

DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY

**National Earthquake Information Center  
Waveform Catalog  
February 1985**

by

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

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## Introduction

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

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

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

This report mainly consists of vertical component waveforms from all reporting stations, organized by event. The section for each event is prefaced by a station coverage map, in which stations and geography within  $100^\circ$  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,  $\Delta$ , in degrees. The start time is chosen to be about 15 seconds before the earliest theoretical arrival time of interest (P, Pdiff, or PKP<sub>df</sub>, 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 February 1985 with magnitudes  $\geq 5.5$

	Origin Time UTC	Latitude	Longitude	Depth (km)	$m_b$	Magnitude $M_{SZ}$	Flinn-Engdahl Region Name
1.	1985 02 01 00:47:16.39	17.619° S	174.486° W	117.6	5.6		Tonga Islands
2.	1985 02 02 11:06:47.93	43.834° N	147.693° E	48.4	5.6	5.2	Kuril Islands
3.	1985 02 03 04:50:52.64	20.465° S	174.205° W	33.9	6.0	5.8	Tonga Islands
4.	1985 02 04 23:16:18.76	2.006° S	139.141° E	14.3	5.7		Near N. Coast of West Iran
5.	1985 02 06 13:29:52.23	43.863° N	149.318° E	64.2	5.5		Kuril Islands Region
6.	1985 02 09 20:33:28.40	23.060° S	175.420° W	33.0	5.2	5.5	Tonga Islands Region
7.	1985 02 10 03:27:07.52	49.869° N	78.818° E	0.0	5.9	4.4	Eastern Kazakh SSR
8.	1985 02 11 07:39:33.06	4.670° N	32.619° W	10.0	5.6	5.2	Central Mid-Atlantic Ridge
9.	1985 02 14 08:30:55.62	23.849° S	67.751° W	122.9	5.6		Chile-Argentina Border Region
10.	1985 02 16 16:28:12.12	39.968° N	142.693° E	40.8	5.2	5.6	Near East Coast of Honshu, Japan
11.	1985 02 17 02:59:58.43	23.576° S	175.255° W	43.5	5.0	5.6	Tonga Islands Region
12.	1985 02 17 21:36:51.78	4.735° S	134.141° E	33.0	5.1	5.5	West Irian Region
13.	1985 02 18 19:41:04.60	23.354° N	123.279° E	43.7	5.7	5.6	Southwestern Ryukyu Islands
14.	1985 02 19 13:53:19.86	61.072° S	23.661° W	33.0	5.5		South Sandwich Islands Region
15.	1985 02 21 18:53:08.54	33.282° S	71.715° W	33.0	4.7	5.5	Near Coast of Central Chile
16.	1985 02 22 09:33:38.14	55.670° S	26.401° W	33.0	5.7	5.3	South Sandwich Islands Region
17.	1985 02 22 15:48:02.04	7.329° S	128.506° E	165.9	5.6		Banda Sea
18.	1985 02 23 13:42:00.63	10.149° S	160.961° E	129.8	6.0		Solomon Islands
19.	1985 02 23 14:45:35.76	6.982° S	30.916° E	10.0	5.7		Lake Tanganyika Region
20.	1985 02 24 02:26:54.95	2.058° S	119.801° E	37.5	5.4	5.5	Sulawesi
21.	1985 02 25 08:34:11.26	0.057° N	123.428° E	168.2	5.5		Minahassa Peninsula
22.	1985 02 25 11:12:40.89	9.897° S	154.099° E	33.0	5.9	5.1	Dentrecasteaux Islands Region
23.	1985 02 28 11:10:22.03	19.178° S	168.668° E	92.3	5.5		Vanuatu Islands
24.	1985 02 28 20:53:47.19	27.462° N	128.495° E	54.9	5.9		Ryukyu Islands

**Table 2.** Current network-event tape station list

<b>Code</b>	<b>ID</b>	<b>Station</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (m)</b>	<b>Type*</b>
AFI	69	Afamalu, 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
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
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
ZOBO	51	La Paz (Zongo), Bolivia	16.27° S	68.13° W	4450.0	ASRO

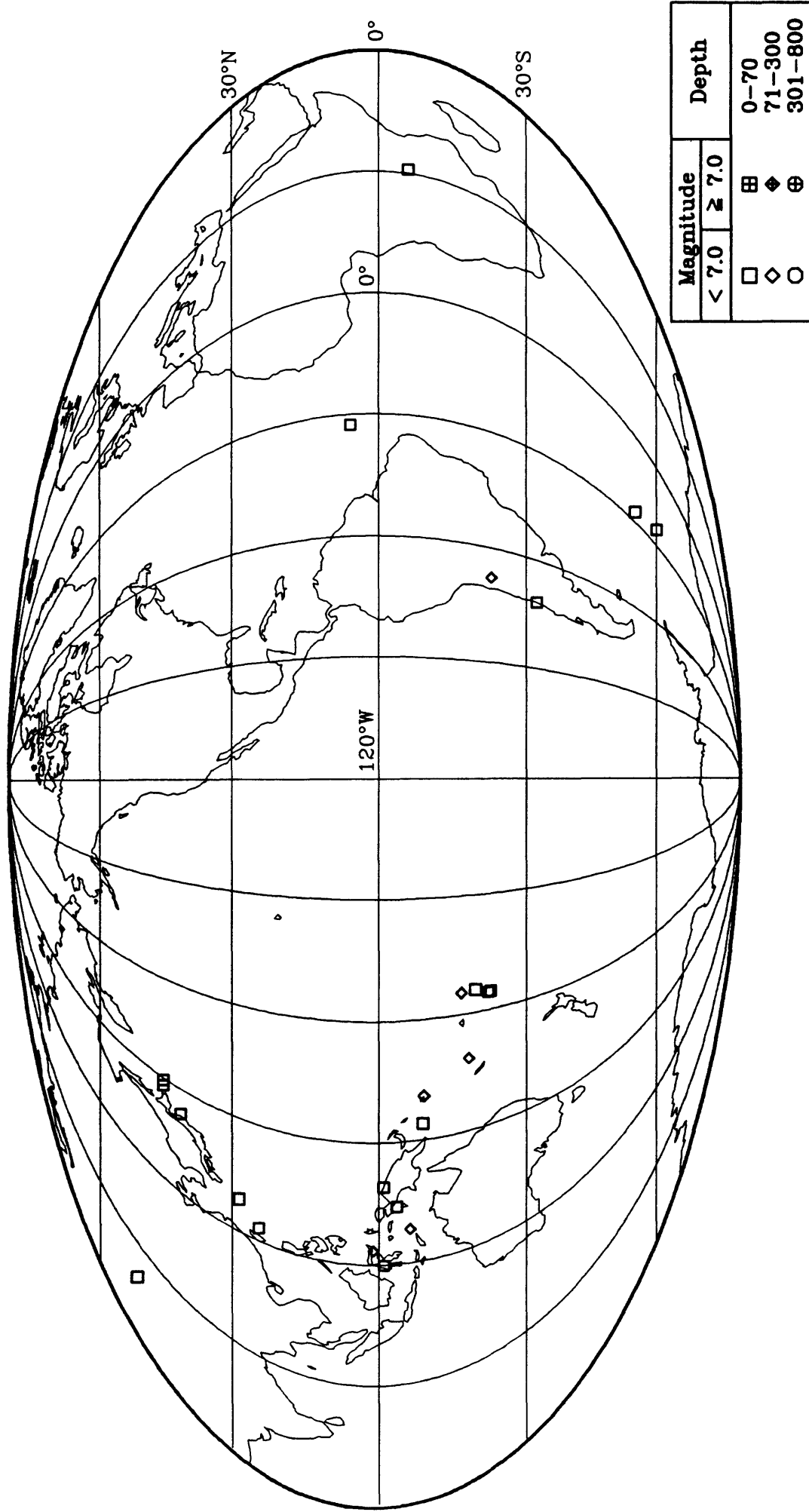
\* SRO - Seismic Research Observatory

ASRO - Abbreviated Seismic Research Observatory

DWWSSN - Digital World Wide Standardized Seismograph Network

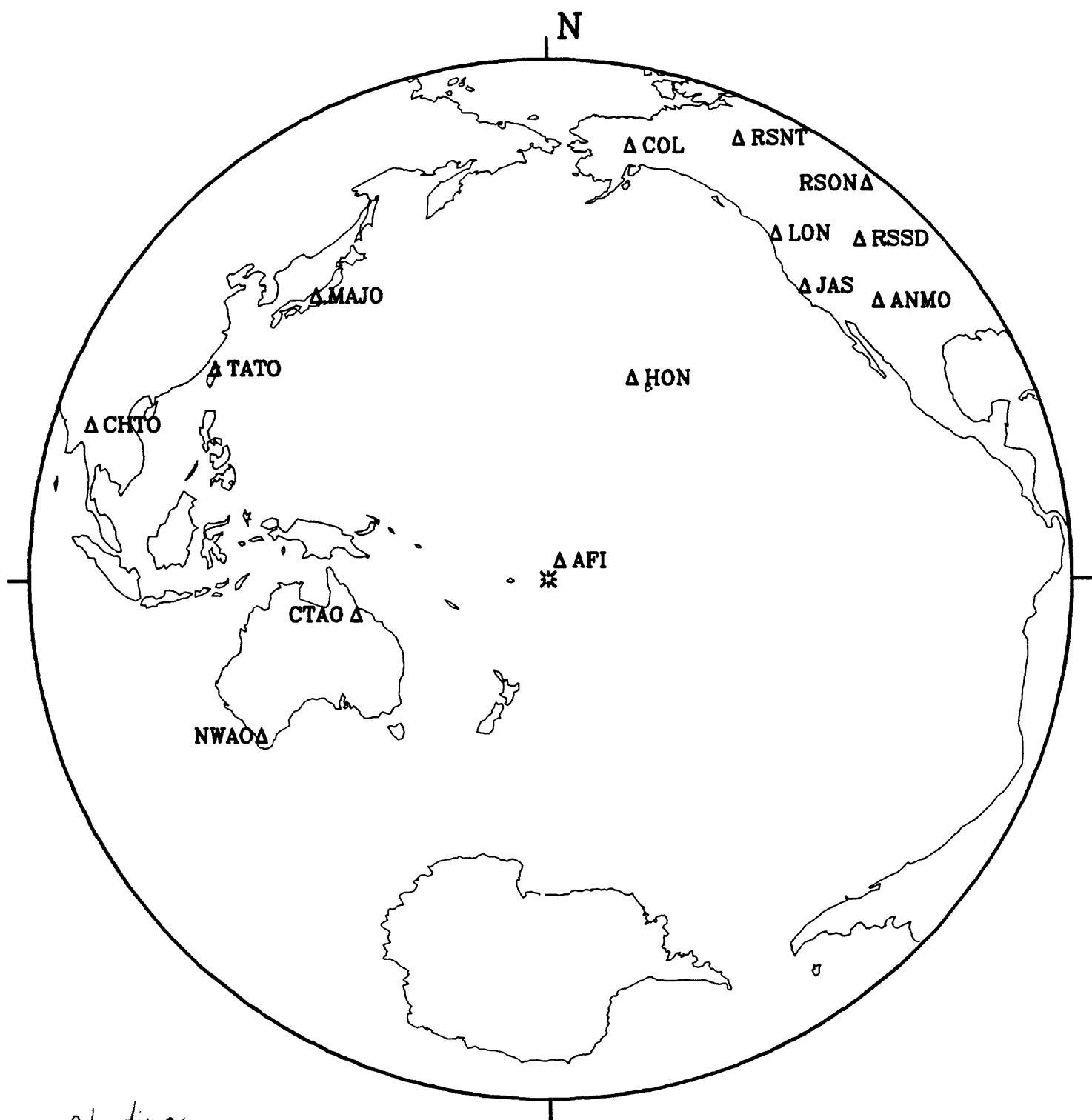
RSTN - Regional Seismic Test Network

# EARTHQUAKES – February 1985 – MAGNITUDE $\geq 5.5$



01 February 1985 00:47:16.39

## Tonga Islands



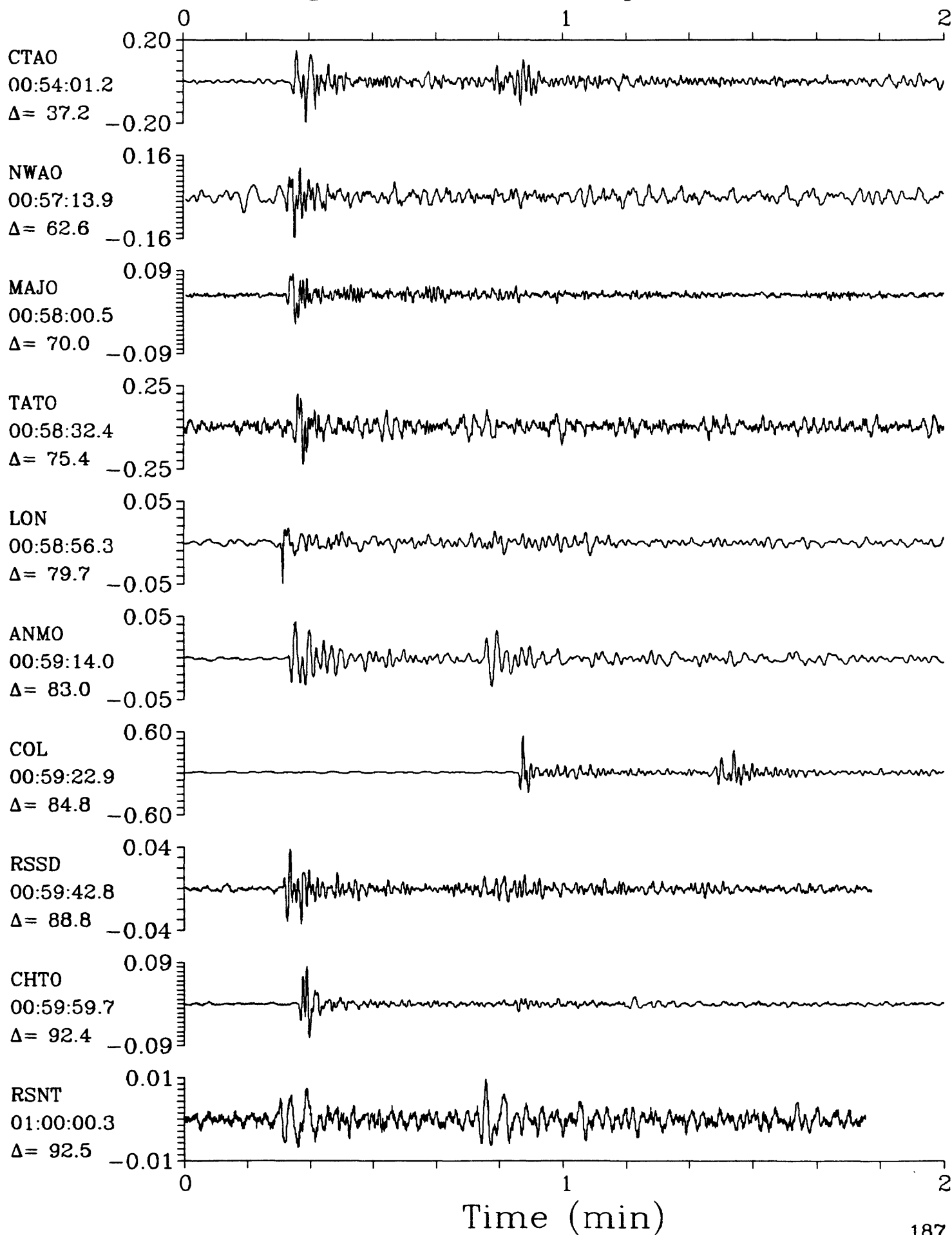
*Starting*



SPZ

01 February 1985 00:47:16.39  
Tonga Islands  $h=117.6$   $m_b=5.6$ 

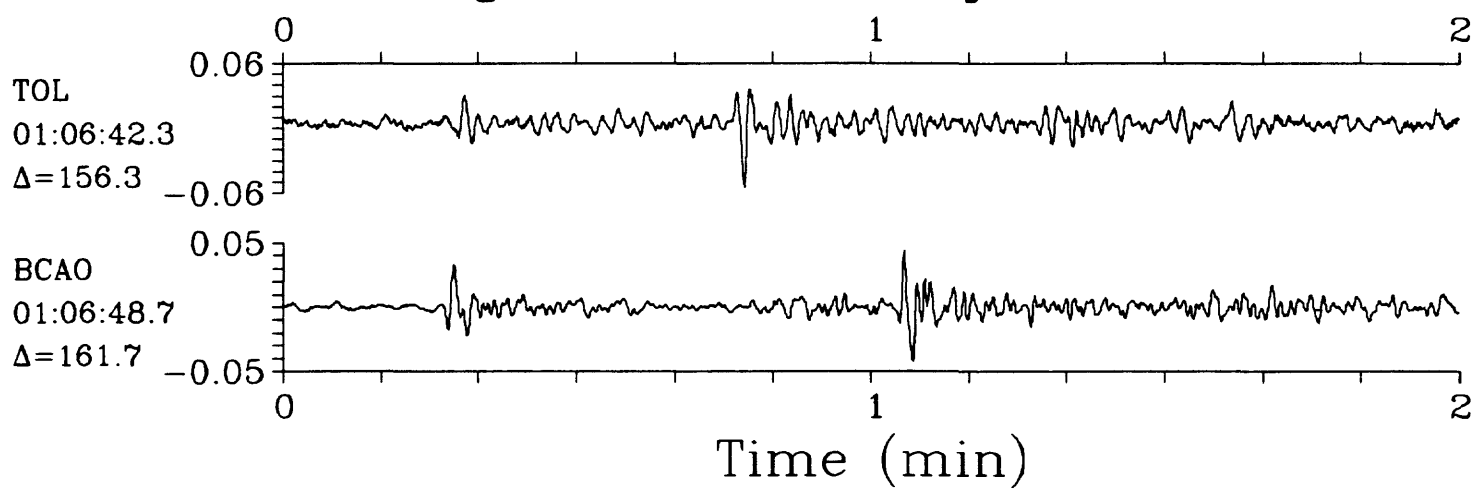
SPZ



SPZ

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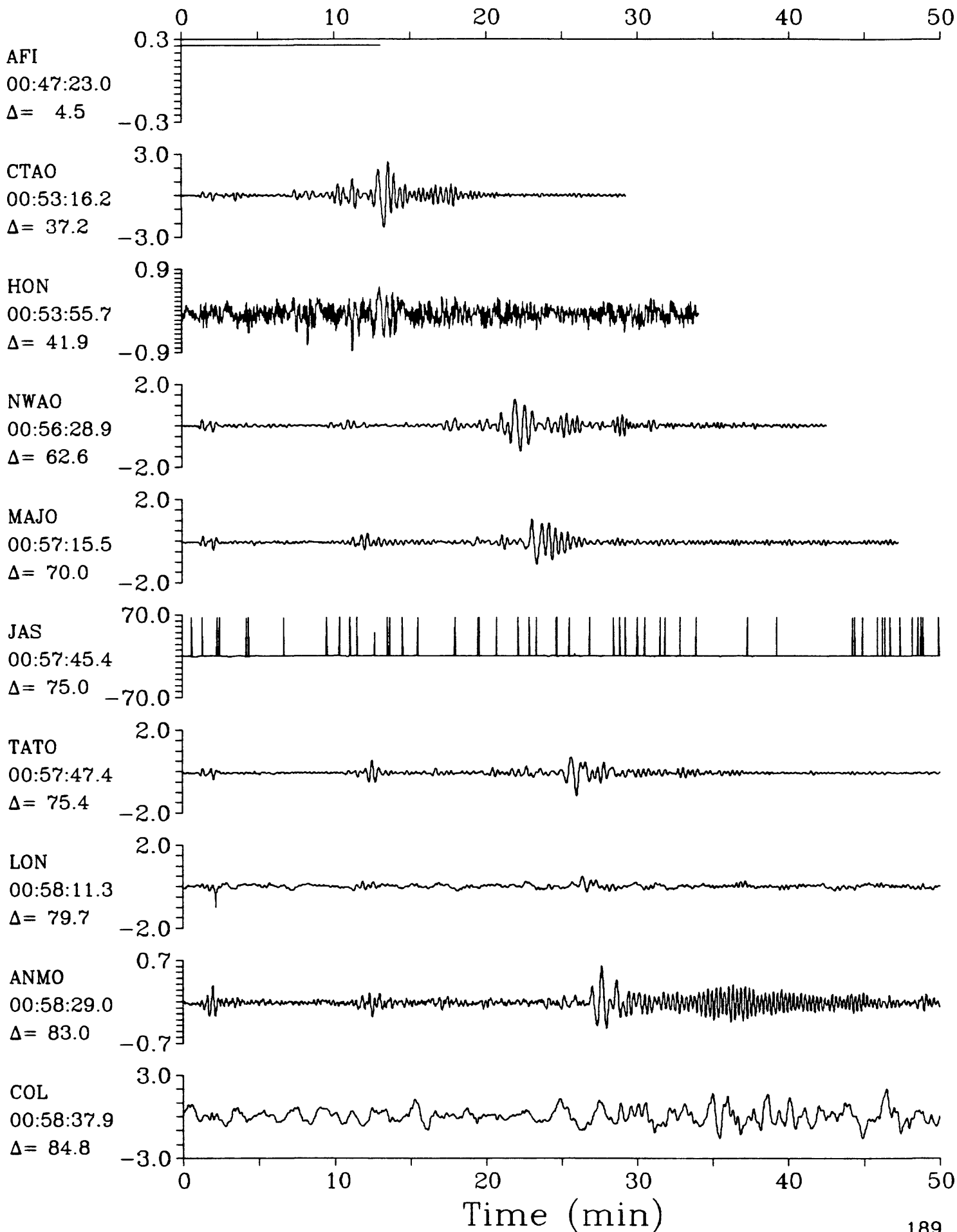
SPZ



LPZ

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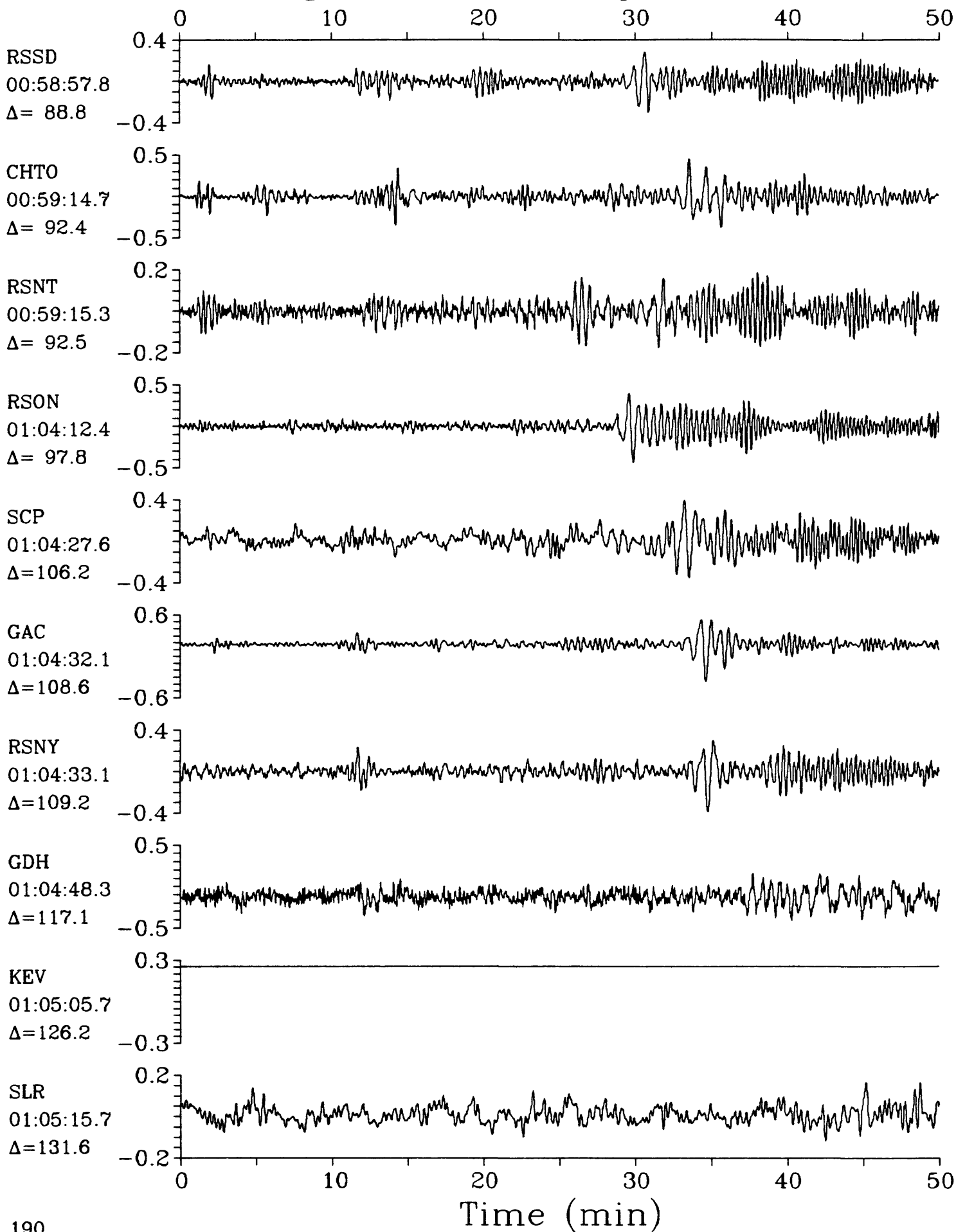
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LPZ

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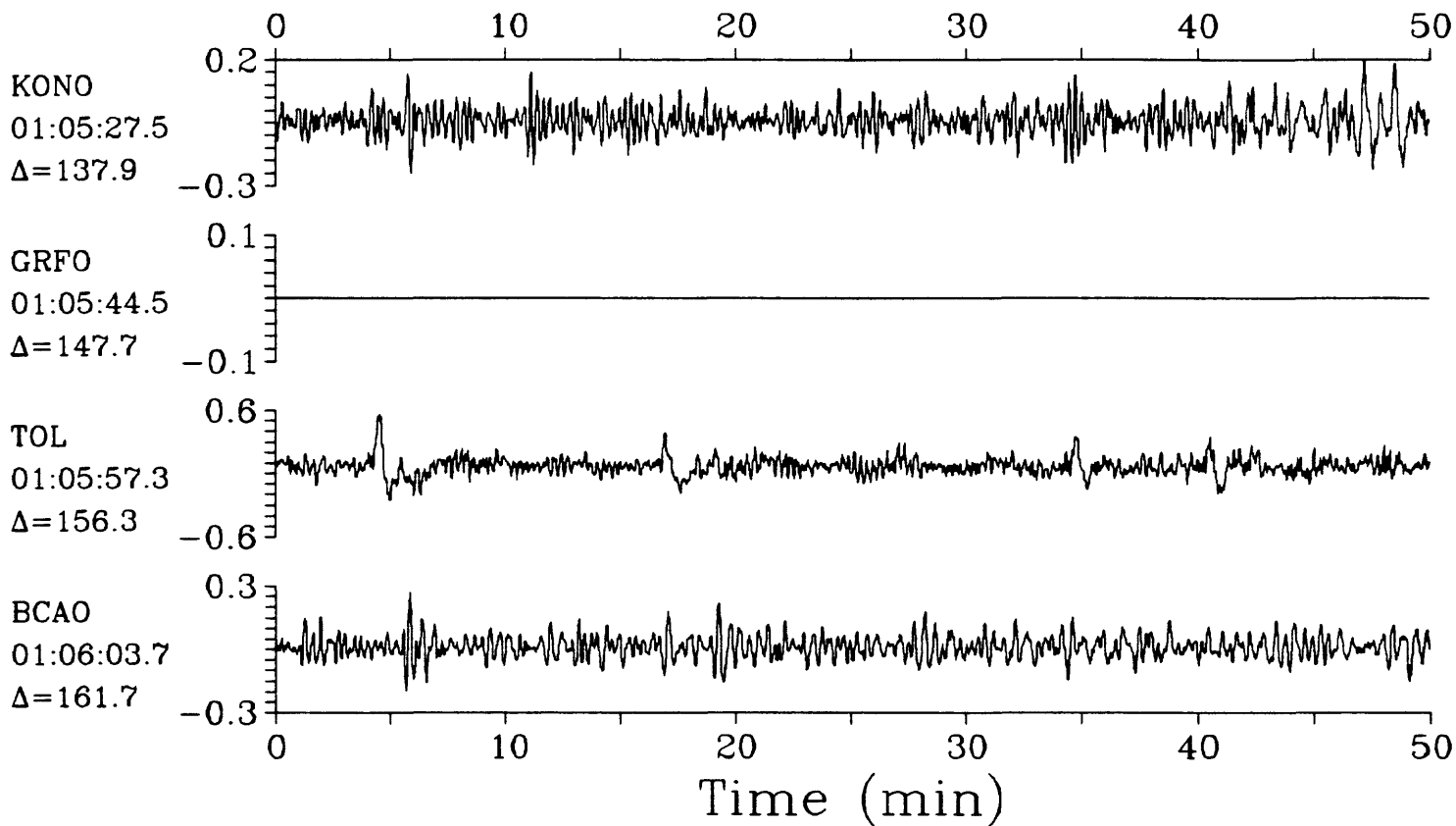
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LPZ

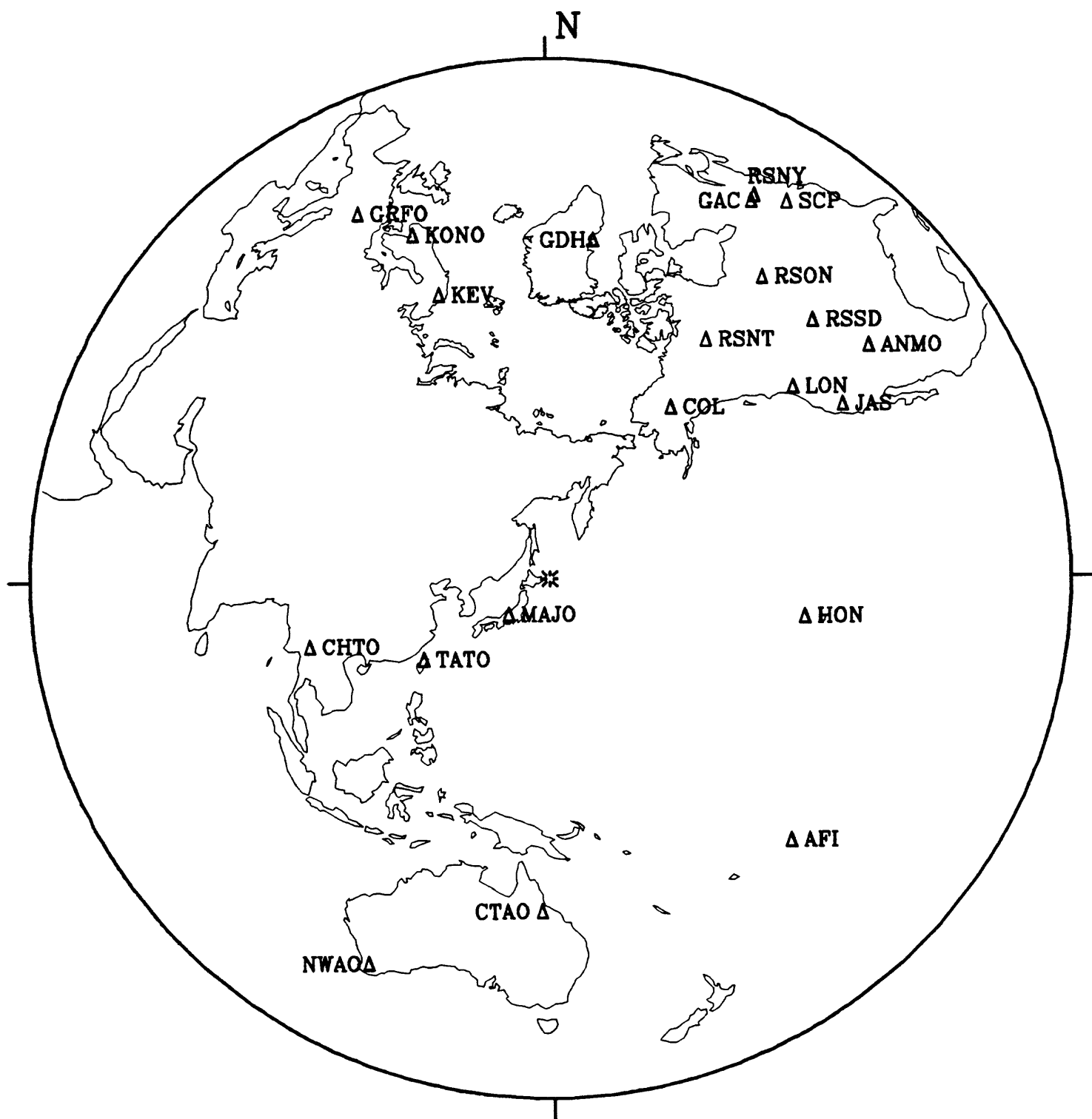
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LPZ



02 February 1985 11:06:47.93

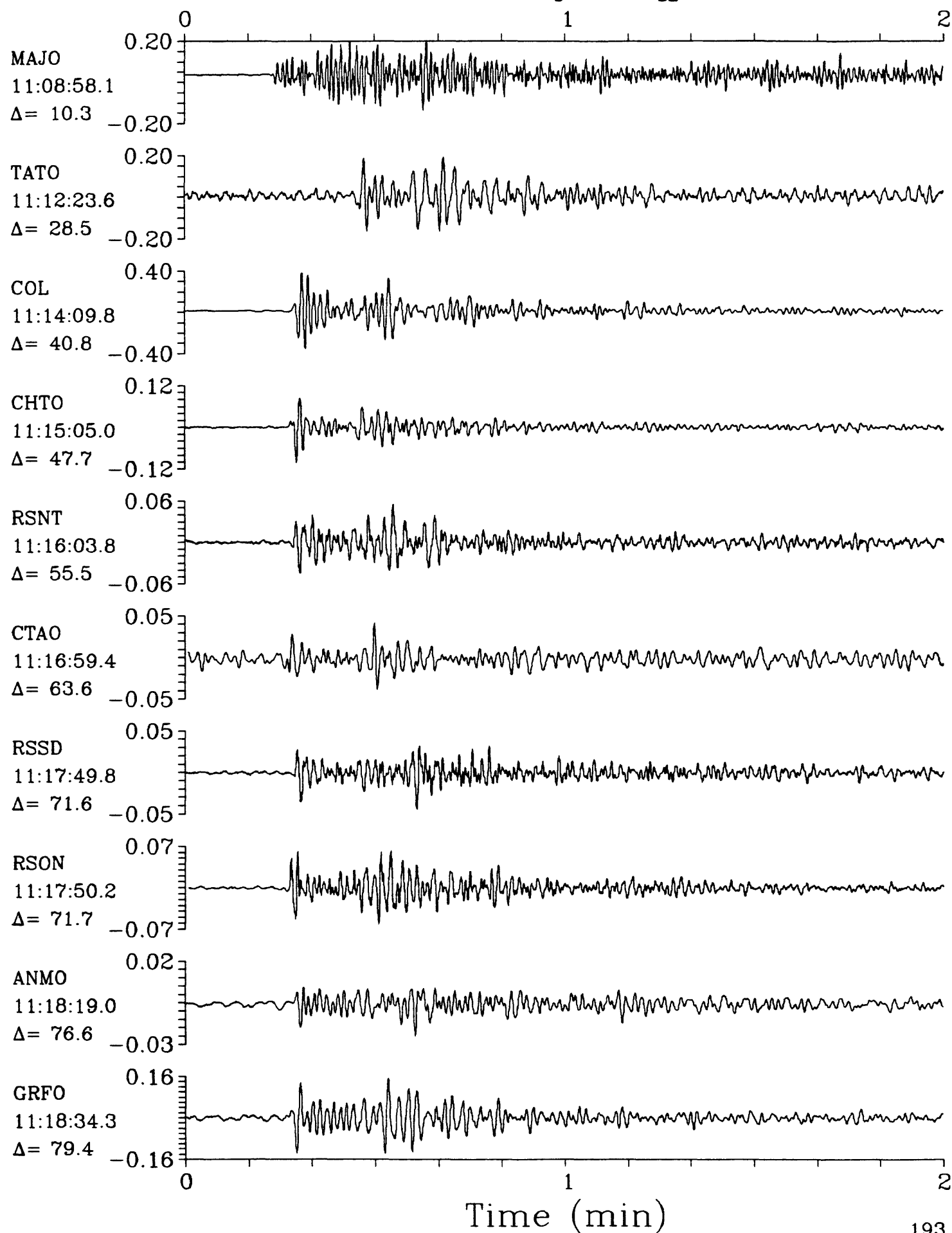
## Kuril Islands



SPZ

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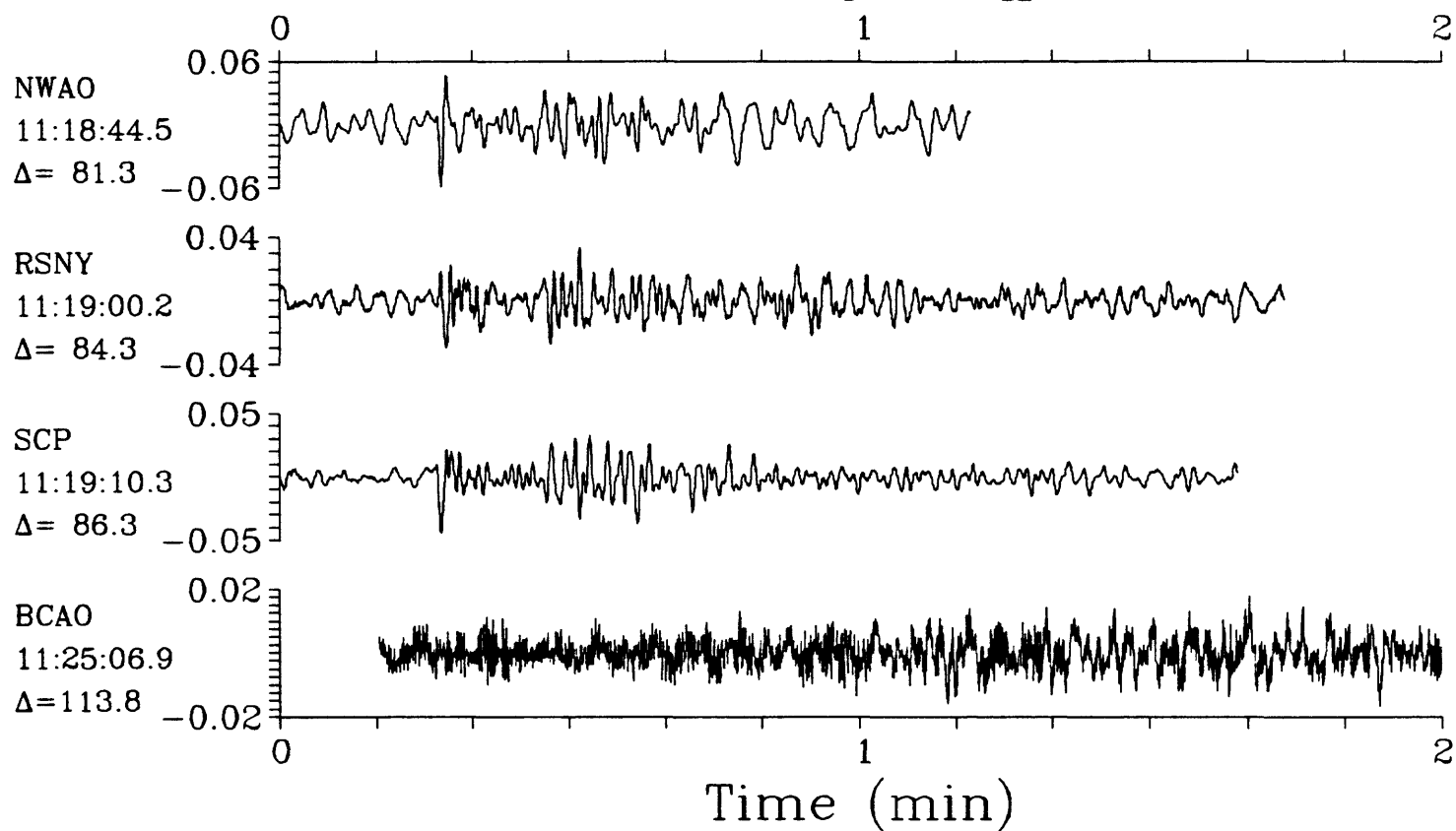
SPZ



SPZ

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SPZ

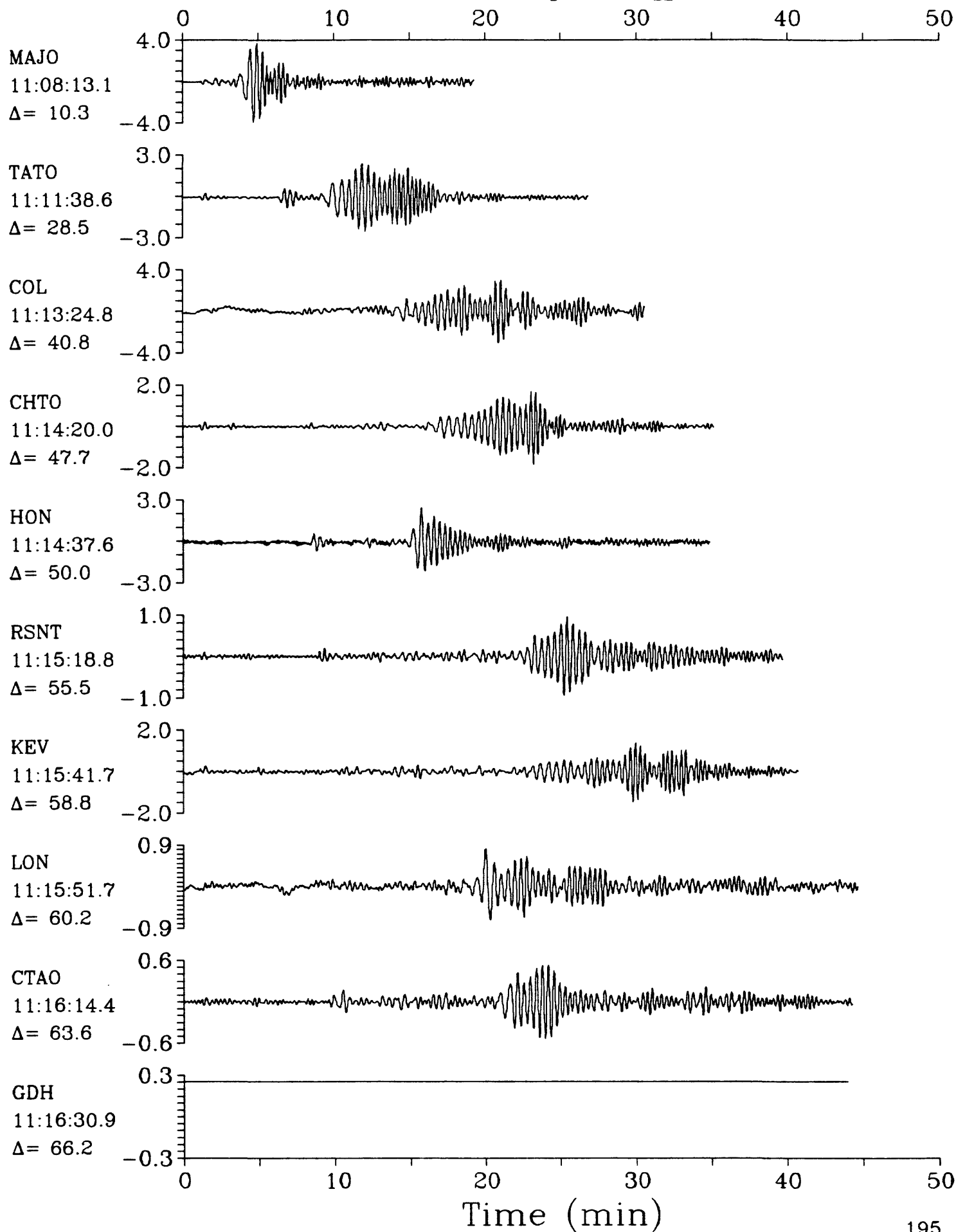




LPZ

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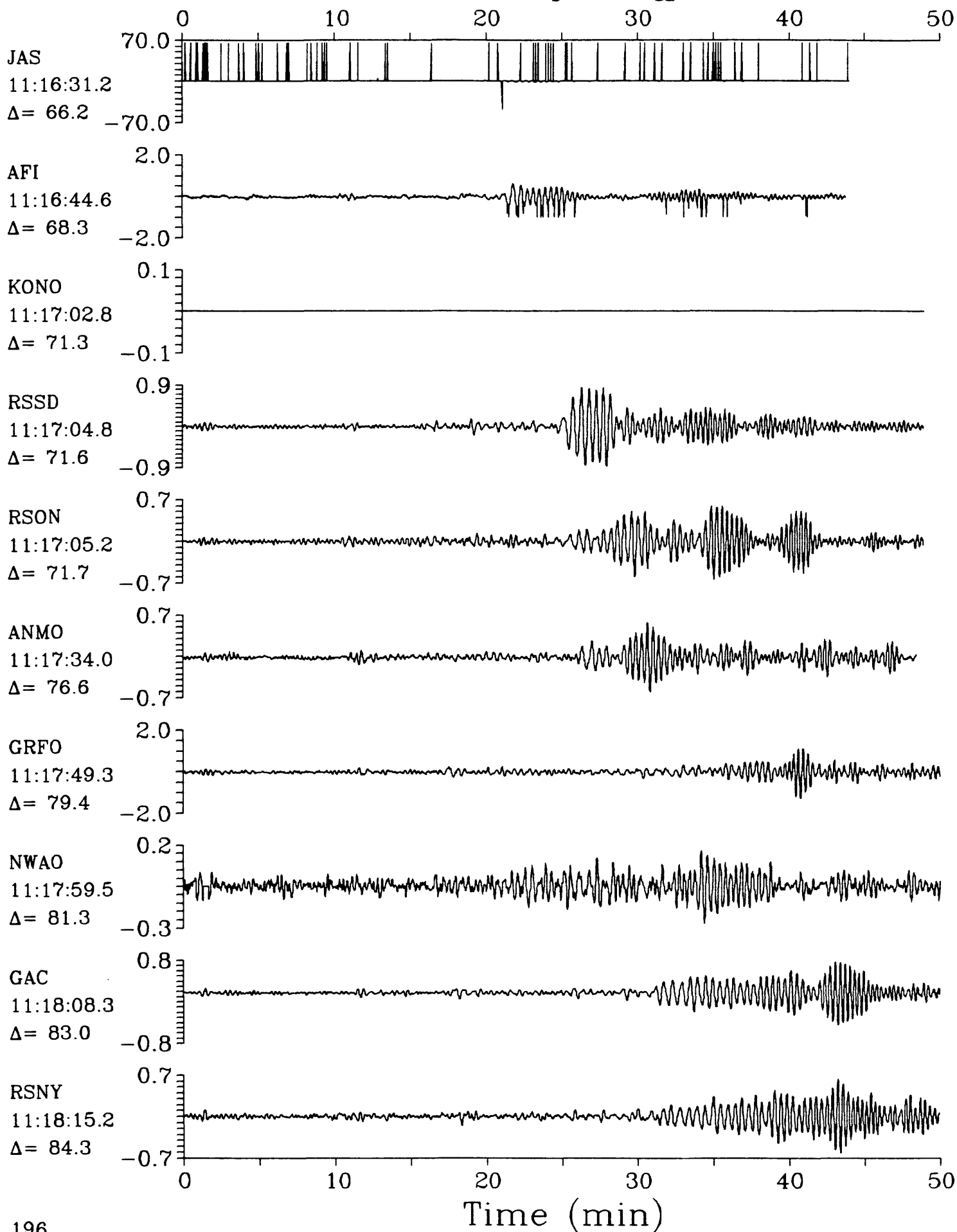
LPZ



LPZ

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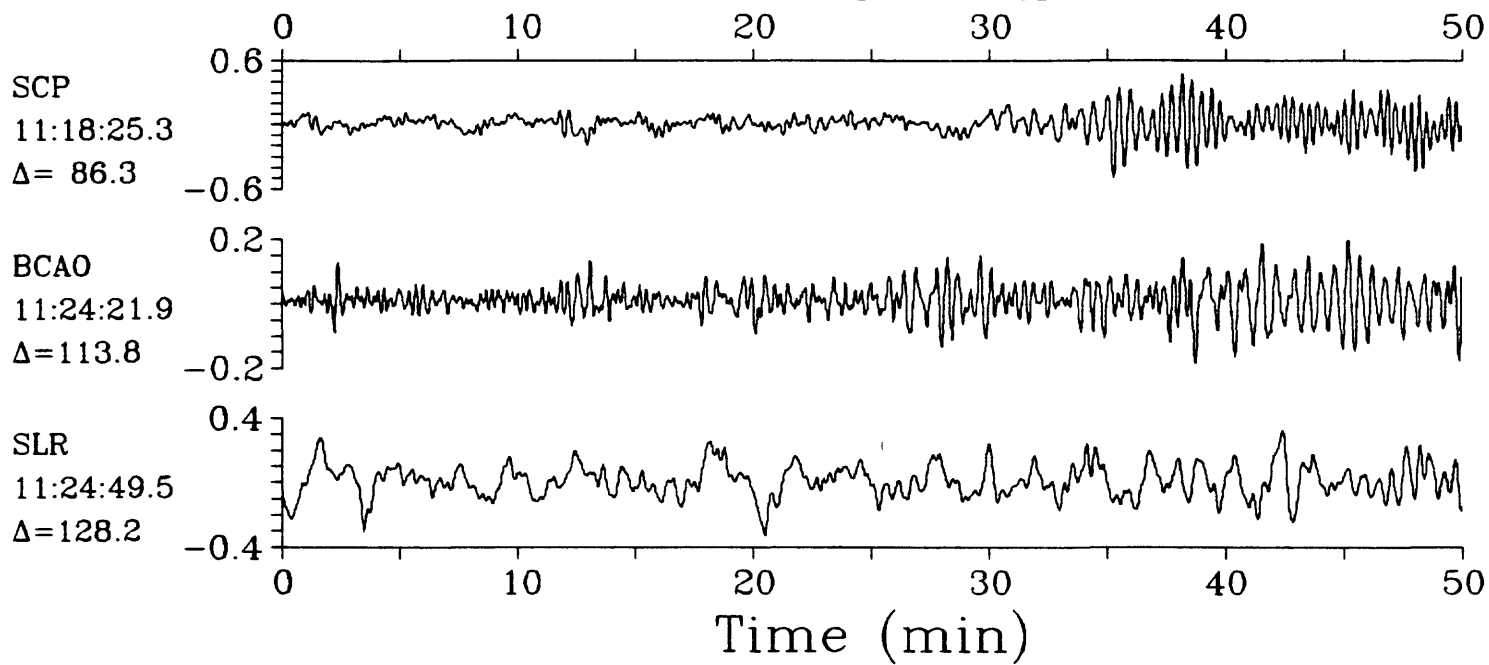
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LPZ

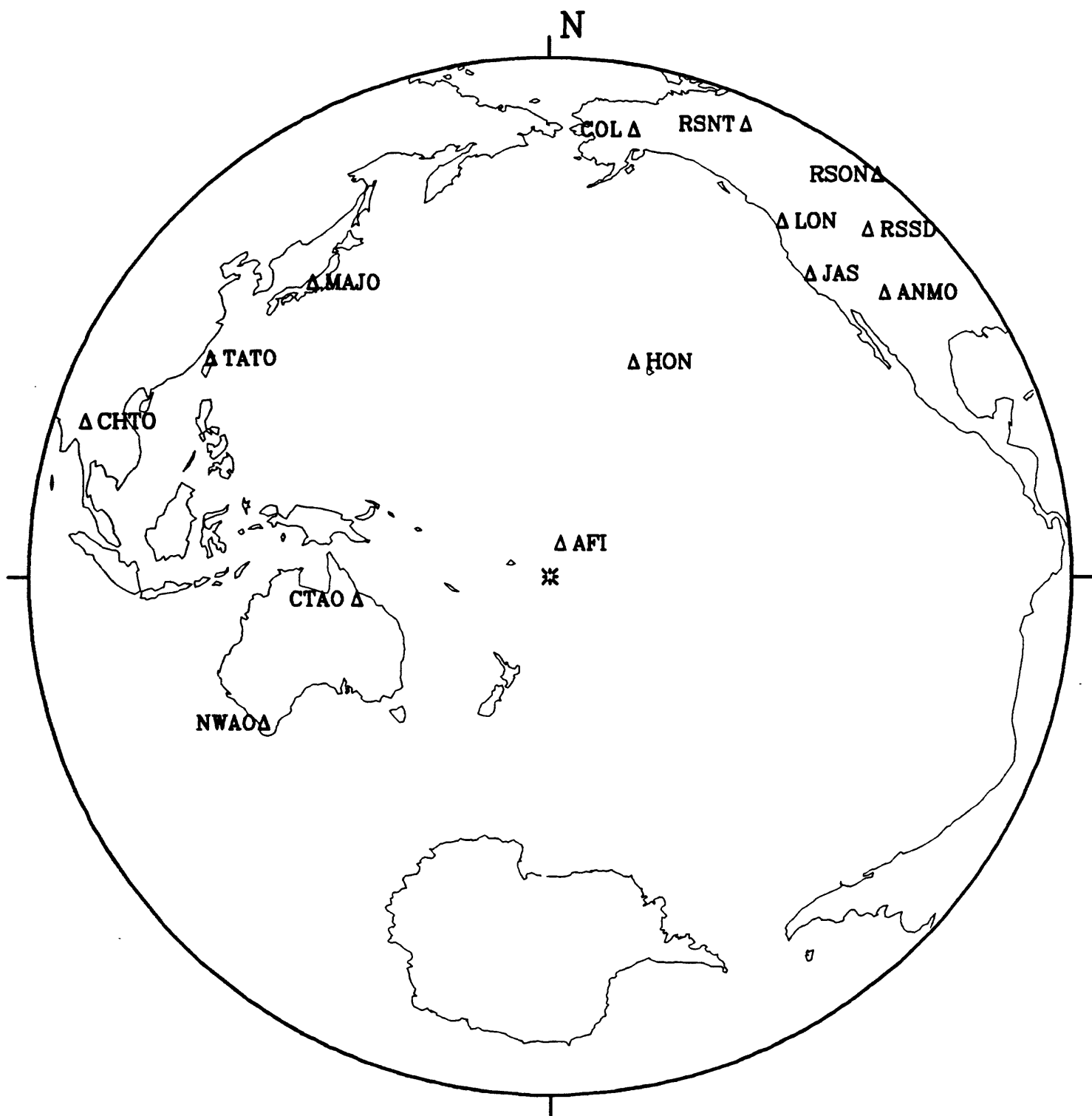
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LPZ



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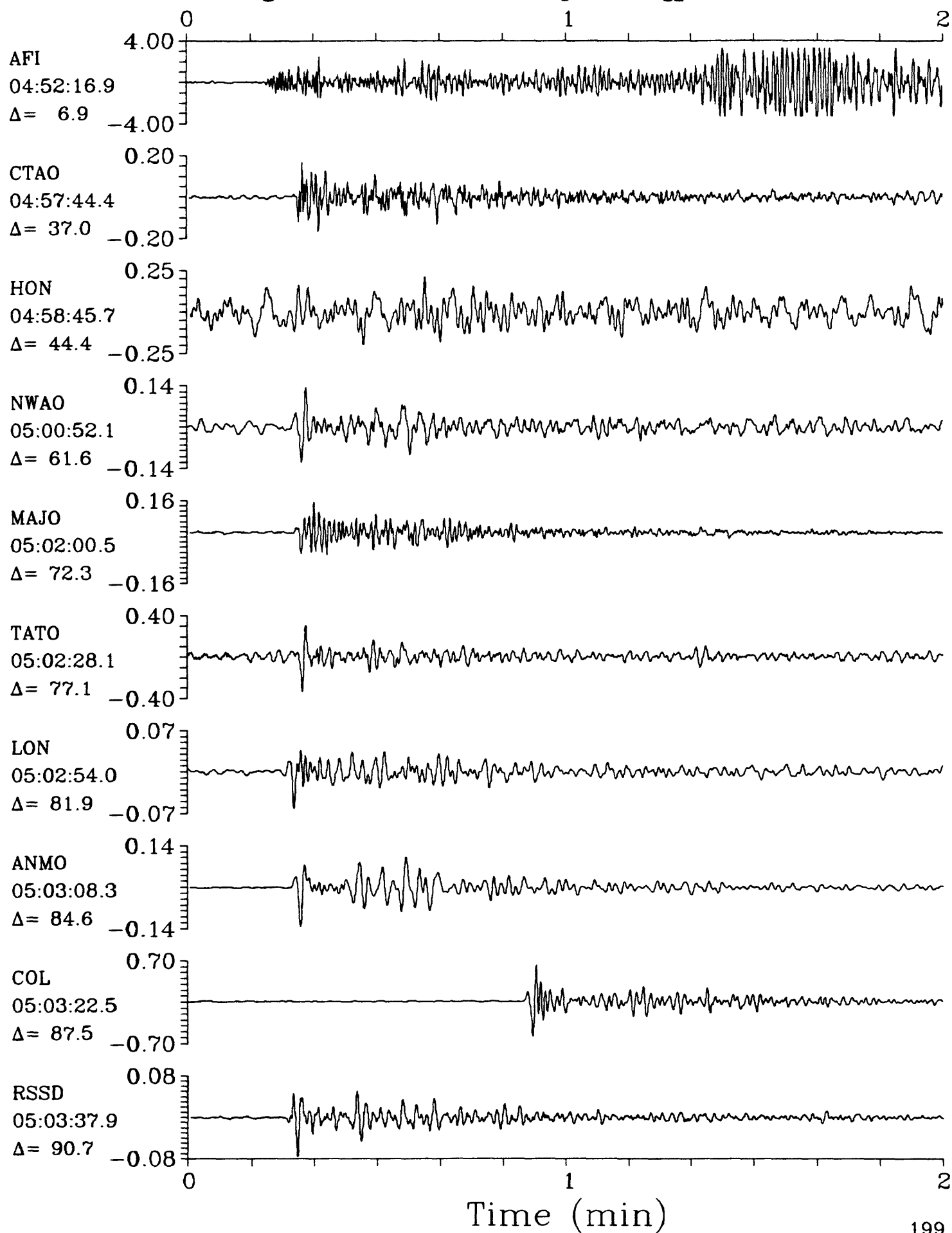
## Tonga Islands



SPZ

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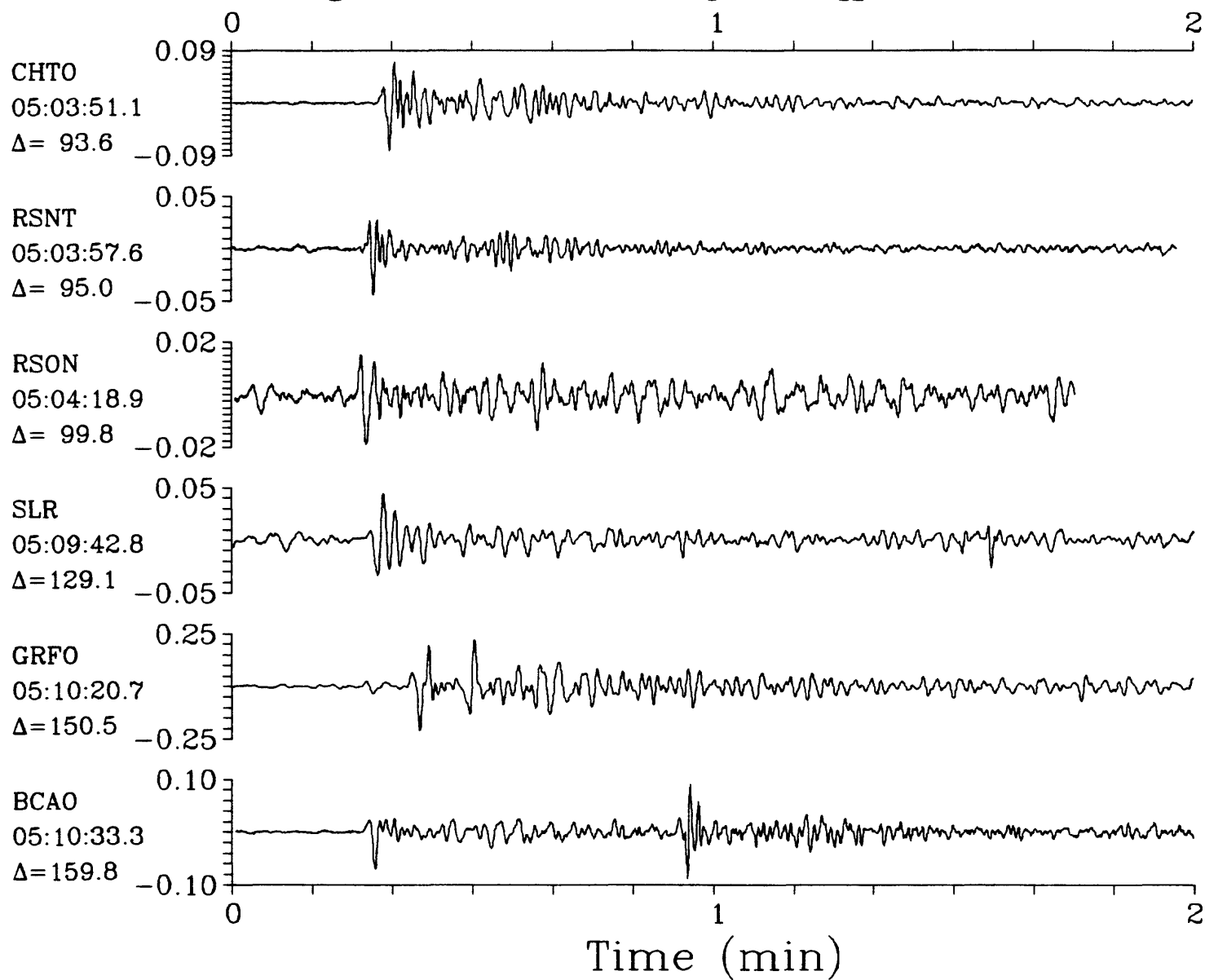
SPZ



SPZ

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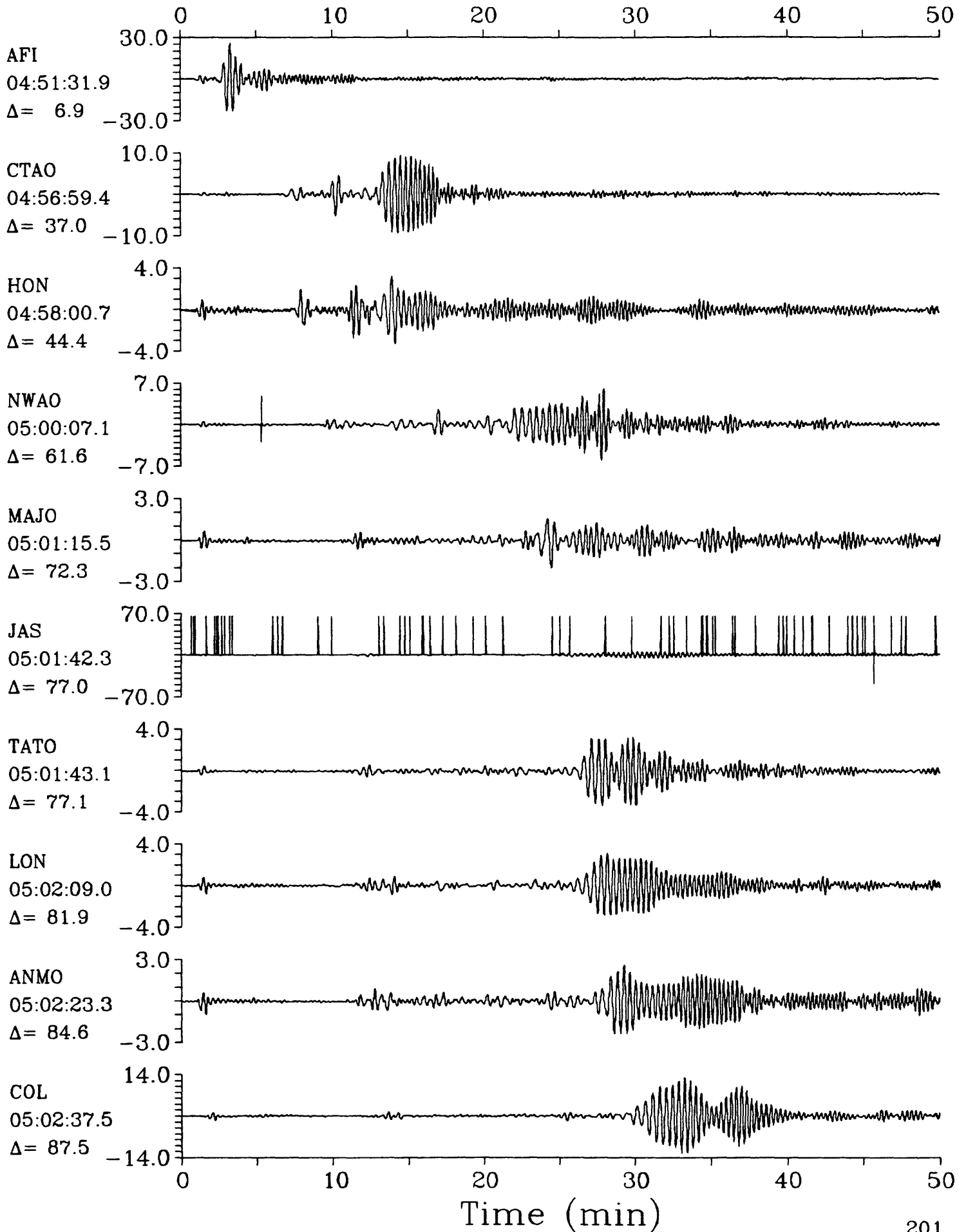
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LPZ

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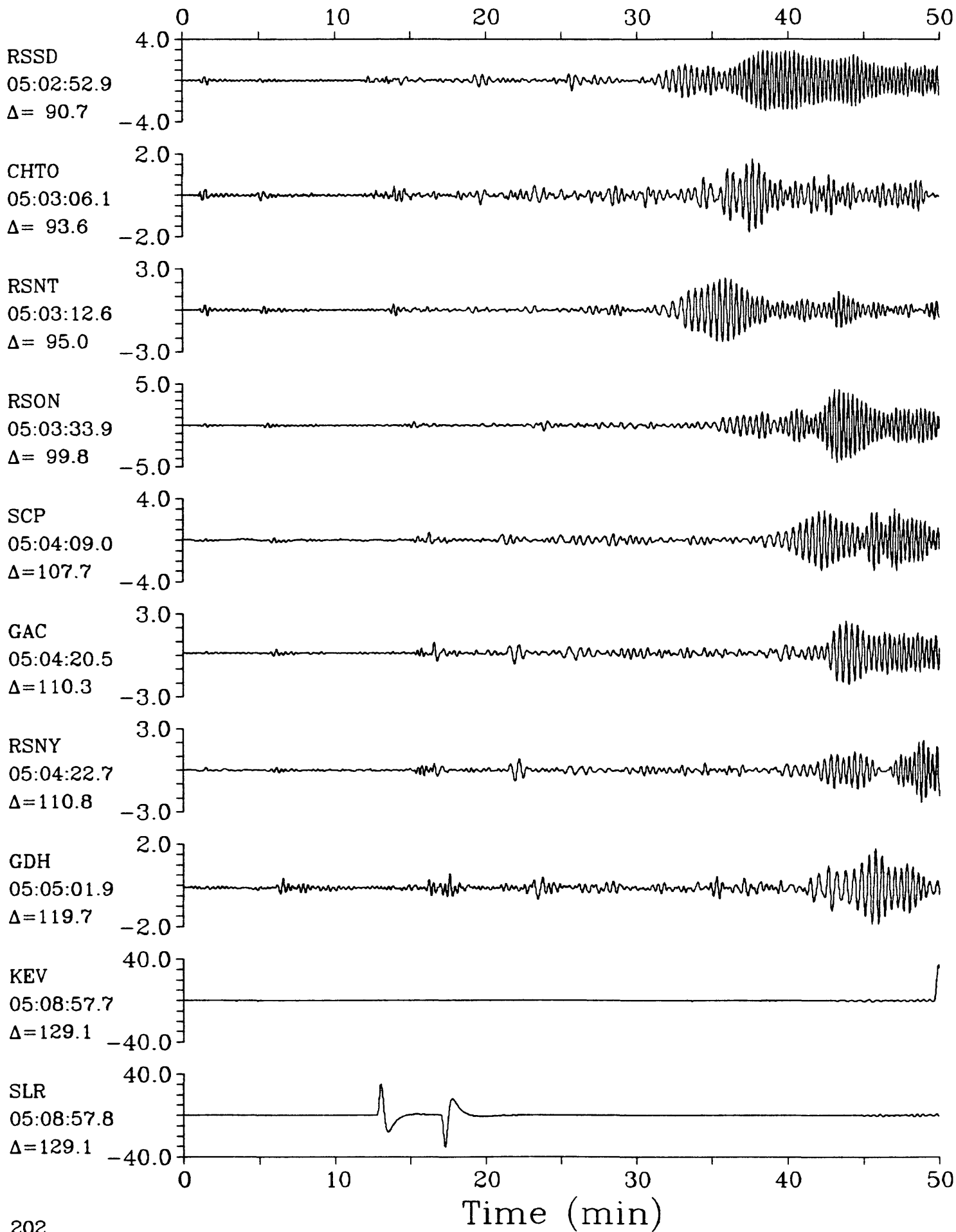
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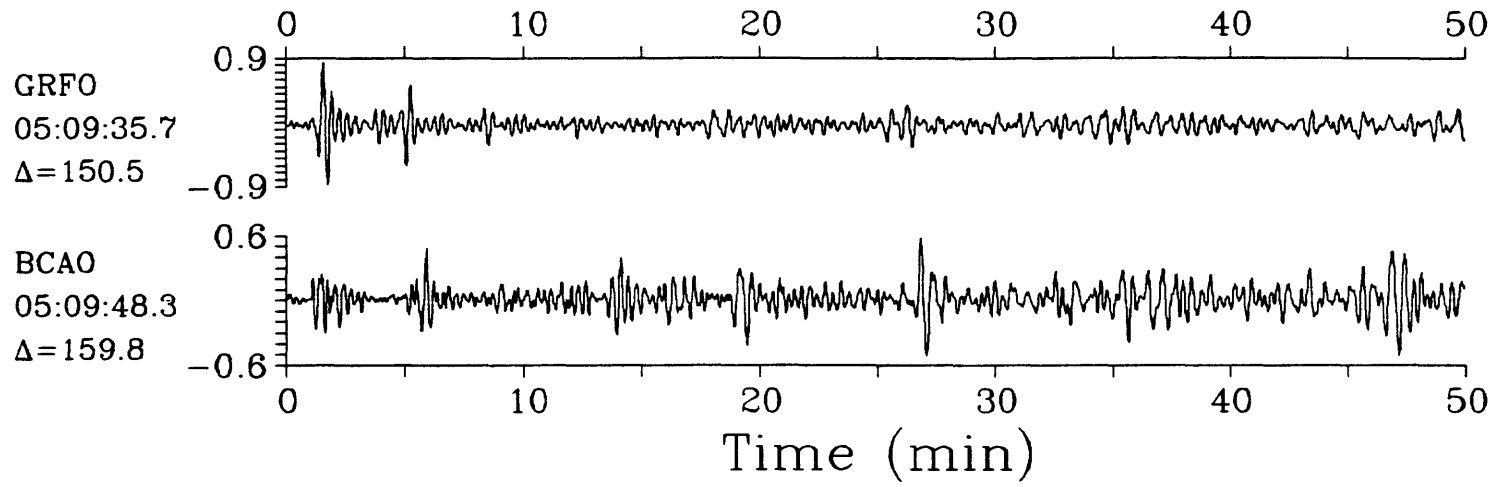




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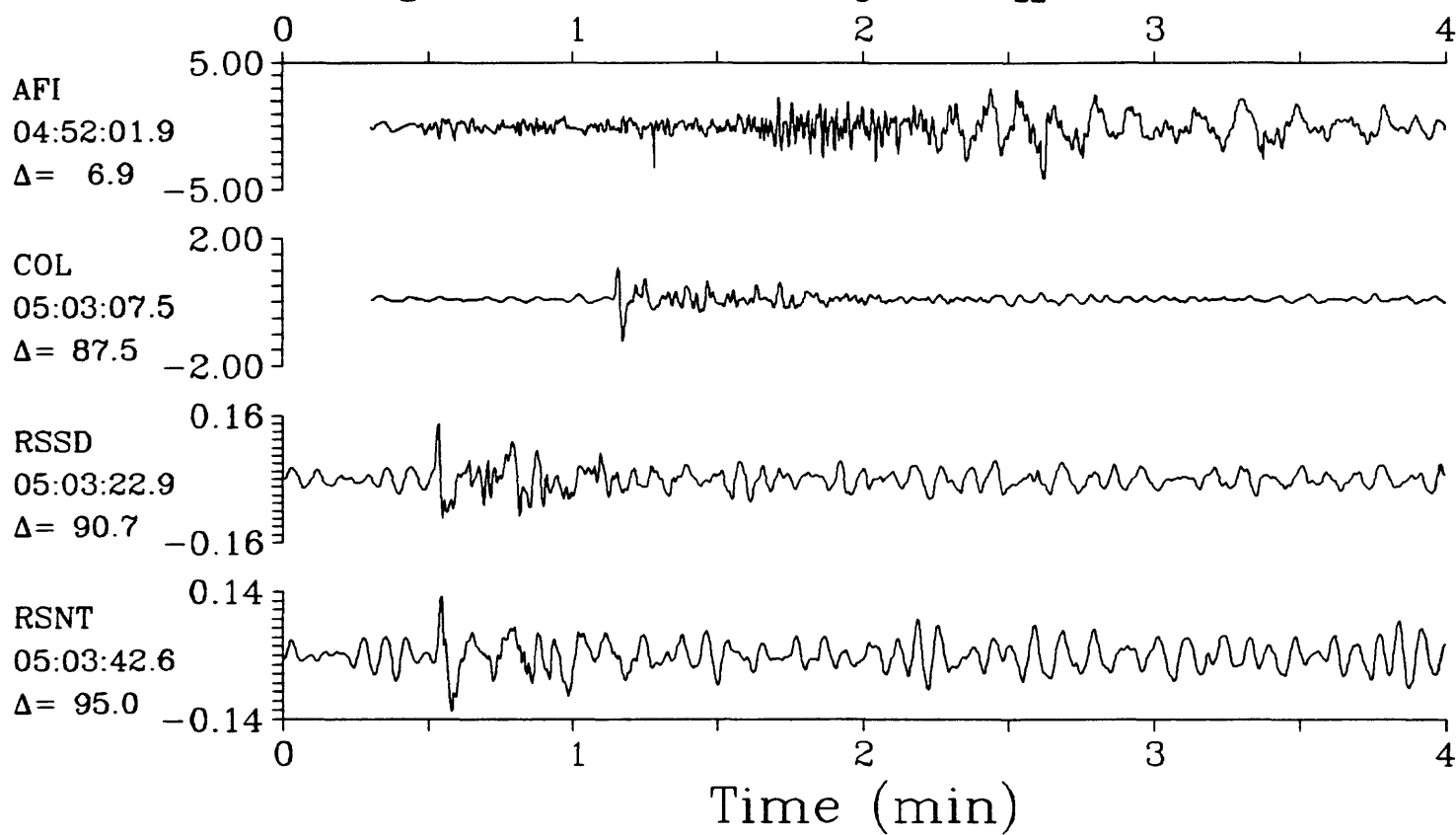
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IPZ

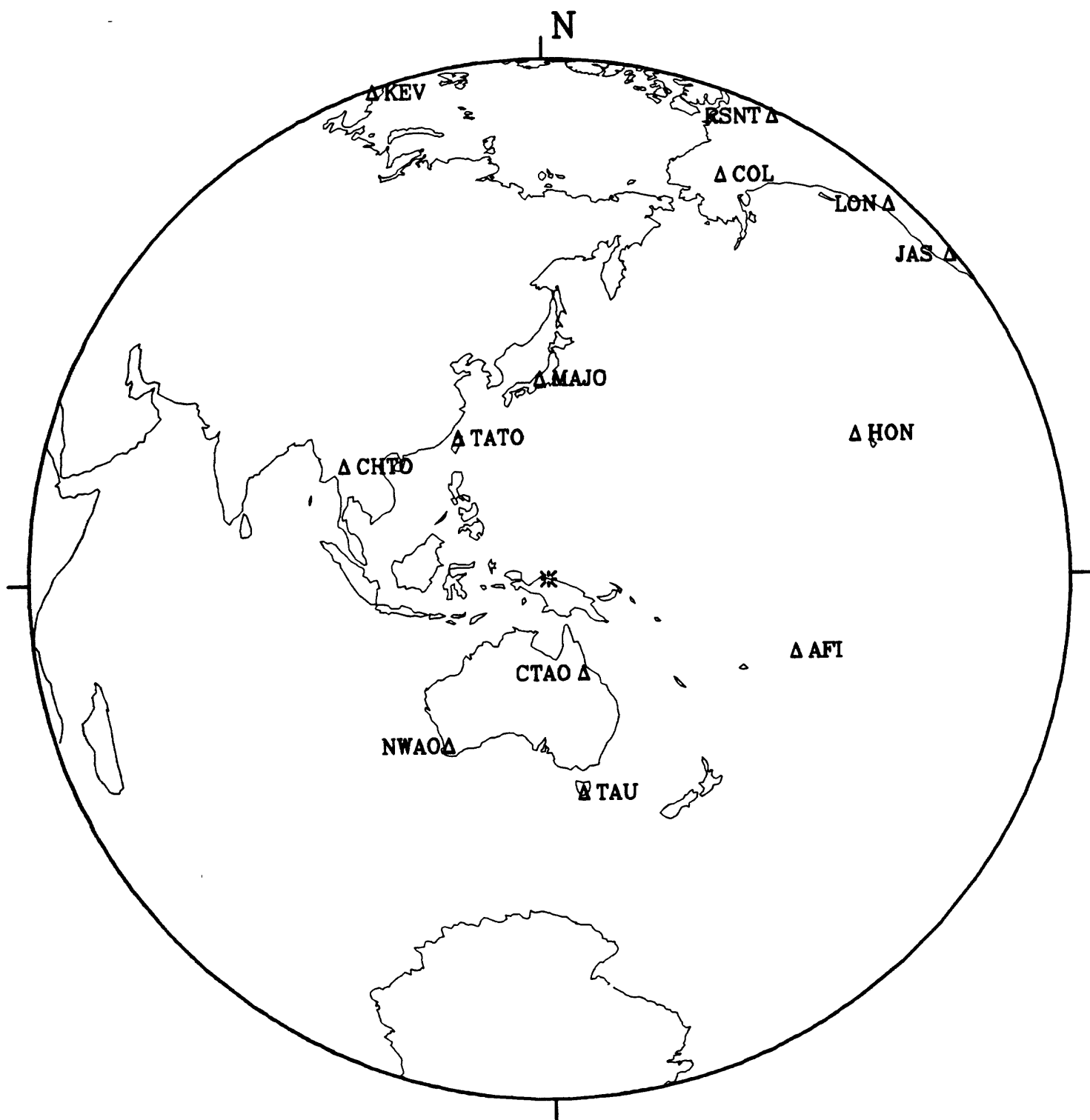
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IPZ



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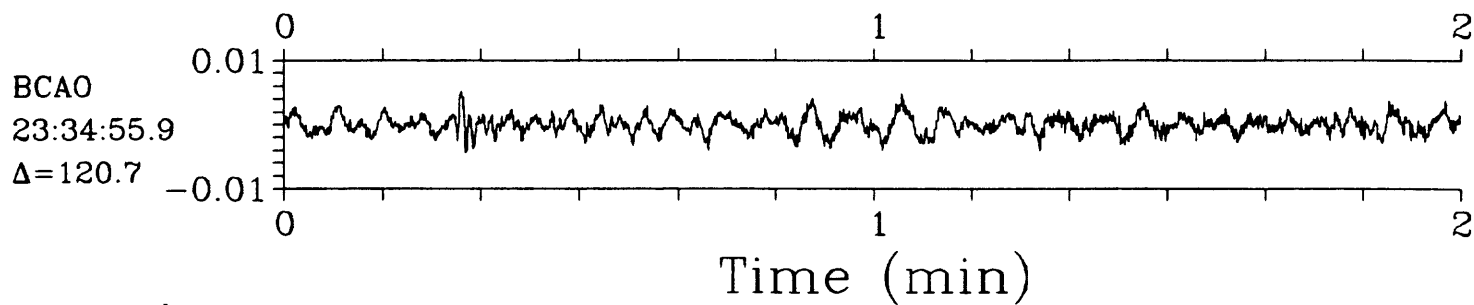
Near N. Coast of West Irian



SPZ

04 February 1985 23:16:18.76

SPZ

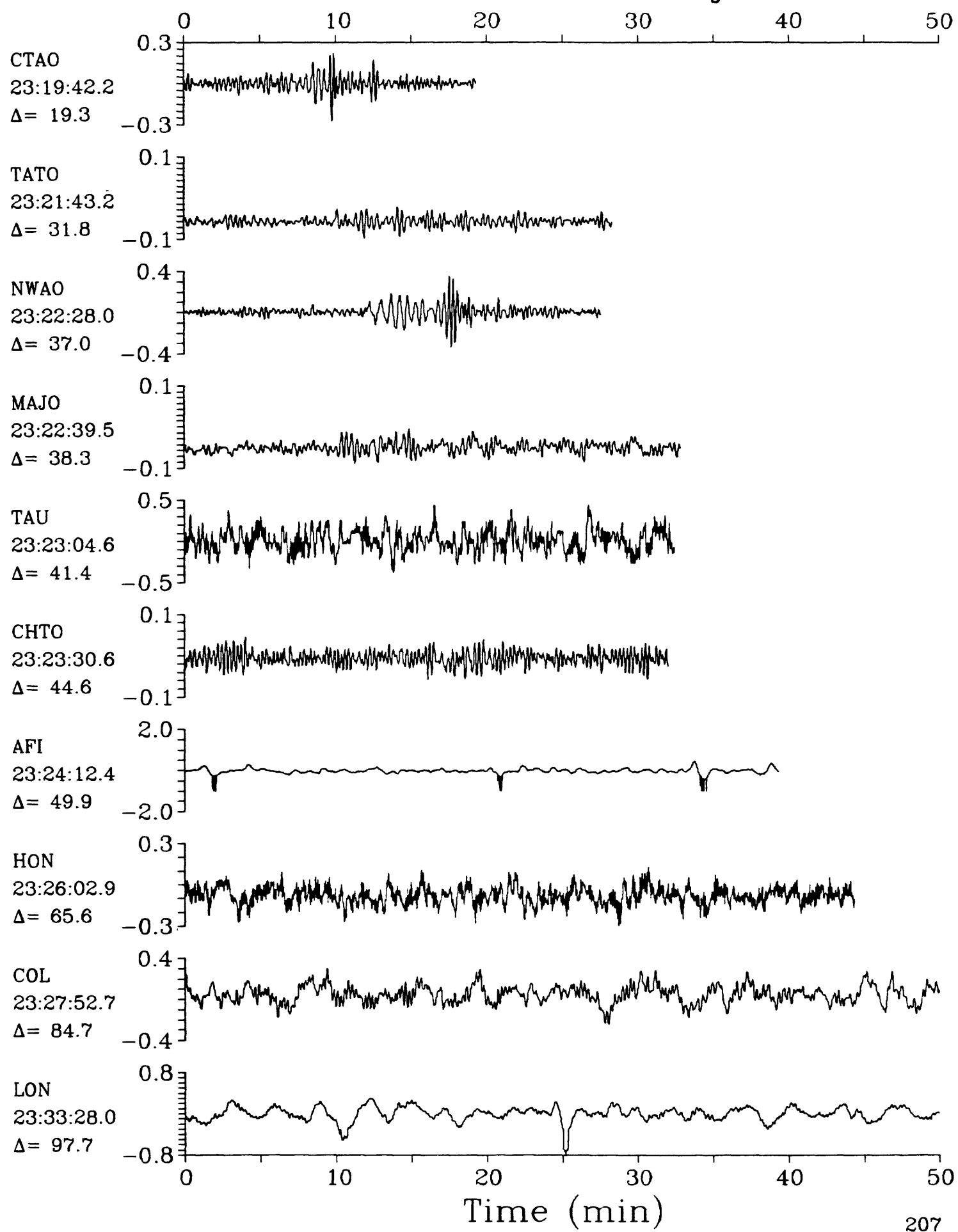
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LPZ

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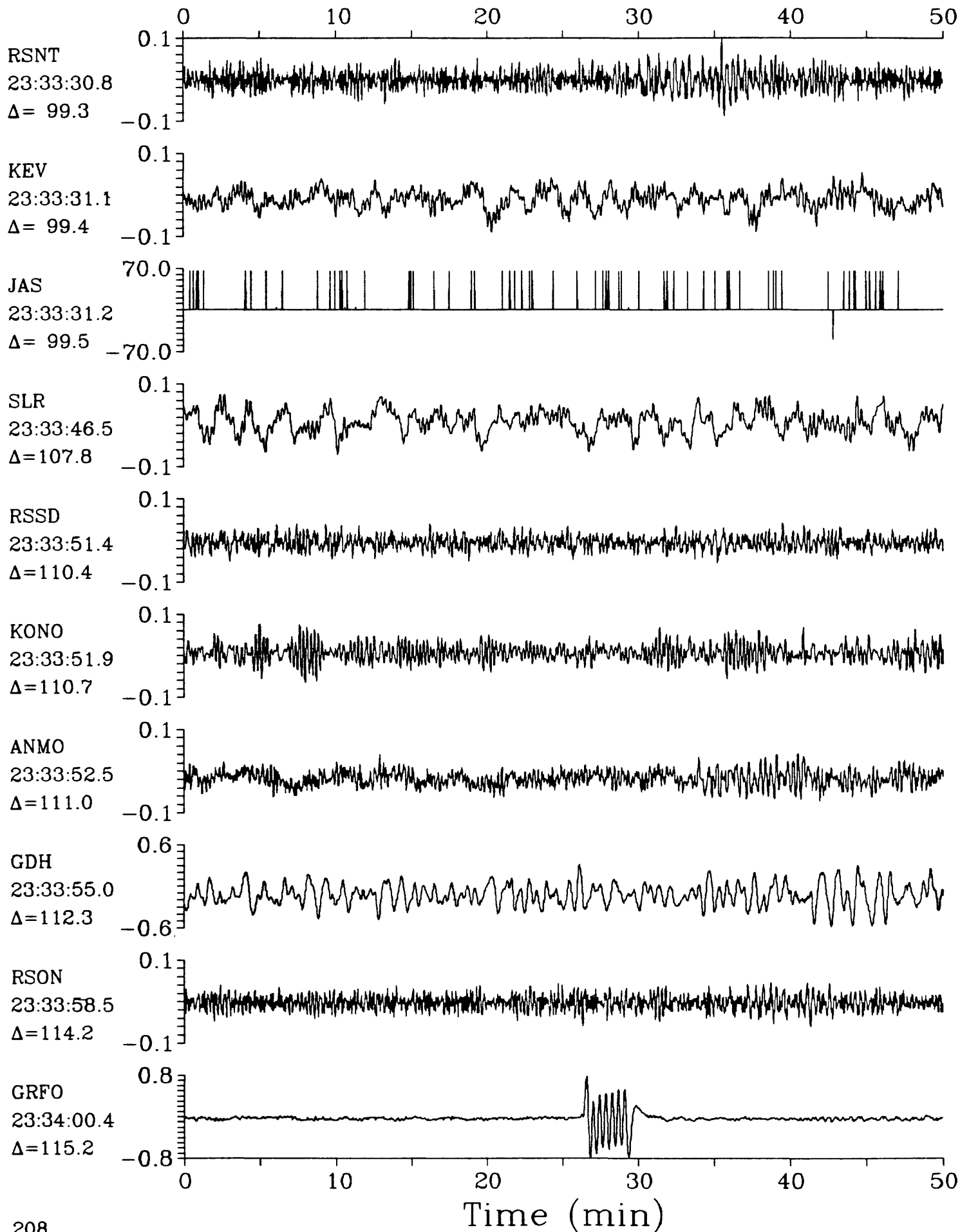
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LPZ

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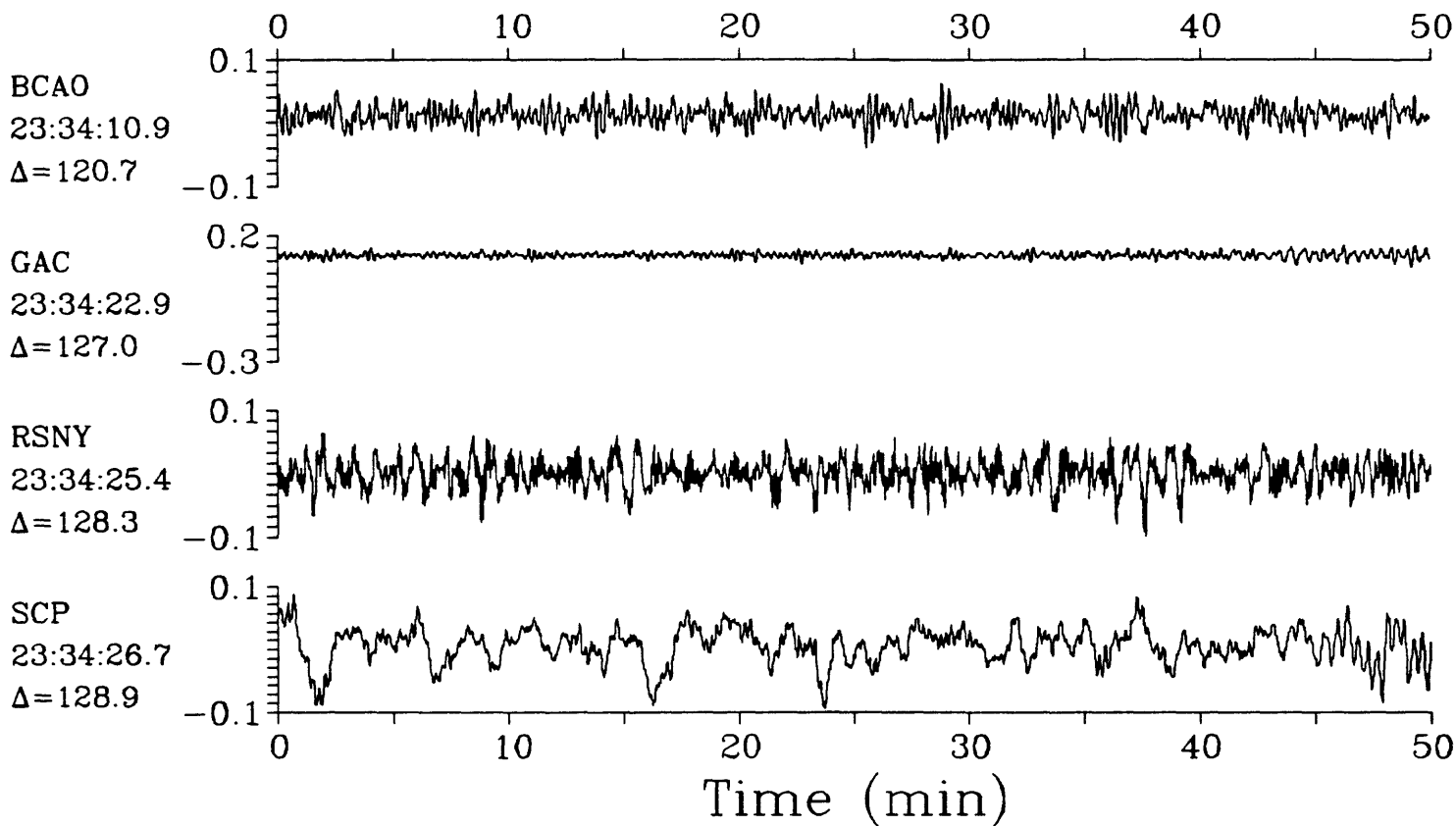
LPZ

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LPZ

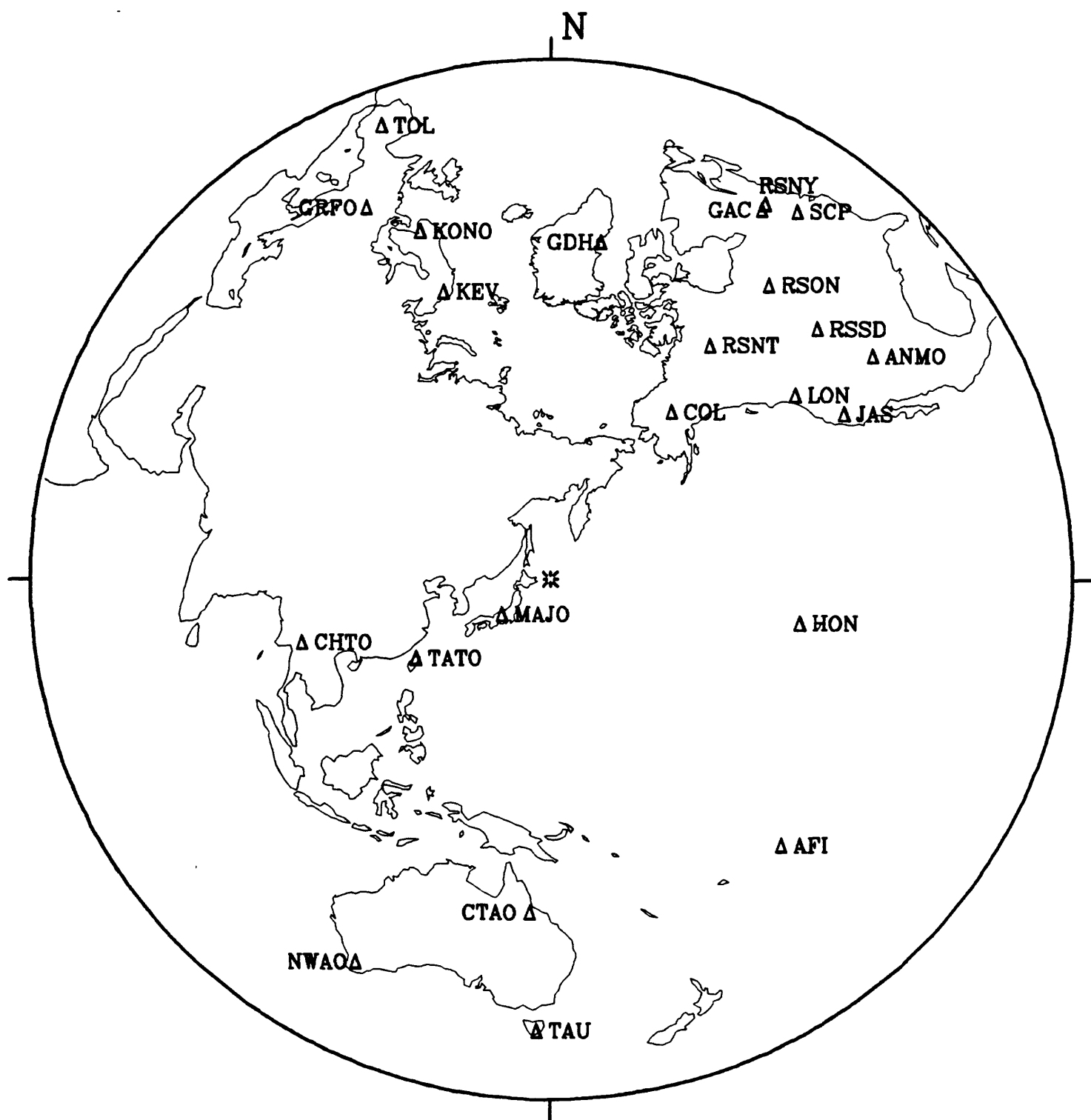
04 February 1985 23:16:18.76

LPZ

Near N. Coast of West Irian  $h=14.3$   $m_b=5.7$ 

06 February 1985 13:29:52.23

## Kuril Islands Region

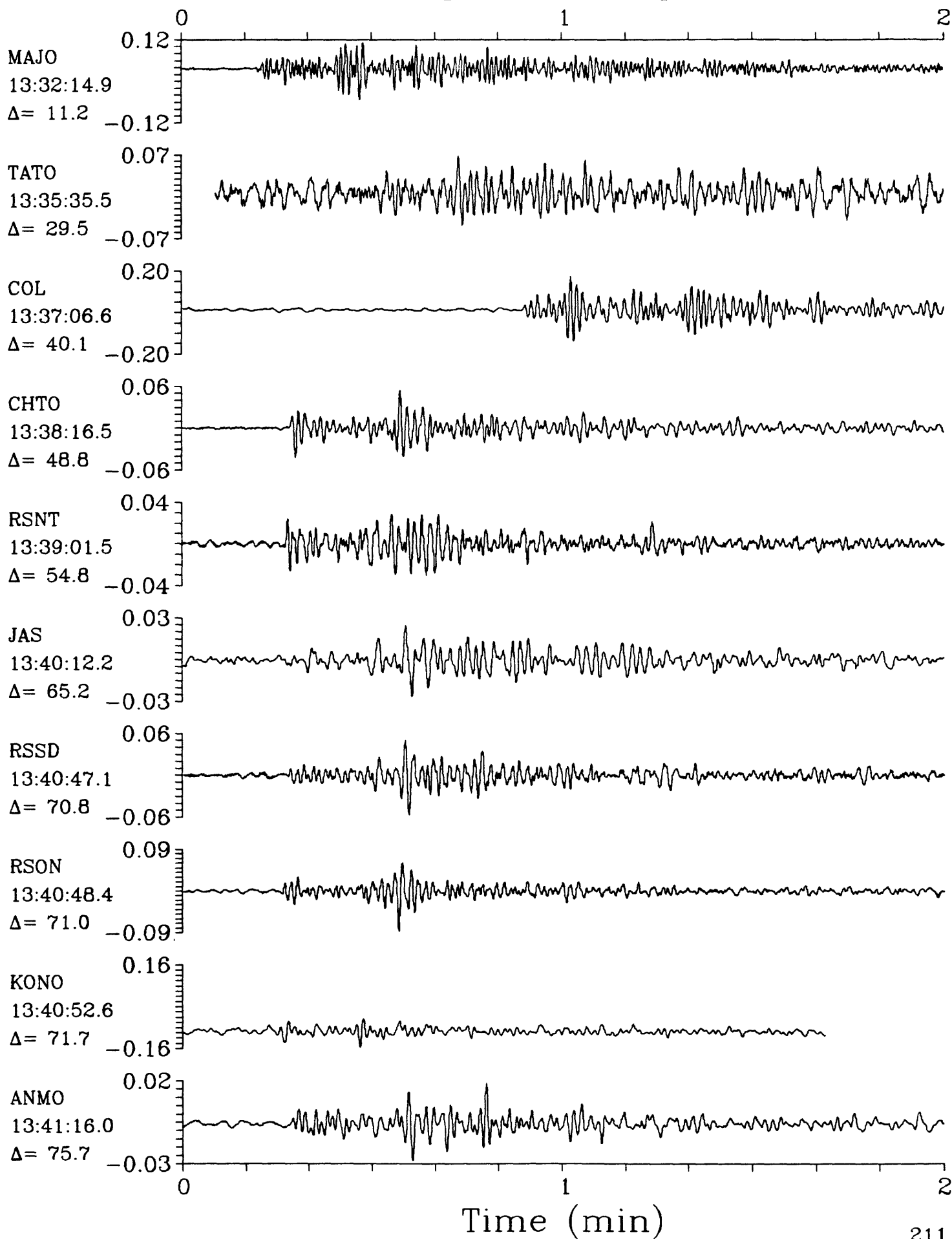




SPZ

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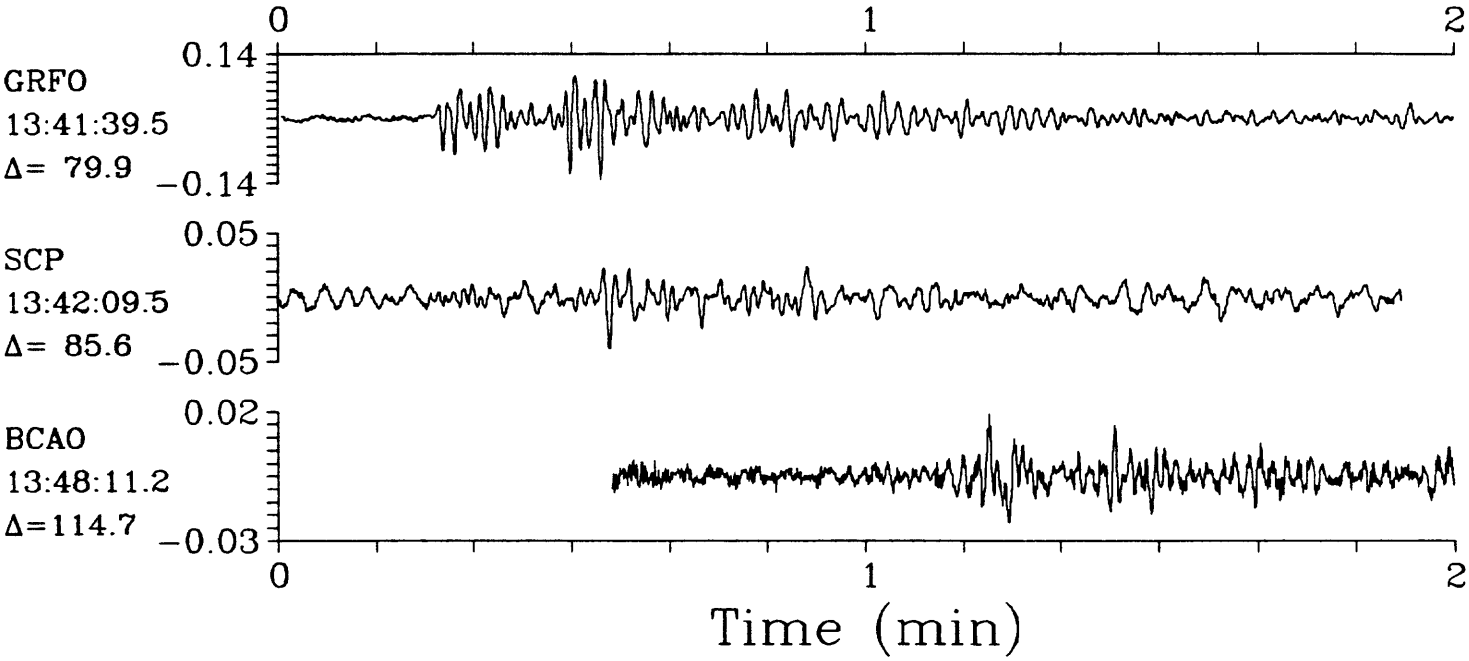
SPZ



SPZ

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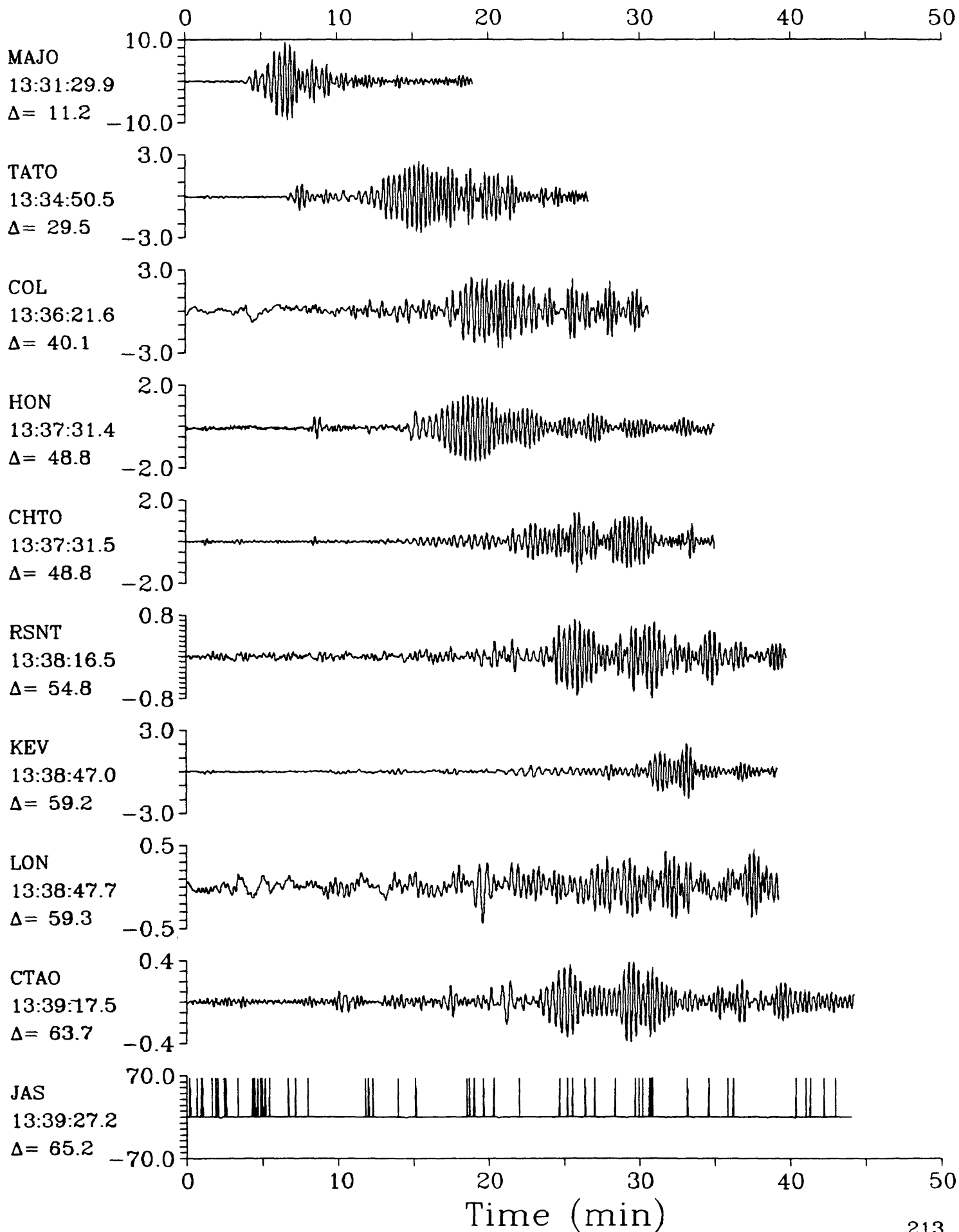
SPZ



LPZ

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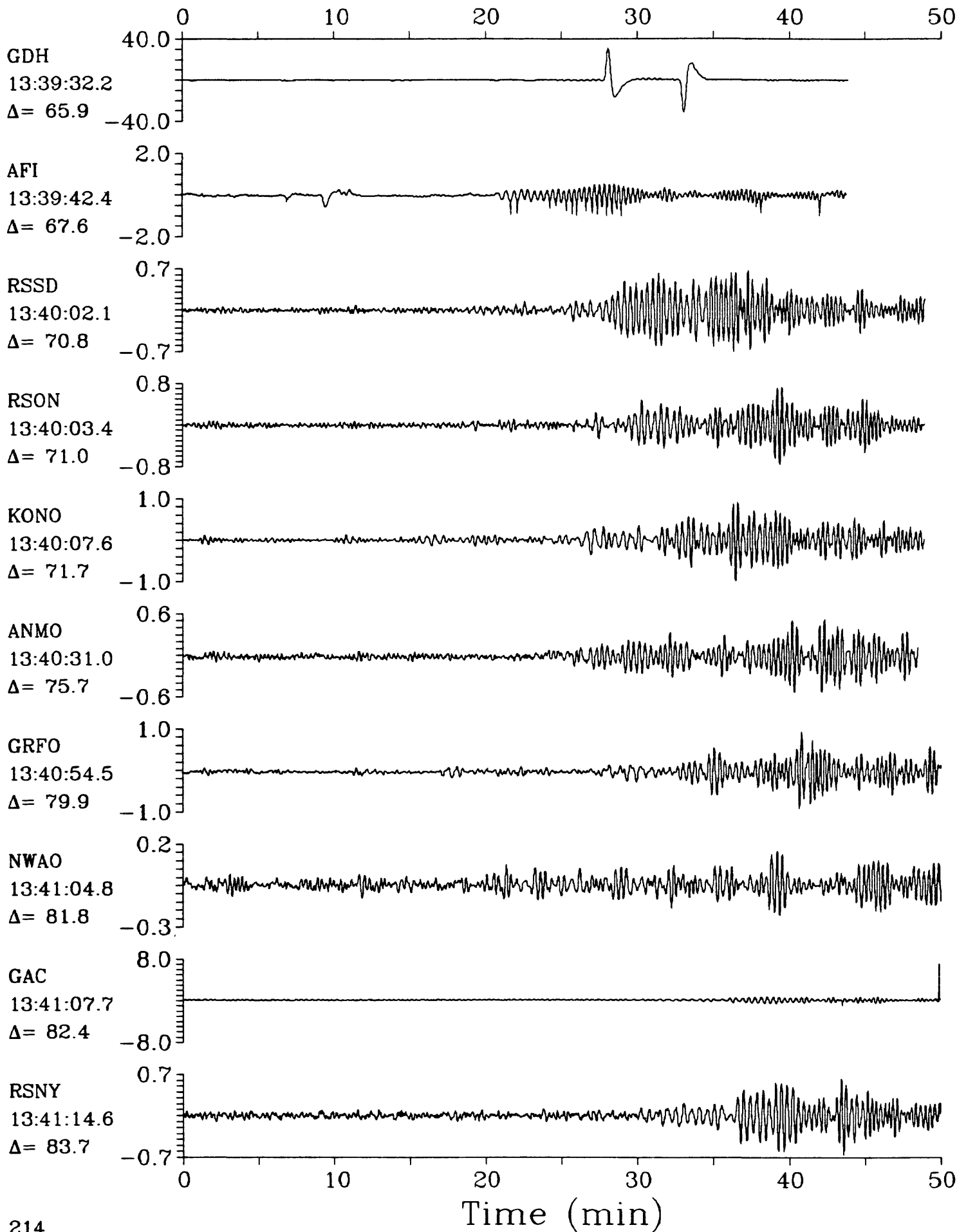
LPZ



LPZ

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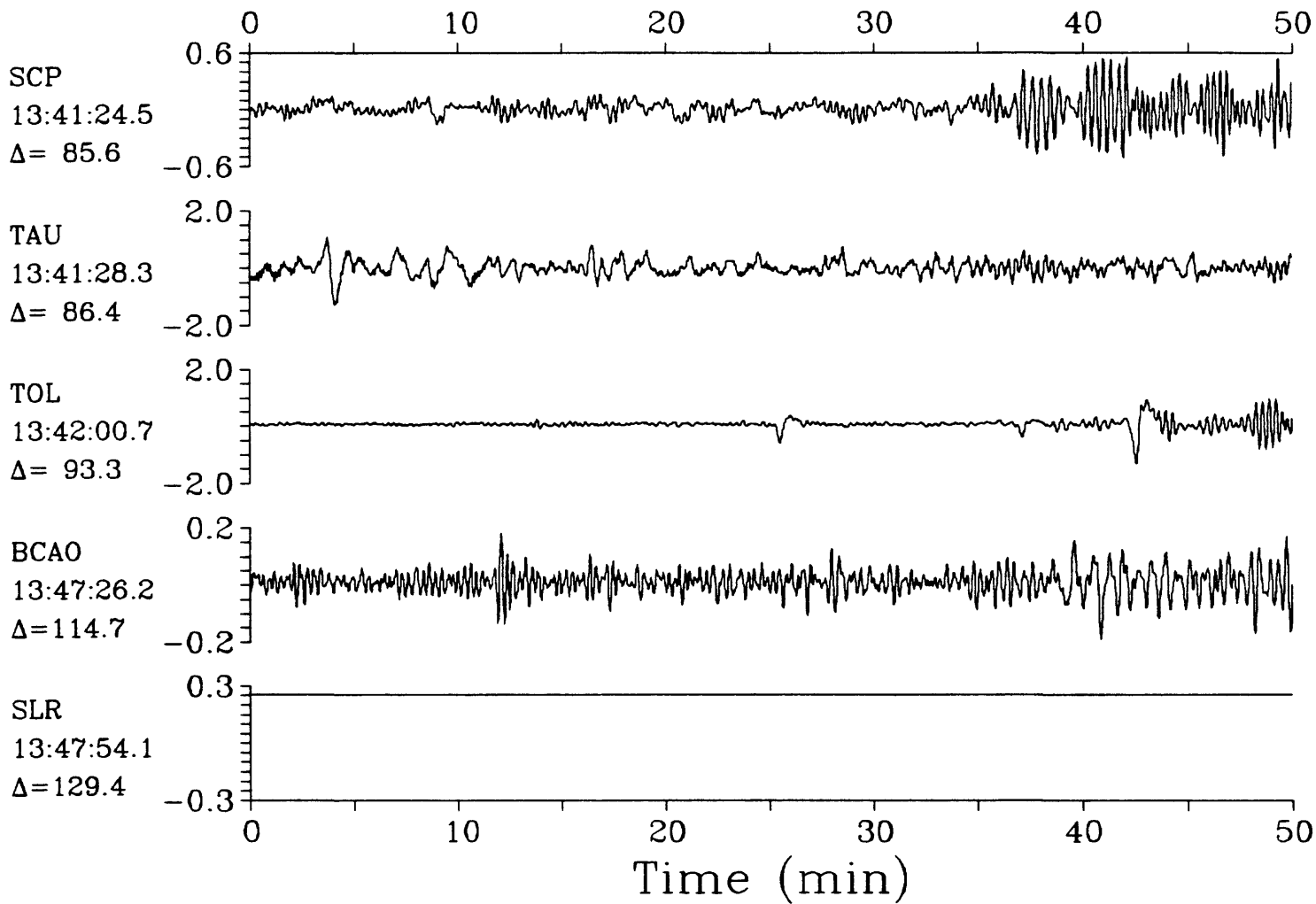
LPZ



LPZ

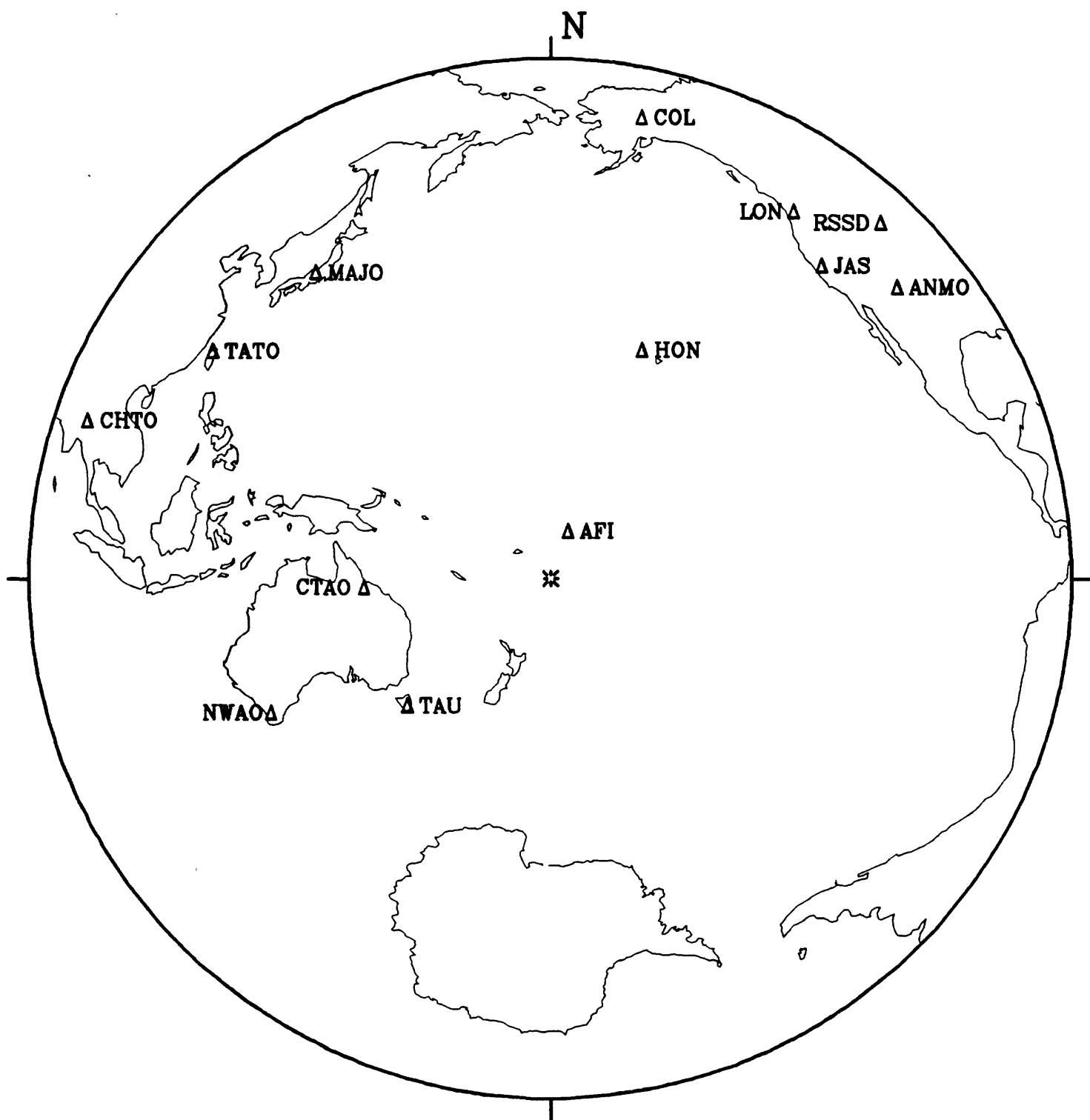
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LPZ



09 February 1985 20:33:28.40

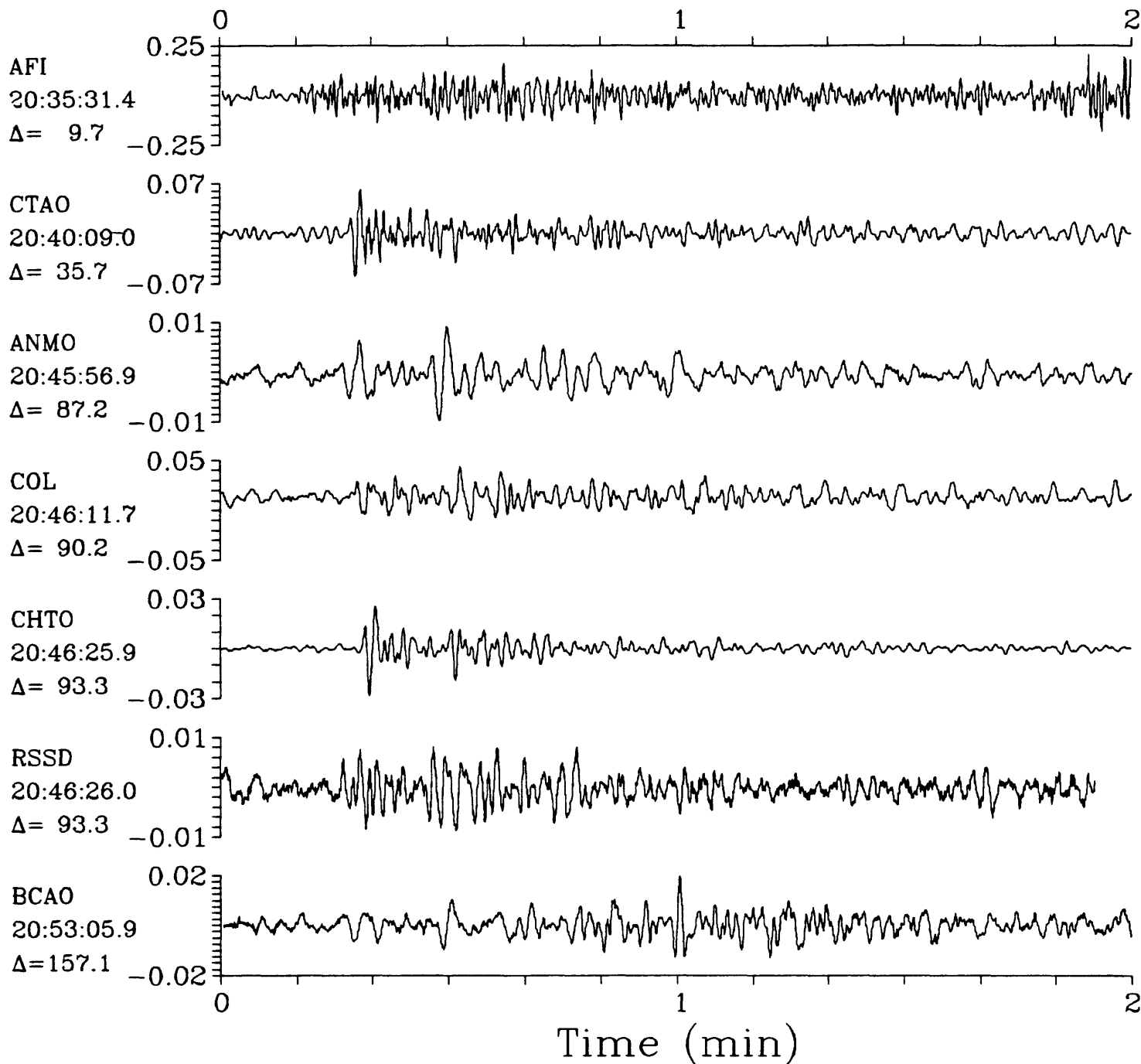
## Tonga Islands Region



SPZ

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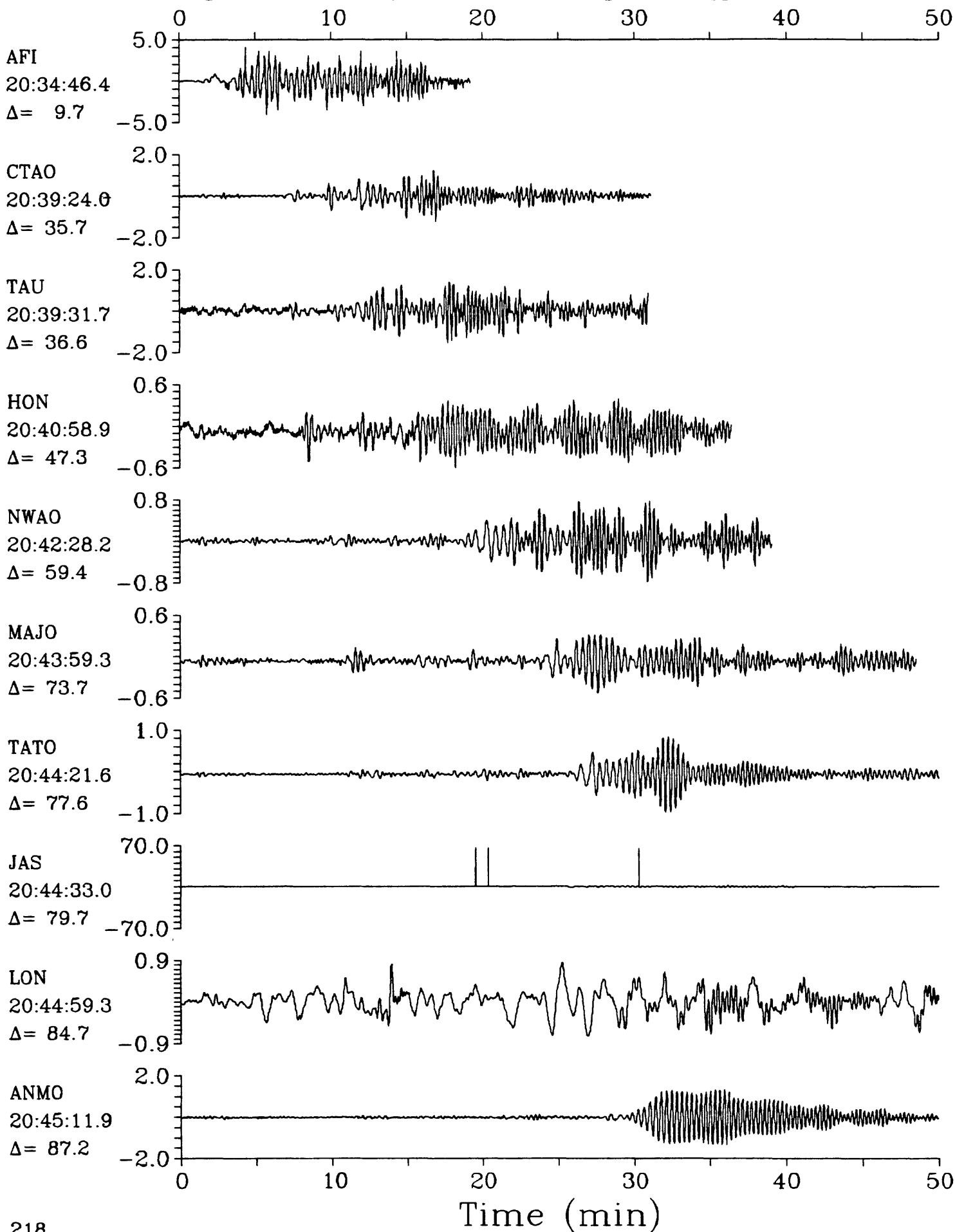
SPZ

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LPZ

09 February 1985 20:33:28.40

LPZ

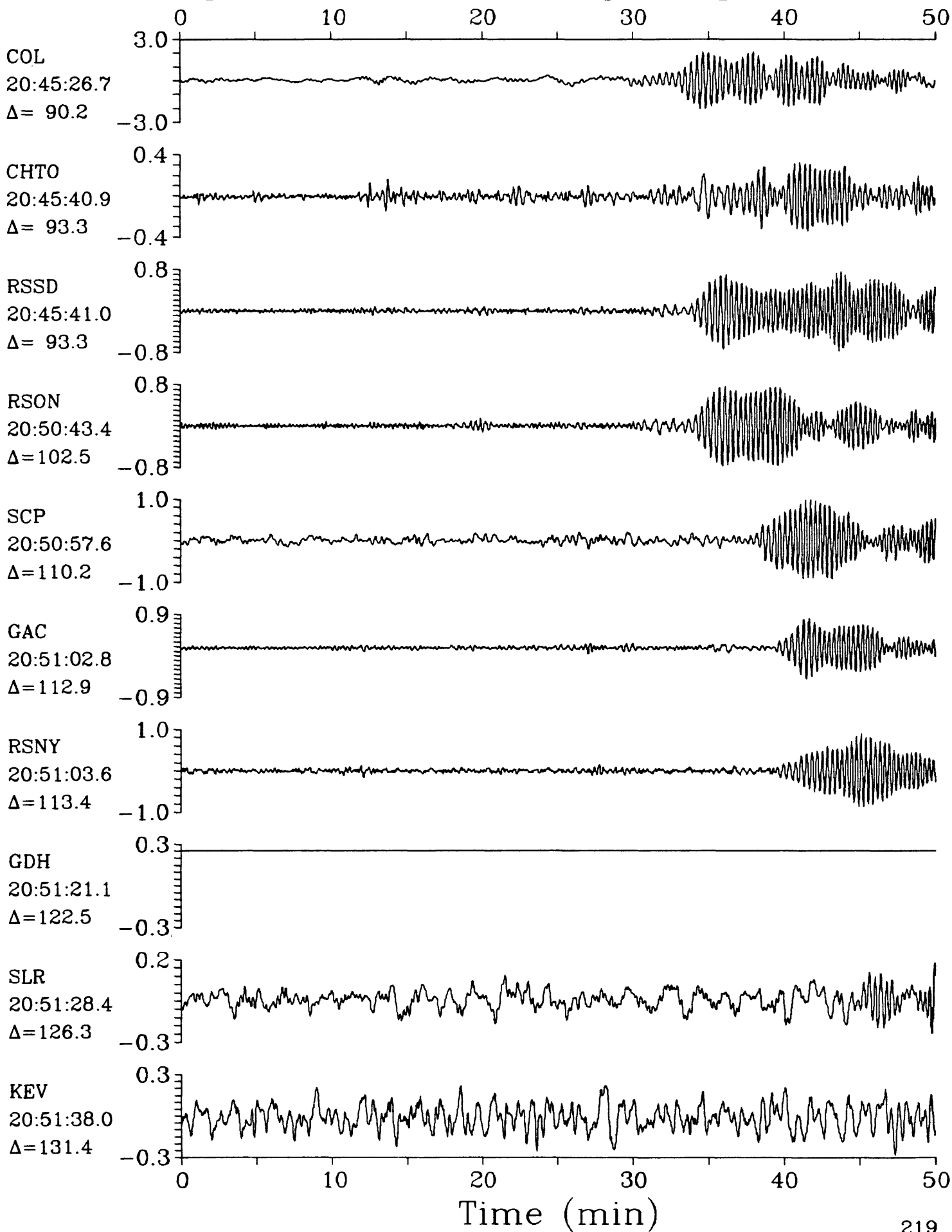
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LPZ

09 February 1985 20:33:28.40

LPZ

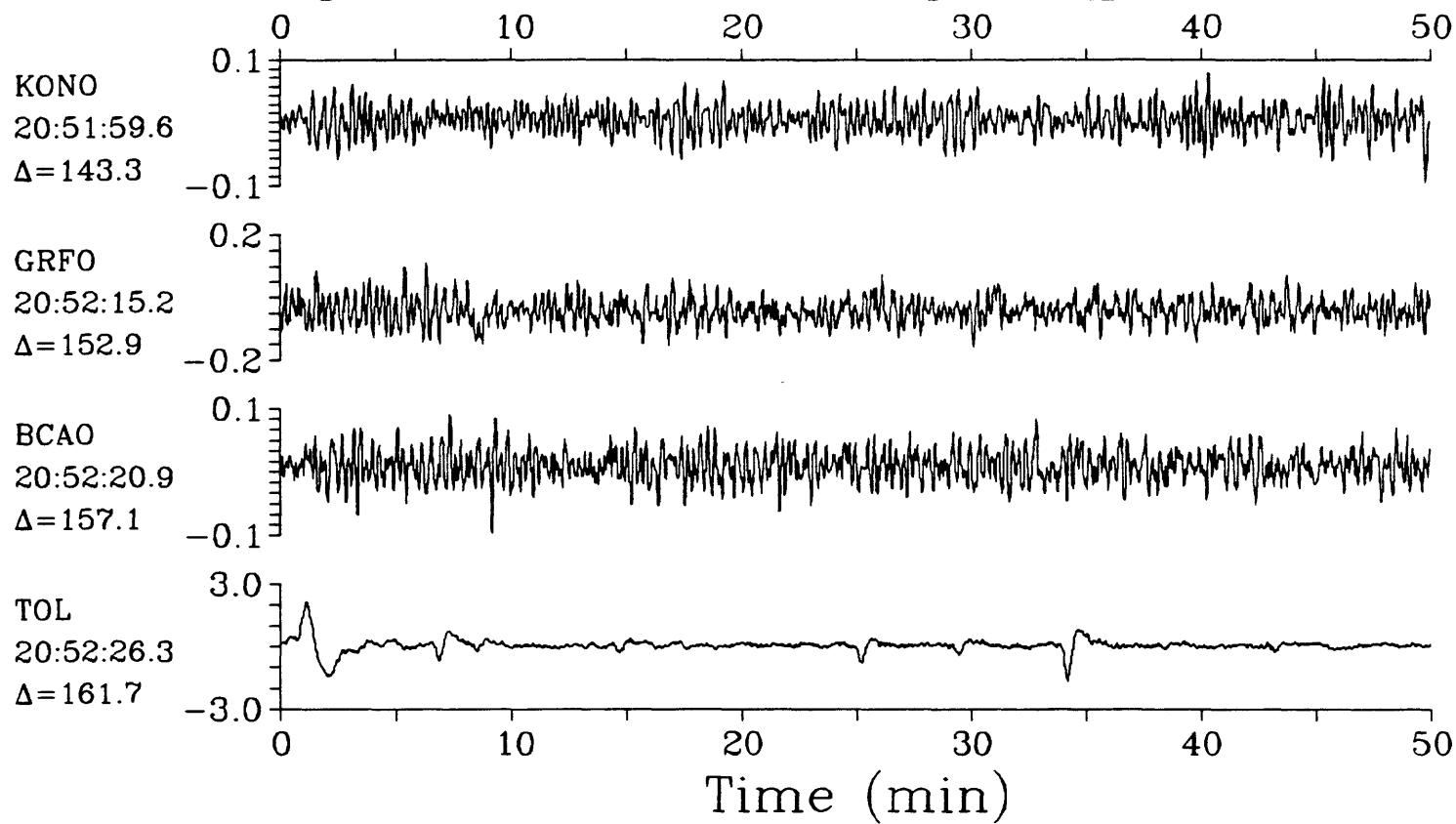
Tonga Islands Region  $h=33.0$   $m_b=5.2$   $M_{sz}=5.5$ 

LPZ

09 February 1985 20:33:28.40

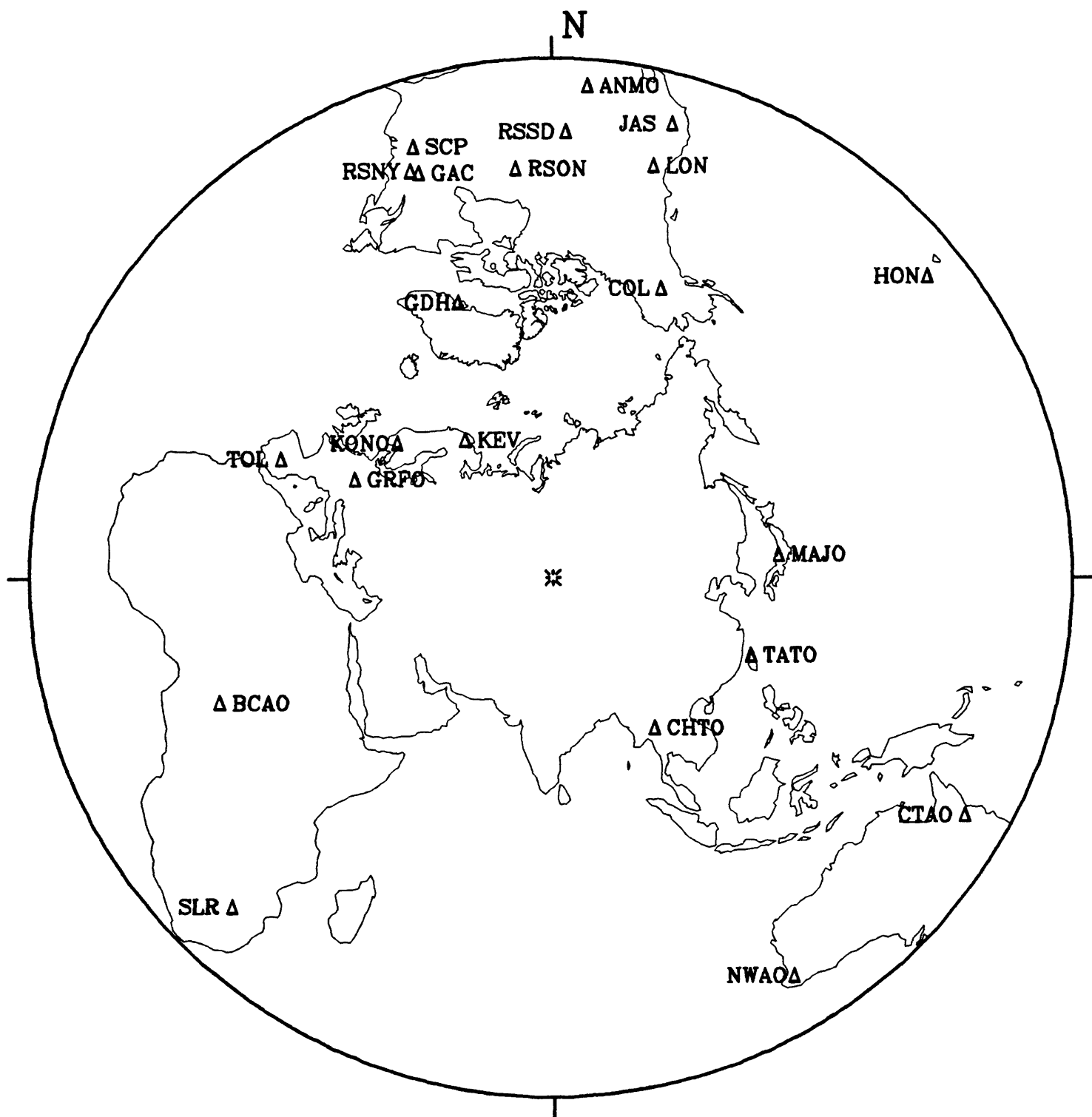
LPZ

Tonga Islands Region  $h=33.0$   $m_b=5.2$   $M_{sz}=5.5$



10 February 1985 03:27:07.52

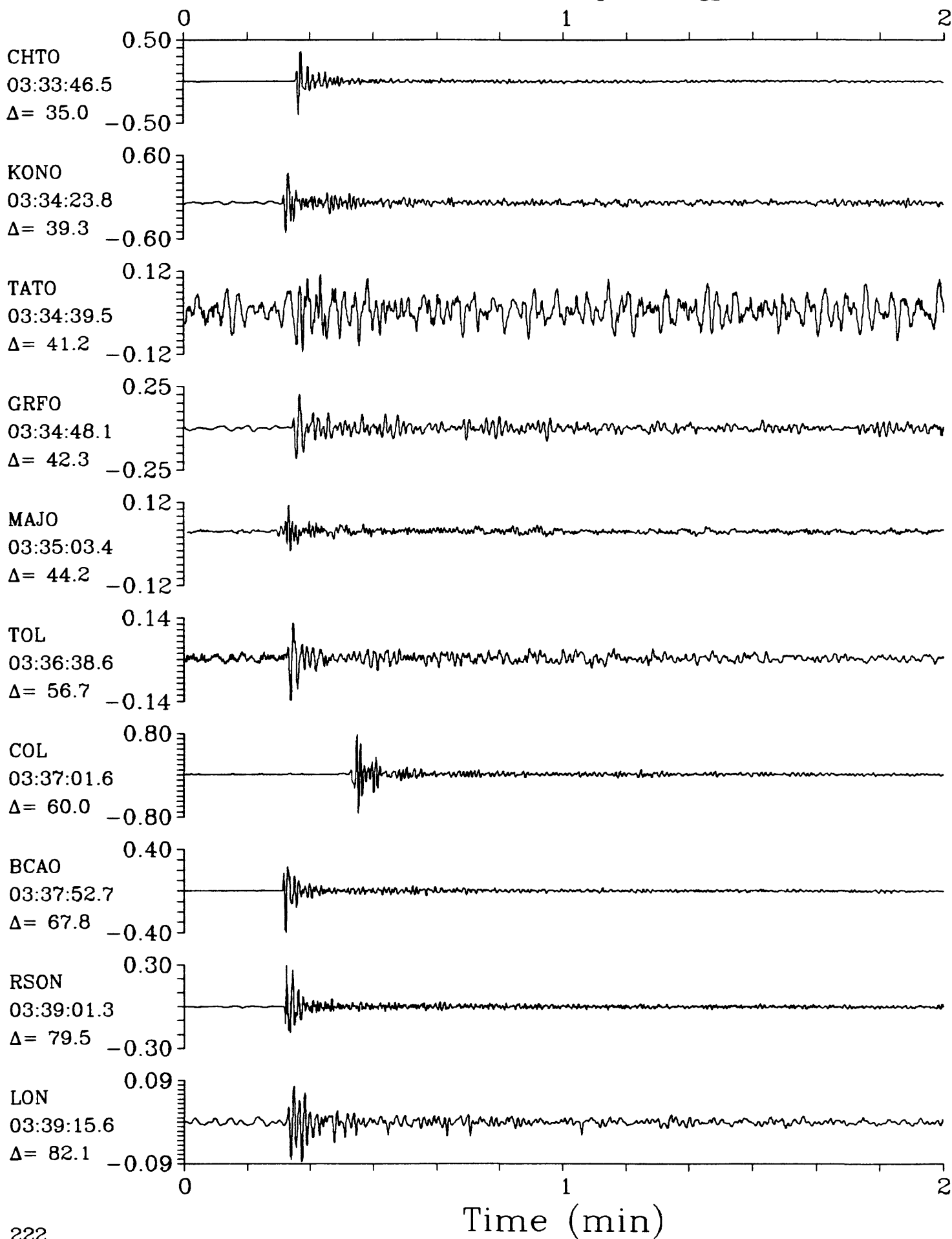
## Eastern Kazakh SSR



SPZ

10 February 1985 03:27:07.52

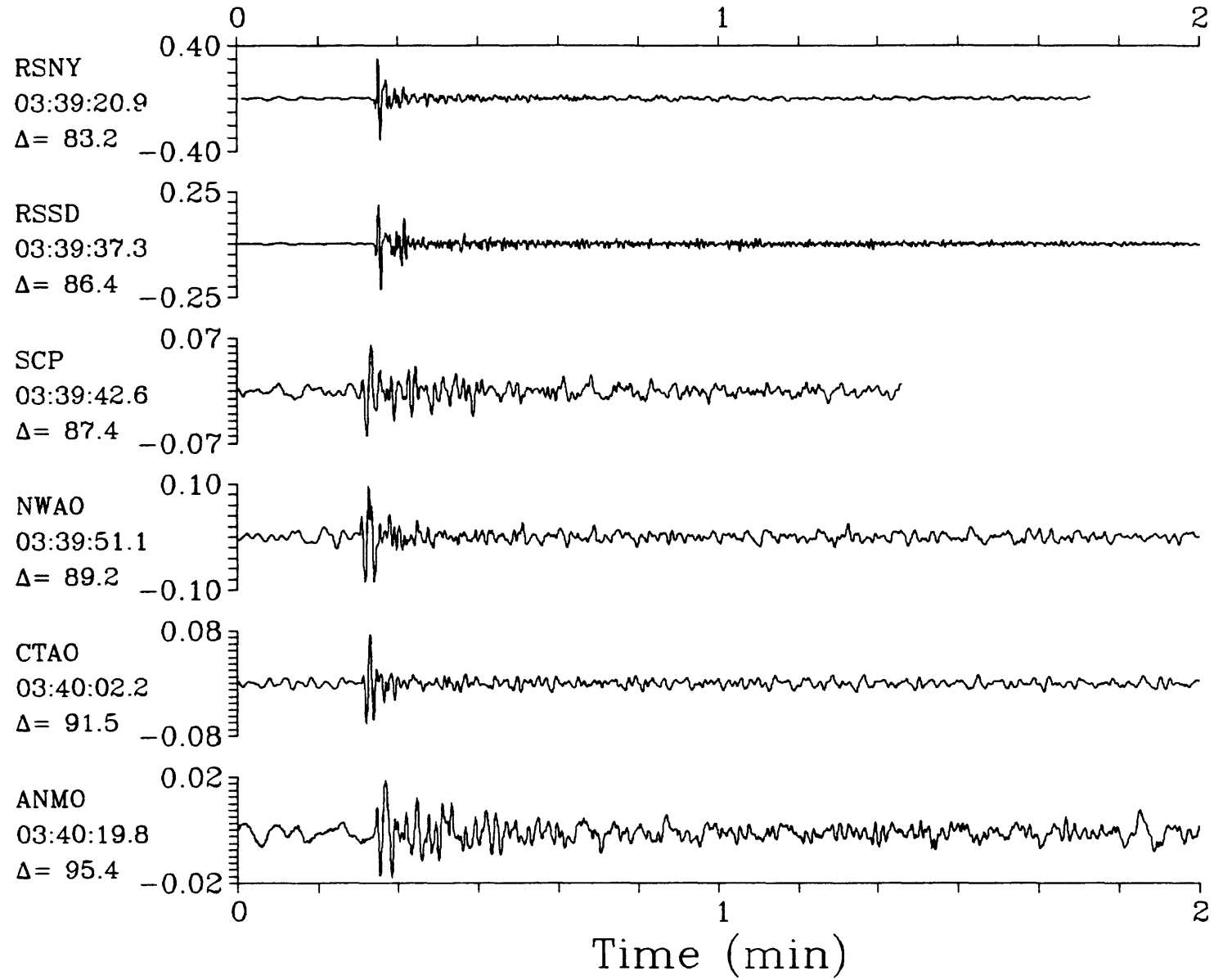
SPZ

Eastern Kazakh SSR  $h=0.0$   $m_b=5.9$   $M_{sz}=4.4$ 

SPZ

10 February 1985 03:27:07.52

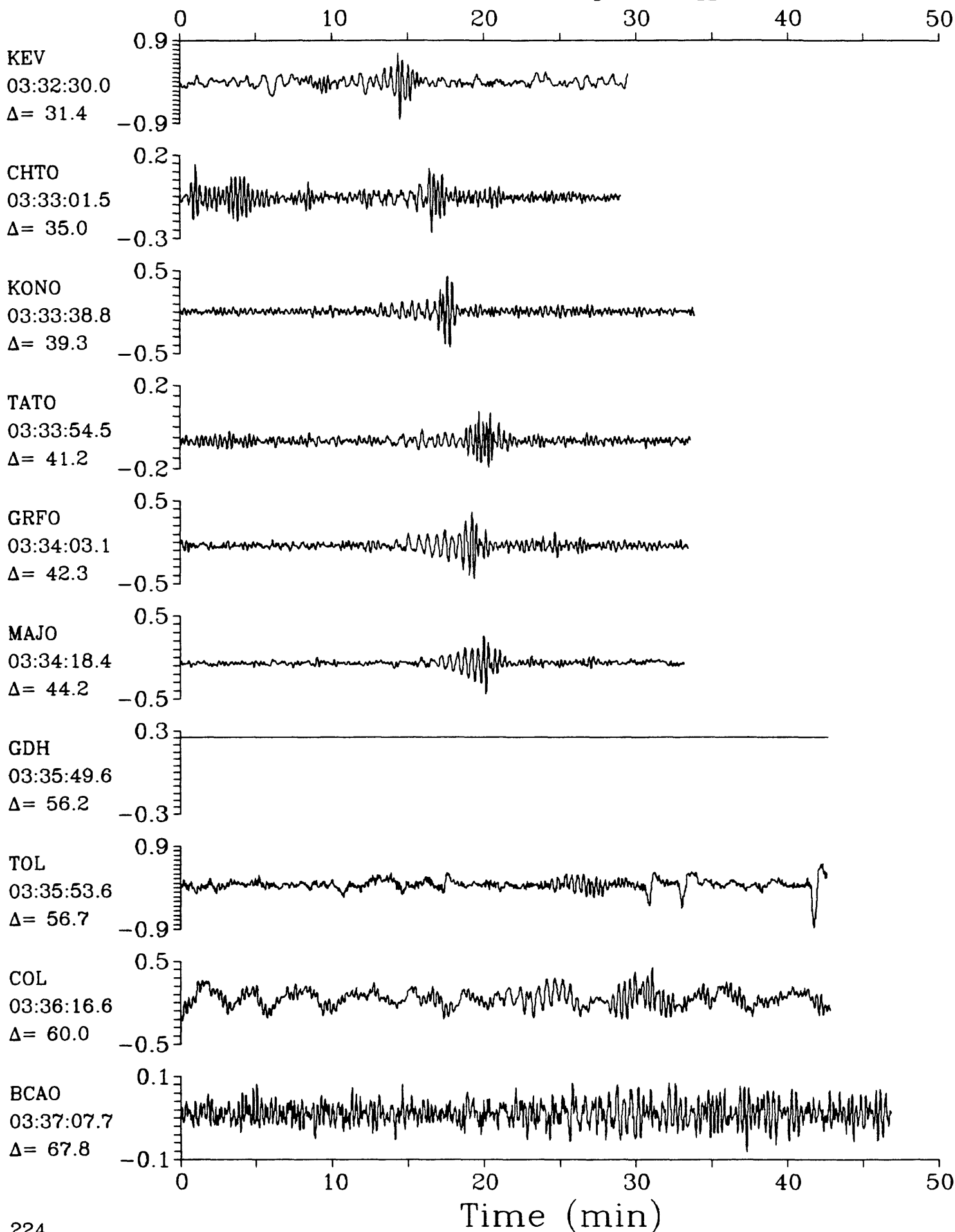
SPZ

Eastern Kazakh SSR  $h=0.0$   $m_b=5.9$   $M_{sz}=4.4$ 

LPZ

10 February 1985 03:27:07.52

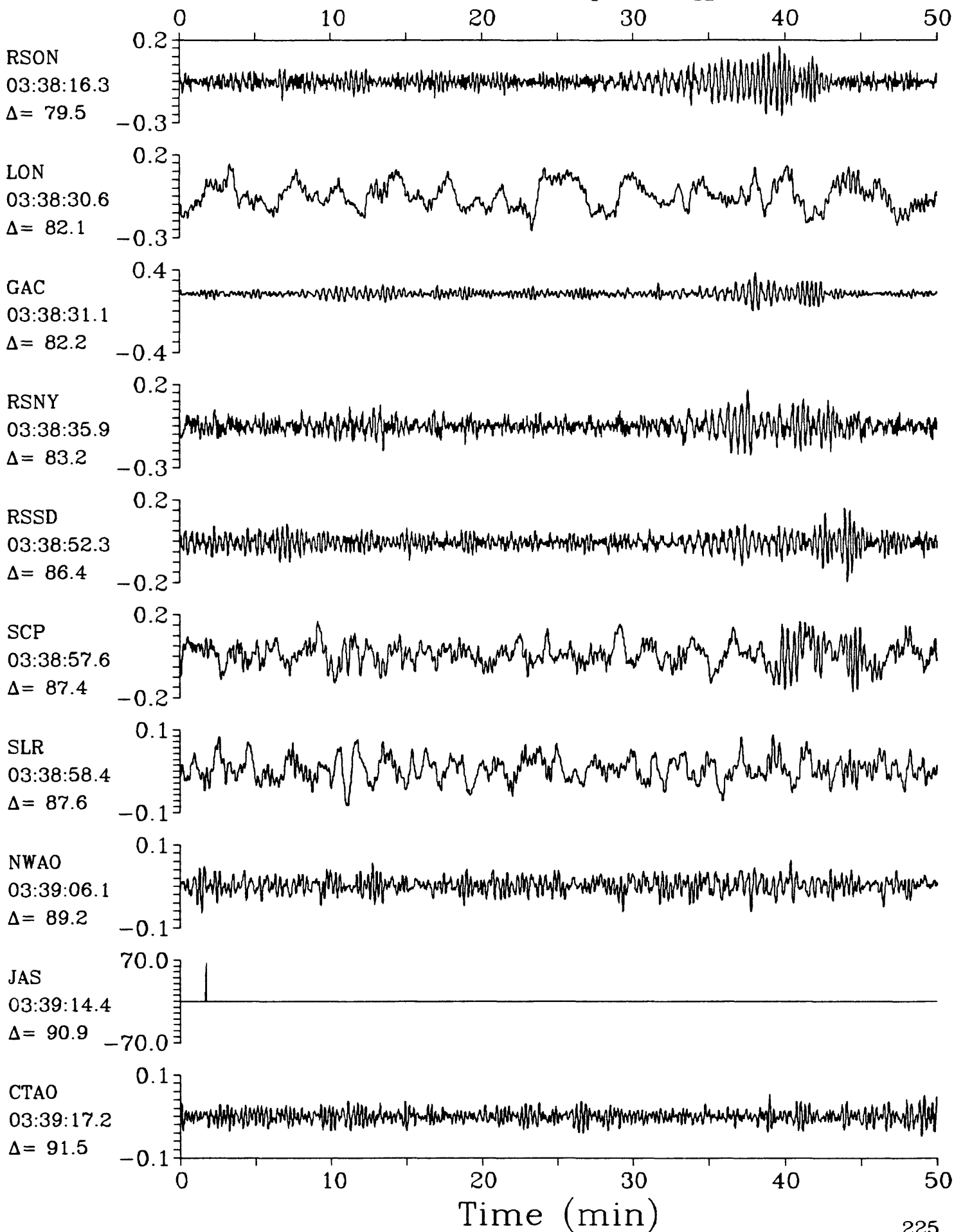
LPZ

Eastern Kazakh SSR  $h=0.0$   $m_b=5.9$   $M_{SZ}=4.4$ 

LPZ

10 February 1985 03:27:07.52

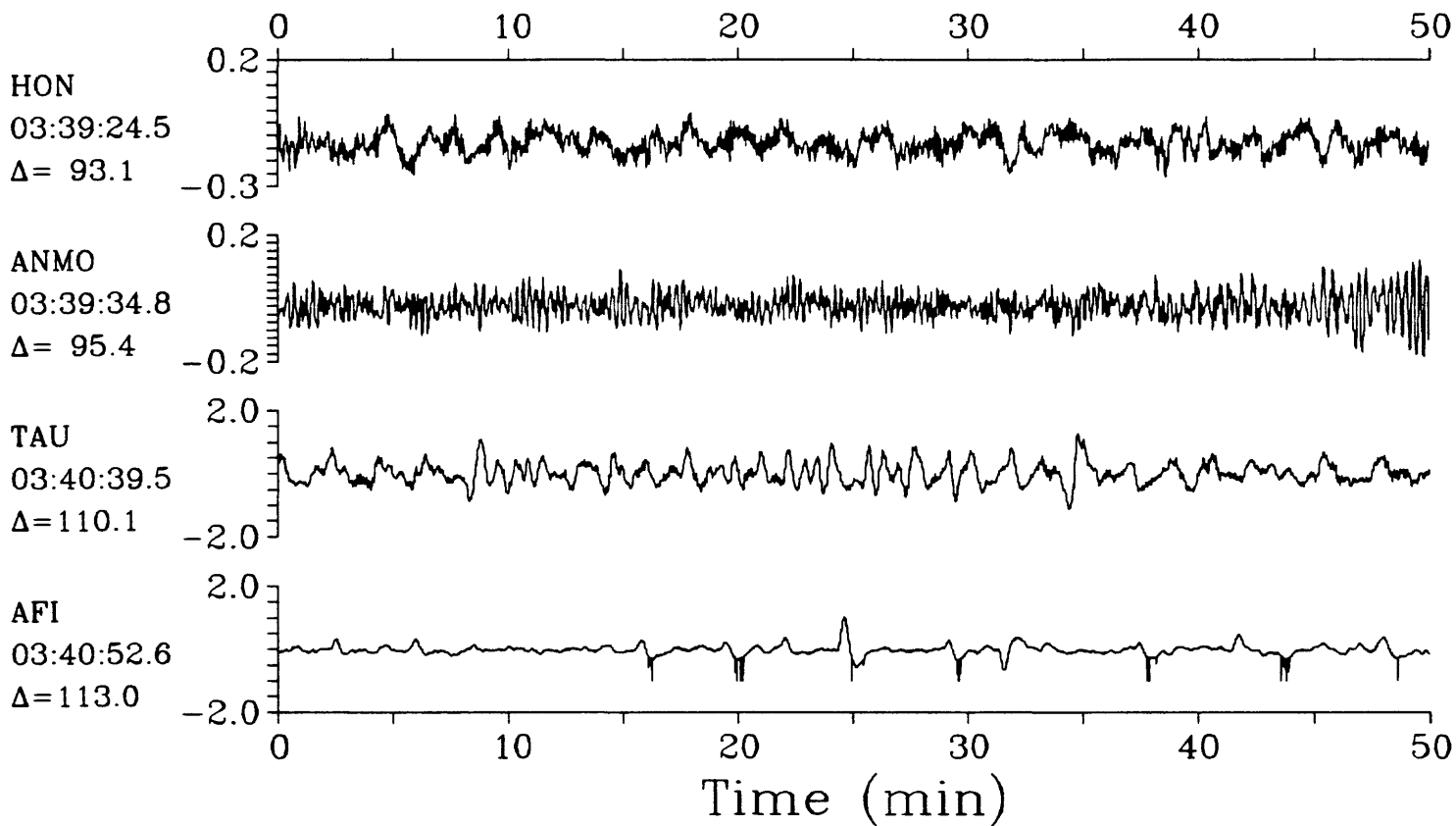
LPZ

Eastern Kazakh SSR  $h=0.0$   $m_b=5.9$   $M_{sz}=4.4$ 

LPZ

10 February 1985 03:27:07.52

LPZ

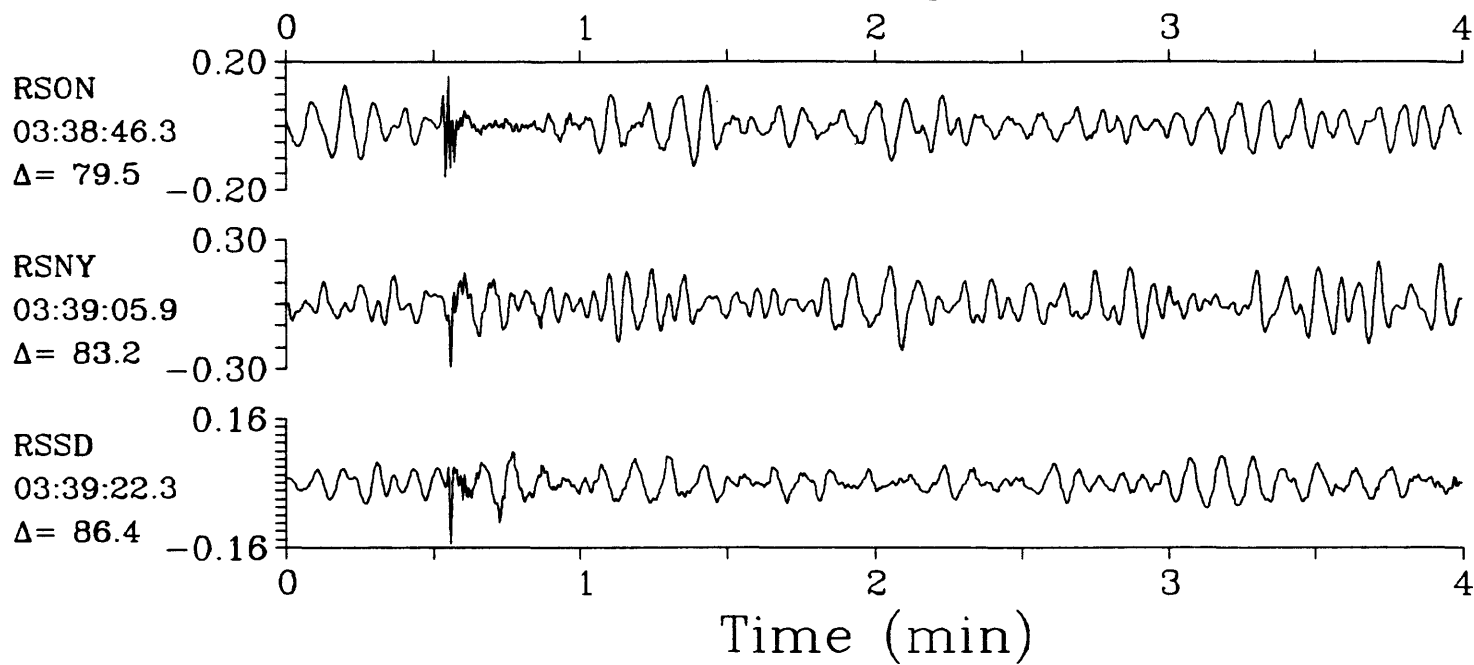
Eastern Kazakh SSR  $h=0.0$   $m_b=5.9$   $M_{sz}=4.4$ 



IPZ

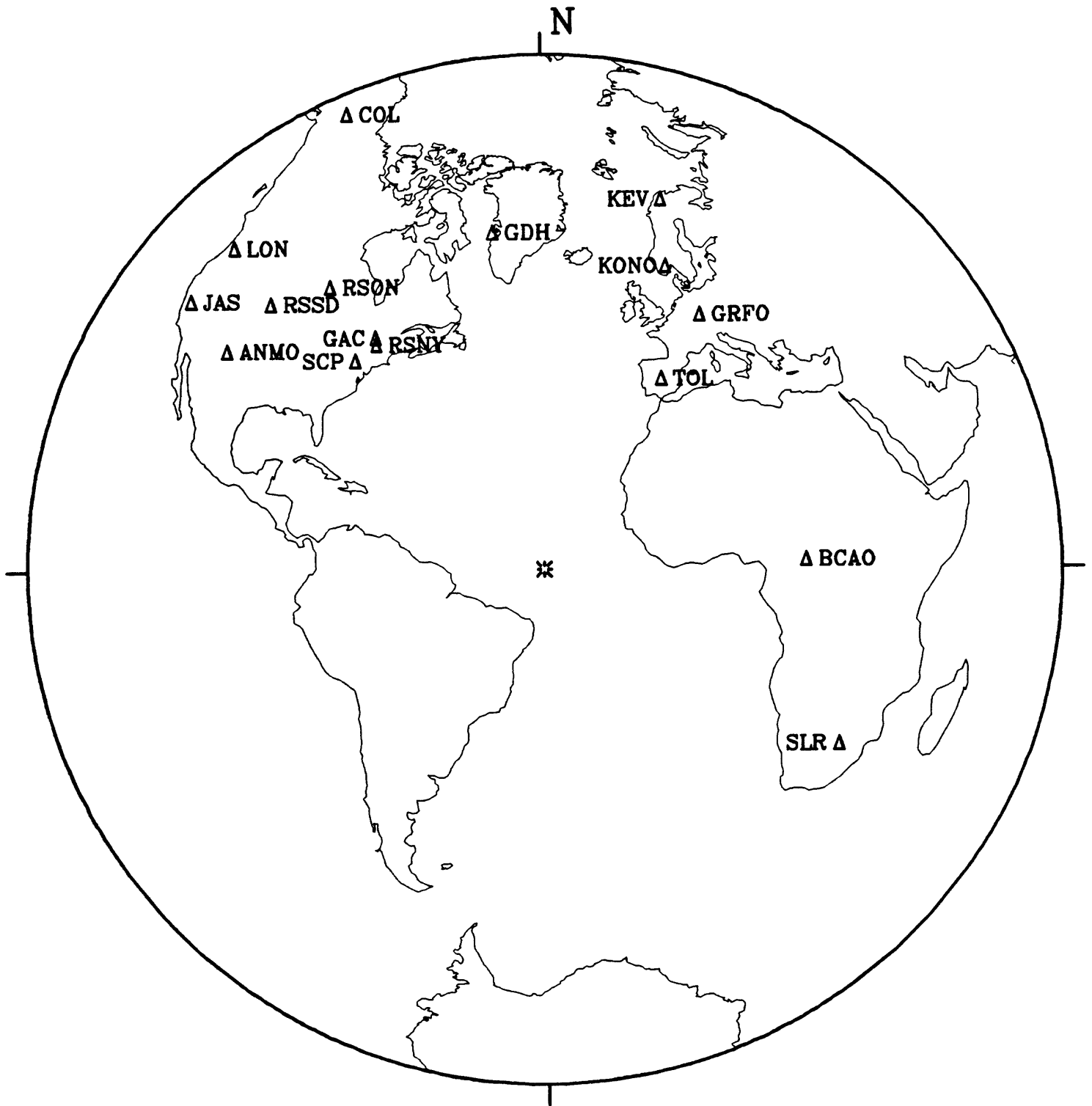
10 February 1985 03:27:07.52

IPZ

Eastern Kazakh SSR  $h=0.0$   $m_b=5.9$   $M_{sz}=4.4$ 

11 February 1985 07:39:33.06

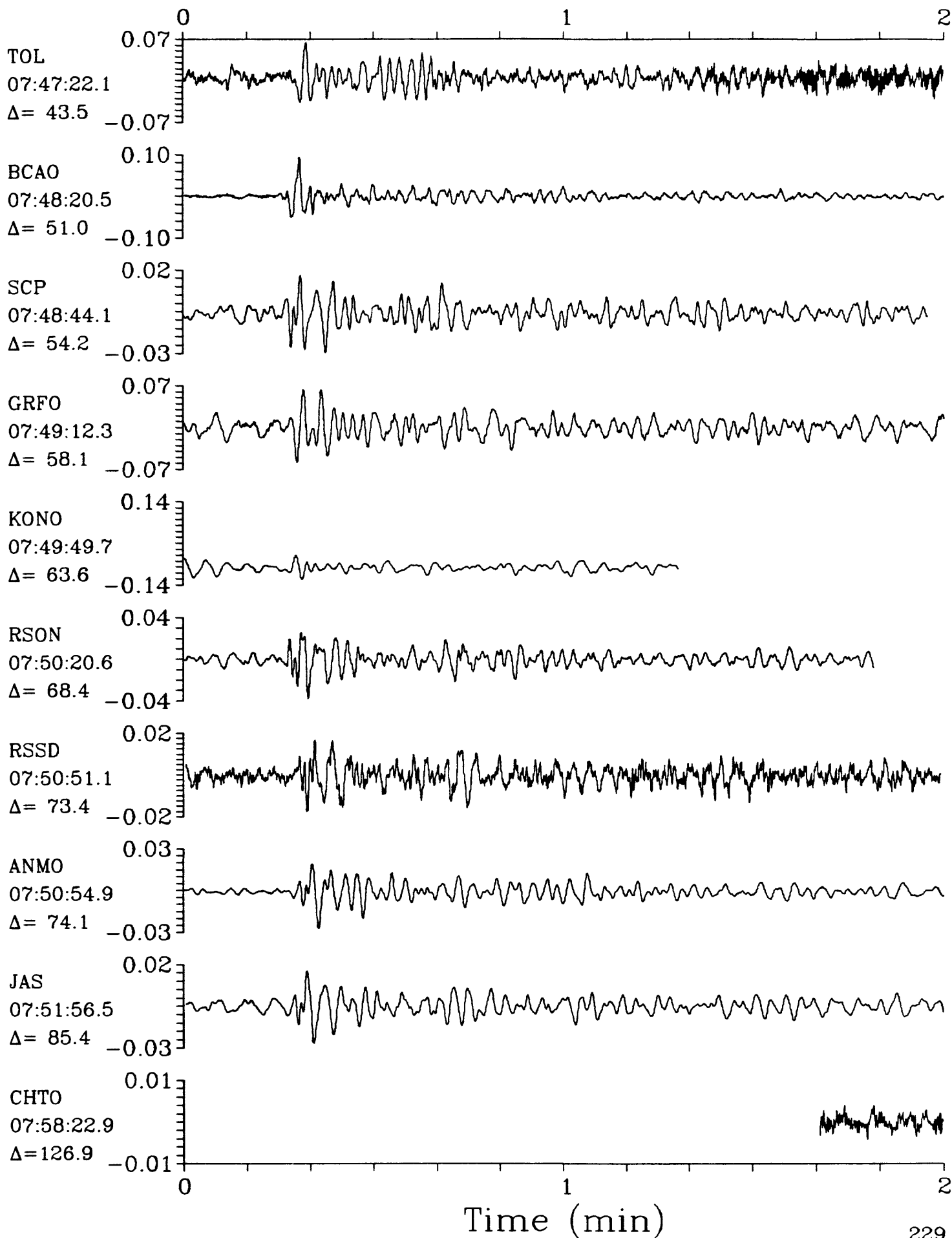
## Central Mid-Atlantic Ridge



SPZ

11 February 1985 07:39:33.06

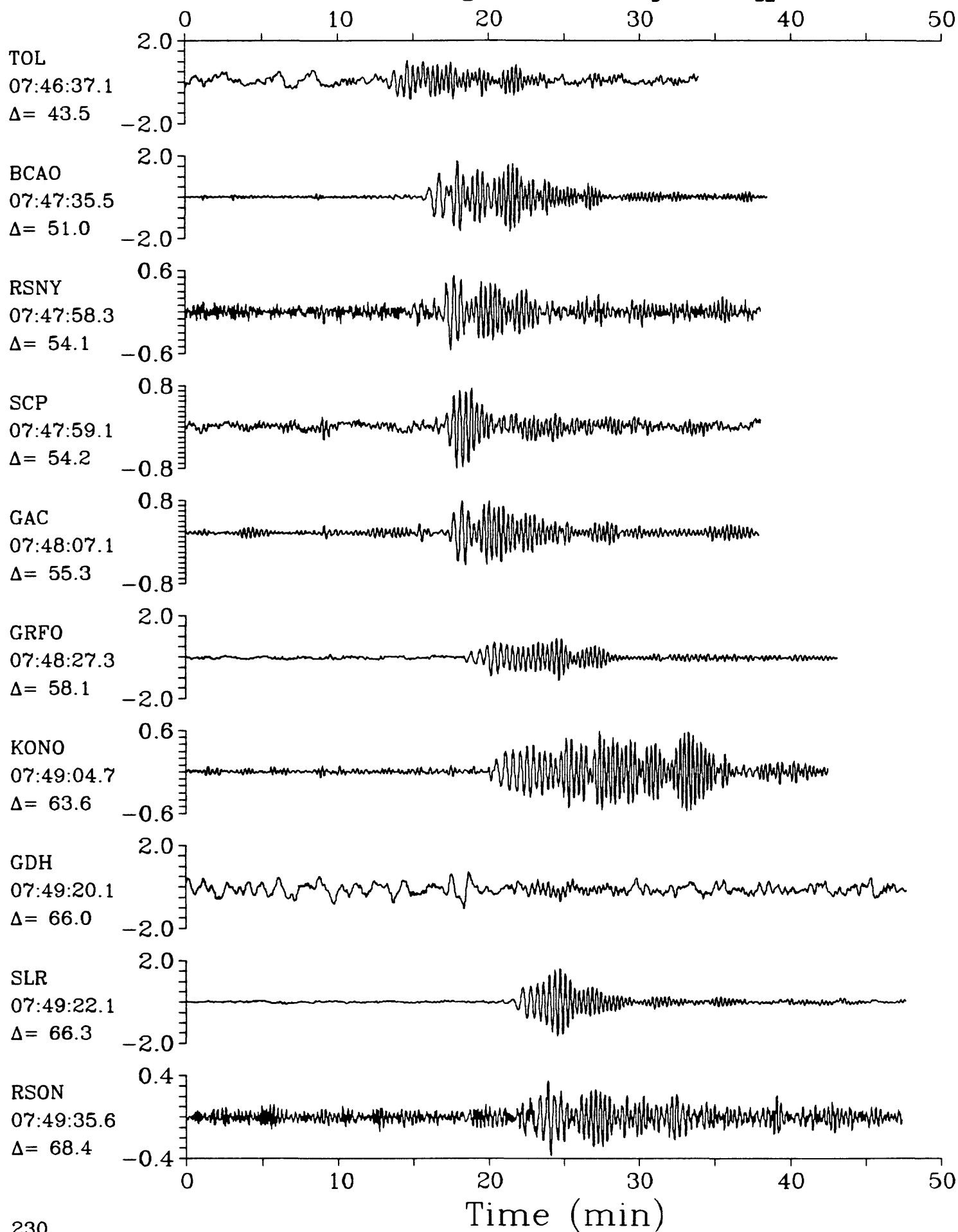
SPZ

Central Mid-Atlantic Ridge  $h=10.0$   $m_b=5.6$   $M_{SZ}=5.2$ 

LPZ

11 February 1985 07:39:33.06

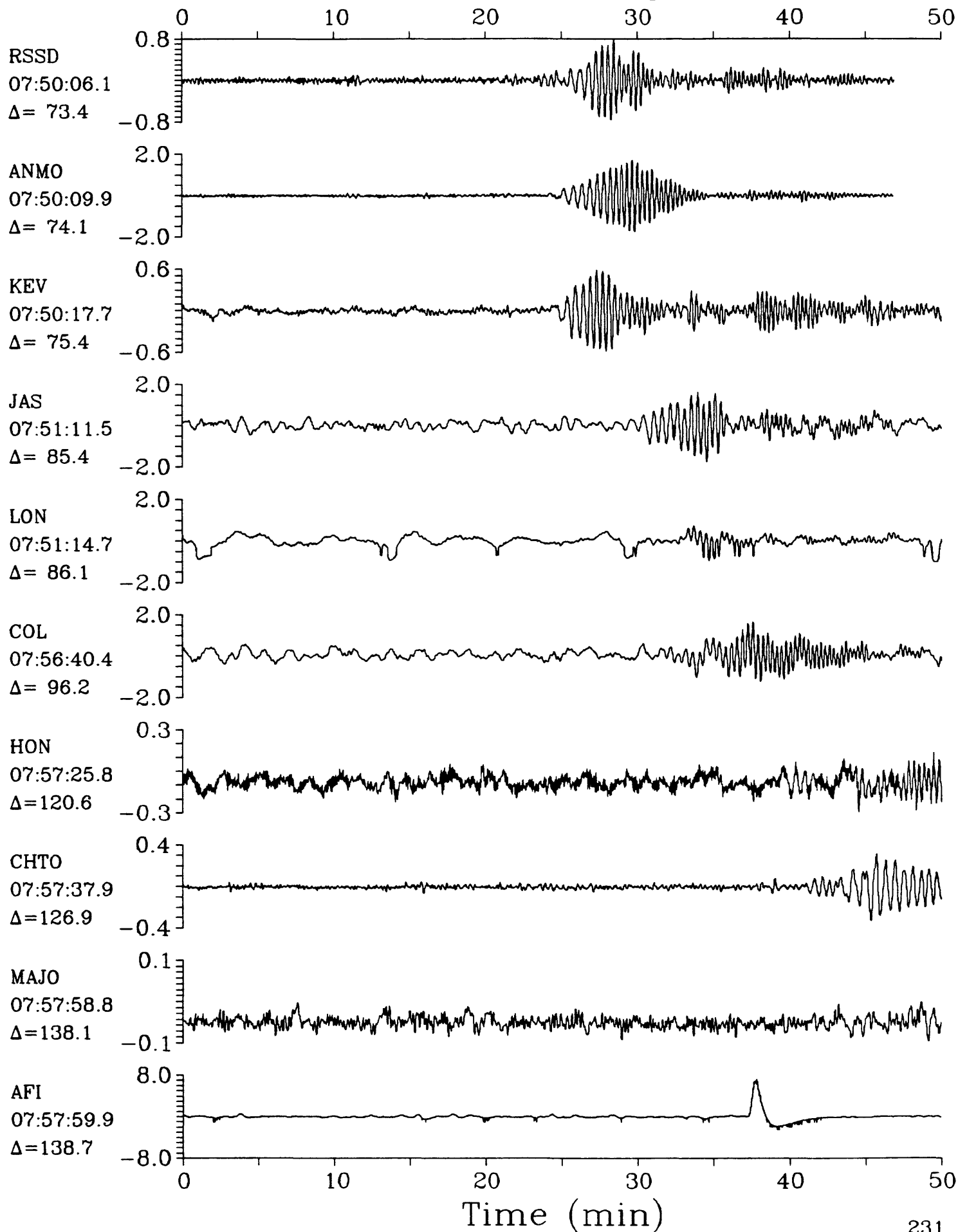
LPZ

Central Mid-Atlantic Ridge  $h=10.0$   $m_b=5.6$   $M_{sz}=5.2$ 

LPZ

11 February 1985 07:39:33.06

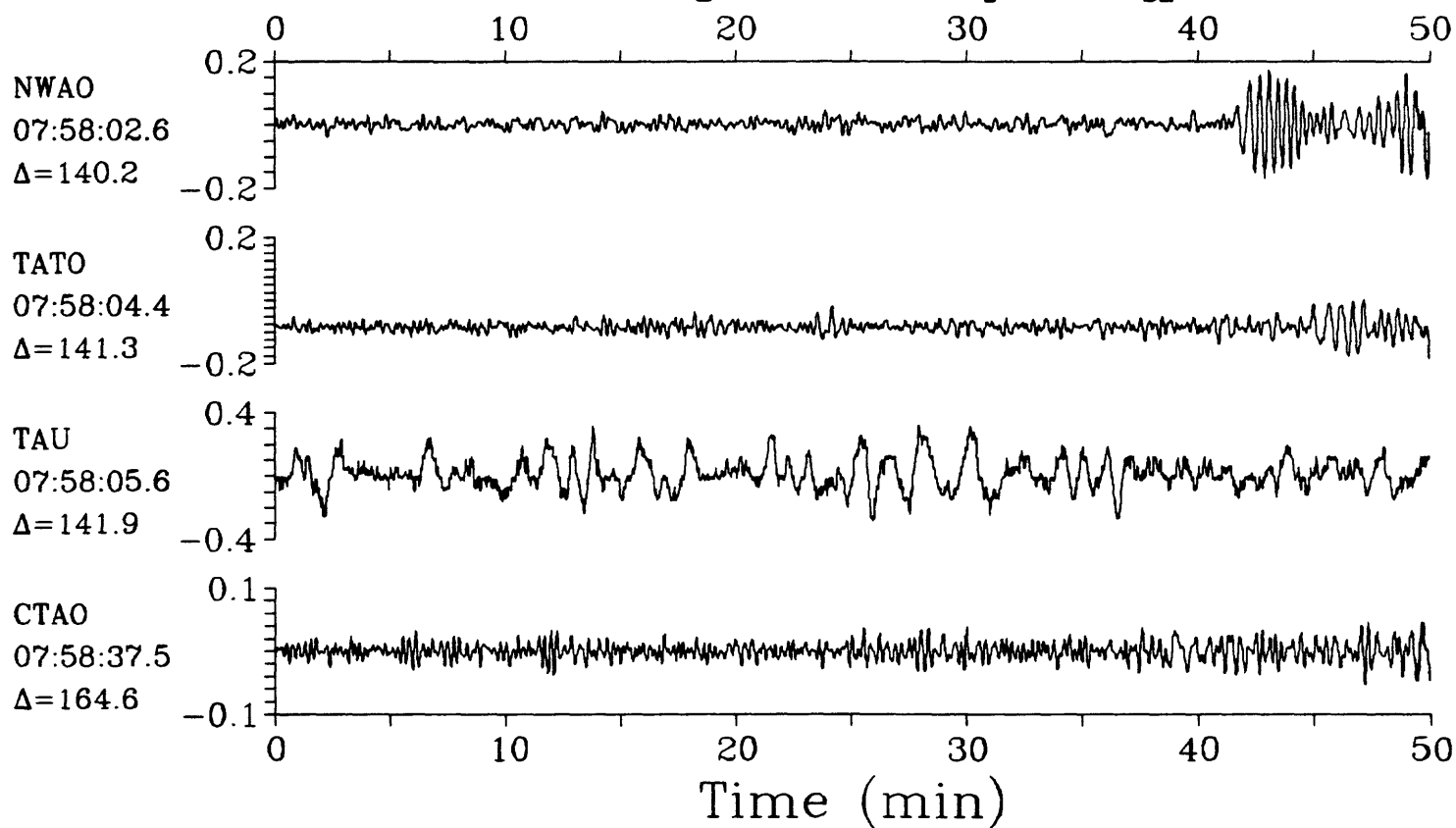
LPZ

Central Mid-Atlantic Ridge  $h=10.0$   $m_b=5.6$   $M_{sz}=5.2$ 

LPZ

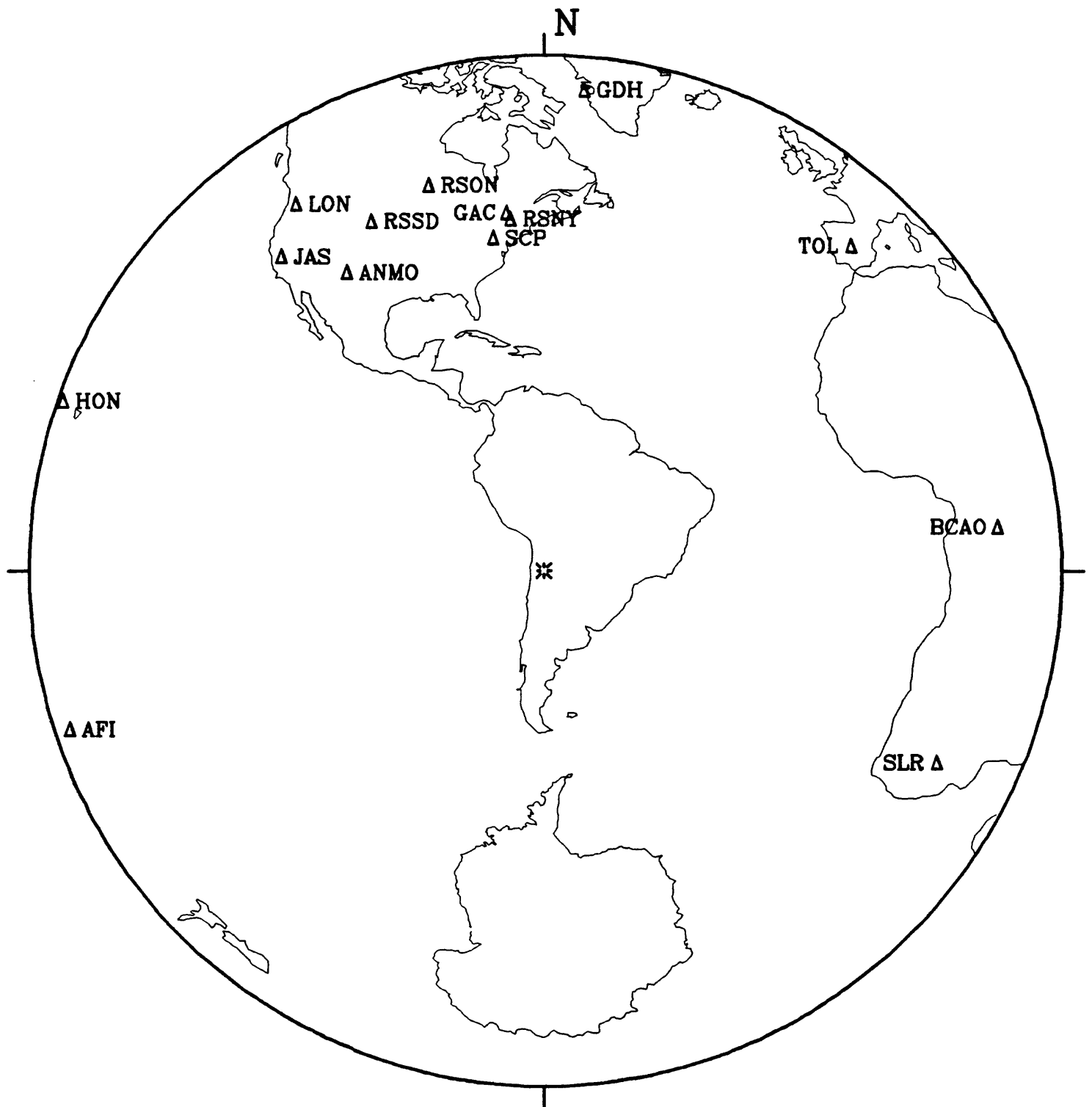
11 February 1985 07:39:33.06

LPZ

Central Mid-Atlantic Ridge  $h=10.0$   $m_b=5.6$   $M_{sz}=5.2$ 

14 February 1985 08:30:55.62

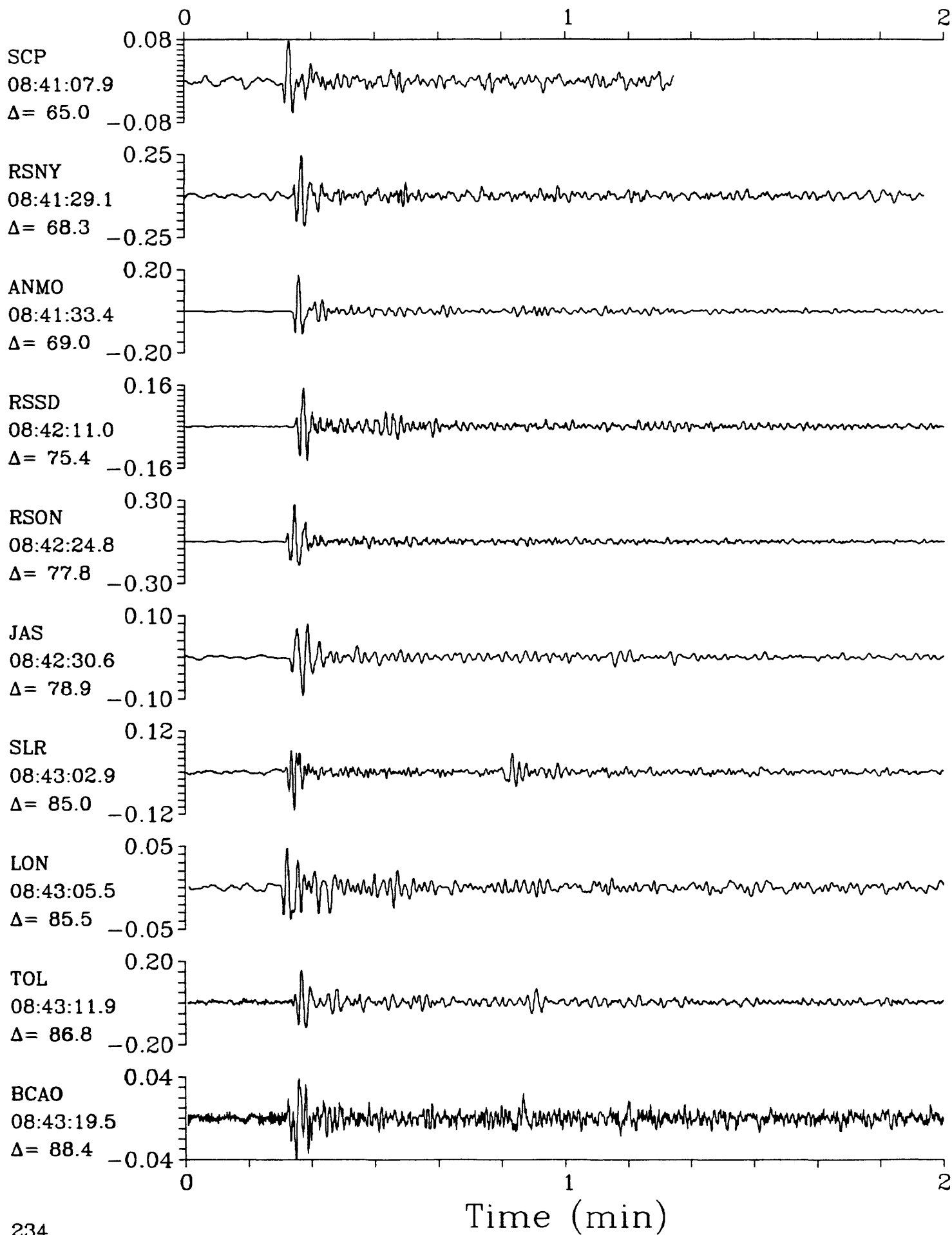
## Chile–Argentina Border Region



SPZ

14 February 1985 08:30:55.62

SPZ

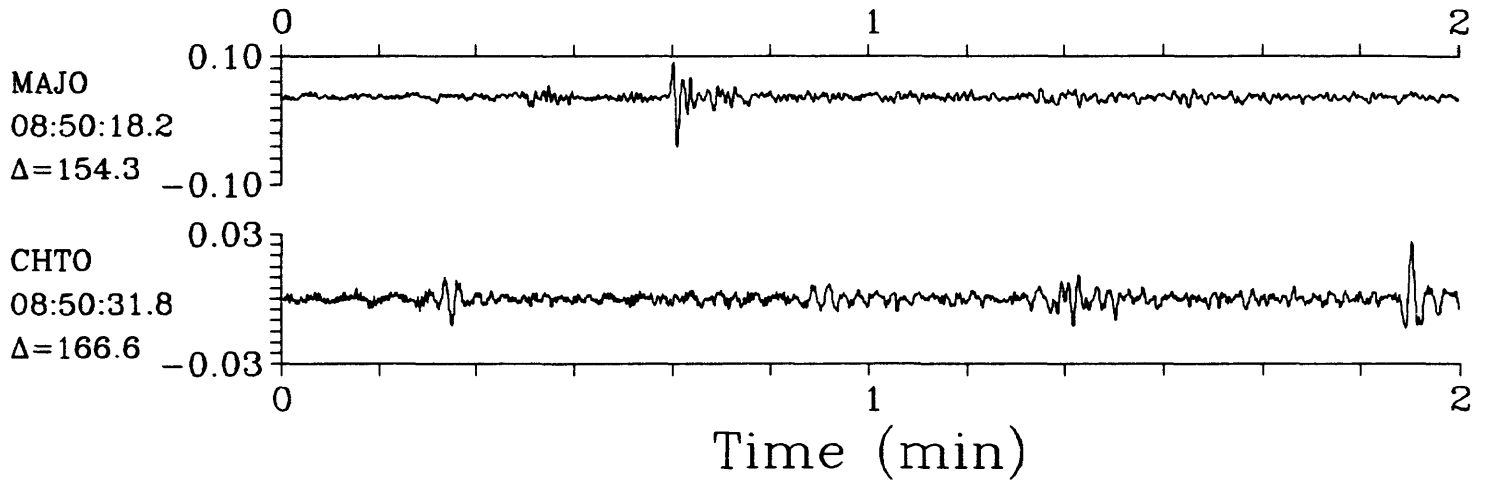
Chile-Argentina Border Region  $h=122.9$   $m_b=5.6$ 



SPZ

14 February 1985 08:30:55.62

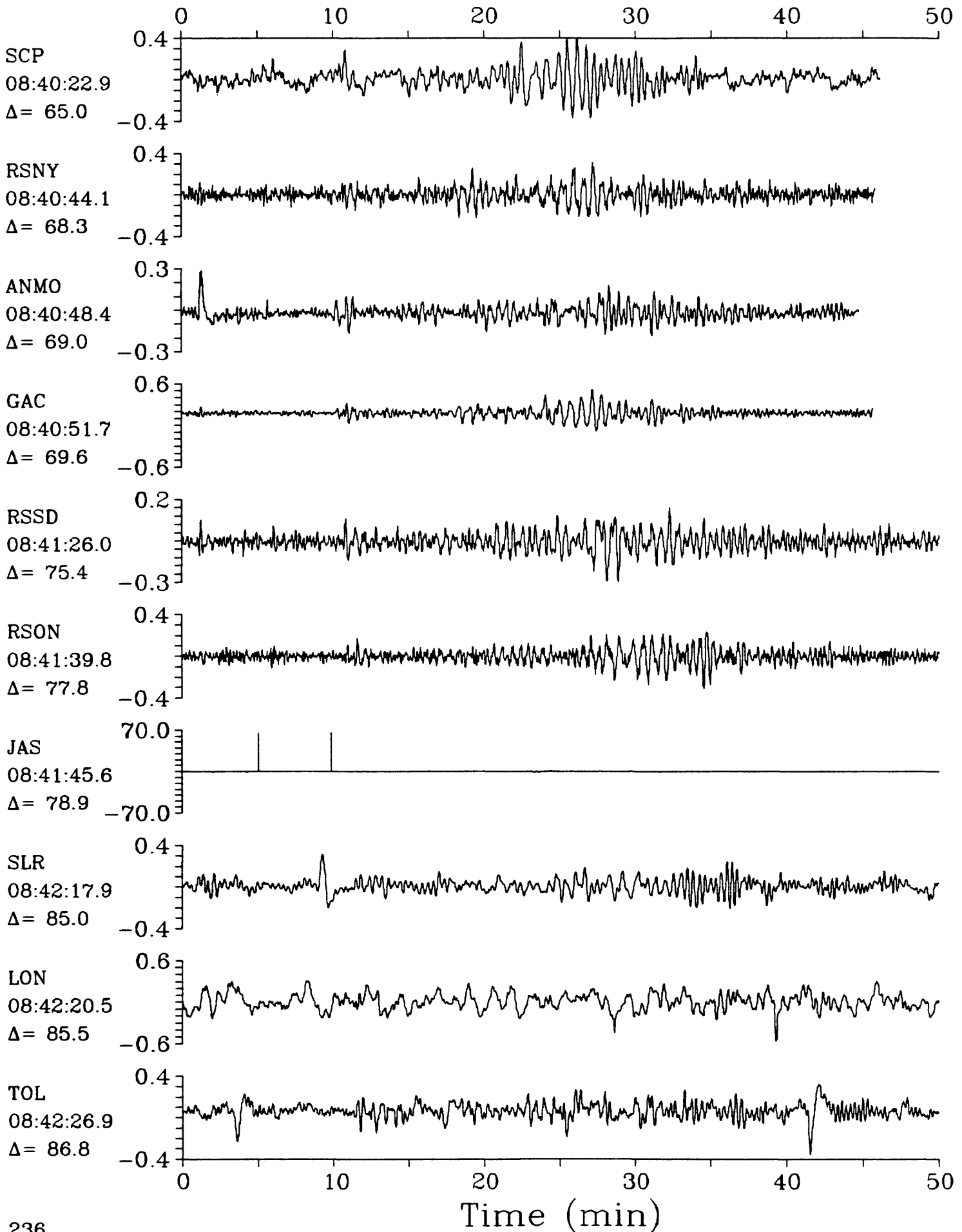
SPZ

Chile-Argentina Border Region  $h=122.9$   $m_b=5.6$ 

LPZ

14 February 1985 08:30:55.62

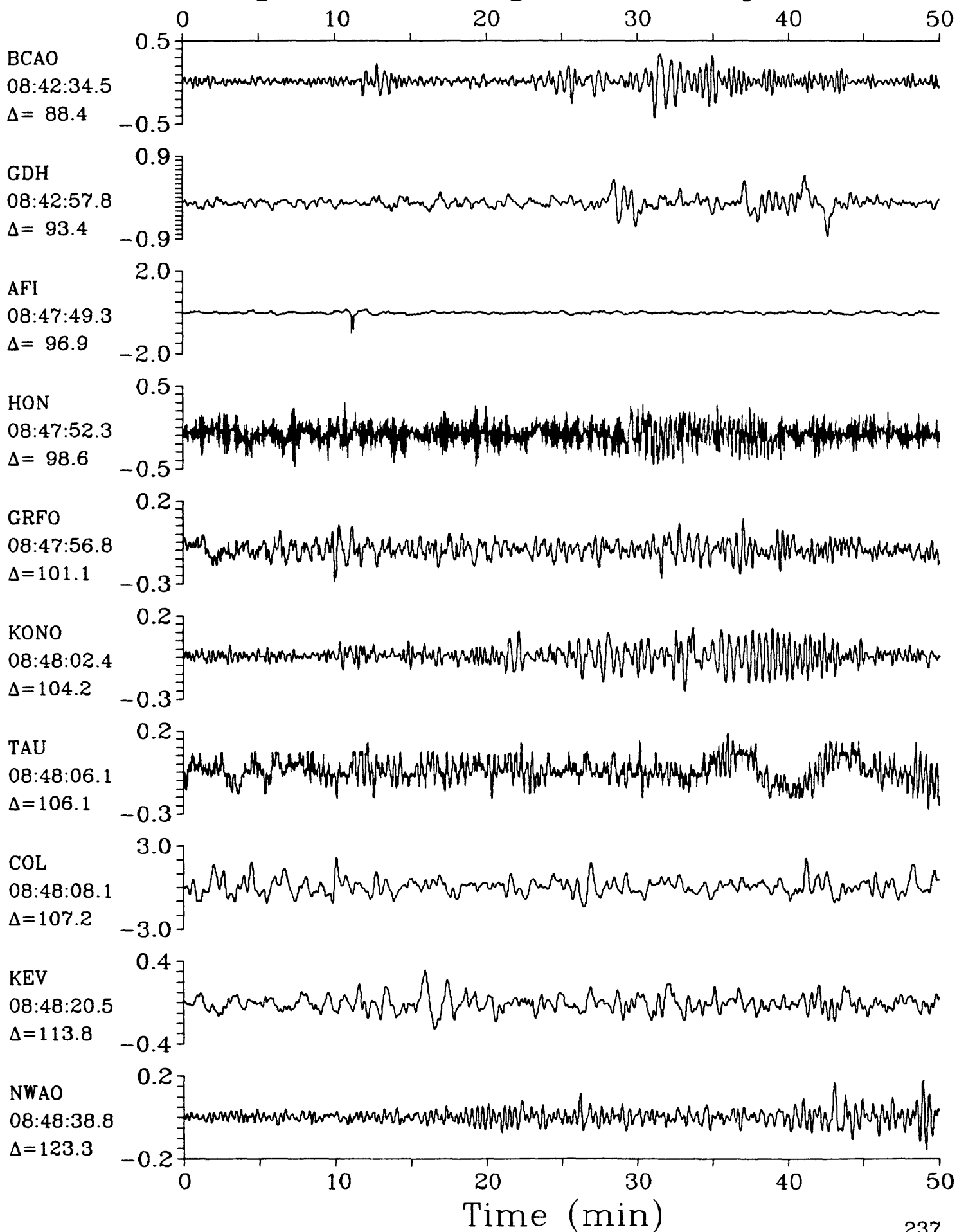
LPZ

Chile-Argentina Border Region  $h=122.9$   $m_b=5.6$ 

LPZ

14 February 1985 08:30:55.62

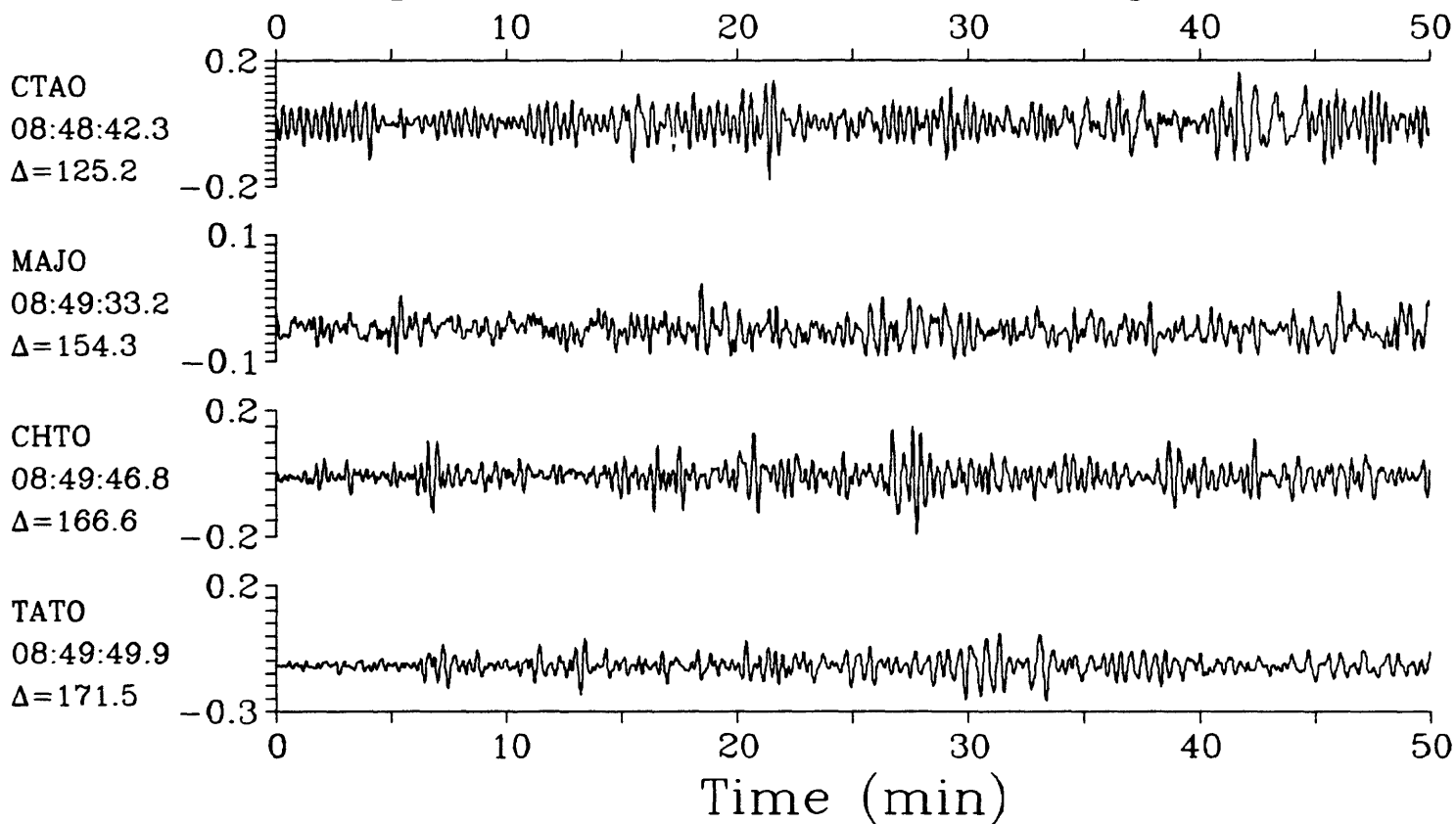
LPZ

Chile-Argentina Border Region  $h=122.9$   $m_b=5.6$ 

LPZ

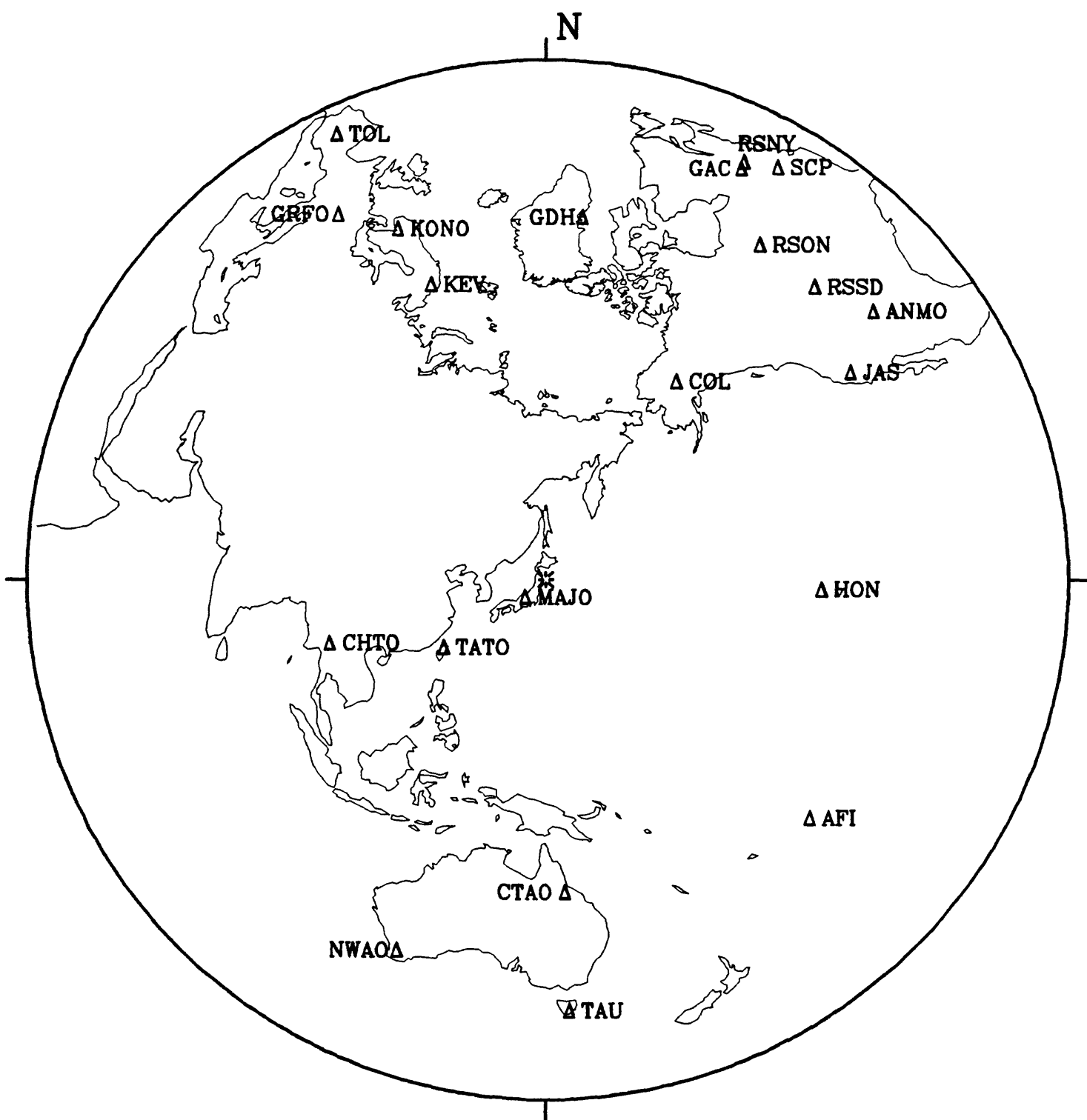
14 February 1985 08:30:55.62

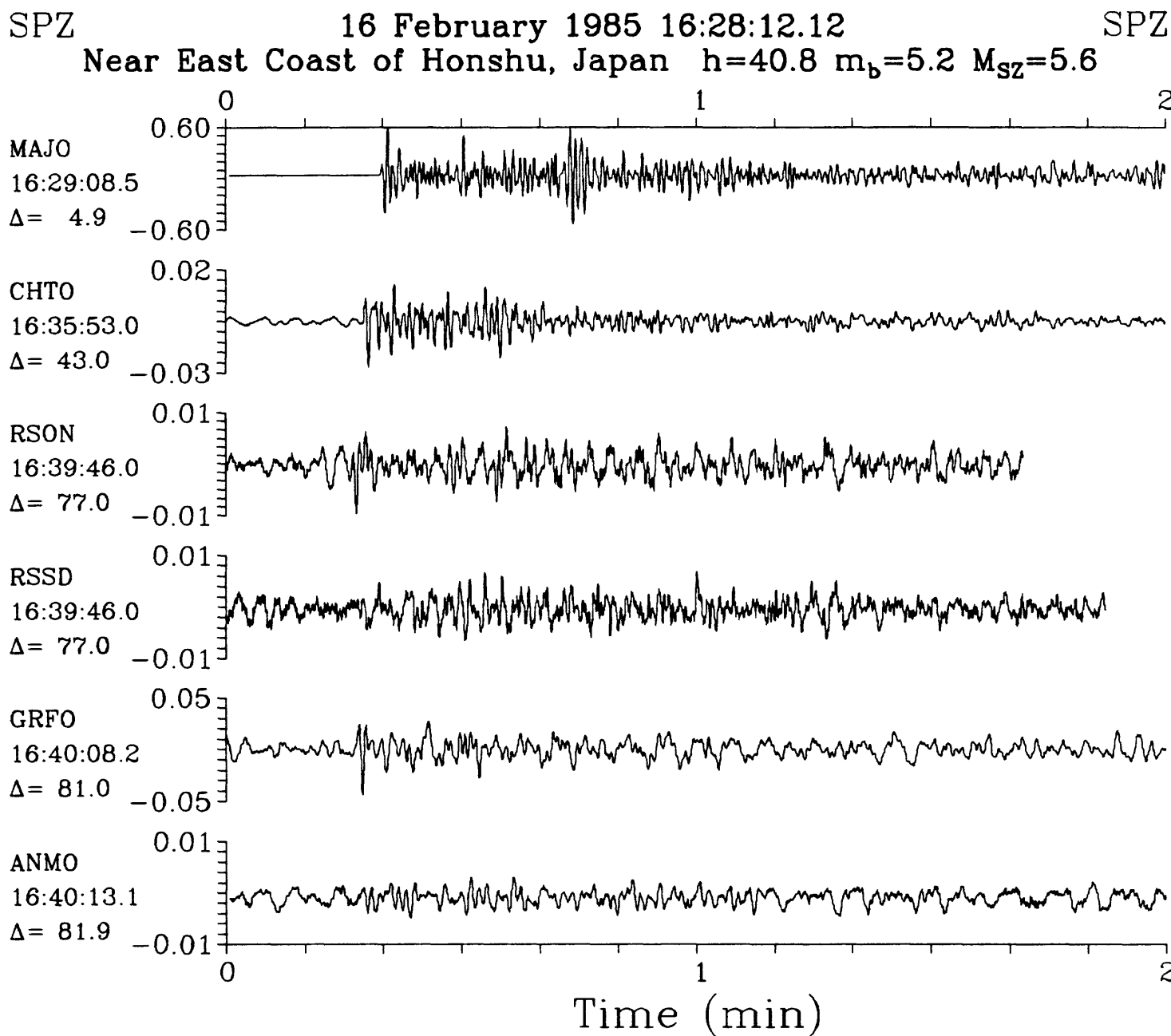
LPZ

Chile-Argentina Border Region  $h=122.9$   $m_b=5.6$ 

16 February 1985 16:28:12.12

Near East Coast of Honshu, Japan

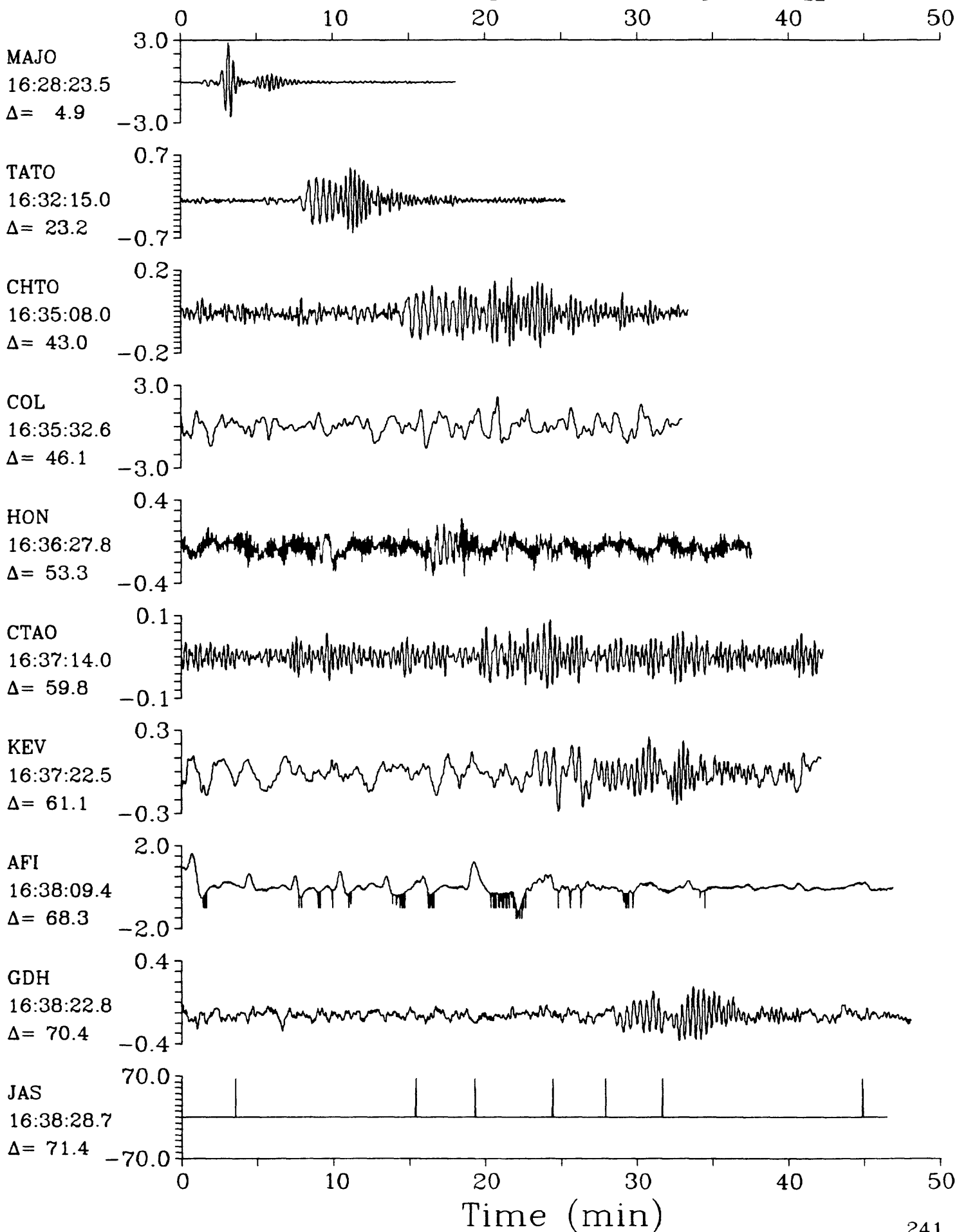




LPZ

16 February 1985 16:28:12.12

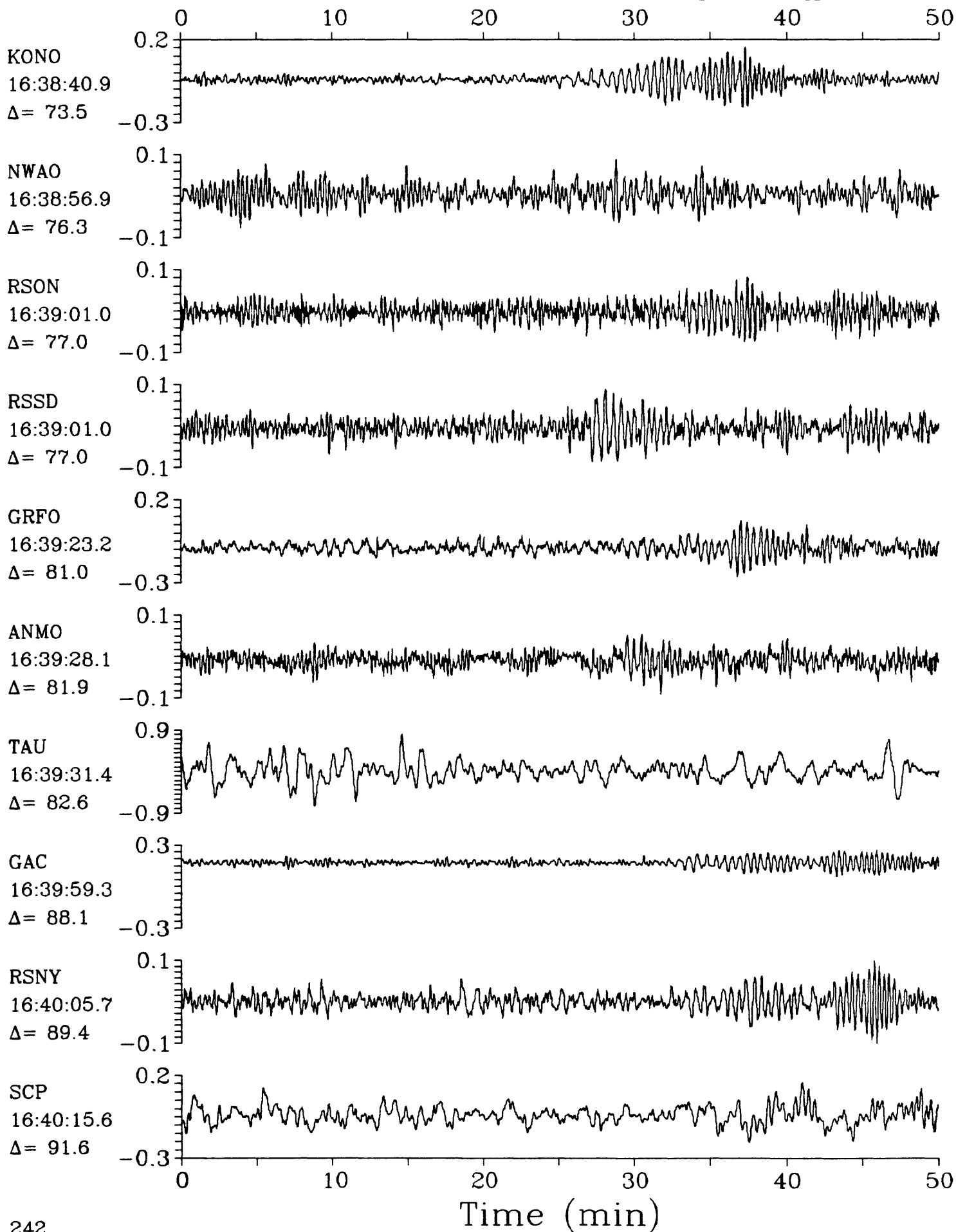
LPZ

Near East Coast of Honshu, Japan  $h=40.8$   $m_b=5.2$   $M_{sz}=5.6$ 

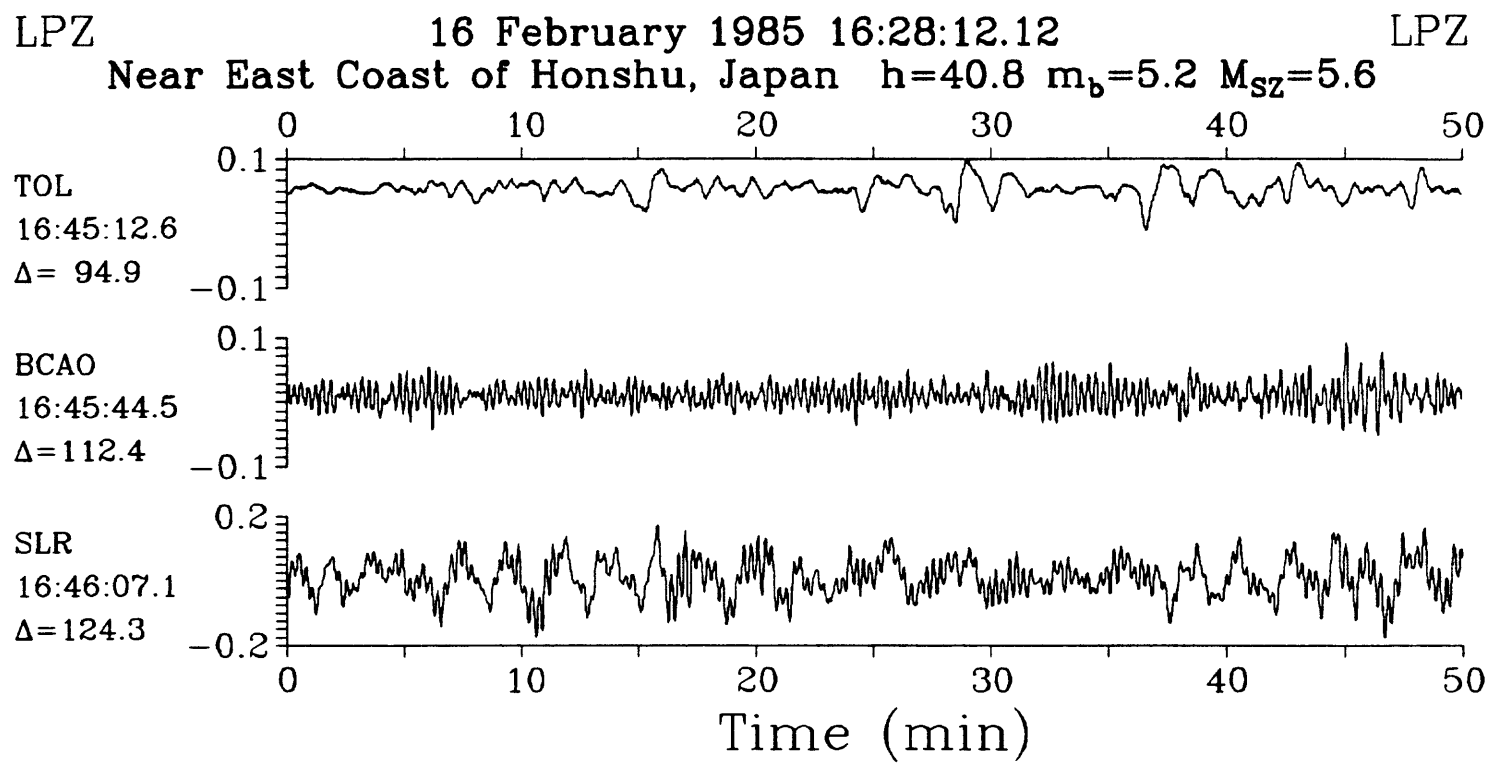
LPZ

16 February 1985 16:28:12.12

LPZ

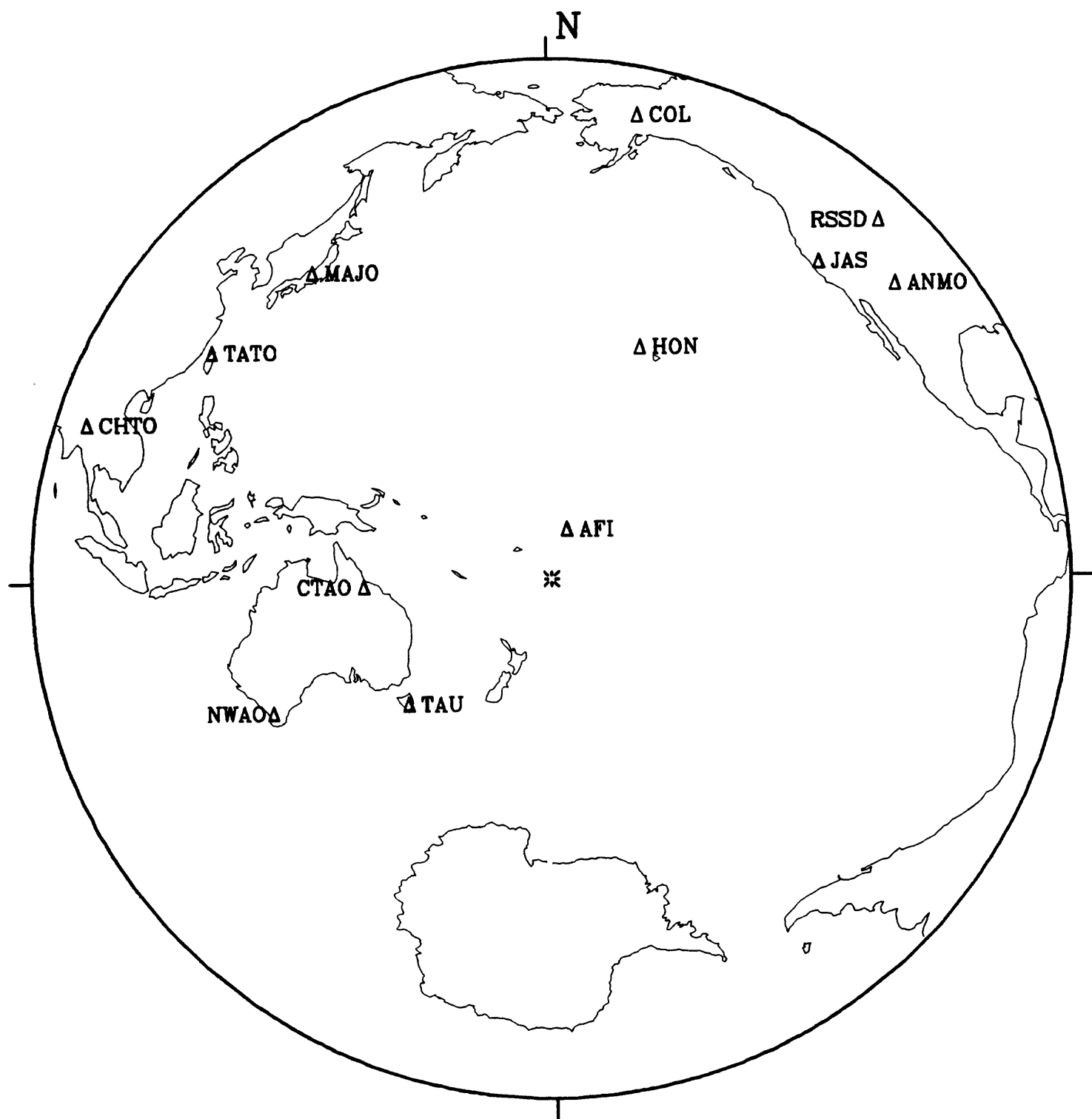
Near East Coast of Honshu, Japan  $h=40.8$   $m_b=5.2$   $M_{sz}=5.6$ 





17 February 1985 02:59:58.43

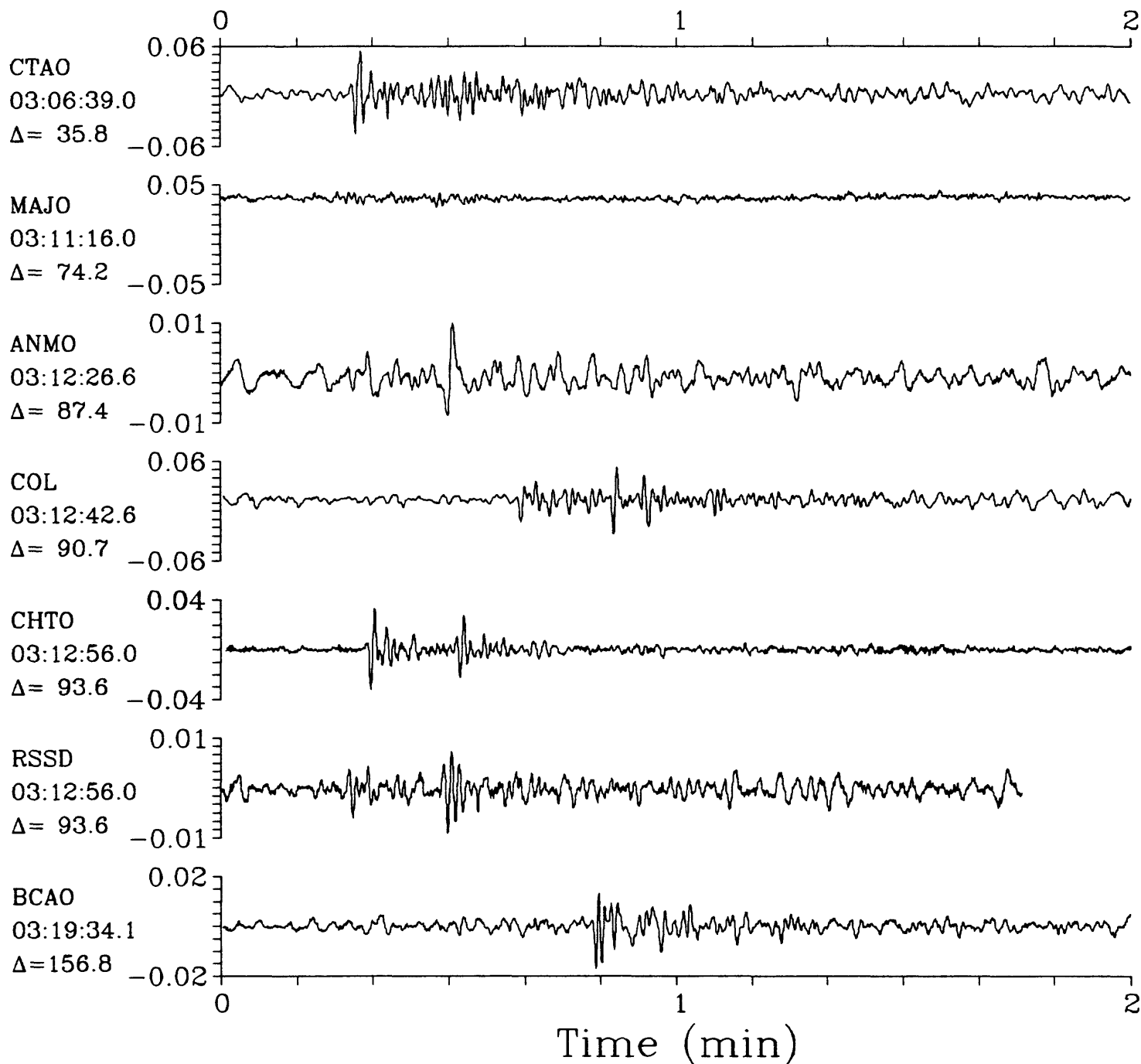
## Tonga Islands Region



SPZ

17 February 1985 02:59:58.43

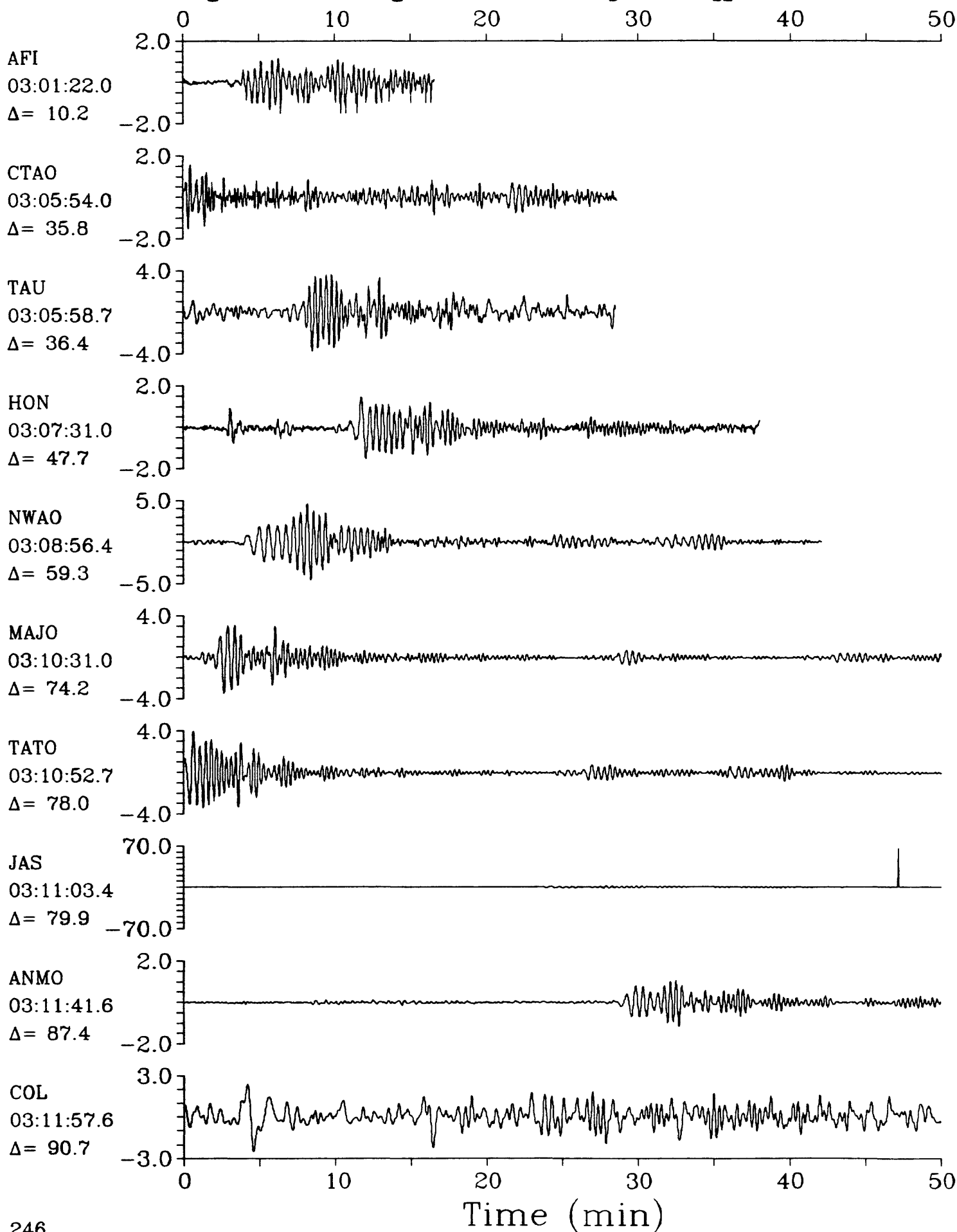
SPZ

Tonga Islands Region  $h=43.5$   $m_b=5.0$   $M_{sz}=5.6$ 

LPZ

17 February 1985 02:59:58.43

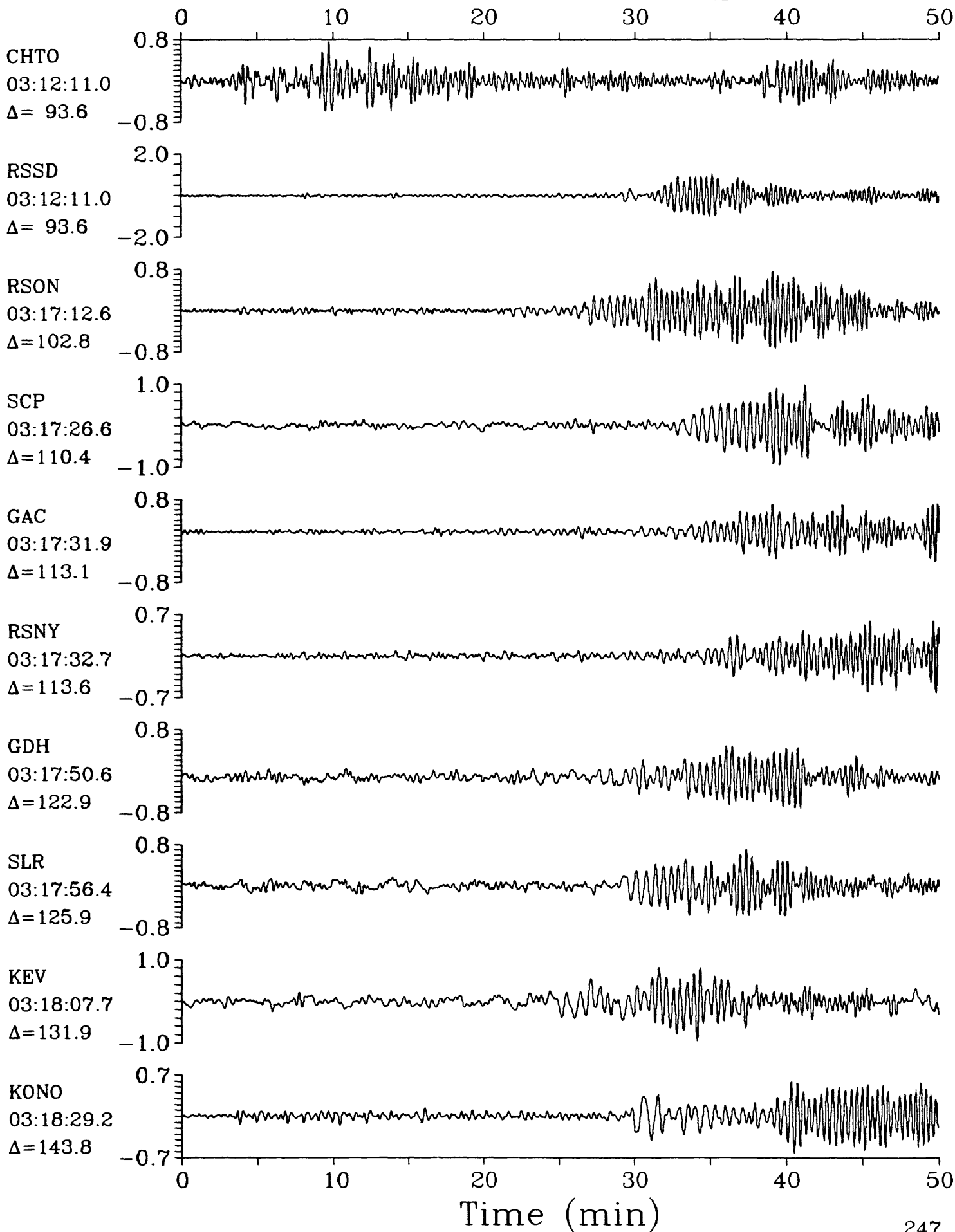
LPZ

Tonga Islands Region  $h=43.5$   $m_b=5.0$   $M_{SZ}=5.6$ 

LPZ

17 February 1985 02:59:58.43

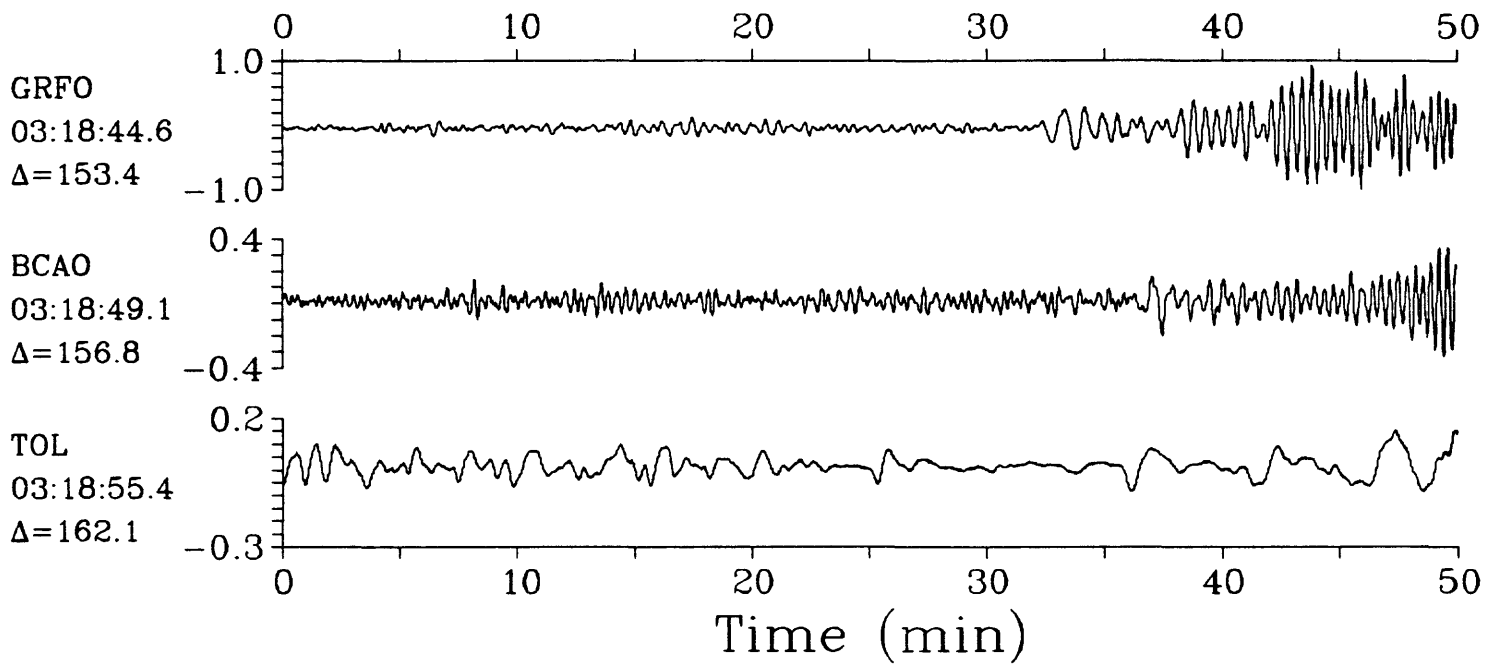
LPZ

Tonga Islands Region  $h=43.5$   $m_b=5.0$   $M_{sz}=5.6$ 

LPZ

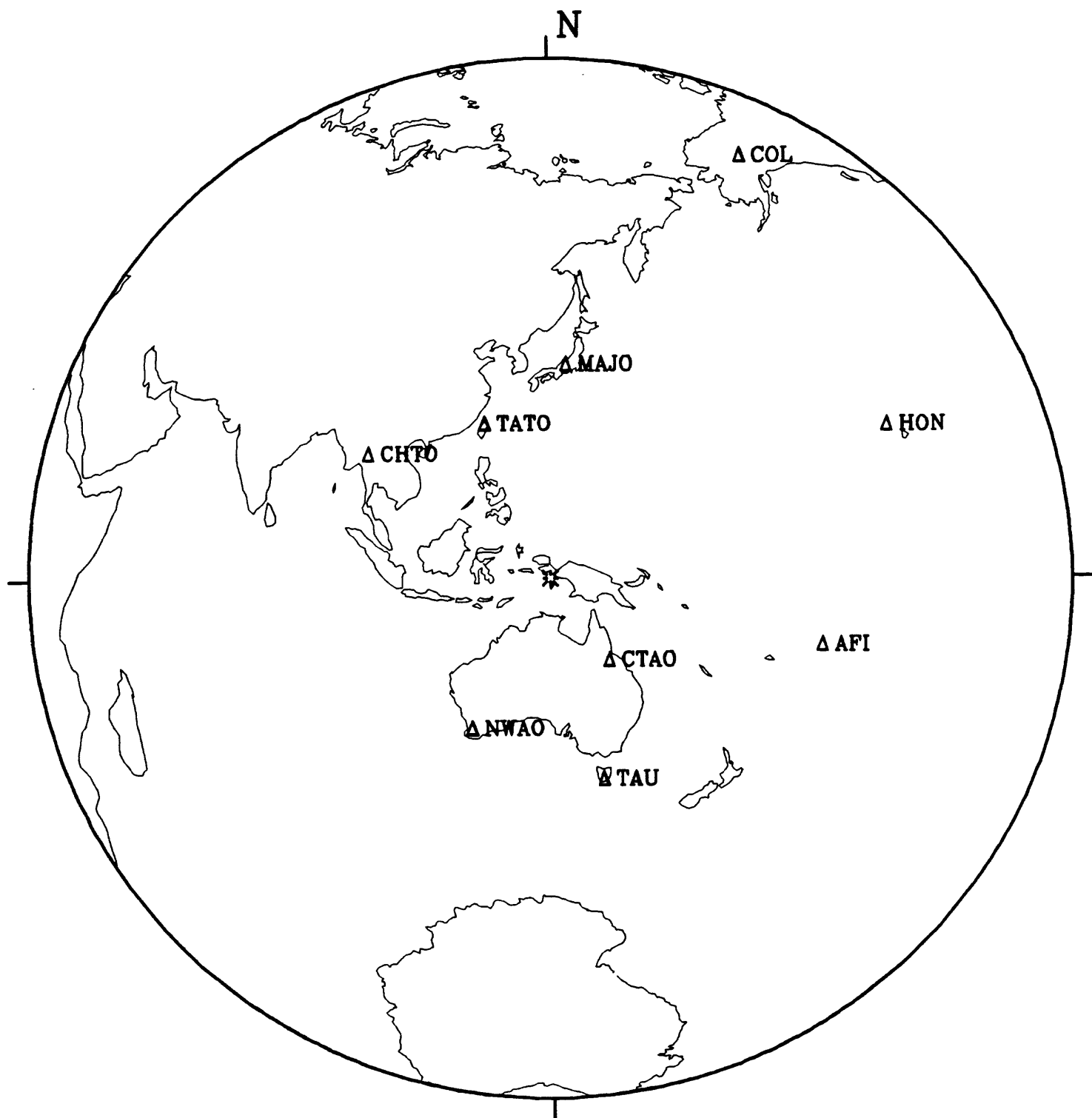
17 February 1985 02:59:58.43

LPZ

Tonga Islands Region  $h=43.5$   $m_b=5.0$   $M_{sz}=5.6$ 

17 February 1985 21:36:51.78

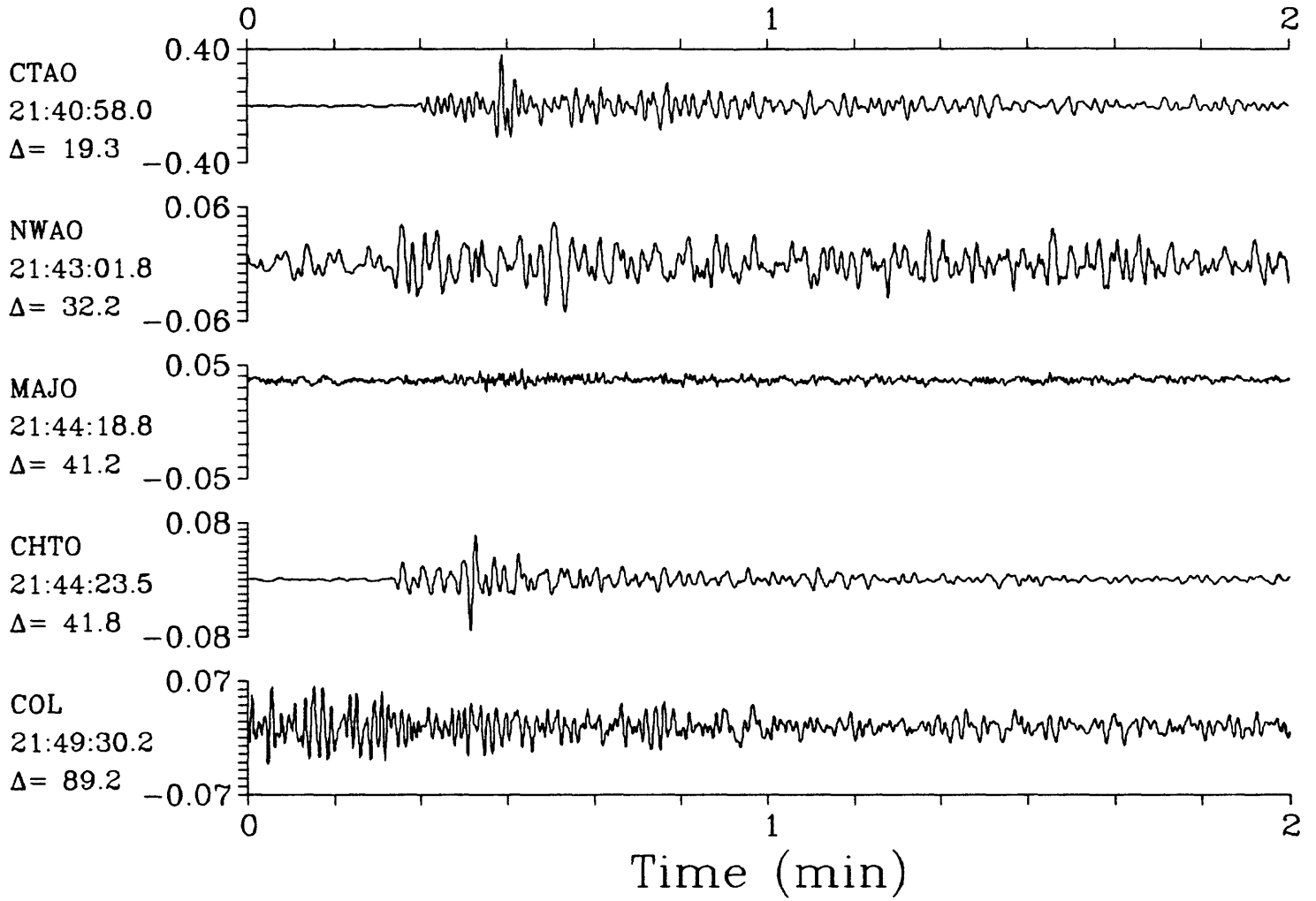
## West Irian Region



SPZ

17 February 1985 21:36:51.78

SPZ

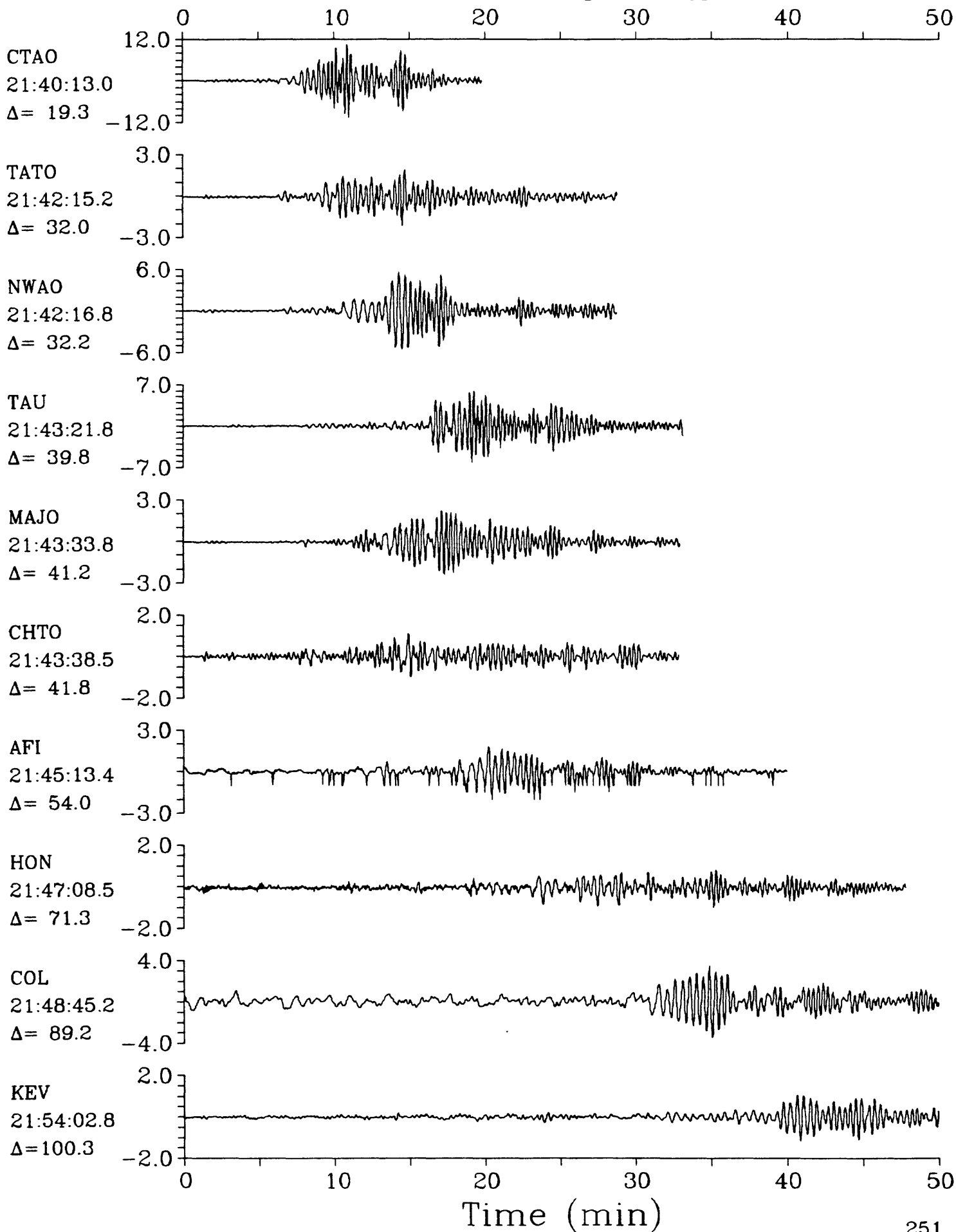
West Irian Region  $h=33.0$   $m_b=5.1$   $M_{sz}=5.5$ 



LPZ

17 February 1985 21:36:51.78

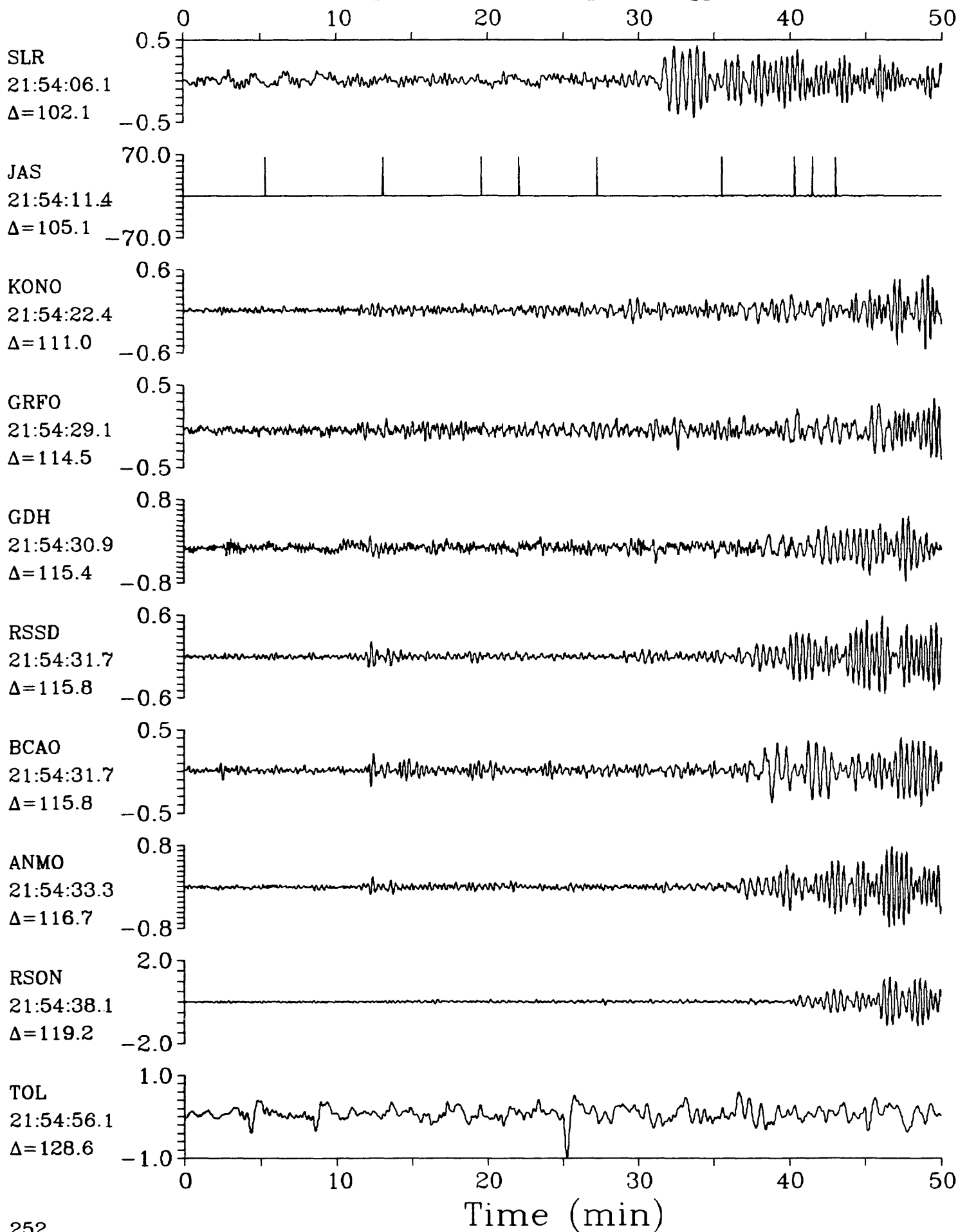
LPZ

West Irian Region  $h=33.0$   $m_b=5.1$   $M_{sz}=5.5$ 

LPZ

17 February 1985 21:36:51.78

LPZ

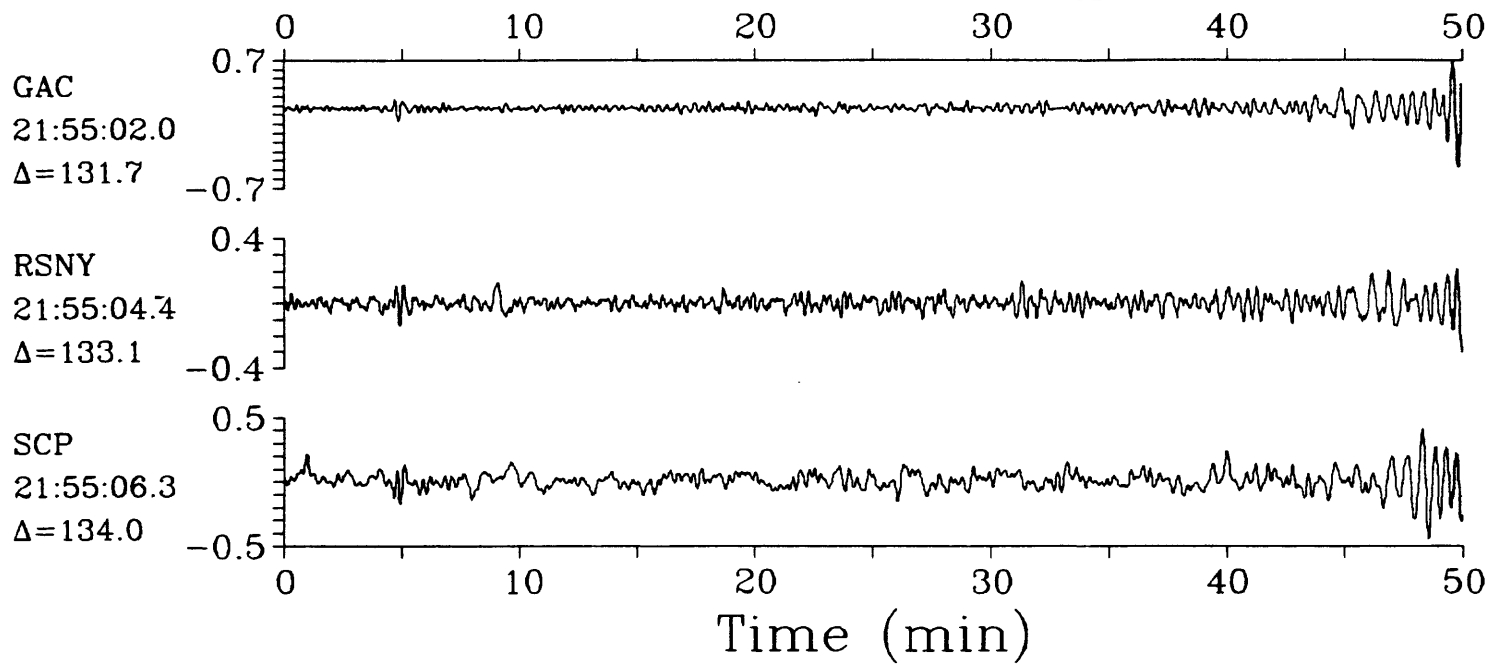
West Irian Region  $h=33.0$   $m_b=5.1$   $M_{sz}=5.5$ 

LPZ

17 February 1985 21:36:51.78

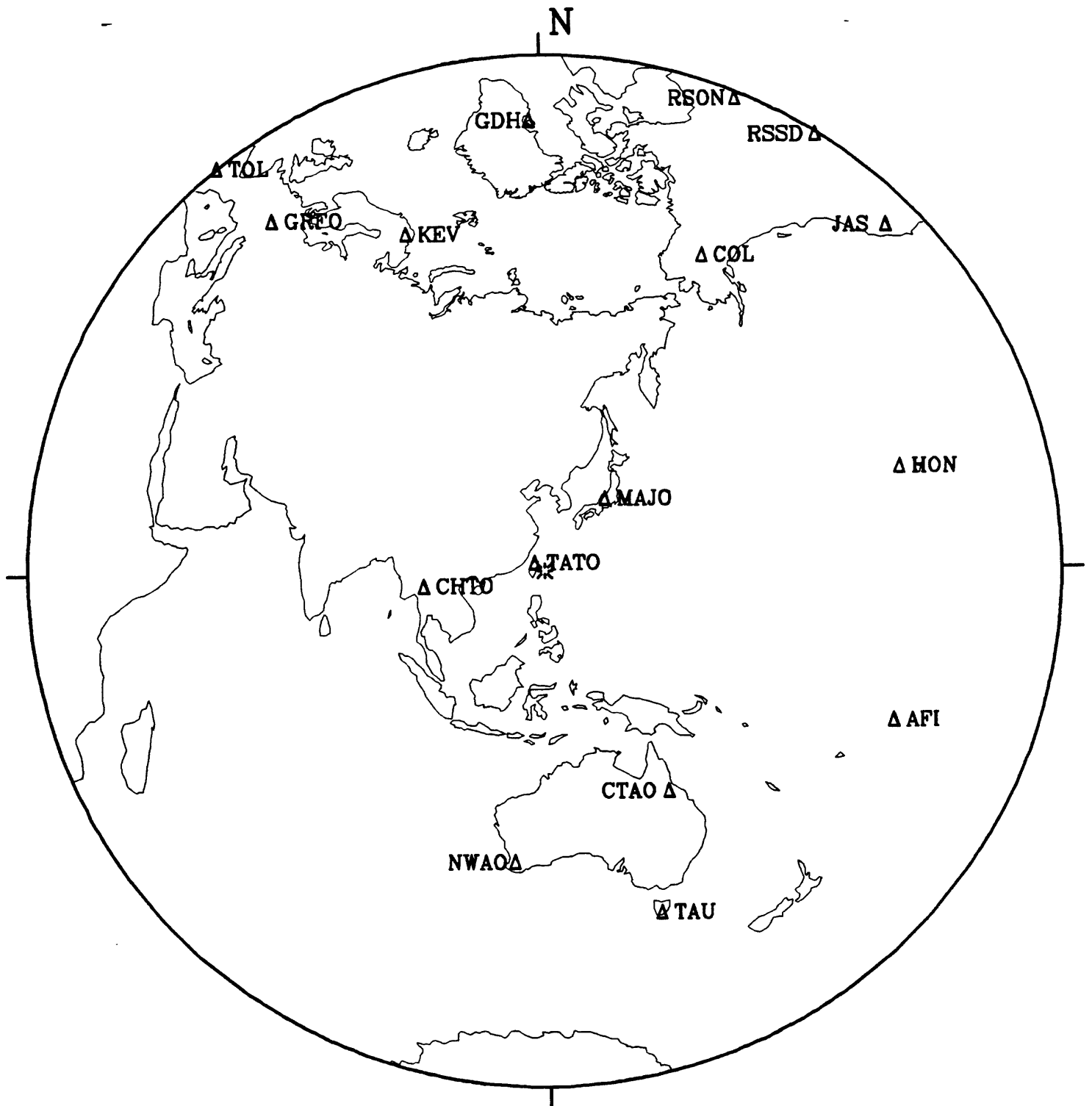
LPZ

West Irian Region  $h=33.0$   $m_b=5.1$   $M_{sz}=5.5$



18 February 1985 19:41:04.60

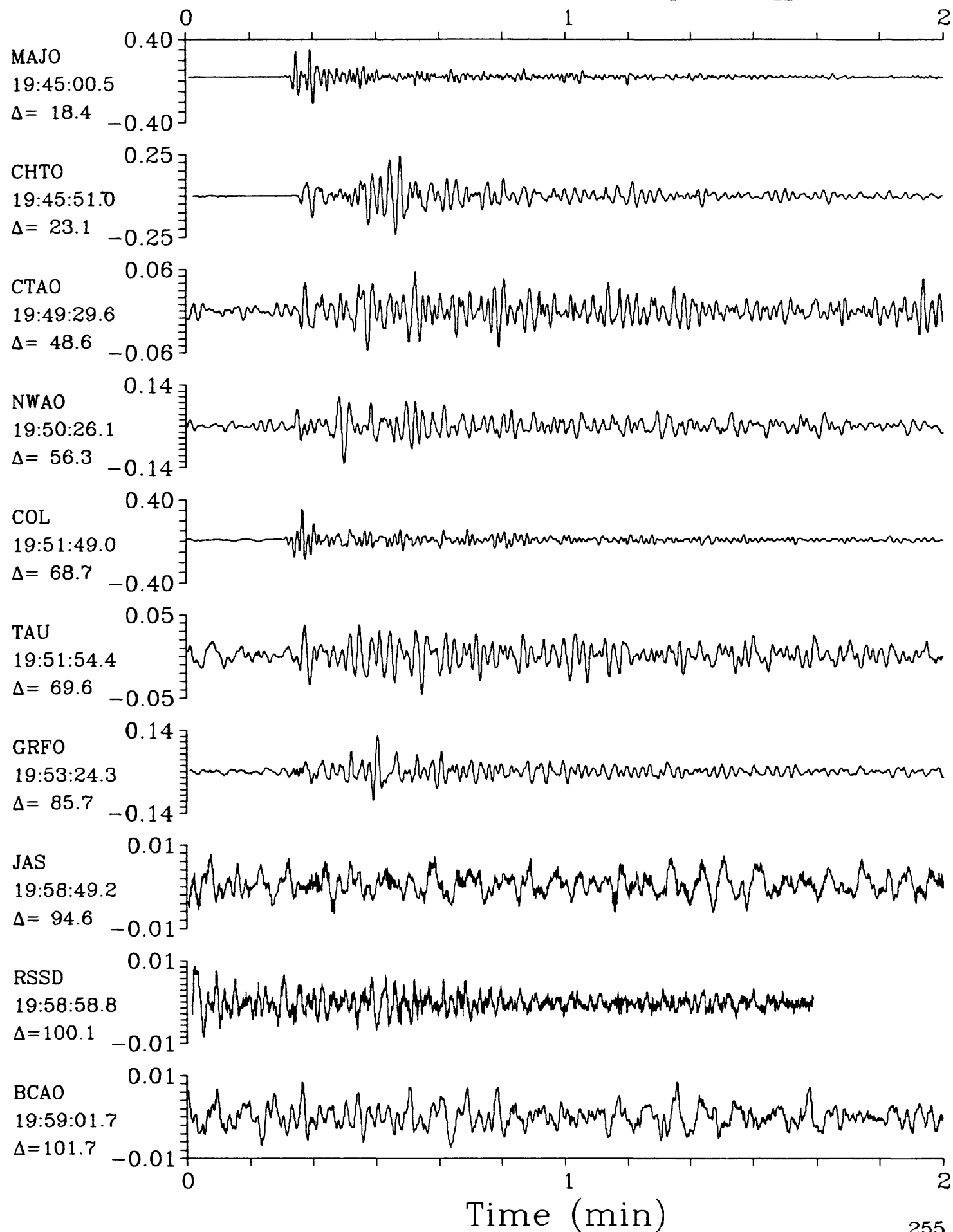
## Southwestern Ryukyu Islands



SPZ

18 February 1985 19:41:04.60

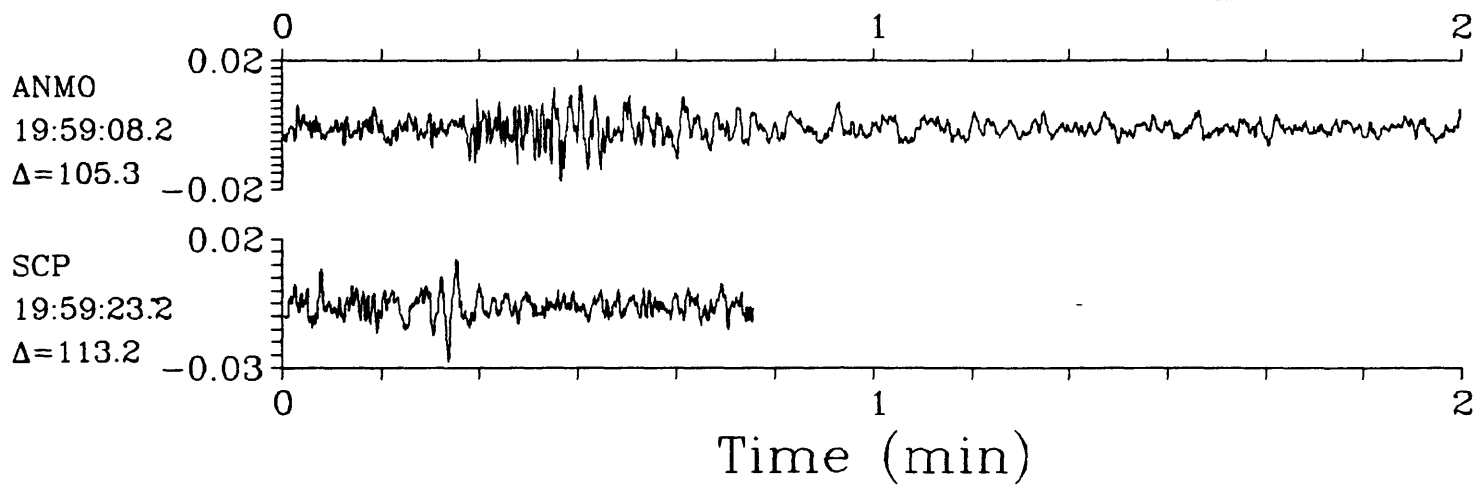
SPZ

Southwestern Ryukyu Islands  $h=43.7$   $m_b=5.7$   $M_{sz}=5.6$ 

SPZ

18 February 1985 19:41:04.60

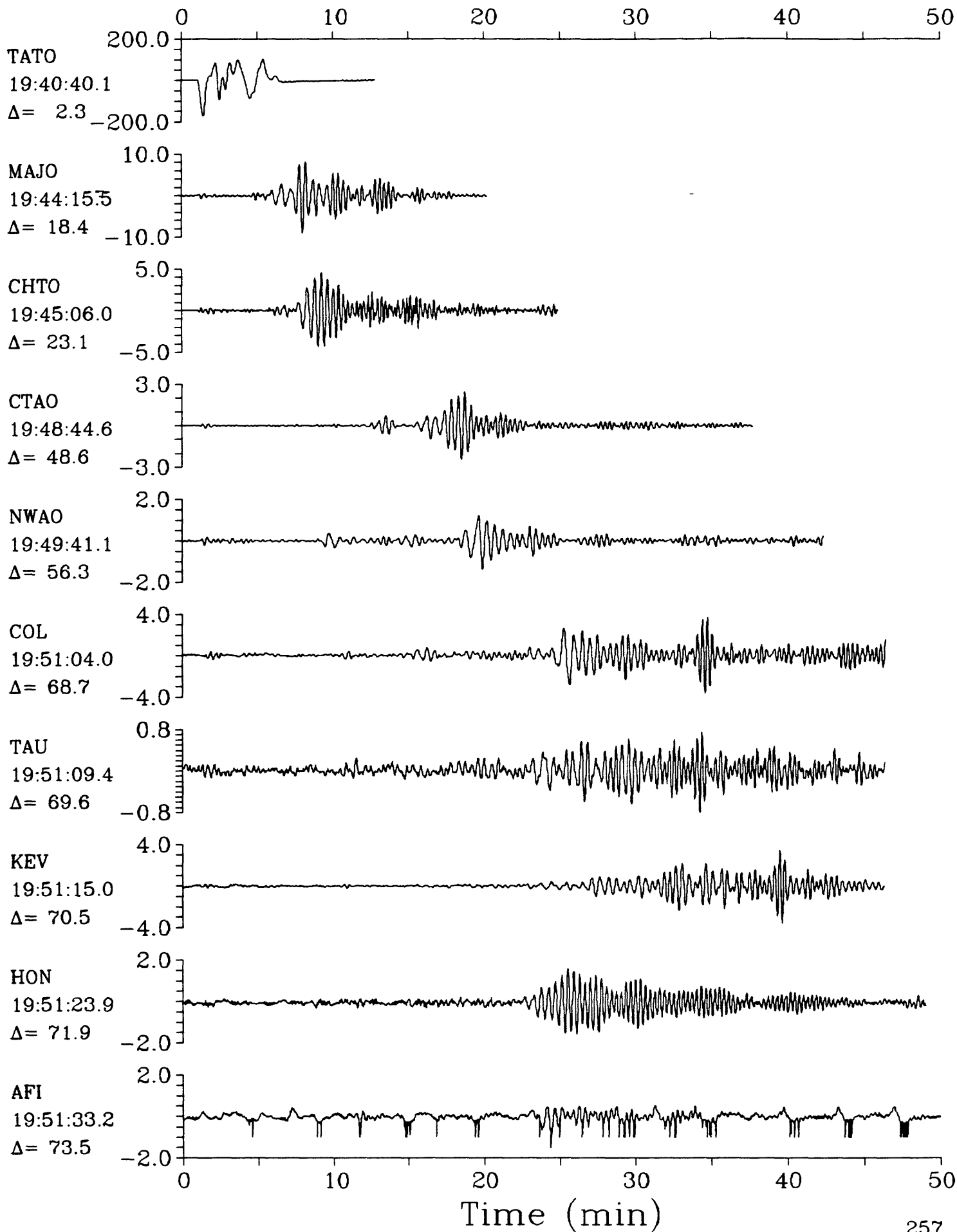
SPZ

Southwestern Ryukyu Islands  $h=43.7$   $m_b=5.7$   $M_{sz}=5.6$ 

LPZ

18 February 1985 19:41:04.60

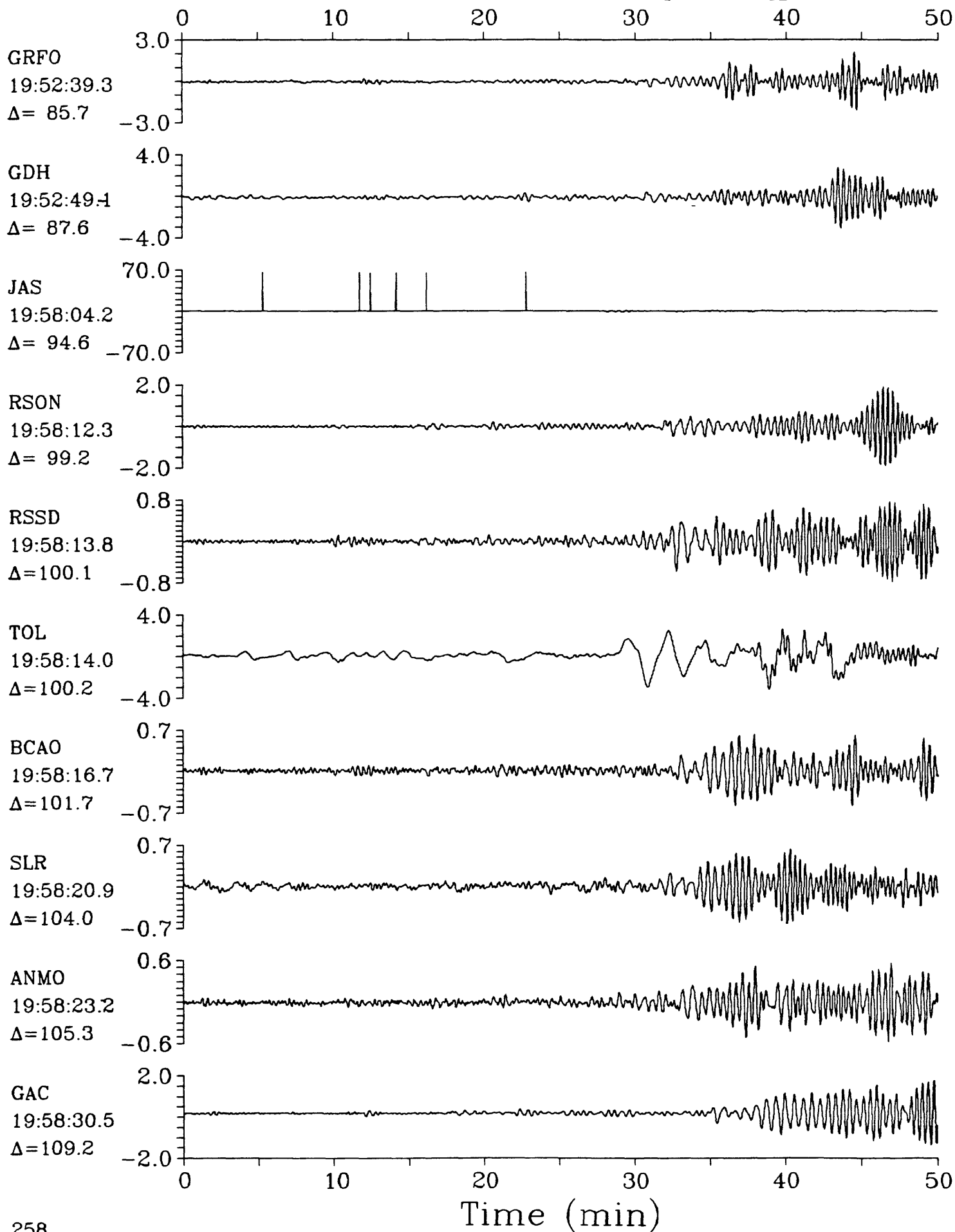
LPZ

Southwestern Ryukyu Islands  $h=43.7$   $m_b=5.7$   $M_{SZ}=5.6$ 

LPZ

18 February 1985 19:41:04.60

LPZ

Southwestern Ryukyu Islands  $h=43.7$   $m_b=5.7$   $M_{sz}=5.6$ 

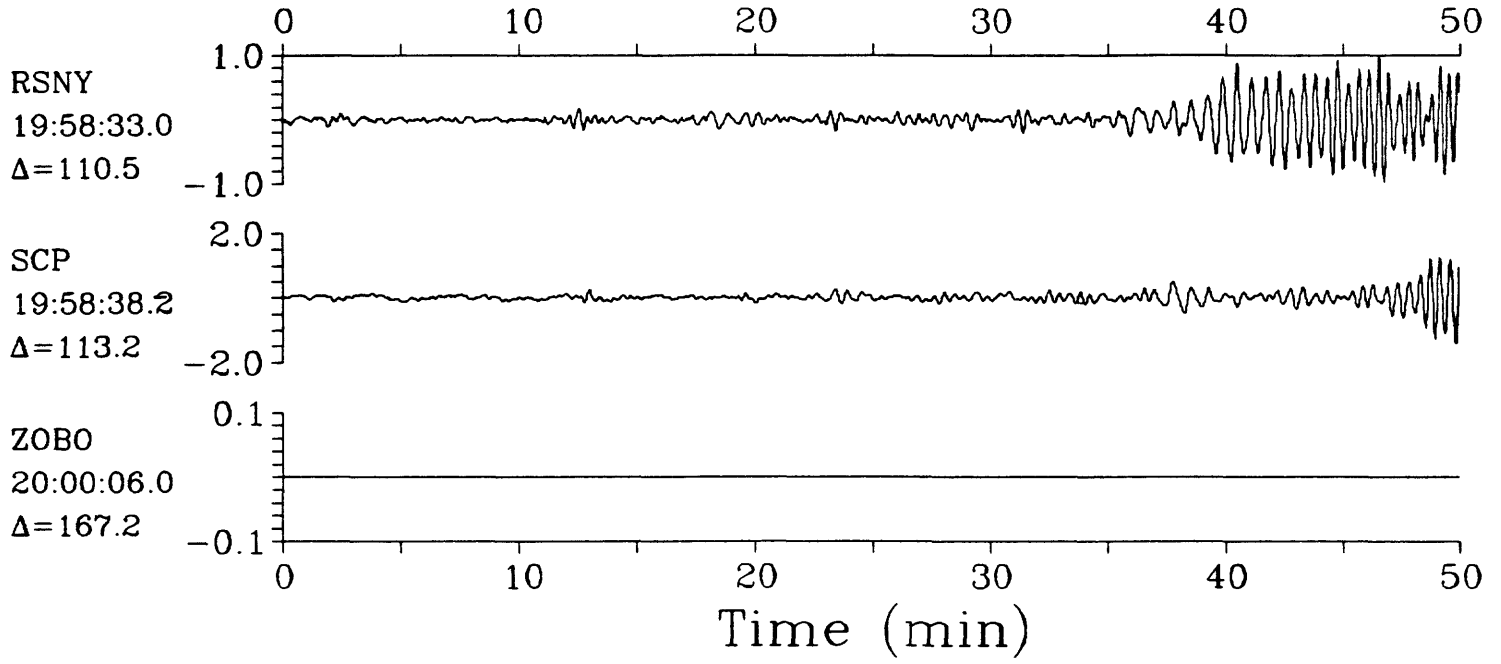


LPZ

18 February 1985 19:41:04.60

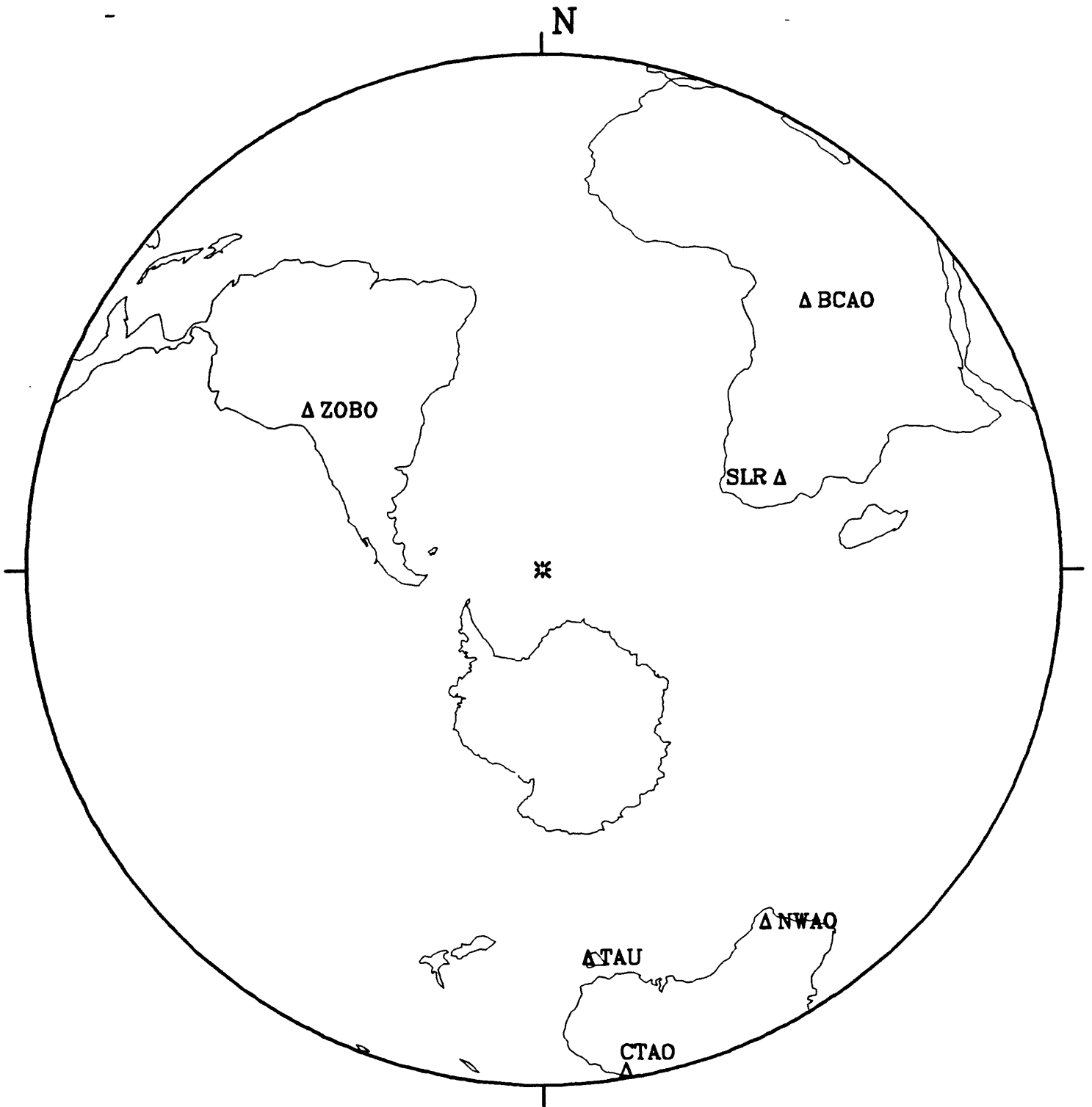
LPZ

Southwestern Ryukyu Islands  $h=43.7$   $m_b=5.7$   $M_{sz}=5.6$



19 February 1985 13:53:19.86

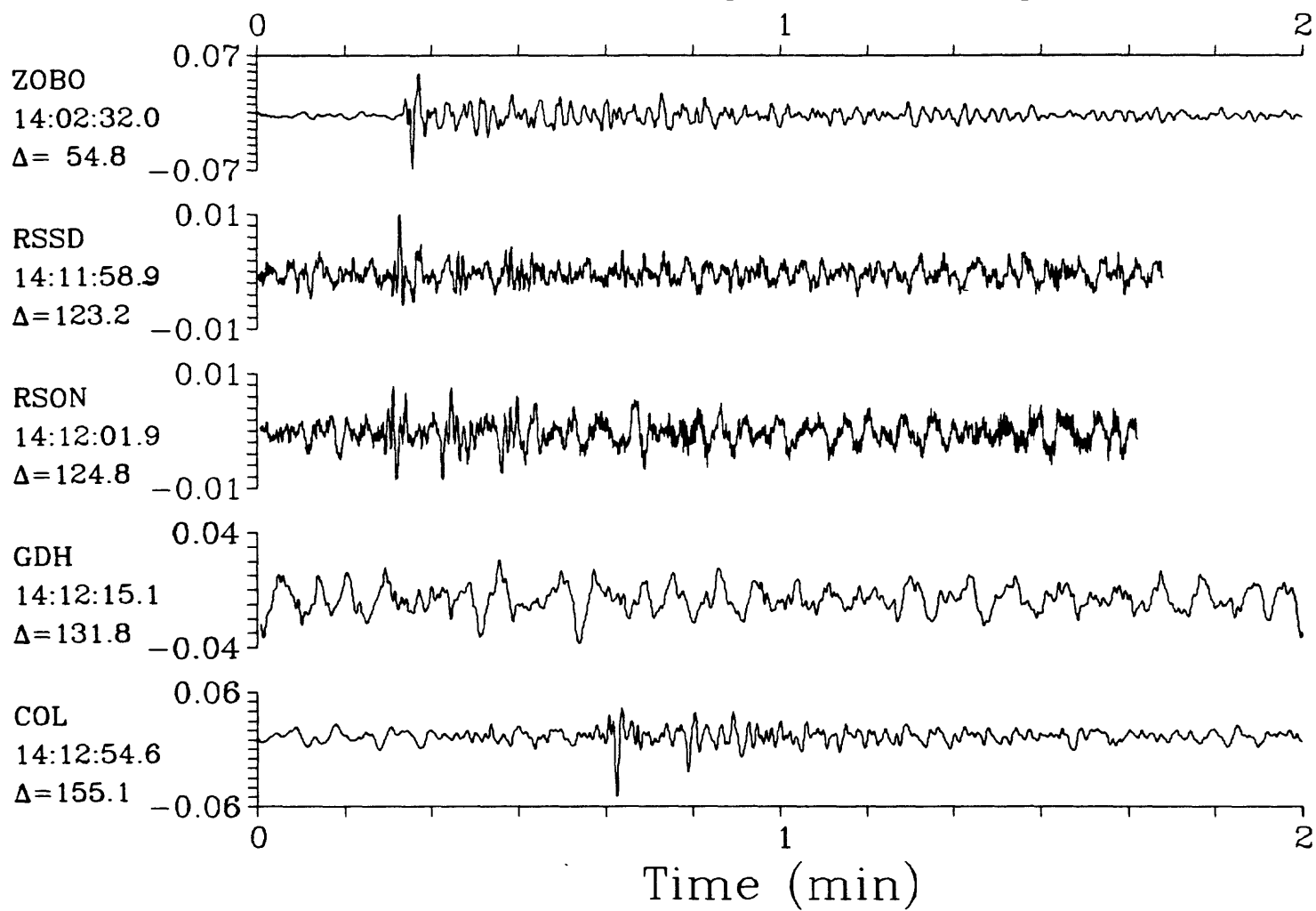
## South Sandwich Islands Region



SPZ

19 February 1985 13:53:19.86

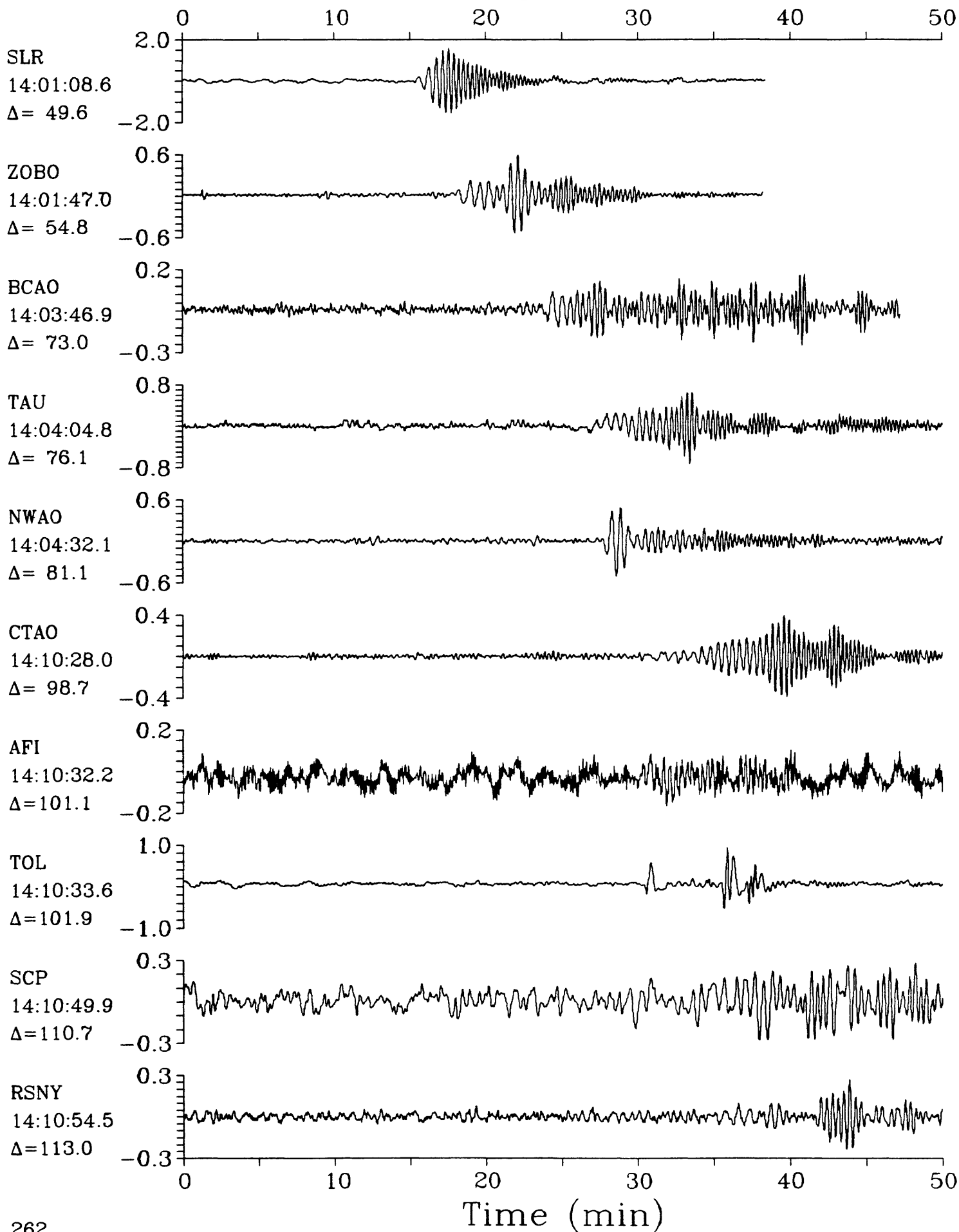
SPZ

South Sandwich Islands Region  $h=33.0$   $m_b=5.5$ 

LPZ

19 February 1985 13:53:19.86

LPZ

South Sandwich Islands Region  $h=33.0$   $m_b=5.5$ 

LPZ

19 February 1985 13:53:19.86

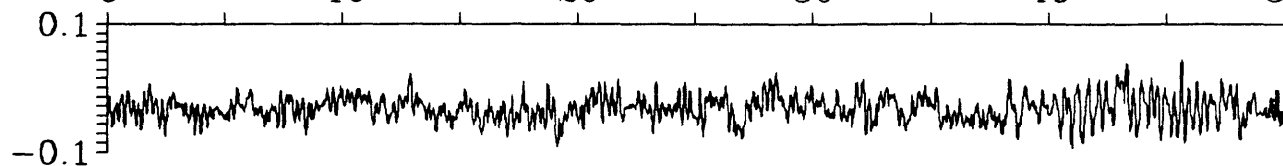
LPZ

South Sandwich Islands Region  $h=33.0$   $m_b=5.5$ 

0 10 20 30 40 50

GRFO

14:10:56.1

 $\Delta=113.9$ 

GAC

14:10:57.0

 $\Delta=114.4$ 

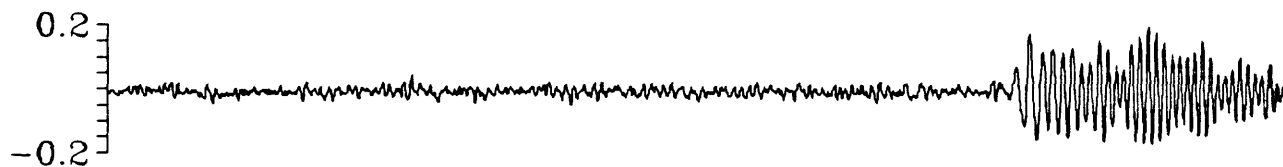
ANMO

14:11:01.3

 $\Delta=116.6$ 

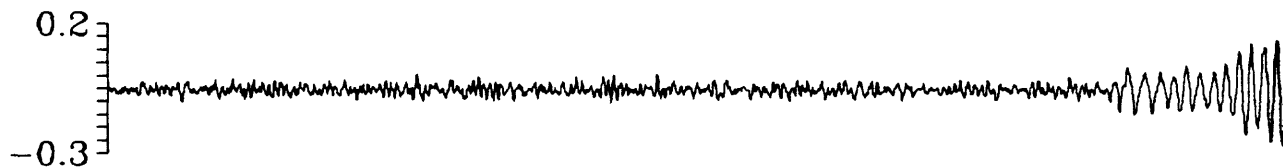
CHTO

14:11:11.4

 $\Delta=121.9$ 

RSSD

14:11:13.9

 $\Delta=123.2$ 

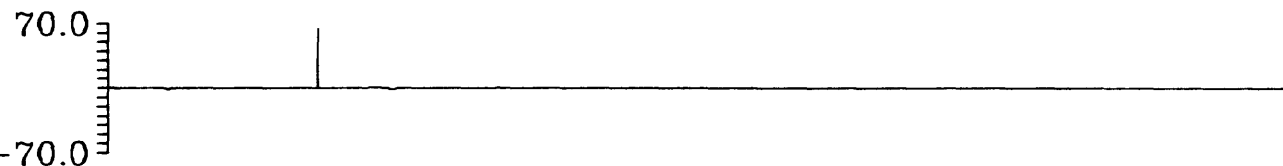
RSON

14:11:16.9

 $\Delta=124.8$ 

JAS

14:11:18.2

 $\Delta=125.4$ 

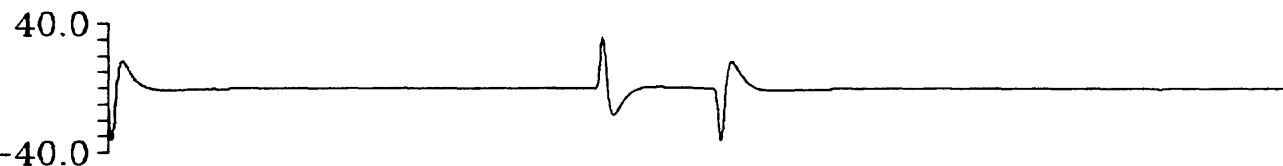
HON

14:11:25.4

 $\Delta=129.3$ 

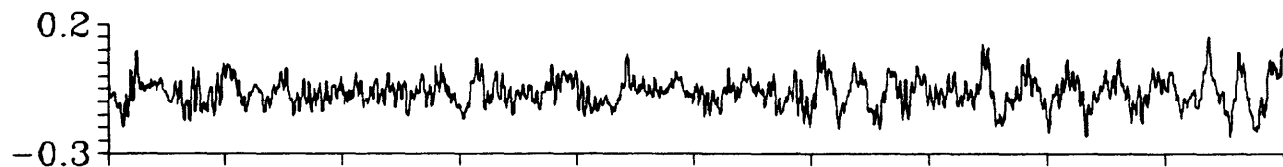
GDH

14:11:30.1

 $\Delta=131.8$ 

KEV

14:11:36.9

 $\Delta=135.4$ 

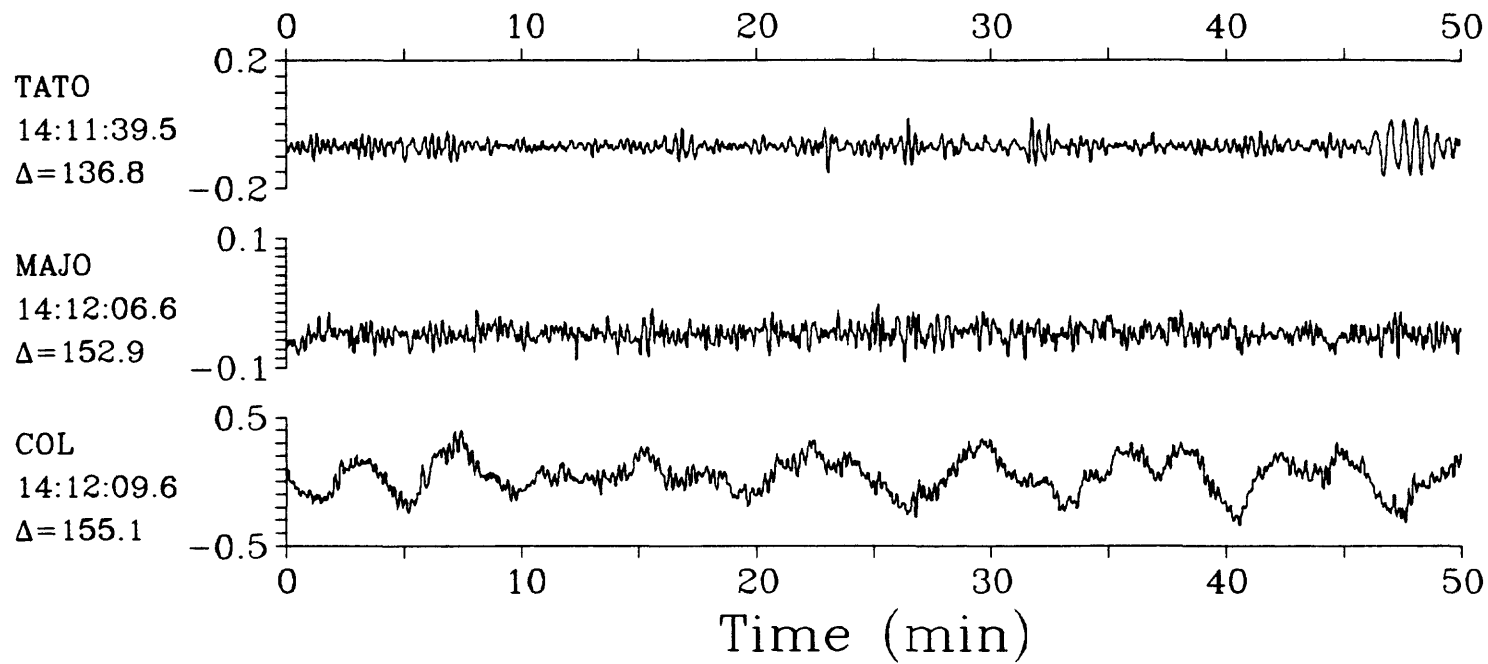
0 10 20 30 40 50

Time (min)

LPZ

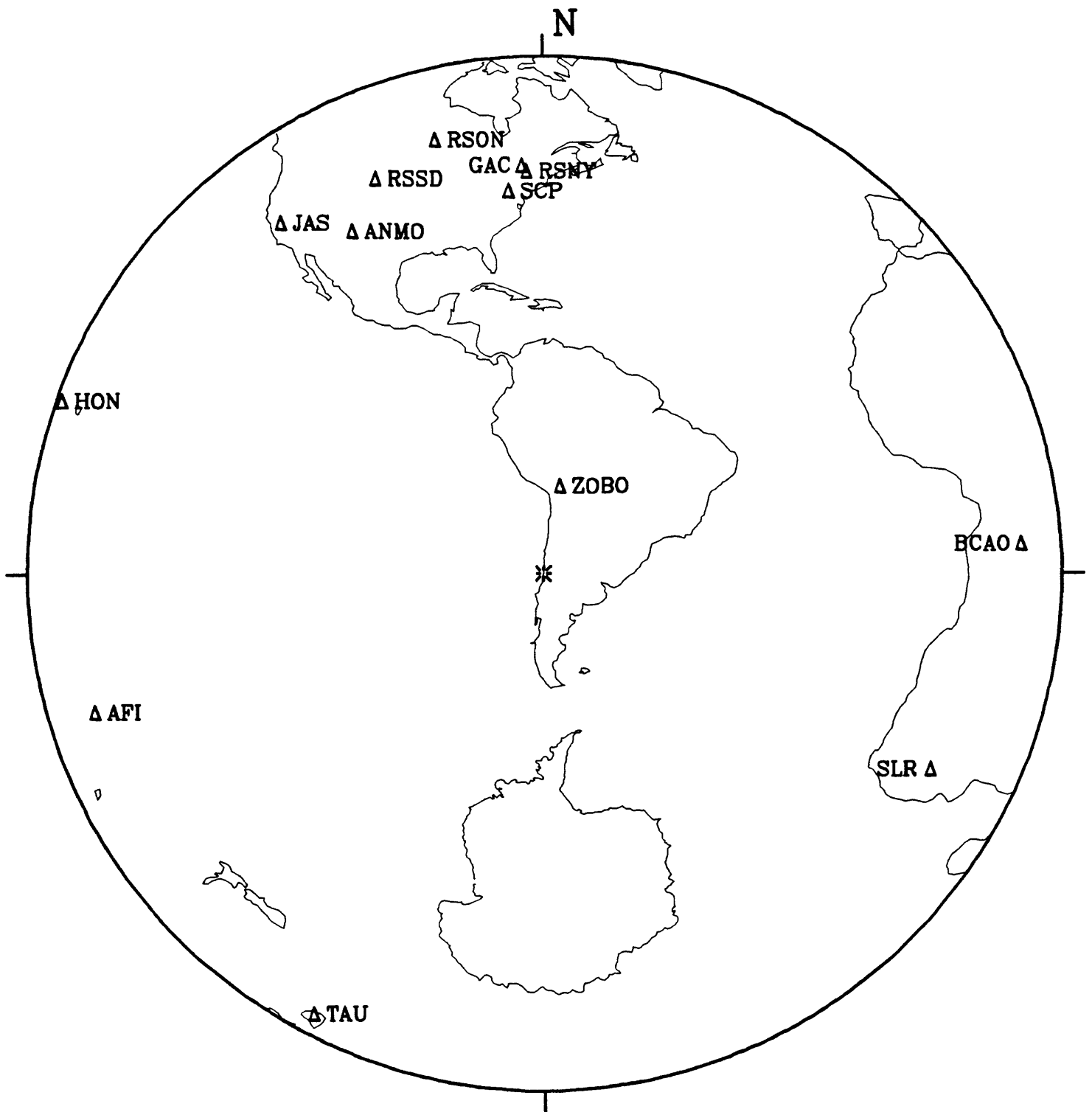
19 February 1985 13:53:19.86

LPZ

South Sandwich Islands Region  $h=33.0$   $m_b=5.5$ 

21 February 1985 18:53:08.54

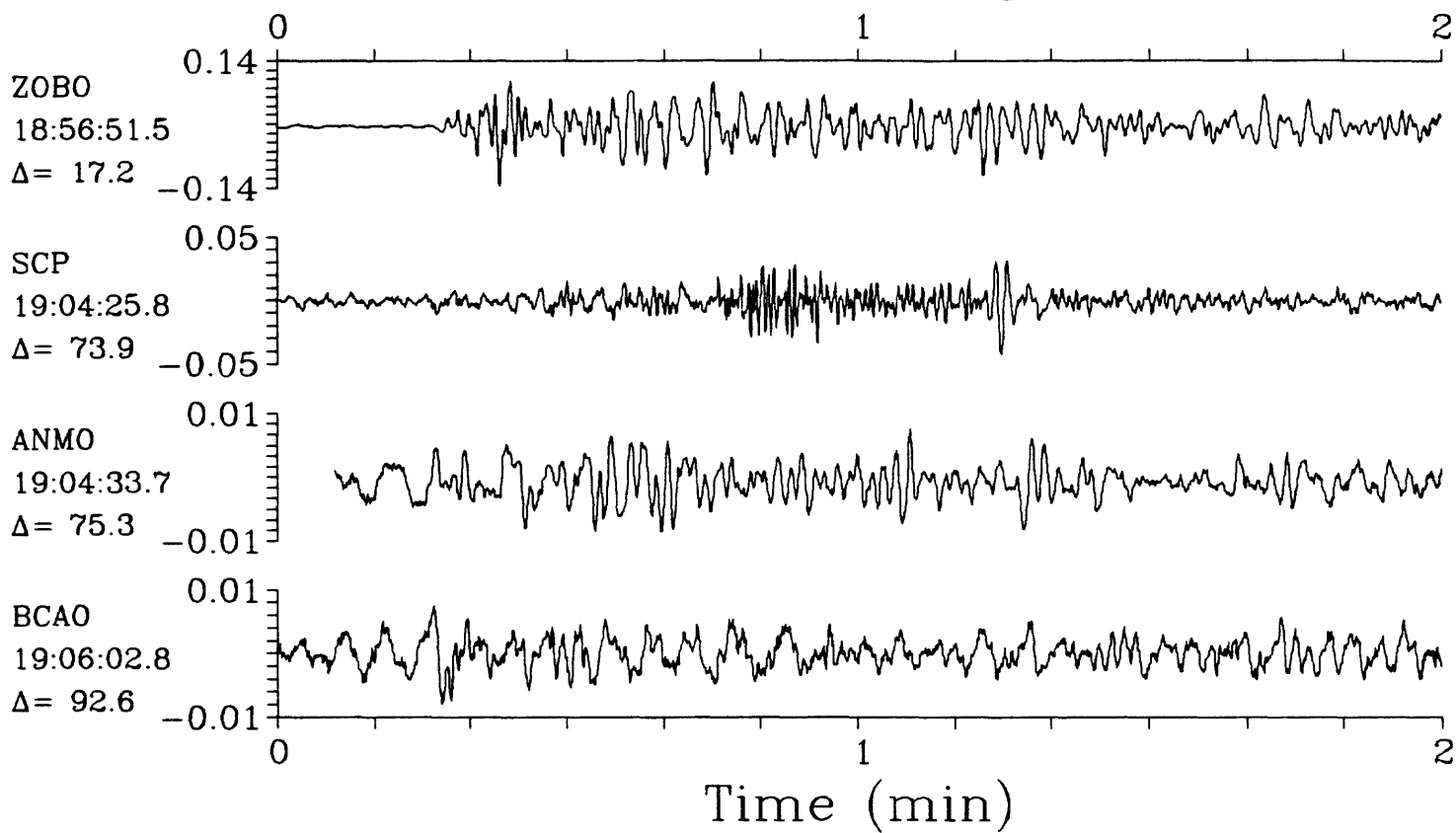
Near Coast of Central Chile



SPZ

21 February 1985 18:53:08.54

SPZ

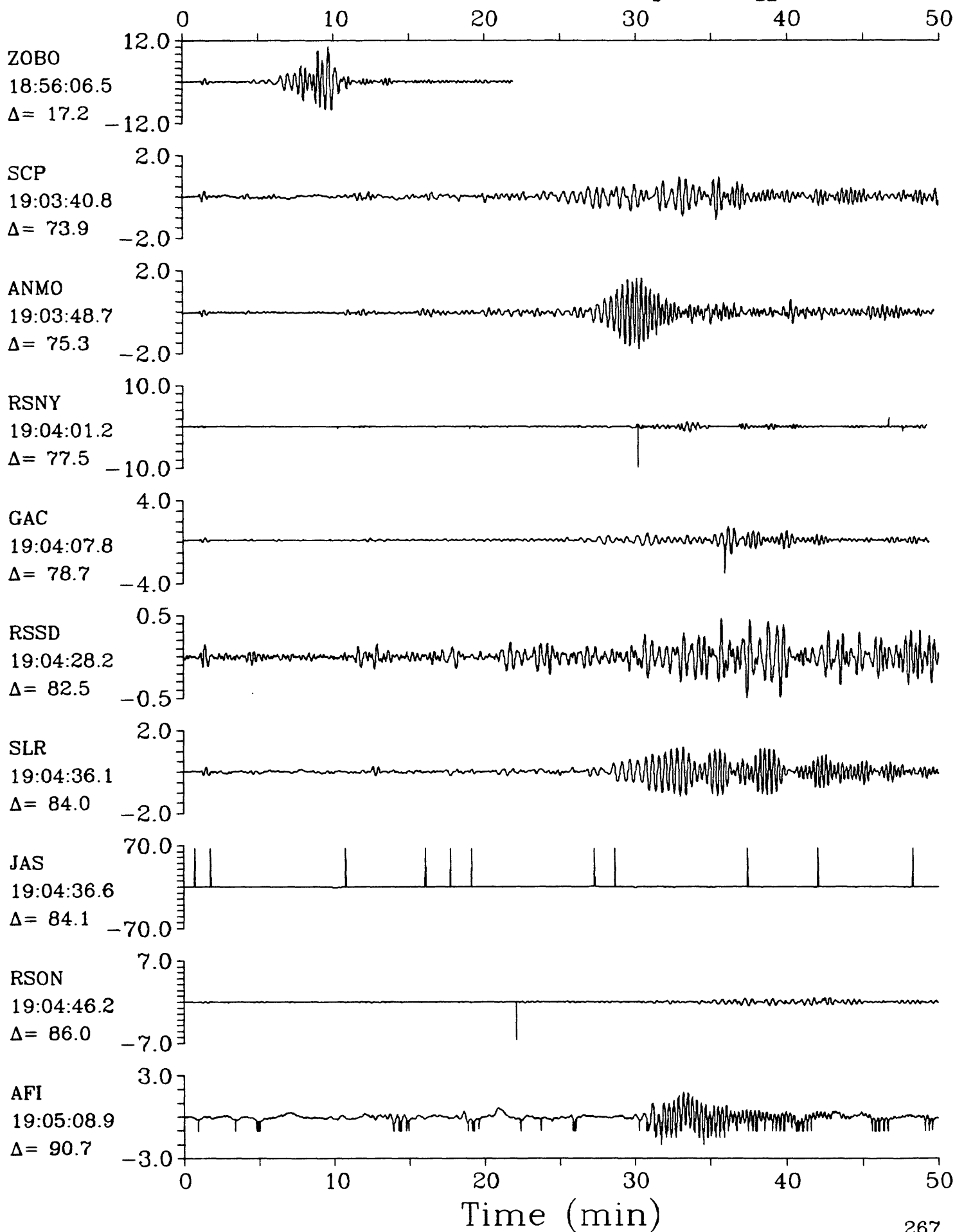
Near Coast of Central Chile  $h=33.0$   $m_b=4.7$   $M_{sz}=5.5$ 



LPZ

21 February 1985 18:53:08.54

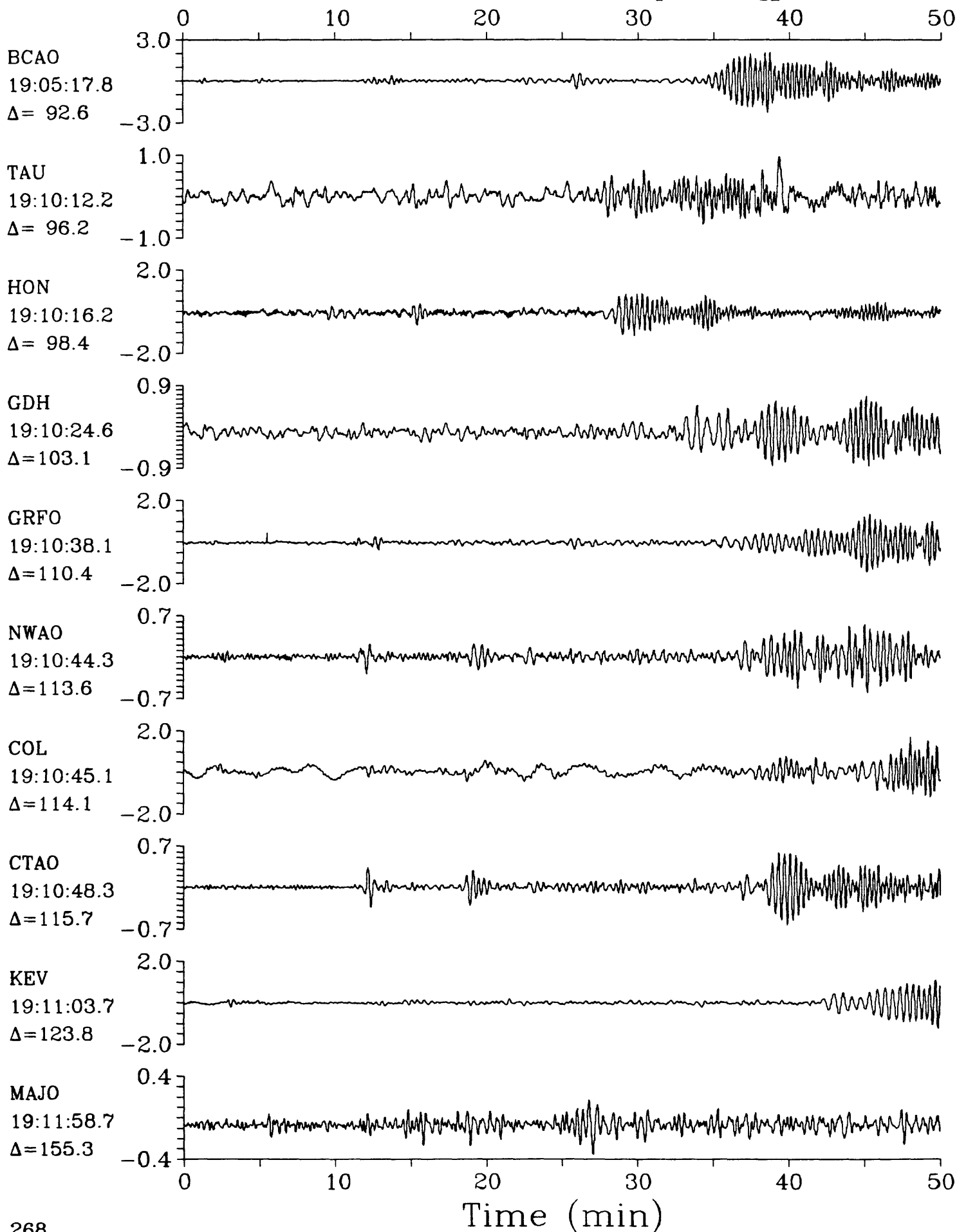
LPZ

Near Coast of Central Chile  $h=33.0$   $m_b=4.7$   $M_{sz}=5.5$ 

LPZ

21 February 1985 18:53:08.54

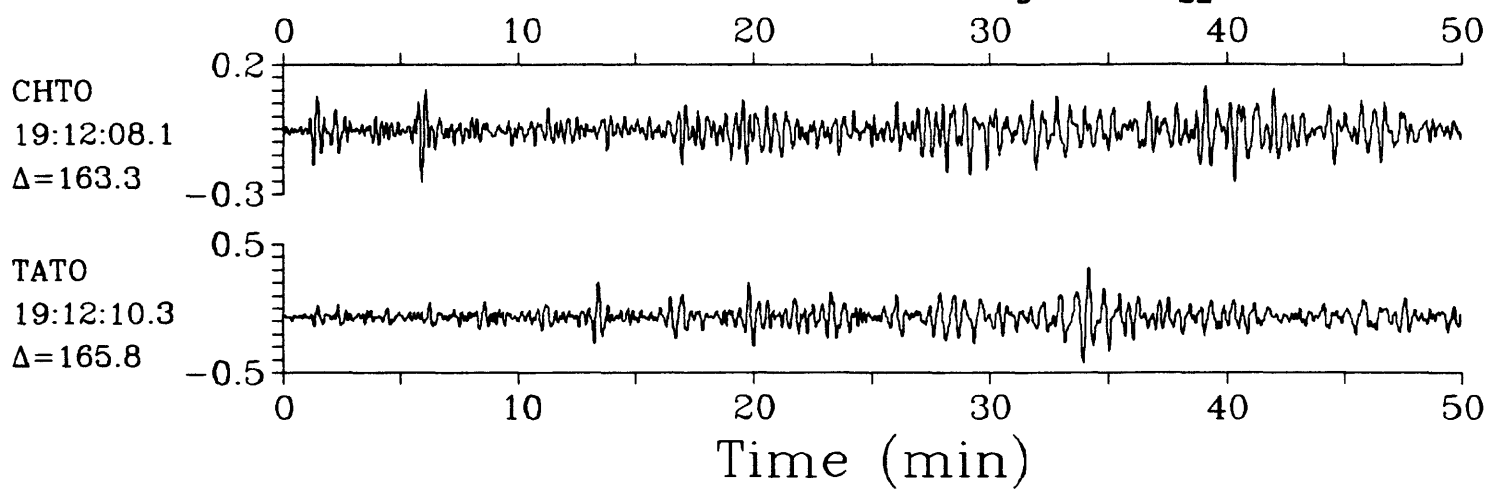
LPZ

Near Coast of Central Chile  $h=33.0$   $m_b=4.7$   $M_{sz}=5.5$ 

LPZ

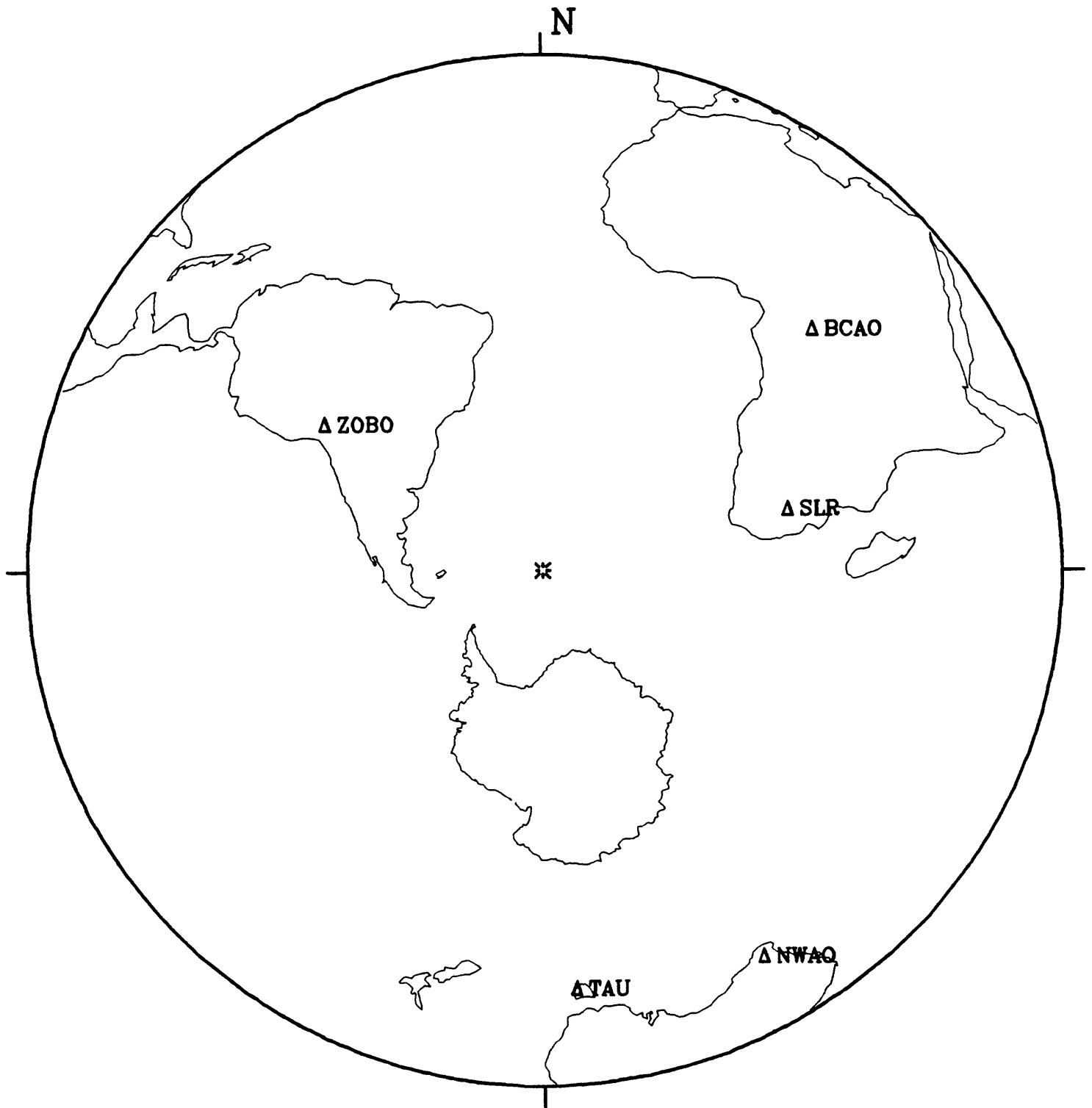
21 February 1985 18:53:08.54

LPZ

Near Coast of Central Chile  $h=33.0$   $m_b=4.7$   $M_{SZ}=5.5$ 

22 February 1985 09:33:38.14

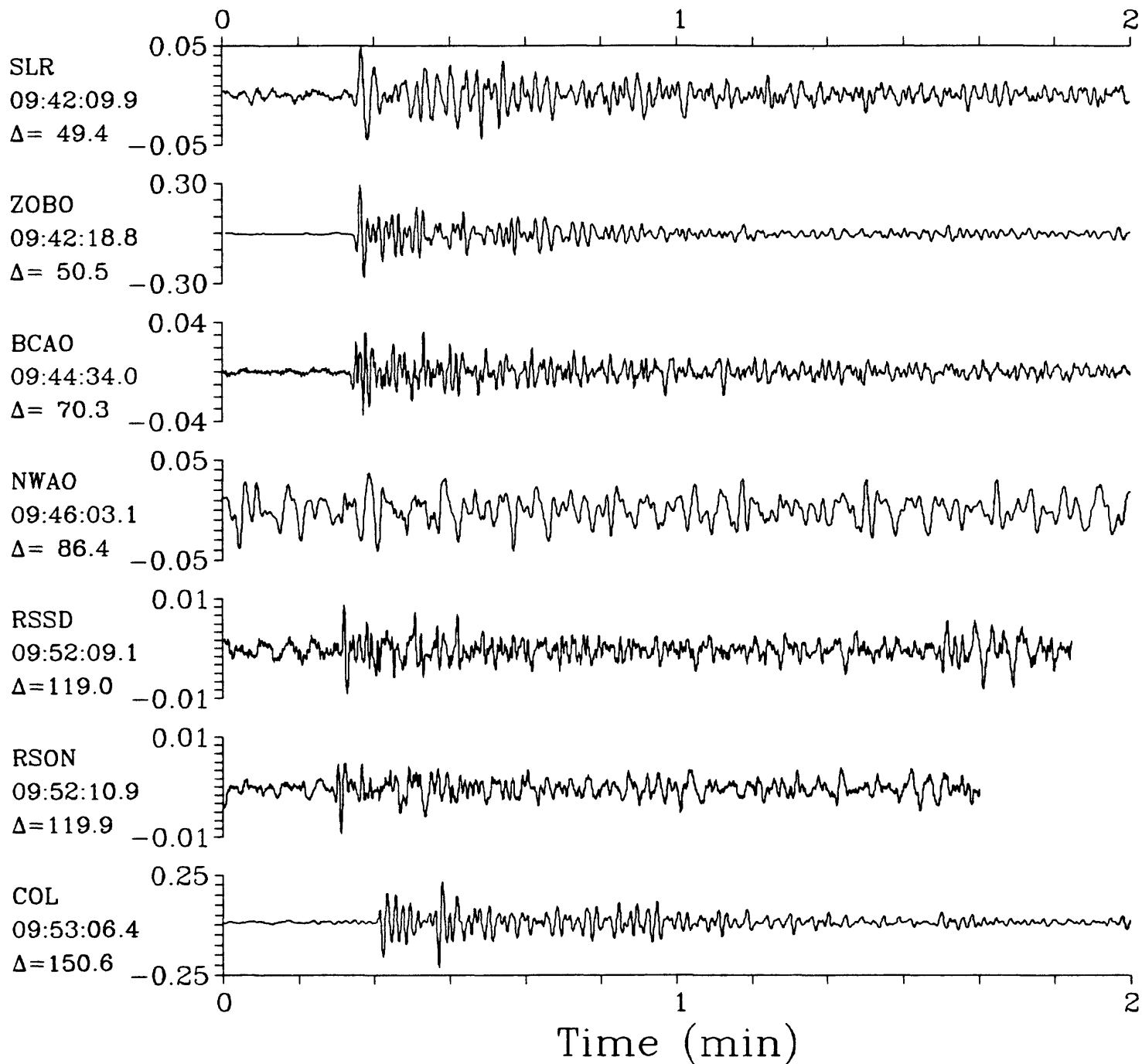
## South Sandwich Islands Region



SPZ

22 February 1985 09:33:38.14

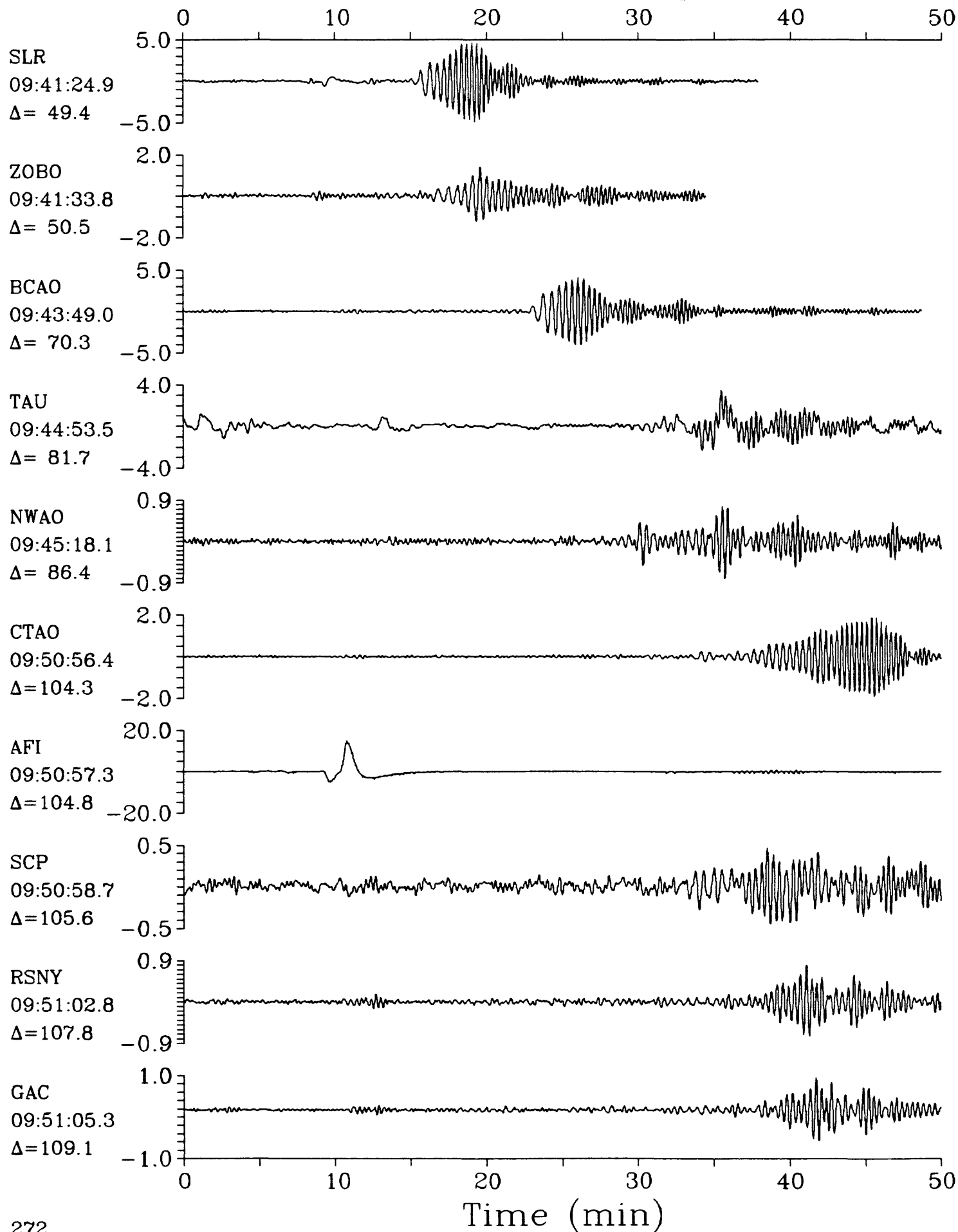
SPZ

South Sandwich Islands Region  $h=33.0$   $m_b=5.7$   $M_{sz}=5.3$ 

LPZ

22 February 1985 09:33:38.14

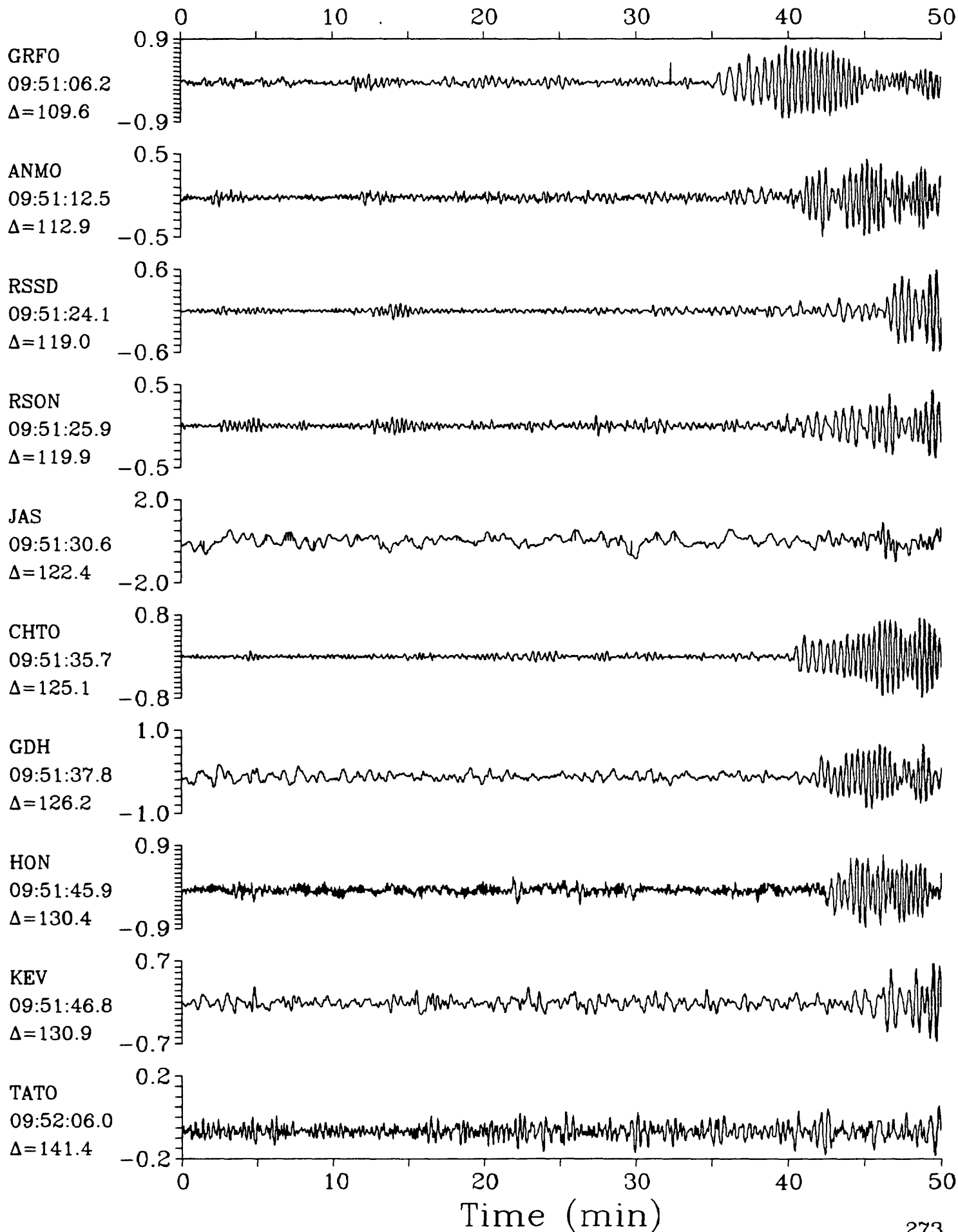
LPZ

South Sandwich Islands Region  $h=33.0$   $m_b=5.7$   $M_{sz}=5.3$ 

LPZ

22 February 1985 09:33:38.14

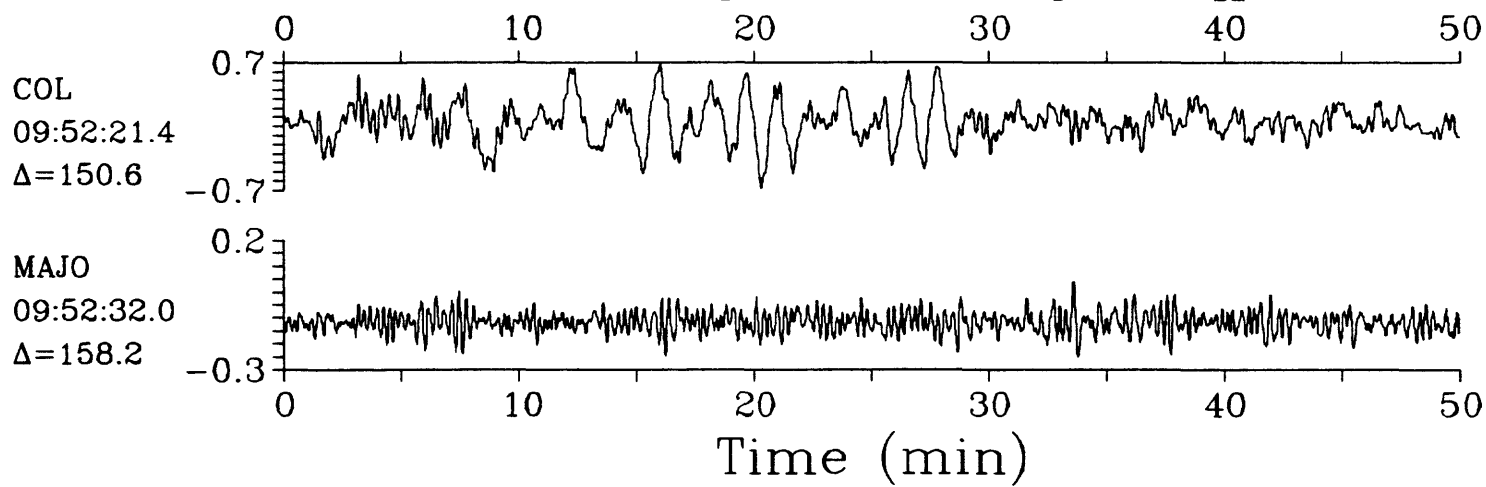
LPZ

South Sandwich Islands Region  $h=33.0$   $m_b=5.7$   $M_{sz}=5.3$ 

LPZ

22 February 1985 09:33:38.14

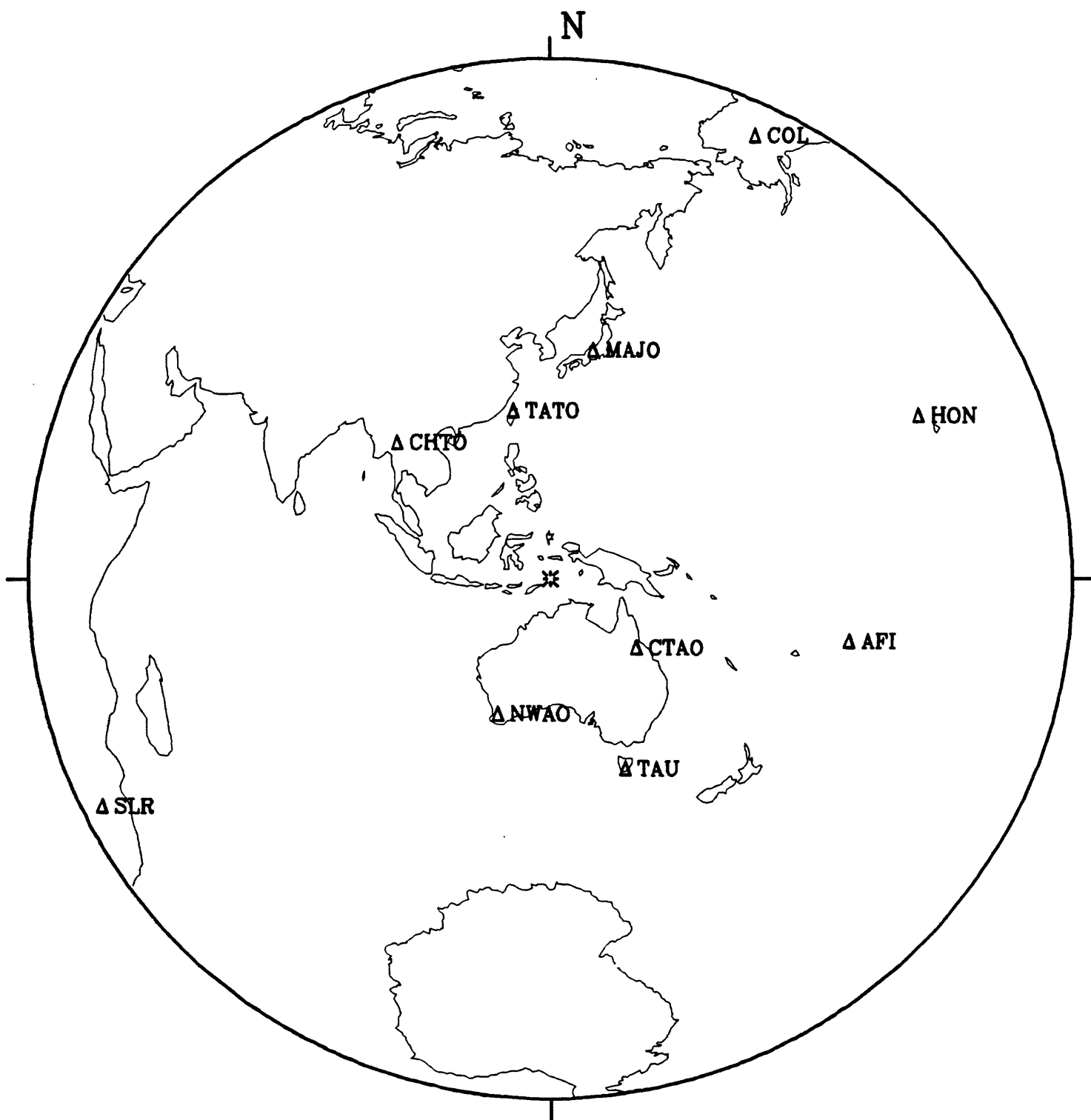
LPZ

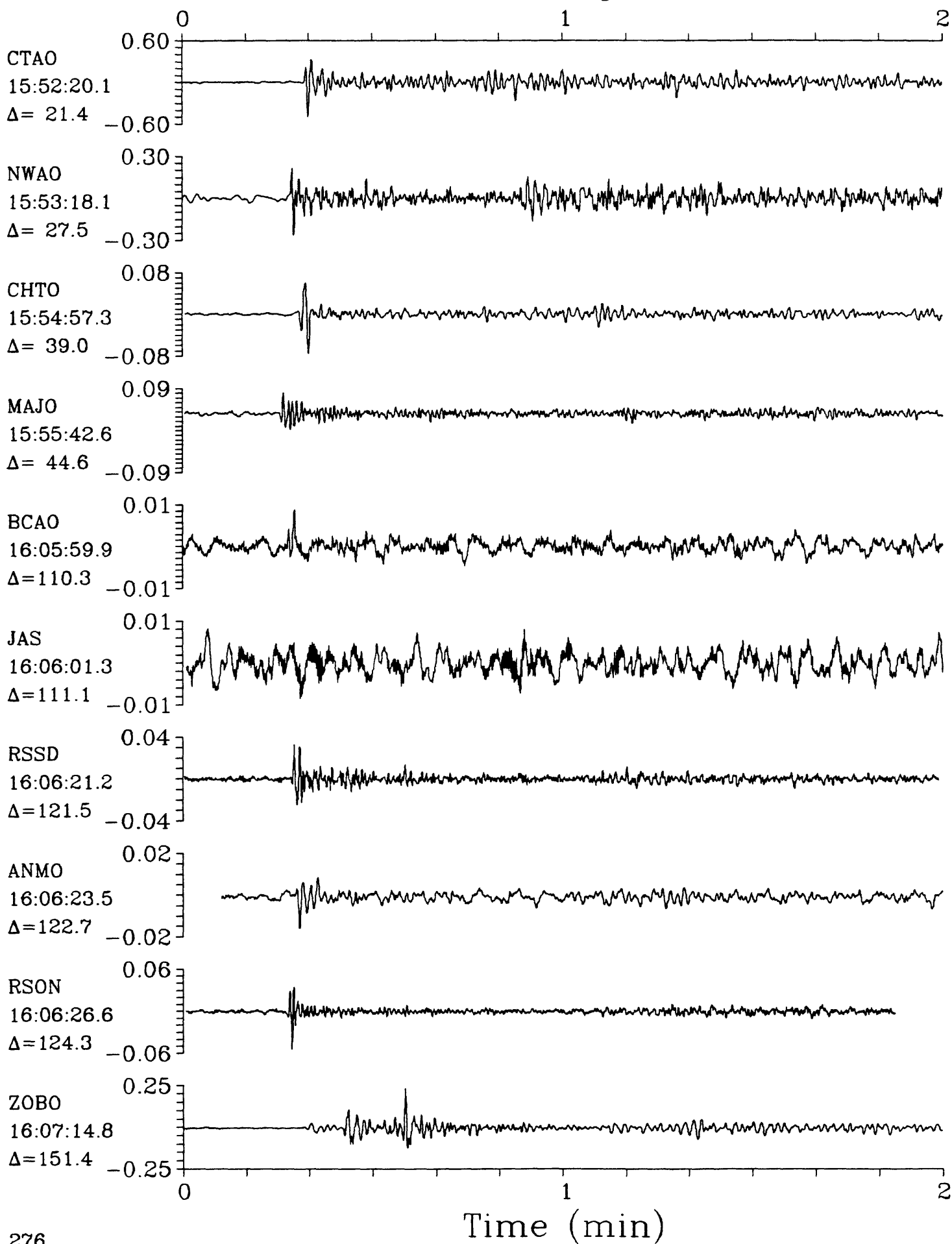
South Sandwich Islands Region  $h=33.0$   $m_b=5.7$   $M_{sz}=5.3$ 



22 February 1985 15:48:02.04

## Banda Sea

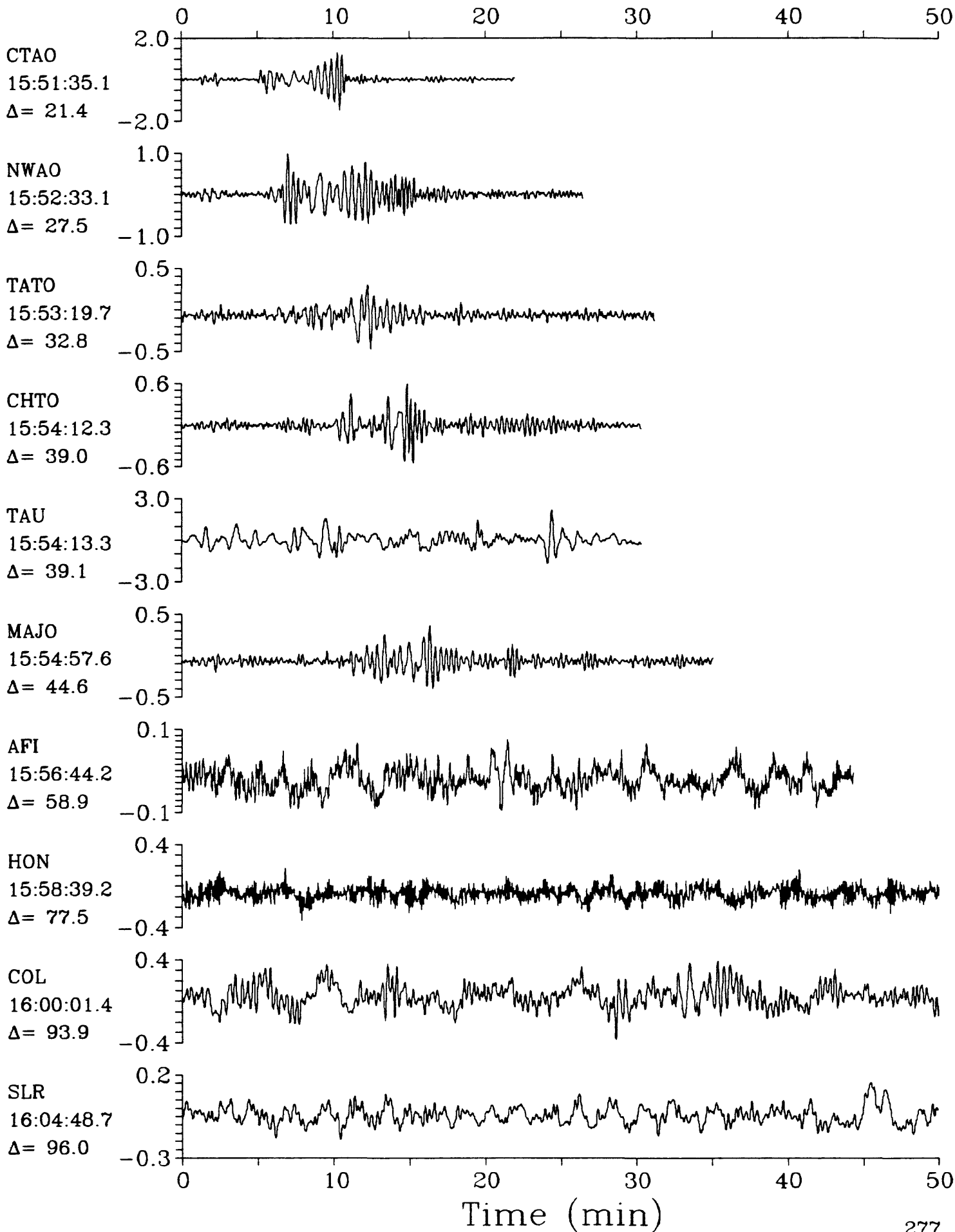


Banda Sea  $h=165.9$   $m_b=5.6$ 

LPZ

22 February 1985 15:48:02.04

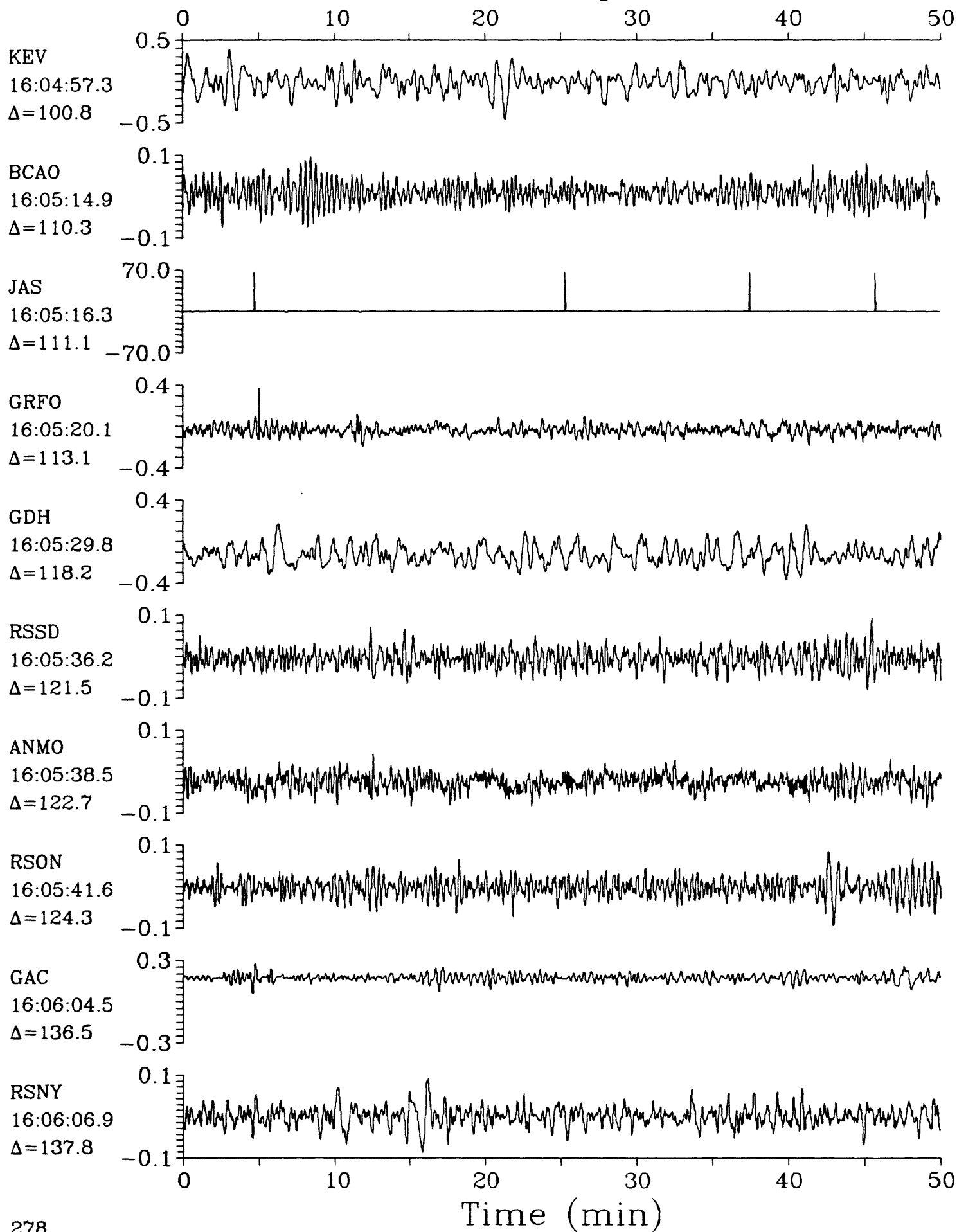
LPZ

Banda Sea  $h=165.9$   $m_b=5.6$ 

LPZ

22 February 1985 15:48:02.04

LPZ

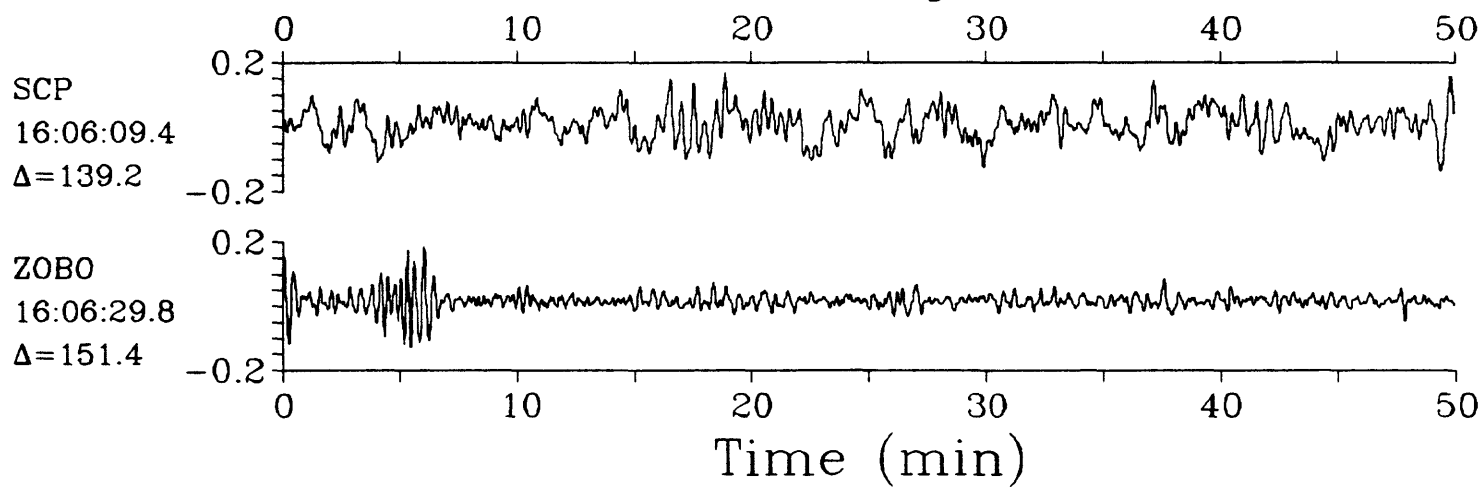
Banda Sea  $h=165.9$   $m_b=5.6$ 

LPZ

22 February 1985 15:48:02.04

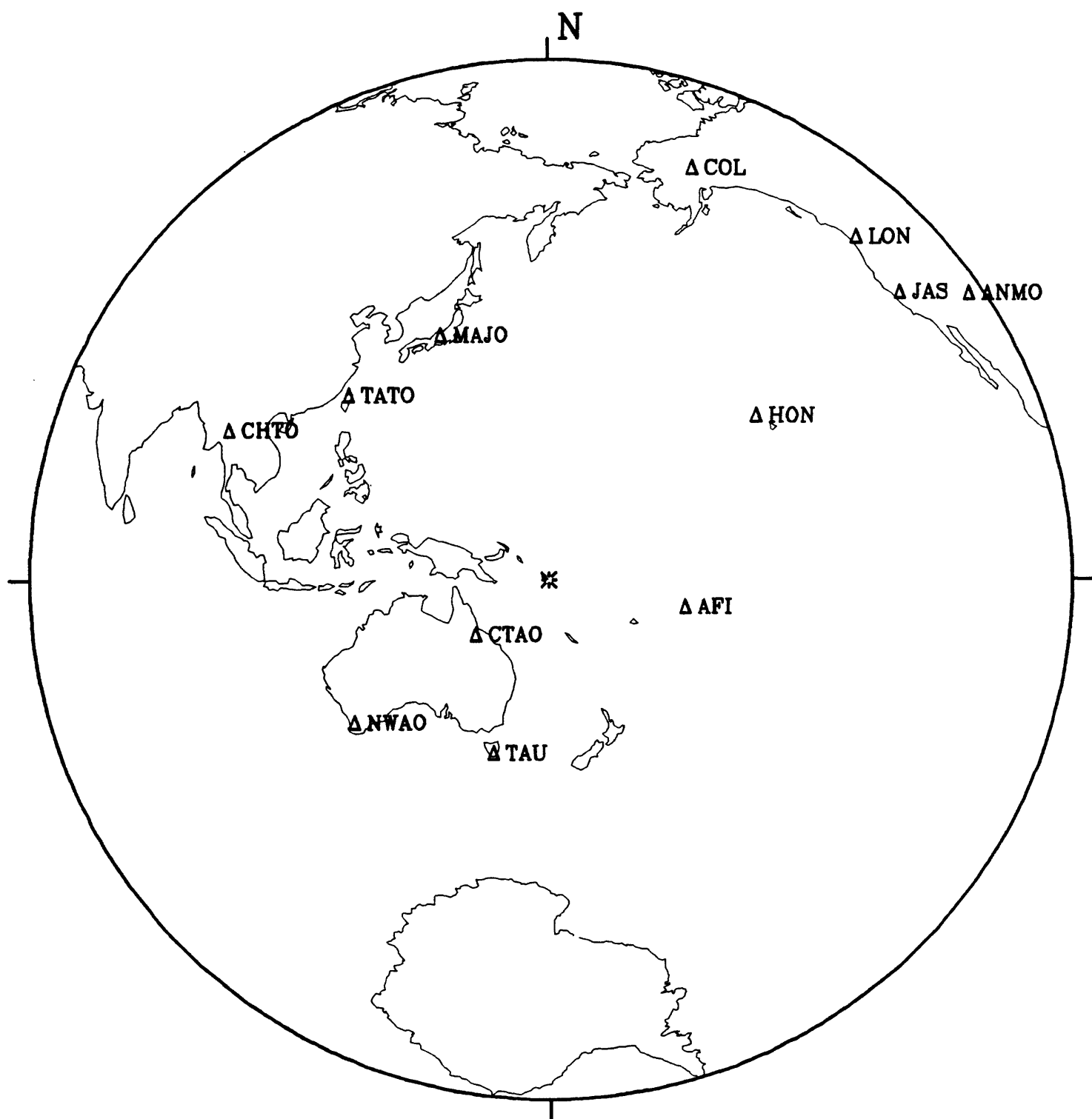
LPZ

Banda Sea  $h=165.9$   $m_b=5.6$



23 February 1985 13:42:00.63

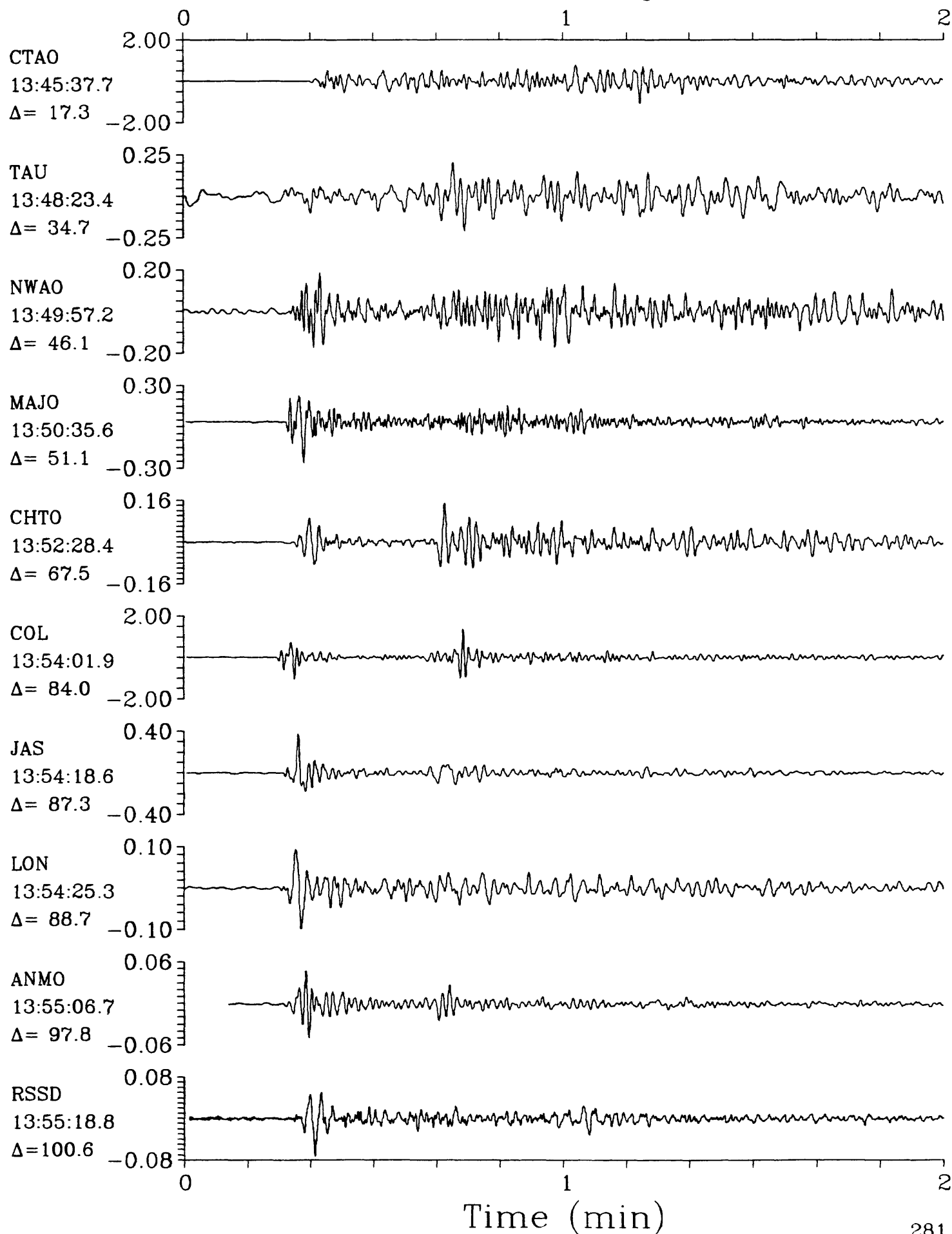
## Solomon Islands



SPZ

23 February 1985 13:42:00.63  
Solomon Islands  $h=129.8$   $m_b=6.0$ 

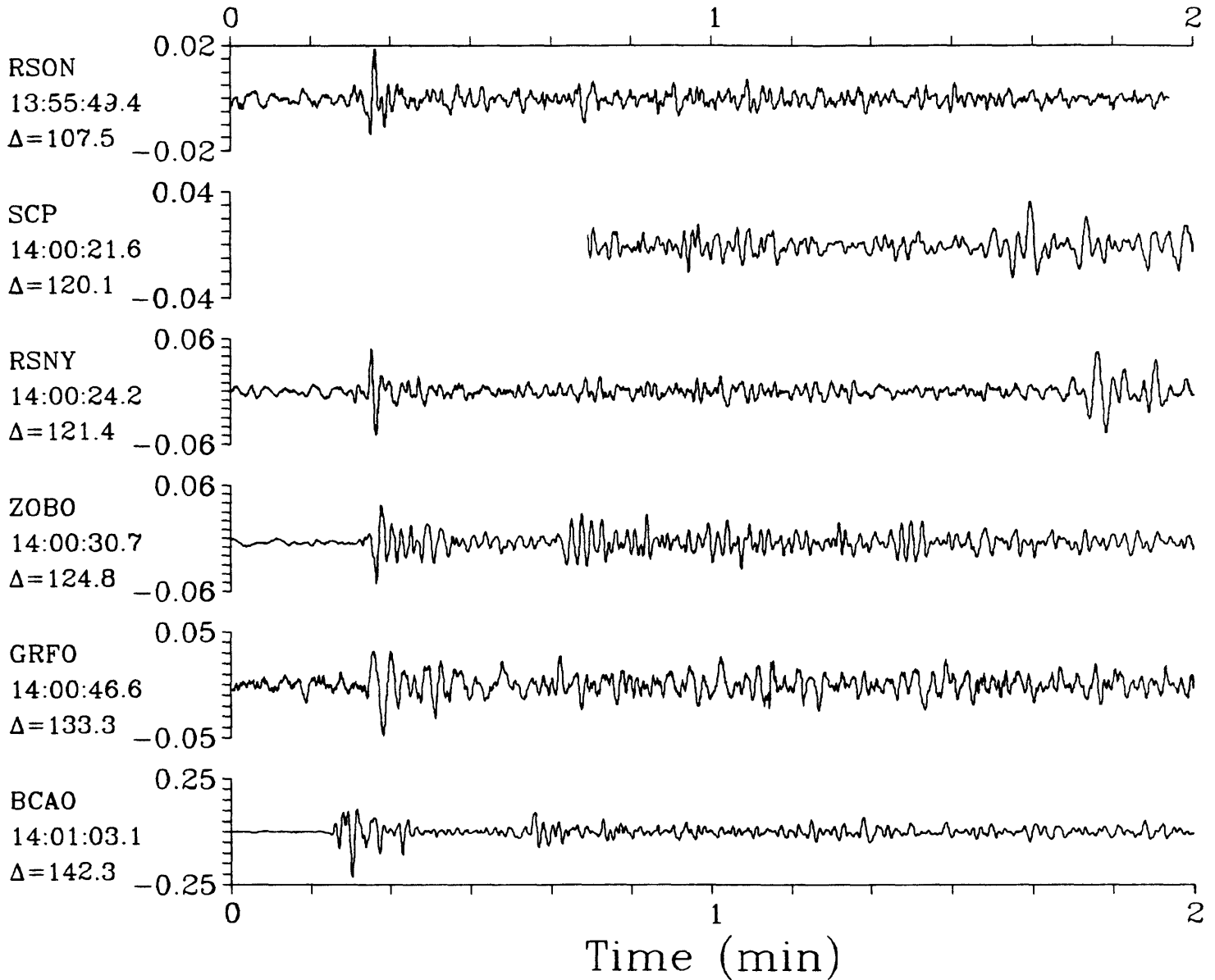
SPZ



SPZ

23 February 1985 13:42:00.63  
Solomon Islands  $h=129.8$   $m_b=6.0$ 

SPZ

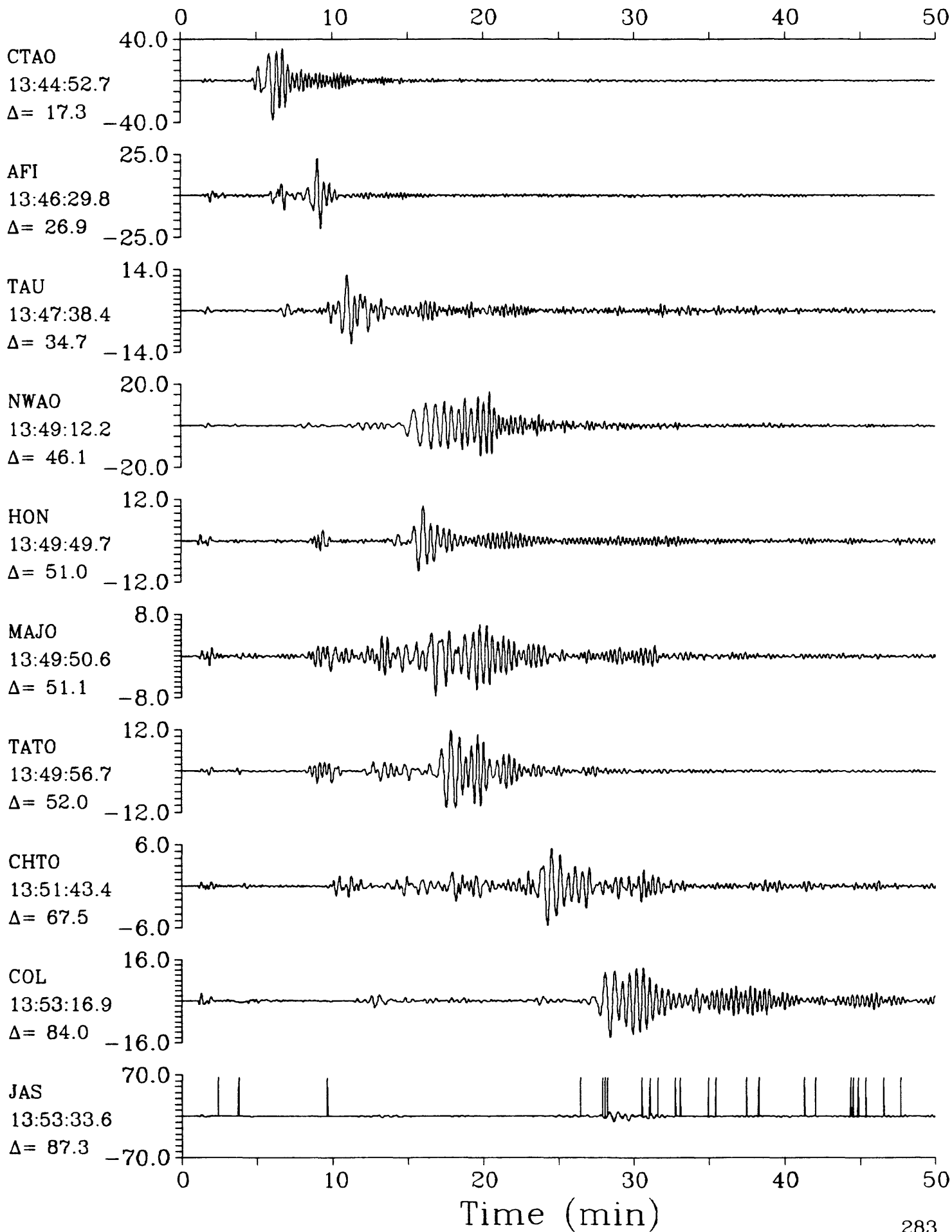




LPZ

23 February 1985 13:42:00.63  
Solomon Islands  $h=129.8$   $m_b=6.0$ 

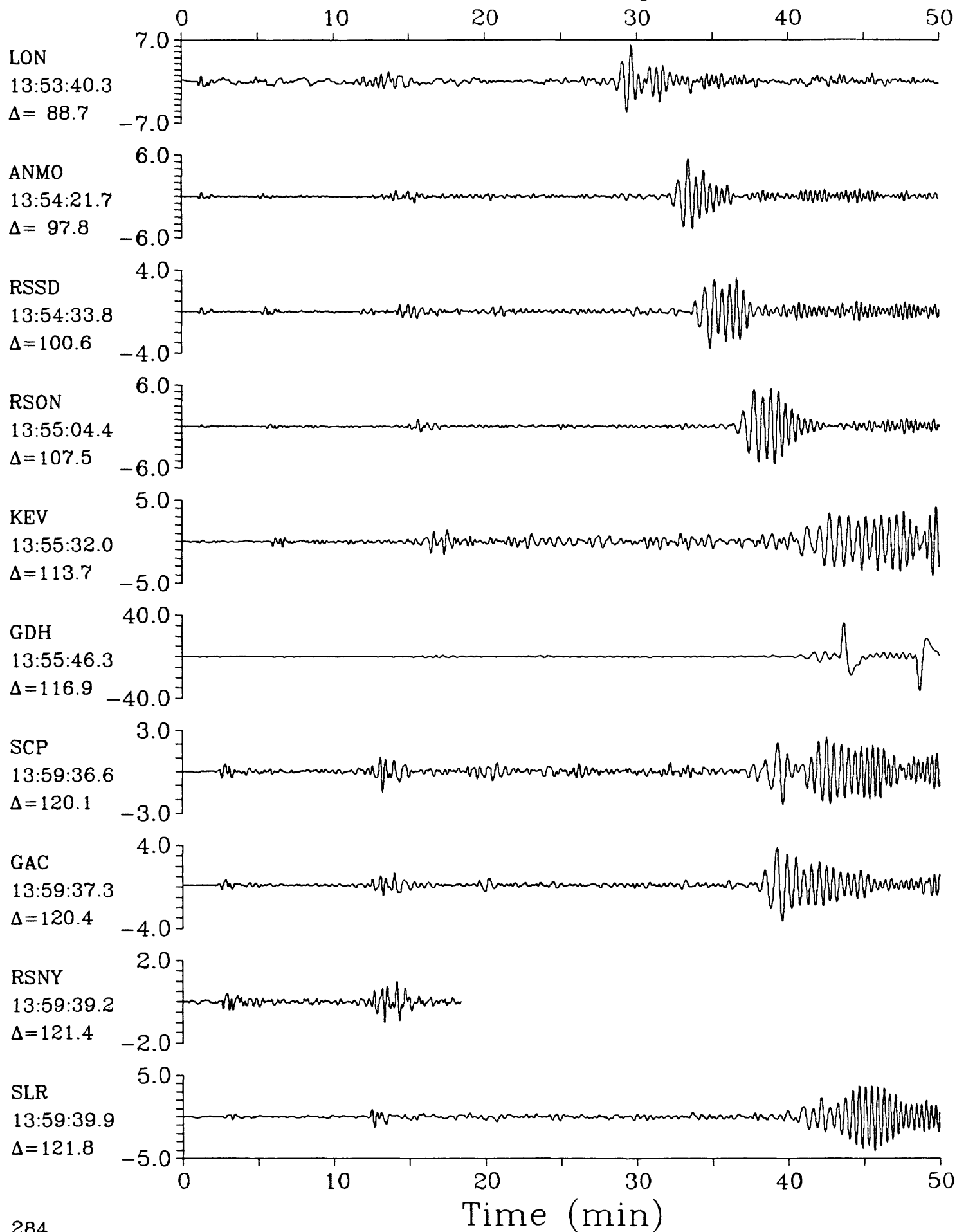
LPZ



LPZ

23 February 1985 13:42:00.63  
Solomon Islands  $h=129.8$   $m_b=6.0$ 

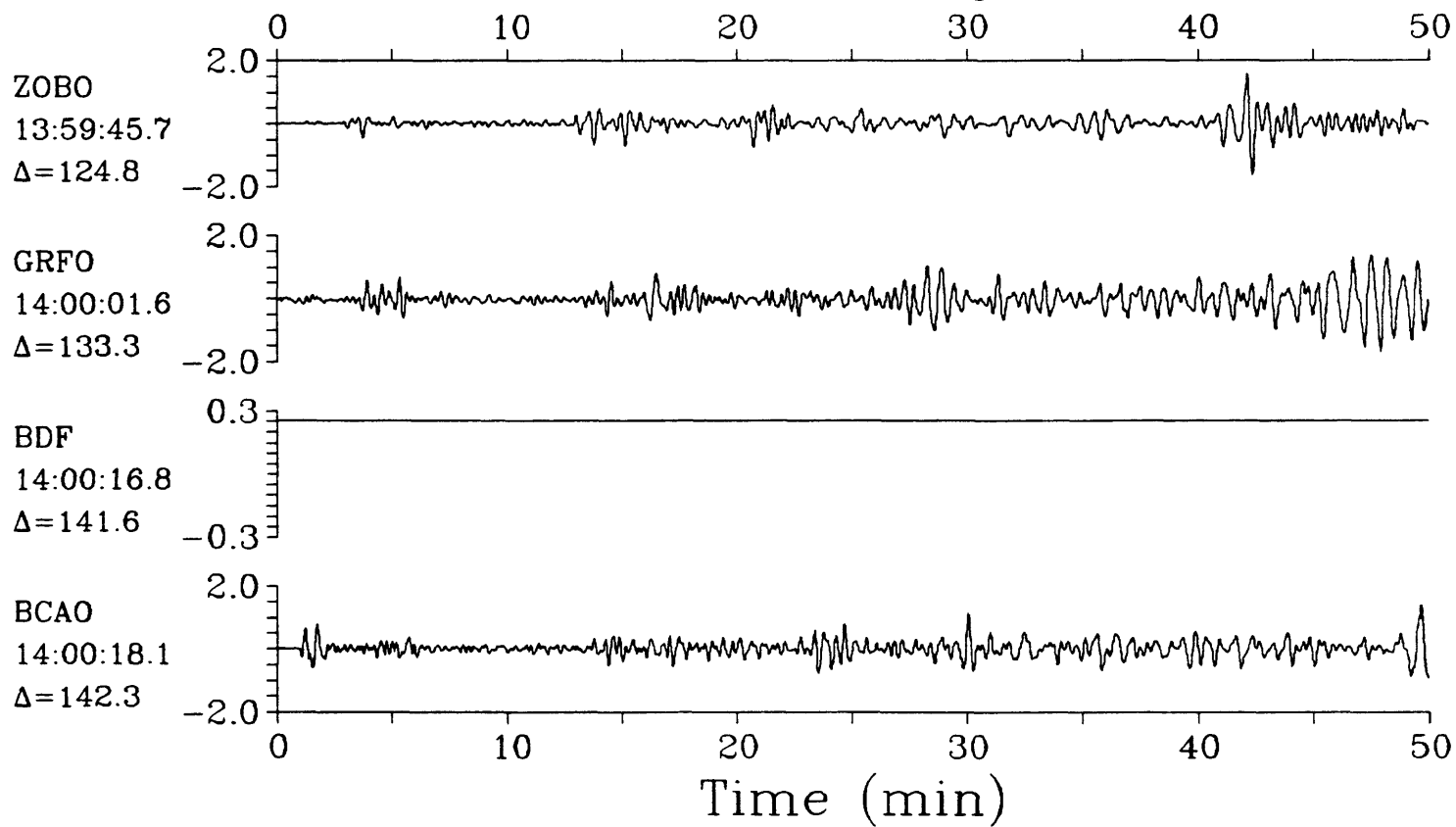
LPZ



LPZ

23 February 1985 13:42:00.63  
Solomon Islands  $h=129.8$   $m_b=6.0$ 

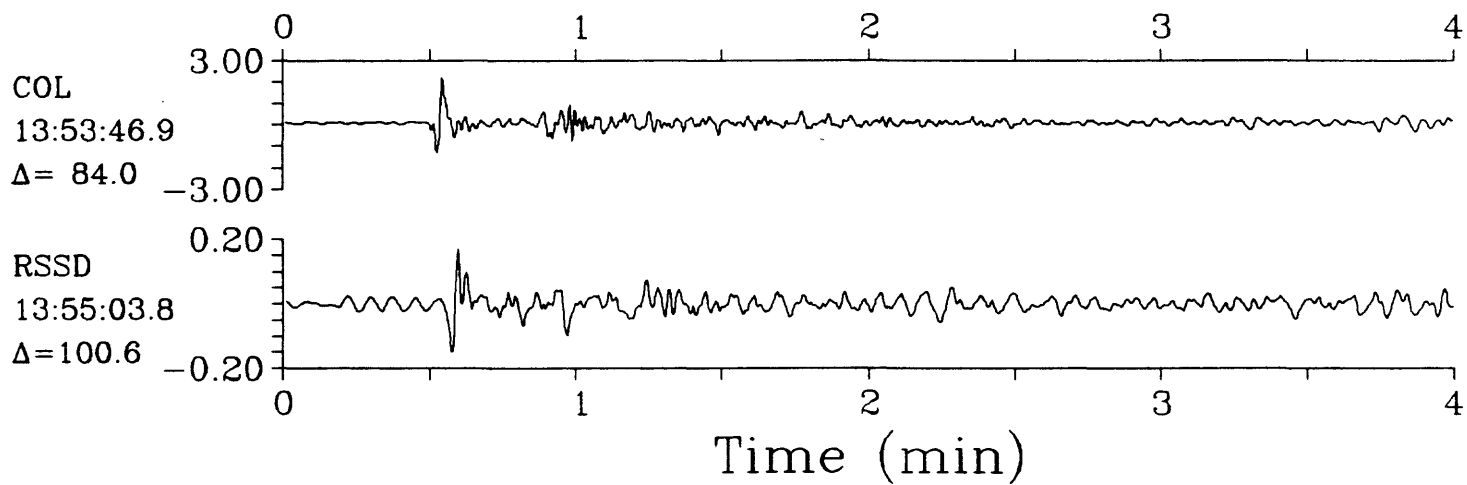
LPZ



IPZ

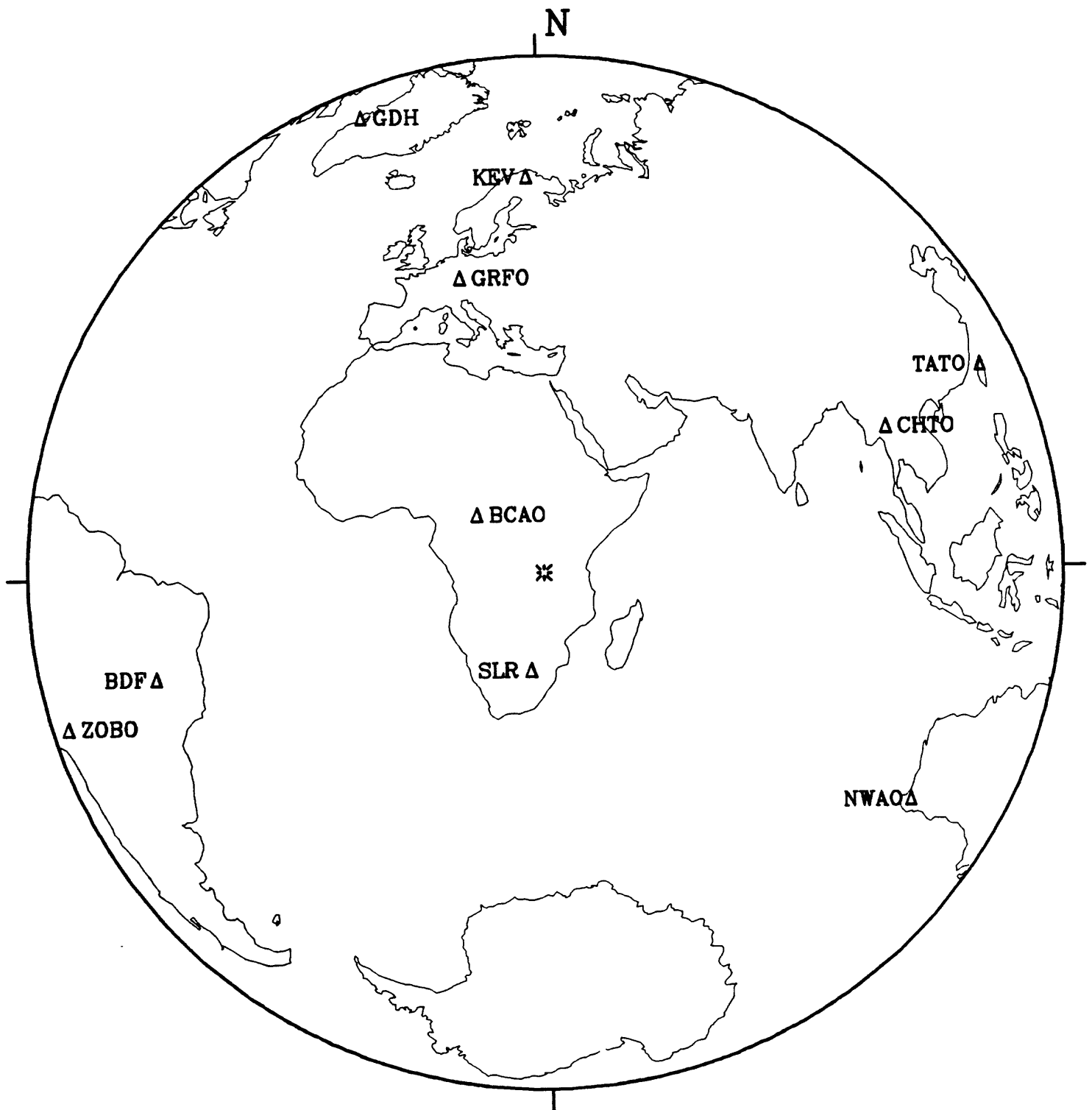
23 February 1985 13:42:00.63  
Solomon Islands  $h=129.8$   $m_b=6.0$

IPZ



23 February 1985 14:45:35.76

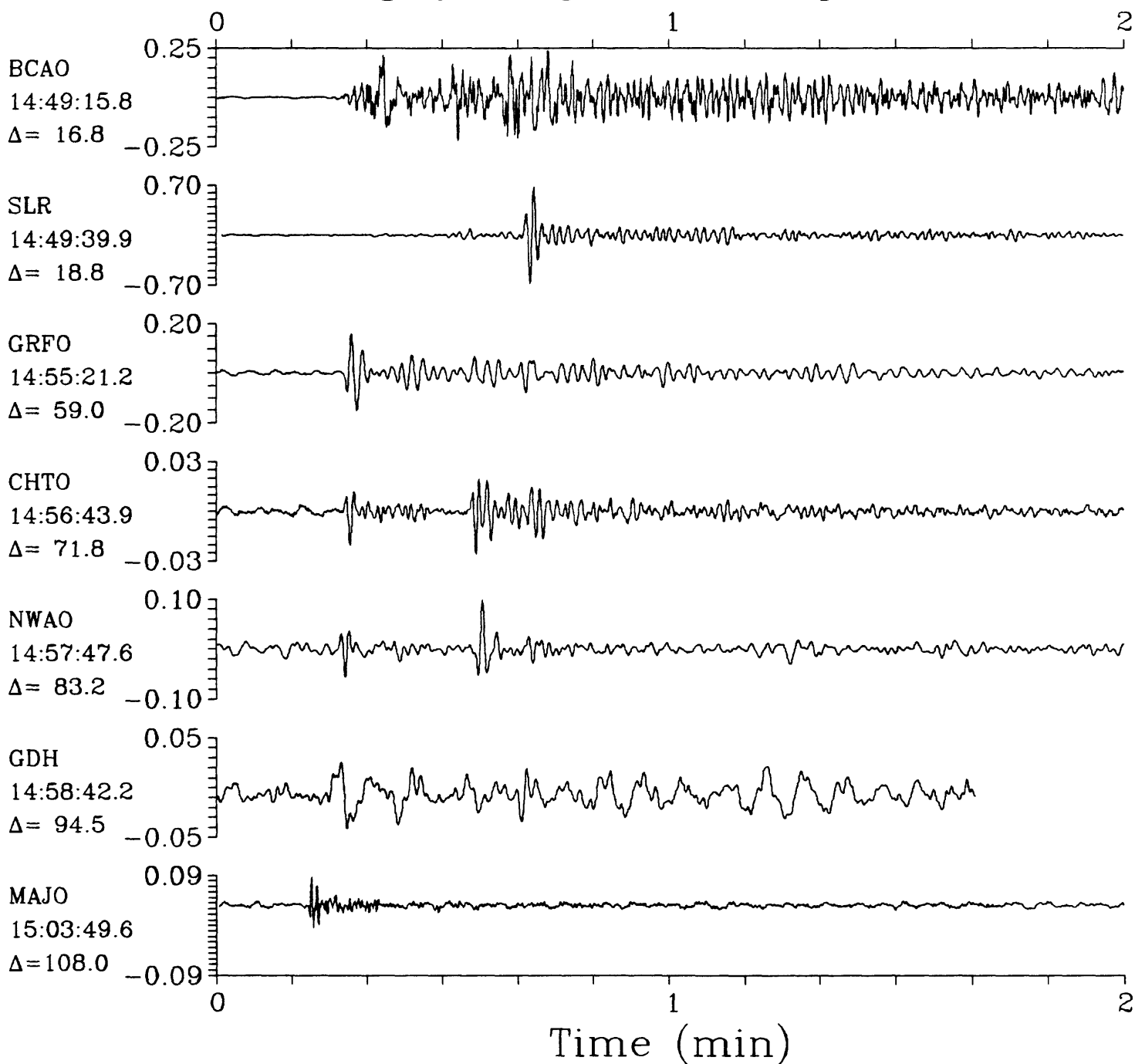
## Lake Tanganyika Region



SPZ

23 February 1985 14:45:35.76

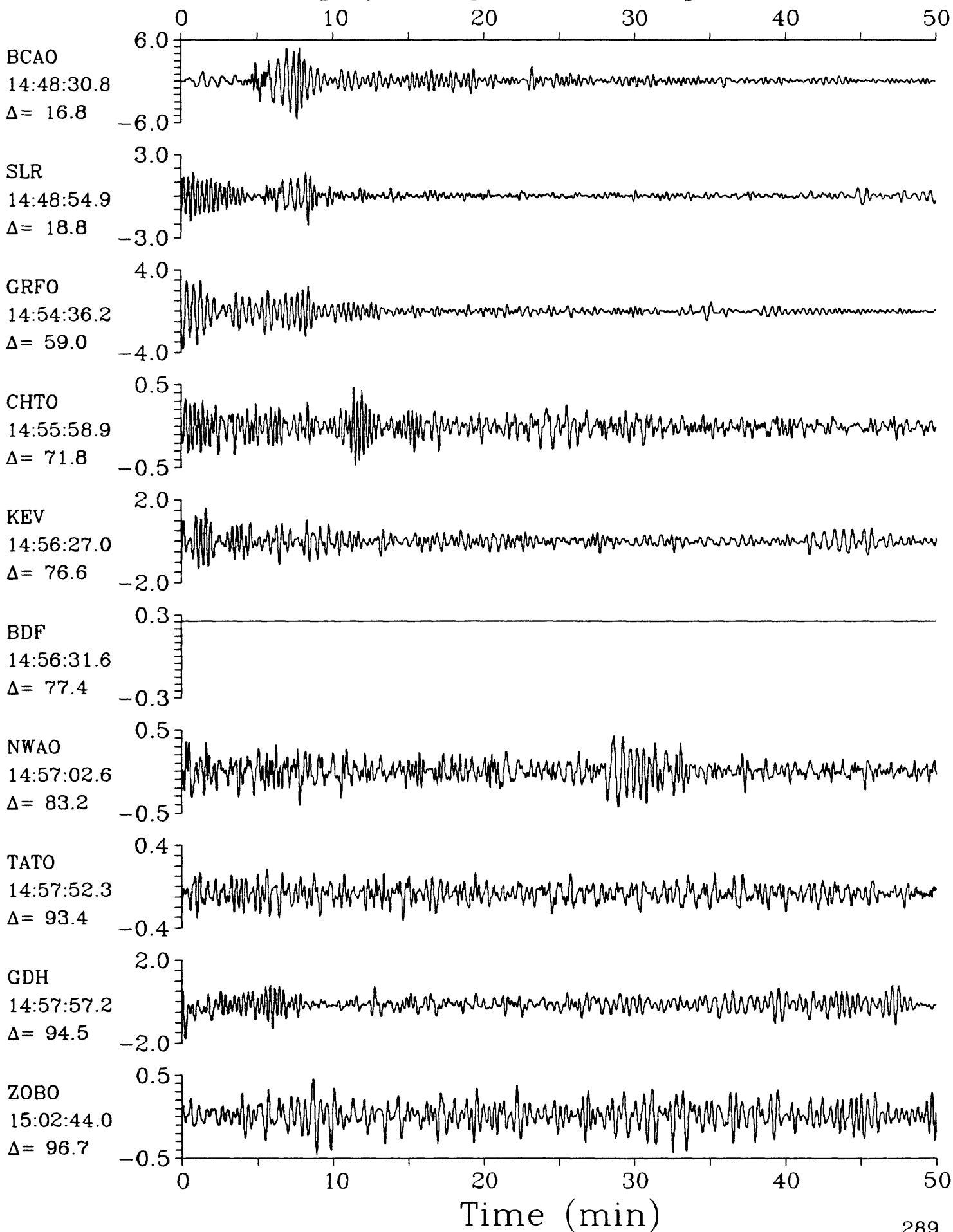
SPZ

Lake Tanganyika Region  $h=10.0$   $m_b=5.7$ 

LPZ

23 February 1985 14:45:35.76

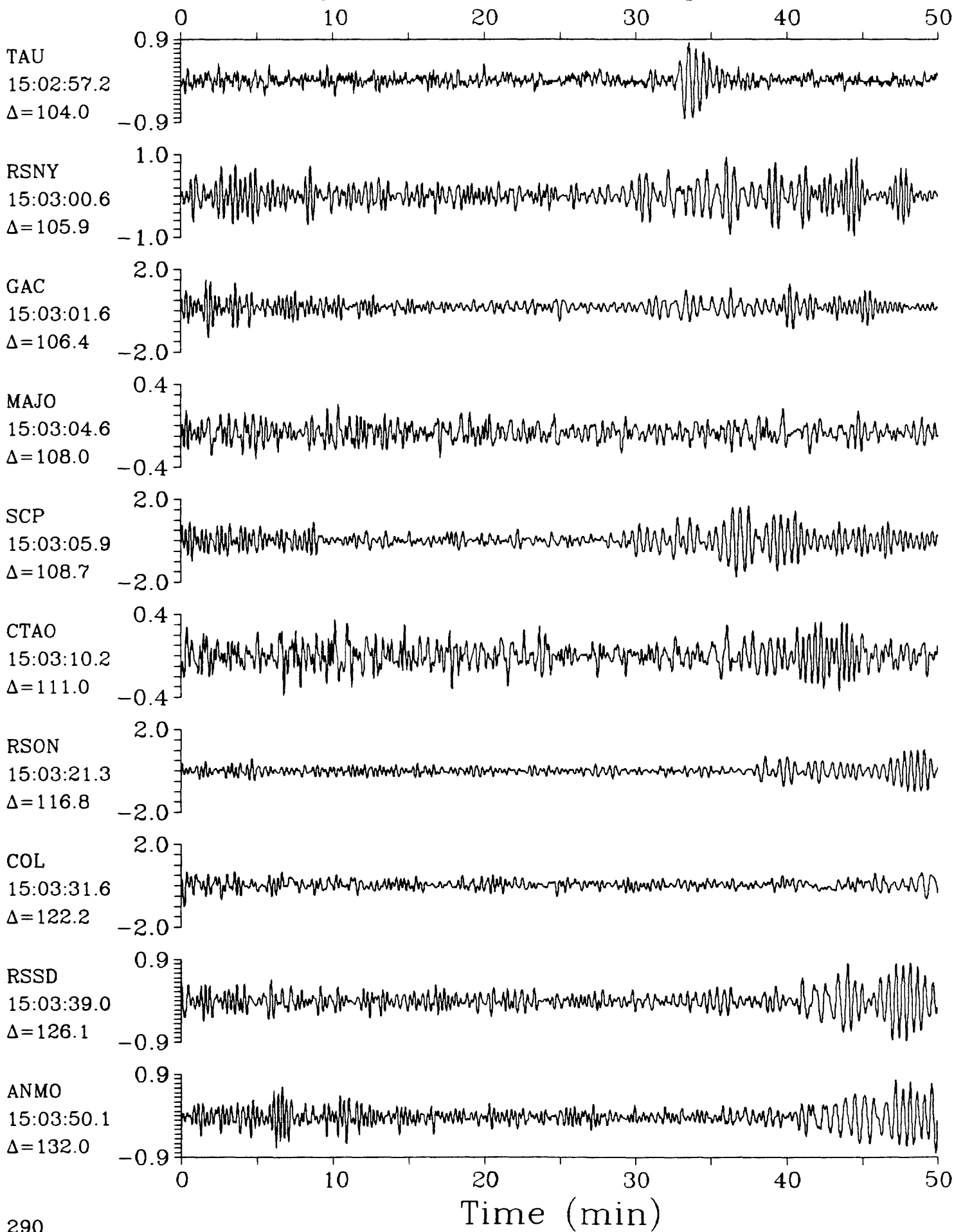
LPZ

Lake Tanganyika Region  $h=10.0$   $m_b=5.7$ 

LPZ

23 February 1985 14:45:35.76

LPZ

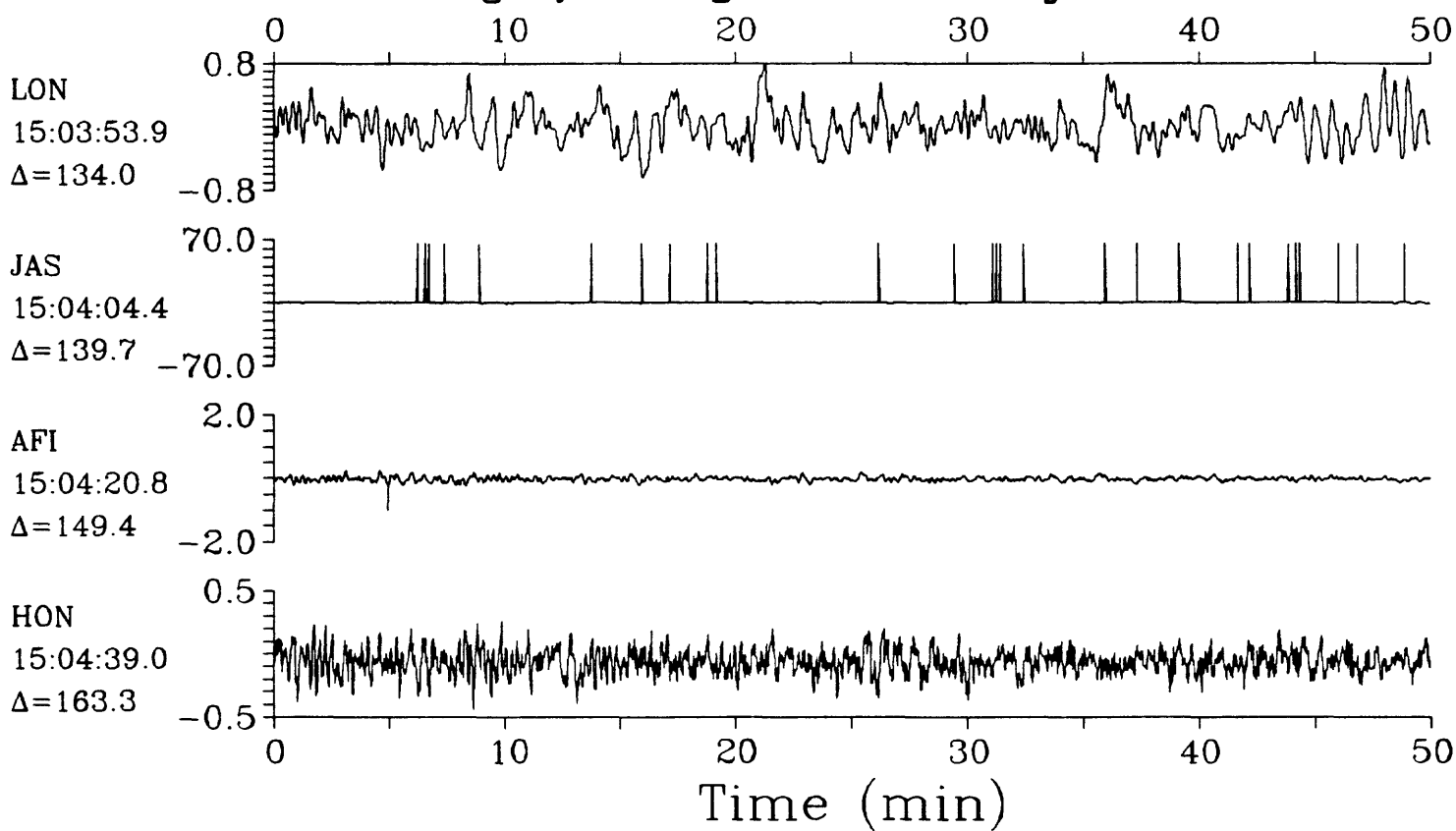
Lake Tanganyika Region  $h=10.0$   $m_b=5.7$ 



LPZ

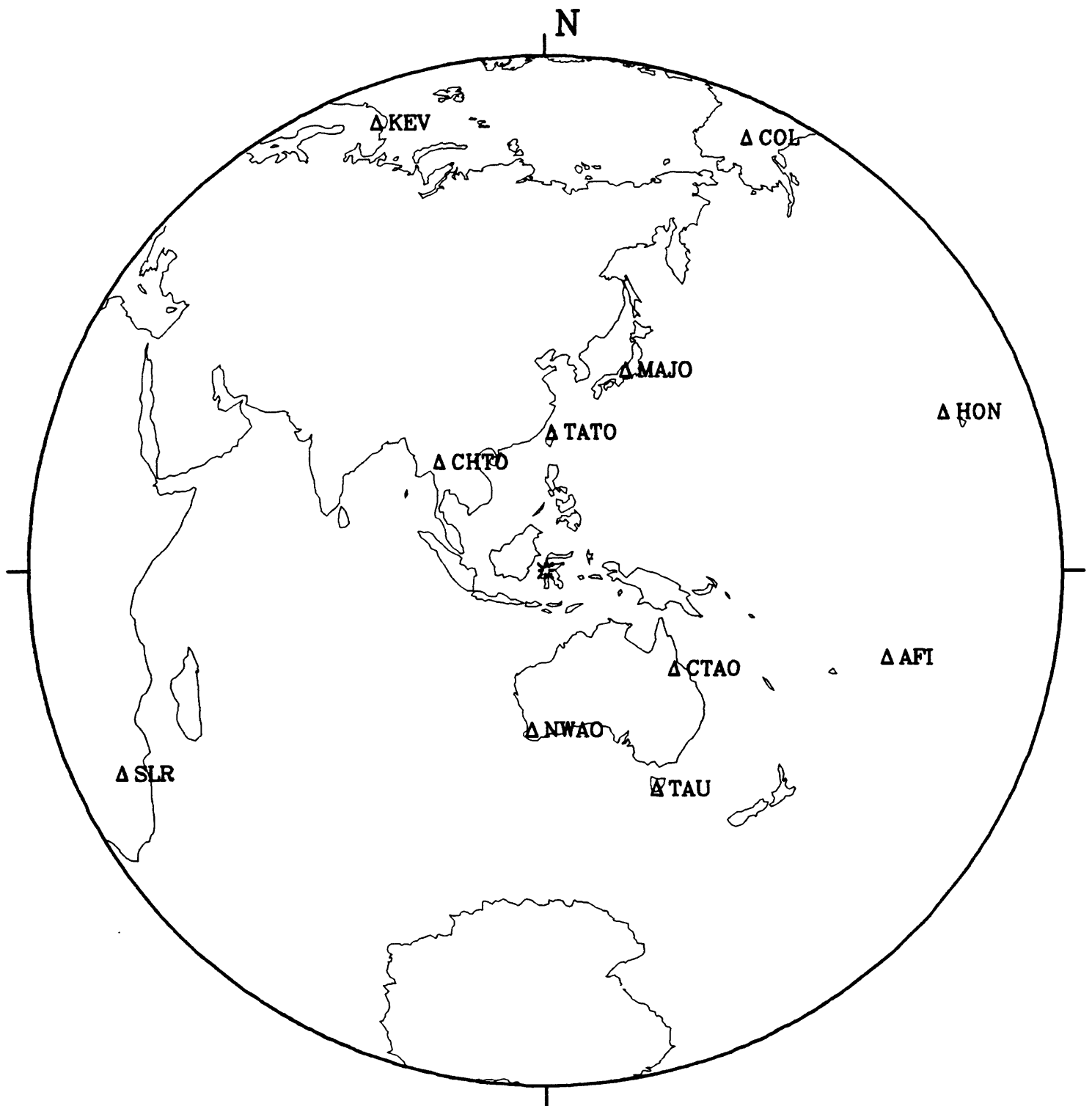
23 February 1985 14:45:35.76

LPZ

Lake Tanganyika Region  $h=10.0$   $m_b=5.7$ 

24 February 1985 02:26:54.95

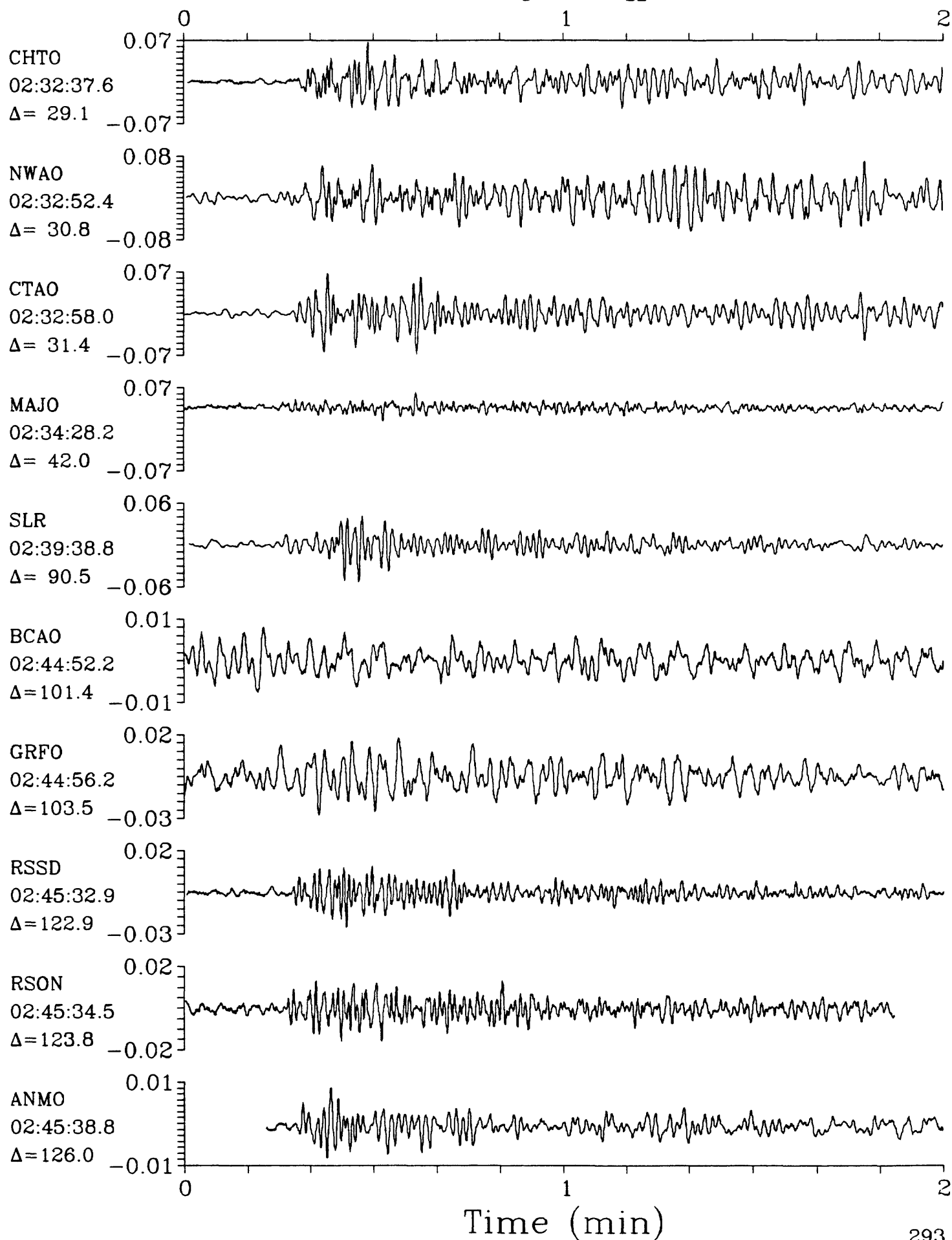
## Sulawesi



SPZ

24 February 1985 02:26:54.95  
Sulawesi  $h=37.5$   $m_b=5.4$   $M_{sz}=5.5$ 

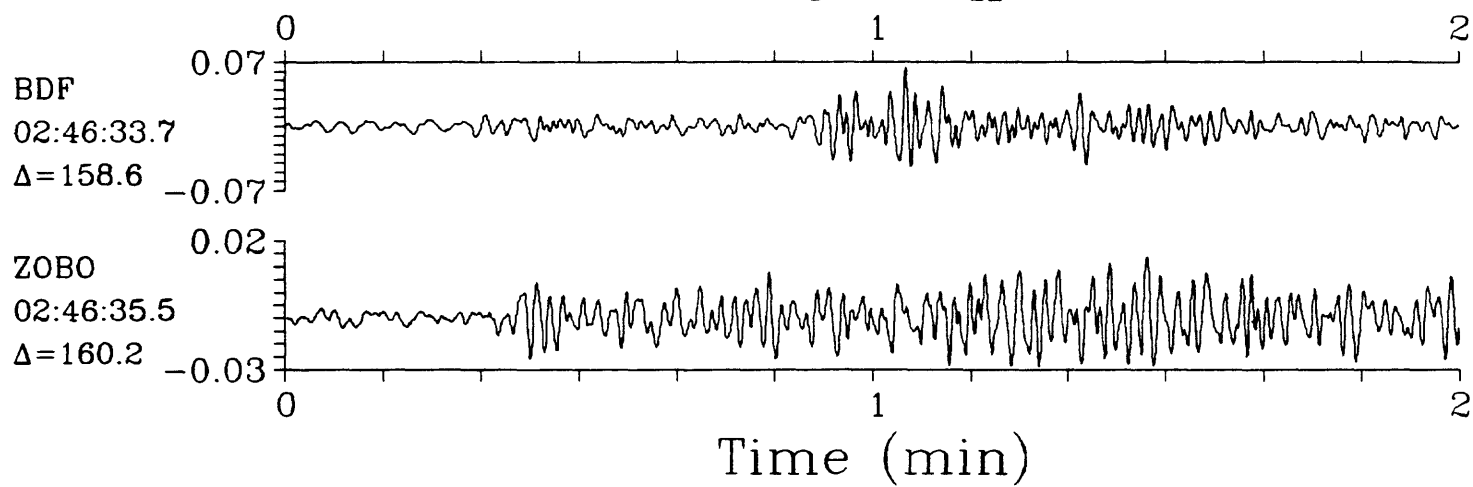
SPZ



SPZ

24 February 1985 02:26:54.95  
Sulawesi  $h=37.5$   $m_b=5.4$   $M_{sz}=5.5$

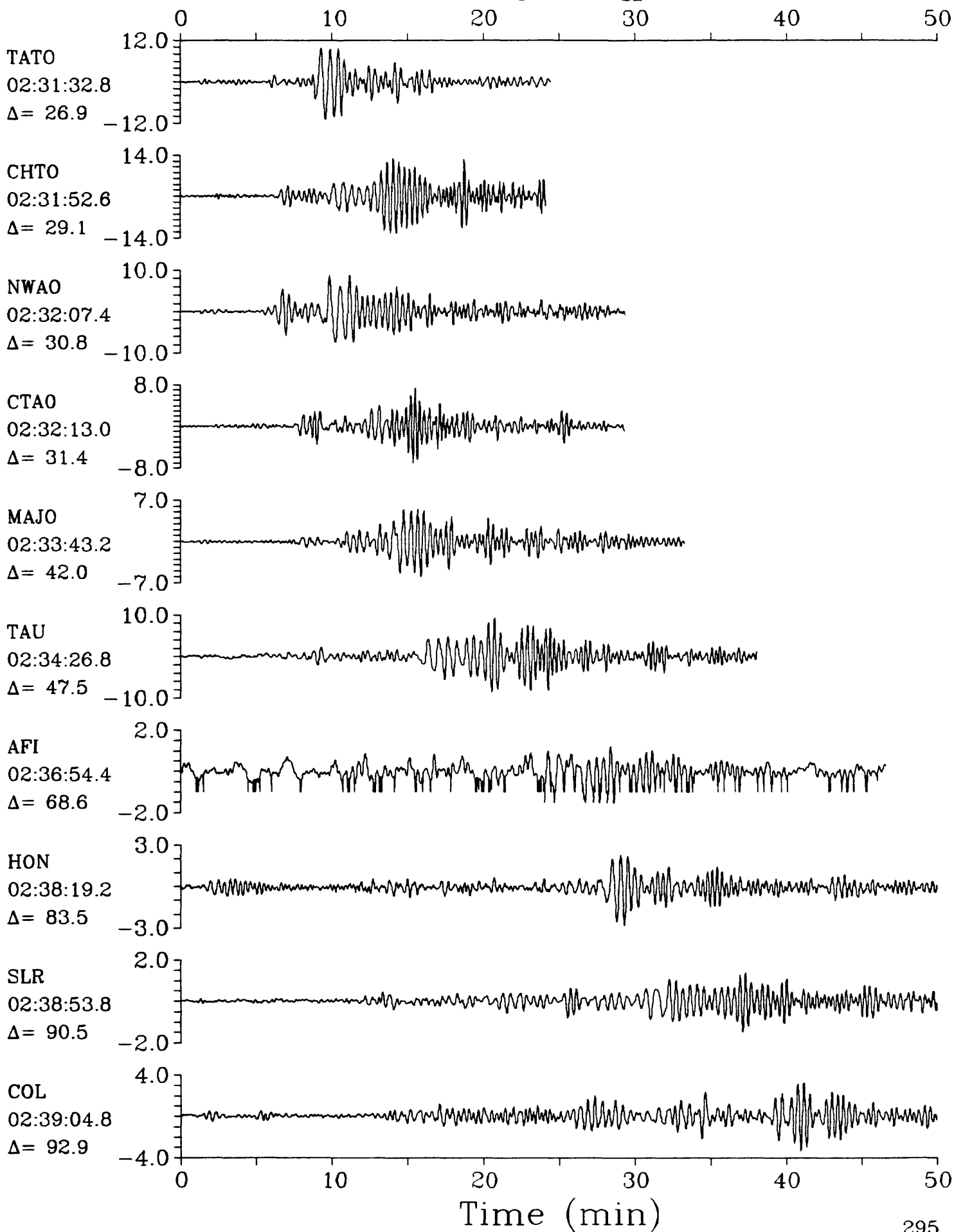
SPZ



LPZ

24 February 1985 02:26:54.95  
Sulawesi  $h=37.5$   $m_b=5.4$   $M_{SZ}=5.5$ 

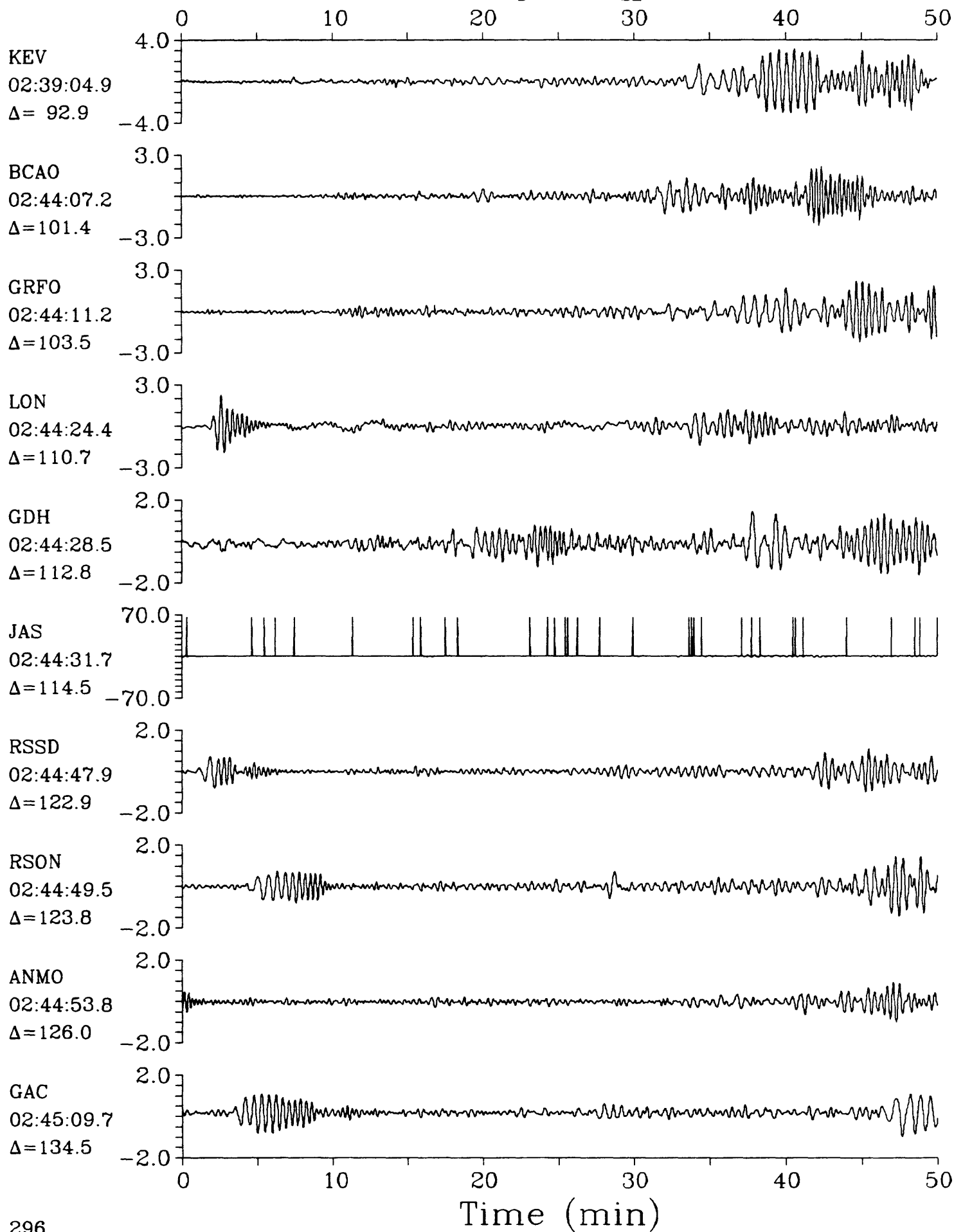
LPZ



LPZ

24 February 1985 02:26:54.95  
Sulawesi  $h=37.5$   $m_b=5.4$   $M_{sz}=5.5$ 

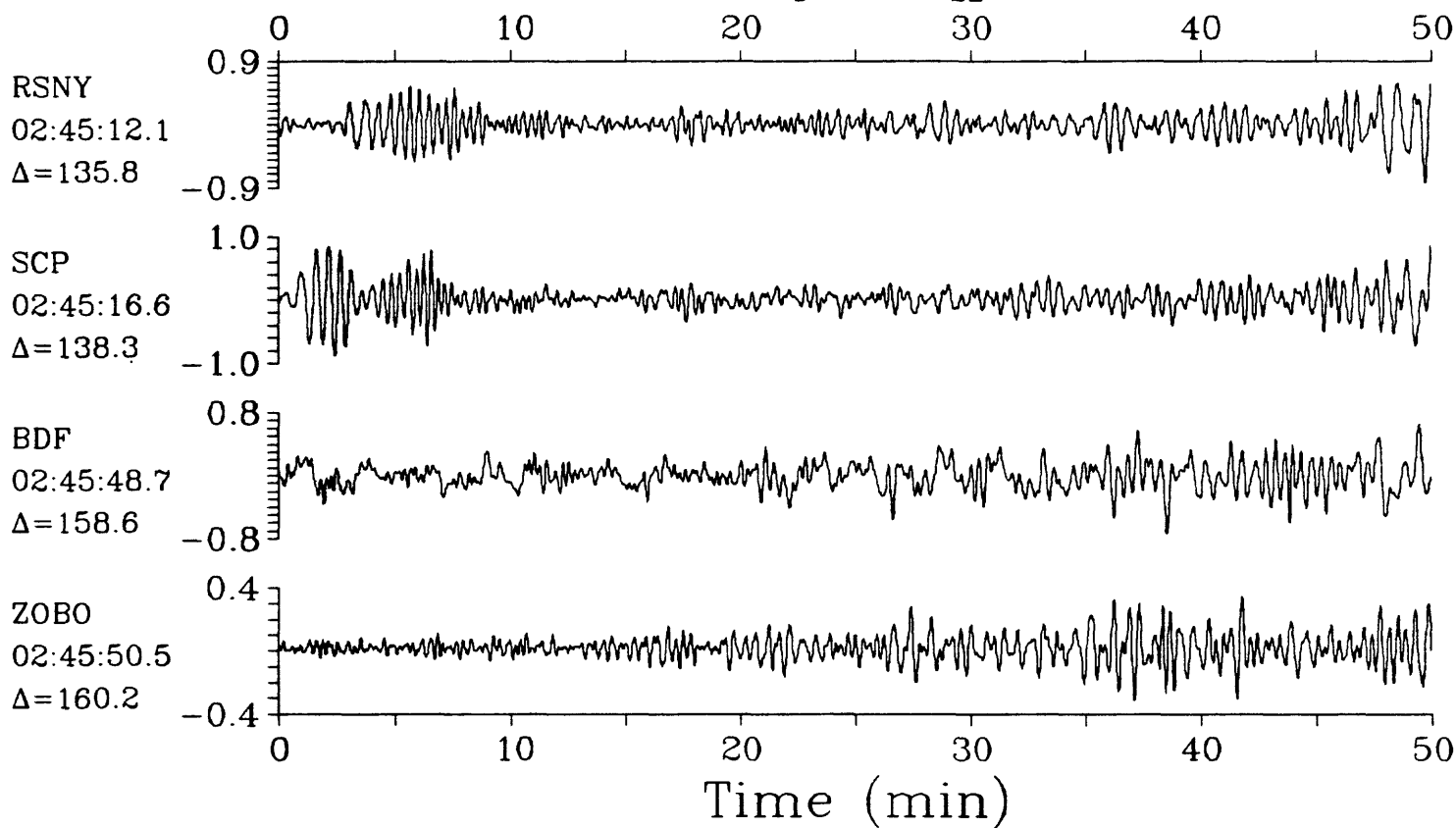
LPZ



LPZ

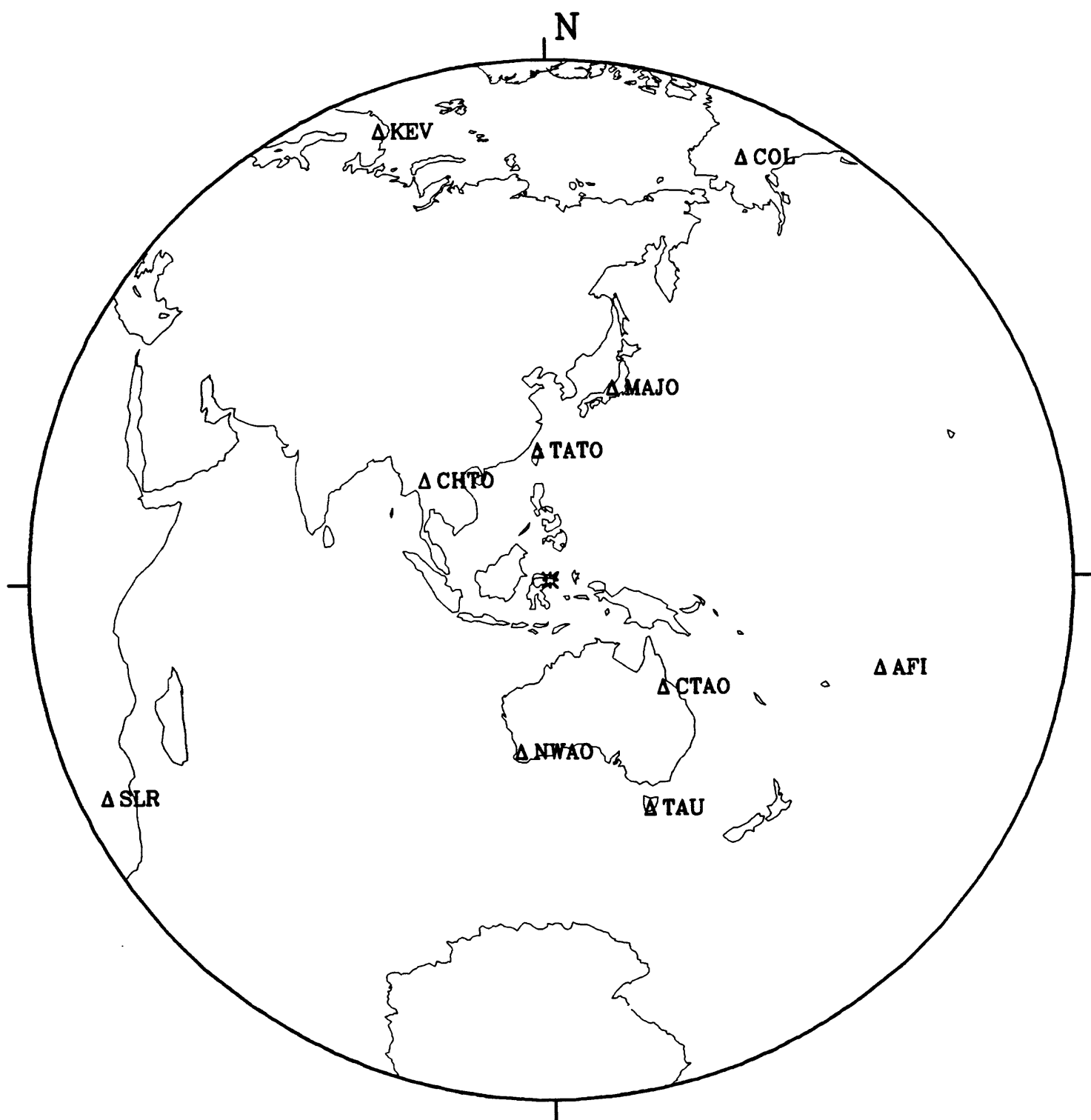
24 February 1985 02:26:54.95  
Sulawesi  $h=37.5$   $m_b=5.4$   $M_{sz}=5.5$

LPZ



25 February 1985 08:34:11.26

## Minahassa Peninsula

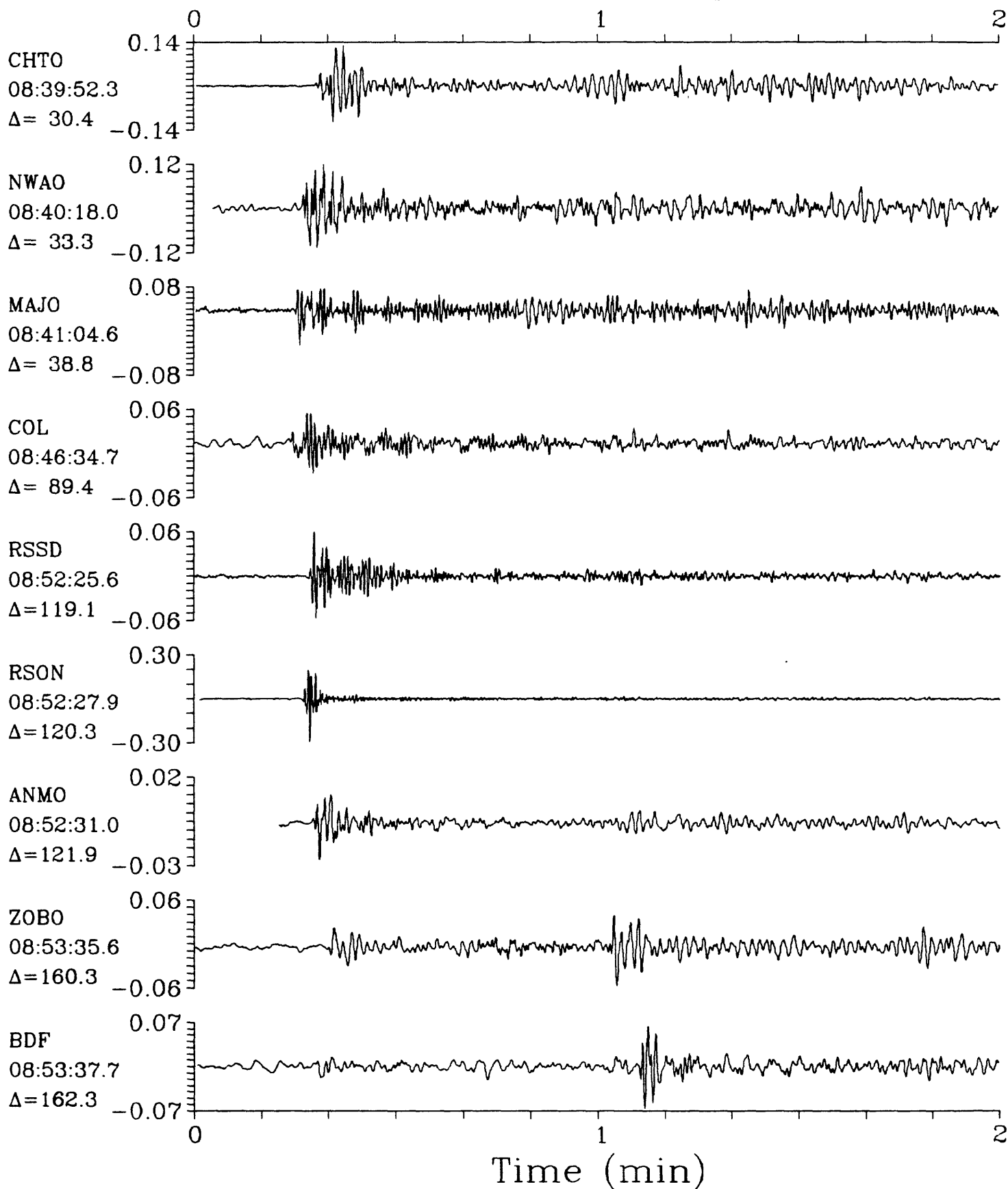




SPZ

25 February 1985 08:34:11.26  
Minahassa Peninsula  $h=168.2$   $m_b=5.5$ 

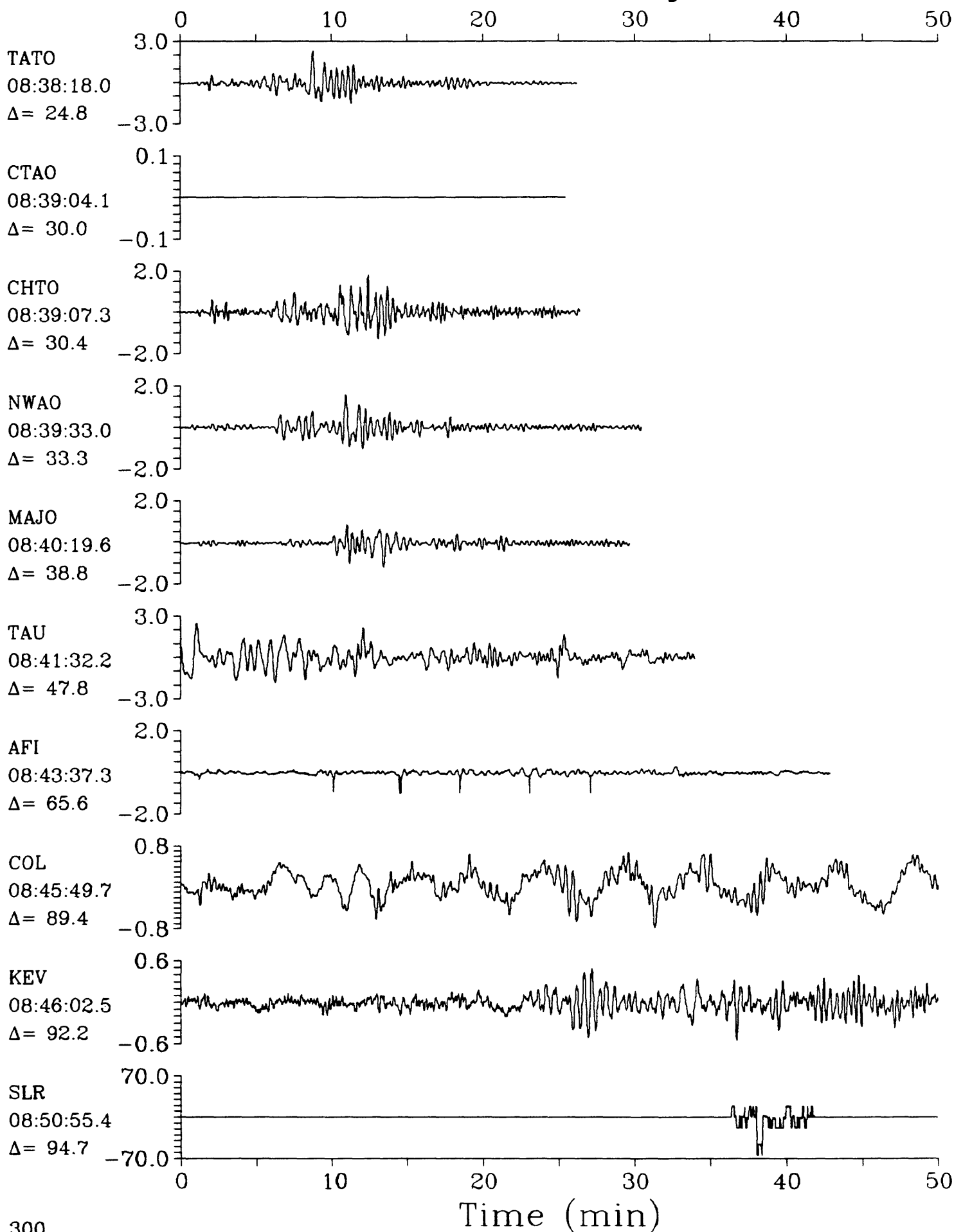
SPZ



LPZ

25 February 1985 08:34:11.26  
Minahassa Peninsula  $h=168.2$   $m_b=5.5$ 

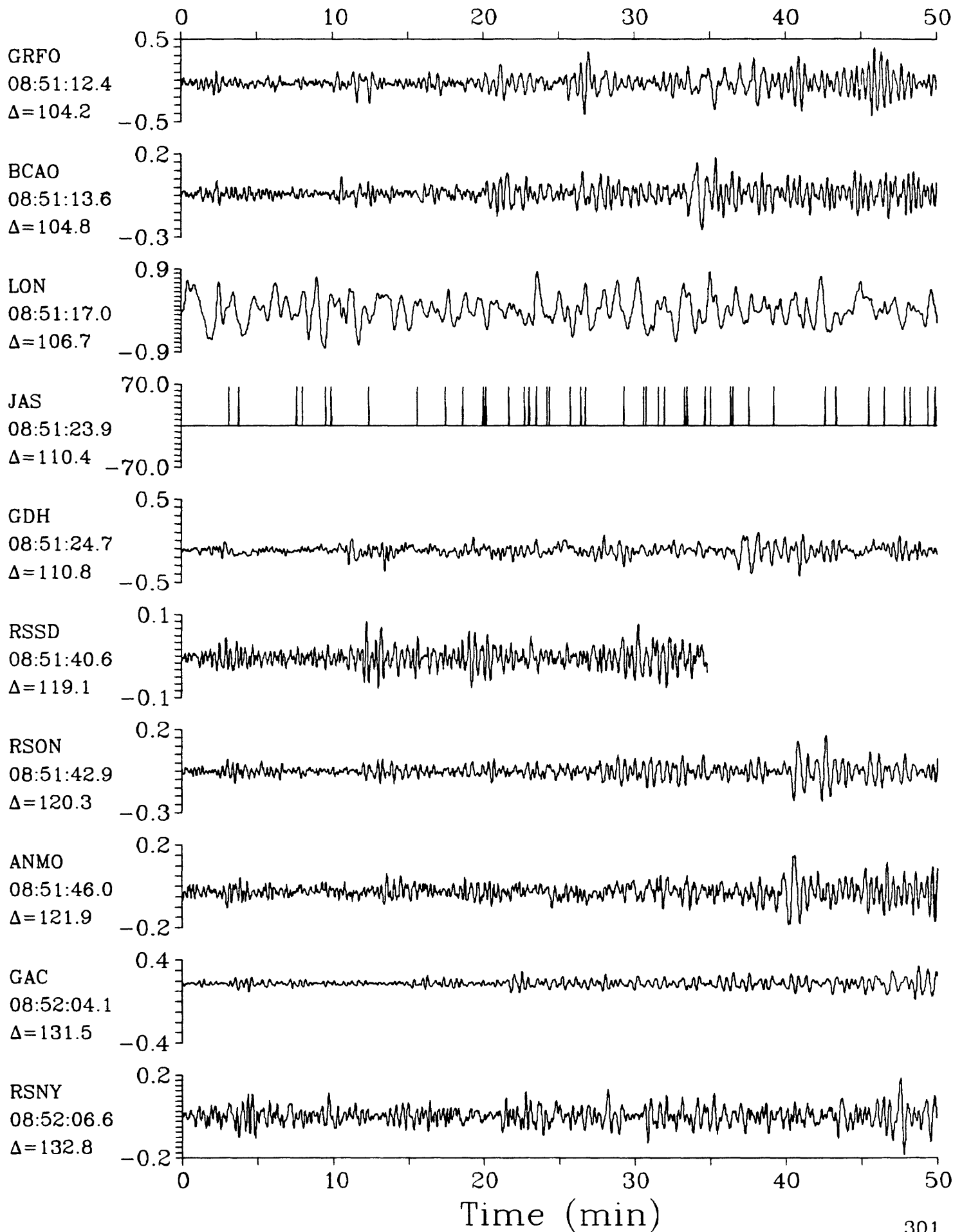
LPZ

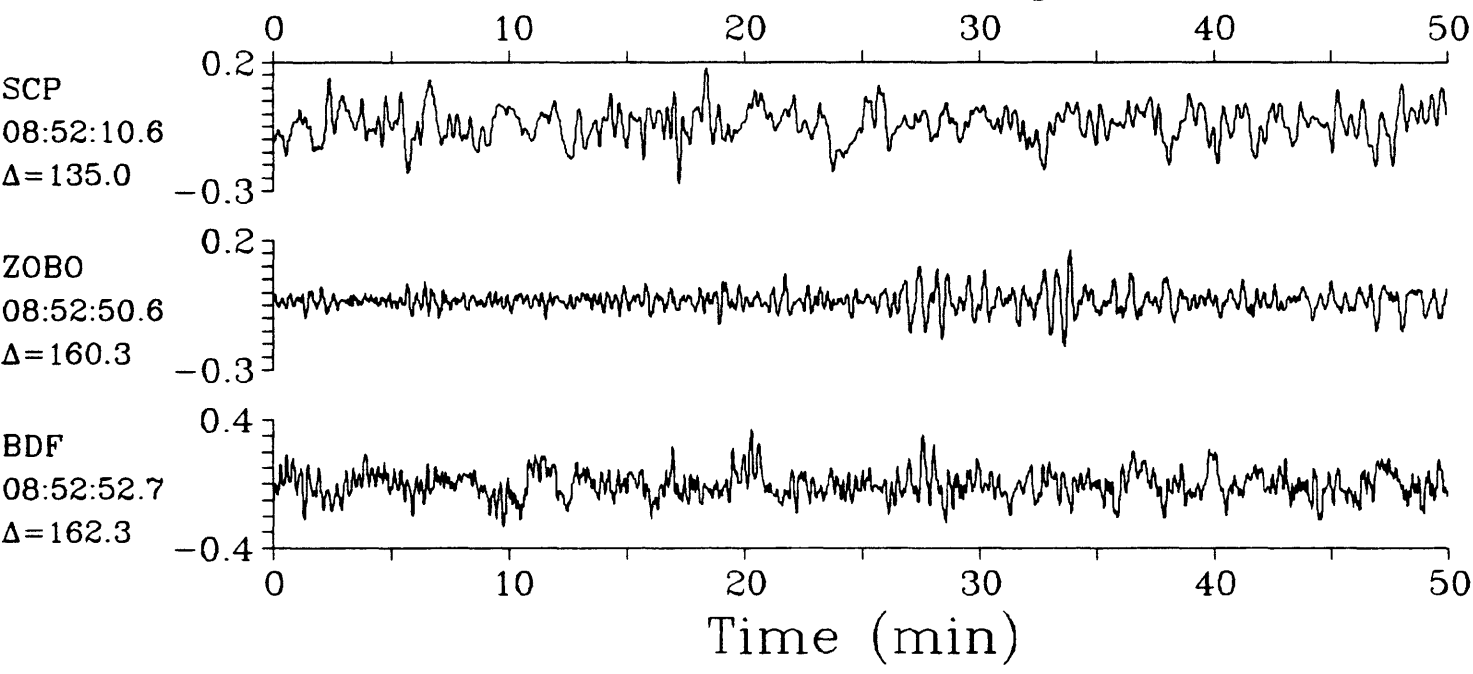


LPZ

25 February 1985 08:34:11.26  
Minahassa Peninsula  $h=168.2$   $m_b=5.5$ 

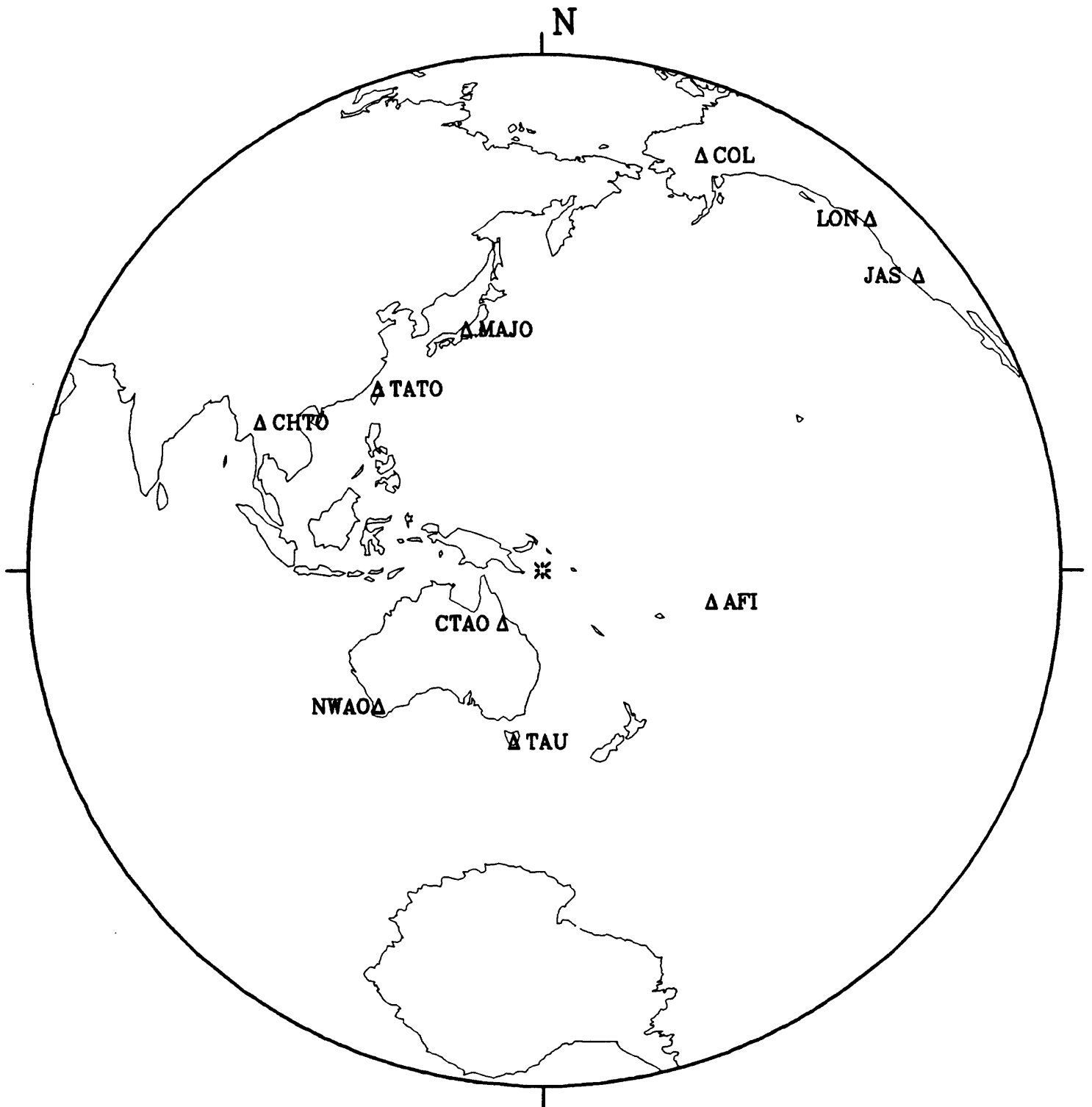
LPZ





25 February 1985 11:12:40.89

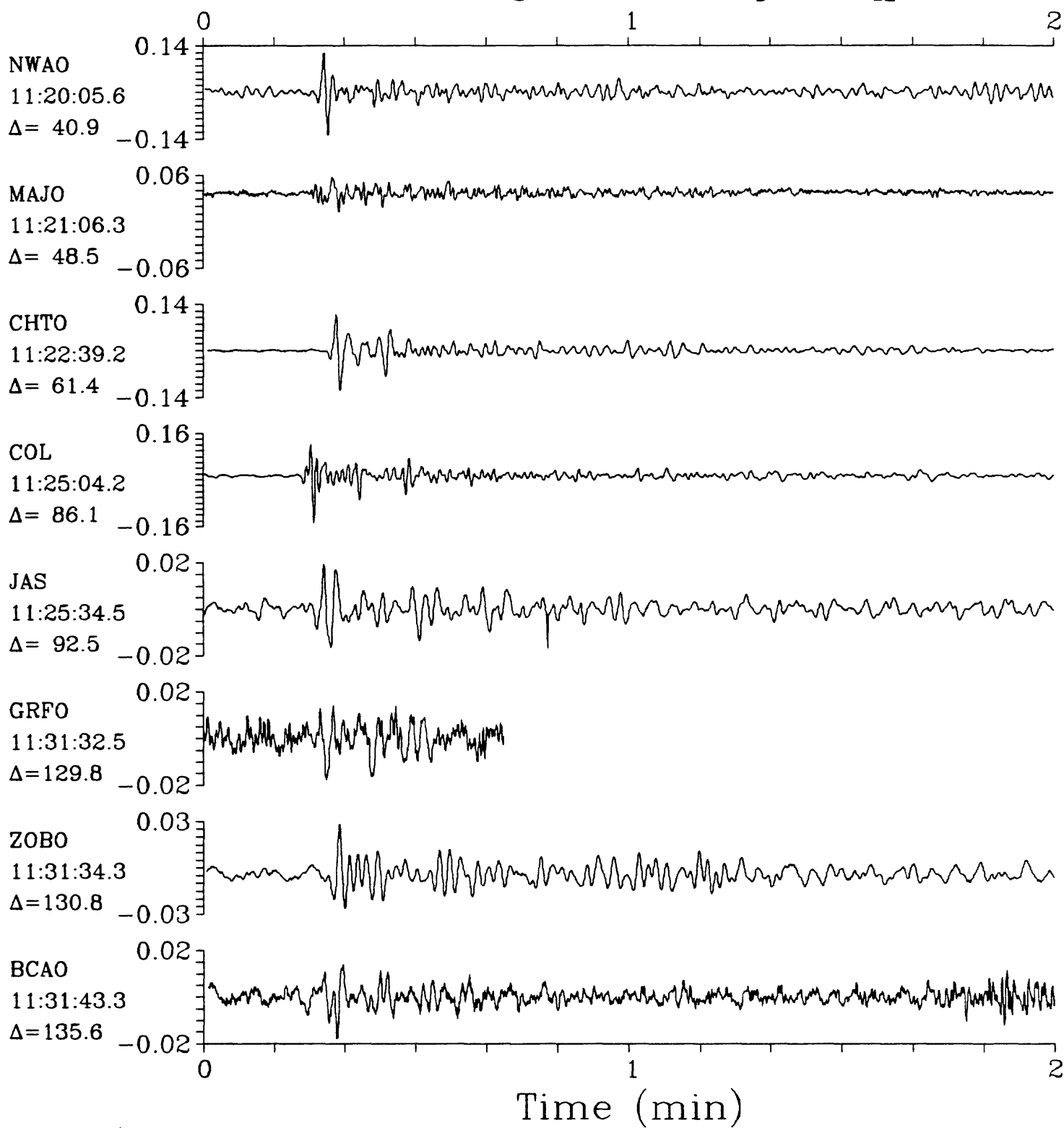
## Dentrecasteaux Islands Region



SPZ

25 February 1985 11:12:40.89

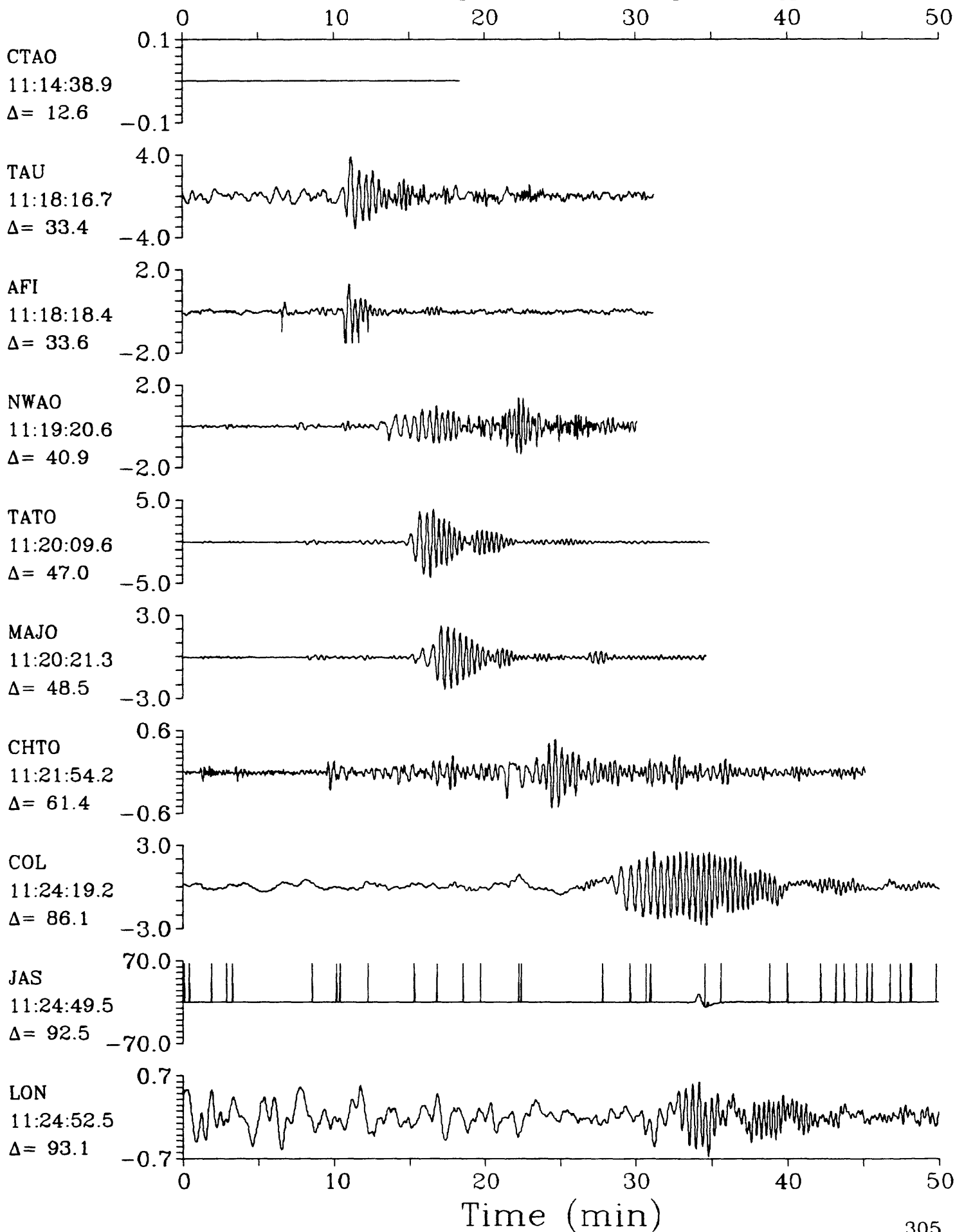
SPZ

Dentrecasteaux Islands Region  $h=33.0$   $m_b=5.9$   $M_{sz}=5.1$ 

LPZ

25 February 1985 11:12:40.89

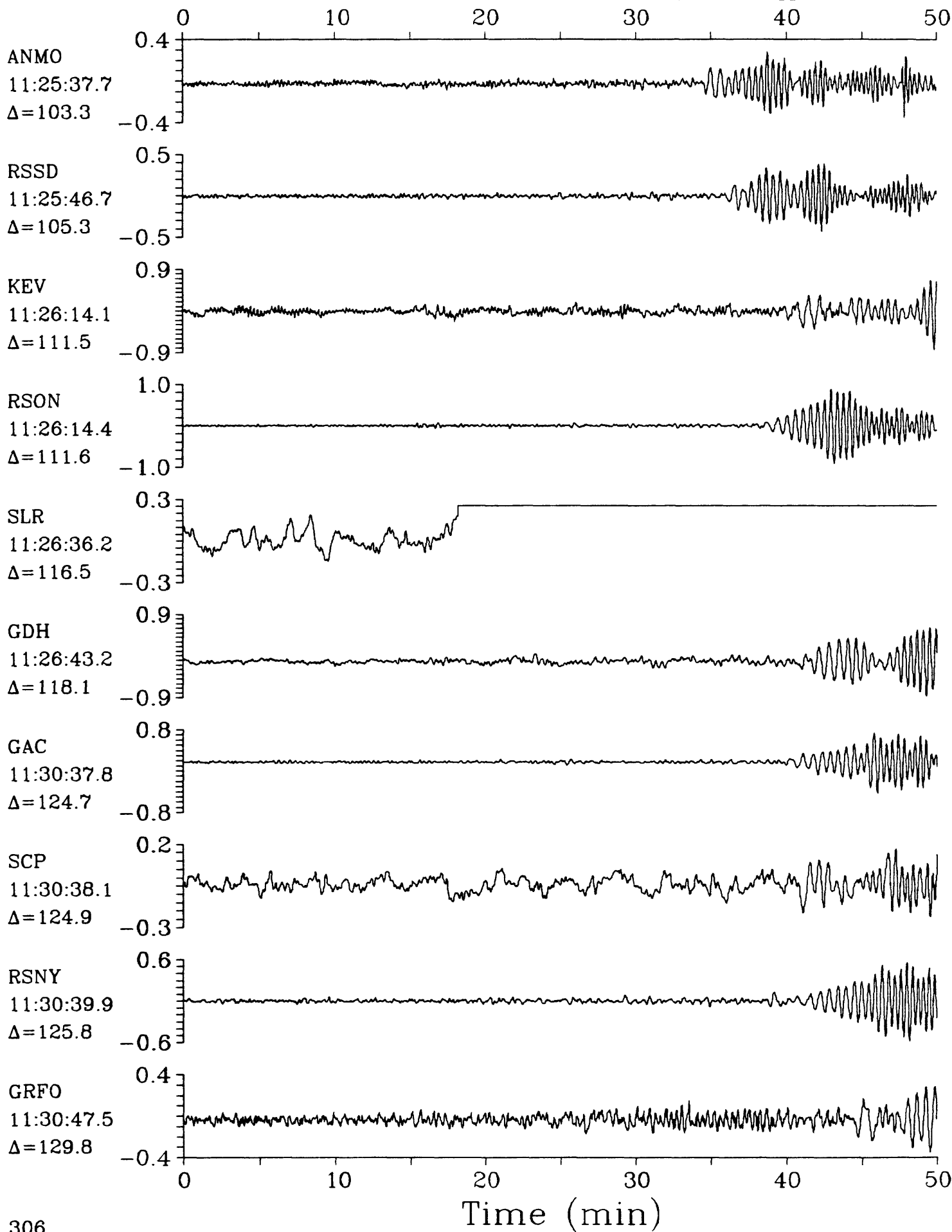
LPZ

Dentrecasteaux Islands Region  $h=33.0$   $m_b=5.9$   $M_{sz}=5.1$ 

LPZ

25 February 1985 11:12:40.89

LPZ

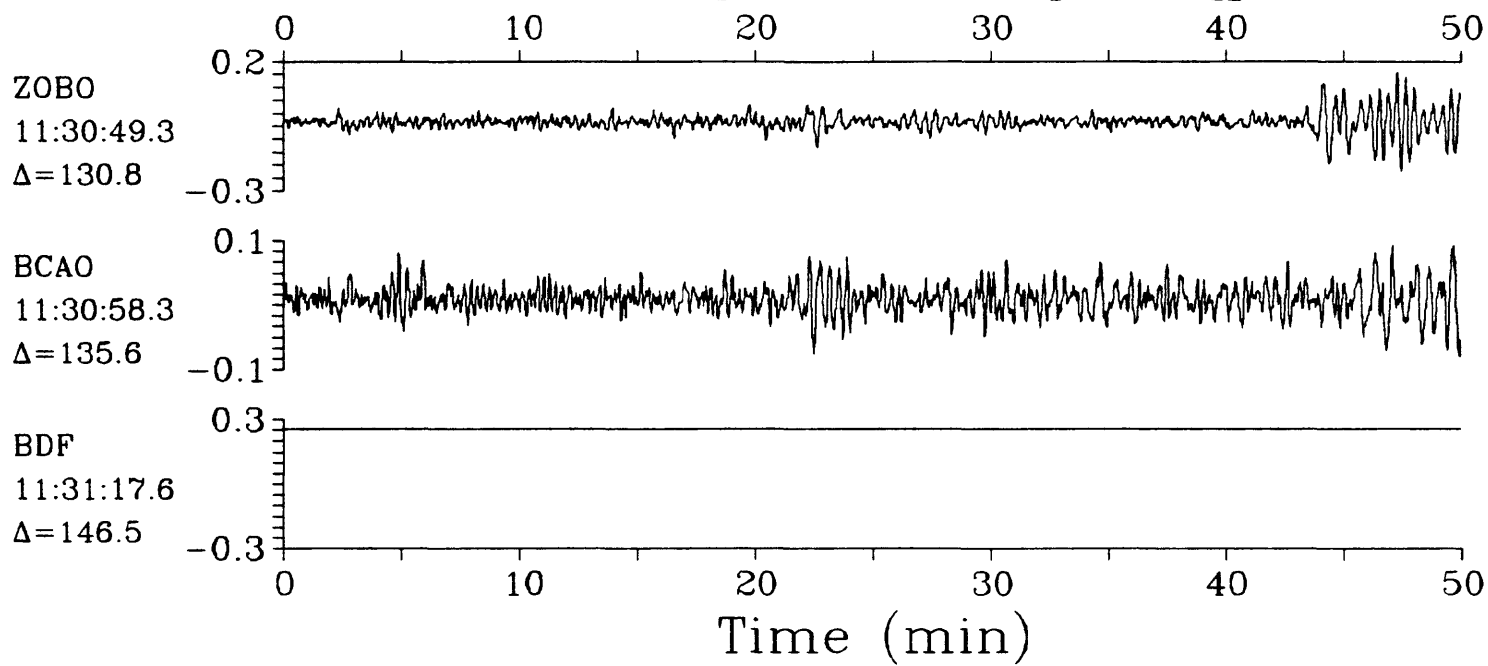
Dentrecasteaux Islands Region  $h=33.0$   $m_b=5.9$   $M_{SZ}=5.1$ 



LPZ

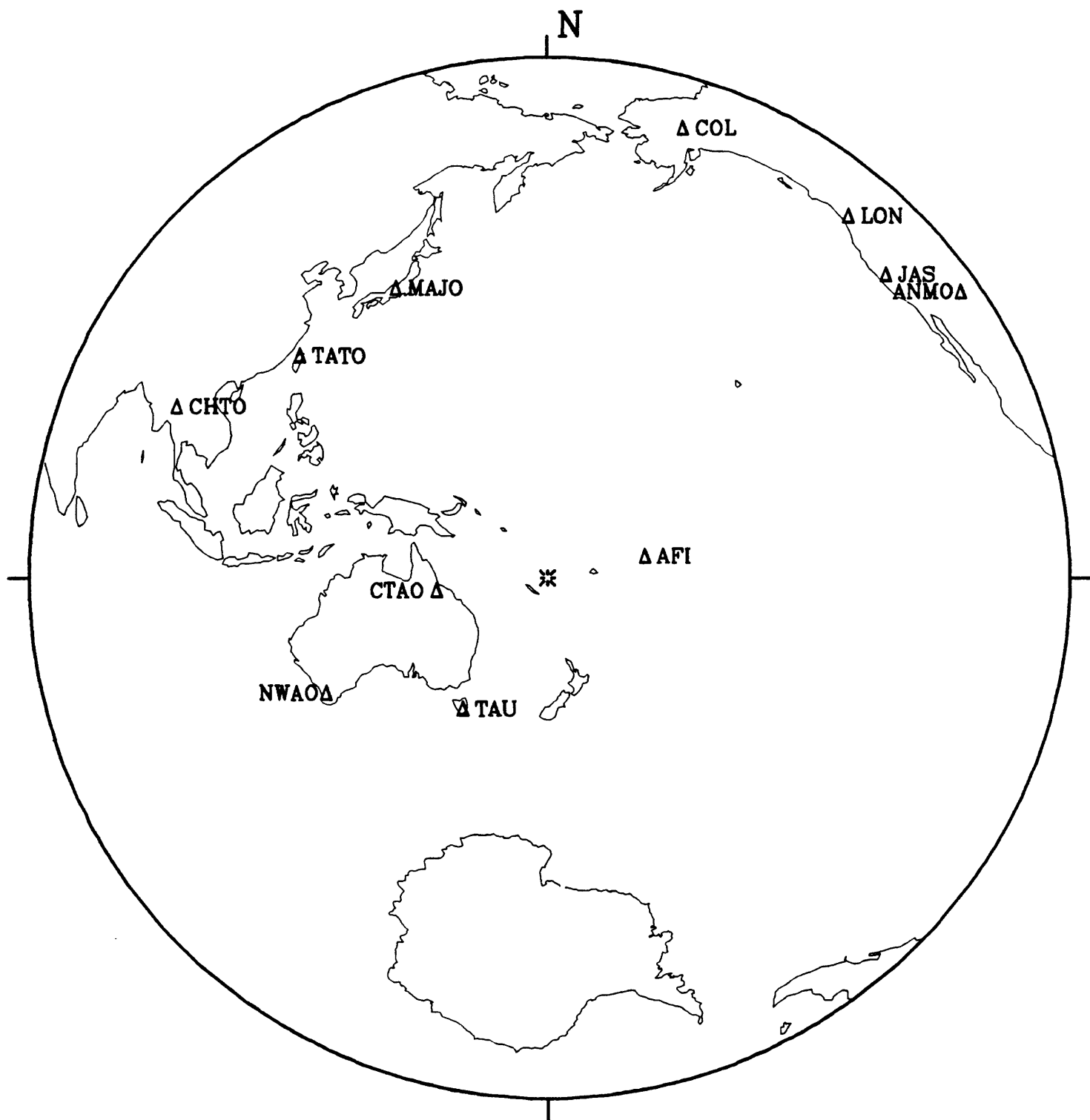
25 February 1985 11:12:40.89

LPZ

Dentrecasteaux Islands Region  $h=33.0$   $m_b=5.9$   $M_{sz}=5.1$ 

28 February 1985 11:10:22.03

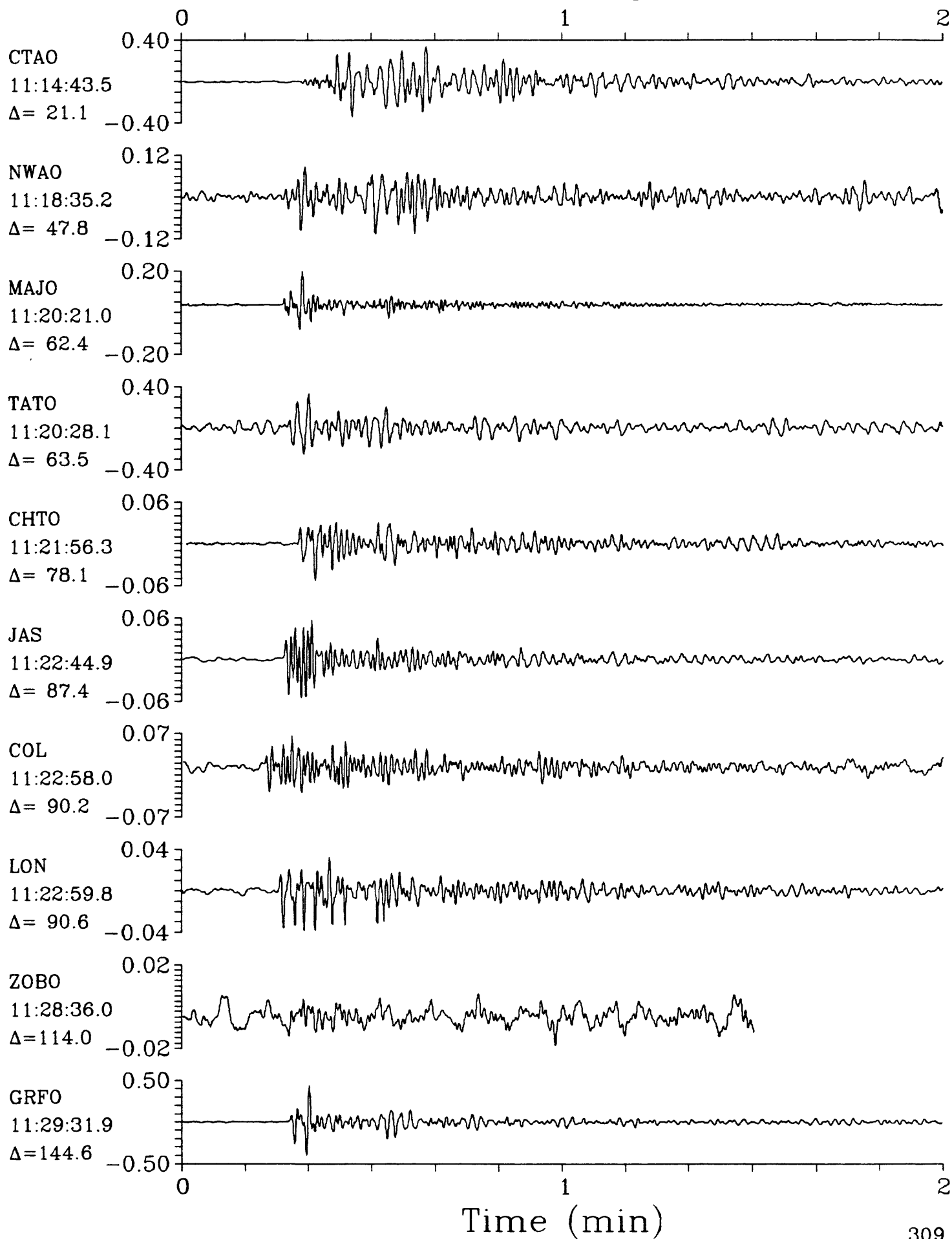
## Vanuatu Islands



SPZ

28 February 1985 11:10:22.03  
Vanuatu Islands  $h=92.3$   $m_b=5.5$ 

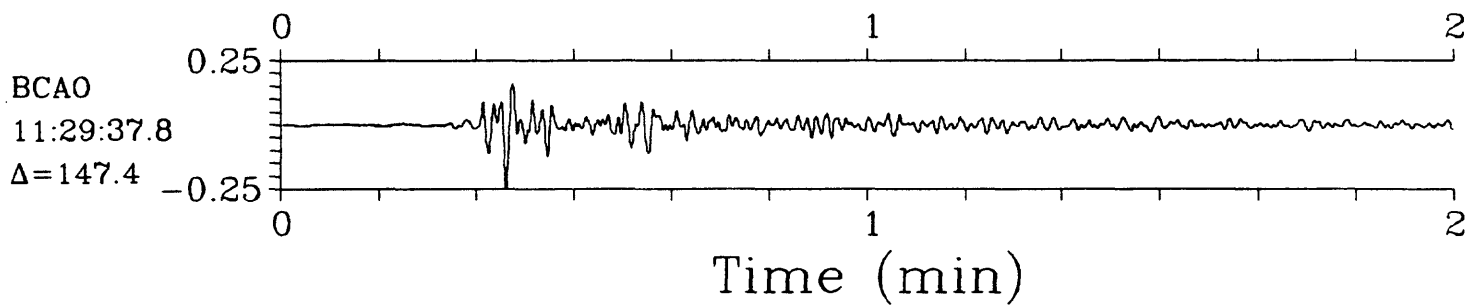
SPZ



SPZ

28 February 1985 11:10:22.03  
Vanuatu Islands  $h=92.3$   $m_b=5.5$

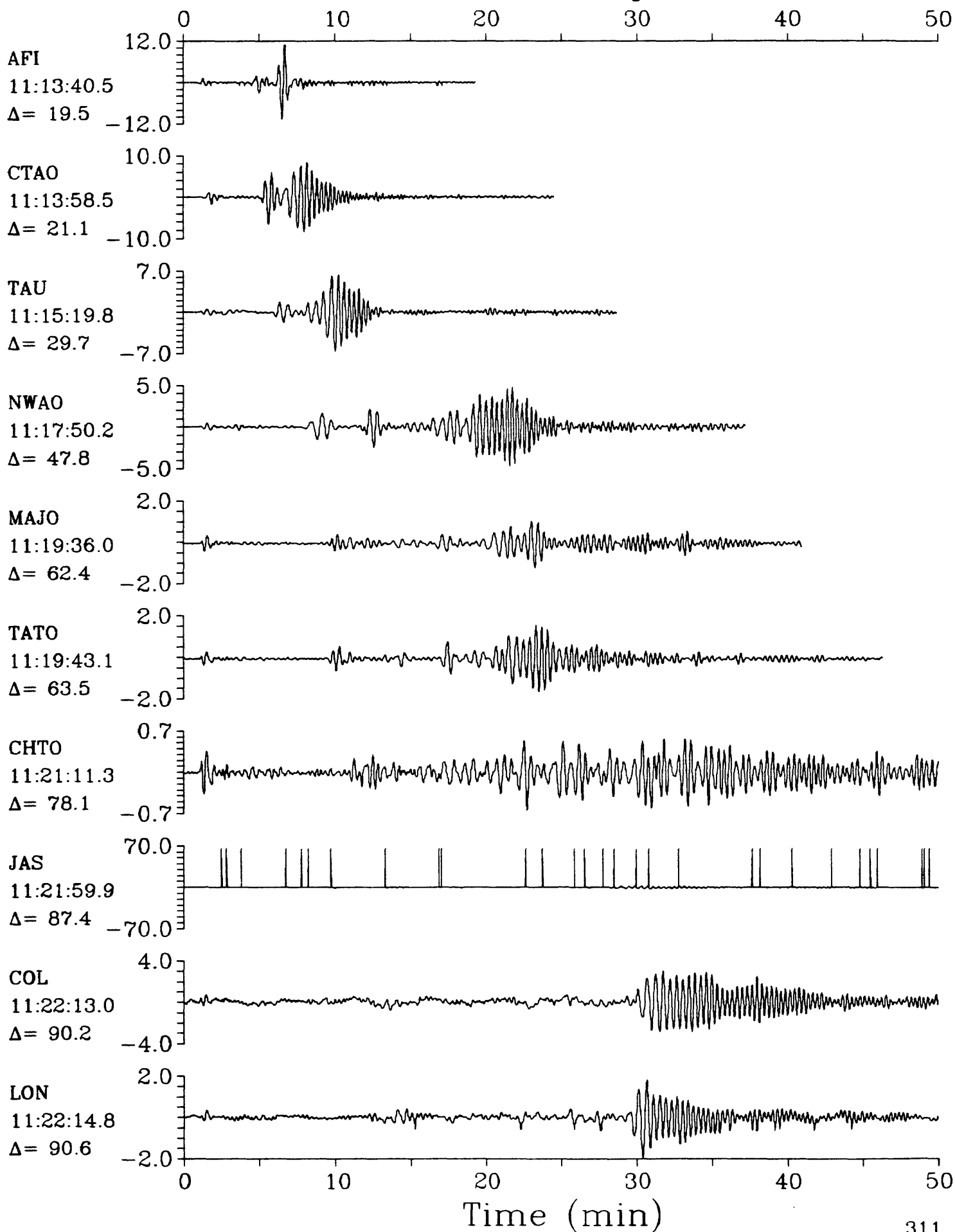
SPZ



LPZ

28 February 1985 11:10:22.03  
Vanuatu Islands  $h=92.3$   $m_b=5.5$ 

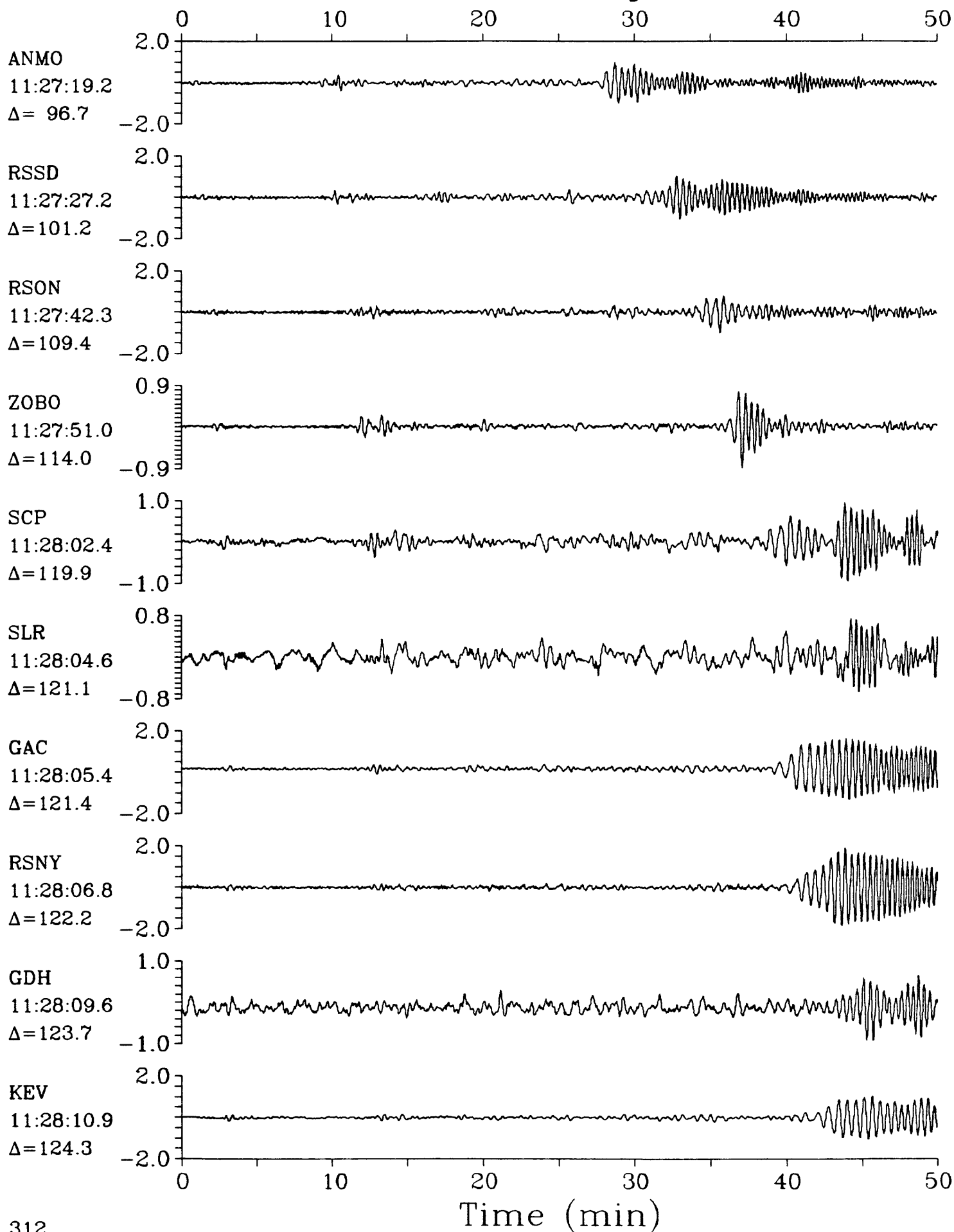
LPZ



LPZ

28 February 1985 11:10:22.03  
Vanuatu Islands  $h=92.3$   $m_b=5.5$ 

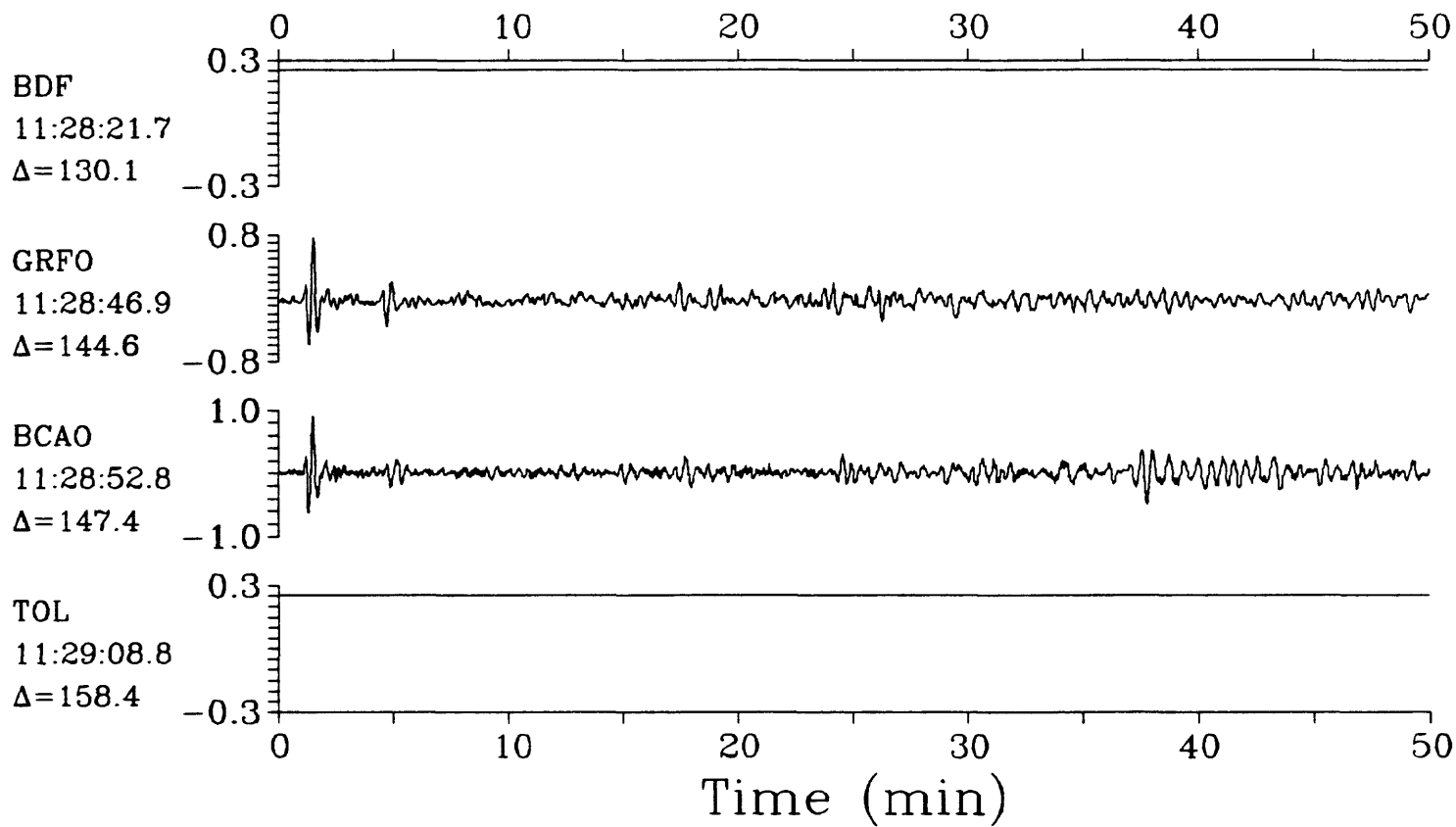
LPZ



LPZ

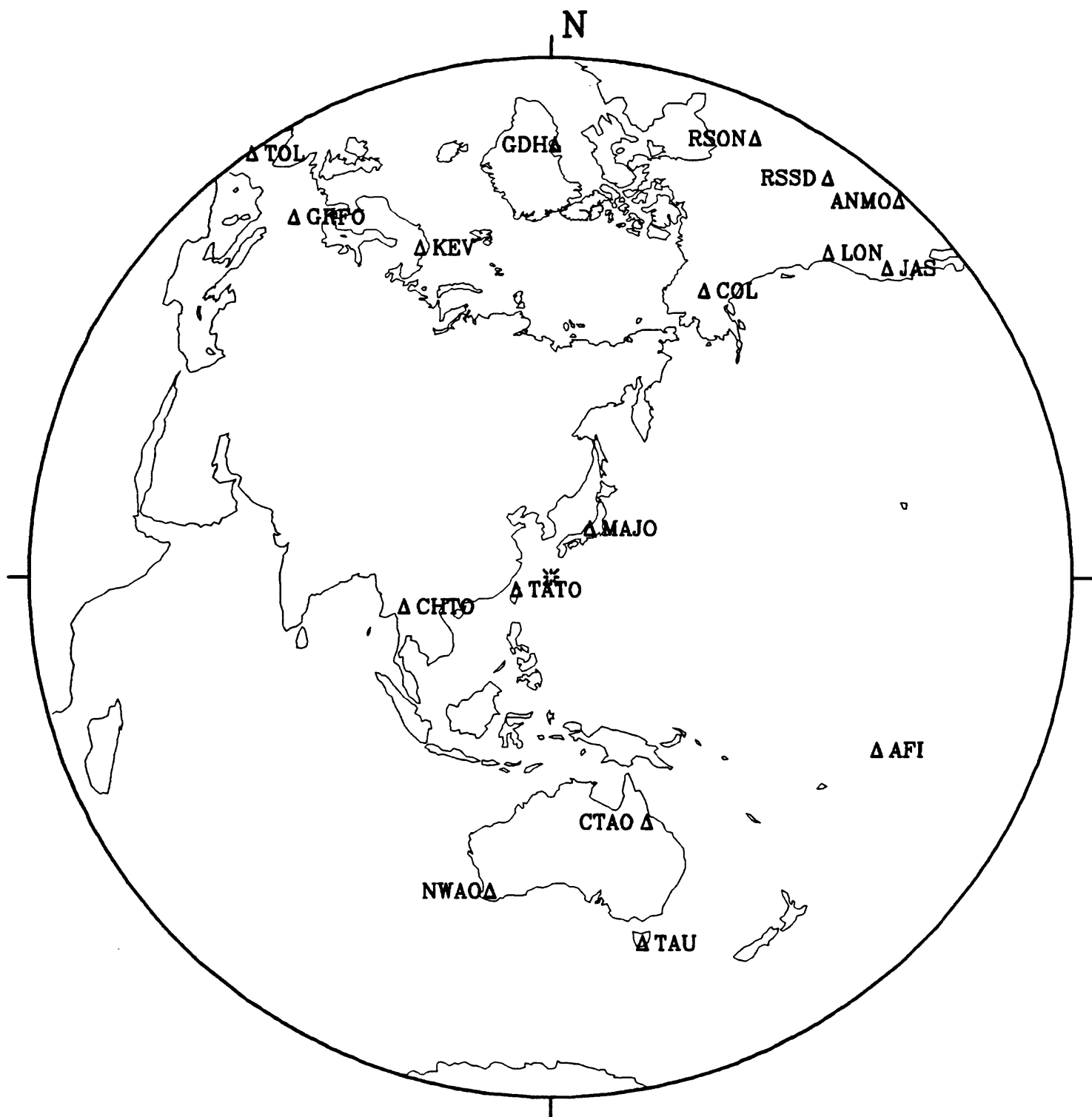
28 February 1985 11:10:22.03  
Vanuatu Islands  $h=92.3$   $m_b=5.5$ 

LPZ



28 February 1985 20:53:47.19

## Ryukyu Islands

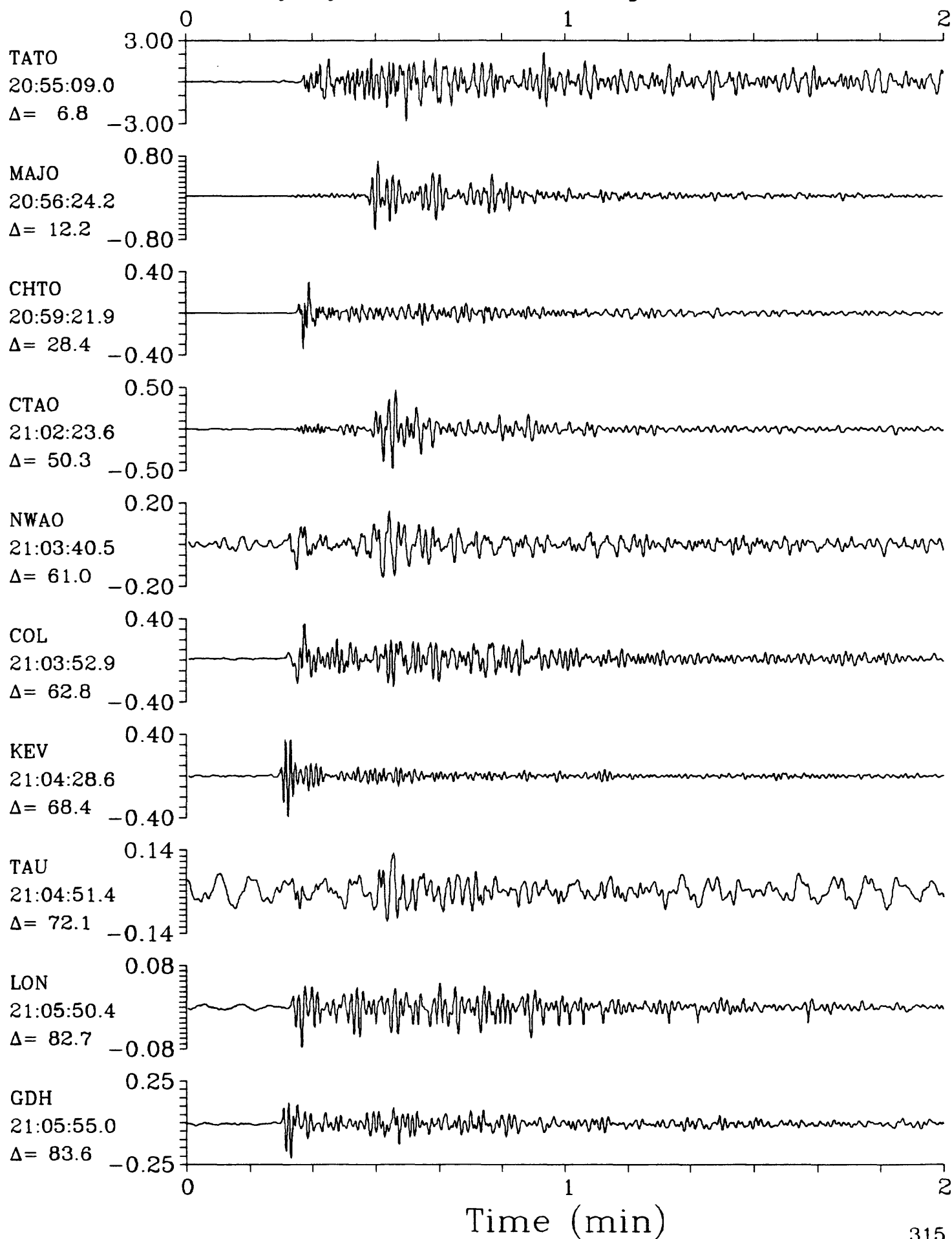




SPZ

28 February 1985 20:53:47.19  
Ryukyu Islands  $h=54.9$   $m_b=5.9$ 

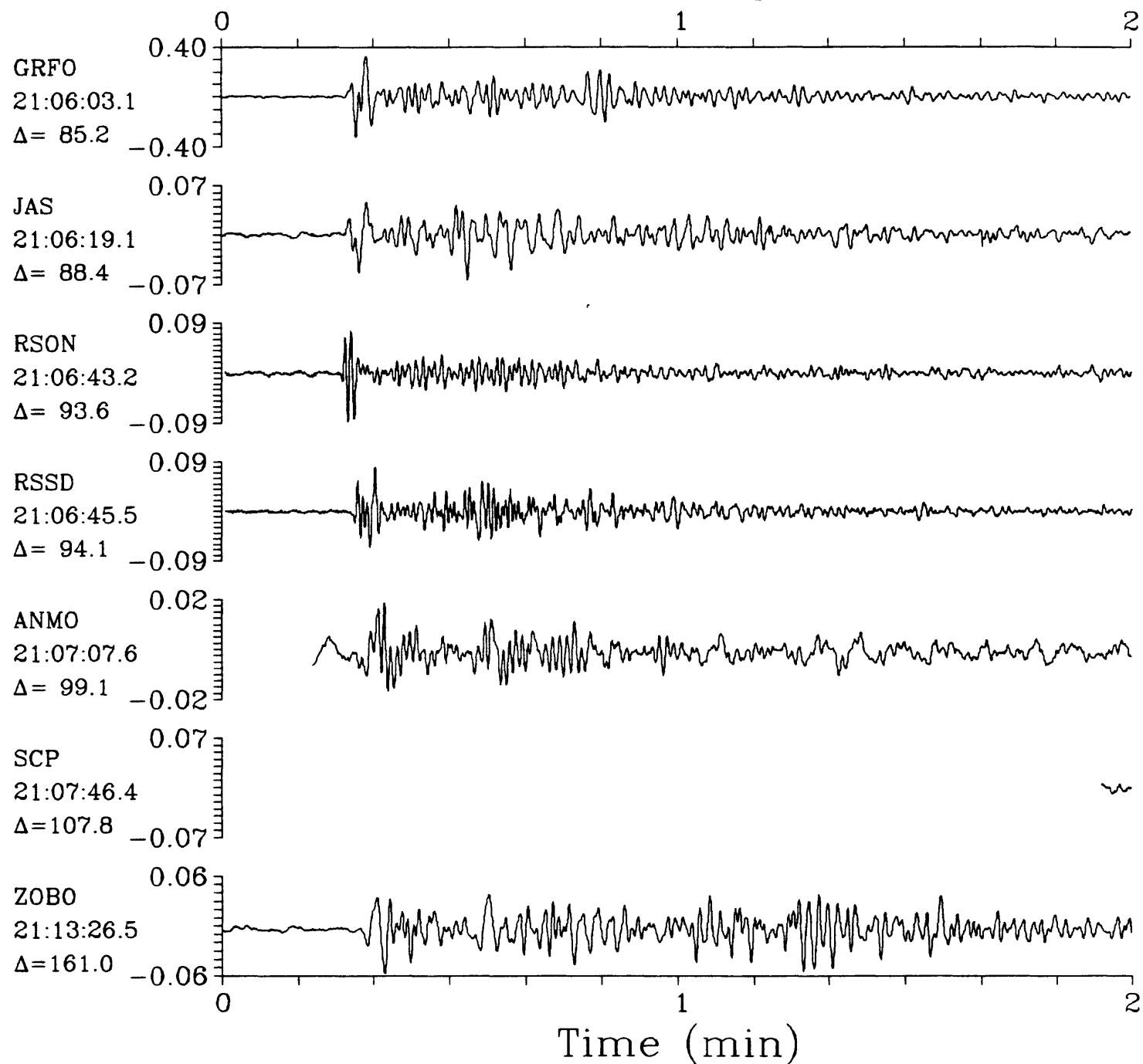
SPZ



SPZ

28 February 1985 20:53:47.19  
Ryukyu Islands  $h=54.9$   $m_b=5.9$ 

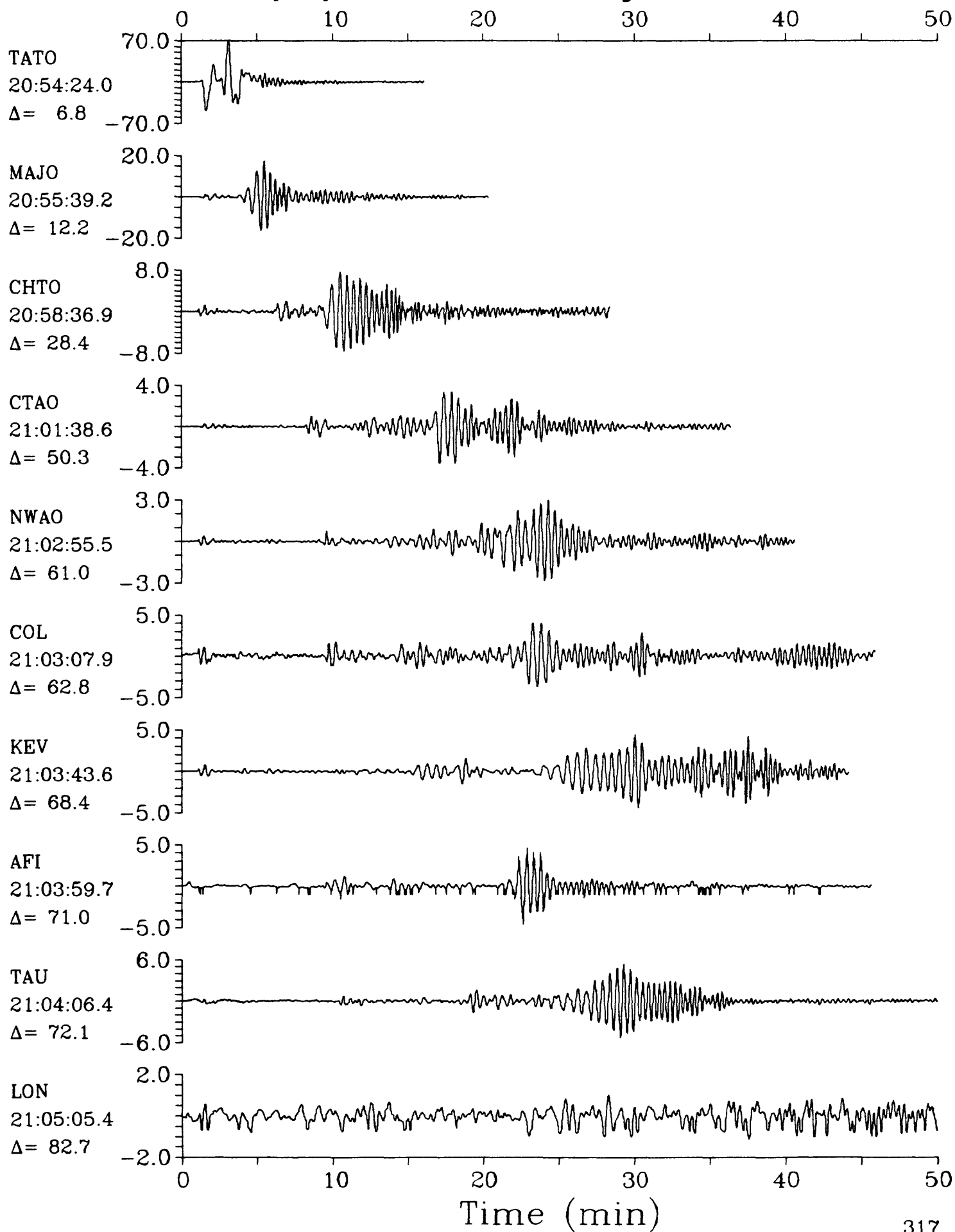
SPZ



LPZ

28 February 1985 20:53:47.19  
Ryukyu Islands  $h=54.9$   $m_b=5.9$ 

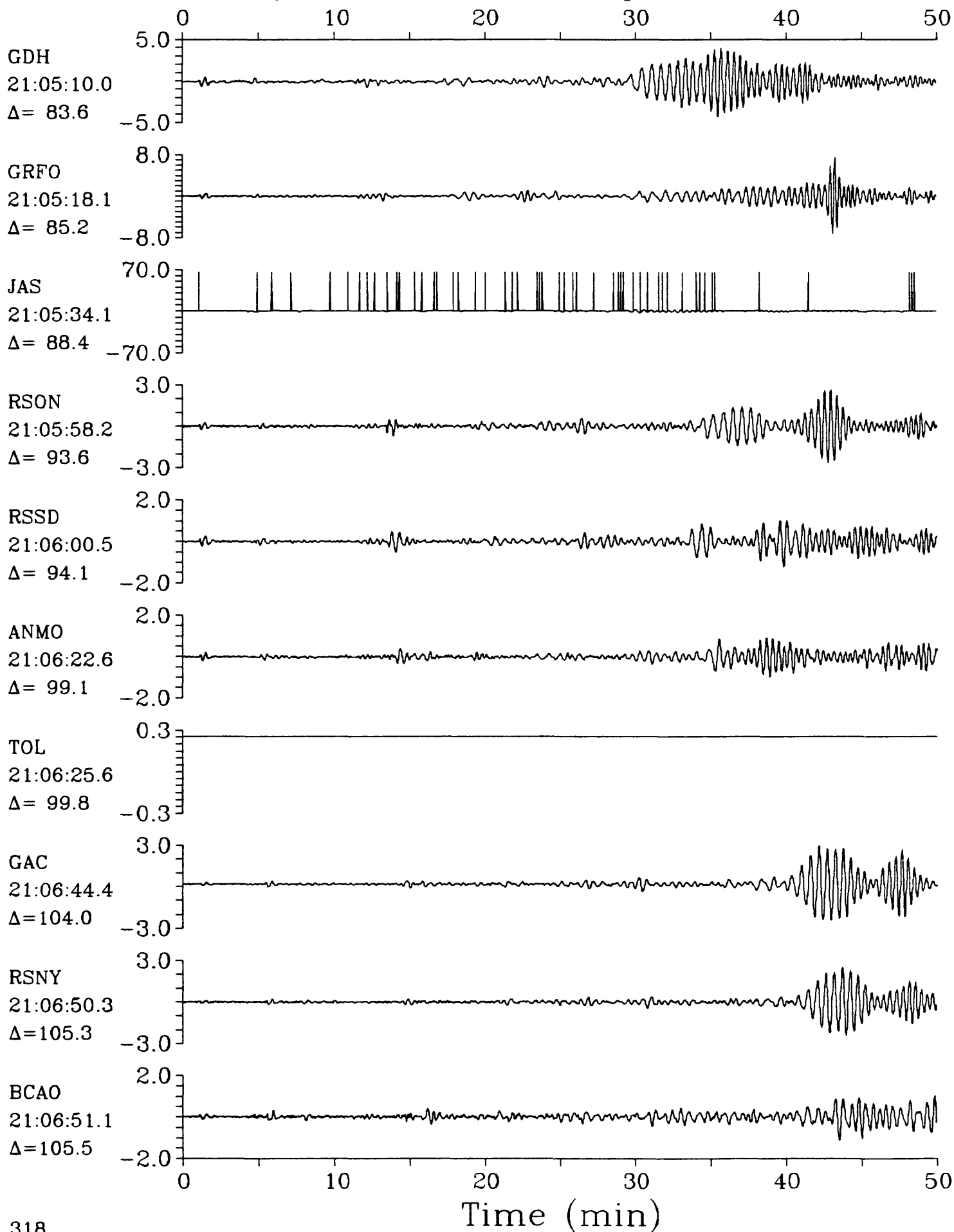
LPZ



LPZ

28 February 1985 20:53:47.19  
Ryukyu Islands  $h=54.9$   $m_b=5.9$ 

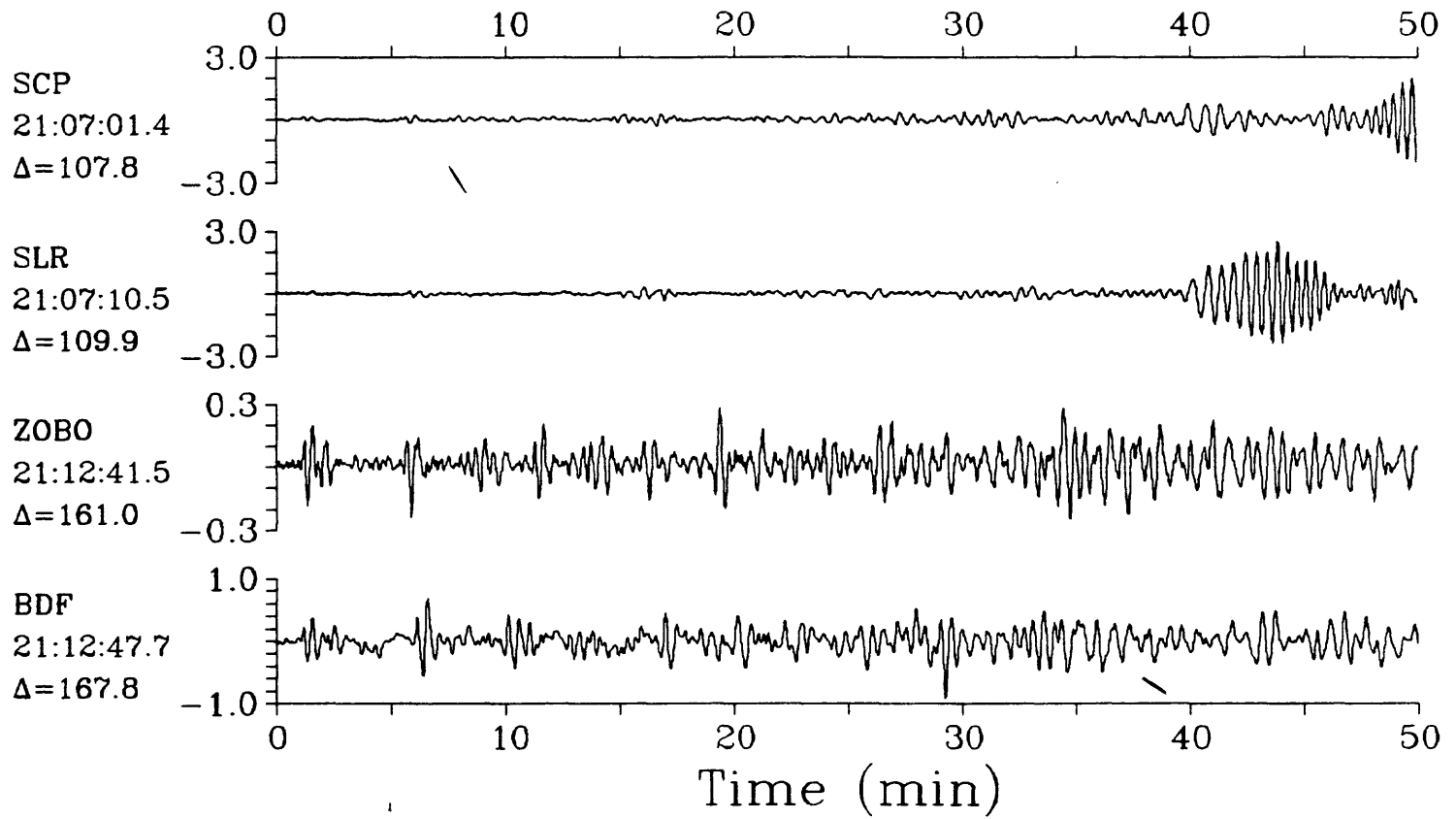
LPZ



LPZ

28 February 1985 20:53:47.19  
Ryukyu Islands  $h=54.9$   $m_b=5.9$ 

LPZ



IPZ

28 February 1985 20:53:47.19  
Ryukyu Islands  $h=54.9$   $m_b=5.9$ 

IPZ

