

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

**National Earthquake Information Center
Waveform Catalog
May 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° of the source are shown in an azimuthal equidistant projection centered at the epicenter. Following the coverage map, all short-period, vertical component waveforms are shown in order of increasing epicentral distance. Each short-period waveform is two minutes long and is identified by station

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

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

Table 1. Earthquakes for May 1985 with magnitudes ≥ 5.5

	Origin Time UTC	Latitude	Longitude	Depth (km)	m_b	Magnitude		Flinn-Engdahl Region Name
						M_{SZ}		
1.	1985 05 01 13:27:56.08	9.168° S	71.255° W	598.9	6.0			Peru-Brazil Border Region
2.	1985 05 02 08:55:16.07	48.870° N	156.359° E	41.7	5.9		6.4	Kuril Islands Region
3.	1985 05 02 15:20:00.08	37.253° N	116.325° W	0.0	5.7		4.7	Southern Nevada
4.	1985 05 03 07:02:47.52	11.910° N	86.772° W	33.0	5.1		5.6	Near Coast of Nicaragua
5.	1985 05 06 03:04:22.35	30.883° N	70.245° E	33.0	5.6		5.4	Pakistan
6.	1985 05 06 17:10:03.63	37.491° S	179.354° E	33.0	5.7		6.1	Off E. Coast of N. Island, N.Z.
7.	1985 05 07 11:17:00.88	9.356° S	118.702° E	33.0	5.8			Sumbawa Island Region
8.	1985 05 08 20:27:58.81	21.836° S	139.057° W	0.0	5.7		5.4	Tuamotu Archipelago Region
9.	1985 05 09 18:22:48.57	2.342° N	126.753° E	33.0	5.5		5.4	Molucca Passage
10.	1985 05 09 19:05:21.45	51.446° N	177.964° E	33.0	5.6		6.0	Rat Islands, Aleutian Islands
11.	1985 05 09 19:14:07.91	51.320° N	178.037° E	33.0	5.4		6.0	Rat Islands, Aleutian Islands
12.	1985 05 10 15:35:50.48	5.575° S	151.077° E	30.3	6.3		7.1	New Britain Region
13.	1985 05 10 18:14:57.65	5.665° S	150.903° E	33.0	5.7		5.8	New Britain Region
14.	1985 05 11 10:40:38.80	37.058° N	141.402° E	49.6	5.5		5.0	Near East Coast of Honshu, Japan
15.	1985 05 13 10:40:59.33	32.987° N	132.456° E	38.0	5.7		5.2	Shikoku, Japan
16.	1985 05 14 13:24:57.89	10.588° S	41.367° E	10.0	6.0		5.5	Northwest of Madagascar
17.	1985 05 14 18:11:09.12	10.488° S	41.427° E	10.0	6.4		6.1	Northwest of Madagascar
18.	1985 05 15 02:52:31.96	51.844° S	28.232° E	10.0	5.6		5.4	South of Africa
19.	1985 05 15 20:12:45.74	56.615° S	25.362° W	33.0	5.8		6.4	South Sandwich Islands Region
20.	1985 05 16 14:20:25.19	29.075° S	77.754° E	10.0	5.9		6.0	Mid-Indian Rise
21.	1985 05 19 08:07:48.22	53.607° N	160.590° E	62.6	6.1		6.0	Near East Coast of Kamchatka
22.	1985 05 19 18:09:15.49	30.237° S	71.279° W	38.7	5.9		6.0	Near Coast of Central Chile
23.	1985 05 20 05:44:44.84	56.986° S	26.549° W	168.1	5.5		6.0	South Sandwich Islands Region
24.	1985 05 20 15:11:40.43	35.451° N	87.176° E	33.0	5.2		6.0	Tibet
25.	1985 05 22 09:32:35.92	30.195° S	177.581° W	33.0	5.6		4.9	Kermadec Islands
26.	1985 05 24 22:04:43.24	51.415° N	178.414° W	33.0	5.8		5.8	Andeanof Islands, Aleutian Is.
27.	1985 05 25 23:29:25.52	54.030° N	161.014° E	79.5	5.9		5.7	Near East Coast of Kamchatka
28.	1985 05 29 15:15:16.13	29.974° S	178.593° W	33.0	5.3		5.7	Kermadec Islands
29.	1985 05 29 15:38:53.70	28.904° S	176.793° W	33.0	5.1		5.9	Kermadec Islands Region
30.	1985 05 30 08:32:17.52	10.625° S	41.383° E	10.0	5.5		4.9	Northwest of Madagascar
31.	1985 05 30 13:06:21.75	49.139° N	154.096° E	149.4	5.5		5.5	Kuril Islands
32.	1985 05 31 07:24:34.73	12.255° N	144.280° E	36.8	5.5		6.0	South of Mariana Islands

Table 2. Current network-event tape station list

Code	ID	Station	Latitude	Longitude	Elevation (m)	Type*
AFI	69	Afiamalu, Western Samoa	13.91° S	171.78° W	706.0	DWWSSN
ANMO	30	Albuquerque, New Mexico	34.95° N	106.46° W	1740.0	SRO
ANTO	31	Ankara, Turkey	39.87° N	32.79° E	883.0	SRO
BCAO	37	Bangui, Central African Republic	4.43° N	18.54° E	336.0	SRO
BDF	72	Brasilia, Brazil	15.66° S	47.90° W	1500.0	DWWSSN
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
JAS1	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
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
RSCP	81	Cumberland Plateau, Tennessee,	35.60° N	85.57° W	481.0	RSTN
RSNT	82	Yellowknife, Northwest Territories	62.48° N	114.59° W	90.0	RSTN
RSNY	84	Adirondack, New York	44.55° N	74.53° W	351.0	RSTN
RSON	85	Red Lake, Ontario	50.86° N	93.70° W	302.0	RSTN
RSSD	83	Black Hills, South Dakota	44.12° N	104.04° W	1948.0	RSTN
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
SNZO	42	Wellington (South Karori), New Zealand	41.31° S	174.70° E	-12.0	SRO
TATO	41	Taipei, Taiwan	24.98° N	121.49° E	53.0	SRO
TAU	74	Hobart, Tasmania	42.91° S	147.32° E	132.0	DWWSSN
TOL	73	Toledo, Spain	39.88° N	4.05° W	480.0	DWWSSN
ZOBO	51	La Paz (Zongo), Bolivia	16.27° S	68.13° W	4450.0	ASRO

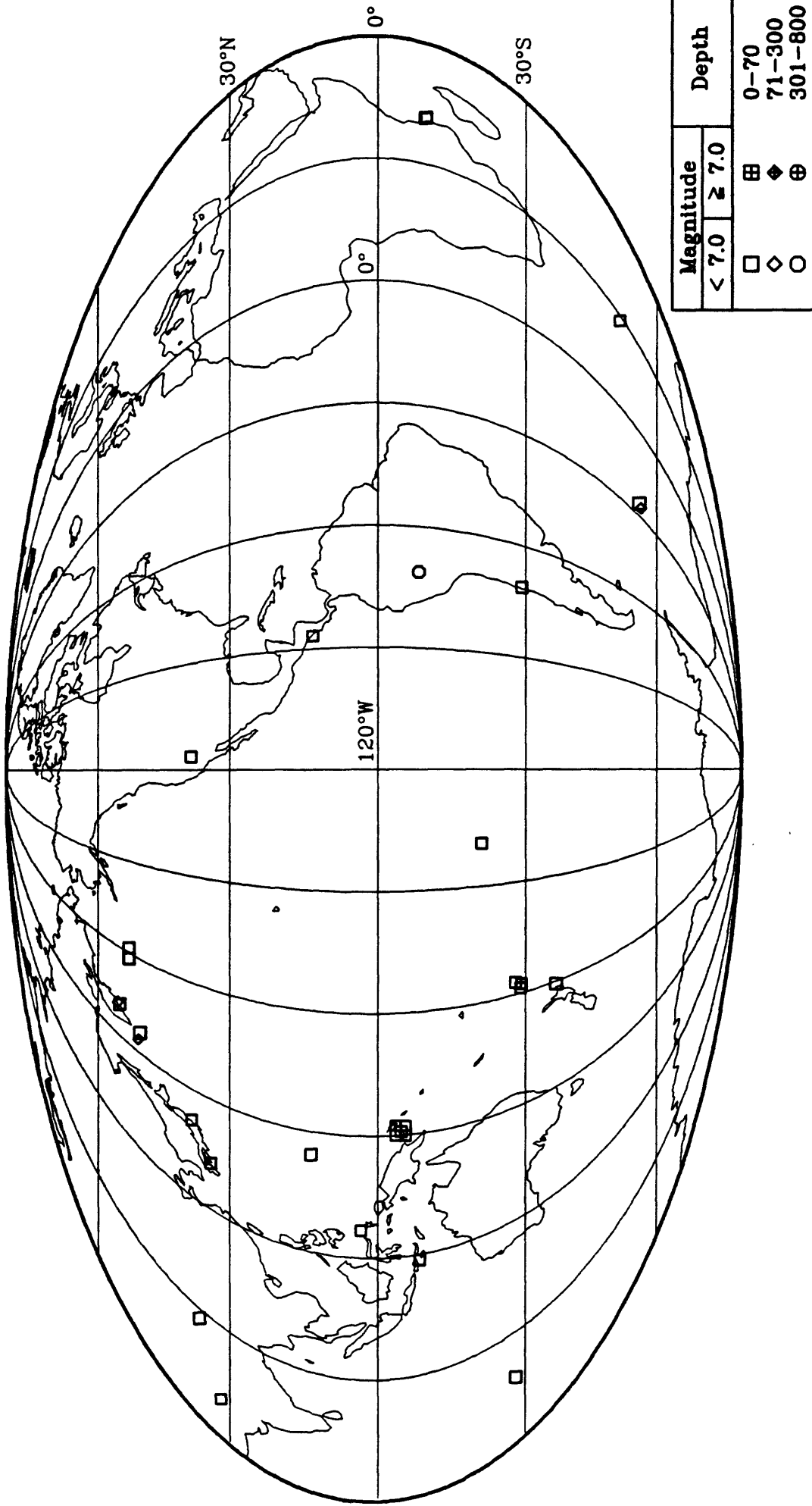
* SRO - Seismic Research Observatory

ASRO - Abbreviated Seismic Research Observatory

DWWSSN - Digital World Wide Standardized Seismograph Network

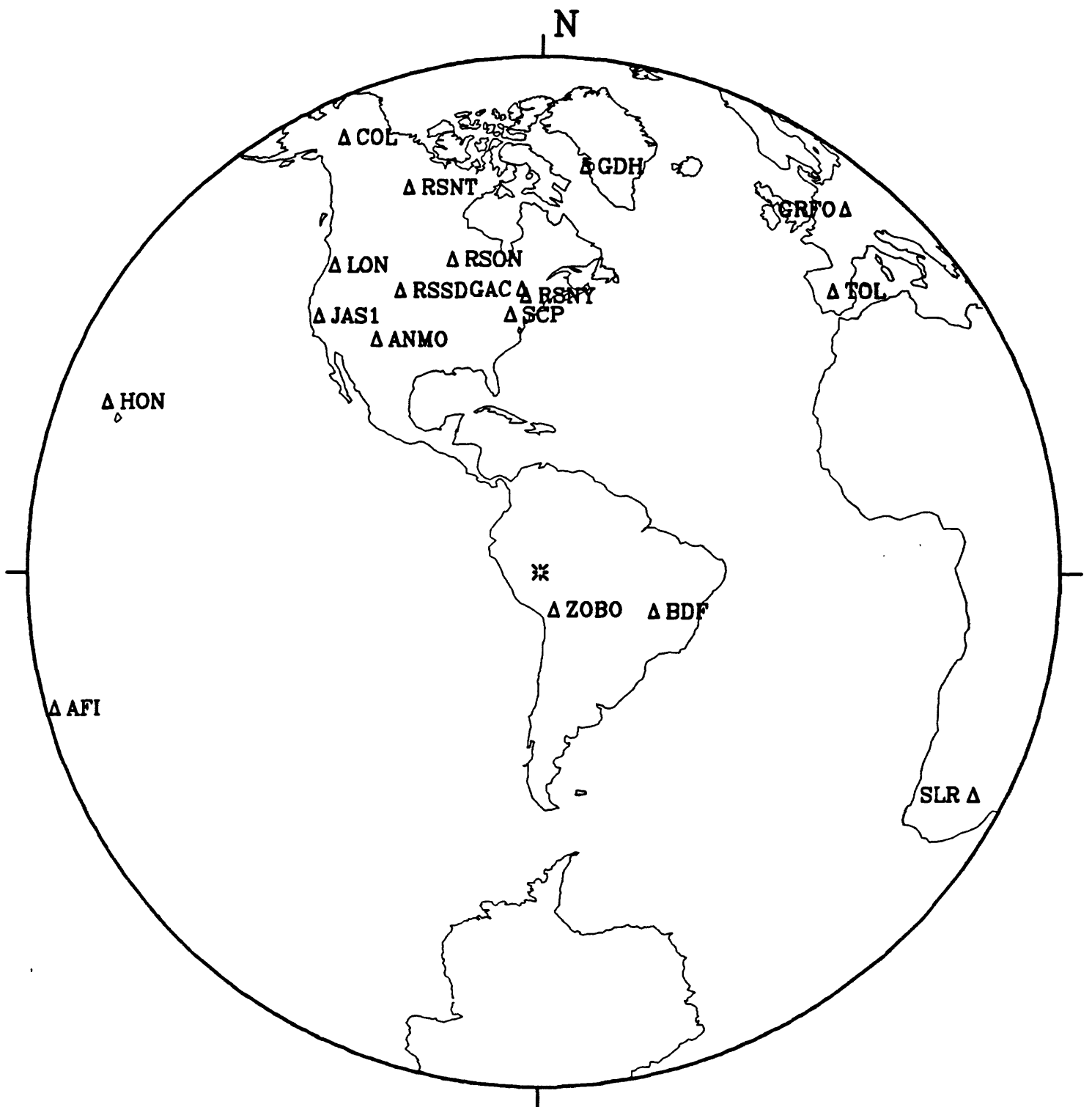
RSTN - Regional Seismic Test Network

EARTHQUAKES - May 1985 - MAGNITUDE ≥ 5.5

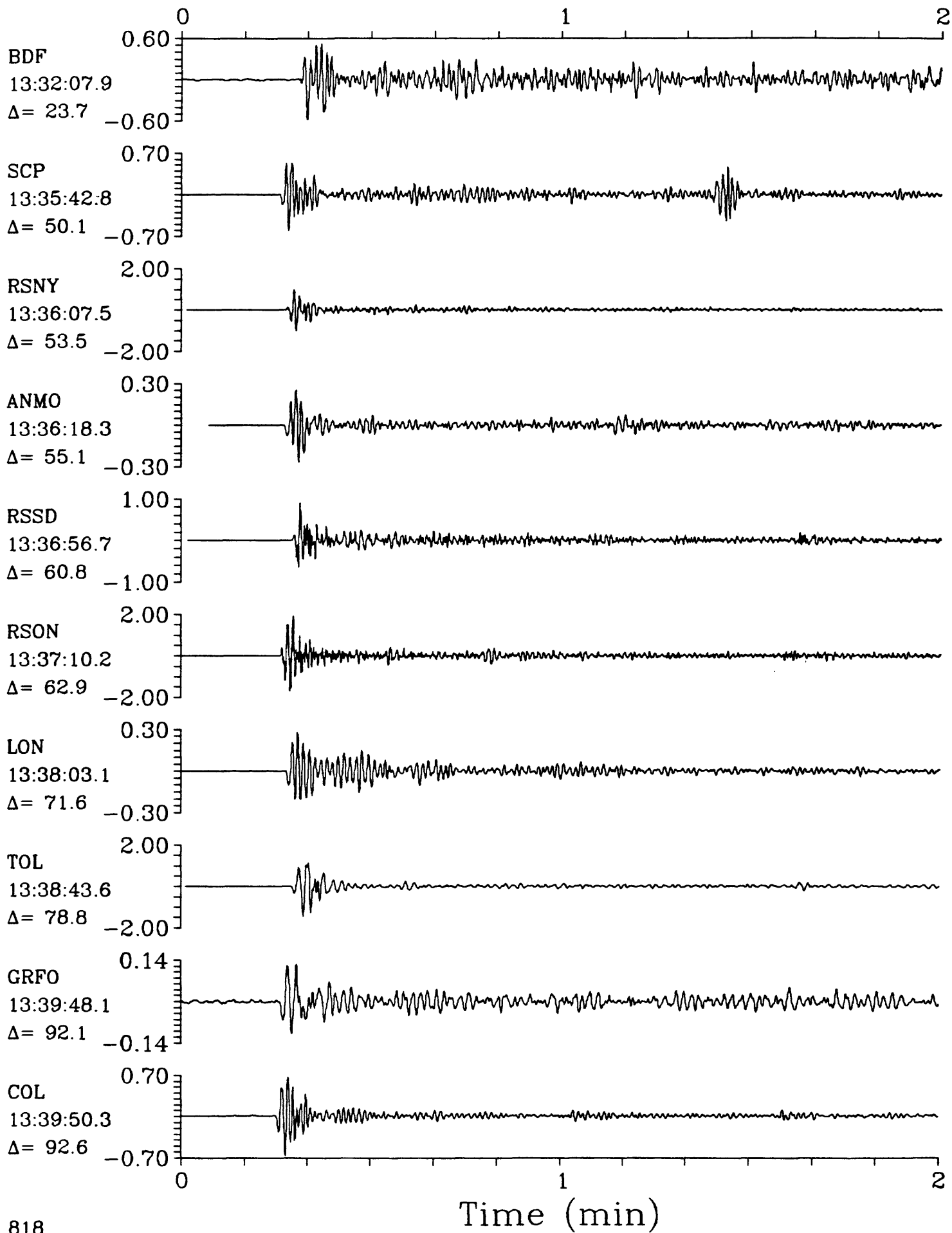


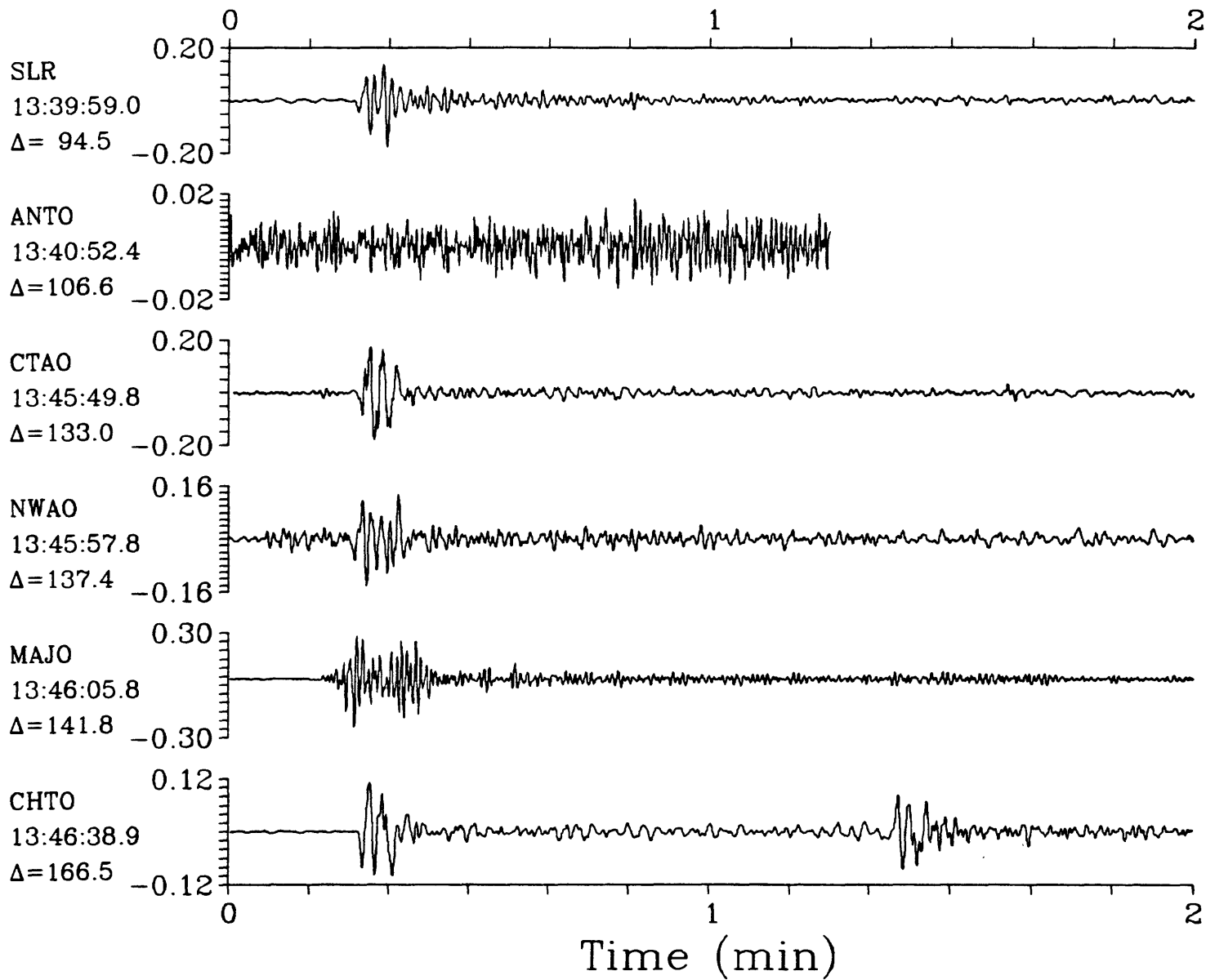
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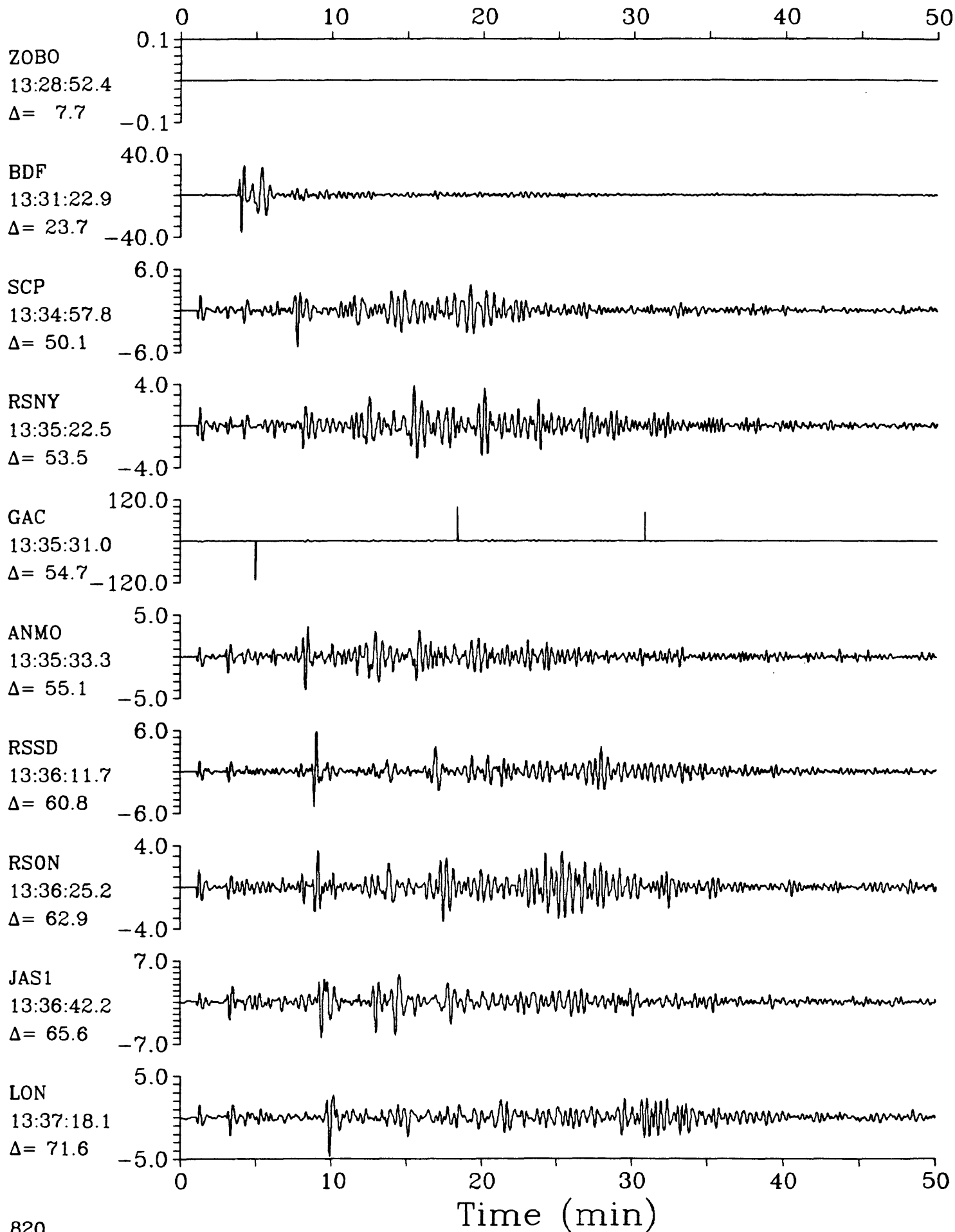
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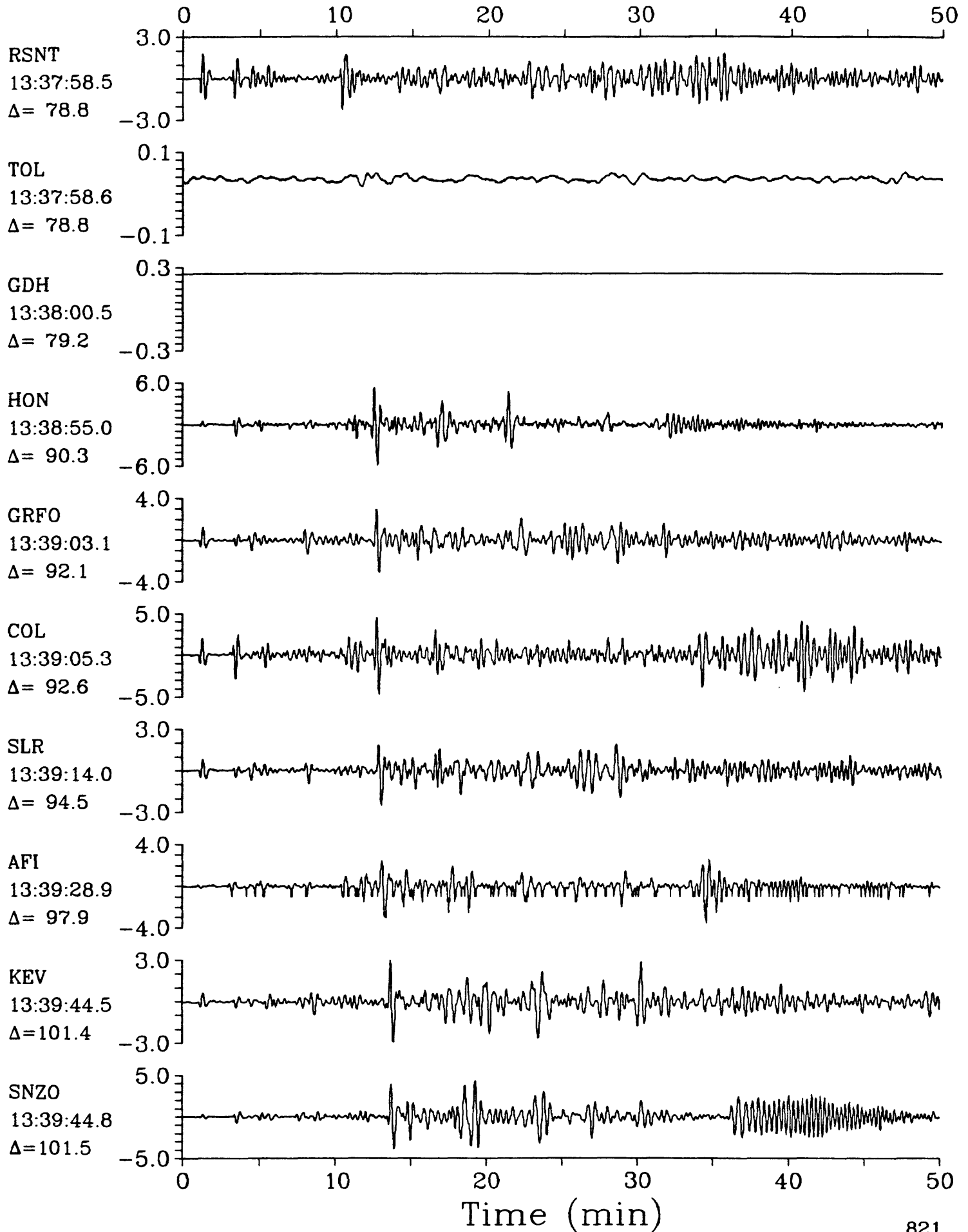


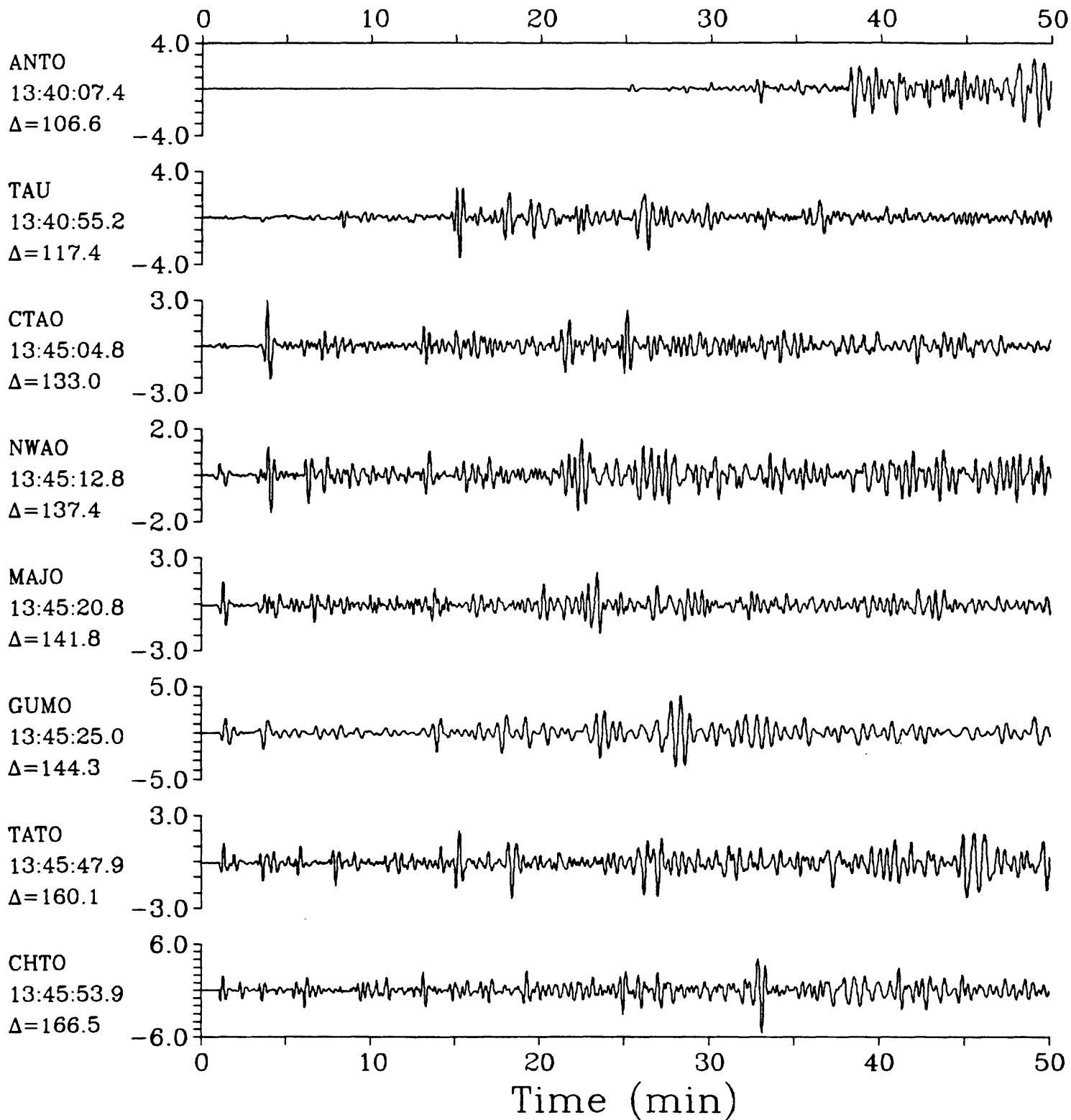
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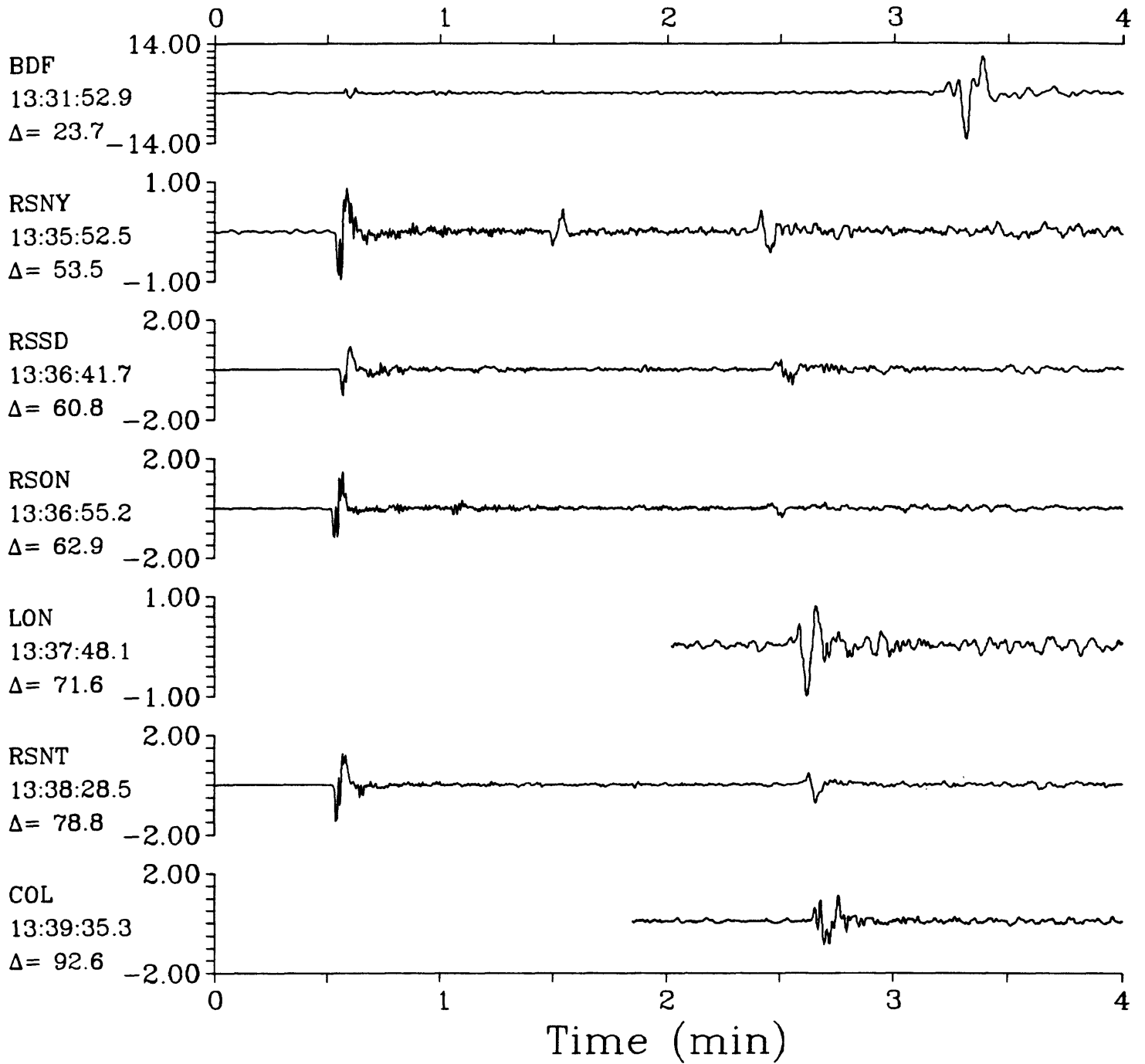
Peru-Brazil Border Region $h=598.9$ $m_b=6.0$ 

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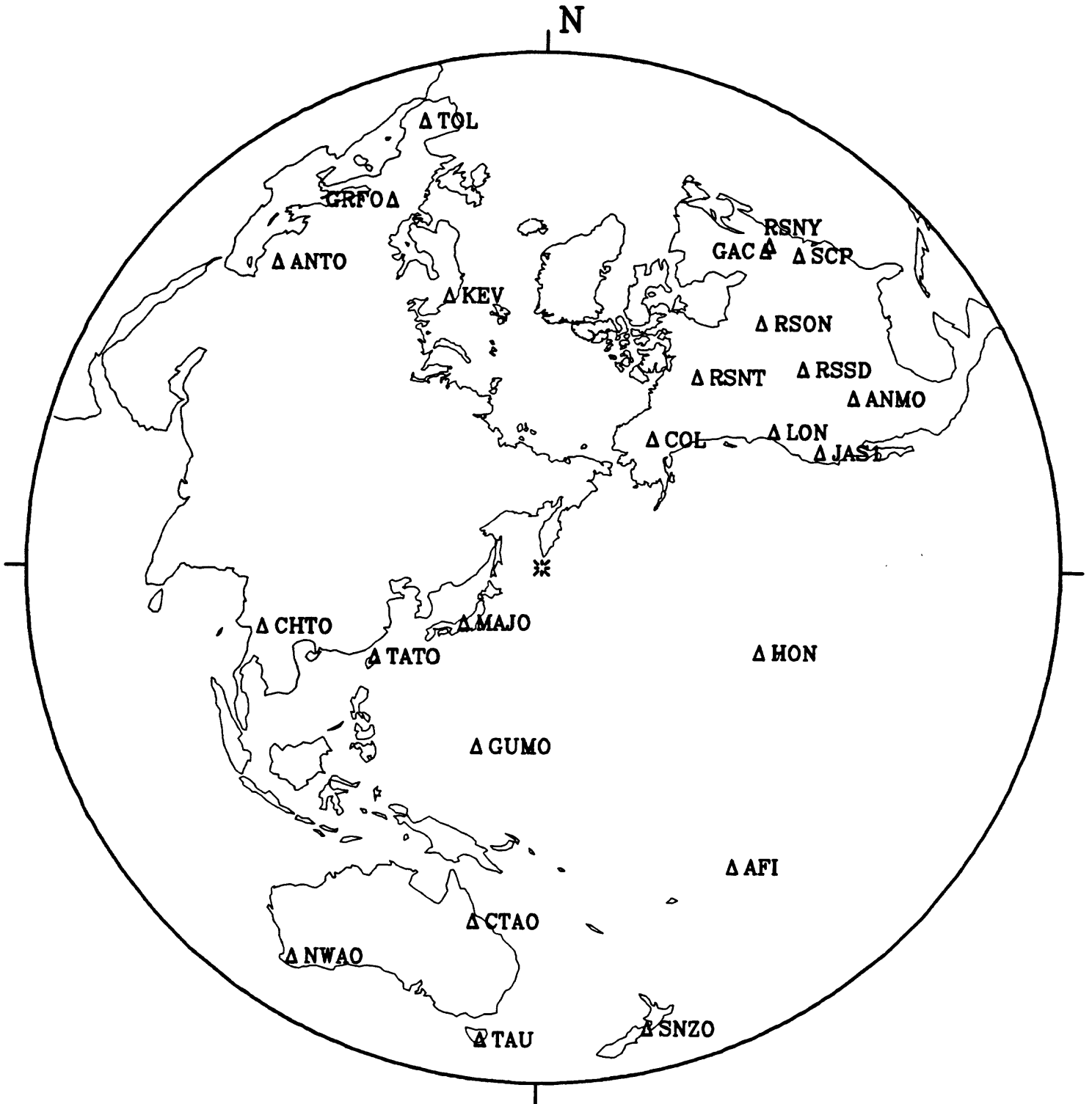
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Peru-Brazil Border Region $h=598.9$ $m_b=6.0$

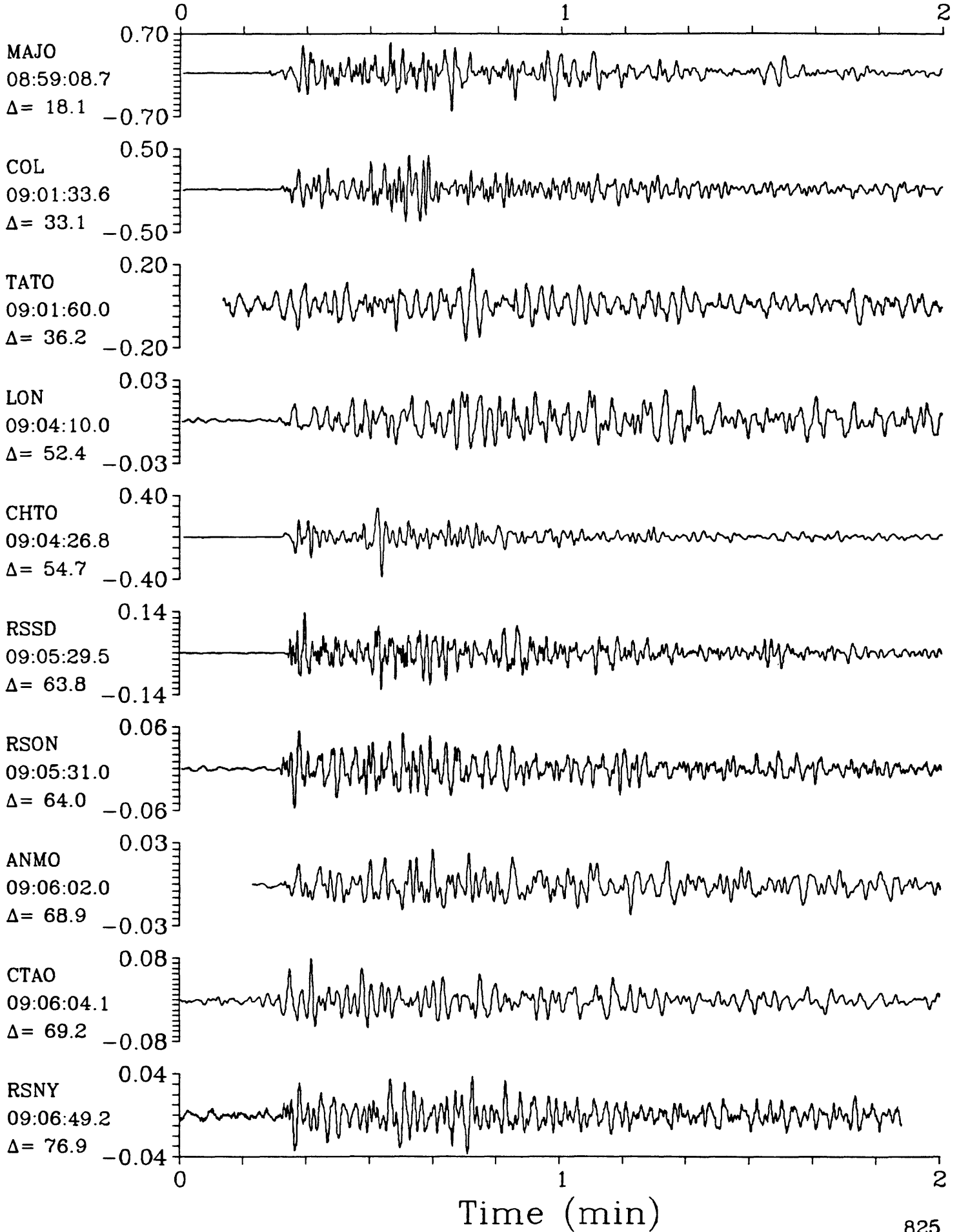


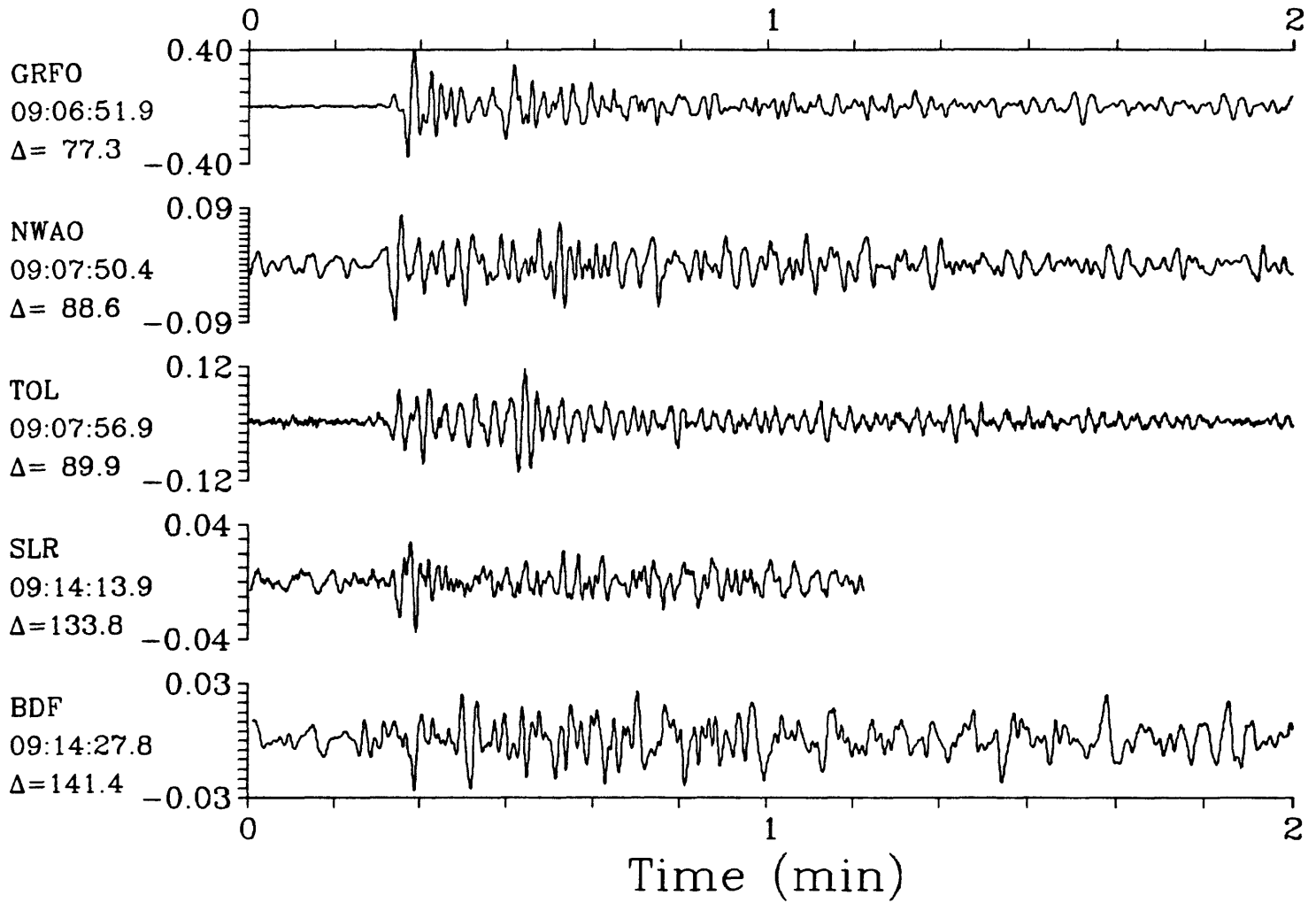
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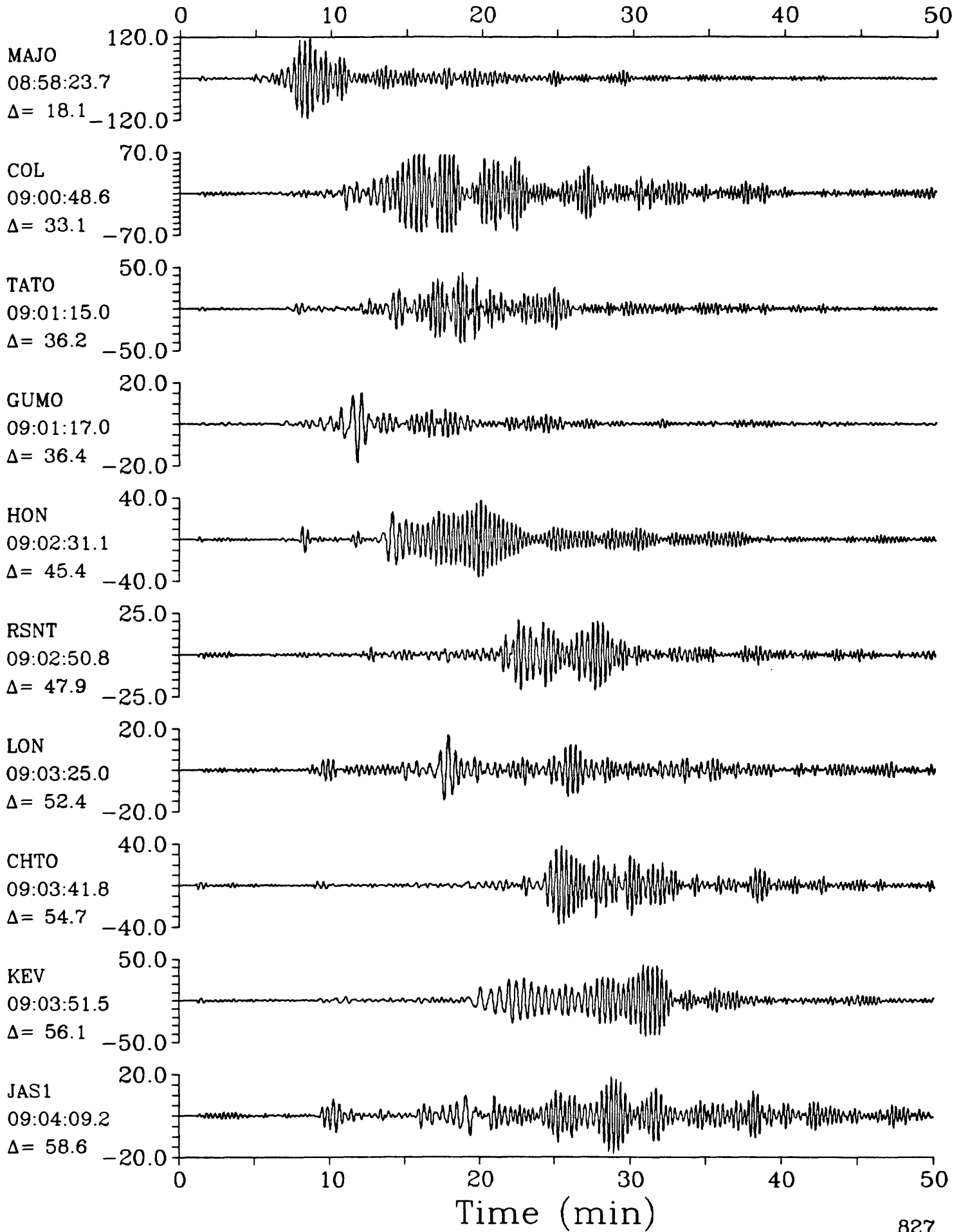
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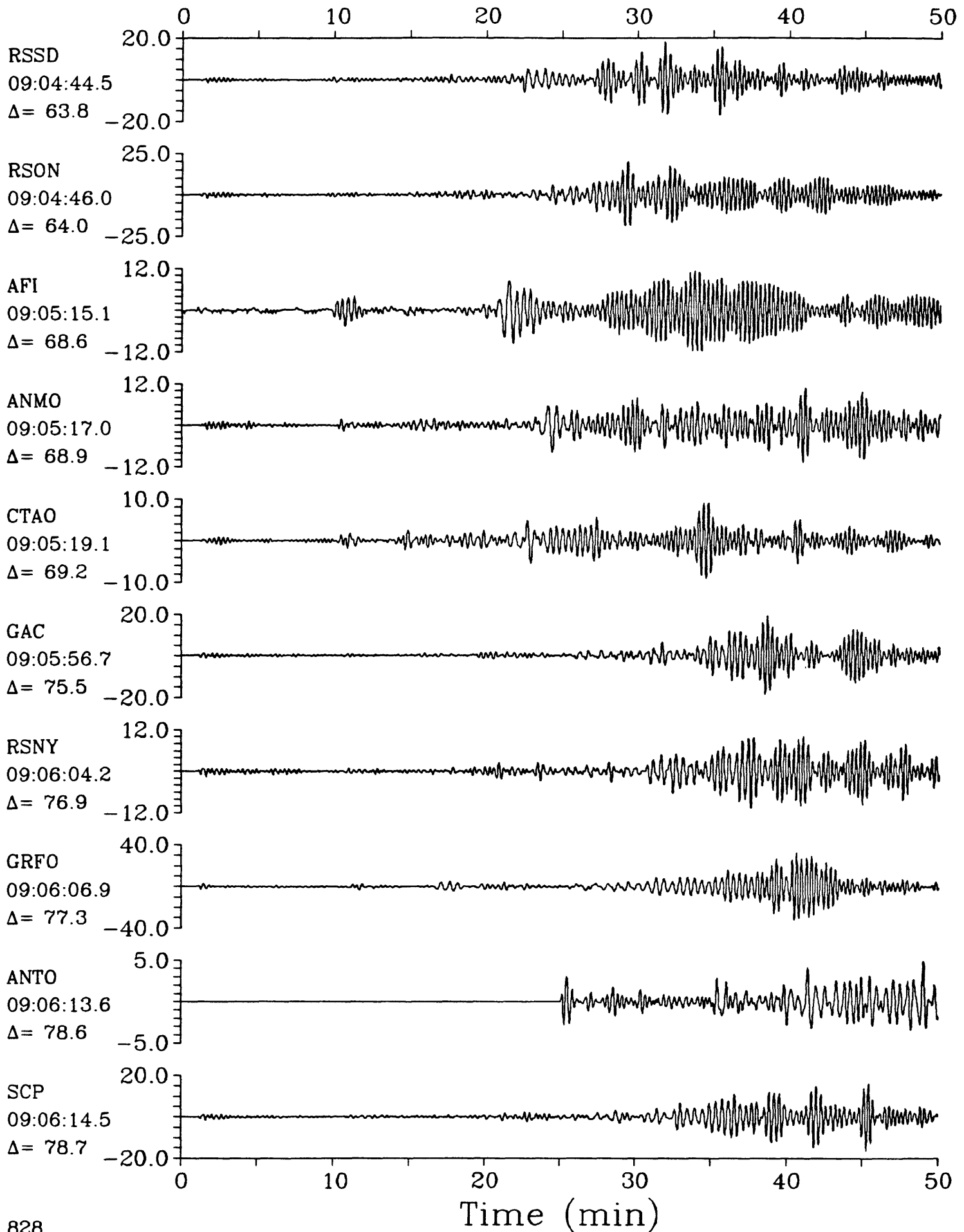


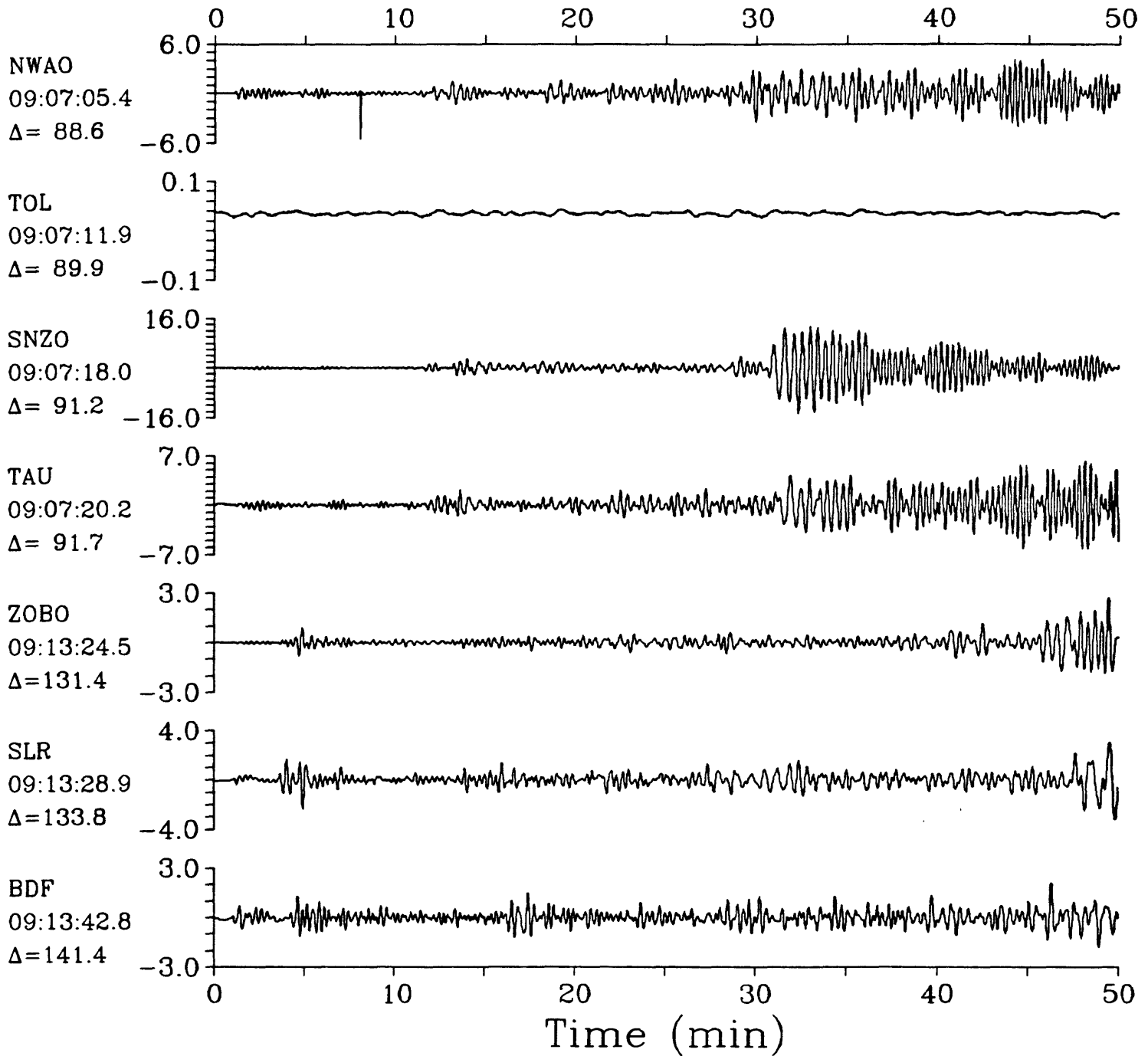
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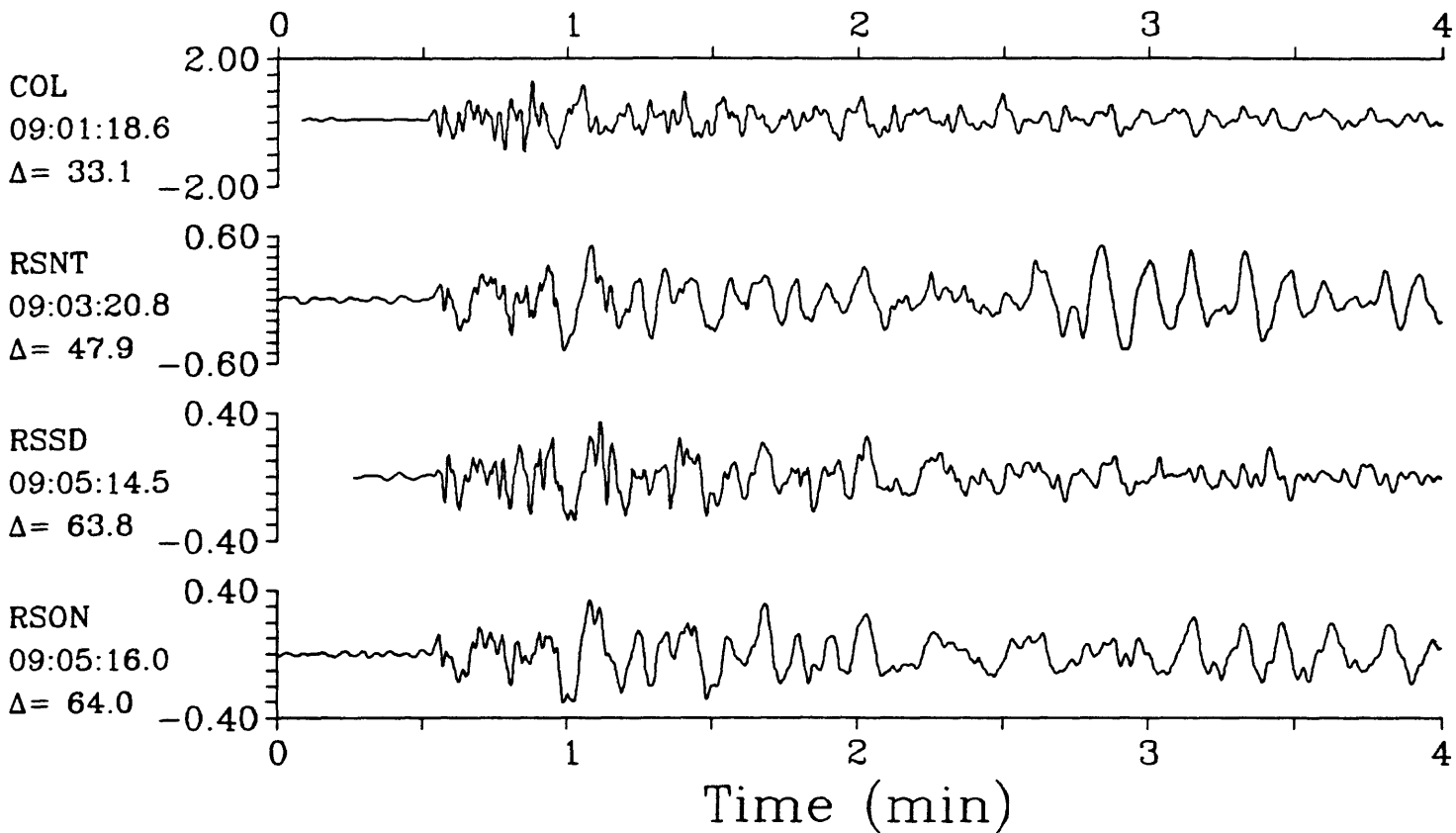
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Kuril Islands Region $h=41.7$ $m_b=5.9$ $M_{sz}=6.4$ 

Kuril Islands Region $h=41.7$ $m_b=5.9$ $M_{sz}=6.4$ 

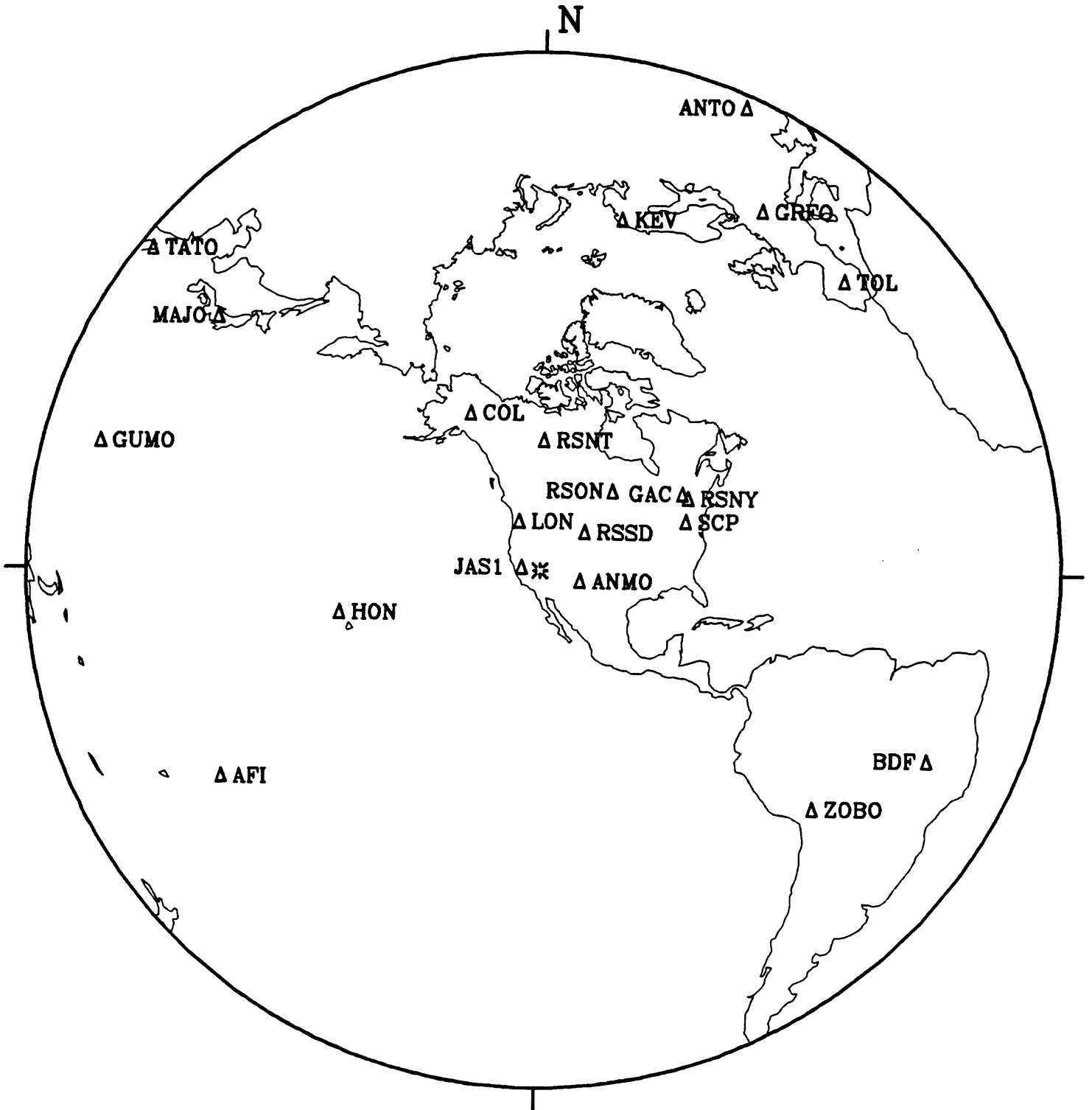
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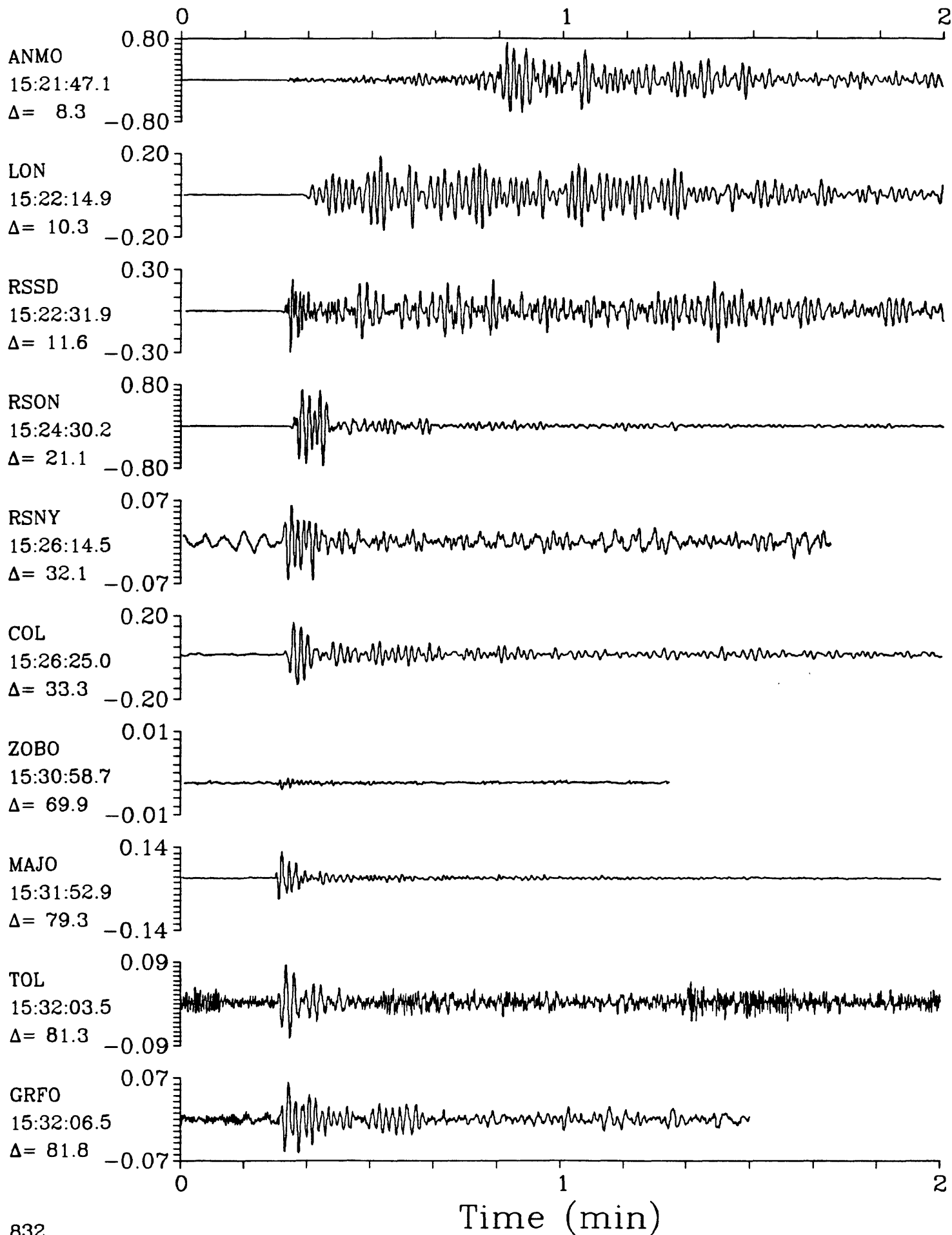
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02 May 1985 15:20:00.08

Southern Nevada



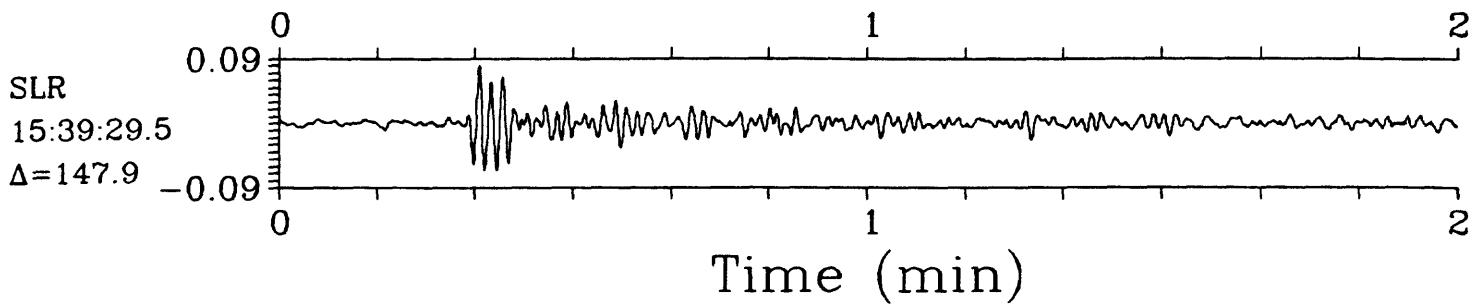
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SPZ

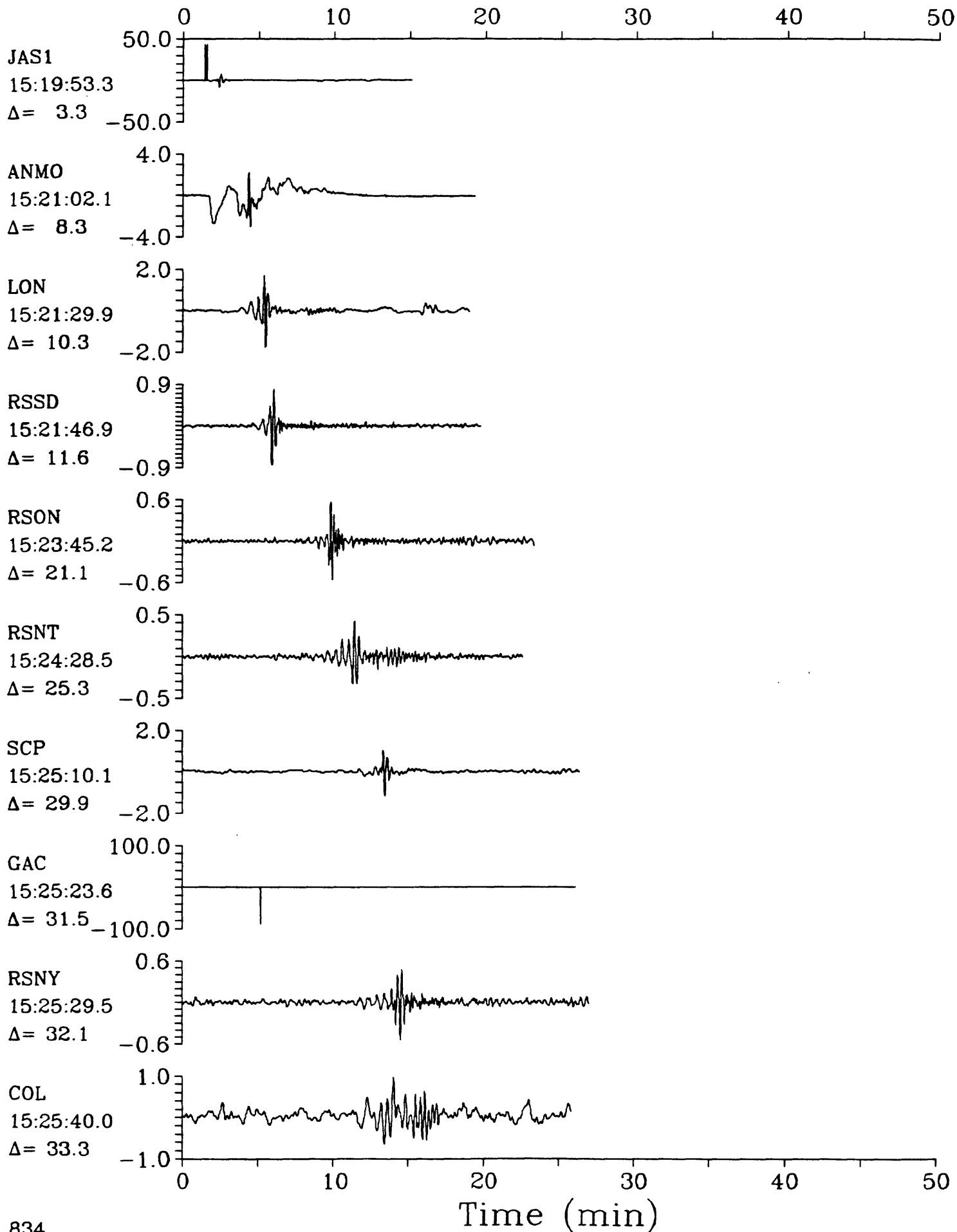
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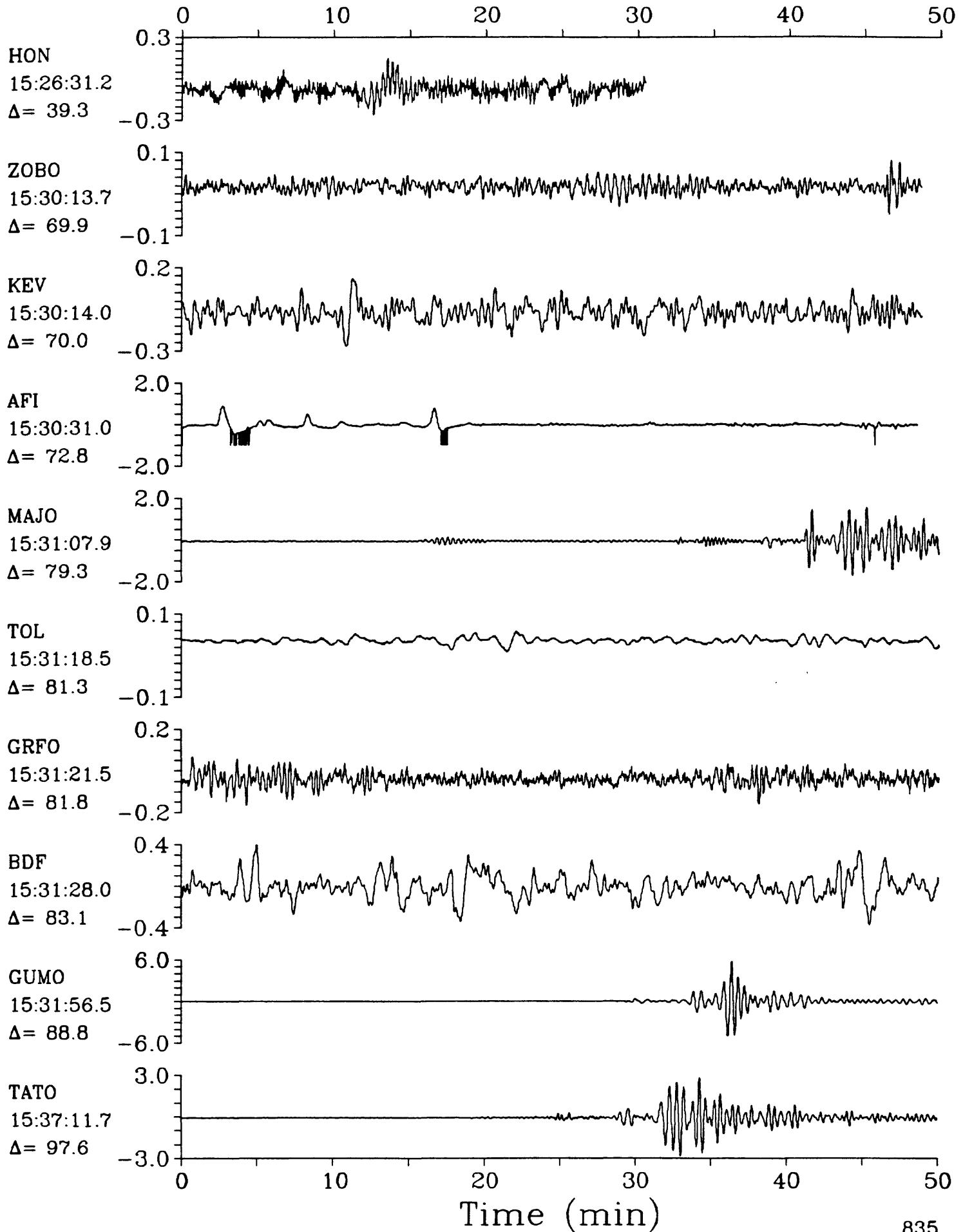
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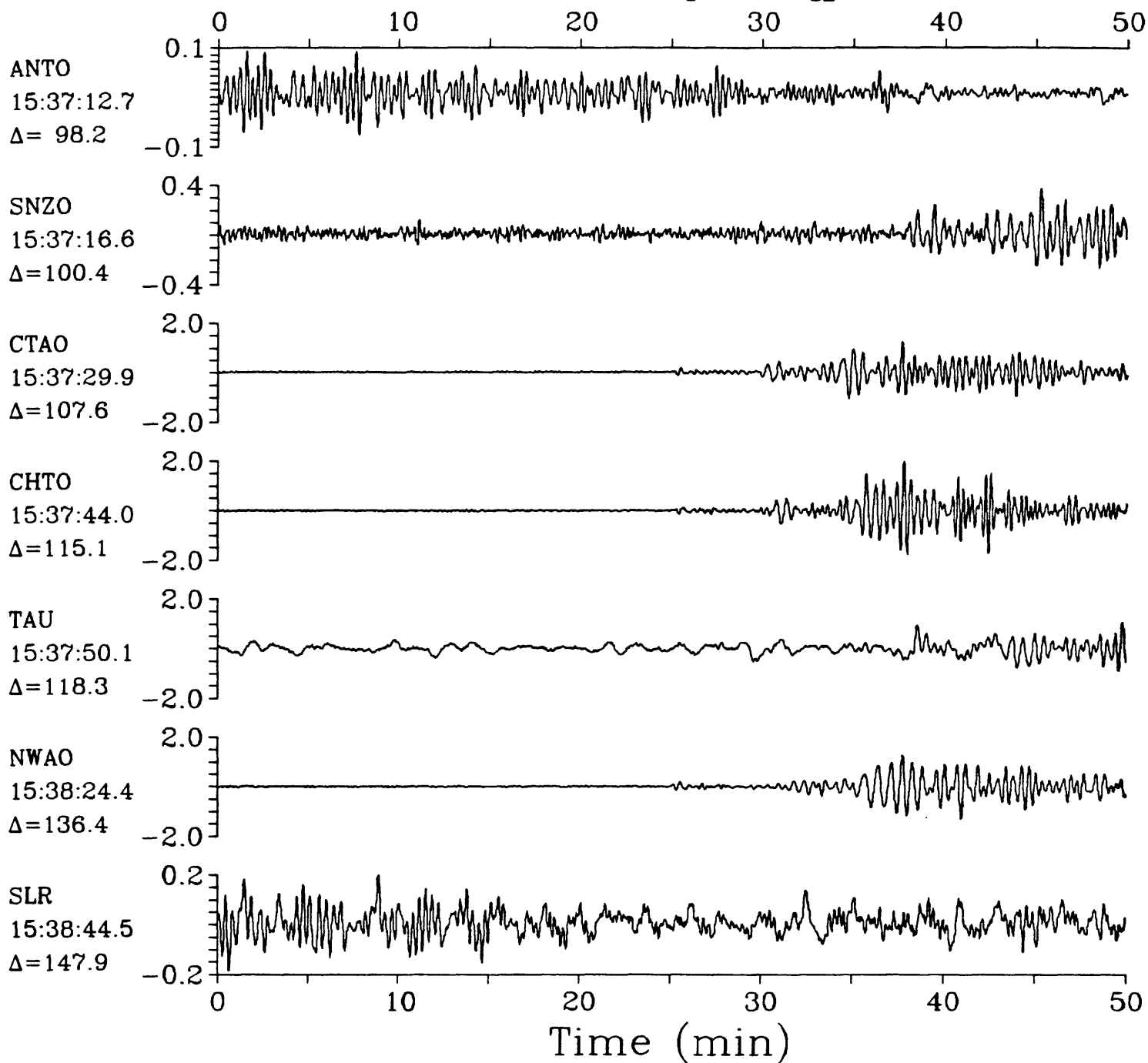
Southern Nevada $h=0.0$ $m_b=5.7$ $M_{sz}=4.7$



Southern Nevada $h=0.0$ $m_b=5.7$ $M_{sz}=4.7$

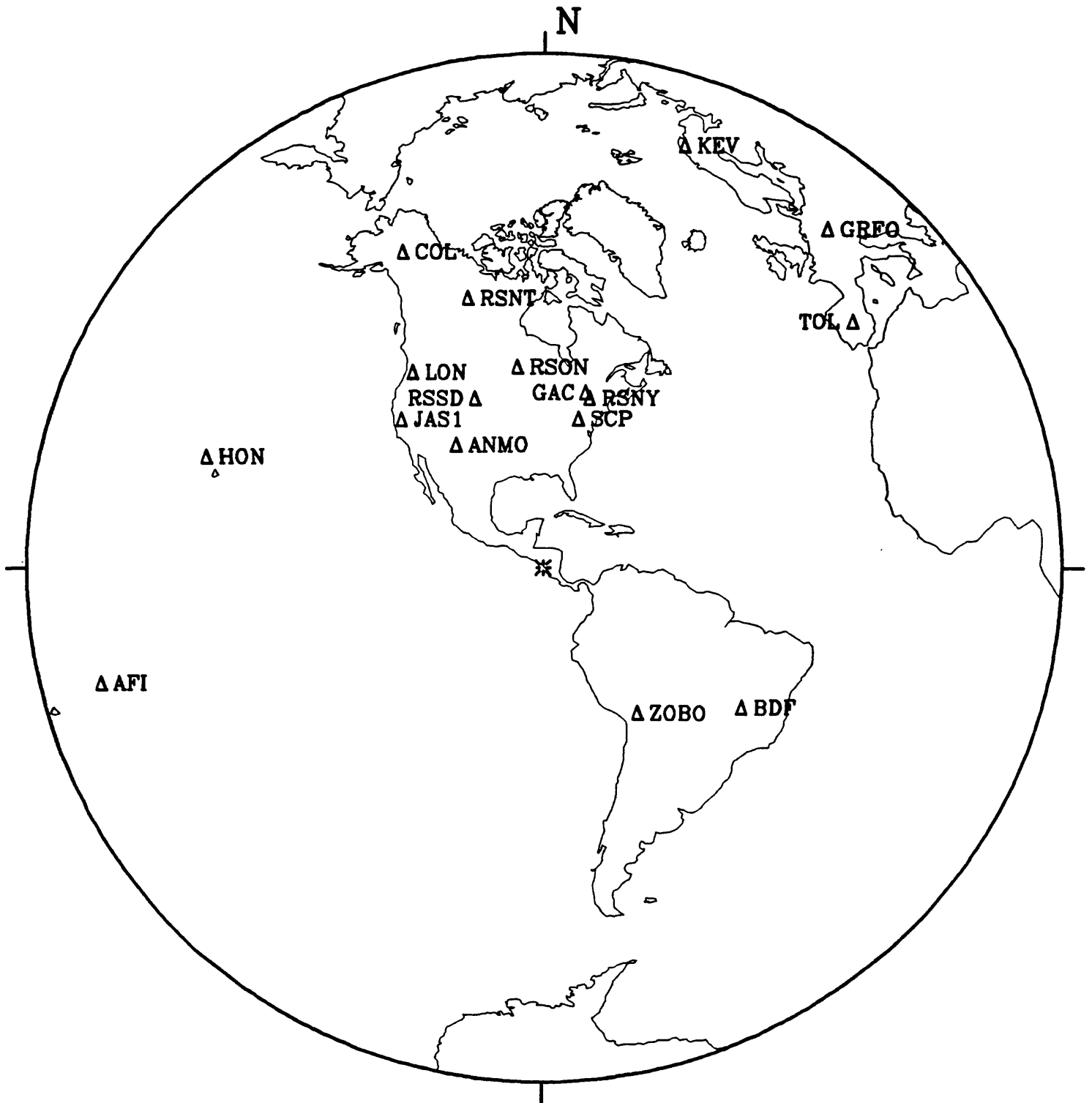


Southern Nevada $h=0.0$ $m_b=5.7$ $M_{sz}=4.7$ 

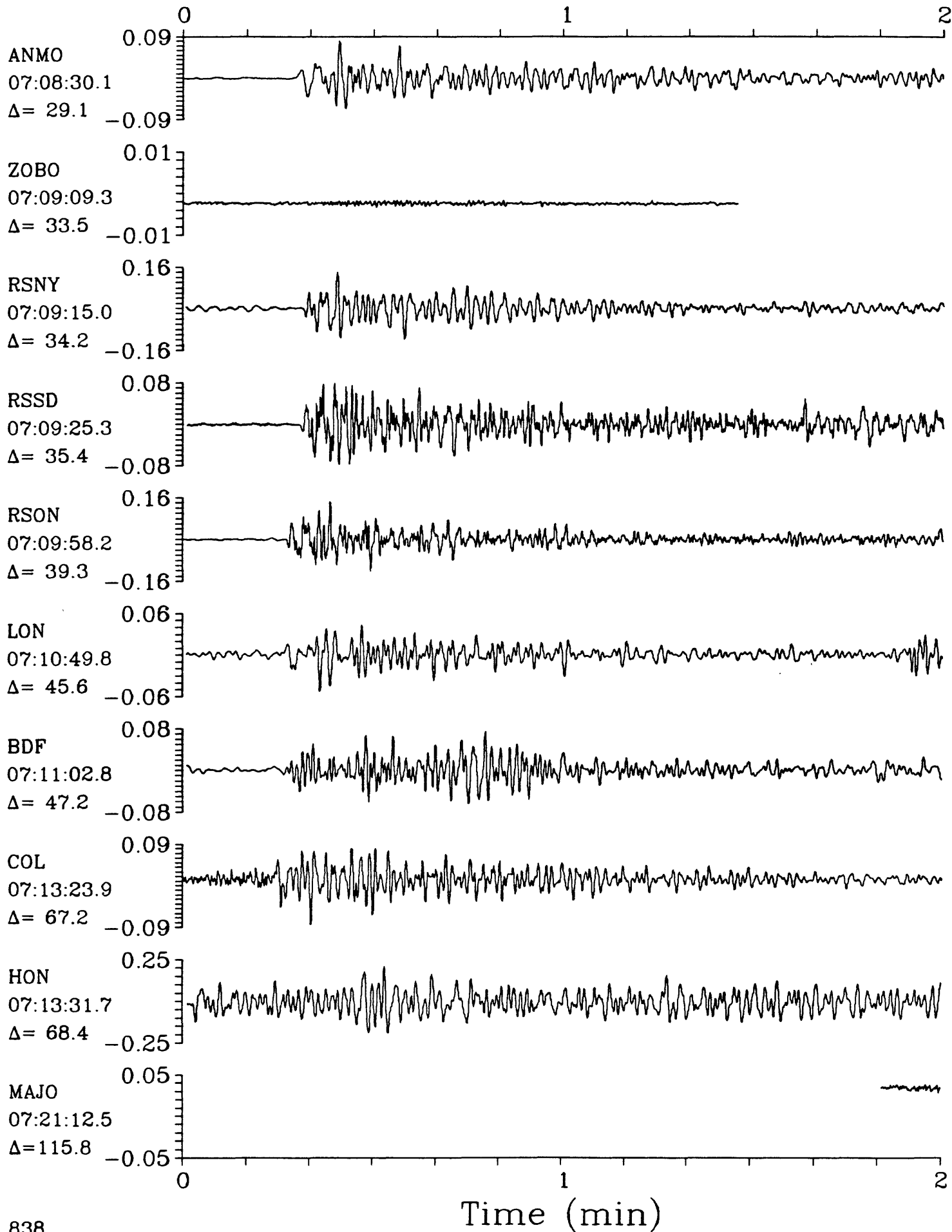
Southern Nevada $h=0.0$ $m_b=5.7$ $M_{sz}=4.7$ 

03 May 1985 07:02:47.52

Near Coast of Nicaragua



Near Coast of Nicaragua $h=33.0$ $m_b=5.1$ $M_{sz}=5.6$

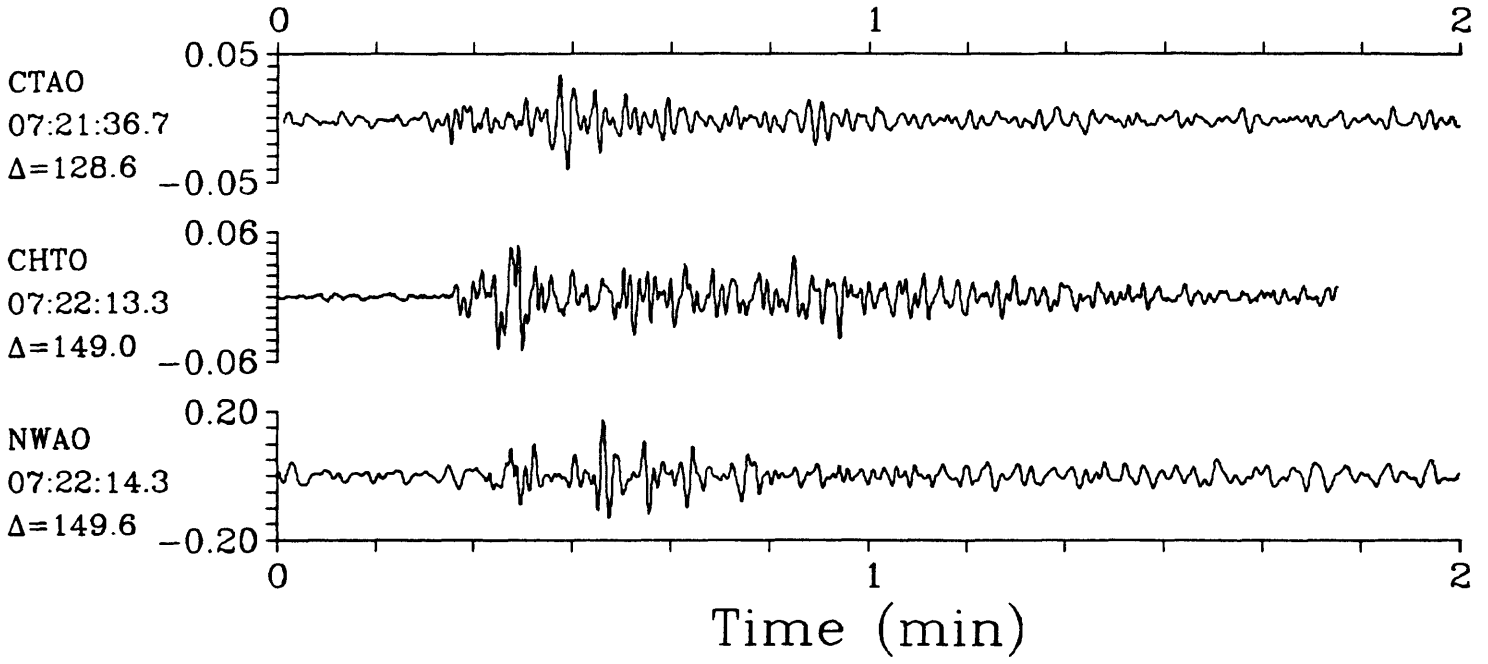


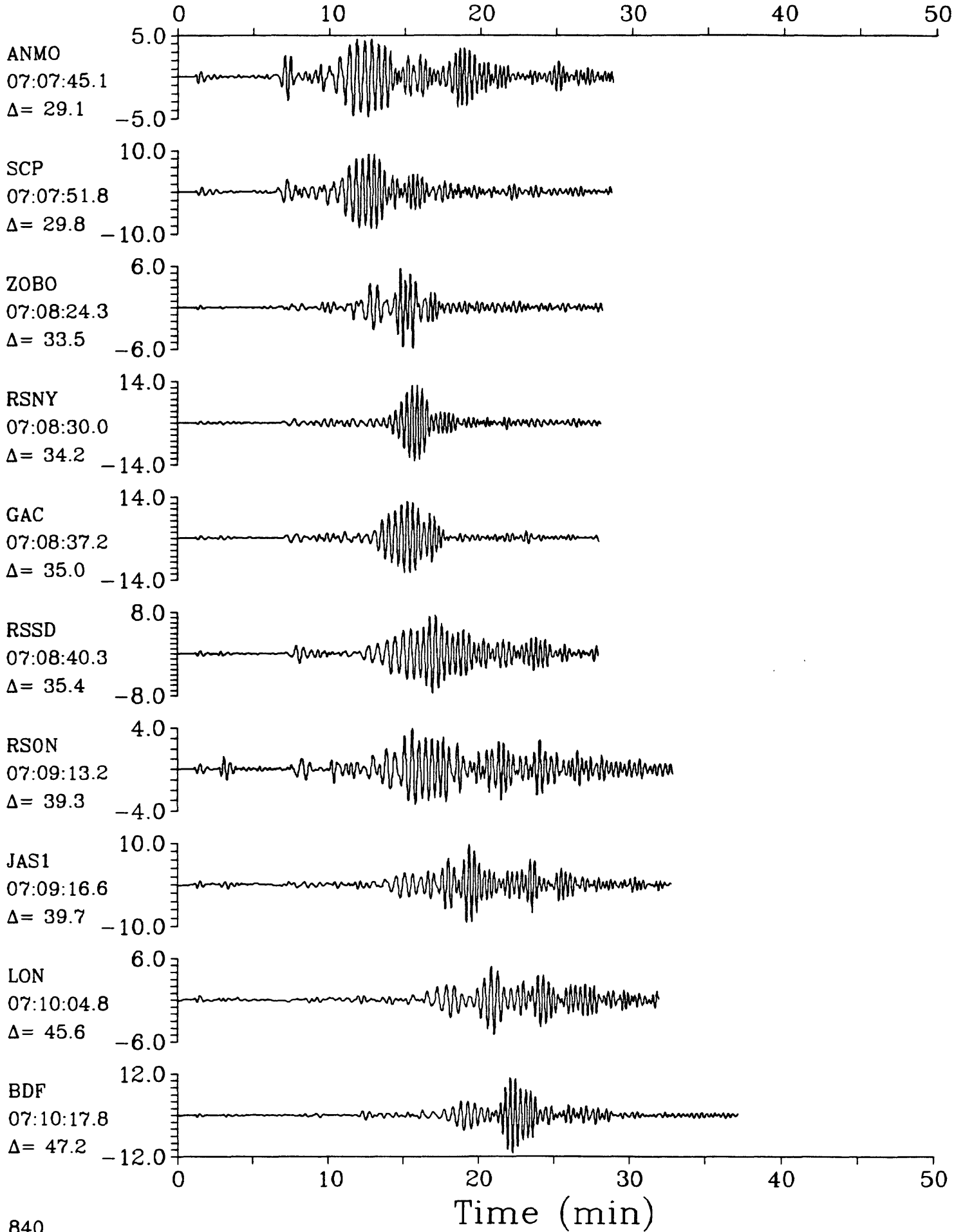
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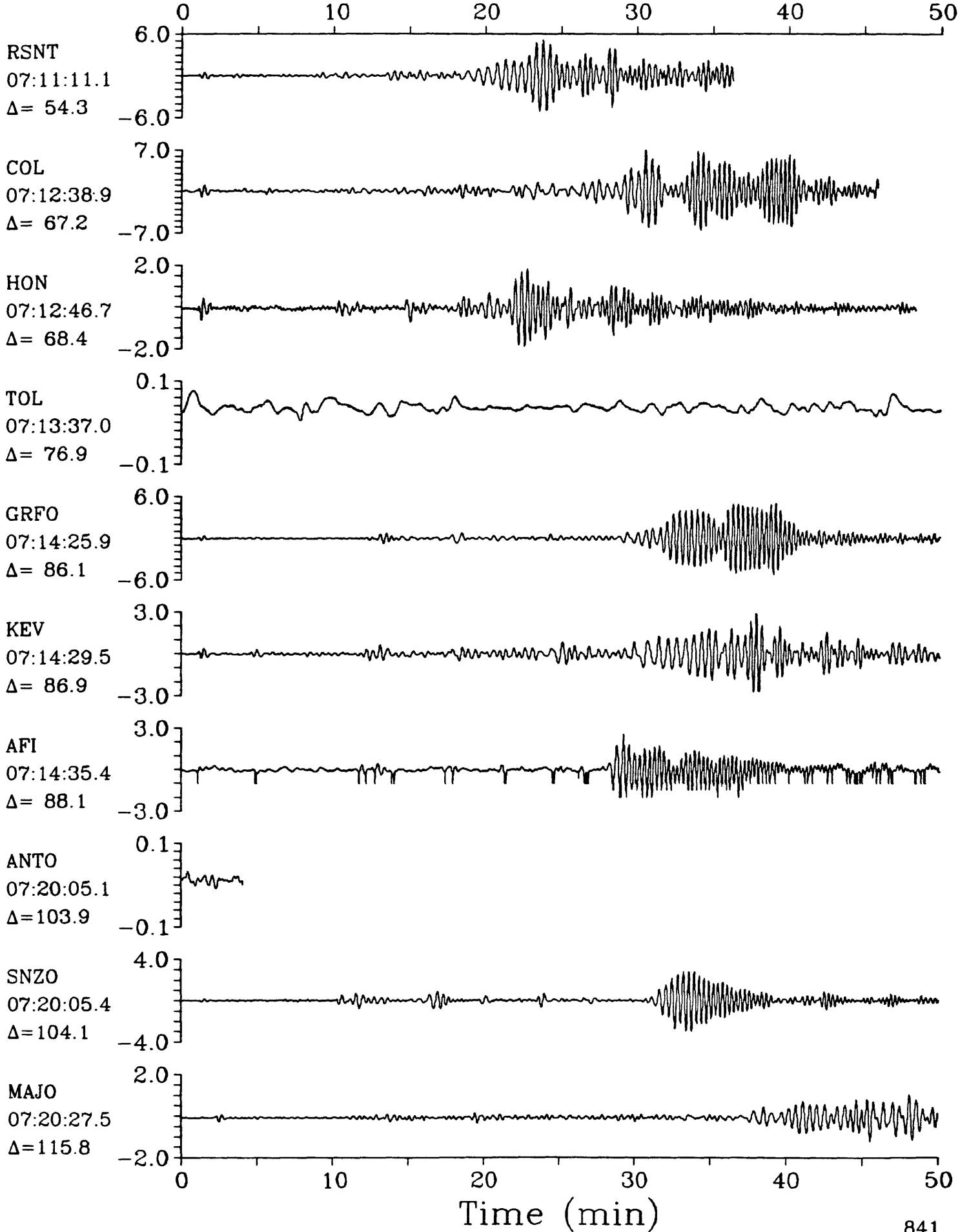
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Near Coast of Nicaragua $h=33.0$ $m_b=5.1$ $M_{sz}=5.6$

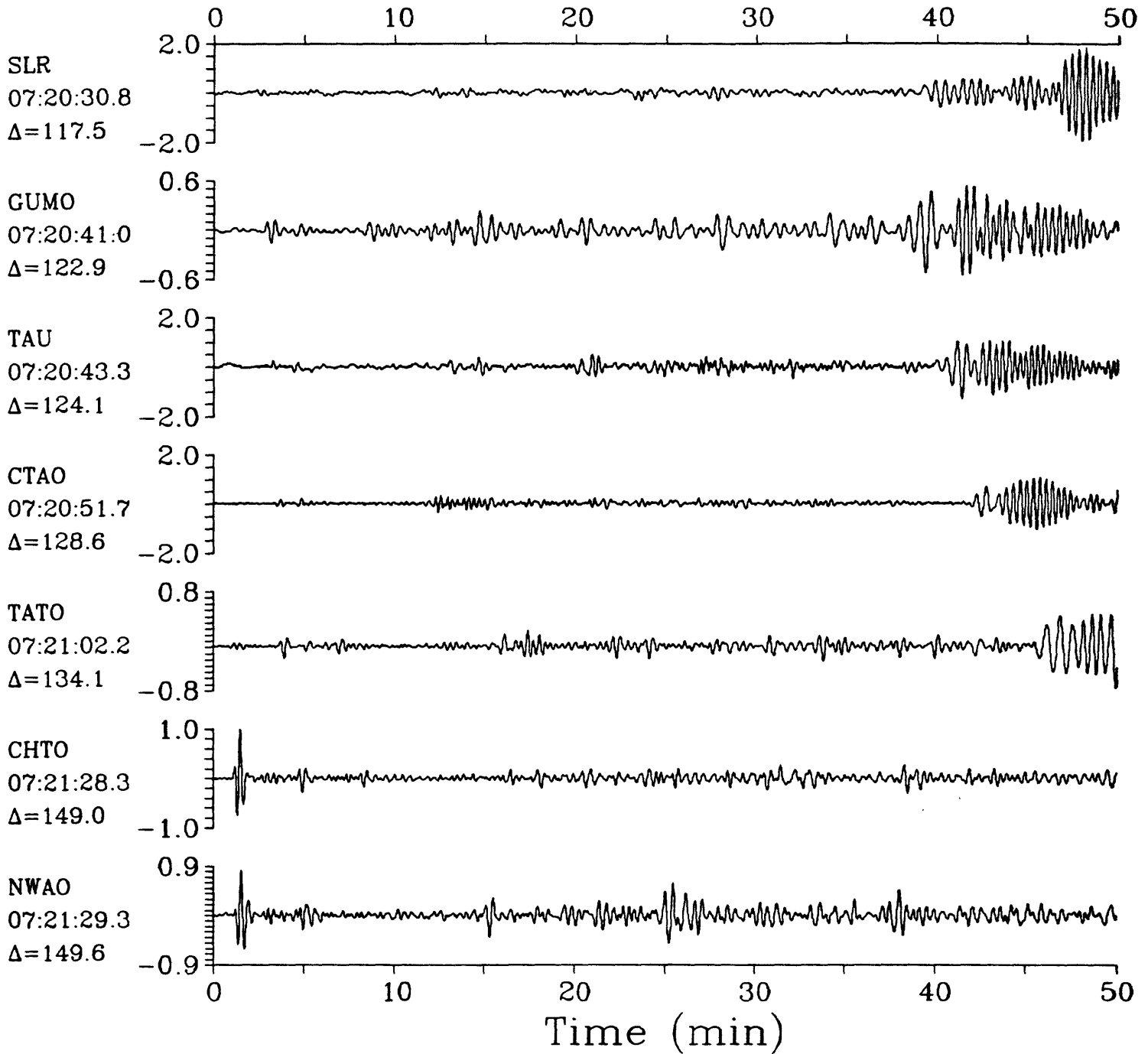


Near Coast of Nicaragua $h=33.0$ $m_b=5.1$ $M_{sz}=5.6$ 

Near Coast of Nicaragua $h=33.0$ $m_b=5.1$ $M_{sz}=5.6$

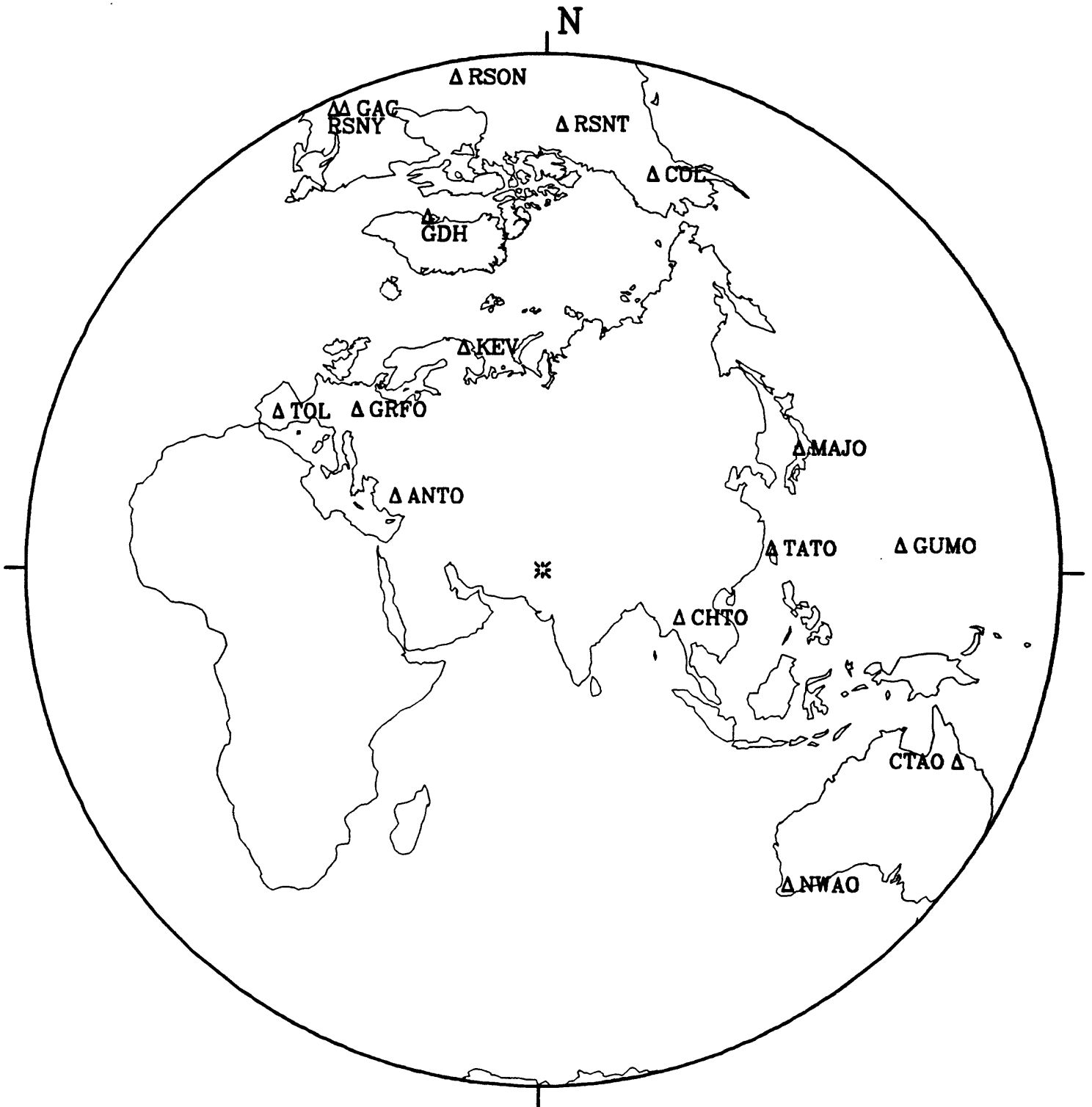


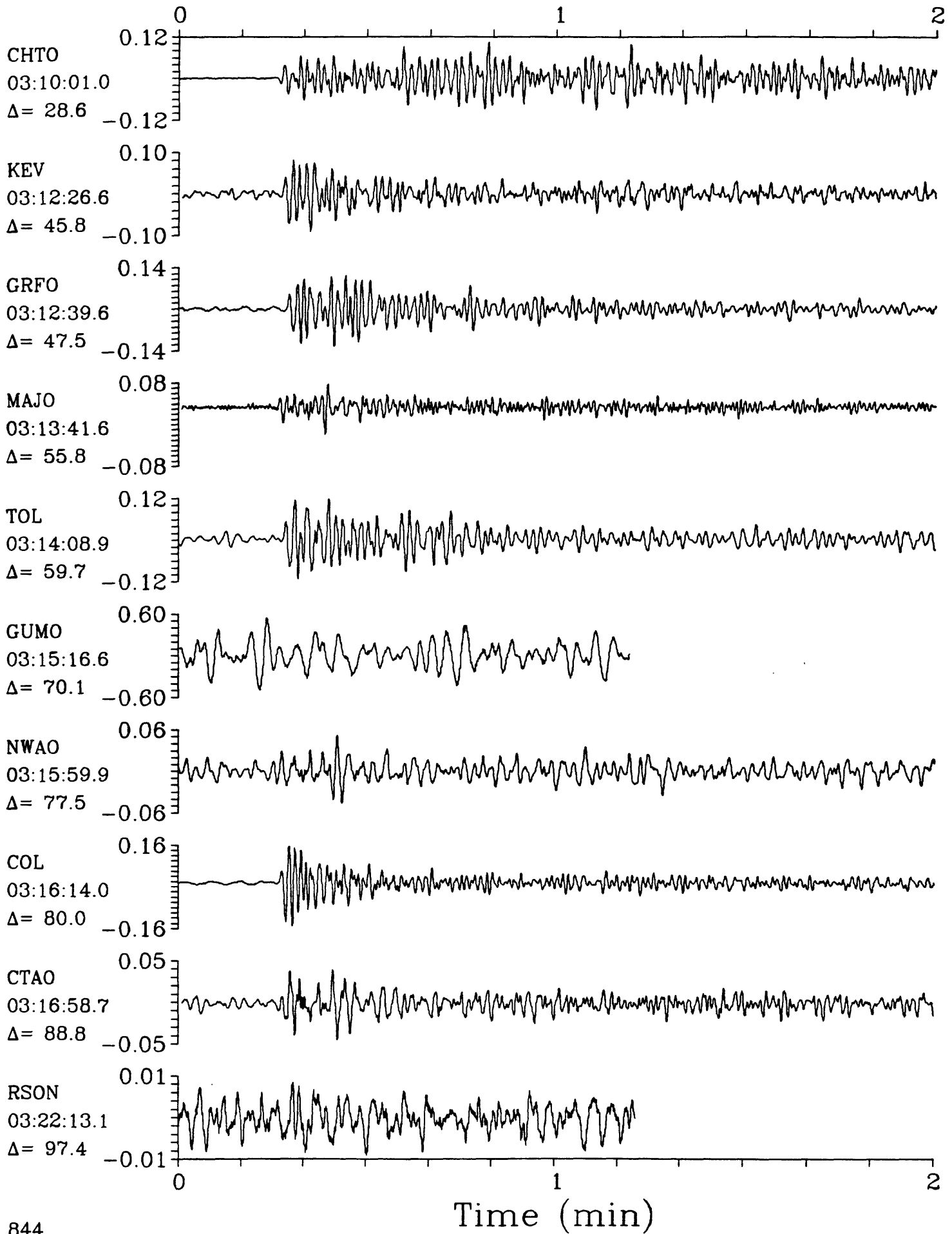
Time (min)

Near Coast of Nicaragua $h=33.0$ $m_b=5.1$ $M_{SZ}=5.6$ 

06 May 1985 03:04:22.35

Pakistan



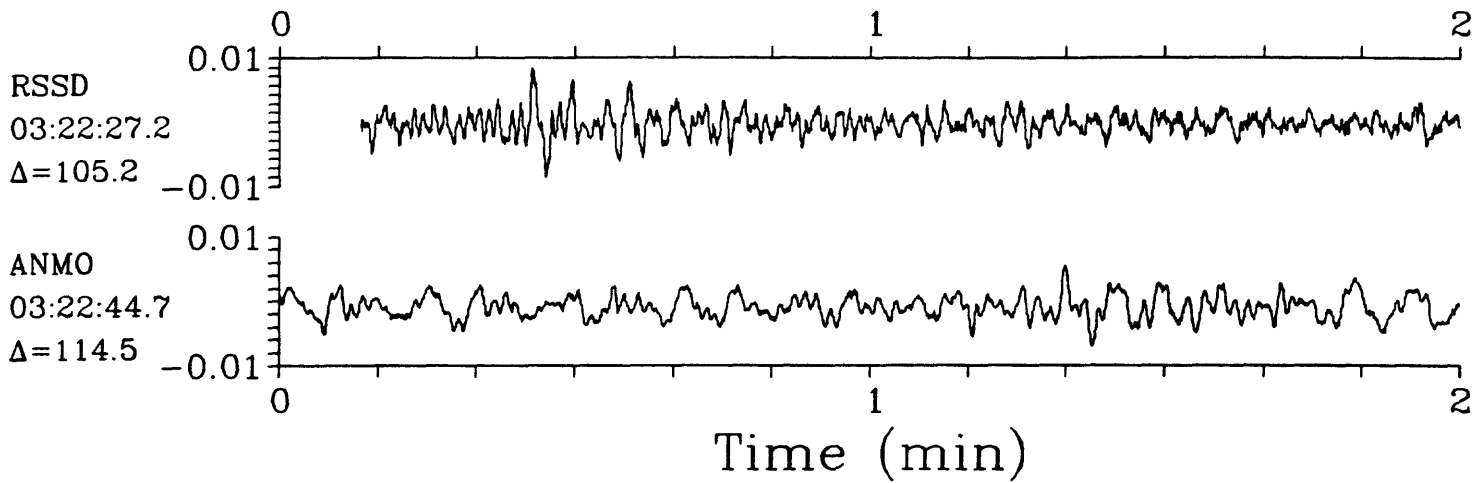


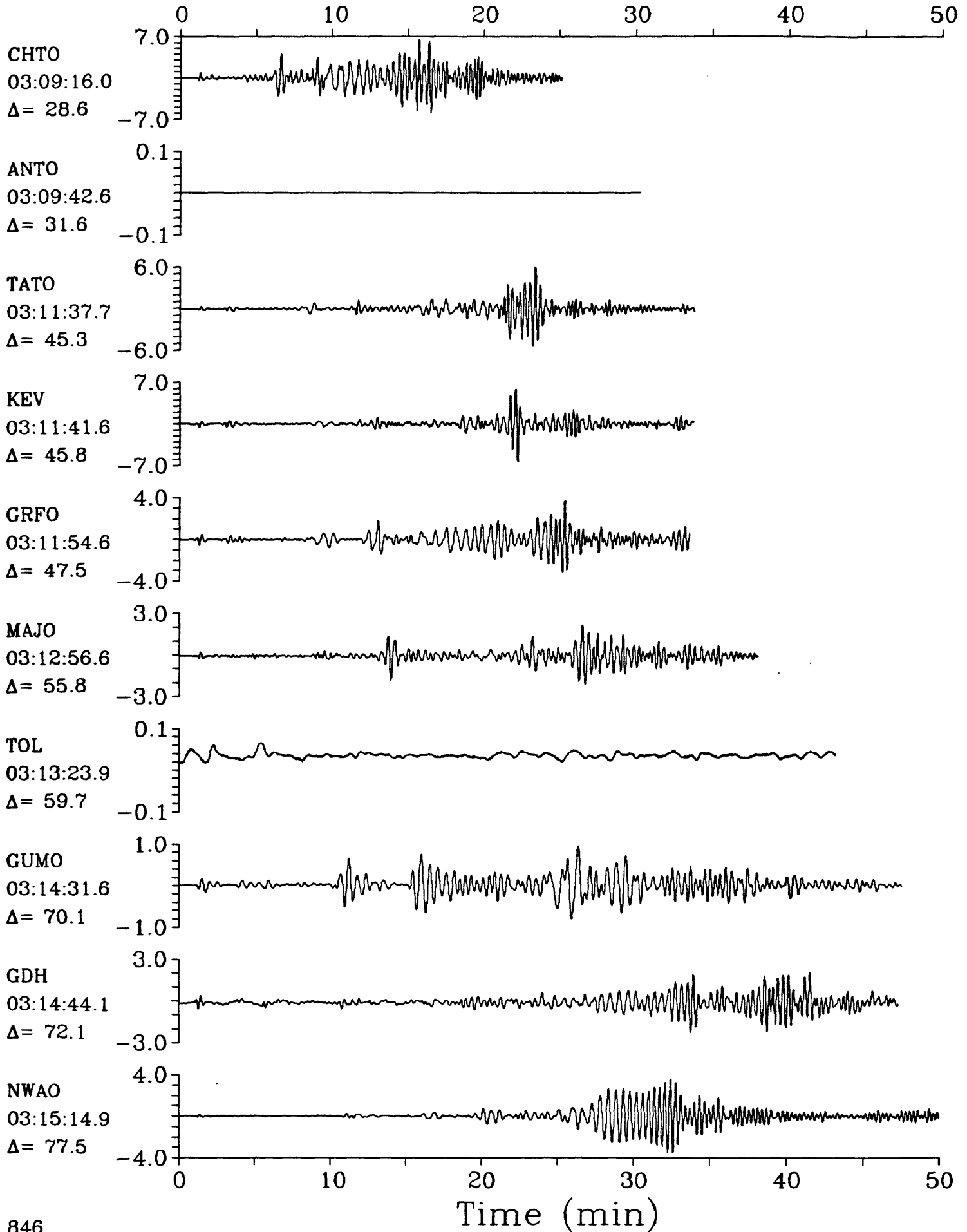
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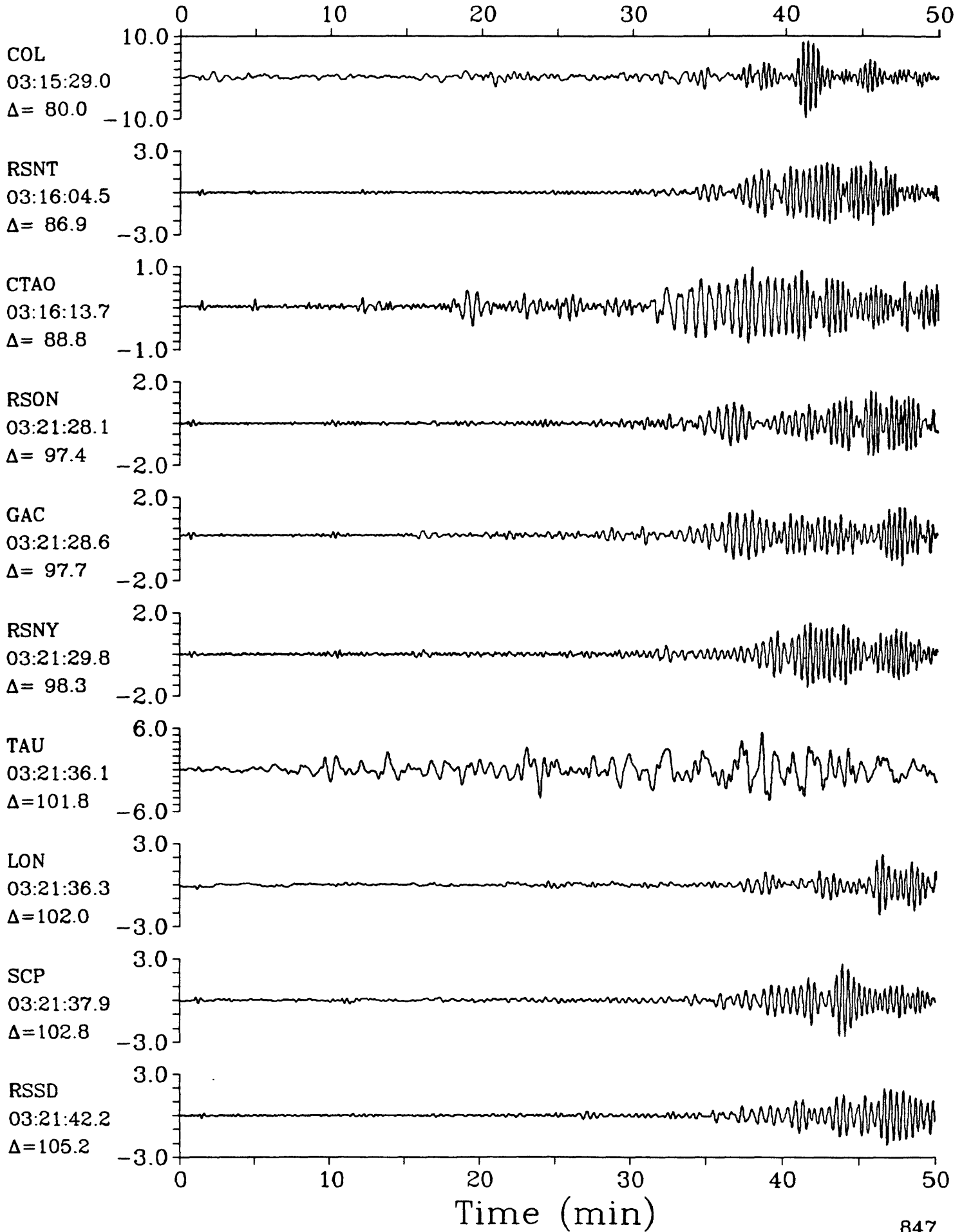
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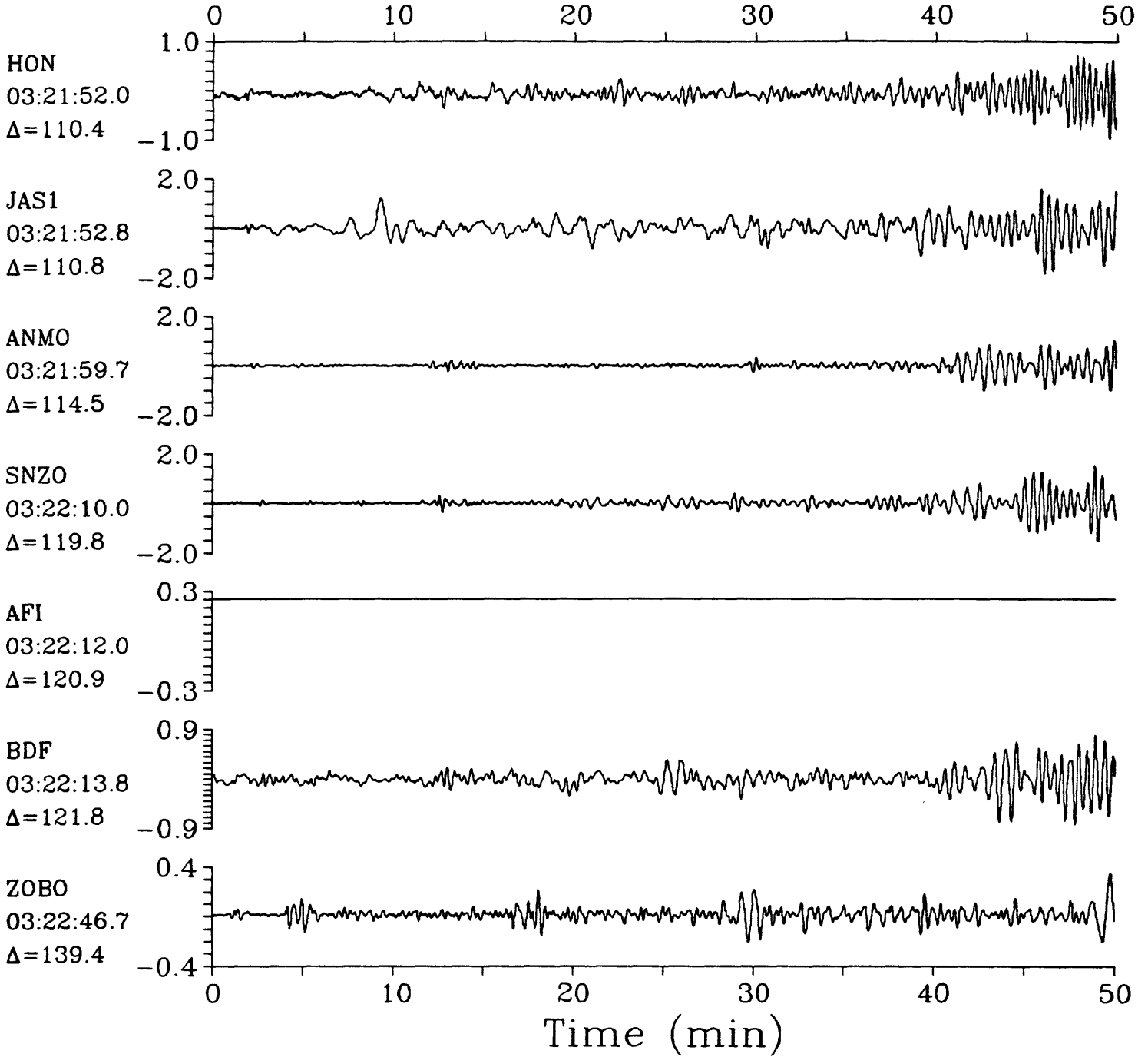
SPZ

Pakistan $h=33.0$ $m_b=5.6$ $M_{sz}=5.4$



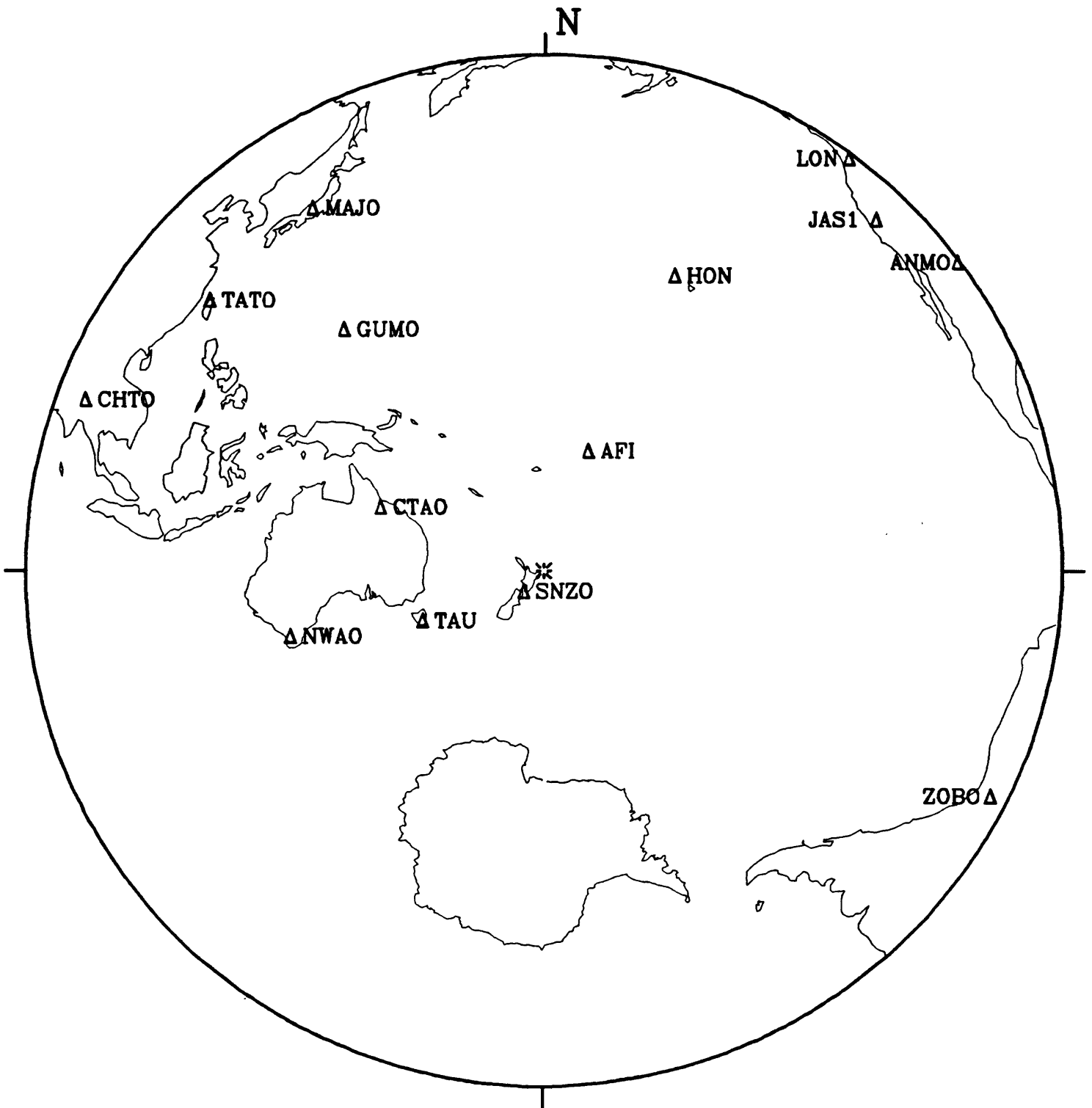


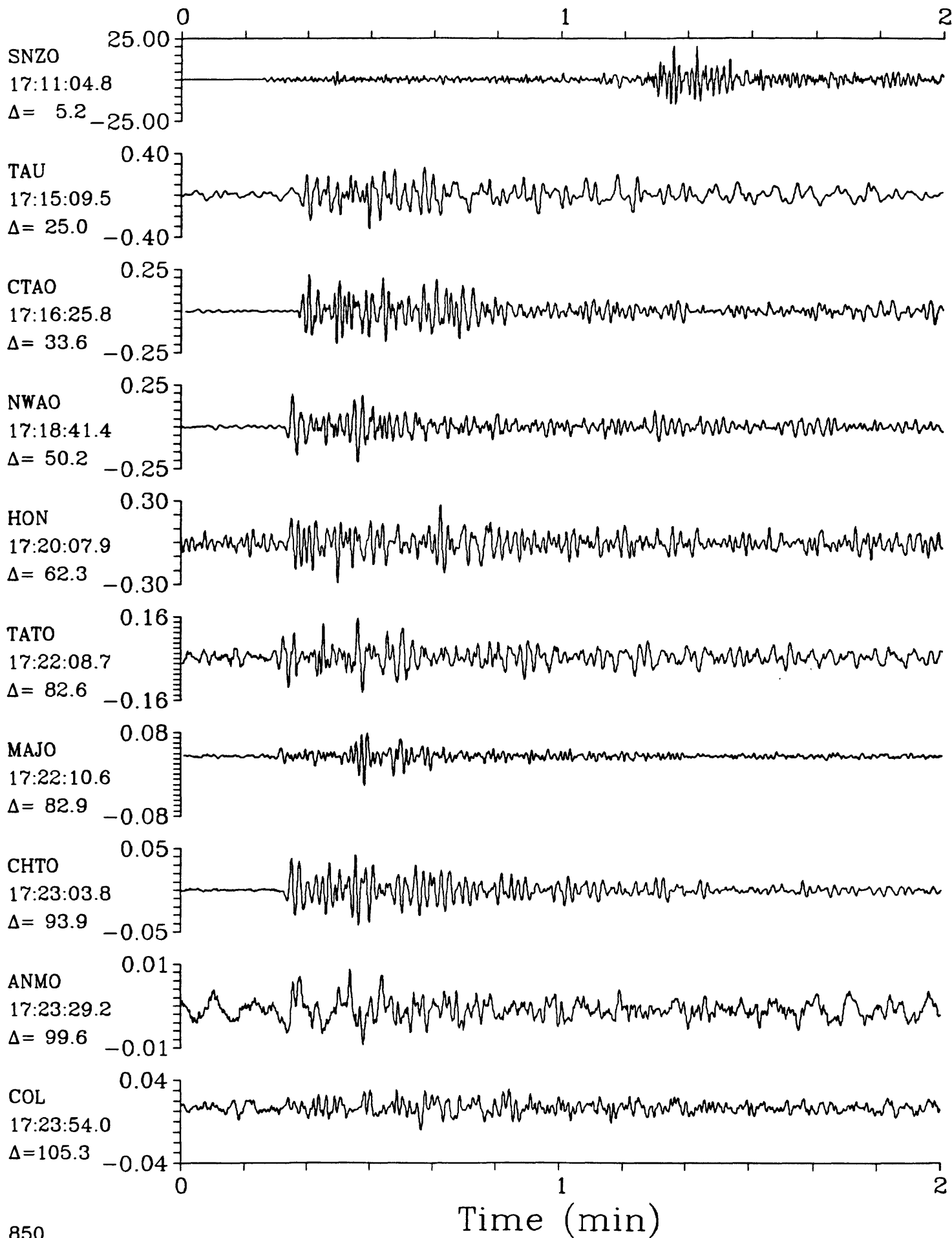




06 May 1985 17:10:03.63

Off E. Coast of N. Island, N.Z.

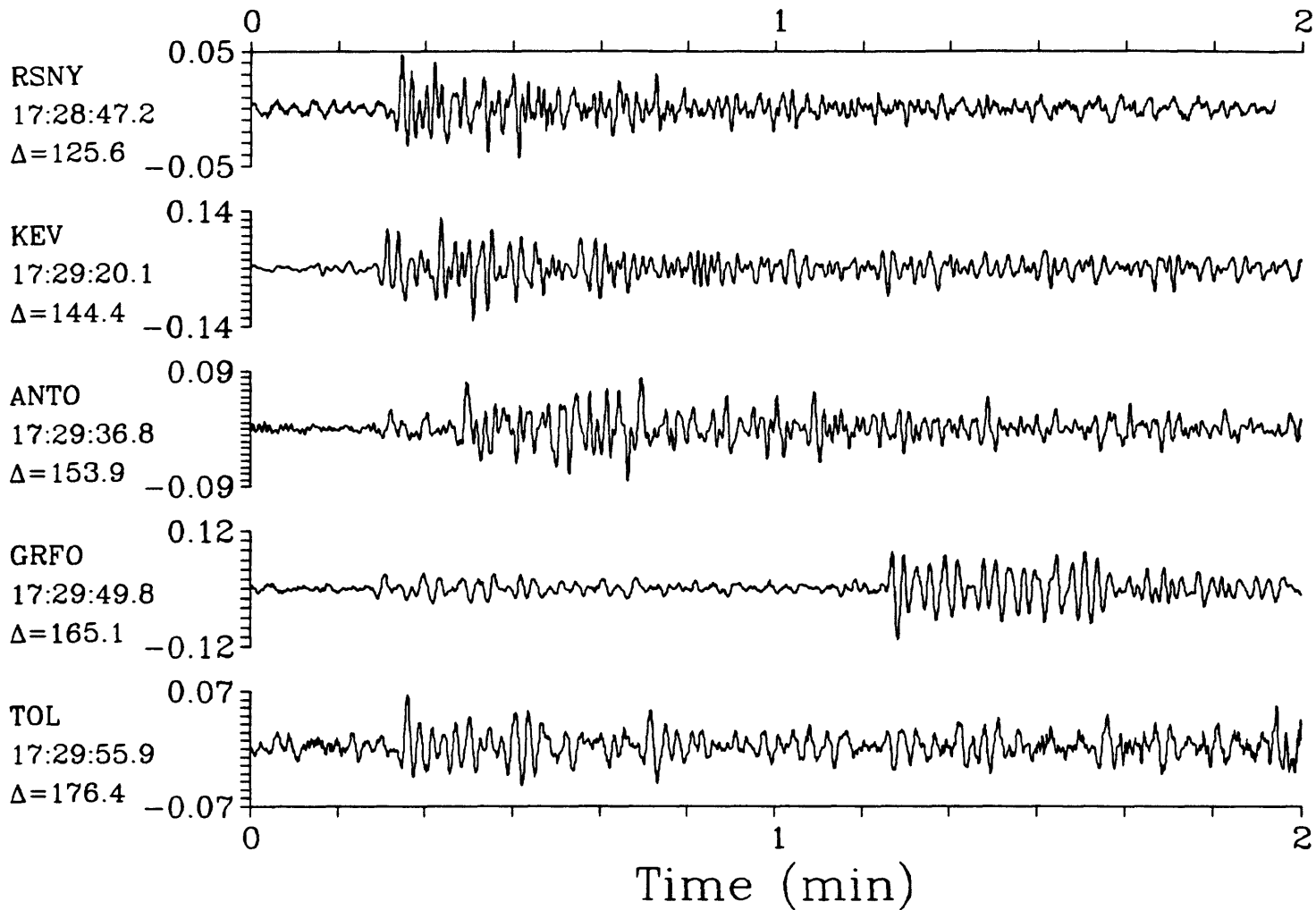


Off E. Coast of N. Island, N.Z. $h=33.0$ $m_b=5.7$ $M_{sz}=6.1$ 

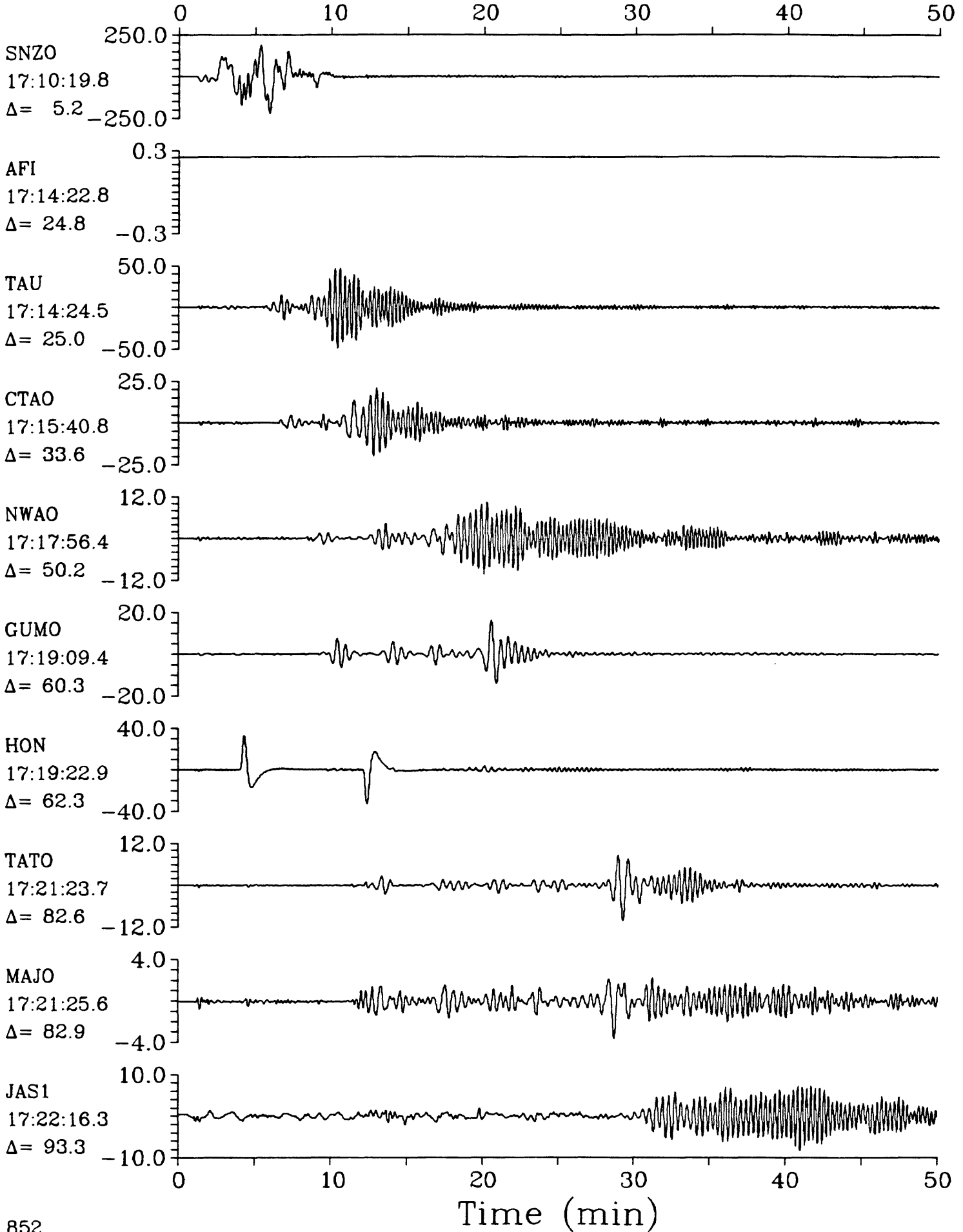
SPZ

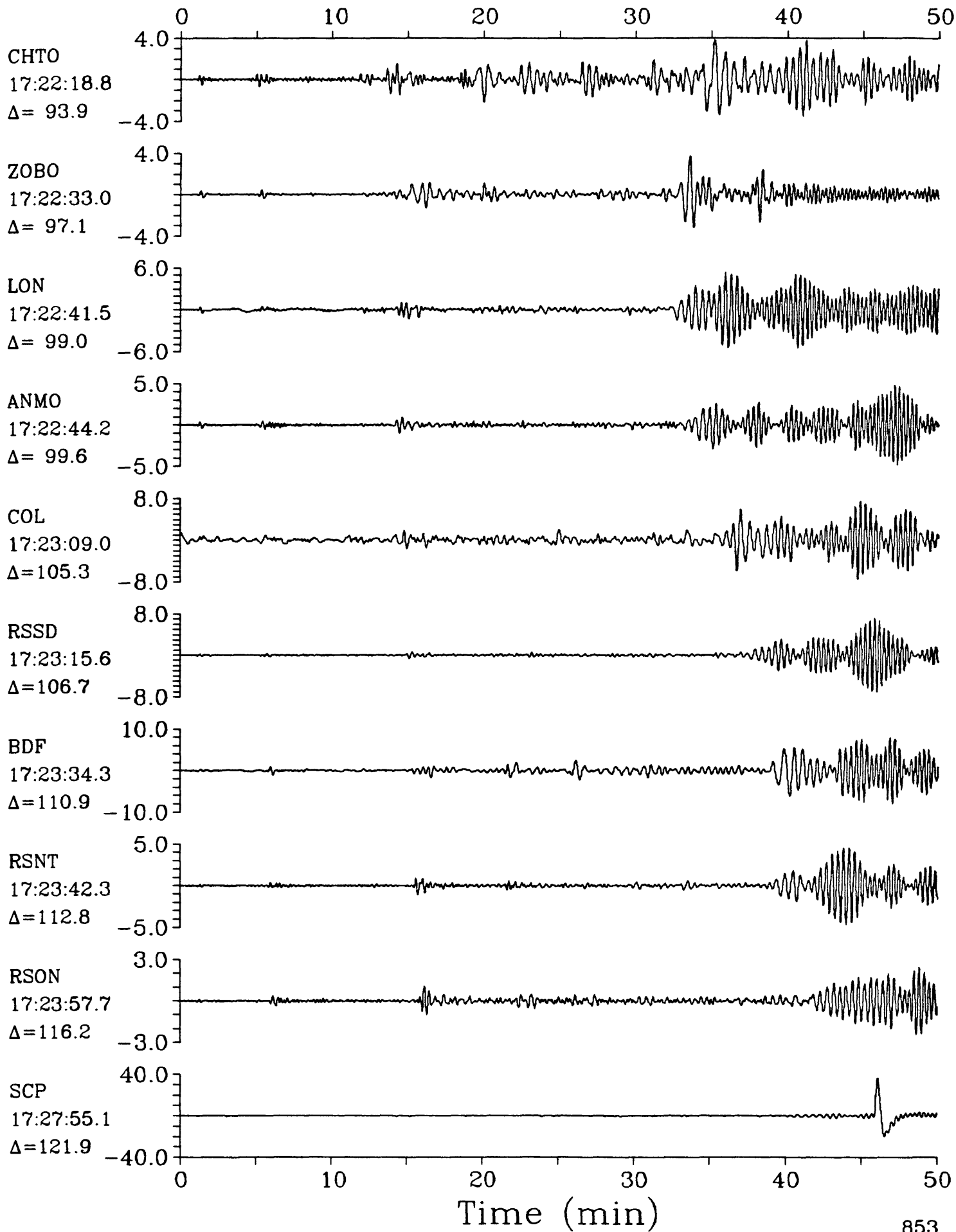
06 May 1985 17:10:03.63

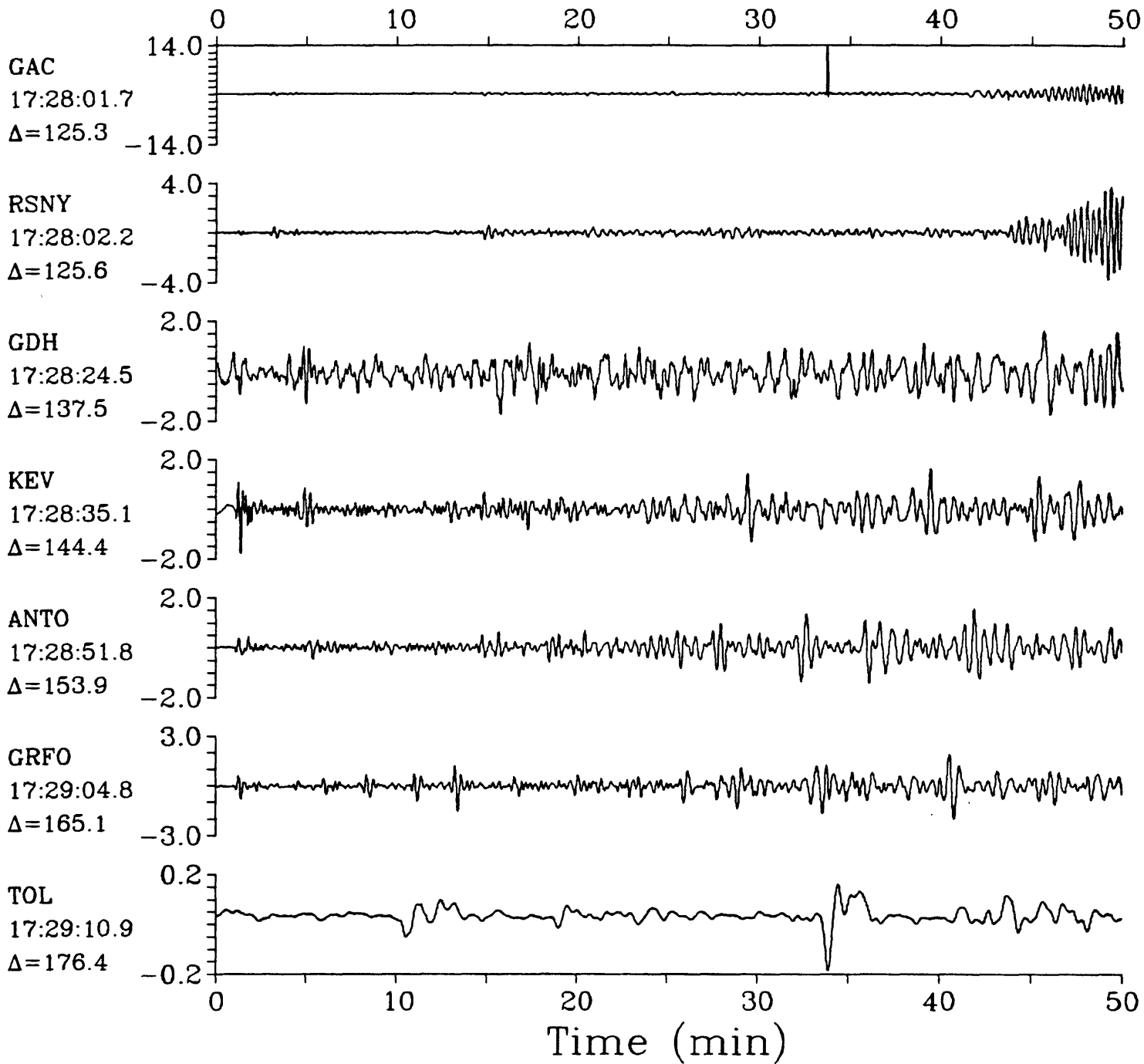
SPZ

Off E. Coast of N. Island, N.Z. $h=33.0$ $m_b=5.7$ $M_{sz}=6.1$ 

Off E. Coast of N. Island, N.Z. $h=33.0$ $m_b=5.7$ $M_{sz}=6.1$

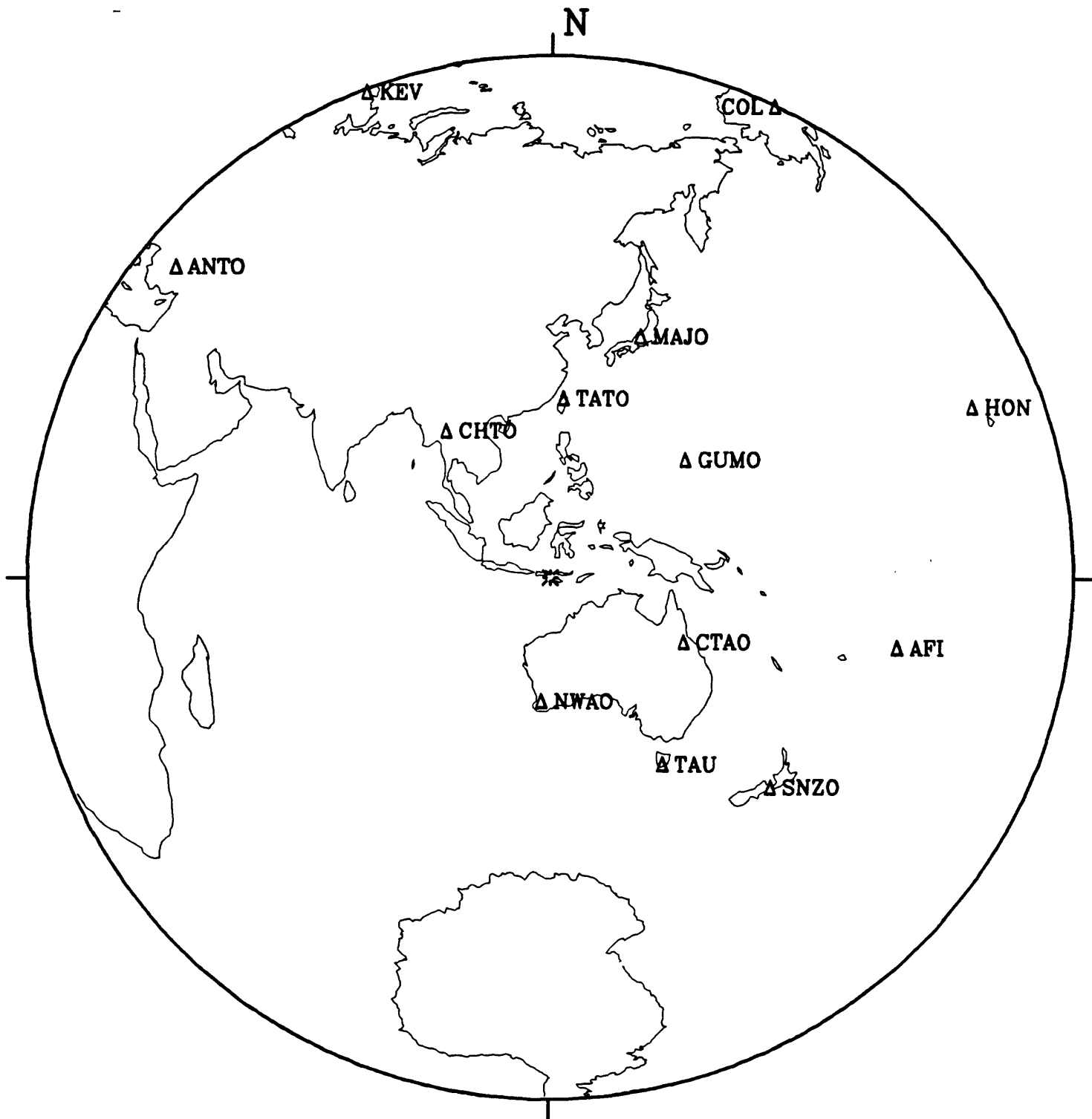


Off E. Coast of N. Island, N.Z. $h=33.0$ $m_b=5.7$ $M_{sz}=6.1$ 

Off E. Coast of N. Island, N.Z. $h=33.0$ $m_b=5.7$ $M_{SZ}=6.1$ 

07 May 1985 11:17:00.88

Sumbawa Island Region

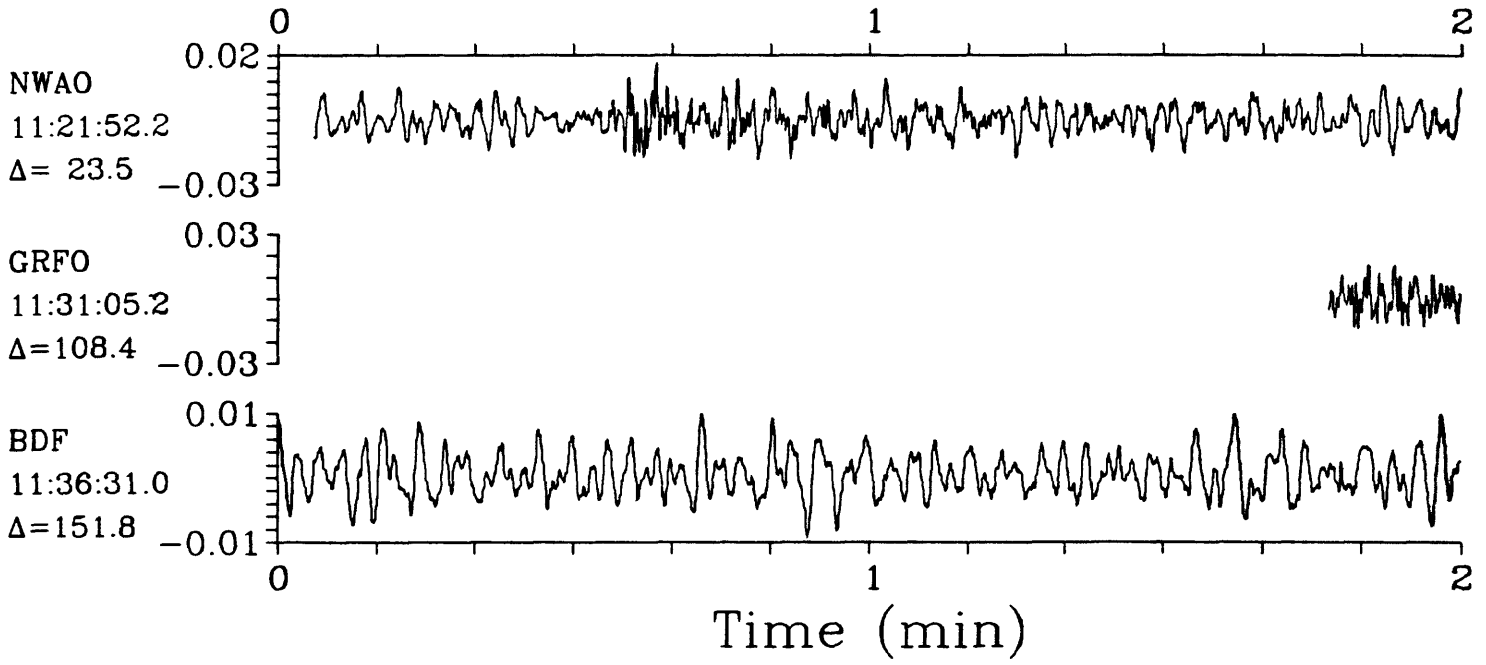


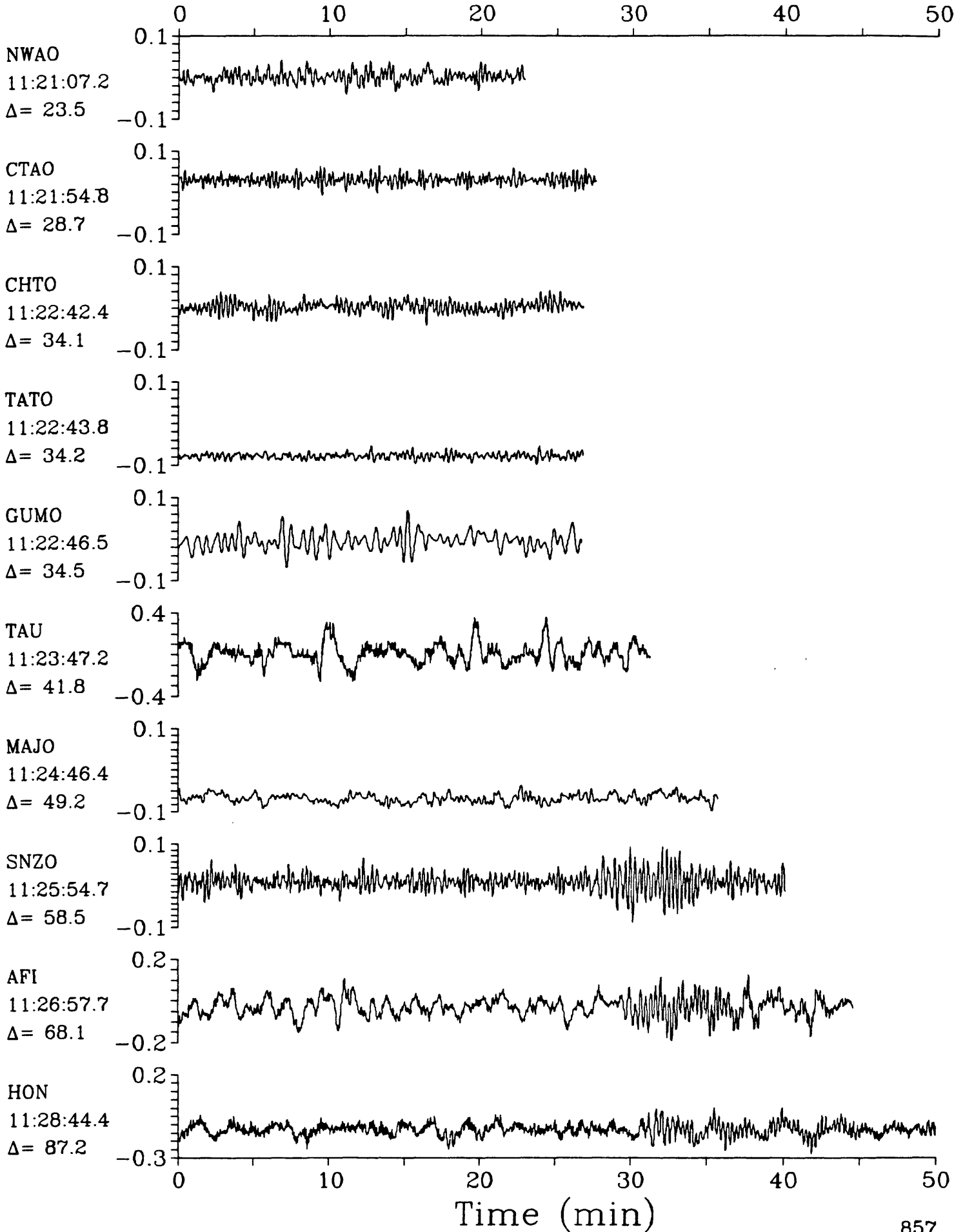
SPZ

07 May 1985 11:17:00.88

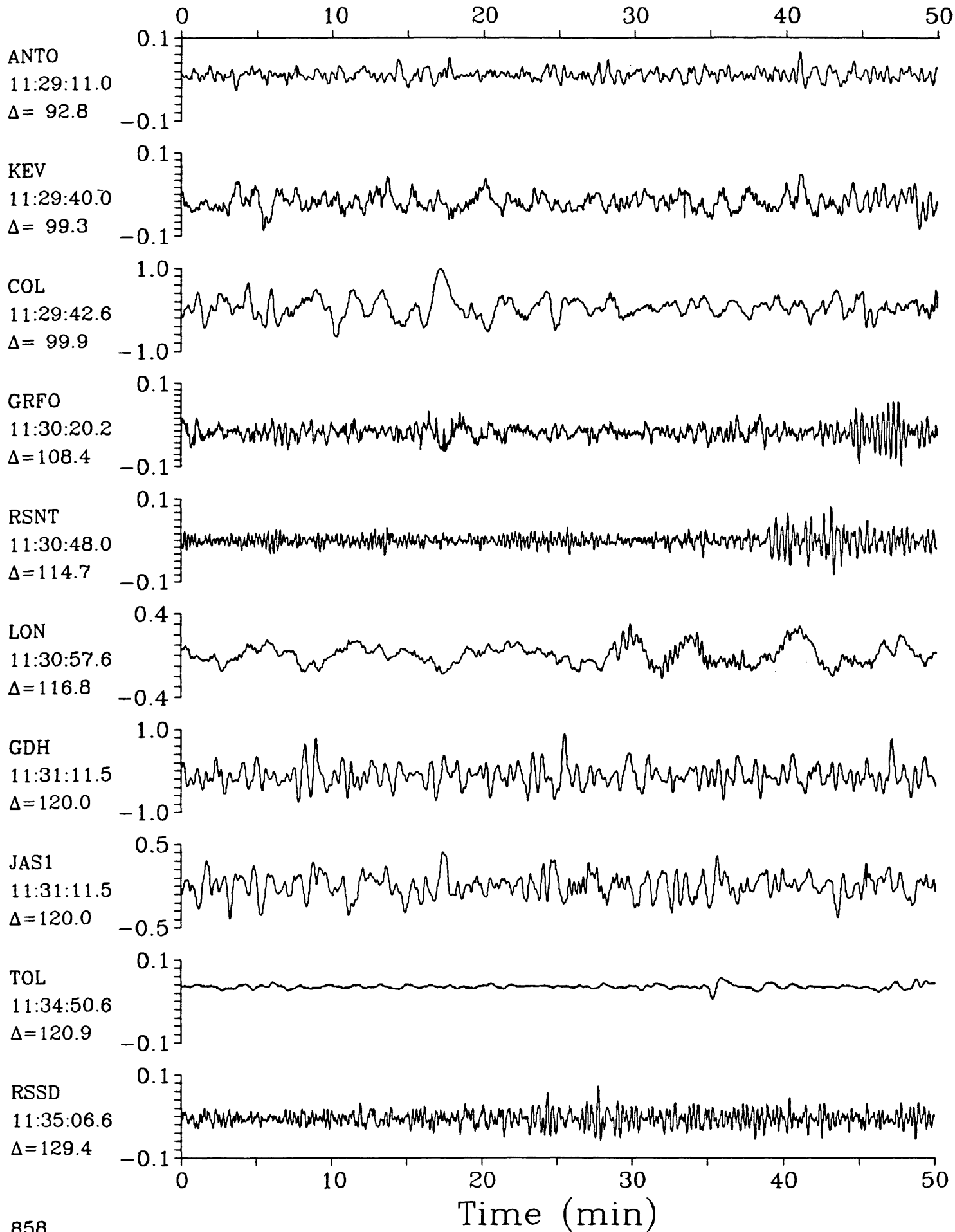
SPZ

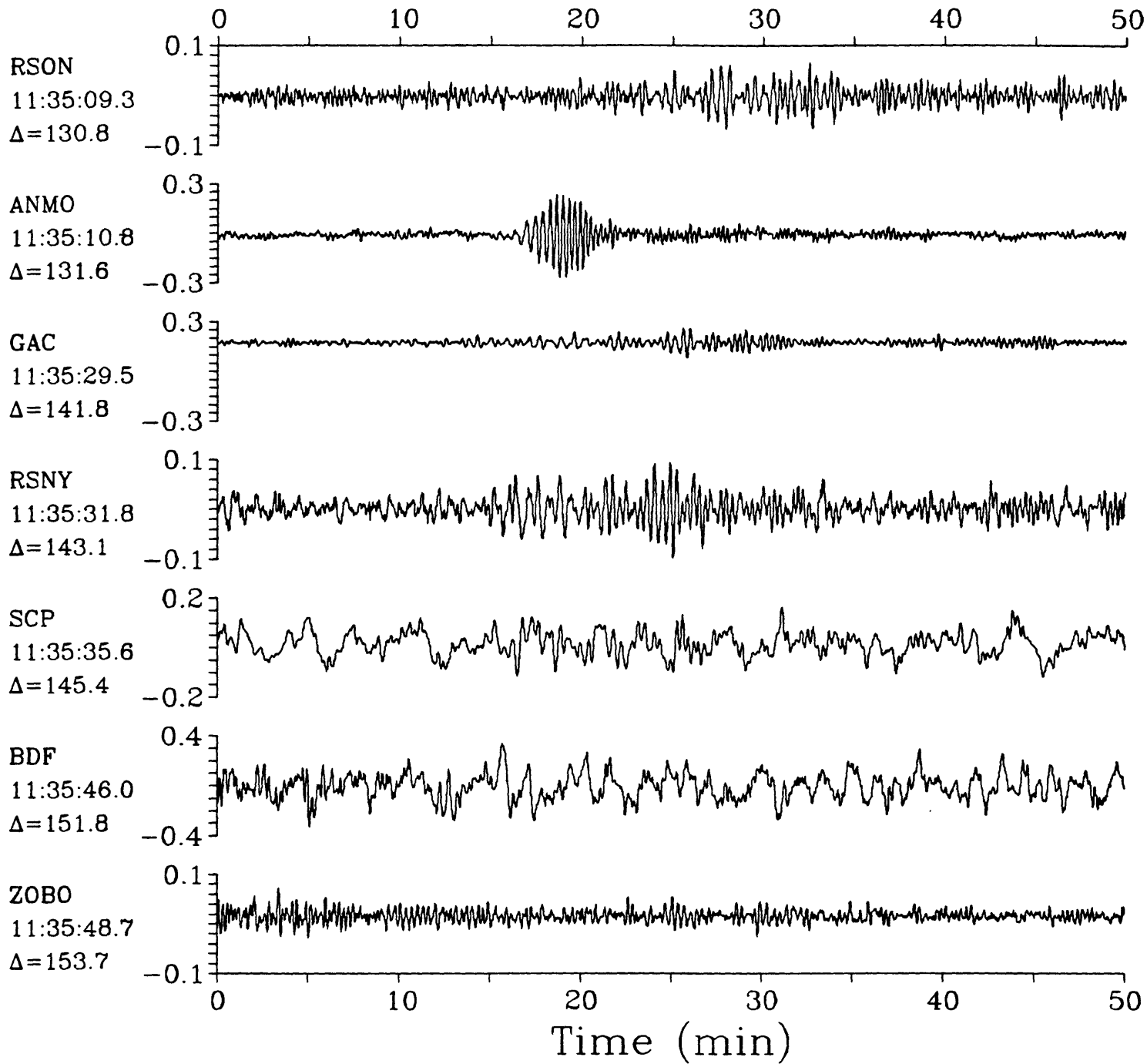
Sumbawa Island Region $h=33.0$ $m_b=5.8$



Sumbawa Island Region $h=33.0$ $m_b=5.8$ 

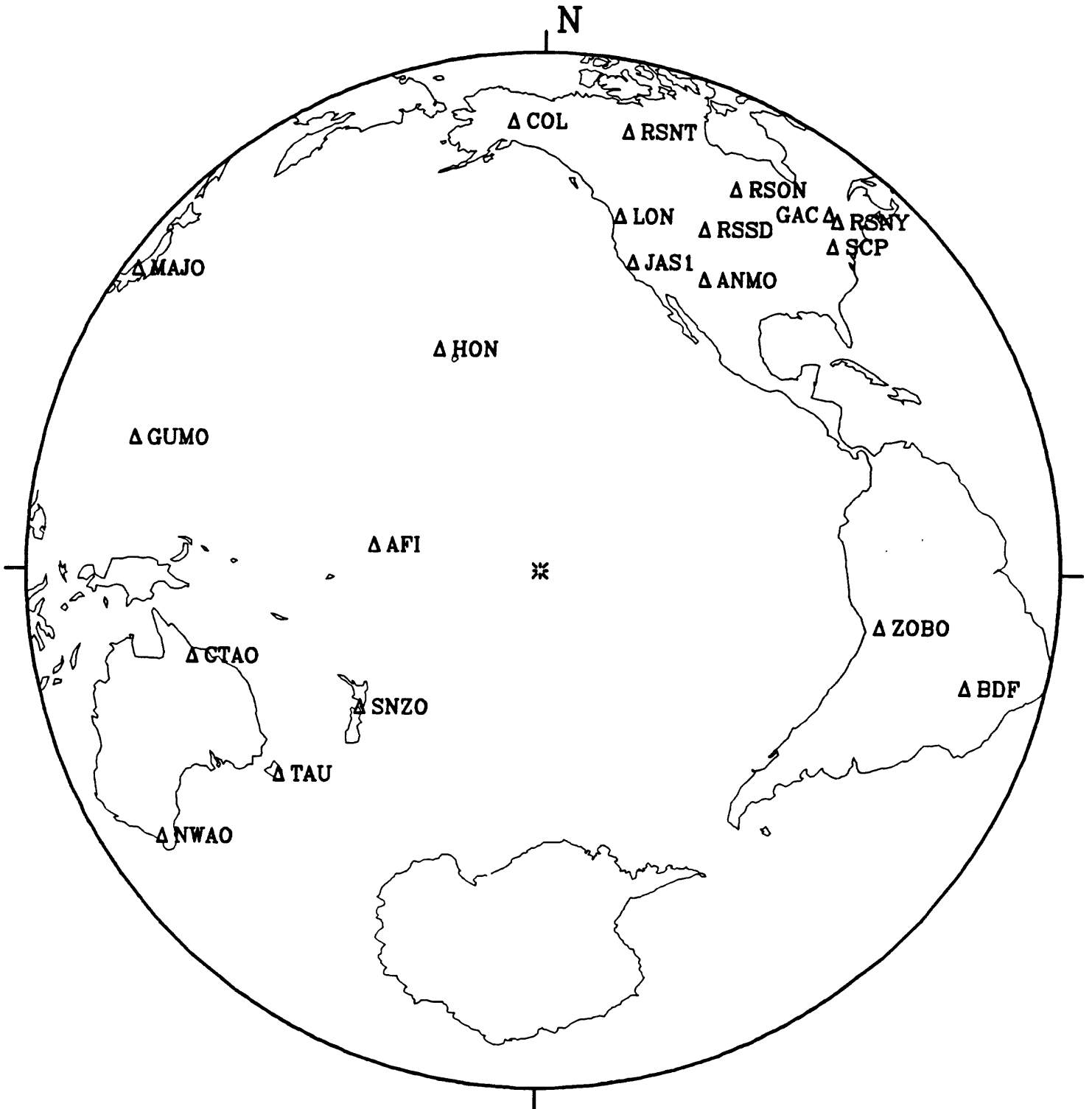
Time (min)

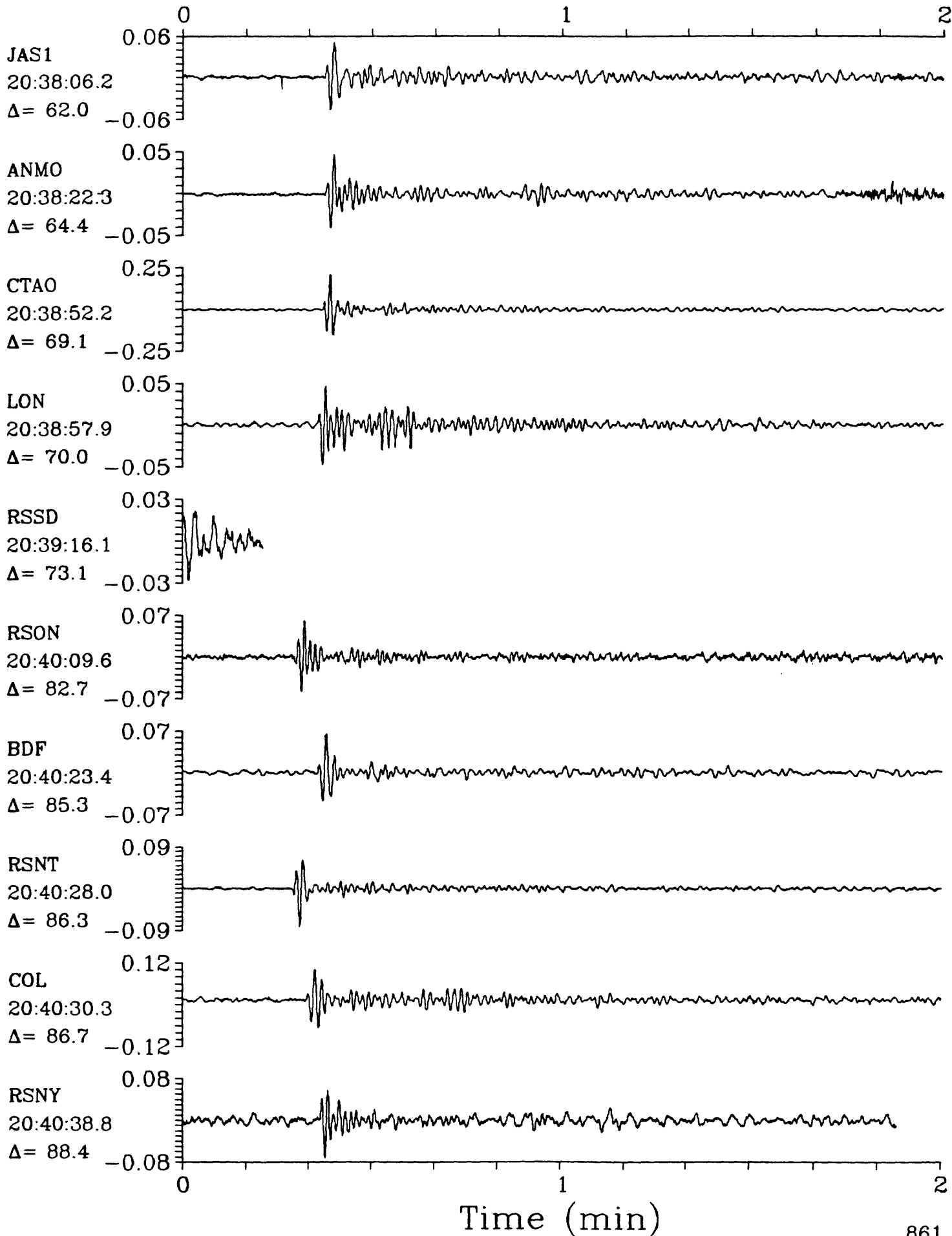
Sumbawa Island Region $h=33.0$ $m_b=5.8$ 

Sumbawa Island Region $h=33.0$ $m_b=5.8$ 

08 May 1985 20:27:58.81

Tuamotu Archipelago Region



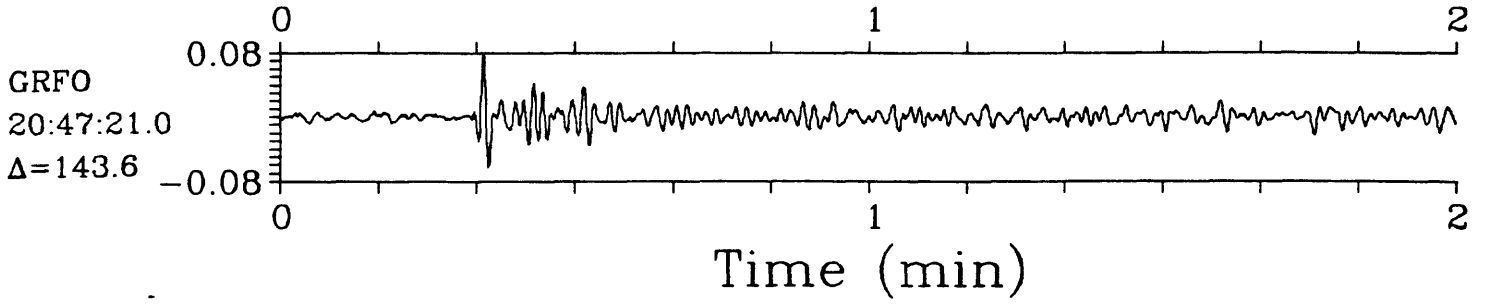
Tuamotu Archipelago Region $h=0.0$ $m_b=5.7$ $M_{SZ}=5.4$ 

SPZ

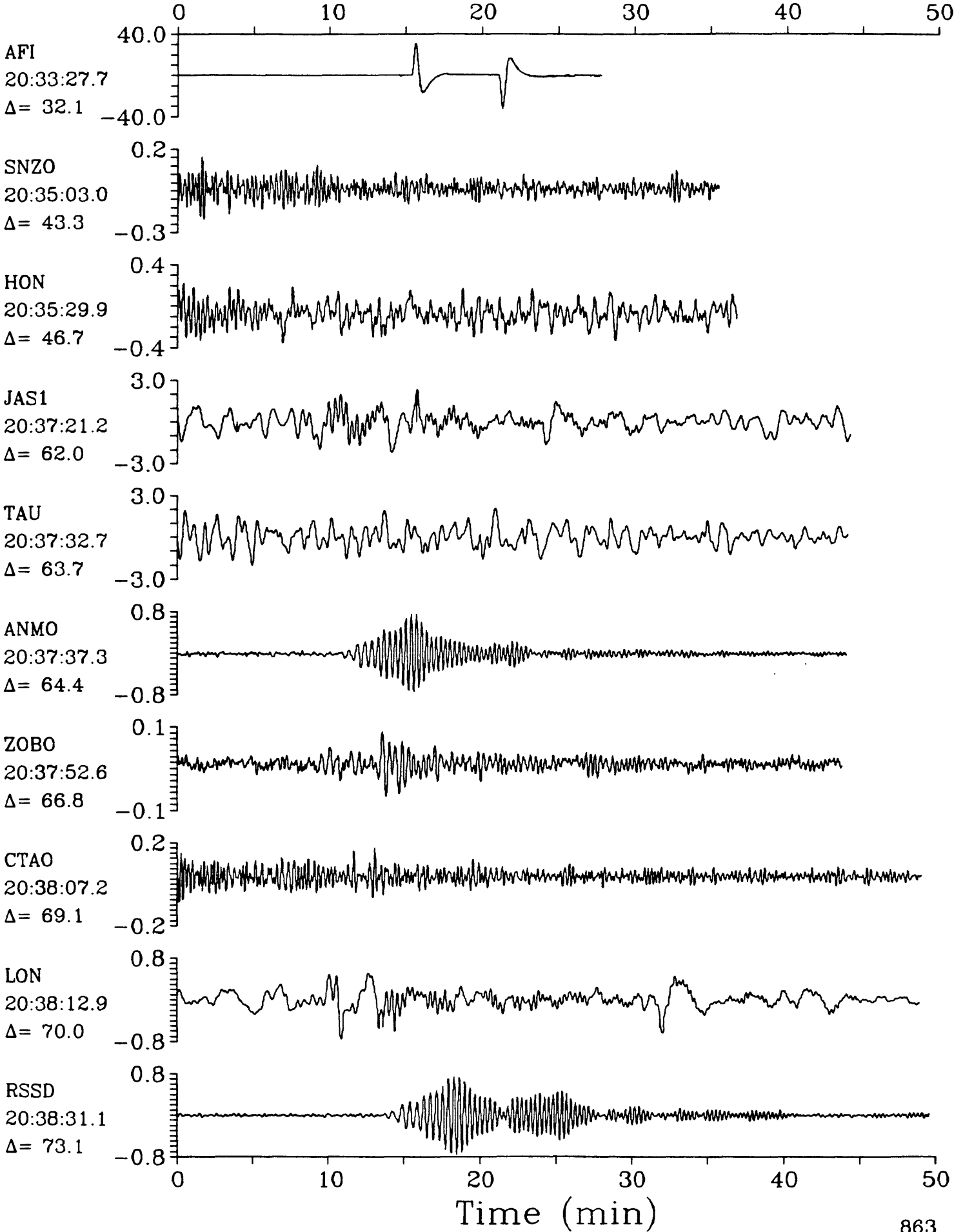
08 May 1985 20:27:58.81

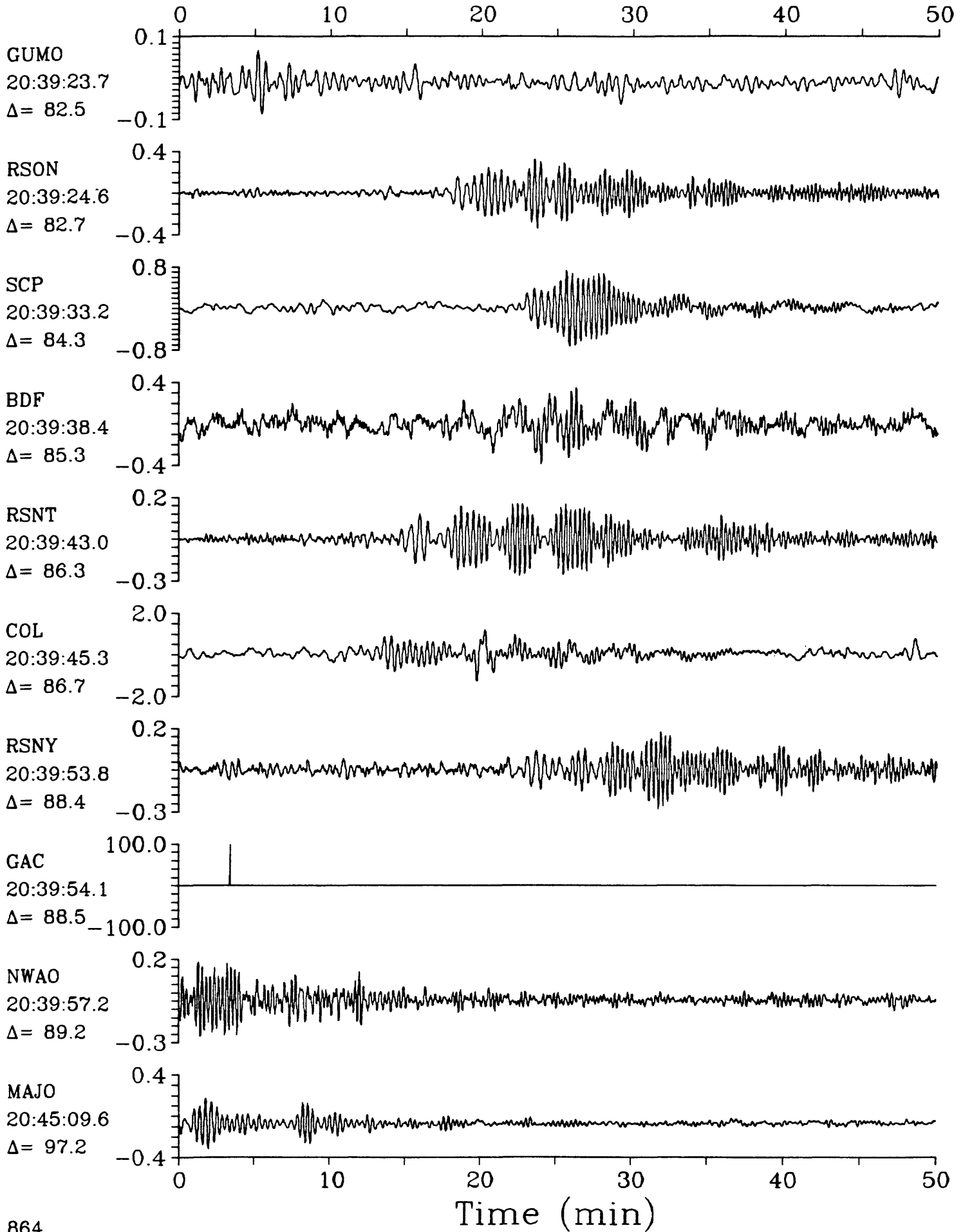
SPZ

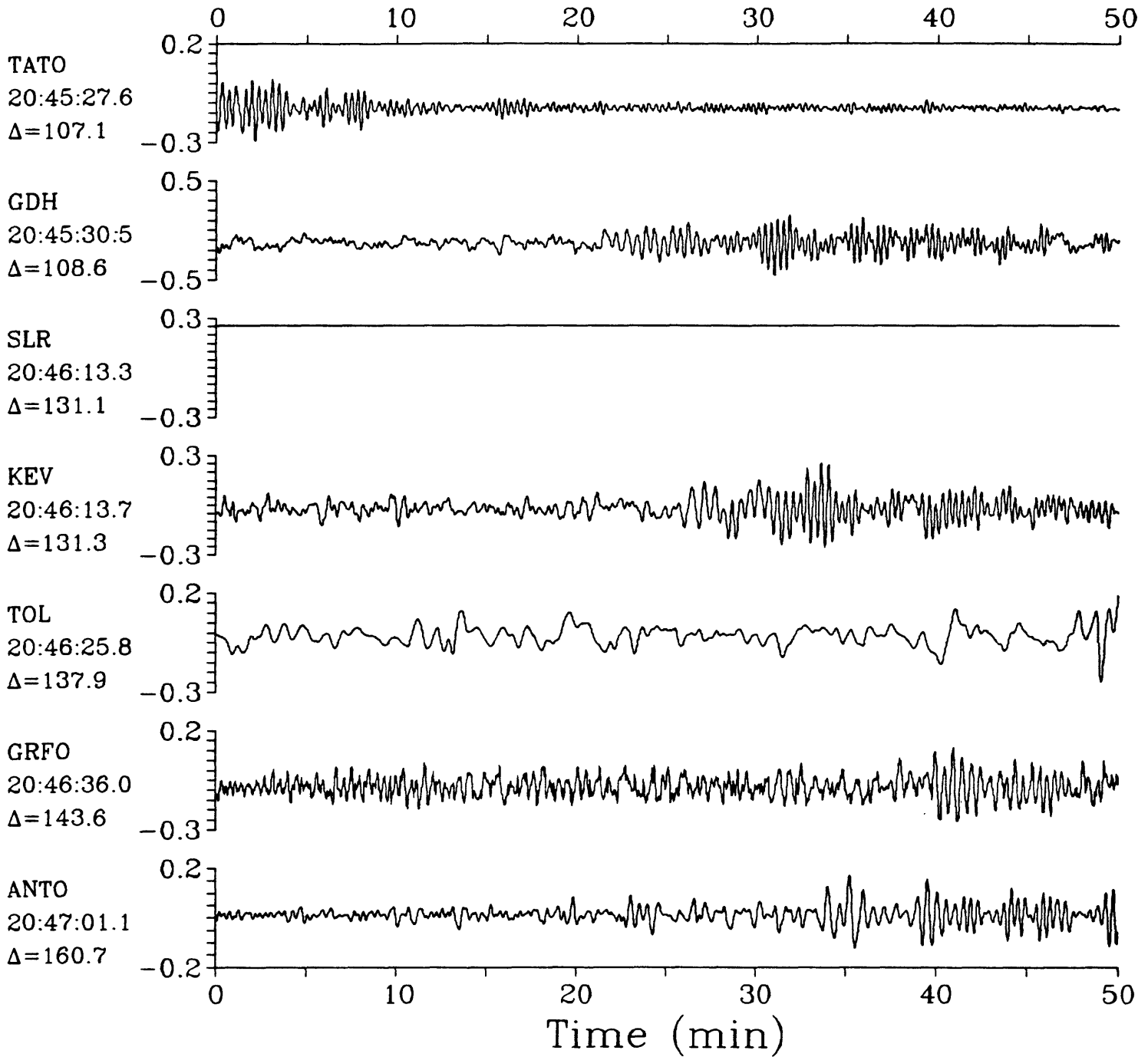
Tuamotu Archipelago Region $h=0.0$ $m_b=5.7$ $M_{sz}=5.4$



Tuamotu Archipelago Region $h=0.0$ $m_b=5.7$ $M_{sz}=5.4$

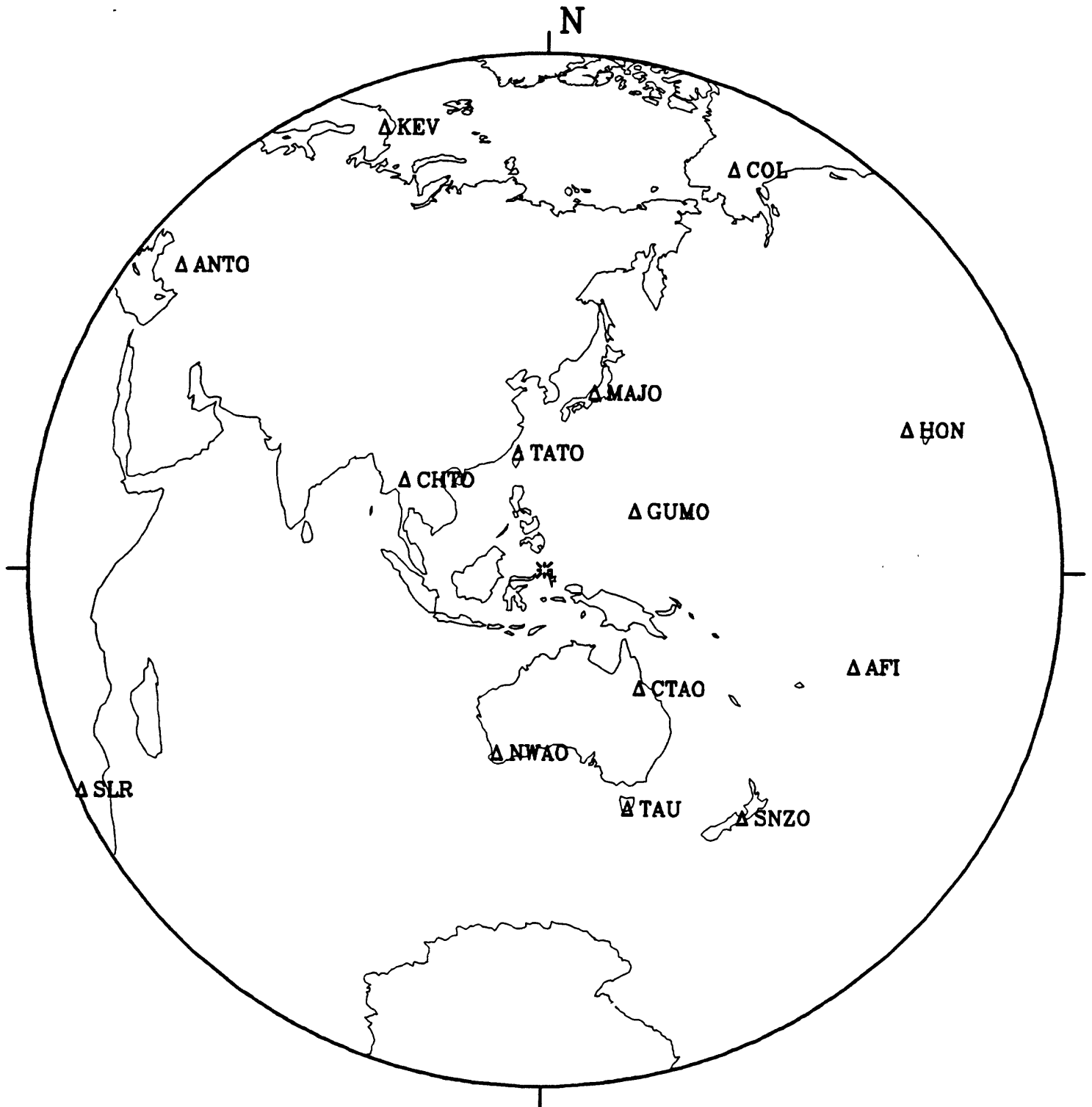


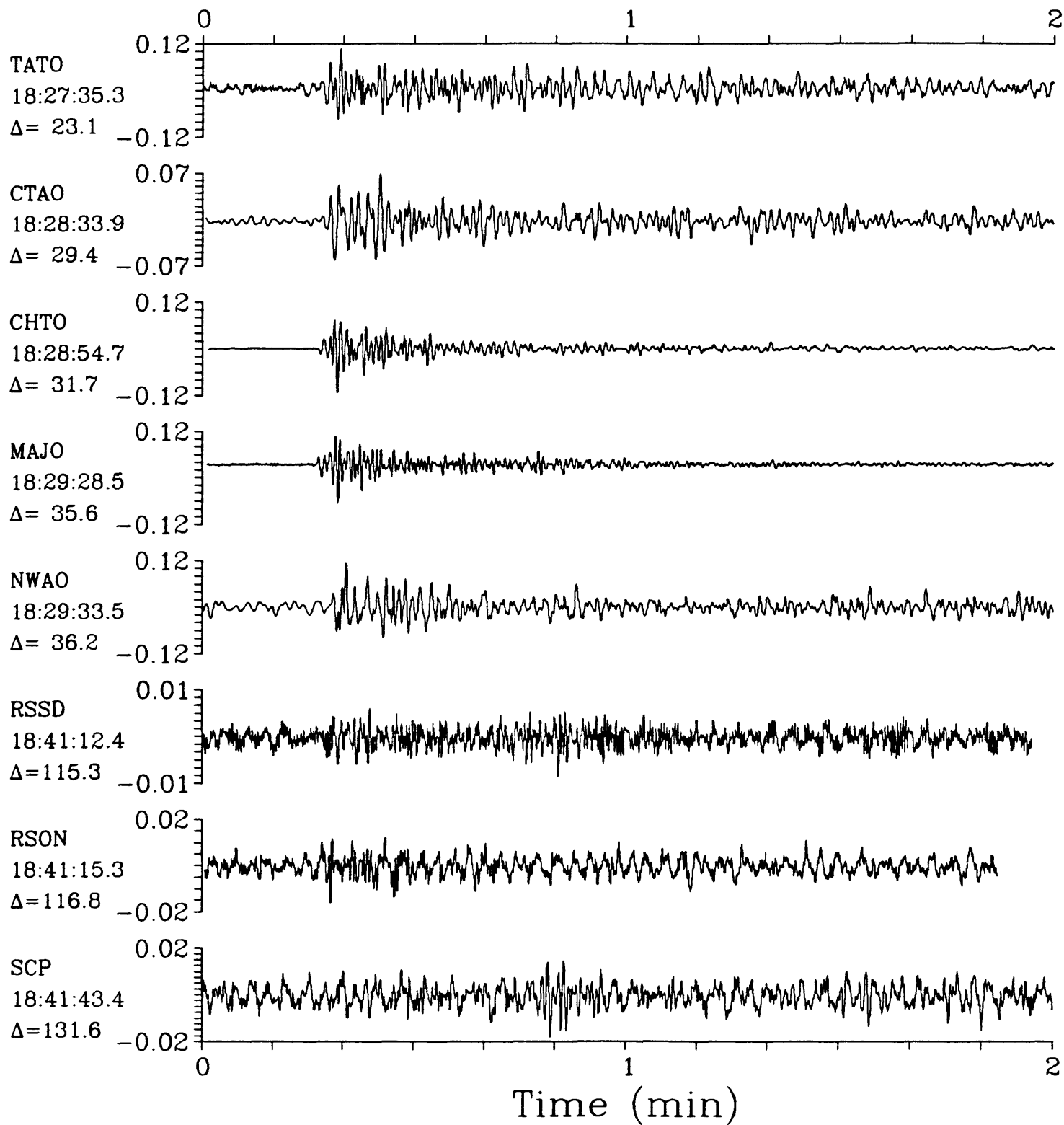
Tuamotu Archipelago Region $h=0.0$ $m_b=5.7$ $M_{SZ}=5.4$ 

Tuamotu Archipelago Region $h=0.0$ $m_b=5.7$ $M_{sz}=5.4$ 

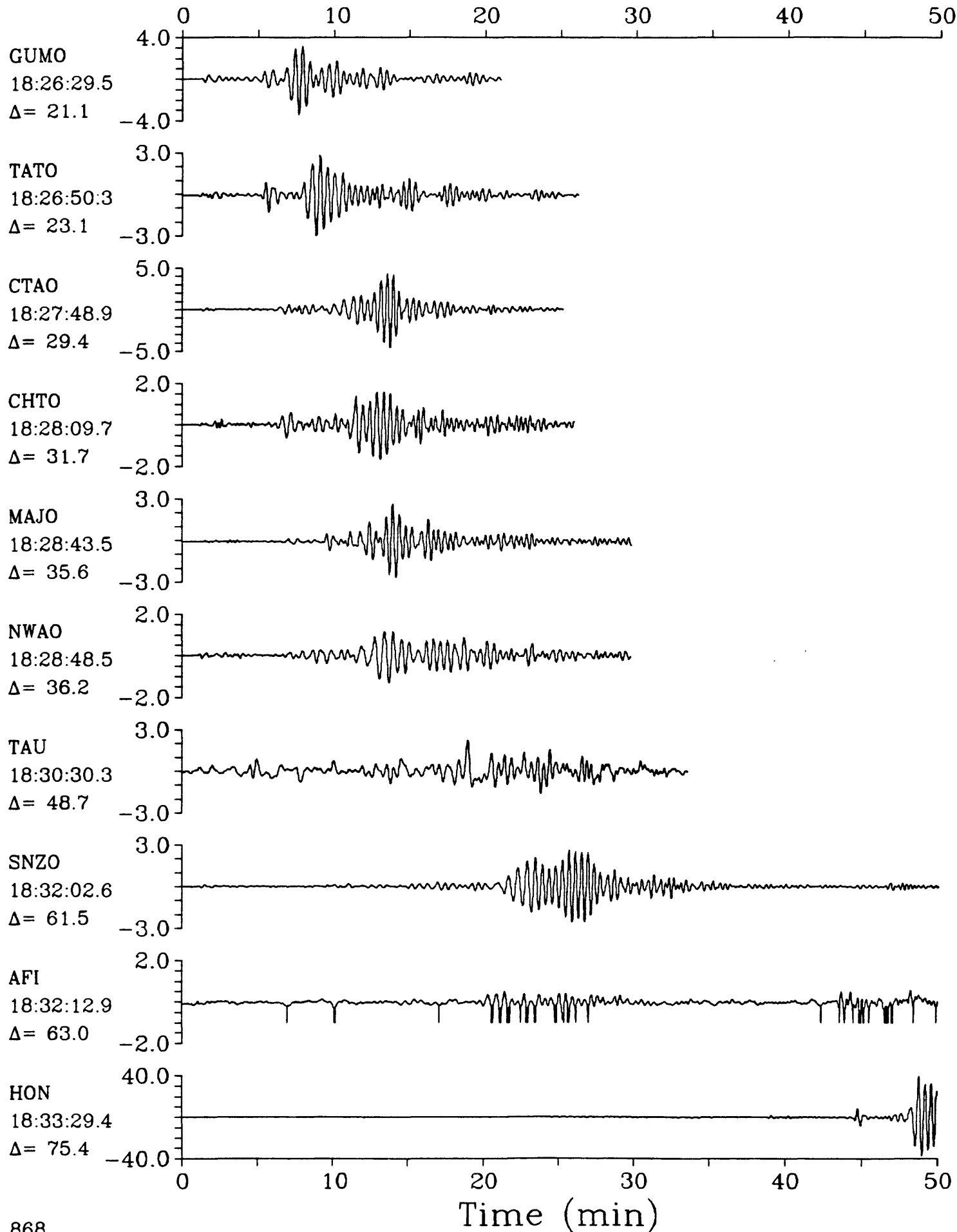
09 May 1985 18:22:48.57

Molucca Passage

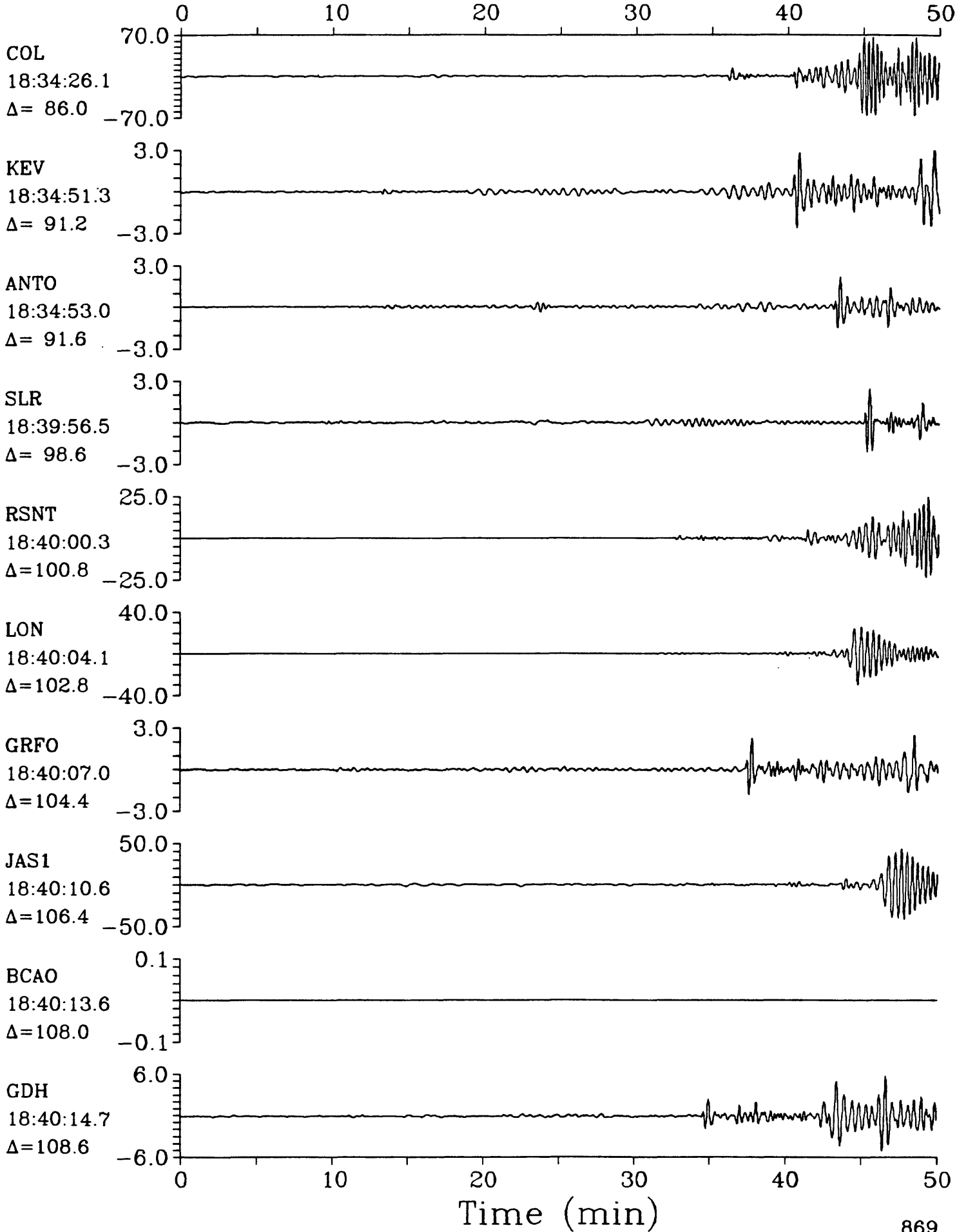


Molucca Passage $h=33.0$ $m_b=5.5$ $M_{SZ}=5.4$ 

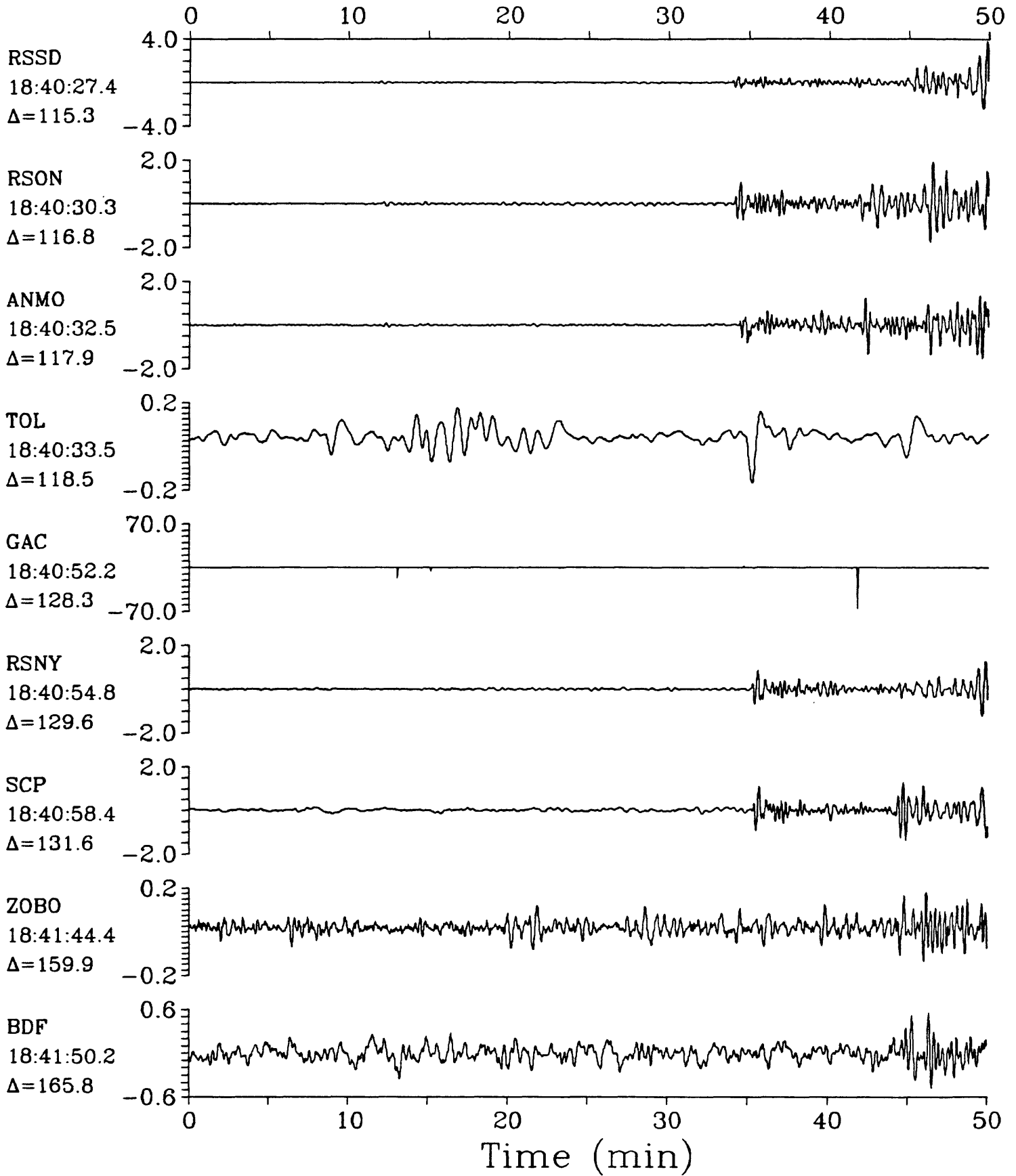
Molucca Passage $h=33.0$ $m_b=5.5$ $M_{sz}=5.4$



Molucca Passage $h=33.0$ $m_b=5.5$ $M_{sz}=5.4$

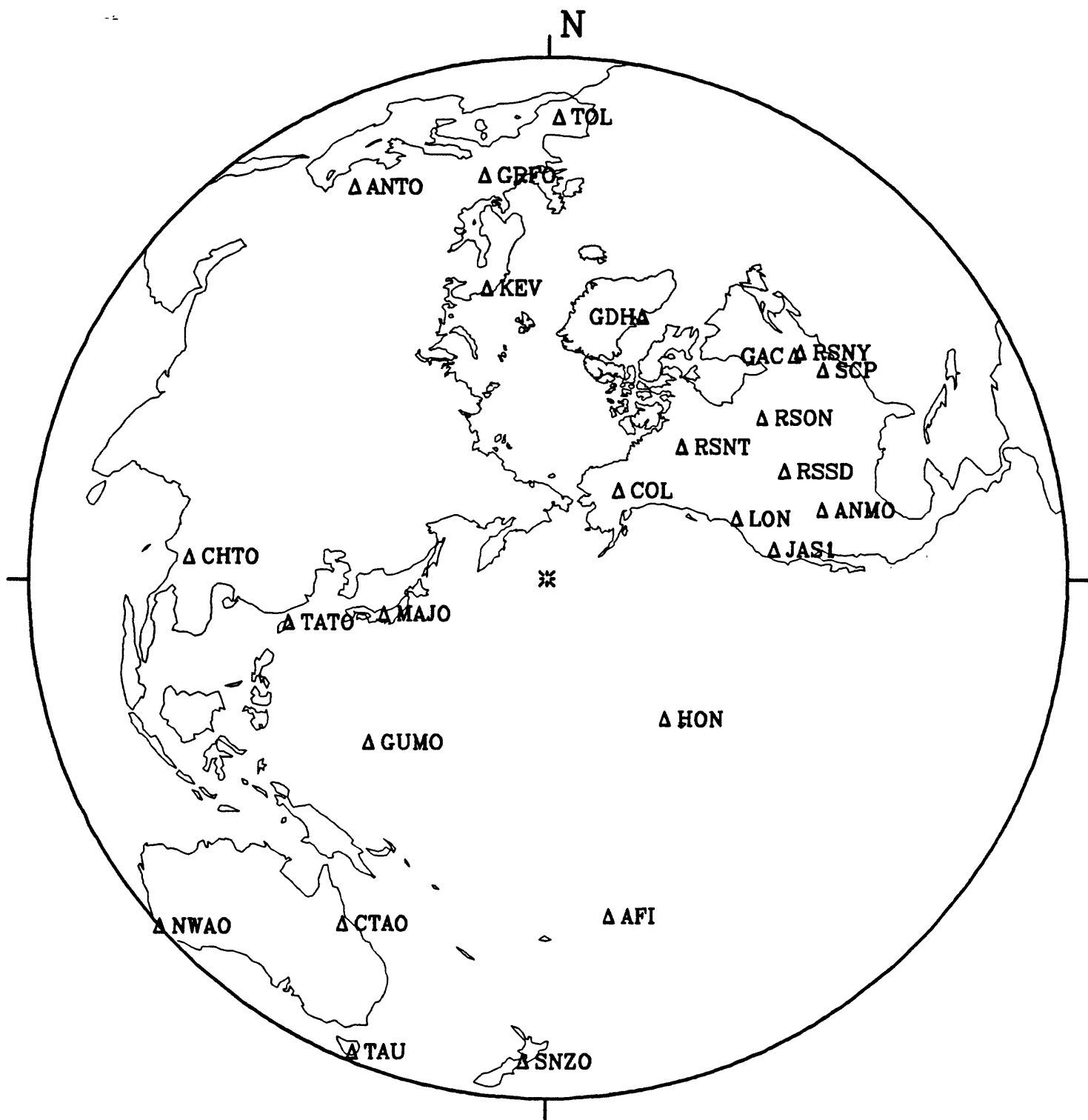


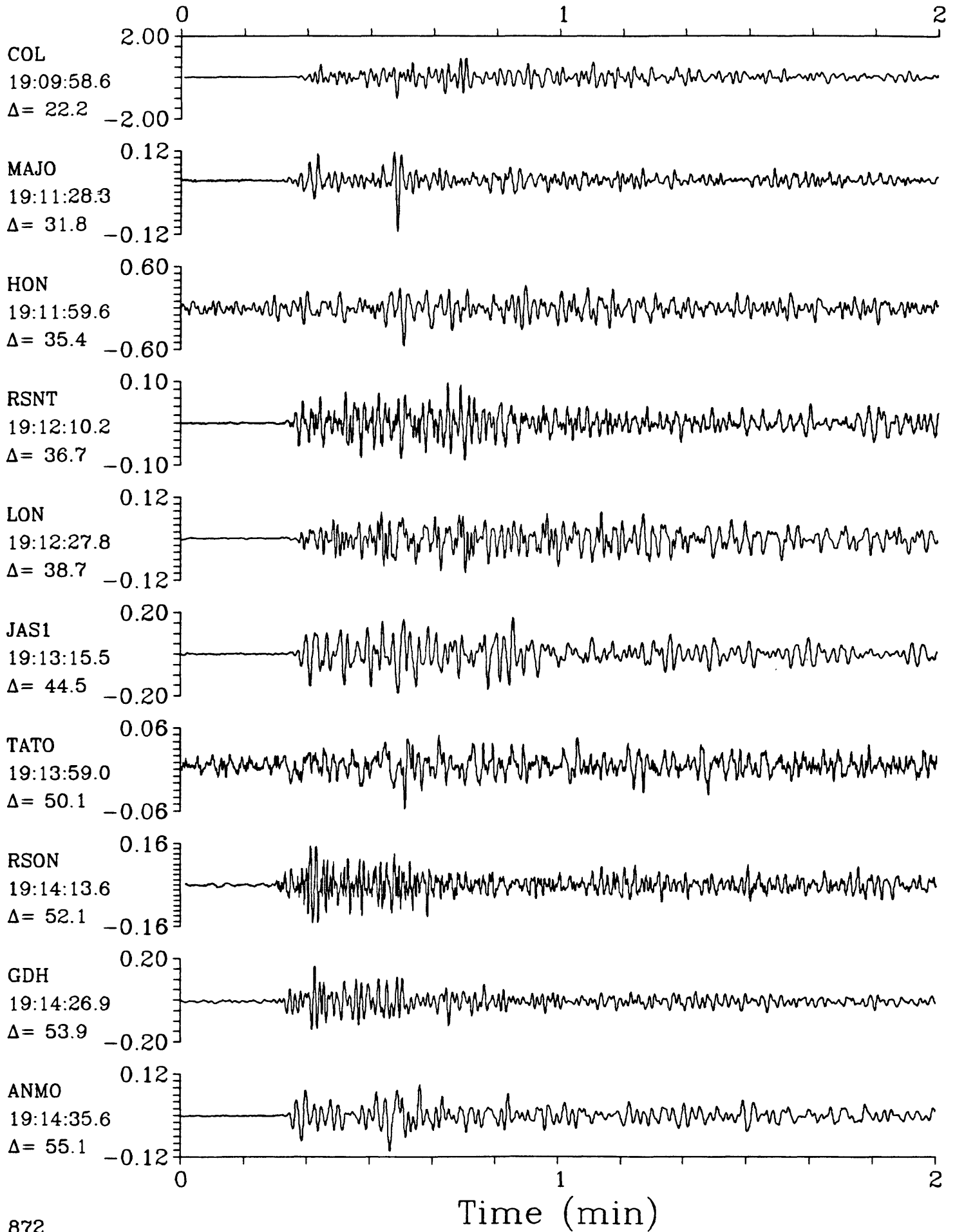
Molucca Passage $h=33.0$ $m_b=5.5$ $M_{sz}=5.4$

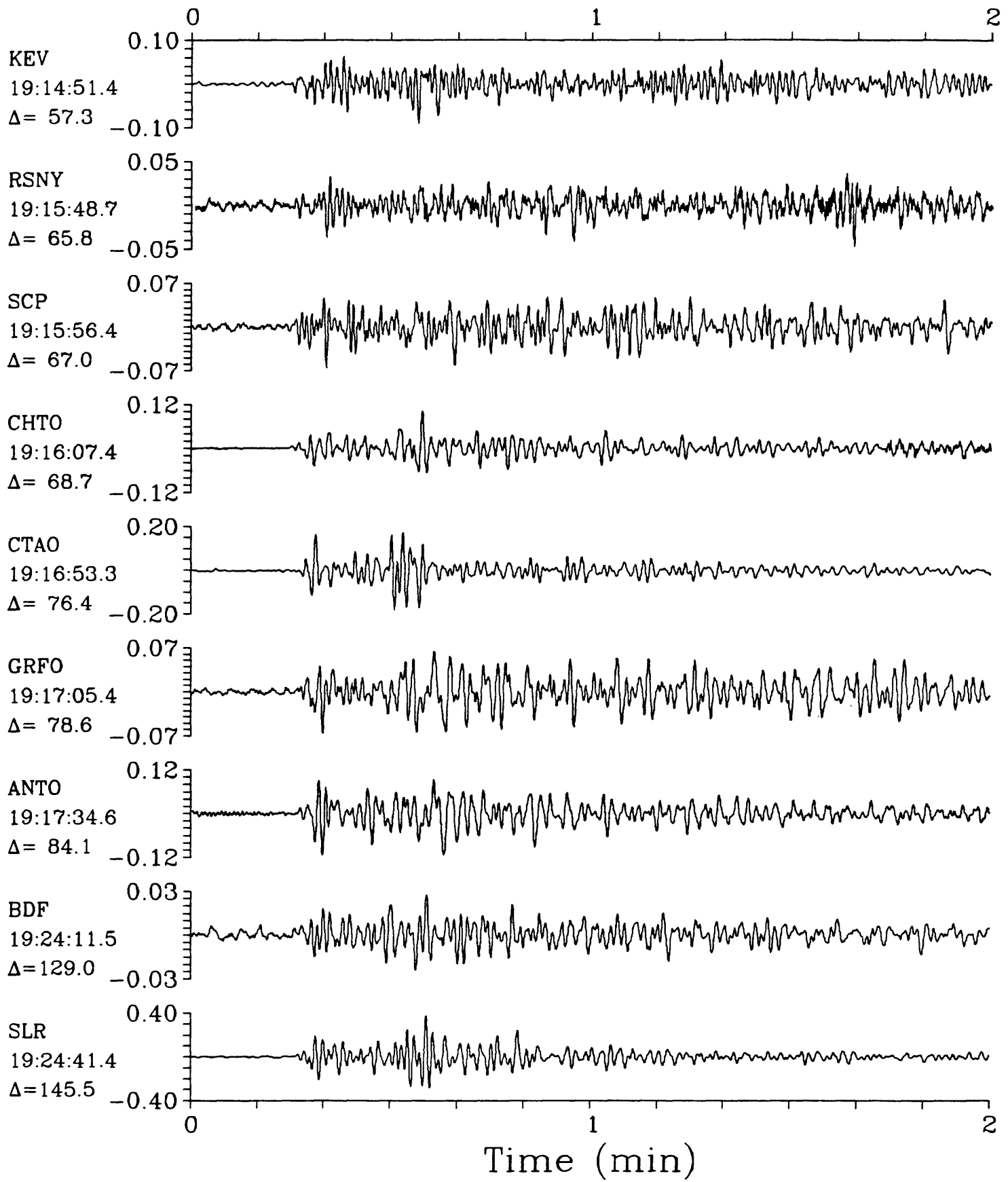


09 May 1985 19:05:21.45

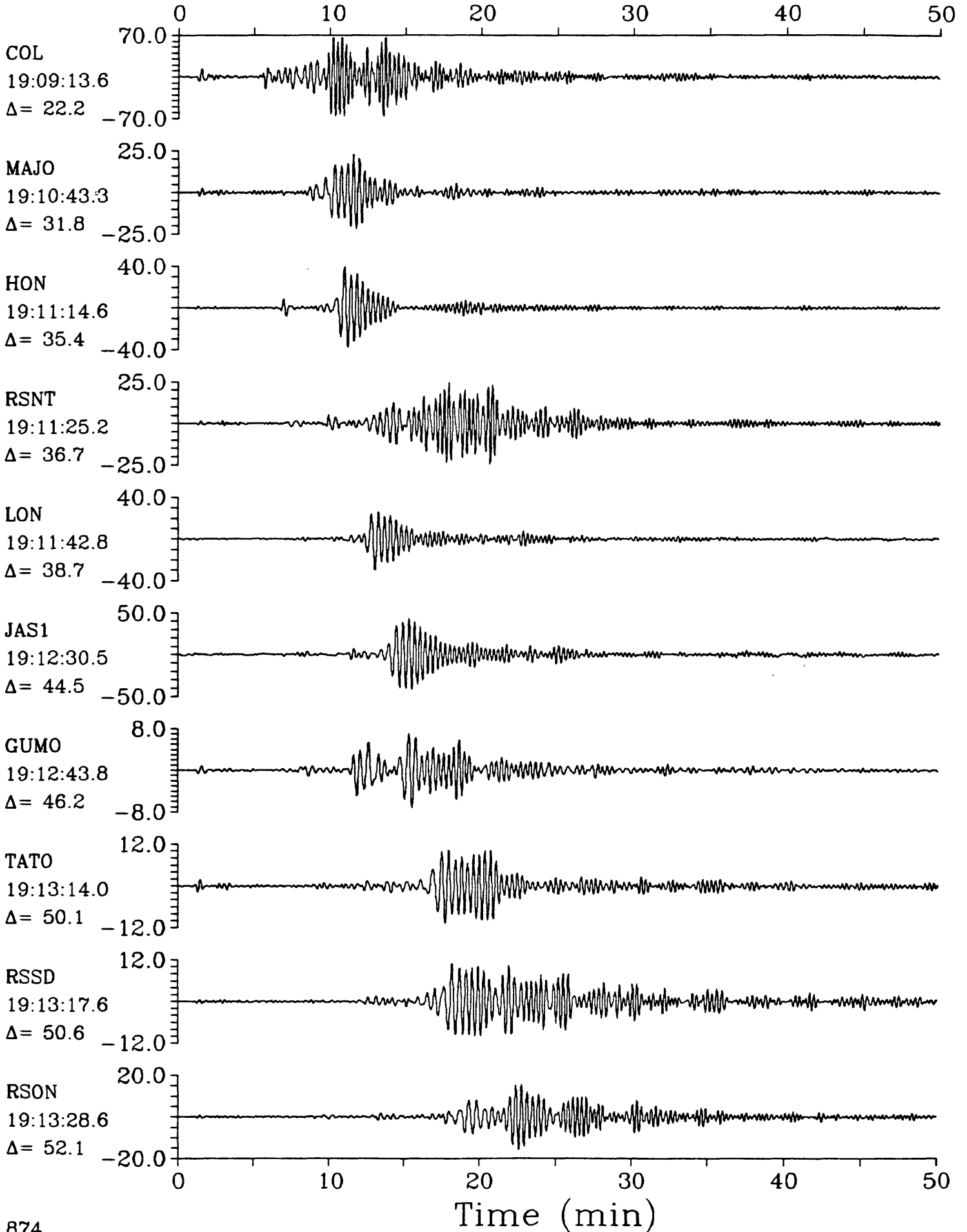
Rat Islands, Aleutian Islands

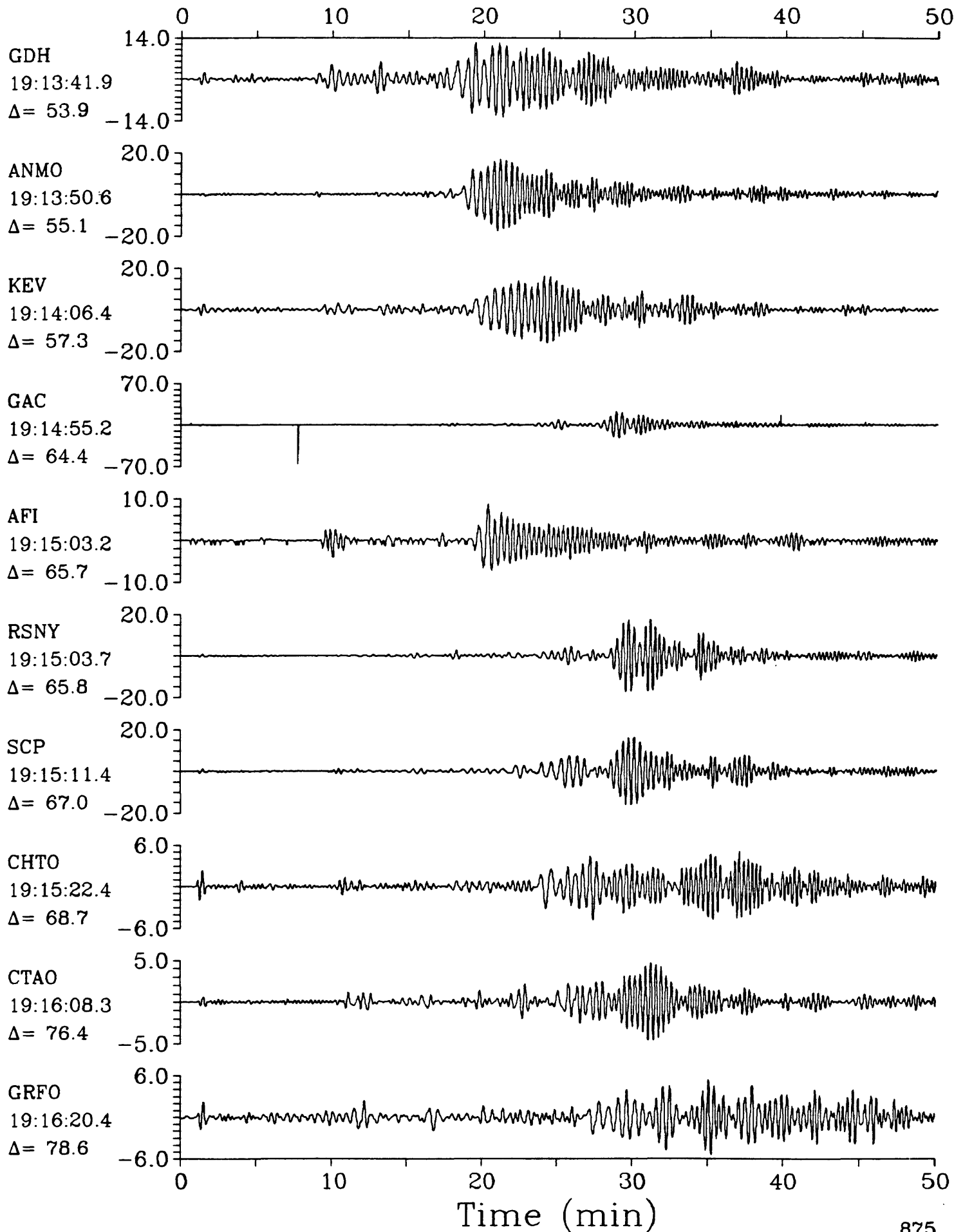


Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.6$ $M_{SZ}=6.0$ 

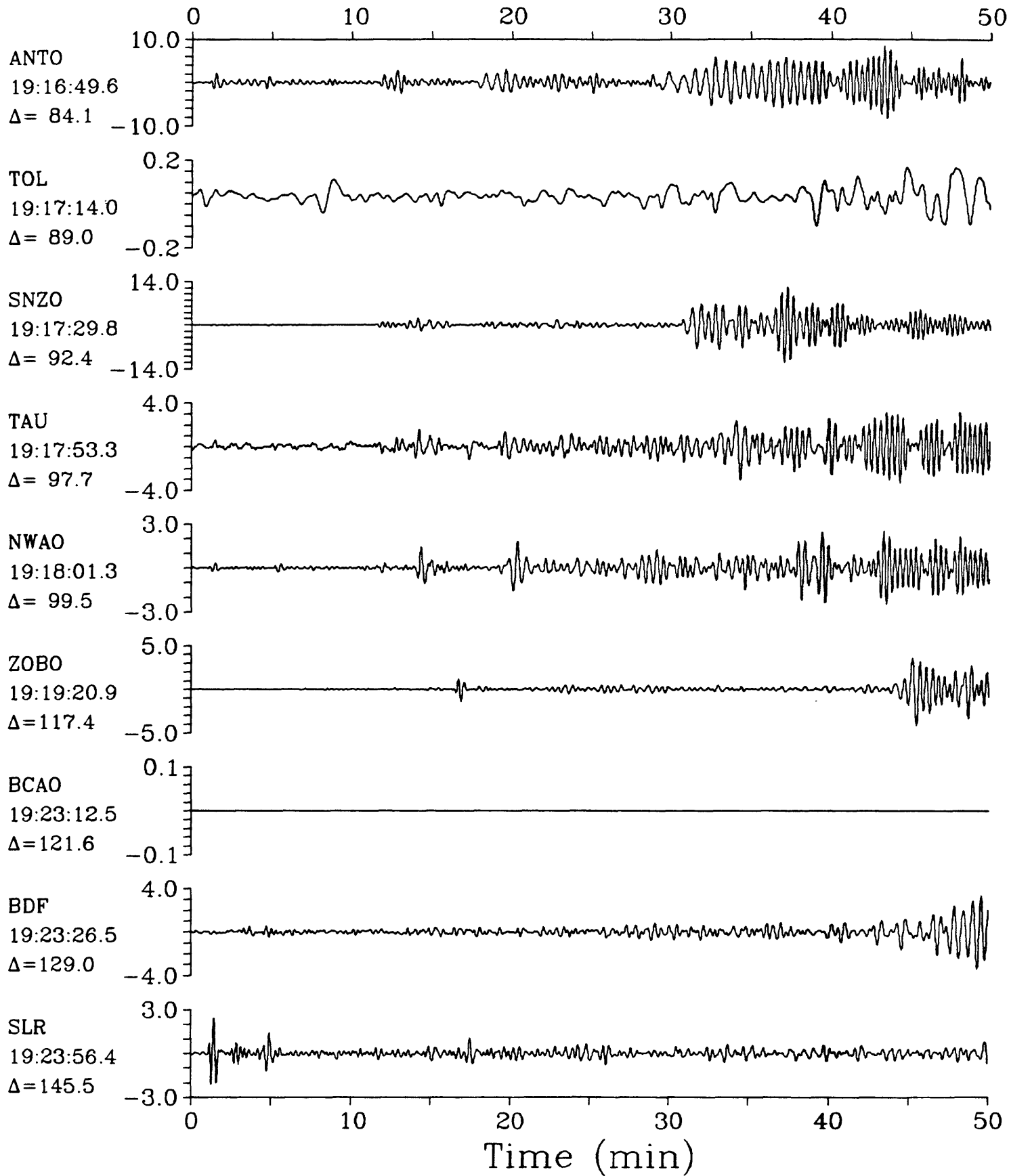
Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.6$ $M_{SZ}=6.0$ 

Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.6$ $M_{sz}=6.0$



Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.6$ $M_{sz}=6.0$ 

Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.6$ $M_{sz}=6.0$

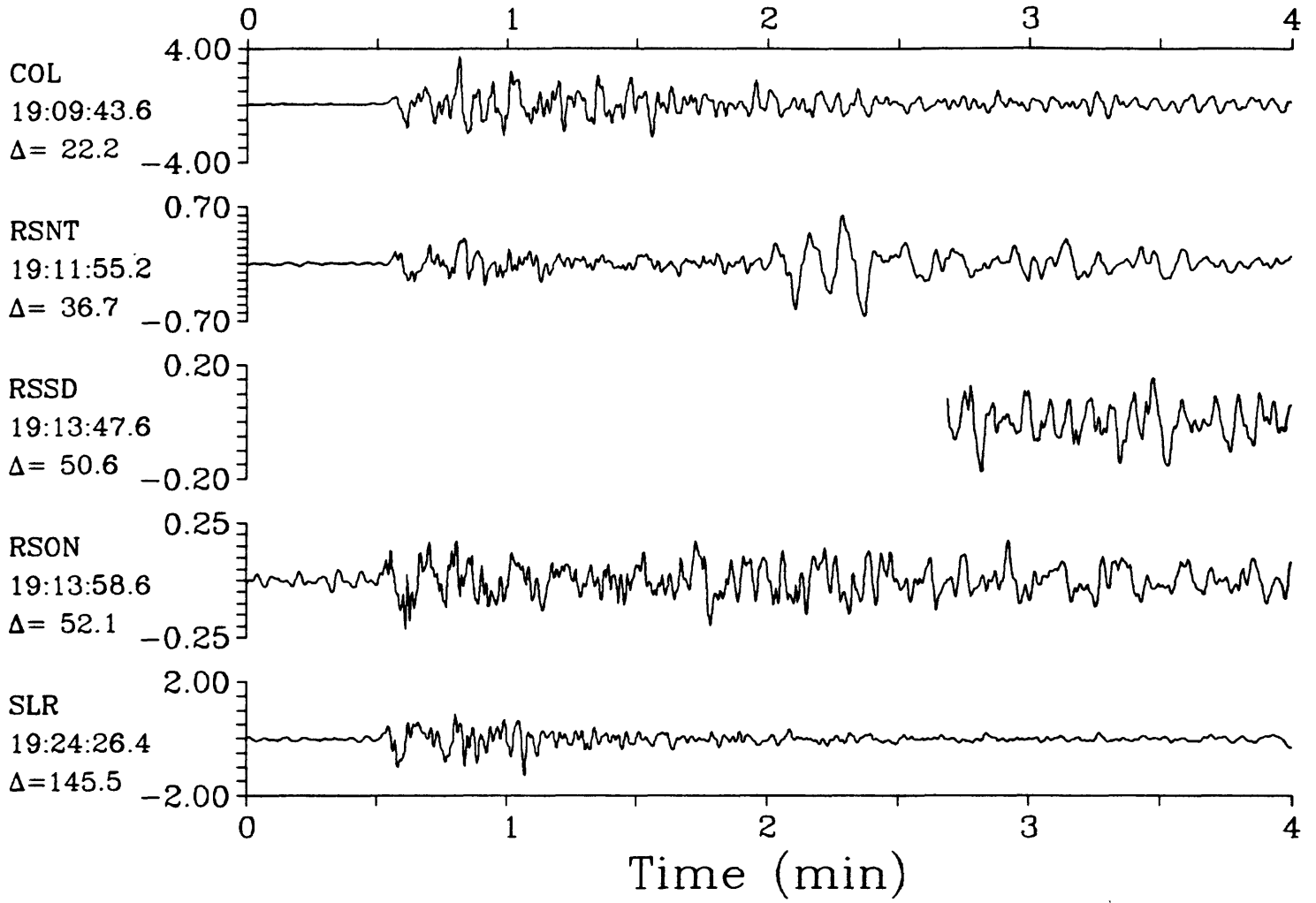


IPZ

09 May 1985 19:05:21.45

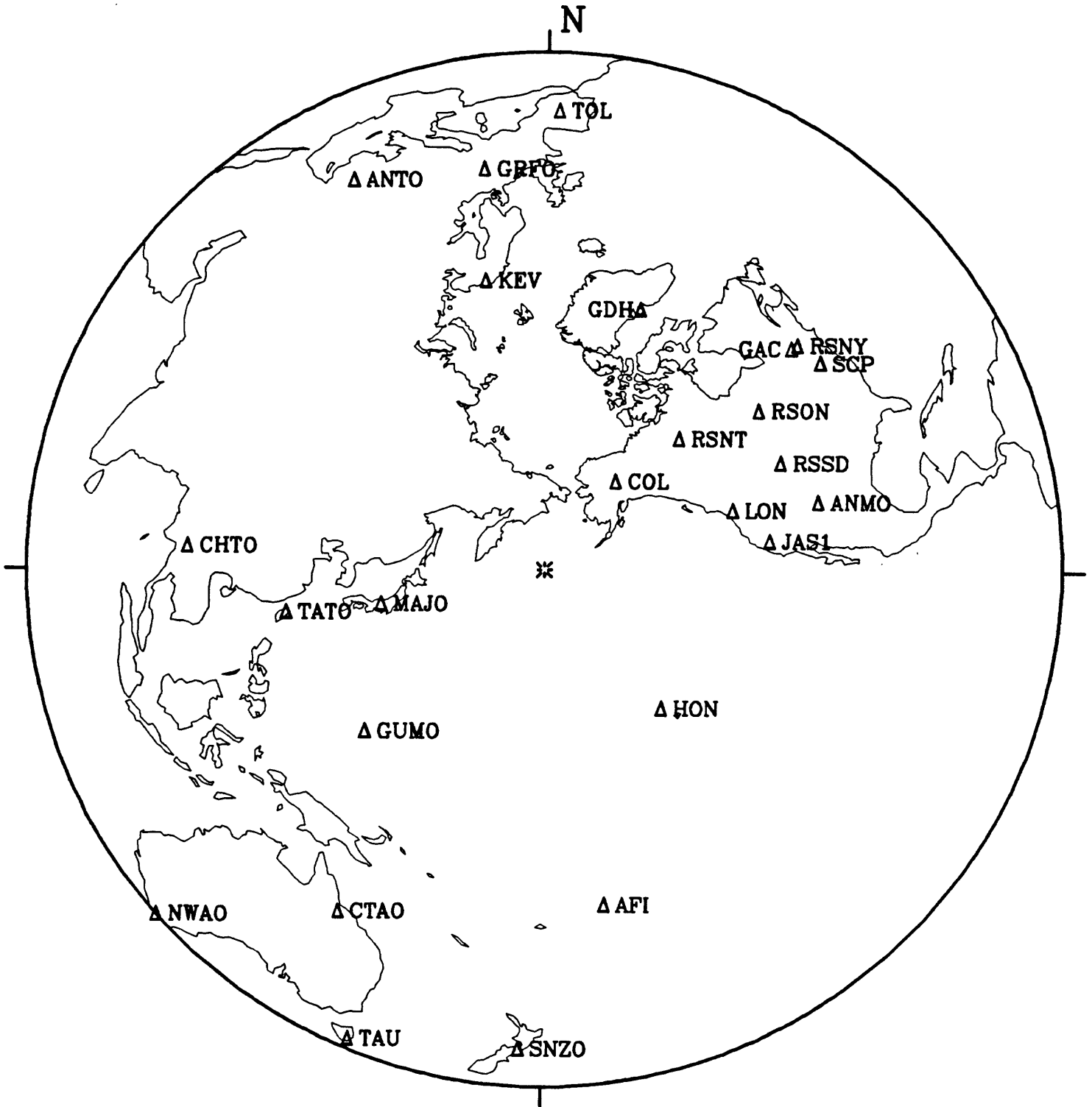
IPZ

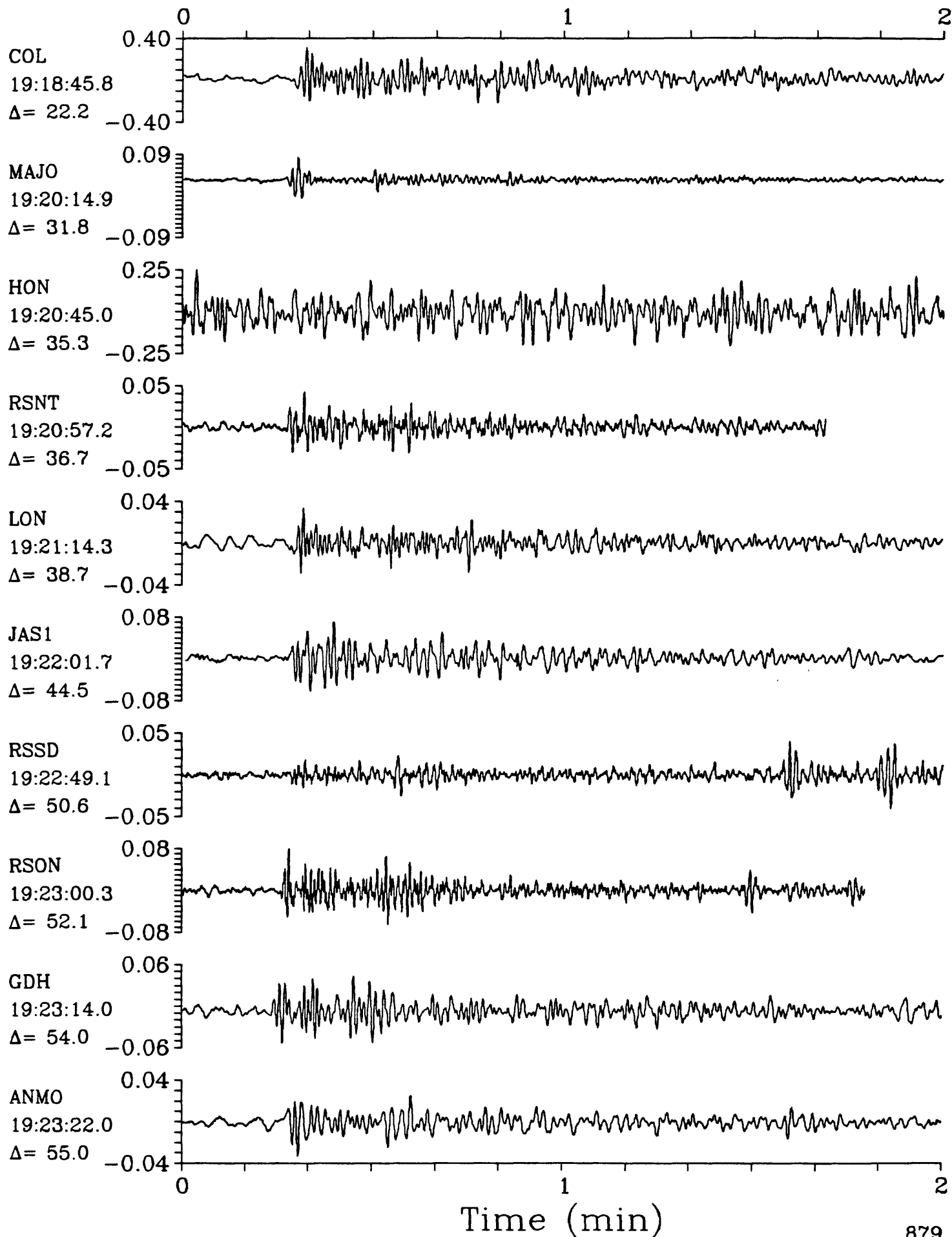
Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.6$ $M_{sz}=6.0$

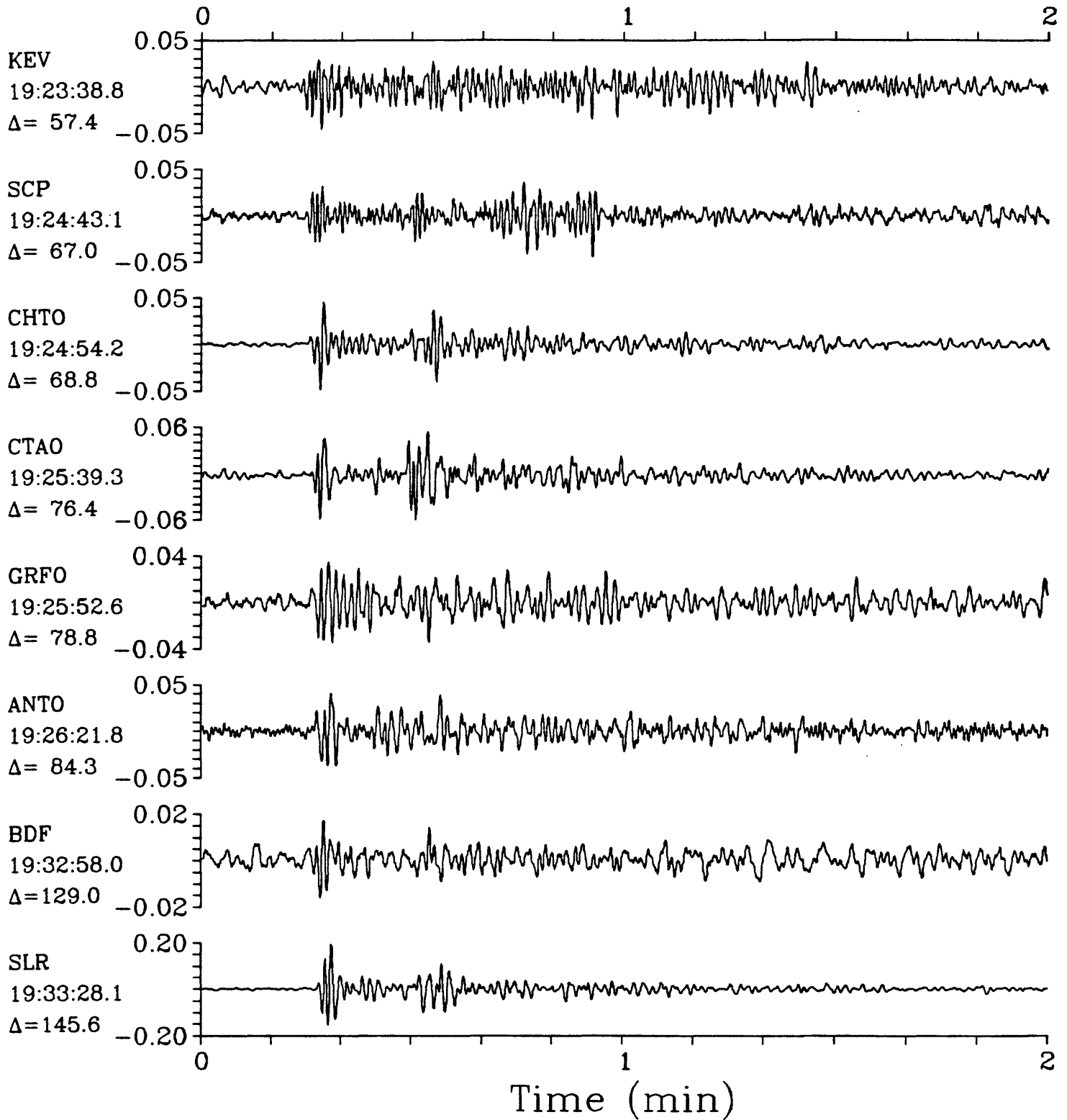


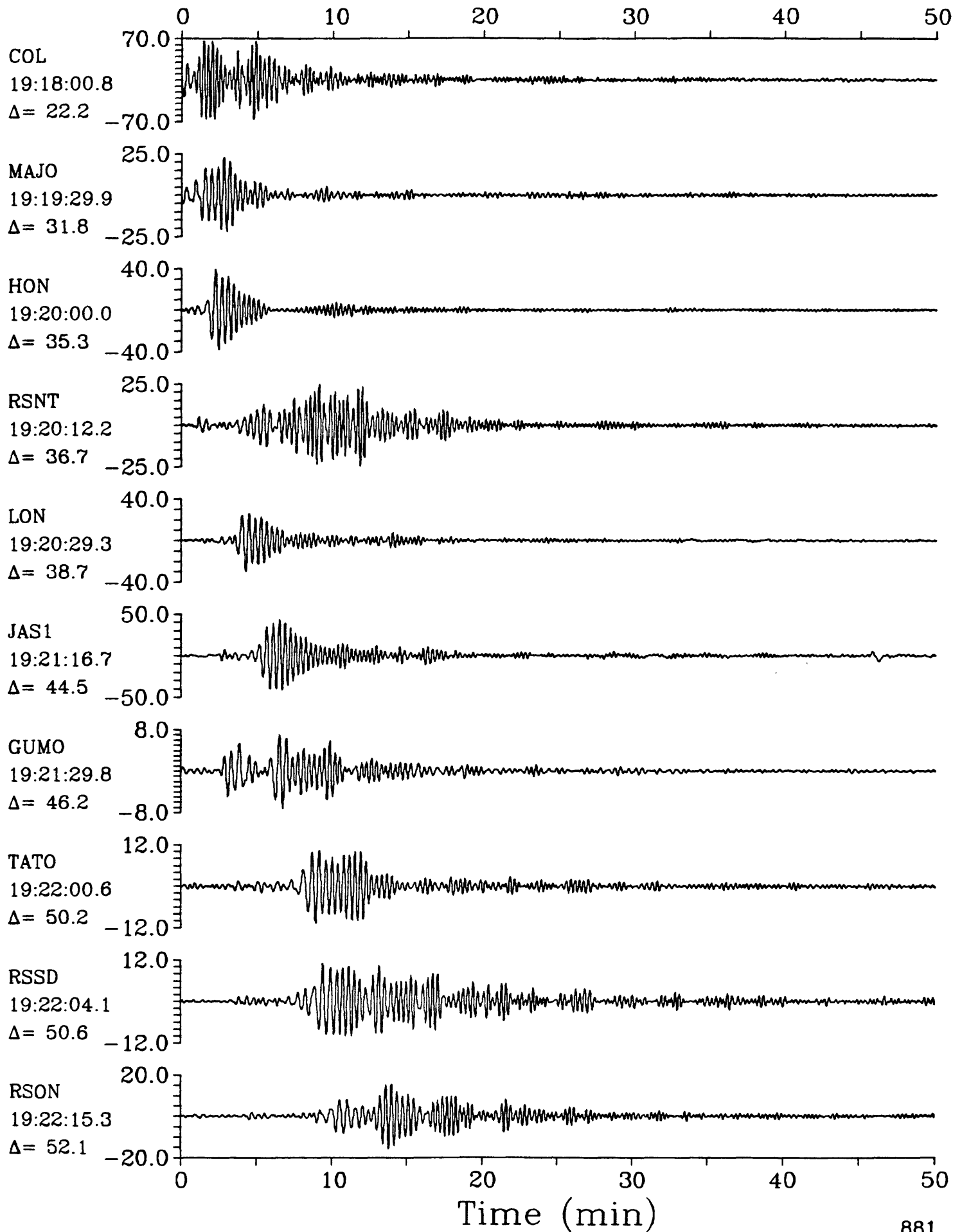
09 May 1985 19:14:07.91

Rat Islands, Aleutian Islands

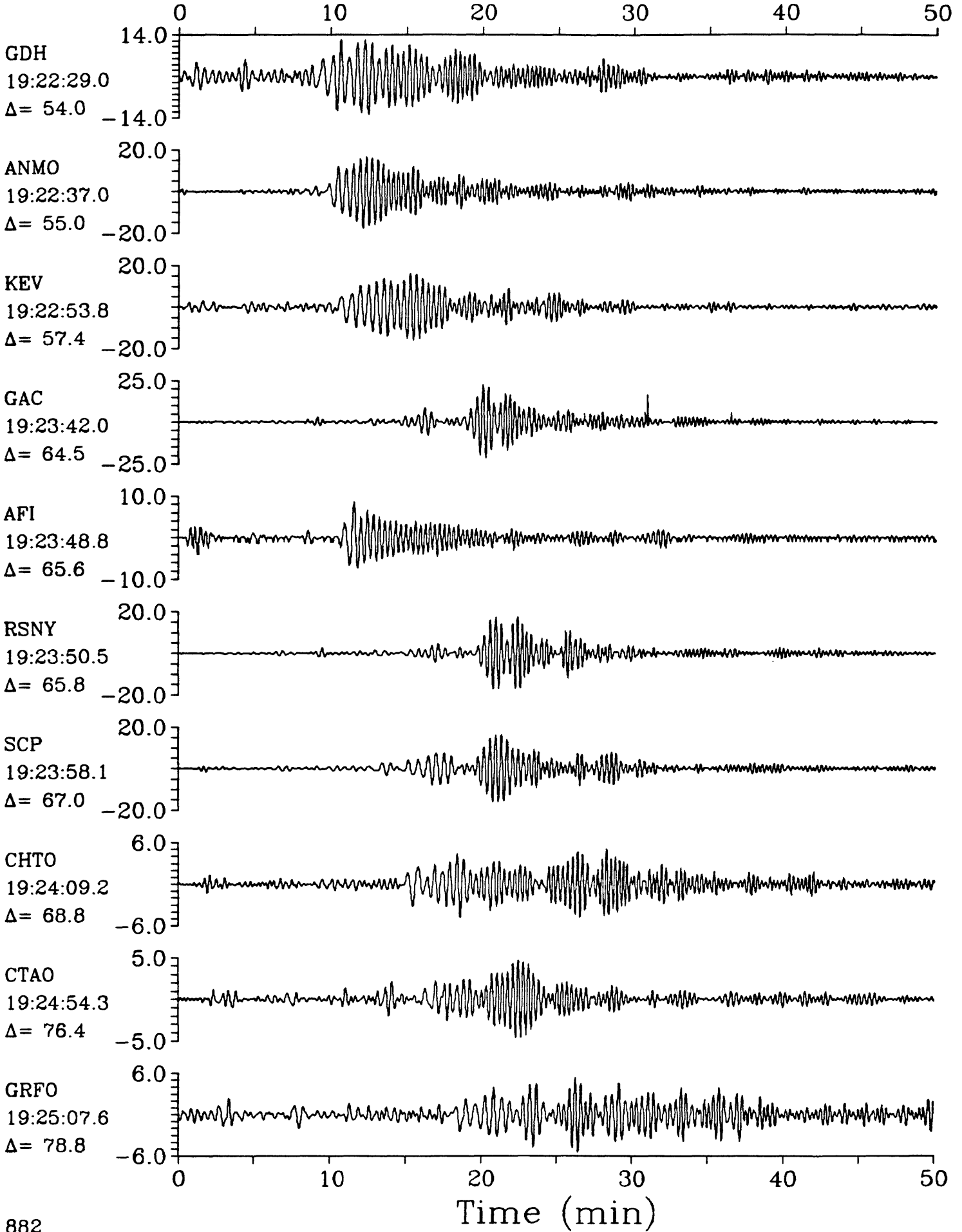


Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.4$ $M_{SZ}=6.0$ 

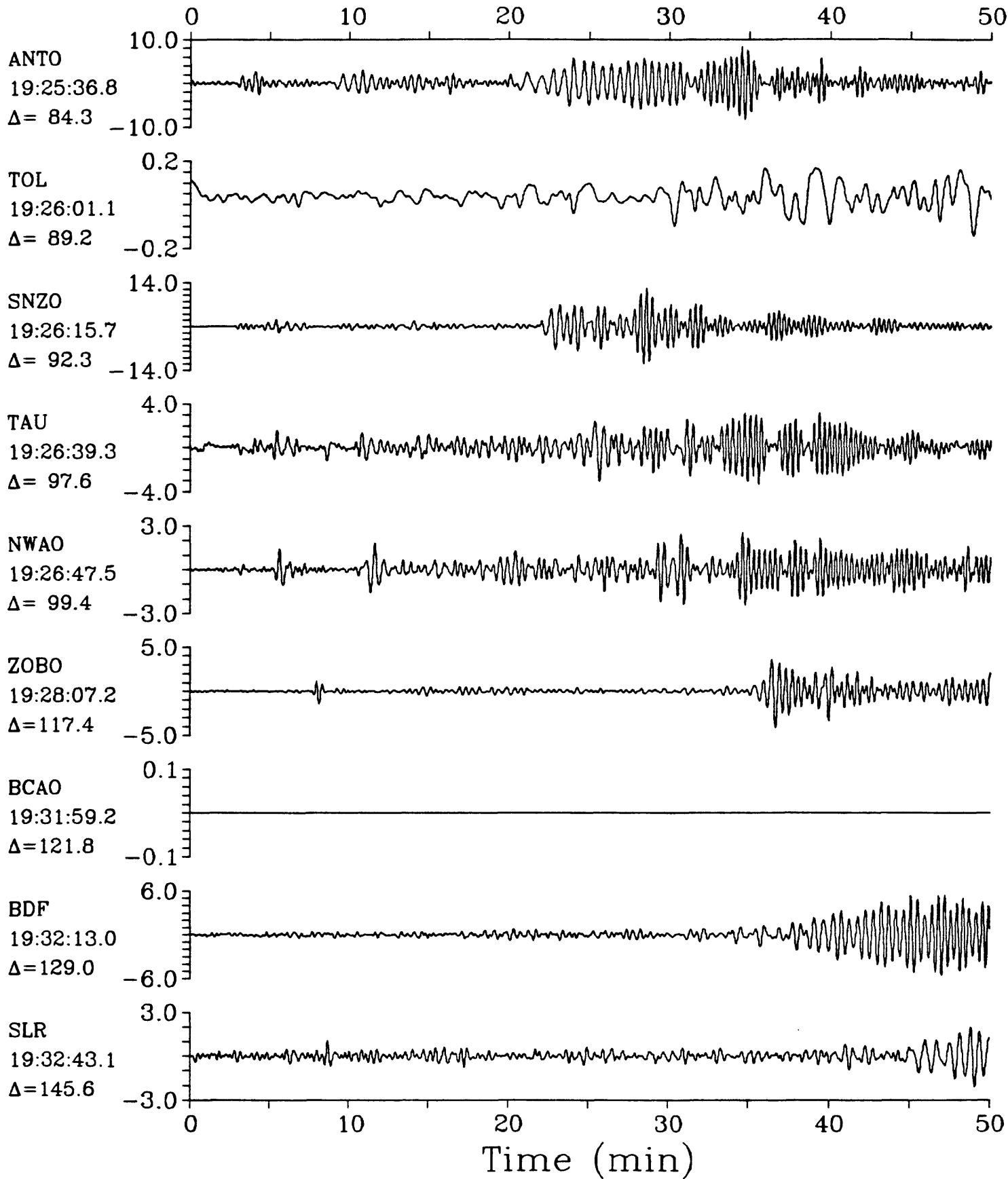
Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.0$ 

Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.0$ 

Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.0$



Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.4$ $M_{SZ}=6.0$

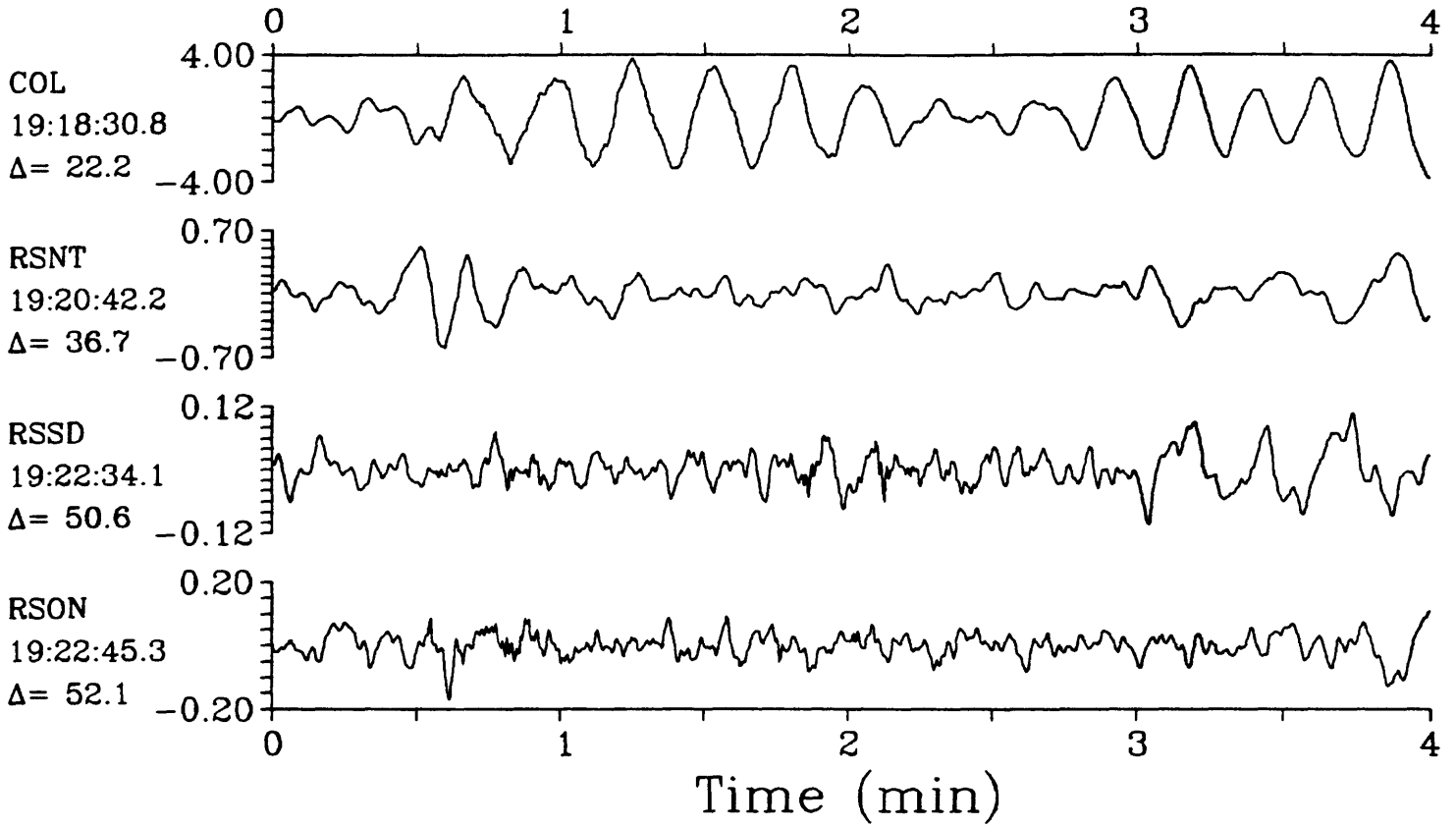


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09 May 1985 19:14:07.91

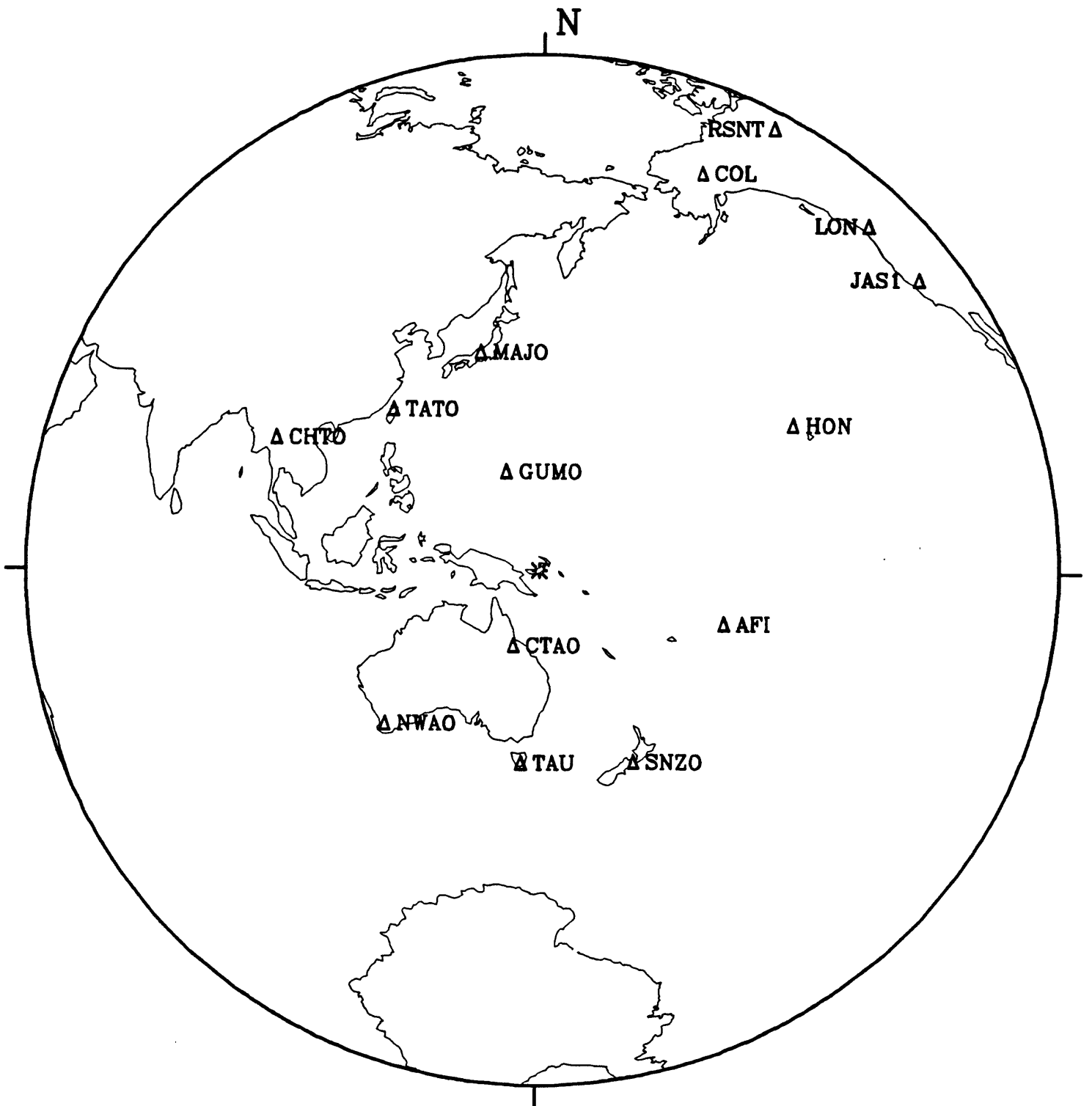
IPZ

Rat Islands, Aleutian Islands $h=33.0$ $m_b=5.4$ $M_{sz}=6.0$

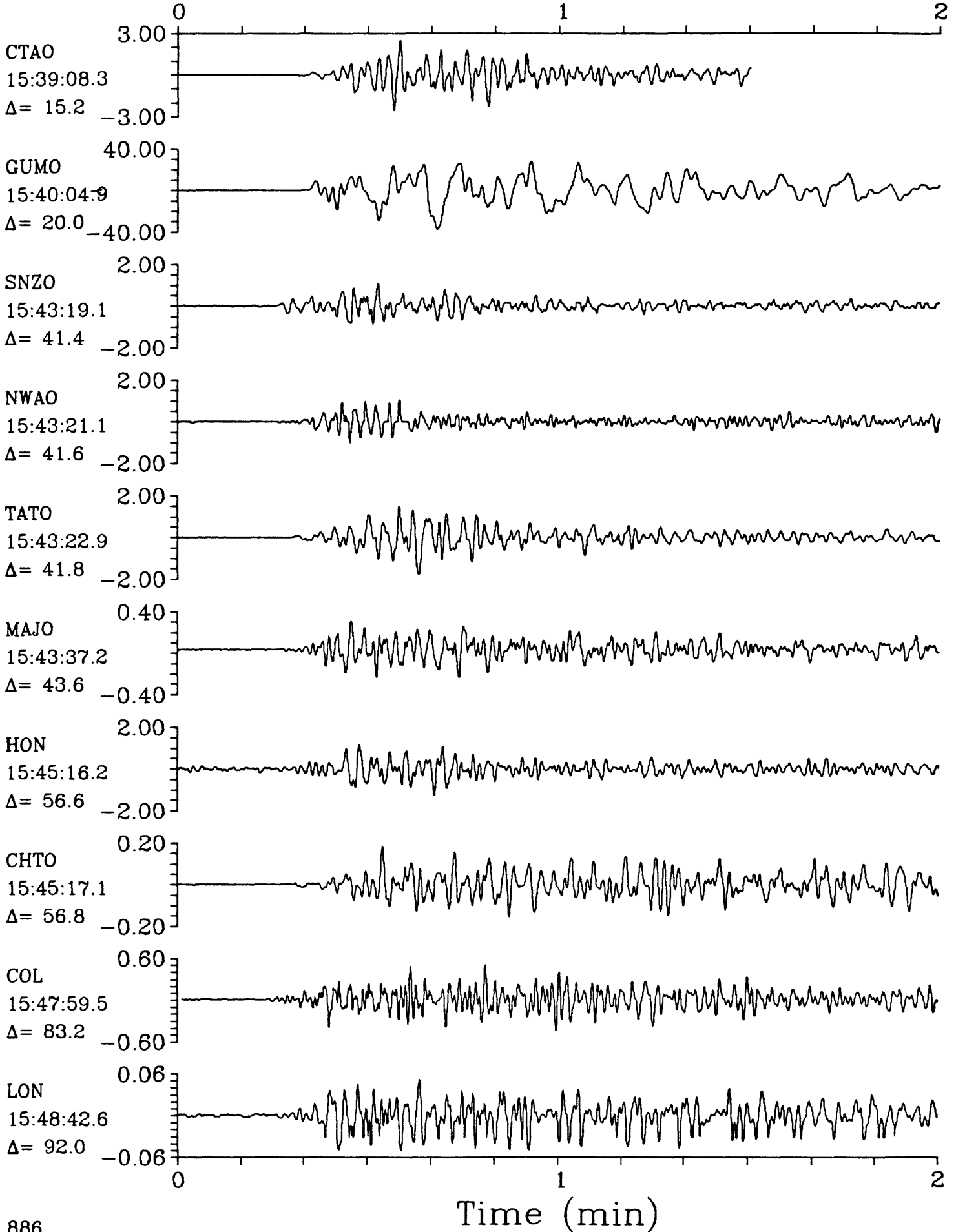


10 May 1985 15:35:50.48

New Britain Region

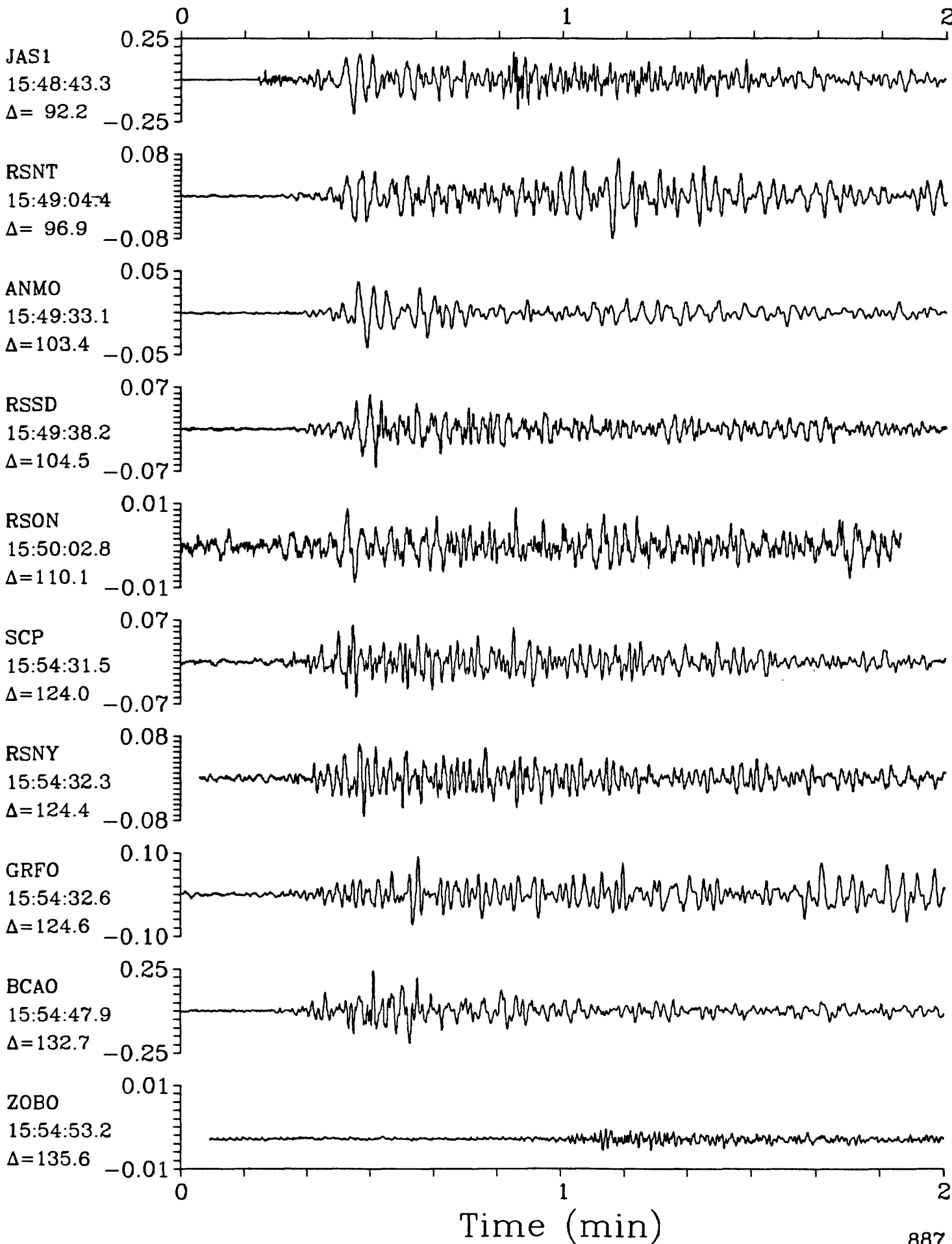


New Britain Region $h=30.3$ $m_b=6.3$ $M_{sz}=7.1$



Time (min)

New Britain Region $h=30.3$ $m_b=6.3$ $M_{sz}=7.1$



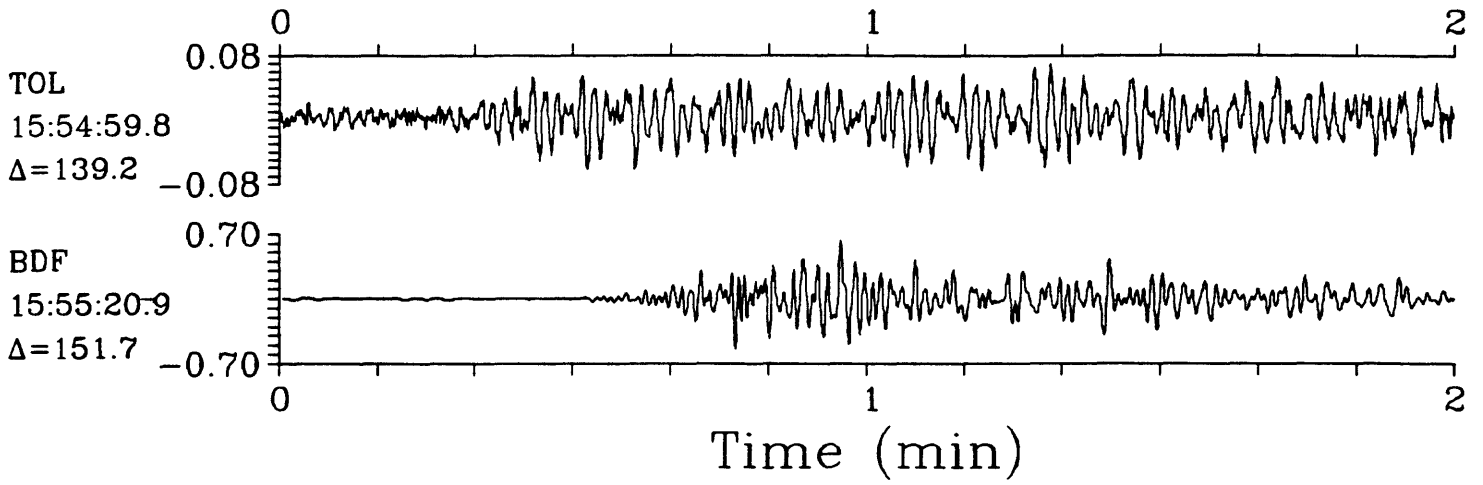
Time (min)

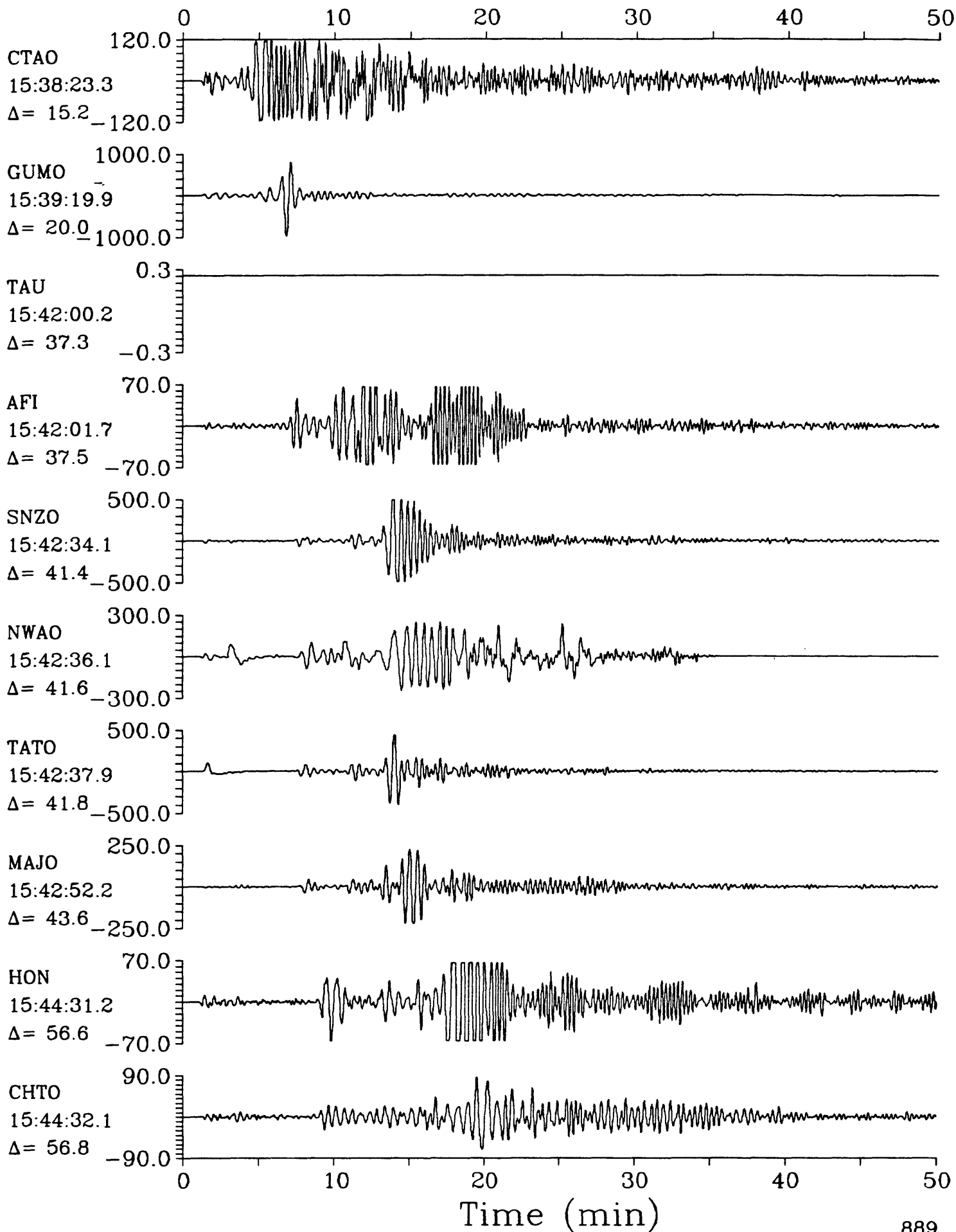
SPZ

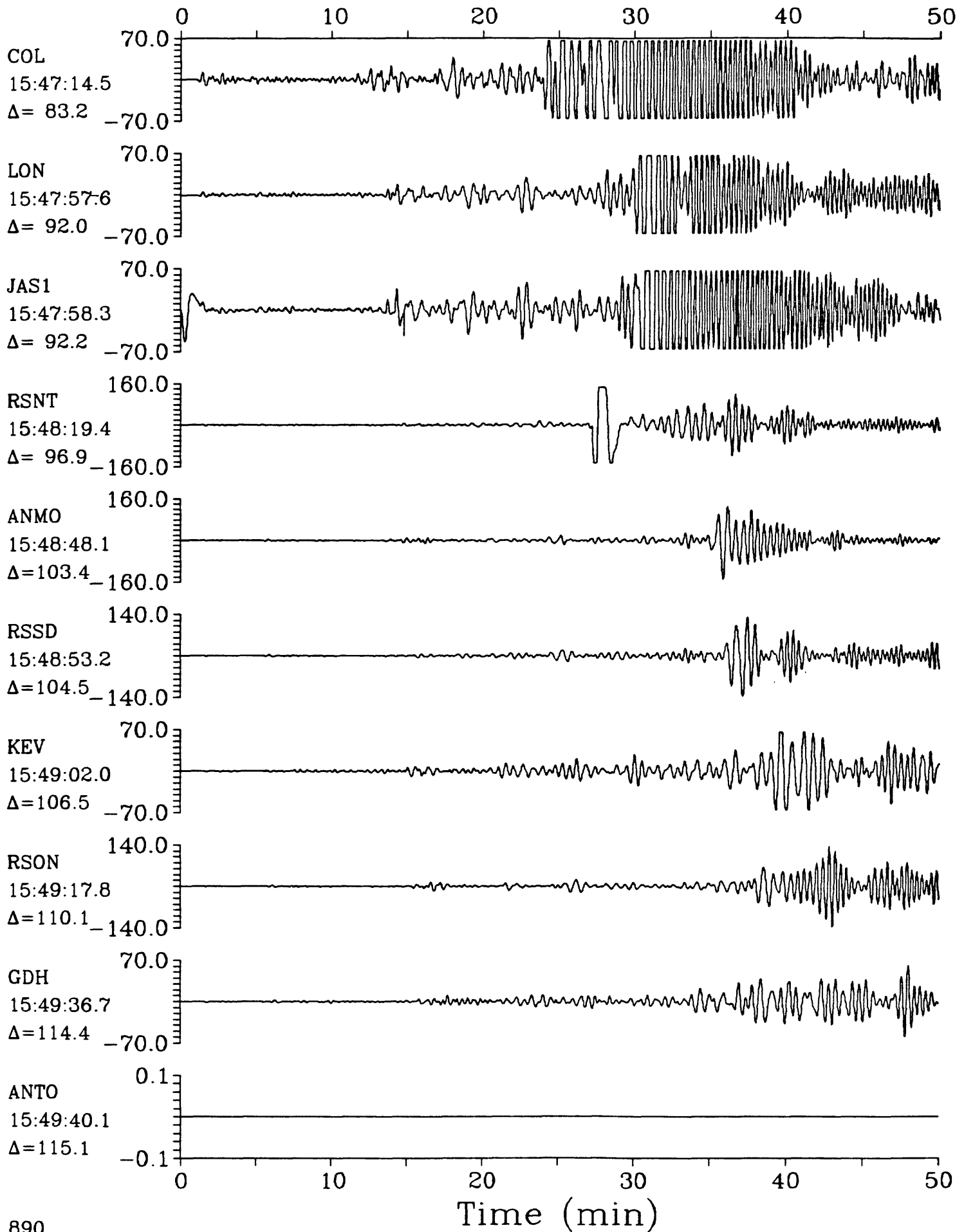
10 May 1985 15:35:50.48

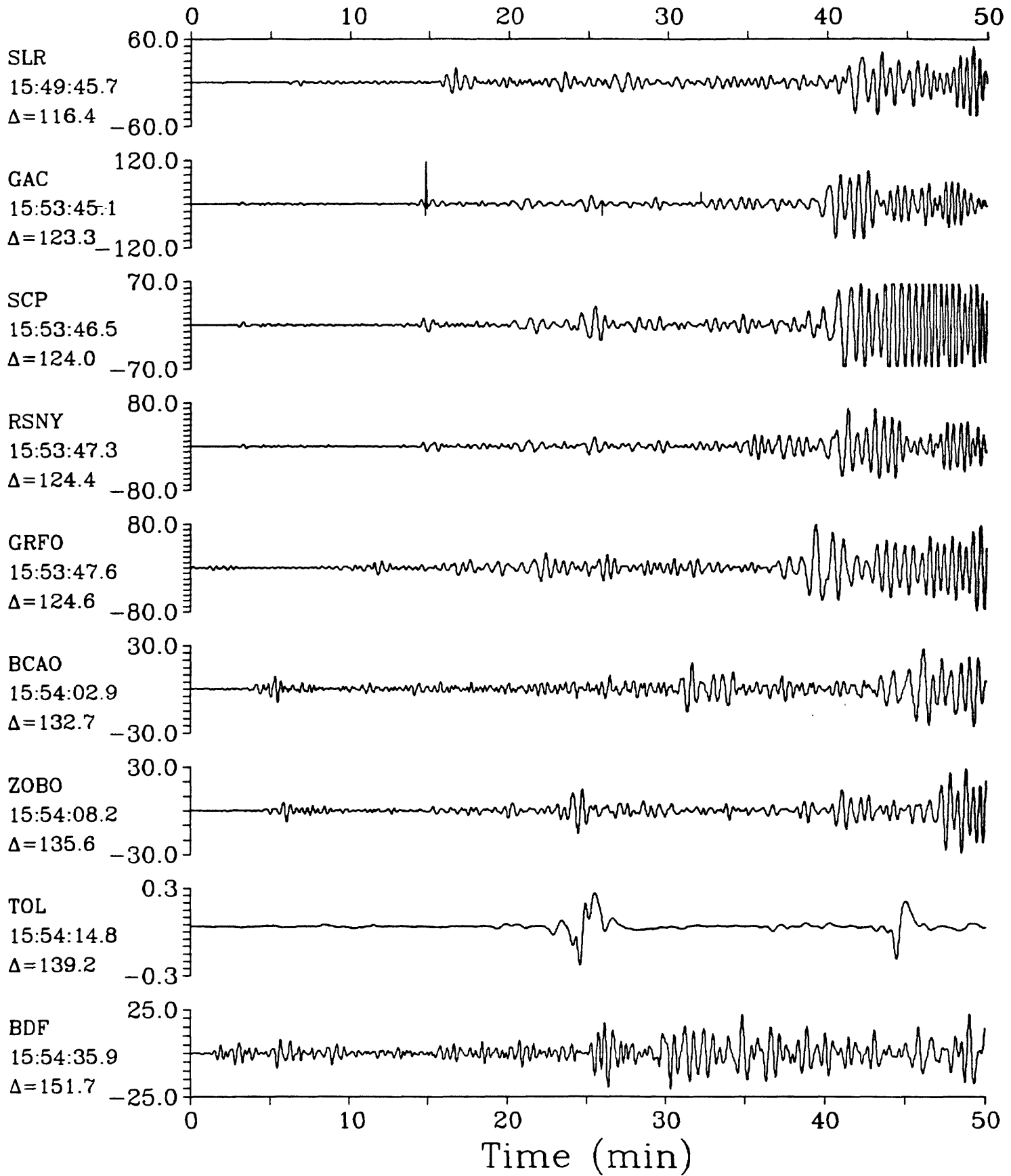
SPZ

New Britain Region $h=30.3$ $m_b=6.3$ $M_{sz}=7.1$



New Britain Region $h=30.3$ $m_b=6.3$ $M_{SZ}=7.1$ 

New Britain Region $h=30.3$ $m_b=6.3$ $M_{SZ}=7.1$ 

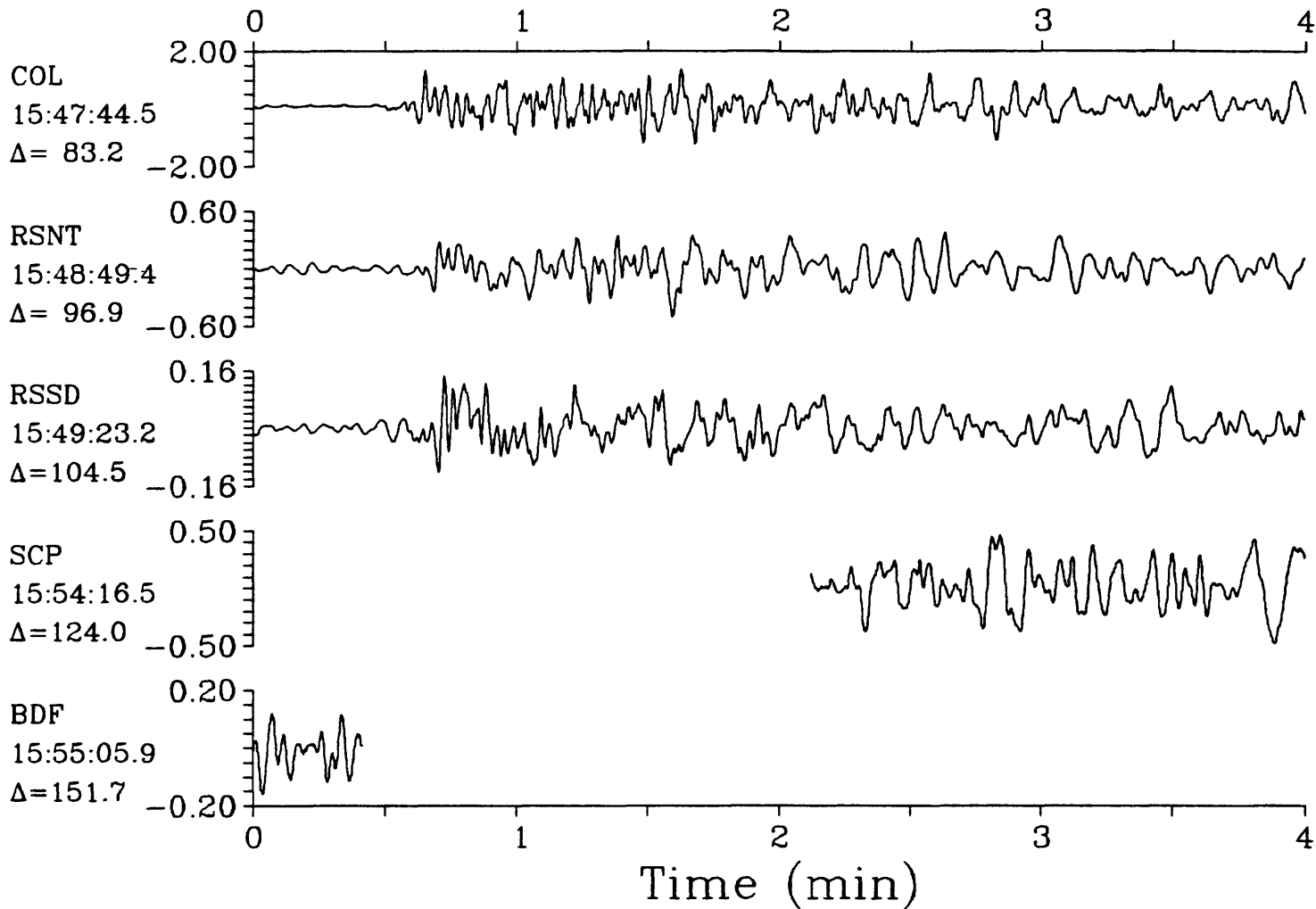
New Britain Region $h=30.3$ $m_b=6.3$ $M_{sz}=7.1$ 

IPZ

10 May 1985 15:35:50.48

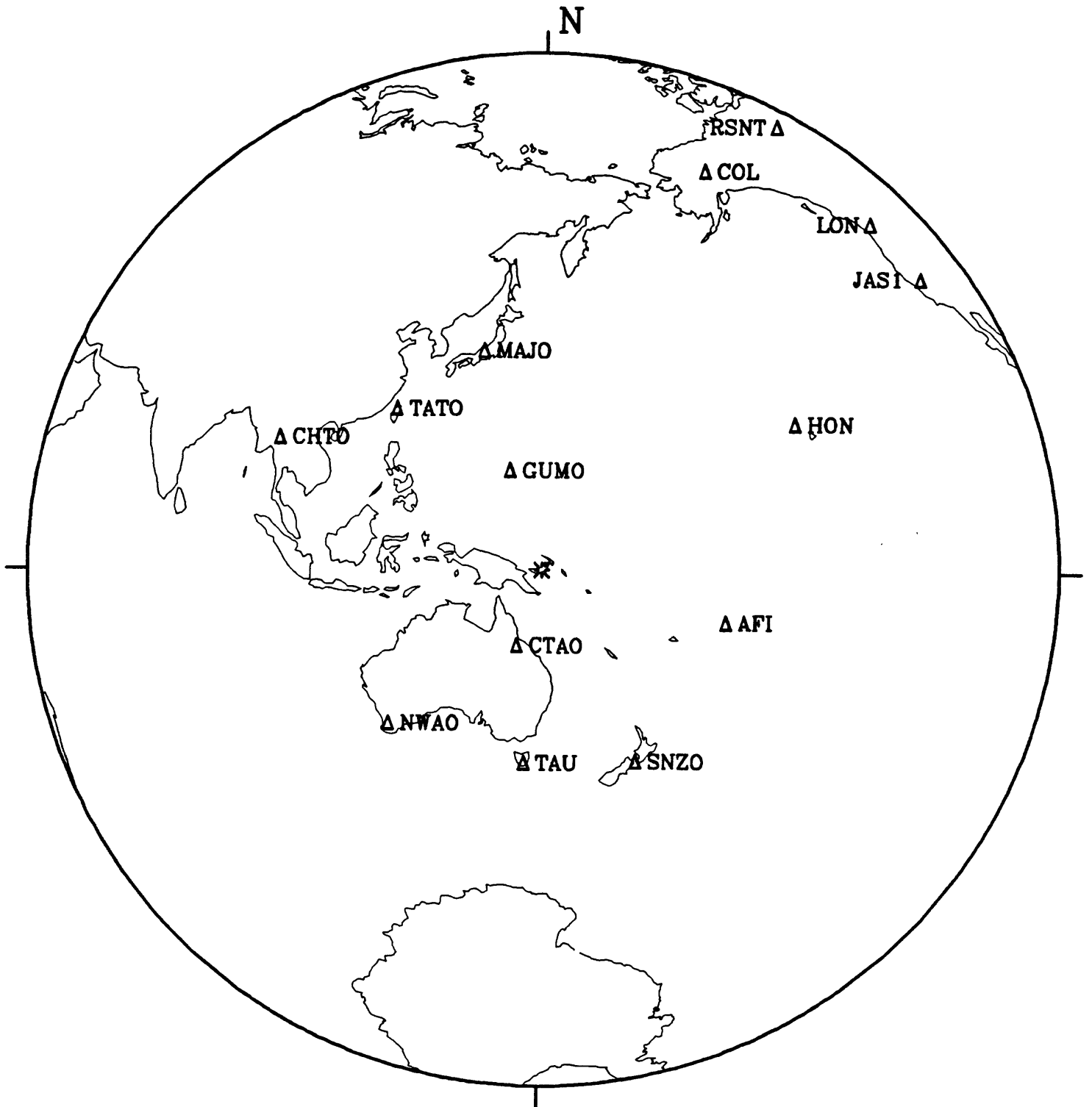
IPZ

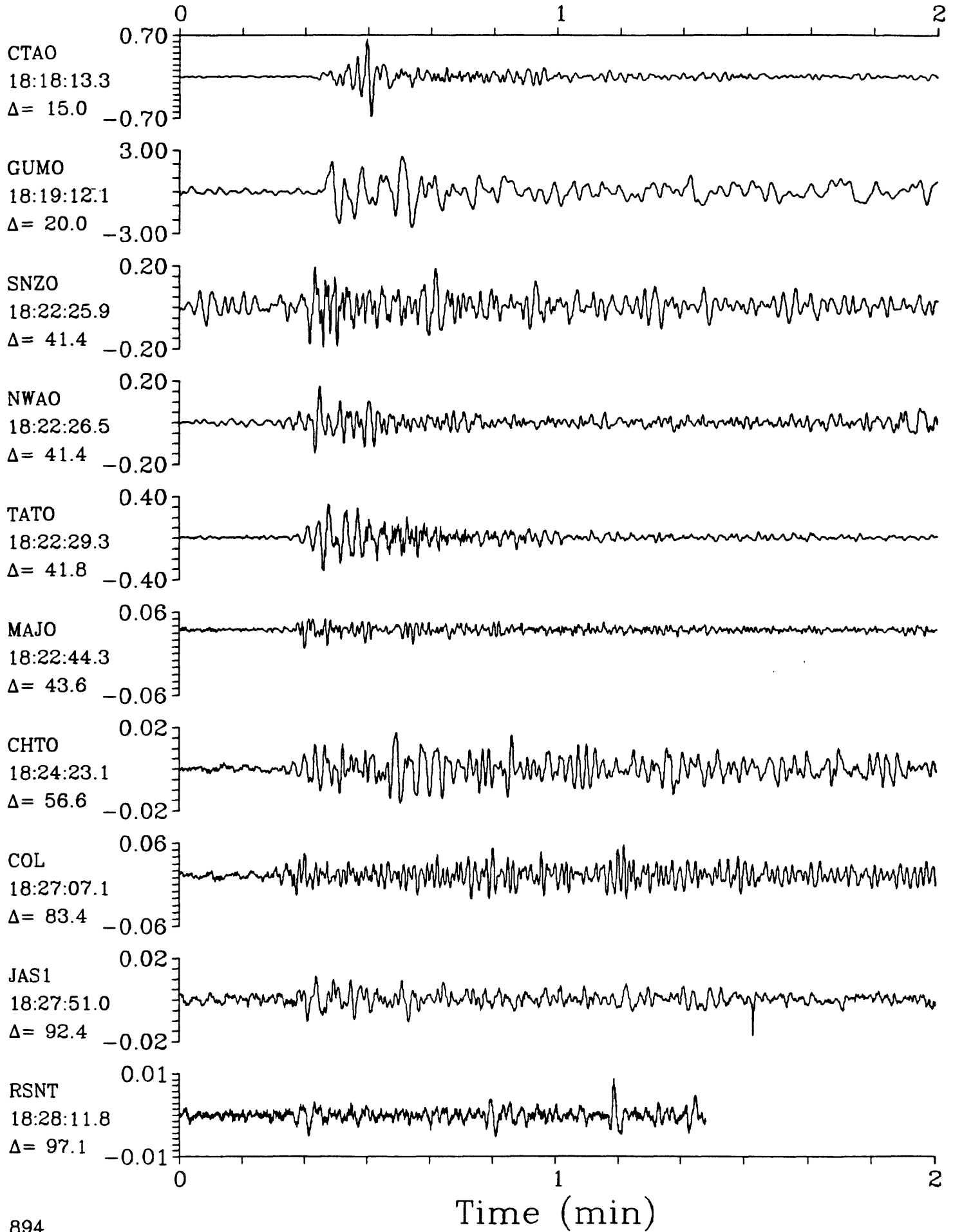
New Britain Region $h=30.3$ $m_b=6.3$ $M_{sz}=7.1$



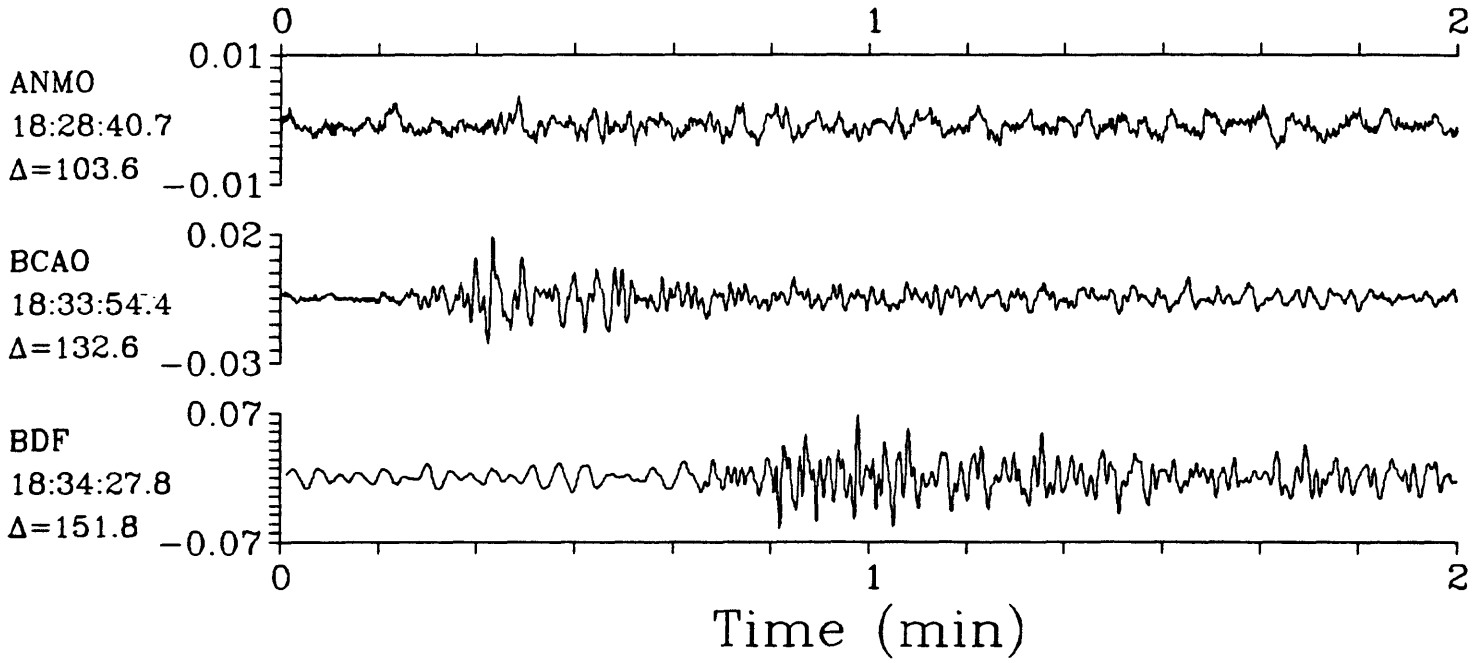
10 May 1985 18:14:57.65

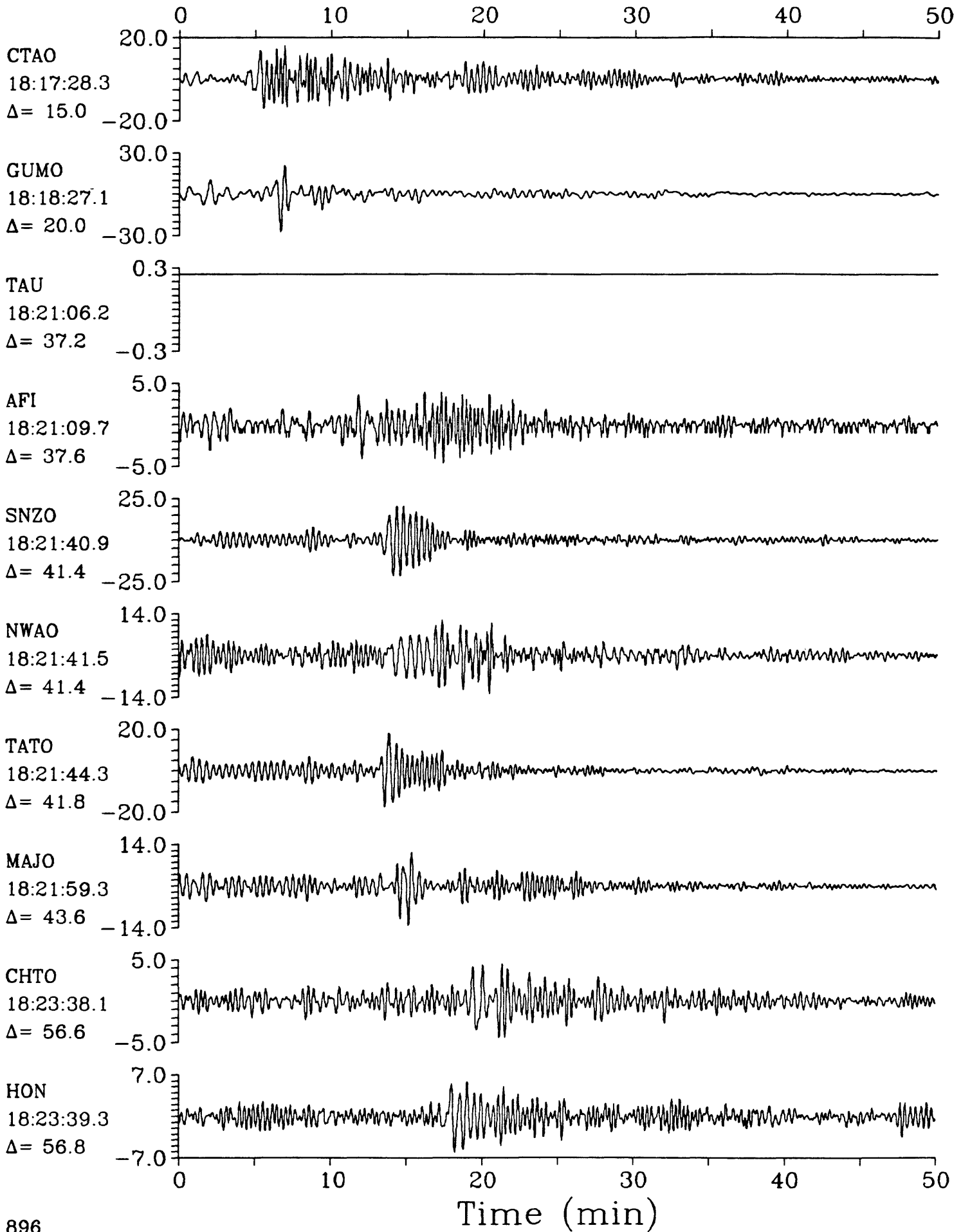
New Britain Region

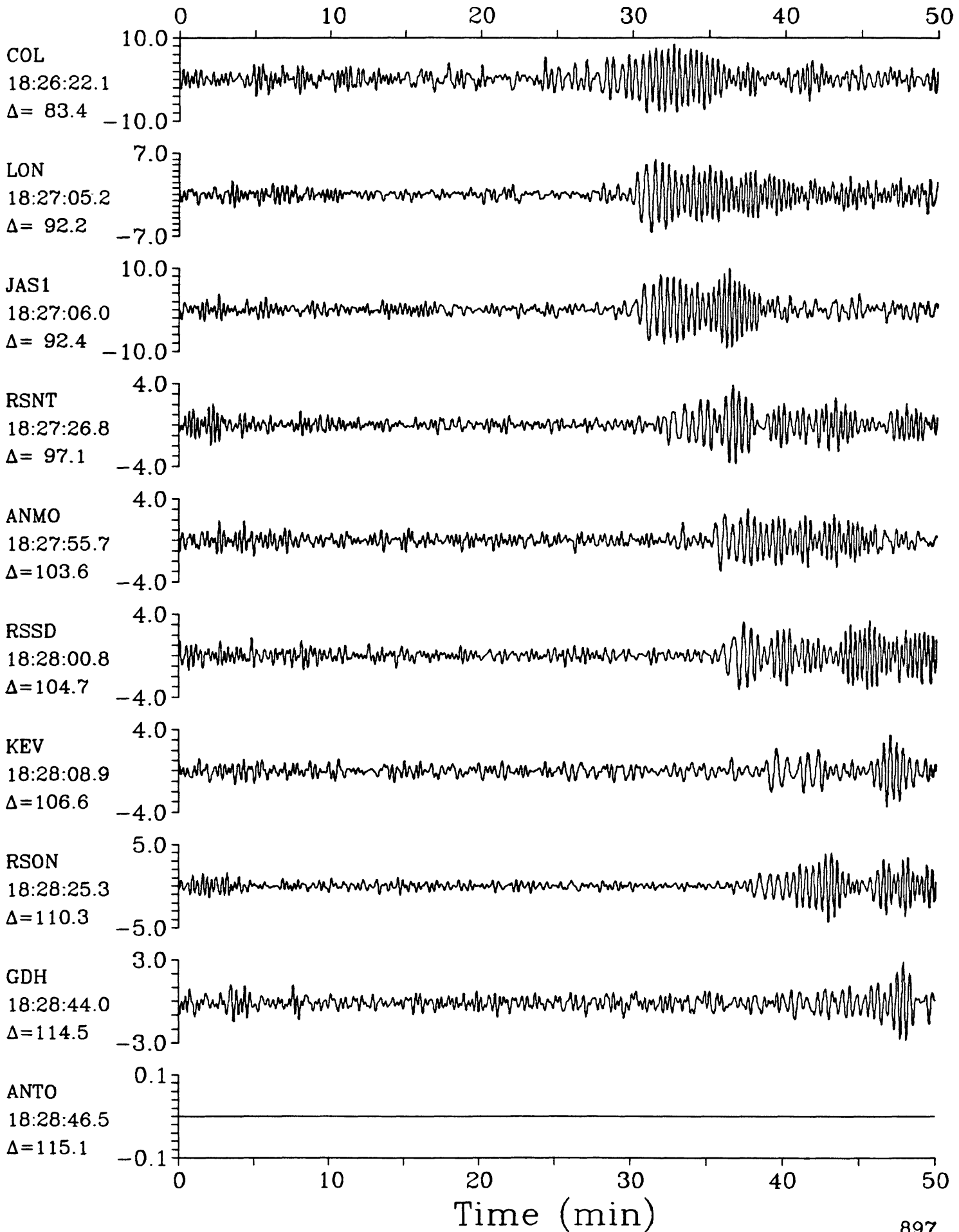


New Britain Region $h=33.0$ $m_b=5.7$ $M_{SZ}=5.8$ 

New Britain Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.8$



New Britain Region $h=33.0$ $m_b=5.7$ $M_{SZ}=5.8$ 

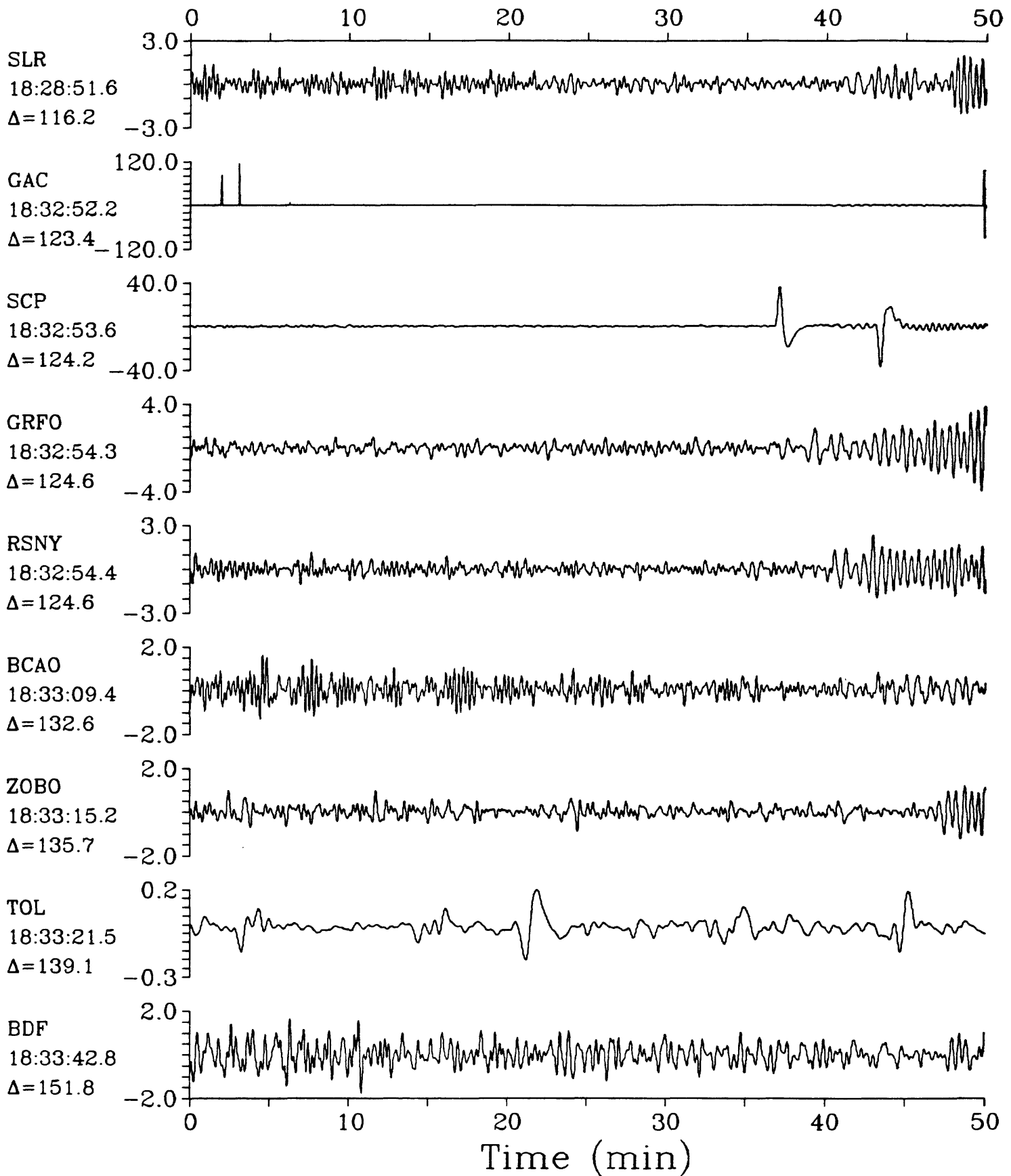
New Britain Region $h=33.0$ $m_b=5.7$ $M_{SZ}=5.8$ 

LPZ

10 May 1985 18:14:57.65

LPZ

New Britain Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.8$

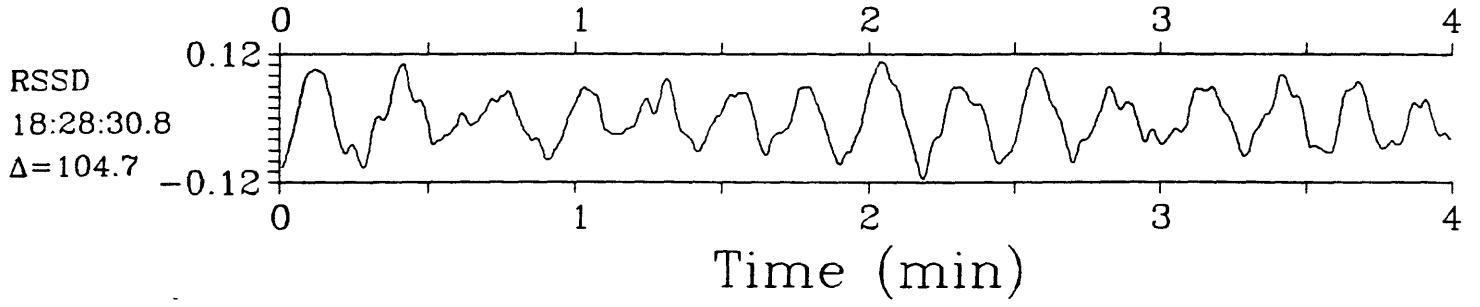


IPZ

10 May 1985 18:14:57.65

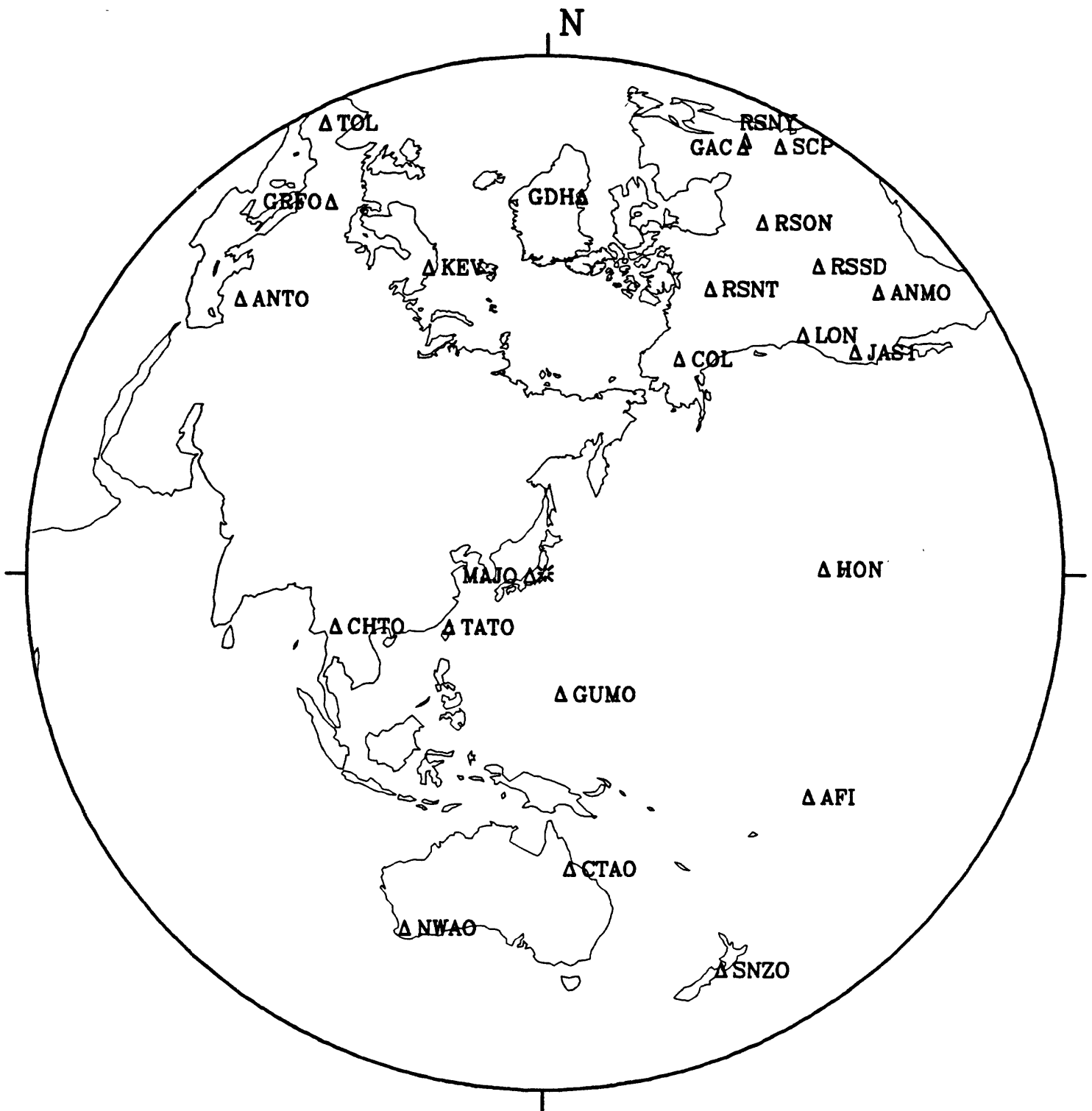
IPZ

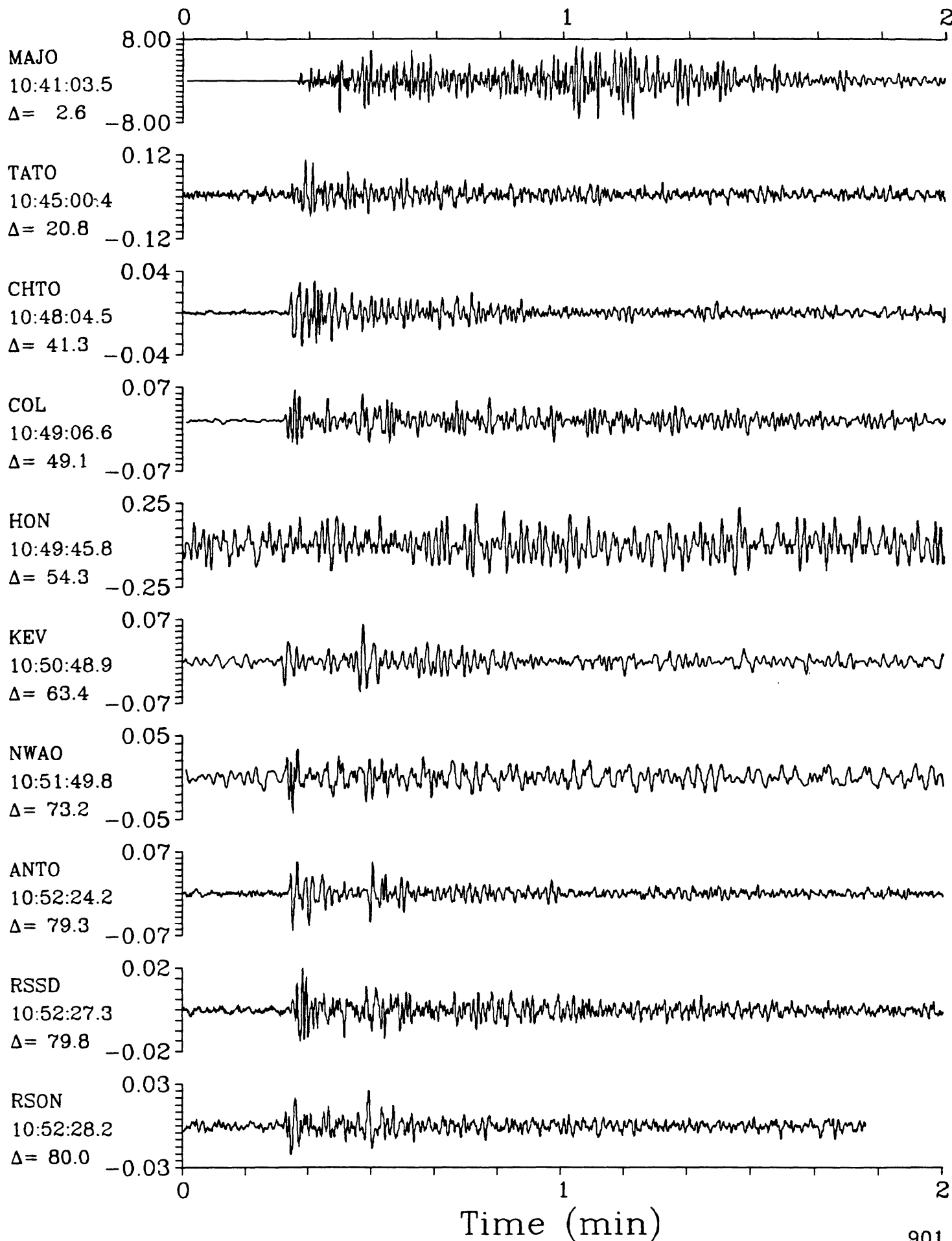
New Britain Region $h=33.0$ $m_b=5.7$ $M_{sz}=5.8$

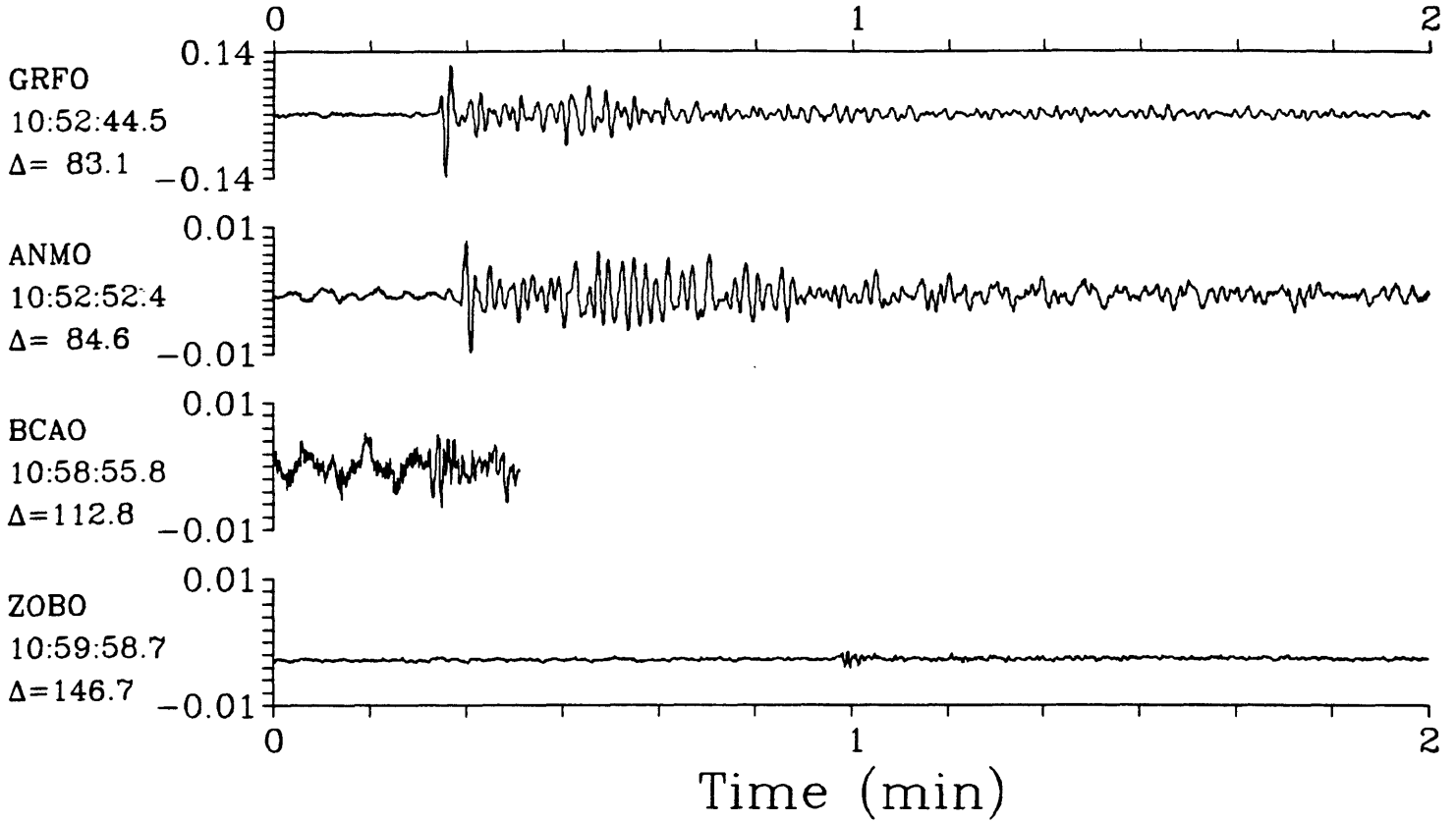


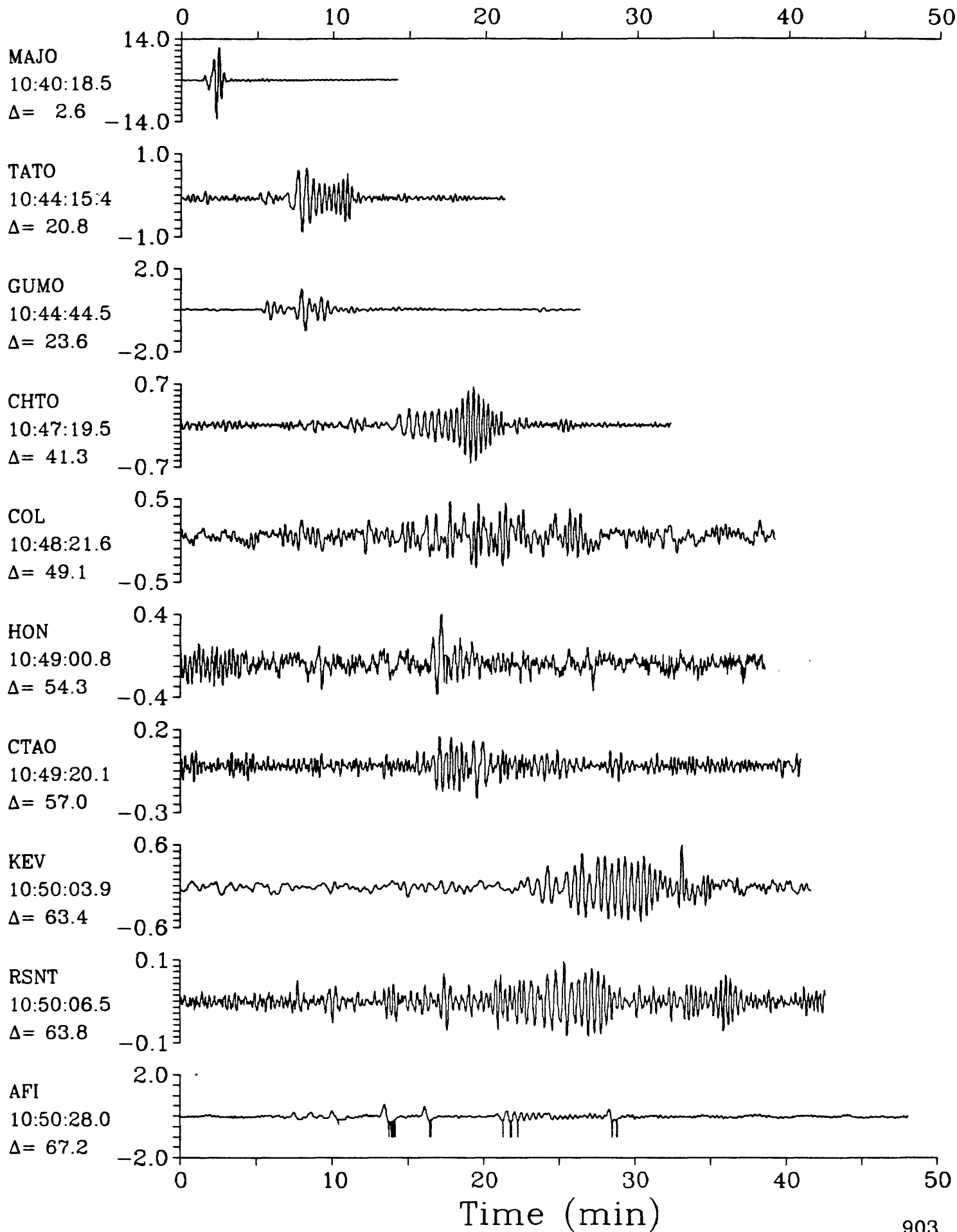
11 May 1985 10:40:38.80

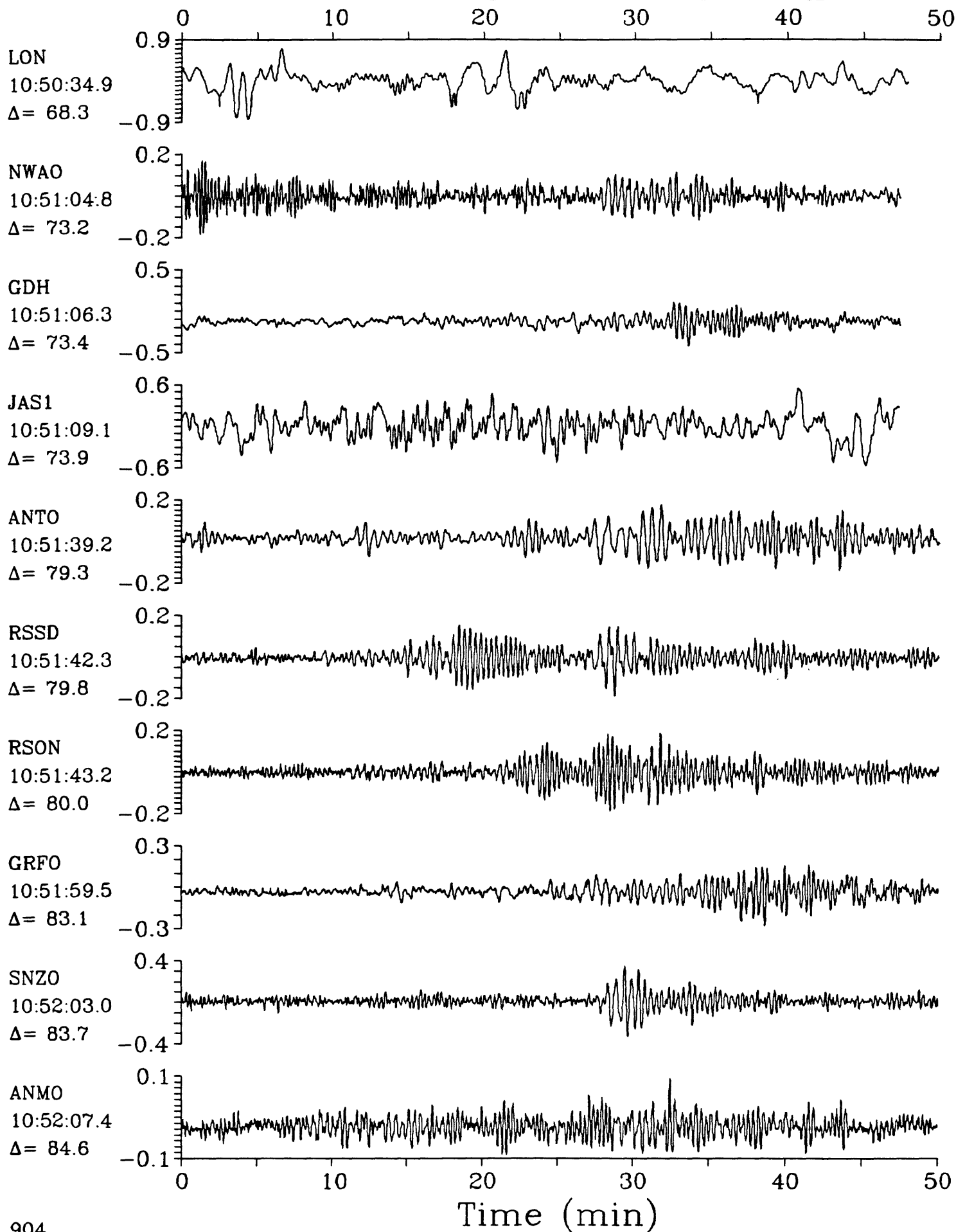
Near East Coast of Honshu, Japan

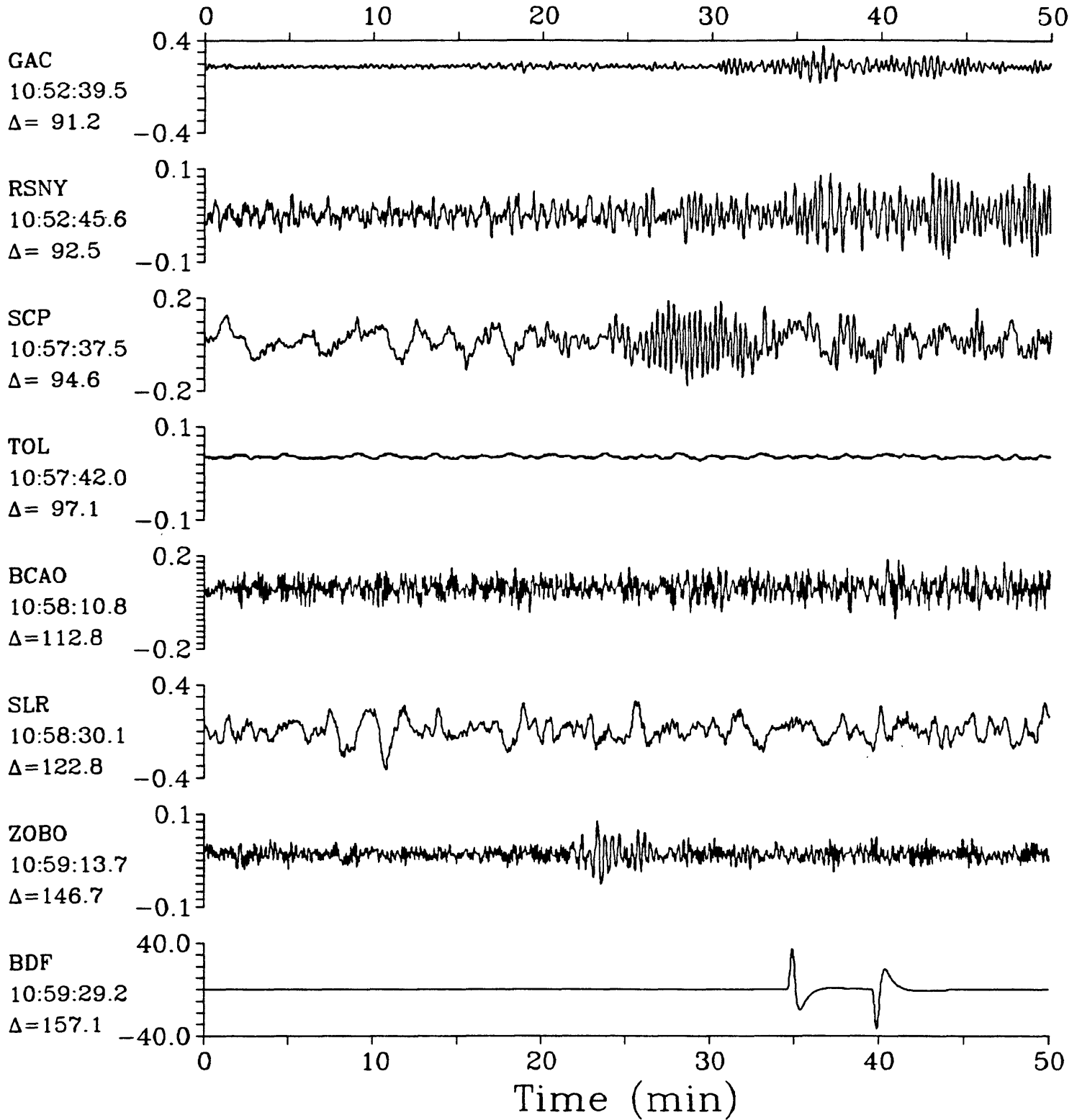


Near East Coast of Honshu, Japan $h=49.6$ $m_b=5.5$ $M_{sz}=5.0$ 



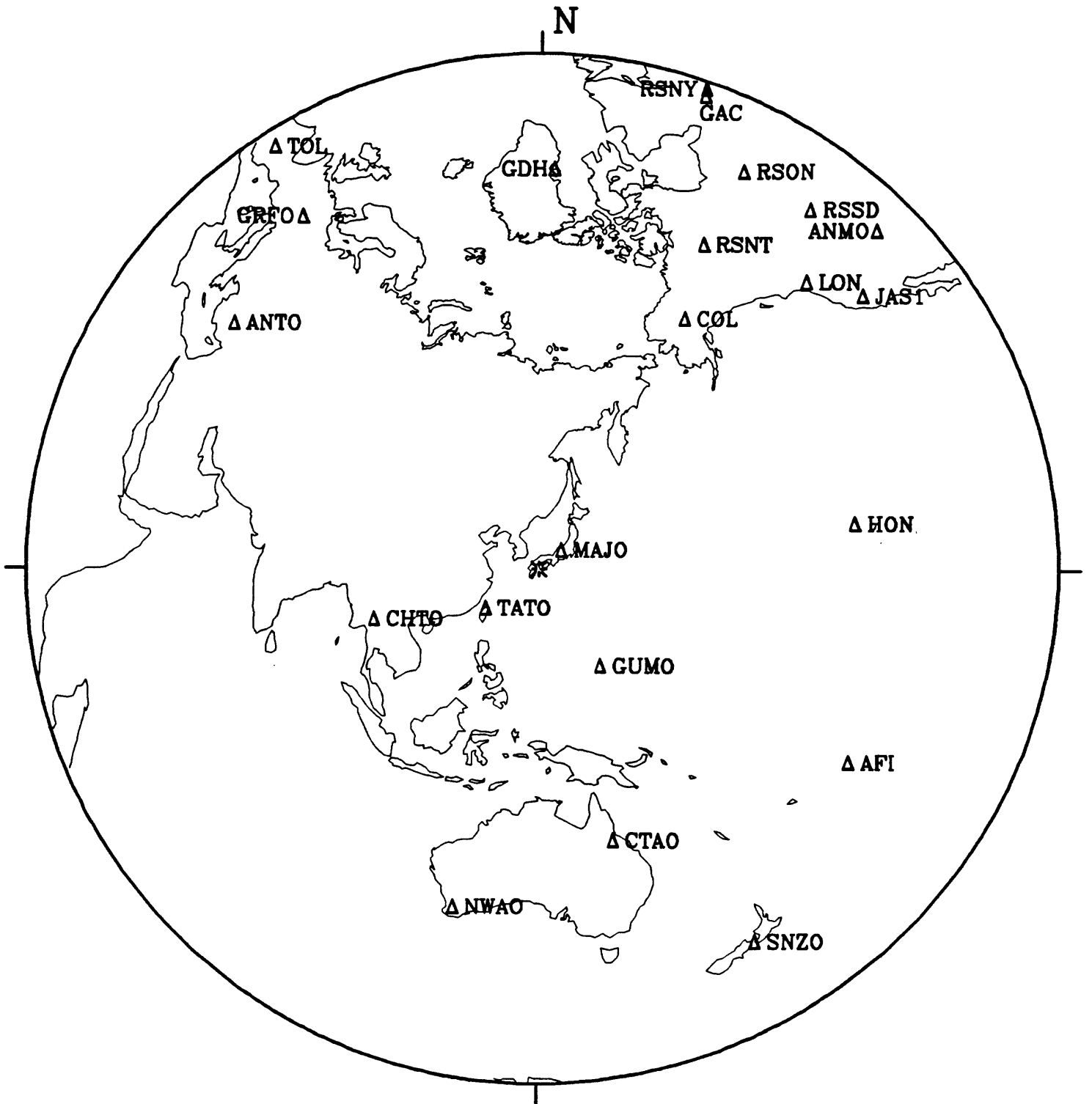
Near East Coast of Honshu, Japan $h=49.6$ $m_b=5.5$ $M_{SZ}=5.0$ 

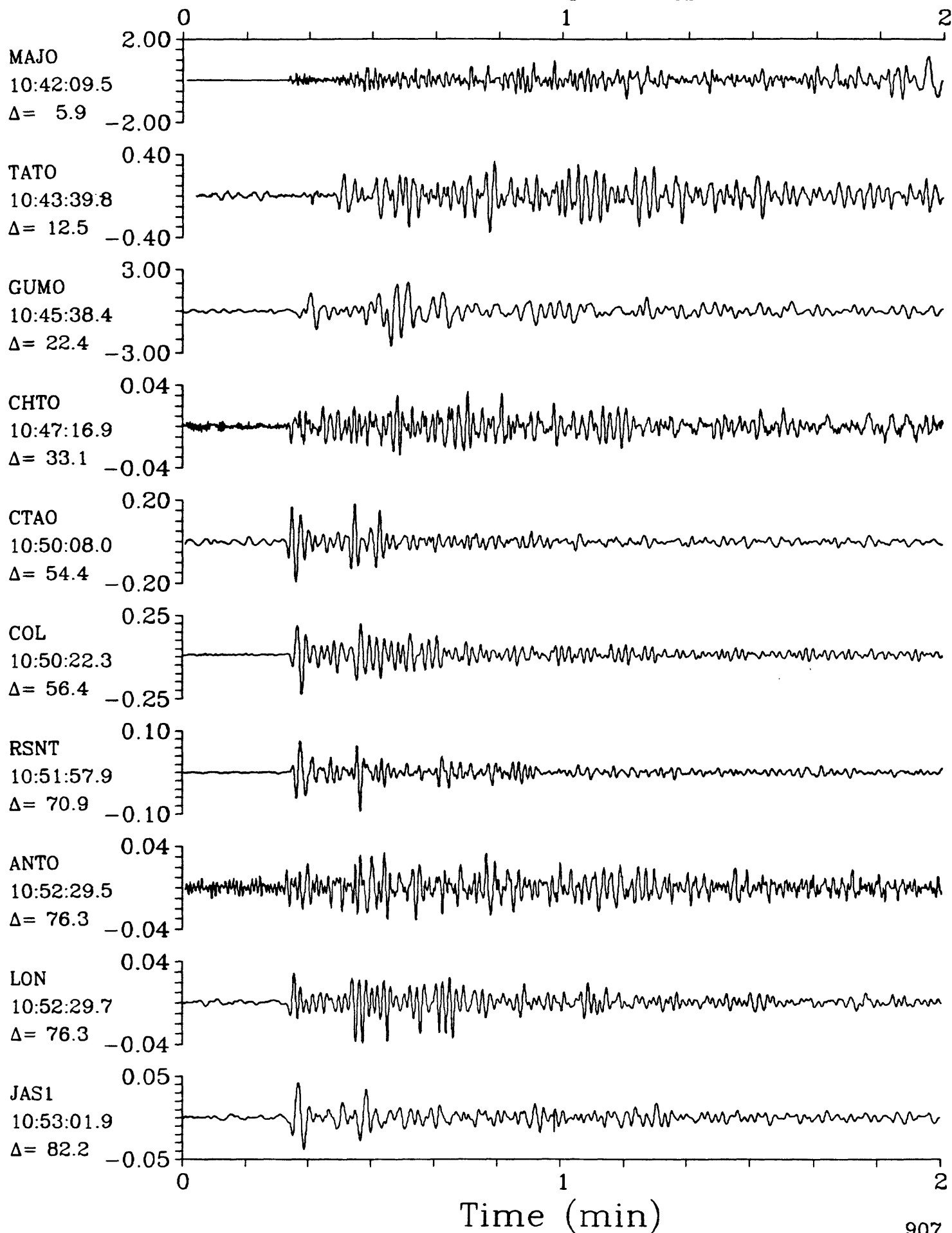
Near East Coast of Honshu, Japan $h=49.6$ $m_b=5.5$ $M_{SZ}=5.0$ 

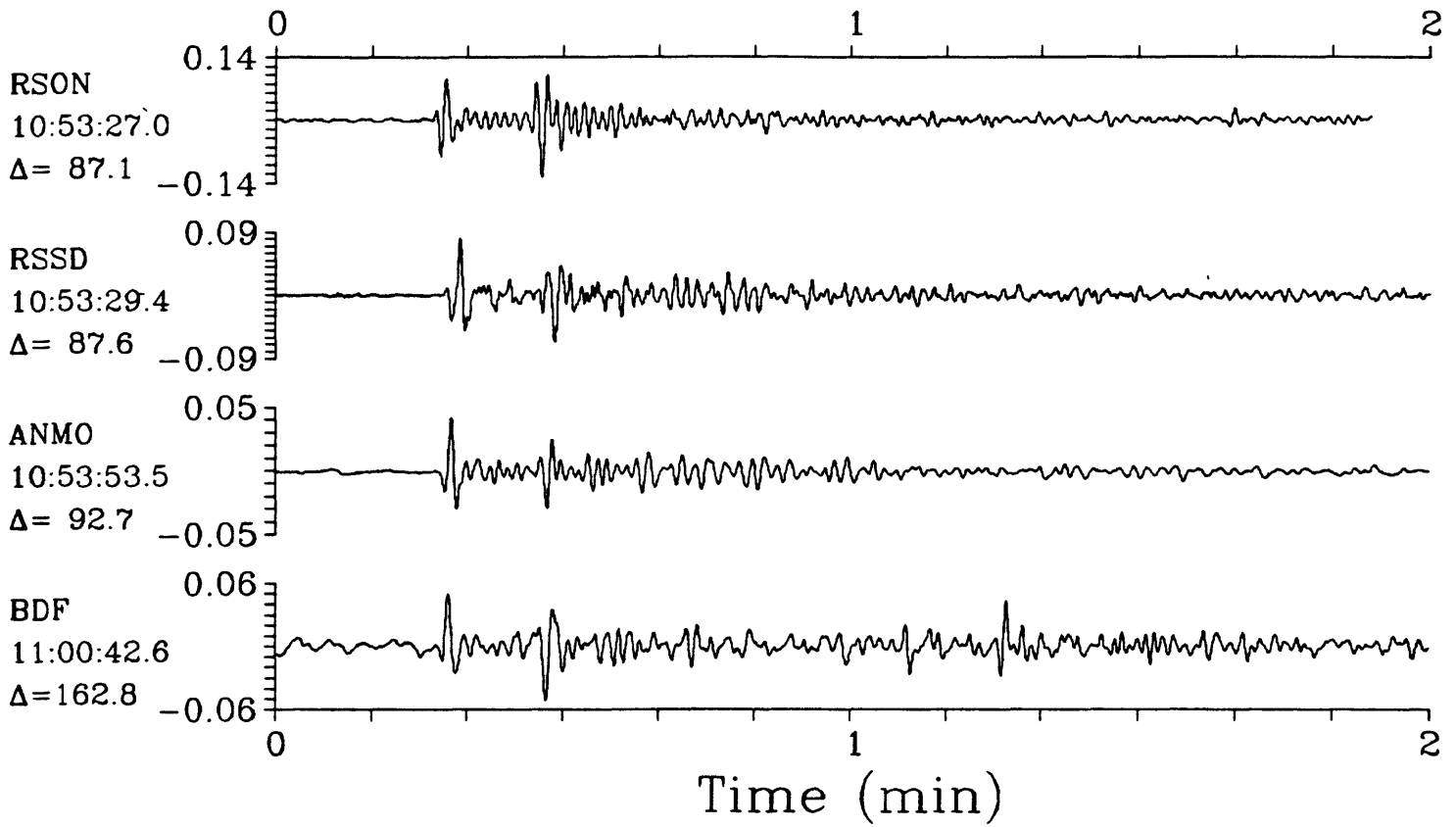
Near East Coast of Honshu, Japan $h=49.6$ $m_b=5.5$ $M_{SZ}=5.0$ 

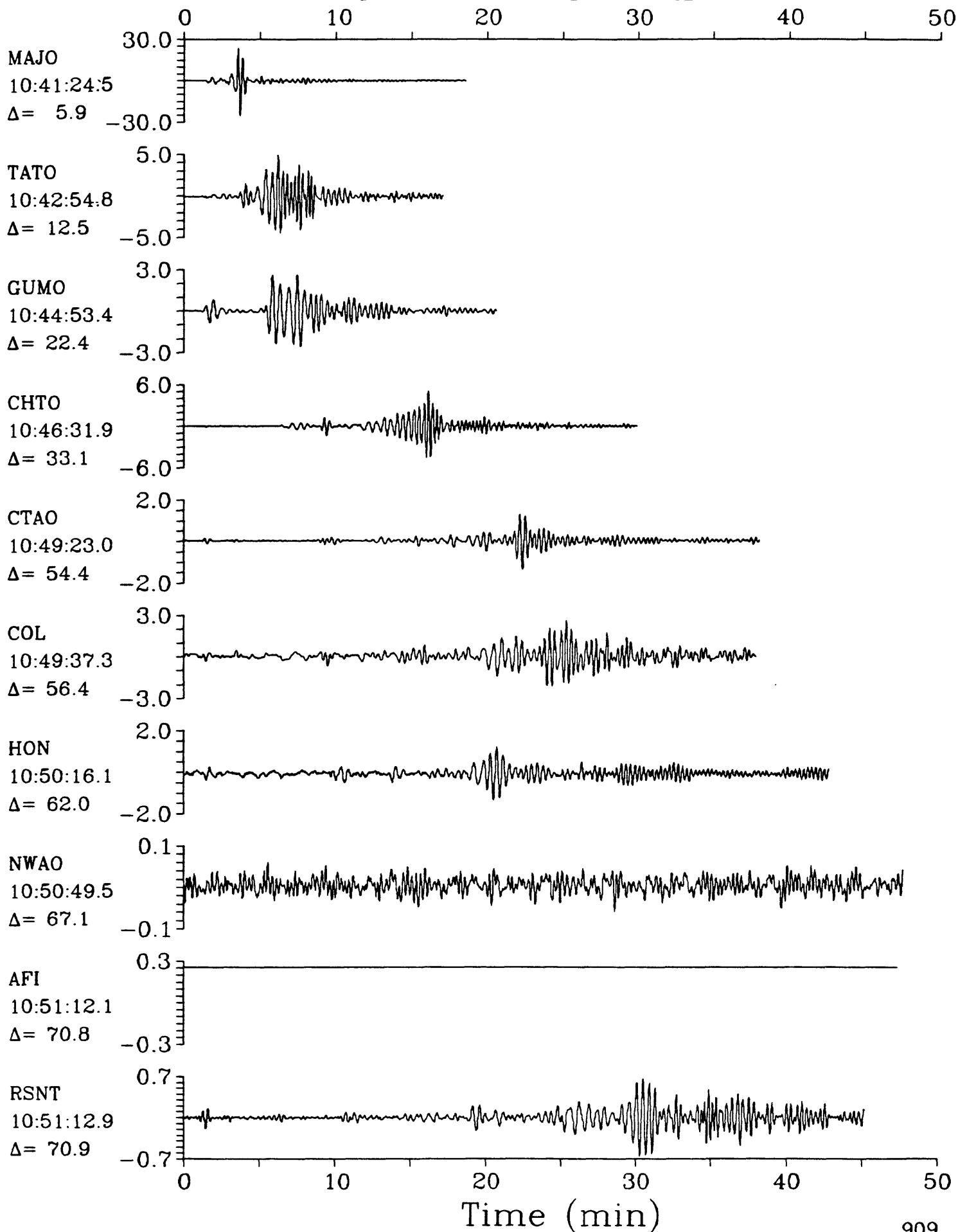
13 May 1985 10:40:59.33

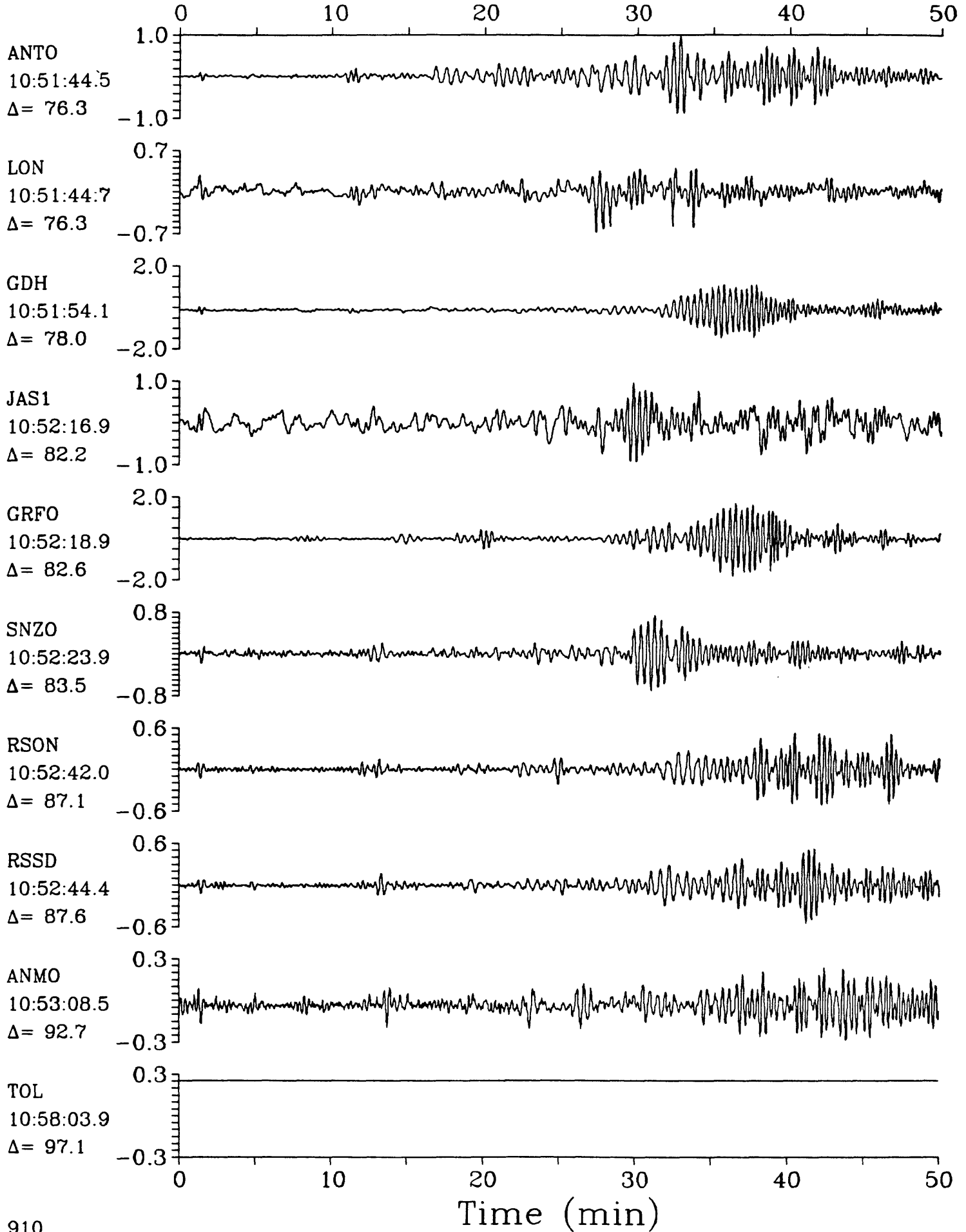
Shikoku, Japan

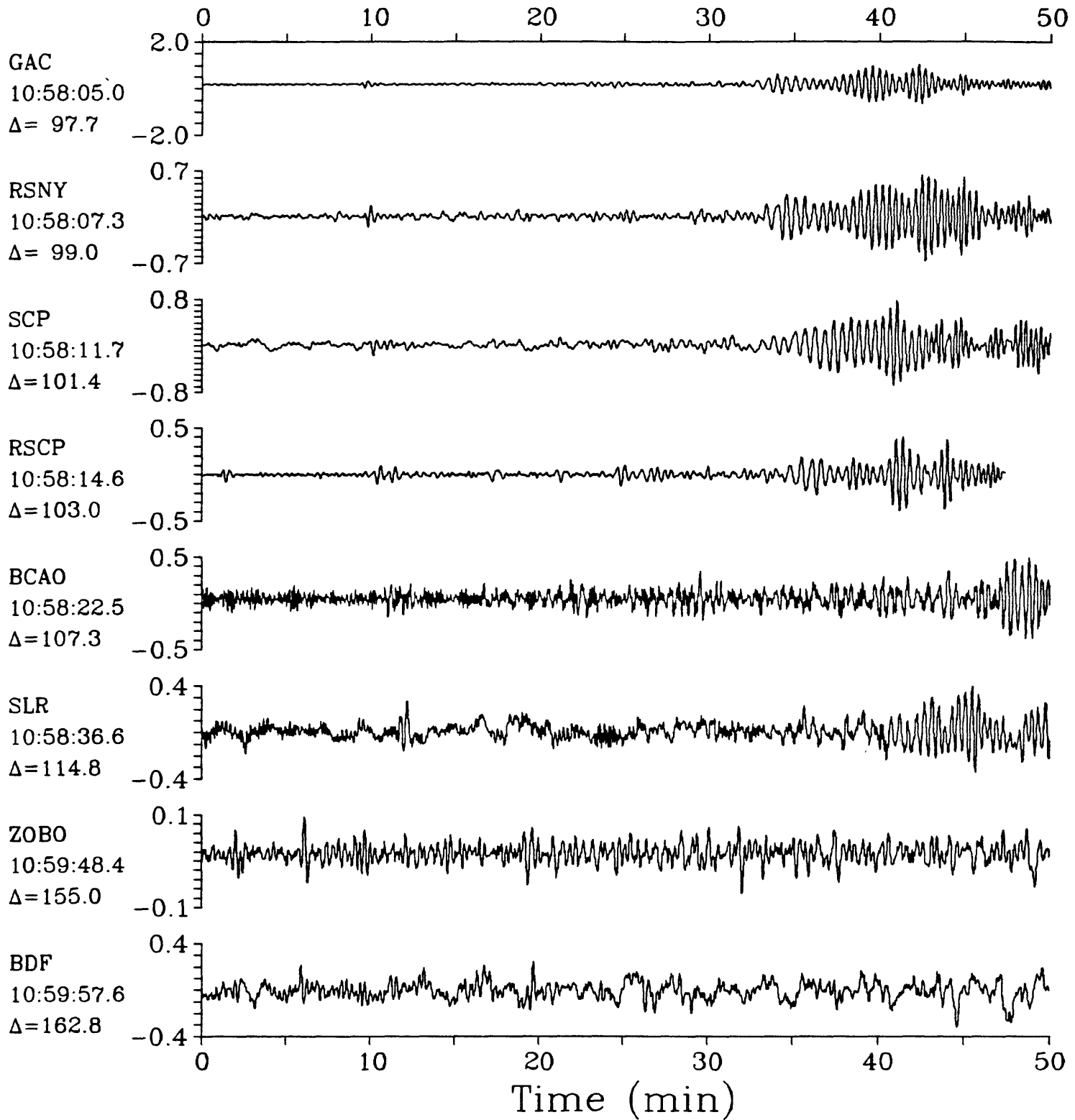


Shikoku, Japan $h=38.0$ $m_b=5.7$ $M_{SZ}=5.2$ 

Shikoku, Japan $h=38.0$ $m_b=5.7$ $M_{sz}=5.2$ 

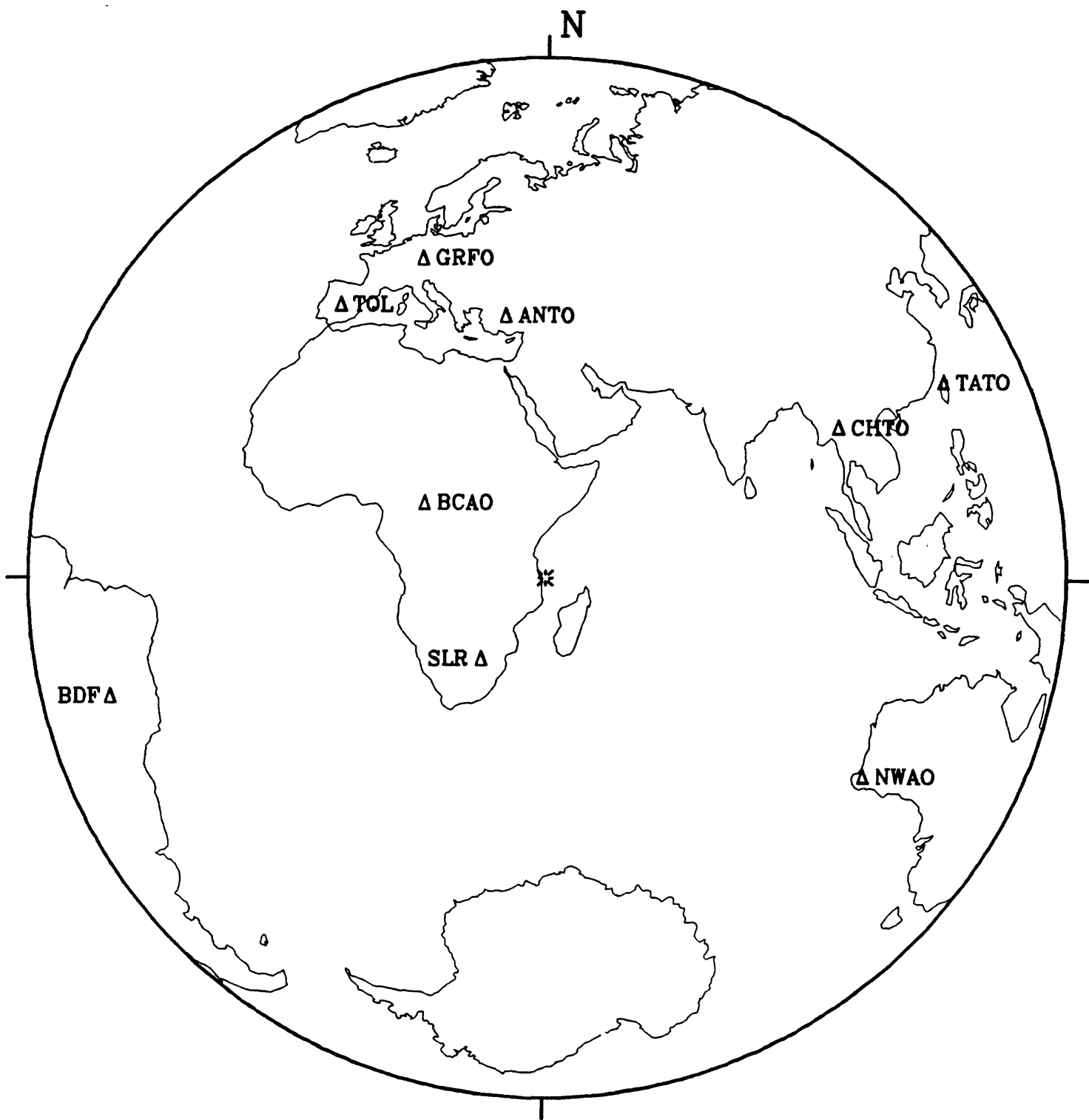
Shikoku, Japan $h=38.0$ $m_b=5.7$ $M_{sz}=5.2$ 

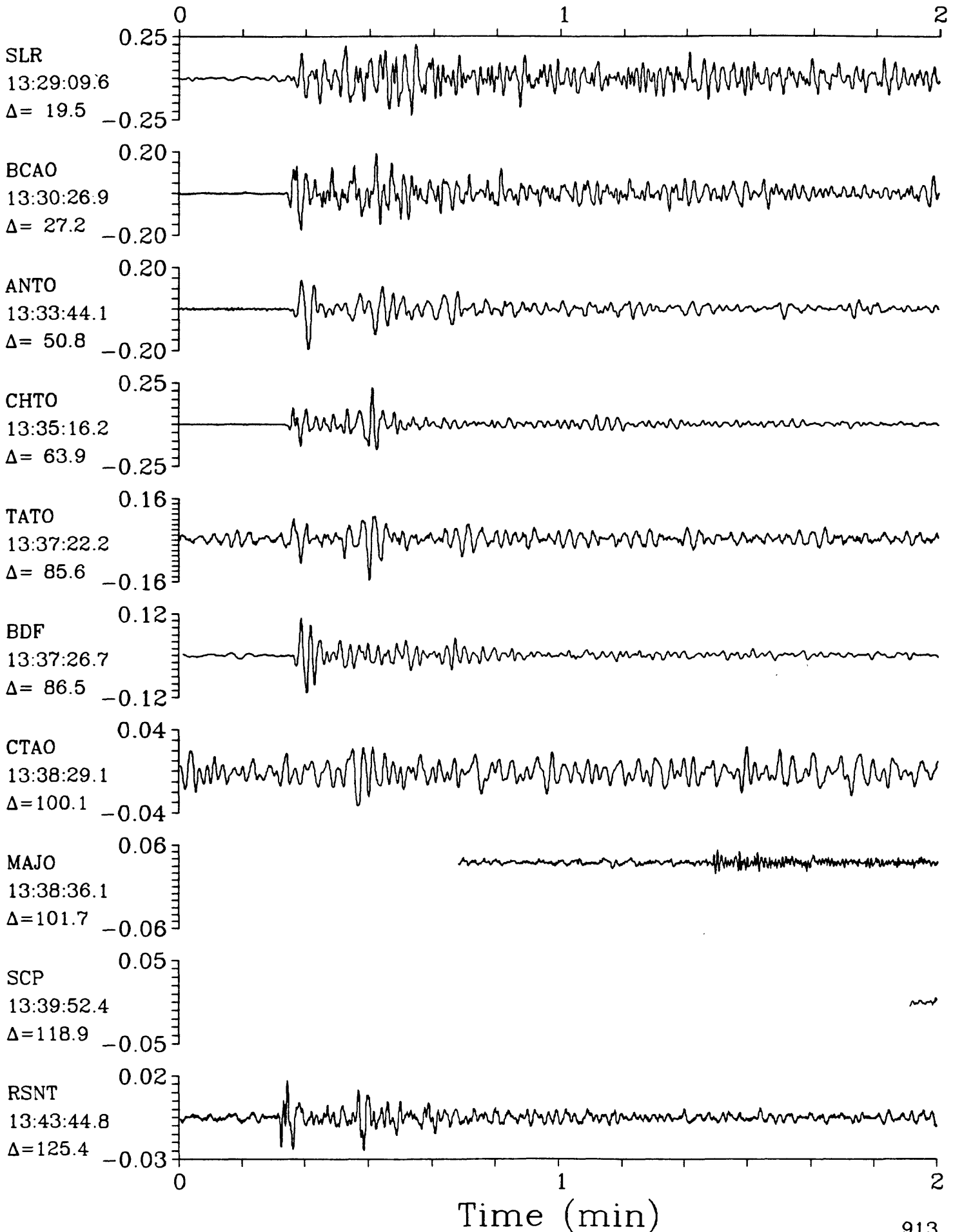
Shikoku, Japan $h=38.0$ $m_b=5.7$ $M_{sz}=5.2$ 

Shikoku, Japan $h=38.0$ $m_b=5.7$ $M_{sz}=5.2$ 

14 May 1985 13:24:57.89

Northwest of Madagascar

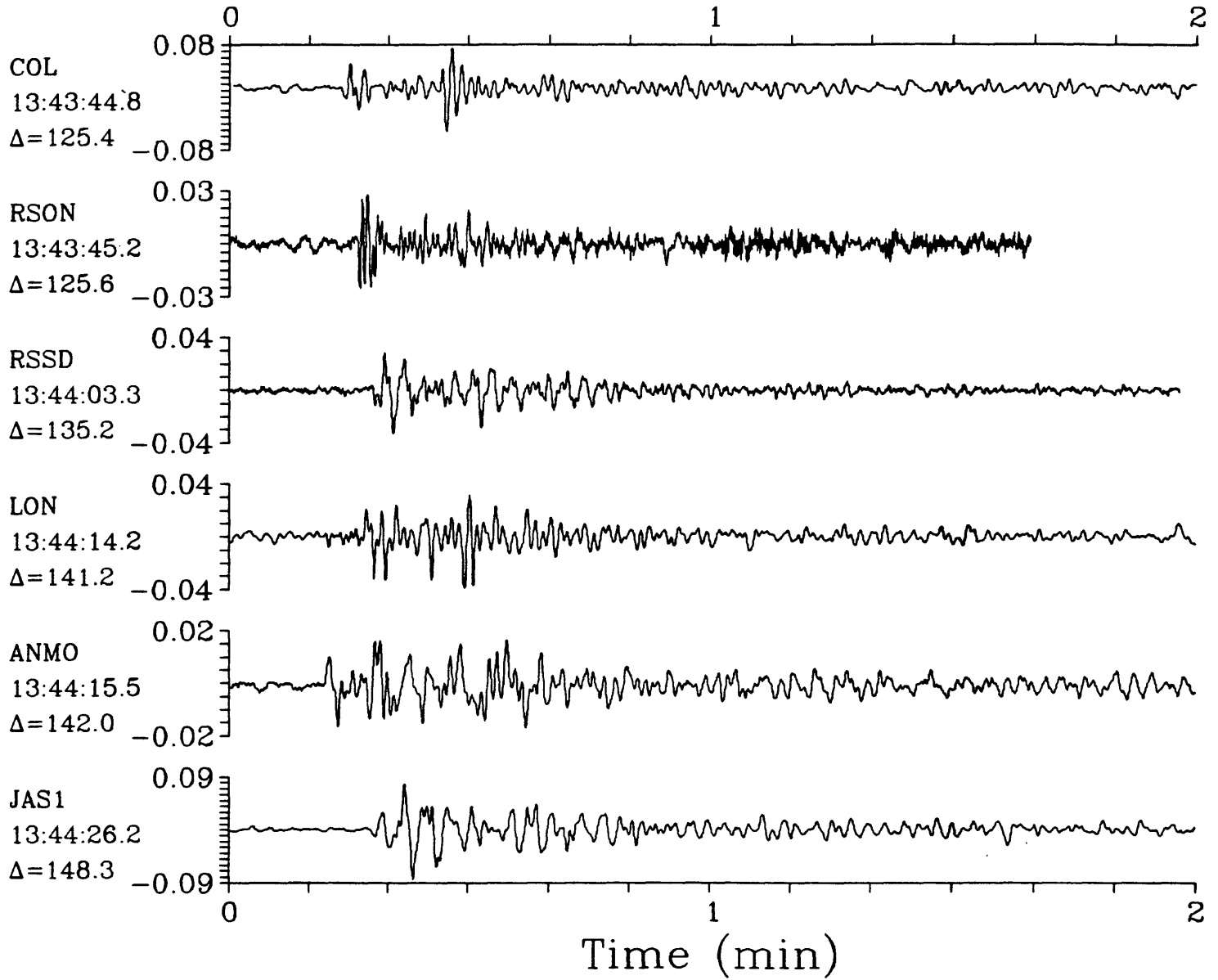


Northwest of Madagascar $h=10.0$ $m_b=6.0$ $M_{SZ}=5.5$ 

SPZ

14 May 1985 13:24:57.89

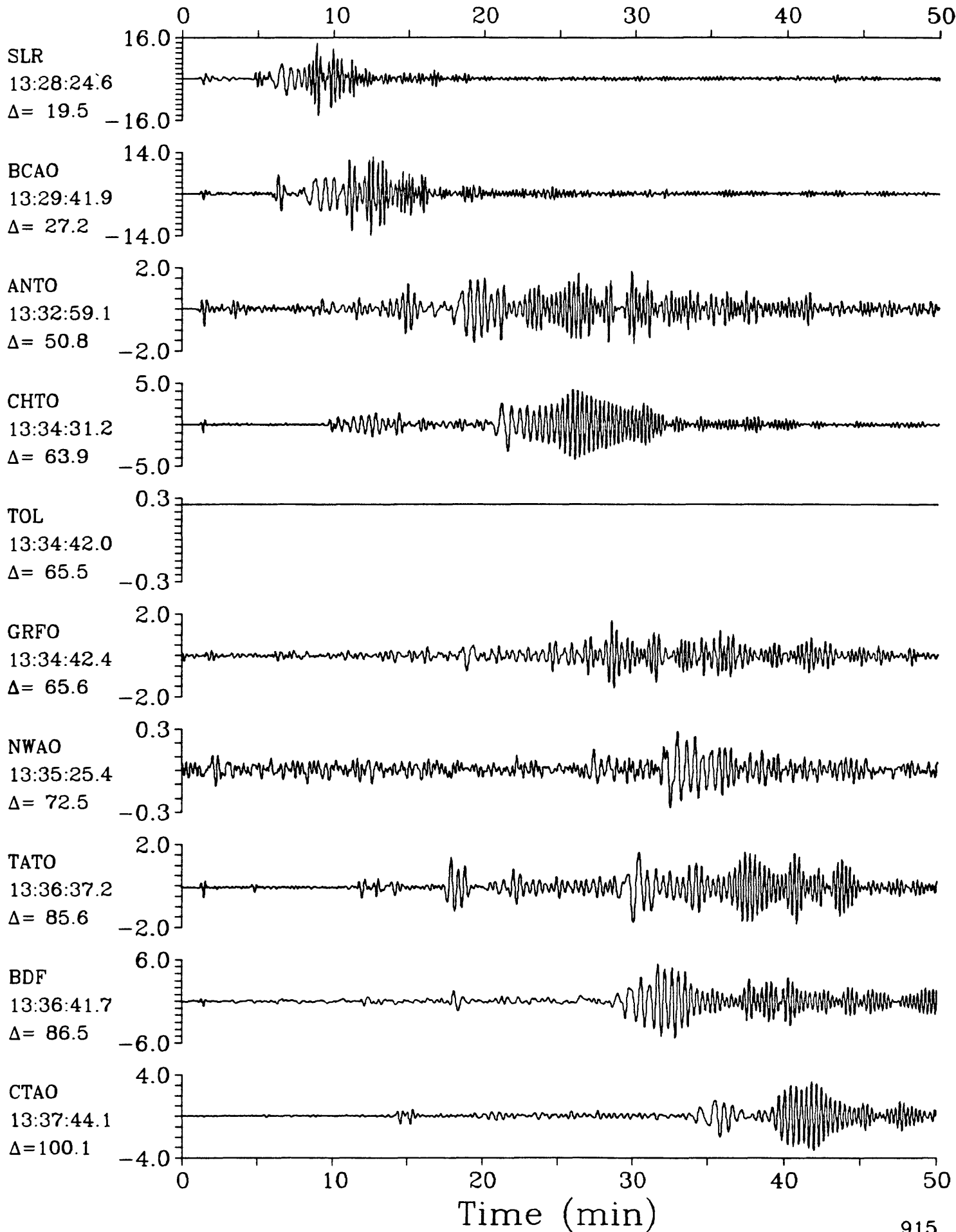
SPZ

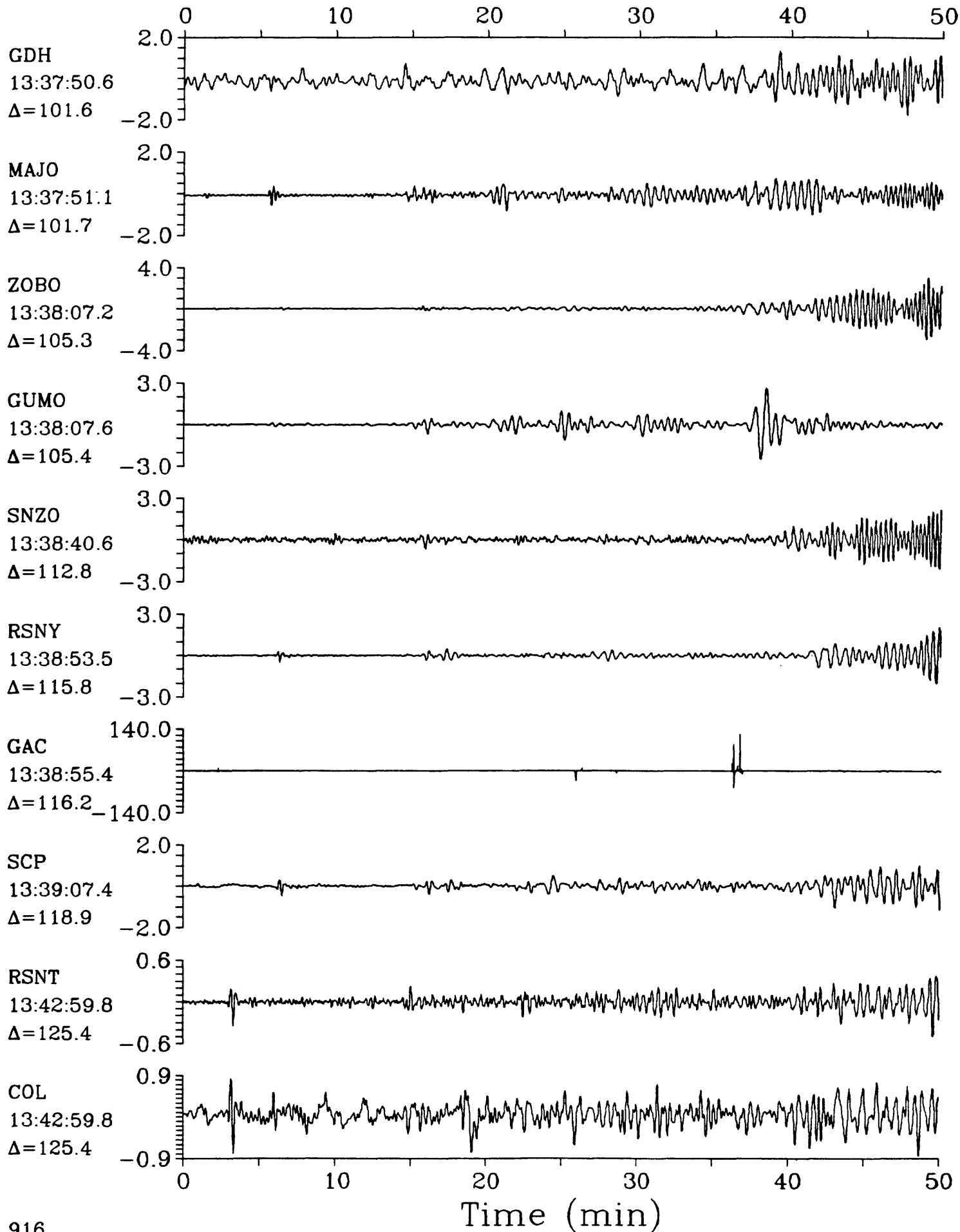
Northwest of Madagascar $h=10.0$ $m_b=6.0$ $M_{SZ}=5.5$ 

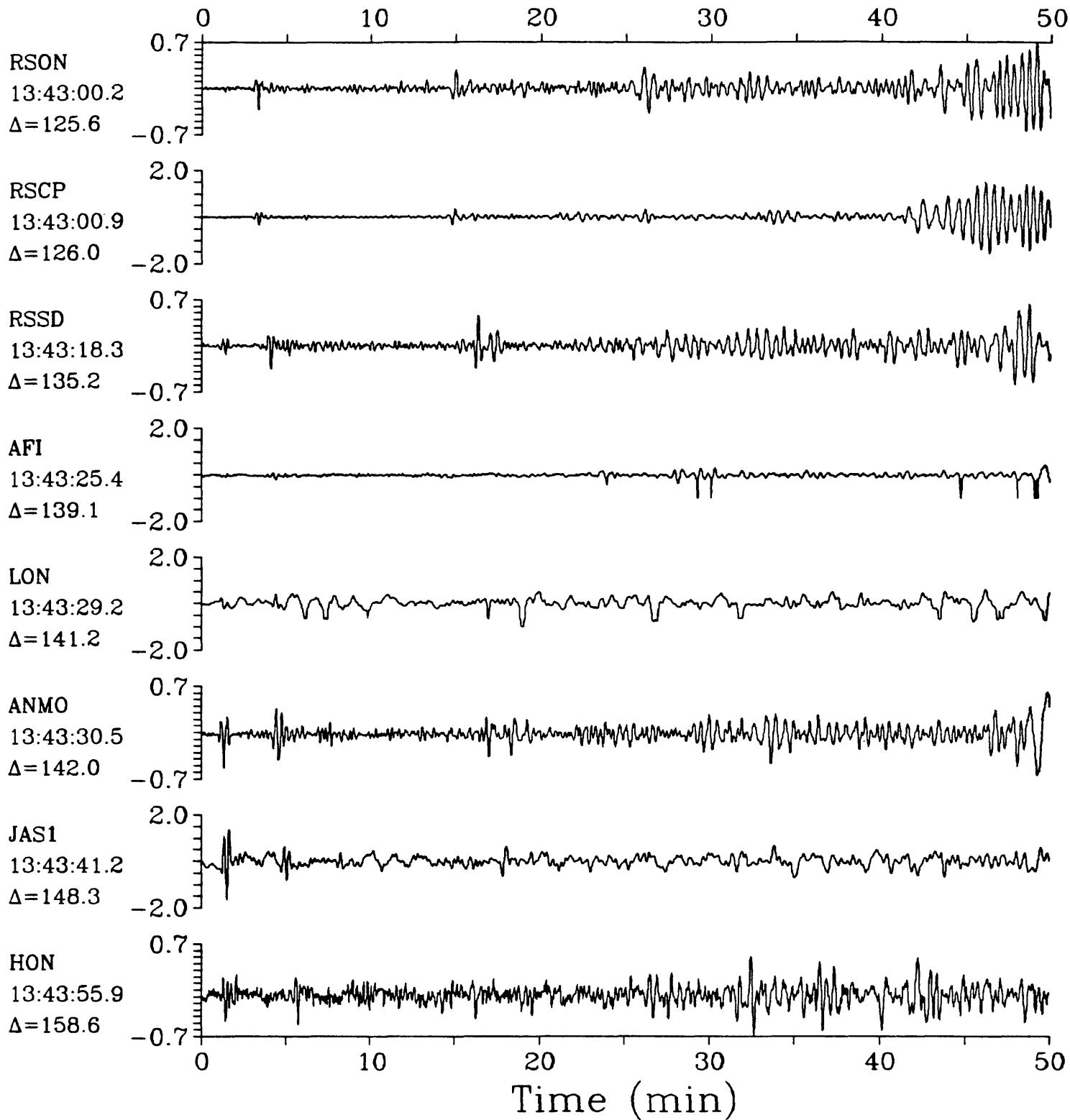
LPZ

14 May 1985 13:24:57.89

LPZ

Northwest of Madagascar $h=10.0$ $m_b=6.0$ $M_{SZ}=5.5$ 

Northwest of Madagascar $h=10.0$ $m_b=6.0$ $M_{sz}=5.5$ 

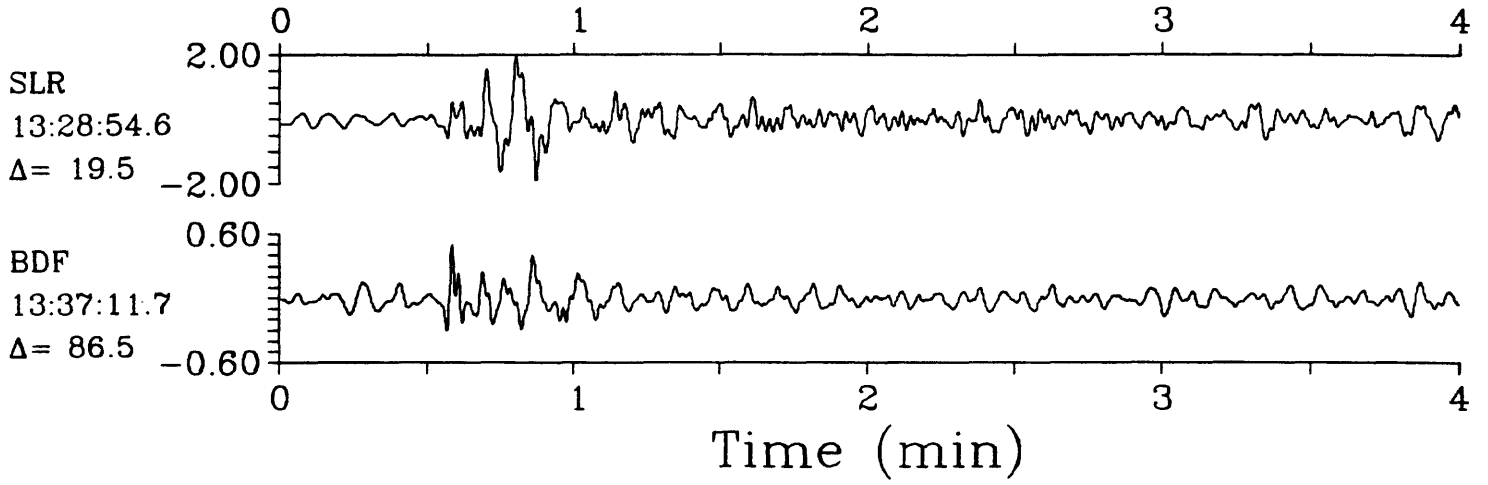
Northwest of Madagascar $h=10.0$ $m_b=6.0$ $M_{SZ}=5.5$ 

IPZ

14 May 1985 13:24:57.89

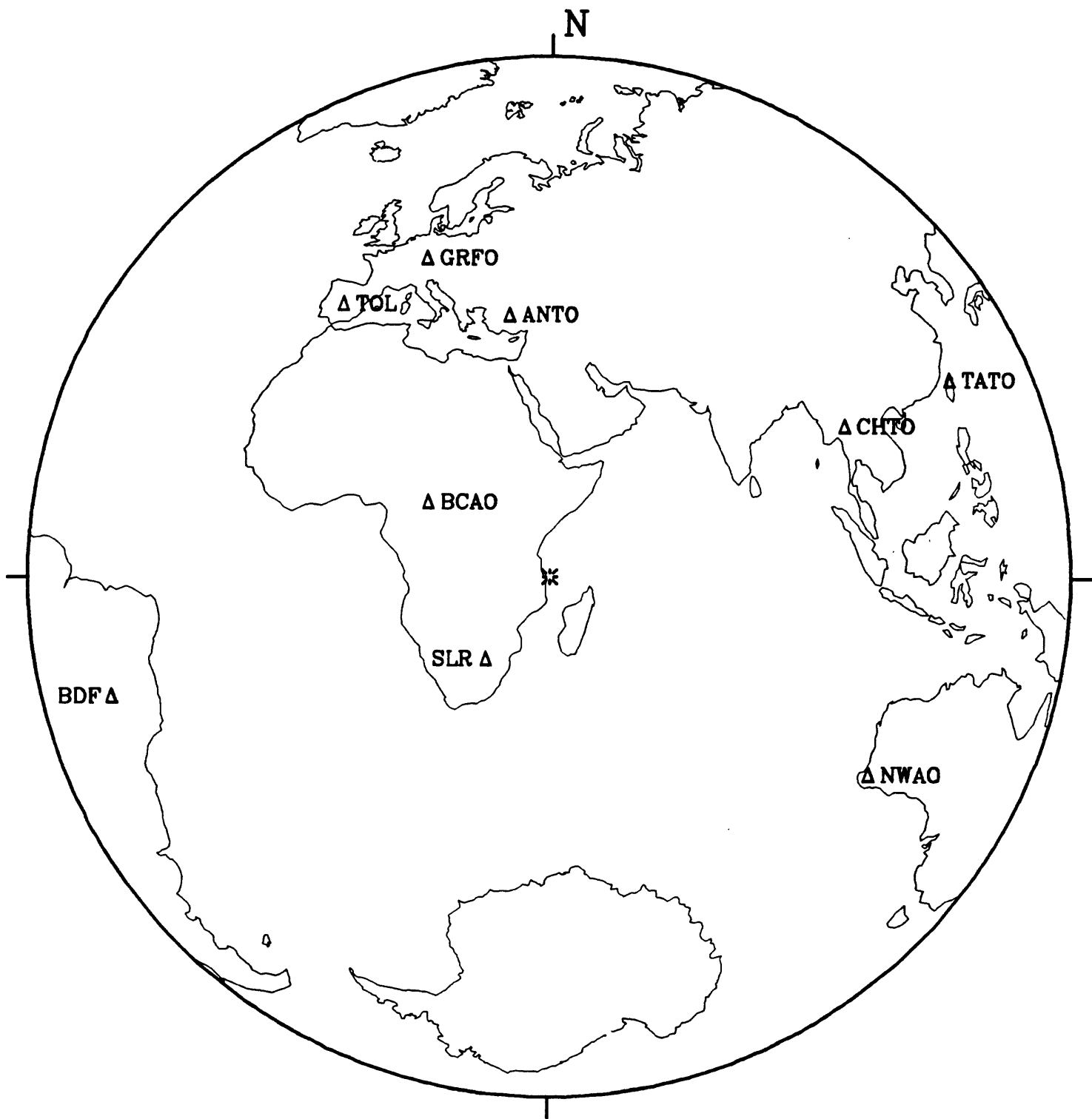
IPZ

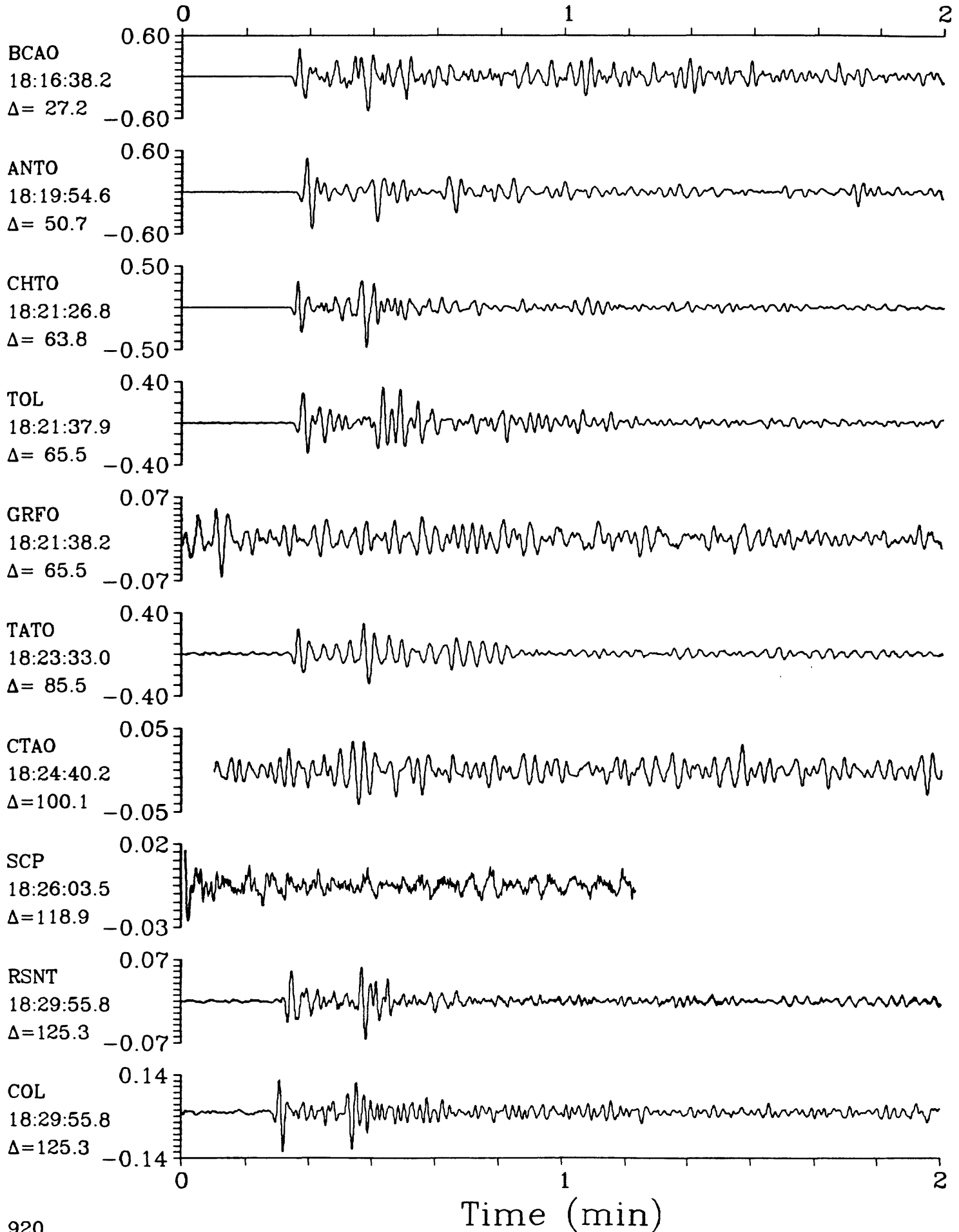
Northwest of Madagascar $h=10.0$ $m_b=6.0$ $M_{SZ}=5.5$



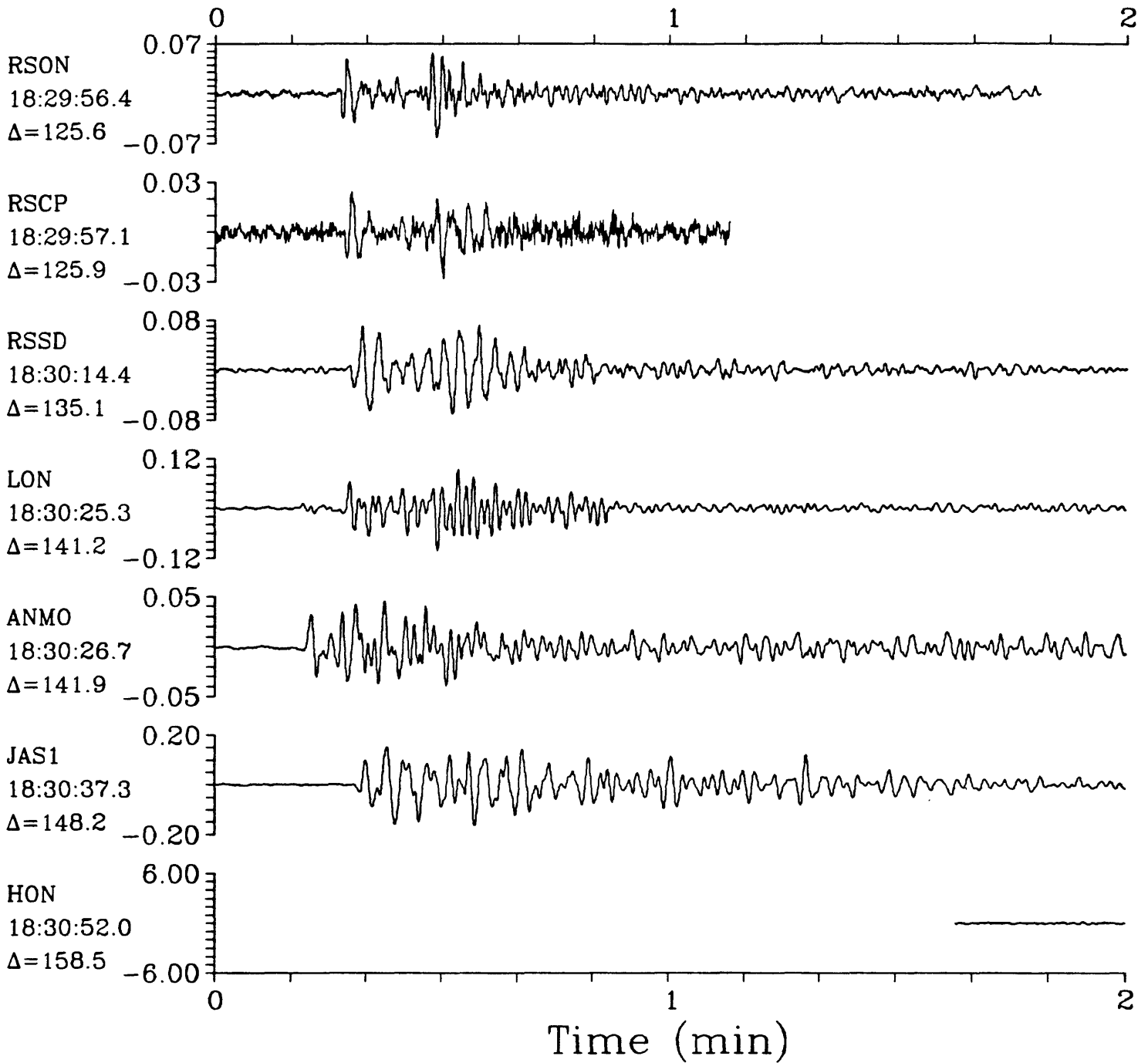
14 May 1985 18:11:09.12

Northwest of Madagascar



Northwest of Madagascar $h=10.0$ $m_b=6.4$ $M_{sz}=6.1$ 

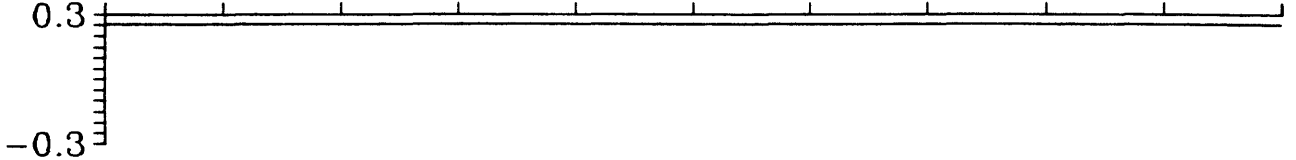
Northwest of Madagascar $h=10.0$ $m_b=6.4$ $M_{sz}=6.1$



Northwest of Madagascar $h=10.0$ $m_b=6.4$ $M_{sz}=6.1$

0 10 20 30 40 50

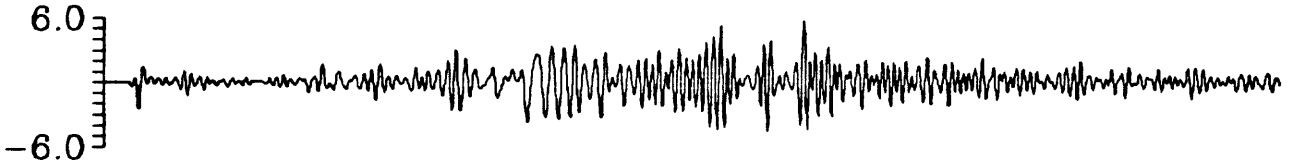
SLR
18:14:37.0
 $\Delta = 19.6$



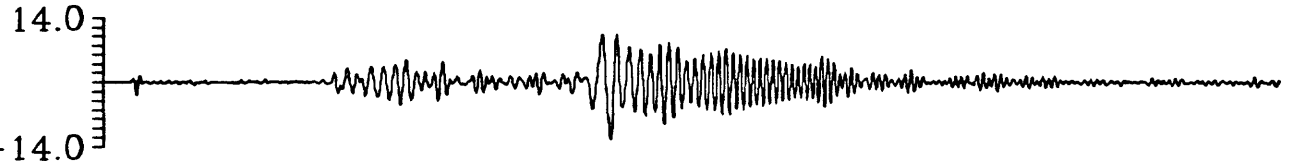
BCAO
18:15:53.2
 $\Delta = 27.2$



ANTO
18:19:09.6
 $\Delta = 50.7$



CHTO
18:20:41.8
 $\Delta = 63.8$



TOL
18:20:52.9
 $\Delta = 65.5$



GRFO
18:20:53.2
 $\Delta = 65.5$



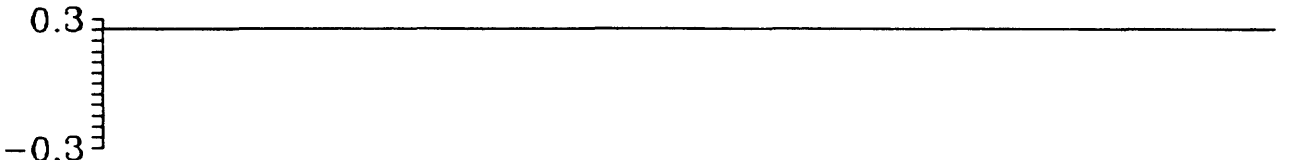
NWAO
18:21:36.6
 $\Delta = 72.5$



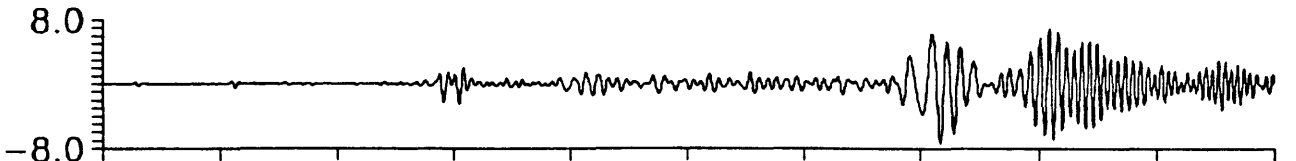
TATO
18:22:48.0
 $\Delta = 85.5$



BDF
18:22:53.3
 $\Delta = 86.6$

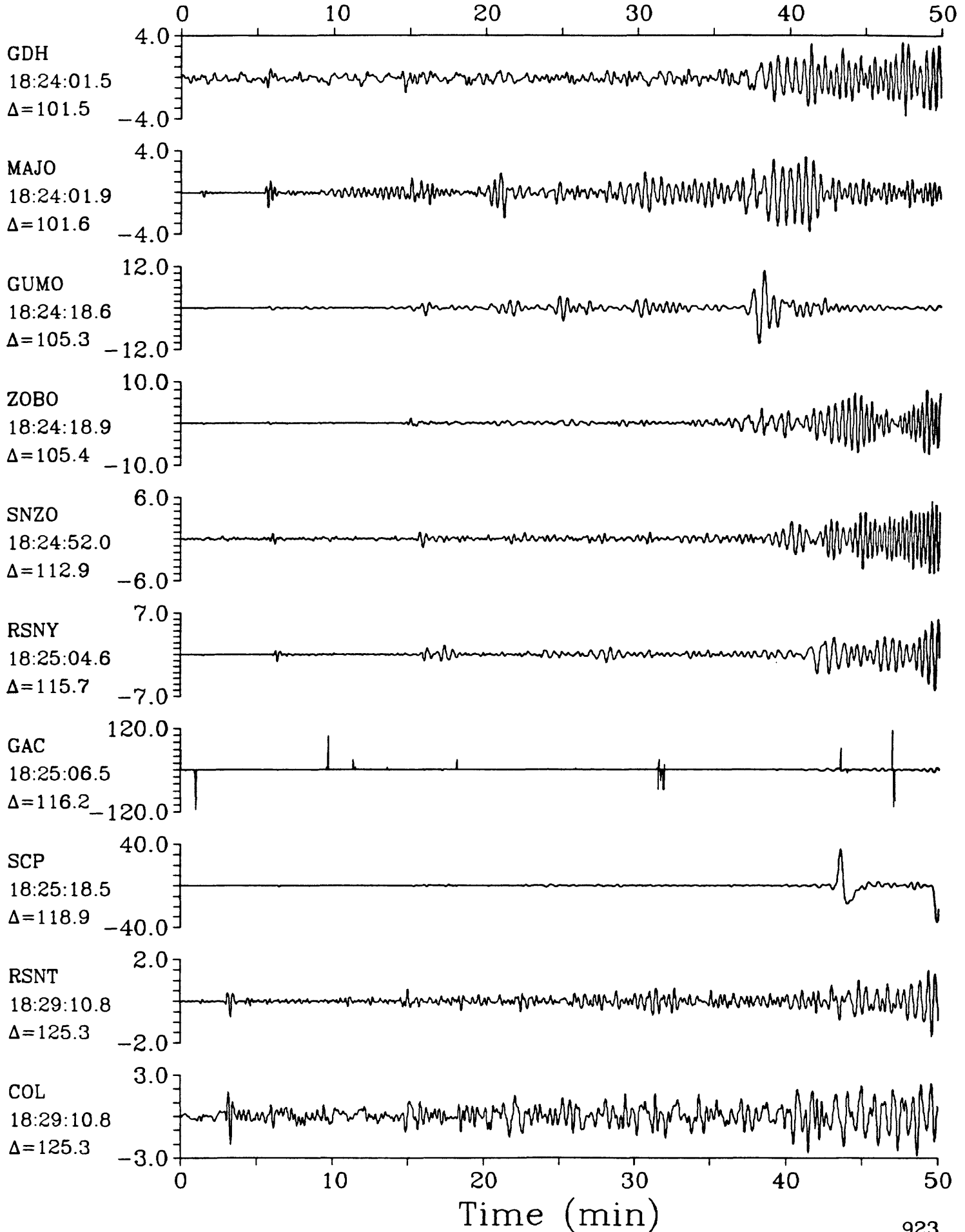


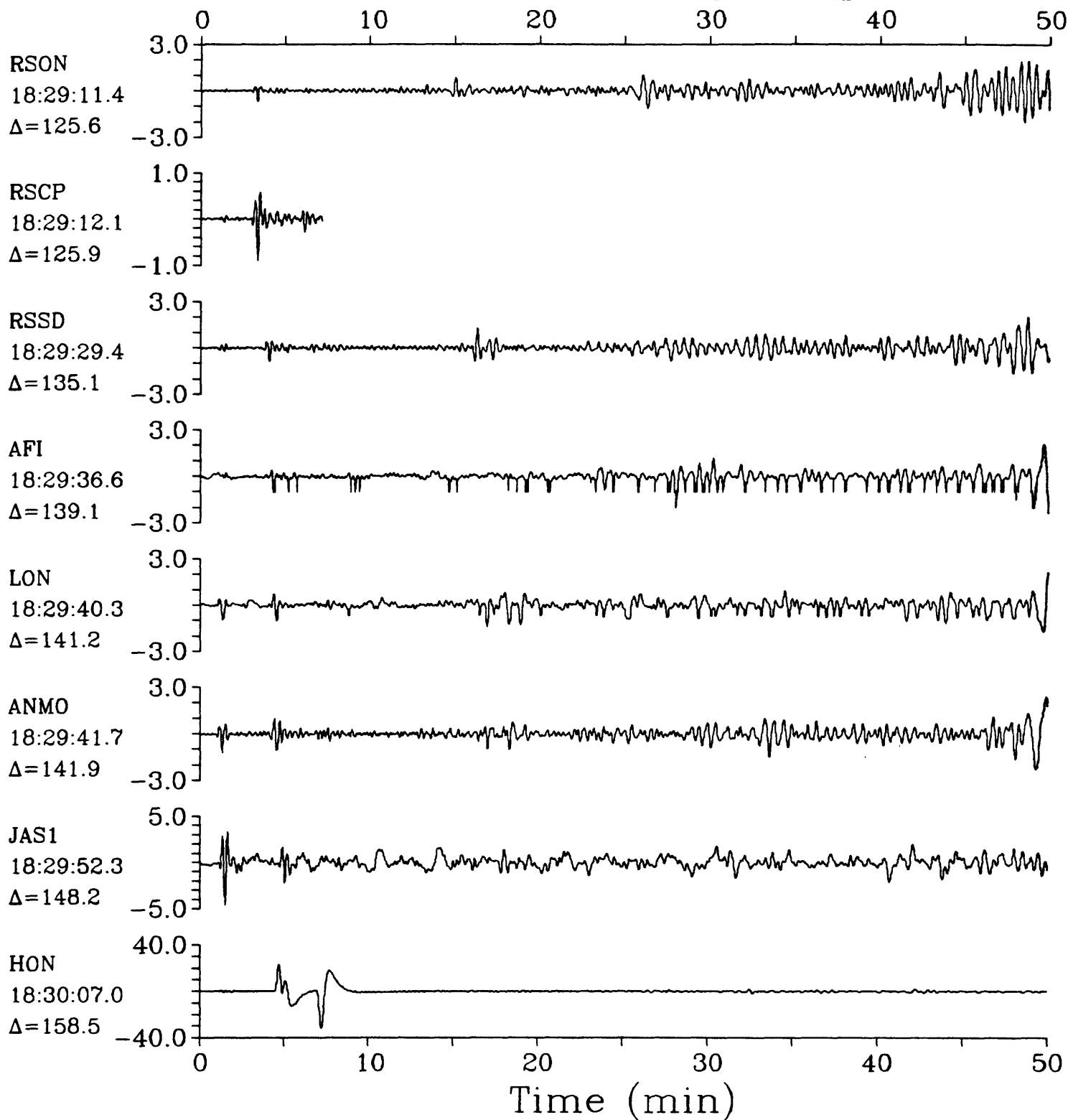
CTAO
18:23:55.2
 $\Delta = 100.1$



0 10 20 30 40 50

Time (min)

Northwest of Madagascar $h=10.0$ $m_b=6.4$ $M_{sz}=6.1$ 

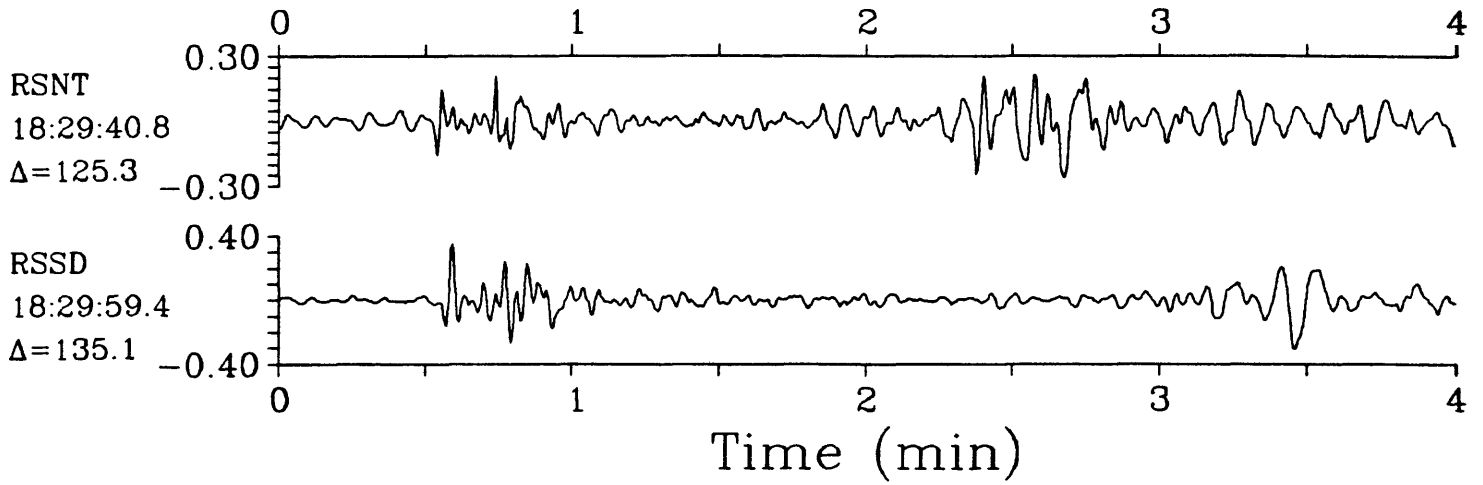
Northwest of Madagascar $h=10.0$ $m_b=6.4$ $M_{SZ}=6.1$ 

IPZ

14 May 1985 18:11:09.12

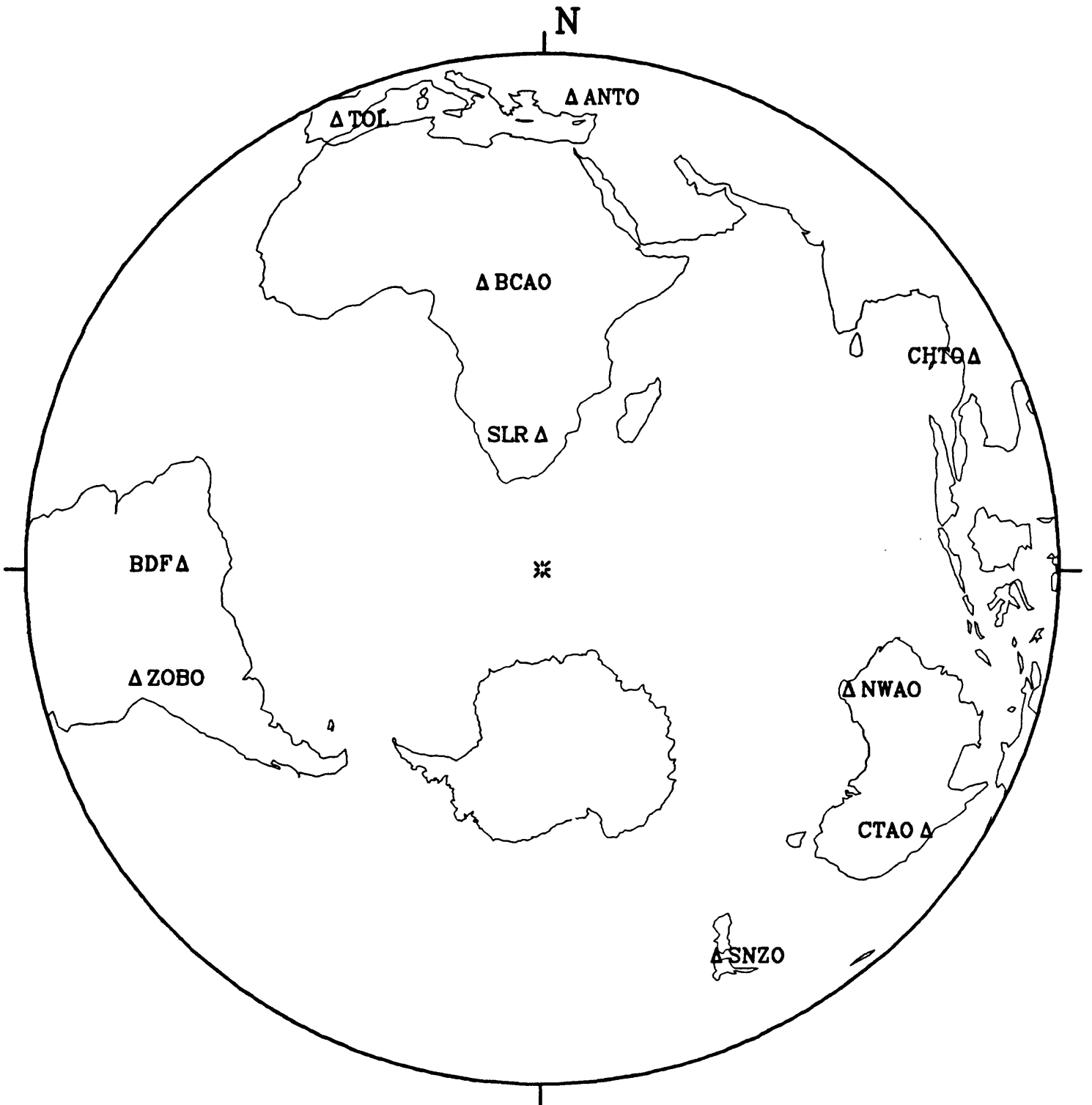
IPZ

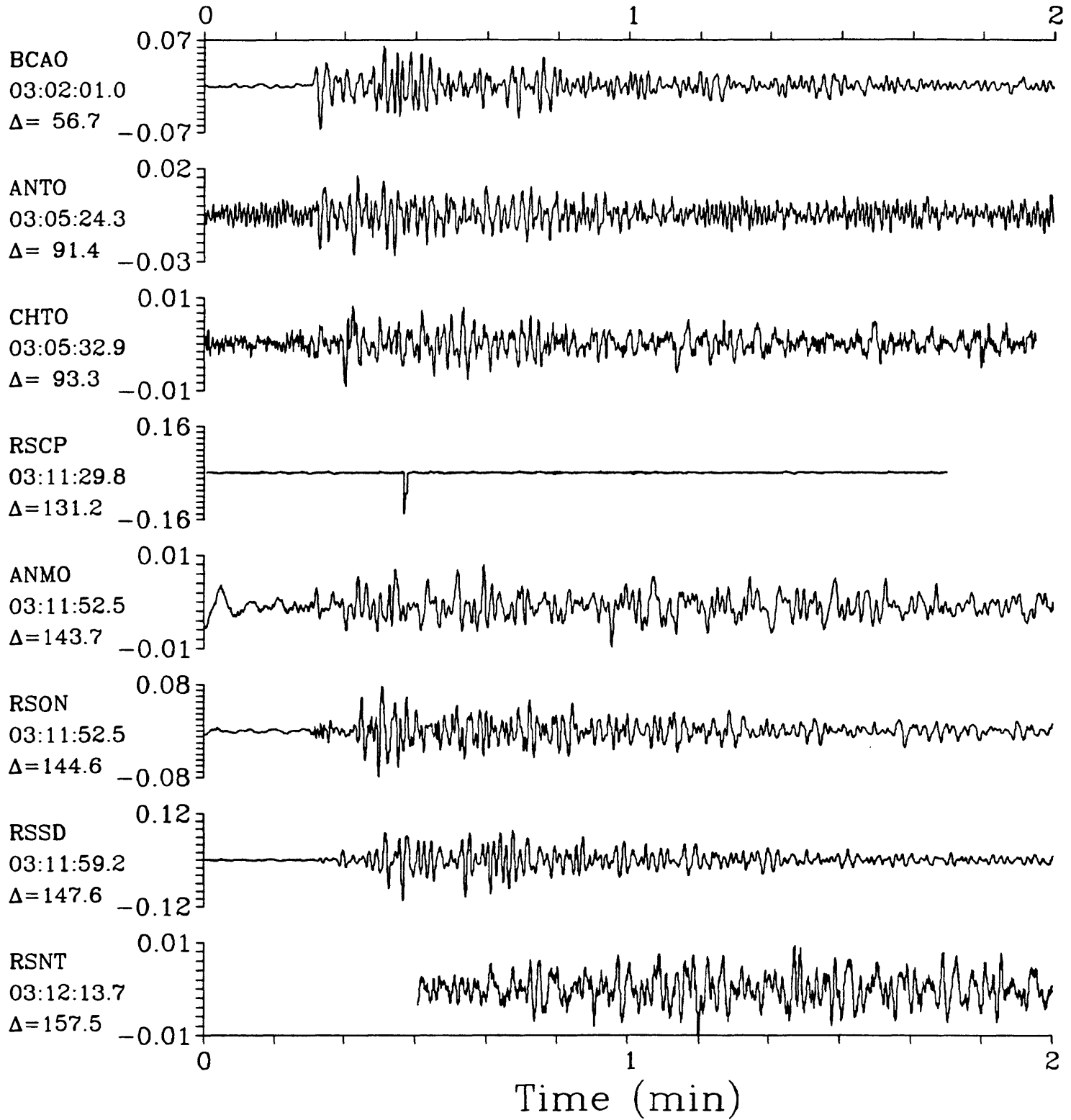
Northwest of Madagascar $h=10.0$ $m_b=6.4$ $M_{SZ}=6.1$

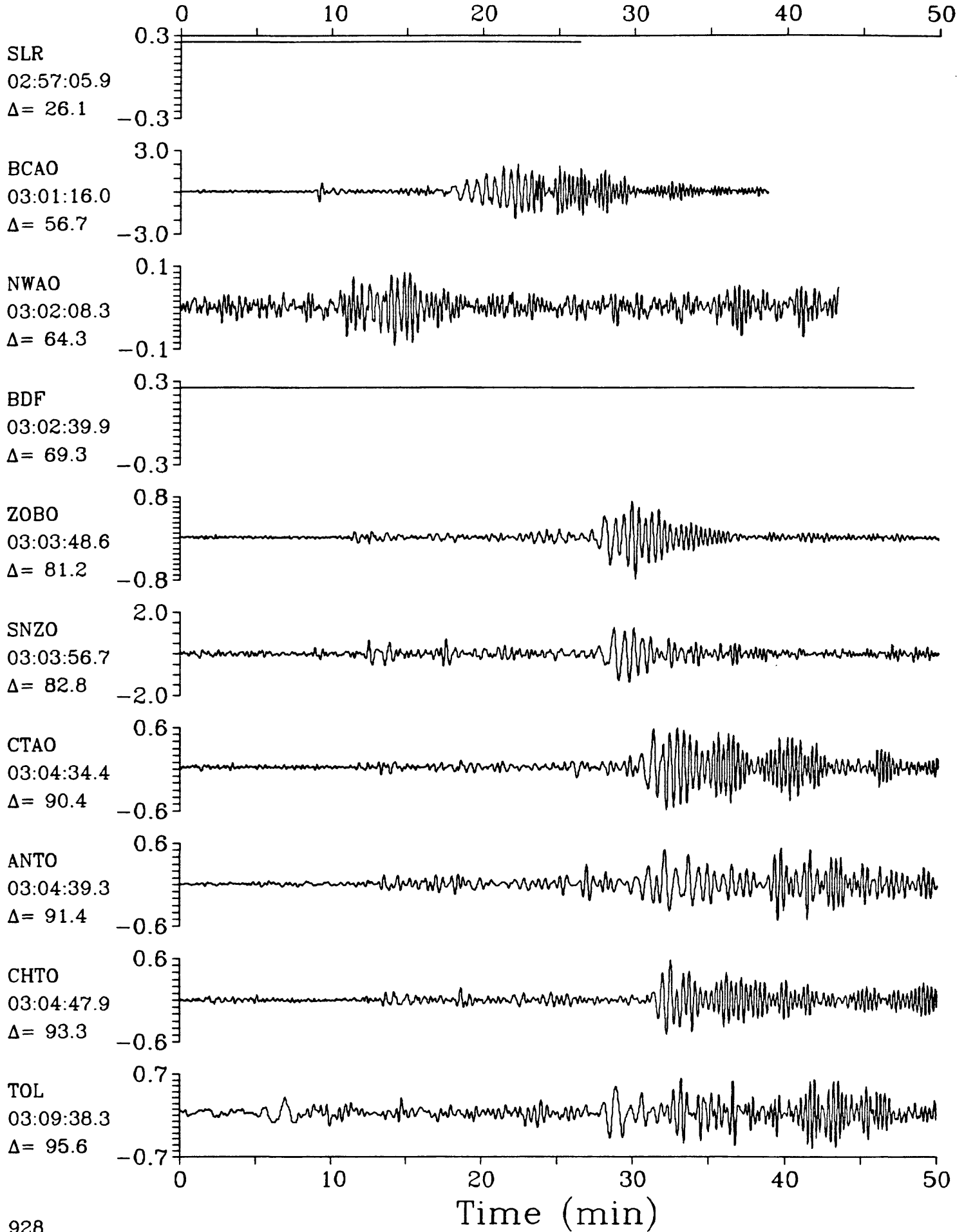


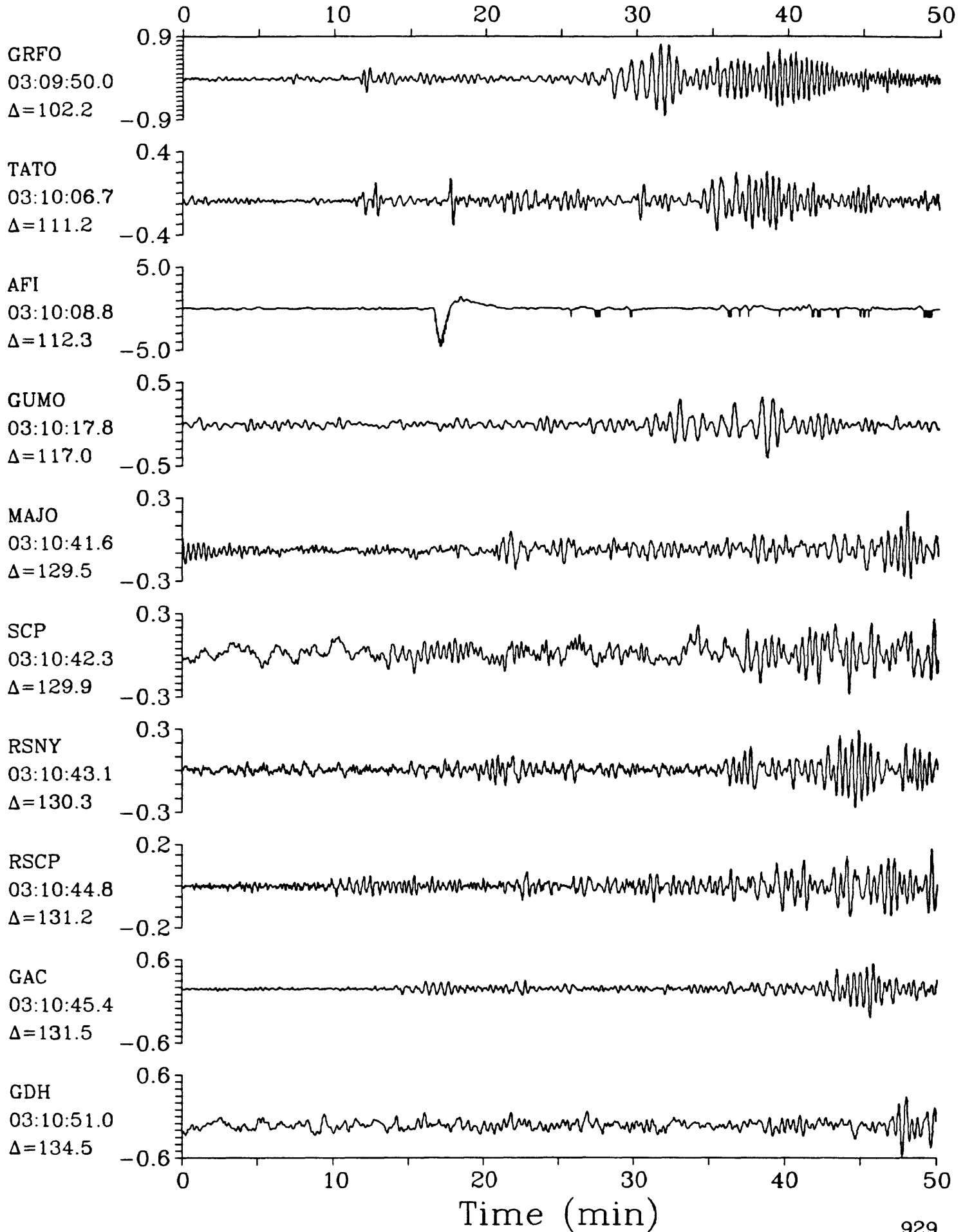
15 May 1985 02:52:31.96

South of Africa

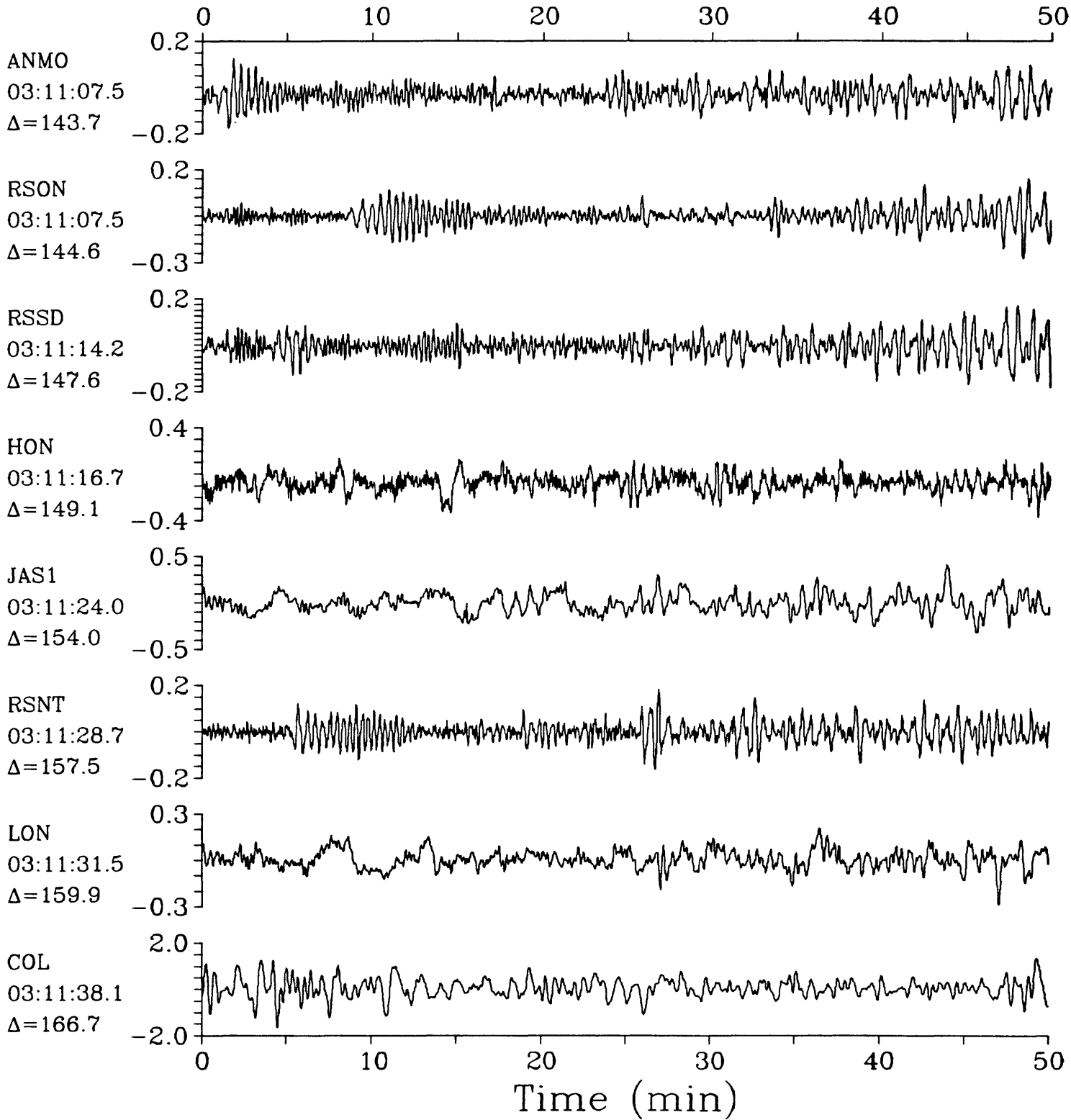


South of Africa $h=10.0$ $m_b=5.6$ $M_{sz}=5.4$ 

South of Africa $h=10.0$ $m_b=5.6$ $M_{sz}=5.4$ 

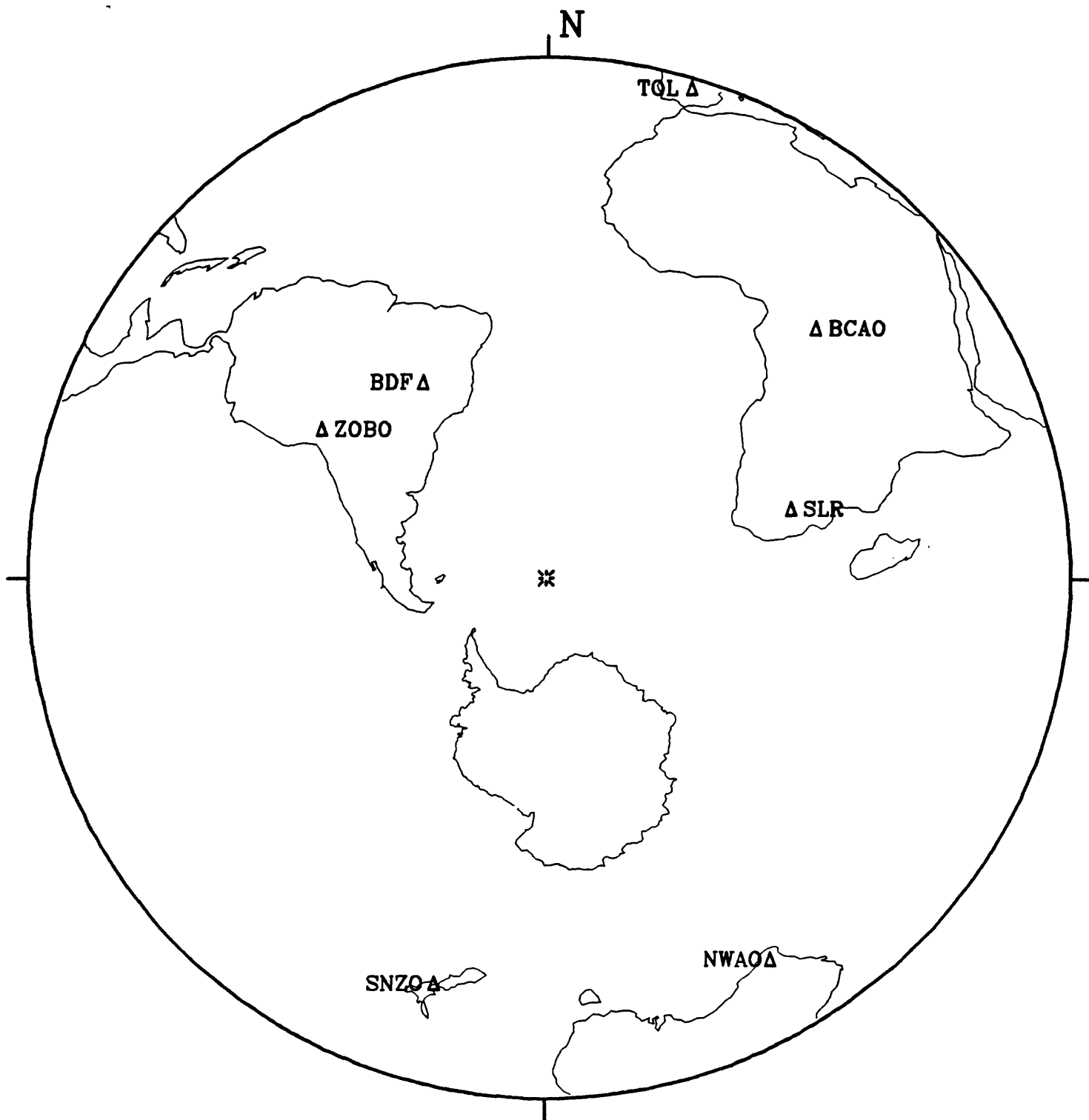
South of Africa $h=10.0$ $m_b=5.6$ $M_{SZ}=5.4$ 

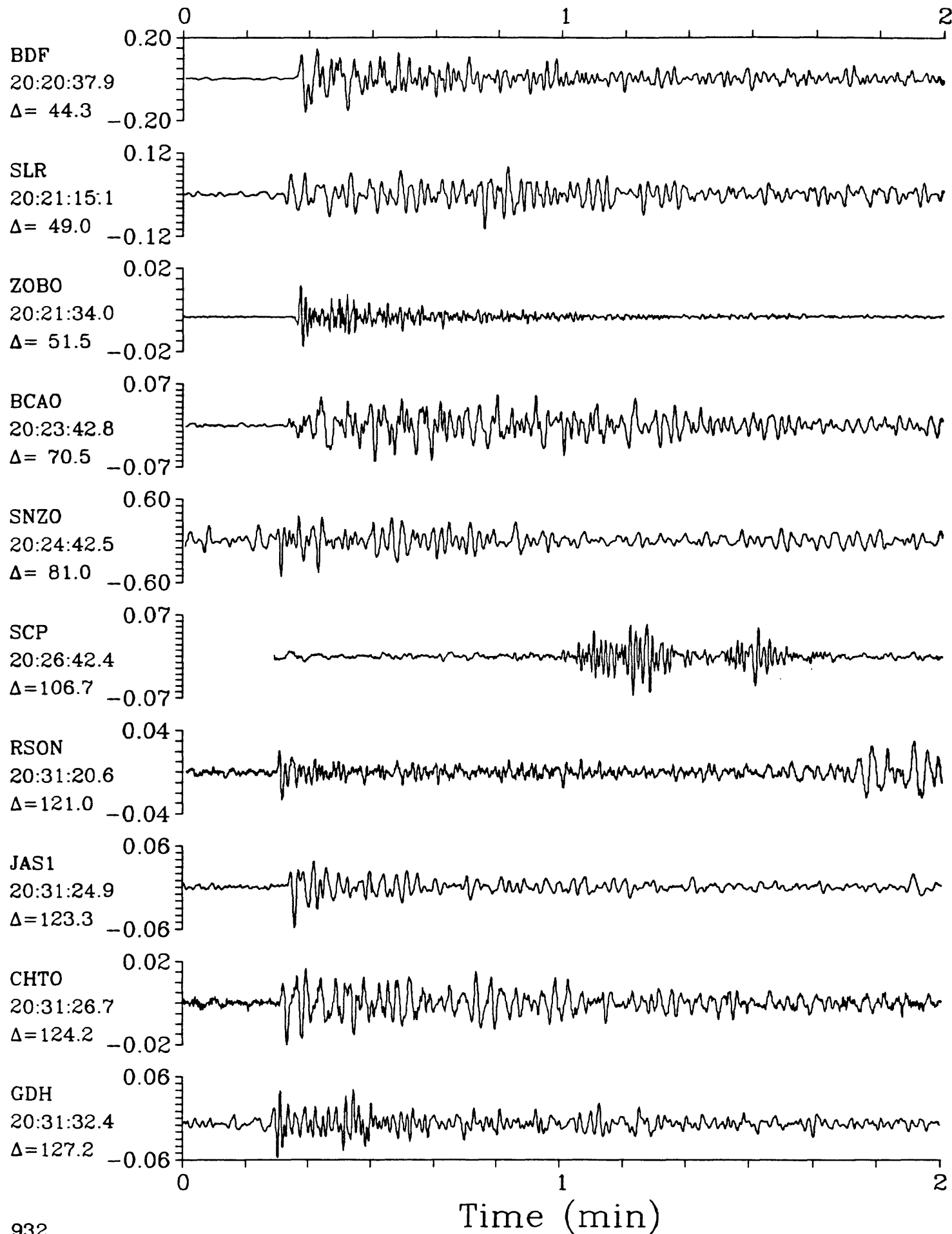
South of Africa $h=10.0$ $m_b=5.6$ $M_{SZ}=5.4$



15 May 1985 20:12:45.74

South Sandwich Islands Region



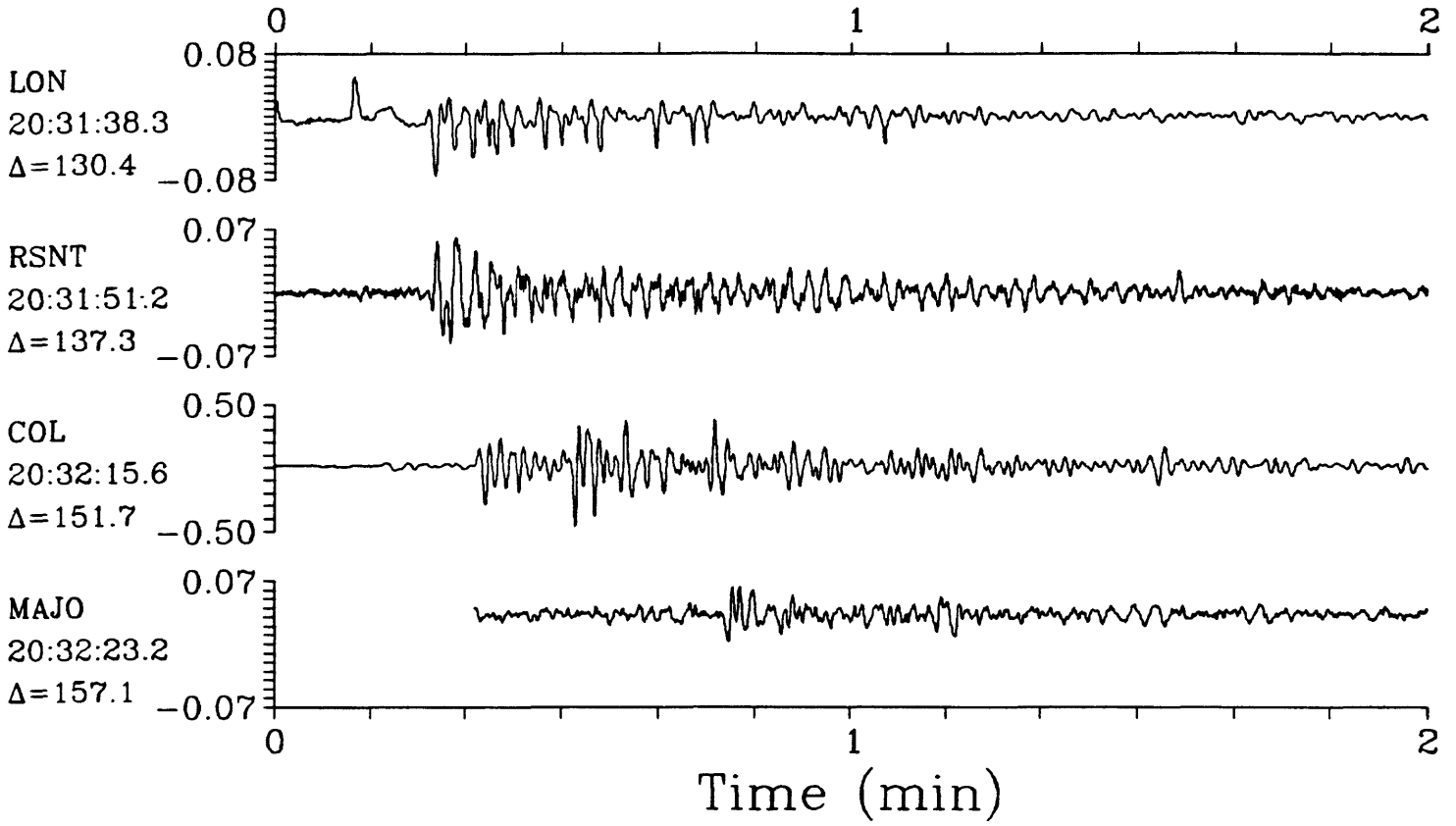
South Sandwich Islands Region $h=33.0$ $m_b=5.8$ $M_{sz}=6.4$ 

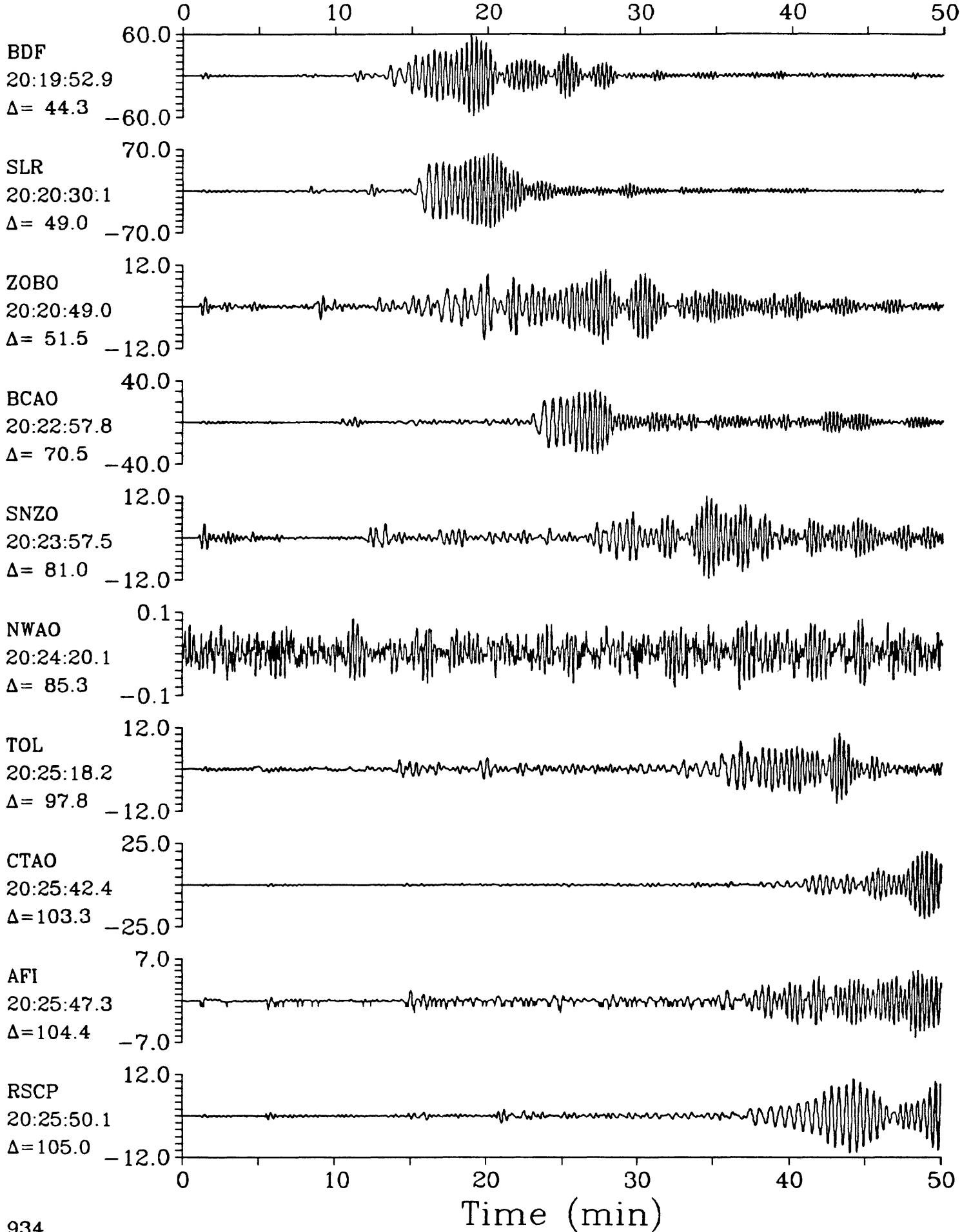
SPZ

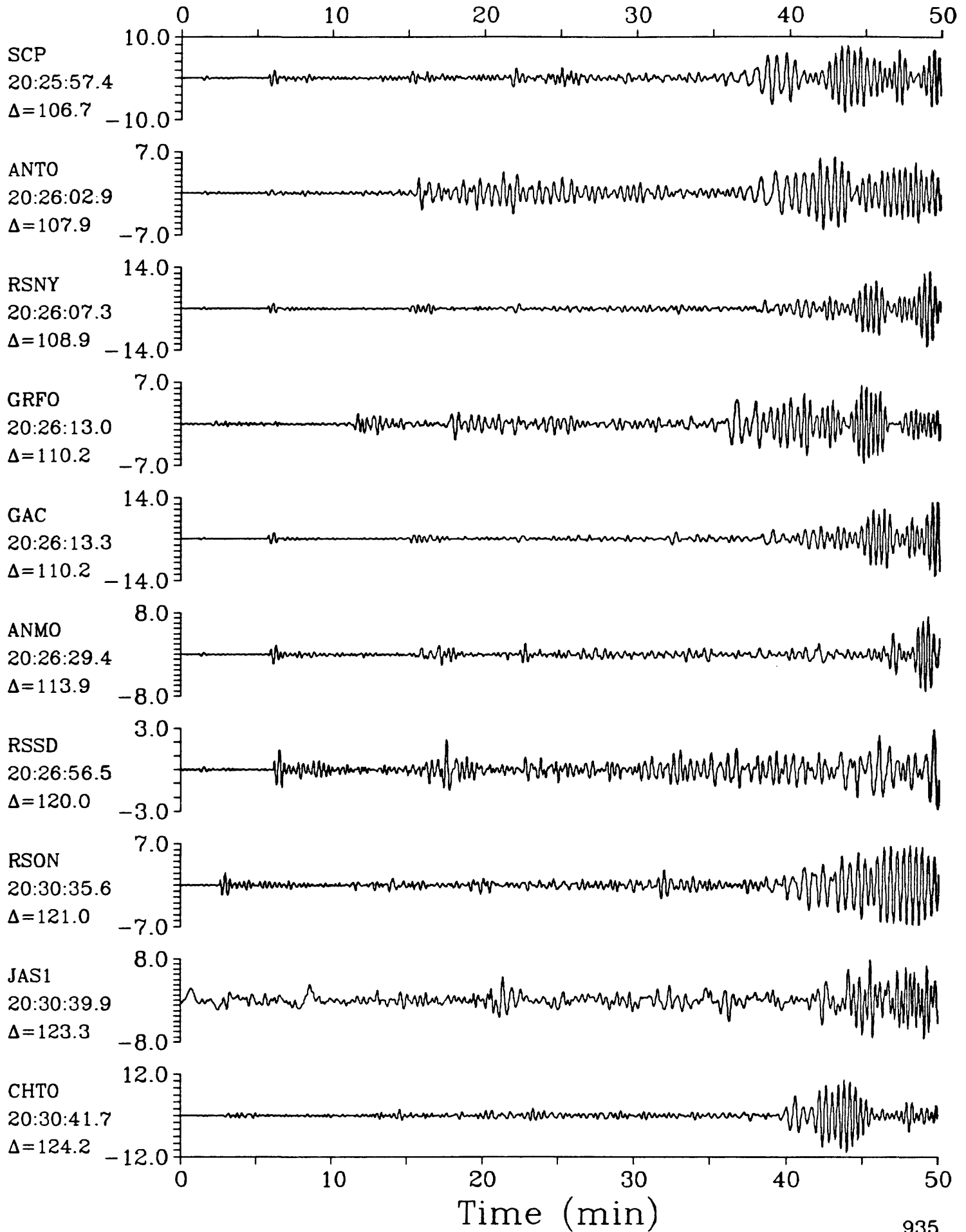
15 May 1985 20:12:45.74

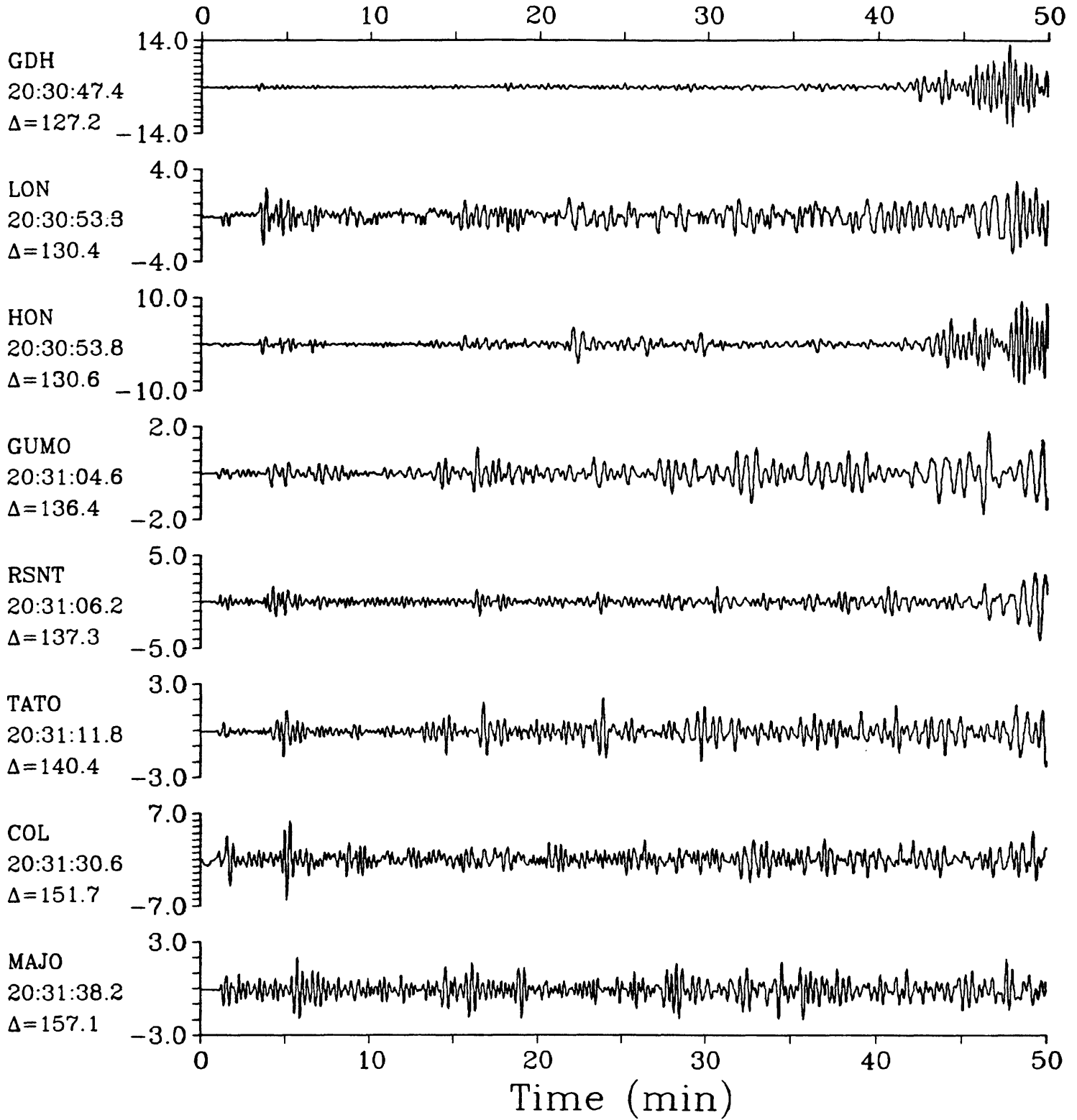
SPZ

South Sandwich Islands Region $h=33.0$ $m_b=5.8$ $M_{SZ}=6.4$



South Sandwich Islands Region $h=33.0$ $m_b=5.8$ $M_{SZ}=6.4$ 

South Sandwich Islands Region $h=33.0$ $m_b=5.8$ $M_{sz}=6.4$ 

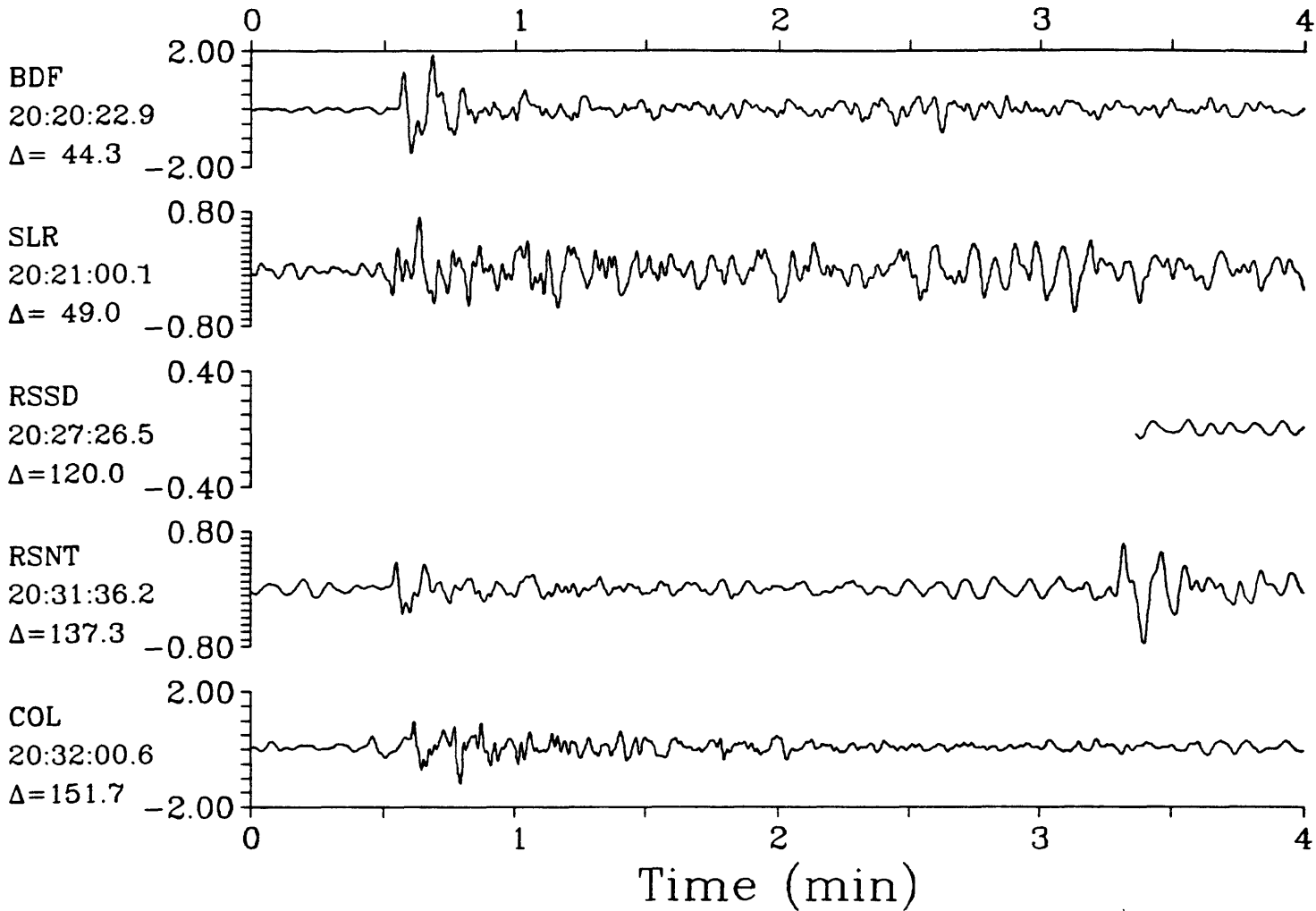
South Sandwich Islands Region $h=33.0$ $m_b=5.8$ $M_{SZ}=6.4$ 

IPZ

15 May 1985 20:12:45.74

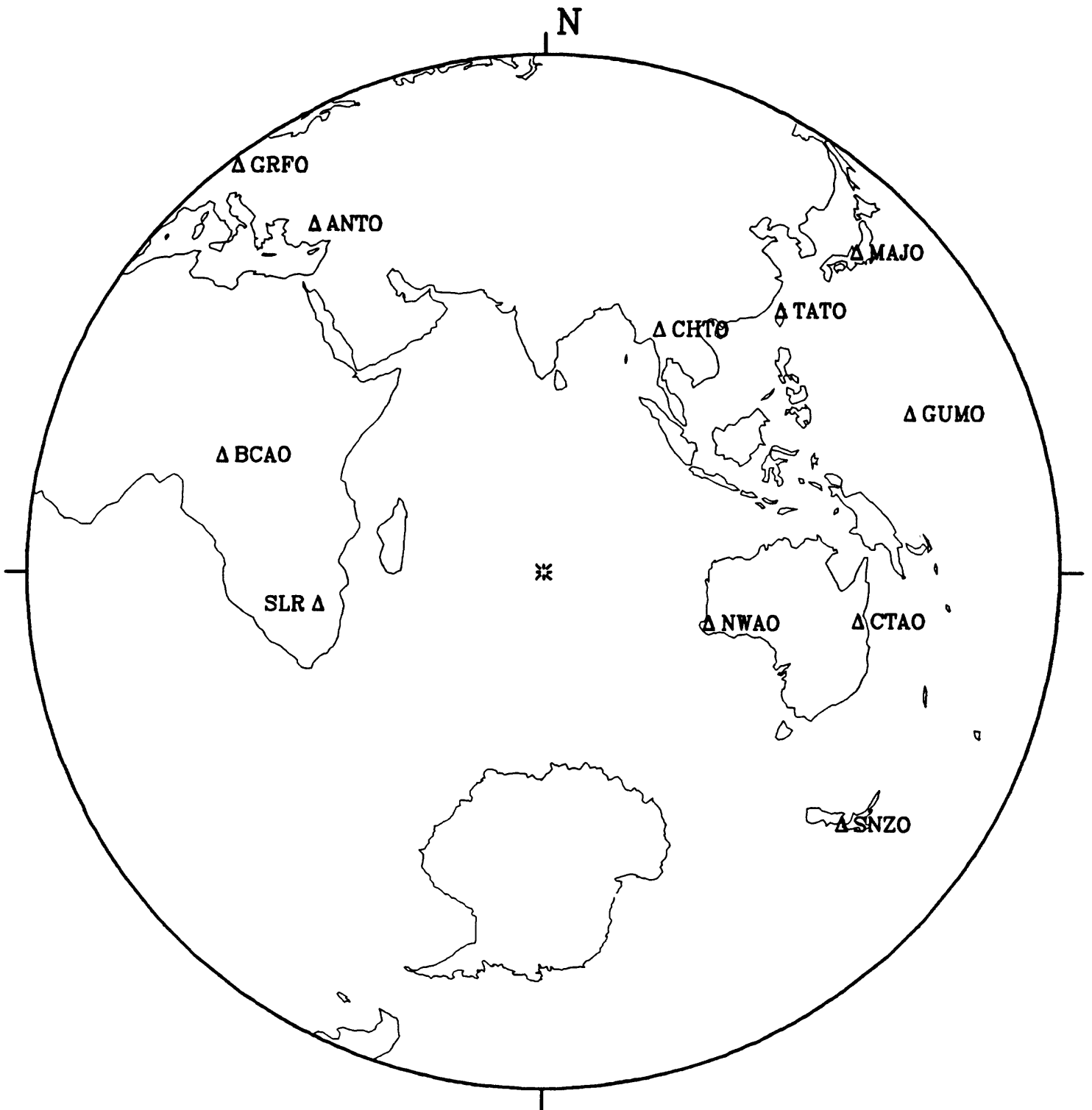
IPZ

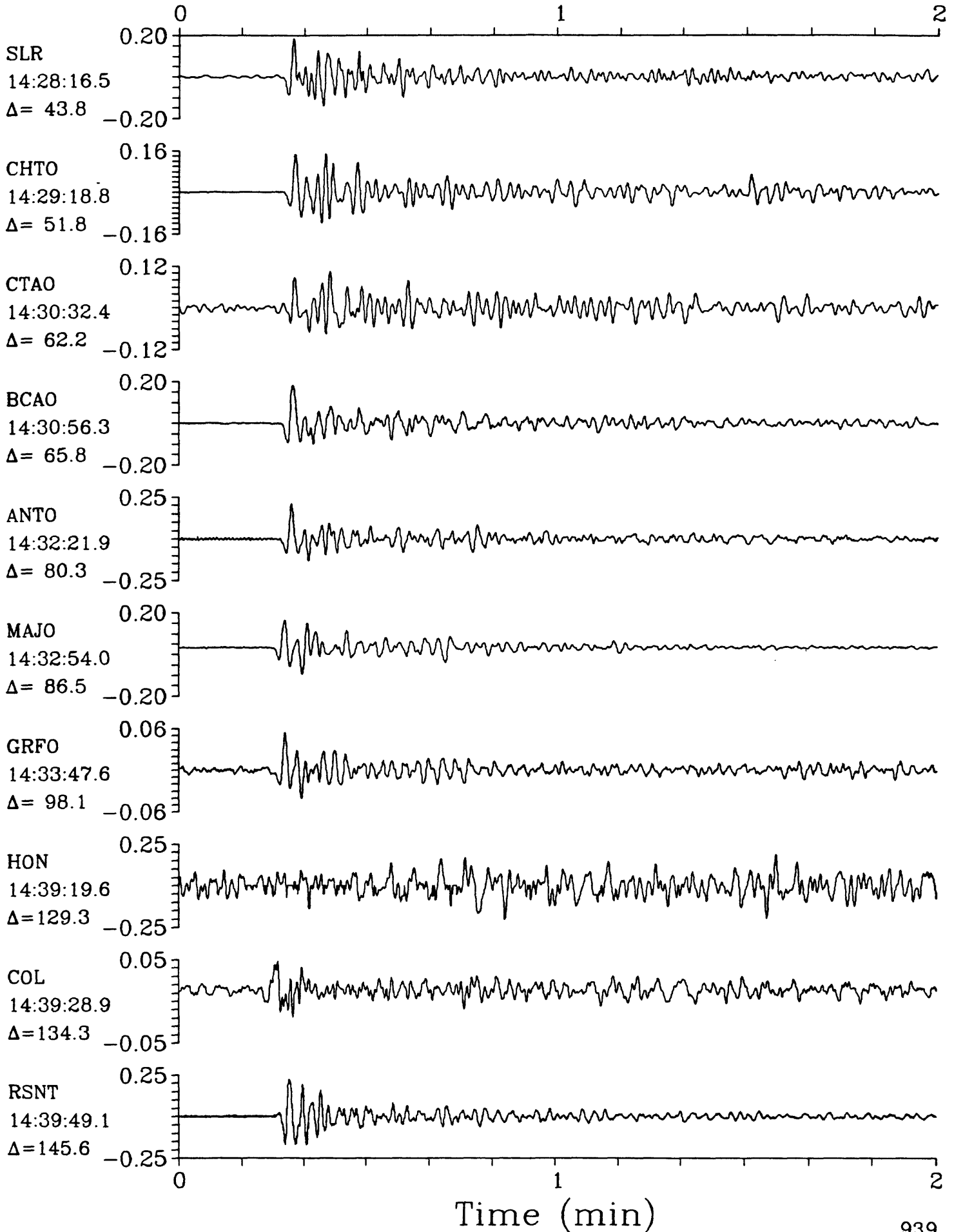
South Sandwich Islands Region $h=33.0$ $m_b=5.8$ $M_{sz}=6.4$



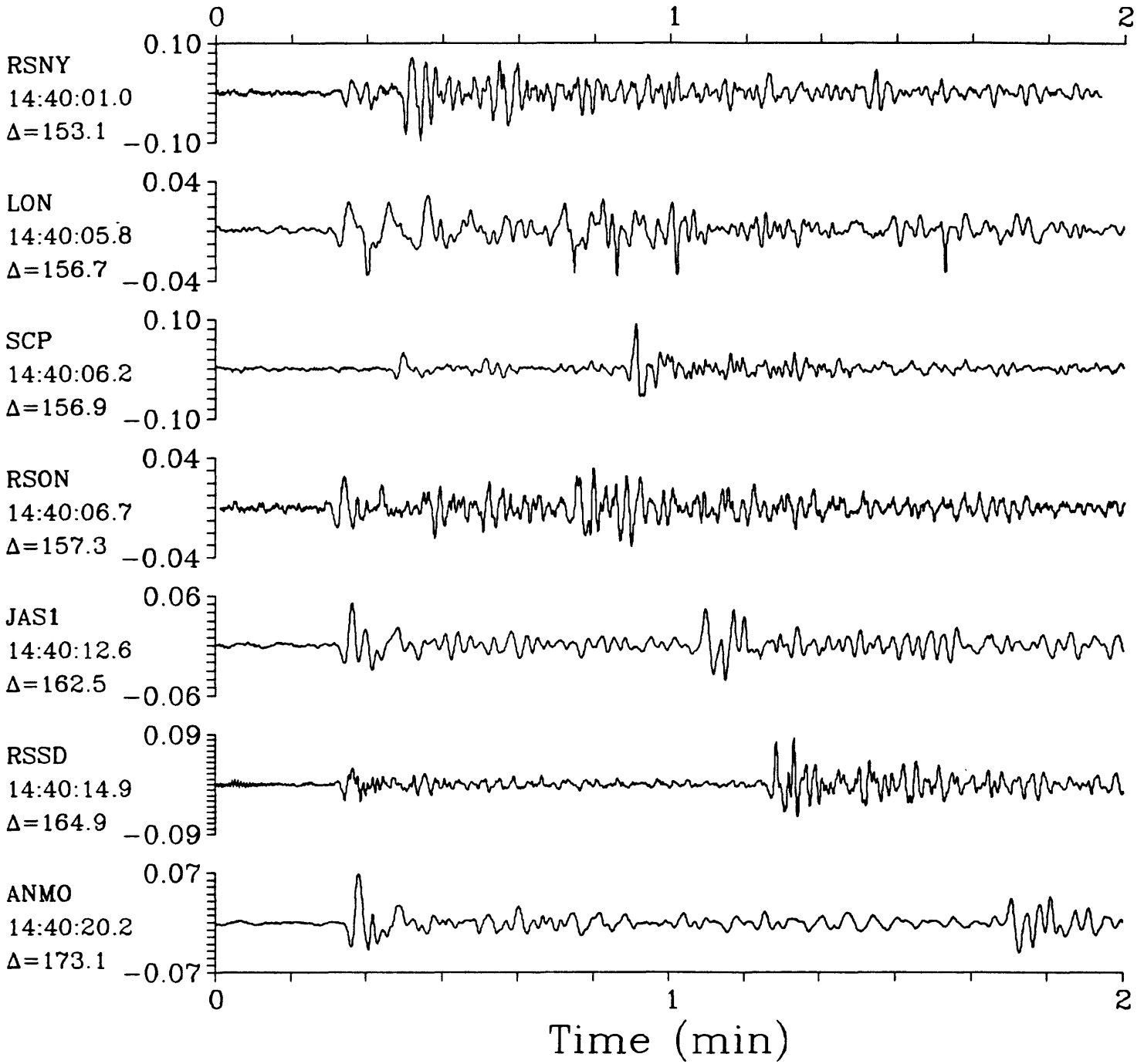
16 May 1985 14:20:25.19

Mid-Indian Rise

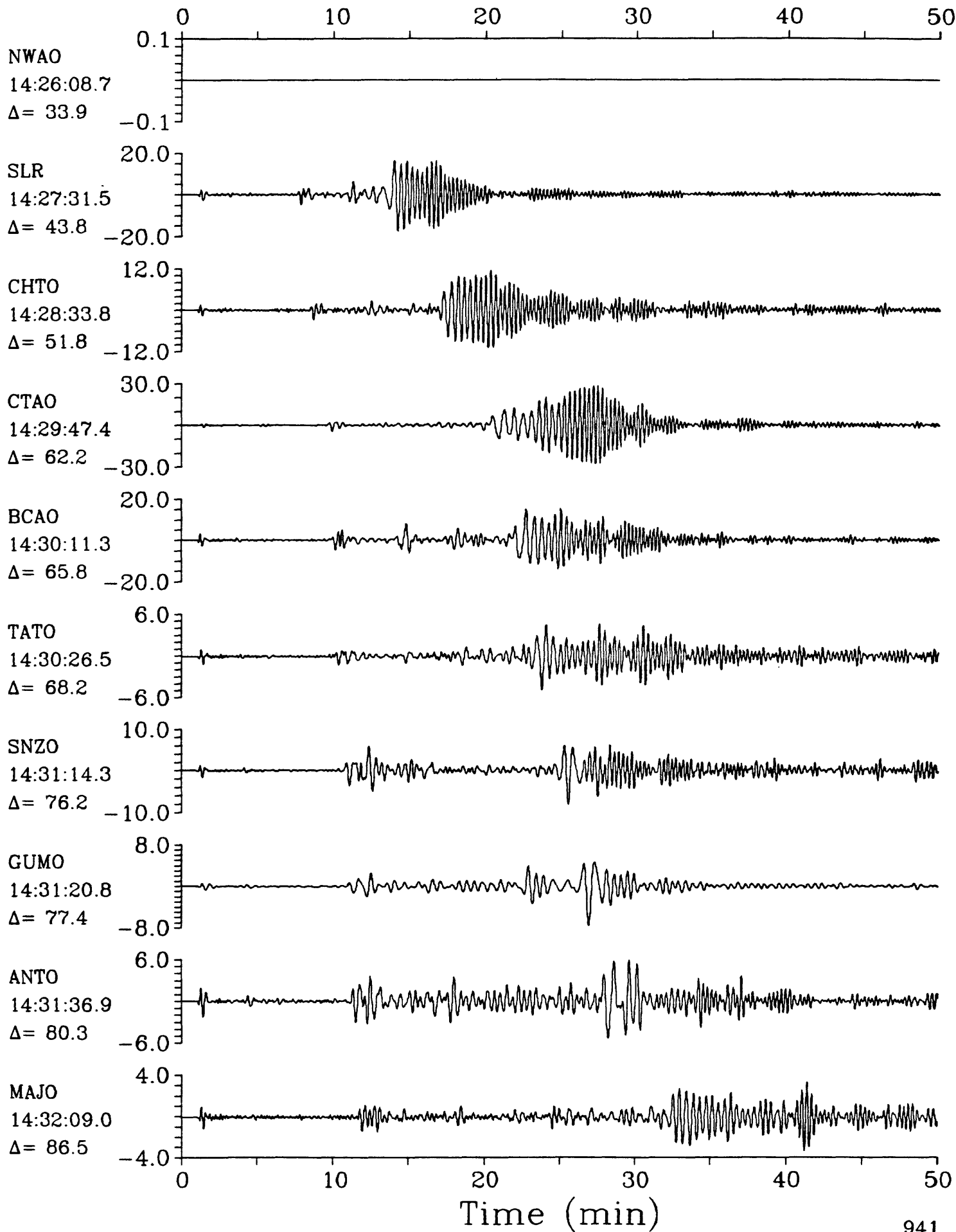


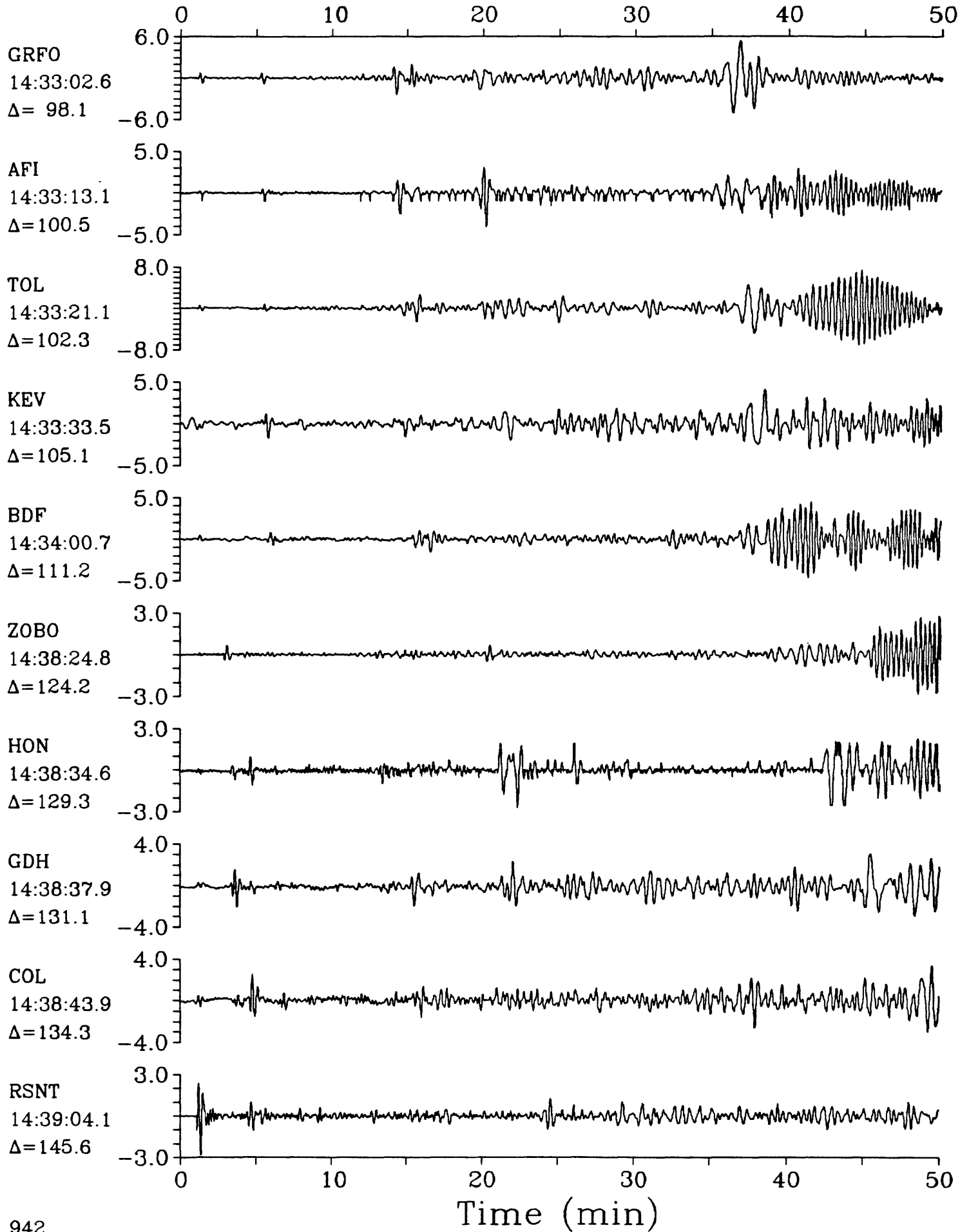
Mid-Indian Rise $h=10.0$ $m_b=5.9$ $M_{sz}=6.0$ 

Mid-Indian Rise $h=10.0$ $m_b=5.9$ $M_{sz}=6.0$

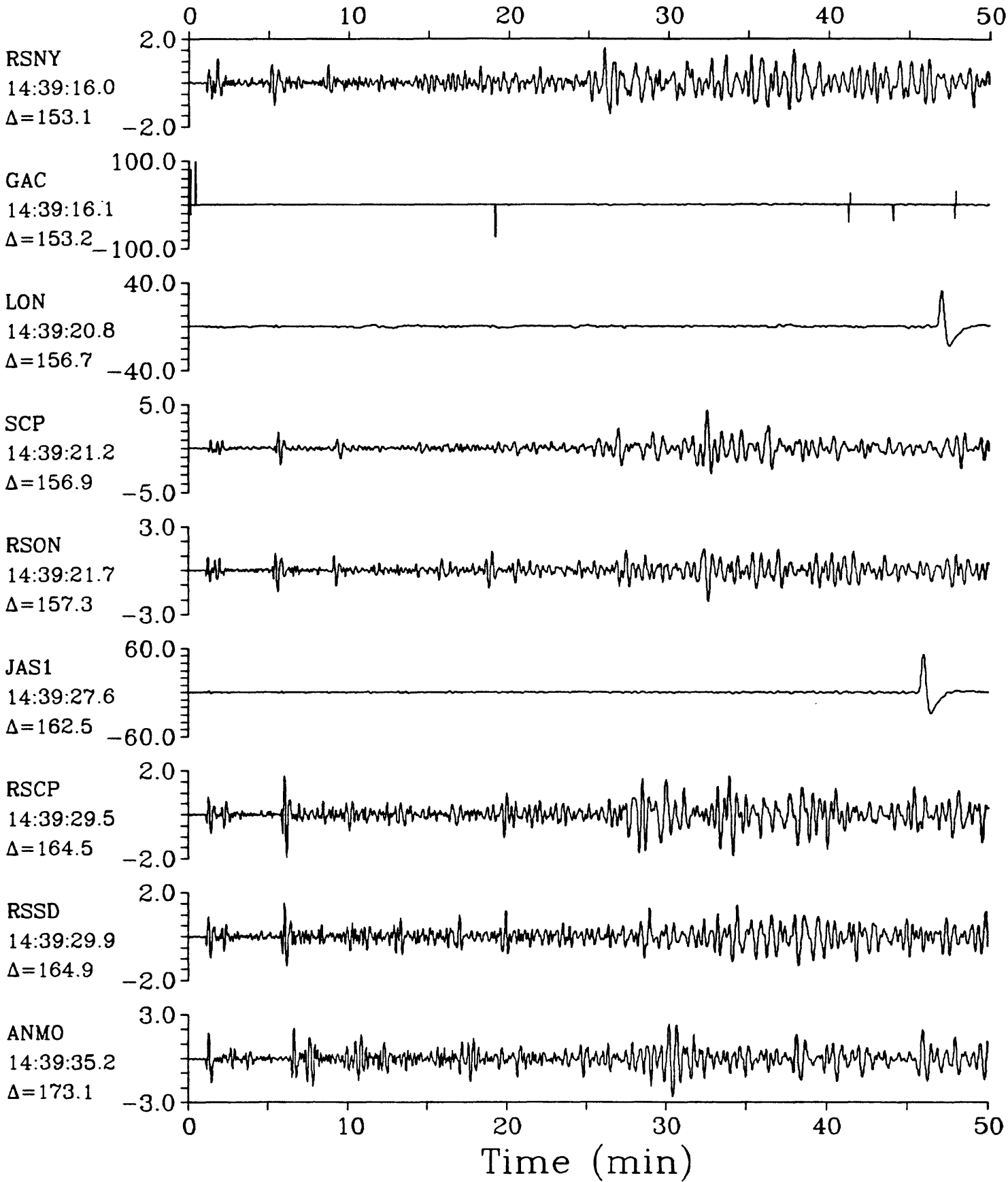


Mid-Indian Rise $h=10.0$ $m_b=5.9$ $M_{sz}=6.0$

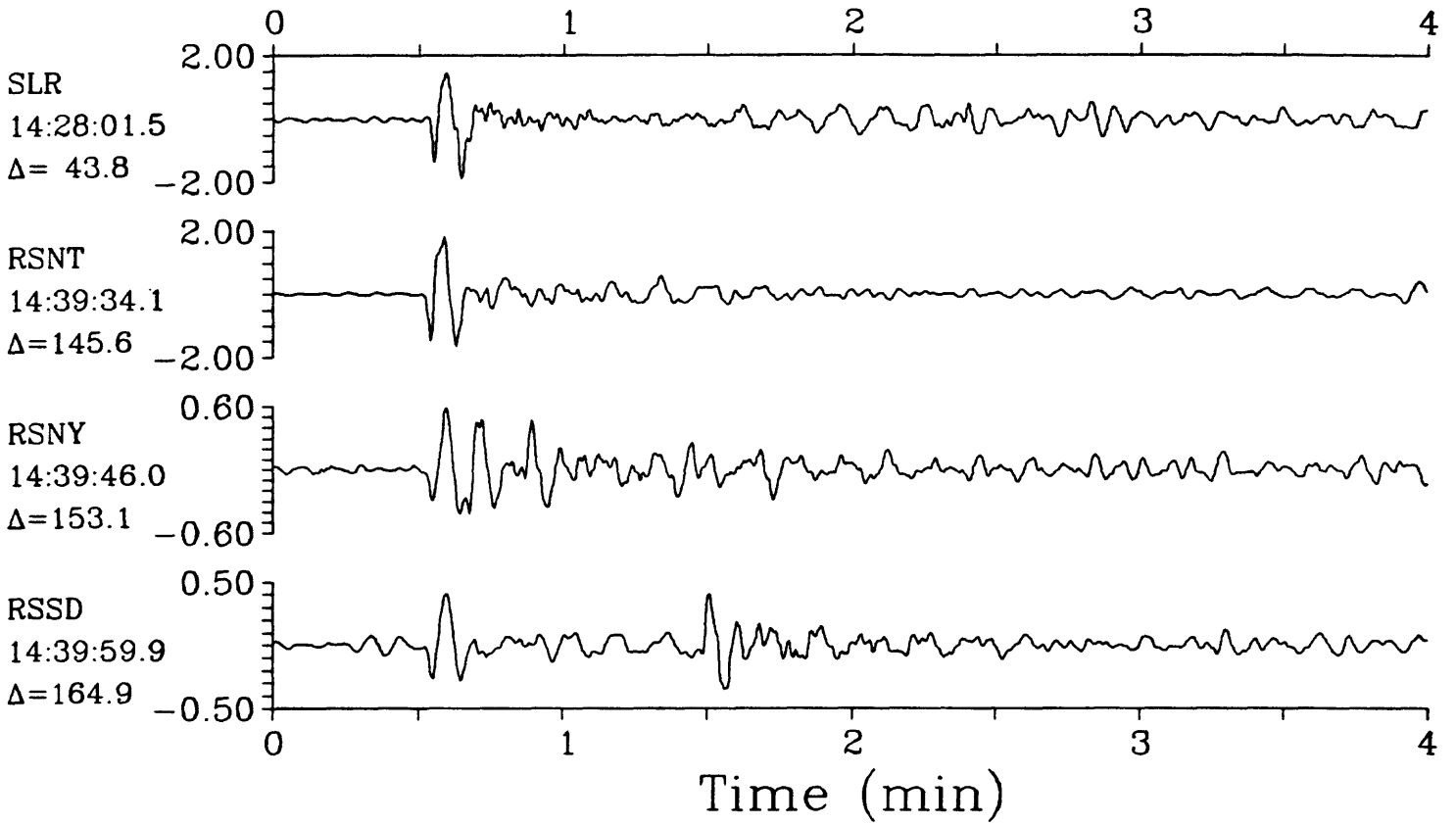


Mid-Indian Rise $h=10.0$ $m_b=5.9$ $M_{SZ}=6.0$ 

Mid-Indian Rise $h=10.0$ $m_b=5.9$ $M_{sz}=6.0$

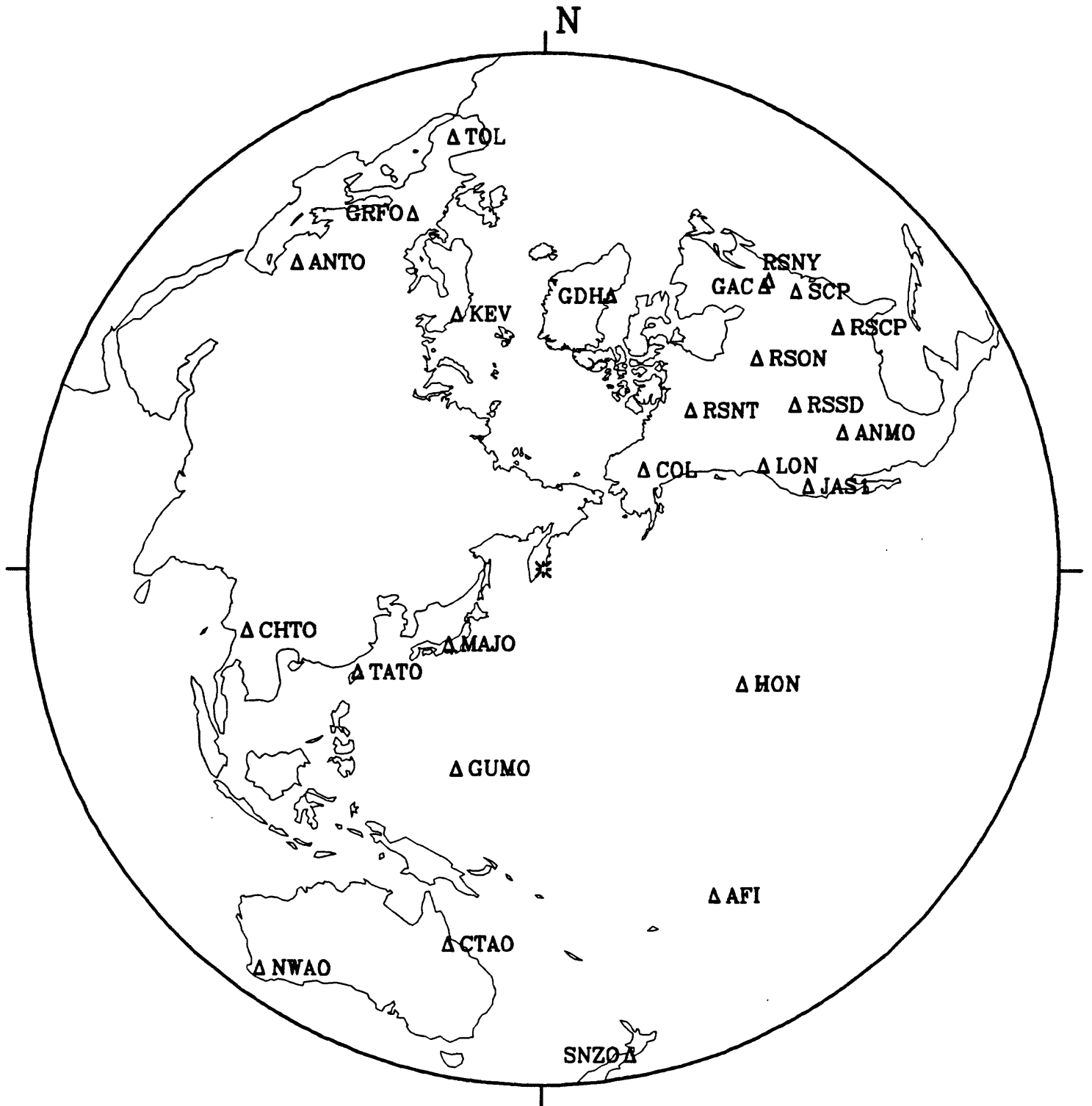


Mid-Indian Rise $h=10.0$ $m_b=5.9$ $M_{sz}=6.0$

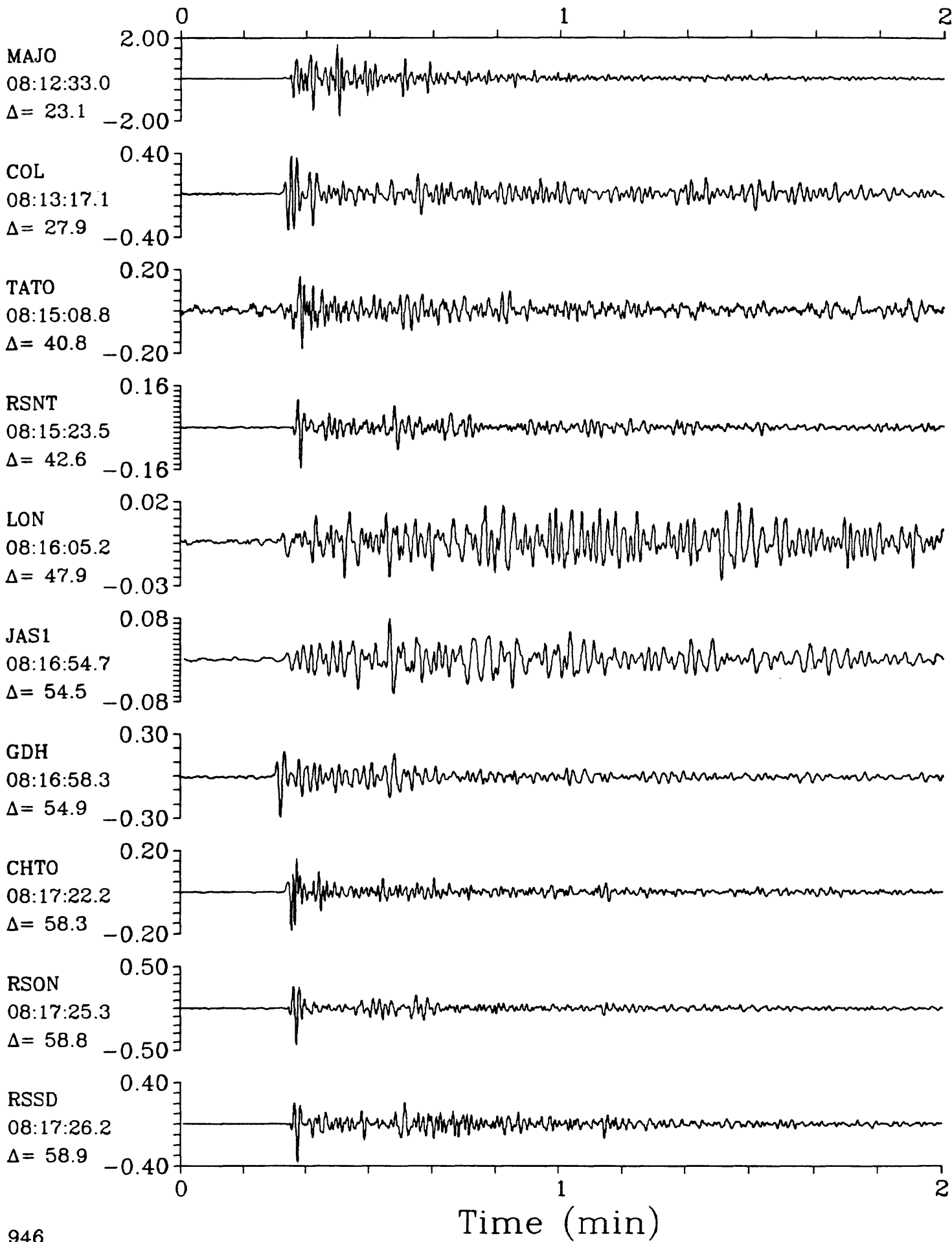


19 May 1985 08:07:48.22

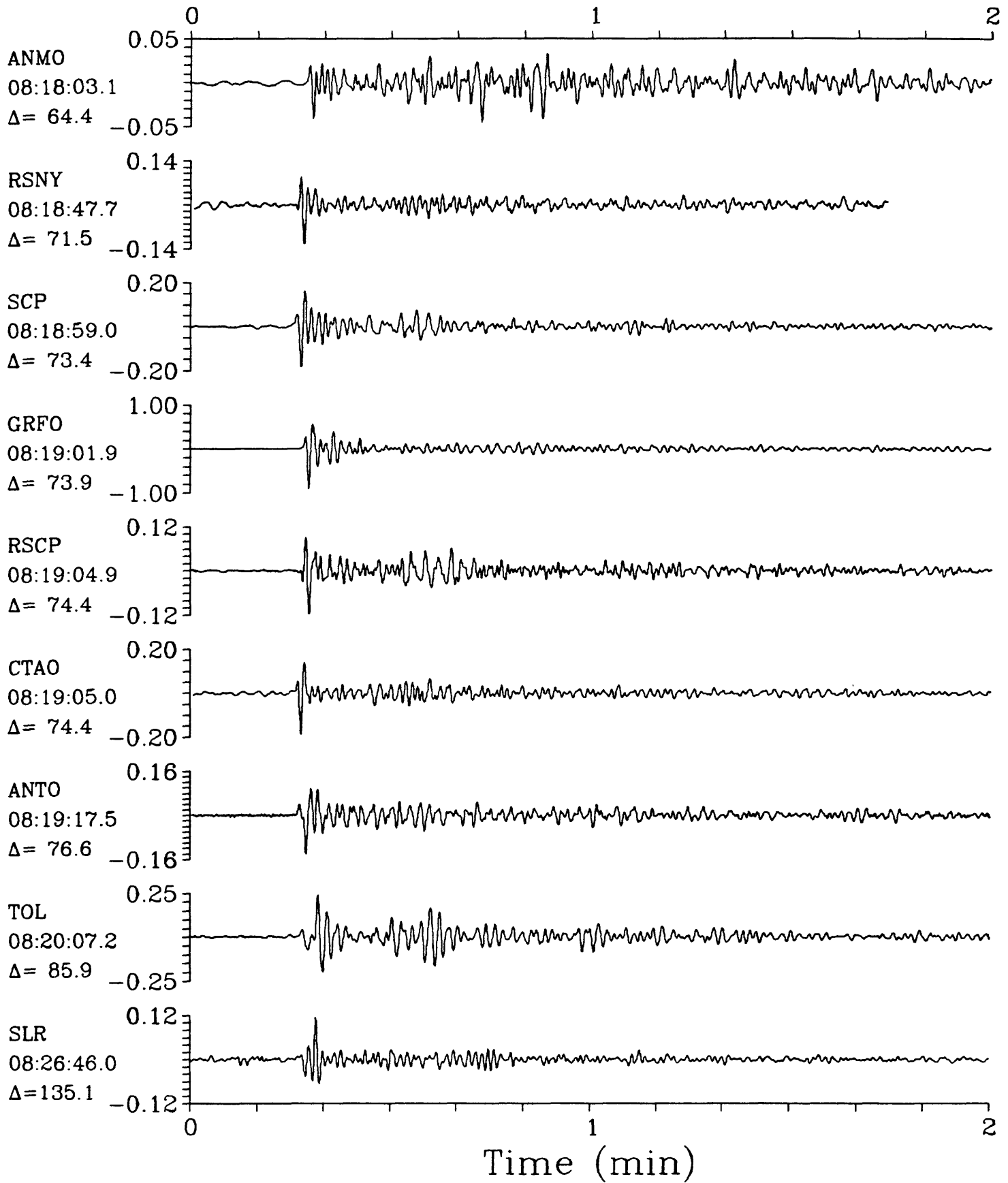
Near East Coast of Kamchatka



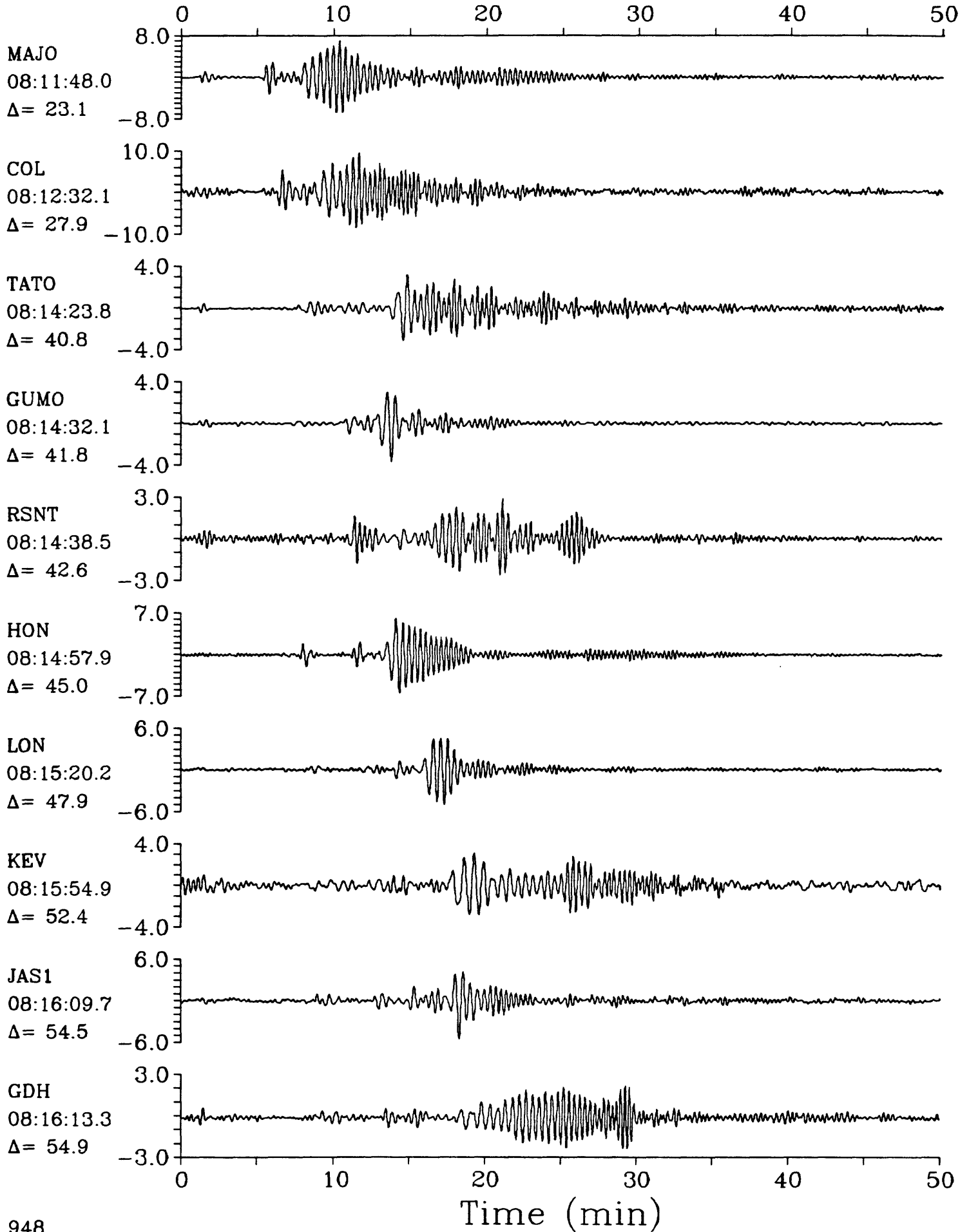
Near East Coast of Kamchatka $h=62.6$ $m_b=6.1$

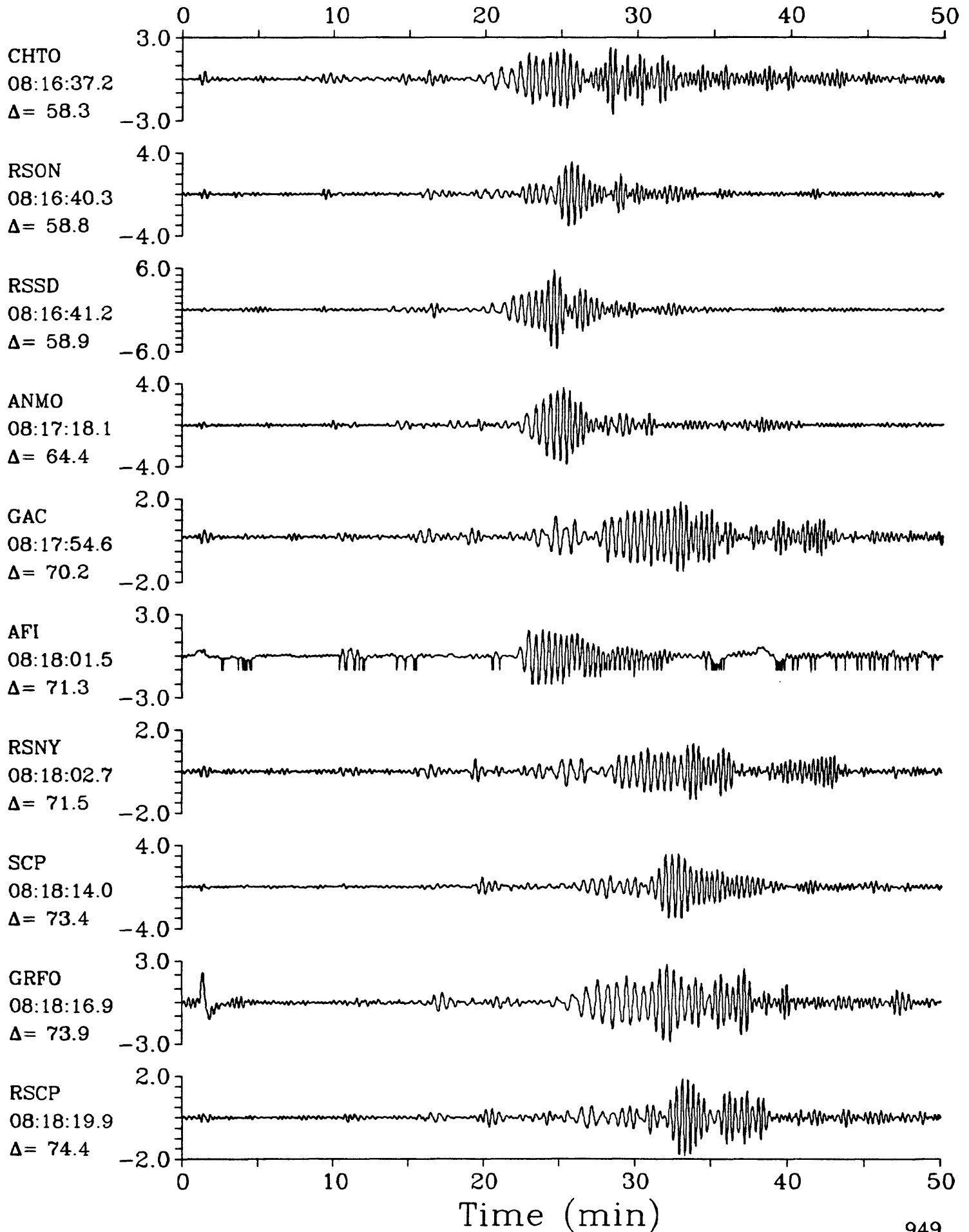


Near East Coast of Kamchatka $h=62.6$ $m_b=6.1$

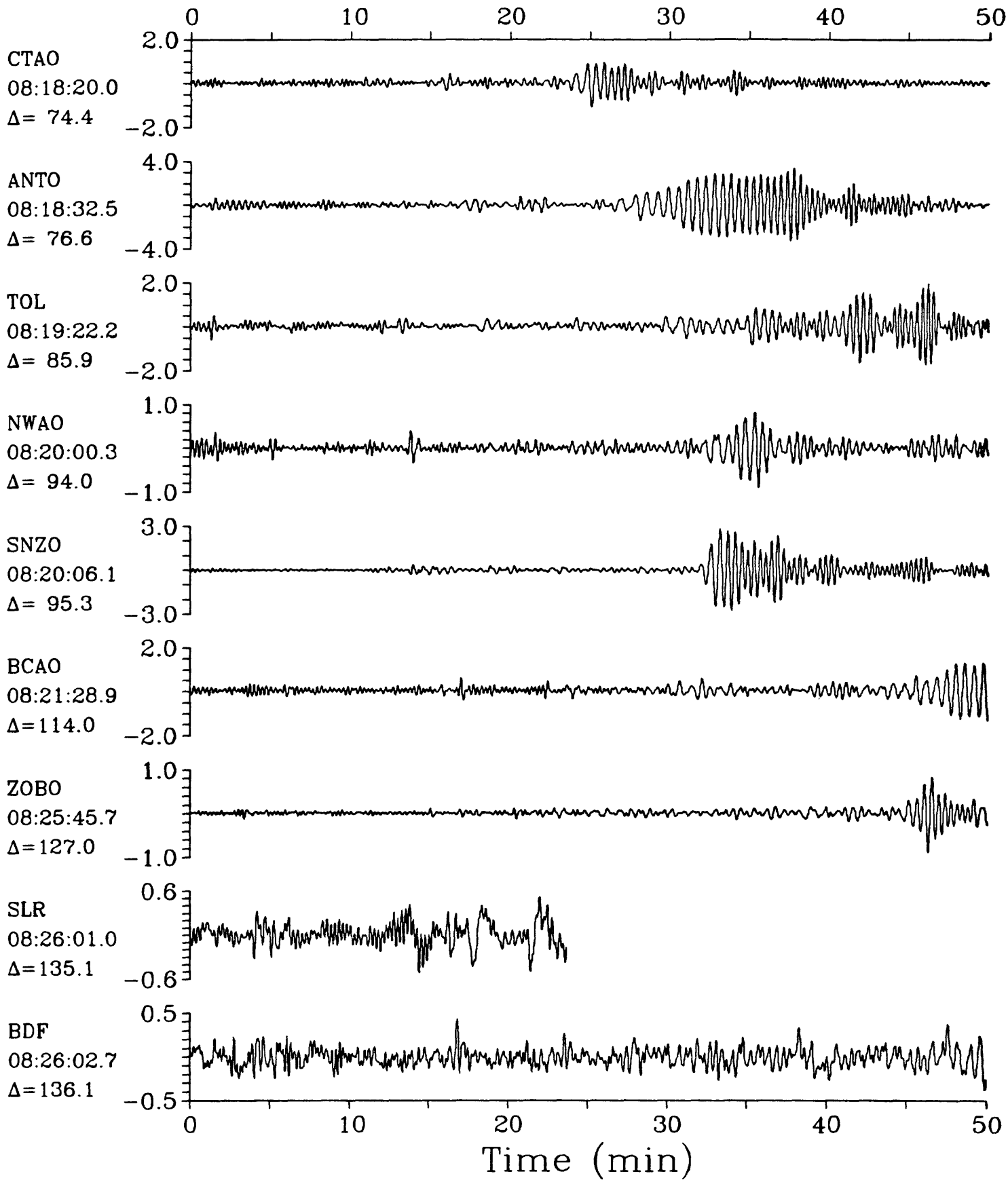


Near East Coast of Kamchatka $h=62.6$ $m_b=6.1$

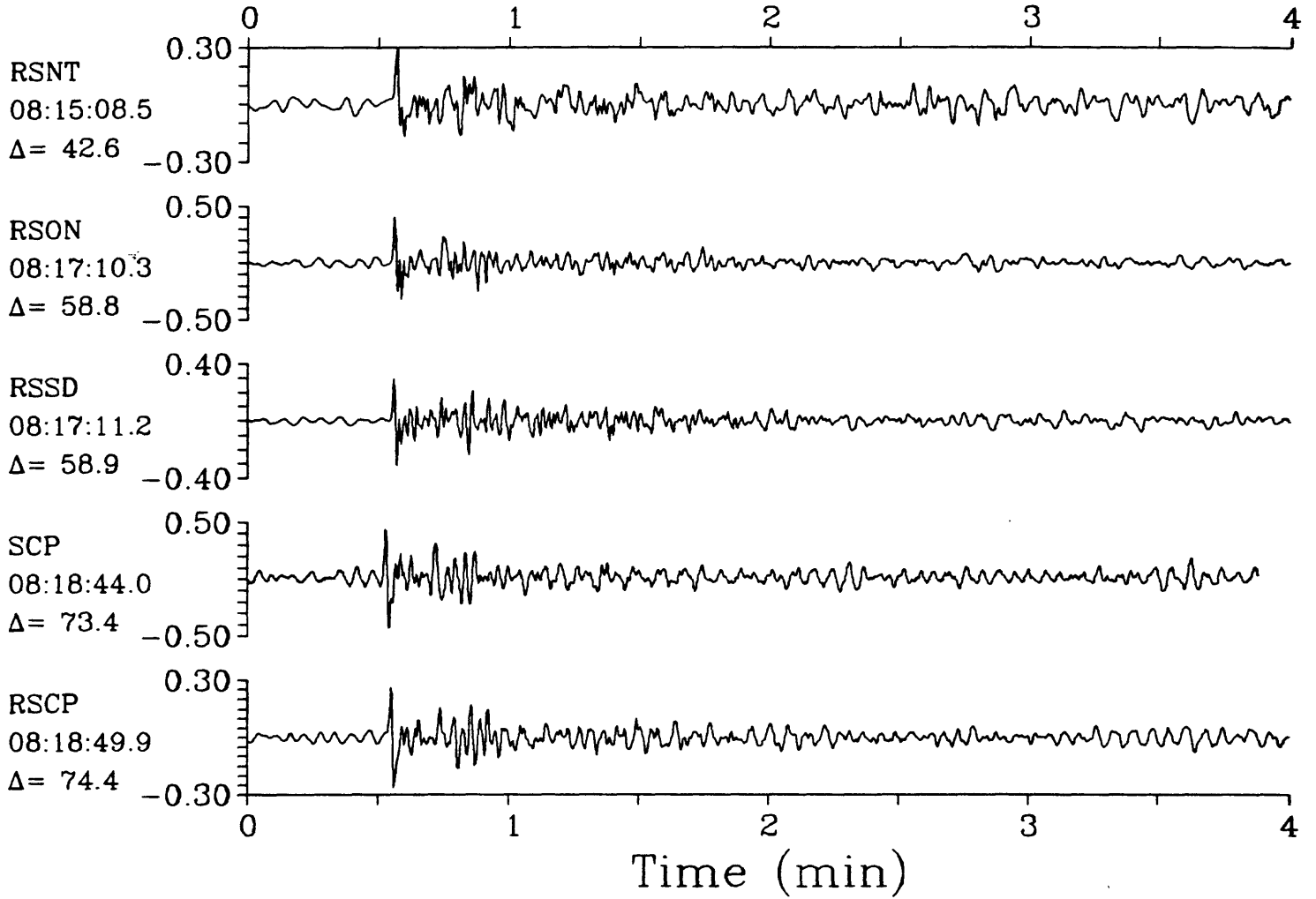


Near East Coast of Kamchatka $h=62.6$ $m_b=6.1$ 

Near East Coast of Kamchatka $h=62.6$ $m_b=6.1$

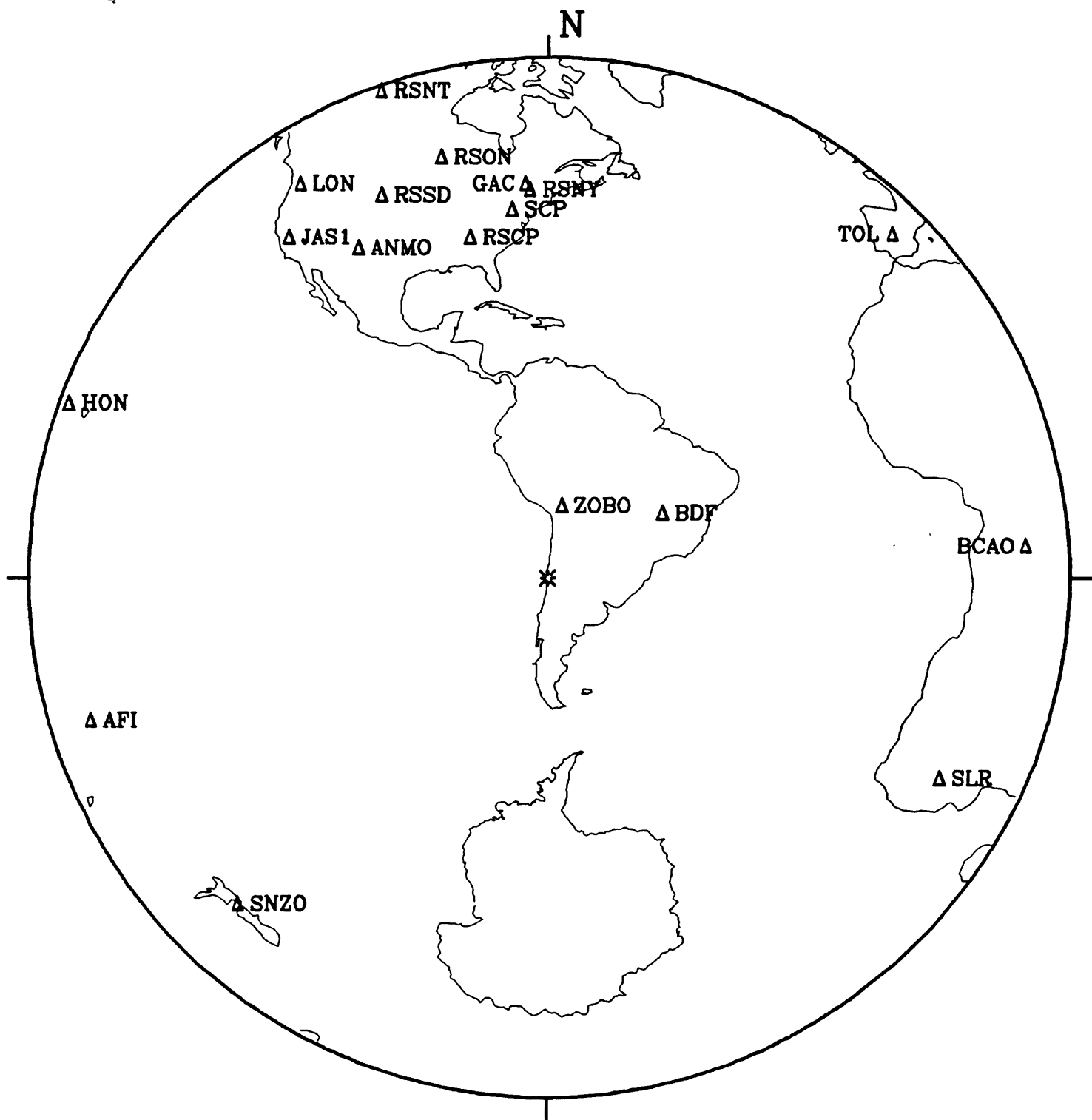


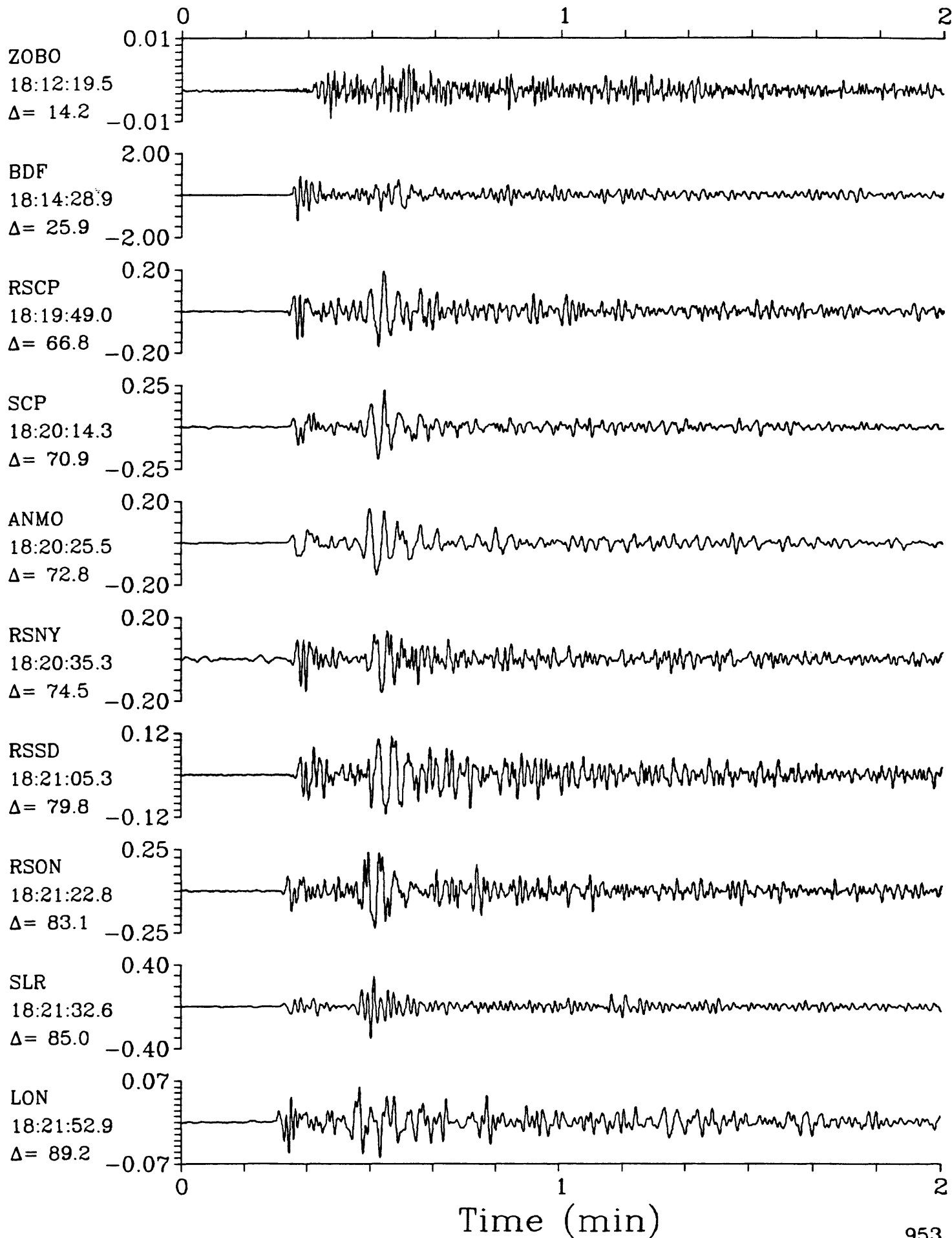
Near East Coast of Kamchatka $h=62.6$ $m_b=6.1$

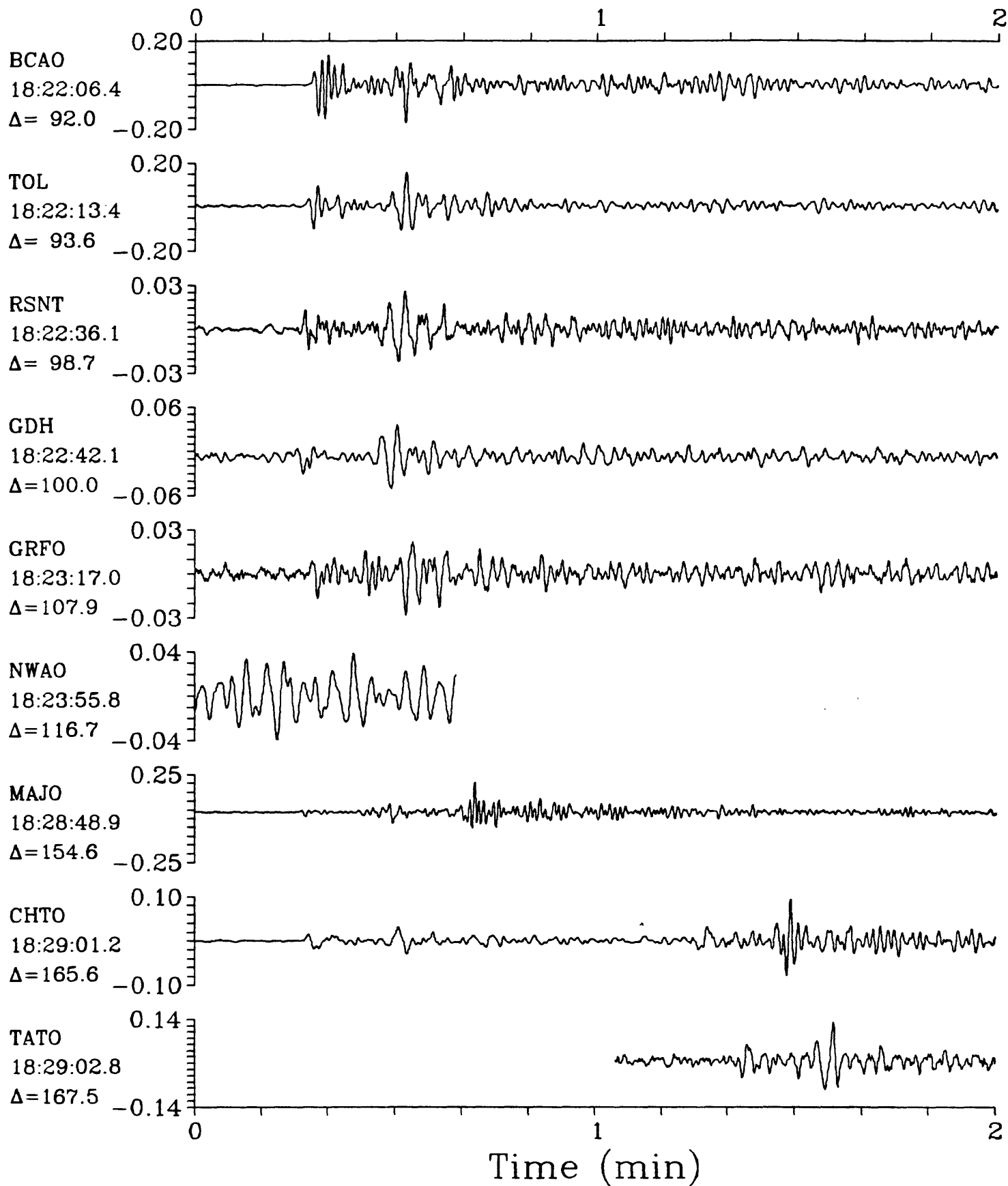


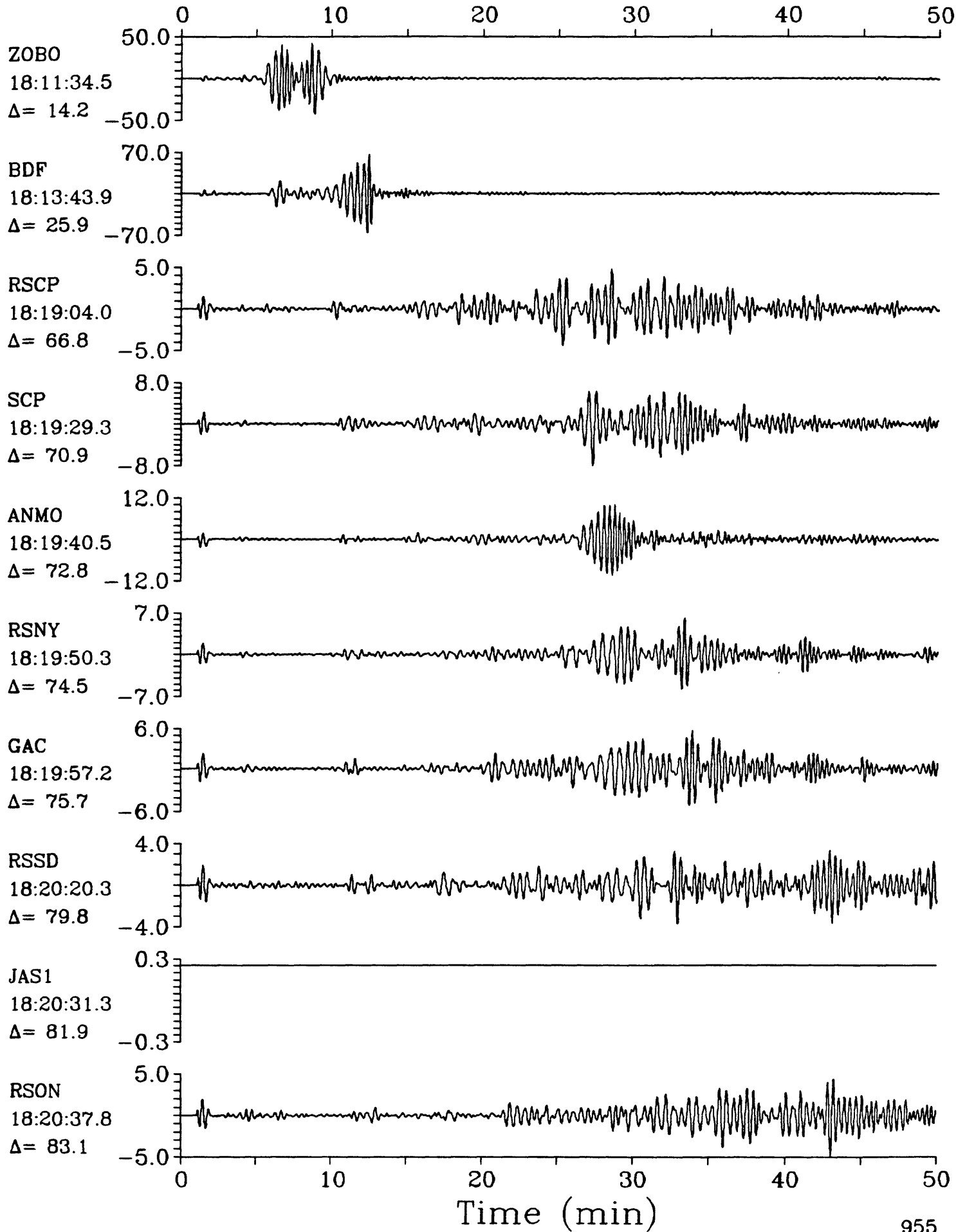
19 May 1985 18:09:15.49

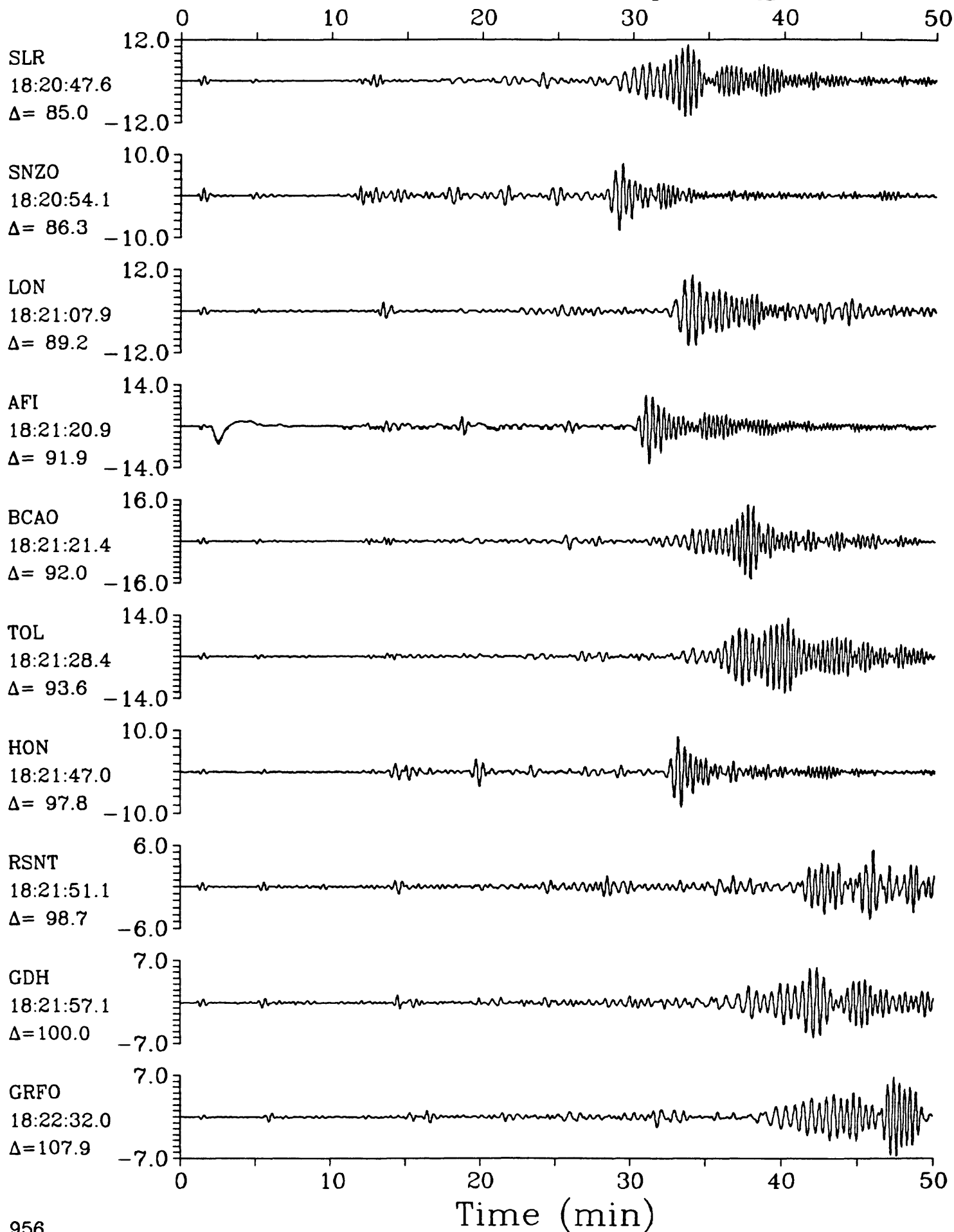
Near Coast of Central Chile

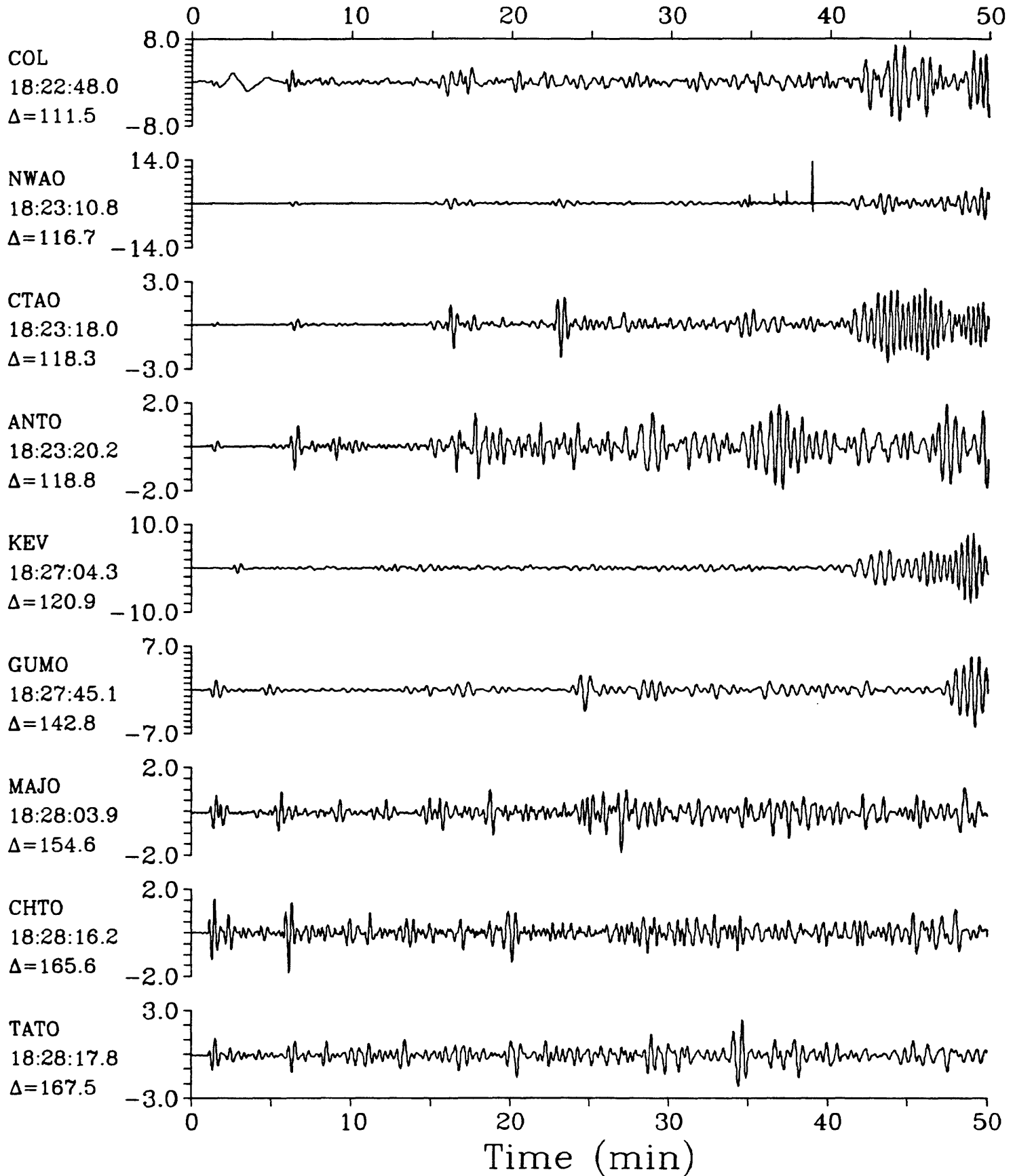


Near Coast of Central Chile $h=38.7$ $m_b=5.9$ $M_{sz}=6.0$ 

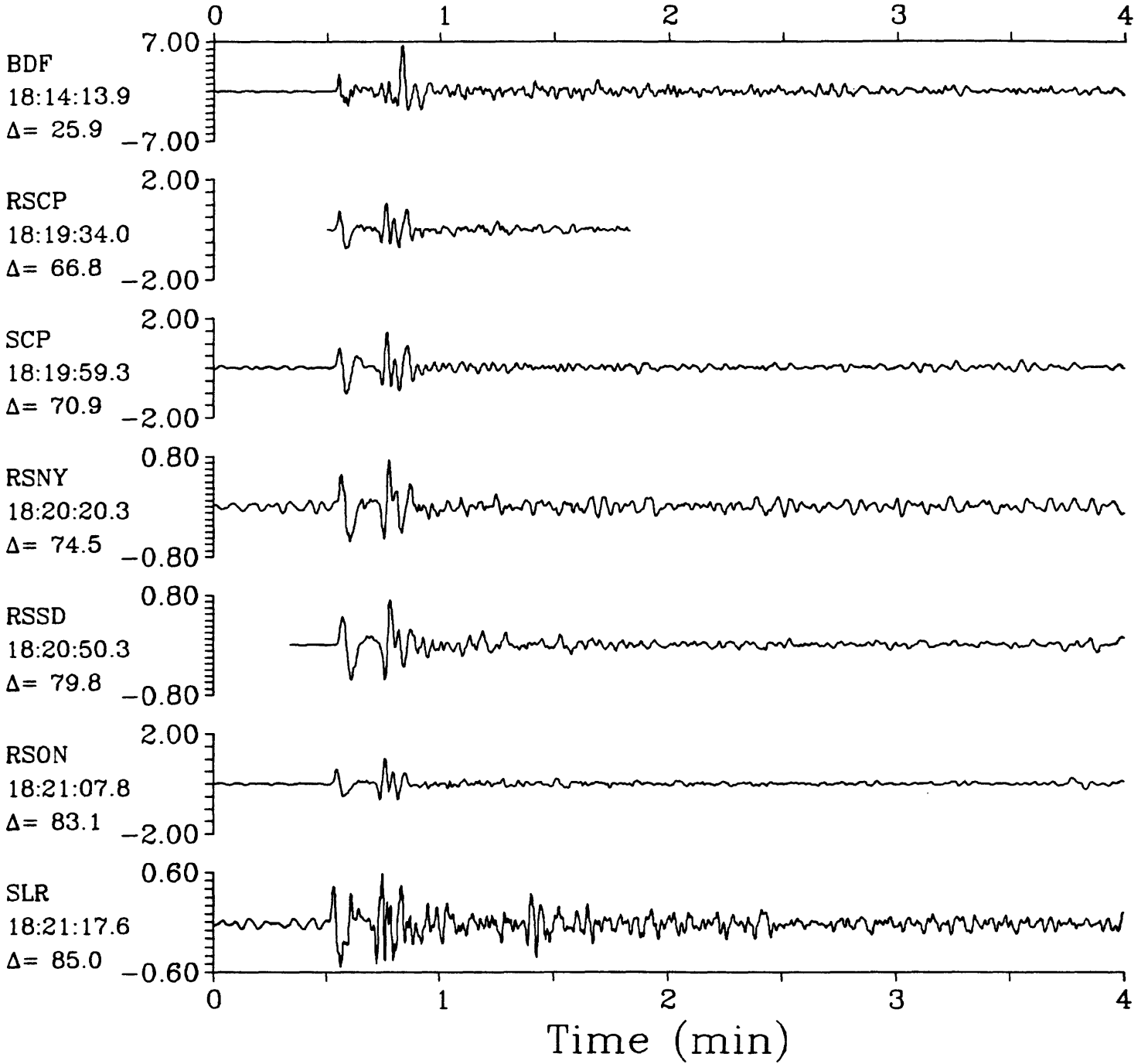
Near Coast of Central Chile $h=38.7$ $m_b=5.9$ $M_{SZ}=6.0$ 

Near Coast of Central Chile $h=38.7$ $m_b=5.9$ $M_{SZ}=6.0$ 

Near Coast of Central Chile $h=38.7$ $m_b=5.9$ $M_{sz}=6.0$ 

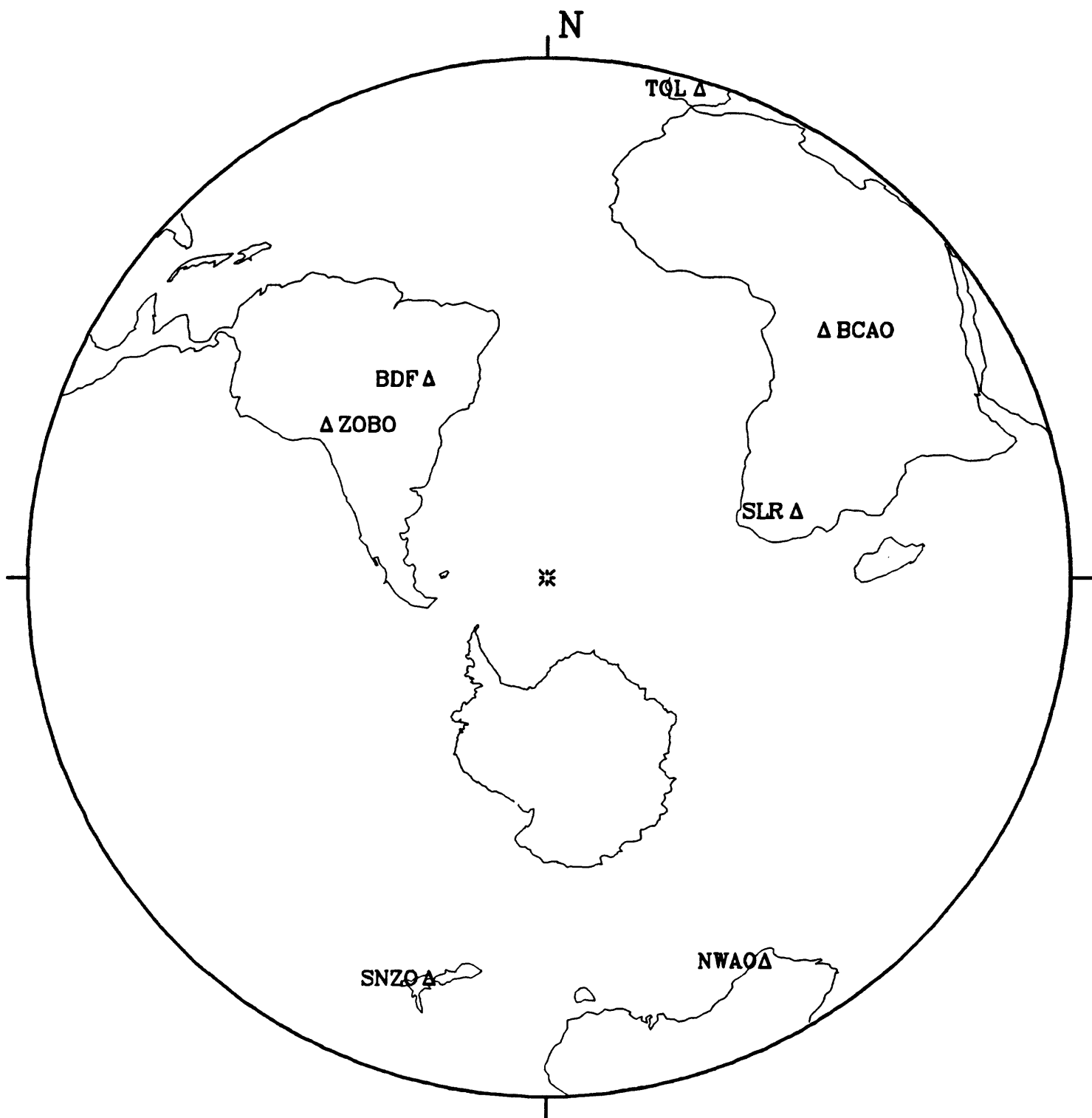
Near Coast of Central Chile $h=38.7$ $m_b=5.9$ $M_{SZ}=6.0$ 

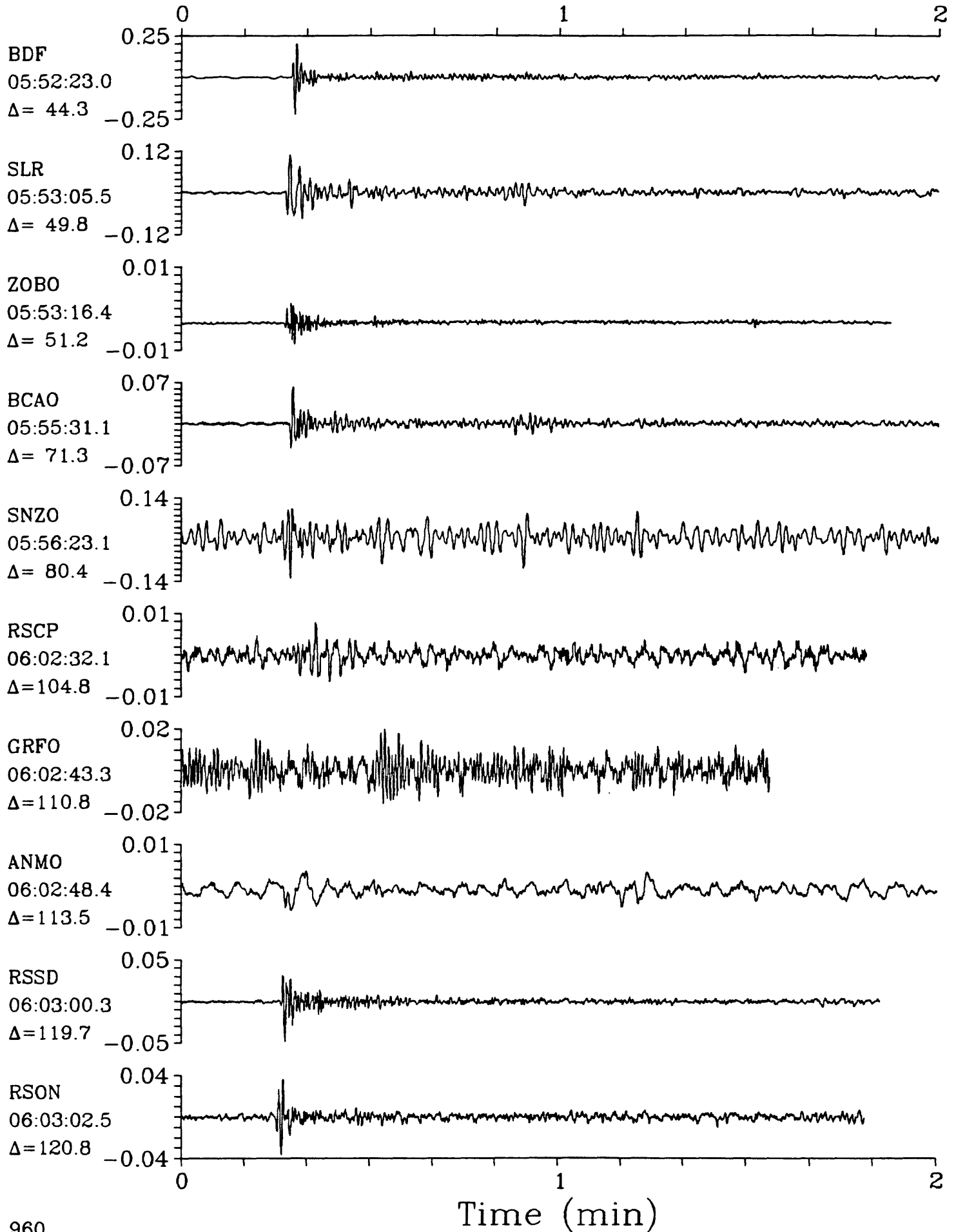
Near Coast of Central Chile $h=38.7$ $m_b=5.9$ $M_{sz}=6.0$



20 May 1985 05:44:44.84

South Sandwich Islands Region



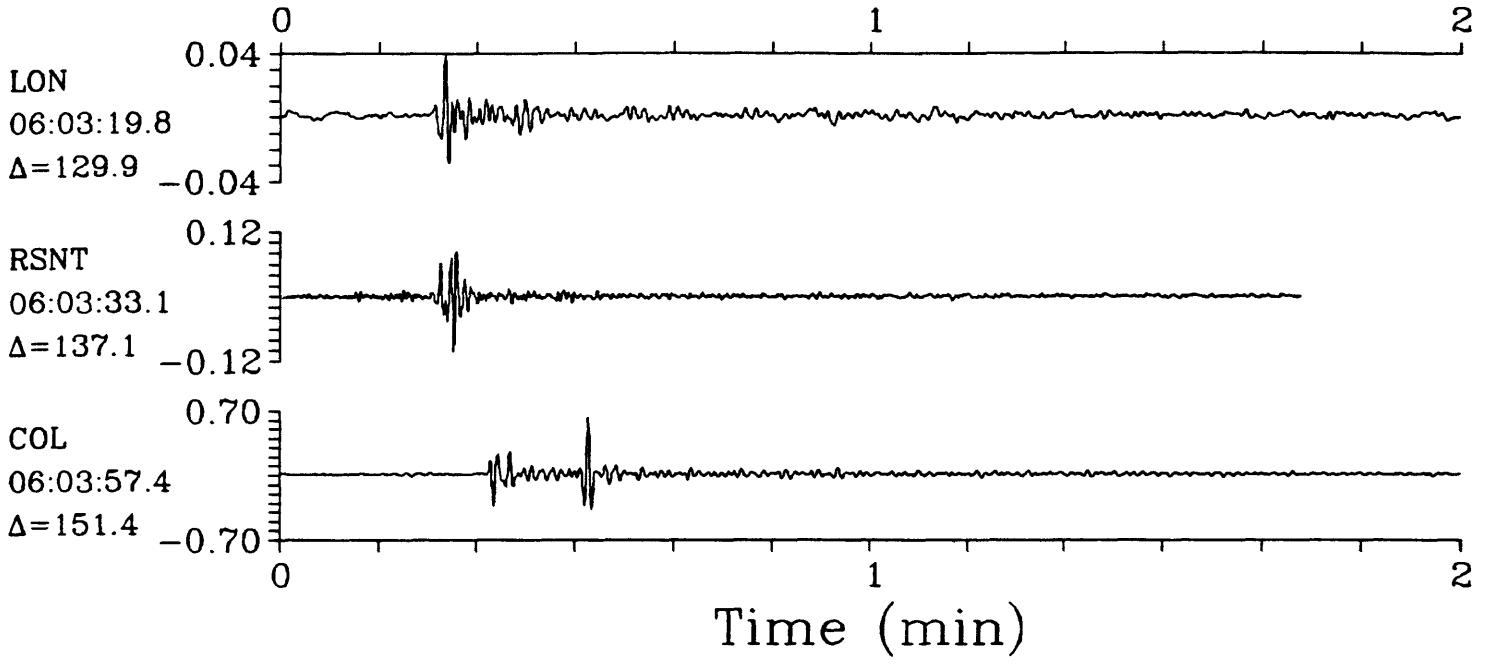
South Sandwich Islands Region $h=168.1$ $m_b=5.5$ 

SPZ

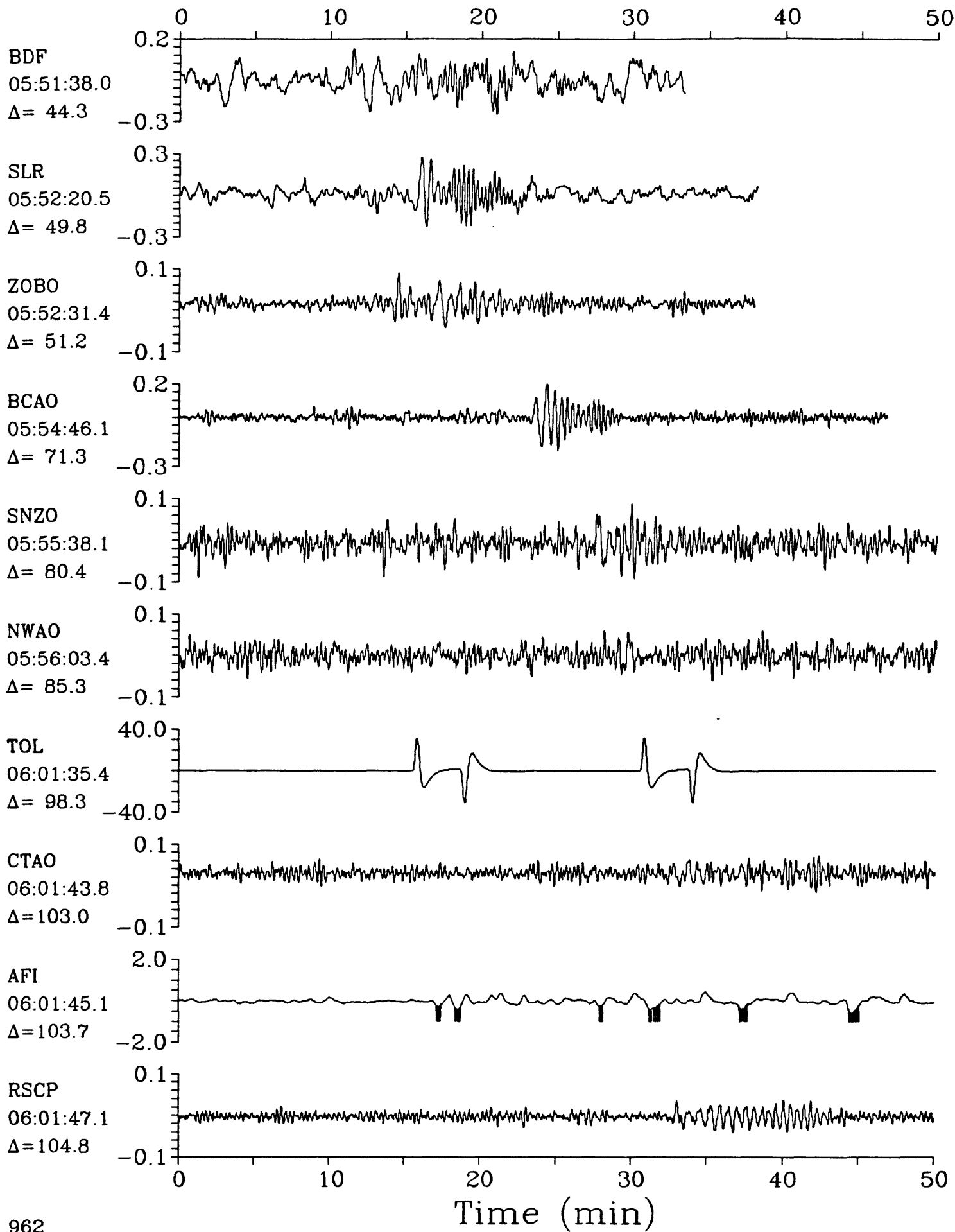
20 May 1985 05:44:44.84

SPZ

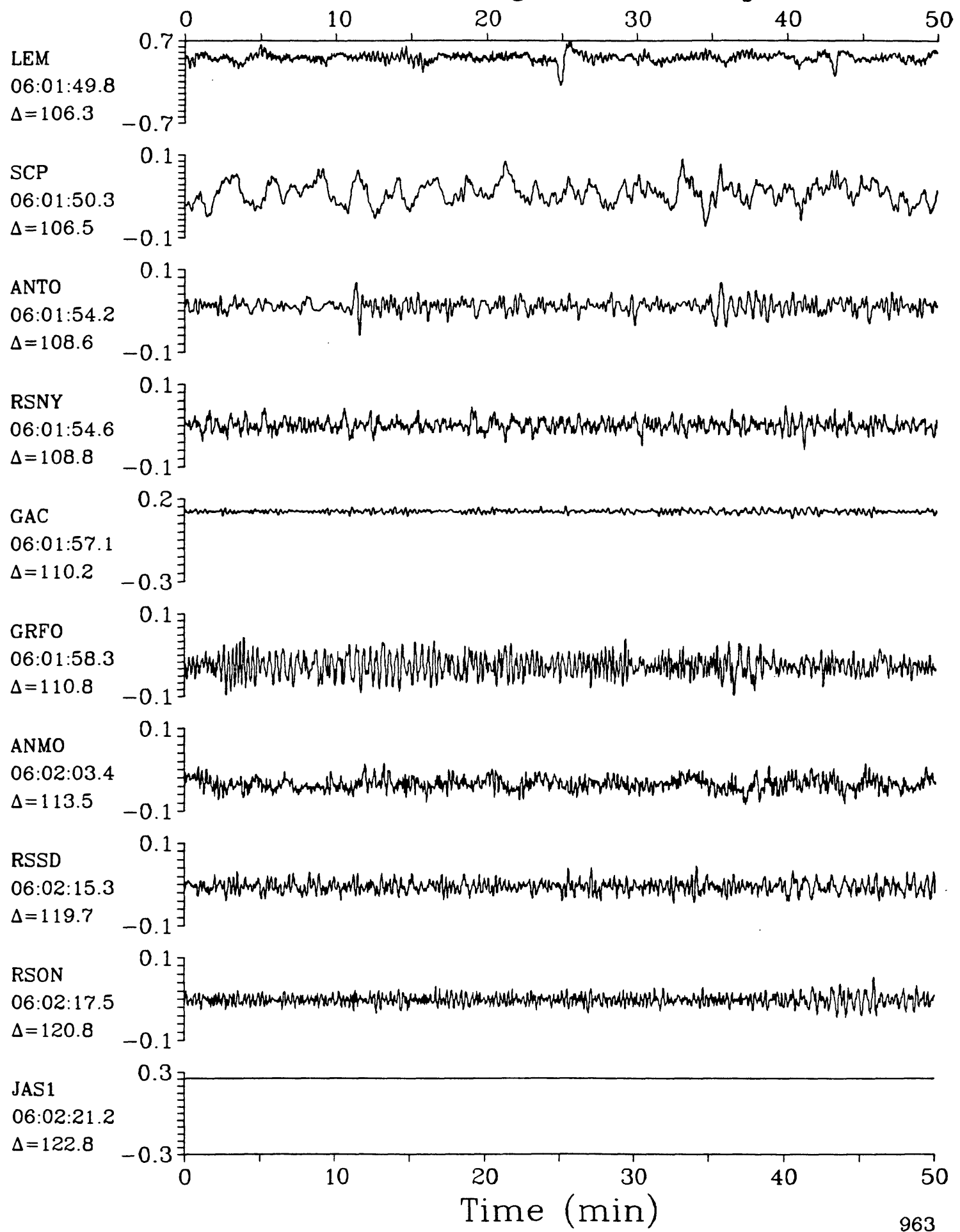
South Sandwich Islands Region $h=168.1$ $m_b=5.5$

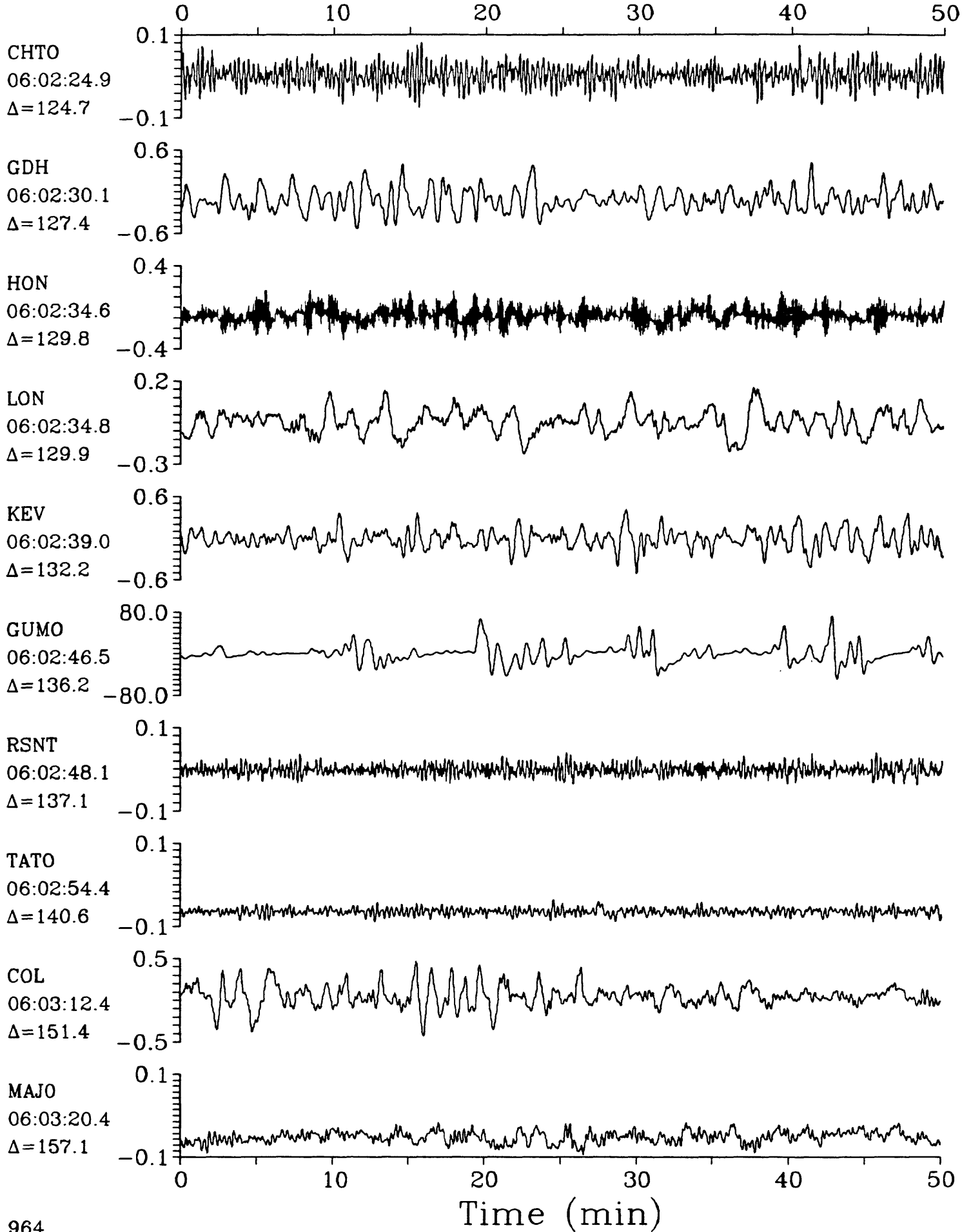


South Sandwich Islands Region $h=168.1$ $m_b=5.5$



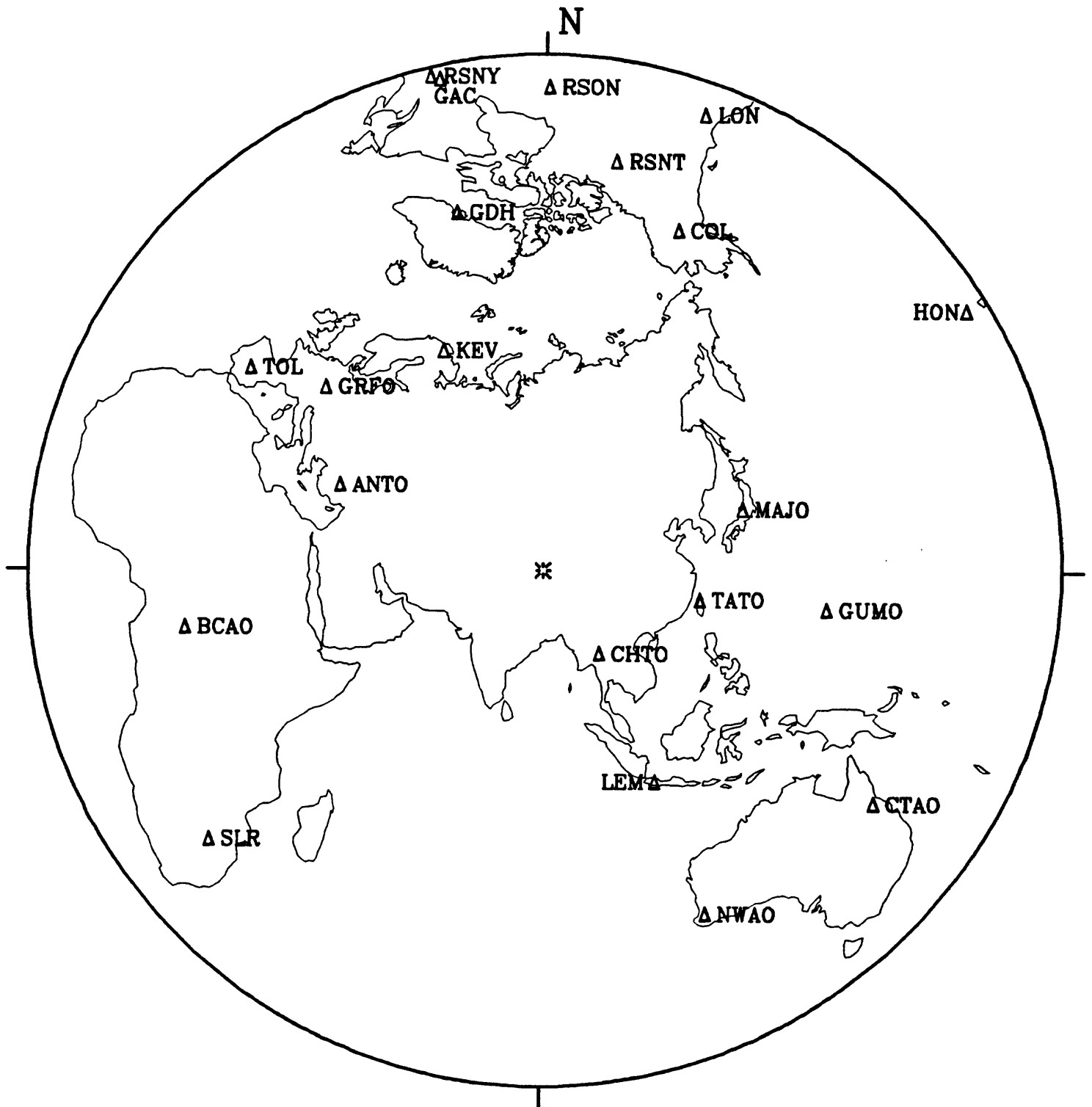
South Sandwich Islands Region $h=168.1$ $m_b=5.5$

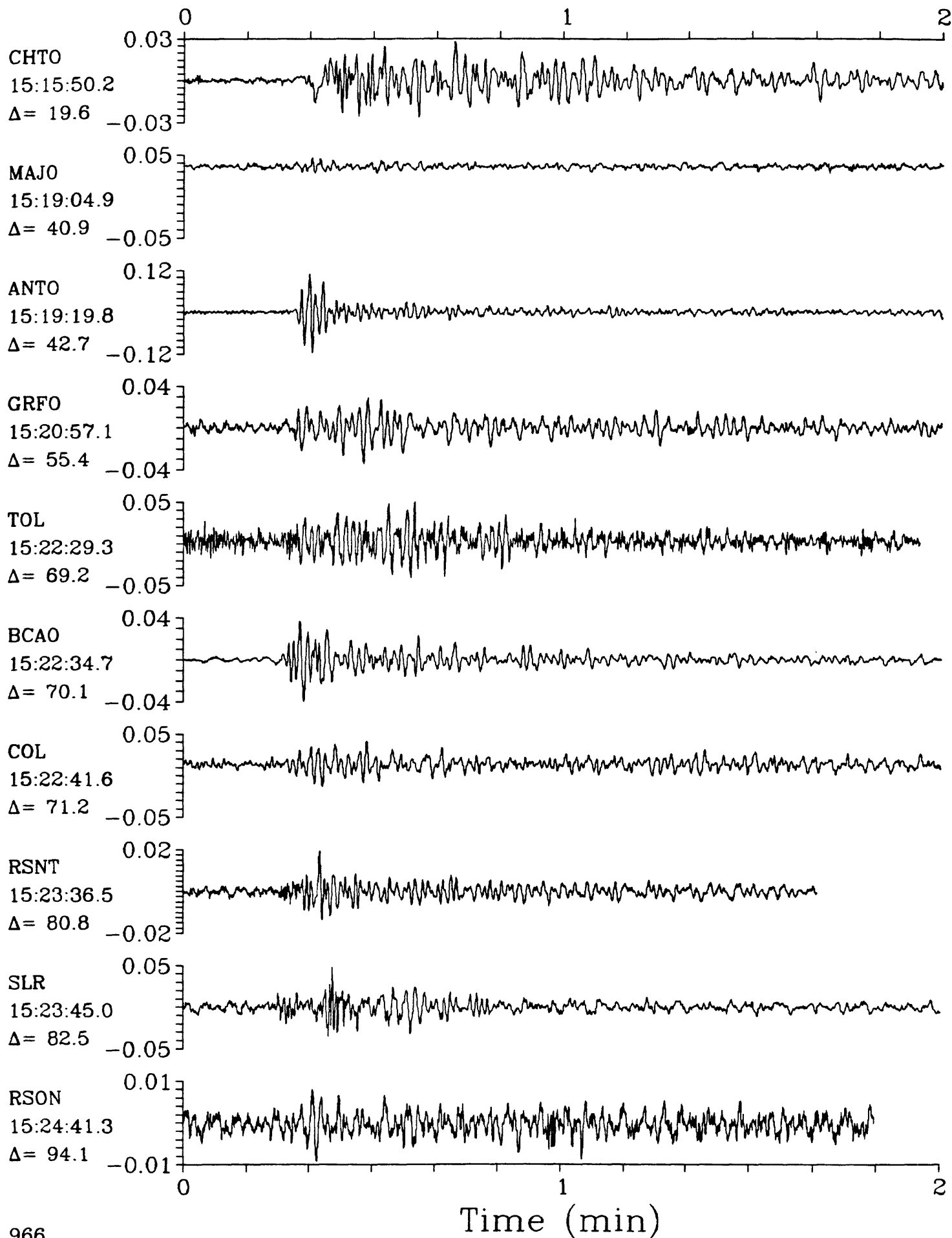


South Sandwich Islands Region $h=168.1$ $m_b=5.5$ 

20 May 1985 15:11:40.43

Tibet



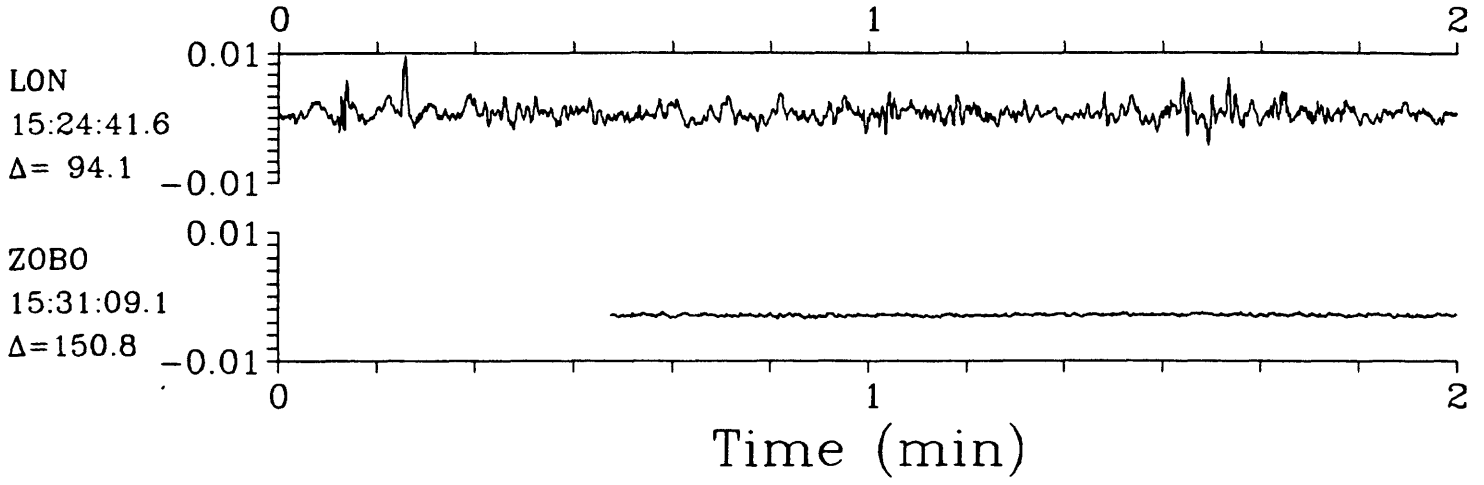


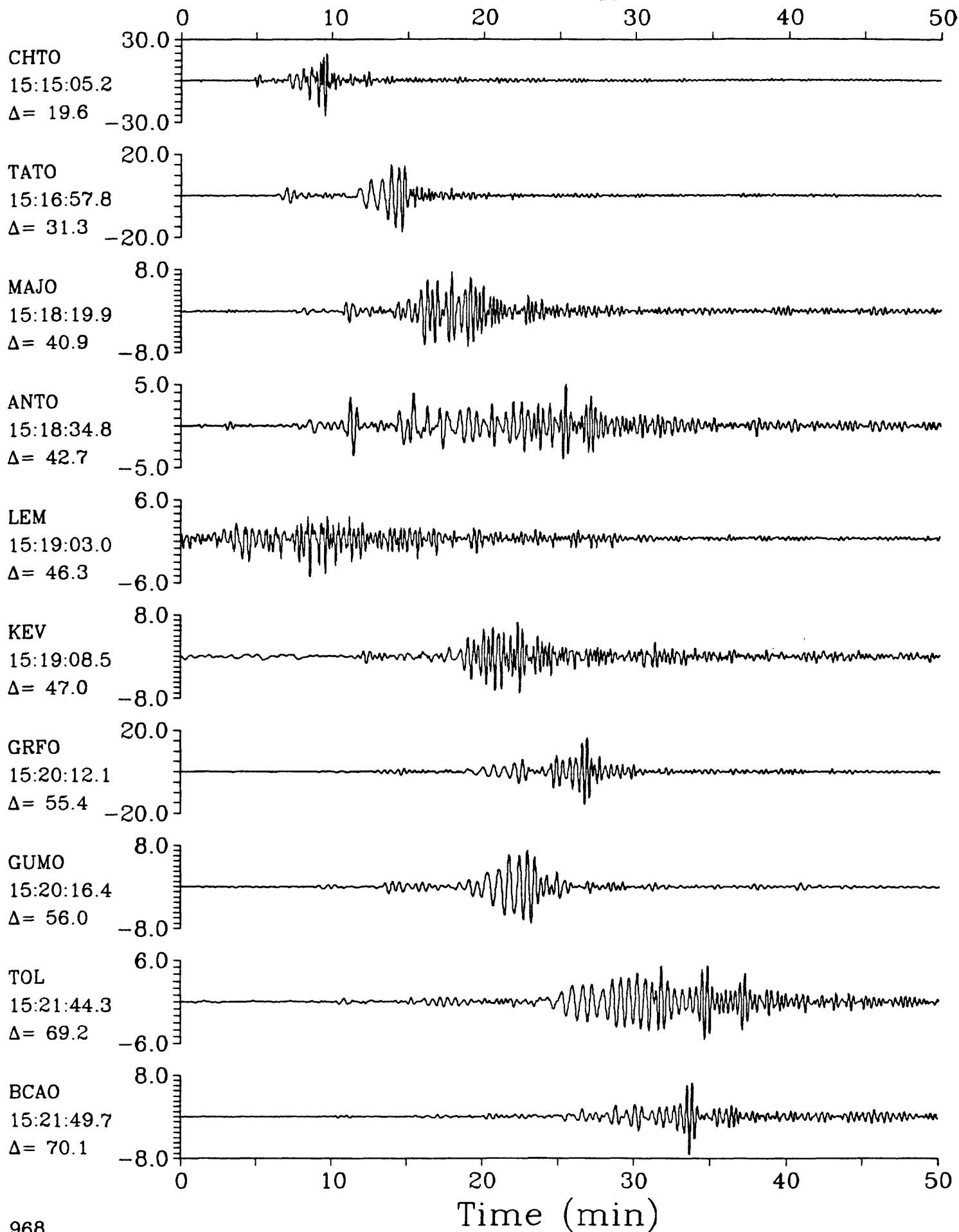
SPZ

20 May 1985 15:11:40.43

SPZ

Tibet $h=33.0$ $m_b=5.2$ $M_{sz}=6.0$

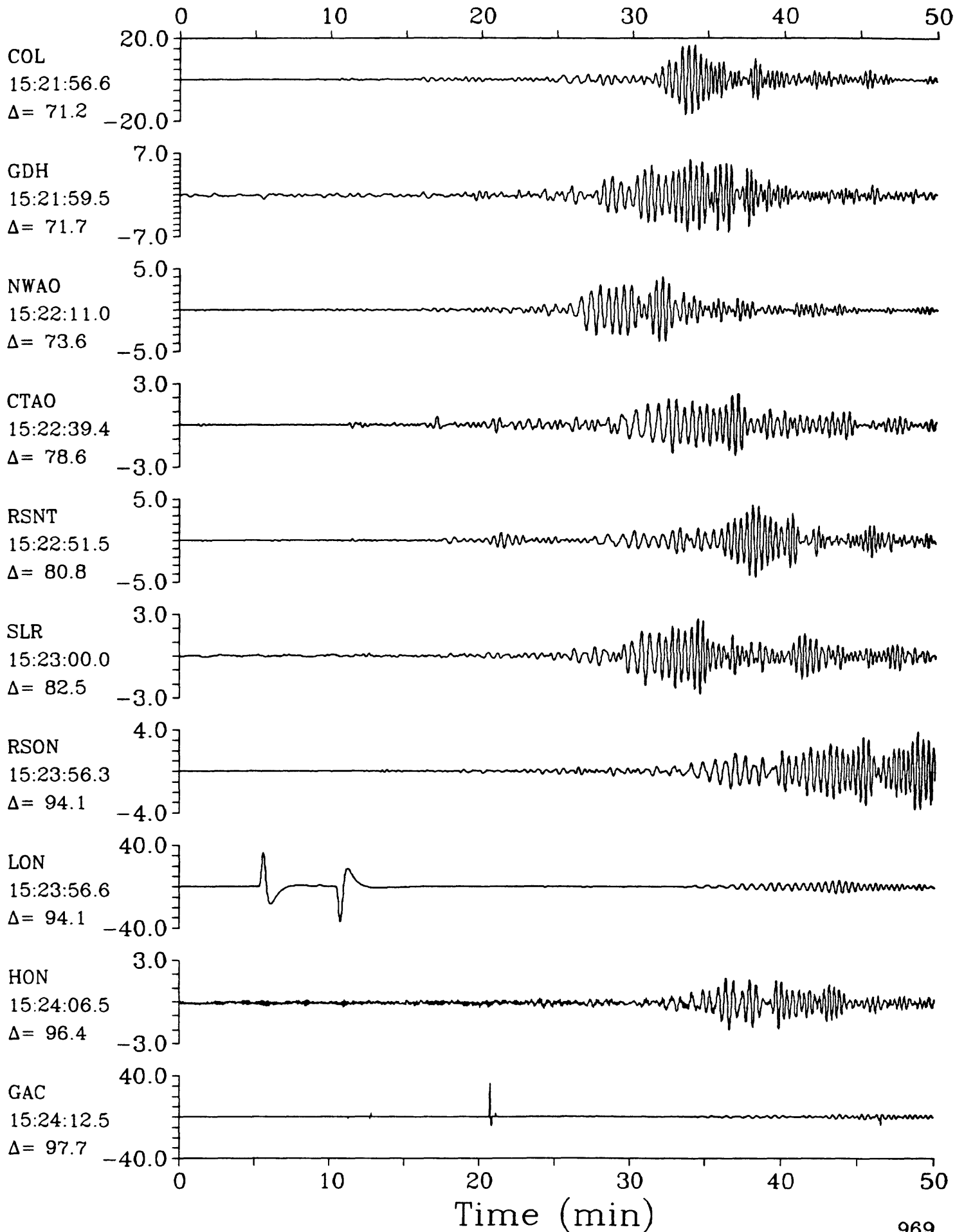


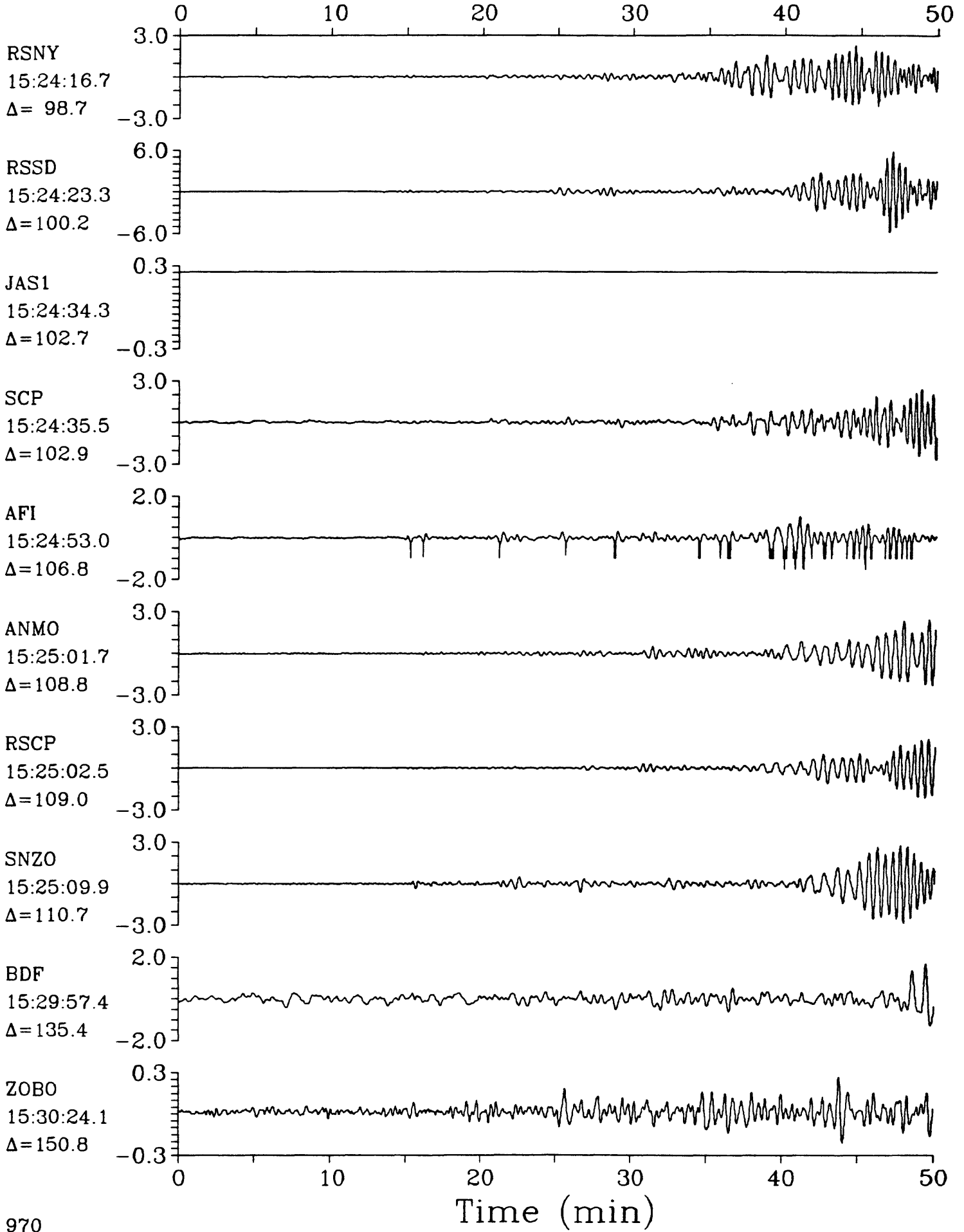


LPZ

20 May 1985 15:11:40.43
Tibet $h=33.0$ $m_b=5.2$ $M_{SZ}=6.0$

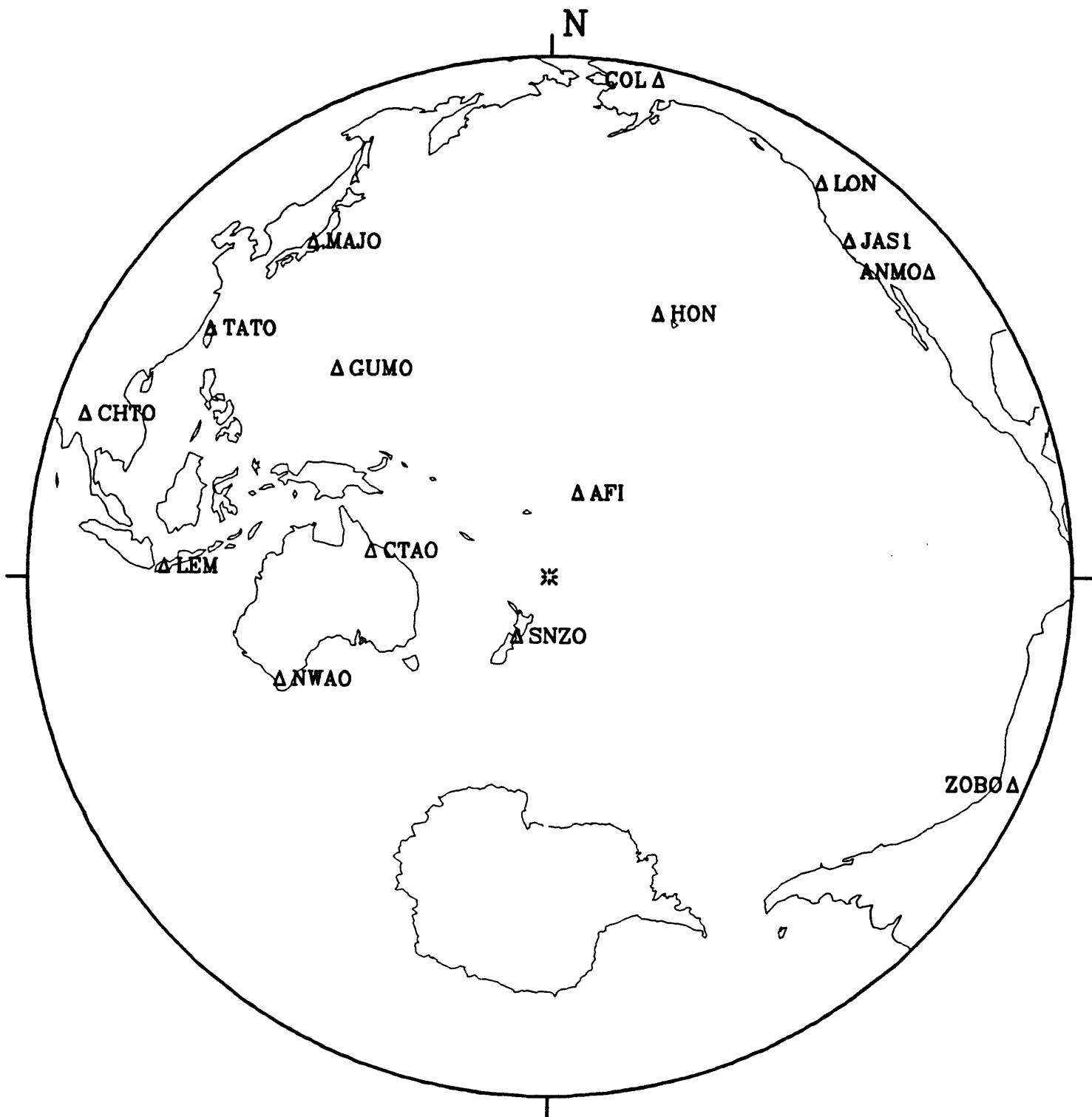
LPZ



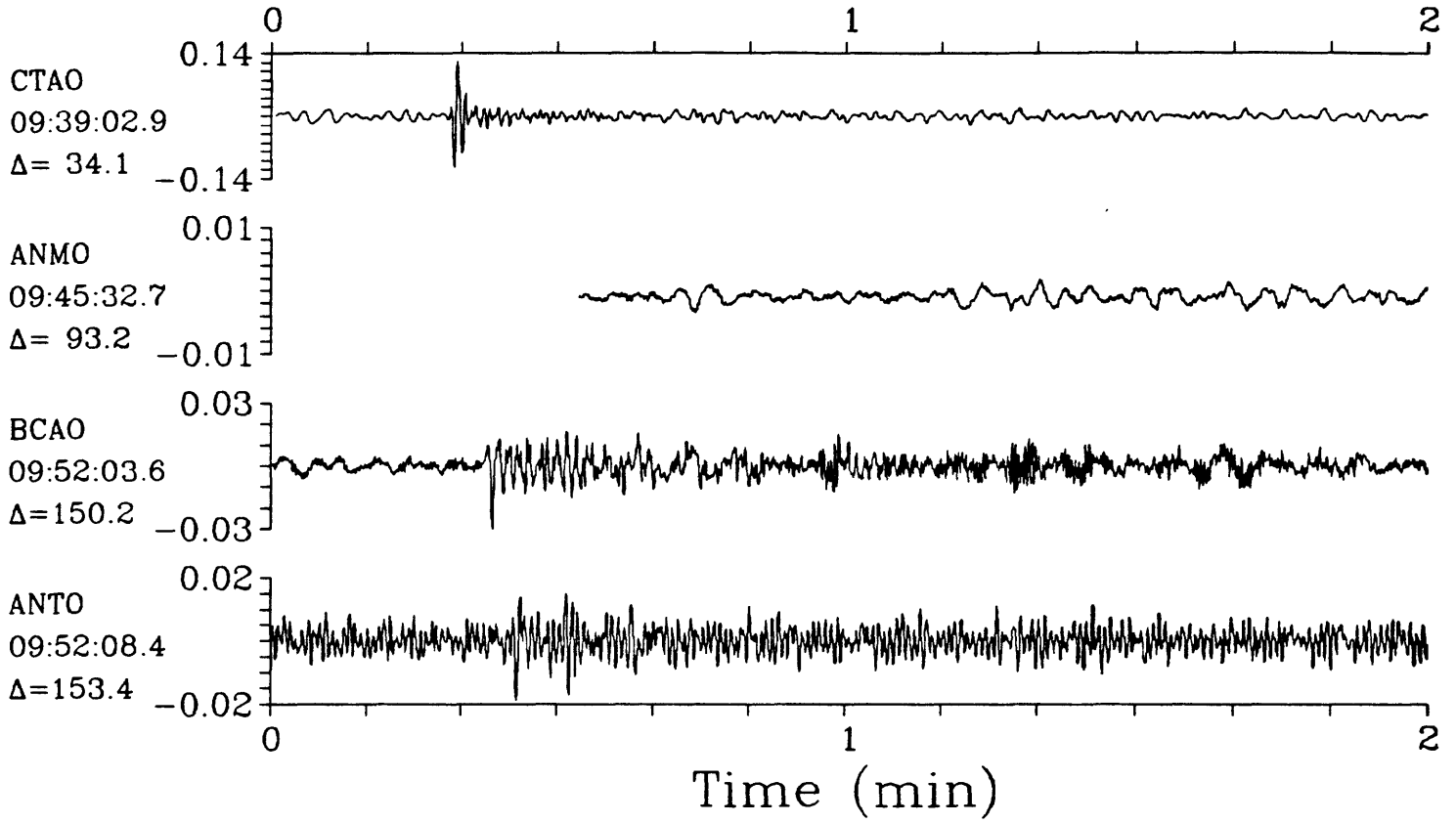


22 May 1985 09:32:35.92

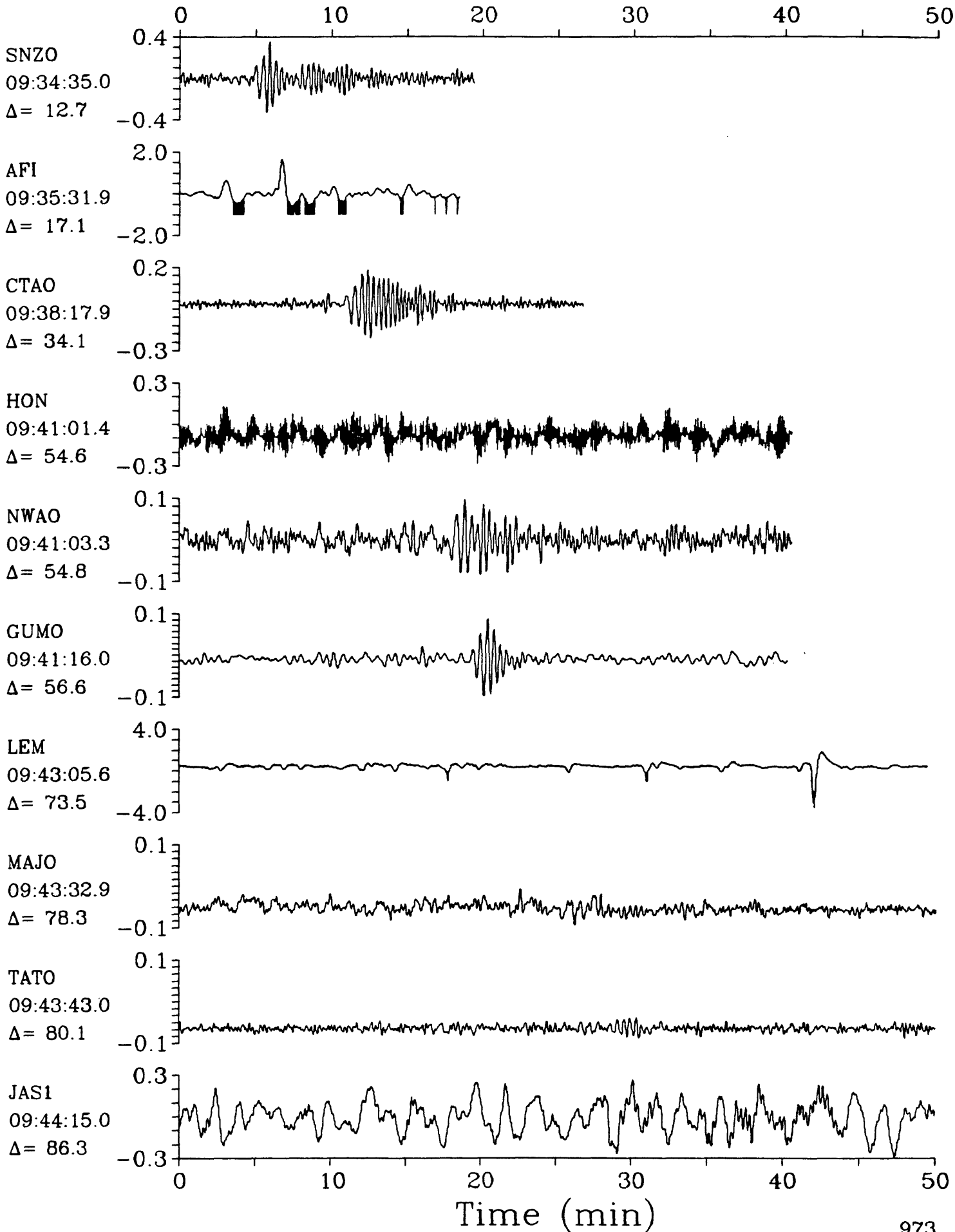
Kermadec Islands



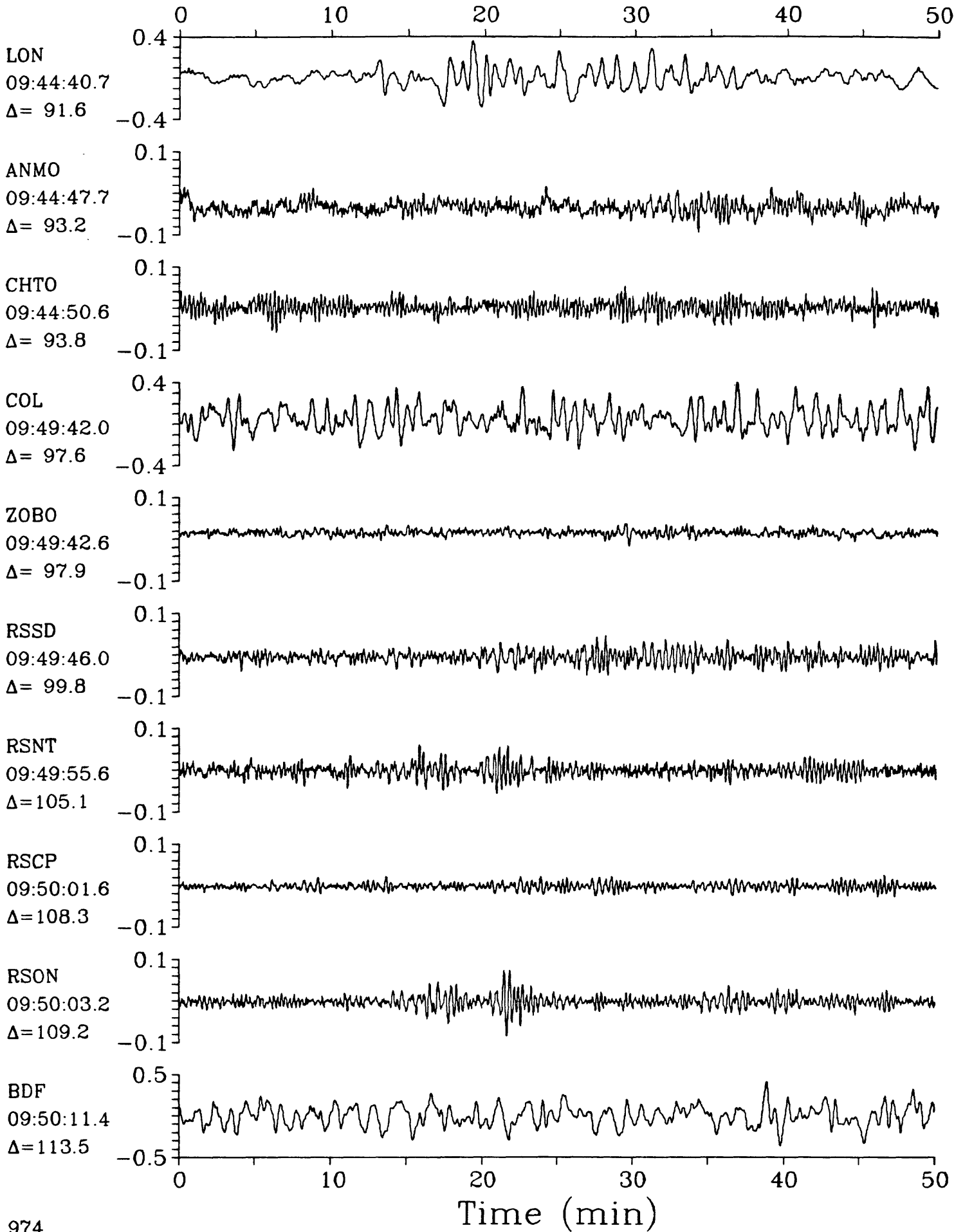
Kermadec Islands $h=33.0$ $m_b=5.6$ $M_{sz}=4.9$



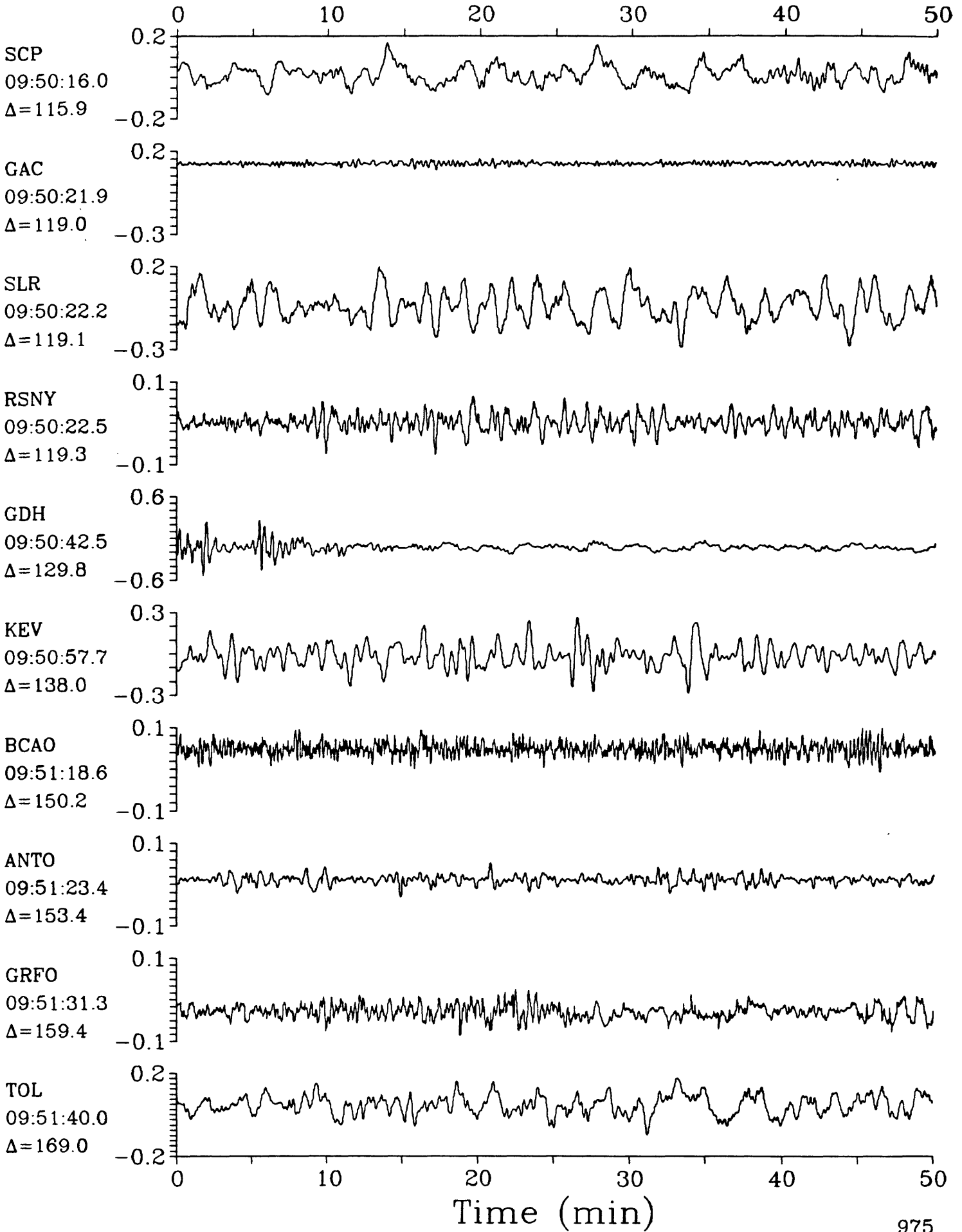
Kermadec Islands $h=33.0$ $m_b=5.6$ $M_{sz}=4.9$



Kermadec Islands $h=33.0$ $m_b=5.6$ $M_{sz}=4.9$

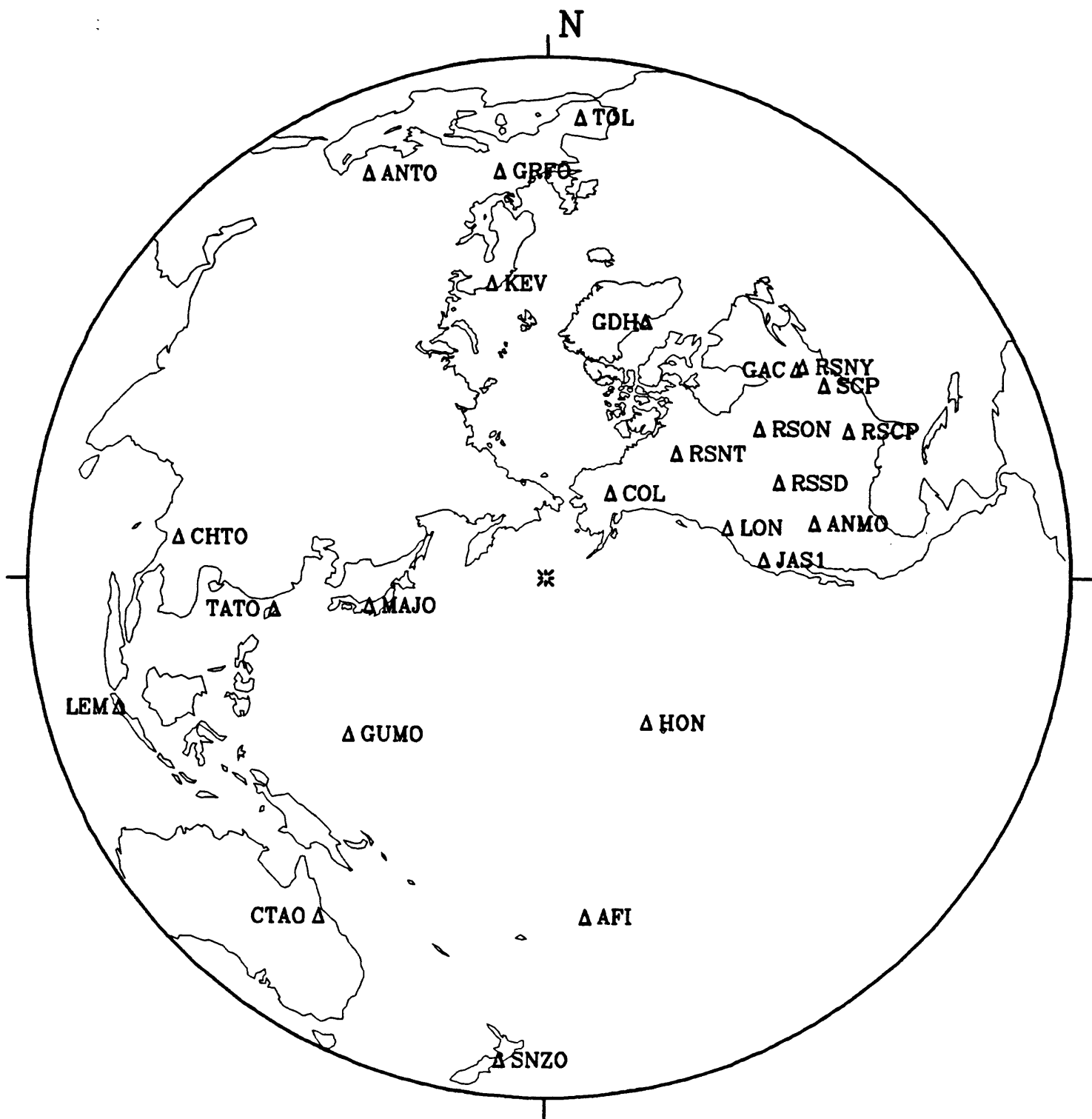


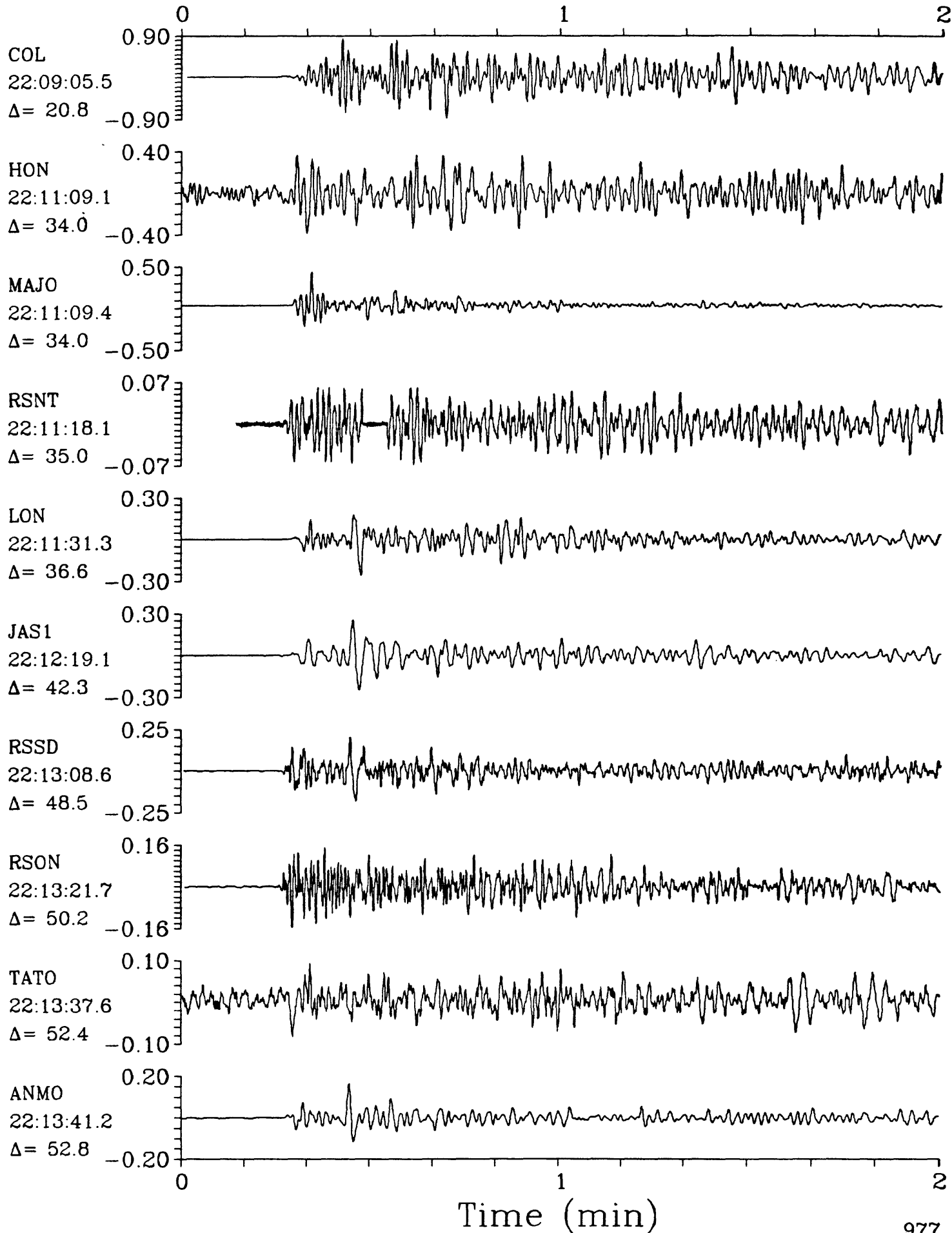
Kermadec Islands $h=33.0$ $m_b=5.6$ $M_{sz}=4.9$

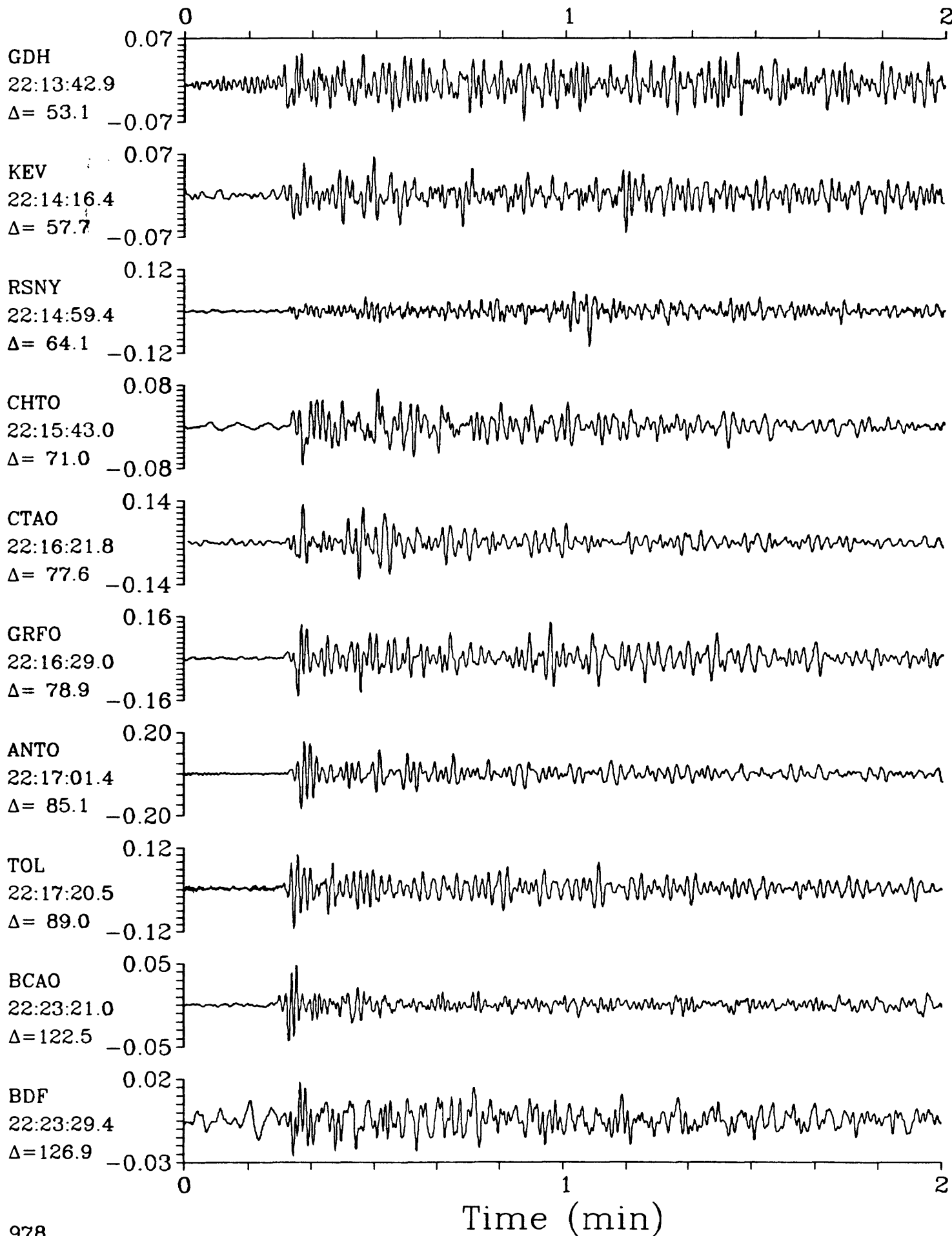


24 May 1985 22:04:43.24

Andreanof Islands, Aleutian Is.



Andreasof Islands, Aleutian Is. $h=33.0$ $m_b=5.8$ $M_{sz}=5.8$ 

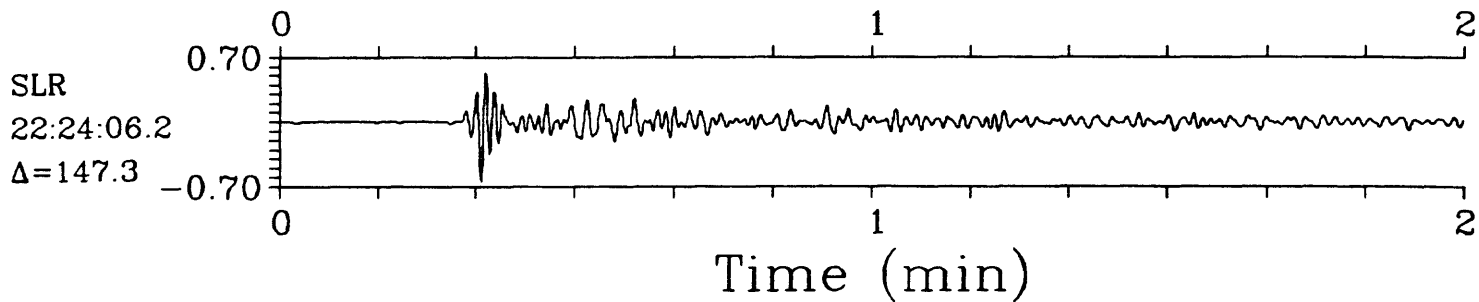
Andreanof Islands, Aleutian Is. $h=33.0$ $m_b=5.8$ $M_{SZ}=5.8$ 

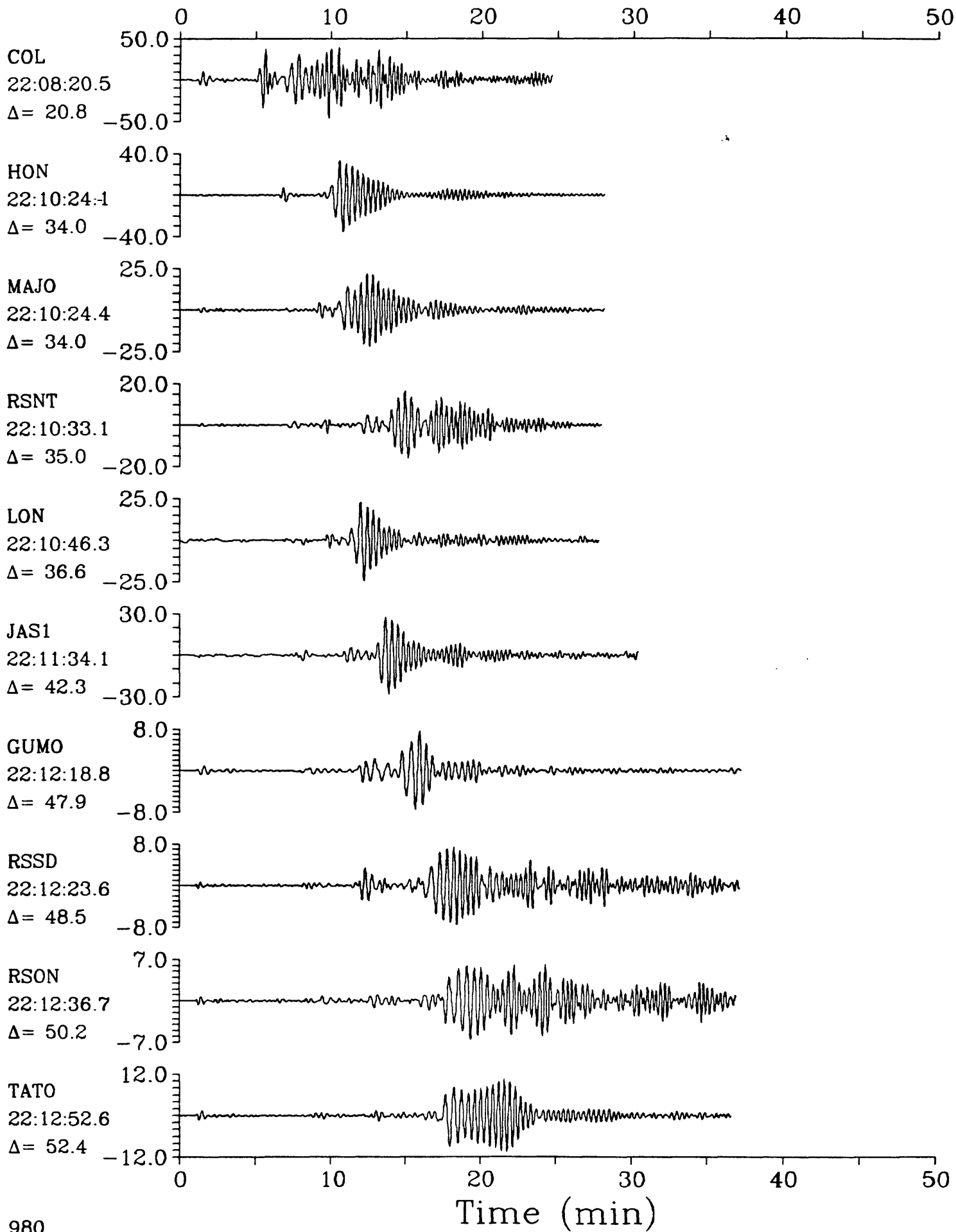
SPZ

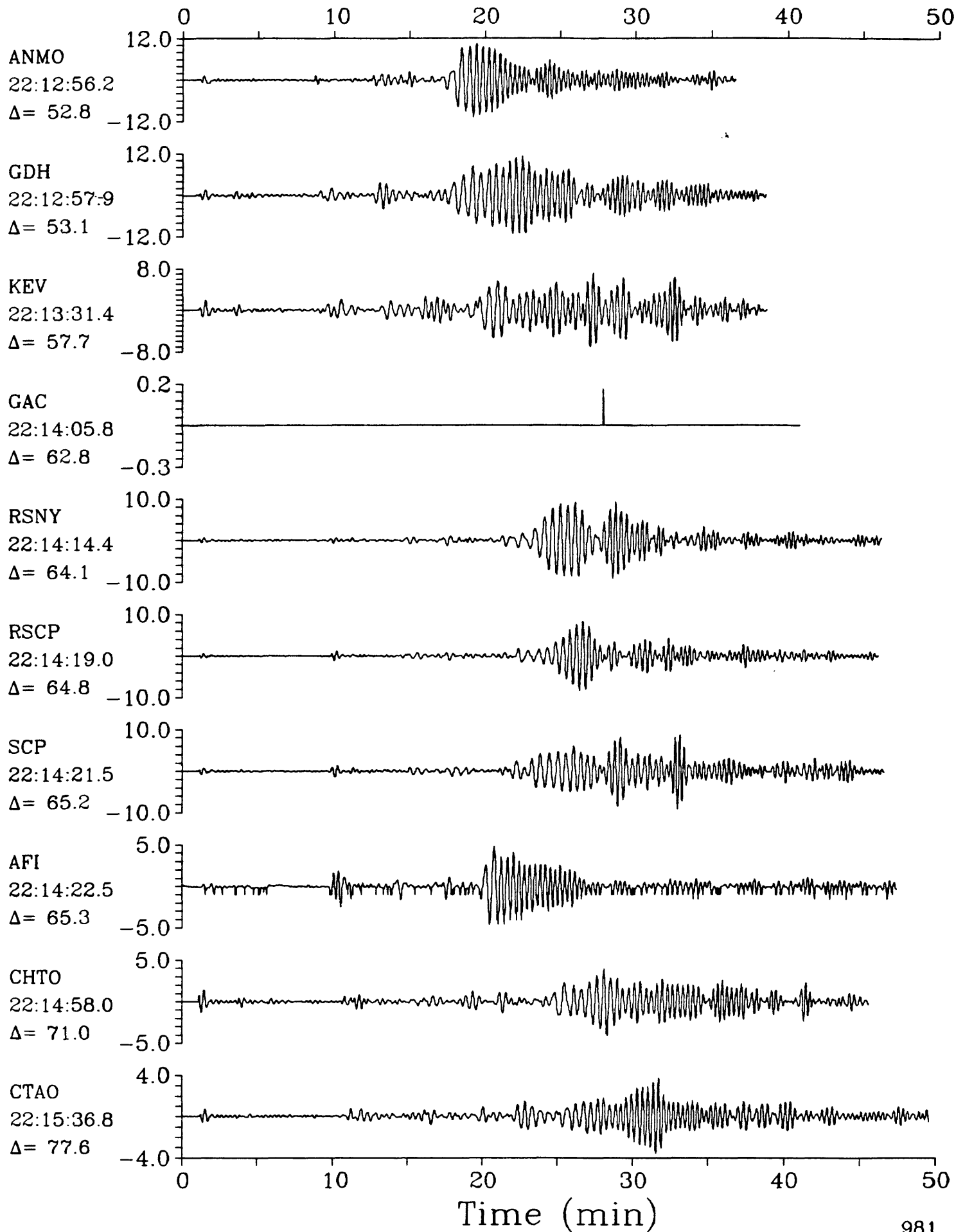
24 May 1985 22:04:43.24

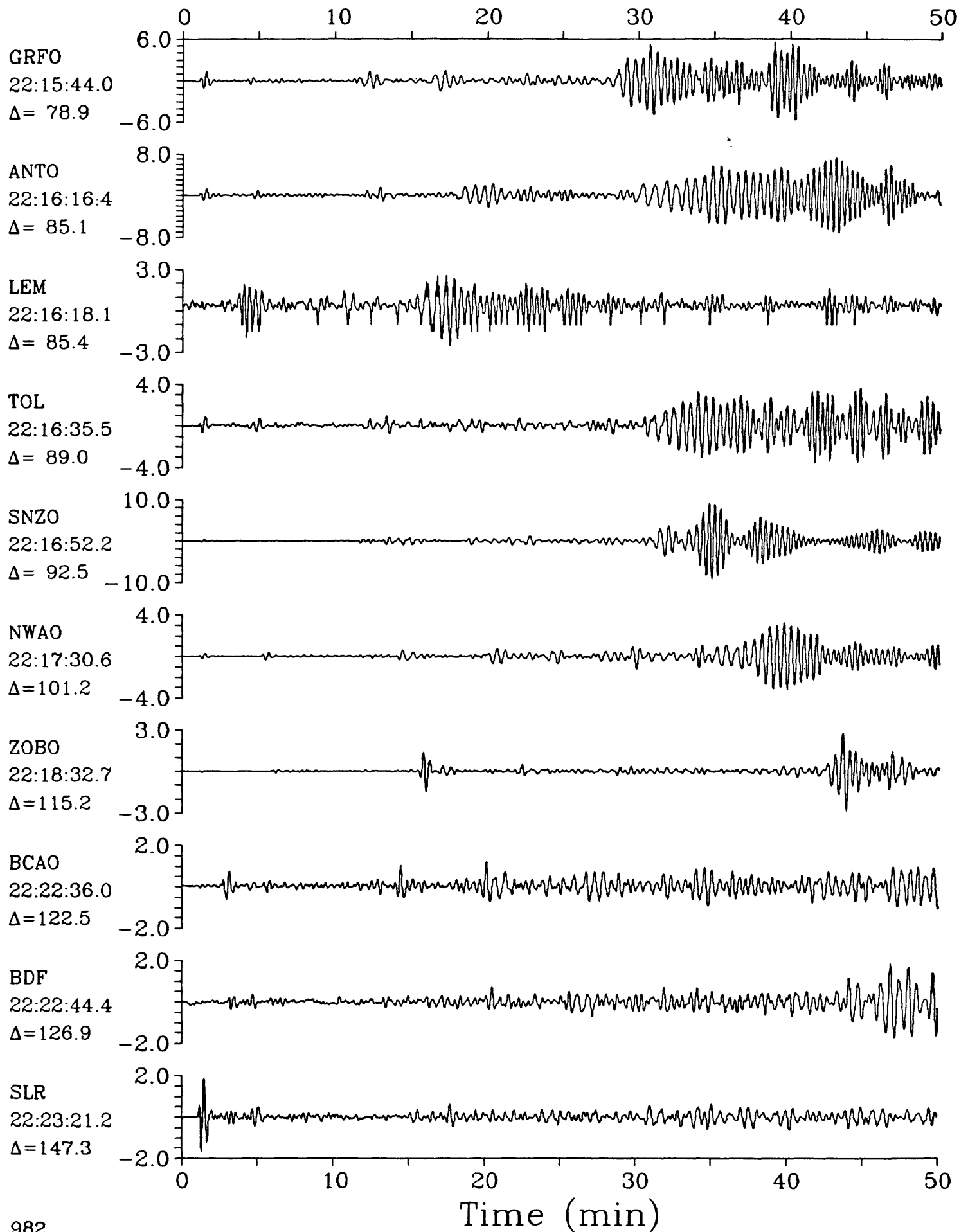
SPZ

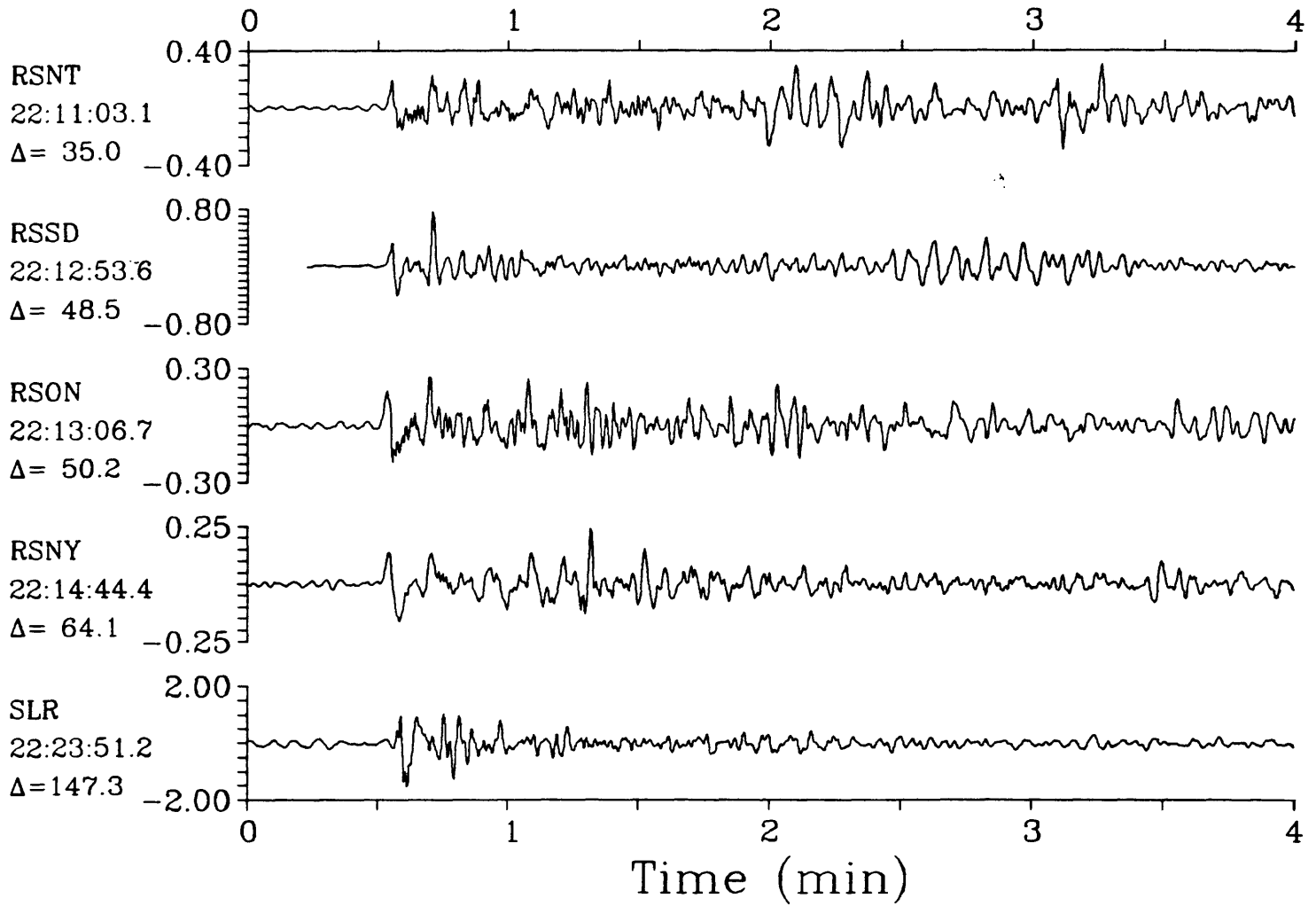
Andreanof Islands, Aleutian Is. $h=33.0$ $m_b=5.8$ $M_{sz}=5.8$



Andreasof Islands, Aleutian Is. $h=33.0$ $m_b=5.8$ $M_{sz}=5.8$ 

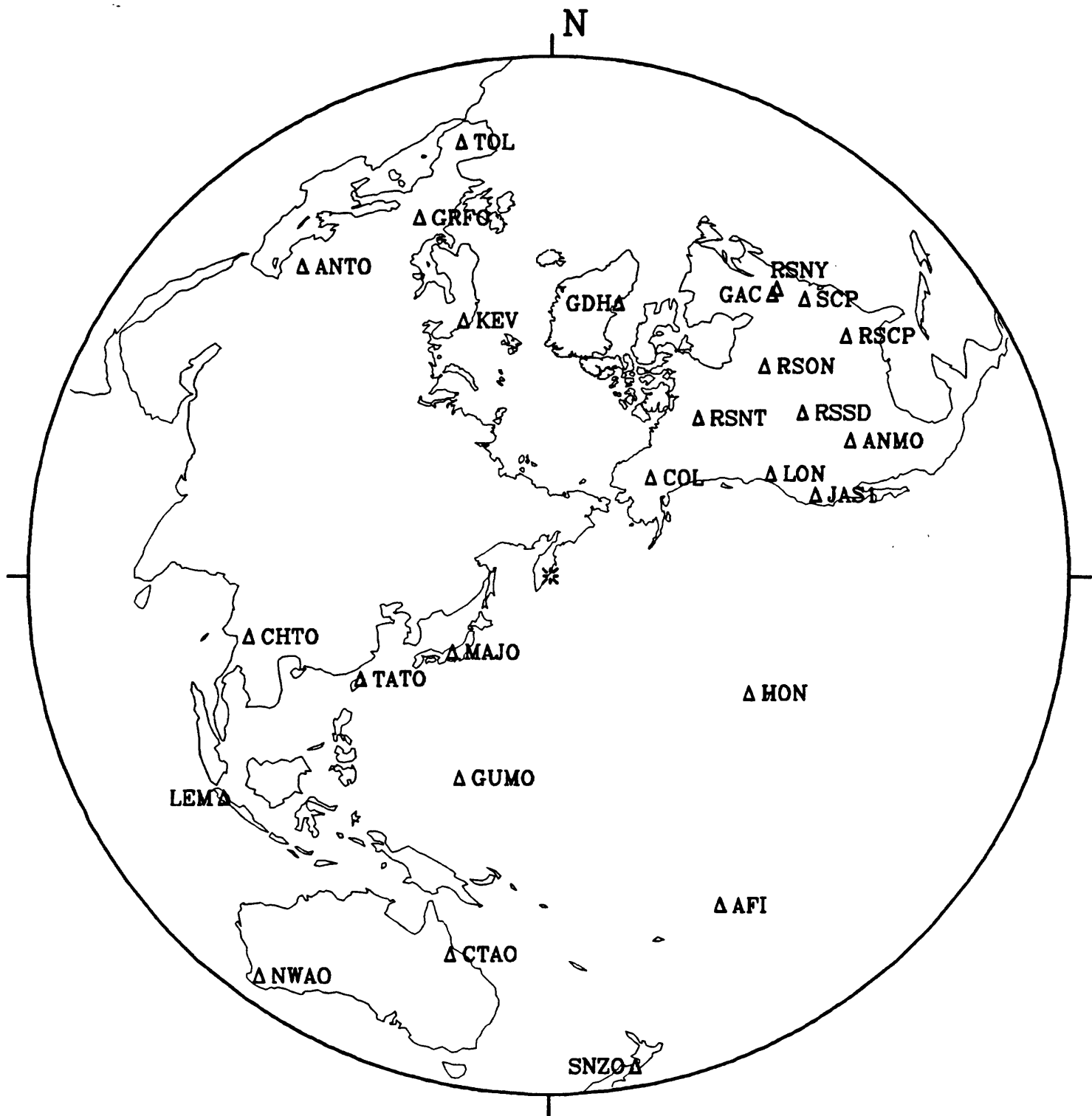
Andreanof Islands, Aleutian Is. $h=33.0$ $m_b=5.8$ $M_{SZ}=5.8$ 

Andreev Islands, Aleutian Is. $h=33.0$ $m_b=5.8$ $M_{sz}=5.8$ 

Andreasof Islands, Aleutian Is. $h=33.0$ $m_b=5.8$ $M_{sz}=5.8$ 

25 May 1985 23:29:25.52

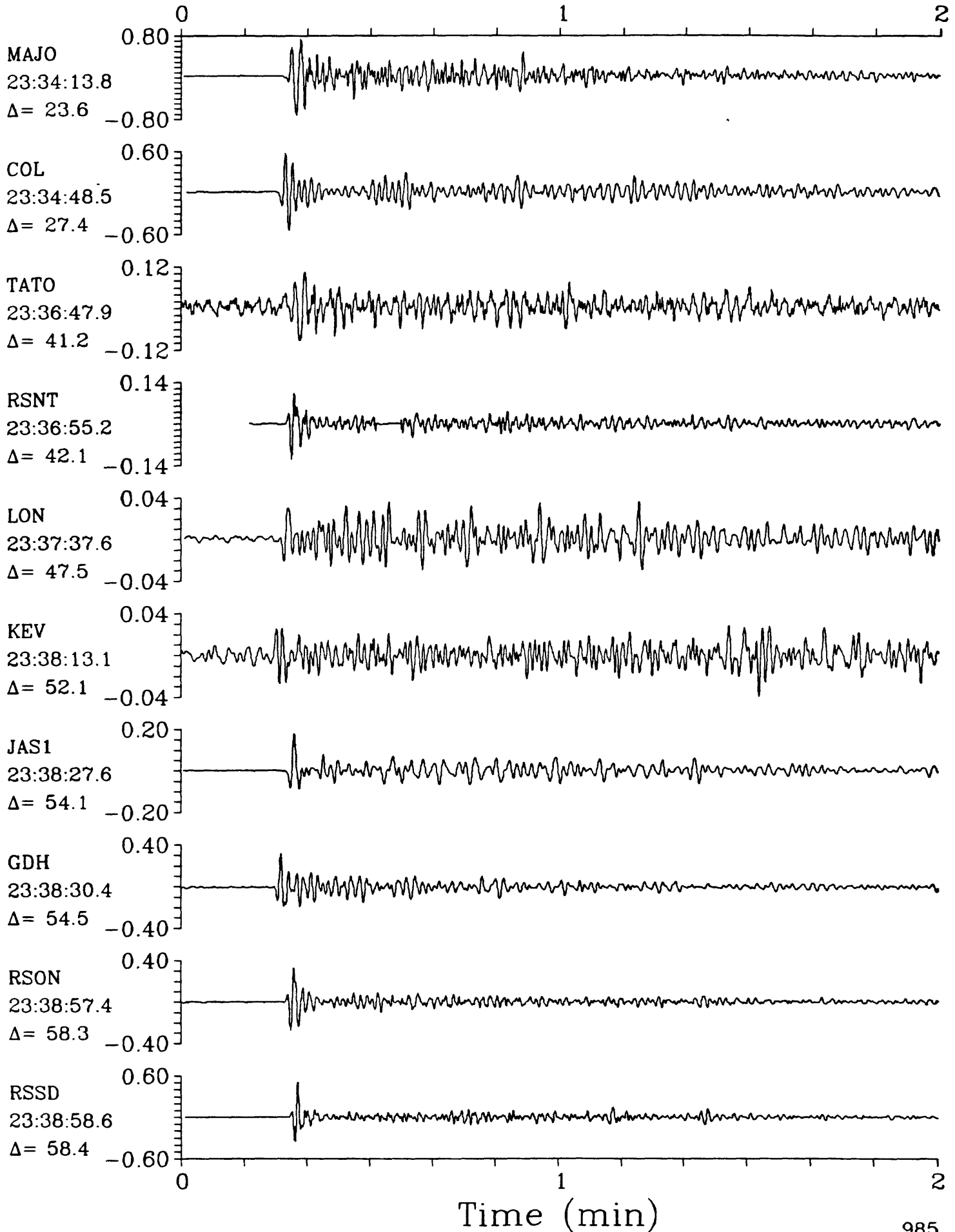
Near East Coast of Kamchatka

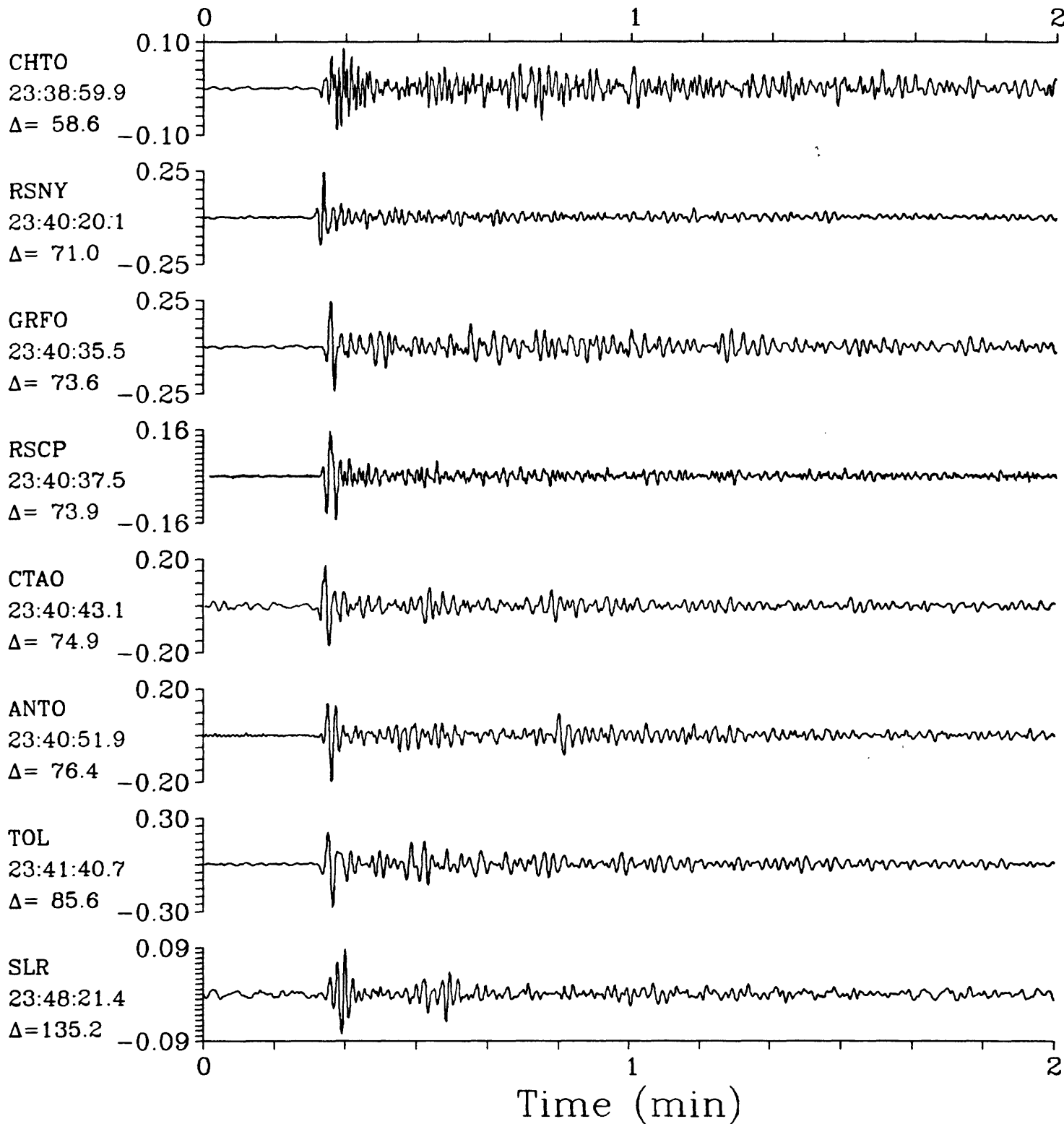


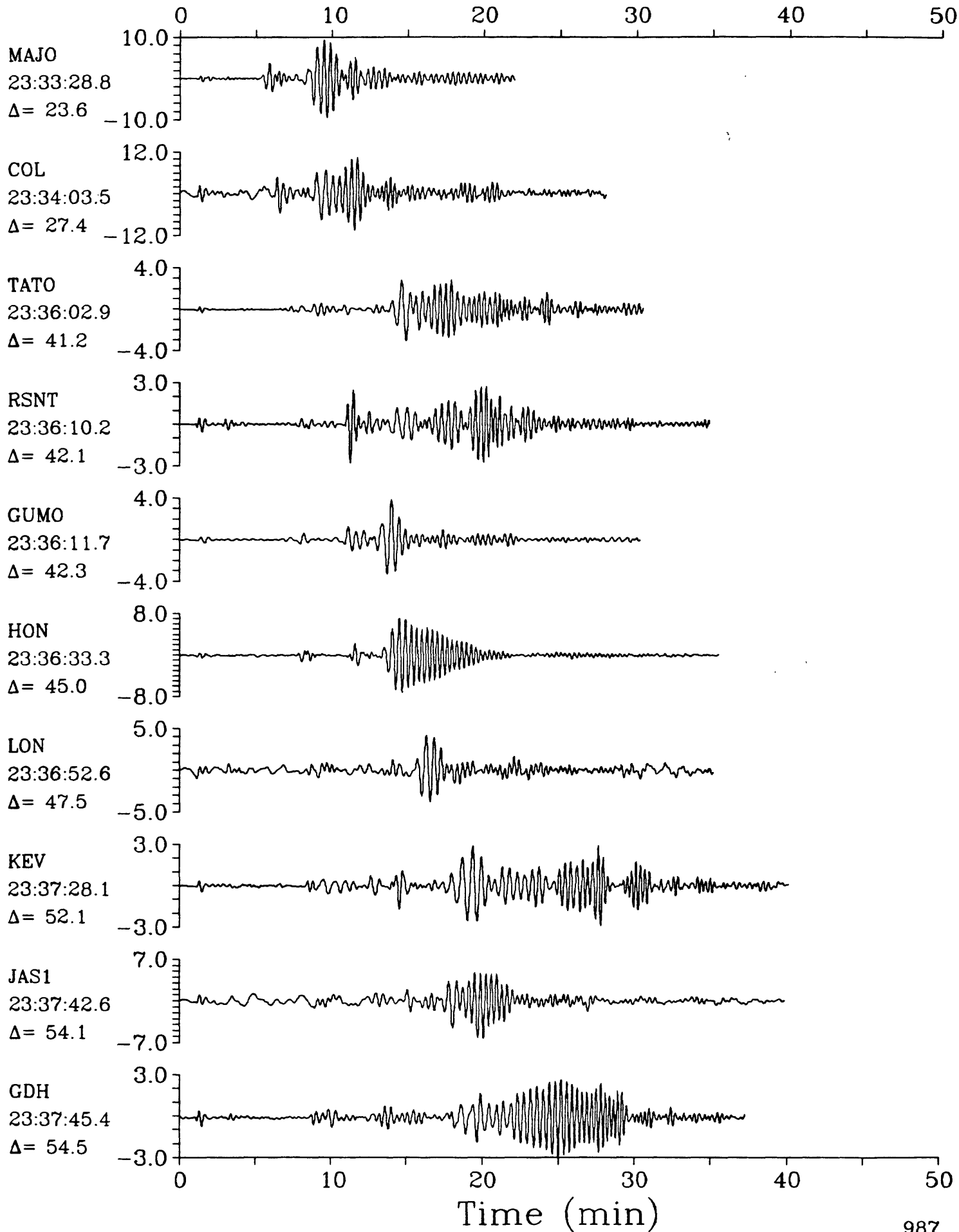
SPZ

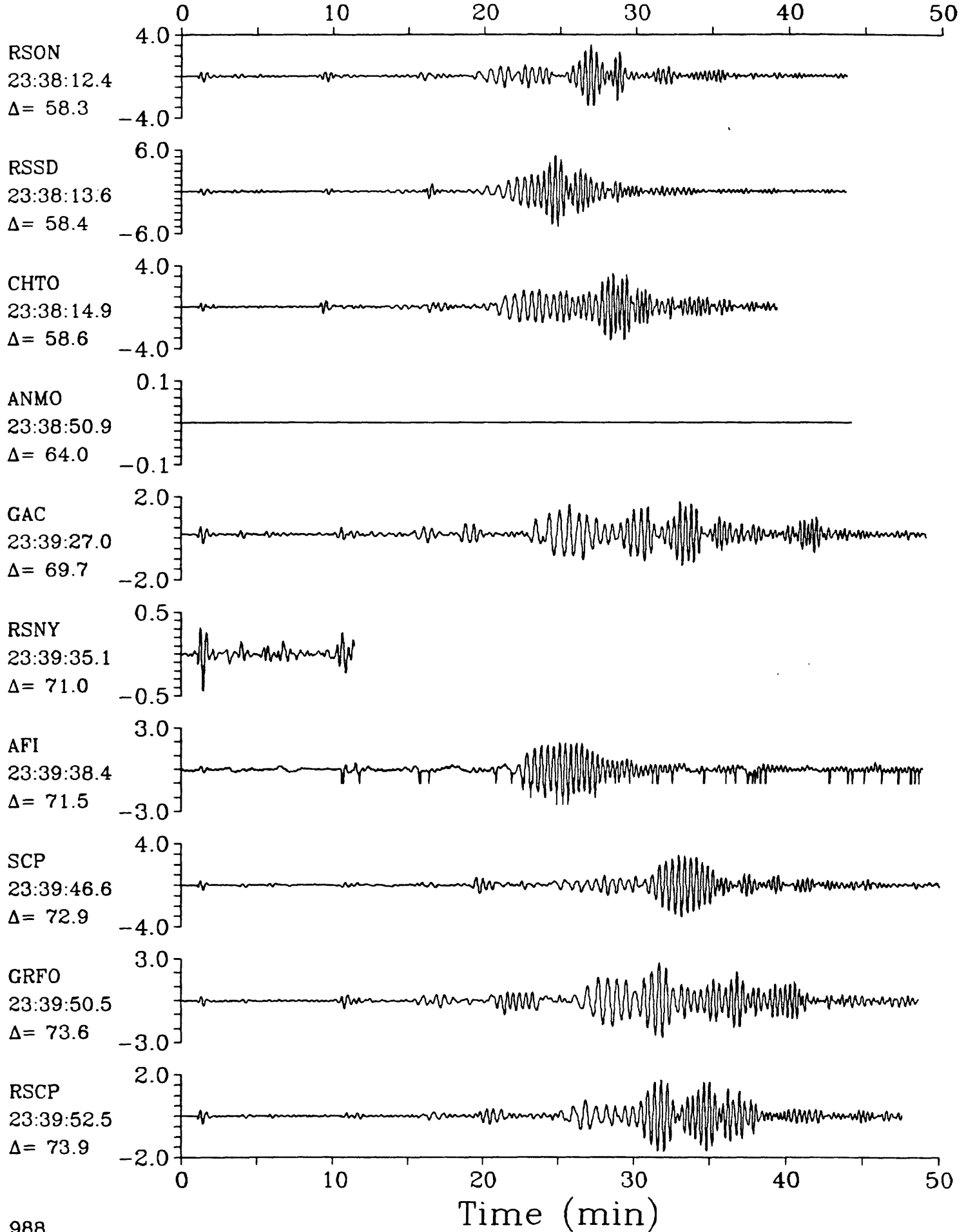
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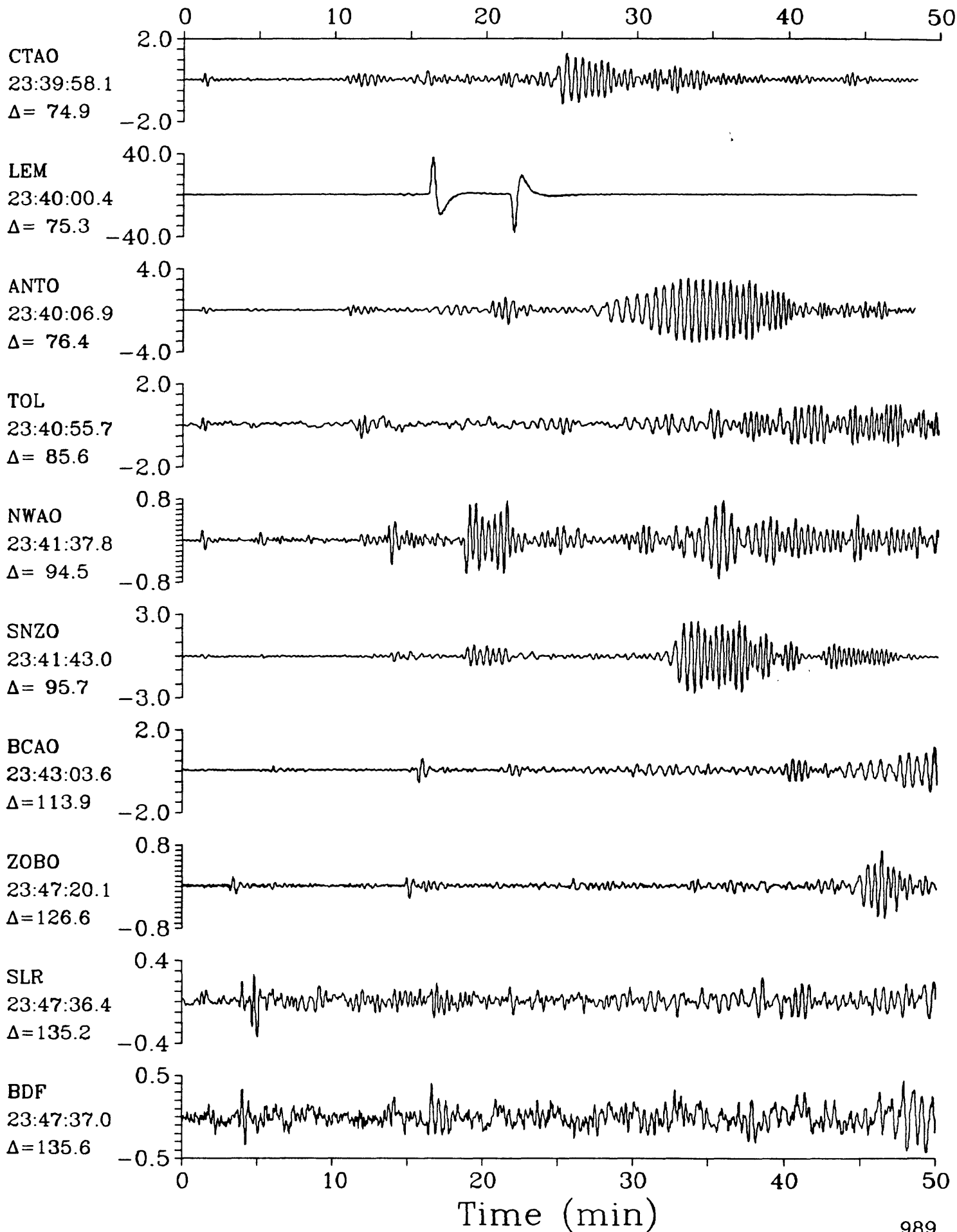
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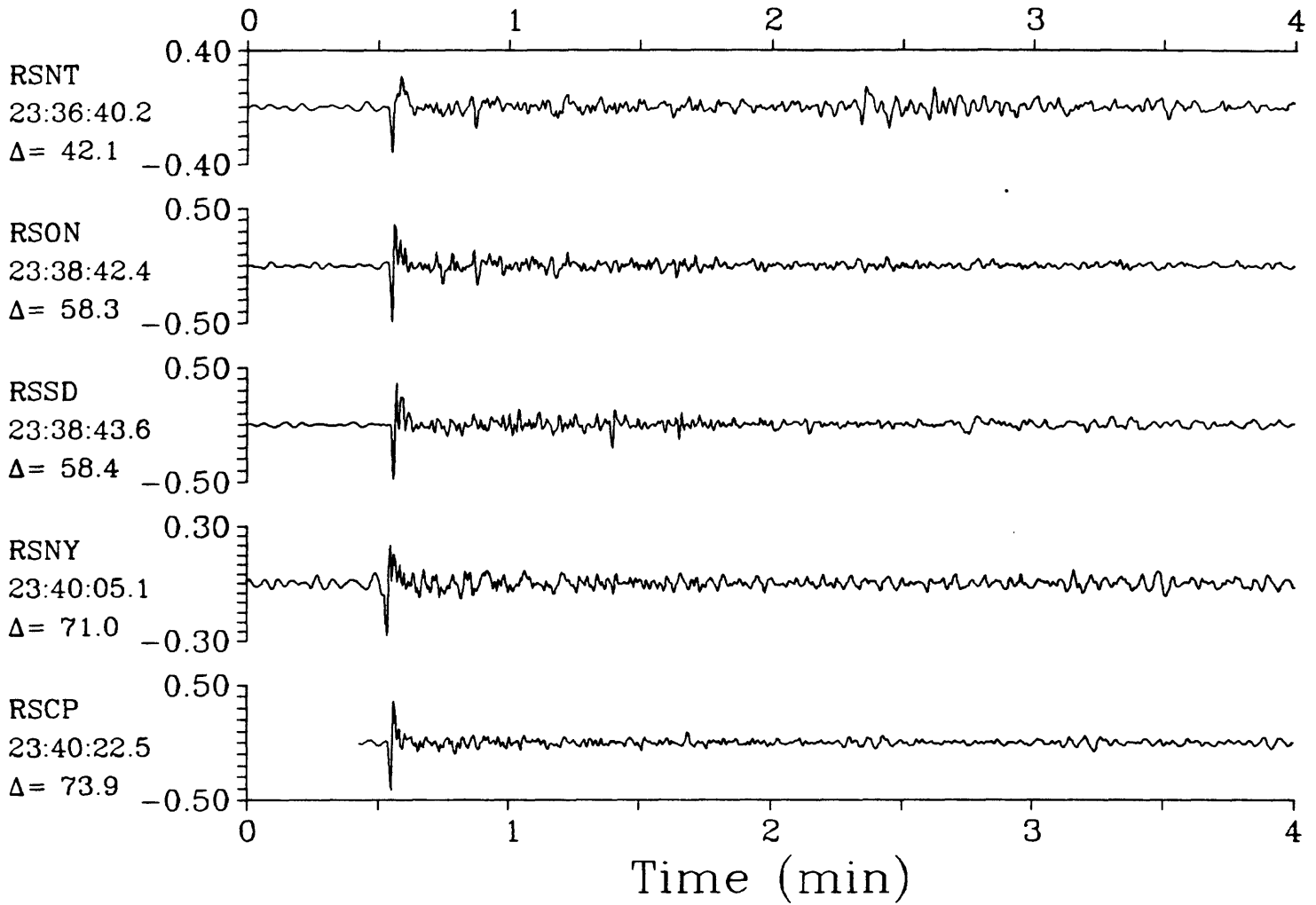
Near East Coast of Kamchatka $h=79.5$ $m_b=5.9$ 

Near East Coast of Kamchatka $h=79.5$ $m_b=5.9$ 

Near East Coast of Kamchatka $h=79.5$ $m_b=5.9$ 

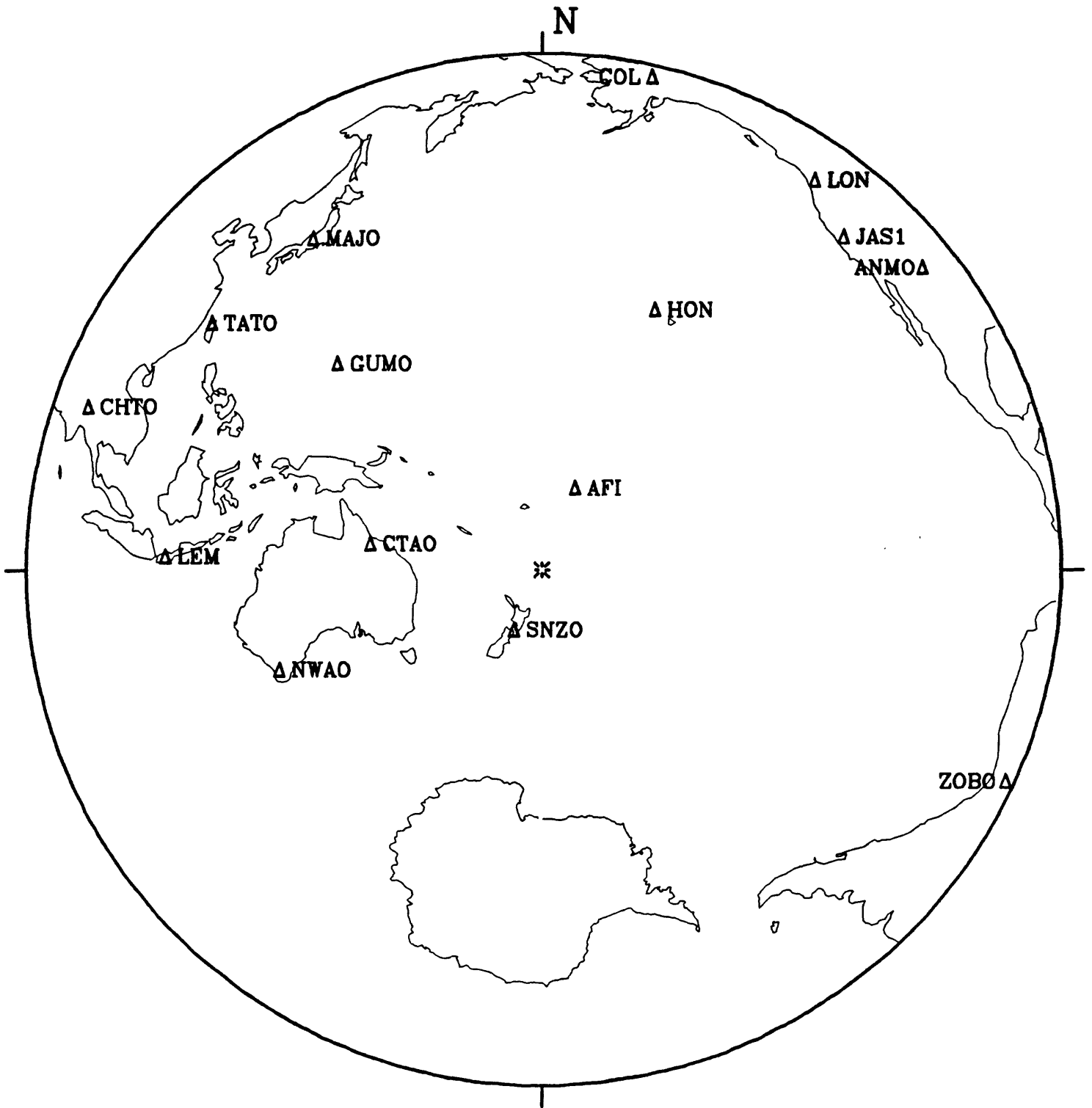
Near East Coast of Kamchatka $h=79.5$ $m_b=5.9$ 

Near East Coast of Kamchatka $h=79.5$ $m_b=5.9$ 

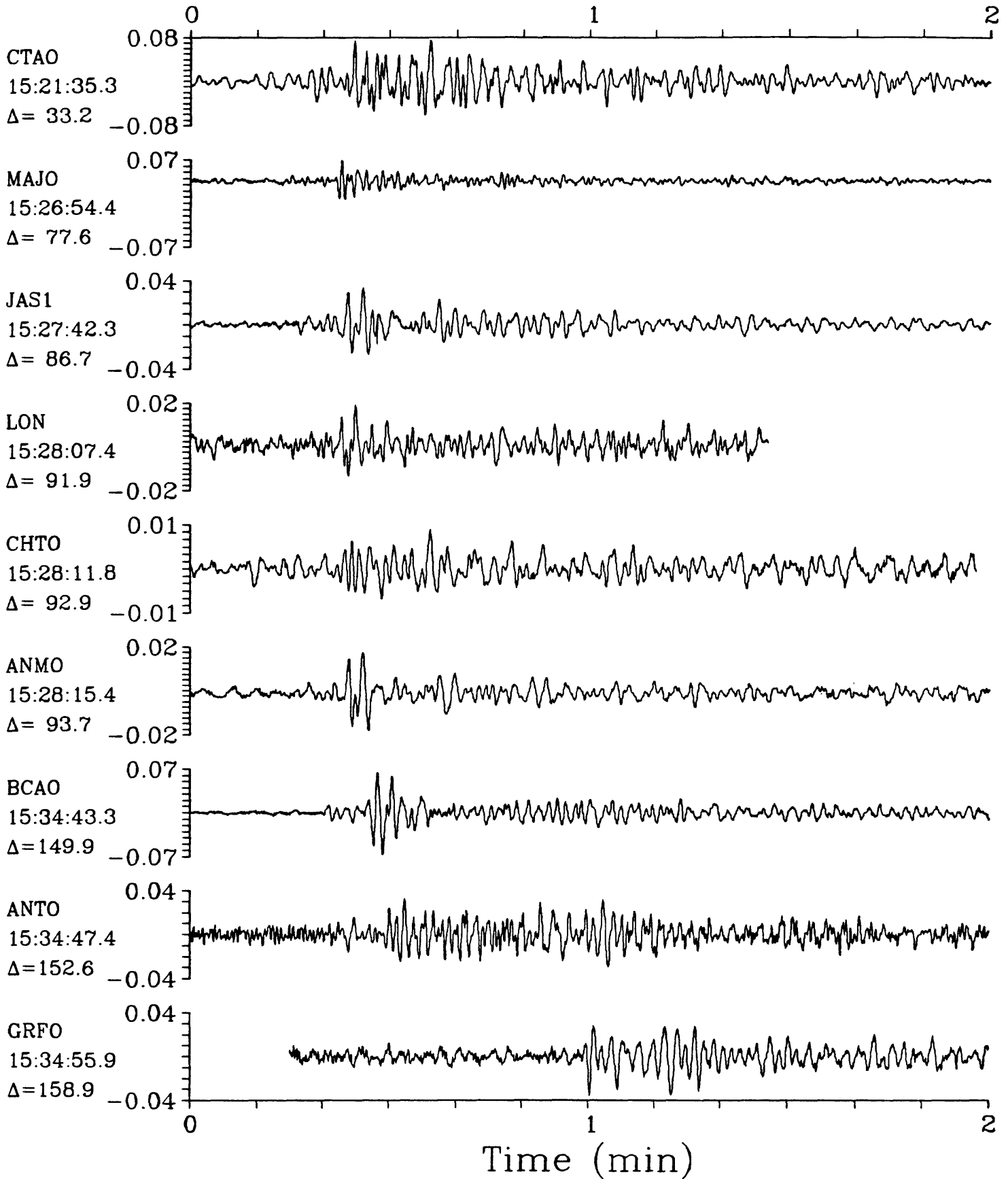
Near East Coast of Kamchatka $h=79.5$ $m_b=5.9$ 

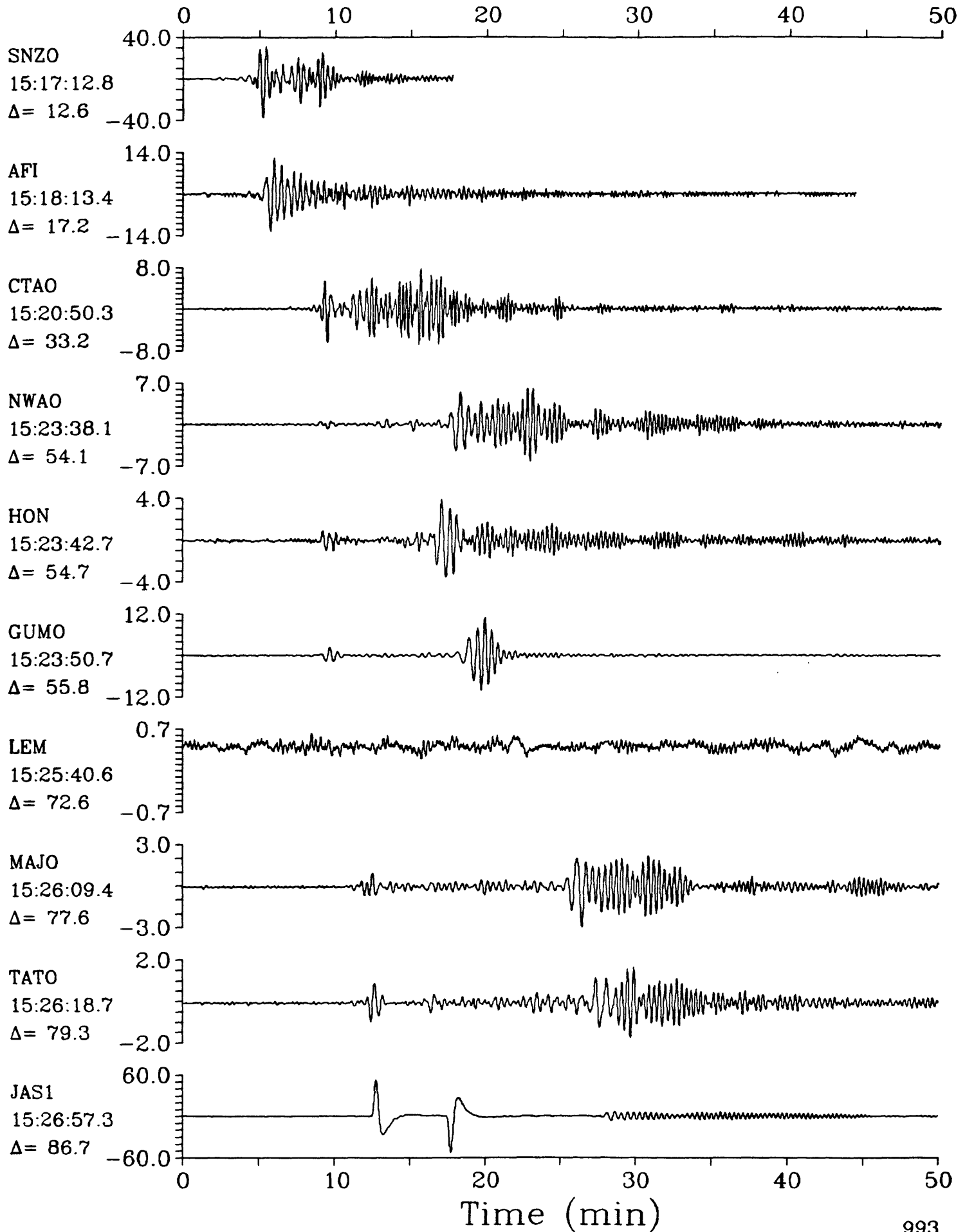
29 May 1985 15:15:16.13

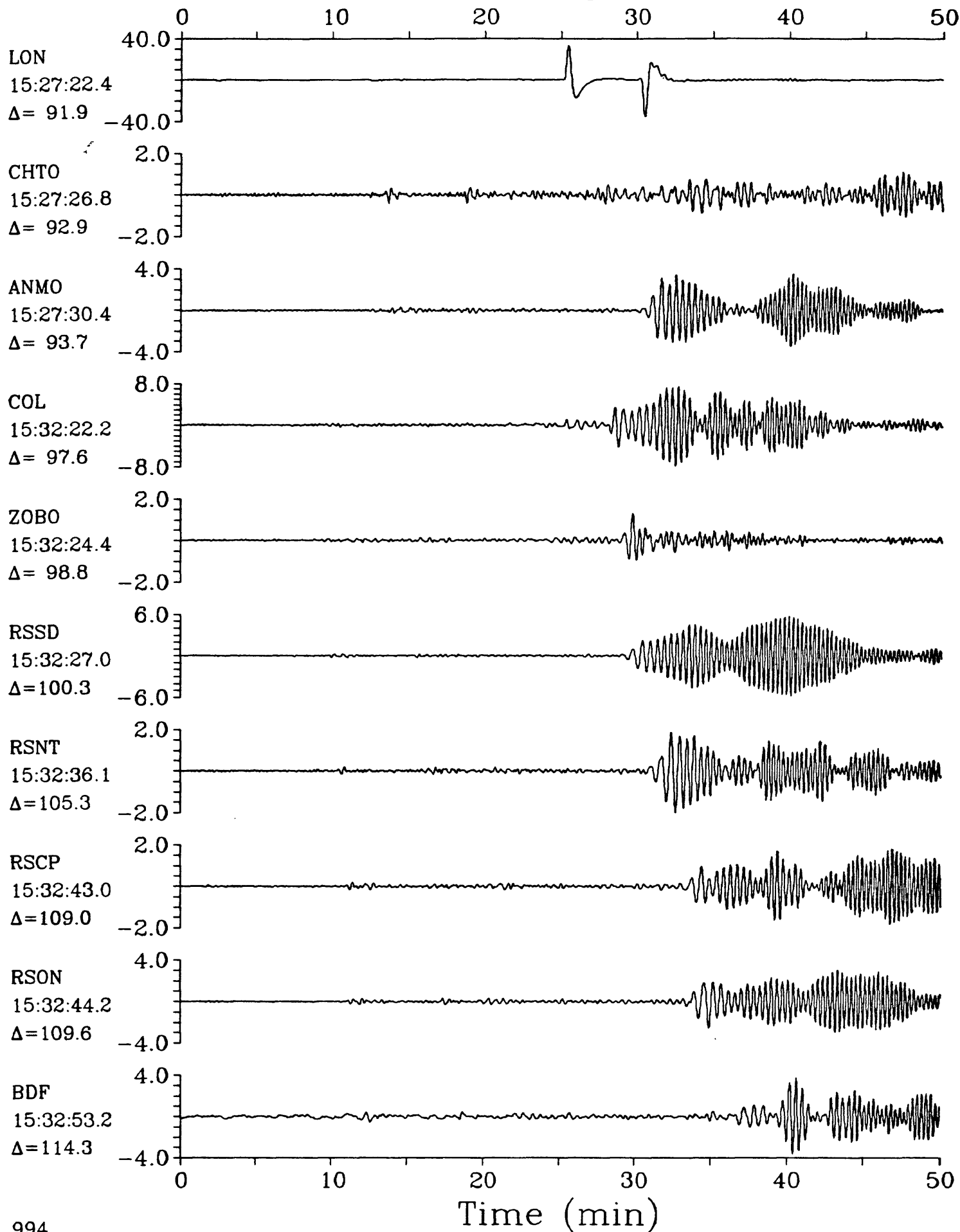
Kermadec Islands



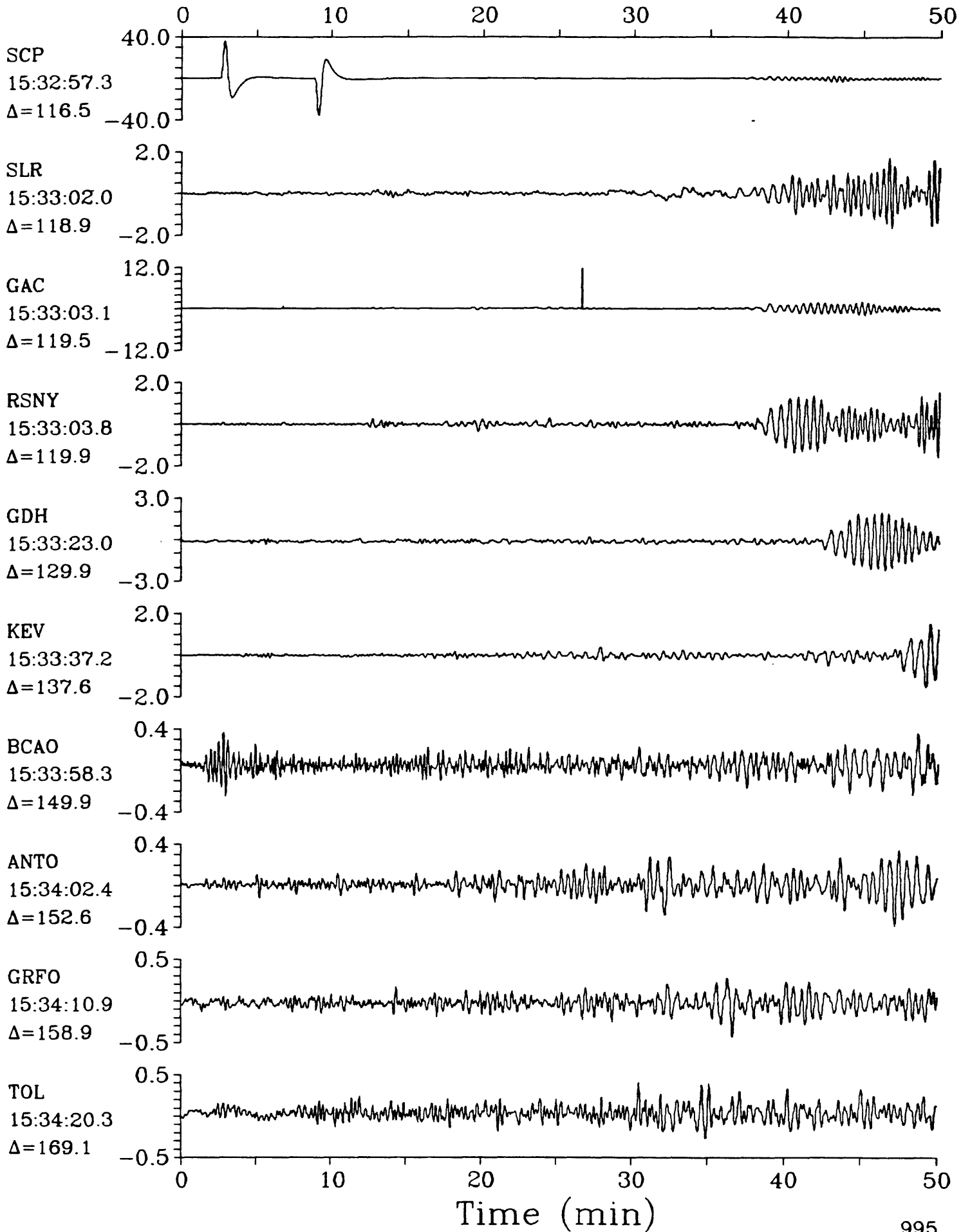
Kermadec Islands $h=33.0$ $m_b=5.3$ $M_{SZ}=5.7$



Kermadec Islands $h=33.0$ $m_b=5.3$ $M_{sz}=5.7$ 

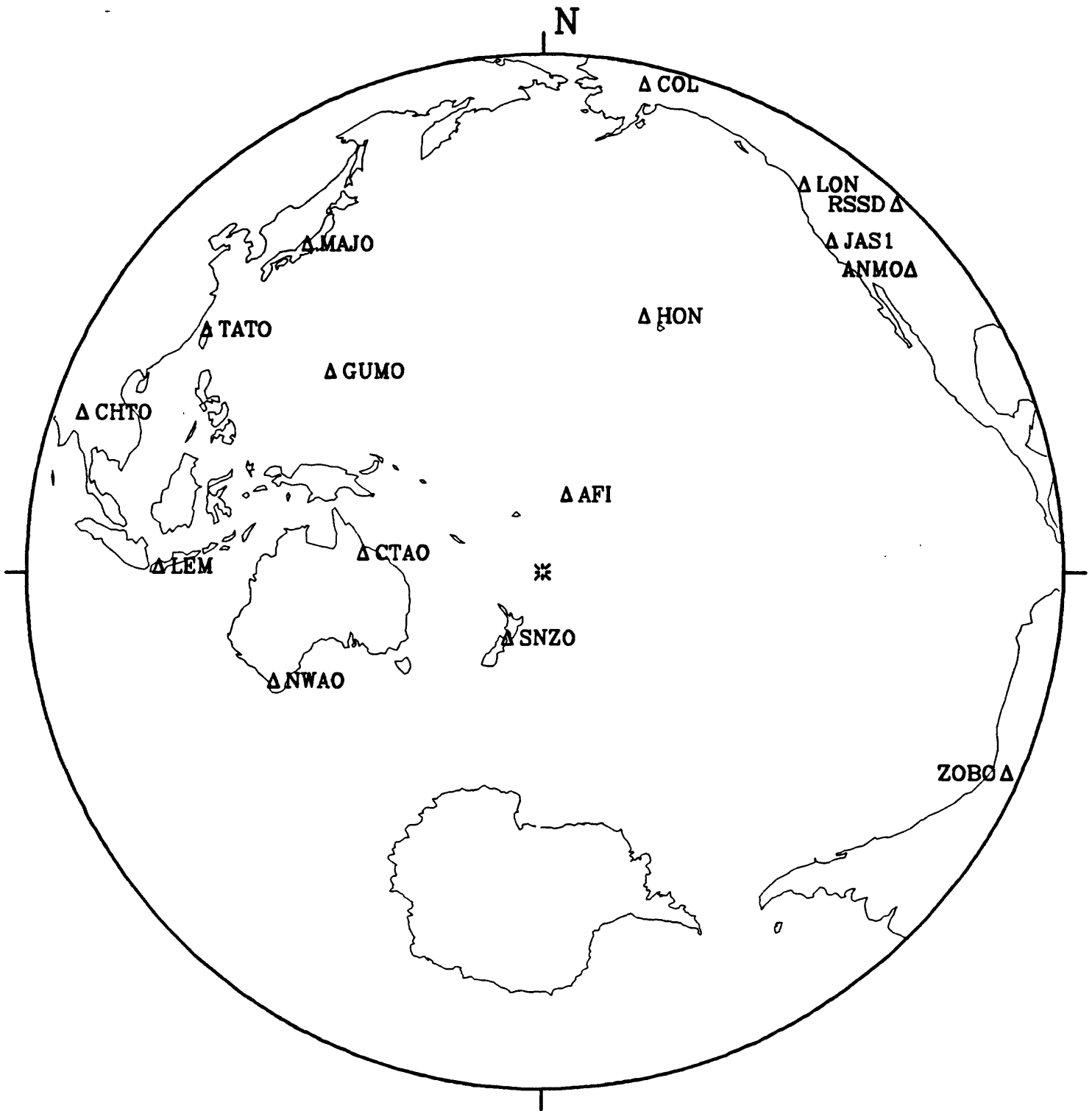
Kermadec Islands $h=33.0$ $m_b=5.3$ $M_{sz}=5.7$ 

Kermadec Islands $h=33.0$ $m_b=5.3$ $M_{SZ}=5.7$



29 May 1985 15:38:53.70

Kermadec Islands Region

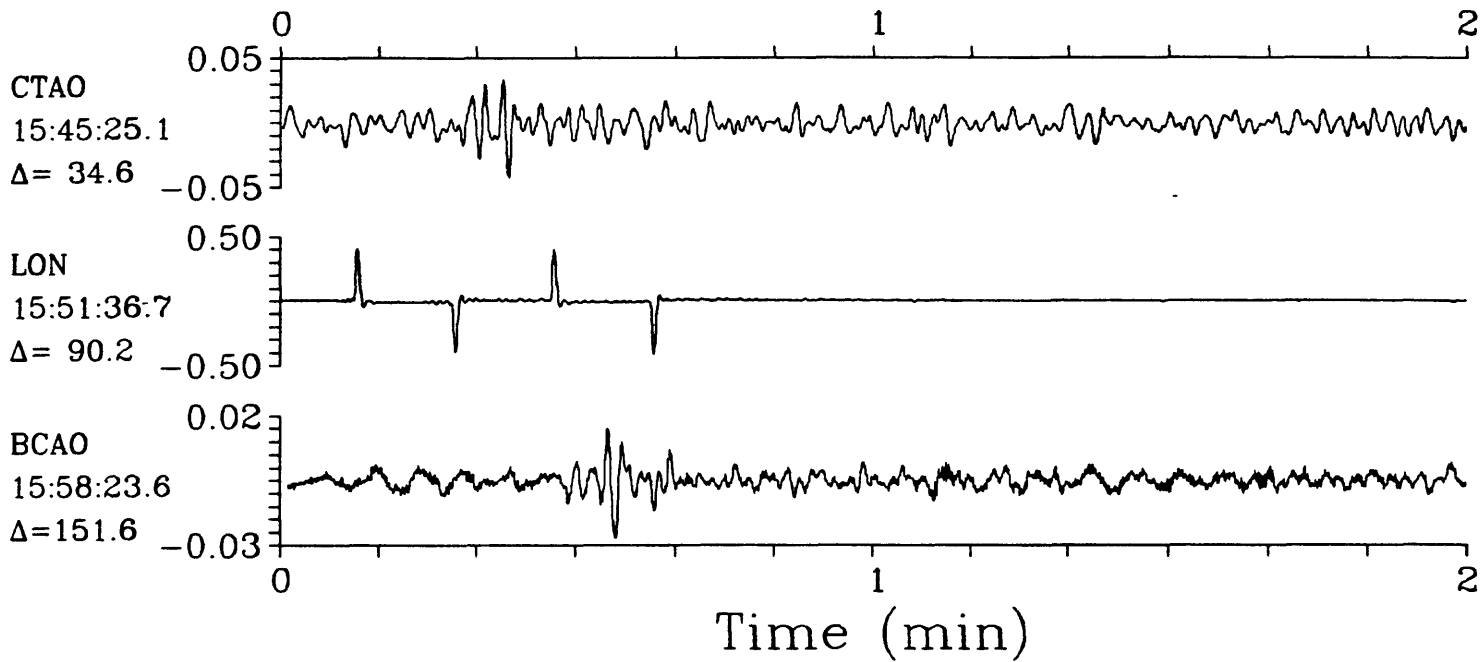


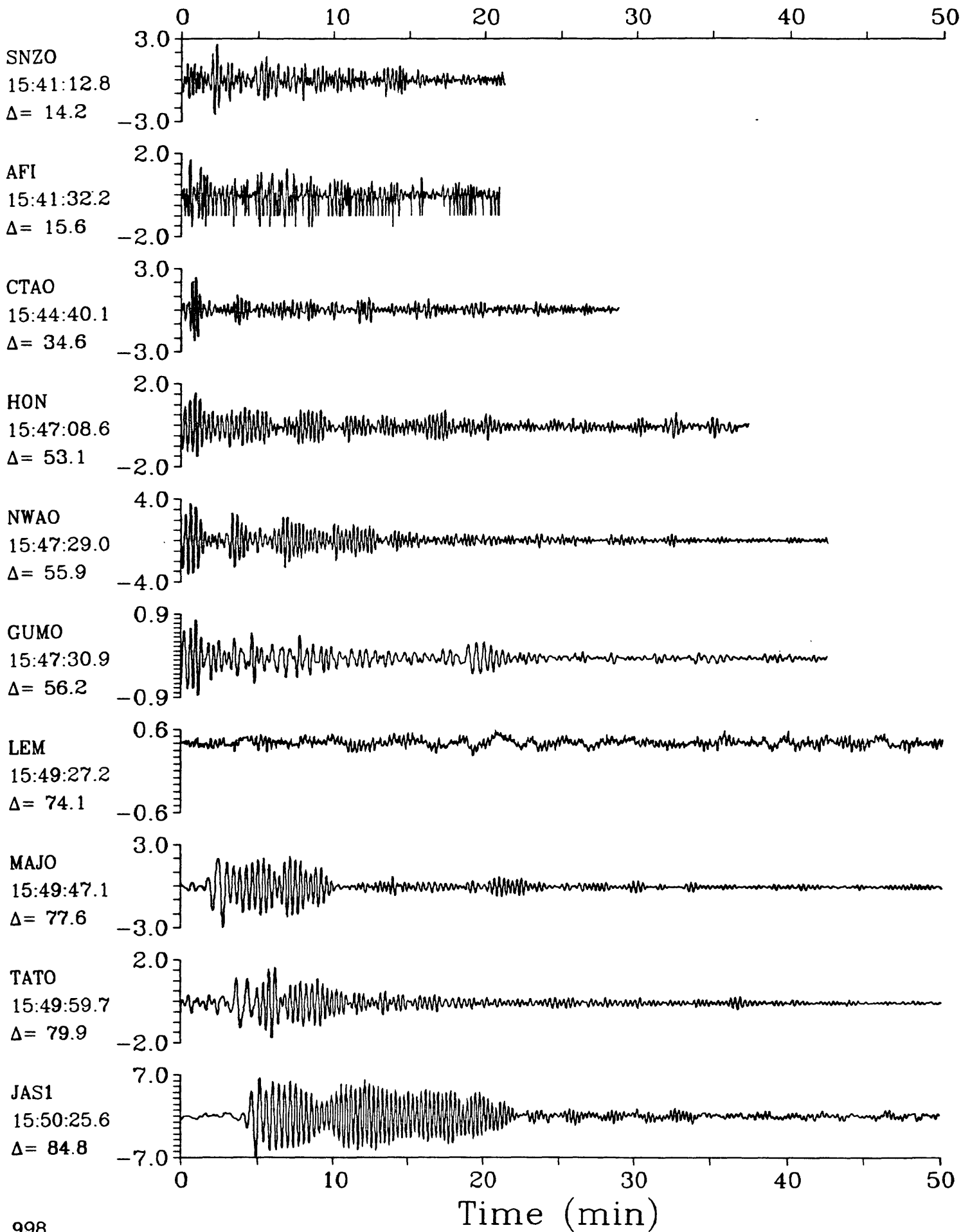
SPZ

29 May 1985 15:38:53.70

SPZ

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

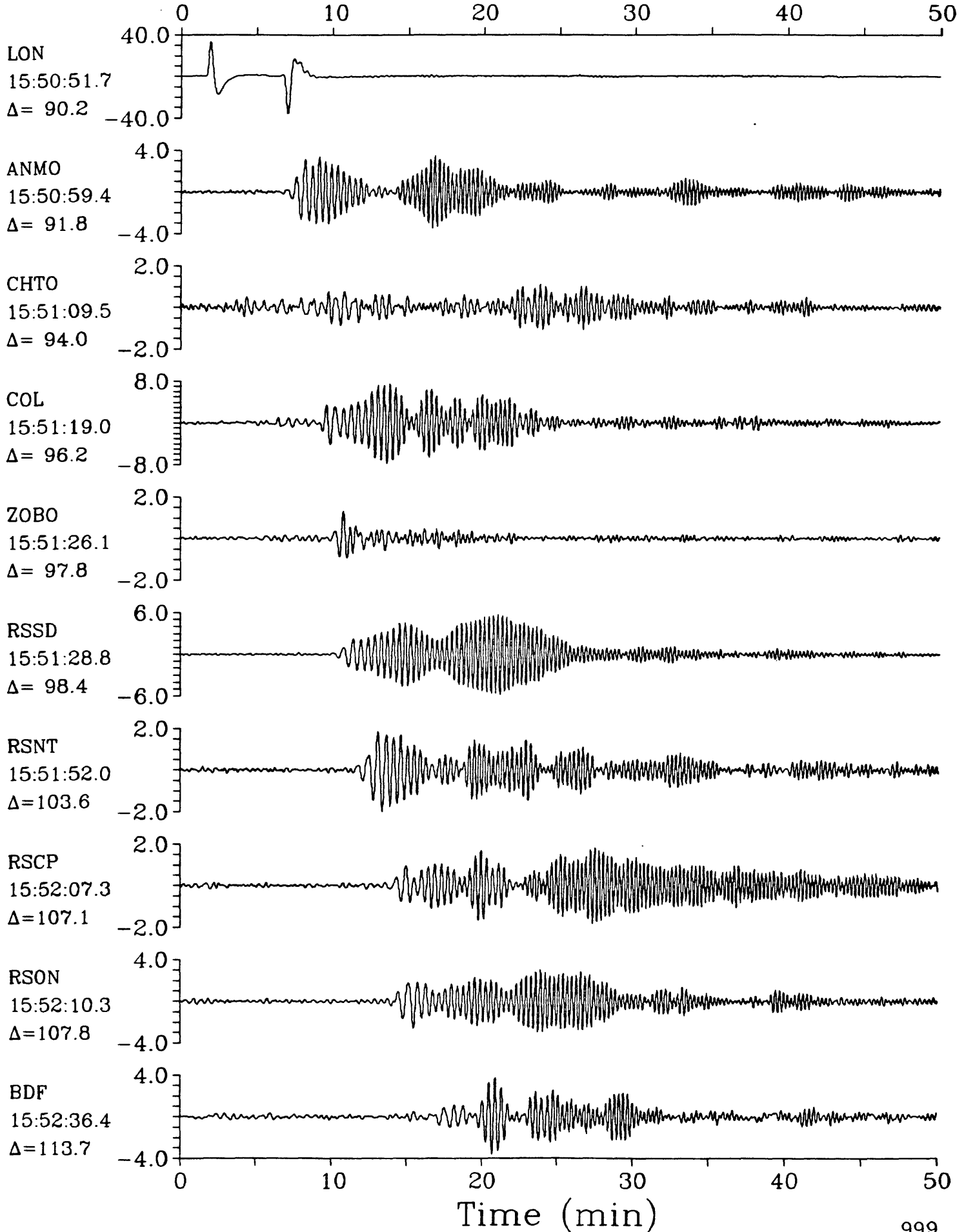


Kermadec Islands Region $h=33.0$ $m_b=5.1$ $M_{SZ}=5.9$ 

LPZ

29 May 1985 15:38:53.70

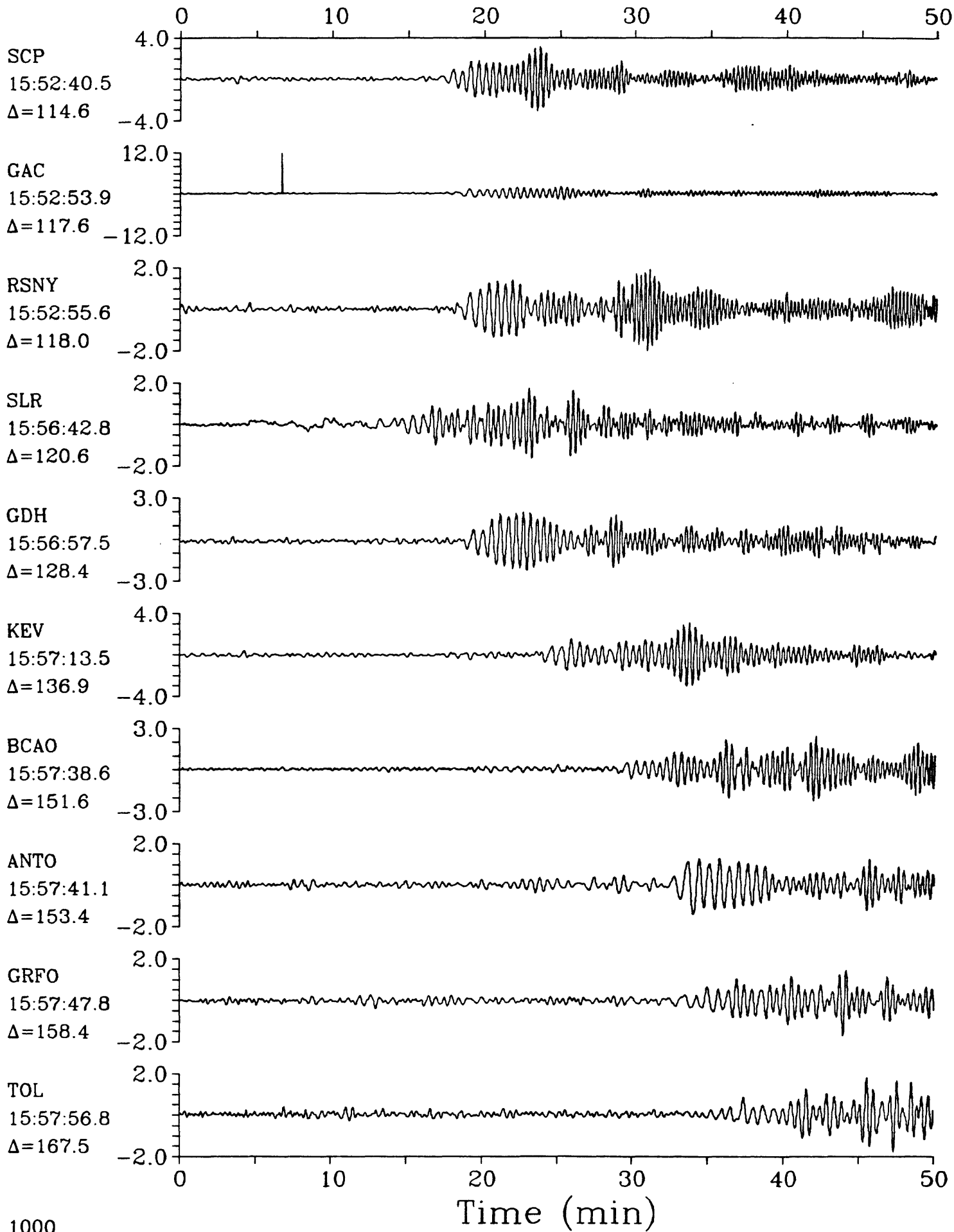
LPZ

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

LPZ

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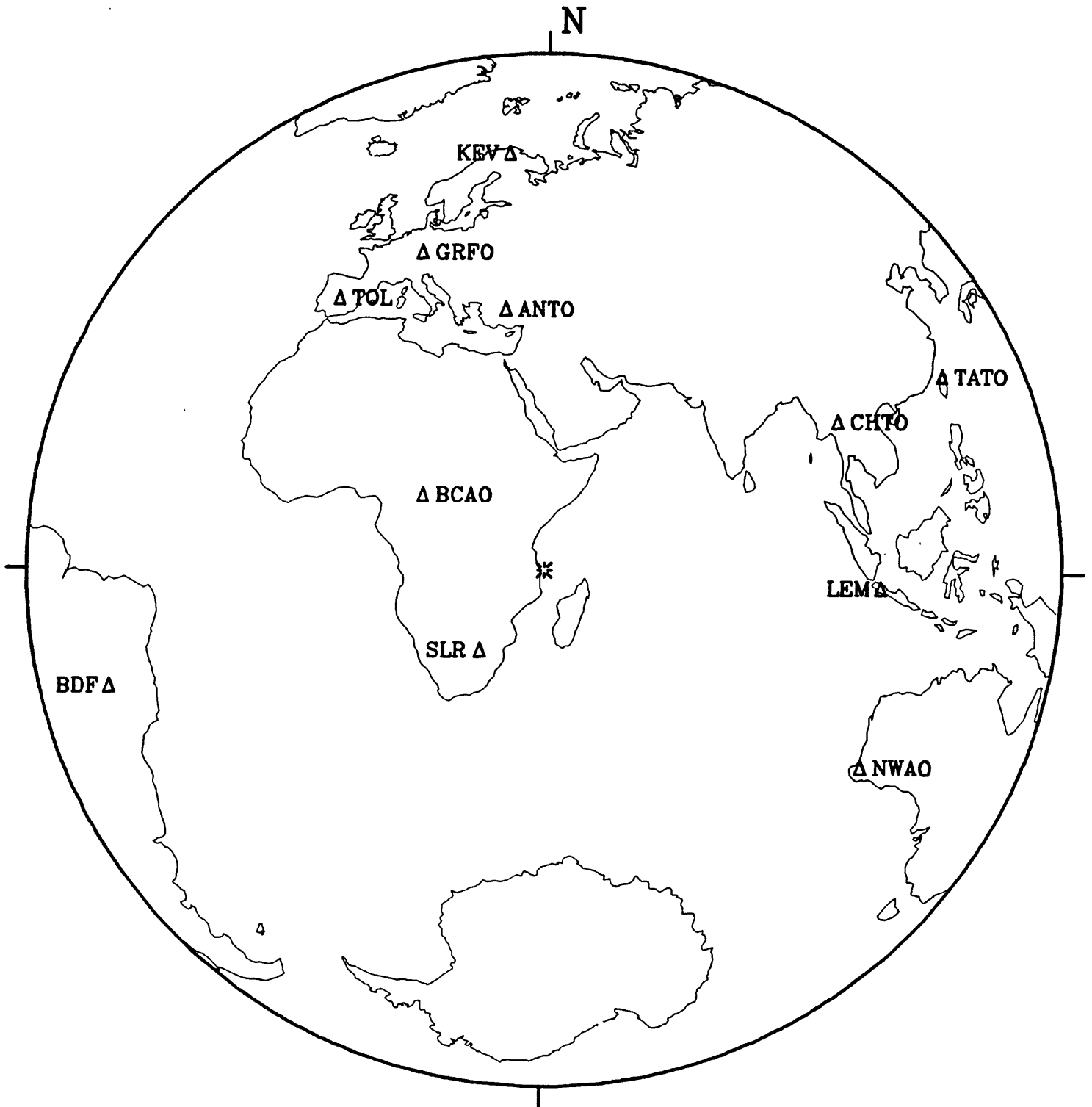
LPZ

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

1000

30 May 1985 08:32:17.52

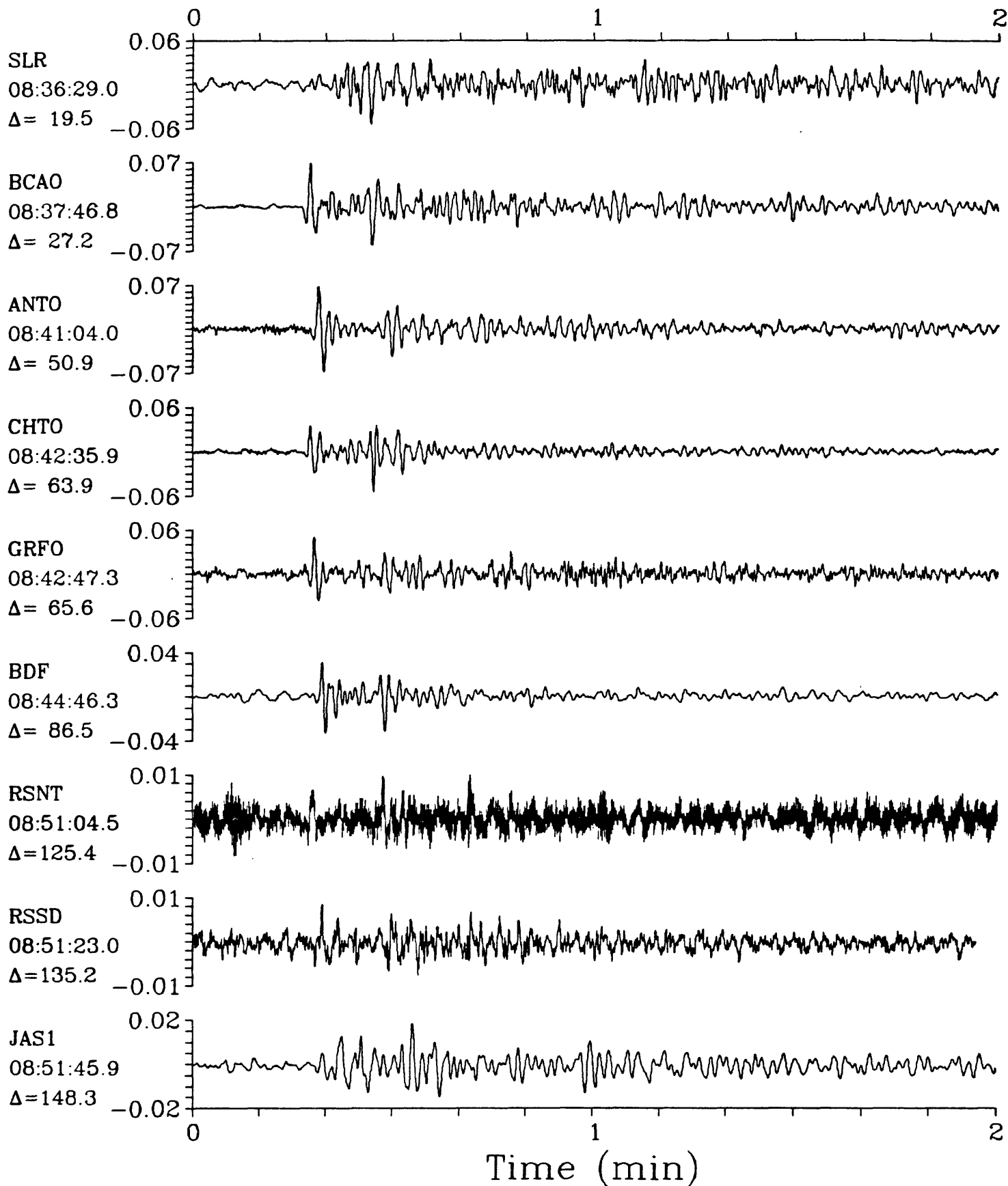
Northwest of Madagascar

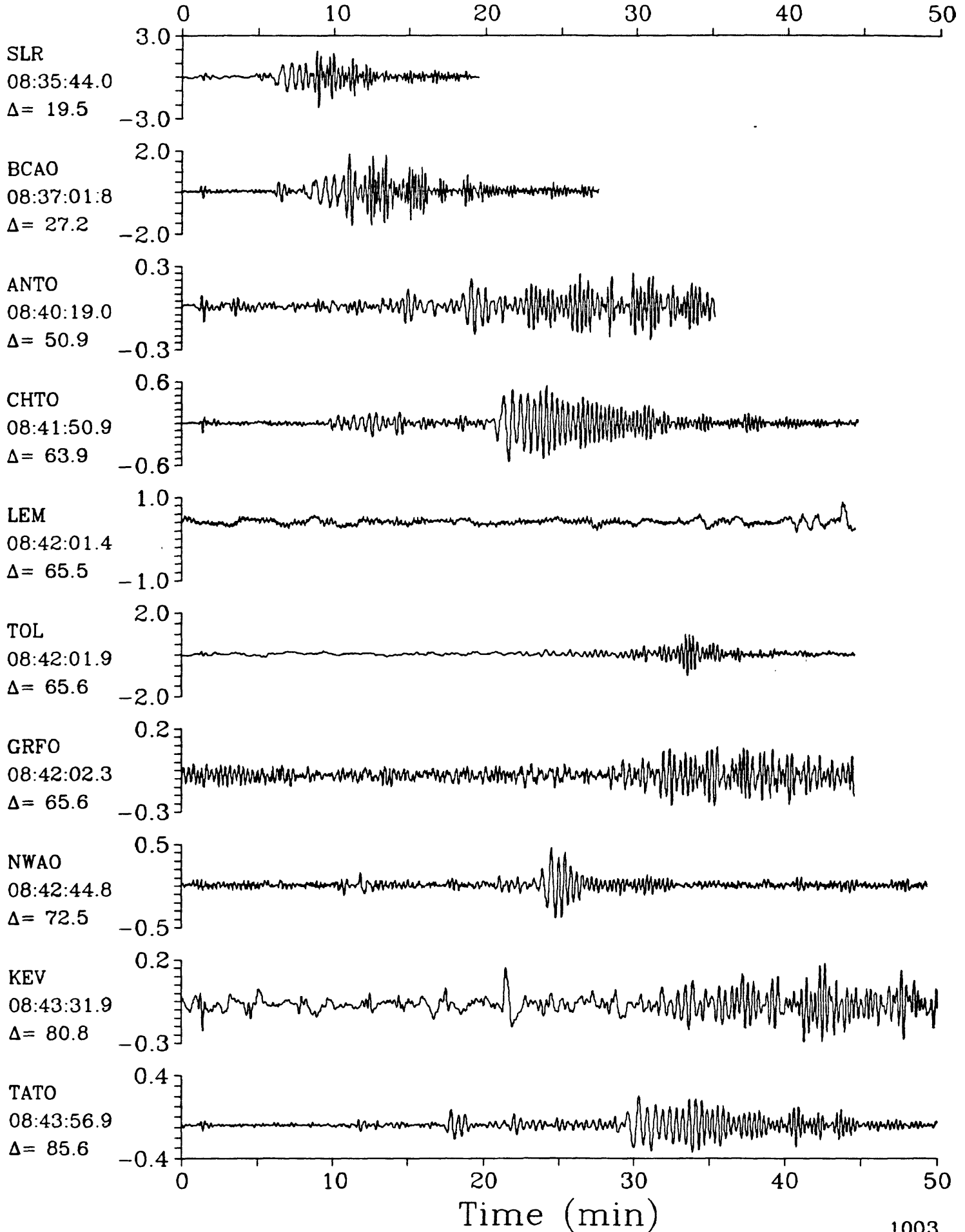


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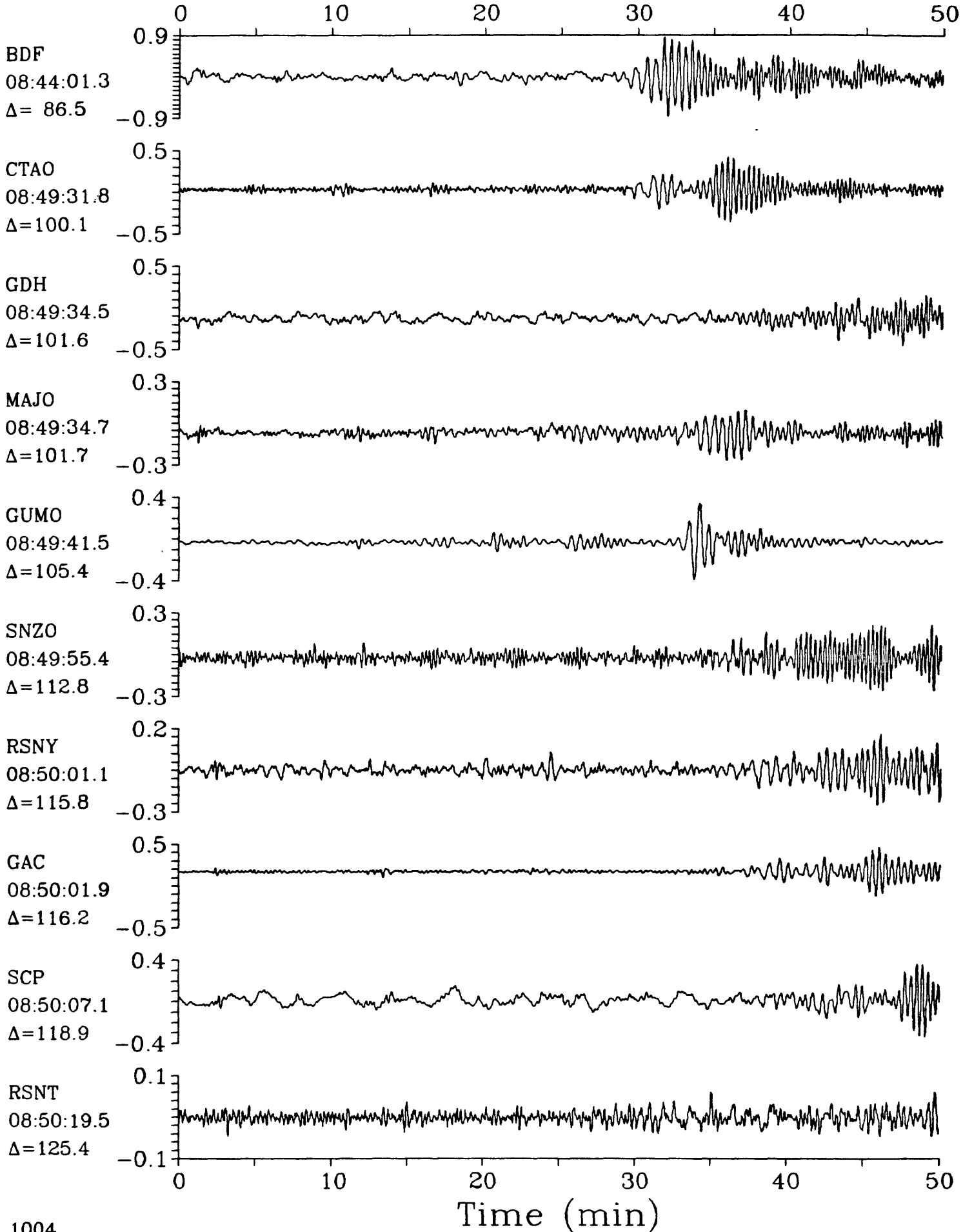
Northwest of Madagascar $h=10.0$ $m_b=5.5$ $M_{sz}=4.9$ 

Northwest of Madagascar $h=10.0$ $m_b=5.5$ $M_{sz}=4.9$ 

LPZ

30 May 1985 08:32:17.52

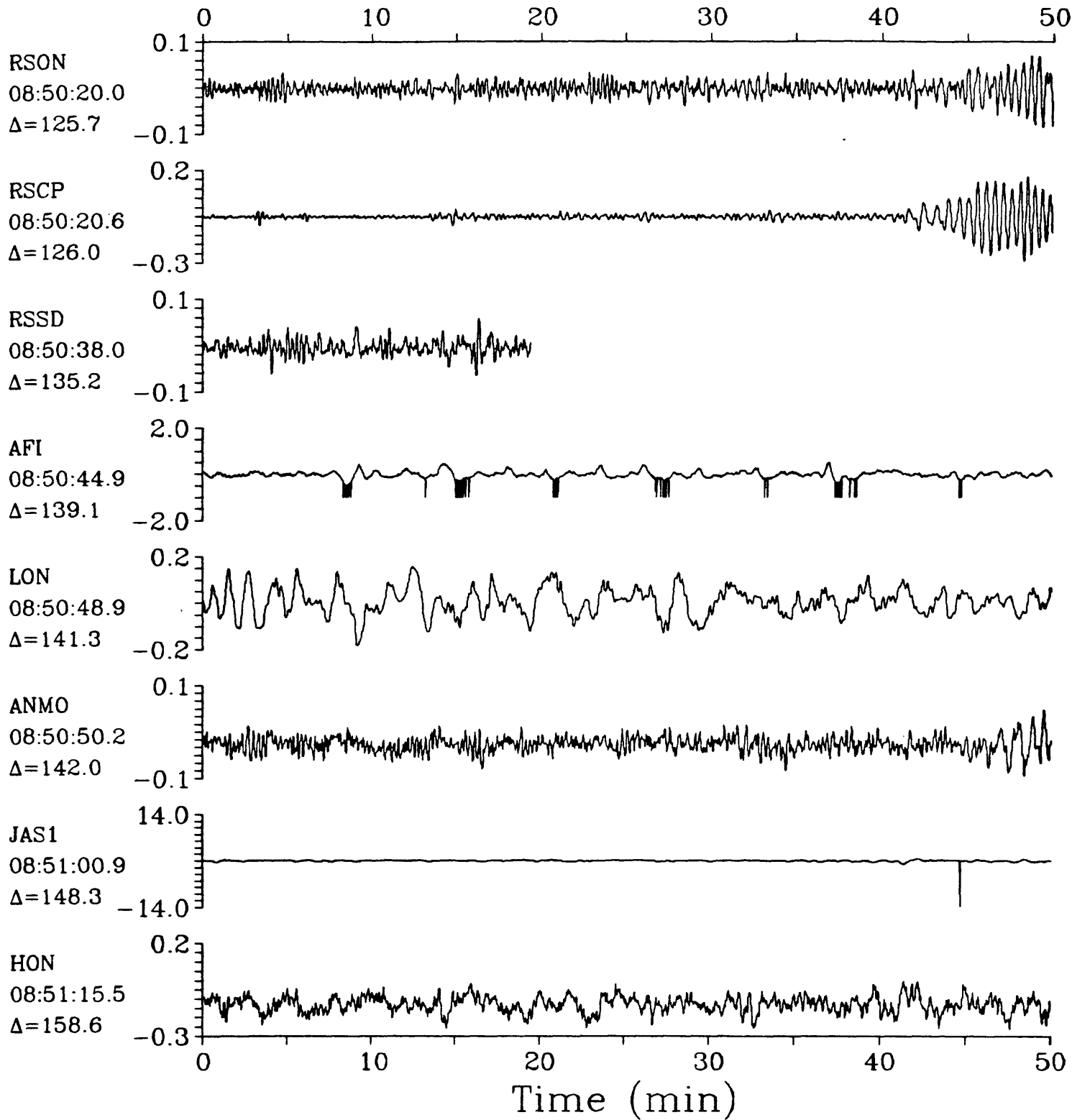
LPZ

Northwest of Madagascar $h=10.0$ $m_b=5.5$ $M_{sz}=4.9$ 

LPZ

30 May 1985 08:32:17.52

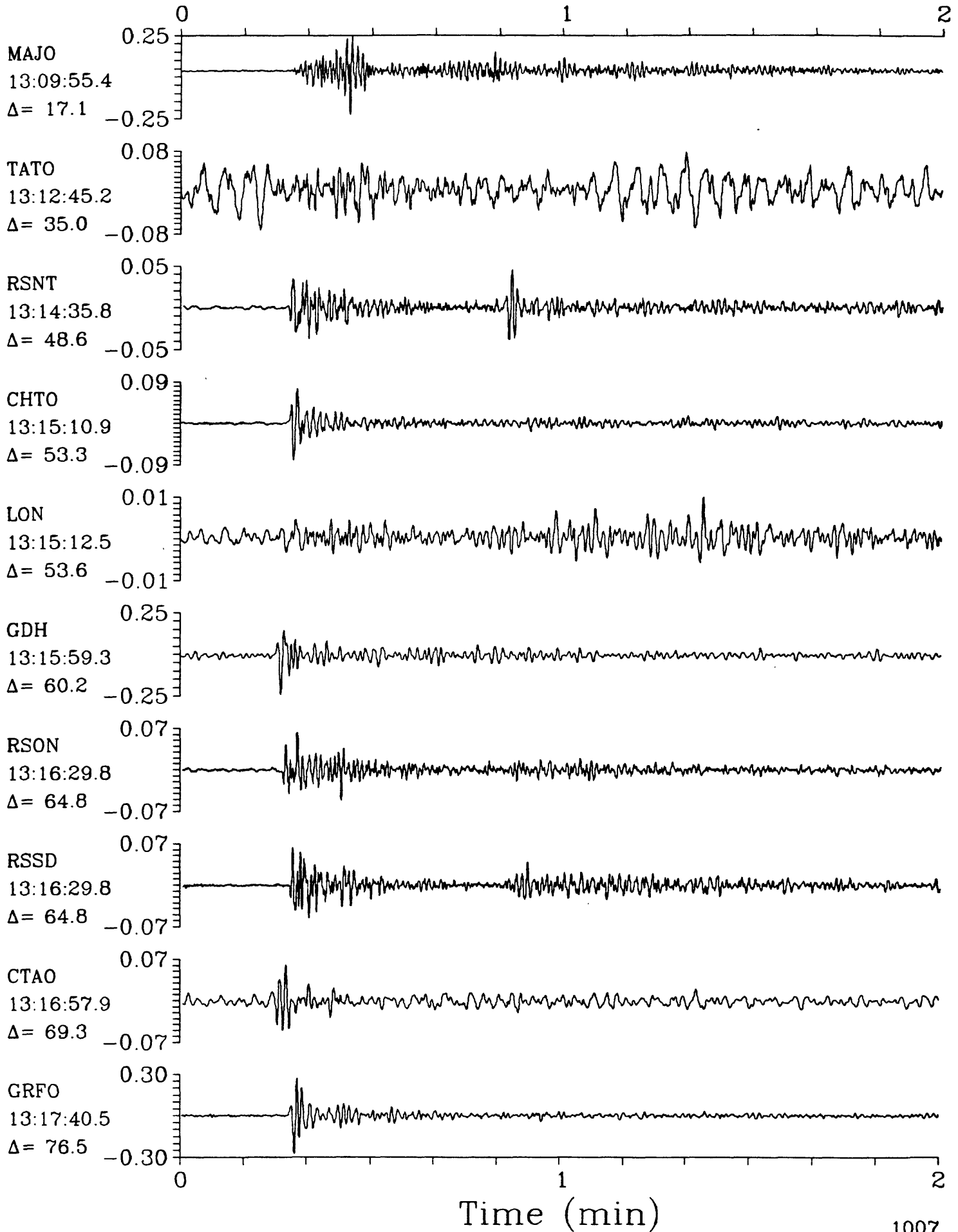
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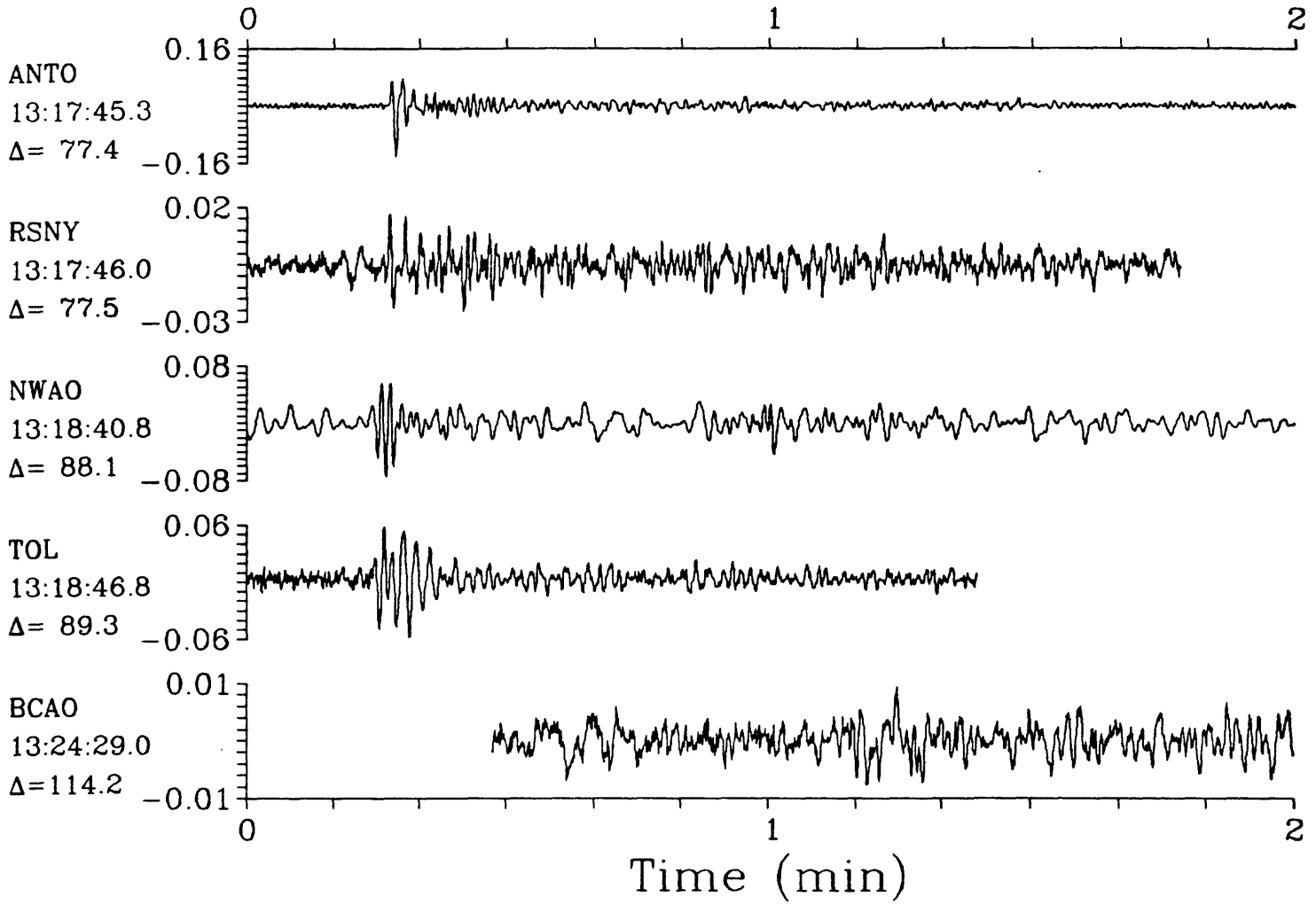
Northwest of Madagascar $h=10.0$ $m_b=5.5$ $M_{sz}=4.9$ 

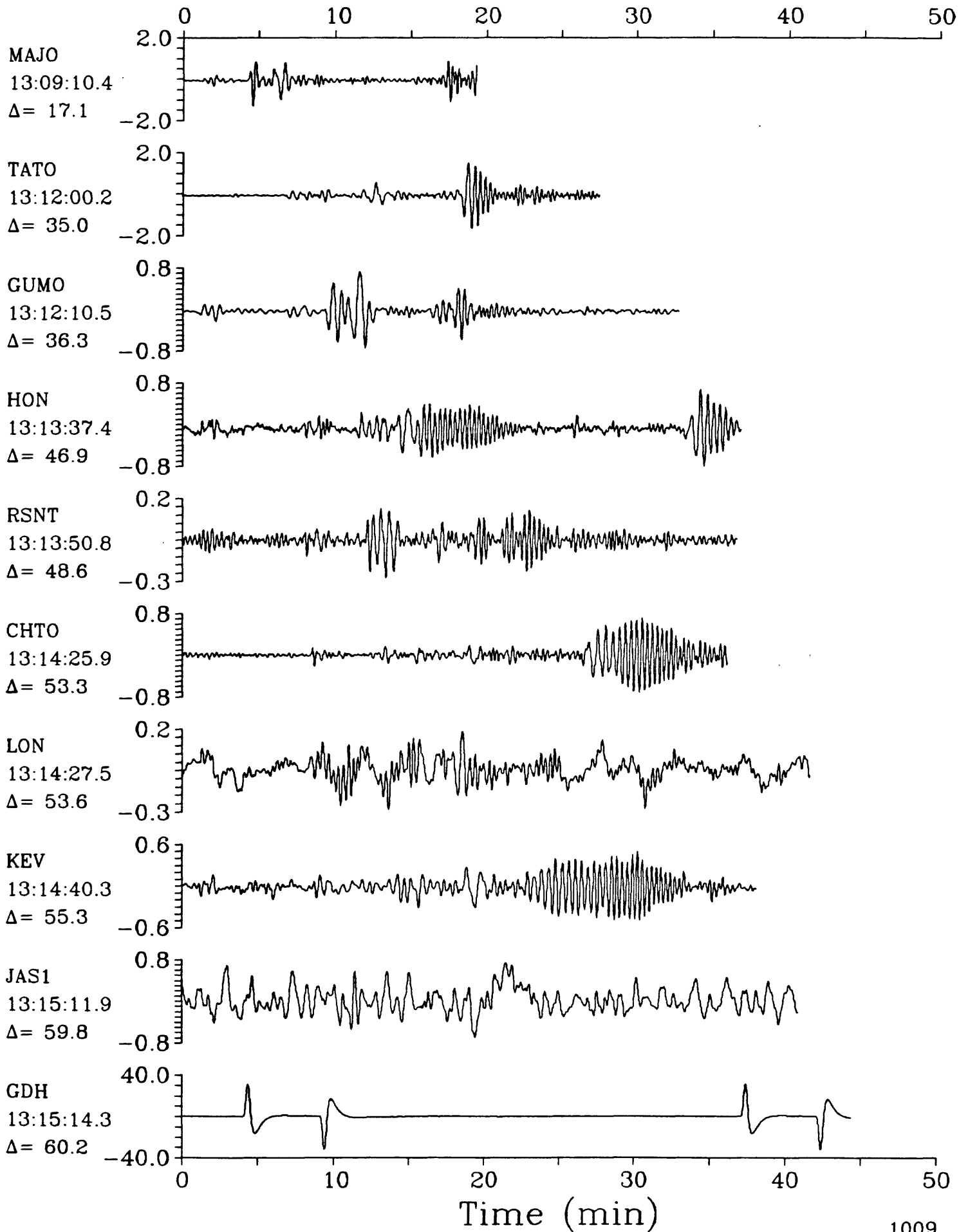
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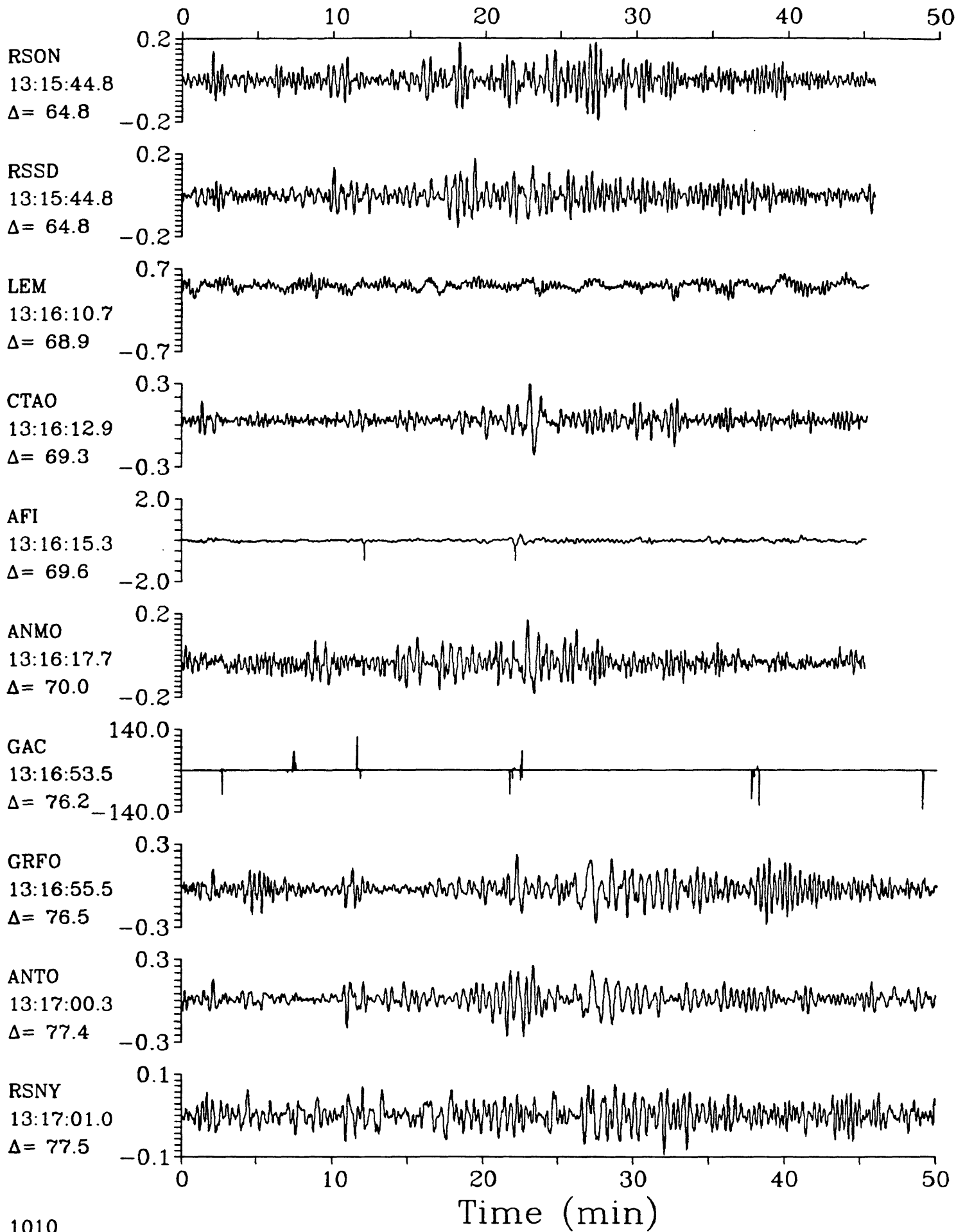
Kuril Islands

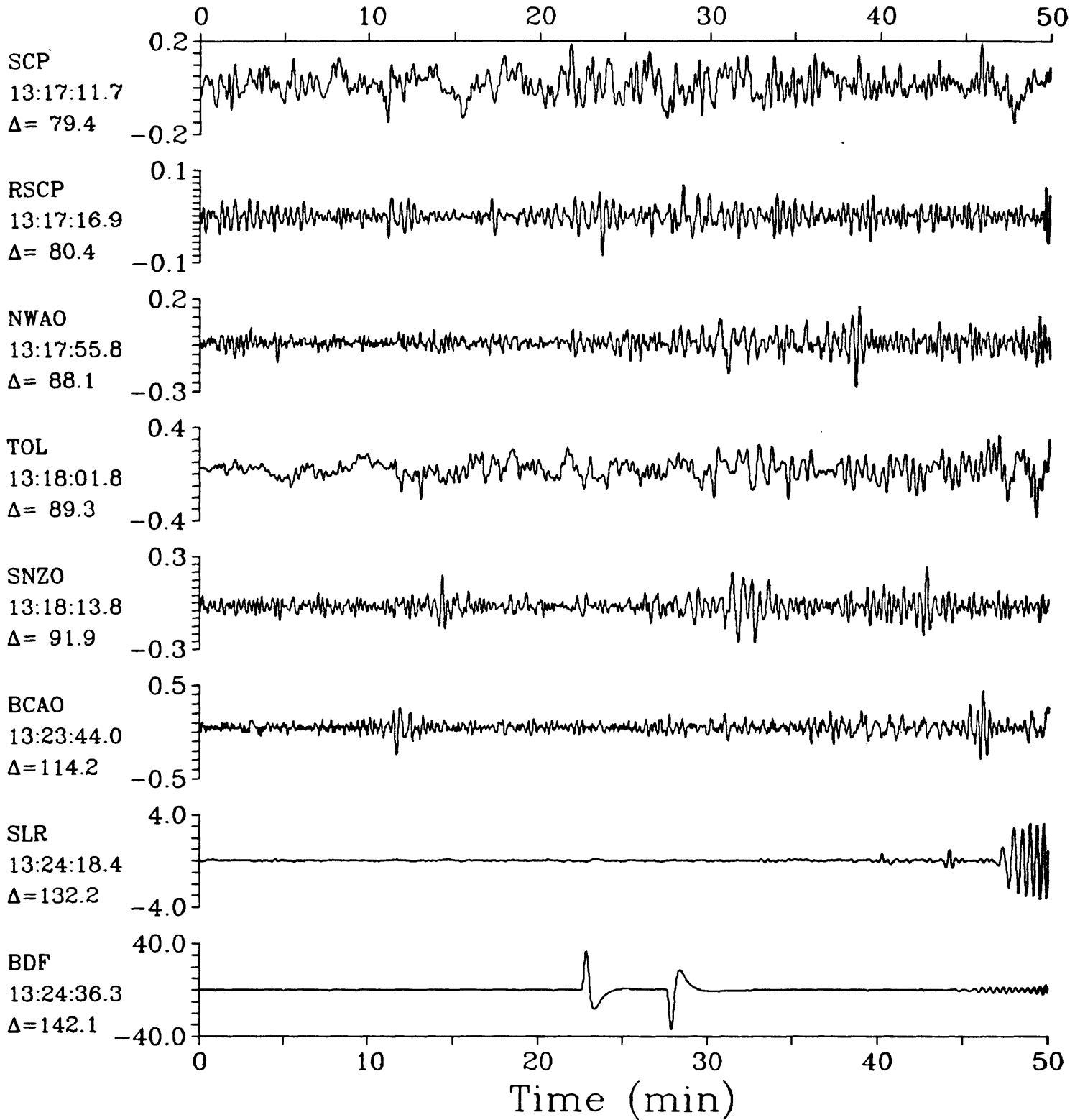






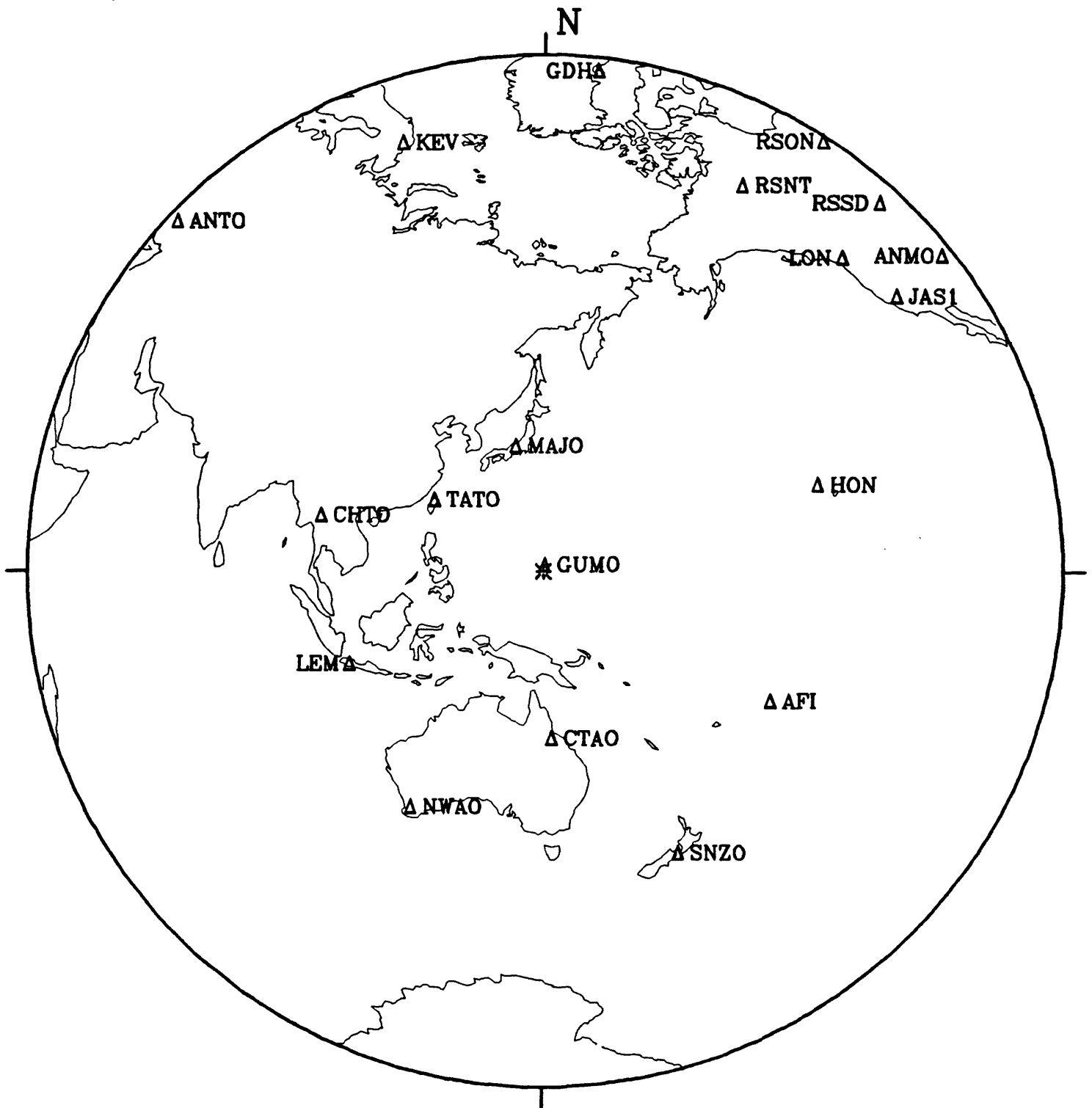


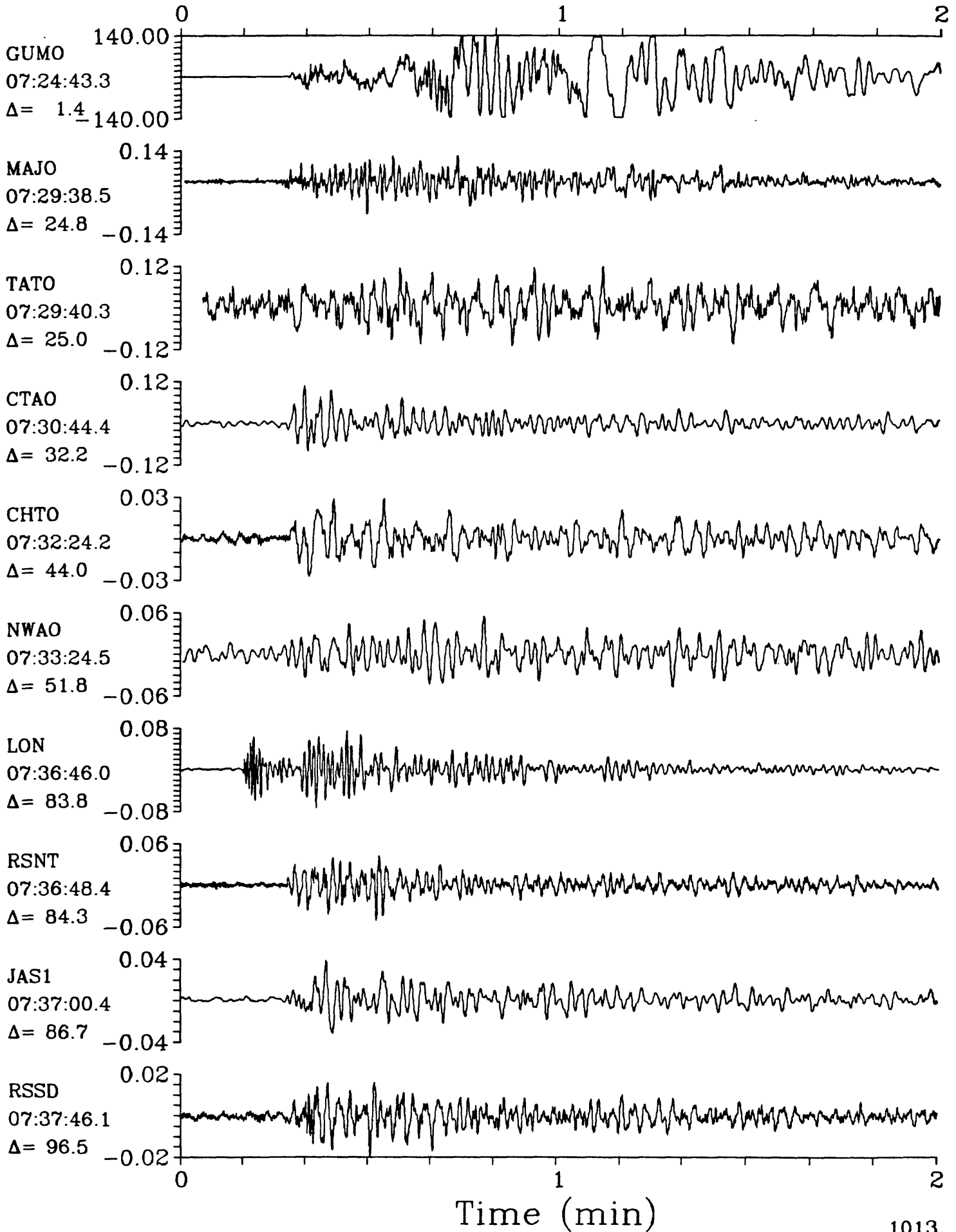




31 May 1985 07:24:34.73

South of Mariana Islands



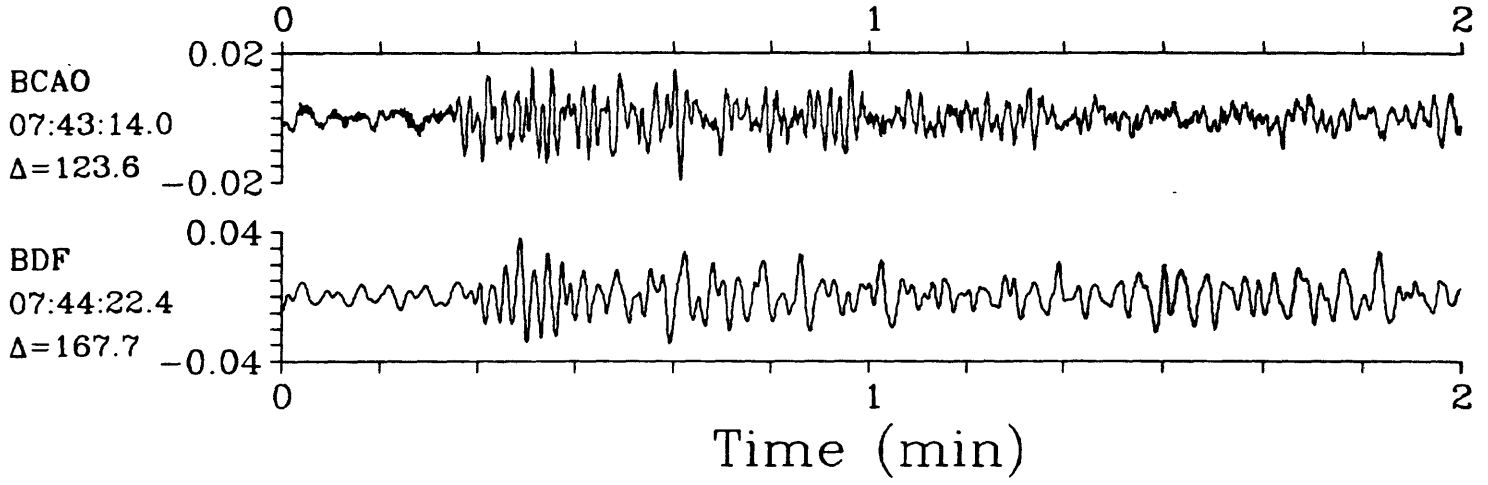
South of Mariana Islands $h=36.8$ $m_b=5.5$ $M_{sz}=6.0$ 

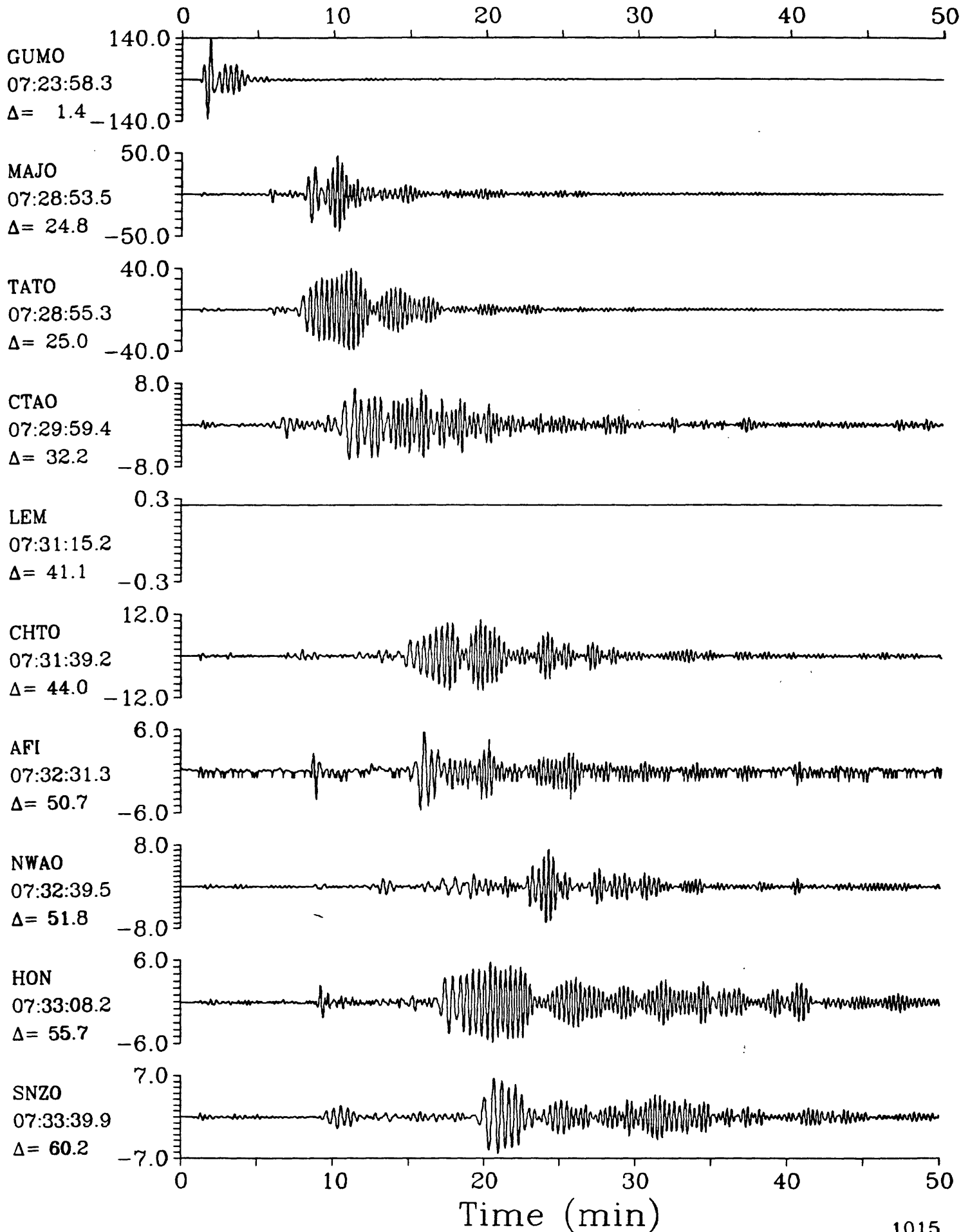
SPZ

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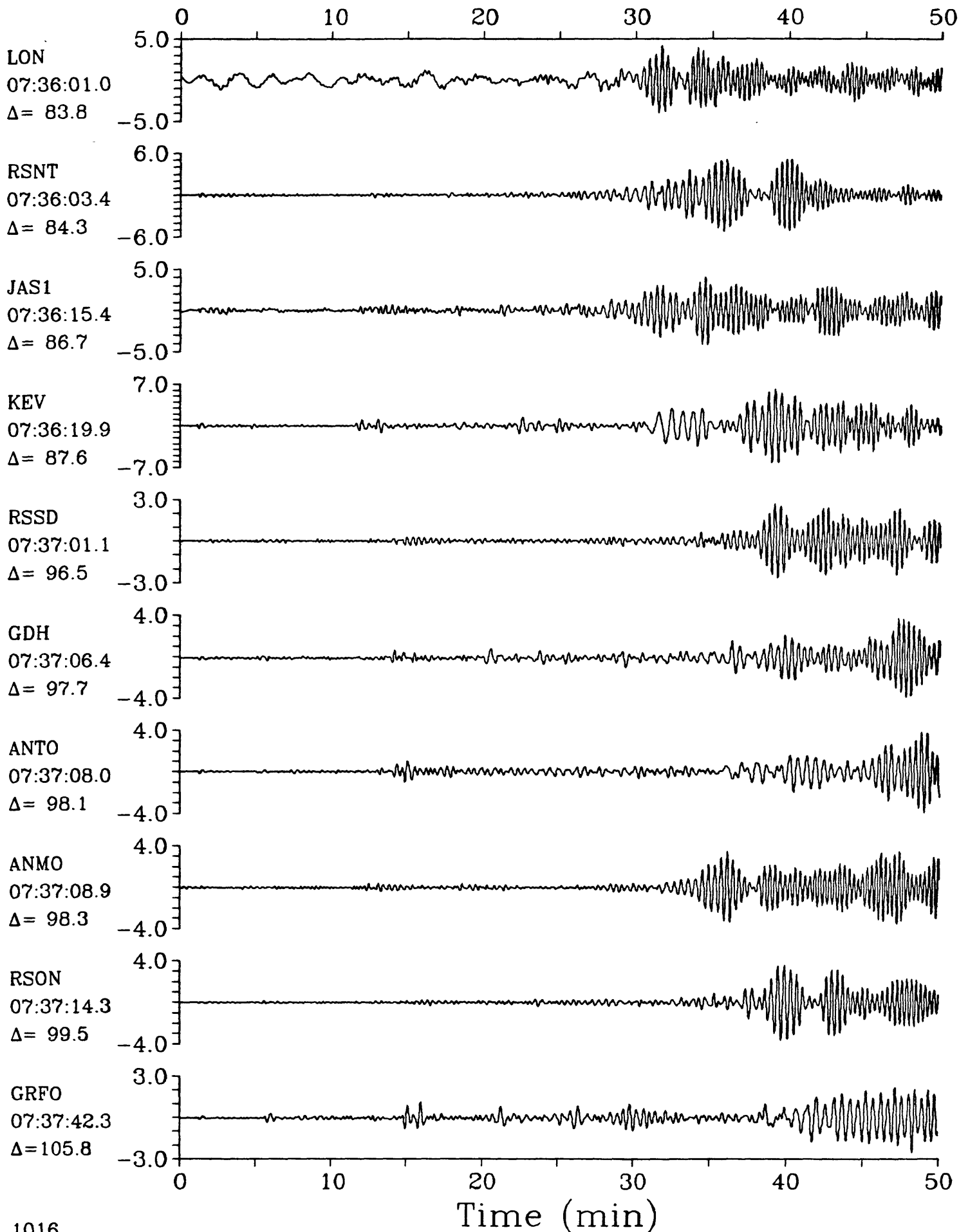
SPZ

South of Mariana Islands $h=36.8$ $m_b=5.5$ $M_{SZ}=6.0$



South of Mariana Islands $h=36.8$ $m_b=5.5$ $M_{sz}=6.0$ 

South of Mariana Islands $h=36.8$ $m_b=5.5$ $M_{sz}=6.0$

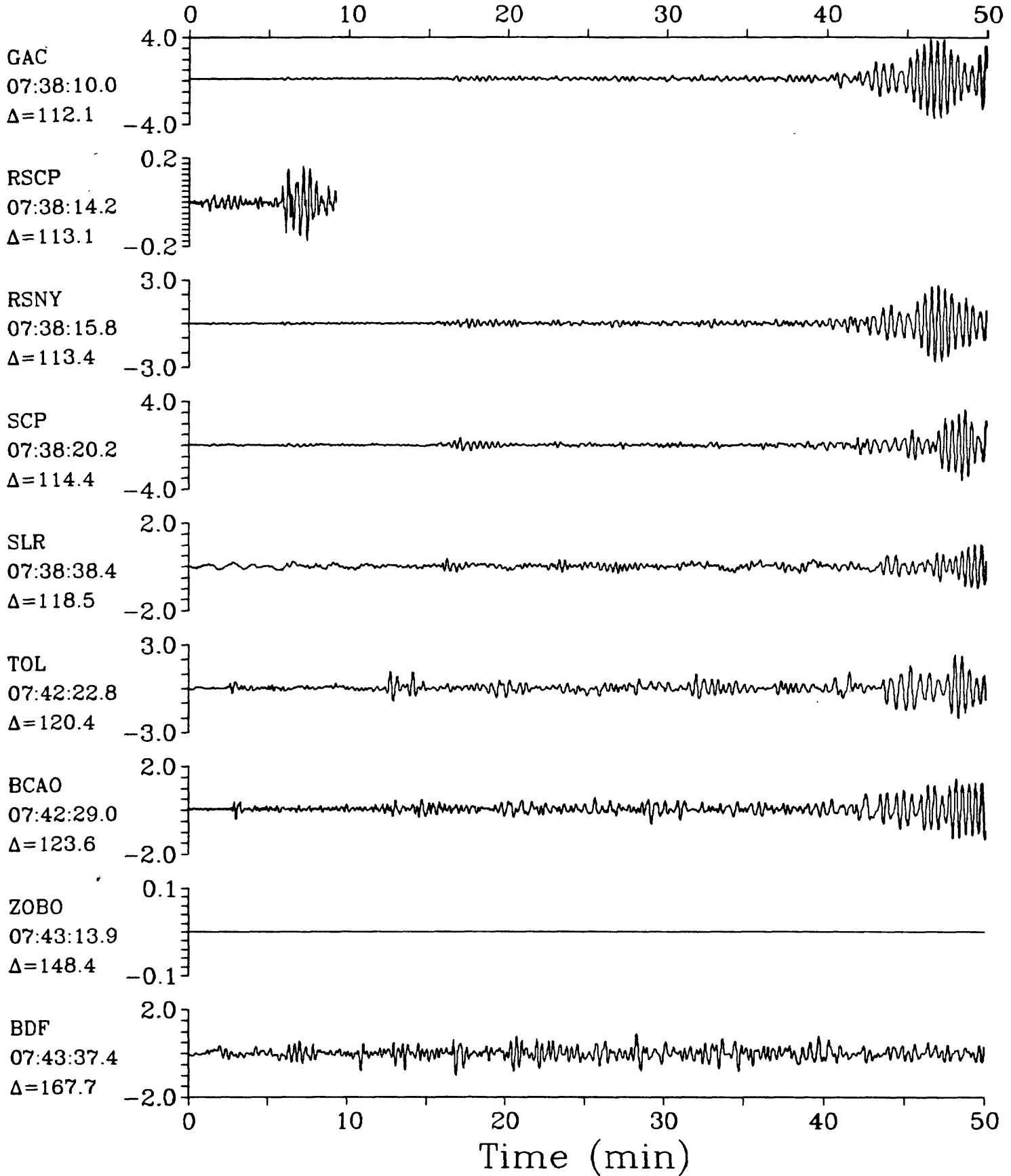


Time (min)

LPZ

31 May 1985 07:24:34.73

LPZ

South of Mariana Islands $h=36.8$ $m_b=5.5$ $M_{SZ}=6.0$ 

IPZ

31 May 1985 07:24:34.73

IPZ

South of Mariana Islands $h=36.8$ $m_b=5.5$ $M_{SZ}=6.0$

