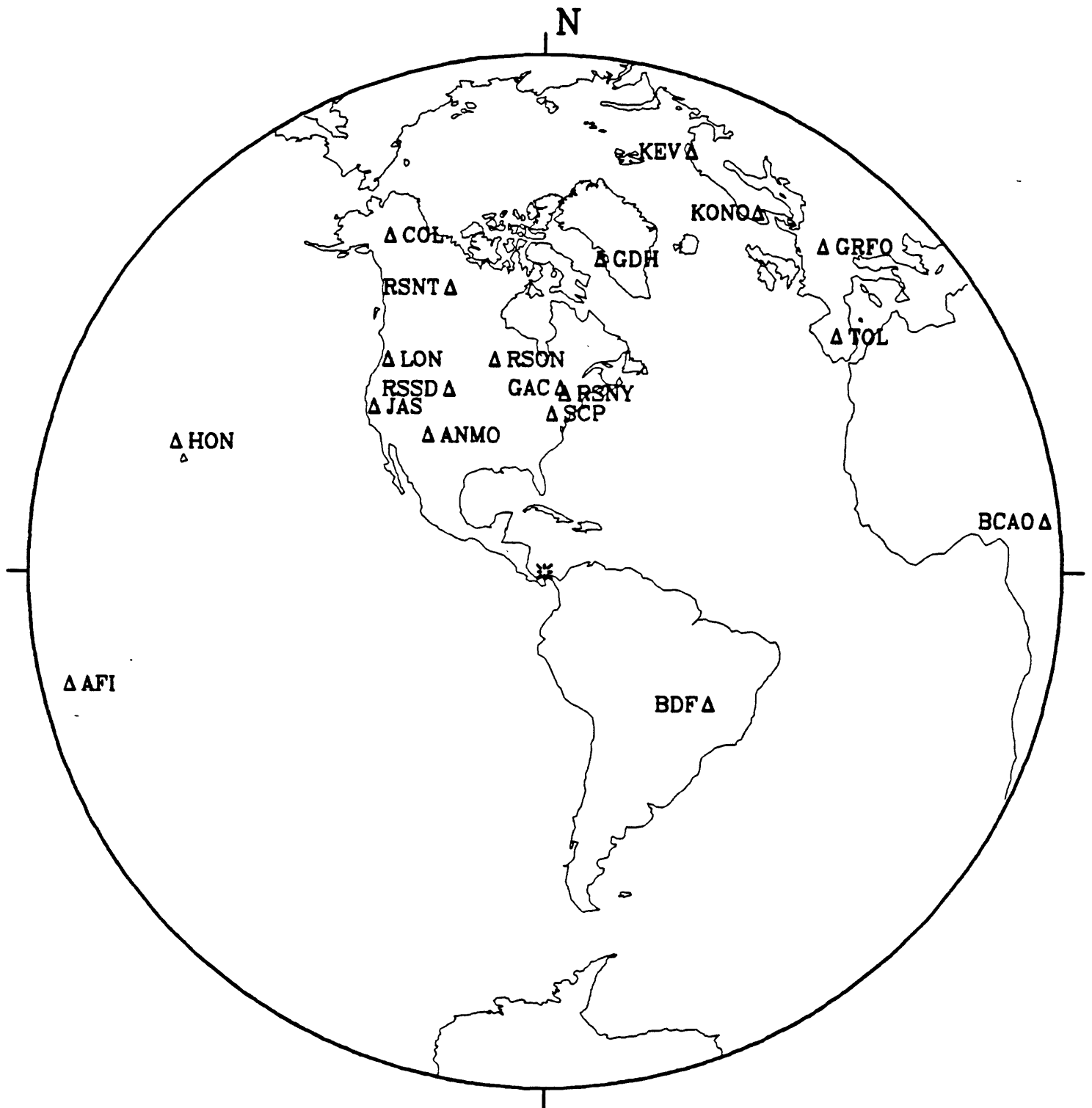
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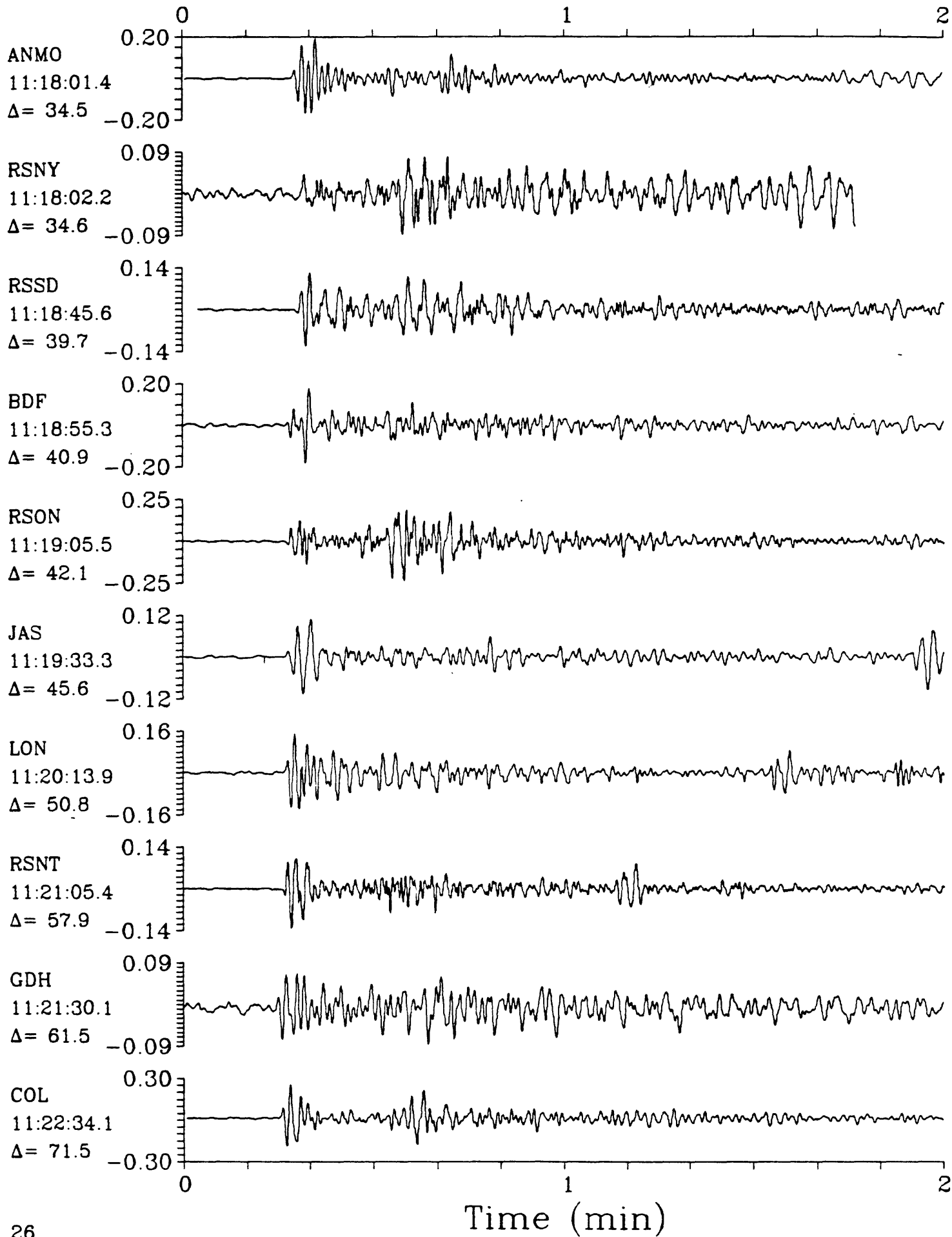
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North of Panama

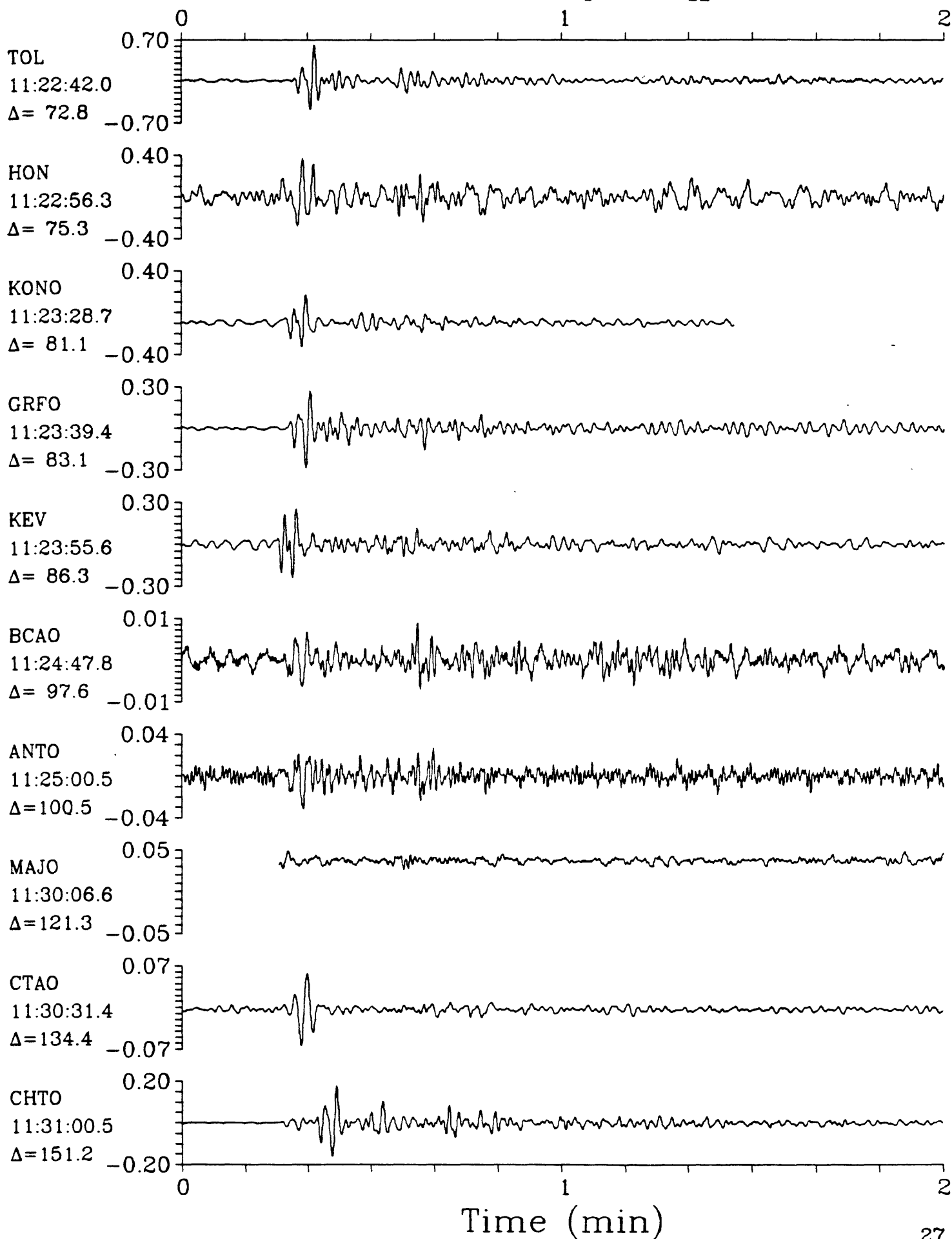


North of Panama $h=32.3$ $m_b=6.2$ $M_{sz}=5.7$ 

SPZ

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North of Panama $h=32.3$ $m_b=6.2$ $M_{sz}=5.7$

SPZ

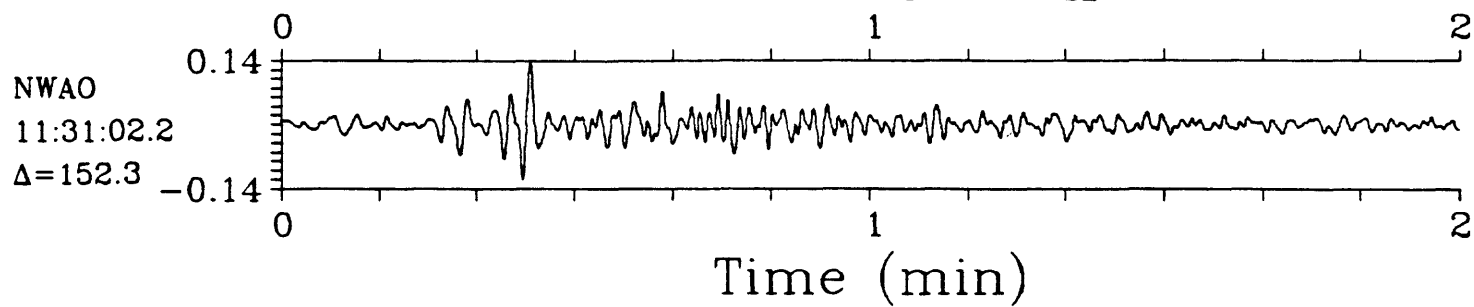


SPZ

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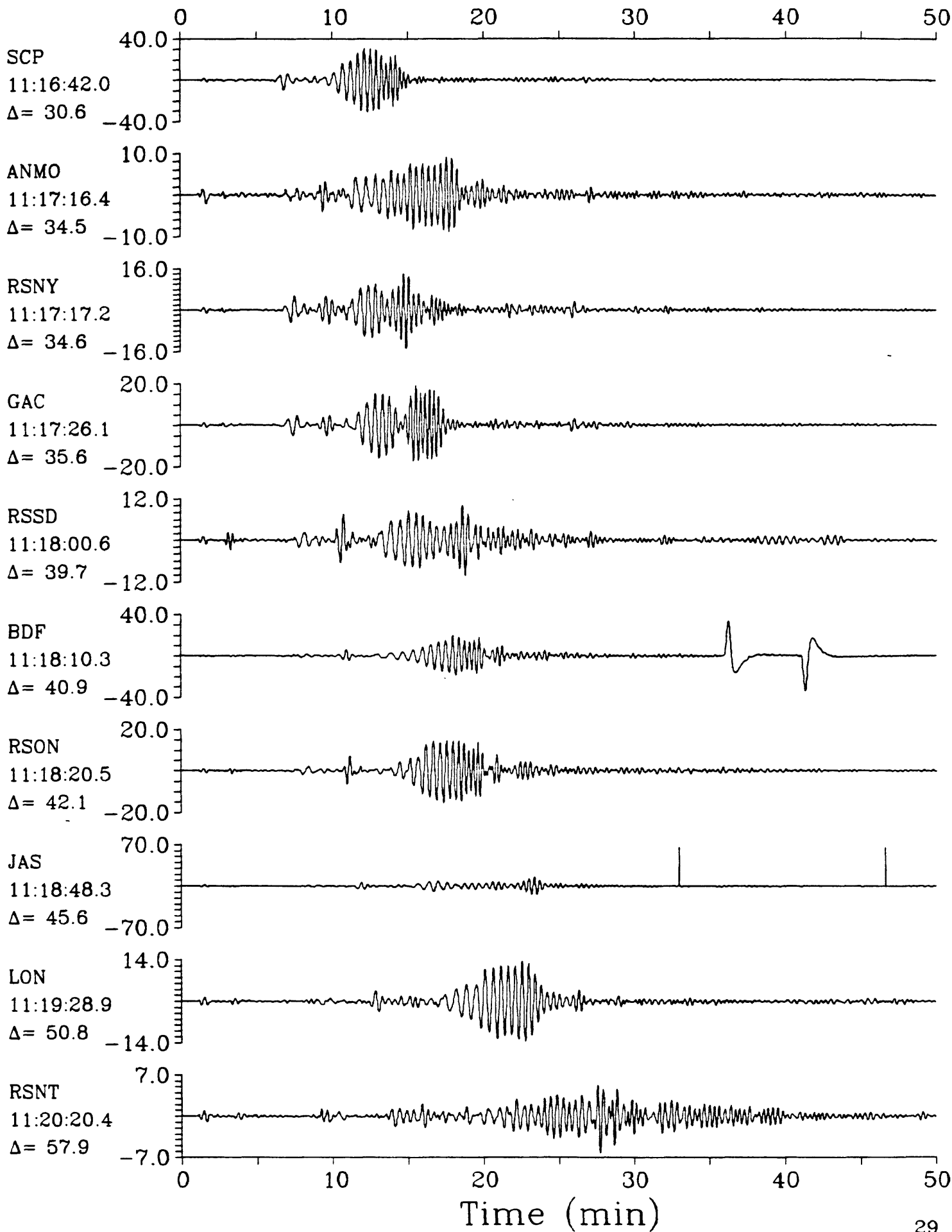
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LPZ

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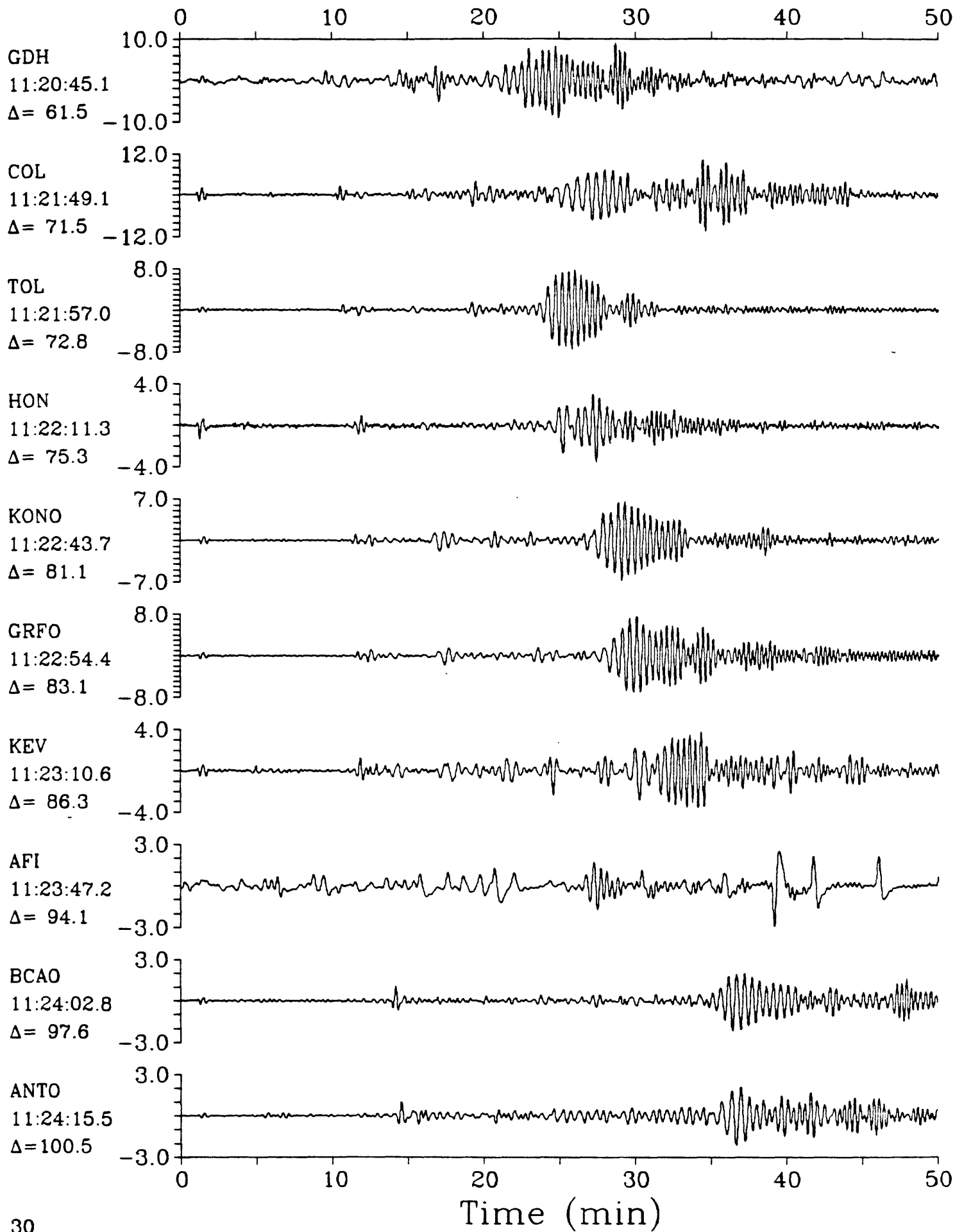
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LPZ

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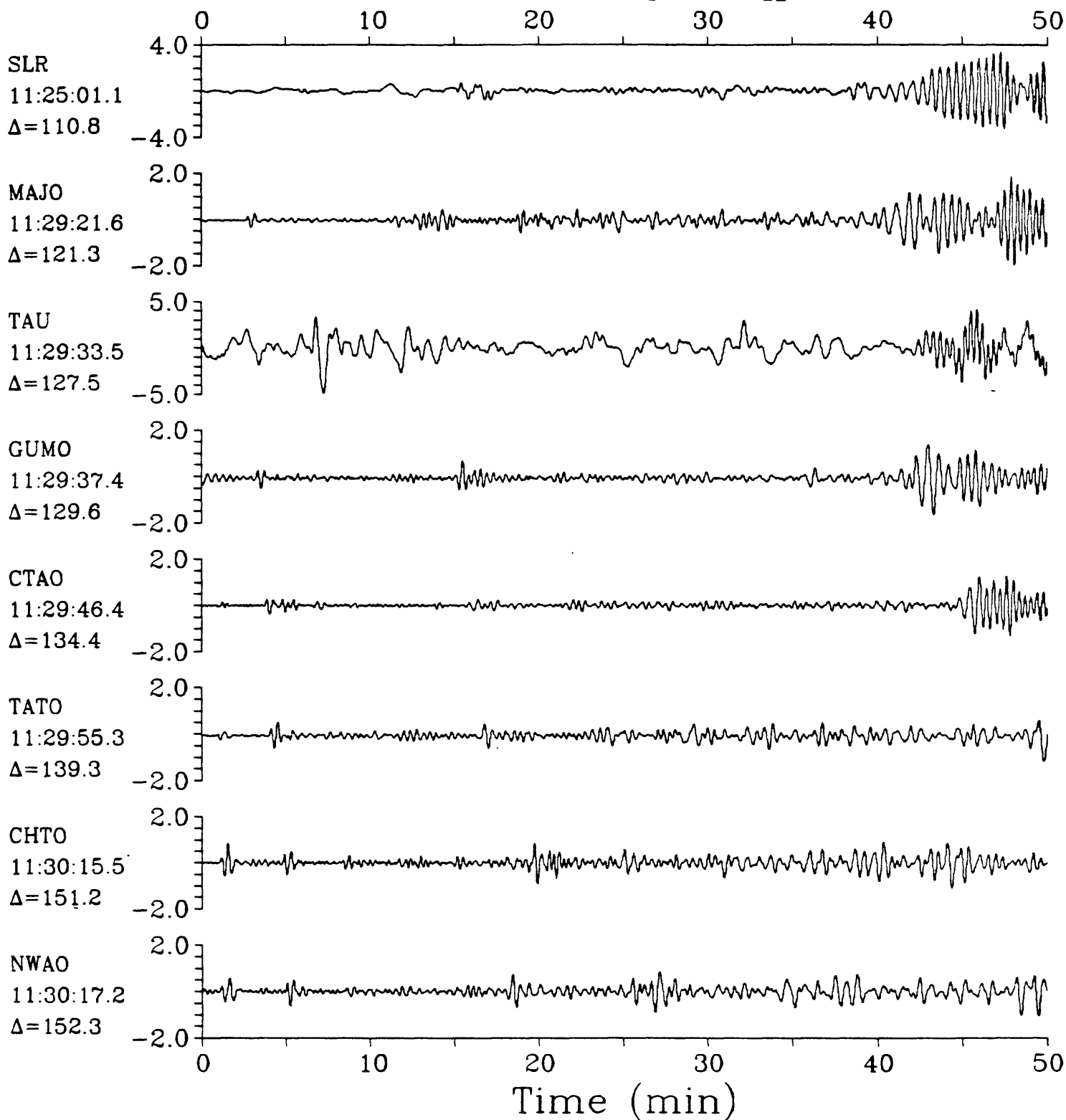
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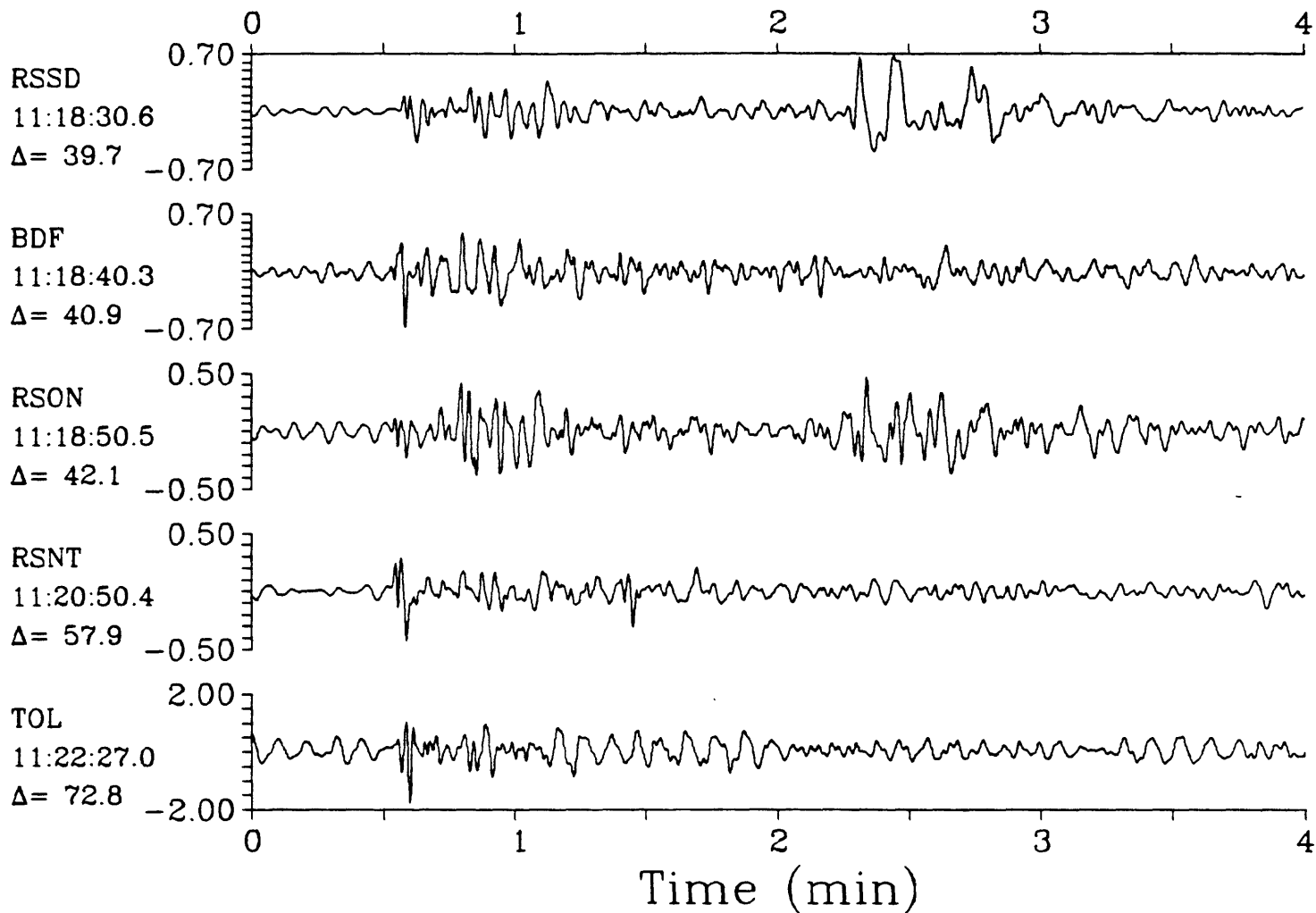
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IPZ

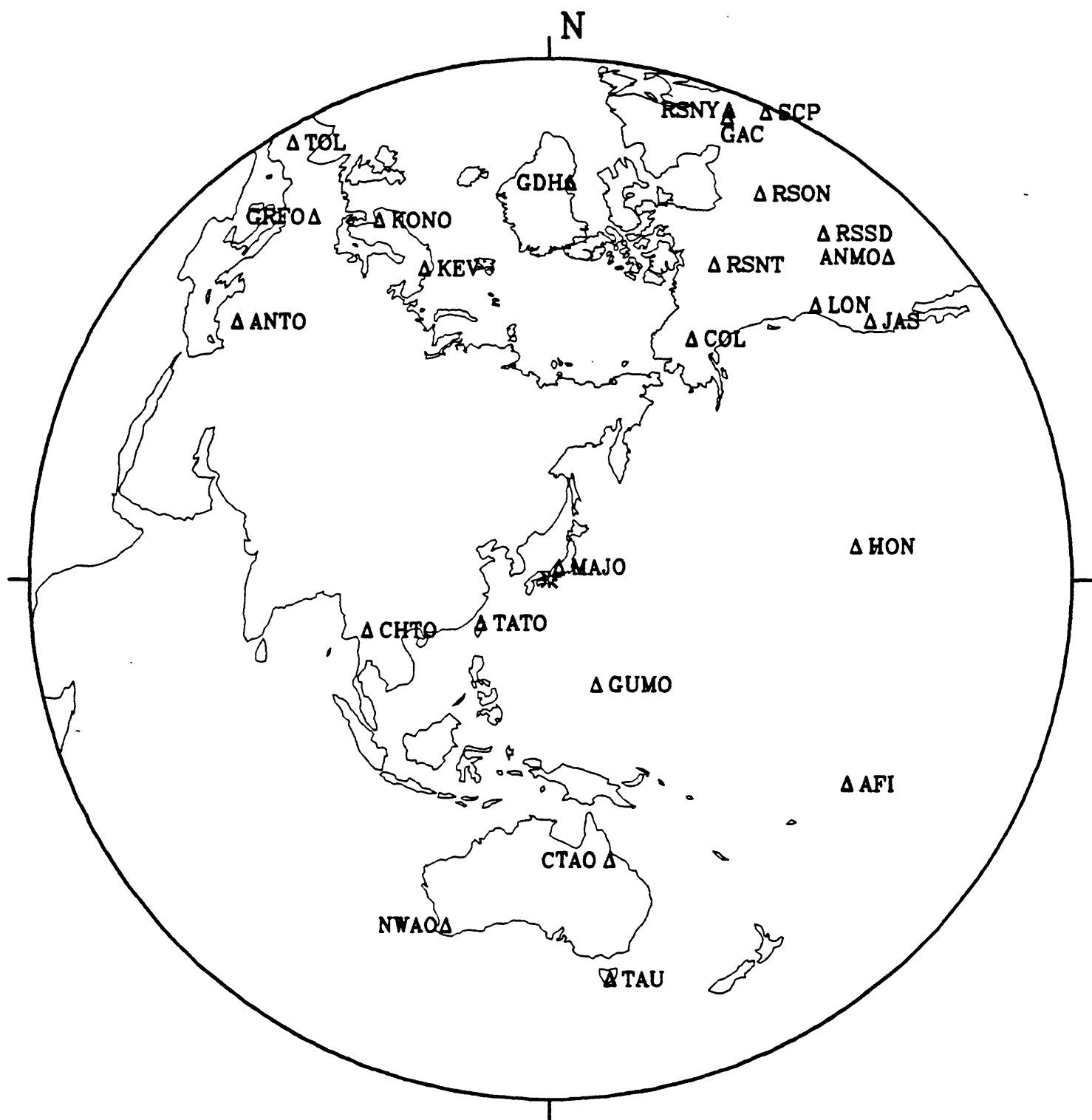
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IPZ

North of Panama $h=32.3$ $m_b=6.2$ $M_{sz}=5.7$ 

05 January 1985 15:45:37.67

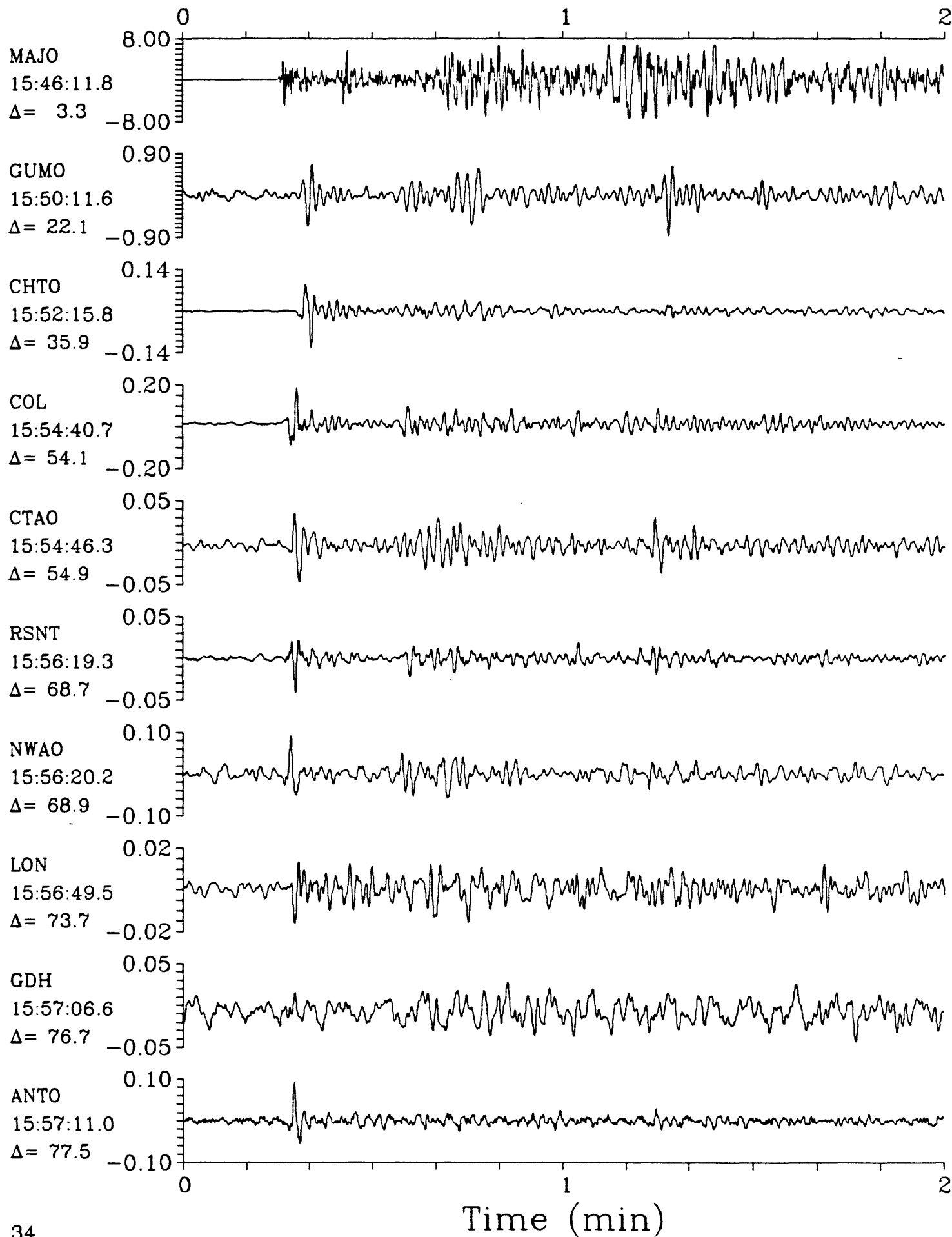
Near S. Coast of Southern Honshu



SPZ

05 January 1985 15:45:37.67

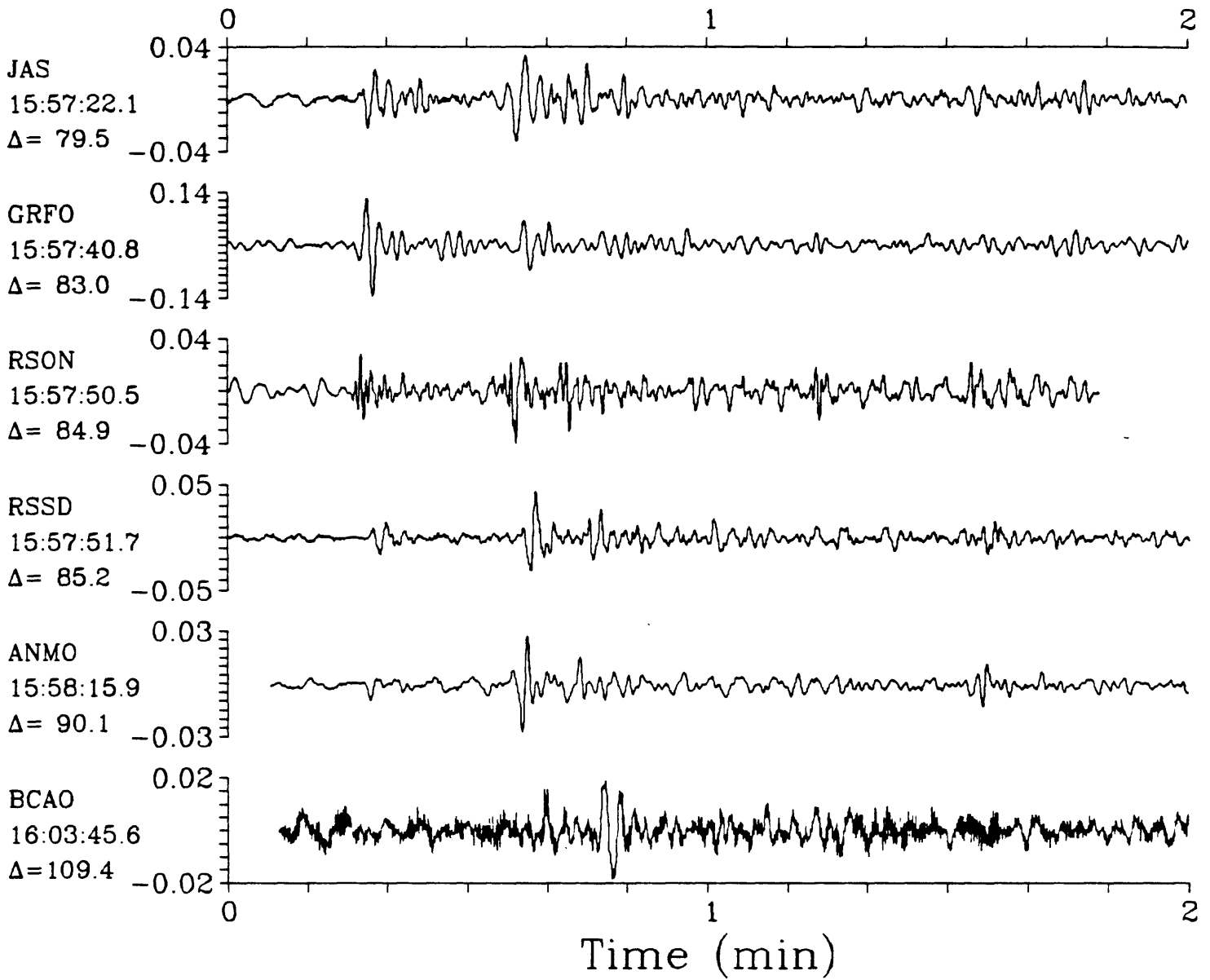
SPZ

Near S. Coast of Southern Honshu $h=71.2$ $m_b=5.6$ 

SPZ

05 January 1985 15:45:37.67

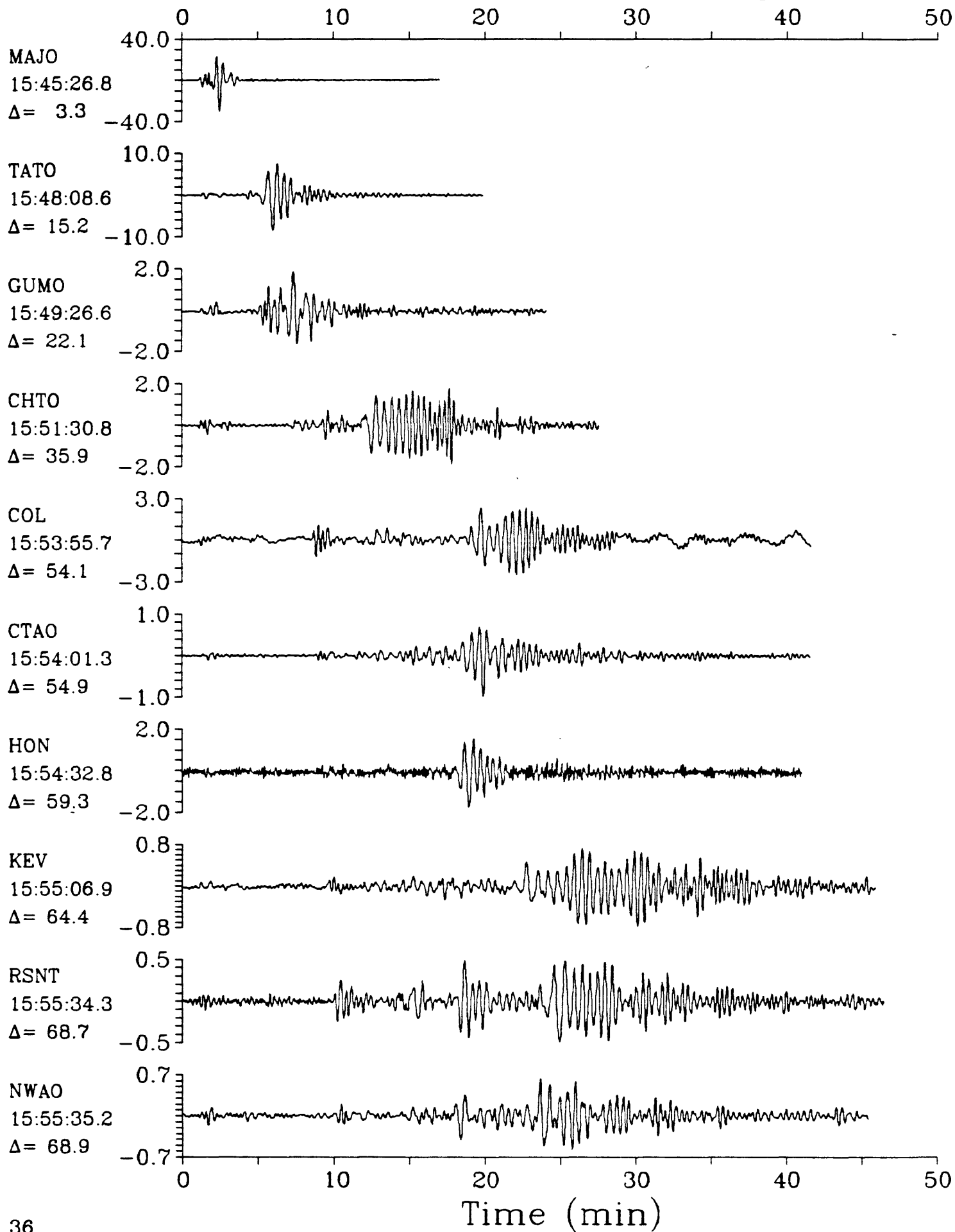
SPZ

Near S. Coast of Southern Honshu $h=71.2$ $m_b=5.6$ 

LPZ

05 January 1985 15:45:37.67

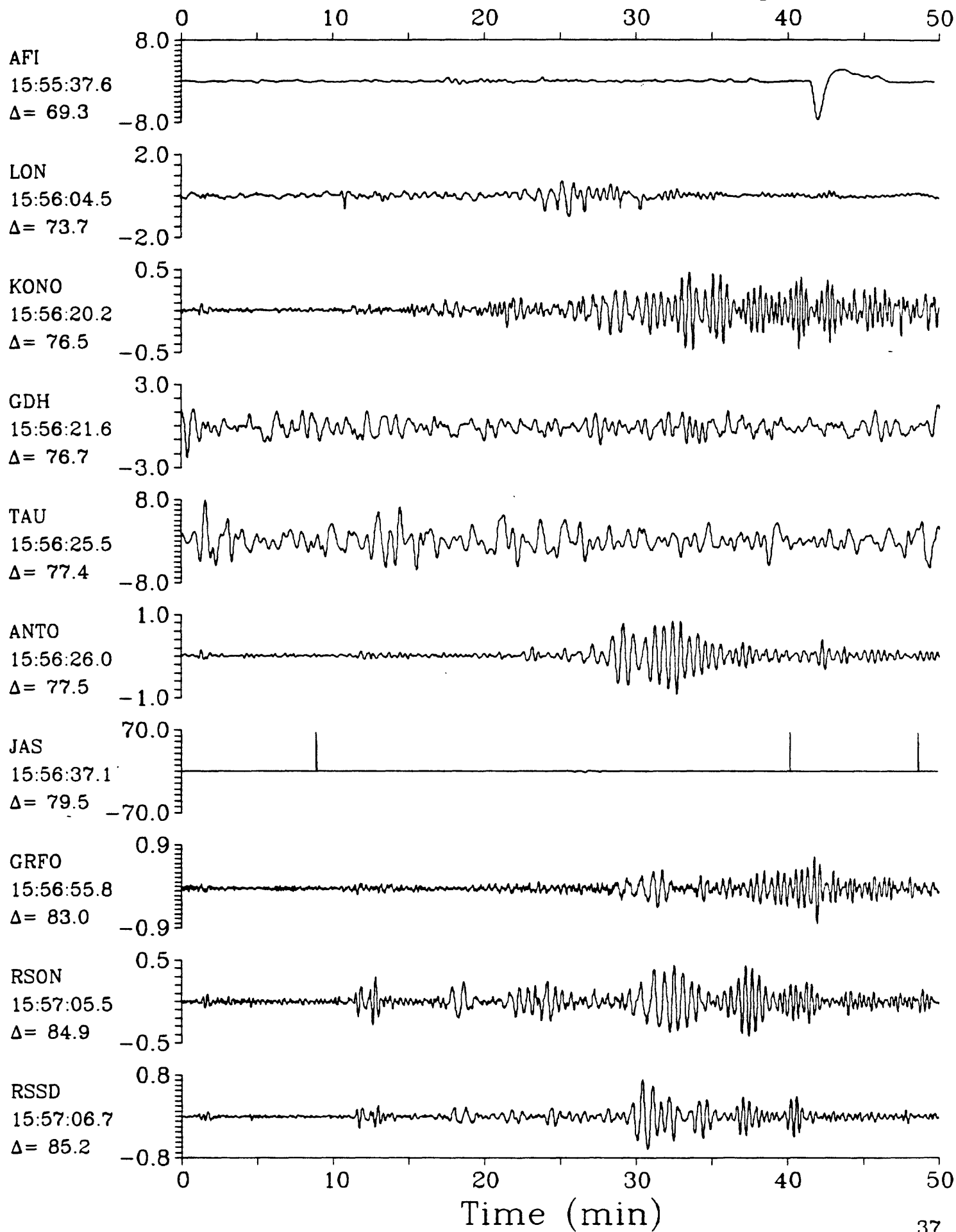
LPZ

Near S. Coast of Southern Honshu $h=71.2$ $m_b=5.6$ 

LPZ

05 January 1985 15:45:37.67

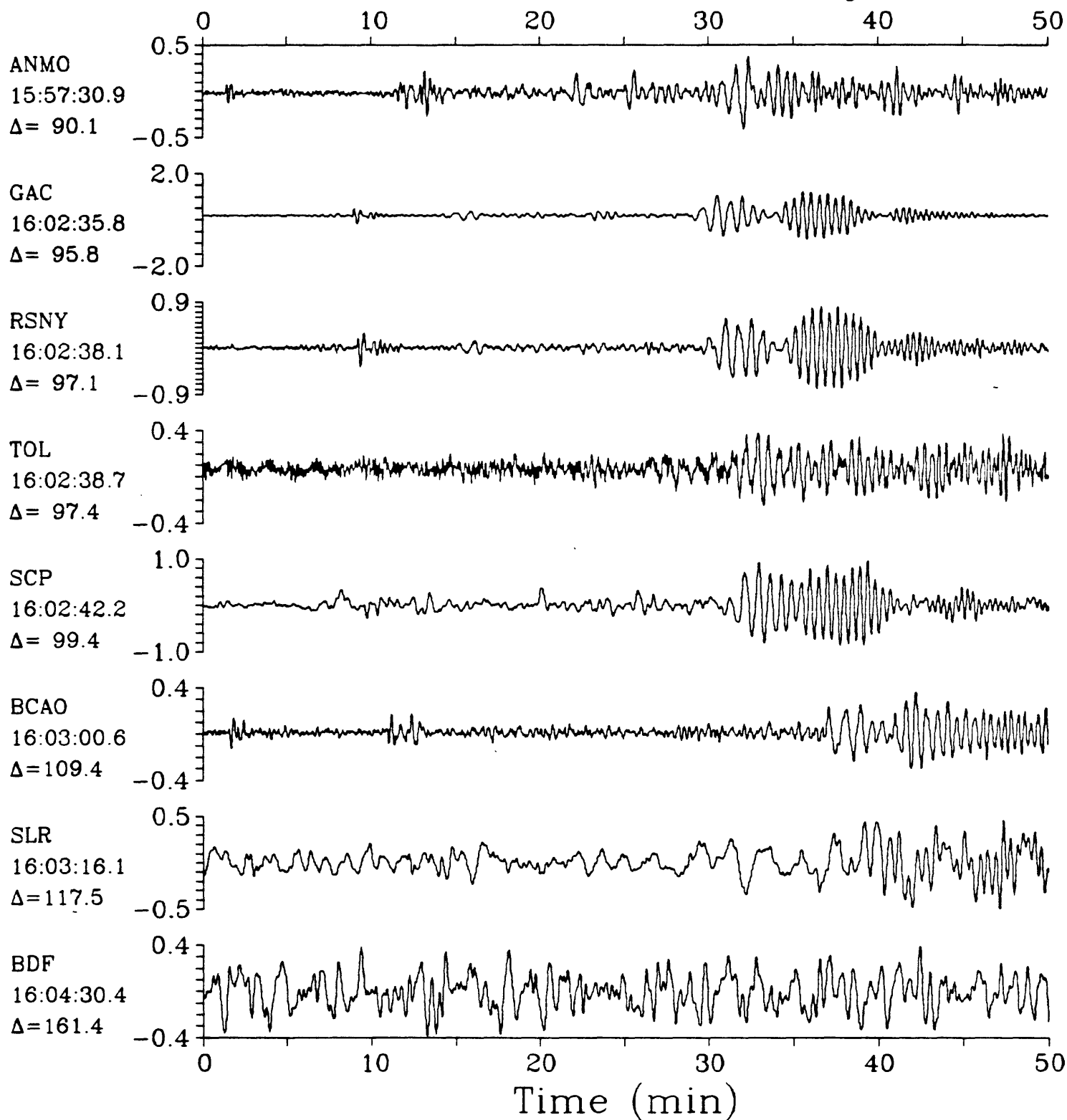
LPZ

Near S. Coast of Southern Honshu $h=71.2$ $m_b=5.6$ 

LPZ

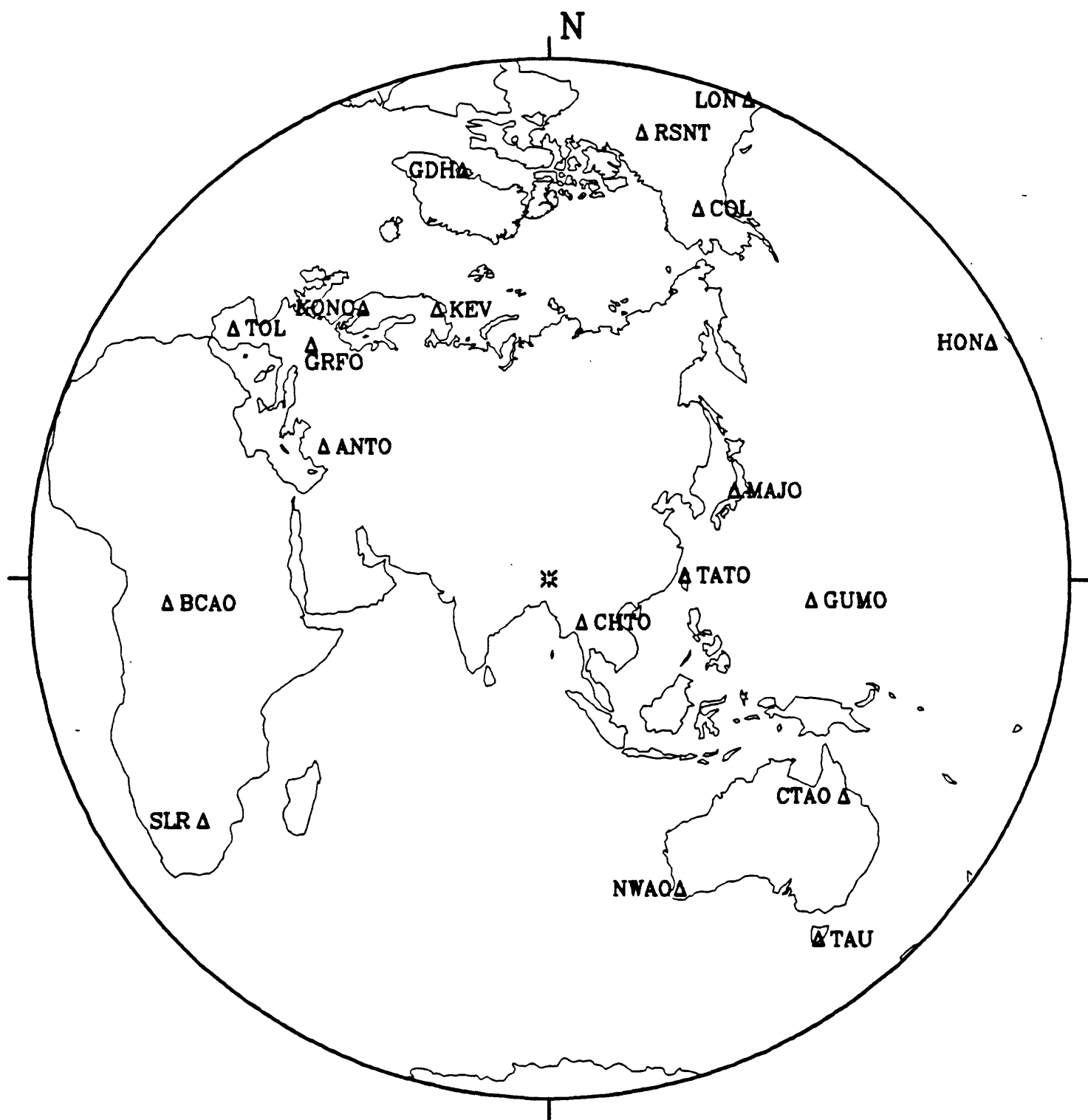
05 January 1985 15:45:37.67

LPZ

Near S. Coast of Southern Honshu $h=71.2$ $m_b=5.6$ 

07 January 1985 16:13:05.21

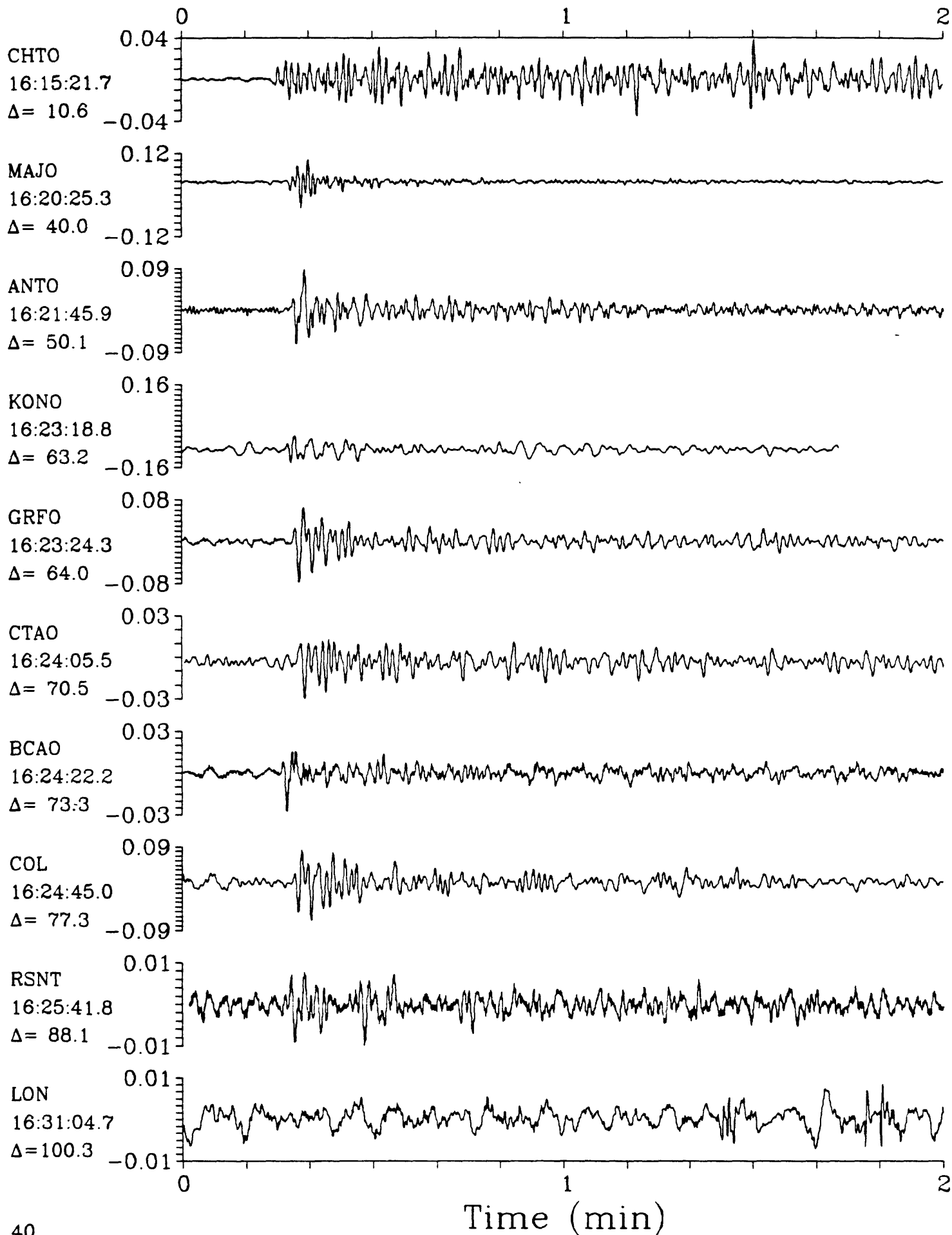
India-China Border Region



SPZ

07 January 1985 16:13:05.21

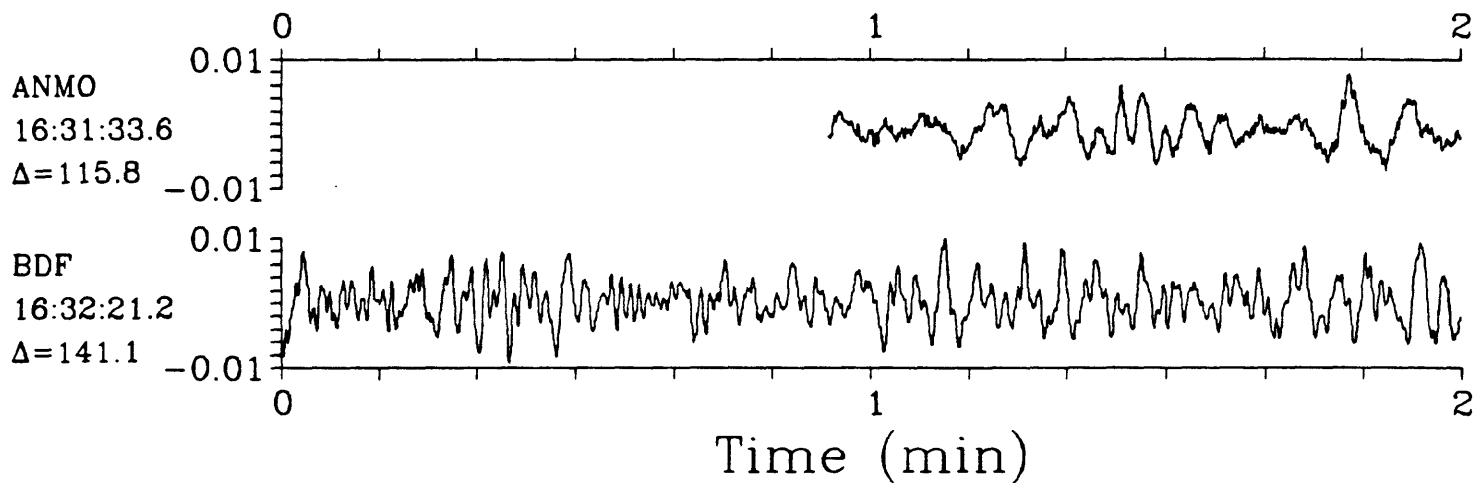
SPZ

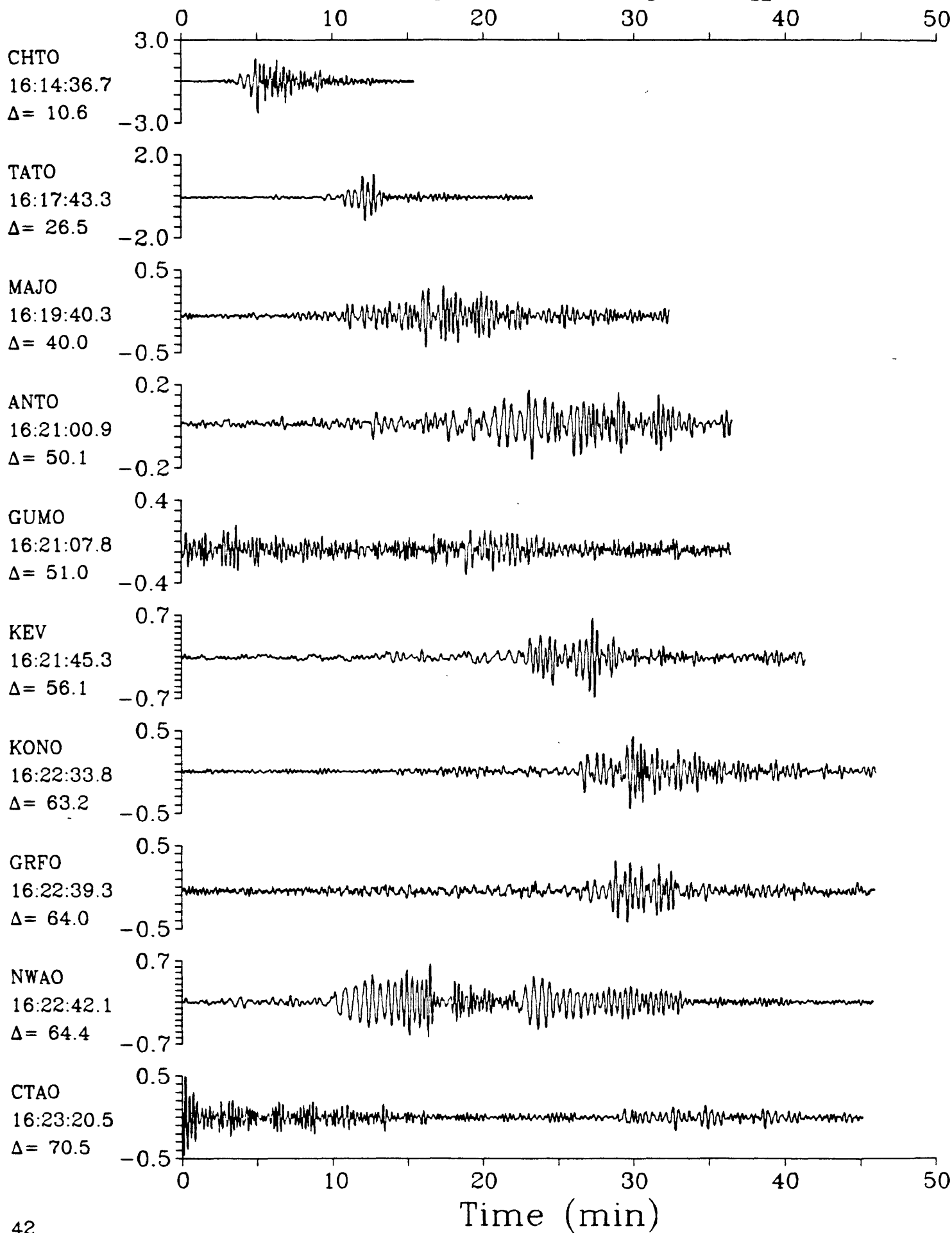
India-China Border Region $h=10.9$ $m_b=5.6$ $M_{sz}=4.7$ 

SPZ

07 January 1985 16:13:05.21

SPZ

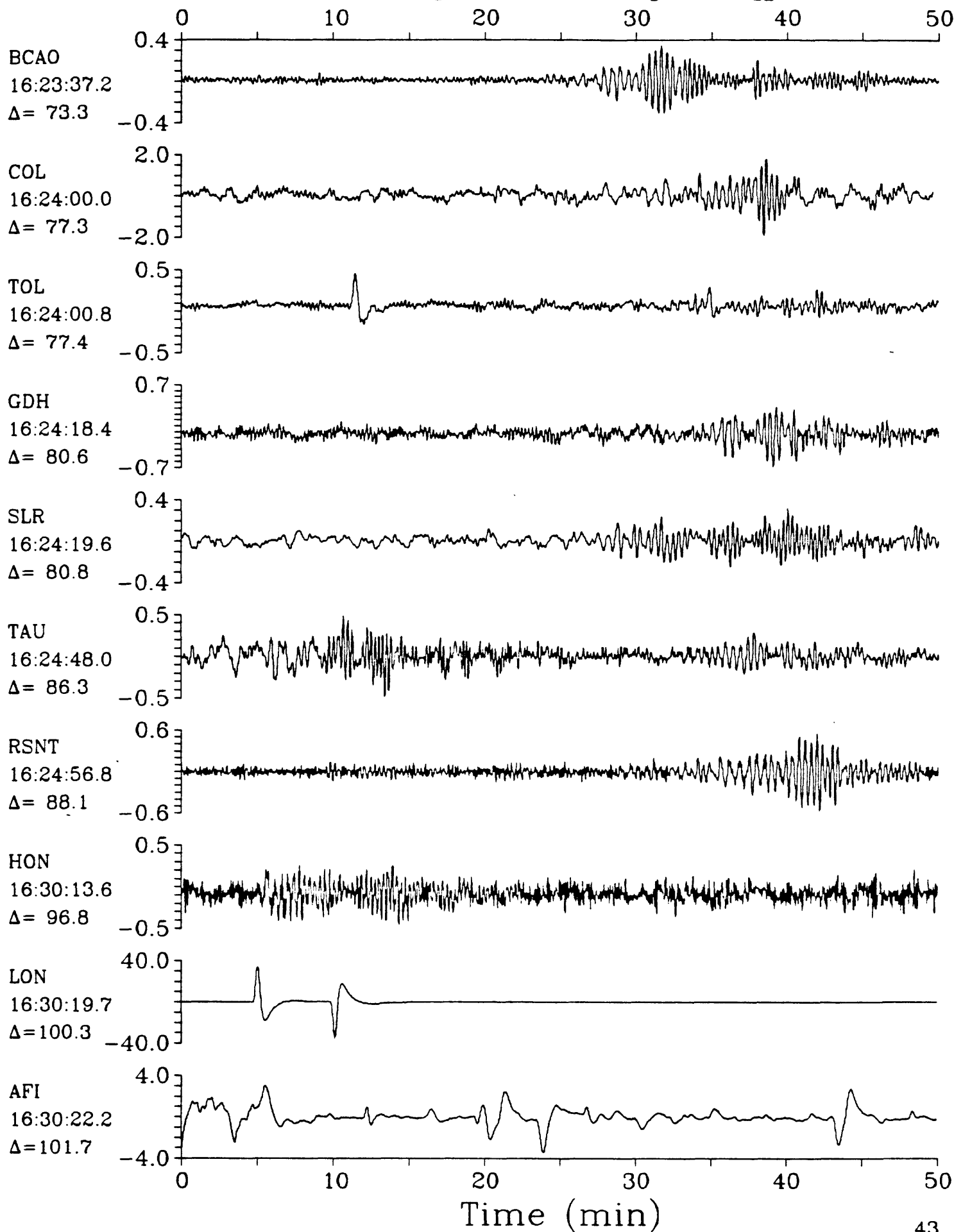
India-China Border Region $h=10.9$ $m_b=5.6$ $M_{sz}=4.7$ 

India-China Border Region $h=10.9$ $m_b=5.6$ $M_{sz}=4.7$ 

LPZ

07 January 1985 16:13:05.21

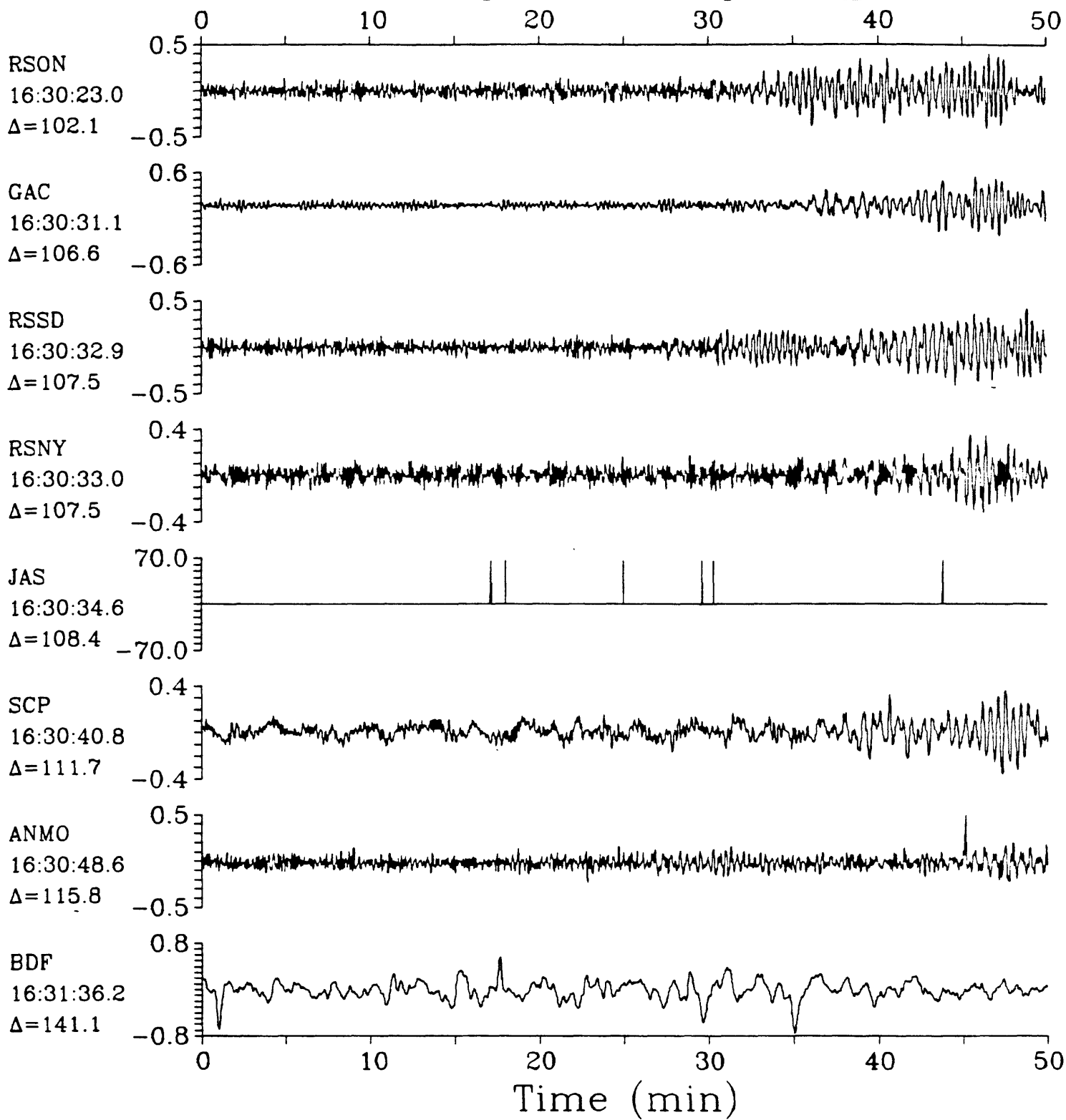
LPZ

India-China Border Region $h=10.9$ $m_b=5.6$ $M_{sz}=4.7$ 

LPZ

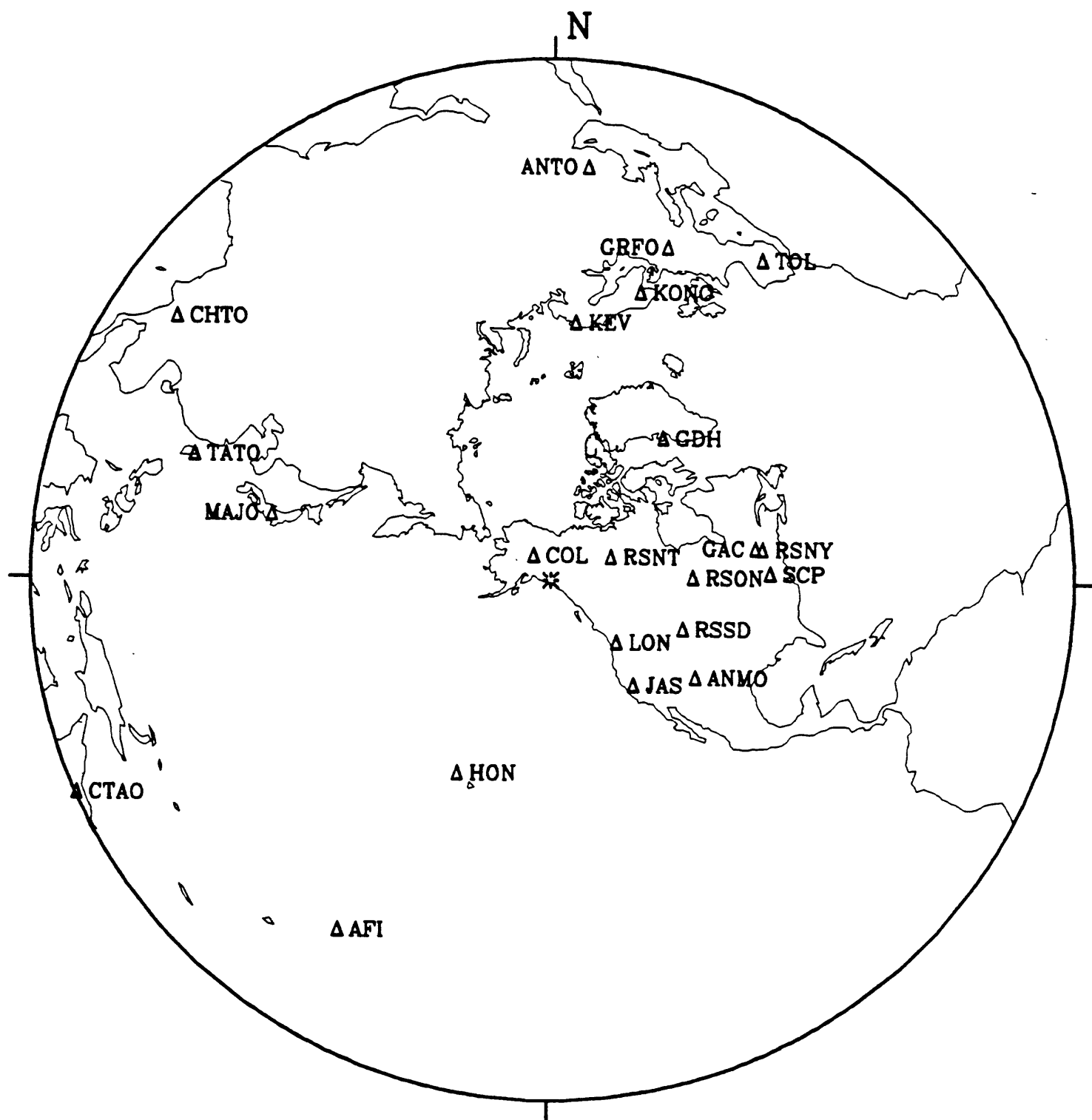
07 January 1985 16:13:05.21

LPZ

India-China Border Region $h=10.9$ $m_b=5.6$ $M_{sz}=4.7$ 

09 January 1985 19:28:20.63

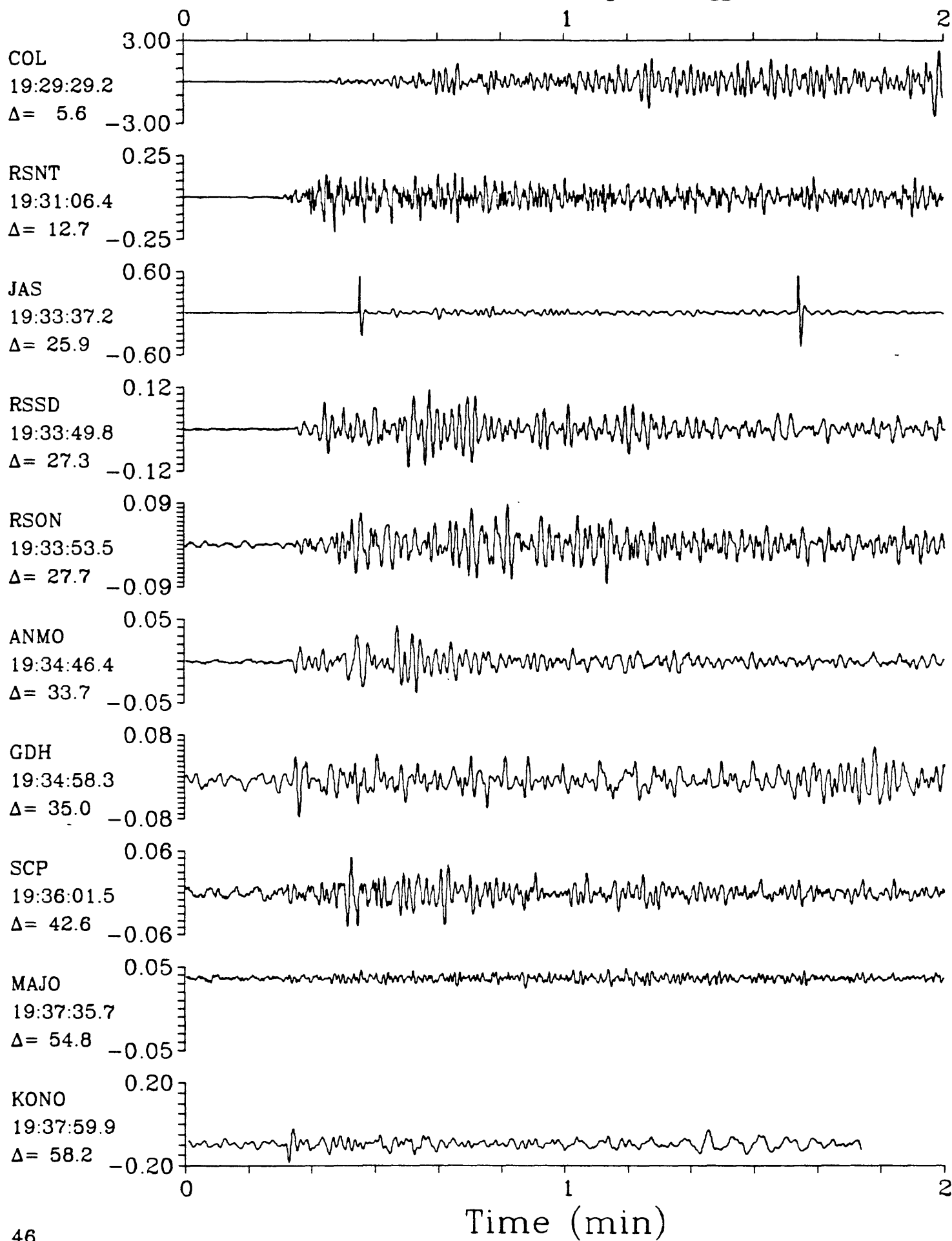
Southeastern Alaska



SPZ

09 January 1985 19:28:20.63

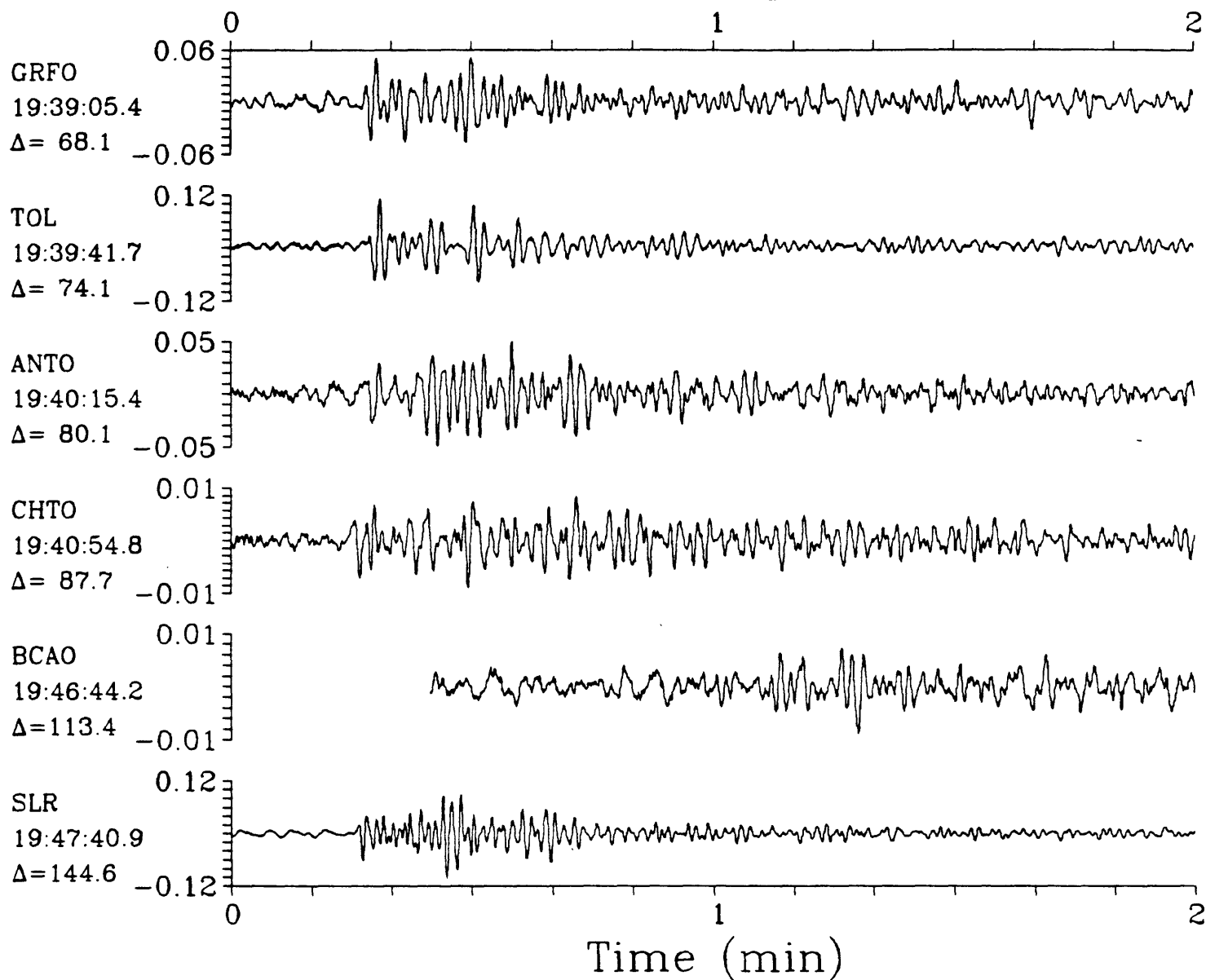
SPZ

Southeastern Alaska $h=13.1$ $m_b=5.7$ $M_{sz}=5.0$ 

SPZ

09 January 1985 19:28:20.63

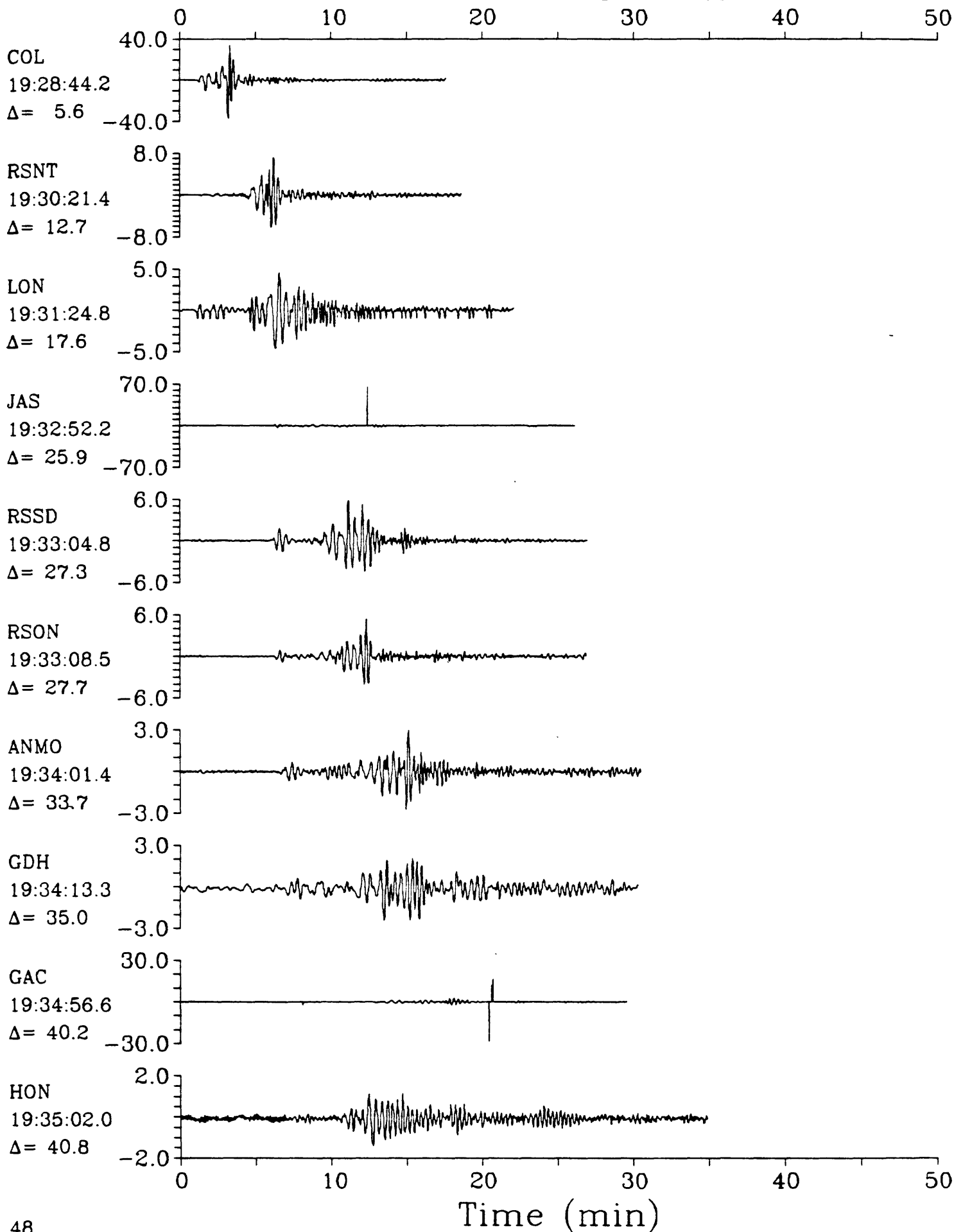
SPZ

Southeastern Alaska $h=13.1$ $m_b=5.7$ $M_{sz}=5.0$ 

LPZ

09 January 1985 19:28:20.63

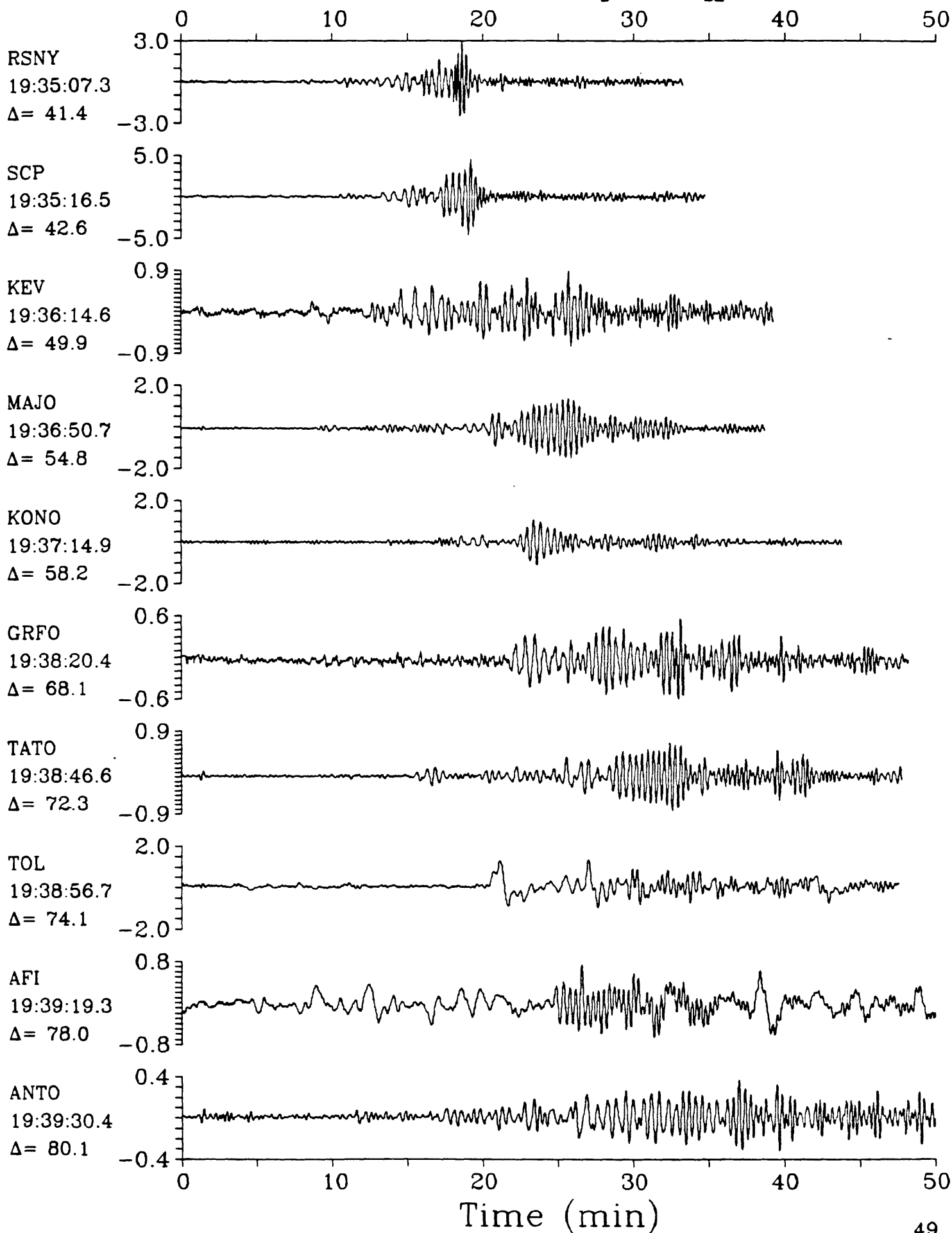
LPZ

Southeastern Alaska $h=13.1$ $m_b=5.7$ $M_{sz}=5.0$ 

LPZ

09 January 1985 19:28:20.63

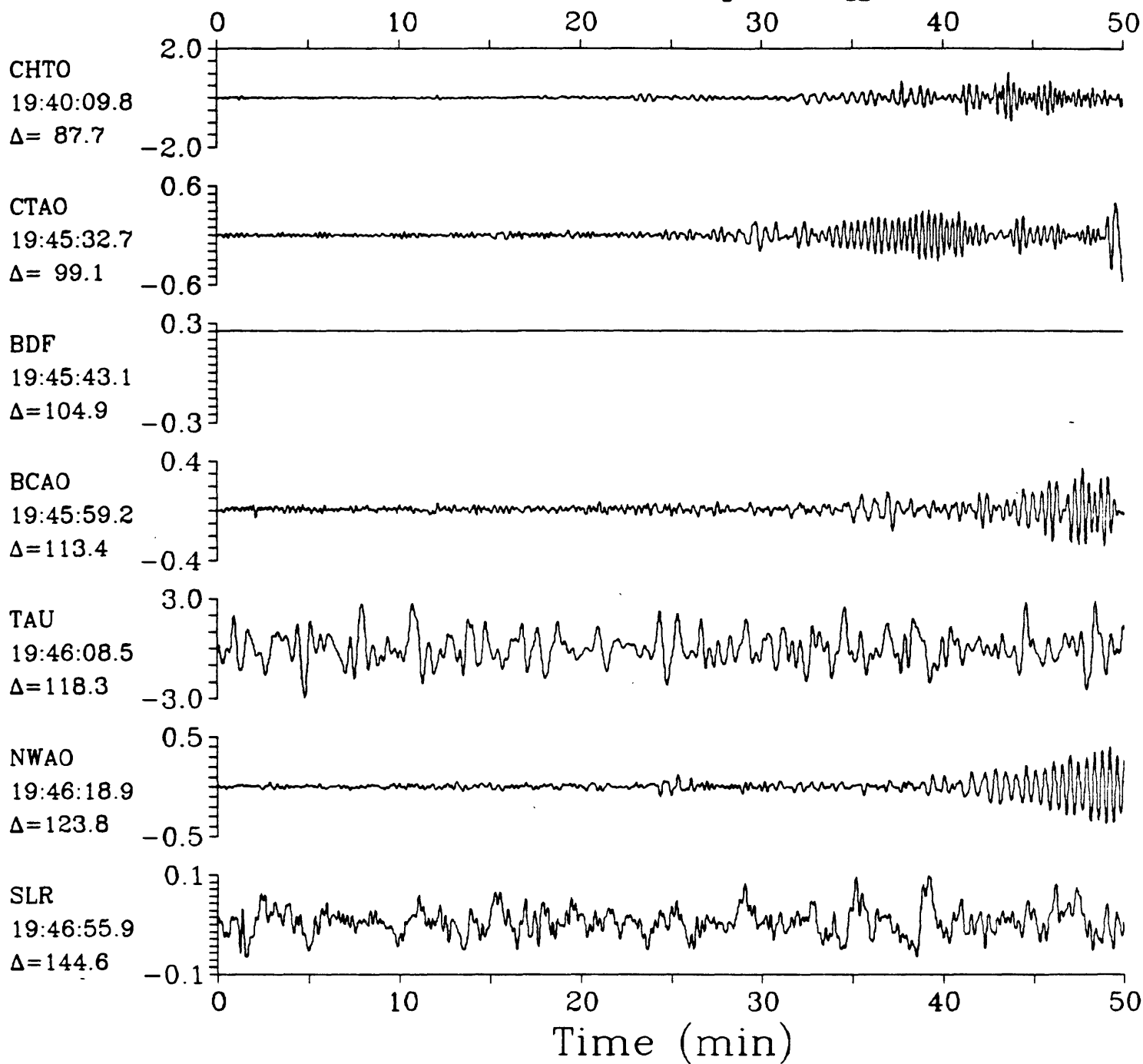
LPZ

Southeastern Alaska $h=13.1$ $m_b=5.7$ $M_{sz}=5.0$ 

LPZ

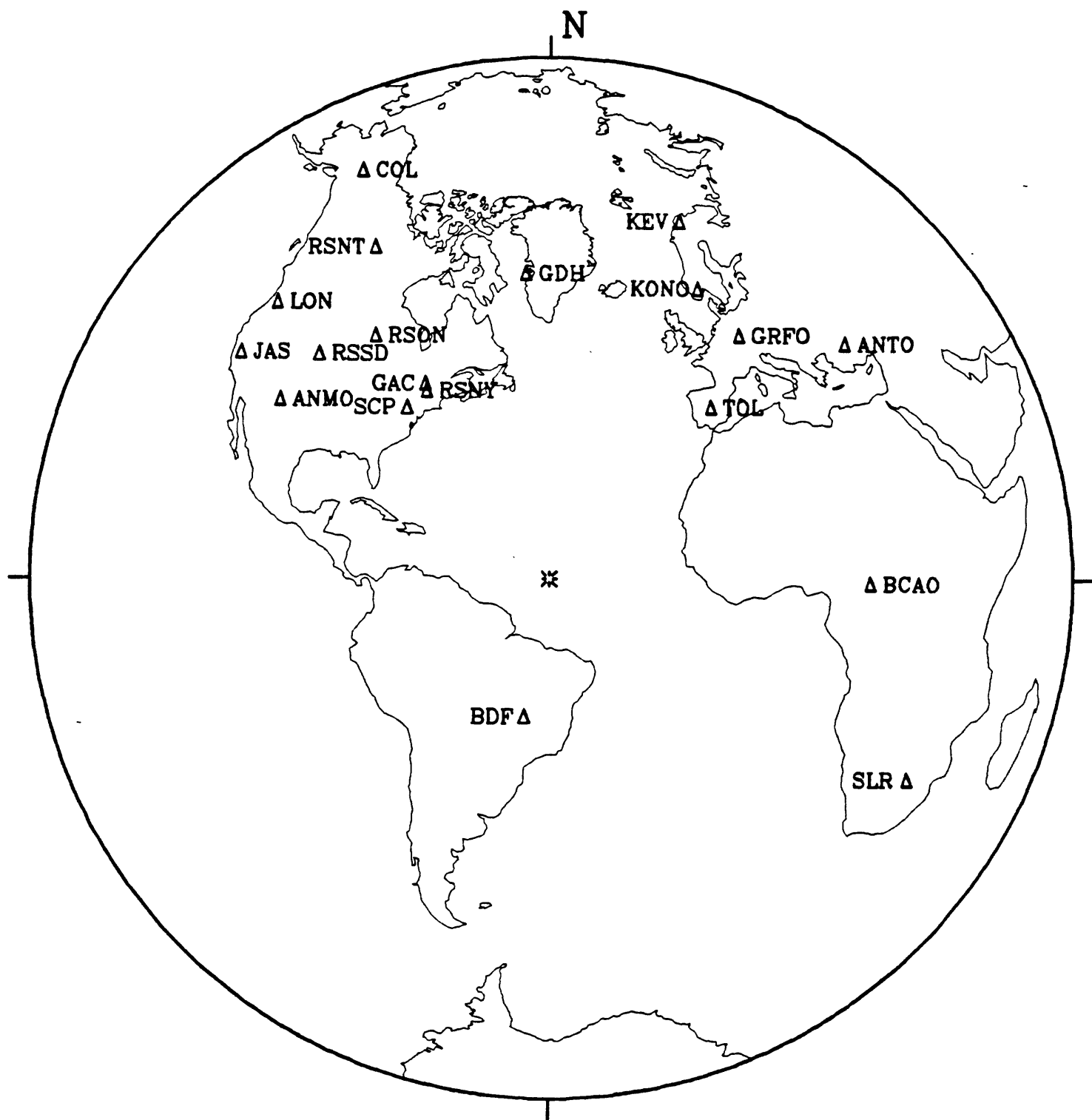
09 January 1985 19:28:20.63

LPZ

Southeastern Alaska $h=13.1$ $m_b=5.7$ $M_{sz}=5.0$ 

10 January 1985 17:47:56.10

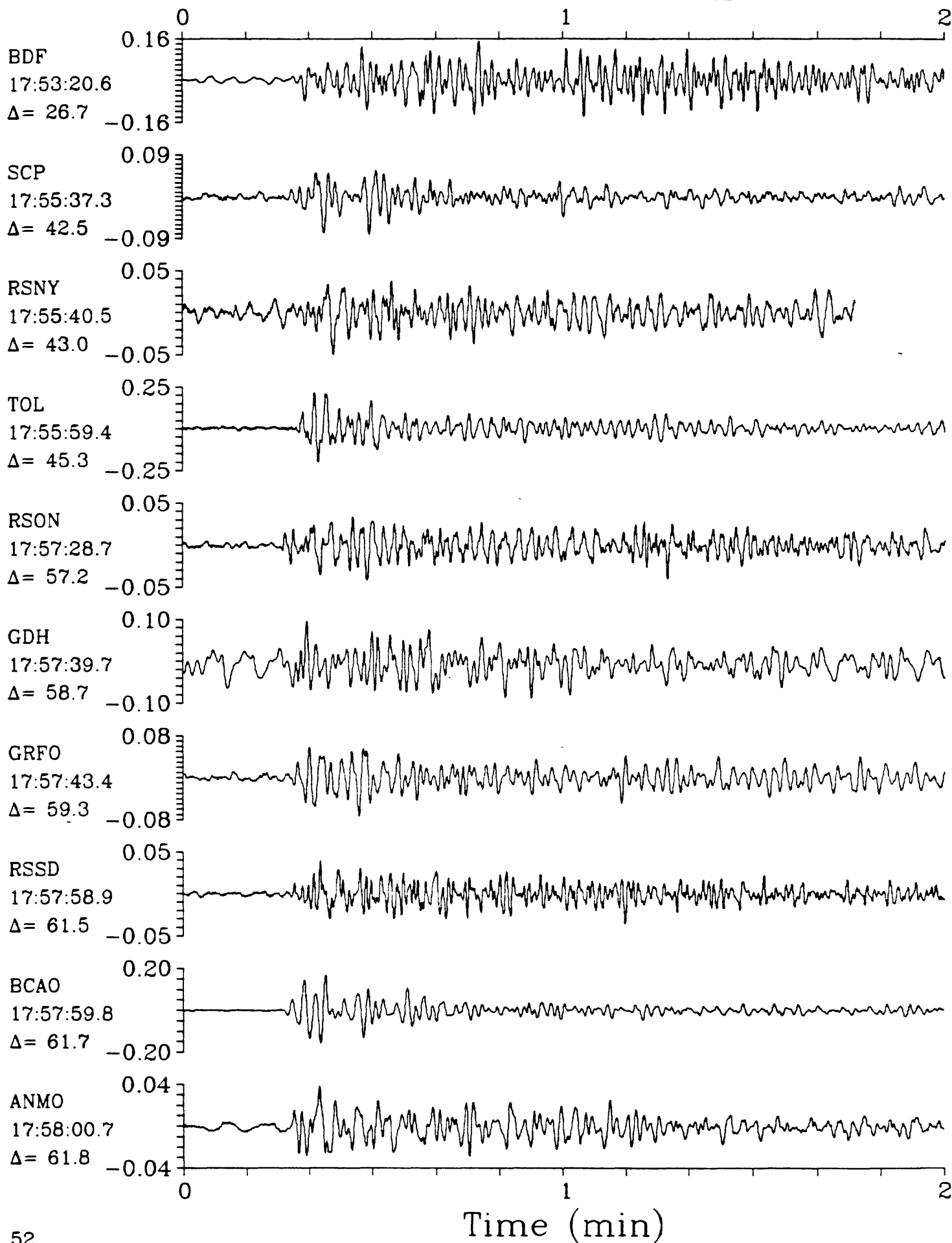
North Atlantic Ridge



SPZ

10 January 1985 17:47:56.10

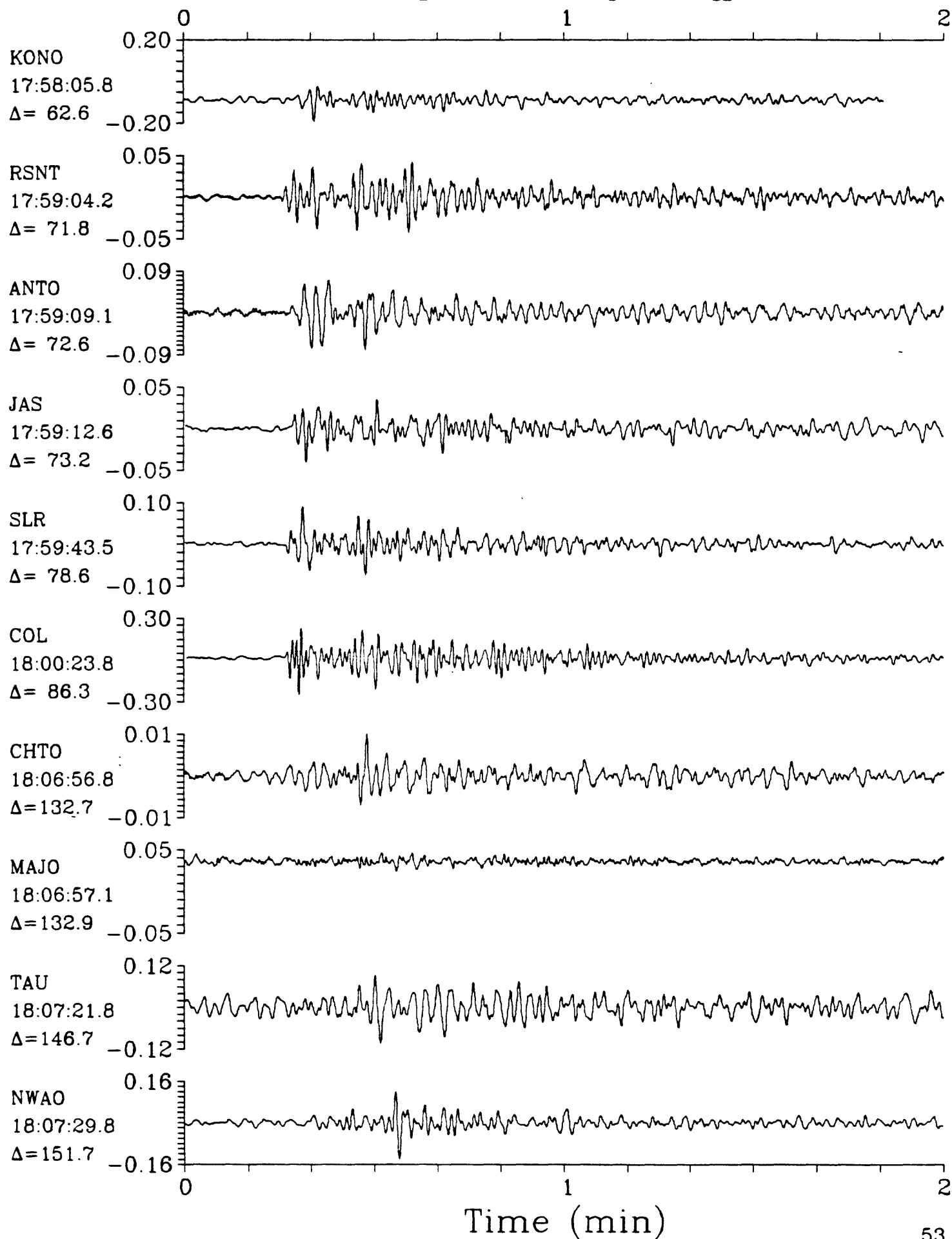
SPZ

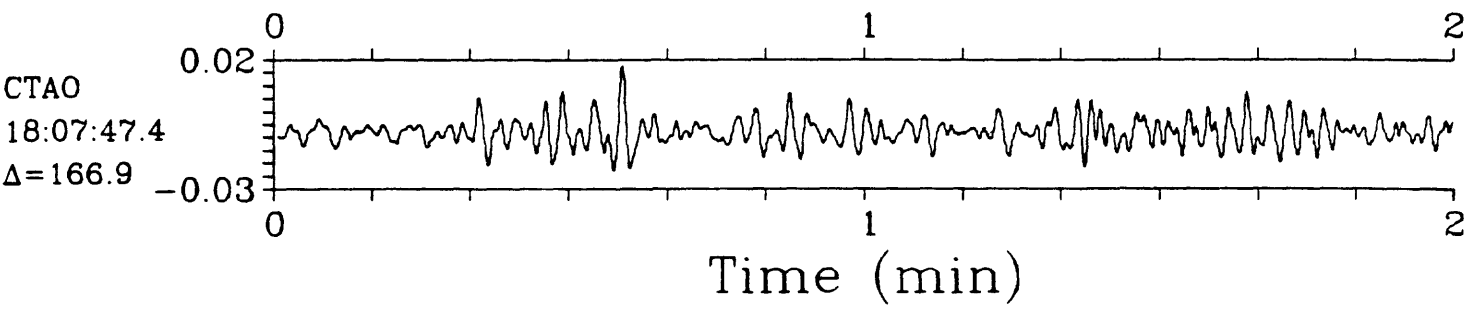
North Atlantic Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=5.8$ 

SPZ

10 January 1985 17:47:56.10

SPZ

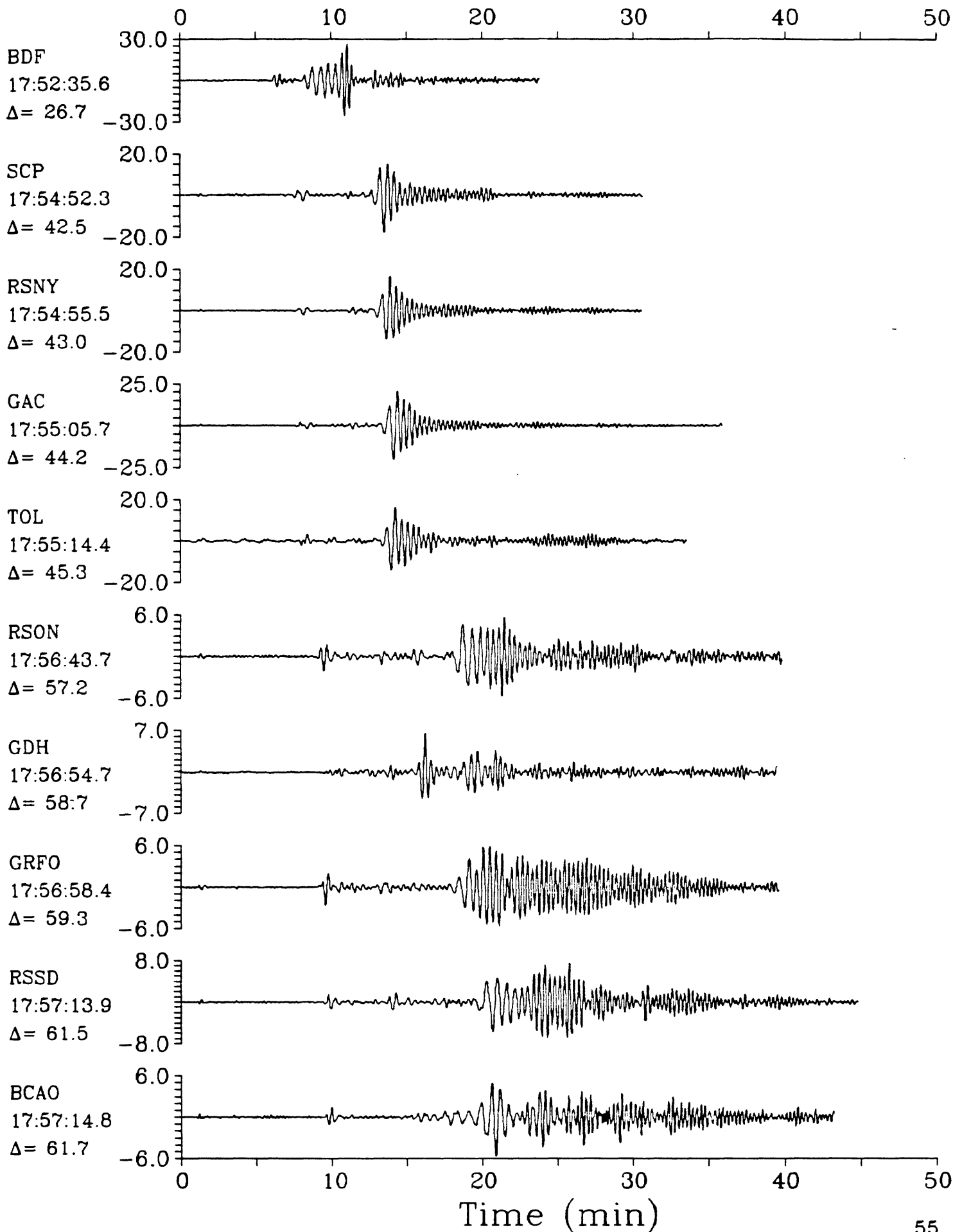
North Atlantic Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=5.8$ 



LPZ

10 January 1985 17:47:56.10

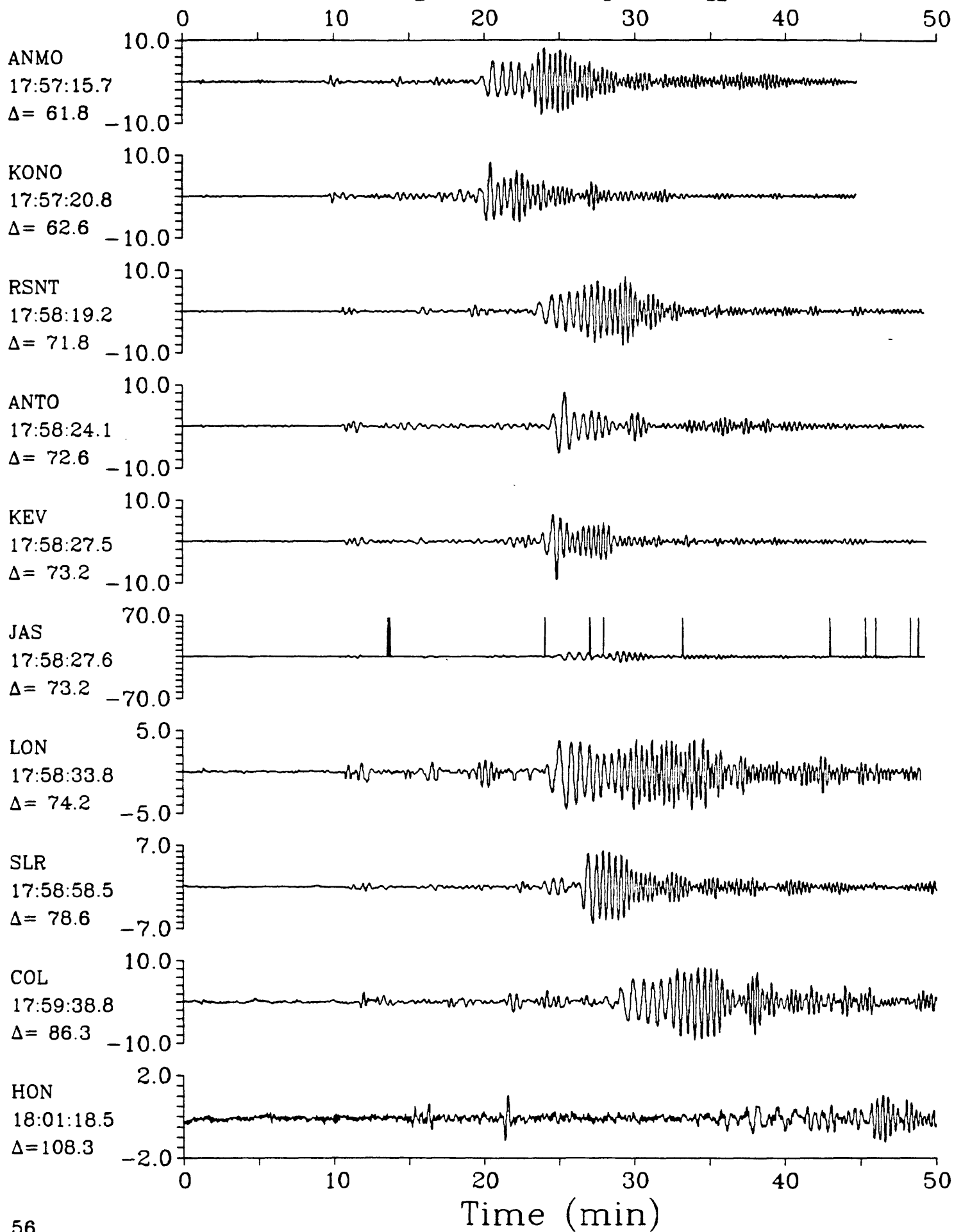
LPZ

North Atlantic Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=5.8$ 

LPZ

10 January 1985 17:47:56.10

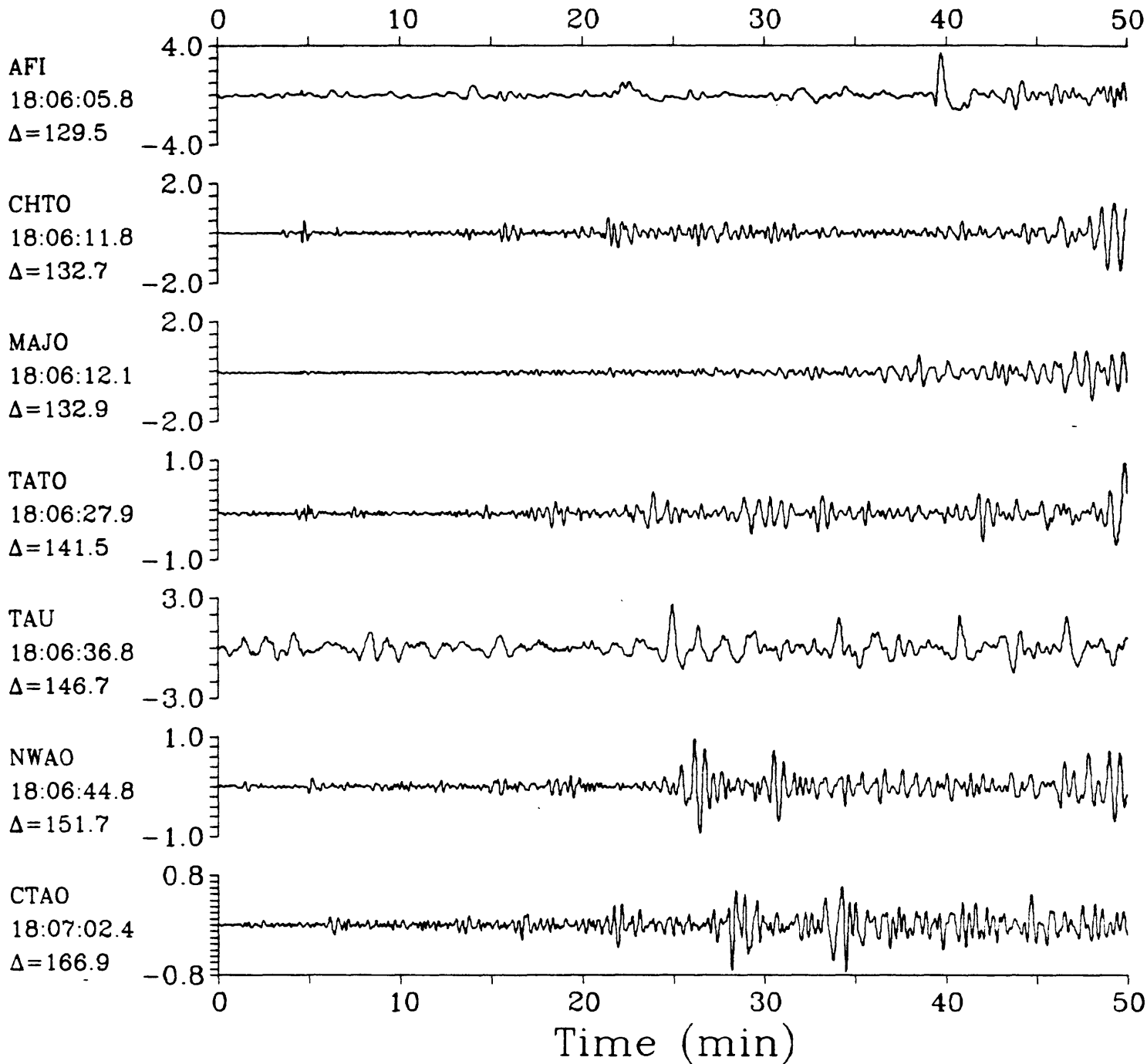
LPZ

North Atlantic Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=5.8$ 

LPZ

10 January 1985 17:47:56.10

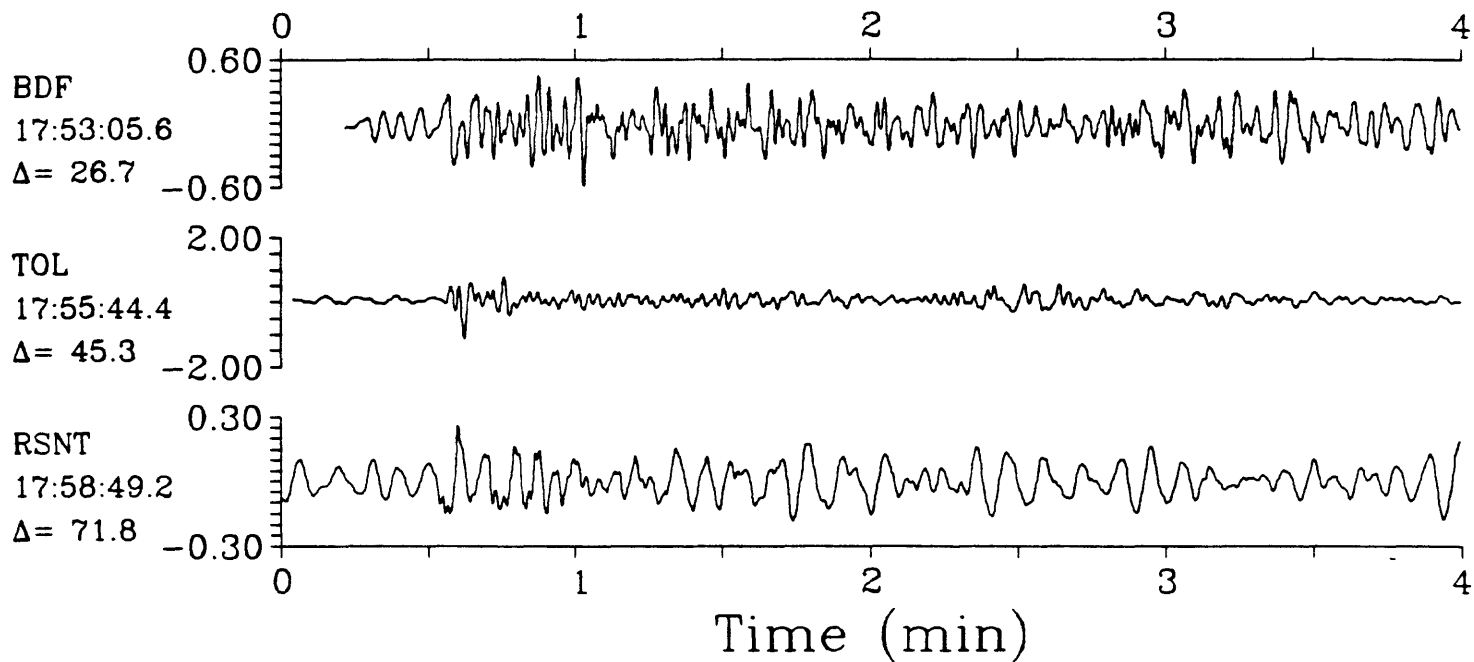
LPZ

North Atlantic Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=5.8$ 

IPZ

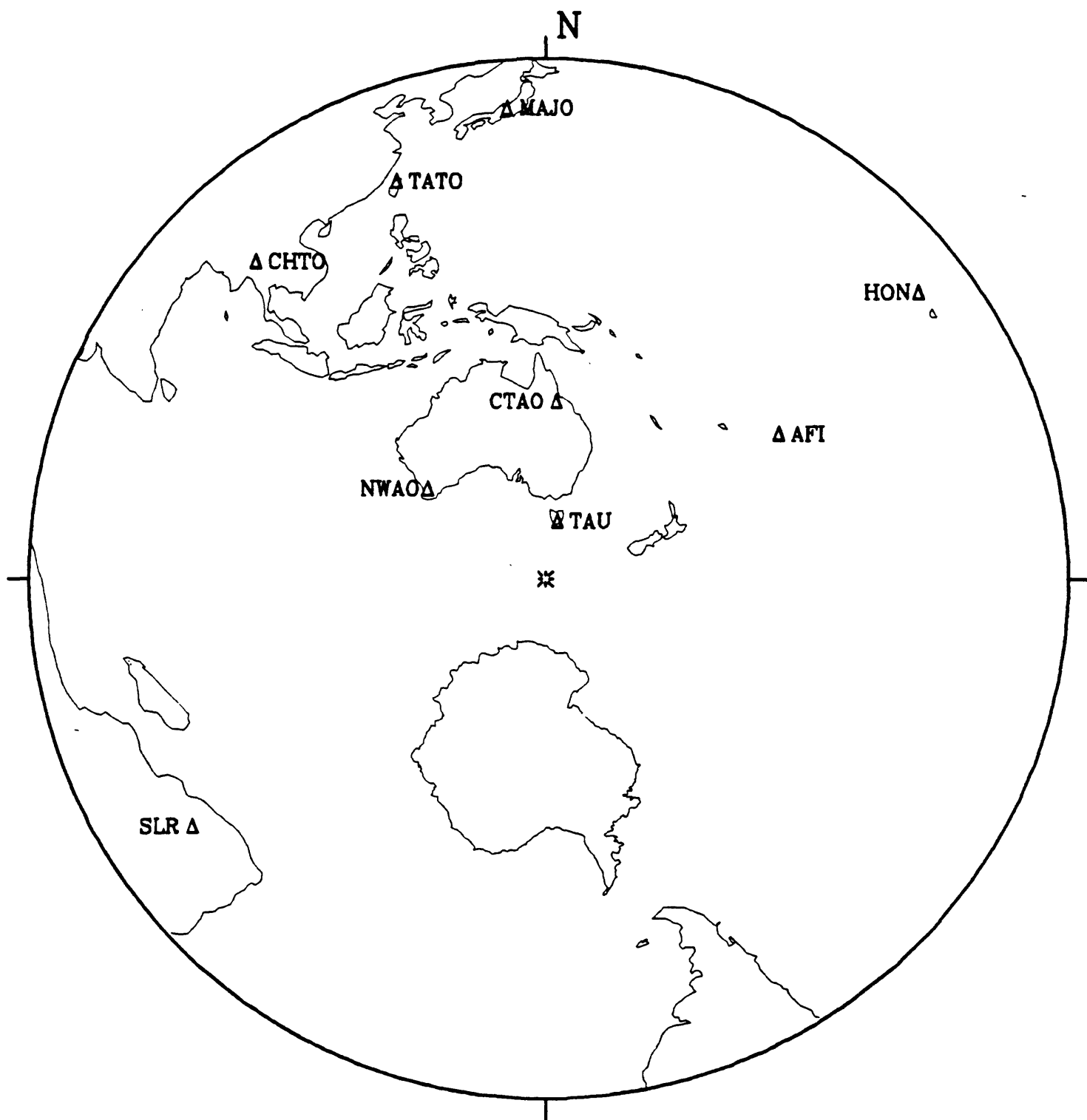
10 January 1985 17:47:56.10

IPZ

North Atlantic Ridge $h=10.0$ $m_b=5.8$ $M_{sz}=5.8$ 

11 January 1985 06:25:48.65

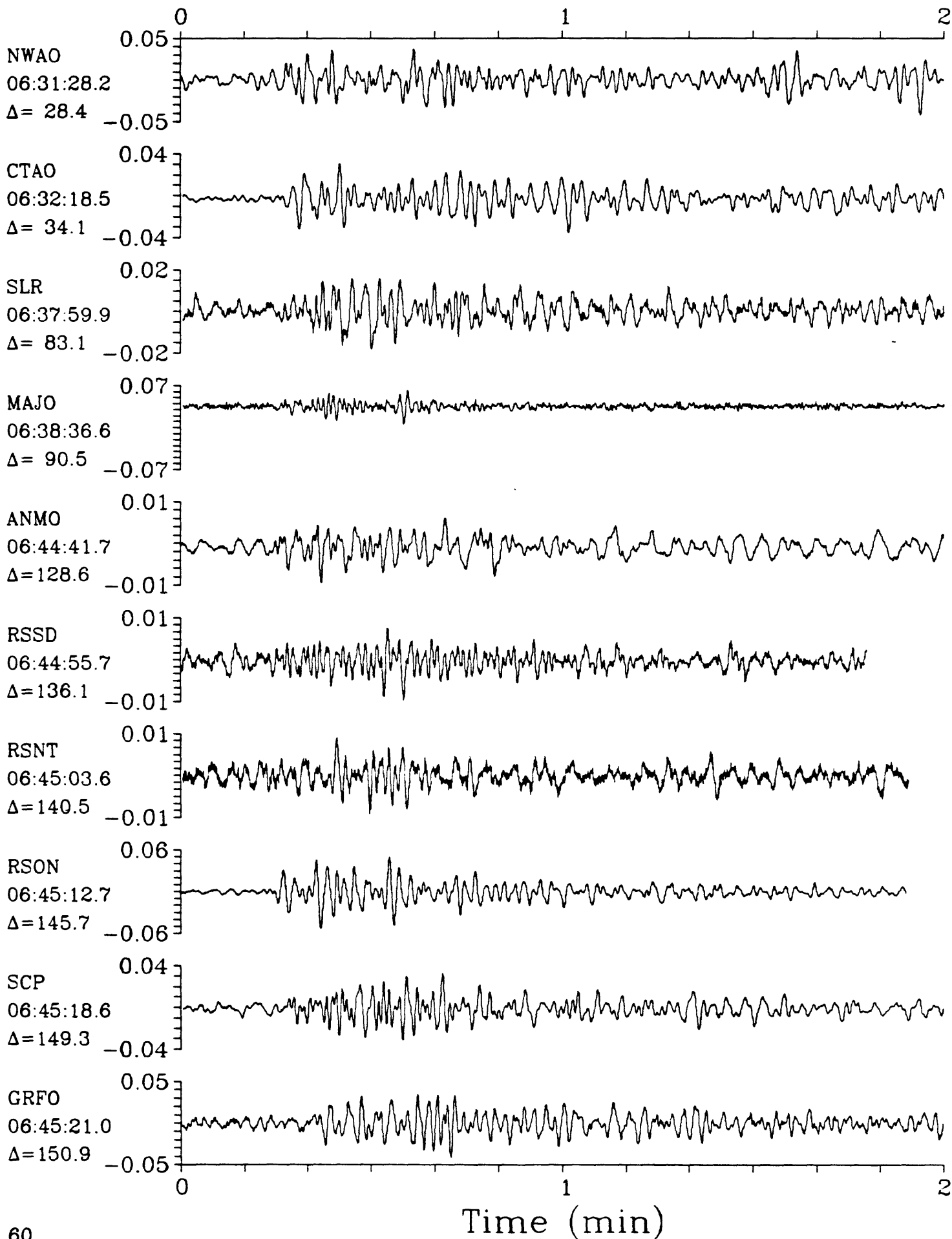
West of Macquarie Island



SPZ

11 January 1985 06:25:48.65

SPZ

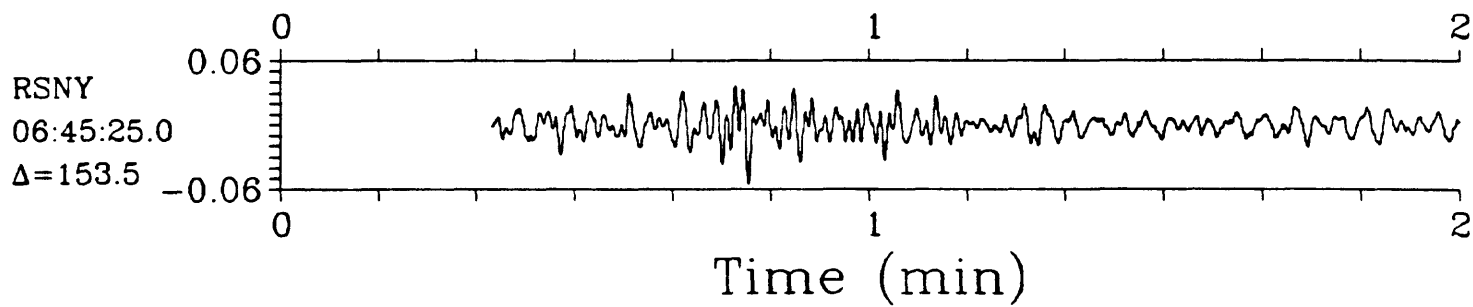
West of Macquarie Island $h=10.0$ $m_b=5.1$ $M_{sz}=5.7$ 

SPZ

11 January 1985 06:25:48.65

SPZ

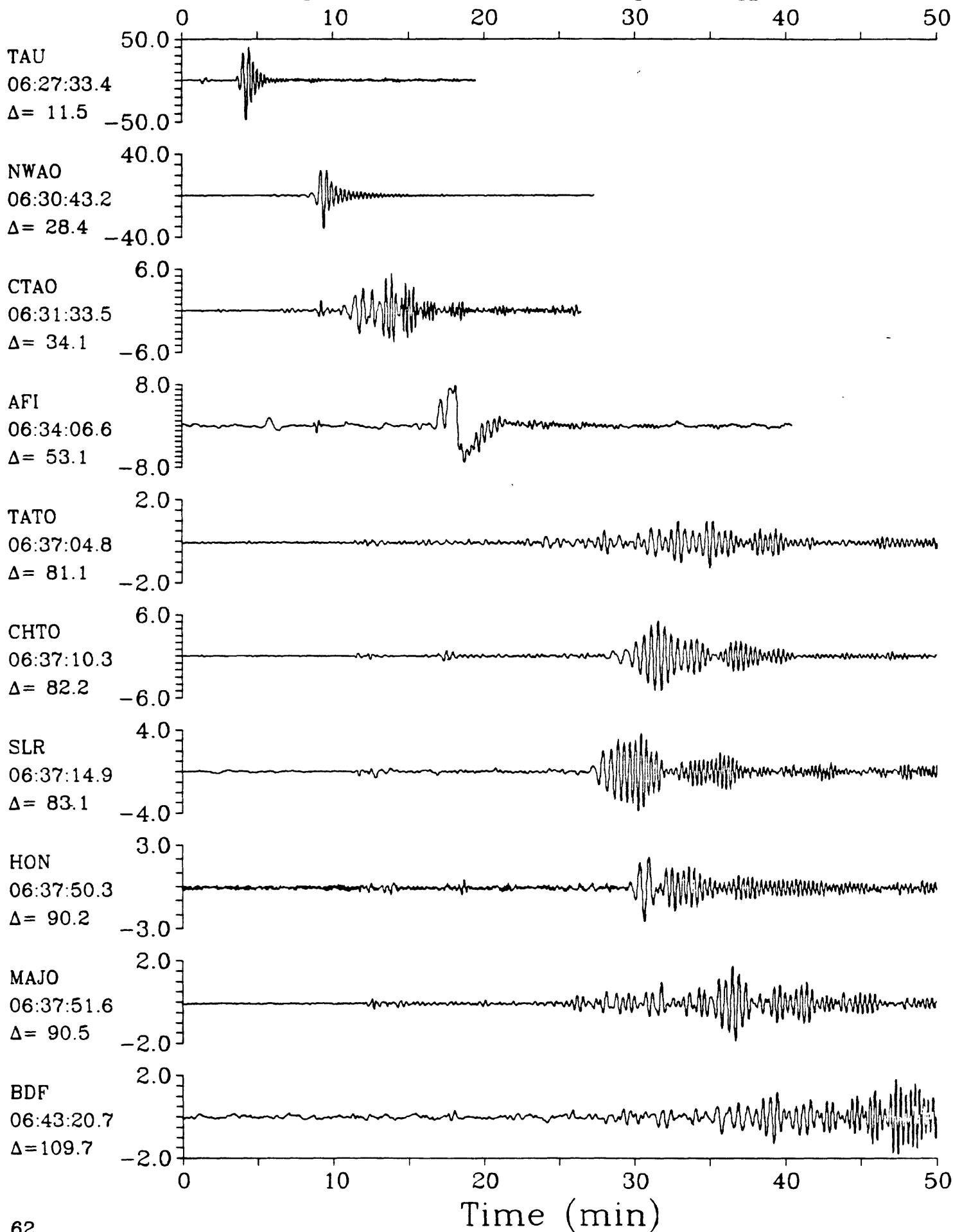
West of Macquarie Island $h=10.0$ $m_b=5.1$ $M_{sz}=5.7$



LPZ

11 January 1985 06:25:48.65

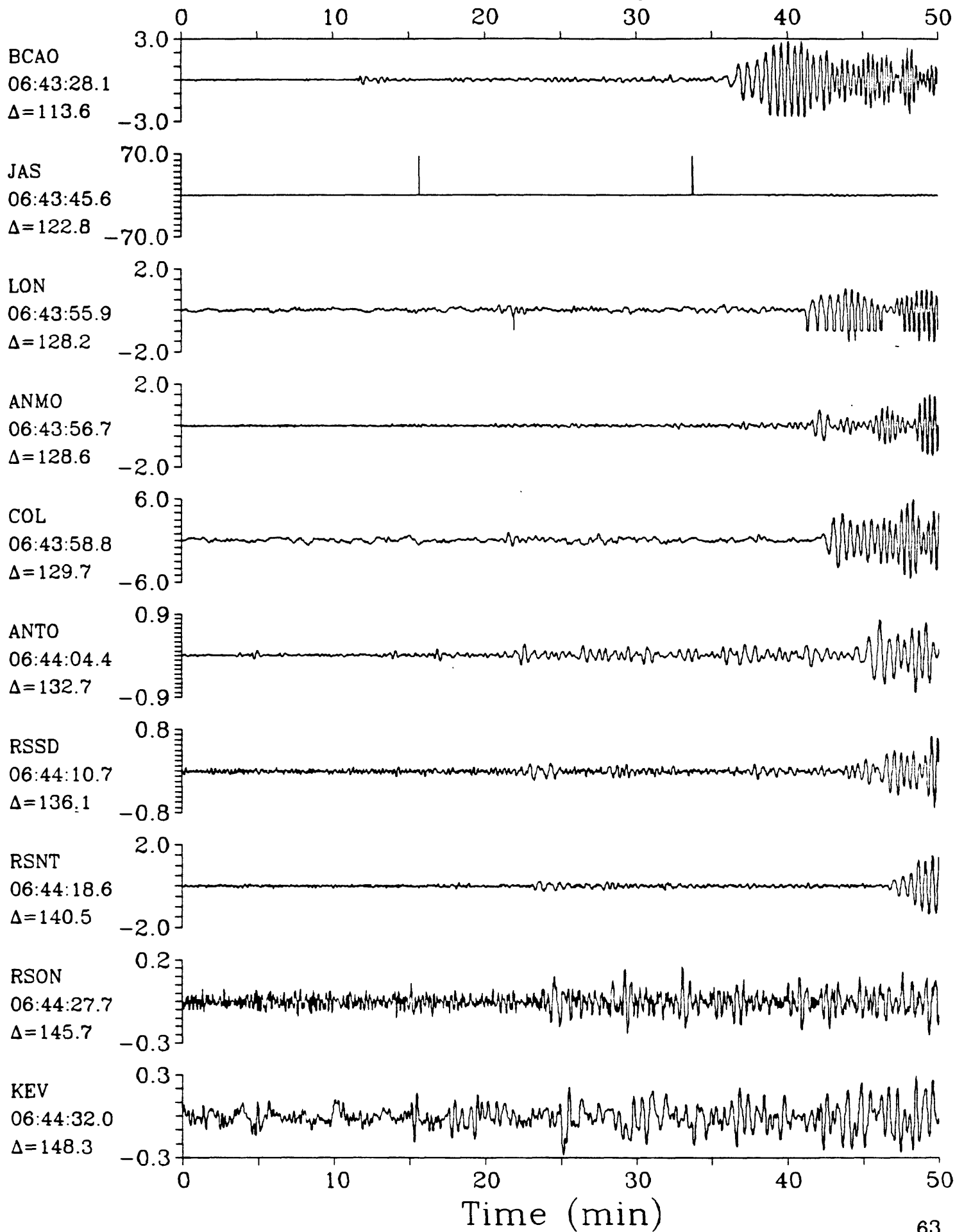
LPZ

West of Macquarie Island $h=10.0$ $m_b=5.1$ $M_{sz}=5.7$ 

LPZ

11 January 1985 06:25:48.65

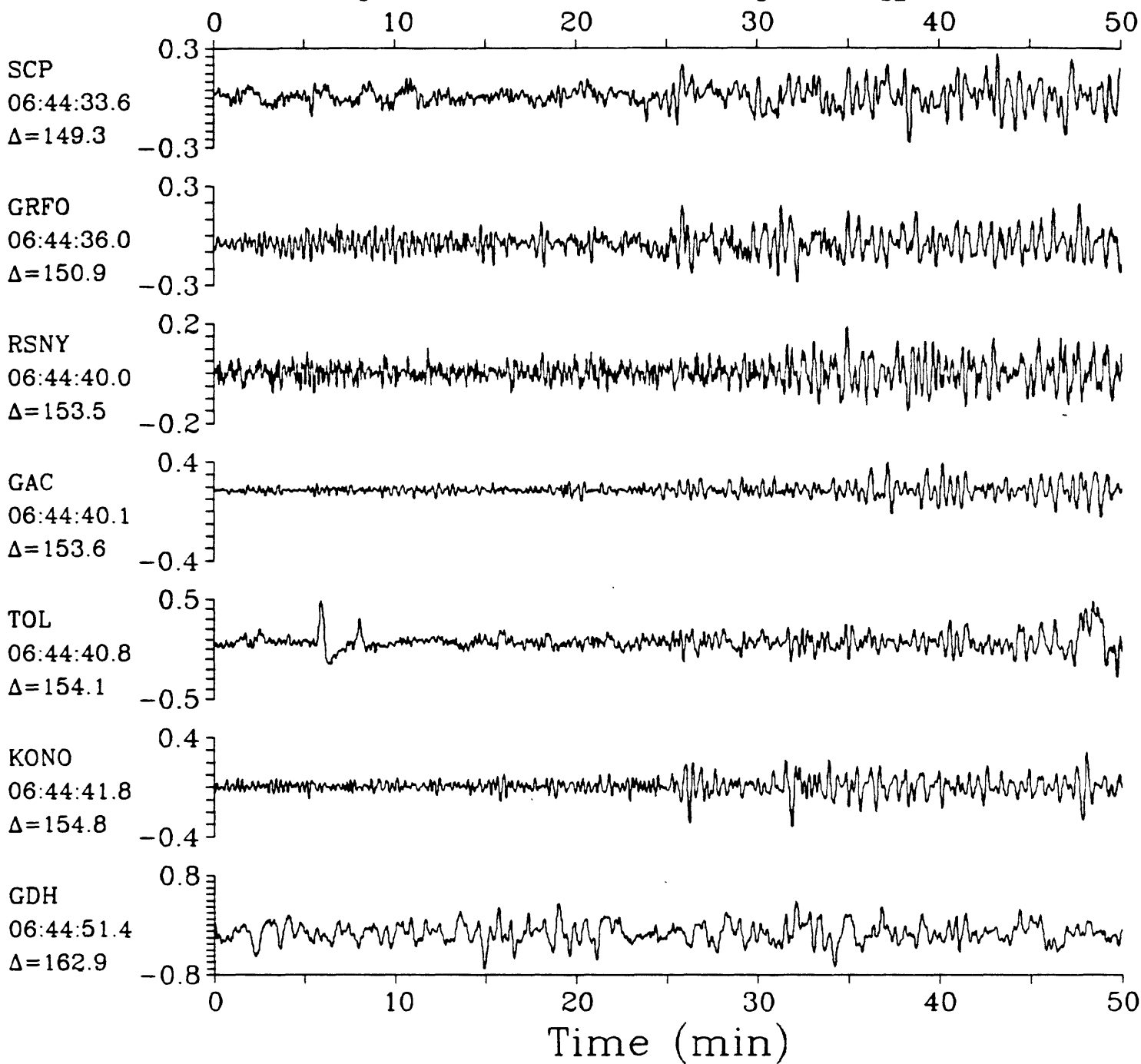
LPZ

West of Macquarie Island $h=10.0$ $m_b=5.1$ $M_{sz}=5.7$ 

LPZ

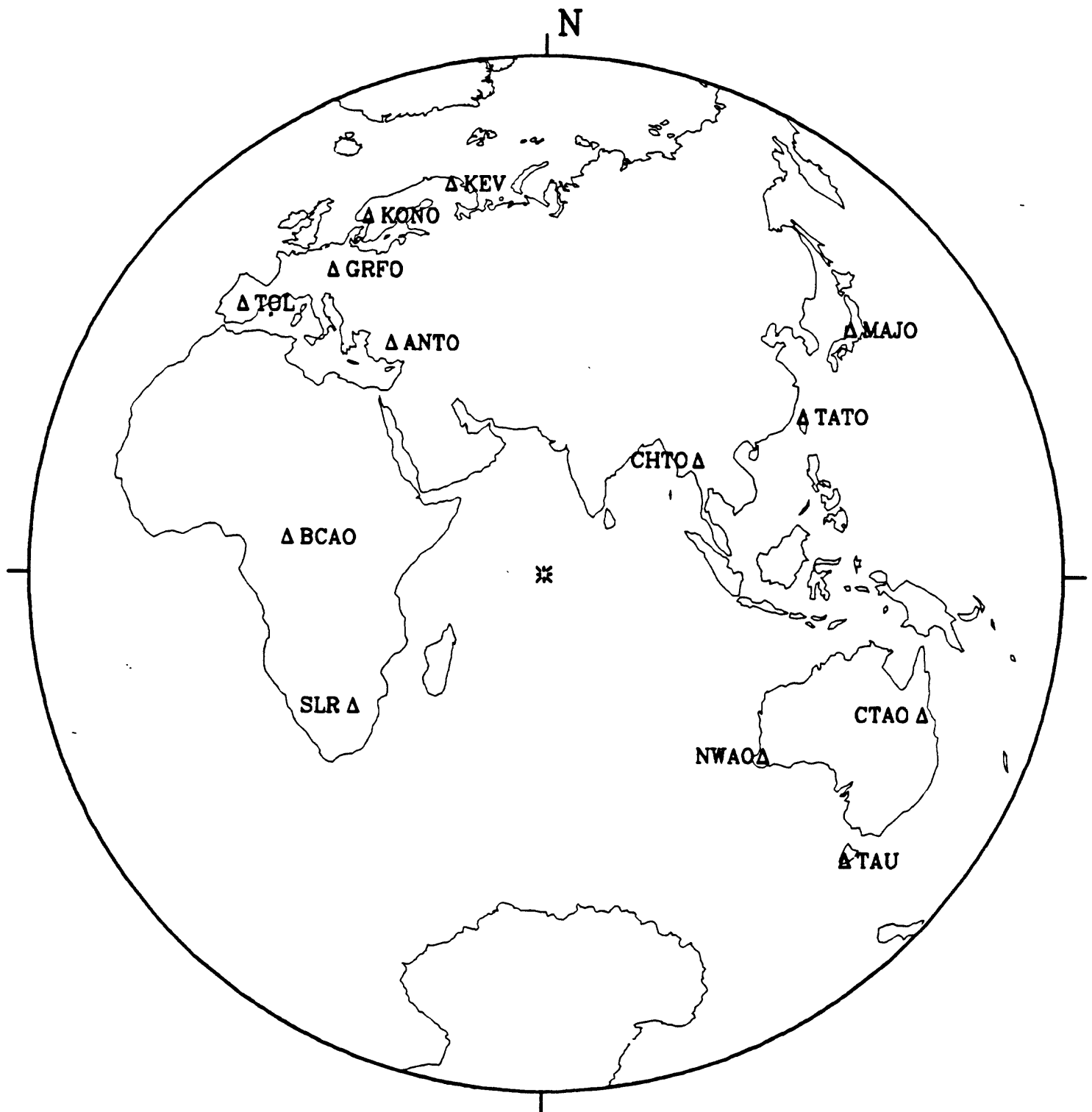
11 January 1985 06:25:48.65

LPZ

West of Macquarie Island $h=10.0$ $m_b=5.1$ $M_{sz}=5.7$ 

11 January 1985 14:30:59.55

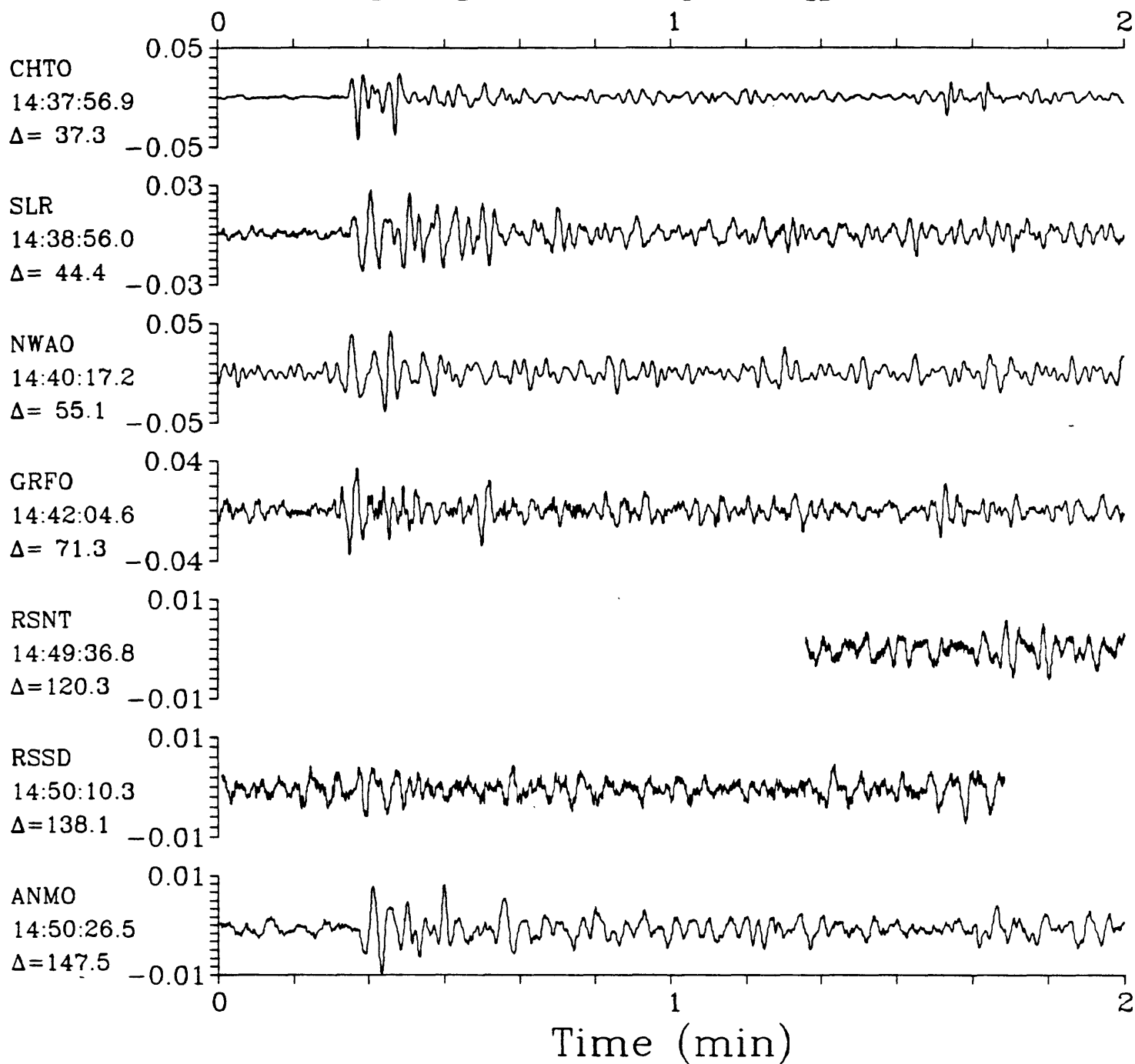
Carlsberg Ridge



SPZ

11 January 1985 14:30:59.55
Carlsberg Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$

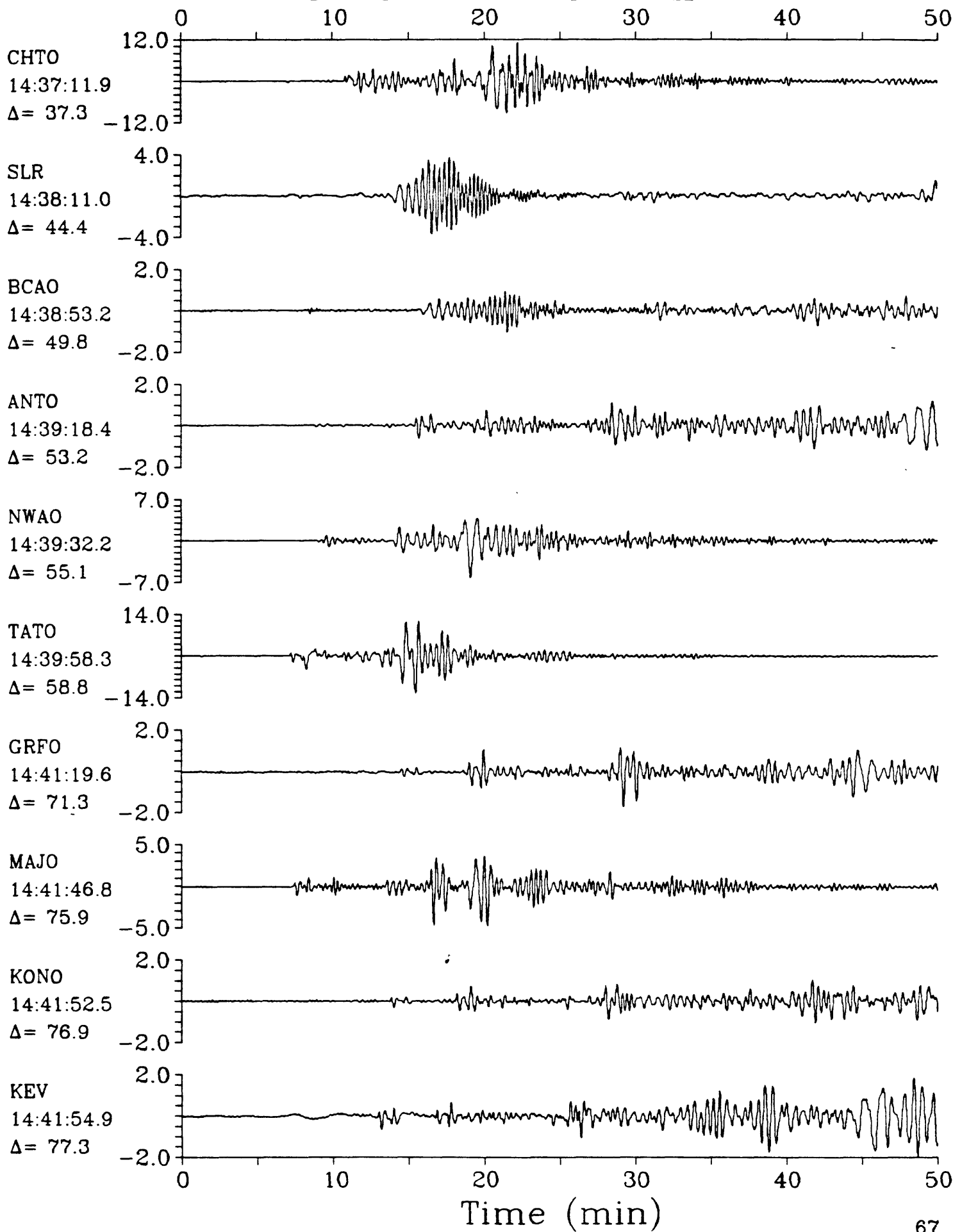
SPZ



LPZ

11 January 1985 14:30:59.55
Carlsberg Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$

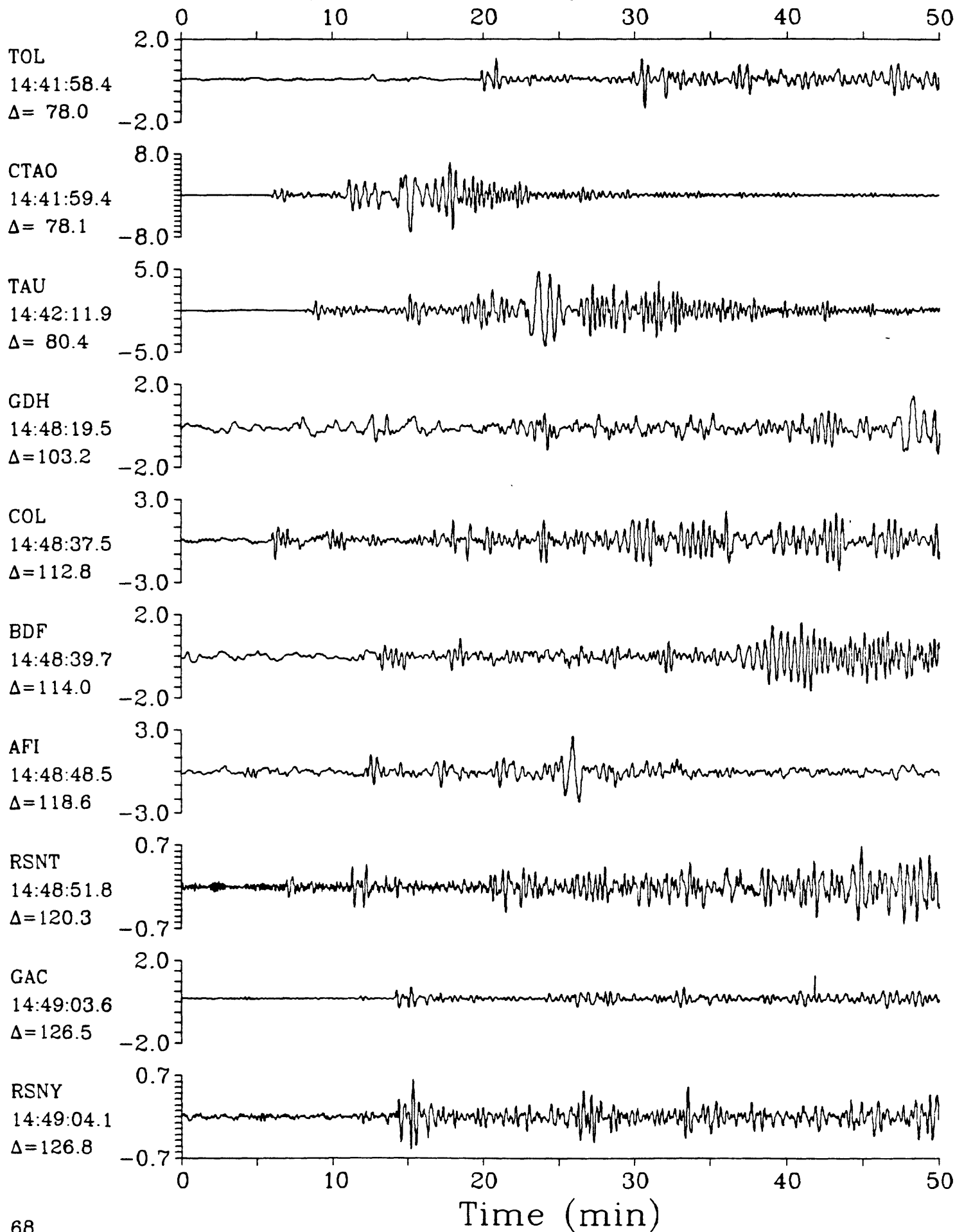
LPZ



LPZ

11 January 1985 14:30:59.55
Carlsberg Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$

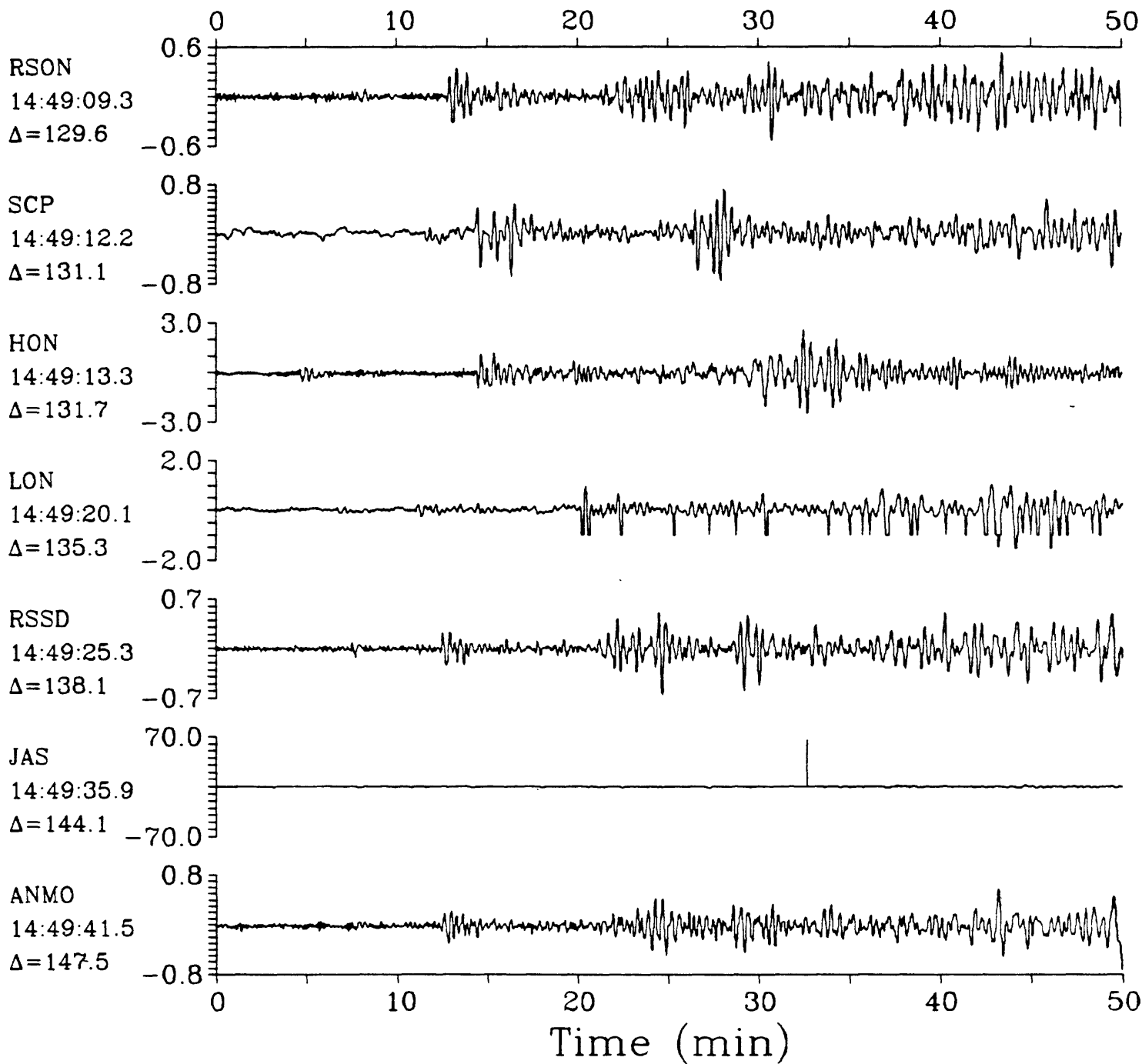
LPZ



LPZ

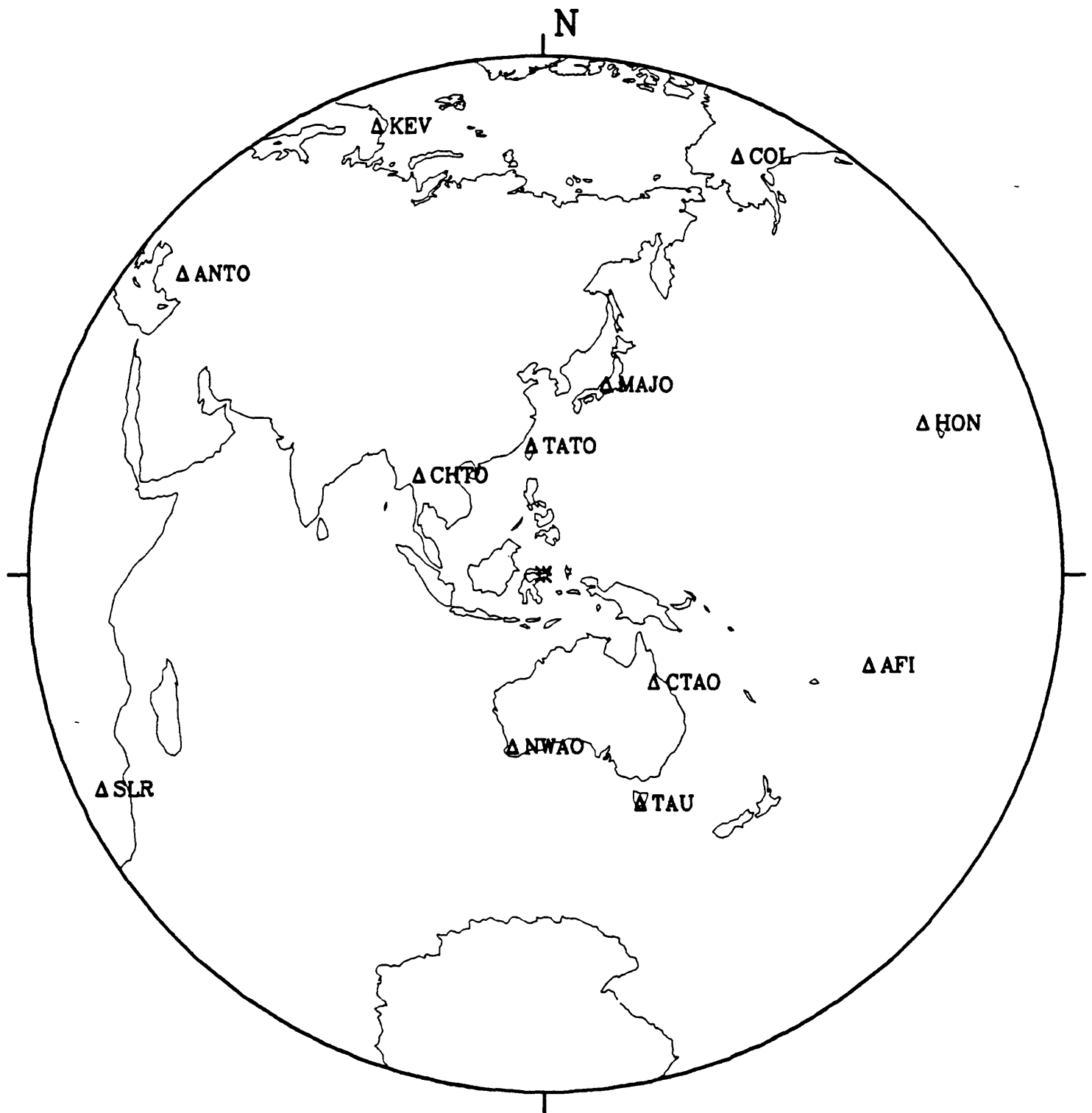
11 January 1985 14:30:59.55
Carlsberg Ridge $h=10.0$ $m_b=5.4$ $M_{sz}=5.5$

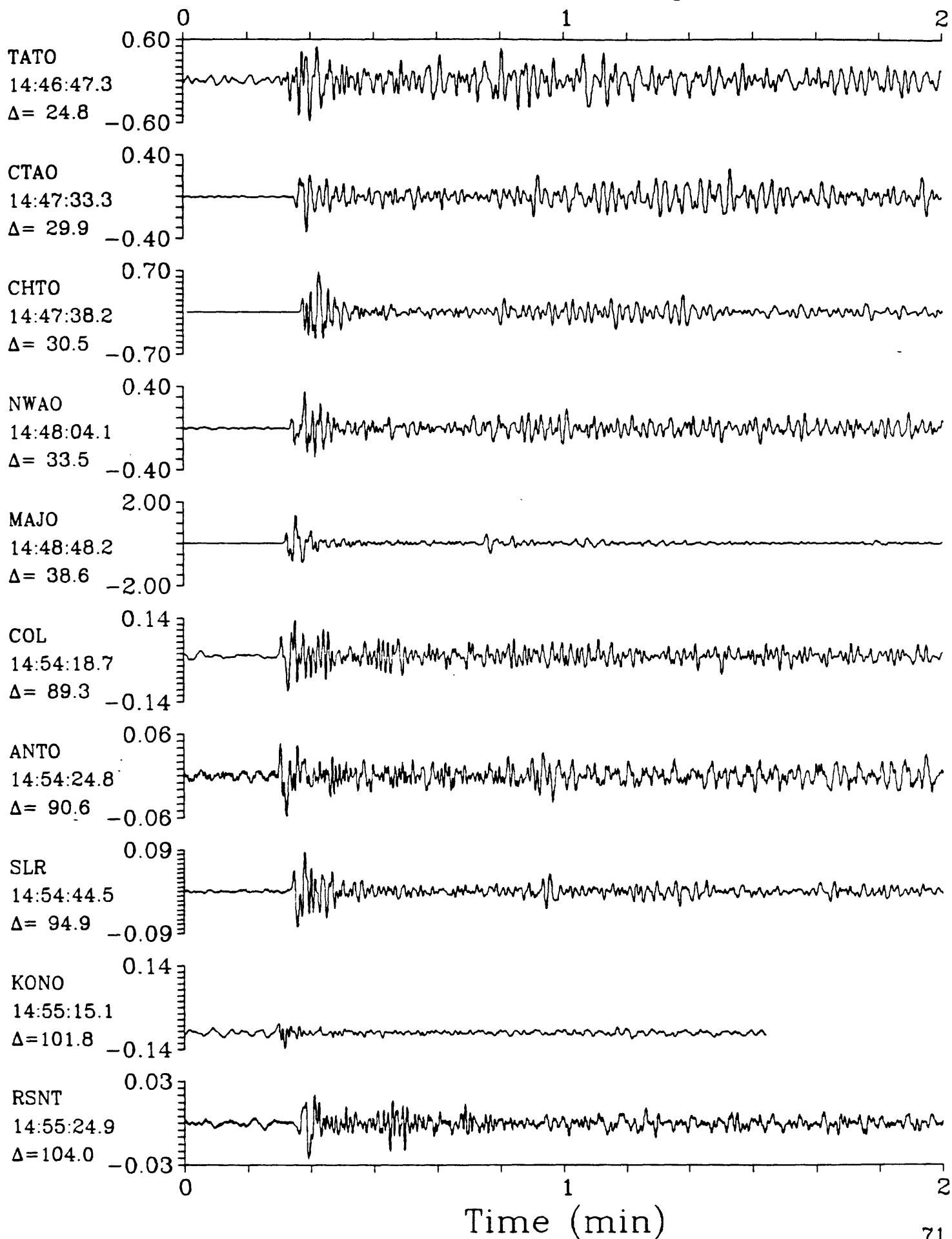
LPZ



11 January 1985 14:41:57.09

Minahassa Peninsula

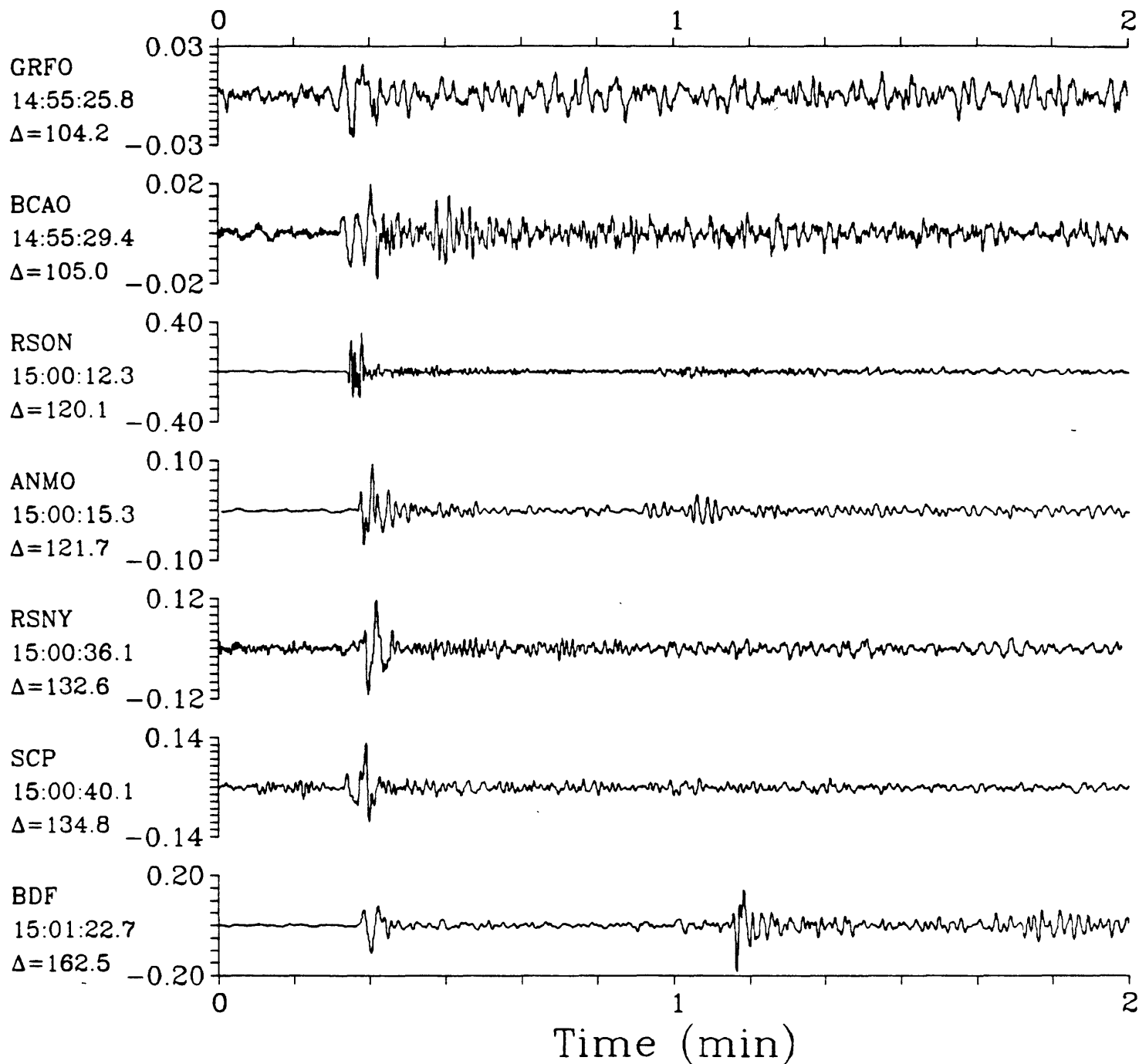




SPZ

11 January 1985 14:41:57.09
Minahassa Peninsula $h=176.5$ $m_b=6.0$

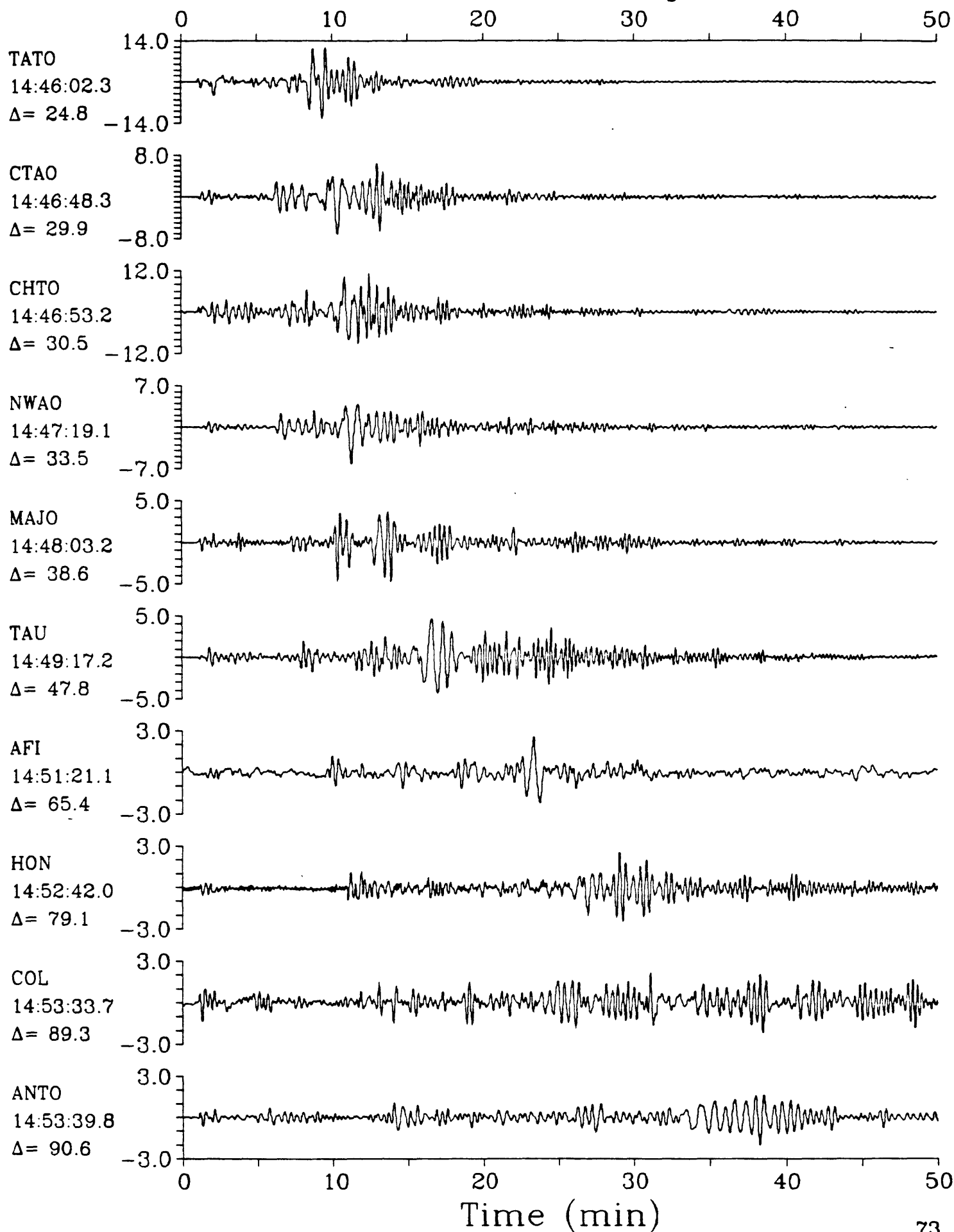
SPZ



LPZ

11 January 1985 14:41:57.09
Minahassa Peninsula $h=176.5$ $m_b=6.0$

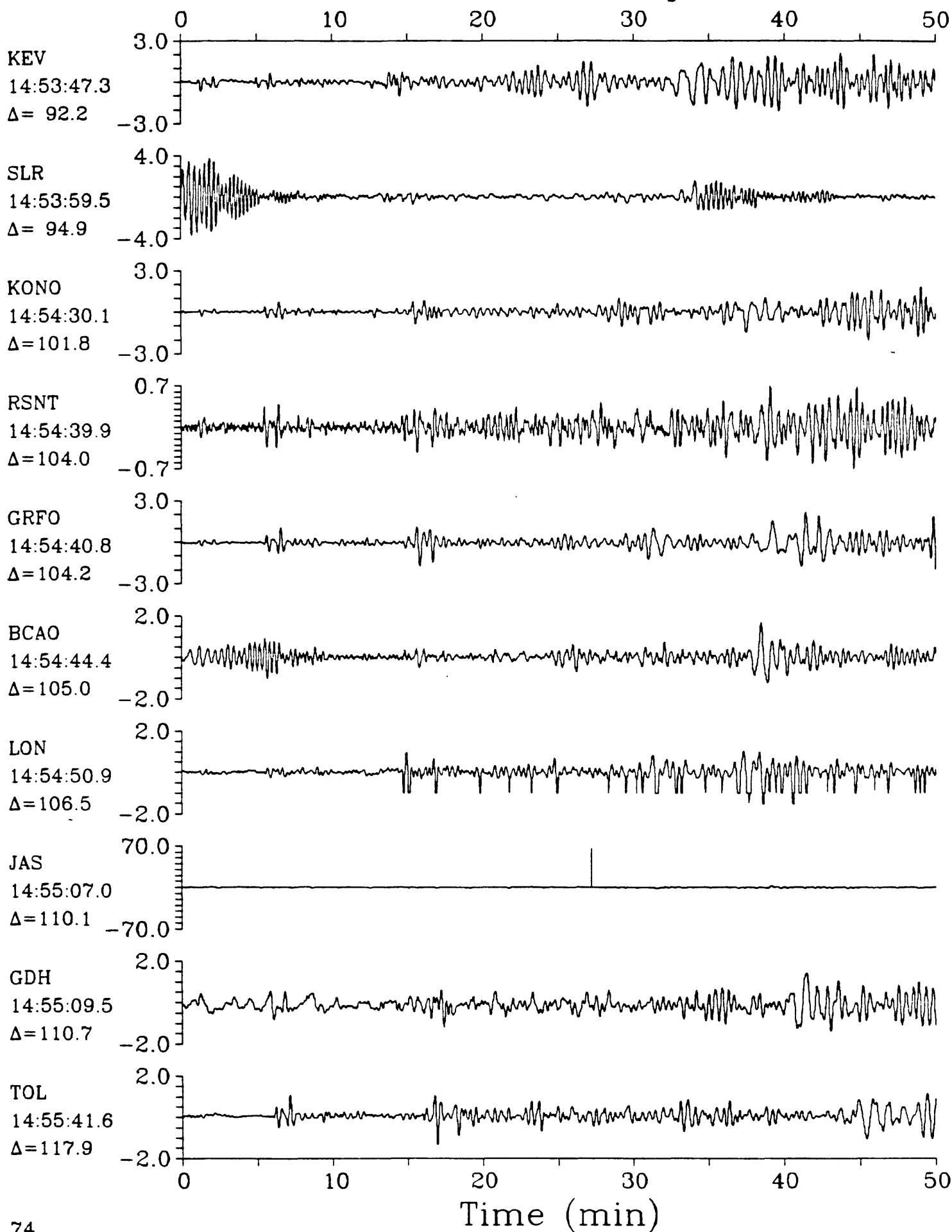
LPZ



LPZ

11 January 1985 14:41:57.09
Minahassa Peninsula $h=176.5$ $m_b=6.0$

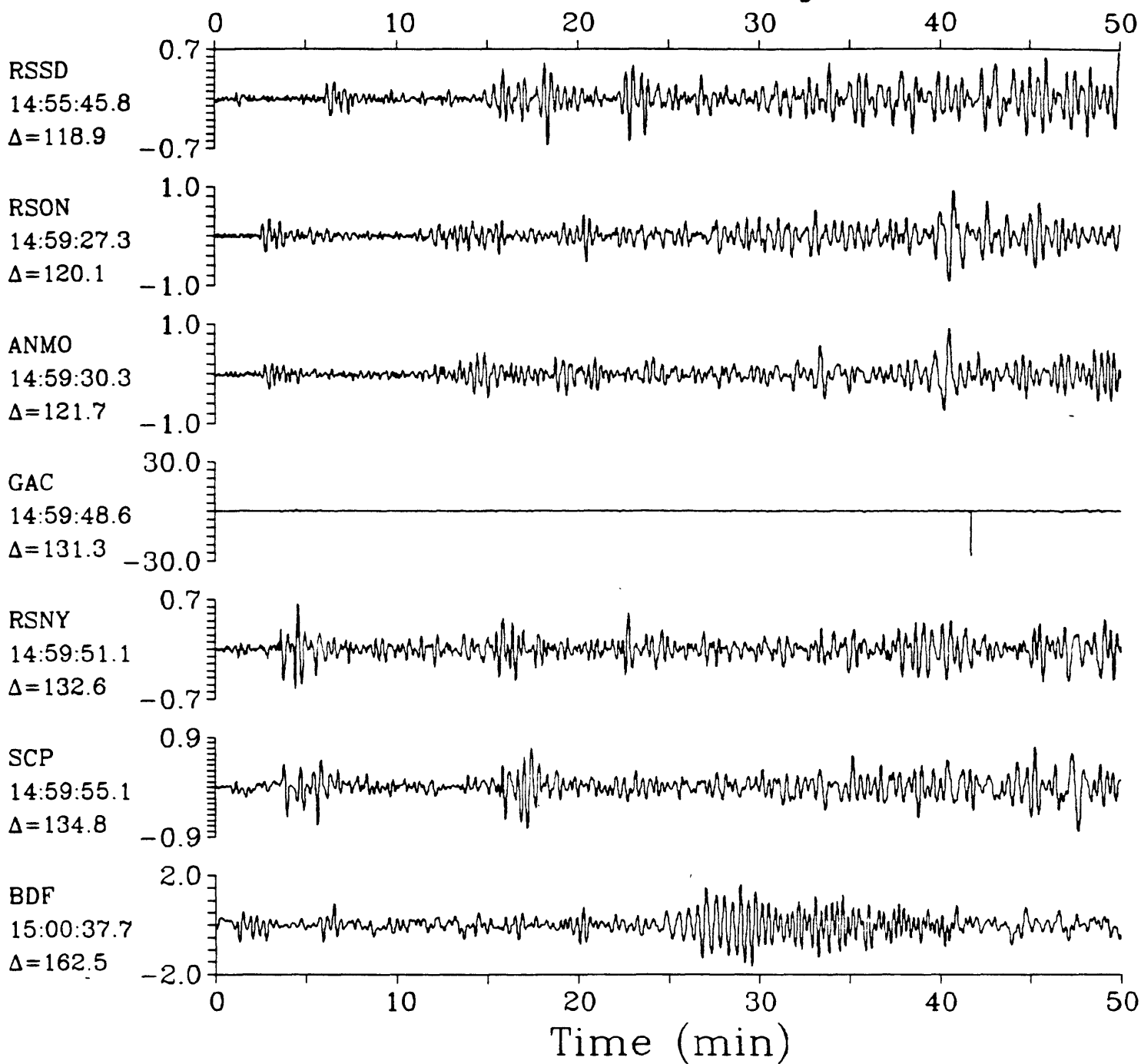
LPZ



LPZ

11 January 1985 14:41:57.09
Minahassa Peninsula $h=176.5$ $m_b=6.0$

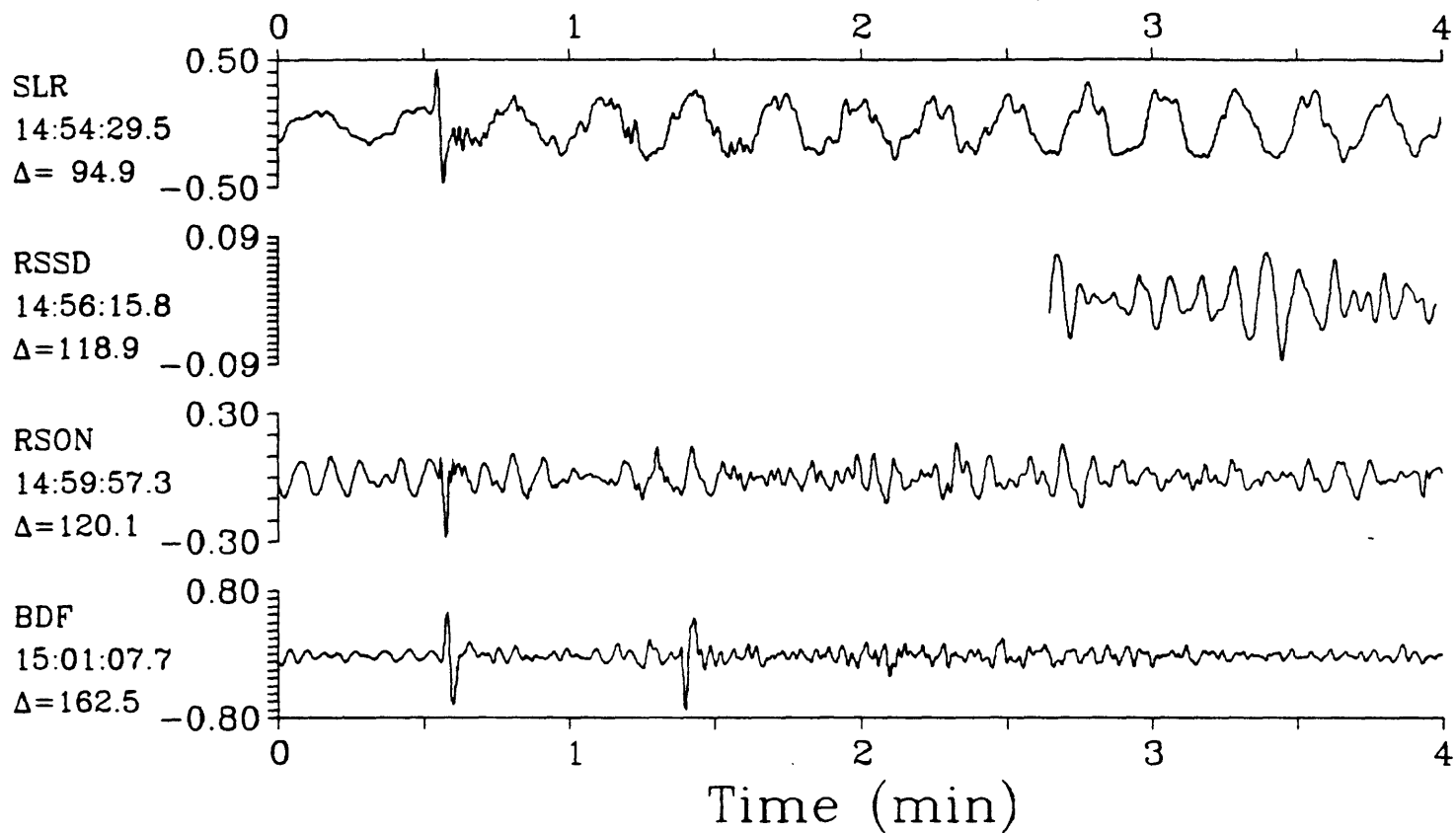
LPZ



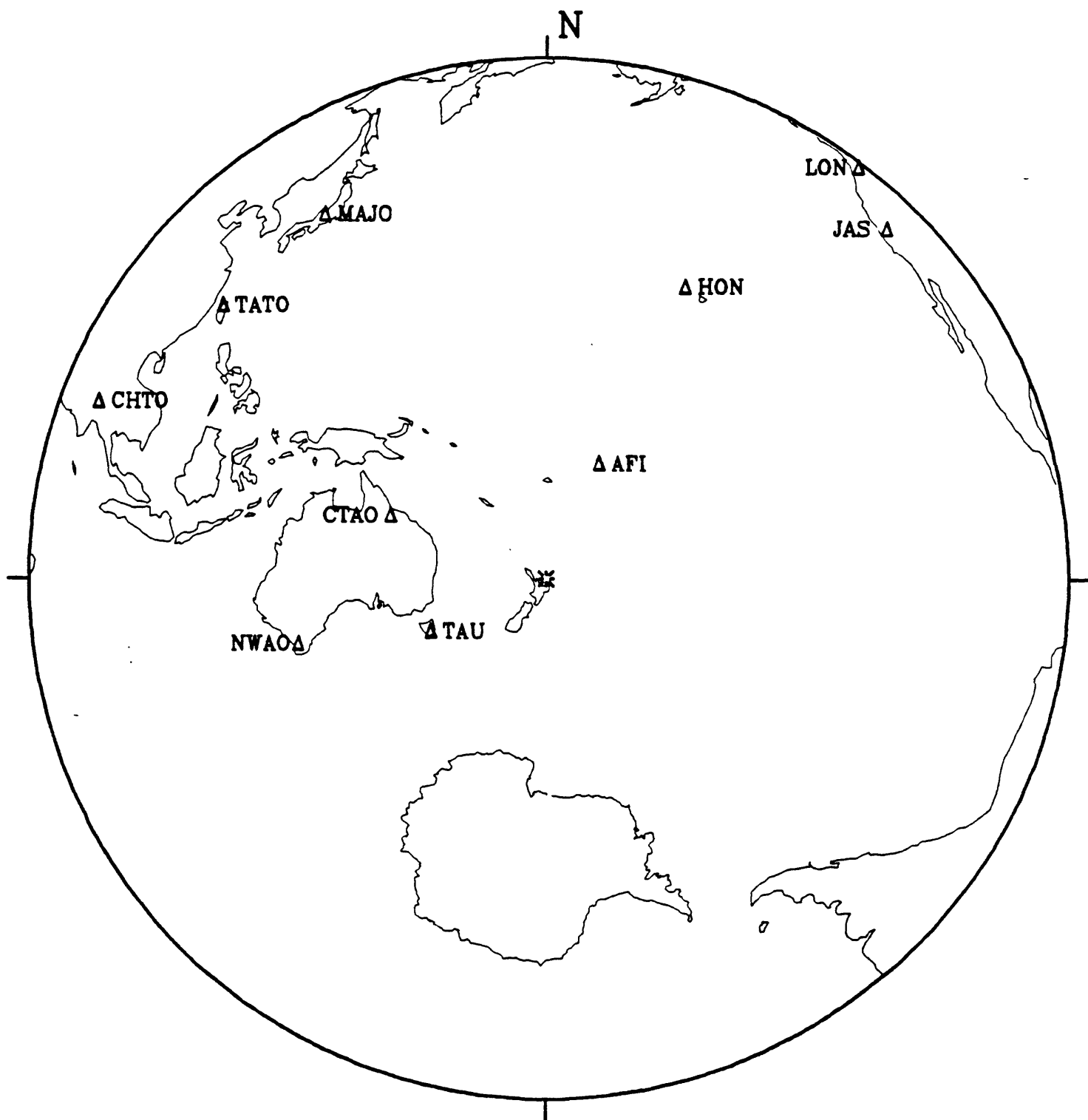
IPZ

11 January 1985 14:41:57.09
Minahassa Peninsula $h=176.5$ $m_b=6.0$

IPZ



13 January 1985 16:01:00.71
Off E. Coast of N. Island, N.Z.

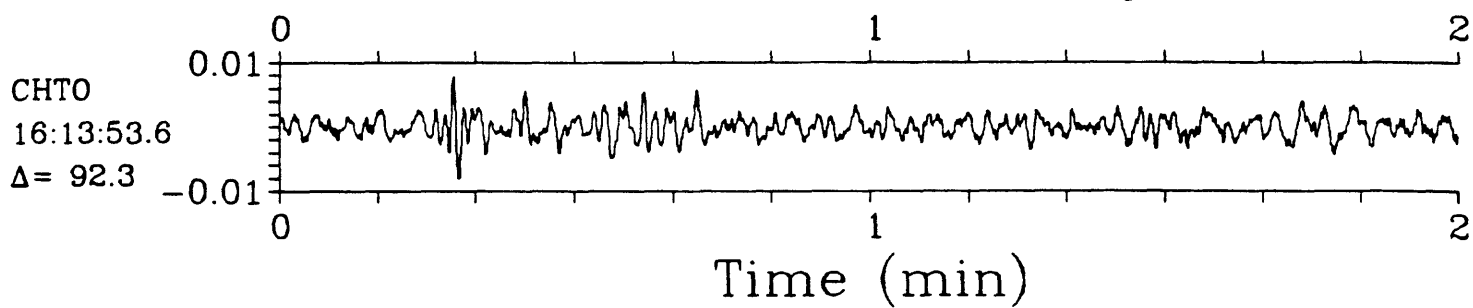


SPZ

13 January 1985 16:01:00.71

SPZ

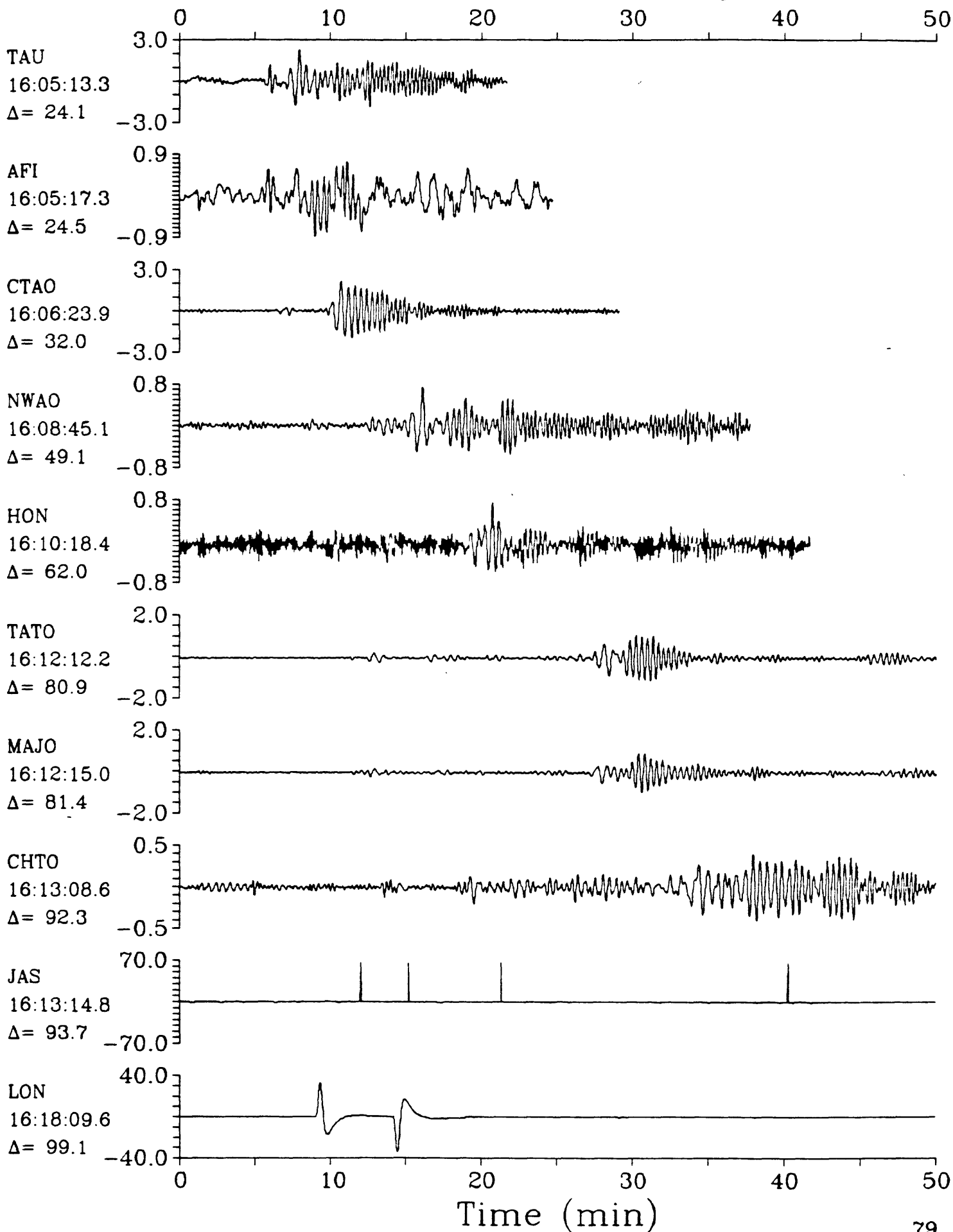
Off E. Coast of N. Island, N.Z. $h=33.0$ $m_b=5.7$



LPZ

13 January 1985 16:01:00.71

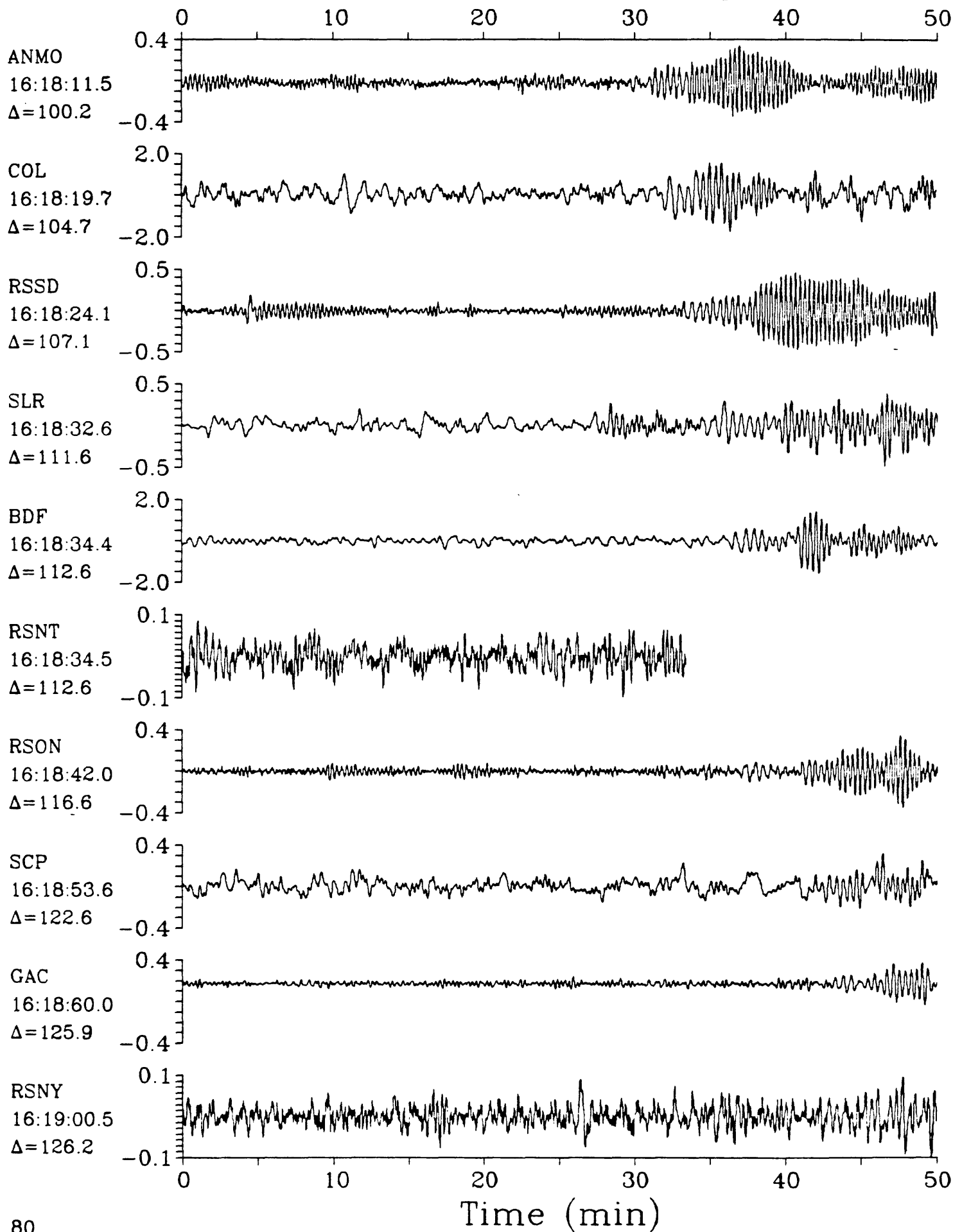
LPZ

Off E. Coast of N. Island, N.Z. $h=33.0$ $m_b=5.7$ 

LPZ

13 January 1985 16:01:00.71

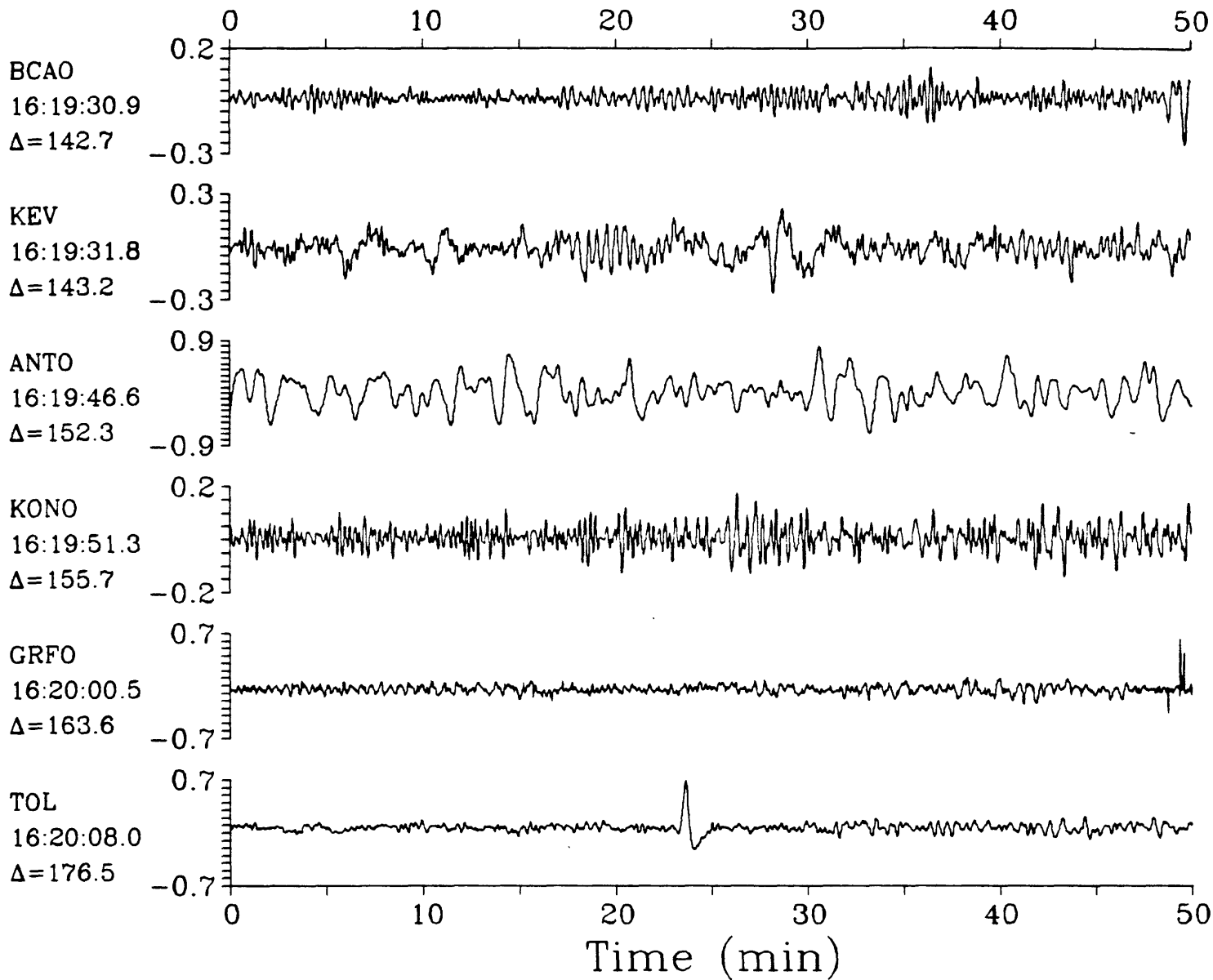
LPZ

Off E. Coast of N. Island, N.Z. $h=33.0$ $m_b=5.7$ 

LPZ

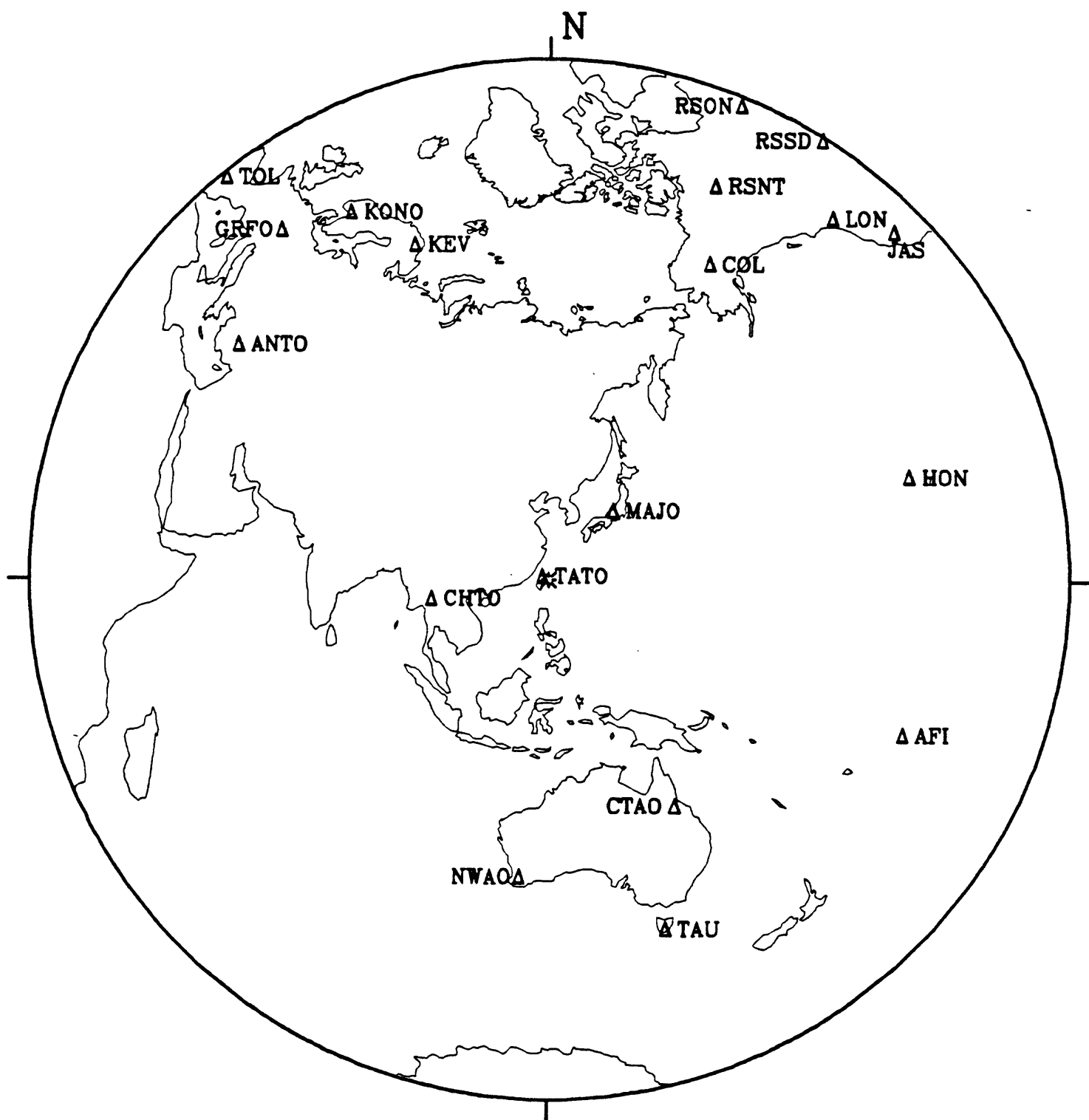
13 January 1985 16:01:00.71

LPZ

Off E. Coast of N. Island, N.Z. $h=33.0$ $m_b=5.7$ 

13 January 1985 21:51:21.70

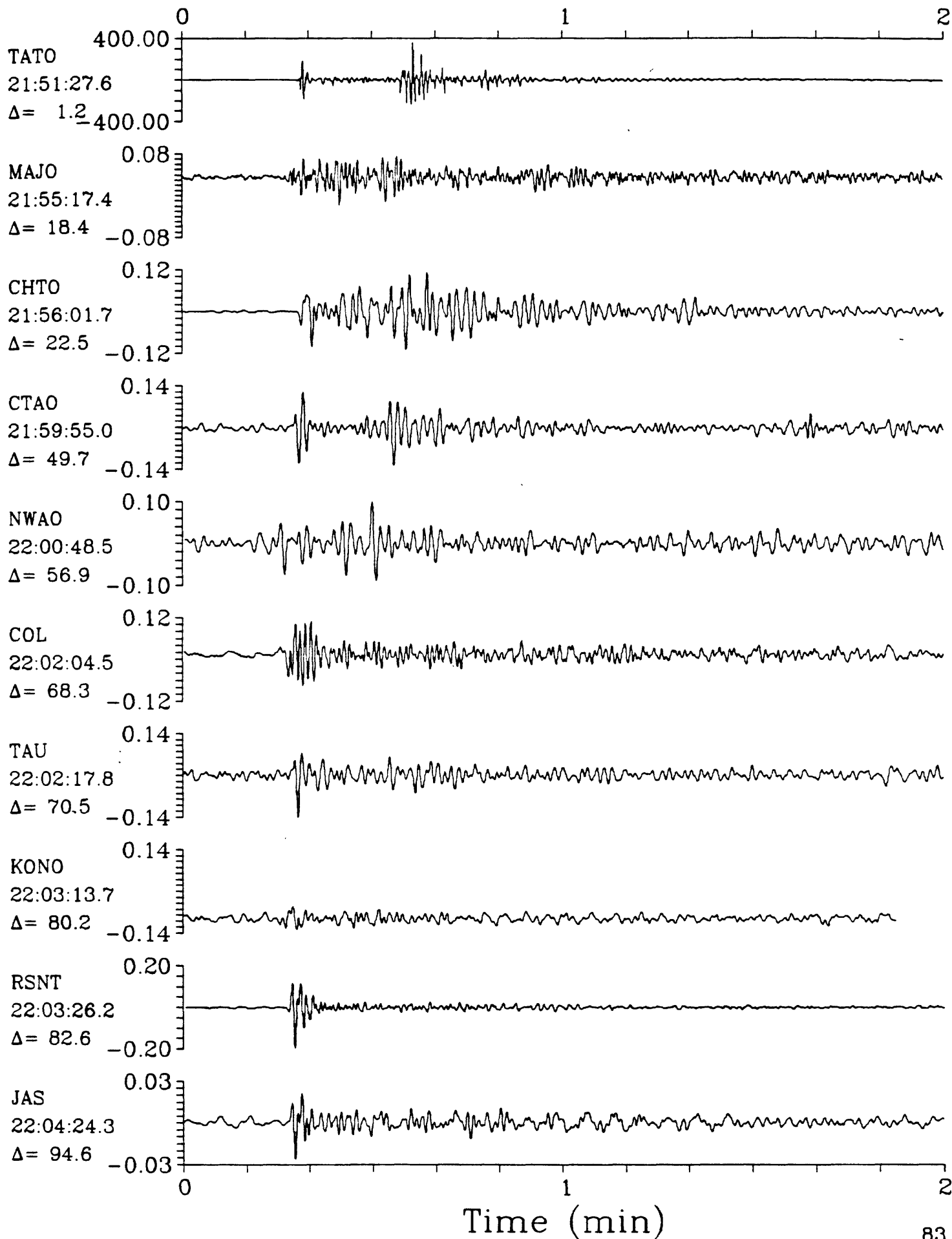
Taiwan Region



SPZ

13 January 1985 21:51:21.70
Taiwan Region $h=39.3$ $m_b=5.8$ $M_{sz}=5.3$

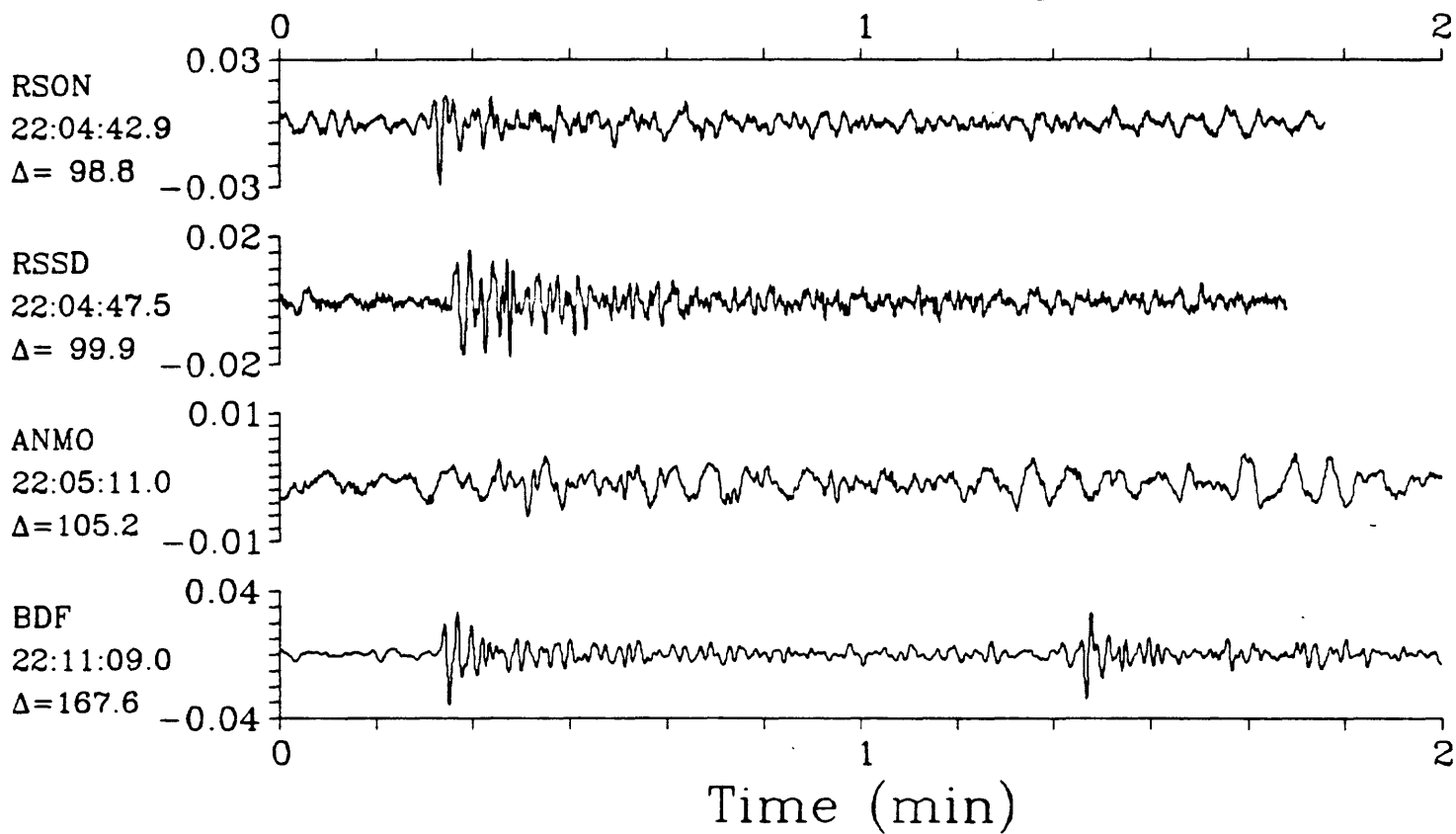
SPZ



SPZ

13 January 1985 21:51:21.70
Taiwan Region $h=39.3$ $m_b=5.8$ $M_{sz}=5.3$

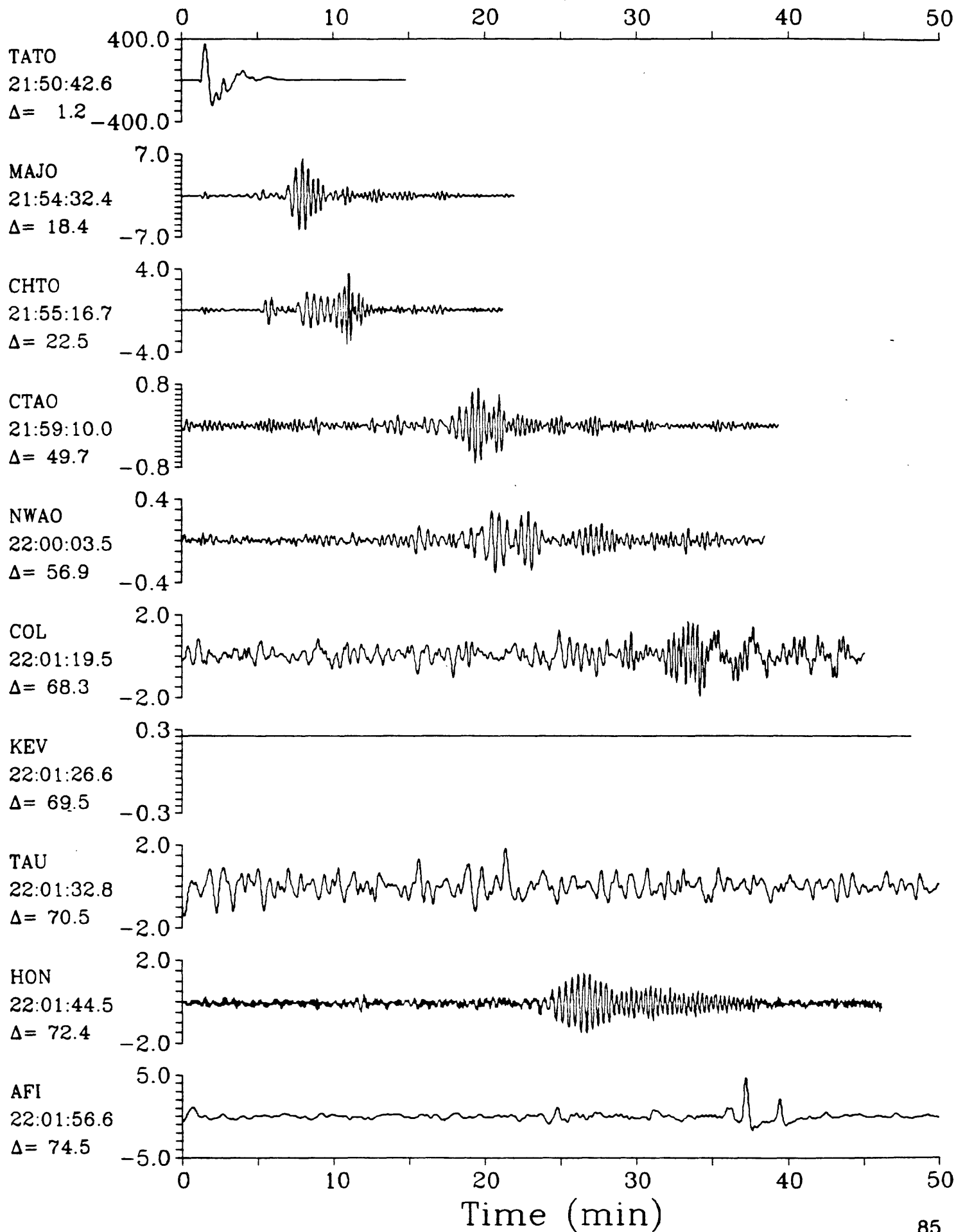
SPZ



LPZ

13 January 1985 21:51:21.70
Taiwan Region $h=39.3$ $m_b=5.8$ $M_{sz}=5.3$

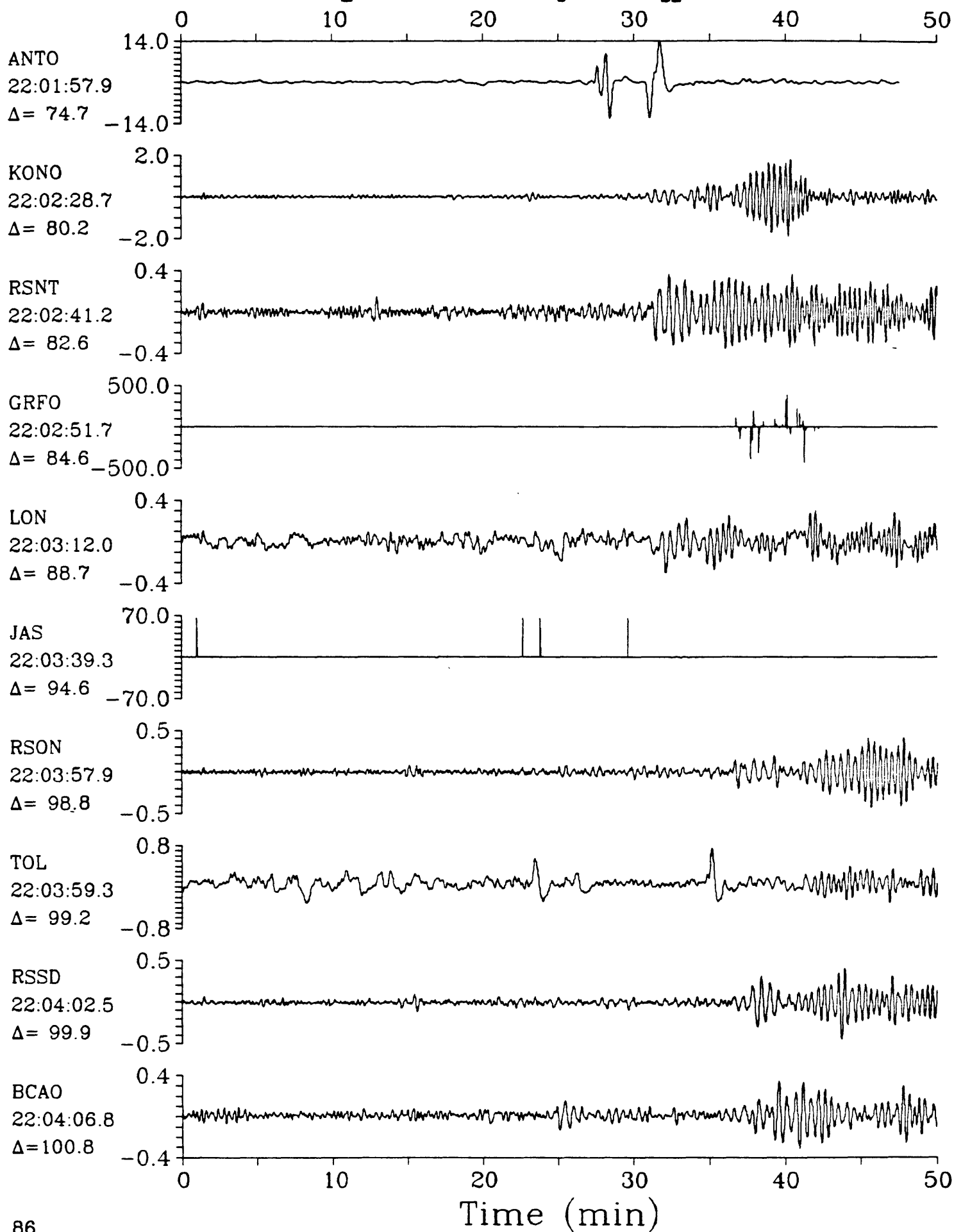
LPZ



LPZ

13 January 1985 21:51:21.70
Taiwan Region $h=39.3$ $m_b=5.8$ $M_{sz}=5.3$

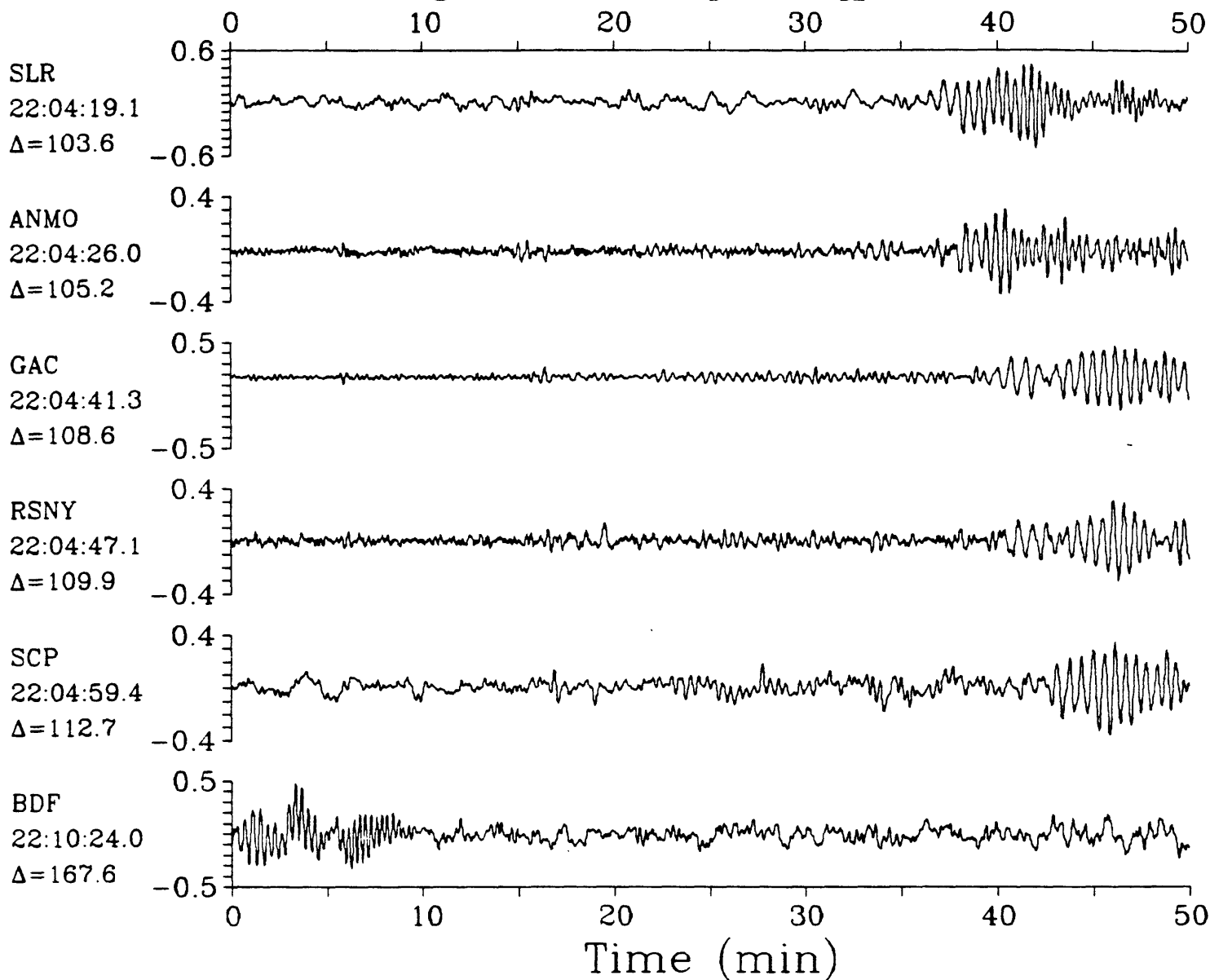
LPZ



LPZ

13 January 1985 21:51:21.70
Taiwan Region $h=39.3$ $m_b=5.8$ $M_{sz}=5.3$

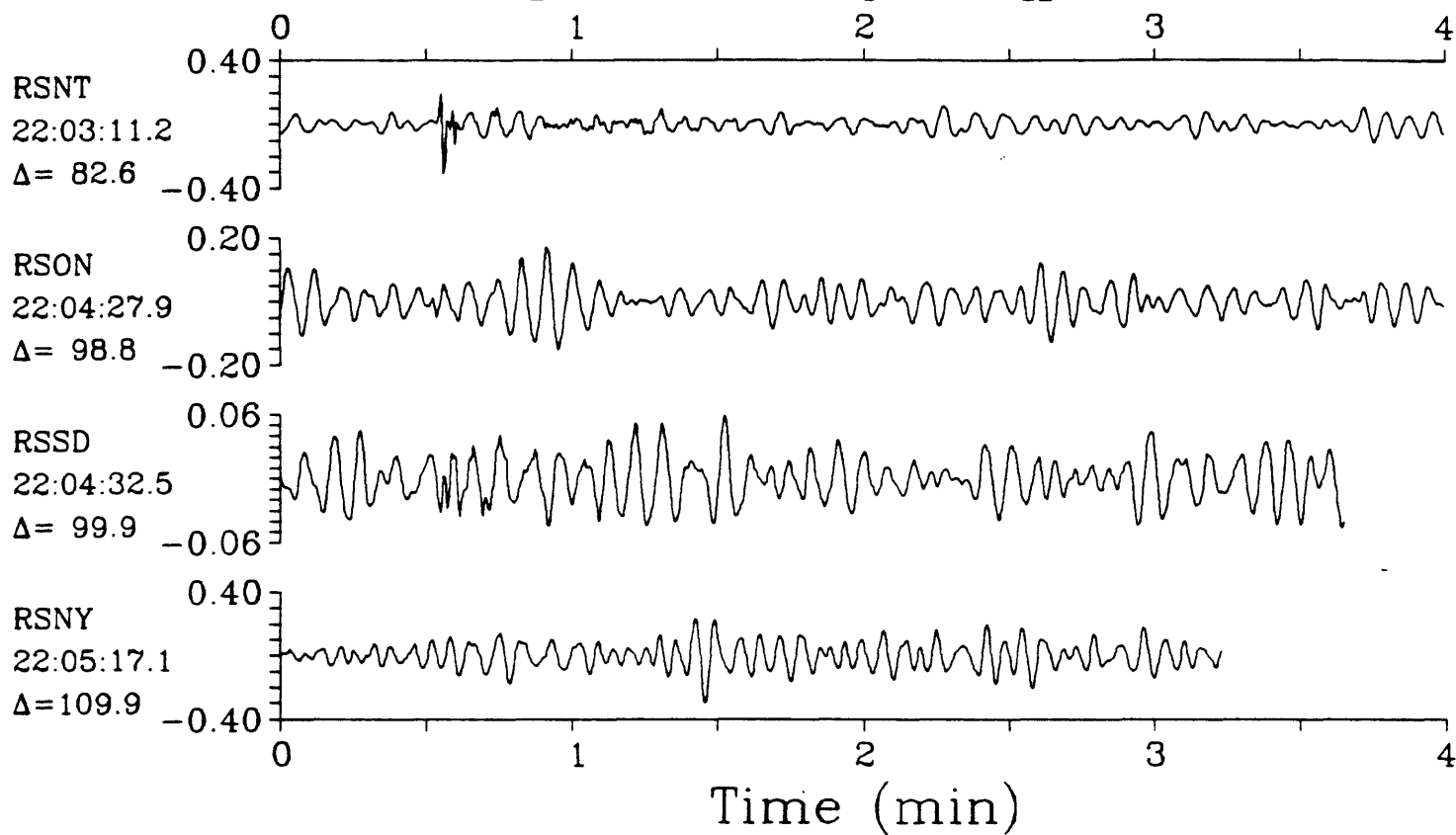
LPZ



IPZ

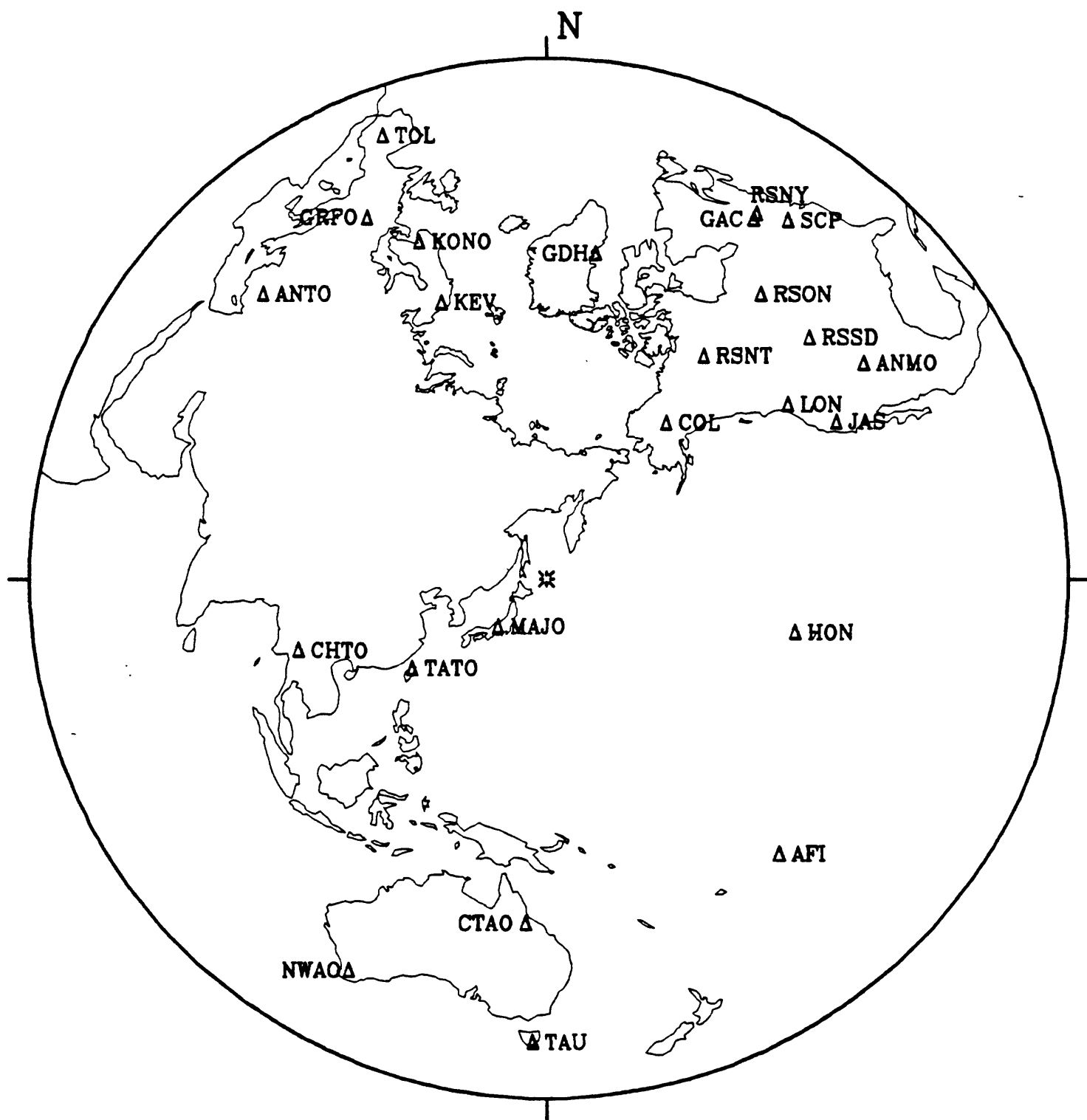
13 January 1985 21:51:21.70
Taiwan Region $h=39.3$ $m_b=5.8$ $M_{sz}=5.3$

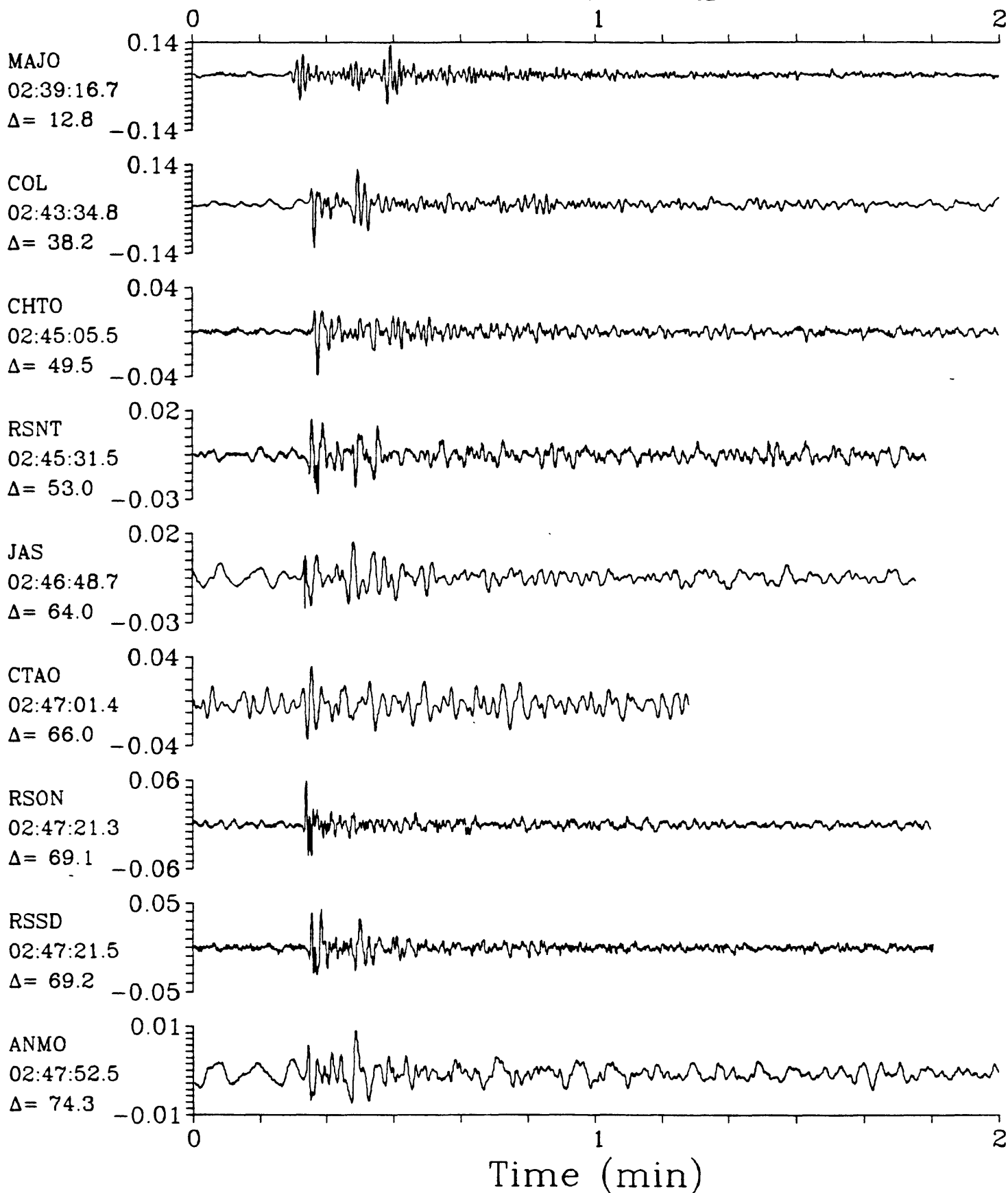
IPZ



14 January 1985 02:36:31.26

Kuril Islands

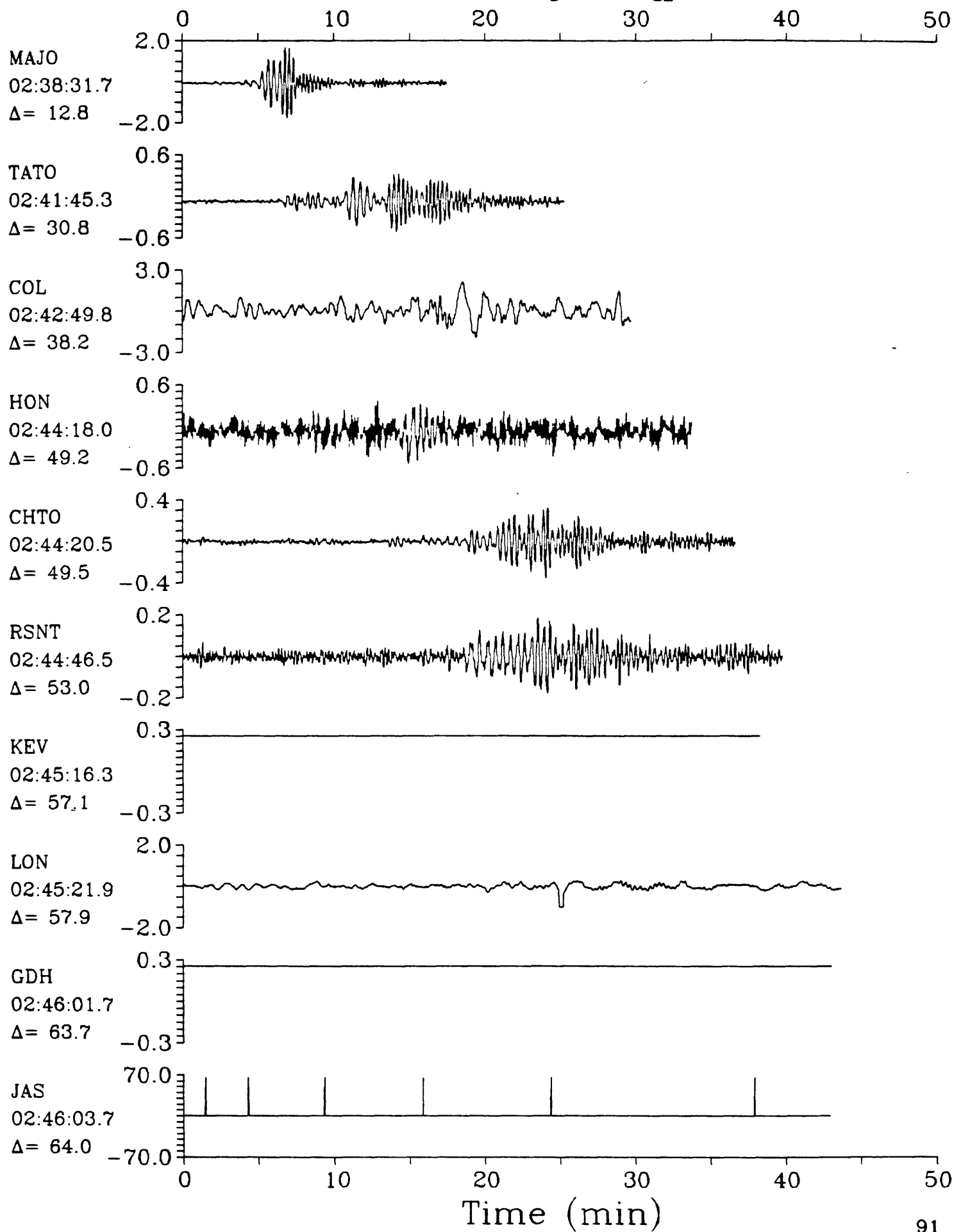




LPZ

14 January 1985 02:36:31.26
Kuril Islands $h=21.9$ $m_b=5.2$ $M_{sz}=5.8$

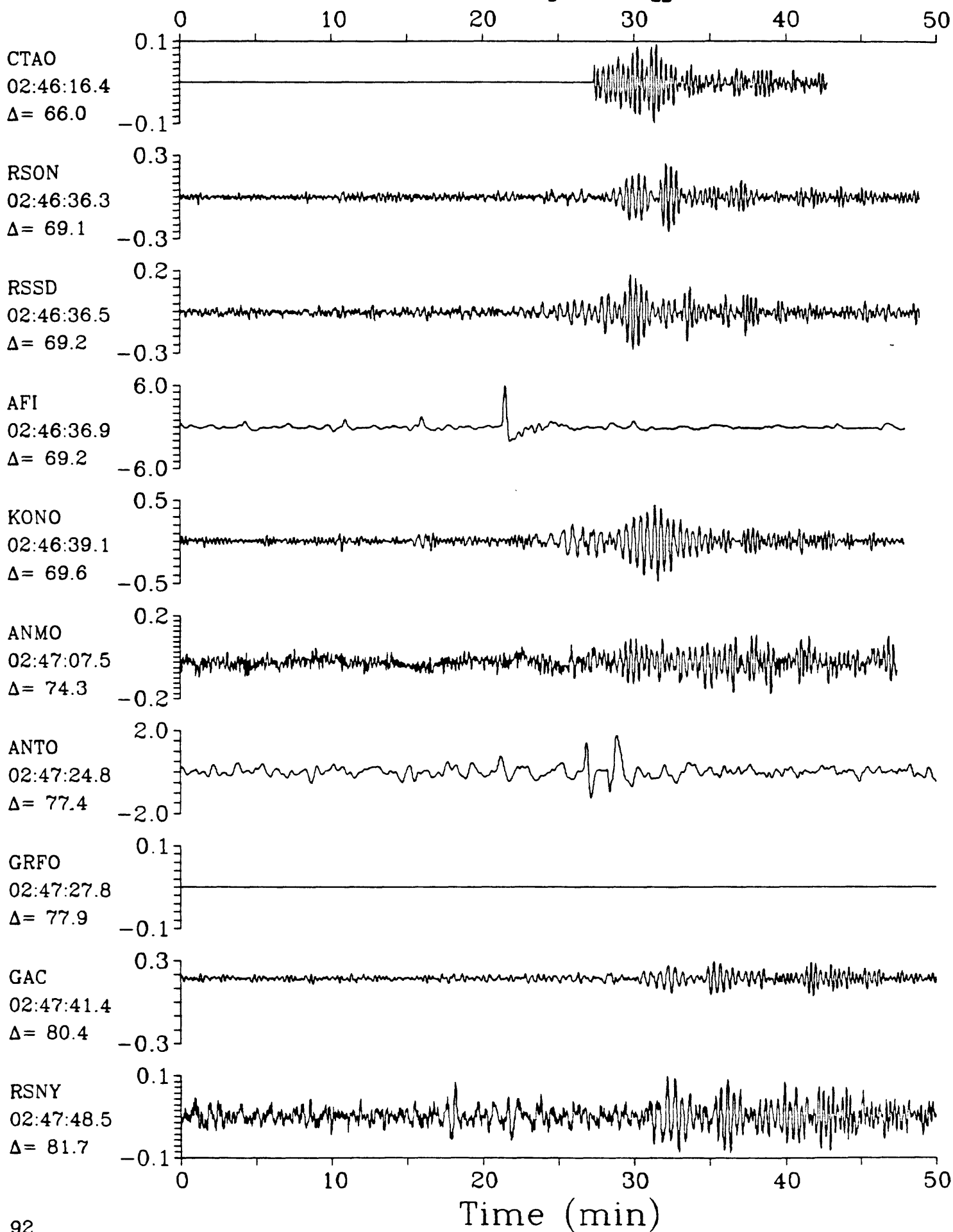
LPZ



LPZ

14 January 1985 02:36:31.26
Kuril Islands $h=21.9$ $m_b=5.2$ $M_{sz}=5.8$

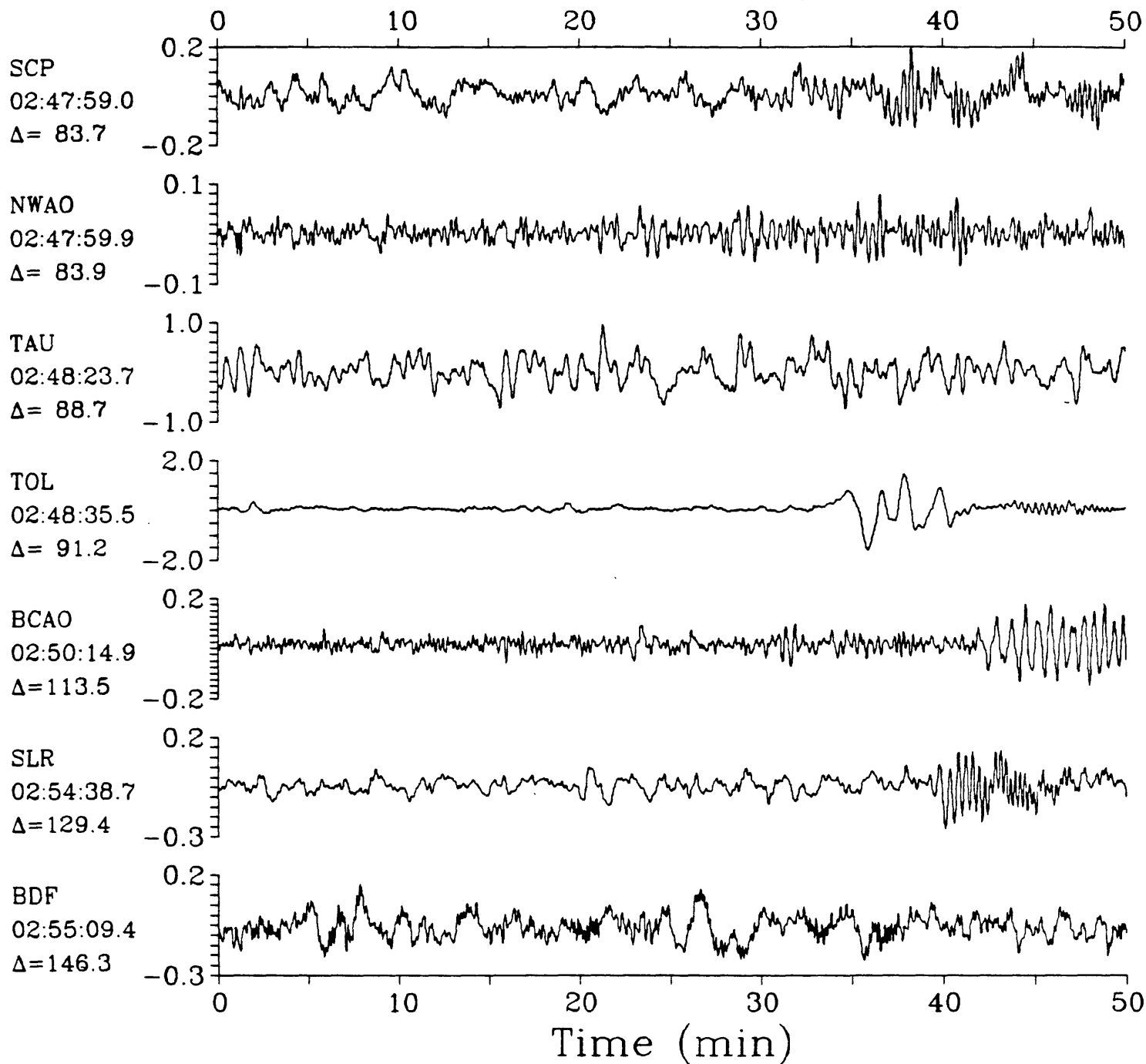
LPZ



LPZ

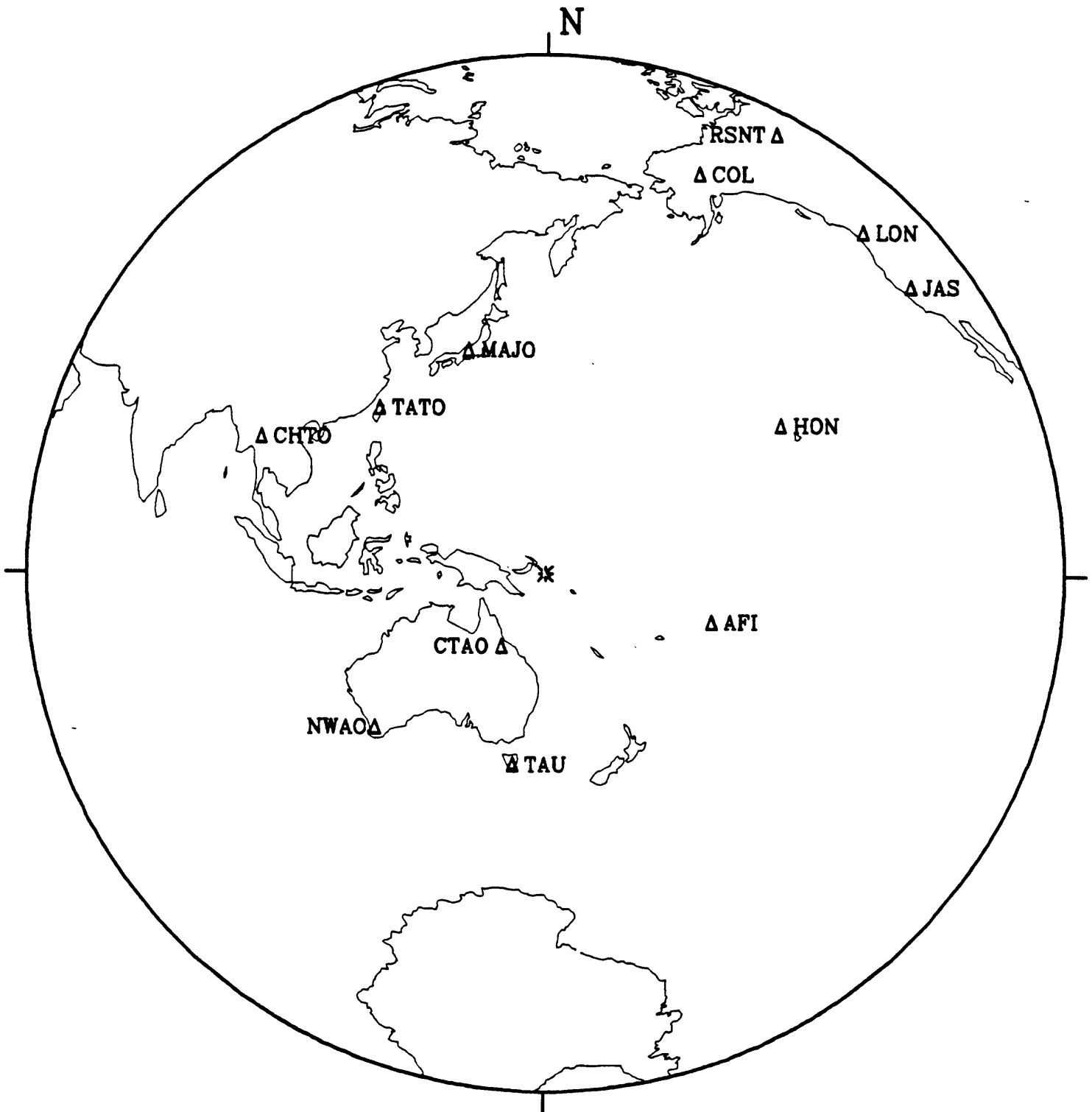
14 January 1985 02:36:31.26
Kuril Islands $h=21.9$ $m_b=5.2$ $M_{sz}=5.8$

LPZ



15 January 1985 13:01:57.54

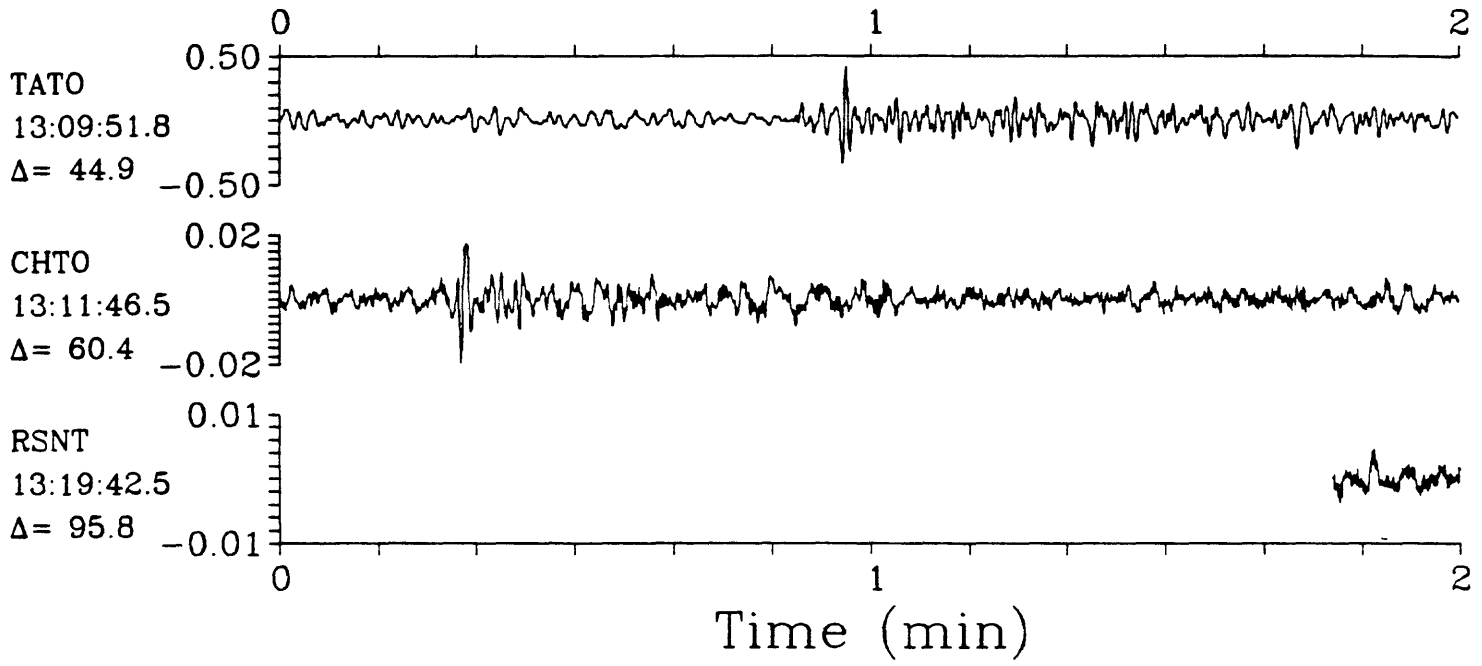
Solomon Islands



SPZ

15 January 1985 13:01:57.54
Solomon Islands $h=56.8$ $m_b=5.5$

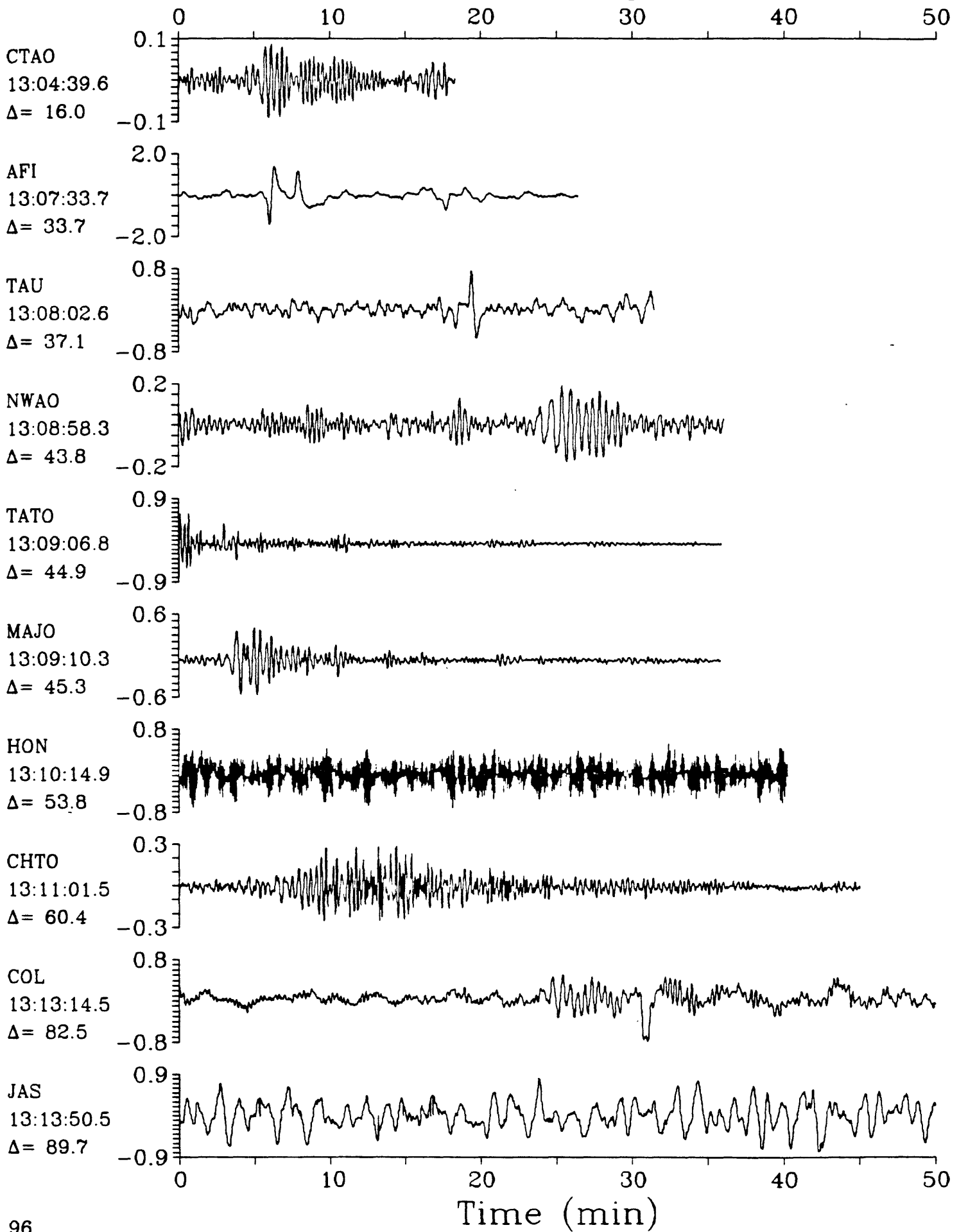
SPZ



LPZ

15 January 1985 13:01:57.54
Solomon Islands $h=56.8$ $m_b=5.5$

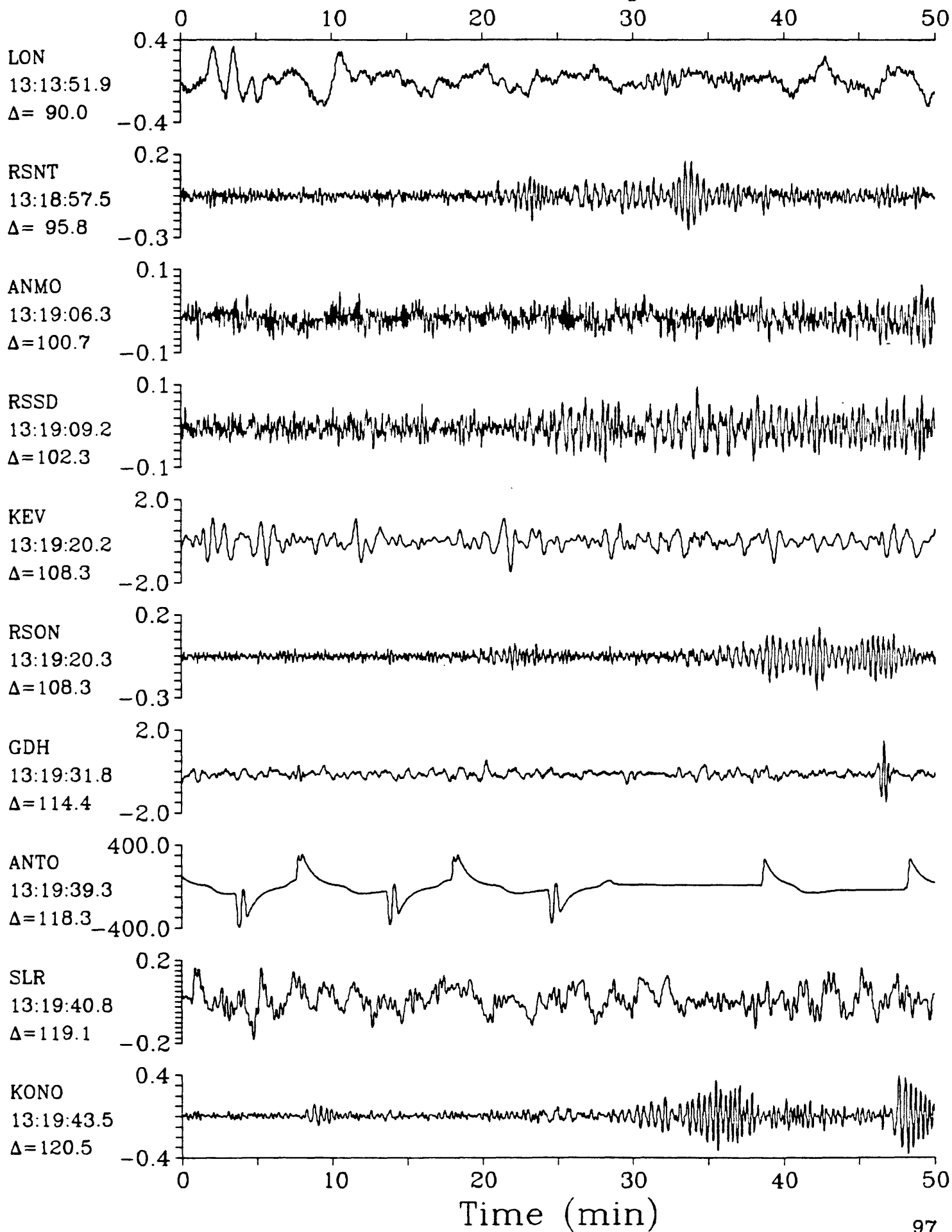
LPZ



LPZ

15 January 1985 13:01:57.54
Solomon Islands $h=56.8$ $m_b=5.5$

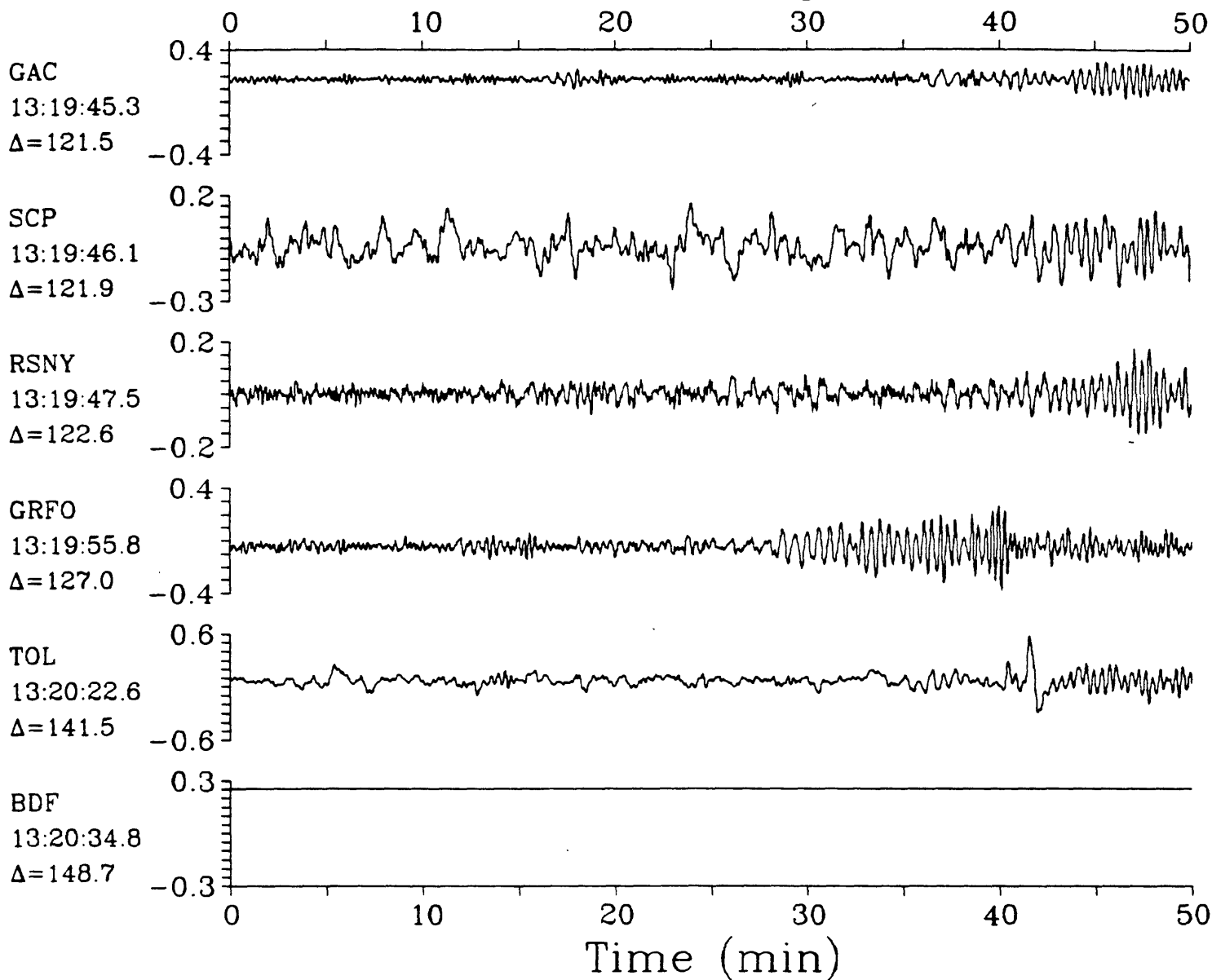
LPZ



LPZ

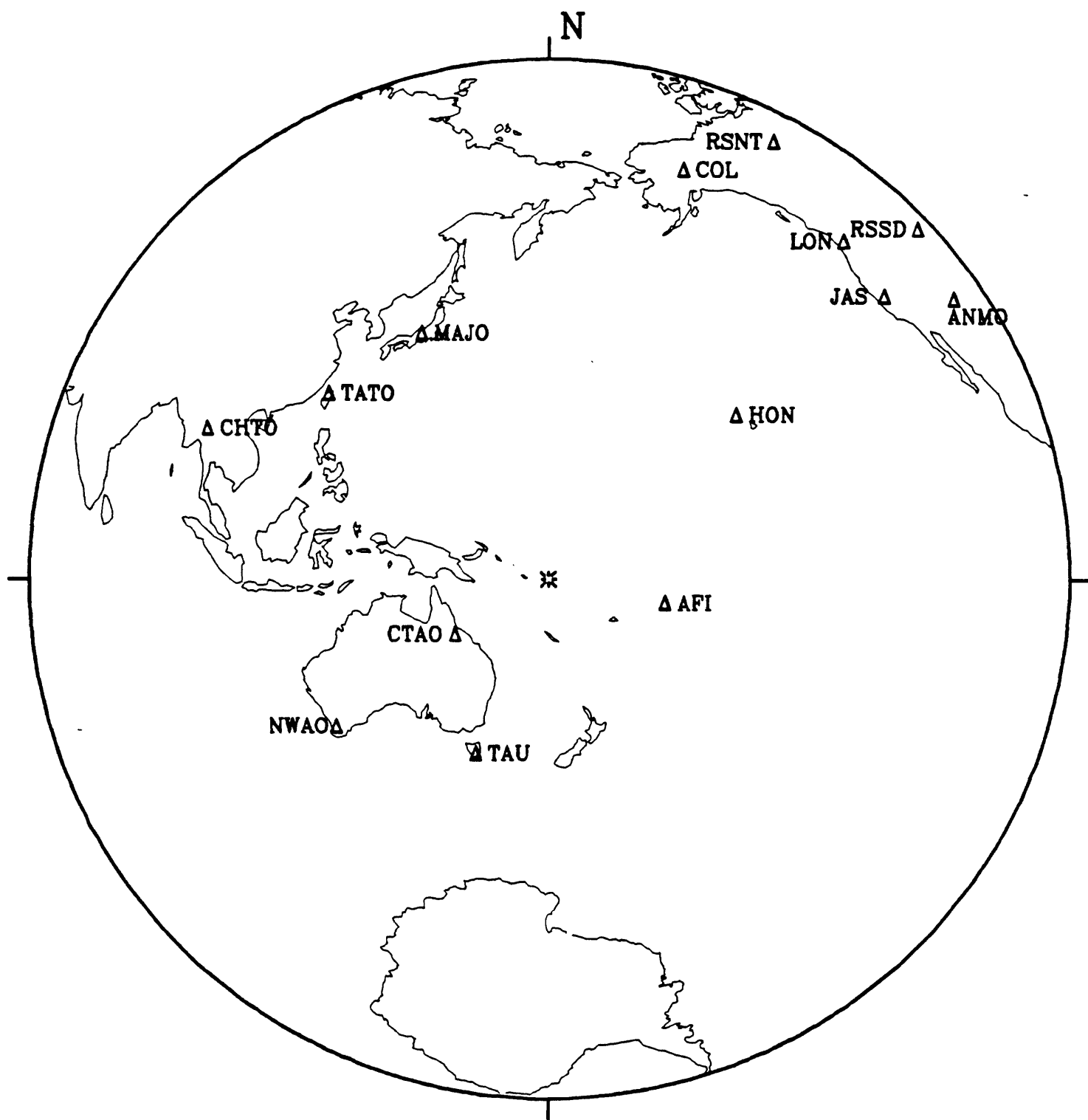
15 January 1985 13:01:57.54
Solomon Islands $h=56.8$ $m_b=5.5$

LPZ



15 January 1985 22:36:35.59

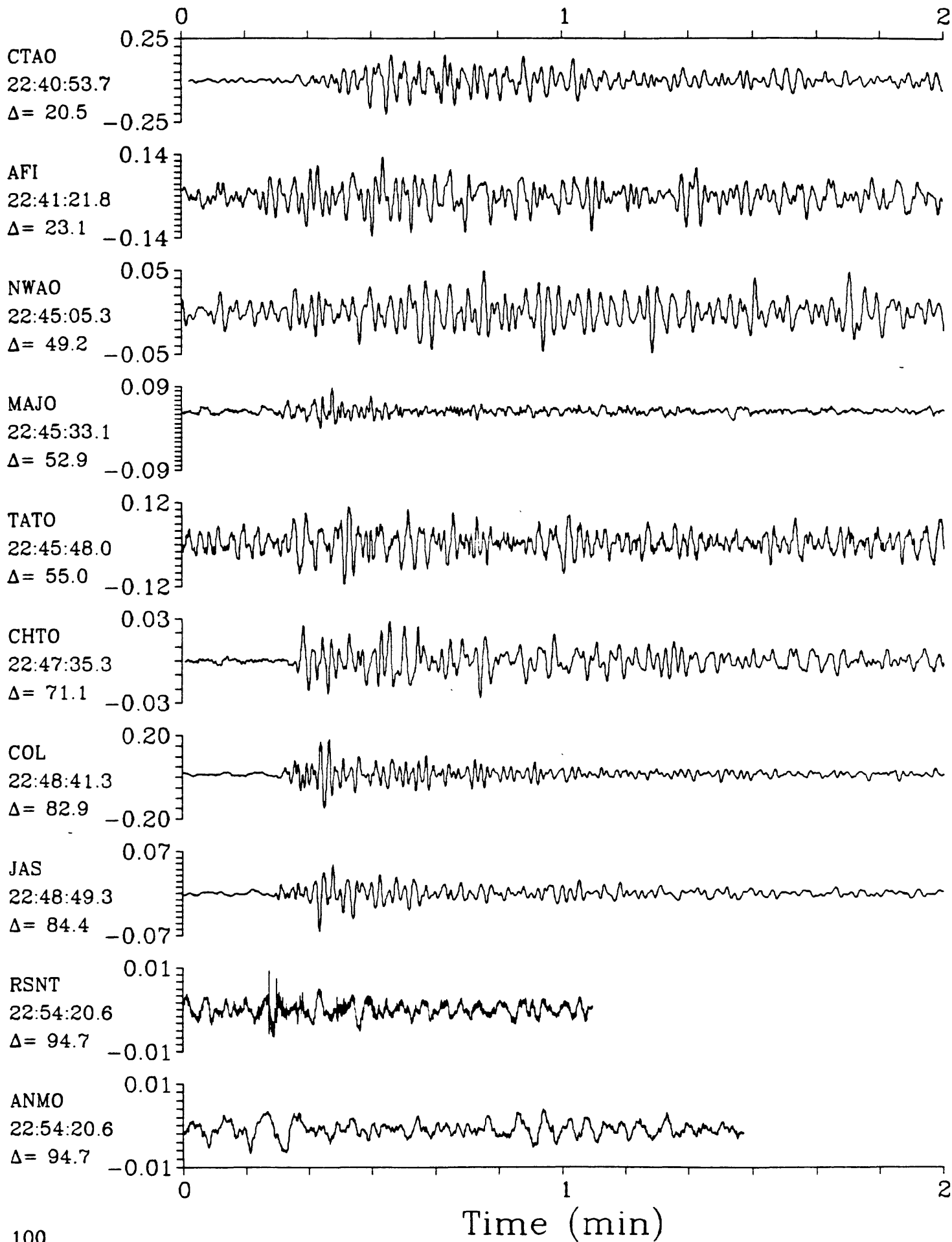
Santa Cruz Islands Region



SPZ

15 January 1985 22:36:35.59

SPZ

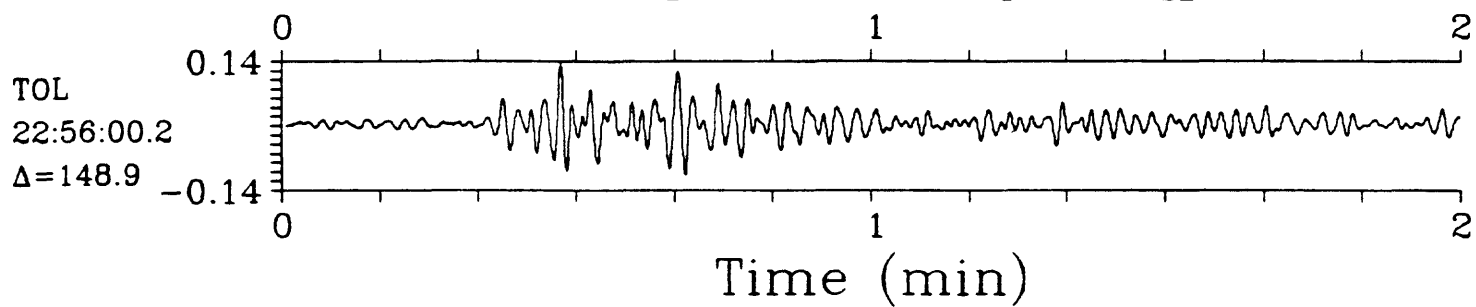
Santa Cruz Islands Region $h=41.0$ $m_b=5.5$ $M_{SZ}=5.7$ 

SPZ

15 January 1985 22:36:35.59

SPZ

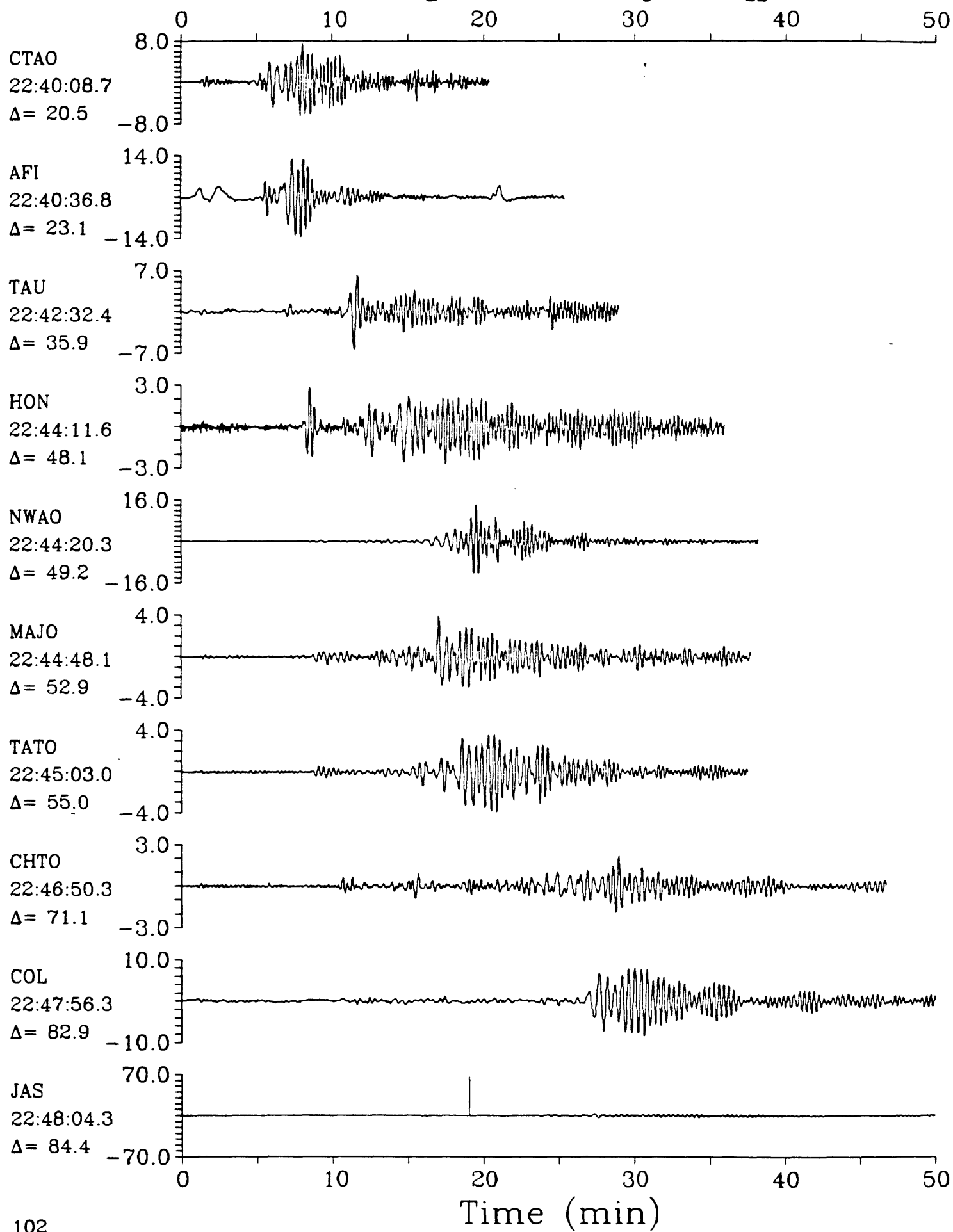
Santa Cruz Islands Region $h=41.0$ $m_b=5.5$ $M_{sz}=5.7$



LPZ

15 January 1985 22:36:35.59

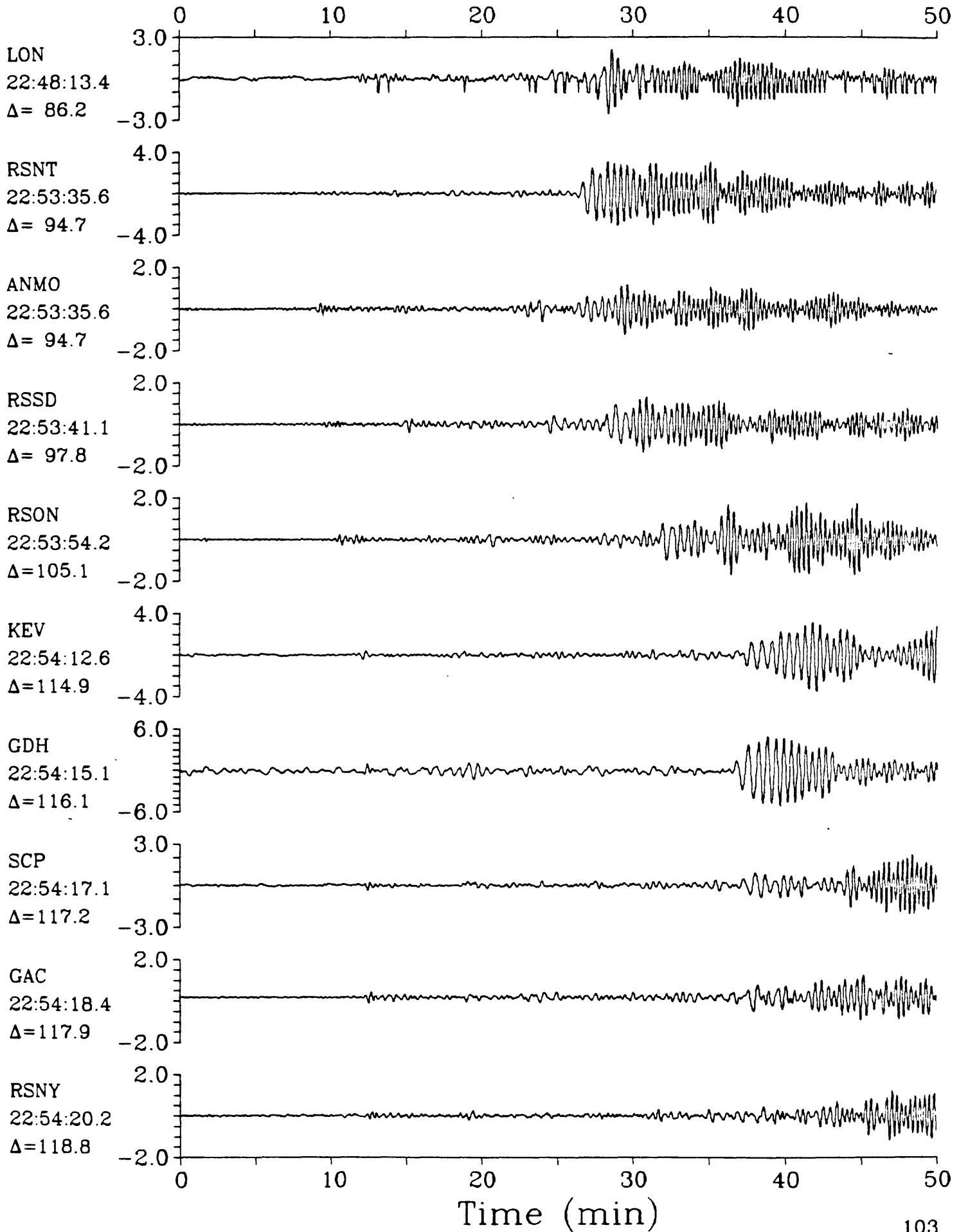
LPZ

Santa Cruz Islands Region $h=41.0$ $m_b=5.5$ $M_{sz}=5.7$ 

LPZ

15 January 1985 22:36:35.59

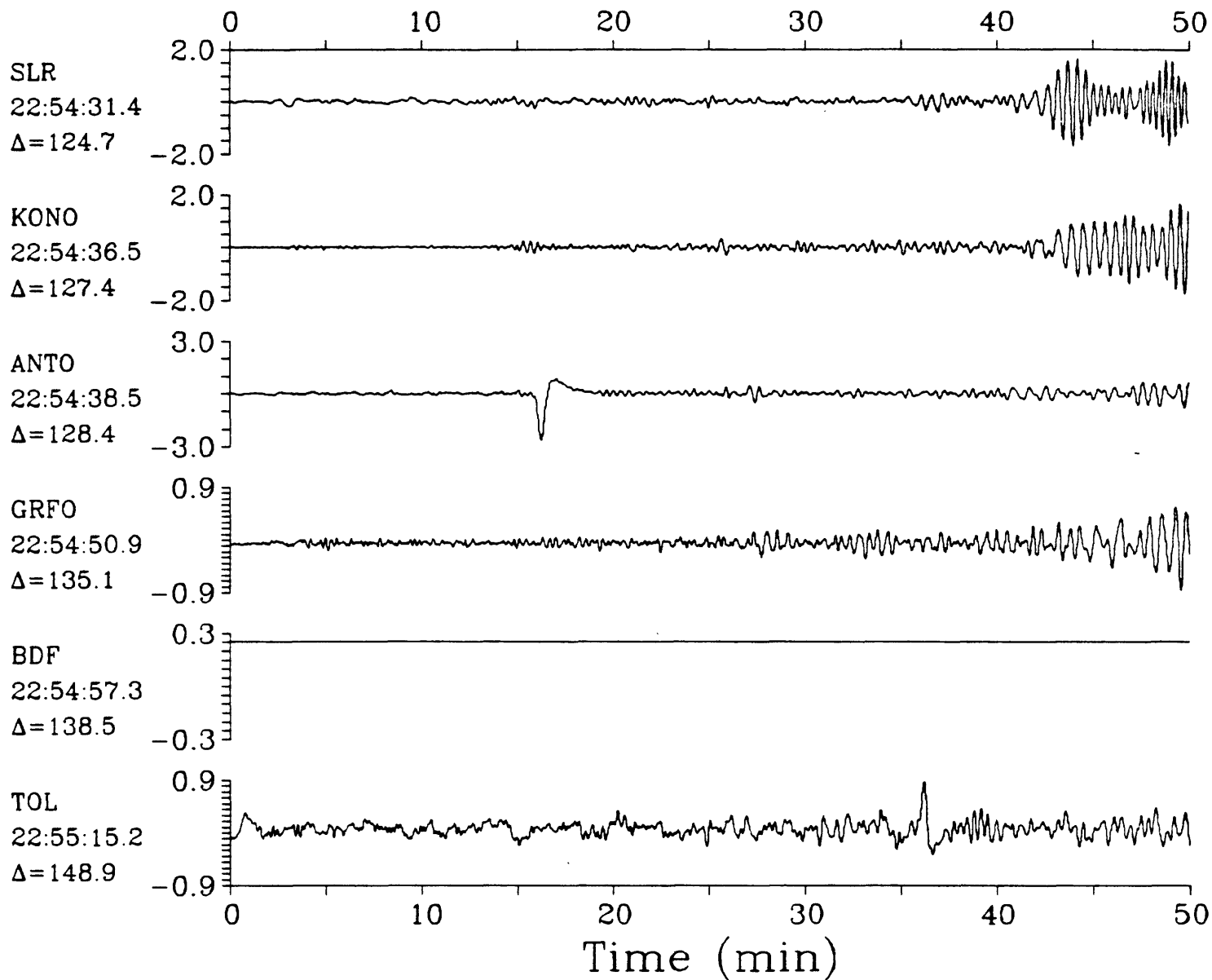
LPZ

Santa Cruz Islands Region $h=41.0$ $m_b=5.5$ $M_{sz}=5.7$ 

LPZ

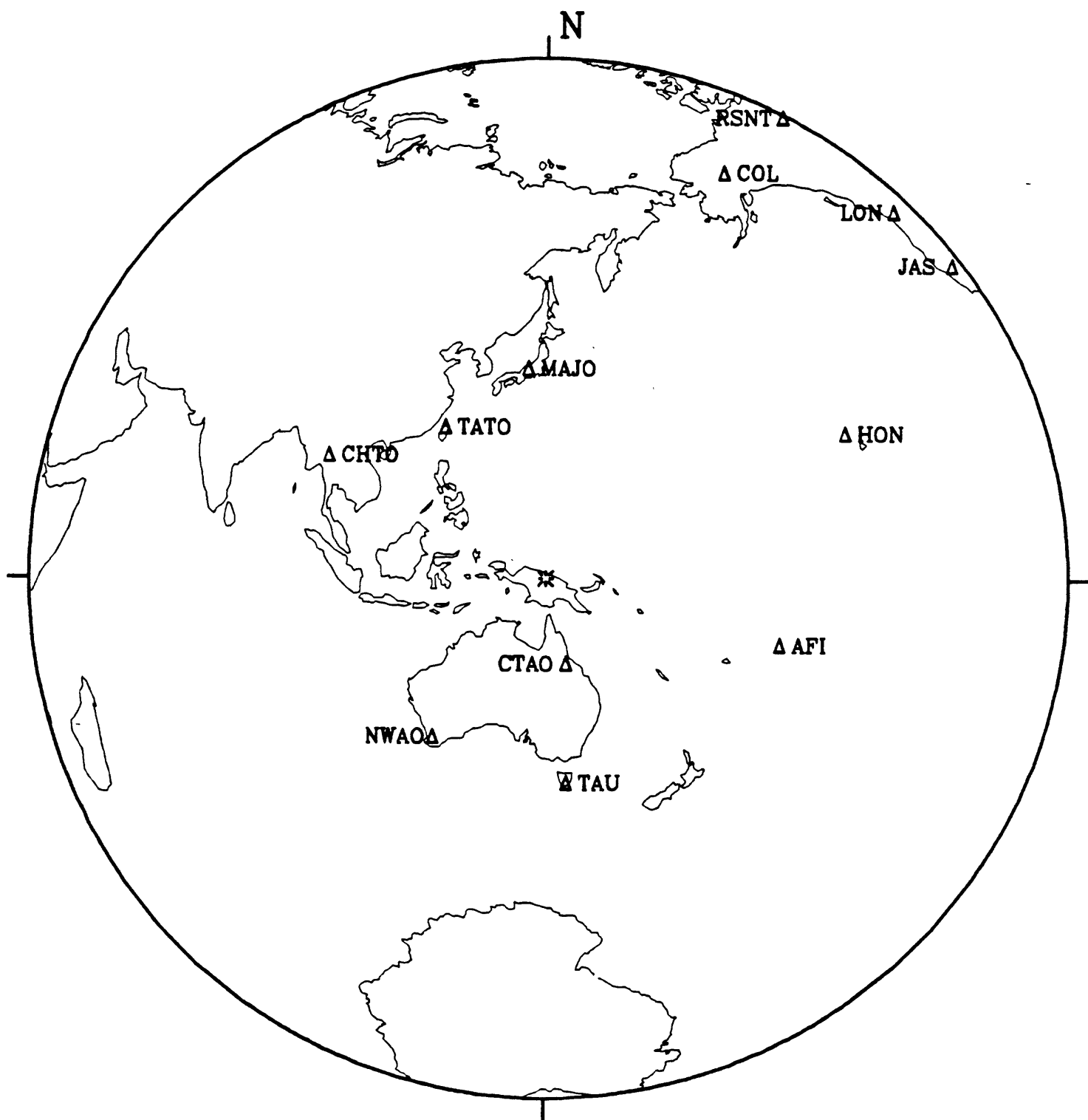
15 January 1985 22:36:35.59

LPZ

Santa Cruz Islands Region $h=41.0$ $m_b=5.5$ $M_{SZ}=5.7$ 

17 January 1985 21:33:10.19

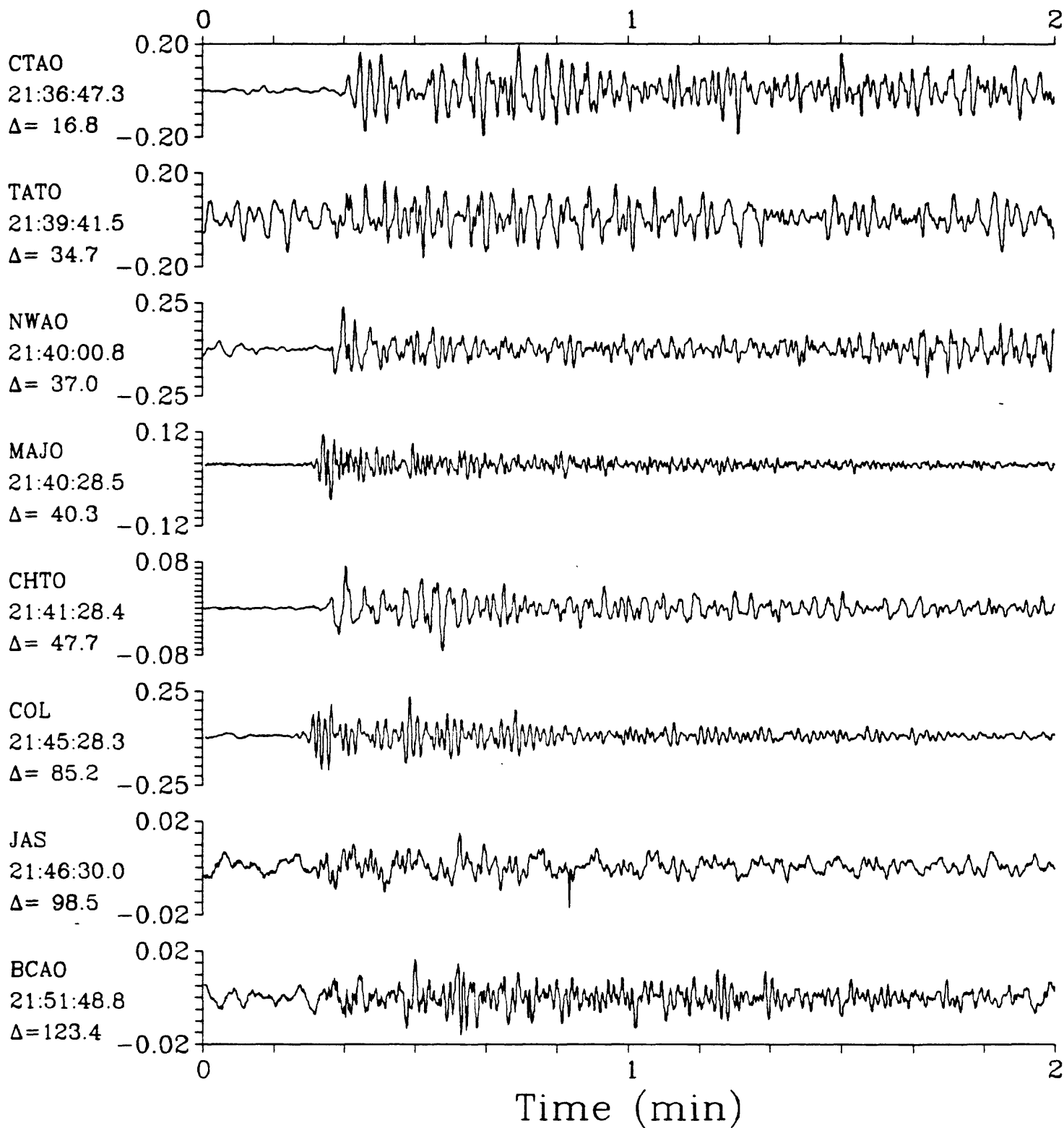
Papua New Guinea



SPZ

17 January 1985 21:33:10.19

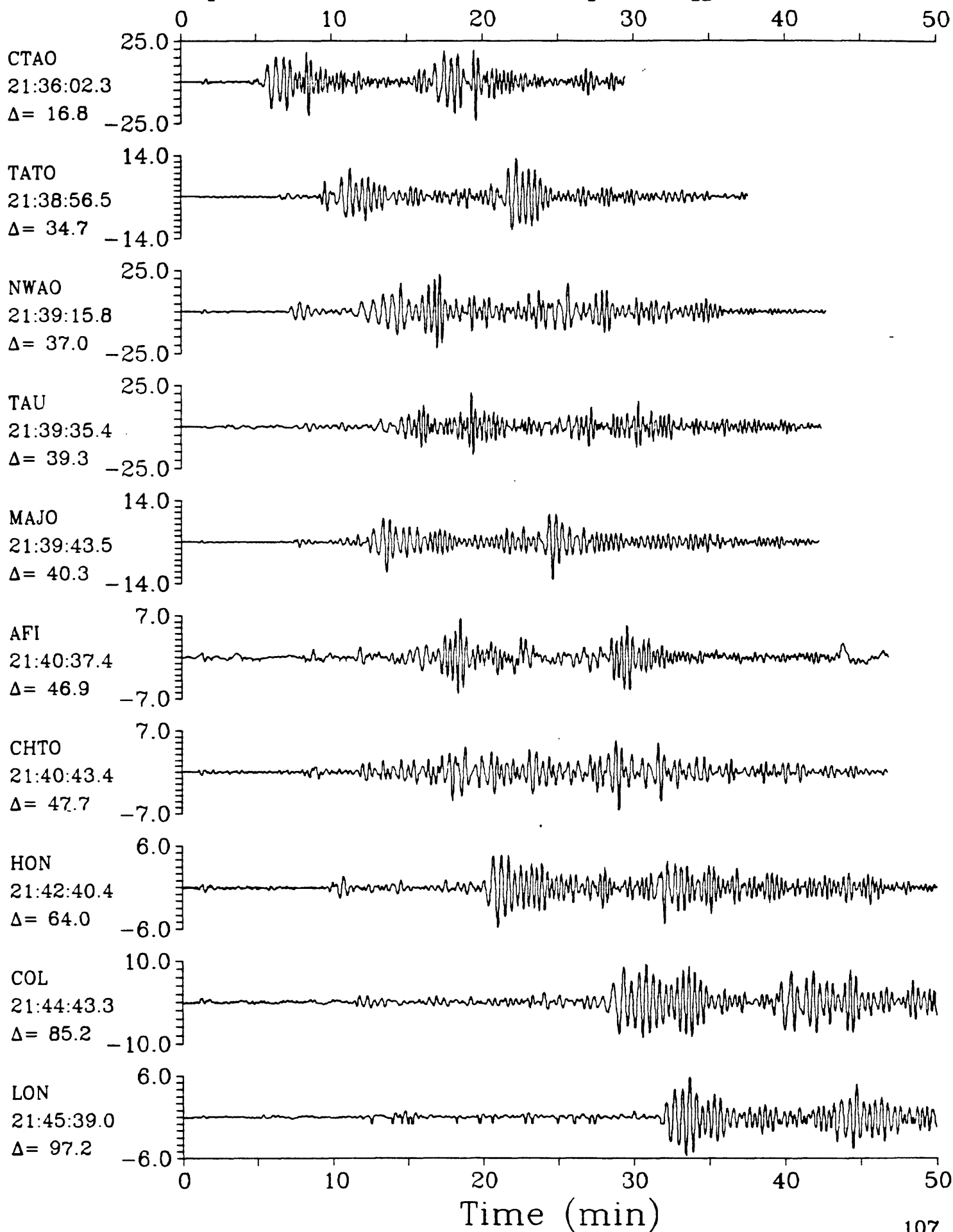
SPZ

Papua New Guinea $h=38.7$ $m_b=5.7$ $M_{sz}=5.8$ 

LPZ

17 January 1985 21:33:10.19

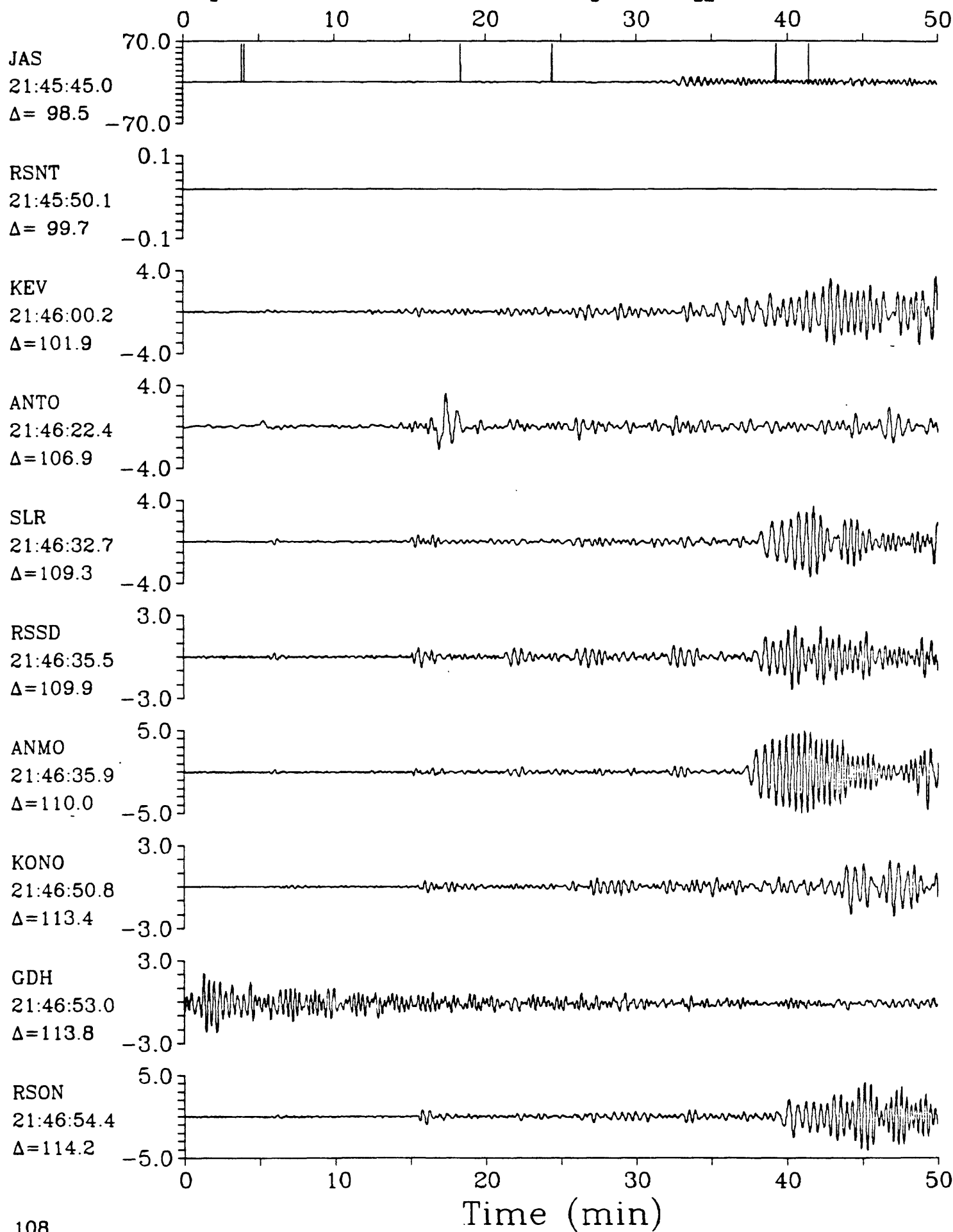
LPZ

Papua New Guinea $h=38.7$ $m_b=5.7$ $M_{sz}=5.8$ 

LPZ

17 January 1985 21:33:10.19

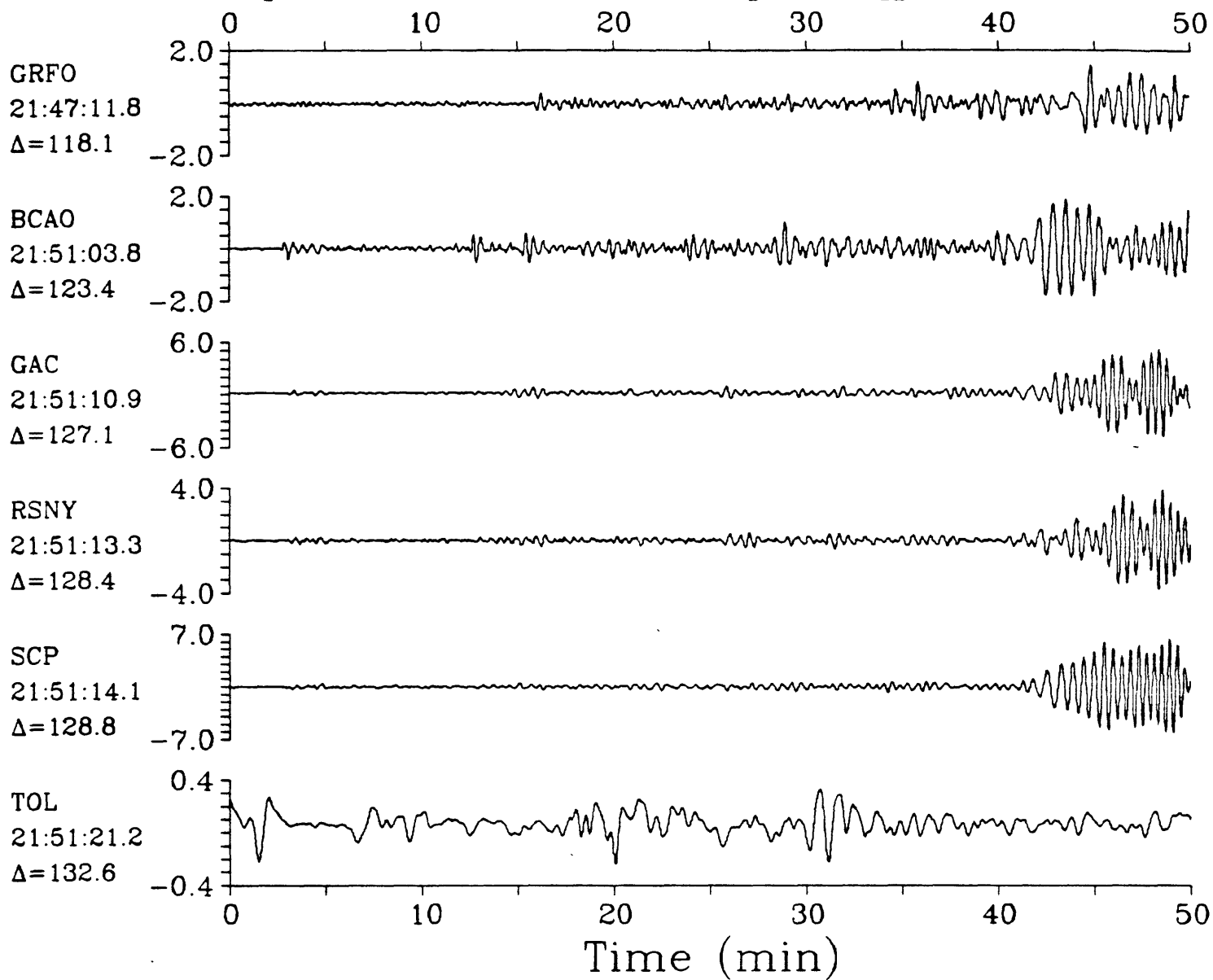
LPZ

Papua New Guinea $h=38.7$ $m_b=5.7$ $M_{sz}=5.8$ 

LPZ

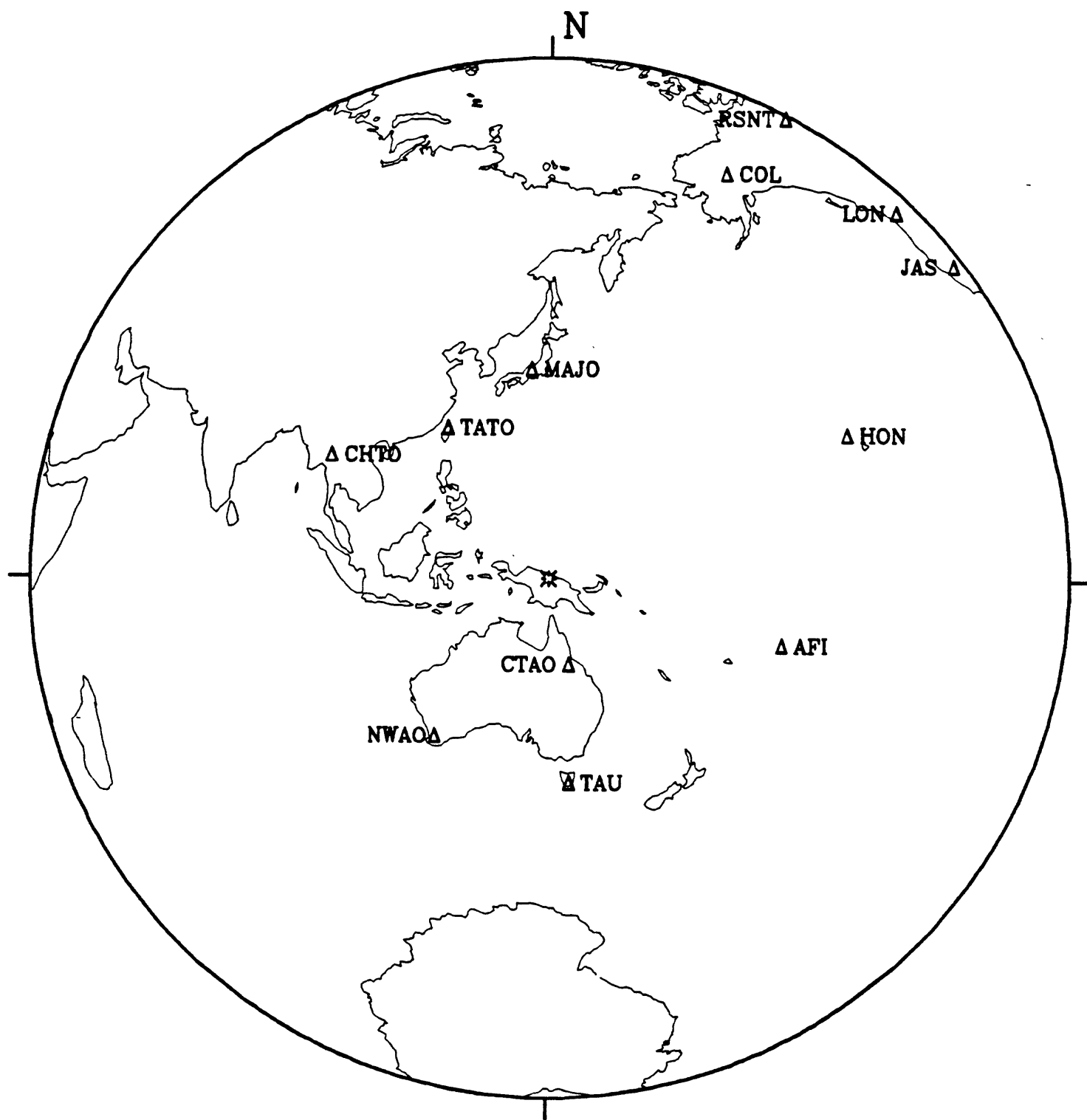
17 January 1985 21:33:10.19

LPZ

Papua New Guinea $h=38.7$ $m_b=5.7$ $M_{sz}=5.8$ 

17 January 1985 21:44:11.53

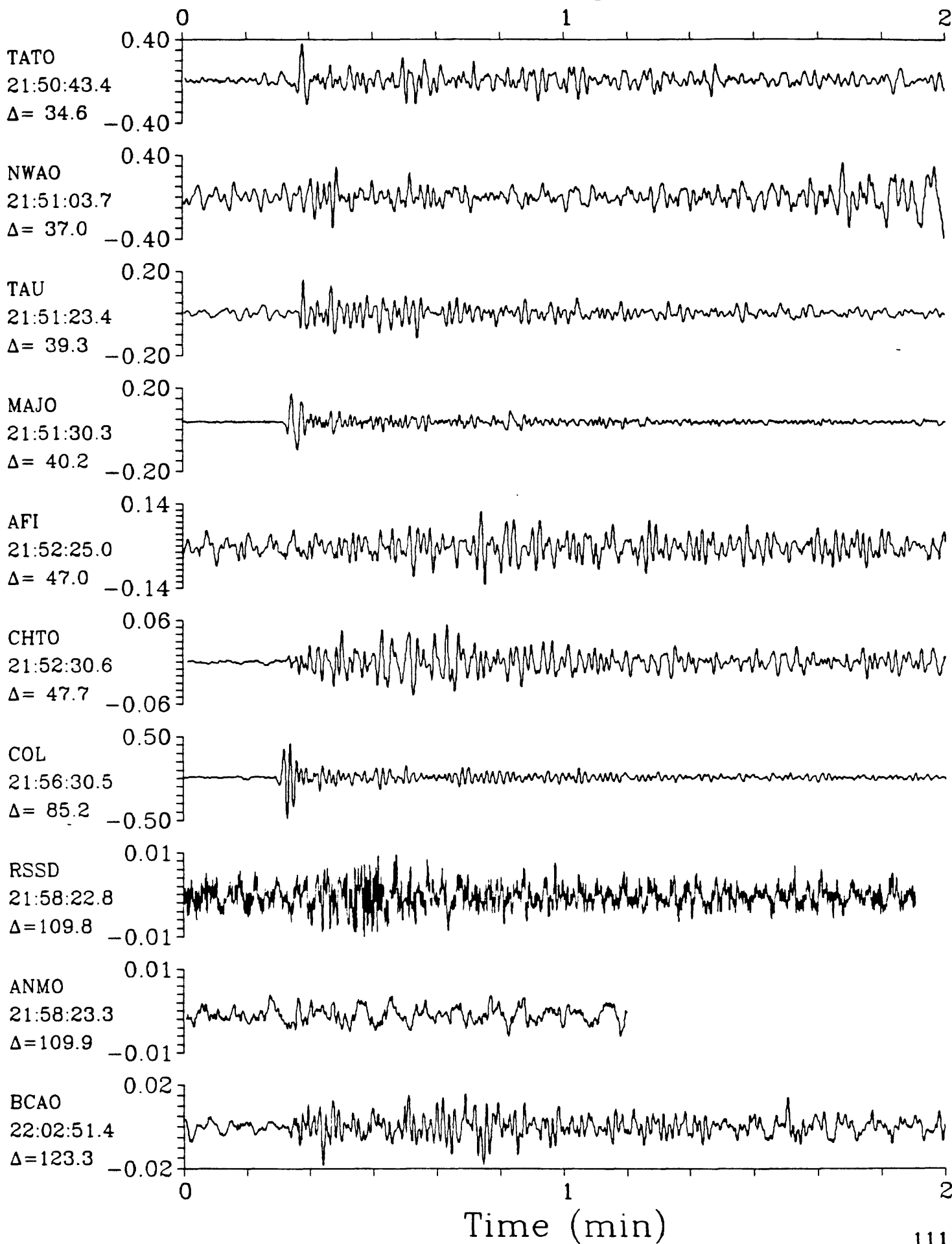
Papua New Guinea



SPZ

17 January 1985 21:44:11.53

SPZ

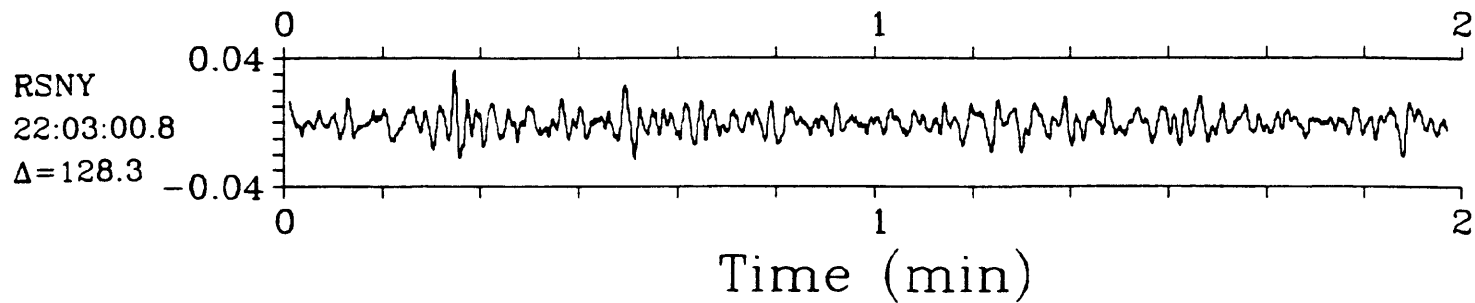
Papua New Guinea $h=29.7$ $m_b=5.9$ $M_{sz}=5.8$ 

SPZ

17 January 1985 21:44:11.53

SPZ

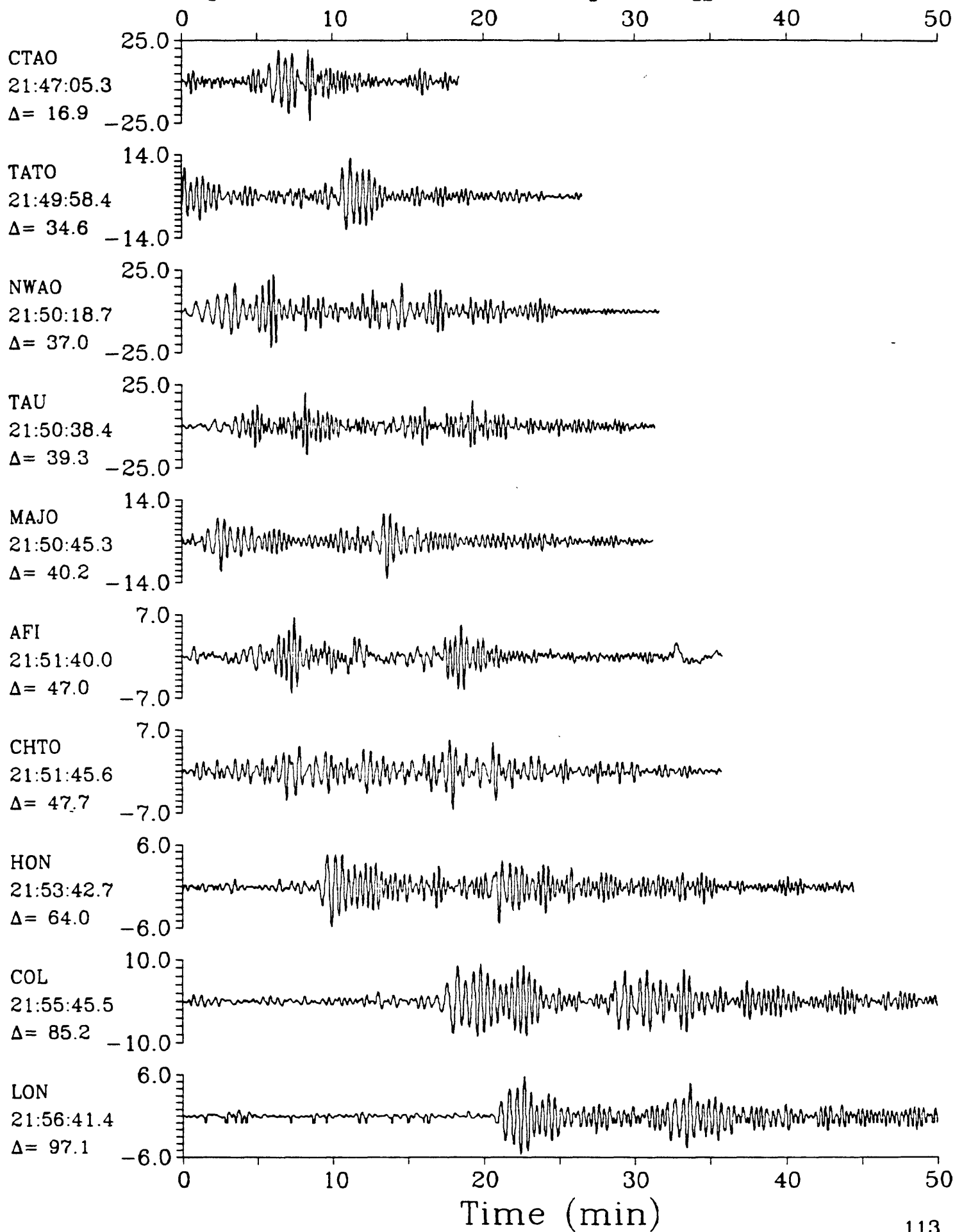
Papua New Guinea $h=29.7$ $m_b=5.9$ $M_{sz}=5.8$



LPZ

17 January 1985 21:44:11.53
Papua New Guinea $h=29.7$ $m_b=5.9$ $M_{sz}=5.8$

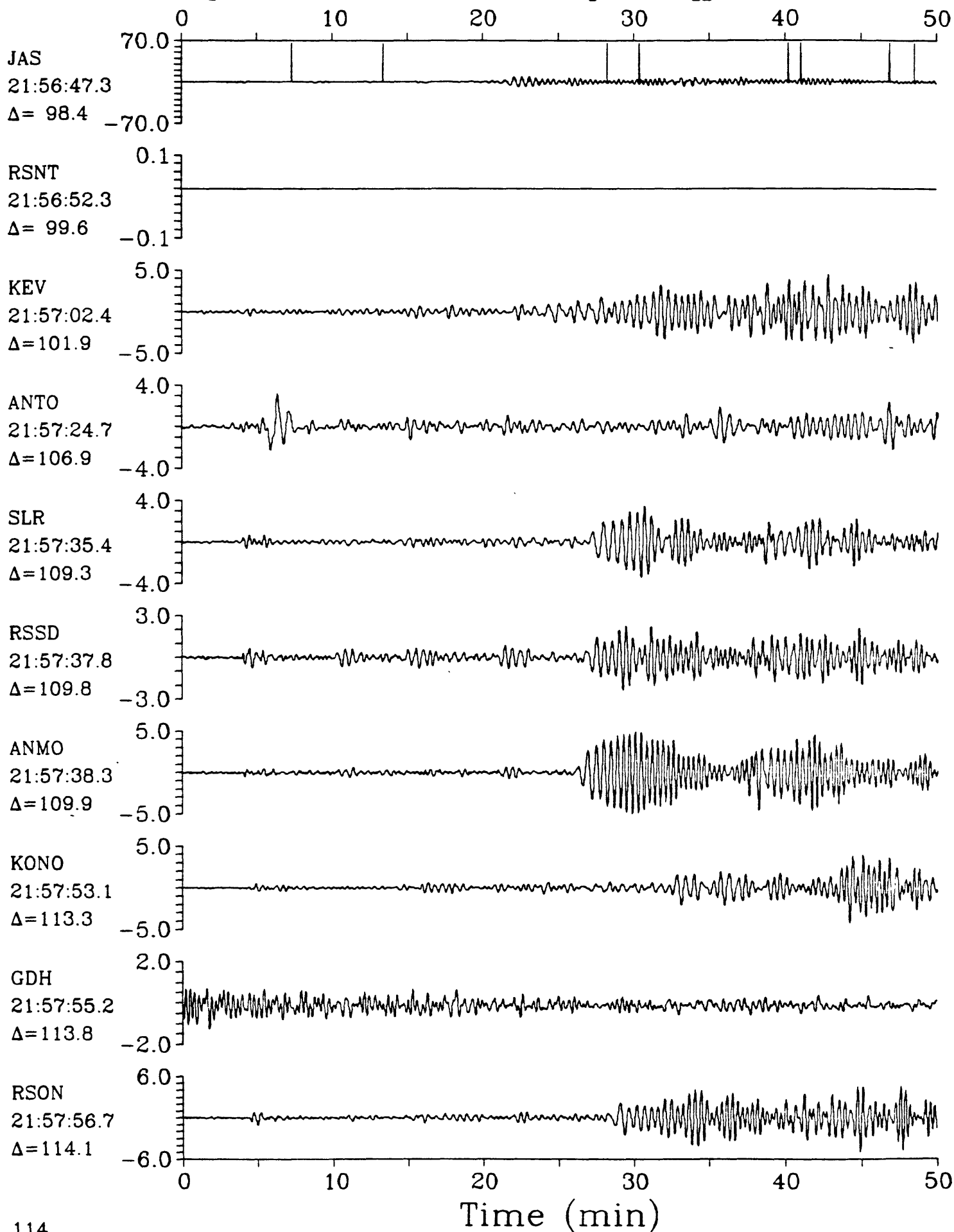
LPZ



LPZ

17 January 1985 21:44:11.53

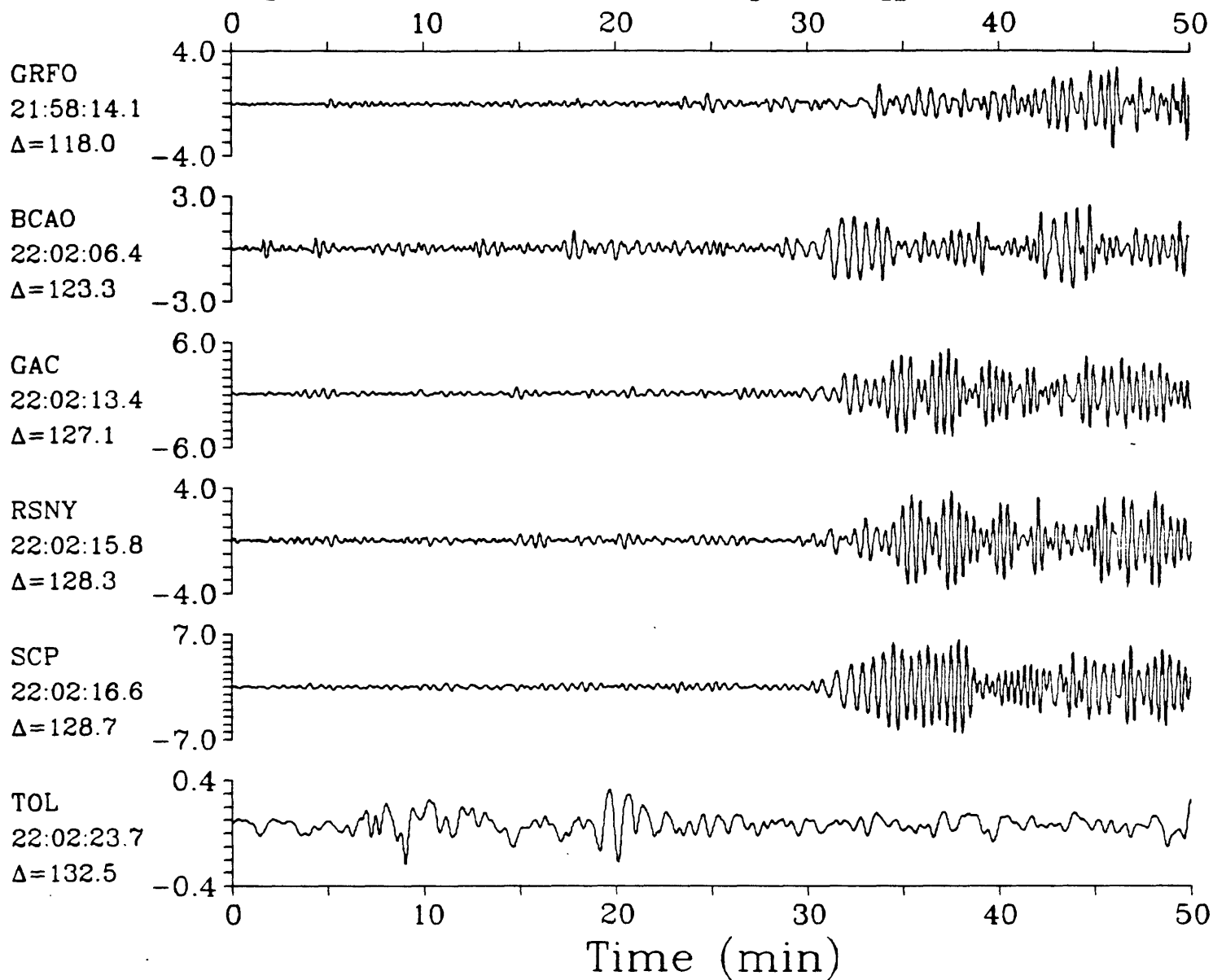
LPZ

Papua New Guinea $h=29.7$ $m_b=5.9$ $M_{sz}=5.8$ 

LPZ

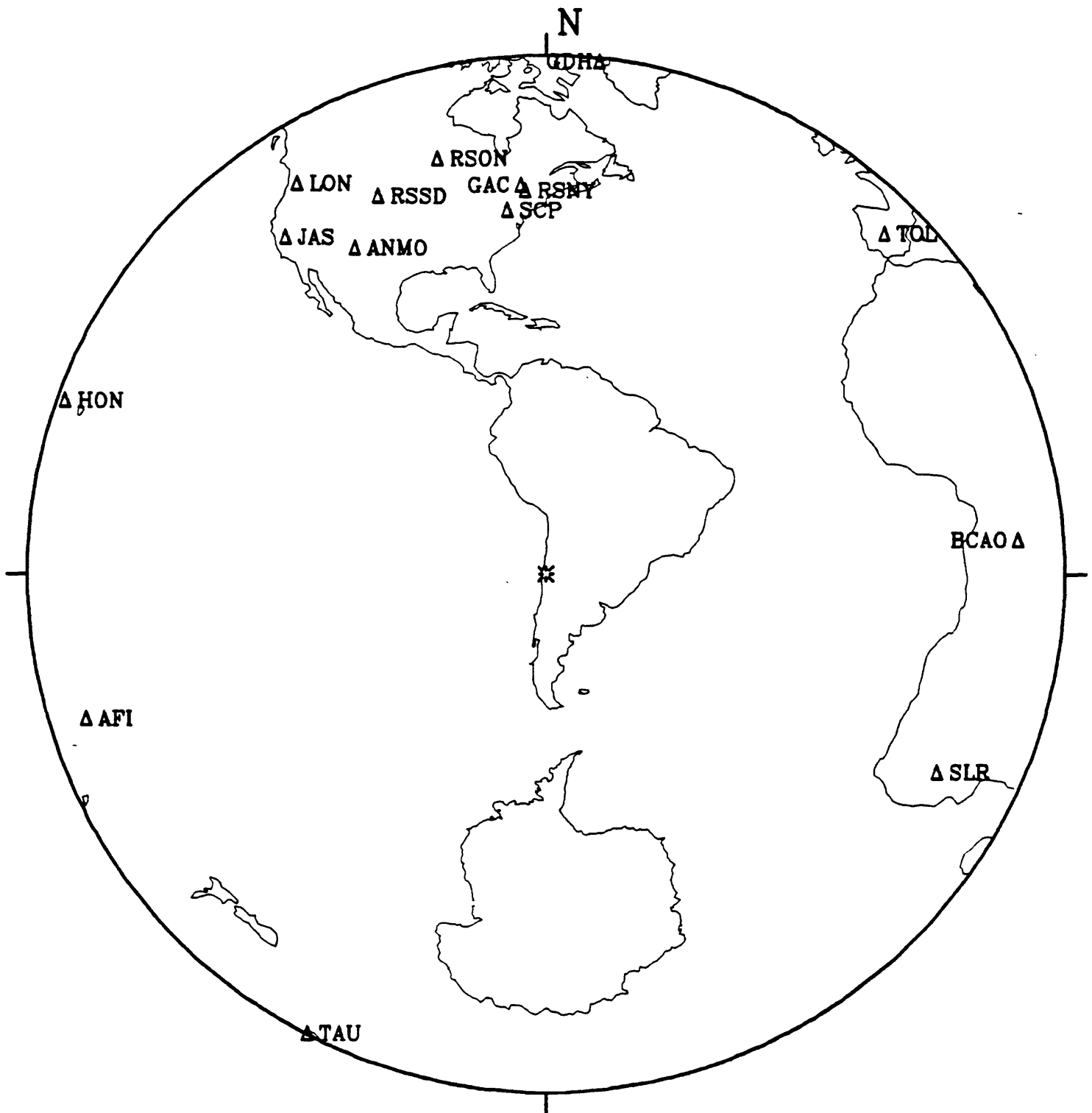
17 January 1985 21:44:11.53

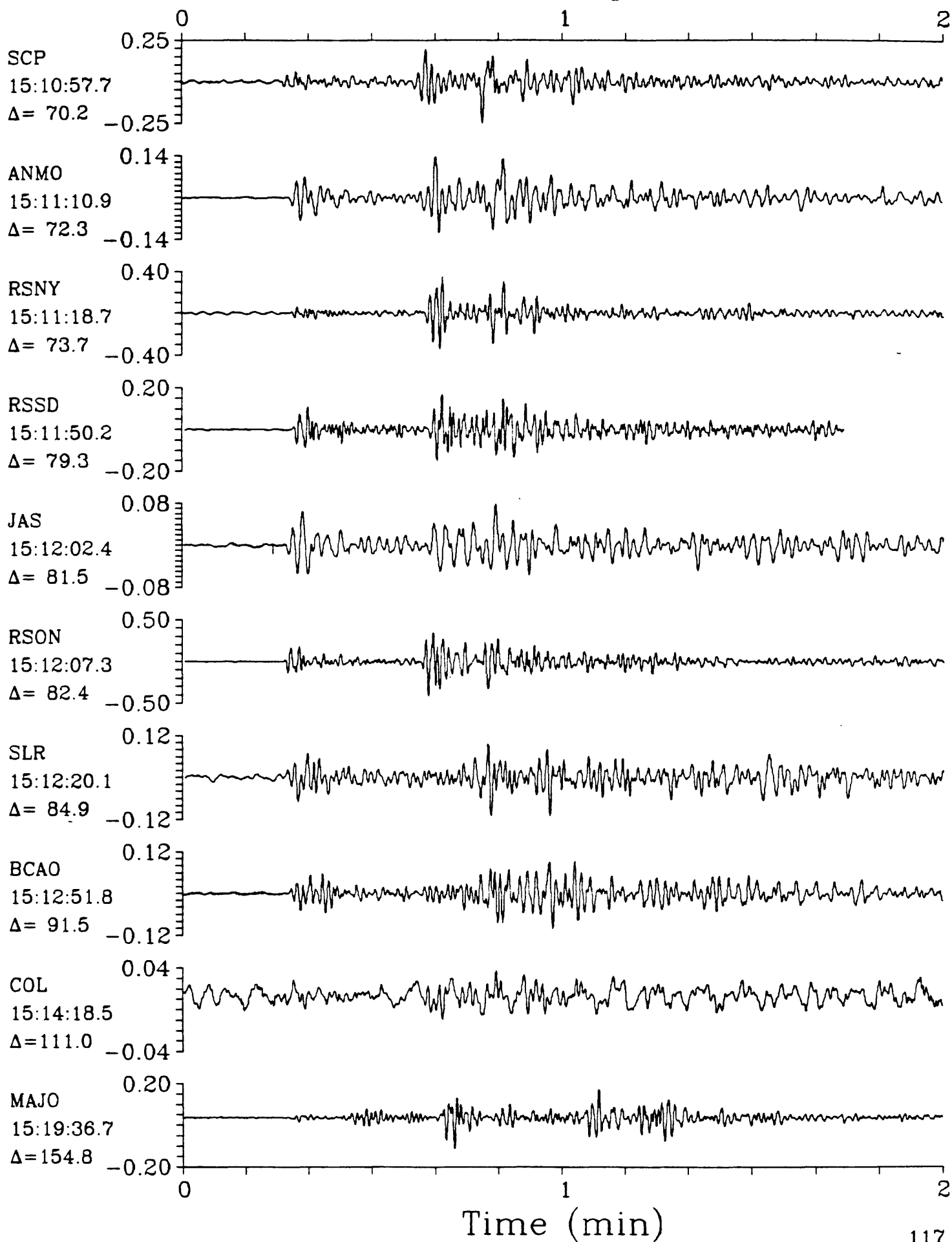
LPZ

Papua New Guinea $h=29.7$ $m_b=5.9$ $M_{sz}=5.8$ 

18 January 1985 15:00:08.39

Central Chile

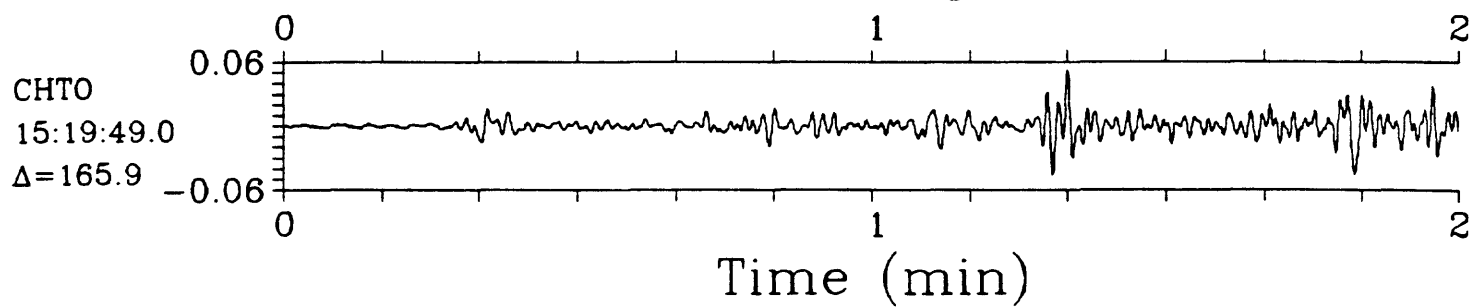




SPZ

18 January 1985 15:00:08.39
Central Chile $h=81.5$ $m_b=5.8$

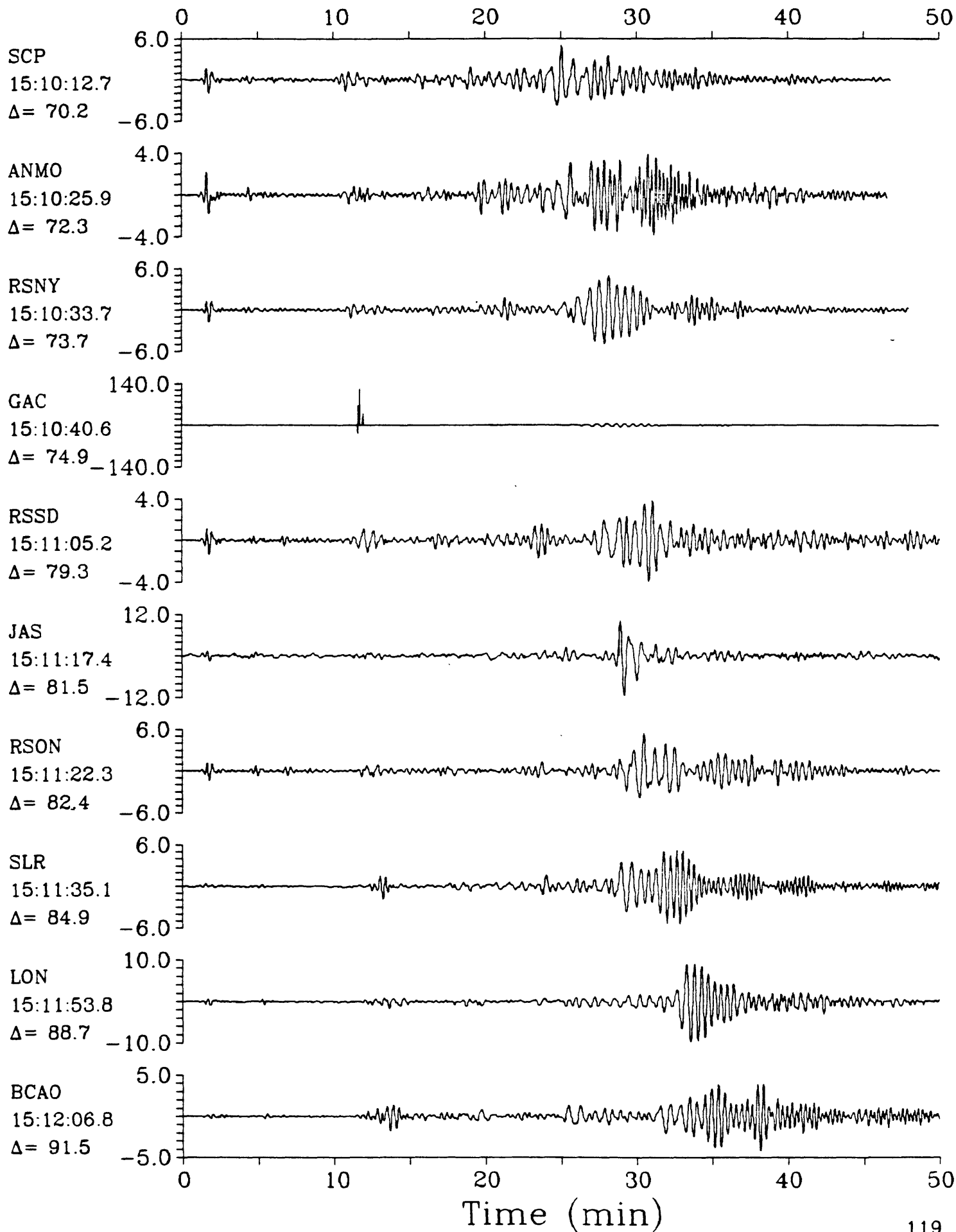
SPZ



LPZ

18 January 1985 15:00:08.39
Central Chile $h=81.5$ $m_b=5.8$

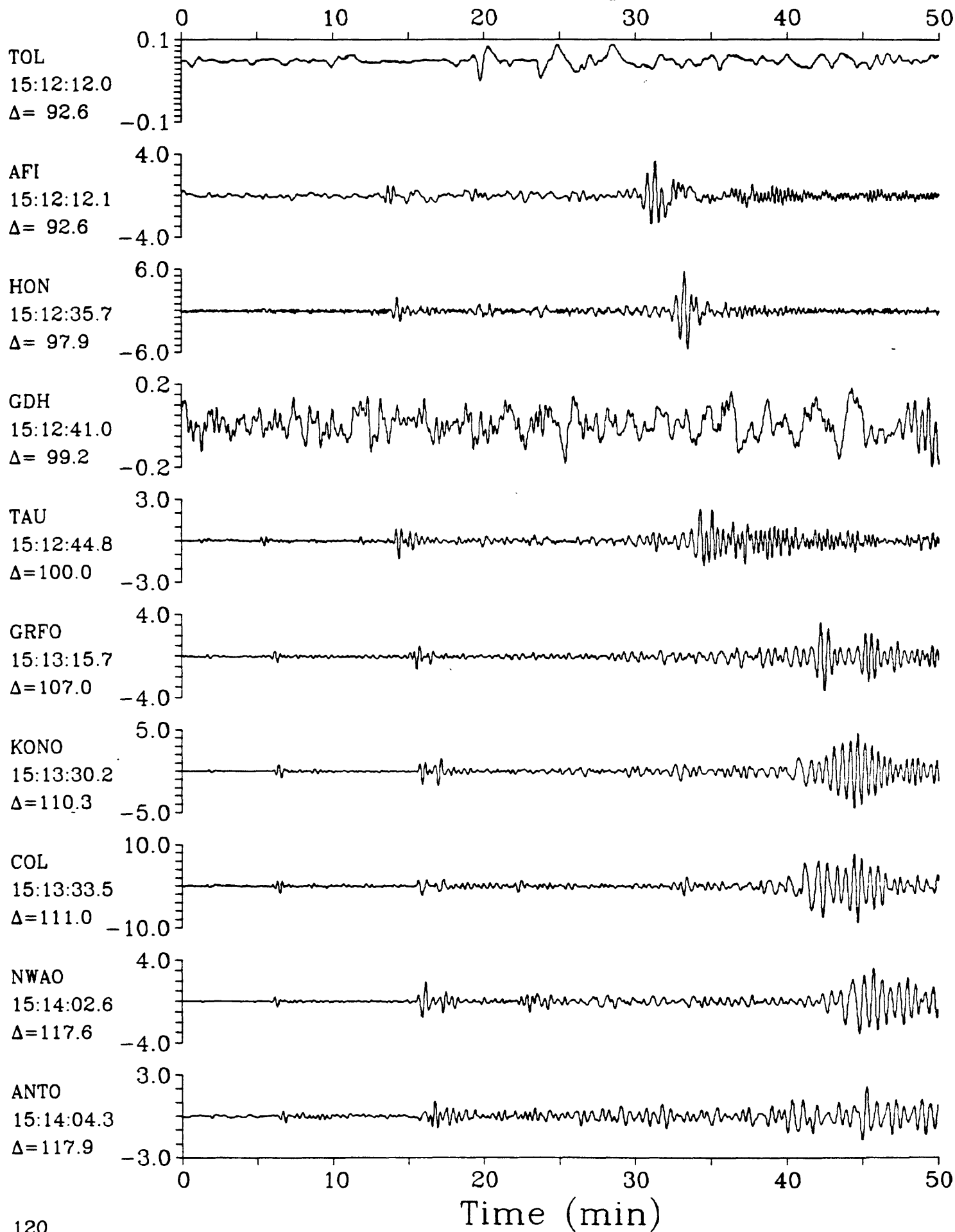
LPZ



LPZ

18 January 1985 15:00:08.39
Central Chile $h=81.5$ $m_b=5.8$

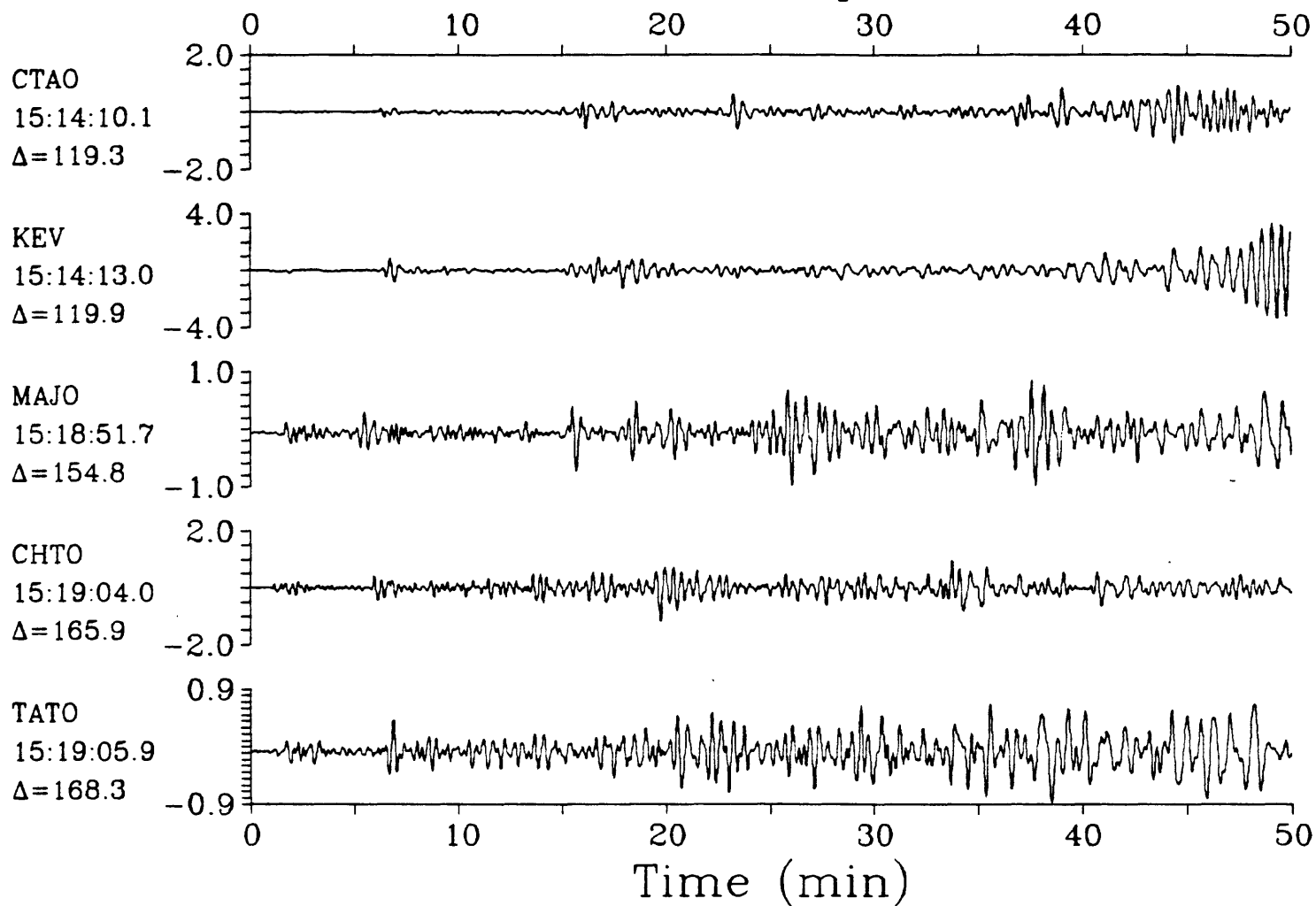
LPZ



LPZ

18 January 1985 15:00:08.39
Central Chile $h=81.5$ $m_b=5.8$

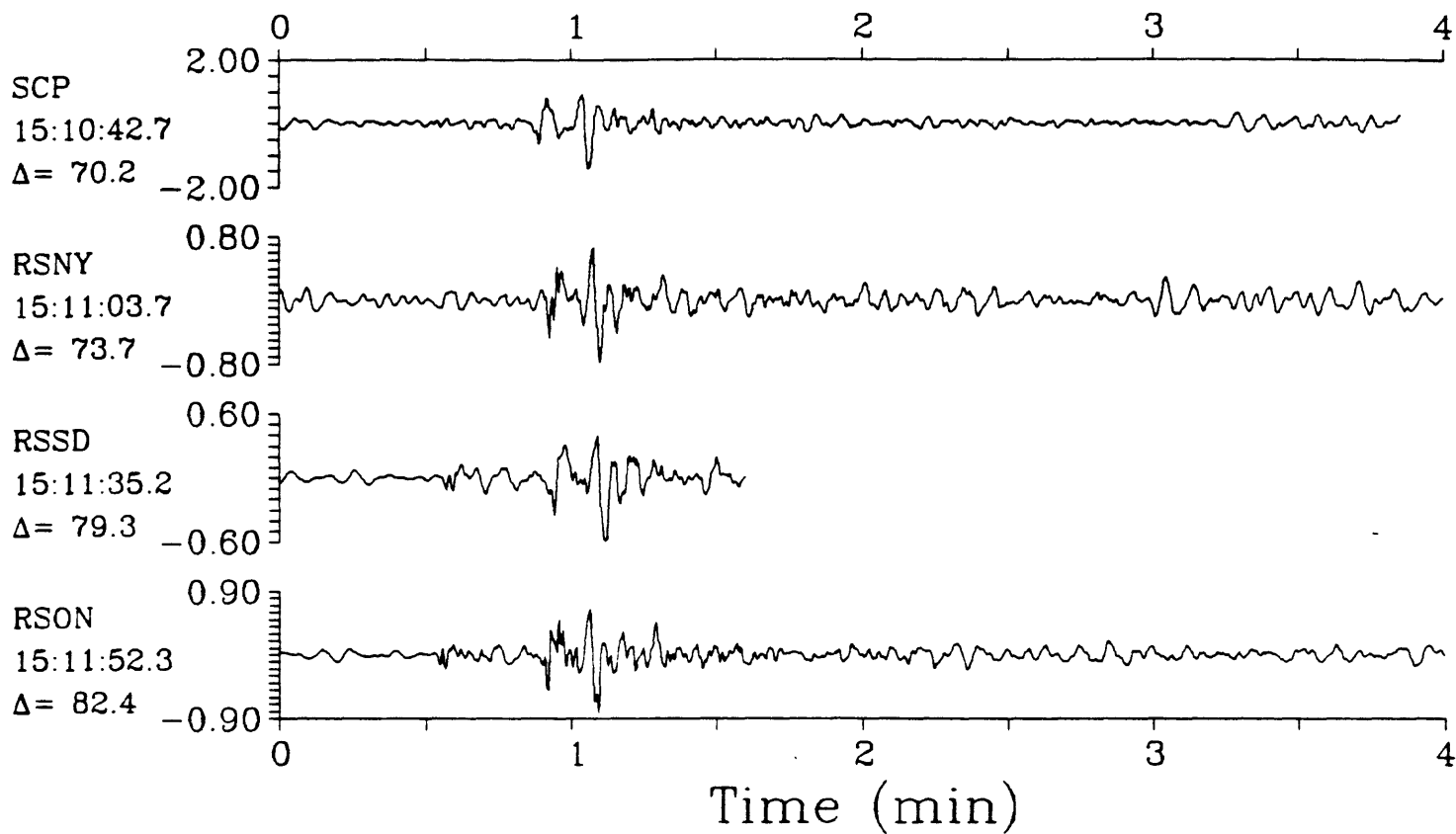
LPZ



IPZ

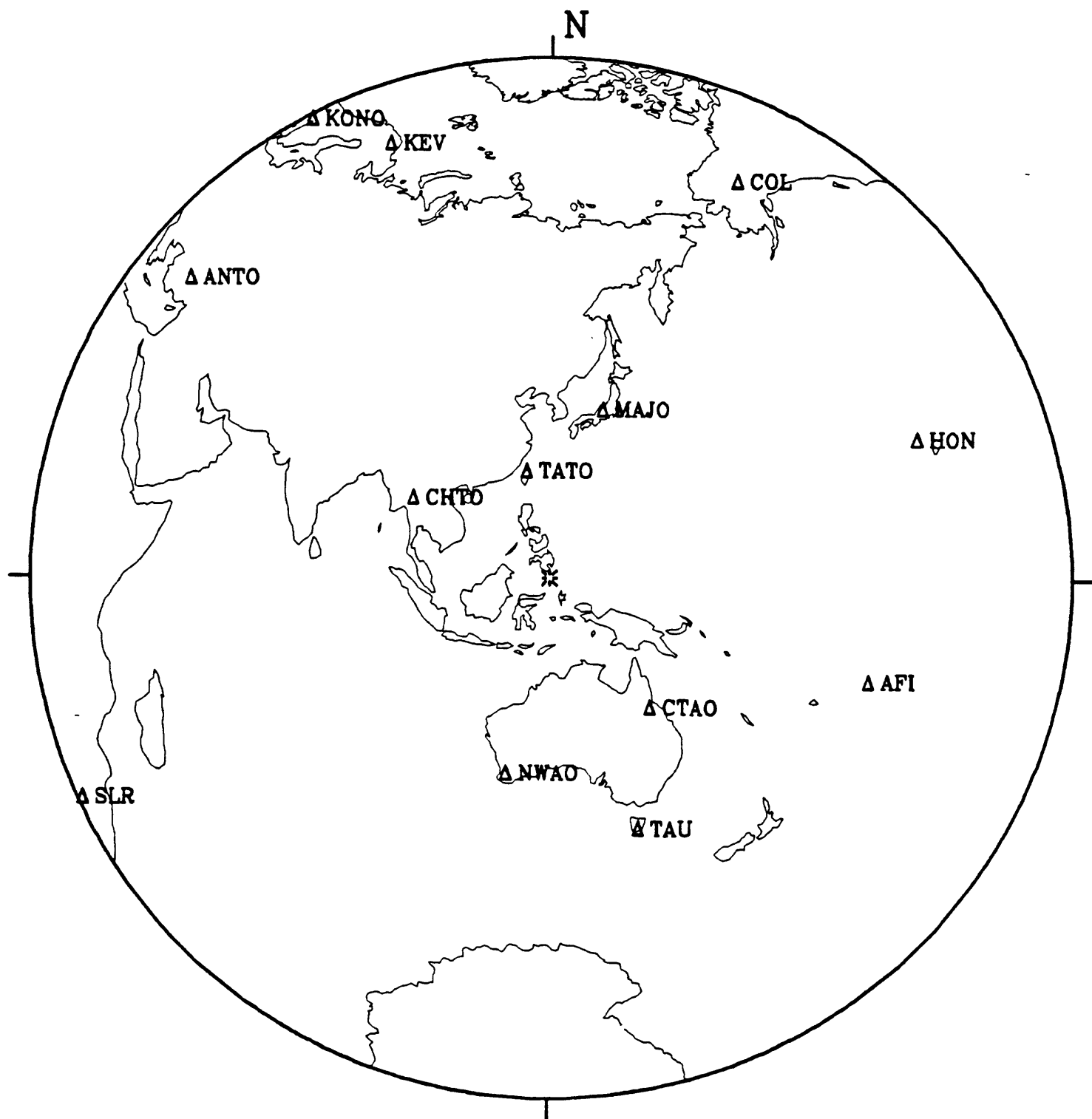
18 January 1985 15:00:08.39
Central Chile $h=81.5$ $m_b=5.8$

IPZ



20 January 1985 14:44:18.83

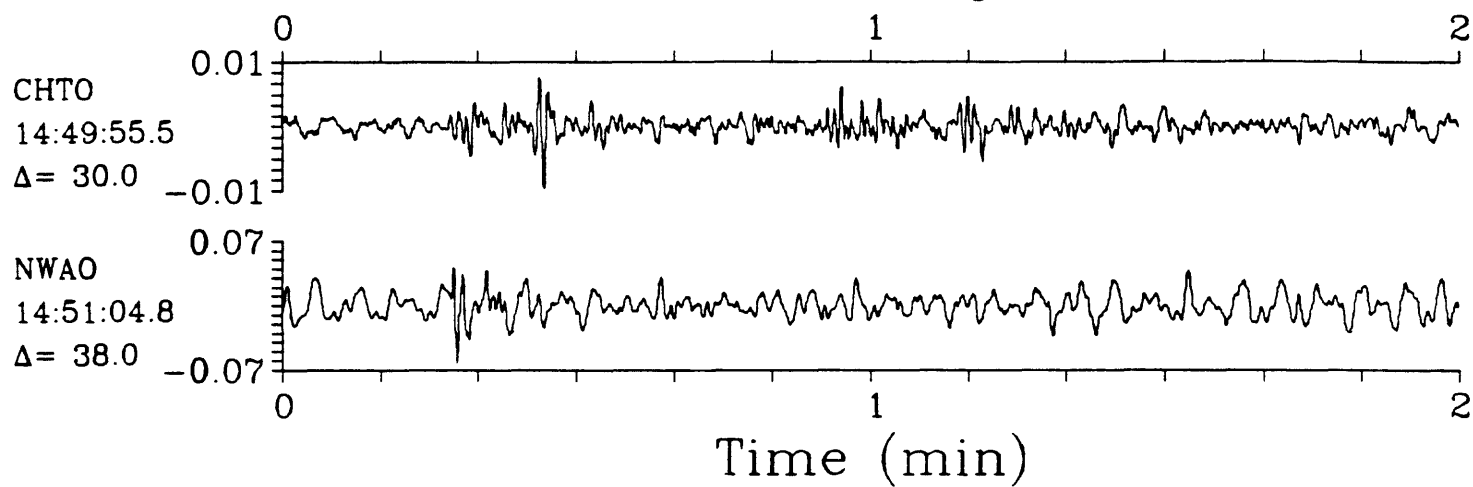
Talau Islands



SPZ

20 January 1985 14:44:18.83
Talaud Islands $h=174.5$ $m_b=5.5$

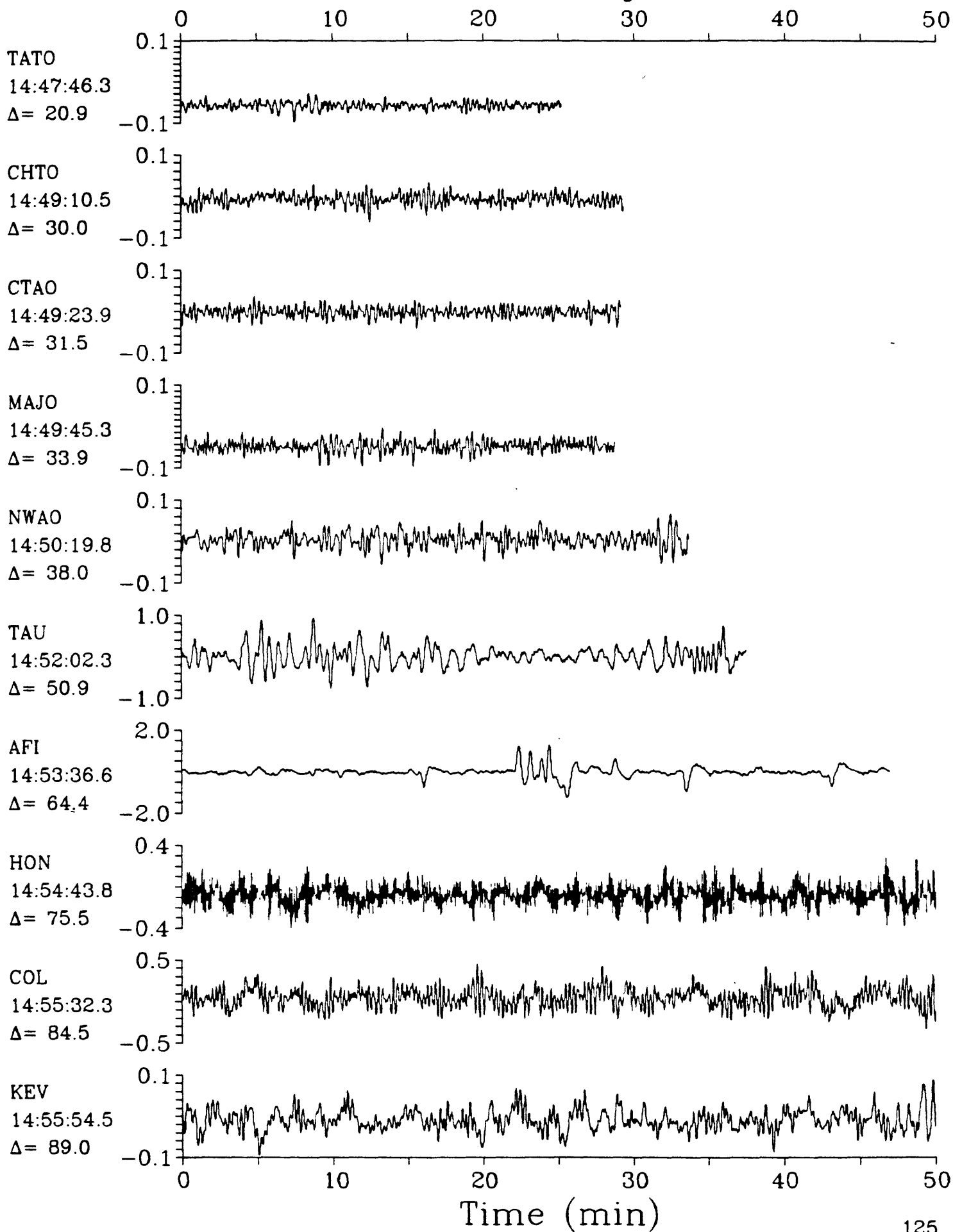
SPZ



LPZ

20 January 1985 14:44:18.83
Talaud Islands $h=174.5$ $m_b=5.5$

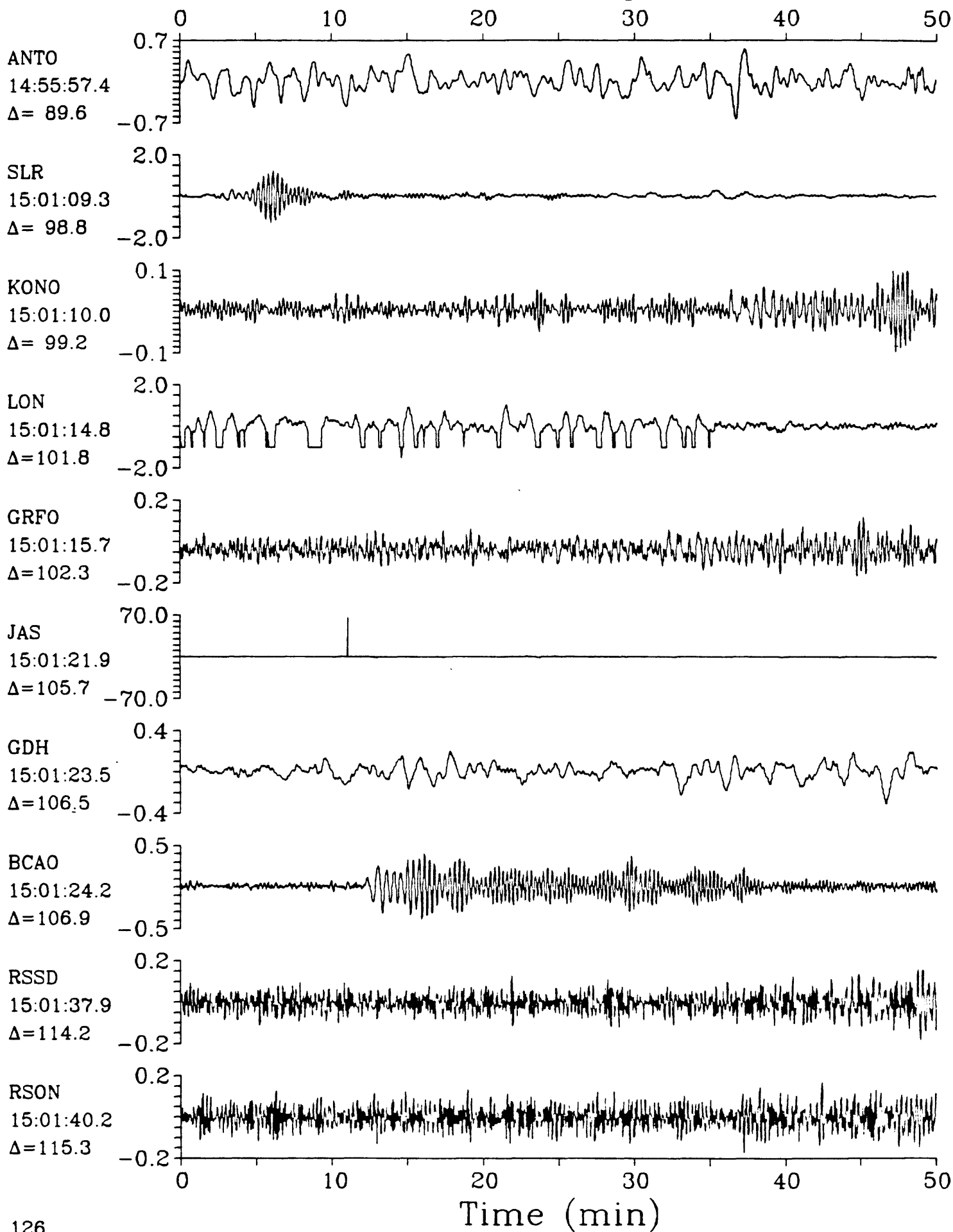
LPZ



LPZ

20 January 1985 14:44:18.83
Talaud Islands $h=174.5$ $m_b=5.5$

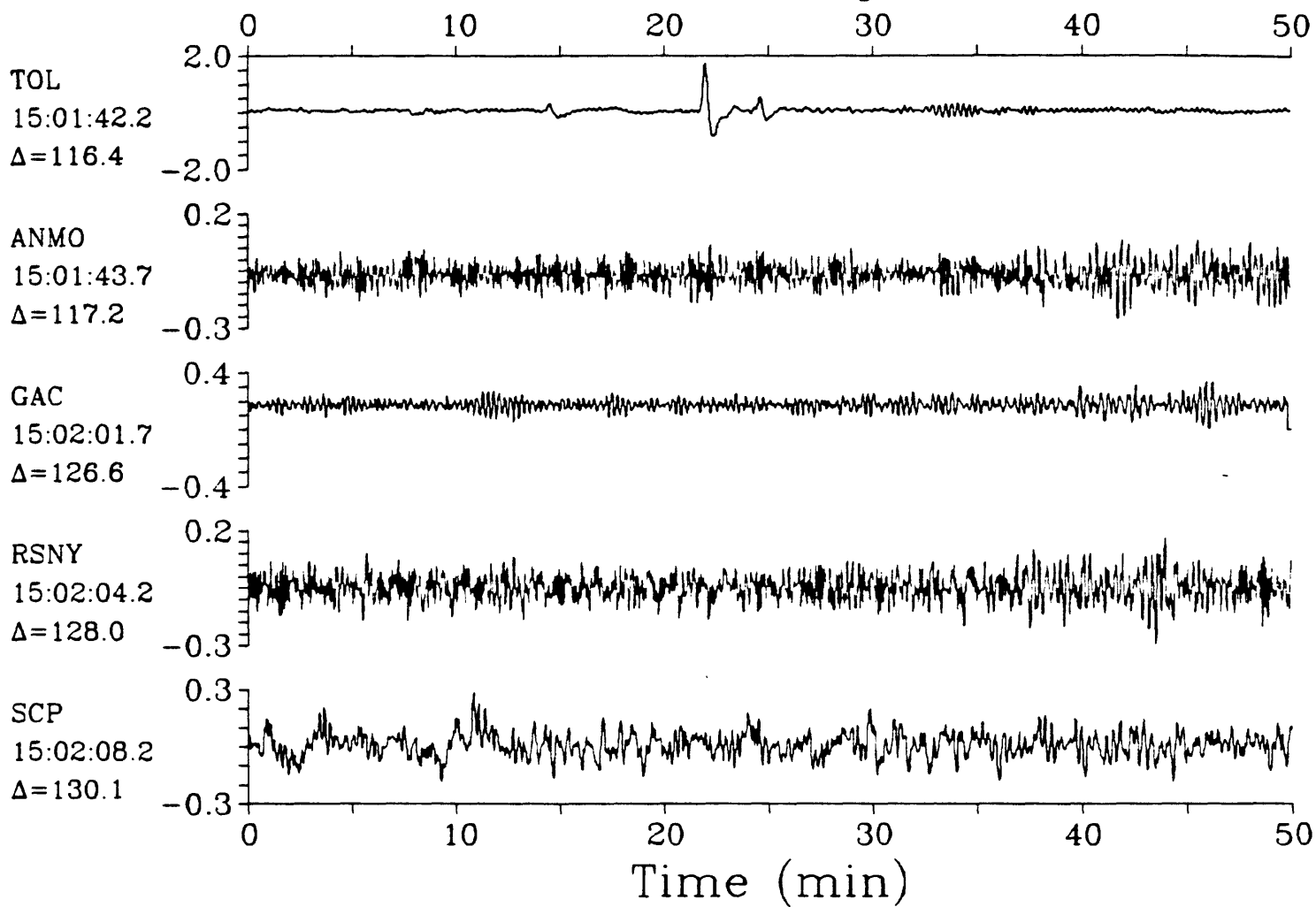
LPZ



LPZ

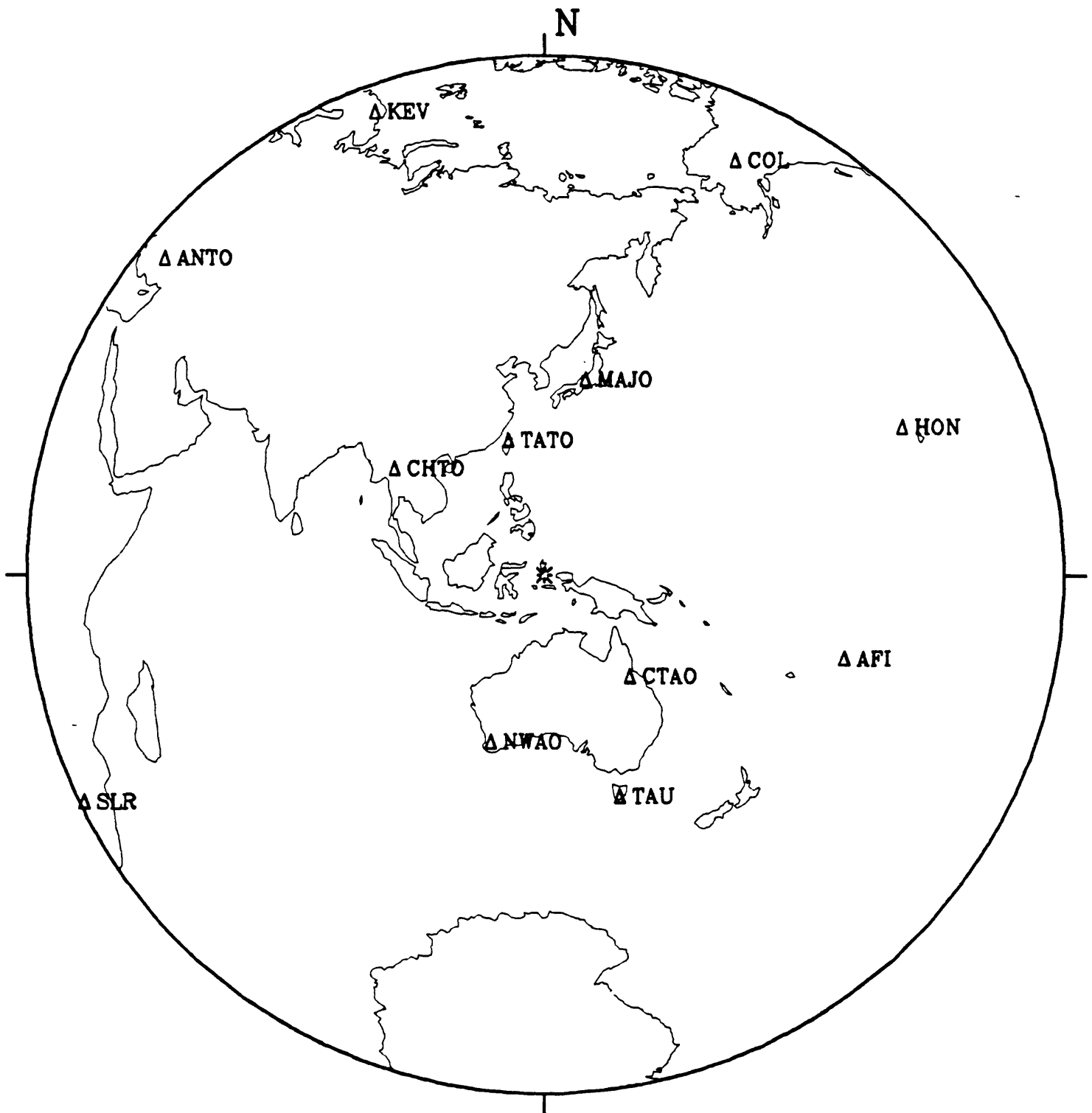
20 January 1985 14:44:18.83
Talaud Islands $h=174.5$ $m_b=5.5$

LPZ



21 January 1985 00:55:22.07

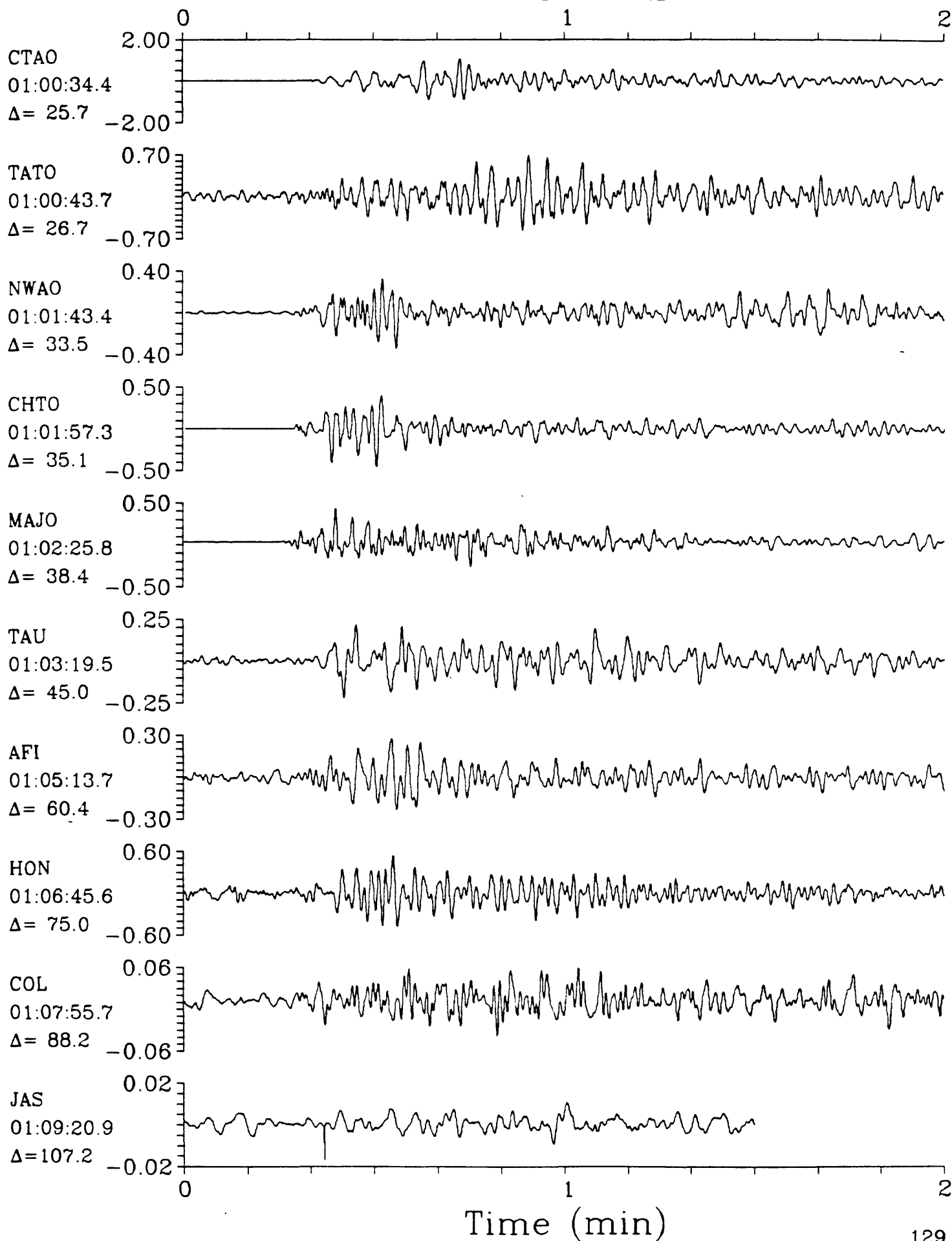
Halmahera



SPZ

21 January 1985 00:55:22.07
Halmahera $h=33.0$ $m_b=5.9$ $M_{sz}=6.7$

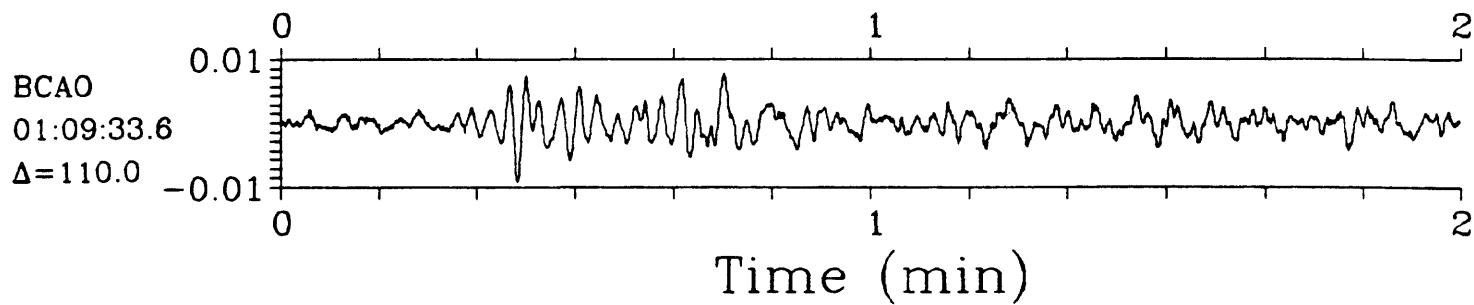
SPZ



SPZ

21 January 1985 00:55:22.07
Halmahera $h=33.0$ $m_b=5.9$ $M_{sz}=6.7$

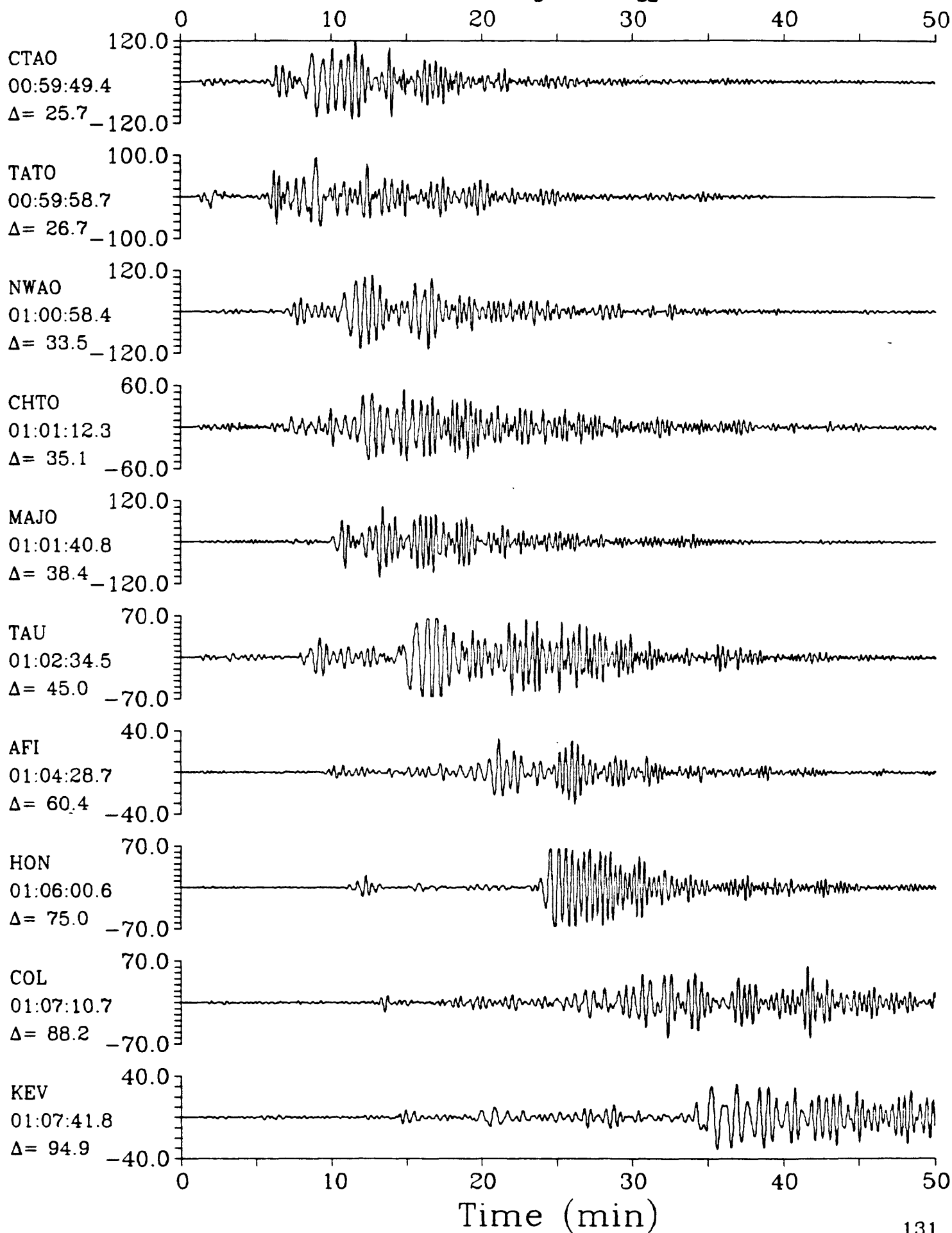
SPZ



LPZ

21 January 1985 00:55:22.07
Halmahera $h=33.0$ $m_b=5.9$ $M_{SZ}=6.7$

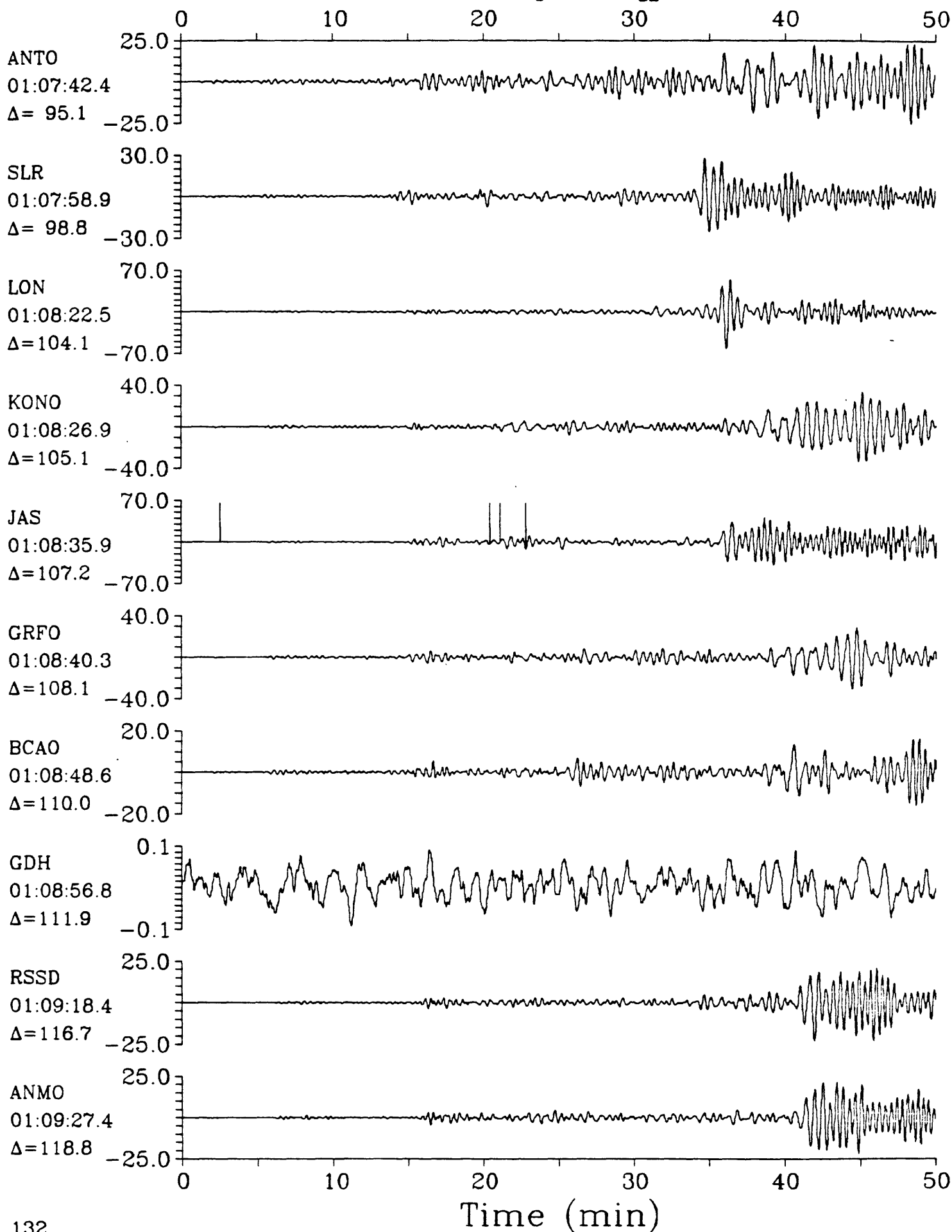
LPZ



LPZ

21 January 1985 00:55:22.07
Halmahera $h=33.0$ $m_b=5.9$ $M_{SZ}=6.7$

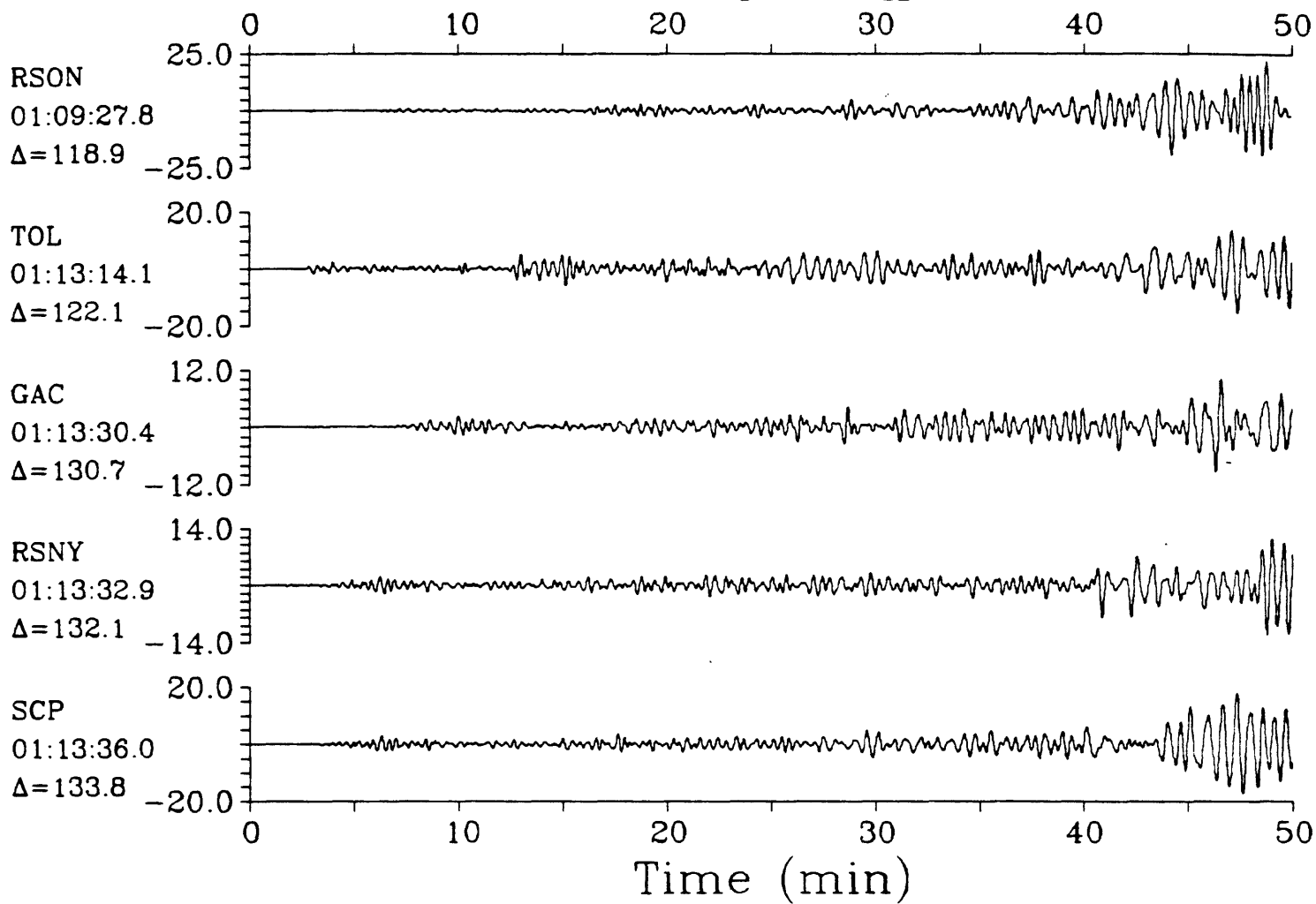
LPZ



LPZ

21 January 1985 00:55:22.07
Halmahera $h=33.0$ $m_b=5.9$ $M_{sz}=6.7$

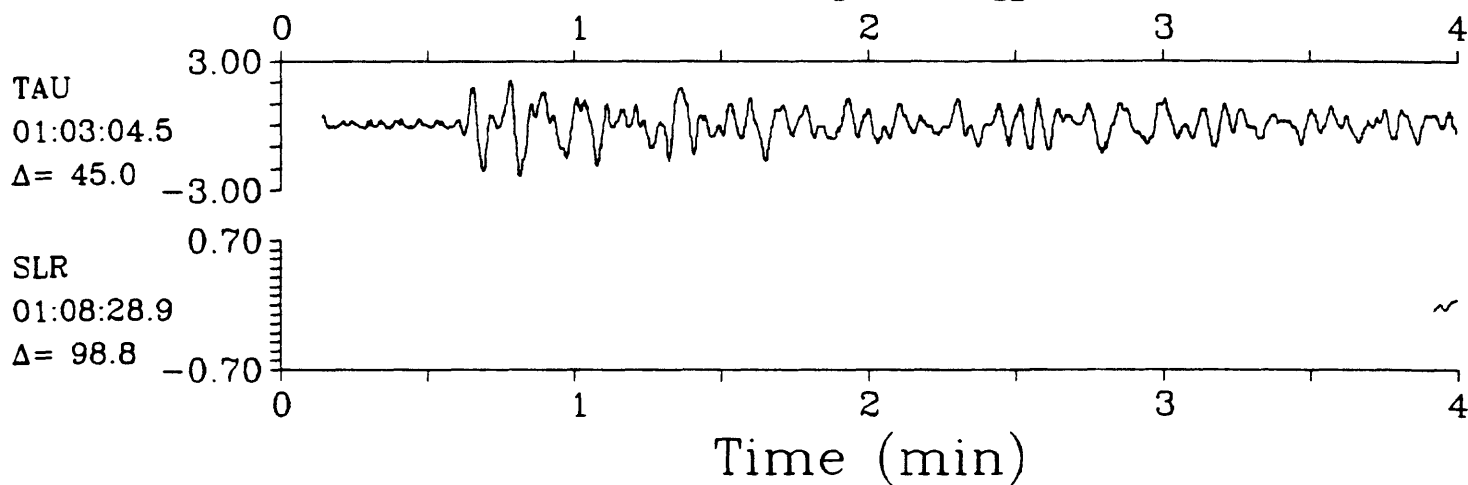
LPZ



IPZ

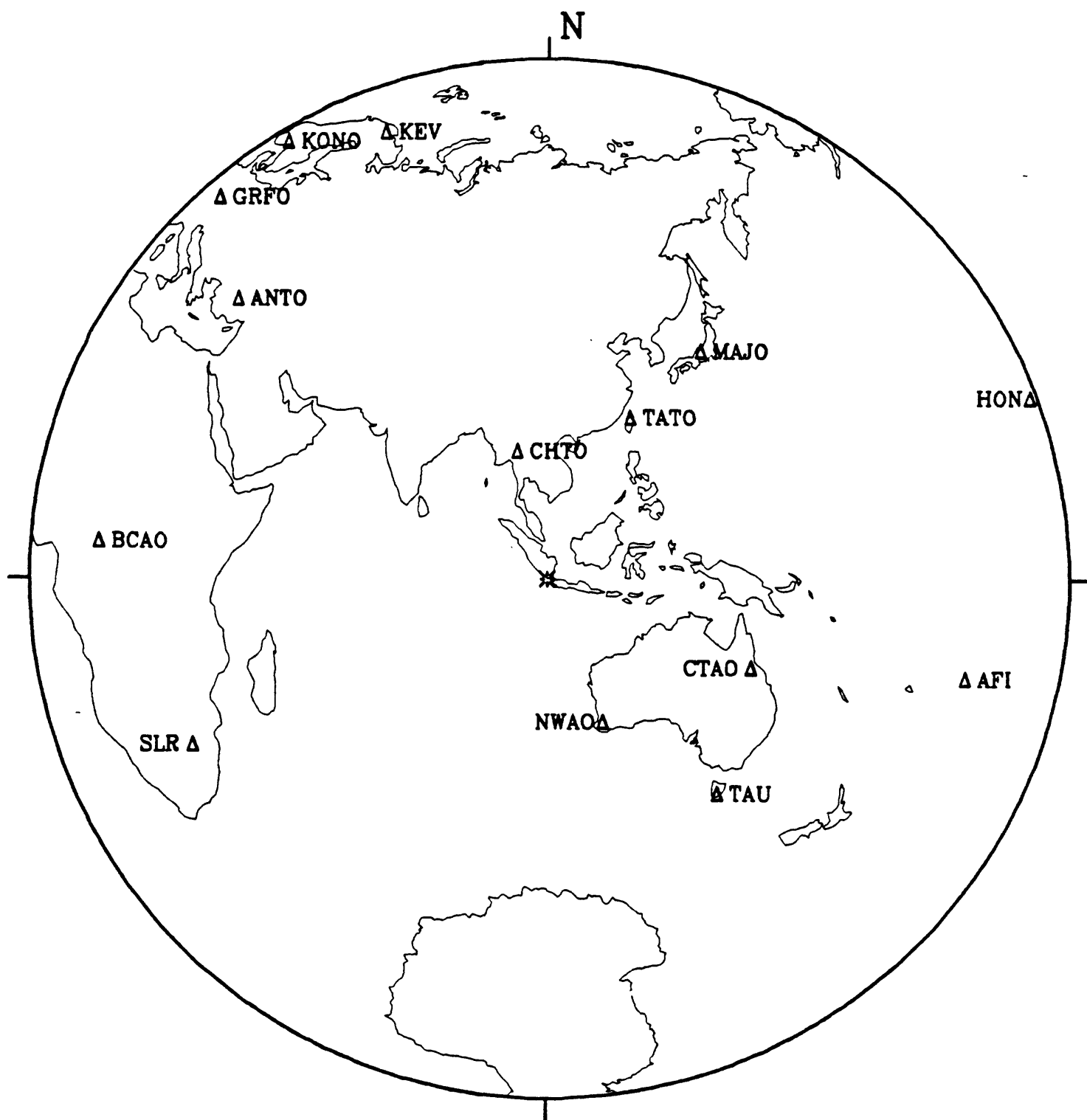
21 January 1985 00:55:22.07
Halmahera $h=33.0$ $m_b=5.9$ $M_{sz}=6.7$

IPZ



22 January 1985 07:57:36.27

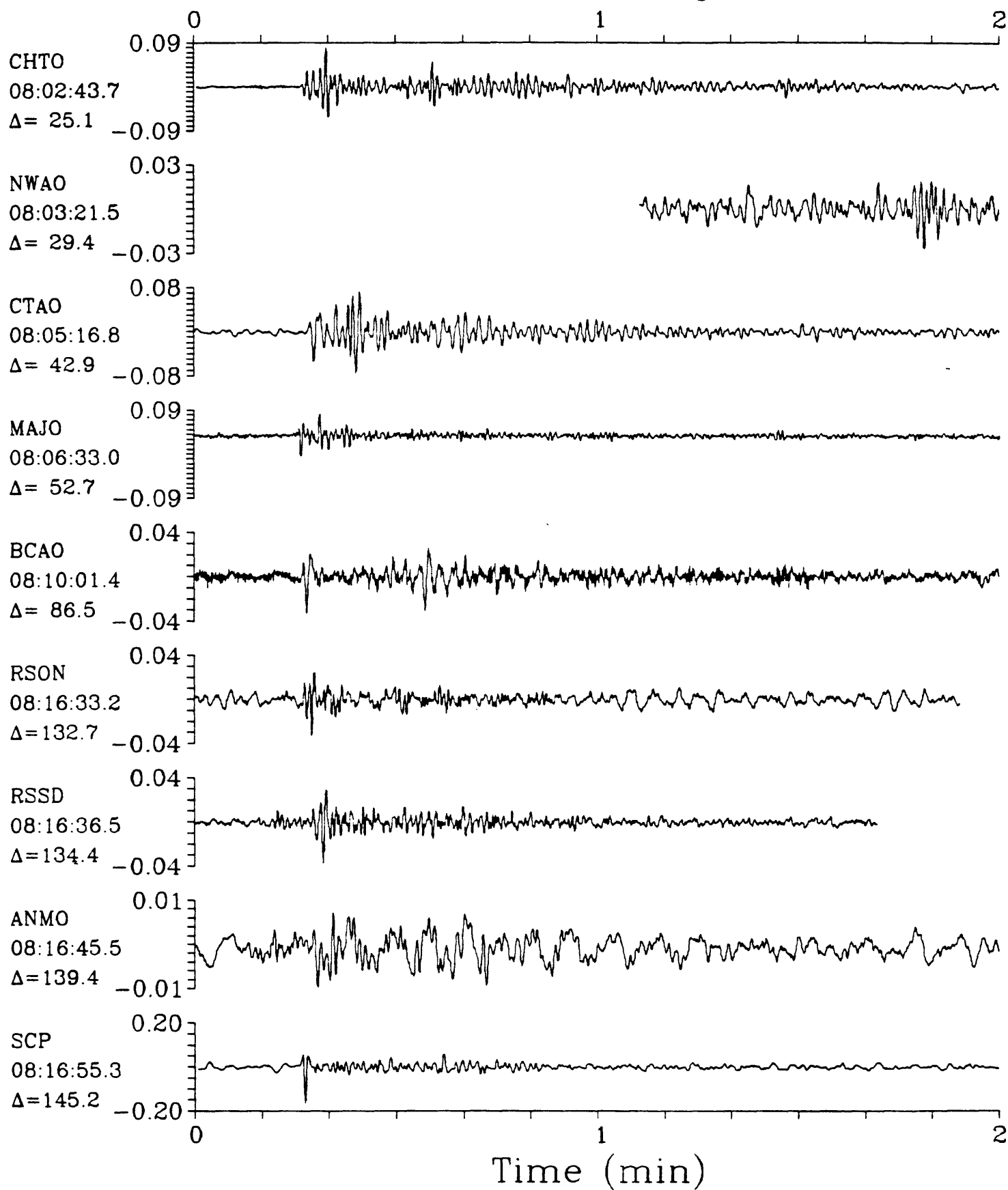
Southern Sumatera



SPZ

22 January 1985 07:57:36.27
Southern Sumatera $h=33.0$ $m_b=5.6$

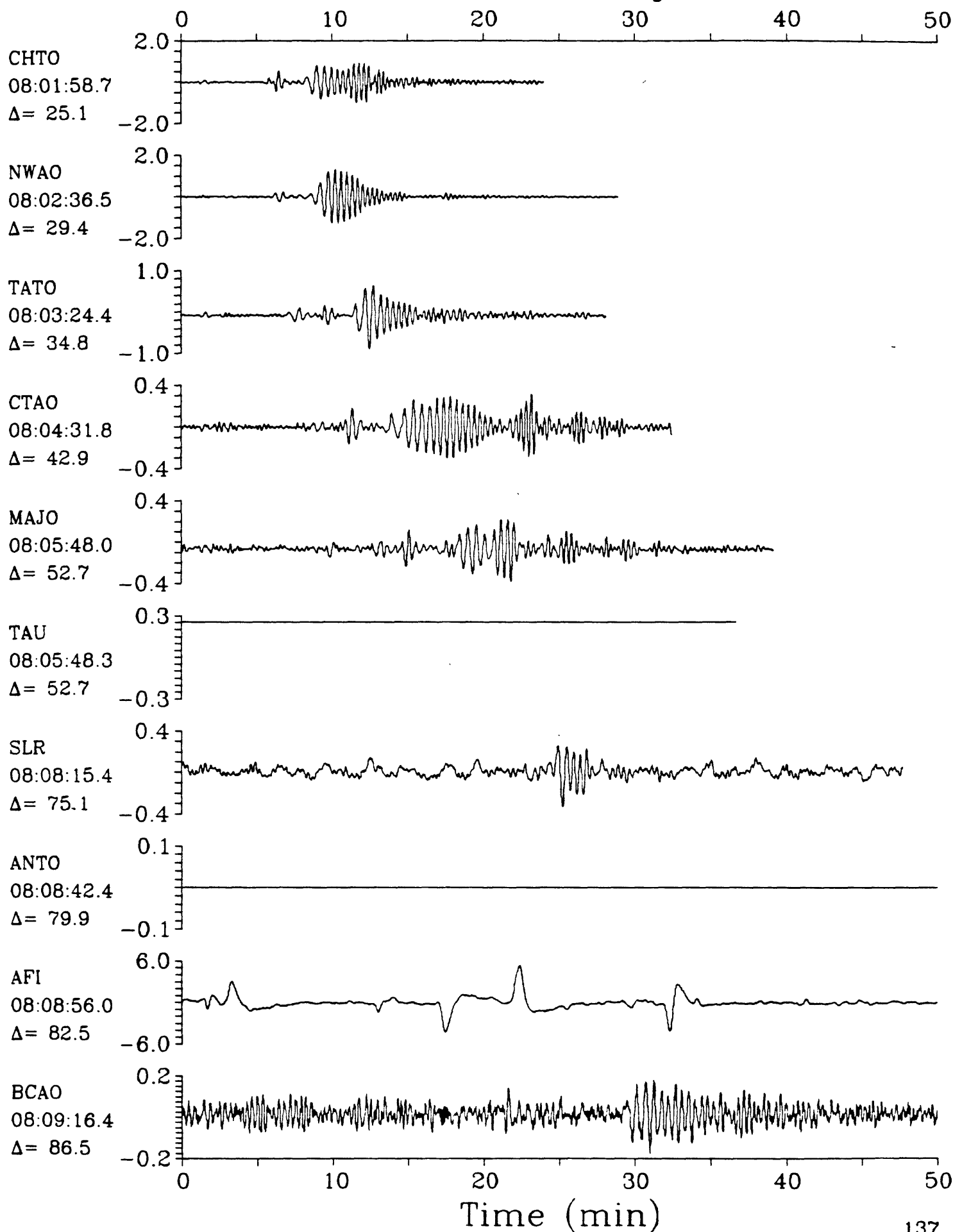
SPZ



LPZ

22 January 1985 07:57:36.27
Southern Sumatera $h=33.0$ $m_b=5.6$

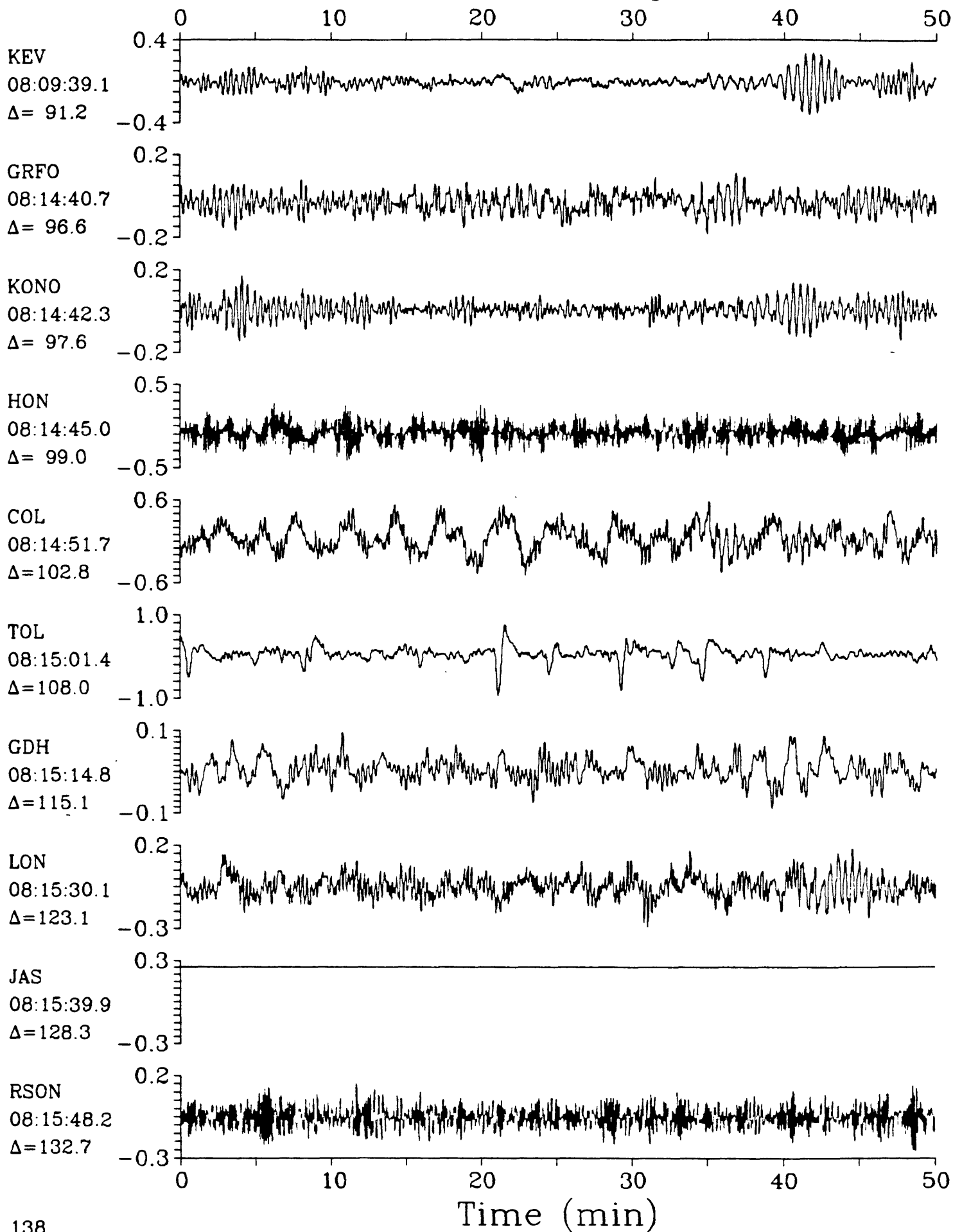
LPZ



LPZ

22 January 1985 07:57:36.27
Southern Sumatera $h=33.0$ $m_b=5.6$

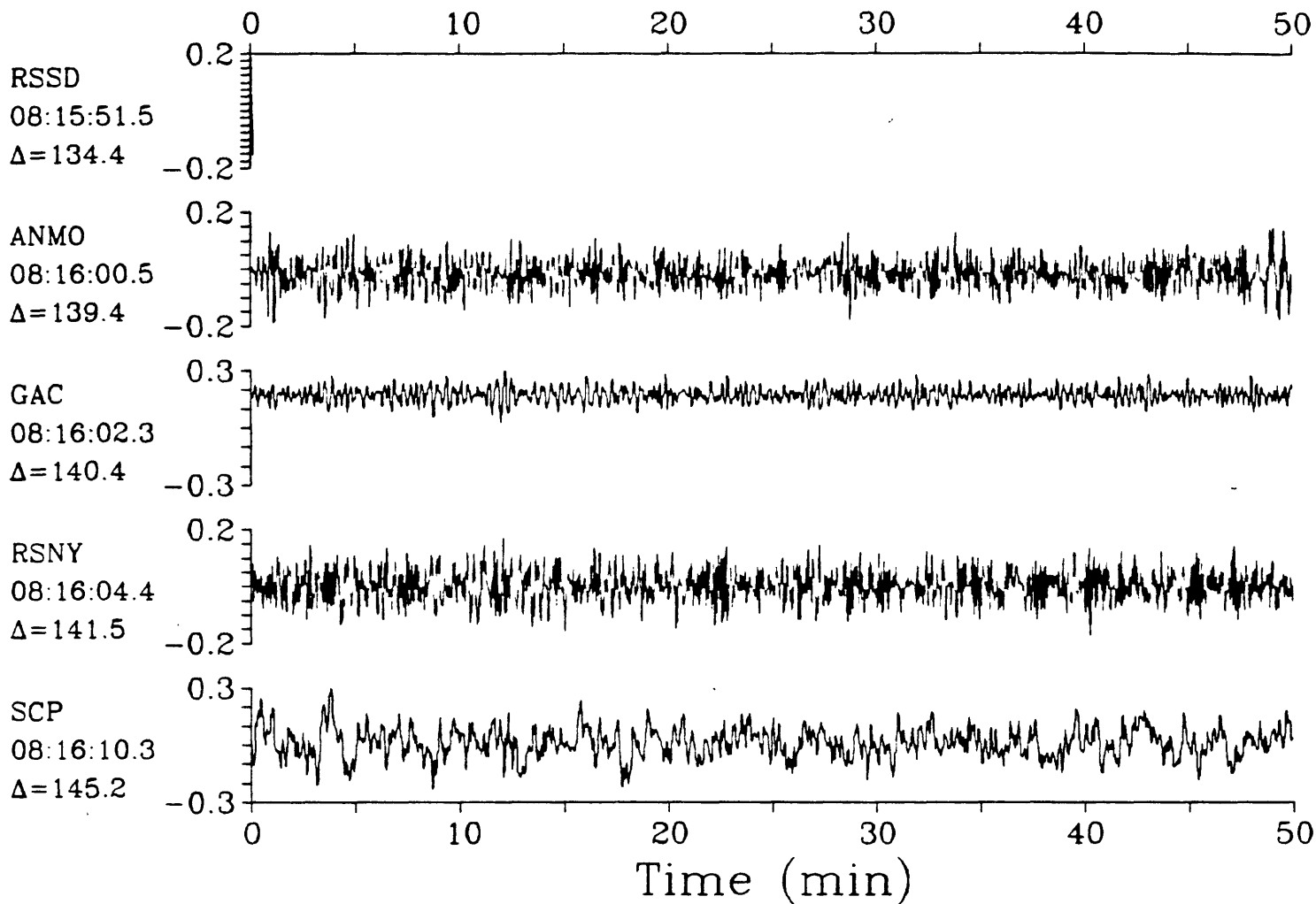
LPZ



LPZ

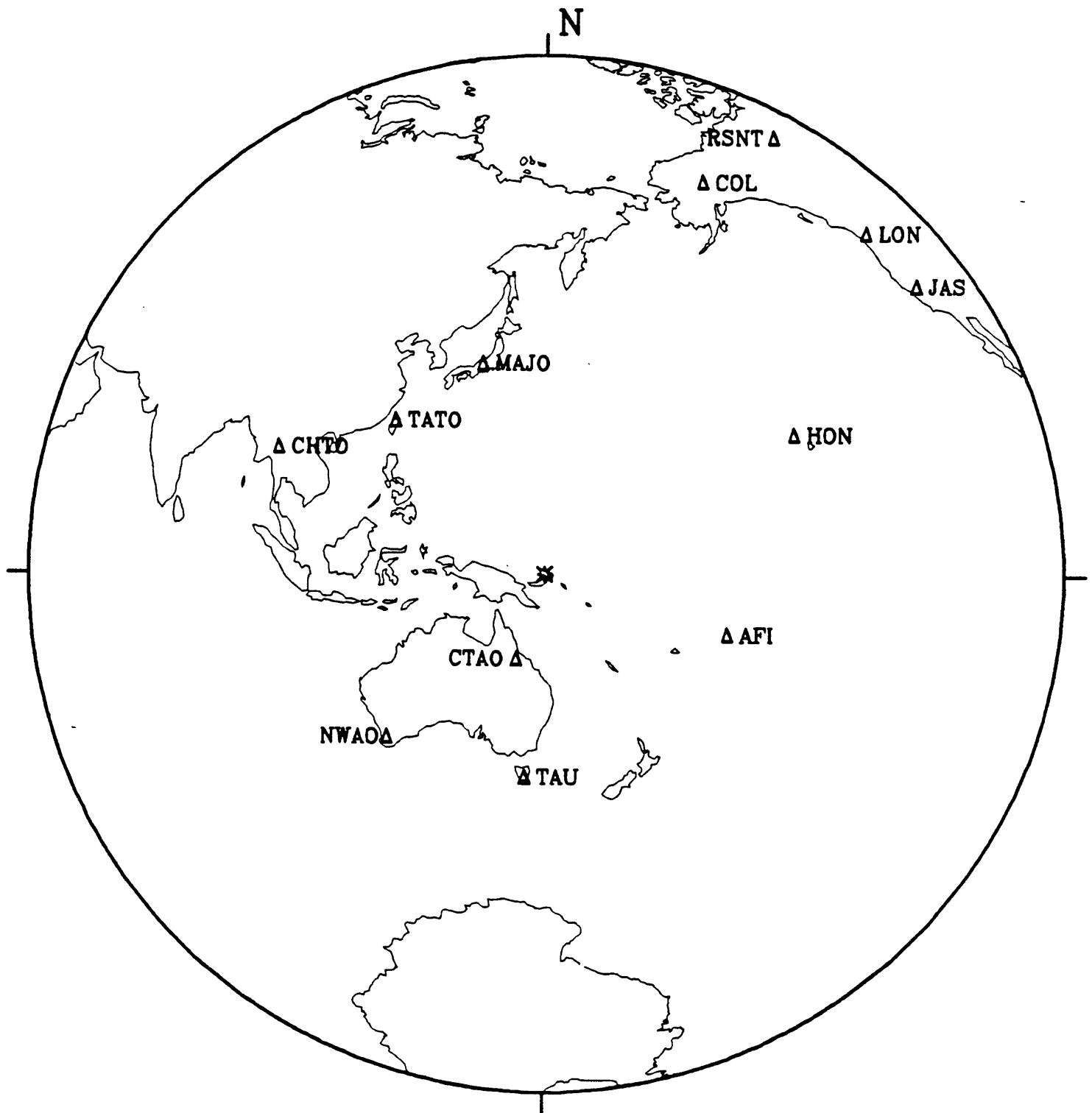
22 January 1985 07:57:36.27
Southern Sumatra $h=33.0$ $m_b=5.6$

LPZ



23 January 1985 20:36:18.27

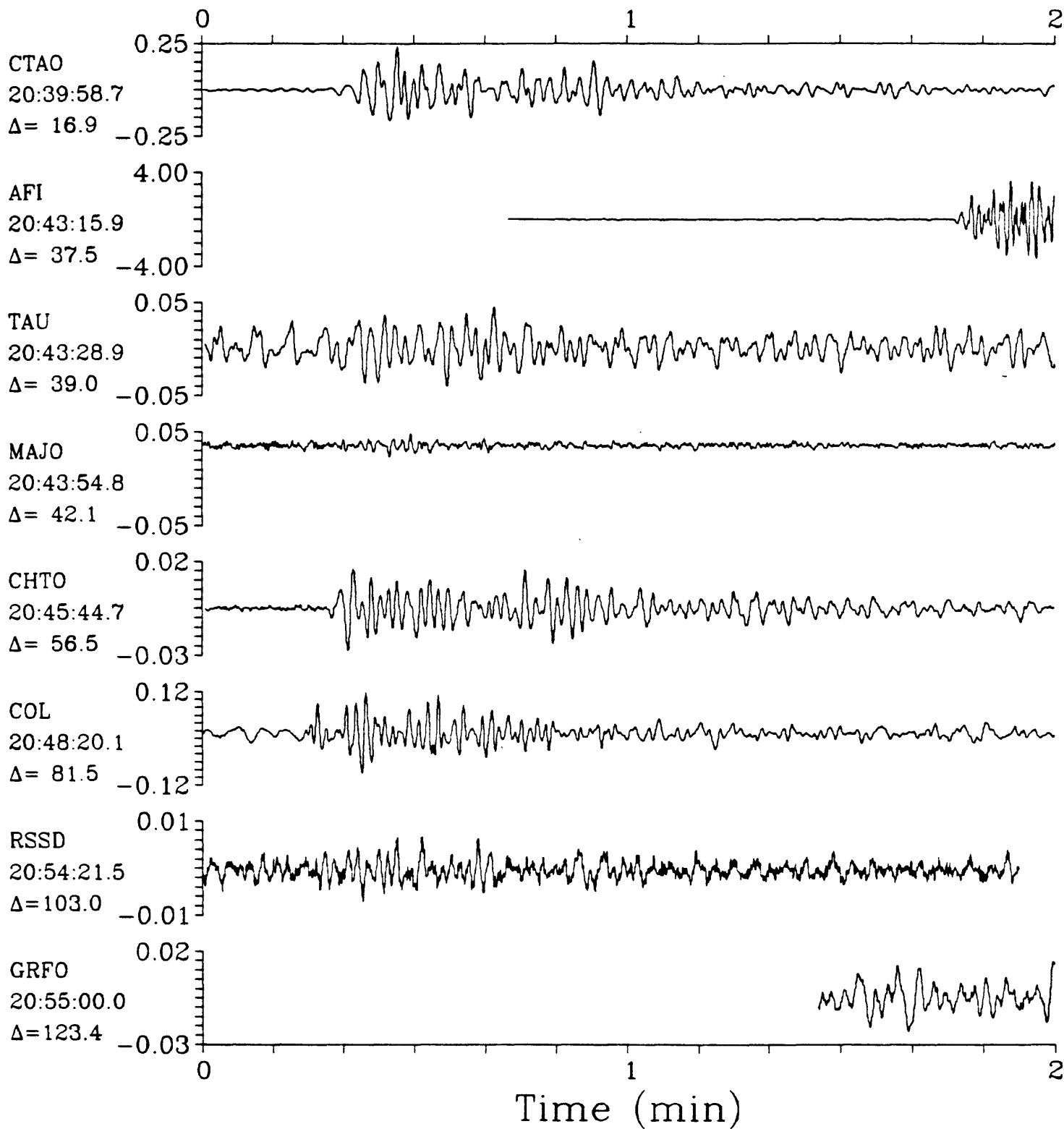
New Ireland Region



SPZ

23 January 1985 20:36:18.27

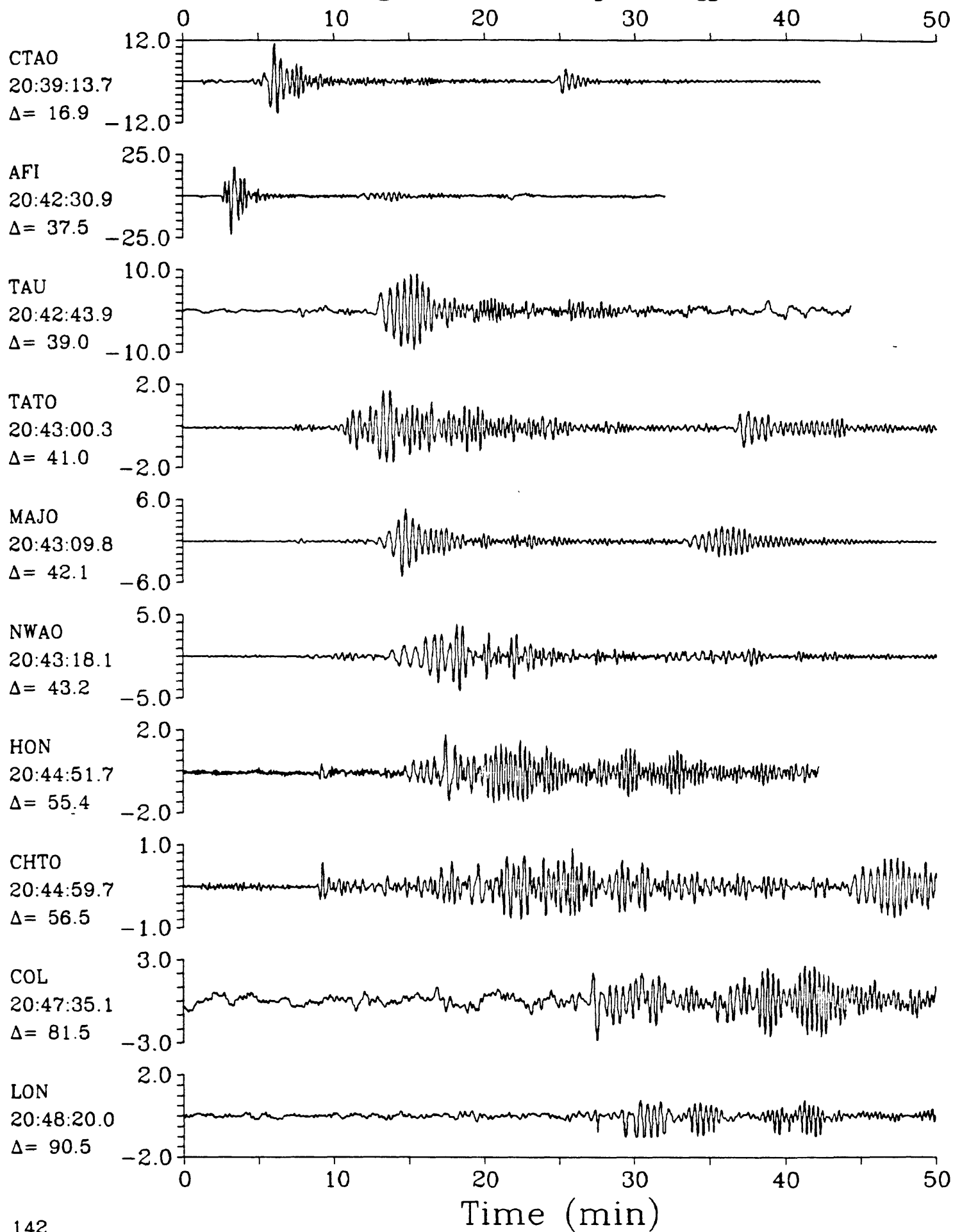
SPZ

New Ireland Region $h=18.2$ $m_b=5.5$ $M_{SZ}=5.4$ 

LPZ

23 January 1985 20:36:18.27

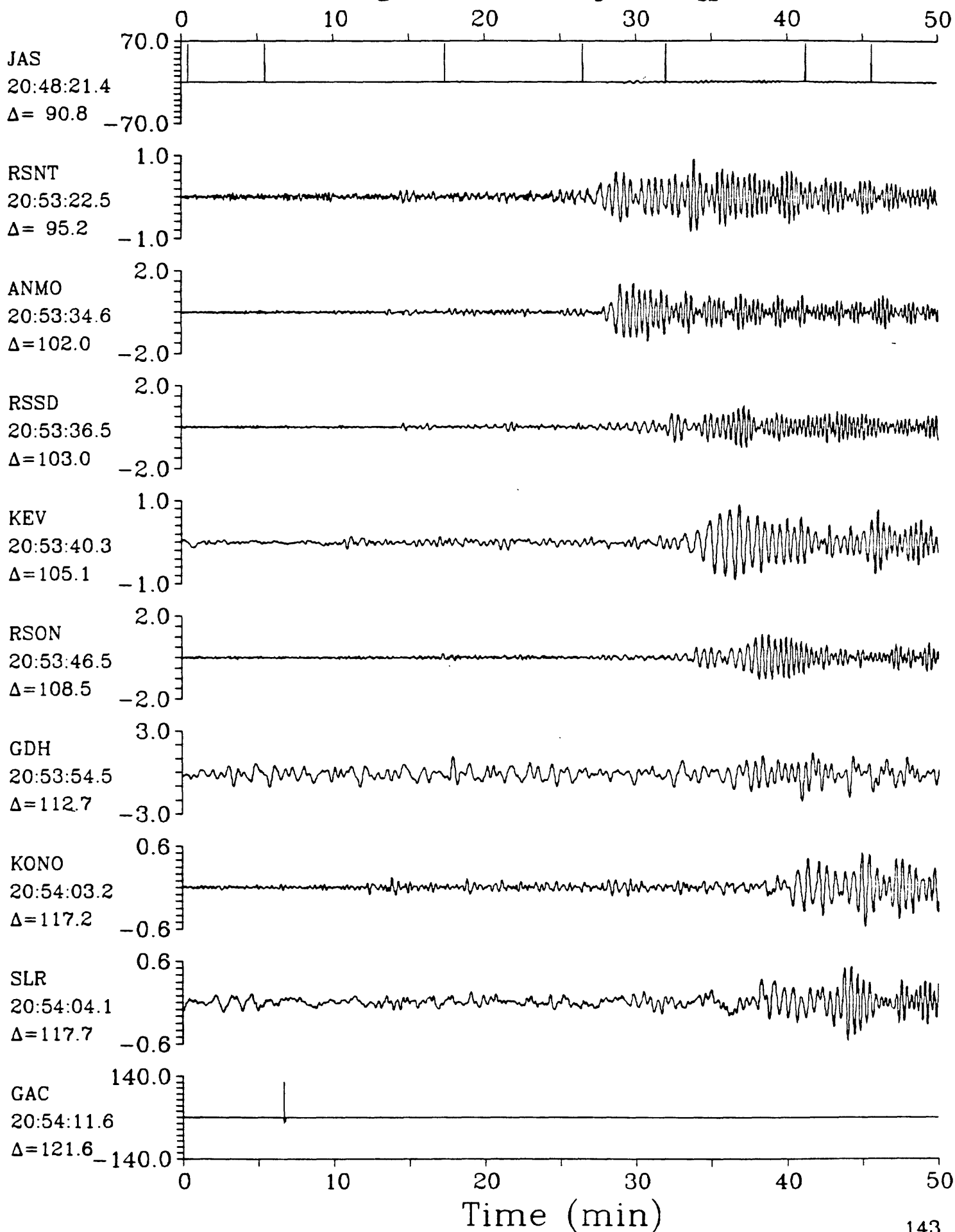
LPZ

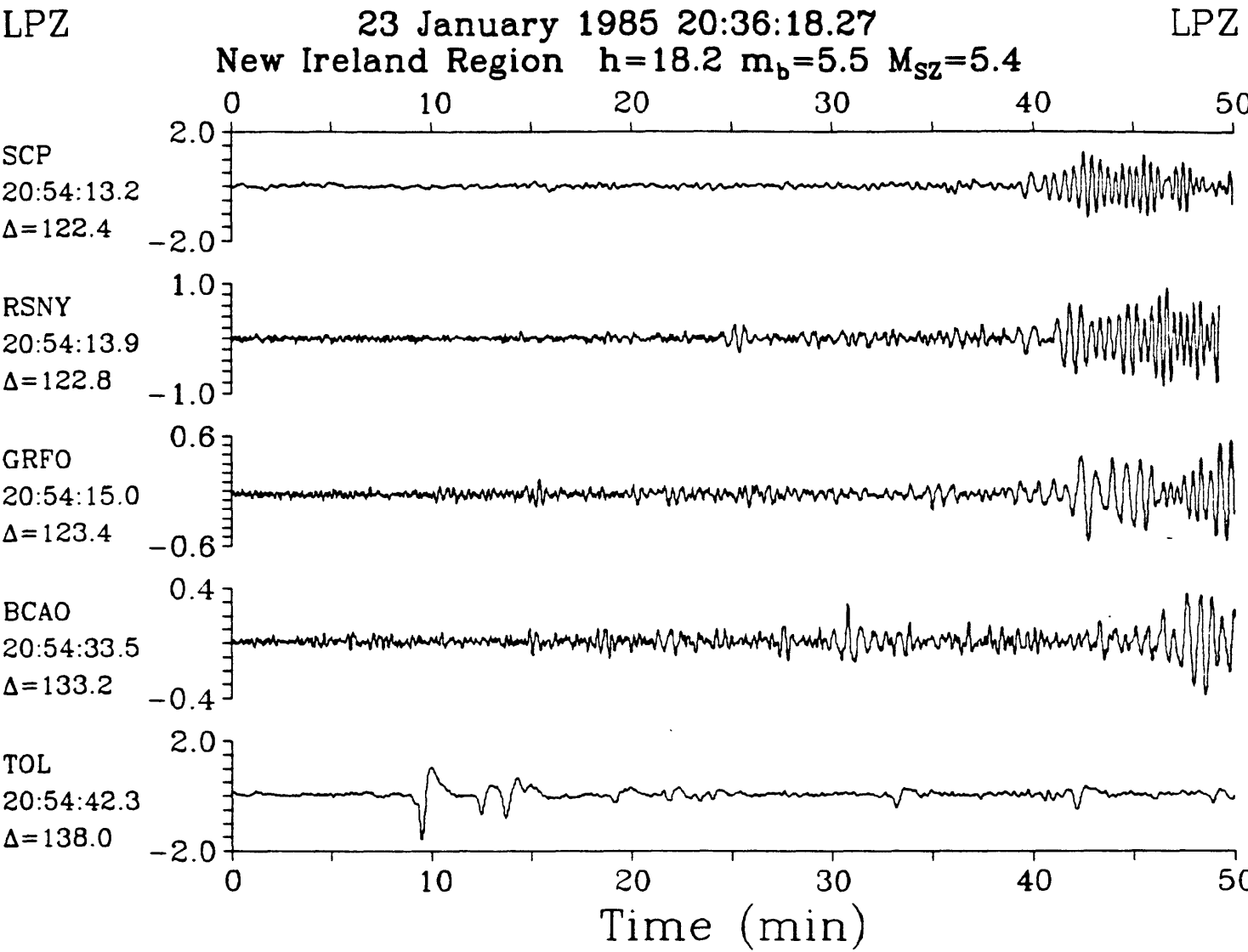
New Ireland Region $h=18.2$ $m_b=5.5$ $M_{sz}=5.4$ 

LPZ

23 January 1985 20:36:18.27

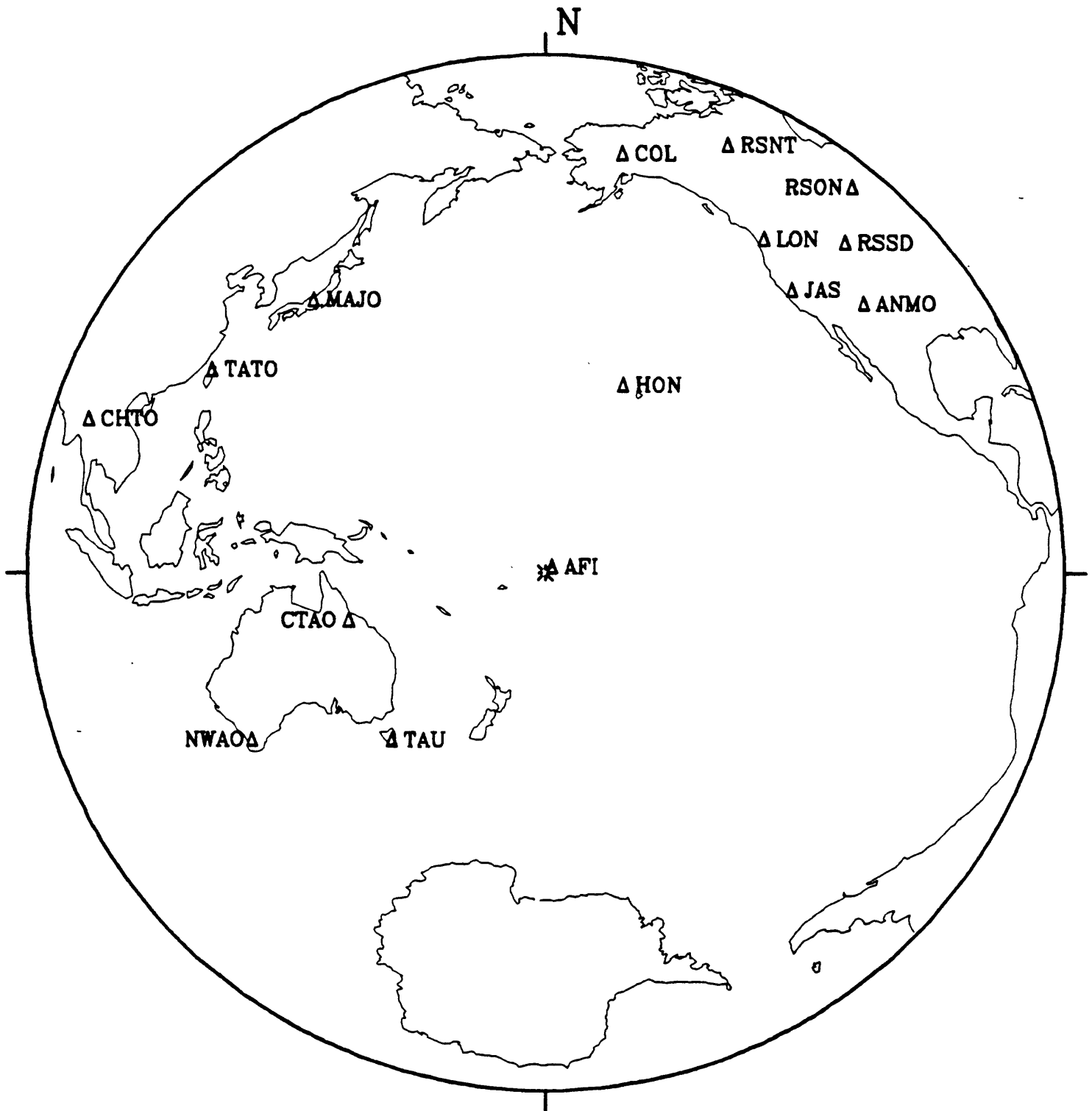
LPZ

New Ireland Region $h=18.2$ $m_b=5.5$ $M_{sz}=5.4$ 



23 January 1985 20:44:39.29

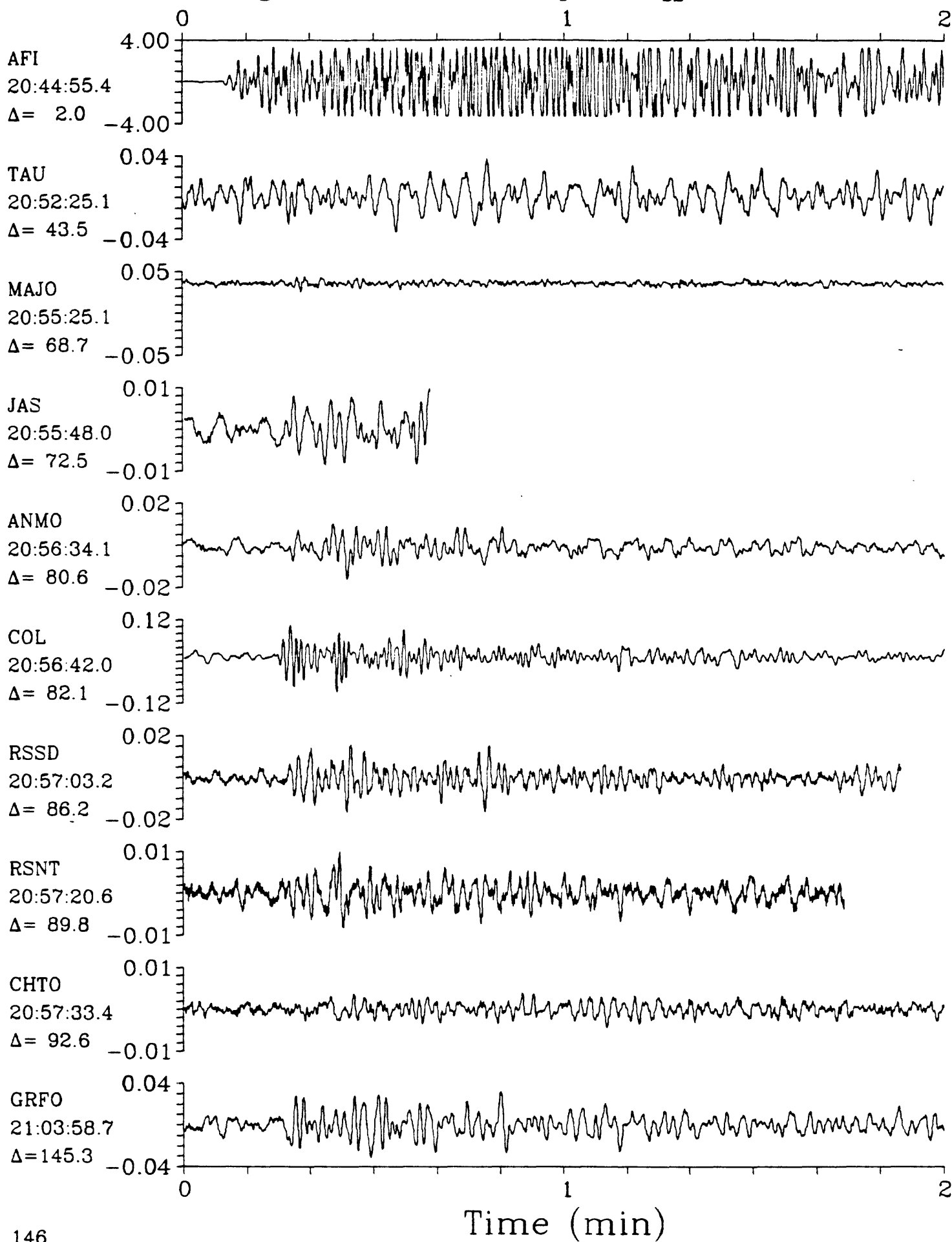
Tonga Islands



SPZ

23 January 1985 20:44:39.29
Tonga Islands $h=33.0$ $m_b=5.2$ $M_{sz}=5.5$

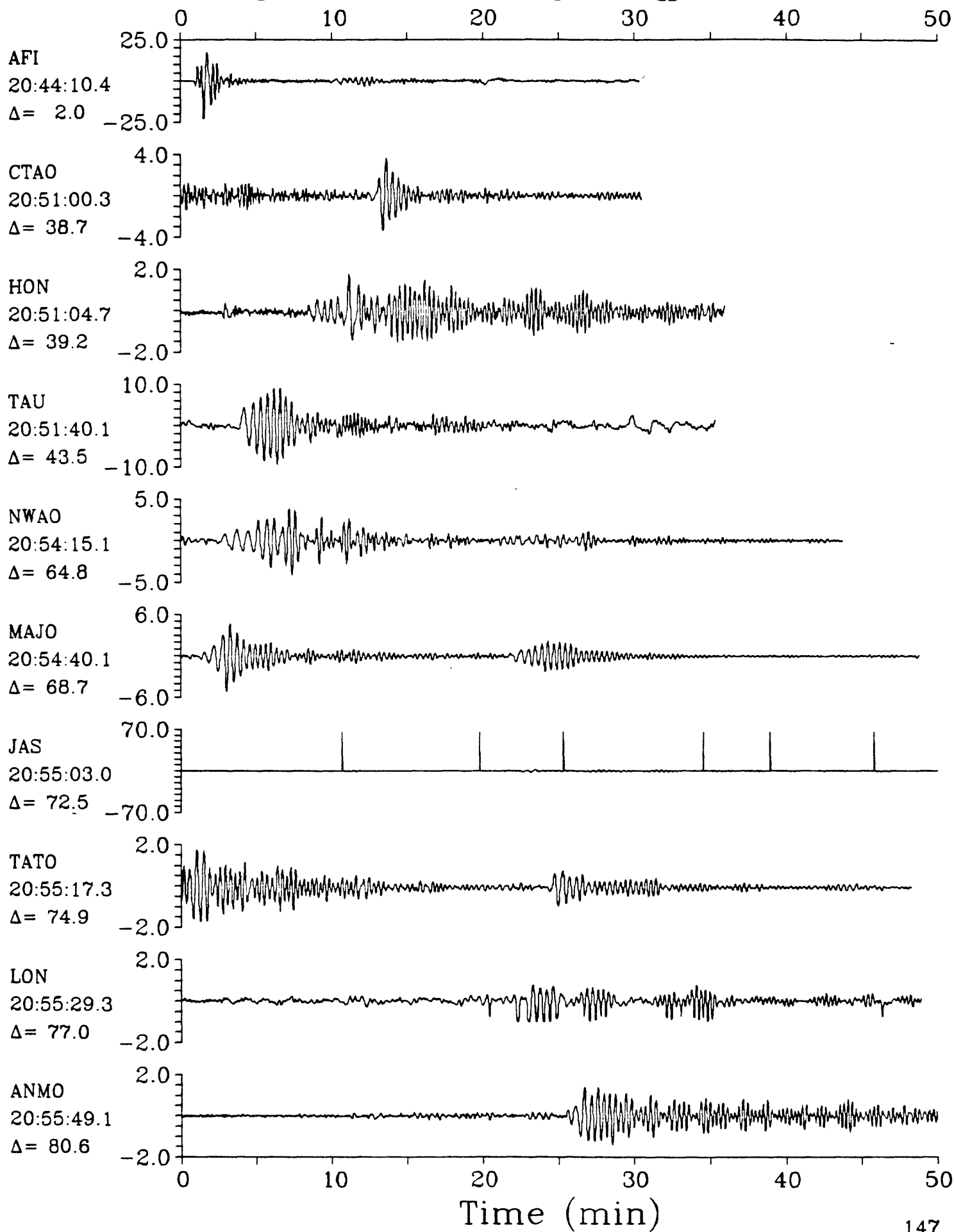
SPZ



LPZ

23 January 1985 20:44:39.29
Tonga Islands $h=33.0$ $m_b=5.2$ $M_{sz}=5.5$

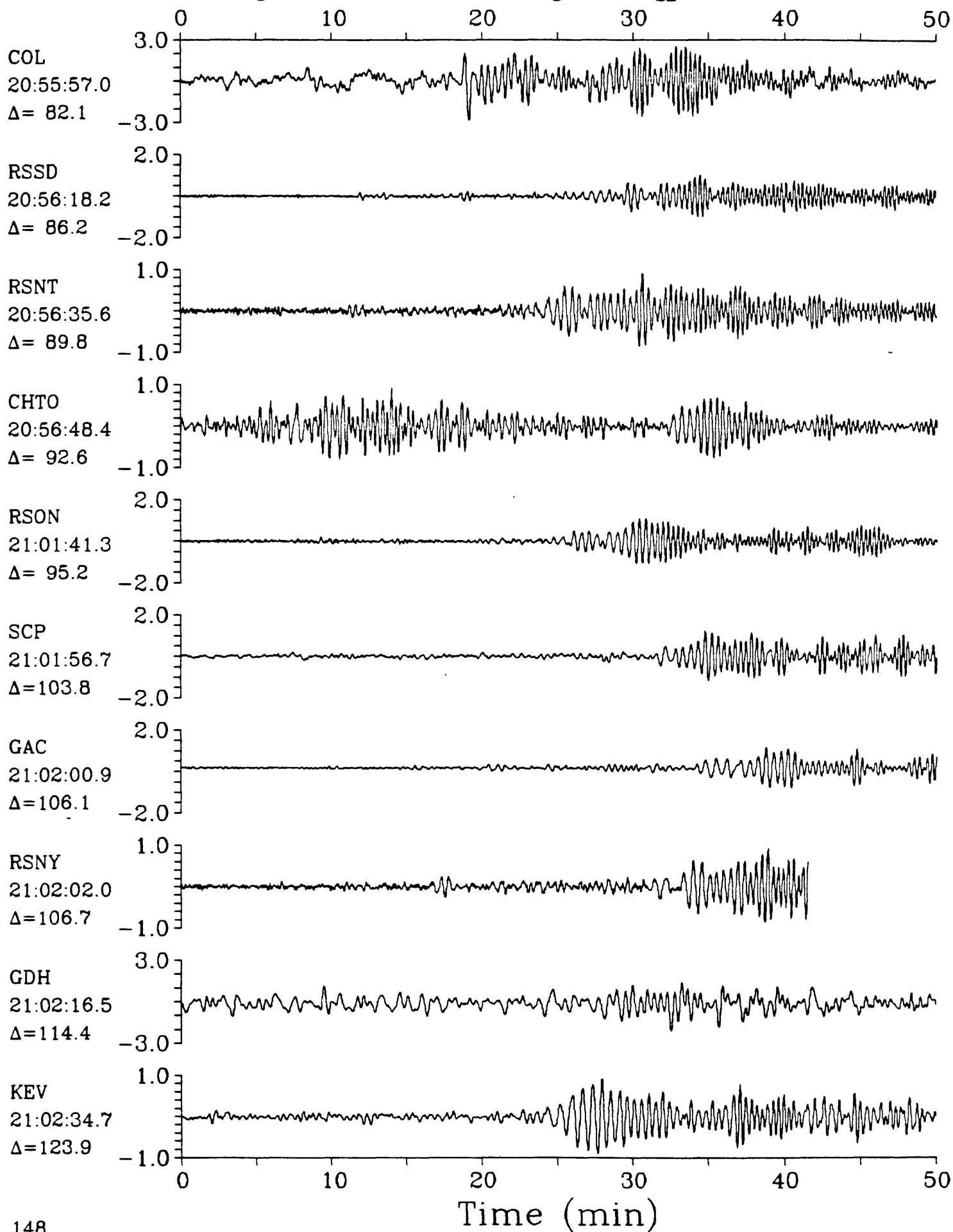
LPZ



LPZ

23 January 1985 20:44:39.29
Tonga Islands $h=33.0$ $m_b=5.2$ $M_{sz}=5.5$

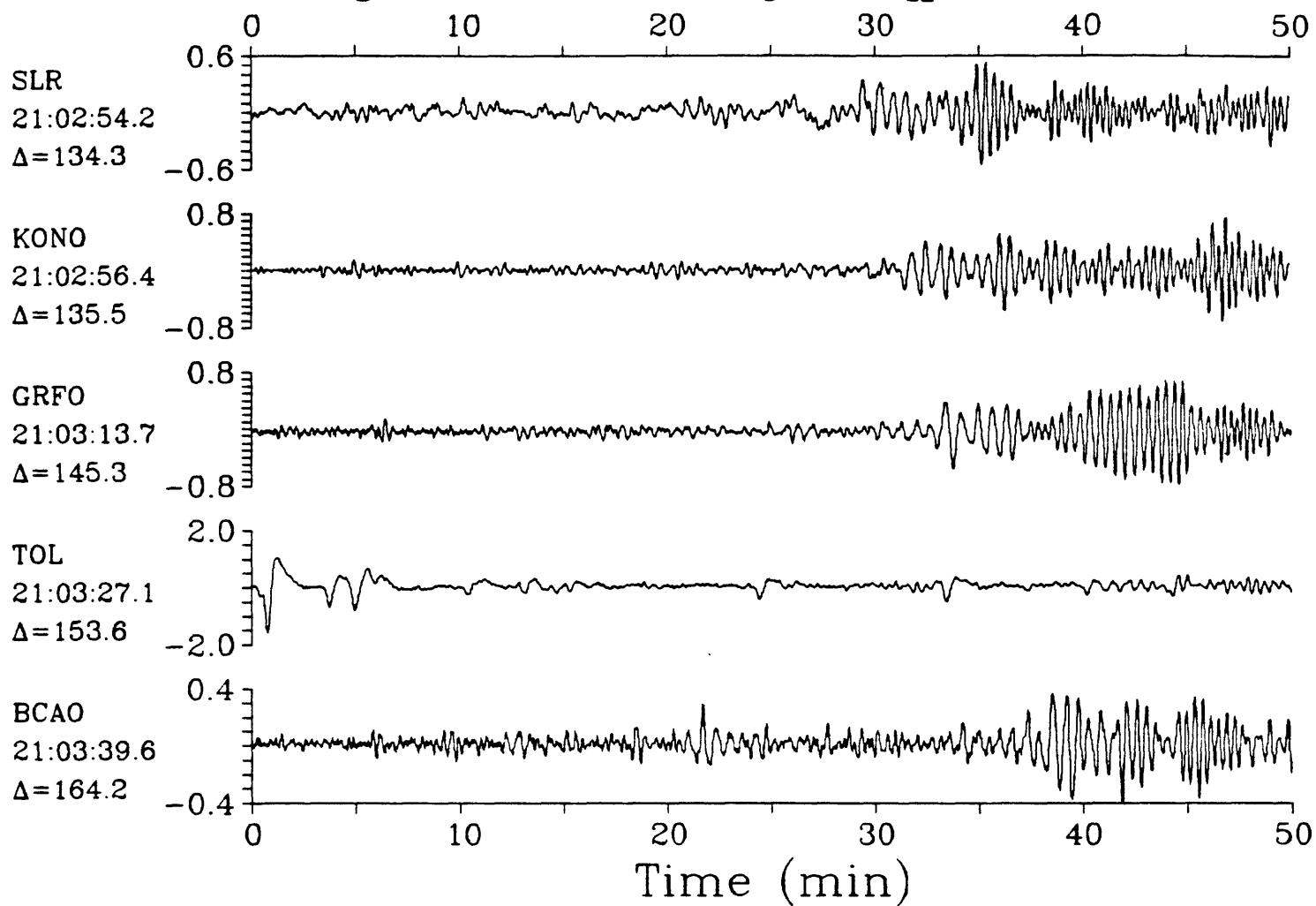
LPZ



LPZ

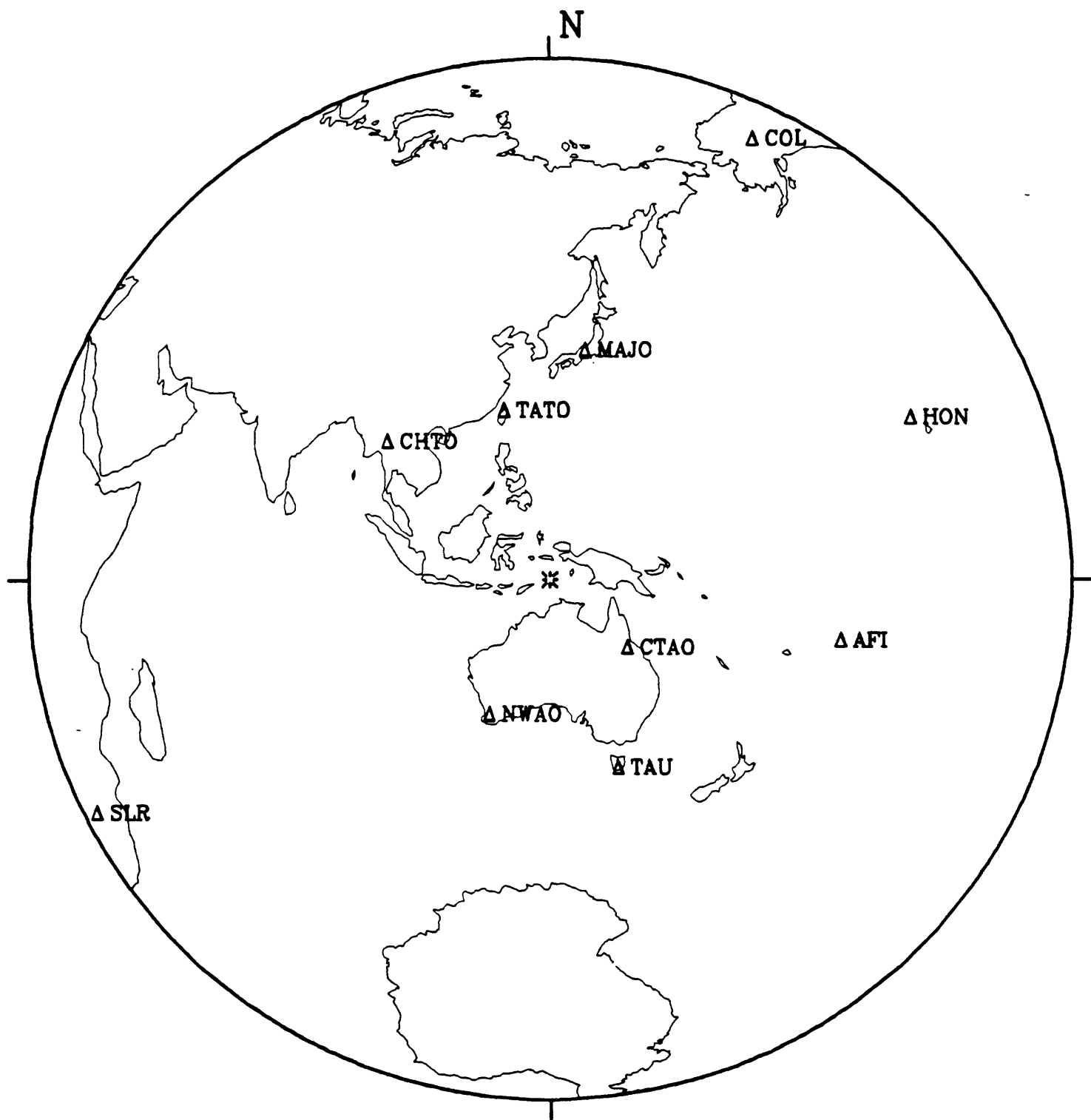
23 January 1985 20:44:39.29
Tonga Islands $h=33.0$ $m_b=5.2$ $M_{sz}=5.5$

LPZ



24 January 1985 12:29:32.40

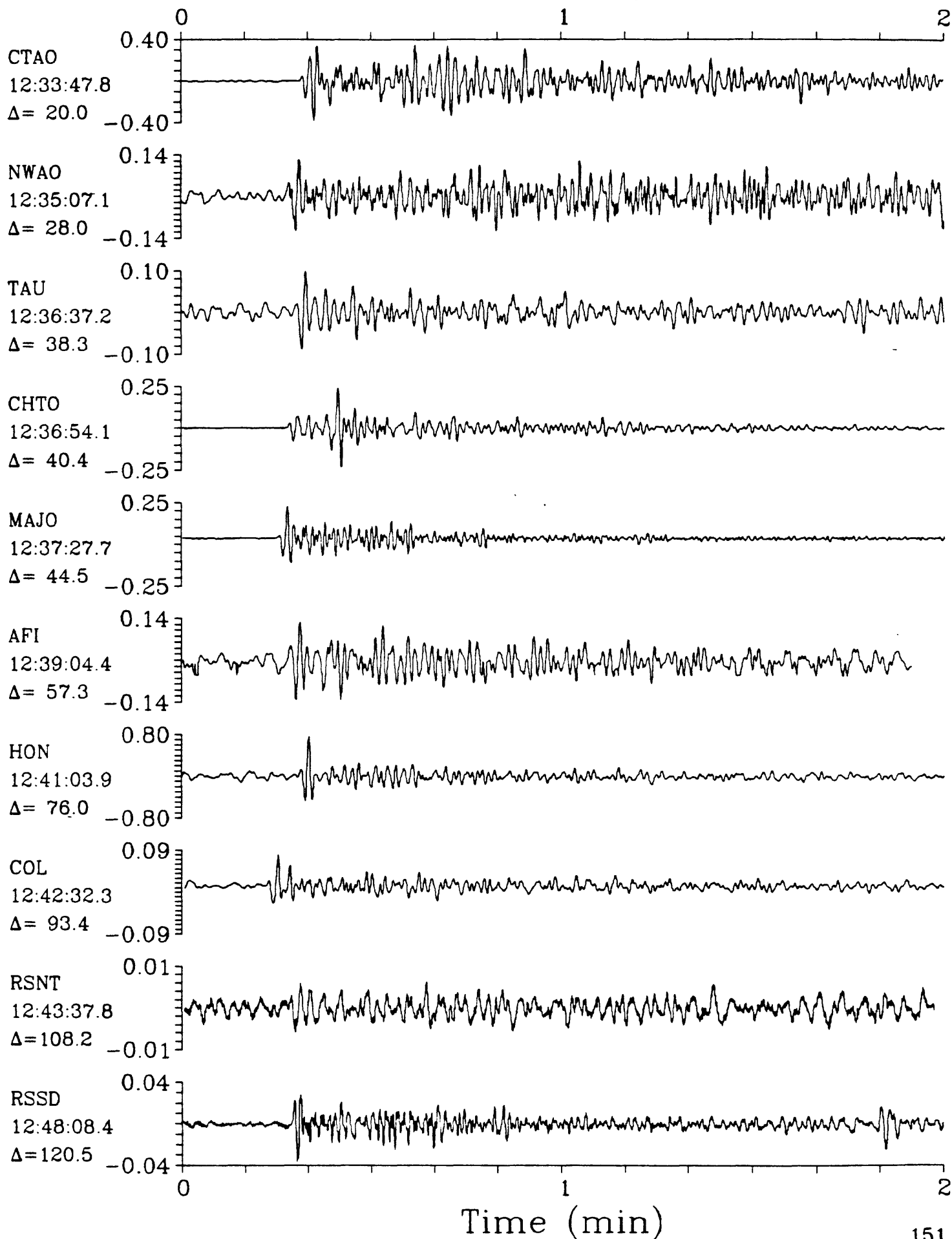
Tanimbar Islands Region



SPZ

24 January 1985 12:29:32.40

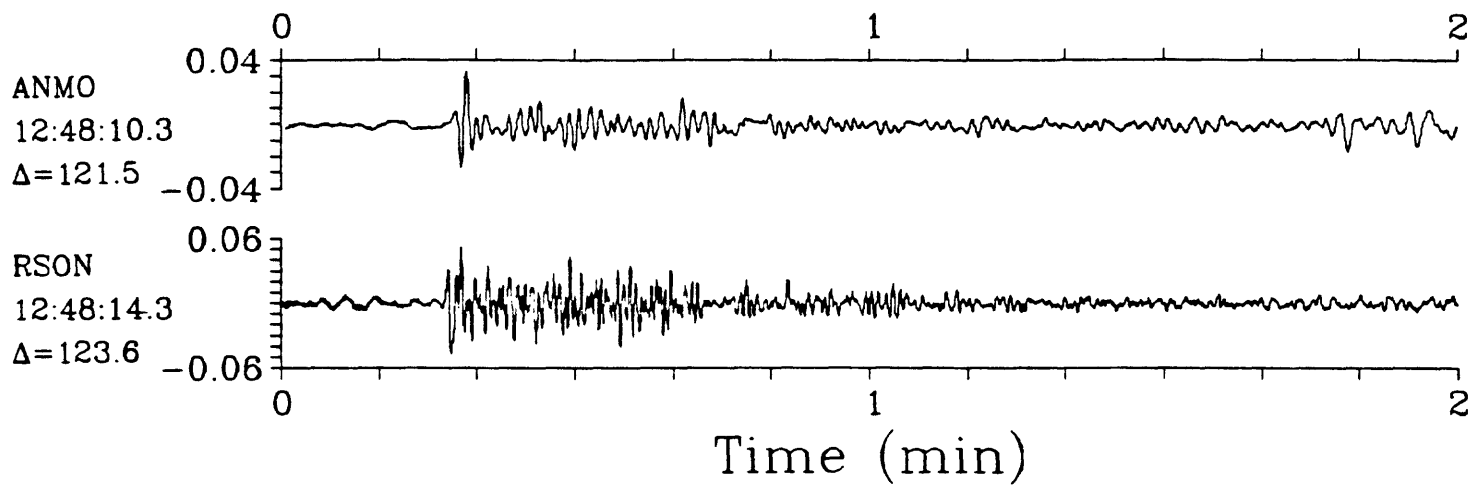
SPZ

Tanimbar Islands Region $h=19.4$ $m_b=5.8$ $M_{sz}=5.3$ 

SPZ

24 January 1985 12:29:32.40

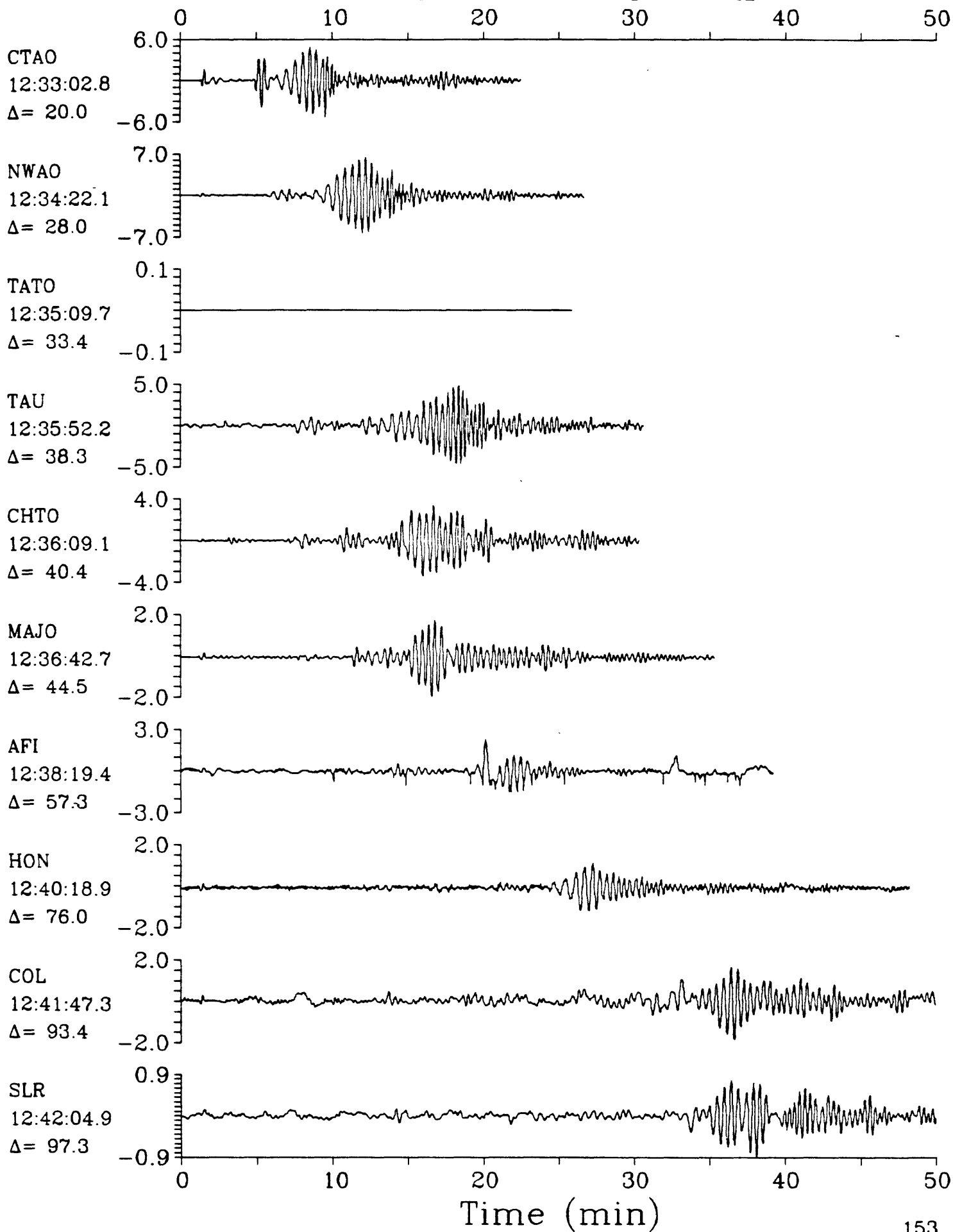
SPZ

Tanimbar Islands Region $h=19.4$ $m_b=5.8$ $M_{SZ}=5.3$ 

LPZ

24 January 1985 12:29:32.40

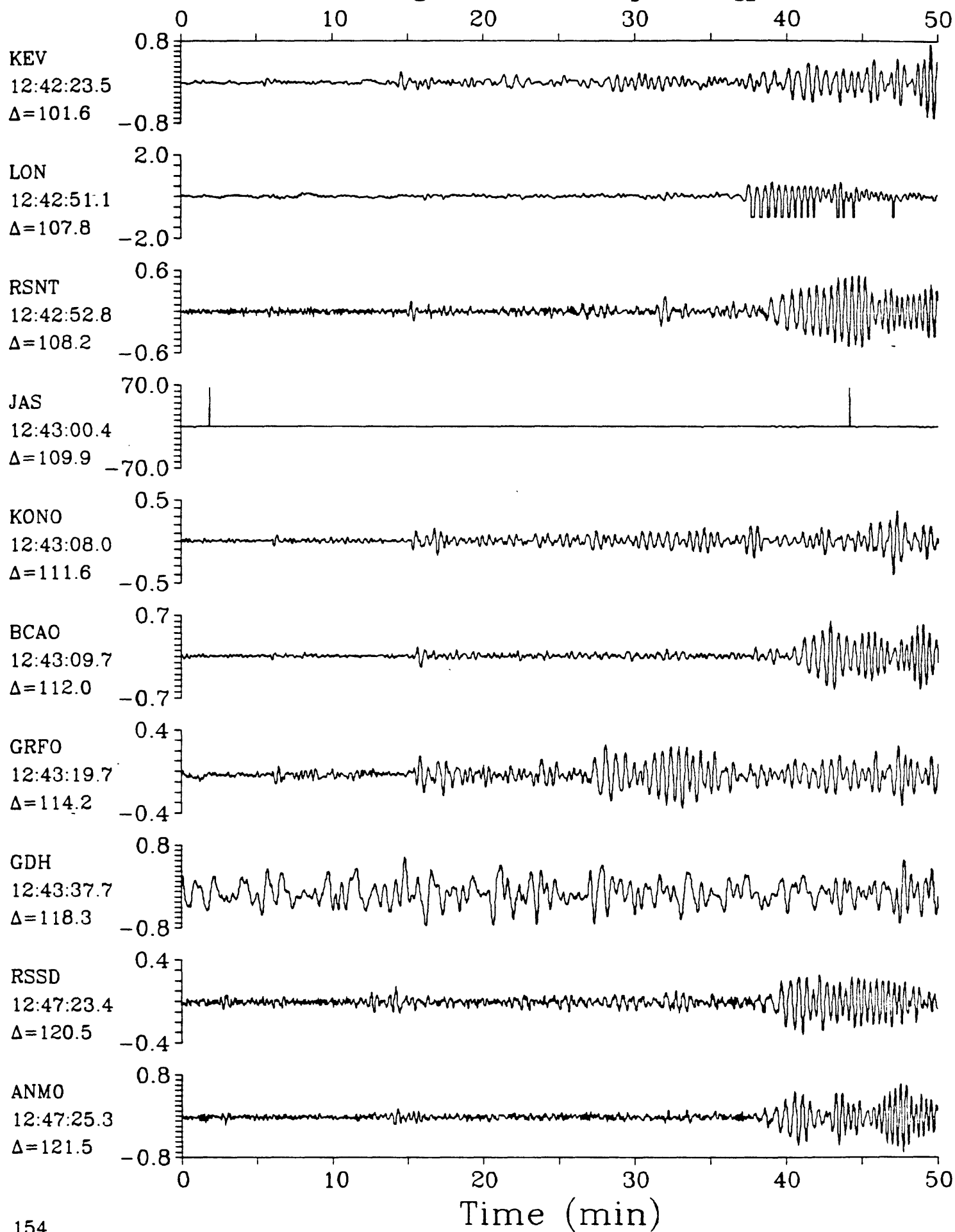
LPZ

Tanimbar Islands Region $h=19.4$ $m_b=5.8$ $M_{sz}=5.3$ 

LPZ

24 January 1985 12:29:32.40

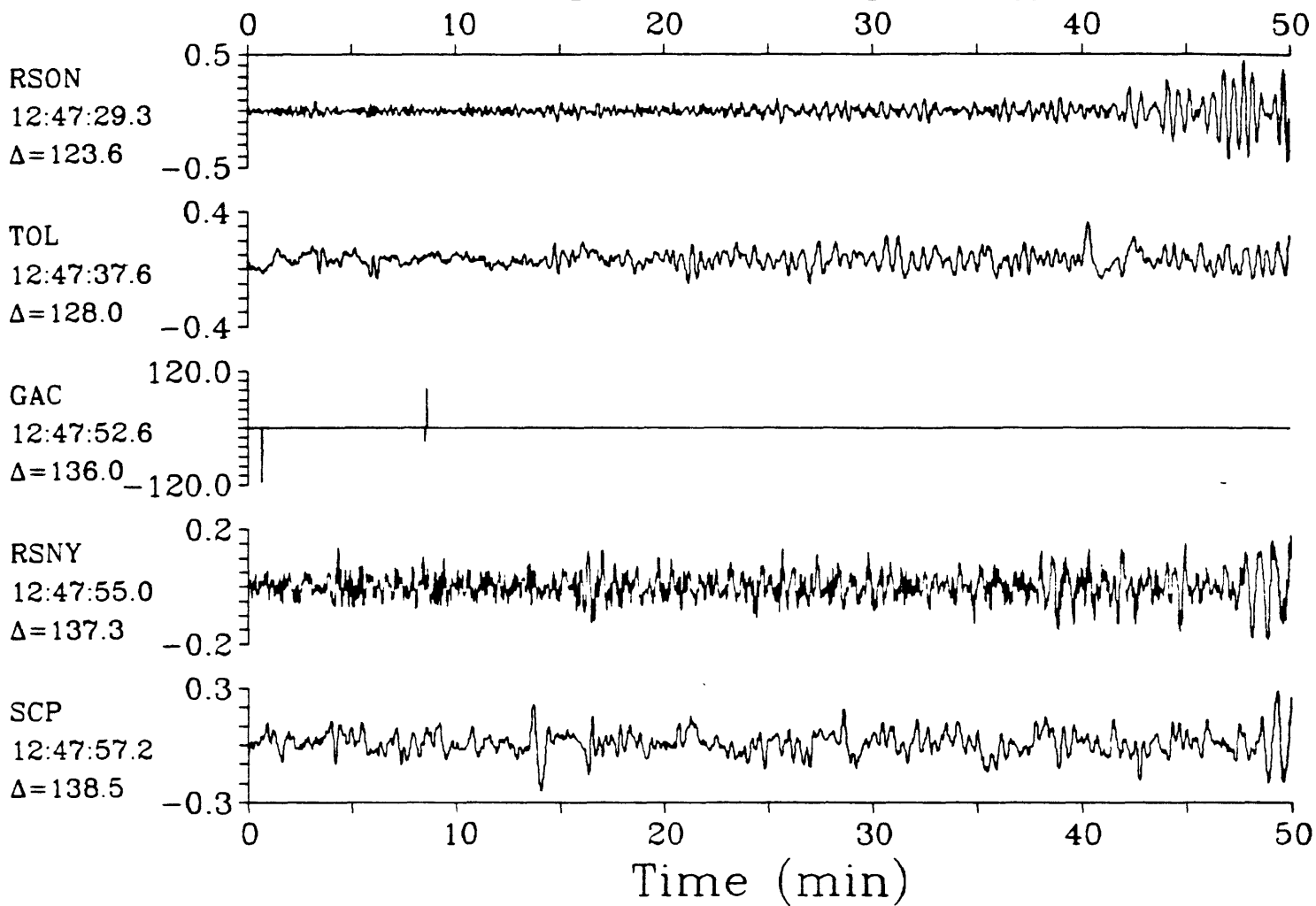
LPZ

Tanimbar Islands Region $h=19.4$ $m_b=5.8$ $M_{sz}=5.3$ 

LPZ

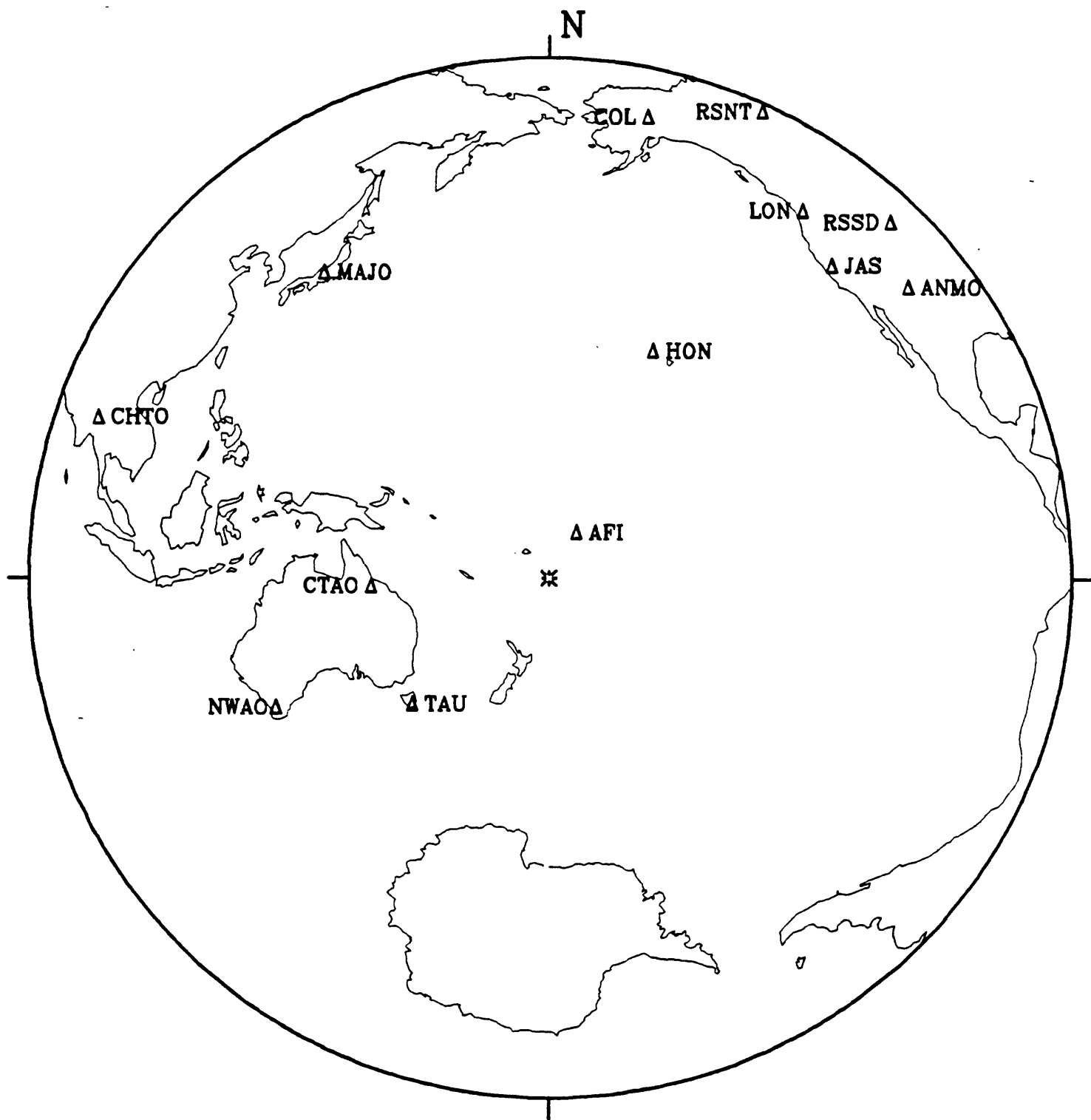
24 January 1985 12:29:32.40

LPZ

Tanimbar Islands Region $h=19.4$ $m_b=5.8$ $M_{sz}=5.3$ 

25 January 1985 21:15:34.31

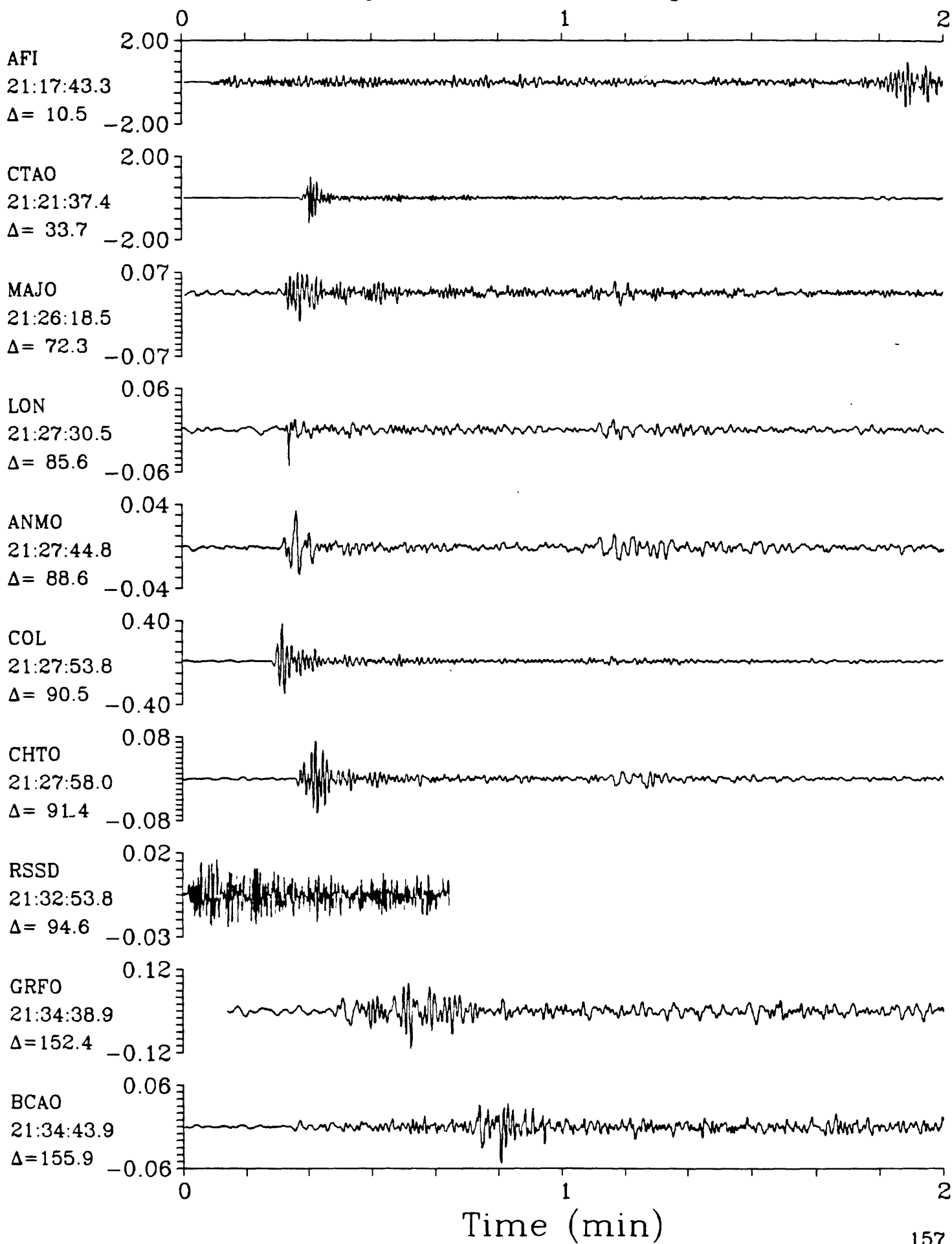
South of Fiji Islands



SPZ

25 January 1985 21:15:34.31
South of Fiji Islands $h=244.7$ $m_b=5.5$

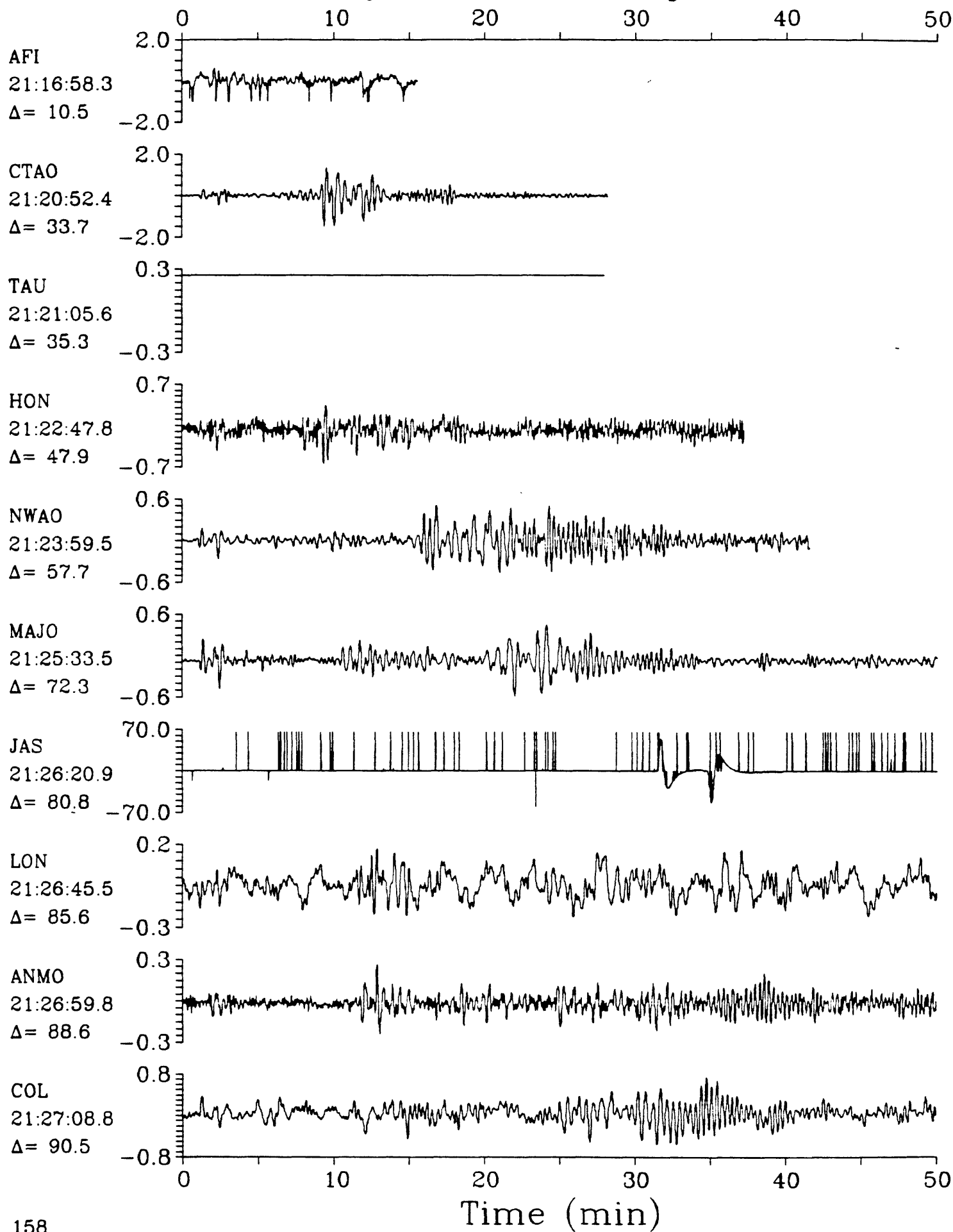
SPZ



LPZ

25 January 1985 21:15:34.31
South of Fiji Islands $h=244.7$ $m_b=5.5$

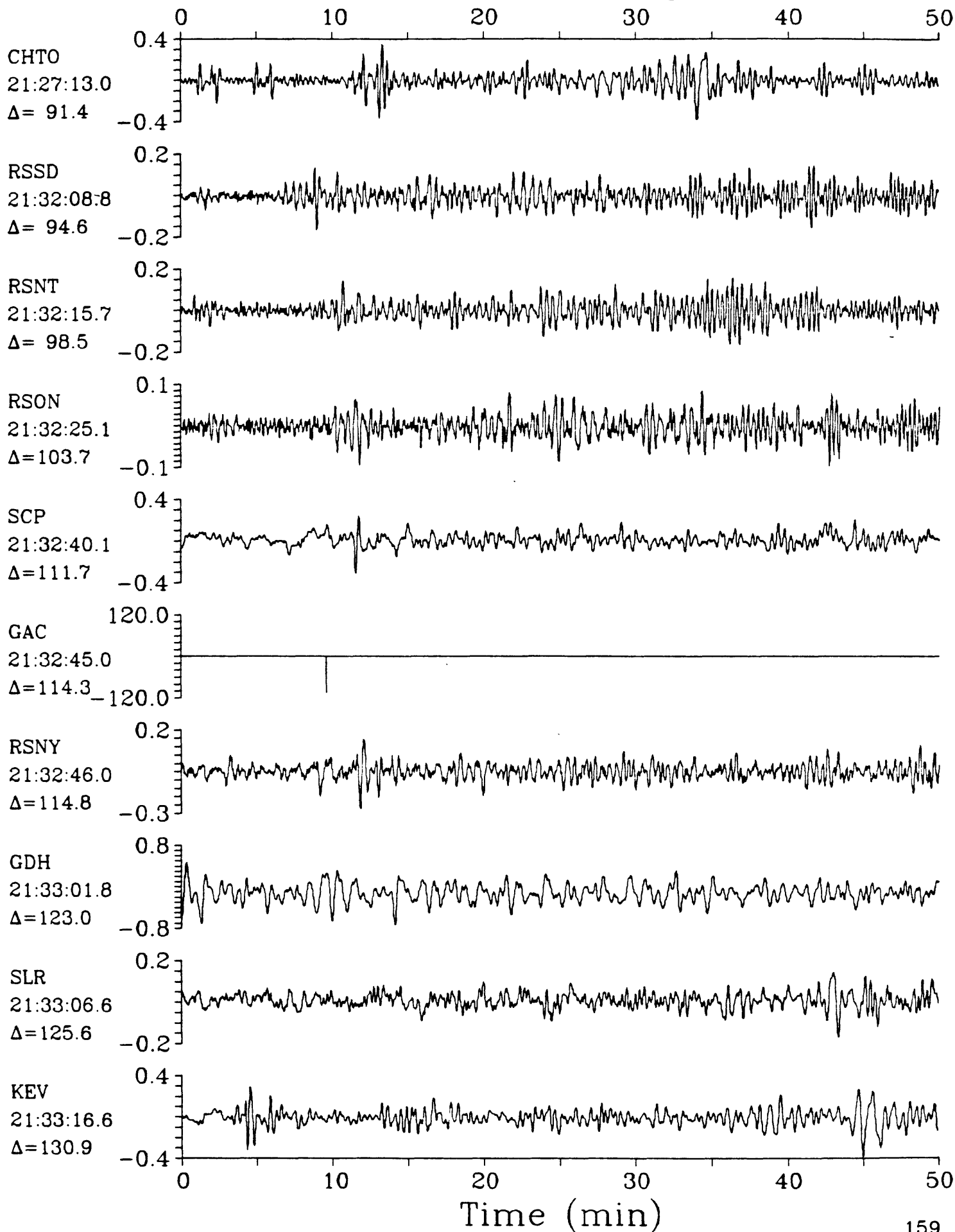
LPZ



LPZ

25 January 1985 21:15:34.31
South of Fiji Islands $h=244.7$ m_b=5.5

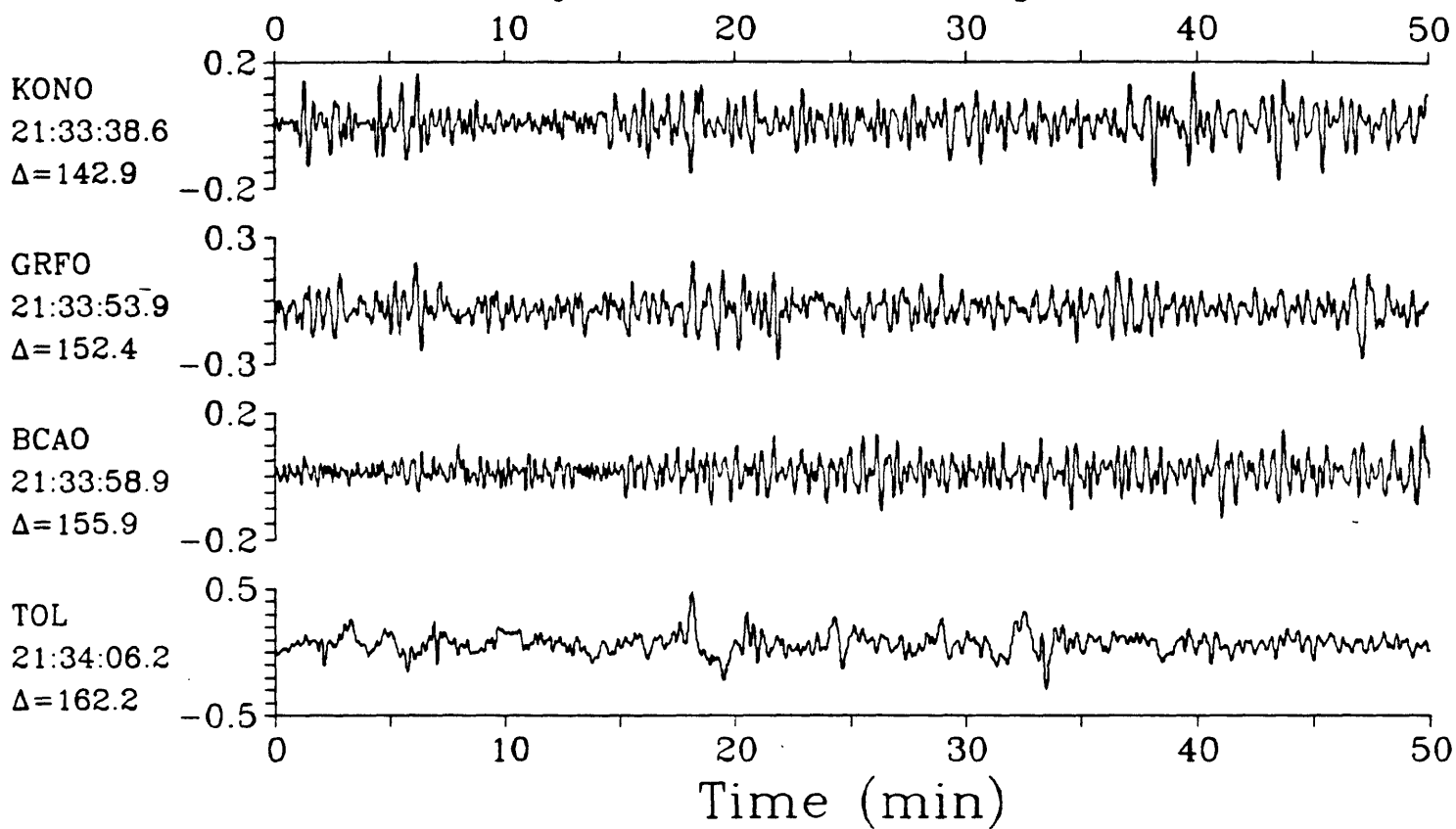
LPZ



LPZ

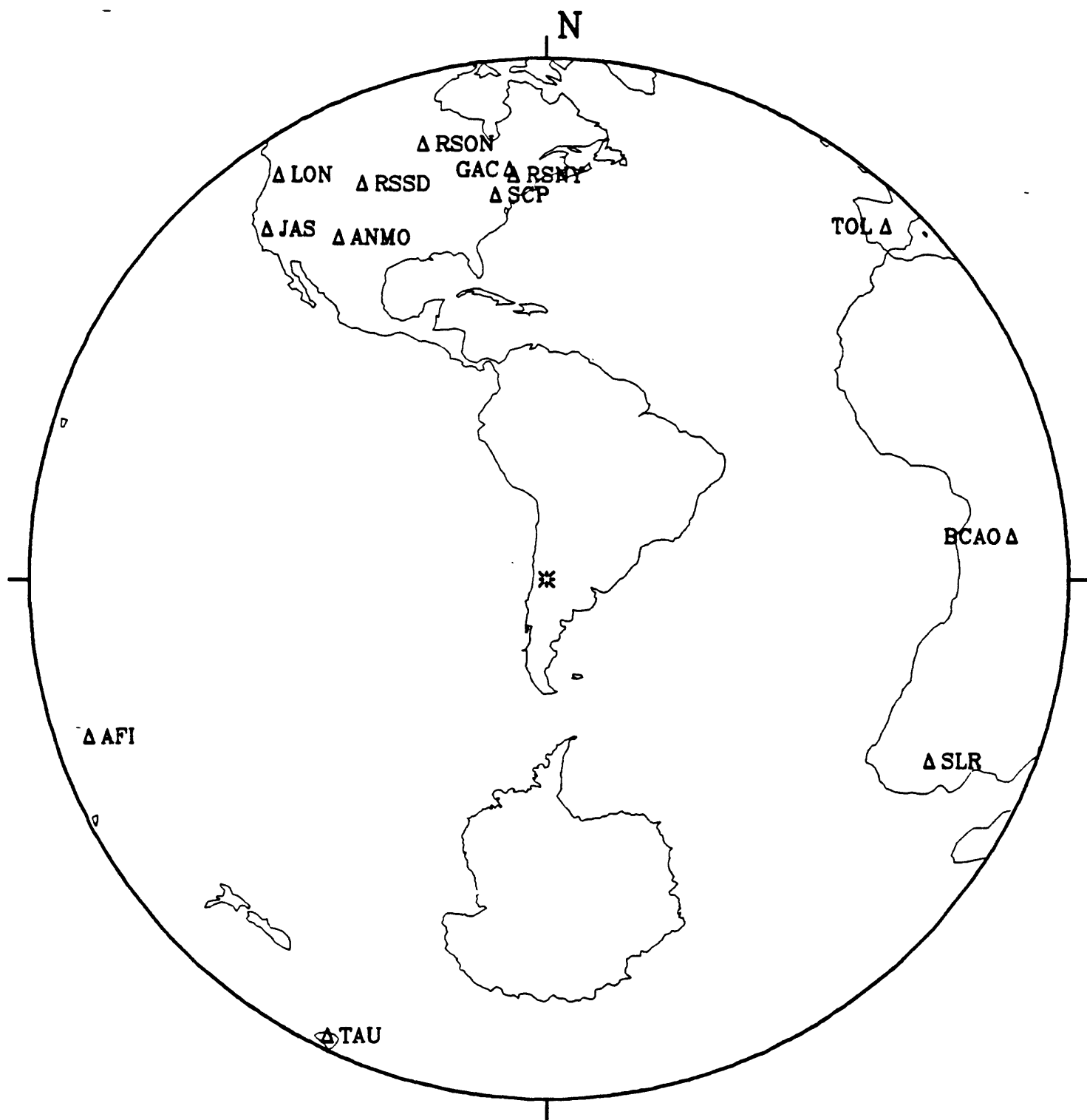
25 January 1985 21:15:34.31
South of Fiji Islands $h=244.7$ $m_b=5.5$

LPZ



26 January 1985 03:07:02.51

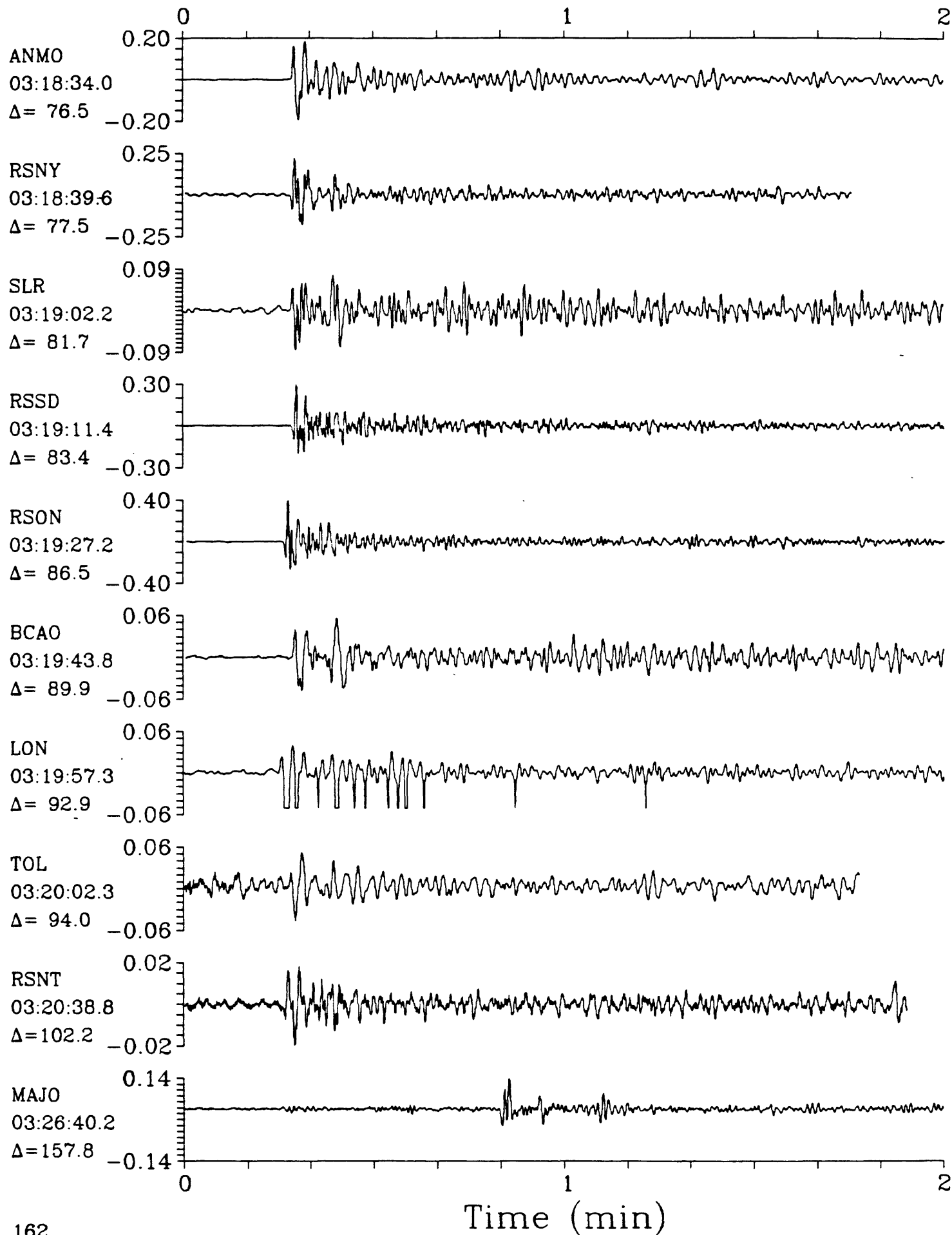
Mendoza Province, Argentina



SPZ

26 January 1985 03:07:02.51

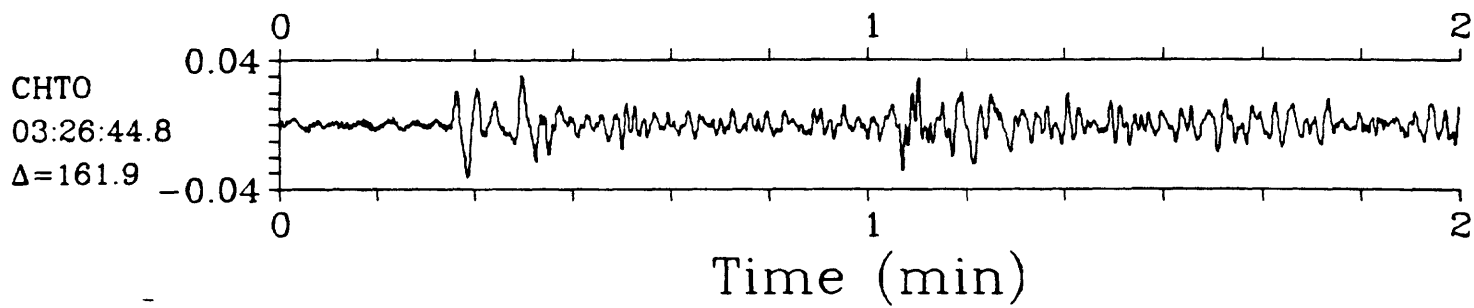
SPZ

Mendoza Province, Argentina $h=38.2$ $m_b=6.1$ $M_{sz}=5.8$ 

SPZ

26 January 1985 03:07:02.51

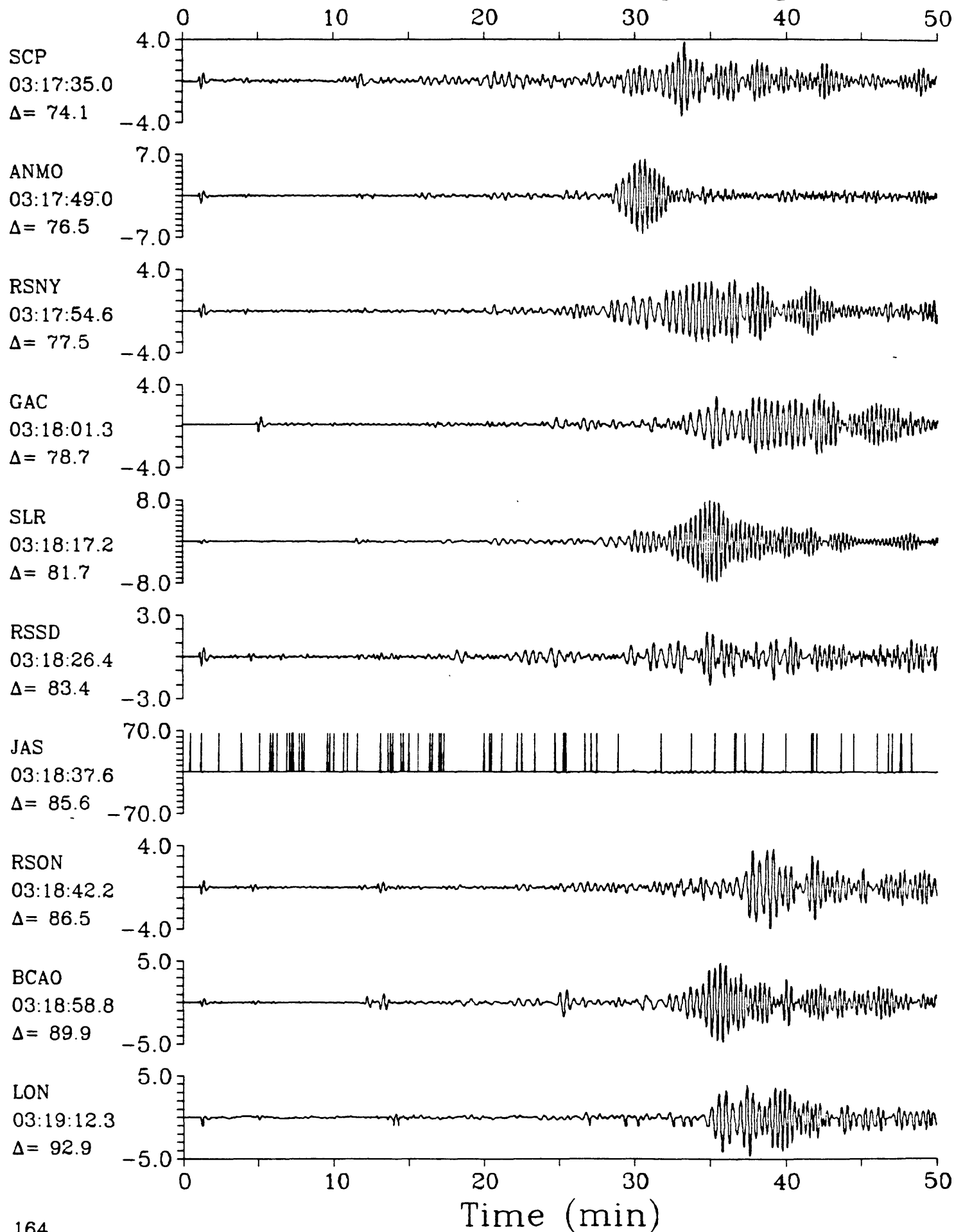
SPZ

Mendoza Province, Argentina $h=38.2$ $m_b=6.1$ $M_{SZ}=5.8$ 

LPZ

26 January 1985 03:07:02.51

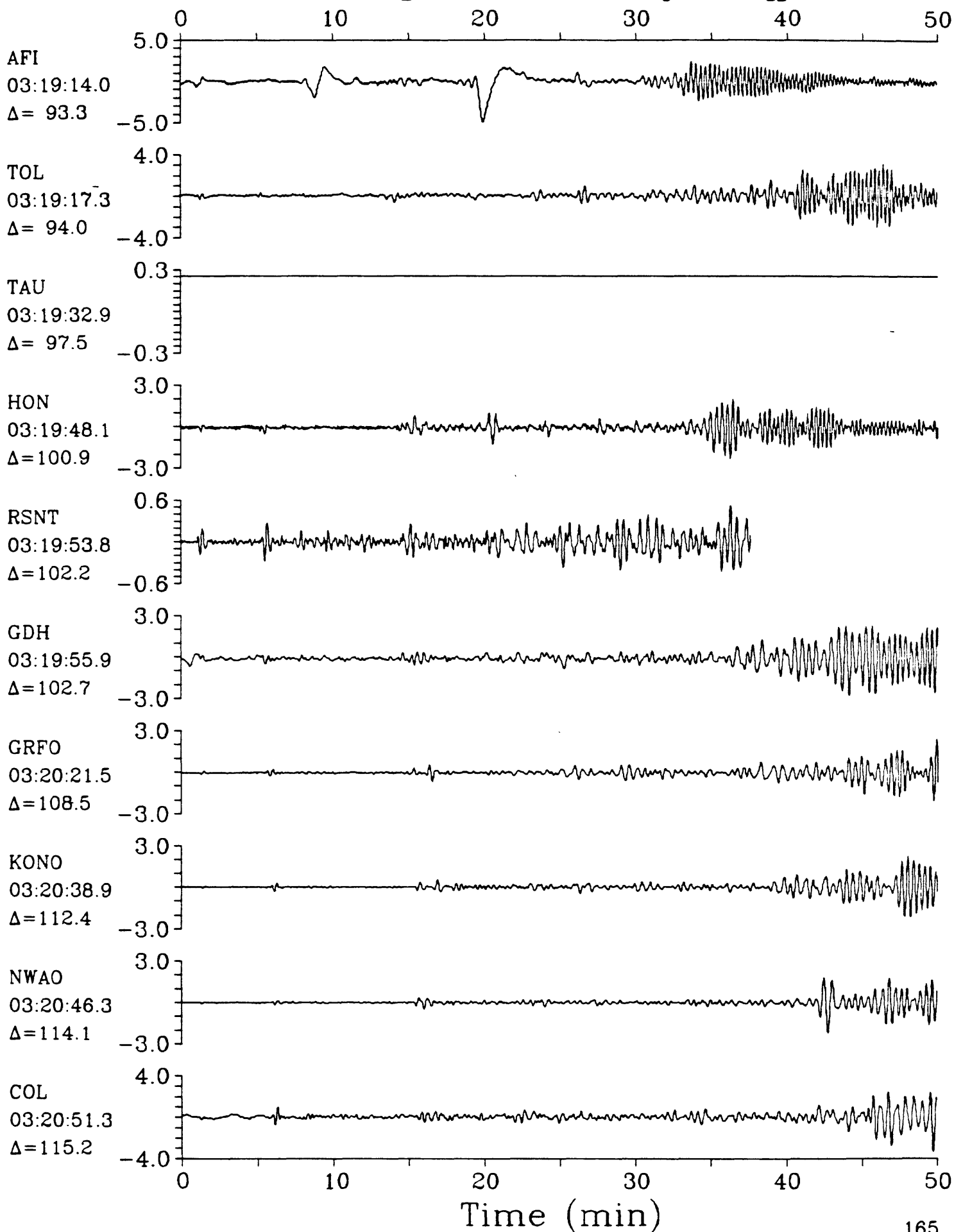
LPZ

Mendoza Province, Argentina $h=38.2$ $m_b=6.1$ $M_{sz}=5.8$ 

LPZ

26 January 1985 03:07:02.51

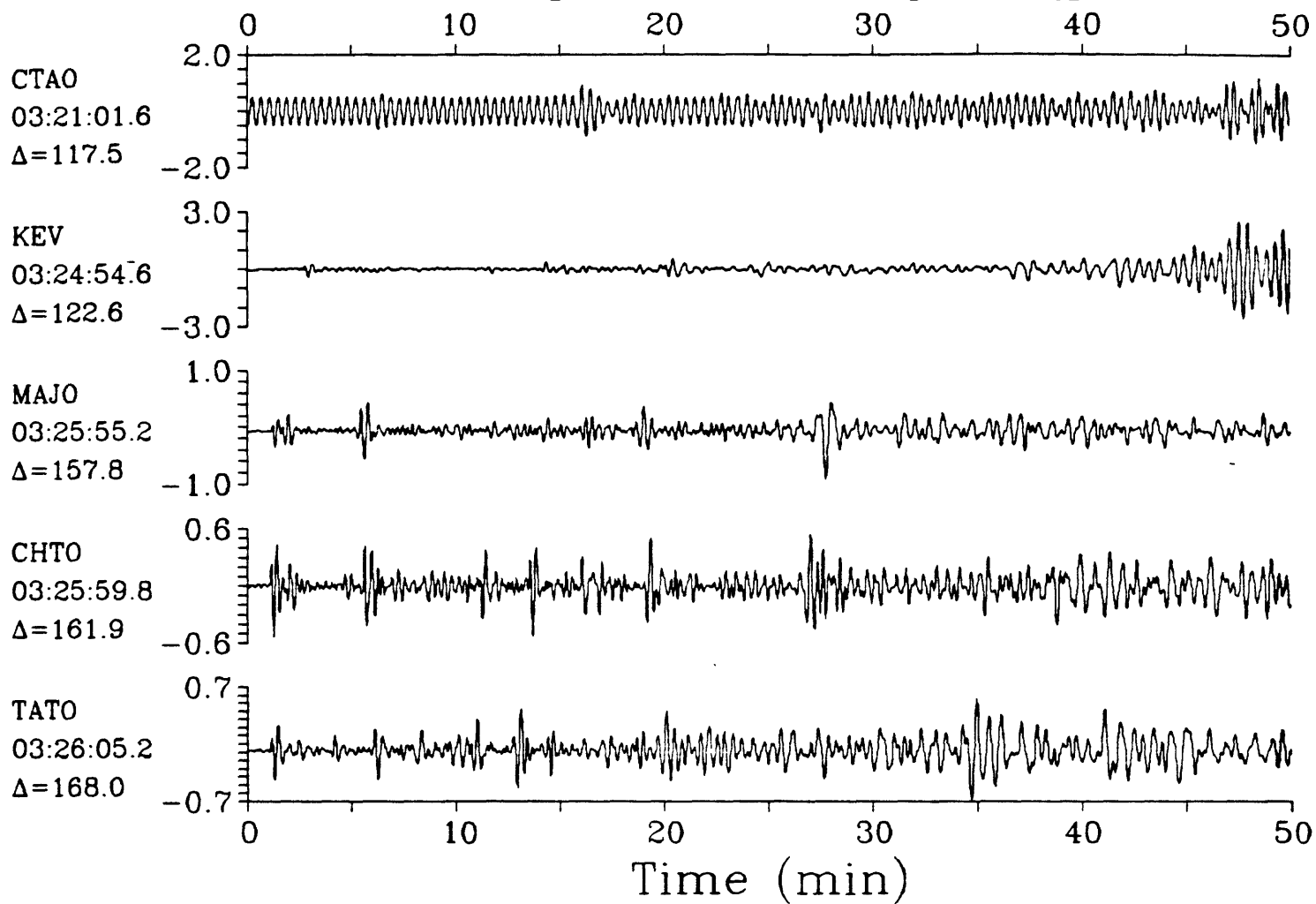
LPZ

Mendoza Province, Argentina $h=38.2$ $m_b=6.1$ $M_{sz}=5.8$ 

LPZ

26 January 1985 03:07:02.51

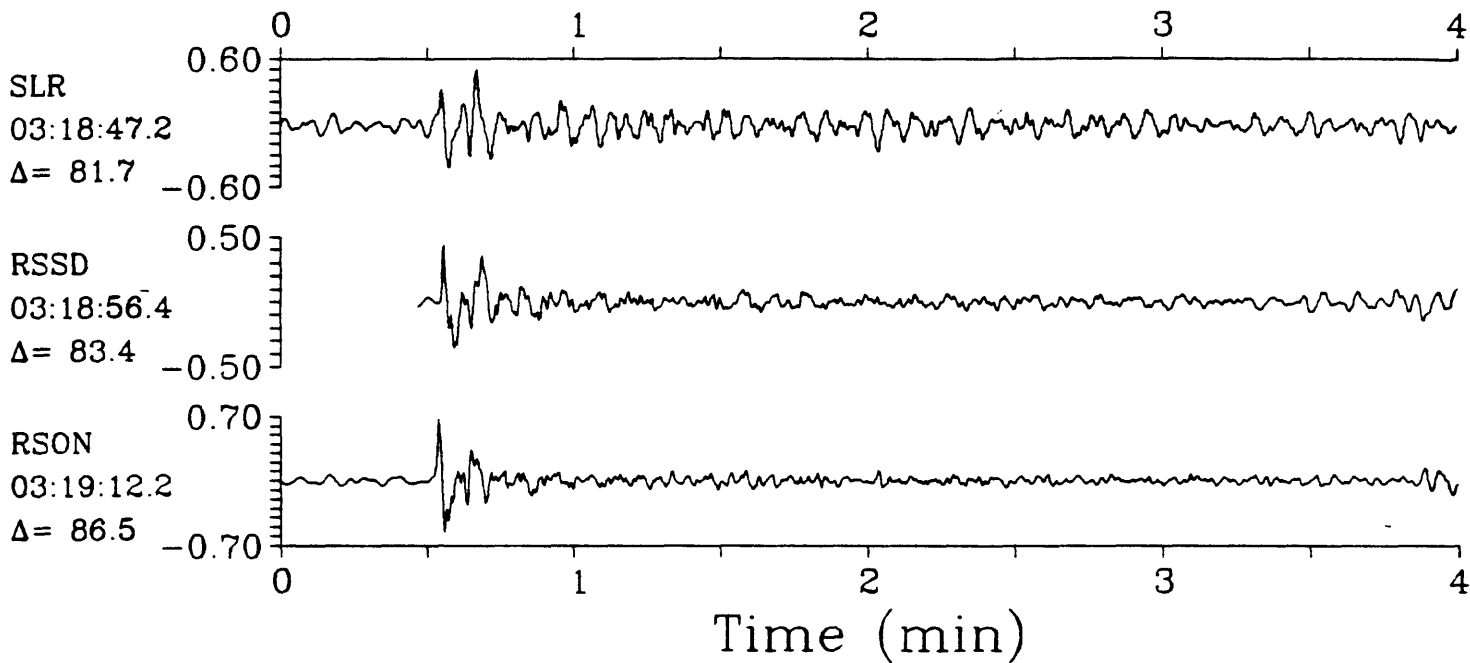
LPZ

Mendoza Province, Argentina $h=38.2$ $m_b=6.1$ $M_{sz}=5.8$ 

IPZ

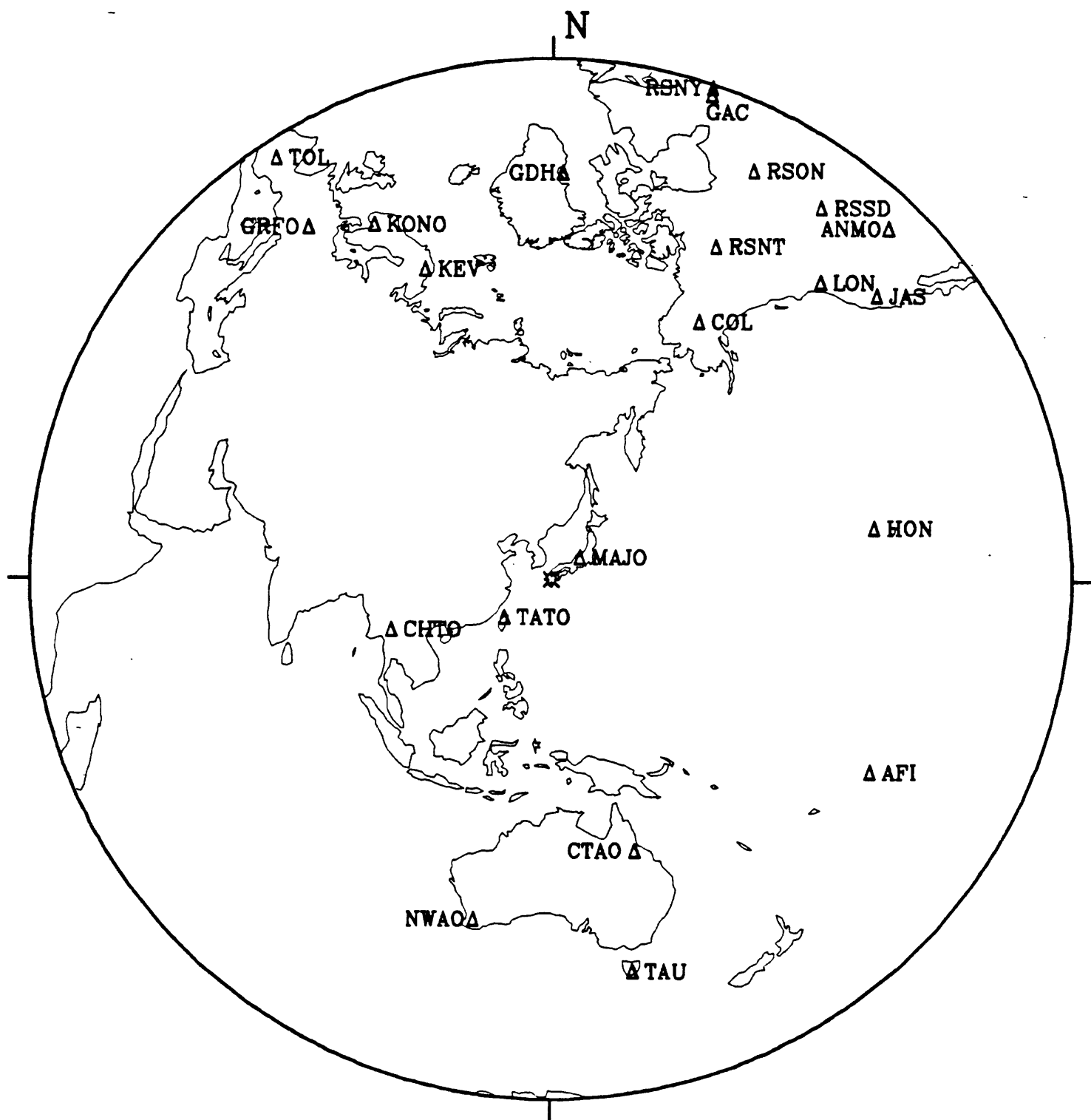
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IPZ

Mendoza Province, Argentina $h=38.2$ $m_b=6.1$ $M_{sz}=5.8$ 

26 January 1985 21:36:09.36

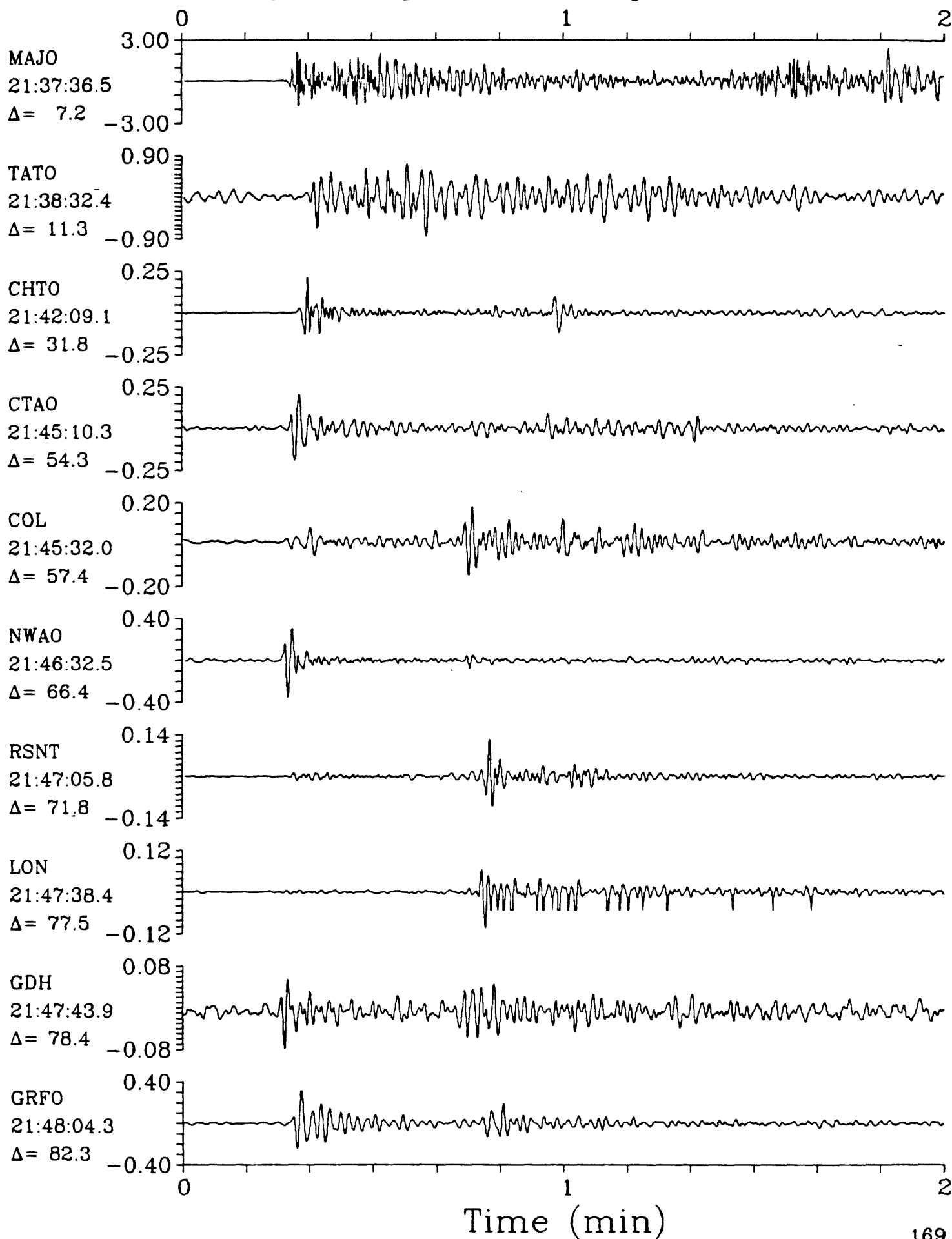
Kyushu, Japan



SPZ

26 January 1985 21:36:09.36
Kyushu, Japan $h=106.9$ $m_b=5.8$

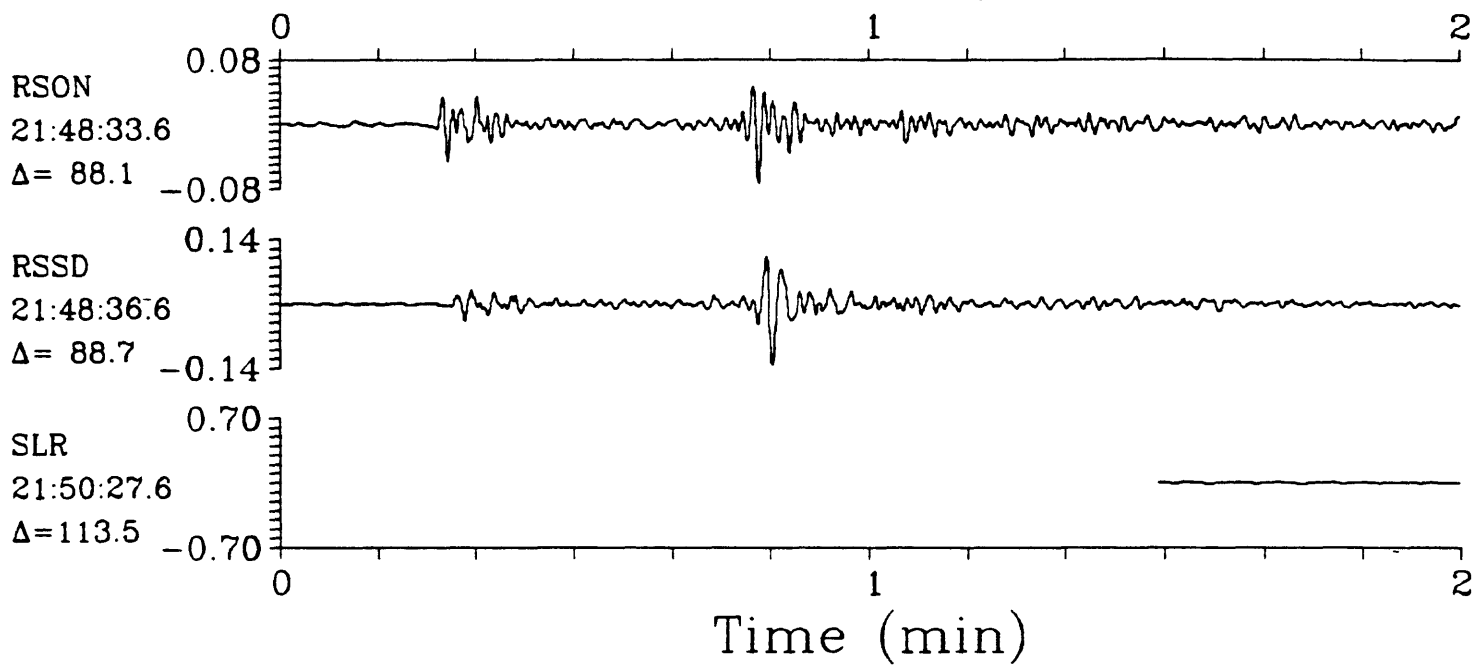
SPZ



SPZ

26 January 1985 21:36:09.36
Kyushu, Japan $h=106.9$ $m_b=5.8$

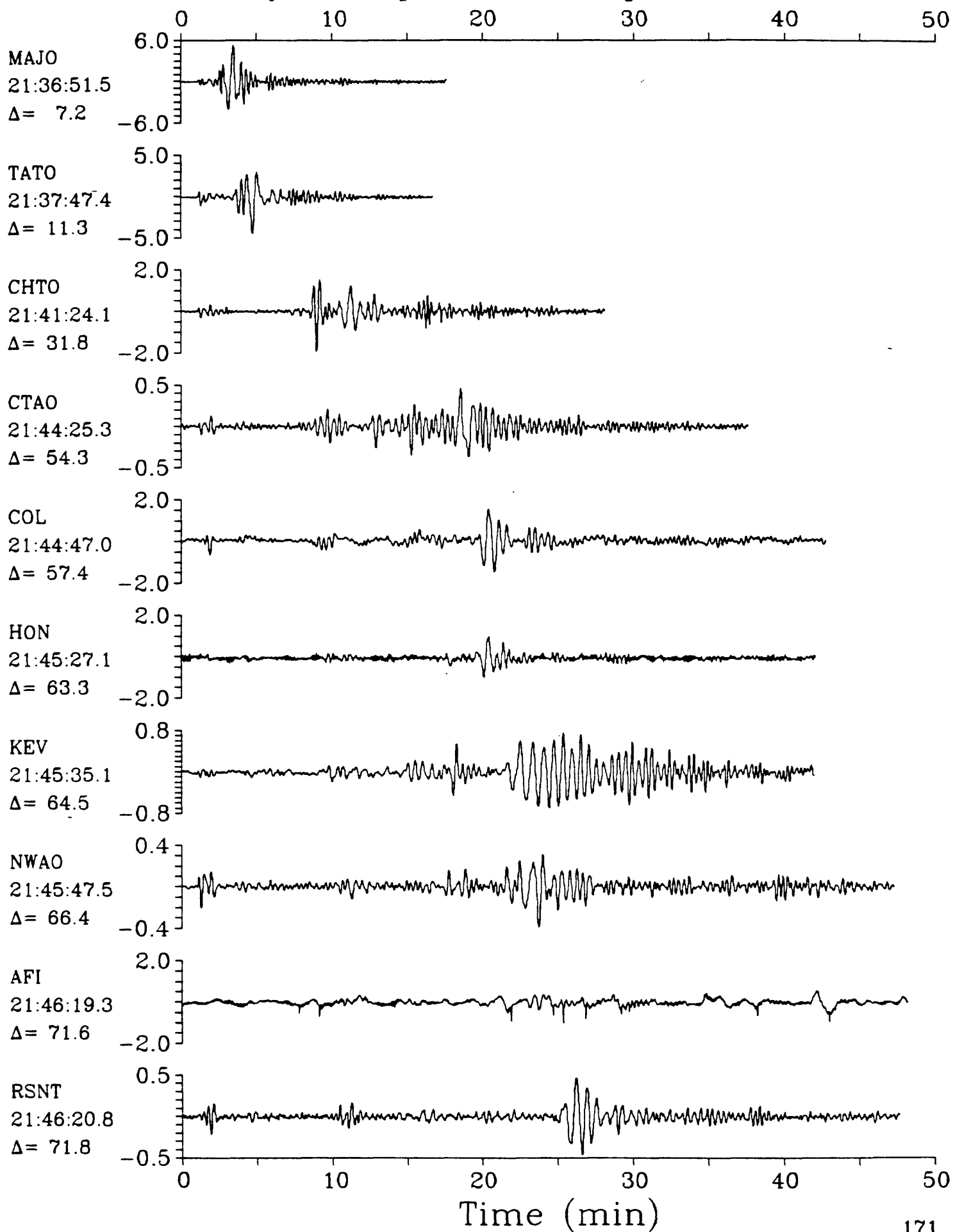
SPZ



LPZ

26 January 1985 21:36:09.36
Kyushu, Japan $h=106.9$ $m_b=5.8$

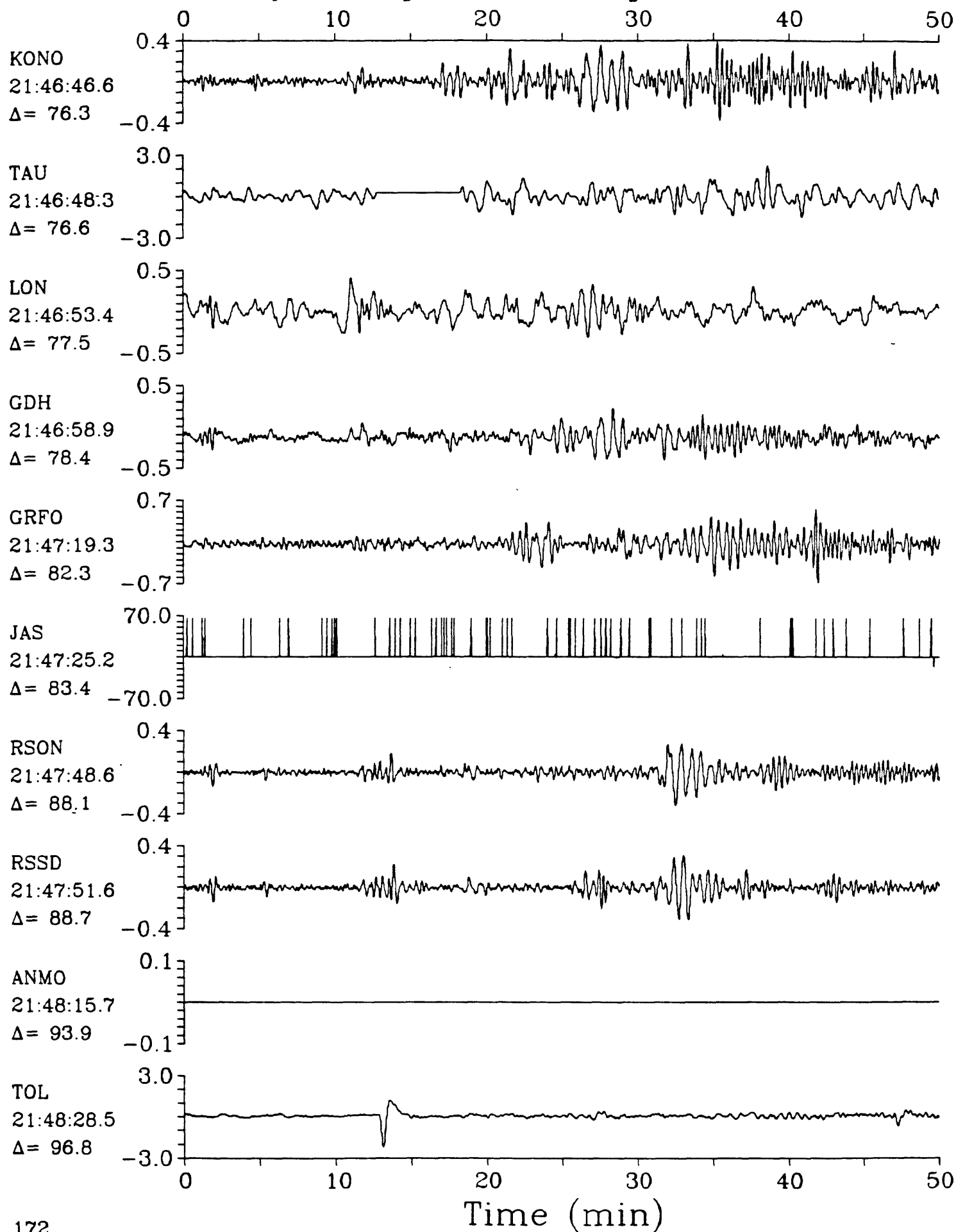
LPZ



LPZ

26 January 1985 21:36:09.36
Kyushu, Japan $h=106.9$ $m_b=5.8$

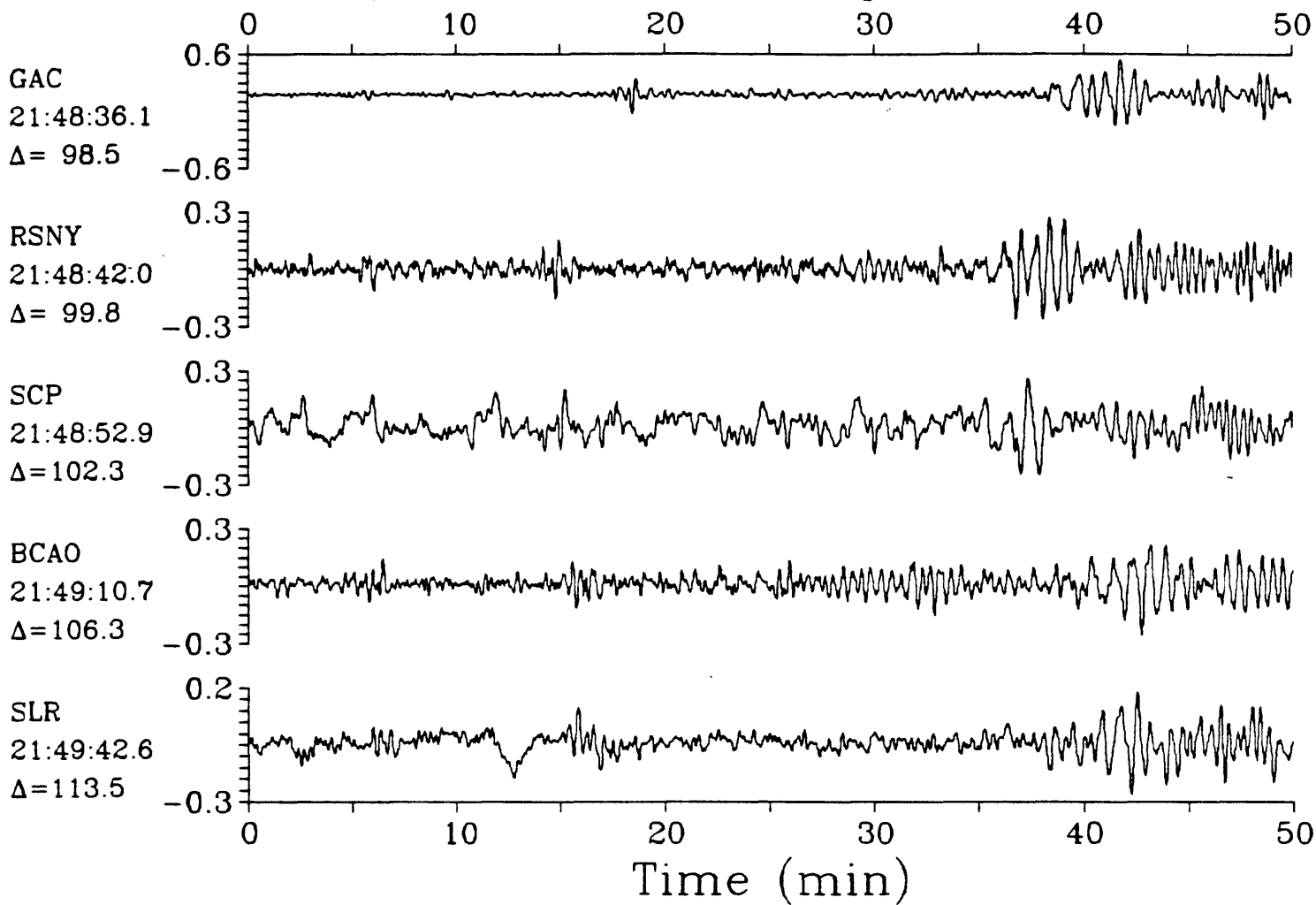
LPZ



LPZ

26 January 1985 21:36:09.36
Kyushu, Japan $h=106.9$ $m_b=5.8$

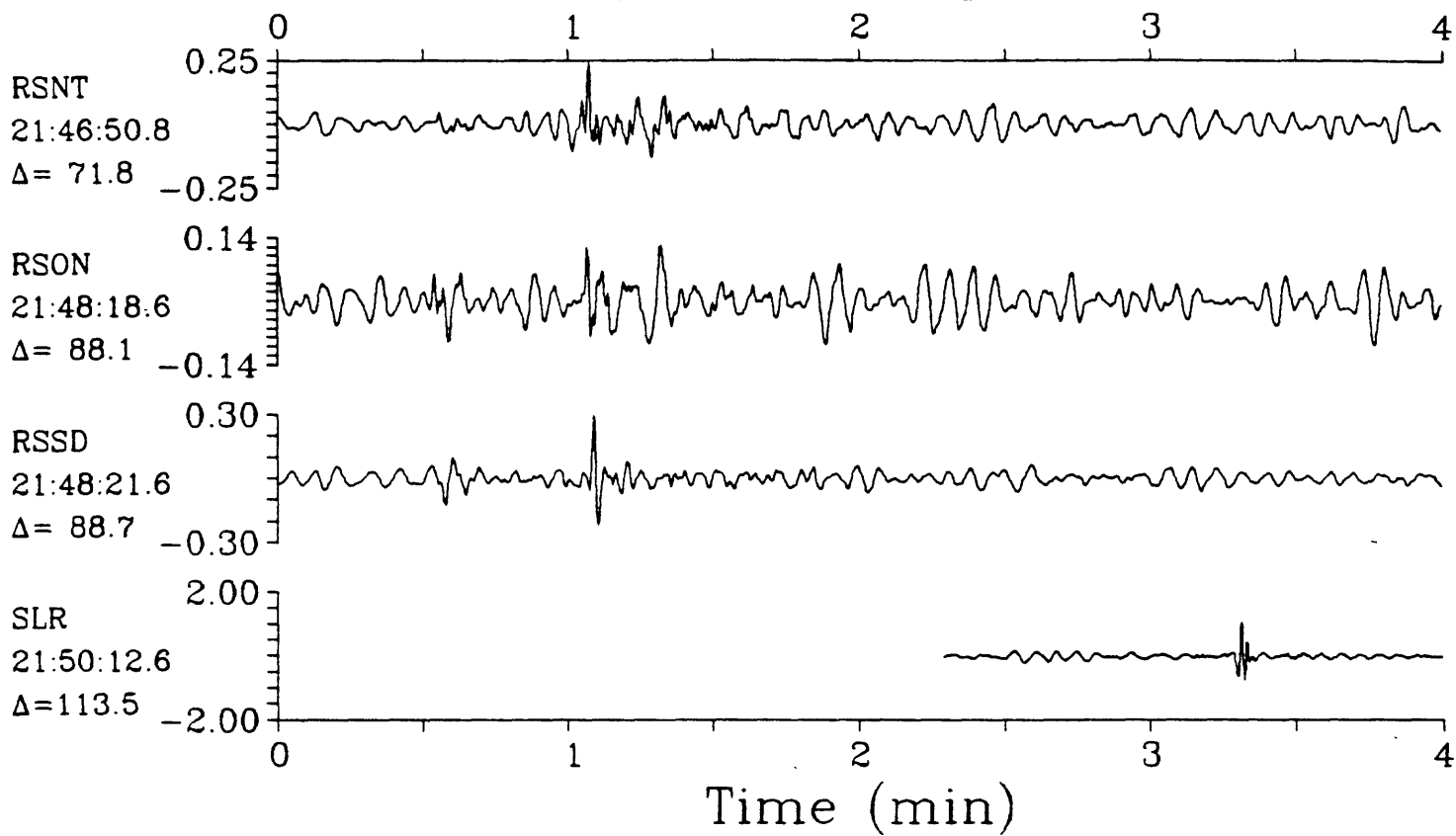
LPZ



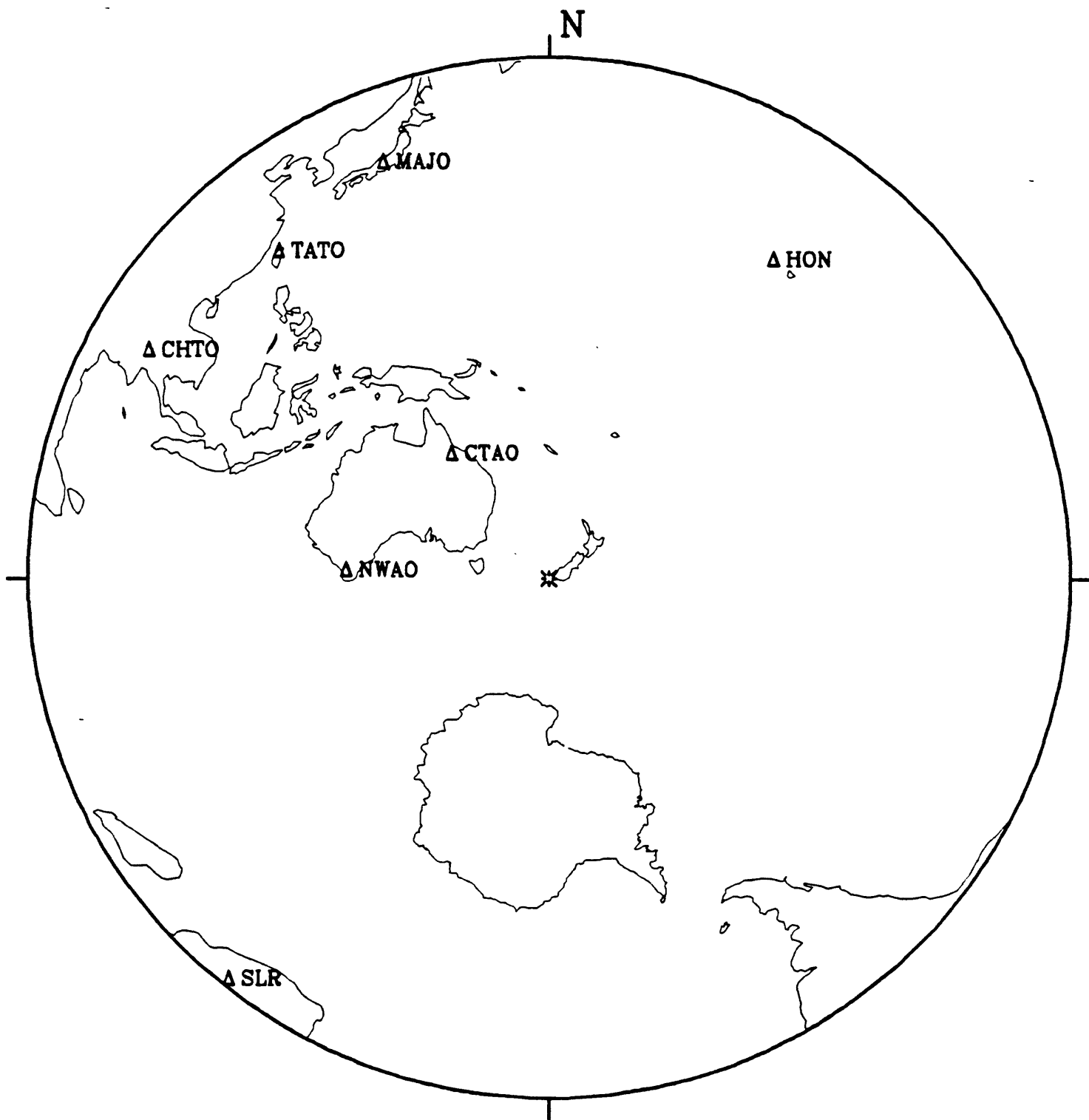
IPZ

26 January 1985 21:36:09.36
Kyushu, Japan $h=106.9$ $m_b=5.8$

IPZ



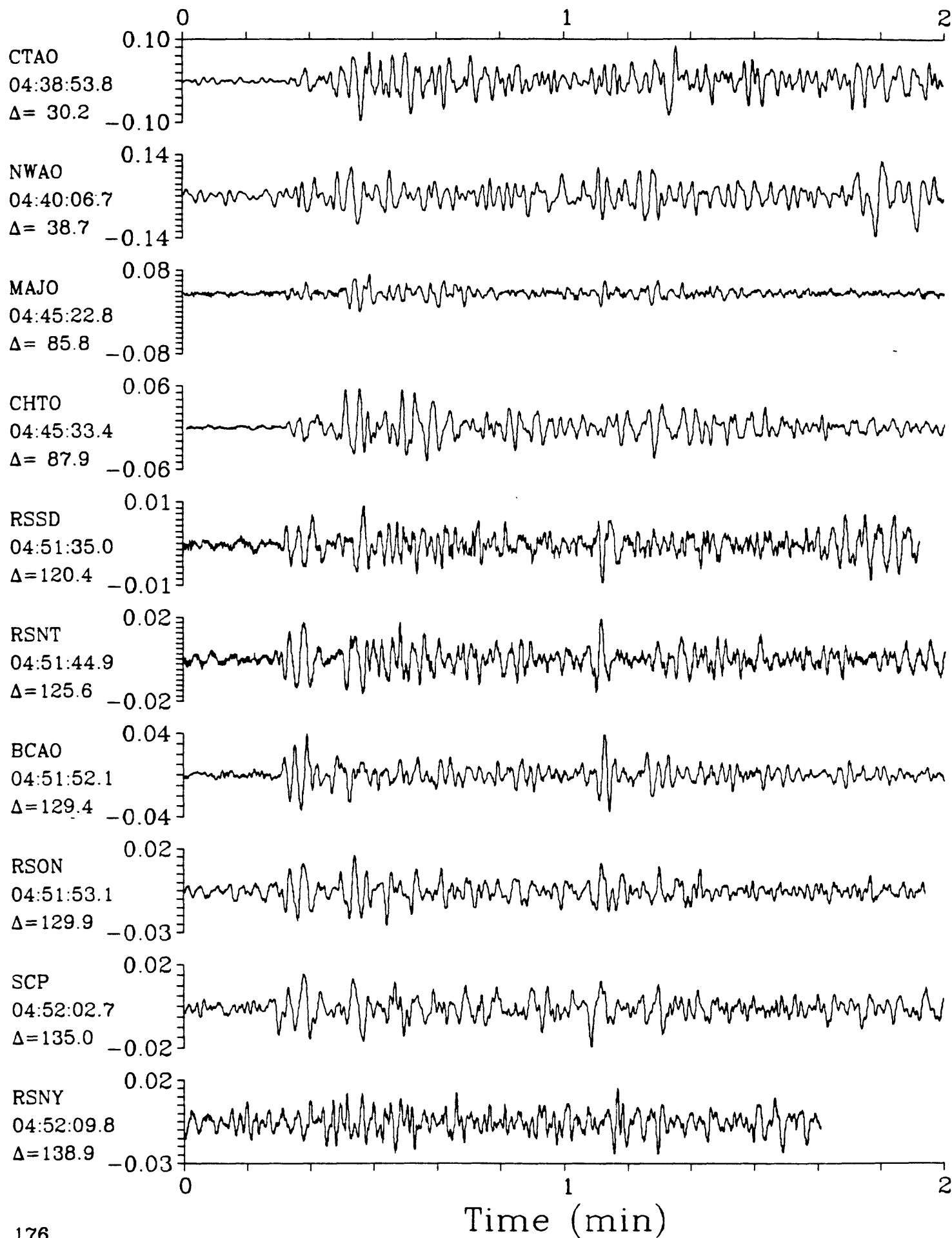
31 January 1985 04:32:57.68
Off W. Coast of S. Island, N.Z.



SPZ

31 January 1985 04:32:57.68

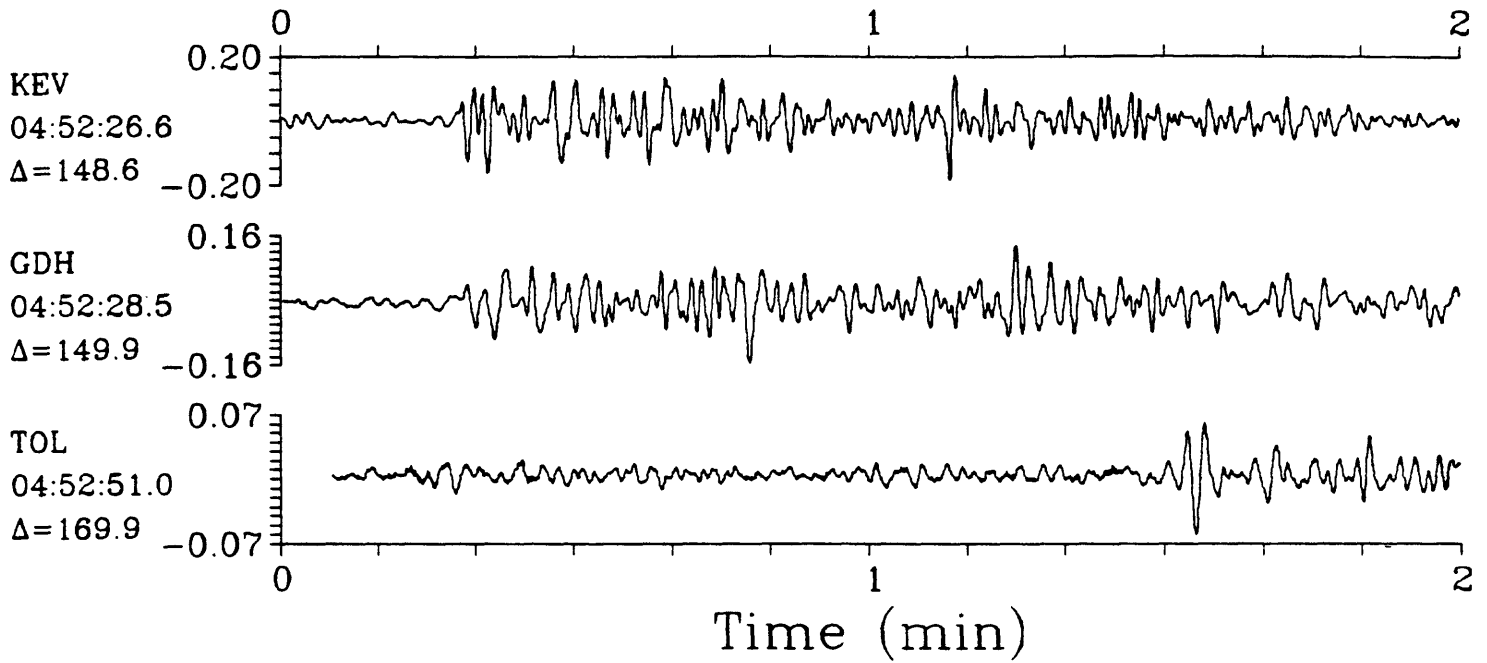
SPZ

Off W. Coast of S. Island, N.Z. $h=10.0$ $m_b=5.8$ $M_{sz}=6.1$ 

SPZ

31 January 1985 04:32:57.68

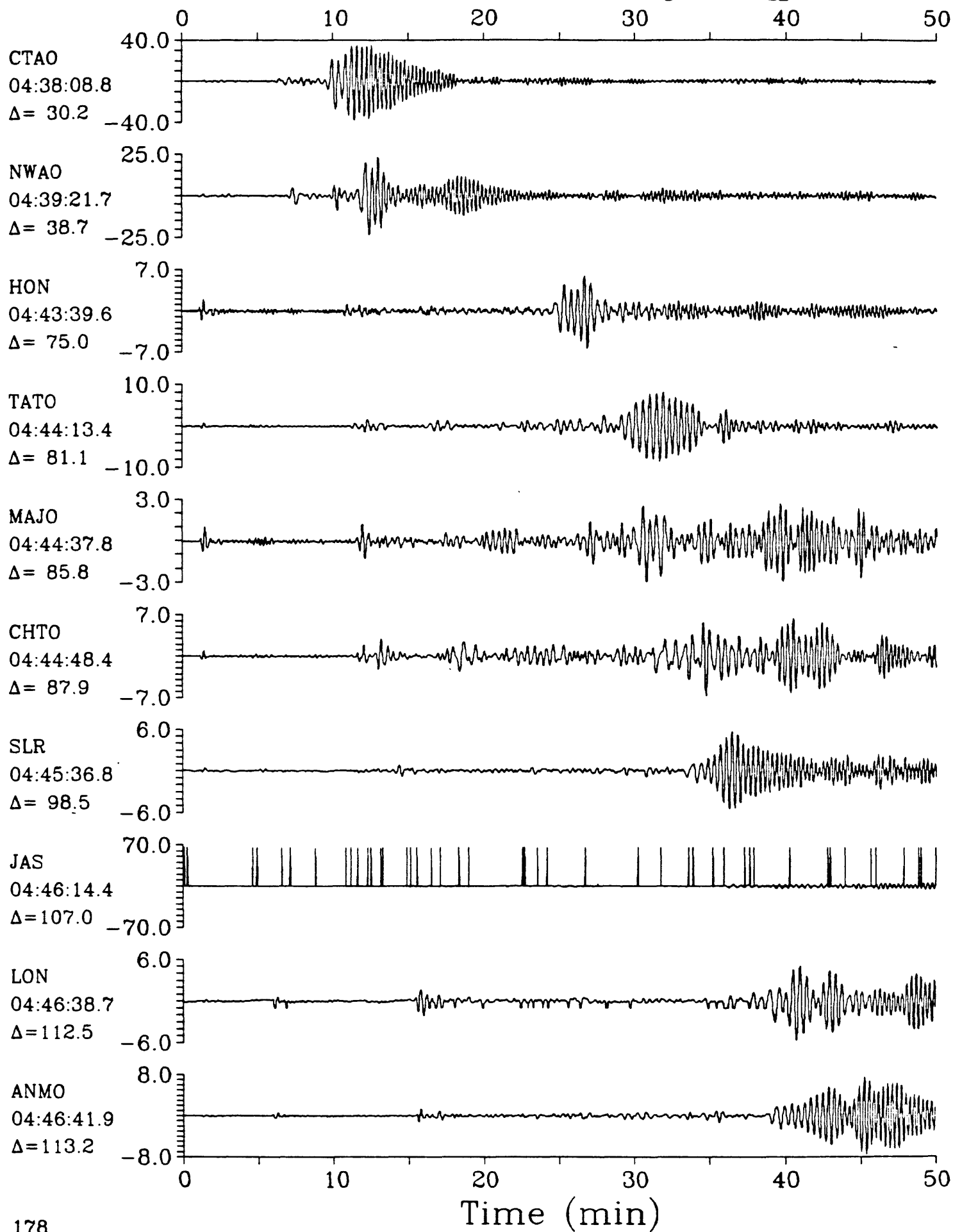
SPZ

Off W. Coast of S. Island, N.Z. $h=10.0$ $m_b=5.8$ $M_{sz}=6.1$ 

LPZ

31 January 1985 04:32:57.68

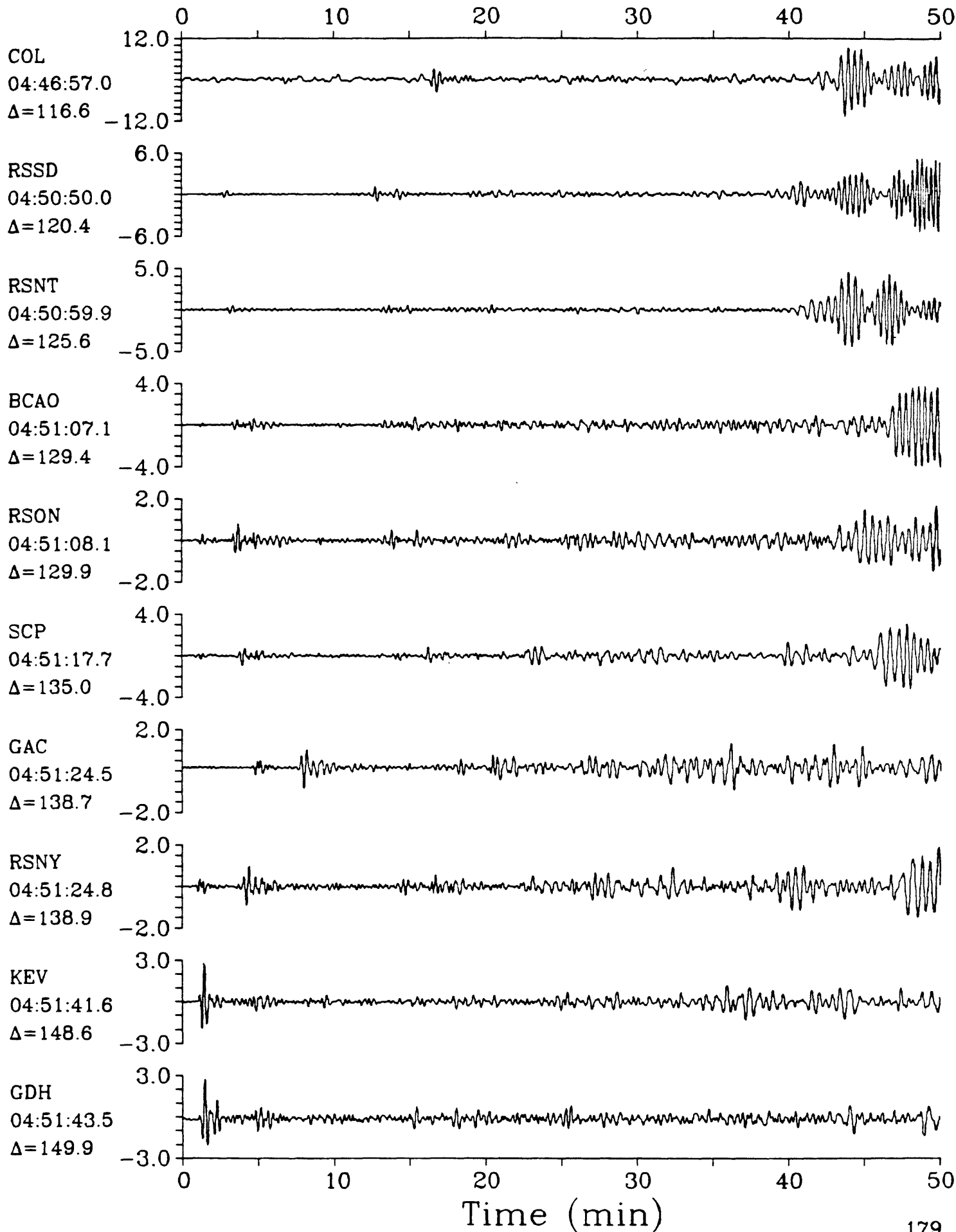
LPZ

Off W. Coast of S. Island, N.Z. $h=10.0$ $m_b=5.8$ $M_{sz}=6.1$ 

LPZ

31 January 1985 04:32:57.68

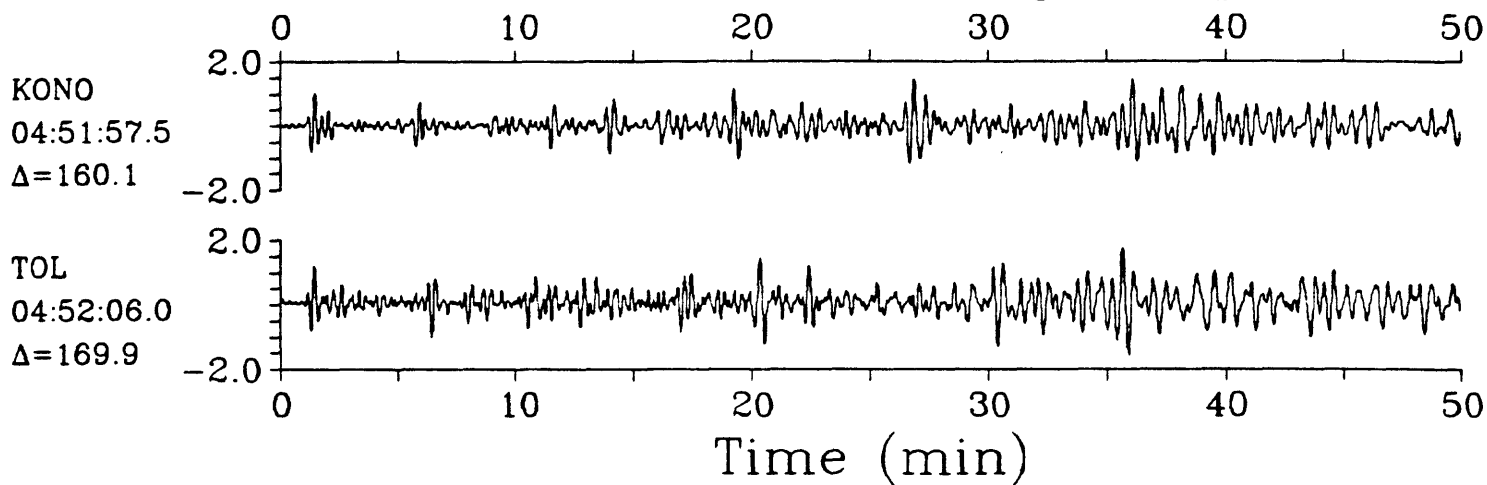
LPZ

Off W. Coast of S. Island, N.Z. $h=10.0$ $m_b=5.8$ $M_{sz}=6.1$ 

LPZ

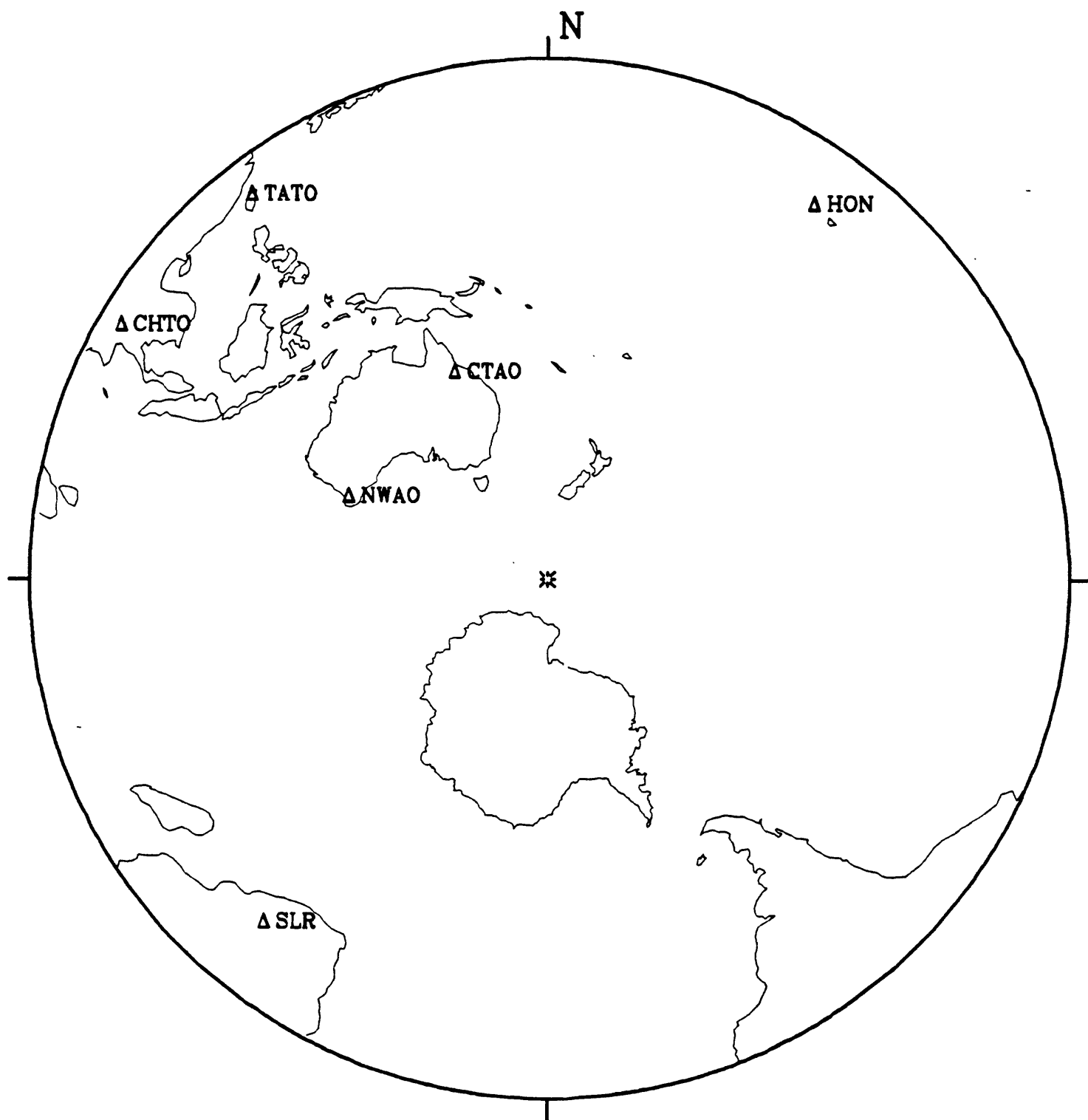
31 January 1985 04:32:57.68

LPZ

Off W. Coast of S. Island, N.Z. $h=10.0$ $m_b=5.8$ $M_{SZ}=6.1$ 

31 January 1985 06:35:09.41

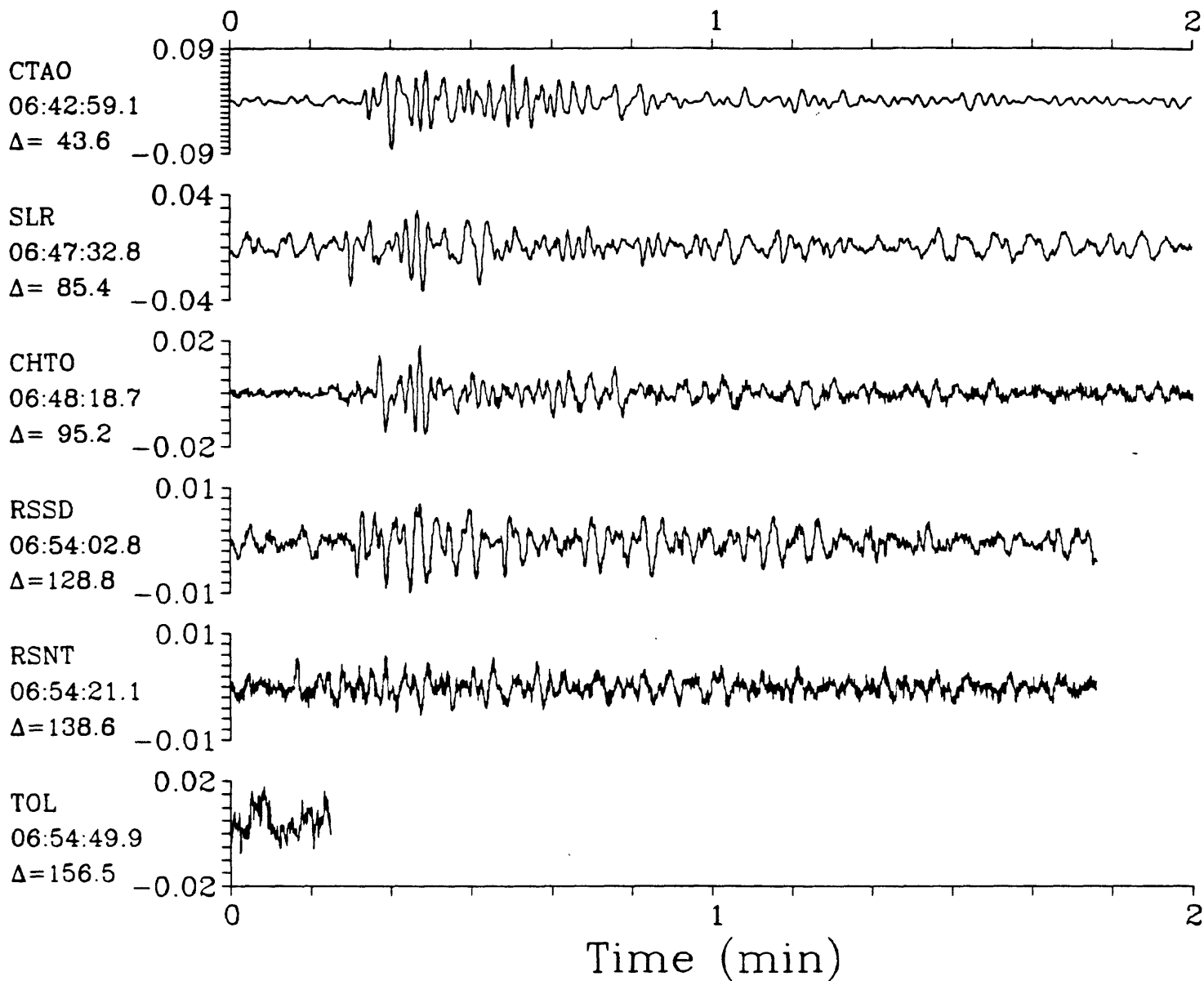
Balleny Islands Region



SPZ

31 January 1985 06:35:09.41

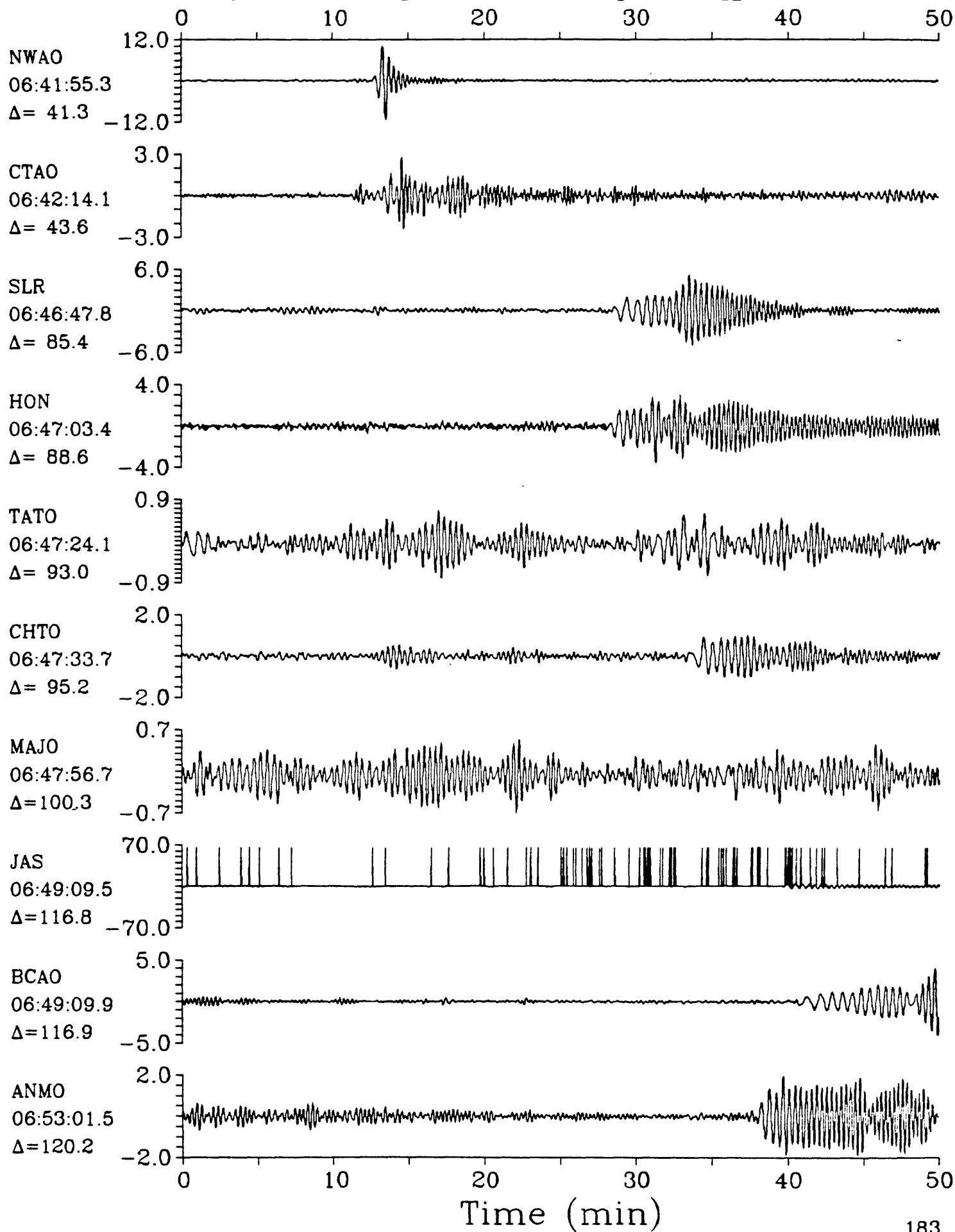
SPZ

Balleny Islands Region $h=10.0$ $m_b=5.5$ $M_{sz}=6.1$ 

LPZ

31 January 1985 06:35:09.41

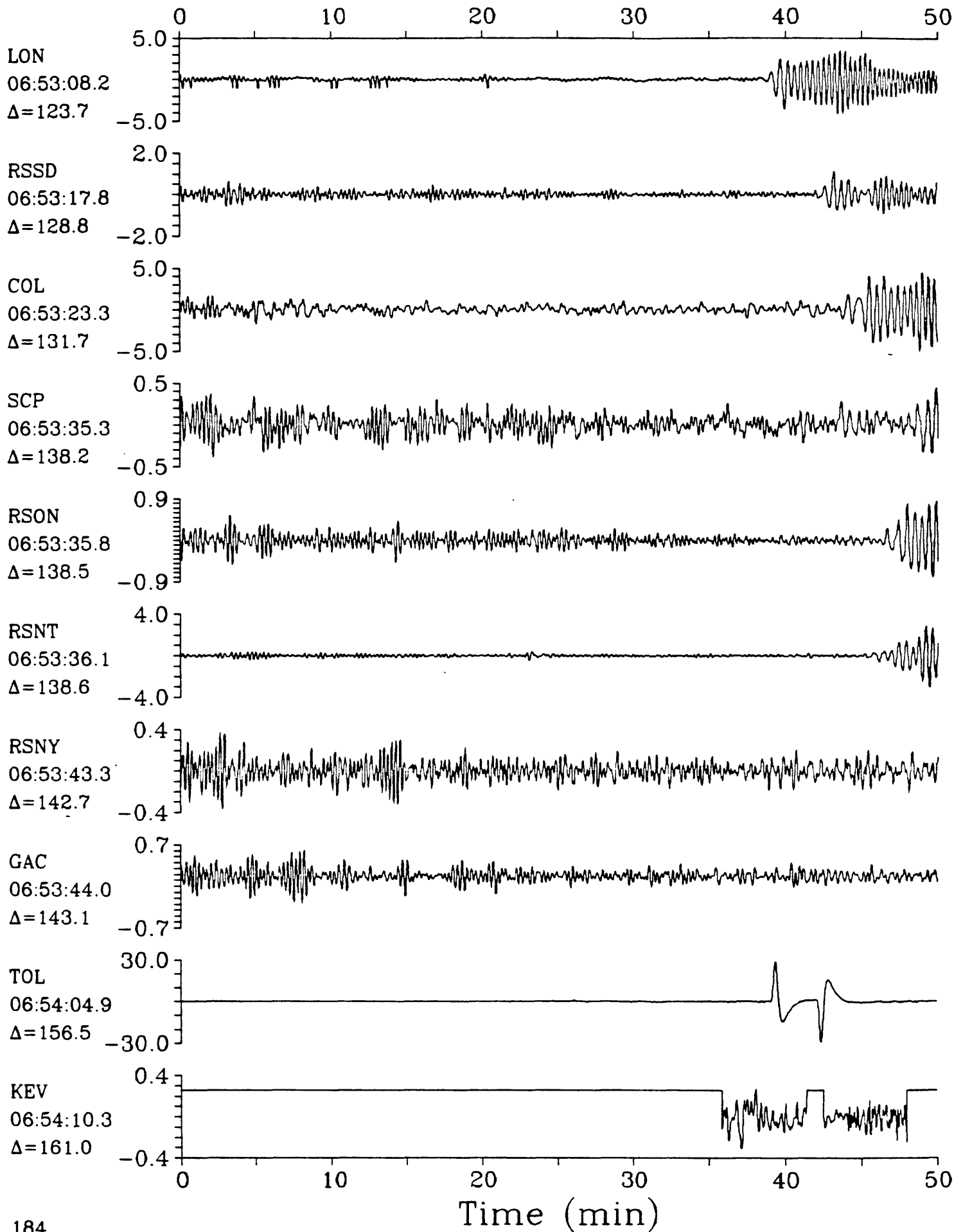
LPZ

Balleny Islands Region $h=10.0$ $m_b=5.5$ $M_{sz}=6.1$ 

LPZ

31 January 1985 06:35:09.41

LPZ

Balleny Islands Region $h=10.0$ $m_b=5.5$ $M_{sz}=6.1$ 

LPZ

31 January 1985 06:35:09.41

LPZ

Balleny Islands Region $h=10.0$ $m_b=5.5$ $M_{sz}=6.1$ 