

**KONINKLIJK NEDERLANDS
METEOROLOGISCH INSTITUUT**

SEISMOLOGICAL BULLETIN
OF THE SEISMOGRAPH STATIONS
IN THE NETHERLANDS

VOLUME 61
1973

DE BILT-1979

LIBRARY
RECEIVED
- 4 DEC 1979
I. S. C.

KONINKLIJK NEDERLANDS
METEOROLOGISCH INSTITUUT

SEISMOLOGICAL BULLETIN
of the seismograph stations
in The Netherlands

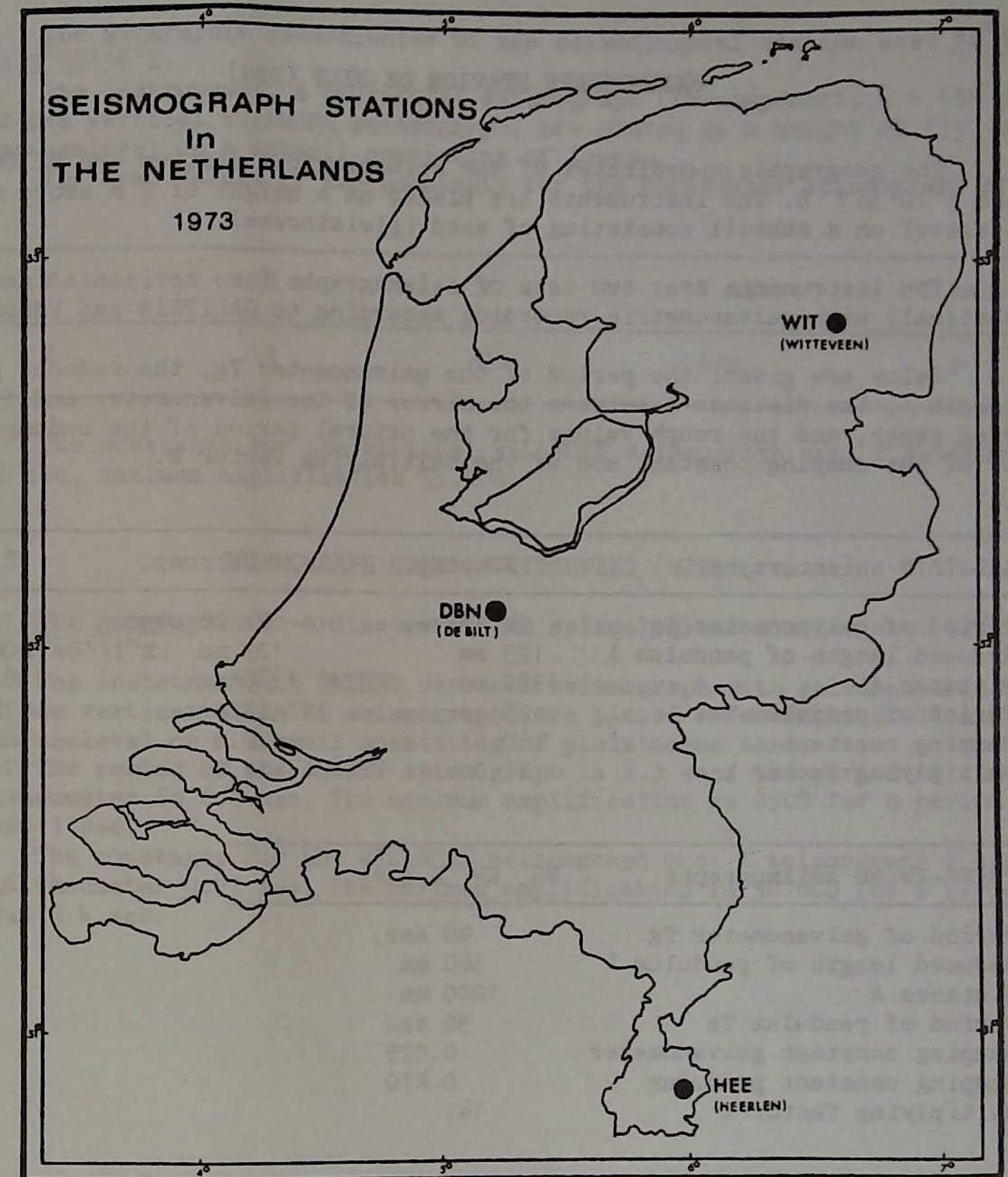
Volume 61
1973

Geographical coordinates of the stations

Code	Latitude (North)	Longitude (East)	Elevation (in meters)
208	52°05'10"	5°12'20"	2 m
209	52°05'10"	5°12'20"	115 m
210	52°05'10"	5°12'20"	115 m

De Bilt 1979

Publicatienummer K.N.M.I. 108-61



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°06'10"N and 5°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		

SEISMOGRAPH STATION HEERLEN (HEE)

The geographic co-ordinates of the seismological station are: 50°53'06"N and 5°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.

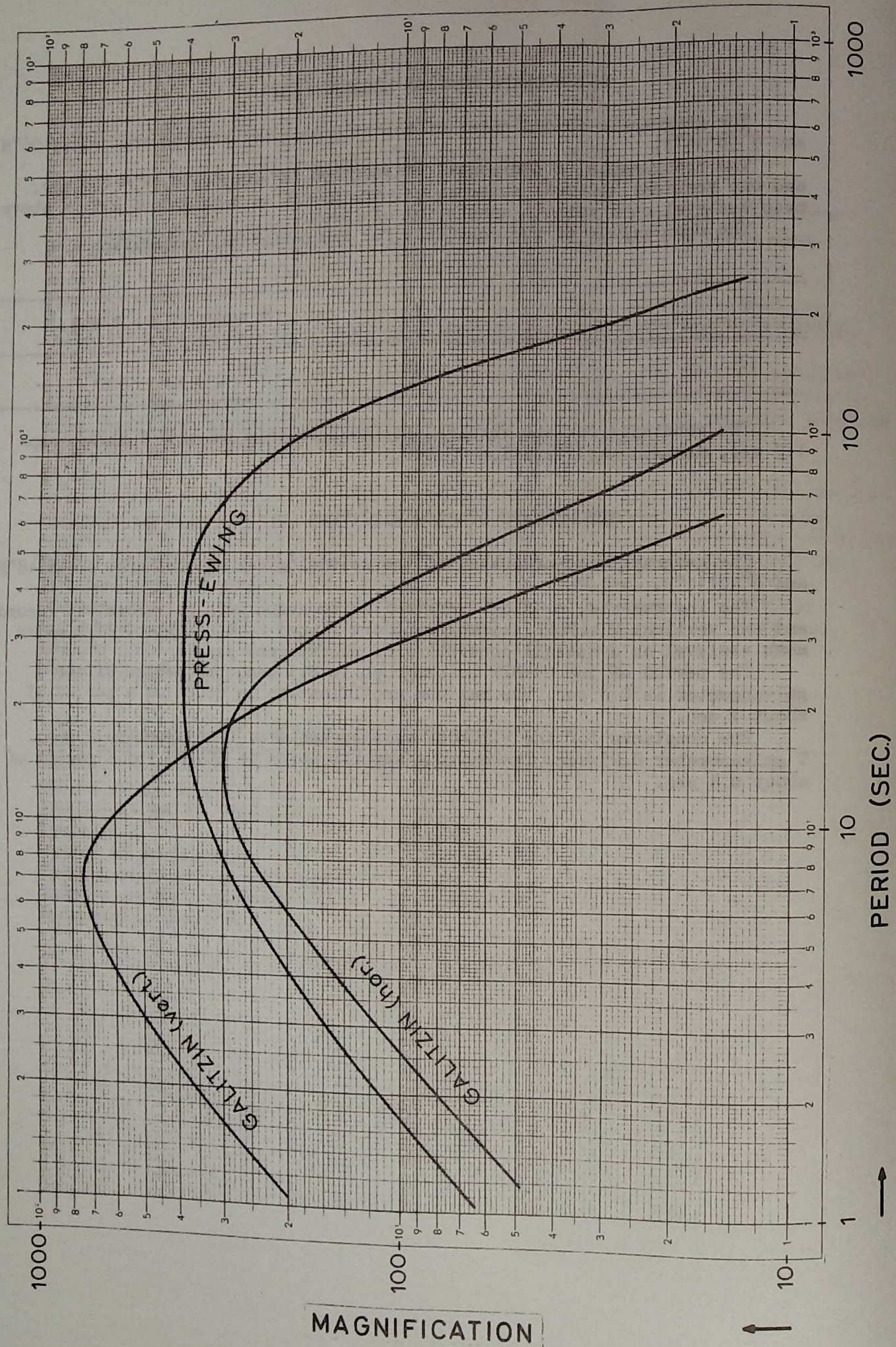
SEISMOGRAPH STATION WITTEVEEN (WIT)

The geographic co-ordinates of the seismological station are: 52°48'48"N and 6°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.

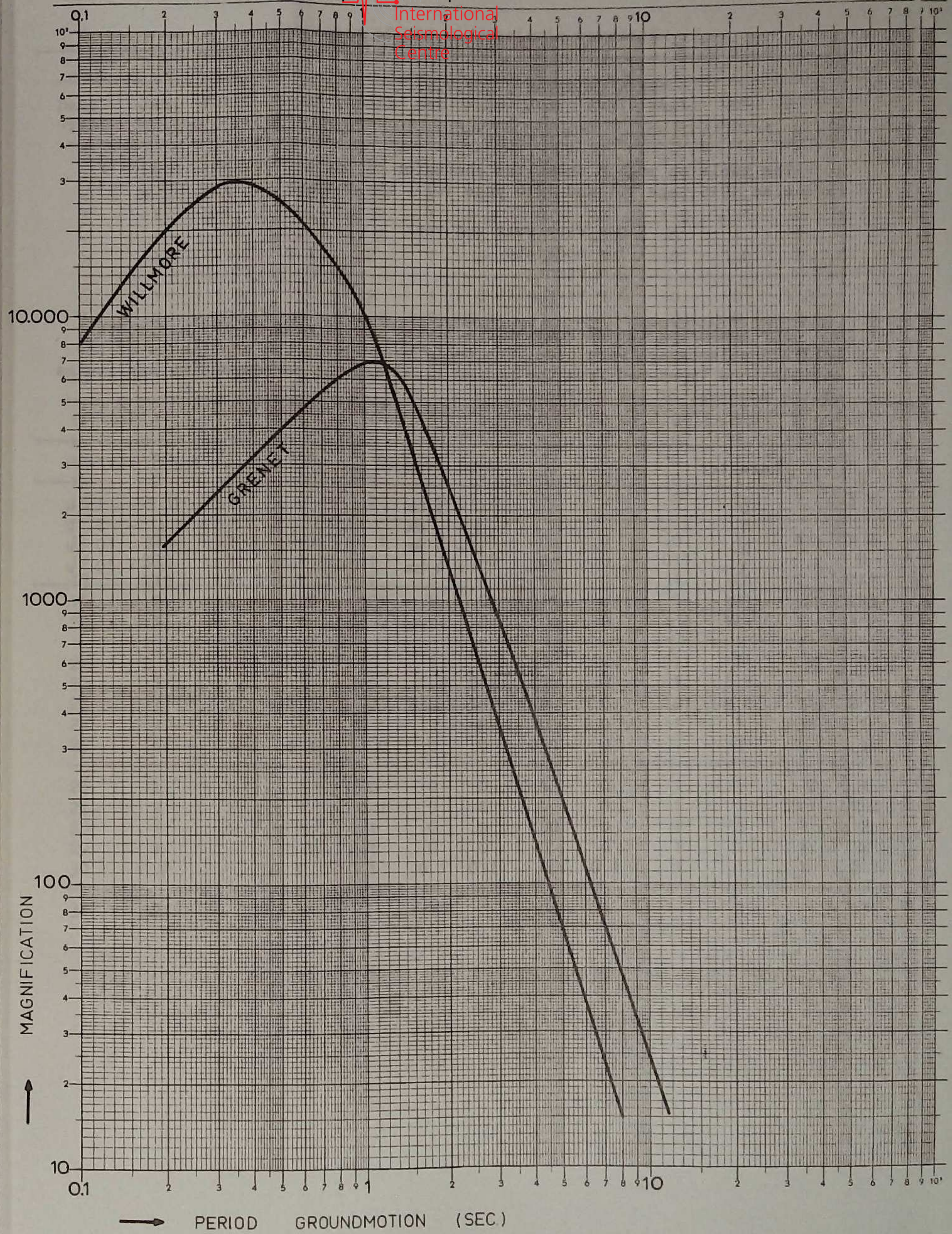
The period of the GRENET seismograph is 2.3 sec, the period of the galvanometer is 0.8 sec. The maximum amplification is 6500 for a period of about 1 sec.

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.



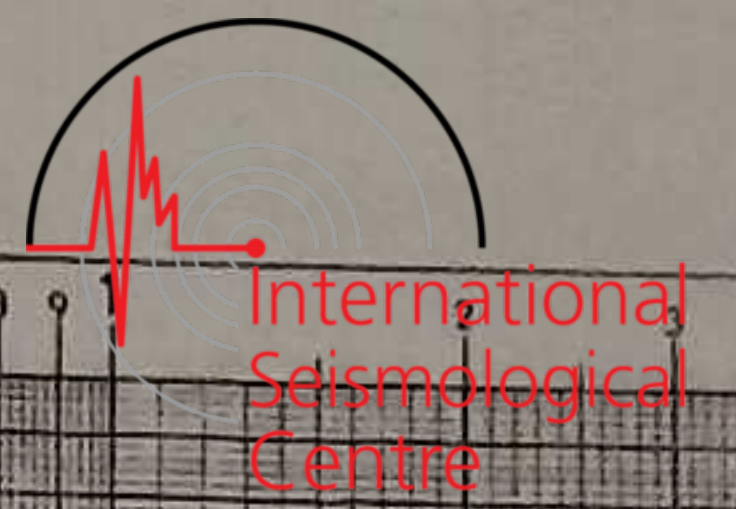
MAGNIFICATION

PERIOD (SEC.)



MAGNIFICATION

PERIOD GROUND MOTION (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

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	1 0 1	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	1 0 1	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:

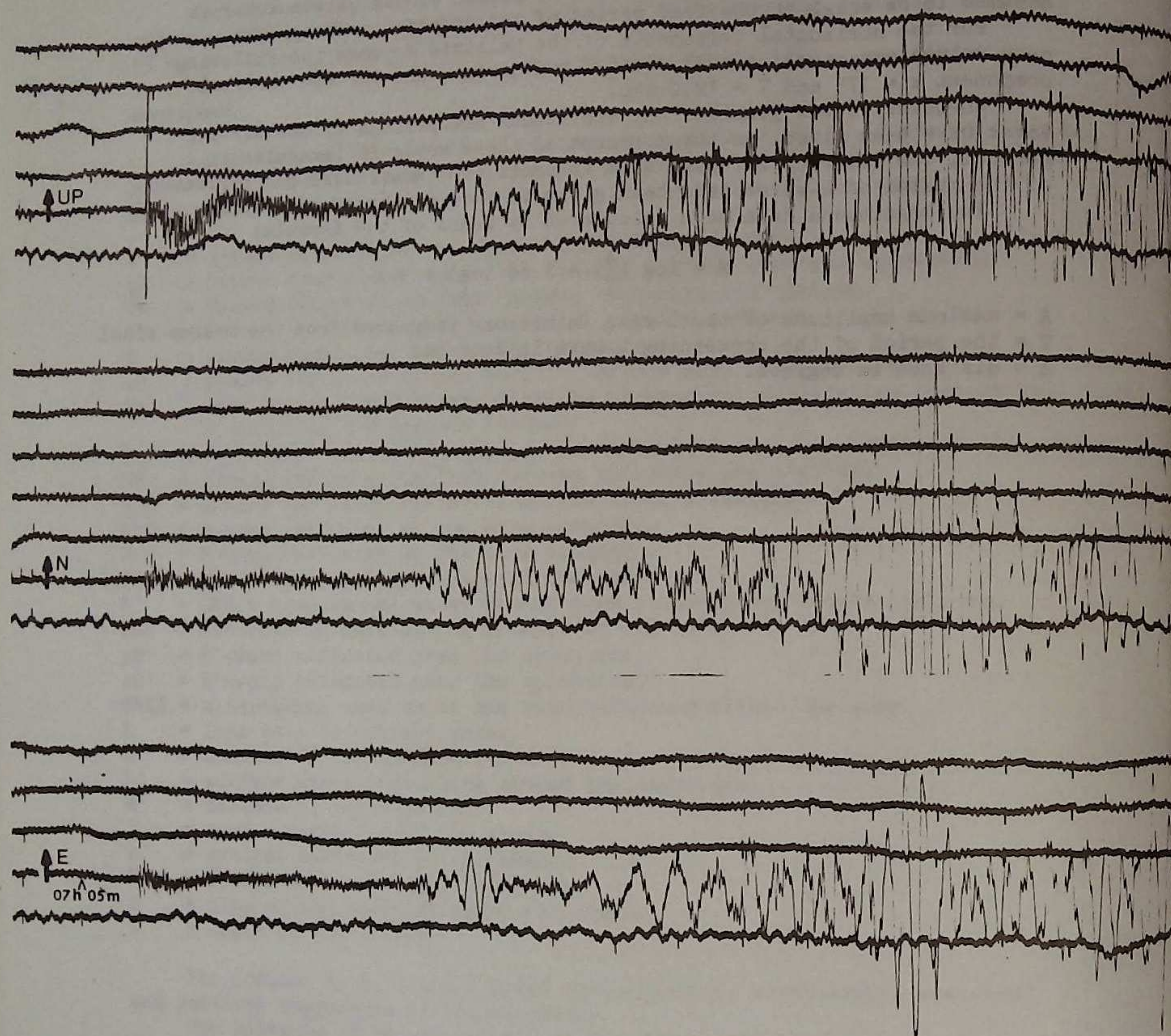
$$M = \log \left(\frac{A}{T} \right) + 1.66 \log \Delta + 3.3$$

A = maximum amplitude of the L-wave in microns (measured from the medium line).

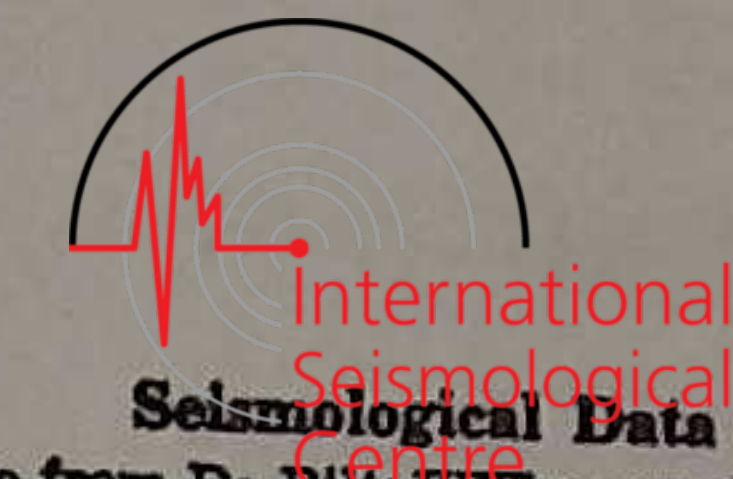
T = the period of the concerning L-wave in seconds.

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



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	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.
	HEE: iPKP	05	42	03.0							15.0S 174.0W, H: 05 22 29.8, h N. Mb 5.0. Tonga Islands.
	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							
	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.
	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							
	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								
	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.
	e	14	50	03							39.1N 71.9E, H: 14 31 04.5, h N. Mb 5.5, Ms 4.8. Tadzhik SSR
	eL	14	57								
	F	15	21								
	WIT: iP	14	39	25.2 -							
	HEE: eP	14	39	32.0							
	eL	00	44.5								41.3N 29.3W, H: 00 31 42.0, h N. Mb 4.5. Azores Islands region.
	F	00	50								
	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	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 -	17	3.3	4.7	4.7	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	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							18	11.4
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	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	20	2.1	5.9	5.9	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	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												20	2.1	5.9	5.9	BCIS: 46.ON 1.2W, H: 02 06 38, France.
	HEE: eP	02	08	17																
	e	02	08	49																
6	ePKP	16	12	08	20	2.1	5.9	5.9	14.7S 166.4E, H: 15 52 41.9, h 36 km. Mb 6.1, Ms 6.0. New Hebrides Islands.											
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	20	2.1	5.9	5.9	15.5S 167.5E, H: 22 15 49.9, h 123 km. Mb 5.3. New Hebrides Islands.											
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						20	2.1	5.9	5.9	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											
7	eL F HEE: eP	12	42								5.3N 36.8E, H: 12 17 12.6, h 34 km. Mb 4.9. Ethiopia.
7	WIT: i HEE: i	23	45	58.4 +							No determination of epicent
8	eL F	00	13								42.2N 29.5W, H: 00 00 53.8, h N. Mb 4.1. Azores Islands region.
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 F	06	13								71.3N 7.6W, H: 06 02 49.1, h N. Mb 4.3. Jan Mayen Island region.
9	eL F	16	45								39.5N 73.7E, H: 16 17 55.2, h N. Mb 4.9. Tadzhik-Sinkiang border region.
10	iP eS eL F WIT: eP e HEE: iP e	03	28	28 (+)							37.8N 21.3E, H: 03 24 11.7, h 41 km. Mb 5.0. Southern Greece.
10	ePP eSKP eSS eSSS eL F	11	54	24							11.1S 162.3E, H: 11 32 27.4, h 32 km. Mb 5.6, Ms 5.8. Solomon Islands.
10	eL F	12	45								11.2S 162.3E, H: 11 46 43.7, h 32 km. Mb 5.0, Ms 5.9. Solomon Islands.

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											
11	eL F WIT: iP HEE: iP	02	51								52.1N 169.6W, H: 02 12 27.5, h 30 km. Mb 5.4, Ms 5.2. Fox Islands, Aleutian Is.
12	eSP eSS eSSS eL F	03	39	35							54.4S 5.3E, H: 03 11 33.1, h N. Mb 5.5, Ms 5.7. Bouvet Island region.
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 HEE: iP	09	15	10.0 - 17.5 -							27.1N 140.1E, H: 09 02 58.3, h 477 km. Mb 5.8. Bonin Islands region.
16	WIT: eP HEE: eP	22	50	00.0 - 49							35.1N 22.6E, H: 22 45 16.7, h 28 km. Mb 4.5. Mediterranean Sea.
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 i HEE: iPKP	10	03	38.6 - 44.5 - 43.0 -							15.1S 175.0W, H: 09 44 36.8, h 251 km. Mb 5.7. Tonga Islands.
18	iPKP i iPP iPPP eSKS eSKKS iSP iSPP iSS iSSS eL F WIT: iPKP i i ePP HEE: iPKP i i	09	47	14 + 22 + 11 + 54 + 54.6 + 05 + 14 + 40 + 16 + 52 + 10.5 + 12.7 +							6.9S 150.0E, H: 09 28 14.1, h 43 km. Mb 6.3, Ms 6.8. New Britain region.
						21		27.5		6.9	

Seismological Data

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

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	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								
19											
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	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								

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	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							
25											
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

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	30	iP	21	13	52	+	15	275	7.7	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							
		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	31	iP	21	08	04	-	22	960	8.0	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

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								
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
		1	e	17	35						52.5					55.7S 26.8W, H: 01 53 21.1, h N. Mb 5.6. South Sandwich Is. region.	
				HEE: eP	17						35						52.0
		2	eL	02	50											43.9N 147.5E, H: 04 30 33.1, h 53 km. Mb 5.3. Kuril Islands.	
				F	03						14						
		5	WIT: iP	04	42						28.5	+				27.9N 127.7E, H: 05 30 02.0, h 81 km. Mb 5.7. Ryukyu Islands.	
		6	WIT: iP	05	42						29.3	(-)				31.4N 100.6E, H: 10 37 10.1, h N. Mb 6.1, Ms 7.4. Szechwan Prov., China.	
				HEE: iP	05						42						36.0
		6	iP	10	48						20	+	22	960	8.0	17.6S 172.7W, H: 02 08 16.9, h N. Mb 5.0, Ms 5.0. Tonga Islands region.	
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													
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

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		
7 FEB. 1973	eL	16	42		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.			
	F	17.4									
	WIT: iP	16	17	21.5 -							
	i	16	17	25.7 -							
	i	16	17	33.6 +							
	HEE: iP	16	17	29.0 -							
i	16	17	33.0 -								
i	16	17	37.5 +								
8	eSS	10	46.2		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.			
	eL	11	14								
	F	12.1									
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	04	20					24.3N 121.8E, H:03 32 28.0, h 56 km. Mb 4.8. Taiwan.			
	F	04	30								
10	iP	12	06	11	+ 5	3.6		18.9N 103.5W, H:11 53 27.5, h N. Mb 5.4, Ms 5.6. Near coast of Michoacan, Mexico.			
	iPP	12	09	37							
	eSKS	12	16	46							
	ePS	12	18	02							
	eSSS	12	26.8								
	eL	12	34								
	F	13.7									
	WIT: eP	12	06	11.5							
	i	12	06	13.5 +							
	HEE: eP	12	06	12.5							
i	12	06	15.5 -								
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	15	41	31.3 -				17.5S 178.5W, H:15 22 55.1, h 541 km. Mb 5.5. Fiji Islands region.			
	HEE: iPKP	15	41	36.5 -							
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	01	33					d.b.m. 22.3N 121.6E, H: 00 49 16.2, h 38 km. Mb 5.9, Ms 5.1. Taiwan region.			
	F	02.1									
	WIT: iP	01	01	56.9 -							
HEE: iP	01	02	02.5 +								
14	eL	16	19					d.b.m. 5.4S 126.7E, H:15 22 09.6, h 17 km. Mb 5.3, Ms 5.7. Banda Sea.			
	F	16.9									



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 FEB. 1973	eL	17	30					d.b.m. 30.4S 177.5W, H:16 11 14.9, h 29 km. Mb 5.7, Ms 6.3. Kermadec Islands.			
	F	19.0									
	WIT: ePKP2	16	31.8								
HEE: iPKP2	16	31	49.5								
i	16	32	00.0								
15	eL	00	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.			
	F	01.4									
16	WIT: iP	05	11	01.0 +				49.8N 78.2E, H:05 02 57.7, h 0 km. Mb. 5.6. Eastern Kazakh SSR.			
	HEE: iP	05	11	11.5							
16	eL	06	03					15.3S 173.3W, H:04 51 01.4, h 50 km. Mb 5.8, Ms 5.2. Tonga Islands.			
	F	06	22								
	HEE: iPKP	05	10	32.5							
e	05	10	48.5								
17	WIT: eP	16	13	15.5				17.0N 61.4W, H:16 02 45.5, h 34 km. Mb 5.5, Ms 4.5. Leeward Islands.			
	HEE: iP	16	13	11.5 -							
	e	16	13	16.5							
17	WIT: iP	19	26	54.5				45.2N 148.6E, H:19 15 11.4, h 113 km. Mb 5.3. Kuril Islands.			
	HEE: eP	19	27	03.5							
18	eL	04	32					36.7S 17.2W, H:03 48 52.9, h N. Mb 5.6, Ms 5.4. South Atlantic Ridge.			
	F	04	45								
	HEE: eP	04	01	49.5							
18	eL	19	35					30.2S 177.6W, H:18 09 27.2, h 49 km. Mb 5.5, Ms 5.7. Kermadec Islands.			
	F	20	33								
	WIT: ePKP	18	29	59							
	i	18	30	00.8 +							
	HEE: ePKP	18	29	58							
e	18	30	05								
18	eL	22	05.2					40.8N 74.1E, H:21 39 02.3, h N, Mb 4.9. Kirgiz-Sinkiang border region			
	F	22	09								
19	ePP	09	00	52				45.5S 35.1E, H:08 42 52.1, h N. Mb 5.5, Ms 5.6. Prince Edward Islands region.		11.0 6.3	
	eSKS	09	07	25							
	ePS	09	09	54							
	eSS	09	15	24							
	eL	09	28								
	F	11.0									
19	eL	18	21					40.2N 33.9E, H:18 10 00.5, h 22 km. Mb 4.5. Turkey.			
	F	18	35								
	WIT: eP	18	15	02.5							
	HEE: eP	18	14	57							

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		
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 18.5 06 00 33.5 06 00 03									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 34.5 07 51 39.5									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 38.0	(-)								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.

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		
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				20	285	7.6			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

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	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	18	09	05	+						54.8N 161.6E, H: 17 57 43.5, h 32 km. Mb 6.1, Ms 5.8. Near east coast of Kamchatka.
						22		5.0		5.8	
	WIT: iP HEE: iP	18	08	59.3	+						
		18	09	10.5							
	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.
		20	06	39.4	+						
	20	06	43.5								
	20	06	33.5								
	20	06	49.5								
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 23.5										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.
	13	21	52.5	-							
8. eL F	15 17.1	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.
	16	22	05.5								
8. e F	21 22	53.0 05									No determination of epicenter.

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	9. iP ipP iPP ipPP iPPP eSKS iSP eSS eL F	10	20	36							6.3N 127.3E, H: 10 06 37.5, h 55 km. Mb 6.0. Philippine Islands region.
		10	20	52							
		10	25	00							
		10	25	24							
		10	27	04							
		10	31.1								
		10	33	55							
		10	39.7								
		10	54			18			17.0	6.6	
		13.0									
WIT: eP HEE: eP	10	20	32								
	10	20	37.5								
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.	
	19	30	04.0								
	19	29	02.0								
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.	
	11	21									
	10	09	37.5								
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.	
	20	17									
	18	27	46.5								
	18	27.9									
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.	
	16	00									
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.	
	07.5										
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.	
	12.4										
	11	25	58.5								
	11	26	09.5								
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.	
	14.3										
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.	
	16	44									
	16	32	04.0								

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		
MAR. 1973											
18.	WIT: e	22	07	23							No determination of epicenter.
19.	iP	11	52	42	-						52.8N 173.8E, H: 11 41 07.8, h 81 km. Mb 5.8. Near Islands, Aleutian Is.
	iS	12	02	13							
	eL	12	15								
	F	12	55								
	WIT: eP	11	52	37.5	-						
	HEE: iP	11	52	49.0							
20.	eL	02	06								56.1S 27.4W, H: 01 06 09.8, h N. Mb 5.1. South Sandwich Is. region.
	F	02	14								
20.	eL	06	15								No determination of epicenter.
	F	06	15								
20.	ePP	19	27	50							8.3S 117.4E, H: 19 09 06.6, h 162 km. Mb 5.7. Sumbawa Island region.
	ipPP	19	28	34							
	i	19	28	54							
	eSKS	19	33	40							
	iSP	19	37	03							
	eSS	19	43	2							
	eSSS	19	47	5							
	eL	20	0			21	3.3		5.9		
	F	21	1								
22.	eL	01	40	0							28.1N 87.0E, H: 01 06 57.2, h N. Mb 5.2. Tibet.
	F	01	55								
22.	eL	06	51								22.0N 100.6E, H: 06 10 28.3, h N. Mb 4.7, Ms 5.4. Burma-China border region.
	F	07	21								
22.	WIT: iP	14	11	07.0	-						15.3N 61.3W, H: 14 00 43.5, h 156 km. Mb 5.1. Leeward Islands.
	HEE: iP	14	11	02.5	-						
22.	eL	21	46								51.2N 179.2W, H: 20 58 36.0, h 40 km. Mb 4.9. Andreanof Is., Aleutian Is.
	F	21	58								
	WIT: eP	21	10	23							
23.	iP	07	07	25							51.3N 174.2E, H: 06 55 33.2, h 27 km. Mb 5.8, Ms 5.9. Near Islands, Aleutian Is.
	i	07	07	53							
	iS	07	17	15							
	iPPS	07	18	03							
	eL	07	5								
	F	10	0								
	HEE: iP	07	07	31.0							WIT: change of papers: 07:05 - 07:08 G.M.T.
23.	eL	19	52								31.9N 100.1E, H: 19 14 53.1, h N. Mb 5.3, Ms 5.4. Szechwan Prov., China.
	F	19	52								
	WIT: eP	19	25	46.5							
	HEE: eP	19	25	53.5							

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		
MAR. 1973											
23.	eS	20	05	51							29.3N 130.4E, H: 19 42 38.8, h 34 km. Mb 5.9, Ms 5.5. Ryukyu Islands.
	eSS	20	11	5							
	eL	20	26			20			7.1	6.1	
	F	21	24								
	WIT: iP	19	55	10.9	+						
	epP	19	55	21.0							
	HEE: iP	19	55	18.5	+						
	ipP	19	55	29.0							
23.	eL	22	34								4.2N 126.8E, H: 21 39 47.6, h 35 km. Mb 5.6. Talaud Islands.
	F	23	00								
24.	eS	00	58	1							31.7N 139.3E, H: 00 34 36.8, h 20 km. Mb 5.6, Ms 5.6. South of Honshu, Japan.
	eL	01	16			21			5.0	5.9	
	F	02	5								
	WIT: eP	00	47	24							
	epP	00	47	33.5							
	HEE: eP	00	47	27							
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	09	35								50.2N 156.9E, H: 08 56 15.2, h 40 km. Mb 5.4, Ms 4.6. Kuril Islands.
	F	10	00								
	WIT: iP	09	07	50.6	+						
	HEE: iP	09	08	01.5	+						
25.	eS	23	05	09							25.9N 109.9W, H: 22 42 02.8, h N. Mb 5.5, Ms 5.5, Gulf of California.
	eSS	23	10	6							
	eL	23	19								
	F	24	4								
	WIT: eP	22	54	37.5							
	HEE: eP	22	54	36.5							
26.	eS	03	00	44							23.4N 124.0E, H: 02 37 21.3, h 16 km. Mb 5.5, Ms 6.0. Southwestern Ryukyu Is.
	eL	03	17			20			35.0	6.7	
	F	04	7								
	WIT: eP	02	50	07.0	+						
	epP	02	50	12.5							
	HEE: eP	02	50	11							
26.	WIT: ePKP	05	28	29.0							21.3S 179.1W, H: 05 09 50.5, h 634 km. Mb 4.9. Fiji Islands region.
	HEE: ePKP	05	28	33.5							
26.	eL	08	22								38.3N 73.9E, H: 07 58 42.7, h 123 km. Mb 5.3. Tadzhik-Sinkiang border region.
	F	08	32								
	WIT: eP	08	07	08							

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											
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 13 13 12 12 12 12	43 08 52 43 43 43 43	44 + + 40.5 49.5 54.5 50.5							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 04 03 03	00 12 44 44								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 13 14 13 13	51 58 05 next shock 51 50	05 32 05 + 02 55							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 in next shock 14 14 14	27 48.0 27 52.5 27 42	+ - +							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 16.6 15 15	24 08 02 07								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 00 00 00 02.0 00 00	08.6 19 25.0 36 08 08		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 23	53 53	33.0 38.0	+						No determination of epicenter.

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											
30.	eP eL F WIT: eP HEE: eP	00 00 00.8 00 00	12.2 18.6 06 12 20								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 03	13 13.9	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 05	42 00								59.9S 31.3W, H: 03 47 24.6, h N. Mb 5.4, Ms 5.5. Scotia Sea.

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		
APR. 1973	1.	iS	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.
		eL	07	35							
		F	08.7								
		WIT: e(P)	07	21	37.5						
	HEE: eP	07	21	26.0							
3.	iS	14	15	57							d.b.m. 4.7N 75.6W, H: 13 54 01.8, h 158 km. Mb 6.2. Colombia.
	isS	14	17	07							
	eL	14	38								
	F	15.2									
	WIT: iP	14	06	05.4							
	ipP	14	06	42.5							
	HEE: iP	14	06	01.5	-						
	ipP	14	06	39.5	-						
3.	eL	20	30								7.5N 36.3W, H: 20 04 47.7, hN. Mb 5.1, Ms 4.7. Central Mid-Atlantic Ridge.
	F	20	50								
4.	HEE: eP	22	03	04							43.4N 147.7E, H: 21 50 53.9, hN. Mb 5.2. Kuril Islands.
5.	eL	05	22								11.9N 122.5E, H: 04 32 08.1, h 6 km. Mb 5.4, Ms 5.4. Panay, Philippine Islands.
	F	06.0									
5.	eS	22	39	10							43.6N 147.7E, H: 22 16 59.6, hN. Mb 5.4, Ms 5.6. Kuril Islands.
	eL	22	55								
	F	23.7									
	WIT: iP	22	28	59.4	+						
	i	22	29	04.3							
	i	22	29	12.0							
6.	HEE: eP	22	29	09							
	WIT: eP	00	13	56.5							43.7N 147.6E, H: 00 01 56.4, hN. Mb 5.3. Kuril Islands.
	HEE: eP	00	14	05							
6.	eL	02	27								43.7N 147.8E, H: 01 48 00.3, hN. Mb 5.4, Ms 5.8. Kuril Islands.
	F	03.1									
	WIT: iP	02	00	00.8	-						
	HEE: eP	02	00	09							
6.	WIT: iP	14	19	04.0	+						34.4N 25.3E, H: 14 13 54.2, h 16 km. Mb 5.1. Crete.
	HEE: eP	14	18	46.5							
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)	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.
	iPP	03	16	38							
	iS	03	23	32							
	iSP	03	24	30							
	iSS	03	29	09							
	eSSS	03	32.7								
	eL	03	40			24	41.0	6.8			

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		
APR. 1973	F	05.2									
	WIT: iP	03	13	13.9	+						
	HEE: iP	03	13	16.0							
	e	03	13	29.5							
	7.	iSP	12	51	36						58.3S 13.4W, H: 12 22 47.3, hN. Mb 6.2, Ms 6.7.
	iSS	12	57	55		20	8.9	6.4			Southwestern Atlantic Ocean.
	eL	13	09								
	F	15.5									
	7.	eL	18	01							11.7N 43.0E, H: 17 36 42.8, hN. Mb 4.7. Ethiopia.
		F	18	40							
7.	eL	19	38.0							41.5N 20.0E, H: 19 30 06.9, h 16 km. Mb 4.7. Albania.	
	F	19	43								
8.	ePKP	13	00	21	+					15.8S 167.2E, H: 12 41 02.0, h 35 km. Mb 5.8, Ms 6.4. New Hebrides Islands.	
	i	13	00	41							
	iPP	13	03	32							
	eSS	13	22	08		22	9.6	6.6			
	eL	13	50								
	F	15	40								
8.	WIT: e(PKP)	13	00	30.0							23.9S 177.0W, H: 20 48 46.0, h 122 km. Mb 5.5. South of Fiji Islands.
	HEE: iPKP	13	00	31.0							
	ePP	13	03.7								
8.	WIT: iPKP	21	08	26.6							47.0N 152.3E, H: 21 54 59.2, h 104 km. Mb 5.6. Kuril Islands.
	i	21	08	33.4							No determination of epicenter.
	ipPKP	21	09	01.5							
	HEE: ePKP	21	08	30.5							
	e	21	08	37.5							
8.	WIT: iP	22	06	38.6	+						26.8N 125.3E, H: 08 32 42.1, h 186 km. Mb 5.4. Northeast of Taiwan.
	HEE: iP	22	06	49.0	+						
8.	eL	23	55								46.0N 27.7W, H: 08 41 02.1, hN. Mb 4.8. North Atlantic Ridge.
	F	24	14								
9.	WIT: iP	08	44	55.6	+						ISC: 19:7S 177:2W, H: 00 18 06, h 0 km, Mb 4.9. Fiji Region.
	i	08	45	48.0	+						
	eS	08	50	04							
9.	eL	08	52.1								
	F	09	05								
	WIT: eP	08	46	04.5							
	HEE: eP	08	45	55.5							
10.	WIT: ePKP	00	37	43							
	HEE: ePKP	00	37	47.0	+						
	e	00	37	55.0							

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		
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. Halmahera.
12.	WIT: ePKP HEE: iPKP	02	20	36.0 41.5							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 22							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 42 27 15.5 22 16.0 46.8 57.5	+	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 50.5 57.0	-						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 47.0	+						ISC: 18°5S 175°0W, H: 01 51 09.9, h 83 km, Mb 4.5. Tonga.

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			
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 21 28 48 05.0 08.0 12.0 28 25 32.5					23	36	6.7	10.7N 84.8W, H: 08 34 00.1, hN. Mb 5.7, Ms 6.5. Costa Rica, (26 killed)
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 29.1 51.5 28.5 34.0 41.0 54	- +						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 epicenter.	
16.	eS eL F WIT: eP HEE: eP	00	14	54 17.3 27 37.0 26.0							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 58.5	- -						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 16 14 24 in next shock 28.5							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 epicenter.	

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		
APR. 1973											
	17.	iP eL F WIT: iP HEE: iP	22 22 23.5 22 22	21 47 21 21	27 21.8 32.5	+					50.8N 157.5E, H: 22 09 49.1, h 41 km.Mb 5.6, Ms 5.4. Kuril Islands.
18.	WIT: ePKP HEE: ePKP	01 01	22 22	19.5 24.5							18.3S 175.6W, H: 01 03 13.4, h 290 km. Mb 4.9. Tonga Islands.
19.	WIT: iP HEE: iP	01 01	51 52	58.1 04.0	+						20.2S 168.8E, H: 01 32 24.4, h 36 km.Mb 5.2, Ms 5.0. Loyalty Islands.
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 F	22 22	24 28	9							38.2N 26.8E, H: 22 13 53.3, h 13 km.Mb 4.5. Aegean Sea.
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 e HEE: iP iSg	12 12 12 12	25 26 24 25	32.5 41.5 49.5 11.5	-						49.4N 6.0E, H: 12 24 21.0, h 0 km.Mb 4.3. Rockburst. France.
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 F	15 16	35 19								No determination of epicenter.
21.	eL F	22 23	10 38								6.4S 144.3E, H: 21 09 51.2, h 29 km.Mb 5.2. New Guinea.
22.	eL F HEE: eP	06 06 05	25 40 57	55							27.7N 104.1E, H: 05 46 20.9, hN.Mb 5.0, Ms 4.9. Yunnan Province, China.
22.	WIT: eP HEE: eP	13 13	44 44	30.5(-) 24							35.2N 23.4E, H: 13 39 46.1, h 56 km.Mb 4.5. Crete.
22.	eL F WIT: eP HEE: eP	21 22 21 21	52.5 05 37 37	13.5 12.5							30.7N 49.8E, H: 21 29 57.2, h 57 km. Mb 5.0. Western 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		
APR. 1973											
	23.	eL F	14 14	15 36							24.0N 121.5E, H: 13 29 16.0, h 42 km.Mb 5.2. Taiwan.
23.	HEE: ePKP	14	32	08.5							34.5S 179.8E, H: 14 11 19.2, hN.Mb 5.3. South of Kermadec Islands.
24.	eL F	04 05	48 14								7.1N 127.0E, H: 03 52 33.6, hN. Mb 5.0, Ms 4.8. Philippine Islands region.
24.	eL F	10 10	30 52								40.6N 143.5E, H: 09 49 53.1, h 32 km. Mb 4.9. Off east coast of Honshu, Japan.
24.	eS eL F WIT: eP iP HEE: eP	19 19 19 18 18 18	04.5 24 35 54 55 54	38 08.7 35.5							5.2N 75.8W, H: 18 42 31.9, h 118 km. Mb 5.5. Colombia.
24.	iP i iPP iS iPS iSS eSSS eL F WIT: iP i iPP i HEE: iP iP iPP	21 21 21 21 21 21 22 22 01 21 21 21 21 21 21 21 21 21	42 43 45 52 53 57 01 05.0 34 42 42 45 45 42 42 45 45 59 59	27 09 37 41 32 48 24 05.0 34 32.0 37.8 32.3 46.0 28.5 41.5 29.0	-	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.
24.	WIT: eP HEE: eP	22 22	59 59	26.5 23.5							4.9N 78.2W, H: 22 47 01.8, hN. Mb 5.3. South of Panama.
25.	WIT: eP HEE: eP	03 03	25 25	11.0 16.5							37.6N 72.1E, H: 03 16 52.3, h 136 km. Mb 5.2. Tadzhik SSR.
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
Data without indication are from De Bilt; WIT means Witteveen, HEE means Heerlen

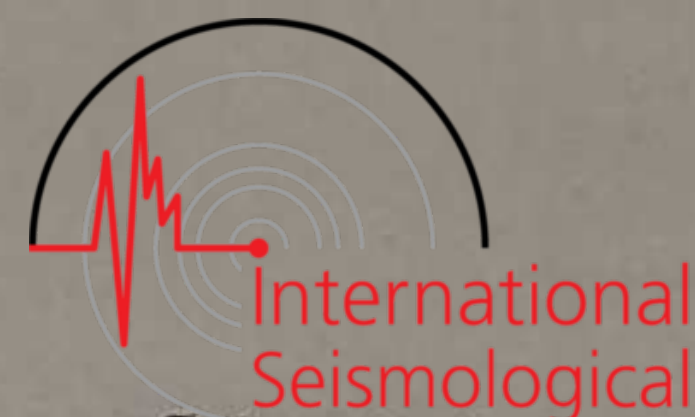
Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
APR. 1973											
25.	eL F	08	55								65.5S 179.3E, H: 07 27 20.1, hN.Mb 5.7. Balleny Islands region.
25.	eL F	15	05								33.4N 140.7E, H: 14 21 13.2, h 65 km. Mb 5.7. South of Honshu, Japan.
	WIT: iP	14	33	45.9							
	i	14	33	49.2							
	HEE: iP	14	33	53.5							
	ipP	14	34	11.5 +							
25.	eL F	18	14								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	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	21	53	12 11 40 10.0 14.0 29 24.5	+						59.3S 26.1W, H: 21 34 37.9, h 67 km. Mb 6.0. South Sandwich Islands region.
	HEE: ePKP ePP	21	53	10.0 58.0		22		9.6	6.4		
26.	WIT: iP HEE: iP	17	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	40	40 02 26 30 28 00.0 04.2 11 23.5							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	40	40 44.0 55 36 10 36 07.0							38.7N 33.0E, H: 00 31 03.0, hN.Mb 4.6. Turkey.
27.	eL F	19	11	50							2.8S 119.5E, H: 18 17 49.4, hN.Mb 5.1, Ms 5.2. Celebes.

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		
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	28	06 00 04 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	44	29 13 09 13 22 12 34 19.0 12 33 54.0 12 34 15.5							1.4S 79.9W, H: 12 21 11.7, h 109 km. Mb 5.5. Ecuador.
28.	WIT: iPKP HEE: ePKP	21	32	54.0 21 33 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	48.0	14 51 14 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	56	27.5 18 56 31.5							19.8S 177.7W, H: 18 37 25.5, h 364 km. Mb 4.9. Fiji Islands region.
29.	eL F	20	22	20 45							29.3N 68.7E, H: 19 56 14.3, h 24 km. Mb 4.9. West Pakistan.
29.	WIT: ePKP HEE: ePKP	23	50	24.0 23 50 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	57	36.8 08 57 42.0	+						17.5S 179.6E, H: 08 39 07.7, h 613 km. Mb 5.4. Fiji Islands.

Seismological Data

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



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											
1.	WIT: iPKP HEE: iPKP	08	01	42.2	-						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	59	54							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	45	28							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	27		(-) +						36.5N 12.3W, H: 23 17 11.6, hN. Mb 4.4. North Atlantic Ocean.
3.	eL F	06	05								76.6N 107.4W, H: 05 42 34.1, hN. Mb 4.3. Queen Elizabeth Islands.
3.	WIT: ePKP HEE: iPKP	13	45	03							17.9S 178.4W, H: 13 26 31.0, h 600 km. Mb 5.1. Fiji Islands region.
4.	eL F	00	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	39	53.6							17.6S 178.6W, H: 01 21 21.7, h 590 km. Mb 4.0. Fiji Islands region.
4.	eL F	12	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	19	56							1.5S 99.9E, H: 23 56 06.1, h 51 km. Mb 5.9. Southern Sumatra.

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	37								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	36								33.3N 57.4E, H: 06 12 35.6, hN. Mb 4.6. Iran.
5.	eL F HEE: iPKP	20	05								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	50	09.9	-						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	20								16.6N 116.1W, H: 16 27 12.1, hN. Mb 4.8. East Central Pacific Ocean.
7.	e F	20	20								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	03	35	+						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	40.5								33.0N 104.0E, H: 10 01 38.2, hN. Mb 4.7. Kanshu Province, China.
10.	WIT: iP HEE: iP	11	51	15.0							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.ON 104.8W, H: 17 50 53.1, hN. Mb 5.0. Near coast of Jalisco, Mexico.
11.	eL F	11.7									1.ON 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: iP	18	21								16.6S 175.9E, H: 17 11 13.8, h 54 km. Mb 5.8. Fiji Islands region.
14.	WIT: iP HEE: iP 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: iP 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.ON 82.2E, H: 09 38 10.0, hN. Mb 5.5. Southern Sinkiang Province, China

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											
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.ON 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 of 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: iP	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

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											
24.	eL F	02	42								20.3N 121.3E, H: 01 52 47.3, hN. Mb 5.0. Philippine Islands region.
24.	iP eL F	18	59	00	-	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.
	WIT: iP HEE: iP	18	58	56.7	(-)						
		18	59	07.0	-						
24.	WIT: epP HEE: eP epP	19	46	57.0	(+)						14.7N 91.2W, H: 19 34 13.5, h 100 km. Mb 5.2. Guatemala.
		19	46	30.0							
		19	46	56.0							
25.	eL F	09	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	02	58								37.2N 141.4E, H: 02 15 35.4, h 56 km. Mb 5.0. Near east coast of Honshu, Japan.
	WIT: eP ipP HEE: eP	02	27	53							
		02	28	07.3							
		02	28	01.5	+						
26.	iP i eS eSS eL F	12	31	25	+	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.
		12	31	42							
		12	41	10							
		12	46	16							
		12	56			18			6.5	6.0	
	WIT: eP i HEE: iP	12	31	19.5							
		12	31	21.7	-						
		12	31	31.0							
26.	WIT: eP	13	23	55.0							51.3N 179.7W, H: 13 12 10.1, h 56 km. Mb 4.9. Andreanof Is., Aleutian Is.
27.	WIT: iPKP HEE: iPKP ipPKP	06	57	12.5	-						21.3S 177.9W, H: 06 38 13.4, h 422 km. Mb 5.0. Fiji Islands region.
		06	57	17.0							
		06	58	57.5							
28.	eP eS eL F	20	40	16		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.
		20	50	36							
		21	03.4								
	WIT: eP e HEE: eP	20	40	16.0							
		20	40	22.0							
		20	40	02.0							
29.	iP iS eSS eL F	01	58	32	+	5	1.2				51.7N 176.2E, H: 01 46 44.9, h 46 km. Mb 5.2, Ms 5.7. Rat Islands, Aleutian Is.
		02	08	20							
		02	13.5								
		02	23.4								
		04.5				20			2.9	5.6	

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											
	WIT: eP i HEE: eP	01	58	26.5							
		01	58	30.3	-						
		01	58	37							
29.	HEE: e	02	02	53							Aftershock.
29.	HEE: eP	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	06	25	55	+	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.
		06	35	28							
		06	50								
		08.0									
	WIT: iP HEE: iP ipP	06	25	52.9	+						
		06	26	03.0	+						
		06	26	16.5							
29.	eL F	08	44								No determination of epicenter.
		08	58								
30.	eP ipP eS i iSP eL F	04	50	40	+						2.3S 78.5W, H: 04 38 01.8, h 111 km. Mb 5.7. Ecuador.
		04	51	07							
		05	01	00							
		05	01	25							
		05	02	16							
		05	19								
		06.1									
	WIT: eP epP HEE: iP i ipP	04	50	46.5							
		04	51	14.5							
		04	50	42.0							
		04	50	47.0							
		04	51	10.0							
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								4.1S 104.1W, H: 16 32 22.1, h N. Mb 5.0, Ms 5.1. Northern Easter Island. Cordillera.
		17	49								
30.	eL F	18	17								26.3N 110.7E, H: 17 33 51.0, h N. Mb 4.8. Gulf of California.
		18	30								
31.	eP ipP eS eSS eSSS eL F	05	51	35							13.9N 90.9W, H: 05 39 18.8, h 99 km. Mb 5.4. Near coast of Guatemala.
		05	52	04							
		06	01.7								
		06	07.0								
		06	10.7								
		06	15								
		07.0									

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		
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	+						
	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		24.3N 93.5E, H: 23 39 56.7, h 30 km. Mb 5.9, Ms 5.7. Burma-India border region.
	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

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											
1.	eSKP	07	45	33							
	eL	08	26		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.
	F	10.6									
1.	eL	13	12								41.1N 82.1E, H: 12 46 08.8, h N. Mb 4.9. Southern Sinkiang Prov., China.
	F	13	26								
1.	eL	17	19								ISC: 24°85' N 98°51' E, H: 16 39 53, h 26 km, Mb 4.5. Burma-China Border Region.
	F	17	29								
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	00	19								6.5S 150.4E, H: 23 36 00.4, h 44 km, Mb 4.8. New Britain Region.
	F	00	45								
2.	eP	20	18	25							19.6N 70.6W, H: 20 07 30.5, h 40 km. Mb 5.2, Ms 5.3. Dominican Republic region.
	eL	20	37								
	F	21.5									
	HEE: eP	20	18	19.5							
3.	iP	00	06	08							44.1N 83.6E, H: 23 57 04.2, h 26 km. Mb 5.8, Ms 5.6. Northern Sinkiang Prov., China.
	ePP	00	06	05							
	iS	00	13	16							
	eScS	00	15	49							
	eSS	00	16	52							
	eL	00	20		16				27.5	6.3	
	F	01.6									
	WIT: eP	00	05	54.5							
	ipP	00	06	02.1	-						
	HEE: iP	00	06	02.5	+						
	i	00	06	07.0							
	ipP	00	06	10.0							
	ePP	00	08	01							
	eL	00	21								
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
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	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													
b.	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	+												
b.	eL	21	18							8	+					42.4N 18.6E, H: 21 11 20.5, h 16 km. Mb 4.6. Yugoslavia
	F	21	26													
7.	eL	04	1								+					53.9S 159.4E, H: 02 43 31.4, h N. Mb 5.8. Macquarie Islands region.
	F	04	43													
	HEE: ePKP2	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	+					14.2N 91.9W, H: 18 34 46.3, h 70 km. Mb 5.7. Guatemala.						
	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							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						27.8N 52.1E, H: 20 36 12.3, h 32 km. Mb 4.7. Southern Iran.							
	i	15	47	07.5													
9.	HEE: eP	20	44	00													

Seismological Data

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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 22 22	23 50 57 57								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 03 03 03	20.9 24 20 17 17 19		(+)						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 12.0 08 08 08 08	53 56 17 26.7 53 53 53 53	32 06 17 26.7 40.5 38.5 50.0		5 20	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 15.8 14 14 14	32 59 32 32 32 33	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 23 23	29 40 24 23	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 Blit; WIT means Witteveen, HEE means Heerlen

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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 00	32 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 13.5 11 11	32 35 41 42 46.8 50.2 55 14.4 25.0	19 02 52 32 32 32 19.0		6 19	2.1		10.4	6.2	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	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	13	50	08.7	-					51.3N 179.4W, H: 13 38 23.1, h 50 km. Mb 5.4. Andreanof Is., Aleutian Is.
	HEE: iP	13	50	18.5	-						
15.	eP	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.	
	eS	21	30	45							
	eL	21	51								
	F	22.6									
	WIT: iP	21	21	02.6	+						
	ipP	21	21	11.1	-						
15.	HEE: iP	21	21	13.5	+					61.1S 154.2E, H: 21 33 59.1, h N, Mb 4.9. Balleny Islands Region.	
	eL	22	51								
15.	F	23.8								25.9S 177.4W, H: 23 04 58.6, h 94 km. Mb 5.6. South of Fiji Islands.	
	WIT: iPKP	23	24	46.6	+						
15.	i	23	24	58.0	+					43.ON 145.9E, H: 00 54 34.2, h 54 km. Mb 4.8. Hokkaido, Japan region.	
	HEE: ePKP	23	24	50.5							
16.	e	23	24	57.5						No determination of epicenter.	
	i	23	25	05.5	+						
16.	WIT: eP	01	06	31.0						37.7N 95.6E, H: 07 22 48.1, h N. Mb 5.4. Tsinghai Prov., China.	
	HEE: e	01	52	54							
16.	i	01	52	58.5	-					55.ON 112.6E, H: 12 12 32.2, h N, Mb 4.5. Lake Baikal Region.	
	eL	07	54								
16.	F	08	05							45.ON 125.8W, H: 14 43 47.5, h N. Mb 5.6, Ms 5.1. Off coast of Oregon, U.S.A.	
	WIT: eP	07	32	57.5							
16.	HEE: eP	07	33	05.0						53.5N 161.5E, H: 07 43 31.6, h 45 km. Mb 5.0. Off east coast of Kamchatka.	
	eL	12	47								
16.	F	13	05							43.ON 146.4E, H: 04 09 12.4, h N. Mb 5.9. Kuril Islands.	
	eP	14	55	24							
16.	eS	15	05	06						42.4N 145.8E, H: 04 19 32.2, h 35 km. Mb 5.4. Hokkaido, Japan region.	
	eSS	15	10.4								
16.	eSSS	15	13.6							42.7N 146.1E, H: 05 12 09.3, h 44 km. Mb 5.4. Off coast of Hokkaido, Japan.	
	eL	15	19								
16.	F	16.1								43.1N 146.1E, H: 05 52 10.9, h 44 km. Mb 5.1. Kuril Islands.	
	WIT: iP	14	55	25.6	+						
16.	HEE: eP	14	55	32.0	-					43.ON 146.4E, H: 08 17 47.7, h 41 km. Mb 5.2. Kuril Islands.	
	eL	15	19								

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	00	00						58.3S 25.5W, H: 23 06 28.8, h 50 km. Mb 5.4. South Sandwich Islands region.	
17.	F	00	57								43.2N 145.8E, H: 03 55 02.9, h 48 km. Mb 6.5, Ms 7.7. Hokkaido, Japan region.
	iP	04	07	04	+	8	15.9				
17.	iPP	04	10	00						43.ON 146.4E, H: 04 09 12.4, h N. Mb 5.9. Kuril Islands.	
	iS	04	17	06							
17.	iSP	04	17	48						42.4N 145.8E, H: 04 19 32.2, h 35 km. Mb 5.4. Hokkaido, Japan region.	
	eSS	04	22.1								
17.	eL	04	30			23		1000	8.2	42.7N 146.1E, H: 05 12 09.3, h 44 km. Mb 5.4. Off coast of Hokkaido, Japan.	
	F	09.4									
17.	WIT: iP	04	06	58.5	+					43.1N 146.1E, H: 05 52 10.9, h 44 km. Mb 5.1. Kuril Islands.	
	eL	04	33								
17.	HEE: iP	04	07	07.5	+					53.5N 161.5E, H: 07 43 31.6, h 45 km. Mb 5.0. Off east coast of Kamchatka.	
	iPP	04	10	20.5							
17.	eL	04	34							43.ON 146.4E, H: 08 17 47.7, h 41 km. Mb 5.2. Kuril Islands.	
	WIT: iP	04	21	12.1	+						
17.	i	04	21	18.0						42.7N 146.1E, H: 05 12 09.3, h 44 km. Mb 5.4. Off coast of Hokkaido, Japan.	
	HEE: iP	04	21	21.5	+						
17.	WIT: iP	04	31	33.0	+					43.1N 146.1E, H: 05 52 10.9, h 44 km. Mb 5.1. Kuril Islands.	
	epP	04	31	44.5							
17.	HEE: eP	04	31	43.0						53.5N 161.5E, H: 07 43 31.6, h 45 km. Mb 5.0. Off east coast of Kamchatka.	
	WIT: eP	05	24	08							
17.	ipP	05	24	23.5						43.1N 146.1E, H: 05 52 10.9, h 44 km. Mb 5.1. Kuril Islands.	
	HEE: eP	05	24	17.5							
17.	WIT: eP	05	24	08						43.1N 146.1E, H: 05 52 10.9, h 44 km. Mb 5.1. Kuril Islands.	
	ipP	05	24	23.5							
17.	HEE: eP	05	24	17.5						53.5N 161.5E, H: 07 43 31.6, h 45 km. Mb 5.0. Off east coast of Kamchatka.	
	WIT: eP	07	54	53.5							
17.	HEE: eP	07	55	04.5						43.ON 146.4E, H: 08 17 47.7, h 41 km. Mb 5.2. Kuril Islands.	
	WIT: eP	08	29	46							

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	09	5							42.9N 146.5E, H: 08 48 19.4, h 37 km. Mb 5.2.
	F	10	3								Off coast of Hokkaido, Japan.
		WIT: eP	09	00	19.0						
	17.	WIT: iP	12	26	23.0	+					42.9N 145.6E, H: 12 14 25.8, h 41 km. Mb 5.5.
		epP	12	26	35.0						Hokkaido, Japan region.
		HEE: eP	12	26	32.5	+					
	17.	eL	13	02							42.6N 146.4E, H: 12 24 34.8, h 36 km. Mb 5.5, Ms 5.0.
		F	13	8							Off coast of Hokkaido, Japan.
		WIT: eP	12	36	36.0	+					
		HEE: eP	12	36	45.0						
	17.	iP	13	45	29	+					43.1N 145.4E, H: 13 33 28.3, h 46 km. Mb 5.6, Ms 5.3.
		eL	14	12		21	3.7		5.7		Hokkaido, Japan region.
		F	15	1							
		WIT: iP	13	45	24.5						
		e	13	45	29.5						
		e	13	45	49.5						
		HEE: iP	13	45	34.0						
		i	13	45	38.5						
	17.	iP	13	55	13	+					43.0N 146.7E, H: 13 43 08.7, h 40 km. Mb 5.5, Ms 5.2.
		WIT: iP	13	55	07.9	+					Kuril Islands.
		HEE: eP	13	55	18.0						
	17.	iP	19	07	44	+					43.0N 146.5E, H: 18 55 39.6, h 45 km. Mb 5.7, Ms 5.4.
		eL	19	33		20	3.2		5.7		Kuril Islands.
		F	20	37							
		WIT: iP	19	07	38.5	+					
		epP	19	07	49.0	+					
		HEE: iP	19	07	48.0	+					
	17.	eP	19	15	40						42.7N 146.3E, H: 19 03 35.1, h 32 km. Mb 5.6, Ms 5.1.
		WIT: eP	19	15	36.5						Off coast of Hokkaido, Japan.
		HEE: eP	19	15	46.5						
	17.	iP	20	50	02	+					42.7N 146.0E, H: 20 37 57.3, h 50 km. Mb 6.0, Ms 6.0.
		ipP	20	50	19						Off coast of Hokkaido, Japan.
		iS	21	00	00						
		i	21	00	31						
		eSS	21	05.5							
		eL	21	14		20	39.0		6.7		
		F	24	0							
		WIT: iP	20	49	55.9	+					
		ipP	20	50	10.5	+					
		HEE: iP	20	50	05.5	+					

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	17.	WIT: iP	21	38	10.5						43.0N 145.3E, H: 21 26 14.2, h 50 km. Mb 5.2.
	HEE: eP	21	38	19.5	+						Hokkaido, Japan region.
		epP	21	38	36.5						
	18.	eL	02	52							42.8N 146.8E, H: 02 12 06.9, h 36 km. Mb 4.9, Ms 4.7.
		F									Off coast of Hokkaido, Japan.
	18.	eL	03	01							42.6N 146.2E, H: 02 19 30.0, h 30 km. Mb 5.2, Ms 4.8.
		F	03	34							Off coast of Hokkaido, Japan.
	18.	WIT: ePKP	03	16	46.0						21.1S 179.3W, H: 02 58 10.1, h 648 km. Mb 4.9.
		HEE: iPKP	03	16	50.5						Fiji Islands region.
	18.	eP	05	49	43	+					42.6N 146.4E, H: 05 37 37.7, h 38 km. Mb 5.5, Ms 5.7.
		eL	06	17							Off coast of Hokkaido, Japan.
		F	06	56							
		WIT: iP	05	49	39.3	-					
		HEE: eP	05	49	48.0						
	18.	WIT: iP	10	29	10.8						52.2N 164.9W, H: 10 17 26.3, h 15 km. Mb 5.4, Ms 4.5.
		HEE: iP	10	29	21.0						South of Alaska.
	18.	iP	17	57	51	+					42.5N 146.0E, H: 17 45 43.7, h 29 km. Mb 5.8, Ms 5.5.
		iS	18	07	52						Off coast of Hokkaido, Japan.
		eL	18	22		20			7.1	6.0	
		F	19	8							
		WIT: eP	17	57	46.0						
		ipP	17	57	56.9						
		HEE: iP	17	57	55.0	+					
		i	17	57	59.5	+					
		ipP	17	58	06.5	+					
	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		
19. JUNE 1973	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.
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.
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.
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.
19.	eL F	07	08								42.7N 145.6E, H: 06 26 12.8 h N, Mb 4.6. Hokkaido, Japan Region.
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.
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
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.
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		
20. JUNE 1973	eL F	02	57								No determination of epicenter.
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.
20.	HEE: e e	22	39	33.5							No determination of epicenter.
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.
22.	iP ipP iS eSS eL F WIT: iP HEE: eP	06	19	41				20	12.5	6.2	42.9N 146.3E, H: 06 07 37.9, h 53 km. Mb 5.5. Off coast of Hokkaido, Japan.
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									21.2S 174.3W, H: 19 51 40.5, h N. Mb 5.5, Ms 5.1. Tonga Islands.
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.
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.

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	26.	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.
	ePP	18	17	29							
	iS	18	24	32							
	eSS	18	29.8								
	eL	18	39.5			21		9.2	6.1		
	F	20.9									
	WIT: iP	18	14	24.2							
ipP	18	14	35.8								
HEE: iP	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	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.
	iS	22	54	04							
	iSS	22	59	28							
	eSSS	23	02.7								
	eL	23	07			25		210	7.5		
	F	in next shock									
	WIT: iP	22	43	57.3	+						
i	22	44	04.7	+							
HEE: iP	22	44	07.0	(-)							
26.	WIT: 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.
	i	22	53	48.0	-						
HEE: eP	22	53	45.0								
26.	WIT: eP	22	57	31.5	+						43.0N 146.7E, H: 22 45 32.5, h 44 km. Mb 5.4. Kuril Islands.
	e	22	57	39.5							
HEE: eP	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	01	15	00.5							42.8N 146.6E, H: 01 02 59.2, h 41 km. Mb 5.1. Off coast of Hokkaido, Japan.
	HEE: eP	01	15	09							
27.	eL	02.3									43.1N 146.5E, H: 01 41 16.1, h 46 km. Mb 5.4, Ms 4.7. Kuril Islands.
	F	03.1									
	WIT: eP	01	53	13.5	+						
	HEE: eP	01	53	23.0	+						

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	27.	eL	03	56							43.1N 146.8E, H: 03 15 20.4, h 45 km. Mb 5.0. Kuril Islands.
	F	04	17								
	HEE: eP	03	27	28.5							
27.	eL	04	19								42.6N 145.8E, H: 03 42 38.0, h 38 km. Mb 5.2., Ms 4.5. Hokkaido, Japan region.
	F	05	00								
HEE: eP	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	13	39								40.6N 79.2E, H: 13 11 11.0, h N. Mb 5.0. Southern Sinkiang Prov., China.
	F	13	55								
28.	eL	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.
	F	12	29								
	WIT: eP	11	02	26.0							
28.	eL	22	37								29.1N 103.6E, H: 21 58 02.9, h N. Mb 5.2. Szechwan Prov., China.
	F	22	58								
	WIT: eP	22	09	20							
HEE: eP	22	09	29.0								
28.	WIT: eP	22	10	50.7							28.9N 103.6E, H: 21 59 30.3, h N. Mb 5.4. Szechwan Prov., China.
	HEE: iP	22	10	57.5	-						
29.	eL	03	15								21.1N 143.1E, H: 02 23 20.9, h 24 km. Mb 5.7, Ms 5.3. Mariana Islands region.
	F	03	53								
29.	eL	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.
	F	04.9									
	WIT: iP	03	38	47.7	+						
	ipP	03	39	04.0	-						
HEE: iP	03	38	57.5	+							
29.	eL	08	37								3.9N 85.0W, H: 07 55 11.9, h N. Mb 5.3, Ms 4.9. Off coast of Central America.
	F	09	00								
29.	eL	18	30								28.8N 103.7E, H: 17 52 00.8, h N. Mb 5.2. Szechwan Prov., China.
	F	18	50								
	WIT: eP	18	03	21.5							
	HEE: iP	18	03	28.0							

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	eL	23	26							54.0N 35.2W, H: 23 14 14.4, h N. Mb 4.6, Ms 4.4. North Atlantic Ocean.	
	F	23	40								
	HEE: eP e	23	19	36 42							
29.	eL F	23	56 24	07						ISC: 51:8N 39:74W, H: 23 44 17.1, h 33 km, Mb 5.0 (MOS). North Atlantic Ocean.	
30.	eL F	01	07 01	07 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 54.5 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 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 07 07 07	31 30.1 49.0 41.0	+					52.7N 172.3E, H: 17 55 55.9, h 44 km. Mb 5.4, Ms 4.8. Near Islands, Aleutian Is.	



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	1.	iP	13	44	22	+	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.
		iPcP	13	44	54						
		iPP	13	46	40						
		iPPP	13	48	32						
		iS	13	53	05						
		eScS	13	54	16						
		iSS	13	57	27						
		eSSS	14	00.5							
		eL	14	05							
		F	18.0								
	WIT: iP	13	44	19.2	+						
	i	13	44	31.3	-						
	ePP	13	46	44							
	HEE: iP	13	44	29.5	+						
	i	13	44	41.5	-						
1.	eL	15.8								57.8N 137.3W, H: 15 12 05.0, h N. Mb 5.2. Off coast of southeastern Alaska.	
	F	in prec. shock									
	WIT: eP	15	22	50.0							
	e	15	22	58.0							
	HEE: eP	15	23	01.0							
2.	iP	01	09	42	+					49.5N 28.5W, H: 01 04 56.0, h N. Mb 5.0. North Atlantic Ridge.	
	eS	01	13	40							
	eL	01	15.0								
	F	01	38								
	WIT: eP	01	09	50.5	+						
	i	01	09	54.8	+						
	HEE: eP	01	09	48.0	+						
	i	01	09	57.5	+						
2.	eL	02	01							84.1N 0.6W, H: 01 45 59.4, h N. Mb 4.7. North of Svalbard	
	F	02	15								
2.	WIT: iP	06	03	26.9	-					42.9N 145.4E, H: 05 51 30.9, h 57 km. Mb 5.2. Hokkaido, Japan region.	
	e	06	03	38.5	-						
	iPP	06	03	43.8	-						
	e	06	03	50.5							
	HEE: eP	06	03	36.5							
2.	eL	06	32							54.0N 164.1E, H: 05 56 12.4, h N. Mb 5.4. Komandorsky Islands region.	
	F	07.0									
	WIT: eP	06	07	34.5	-						
	e	06	07	44.5							
	HEE: iP	06	07	45.5	+						
2.	eL	12	24.0							39.7N 24.0E, H: 12 14 08.3, h N. Mb 4.2. Aegean Sea.	
	F	12	31								

Seismological Data

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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 ipP ePP iS eL F WIT: eP epP HEE: eP i epP	04 04 04 04 04 05 04 04 04 04 04	12 12 15 22 40 11 12 12 12 12 12	17 44 36 40 40 11 21.5 45.0 21.0 23.5 48.5	+	6	0.8				19.1N 101.8W, H: 03 59 53.7, h 125 km. Mb 5.6. Michoacan, Mexico.
3.	eP ePP eSKS eSP eL F WIT: eP HEE: eP	06 06 07 07 07 06 06	51 55 01 04 22 in next shock 51 51	08 10 52 04 22 shock 05.5 08.5	+						12.3N 125.4E, H: 06 37 34.4, h 44 km. Mb 5.5, Ms 6.0. Samar, Philippine Islands.
3.	iP iPP eSKS iSP eL F WIT: eP HEE: eP	07 07 07 07 07 07 07 07	17 21 28 30 49 10.4 17 17	18 22 00 14 14 shock 13.5 19.0	+	20	26.5	6.7			12.2N 125.3E, H: 07 03 43.9, h N. Mb 6.1, Ms 6.5. Samar, Philippine Islands.
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 HEE: eP	11 11	09 09	20.0 28.5							31.1N 130.2E, H: 10 57 07.5, h 139 km. Mb 5.0. Kyushu, Japan.
3.	eL F HEE: eL	16 16 16	15 22 14.9								44.1N 13.3E, H: 16 10 12.4, h 47 km. Mb 5.3. Adriatic Sea.
3.	iP iPP iS iSS eL F WIT: eP e HEE: eP	17 17 17 17 17 17 17 17 17 17	10 12 19 23 20 30.9 in next shock 10 10 10 10	23 48 22 20 20 shock 20.0 43.5 30.0	+	6	3.3				58.0N 138.0W, H: 16 59 35.1, h N. Mb 6.0, Ms 6.0. Southeastern Alaska.



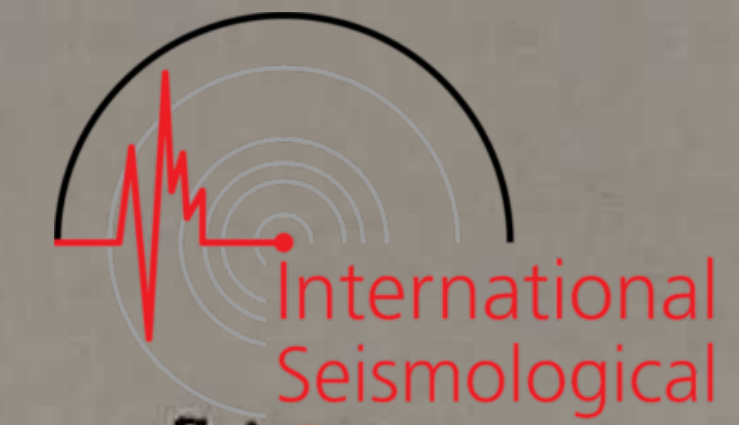
International Seismological Centre

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
		h	m	s			Z	NS	EW		
July 1973											
3.	eL F	19 20	29 28								ISC: 45°71N 150°67E, H: 18 46 22.3, h 120 km, Mb 4.4. Kurile Islands.
3.	eL F	22 23	33 28								27.1S 70.9W, H: 21 41 52.3, h 6 km. Mb 5.4, Ms 5.4. Near coast of northern Chile.
4.	eL F	02 03	42 13								27.1S 71.0W, H: 01 49 06.1, h N. Mb 5.2. Near coast of northern Chile.
4.	HEE: e	04	34	08.5							No determination of epicenter.
4.	WIT: e	09	46	30							No determination of epicenter.
5.	ePKP eSKS ePS eSS eSSS eL F	00 00 00 00 00 00 00	07 15.0 16 22 26 39 in next shock	13 04 40 16 00 39 shock							53.2S 22.7E, H: 23 48 43.0, h N. Mb 5.5, Ms 5.8. South of Africa.
5.	eL F WIT: eP i HEE: iP	01 02 01 01 01	37 38 10 10 10	37 38 41.5 44.8 51.0	+						44.0N 147.8E, H: 00 58 45.0, h 40 km. Mb 5.5. Kuril Islands.
5.	iP eL F WIT: eP HEE: eP	07 08 09 07 07	59 21 20 59 59	52 52 50.0 59.5	+						57.9N 137.9W, H: 07 49 04.5, h N. Mb 5.4, Ms 4.9. Off coast of southeastern Alaska.
5.	eL F	14 15	31 00								27.2S 71.1W, H: 13 37 11.1, h 35 km. Mb 5.1. Near coast of northern Chile.
5.	eP iPP eSKS iSP iSPP eSS eL F WIT: eP e i HEE: eP e	22 23 23 23 23 23 23 22 22 22 22 22	59 03 10 12 13 17.8 33 01.6 59 59 59 59 59	46 56 20 22 04 17.8 33 40.5 44 52.5 45.0 49.5		22		32.5	6.8		13.2N 124.7E, H: 22 46 16.4, h 38 km. Mb 5.6, Ms 6.0. Luzon, 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		
6. July 1973	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 10 12.2	41 18	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 13	57 16								27.4S 70.9W, H: 11 59 30.9, h 39 km. Mb 5.0. Near coast of northern Chile.
6.	eL F	13 13	52.6 55								No determination of epicenter.
6.	eL F WIT: eP HEE: eP	14 14 13 13	23 37	58.5 09.5	+						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 21	28 47								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 03 02 02	39 53	47.5 54.0	-						19.1S 168.8E, H: 02 27 24.8, h 93 km. Mb 5.6. New Hebrides Islands.
7.	eL F	13 13	34 40								19.2S 69.8W, H: 12 45 00.1, h 89 km. Mb 5.3. Northern Chile.
7.	eL F WIT: ePKP	16 17 15	51 04	37							6.0S 150.6E, H: 15 40 40.0, h 53 km. Mb 5.4. New Britain region.
7.	eL F	19 20	41 37								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 22	43 03								No determination of epicenter.



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		
8. July 1973	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 03.2									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 04 04 04 04	15 15 16 15 15	19.7 25.6 00.5 16.5 23.5 57.5	-						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 17 17 17	29 40	37.5 44.5	+						15.9N 60.7W, H: 16 59 08.1, h 19 km. Mb 5.1. Leeward Islands.
8.	eL F	21 22	45 11								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 00 00	29.6 28 29	16.5 12.5							46.8N 9.8E, H: 00 27 02.9, h 18 km. Switzerland.
9.	WIT: eP HEE: eP	02 02	15 15	29 39							54.5N 158.4E, H: 02 04 21.4, h 100 km. Mb 4.8. Kamchatka.
9.	eL F	03 03	21 52								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 11	21 22	57.2 03.0	- +						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 16 16 17.0 17.9 16 16 16 16	32 41 47.2 08 08 31 32 31 32	08 52 47.2 08.0 08.0 49.0 04.5 52.5 08.0	- - - - - + - - -						10.7N 92.6E, H: 16 19 46.8, h 46 km. Mb 5.7, Ms 5.2. Andaman 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		
July 1973	9.	WIT: ePKP i	21	46	35.5	-					21.5S 177.9W, H: 21 27 39.2, h 463 km. Mb 4.6. Fiji Islands region.
	HEE: iPKP	21	46	37.9							
		21	46	40.5							
10.	WIT: iP	01	35	01.5	+						49.8N 78.1E, H: 01 26 57.6, h 0 km. Mb 5.4. Eastern Kazakh SSR.
	HEE: iP	01	35	11.5							
10.	ePKP	04	21	53							24.1S 177.4W, H: 04 02 18.5, h 118 km. Mb 5.1. South of Fiji Islands.
	eL	05	13								
	F	06.6									
	WIT: ePKP	04	22	00.5							
	HEE: ePKP	04	22	03							
10.	ePKP	07	19	22							24.1S 177.3W, H: 06 59 43.7, h 103 km. Mb 5.2. South of Fiji Islands.
	eL	08	11								
	F	09.5									
	WIT: ePKP	07	19	25							
	HEE: ePKP	07	19	31.0							
10.	eL	07	19	41.0	-						
	F	16	00								
10.	eL	16	00								27.1S 71.2W, H: 15 06 00.4, h 22 km. Mb 5.4. Near coast of northern Chile.
	F	16	36								
10.	WIT: 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.
	HEE: eP	23	37	58.5							
11.	eL	00	08								27.0S 71.0W, H: 23 26 44.0, h N. Mb 5.5. Near coast of northern Chile.
	F	01	00								
11.	WIT: e	02	27	15.5							No determination of epicenter.
11.	eL	06	54								0.1S 125.0E H: 05 57 20.0, h N. Mb 5.4, Ms 4.4. Molucca Sea.
	F	07	19								
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	00	01								52.0N 176.1W, H: 23 23 11.7, h 63 km. Mb 5.1. Andreanof Is., Aleutian Is.
	F	00	26								

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.
			02	11	29						
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	08	33								42.7N 146.8E, H: 07 56 12.8, h 21 km. Mb 5.3. Off coast of Hokkaido, Japan.
	F	09	09								
	WIT: eP	08	08	17.0							
12.	eL	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.
	F	15	42								
12.	eL	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.
	F	18.5									
12.	eL	20	04								12.2N 125.5E, H: 19 10 23.5, h N. Mb 5.2. Samar, Philippine Islands.
	F	20	19								
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.
		00	37	03.0							
13.	eL	01	45								No determination of epicenter.
	F	02	33								
13.	eL	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.
	F	04	32								
	HEE: eP	03	11	04							
14.	iP	05	01	15	-	7	5.8				35.2N 86.5E, H: 04 51 21.0, h N. Mb 6.0, Ms 6.9. Tibet.
	iPP	05	03	28							
	iPPP	05	04	46							
	iS	05	09	20							
	iSS	05	13	22							
	eL	05	18								
	F	09.2									
	WIT: eP	05	01	06.5							
	i	05	01	10.8							
	i	05	01	32.9							
	eL	05	20								
HEE: iP	05	01	13.0								
ePP	05	03	25.5								
eL	05	21									
14.	HEE: e	06	42	58.0							No determination of epicenter. ISC: 31:7N 83:2E, H: 09 12 40, h 0 km. Tibet.
14.	eL	09	42								
	F	10	01								

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											
14.	eL F WIT: eP HEE: eP	12	48.4								37.9N 21.1E, H: 12 38 18.3, h 36 km. Mb 4.7. Southern Greece.
14.	iP eS eSS eL F WIT: iP e HEE: iP	13	49 24	-							35.3N 86.6E, H: 13 39 30.0, h N. Mb 5.9, Ms 5.5. Tibet.
15.	WIT: e e HEE: e	08	48 43.0	-							No determination of epicenter.
15.	eL F	14	17								5.6S 147.2E, H: 13 19 28.6, h 203 km, Mb 5.0. East New Guinea Region.
15.	WIT: iP i HEE: iP	14	18 46.6(+)								43.4N 146.5E, H: 14 06 49.8, h 43 km. Mb 5.4. Kuril Islands.
15.	eL F	19	56								28.0S 176.4W, H: 18 30 19.4, h 63 km, Mb 4.6. Kermadec Islands Region. HEE: No records from: July 16, 00 h - July 30, 24 h
16.	WIT: i	00	24 00.5								No determination of epicenter.
16.	eL F	05	06								10.2S 151.9E, H: 03 59 30.3, h 40 km. Mb 5.3, Ms 5.1. Dentrecasteaux Islands region.
16.	iP ipP iPP iS eL F WIT: 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.
16.	eL F	20	17								35.1N 86.4E, H: 19 45 38.3, h 15 km. Mb 5.4. Tibet.
17.	eL F	01	16								4.3S 134.5E, H: 00 14 47.7, h N. Mb 5.3. West New Guinea 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		
July 1973											
18.	eL F	04	41								14.9N 119.9E, H: 03 53 41.2, h 56 km. Mb 5.1. Luzon, Philippine Islands.
18.	eP epP iS F	15	34 28								18.4S 69.2W, H: 15 21 23.0, h 151 km. Mb 5.7. Northern Chile.
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.
19.	WIT: e	19	35 37.0								B.C.I.S. 71.8N 10.6E, H: 19 29 07, Norwegian Sea.
20.	iP ePP eS eL F WIT: eP epP	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.
20.	eL F	13	59								18.8N 106.5W, H: 13 11 00.4, h N. Mb 4.7, Ms 5.2. Off coast of Jalisco, Mexico.
20.	eL F	14	38								19.1N 106.3W, H: 13 49 31.8, h N. Mb 4.5, Ms 5.3. Off coast of Jalisco, Mexico.
20.	eL F	23	41								80.ON 0.2E, H: 23 27 48.3, h N. Mb 5.2, Ms 4.8. North of Svalbard.
21.	iPKP i F WIT: ePKP i i i ipPKP i	04	38 19	-							24.8S 179.2W, H: 04 19 17.1, h 411 km. Mb 5.9. South of Fiji Islands.
21.	eL F	12	35								20.ON 121.4E, H: 11 46 34.9, h 72 km. Mb 5.0. 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		
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								
		05	00								
28.	eL F	05	34								
		06	05								
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.
		15	43								
		14	40	48.8							
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.
		19	33								
		18	06	14.0							
		18	06	18.5	+						
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.
		20	19	10							
		20	20	11							
		21	05								
		20	17	03.9	-						
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.
		16	01								
		15	03	00.5	+						
		15	03	04.3	+						
		15	03	13.0							
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.
		23	47								
30.	eL F	15	05								31.9N 131.8E, H: 14 16 14.4, h 41 km. Mb 4.8. Kyushu, Japan.
		15	19								
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.
		02	54								
		00	48	25.5							
		00	48	31.5							

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		
July 1973											
21.	eL F	20	22								35.1N 86.4E, H: 19 50 06.3, h N. Mb 5.3. Tibet.
		20	33								
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.
		03	30								
		04	03								
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.
		02	00								
		01	31	04.0	+						
		01	32	42.9							
23.	eL F	10	48								24.1N 122.3E, H: 10 02 05.2, h 42 km. Mb 5.4. Taiwan region.
		11	15								
23.	eL F	21	17								30.8N 113.5W, H: 20 37 46.1, h N. Mb 5.0. Gulf of California.
		22	01								
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.
		21	30								
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.
		06	31	16							
		07	10								
		09.0									
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.
		21	15								
27.	eL F	02	15								8.0S 129.0E, H: 01 29 13.5, h N, Mb 5.2. Timor Sea.
		02	26								
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.
		17	32								
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.
		19	49	41							
		20	39								
		22.0									

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		
July 1973											
31.	ePP eL F	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.
31.	eP iPP iSKS iS iPS iPPS eSS eSSS eL F	11	05	10	+						27.1S 71.5W, H: 10 51 13.2, h N. Mb 5.6, Ms 6.3. Near coast of northern Chile.
		11	09	36							
		11	16	03							
		11	17	07							
		11	18	41							
		11	19	33							
		11	24.5								
		11	28.0								
		11	35		19				21.5	6.7	
		15.2									
31.	eL F	16	08								26.6S 70.5W, H: 15 17 49.5, h N. Mb 4.9, Ms 5.1. Near coast of northern Chile.
		17.0									
31.	ePKP iPP iSKP eSS eL F HEE: ePKP	21	04	08	+						8.8S 161.0E, H: 20 44 52.2, h 30 km. Mb 5.4, Ms 6.0. Solomon Islands.
		21	06	31							
		21	07	36							
		21	24.2								
		21	46		20				3.5	6.1	
		23.9									
		21	04	12							

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											
1.	iPKP ipPKP iPP iZ ipPP iSKKS iSPP ipSPP eSS eSSS eL F	01	50	20	+						14.3S 167.3E, H: 01 31 30.9, h 200 km. Mb 6.1. New Hebrides Islands.
		01	51	25							
		01	53	14							
		01	53	32							
		01	54	12							
		02	00	04							
		02	05	33							
		02	06	34							
		02	11	30							
		02	16	48							
		02	27								
		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 F	12	03								27.1S 71.1W, H: 11 08 28.4, h N. Mb 5.2. Near coast of northern Chile.
		12	42								
1.	eP ePP eSKS ePS eL F	15	58	21							26.8S 71.0W, H: 15 44 25.5, h 16 km. Mb 5.7, Ms 5.4. Off coast of northern Chile.
		16	02	32							
		16	09	12							
		16	11	50							
		16	34		20				2.1	5.6	
		18.9									
2.	WIT: i	03	10	32.2	+						No determination of epicenter.
2.	eL F WIT: eP	09	33								27.8N 104.5E, H: 08 58 15.1, h N. Mb 5.4. Yunnan Province, China.
		10	13								
		09	09	43.5							No determination of epicenter.
2.	eL F	10	41								
		11	02								
2.	eL F	19	40								21.4N 45.8W, H: 19 17 23.8, h N. North Atlantic Ridge.
		19	49								
2.	eP eL F WIT: eP HEE: eP	20	03	48							37.3N 56.5E, H: 19 56 26.6, h 36 km. Mb 5.3. Iran.
		20	17								
		20	44								
		20	03	41.5							
		20	03	43.5							
2.	WIT: eP	20	36	11.5							37.3N 56.5E, H: 20 28 55.7, h 34 km. Mb 4.8. Iran.

Seismological Data

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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.ON 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	+				2.0	5.4	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.ON 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	+				2.5	5.6	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.ON 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.

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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			20		7.1		6.2	
7.	eL F	07	57			20		4.3		6.3	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			20		5.3		6.1	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		19		14.0		6.5	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		20		3.6		4.5	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	7.1		6.0	43.4N 146.4E, H: 10 44 26.5, h 55 km. Mb 6.0. Kuril Islands.
9.	eL F	14	24			20		3.2		6.2	56.3S 147.4E, H: 13 06 36.6, h N. Mb 5.6, Ms 5.9. West of Macquarie Island.

Seismological Data

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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							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								3.5S 135.6E, H: 13 04 35.7, h 9 km. Mb 5.4. West New Guinea region.
11.	eL F	18	44								28.9S 13.1W, H: 18 01 59.7, h N. Mb 4.8. South Atlantic Ridge.
13.	eL F	02	31								29.9N 68.4W, H: 02 00 20.4, h 7 km, Mb 4.7, Ms 4.3. West Pakistan.



Seismological Data

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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 iSP ePPS eSS eL F WIT: iPKP epPKP HEE: ePKP epPKP	08	47	02 36 00 14 37 08 12 14 26 11.3 00.1 - 30.0 + 03.0 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	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								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 09 49.0 09 52.0 + 09 54.5 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								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 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.	e F	13 28.0 13 32									No determination of epicenter.
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: i 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

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											
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		+							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		(-)							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			21		3.3		5.6		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		+							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
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		
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	-						
	i	02	13	54.5	+						
24.	eL	10	59.3							36.2N 2.0W, H: 10 50 59.7, h N. Mb 3.9. Strait of Gibraltar.	
	F	11	13								
24.	ePP	20	39	42						7.2S 156.0E, H: 20 18 21.4, h 62 km. Mb 5.8. Solomon Islands.	
	eL	21	15								
	F	22.8									
	WIT: ePKP	20	37	23.0	-						
	HEE: iPKP	20	37	26.5	-						
	e	20	37	40.0							
	e (SKP)	20	40	44.5							
25.	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.ON 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
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		
26.	HEE: e	17	22	47.0							No determination of epicenter.
26.	WIT: iPKP	18	19	07.5	-						18.0S 178.7W, H: 18 00 37.4, h 634 km. Mb 4.5. Fiji Islands region.
	HEE: iPKP	18	19	13.0	+						
26.	WIT: ePKP1	21	47	21.5							29.6S 177.4W, H: 21 27 34.1, h 55 km. Mb 5.4. Kermadec Islands.
	HEE: ePKP2	21	48	03.5							
	iPKP2	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							
	HEE: eP	21	59	07.5	+						
27.	eL	13	01								45.2S 76.7W, H: 12 01 21.8, h N, Mb 4.8, Ms 4.8. Off coast of Southern Chile.
	F	13	31								
27.	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

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		
28. August 1973	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. More than 600 reported killed.
	ipP	10	03	22							
	iPP	10	06	04							
	ipPPP	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								38.0N 42.7E, H: 07 36 23.6, h N. Mb 4.8, Ms 4.7. Turkey.
	F	08	27		20			3.6	5.0		
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

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		
30. August 1973	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	+					
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							
30.	HEE: eP	20	01	56.5							32.5N 141.7E, H: 21 13 48.3, h 39 km, Mb 4.9. South of Honshu, Japan.
	e	20	02	08.5							
	30.	eL	22	00							
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							
31.	e	02	41	52.5							16.1S 172.5W, H: 23 29 49.4, h N. Mb 5.1. Samoa Islands region.
	HEE: iPKP	23	49	25.0	+						

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											
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 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 17 17 17	37 37 47 49 53.7 57.2 03 34 37 37 37	27 40 56 02 2 3 32.0 31.5 41.5	+ + - -	7 19	1.5				15.0N 94.3W, H: 17 24 59.4, h 51 km. Mb 5.2. Near coast of Oaxaca, Mexico.
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					4.1	5.8	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

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													
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
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	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	07							
		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							
		F	in next shock			20		19.5	6.5		
		WIT: iP	18	38	03.0						
		HEE: iP	18	38	12.5	-					

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		
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	08							
		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. WIT: change of papers: 07:05-07:09 G.M.T.	
		eS	07	11	03						
		eL	07	16							
		F	08	57							
		HEE: iP	07	06	11.0	+					
		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								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	16	+	7	2.4				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								63.9N 22.1W, H: 02 22 15.7, h N, Mb 4.9. Iceland region.
15.	eL F	03	34								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								29.3N 130.3E, H: 04 25 08.7, h 34 km, Mb 5.3. Ryukyu Islands.
15.	eL F	16	05								7.6N 144.7E, H: 15 05 24.8, h 12 km, Mb 5.2. Caroline Islands region.
15.	eL F	18	14								No determination of epicenter.
16.	eL F	03	18								No determination of epicenter.
16.	eP eS eL F WIT: eP HEE: eP	05	05	12	+						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	58							5.2N 78.1W, H: 08 21 38.1, h N, Mb 5.3, Ms 5.2. South of Panama.

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								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	12	+	7	2.4				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								63.9N 22.4W, H: 22 33 28.4, h 5 km, Mb 4.7. Iceland region.
17.	eL F	01	24.5								64.0N 22.2W, H: 01 14 17.2, h N, Mb 4.1. Iceland.
17.	eL F	04	23								36.5N 51.1E, H: 04 06 03.7, h 47 km, Mb 4.8. Iran.
17.	eL F WIT: iPKP HEE: iPKP ipPKP	08	35								17.3S 174.3W, H: 07 21 47.4, h 135 km, Mb 5.5. Tonga Islands.
17.	eL F	10	11								No determination of epicenter.
18.	eL F	00	04								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								36.7N 30.1E, H: 08 47 40.5, h 15 km, Mb 4.4. Turkey.
18.	WIT: eP HEE: iP	13	11	19.0							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	42							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		
19. SEP. 1973	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 23	33 33.4	08							B.C.I.S.: 43.3N 0.3E, H: 23 29 04, France.
20.	iP iPP iSKS eL F	20 21 21 21.5 23.1	56 00 06	26 36 13	-	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 20 21	56 59 00	21.5 25 30	-						
	HEE: eP i	20 20	56 56	25.0 27.5							
21.	eSP eSS eL F	07 07 08	41 46.7 02	01							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 09.9	20								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 19 19 19	47 47 47 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 02	48 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 03 04.1 03 03	12 16 14	14 35.5 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 06	57 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		
22. SEP. 1973	eL F	19 19	20 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 20.8	13								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 13 12	14 57 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 18	33 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 23	54 03								19.3N 121.0E, H: 22 02 55.9, h 35 km. Mb 4.7. Philippine Islands Region.
24.	eL F	09 09.7	25								86.1N 32.0E, H: 09 08 39.4, h N. Mb 4.9, Ms 4.9. North of Svalbard.
24.	eL F	11 11	37 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 17 17 19.6	38 01.0 32	07	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 23	21 43								7.5N 126.8E, H: 22 26 31.6, h 94 km. Mb 5.2. Mindanao, Philippine Islands.
26.	eL F	10 11	36 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 18	54 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 03	55.7 07								No determination of epicenter.
27.	eL F	05 05	20 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		
SEP. 1973											
27.	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.
		07	06	31.5	-						
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.
		12	37	44							
		12	38.6								
		13	17								
		12	33	38							
		12	33	59.5	-						
		12	34	10.5							
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 ipP iPP iPPP iS isS eSS eSSS eL F WIT: iP ipP iS e e HEE: iP ipP 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.
		00	55	30							
		00	56	42							
		00	57	42							
		00	59	28							
		01	03	32							
		01	07	03							
		01	08.5								
		01	12.0								
		01	21								
		04.0									
		00	54	40.6	-						
		00	56	43.0							
		01	03	23.0							
		01	22	09							
		01	25	08							
		00	54	49.0	-						
		00	56	56.0							
		01	03	48.0							
		01	22	17							
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.
		05	06	09.5							
		05	06	36.0							
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.
		07	43								
		06	30	13.7	+						
		06	30	22.5	+						

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											
1.	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.
		06	31								
1.	eS eL F WIT: iP epP 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.
		14	56								
		16	16								
		14	28	44.9							
		14	28	58.0							
		14	28	54.0							
		14	29	07.0							
1.	eL F	16	37								No determination of epicenter.
		17	00								
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.
		20	50								
2.	eL F WIT: iPKP HEE: ePKP	00	47								4.5S 151.5E, H:23 44 12.0, h 226 km. Mb 5.4. New Britain region.
		01	03								
		00	02	45.1	+						
		00	02	47.5							
2.	eL F	03	45								23.9N 121.6E, H:02 59 42.3, h 49 km. Mb 5.1, Ms 4.8. Taiwan.
		04	26								
2.	eL F	08	24								No determination of epicenter.
		08	38								
2.	eL F	21	45								10.5N 85.1W, H:21 05 05.3, h 88 km. Mb 5.1. Costa Rica.
		22	11								
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.
		05	44								
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.
		11	58								
		10	47	52.5							
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.
		13	17								
3.	WIT: iPKP HEE: iPKP	16	10	31.0							17.7S 176.9W, H:15 51 35.0, h 360 km. Mb 4.9. Fiji Islands region.
		16	10	37.0	+						
3.	WIT: ePKP HEE: iPKP i	18	18	24.5	+						21.1S 179.2W, H:17 59 48.3, h 638 km. Mb 5.0. Fiji Islands region.
		18	18	29.5	+						
		18	18	38.0	-						

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				
OCT. 1973	5.	iP	05	59	53	+				33.0S 71.9W, H:05 45 27.3, h 14 km. Mb 5.8, Ms 6.5. Near coast of central Chile.			
		iPP	06	04	20								
		iSKS	06	10	40								
		iSPP	06	14	48								
		eSS	06	19	40								
		eSSS	06	24.0									
		eL	06	33							20	44.5	7.0
F	in next shock												
5.	5.	iP	06	02	10	+				32.5S 71.5W, H: 05 47 51.1, h N. Mb 5.8, Ms 6.7. Near coast of central Chile.			
		iPP	06	06	37								
		iSPP	06	17	02								
		eSS	06	21.8									
		eL	06.6										
F	10.4												
5.	WIT: ePKP HEE: iPKP i	19	49	41.0						17.4S 172.8W, H:19 30 07.0; h N. Mb 5.0. Tonga Islands region.			
		19	49	47.0+									
		19	49	53.0									
5.	eL F	21	34							33.2S 72.1W, H:20 34 21.9, h 23 km. Mb 4.8. Off coast of central Chile.			
		22	05										
6.	eL F	05	17							33.1S 72.1W, H:04 24 49.5, h 21 km. Mb. 5.0. Off coast of central Chile.			
		06	29										
6.	eL F	07	45							31.7S 71.7W, H:06 43 37.5, h 46 km. Mb 5.0. Near coast of central Chile.			
		07	57										
6.	eP iPP iPPP eSKS iSP iSS eSSS eL F WIT: ePKP e HEE: ePKP e	15	22	33	-					60.8S 21.5W, H:15 07 37.3, h N. Mb 6.2, Ms 7.0. Southwestern Atlantic Ocean.			
		15	27	08									
		15	29	20									
		15	33	00									
		15	36	56									
		15	43	00									
		15	47.0										
		15	54								20	39.0	7.0
		15.7											
		15	26	32									
		15	36	52									
		15	26	25									
		15	37	01									
		6.	eS eL F WIT: eP HEE: eP	21							29.2		
21	33												
21	44												
21	25			06									
21	24			51.5									
21	24			51.5									

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		
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	09							42.3N 146.6E, H:09 27 02.2, h 27 km. Mb 5.2, Ms 4.7. Off coast of Hokkaido, Japan.	
		10	51								
		09	39	07.0							
		09	39	09.5							
		09	39	16.0							
7.	eL F	12	03							16.2N 122.2E, H:11 11 26.2, h 78 km. Mb 4.8. Luzon, Philippine Islands.	
		12	15								
7.	eL F	13	13							16.3N 122.3E, H:12 20 37.2, h N. Mb 5.0. Luzon, Philippine Islands.	
		13	40								
8.	WIT: ePKP HEE: iPKP epPKP	04	04	46.5						17.8S 178.3W, H:03 46 09.0, h 544 km. Mb 5.4. Fiji Islands region.	
		04	04	51.5							
		04	06	58.0							
9.	eL F	02	34		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.	
		03	17								
9.	ePKP ePP eL F HEE: ePKP	08	17	03						14.2S 167.2E, H:07 57 31.0, h 9 km. Mb 5.8, Ms 6.4. New Hebrides Islands.	
		08	20	04							
		09.0									
		10.6									
9.	eL F WIT: eP	08	17	16.0	22					7.4N 35.2W, H:19 06 02.0, h N. Mb 4.9. Central Mid-Atlantic Ridge.	
		19	31								
9.	eL F WIT: eP	19	47							B.C.I.S: 49.2N 68E, H:23 01 52, N.E. France.	
		19	15	45.0							
9.	HEE: e	23	02.5							29.7N 113.5W, H:00 01 24.1, h N. Mb 5.0. Gulf of California.	
11.	HEE: iP	00	13	51.0 +							
11.	iP i iPP iPPP iS iSS eLQ eLR F WIT: iP HEE: iP	02	17	52	-	6	4.1				06N 29.5W, H:02 07 52.7, h N. Mb 5.8, Ms 6.3. Central Mid-Atlantic Ridge.
		02	17	58							
		02	20	04							
		02	21	36							
		02	26	04							
		02	29	20							
		02	32.6								
		02	34.9								
		05.2									
		02	17	59.3 -							
		02	17	47.5 -							

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		
OCT. 1973											
11.	eL F	10 11	55 26								ISC: 4:61S 134:03E, H: 09 53 35.0, h 33 km. West Irian.
11.	eL F	19 19	18 56								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 21 21	38 38 38	15.5 20.5 23.5							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 03 03 03	13 19 44 02	00 47							37.7N 72.0E, H:02 54 07.7, h 11 km. Mb 5.3, Ms 4.6. Tadzhik SSR.
12.	eL F	06 07	27 20								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 19	52 06								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 02 01 01	29 50 56 56	13.5 + 17.0 +							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 22 21	37 19 20	40							4.8N 32.6W, H:21 10 49.3, h N. Mb 5.4. Central Mid-Atlantic Ridge.
13.	eL F	22 23	57 27								5.0N 32.6W, H:22 30 47.9, h N. Mb 4.9. Central Mid-Atlantic Ridge.
14.	eL F	01 01	22 40								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 06 06 06	38 44 31 31	49.5 57.0							58.6N 31.9W, H:06 26 54.4, h N. Mb 4.5. North Atlantic Ridge.
14.	eL F	10 10	22 48								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		
OCT. 1973											
14.	eS eL F WIT:eP HEE:eP	18 18 18 18	16 19.0 46 12	24 05.0 56.0							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 22 22 23 22 22 22	15 21 26 08 15 15 15	10 16 02.5 18.5 + 26.0							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 24	10 23								6.4S 154.9E, H:22 06 50.4, h 60 km. Mb 5.4. Solomon Islands.
15.	eL F	07 08	45 21								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 03 03 03 03 03 03 03 03 03 03 03 03 03	24 25 26 27 31 32 35 27 24 25 25 24 25 25 25	38 45 34 37 20 29 04 30.7 - 02.5 18.4 35.5 24.5 46.0	+ 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 01 02.4 01 01	21 49 25 21 21	22 25 28.0 -							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 11 11 11 11 11 11	02 12 28 12.8 02 02 02	16 30 21.5 - 23.5 + 29.5 -	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	59	11.4							18.1N 106.1W, H:10 14 15.9, h N. Mb 5.2. Off coast of Jalisco, Mexico.
23.	eL F	22	11	22.6							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	04	56							13.8N 120.2E, H:06 41 11.3, h 63 km. Mb 5.6.
	HEE:eP	07	12.0	08.4	20			5.3	6.0		Mindoro, Philippine Islands.
25.	iP ipP iSKS iSP ipSP iSS iSSS F	06	54	28.5							
	WIT:iP ipP HEE:iP ipP	14	21	26	-	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	14	23	22	+						
		14	31	13							
		14	33	10							
		14	36	30							
		14	38	30							
		14	41	37							
		14	41	37							
		14	21	31.1	-						
		14	23	29.5							
		14	21	25.0	-						
		14	23	23.0							
26.	WIT:iP HEE:iP	04	35	01.9	+						
		04	35	12.0	+						
26.	eL F	11	54								49.8N 78.2E, H:04 26 57.7, h 0 km. Mb 5.3, Ms 4.4. Eastern Kazakh SSR.
		12	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	07	05	59.0	+	3	30.0				70.8N 54.2E, H:06 59 57.4, h 0 km. Mb 6.9, Ms 5.5. Novaya Zemlya.
		07	10	48							
		07	13.5								
		09.0									
	WIT:iP HEE:iP	07	05	48.6	+						
		07	06	05.0	+						

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		
OCT. 1973											
27.	WIT:i HEE:i	07	38	17.5	-						No determination of epicenter.
27.	HEE:ePKP	07	38	08.5	-						
27.	eL F	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	58								57.8S 25.6W, H:22 03 02.3, h 97 km. Mb 5.2. South Sandwich Islands region.
28.	HEE:e(L)	23	11								48.4N 17.1E, H:03 56 15.4, h 2 km. Czechoslovakia.
28.	eL F	04	00	26.0							66.6N 19.9W, H:10 01 54.1, h N. Mb 4.5. Iceland region.
28.	eL F	10	12								No determination of epicenter.
		10	17								
28.	eL F	10	22.5								
		10	32								
28.	eL F	10	53.0								66.7N 19.7W, H:10 42 50.6, h N. Mb 4.4. Iceland region.
				in next shock							
28.	eL F	10	58.5								66.7N 19.3W, H:10 48 23.0, h N. Mb 4.3. Iceland region.
		11	13								
28.	eL F HEE:eP	11	22.0								67.0N 19.3W, H:11 12 02.5, h N. Mb 4.7, Ms 3.9. Iceland region,
		11	35								
		11	16	37.0							
28.	iP eL F HEE:eP	11	36	08	(-)	20	3.2			4.7	66.9N 19.2W, H:11 31 44.1, h N. Mb 5.0, Ms 4.4. Iceland region.
		11	41.0								
				in next shock							
		11	36	19.0							
28.	eL F HEE:eP	11	57.0								66.8N 19.3W, H:11 47 37.6, h N. Mb 4.7. Iceland region.
		11	52	12.0							
28.	eL F	12	11.5								67.3N 19.0W, H:12 01 47.8, h N. Mb 4.4. Iceland region.
		12	25								
28.	eL F HEE:eP	14	35.3			20	1.8			4.4	66.9N 19.5W, H:14 25 54.3, h N. Mb 4.5, Ms 4.0. Iceland region.
		14	54								
		14	30	30.0							ISC: 67°1N 19°W, H: 02 14 41, h 0 km. Iceland Region.
29.	eL F	02	25								3.0S 139.3E, H:05 27 25.5, h 36 km. Mb 5.7, Ms 5.5. WestNew Guinea.
		02	35								
29.	eL F	06	23								19.2N 121.1E, H:15 53 07.9, h 50 km. Mb. 4.7. Philippine Islands region, No determination of epicenter
		07	13								
29.	eL F	16	43								42.8N 145.3E, H:23 07 01.6 h 54 km. Mb 5.1. Hokkaido, Japan region.
		17	01								
31.	HEE:e	02	55	22.0							
31.	WIT:eP	23	18	58.0							

Seismological Data

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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								
	F	17.1			18			3.0	5.8		

Seismological Data

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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								
	F	08	52								41.7N 13.8E, H: 08 40 46.7, hN. Mb 4.0. Southern Italy.
6.	WIT:iPKP	05	38	09.5							
	HEE:iPKP	05	38	13.5(+)							
	i	05	38	26.5 +							d.b.m.23.8S 179.1E, H: 05 19 18.3, h 546 km. Mb 5.5. South of Fiji Islands.
6.	iP	09	47	56 +							
	iS	09	57	48							
	iPS	09	58	33							
	iSS	10	02	52							
	eSSS	10	06.2					14.0	6.3		
	eL	10	12.7		20						
	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
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		
NOV. 1973	6.	iP	18	38	24	20	21.0	6.5		d.b.m. 51.6N 175.2W, H: 18 26 35.1, h 41 km. Mb 5.9, Ms 6.3. Andreanof Is., Aleution Is.	
	iS	18	48	06							
	iSS	18	53	19							
	eSSS	18	56.5								
	eL	19	03.0								
	F	21.3									
	WIT:eP	18	38	20							
HEE:eP	18	38	30.0								
7.	eL	08	24		20	17.8	6.3		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	20	17.8	6.3		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								
	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		20	8.9	5.2		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		20	8.9	5.2		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	20	7.1	6.0		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	20	7.1	6.0		50.0N 156.4E, H: 02 43 06.2, h 51 km. Mb 6.0. Kuril Islands		
	eS	03	04	25							
	eL	03	20								
	F	04	12								
	WIT:eP	02	54	41.5							
	i	02	54	48.7							
	HEE:iP	02	54	50.5							

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		
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		-				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

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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 05 24 04 37	31.0								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:iP ipP	09 31 09 31 09 31	29.0 42.0 - 57.5 +								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 18.8									55.7S 28.3W, H: 17 11 19.0, hN. Mb 5.7, Ms 5.9. South Sandwich Islands region
27.	eL F WIT:iP HEE:iP	14 32 15.0 14 03 14 04	47.0 02.0								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 01 09	45.0 50.0								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 08 36 08 39 08 40 08 44 08 56 10.1	20 52 25 07 40	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 11 00									No determination of epicenter
29.	eL F	01 28 02.3									3.5S 145.9E, H: 00 29 56.4, hN. Mb 5.1, Ms 5.7. Near north coast of New Guinea.

Seismological Data

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

Date	Phase	G.M. Time			First motion	Period s	Amplitude μ			Magnitude De Blit	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:iP HEE:iP	11 02 34 11 03 32 11 06 30 11 09.5 12 00 11 02 30.4 + 11 02 18.5		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 13 35									55.7° 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 18 10 00.0									53.3N 153.4E, H: 17 59 21.3, h 491 km. Mb 5.2. Sea of Okhotsk.
29.	eL F	18 15 18 35									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 + 08 29 39 08 30 12 08 32 15 08 32 35 09 10 11.1 08 29 03.0 08 29 07.0	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	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											
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	30	24	+						
		23	40	08							
		23	40	44							
		23	54			20		19.0	6.4		
		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

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		
DEC. 1973											
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 ipP	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							

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		
DEC. 1973											
9.	WIT:ePKP HEE:iPKP	21	17	32.5 35.5	-						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 29.0 40.0 24.0	+						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 27							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 59.3							No determination of epicenter.
15.	WIT:iPKP HEE:iPKP i	11	13	34.5 38.0 45.5	- +						21.6S 175.2E, H: 10 54 52.1, h 567 km. Mb 5.3. South of Fiji 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		
DEC. 1973											
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 31.0	+						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 17.5							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

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		
24.	WIT: iPKP epPKP HEE: iPKP epPKP	08	33	53.5	-						19.1S 174.9W, H: 08 14 25.1, h 121 km. Mb 5.7. Tonga Islands.
24.	eL F	14	06.8								35.ON 27.8E, H: 13 53 50.9, hN. Mb 4.3. Dodecanese Islands.
24.	eL F HEE: iP	19	09								12.6S 77.7W, H: 18 18 10.2, hN. Mb 5.4. Near coast of Peru.
24.	WIT: eP HEE: eP	20	27	39.5							34.7N 24.6E, H: 20 22 45.4, h 37 km. Mb 4.9, Ms 5.2. Crete.
24.	eL F WIT: eP HEE: eP	21	03.4								22.6N 45.1W, H: 20 41 37.3, hN. Mb 4.9. North Atlantic Ridge.
24.	eL F	21	36.5								24.3N 121.0E, H: 20 50 08.0, h 24 km, Mb 4.8. Taiwan.
26.	eL F	00	58								61.4S 153.7E, H: 23 25 56.5, h N. Balleny Islands Region.
26.	eL F WIT: eP ipP HEE: eP	21	15								33.4N 140.8E, H: 20 30 06.4, h 63 km. Mb 5.6. South of Honshu, Japan.
27.	eL F	06	44								13.9N 146.4E, H: 05 48 42.2, h 54 km. Mb 5.1. South of Mariana 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		
28.	iPKP ipPKP iPP iSS eL F WIT: ePKP i ipPKP HEE: iPKP i i epPKP	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.
28.	iPKP i iSKP iPPP iSKKS eSS eL F WIT: ePKP i i iSKP HEE: ePKP i i iSKP i	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.
						20	92.5		7.6		
28.	WIT: iPKP e	14	38	22.5							14.7S 166.5E, H: 14 18 52.0, hN. Mb 5.6. New Hebrides Islands.
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 F	23	59								18.9N 146.9E, H: 23 13 29.0, h 45 km, Mb 5.2, Ms 5.3. Mariana Islands.

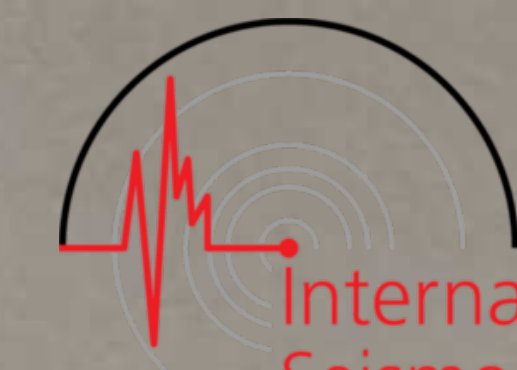
Seismological Data

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			
DEC. 1973	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									
		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								
		F	20.2									
		WIT:iPKP	16	58								58.5
		i	16	59								15.3
		HEE:ePKP	16	59								02.5

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		
DEC. 1973	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							



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		
DEC. 1973	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								