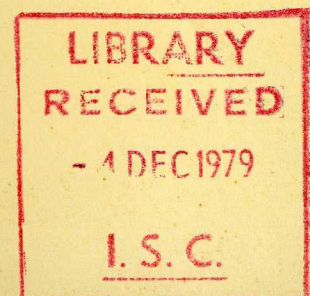


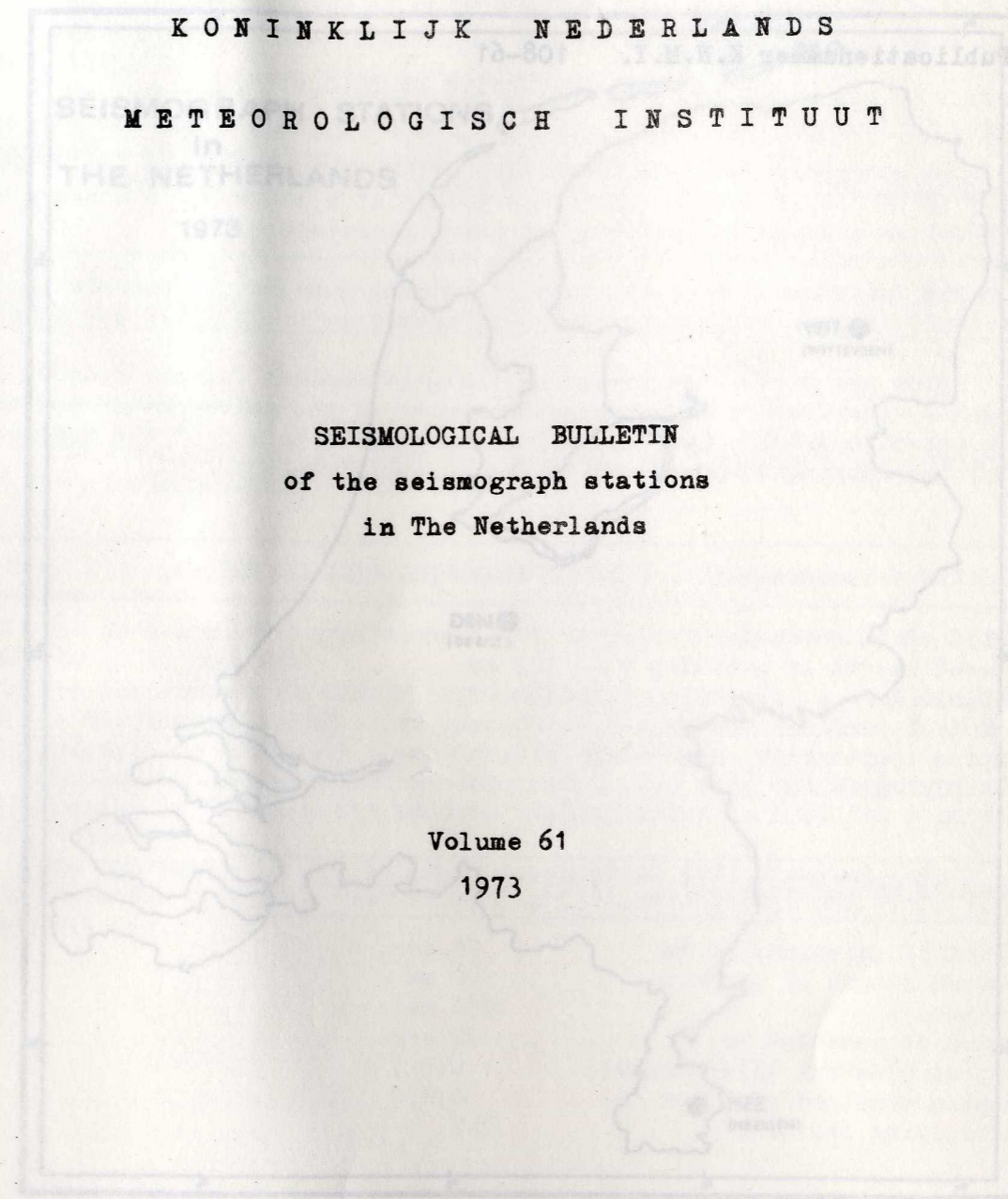
**KONINKLIJK NEDERLANDS
METEOROLOGISCH INSTITUUT**

SEISMOLOGICAL BULLETIN
OF THE SEISMOGRAPH STATIONS
IN THE NETHERLANDS

VOLUME 61
1973

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METEOROLOGISCH INSTITUUT

SEISMOLOGICAL BULLETIN
of the seismograph stations
in The Netherlands

Volume 61
1973

Geographical coordinates of the stations

Code	Latitude (North)	Longitude (East)	Elevation (above m.s.l.)
DAV	52°06'10"	5°10'35"	2 m
HES	50°53'06"	6°40'11"	115 m
WIT	52°48'48"	6°40'11"	17 m

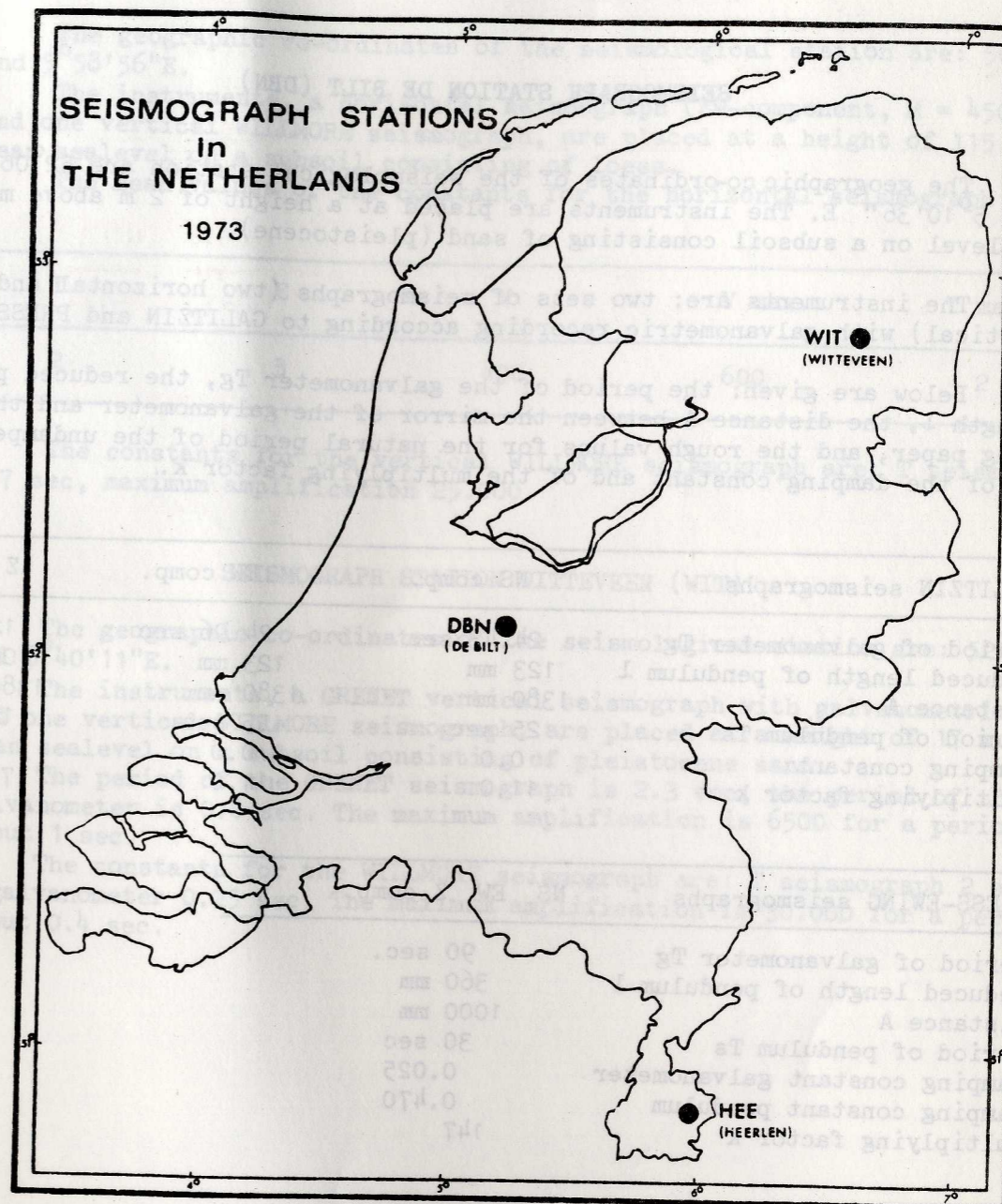
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SEISMOLOGICAL BULLETIN
of the seismograph stations
in the Netherlands

Volume 21
1973

De Bilt 1973



Geographical coordinates of the stations

Code	Latitude (North)	Longitude (East)	Elevation (above m.s.l.)
DBN	52°06'10"	5°10'36"	2 m
HEE	50°53'06"	5°58'56"	115 m
WIT	52°48'48"	6°40'11"	17 m

SEISMOGRAPH STATION DE BILT (DBN)

The geographic co-ordinates of the seismological station are $52^{\circ}06'10''N$ and $5^{\circ}10'36'' E$. The instruments are placed at a height of 2 m above mean sealevel on a subsoil consisting of sand (pleistocene).

The instruments are: two sets of seismographs (two horizontal and one vertical) with galvanometric recording according to GALITZIN and PRESS-EWING.

Below are given: the period of the galvanometer T_g , the reduced pendulum length l , the distance A between the mirror of the galvanometer and the recording paper, and the rough values for the natural period of the undamped pendulum T , of the damping constant and of the multiplying factor k .

GALITZIN seismographs	NS comp.	EW comp.	Z comp.
Period of galvanometer T_g	24.43 sec	24.96 sec	12.0 sec
Reduced length of pendulum l	123 mm	123 mm	406 mm
Distance A	1380 mm	1380 mm	1380 mm
Period of pendulum T_s	25 sec	25 sec	12 sec
Damping constant	0.0	0.0	0.0
Multiplying factor k	11.0	11.0	175

PRESS-EWING seismographs	NS	EW	Z comp.
Period of galvanometer T_g	90 sec.		
Reduced length of pendulum l	360 mm		
Distance A	1000 mm		
Period of pendulum T_s	30 sec		
Damping constant galvanometer	0.025		
Damping constant pendulum	0.470		
Multiplying factor k	147		

Geographical coordinates of the stations

Code	Latitude (North)	Longitude (East)	Elevation (above m.s.l.)
DBN	$52^{\circ}06'10''$	$5^{\circ}10'36''$	2 m
HEE	$50^{\circ}53'06''$	$5^{\circ}58'56''$	115 m
WIT	$52^{\circ}48'48''$	$6^{\circ}40'11''$	17 m

SEISMOGRAPH STATION HEERLEN (HEE)

The geographic co-ordinates of the seismological station are: $50^{\circ}53'06''N$ and $5^{\circ}58'56''E$.

The instruments, a horizontal seismograph (EW-component, $M = 450$ kg), and one vertical WILLMORE seismograph, are placed at a height of 115 m above mean sealevel on a subsoil consisting of loess.

The mean values of the constants for the horizontal seismograph are:

T	E	V	V max.	T max.
2	3	400	600	2

The constants for the vertical WILLMORE seismograph are: T seismograph 1.7 sec, maximum amplification 25.000.

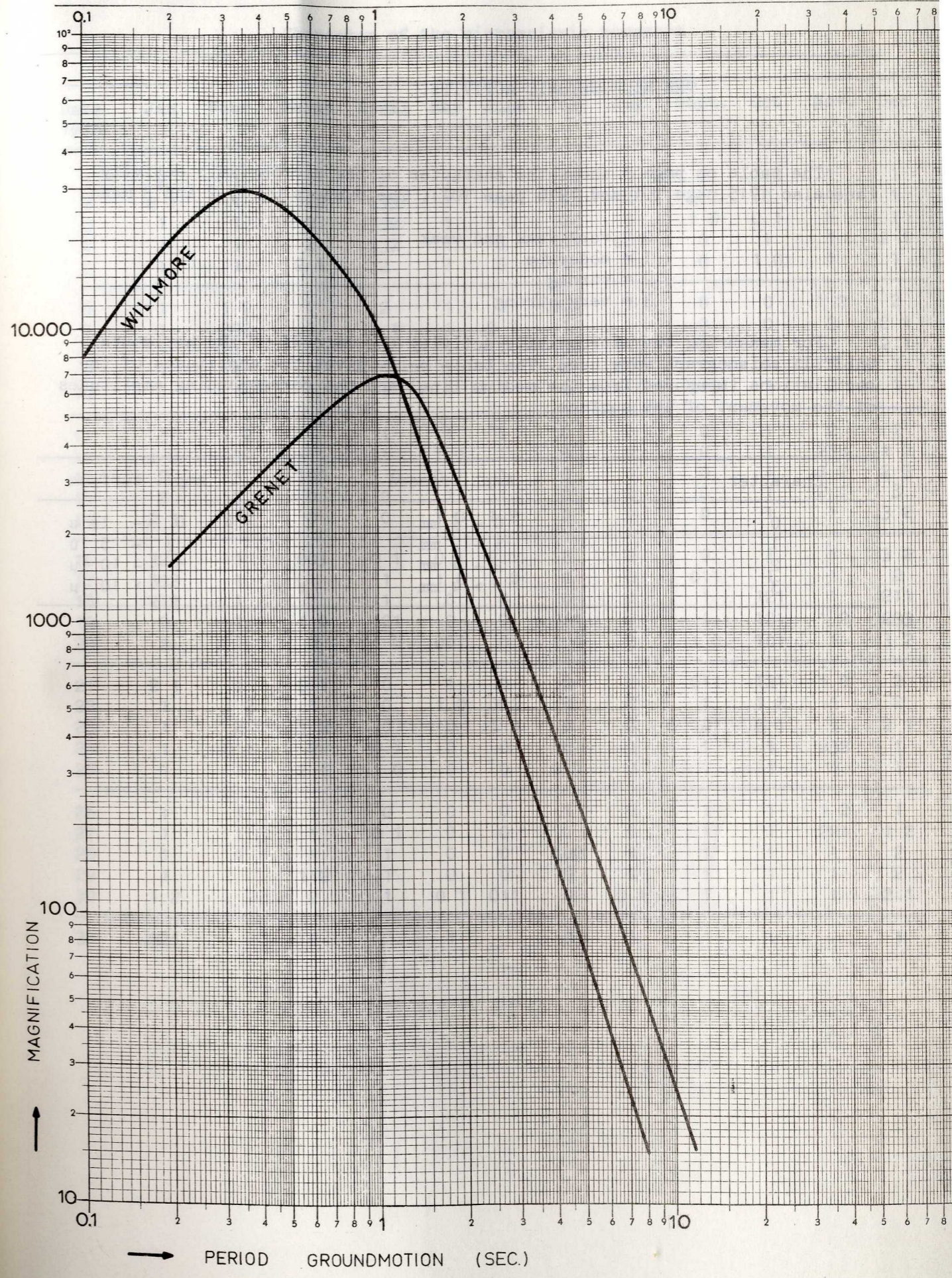
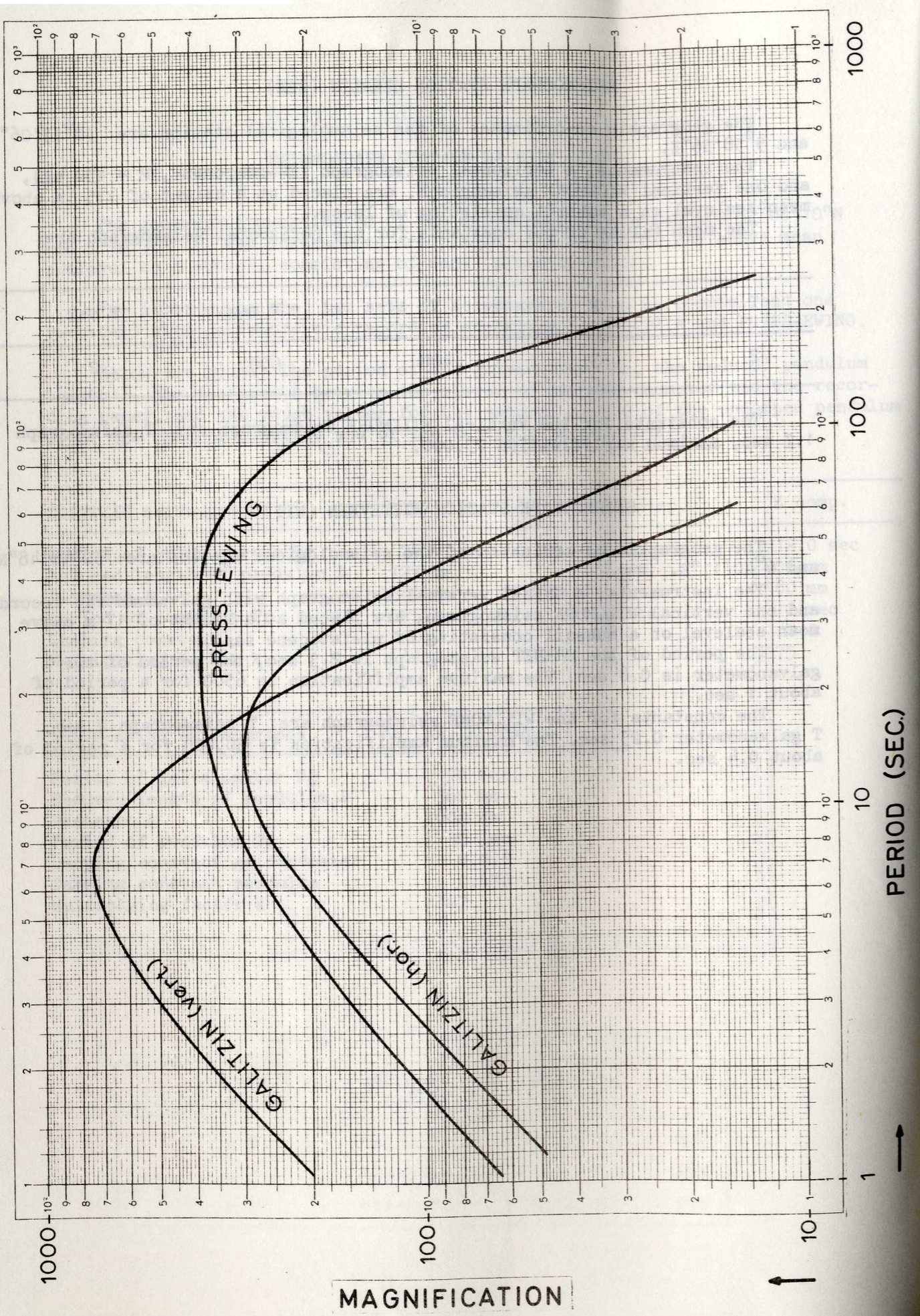
SEISMOGRAPH STATION WITTEVEEN (WIT)

The geographic co-ordinates of the seismological station are: $52^{\circ}48'48''N$ and $6^{\circ}40'11''E$.

The instruments, a GRENET vertical seismograph with galvanometric record, and one vertical WILLMORE seismograph, are placed at a height of 17 m above mean sealevel on a subsoil consisting of pleistocene sand.

The period of the GRENET seismograph is 2.3 sec, the period of the galvanometer is 0.8 sec. The maximum amplification is 6500 for a period of about 1 sec.

The constants for the WILLMORE seismograph are: T seismograph 2 sec, T galvanometer 0.25 sec. The maximum amplification is 30.000 for a period of about 0.4 sec.



THE MICROSEISMIC ACTIVITY.

The table on page 7 shows the character of the microseismic activity (see also 1915 page 101 and 1916 page 101). The numbers 0, 1, 2 and 3 mean:

- 0 = very weak and weak
- 1 = moderate
- 2 = strong
- 3 = very strong

For measuring the microseismic activity the records of the horizontal GALITZIN seismograph were used. The table below gives the amplitudes of the oscillations (measured from the medium line) and the corresponding amplitudes of the movement of the surface.

Character	Ampl. record	Ampl. surface
0	0 - 1/2 mm	0 - 1 1/2 μ
1	1/2 - 2 mm	1 1/2 - 5 μ
2	2 - 4 mm	5 - 10 μ
3	> 4 mm	> 10 μ

Character of the microseismic movement

Date 1973	Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2	1	1	2	1	1	1 0	0	1	1 0	1	1
2	2 1	1	122	233	1	1	0	0	1	0	1	1
3	1	1	2	332	1	1 0	0	0	1 0	0 1	1	1
4	1	1	2	232	1	0	0	0 0 1	0	1	1	2 1
5	1	1	2 1	2	1	0	0	1	0	1 0	1	1
6	1	1 2	1	2	1	0	0 0 1	1	0	0	1 2	2
7	1	232	1	2 1	1	0 1	1	1	0	0	2	2 1
8	1	1	1	1	1	1	100	110	0	0 0 1	2	2 1
9	1	1	1	1	1	101	0	0 1 1	0	1	2	1
10	1	1	1	1	1	1	0	1 0	0 1 0	1	2	1
11	1	1 2	1	1	1	1	0	0	0	1	2	1
12	1 2	3	1	1	1 0	1	0	0	0	1	233	1 2
13	2	3	100	1 0	0 1	1	0	0	0	1	3 2	2 3
14	2	3	0	0	1	1	0	0	0	1	2 1	3
15	2 3	3 2	0	0	1 0	1 2	0	0	0	1	1	3 2
16	323	1	0 0 1	0 1	0 1	2 1	0	0	0	1	1	3 2
17	332	1	1	1	1 0	1 0	0	0	0 1 1	1	1	2
18	212	1	1	1	0	0	0	0	1	121	1	211
19	2	1	1 0	121	0	0	0 1 1	0	1	121	1 2	233
20	2	1	0	1 0	0 0 1	0	1 0	0	1 0	101	1	3 2
21	2 1	1	0 1 1	0	1	0	0	0	0 1 1	121	1 0	2
22	1	1 2	1	0	1 0	0 0 1	0	0	1	1 2	1	2
23	1	2	1 2	0	0	1 0	0	0	101	2 1	1	2 1
24	1	2 1	2	0 1	0	0	0	0	1	1	232	1
25	1	1	2 1	1 0	0	0	0 1	0	1	1	1	1
26	1	1	1	0	0	0	1	0	1	1	1 2	1
27	1	1	1	0 1	0	0	1	0	1	1	221	1 2
28	1	1	1	1	0	0	100	0	1	1	1	2
29	1		112	1	0	0	0	0	1	1	1	2
30	1 2		2	1	0 1	0 1 1	0	0 1	1	1	1	2 1
31	221		2		1		0	1		1		1

EXPLANATION OF THE TABLES.

The data given in this yearbook have mostly been obtained from the GALITZIN and the PRESS-EWING records. The velocity of the recording paper is 30 mm and 15 mm per minute, respectively.

The data from the seismographs at Heerlen and Witteveen are also mentioned.

The time is Greenwich mean time.

In the column "first motion" + means an upward movement of the soil (compression), - means a downward movement (dilatation). Uncertain data have been given in parentheses. The following symbols were used for the phases:

- P = normal first phase, or first longitudinal tremor.
- pP = P-wave once reflected at the earth's surface near the epicentre.
- PP = P-wave reflected halfway between epicentre and station.
- PPP = P-wave two times reflected at the earth's surface.
- S = second phase, arrival of the transversal tremor.
- sS = S-wave reflected at the earth's surface near the epicentre.
- PS = wave changed from longitudinal to transversal oscillation through reflection at the earth's surface.
- PPS = wave twice reflected, having been transversal on one branch of the path.
- SS = S-wave reflected halfway between epicentre and station.
- SSS = S-wave two times reflected at the earth's surface.
- PcP = P-wave reflected at the core boundary.
- ScS = S-wave reflected at the core boundary.
- P' = PKP = wave having penetrated the core.
- S' = SKS = transversal wave, having been longitudinal within the core.
- PKS = alternating wave having penetrated the core.
- pP' = P'-wave reflected near the epicentre.
- sS' = S'-wave reflected near the epicentre.
- SKKS = alternating wave which has been reflected within the core.
- L = long wave or surface waves.
- M = maximum of the surface waves.
- L' = surface waves travelling around the major arc.
- M' = maximum of these waves.
- i = sudden beginning of the phase.
- e = gradual beginning of the phase.
- F = end of the discernable movement
- H = time of the shock at point of origin.
- h = depth of the origin.

The indices H, N, E and Z refer to horizontal, north-south, east-west and vertical components of the movement.

The distance of the epicentre and the depth of origin have been calculated by means of curves constructed with the aid of the time tables of Jeffreys and Bullen (1940).

The data given in the column "amplitude" are the maximum amplitudes measured from the medium line (Galitzin records). The amplitudes have been calculated by means of the formula:

$$V = \frac{A k T_b}{\pi l} \frac{1}{\left\{ 1 + \left(\frac{T_b}{T} \right)^2 \right\}^2}$$

In this formula A is the distance between galvanometer mirror and recording paper, k is the multiplying factor, T_b the period of the wave, l the reduced length of the pendulum, T the free period of the undamped seismograph, and V the magnification. The period of the galvanometer is assumed to be equal to the free period of the undamped seismograph.

For the horizontal components of the Galitzin records the following mean values were used: $k = 11,0$ and $T = 24,5$ sec, and for the vertical component $k = 175$ and $T = 12,0$ sec.

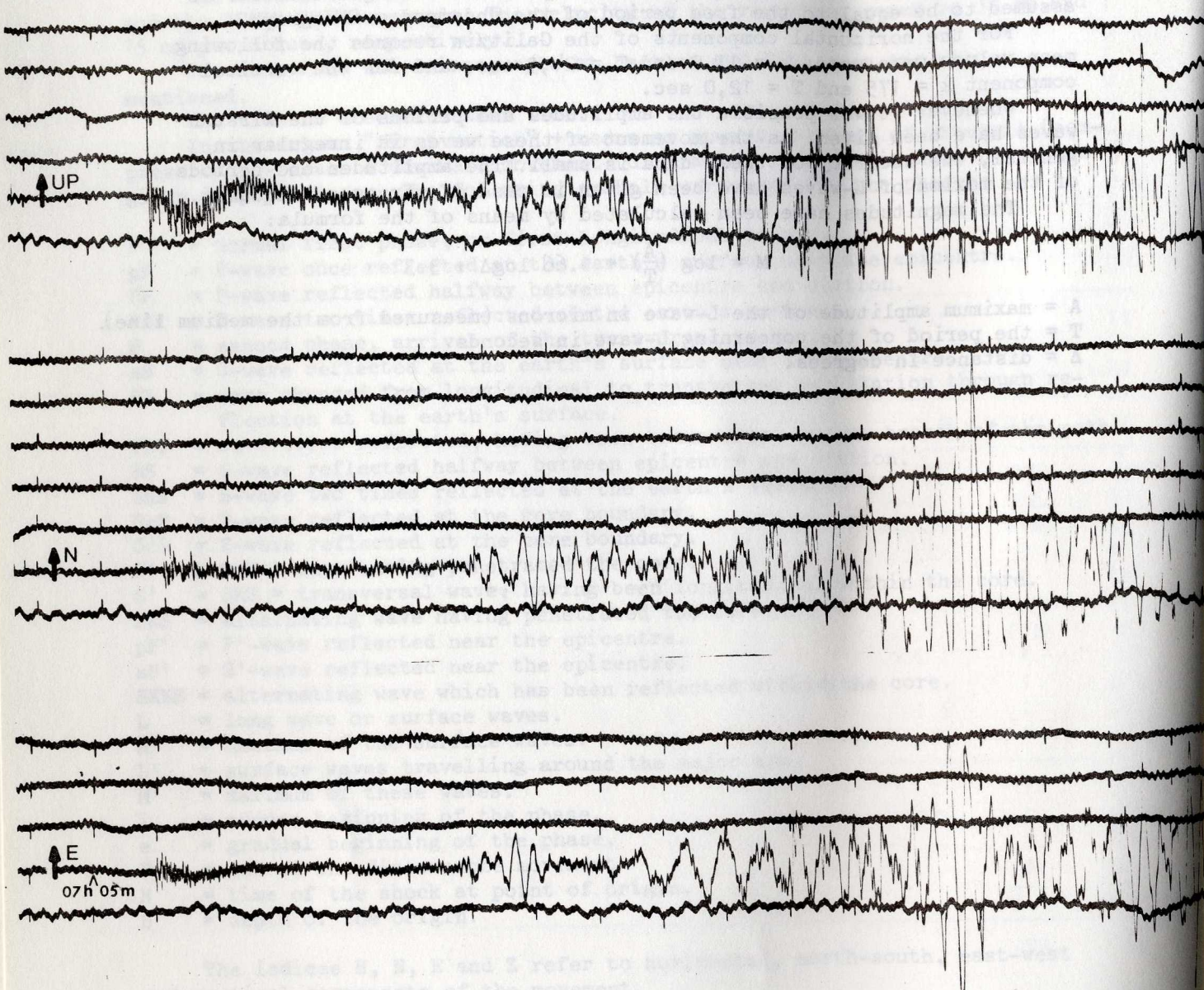
Whenever it was possible the amplitudes and periods of the first P waves have been given. As the movement of these waves is irregular in general, the accuracy of these data is small. The amplitudes and periods of the maxima of L-waves have been given in case of strong earthquakes.

The magnitudes have been calculated by means of the formula:

$$M = \log \left(\frac{A}{T} \right) + 1.66 \log \Delta + 3.3$$

- A = maximum amplitude of the L-wave in microns (measured from the medium line).
- T = the period of the concerning L-wave in seconds.
- Δ = distance in degrees.

PRESS-EWING records at DE BILT



UNDERGROUND NUCLEAR EXPLOSION at NOVAYA ZEMLYA
 October 27, 1973 Mb 6.9 Ms 5.5

Seismological Data
 Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JAN. 1973											
1	HEE: ePKP	04	05	16.0							9.2S 150.6E, H: 03 46 09.8, h 41 km. Mb 5.3. East New Guinea region.
1	HEE: iPKP	05	42	03.0							15.0S 174.0W, H: 05 22 29.8, h N. Mb 5.0. Tonga Islands.
1	eS	12	06	32							35.2S 16.2W, H: 11 42 37.5, h N. Mb 5.4, Ms 6.0. South Atlantic Ridge.
	ePS	12	07	30							
	eSS	12	12	06							
	eL	12.4			19		4.5		5.9		
	F	13.0									
	WIT: eP	11	55	37.5							
	e	11	55	47.0							
	HEE: eP	11	55	29							
	ePP	11	58	53							
2	HEE: eP	04	00	31							5.4N 82.5W, H: 03 47 52.5, h 30 km. Mb 5.2, Ms 5.0. South of Panama.
2	WIT: iP	22	36	08.7 +							31.2N 88.1E, H: 22 25 57.0, h N. Mb 5.2. Tibet.
	HEE: iP	22	36	14.5							
2	WIT: eP	23	24.9								71.3N 7.6W, H: 23 20 16.7, h N. Mb 4.7. Jan Mayen Island region.
	HEE: eP	23	25.0								
3	HEE: eP	03	10	58.5							27.7S 63.3W, H: 02 58 16.7, h 563 km. Mb 5.6. Santiago del Estero Prov., Argentina.
3	e	14	50	03							39.1N 71.9E, H: 14 31 04.5, h N. Mb 5.5, Ms 4.8. Tadjik SSR
	eL	14	57								
	F	15	21								
	WIT: iP	14	39	25.2 -							
	HEE: eP	14	39	32.0							
4	eL	00	44.5								41.3N 29.3W, H: 00 31 42.0, h N. Mb 4.5. Azores Islands region.
	F	00	50								
4	WIT: ePKP	01	26	53.5							13.4S 167.1E, H: 01 07 50.3, h 194 km. Mb 5.1. New Hebrides Islands.
	i	01	26	54.5							
	HEE: ePKP	01	26	59							

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JAN. 1973	4	eP	08	08	27	15	2.3	4.6		71.1N 7.7W, H: 08 03 50.4, h N. Mb 5.1. Jan Mayen Island region.	
	ePP	08	08	50							
	eS	08	12	14							
	eL	08	13.3								
	F	08	39								
	WIT: iP	08	08	16.3 +							
	e	08	08	19.5							
	HEE: iP	08	08	34.0							
5	WIT: iP	00	52	35.5 -					0.7N 80.0W, H: 00 39 48.2, h 36 km. Mb 4.7. Near coast of Ecuador.		
HEE: iP	00	52	32.5								
5	iP	01	49	14 -	17	3.3	4.7		49.4N 28.2W, H: 01 44 25.8, h N. Mb 5.4, Ms 4.6. North Atlantic Ridge.		
iPP	01	49	36								
iS	01	53	06								
eL	01	54.6									
F	02	12									
WIT: iP	01	49	19.0 +								
i	01	49	21.4 -								
HEE: iP	01	49	16.5 +								
i	01	49	25.0								
5	eL	04	01						25.9N 45.ON, H: 03 38 58.1, h N. Mb 5.1, Ms 5.0. North Atlantic Ridge.		
F	04	07									
WIT: eP	03	47	28.0								
HEE: iP	03	47	21.0								
5	iP	05	53	52 +	18	11.4	5.3		35.8N 21.8E, H: 05 49 17.5, h N. Mb 5.3, Ms 5.1. Mediterranean Sea.		
iPP	05	54	23								
iS	05	57	37								
iSS	05	58	16								
eL	05	59.9									
F	06	50									
WIT: eP	05	53	52.0								
i	05	53	56.3 -								
HEE: iP	05	53	40.0(+)								
i	05	53	45.0								

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms				
		h	m	s			Z	NS	EW						
JAN. 1973	5	ePKP1	14	14	10 +					39.0S 175.2W, H: 13 54 29.1, h 150 km. Mb 6.2. North Island, New Zealand.					
	iPKP2	14	15	16 -											
	iPP	14	18	59											
	eSKKS	14	26	26											
	eSKKKS	14	29	18											
	iSPP	14	32	27											
	eSS	14	39	24											
	eL	15	13												
	F	16.4													
	WIT: iPKP2	14	15	09.0(+)											
	e	14	15	45.5											
	ePP	14	18	54.5											
	HEE: iPKP2	14	15	17.0											
	i	14	15	59.0											
	5	WIT: iPKP	21	47	49.8(-)						20	2.1	5.9		21.3S 175.2E, H: 21 29 12.3, h 620 km. Mb 5.2. South of Fiji Islands.
	HEE: iPKP	21	47	54.5											
	i	21	48	02											
	6	WIT: e	02	10.5											
	HEE: eP	02	08	17											
	e	02	08	49											
6	ePKP	16	12	08 +											
ePP	16	15	00												
eSKS	16	19.2													
eSS	16	33.4													
eSSS	16	38.5													
eL	16	55													
F	18.8														
WIT: ePKP	16	12	07.0												
e	16	15.4													
HEE: ePKP	16	12	05												
6	WIT: ePKP	22	34	58.0											
i	22	35	05.0												
i	22	35	07.7												
ePP	22	38	31.5												
HEE: ePKP	22	35	03												
i	22	35	09.0												
ePP	22	38	37												
7	WIT: ePKP	01	51	47					21.9S 170.4E, H: 01 32 13.1, h 66 km. Mb 4.7. Loyalty Islands region.						
HEE: iPKP	01	51	52.0												

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JAN. 1973	eL	12	42								5.3N 36.8E, H: 12 17 12.6, h 34 km. Mb 4.9. Ethiopia.
	F	13	42								
	HEE: eP	12	26	38.0							
7	WIT: i	23	45	58.4	+						No determination of epicentre
	HEE: i	23	46	03.5	+						
8	eL	00	13								42.2N 29.5W, H: 00 00 53.8, h N. Mb 4.1. Azores Islands region.
	F	00	22								
8	HEE: eP	04	46	01							13.6N 57.3E, H: 04 36 26.4, h N. Mb 5.0. Arabian Sea.
8	WIT: iPKP	10	42	58.8	(-)						20.1S 179.0W, H: 10 24 25.4, h 653 km. Mb 4.7. Fiji Islands region.
8	WIT: ePKP	21	29	49.0							24.4S 177.3W, H: 21 10 11.2, h 154 km. Mb 4.7. South of Fiji Islands.
9	eL	06	13								71.3N 7.6W, H: 06 02 49.1, h N. Mb 4.3. Jan Mayen Island region.
	F	06	23								
9	eL	16	45								39.5N 73.7E, H: 16 17 55.2, h N. Mb 4.9. Tadzhik-Sinkiang border region.
	F	16	52								
10	iP	03	28	28	(+)						37.8N 21.3E, H: 03 24 11.7, h 41 km. Mb 5.0. Southern Greece.
	eS	03	32	00							
	eL	03	34.0								
	F	03	52								
	WIT: eP	03	28	34.0							
	e	03	28	45.0							
	HEE: iP	03	28	14.0							
	e	03	28	19							
10	ePP	11	54	24							11.1S 162.3E, H: 11 32 27.4, h 32 km. Mb 5.6, Ms 5.8. Solomon Islands.
	eSKP	11	55	14							
	eSS	12	12	24							
	eSSS	12	17.5								
	eL	12	31								
	F	in next shock									
10	eL	12	45								11.2S 162.3E, H: 11 46 43.7, h 32 km. Mb 5.0, Ms 5.9. Solomon Islands.
	F	14.1									

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JAN. 1973	eL	02	51								52.1N 169.6W, H: 02 12 27.5, h 30 km. Mb 5.4, Ms 5.2. Fox Islands, Aleutian Is.
	F	03.8									
	WIT: iP	02	24	11.2	-						
	HEE: iP	02	24	21.0	+						
12	eSP	03	39	35							54.4S 5.3E, H: 03 11 33.1, h N. Mb 5.5, Ms 5.7. Bouvet Island region.
	eSS	03	45.3								
	eSSS	03	49.7								
	eL	04	01								
	F	05.8									
15	WIT: eP	02	04	18.5							46.0N 142.7E, H: 01 53 14.6, h 354 km. Mb 5.1. Sakhalin Island.
15	WIT: iP	09	15	10.0	-						27.1N 140.1E, H: 09 02 58.3, h 477 km. Mb 5.8. Bonin Islands region.
	HEE: iP	09	15	17.5	-						
16	WIT: eP	22	50	00.0	-						35.1N 22.6E, H: 22 45 16.7, h 28 km. Mb 4.5. Mediterranean Sea.
	HEE: eP	22	49	49							
17	WIT: iPKP	09	22	21.5							17.5S 178.7W, H: 09 03 42.9, h 531 km. Mb 4.8. Fiji Islands region.
17	WIT: iPKP	10	03	38.6	-						15.1S 175.0W, H: 09 44 36.8, h 251 km. Mb 5.7. Tonga Islands.
	i	10	03	44.5							
	HEE: iPKP	10	03	43.0	-						
18	iPKP	09	47	14	+						6.9S 150.0E, H: 09 28 14.1, h 43 km. Mb 6.3, Ms 6.8. New Britain region.
	i	09	47	22							
	iPP	09	49	11							
	iPPP	09	51	54							
	eSKS	09	54.6								
	eSKKS	09	56	05							
	iSP	09	59	14							
	iSPP	10	00	40							
	iSS	10	06	16							
	iSSS	10	10	52							
	eL	10.5									
	F	12.7									
	WIT: iPKP	09	47	12.7	-						
	i	09	47	20.5							
i	09	47	29.0								
ePP	09	49	02								
HEE: iPKP	09	47	15.5	+							
i	09	47	23.5								
i	09	47	44.5								

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
19 JAN. 1973	eL	12	41							55.5S 28.8W, H: 11 46 58.8, h N. Mb 5.4, Ms 5.4. South Sandwich Is. region.	
	F	12	58								
20	eL	13	01		19	3.5		5.4		29.3N 68.6E, H: 12 34 19.6, h 17 km. Mb 5.3, Ms 5.6. West Pakistan.	
	F	13	50								
21	WIT: ePKP	20	40	02						15.9S 174.1W, H: 20 20 49.3, h 129 km. Mb 5.5. Tonga Islands.	
	HEE: iPKP	20	40	13.0	-						
22	iP	00	50	52						18.6N 105.0W, H: 00 37 58.0, h N. Mb 5.6, Ms 6.1. Off coast of Jalisco, Mexico.	
	iPP	00	54	12							
	iS	01	01	24							
	iPS	01	02	32							
	iSS	01	07	04							
	iSSS	01	11	08							
	eL	01	16		20	26.5	6.7				
	F	03	46								
	WIT: eP	00	50	53.5							
	HEE: eP	00	50.8								
ePP	00	54	15.5								
22	WIT: iPKP	13	55	42.2	-					21.7S 179.0W, H: 13 36 57.8, h 570 km. Mb 5.2. Fiji Islands region.	
	HEE: iPKP	13	55	46.5	-						
23	eL	00	49							6.0S 149.7E, H: 23 45 36.7, h 72 km. Mb 5.2. New Britain region.	
	F	01.7									
23	iPP	05	11	48						12.1S 166.5E, H: 04 49 45.7, h 97 km. Mb 5.8. Santa Cruz Islands.	
	ipPP	05	12	20							
	ePKS	05	12	36							
	iSP	05	21	44							
	iSPP	05	23	48							
	eSS	05	30.0								
	eSSS	05	35.0								
	eL	05	53		24	7.7	6.4				
	F	07.2									
	WIT: iPKP	05	09	00.0							
i	05	09	06.9								
e	05	09	23.0								
e	05	09	34.0								
HEE: e	05	08	55								
ePP	05	11	52								
24	eL	03	47							41.0N 82.2E, H: 03 20 20.2, h N. Mb 5.1. Southern Sinkiang Prov., China.	
	F	04	00								

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
25 JAN. 1973	eL	19	09							54.6N 161.6E, H: 18 32 27.4, h 31 km. Mb 5.3, Ms 4.3. Near east coast of Kamchatka.	
	F	19	30								
	WIT: iP	18	43	43.6							
HEE: iP	18	43	55.0								
27	eL	14.1								0.1S 123.9E, H: 13 08 43.7, h 55 km. Mb 6.0. Northern Celebes.	
	F	14.5									
27	HEE: ePKP	20	57	41						17.5S 172.9W, H: 20 38 00.3, h N. Mb 5.1. Tonga Islands region.	
28	HEE: iPKP	14	37	40.5	+					16.5S 173.8W, H: 14 18 03.1, h N. Mb 5.1. Tonga Islands.	
	i	14	37	58.0							
28	WIT: ePKP	17	53	56.5						19.3S 175.9W, H: 17 34 42.1, h 236 km. Mb 5.0. Tonga Islands.	
	epPKP	17	55	02.5							
	HEE: iPKP	17	54	02.5	+						
epPKP	17	55	07								
28	iPKP	18	02	45	+	5	3.5			19.8S 169.0E, H: 17 43 14.6, h 72 km. Mb 5.7. New Hebrides Islands.	
	i	18	02	56							
	ePP	18	06	12							
	ePS	18	16	40							
	eL	18	56		22		3.1	6.1			
	F	20.0									
	WIT: iPKP	18	02	43.7	-						
	i	18	02	48.7	+						
	i	18	02	57.4							
	e	18	03	15.5							
i	18	03	29.7								
HEE: iPKP	18	02	47.0	+							
e	18	02	59.0								
29	eL	22.2								23.9N 123.4E, H: 21 23 39.6, h 53 km. Mb 4.9. Southwestern Ryukyu Is.	
	F	22.4									
30	eL	16.1								45.7S 76.6W, H: 15 03 23.9, h N. Mb 5.0, Ms 5.3. Off coast of Southern Chile.	
	F	16.5									

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JAN. 1973											
	30	iP	21	13	52						18.5N 103.0W, H: 21 01 12.5, h 43 km. Mb 6.2., Ms 7.5. Near coast of Michoacan, Mexico. 17 Killed.
		iPP	21	17	11						
		iPPP	21	19	13						
		iS	21	24	20						
		i	21	24	44						
		iSP	21	25	20						
		iPPS	21	26	06						
		iSS	21	30	10						
		eSSS	21	34.0							
		eL	21	38.5		15			275	7.7	
		F	02.3								
		WIT: eP	21	13	55.0						
		i	21	13	57.7	+					
	i	21	14	04.4	+						
	HEE: eP	21	13	56.5	+						
31	iP	21	08	04	-					28.2N 139.2E, H: 20 55 53.1, h 498 km. Mb 6.0. Bonin Islands region.	
	ipP	21	09	57							
	iSKS	21	17	44							
	esSKS	21	21	24							
	iSS	21	24	24							
	eL	21.7									
	F	23.6									
	WIT: iP	21	07	57.2	-						
	i	21	07	58.9	+						
	epP	21	09	40.0							
	e	21	19	04.0							
	e	21	19	08.5							
	HEE: iP	21	08	06.0							
	i	21	19	30							
		21									

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms	
		h	m	s			Z	NS	EW			
FEB. 1973												
	1	eSKS	05	37	44						22.7S 66.2W, H: 05 14 20.6 h 229 km. Mb 6.1. Jujuy Prov., Argentina. DBN: No vertical records.	
		F	07.2									
		WIT: iP	05	27	32.1	+						
		epP	05	28	35.0							
		HEE: eP	05	27	28							
		epP	05	28	30							
	1	WIT: iPKP	07	46	55.7	-						17.7S 175.2W, H: 07 27 44.8 h 232 km. Mb 5.3. Tonga Islands.
		HEE: iPKP	07	47	03.0							
		e	07	49	05							
	1	eL	18	01								51.8N 176.3E, H: 17 24 00.9 h 51 km. Mb 5.3. Rat Islands, Aleutian Is.
		F	18.9									
		WIT: iP	17	35	41.7	+						
		e	17	35	52.5							
	HEE: eP	17	35	52.0								
2	eL	02	50							55.7S 26.8W, H: 01 53 21.1, h N. Mb 5.6. South Sandwich Is. region.		
	F	03	14									
5	WIT: iP	04	42	28.5	+					43.9N 147.5E, H: 04 30 33.1, h 53 km. Mb 5.3. Kuril Islands.		
6	WIT: iP	05	42	29.3(-)						27.9N 127.7E, H: 05 30 02.0, h 81 km. Mb 5.7. Ryukyu Islands.		
	HEE: iP	05	42	36.0								
6	iP	10	48	20	+					31.4N 100.6E, H: 10 37 10.1, h N. Mb 6.1, Ms 7.4. Szechwan Prov., China.		
	i	10	48	29	+							
	iPP	10	51	06								
	iPPP	10	52	45								
	iS	10	57	26								
	iSS	11	01	50								
	iSSS	11	05	00								
	eL	11	09.0									
	F	15.0										
	WIT: iP	10	48	09.5								
	e	10	52	33.5								
	eL	11	11.0									
	HEE: iP	10	48	15.5	+							
7	WIT: ePKP	02	27	56.5							17.6S 172.7W, H: 02 08 16.9, h N. Mb 5.0, Ms 5.0. Tonga Islands region.	
	HEE: ePKP	02	27	57.5								

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
FEB. 1973											
7	eL F WIT: iP i i HEE: iP i i	16 17.4 16 16 16 16 16 16 16	42 17 17 17 17 17 17 17 17	 21.5 25.7 33.6 29.0 33.0 37.5	- - - - - +	20	5.3		5.7	31.5N 100.3N, H:16 06 25.0, h N. Mb 5.8 Ms 5.5. Szechwan Prov., China.	
8	eSS eL F	10 11 12.1	46.2 14			20	3.6		6.0	45.5S 96.3E, H:10 09 08.3, h N. Mb 5.9, Ms 6.1. Southeast Indian Rise.	
8	HEE: eP	19	15	49.0						10.4S 13.0W, H:19 05 21.9, h N. Mb 5.3, Ms 5.3. Ascension Island region.	
10	eL F	04 04	20 30							24.3N 121.8E, H:03 32 28.0, h 56 km. Mb 4.8. Taiwan.	
10	iP iPP eSKS ePS eSSS eL F WIT: eP i HEE: eP i	12 12 12 12 12 12 13.7 12 12 12 12	06 09 16 18 26.8 34 06 06 06 06	11 37 46 02 26.8 34 11.5 13.5 12.5 15.5	+ + - -	5 16	3.6		6.2	18.9N 103.5W, H:11 53 27.5, h N. Mb 5.4, Ms 5.6. Near coast of Michoacan, Mexico.	
10	HEE: iP	17	07	22.5						49.9N 156.1E, H:16 55 33.9, h N. Mb 5.5, Ms 5.2. Kuril Islands.	
13	WIT: iPKP HEE: iPKP	15 15	41 41	31.3 36.5	- -					17.5S 178.5W, H:15 22 55.1, h 541 km. Mb 5.5. Fiji Islands region.	
13	WIT: eP	20	05	39.0						51.2N 179.2W, H:19 53 53.5, h 46 km. Mb 5.4, Ms 4.7. Andreanof Is., Aleutian Is.	
14	eL F WIT: iP HEE: iP	01 02.1 01 01	33	 56.9 02.5	- - +					d.b.m. 22.3N 121.6E, H: 00 49 16.2, h 38 km. Mb 5.9, Ms 5.1. Taiwan region.	
14	eL F	16 16.9	19							d.b.m. 5.4S 126.7E, H:15 22 09.6, h 17 km. Mb 5.3, Ms 5.7. Banda Sea.	

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
FEB. 1973											
14	eL F WIT: ePKP2 HEE: iPKP2 i	17 19.0 16 16 16	30 31.8 31 32	 49.5 00.0							d.b.m. 30.4S 177.5W, H:16 11 14.9, h 29 km. Mb 5.7, Ms 6.3. Kermadec Islands.
15	eL F	00 01.4	57								d.b.m. 11.5N 86.5W, H: 00 15 53.7, h 33 km. Mb 5.1, Ms 5.0. Near coast of Nicaragua.
16	WIT: iP HEE: iP	05 05	11 11	01.0 11.5	+ -						49.8N 78.2E, H:05 02 57.7, h 0 km. Mb. 5.6. Eastern Kazakh SSR.
16	eL F HEE: iPKP e	06 06 05 05	03 22 10 10	 32.5 48.5							15.3S 173.3W, H:04 51 01.4, h 50 km. Mb 5.8, Ms 5.2. Tonga Islands.
17	WIT: eP HEE: iP e	16 16 16	13 13 13	15.5 11.5 16.5	- -						17.0N 61.4W, H:16 02 45.5, h 34 km. Mb 5.5, Ms 4.5. Leeward Islands.
17	WIT: iP HEE: eP	19 19	26 27	54.5 03.5							45.2N 148.6E, H:19 15 11.4, h 113 km. Mb 5.3. Kuril Islands.
18	eL F HEE: eP	04 04 04	32 45 01	 49.5							36.7S 17.2W, H:03 48 52.9, h N. Mb 5.6, Ms 5.4. South Atlantic Ridge.
18	eL F WIT: ePKP i HEE: ePKP e	19 20 18 18 18 18	35 33 29 30 29 30	 59 00.8 58 05	+ + -						30.2S 177.6W, H:18 09 27.2, h 49 km. Mb 5.5, Ms 5.7. Kermadec Islands.
18	eL F	22 22	05.2 09								40.8N 74.1E, H:21 39 02.3, h N, Mb 4.9. Kirgiz-Sinkiang border region
19	ePP eSKS ePS eSS eL F	09 09 09 09 09 11.0	00 07 09 15 28	52 25 54 24		17			11.0	6.3	45.5S 35.1E, H:08 42 52.1, h N. Mb 5.5, Ms 5.6. Prince Edward Islands region.
19	eL F WIT: eP HEE: eP	18 18 18 18	21 35 15 14	 02.5 57							40.2N 33.9E, H:18 10 00.5, h 22 km. Mb 4.5. Turkey.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
FEB. 1973											
20	eL F	02.6 03.1									62.5S 166.3E, H:01 14 40.7, h N. Mb 5.7. Balleny Islands region.
20	eL F WIT:eP e HEE:eP	06 08 06 13 06 00 06 00 06 00									34.4N 23.8E, H:05 55 14.4, h 22 km. Mb 4.5. Crete.
20	eL F WIT:eP e	08 15 09.1 07 51 07 51									58.3N 149.8W, H:07 40 34.8, h 12 km. Mb 5.5, Ms 5.1. Gulf of Alaska.
20	eL F	23.5 24.1									62.6S 167.4E, H:22 05 19.6, h N. Mb 5.4. Balleny Islands region.
21	iP ePP eL F WIT:eP HEE:eP	14 58 14 15 01 21 15 29 16.1 14 58 16.5 14 58 20.0			(+) 20		4.8	5.8			34.1N 119.0W, H:14 45 57.3, h 8 km. Mb 5.7, Ms 5.2. Southern California.
22	eL F HEE:iP	01 09 01 26 00 42									14.5N 91.6W, H:00 30 20.3, h 107 km. Mb 5.2. Guatemala.
23	eL F WIT:eP HEE:eP e	05.2 05.6 04 39 14 04 39 07.0 04 39 12.0									d.b.m. 2.1S 78.2W, H:04 26 23.3, h 67 km. Mb 5.7. Ecuador.
23	WIT:iPKP	21 16 25.5									23.9S 180.0W, H:20 57 31.0, h 518 km. Mb 5.0. South of Fiji Islands.
24	WIT:eP	00 10 30									28.6N 52.6E, H:00 02 40.1, h 27 km. Mb 5.2. Southern Iran.
24	iPKP i eL F WIT:iPKP HEE:iPKP	07 58 01 07 58 14 08 51 09 13 07 57 55.4 07 58 01.5			- +						d.b.m. 19.2S 168.7E, H; 07 38 27.0, h 59 km. Mb 6.0. New Hebrides Islands.

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms	
		h	m	s			Z	NS	EW			
FEB. 1973												
25	ePP eSKS iPS ePPS eSS eL F HEE:ePKP e	05 55 51 06 01 40 06 05 44 06 07 00 06 12 12 06 25 08.7 05 54 38.5 05 57 12.5							18	4.0	6.1	61.0S 37.9W, H:05 35 55.4, h 33 km. Mb 6.4, Ms 6.2. Scotia Sea.
25	eS ePS eSS eSSS eL F	10 56 05 10 57 24 11 02.6 11 06.0 11 20 12.5							20		5.7 6.0	1.7S 99.7E, H:10 31 39.5, h N. Mb 5.4, Ms 5.9. Southern Sumatra.
26	WIT:eP HEE:eP	00 56 04.0 00 56 02.5										9.6N 84.2W, H:00 43 39.9, h N. Mb 4.7, Ms 4.0. Costa Rica.
26	eL F	11 47 12 16										5.7N 127.0E, H:10 53 27.6, h 74 km Mb 5.2. Philippine Islands region.
26	eS eL F	22 22 04 22 46 23.7										1.8S 99.7E, H:21 57 30.0, h N. Mb 5.2, Ms 5.3. Southern Sumatra.
27	eL F	17 22.0 17 27										38.9N 29.9E, H:17 10 10.6, h 33 km. Mb 4.2. Turkey.
28	iP iS ePS ePPS eSS eSSS eL F WIT:iP i HEE:eP i	06 49 32 06 58 47 06 59 14 06 59 33 07 04 24 07 07 02 07 11 11.6 06 49 27.6 06 49 32.7 06 49 36.0 06 49 38.0										50.5N 156.6E H:06 37 49.5, h 27 km. Mb 6.3, Ms 7.2. Kuril Islands.
28	HEE:eP	07 02 27.0										50.1N 156.9E, H;06 50 39.7, h N. Mb 5.3. Kuril Islands.
28	HEE:iP	07 07 25.0										50.1N 156.9E, H:06 55 38.7, h 48 km. Mb 5.5. Kuril Islands.
28	HEE:eP	11 44 28.5										50.1N 156.9E, H:11 32 42.7, h 48 km. Mb 5.2. Kuril Islands.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAR. 1973											
1.	WIT: iP e HEE: iP	02	30	42.5							49.9N 157.3E, H:02 19 03.1, h 30 km. Mb 5.5. Kuril Islands region.
3.	HEE: eP	01	56	34.0	+						25.0N 128.2E, H:01 43 41.8, hN. Mb 5.3. Ryukyu Islands.
3.	WIT: eP HEE: eP	02	53	41							50.4N 156.3E, H:02 42 09.0, h 59 km. Mb 5.5. Kuril Islands.
4.	WIT: e	03	36	52.5							No determination of epicenter
4.	iP iPP iS ePPS eSS eL F WIT: iP HEE: iP	18	09	05	+	22	5.0	5.8			54.8N 161.6E, H: 17 57 43.5, h 32 km. Mb 6.1, Ms 5.8. Near east coast of Kamchatka.
5.	WIT: iPn iP* ePg HEE: iPn iSn	20	06	38.4	+						51.5N 7.2E, H: 20 06 11.9, h 0 km. Coalmine rockburst. One miner killed. Germany.
6.	HFE: eP	04	11	33.5							18.1N 120.7E, H: 03 58 40.2, h 98 km. Mb 5.1. Luzon, Philippine Islands.
6.	eL F	23.0									27.5N 112.5W, H: 22 19 32.7, hN. Mb 5.1, Ms 4.9. Baja California.
8.	WIT: iPKP HEE: iPKP	13	21	47.6	-						17.7S 178.9W, H: 13 03 13.5, h 582 km. Mb 4.8. Fiji Islands region.
8.	eL F	15	56								23.0S 175.6W, H: 14 35 18.4, hN. Mb 5.0, Ms 5.6. Tonga Islands region.
8.	WIT: eP HEE: eP	16	21	59.0	+						37.1N 116.0W, H: 16 10 00.2, h 0 km. Mb 5.4. Southern Nevada.
8.	e F	21	53.0								No determination of epicenter.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAR. 1973											
9.	iP ipP iPP ipPP iPPP eSKS iSP eSS eL F WIT: eP HEE: eP	10	20	36							6.3N 127.3E, H: 10 06 37.5, h 55 km. Mb 6.0. Philippine Islands region.
9.	WIT: iPKP i HEE: ePKP	19	29	00.4	-						34.1S 150.3E, H: 19 09 12.8, h 13 km. Mb 5.5. Near southeast coast of Australia.
10.	eL F HEE: ePKP	11	00								15.2S 173.5W, H: 09 50 00.3, h 8 km. Mb 5.6, Ms 5.1. Tonga Islands.
10.	eL F WIT: ePKP HEE: ePKP	19	28								23.1S 175.4W, H: 18 07 56.2, hN. Mb 5.0, Ms 5.2. Tonga Islands region.
11.	WIT: eP	13	49	47							41.6N 142.0E, H: 13 37 47.3, h 73 km. Mb 5.5. Hokkaido, Japan region.
11.	eL F	15	39								21.0N 120.2E, H: 14 53 07.5, h 32 km. Mb 4.8. Taiwan region.
12.	eL F	06	57								9.4S 111.1E, H: 05 57 02.0, h 38 km. Mb 5.4, Ms 5.4. South of Java.
12.	eL F WIT: eP HEE: iP	11	56								50.1N 156.7E, H: 11 14 23.6, h 49 km. Mb 5.7, Ms 5.2. Kuril Islands.
12.	eL F	13	29								4.2N 126.5E, H: 12 39 02.0 h 37 km. Mb 5.5, Ms 5.4. Talaud Islands.
12.	eL F WIT: eP	16	38.0								73.6N 8.6E, H: 16 27 24.0, h 33 km. Mb 4.9. Greenland Sea.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAR. 1973											
12.	iP ipP iPP iS iPS eSS eL F	19	50	57	+	6	3.7				50.8N 157.1E, H: 19 39 21.0, h 54 km. Mb 6.1. Kuril Islands.
	WIT: iP epP HEE: iP	19	50	51.8 18.5 02.0	+						
12.	HEE: iP	20	35	05.0				17.8	6.3		35.9N 21.8E, H: 20 30 43.9, h 44 km. Mb 4.7. Mediterranean Sea.
12.	eL F	21	56								No determination of epicenter.
13.	eL F	02	45								5.4S 154.2E, H: 01 42 43.6, h 170 km. Mb 5.5. Solomon Islands.
13.	WIT: ePKP	20	20	10							6.4S 153.1E, H: 20 01 08.4, h 35 km. Mb 5.3. New Britain region.
14.	eL F	07	35								62.5S 165.3E, H: 06 07 30.8, h 36 km. Mb 5.5, Ms 5.8. Balleny Islands region.
14.	WIT: ePKP	11	44	41							5.3S 152.2E, H: 11 25 46.7, h 64 km. Mb 5.8. New Britain region.
16.	eP i iPP iSKS eSKKS eS iSP iPPS eSS eSSS eL F WIT: eP epP e HEE: eP	01	06	08 19 24 48 36 04 43 52 25.5 29.6 40	-	23			21.7	6.7	2.1N 126.6E, H: 00 51 47.0 h 18 km. Mb 6.0, Ms 6.3. Molucca Passage.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms	
		h	m	s			Z	NS	EW			
MAR. 1973												
16.	eL F	03	00								2.0N 126.6E, H: 02 12 23.3, h 47 km. Mb 5.5. Molucca Passage.	
16.	eL F WIT: eP HEE: eP	22	31								37.0N 141.6E, H: 21 50 01.1, h 40 km. Mb 5.1. Near east coast of Honshu, Japan.	
17.	iPKP ipPKP iPP eSS F WIT: iPKP i iPP HEE: ePKP i i iPP i	05	16	28 08 50 32 06.5	+	5	2.1				19.4S 169.4E, H: 04 57 12.7, h 194 km. Mb 6.0. New Hebrides Islands.	
17.	eP eS ePS iPPS eSS eSSS eL F WIT: eP i i HEE: iP i	08	44	10 16 50 27 52 05.6 14 13.4	- + + + + +				20	250 7.7	13.4N 122.8E, H: 08 30 51.8, h N. Mb 5.6, Ms 7.0. Luzon, Philippine Islands.	
17.	eL F	16	31								5.2S 103.2E, H: 15 40 48.0, h 68 km. Mb 5.7. Southern Sumatra.	
18.	iP ePP iSKS iSKKS iPS ePPS eSS eL F WIT: eP HEE: eP e	11	20	31 11 12 00 08 12 40.0 53 14.0 20.5 31 46	+				25	36.0	6.9	2.0N 126.6E, H: 11 06 14.7, h N. Mb 6.0, Ms 6.5. Molucca Passage.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAR. 1973											
18.	WIT: e	22	07	23							No determination of epicenter.
19.	iP iS eL F WIT: eP HEE: iP	11 12 12 12 11 11	52 02 15 55 52 52	42 13 37.5 49.0	- - -						52.8N 173.8E, H: 11 41 07.8, h 81 km. Mb 5.8. Near Islands, Aleutian Is.
20.	eL F	02 02	06 14								56.1S 27.4W, H: 01 06 09.8, h N. Mb 5.1. South Sandwich Is. region.
20.	eL F	06 06.7	15								No determination of epicenter.
20.	ePP ipPP i eSKS iSP eSS eSSS eL F	19 19 19 19 19 19 19 20.0 21.1	27 28 28 33 37 43.2 47.5	50 34 54 40 03		21	3.3	5.9			8.3S 117.4E, H: 19 09 06.6, h 162 km. Mb 5.7. Sumbawa Island region.
22.	eL F	01 01	40.0 55								28.1N 87.0E, H: 01 06 57.2, h N. Mb 5.2. Tibet.
22.	eL F	06 07	51 21								22.0N 100.6E, H: 06 10 28.3, h N. Mb 4.7, Ms 5.4. Burma-China border region.
22.	WIT: iP HEE: iP	14 14	11 11	07.0 02.5	- -						15.3N 61.3W, H: 14 00 43.5, h 156 km. Mb 5.1. Leeward Islands.
22.	eL F WIT: eP	21 21 21	46 58 10	23							51.2N 179.2W, H: 20 58 36.0, h 40 km. Mb 4.9. Andreanof Is., Aleutian Is.
23.	iP i iS iPPS eL F HEE: iP	07 07 07 07 07 07 07	07 07 17 18 07.5 10.0	25 53 15 03							51.3N 174.2E, H: 06 55 33.2, h 27 km. Mb 5.8, Ms 5.9. Near Islands, Aleutian Is. WIT: change of papers: 07:05 - 07:08 G.M.T.
23.	eL F WIT: eP HEE: eP	19 19 19 19	52 in next shock 25 25	31.0 46.5 53.5							31.9N 100.1E, H: 19 14 53.1, h N. Mb 5.3, Ms 5.4. Szechwan Prov., China.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAR. 1973											
23.	eS eSS eL F WIT: iP epP HEE: iP ipP	20 20 20 21 19 19 19 19	05 11.5 26 24 55 55 55 55	51 10.9 21.0 18.5 29.0	 + +	20			7.1	6.1	29.3N 130.4E, H: 19 42 38.8, h 34 km. Mb 5.9, Ms 5.5. Ryukyu Islands.
23.	eL F	22 23	34 00								4.2N 126.8E, H: 21 39 47.6, h 35 km. Mb 5.6. Talaud Islands.
24.	eS eL F WIT: eP epP HEE: eP	00 01 02.5 00 00 00	58.1 16 02.5 47 47 47	24 33.5 27	 + +	21			5.0	5.9	31.7N 139.3E, H: 00 34 36.8, h 20 km. Mb 5.6, Ms 5.6. South of Honshu, Japan.
24.	WIT: eP	07	26	01.0							51.6N 161.6E, H: 07 14 26.2, h N. Mb 4.8. Off east coast of Kamchatka.
25.	eL F WIT: iP HEE: iP	09 10 09 09	35 00 07 08	50.6 01.5	+ +						50.2N 156.9E, H: 08 56 15.2, h 40 km. Mb 5.4, Ms 4.6. Kuril Islands.
25.	eS eSS eL F WIT: eP HEE: eP	23 23 23 22 22	05 10.6 19 24.4 54 54	09 37.5 36.5	 + +						25.9N 109.9W, H: 22 42 02.8, h N. Mb.5.5, Ms 5.5, Gulf of California.
26.	eS eL F WIT: eP epP HEE: eP	03 03 04.7 02 02 02	00 17 04.7 50 50 50	44 07.0 12.5 11	 + +	20		35.0		6.7	23.4N 124.0E, H: 02 37 21.3, h 16 km. Mb 5.5, Ms 6.0. Southwestern Ryukyu Is.
26.	WIT: ePKP HEE: ePKP	05 05	28 28	29.0 33.5							21.3S 179.1W, H: 05 09 50.5, h 634 km. Mb 4.9. Fiji Islands region.
26.	eL F WIT: eP	08 08 08	22 32 07	08							38.3N 73.9E, H: 07 58 42.7, h 123 km. Mb 5.3. Tadzhik-Sinkiang border region.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAR. 1973											
27.	eL F	04	23								24.3N 123.6E, H: 03 37 42.8, h 77 km. Mb.5.0. Southwestern Ryukyu Islands.
27.	eP eL F WIT: iP i i HEE: iP	12	43	44	+						52.6N 172.9E, H: 12 32 05.1, h 43 km. Mb 5.6, Ms 5.2. Near Islands, Aleutian Is.
28.	eL F WIT: eP HEE: eP	04	00								28.6N 52.7E, H: 03 36 38.2, h 37 km. Mb 5.2, Ms 4.4. Southern Iran.
28.	eP eS eL F WIT: eP HEE: eP	13	51	05	+						11.7N 42.7E, H: 13 42 06.7, h N. Mb 5.3, Ms 5.3. Ethiopia.
28.	eL F WIT: eP e HEE: eP	14	7								11.7N 42.9E, H: 14 18 52.3, h N.Mb 5.4, Ms 5.4. Ethiopia.
28.	eL F WIT: eP HEE: eP	15	24								11.7N 42.9E, H: 14 59 06.7, h N. Mb 5.2. Ethiopia.
28.	WIT: ePKP	17	04	08.5	+						4.5S 141.8E, H: 16 45 25.3, h 81 km. Mb 5.5. New Guinea.
29.	eP eS eSS eL F WIT: eP HEE: eP	00	08	6		20	25.0		6.6		23.3N 123.8E, H: 23 55 47.3, h N. Mb 5.3, Ms 6.0. Southwestern Ryukyu Is.
29.	WIT: e HEE: i	23	53	33.0	+						No determination of epicenter.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAR. 1973											
30.	eP eL F WIT: eP HEE: eP	00	12	2							76.3N 6.0E, H: 00 06 52.5, h N. Mb 5.1, Ms 5.4. Svalbard region.
30.	WIT: iP HEE: eP	03	13	49.1	(-)						40.8N 143.1E, H: 03 01 45.5, h 54 km. Mb 4.8. Off east coast of Honshu, Japan.
30.	eL F	04	42								59.9S 31.3W, H: 03 47 24.6, h N. Mb 5.4, Ms 5.5. Scotia Sea.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
APR. 1973											
1.	iS eL F WIT: e(P) HEE: eP	07	29	00							d.b.m. 11.7N 43.0E, H: 07 12 37.0, h 31 km. Mb 5.5, Ms 5.9. Ethiopia.
3.	iS isS eL F WIT: iP ipP HEE: iP ipP	14	15	57							d.b.m. 4.7N 75.6W, H: 13 54 01.8, h 158 km. Mb 6.2. Colombia.
3.	eL F	20	30								7.5N 36.3W, H: 20 04 47.7, hN. Mb 5.1, Ms 4.7. Central Mid-Atlantic Ridge.
4.	HEE: eP	22	03	04							43.4N 147.7E, H: 21 50 53.9, hN. Mb 5.2. Kuril Islands.
5.	eL F	05	22								11.9N 122.5E, H: 04 32 08.1, h 6 km. Mb 5.4, Ms 5.4. Panay, Philippine Islands.
5.	eS eL F WIT: iP i i HEE: eP	22	39	10							43.6N 147.7E, H: 22 16 59.6, hN. Mb 5.4, Ms 5.6. Kuril Islands.
6.	WIT: eP HEE: eP	00	13	56.5							43.7N 147.6E, H: 00 01 56.4, hN. Mb 5.3. Kuril Islands.
6.	eL F WIT: iP HEE: eP	02	27								43.7N 147.8E, H: 01 48 00.3, hN. Mb 5.4, Ms 5.8. Kuril Islands.
6.	WIT: iP HEE: eP	14	19	04.0							34.4N 25.3E, H: 14 13 54.2, h 16 km. Mb 5.1. Crete.
7.	WIT: iPKP	02	31	54.6							ISC: 16:48S 178:71W, H: 02 12 23.0, h 0 km, Mb 4.7. Fiji Region.
7.	i(P) iPP iS iSP iSS eSSS eL	03	13	26							d.b.m. 7.0N 91.4E, H: 03 00 58.8, hN. Mb 5.9, Ms 6.6. Nicobar Islands region.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
APR. 1973											
	F WIT: iP HEE: iP e	05.2									
		03	13	13.9	+						
		03	13	16.0							
		03	13	29.5							
7.	iSP iSS eL F	12	51	36							58.3S 13.4W, H: 12 22 47.3, hN. Mb 6.2, Ms 6.7. Southwestern Atlantic Ocean.
		12	57	55		20		8.9	6.4		
		13	09								
		15.5									
7.	eL F	18	01								11.7N 43.0E, H: 17 36 42.8, hN. Mb 4.7. Ethiopia.
		18	40								
7.	eL F	19	38.0								41.5N 20.0E, H: 19 30 06.9, h 16 km. Mb 4.7. Albania.
		19	43								
8.	ePKP i iPP eSS eL F	13	00	21	+						15.8S 167.2E, H: 12 41 02.0, h 35 km. Mb 5.8, Ms 6.4. New Hebrides Islands.
		13	00	41							
		13	03	32							
		13	22	08							
		13	50			22		9.6	6.6		
		15	40								
	WIT: e(PKP) HEE: iP ePP	13	00	30.0							
		13	00	31.0							
		13	03.7								
8.	WIT: iP i iPKP HEE: ePKP e	21	08	26.6							23.9S 177.0W, H: 20 48 46.0, h 122 km. Mb 5.5. South of Fiji Islands.
		21	08	33.4							
		21	09	01.5							
		21	08	30.5							
		21	08	37.5							
8.	WIT: iP HEE: iP	22	06	38.6	+						47.0N 152.3E, H: 21 54 59.2, h 104 km. Mb 5.6. Kuril Islands.
		22	06	49.0	+						
8.	eL F	23	55								No determination of epicenter.
		24	14								
9.	WIT: iP i	08	44	55.6	+						26.8N 125.3E, H: 08 32 42.1, h 186 km. Mb 5.4. Northeast of Taiwan.
		08	45	48.0	+						
9.	eS eL F	08	50	04							46.0N 27.7W, H: 08 41 02.1, hN. Mb 4.8. North Atlantic Ridge.
		08	52.1								
		09	05								
	WIT: eP HEE: eP	08	46	04.5							
		08	45	55.5							
10.	WIT: ePKP HEE: ePKP e	00	37	43							ISC: 19:7S 177:2W, H: 00 18 06, h 0 km, Mb 4.9. Fiji Region.
		00	37	47.0	+						
		00	37	55.0							

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
APR. 1973											
10.	eL F	20	56								9.8S 119.3E, H: 19 55 55.8, hN.Mb 5.8, Ms 5.1. Sumba Island region.
11.	HEE: eP	02	34	52							16.1N 95.4W, H: 02 22 17.8, hN. Mb 4.9. Oaxaca, Mexico.
11.	eL F	10	20								0.8S 127.5E, H: 09 23 06.6, hN.Mb 5.6, Ms 5.3. Halmaheera.
12.	WIT: ePKP HEE: iPKP	02	20	36.0							20.1S 169.2E, H: 02 01 05.3, h 55 km. Mb 4.8. New Hebrides Islands.
12.	WIT: eP HEE: eP	05	15	13							41.6N 142.0E, H: 05 03 18.8, h 73 km. Mb 5.4. Hokkaido, Japan region.
12.	eL F	05	27								29.6N 130.5E, H: 04 40 54.9, h 37 km. Mb 5.1. Ryukyu Islands.
12.	iP ePP iS eSS eL F WIT: iP HEE: iP	14	00	52	+	6	4.8				50.9N 157.4E, H: 13 49 15.8, h 52 km. Mb 6.1. Kuril Islands.
						20	25.0		6.5		
13.	eL F WIT: iP	08	21.0								39.1N 17.0E, H: 08 12 15.4, h 45 km. Mb 4.7. Southern Italy.
13	eL F	20	00								54.0N 161.7E, H: 19 16 24.4, h 50 km. Mb 5.1. Near east coast of Kamchatka.
13.	WIT: iPKP HEE: iPKP i	20	12	45.4	-						19.9S 179.8E, H: 19 54 14.8, h 665 km. Mb 5.0. South of Fiji Islands.
14.	WIT: ePKP HEE: ePKP	02	10	41.5	+						ISC: 18°5S 175°0W, H: 01 51 09, h 83 km, Mb 4.5. Tonga.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
APR. 1973											
14.	eL F WIT: eP HEE: eP	03	23.0								34.5N 24.2E, H: 03 10 30.6, h 37 km. Mb 4.3. Crete.
14.	eP i iS iSS eSSS eL F WIT: eP HEE: eP i	08	46	17							10.7N 84.8W, H: 08 34 00.1, hN. Mb 5.7, Ms 6.5. Costa Rica, (26 killed)
					23		36		6.7		
14.	eL F	17	12								6.6N 124.1E, H: 16 17 42.1, h 23 km. Mb 5.4, Ms 4.9. Mindanao, Philippine Islands.
15.	WIT: i(PKP) i epPKP HEE: iPKP i i epPKP	06	29	28.2	-						20.6S 178.8W, H: 06 10 50.9, h 610 km. Mb 5.5. Fiji Islands region.
					+						
15.	eL F	15	54								No determination of epicentre
16.	eS eL F WIT: eP HEE: eP	00	14	54							34.8N 25.0E, H: 00 05 43.1, h 43 km. Mb 4.6. Crete.
16.	WIT: iP HEE: iP	14	59	48.6	-						51.1N 178.8W, H: 14 48 02.8, h 54 km. Mb 5.5. Andreanof Is., Aleutian Is.
17.	HEE: eP	03	46	24							33.3N 68.1E, H: 03 37 48.1, h 40 km. Mb 5.1. Afghanistan.
17.	iPP eSP eSS eL F HEE: iPP	12	54	27							4.4S 134.0E, H: 12 34 26.5, hN. Mb 5.7, Ms 6.4. West New Guinea region.
17.	eL F	14.5	15.7								No determination of epicentre

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
APR. 1973	iP	22	21	27	+					50.8N 157.5E, H: 22 09 49.1, h 41 km.Mb 5.6, Ms 5.4. Kuril Islands.	
	eL	22	21	47							
	F	23	5								
	WIT: iP	22	21	21.8							
	HEE: iP	22	21	32.5							
18.	WIT: ePKP	01	22	19.5						18.3S 175.6W, H: 01 03 13.4, h 290 km. Mb 4.9. Tonga Islands.	
	HEE: ePKP	01	22	24.5							
19.	WIT: iP	01	51	58.1	+					20.2S 168.8E, H: 01 32 24.4, h 36 km.Mb 5.2, Ms 5.0. Loyalty Islands.	
	HEE: iP	01	52	04.0							
19.	HEE: ePKP	06	40	52.5	-					22.3S, 170.3E, H: 06 21 04.9, h 41 km.Mb 4.9, Ms 5.1. Loyalty Islands region.	
19.	HEE: iP	11	45	40.5						18.3S 169.4E, H: 11 26 36.9, h 301 km. Mb 4.7. New Hebrides Islands.	
19.	eL	22	24	9						38.2N 26.8E, H: 22 13 53.3, h 13 km.Mb 4.5. Aegean Sea.	
	F	22	28								
20.	HEE: ePKP	00	52	40.0	+					14.8S 173.1W, H: 00 33 10.1, h 49 km.Mb 5.3, Ms 4.7. Samoa Islands region.	
20.	WIT: iP	12	25	32.5						49.4N 6.0E, H: 12 24 21.0, h 0 km.Mb 4.3. Rockburst. France.	
	e	12	26	41.5							
	HEE: iP	12	24	49.5							
	iSg	12	25	11.5							
21.	HEE: iP	14	30	56.5	-					33.3S 179.1W, H: 14 10 19.1, h 33 km. Mb 4.9. South of Kermadec Islands.	
21.	eL	15	35							No determination of epicenter.	
	F	16	19								
21.	eL	22	10							6.4S 144.3E, H: 21 09 51.2, h 29 km.Mb 5.2. New Guinea.	
	F	23	38								
22.	eL	06	25							27.7N 104.1E, H: 05 46 20.9, hN.Mb 5.0, Ms 4.9. Yunnan Province, China.	
	F	06	40								
	HEE: eP	05	57	55							
22.	WIT: eP	13	44	30.5	(-)					35.2N 23.4E, H: 13 39 46.1, h 56 km.Mb 4.5. Crete.	
	HEE: eP	13	44	24							
22.	eL	21	52	5						30.7N 49.8E, H: 21 29 57.2, h 57 km. Mb 5.0. Western Iran.	
	F	22	05								
	WIT: eP	21	37	13.5							
	HEE: eP	21	37	12.5							

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
APR. 1973	eL	14	15							24.0N 121.5E, H: 13 29 16.0, h 42 km.Mb 5.2. Taiwan.	
	F	14	36								
23.	HEE: ePKP2	14	32	08.5						34.5S 179.8E, H: 14 11 19.2, hN.Mb 5.3. South of Kermadec Islands.	
24.	eL	04	48							7.1N 127.0E, H: 03 52 33.6, hN. Mb 5.0, Ms 4.8. Philippine Islands region.	
	F	05	14								
24.	eL	10	30							40.6N 143.5E, H: 09 49 53.1, h 32 km. Mb 4.9. Off east coast of Honshu, Japan.	
	F	10	52								
24.	eS	19	04	5						5.2N 75.8W, H: 18 42 31.9, h 118 km. Mb 5.5. Colombia.	
	eL	19	24								
	F	19	35								
	WIT: eP	18	54	38							
	ipP	18	55	08.7							
	HEE: eP	18	54	35.5							
24.	iP	21	42	27	-	7	14.2			5.0N 78.1W, H: 21 30 09.9, h 50 km.Mb 6.3, Ms 6.5. South of Panama. One killed.	
	i	21	43	09							
	ipP	21	45	37							
	iS	21	52	41							
	iPS	21	53	32							
	iSS	21	57	48							
	eSSS	22	01	24							
	eL	22	05	0							
	F	01	34								
	WIT: iP	21	42	32.0							
	i	21	42	37.8							
	ipP	21	45	32.3							
	i	21	45	46.0							
HEE: iP	iP	21	42	28.5							
	ipP	21	42	41.5							
	ipP	21	45	29.0							
24.	WIT: eP	22	59	26.5						4.9N 78.2W, H: 22 47 01.8, hN. Mb 5.3. South of Panama.	
	HEE: eP	22	59	23.5							
25.	WIT: eP	03	25	11.0						37.6N 72.1E, H: 03 16 52.3, h 136 km. Mb 5.2. Tadjik SSR.	
	HEE: eP	03	25	16.5							
25.	HEE: iP	06	59	24.5	+					15.6S 175.8W, H: 06 40 27.7, h 350 km.Mb 5.1. Tonga Islands.	

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
APR. 1973											
25.	eL F	08 09	55 36								65.5S 179.3E, H: 07 27 20.1, hN. Mb 5.7. Balleny Islands region.
25.	eL F WIT: iP i HEE: iP ipP	15 15.6 14 14 14 14	05 33 33 33 34	 45.9 49.2 53.5 11.5 +							33.4N 140.7E, H: 14 21 13.2, h 65 km. Mb 5.7. South of Honshu, Japan.
25.	eL F	18 18	14 38								23.5N 143.2E, H: 17 21 39.5, hN.Mb 5.0, Ms 4.8. Volcano Islands region.
25.	WIT: ePKP2 HEE: iPKP2	20 20	33 33	30.0 37.0							31.7S 179.7E, H: 20 13 41.4, h 387 km. Mb 4.7. Kermadec Islands region.
25.	ePKP ePP iSP eSS eSSS eL F HEE: ePKP ePP	21 21 22 22 22 22 22 21 21	53 54 03 10.0 14.0 29 24.5 53 53	12 + 11 40 10.0 58.0		22		9.6	6.4		59.3S 26.1W, H: 21 34 37.9, h 67 km. Mb 6.0. South Sandwich Islands region.
26.	WIT: iP HEE: iP	17 17	27 27	00.9 04.5							37.1N 116.1W, H: 17 15 00.2, h 0 km. Mb 5.6. Southern Nevada.
26.	eP ePP ePPP eSKS ePS eSS eSSS eL F	20 20 20 20 20 21 21 21 21	40 45 47 51 54 00.0 04.2 11 23.5	40 02 26 30 28 20				6.4	6.2		19.9N 155.1W, H: 20 26 28.0, h 50 km. Mb 6.0, Ms 6.1. Hawaii.
27.	eS eL F WIT: eP HEE: eP	00 00 00 00 00	40 44.0 55 36 36	40 10 07.0							38.7N 33.0E, H: 00 31 03.0, hN. Mb 4.6. Turkey.
27.	eL F	19 19	11 50								2.8S 119.5E, H: 18 17 49.4, hN. Mb 5.1, Ms 5.2. Celebes.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
APR. 1973											
28.	HEE: eP	03	03	24.0	-						34.3N 26.3E, H: 02 58 27.6, hN.Mb 4.4. Crete.
28.	eL F WIT: eP	05 06 04	28 00 55	 40.0							25.7N 125.1E, H: 04 43 11.4, h 103 km. Mb 4.9. Southwestern Ryukyu Islands.
28.	eS eL F WIT: e(pP) HEE: eP epP	12 13 13 12 12 12	44 09 22 34 33 34	29 19.0 54.0 15.5							1.4S 79.9W, H: 12 21 11.7, h 109 km. Mb 5.5. Ecuador.
28.	WIT: iPKP HEE: ePKP	21 21	32 33	54.0 00							17.3S 178.5W, H: 21 14 06.7, h 398 km. Mb 4.5. Fiji Islands region.
29.	eL F HEE: eP	14 14 14	48.0 51 42	 04	14			3.2	4.7		34.6N 4.1 W, H: 14 37 53.9, h 19 km. Mb 4.6. Morocco.
29.	WIT: e	14	49	12.0							No determination of epicenter.
29.	WIT: ePKP HEE: ePKP	18 18	56 56	27.5 31.5							19.8S 177.7W, H: 18 37 25.5, h 364 km. Mb 4.9. Fiji Islands region.
29.	eL F	20 20	22 45								29.3N 68.7E, H: 19 56 14.3, h 24 km. Mb 4.9. West Pakistan.
29.	WIT: ePKP HEE: ePKP	23 23	50 50	24.0 29.0 +							ISC: 20°12S 178°68W, H: 23 30 44.1, h 0 km, Mb 4.9. Fiji Region.
30.	HEE: ePKP	02	13	18.5							25.4S 179.9E, H: 01 53 57.3, h 479 km. Mb 4.7. South of Fiji Islands.
30.	WIT: iPKP HEE: ePKP	08 08	57 57	36.8 + 42.0							17.5S 179.6E, H: 08 39 07.7, h 613 km. Mb 5.4. Fiji Islands.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAY 1973	1.	WIT: iPKP HEE: iPKP	08	01	42.2 48.0	-					18.0S 178.3W, H: 07 43 09.1, h 596 km. Mb 5.0. Fiji Islands region.
	1.	ePKP ePP iSPP eL F	10 11 11 11	59 02 13	54 02 46 43 13.0						10.0S 150.2E, H: 10 40 46.9, h 27 km. Mb 5.9, Ms 5.4. East New Guinea region.
	2.	ePKP ePP iSPP eL F WIT: ePKP HEE: ePKP	01 01 01 02 04.0 01 01	45 47 59 29 04.0 45 45	28 36 16 29 04.0 26 29						10.0S 150.2E, H: 01 26 20.9, h 29 km. Mb 5.6, Ms 5.2. East New Guinea region.
	2.	eL F WIT: iP i HEE: eP i e	23 23 23 23 23 23	27 32 21 22 21 21	57.0 00.4 39.0 42.5 54.5	(-) +					36.5N 12.3W, H: 23 17 11.6, hN. Mb 4.4. North Atlantic Ocean.
	3.	eL F	06 06	05 20							76.6N 107.4W, H: 05 42 34.1, hN. Mb 4.3. Queen Elizabeth Islands.
	3.	WIT: ePKP HEE: iPKP	13 13	45 45	03 08.0						17.9S 178.4W, H: 13 26 31.0, h 600 km. Mb 5.1. Fiji Islands region.
	4.	eL F	00 01.0	11							46.1S, 73.2E, H: 23 11 05.7, hN. Mb 5.5, Ms 5.5. Kerguelen Islands region.
	4.	WIT: iPKP HEE: iPKP	01 01	39 39	53.6 59.0						17.6S 178.6W, H: 01 21 21.7, h 590 km. Mb 4.0. Fiji Islands region.
	4.	eL F	12 12.8	22							2.3N 126.7E, H: 11 27 13.4, hN. Mb 5.9, Ms 5.5. Molucca Passage.
	5.	eSKS eL F WIT: eP HEE: eP	00 00 01 00 00	19 19 30 09 09	56 56 30 17.0 19						1.5S 99.9E, H: 23 56 06.1, h 51 km. Mb 5.9. Southern Sumatra.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAY 1973	5.	eL F WIT: iP HEE: iP	04 04 04 04	37 50 04 04	45.0 54.0	(-)					37.1N 141.3E, H: 03 52 26.4, h 41 km. Mb 5.4. Near east coast of Honshu, Japan.
	5.	eL F	06 06	36 46							33.3N 57.4E, H: 06 12 35.6, hN. Mb 4.6. Iran.
	5.	eL F HEE: iPKP	20 21 19	05 10 13	01.5	(+)					16.6S 177.0W, H: 18 53 20.3, hN. Mb 5.3, Ms 5.5. Fiji Islands region.
	6.	HEE: eP	04	07	28.0						27.3N 55.5E, H: 03 59 19.6, h 28 km. Mb 4.9. Southern Iran.
	6.	WIT: iP epP HEE: iP epP	14 14 14 14	50 51 50 52	09.9 56.5 19.5 08.0	-					43.5N 132.3E, H: 14 39 28.1, h 497 km. Mb 5.3. Near east coast of eastern Russia.
	6.	WIT: eP	15	22	54.5						53.9N 160.5E, H: 15 11 37.8, h 57 km. Mb 5.0. Near east coast of Kamchatka.
	7.	eL F	17 17	20 30							16.6N 116.1W, H: 16 27 12.1, hN. Mb 4.8. East Central Pacific Ocean.
	7.	e F	20 20	20 30							No determination of epicenter.
	8.	WIT: ePKP	01	03	01.5						15.7S 167.8E, H: 00 43 47.9, h 153 km. Mb 5.2. New Hebrides Islands.
	8.	iPKP WIT: iPKP HEE: iPKP	05 05 05	03 03 03	35 32.9 38.5	+ + +					17.6S 178.9W, H: 04 44 56.5, h 543 km. Mb 5.3. Fiji Islands region.
	8.	WIT: eP	08	00	43.5						45.7N 149.6E, H: 07 48 59.8, h 95 km. Mb 5.4. Kuril Islands.
	8.	eL F	10 10	40.5 50							33.0N 104.0E, H: 10 01 38.2, hN. Mb 4.7. Kanshu Province, China.
	10.	WIT: iP HEE: iP	11 11	51 51	15.0 24.5						51.4N 179.5W, H: 11 39 31.5, h 61 km. Mb 5.3. Andreanof Is., Aleutian Is.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAY 1973											
10.	WIT: eP HEE: iP	18	03	39	(+)						19.0N 104.8W, H: 17 50 53.1, hN. Mb 5.0. Near coast of Jalisco, Mexico.
11.	eL F	11	7								1.0N 126.0E, H: 10 45 25.4, h 24 km. Mb 5.4, Ms 5.2. Molucca Passage.
11.	eL F	14	15								33.4N 57.4E, H: 13 52 31.7, h 50 km. Mb 5.1. Iran.
12.	eL F WIT: ePKP HEE: ePKP	17	24			20	3.5	6.0			3.7S 152.1E, H: 16 20 09.2, h 13 km. Mb 5.5, Ms 5.9. New Ireland region.
12.	eL F	20	38								4.3S 134.3E, H: 19 36 45.8, h 43 km. Mb 5.2. West New Guinea region.
13.	eL F HEE: eP	02	02								0.9S 13.2W, H: 01 32 36.1, hN. Mb 5.3, Ms 4.3. North of Ascension Island.
14.	WIT: iP HEE: iP	02	30	54.8	+						44.1N 148.2E, H: 02 19 01.6, h 64 km. Mb 5.5. Kuril Islands.
14.	eL F WIT: ePKP i HEE: iPKP	18	21								16.6S 175.9E, H: 17 11 13.8, h 54 km. Mb 5.8. Fiji Islands region.
14.	WIT: iPKP HEE: iPKP i	21	34	40.5	+						22.0S 179.1W, H: 21 15 47.9, h 501 km. Mb 5.4. South of Fiji Islands.
15.	e F	04	45								39.9N 77.8E, H: 04 17 05.8, h 45 km, Mb 4.4. Southern Sinkiang Province, China.
17.	WIT: iPKP HEE: ePKP	02	03	43.5	+						18.1S 175.0W, H: 01 44 29.0, h 215 km. Mb 5.0. Tonga Islands.
17.	eL F	10	06								41.0N 82.2E, H: 09 38 10.0, hN. Mb 5.5. Southern Sinkiang Province, China

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAY 1973											
18.	eP eL F WIT: iP HEE: iP	10	48	48							44.6N 149.3E, H: 10 36 50.3, hN. Mb 5.4, Ms 5.2. Kuril Islands.
18.	eL F HEE: ePKP	14	25								6.2S 151.8E, H: 13 20 10.2, h 34 km. Mb 5.8, Ms 5.1. New Britain region.
19.	iP iPP iS eL F WIT: eP HEE: iP	00	42	20	+	5	1.1				57.5N 33.0W, H: 00 37 22.5, hN. Mb 4.9, Ms 4.7. North Atlantic Ocean.
19.	HEE: eP	00	49	20.5					5.9	5.1	57.5N 33.1W, H: 00 44 10.8, hN. Mb 4.4. North Atlantic Ocean.
20.	eL F	14	17								8.0N 83.0W, H: 13 35 06.8, h N, Mb 4.4. Costa Rica.
21.	WIT: ePKP HEE: ePKP	05	18	22.0							20.2S 178.0W, H: 04 59 38.6, h 550 km. Mb 5.1. Fiji Islands region.
21.	e F	15	36								16.9N 99.3W, H: 15 25 20.2, h 96 km, Mb 4.8. Near coast Guerrero, Mexico.
21.	HEE: ePKP	23	27	53.5							16.1S 172.1W, H: 23 08 17.6, hN. Mb 5.0. Samoa Islands region.
22.	ePKP eL F WIT: ePKP HEE: iPKP	17	25	13							20.9S 174.0W, H: 17 05 25.7, hN. Mb 5.1, Ms 5.2. Tonga Islands.
22.	eL F	23	15								10.0S 150.3E, H: 22 04 58.4, h 13 km. Mb 5.5, Ms 5.0. East New Guinea region.
23.	eL F	10	48								5.0S 11.6W, H: 10 17 59.8, hN. Mb 4.8, Ms 4.2. Ascension Island region.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAY 1973											
24.	eL F	02	42 53								20.3N 121.3E, H: 01 52 47.3, hN. Mb 5.0. Philippine Islands region.
24.	iP eL F WIT: iP HEE: iP	18	59 19.4 20.5 58 59	00 - - 56.7(-) 07.0	-	18	1.7		5.3		51.6N 173.4W, H: 18 47 11.7, h 43 km. Mb 5.4, Ms 5.1. Andreanof Is., Aleutian Is.
24.	WIT: epP HEE: epP epP	19	46 46 46	57.0(+) 30.0 56.0							14.7N 91.2W, H: 19 34 13.5, h 100 km. Mb 5.2. Guatemala.
25.	eL F	09	10 10			18	1.7		5.1		25.5N 66.5E, H: 08 39 53.9, h 57 km. Mb 4.9. West Pakistan.
26.	eL F WIT: epP ipP HEE: epP	02	58 03 21 02 27 53 02 28 07.3 02 28 01.5								37.2N 141.4E, H: 02 15 35.4, h 56 km. Mb 5.0. Near east coast of Honshu, Japan.
26.	iP i eS eSS eL F WIT: epP i HEE: iP	12	31 31 41 46 12 56 15.2 12 31 12 31 12 31	25 42 10 16 19.5 21.7 31.0	+	6	1.4				51.4N 179.7W, H: 12 19 34.4, h 39 km. Mb 5.8, Ms 5.7. Andreanof Is., Aleutian Is.
26.	WIT: epP	13	23	55.0					6.5	6.0	51.3N 179.7W, H: 13 12 10.1, h 56 km. Mb 4.9. Andreanof Is., Aleutian Is.
27.	WIT: ipKP HEE: ipKP ipKP	06	57 57 58	12.5 17.0 57.5	-						21.3S 177.9W, H: 06 38 13.4, h 422 km. Mb 5.0. Fiji Islands region.
28.	eP eS eL F WIT: epP e HEE: epP	20	40 50 21 03.4 23.4 20 40 20 40 20 40	16 36 - - 16.0 22.0 02.0		20	3.6		5.8		18.1S 65.3E, H: 20 27 11.2 h N. Mb 5.0, Ms 5.9. Mascarene Islands region.
29.	iP iS eSS eL F	01	58 02 08 20 02 13.5 02 23.4 04.5	32 - - - -	+	5	1.2		2.9	5.6	51.7N 176.2E, H: 01 46 44.9, h 46 km. Mb 5.2, Ms 5.7. Rat Islands, Aleutian Is.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAY 1973											
	WIT: epP i HEE: epP	01	58 58 58	26.5 30.3 37	-						
29.	HEE: e	02	02	53							Aftershock.
29.	HEE: epP	04	56	57.0							73.7N 9.5E, H: 04 51 57.9, h N. Mb. 4.8. Greenland Sea.
29.	iP eS eL F WIT: iP HEE: iP ipP	06	25 35 50 08.0 25 26 26	55 28 - - 52.9 03.0 16.5	+	21		2.0		5.5	54.0N 163.8W, H: 06 14 22.3, h 30 km. Mb 6.0, Ms 5.5. Unimak Island region.
29.	eL F	08	44 58								No determination of epicentre
30.	eP ipP eS i iSP eL F WIT: epP epP HEE: iP i ipP	04	50 51 01 01 02 05 19 06.1 04 50 04 51 04 50 04 50 04 51	40 07 00 25 16 - - 46.5 14.5 42.0 47.0 10.0	+						2.3S 78.5W, H: 04 38 01.8, h 111 km. Mb 5.7. Ecuador.
30.	WIT: epKP	11	58	57.5							17.6S 179.0W, H: 11 40 21.8, h 553 km. Mb. 4.8. Fiji Islands region.
30.	eL F	17	26 49								4.1S 104.1W, H: 16 32 22.1, h N. Mb 5.0, Ms 5.1. Northern Easter Island. Cordillera.
30.	eL F	18	17 30								26.3N 110.7E, H: 17 33 51.0, h N. Mb 4.8. Gulf of California.
31.	eP ipP eS eSS eL F	05	51 52 01.7 07.0 10.7 15 07.0	35 04 - - - -							13.9N 90.9W, H: 05 39 18.8, h 99 km. Mb 5.4. Near coast of Guatemala.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
MAY 1973											
	WIT: eP	05	51	37.0							
	epP	05	52	07.0							
	HEE: eP	05	51	37.0							
	epP	05	52	06.0							
31.	HEE: eP	19	58	45							28.2N 56.2E, H: 19 50 36.9, h N. Mb 4.7. Southern Iran.
31.	eP	23	51	17	+						24.3N 93.5E, H: 23 39 56.7, h 30 km. Mb 5.9, Ms 5.7. Burma-India border region.
	ipP	23	51	24							
	ePP	23	54	00							
	eS	24	00	14							
	iH	24	00	52							
	eSS	24	04	40							
	eSSS	24	08.2								
	eL	24	12			20	12.4		6.2		
	F	01.5									
	WIT: eP	23	51	02.0	+						
	i	23	51	18.3	-						
	HEE: eP	23	51	07.0	+						
	i	23	51	24.0							

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
1.	eSKP eL F	07 08	45 26	33		20			6.0 6.3		47.8S 99.7E, H: 07 22 57.1, h N. Mb 5.8, Ms 6.3. Southeast Indian Rise.
1.	eL F	13 13	12 26								41.1N 82.1E, H: 12 46 08.8, h N. Mb 4.9. Southern Sinkiang Prov., China.
1.	eL F	17 17	19 29								ISC: 24°85' N 98°51' E, H: 16 39 53, h 26 km, Mb 4.5. Burma-China Border Region.
1.	WIT: iPKP	20	19	07.3 -							20.8S 178.6W, H: 20 00 28.3, h 613 km. Mb 4.6. Fiji Islands region.
2.	eL F	00 00	19 45								6.5S 150.4E, H: 23 36 00.4, h 44 km, Mb 4.8. New Britain Region.
2.	eP eL F HEE: eP	20 20 20	18 37 18	25							19.6N 70.6W, H: 20 07 30.5, h 40 km. Mb 5.2, Ms 5.3. Dominican Republic region.
3.	iP ePP iS eScS eSS eL F WIT: eP ipP HEE: iP i ipP ePP eL	00 00 00 00 00 00	06 00 13 15 16 20	08 05 16 49 52		16			27.5 6.3		44.1N 83.6E, H: 23 57 04.2, h 26 km. Mb 5.8, Ms 5.6. Northern Sinkiang Prov., China.
5.	HEE: ePKP	02	26	44.5							17.3S 167.8E, H: 02 07 12.6, h 12 km. Mb 5.2. New Hebrides Islands.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms				
		h	m	s			Z	NS	EW						
JUNE 1973	5.	iPKP	03	31	52	22	6.5		6.4	17.2S 167.8E, H: 03 12 25.8, h 24 km. Mb 5.6, Ms 6.1. New Hebrides Islands.					
	iPP	03	35	08											
	eSPP	03	47	36											
	eSS	03	53	52											
	eSSS	03	59.2												
	eL	04	21												
	F	06.3													
	WIT: ePKP	03	32	00.5											
	i	03	32	12.2											
	HEE: ePKP	03	31	59											
i	03	32	09.0												
6.	iP	13	11	58.0	+					37.2N 116.3W, H: 13 00 00.1, h 0 km. Mb 6.1. Southern Nevada.					
	eLR	13	45												
	F	14	02												
	WIT: iP	13	11	58.5											
HEE:	13	12	04.5	+											
6.	eL	21	18.8								20			6.5	42.4N 18.6E, H: 21 11 20.5, h 16 km. Mb 4.6. Yugoslavia
	F	21	26												
7.	eL	04.1									+				
	F	04	43												
	HEE: ePKP	03	04	21.0											
7.	eL	07	09		+					22.4N 121.1E, H: 06 22 01.9, h N, Mb 4.4. Taiwan Region.					
	F	07.5													
7.	iP	18	45	03	+	20		19.5	6.5	14.3N 92.0W, H: 18 32 42.9, h 78 km. Mb 5.5, Near coast of Chiapas, Mexico.					
	eS	18	55.1												
	eL	19	13												
	F	21.7													
	WIT: eP	18	45	06											
	HEE: eP	18	45	06.5											
	7.	iP	18	47							07	+			
eS		18	57.4												
eSS		19	02.6												
eSSS		19	06.0												
eL		19	15												
F		21.7													
WIT: iP		18	47	12.5											
HEE: iP		18	47	10.5											

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms						
		h	m	s			Z	NS	EW								
JUNE 1973	7.	WIT: iPKP	19	15	08.0						22.1S 176.8W, H: 18 55 43.4, h 220 km. Mb 5.2. South of Fiji Islands.						
	e	19	15	12.0													
	HEE: iPKP	19	15	12.0													
	i	19	15	20.5													
	8.	ePKP	01	20	40							+					17.5S 167.7E, H: 01 01 11.4, h 21 km. Mb 5.2, Ms 5.5. New Hebrides Islands.
		i	01	20	55												
		ePP	01	23	55												
		eL	02	11													
		F	03.5														
		WIT: ePKP	01	20	42.5												
e		01	20	45.0													
HEE: iPKP	01	20	44.0														
9.	eP	01	48	44	20		2.1	5.4		53.9N 160.5E, H: 01 37 21.4, h 33 km. Mb 5.3, Ms 5.0. Near east coast of Kamchatka.							
	eL	02	13														
	F	03.0															
	WIT: iP	01	48	40.7													
HEE: iP	01	48	51.5(+)														
9.	eL	04	46		20		5.7	6.3		41.0N 82.3E, H: 04 19 14.3, h N. Mb 5.1. Southern Sinkiang Prov., China.							
	F	05	01														
9.	iPKP	08	40	38	(+)					10.3S 161.4E, H: 08 21 27.3, h 70 km. Mb 6.3. Solomon Islands.							
	ipPKP	08	41	00													
	iPP	08	43	08													
	ipPP	08	43	28													
	ePKS	08	44	06													
	ePPP	08	46	04													
	ePPS	08	56	12													
	eSS	09	02.5														
	eL	09	24														
	F	10.9															
WIT: ePKP	08	40	36.0														
epPKP	08	40	56.5														
HEE: ePKP	08	40	40.0														
ipPKP	08	41	00.0														
9.	HEE: e	15	47	04.0													
	i	15	47	07.5													
9.	HEE: eP	20	44	00							27.8N 52.1E, H: 20 36 12.3, h 32 km. Mb 4.7. Southern Iran.						

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
9.	WIT: eP e	22	09	22.5 31.0							11.6N 95.1E, H: 21 57 14.1, h N. Mb 5.0, Ms 4.8. Andaman Islands region.
9.	eL F WIT: iP HEE: iP	23 23	23 50	23.8 34.5	+						52.9N 160.1E, H: 22 45 58.9, h N. Mb 5.4. Off east coast Kamchatka.
10.	HEE: e	13	31	03.0							No determination of epicenter.
10.	eL F	16 16	36 44								39.5N 74.8E, H: 16 08 42.2, h N. Mb 5.2. Southern Sinkiang Prov., China.
11.	eL F WIT: eL HEE: iP i e(S)	03 03	20.9 24	41.5 43.5 12.5	(+)						46.2N 16.1E, H: 03 15 39.3, h 11 km. Mb 4.5. Yugoslavia.
11.	iP ePP eL F WIT: iP ipP HEE: iP ipP	08 08 09	53 56 17	32 06	+	5	2.8		13.5	6.2	53.7N 161.6E, H: 08 42 04.0, h 30 km. Mb 5.6, Ms 6.0. Off east coast of Kamchatka.
12.	iP eL F WIT: iP HEE: iP i	14 14	32 59	51 46.5 57.5 09.5	+	20		1.8		5.3	53.6N 161.6E, H: 14 21 24.2, h N. Mb 5.4, Ms 5.2. Off east coast of Kamchatka.
12.	eL F	20 20	31 51								No determination of epicenter.
12.	eL F WIT: eP HEE: eP	23 23	29 40	01.5 52.5							46.6N 27.5W, H: 23 18 55.5, h N. Mb 4.7, Ms 4.6. North Atlantic Ridge.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
13.	iP WIT: iP HEE: iP i	00 00 00	32 32 32	28 22.5 32.5 35.5	+						47.0N 151.0E, H: 00 20 49.5, h 142 km. Mb 5.5. Kuril Islands.
13.	HEE: ePKP e	07 07	01 01	05 13							20.0S 169.7E, H: 06 41 27.3, h 41 km. Mb 5.5, Ms 5.0. New Hebrides Islands.
13.	eL F	09 09	26 39								19.7N 109.5W, H: 08 39 26.8, h N. Mb 5.2, Ms 5.1. Revilla Gigedo Islands region.
13.	HEE: iPKP	10	08	04.0							19.2S 169.7E, H: 09 48 25.2, h 24 km. Mb 5.7. New Hebrides Islands.
14.	WIT: iPKP HEE: iPKP i	03 03 03	50 50 50	12.3 17.0 25.0	- - +						21.1S 178.8W, H: 03 31 30.9, h 593 km. Mb 5.2. Fiji Islands region.
15.	WIT: eP	01	17	58.5							45.3N 70.9W, H: 01 09 04.2, h 12 km. Mb 4.8. Maine, U.S.A.
15.	iP WIT: eP HEE: iP	11 11 11	32 32 32	11 06.0 19.0	+						53.5N 161.4E, H: 11 20 44.9, h N. Mb 5.0. Off east coast of Kamchatka.
15.	iP iPP iS iSP eSS eSSS eL F WIT: iP HEE: iP	11 11 11 11 11 11 11	32 35 41 42 46.8 50.2 55	19 02 52 32 8 2 13.5	+	6	2.1				53.5N 161.5E, H: 11 20 51.5, h N. Mb 5.6, Ms 5.9. Off east coast of Kamchatka.
15.	WIT: iP HEE: iP	11 11	32 32	14.4 25.0	- -	19			10.4	6.2	
15.	WIT: iP HEE: iP	12 12	22 22	48.0 57.5	- +						51.3N 179.4W, H: 12 11 02.3, h 48 km. Mb 5.8, Ms 4.8. Andreanof Is., Aleutian Is.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
15.	WIT: iP HEE: iP	13	50	08.7	-						51.3N 179.4W, H: 13 38 23.1, h 50 km. Mb 5.4. Andeanof Is., Aleutian Is.
15.	eP eS eL F WIT: iP ipP HEE: iP	21	21	08							53.6N 161.6E, H: 21 09 41.7, h 45 km. Mb 5.5, Ms 5.1. Off east coast of Kamchatka.
15.	eL F	22	51								61.1S 154.2E, H: 21 33 59.1, h N, Mb 4.9. Balleny Islands Region.
15.	WIT: iPKP i HEE: ePKP e i	23	24	46.6	+						25.9S 177.4W, H: 23 04 58.6, h 94 km. Mb 5.6. South of Fiji Islands.
16.	WIT: eP	01	06	31.0							43.0N 145.9E, H: 00 54 34.2, h 54 km. Mb 4.8. Hokkaido, Japan region.
16.	HEE: e i	01	52	54							No determination of epicenter.
16.	eL F WIT: eP HEE: eP	07	54								37.7N 95.6E, H: 07 22 48.1, h N. Mb 5.4. Tsinghai Prov., China.
16.	eL F	12	47								55.0N 112.6E, H: 12 12 32.2, h N, Mb 4.5. Lake Baikal Region.
16.	eP eS eSS eSSS eL F WIT: iP HEE: eP	14	55	24	-						45.0N 125.8W, H: 14 43 47.5, h N. Mb 5.6, Ms 5.1. Off coast of Oregon, U.S.A.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
16.	WIT: eP	20	00	53.5							53.5N 161.5E, H: 19 49 31.0, h 46 km. Mb 4.9. Off east coast of Kamchatka.
17.	eL F	00	00								58.3S 25.5W, H: 23 06 28.8, h 50 km. Mb 5.4. South Sandwich Islands region.
17.	iP iPP iS iSP eSS eL F WIT: iP eL HEE: iP iPP eL	04	07	04	+	8	15.9				43.2N 145.8E, H: 03 55 02.9, h 48 km. Mb 6.5, Ms 7.7. Hokkaido, Japan region.
						23			1000	8.2	
17.	WIT: iP i HEE: iP	04	21	12.1	+						43.0N 146.4E, H: 04 09 12.4, h N. Mb 5.9. Kuril Islands.
17.	WIT: iP epP HEE: eP	04	31	33.0	+						42.4N 145.8E, H: 04 19 32.2, h 35 km. Mb 5.4. Hokkaido, Japan region.
17.	WIT: eP ipP HEE: eP	05	24	08							42.7N 146.1E, H: 05 12 09.3, h 44 km. Mb 5.4. Off coast of Hokkaido, Japan.
17.	WIT: iP HEE: eP	06	04	08.9	-						43.1N 146.1E, H: 05 52 10.9, h 44 km. Mb 5.1. Kuril Islands.
17.	WIT: eP HEE: eP	07	54	53.5							53.5N 161.5E, H: 07 43 31.6, h 45 km. Mb 5.0. Off east coast of Kamchatka.
17.	WIT: eP	08	29	46							43.0N 146.4E, H: 08 17 47.7, h 41 km. Mb 5.2. Kuril Islands.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
17.	eL F WIT: eP	09.5 10.3 09 00 19.0									42.9N 146.5E, H: 08 48 19.4, h 37 km. Mb 5.2. Off coast of Hokkaido, Japan.
17.	WIT: iP epP HEE: eP	12 26 23.0 12 26 35.0 12 26 32.5		+							42.9N 145.6E, H: 12 14 25.8, h 41 km. Mb 5.5. Hokkaido, Japan region.
17.	eL F WIT: eP HEE: eP	13 02 13.8 12 36 36.0 12 36 45.0		+							42.6N 146.4E, H: 12 24 34.8, h 36 km. Mb 5.5, Ms 5.0. Off coast of Hokkaido, Japan.
17.	iP eL F WIT: iP e e HEE: iP i	13 45 29 14 12 15.1 13 45 24.5 13 45 29.5 13 45 49.5 13 45 34.0 13 45 38.5		+	21	3.7	5.7				43.1N 145.4E, H: 13 33 28.3, h 46 km. Mb 5.6, Ms 5.3. Hokkaido, Japan region.
17.	iP WIT: iP HEE: eP	13 55 13 13 55 07.9 13 55 18.0		+							43.0N 146.7E, H: 13 43 08.7, h 40 km. Mb 5.5, Ms 5.2. Kuril Islands.
17.	iP eL F WIT: iP epP HEE: iP	19 07 44 19 33 20 37 19 07 38.5 19 07 49.0 19 07 48.0		+	20	3.2	5.7				43.0N 146.5E, H: 18 55 39.6, h 45 km. Mb 5.7, Ms 5.4. Kuril Islands.
17.	eP WIT: eP HEE: eP	19 15 40 19 15 36.5 19 15 46.5									42.7N 146.3E, H: 19 03 35.1, h 32 km. Mb 5.6, Ms 5.1. Off coast of Hokkaido, Japan.
17.	iP ipP iS i eSS eL F WIT: iP ipP HEE: iP	20 50 02 20 50 19 21 00 00 21 00 31 21 05.5 21 14 24.0 20 49 55.9 20 50 10.5 20 50 05.5		+	20	39.0	6.7				42.7N 146.0E, H: 20 37 57.3, h 50 km. Mb 6.0, Ms 6.0. Off coast of Hokkaido, Japan.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
17.	WIT: iP HEE: eP epP	21 38 10.5 21 38 19.5 21 38 36.5		+							43.0N 145.3E, H: 21 26 14.2, h 50 km. Mb 5.2. Hokkaido, Japan region.
18.	eL F	02 52 in next shock									42.8N 146.8E, H: 02 12 06.9, h 36 km. Mb 4.9, Ms 4.7. Off coast of Hokkaido, Japan.
18.	eL F	03 01 03 34									42.6N 146.2E, H: 02 19 30.0, h 30 km. Mb 5.2, Ms 4.8. Off coast of Hokkaido, Japan.
18.	WIT: ePKP HEE: iPKP	03 16 46.0 03 16 50.5									21.1S 179.3W, H: 02 58 10.1, h 648 km. Mb 4.9. Fiji Islands region.
18.	eP eL F WIT: iP HEE: eP	05 49 43 06 17 06 56 05 49 39.3 05 49 48.0		+							42.6N 146.4E, H: 05 37 37.7, h 38 km. Mb 5.5, Ms 5.7. Off coast of Hokkaido, Japan.
18.	WIT: iP HEE: iP	10 29 10.8 10 29 21.0									52.2N 164.9W, H: 10 17 26.3, h 15 km. Mb 5.4, Ms 4.5. South of Alaska.
18.	iP iS eL F WIT: eP ipP HEE: iP i ipP	17 57 51 18 07 52 18 22 19.8 17 57 46.0 17 57 56.9 17 57 55.0 17 57 59.5 17 58 06.5		+	20	7.1	6.0				42.5N 146.0E, H: 17 45 43.7, h 29 km. Mb 5.8, Ms 5.5. Off coast of Hokkaido, Japan.
18.	WIT: epP	18 36 31.0									42.3N 145.4E, H: 18 24 19.6, h 29 km. Mb 5.3. Hokkaido, Japan region.
18.	WIT: eP	20 43 54.0									42.7N 146.3E, H: 20 31 37.4, h 34 km. Mb 5.1. Off coast of Hokkaido, Japan.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
19.	eL F WIT: eP HEE: eP	03	01								42.9N 146.7E, H: 02 22 05.6, h 49 km. Mb 5.2, Ms 4.9. Off coast of Hokkaido, Japan.
		in next shock			+						
		02	34	04.0							
		02	34	13.5							
19.	eL F WIT: iP epP i HEE: eP	03	34			20		2.1	5.5		42.7N 146.0E, H: 02 54 09.8, h 43 km. Mb 5.6. Off coast of Hokkaido, Japan.
		in next shock									
		03	06	09.2							
		03	06	21							
		03	06	27.1							
		03	06	18.0							
19.	iPP ePPP eSKS iPS iSPP eSS eSSS eL F	03	53	04							8.1N 137.3E, H: 03 34 19.4, h N. Mb 5.5, Ms 5.8. West Caroline Islands.
		03	55	22							
		03	59	25							
		04	02	35							
		04	03	24							
		04	08	36							
		04	12	30							
		04	24			18		17.0	6.6		
		06.5									
19.	WIT: eP epP	06	49	54.0							42.9N 146.5E, H: 06 37 54.4, h 42 km. Mb 5.3, Ms 4.5. Off coast of Hokkaido, Japan.
		06	50	07.5							
19.	eL F	07	08								42.7N 145.6E, H: 06 26 12.8 h N, Mb 4.6. Hokkaido, Japan Region.
		07.7									
19.	eL F	09	16								42.9N 146.5E, H: 08 36 18.9, h 36 km. Mb 5.3, Ms 4.5. Off coast of Hokkaido, Japan.
		09 45									
19.	WIT: ePKP HEE: iPKP	17	05	28.0							20.3S 178.0W, H: 16 46 16.6, h 258 km. Mb 4.4. Fiji Islands region
		17	05	32.5	+						
19.	eL F WIT: eP epP HEE: eP ipP	20	49								42.8N 146.3E, H: 20 05 52.7, h 45 km. Mb 5.3. Off coast of Hokkaido, Japan.
		21	12								
		20	17	51.5							
		20	18	05.5							
		20	18	02.0							
		20	18	15.0							
19.	HEE: eP	22	43	44							36.5N 140.6E, H: 22 31 18.5, h 65 km. Mb 5.2. Near east coast of Honshu, Japan.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
20.	eL F	02	57								No determination of epicenter.
		03 14									
20.	ePKP1 eL F HEE: iPKP2 e	12	21	52							28.5S 176.8W, H: 12 01 56.7, h 41 km. Mb 5.6, Ms 5.6. Kermadec Islands region.
		13.4									
		14.4									
		12	22	23.0	+						
		12	22	33.0							
20.	HEE: e e	22	39	33.5							No determination of epicenter.
		22	39	47.5							
21.	HEE: iP	14	57	05.0	+						37.1N 116.0W, H: 14 44 59.7, h 5 km. Mb 5.3. Southern Nevada.
22.	WIT: iPKP HEE: iPKP e	02	19	06.0	+						17.6S 178.9W, H: 02 00 31.7, h 565 km. Mb 5.0. Fiji Islands region.
		02	19	11.0	+						
		02	22	24							
22.	iP ipP iS eSS eL F WIT: iP HEE: eP	06	19	41	+						42.9N 146.3E, H: 06 07 37.9, h 53 km. Mb 5.5. Off coast of Hokkaido, Japan.
		06	19	56							
		06	29	41							
		06	34.7								
		06	44			20		12.5	6.2		
		09.0									
		06	19	36.1							
		06	19	48							
22.	HEE: iPKP	17	36	26.5	(-)						17.0S 175.8E, H: 17 16 47.5, h 16 km. Mb 5.3, Ms 4.9. Fiji Islands region.
22.	eL F WIT: ePKP HEE: iPKP	21.2 21.6									21.2S 174.3W, H: 19 51 40.5, h N. Mb 5.5, Ms 5.1. Tonga Islands.
		20	11	26.5							
		20	11	31.0	-						
23.	eL F	01	27								2.4S 139.3E, H: 00 25 15.3, h N. Mb 5.3, Ms 4.6. Near north coast of West New Guinea.
		01.9									
23.	eL F WIT: eP HEE: iP	02	48								43.2N 147.3E, H: 02 09 40.1, h 41 km. Mb 5.5, Ms 4.9. Kuril Islands.
		03	48								
		02	21	39.5	+						
		02	21	49.0	+						

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
23.	HEE: e	05	21	52							No determination of epicenter.
24.	iP	02	55	26	+	10	39.5				43.3N 146.4E, H: 02 43 25.5, h 50 km. Mb 6.3, Ms 7.1. Kuril Islands.
	iPP	02	58	24							
	iS	03	05	26							
	iSP	03	06	08							
	eL	03	18			22		650	8.0		
	F	08.0									
	WIT: iP	02	55	21.6	+						
	eS	03	05.4								
	eL	03	21								
	HEE: iP	02	55	31.0	+						
	eS	03	05	39							
24.	WIT: iP	03	16	14.9	+						43.2N 146.8E, H: 03 04 18.6, h 55 km. Mb 5.8. Kuril Islands.
	e	03	16	44.0							
	HEE: eP	03	16	23.5	+						
24.	WIT: eP	03	40	35.5							43.3N 146.8E, H: 03 28 38.5, h 47 km. Mb 5.5. Kuril Islands.
	iP	03	40	40.9							
	HEE: eP	03	40	45.0							
	iP	03	40	50.0							
24.	WIT: eP	04	55	22							43.1N 146.7E, H: 04 43 25.7, h 62 km. Mb 5.0. Kuril Islands.
	i	04	55	50.5							
	HEE: eP	04	55	31.5							
24.	WIT: iP	05	19	44.6	+						43.1N 146.6E, H: 05 07 46.8, h 44 km. Mb 5.8. Kuril Islands.
	e	05	20	09.5							
	HEE: iP	05	19	54.0	+						
24.	WIT: iP	11	05	51.1							43.1N 146.5E, H: 10 53 54.1, h 60 km. Mb 5.4. Kuril Islands.
	HEE: eP	11	06	00.0							
24.	WIT: eP	18	53	50.0							43.1N 146.9E, H: 18 41 49.3, h 36 km. Mb 5.2. Kuril Islands.
	HEE: eP	18	53	59.0							
	e	18	54	05.0							
24.	eP	20	12	18	+						43.3N 146.8E, H: 20 00 16.1, h 51 km. Mb 5.1. Kuril Islands.
	eL	20	40								
	F	21	15								
	WIT: eP	20	12	13							
	e	20	12	23.0							
	HEE: iP	20	12	22.5	+						

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
25.	eL	08.1									
	F	09.1									
	WIT: eP	07	32	37.0							19.1N 121.2E, H: 07 19 46.3, h 50 km. Mb 5.7. Philippine Islands region.
	e	07	32	47.0							
	e	07	32	58.0							
	HEE: iP	07	32	42.5	+						
	i	07	32	51.5	-						
25.	eL	10	50								30.0N 50.5E, H: 10 29 02.6, h 48 km. Mb 5.0. Iran.
	F	11	07								
25.	eL	12	34								0.9N 126.0E, H: 11 37 51.6, h N. Mb 5.7, Ms 4.8. Molucca Passage.
	F	13.0									
25.	eL	16	06								35.9S 103.9W, H: 15 03 18.7, h N. Mb 5.1, Ms 5.1. Southern Pacific Ocean.
	F	16	27								
25.	eL	21	40								6.9N 126.8E, H: 20 46 46.3, h 73 km. Mb 5.2. Mindanao, Philippine Islands.
	F	22	13								
25.	HEE: e	22	03	19.0							
	i	22	03	26.0	+						
26.	eL	06	14								52.2N 174.1E, H: 05 35 17.0, h 41 km. Mb 4.9, Ms 4.5. Near Islands, Aleutian Is.
	F	06	46								
26.	eL	12	21								43.1N 146.6E, H: 11 39 23.9, h 57 km. Mb 5.3. Kuril Islands.
	F	12	46								
	WIT: iP	11	51	21.5	(-)						
26.	WIT: iP	12	30	06.7	-						43.1N 146.0E, H: 12 18 08.9, h 46 km. Mb 5.3. Kuril Islands.
26.	e	17	20.6								
	F	17	24								

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
26.	iP ePP iS eSS eL F WIT: iP ipP HEE: iP	18	14	30	+	7	1.2				43.0N 147.1E, H: 18 02 24.2, h 39 km. Mb 5.6, Ms 5.8. Kuril Islands.
		18	17	29							
		18	24	32		10	39.3				
		18	29	8					9.2	6.1	
		18	39	5		21					
		20	9								
		18	14	24.2		22					
		18	14	35.8							
		18	14	34.0							
26.	HEE: iP	19	10	16.5	-						34.3N 26.1E, H: 19 05 21.9, h 38 km. Mb 4.8. Crete.
26.	iP iS iSS eSSS eL F WIT: iP i HEE: iP	22	44	03	+	10	3.0				43.2N 146.6E, H: 22 32 00.2, h 50 km. Mb 5.8, Ms 6.6. Kuril Islands.
		22	54	04							
		22	59	28							
		23	02	7							
		23	07			25		210	7.5		
		in next shock									
		22	43	57.3	+						
		22	44	04.7	+						
		22	44	07.0	(-)						
26.	WIT: eP i HEE: eP	22	53	34.0	+						42.8N 146.7E, H: 22 41 34.6, h 41 km. Mb 5.5. Off coast of Hokkaido, Japan.
		22	53	48.0	-						
		22	53	45.0							
26.	WIT: eP e HEE: eP	22	57	31.5	+						43.0N 146.7E, H: 22 45 32.5, h 44 km. Mb 5.4. Kuril Islands.
		22	57	39.5							
		22	57	41.0	+						
26.	WIT: eP	23	09	14.0							42.8N 146.6E, H: 22 57 13.0, h 44 km. Mb 5.3. Off coast of Hokkaido, Japan.
27.	WIT: eP HEE: eP	01	15	00.5							42.8N 146.6E, H: 01 02 59.2, h 41 km. Mb 5.1. Off coast of Hokkaido, Japan.
		01	15	09							
27.	eL F WIT: eP HEE: eP	02	3								43.1N 146.5E, H: 01 41 16.1, h 46 km. Mb 5.4, Ms 4.7. Kuril Islands.
		03	1								
		01	53	13.5	+						
		01	53	23.0	+						

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
27.	eL F HEE: eP	03	56								43.1N 146.8E, H: 03 15 20.4, h 45 km. Mb 5.0. Kuril Islands.
		04	17								
		03	27	28.5							
27.	eL F HEE: eP	04	19								42.6N 145.8E, H: 03 42 38.0, h 38 km. Mb 5.2., Ms 4.5. Hokkaido, Japan region.
		05	00								
		03	54	48.5							
27.	HEE: iPKP2	12	37	21.0							30.6S 178.0W, H: 12 16 48.7, h 42 km. Mb 5.3, Ms 5.0. Kermadec Islands.
27.	eL F	13	39								40.6N 79.2E, H: 13 11 11.0, h N. Mb 5.0. Southern Sinkiang Prov., China.
		13	55								
28.	eL F WIT: eP	11	32		22			7.3	6.1		23.4N 123.5E, H: 10 49 33.4, h 41 km. Mb 5.2, Ms 5.2. Southwestern Ryukyu Islands.
		12	29								
		11	02	26.0							
28.	eL F WIT: eP HEE: eP	22	37								29.1N 103.6E, H: 21 58 02.9, h N. Mb 5.2. Szechwan Prov., China.
		22	58								
		22	09	20							
		22	09	29.0							
28.	WIT: eP HEE: iP	22	10	50.7							28.9N 103.6E, H: 21 59 30.3, h N. Mb 5.4. Szechwan Prov., China.
		22	10	57.5	-						
29.	eL F	03	15								21.1N 143.1E, H: 02 23 20.9, h 24 km. Mb 5.7, Ms 5.3. Mariana Islands region.
		03	53								
29.	eL F WIT: iP ipP HEE: iP	04	04		21			3.3	5.7		43.4N 145.8E, H: 03 26 53.2, h 50 km. Mb 5.9, Ms 5.0. Hokkaido, Japan region.
		04	9								
		03	38	47.7	+						
		03	39	04.0	-						
		03	38	57.5	+						
29.	eL F	08	37								3.9N 85.0W, H: 07 55 11.9, h N. Mb 5.3, Ms 4.9. Off coast of Central America.
		09	00								
29.	eL F WIT: eP HEE: iP	18	30								28.8N 103.7E, H: 17 52 00.8, h N. Mb 5.2. Szechwan Prov., China.
		18	50								
		18	03	21.5							
		18	03	28.0							

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
JUNE 1973											
29.	eL F HEE: eP e	23	26								54.0N 35.2W, H: 23 14 14.4, h N. Mb 4.6, Ms 4.4. North Atlantic Ocean.
29.	eL F	23 56 24 07									ISC: 51°8N 39°74W, H: 23 44 17.6 h 33 km, Mb 5.0 (MOS). North Atlantic Ocean.
30.	eL F	01 07 01 40									No determination of epicenter.
30.	eL F	01 48 02 04									54.2N 35.1W, H: 01 36 42.6, h N. Mb 4.1. North Atlantic Ocean.
30.	WIT: iPKP HEE: iPKP e	05 42 49.7 05 42 54.5 05 43 00.0	-								19.9S 177.6W, H: 05 24 10.0, h 576 km. Mb 5.0. Fiji Islands region.
30.	eL F	08.9 09 25									13.8N 90.9W, H: 08 08 57.6, h 78 km. Mb 5.1. Near coast of Guatemala
30.	WIT: eP HEE: eP	17 56 06.0 17 56 12.5	+								22.9N 121.4E, H: 17 43 27.6, h N. Mb 5.2. Taiwan region.
30.	eL F WIT: iP epP HEE: eP	18 31 19.2 18 07 30.1 18 07 49.0 18 07 41.0	+								52.7N 172.3E, H: 17 55 55.9, h 44 km. Mb 5.4, Ms 4.8. Near Islands, Aleutian Is.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 1973											
1.	iP iPcP iPP iPPP iS eScS iSS eSSS eL F WIT: iP i ePP HEE: iP i	13 44 22 13 44 54 13 46 40 13 48 32 13 53 05 13 54 16 13 57 27 14 00.5 14 05 18.0 13 44 19.2 13 44 31.3 13 46 44 13 44 29.5 13 44 41.5	+	8		19.3					57.8N 137.3W, H: 13 33 34.6, h N. Mb 6.1, Ms 6.7 Off coast of southeastern Alaska.
1.	eL F WIT: eP e HEE: eP	15.8 in prec. shock 15 22 50.0 15 22 58.0 15 23 01.0									57.8N 137.3W, H: 15 12 05.0, h N. Mb 5.2. Off coast of southeastern Alaska.
2.	iP eS eL F WIT: eP i HEE: eP i	01 09 42 01 13 40 01 15.0 01 38 01 09 50.5 01 09 54.8 01 09 48.0 01 09 57.5	+								49.5N 28.5W, H: 01 04 56.0, h N. Mb 5.0. North Atlantic Ridge.
2.	eL F	02 01 02 15									84.1N 0.6W, H: 01 45 59.4, h N. Mb 4.7. North of Svalbard
2.	WIT: iP e ipP e HEE: eP	06 03 26.9 06 03 38.5 06 03 43.8 06 03 50.5 06 03 36.5	-								42.9N 145.4E, H: 05 51 30.9, h 57 km. Mb 5.2. Hokkaido, Japan region.
2.	eL F WIT: eP e HEE: iP	06 32 07.0 06 07 34.5 06 07 44.5 06 07 45.5	-								54.0N 164.1E, H: 05 56 12.4, h N. Mb 5.4. Komandorsky Islands region.
2.	eL F	12 24.0 12 31									39.7N 24.0E, H: 12 14 08.3, h N. Mb 4.2. Aegean Sea.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 1973											
2.	HEE: ePKP2	20	15	55.0							29.7S 177.6W, H: 19 55 26.0, h 51 km. Mb 4.8. Kermadec Islands.
3.	iP	04	12	17	+	6	0.8				19.1N 101.8W, H: 03 59 53.7, h 125 km. Mb 5.6. Michoacan, Mexico.
	ipP	04	12	44							
	ePP	04	15	36							
	iS	04	22	40							
	eL	04	40								
	F	05	11								
	WIT: eP	04	12	21.5	+						
	epP	04	12	45.0							
	HEE: eP	04	12	21.0							
	i	04	12	23.5	+						
	epP	04	12	48.5							
3.	eP	06	51	08	+						12.3N 125.4E, H: 06 37 34.4, h 44 km. Mb 5.5, Ms 6.0. Samar, Philippine Islands.
	ePP	06	55	10							
	eSKS	07	01	52							
	eSP	07	04	04							
	eL	07	22								
	F	in next shock									
	WIT: eP	06	51	05.5							
	HEE: eP	06	51	08.5							
3.	iP	07	17	18	+						12.2N 125.3E, H: 07 03 43.9, h N. Mb 6.1, Ms 6.5. Samar, Philippine Islands.
	ipP	07	21	22							
	eSKS	07	28	00							
	iSP	07	30	14							
	eL	07	49			20	26.5		6.7		
	F	10.4									
	WIT: eP	07	17	13.5							
	HEE: eP	07	17	19.0	+						
3.	HEE: eP	08	10	57.0							12.1N 125.4E, H: 07 57 24.0, h 56 km. Mb 5.3. Samar, Philippine Islands.
3.	WIT: eP	11	09	20.0	-						31.1N 130.2E, H: 10 57 07.5, h 139 km. Mb 5.0. Kyushu, Japan.
	HEE: eP	11	09	28.5							
3.	eL	16	15								44.1N 13.3E, H: 16 10 12.4, h 47 km. Mb 5.3. Adriatic Sea.
	F	16	22								
	HEE: eL	16	14.9								
3.	iP	17	10	23	+	6	3.3				58.ON 138.0W, H: 16 59 35.1, h N. Mb 6.0, Ms 6.0. Southeastern Alaska.
	ipP	17	12	48							
	iS	17	19	22							
	iSS	17	23	20							
	eL	17	30.9			20		17.8	6.3		
	F	in next shock									
	WIT: eP	17	10	20.0	+						
	e	17	10	43.5	+						
	HEE: eP	17	10	30.0	+						

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 1973											
3.	eL	19	29								ISC: 45:71N 150:67E, H: 18 46 22.3, h 120 km, Mb 4.4. Kurile Islands.
	F	20	28								
3.	eL	22	33								27.1S 70.9W, H: 21 41 52.3, h 6 km. Mb 5.4, Ms 5.4. Near coast of northern Chile.
	F	23	28								
4.	eL	02	42								27.1S 71.0W, H: 01 49 06.1, h N. Mb 5.2. Near coast of northern Chile.
	F	03	13								
4.	HEE: e	04	34	08.5							No determination of epicenter.
4.	WIT: e	09	46	30							No determination of epicenter.
5.	ePKP	00	07	13							53.2S 22.7E, H: 23 48 43.0, h N. Mb 5.5, Ms 5.8. South of Africa.
	eSKS	00	15.0								
	ePS	00	16	40							
	eSS	00	22	16							
	eSSS	00	26	00							
	eL	00	39								
	F	in next shock									
5.	eL	01	37								44.ON 147.8E, H: 00 58 45.0, h 40 km. Mb 5.5. Kuril Islands.
	F	02	38								
	WIT: eP	01	10	41.5							
	i	01	10	44.8							
	HEE: iP	01	10	51.0	+						
5.	iP	07	59	52	+						57.9N 137.9W, H: 07 49 04.5, h N. Mb 5.4, Ms 4.9. Off coast of southeastern Alaska.
	eL	08	21								
	F	09	20								
	WIT: eP	07	59	50.0							
	HEE: eP	07	59	59.5	+						
5.	eL	14	31								27.2S 71.1W, H: 13 37 11.1, h 35 km. Mb 5.1. Near coast of northern Chile.
	F	15	00								
5.	eP	22	59	46							13.2N 124.7E, H: 22 46 16.4, h 38 km. Mb 5.6, Ms 6.0. Luzon, Philippine Islands.
	iPP	23	03	56							
	eSKS	23	10	20							
	iSP	23	12	22							
	iSPP	23	13	04							
	eSS	23	17.8								
	eL	23	33			22		32.5	6.8		
	F	01.6									
	WIT: eP	22	59	40.5							
	e	22	59	44							
	i	22	59	52.5							
	HEE: eP	22	59	45.0							
	e	22	59	49.5							

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 1973											
6.	eL F	06	03								12.0N 87.6W, H: 05.21 49.1, h 51 km. Mb 4.8. Near coast of Nicaragua.
6.	eP eL F	09	41	29	+						27.2S 71.1W, H: 09 27 30.7, h 34 km. Mb 5.4, Ms 5.6. Near coast of northern Chile.
6.	eL F	12	57								27.4S 70.9W, H: 11 59 30.9, h 39 km. Mb 5.0. Near coast of northern Chile.
6.	eL F	13	52.6								No determination of epicenter.
6.	eL F WIT: eP HEE: eP	14	23								40.2N 142.5E, H: 13 37 53.7, h 51 km. Mb 5.1. Near east coast of Honshu, Japan.
6.	eL F	21	28								27.0S 71.0W, H: 20 30 07.7, h 32 km. Mb 5.0. Near coast of northern Chile.
7.	HEE: iPKP	00	27	42.0	+						15.1S 175.0E, H: 00 09 15.5, h 614 km. Mb 5.2. Fiji Islands region.
7.	eL F WIT: ePKP HEE: iPKP	03	39								19.1S 168.8E, H: 02 27 24.8, h 93 km. Mb 5.6. New Hebrides Islands.
7.	eL F	13	34								19.2S 69.8W, H: 12 45 00.1, h 89 km. Mb 5.3. Northern Chile.
7.	eL F WIT: ePKP	16	51								6.0S 150.6E, H: 15 40 40.0, h 53 km. Mb 5.4. New Britain region.
7.	eL F	19	41								27.0S 71.2W, H: 18 44 32.7, h 28 km. Mb 5.4, Ms 5.3. Near coast of northern Chile.
7.	eL F	20	43								No determination of epicenter.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 1973											
8.	eL F	00	55								12.3N 125.6E, H: 00 02 46.4, h 47 km. Mb 5.3. Samar, Philippine Islands.
8.	eL F	01.7									27.2S 71.2W, H: 00 49 51.1, h 35 km. Mb 5.1, Ms 5.3. Near coast of northern Chile.
8.	WIT: iP i epP HEE: eP i ipP	04	15	19.7							6.8N 73.0W, H: 04 03 34.5, h 156 km. Mb 5.7. Northern Colombia.
8.	WIT: eP	10	11	45							43.4N 146.4E, H: 09 59 45.8, h 61 km. Mb 5.0. Kuril Islands.
8.	eL F HEE: eP ipP	17	29								15.9N 60.7W, H: 16 59 08.1, h 19 km. Mb 5.1. Leeward Islands.
8.	eL F	21	45								27.0S 71.0W, H: 20 47 40.1, h 25 km. Mb 5.1, Ms 4.6. Near coast of northern Chile.
9.	WIT: e HEE: iP e	00	29.6								46.8N 9.8E, H: 00 27 02.9, h 18 km. Switzerland.
9.	WIT: eP HEE: eP	02	15	29							54.5N 158.4E, H: 02 04 21.4, h 100 km. Mb 4.8. Kamchatka.
9.	eL F	03	21								3.4S 149.1E, H: 02 18 59.7, h N. Mb 4.6, Ms 4.8. Bismarck Sea.
9.	WIT: iPKP HEE: iPKP	11	21	57.2	-						16.6S 174.8W, H: 11 02 49.6, h 236 km. Mb 5.0. Tonga Islands.
9.	iP eS eSS eL F WIT: eP e HEE: iP e	16	32	08	-						10.7N 92.6E, H: 16 19 46.8, h 46 km. Mb 5.7, Ms 5.2. Andaman Islands region.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 1973											
9.	WIT: ePKP i HEE: iPKP	21	46	35.5	-						21.5S 177.9W, H: 21 27 39.2, h 463 km. Mb 4.6. Fiji Islands region.
10.	WIT: iP HEE: iP	01	35	01.5	+						49.8N 78.1E, H: 01 26 57.6, h 0 km. Mb 5.4. Eastern Kazakh SSR.
10.	ePKP eL F WIT: ePKP HEE: ePKP	04	21	53							24.1S 177.4W, H: 04 02 18.5, h 118 km. Mb 5.1. South of Fiji Islands.
10.	ePKP eL F WIT: ePKP HEE: ePKP i	07	19	22							24.1S 177.3W, H: 06 59 43.7, h 103 km. Mb 5.2. South of Fiji Islands.
10.	eL F	16	00								27.1S 71.2W, H: 15 06 00.4, h 22 km. Mb 5.4. Near coast of northern Chile.
10.	WIT: eP HEE: eP	23	37	49.5							37.5N 142.5E, H: 23 25 31.2, h 45 km. Mb 5.2. Off east coast of Honshu, Japan.
11.	eL F	00	08								27.0S 71.0W, H: 23 26 44.0, h N. Mb 5.5. Near coast of northern Chile.
11.	WIT: e	02	27	15.5							No determination of epicenter.
11.	eL F	06	54								0.1S 125.0E H: 05 57 20.0, h N. Mb 5.4, Ms 4.4. Molucca Sea.
11.	WIT: eP	14	41	29.5							30.8N 142.1E, H: 14 28 40.6, h 45 km. Mb 5.1. South of Honshu, Japan.
11.	HEE: ePKP	23	07	22.0	+						15.2S 173.9W, H: 22 47 49.1, h N. Mb 5.4, Ms 5.0. Tonga Islands.
12.	eL F	00	01								52.0N 176.1W, H: 23 23 11.7, h 63 km. Mb 5.1. Andreanof Is., Aleutian Is.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 1973											
12.	HEE: eP e	02	11	22.0							5.3S 68.6E, H: 01 59 28.7, h N. Mb 4.9. Chagos Archipelago region.
12.	WIT: iP	08	02	45.7	-						52.2N 174.2E, H: 07 51 07.9, h 47 km. Mb 5.2, Ms 4.3. Near Islands, Aleutian Is.
12.	eL F WIT: eP	08	33								42.7N 146.8E, H: 07 56 12.8, h 21 km. Mb 5.3. Off coast of Hokkaido, Japan.
12.	eL F	14	35		19				2.8	5.8	27.1S 71.2W, H: 13 45 30.3, h 20 km. Mb 5.5, Ms 5.4. Near coast of northern Chile.
12.	eL F	16	33								27.2S 71.5W, H: 15 41 39.3, h 15 km. Mb 5.4, Ms 4.9. Near coast of northern Chile.
12.	eL F	20	04								12.2N 125.5E, H: 19 10 23.5, h N. Mb 5.2. Samar, Philippine Islands.
13.	HEE: ePKP e	00	36	56.0							27.5S 176.8W, H: 00 18 34.4, h 35 km, Mb 4.4. Kermadec Islands Region.
13.	eL F	01	45								No determination of epicenter.
13.	eL F HEE: eP	03	30		20				1.8	5.3	49.0N 128.0W, H: 02 59 39.1, h N. Mb 5.3, Ms 5.1. Vancouver Island region.
14.	iP iPP iPPP iS iSS eL F WIT: eP i i eL HEE: iP ePP eL	05	01	15	-	7			5.8		35.2N 86.5E, H: 04 51 21.0, h N. Mb 6.0, Ms 6.9. Tibet.
14.	HEE: e	06	42	58.0							No determination of epicenter.
14.	eL F	09	42								ISC: 31:7N 83:2E, H: 09 12 40, h 0 km. Tibet.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 14.	eL	12	48	4						37.9N 21.1E, H: 12 28 18.3, h 36 km. Mb 4.7. Southern Greece.	
	F	12	59								
	WIT: eP	12	42	39.5							
	HEE: eP	12	42	18.0							
July 14.	iP	13	49	24	-					35.3N 86.6E, H: 13 39 30.0, h N. Mb 5.9, Ms 5.5. Tibet.	
	eS	13	57	32							
	eSS	14	01	5		18	13.5	6.1			
	eL	14	07								
	F	15	10								
	WIT: iP	13	49	15.2	-						
	e	13	49	24.5							
	HEE: iP	13	49	22.5							
											No determination of epicenter.
July 15.	WIT: e	08	48	43.0	-						
	e	08	49	20.5							
	HEE: e	08	48	51.5							
July 15.	eL	14	17							5.6S 147.2E, H: 13 19 28.6, h 203 km, Mb 5.0. East New Guinea Region.	
	F	15	13								
July 15.	WIT: iP	14	18	46.6 (+)						43.4N 146.5E, H: 14 06 49.8, h 43 km. Mb 5.4. Kuril Islands.	
	i	14	19	01.5	-						
	HEE: iP	14	18	56.5 +							
July 15.	eL	19	56							28.0S 176.4W, H: 18 30 19.4, h 63 km, Mb 4.6. Kermadec Islands Region.	
	F	20	42							HEE: No records from: July 16, 00 h - July 30, 24 h No determination of epicenter.	
July 16.	WIT: i	00	24	00.5							
July 16.	eL	05	06							10.2S 151.9E, H: 03 59 30.3, h 40 km. Mb 5.3, Ms 5.1. Dentrecasteaux Islands region.	
	F	05	30								
July 16.	iP	18	25	37	+	4	2.0			17.3N 100.7W, H: 18 12 57.5, h 44 km. Mb 5.6, Ms 5.7. Guerrero, Mexico.	
	iPP	18	25	47							
	iPP	18	28	56							
	iS	18	36	19							
	eL	18	51			20	3.2	5.7			
	F	in next shock									
	WIT: iP	18	25	39.6	-						
July 16.	eL	20	17							35.1N 86.4E, H: 19 45 38.3, h 15 km. Mb 5.4. Tibet.	
	F	21	0								
July 17.	eL	01	16							4.3S 134.5E, H: 00 14 47.7, h N. Mb 5.3. West New Guinea region.	
	F	01	42								

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 18.	eL	04	41							14.9N 119.9E, H: 03 53 41.2, h 56 km. Mb 5.1. Luzon, Philippine Islands.	
	F	05	07								
July 18.	eP	15	34	28						18.4S 69.2W, H: 15 21 23.0, h 151 km. Mb 5.7. Northern Chile.	
	epP	15	35	04							
	iS	15	45	29							
	F	16	49								
July 19.	WIT: iPKP	06	03	01.0	-					18.1S 178.3W, H: 05 44 25.6, h 571 km. Mb 5.8. Fiji Islands region.	
July 19.	WIT: e	19	35	37.0						B.C.I.S. 71.8N 10.6E, H: 19 29 07, Norwegian Sea.	
July 20.	iP	08	25	20		4	2.8			36.4N 141.0E, H: 08 12 53.5, h 46 km. Mb 5.8, Ms 5.5. Near east coast of Honshu, Japan.	
	ePP	08	28	29							
	eS	08	35	7		19	8.0	6.1			
	eL	08	53								
	F	10	1								
	WIT: eP	08	25	14.5							
	epP	08	25	30.5							
July 20.	eL	13	59							18.8N 106.5W, H: 13 11 00.4, h N. Mb 4.7, Ms 5.2. Off coast of Jalisco, Mexico.	
	F	14	13								
July 20.	eL	14	38							19.1N 106.3W, H: 13 49 31.8, h N. Mb 4.5, Ms 5.3. Off coast of Jalisco, Mexico.	
	F	14	49								
July 20.	eL	23	41							80.0N 0.2E, H: 23 27 48.3, h N. Mb 5.2, Ms 4.8. North of Svalbard.	
	F	24	05								
July 21.	iPKP	04	38	19	-					24.8S 179.2W, H: 04 19 17.1, h 411 km. Mb 5.9. South of Fiji Islands.	
	i	04	38	38							
	F	05	6								
	WIT: ePKP	04	38	18.5	+						
	i	04	38	25.4	-						
	i	04	38	36.0	+						
	i	04	39	04.9	-						
	ipPKP	04	40	13.7							
	i	04	42	07.2							
July 21.	eL	12	35							20.0N 121.4E, H: 11 46 34.9, h 72 km. Mb 5.0. Philippine Islands region.	
	F	12	53								

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 1973											
27.	iP F	19	54	42	+						12.8N 86.7W, H: 19 42 47.9, h 199 km. Mb 5.3. Nicaragua.
28.	eL F	04	23								
28.	eL F	05	34								
28.	eL F WIT: iP	15	13								40.9N 143.1E, H: 14 28 44.4, h 37 km. Mb 5.3, Ms 5.2. Off east coast of Honshu, Japan.
28.	eL F WIT: eP i	18	36			20			8.9	6.2	22.1N 121.5E, H: 17 53 32.3, h N Mb 5.4, Ms 5.6. Taiwan region.
28.	WIT: iPKP	19	34	30.6	+						18.9S 178.2W, H: 19 15 46.4, h 515 km. Mb 4.8. Fiji Islands region.
28.	iP epP iZ F WIT: iP	20	17	08	-						50.5N 148.8E, H: 20 06 36.0, h 592 km. Mb 5.5. Sea of Okhotsk.
28.	WIT: eP	22	31	30							16.1S 71.3W, H: 22 18 14.9, h 110 km. Mb 5.7. Southern Peru.
29.	eL F WIT: eP i epP	15	33								43.1N 146.8E, H: 14 51 03.1, h 52 km. Mb 5.4. Kuril Islands.
29.	eL F	23	11								56.3S 147.4E, H: 21 42 21.4, h N. Mb 5.3, Ms 5.2. West of Macquarie Island.
30.	eL F	15	05								31.9N 131.8E, H: 14 16 14.4, h 41 km. Mb 4.8. Kyushu, Japan.
31.	eL F WIT: ePKP2 HEE: ePKP2	01	56								35.9S 179.9W, H: 00 27 40.4, h 58 km. Mb 5.1. East of North Island, New Zealand.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 1973											
21.	eL F	20	22								35.1N 86.4E, H: 19 50 06.3, h N. Mb 5.3. Tibet.
22.	eSP eL F	03	05	39							55.7S 28.3W, H: 02 36 54.7, h 70 km. Mb 5.4. South Sandwich Islands region.
23.	eL F WIT: iP iPP	01	46.8								50.0N 78.9E, H: 01 22 57.8, h 0 km. Mb 6.3, Ms 4.7. Eastern Kazakh SSR.
23.	eL F	10	48								24.1N 122.3E, H: 10 02 05.2, h 42 km. Mb 5.4. Taiwan region.
23.	eL F	21	17								30.8N 113.5W, H: 20 37 46.1, h N. Mb 5.0. Gulf of California.
24.	WIT: ePKP2	08	14	52.5							31.5S 179.6E, H: 07 55 08.2, h 429 km. Mb 5.1. Kermadec Islands region.
24.	eL F	20	59								30.5S 71.6W, H: 20 03 35.3, h 60 km. Mb 5.6. Near coast of Central Chile.
25.	iPP iSKP eL F	06	30	12		20			3.9	6.1	8.7S 160.7E, H: 06 08 38.7, h 69 km. Mb 5.5. Solomon Islands.
25.	eL F	20	52								12.2N 125.8E, H: 19 58 55.8, h N. Mb 5.3, Ms 4.3. Samar, Philippine Islands.
27.	eL F	02	15								8.0S 129.0E, H: 01 29 13.5, h N, Mb 5.2. Timor Sea.
27.	WIT: ePg	10	02	44.5							51.7N 6.8E, H: 10 02 09.1, Rockburst in Ruhr Coal- district, Germany.
27.	eL F	17	25								17.2S 167.8E, H: 16 08 32.6, h 15 km. Mb 5.1, Ms 4.9. New Hebrides Islands.
27.	ePKP ePP eL F	19	46	10							15.5S 173.1W, H: 19 26 41.9, h N. Mb 5.4, Ms 5.6. Tonga Islands.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
31. July 1973	ePP	06	00	24		18			5.1	6.1	37.7S 73.4W, H: 05 41 04.0, h 32 km. Mb 5.3, Ms 5.5. Near coast of Central Chile.
	eL	06	39								
	F	08	40								
31.	eP	11	05	10	+	19			21.5	6.7	27.1S 71.5W, H: 10 51 13.2, h N. Mb 5.6, Ms 6.3. Near coast of northern Chile.
	iPP	11	09	36							
	iSKS	11	16	03							
	iS	11	17	07							
	iPS	11	18	41							
	iPPS	11	19	33							
	eSS	11	24.5								
	eSSS	11	28.0								
	eL	11	35								
	F	15.2									
31.	eL	16	08								26.6S 70.5W, H: 15 17 49.5, h N. Mb 4.9, Ms 5.1. Near coast of northern Chile.
	F	17.0									
31.	ePKP	21	04	08	+	20		3.5		6.1	8.8S 161.0E, H: 20 44 52.2, h 30 km. Mb 5.4, Ms 6.0. Solomon Islands.
	iPP	21	06	31							
	iSKP	21	07	36							
	eSS	21	24.2								
	eL	21	46								
	F	23.9									
HEE: ePKP 21 04 12											

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms		
		h	m	s			Z	NS	EW				
August 1973	1.	iPKP	01	50	20	+					14.3S 167.3E, H: 01 31 30.9, h 200 km. Mb 6.1. New Hebrides Islands.		
		ipPKP	01	51	25								
		iPP	01	53	14								
		iZ	01	53	32								
		ipPP	01	54	12								
		iSKS	02	00	04								
		iSPP	02	05	33								
		ipSPP	02	06	34								
		eSS	02	11	30								
		eSSS	02	16	48								
		eL	02	27									
		F	05.4										
		WIT: ePKP	01	50	26.0								
		i	01	50	34.7								
		ipPKP	01	51	14.0								
		e	01	53	26								
		HEE: ePKP	01	50	29.5							+	
i	01		50	40.0	-								
e	01		53	33.0									
1.	eL	12	03								27.1S 71.1W, H: 11 08 28.4, h N. Mb 5.2. Near coast of northern Chile.		
		F	12	42									
1.	eP	15	58	21		20				2.1	5.6	26.8S 71.0W, H: 15 44 25.5, h 16 km. Mb 5.7, Ms 5.4. Off coast of northern Chile.	
		ePP	16	02									32
		iSKS	16	09									12
		ePS	16	11									50
		eL	16	34									
		F	18.9										
2.	WIT: i	03	10	32.2	+						No determination of epicenter.		
2.	eL	09	33								27.8N 104.5E, H: 08 58 15.1, h N. Mb 5.4. Yunnan Province, China.		
		F	10	13									
		WIT: eP	09	09								43.5	
2.	eL	10	41								No determination of epicenter.		
		F	11	02									
2.	eL	19	40								21.4N 45.8W, H: 19 17 23.8, h N. North Atlantic Ridge.		
		F	19	49									
2.	eP	20	03	48							37.3N 56.5E, H: 19 56 26.6, h 36 km. Mb 5.3. Iran.		
		eL	20	17									
		F	20	44									
		WIT: eP	20	03								41.5	
		HEE: eP	20	03								43.5	
		WIT: eP	20	36								11.5	
2.	eL	20	28	55.7							37.3N 56.5E, H: 20 28 55.7, h 34 km. Mb 4.8. Iran.		
		F	20	28								55.7	

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
August 1973											
2.	eL F	22	33								3.9N 126.2E, H: 21 38 12.6, h 51 km, Mb 4.9. Talaud Islands.
3.	WIT: eP HEE: eP	04	08	32.5							53.2N 169.8W, H: 03 57 06.8, h 124 km, Mb 5.0. Fox Islands, Aleutian Is.
3.	eL F	07	12								42.5N 145.7E, H: 06 26 25.4, h 45 km, Mb 5.0, Ms 4.5. Hokkaido, Japan Region.
3.	eP eL F WIT: iP HEE: iP	15	55	20							20.0N 73.1W, H: 15 44 26.9, h 37 km, Mb 5.2. Haiti region.
3.	iP eS eL F WIT: eP HEE: eP	17	35	19	+						54.8N 162.4E, H: 17 23 57.0, h 28 km, Mb 5.3, Ms 5.0. Near east coast of Kamchatka.
3.	eL F	19	56								43.0N 147.6E, H: 19 13 05.1, h 53 km, Mb 4.6. Kuril Islands.
4.	iP eS eL F WIT: eP e HEE: iP e	00	57	12	+						9.8N 84.6W, H: 00 44 42.8, h N. Mb 5.3, Ms 5.4. Costa Rica.
4.	eL F	22	48								2.0N 126.7E, H: 21 51 25.0, h 40 km, Mb 5.6, Ms 5.2. Molucca Passage.
5.	iPKP ePP eL F WIT: iPKP e HEE: iPKP i ePP	16	07	04	+						16.2S 173.1W, H: 15 47 32.9, h N. Mb 6.1, Ms 5.7. Tonga Islands.
6.	WIT: eP HEE: eP	23	23	49.0							44.3N 147.8E, H: 23 11 59.8, h 89 km, Mb 5.3. Kuril Islands.

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
August 1973											
7.	iP iPP iSKS iS iPS iPPS eL F	03	55	26	+						26.8S 70.9W, H: 03 41 25.6, h 25 km, Mb 5.6, Ms 6.1. Near coast of northern Chile.
7.	eL F	07	57								54.4S 136.6W, H: 06 39 00.8, h N. Mb 5.4, Ms 6.1. South Pacific Cordillera.
7.	eL F	10	9								26.7S 70.9W, H: 10 04 26.6, h 34 km, Mb 5.7, Ms 5.9. Near coast of northern Chile.
7.	eP eL F	14	36	46							26.8S 70.9W, H: 14 22 45.4, h 14 km, Mb 5.9, Ms 6.3. Near coast of northern Chile.
8.	eL F	05	32								58.3S 25.0W, H: 04 37 12.9, h N. Mb 5.3, Ms 5.5. South Sandwich Is. region.
8.	eL F	14	44.0								40.8N 15.4E, H: 14 36 11.0, h N. Mb 4.7. Southern Italy
9.	eL F HEE: eP	02	54								40.3N 124.2W, H: 02 18 25.8, h 2 km, Mb 5.1, Ms 4.7. Near coast of northern California.
9.	WIT: iPKP HEE: ePKP	09	57	18.3							6.1S 154.5E, H: 09 38 59.2, h 404 km, Mb 5.4. Solomon Islands.
9.	iP eL F WIT: iP i i HEE: iP	10	56	28	+	7	1.0				43.4N 146.4E, H: 10 44 26.5, h 55 km, Mb 6.0. Kuril Islands.
9.	eL F	14	24								56.3S 147.4E, H: 13 06 36.6, h N. Mb 5.6, Ms 5.9. West of Macquarie Island.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
August 1973											
9.	HEE: iPKP	19	53	04.0	-						19.0S 168.6E, H: 19 33 29.8, h 45 km. Mb 5.0. New Hebrides Islands.
10.	ePS eL F WIT: epP HEE: eP epP	00	31	24 02.2 00 20 51.5 00 20 46 00 21 01							34.ON 141.4E, H: 00 08 05.8, h 55 km. Mb 5.0. Off east coast of Honshu, Japan.
10.	WIT: ePKP HEE: iPKP	14	46	51.5 + 56.0 +							19.2S 173.0W, H: 14 27 06.8, h 7 km. Mb 5.3. Tonga Islands.
10.	WIT: ePKP HEE: iPKP	15	03	22.0 27.5(+)							19.2S 173.0W, H: 14 43 41.6, h N. Mb 5.4, Ms 5.2. Tonga Islands.
10.	WIT: eP	15	56	47.0							43.4N 146.4E, H: 15 44 51.8, h 59 km. Mb 4.8. Kuril Islands.
10.	WIT: ePKP HEE: ePKP	19	15	02 05.5							19.2S 173.2W, H: 18 55 20.3, h N. Mb 4.6. Tonga Islands.
11.	WIT: iPKP HEE: ePKP e e e	04	05	05.1 10.0 + 12.5 18.0 42.0							17.8S 177.0W, H: 03 46 12.3, h 399 km. Mb 5.4. Fiji Islands region.
11.	iP eS eSS eSSS eL F WIT: eP i HEE: eP	07	26	51 36 01 40.5 43.5 47 55 26 42.0 26 46.6 26 49.5		18		42.5	6.7		33.ON 104.0E, H: 07 15 39.7, h N. Mb 5.4, Ms 6.1. Kanshu Province, China.
11.	eL F	14	05	36							3.5S 135.6E, H: 13 04 35.7, h 9 km. Mb 5.4. West New Guinea region.
11.	eL F	18	44	59							28.9S 13.1W, H: 18 01 59.7, h N. Mb 4.8. South Atlantic Ridge.
13.	eL F	02	31	42							29.9N 68.4W, H: 02 00 20.4, h 7 km, Mb 4.7, Ms 4.3. West Pakistan.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
August 1973											
13.	ePKP iPP ipPP iPPP ipPPP iSP ePPS eSS eL F WIT: iPKP epPKP HEE: ePKP epPKP	08	47	02 36 00 14 37 08 12 14 26 11.3 08 47 00.1 - 08 47 30.0 + 08 47 03.0 08 47 33.0							4.5S 144.0E, H: 08 28 19.7, h 112 km. Mb 6.0. Near north coast of New Guinea.
14.	ePS eL F	02	24	24 47 23		19	1.7		5.6		26.6S 70.8W, H: 01 57 00.5, h 29 km. Mb 5.7, Ms 5.5. Near coast of northern Chile.
14.	WIT: iPKP HEE: ePKP i	04	38	04.1 + 08.0 + 18.0 -							22.3S 179.6W, H: 04 19 20.2, h 592 km. Mb 5.2. South of Fiji Islands.
15.	eL F	18	55	08							25.4N 65.7E, H: 18 24 20.2, h N. Mb 5.1. West Pakistan.
15.	WIT: eP iPP HEE: eP ePP	02	07	44.0 17.5 50.5 25.5							42.7N 67.4E, H: 01 59 57.8, h 0 km. Mb 5.3. Central Kazakh SSR.
16.	eP eS eSS eSSS eL F WIT: eP i HEE: eP e	04	09	56 42 24.6 28.0 35 06.2 04 09 49.0 04 09 52.0 + 04 09 54.5 04 09 57.5		22	9.6		6.2		23.1N 101.1E, H: 03 58 10.7, h N. Mb 5.4, Ms 6.4. Yunnan Province, China.
16.	eL F	06	42	03							23.2N 100.9E, H: 06 05 28.2, h N. Mb 5.1. Yunnan Province, China.
16.	eP eL F	08	13	00 34 20							33.1N 86.9E, H: 08 02 53.8, h N. Mb 5.3, Ms 5.5. Tibet.
16.	iP eS eSS eL F WIT: eP	12	28	50 + 40 52 12.9 14.5 12 28 49.5		20	5.0		5.8		51.3N 176.6W, H: 12 16 59.8, h 47 km. Mb 5.6, Ms 5.8. Andreanof Is., Aleutian Is.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
August 1973											
16.	eL F	14.7 16.0									51.4N 176.6W, H: 14 25 34.4, h 62 km, Mb 5.6. Andreanof Islands, Aleutian Islands.
17.	eS eL F WIT: eP i HEE: eP i	02 05 32 02 21 03 28 01 54 54.5 01 55 07.7 01 55 01.0 01 55 15.0			20		12.5		6.3		23.3N 123.6E, H: 01 42 11.9, h 28 km. Mb 5.4, Ms 5.4. Southwestern Ryukyu Is.
17.	eL F	09 03 09 14									45.1N 28.1W, H: 08 51 47.1, h N. Mb 4.5, Ms 4.3. North Atlantic Ridge.
17.	eL F	19 39 20 10									11.5N 121.5E, H: 18 48 16.8, h 40 km. Mb 5.4. Panay, Philippine Islands.
18.	WIT: iP HEE: eP	02 20 25.3 02 20 34.5		+							42.0N 142.5E, H: 02 08 32.0, h 71 km. Mb 5.2. Hokkaido, Japan region.
18.	eL F	06 50 07 08									17.6S 13.5W, H: 06 14 50.9, h N. Mb 4.6. South Atlantic Ridge.
18.	iP iPP iPPP iZ eSKS iSP eSS eL F HEE: eP	08 39 15 08 43 07 08 45 24 08 46 57 08 49 50 08 51 56 08 57 16 09 11 11.6 08 39 14.5			7		1.0				11.5N 121.4E, H: 08 25 44.1, h 14 km. Mb 5.9, Ms 6.1. Panay, Philippine Islands.
18.	eL F	09 11 11.6			18		23.5		6.6		No determination of epicenter.
18.	e F	13 28.0 13 32									
19.	eL F	02 36 02 59									11.4N 121.2E, H: 01 45 19.0, h 22 km. Mb 5.2. Panay, Philippine Islands.
19.	WIT: eP	23 24 06.5									75.1N 9.9E, H: 23 19 19.8, h N. Mb 4.4. Greenland Sea.
20.	eL F WIT: e HEE: eP i	15 27.5 15 33 15 22 03.0 15 21 53.5 15 22 01.0		+							45.7N 26.5E, H: 15 18 28.4, h 73 km. Mb 5.6. Rumania.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms	
		h	m	s			Z	NS	EW			
August 1973												
22.	eH eL F	01 06 56 01 13.0 01 56									ISC: 45°N 36°W, H: 00 48 57, h 0 km, Mb 4.5. Central Mid-Atlantic Ridge.	
22.	iPKP1 iPKP2 iPP iSPP eL F WIT: ePKP1 HEE: ePKP1 ePKP2	06 59 17 06 59 58 07 03 40 07 17 06 07 55 09.2 06 59 16.0 06 59 20 07 00 04.0								20	5.3 6.4	32.8S 179.2W, H: 06 39 21.4, h N. Mb 5.5, Ms 6.0. South of Kermadec Islands.
22.	iP iPP iS eSS eSSS eL F WIT: eP i iPP HEE: eP iPP	18 25 46 18 25 56 18 34 57 18 39.6 18 42.7 18 49 20.0 18 25 43.2 18 25 53.5 18 28 05.8 18 25 53.5 18 26 04.0								21	3.3 5.6	57.1N 154.1W, H: 18 14 37.2, h 38 km. Mb 5.9, Ms 5.6. Kodiak Island region.
22.	eL F HEE: eP	22 45 23 00 22 25 02.0										0.6N 25.3W, H: 22 15 17.3, h N. Mb 5.1. Central Mid-Atlantic Ridge.
23.	eL F	14 59.0 15 05										45.7N 21.1E, H: 14 52 42.3, h 39 km. Rumania.
23.	eL F WIT: ePKP e HEE: iPKP e	17 57 19 14 17 14 18.5 17 14 31.0 17 14 21.5 17 14 34.5										5.4S 151.5E, H: 16 55 25.9, h 78 km. Mb 5.7. New Britain region.
23.	WIT: eP	19 28 50.0										36.5N 139.6E, H: 19 16 41.0, h 115 km. Mb 5.1. Honshu, Japan.
24.	iP ePP eS eL F WIT: iP i i HEE: eP	00 02 56 00 06 08 00 13 20 00 34 01 49 00 02 52.4 00 03 05.0 00 03 11.9 00 03 01.5								20	3.5 5.7	37.2N 142.1E, H: 23 50 32.4, h 34 km. Mb 5.7, Ms 5.4. Off east coast of Honshu, Japan.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
24. 1973	eL	02	26							27.8N 52.7E, H: 02 06 01.6, h N. Mb 5.1, Ms 5.3. Southern Iran.	
	F	02	51								
	WIT: eP	02	13	52.0							
	i	02	13	55.7	-						
	HEE: iP	02	13	52.0	-						
24.	i	02	13	54.5	+						
	eL	10	59.3							36.2N 2.0W, H: 10 50 59.7, h N. Mb 3.9. Strait of Gibraltar.	
	F	11	13								
	ePP	20	39	42							
	eL	21	15								
F	22.8										
24.	WIT: ePKP	20	37	23.0	-					7.2S 156.0E, H: 20 18 21.4, h 62 km. Mb 5.8. Solomon Islands.	
	HEE: iPKP	20	37	26.5	-						
	e	20	37	40.0							
	e (SKP)	20	40	44.5							
	ePP	04	03	08							10.6N 138.4E, H: 03 44 34.2, h N. Mb 5.8, Ms 5.0. West Caroline Islands.
eSKS	04	09.5									
eSP	04	12	30								
eSPP	04	13	20								
eSS	04	18.4									
eL	04	36		18		6.8		6.2			
F	06.7										
WIT: ePP	04	03	04								
HEE: ePP	04	03	11.5								
25.	eL	12	57							56.0N 163.6E, H: 12 15 53.0, h N. Mb 5.2, Ms 4.6. Near east coast of Kamchatka.	
	F	13	25								
	WIT: iP	12	27	03.2	-						
	HEE: eP	12	27	14.0	+						
25.	eL	15	23							25.8N 129.5E, H: 14 39 15.1, h N. Mb 5.6, Ms 5.4. Ryukyu Islands region.	
	F	16	06								
	WIT: eP	14	52	01.0							
	HEE: iP	14	52	07.5	+						
	e	14	52	10							
25.	WIT: iP	15	06	17.5	-					28.1N 56.8E, H: 14 58 10.8, h 56 km. Mb 5.4. Southern Iran.	
	HEE: eP	15	06	16.5	+						
25.	eL	22	39							19.5N 121.6E, H: 21 50 01.4, h 44 km. Mb 5.1. Philippine Islands region.	
	F	22	54								
	WIT: eP	22	02	52.5	+						
	HEE: eP	22	02	58.0							
26.	HEE: ePKP	01	48	30.0	+					19.7S 168.1E, H: 01 28 49.0, h 17 km. Mb 4.8. New Hebrides Islands.	
	e	01	48	40.5							

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
26. 1973	HEE: e	17	22	47.0							No determination of epicenter.
	WIT: iPKP	18	19	07.5	-						
26.	HEE: iPKP	18	19	13.0	+						18.0S 178.7W, H: 18 00 37.4, h 634 km. Mb 4.5. Fiji Islands region.
	WIT: ePKP1	21	47	21.5							
26.	HEE: ePKP2	21	48	03.5							29.6S 177.4W, H: 21 27 34.1, h 55 km. Mb 5.4. Kermadec Islands.
	ipPKP2	21	48	17.0							
26.	iP	21	59	00	+						51.2N 179.3W, H: 21 47 12.0, h 48 km. Mb 5.2, Ms 5.3. Andreanof Is., Aleutian Is.
	eS	22	09.0								
	eL	22	25								
	F	23.9									
	WIT: eP	21	58	57.0							
	e	21	59	05.5							
26.	HEE: eP	21	59	07.5	+						45.2S 76.7W, H: 12 01 21.8, h N, Mb 4.8, Ms 4.8. Off coast of Southern Chile.
	eL	13	01								
27.	F	13	31								
	ePKP	14	07	57						16.0S 168.1E, H: 13 48 31.6, h 11 km. Mb 5.7, Ms 5.6. New Hebrides Islands.	
ePP	14	11	04								
eL	15	03									
F	16.4										
27.	WIT: iPKP	14	41	38.0	+						18.1S 178.4W, H: 14 23 06.1, h 610 km. Mb 5.1. Fiji Islands region.
	HEE: iPKP	14	41	43.5							
27.	WIT: iPKP	14	45	32.1							18.1S 178.5W, H: 14 27 02.2, h 631 km. Mb 5.0. Fiji Islands region.
	HEE: iPKP	14	45	38.0							
28.	HEE: eP	03	07	23.5							50.5N 68.4E, H: 02 59 57.6, h 0 km. Mb 5.3. Central Kazakh SSR.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
August 1973											
28.	iP	10	02	58	-	9	17.2				18.3N 96.6W, H: 09 50 40.0, h 84 km. Mb 6.8. Vera Cruz, Mexico.
	ipP	10	03	22							More than 600 reported killed.
	iPP	10	06	04							
	ipPP	10	06	30							
	ipPPP	10	08	23							
	iS	10	13	10							
	i	10	13	37							
	iSP	10	13	56							
	eSS	10	18.2								
	eL	10	26			24		70.0	7.1		
	F	13.1									
	WIT: iP	10	03	01.3	-						
	ipP	10	03	22.6	-						
	isP	10	03	31.0	-						
	i	10	04	09.4	+						
	eS	10	13	21							
	HEE: iP	10	03	02.0	-						
	eS	10	13	15							
28.	iP	15	11	33	+						0.2S 18.0W, H: 15 01 59.1, h N. Mb 5.8, Ms 6.8. Central Mid-Atlantic Ridge.
	i	15	11	54	+						
	iPcP	15	12	27							
	i	15	13	04	+						
	iPP	15	13	57							
	iPPP	15	15	11							
	iS	15	19	36							
	eSS	15	23.2								
	eL	15	26.3			18		187	7.2		
	F	19.5									
	WIT: eP	15	11	43.0(+)							
	i	15	11	52.9	+						
	i	15	12	02.3	-						
	i	15	12	46.0							
	eLR	15	33								
	HEE: eP	15	11	28.5							
	i	15	11	50.5	+						
	eLR	15	32								
29.	WIT: ePKP	08	09	41.0							17.1S 173.2W, H: 07 50 05.0, h N. Mb 5.2. Tonga Islands.
30.	eL	07	51.3			20	3.6	5.0			38.0N 42.7E, H: 07 36 23.6, h N. Mb 4.8, Ms 4.7. Turkey.
	F	08	27								
30.	ePP	09	19	12							37.3S 179.4E, H: 08 54 32.4, h 46 km. Mb 5.8, Ms 5.4. Off east coast of North Island, New Zealand.
	eSS	09	39.9								
	eL	10	14								
	F	11	47								

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
August 1973											
30.	iP	18	37	17	+	6	1.8				7.3N 72.8W, H: 18 25 43.2, h 181 km. Mb 5.7. Northern Colombia.
	ipP	18	38	00	+						
	isP	18	38	19							
	ePP	18	40	16							
	iS	18	46	50							
	iSP	18	47	49							
	isS	18	48	05							
	eL	19	02								
	F	20	00								
	WIT: iP	18	37	22.6	-						
	i	18	37	26.3	+						
	ipP	18	38	07.6	+						
	i	18	38	32.1	-						
	HEE: iP	18	37	19.0	+						
	i	18	37	22.5							
	ipP	18	38	03.0	-						
30.	iP	20	02	00	+						7.1N 84.3E, H: 19 50 02.9, h N. Mb 5.9, Ms 5.2. Bay of Bengal.
	ePP	20	04	59							
	eS	20	11	51							
	eL	20.4									
	F	21.6									
	WIT: iP	20	01	55.0	-						
	i	20	02	07.0							
	HEE: eP	20	01	56.5							
	e	20	02	08.5							
30.	eL	22	00								32.5N 141.7E, H: 21 13 48.3, h 39 km, Mb 4.9. South of Honshu, Japan.
	F	22	29								
30.	WIT: iPKP	23	27	19.4	-						21.0S 178.9W, H: 23 08 41.7, h 627 km. Mb 5.1. Fiji Islands region.
	HEE: iPKP	23	27	24.5							
	i	23	27	32.5	+						
31.	eL	03	03								61.1N 147.4W, H: 02 30 57.9, h 49 km. Mb 5.1, Ms 5.0. Southern Alaska.
	F	04.0									
	WIT: eP	02	41	33.0							
	HEE: eP	02	41	44.0							
	e	02	41	52.5							
31.	HEE: iPKP	23	49	25.0	+						16.1S 172.5W, H: 23 29 49.4, h N. Mb 5.1. Samoa Islands region.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
SEP. 1973											
2.	HEE: eP	00	42	13.5							7.4N 123.7E, H: 00 29 26.2, h 619 km. Mb 5.3. Mindanao, Philippine Islands.
2.	eL F	07 08	47 06								24.9N 63.1E, H: 07 23 17.1, h 25 km. Mb 5.3. Near coast of West Pakistan.
2.	HEE: iPKP e	16 16	26 26	09.5 20.5	-						19.3S 167.6E, H: 16 06 33.5, h N. Mb 5.2. New Hebrides Islands region.
3.	WIT: iPKP epPKP HEE: iPKP i epPKP	03 03 03 03	42 44 42 42 44	23.6 49.0 28.0 36.0 55.5	- - - -						20.9S 179.0W, H: 03 23 47.4, h 639 km. Mb 5.4. Fiji Islands region.
4.	iP ipP eS ePS eSS eSSS eL F WIT: eP HEE: iP epP	17 17 17 17 17 17 18 19	37 37 47 49 53.7 57.2 03 34	27 40 56 02 - - 32.0 31.5 41.5	+ + - - - - - -	7	1.5				15.0N 94.3W, H: 17 24 59.4, h 51 km. Mb 5.2. Near coast of Oaxaca, Mexico.
						19			4.1	5.8	
4.	ePKP ₁ ePP eSS eL F WIT: ePKP ₁ ePKP ₂ HEE: ePKP ₂ e	21 21 21 22.0 23.3 21 21 21 21	01 06 26.0 - - 01 02 02 02	50 01 - - - 49.0 20.5 28.5 46.5	- - - - - - - -						30.4S 177.9W, H: 20 41 55.4, h N. Mb 5.4, Ms 5.3. Kermadec Islands.
5.	eL F WIT: iP HEE: eP	01 01 00 00	11 24 42 42	- - 35.2 43.5	- - - -						40.7N 139.6E, H: 00 30 53.5, h 191 km. Mb 5.6. Near west coast of Honshu, Japan.
5.	WIT: ePKP HEE: iPKP i	04 04 04	03 03 03	18.0 23.0 28.5	- - -						19.7S 177.9W, H: 03 44 21.0, h 402 km. Mb 5.0. Fiji Islands region.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms	
		h	m	s			Z	NS	EW			
SEP. 1973												
5.	WIT: eP	09	20	11.0							44.0N 148.3E, H: 09 08 14.0, h 47 km. Mb 4.6. Kuril Islands.	
5.	iP ePP ePPP eS eSP eSS eSSS eL F WIT: iP HEE: eP	13 13 13 13 13 13 13 13 16.4 13 13	15 18 20 25 26 31.0 34.4 40.5 - 15 15	31 38 28 43 30 - - - - 24.6 33.5	+ - - - - - - - - + +				20	15.0	6.3	39.5N 143.1E, H: 13 03 13.9, h 41 km. Mb 5.5, Ms 5.8. Off east coast of Honshu Japan.
5.	eL F	16 17	34 08									Aftershock.
6.	eS eL F	11 11 12	19.0 32 38									61.0N 146.8W, H: 10 59 36.7, h 29 km. Mb 5.5, Ms 5.3. Southern Alaska.
7.	WIT: ePg HEE: iPm	00 00	11 11	54.0 50.5	- +							B.C.I.S.: 51.7N 7.8E, H: 00 11 25, h 0 km. Coalmine rockburst. Germany.
7.	eL F	10 11	35 05									5.6S 151.5E, H: 09 31 14.8, h 61 km. Mb 5.5. New Britain region.
7.	eL F	12 12	05 42									19.5N 108.5W, H: 11 27 13.2, h N. Mb 5.0, Ms 5.1. Revilla Gigedo Islands region.
7.	eL F WIT: ePKP	15 15 14	01 39 17	28.5								5.5S 151.1E, H: 13 58 33.6, h 71 km. Mb 5.6. New Britain region.
7.	eL F	15 16	56 13									No determination of epicenter
8.	eL F	05 05	10 26									34.5N 139.4E, H: 04 23 26.4, h 9 km, Mb 4.7. Near South Coast of Honshu, Japan.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
SEP. 1973	8.	iP	07	35	48	-	7	1.2			33.2N 86.7E, H: 07 25 43.9, h N. Mb 5.5, Ms 5.2. Tibet.
		ePcP	07	36	32						
		ePP	07	38	01						
		eS	07	44	04						
		eL	07	54			22	12.3		6.0	
		F	09.7								
		WIT: iP	07	35	40.4	-					
	HEE: eP	07	35	46.5	-						
	8.	WIT: eP	07	59	40.0						8.3S 74.2W, H: 07 46 52.7, h 168 km. Mb 5.6. Peru-Brazil border region.
		HEE: iP	07	59	36.5(-)						
		i	08	00	15.0						
	8.	HEE: ePKP ₂	20	01	47.0						29.2S 178.5W, H: 19 41 32.0, h 142 km. Mb 4.9. Kermadec Islands.
	9.	iP	02	24	40						31.6N 100.0E, H: 02 13 39.4, h N. Mb 5.5. Szechwan Province, China.
		eS	02	33	48						
		eL	02	48							
		F	03	31							
		WIT: eP	02	24	34.5						
		HEE: eP	02	24	41.0	-					
		e	02	24	45.0						
	9.	WIT: eP	02	53	30						31.5N 100.0E, H: 02 42 33.1, h N. Mb 5.2. Szechwan Province, China.
	9.	eP	08	42	30						7.1S 12.8W, H: 08 32 14.8, h N. Mb 5.2, Ms 4.9. Ascension Island region.
		eS	08	50	46						
		eSS	08	54	52						
		eSSS	08	57	20						
		eL	09	00							
		F	09	36							
		WIT: eP	08	42	34						
		HEE: eP	08	42	21.5						
	9.	iP	18	38	08	+					39.5N 143.1E, H: 18 25 49.4, h 23 km. Mb 5.7, Ms 5.9. Off east coast of Honshu, Japan.
		i	18	38	24	+					
		iPP	18	41	16						
		iS	18	48	20						
		iSP	18	49	13						
		eSS	18	53.8							
		eL	19	03			20	19.5		6.5	
		F	in next shock								
		WIT: iP	18	38	03.0						
		HEE: iP	18	38	12.5	-					

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms	
		h	m	s			Z	NS	EW			
SEP. 1973	9.	eL	20	52							39.4N 143.3E, H: 20 09 12.0, h 28 km. Mb 5.0. Off east coast of Honshu, Japan.	
		F	22.4									
		WIT: eP	20	21	25							
		i	20	21	36.2							
		HEE: eP	20	21	36							
		10.	eL	03	17							38.5N 39.6E, H: 03 02 04.2, h N. Mb 4.9. Turkey.
		F	03	26								
		WIT: eP	03	07	43.5							
		HEE: eP	03	07	42.5							
		10.	iP	07	54	18	-	7	2.0			42.5N 130.9E, H: 07 43 30.5, h 532 km. Mb 6.0. E. Russia-N.E. China border region.
		ipP	07	56	15							
		iPP	07	57	09							
		ipPP	07	59	04							
	iS	08	03	08								
	isS	08	06	38								
	eL	08	21									
	F	09.8										
	WIT: iP	07	54	11.6	-							
	ipP	07	56	08.3								
	eS	08	03	02								
	HEE: iP	07	54	20.5	-							
	11.	eL	19	40							39.6N 143.2E, H: 18 54 49.0, h 29 km. Mb 4.4. Off east coast of Honshu, Japan.	
	F	20	03									
	11.	iP	23	31	19	-	6	2.9			25.6N 124.5E, H: 23 18 50.8, h 141 km. Mb 5.8. Northeast of Taiwan.	
	epP	23	31	52								
	iPP	23	34	38								
	ipPP	23	35	28								
	iSKS	23	41	32								
	isSKS	23	42	39								
	eL	23	58									
	F	01.5										
	WIT: iP	23	31	12.5	-							
	ipP	23	31	52.3								
	HEE: iP	23	31	19.0	-							
	i	23	31	22.0								
	ipP	23	31	57.0								
	12.	eL	05	39							2.5S 138.4E, H: 04 35 28.7, h 23 km. Mb 5.1. West New Guinea.	
	F	06	00									
	12.	iP	07	06	05	+	3	9.6			73.3N 55.2E, H: 06 59 54.3, h 0 km. Mb 6.8, Ms 5.0. Novaya Zemlya.	
	eS	07	11	03								
	eL	07	16									
	F	08	57									
	HEE: iP	07	06	11.0	+						WIT: change of papers: 07:05-07:09 G.M.T.	
	i	07	06	42.0								

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
SEP. 1973											
13.	eL F HEE: eP	07	12 47 33								9.2N 126.1E, H: 06 19 45.8, h 68 km, Mb 5.8. Mindanao, Philippine Islands.
15.	iP iS eL F WIT: eP i HEE: eP	01	50 53 55.0 14 50 50 50	16 + 20	7	2.4		15.3	5.3		63.9N 22.2W, H: 01 45 57.7, h 1 km, Mb 5.3, Ms 5.4. Iceland region.
15.	eL F WIT: eP HEE: eP	02	31.5 in prec.shock 26 26								63.9N 22.1W, H: 02 22 15.7, h N. Mb 4.9. Iceland region.
15.	eL F	03	34 55								19.1N 121.3E, H: 02 44 24.6, h 58 km, Mb 4.7. Philippine Islands region.
15.	eL F WIT: iP i HEE: eP	05	10 39 37 37 37								29.3N 130.3E, H: 04 25 08.7, h 34 km, Mb 5.3. Ryukyu Islands.
15.	eL F	16	05 18								7.6N 144.7E, H: 15 05 24.8, h 12 km, Mb 5.2. Caroline Islands region.
15.	eL F	18	14 45								No determination of epicenter.
16.	eL F	03	18 30								No determination of epicenter.
16.	eP eS eL F WIT: eP HEE: eP	05	05 15 33 06.7 05 05	12 + 27							5.2N 78.0W, H: 04 52 50.9, h N. Mb 5.4, Ms 5.6. South of Panama.
16.	eP eL F WIT: eP HEE: eP	08	33 52 49 34 33	58							5.2N 78.1W, H: 08 21 38.1, h N. Mb 5.3, Ms 5.2. South of Panama.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
SEP. 1973											
16.	eL F	19	57 17								30.2N 131.1E, H: 19 09 59.1, h 30 km. Mb 4.7. Kyushu, Japan.
16.	iP iS eL F WIT: iP HEE: iP	21	31 34 35.9 16.0 28.0	12 + 20	7	2.4		13.5			63.9N 22.2W, H: 21 26 53.5, h 2 km. Mb 5.2, Ms 5.1. Iceland region.
16.	eL F	22	43 00								63.9N 22.4W, H: 22 33 28.4, h 5 km. Mb 4.7. Iceland region.
17.	eL F	01	24.5 29								64.0N 22.2W, H: 01 14 17.2, h N. Mb 4.1. Iceland.
17.	eL F	04	23 50								36.5N 51.1E, H: 04 06 03.7, h 47 km. Mb 4.8. Iran.
17.	eL F WIT: iPKP HEE: iPKP iPKP	08	35 07 41 41 41	35 07 09.1 15.0 49.0							17.3S 174.3W, H: 07 21 47.4, h 135 km. Mb 5.5. Tonga Islands.
17.	eL F	10	11 23								No determination of epicenter.
18.	eL F	00	04 35								44.4N 129.3W, H: 23 33 33.0, h N, Mb 5.1, Ms 4.6. Off coast of Oregon.
18.	eL F	09	00 07								36.7N 30.1E, H: 08 47 40.5, h 15 km. Mb 4.4. Turkey.
18.	WIT: eP HEE: iP	13	11 11	19.0 13.0							7.0S 76.1W, H: 12 58 25.2, h 133 km. Mb 5.8. Northern Peru.
18.	ePKP ₂ eSS eL F	13	53 14 47 16.5	42				3.6	6.3		54.5S 132.6W, H: 13 32 51.6, h N. Mb 5.3, Ms 6.4. South Pacific Cordillera.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
SEP. 1973											
19.	HEE: eP	03	07	40.0							45.6N 67.8E, H: 02 59 57.2, h 0 km. Mb 5.2. Central Kazakh SSR.
19.	HEE: e eL	23	33	08 33.4							B.C.I.S.: 43.3N 0.3E, H: 23 29 04, France.
20.	iP iPP iSKS eL F	20	56	26 36 13 21.5 23.1	-	6	1.4				9.0N 123.8E, H: 20 43 39.8, h 560 km. Mb 6.0. Negros, Philippine Islands.
	WIT: eP e ePP	20	56	21.5 25 30	-						
	HEE: eP i	20	56	25.0 27.5	+						
21.	eSP eSS eL F	07	41	01 46.7 02							4.4S 102.0W, H: 07 13 34.0, h N. Mb 6.1, Ms 6.0. Northern Easter Island Cordillera.
21.	eL F	08	20	09.9							4.4S 101.9W, H: 07 31 02.8, h N. Mb 6.0, Ms 5.6. Northern Easter Island Cordillera.
21.	WIT: iPKP i HEE: ePKP i	19	47	15.9 29.5 19.0 37.0	+						26.1S 178.3E, H: 19 28 29.4, h 651 km. Mb 5.6. South of Fiji Islands.
22.	eL F	02	48	02 55							26.6N 44.7W, H: 02 27 42.3, h N. Mb 4.7, Ms 5.9. North Atlantic Ridge.
22.	eS eL F HEE: eP i	03	12	14 16 04.1 03 05 35.5 03 06 03.0		20		5.3	5.5		26.5N 44.6W, H: 02 57 19.5, h N. Mb 5.1, Ms 5.6. North Atlantic Ridge.
22.	eL F	05	57	06 26							10.0N 126.3E, H: 05 01 44.2, h 36 km. Mb 5.3, Ms 4.7. Philippine Islands region.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
SEP. 1973											
22.	eL F	19	20	19 39							51.6N 173.7W, H: 18 36 24.6, h 36 km. Mb 5.0, Ms 4.5. Andreanof Is., Aleutian Is.
22.	eL F	20	13	20.8							51.6N 173.7W, H: 19 27 49.3, h 49 km. Mb 5.4, Ms 4.5. Andreanof Is., Aleutian Is.
23.	eL F HEE: eP	13	14	13 57 12 39 33.5							10.3N 125.3E, H: 12 25 52.1, h 39 km. Mb 5.7, Ms 5.1. Leyte, Philippine Islands.
23.	eL F	17	33	18 07							9.9N 126.3E, H: 16 40 34.0, h 46 km. Mb 5.2, Ms 4.9. Mindanao, Philippine Islands.
23.	eL F	22	54	23 03							19.3N 121.0E, H: 22 02 55.9, h 35 km, Mb 4.7. Philippine Islands Region.
24.	eL F	09	25	09.7							86.1N 32.0E, H: 09 08 39.4, h N. Mb 4.9, Ms 4.9. North of Svalbard.
24.	eL F	11	37	11 58							9.8N 126.6E, H: 10 41 10.5, h 45 km, Mb 5.6. Mindanao, Philippine Islands.
25.	ePKP ₂ eSS eL F	16	38	07 01.0 17 32 19.6		19		12.1	6.7		54.8S 145.8E, H: 16 17 28.3, h N. Mb 5.9, Ms 6.3. West of Macquarie Island.
25.	eL F	23	21	23 43							7.5N 126.8E, H: 22 26 31.6, h 94 km. Mb 5.2. Mindanao, Philippine Islands.
26.	eL F	10	36	11 27		22		2.7	5.7		10.2N 125.3E, H: 09 46 48.8, h N. Mb 5.4, Ms 5.3. Leyte, Philippine Islands.
26.	eL F	17	54	18 35							55.4S 146.3E, H: 16 27 47.2, h N. Mb 5.5, Ms 4.9. West of Macquarie Island.
27.	eL F	02	55.7	03 07							No determination of epicenter.
27.	eL F	05	20	05 36							13.3N 120.8E, H: 04 29 34.8, h N. Mb 4.9. Mindoro, Philippine Islands.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
27. SEP. 1973	HEE: iP i	07	06	04.5	+						70.8N 53.9E, H: 06 59 58.0, h 0 km. Mb 6.0, Ms 4.9. Novaya Zemlya. WIT: change of papers: 07:05-07:08 G.M.T.
27.	iP iS eL F WIT: eP HEE: iP i	12	33	44	+	20		5.3	4.9		71.5N 12.1W, H: 12 29 04.3, h N. Mb 5.1, Ms 5.6. Jan Mayen Island region.
28.	HEE: eP	11	41	33.0							13.2N 50.7E, H: 11 32 23.3, h N. Mb 5.5. Eastern Gulf of Aden.
29.	iP i iP iPP iPPP iS iS eSS eSSS eL F WIT: iP iP iS e e HEE: iP iP iS e	00	54	46	-	7	23.0				41.9N 130.9E, H: 00 44 00.8, h 575 km. Mb 6.5. North Korea.
30.	WIT: eP HEE: iP i	05	06	02.0							51.6N 54.6E, H: 04 59 57.5, h 0 km. Mb 5.2. Western Russia.
30.	eL F WIT: iP HEE: iP	06	59								35.6N 140.4E, H: 06 17 52.8, h 62 km. Mb 5.9. Near east coast of Honshu, Japan.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
OCT. 1973	eL F	05	51								6.4 N 124.0 E, H:04 56 33.5, h 67 km. Mb 4.9. Mindanao, Philippine Is- lands.
1.	eS eL F WIT: iP HEE: eP epP	14	39	16		20		3.9	5.8		35.7N 140.6E, H:14 16 23.0, h 56 km. Mb 5.6. Near east coast of Honshu, Japan.
1.	eL F	16	37								No determination of epicenter.
1.	eL F	20	29								15.3N 94.4W, H:19 41 55.4, h 61 km. Mb 4.9. Near coast of Oaxaca, Mexico.
2.	eL F WIT: iP HEE: eP	00	47								4.5S 151.5E, H:23 44 12.0, h 226 km. Mb 5.4. New Britain region.
2.	eL F	03	45								23.9N 121.6E, H:02 59 42.3, h 49 km. Mb 5.1, Ms 4.8. Taiwan.
2.	eL F	08	24								No determination of epicenter.
2.	eL F	21	45								10.5N 85.1W, H:21 05 05.3, h 88 km. Mb 5.1. Costa Rica.
3.	eL F	05	09								27.6N 112.4W, H:04 27 40.5, h 9 km. Mb 5.5, Ms 4.7. Baja California.
3.	eL F WIT: eP	11	18								45.5N 151.8E, H:10 35 51.3, h N. Mb 5.2, Ms 4.8. Kuril Islands.
3.	eL F	12	33								32.6S 179.1W, H:11 08 27.2, h 37 km. Mb 5.4, Ms 5.3. South of Kermadec Islands.
3.	WIT: iP HEE: iP	16	10	31.0							17.7S 176.9W, H:15 51 35.0, h 360 km. Mb 4.9. Fiji Islands region.
4.	WIT: eP HEE: iP i	18	18	24.5	+						21.1S 179.2W, H:17 59 48.3, h 638 km. Mb 5.0. Fiji Islands region.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
OCT. 1973											
5.	iP iPP iSKS iSPP eSS eSSS eL F	05 06 06 06 06 06 06 06	59 04 10 14 19 24.0 33 in next shock	53 20 40 48 40 40 33 in next shock	+	20			44.5 7.0		33.0S 71.9W, H:05 45 27.3, h 14 km. Mb 5.8, Ms 6.5. Near coast of central Chile.
5.	iP iPP iSPP eSS eL F	06 06 06 06 06 06	02 06 17 21.8 06.6 10.4	10 37 02 02 06 10.4	+						32.5S 71.5W, H: 05 47 51.1, h N. Mb 5.8, Ms 6.7. Near coast of central Chile.
5.	WIT: ePKP HEE: iPKP i	19 19 19	49 49 49	41.0 47.0+ 53.0							17.4S 172.8W, H:19 30 07.0; h N. Mb 5.0. Tonga Islands region.
5.	eL F	21 22	34 05								33.2S 72.1W, H:20 34 21.9, h 23 km. Mb 4.8. Off coast of central Chile.
6.	eL F	05 06	17 29								33.1S 72.1W, H:04 24 49.5, h 21 km. Mb. 5.0. Off coast of central Chile.
6.	eL F	07 07	45 57								31.7S 71.7W, H:06 43 37.5, h 46 km. Mb 5.0. Near coast of central Chile.
6.	eP iPP iPPP eSKS iSP iSS eSSS eL F WIT: ePKP e HEE: ePKP e	15 15 15 15 15 15 15 15 15 15 15 15 15 15	22 27 29 33 36 43 47.0 54 19.7 26 36 26 37	33 08 20 00 56 00 00 54 32 52 25 01	-	20			39.0 7.0		60.8S 21.5W, H:15 07 37.3, h N. Mb 6.2, Ms 7.0. Southwestern Atlantic Ocean.
6.	eS eL F WIT: eP HEE: eP	21 21 21 21 21	29.2 33 44 25 24	06 51.5							34.9N 26.3E, H:21 19 58.2, h 33 km. Mb 4.4. Crete.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
OCT. 1973											
7.	HEE: ePKP	07	56	21.5							16.0S 172.8W, H:07 36 45.1, h N. Mb 4.9. Samoa Islands region.
7.	eL F WIT: eP e HEE: eP	10 10 09 09 09	09 51 39 39 39	21.5 07.0 09.5 16.0							42.3N 146.6E, H:09 27 02.2, h 27 km. Mb 5.2, Ms 4.7. Off coast of Hokkaido, Japan.
7.	eL F	12 12	03 15								16.2N 122.2E, H:11 11 26.2, h 78 km. Mb 4.8. Luzon, Philippine Islands.
7.	eL F	13 13	13 40								16.3N 122.3E, H:12 20 37.2, h N. Mb 5.0. Luzon, Philippine Islands.
8.	WIT: ePKP HEE: iPKP epPKP	04 04 04	04 04 06	46.5 51.5 58.0							17.8S 178.3W, H:03 46 09.0, h 544 km. Mb 5.4. Fiji Islands region.
9.	eL F	02 03	34 17		20		2.5		5.7		16.3N 122.4E, H:01 44 57.5, h N. Mb 5.2, Ms 5.1. Luzon, Philippine Islands.
9.	ePKP ePP eL F HEE: ePKP	08 08 08 08 08	17 20 09.0 10.6 17	03 04 10.6 16.0		22			11.8 6.6		14.2S 167.2E, H:07 57 31.0, h 9 km. Mb 5.8, Ms 6.4. New Hebrides Islands.
9.	eL F WIT: eP	19 19 19	31 47 15	45.0							7.4N 35.2W, H:19 06 02.0, h N. Mb 4.9. Central Mid-Atlantic Ridge.
9.	HEE: e	23	02.5								B.C.I.S: 49.2N 68E, H:23 01 52, N.E. France.
11.	HEE: iP	00	13	51.0 +							29.7N 113.5W, H:00 01 24.1, h N. Mb 5.0. Gulf of California.
11.	iP i iPP iPPP iS iSS eLQ eLR F WIT: iP HEE: iP	02 02 02 02 02 02 02 02 02 02 02 02	17 17 20 21 26 29 32.6 34.9 05.2 17 17	52 58 04 36 04 20 34.9 - 47.5 -	- - - - - - - - - - -	6		4.1			06N 29.5W, H:02 07 52.7, h N. Mb 5.8, Ms 6.3. Central Mid-Atlantic Ridge.
						22		28.5	6.4		

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
11. OCT. 1973	eL F	10	55								ISC: 4°61S 134°03E, H: 09 53 35.0, h 33 km. West Irian.
11.	eL F	19	18								34.9N 141.6E, H:18 32 35.4, h 52 km. Mb 4.6. Off east coast of Honshu, Japan.
11.	WIT:ePKP HEE:iPKP e	21	38	15.5							18.3S 178.1W, H:21 19 42.8, h 619 km. Mb 5.1. Fiji Islands region.
12.	eS eL F HEE:eP	03	13	00							37.7N 72.0E, H:02 54 07.7, h 11 km. Mb 5.3, Ms 4.6. Tadzhik SSR.
12.	eL F	06	27								43.7N 127.5W, H:05 54 27.7, h 6 km. Mb 5.4, Ms 5.2. Off coast of Oregon.
12.	eL F	18	52								16.0S 74.0W, H:18 04 29.3, h 47 km. Mb 5.3, Ms 4.6. Near coast of Peru.
12.	WIT:ePKP	23	56	31.5 +							17.6S 179.2W, H:23 37 59.9, h 588 km. Mb 4.8. Fiji Islands region.
13.	eL F WIT:iP HEE:iP	02	29								29.6N 113.6W, H:01 43 47.2, h 15 km. Mb 5.2. Gulf of California.
13.	WIT:eP	16	36	21.0							41.9N 142.3E, H:16 24 27.3, h 71 km. Mb 4.9. Hokkaido, Japan region.
13.	eL F WIT:eP	21	37								4.8N 32.6W, H:21 10 49.3, h N. Mb 5.4. Central Mid-Atlantic Ridge.
13.	eL F	22	57								5.0N 32.6W, H:22 30 47.9, h N. Mb 4.9. Central Mid-Atlantic Ridge.
14.	eL F	01	22								4.7N 32.6W, H:00 55 39.0, h N. Mb 4.9, Ms 4.6. Central Mid-Atlantic Ridge.
14.	eL F WIT:eP HEE:eP	06	38								58.6N 31.9W, H:06 26 54.4, h N. Mb 4.5. North Atlantic Ridge.
14.	eL F	10	22								5.1N 32.7W, H:09 56 14.8, h N. Mb 5.0. Central Mid-Atlantic Ridge.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
14. OCT. 1973	eS eL F WIT:eP HEE:eP	18	16	24							34.8N 26.2E, H:18 07 05.7, h 45 km. Mb 4.8. Crete.
14.	eP eS eL F WIT:eP HEE:iP i	22	15	10							85.0N 99.5E, H:22 07 46.8, h N. Mb 5.2, Ms 5.3. North of Severnaya Zemlya.
14.	eL F	23	10								6.4S 154.9E, H:22 06 50.4, h 60 km. Mb 5.4. Solomon Islands.
15.	eL F	07	45								32.7S 179.7W, H:06 24 35.9, h N. Mb 5.1, Ms 5.0. South of Kermadec Islands.
17.	iP isP iPP isPP iS isS eSS F WIT:iP e ipP HEE:eP ipP i	03	24	38	+ 6		1.9				36.4N 71.2E, H:03 16 18.6, h 221 km. Mb 5.5. Afghanistan-USSR border region.
18.	eP eL F WIT:eP HEE:iP	01	21	22							9.2N 84.0W, H:01 09 04.8, h 41 km. Mb 5.3, Ms 5.1. Costa Rica.
18.	iP eS eL F WIT:eP HEE:iP i	11	02	16		8	2.7				19.4N 105.0W, H:10 49 37.5, h 45 km. Mb 6.0, Ms 5.5. Near coast of Jalisco, Mexico.
20.	WIT:iPKP	20	11	45.9 -							21.7S 179.4W, H:19 53 05.5, h 614 km. Mb 5.4. Fiji Islands region.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
OCT. 1973											
23.	WIT:eP	10	54	23.5							45.7N 26.5E, H:10 50 58.6, h 174 km. Mb 4.9. Rumania.
23.	eL F	10 11.4	59								18.1N 106.1W, H:10 14 15.9, h N. Mb 5.2. Off coast of Jalisco, Mexico.
23.	eL F	22 22.6	11								17.9N 106.2W, H:21 28 26.2, h N. Mb 5.0, Ms 5.1. Off coast of Jalisco, Mexico.
24.	HEE:ePKP	03	27	59.0							16.8S 177.1W, H:03 08 19.2, h N. Mb 5.0. Fiji Islands region.
24.	HEE:iP	05	33	05.5							33.1N 75.9E, H:05 23 51.0, h N. Mb 5.4. Eastern Kashmir.
25.	HEE:e	02	13	49.0							No determination of epicenter.
25.	eSKS eSS eL F	07 07 07 08.4	04 12.0 30	56	20			5.3	6.0		13.8N 120.2E, H:06 41 11.3, h 63 km. Mb 5.6. Mindoro, Philippine Islands.
25.	HEE:eP iP ipP iSKS iSP ipSP iSS iSSS F WIT:iP ipP HEE:iP ipP	06 14 14 14 14 14 14 14 16.2 14 14 14 14 14	54 21 23 31 33 36 38 41	28.5 26 22 13 10 30 30 37	- 5 +				2.2		22.0S 63.7W, H:14 08 59.5, h 529 km. Mb 6.1. Salta Province, Argentina.
26.	WIT:iP HEE:iP	04 04	35 35	01.9 12.0	+						49.8N 78.2E, H:04 26 57.7, h 0 km. Mb 5.3, Ms 4.4. Eastern Kazakh SSR.
26.	eL F	11 12	54 24								17.8N 106.1W, H:11 10 28.7, h N. Mb 5.3, Ms 5.1. Off coast of Jalisco, Mexico.
27.	iP iS eL F WIT:iP HEE:iP	07 07 07 09.0 07 07	05 10 13.5	59.0 48 13.5 09.0 48.6 05.0	+	3			30.0		70.8N 54.2E, H:06 59 57.4, h 0 km. Mb 6.9, Ms 5.5. Novaya Zemlya.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
OCT. 1973											
27.	WIT:i HEE:i	07 07	38 38	17.5 08.5	- -						No determination of epicenter.
27.	HEE:ePKP	08	13	16.0							18.0S 169.1E, H:07 53 38.2, h 29 km. Mb 5.3. New Hebrides Islands.
27.	eL F	22 23	58 11								57.8S 25.6W, H:22 03 02.3, h 97 km. Mb 5.2. South Sandwich Islands region.
28.	HEE:e(L)	04	00	26.0							48.4N 17.1E, H:03 56 15.4, h 2 km. Czechoslovakia.
28.	eL F	10 10	12 17								66.6N 19.9W, H:10 01 54.1, h N. Mb 4.5. Iceland region.
28.	eL F	10 10	22.5 32								No determination of epicenter.
28.	eL F	10 10	53.0								66.7N 19.7W, H:10 42 50.6, h N. Mb 4.4. Iceland region.
28.	eL F	10 11	58.5 13								66.7N 19.3W, H:10 48 23.0, h N. Mb 4.3. Iceland region.
28.	eL F HEE:eP	11 11 11	22.0 35 16	37.0							67.0N 19.3W, H:11 12 02.5, h N. Mb 4.7, Ms 3.9. Iceland region,
28.	iP eL F HEE:eP	11 11 11 11	36 41.0	08 -	(-)	20			3.2		66.9N 19.2W, H:11 31 44.1, h N. Mb 5.0, Ms 4.4. Iceland region.
28.	eL F HEE:eP	11 11 11	57.0								66.8N 19.3W, H:11 47 37.6, h N. Mb 4.7. Iceland region.
28.	eL F	12 12	11.5 25								67.3N 19.0W, H:12 01 47.8, h N. Mb 4.4. Iceland region.
28.	eL F HEE:eP	14 14 14	35.3 54 30	30.0		20			1.8		66.9N 19.5W, H:14 25 54.3, h N. Mb 4.5, Ms 4.0. Iceland region.
29.	eL F	02 02	25 35								ISC: 67°1N 19°W, H: 02 14 41, h 0 km. Iceland Region.
29.	eL F	06 07	23 13								3.0S 139.3E, H:05 27 25.5, h 36 km. Mb 5.7, Ms 5.5. WestNew Guinea.
29.	eL F	16 17	43 01								19.2N 121.1E, H:15 53 07.9, h 50 km. Mb. 4.7. Philippine Islands region,
31.	HEE:e	02	55	22.0							No determination of epicenter
31.	WIT:eP	23	18	58.0							42.8N 145.3E, H:23 07 01.6 h 54 km. Mb 5.1. Hokkaido, Japan region.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
NOV. 1973	1. eL	08	00								24.2S 176.4W, H: 06 38 54.1, h 35 km. Mb 5.7, Ms 5.3. South of Fiji Islands.
	F	09.4									
	WIT:iPKP	06	58	46.4	-						
	e	06	59	00.0							
	HEE:iPKP	06	58	50.5	-						
	i	06	59	01.5							
1.	eL	13	26								ISC: 38°4N 28°4W, H: 13 12 55 h 0 km, Mb 4.2. Azores.
	F	13	30								
2.	eL	06	03								32.7N 48.2E, H: 05 46 37.6, h 55 km. Mb 4.9. Western Iran.
	F			in next shock							
2.	eL	06	14								32.6N 48.2E, H: 05 57 33.0, h 59 km. Mb 4.9. Western Iran.
	F	06	44								
2.	eL	08	05								54.1N 125.8E, H: 07 31 33.5, hN. Mb 4.9, Ms 5.1. Eastern Russia.
	F	08	50								
3.	WIT:iP	00	31	05.1	+						54.6N 161.4E, H: 00 19 51.5, h 61 km. Mb 5.3. Near east coast of Kamchatka.
	HEE:iP	00	31	15.5	+						
3.	eL	02	25								7.3N 74.3W, H: 01 46 05.3, h 18 km. Mb 5.0. Northern Colombia
	F	02	39								
	WIT:eP	01	58	09.0							
	HEE:eP	01	58	06.0							
3.	eSSS	08	54.0								9.9N 57.9E, H: 08 29 35.3, hN. Mb 5.1, Ms 5.4. Carlsberg Ridge.
	eL	09.0									
	F	09	31								
	WIT:eP	08	39	38.5	-						
	HEE:eP	08	39	33							
3.	iP	14	31	24							26.1S 67.8W, H: 14 17 41.8, h 36 km. Mb 5.9, Ms 5.8. Catamarca Province, Argentina.
	iPP	14	35	31							
	eSKS	14	42	12							
	ePS	14	44	39							
	eSS	14	50.0								
	eSSS	14	54.0								
	eL	15	04		18			3.0	5.8		
	F	17.1									

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
NOV. 1973	4. WIT:eP	13	12	40.5							53.9N 141.4E, H: 13 01 45.2, hN. Mb 5.1. Sakhalin Island.
	HEE:eP	13	12	50							
4.	eSKS	15	03.4								25.9S 67.7W, H: 14 38 51.8, hN. Mb 5.3, Ms 5.4. Catamarca Province, Argentina.
	eL	15	25								
	F			in next shock							
4.	iP	15	56	14	+	4	4.1				38.9N 20.4E, H: 15 52 11.7, h 8 km. Mb 5.8, Ms 5.5. Greece
	iS	15	59	37							
	eL	16	01.3			16		49.0	5.8		
	F	17	28								
	WIT:iP	15	56	11.7	(-)						
	eL	16	01.5								
	HEE:iP	15	55	56.0	-						
	i	15	56	02.0							
	eL	16	01.5								
4.	HEE:eP	16	15	26.0							39.1N 20.5E, H: 16 11 36.0, h 6 km. Mb 5.0. Greece-Albania border region.
5.	eL	08	48.5								41.7N 13.8E, H: 08 40 46.7, hN. Mb 4.0. Southern Italy.
	F	08	52								
6.	WIT:iPKP	05	38	09.5							d.b.m. 23.8S 179.1E, H: 05 19 18.3, h 546 km. Mb 5.5. South of Fiji Islands.
	HEE:iPKP	05	38	13.5	(+)						
	i	05	38	26.5	+						
6.	iP	09	47	56	+						d.b.m. 51.6N 175.4W, H: 09 36 05.0, h 34 km. Mb 5.8, Ms 6.4. Andreanof Is., Aleutian Is.
	iS	09	57	48							
	iPS	09	58	33							
	iSS	10	02	52							
	eSSS	10	06.2								
	eL	10	12.7			20		14.0	6.3		
	F			in next shock							
	WIT:eP	09	47	55							
	HEE:eP	09	48	04.0							
6.	eL	11.9									No determination of epicenter.
	F	12.9									

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
NOV. 1973	6.	iP	18	38	24	+					d.b.m. 51.6N 175.2W, H: 18 26 35.1, h 41 km. Mb 5.9, Ms 6.3. Andreanof Is., Aleutian Is.
	iS	18	48	06							
	iSS	18	53	19							
	eSSS	18	56.5								
	eL	19	03.0		20		21.0		6.5		
	F	21.3									
	WIT:eP	18	38	20							
	HEE:eP	18	38	30.0							
	7.	eL	08	24							5.9S 153.6E, H: 07 18 39.8, hN. Mb 5.1, Ms 5.0. New Ireland region
	F	08	52								
8.	iP	09	10	54	+					50.1N 156.3E, H: 08 59 10.0, hN. Mb 6.0, Ms 6.1. Kuril Islands	
	iS	09	20	28							
	iSS	09	25	32							
	eL	09	32		20		17.8		6.3		
	F	11.2									
	WIT:iP	09	10	46.5	+						
HEE:iP	09	10	57.5								
8.	HEE:eP	13	30	45.5						18.1N 99.7W, H: 13 18 12.0, h 71 km. Mb 5.3. Guerrero, Mexico.	
9.	eL	13	58							86.1N 32.7E, H: 13 42 43.7, hN. Mb 5.3, Ms 5.1. North of Svalbard.	
	F	14.4									
	HEE:eP	13	49	41.0							
9.	eL	15	26							86.0N 31.3E, H: 15 09 36.1, hN. Mb 5.2, Ms 5.0. North of Svalbard.	
	F	15.6									
HEE:eP	15	16	34.0								
9.	HEE:iP	22	54	31.0						4.0S 81.0W, H: 22 41 27.7, h 31 km. Mb 5.6. Near coast of northern Peru.	
10.	HEE:iPKP	09	40	54.0						19.1S 167.4E, H: 09 21 16.6, h 12 km. Mb 5.4. New Hebrides Islands region.	
	i	09	41	05.0							
11.	iP	02	54	46						50.0N 156.4E, H: 02 43 06.2, h 51 km. Mb 6.0. Kuril Islands	
	eS	03	04	25							
	eL	03	20		20		7.1	6.0			
	F	04	12								
	WIT:eP	02	54	41.5							
	i	02	54	48.7	-						
	HEE:iP	02	54	50.5	+						

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
NOV. 1973	11.	eS	07	28	48						30.6N 52.9E, H: 07 14 51.5, h 11 km. Mb 5.5. Iran.
	eL	07	35								
	F	08	19								
	HEE:iP	07	22	29.0	-						
	11.	WIT:iPKP	10	21	31.5						18.1S 178.4W, H: 10 02 56.7, h 583 km. Mb 4.6. Fiji Islands region.
	HEE:iPKP	10	21	36.0							
	11.	WIT:iPKP	17	12	57.0						22.1S 179.5W, H: 16 54 11.6, h 568 km. Mb 5.1. South of Fiji Islands.
	HEE:ePKP	17	13	01.0							
	11.	WIT:iPKP	22	14	25.7						19.9S 176.5W, H: 21 55 13.1, h 274 km. Mb 5.4. Fiji Islands region.
	HEE:iPKP	22	14	30.0	-						
	12.	eL	00	19.5							35.5N 27.7E, H: 00 07 13.3, h 69 km. Mb 4.7. Dodecanese Islands.
	F	in next shock									
	HEE:eP	00	12	06.0							
	12.	eL	00	24.5		20		8.9	5.2		35.6N 27.7E, H: 00 11 52.3, hN. Mb 5.1. Dodecanese Islands.
	F	00	55								
HEE:eP	00	16	38.0								
e	00	16	48.0								
i	00	17	05.0								
12.	eL	04	51							6.2S 154.5E, H: 03 53 44.0, h 50 km. Mb 5.6, Ms 5.9. Solomon Islands.	
F	06.2										
13.	WIT:iPKP	16	29	35.3	-					18.3S 178.1W, H: 16 10 58.9, h 571 km. Mb 5.6. Fiji Islands region.	
HEE:iPKP	16	29	40.5	-							
13.	WIT:iPKP	22	50	02.6	-					17.7S 178.7W, H: 22 31 26.3, h 554 km. Mb 5.1. Fiji Islands region.	
HEE:iPKP	22	50	08.0	-							
15.	eL	03	06.7							ISC: 56°9N 34°4W, H: 02 57 22, h 0 km, Mb 4.5. North Atlantic Ocean.	
F	03	17									
15.	iS	06	23	35						1.4S 15.9W, H: 06 05 57.4, hN. Mb 5.2, Ms 4.9. North of Ascension Island.	
eL	06	33									
F	07.1										

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
NOV. 1973											
15.	eL F HEE:iP	15	36								1.4S 15.8W, H: 15 06 35.5, hN. Mb 5.5, Ms 5.0. North of Ascension Island.
17.	eL F	00	25								51.2S 139.5E, H: 23 08 49.0, hN. Mb 5.4, Ms 5.8. South of Australia.
17.	eP eL F HEE:eP	11	03	08							1.6S 69.8E, H: 10 51 21.8, hN. Mb 5.5, Ms 5.5. Carlsberg Ridge.
18.	eL F	09	27								15.9N 119.2E, H: 08 38 26.5, hN. Mb 4.9. Luzon, Philippine Islands.
18.	WIT:iP	12	19	30.3	+						44.5N 148.8E, H: 12 07 35.8, h 50 km. Mb 5.1. Kuril Islands.
19.	eL F HEE:eP	12	13								d.b.m. 24.7S 64.6W, H: 11 19 35.1, h 40 km. Mb 5.8, Ms 5.9. Salta Province, Argentina.
19.	iP iPP eL F WIT:iP HEE:iP	13	14	11	+	19	52.0		6.8		d.b.m. 38.9N 141.9E, H: 13 01 56.1, h 56 km. Mb 6.1. Near east coast of Honshu, Japan.
19.	eL F	19	35								d.b.m. 28.5S 70.9W, H: 18 40 05.2, h 58 km. Mb 5.7. Central Chile.
19.	eL F	21	58								d.b.m. 38.9N 141.9E, H: 21 11 17.1, h 60 km. Mb 5.1. Near east coast of Honshu, Japan.
20.	eL F	13	12.6			14	7.4		5.0		39.4N 24.0E, H: 13 02 36.8, hN. Mb 4.8. Aegean Sea.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
NOV. 1973											
20.	eL F WIT:eP HEE:eP	17	38								52.5N 160.9E, H: 16 57 38.6, hN. Mb 5.0, Ms 4.9. Off east coast of Kamchatka.
21.	iP ipP eS eSSS eL F	13	43	55	+						14.5N 92.7W, H: 13 31 32.1, h 59 km. Mb 5.3. Near coast of Chiapas, Mexico.
21.	WIT:iPKP HEE:iPKP	15	20	28.8	-						20.1S 178.4W, H: 15 01 52.6, h 617 km. Mb 5.1. Fiji Islands region.
21.	eL F	20	16.5			20	3.5		5.5		34.7N 81.0E, H: 19 47 56.3, h 26 km. Mb 5.0, Ms 5.2. Tibet.
21.	eL F WIT:iP HEE:iP	21	44								46.1N 151.4E, H: 21 05 20.4, h 84 km. Mb 5.6. Kuril Islands.
23.	iP iS eL F WIT:eP HEE:iP	13	42	12		20			7.8	5.3	38.5N 28.3W, H: 13 36 19.3, h 5 km. Mb 5.0, Ms 5.1. Azores Islands. One killed.
23.	eL F	21	16								45.0S 80.3W, H: 20 15 30.4, hN. Mb 5.3, Ms 5.1. Off coast of southern Chile.
24.	eL F	00	26.0								38.9N 77.6E, H: 23 58 18.7, h N, Mb 4.5. Southern Sinkiang Province, China.
24.	eL F HEE:e(P)	14	14			18			6.8	4.8	d.b.m. 36.1N 4.4E, H: 14 05 46.4, h 17 km. Mb 5.1, Ms 5.1. Algeria. 4 Killed.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
NOV. 1973											
25.	eL F HEE:e(P)	04	28.5								36.2N 4.5E, H: 04 20 22.5, h N. Mb 4.9, Ms 4.4. Algeria.
25.	eL F HEE:ipP	05	09								33.8N 135.5E, H: 04 24 47.3, h 51 km. Mb 5.7. Near south coast of southern Honshu, Japan.
25.	WIT:eP HEE:ipP ipP	09	31	29.0							33.8N 135.4E, H: 09 19 14.6, h 56 km. Mb 5.7. Near south coast of southern Honshu, Japan.
25.	eL F	18	04								55.7S 28.3W, H: 17 11 19.0, hN. Mb 5.7, Ms 5.9. South Sandwich Islands region
27.	eL F WIT:ipP HEE:ipP	14	32								53.6N 160.5E, H: 13 52 29.6, h 60 km. Mb 5.9. Near east coast of Kamchatka.
28.	WIT:ePKP HEE:ePKP	01	09	45.0							20.6S 177.8W, H: 00 50 49.5, h 443 km. Mb 4.8. Fiji Islands region.
28.	ipP eSKS iPS iPPS eSS eL F	08	30	20		20	6.1	6.1			41.9S 42.8E, H: 08 12 31.4, hN. Mb 5.7, Ms 5.9. Prince Edward Islands region.
28.	eL F	10	29								No determination of epicenter
29.	eL F	01	28								3.5S 145.9E, H: 00 29 56.4, hN. Mb 5.1, Ms 5.7. Near north coast of New Guinea.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
NOV. 1973											
29.	ip iZ is eL F WIT:ipP HEE:ipP	11	02	34		19	48.5		5.9		35.2N 23.8E, H: 10 57 42.7, h 26 km. Mb 5.7, Ms 5.6. Crete.
29.	eL F	13	06								55.7S 28.3W, H: 12 07 34.0, h 4 km. Mb 5.8, Ms 5.7. South Sandwich Islands region
29.	WIT:eP HEE:eP	18	09	48.5							53.3N 153.4E, H: 17 59 21.3, h 491 km. Mb 5.2. Sea of Okhotsk.
29.	eL F	18	15								44.3S 81.7W, H: 17 07 29.4, hN. Mb 5.3. West Chile Rise.
30.	ipKP ipPKP isPKP iPP iZ eL F WIT:ePKP HEE:ipKP	08	29	04	+	8	5.5				15.2S 167.4E, H: 08 09 55.4, h 124 km. Mb 6.0. New Hebrides Islands.
30.	HEE:i	21	37	02.0							No determination of epicenter.

Seismological Data

Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

Date DEC. 1973	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
1.	eL F	01	14							59.2S 25.6W, H: 00 19 26.9, h 32 km. Mb 5.4, Ms 5.2. South Sandwich Islands region	
1.	eP eL F WIT:eP	10	50	56		20		2.8	5.6	43.0N 146.1E, H: 10 38 51.0, h 36 km. Mb 5.4, Ms 5.3. Kuril Islands.	
1.	eL F	17	57			20		3.2	5.9	35.6S 74.5W, H: 17 00 56.2, h 35 km. Mb 5.8, Ms 5.9. Off coast of central Chile.	
1.	eL F	22	11							1.9S 134.2E, H: 21 18 24.0, h 20 km. Mb 5.1, Ms 5.2. West New Guinea region.	
1.	WIT:eP HEE:eP e	23	28	54.5						43.1N 146.9E, H: 23 16 54.8, h 31 km. Mb 5.3, Ms 5.9. Kuril Islands.	
1.	iP i iS iSP eL F WIT:iP HEE:iP	23	30	08	+	6	2.0			43.2N 146.9E, H: 23 18 03.9, h 40 km. Mb 5.8, Ms 5.9. Kuril Islands	
		23	40	08	+						
		23	40	44		20		19.0	6.4		
		23	54								
		02.2									
		23	30	02.6	+						
		23	30	11.5	+						
2.	eL F	05	05							55.6S 28.1W, H: 04 08 01.8, hN. Mb 5.3, Ms 5.3. South Sandwich Islands region	
		05	32								
2.	WIT:iPKP ₁ HEE:iPKP ₂	13	22	26.7						24.4S 179.9W, H: 13 03 26.3, h 464 km. Mb 5.0. South of Fiji Islands.	
		13	22	44.5	-						
2.	eL F	19	12							55.7S 28.2W, H: 18 19 46.3, hN. Mb 5.4, Ms 5.5. South Sandwich Islands region	
		20	00								

Seismological Data

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		h	m	s			Z	NS	EW		
2.	eL F WIT:iP HEE:iP	22	51							52.3N 168.7W, H: 22 09 54.5, h 40 km. Mb 5.6, Ms 5.0. Fox Islands, Aleution Is.	
		23.7									
		22	21	35.9							
		22	21	44.5	+						
4.	eL F	16	41							16.5S 167.1E, H: 15 30 39.1, h 9 km. Mb 5.3. New Hebrides Islands.	
		17.8									
5.	eS eL F WIT:eP HEE:iP iP	03	59	56						35.4N 26.4E, H: 03 50 51.4, h 80 km. Mb 5.1. Crete.	
		04	03.4								
		04	11								
		03	55	42.5							
		03	55	34.0	+						
		03	55	50.0							
5.	eL F	04	41							14.7N 91.8W, H: 04 01 50.3, h 115 km, Mb 4.9. Guatemala.	
		04	54								
5.	WIT:iPn HEE:iPn i iSn	14	58	38.7	-					51.5N 7.1E, H: 14 58 12.7, h 0 km. Rockburst. Germany.	
		14	58	34.0	-						
		14	58	36.5	-						
		14	58	51.0	-						
5.	eS eL F WIT:eP HEE:eP	18	06	20						52.5N 31.6W, H: 17 57 11.3, hN. Mb 4.8. North Atlantic Ridge.	
		18	08.5								
		18	16								
		18	02	14.0							
		18	02	16.0							
8.	eL F	06	58							d.b.m.0.2S 98.4E, H:06 10 03.5, hN. Mb 5.7, Ms 5.6. Southern Sumatra.	
		07.7									
9.	iPKP i iPP iSS eSSS eL F WIT:ePKP i i HEE:ePKP	20	15	20						19.9S 169.8E, H: 19 55 45.6, h 39 km. Mb 6.2, Ms 6.8. New Hebrides Islands.	
		20	15	26	-						
		20	18	52							
		20	37	53							
		20	43	30							
		20	58			23		20.0	6.9		
		24.0									
		20	15	18.0							
		20	15	24.5							
		20	15	36.0							
		20	15	22.0							

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Date DEC. 1973	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
9.	WIT:ePKP HEE:iPKP	21	17	32.5	-						19.8S 169.9E, H: 20 57 57.8, h 34 km. Mb 5.9, Ms 6.3. New Hebrides Islands.
10.	WIT:iP epP HEE:iP epP	19	40	44.1							1.4S 77.7W, H: 19 28 13.2, h 181 km. Mb 5.3. Ecuador.
11.	eL F WIT:iP HEE:eP	00	23.0			20			3.5	5.0	38.7N 28.7W, H: 00 10 09.2 hN. Mb 5.0, Ms 5.0. Azores Islands
11.	eL F	03	26								13.7N 146.4E, H: 02 36 38.9, h 46 km. Mb 5.5, Ms 5.4. South of Mariana Islands.
12.	HEE:iPn eSn e	00	04	18.5							47.2N 14.1E, H: 00 02 38.1, h 5 km. Mb 4.1. Austria.
12.	eL F	04	14								23.3N 126.3E, H: 03 24 22.4, h 67 km. Mb 4.9. Ryukyu Islands region.
13.	WIT:eL HEE:eL	18	14.3								43.2N 0.4W, H: 08 08 39.3, h 5 km. Mb 4.4. Pyrenees, France.
14.	HEE:iP	07	55	13.5							d.b.m.50.0N 79.0E, H: 07 46 57.0, h 0 km. Mb 6.0, Ms 4.4. Eastern Kazakh SSR.
14.	eL F WIT:iP HEE:iP	18	15								d.b.m.51.4N 177.9W, H: 17 37 35.4, h 53 km. Mb 5.8. Andreanof Is., Aleutian Is.
15.	HEE:i e(L)	03	58	30.0							No determination of epicenter.
15.	WIT:iPKP HEE:iPKP i	11	13	34.5							21.6S 175.2E, H: 10 54 52.1, h 567 km. Mb 5.3. South of Fiji Islands.

Seismological Data

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Date DEC. 1973	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms	
		h	m	s			Z	NS	EW			
15.	HEE:eP	23	40	54.5							74.3N 147.1E, H: 23 31 44.3, hN. Mb 5.0. New Siberian Islands.	
17.	eL F WIT:eP HEE:iP	22	33								48.1N 154.5E, H: 21 54 02.5, hN. Mb 5.6, Ms 5.3. Kuril Islands.	
19.	iPP iSP iSPP eL F HEE:ePKP	05	02	32		24				8.2	6.3	9.4S 119.5E, H: 04 43 01.5, h 58 km. Mb 6.0. Sumba Island region.
19.	iPKP eSS F WIT:iPKP HEE:iPKP	13	15	14								20.6S 176.5W, H: 12 55 57.1, h 246 km. Mb 5.8. Fiji Islands region.
20.	WIT:eP HEE:iP	17	47	48.5								38.8N 14.8E, H: 17 44 25.8, h 272 km. Mb 5.1. Sicily region.
21.	WIT:iPKP HEE:ePKP	17	12	13.4								20.5S 178.8W, H: 16 53 34.8, h 606 km. Mb 5.0., Fiji Islands region.
21.	eL F	19	53									40.6N 124.6W, H: 19 12 43.5, h 30 km. Mb 5.2, Ms 4.9. Near coast of northern California.
22.	eL F HEE:ePKP	15	34									14.8S 173.2E, H: 14 19 04.1, hN. Mb 5.4, Ms 5.3. Fiji Islands region.
23.	eL F	19	49									56.3S 139.0W, H: 18 31 32.6, hN. Ms 5.7. South Pacific Cordillera.

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
DEC. 1973	WIT:iPKP	08	33	53.5	-						19.1S 174.9W, H: 08 14 25.1, h 121 km. Mb 5.7. Tonga Islands.
	epPKP	08	34	22.5							
	HEE:iPKP	08	33	58.5	-						
	epPKP	08	34	25							
24.	eL	14	06	8							35.0N 27.8E, H: 13 53 50.9, hN. Mb 4.3. Dodecanese Islands.
	F	14	15								
24.	eL	19	09								12.6S 77.7W, H: 18 18 10.2, hN. Mb 5.4. Near coast of Peru.
	F	19	30								
HEE:iP		18	31	34.0							
24.	WIT:eP	20	27	39.5							34.7N 24.6E, H: 20 22 45.4, h 37 km. Mb 4.9, Ms 5.2. Crete.
	HEE:eP	20	27	28.5	+						
24.	eL	21	03	4							22.6N 45.1W, H: 20 41 37.3, hN. Mb 4.9. North Atlantic Ridge.
	F	21	31								
	WIT:eP	20	50	27.5							
	HEE:eP	20	50	19.0							
24.	eL	21	36	5							24.3N 121.0E, H: 20 50 08.0, h 24 km, Mb 4.8. Taiwan.
	F	21	59								
26.	eL	00	58								61.4S 153.7E, H: 23 25 56.5, h N. Balleny Islands Region.
	F	01	32								
26.	eL	21	15								33.4N 140.8E, H: 20 30 06.4, h 63 km. Mb 5.6. South of Honshu, Japan.
	F	21	51								
	WIT:eP	20	42	38.0							
	ipP	20	42	54.0							
HEE:eP	20	42	46.0								
27.	eL	06	44								13.9N 146.4E, H: 05 48 42.2, h 54 km. Mb 5.1. South of Mariana Islands.
	F	07	16								

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
DEC. 1973	iPKP	05	49	54	+	6	5.2				23.9S 180.0E, H: 05 31 06.4, h 549 km. Mb 6.4. South of Fiji Islands.
	ipPKP	05	51	58	-						
	ipp	05	53	04							
	iss	06	12	32							
	eL	06	12	32							
	F	07	07								
	WIT:ePKP	05	49	50.5	+						
	i	05	49	58.7	+						
	ipPKP	05	52	00.5							
	HEE:iPKP	05	49	54.5	+						
	i	05	50	02.5	+						
i	05	50	16.0								
epPKP	05	51	54								
28.	iPKP	14	01	05	+	8	3.5				14.5S 166.6E, H: 13 41 45.9, h 26 km. Mb 6.4, Ms 7.5. New Hebrides Islands.
	i	14	01	36	+						
	iSKP	14	04	36							
	ippP	14	07	28							
	iSKKS	14	10	48							
	eSS	14	22	0							
	eL	14	52			20	92.5		7.6		
	F	19	5								
	WIT:ePKP	14	01	11.0							
	i	14	01	13.9	+						
	i	14	01	18.9	+						
iSKP	14	04	55.5								
HEE:ePKP	14	01	13.5								
i	14	01	16.5	+							
i	14	01	41.0								
iSKP	14	04	57.5								
i	14	05	30.0								
28.	WIT:iPKP	14	38	22.5							14.7S 166.5E, H: 14 18 52.0, hN. Mb 5.6. New Hebrides Islands.
	e	14	38	36.0							
28.	WIT:ePKP	15	27	45.0							14.5S 166.5E, H: 15 08 12.6, hN. Mb 5.5. New Hebrides Islands.
28.	HEE:ePKP	21	25	03.0							14.4S 166.7E, H: 21 05 36.7, h 50 km. Mb 5.6. New Hebrides Islands.
28.	eL	23	59								18.9N 146.9E, H: 23 13 29.0, h 45 km, Mb 5.2, Ms 5.3. Mariana Islands.
F		in next shock									

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms		
		h	m	s			Z	NS	EW				
29.	iPKP	00	38	44	+	8	3.5			15.1S 166.9E, H: 00 19 31.1, h 47 km. Mb 6.2, Ms 7.2. New Hebrides Islands.			
	iPP	00	41	43									
	iSPP	00	54	10									
	eSS	01	00	24									
	eSSS	01	05.5										
	eL	01.5									24	62.0	7.3
	F	04.2											
	WIT:ePKP	00	38	47.0									
	i	00	38	53.7							-		
	ipPKP	00	38	59.0							+		
	i	00	39	04.8							-		
	iSKP	00	42	43.3									
	HEE:iPKP	00	38	53.5							+		
29.	WIT:iPKP	03	10	04.5	+					18.2S 178.2W, H: 02 51 33.7, h 625 km. Mb 4.6. Fiji Islands region.			
	HEE:iPKP	03	10	10.5	+								
29.	WIT:ePKP	07	03	51.5						14.9S 166.5E, H: 06 44 18.9, hN. Mb 5.8, Ms 5.3. New Hebrides Islands.			
29.	iP	08	31	44	-	20	8.9	6.1		54.6N 168.7E, H: 08 20 16.2, hN. Mb 5.5, Ms 6.0. Komandorsky Islands region.			
	iS	08	41	12									
	eL	08	55										
	F	11.5											
	WIT:eP	08	31	39.0									
	i	08	31	49.7							+		
HEE:eP	08	31	49										
	e	08	32	00.0									
30.	HEE:ePKP	16	41	04.0						15.3S 173.1W, H: 16 21 29.3, hN. Mb 5.4, Ms 6.2. Tonga Islands.			
30.	iPKP	16	59	04	+	7	2.4			15.5S 166.6E, H: 16 39 29.7, h 10 km. Mb 5.9, Ms 6.6. New Hebrides Islands.			
	iPP	17	02	14									
	eSS	17	21	00									
	eSSS	17	26	00									
	eL	17	36								23	21.5	6.9
	F	20.2											
	WIT:iPKP	16	58	58.5									
	i	16	59	15.3									
	HEE:ePKP	16	59	02.5									

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
31.	WIT:ePKP ₁	03	19	38.0						28.9S 178.5W, H: 03 00 12.0, h 220 km. Mb 5.7. Kermadec Islands region.	
	i	03	19	49.0							+
	iPKP ₂	03	20	07.0							
	HEE:ePKP ₁	03	19	42.5							
	iPKP ₂	03	20	16.5							+
	ipPKP ₂	03	21	10.5							+
31.	WIT:ePKP	04	01	05.0						15.1S 172.6W, H: 03 41 40.0, hN. Mb 5.0, Ms 4.8. Samoa Islands region.	
	HEE:ePKP	04	01	12.5							
31.	eL	11	41							58.7S 25.3W, H: 10 47 11.3, h 38 km. Mb 5.3. South Sandwich Islands region.	
	F	11	58								

Seismological Data

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Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
31. DEC. 1973	WIT:ePKP ₁	03	19	38.0						28.9S 178.5W, H: 03 00 12.0, h 220 km. Mb 5.7. Kermadec Islands region.	
	i	03	19	49.0	+						
	iPKP ₂	03	20	07.0							
	HEE:ePKP ₁	03	19	42.5							
	iPKP ₂	03	20	16.5	+						
	ipPKP ₂	03	21	10.5	+						
31.	WIT:ePKP	04	01	05.0						15.1S 172.6W, H: 03 41 40.0, hN. Mb 5.0, Ms 4.8. Samoa Islands region.	
	HEE:ePKP	04	01	12.5							
31.	eL	11	41							58.7S 25.3W, H: 10 47 11.3, h 38 km. Mb 5.3. South Sandwich Islands region	
	F	11	58								