The Geophysical Observatory at Neumayer Station, Antarctica

Geomagnetic and Seismological Observations in 1995 and 1996

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The Geophysical Observatory at Neumayer Station, Antarctica

Geomagnetic and Seismological Observations 1995 and 1996

1. Introduction

The geophysical observatory at the German Antarctic research station "Neumayer" on the Ekström Ice Shelf (Fig. 1) is now operating since 1992. It continuous the observatory program carried out at the former "Georg-von-Neumayer Station" (GvN), which started in 1982. The new observatory was completely modernized and most of the electronics was replaced by new instruments representing the latest state of engineering. Especially the digital data acquisition was totally changed and is now based on a network of several UNIX-workstations.

The main tasks of the observatory are still related to seismology and geomagnetism. The "seismic" and the "magnetic" observatory are located about 850 m south of the base to eliminate any disturbances caused by the base itself and its activities. The magnetic observatory is separated again by about 100 m from the seismic observatory. At both sites special laboratory containers are installed inside deep snow caves, initially about 7 meters below the normal surface, to ensure a minimum of wind induced noise and to guarantee stable temperature conditions. The caves are covered by a solid wooden roof which should withstand the weight of several meters of accumulated snow.

Inside the magnetic observatory a stable and thermally well insulated plywood container houses only the flux-gate sensors and the theodolite to measure the field´s declination and inclination. Although there is no special temperature control the temperature inside this container is fairly stable at about 0° to +2 °C only by some permanently shining lamps. For data acquisition the output-signals of the flux-gate sensors are transmitted via cable to the seismic observatory. The sensor of the proton precession magnetometers (PPM) for total-field measurements is installed in small wooden shelters buried in the snow some 50 m outside the seismic observatory.

The seismic observatory is the central part of the geophysical observatory and nearly all instruments and devices for data acquisition are installed here. Data acquisition in the seismic observatory is now controlled by a UNIX-workstation. The workstation is connected to the station´s main server via a fibre-optical link. So all other workstations in the station´s network have access to the observatory´s hard disk and thus a continuous on-line monitoring of the data-acquisition is therefore possible inside the station´s geophysical laboratory.

Exact time-control of the measurements is accomplished by the station´s master-clock, which is controlled by a GPS time-signal receiver. It synchronizes the observatory´s slave clock which triggers the ADC and PPM-magnetometers.

Figure 2 shows a comprehensive organogram of the principal configuration of the observatories. Coordinates and some other important data are summarized in the table below.

Table 1: Coordinates and other relevant data:

geographic coordinates 1996:	70.66° S 08.26° W
height above sea level:	57 m
mean annual drift:	approx. 150 m/year towards 326°
geomagnetic coordinates:	61.23° S 41.47° W
mean total intensity 1996:	39744 nT
mean declination 1996:	12° 24.8' W
mean inclination 1996:	61° 26.3'

The main purpose of this report is to give a comprehensive view about the geomagnetic and seismological data which had been registered during the years 1995 to 1996.

2. Geomagnetic Measurements

The time variations of the NS-, EW- and Z-component of the geomagnetic field are continuously measured with three flux-gate sensors which are integrated into a single sensor-triple. The total intensity F is measured with a PPM-magnetometer (ELSEC 820). The exact alignment of the system parallel to geographic North was established and is controlled by a gyro-compass. This azimuth-control is done in regular intervals which is also very important for measuring the declination D and inclination I. The variations of declination and inclination are shown in Figure 3. A non-magnetic theodolite combined with a single-axis flux gate sensor is used to determine these angular elements. From D, I and the total intensity F absolute values of the field components are obtained. Since the flux gate measurements are only relative measurements, the determination of the absolute values of the field-components is essential for the computation of absolute base lines. The table below shows the currently used sampling rates concerning the geomagnetic data.

Table 2: Sampling rates for geomagnetic data:

EW, NS, Z components:	1 per second
Total indensity F:	1 per minute
D, I measurements:	every 2-3 days (depends on magnetic activity)
gyro-compass control:	monthly

In Appendix A the magnetic field´s time variations are shown for every month during the years 1995 and 1996. They clearly illustrate the typical difference between recordings made in austral summer and austral winter: measurements during the summer show small, but pronounced daily variations caused by the seasonal changing SQ-variations (solar quiet variations) which vanish almost completely during the winter.

Hourly absolute mean values of the field´s components and the total intensity are processed and arranged in monthly tables according to the recommendations of the International Association of Geomagnetism and Aeronomy (IAGA). The complete set of Neumayer-data from a whole year is mailed to the World Data Center (WDC) immediately after the data have arrived at the AWI. Additionally, due to the satellite based computer link, selected magnetic data of special interest may be available on request within a few days to every interested scientist.

Digital recording of the time variations of the geomagnetic field at GvN and Neumayer has been carried out almost continuously until today since 1983. This basic geomagnetic observatory program will be continued for at least ten more years, until the end of the expected life time of Neumayer station. Until now the available geomagnetic field data from GvN and Neumayer, recorded at the standard interval of one minute, comprise more than twelve years, i.e. almost one complete solar cycle. Continuously complemented with new observatory data this data set thus forms a valuable basis for various aspects in geomagnetic research, for example:

- studying the long term variations of declination, inclination and total intensity as part of the secular variation of the geomagnetic field
- detailed statistical analysis of the field´s daily solar and lunar variations, their seasonal dependance and their relation to the state of solar activity
- investigation of special magnetic phenomena related to the polar electrojet
- different aspects in pulsation studies using 1 Hz or even 10 Hz data

3. Seismological Observations

Continuous monitoring of the regional and global seismicity started in 1982 and in all these years an enormous amount of seismological data has been collected. Several thousands of digital seismograms have been recorded with a local network of seismological stations around GvN and Neumayer. A large part of these recordings show excellent data quality although most of these network stations are located on a floating ice shelf which is certainly not the most favourable location for seismological observations. More than two third of the recorded events are in the teleseismic range with epicentral distances greater 25° and are well localized by NEIC and ISC. But there are numerous recordings of earthquakes in the regional distance range between approx. 10° and 20°. These earthquakes with epicenters mostly in the Southern Atlantic Ocean, in an area ranging from the Antarctic Peninsula and the Scotia Sea in the West to the East of Bouvet Island, including the seismically very active region around the South Sandwich Islands are only partly localized by the international agencies. The major part of these events however are not localized by NEIC or ISC because their magnitudes were too small to be recorded at some other stations outside Antarctica. Therefore these seismological recordings are very valuable for a detailed mapping of the seismic activity in these regions.

Currently our interests focus on the investigation of the principal structures of the deeper earth below the Ekström Ice Shelf, i.e. the crust and the upper mantle. Different seismological standard processing techniques are applied for this purpose and they all benefit now from the numerous recordings of teleseismic events collected during all these years. The main topics currently are:

- calculating and modelling receiver functions using selected seismograms recorded with seismometers of intermediate eigenperiods.
- analyzing slowness and azimuth anomalies utilizing almost all usable network-data
- continuation of the analysis of teleseismic travel time residuals including more data from other stations in Antarctica
- investigations of seismic anisotropy by investigations on shear wave splitting (SKS-phases and selected S-waves from deep focus earthquakes)

Besides the three Geotech S-13 seismometers in the seismic observatory there are currently six additional remote seismographic stations installed in the wider area around Neumayer station (Fig. 1). This seismographic network, with two stations located quite far away from the base, is operating almost continuously throughout the whole year. Longer lasting break-downs with a duration of up to three months, especially during the winter time due to power-failure, affect only the two most remote stations. These stations, "Watzmann" and "Olymp", are located far to the southeast and southwest and cannot be visited for service during the Antarctic winter. They are situated on the ice rises "Halvfar Ryggen" and "Søråsen", both at approx. 350 m and 500 m above sea leavel. Because of their special location on grounded ice these two stations are of great importance for the observations of shear-waves. The stations "Watzmann" and "Olymp" are equipped with autonomously running PCM-systems. They are operating in a gain-ranging mode which enables a dynamic range of nearly 120 dB. In the geophysical laboratory the transmitted digital PCM-code is added to the central PCM-mixer-unit, which evaluates also the transmitted trigger-status (see also Fig. 2). Because the locations of these stations are more favourable for seismological research they are equipped with 3-component seismometers with longer eigenperiods of 5 sec or 20 sec (LENNARTZ Le-3D / 5s and MARK L-IV with special designed electronic feedback). The sample rate is 125 Hz and the anti-aliasing low-pass filters are set to a corner frequency of 25 Hz.

All other stations are situated on the floating ice shelf. The remote stations on the ice shelf are equipped with 1 Hz seismometers (LENNARTZ Le-3D / 1s) and only the vertical component is transmitted. The stations are transmitting the amplified signals FM-modulated and therefore the dynamic range is limited to 60 dB. At these stations the observation of S-phases is unfortunately drastically impaired by the water layer beneath the ice shelf.

Because shear-waves cannot penetrate through this water layer, the observation of S-phases is depending on the conversion of the vertically polarized S-wave components into P-waves at the seafloor-ocean interface. Therefore recorded S-phases show strongly decreased amplitudes compared to the two remote stations located on the ice rises. Despite this fact, the instruments in the seismic observatory are the station´s main seismometers because they are continuously operating without any interruptions. The signals from all remote stations are transmitted continuously via UHF-telemetry to the station where they are centrally recorded on tape. The recording is triggered by a multichannel STA/LTA event-detector. In the near future it is intended to transfer the incoming data stream of the Neumayer network continuously to a UNIX-workstation and to store all seismic data on a large disk-array.

In the laboratory the recorded events can be transferred via an IEEE-interface to one of the station´s workstations for further processing. A variety of software-tools (PITSA, SEISAN) allows almost a complete analysis and processing of the recorded earthquakes (phase picking, beam forming etc.). Furthermore the dial-up computer-link to Bremerhaven enables a fast transfer of complete seismograms of interesting events for current research work at home.

An approximate determination of the hypocenter using only the Neumayer network data will be successful only in some very few cases. But if these data are combined with reordings from other Antarctic stations the errors will be reduced to a reasonable degree. A further approach for more reliable localizations of regional events is the planned installation of a 15-channel small aperture array on the Halfvar Ryggen ice rise southeast of Neumayer in 1997. With this regional monitoring array and special processing techniques a major improvement in the detection capabilities should be achieved. And even more, by comparing array-recordings of selected "master events" and the corresponding localizations with seismograms from the original network not including the array it should be possible to derive more reliable solutions for the hypocenters of many previously recorded events. This will be the next step in the further processing the seismological data from Neumayer.

First arrival times and other phase readings of recorded events are sent to NEIC National Information Earthquake Center) and ISC (International Seismological Center) in a regular (monthly) schedule. Since autumn 1995 there are three stations of Neumayer registered in the station list of NEIC. Their IDs and coordinates are shown in the table below.

Table 3: Coordinates of the registered Seismological Stations (1996):

Station ID	Full Name of the station	Latitude	Longitude	Height
VNA1	Neumayer -- Observatory	70.65° S	08.26° W	57 m
VNA2	Neumayer -- Watzmann	70.93° S	07.39° W	395 m
VNA3	Neumayer -- Olymp	71.24° S	09.67° W	525 m

Up to 1995 we reported the phases only for the station's main seismometers (VNA1) Since 1996 we also sent picked events of the two remotest stations VNA2 and VNA3, whenever we got triggered events of them on tape. In this report we'll only show the picked events at Neumayer-Station (VNA1) of the years 1995 and 1996 in Appendix B or C respectively. Each Appendix contains the the list of picked events, the list of corresponding epicentres and some examples of digital records of seismograms. In Appendix D we show some examples of picked events at VNA, which location are not identified by NEIC.

The onset of the teleseismic events were detected on analog, or if present on digital seismograms. The arrival times of P- and S-Phases are summarized in the first list. Arrival time is represented in UTC. Symbols e and i in front of the phases denote emergent and sharp onsets, + denote upward ground motions, - denote downward ground motions. Phases which have a ? are not identified in wave type. That's the matter if the location of the event cannot be identified, or the phase is clear, but cannot be fixed. Events which can

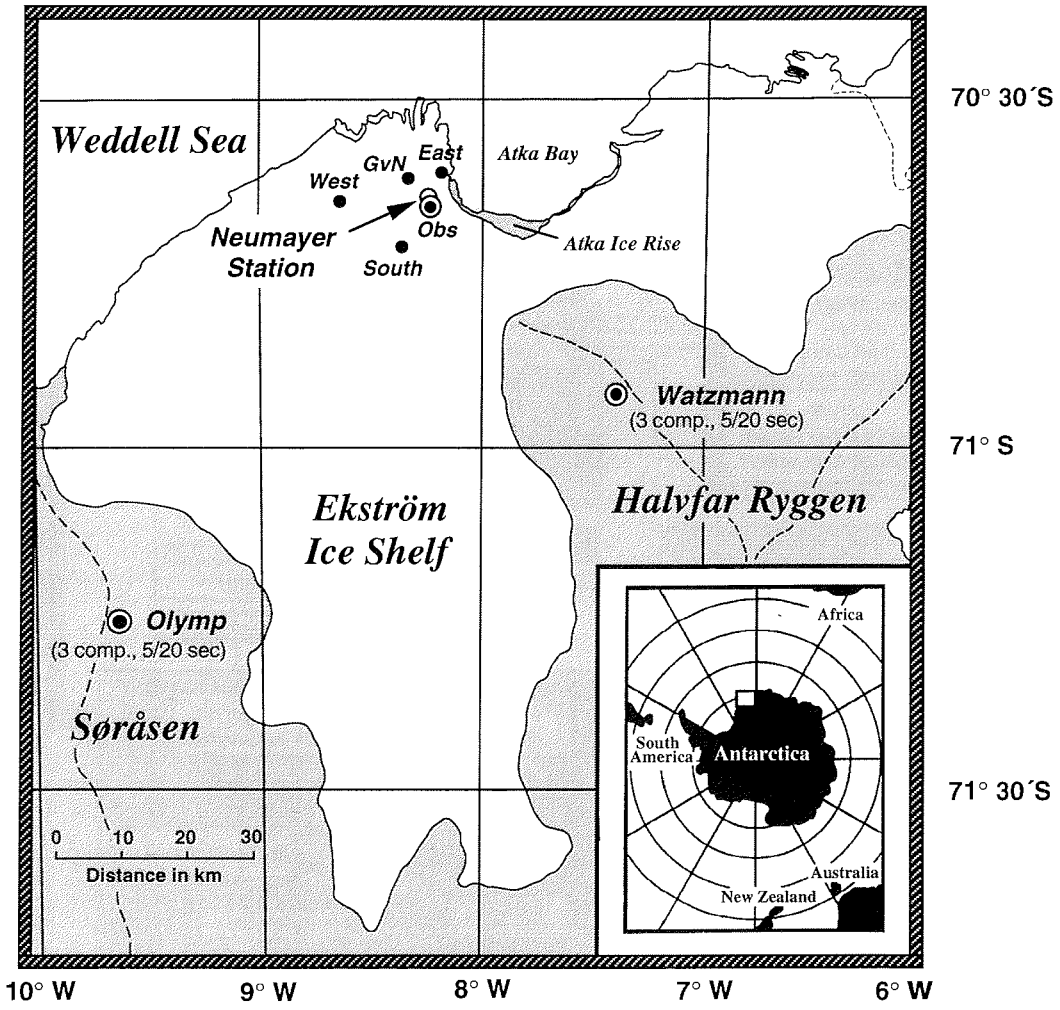
be identified by NEIC-Reports have a serial number in the last column of the line. This serial number corresponds to the number in the list of epicentres following the list of events. Events which are marked with a D in the column of the serial number are available as digital records. The number of recorded events every year is between 400 and 800. For 1995 and 1996 we got a total sum of 1292 events. Figure 4 shows the locations of the epicentres of all recorded events.

The relationship between the epicentral distance and the magnitude for all events is shown in Figure 5a. The threshold-magnitude for detection of events in the distance range up to 100° is in most cases not higher than mb = 5.0 depending on the distance, the actual wind conditions and the related ground noise, the network´s position relative to the nodal planes etc. For quite a number of events this threshold is even distinct lower. As already mentioned above, these data are important for more accurate localizations of earthquakes with epicenters not too far away from Neumayer, e.g. the seismically active areas in the Southern Atlantic Ocean, ranging from the Antarctic Peninsula to the Bouvet Island triple junction and further eastwards.

Figure 5b shows the relationship between the focal depths and the directions (backazimuth) to the epicentres.

Figures 1-5 on pages 9-13

The Seismological Network at Neumayer Station



- 1-Hz Seismometer (Le-3D/1s, vertical component only)
- 3-Component -Seismometer
  (Eigenperiods: 1 sec in the Observatory,
  5 and 20 sec´s at the stations "Watzmann" and "Olymp")

Fig. 1 - Map of the Ekström Ice Shelf and the surrounding ice rises *Halvfar Ryggen* and *Sorasen* showing the remote stations of the seismological network around Neumayer (modified map based on the satellite image map from the *Institut für Angewandte Geodäsie, 1989*).

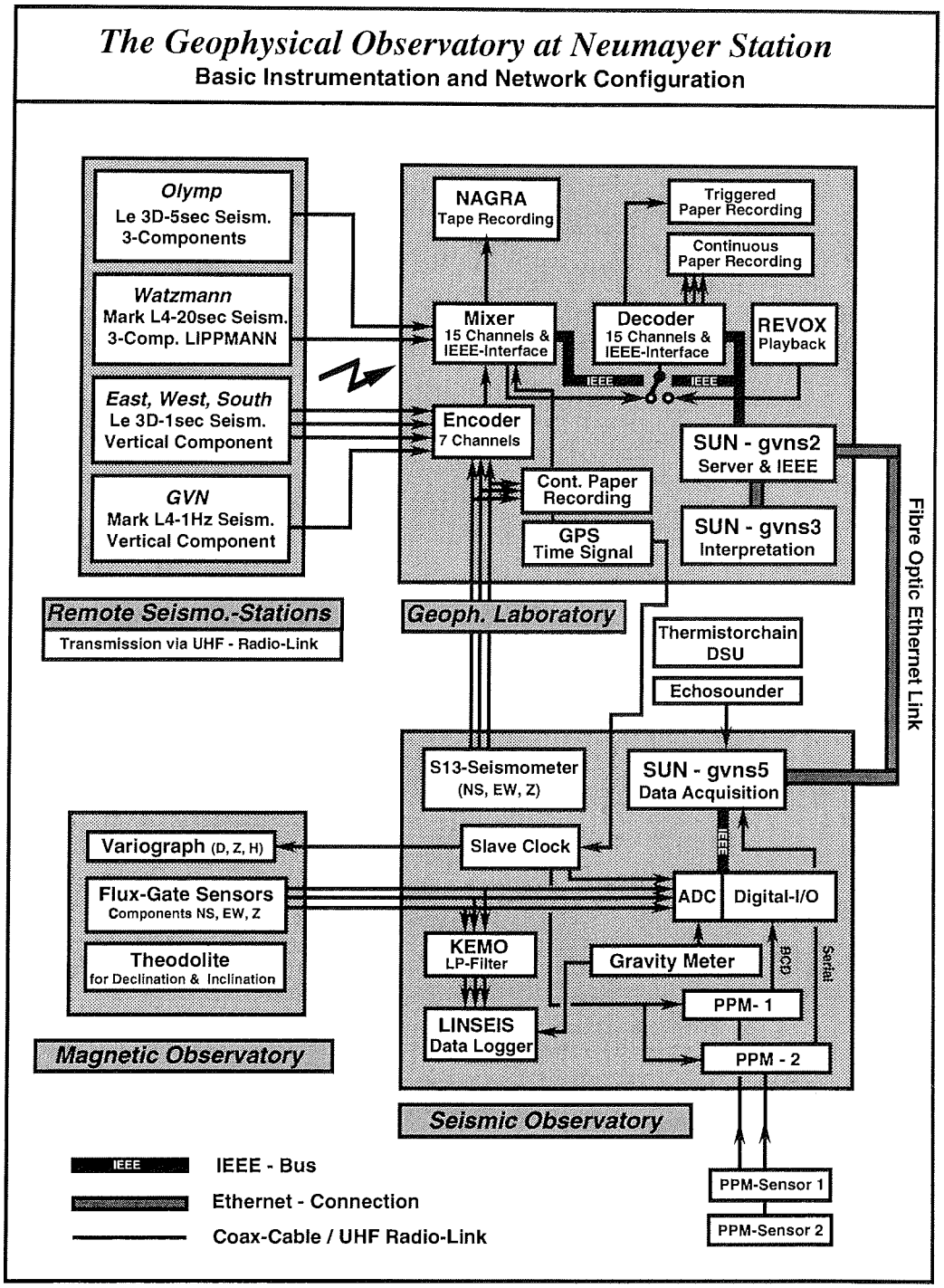


Fig. 2 - Block diagram of the principal configuration of the Geophysical Observatory at Neumayer Station.

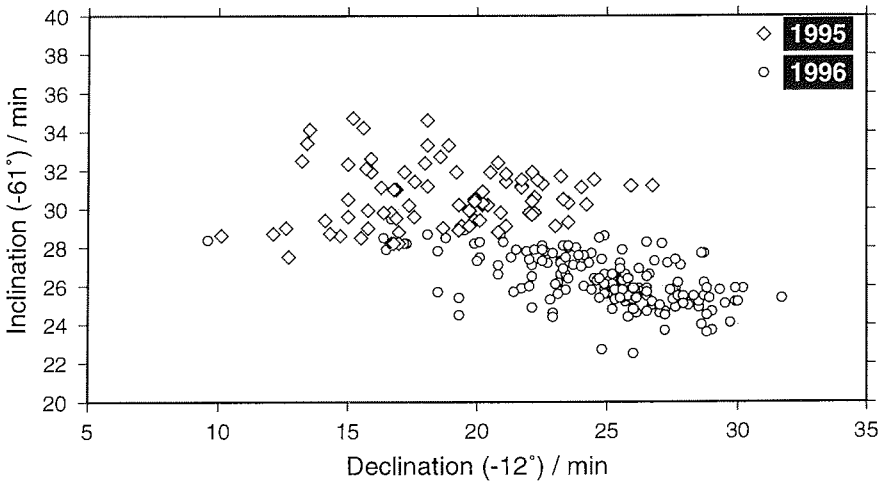


Fig. 3 - Time variations of the values for declination and inclination derived from D/I measurements to obtain the baselines for the components of the geomagnetic field. This plot clearly shows the influence of the secular variation onto the field's direction.

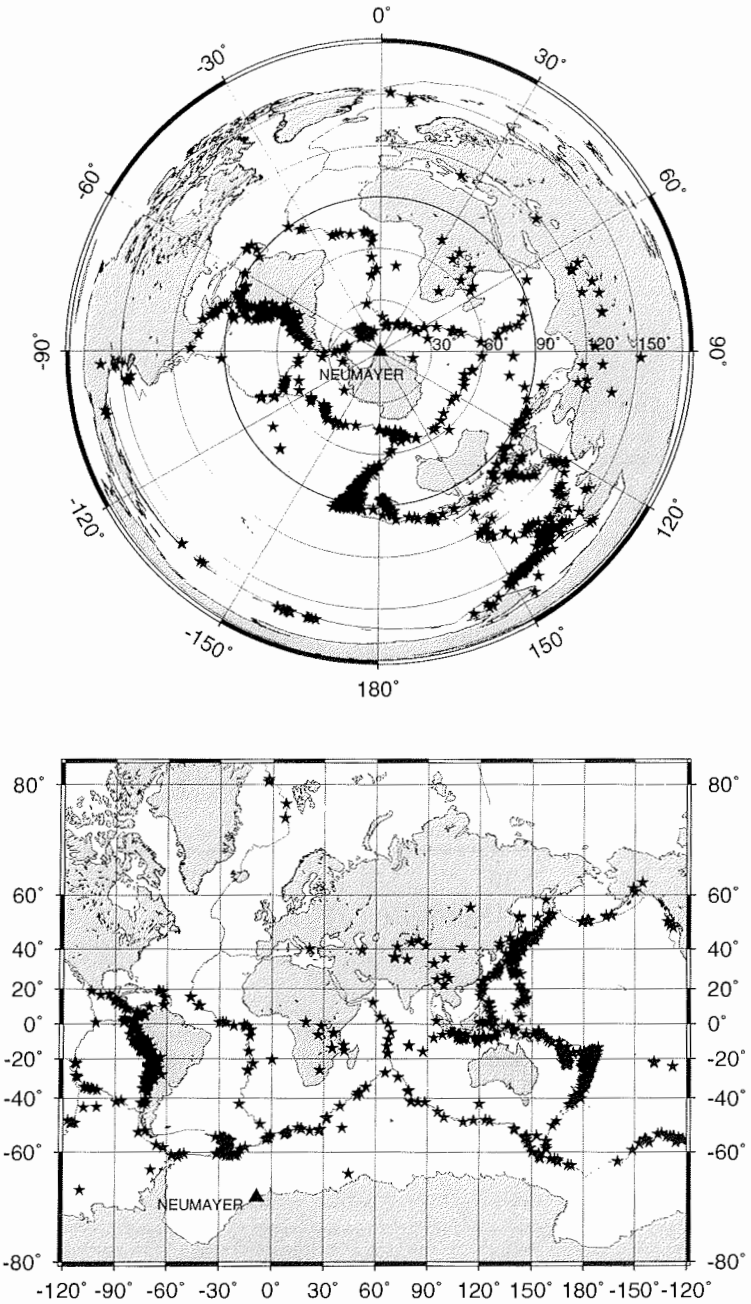


Fig. 4 - Locations of all 1292 events recorded in the years 1995 and 1996. The epicentres are plotted onto the earth's surface in two different kinds of projections:
The first diagram above shows the directional distribution of the events around Neumayer (Backazimuth). Negative values between 0° and -180° have to be added to 360° to get the right backazimuth (e.g. -30° corresponds to a backazimuth of 320°).
The second diagram on the bottom shows the latitude and longitude of the epicentres.

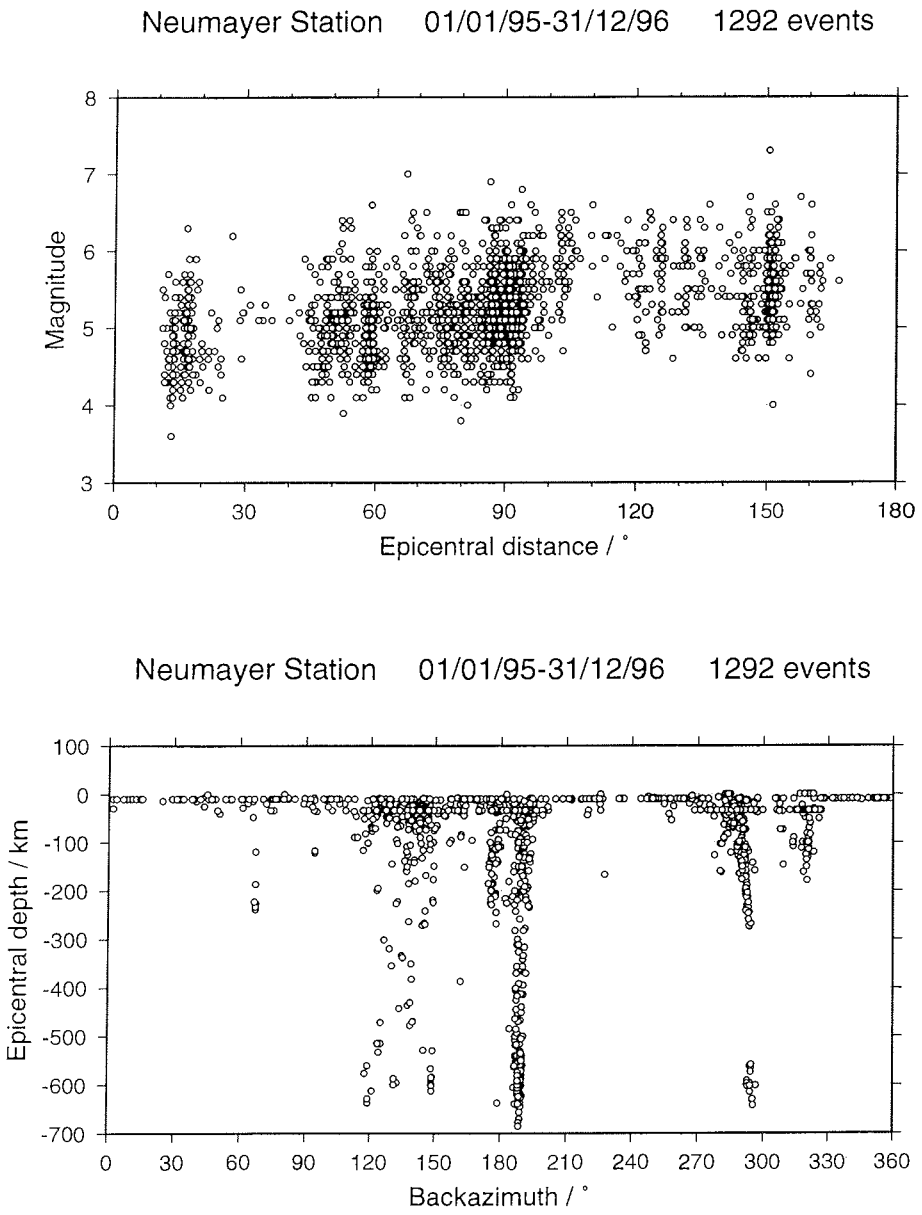


Fig. 5 - Magnitudes and Focus depths of all events recorded in 1995 and 1996:
(5a) The first diagram above shows the relationship between Magnitude and epicentral distance. The threshold-magnitudes of detection in the ranges up to 100° are in most cases lower than mb = 5.0.
(5b) The second diagram on the bottom shows the relationship between focal depths and backazimuth. One can recognize quite good different focal depth distributions for events at backazimuths of 180-200° (Fiji-Tonga-Kermadec), 280°-290° (South-America, Andes) and 320° (South Sandwich Islands Region).

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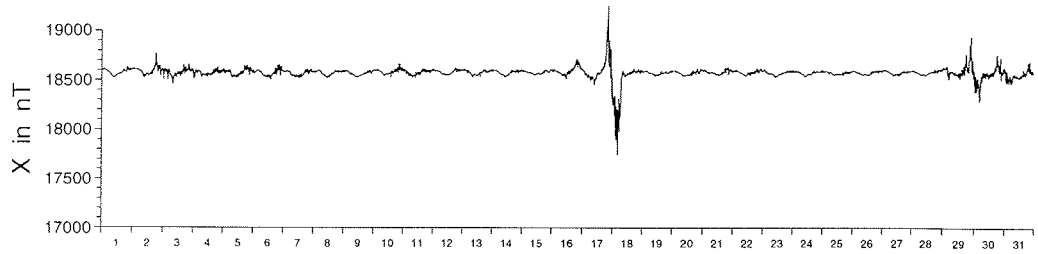
Appendix

A

Geomagnetic Data
1995 - 1996

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for
January 1995



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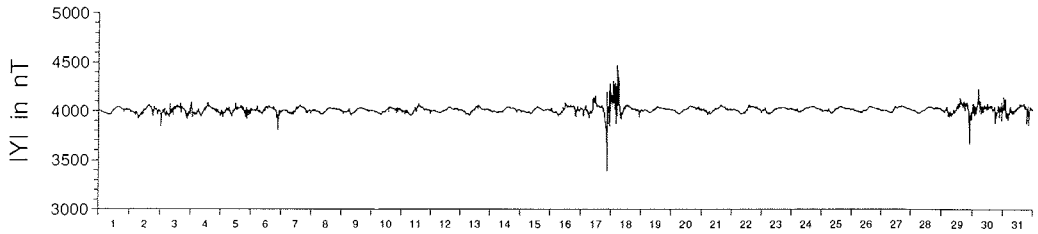

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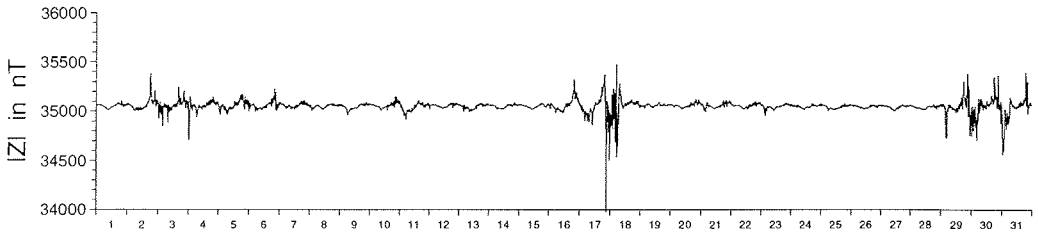

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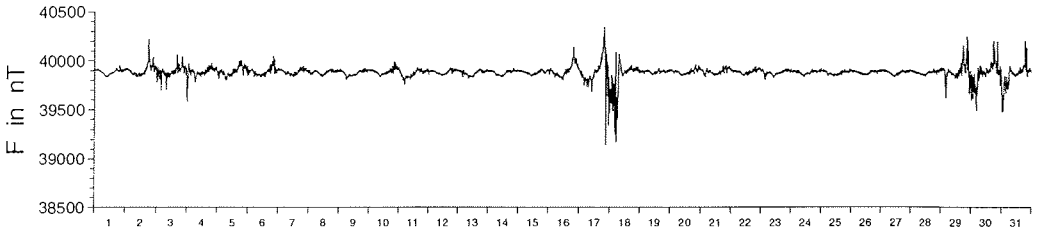
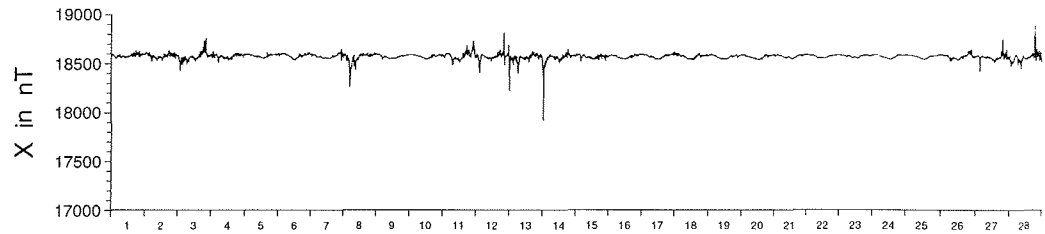


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for
February 1995



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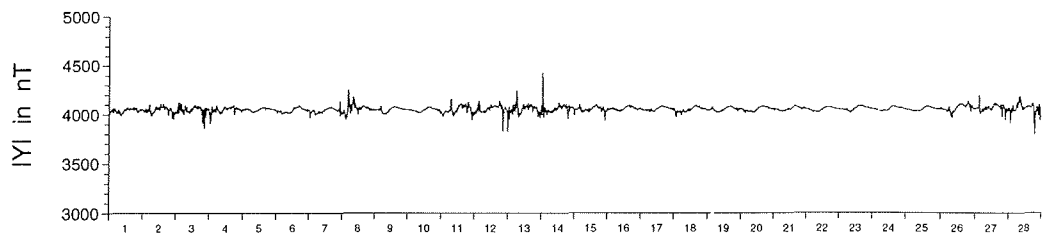

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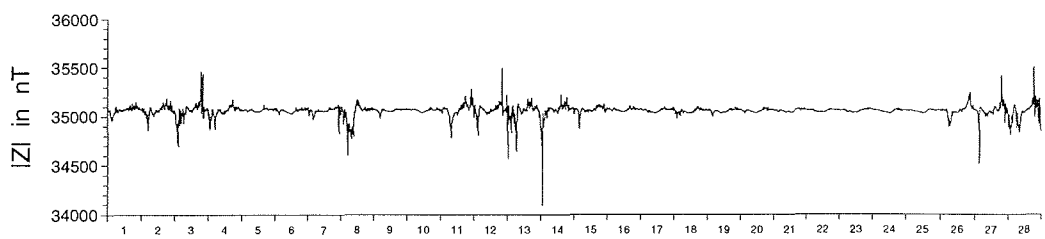

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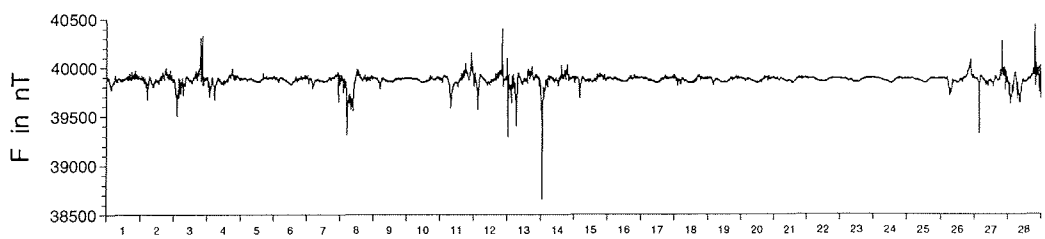
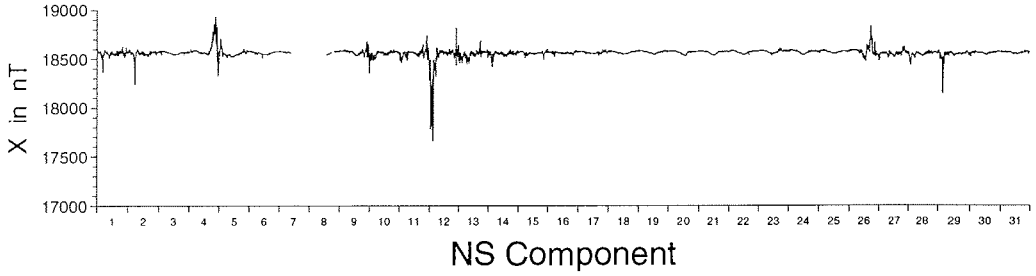


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for March 1995



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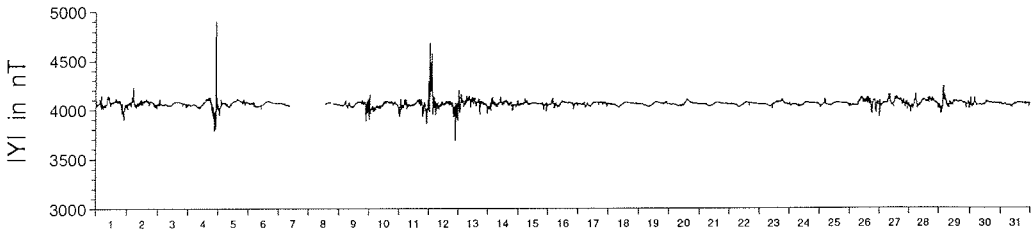

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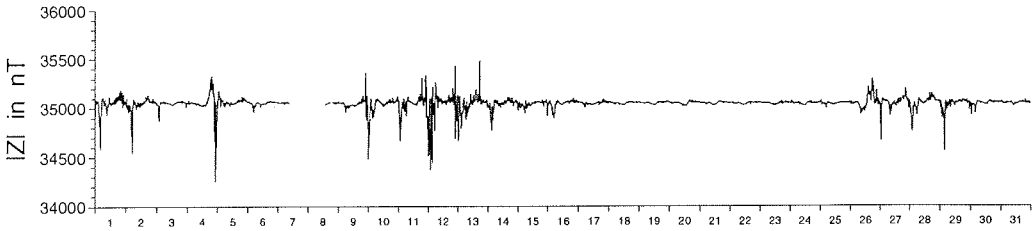

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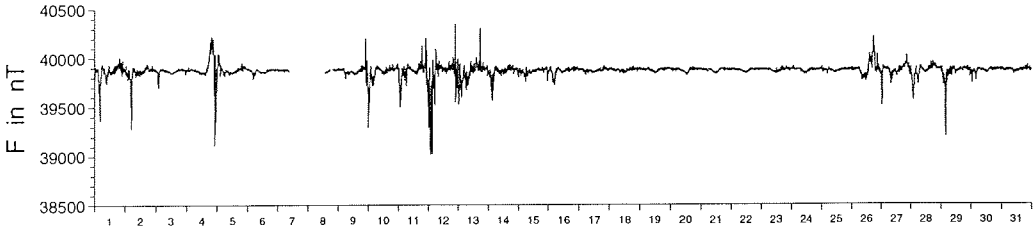
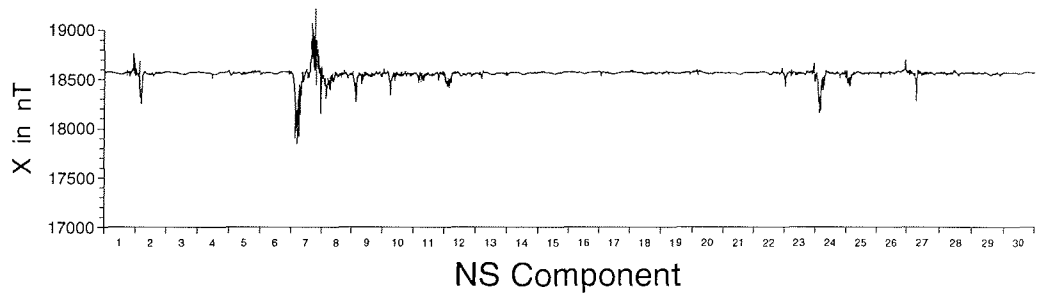


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for

April 1995



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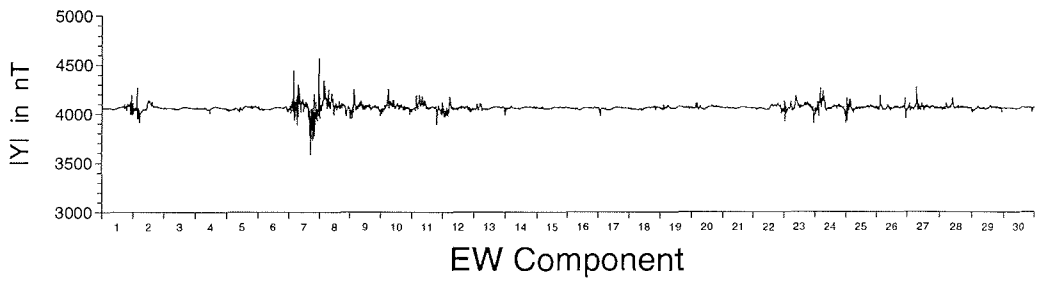

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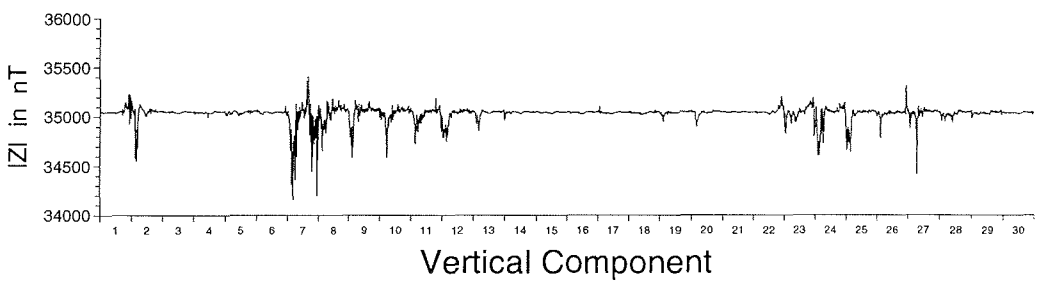

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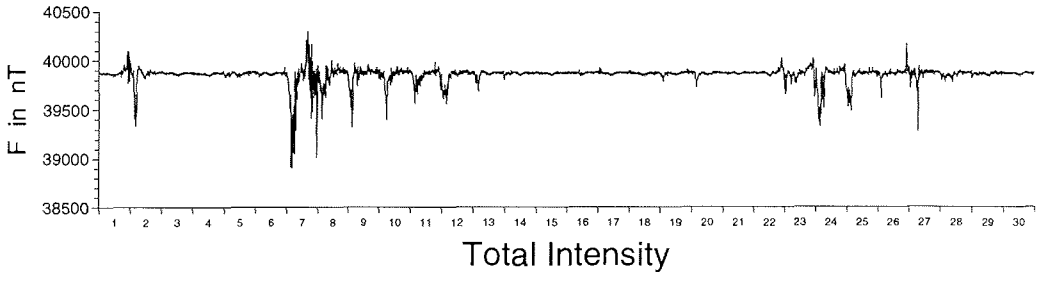
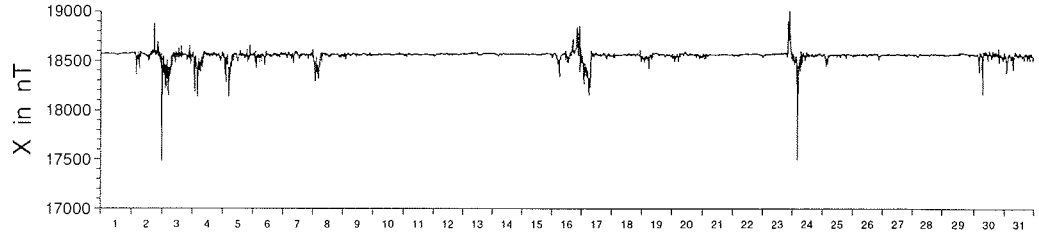


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for

May 1995



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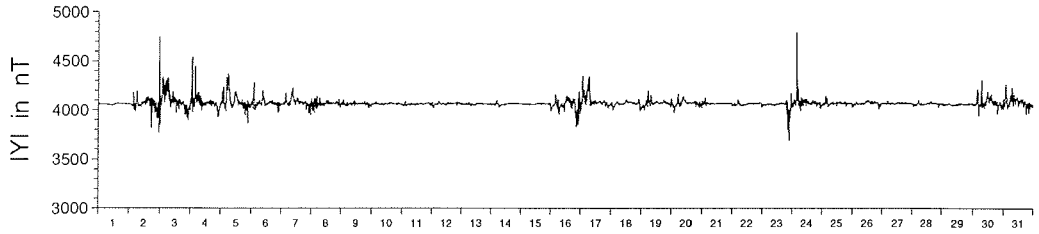

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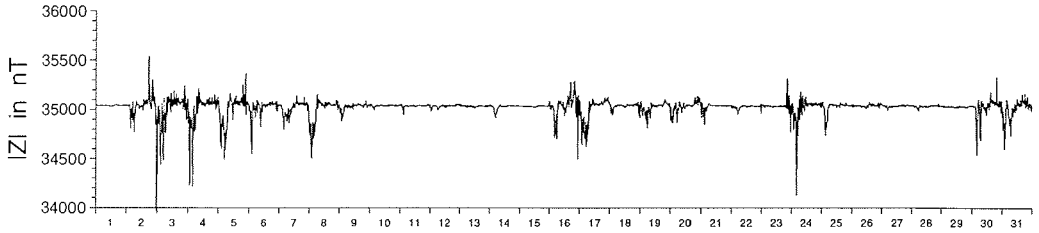
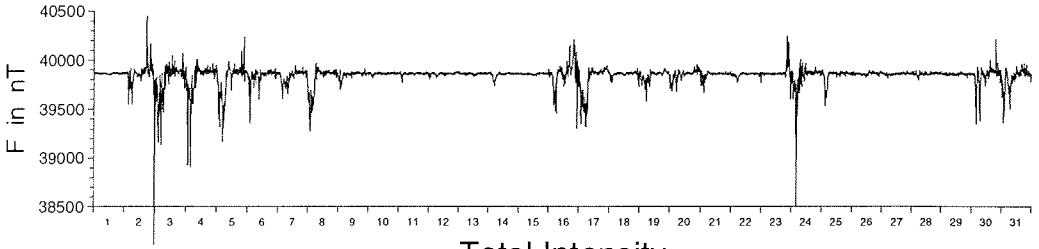


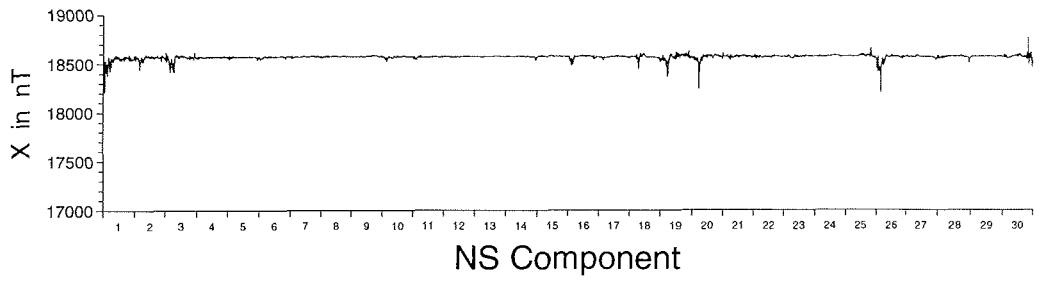
Vertical Component



Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for
June 1995



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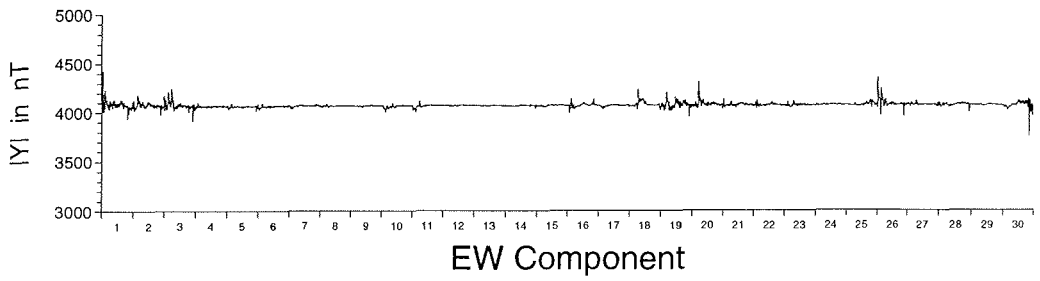

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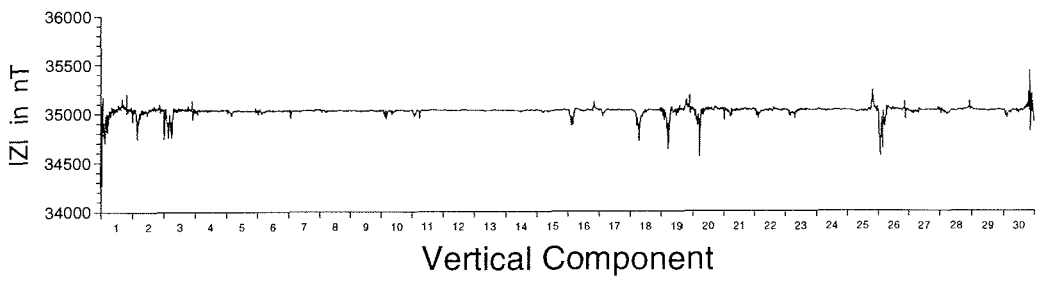

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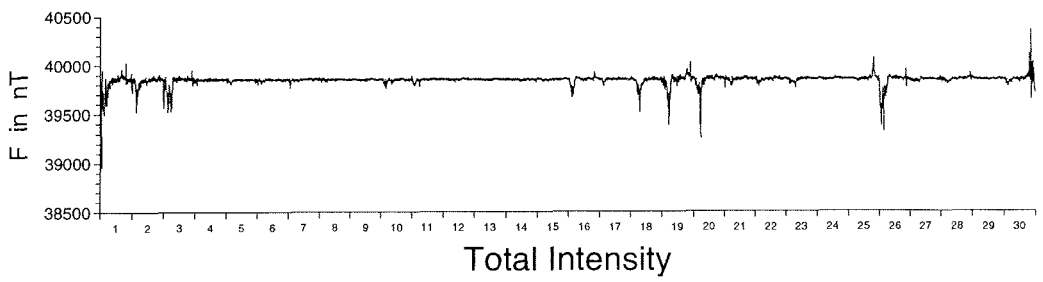
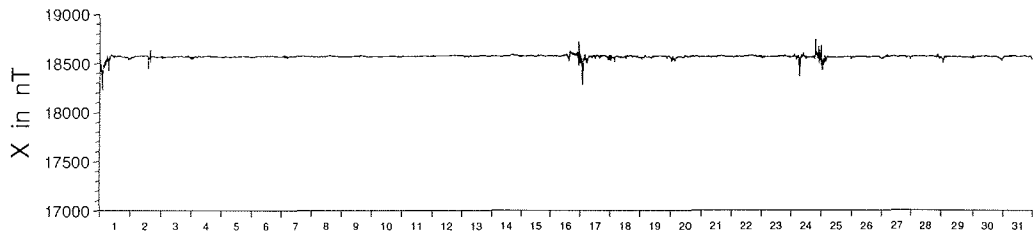


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for July 1995



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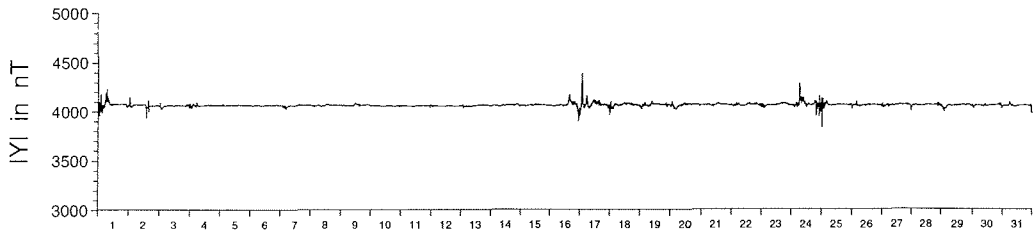

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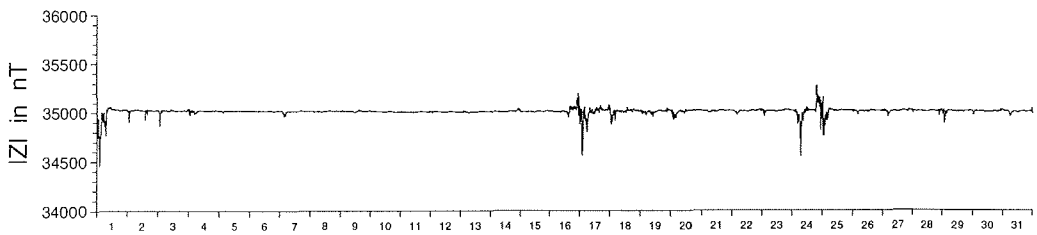

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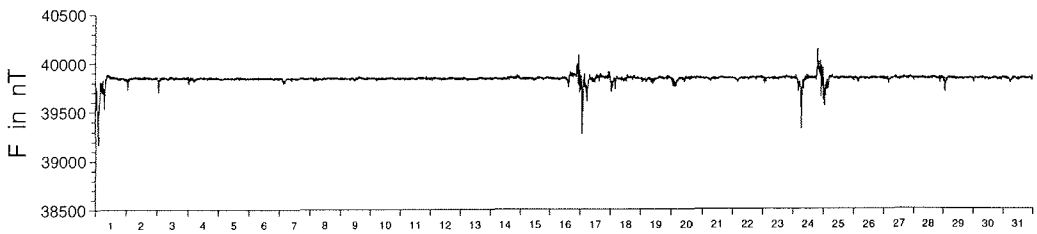
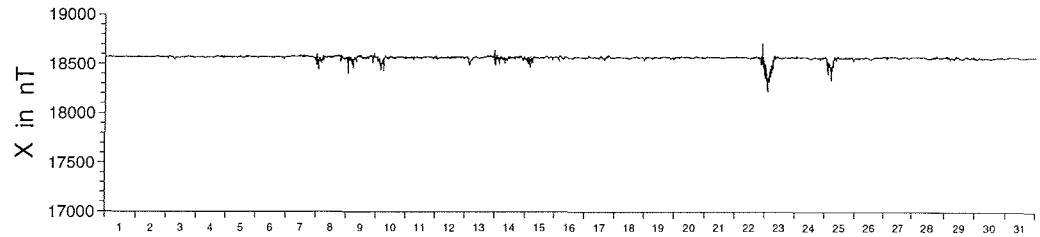


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for August 1995



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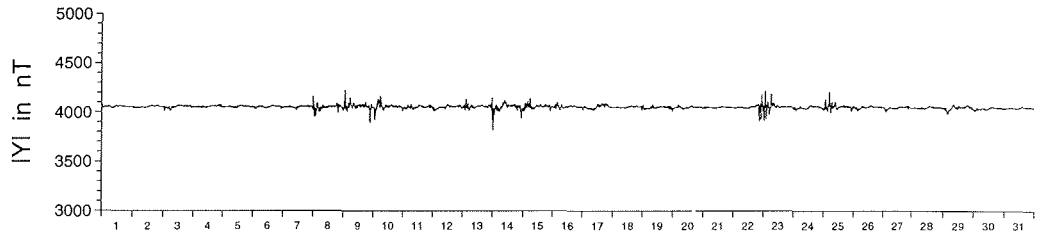

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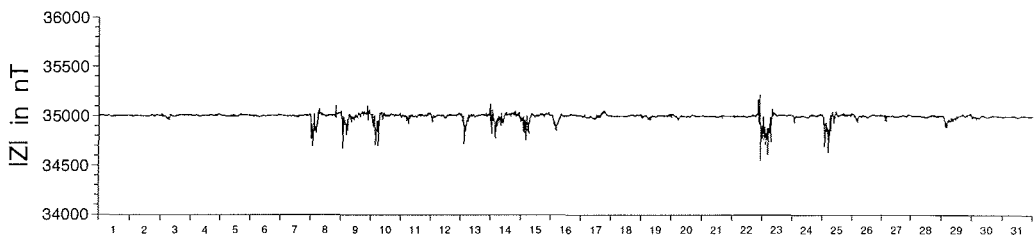

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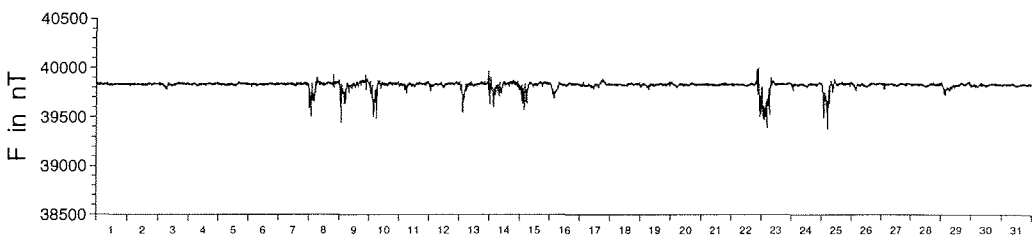
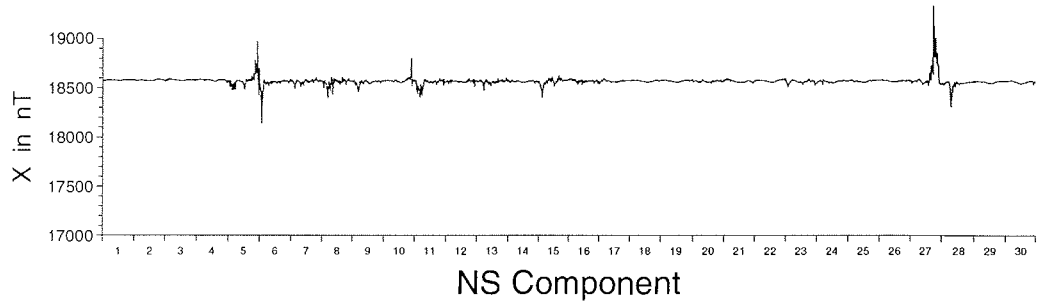


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for
September 1995



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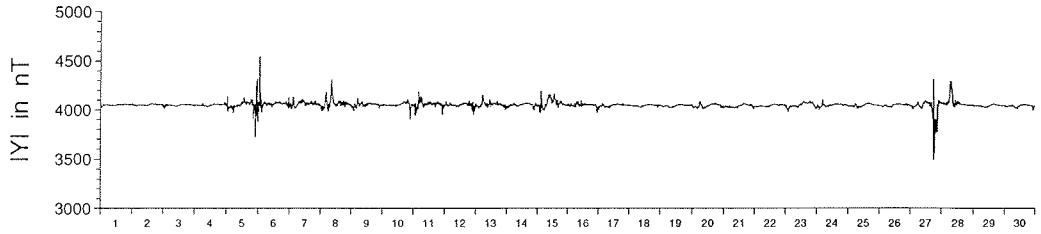

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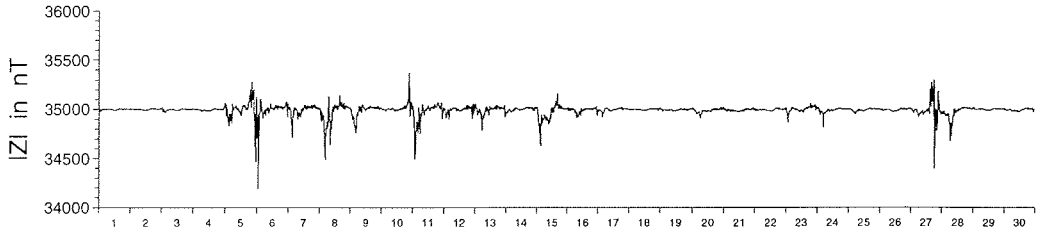

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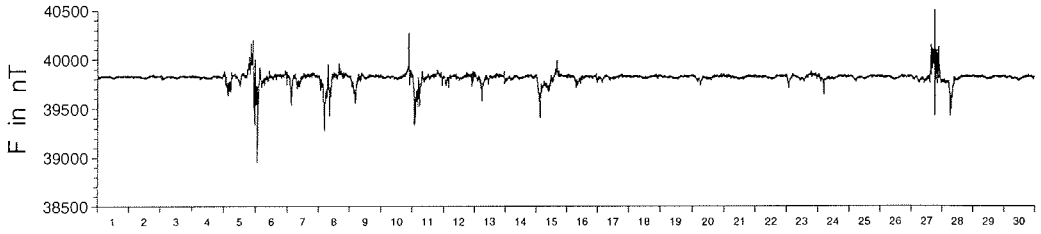
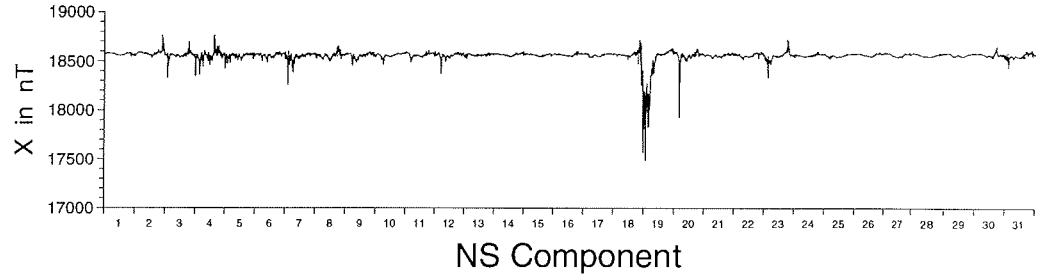


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for
October 1995



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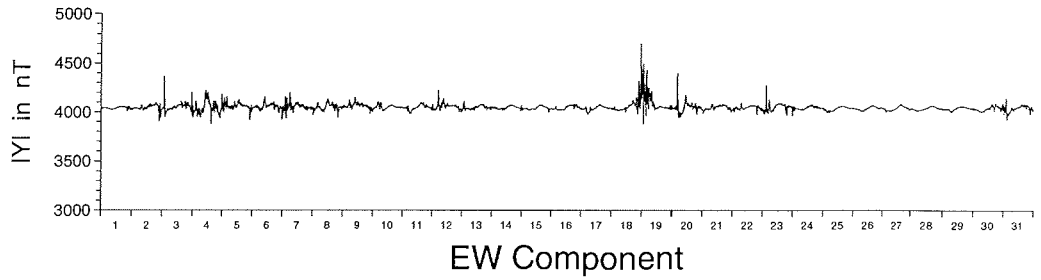

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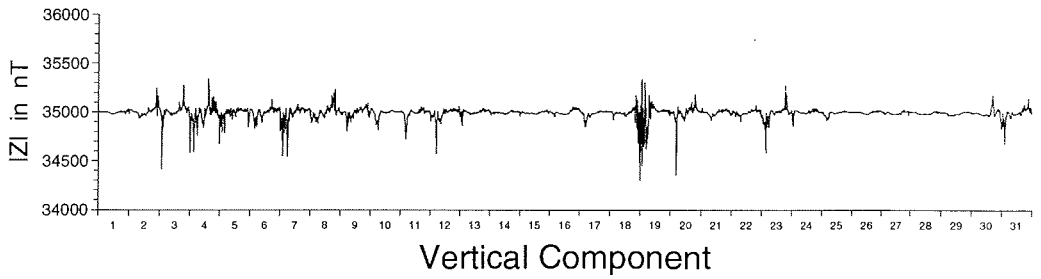

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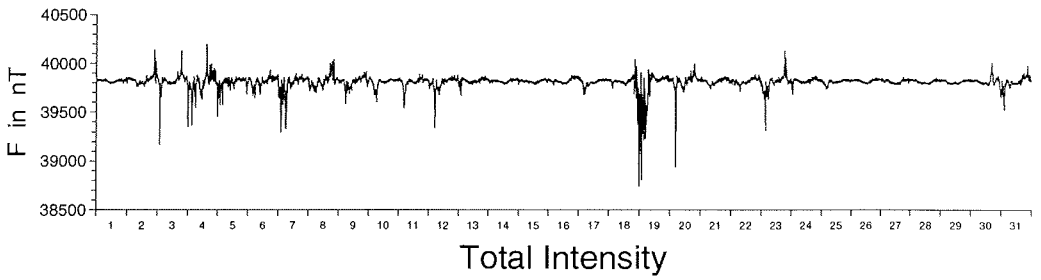
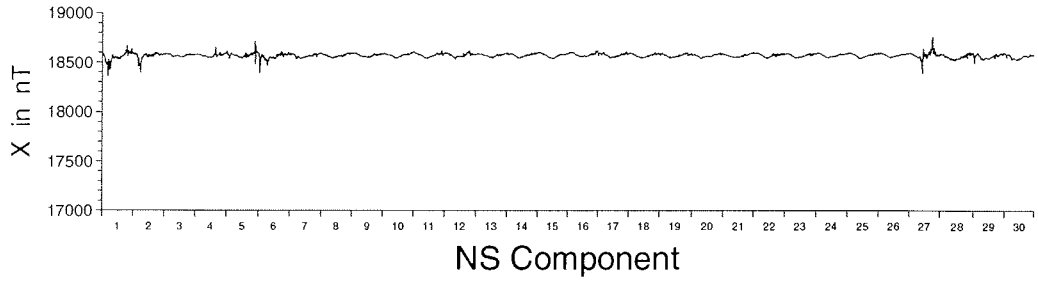


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for November 1995



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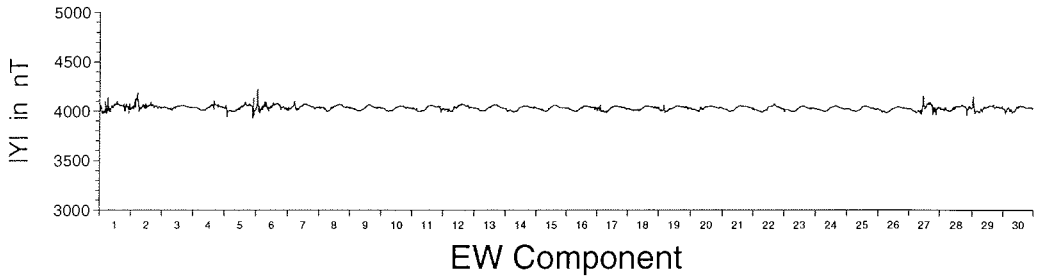

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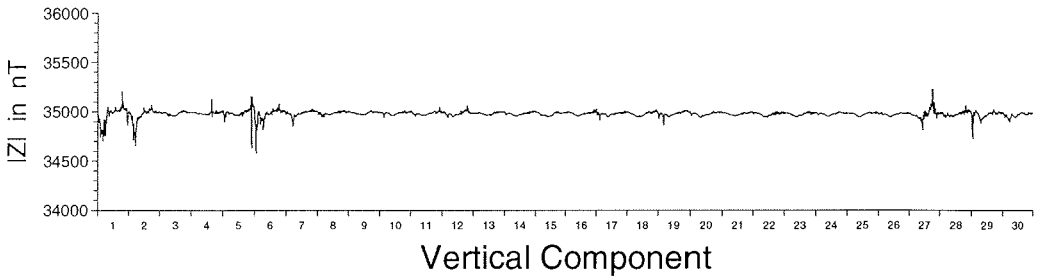

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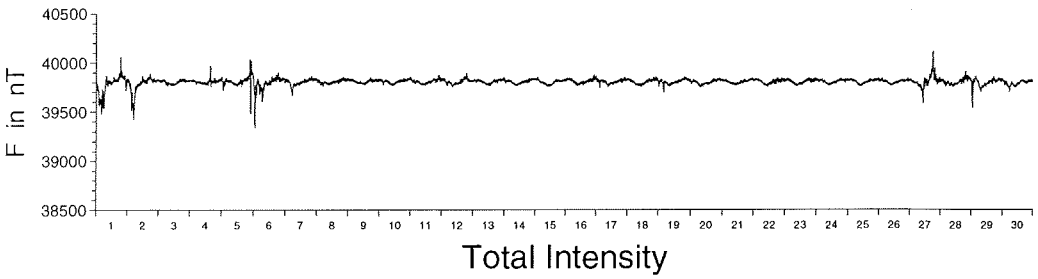
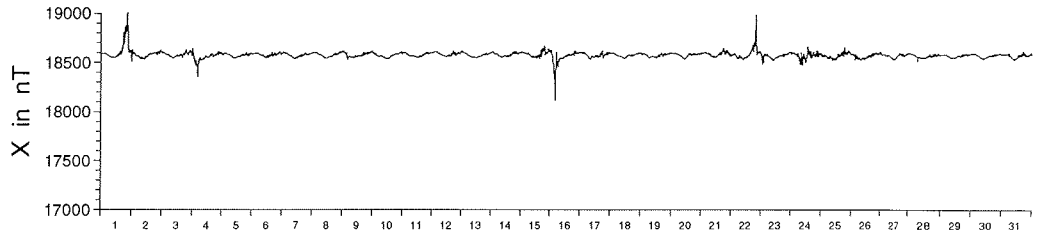


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for
December 1995



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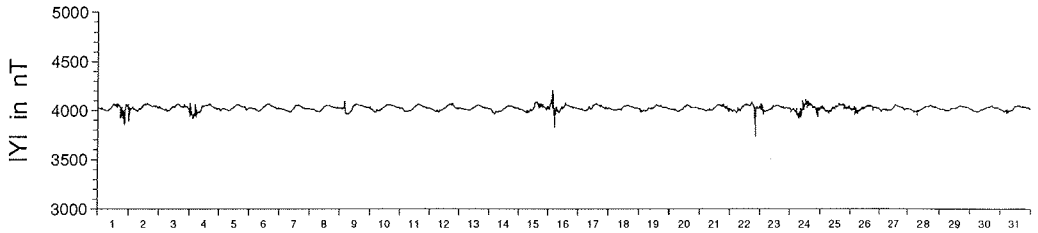
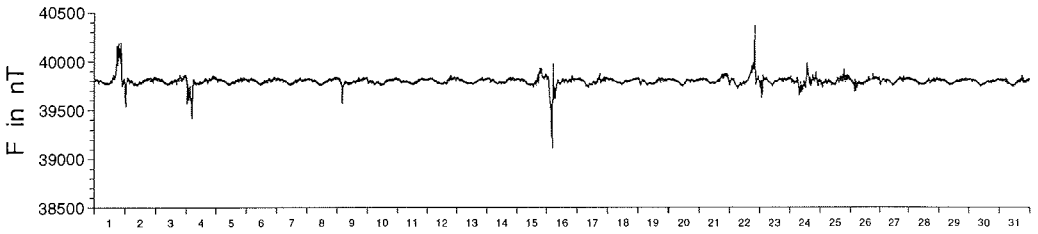


EW Component

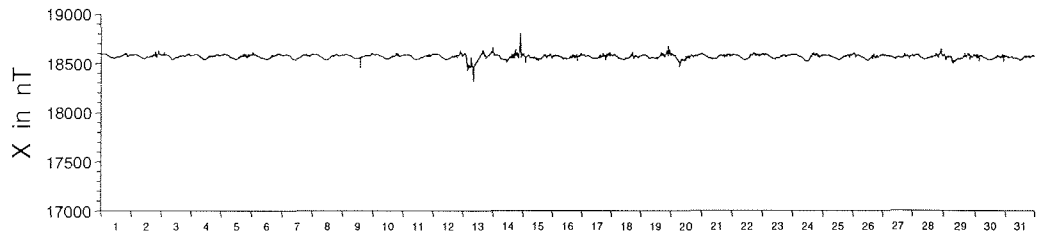
Vertical Component



Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for
January 1996



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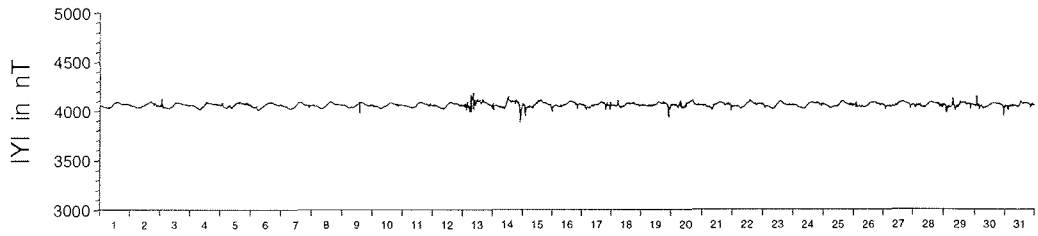

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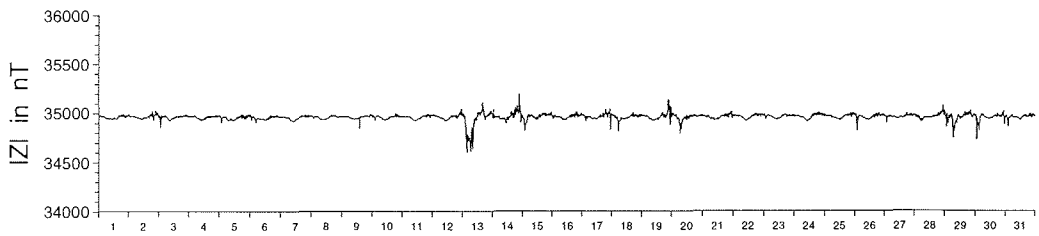

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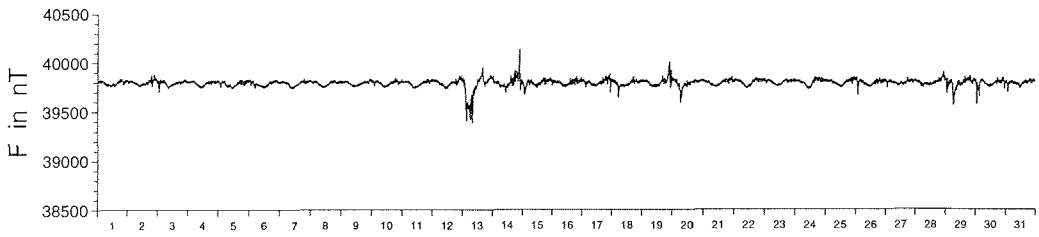
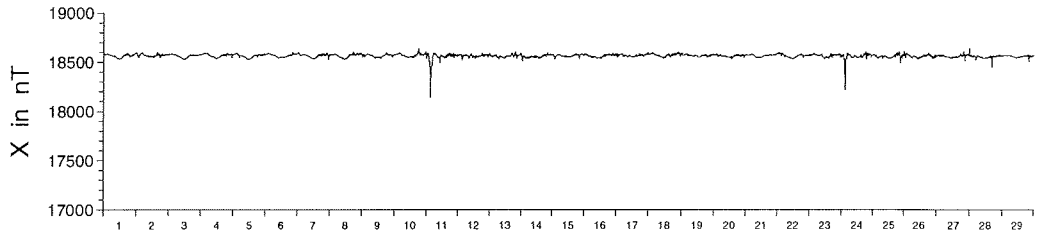


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for
February 1996



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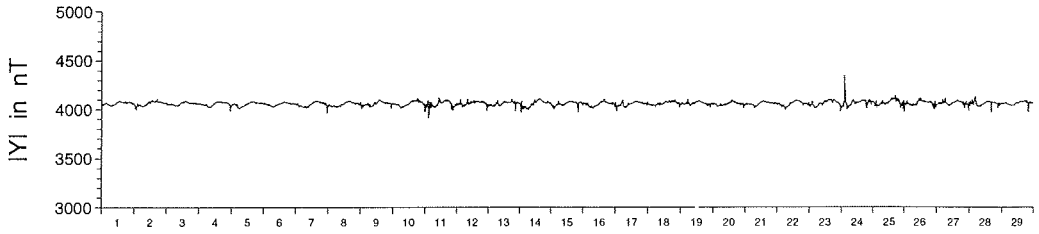

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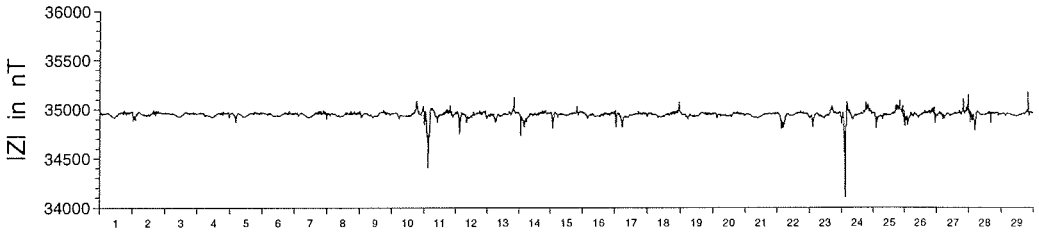

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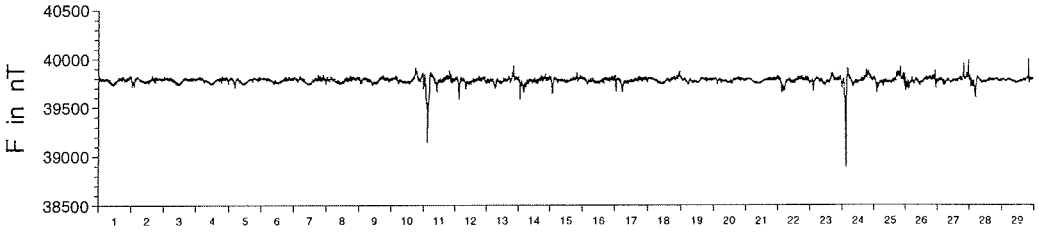
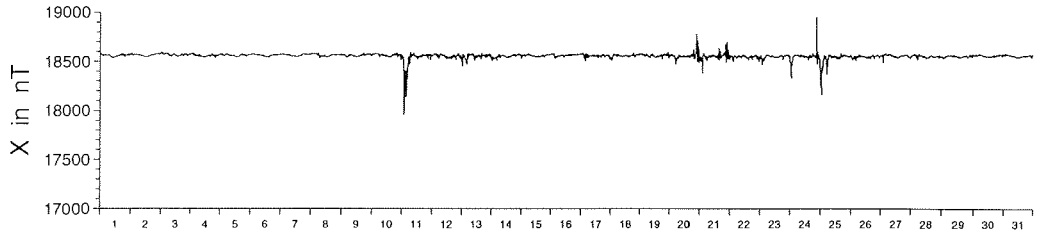


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for
March 1996



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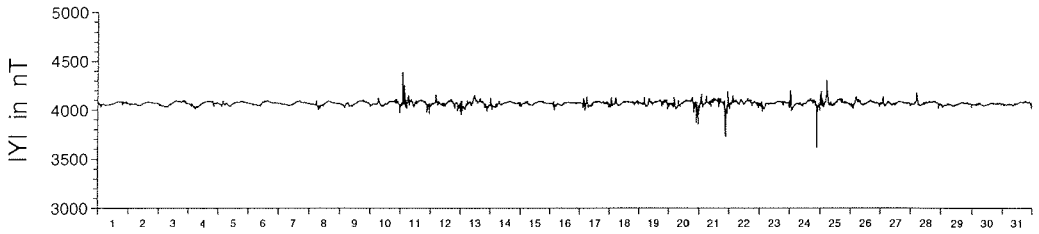

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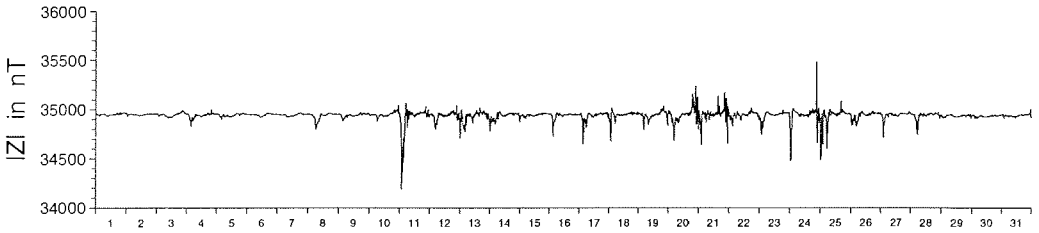

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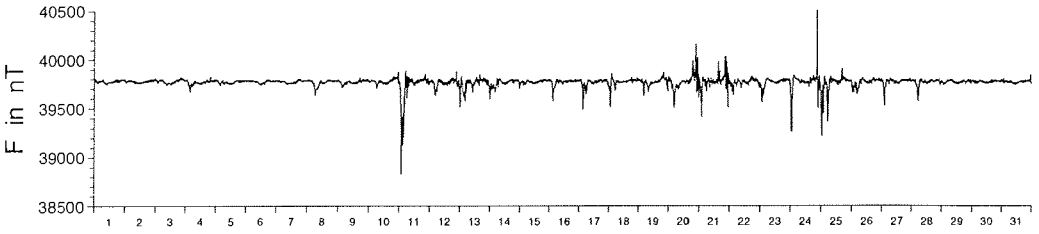
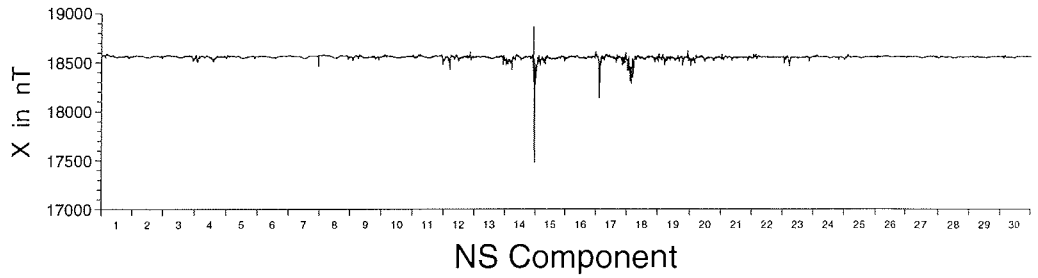


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for April 1996



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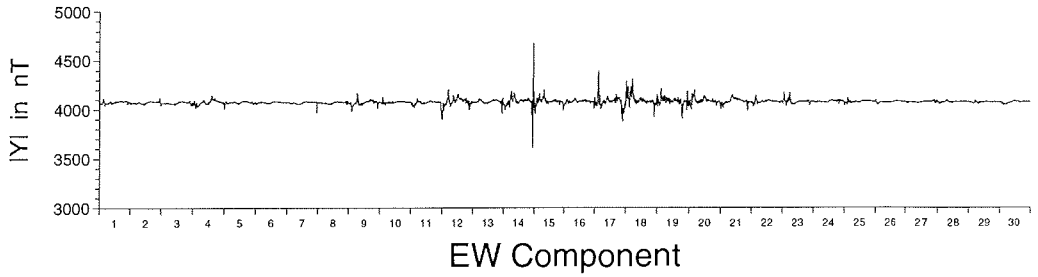

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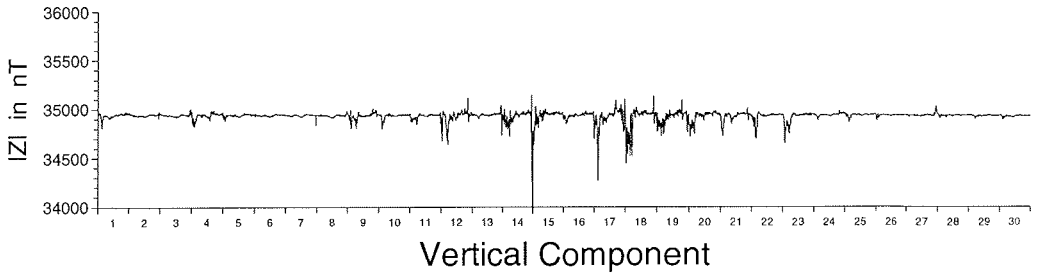

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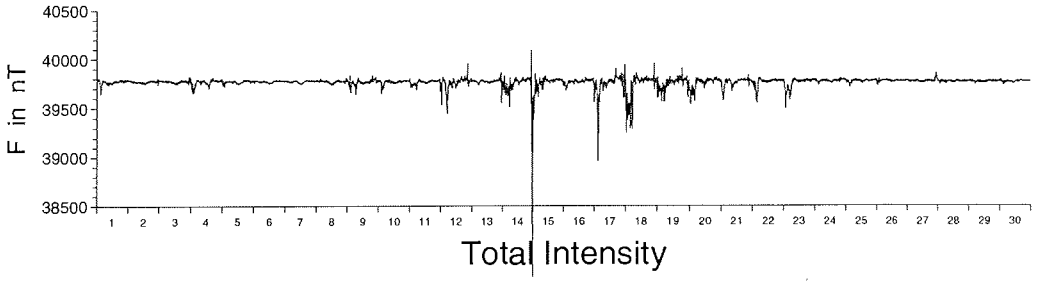
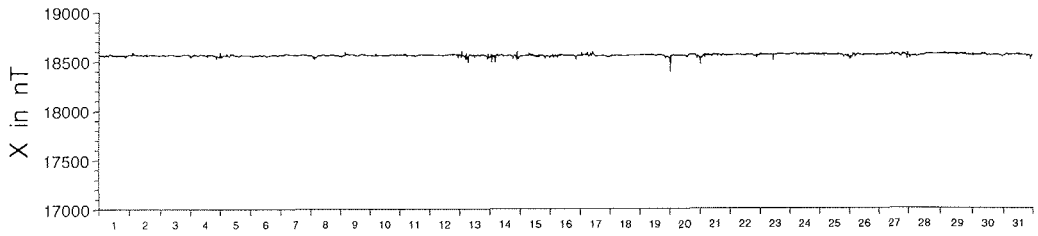


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for

May 1996



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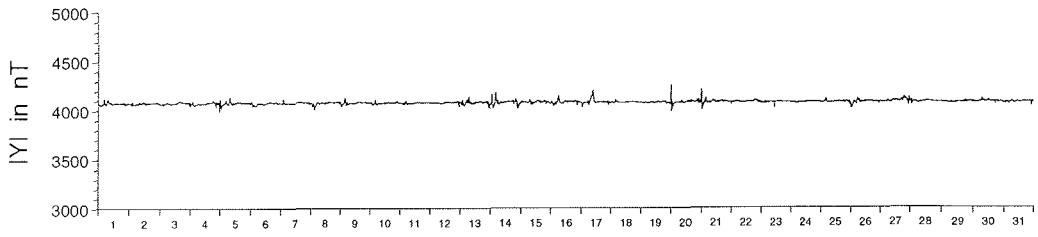

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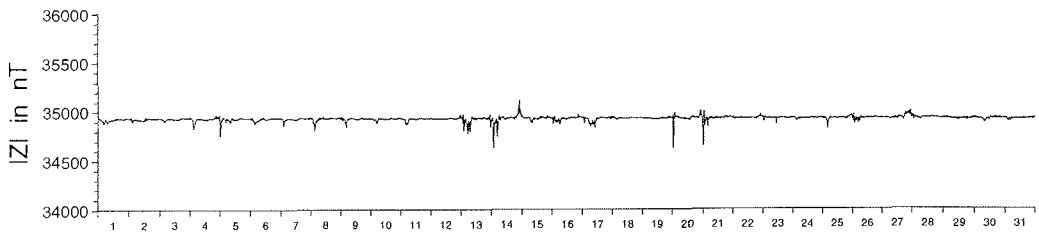

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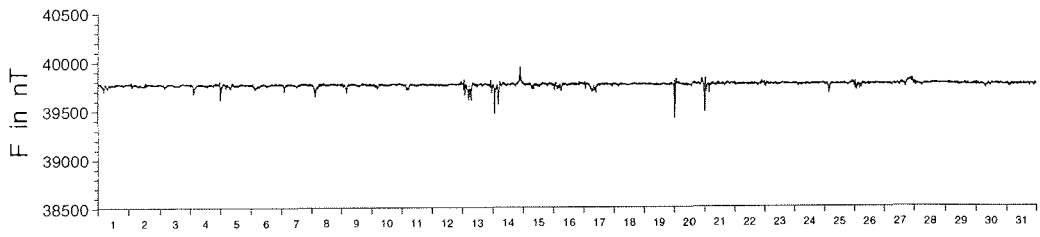
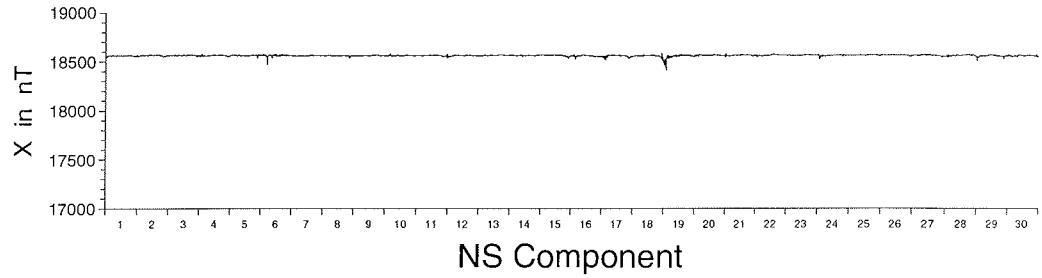


Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for

June 1996



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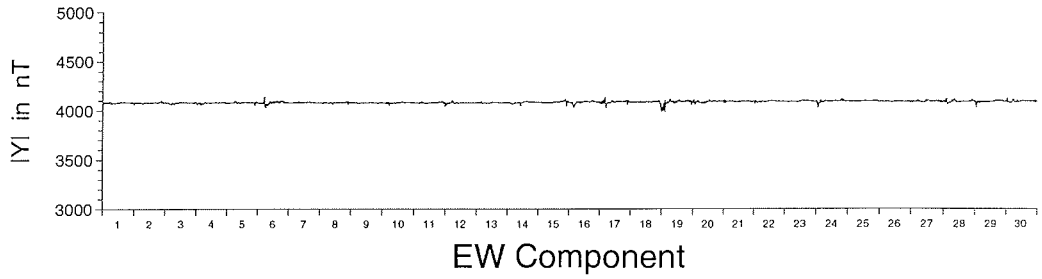
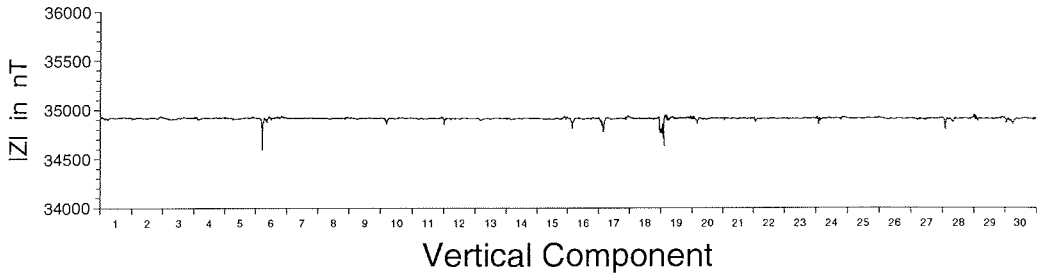
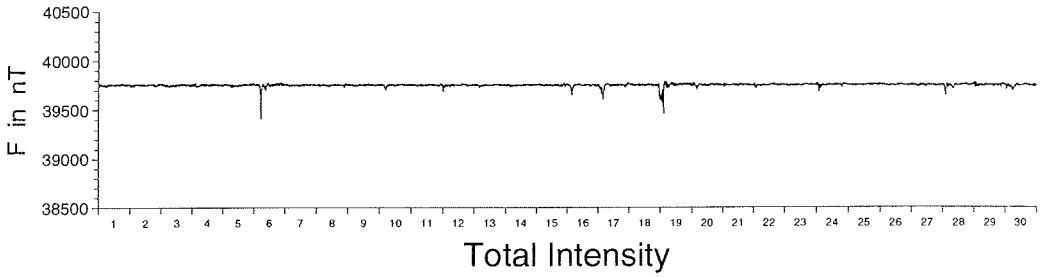


EW Component



Vertical Component

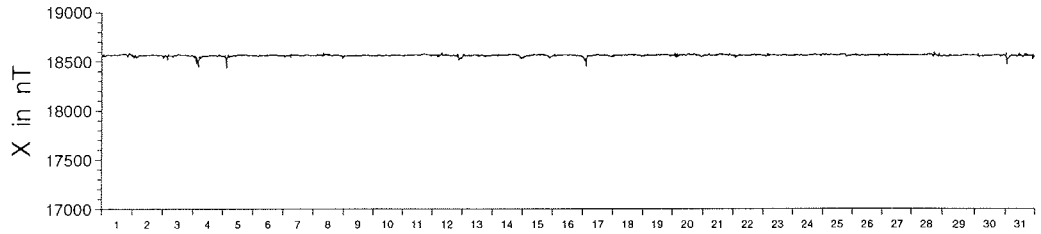


Total Intensity

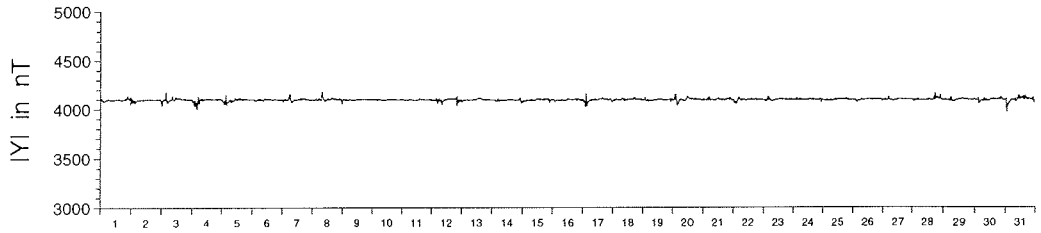
Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for

July 1996

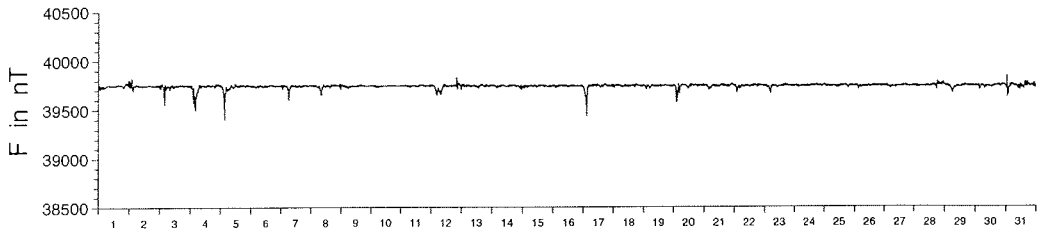


NS Component



EW Component

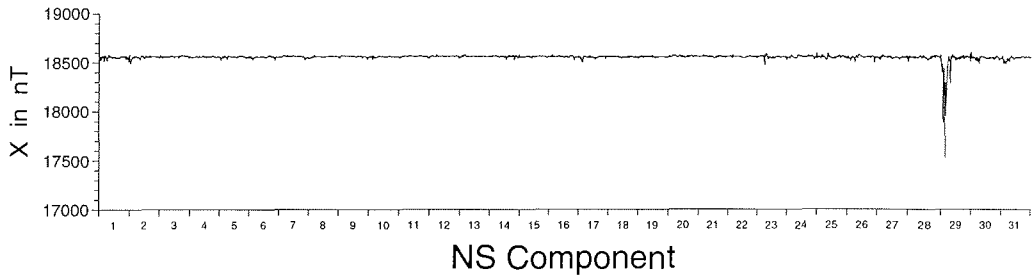
Vertical Component



Total Intensity

Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for
August 1996



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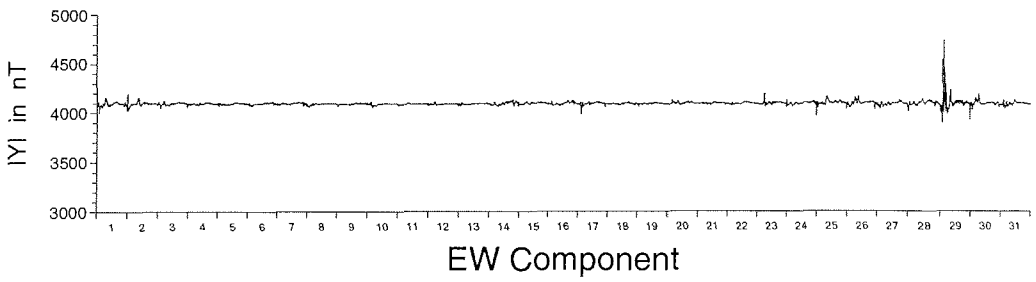
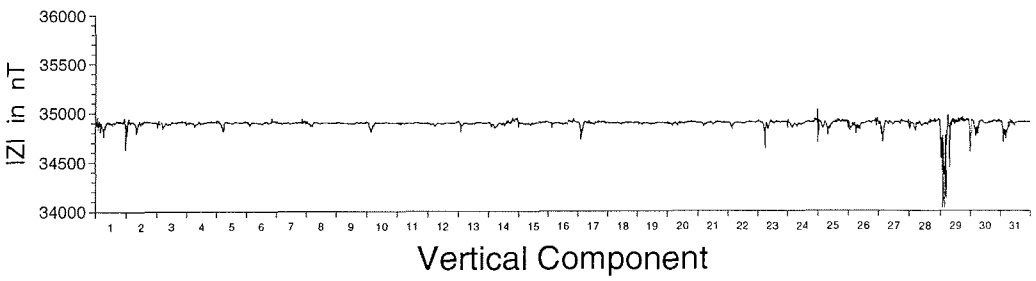
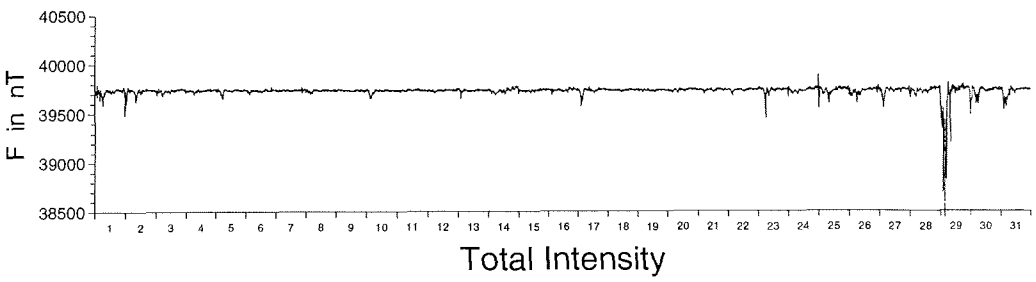


EW Component



Vertical Component

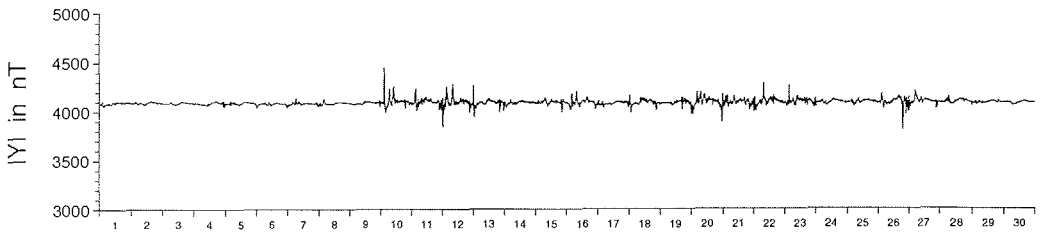


Total Intensity

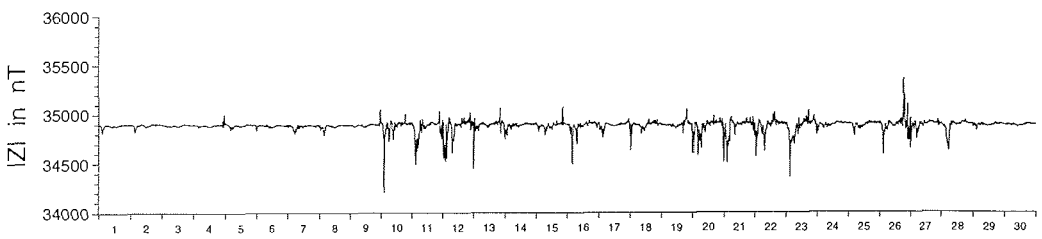
Neumayer-Station - Geomagnetic Observatory

Magnetic Field Components for
September 1996

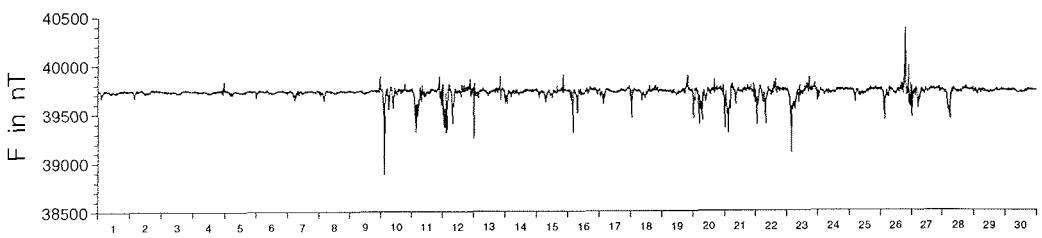
NS Component



EW Component



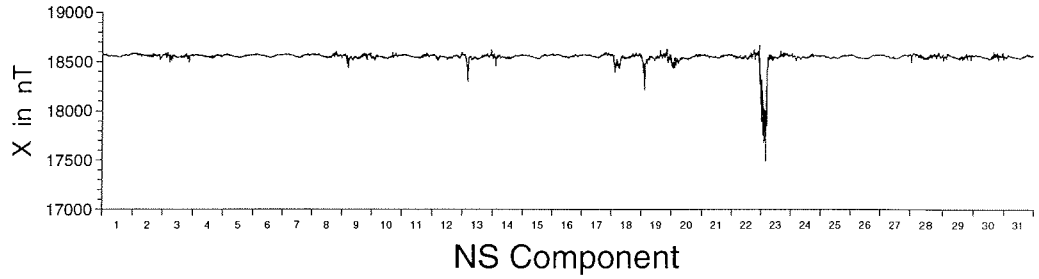
Vertical Component



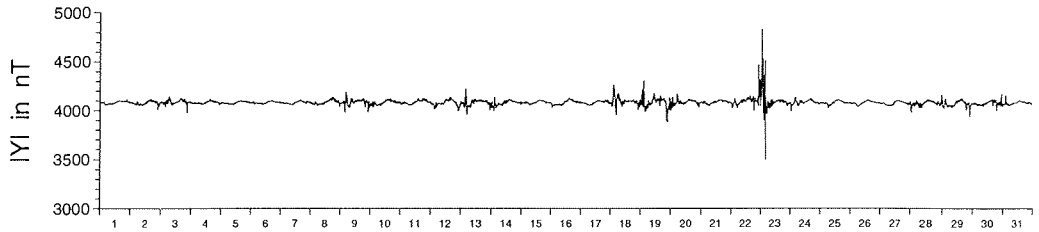
Total Intensity

Neumayer-Station - Geomagnetic Observatory

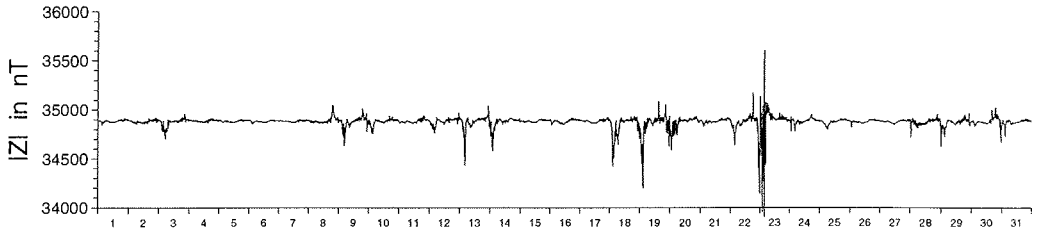
Magnetic Field Components for October 1996



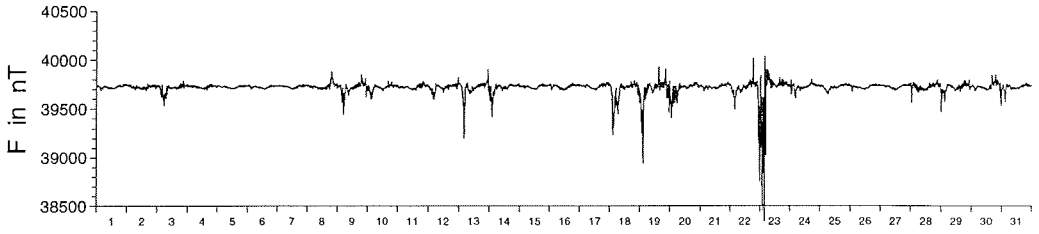
NS Component



EW Component



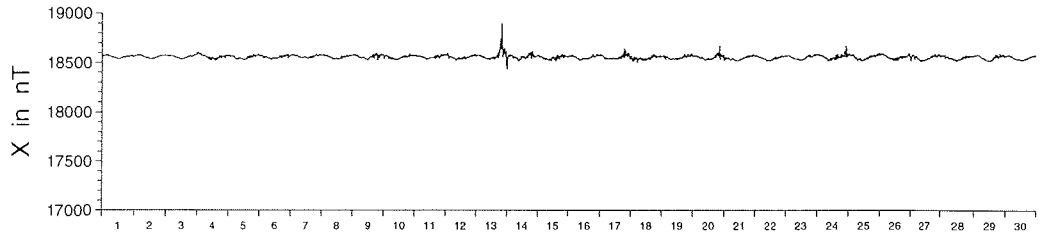
Vertical Component



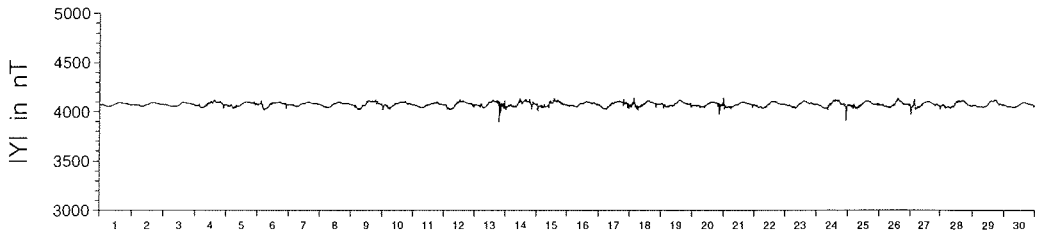
Total Intensity

Neumayer-Station - Geomagnetic Observatory

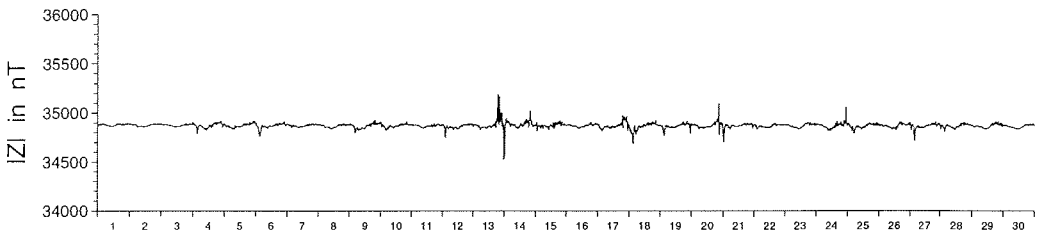
Magnetic Field Components for November 1996



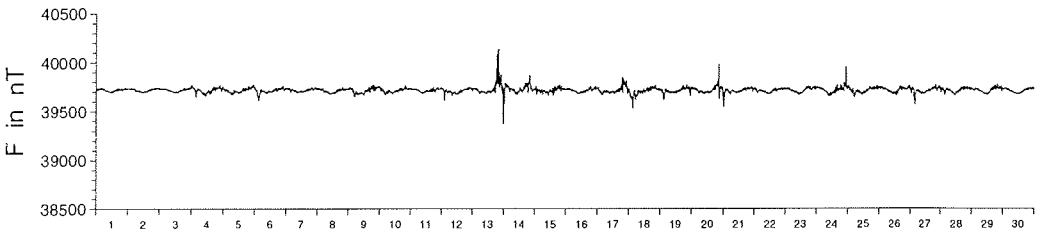
NS Component



EW Component



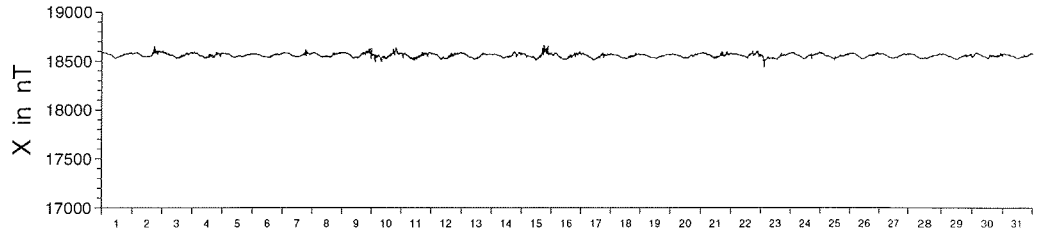
Vertical Component



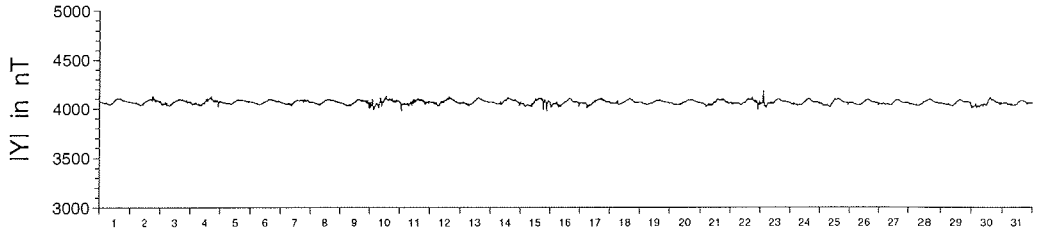
Total Intensity

Neumayer-Station - Geomagnetic Observatory

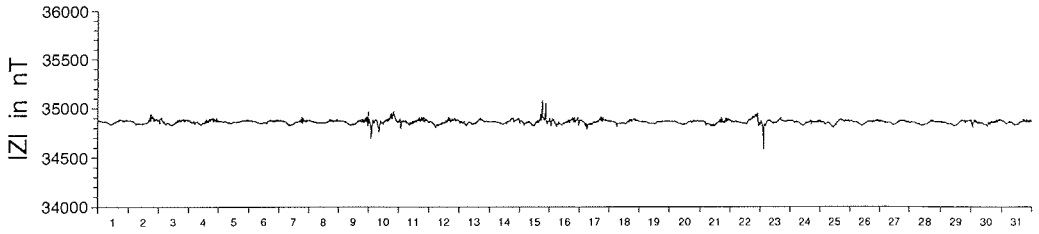
Magnetic Field Components for
December 1996



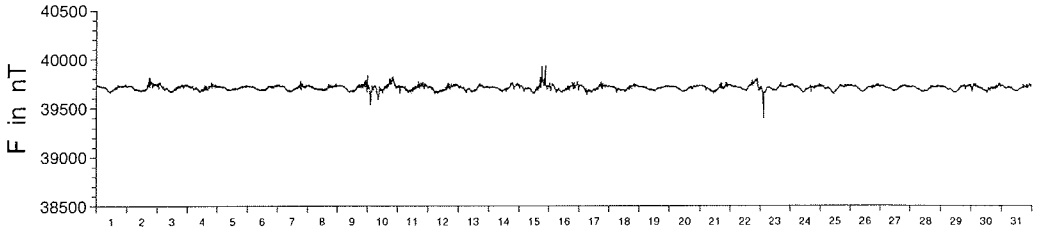
NS Component



EW Component



Vertical Component



Total Intensity

Appendix

B

Seismological Data
1995

Date (1995)	Onset Time h	m	s		Phase	No.		Date (1995)	Onset Time h	m	s		Phase	No.	
JAN 01	20	51	21	e	P	1		JAN	09	07	13.1	-i	PKPbc		
02	21	18	01	e	PKPdf	2			09	07	33.8	-i	pPKPdf		
03	02	58	43.3	-i	Pn	3			09	07	39	e	pPKPbc		
	03	03	26	e	PcP			21	09	31	05.9	-i	?		
	03	06	47.2	-i	ScP			21	09	31	00.1	-i	P	41	D
03	05	47	43	e	P	4			09	31	26.4	-i	pP		
03	07	01	16.0	-i	P	5			09	31	31.6	-i	sP		
03	16	17	41.2	+i	P	6		21	10	15	18.1	-i	?		D
04	06	37	01	e	P	7		22	00	32	41.0	+i	P	42	D
04	14	19	40	e	?			22	10	54	11.6	-i	P	43	D
04	23	34	46.2	-i	PKPab?	8	D	23	10	28	33	e	P	44	
05	05	27	11	e	?			24	08	50	38	e	PKPdf	45	D
05	09	38	16	e	PKPdf	9	D	29	23	02	18	e	P	46	
05	12	27	12	e	PKPdf	10		FEB 01	11	44	55	e	?		
05	23	42	52.9	+i	P	11	D	01	15	02	53	e	?		
06	12	24	42	e	?		D	05	23	02	29	e	P	47	D
06	16	01	00	e	Pn	12	D	08	18	53	02.7	-i	P	48	D
06	17	01	07	e	PKPdf	13	D	09	17	08	47	e	?		
06	18	04	55.9	-i	Pn	14	D	10	01	56	24.7	+i	P	49	D
06	19	05	35.5	-i	Pn	15	D	10	20	37	31.8	+i	pP?	50	
06	20	45	04	e	Pn	16		12	01	14	02.5	-i	P	51	D
06	22	57	10.3	+i	PKPdf	17	D	13	00	23	11.8	+i	P	52	
07	02	25	30	e	P	18	D	13	09	01	52	e	PKiKP	53	
	02	26	09	e	sP			13	11	45	14.2	-i	?		D
07	02	55	42.4	+i	PKPdf	19	D	18	13	48	22.6	-i	PKPdf	54	D
	02	56	11.8	+i	pPKPdf			28	12	44	26	e	?		D
08	09	34	16.8	-i	pP?	20		MAR 26	02	20	13.4	-i	Pn	55	D
10	03	36	22	e	P	21			02	37	51	e	T		
	03	36	35	e	sP			27	21	48	56	e	?		
11	09	59	01.4	-i	P	22	D	27	21	50	08	e	?		
11	10	37	47.9	-i	P	23		27	22	00	30	e	?		
	10	38	30.5	+i	pP			27	22	12	04	e	?		
12	10	46	32.2	+i	PKPdf	24	D	29	01	43	45	e	?		
13	03	32	48	e	PKPdf	25	D	29	04	28	49	e	?		
	03	36	37	e	PP			29	11	26	01	e	?		
13	07	30	20	e	?			29	11	46	13	e	?		
14	07	01	18.6	-i	P	26	D	29	12	54	29	e	?		
15	02	59	25.0	-i	PKPdf	27		29	14	12	58	e	?		
15	03	42	45	e	?			30	22	35	02.5	-i	PKPdf	56	D
	03	43	09	e	?			30	23	44	38	e	?		
15	19	13	23	e	P	28		31	04	14	43	e	?		
15	20	56	10.4	+i	P	29		31	04	21	47	e	?		
16	21	06	09.4	-i	PKPdf	30		31	04	59	02	e	?		
17	06	45	49	e	P	31	D	31	05	38	00	e	?		
17	07	05	47	e	?			31	14	20	27	e	PKPdf	57	
17	17	05	59.5	+i	P	32	D	31	14	44	57	e	?		
	17	08	19.4	+i	pP			31	16	52	36	e	P	58	
19	03	20	10.4	-i	PKPdf	33		31	21	08	57	e	?		
	03	20	40	e	pPKPdf			APR 01	04	09	04.5	-i	PKPdf	59	
19	10	08	48	e	P	34		01	14	48	43	e	?		
19	15	17	47.1	-i	P	35		01	14	50	59	e	?		
	15	17	50.5	-i	PcP			01	16	45	46	e	?		
	15	21	08	e	PP			01	18	03	22	e	?		
20	03	55	30.5	+i	PKPdf	36	D	01	23	11	56	e	?		
	03	55	36.3	+i	PKPbc			02	00	32	54	e	?		
20	14	12	07	e	P	37		03	01	52	16	e	?		
20	14	31	54.3	-i	P	38	D	03	01	53	08	e	Pn	60	
21	07	16	12	e	PKPdf	39		03	15	55	38.4	-i	P	61	
21	09	07	07.6	-i	PKPdf	40	D	03	22	08	58	e	?		

Date (1995)	Onset Time h	m	s		Phase	No.		Date (1995)	Onset Time h	m	s		Phase	No.	
APR 03	23	35	42	e	P	62		APR 15	09	47	20.5	+i	?		D
03	23	41	10	e	?			15	10	07	20	e	?		
04	20	17	54	e	?			16	00	35	09	e	?		
05	05	05	29	e	?			16	02	20	06	e	?		
05	07	06	37	e	?			16	06	13	35	e	?		
05	10	00	25	e	?			16	09	12	03	e	P	89	
05	11	17	04	e	?			16	11	15	07	e	?		
05	20	01	35	e	?			16	11	26	37	e	?		
06	05	15	33.5	-i	P	63		17	01	26	24.1	+i	?		D
06	09	21	38	e	?			17	08	56	19	e	Pn	90	D
06	12	05	45	e	?			17	16	13	40	e	?		
07	10	05	44	e	Pn	64	D	17	17	00	07	e	P	91	
	10	08	33	e	S?			17	23	48	01.6	+i	PKPdf	92	D
	10	21	01	e	T			18	05	43	52	e	PKPdf	93	
07	10	33	13	e	?			18	16	32	33.3	+i	P	94	D
07	22	20	13.5	-i	P	65	D	18	21	20	09.1	-i	P	95	
	22	31	04	e	S			18	22	11	21	e	?		
	22	37	17	e	PKKPdf			18	23	27	57.8	-i	Pn	96	D
08	01	15	23	e	P	66		19	04	09	55.2	-i	PKPdf	97	D
08	01	33	22.8	+i	P	67	D	19	22	52	31	e	?		
08	14	41	53.8	-i	P	68		20	09	03	20.0	+i	PKiKP	98	D
08	16	48	52	e	P	69		20	09	04	06.8	+i	?		
08	17	26	09	e	P	70		20	09	04	34.0	+i	?		
08	17	51	19	e	P	71		20	20	56	20	e	?		
08	18	00	12	e	Pdiff	72	D	20	21	09	04	e	PKPdf	99	
	18	03	47.7	-i	PKPdf			21	01	04	16	e	?		
09	00	47	28	e	?			21	01	53	38	e	?		
09	01	00	31	e	P	73		21	05	21	55	e	?		
09	02	50	17	e	P	74		21	18	04	14	e	P	100	
09	04	56	10	e	?			21	21	28	10	e	?		
09	08	07	50	e	?			22	10	41	43.6	+i	P	101	
09	14	50	24	e	P	75		22	23	02	16	e	?		
09	20	11	42	e	?			23	00	11	09	e	?		
09	20	47	07.7	+i	P	76		23	03	15	53	e	PKPdf	102	D
10	13	05	36	e	P	77		23	04	59	19	e	P	103	
11	03	24	42	e	?			23	05	37	19	e	?		
11	04	52	31	e	?			23	17	17	29.6	+i	Pn	104	D
11	04	56	20	e	?				17	31	21	e	T?		
11	10	52	15	e	P	78		24	00	08	21	e	P	105	
11	21	45	21.6	-i	P	79		24	03	26	29	e	PKPdf?	106	
12	05	42	58	e	pPKPdf	80	D	24	07	19	41.6	+i	?		D
12	05	59	23	e	?			24	12	43	22	e	?		
12	12	38	28	e	?			24	21	10	38	e	P	107	
12	18	35	10	e	P	81		25	02	43	25	e	?		
13	02	47	01.0	+i	P	82		25	05	46	43	e	?		
	02	49	15	e	pP			25	06	29	08	e	?		
13	03	05	47	e	?			25	08	59	44.2	+i	?		D
13	05	40	10	e	P	83		25	13	52	31	e	PKPdf	108	
13	17	00	10	e	?			25	14	08	38	e	PKPdf	109	
13	18	56	31	e	?			26	03	58	55	e	?		
14	00	03	40	e	PKPdf	84		26	04	31	32.5	+i	P	110	
14	04	42	18	e	P	85		27	11	11	26	e	P	111	
14	12	23	08	e	?			27	12	00	02.5	+i	P	112	
14	13	17	52.1	-i	Pn	86	D	27	12	57	24.3	+i	P	113	
	13	19	43	e	?			27	16	05	33	e	P	114	
	13	27	10	e	ScP			27	22	10	58	e	P	115	
14	14	24	59.8	-i	P	87	D	28	02	13	26.4	+i	P	116	
14	17	03	27	e	?			28	10	12	07.0	+i	P	117	
15	05	56	20	e	PKPdf	88		28	16	49	44.2	+i	PKPdf	118	D

Date (1995)	Onset h	m	s		Phase	No.		Date (1995)	Onset h	m	s		Phase	No.	
APR	28	17	28	32.5 -i	PKPdf	119	D	MAY	12	18	03	41.5 +i	P	154	
	28	17	57	43 e	?				12	19	56	52 e	PKPab?	155	
	28	19	06	01 e	?				13	02	21	14 e	?		
	28	20	46	38 e	?				13	05	56	45 e	?		
	29	04	55	15.5 -i	PKPdf	120			13	09	05	55 e	PKiKP	156	
	29	12	02	27.3 +i	P	121				09	06	25 e	pPKiKP		
	29	14	10	21 e	P	122				09	16	47 e	PKKPbc		
	29	22	22	47 e	?				13	11	35	24 e	P	157	
	29	23	45	11 e	?				13	11	55	10 e	?		
	30	07	38	54 e	?				13	12	23	43 e	?		
MAY	01	17	33	21 e	?				13	21	13	14 e	P	158	
	01	18	03	33 e	?				14	11	46	44.2 -i	P	159	D
	01	18	43	10.1 +i	P	123	D		14	12	12	27 e	P	160	
		18	47	13.0 -i	PKiKP				14	12	39	18 e	P	161	
	02	04	13	54.2 -i	PKPdf	124	D		14	18	05	26 e	?		
	02	06	18	02.4 -i	P	125	D		15	01	53	22.4 +i	?		
		06	36	50 e	PKKPbc				15	04	25	11 e	PKPdf	162	
	02	12	07	32 e	PKPdf	126			15	15	30	45.7 +i	Pn	163	D
	03	00	01	28 e	P	127				15	33	56.0 +i	S		
	03	00	13	47 e	?					15	38	49 e	ScP		
	03	10	54	37.5 -i	P	128			15	18	52	25 e	?		
	03	15	17	52 e	?		D		15	22	39	47.7 -i	P	164	D
	04	02	37	09 e	PKiKP	129			16	03	53	31.2 +i	PKPdf	165	D
	04	07	42	52 e	?				16	04	45	36.5 +i	P	166	D
	04	15	19	02 e	PKPdf	130				04	47	49 e	pP		
	04	18	57	41.0 +i	P	131			16	20	25	25.2 +i	P	167	D
	05	04	12	36 e	PKPdf	132			16	20	43	55 e	P	168	
	05	10	22	05 e	P	133			16	21	38	20 e	P	169	
	05	13	14	48 e	P	134	D		17	02	44	26 e	?		
	05	14	57	32 e	?				17	02	55	19 e	?		
	05	15	31	28.0 +i	P	135			17	03	37	22 e	P	170	
	05	16	21	24 e	P	136			17	04	10	55 e	P	171	
	05	17	32	17.6 +i	P	137			17	04	49	06.5 -i	P	172	D
	05	19	05	14 e	P	138			17	05	36	00 e	P	173	
	05	23	00	56 e	P	139	D		17	06	36	10.6 +i	P	174	D
	06	02	17	39.6 +i	PKPdf	140	D		17	06	49	27 e	?		
	06	21	10	11 e	P	141			17	11	36	30.4 +i	P	175	D
	07	09	11	13 e	P	142			17	14	12	05 e	P	176	
	07	22	32	15 e	?				18	00	17	43.0 +i	P	177	D
	07	22	51	45 e	P	143			18	11	28	28 e	P	178	
	08	01	07	23 e	?				18	14	50	55.0 +i	PKPdf	179	D
	08	03	42	00.4 +i	P	144	D		19	07	29	47 e	P	180	
	08	18	00	14 e	PKPdf	145	D		19	09	41	11 e	P	181	
	08	18	00	27.4 -i	PKPdf	146			19	18	02	38 e	P	182	
	09	12	38	53 e	P	147			19	18	26	03 e	P	183	D
	09	22	11	30.8 -i	?		D		20	13	48	52.5 -i	Pn	184	D
	09	23	46	03 e	?					13	57	01.9 +i	PcP		
	10	00	08	50 e	PKPdf	148			20	22	31	29 e	P	185	
	10	06	39	30 e	P	149			21	07	42	11 e	P	186	
	10	06	44	01 e	?				21	15	57	20 e	P	187	
	10	10	46	47 e	?				21	17	02	53.6 -i	P	188	D
	10	13	22	44 e	?				21	19	08	45.4 -i	P	189	D
	10	23	22	47 e	?		D		22	03	57	45 e	P	190	D
	11	04	46	12 e	?				22	04	02	38 e	P	191	
	11	05	10	44 e	?				22	06	10	55.2 +i	P	192	D
	11	22	11	09.5 +i	P	150	D		22	07	11	46 e	P	193	
	12	05	43	13 e	PKPdf?	151			22	10	02	02 e	Pdiff?	194	
	12	11	44	53 e	PKPdf	152			22	10	35	46 e	P	195	
	12	15	21	39 e	P	153	D		23	07	32	30 e	P	196	

Date (1995)	Onset Time h	m	s		Phase	No.		Date (1995)	Onset Time h	m	s		Phase	No.	
MAY 23	10	21	15.4	+i	PKPdf	197	D	JUN 04	02	27	40.3	+i	P	226	D
23	22	13	45.0	+i	Pn	198	D	04	11	23	21	e	P	227	
23	22	28	53	e	?			04	12	06	28.4	-i	Pn	228	D
23	22	29	20	e	?				12	14	39	e	T		
23	23	23	27	e	Pn	199	D	04	12	27	55	e	P	229	
23	23	35	07	e	Pn	200		05	07	16	52	e	P	230	
23	23	42	14	e	Pn	201		05	18	48	31	e	Pn	231	D
24	03	32	21	e	?			05	19	02	18	e	?		
24	03	41	26	e	?			05	20	39	04	e	PKPdf	232	
24	11	22	53	e	PKPab	202		05	21	17	31	e	?		
24	13	15	45	e	P	203		05	22	46	28	e	?		
24	18	50	05	e	?		D	06	16	04	23	e	?		
24	19	21	23	e	?			06	22	53	02	e	Pn	233	D
24	23	45	07	e	?			07	00	53	46	e	?		
25	05	19	35.4	+i	PKPdf	204	D	07	04	07	03	e	?		
25	05	58	06	e	P	205		07	08	35	40	e	P	234	
25	09	31	15	e	PKPdf	206		07	11	54	38	e	P	235	
25	15	49	50	e	?			07	16	11	12	e	P	236	
25	17	08	03	e	?			07	20	11	23	e	P	237	
26	00	28	08	e	?			07	22	58	17	e	P	238	
26	05	30	09	e	?			07	23	43	00	e	PKPdf	239	
26	05	45	28	e	?			08	06	09	19	e	?		
26	06	13	22	e	P	207		08	07	45	06	e	?		
26	07	04	53	e	?			08	17	46	22	e	?		
26	11	31	03	e	?			08	18	37	36.2	-i	Pn	240	D
26	11	54	00	e	?			09	05	45	43.0	-i	P	241	D
27	13	23	51	e	PKPdf	208	D	09	08	30	28	e	PKPdf	242	
	13	24	25.4	+i	PKPab			09	12	11	27	e	P	243	
27	14	37	08	e	?			10	14	29	30	e	?		
27	14	45	19	e	P	209		12	03	47	28.0	-i	P	244	
27	14	48	06	e	P	210		14	05	57	15	e	P	245	
27	20	28	26.7	+i	P	211	D	14	11	25	27	e	Pdiff	246	
28	02	55	23	e	P	212		14	11	28	38	e	Pdiff	247	
28	06	04	50	e	P	213		14	16	22	44.5	-i	P	248	D
28	06	10	15	e	P	214		14	17	44	17	e	P	249	
28	10	06	47	e	P	215		15	19	01	29.2	+i	Pn	250	D
28	11	39	59	e	?			15	19	27	11	e	Pn	251	
28	15	03	14	e	?			15	19	28	54.8	+i	?		
28	20	08	33.8	+i	P	216	D	15	19	29	11.3	+i	Pn	252	D
29	04	51	26	e	?			15	19	31	24.8	+i	?		
29	10	17	34	e	P	217		15	19	34	41	e	?		
29	10	42	00	e	PKPab	218		15	20	18	41	e	?		
30	16	59	40.1	-i	Pn	219	D	15	21	04	03	e	?		
	17	13	08	e	T			15	23	55	39	e	?		
31	05	46	58	e	?			16	00	58	28	e	?		
JUN 01	01	50	31.8	+i	?		D	16	02	19	19	e	?		
01	10	11	32	e	P	220		16	03	52	10	e	?		
01	13	49	17	e	?			16	12	22	16	e	?		
01	15	48	14.8	+i	P	221		16	14	01	56	e	P	253	
01	19	32	49	e	?			16	23	46	44	e	?		
02	00	06	09	e	?			17	05	17	09	e	?		
02	07	54	27.0	-i	Pn	222	D	17	05	23	57	e	?		
	08	08	14	e	T			17	05	38	04	e	?		
02	08	27	51	e	?			17	14	18	24	e	?		
02	19	16	22.0	-i	P	223	D	17	14	28	47	e	?		
02	21	05	42	e	?		D	18	12	07	38	e	P	254	
03	08	56	13	e	P	224		18	23	11	38	e	?		
03	21	10	10.9	+i	P	225	D	19	01	17	35	e	PKPdf	255	
	21	19	27	e	S			19	10	24	06	e	P	256	

Date (1995)	Onset Time h m s		Phase	No.		Date (1995)	Onset Time h m s		Phase	No.	
JUN 19	10 44 52	e	P	257		JUL	00 15 36	e	PP		
19	12 59 05	e	P	258			00 16 02	e	SKiKP		
20	06 00 21	e	P	259		03	02 14 40	e	P	296	
20	15 52 37	e	?			03	10 10 25	e	?		
20	18 00 00.1	+i	Pn	260	D	03	20 02 57.7	-i	P	297	D
21	04 25 49	e	?			03	20 20 22	e	?		
21	15 37 25.0	+i	P	261	D	03	22 08 57.6	+i	P	298	D
21	16 44 24	e	P	262	D	04	01 02 22	e	P	299	
21	20 43 59	e	PKPdf	263		04	03 13 25	e	P	300	
22	00 29 08	e	P	264		04	04 34 32.4	-i	P	301	D
22	08 10 23	e	P	265		04	11 46 01	e	?		
22	09 54 13	e	?			04	12 40 03	e	P	302	
22	11 57 28	e	?			04	17 16 01	e	P	303	
22	14 16 49	e	?			04	22 34 55	e	P	304	
22	20 22 29	e	?			05	03 24 00	e	P	305	
22	20 30 49	e	P	266		05	05 31 07	e	P	306	
22	22 37 03	e	?			05	11 53 38	e	P	307	
23	02 14 24	e	?			06	01 24 13.6	+i	P	308	D
23	10 28 08	e	P	267		06	05 54 21	e	P	309	
23	16 23 19	e	P	268		06	08 27 21	e	?		
24	00 07 20	e	P	269		06	09 51 40	e	P	310	
24	07 15 44	e	PKiKP	270		06	10 00 31	e	P	311	
24	17 49 10	e	P	271		06	16 16 51.7	+i	PKPdf	312	D
25	05 09 05.8	+i	Pn	272	D	07	04 40 34	e	P	313	
	05 17 30	e	ScP			07	05 56 11.4	+i	P	314	D
25	07 18 03	e	PKPdf	273		07	10 44 27.6	+i	P	315	D
25	12 44 24.3	+i	PKPdf	274	D	07	11 52 34	e	PKPdf	316	
26	03 40 57.8	+i	?		D	07	13 36 04.9	+i	P	317	D
26	03 45 47	e	Pn	275		07	17 12 38	e	P	318	
26	07 00 55.4	+i	P	276	D	07	21 33 56.8	+i	PKPdf	319	D
27	04 13 35.3	+i	Pn	277	D		21 34 07.9	+i	PKiKP		
27	04 26 40	e	Pn	278			21 36 24.5	+i	PP		
27	05 29 33	e	P	279			21 37 09.1	-i	SKPbc		
27	13 43 09	e	P	280		08	03 29 16.1	+i	Pn	320	D
27	16 06 36	e	P	281		08	06 02 31.3	-i	PKPdf	321	D
27	16 59 36	e	P	282		08	07 01 12	e	PKPdf	322	
27	21 24 03	e	P	283		08	07 17 50	e	?		
28	03 56 33	e	?			08	07 25 41	e	P	323	
28	11 42 18	e	P	284		08	11 52 00	e	P	324	
28	14 33 47	e	PKPdf	285		08	15 40 01	e	?		D
29	01 35 53.7	+i	P	286	D	08	17 35 24	e	PKPdf	325	
29	08 04 57	e	PKPdf	287	D	08	23 15 03	e	?		
	08 05 07	e	pPKPdf			09	00 02 19.0	+i	P	326	D
	08 05 26.7	-i	PKPab			09	03 17 26	e	P	327	
	08 05 46.7	-i	pPKPab			09	11 09 08	e	?		
	08 09 05	e	PP			09	11 14 01	e	P	328	
29	08 15 26	e	?			09	13 56 24.8	+i	P	329	D
29	12 36 47.7	-i	P	288	D	09	16 15 35	e	PKPdf	330	
29	23 21 16	e	?			09	23 51 36.9	-i	P	331	D
30	12 32 01	e	Pn	289		10	02 47 10	e	?		D
JUL 01	06 17 41	e	?			10	04 55 22	e	?		
01	09 23 45	e	P	290		10	11 44 15	e	?		D
01	09 26 59	e	P	291		10	13 48 16	e	?		
02	00 01 48	e	Pn	292		11	02 43 35	e	?		
02	01 25 34.9	+i	P	293	D	11	04 41 12	e	?		
	01 26 08.1	-i	pP			11	22 05 25	e	PKPdf	332	
02	17 56 40	e	P	294		12	15 52 52	e	P	333	
03	00 12 29	e	PKPdf	295		12	15 59 38.6	-i	P	334	D
	00 12 39	e	PKiKP			12	16 14 24	e	?		

Date (1995)	Onset h	Time m	s		Phase	No.		Date (1995)	Onset h	Time m	s		Phase	No.	
JUL 12	19	08	09	e	?			JUL 26	17	14	04	e	P	371	
12	19	12	04	e	?			27	00	00	19	e	PKiKP	372	
13	00	13	01.6	-i	P	335	D	27	06	03	15.1	+i	P	373	D
13	15	10	14	e	?			27	06	07	31.0	+i	P	374	D
14	06	53	51	e	P	336		27	12	34	31.8	-i	P	375	D
14	09	30	01.3	+i	?		D	27	21	10	17	e	Pn	376	D
14	17	11	49	e	PKPdf	337		28	14	41	52.3	+i	P	377	D
14	19	27	01	e	PKPab?	338			14	59	37	e	PKiKP		
14	22	21	09.0	-i	P	339	D	28	20	44	06.5	-i	P	378	D
14	23	24	02	e	P	340		29	08	49	36	e	P	379	D
15	01	47	31.8	+i	P	341	D	29	12	40	28	e	P	380	
15	13	02	33	e	PKPdf	342		29	16	37	02	e	?		
15	14	05	02.2	-i	P	343	D	29	16	37	15	e	PKPdf	381	
16	06	55	19	e	?				16	37	21	e	PKiKP		
16	11	54	29.8	+i	Pn	344	D		16	40	02.9	+i	SKPbc		D
16	14	19	11	e	P	345		29	18	43	23	e	P	382	
16	23	59	45	e	P	346		30	05	21	18.5	+i	P	383	
17	03	36	56	e	P	347		30	05	35	06	e	P	384	
17	09	01	26	e	?			30	05	57	00	e	P	385	
17	11	15	26.0	+i	Pn	348	D	30	06	49	21	e	P	386	
18	14	13	46	e	P	349		30	07	24	21	e	P	387	
18	22	20	36	e	PKPdf	350	D	30	07	44	15	e	P	388	
	22	20	43.2	-i	PKPbc			30	08	27	12	e	P	389	
19	00	36	59	e	P	351		30	09	44	31	e	P	390	
19	00	38	18	e	P	352		30	10	45	33	e	P	391	
19	01	04	56	e	P	353		30	11	06	11	e	P	392	
19	06	27	41	e	?			30	12	10	27	e	PKPdf	393	
19	06	39	12	e	?			30	12	37	27	e	P	394	
19	06	39	38	e	?			30	12	53	16.5	-i	P	395	D
19	13	25	08	e	?			30	13	01	29.4	+i	P	396	D
19	13	26	11	e	?			30	13	09	16.1	+i	P	397	D
19	21	14	46	e	PKiKP	354		30	14	54	42	e	P	398	
20	04	22	52	e	?		D	30	16	29	12.1	+i	P	399	D
20	04	49	02	e	?			30	18	12	39.2	+i	P	400	D
20	05	19	13	e	P	355		30	21	15	48.6	+i	P	401	D
20	11	01	40.7	-i	Pn	356	D	30	22	37	53	e	P	402	
	11	10	23	e	ScP			31	00	24	40.0	+i	P	403	D
20	11	26	09	e	P	357		31	07	16	55	e	P	404	
22	04	02	23	e	?			31	08	30	12	e	P	405	
22	13	42	19	e	P	358		31	08	59	59.3	-i	P	406	D
22	22	40	57	e	P	359		31	10	06	34	e	P	407	
23	00	39	00	e	?			AUG 01	02	30	50	e	PKPab	408	
23	00	39	25	e	?				02	31	05	e	sPKPab		
23	00	49	49	e	?			01	03	30	57	e	P	409	
23	01	28	06	e	?			01	04	38	48	e	P	410	
23	18	11	10	e	P	360			04	39	40	e	PcP		
24	04	15	53	e	P	361		01	05	20	46	e	P	411	
24	06	06	57	e	Pdiff	362		01	06	10	31	e	P	412	
24	10	39	03	e	PKPdf	363		01	12	47	15	e	P	413	
24	15	46	19	e	?				12	47	22	e	pP		
24	18	47	19	e	P	364			12	48	06	e	PcP		
25	13	57	18	e	PKPdf	365		01	13	38	42	e	P	414	
25	15	26	00.3	-i	P	366	D		13	38	49	e	pP?		
25	22	59	13.6	+i	PKPdf	367	D	01	15	54	24	e	P	415	
25	23	59	56.6	+i	P	368	D		15	55	11	e	PcP?		
26	01	49	43.0	+i	P	369	D	02	00	24	09.8	+i	P	416	D
26	09	22	37.3	-i	P	370	D		00	24	59	e	PcP		
	09	23	33	e	pP			02	02	14	38	e	?		
26	14	23	50	e	?				02	14	49	e	?		

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AUG 02	05	32	22	e	P	417		AUG 07	09	46	01	e	?		
02	11	15	37	e	P	418	D		09	46	23	e	?		
02	16	37	30.6	+i	P	419	D	07	20	03	36	e	PKiKP?	453	
	16	37	37	e	pP			07	21	04	33	e	?		
	16	38	19	e	PcP			07	21	49	38	e	P	454	
02	18	49	38	e	P	420		08	04	41	50	e	Pn	455	
02	20	30	14	e	P	421		08	04	59	05	e	?		
	20	31	01	e	PcP				04	59	46	e	?		
02	21	51	26	e	P	422		08	07	28	03	e	P	456	
03	01	36	33	e	PKPdf	423			07	28	23	e	sP?		
	01	36	42	e	pPKPbc			08	15	46	26	e	P	457	
	01	36	49	e	pPKPab			08	16	42	53	e	P	458	
03	02	07	20.9	+i	P	424	D	09	07	28	58.0	+i	P	459	D
03	02	42	41	e	P	425		09	07	30	27.4	+i	P	460	
03	04	53	05	e	P	426			07	30	37.1	-i	pP		
03	07	29	15	e	?			09	08	32	59.3	i	P	461	D
	07	29	24	e	?				08	33	09.5	i	pP		
03	08	28	09.1	+i	P	427	D	10	00	51	31.8	-i	P	462	D
	08	28	32.9	i	pP			10	06	09	11	e	?		
	08	29	13.4	i	PcP			10	11	58	43	e	P	463	
03	12	10	29	e	P	428		10	12	58	28	e	P	464	
03	13	58	20	e	P	429		10	18	20	33.9	+i	P	465	D
03	14	29	06	e	P	430		11	09	32	02.9	-i	P	466	D
03	14	49	08	e	P	431		11	10	24	16.4	-i	P	467	D
03	19	17	40	e	P	432			10	25	06.6	i	PcP		
03	19	31	38	e	?			11	14	00	12	e	P	468	
	19	31	47	e	?			12	03	52	25	e	P?	469	
	19	32	03	e	?			14	08	25	13	e	Pn	470	
03	20	00	32	e	P	433		16	01	34	21.5	-i	P	471	D
04	06	50	23	e	P	434			01	34	23.5	-i	PcP		
	06	50	32	e	?				01	36	27	e	?		
04	10	44	16	e	P	435		16	01	44	16	e	?		
04	11	38	44	e	P	436		16	03	45	07	e	P	472	
04	13	50	47	e	PKPdf	437		16	04	02	56	e	P	473	
04	15	01	18.2	+i	PKPab?	438	D	16	08	28	07	e	P	474	
05	00	42	46	e	P	439		16	09	07	37.9	+i	Pn	475	D
05	02	00	13	e	P	440		16	10	41	25.3	-i	Pdiff?	476	D
	02	00	22	e	pP			16	11	34	47.2	+i	P	477	D
05	08	31	05	e	P	441			11	35	35	e	SP		
	08	31	13	e	?				11	38	19.8	+i	PP		
05	09	22	12	e	P	442		16	13	39	09	e	PKiKP	478	
05	11	51	05	e	PKPdf	443		16	15	15	09.5	-i	P	479	D
	11	51	15	e	pPKPdf				15	15	17.8	i	PcP		
05	14	00	44	e	P	444			15	16	44.5	i	pP		
05	19	56	00.1	-i	P	445	D		15	18	09.2	i	PP		
	19	56	09.7	i	pP				15	24	22.7	-i	S?		
05	22	50	44.6	+i	P	446	D		15	24	34.7	+i	SKS		
	22	51	10	e	?			16	15	42	48	e	Pdiff	480	
06	04	01	29	e	P	447		16	16	38	25	e	Pdiff	481	D
	04	01	49	e	?				16	38	34	e	pPdiff		
06	04	37	31	e	?				16	42	41	e	PP		
06	09	20	34	e	PKPdf	448		16	17	39	13	e	PKPdf	482	
06	12	19	19.5	+i	PKPdf	449	D	16	21	18	07.7	+i	PKPdf	483	D
	12	19	27.7	i	PKiKP				21	18	24	e	SPKiKP		
06	19	28	17	e	P	450		16	21	41	50	e	PKiKP	484	
06	22	48	31	e	P	451		16	23	24	18.9	+i	Pdiff	485	D
07	05	36	29.5	+i	P	452	D		23	24	37	e	pPdiff		
	05	44	12	e	PKiKP?				23	28	33	e	PP		
07	09	28	49	e	?				23	28	49	e	pPKiKP		

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AUG 16	23	44	31	e	P	486		AUG 23	07	59	33	e	P?	513	
17	00	11	08	e	?			23	08	15	33.4	-i	PKPdf	514	D
17	00	29	48.9	+i	Pdiff	487	D	23	13	23	27.7	+i	P	515	D
	00	30	00.4	i	pP				13	23	31.5	i	pP		
	00	30	05.9	i	sP			23	13	32	03	e	?		
17	00	34	02	e	?			23	13	34	53	e	?		
17	01	19	10.8	+i	PKPdf	488	D	23	23	15	39.1	+i	?		D
17	05	48	18.4	-i	P	489	D	24	02	13	29.3	+i	PKPdf	516	D
	05	48	28	e	pP				02	15	49	e	pPKPdf		
17	09	15	58	e	?		D		02	18	23	e	?		
17	10	19	51	e	PKiKP	490		24	02	23	08	e	?		
17	12	22	44	e	P	491	D	24	02	26	47	e	?		
	12	22	53	e	pP			24	06	46	49	e	PKPdf	517	
	12	22	59	e	sP				06	48	48	e	PP?		
17	14	43	28.4	-i	P	492	D		06	49	07	e	pPKPdf		
17	16	04	29	e	sPKPbc	493		24	08	12	37	e	PKPdf	518	
	16	04	41	e	sPKPab				08	14	55	e	pPKPdf		
17	19	04	32	e	P	494		24	08	13	21	e	PKPdf	519	
17	20	40	20	e	?				08	15	38	e	pPKPdf		
17	23	32	42.4	-i	PKPdf	495	D	24	09	29	54	e	?		
	23	33	43.8	+i	pPKPKd			25	14	37	23.0	+i	P	520	
18	02	16	02	e	PKPdf	496			14	39	22	e	pP		
18	02	20	30.1	+i	Pn	497	D	25	16	06	35	e	Pn	521	
	02	20	40.8	i	PnPn			25	16	22	15	e	?		
18	02	24	40.1	-i	Pn	498		25	17	04	23.6	+i	P	522	
	02	25	19.9	i	?				17	04	33	e	?		
	02	38	35	e	?				17	05	23	e	pP		
18	06	46	47	e	P	499		26	00	18	34	e	P	523	
18	09	38	07	e	PKPdf	500		26	17	08	17	e	?		
	09	38	52	e	?			26	17	30	16	e	P	524	
18	10	17	02	e	?			26	22	38	25	e	?		
18	15	39	24	e	?			27	00	42	40.6	-i	P	525	
18	19	25	32	e	PKPdf	501		27	03	17	28	e	?		
18	19	54	52	e	P	502		27	07	00	22	e	?		
18	19	57	51.9	-i	P	503	D	27	17	57	07	e	P	526	
19	18	36	02	e	P	504			17	57	11	e	pP		
19	21	42	15	e	Pdiff	505			17	58	12	e	PP		
	21	46	37	e	PKiKP			28	02	07	49	e	P	527	
19	21	56	06.4	-i	P	506	D	28	11	06	16	e	?		
	21	56	07.3	i	PcP				11	06	24	e	?		
	21	56	20.9	i	?			29	00	26	52	e	P	528	
	21	56	38.4	i	pP			29	00	51	40	e	P	529	
	21	56	52.8	i	sP				00	51	55	e	?		
	21	59	31	e	PP			29	07	34	51.2	+i	P	530	D
20	01	32	30	e	P	507			07	34	58.0	i	?		
20	03	19	05	e	P	508			07	36	09.4	i	PcP		
21	13	33	30.5	+i	Pn	509	D		07	36	51.0	i	PP		
	13	34	20.0	i	?			29	07	48	11	e	?		
21	17	58	02	e	?			29	09	04	21	e	P	531	
21	18	23	25	e	P	510			09	04	35	e	?		
22	22	24	06.5	-i	P	511		29	19	21	41	e	?		
	22	24	20	e	pP			29	20	25	57	e	P	532	
	22	24	29	e	sP			29	23	00	08	e	Pn	533	D
23	07	23	19	e	?		D		23	02	22	e	?		
23	07	23	44	e	?			30	00	58	17	e	?		D
23	07	23	57.0	-i	PKPdf	512		30	23	17	05	e	P	534	
	07	25	49.3	i	pPKPdf			31	04	27	40	e	P	535	
	07	33	37	e	PKKP?			31	05	07	19	e	?		
	07	37	31	e	?			31	05	17	40	e	?		

Date (1995)	Onset Time h	m	s		Phase	No.		Date (1995)	Onset Time h	m	s		Phase	No.	
AUG 31	10	49	00	e	P	536		SEP 11	04	00	48	e	?		
31	13	45	23	e	P	537		11	04	36	05	e	P	567	
31	17	23	51.9	+i	P	538	D	12	08	50	41	e	P	568	
	17	24	31.6	i	?				08	52	04	e	?		
31	19	35	43	e	?			12	12	56	25.7	+i	P	569	D
31	20	52	32	e	P	539		12	14	35	19.1	+i	P	570	D
31	22	01	21	e	Pn	540	D		14	35	23	e	?		
	22	01	28.7	+i	?				14	37	26	e	pP		
SEP 01	05	29	03.7	-i	P	541	D	12	20	15	25	e	P	571	
	05	29	24	e	PcP			12	23	04	15	e	P	572	
	05	29	31	e	pP			13	04	20	49	e	P?	573	
01	06	44	18	e	Pdiff	542		13	05	46	44	e	?		
	06	48	37	e	PKiKP			13	09	47	24	e	?		
01	18	38	42	e	P	543		13	18	04	36	e	?		
02	13	26	19	e	?			13	19	01	17	e	?		
02	18	55	51	e	?			14	00	06	55	e	?		
03	01	35	10	e	?			14	05	21	39	e	?		
03	01	59	53	e	?			14	12	36	45.4	-i	P	574	D
03	07	42	20	e	P	544			12	38	20	e	?		
03	16	18	36	e	P	545			12	38	45	e	pP		
04	04	32	57.0	+i	P	546	D	14	14	22	50	e	PKiKP	575	
04	07	33	53.6	-i	P	547	D	14	14	34	20	e	?		
04	17	24	21	e	?			14	19	52	47	e	?		
05	01	18	35	e	P	548		14	22	11	18	e	?		
05	01	49	31	e	?			15	04	59	08	e	P	576	
05	13	15	52	e	?			15	16	06	11	e	P	577	
05	13	16	12	e	P	549		15	19	29	40	e	?		
05	19	21	24	e	PKPab	550		15	21	13	01	e	P	578	
06	15	42	18	e	?			16	00	11	34	e	PKPdf	579	D
06	22	20	05	e	P	551			00	11	39.2	+i	PKPbc		
07	13	04	48	e	P	552			00	11	44	e	PKPab		
07	13	36	19.3	-i	PKPdf	553	D		00	12	08.6	-i	pPKPdf		
	13	36	24	e	PKiKP			16	01	17	16	e	Pdiff	580	
07	13	52	05.2	+i	P	554	D		01	18	00	e	pPdiff		
	13	52	10	e	?				01	21	36	e	PKiKP		
	13	52	16	e	pP			16	03	52	37	e	P	581	D
07	15	19	52	e	?				03	52	40.1	-i	?		
08	00	36	07.9	-i	P	555	D		03	52	49	e	?		
	00	36	10	e	pP				03	53	05	e	?		
	00	37	55	e	PcP			16	19	36	35	e	?		
08	01	23	48.5	+i	P	556	D	16	22	33	51	e	?		
08	16	15	38	e	P	557		17	02	13	34	e	PKPdf	582	
08	22	52	22	e	PKPdf	558		17	03	38	11	e	?		
09	00	41	50	e	P	559		17	07	34	15.3	-i	P	583	D
09	05	30	03	e	?				07	34	24	e	pP		
09	12	28	50	e	?				07	35	38	e	PcP		
09	13	42	31.4	+i	P	560	D	17	17	20	28.0	+i	P	584	
09	17	49	35.4	+i	P	561	D	18	20	34	02	e	P	585	
09	20	02	38	e	P	562			20	36	12	e	pP		
09	21	08	50.3	+i	P	563	D	18	23	12	28.9	-i	?		
	21	09	11	e	pP			19	01	45	21	e	PKPdf	586	
	21	09	22	e	PcP			19	03	41	52	e	P	587	
	21	09	44	e	?				03	42	20	e	pP		
09	21	38	30	e	?				03	42	33	e	PcP		
09	22	26	02	e	P	564		19	03	55	19	e	P	588	
10	02	54	01	e	P	565		19	04	11	18	e	?		
10	04	26	25	e	P	566		19	07	37	32.5	+i	P	589	
10	07	38	20	e	?			19	15	28	46	e	?		
	07	38	48	e	?			19	15	53	48	e	Pdiff	590	

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SEP 19	21	25	27.9	+i	PKPdf	591		SEP 27	08	33	25	e	P	622	
	21	25	49	e	pPKPdf				27	21	42	28	e	?	
	19	23	03	12.3	-i	P	592	D		28	21	22	14	e	?		D
		23	03	23	e	?				29	00	31	38	e	?		
		23	03	59	e	pP				29	04	03	05	e	?		
		23	04	26	e	sP				29	04	22	09	e	P	623	
	20	00	40	55	e	P	593			29	13	33	09.4	-i	Pn	624	D
	20	07	02	22	e	P	594			29	13	42	35	e	P	625	
	20	11	31	07	e	PKPdf	595			30	11	07	51	e	PKPdf	626	
	20	14	45	43	e	P	596		OCT	01	12	59	18.8	+i	P	627	D
		14	47	16	e	?					12	59	34	e	pP		
		14	47	54	e	?					13	00	27	e	PcP		
	20	15	55	07	e	?				01	16	16	33.4	-i	?		D
	20	22	30	02.3	+i	P	597	D			16	16	41	e	?		
	20	23	58	09	e	P	598				16	17	15	e	?		
	21	04	45	30	e	P	599			01	16	50	41	e	P	628	
	21	05	30	30.3	-i	P	600			01	17	24	32	e	PKPdf	629	
	21	07	42	54	e	?		D		01	17	27	19.8	-i	?		D
	21	08	28	17	e	P	601			01	17	57	07.0	-i	Pn	630	D
	22	01	46	11	e	P	602			01	18	24	11	e	P	631	
	22	05	53	18	e	Pdiff	603			01	18	39	04	e	P	632	
		05	57	29	e	PP				01	21	47	35	e	P	633	
		05	57	35	e	PKiKP?				01	23	42	17	e	P	634	D
	22	09	03	27.4	+i	P	604	D			23	45	36	e	PP		
		09	03	30	e	pP				02	04	47	18	e	?		
		09	03	43	e	PcP				03	00	01	41	e	P	635	
	23	01	58	40	e	P	605			03	01	13	40	e	P	636	
	23	02	48	04	e	Pdiff	606			03	02	03	36.7	-i	P	637	D
		02	52	19	e	PP					02	03	41	e	PcP		
		02	52	25	e	PKiKP?					02	03	48	e	pP		
	23	05	11	43	e	?				03	02	09	15	e	P	638	
	23	11	01	21	e	?				03	02	46	05	e	P	639	
	23	16	18	55.7	-i	P	607	D		03	02	59	56	e	P	640	
		16	22	35	e	PP				03	05	32	37	e	P	641	
	23	21	07	52.7	+i	P	608	D		03	06	29	59	e	?		
		21	07	56	e	pP				03	06	39	39	e	P	642	
		21	08	03	e	PcP				03	06	44	00	e	P	643	
	23	22	43	23.2	+i	P	609	D		03	11	52	27	e	P	644	
		22	43	43	e	pP					11	52	37	e	pP		
	24	01	29	19	e	P	610			03	12	57	10.8	-i	P	645	D
	24	06	25	48	e	P?	611			03	14	41	39	e	P	646	
	24	08	59	21	e	?				03	16	17	29.4	-i	P	647	D
	24	14	08	44	e	P	612				16	17	38	e	pP		
	25	01	23	03	e	P	613			03	17	13	13	e	P	648	
	25	09	27	11	e	Pdiff	614			03	18	51	25	e	P	649	
	25	17	16	27	e	P	615	D		03	23	14	19	e	?		
		17	16	29.5	+i	pP				04	02	05	31	e	P	650	
	26	02	03	00	e	P	616			04	04	12	49	e	?		
	26	06	47	37	e	P	617			04	08	50	23	e	P	651	
		06	47	42.9	-i	?				04	09	37	12	e	PKPdf	652	
	26	07	34	16	e	P	618	D		06	11	52	09.9	-i	P	653	
		07	34	19	e	PKPbc				07	10	27	16	e	?		
		07	34	31	e	pPKPab				07	11	00	07	e	?		
	26	18	37	20.3	+i	P	619	D		07	11	01	56	e	?		
		18	38	09	e	pP				07	11	04	04	e	?		
	26	22	44	46.8	+i	P	620	D		07	11	31	47	e	?		
		22	44	50	e	PcP				07	18	26	07	e	?		
	27	00	59	50	e	?		D		07	21	40	16.8	-i	P	654	D
	27	02	18	33.7	+i	P	621	D			21	40	22	e	PcP		

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OCT 08	00	02	49	e	PKPdf	655		OCT 19	00	51	16.9	-i	PKPdf	685	D
08	09	14	45.5	+i	PKPdf	656	D	19	03	00	49.8	-i	PKPdf	686	D
	09	14	53	e	pPKPdf			19	09	25	52	e	P	687	
08	10	39	51	e	P	657		19	10	27	47.4	+i	?		D
09	07	59	40	e	P	658	D	19	10	43	49	e	?		
09	09	10	28	e	P	659		19	11	10	23	e	PKPdf	688	
09	09	56	43.5	-i	P	660	D	19	12	48	04	e	?		
	09	56	53	e	pP			19	13	03	24	e	?		
	09	57	55	e	PcP			19	21	40	03	e	?		
	09	58	43	e	PP				21	41	21	e	?		
09	13	56	19.4	-i	P	661	D		21	43	04	e	?		
	13	56	48	e	pP			20	01	10	24.7	-i	Pn	689	D
09	14	06	51	e	?			20	01	26	25	e	?		
09	15	50	29	e	Pdiff	662		20	04	33	09	e	PKPdf	690	
	15	54	11	e	PKiKP			20	05	35	07	e	PKPdf	691	
09	16	32	21	e	P	663		20	06	40	07	e	?		
10	00	55	39	e	P	664		20	08	08	11.9	+i	PKPdf	692	D
10	02	36	12	e	PKPdf	665			08	09	12	e	?		
10	05	55	30	e	?				08	10	13	e	pPKPdf		
10	17	41	53	e	P	666			08	11	00	e	sPKP?		
11	04	39	48.0	+i	Pn	667	D	20	10	21	11.7	+i	?		D
	04	42	07	e	?				10	23	32	e	?		
11	04	53	10	e	?			20	11	16	19	e	?		
11	10	10	19	e	?			20	15	53	52	e	?		
12	02	45	05	e	P	668		20	16	54	03	e	?		D
12	05	22	17.8	-i	Pn	669	D	20	19	40	09	e	PKPdf	693	
12	13	48	55	e	?				19	41	28	e	?		
12	15	37	44	e	?			21	00	43	25.7	-i	P	694	D
12	15	48	58	e	P	670		21	01	56	12.9	+i	P	695	D
12	23	07	09.6	-i	P	671	D		01	56	53	e	pP		
	23	07	19	e	pP				01	57	12	e	PcP		
	23	07	56	e	PcP			21	02	52	43	e	Pdiff	696	
12	23	51	51.4	+i	P	672	D		02	57	03	e	PKiKP?		
	23	51	54	e	pP				03	08	53	e	PKKPdf		
	23	54	05	e	PP			21	11	38	57	e	?		
13	01	42	20	e	?			21	16	17	47	e	P	697	
13	15	31	22.9	+i	P	673	D	21	19	11	02	e	PKiKP	698	
	15	31	31	e	pP			22	06	13	12	e	?		
14	08	13	02	e	P	674	D	22	09	38	15.5	+i	P	699	D
	08	23	14	e	?				09	38	21	e	PcP		
14	08	31	17	e	?				09	38	26	e	pP		
14	08	39	27	e	?			22	10	34	12	e	?		
14	21	03	07	e	PKiKP	675		22	20	07	44.1	+i	P	700	D
15	06	43	54	e	P	676			20	07	58	e	pP		
16	11	03	41	e	?			22	21	52	23	e	PKPdf	701	
16	16	46	18.5	-i	P	677	D	23	00	54	22	e	P	702	
	16	46	26	e	pP			23	02	20	38	e	?		
	16	47	02	e	PcP			23	04	11	09.4	-i	P	703	D
16	16	54	19.5	-i	P	678		23	11	44	33.3	+i	P	704	D
	16	54	26	e	pP			23	19	45	24	e	?		
18	03	19	14	e	?			23	23	05	44	e	PKPdf	705	
18	09	49	03.1	+i	PKPdf	679	D		23	05	53	e	pPKPdf		
	09	49	38	e	?			24	09	14	07	e	?		
	09	50	01	e	pPKPdf			24	09	29	26	e	Pn	706	
18	10	56	21	e	PKPdf	680	D		09	29	44	e	?		
18	11	20	54	e	PKPdf	681		24	10	45	25	e	P	707	
18	14	00	00	e	PKPdf	682		24	13	12	00	e	?		
18	23	02	15	e	PKPdf	683		24	19	16	07.7	-i	P	708	D
18	23	45	10	e	PKPdf	684		24	22	51	31.8	-i	?		D

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OCT 24	23	13	13	e	?			NOV 02	17	30	22	e	P	740	
24	23	48	54.3	-i	P	709	D	02	18	31	31.1	+i	P	741	D
25	05	34	50	e	P	710			18	33	16	e	?		
25	14	03	33	e	?			03	08	49	54.8	-i	?		D
25	22	14	36	e	P	711		05	16	43	22.9	+i	P?	742	D
26	00	35	09	e	P	712		06	04	35	51	e	P	743	D
26	06	53	02	e	Pn	713		07	04	16	38	e	P	744	
26	07	10	23	e	?				04	16	44	e	PcP		
26	13	56	12	e	P	714		07	13	29	00	e	P	745	D
26	14	41	40.8	+i	P	715	D	07	14	08	07.8	+i	P	746	D
26	15	29	21	e	?				14	08	10	e	PcP		
26	23	33	35	e	?				14	08	18	e	pP		
27	00	07	36	e	P	716			14	08	31	e	?		
	00	09	39	e	pP			07	18	08	02	e	?		
27	08	53	24	e	?			08	07	27	43	e	P	747	
27	09	04	41	e	P	717			07	31	38	e	PP		
27	09	10	27	e	P	718			07	32	28	e	PKiKP		
27	09	11	28	e	P	719		08	08	32	18	e	P	748	D
27	22	12	18	e	P	720		08	16	19	34	e	PKiKP	749	
28	06	22	09	e	P	721		08	22	05	36	e	?		
28	07	37	01	e	?			09	07	44	43	e	?		
28	14	52	27	e	Pdiff	722		13	02	36	15	e	PKiKP	750	
	14	56	29	e	PP				02	36	54	e	?		
	14	56	47	e	PKiKP				02	37	32	e	?		
28	18	15	24	e	P	723		13	02	47	32	e	?		
	18	16	18	e	PcP				02	47	47	e	?		
	18	17	30	e	PP				02	48	02	e	?		
28	18	47	33	e	P	724	D	13	02	51	57	e	?		
28	19	33	15	e	P	725		13	07	52	03	e	P	751	D
29	05	41	04	e	P	726			07	52	12	e	pP		
29	06	46	03	e	PKPdf	727		13	08	07	56	e	P	752	
29	19	13	56	e	PKiKP	728			08	08	05	e	pP		
29	19	38	30	e	Pdiff	729		13	09	03	00.6	-i	PKPdf	753	D
	19	42	45	e	PKiKP				09	03	07	e	PKPbc		
29	19	52	42.7	-i	P	730	D		09	03	15	e	pPKPbc		
	19	54	57	e	pP				09	06	12	e	SPKPdf		
	19	55	53	e	PP?				09	06	41	e	PP		
	20	02	05	e	?				09	07	17	e	?		
31	02	05	27.2	+i	P	731	D	13	12	49	38.4	-i	P	754	D
NOV 01	00	44	57.2	+i	P	732	D		12	49	47	e	pP		
	00	45	05	e	?			13	22	11	46.6	+i	P	755	D
01	01	15	00	e	?			14	04	15	38	e	Pdiff	756	
01	01	21	33.0	+i	P	733	D	15	10	01	15	e	P	757	
	01	21	41	e	pP			15	10	38	30	e	Pdiff	758	
	01	22	37	e	PcP				10	42	46	e	PKiKP		
	01	23	42	e	PP			18	22	28	34	e	Pn	759	D
01	08	55	52	e	P	734			22	30	56	e	?		
01	09	15	07	e	?			19	12	56	14.0	-i	P	760	D
01	09	54	38	e	P	735			13	00	42	e	PKiKP		
01	09	55	09	e	PKPdf	736			13	02	53	e	pPKiKP		
01	09	58	31	e	?			19	16	09	41	e	?		
01	12	48	35	e	PKPdf	737		19	22	25	37	e	?		
01	14	57	25	e	?			19	22	56	42	e	PKPab	761	
01	17	16	37.2	+i	?		D	20	01	05	15	e	P	762	D
01	17	30	47	e	?				01	05	30	e	sP		
01	19	27	30	e	?				01	05	46	e	?		
02	05	50	36	e	P	738		20	02	01	28	e	Pn	763	
	05	52	01	e	?			20	03	10	59	e	?		
02	16	26	45	e	PKiKP	739		20	15	51	24.9	-i	Pn	764	D

Date (1995)	Onset Time h	m	s		Phase	No.		Date (1995)	Onset Time h	m	s		Phase	No.	
NOV	15	51	40	e	?			DEC 03	20	01	31	e	PKPdf	784	
	15	53	27	e	?			03	20	14	11	e	PKPdf	785	D
20	16	03	02	e	?			03	20	27	11.8	+i	PKPdf	786	
21	18	26	01	e	P	765		03	20	57	41	e	PKPdf	787	D
	18	27	20	e	PcP			03	21	03	14.0	+i	PKPdf	788	
21	19	22	27	e	P	766		03	21	16	27	e	PKPdf	789	
21	22	37	35	e	?			03	21	32	53.7	+i	P	790	
22	01	02	27	e	P	767		03	21	58	30	e	PKPdf	791	
22	04	32	54	e	?			03	22	41	31	e	PKPdf	792	
	04	33	34	e	?			04	03	59	22	e	?		
	04	33	50	e	?			04	15	50	23	e	P	793	
22	12	24	34	e	?			06	00	59	13.7	+i	Pn	794	D
23	05	01	23	e	PKPdf	768		06	23	37	13.4	+i	PKPdf	795	D
23	11	21	49	e	PKPdf	769		07	00	33	41	e	?		
23	14	32	50	e	PKPdf	770		07	03	04	06.0	+i	PKPdf	796	
24	06	29	52	e	P	771	D	10	22	43	06.6	+i	PKPdf	797	
	06	29	56	e	pP			10	23	08	00	e	PKPdf	798	
	06	30	23	e	PcP			10	23	59	05.4	+i	P	799	D
28	19	02	18	e	?			11	00	08	55	e	?		
28	19	15	03	e	?			11	18	05	42.7	-i	P	800	
29	18	53	06.8	+i	P	772	D	12	10	24	39	e	P	801	
	18	53	11	e	?			14	06	43	54	e	P	802	
	18	54	33	e	pP			19	23	42	06.3	+i	Pdiff	803	D
29	23	44	57.6	-i	P	773		21	16	13	52	e	?		
30	13	25	07.4	+i	P	774	D	22	13	49	15	e	P	804	
	13	25	16	e	pP			22	16	42	40	e	?		
30	15	28	51.6	-i	PKPdf	775	D	22	23	04	40.2	+i	P	805	D
	15	28	58	e	PKiKP				23	05	09	e	?		
	15	29	35	e	pPKiKP			24	14	15	49	e	Pn	806	
	15	32	36	e	PP			25	03	18	47	e	P	807	
30	18	12	31.2	-i	P	776		25	04	56	43.7	-i	P	808	D
	18	12	42	e	pP			26	12	32	19	e	P	809	
30	23	57	29	e	PKPdf	777	D	26	12	38	39	e	P	810	
	00	01	13	e	PP			26	15	26	11	e	?		
DEC 02	17	33	12.6	-i	PKPdf	778	D	27	15	24	54.2	-i	Pn	811	D
03	18	20	57.4	+i	PKPdf	779	D	27	22	37	05	e	?		
03	18	30	38.0	-i	pPKPdf	780		29	13	14	40	e	P	812	
03	18	34	22	e	PKPdf	781		30	12	09	45.9	-i	?		
03	19	25	31.7	-i	?			30	12	37	16	e	PKPdf	813	
03	19	44	12	e	PKPdf	782		31	10	14	29.1	-i	Pn	814	D
03	19	51	14.6	-i	PKPdf	783	D	31	15	09	10.3	-i	P	815	

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude		Longitude		Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
1	JAN 01	20	39	40.3	23.767	S	179.891	E	SOUTH OF FIJI ISLANDS	551	4.8	85.533	187.470
2	02	20	58	17.4	40.553	N	143.466	E	OFF EAST COAST OF HONSHU, JAPAN	27	5.1	146.604	139.264
3	03	02	54	57.0	56.206	S	27.285	W	SOUTH SANDWICH ISLANDS REGION	130	5.5	16.642	320.581
4	03	05	35	57.3	33.324	S	179.821	E	SOUTH OF KERMADEC ISLANDS	33	4.9	76.007	186.950
5	03	06	49	20.1	19.634	S	178.106	W	FIJI ISLANDS REGION	601	5.3	89.552	189.545
6	03	16	11	57.1	57.699	S	65.883	W	DRAKE PASSAGE	13	6.2	26.914	268.701
7	04	06	28	39.1	56.060	S	123.232	W	EASTER ISLAND CORDILLERA	10	5.0	45.326	225.493
8	04	23	14	42.0	43.251	N	147.449	E	KURIL ISLANDS	49	5.3	150.021	143.253
9	05	09	18	43.2	39.319	N	143.366	E	OFF EAST COAST OF HONSHU, JAPAN	32	5.3	145.399	139.750
10	05	12	07	36.8	39.209	N	143.510	E	OFF EAST COAST OF HONSHU, JAPAN	29	5.2	145.324	139.991
11	05	23	30	07.4	22.033	S	168.902	E	NEW CALEDONIA	29	5.6	87.418	177.369
12	06	15	57	34.7	56.947	S	27.021	W	SOUTH SANDWICH ISLANDS REGION	178	4.4	15.901	320.044
13	06	16	41	30.8	39.115	N	143.511	E	OFF EAST COAST OF HONSHU, JAPAN	18	5.2	145.234	140.038
14	06	18	01	12.8	56.497	S	25.319	W	SOUTH SANDWICH ISLANDS REGION	33	5.2	15.970	323.822
15	06	19	01	51.1	56.627	S	25.724	W	SOUTH SANDWICH ISLANDS REGION	33	5.0	15.929	322.892
16	06	20	41	15.9	56.223	S	24.469	W	SOUTH SANDWICH ISLANDS REGION	33	4.6	16.065	325.771
17	06	22	37	34.3	40.246	N	142.175	E	NEAR EAST COAST OF HONSHU, JAP.	26	6.7	146.027	137.728
18	07	02	13	28.0	1.570	S	78.010	W	ECUADOR	165	5.4	81.939	288.606
19	07	02	36	06.8	40.258	N	142.364	E	NEAR EAST COAST OF HONSHU, JAP.	32	6.3	146.081	137.969
20	08	09	22	18.8	8.496	S	74.307	W	PERU-BRAZIL BORDER REGION	148	5.1	74.223	289.970
21	10	03	31	00.1	52.424	S	27.805	E	SOUTH OF AFRICA	10	4.6	24.403	60.604
22	11	09	47	16.3	22.180	S	179.536	W	SOUTH OF FIJI ISLANDS	594	5.2	87.089	188.075
23	11	10	26	25.4	7.963	S	73.943	W	PERU-BRAZIL BORDER REGION	174	5.3	74.614	290.498
24	12	10	26	47.4	44.061	N	147.033	E	KURIL ISLANDS	34	6.1	150.716	142.216
25	13	03	13	00.0	43.165	N	147.029	E	KURIL ISLANDS	33	5.9	149.855	142.713
26	14	06	49	23.9	27.929	S	178.273	W	KERMADEC ISLANDS REGION	212	5.3	81.299	188.911
27	15	02	40	18.9	27.511	N	128.460	E	RYUKYU ISLANDS	46	5.8	130.513	126.999
28	15	19	04	31.9	34.015	S	70.059	W	CHILE-ARGENTINA BORDER REGION	5	5.2	48.969	284.099
29	15	20	46	58.9	28.712	S	68.849	W	LA RIOJA PROVINCE, ARGENTINA	118	5.1	53.495	287.867
30	16	20	46	52.1	34.583	N	135.018	E	NEAR S. COAST OF SOUTHERN HONSHU	21	6.3	138.934	131.568
31	17	06	41	12.5	61.341	S	53.603	W	SOUTH SHETLAND ISLANDS	10	4.8	20.075	274.563
32	17	16	54	11.8	20.833	S	179.236	W	FIJI ISLANDS REGION	633	5.9	88.417	188.422
33	19	03	00	23.2	43.376	N	146.971	E	KURIL ISLANDS	39	5.5	150.046	142.516
34	19	09	55	33.7	7.395	S	128.260	E	BANDA SEA	159	5.9	96.799	136.660
35	19	15	05	03.4	5.050	N	72.916	W	COLOMBIA	17	6.3	86.648	295.516

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
36	JAN 20	03	35	46.0	43.333 N	146.800 E	KURIL ISLANDS	57	5.8	149.970	142.301
37	20	13	59	20.3	5.178 N	72.921 W	COLOMBIA	33	5.1	86.771	295.549
38	20	14	19	56.8	31.889 S	178.259 W	KERMADEC ISLANDS REGION	33	5.3	77.352	188.688
39	21	06	56	33.6	40.572 N	143.603 E	OFF EAST COAST OF HONSHU, JAPAN	33	5.4	146.652	139.436
40	21	08	47	29.6	43.377 N	146.720 E	KURIL ISLANDS	58	6.5	149.996	142.165
41	21	09	18	18.0	4.965 N	72.991 W	COLOMBIA	33	5.3	86.590	295.419
42	22	00	20	40.3	20.436 S	177.929 W	FIJI ISLANDS REGION	504	5.1	88.744	189.664
43	22	10	41	27.6	5.093 N	72.965 W	COLOMBIA	21	5.5	86.704	295.482
44	23	10	16	18.5	26.835 S	176.472 W	SOUTH OF FIJI ISLANDS	33	5.4	82.287	190.592
45	24	08	32	05.7	40.931 N	131.491 E	SEA OF JAPAN	533	4.7	143.997	123.970
46	29	22	51	36.7	15.032 S	71.491 W	SOUTHERN PERU	143	4.4	67.166	290.546
47	FEB 05	22	51	05.1	37.759 S	178.752 E	OFF E. COAST OF N. ISLAND, N.Z	21	6.5	71.621	185.837
48	08	18	40	25.4	4.104 N	76.622 W	COLOMBIA	73	6.3	86.879	291.701
49	10	01	45	03.9	37.855 S	178.602 E	OFF E. COAST OF N. ISLAND, N.Z	28	5.8	71.530	185.708
50	10	20	26	58.1	19.942 S	68.761 W	CHILE-BOLIVIA BORDER REGION	118	5.5	61.687	291.517
51	12	01	02	07.2	5.762 S	76.109 W	NORTHERN PERU	22	5.7	77.374	289.103
52	13	00	11	47.1	37.621 S	178.629 E	OFF E. COAST OF N. ISLAND, N.Z	28	5.7	71.763	185.741
53	13	08	43	37.2	1.278 S	127.444 E	HALMAHERA	14	6.2	102.539	134.421
54	18	13	29	06.4	46.702 N	145.875 E	SEA OF OKHOTSK	350	5.6	152.993	138.900
55	MAR 26	02	16	12.6	55.950 S	28.214 W	SOUTH SANDWICH ISLANDS REGION	48	5.9	17.077	319.262
56	30	22	15	52.1	44.842 N	137.536 E	EASTERN SEA OF JAPAN	319	5.4	149.253	128.890
57	31	14	01	40.1	38.212 N	135.012 E	SEA OF JAPAN	354	6.0	142.378	129.778
58	31	16	39	57.3	22.427 S	175.162 W	TONGA ISLANDS REGION	66	5.4	86.589	192.100
59	APR 01	03	49	33.5	37.925 N	139.186 E	HONSHU, JAPAN	10	5.8	143.127	135.081
60	03	01	50	19.4	60.573 S	25.180 W	SOUTH SANDWICH ISLANDS REGION	33	4.3	12.205	317.274
61	03	15	43	46.5	20.123 S	178.770 W	FIJI ISLANDS REGION	622	5.0	89.101	188.895
62	03	23	26	21.6	54.849 S	147.074 E	WEST OF MACQUARIE ISLAND	10	4.6	53.410	162.559
63	06	05	02	16.7	15.417 S	166.230 E	VANUATU ISLANDS	27	5.5	93.953	174.683
64	07	10	02	00.2	56.700 S	26.733 W	SOUTH SANDWICH ISLANDS REGION	90	5.1	16.068	320.920
65	07	22	06	56.9	15.199 S	173.529 W	TONGA ISLANDS	21	6.8	93.652	194.212
66	08	01	02	08.1	15.136 S	173.549 W	TONGA ISLANDS	33	5.0	93.716	194.198
67	08	01	20	08.8	15.213 S	173.421 W	TONGA ISLANDS	37	5.8	93.629	194.315
68	08	14	28	37.8	15.216 S	173.319 W	TONGA ISLANDS	32	5.5	93.618	194.413
69	08	16	35	35.9	15.302 S	173.413 W	TONGA ISLANDS	31	5.2	93.540	194.315
70	08	17	12	54.6	15.351 S	173.359 W	TONGA ISLANDS	33	5.2	93.487	194.363

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
71	APR 08	17	38	37.9	21.612 S	170.083 E	LOYALTY ISLANDS REGION	93	5.6	87.852	178.459
72	08	17	45	12.9	21.833 N	142.691 E	MARIANA ISLANDS REGION	267	6.4	128.296	145.033
73	09	00	52	13.1	56.001 S	122.217 W	EASTER ISLAND CORDILLERA	10	4.1	45.138	226.252
74	09	02	37	02.0	15.176 S	173.635 W	TONGA ISLANDS	27	4.7	93.683	194.112
75	09	14	41	57.5	55.711 S	124.943 W	EASTER ISLAND CORDILLERA	10	4.1	46.046	224.476
76	09	20	38	39.6	55.541 S	124.948 W	EASTER ISLAND CORDILLERA	10	4.3	46.202	224.569
77	10	12	53	18.4	27.212 S	176.500 W	KERMADEC ISLANDS REGION	34	5.2	81.914	190.541
78	11	10	40	06.6	28.039 S	176.749 W	KERMADEC ISLANDS REGION	81	4.6	81.105	190.262
79	11	21	33	06.6	28.299 S	176.684 W	KERMADEC ISLANDS REGION	30	5.2	80.842	190.302
80	12	05	23	04.8	36.400 N	140.551 E	NEAR EAST COAST OF HONSHU, JAP.	56	4.9	141.979	137.511
81	12	18	22	33.0	2.752 N	78.351 W	NEAR WEST COAST OF COLOMBIA	46	5.2	86.136	289.637
82	13	02	34	38.0	13.446 S	170.434 E	VANUATU ISLANDS REGION	637	5.6	95.998	178.724
83	13	05	27	24.9	22.252 S	170.540 E	LOYALTY ISLANDS REGION	16	5.2	87.217	178.888
84	13	23	43	54.1	43.823 N	147.269 E	KURIL ISLANDS	55	5.3	150.535	142.684
85	14	04	31	47.2	15.251 S	70.448 W	SOUTHERN PERU	202	5.2	66.636	291.507
86	14	13	15	17.3	60.774 S	20.074 W	SOUTHWESTERN ATLANTIC OCEAN	10	5.5	10.992	328.271
87	14	14	12	59.8	1.837 S	77.507 W	ECUADOR	164	5.5	81.528	289.005
88	15	05	36	32.6	43.946 N	147.282 E	KURIL ISLANDS	48	5.4	150.656	142.633
89	16	09	00	02.4	20.366 S	177.867 W	FIJI ISLANDS REGION	500	4.3	88.810	189.726
90	17	08	52	20.8	55.663 S	27.425 W	SOUTH SANDWICH ISLANDS REGION	33	5.2	17.175	321.029
91	17	16	48	20.4	20.325 S	178.740 W	FIJI ISLANDS REGION	656	4.5	88.898	188.912
92	17	23	28	06.9	45.928 N	151.283 E	KURIL ISLANDS	23	6.1	153.327	147.305
93	18	05	23	58.7	45.829 N	151.444 E	KURIL ISLANDS	33	5.7	153.260	147.602
94	18	16	23	36.5	54.235 S	136.596 W	SOUTH PACIFIC CORDILLERA	10	5.1	49.936	216.874
95	18	21	11	14.2	55.817 S	144.040 W	SOUTH PACIFIC CORDILLERA	10	4.8	49.814	210.918
96	18	23	25	16.4	60.051 S	19.109 W	SOUTHWESTERN ATLANTIC OCEAN	10	4.4	11.515	331.822
97	19	03	50	04.6	44.046 N	148.144 E	KURIL ISLANDS	26	5.9	150.923	143.796
98	20	08	45	11.7	6.279 N	126.777 E	MINDANAO, PHILIPPINE ISLANDS	94	6.2	109.686	131.852
99	20	20	49	09.1	45.921 N	151.215 E	KURIL ISLANDS	23	5.7	153.308	147.208
100	21	17	58	53.5	52.517 S	27.736 E	SOUTH OF AFRICA	10	4.4	24.301	60.621
101	22	10	31	47.1	51.143 S	161.885 E	NORTH OF MACQUARIE ISLAND	10	4.6	58.149	172.728
102	23	02	55	55.1	51.334 N	179.714 E	RAT ISLANDS, ALEUTIAN ISLANDS	16	6.2	160.305	194.845
103	23	04	46	06.3	16.384 S	177.940 E	FIJI ISLANDS	33	4.7	92.967	185.946
104	23	17	14	15.0	58.767 S	25.200 W	SOUTH SANDWICH ISLANDS REGION	33	4.4	13.842	320.696
105	23	23	55	40.7	5.247 N	72.476 W	COLOMBIA	33	5.3	86.704	295.994

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
106	APR 24	03	06	34.7	51.221 N	179.493 E	RAT ISLANDS, ALEUTIAN ISLANDS	33	4.4	160.211	194.396
107	24	21	00	50.5	21.906 S	67.367 W	CHILE-BOLIVIA BORDER REGION	170	4.8	59.407	292.189
108	25	13	32	51.6	40.199 N	143.799 E	OFF EAST COAST OF HONSHU, JAPAN	29	5.0	146.336	139.884
109	25	13	48	58.8	40.220 N	143.810 E	OFF EAST COAST OF HONSHU, JAPAN	24	5.0	146.359	139.888
110	26	04	21	36.8	22.773 S	69.382 W	NORTHERN CHILE	70	5.0	59.217	289.808
111	27	10	58	44.7	1.226 N	85.261 W	OFF COAST OF ECUADOR	33	4.9	86.901	282.591
112	27	11	47	20.7	1.192 N	85.166 W	OFF COAST OF ECUADOR	33	5.2	86.838	282.670
113	27	12	44	41.2	1.297 N	85.031 W	OFF COAST OF ECUADOR	20	5.3	86.893	282.831
114	27	15	59	32.6	42.488 S	18.700 W	SOUTH ATLANTIC RIDGE	10	5.1	28.692	343.799
115	27	22	01	53.2	31.628 S	72.138 W	OFF COAST OF CENTRAL CHILE	30	4.8	51.842	283.188
116	28	02	04	19.2	31.640 S	71.963 W	NEAR COAST OF CENTRAL CHILE	31	5.1	51.775	283.357
117	28	09	59	16.1	21.405 S	174.337 W	TONGA ISLANDS	9	5.7	87.546	192.942
118	28	16	30	00.7	44.072 N	148.004 E	KURIL ISLANDS	28	6.5	150.921	143.582
119	28	17	08	43.2	44.091 N	148.074 E	KURIL ISLANDS	35	6.1	150.953	143.671
120	29	04	35	26.2	44.007 N	147.954 E	KURIL ISLANDS	33	5.4	150.848	143.548
121	29	11	50	52.6	1.315 S	28.605 E	ZAIRE REPUBLIC	10	5.1	73.313	38.820
122	29	13	58	27.5	32.891 S	178.620 W	SOUTH OF KERMADEC ISLANDS	33	5.2	76.370	188.316
123	MAY 01	18	29	34.6	10.568 S	161.399 E	SOLOMON ISLANDS	32	5.5	98.566	169.738
124	02	03	54	08.5	43.302 N	147.325 E	KURIL ISLANDS	49	5.6	150.046	143.052
125	02	06	06	05.7	3.792 S	76.917 W	NORTHERN PERU	97	6.5	79.492	288.952
126	02	11	48	11.7	43.776 N	84.660 E	NORTHERN XINJIANG, CHINA	33	5.5	131.623	75.034
127	02	23	52	43.6	60.427 S	154.042 E	WEST OF MACQUARIE ISLAND	10	5.2	48.469	168.415
128	03	10	45	47.1	56.251 S	143.758 W	SOUTH PACIFIC CORDILLERA	10	4.3	49.352	210.942
129	04	02	18	47.9	1.889 N	128.478 E	HALMAHERA	23	6.0	105.851	134.688
130	04	15	00	10.3	19.620 N	122.134 E	PHILIPPINE ISLANDS REGION	33	4.9	121.273	123.044
131	04	18	47	48.6	23.916 S	69.909 W	NORTHERN CHILE	49	4.9	58.311	288.822
132	05	03	53	45.0	12.626 N	125.297 E	SAMAR, PHILIPPINE ISLANDS	16	6.2	115.427	128.570
133	05	10	09	06.6	8.919 S	110.335 E	JAVA	67	4.9	90.676	119.909
134	05	13	01	41.5	9.897 S	118.915 E	SUMBAWA ISLAND REGION	33	5.7	92.096	128.306
135	05	15	18	08.2	16.160 S	177.952 E	FIJI ISLANDS	20	4.9	93.190	185.965
136	05	16	08	11.7	15.824 S	172.798 W	SAMOA ISLANDS REGION	33	5.2	92.970	194.860
137	05	17	19	19.4	8.725 S	111.034 E	JAVA	76	5.7	91.061	120.513
138	05	18	51	58.2	15.284 S	173.369 W	TONGA ISLANDS	33	4.8	93.554	194.359
139	05	22	48	04.5	18.553 S	168.779 E	VANUATU ISLANDS	116	5.9	90.886	177.196
140	06	01	59	07.1	24.987 N	95.294 E	BURMA	117	6.4	117.944	94.051

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
141	MAY 06	20	59	03.2	17.039 S	66.945 E	MASCARENE ISLANDS REGION	10	4.9	69.129	81.870
142	07	09	00	46.2	9.253 S	71.244 W	PERU-BRAZIL BORDER REGION	603	4.4	72.557	292.726
143	07	22	38	28.1	15.420 S	173.266 W	TONGA ISLANDS	20	5.3	93.411	194.446
144	08	03	29	12.0	18.051 S	168.464 E	VANUATU ISLANDS	171	5.4	91.382	176.888
145	08	17	40	23.3	43.856 N	148.342 E	KURIL ISLANDS REGION	21	5.7	150.779	144.182
146	08	17	40	53.8	43.838 N	148.327 E	KURIL ISLANDS REGION	33	5.5	150.759	144.171
147	09	12	29	57.7	53.973 S	134.304 W	SOUTH PACIFIC CORDILLERA	10	5.4	49.716	218.645
148	09	23	50	09.5	13.619 N	144.589 E	MARIANA ISLANDS	100	4.9	120.593	149.061
149	10	06	29	18.5	35.125 S	107.577 W	EASTER ISLAND CORDILLERA	10	4.7	60.191	248.599
150	11	21	59	16.2	20.330 S	178.479 W	FIJI ISLANDS REGION	598	5.1	88.879	189.156
151	12	05	23	30.9	40.211 N	138.668 E	EASTERN SEA OF JAPAN	25	4.6	145.179	133.236
152	12	11	25	04.3	43.918 N	148.327 E	KURIL ISLANDS REGION	36	5.1	150.836	144.127
153	12	15	12	23.2	19.338 S	63.947 W	SOUTHERN BOLIVIA	601	5.2	60.797	296.640
154	12	17	51	45.9	19.832 S	178.028 W	FIJI ISLANDS REGION	587	4.6	89.351	189.607
155	12	19	36	53.1	43.690 N	147.337 E	KURIL ISLANDS	33	5.1	150.421	142.854
156	13	08	47	12.7	40.149 N	21.695 E	GREECE	14	6.2	112.751	24.525
157	13	11	22	53.3	24.693 S	175.695 W	SOUTH OF TONGA ISLANDS	33	5.1	84.370	191.445
158	13	21	00	56.1	5.304 S	108.903 E	JAVA SEA	576	5.7	93.704	117.495
159	14	11	33	18.9	8.378 S	125.127 E	TIMOR	11	6.2	95.115	133.863
160	14	12	00	15.4	17.891 S	178.366 W	FIJI ISLANDS REGION	500	4.6	91.302	189.400
161	14	12	25	54.6	8.674 S	125.358 E	TIMOR	26	5.2	94.884	134.156
162	15	04	05	57.8	41.603 N	88.820 E	SOUTHERN XINJIANG, CHINA	0	6.1	131.022	79.971
163	15	15	26	53.9	56.037 S	27.811 W	SOUTH SANDWICH ISLANDS REGION	100	5.5	16.910	319.862
164	15	22	29	31.5	42.420 S	120.036 E	SOUTH OF AUSTRALIA	10	5.3	61.139	138.536
165	16	03	35	02.6	36.455 N	70.893 E	HINDU KUSH REGION	186	5.7	120.626	66.848
166	16	04	33	46.2	20.766 S	178.761 W	FIJI ISLANDS REGION	605	4.9	88.460	188.869
167	16	20	12	44.2	23.008 S	169.900 E	LOYALTY ISLANDS REGION	20	6.9	86.458	178.304
168	16	20	31	14.6	23.082 S	170.047 E	LOYALTY ISLANDS REGION	33	5.8	86.385	178.440
169	16	21	25	40.4	22.876 S	170.118 E	LOYALTY ISLANDS REGION	32	5.4	86.591	178.504
170	17	03	24	42.6	23.198 S	170.263 E	LOYALTY ISLANDS REGION	26	5.2	86.271	178.640
171	17	03	58	14.4	22.888 S	170.167 E	LOYALTY ISLANDS REGION	31	5.5	86.580	178.549
172	17	04	36	23.1	22.471 S	170.515 E	LOYALTY ISLANDS REGION	33	5.1	86.998	178.867
173	17	05	23	17.3	22.743 S	169.902 E	LOYALTY ISLANDS REGION	27	5.4	86.722	178.303
174	17	06	24	11.1	30.865 S	178.282 W	KERMADEC ISLANDS	33	5.3	78.373	188.729
175	17	11	23	49.5	23.030 S	170.108 E	LOYALTY ISLANDS REGION	19	5.9	86.438	178.496

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176	MAY 17	13	59	21.3	22.397 S	170.350 E	LOYALTY ISLANDS REGION	30	4.9	87.071	178.714
177	18	00	06	27.5	0.893 S	21.996 W	CENTRAL MID-ATLANTIC RIDGE	12	6.2	70.286	345.370
178	18	11	19	51.5	55.283 S	129.116 W	SOUTH PACIFIC CORDILLERA	10	4.5	47.386	221.729
179	18	14	31	12.5	44.322 N	147.536 E	KURIL ISLANDS	89	5.8	151.068	142.776
180	19	07	17	28.2	26.720 S	175.740 W	SOUTH OF TONGA ISLANDS	37	5.2	82.356	191.257
181	19	09	31	45.8	23.836 S	66.413 W	JUJUY PROVINCE, ARGENTINA	230	4.9	57.298	292.411
182	19	17	49	57.8	23.223 S	170.682 E	LOYALTY ISLANDS REGION	22	5.0	86.249	179.026
183	19	18	13	24.3	23.247 S	170.750 E	LOYALTY ISLANDS REGION	33	5.3	86.226	179.089
184	20	13	45	02.8	56.025 S	27.736 W	SOUTH SANDWICH ISLANDS REGION	100	5.5	16.905	320.011
185	20	22	18	58.1	5.553 N	73.783 W	COLOMBIA	142	5.0	87.387	294.842
186	21	07	33	12.4	43.758 S	100.912 W	SOUTHERN PACIFIC OCEAN	10	5.1	50.220	250.099
187	21	15	47	24.9	35.939 S	102.647 W	SOUTHERN PACIFIC OCEAN	10	4.9	57.895	252.559
188	21	16	50	39.3	27.855 S	176.468 W	KERMADEC ISLANDS REGION	33	5.5	81.272	190.525
189	21	18	56	06.3	23.219 S	170.722 E	LOYALTY ISLANDS REGION	33	5.3	86.253	179.063
190	22	03	45	02.7	22.795 S	170.010 E	LOYALTY ISLANDS REGION	18	5.8	86.671	178.403
191	22	03	49	56.7	22.830 S	170.124 E	LOYALTY ISLANDS REGION	33	5.7	86.637	178.509
192	22	05	58	13.3	22.727 S	170.077 E	LOYALTY ISLANDS REGION	36	4.4	86.740	178.464
193	22	06	59	04.2	22.850 S	169.894 E	LOYALTY ISLANDS REGION	33	5.2	86.615	178.297
194	22	09	47	14.1	11.590 N	125.621 E	SAMAR, PHILIPPINE ISLANDS	33	5.0	114.515	129.207
195	22	10	23	09.7	22.783 S	169.874 E	LOYALTY ISLANDS REGION	33	5.2	86.682	178.278
196	23	07	20	19.4	27.913 S	176.330 W	KERMADEC ISLANDS REGION	64	5.3	81.205	190.644
197	23	10	01	28.4	43.655 N	141.736 E	HOKKAIDO, JAPAN REGION	17	5.5	149.171	135.200
198	23	22	10	11.8	55.945 S	3.361 W	SOUTH ATLANTIC RIDGE	10	5.4	14.892	10.754
199	23	23	19	45.4	55.440 S	1.547 W	BOUVET ISLAND REGION	10	4.3	15.524	14.386
200	23	23	31	24.4	55.604 S	2.502 W	SOUTH ATLANTIC RIDGE	10	4.2	15.288	12.447
201	23	23	38	31.6	55.299 S	1.490 W	BOUVET ISLAND REGION	10	4.1	15.669	14.429
202	24	11	02	12.9	61.007 N	150.119 W	SOUTHERN ALASKA	41	5.3	162.106	256.645
203	24	13	06	10.5	52.261 S	139.805 E	WEST OF MACQUARIE ISLAND	10	5.0	55.113	156.718
204	25	04	59	48.7	43.926 N	147.331 E	KURIL ISLANDS	51	5.6	150.647	142.713
205	25	05	44	51.7	15.316 S	173.421 W	TONGA ISLANDS	33	5.0	93.527	194.306
206	25	09	11	34.8	40.214 N	143.364 E	OFF EAST COAST OF HONSHU, JAPAN	29	5.4	146.257	139.303
207	26	06	00	39.5	22.940 S	169.843 E	LOYALTY ISLANDS REGION	21	5.2	86.525	178.251
208	27	13	03	52.7	52.629 N	142.827 E	SAKHALIN ISLAND	11	6.7	157.786	129.236
209	27	14	32	46.3	23.936 S	176.003 W	SOUTH OF FIJI ISLANDS	51	5.5	85.144	191.218
210	27	14	35	38.3	23.963 S	175.875 W	TONGA ISLANDS REGION	85	5.5	85.109	191.333

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
211	MAY 27	20	15	34.5	19.707 S	168.967 E	VANUATU ISLANDS	74	5.4	89.739	177.392
212	28	02	42	27.1	6.783 S	107.277 E	JAVA	115	5.1	91.815	116.388
213	28	05	52	16.1	24.004 S	175.884 W	SOUTH OF TONGA ISLANDS	33	5.0	85.069	191.322
214	28	05	57	40.7	23.986 S	175.972 W	TONGA ISLANDS REGION	33	5.2	85.092	191.243
215	28	09	54	12.1	23.797 S	176.137 W	SOUTH OF FIJI ISLANDS	36	4.7	85.291	191.105
216	28	19	59	12.8	28.978 S	71.217 W	NEAR COAST OF CENTRAL CHILE	42	5.7	54.001	285.348
217	29	10	06	41.7	43.050 S	171.511 E	SOUTH ISLAND, NEW ZEALAND	10	4.5	66.451	179.817
218	29	10	21	34.2	52.686 N	142.850 E	SAKHALIN ISLAND	33	5.3	157.844	129.206
219	30	16	56	24.8	60.229 S	31.548 W	SCOTIA SEA	33	5.4	14.087	305.998
220	JUN 01	09	58	48.8	22.384 S	170.065 E	LOYALTY ISLANDS REGION	33	4.8	87.082	178.450
221	01	15	35	29.1	19.814 S	169.395 E	VANUATU ISLANDS	114	5.1	89.638	177.796
222	02	07	51	12.7	60.398 S	31.397 W	SCOTIA SEA	33	4.7	13.904	305.880
223	02	19	07	22.5	31.773 S	71.296 W	NEAR COAST OF CENTRAL CHILE	69	5.4	51.436	283.964
224	03	08	44	21.5	20.809 S	178.688 W	FIJI ISLANDS REGION	569	4.9	88.413	188.934
225	03	20	58	59.3	32.429 S	179.655 E	SOUTH OF KERMADEC ISLANDS	400	5.0	76.907	186.851
226	04	02	15	41.3	31.850 S	178.619 W	KERMADEC ISLANDS REGION	10	5.3	77.408	188.378
227	04	11	13	04.4	20.044 S	70.740 W	NEAR COAST OF NORTHERN CHILE	60	4.7	62.207	289.488
228	04	12	02	36.7	56.032 S	27.164 W	SOUTH SANDWICH ISLANDS REGION	70	4.6	16.778	321.027
229	04	12	18	58.9	33.312 S	72.182 W	OFF COAST OF CENTRAL CHILE	33	4.9	50.303	282.315
230	05	07	04	50.2	30.270 S	177.831 W	KERMADEC ISLANDS	33	5.0	78.943	189.161
231	05	18	45	13.2	60.477 S	31.496 W	SCOTIA SEA	10	4.4	13.864	305.529
232	05	20	20	17.6	18.435 N	120.852 E	LUZON, PHILIPPINE ISLANDS	47	5.4	119.785	122.105
233	06	22	49	59.9	59.739 S	26.460 W	SOUTH SANDWICH ISLANDS REGION	33	4.7	13.240	316.418
234	07	08	26	53.7	34.828 S	54.194 E	ATLANTIC-INDIAN RISE	10	4.9	48.433	76.984
235	07	11	43	15.0	0.308 S	15.984 W	NORTH OF ASCENSION ISLAND	10	4.9	70.471	351.789
236	07	15	58	21.2	22.996 S	169.691 E	LOYALTY ISLANDS REGION	33	4.3	86.467	178.111
237	07	20	02	56.9	63.507 S	170.997 E	BALLENY ISLANDS REGION	10	4.3	45.974	179.538
238	07	22	49	18.1	33.136 S	72.115 W	OFF COAST OF CENTRAL CHILE	25	5.0	50.444	282.471
239	07	23	23	16.8	43.572 N	147.154 E	KURIL ISLANDS	64	5.2	150.271	142.663
240	08	18	33	23.4	54.050 S	8.212 E	BOUVET ISLAND REGION	10	5.0	18.175	32.356
241	09	05	35	50.0	21.509 S	67.980 W	CHILE-BOLIVIA BORDER REGION	131	5.3	59.970	291.718
242	09	08	10	39.8	43.935 N	147.425 E	KURIL ISLANDS	33	5.2	150.674	142.841
243	09	12	01	56.1	24.038 S	66.945 W	SALTA PROVINCE, ARGENTINA	180	4.8	57.272	291.786
244	12	03	35	48.8	8.304 S	75.908 W	PERU	33	5.7	74.907	288.473
245	14	05	43	39.8	11.679 N	88.885 W	OFF COAST OF CENTRAL AMERICA	27	5.1	97.927	282.586

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246	JUN 14	11	11	47.4	12.128 N	88.360 W	OFF COAST OF CENTRAL AMERICA	25	5.7	98.179	283.225
247	14	11	15	04.2	12.117 N	88.339 W	OFF COAST OF CENTRAL AMERICA	33	5.6	98.162	283.241
248	14	16	12	59.2	24.822 S	70.049 W	NEAR COAST OF NORTHERN CHILE	48	5.4	57.506	288.312
249	14	17	32	01.1	2.950 S	79.794 W	NEAR COAST OF ECUADOR	33	4.9	81.199	286.456
250	15	18	58	10.7	60.269 S	31.203 W	SCOTIA SEA	10	5.0	13.961	306.506
251	15	19	23	52.9	60.360 S	31.205 W	SCOTIA SEA	10	5.1	13.884	306.299
252	15	19	25	37.0	60.430 S	31.644 W	SCOTIA SEA	10	5.2	13.944	305.381
253	16	13	49	49.3	18.269 S	178.010 W	FIJI ISLANDS REGION	566	5.6	90.906	189.716
254	18	11	54	34.1	17.868 S	176.384 W	FIJI ISLANDS REGION	31	5.0	91.207	191.282
255	19	00	57	44.2	44.090 N	150.415 E	KURIL ISLANDS REGION	33	5.3	151.393	147.031
256	19	10	12	09.4	30.112 S	178.503 W	KERMADEC ISLANDS	92	4.8	79.135	188.580
257	19	10	34	15.7	15.308 S	71.304 W	SOUTHERN PERU	165	4.1	66.847	290.636
258	19	12	49	34.8	24.023 S	66.823 W	SALTA PROVINCE, ARGENTINA	204	4.3	57.248	291.917
259	20	05	47	18.4	15.730 N	46.699 W	NORTH ATLANTIC RIDGE	10	4.8	90.261	323.176
260	20	17	56	11.8	56.206 S	27.242 W	SOUTH SANDWICH ISLANDS REGION	101	5.0	16.633	320.659
261	21	15	28	51.7	61.673 S	154.766 E	BALLENY ISLANDS REGION	10	5.8	47.279	169.109
262	21	16	33	06.1	11.538 S	77.530 W	NEAR COAST OF PERU	70	5.6	72.370	285.815
263	21	20	24	14.7	51.104 N	130.518 W	QUEEN CHARLOTTE ISLANDS REGION	10	5.1	147.691	263.562
264	22	00	16	50.8	17.494 S	178.627 W	FIJI ISLANDS REGION	466	4.5	91.711	189.174
265	22	07	57	10.9	16.413 S	168.108 E	VANUATU ISLANDS	33	5.6	93.008	176.516
266	22	20	21	59.3	56.295 S	142.775 W	SOUTH PACIFIC CORDILLERA	10	4.6	49.141	211.610
267	23	10	15	09.6	18.020 S	174.634 W	TONGA ISLANDS	63	5.1	90.934	192.929
268	23	16	10	57.1	24.563 S	177.263 W	SOUTH OF FIJI ISLANDS	108	5.4	84.597	190.026
269	23	23	58	35.9	34.211 S	71.725 W	NEAR COAST OF CENTRAL CHILE	50		49.328	282.316
270	24	06	58	06.7	3.959 S	153.930 E	NEW IRELAND REGION	386	6.2	104.521	161.664
271	24	17	37	03.9	18.539 S	177.767 W	FIJI ISLANDS REGION	545	4.6	90.624	189.929
272	25	05	05	17.6	56.333 S	26.613 W	SOUTH SANDWICH ISLANDS REGION	60	5.2	16.383	321.634
273	25	06	59	06.2	24.600 N	121.700 E	TAIWAN	52	5.8	125.885	120.775
274	25	12	25	40.3	26.116 N	124.753 E	NORTHEAST OF TAIWAN	194	5.2	128.181	123.470
275	26	03	41	42.4	55.359 S	27.899 W	SOUTH SANDWICH ISLANDS REGION	33	5.4	17.558	320.568
276	26	06	48	49.8	17.923 S	178.529 W	FIJI ISLANDS REGION	582	5.0	91.279	189.243
277	27	04	09	29.3	55.333 S	27.995 W	SOUTH SANDWICH ISLANDS REGION	33	5.2	17.602	320.432
278	27	04	22	36.3	55.365 S	27.962 W	SOUTH SANDWICH ISLANDS REGION	33	5.0	17.565	320.451
279	27	05	16	35.5	7.751 S	108.035 E	JAVA	81	4.8	91.119	117.393
280	27	13	32	15.2	15.199 S	74.637 W	NEAR COAST OF PERU	51	4.1	67.998	287.378

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude		Longitude		Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
281	JUN 27	15	53	26.7	16.584	S	172.587	W	SAMOA ISLANDS REGION	33	4.9	92.197	194.995
282	27	16	47	16.0	4.807	S	68.630	E	CHAGOS ARCHIPELAGO REGION	10	4.9	81.177	79.267
283	27	21	12	56.2	17.175	S	66.871	E	MASCARENE ISLANDS REGION	10	5.0	68.977	81.848
284	28	11	23	26.0	20.774	N	121.286	E	PHILIPPINE ISLANDS REGION	33	4.7	122.134	121.749
285	28	14	14	53.3	22.094	N	121.570	E	TAIWAN REGION	33	5.3	123.470	121.574
286	29	01	27	02.9	33.912	S	72.319	W	OFF COAST OF CENTRAL CHILE	41	5.1	49.796	281.874
287	29	07	45	09.9	48.793	N	154.446	E	KURIL ISLANDS	64	5.9	156.641	150.494
288	29	12	24	03.2	19.544	S	169.287	E	VANUATU ISLANDS	139	6.3	89.906	177.690
289	30	12	28	07.7	55.537	S	26.320	W	SOUTH SANDWICH ISLANDS REGION	120	4.3	17.067	323.167
290	JUL 01	09	14	54.0	33.988	S	72.329	W	OFF COAST OF CENTRAL CHILE	33	4.9	49.729	281.825
291	01	09	18	06.9	33.904	S	72.342	W	OFF COAST OF CENTRAL CHILE	33	4.9	49.811	281.855
292	01	23	57	44.2	55.413	S	27.654	W	SOUTH SANDWICH ISLANDS REGION	33	5.0	17.456	320.933
293	02	01	14	17.2	9.762	S	74.589	W	PERU	131	5.2	73.114	289.278
294	02	17	46	29.0	19.722	S	69.013	W	NORTHERN CHILE	104	4.5	61.972	291.344
295	02	23	53	21.8	35.039	N	139.393	E	NEAR S. COAST OF HONSHU, JAPAN	119	5.4	140.412	136.672
296	03	02	03	06.0	37.637	S	177.285	E	OFF E. COAST OF N. ISLAND, N.Z	33	4.2	71.787	184.620
297	03	19	50	50.6	29.211	S	177.589	W	KERMADEC ISLANDS	35	6.5	79.985	189.440
298	03	21	56	51.4	29.117	S	177.627	W	KERMADEC ISLANDS	54	6.1	80.081	189.412
299	04	00	50	38.9	24.140	S	179.877	E	SOUTH OF FIJI ISLANDS	500	4.3	85.162	187.440
300	04	03	01	11.3	28.020	S	178.053	W	KERMADEC ISLANDS REGION	33	5.3	81.197	189.101
301	04	04	22	17.9	28.045	S	178.124	W	KERMADEC ISLANDS REGION	33	5.2	81.176	189.037
302	04	12	27	56.2	29.319	S	177.430	W	KERMADEC ISLANDS	33	5.1	79.869	189.574
303	04	17	07	11.0	33.969	S	72.253	W	OFF COAST OF CENTRAL CHILE	42	4.1	49.722	281.911
304	04	22	22	49.7	29.337	S	177.485	W	KERMADEC ISLANDS	45	5.1	79.854	189.524
305	05	03	10	52.6	17.194	S	167.511	E	VANUATU ISLANDS	33	4.8	92.216	175.962
306	05	05	19	02.7	29.178	S	176.919	W	KERMADEC ISLANDS REGION	63	4.9	79.981	190.035
307	05	11	41	23.9	26.055	S	177.124	W	SOUTH OF FIJI ISLANDS	100	4.6	83.103	190.057
308	06	01	12	24.6	31.300	S	178.675	W	KERMADEC ISLANDS REGION	126	4.7	77.959	188.361
309	06	05	42	05.6	27.737	S	178.105	W	KERMADEC ISLANDS REGION	33	4.0	81.482	189.072
310	06	09	38	55.6	22.608	S	170.593	E	LOYALTY ISLANDS REGION	33	4.7	86.862	178.940
311	06	09	47	52.5	23.208	S	169.253	E	LOYALTY ISLANDS REGION	33	4.8	86.251	177.711
312	06	15	58	51.6	17.775	N	145.397	E	MARIANA ISLANDS	529	5.1	124.810	149.100
313	07	04	30	23.2	34.774	S	107.930	W	EASTER ISLAND CORDILLERA	10	4.5	60.625	248.442
314	07	05	44	41.7	30.925	S	179.508	W	KERMADEC ISLANDS REGION	300	4.1	78.372	187.654
315	07	10	40	03.5	53.449	S	9.114	E	SOUTHWEST OF AFRICA	10	5.5	18.910	33.383

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
316	JUL 07	11	32	57.2	39.714 N	143.540 E	OFF EAST COAST OF HONSHU, JAPAN	27	4.9	145.815	139.785
317	07	13	23	59.7	29.415 S	177.468 W	KERMADEC ISLANDS	49	5.5	79.776	189.534
318	07	17	03	09.4	24.075 S	66.615 W	SALTA PROVINCE, ARGENTINA	197	4.1	57.135	292.109
319	07	21	15	19.7	33.972 N	137.127 E	NEAR S. COAST OF HONSHU, JAPAN	333	5.8	138.863	134.371
320	08	03	26	06.9	59.219 S	25.697 W	SOUTH SANDWICH ISLANDS REGION	38	4.8	13.537	318.915
321	08	05	42	53.1	39.678 N	143.352 E	OFF EAST COAST OF HONSHU, JAPAN	11	5.9	145.741	139.556
322	08	06	41	32.5	39.642 N	143.383 E	OFF EAST COAST OF HONSHU, JAPAN	10	5.0	145.713	139.614
323	08	07	12	58.7	21.008 S	170.299 E	LOYALTY ISLANDS REGION	100	4.8	88.456	178.655
324	08	11	39	06.1	4.308 N	62.400 E	CARLSBERG RIDGE	10	5.4	87.787	70.416
325	08	17	15	25.8	53.578 N	163.740 W	UNIMAK ISLAND REGION	21	6.0	159.735	225.193
326	08	23	49	43.8	24.265 S	176.316 W	SOUTH OF FIJI ISLANDS	19	5.8	84.836	190.909
327	09	03	04	10.9	15.128 S	173.723 W	TONGA ISLANDS	33	4.6	93.738	194.031
328	09	11	04	30.2	24.097 S	66.957 W	SALTA PROVINCE, ARGENTINA	171	4.4	57.220	291.750
329	09	13	47	26.8	31.336 S	67.757 W	SAN JUAN PROVINCE, ARGENTINA	43	4.7	50.709	287.774
330	09	15	56	28.3	35.976 N	100.073 E	QINGHAI PROVINCE, CHINA	33	5.2	129.655	93.531
331	09	23	42	07.7	24.183 S	66.891 W	SALTA PROVINCE, ARGENTINA	182	4.7	57.119	291.783
332	11	21	46	39.8	21.966 N	99.196 E	BURMA-CHINA BORDER REGION	12	6.1	116.418	99.022
333	12	15	40	09.3	22.566 S	171.114 E	LOYALTY ISLANDS REGION	33	4.8	86.907	179.421
334	12	15	46	56.8	23.260 S	170.865 E	LOYALTY ISLANDS REGION	11	6.0	86.213	179.194
335	13	00	00	22.5	23.080 S	170.641 E	LOYALTY ISLANDS REGION	13	5.7	86.392	178.987
336	14	06	41	12.6	23.164 S	170.791 E	LOYALTY ISLANDS REGION	33	4.9	86.309	179.126
337	14	16	52	46.8	24.322 N	121.872 E	TAIWAN	10	5.2	125.670	121.065
338	14	19	06	27.0	53.315 N	166.835 W	FOX ISLANDS, ALEUTIAN ISLANDS	33	4.9	160.184	219.928
339	14	22	09	24.5	33.640 S	179.575 W	SOUTH OF KERMADEC ISLANDS	33	4.9	75.667	187.453
340	14	23	15	23.6	54.915 S	129.645 W	SOUTH PACIFIC CORDILLERA	10	4.4	47.842	221.542
341	15	01	35	14.6	19.900 S	177.547 W	FIJI ISLANDS REGION	358	5.5	89.256	190.054
342	15	12	42	56.7	44.862 N	148.116 E	KURIL ISLANDS	102	4.9	151.702	143.289
343	15	13	52	21.6	23.319 S	170.845 E	LOYALTY ISLANDS REGION	22	5.6	86.154	179.176
344	16	11	51	16.9	58.991 S	25.567 W	SOUTH SANDWICH ISLANDS REGION	33	4.9	13.715	319.581
345	16	14	06	47.2	16.290 S	179.937 E	FIJI ISLANDS	451	4.2	92.981	187.864
346	16	23	46	54.5	18.161 S	174.574 W	TONGA ISLANDS	130	5.1	90.789	192.975
347	17	03	24	15.9	22.987 S	170.343 E	LOYALTY ISLANDS REGION	36	5.0	86.482	178.712
348	17	11	11	42.3	56.792 S	26.165 W	SOUTH SANDWICH ISLANDS REGION	33	4.8	15.865	321.845
349	18	14	01	42.8	18.027 S	178.511 W	FIJI ISLANDS REGION	589	4.4	91.174	189.255
350	18	22	00	49.9	46.103 N	151.030 E	KURIL ISLANDS	33	5.5	153.450	146.826

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
351	JUL 19	00	24	14.7	22.719 S	169.783 E	LOYALTY ISLANDS REGION	11	5.7	86.745	178.193
352	19	00	25	37.1	22.766 S	169.842 E	LOYALTY ISLANDS REGION	33	5.2	86.698	178.248
353	19	00	52	52.3	17.866 S	178.596 W	FIJI ISLANDS REGION	594	4.6	91.339	189.183
354	19	20	56	25.2	6.035 S	154.510 E	SOLOMON ISLANDS	32	5.2	102.522	162.471
355	20	05	08	25.8	12.402 S	41.410 E	NORTHWEST OF MADAGASCAR	10	5.1	65.688	54.869
356	20	10	58	25.2	58.910 S	25.798 W	SOUTH SANDWICH ISLANDS REGION	33	5.4	13.839	319.267
357	20	11	13	38.0	0.522 N	80.091 W	NEAR COAST OF ECUADOR	33	5.0	84.575	287.279
358	22	13	31	53.6	13.966 S	34.820 E	MALAWI	10	5.1	62.466	48.447
359	22	22	32	37.3	62.559 S	159.955 W	SOUTH PACIFIC CORDILLERA	10	4.5	45.470	197.889
360	23	17	58	53.0	26.841 S	175.892 W	SOUTH OF TONGA ISLANDS	51	4.6	82.245	191.112
361	24	04	06	50.1	32.387 S	71.673 W	NEAR COAST OF CENTRAL CHILE	10		50.991	283.286
362	24	05	53	21.0	13.504 N	89.659 W	EL SALVADOR	83	4.9	99.895	282.474
363	24	10	19	48.5	29.740 N	130.622 E	RYUKYU ISLANDS	38	5.0	133.204	128.539
364	24	18	35	24.8	32.722 S	178.315 W	SOUTH OF KERMADEC ISLANDS	33	4.8	76.524	188.589
365	25	13	37	32.6	43.224 N	146.512 E	KURIL ISLANDS	49	4.6	149.807	141.961
366	25	15	13	26.8	10.702 N	41.212 W	NORTH ATLANTIC RIDGE	10	5.5	84.305	327.457
367	25	22	39	24.5	44.148 N	148.425 E	KURIL ISLANDS	40	5.5	151.076	144.139
368	25	23	48	23.9	26.970 S	179.185 W	SOUTH OF FIJI ISLANDS	469	4.5	82.299	188.148
369	26	01	44	17.4	58.628 S	61.965 W	DRAKE PASSAGE	10	4.1	24.888	271.055
370	26	09	09	50.5	16.462 S	174.742 W	TONGA ISLANDS	234	5.2	92.491	192.947
371	26	17	01	50.5	17.402 S	178.821 W	FIJI ISLANDS REGION	515	4.2	91.813	188.994
372	26	23	42	02.8	2.534 N	127.681 E	MOLUCCA PASSAGE	65	6.0	106.286	133.725
373	27	05	51	18.9	12.590 S	79.228 E	SOUTH INDIAN OCEAN	16	6.2	77.369	91.950
374	27	05	55	33.5	12.622 S	79.224 E	SOUTH INDIAN OCEAN	10	5.4	77.338	91.957
375	27	12	21	32.4	8.683 S	111.206 E	JAVA	71	5.1	91.151	120.664
376	27	21	06	32.6	56.235 S	23.469 W	SOUTH SANDWICH ISLANDS REGION	10	4.6	15.871	327.672
377	28	14	29	11.0	21.182 S	175.394 W	TONGA ISLANDS	92	6.3	87.844	191.978
378	28	20	33	16.8	30.010 S	111.993 W	EASTER ISLAND REGION	10	5.5	66.306	246.798
379	29	08	38	47.1	30.056 S	112.004 W	EASTER ISLAND REGION	10	5.2	66.266	246.770
380	29	12	28	23.8	18.085 S	178.400 W	FIJI ISLANDS REGION	585	4.5	91.111	189.357
381	29	16	18	44.8	30.345 N	138.381 E	SOUTH OF HONSHU, JAPAN	435	5.6	135.667	137.327
382	29	18	24	00.0	35.765 N	140.400 E	NEAR EAST COAST OF HONSHU, JAP.	35	5.4	141.336	137.604
383	30	05	11	23.6	23.340 S	70.294 W	NEAR COAST OF NORTHERN CHILE	45	6.6	58.972	288.664
384	30	05	25	06.0	23.230 S	70.676 W	NEAR COAST OF NORTHERN CHILE	33	5.8	59.195	288.323
385	30	05	47	02.2	23.253 S	70.318 W	NEAR COAST OF NORTHERN CHILE	33	5.9	59.061	288.674

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude		Longitude		Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
386	JUL	30	06	39	28.9	24.266 S	70.574	W	NEAR COAST OF NORTHERN CHILE	33	5.1	58.193	288.009
387		30	07	14	29.9	24.346 S	70.541	W	NEAR COAST OF NORTHERN CHILE	33	4.6	58.107	288.010
388		30	07	34	18.4	23.453 S	70.361	W	NEAR COAST OF NORTHERN CHILE	33	5.0	58.887	288.551
389		30	08	17	18.2	23.982 S	70.276	W	NEAR COAST OF NORTHERN CHILE	30	5.2	58.364	288.425
390		30	09	34	39.2	24.174 S	70.209	W	NEAR COAST OF NORTHERN CHILE	32	5.2	58.163	288.415
391		30	10	35	39.3	24.359 S	70.715	W	NEAR COAST OF NORTHERN CHILE	10	5.8	58.150	287.829
392		30	10	56	13.0	23.055 S	70.799	W	NEAR COAST OF NORTHERN CHILE	33	5.4	59.398	288.268
393		30	11	51	17.4	28.657 N	129.380	E	RYUKYU ISLANDS	48	5.5	131.847	127.574
394		30	12	27	37.3	24.649 S	70.512	W	NEAR COAST OF NORTHERN CHILE	33	4.5	57.814	287.916
395		30	12	40	37.5	20.635 S	169.769	E	VANUATU ISLANDS	136	5.2	88.823	178.156
396		30	12	51	37.6	24.441 S	70.850	W	NEAR COAST OF NORTHERN CHILE	33	4.6	58.116	287.660
397		30	12	59	21.6	24.102 S	70.563	W	NEAR COAST OF NORTHERN CHILE	33	4.4	58.343	288.087
398		30	14	44	46.1	24.077 S	69.988	W	NORTHERN CHILE	33	4.8	58.185	288.677
399		30	16	19	24.5	24.876 S	70.715	W	NEAR COAST OF NORTHERN CHILE	33	5.3	57.666	287.618
400		30	18	02	45.8	24.015 S	70.734	W	NEAR COAST OF NORTHERN CHILE	33	5.0	58.478	287.950
401		30	21	05	47.7	23.347 S	70.609	W	NEAR COAST OF NORTHERN CHILE	13	5.6	59.065	288.344
402		30	22	27	55.1	23.271 S	70.057	W	NEAR COAST OF NORTHERN CHILE	33	4.9	58.962	288.930
403		31	00	14	47.4	24.125 S	70.219	W	NEAR COAST OF NORTHERN CHILE	33	5.0	58.213	288.424
404		31	07	03	54.8	15.467 N	46.623	W	NORTH ATLANTIC RIDGE	10	4.9	89.990	323.194
405		31	08	20	22.4	21.046 S	68.031	W	CHILE-BOLIVIA BORDER REGION	158	4.6	60.422	291.842
406		31	08	48	30.8	10.422 S	78.264	W	NEAR COAST OF PERU	59	5.7	73.657	285.480
407		31	09	54	57.9	29.321 S	179.010	W	KERMADEC ISLANDS REGION	311	3.8	79.948	188.178
408	AUG	01	02	10	40.8	46.391 N	153.843	E	KURIL ISLANDS	40	5.7	154.211	150.930
409		01	03	21	08.0	24.783 S	70.740	W	NEAR COAST OF NORTHERN CHILE	33	4.6	57.761	287.631
410		01	04	29	19.9	24.089 S	66.674	W	SALTA PROVINCE, ARGENTINA	193	4.8	57.140	292.043
411		01	05	10	57.5	24.914 S	70.916	W	NEAR COAST OF NORTHERN CHILE	29	5.2	57.695	287.400
412		01	06	00	37.5	24.210 S	70.826	W	NEAR COAST OF NORTHERN CHILE	33	4.7	58.325	287.778
413		01	12	37	19.9	23.925 S	70.519	W	NEAR COAST OF NORTHERN CHILE	22	4.8	58.495	288.203
414		01	13	29	42.9	31.175 S	67.166	W	SAN JUAN PROVINCE, ARGENTINA	25	5.0	50.672	288.458
415		01	15	44	30.6	24.124 S	70.771	W	NEAR COAST OF NORTHERN CHILE	30	5.2	58.388	287.868
416		02	00	14	09.4	23.230 S	70.677	W	NEAR COAST OF NORTHERN CHILE	33	5.4	59.196	288.322
417		02	05	22	21.6	23.114 S	70.534	W	NEAR COAST OF NORTHERN CHILE	33	4.8	59.259	288.512
418		02	11	05	39.0	23.119 S	70.405	W	NEAR COAST OF NORTHERN CHILE	33	5.2	59.214	288.640
419		02	16	27	32.7	23.432 S	70.571	W	NEAR COAST OF NORTHERN CHILE	33	5.1	58.973	288.348
420		02	18	39	37.8	23.034 S	70.559	W	NEAR COAST OF NORTHERN CHILE	33	4.5	59.342	288.518

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421	AUG 02	20	20	14.0	22.966 S	70.576 W	NEAR COAST OF NORTHERN CHILE	33	5.1	59.411	288.528
422	02	21	39	36.8	32.781 S	178.700 W	SOUTH OF KERMADEC ISLANDS	100	5.0	76.484	188.254
423	03	01	16	39.8	80.280 N	2.801 W	NORTH OF SVALBARD	10	4.9	150.872	1.899
424	03	01	57	19.9	23.062 S	70.588 W	NEAR COAST OF NORTHERN CHILE	16	5.4	59.325	288.478
425	03	02	31	00.3	33.034 S	179.197 W	SOUTH OF KERMADEC ISLANDS	150	5.0	76.255	187.811
426	03	04	43	04.5	23.156 S	70.485 W	NEAR COAST OF NORTHERN CHILE	33	4.7	59.205	288.544
427	03	08	18	53.9	28.281 S	69.239 W	CHILE-ARGENTINA BORDER REGION	104	5.9	54.020	287.661
428	03	12	00	27.7	23.032 S	70.562 W	NEAR COAST OF NORTHERN CHILE	33	5.0	59.345	288.516
429	03	13	48	26.3	24.081 S	70.240 W	NEAR COAST OF NORTHERN CHILE	33	4.6	58.260	288.421
430	03	14	19	04.7	22.954 S	70.403 W	NEAR COAST OF NORTHERN CHILE	33	5.2	59.368	288.707
431	03	14	36	19.5	1.900 N	85.161 W	OFF COAST OF ECUADOR	10	4.5	87.504	282.903
432	03	19	07	45.2	24.008 S	70.768 W	NEAR COAST OF NORTHERN CHILE	34	4.6	58.496	287.918
433	03	19	50	37.6	23.780 S	70.547 W	NEAR COAST OF NORTHERN CHILE	45	4.9	58.639	288.233
434	04	06	38	33.2	32.674 S	178.448 W	SOUTH OF KERMADEC ISLANDS	33	5.2	76.578	188.477
435	04	10	31	22.9	17.233 S	174.345 W	TONGA ISLANDS	140	4.5	91.695	193.265
436	04	11	28	50.4	24.033 S	70.355 W	NEAR COAST OF NORTHERN CHILE	31	4.5	58.342	288.324
437	04	13	31	49.0	52.839 N	152.880 E	NORTHWEST OF KURIL ISLANDS	528	5.3	160.252	144.821
438	04	14	41	09.4	47.455 N	153.178 E	KURIL ISLANDS	75	4.6	155.134	149.304
439	05	00	32	46.7	23.229 S	70.624 W	NEAR COAST OF NORTHERN CHILE	37	4.6	59.180	288.375
440	05	01	50	13.5	23.109 S	70.596 W	NEAR COAST OF NORTHERN CHILE	33	4.7	59.284	288.451
441	05	08	21	06.2	23.094 S	70.520 W	NEAR COAST OF NORTHERN CHILE	33	4.8	59.274	288.534
442	05	09	12	08.7	23.094 S	70.482 W	NEAR COAST OF NORTHERN CHILE	70	4.4	59.262	288.572
443	05	11	31	29.5	39.738 N	143.279 E	OFF EAST COAST OF HONSHU, JAPAN	33	4.9	145.782	139.430
444	05	13	52	01.9	22.607 S	10.703 W	SOUTH ATLANTIC RIDGE	10	4.5	48.077	356.962
445	05	19	42	49.3	16.255 S	177.893 E	FIJI ISLANDS	33	5.5	93.097	185.905
446	05	22	42	03.2	22.563 S	10.778 W	SOUTH ATLANTIC RIDGE	10	5.4	48.122	356.870
447	06	03	48	05.4	12.446 N	87.399 W	NEAR COAST OF NICARAGUA	48	4.6	98.168	284.227
448	06	09	00	51.0	43.571 N	147.153 E	KURIL ISLANDS	68	5.0	150.270	142.662
449	06	11	59	34.8	44.376 N	147.271 E	KURIL ISLANDS	74	5.4	151.067	142.370
450	06	19	16	17.1	23.445 S	179.192 W	SOUTH OF FIJI ISLANDS	362	4.2	85.812	188.327
451	06	22	38	32.9	23.642 S	70.833 W	NEAR COAST OF NORTHERN CHILE	33	4.6	58.859	288.000
452	07	05	27	52.5	59.378 S	151.161 W	SOUTH PACIFIC CORDILLERA	10	4.9	47.500	204.680
453	07	19	44	25.4	4.041 N	143.770 E	CAROLINE ISLANDS REGION	12	5.4	111.047	149.981
454	07	21	36	45.6	20.198 S	173.799 W	TONGA ISLANDS	33	4.9	88.705	193.541
455	08	04	37	55.8	55.897 S	26.995 W	SOUTH SANDWICH ISLANDS REGION	59	4.8	16.868	321.504

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
456	AUG 08	07	18	12.3	23.911 S	69.981 W	NORTHERN CHILE	52	4.4	58.338	288.751
457	08	15	33	44.9	23.208 S	169.147 E	LOYALTY ISLANDS REGION	10	5.1	86.249	177.613
458	08	16	32	57.7	18.586 S	66.667 W	BOLIVIA	268	4.6	62.325	294.133
459	09	07	17	45.6	35.790 S	178.104 E	OFF E. COAST OF N. ISLAND, N.Z	212	4.7	73.608	185.377
460	09	07	20	37.5	24.475 S	70.190 W	NEAR COAST OF NORTHERN CHILE	33	5.0	57.876	288.312
461	09	08	23	01.1	23.097 S	70.151 W	NEAR COAST OF NORTHERN CHILE	35	5.3	59.155	288.904
462	10	00	41	04.4	15.473 S	41.604 E	MOZAMBIQUE CHANNEL	10	5.1	62.803	56.026
463	10	11	46	32.3	17.758 S	178.661 W	FIJI ISLANDS REGION	530	4.3	91.450	189.127
464	10	12	48	45.8	23.659 S	67.695 W	CHILE-ARGENTINA BORDER REGION	118	4.5	57.860	291.171
465	10	18	10	37.2	23.769 S	70.567 W	NEAR COAST OF NORTHERN CHILE	33	5.4	58.656	288.217
466	11	09	19	21.6	23.199 S	170.813 E	LOYALTY ISLANDS REGION	15	5.6	86.274	179.146
467	11	10	14	45.7	23.629 S	66.709 W	JUJUY PROVINCE, ARGENTINA	214	4.9	57.584	292.190
468	11	13	47	21.7	2.546 N	84.447 W	OFF COAST OF CENTRAL AMERICA	10	5.0	87.882	283.787
469	12	03	39	07.1	16.071 S	179.384 W	FIJI ISLANDS REGION	33	4.8	93.167	188.526
470	14	08	21	43.9	57.874 S	25.397 W	SOUTH SANDWICH ISLANDS REGION	33	5.2	14.704	321.743
471	16	01	22	38.2	23.631 S	179.054 E	SOUTH OF FIJI ISLANDS	540	5.3	85.703	186.709
472	16	03	34	12.9	29.316 S	112.764 W	EASTER ISLAND REGION	10	4.9	67.190	246.378
473	16	03	52	00.1	29.251 S	112.666 W	EASTER ISLAND REGION	10	4.6	67.221	246.490
474	16	08	17	12.2	29.262 S	112.634 W	EASTER ISLAND REGION	10	5.2	67.201	246.514
475	16	09	04	31.2	59.924 S	27.647 W	SOUTH SANDWICH ISLANDS REGION	108	4.3	13.354	313.741
476	16	10	27	28.6	5.799 S	154.178 E	SOLOMON ISLANDS	30	6.5	102.723	162.111
477	16	11	21	42.6	14.802 S	167.148 E	VANUATU ISLANDS	134	5.9	94.592	175.552
478	16	13	20	49.9	5.206 S	153.565 E	NEW IRELAND REGION	33	4.7	103.247	161.426
479	16	15	04	01.4	31.950 S	179.362 E	KERMADEC ISLANDS REGION	463	5.7	77.396	186.619
480	16	15	28	56.1	5.032 S	153.935 E	NEW IRELAND REGION	83	5.8	103.458	161.783
481	16	16	24	26.5	5.429 S	153.773 E	NEW IRELAND REGION	18	5.8	103.048	161.661
482	16	17	19	17.0	51.475 N	176.716 W	ANDREANOF ISLANDS, ALEUTIAN IS.	33	4.9	160.077	201.376
483	16	20	58	50.8	28.460 N	128.067 E	RYUKYU ISLANDS	20	5.3	131.312	126.185
484	16	21	23	33.5	5.498 S	153.592 E	NEW IRELAND REGION	28	5.1	102.960	161.485
485	16	23	10	24.0	5.771 S	154.347 E	SOLOMON ISLANDS	33	6.2	102.768	162.279
486	16	23	31	17.0	6.902 S	129.235 E	BANDA SEA	185	5.4	97.498	137.496
487	17	00	15	50.5	5.934 S	154.213 E	SOLOMON ISLANDS	14	6.1	102.592	162.160
488	17	00	59	57.7	41.559 N	88.800 E	SOUTHERN XINJIANG, CHINA	0	6.0	130.976	79.979
489	17	05	35	37.2	21.848 S	170.436 E	LOYALTY ISLANDS REGION	73	5.7	87.619	178.789
490	17	10	01	26.0	5.168 S	153.447 E	NEW IRELAND REGION	21	5.6	103.272	161.302

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491	AUG 17	12	11	28.7	11.860	S	73.426	W	PERU	26	5.1	70.766	289.718
492	17	14	34	06.8	30.325	S	73.643	W	OFF COAST OF CENTRAL CHILE	14	4.9	53.535	282.300
493	17	15	44	21.7	45.361	N	151.581	E	KURIL ISLANDS	33	5.1	152.831	148.065
494	17	18	54	32.9	23.178	S	70.489	W	NEAR COAST OF NORTHERN CHILE	33	4.9	59.185	288.532
495	17	23	14	19.0	36.443	N	71.129	E	AFGHANISTAN-USSR BORDER REGION	233	5.5	120.687	67.058
496	18	01	57	18.6	13.198	N	145.179	E	MARIANA ISLANDS	71	5.3	120.279	149.799
497	18	02	16	26.0	55.934	S	28.832	W	SOUTH SANDWICH ISLANDS REGION	41	5.7	17.228	318.200
498	18	02	20	35.9	55.656	S	28.659	W	SOUTH SANDWICH ISLANDS REGION	33	5.6	17.446	318.866
499	18	06	36	55.5	24.250	S	70.367	W	NEAR COAST OF NORTHERN CHILE	30	4.4	58.142	288.224
500	18	09	18	07.6	53.580	N	163.642	W	UNIMAK ISLAND REGION	33	5.1	159.714	225.350
501	18	19	07	36.9	18.820	N	145.271	E	MARIANA ISLANDS	584	5.0	125.814	148.727
502	18	19	44	49.9	23.856	S	70.674	W	NEAR COAST OF NORTHERN CHILE	33	4.5	58.608	288.074
503	18	19	45	52.6	18.212	S	178.555	W	FIJI ISLANDS REGION	636	4.7	90.993	189.203
504	19	18	23	54.7	17.797	S	178.721	W	FIJI ISLANDS REGION	558	4.4	91.415	189.068
505	19	21	28	22.2	4.960	S	153.755	E	NEW IRELAND REGION	88	5.6	103.511	161.593
506	19	21	43	31.9	5.139	N	75.577	W	COLOMBIA	119	6.2	87.540	293.012
507	20	01	20	29.2	30.619	S	178.108	W	KERMADEC ISLANDS	33	4.7	78.610	188.896
508	20	03	09	05.1	23.249	S	70.474	W	NEAR COAST OF NORTHERN CHILE	33	4.6	59.114	288.518
509	21	13	30	09.0	58.278	S	25.192	W	SOUTH SANDWICH ISLANDS REGION	33	4.4	14.289	321.515
510	21	18	11	27.2	18.763	S	177.787	W	FIJI ISLANDS REGION	622	4.3	90.402	189.897
511	22	22	11	56.6	29.155	S	177.370	W	KERMADEC ISLANDS	23	5.6	80.029	189.637
512	23	07	06	02.8	18.856	N	145.218	E	MARIANA ISLANDS	594	6.3	125.840	148.658
513	23	07	45	48.3	9.459	N	83.954	W	COSTA RICA	33	5.1	94.248	286.470
514	23	07	57	35.5	19.083	N	144.954	E	MARIANA ISLANDS	567	5.2	126.017	148.304
515	23	13	14	42.4	56.883	S	141.654	W	SOUTH PACIFIC CORDILLERA	12	5.9	48.386	212.141
516	24	01	55	34.6	18.902	N	145.047	E	MARIANA ISLANDS	587	6.0	125.855	148.452
517	24	06	28	54.9	18.847	N	145.123	E	MARIANA ISLANDS	602	5.7	125.815	148.551
518	24	07	54	43.0	18.823	N	145.042	E	MARIANA ISLANDS	612	5.5	125.777	148.464
519	24	07	55	26.2	18.849	N	145.089	E	MARIANA ISLANDS	585	5.5	125.811	148.512
520	25	14	25	25.2	20.333	S	177.850	W	FIJI ISLANDS REGION	540	5.2	88.842	189.744
521	25	16	02	59.4	57.490	S	26.020	W	SOUTH SANDWICH ISLANDS REGION	33	4.5	15.188	321.125
522	25	16	51	46.6	18.686	S	175.409	W	TONGA ISLANDS	224	5.5	90.328	192.147
523	26	00	08	56.4	49.056	S	123.707	E	SOUTH OF AUSTRALIA	10	4.4	55.568	143.733
524	26	17	16	56.9	8.280	S	121.548	E	FLORES ISLAND REGION	34	5.6	94.329	130.400
525	27	00	30	06.2	23.956	S	176.630	W	SOUTH OF FIJI ISLANDS	33	4.8	85.163	190.643

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526	AUG 27	17	51	00.2	48.004	S	32.018	E	PRINCE EDWARD ISLANDS REGION	10	5.2	29.569	61.484
527	28	01	57	57.2	24.478	S	70.763	W	NEAR COAST OF NORTHERN CHILE	33	4.3	58.054	287.733
528	29	00	18	11.4	33.919	S	70.526	W	CHILE-ARGENTINA BORDER REGION	100		49.208	283.675
529	29	00	39	11.6	19.609	S	178.851	W	FIJI ISLANDS REGION	185	5.0	89.617	188.847
530	29	07	25	49.2	47.937	S	99.467	E	SOUTHEAST INDIAN RISE	10	5.6	50.868	124.515
531	29	08	51	30.7	21.159	S	174.354	W	TONGA ISLANDS	18	5.5	87.792	192.946
532	29	20	16	27.3	24.381	S	67.062	W	CHILE-ARGENTINA BORDER REGION	172	4.5	56.986	291.528
533	29	22	57	01.1	59.620	S	26.160	W	SOUTH SANDWICH ISLANDS REGION	33	5.0	13.278	317.243
534	30	23	04	04.4	19.360	S	173.464	W	TONGA ISLANDS	9	5.3	89.512	193.924
535	31	04	16	34.2	14.690	S	74.349	W	PERU	39	4.5	68.386	287.840
536	31	10	39	29.3	22.639	S	66.211	W	JUJUY PROVINCE, ARGENTINA	259	4.3	58.362	293.087
537	31	13	36	16.6	27.971	S	66.855	W	CATAMARCA PROVINCE, ARGENTINA	158	4.4	53.559	290.236
538	31	17	10	35.1	15.838	S	166.426	E	VANUATU ISLANDS	16	6.1	93.539	174.885
539	31	20	39	44.8	21.207	S	174.287	W	TONGA ISLANDS	33	5.2	87.739	193.004
540	31	21	57	02.4	55.109	S	32.040	W	SOUTH GEORGIA ISLAND REGION	10	4.4	18.723	313.892
541	SEP 01	05	18	04.0	13.614	S	74.886	W	PERU	109	5.1	69.571	287.686
542	01	06	30	35.7	0.042	N	123.235	E	MINAHASSA PENINSULA	144	5.6	102.780	129.914
543	01	18	25	48.3	21.212	S	174.627	W	TONGA ISLANDS	30	4.9	87.759	192.688
544	03	07	31	41.2	15.896	S	72.159	W	SOUTHERN PERU	122	4.7	66.559	289.580
545	03	16	05	26.0	1.007	N	101.332	W	EAST CENTRAL PACIFIC OCEAN	10	5.1	92.001	267.338
546	04	04	19	51.9	15.152	S	167.415	E	VANUATU ISLANDS	124	5.4	94.250	175.820
547	04	07	21	47.3	17.852	S	178.151	W	FIJI ISLANDS REGION	571	4.6	91.329	189.606
548	05	01	10	32.1	40.418	S	72.118	W	CENTRAL CHILE	33	4.5	43.801	278.414
549	05	13	03	55.3	17.997	S	178.167	W	FIJI ISLANDS REGION	450	4.3	91.186	189.583
550	05	19	01	21.7	43.748	N	147.344	E	KURIL ISLANDS	49	5.1	150.478	142.832
551	06	22	07	26.5	23.306	S	170.713	E	LOYALTY ISLANDS REGION	33	4.9	86.167	179.055
552	07	12	55	03.6	24.854	S	70.571	W	NEAR COAST OF NORTHERN CHILE	56	4.6	57.641	287.772
553	07	13	16	44.9	38.973	N	144.408	E	OFF EAST COAST OF HONSHU, JAPAN	33	5.2	145.286	141.280
554	07	13	39	28.7	22.200	S	170.357	E	LOYALTY ISLANDS REGION	94	5.0	87.268	178.719
555	08	00	27	48.9	56.202	S	122.267	W	EASTER ISLAND CORDILLERA	10	4.8	44.968	226.095
556	08	01	15	28.3	56.222	S	122.419	W	EASTER ISLAND CORDILLERA	10	5.2	44.986	225.975
557	08	16	03	37.6	9.126	S	67.322	E	MID-INDIAN RISE	10	5.0	76.683	79.456
558	08	22	33	47.4	21.844	N	142.896	E	MARIANA ISLANDS REGION	269	4.6	128.345	145.267
559	09	00	31	39.9	49.425	S	164.260	E	AUCKLAND ISLANDS REGION	10	4.6	59.954	174.380
560	09	13	30	48.6	33.570	S	179.593	W	SOUTH OF KERMADEC ISLANDS	75	4.9	75.738	187.441

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561	SEP 09	17	38	15.9	34.164 S	179.020 E	SOUTH OF KERMADEC ISLANDS	229	4.6	75.200	186.224
562	09	19	49	48.8	20.767 S	174.068 W	TONGA ISLANDS	33	4.9	88.160	193.243
563	09	20	58	40.5	20.135 S	69.323 W	NORTHERN CHILE	75	5.6	61.680	290.878
564	09	22	15	28.5	16.746 S	71.832 W	SOUTHERN PERU	91	4.6	65.655	289.603
565	10	02	41	04.9	14.233 S	167.344 E	VANUATU ISLANDS	229	4.6	95.164	175.728
566	10	04	13	22.2	5.491 S	104.874 E	SOUTHERN SUMATERA	89	4.7	92.320	113.722
567	11	04	22	52.7	0.986 N	101.452 W	EAST CENTRAL PACIFIC OCEAN	10	5.4	92.021	267.218
568	12	08	40	43.1	23.749 S	71.089 W	OFF COAST OF NORTHERN CHILE	33	4.5	58.840	287.700
569	12	12	44	41.2	21.709 S	179.337 W	FIJI ISLANDS REGION	600	4.8	87.549	188.283
570	12	14	23	32.8	21.721 S	179.347 W	FIJI ISLANDS REGION	599	5.1	87.537	188.273
571	12	20	05	46.4	49.495 S	125.932 E	SOUTH OF AUSTRALIA	10	4.1	55.575	145.573
572	12	22	44	24.5	51.280 N	131.132 W	QUEEN CHARLOTTE ISLANDS REGION	10	4.6	148.044	263.119
573	13	04	07	25.5	15.223 S	174.501 W	TONGA ISLANDS	33	4.7	93.705	193.275
574	14	12	24	34.2	17.623 S	178.966 W	FIJI ISLANDS REGION	532	5.5	91.600	188.845
575	14	14	04	31.4	16.779 N	98.597 W	NEAR COAST OF GUERRERO, MEXICO	23	6.4	105.901	275.276
576	15	04	50	20.5	50.175 S	114.829 W	EASTER ISLAND CORDILLERA	10	4.4	48.516	235.169
577	15	15	56	39.8	27.745 S	71.356 W	NEAR COAST OF NORTHERN CHILE	29	4.8	55.193	285.755
578	15	20	53	06.7	51.233 N	179.206 E	RAT ISLANDS, ALEUTIAN ISLANDS	33	5.2	160.246	193.876
579	15	23	52	03.3	43.064 N	143.797 E	HOKKAIDO, JAPAN REGION	105	5.0	149.077	138.330
580	16	01	03	36.9	6.323 S	155.207 E	SOLOMON ISLANDS	151	5.9	102.305	163.205
581	16	03	40	50.5	31.127 S	178.872 W	KERMADEC ISLANDS REGION	129	5.2	78.141	188.199
582	17	01	53	59.8	40.209 N	142.445 E	NEAR EAST COAST OF HONSHU, JAP.	44	4.9	146.052	138.100
583	17	07	25	26.9	35.561 S	74.167 W	OFF COAST OF CENTRAL CHILE	7	5.9	48.888	279.173
584	17	17	09	20.6	17.093 S	66.707 E	MASCARENE ISLANDS REGION	8	5.6	69.000	81.661
585	18	20	22	13.9	20.642 S	178.544 W	FIJI ISLANDS REGION	617	5.1	88.572	189.078
586	19	01	26	20.2	33.350 N	93.603 E	QINGHAI PROVINCE, CHINA	19	4.9	125.105	88.723
587	19	03	31	53.9	21.194 S	68.672 W	CHILE-BOLIVIA BORDER REGION	112	5.7	60.481	291.136
588	19	03	41	46.0	18.793 N	62.534 W	LEEWARD ISLANDS	10	4.7	96.868	309.178
589	19	07	25	36.9	21.591 S	178.822 W	FIJI ISLANDS REGION	500	4.3	87.641	188.767
590	19	15	40	08.6	13.874 N	90.658 W	NEAR COAST OF GUATEMALA	63	5.1	100.567	281.669
591	19	21	05	51.3	41.138 N	142.199 E	HOKKAIDO, JAPAN REGION	58	5.4	146.884	137.285
592	19	22	52	23.1	39.698 S	174.168 E	NORTH ISLAND, NEW ZEALAND	216	5.6	69.788	181.990
593	20	00	29	13.8	24.959 S	179.859 E	SOUTH OF FIJI ISLANDS	500	4.4	84.347	187.385
594	20	06	49	34.3	21.260 S	174.318 W	TONGA ISLANDS	33	5.1	87.689	192.971
595	20	11	11	42.2	37.048 N	141.650 E	NEAR EAST COAST OF HONSHU, JAP.	56	4.6	142.845	138.604

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
596	SEP 20	14	34	25.7	30.946 S	179.989 E	KERMADEC ISLANDS REGION	425	4.8	78.372	187.213
597	20	22	17	23.9	23.353 S	170.605 E	LOYALTY ISLANDS REGION	36	5.2	86.119	178.956
598	20	23	45	32.1	23.424 S	170.358 E	LOYALTY ISLANDS REGION	33	4.4	86.047	178.729
599	21	04	36	24.8	31.036 S	71.382 W	NEAR COAST OF CENTRAL CHILE	61	4.4	52.146	284.230
600	21	05	17	36.6	20.238 S	169.146 E	VANUATU ISLANDS	38	4.9	89.212	177.568
601	21	08	19	53.5	63.684 S	172.804 E	BALLENY ISLANDS REGION	10	4.3	45.796	180.659
602	22	01	36	40.2	36.550 S	79.342 E	MID-INDIAN RISE	10	4.5	55.153	101.704
603	22	05	39	30.5	6.053 S	146.543 E	EAST PAPUA NEW GUINEA REGION	45	5.8	101.535	154.448
604	22	08	51	49.5	1.065 N	19.395 E	ZAIRE REPUBLIC	10	5.7	73.939	28.917
605	23	01	45	04.7	10.438 S	161.296 E	SOLOMON ISLANDS	36	5.3	98.689	169.628
606	23	02	34	12.8	5.968 S	146.635 E	EAST PAPUA NEW GUINEA REGION	27	5.8	101.632	154.528
607	23	16	05	49.6	5.561 S	104.062 E	SOUTHERN SUMATERA	45	5.9	92.006	112.973
608	23	20	56	04.1	24.328 S	128.003 W	SOUTH PACIFIC OCEAN	10	5.5	76.298	234.511
609	23	22	31	56.4	10.680 S	78.581 W	NEAR COAST OF PERU	59	6.0	73.515	285.085
610	24	01	17	51.9	10.650 S	78.390 W	NEAR COAST OF PERU	66	4.7	73.482	285.281
611	24	06	16	03.0	22.200 S	67.121 W	CHILE-BOLIVIA BORDER REGION	189	4.2	59.055	292.327
612	24	13	59	00.3	23.170 S	67.878 W	CHILE-ARGENTINA BORDER REGION	126	4.7	58.376	291.178
613	25	01	10	07.1	19.542 S	173.757 W	TONGA ISLANDS	33	5.4	89.354	193.634
614	25	09	13	28.2	4.703 S	130.493 E	BANDA SEA	42	5.6	99.915	138.234
615	25	17	04	49.3	1.120 N	19.424 E	ZAIRE REPUBLIC	10	5.5	73.997	28.938
616	26	01	49	42.1	15.133 S	173.436 W	TONGA ISLANDS	33	4.9	93.710	194.307
617	26	06	38	50.8	56.081 S	143.249 W	SOUTH PACIFIC CORDILLERA	10	4.8	49.427	211.366
618	26	07	14	37.5	41.819 N	143.334 E	HOKKAIDO, JAPAN REGION	33	5.8	147.787	138.414
619	26	18	24	12.9	13.098 S	166.997 E	VANUATU ISLANDS	186	5.6	96.286	175.359
620	26	22	32	37.4	26.432 S	177.525 W	SOUTH OF FIJI ISLANDS	158	5.1	82.750	189.671
621	27	02	05	21.4	14.773 S	167.074 E	VANUATU ISLANDS	79	5.2	94.619	175.480
622	27	08	21	45.9	11.388 S	77.602 W	NEAR COAST OF PERU	56	4.6	72.534	285.796
623	29	04	09	23.6	20.884 S	174.147 W	TONGA ISLANDS	33	4.9	88.050	193.160
624	29	13	29	24.3	56.066 S	24.158 W	SOUTH SANDWICH ISLANDS REGION	33	4.4	16.155	326.550
625	29	13	32	39.4	35.864 S	103.402 W	SOUTHERN PACIFIC OCEAN	10	4.7	58.203	251.929
626	30	10	47	58.1	50.829 N	157.341 E	KURIL ISLANDS	44	5.7	159.066	154.011
627	OCT 01	12	50	15.7	31.356 S	71.249 W	NEAR COAST OF CENTRAL CHILE	63	5.4	51.807	284.212
628	01	16	38	36.0	17.949 S	178.570 W	FIJI ISLANDS REGION	587	4.8	91.255	189.203
629	01	17	06	03.4	29.311 N	139.040 E	SOUTH OF HONSHU, JAPAN	430	5.5	134.815	138.485
630	01	17	53	53.0	58.767 S	25.128 W	SOUTH SANDWICH ISLANDS REGION	33	4.6	13.827	320.839

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631	OCT 01	18	14	52.8	56.545 S	158.332 E	MACQUARIE ISLANDS REGION	10	3.9	52.589	170.723
632	01	18	29	47.2	56.479 S	158.015 E	MACQUARIE ISLANDS REGION	10	4.5	52.638	170.495
633	01	21	43	14.9	60.418 S	50.221 W	SCOTIA SEA	103	4.3	19.643	279.986
634	01	23	29	58.0	22.250 S	138.745 W	TUAMOTU ARCHIPELAGO REGION	0	5.4	81.020	225.425
635	02	23	48	23.3	15.221 S	174.934 W	TONGA ISLANDS	33	5.5	93.739	192.858
636	03	01	00	20.8	13.865 S	171.299 W	SAMOA ISLANDS	38	4.9	94.781	196.485
637	03	01	51	23.9	2.750 S	77.881 W	PERU-ECUADOR BORDER REGION	24	6.5	80.781	288.356
638	03	01	57	03.5	2.614 S	77.777 W	PERU-ECUADOR BORDER REGION	33	5.6	80.877	288.499
639	03	02	33	53.8	2.597 S	77.763 W	PERU-ECUADOR BORDER REGION	33	5.1	80.889	288.518
640	03	02	46	37.7	14.882 S	175.110 W	SAMOA ISLANDS REGION	33	5.3	94.089	192.714
641	03	05	20	26.4	2.822 S	77.821 W	PERU-ECUADOR BORDER REGION	33	5.0	80.694	288.391
642	03	06	27	24.1	2.896 S	77.916 W	PERU-ECUADOR BORDER REGION	18	5.2	80.654	288.276
643	03	06	31	47.6	2.679 S	77.803 W	PERU-ECUADOR BORDER REGION	33	4.8	80.824	288.454
644	03	11	40	16.1	2.672 S	77.785 W	PERU-ECUADOR BORDER REGION	33	4.9	80.825	288.473
645	03	12	44	58.1	2.778 S	77.851 W	PERU-ECUADOR BORDER REGION	16	6.0	80.746	288.376
646	03	14	29	28.0	2.927 S	77.899 W	PERU-ECUADOR BORDER REGION	33	4.7	80.620	288.282
647	03	16	08	17.8	30.715 S	71.937 W	NEAR COAST OF CENTRAL CHILE	37	5.5	52.622	283.824
648	03	17	01	00.9	2.883 S	77.903 W	PERU-ECUADOR BORDER REGION	33	4.9	80.663	288.293
649	03	18	38	29.8	19.381 S	173.416 W	TONGA ISLANDS	33	5.2	89.487	193.968
650	04	01	55	43.3	36.281 S	100.546 W	SOUTHERN PACIFIC OCEAN	10	4.7	56.912	254.254
651	04	08	38	12.7	2.635 S	77.801 W	PERU-ECUADOR BORDER REGION	59	5.1	80.865	288.469
652	04	09	17	30.2	75.984 N	6.956 E	GREENLAND SEA	10	5.1	146.829	6.701
653	06	11	39	34.8	20.002 S	175.921 W	TONGA ISLANDS	197	5.8	89.053	191.571
654	07	21	28	03.1	2.775 S	77.823 W	PERU-ECUADOR BORDER REGION	12	5.8	80.740	288.404
655	07	23	43	33.6	29.193 N	141.569 E	SOUTH OF HONSHU, JAPAN	44	4.9	135.240	141.548
656	08	08	55	45.8	41.048 N	72.153 E	KIRGHIZ SSR	14	5.9	125.237	65.797
657	08	10	27	39.2	2.581 S	77.835 W	PERU-ECUADOR BORDER REGION	33	5.3	80.927	288.454
658	09	07	50	46.0	56.057 S	144.213 W	SOUTH PACIFIC CORDILLERA	10	5.4	49.615	210.701
659	09	09	01	02.9	54.778 S	152.805 E	WEST OF MACQUARIE ISLAND	10	4.3	53.986	166.601
660	09	09	47	48.0	32.442 S	71.503 W	NEAR COAST OF CENTRAL CHILE	82	4.8	50.885	283.430
661	09	13	43	41.3	21.474 S	170.176 E	LOYALTY ISLANDS REGION	104	5.7	87.990	178.545
662	09	15	35	53.9	19.055 N	104.205 W	NEAR COAST OF JALISCO, MEXICO	33	6.6	109.890	270.845
663	09	16	23	34.9	54.905 S	131.334 W	SOUTH PACIFIC CORDILLERA	10	4.7	48.219	220.335
664	10	00	43	55.6	32.320 S	179.515 W	SOUTH OF KERMADEC ISLANDS	111	4.6	76.981	187.575
665	10	02	17	20.5	14.795 N	146.746 E	MARIANA ISLANDS	33	5.2	122.105	151.236

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666	OCT 10	17	29	23.5	1.123	N	79.300	W	NEAR COAST OF ECUADOR	55	5.1	84.893	288.223
667	11	04	36	42.0	59.642	S	26.387	W	SOUTH SANDWICH ISLANDS REGION	33	4.4	13.310	316.753
668	12	02	35	30.9	22.558	S	66.207	W	JUJUY PROVINCE, ARGENTINA	235	4.6	58.437	293.123
669	12	05	18	09.7	55.715	S	29.480	W	SOUTH SANDWICH ISLANDS REGION	33	4.2	17.574	317.370
670	12	15	37	37.3	38.026	S	178.403	E	OFF E. COAST OF N. ISLAND, N.Z	10	4.7	71.366	185.535
671	12	22	57	10.0	23.010	S	70.466	W	NEAR COAST OF NORTHERN CHILE	32	5.3	59.335	288.621
672	12	23	41	45.4	35.288	S	106.266	W	EASTER ISLAND CORDILLERA	8	5.5	59.633	249.675
673	13	15	22	23.4	59.014	S	158.280	E	MACQUARIE ISLANDS REGION	14	5.6	50.126	171.000
674	14	08	00	50.0	25.758	S	177.522	W	SOUTH OF FIJI ISLANDS	147	5.8	83.421	189.716
675	14	20	44	57.5	6.435	S	154.556	E	SOLOMON ISLANDS	18	5.2	102.130	162.558
676	15	06	34	01.9	22.355	S	68.572	W	NORTHERN CHILE	110	4.6	59.358	290.792
677	16	16	36	19.4	23.258	S	70.471	W	NEAR COAST OF NORTHERN CHILE	27	5.4	59.104	288.518
678	16	16	44	20.2	23.382	S	70.624	W	NEAR COAST OF NORTHERN CHILE	29	5.0	59.036	288.315
679	18	09	30	38.5	36.430	N	70.387	E	HINDU KUSH REGION	222	5.5	120.448	66.421
680	18	10	37	26.4	27.929	N	130.175	E	RYUKYU ISLANDS	28	6.4	131.361	128.755
681	18	11	01	44.9	27.959	N	130.133	E	RYUKYU ISLANDS	33	5.3	131.378	128.696
682	18	13	40	48.8	27.909	N	130.127	E	RYUKYU ISLANDS	31	5.2	131.329	128.708
683	18	22	42	56.4	27.844	N	129.984	E	RYUKYU ISLANDS	31	5.4	131.230	128.573
684	18	23	25	58.8	28.203	N	130.211	E	RYUKYU ISLANDS	27	5.8	131.631	128.688
685	19	00	32	06.4	28.164	N	130.156	E	RYUKYU ISLANDS	33	5.9	131.580	128.642
686	19	02	41	36.2	28.094	N	130.148	E	RYUKYU ISLANDS	19	6.3	131.511	128.660
687	19	09	13	40.9	2.916	S	77.871	W	PERU-ECUADOR BORDER REGION	33	4.6	80.621	288.313
688	19	10	51	11.2	27.802	N	129.986	E	RYUKYU ISLANDS	28	5.2	131.190	128.591
689	20	01	06	37.6	56.623	S	26.698	W	SOUTH SANDWICH ISLANDS REGION	33	4.7	16.132	321.090
690	20	04	13	57.2	28.108	N	130.095	E	RYUKYU ISLANDS	25	5.0	131.511	128.595
691	20	05	15	17.7	44.753	N	146.908	E	KURIL ISLANDS	33	4.8	151.354	141.633
692	20	07	49	32.2	42.469	N	131.798	E	E. USSR-N.E. CHINA BORDER REG.	514	4.8	145.511	123.357
693	20	19	21	28.8	18.708	N	145.544	E	MARIANA ISLANDS	224	5.3	125.751	149.064
694	21	00	34	06.8	55.118	S	146.410	E	WEST OF MACQUARIE ISLAND	10	5.2	53.078	162.149
695	21	01	47	08.7	27.976	S	67.100	W	CATAMARCA PROVINCE, ARGENTINA	176	4.9	53.631	289.982
696	21	02	38	57.1	16.840	N	93.469	W	CHIAPAS, MEXICO	159	6.3	104.269	280.077
697	21	16	04	38.2	8.452	N	82.950	W	PANAMA-COSTA RICA BORDER REGION	33	4.7	92.978	287.089
698	21	18	52	47.7	5.037	S	153.318	E	NEW IRELAND REGION	33	5.4	103.388	161.157
699	22	09	26	49.2	31.072	S	178.941	W	KERMADEC ISLANDS REGION	326	4.5	78.199	188.142
700	22	19	54	47.8	6.404	S	98.668	E	SOUTHWEST OF SUMATERA	33	5.2	89.530	108.140

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701	OCT 22	21	33	12.5	27.803	N	129.965	E	RYUKYU ISLANDS	31	5.0	131.186	128.567
702	23	00	42	10.9	2.802	S	77.796	W	PERU-ECUADOR BORDER REGION	33	4.8	80.705	288.421
703	23	03	58	08.6	14.281	S	167.294	E	VANUATU ISLANDS	199	5.5	95.115	175.680
704	23	11	32	05.0	18.457	S	176.747	W	FIJI ISLANDS REGION	316	5.0	90.644	190.899
705	23	22	46	50.8	26.003	N	102.227	E	SICHUAN PROVINCE, CHINA	10	5.8	121.173	100.331
706	24	09	25	33.1	56.297	S	26.558	W	SOUTH SANDWICH ISLANDS REGION	33	4.7	16.406	321.782
707	24	10	32	33.3	3.467	N	84.724	W	OFF COAST OF CENTRAL AMERICA	33	4.8	88.841	283.821
708	24	19	04	06.0	26.399	S	177.557	W	SOUTH OF FIJI ISLANDS	214	4.3	82.785	189.645
709	24	23	37	11.4	33.316	S	179.467	W	SOUTH OF KERMADEC ISLANDS	57	4.4	75.985	187.563
710	25	05	21	50.7	19.128	S	173.160	W	TONGA ISLANDS	33	5.3	89.718	194.230
711	25	22	01	29.1	16.815	S	173.965	E	FIJI ISLANDS REGION	50	5.0	92.630	182.128
712	26	00	22	06.4	17.217	S	173.849	E	FIJI ISLANDS REGION	74	4.9	92.231	182.012
713	26	06	49	04.8	55.763	S	26.837	W	SOUTH SANDWICH ISLANDS REGION	33	4.8	16.960	321.957
714	26	13	44	28.4	23.962	S	179.879	E	SOUTH OF FIJI ISLANDS	517	4.8	85.340	187.450
715	26	14	29	43.1	28.384	S	178.004	W	KERMADEC ISLANDS REGION	162	4.3	80.832	189.123
716	26	23	55	52.9	23.499	S	179.940	W	SOUTH OF FIJI ISLANDS	540	4.8	85.793	187.638
717	27	08	56	28.3	37.725	S	49.827	E	ATLANTIC-INDIAN RISE	10	4.7	44.372	74.109
718	27	09	02	13.1	38.795	S	49.137	E	ATLANTIC-INDIAN RISE	10	4.8	43.174	74.019
719	27	09	03	16.2	37.784	S	49.884	E	ATLANTIC-INDIAN RISE	10	5.2	44.336	74.202
720	27	21	59	58.2	21.891	S	138.983	W	TUAMOTU ARCHIPELAGO REGION	0	5.4	81.422	225.301
721	28	06	09	52.0	2.073	S	80.258	W	NEAR COAST OF ECUADOR	33	4.5	82.176	286.293
722	28	14	38	19.5	6.227	S	154.966	E	SOLOMON ISLANDS	38	5.3	102.377	162.952
723	28	18	05	35.9	24.954	S	70.635	W	NEAR COAST OF NORTHERN CHILE	33	5.0	57.568	287.667
724	28	18	38	45.4	26.332	S	27.548	E	REPUBLIC OF SOUTH AFRICA	5	4.7	48.793	44.272
725	28	19	20	37.3	23.116	S	169.751	E	LOYALTY ISLANDS REGION	33	4.6	86.348	178.168
726	29	05	28	48.5	2.701	S	77.833	W	PERU-ECUADOR BORDER REGION	33	4.9	80.813	288.418
727	29	06	27	19.8	39.589	N	51.875	E	CASPIAN SEA	33	5.4	118.202	49.474
728	29	18	55	40.4	0.824	N	125.975	E	MOLUCCA PASSAGE	52	5.5	104.219	132.440
729	29	19	24	33.6	0.858	N	125.886	E	MOLUCCA PASSAGE	68	6.1	104.230	132.342
730	29	19	40	57.9	21.793	S	179.387	W	FIJI ISLANDS REGION	618	5.7	87.468	188.232
731	31	01	55	57.4	28.939	S	71.390	W	NEAR COAST OF CENTRAL CHILE	33	5.2	54.093	285.191
732	NOV 01	00	35	32.7	28.906	S	71.417	W	NEAR COAST OF CENTRAL CHILE	19	6.3	54.133	285.178
733	01	01	12	09.8	28.947	S	71.348	W	NEAR COAST OF CENTRAL CHILE	33	5.3	54.072	285.230
734	01	08	51	19.2	60.573	S	52.458	W	SOUTH SHETLAND ISLANDS	46	4.5	20.262	277.265
735	01	09	42	14.7	25.745	S	176.321	W	SOUTH OF FIJI ISLANDS	100	4.7	83.363	190.803

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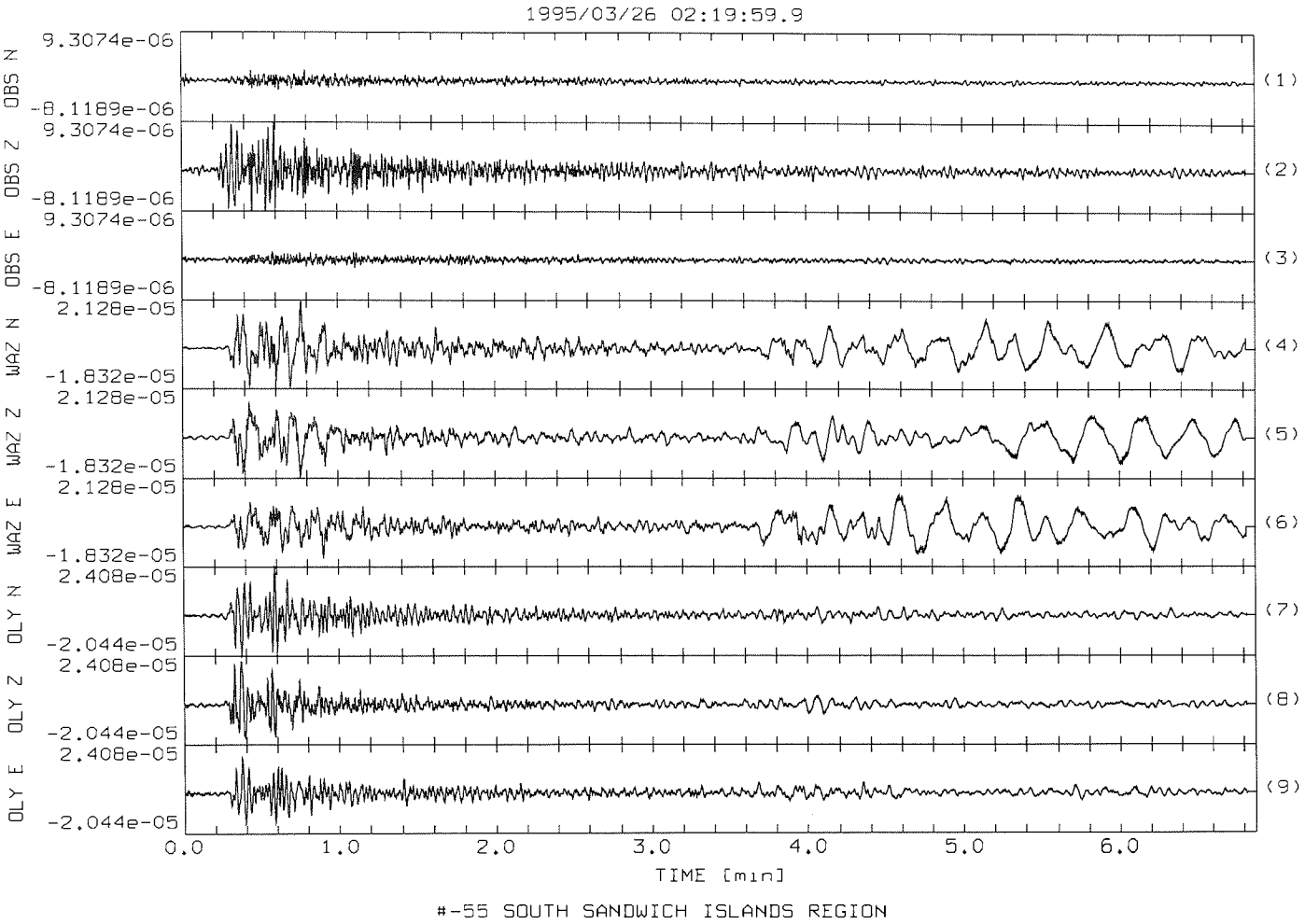
736	NOV 01	09	35	57.1	28.179 N	130.052 E	RYUKYU ISLANDS	33	5.5	131.567	128.519
737	01	12	29	26.7	42.942 N	80.307 E	KIRGHIZ-XINJIANG BORDER REGION	20	5.4	129.486	71.758
738	02	05	40	37.3	35.512 S	103.922 W	SOUTHERN PACIFIC OCEAN	10	4.6	58.691	251.632
739	02	16	08	41.0	9.789 S	159.701 E	SOLOMON ISLANDS	12	5.6	99.232	168.002
740	02	17	17	21.3	17.735 S	173.492 W	TONGA ISLANDS	33	4.8	91.129	194.034
741	02	18	19	16.1	27.887 S	175.813 W	KERMADEC ISLANDS REGION	19	4.5	81.199	191.107
742	05	16	29	58.3	4.920 S	103.220 E	SOUTHERN SUMATERA	36	6.4	92.356	111.979
743	06	04	31	43.6	55.284 S	29.240 W	SOUTH SANDWICH ISLANDS REGION	33	5.3	17.917	318.337
744	07	04	04	24.0	2.357 S	77.676 W	PERU-ECUADOR BORDER REGION	33	5.2	81.089	288.678
745	07	13	16	59.4	18.132 S	178.321 W	FIJI ISLANDS REGION	626	4.9	91.060	189.429
746	07	13	55	35.9	24.527 S	176.400 W	SOUTH OF FIJI ISLANDS	33	5.6	84.581	190.815
747	08	07	14	18.6	1.833 N	95.050 E	OFF W COAST OF NORTHERN SUMATE	33	6.2	96.148	102.082
748	08	08	20	04.5	18.925 S	178.027 W	FIJI ISLANDS REGION	439	4.6	90.254	189.661
749	08	16	01	19.2	1.290 N	121.678 E	MINAHASSA PENINSULA	19	5.5	103.580	128.042
750	13	02	17	51.1	3.588 N	126.647 E	TALAUD ISLANDS	33	5.9	107.055	132.416
751	13	07	38	42.6	15.114 S	173.473 W	TONGA ISLANDS	10	5.8	93.732	194.273
752	13	07	54	38.9	14.993 S	173.502 W	SAMOA ISLANDS REGION	33	5.3	93.854	194.255
753	13	08	43	14.6	56.100 N	114.495 E	EAST OF LAKE BAIKAL	21	5.9	152.006	91.355
754	13	12	36	53.5	2.940 N	79.414 W	SOUTH OF PANAMA	10	5.3	86.648	288.685
755	13	21	59	57.4	21.103 S	179.069 W	FIJI ISLANDS REGION	600	4.5	88.140	188.564
756	14	04	01	46.2	6.143 S	150.759 E	NEW BRITAIN REGION	33	5.6	102.002	158.697
757	15	09	51	06.0	19.330 S	69.352 W	NORTHERN CHILE	125	4.6	62.447	291.148
758	15	10	24	30.8	4.871 S	153.348 E	NEW IRELAND REGION	37	5.6	103.556	161.169
759	18	22	25	21.5	59.026 S	25.606 W	SOUTH SANDWICH ISLANDS REGION	33	4.7	13.692	319.442
760	19	12	44	01.1	17.141 S	179.126 W	FIJI ISLANDS REGION	550	4.1	92.089	188.718
761	19	22	35	56.9	53.704 N	161.682 E	OFF EAST COAST OF KAMCHATKA	33	5.0	162.440	160.041
762	20	00	52	43.6	24.742 S	175.946 W	SOUTH OF TONGA ISLANDS	33	5.4	84.338	191.213
763	20	01	58	25.2	59.858 S	26.384 W	SOUTH SANDWICH ISLANDS REGION	33	4.1	13.116	316.331
764	20	15	48	40.0	60.687 S	24.811 W	SOUTH SANDWICH ISLANDS REGION	33	4.7	12.020	317.795
765	21	18	17	04.7	33.234 S	71.947 W	NEAR COAST OF CENTRAL CHILE	41	5.1	50.299	282.590
766	21	19	13	30.7	33.274 S	71.903 W	NEAR COAST OF CENTRAL CHILE	51	4.7	50.248	282.614
767	22	00	52	41.2	20.716 S	66.608 W	SOUTHERN BOLIVIA	244	4.2	60.296	293.413
768	23	04	41	46.8	41.344 N	142.493 E	HOKKAIDO, JAPAN REGION	63	5.1	147.147	137.559
769	23	11	02	14.4	41.300 N	140.058 E	HOKKAIDO, JAPAN REGION	46	4.8	146.544	134.405
770	23	14	13	12.4	40.287 N	143.274 E	OFF EAST COAST OF HONSHU, JAPAN	24	5.2	146.308	139.147

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
771	NOV 24	06	18	56.5	42.984 S	171.793 E	SOUTH ISLAND, NEW ZEALAND	10	5.6	66.517	180.042
772	29	18	40	36.7	16.959 S	176.275 W	FIJI ISLANDS REGION	369	5.1	92.104	191.447
773	29	23	32	40.4	20.340 S	177.595 W	FIJI ISLANDS REGION	341	4.8	88.821	189.982
774	30	13	15	35.5	27.750 S	70.933 W	NEAR COAST OF NORTHERN CHILE	19	5.5	55.053	286.179
775	30	15	09	22.5	44.277 N	145.619 E	HOKKAIDO, JAPAN REGION	136	5.9	150.629	140.110
776	30	18	00	30.1	5.970 S	81.702 W	NEAR COAST OF NORTHERN PERU	33	4.9	78.961	283.646
777	30	23	37	36.4	44.473 N	149.342 E	KURIL ISLANDS	23	5.9	151.565	145.274
778	DEC 02	17	13	18.6	44.505 N	149.237 E	KURIL ISLANDS	18	6.0	151.576	145.104
779	03	18	01	09.0	44.663 N	149.300 E	KURIL ISLANDS	33	6.6	151.740	145.107
780	03	18	10	32.3	44.452 N	149.314 E	KURIL ISLANDS	33	5.8	151.539	145.245
781	03	18	14	28.4	44.956 N	150.674 E	KURIL ISLANDS REGION	33	6.4	152.277	146.946
782	03	19	24	25.0	44.764 N	149.416 E	KURIL ISLANDS	33	5.0	151.859	145.218
783	03	19	31	22.6	44.305 N	149.851 E	KURIL ISLANDS	33	5.7	151.498	146.101
784	03	19	41	45.2	44.690 N	150.309 E	KURIL ISLANDS REGION	33	5.9	151.954	146.557
785	03	19	54	18.7	44.457 N	149.722 E	KURIL ISLANDS	33	5.7	151.621	145.831
786	03	20	07	19.8	44.791 N	149.640 E	KURIL ISLANDS	33	5.5	151.928	145.528
787	03	20	37	50.6	44.366 N	150.189 E	KURIL ISLANDS REGION	33	5.4	151.619	146.557
788	03	20	43	21.7	44.617 N	150.390 E	KURIL ISLANDS REGION	33	5.4	151.898	146.715
789	03	20	56	22.0	44.381 N	149.397 E	KURIL ISLANDS	33	5.0	151.486	145.404
790	03	21	21	19.7	31.958 S	179.715 W	KERMADEC ISLANDS REGION	219	4.8	77.351	187.420
791	03	21	38	38.8	44.727 N	150.033 E	KURIL ISLANDS REGION	33	6.0	151.939	146.135
792	03	22	21	51.8	44.322 N	149.664 E	KURIL ISLANDS	33	4.0	151.479	145.821
793	04	15	38	47.0	33.812 S	179.503 W	SOUTH OF KERMADEC ISLANDS	100	5.1	75.492	187.505
794	06	00	55	23.2	56.005 S	27.810 W	SOUTH SANDWICH ISLANDS REGION	124	5.4	16.939	319.906
795	06	23	17	21.1	44.259 N	149.365 E	KURIL ISLANDS	33	5.6	151.363	145.424
796	07	02	44	14.3	44.364 N	149.313 E	KURIL ISLANDS	33	5.3	151.454	145.292
797	10	22	23	12.4	44.351 N	149.742 E	KURIL ISLANDS	16	5.7	151.522	145.918
798	10	22	48	08.3	44.231 N	149.801 E	KURIL ISLANDS	33	5.7	151.417	146.068
799	10	23	46	59.7	21.513 S	178.077 W	FIJI ISLANDS REGION	412	6.0	87.680	189.463
800	11	17	54	39.4	6.224 S	26.714 E	ZAIRE REPUBLIC	10	5.5	68.135	37.932
801	12	10	12	41.3	27.070 S	177.875 W	KERMADEC ISLANDS REGION	201	4.7	82.134	189.318
802	14	06	32	15.4	34.762 S	179.388 W	SOUTH OF KERMADEC ISLANDS	33	5.0	74.540	187.552
803	19	23	28	12.2	3.703 S	140.233 E	WEST IRIAN	63	6.1	102.835	147.726
804	22	13	40	38.2	61.390 S	153.992 E	BALLENY ISLANDS REGION	10	4.3	47.510	168.559
805	22	22	54	19.1	15.793 S	69.133 W	PERU-BOLIVIA BORDER REGION	245	4.9	65.718	292.633

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude		Longitude		Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
806	DEC 24	14	11	54.7	54.348	S	0.755	W	BOUVET ISLAND REGION	10	4.5	16.673	15.430
807	25	03	06	32.0	28.148	S	176.794	W	KERMADEC ISLANDS REGION	14	5.6	80.999	190.215
808	25	04	43	24.5	6.903	S	129.151	E	BANDA SEA	141	6.3	97.478	137.414
809	26	12	20	15.2	30.358	S	178.306	W	KERMADEC ISLANDS	50	4.7	78.880	188.738
810	26	12	25	50.0	21.941	S	174.237	W	TONGA ISLANDS	33	5.2	87.006	192.992
811	27	15	21	20.1	57.283	S	25.510	W	SOUTH SANDWICH ISLANDS REGION	33	5.3	15.275	322.395
812	29	13	01	40.4	9.944	N	70.106	W	VENEZUELA	33	5.5	90.479	299.626
813	30	12	17	37.0	40.745	N	143.232	E	OFF EAST COAST OF HONSHU, JAPAN	33	5.7	146.738	138.855
814	31	10	11	19.9	59.382	S	25.837	W	SOUTH SANDWICH ISLANDS REGION	33	4.8	13.420	318.336
815	31	14	57	23.3	33.392	S	178.700	W	SOUTH OF KERMADEC ISLANDS	33	4.7	75.875	188.218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OBS E
WAZ N
WAZ Z
WAZ E
OLY N
OLY Z
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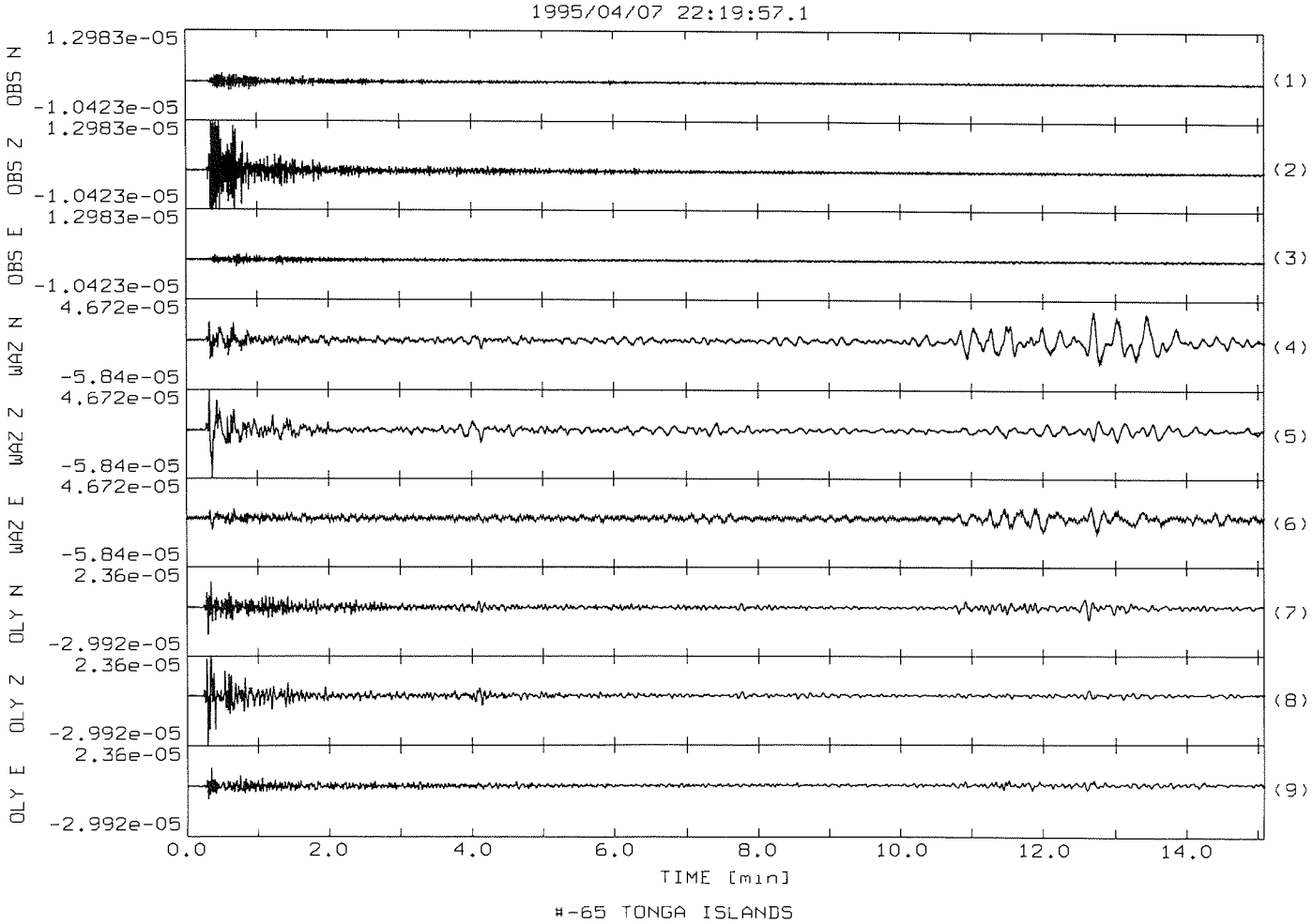
#-55 SOUTH SANDWICH ISLANDS REGION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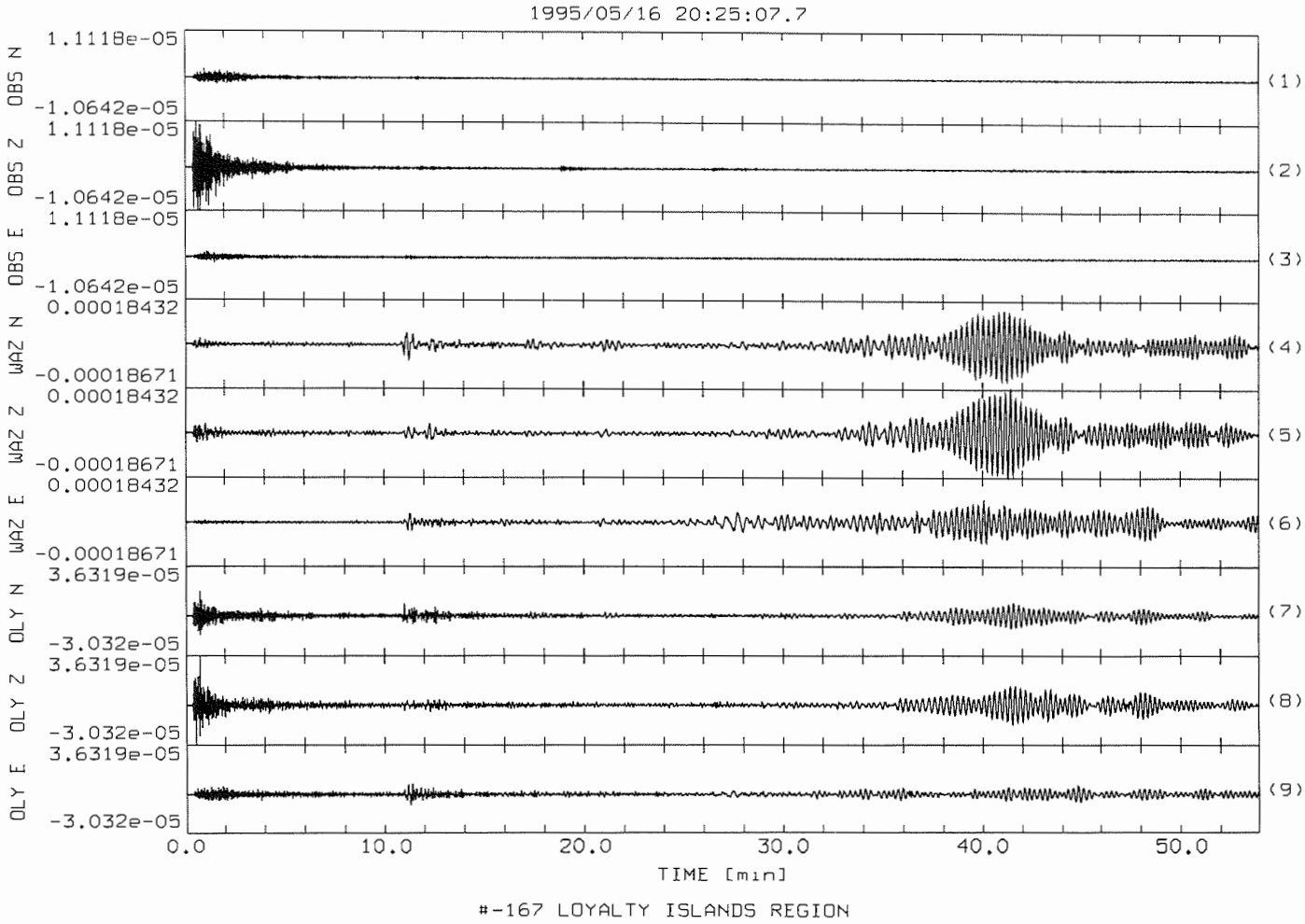
#-65 TONGA ISLANDS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WAZ E
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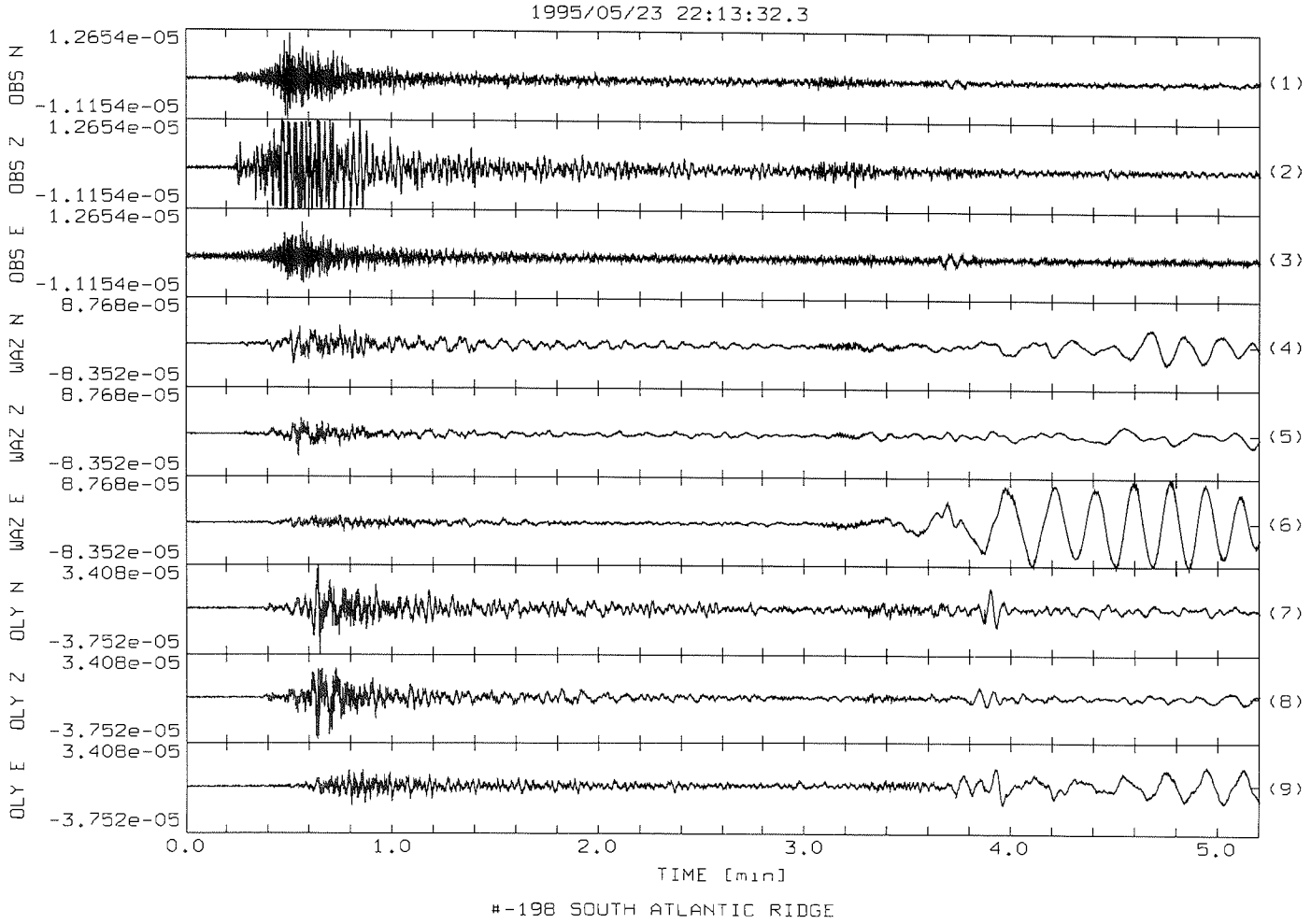
#-167 LOYALTY ISLANDS REGION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OLY Z
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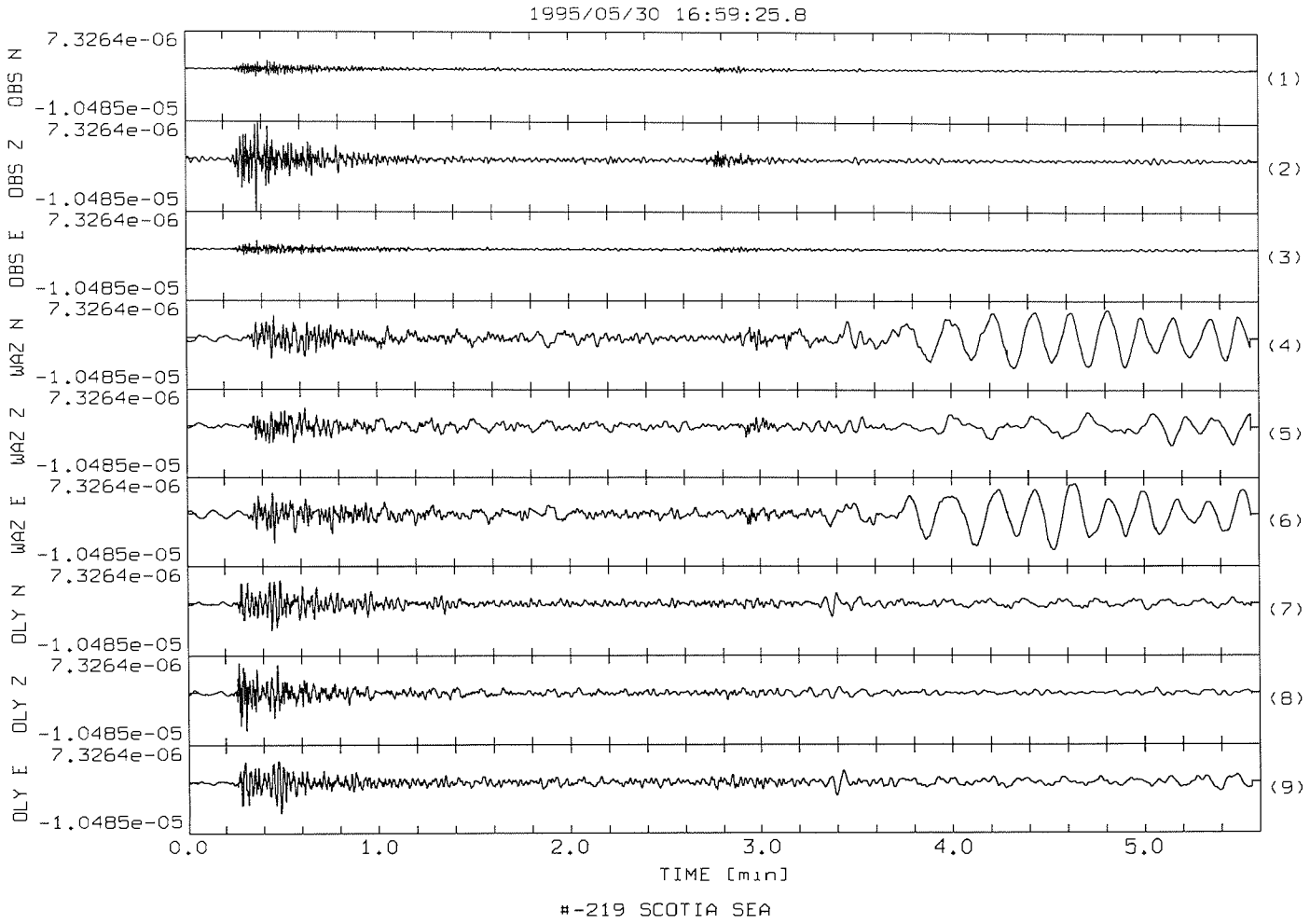
#-198 SOUTH ATLANTIC RIDGE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WAZ E
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OLY Z
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(6)
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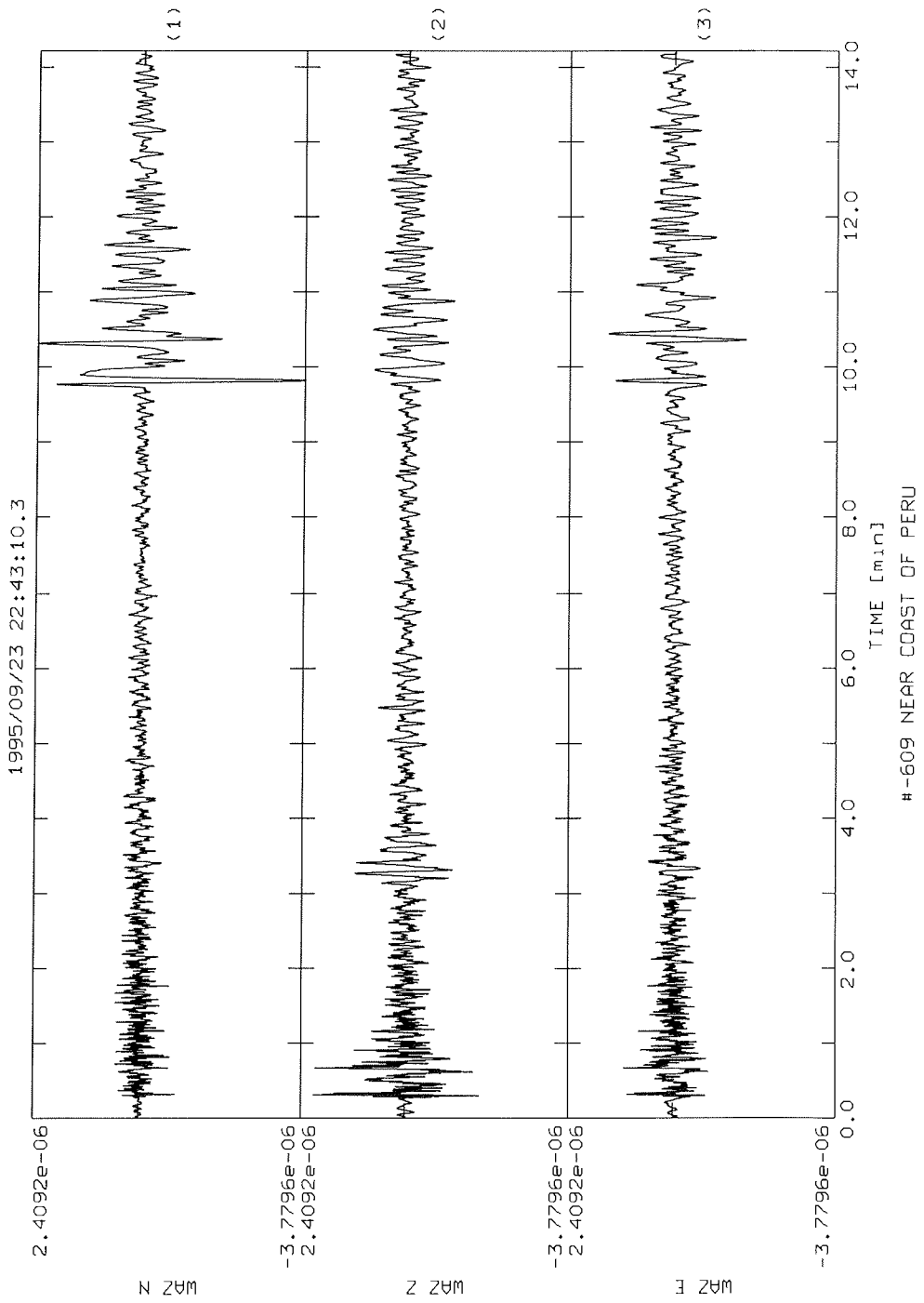
#-219 SCOTIA SEA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WAZ Z
WAZ E
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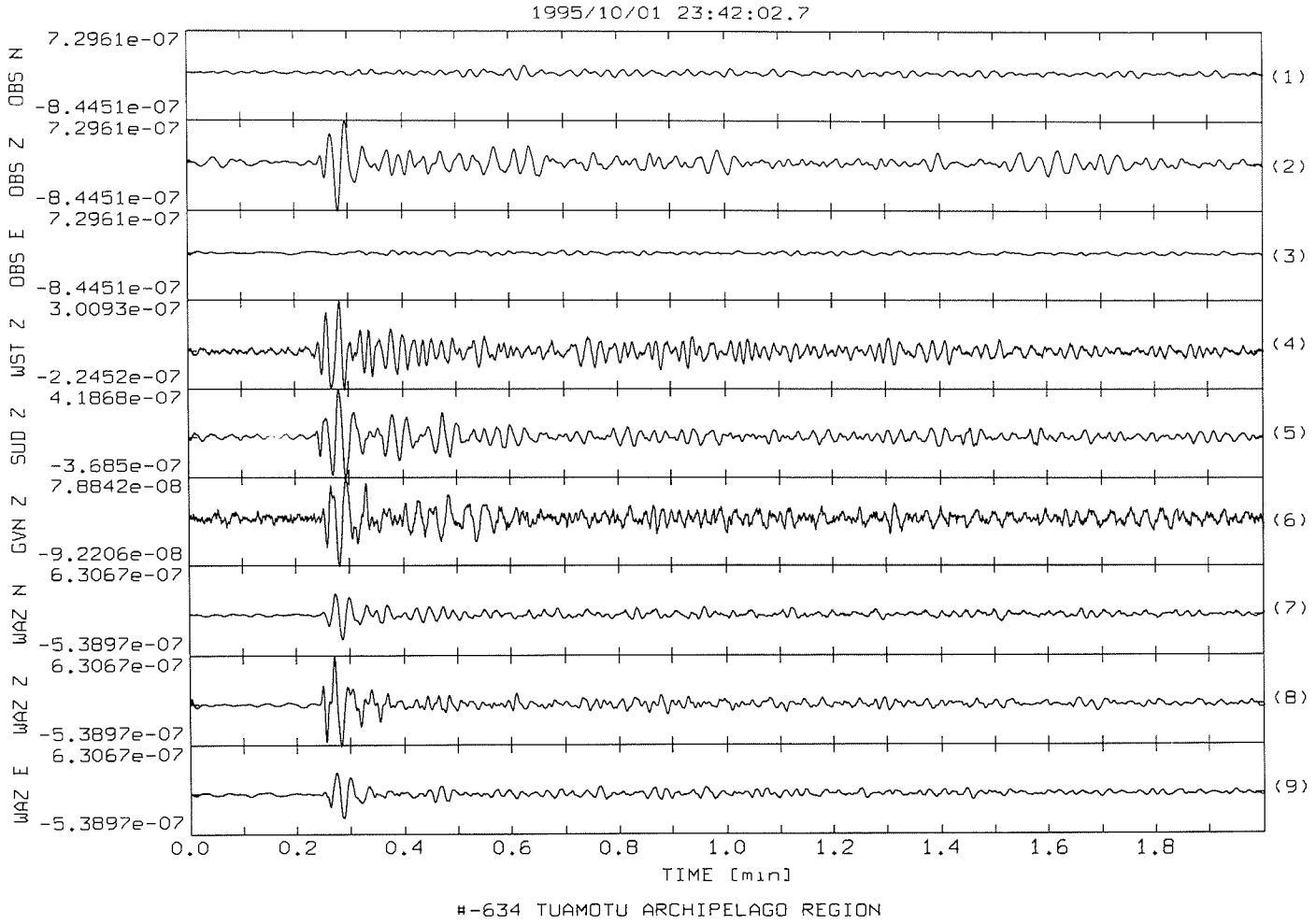
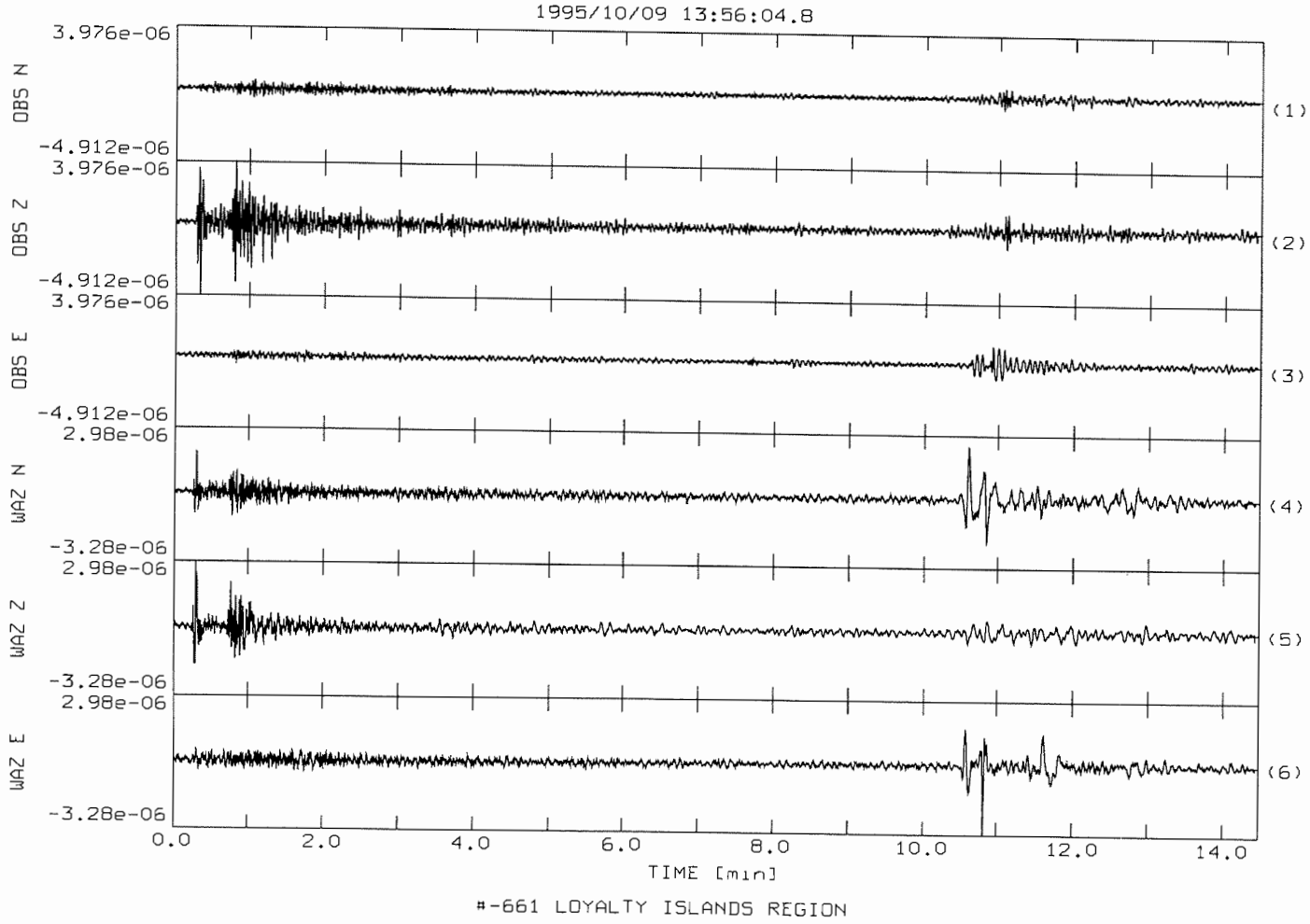
#-609 NEAR COAST OF PERU



#-634 TUAMOTU ARCHIPELAGO REGION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(3)
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(6)
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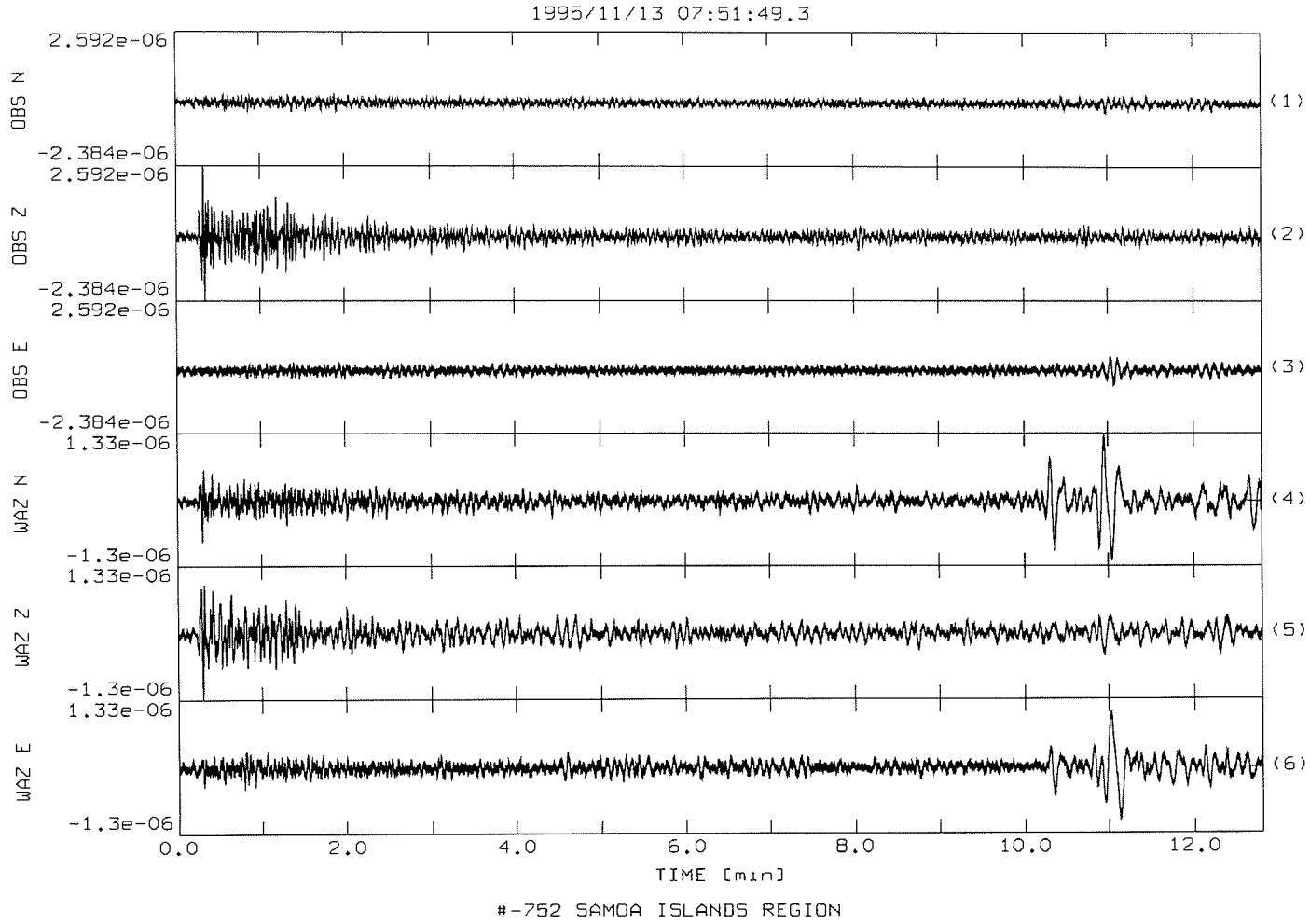
#-661 LOYALTY ISLANDS REGION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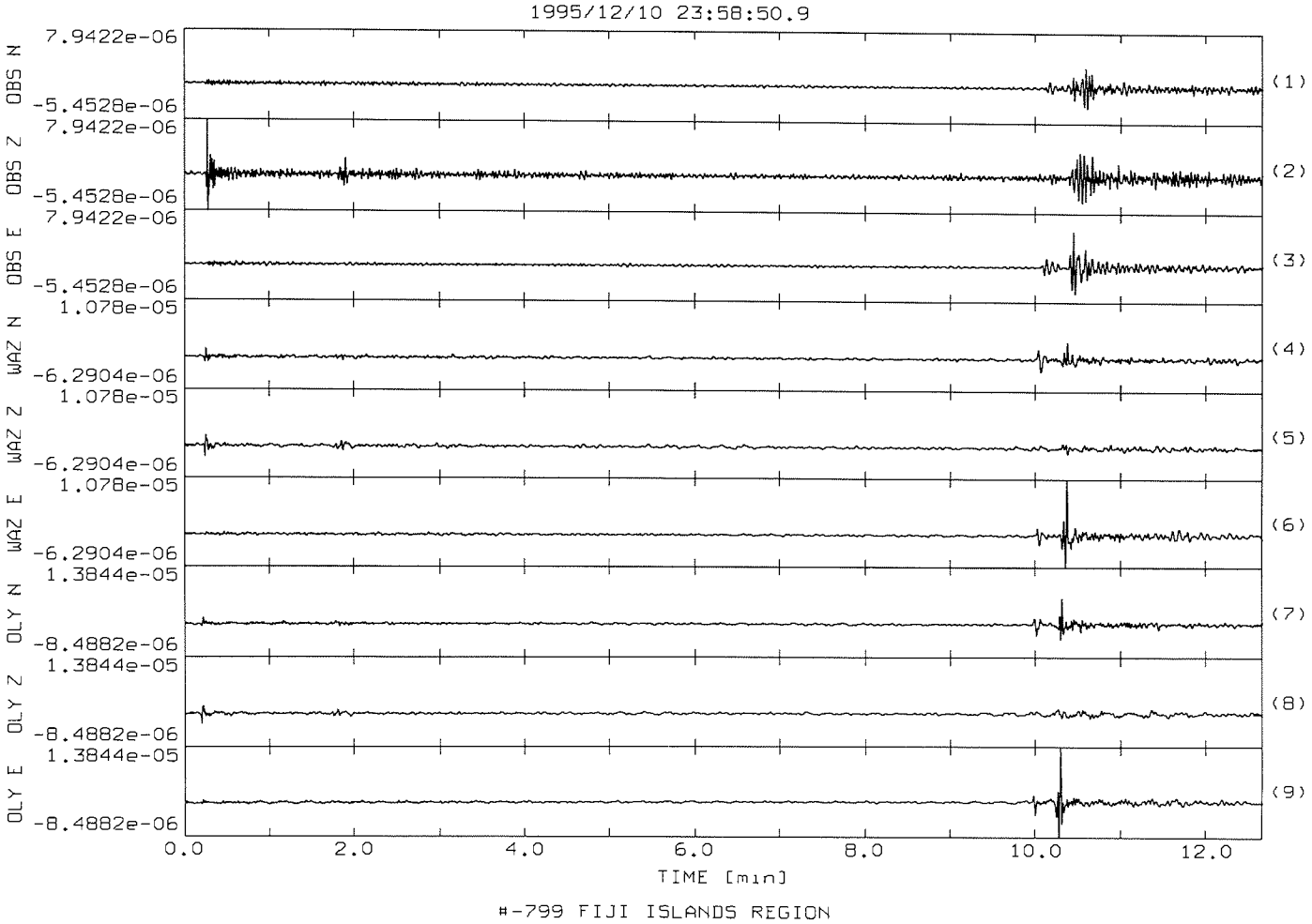
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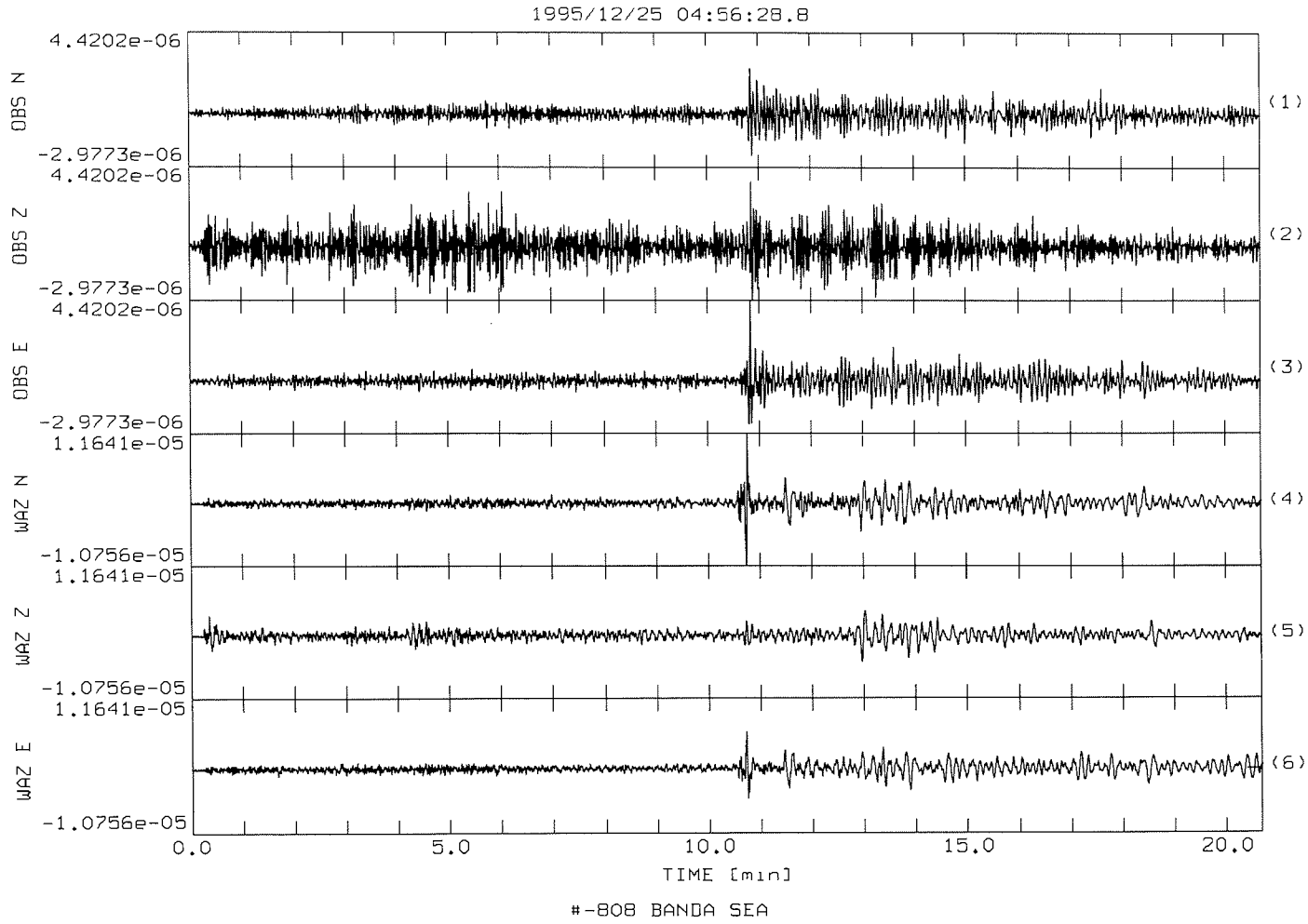
#-799 FIJI ISLANDS REGION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TIME [min]
#-808 BANDA SEA

Appendix

C

Seismological Data 1996

Date (1996)	Onset Time h	m	s		Phase	No.		Date (1996)	Onset Time h	m	s		Phase	No.	
JAN 01	01	47	08	e	P	1		JAN	01	24	41	e	Sn		
01	08	23	10	e	PKiKP?	2			01	34	22	e	T		
01	08	35	09	e	?			24	08	20	17	e	?		
01	09	51	33	e	P	3		24	20	31	54	e	?		
01	10	18	34	e	PKPab	4		24	20	32	02	e	?		
01	10	23	36	e	?			26	07	33	12	e	?		
02	04	12	57	e	?			27	18	48	48.8	-i	?		D
03	05	00	08	e	?			27	19	00	36	e	?		
03	09	42	36	e	P	5		27	21	42	17	e	P	28	
04	20	10	20	e	PKPab	6		28	01	49	23	e	?		
04	23	37	25.7	+i	Pn	7	D	30	07	37	26	e	?		
	23	37	36	e	pP			30	09	00	06	e	?		
	23	42	12	e	PcP			30	14	08	31.8	+i	P	29	
	23	45	37	e	ScP			30	14	24	50.3	-i	?		
04	23	54	43	e	?			30	22	12	03.2	+i	P	30	
06	05	20	38	e	P	8		30	22	41	46.4	-i	P	31	
06	06	35	00	e	Pn	9		30	23	24	25	e	?		
06	15	47	53	e	PKPdf	10		31	15	00	26.8	+i	?		
08	10	25	20.6	-i	PKPab	11	D	31	20	50	35	e	PKPdf	32	
	10	25	35	e	sPKPab			FEB 01	07	36	29	e	?		
	10	25	47	e	?			01	07	37	24	e	PKPdf	33	
	10	28	59	e	PP			03	11	33	13.9	-i	PKPdf	34	D
09	15	37	19	e	P	12			11	33	17	e	pPdiff		
10	22	52	52	e	?			03	20	10	09	e	?		
10	22	53	45	e	?			04	00	00	10	e	P	35	
11	04	09	06	e	PP?	13		04	12	17	10.8	-i	?	36	D
11	07	39	05	e	PKPdf	14		04	15	09	57	e	?		
12	02	30	13.3	+i	P	15	D	04	23	08	59.8	-i	P	37	D
	02	30	15	e	PcP				23	12	06	e	PP		
	02	40	26	e	SKSac			04	23	27	35.5	+i	P	38	D
12	07	12	35.4	+i	?		D		23	27	46	e	sP		
12	11	14	49	e	?			04	23	46	44.6	+i	P	39	D
13	00	20	21.6	+i	P	16	D		23	46	55	e	PcP		
	00	20	34	e	sP				23	56	20	e	S		
13	16	59	24	e	?				23	56	56	e	ScS		
13	17	13	14	e	?			05	18	49	36.4	+i	Pn	40	D
14	06	48	11.5	+i	PKPdf	17	D		18	54	13	e	PcP		
	06	48	21	e	pPKiKP			06	03	20	51	e	?		
	06	54	54	e	SKSdf			06	05	40	31	e	P	41	
14	13	36	18.0	+i	P	18	D	07	02	22	54	e	?		
	13	36	22	e	PcP			07	21	56	35.5	-i	PKPdf	42	D
	13	39	39	e	PKiKP				21	56	43	e	PKiKP		
	13	46	27	e	SkSac				22	00	16	e	SKPdf		
16	02	23	38.1	+i	Pn	19	D		22	03	38	e	SKSdf		
16	05	27	52.5	-i	P	20	D	07	22	07	13	e	?		
	05	29	16	e	pP			07	23	13	51	e	sPKPdf	43	
17	10	20	32	e	Pdiff	21		08	02	52	53	e	?		
	10	24	25	e	PP?			08	03	04	04	e	?		
18	03	19	26.7	-i	P	22	D	08	04	26	44	e	?		
18	20	11	09.4	+i	P	23	D	08	15	57	01.8	-i	?		
19	19	13	31.7	+i	P	24	D	08	23	42	04	e	?		
	19	13	43	e	pP			10	07	40	11	e	?		
20	04	06	26.6	+i	P	25	D	10	12	21	58	e	P	44	
21	00	30	14.7	-i	?			11	09	48	42.1	-i	PKPdf	45	D
22	23	22	49.2	+i	Pn	26	D		09	48	53	e	pPKPdf		
	23	24	57	e	Sn				09	49	11	e	pPKPab		
	23	34	15	e	T			11	14	22	44	e	?		
23	01	22	33.7	-i	Pn	27	D	12	03	18	46.8	+i	PKPdf	46	
	01	22	44	e	sPn?			12	05	22	10.9	-i	?		D

Date (1996)	Onset Time h	m	s		Phase	No.		Date (1996)	Onset Time h	m	s		Phase	No.	
FEB 12	05	22	23.0	+i	P	47	D	FEB 25	04	29	54	e	P	65	
12	09	21	14	e	P	48		27	18	16	19	e	P	66	
13	19	15	11	e	?			27	21	29	00	e	?		
14	19	56	37	e	?			27	21	38	29	e	?		
14	20	43	15	e	?			28	10	02	24	e	PKiKP	67	
14	20	50	52.1	+i	PKPdf	49	D	28	10	09	08	e	P	68	
	20	50	58	e	PKPbc			MAR 01	02	37	23	e	P	69	
	20	51	04	e	pPKPdf				02	37	32	e	pP		
	20	51	09	e	PKPab			02	12	54	12	e	?		
	20	51	23	e	sPKPdf			02	13	03	12	e	?		
	20	52	09	e	SKPdf			02	13	09	20	e	?		
	20	58	10	e	SKSdf			05	15	11	34	e	PKPdf	70	
14	21	45	56.0	-i	PKPdf	50	D	05	18	55	21	e	?		D
16	09	53	35	e	?			06	01	47	51.5	-i	P	71	D
16	09	56	06.3	+i	P	51	D	06	06	24	08	e	?		
	09	56	10	e	pP			06	08	40	07	e	P	72	
	09	56	32	e	PcP			07	08	48	53	e	P	73	
16	11	47	51	e	P	52		08	04	09	30	e	?		
16	15	42	25	e	PKPdf	53		08	05	49	26	e	?		
17	06	13	42	e	Pdiff	54		08	08	13	27	e	Pn	74	D
	06	17	12	e	PKiKP?			09	04	50	04.7	-i	P	75	D
17	06	29	40	e	?				04	50	12	e	PcP		
17	14	39	55	e	PKiKP	55			04	50	13	e	pP		
17	19	19	32	e	?			09	16	35	26	e	PKPdf	76	
18	02	44	10	e	?				16	35	42	e	pPKPbc		
19	00	00	39.2	+i	P	56	D	10	09	07	23.7	+i	P	77	D
	00	00	44	e	sP				09	07	34	e	pP		
19	02	39	43.2	+i	P	57	D	11	12	03	50	e	P	78	
	02	39	47	e	pP			16	22	22	32	e	PKPdf	79	
	02	40	08	e	PcP				22	25	16	e	PP		
	02	49	45	e	SKS			17	15	02	01	e	P	80	
19	07	18	11.8	-i	P	58	D	20	13	00	11	e	P	81	
	07	18	22	e	pP			22	03	44	10	e	PKPdf	82	
	07	18	26	e	sP			22	17	42	41	e	P	83	D
	07	19	53	e	PP			22	18	53	39	e	P	84	D
	07	19	59	e	PcP			23	10	55	24	e	P	85	
	07	24	37	e	S			24	15	52	08.5	+i	Pn	86	D
	07	28	05	e	SS			24	20	46	06	e	?		D
	07	28	13	e	ScS			24	22	28	21	e	P	87	
19	12	33	56	e	PKPdf	59		25	04	09	31	e	Pn	88	
19	23	39	51.2	-i	P	60	D	30	19	57	48	e	Pn	89	
	23	41	26	e	pP			APR 02	04	49	56	e	?		
	23	48	33	e	SKS			04	10	23	37	e	?		
	23	49	40	e	S			06	00	10	21	e	?		
	23	49	49	e	ScS			06	00	40	40	e	?		
20	00	01	32.2	+i	P	61	D	06	00	49	23	e	?		
	00	01	42	e	pP			06	09	30	12	e	P	90	
21	13	02	41	e	P	62		06	12	24	11	e	P	91	D
21	17	57	05	e	?			06	12	47	48	e	?		
22	13	49	45.5	+i	P	63	D	06	22	19	09	e	?		
	13	51	06	e	PcP			06	22	24	32	e	PKPdf	92	
	13	57	14	e	sS			07	00	27	17	e	PKPdf	93	
	13	59	32	e	ScS			07	03	09	55	e	?		
22	15	18	43.5	+i	PKPdf	64	D	07	03	22	32	e	?		
	15	18	50	e	PKPbc			07	03	29	41	e	?		
	15	19	00	e	PKPab			07	03	30	26	e	?		
	15	19	27	e	pPKiKP			07	03	39	50	e	?		
	15	22	31	e	PP			07	03	41	03	e	?		
24	15	54	02	e	?			07	03	45	26	e	?		

Date (1996)	Onset Time h	m	s		Phase	No.		Date (1996)	Onset Time h	m	s		Phase	No.	
APR 07	03	49	08	e	?			MAY 01	18	17	06.6	-i	P	124	D
07	06	17	53	e	PKPdf	94		02	04	08	38.3	+i	P	125	D
07	06	21	55	e	PKPdf	95		02	13	32	29	e	Pn	126	D
07	06	29	00	e	PKPdf	96			13	32	35	e	PP		
08	01	31	50	e	?				13	46	20	e	T		
08	03	03	19.8	-i	P	97	D	03	03	52	10	e	PKPdf	127	
08	03	32	44	e	P	98		03	13	51	32	e	Pn	128	
08	06	19	53	e	?			03	14	05	27	e	?		
08	09	36	57.4	+i	P	99	D	03	18	59	23	e	PKPdf	129	
09	07	39	12	e	?			04	02	49	39.6	+i	P	130	D
09	08	54	26	e	?				02	51	47	e	Sn		
09	13	52	12	e	?				03	01	33	e	T?		
10	07	31	12	e	?			04	02	56	46.9	+i	?		
10	09	12	21	e	?				02	58	51	e	Sn?		
10	10	51	28	e	?				03	08	28	e	T?		
10	12	23	22	e	?			04	17	08	18	e	PKPdf	131	
10	12	54	24	e	P	100		04	17	18	26.5	+i	P	132	D
11	01	51	54.8	+i	P	101	D	05	00	45	55.6	+i	P	133	D
	01	52	06	e	PcP				00	46	04	e	pP		
	01	53	45	e	PP			05	06	35	40	e	?		
13	23	44	44	e	P	102		05	07	34	38	e	?		
14	15	49	05	e	?			05	08	59	09	e	?		
16	00	43	18.4	-i	P	103	D	05	09	13	03	e	?		
	00	53	45	e	S			05	09	13	14	e	?		
16	15	15	33.5	+i	Pn	104	D	06	09	50	18	e	P	134	
	15	17	52	e	SbSb			06	12	23	06	e	P	135	
17	07	09	25	e	?				12	25	06	e	pP		
17	14	27	24.0	+i	P	105	D		12	25	11	e	?		
17	23	20	58	e	?			07	01	25	55.3	+i	P	136	D
18	00	13	11	e	P	106		07	09	02	05	e	PKiKP	137	
18	04	00	23.5	+i	P	107	D		09	03	24	e	?		
18	17	28	41	e	PKPab	108		07	12	25	42	e	P	138	
19	00	29	23	e	P	109		07	21	54	04.7	-i	P	139	D
19	02	42	13	e	P	110			21	55	03	e	PP		
19	03	29	14	e	P	111		07	23	39	41	e	PKPdf	140	D
20	19	26	34	e	P	112			23	39	47	e	PKPbc		
20	23	15	14	e	P	113			23	39	55	e	PKPab		
	23	17	24	e	pP				23	40	05	e	pPKPbc		
21	07	13	06	e	?				23	46	47	e	PP		
21	12	54	47	e	?			08	19	22	18	e	?		
21	14	30	53	e	?			09	04	47	49.2	+i	P	141	D
23	01	41	33	e	?				04	48	00	e	PcP		
23	04	27	29.0	-i	PKPdf	114	D		04	48	11	e	pP		
23	14	58	28	e	?				04	50	46	e	PP		
23	18	05	42	e	?				04	57	31	e	S		
23	21	37	49	e	?			09	15	16	31	e	P	142	
24	09	48	36	e	P	115		10	06	23	51	e	?		
24	17	18	00.8	-i	P	116	D	10	06	39	27	e	?		
	17	20	46	e	PP			10	08	36	25	e	P	143	
25	05	00	28.2	-i	P	117	D	10	10	30	34.8	+i	P	144	D
25	06	01	49.2	+i	P	118	D		10	31	03	e	pP		
	06	04	09	e	PP				10	31	13	e	sP		
26	00	26	38	e	P	119			10	33	06	e	PP		
26	13	24	49.0	+i	P	120	D	10	16	10	09	e	P	145	
26	17	23	52	e	PKPab	121		11	02	32	21	e	Pdiff	146	
27	08	27	44	e	?			11	03	01	22	e	Pn	147	D
27	08	53	30	e	P	122		11	04	58	19.2	+i	PKPdf	148	D
29	14	54	33	e	Pdiff	123			04	58	30	e	PKiKP		
	15	10	36	e	PKKPbc			11	13	57	52	e	Pdiff	149	

Date (1996)	Onset Time h	m	s		Phase	No.		Date (1996)	Onset Time h	m	s		Phase	No.	
MAY	14	01	03	e	PKiKP			JUN	23	43	32	e	PP		
11	20	15	47	e	?				23	46	11	e	SKSdf		
11	21	34	57.0	+i	P	150	D	09	01	30	58.8	-i	PKPdf	176	D
12	06	34	38	e	P	151			01	32	47	e	PP		
12	21	51	39	e	?				01	37	48	e	SKSac		
14	12	49	03.3	+i	P	152	D		01	37	57	e	SKSdf		
	12	51	16	e	pP				01	41	21	e	PKKPdf		
14	17	46	26.6	-i	P	153	D	10	01	17	51.8	-i	P	177	D
	17	47	11	e	pP				01	22	40	e	PKiKP		
15	04	03	14	e	?		D		01	25	45	e	SKiKP		
15	07	56	48.1	+i	P	154	D	10	04	23	29.7	-i	PKPdf	178	D
17	12	33	37.0	+i	P	155			04	23	41	e	pPKPdf		
	12	35	29	e	pP				04	27	52	e	PP		
18	07	52	05.9	-i	P	156	D	10	15	44	57	e	PKPdf	179	
	07	52	32	e	pP			12	02	47	38.4	+i	?		D
	07	52	42	e	sP			13	07	09	55.4	+i	P	180	D
19	18	30	38	e	P	157			07	11	52	e	pP		
19	21	37	30	e	PKPdf	158		14	09	37	25	e	PKPdf	181	
19	22	20	51.3	+i	?		D	14	13	42	56.1	+i	P	182	D
20	17	17	28	e	P	159		15	15	11	22.4	+i	?		D
23	02	10	16	e	P	160		15	15	23	41	e	?		
23	03	42	31.4	+i	Pn	161	D	15	22	52	09	e	?		
	03	42	40	e	P			15	23	10	44	e	?		
	03	45	59	e	S			16	00	09	12.1	+i	Pn	183	D
26	01	56	19	e	P	162		16	00	20	46	e	?		
29	01	13	17	e	Pn	163	D	17	09	39	00	e	?		
	01	13	28	e	PnPn			17	11	34	42.7	-i	P	184	D
	01	13	40	e	sP				11	38	44	e	PP		
29	10	12	42.7	+i	Pn	164	D		11	44	24	e	SKSac		
	10	12	48	e	pPn				11	51	30	e	PKKP		
29	10	43	08	e	Pn	165	D		11	59	45	e	P'P'df		
	10	43	30	e	sPn			17	12	16	45.6	+i	?		
30	03	08	18.1	+i	Pn	166	D	18	14	08	46.9	+i	P	185	D
	03	11	08	e	S				14	08	57	e	pP		
	03	16	36	e	ScP			21	04	00	05.7	+i	P	186	D
	03	23	03	e	T				04	01	21	e	PcP		
JUN 01	08	35	38	e	?				04	02	02	e	PP		
01	09	56	34	e	?				04	05	15	e	ScP		
01	15	17	22.9	-i	?		D	21	14	17	47	e	PKPab	187	
01	20	03	34	e	?			22	00	36	34.2	+i	Pn	188	D
02	01	02	14	e	P	167			00	36	44	e	pP		
02	03	04	44.3	-i	P	168	D		00	54	00	e	?		
	03	15	15	e	sSKS			22	11	07	38	e	?		
	03	15	22	e	ScS			23	11	00	22	e	?		
02	09	56	53	e	?			26	03	40	25.5	+i	PKPdf	189	D
02	10	00	13	e	?				03	43	00	e	PP		
04	04	22	04.2	+i	P	169	D		03	43	07	e	SKP		
06	06	39	42	e	P	170		26	04	13	33	e	PKPdf	190	
06	09	32	55	e	?			28	02	53	57	e	P	191	
06	17	44	41.2	-i	P	171	D	28	05	51	10	e	?		
	17	44	44	e	pP			29	02	49	08	e	?		
06	19	56	18	e	P	172		30	02	43	55	e	P	192	D
07	02	27	03.7	+i	?		D	30	06	43	17.3	+i	?		D
07	08	36	25.4	+i	P	173	D	30	22	35	40.2	+i	P	193	D
	08	36	31	e	pP			JUL 01	16	33	15.5	+i	P	194	D
08	03	15	12	e	PKPdf	174		02	16	06	06.0	+i	Pn	195	D
08	23	39	08.7	+i	PKPdf	175	D		16	08	00	e	Sn		
	23	39	19	e	pPKPdf				16	17	15	e	T		
	23	39	50	e	PKPab			03	12	56	17.2	+i	Pn	196	D

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JUL	12	58	31	e	Sn?			JUL	24	22	14	40	e ?		
03	16	58	27.1	+i	P	197	D		24	22	28	29	e ?		
	16	58	36	e	pP				24	23	15	05	e ?		
	16	59	16	e	PcP				24	23	57	41	e ?		
03	19	19	03	e	PKPdf	198				23	59	09	e ?		
04	12	00	20.6	+i	PKPab	199	D		25	00	37	00	e ?		
	12	00	41	e	pPKPab				25	03	21	54	e ?		
04	15	50	14	e	P	200				03	23	56	e ?		
06	21	55	07.9	-i	PKPdf	201	D		25	05	03	24	e ?		
	21	58	02	e	SKPdf				25	08	46	43	e ?		
07	06	08	07.6	+i	Pn	202	D		25	12	58	20.8	+i P	221	D
	06	10	23	e	Sn?					12	58	26	e sP		
07	11	11	06.9	+i	PKPab	203	D		25	18	55	39.1	-i Pn	222	D
	11	11	23	e	?				25	23	45	40.0	-i Pn	223	D
	11	14	55	e	PP					23	57	10	e T		
11	16	50	28	e	?				26	22	09	39	e ?		
	16	50	51	e	?				26	23	58	03	e ?		
	16	51	01	e	?				27	08	40	28	e ?		
	16	51	22	e	?				27	11	52	11.9	+i P	224	D
12	09	09	57	e	PKPdf	204				11	52	20	e PcP		
13	15	31	04.6	+i	PKPab	205	D			11	52	28	e pP		
14	19	33	15.0	+i	P	206	D		29	02	00	43.8	+i ?		D
15	17	10	03	e	PKPdf	207			29	08	08	30.9	+i Pn	225	D
15	19	11	34	e	P	208				08	08	39	e pPn		
16	10	25	43	e	PKiKP	209				08	08	46	e sPn		
16	10	55	59.0	+i	?		D			08	09	18	e PbPb		
16	17	14	40	e	P	210			29	11	00	09.6	+i Pn	226	D
18	21	12	16.9	+i	Pn	211	D			11	00	17	e pPn		
19	19	40	02	e	?					11	00	22	e sPn		
19	21	34	12	e	?				30	18	37	13	e ?		
19	23	49	09	e	P	212			31	10	40	41.7	+i P	227	D
20	07	53	33.1	+i	P	213	D		31	22	40	35.7	+i P	228	D
	07	55	02	e	pP			AUG	01	22	02	14.8	+i P	229	D
20	17	43	04	e	?		D			22	02	49	e PcP		
22	07	21	17	e	?					22	04	36	e PP		
	07	21	50	e	?					22	07	38	e ?		
22	08	28	40	e	?				02	12	20	34	e P	230	
	08	29	07	e	?				02	13	09	04.8	-i P	231	D
	08	30	42	e	?					13	09	15	e pP		
	08	31	11	e	?				02	16	35	55	e P	232	
22	14	37	51	e	PKiKP	214			02	21	39	44	e ?		
23	03	44	32.2	+i	P	215	D		03	22	20	00	e ?		
23	05	32	24.5	-i	P	216	D		04	06	08	38	e ?		
	05	32	35	e	pP				04	06	48	57	e ?		
23	05	35	09	e	P	217			04	07	02	02	e P	233	
23	06	50	35	e	P	218			04	07	09	47	e ?		
23	10	08	49	e	?				04	10	55	44	e ?		
	10	09	28	e	?				04	11	45	49	e ?		
23	11	17	24	e	?				04	23	19	56	e ?		
	11	18	11	e	?				05	00	12	06	e PKPdf	234	
23	18	22	23	e	?				05	02	22	13.9	-i P	235	D
24	03	01	48.8	+i	P	219	D			02	22	26	e pP		
24	14	57	30	e	?					02	25	59	e PP		
24	16	01	04	e	?					02	26	59	e PKiKP		
24	18	26	50	e	?					02	34	32	e SP		
24	20	18	38	e	?				05	03	21	36	e ?		
24	20	26	07	e	?				05	09	00	36	e ?		
24	21	13	48.3	+i	P	220	D		05	20	08	08	e ?		
24	21	49	44	e	?				05	21	51	37.1	-i P	236	D

Date (1996)	Onset Time h m s		Phase	No.		Date (1996)	Onset Time h m s		Phase	No.	
AUG	21 55 05	e	?			AUG	06 38 44	e	PP		
05	22 48 09.2	+i	P	237	D	15	07 47 15.5	+i	P	260	D
	22 48 43	e	pP				07 47 26	e	pP		
05	22 50 17.1	+i	P	238		16	08 45 11.9	+i	Pn	261	D
	22 52 17	e	pP				08 45 59	e	PbPb		
06	10 26 02	e	P	239		16	08 57 31	e	?		
06	15 17 41	e	P	240		16	13 04 09	e	P	262	
07	10 00 30	e	?			16	15 15 05	e	?		
07	20 47 11	e	?			16	21 36 31	e	?		
07	22 24 32	e	?			17	21 17 02	e	?		
07	22 44 19	e	?			18	05 57 44	e	?		
07	23 18 16	e	?			18	08 52 12	e	P	263	
08	10 00 50.9	-i	?		D	19	01 34 53	e	?		
08	17 12 27	e	?			19	04 39 11	e	PKPdf	264	
08	17 30 44	e	?			19	06 33 14.1	+i	P	265	D
08	17 31 25.2	+i	PKPab	241	D	19	19 54 47	e	?		
09	23 39 31	e	?			20	00 30 48	e	PKPdf	266	
10	00 53 29.3	+i	P	242	D	23	18 06 03	e	P	267	
	00 53 35	e	pP			23	20 00 21	e	?		
	00 57 25	e	S			24	07 39 37	e	?		
	00 57 48	e	SnSn			24	09 03 12	e	P	268	
10	02 22 37	e	?			24	17 42 42	e	?		
10	02 42 43	e	?			26	06 01 25	e	P	269	
10	08 10 17	e	?			27	06 35 52.7	-i	P	270	D
10	14 57 46	e	?				06 37 57	e	pP		
10	15 19 54	e	P	243			06 39 25	e	PP		
10	15 23 41.3	+i	P	244	D		06 40 54	e	PKiKP		
	15 25 33	e	pP			27	06 46 27	e	P	271	
	15 28 36	e	PKiKP			27	08 38 30	e	?		
10	18 31 51.9	+i	PKPdf	245	D	27	11 00 20.6	-i	P	272	D
	18 35 08	e	PP				11 00 23	e	pP		
	18 43 42	e	Sdiff				11 07 58	e	PKiKP		
10	19 13 45.7	+i	PKPdf	246	D	27	14 47 15	e	P	273	
	19 17 03	e	PP			28	17 01 54	e	P	274	
10	20 20 27.0	+i	Pn	247	D	29	04 57 56.4	+i	P	275	D
10	23 30 20.4	+i	PKPdf	248	D		05 04 25	e	PKiKP		
	23 33 36	e	PP			29	20 33 16	e	?		
11	01 44 34.5	-i	P	249	D	29	20 33 47	e	P	276	
	01 49 12	e	PKiKP			30	00 29 52	e	?		
	01 52 52	e	?			30	05 41 13	e	?		
11	02 18 59	e	PKPdf	250		30	23 11 29	e	P	277	
11	06 21 10	e	PKPdf	251		31	16 11 36.5	+i	P	278	D
11	12 07 50	e	PKPdf	252		31	19 05 52	e	P	279	
11	12 12 02	e	PKPdf	253		31	21 07 54.9	+i	PKPab	280	D
11	22 29 04	e	?			SEP 02	21 00 41	e	PKPdf	281	
13	02 32 36	e	PKPdf	254		03	03 20 02	e	?		
13	09 53 04.0	+i	P	255	D	03	10 17 03	e	PKPdf	282	
	09 53 16	e	PcP			04	10 47 21	e	P	283	
	09 53 53	e	pP			04	14 36 19	e	P	284	
13	09 54 00.5	+i	P	256	D	04	15 37 41	e	PKPdf	285	
13	19 43 13.2	-i	P	257	D	04	19 20 07	e	P	286	
14	01 42 31	e	?			05	00 02 21	e	P	287	
14	06 11 54	e	?			05	08 25 53	e	P	288	D
14	07 22 09	e	?			05	09 21 59	e	P	289	
14	21 31 40.5	+i	P	258	D	05	09 58 39	e	P	290	D
	21 33 25	e	PP			06	00 01 01.1	+i	PKPdf	291	D
	21 33 33	e	PcP				00 01 17	e	?		
	21 40 39	e	PKiKP				00 02 43	e	PP		
15	06 36 21.4	+i	P	259	D		00 04 36	e	SKPdf		

Date (1996)	Onset Time h	m	s		Phase	No.		Date (1996)	Onset Time h	m	s		Phase	No.	
SEP	00	10	59	e	PKKPdf			SEP	18	00	32	52	e PKPdf	315	
	00	12	19	e	?				18	04	24	35.2	+i P	316	D
	00	14	46	e	?					04	24	44	e pP		
	06	10	15	14.1	+i ?		D		18	19	31	39	e ?		
	06	11	53	28	e PKPdf	292			19	12	27	29.6	+i ?		
	07	03	08	23	e P	293			19	21	17	08	e P	317	
	07	06	10	08	e ?					21	18	57	e pP		
	07	10	43	46.8	-i P	294	D			21	19	05	e ?		
		10	43	57	e pP				20	02	12	51.1	+i P	318	D
		10	44	08	e ?				20	04	29	50	e PKiKP?	319	
	07	11	35	30	e ?	295				04	29	59	e ?		
	08	08	18	58.0	-i P	296	D		20	17	41	36.0	+i P	320	D
		08	19	23	e pP					17	41	39	e pP		
	08	11	10	36	e P	297				17	41	42	e P		
	08	11	46	47.4	+i P	298	D			17	41	52	e PnPn		
	08	11	54	46.8	+i P	299			21	03	03	16.7	+i P	321	D
		11	57	40	e pP?					03	05	35	e PP		
	08	22	47	53	e P	300			21	04	36	12.6	+i Pn	322	D
	09	00	29	42.1	+i P	301	D		21	23	26	43	e ?		
		00	29	54	e pP				22	00	02	38.6	-i ?		D
		00	30	02	e sP				22	02	32	09	e P	323	
		00	30	55	e PcP				22	02	48	30	e PKPdf	324	
		00	31	30	e PP				24	04	16	28	e ?		
		00	31	53	e ?				24	04	35	10	e ?		
	09	09	43	57.9	+i P	302	D		24	11	55	18	e P	325	
		09	46	11	e pP				24	13	29	19	e P	326	
	10	04	05	10	e ?				25	10	46	09.2	-i P	327	D
	10	04	36	57	e P	303	D			10	46	19	e pP		
	10	10	15	06.0	-i Pn	304	D			10	46	23	e sP		
		10	17	14	e Sn					10	46	31	e PcP		
	10	14	50	10	e P	305			25	10	46	58.7	+i ?		
	10	15	13	32	e ?				25	15	04	24	e P	328	
	11	00	28	52	e ?				25	21	29	06	e P	329	
	11	01	09	51	e ?				26	02	36	21	e ?		
	11	02	56	33	e PKPdf	306			26	23	20	29	e Pn	330	
	11	03	09	11	e ?					23	22	37	e ?		
	11	07	07	51	e ?				29	06	29	02.5	+i P	331	D
	14	08	19	41	e PKPdf	307			30	00	35	07.0	+i ?		D
		08	20	12	e pPKPdf				30	01	56	46.1	+i Pn	332	D
	15	02	20	14	e ?				30	02	10	31.5	+i Pn	333	D
	15	02	48	49.6	+i ?		D		30	06	10	27.6	-i PKPab	334	D
	15	07	24	59	e P	308			30	18	52	08	e P	335	
	15	08	06	24	e ?				30	19	12	10	e PKPab	336	
	15	09	37	25.0	+i P	309	D	OCT	01	11	21	15	e PKPdf	337	
		09	39	20	e pP				01	15	05	07.2	+i P	338	D
		09	42	35	e PKiKP				01	16	03	50	e P	339	
		09	45	21	e SKiKP				01	23	15	41	e P	340	
	15	13	00	02	e ?				02	11	44	41	e PKPdf	341	
	15	18	58	24	e ?				02	13	16	43	e P	342	
	16	13	04	39	e P	310			02	22	02	49	e P	343	
	16	15	18	10	e ?				04	19	22	05	e P	344	
	16	15	30	11.4	+i Pn	311	D		05	11	15	33.0	+i ?		D
		15	30	24	e SPn				06	05	32	51.4	+i P	345	D
		15	54	08.0	T T				06	07	52	02	e P	346	
	16	16	29	16	e ?				06	20	32	44.9	-i PKPdf	347	D
	16	17	19	26	e P	312				20	32	54	e pPKPdf		
	17	09	10	41.3	+i ?		D			20	36	09	e PP		
	17	23	20	56	e P	313			07	08	54	06.0	+i P	348	D
	18	00	06	54	e PKPdf	314				08	55	08	e PcP		

Date (1996)	Onset Time h	m	s		Phase	No.		Date (1996)	Onset Time h	m	s		Phase	No.	
OCT	08	55	58	e	pP			OCT	20	10	35	e	pP		
	08	58	06	e	ScP				20	10	40	e	PcP		
07	09	35	40.7	-i	P	349	D	26	03	39	04	e	?		
	09	40	40	e	PKiKP			26	07	49	36	e	?		
07	11	34	35	e	P	350		26	09	08	31	e	?		
07	18	26	28.5	+i	?		D	26	11	40	21	e	?		
08	01	46	04.5	+i	P	351	D	26	15	42	38	e	?		
	01	47	18	e	PcP			26	15	48	32	e	?		
	01	48	03	e	PP			26	16	01	22	e	?		
	01	48	11	e	PP			26	16	22	16	e	?		
08	22	55	56.3	+i	?		D	26	21	54	42	e	?		
09	07	32	05	e	P	352		27	07	52	08	e	?		
09	13	29	32	e	?			27	08	30	15	e	?		
10	01	55	49.1	+i	?		D	27	17	06	36	e	Pdiff?	375	
10	09	09	19	e	?				17	10	04	e	PKPdf?		
12	18	58	35	e	?			27	17	20	05	e	?		
13	08	23	09	e	?			28	02	52	06	e	?		
13	18	56	25	e	?			28	05	00	22	e	?		
14	09	16	48	e	?			28	09	43	55.3	-i	PKPdf	376	D
14	23	44	38	e	PKiKP	353			09	44	02	e	PKiKP		
15	00	42	21	e	PKPdf	354		28	12	30	24	e	?		
15	20	44	02	e	?			28	23	35	28.5	-i	Pn	377	D
16	01	32	01.0	-i	P	355	D		23	40	50	e	PcP		
	01	32	11	e	pP			29	11	27	24.2	+i	Pn	378	D
	01	36	57	e	PKiKP			29	11	31	17	e	Pn	379	
16	09	55	33	e	?			29	13	14	41.5	+i	Pn	380	D
16	10	42	35	e	?			30	05	46	03	e	?		
17	16	34	12	e	?			30	09	28	56.5	+i	PKPdf	381	D
18	06	37	14.2	+i	P	356	D		09	28	59	e	PKPab		
18	11	09	40	e	PKPdf	357			09	29	55	e	pPKPab		
18	13	49	50	e	P	358			09	32	25	e	PP		
18	15	31	58	e	P	359	D	30	17	04	50.6	+i	P	382	D
18	17	03	34	e	PKPdf	360			17	06	08	e	PcP		
	17	06	38	e	SKPdf				17	06	48	e	PP		
18	17	43	27.3	-i	P	361	D	30	18	17	21	e	?		
	17	44	57	e	PcP			30	18	38	10	e	?		
19	15	04	01.4	+i	PKPdf	362	D	30	23	10	25	e	P	383	
	15	04	11	e	PKiKP			30	23	13	10	e	P?	384	
19	15	05	41.8	-i	P	363		30	23	43	10.9	+i	P	385	D
	15	07	50	e	pP				23	43	21	e	pP		
	15	08	40	e	sP			31	17	57	08.2	+i	PKPdf	386	D
19	15	23	15	e	?				17	57	13	e	PKPbc		
21	19	45	08.0	+i	P	364	D		17	57	20	e	PKPab		
21	22	39	56	e	?			31	18	55	09	e	?		
22	08	33	02	e	Pn	365		31	22	55	25	e	?		
22	09	12	35	e	P	366		NOV 02	00	21	36.3	-i	P	387	D
22	11	00	08	e	P	367			00	22	47	e	pP		
22	20	46	23	e	?	368			00	25	27	e	PP		
22	22	35	50.6	-i	PKPab	369	D	02	12	34	06	e	?		
	22	39	34	e	PP			02	15	42	52.9	-i	?		D
23	01	59	00	e	P	370		02	20	02	18	e	PKPdf	388	
23	12	25	40	e	PKPdf	371		04	17	37	58.2	+i	P	389	D
24	14	09	48.6	-i	P	372	D		17	41	32	e	PP		
	14	09	56	e	PcP				17	48	31	e	SKSac		
	14	11	16	e	pP				17	50	04	e	SP		
25	07	27	40.8	-i	P	373	D	05	02	46	40	e	?		
	07	27	51	e	pP			05	09	52	55.9	-i	P	390	D
25	07	45	31	e	?				09	53	01	e	PcP		
25	20	10	07.1	-i	P	374	D		09	54	15	e	pP		

Date (1996)	Onset Time h	m	s		Phase	No.		Date (1996)	Onset Time h	m	s		Phase	No.	
NOV	10	02	23	e	S			NOV	16	10	01	04	e P	425	
05	10	17	40	e	P	391			16	10	55	31.0	? ?		
06	02	14	26	e	P	392			16	10	56	33.0	? ?		
06	17	17	37	e	P	393			17	13	21	15	e Pn	426	
06	20	20	16.5	+i	PKPdf	394	D		17	18	56	48	e P	427	
	20	20	18.7	+i	PKiKP				17	19	31	19	e P	428	
	20	20	26	e	pPKPdf				17	19	47	56	e ?		
	20	20	34	e	sPKiKP				17	21	23	04.9	-i P	429	D
	20	22	49	e	PP					21	25	11	e pP		
	20	23	48	e	SKiKP					21	32	57	e S		
07	03	24	10	e	P	395			17	23	38	34.0	+i P	430	D
07	07	13	07	e	Pn	396				23	38	39	e PcP		
08	00	55	31	e	?					23	38	50	e pP		
08	10	32	50	e	?				18	10	55	13	e P	431	
08	13	54	30	e	?				18	16	51	16	e Pn	432	
08	14	12	38	e	P	397			19	00	11	14	e PKPdf	433	
	14	14	39	e	pP				19	08	26	17.7	-i P	434	D
09	08	04	57.7	-i	P	398	D		19	11	03	40	e PKPdf	435	
	08	05	23	e	pP				20	02	47	07	e PKPdf	436	
09	09	46	29	e	P	399				02	50	12	e PP		
09	17	40	39	e	P	400			20	18	16	49	e PKPdf	437	
10	17	22	30	e	P	401			21	02	47	18	e PKPdf	438	
11	00	59	12.7	+i	P	402	D		21	07	36	18.5	-i P	439	D
	01	08	59	e	S					07	36	56	e PcP		
	01	09	23	e	SKSac				21	08	02	06	e PKiKP	440	
	01	09	36	e	PnS?				21	08	36	19	e ?		
11	06	48	18	e	P	403			22	08	11	29.0	+i Pn	441	D
12	17	10	45.2	-i	P	404	D			08	11	43	e pPn		
	17	10	59	e	sP				22	15	50	00	e P	442	
	17	13	44	e	??					15	50	38	e pP		
12	17	21	02.1	-i	P	405	D		22	16	19	39	e P	443	
	17	21	11	e	pP				23	01	14	30.4	+i Pn	444	D
12	17	27	15	e	P	406			25	13	42	09	e PKiKP	445	
12	17	50	28.6	+i	P	407	D		26	10	38	11	e P	446	
	17	50	41	e	pP				28	14	09	47	e Pn	447	
12	18	28	29	e	P	408			29	00	55	24.2	-i Pn	448	D
12	20	18	46	e	P	409			30	18	14	52.5	-i PKPdf	449	D
12	21	54	57	e	P	410		DEC	01	23	21	07.3	+i P	450	D
12	23	46	17	e	P	411				23	22	27	e pP		
13	00	39	21	e	P	412				23	24	12	e PP		
13	02	52	42	e	P	413				23	26	39	e PKiKP		
13	02	58	30	e	P	414			02	22	37	17	e PKPdf	451	
13	04	54	47	e	P	415			03	13	09	56.4	+i P	452	D
13	10	03	13	e	P	416				13	10	07	e pP		
13	12	43	07	e	P	417			03	16	08	26	e PKPdf	453	
14	02	49	56	e	P	418			04	18	10	30.3	+i Pn	454	D
14	06	30	11	e	P	419			05	00	15	38	e P	455	
14	10	51	16	e	P	420			06	10	12	08.3	-i Pn	456	D
14	11	55	09.1	+i	P	421	D			10	12	09	e Pn		
	11	55	18	e	pP					10	14	21	e Sn		
	11	55	22	e	sP				09	00	46	49	e ?		
14	14	00	07.1	+i	P	422	D		09	04	07	16.0	+i P	457	D
	14	00	09	e	PcP					04	07	32	e pP		
	14	00	54	e	pP					04	07	37	e sP		
	14	01	15	e	sP					04	10	48	e PP		
	14	10	39	e	S					04	12	06	e PKiKP		
15	02	35	16	e	Pn	423			10	08	47	49	e P	458	D
15	04	09	47.0	?	?				10	17	18	20	e PKPab	459	D
15	09	00	38	e	P	424			11	03	19	05	e ?		

Date (1996)	Onset Time h	m	s		Phase	No.		Date (1996)	Onset Time h	m	s		Phase	No.	
DEC 11	03	28	03.2	+i	P	460	D	DEC 21	01	48	08	e	PKPdf	472	
11	05	26	18	e	P	461		21	07	31	28	e	?		
11	17	32	01	e	?			21	08	45	25	e	P	473	
13	01	13	18	e	P	462		22	09	38	25	e	?		
13	12	39	10.5	+i	Pn	463	D	22	15	12	42.4	-i	PKPdf	474	D
15	15	51	21	e	P	464	D		15	12	46	e	PKPbc		
	15	51	31	e	pP				15	12	50	e	PKPac		
	15	52	58	e	?				15	13	43	e	pPKPbc		
15	23	24	24.6	+i	P	465	D		15	16	00	e	SKPbc		
	23	24	40	e	pP				15	16	15	e	PP		
17	22	12	57	e	pP?	466			15	16	16	e	PKSdf		
17	22	53	00	e	P	467		23	00	41	29	e	P	475	
18	10	22	16.0	+i	P	468	D	24	23	41	14.8	+i	P	476	D
	10	22	26	e	pP			25	07	02	21.4	-i	?		D
	10	22	32	e	sP				07	04	16	e	Sn?		
19	09	35	50	e	P	469			07	13	26	e	T?		
19	22	49	44	e	P	470		27	03	02	59.2	+i	P	477	D
20	04	04	44	e	P	471			03	03	05	e	pP		
20	07	23	09	e	?										

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude		Longitude		Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
1	JAN 01	01	34	15.9	20.318	S	174.359	W	TONGA ISLANDS	33	5.3	88.629	193.008
2	01	08	05	12.0	0.724	N	119.981	E	MINAHASSA PENINSULA	33	6.2	102.587	126.516
3	01	09	38	25.4	11.177	N	61.882	W	WINDWARD ISLANDS	73	5.3	89.384	307.739
4	01	09	57	51.8	53.917	N	159.496	E	NEAR EAST COAST OF KAMCHATKA	33	5.8	162.377	155.731
5	03	09	33	10.7	28.869	S	71.425	W	NEAR COAST OF CENTRAL CHILE	45	4.9	54.169	285.187
6	04	19	50	22.1	44.543	N	149.235	E	KURIL ISLANDS	33	5.1	151.612	145.080
7	04	23	33	27.8	55.467	S	26.930	W	SOUTH SANDWICH ISLANDS REGION	33	4.9	17.256	322.154
8	06	05	12	00.2	54.906	S	127.640	W	SOUTH PACIFIC CORDILLERA	10	4.7	47.403	222.987
9	06	06	32	00.9	59.597	S	25.303	W	SOUTH SANDWICH ISLANDS REGION	33	4.3	13.108	319.001
10	06	15	28	04.0	45.354	N	151.084	E	KURIL ISLANDS	33	5.4	152.736	147.332
11	08	10	04	51.3	53.233	N	142.732	E	SAKHALIN ISLAND	33	5.5	158.309	128.407
12	09	15	24	41.9	22.585	S	171.046	E	LOYALTY ISLANDS REGION	60	5.0	86.887	179.358
13	11	03	51	34.7	8.414	S	158.642	E	SOLOMON ISLANDS	95	5.5	100.522	166.844
14	11	07	19	10.0	45.083	N	150.025	E	KURIL ISLANDS	13	5.5	152.281	145.925
15	12	02	17	34.1	23.197	S	170.770	E	LOYALTY ISLANDS REGION	33	5.8	86.276	179.107
16	13	00	07	23.6	19.387	S	168.748	E	VANUATU ISLANDS	33	4.9	90.054	177.181
17	14	06	28	20.7	44.557	N	149.010	E	KURIL ISLANDS	33	5.5	151.583	144.748
18	14	13	24	07.4	26.843	S	177.542	W	SOUTH OF FIJI ISLANDS	112	5.0	82.342	189.630
19	16	02	19	40.3	55.961	S	27.105	W	SOUTH SANDWICH ISLANDS REGION	33	4.5	16.831	321.224
20	16	05	15	27.7	18.703	S	177.453	W	FIJI ISLANDS REGION	333	5.4	90.442	190.216
21	17	10	06	45.2	4.436	S	140.046	E	WEST IRIAN	103	5.6	102.083	147.671
22	18	03	06	44.3	22.332	S	171.193	E	LOYALTY ISLANDS REGION	33	5.2	87.140	179.493
23	18	20	02	06.0	58.242	S	157.984	E	MACQUARIE ISLANDS REGION	10	5.1	50.880	170.699
24	19	19	01	58.4	10.424	S	78.772	W	NEAR COAST OF PERU	35	5.6	73.818	284.987
25	20	03	54	09.1	26.822	S	177.290	W	SOUTH OF FIJI ISLANDS	54	5.2	82.349	189.858
26	22	23	20	01.2	60.615	S	25.731	W	SOUTH SANDWICH ISLANDS REGION	33	5.7	12.293	316.048
27	23	01	19	43.0	61.022	S	25.967	W	SOUTH SANDWICH ISLANDS REGION	33	4.7	11.990	314.640
28	27	21	29	57.6	22.259	S	138.810	W	TUAMOTU ARCHIPELAGO REGION	0	5.3	81.026	225.364
29	30	13	59	28.9	57.026	S	147.830	E	WEST OF MACQUARIE ISLAND	10	5.0	51.336	163.560
30	30	22	00	12.4	32.885	S	178.339	W	SOUTH OF KERMADEC ISLANDS	33	5.5	76.363	188.559
31	30	22	29	57.4	32.831	S	178.266	W	SOUTH OF KERMADEC ISLANDS	33	5.5	76.413	188.625
32	31	20	30	47.1	44.455	N	149.372	E	KURIL ISLANDS	58	5.8	151.553	145.327
33	FEB 01	07	18	05.4	44.863	N	146.293	E	KURIL ISLANDS	179	5.7	151.331	140.697
34	03	11	14	19.8	27.299	N	100.341	E	YUNNAN PROVINCE, CHINA	10	6.3	121.758	97.937
35	03	23	46	57.4	7.404	S	128.385	E	BANDA SEA	150	5.0	96.819	136.784

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
36	FEB 04	11	57	19.5	44.966 N	149.610 E	KURIL ISLANDS	33	5.6	152.091	145.386
37	04	22	56	59.5	32.346 S	179.542 W	SOUTH OF KERMADEC ISLANDS	33	5.7	76.956	187.550
38	04	23	15	45.0	32.380 S	179.487 W	SOUTH OF KERMADEC ISLANDS	33	4.8	76.920	187.596
39	04	23	34	52.8	32.512 S	179.527 W	SOUTH OF KERMADEC ISLANDS	33	5.1	76.790	187.554
40	05	18	45	42.1	55.757 S	28.243 W	SOUTH SANDWICH ISLANDS REGION	101	4.9	17.262	319.463
41	06	05	28	42.5	32.333 S	178.893 W	SOUTH OF KERMADEC ISLANDS	33	4.6	76.940	188.112
42	07	21	36	45.1	45.321 N	149.909 E	KURIL ISLANDS	33	6.3	152.489	145.620
43	07	22	53	39.4	43.981 N	149.480 E	KURIL ISLANDS REGION	33	5.3	151.116	145.740
44	10	12	17	04.7	60.873 S	57.154 W	SOUTH SHETLAND ISLANDS	10	4.7	21.596	271.939
45	11	09	28	49.4	45.291 N	150.471 E	KURIL ISLANDS	33	5.3	152.564	146.462
46	12	02	58	53.4	45.147 N	150.326 E	KURIL ISLANDS	33	5.5	152.399	146.330
47	12	05	09	36.5	19.395 S	169.001 E	VANUATU ISLANDS	112	4.8	90.050	177.419
48	12	09	08	10.6	11.159 S	118.660 E	SOUTH OF SUMBAWA ISLAND	33	5.8	90.816	128.396
49	14	20	31	06.4	45.386 N	150.360 E	KURIL ISLANDS	33	5.9	152.636	146.245
50	14	21	26	56.2	29.220 N	140.383 E	SOUTH OF HONSHU, JAPAN	141	5.9	135.018	140.117
51	16	09	44	58.1	1.524 S	15.222 W	NORTH OF ASCENSION ISLAND	10	6.0	69.226	352.542
52	16	11	34	30.4	15.105 S	173.587 W	TONGA ISLANDS	33	5.1	93.750	194.164
53	16	15	22	57.8	37.343 N	142.474 E	OFF EAST COAST OF HONSHU, JAPAN	33	6.2	143.308	139.521
54	17	05	59	29.7	0.950 S	137.027 E	WEST IRIAN REGION	33	6.5	104.935	143.964
55	17	14	21	23.8	0.591 S	135.874 E	WEST IRIAN REGION	33	5.8	105.057	142.723
56	18	23	49	28.1	1.283 S	14.274 W	NORTH OF ASCENSION ISLAND	10	6.3	69.428	353.566
57	19	02	28	31.9	1.223 S	14.227 W	NORTH OF ASCENSION ISLAND	11	5.5	69.486	353.619
58	19	07	10	10.4	42.091 S	75.085 W	OFF COAST OF SOUTHERN CHILE	33	5.9	43.277	274.435
59	19	12	14	18.2	40.357 N	142.406 E	NEAR EAST COAST OF HONSHU, JAPAN	33	5.3	146.185	137.972
60	19	23	28	06.2	22.043 S	179.528 W	SOUTH OF FIJI ISLANDS	608	5.1	87.225	188.089
61	19	23	48	37.9	20.308 S	169.141 E	VANUATU ISLANDS	33	5.8	89.142	177.565
62	21	12	51	04.3	9.620 S	79.568 W	OFF COAST OF NORTHERN PERU	33	5.8	74.832	284.488
63	22	13	40	53.5	33.693 S	71.706 W	NEAR COAST OF CENTRAL CHILE	44	5.9	49.798	282.601
64	22	14	59	09.8	45.208 N	148.557 E	KURIL ISLANDS	132	6.2	152.122	143.719
65	25	04	17	11.2	22.267 S	175.908 W	TONGA ISLANDS REGION	33	5.6	86.799	191.423
66	27	18	03	04.8	14.060 S	167.441 E	VANUATU ISLANDS	33	5.6	95.339	175.818
67	28	09	44	09.5	1.731 N	126.100 E	MOLUCCA PASSAGE	102	6.1	105.126	132.336
68	28	10	03	07.1	51.799 S	40.350 E	PRINCE EDWARD ISLANDS REGION	10	5.5	28.800	74.904
69	MAR 01	02	27	24.1	23.479 S	70.358 W	NEAR COAST OF NORTHERN CHILE	26	5.1	58.862	288.544
70	05	14	52	28.7	24.092 N	122.215 E	TAIWAN REGION	29	6.1	125.549	121.518

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71	MAR 06	01	35	03.0	18.656 S	174.864 W	TONGA ISLANDS	134	5.4	90.319	192.663
72	06	08	33	53.3	69.387 S	110.332 W	SOUTHERN PACIFIC OCEAN	10	5.3	30.923	222.209
73	07	08	38	57.5	23.267 S	70.285 W	NEAR COAST OF NORTHERN CHILE	31	5.3	59.037	288.702
74	08	08	10	37.5	60.604 S	25.433 W	SOUTH SANDWICH ISLANDS REGION	33	4.3	12.235	316.683
75	09	04	38	01.0	30.409 S	177.811 W	KERMADEC ISLANDS	33	5.3	78.804	189.170
76	09	16	15	36.2	43.425 N	148.009 E	KURIL ISLANDS REGION	33	5.6	150.299	143.946
77	10	08	56	22.3	12.969 S	69.425 W	PERU	32	5.8	68.480	293.304
78	11	11	56	07.8	42.184 S	71.888 W	S. CHILE-ARGENTINA BORDER REG.	126	5.2	42.137	277.511
79	16	22	04	06.2	28.983 N	138.944 E	BONIN ISLANDS REGION	477	5.9	134.477	138.486
80	17	14	48	56.7	14.705 S	167.297 E	VANUATU ISLANDS	164	5.8	94.692	175.694
81	20	12	49	17.1	32.395 S	179.497 E	SOUTH OF KERMADEC ISLANDS	500	4.5	76.947	186.715
82	22	03	24	20.0	51.221 N	178.695 E	RAT ISLANDS, ALEUTIAN ISLANDS	20	5.7	160.273	192.934
83	22	17	31	06.3	35.241 S	179.212 W	EAST OF NORTH ISLAND, N.Z.	33	5.6	74.054	187.675
84	22	18	45	25.8	26.399 S	13.690 W	SOUTH ATLANTIC RIDGE	10	5.1	44.382	353.026
85	23	10	46	45.9	62.722 S	164.876 E	BALLENY ISLANDS REGION	10	5.0	46.676	175.672
86	24	15	49	21.4	60.342 S	27.065 W	SOUTH SANDWICH ISLANDS REGION	90	4.1	12.847	313.980
87	24	22	19	02.7	55.420 S	146.006 E	WEST OF MACQUARIE ISLAND	10	5.3	52.740	161.932
88	25	04	05	37.2	55.764 S	28.179 W	SOUTH SANDWICH ISLANDS REGION	125	4.5	17.242	319.566
89	30	19	53	59.3	56.157 S	27.523 W	SOUTH SANDWICH ISLANDS REGION	109	4.7	16.737	320.218
90	APR 06	09	18	52.0	10.197 S	75.122 W	PERU	51	4.9	72.870	288.613
91	06	12	17	29.3	53.449 S	76.351 W	OFF COAST OF SOUTHERN CHILE	10	5.1	33.834	264.135
92	06	22	04	41.6	44.170 N	149.184 E	KURIL ISLANDS	33	5.2	151.243	145.213
93	07	00	07	25.0	44.318 N	149.204 E	KURIL ISLANDS	33	5.2	151.389	145.160
94	07	05	58	02.1	44.283 N	149.106 E	KURIL ISLANDS	33	5.2	151.337	145.039
95	07	06	02	04.2	44.295 N	149.056 E	KURIL ISLANDS	33	5.1	151.339	144.960
96	07	06	09	09.9	44.299 N	149.113 E	KURIL ISLANDS	33	5.0	151.354	145.040
97	08	02	52	13.2	12.799 S	74.037 W	PERU	72	5.0	70.071	288.800
98	08	03	21	22.2	8.815 S	74.692 W	PERU-BRAZIL BORDER REGION	140	5.0	74.042	289.489
99	08	09	31	39.6	52.759 S	27.183 E	SOUTH OF AFRICA	10	5.1	23.928	60.178
100	10	12	43	40.7	16.234 S	74.127 W	NEAR COAST OF PERU	29	4.6	66.861	287.513
101	11	01	40	11.3	33.272 S	178.585 W	SOUTH OF KERMADEC ISLANDS	45	4.6	75.989	188.324
102	13	23	32	11.8	20.071 S	176.125 W	FIJI ISLANDS REGION	213	4.7	88.998	191.375
103	16	00	30	54.7	24.061 S	177.036 W	SOUTH OF FIJI ISLANDS	110	6.4	85.083	190.265
104	16	15	12	23.0	59.821 S	26.357 W	SOUTH SANDWICH ISLANDS REGION	33	4.5	13.143	316.458
105	17	14	14	58.1	24.249 S	176.855 W	SOUTH OF FIJI ISLANDS	100	5.0	84.885	190.419

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106	APR 18	00	01	18.1	16.107 S	87.279 E	SOUTH INDIAN OCEAN	10	5.0	76.728	100.699
107	18	03	47	58.4	24.204 S	176.948 W	SOUTH OF FIJI ISLANDS	107	4.9	84.936	190.337
108	18	17	08	26.2	47.345 N	154.171 E	KURIL ISLANDS	33	5.3	155.191	150.916
109	19	00	19	31.2	23.944 S	70.093 W	NEAR COAST OF NORTHERN CHILE	49	6.0	58.342	288.625
110	19	02	30	09.6	17.757 S	179.865 W	FIJI ISLANDS REGION	609	5.0	91.511	187.983
111	19	03	17	10.6	17.744 S	179.886 W	FIJI ISLANDS REGION	612	4.7	91.525	187.964
112	20	19	17	06.1	24.071 S	66.786 W	SALTA PROVINCE, ARGENTINA	196	5.2	57.192	291.935
113	20	23	03	29.7	22.293 S	179.692 W	SOUTH OF FIJI ISLANDS	592	5.2	86.984	187.925
114	23	04	08	01.1	39.215 N	141.462 E	HONSHU, JAPAN	73	5.3	144.881	137.331
115	24	09	36	27.3	17.866 S	178.674 W	FIJI ISLANDS REGION	541	5.1	91.343	189.109
116	24	17	06	36.4	8.128 S	74.362 W	PERU-BRAZIL BORDER REGION	150	5.6	74.588	290.036
117	25	04	51	16.1	30.074 S	71.213 W	NEAR COAST OF CENTRAL CHILE	60	5.4	52.983	284.851
118	25	05	50	08.8	22.073 S	179.056 E	SOUTH OF FIJI ISLANDS	639	5.1	87.256	186.777
119	26	00	14	58.0	9.685 S	80.082 W	OFF COAST OF NORTHERN PERU	33	5.0	74.936	283.969
120	26	13	16	30.1	37.310 S	71.529 W	S. CHILE-ARGENTINA BORDER REG.	103	4.5	46.427	280.843
121	26	17	03	47.7	44.886 N	150.162 E	KURIL ISLANDS REGION	49	5.0	152.116	146.235
122	27	08	40	41.8	2.368 N	79.341 W	SOUTH OF PANAMA	10	4.8	86.084	288.575
123	29	14	40	41.1	6.518 S	154.999 E	SOLOMON ISLANDS	44	6.3	102.091	163.014
124	MAY 01	18	07	03.5	35.228 S	105.589 W	EASTER ISLAND CORDILLERA	10	4.7	59.477	250.294
125	02	04	00	11.1	36.202 S	71.143 W	CENTRAL CHILE	92	4.8	47.313	281.846
126	02	13	29	17.7	59.084 S	27.070 W	SOUTH SANDWICH ISLANDS REGION	33	5.1	13.966	316.487
127	03	03	32	47.1	40.774 N	109.661 E	NORTHERN CHINA	26	5.5	137.168	100.168
128	03	13	48	17.6	59.603 S	27.016 W	SOUTH SANDWICH ISLANDS REGION	33	4.1	13.489	315.602
129	03	18	39	37.1	43.085 N	146.835 E	KURIL ISLANDS	49	4.9	149.739	142.487
130	04	02	46	50.7	59.047 S	18.083 W	SOUTHWESTERN ATLANTIC OCEAN	10	4.6	12.327	335.650
131	04	16	49	24.8	13.862 N	146.256 E	SOUTH OF MARIANA ISLANDS	33	5.5	121.109	150.868
132	04	17	13	51.0	50.640 S	6.488 W	SOUTH ATLANTIC RIDGE	10	4.7	20.066	3.284
133	05	00	33	58.0	28.577 S	177.630 W	KERMADEC ISLANDS REGION	150	4.8	80.619	189.444
134	06	09	41	40.2	41.213 S	86.296 W	WEST CHILE RISE	10	4.7	47.786	264.433
135	06	12	11	30.0	24.628 S	178.755 E	SOUTH OF FIJI ISLANDS	560	5.0	84.721	186.395
136	07	01	16	50.0	57.143 S	147.481 E	WEST OF MACQUARIE ISLAND	10	4.8	51.188	163.347
137	07	08	44	36.6	1.621 N	126.558 E	MOLUCCA PASSAGE	33	5.9	105.132	132.823
138	07	12	13	02.3	22.989 S	175.204 W	TONGA ISLANDS REGION	33	4.9	86.033	192.019
139	07	21	43	39.9	15.321 S	70.014 W	SOUTHERN PERU	241	5.0	66.435	291.916
140	07	23	20	00.7	43.708 N	147.607 E	KURIL ISLANDS	53	6.2	150.492	143.224

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141	MAY 09	04	36	03.8	32.611	S	179.384	W	SOUTH OF KERMADEC ISLANDS	76	5.4	76.685	187.672
142	09	15	04	16.1	24.389	S	176.944	W	SOUTH OF FIJI ISLANDS	200	4.3	84.751	190.328
143	10	08	23	44.6	17.739	S	175.121	W	TONGA ISLANDS	232	4.1	91.249	192.489
144	10	10	19	38.3	14.009	S	74.467	W	PERU	101	5.4	69.065	287.961
145	10	16	01	30.5	61.784	S	160.830	E	BALLENY ISLANDS REGION	10	4.4	47.481	173.012
146	11	02	18	45.7	19.314	N	64.957	W	VIRGIN ISLANDS	35	5.0	98.002	307.099
147	11	02	57	26.0	55.580	S	27.914	W	SOUTH SANDWICH ISLANDS REGION	100	4.6	17.356	320.267
148	11	04	38	40.0	80.578	N	2.271	W	NORTH OF SVALBARD	29	5.4	151.177	2.039
149	11	13	43	45.1	6.605	S	155.038	E	SOLOMON ISLANDS	33	5.7	102.009	163.062
150	11	21	26	39.5	37.511	S	50.922	E	ATLANTIC-INDIAN RISE	10	5.1	44.919	75.117
151	12	06	21	35.4	17.383	S	175.230	W	TONGA ISLANDS	33	4.7	91.611	192.412
152	14	12	36	59.4	17.955	S	178.546	W	FIJI ISLANDS REGION	604	5.5	91.248	189.226
153	14	17	34	10.1	24.518	S	177.541	W	SOUTH OF FIJI ISLANDS	169	5.1	84.657	189.776
154	15	07	47	34.3	43.983	S	108.190	W	EASTER ISLAND CORDILLERA	10	4.9	52.241	243.871
155	17	12	25	21.8	28.674	S	62.904	W	SANTIAGO DEL ESTERO PROV., ARG.	602	4.6	51.685	294.036
156	18	07	42	21.7	23.953	S	68.823	W	NORTHERN CHILE	97	5.3	57.935	289.906
157	19	18	18	21.0	6.037	S	112.328	E	JAVA	612	5.0	93.997	120.973
158	19	21	19	05.9	28.799	N	139.497	E	BONIN ISLANDS REGION	382	5.0	134.420	139.206
159	20	17	07	42.6	21.786	S	67.075	W	CHILE-BOLIVIA BORDER REGION	204	4.6	59.430	292.533
160	23	01	57	23.0	5.900	N	77.584	W	NEAR WEST COAST OF COLOMBIA	33	5.5	88.879	291.343
161	23	03	38	42.4	55.997	S	27.778	W	SOUTH SANDWICH ISLANDS REGION	136	5.1	16.940	319.973
162	26	01	43	44.6	22.191	S	171.475	E	LOYALTY ISLANDS REGION	108	5.6	87.282	179.754
163	29	01	09	06.5	55.324	S	29.553	W	SOUTH SANDWICH ISLANDS REGION	23	4.4	17.950	317.752
164	29	10	08	34.3	55.313	S	29.283	W	SOUTH SANDWICH ISLANDS REGION	33	4.9	17.900	318.227
165	29	10	38	58.0	55.358	S	29.472	W	SOUTH SANDWICH ISLANDS REGION	33	4.6	17.900	317.847
166	30	03	04	37.6	56.720	S	26.311	W	SOUTH SANDWICH ISLANDS REGION	84	5.7	15.962	321.672
167	JUN 02	00	50	37.1	9.682	S	79.584	W	OFF COAST OF NORTHERN PERU	33	5.3	74.778	284.451
168	02	02	52	09.5	10.797	N	42.254	W	NORTH ATLANTIC RIDGE	10	6.1	84.587	326.462
169	04	04	13	16.9	50.005	S	114.775	W	EASTER ISLAND CORDILLERA	10	5.3	48.655	235.307
170	06	06	26	52.2	21.509	S	169.175	E	LOYALTY ISLANDS REGION	33	5.2	87.944	177.614
171	06	17	35	38.2	41.329	S	80.666	E	MID-INDIAN RISE	20	5.5	51.235	105.348
172	06	19	47	38.8	61.871	S	163.167	E	BALLENY ISLANDS REGION	10	4.6	47.478	174.516
173	07	08	31	19.7	64.700	S	69.355	W	SOUTHERN PACIFIC OCEAN	21	4.7	22.933	254.369
174	08	02	55	58.0	41.657	N	88.690	E	SOUTHERN XINJIANG, CHINA	0	5.9	131.028	79.824
175	08	23	19	15.2	51.491	N	178.128	W	ANDREANOF ISLANDS, ALEUTIAN IS.	33	5.9	160.253	198.845

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
176	JUN 09	01	12	16.8	17.444 N	145.458 E	MARIANA ISLANDS	149	6.0	124.496	149.241
177	10	01	04	47.0	13.481 S	167.130 E	VANUATU ISLANDS	200	5.8	95.908	175.500
178	10	04	03	35.5	51.564 N	177.632 W	ANDREANOF ISLANDS, ALEUTIAN IS.	33	6.6	160.271	199.779
179	10	15	24	56.0	51.478 N	176.847 W	ANDREANOF ISLANDS, ALEUTIAN IS.	26	5.9	160.096	201.143
180	13	06	57	58.2	20.416 S	178.310 W	FIJI ISLANDS REGION	535	5.1	88.785	189.309
181	14	09	17	36.2	44.613 N	150.278 E	KURIL ISLANDS REGION	54	5.4	151.874	146.554
182	14	13	34	03.2	58.727 S	149.068 E	WEST OF MACQUARIE ISLAND	10	5.0	49.770	164.776
183	16	00	06	17.8	60.275 S	26.288 W	SOUTH SANDWICH ISLANDS REGION	33	5.2	12.723	315.659
184	17	11	22	18.5	7.137 S	122.589 E	FLORES SEA	587	6.6	95.693	131.112
185	18	13	55	34.2	16.073 S	178.118 E	FIJI ISLANDS	33	5.6	93.271	186.128
186	21	03	50	53.9	41.820 S	84.683 E	SOUTHEAST INDIAN RISE	10	5.1	52.064	109.089
187	21	13	57	10.0	51.568 N	159.119 E	OFF EAST COAST OF KAMCHATKA	20	6.0	160.033	156.648
188	22	00	32	13.5	53.774 S	8.800 E	BOUVET ISLAND REGION	10	5.9	18.544	33.139
189	26	03	22	03.1	27.727 N	139.747 E	BONIN ISLANDS REGION	468	5.5	133.436	139.864
190	26	03	55	09.5	27.668 N	139.526 E	BONIN ISLANDS REGION	470	5.0	133.331	139.623
191	28	02	41	13.4	21.712 S	175.213 W	TONGA ISLANDS	35	5.3	87.304	192.106
192	30	02	30	48.0	15.244 S	173.499 W	TONGA ISLANDS	93	4.7	93.605	194.237
193	30	22	27	04.4	55.177 S	127.084 W	SOUTH PACIFIC CORDILLERA	10	4.9	47.027	223.241
194	JUL 01	16	23	55.6	41.963 S	88.432 E	SOUTHEAST INDIAN RISE	10	4.8	53.099	112.363
195	02	16	03	32.4	60.894 S	21.217 W	SOUTHWESTERN ATLANTIC OCEAN	33	5.0	11.089	325.329
196	03	12	53	19.7	59.539 S	26.107 W	SOUTH SANDWICH ISLANDS REGION	111	4.5	13.339	317.504
197	03	16	48	27.6	23.376 S	70.405 W	NEAR COAST OF NORTHERN CHILE	33	5.3	58.973	288.537
198	03	18	59	26.4	40.683 N	142.570 E	NEAR EAST COAST OF HONSHU, JAP.	48	5.0	146.533	138.016
199	04	11	39	39.9	61.852 N	150.830 W	SOUTHERN ALASKA	54	5.6	162.961	257.712
200	04	15	37	50.6	7.148 S	122.395 E	FLORES SEA	600	5.3	95.633	130.927
201	06	21	36	28.7	21.968 N	142.830 E	MARIANA ISLANDS REGION	241	5.8	128.454	145.158
202	07	06	05	01.5	60.040 S	27.581 W	SOUTH SANDWICH ISLANDS REGION	100	4.3	13.236	313.625
203	07	10	49	59.7	58.620 N	157.752 E	KAMCHATKA	10	5.6	166.620	147.217
204	12	08	50	02.4	45.475 N	150.617 E	KURIL ISLANDS	33	4.9	152.769	146.573
205	13	15	10	30.3	51.358 N	177.851 W	ANDREANOF ISLANDS, ALEUTIAN IS.	33	5.2	160.092	199.277
206	14	19	21	30.3	21.451 S	179.439 W	FIJI ISLANDS REGION	639	5.0	87.811	188.202
207	15	16	51	22.1	18.726 N	145.628 E	MARIANA ISLANDS	176	5.9	125.783	149.156
208	15	19	01	56.3	23.913 S	67.518 W	CHILE-ARGENTINA BORDER REGION	137	4.6	57.567	291.250
209	16	10	07	36.7	1.016 N	120.254 E	MINAHASSA PENINSULA	33	6.0	102.941	126.707
210	16	17	02	17.6	21.092 S	177.260 W	FIJI ISLANDS REGION	282	4.8	88.053	190.248

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
211	JUL 18	21	09	26.3	60.423 S	25.113 W	SOUTH SANDWICH ISLANDS REGION	33	4.5	12.324	317.734
212	19	23	43	03.9	48.247 S	31.642 E	SOUTH OF AFRICA	10	5.2	29.241	61.238
213	20	07	41	15.3	19.820 S	177.643 W	FIJI ISLANDS REGION	356	5.7	89.341	189.969
214	22	14	19	35.8	1.000 N	120.450 E	MINAHASSA PENINSULA	33	6.0	102.977	126.905
215	23	03	32	12.7	26.753 S	177.199 W	SOUTH OF FIJI ISLANDS	33	5.8	82.412	189.944
216	23	05	20	04.3	26.769 S	177.250 W	SOUTH OF FIJI ISLANDS	33	5.7	82.399	189.897
217	23	05	31	34.9	56.122 S	27.023 W	SOUTH SANDWICH ISLANDS REGION	100	4.6	16.665	321.164
218	23	06	38	15.7	26.647 S	177.162 W	SOUTH OF FIJI ISLANDS	33	5.2	82.516	189.984
219	24	02	52	22.6	49.268 S	116.756 E	SOUTH OF AUSTRALIA	10	4.7	53.918	138.531
220	24	21	00	33.5	15.141 S	173.493 W	TONGA ISLANDS	33	5.3	93.707	194.252
221	25	12	49	37.1	50.149 S	113.538 W	EASTER ISLAND CORDILLERA	10	5.1	48.185	236.186
222	25	18	52	24.8	59.053 S	25.648 W	SOUTH SANDWICH ISLANDS REGION	33	4.3	13.677	319.311
223	25	23	42	59.8	60.999 S	23.987 W	SOUTH SANDWICH ISLANDS REGION	33	4.3	11.559	318.862
224	27	11	40	02.8	28.655 S	177.465 W	KERMADEC ISLANDS REGION	48	5.6	80.532	189.585
225	29	08	05	25.5	60.405 S	27.973 W	SOUTH SANDWICH ISLANDS REGION	33	4.0	13.013	312.088
226	29	10	56	09.9	55.780 S	27.924 W	SOUTH SANDWICH ISLANDS REGION	33	4.6	17.172	319.995
227	31	10	29	10.4	12.739 S	66.307 E	MID-INDIAN RISE	10	5.1	72.954	79.721
228	31	22	30	35.6	27.600 S	65.547 E	SOUTH INDIAN OCEAN	10	5.6	58.823	84.713
229	AUG 01	21	51	47.9	17.810 S	70.623 W	NEAR COAST OF PERU	73	5.0	64.275	290.427
230	02	12	07	54.2	22.280 S	171.252 E	LOYALTY ISLANDS REGION	74	5.1	87.192	179.548
231	02	12	55	29.3	10.769 S	161.445 E	SOLOMON ISLANDS	33	6.2	98.368	169.795
232	02	16	23	36.7	26.923 S	177.171 W	SOUTH OF FIJI ISLANDS	33	5.3	82.241	189.958
233	04	06	48	32.9	7.758 S	128.671 E	BANDA SEA	33	5.0	96.540	137.142
234	04	23	52	28.3	40.062 N	143.540 E	OFF EAST COAST OF HONSHU, JAPAN	33	5.2	146.150	139.611
235	05	02	08	58.2	15.267 S	173.126 W	TONGA ISLANDS	41	6.0	93.551	194.594
236	05	21	39	16.2	1.996 S	81.001 W	OFF COAST OF ECUADOR	33	5.7	82.486	285.607
237	05	22	35	06.8	15.647 S	167.733 E	VANUATU ISLANDS	132	5.0	93.764	176.138
238	05	22	38	22.1	20.690 S	178.310 W	FIJI ISLANDS REGION	550	6.4	88.512	189.294
239	06	10	13	14.3	21.356 S	175.461 W	TONGA ISLANDS	33	5.4	87.675	191.903
240	06	15	08	24.2	28.607 S	67.535 W	LA RIOJA PROVINCE, ARGENTINA	33	5.0	53.178	289.257
241	08	17	10	52.7	53.061 N	167.094 W	FOX ISLANDS, ALEUTIAN ISLANDS	43	5.7	160.001	219.240
242	10	00	48	43.7	51.943 S	14.990 E	SOUTHWEST OF AFRICA	10	4.6	21.523	41.687
243	10	15	08	05.7	19.749 S	177.965 W	FIJI ISLANDS REGION	500	5.0	89.430	189.671
244	10	15	11	41.2	19.540 S	178.081 W	FIJI ISLANDS REGION	550	4.5	89.645	189.574
245	10	18	12	17.4	38.909 N	140.530 E	HONSHU, JAPAN	10	6.0	144.377	136.291

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
246	AUG 10	18	54	11.1	38.936 N	140.556 E	HONSHU, JAPAN	10	5.7	144.409	136.310
247	10	20	17	10.7	58.749 S	26.566 W	SOUTH SANDWICH ISLANDS REGION	100	4.7	14.154	318.055
248	10	23	10	45.7	38.880 N	140.628 E	HONSHU, JAPAN	10	5.6	144.372	136.430
249	11	01	31	16.8	13.396 S	166.692 E	VANUATU ISLANDS	99	5.6	95.981	175.070
250	11	01	59	23.8	38.848 N	140.509 E	HONSHU, JAPAN	10	5.2	144.314	136.295
251	11	06	01	32.9	38.878 N	140.537 E	HONSHU, JAPAN	10	4.7	144.349	136.315
252	11	11	48	14.3	38.949 N	140.574 E	HONSHU, JAPAN	10	4.9	144.426	136.327
253	11	11	52	26.9	38.932 N	140.616 E	HONSHU, JAPAN	10	4.8	144.419	136.389
254	13	02	13	01.7	38.844 N	140.509 E	HONSHU, JAPAN	10	5.0	144.311	136.297
255	13	09	41	43.8	34.506 S	179.156 E	SOUTH OF KERMADEC ISLANDS	200	5.3	74.854	186.325
256	13	09	41	21.4	21.601 S	170.351 E	LOYALTY ISLANDS REGION	109	5.3	87.865	178.708
257	13	19	33	40.4	15.702 S	13.200 W	SOUTH ATLANTIC RIDGE	10	5.6	55.026	354.184
258	14	21	23	47.4	42.547 S	73.587 W	NEAR COAST OF SOUTHERN CHILE	33	4.9	42.373	275.596
259	15	06	25	30.4	17.348 S	71.143 W	NEAR COAST OF PERU	57	5.1	64.872	290.074
260	15	07	33	50.6	13.302 S	166.838 E	VANUATU ISLANDS	33	5.7	96.079	175.210
261	16	08	41	57.9	58.635 S	25.026 W	SOUTH SANDWICH ISLANDS REGION	33	5.0	13.926	321.263
262	16	12	51	23.5	0.068 S	66.997 E	CARLSBERG RIDGE	10	4.9	85.115	76.169
263	18	08	43	42.3	35.873 S	71.370 W	CENTRAL CHILE	90	4.9	47.688	281.796
264	19	04	19	16.2	51.451 N	178.367 W	ANDREANOF ISLANDS, ALEUTIAN IS.	33	5.7	160.239	198.392
265	19	06	24	11.0	41.523 S	80.416 E	MID-INDIAN RISE	10	5.4	50.979	105.236
266	20	00	11	00.3	77.860 N	7.564 E	SVALBARD REGION	10	5.3	148.707	6.366
267	23	17	53	06.2	19.035 S	173.579 W	TONGA ISLANDS	33	5.2	89.844	193.843
268	24	08	51	15.3	30.752 S	178.235 W	KERMADEC ISLANDS	59	5.1	78.484	188.777
269	26	05	48	38.6	8.031 S	93.583 E	SOUTH INDIAN OCEAN	10	5.2	86.371	103.881
270	27	06	24	07.9	22.570 S	179.792 W	SOUTH OF FIJI ISLANDS	574	5.6	86.712	187.819
271	27	06	34	42.1	22.435 S	179.746 W	SOUTH OF FIJI ISLANDS	581	5.0	86.845	187.868
272	27	10	50	49.4	36.883 S	78.486 E	MID-INDIAN RISE	10	5.3	54.570	101.101
273	27	14	36	39.2	6.933 S	12.724 W	ASCENSION ISLAND REGION	10	5.2	63.749	355.050
274	28	16	53	11.7	59.994 S	149.942 E	WEST OF MACQUARIE ISLAND	10	5.3	48.592	165.636
275	29	04	47	03.9	42.490 S	172.755 E	SOUTH ISLAND, NEW ZEALAND	33	5.0	67.009	180.813
276	29	20	22	15.9	1.086 N	28.185 W	CENTRAL MID-ATLANTIC RIDGE	10	5.1	72.877	339.081
277	30	23	00	30.9	3.333 S	12.039 W	NORTH OF ASCENSION ISLAND	10	4.9	67.318	355.904
278	31	15	58	29.8	14.930 S	167.331 E	VANUATU ISLANDS	125	5.2	94.469	175.733
279	31	18	59	20.9	52.992 S	72.378 W	NEAR COAST OF SOUTHERN CHILE	33	5.1	32.898	268.209
280	31	20	47	21.1	51.493 N	178.218 W	ANDREANOF ISLANDS, ALEUTIAN IS.	43	5.6	160.265	198.683

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281	SEP 02	20	41	52.9	12.320	N	143.809	E	SOUTH OF MARIANA ISLANDS	33	5.7	119.184	148.462
282	03	09	57	26.8	40.203	N	142.652	E	NEAR EAST COAST OF HONSHU, JAPAN	33	5.1	146.092	138.374
283	04	10	38	07.3	55.989	S	147.121	E	WEST OF MACQUARIE ISLAND	10	5.2	52.291	162.840
284	04	14	27	58.4	56.921	S	126.269	W	EASTER ISLAND CORDILLERA	10	4.3	45.246	222.839
285	04	15	18	27.4	29.038	N	140.833	E	SOUTH OF HONSHU, JAPAN	65	5.4	134.936	140.717
286	04	19	06	49.8	9.365	N	84.266	W	COSTA RICA	32	5.8	94.259	286.148
287	04	23	51	26.9	42.003	S	174.741	E	OFF E. COAST OF S. ISLAND, N.Z	33	5.1	67.477	182.414
288	05	08	14	14.5	22.118	S	113.436	W	EASTER ISLAND REGION	10	6.2	74.152	248.362
289	05	09	10	20.8	22.054	S	113.099	W	EASTER ISLAND REGION	10	5.6	74.108	248.690
290	05	09	46	59.4	22.056	S	113.083	W	EASTER ISLAND REGION	10	5.6	74.101	248.704
291	05	23	42	06.1	21.898	N	121.498	E	TAIWAN REGION	20	6.4	123.263	121.569
292	06	11	34	31.6	21.586	N	121.440	E	TAIWAN REGION	20	5.5	122.950	121.621
293	07	02	55	30.4	20.520	S	174.360	W	TONGA ISLANDS	35	5.0	88.428	192.991
294	07	10	31	58.4	32.653	S	178.530	W	SOUTH OF KERMADEC ISLANDS	33	5.0	76.603	188.408
295	07	11	23	31.7	32.551	S	178.475	W	SOUTH OF KERMADEC ISLANDS	33	4.9	76.702	188.461
296	08	08	08	13.5	15.573	S	73.049	W	SOUTHERN PERU	98	5.4	67.143	288.812
297	08	11	01	50.9	57.344	S	147.396	W	SOUTH PACIFIC CORDILLERA	10	4.5	48.901	207.992
298	08	11	34	58.6	19.610	S	179.296	W	FIJI ISLANDS REGION	678	4.8	89.638	188.429
299	08	11	42	51.8	19.718	S	179.097	W	FIJI ISLANDS REGION	600	4.9	89.521	188.610
300	08	22	42	35.1	52.947	S	27.245	E	SOUTH OF AFRICA	10	4.5	23.780	60.481
301	09	00	20	39.1	31.900	S	71.560	W	NEAR COAST OF CENTRAL CHILE	39	6.0	51.404	283.637
302	09	09	32	11.3	21.217	S	179.167	W	FIJI ISLANDS REGION	624	5.0	88.031	188.466
303	10	04	25	37.5	30.177	S	179.642	W	KERMADEC ISLANDS REGION	416	4.4	79.123	187.575
304	10	10	12	15.8	60.525	S	25.516	W	SOUTH SANDWICH ISLANDS REGION	33		12.324	316.685
305	10	14	38	54.5	7.943	S	74.345	W	PERU-BRAZIL BORDER REGION	149	4.8	74.758	290.112
306	11	02	37	15.0	35.537	N	140.943	E	NEAR EAST COAST OF HONSHU, JAPAN	55	6.1	141.237	138.381
307	14	08	01	03.8	36.046	N	70.706	E	HINDU KUSH REGION	119	5.1	120.190	66.865
308	15	07	12	42.8	26.119	S	177.741	W	SOUTH OF FIJI ISLANDS	100	4.9	83.074	189.496
309	15	09	25	41.5	24.427	S	179.919	W	SOUTH OF FIJI ISLANDS	493	4.8	84.867	187.613
310	16	12	52	28.1	17.779	S	178.219	W	FIJI ISLANDS REGION	500	5.1	91.406	189.546
311	16	15	26	59.6	59.339	S	27.232	W	SOUTH SANDWICH ISLANDS REGION	33	5.2	13.775	315.698
312	16	17	07	16.1	17.704	S	178.290	W	FIJI ISLANDS REGION	500	4.8	91.484	189.483
313	17	23	09	24.2	0.908	N	26.370	W	CENTRAL MID-ATLANTIC RIDGE	10	5.3	72.494	340.951
314	17	23	47	07.1	43.648	N	147.213	E	KURIL ISLANDS	33	5.5	150.356	142.704
315	18	00	13	07.1	43.010	N	146.870	E	KURIL ISLANDS	53	5.0	149.674	142.576

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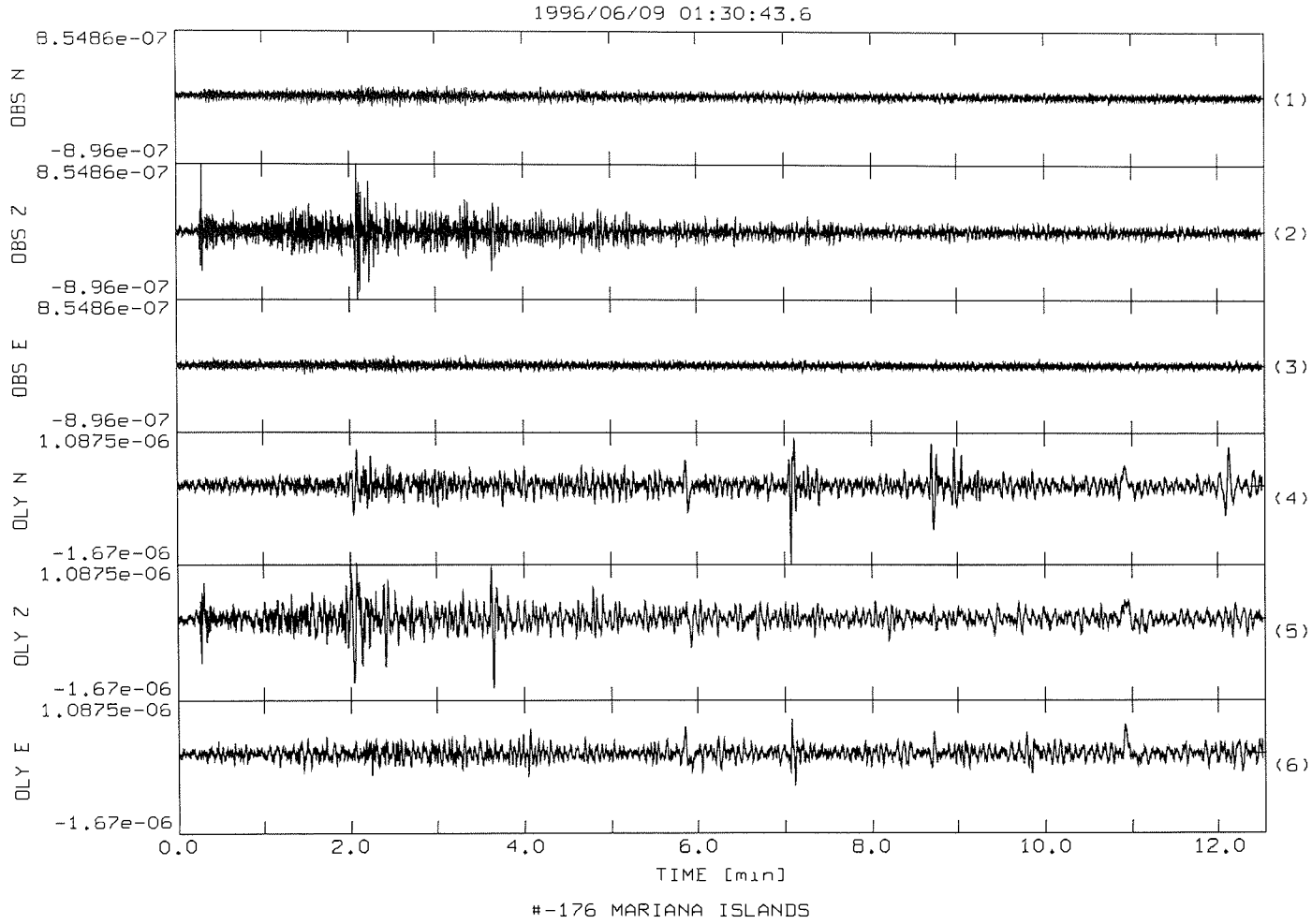
316	SEP 18	04	11	44.4	19.754 S	168.688 E	VANUATU ISLANDS	31	5.4	89.687	177.130
317	19	21	05	28.1	25.360 S	179.786 E	SOUTH OF FIJI ISLANDS	484	5.1	83.950	187.300
318	20	02	02	49.6	29.821 S	73.011 E	MID-INDIAN RISE	26	5.3	59.249	92.764
319	20	04	11	04.5	9.454 N	126.334 E	MINDANAO, PHILIPPINE ISLANDS	33	5.9	112.639	130.545
320	20	17	37	06.3	53.083 S	9.696 E	SOUTHWEST OF AFRICA	10	5.6	19.366	34.052
321	21	02	53	18.6	18.999 S	67.531 W	BOLIVIA	224	5.0	62.198	293.107
322	21	04	32	26.7	55.968 S	24.721 W	SOUTH SANDWICH ISLANDS REGION	50	5.1	16.352	325.602
323	22	02	21	33.3	15.903 S	71.727 W	SOUTHERN PERU	139	5.0	66.418	290.007
324	22	02	29	07.7	34.040 N	140.627 E	NEAR EAST COAST OF HONSHU, JAPAN	54	5.5	139.727	138.615
325	24	11	42	18.9	15.191 N	61.443 W	LEEWARD ISLANDS	146	6.0	93.127	309.219
326	24	13	16	49.2	20.187 S	176.326 W	FIJI ISLANDS REGION	219	5.0	88.896	191.179
327	25	10	35	16.8	39.193 S	174.895 E	NORTH ISLAND, NEW ZEALAND	225	5.0	70.283	182.597
328	25	14	59	50.1	65.637 S	44.382 E	SOUTH INDIAN OCEAN	10	4.6	19.598	101.322
329	25	21	16	09.7	9.295 S	108.725 E	SOUTH OF JAVA	33	5.2	89.851	118.499
330	26	23	16	35.7	56.022 S	27.905 W	SOUTH SANDWICH ISLANDS REGION	100	4.6	16.944	319.714
331	29	06	15	43.6	10.549 S	165.867 E	SANTA CRUZ ISLANDS	185	5.2	98.792	174.167
332	30	01	53	38.8	59.133 S	25.102 W	SOUTH SANDWICH ISLANDS REGION	33	4.4	13.487	320.257
333	30	02	07	24.8	59.115 S	24.906 W	SOUTH SANDWICH ISLANDS REGION	33	4.7	13.462	320.684
334	30	05	49	50.5	54.047 N	160.005 E	NEAR EAST COAST OF KAMCHATKA	101	5.5	162.571	156.598
335	30	18	42	16.3	22.304 S	68.406 W	NORTHERN CHILE	125	4.9	59.354	290.980
336	30	18	52	03.6	45.537 N	151.811 E	KURIL ISLANDS	33	5.5	153.041	148.312
337	OCT 01	11	01	25.3	44.073 N	148.353 E	KURIL ISLANDS	33	5.5	150.990	144.078
338	01	14	53	11.5	19.699 S	178.253 W	FIJI ISLANDS REGION	593	4.9	89.496	189.404
339	01	15	50	23.7	12.434 N	58.066 E	ARABIAN SEA	10	5.8	94.164	63.832
340	01	23	04	12.6	12.681 S	76.813 W	NEAR COAST OF PERU	61	5.5	71.063	286.122
341	02	11	24	48.4	45.133 N	151.168 E	KURIL ISLANDS	33	6.1	152.537	147.577
342	02	13	07	09.9	22.678 S	66.202 W	JUJUY PROVINCE, ARGENTINA	247	4.6	58.323	293.081
343	02	21	52	58.5	19.252 S	179.425 W	FIJI ISLANDS REGION	685	5.2	90.001	188.326
344	04	19	13	18.2	41.559 S	89.262 W	SOUTHERN PACIFIC OCEAN	10	5.0	48.453	261.539
345	06	05	23	20.8	52.672 S	140.319 E	WEST OF MACQUARIE ISLAND	10	5.0	54.778	157.199
346	06	07	44	59.7	43.417 S	39.181 E	PRINCE EDWARD ISLANDS REGION	10	5.1	35.857	66.258
347	06	20	13	09.2	49.047 N	127.880 W	VANCOUVER ISLAND REGION	10	5.8	145.053	264.281
348	07	08	45	52.4	28.689 S	62.915 W	SANTIAGO DEL ESTERO PROV., ARG.	615	4.7	51.674	294.018
349	07	09	23	56.9	22.113 S	179.577 W	SOUTH OF FIJI ISLANDS	606	5.2	87.158	188.040
350	07	11	21	46.0	1.451 N	85.335 W	OFF COAST OF ECUADOR	33	4.6	87.137	282.593

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude		Longitude		Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
351	OCT 08	01	36	53.9	45.778	S	96.025	E	SOUTHEAST INDIAN RISE	10	5.2	51.877	120.634
352	09	07	12	25.9	49.737	N	129.605	W	VANCOUVER ISLAND REGION	10	5.3	146.219	263.181
353	14	23	26	20.0	7.133	S	155.568	E	SOLOMON ISLANDS	24	5.9	101.535	163.647
354	15	00	22	38.8	43.705	N	147.106	E	KURIL ISLANDS	33	5.5	150.389	142.522
355	16	01	19	18.5	19.616	S	169.297	E	VANUATU ISLANDS	143	5.3	89.834	177.701
356	18	06	25	17.2	20.188	S	178.313	W	FIJI ISLANDS REGION	550	4.9	89.012	189.320
357	18	10	50	20.9	30.568	N	131.093	E	KYUSHU, JAPAN	10	6.0	134.115	128.735
358	18	13	41	03.4	32.436	S	70.041	W	CHILE-ARGENTINA BORDER REGION	121	5.2	50.420	284.910
359	18	15	26	58.1	52.974	S	21.862	E	SOUTH OF AFRICA	10	5.2	22.259	53.127
360	18	16	44	47.9	33.685	N	137.403	E	NEAR S. COAST OF HONSHU, JAPAN	337	5.4	138.653	134.827
361	18	17	34	53.0	62.141	S	165.014	E	BALLENY ISLANDS REGION	10	4.9	47.261	175.717
362	19	14	44	40.8	31.885	N	131.468	E	KYUSHU, JAPAN	22	6.3	135.465	128.606
363	19	14	53	48.8	20.412	S	178.510	W	FIJI ISLANDS REGION	590	6.1	88.799	189.123
364	21	19	33	01.4	19.231	S	177.350	W	FIJI ISLANDS REGION	500	5.1	89.910	190.280
365	22	08	28	47.8	54.185	S	7.347	E	BOUVET ISLAND REGION	10	4.7	17.895	30.917
366	22	08	59	57.5	22.751	S	174.936	W	TONGA ISLANDS REGION	52	4.9	86.251	192.284
367	22	10	51	25.1	60.880	S	154.473	E	WEST OF MACQUARIE ISLAND	10	4.9	48.048	168.777
368	22	20	37	21.1	50.256	S	115.855	W	EASTER ISLAND CORDILLERA	10	4.9	48.721	234.329
369	22	22	15	02.5	63.347	N	145.359	W	CENTRAL ALASKA	3	5.7	162.211	267.198
370	23	01	50	06.5	49.307	S	117.264	W	SOUTH PACIFIC OCEAN	10	4.8	49.963	233.756
371	23	12	05	49.7	44.650	N	149.461	E	KURIL ISLANDS	33	5.5	151.758	145.347
372	24	13	58	34.2	31.026	S	179.925	E	KERMADEC ISLANDS REGION	444	4.4	78.295	187.153
373	25	07	14	57.3	22.012	S	174.170	W	TONGA ISLANDS REGION	33	5.3	86.930	193.048
374	25	19	59	41.1	17.378	S	69.989	W	PERU-BOLIVIA BORDER REGION	116	5.5	64.485	291.217
375	27	16	51	09.9	34.261	N	139.172	E	NEAR S. COAST OF HONSHU, JAPAN	33	4.9	139.615	136.734
376	28	09	24	06.7	43.501	N	147.098	E	KURIL ISLANDS	33	5.5	150.192	142.624
377	28	23	32	11.9	58.740	S	25.582	W	SOUTH SANDWICH ISLANDS REGION	33	5.0	13.948	319.986
378	29	11	24	14.3	58.960	S	24.833	W	SOUTH SANDWICH ISLANDS REGION	50	4.6	13.588	321.101
379	29	11	28	01.9	58.948	S	25.097	W	SOUTH SANDWICH ISLANDS REGION	10		13.654	320.591
380	29	13	11	39.7	58.366	S	15.131	W	SOUTHWESTERN ATLANTIC OCEAN	10	4.6	12.648	343.293
381	30	09	09	41.4	41.719	N	138.708	E	EASTERN SEA OF JAPAN	222	5.1	146.616	132.425
382	30	16	55	39.0	49.899	S	110.697	E	SOUTHEAST INDIAN RISE	10	4.8	51.939	134.197
383	30	22	57	54.6	24.593	S	176.165	W	SOUTH OF FIJI ISLANDS	33	5.0	84.500	191.024
384	30	23	07	00.9	48.397	S	31.363	E	SOUTH OF AFRICA	28	4.6	29.025	61.029
385	30	23	30	40.1	24.587	S	176.118	W	SOUTH OF FIJI ISLANDS	33	5.2	84.503	191.067

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude	Longitude	Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
386	31	17	37	23.4	43.536 N	147.166 E	KURIL ISLANDS	59	5.5	150.239	142.700
387	NOV 02	00	08	50.7	7.558 S	117.301 E	BALI SEA	301	5.5	93.916	126.146
388	02	19	42	25.7	43.783 N	151.895 E	KURIL ISLANDS REGION	33	4.9	151.353	149.340
389	04	17	24	57.4	7.306 N	77.393 W	PANAMA-COLOMBIA BORDER REGION	14	6.0	90.152	291.958
390	05	09	41	34.8	31.160 S	179.998 E	KERMADEC ISLANDS REGION	369	5.9	78.158	187.211
391	05	10	05	56.6	22.135 S	179.589 W	SOUTH OF FIJI ISLANDS	600	5.0	87.136	188.028
392	06	02	00	52.7	18.849 N	64.326 W	VIRGIN ISLANDS	21	5.1	97.389	307.548
393	06	17	04	33.8	7.761 S	106.981 E	JAVA	33	5.4	90.797	116.399
394	06	20	00	58.9	27.999 N	143.538 E	BONIN ISLANDS REGION	9	6.4	134.472	144.301
395	07	03	10	57.8	16.082 S	177.724 W	FIJI ISLANDS REGION	33	5.1	93.067	190.118
396	07	07	09	17.5	55.894 S	27.900 W	SOUTH SANDWICH ISLANDS REGION	150	4.6	17.061	319.891
397	08	14	00	50.6	22.258 S	179.223 W	SOUTH OF FIJI ISLANDS	552	5.2	86.997	188.360
398	09	07	53	22.7	34.551 S	179.383 E	SOUTH OF KERMADEC ISLANDS	84	5.4	74.800	186.516
399	09	09	34	46.0	32.409 S	179.150 W	SOUTH OF KERMADEC ISLANDS	100	5.2	76.876	187.886
400	09	17	28	41.2	31.184 S	177.963 W	KERMADEC ISLANDS REGION	33	5.3	78.039	188.989
401	10	17	12	50.8	25.815 S	68.941 W	CHILE-ARGENTINA BORDER REGION	33	4.6	56.228	289.024
402	11	00	47	21.1	32.538 S	179.049 W	SOUTH OF KERMADEC ISLANDS	33	5.9	76.743	187.966
403	11	06	38	42.1	25.053 S	64.386 W	SALTA PROVINCE, ARGENTINA	33	5.0	55.534	294.013
404	12	16	59	44.0	14.993 S	75.675 W	NEAR COAST OF PERU	33	6.5	68.522	286.430
405	12	17	10	00.5	14.935 S	75.609 W	NEAR COAST OF PERU	33	5.6	68.556	286.516
406	12	17	16	16.5	15.111 S	75.069 W	NEAR COAST OF PERU	33	5.1	68.218	286.984
407	12	17	39	26.6	14.819 S	75.555 W	NEAR COAST OF PERU	33	5.2	68.648	286.609
408	12	18	17	31.4	15.306 S	75.296 W	NEAR COAST OF PERU	33	5.2	68.107	286.692
409	12	20	07	46.3	15.114 S	75.657 W	NEAR COAST OF PERU	33	4.9	68.402	286.405
410	12	21	43	58.0	15.269 S	75.511 W	NEAR COAST OF PERU	33	5.2	68.210	286.494
411	12	23	35	14.2	14.929 S	75.556 W	NEAR COAST OF PERU	33	5.5	68.544	286.570
412	13	00	28	20.1	15.053 S	75.623 W	NEAR COAST OF PERU	33	5.2	68.449	286.460
413	13	02	41	39.9	14.843 S	75.692 W	NEAR COAST OF PERU	33	5.6	68.669	286.467
414	13	02	47	33.2	15.360 S	75.571 W	NEAR COAST OF PERU	33	5.1	68.143	286.403
415	13	04	43	48.2	15.194 S	75.231 W	NEAR COAST OF PERU	33	5.2	68.191	286.795
416	13	09	52	11.7	14.959 S	75.489 W	NEAR COAST OF PERU	33	5.2	68.495	286.625
417	13	12	32	09.8	15.474 S	75.414 W	NEAR COAST OF PERU	33	5.4	67.986	286.517
418	14	02	38	57.0	15.452 S	75.512 W	NEAR COAST OF PERU	33	5.3	68.038	286.428
419	14	06	18	15.3	20.632 S	178.064 W	FIJI ISLANDS REGION	505	4.8	88.556	189.527
420	14	10	42	57.0	25.860 S	13.836 W	SOUTH ATLANTIC RIDGE	10	5.2	44.925	352.874

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude		Longitude		Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
421	NOV 14	11	44	06.7	14.802	S	75.746	W	NEAR COAST OF PERU	33	5.4	68.724	286.428
422	14	13	47	38.1	21.237	S	176.621	W	FIJI ISLANDS REGION	191	5.9	87.869	190.833
423	15	02	32	02.3	58.849	S	24.785	W	SOUTH SANDWICH ISLANDS REGION	33		13.680	321.387
424	15	08	49	30.8	14.781	S	75.479	W	NEAR COAST OF PERU	33	5.2	68.659	286.697
425	16	09	47	50.8	15.101	S	176.300	W	FIJI ISLANDS REGION	33	5.3	93.954	191.551
426	17	13	17	24.7	56.060	S	27.399	W	SOUTH SANDWICH ISLANDS REGION	100	4.9	16.801	320.568
427	17	18	44	14.2	4.438	N	76.201	W	COLOMBIA	112	4.7	87.066	292.204
428	17	19	17	42.0	11.081	N	86.052	W	NEAR COAST OF NICARAGUA	33	5.5	96.449	285.034
429	17	21	11	20.3	22.196	S	179.704	W	SOUTH OF FIJI ISLANDS	591	5.5	87.081	187.919
430	17	23	26	36.3	30.660	S	178.187	W	KERMADEC ISLANDS	54	5.3	78.573	188.825
431	18	10	46	29.3	35.326	S	72.593	W	NEAR COAST OF CENTRAL CHILE	33	4.9	48.588	280.863
432	18	16	48	01.6	58.876	S	25.950	W	SOUTH SANDWICH ISLANDS REGION	113		13.903	319.029
433	18	23	51	25.1	46.608	N	151.345	E	KURIL ISLANDS	91	5.1	153.995	147.001
434	19	08	14	08.2	17.575	S	178.409	W	FIJI ISLANDS REGION	550	4.8	91.619	189.377
435	19	10	44	46.1	35.345	N	78.133	E	EASTERN KASHMIR	33	6.1	121.868	73.690
436	20	02	27	48.0	34.350	N	141.132	E	OFF EAST COAST OF HONSHU, JAPAN	33	5.9	140.136	139.113
437	20	17	58	04.6	16.348	N	120.527	E	LUZON, PHILIPPINE ISLANDS	33	5.7	117.704	122.463
438	21	02	28	34.2	10.878	N	141.424	E	WEST CAROLINE ISLANDS	33	5.6	117.344	146.157
439	21	07	26	08.5	19.897	S	68.918	W	CHILE-BOLIVIA BORDER REGION	110	5.0	61.778	291.375
440	21	07	43	38.4	6.659	N	126.463	E	MINDANAO, PHILIPPINE ISLANDS	52	5.8	109.975	131.431
441	22	08	07	50.1	56.568	S	24.128	W	SOUTH SANDWICH ISLANDS REGION	33	5.1	15.676	325.999
442	22	15	38	35.2	7.909	S	74.385	W	PERU-BRAZIL BORDER REGION	150	4.8	74.803	290.084
443	22	16	08	04.1	22.624	S	112.443	W	EASTER ISLAND REGION	10	5.1	73.369	249.088
444	23	01	10	40.5	56.097	S	26.761	W	SOUTH SANDWICH ISLANDS REGION	100		16.634	321.672
445	25	13	23	53.2	2.749	S	139.389	E	NEAR N. COAST OF WEST IRIAN	33	5.5	103.619	146.701
446	26	10	29	44.4	55.685	S	124.358	W	EASTER ISLAND CORDILLERA	10	4.7	45.933	224.909
447	28	14	05	49.4	55.576	S	26.046	W	SOUTH SANDWICH ISLANDS REGION	33	4.9	16.976	323.618
448	29	00	51	40.5	56.513	S	25.345	W	SOUTH SANDWICH ISLANDS REGION	33	5.1	15.960	323.752
449	30	17	55	13.0	41.762	N	139.420	E	HOKKAIDO, JAPAN REGION	33	5.0	146.830	133.314
450	DEC 01	23	09	40.6	30.522	S	179.675	W	KERMADEC ISLANDS REGION	355	5.3	78.781	187.529
451	02	22	17	59.2	31.789	N	131.314	E	KYUSHU, JAPAN	49	6.0	135.334	128.470
452	03	12	56	56.9	18.351	S	172.275	W	TONGA ISLANDS REGION	32	6.0	90.415	195.132
453	03	15	49	12.8	37.485	N	139.480	E	HONSHU, JAPAN	138	5.0	142.775	135.664
454	04	18	06	34.9	55.795	S	26.204	W	SOUTH SANDWICH ISLANDS REGION	33		16.802	323.065
455	05	00	02	19.6	15.598	S	167.340	E	VANUATU ISLANDS	33	5.1	93.803	175.759

Data No.	Origin time UTC Date	h	m	s	Geographic coordinates Latitude		Longitude		Region	Depth (km)	Magnitude Mb/MS	Epicentral distance (degree)	Azimut (degree)
456	DEC 06	10	09	02.4	59.235	S	24.728	W	SOUTH SANDWICH ISLANDS REGION	33	4.9	13.314	320.832
457	09	03	54	16.3	7.936	S	107.489	E	JAVA	50	5.5	90.781	116.932
458	10	08	36	18.7	0.870	N	30.039	W	CENTRAL MID-ATLANTIC RIDGE	10	6.0	72.893	337.126
459	10	16	57	39.8	51.824	N	177.562	W	ANDREANOF ISLANDS, ALEUTIAN IS	10	5.3	160.519	200.046
460	11	03	23	09.0	52.264	S	17.156	E	SOUTHWEST OF AFRICA	10	4.2	21.721	45.372
461	11	05	21	25.8	52.247	S	16.888	E	SOUTHWEST OF AFRICA	10		21.673	44.944
462	13	01	00	07.8	16.406	S	171.609	W	SAMOA ISLANDS REGION	33	5.4	92.287	195.944
463	13	12	35	24.5	56.267	S	27.056	W	SOUTH SANDWICH ISLANDS REGION	114	5.2	16.537	320.914
464	15	15	38	48.8	24.437	S	176.454	W	SOUTH OF FIJI ISLANDS	33	4.9	84.674	190.772
465	15	23	13	20.0	40.220	S	178.543	E	OFF E. COAST OF N. ISLAND, N.Z	46	4.8	69.171	185.554
466	17	21	59	35.0	8.508	S	112.568	E	JAVA	71	4.8	91.704	121.904
467	17	22	40	54.0	18.182	S	178.036	W	FIJI ISLANDS REGION	550	5.4	90.994	189.696
468	18	10	12	27.5	25.120	S	70.683	W	NEAR COAST OF NORTHERN CHILE	32	5.8	57.428	287.550
469	19	09	32	35.4	59.880	S	27.813	W	SOUTH SANDWICH ISLANDS REGION	100	4.2	13.433	313.515
470	19	22	38	42.8	15.253	S	75.738	W	NEAR COAST OF PERU	26	4.3	68.297	286.277
471	20	03	53	22.2	5.288	S	35.828	E	TANZANIA	10	5.0	71.092	47.146
472	21	01	28	45.3	36.025	N	139.767	E	HONSHU, JAPAN	44	5.7	141.443	136.700
473	21	08	34	03.7	5.215	S	35.545	E	TANZANIA	10	4.8	71.094	46.838
474	22	14	53	27.6	43.207	N	138.920	E	EASTERN SEA OF JAPAN	226	6.0	148.071	131.781
475	23	00	28	55.9	22.622	S	175.520	W	TONGA ISLANDS REGION.	100	5.0	86.420	191.756
476	24	23	30	19.8	15.560	S	74.475	W	NEAR COAST OF PERU	33	5.1	67.606	287.410
477	27	02	49	47.4	16.058	S	178.162	E	FIJI ISLANDS.	33	5.7	93.284	186.171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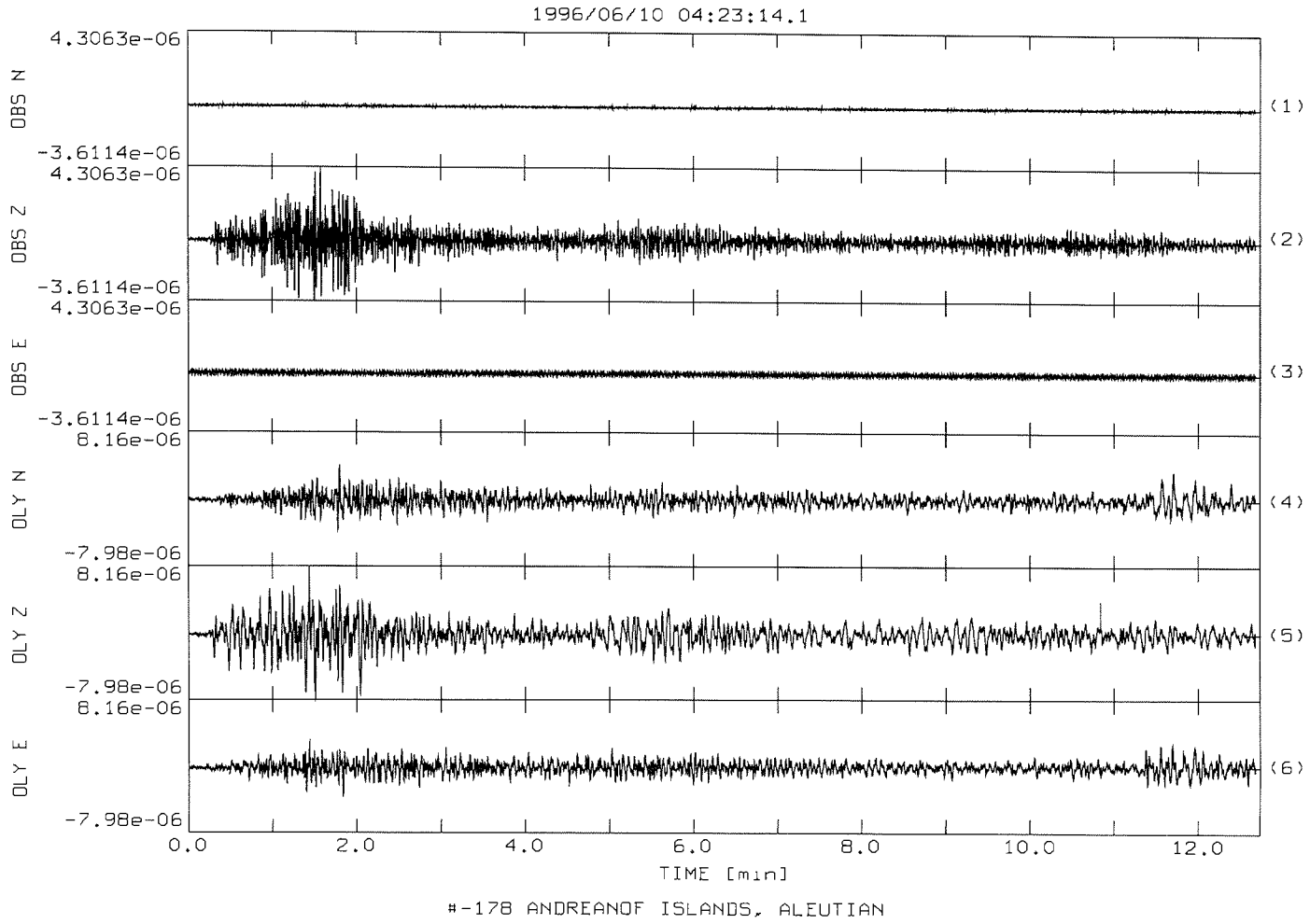
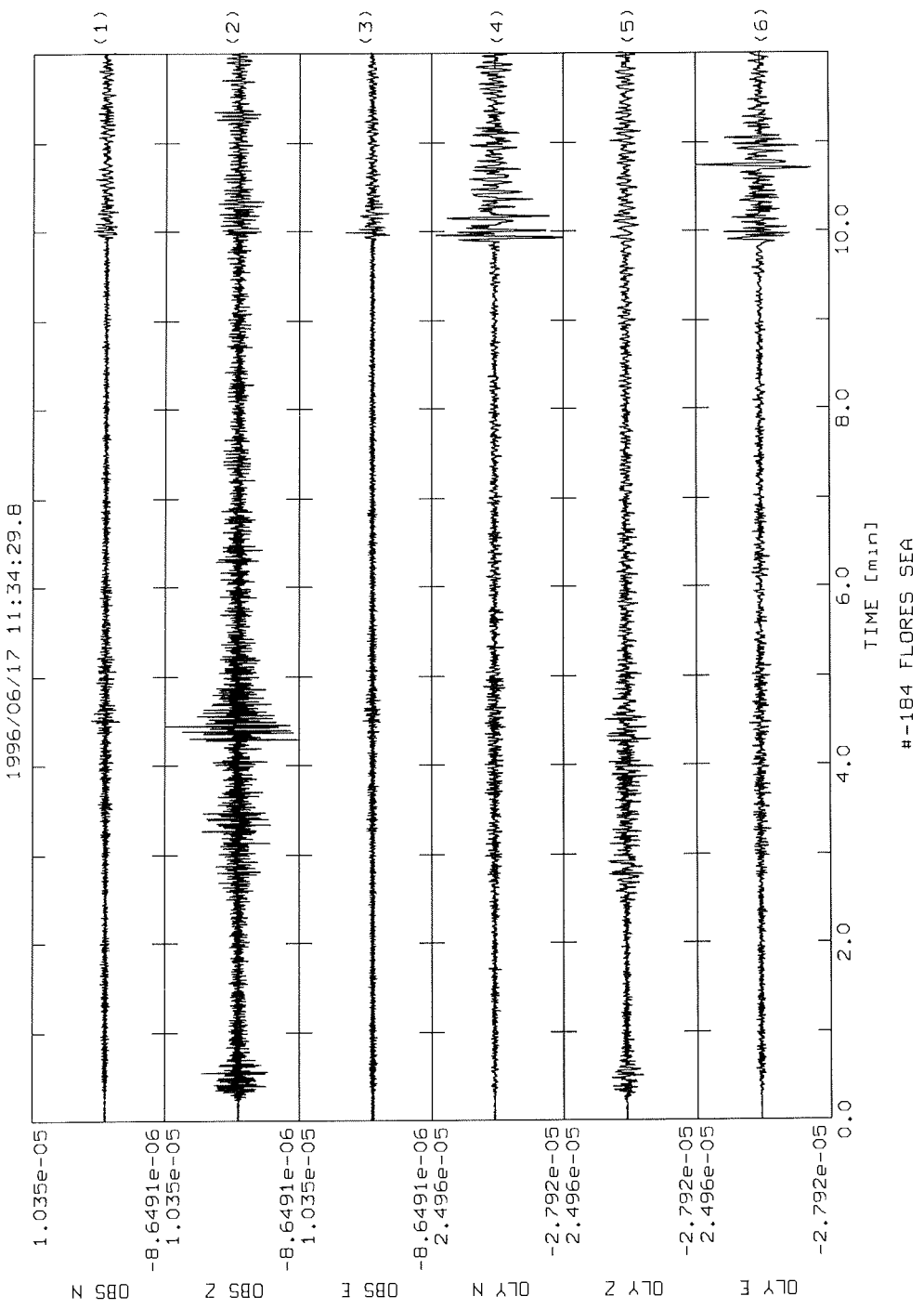
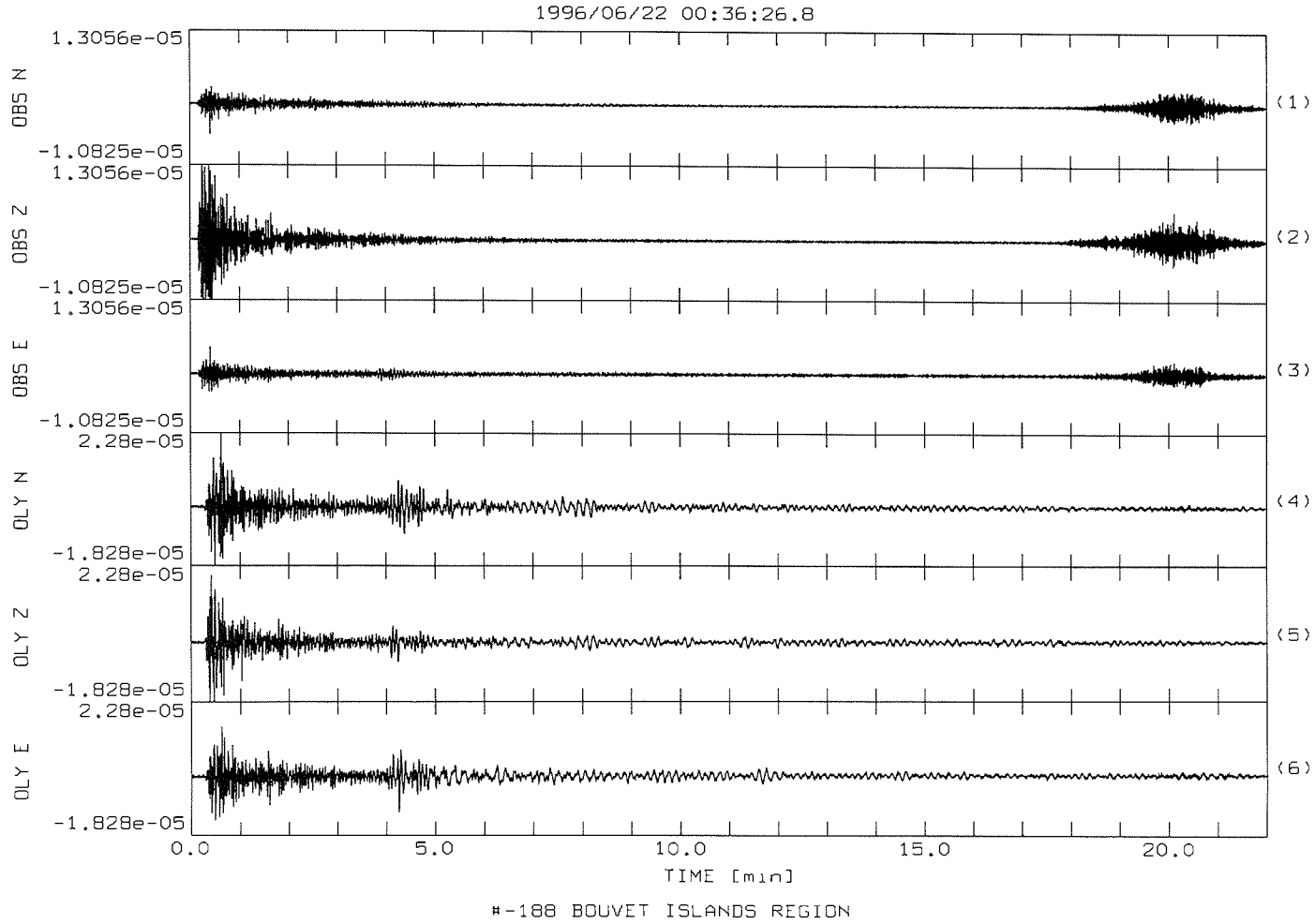
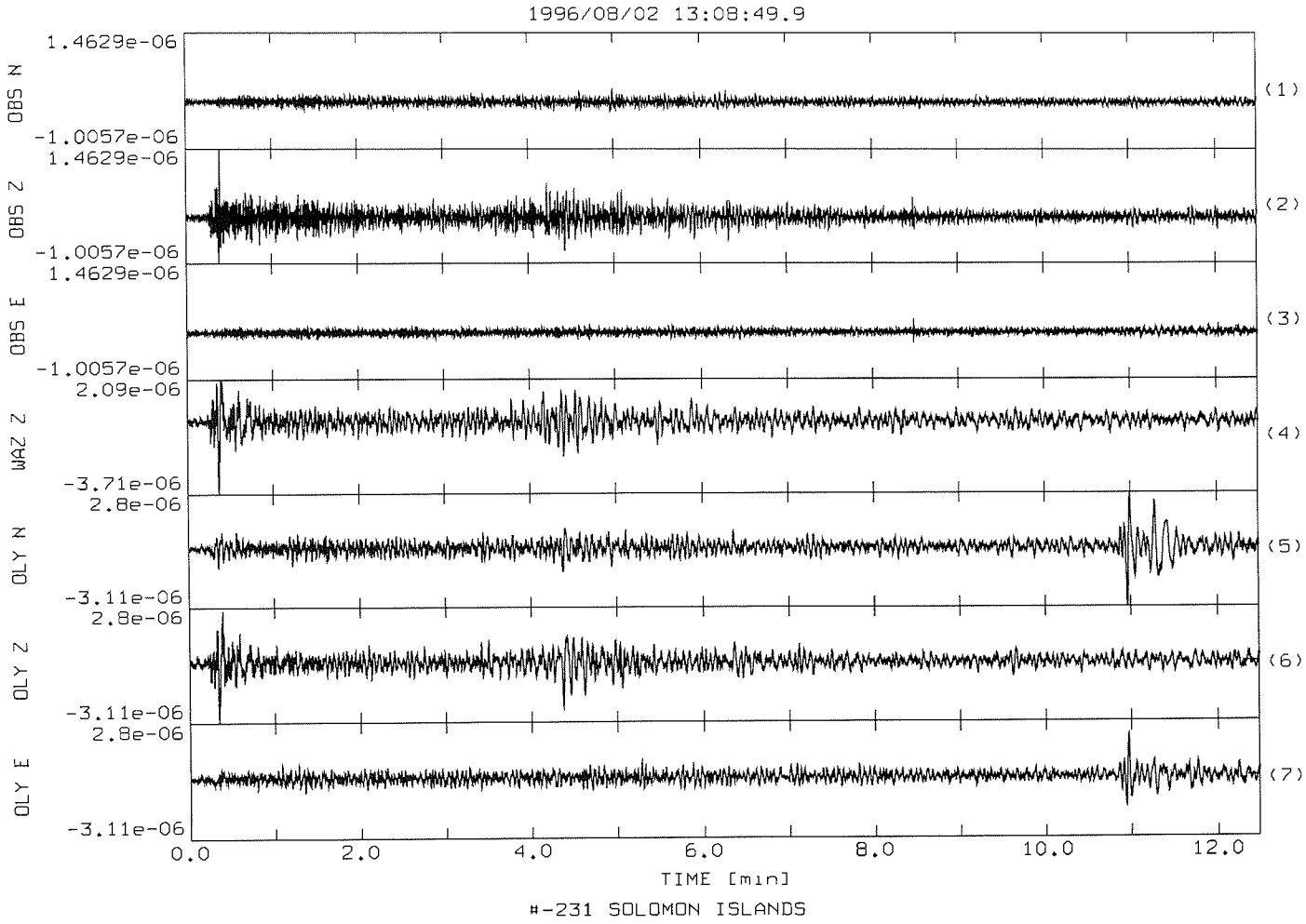
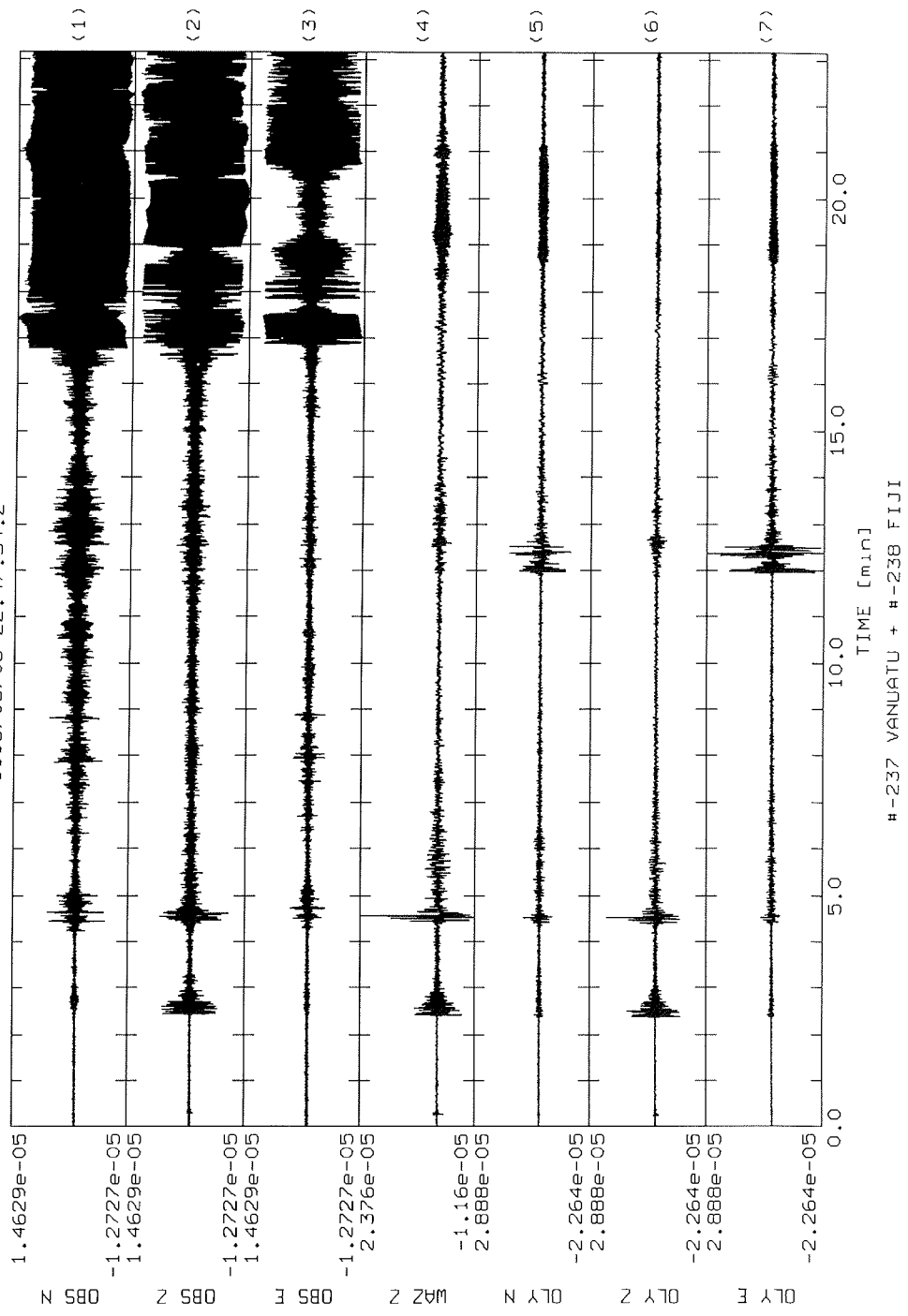
TIME [min]
#-176 MARIANA ISLANDS

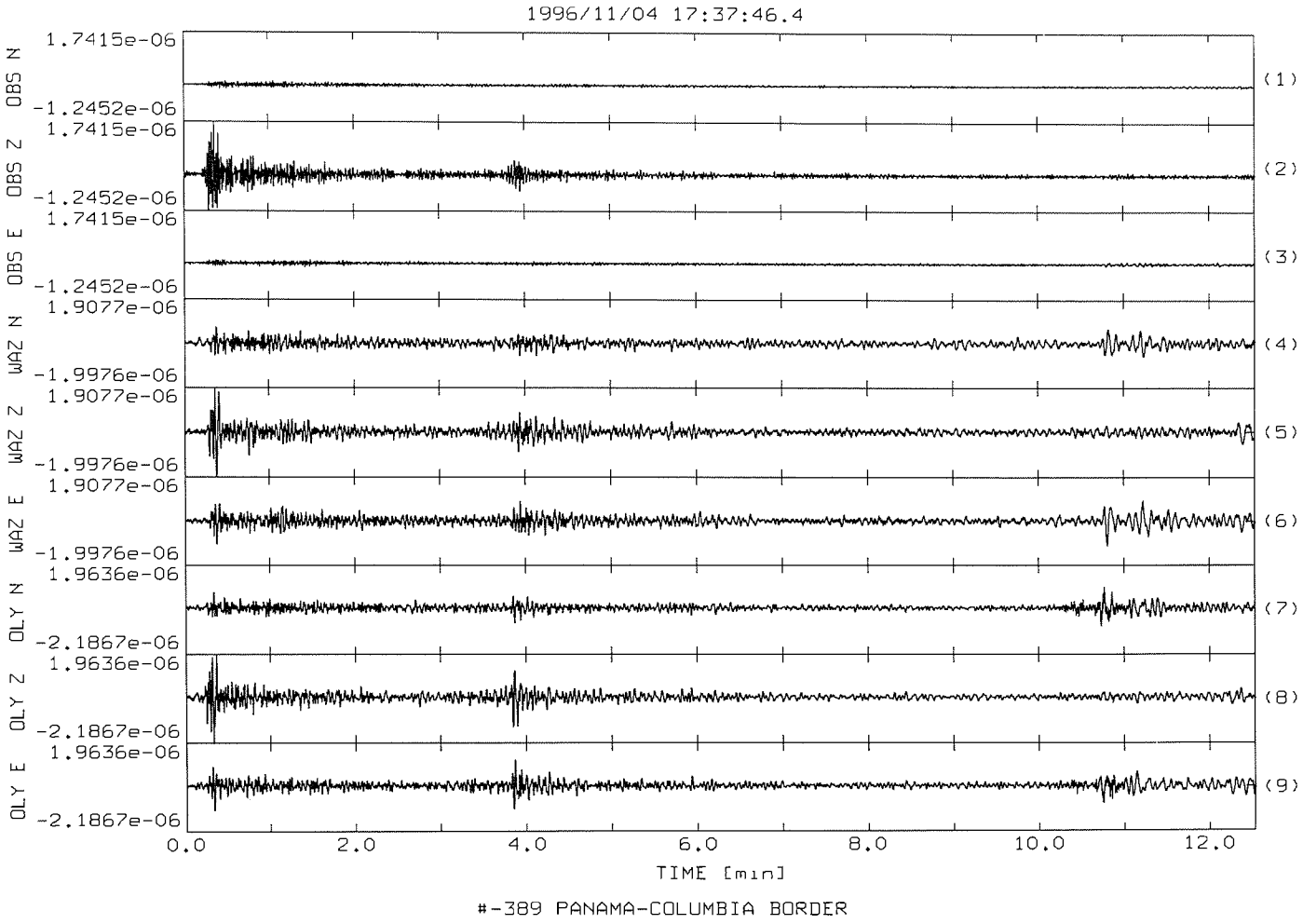

1996/06/10 04:23:14.1
4.3063e-06
OBS N
-3.6114e-06
4.3063e-06
OBS Z
-3.6114e-06
4.3063e-06
OBS E
-3.6114e-06
8.16e-06
OLY N
-7.98e-06
8.16e-06
OLY Z
-7.98e-06
8.16e-06
OLY E
-7.98e-06
(1)
(2)
(3)
(4)
(5)
(6)
0.0
2.0
4.0
6.0
8.0
10.0
12.0
TIME [min]
#-178 ANDREANOF ISLANDS, ALEUTIAN

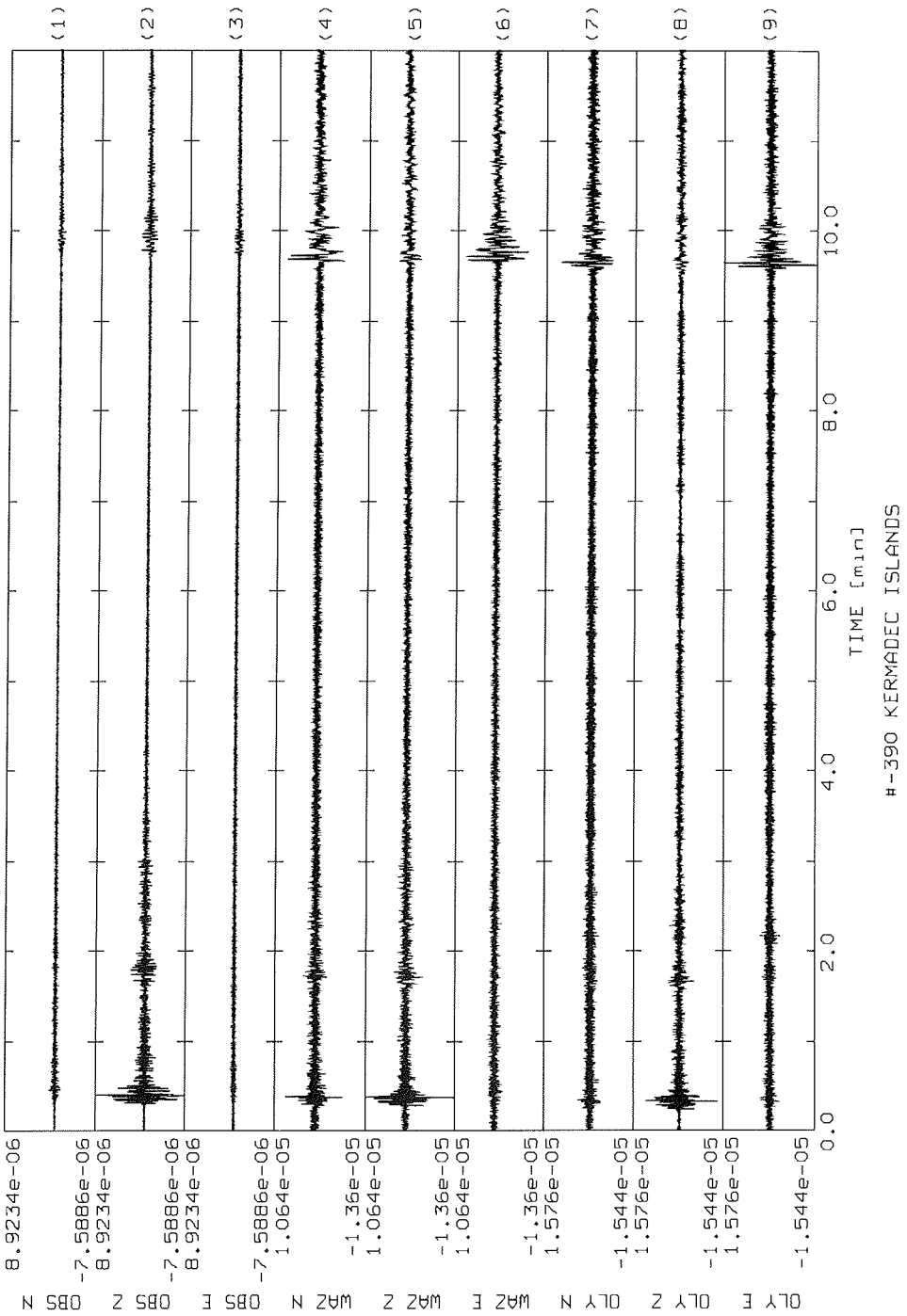

1996/06/17 11:34:29.8
(1)
(2)
(3)
(4)
(5)
(6)
1.035e-05
-8.6491e-06
1.035e-05
-8.6491e-06
1.035e-05
-8.6491e-06
2.496e-05
-2.792e-05
2.496e-05
-2.792e-05
2.496e-05
-2.792e-05
OBS N
OBS Z
OBS E
OLY N
OLY Z
OLY E
0.0
2.0
4.0
6.0
8.0
10.0
TIME [min]
#-184 FLORES SEA


1996/06/22 00:36:26.8
1.3056e-05
OBS N
-1.0825e-05
(1)
1.3056e-05
OBS Z
-1.0825e-05
(2)
1.3056e-05
OBS E
-1.0825e-05
(3)
2.28e-05
OLY N
-1.828e-05
(4)
2.28e-05
OLY Z
-1.828e-05
(5)
2.28e-05
OLY E
-1.828e-05
(6)
0.0
5.0
10.0
15.0
20.0
TIME [min]
#-188 BOUVET ISLANDS REGION


1996/08/02 13:08:49.9
OBS N
1.4629e-06
-1.0057e-06
(1)
OBS Z
1.4629e-06
-1.0057e-06
(2)
OBS E
1.4629e-06
-1.0057e-06
(3)
WAZ Z
2.09e-06
-3.71e-06
(4)
OLY N
2.8e-06
-3.11e-06
(5)
OLY Z
2.8e-06
-3.11e-06
(6)
OLY E
2.8e-06
-3.11e-06
(7)
0.0
2.0
4.0
6.0
8.0
10.0
12.0
TIME [min]
#-231 SOLOMON ISLANDS


1996/08/05 22:47:54.2
(1)
(2)
(3)
(4)
(5)
(6)
(7)
OBS N
OBS Z
OBS E
WAZ Z
OLY N
OLY Z
OLY E
1.4629e-05
-1.2727e-05
1.4629e-05
-1.2727e-05
1.4629e-05
-1.2727e-05
2.376e-05
-1.16e-05
2.888e-05
-2.264e-05
2.888e-05
-2.264e-05
2.888e-05
-2.264e-05
0.0
5.0
10.0
15.0
20.0
TIME [min]
#-237 VANUATU + #-238 FIJI

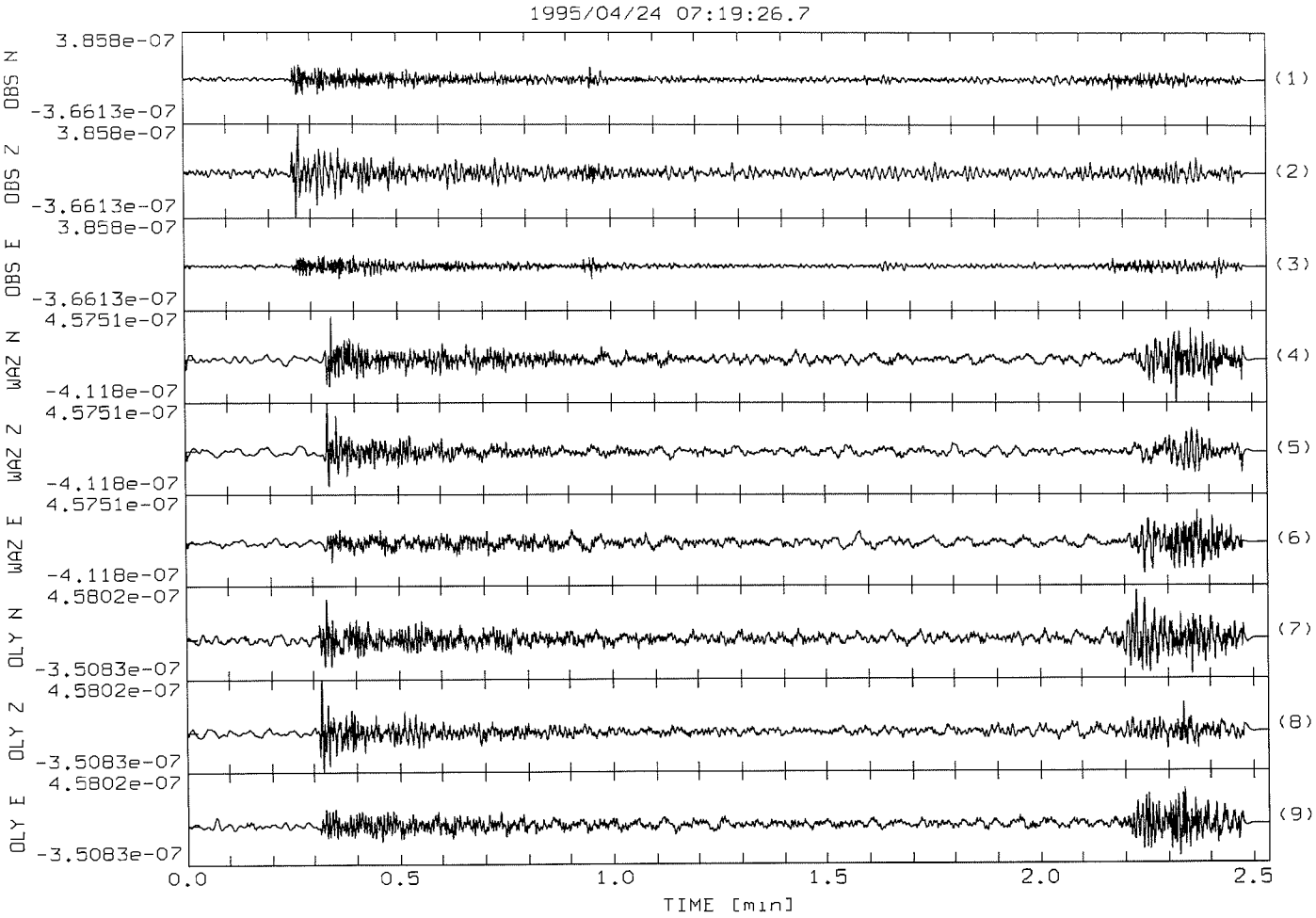

1996/11/04 17:37:46.4
OBS N
1.7415e-06
-1.2452e-06
(1)
OBS Z
1.7415e-06
-1.2452e-06
(2)
OBS E
1.7415e-06
-1.2452e-06
(3)
WAZ N
1.9077e-06
-1.9976e-06
(4)
WAZ Z
1.9077e-06
-1.9976e-06
(5)
WAZ E
1.9077e-06
-1.9976e-06
(6)
OLY N
1.9636e-06
-2.1867e-06
(7)
OLY Z
1.9636e-06
-2.1867e-06
(8)
OLY E
1.9636e-06
-2.1867e-06
(9)
0.0
2.0
4.0
6.0
8.0
10.0
12.0
TIME [min]
#-389 PANAMA-COLUMBIA BORDER

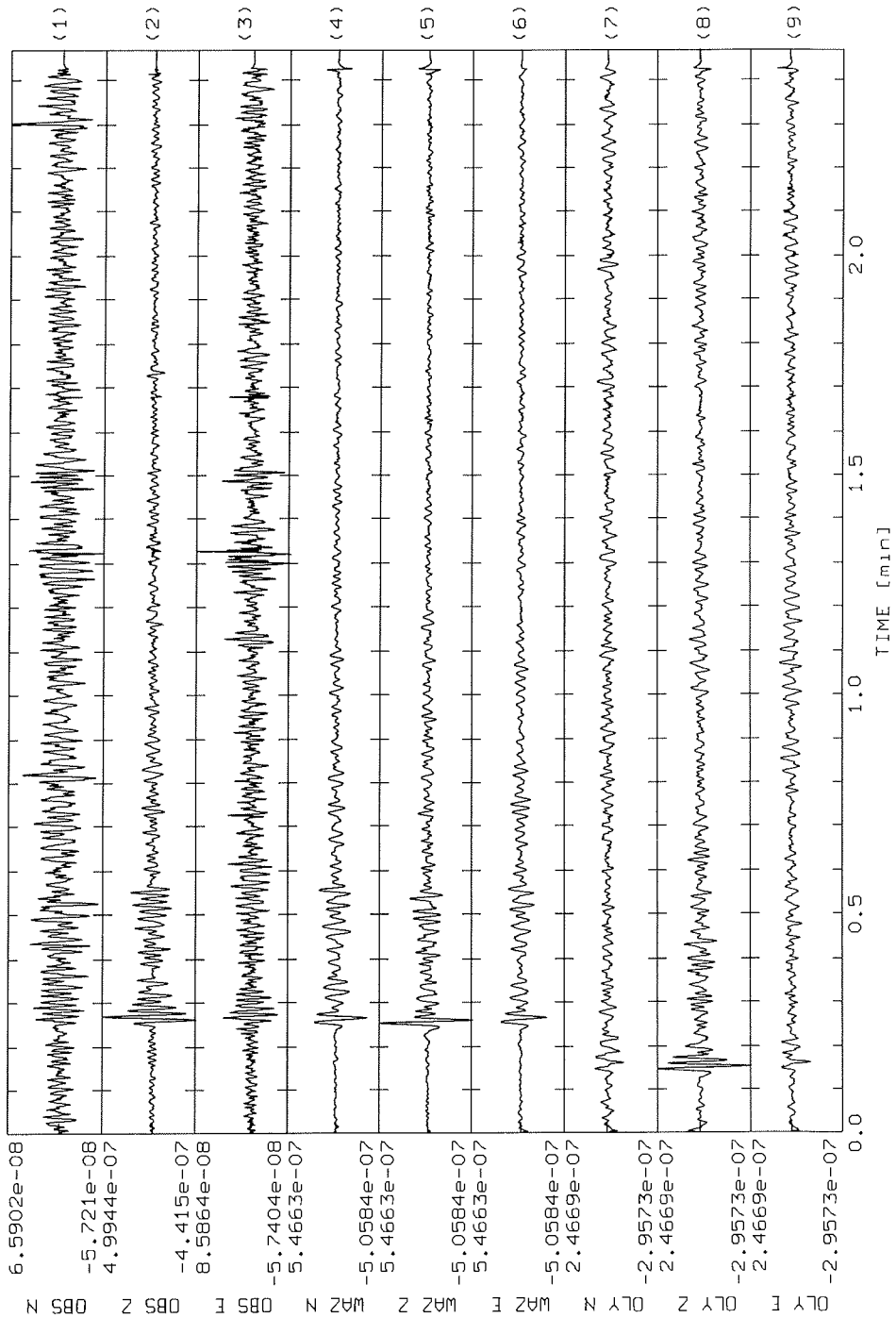

1996/11/05 09:52:39.2
(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
8.9234e-06
-7.5886e-06
8.9234e-06
-7.5886e-06
8.9234e-06
-7.5886e-06
1.064e-05
-1.36e-05
1.064e-05
-1.36e-05
1.064e-05
-1.36e-05
1.576e-05
-1.544e-05
1.576e-05
-1.544e-05
1.576e-05
-1.544e-05
OBS N
OBS Z
OBS E
WAZ N
WAZ Z
WAZ E
OLY N
OLY Z
OLY E
0.0
2.0
4.0
6.0
8.0
10.0
TIME [min]
#-390 KERMADEC ISLANDS

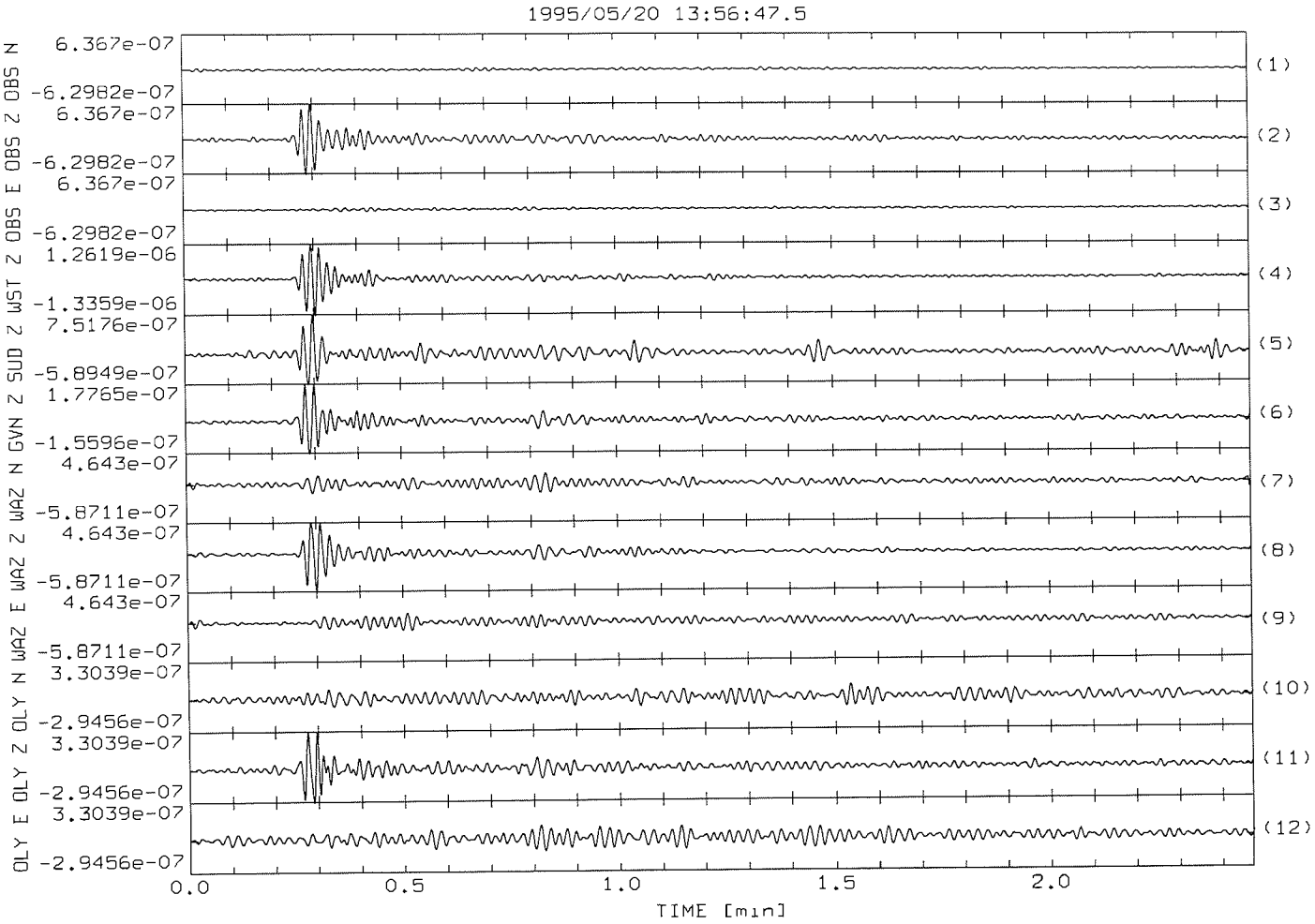
Appendix

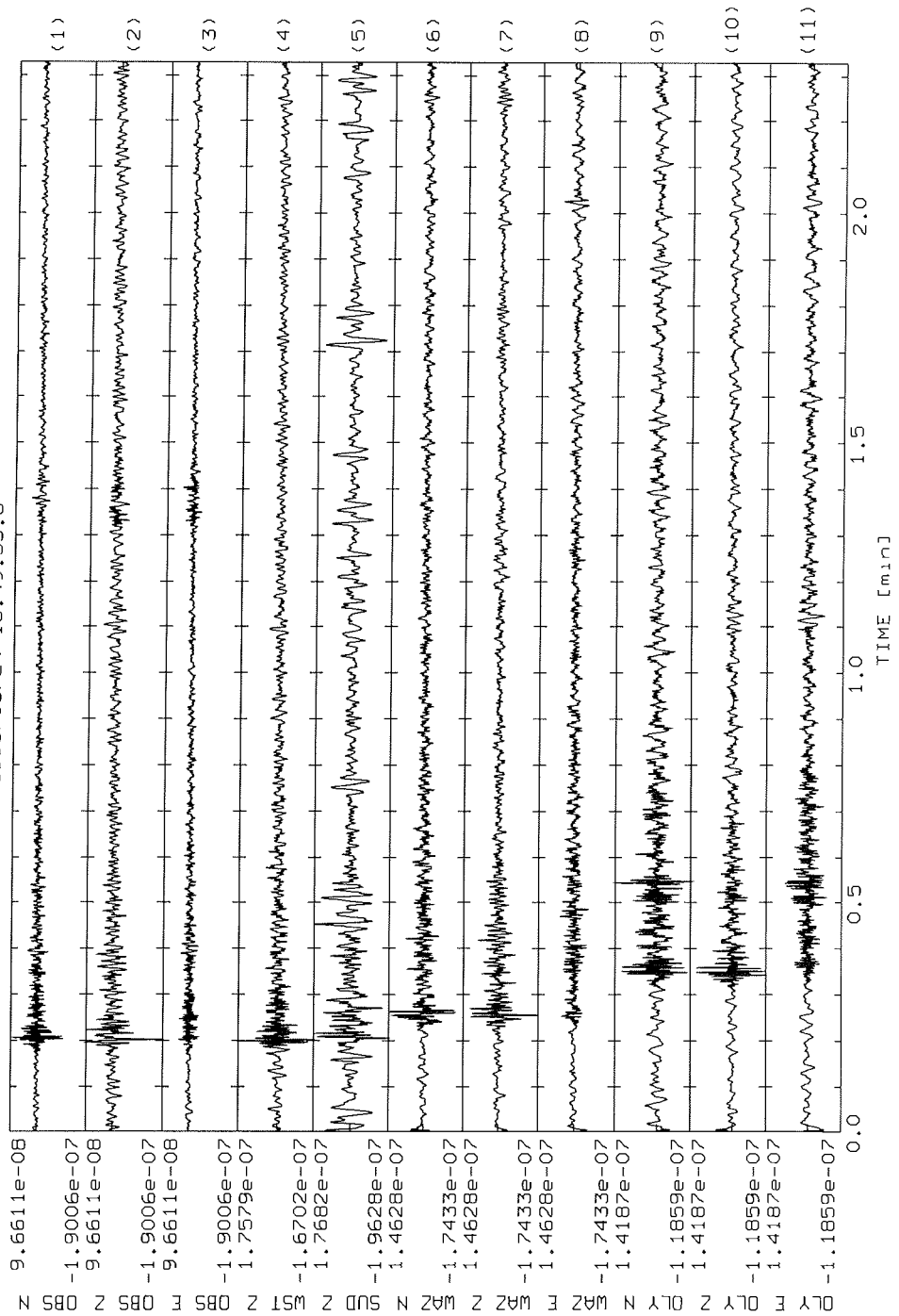
D

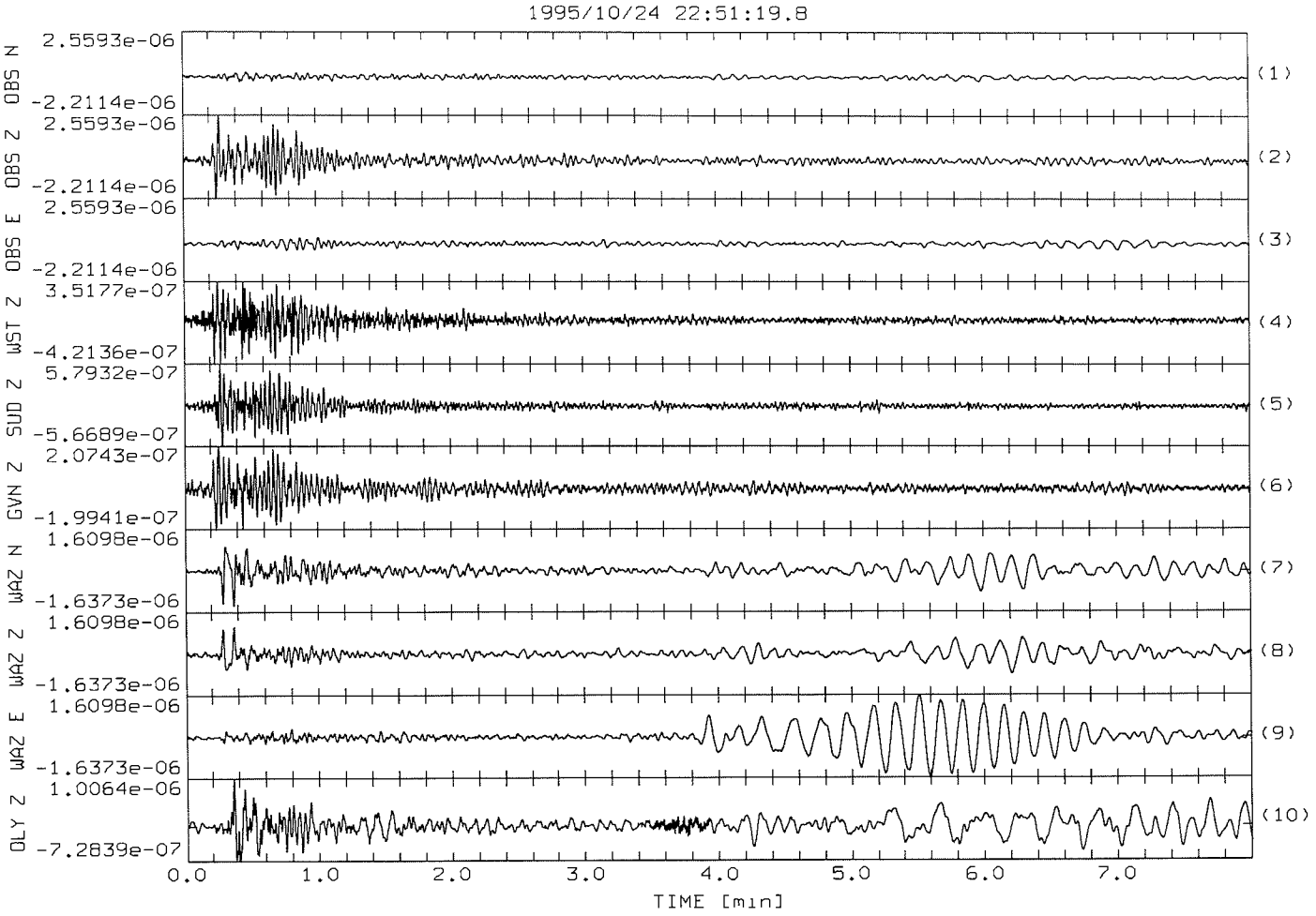
Examples of unidentified Events 1995 and 1996

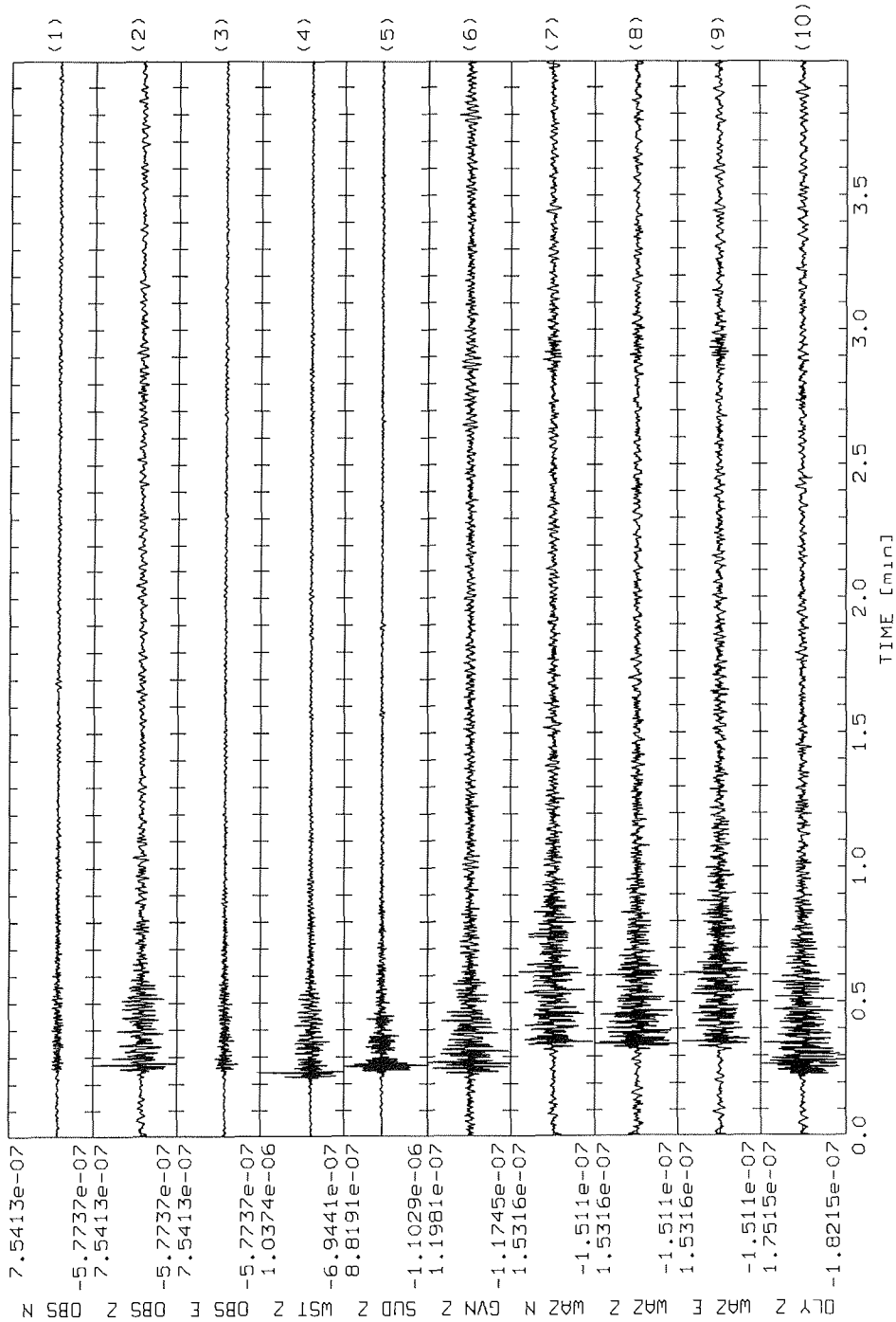

1995/04/24 07:19:26.7
OBS N
3.858e-07
-3.6613e-07
(1)
OBS Z
3.858e-07
-3.6613e-07
(2)
OBS E
3.858e-07
-3.6613e-07
(3)
WAZ N
4.5751e-07
-4.118e-07
(4)
WAZ Z
4.5751e-07
-4.118e-07
(5)
WAZ E
4.5751e-07
-4.118e-07
(6)
OLY N
4.5802e-07
-3.5083e-07
(7)
OLY Z
4.5802e-07
-3.5083e-07
(8)
OLY E
4.5802e-07
-3.5083e-07
(9)
0.0
0.5
1.0
1.5
2.0
2.5
TIME [min]

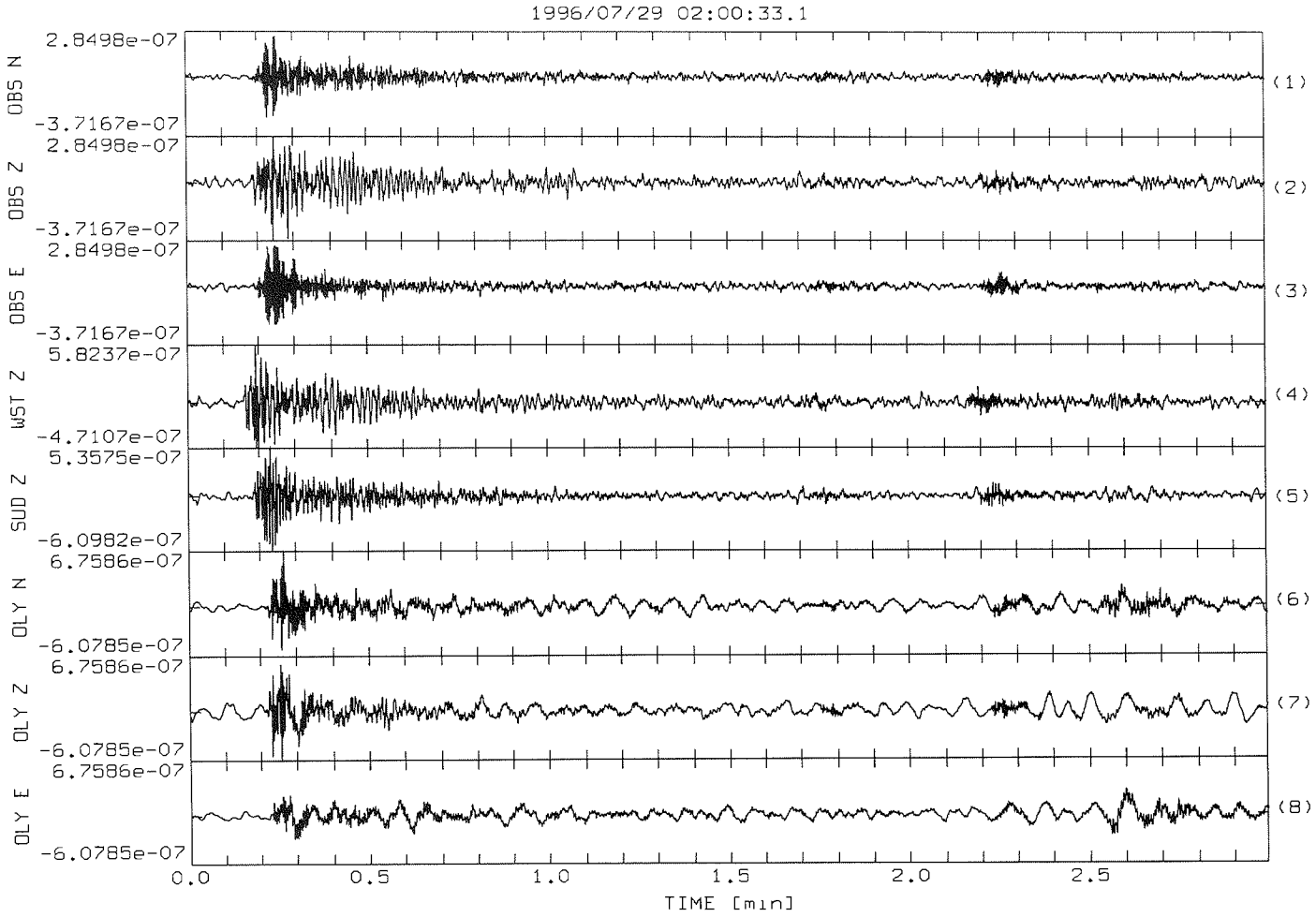

1995/04/25 08:59:29.7
(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
6.5902e-08
-5.721e-08
4.9944e-07
-4.415e-07
8.5864e-08
-5.7404e-08
5.4663e-07
-5.0584e-07
5.4663e-07
-5.0584e-07
5.4663e-07
-5.0584e-07
2.4669e-07
-2.9573e-07
2.4669e-07
-2.9573e-07
2.4669e-07
-2.9573e-07
OBS N
OBS Z
OBS E
WAZ N
WAZ Z
WAZ E
OLY N
OLY Z
OLY E
0.0
0.5
1.0
1.5
2.0
TIME [min]

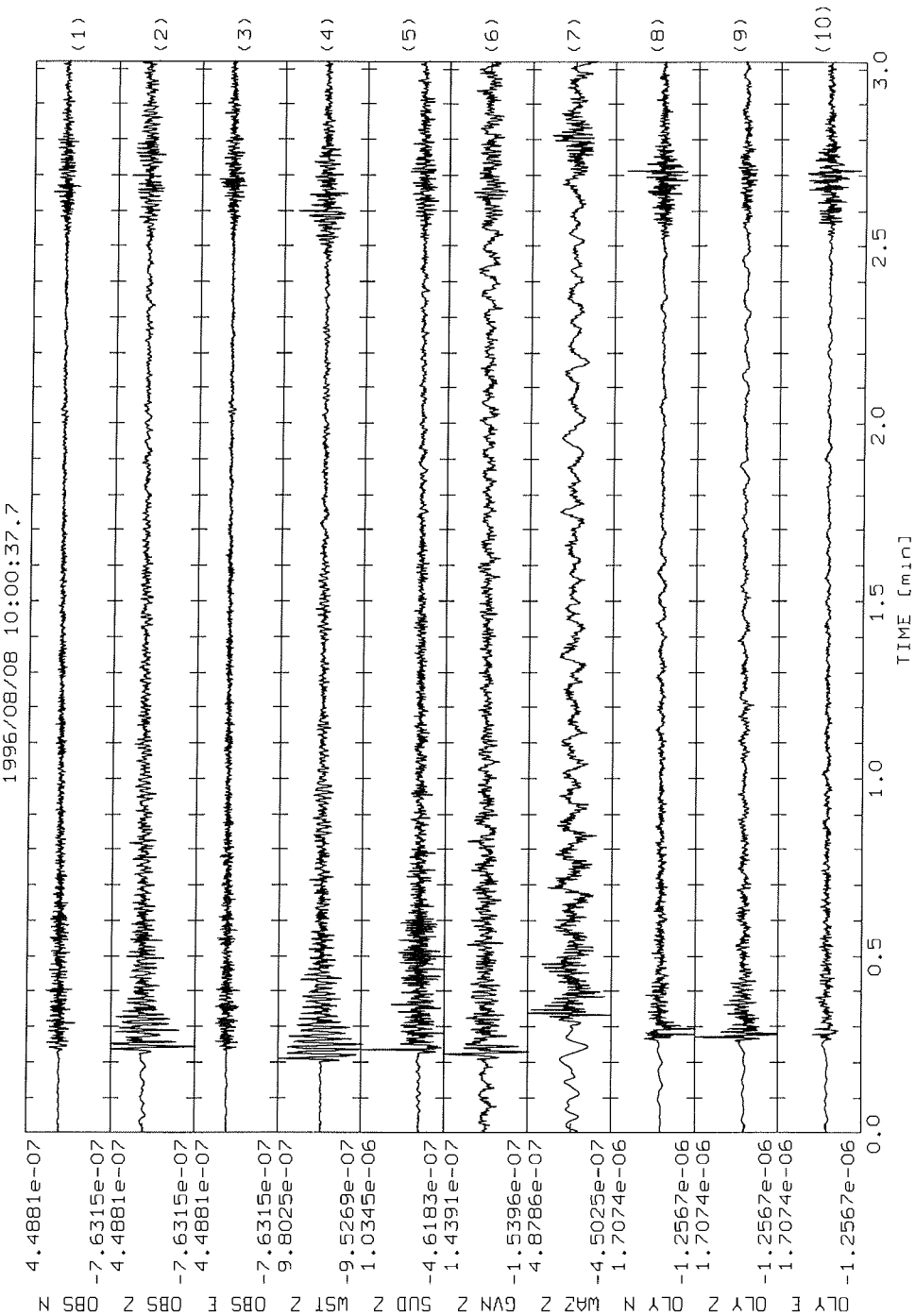

1995/05/20 13:56:47.5
OBS N
6.367e-07
-6.2982e-07
OBS Z
6.367e-07
-6.2982e-07
OBS E
6.367e-07
-6.2982e-07
WST Z
1.2619e-06
-1.3359e-06
SUD Z
7.5176e-07
-5.8949e-07
GVN Z
1.7765e-07
-1.5596e-07
WAZ N
4.643e-07
-5.8711e-07
WAZ Z
4.643e-07
-5.8711e-07
WAZ E
4.643e-07
-5.8711e-07
OLY N
3.3039e-07
-2.9456e-07
OLY Z
3.3039e-07
-2.9456e-07
OLY E
3.3039e-07
-2.9456e-07
(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
(10)
(11)
(12)
0.0
0.5
1.0
1.5
2.0
TIME [min]

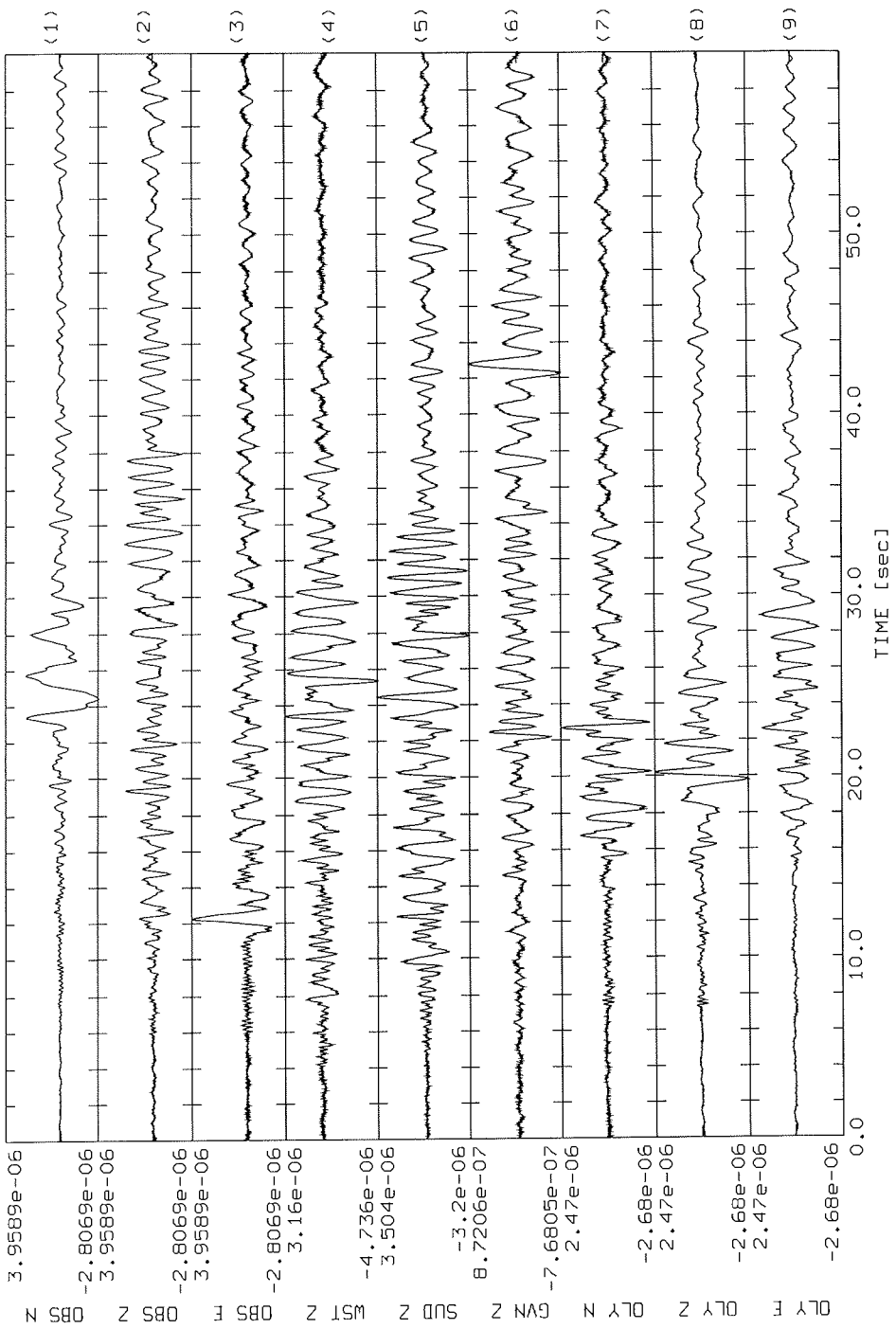

1995/05/24 18:49:55.8
(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
(10)
(11)
9.6611e-08
-1.9006e-07
9.6611e-08
-1.9006e-07
9.6611e-08
-1.9006e-07
1.7579e-07
-1.6702e-07
1.7682e-07
-1.9628e-07
1.4628e-07
-1.7433e-07
1.4628e-07
-1.7433e-07
1.4628e-07
-1.7433e-07
1.4187e-07
-1.1859e-07
1.4187e-07
-1.1859e-07
1.4187e-07
-1.1859e-07
OBS N
OBS Z
OBS E
OBS Z
WST Z
SUD Z
WAZ N
WAZ Z
WAZ E
WAZ N
DLY N
DLY Z
DLY E
DLY Z
0.0
0.5
1.0
1.5
2.0
TIME [min]

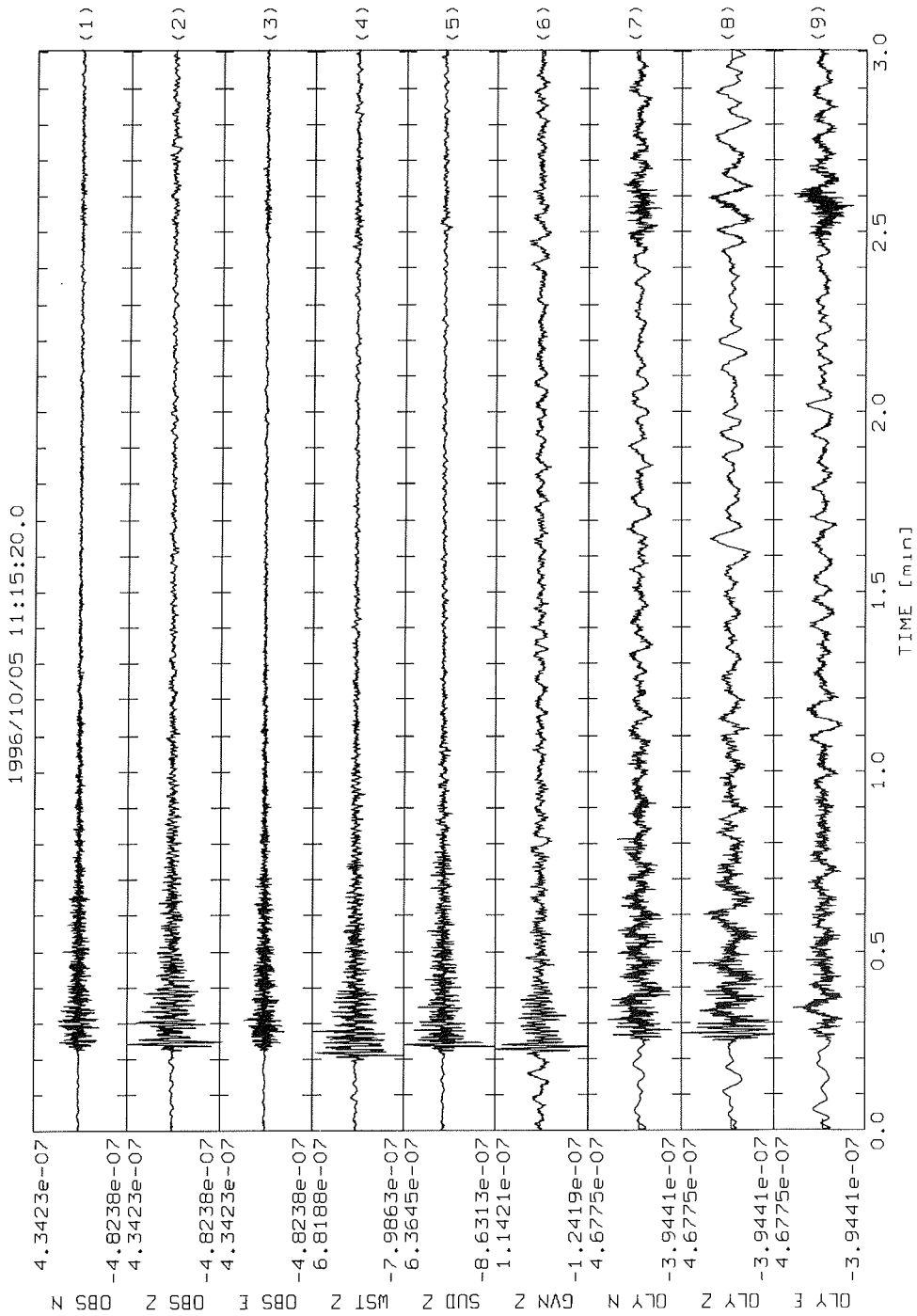

1995/10/24 22:51:19.8
OBS N
2.5593e-06
-2.2114e-06
(1)
OBS Z
2.5593e-06
-2.2114e-06
(2)
OBS E
2.5593e-06
-2.2114e-06
(3)
WST Z
3.5177e-07
-4.2136e-07
(4)
SUD Z
5.7932e-07
-5.6689e-07
(5)
GVN Z
2.0743e-07
-1.9941e-07
(6)
WAZ N
1.6098e-06
-1.6373e-06
(7)
WAZ Z
1.6098e-06
-1.6373e-06
(8)
WAZ E
1.6098e-06
-1.6373e-06
(9)
OLY Z
1.0064e-06
-7.2839e-07
(10)
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
TIME [min]

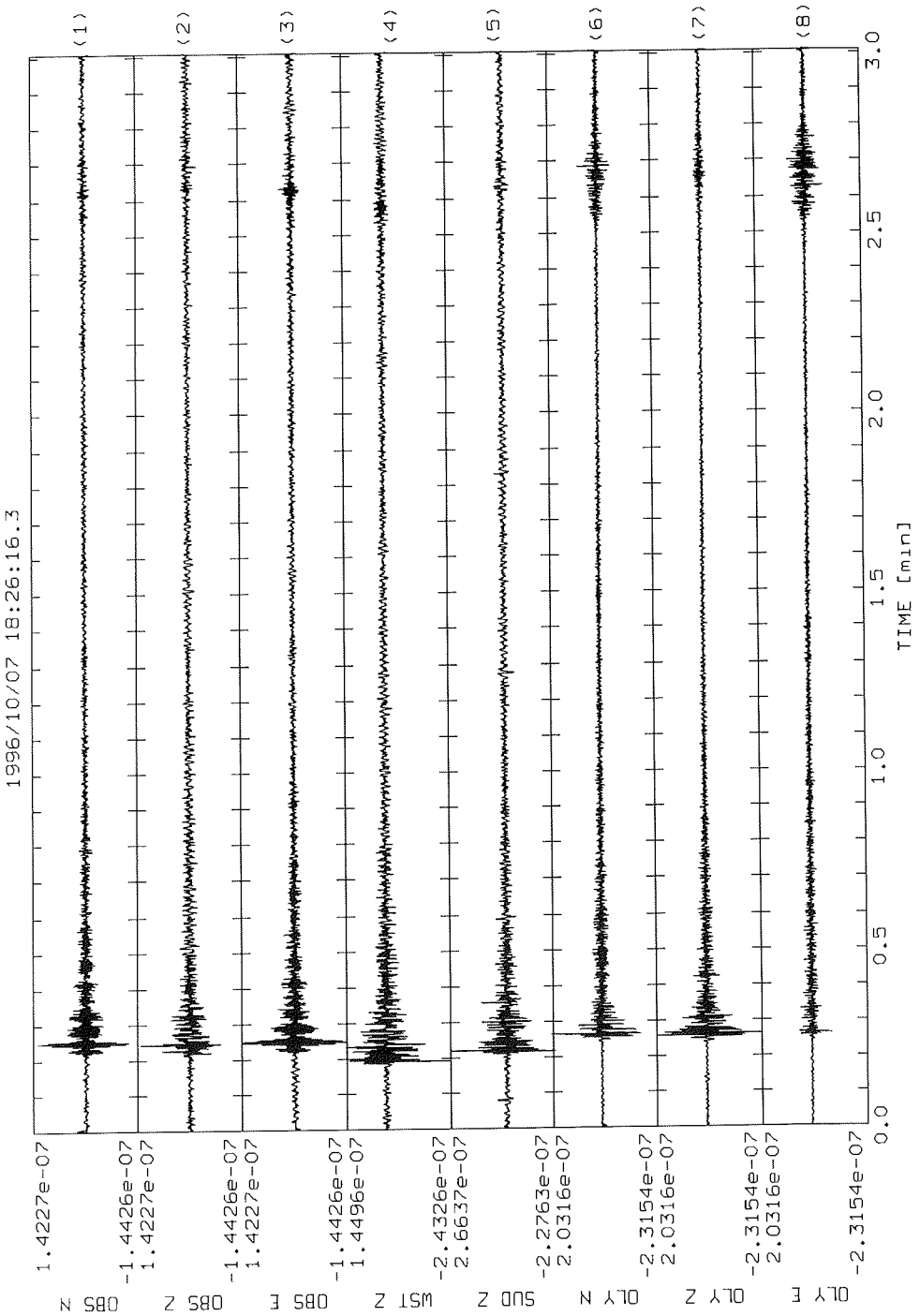

1995/11/01 17:16:23.0
(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
(10)
OBS N
OBS Z
OBS E
WST Z
SUD Z
GVN Z
WAZ N
WAZ Z
WAZ E
DLY Z
7.5413e-07
-5.7737e-07
7.5413e-07
-5.7737e-07
7.5413e-07
-5.7737e-07
1.0374e-06
-6.9441e-07
8.8191e-07
-1.1029e-06
1.1981e-07
-1.1745e-07
1.5316e-07
-1.511e-07
1.5316e-07
-1.511e-07
1.5316e-07
-1.511e-07
1.7515e-07
-1.8215e-07
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
TIME [min]


1996/07/29 02:00:33.1
OBS N
2.8498e-07
-3.7167e-07
(1)
OBS Z
2.8498e-07
-3.7167e-07
(2)
OBS E
2.8498e-07
-3.7167e-07
(3)
WST Z
5.8237e-07
-4.7107e-07
(4)
SUD Z
5.3575e-07
-6.0982e-07
(5)
OLY N
6.7586e-07
-6.0785e-07
(6)
OLY Z
6.7586e-07
-6.0785e-07
(7)
OLY E
6.7586e-07
-6.0785e-07
(8)
0.0
0.5
1.0
1.5
2.0
2.5
TIME [min]


1996/08/08 10:00:37.7
(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
(10)
4.4881e-07
-7.6315e-07
4.4881e-07
OBS N
-7.6315e-07
4.4881e-07
OBS Z
-7.6315e-07
4.4881e-07
OBS E
-7.6315e-07
9.8025e-07
WST Z
-9.5269e-07
1.0345e-06
SUD Z
-4.6183e-07
1.4391e-07
GVN Z
-1.5396e-07
4.8786e-07
WAZ Z
-4.5025e-07
1.7074e-06
OLY N
-1.2567e-06
1.7074e-06
OLY Z
-1.2567e-06
1.7074e-06
OLY E
-1.2567e-06
0.0
0.5
1.0
1.5
2.0
2.5
3.0
TIME [min]


1996/09/15 02:48:43.8
(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
OBS N
OBS Z
OBS E
WST Z
SUD Z
GVN Z
OLY N
OLY Z
OLY E
3.9589e-06
-2.8069e-06
3.9589e-06
-2.8069e-06
3.9589e-06
-2.8069e-06
3.16e-06
-4.736e-06
3.504e-06
-3.2e-06
8.7206e-07
-7.6805e-07
2.47e-06
-2.68e-06
2.47e-06
-2.68e-06
2.47e-06
-2.68e-06
0.0
10.0
20.0
30.0
40.0
50.0
TIME [sec]


1996/10/05 11:15:20.0
(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
4.3423e-07
OBS N
-4.8238e-07
4.3423e-07
OBS Z
-4.8238e-07
4.3423e-07
OBS E
-4.8238e-07
6.8188e-07
WST Z
-7.9863e-07
6.3645e-07
SUD Z
-8.6313e-07
1.1421e-07
GYN Z
-1.2419e-07
4.6775e-07
OLY N
-3.9441e-07
4.6775e-07
OLY Z
-3.9441e-07
4.6775e-07
OLY E
-3.9441e-07
0.0
0.5
1.0
1.5
2.0
2.5
3.0
TIME [min]


1996/10/07 18:26:16.3
(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
1.4227e-07
-1.4426e-07
1.4227e-07
OBS N
-1.4426e-07
1.4227e-07
OBS Z
-1.4426e-07
1.4227e-07
OBS E
-1.4426e-07
1.4496e-07
WST Z
-2.4326e-07
2.6637e-07
SUD Z
-2.2763e-07
2.0316e-07
OLY N
-2.3154e-07
2.0316e-07
OLY Z
-2.3154e-07
2.0316e-07
OLY E
-2.3154e-07
0.0
0.5
1.0
1.5
2.0
2.5
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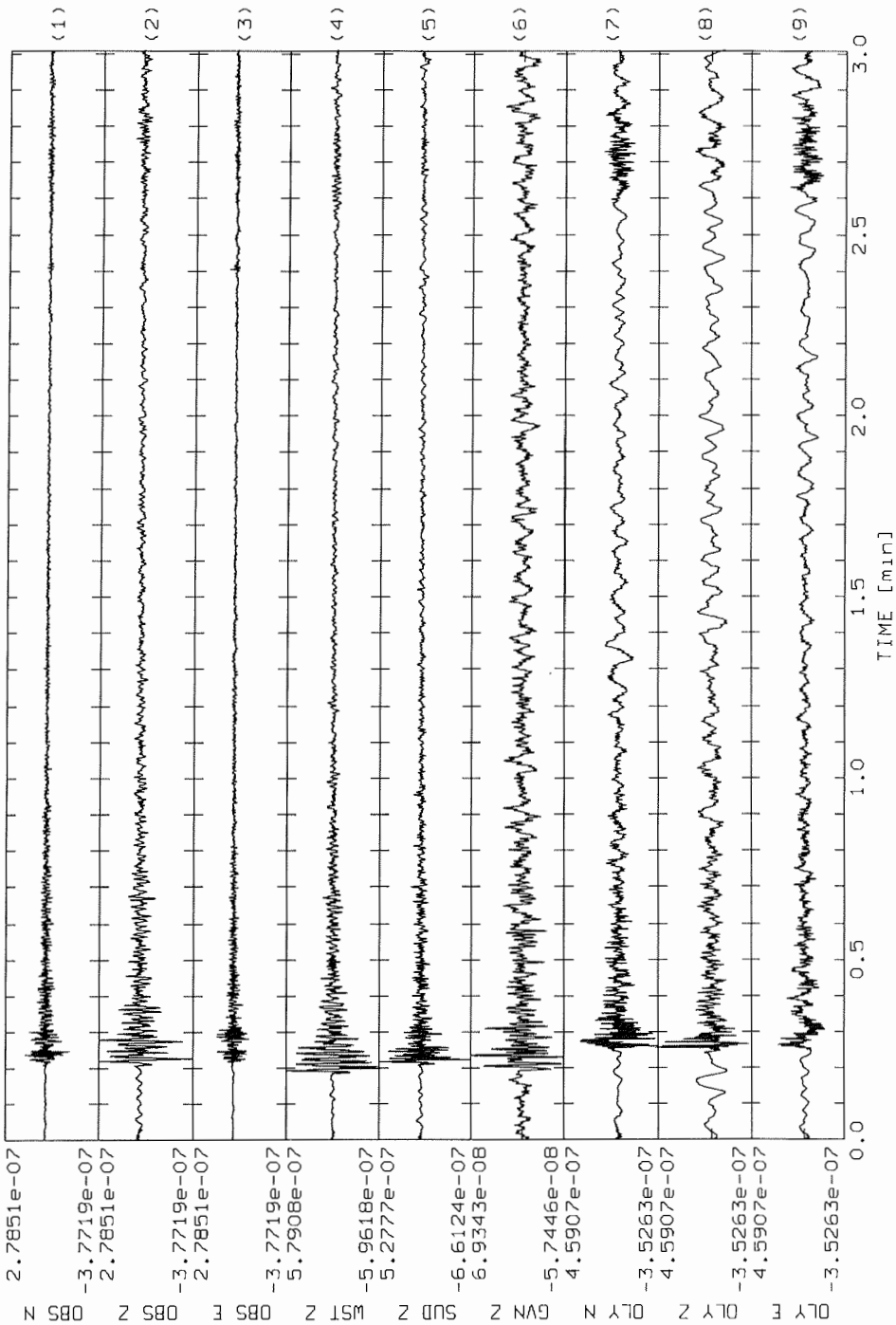
TIME [min]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GVN Z
GVN N
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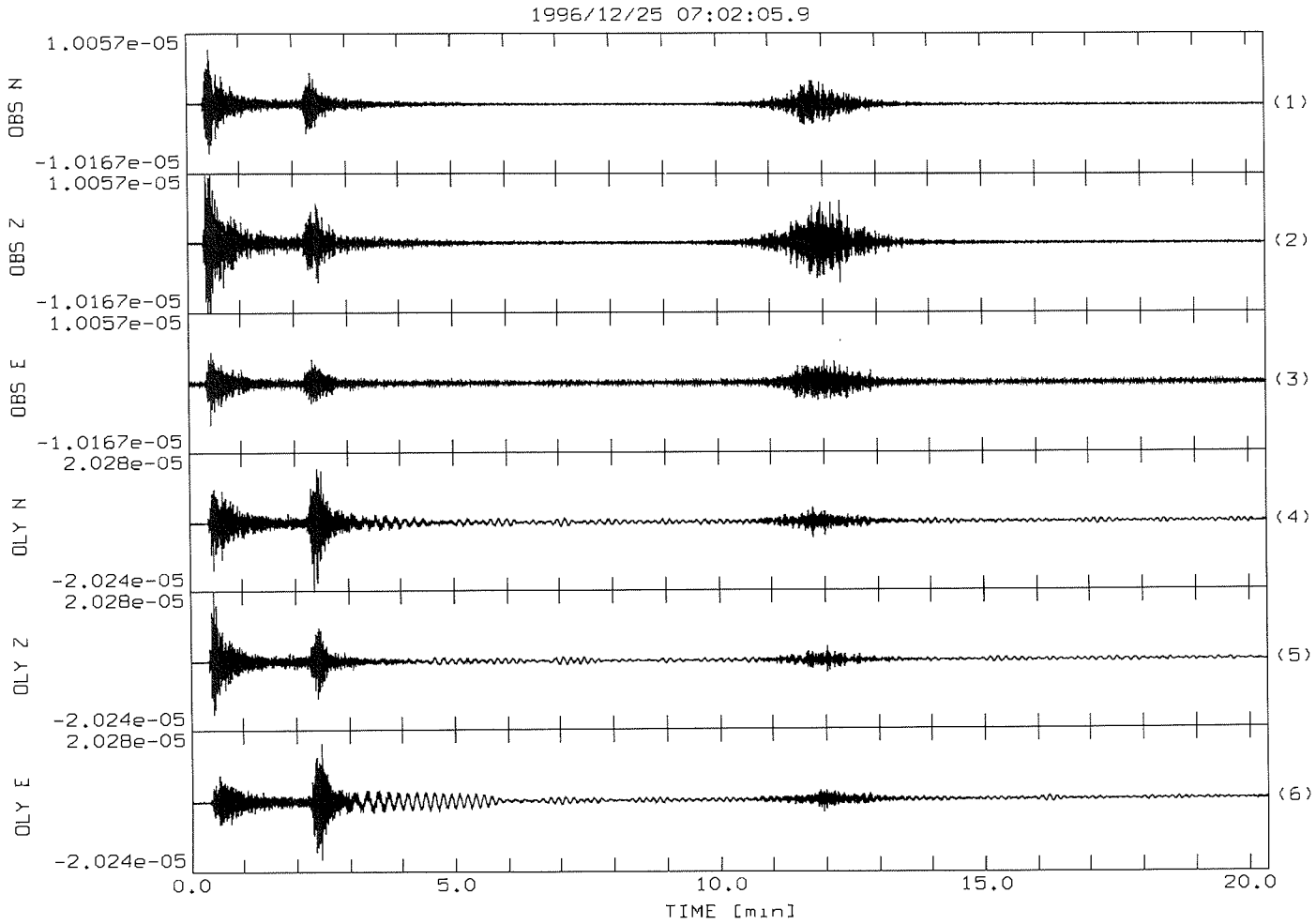
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