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SEISMIC RECORDS AT DE BILT

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M E T E O R O L O G I S C H I N S T I T U U T

Seismic Records

at De Bilt

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P R E F A C E

This seismic Yearbook was composed under the supervision of Dr. J. Veldkamp, director of the Geophysical Section. The records have been reduced by Mr. J. Oldeman, scientific officer, Mr. G. Houtgast, scientific assistant, and Mr. J.A. van Bodegraven, assistant.

The Director in Chief of
the Royal Netherlands Meteorological Institute,

Dr. M.W.F. Schregardus.

De Bilt juli 1972

I N T R O D U C T I O N

SEISMOLOGICAL STATION DE BILT

The geographic coordinates of the seismological station are 52°06'06.0"N and 5°10'36.0"E. The instruments are placed at a height of 3 m above mean sea-level on a subsoil consisting of sand (pleistocene).

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

Below are given: the period of the galvanometer Tg, 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 for the year 1968.

GALITZIN seismographs	NS comp.	EW comp.	Z comp.
Period of galvanometer Tg	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 Ts	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 Tg	90 sec
Reduced length of pendulum l	360 mm
Distance A	1000 mm
Period of pendulum Ts	30 sec
Damping constant galvanometer	0.025
Damping constant pendulum	0.470
Multiplying factor k	147

SEISMOLOGICAL STATION HEERLEN (HEE)

The geographic coordinates of the seismological station are: 50°53'09.7"N and 5°58'57.4"E.

The instrument, a horizontal seismograph, EW-component, M = 450 kg, is placed at a height of 100 m above mean sea-level on a subsoil consisting of loess.

The mean values of the constants for the year 1968 are:

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

SEISMOLOGICAL STATION WITTEVEEN (WIT)

The geographic coordinates of the seismological station are: 52°48'48.0"N and 6°40'06.0"E.

The instruments, a GRENET vertical seismograph with galvanometric record, and one vertical and one horizontal WILLMORE seismograph, are placed at a height of 17 m above mean sea-level 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 seismographs are:
T seismograph 2 sec, T galvanometer 0,25 sec. The maximum amplification is 30.000 for a period of about 0.4 sec.

EXPLANATION OF THE TABLES

The data given in this yearbook have mostly been obtained from the GALITZIN records. The velocity of the recording paper is 30 mm per minute, allowing a good time-accuracy.

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 aplitudes measured from the medium line (Galitzin records). The amplitudes have been calculated by means of the formula:

$$V = \frac{A\ k\ Tb}{\pi\ l} \frac{1}{\left\{1 + \left[\frac{Tb}{T}\right]^2\right\}^2}$$

In this formula A is the distance between galvanometer mirror and recording paper, k is the multiplying factor, Tb 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.

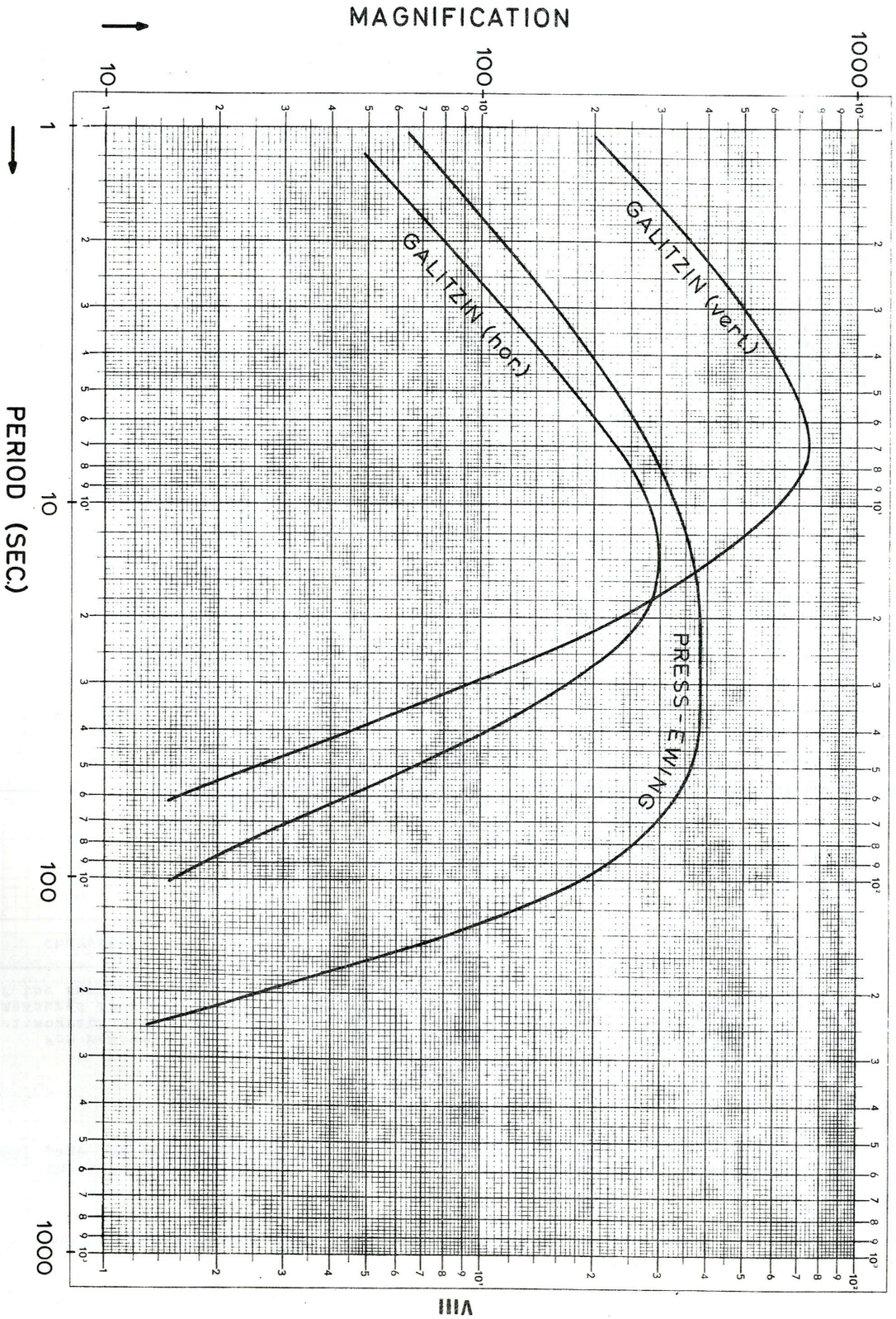
For the horizontal components of the Galitzin records the following mean values were used: k = 11,0 and T = 24,5 sec, and for the vertical component k = 175 and T = 12,0 sec.

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:

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

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.



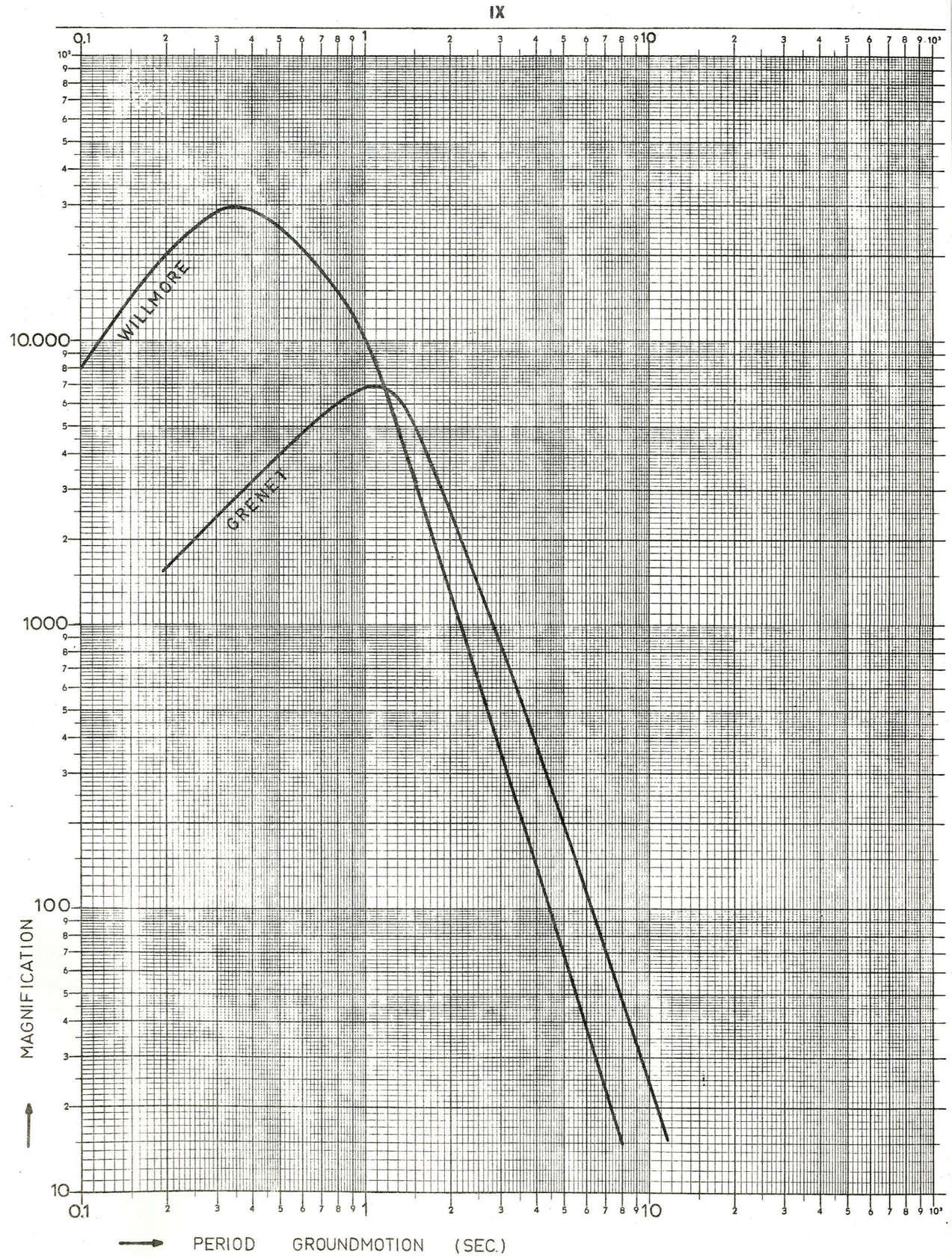
THE MICROSEISMIC ACTIVITY

The table on page 1 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 - ½ mm	0 - 1½ μ
1	½ - 2 mm	1½ - 5 μ
2	2 - 4 mm	5 - 10 μ
3	4 mm	10 μ



Seismic Records at De Bilt

Character of the microseismic movement

Date 1968	Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2	2	2 1	1 2 3	1	1	1	0	1	2	2 1 2	1
2	2	2 1	1	3 2	1	1	1	0	1	2	2	1
3	2 3	1	1	2	1	1	1	0	1 0	2	2 3 2	1
4	3 2	1 3	1 2	2 1	1	1	1	0	0	2 3	2 1	1
5	2	3	2	1	1 2	1 2 1	1 0	0	0 1	3	1 2	1
6	2 3	3 2	2 3	1	2	1	0 1	0	1	3 2 1	2	1
7	3 2	2 1	3 2 1	1	1	1 0	1 0	0	1	1	2 1	1
8	2 3	1	1	1	1	0	0 1	0	1 0	1	1	1
9	3 2	1	1	1	1	0	1 0	0	0 1	1 2 3	1 2	1
10	2 3	1	1	1 0	1 2	0	0 1	0	1	3	2 1	1 2
11	3 2	1	1 2	0	2 1	0	1 3 2	0	1	3	1	2 1
12	2 1	1 2	2 1	0 1	1	0	2 1 0	0	1	3	1 2	1 2
13	1 2	2 3	1 2	1	1 2 1	0 1	0	0 1	1 0	3 2	2	2
14	2 3	3 2	2	1 0	1 0	1 0	0	1 2	0 1	2 1	2 3	2
15	3 2	2 1	2 3 2	0	0	0	0 1	2	1 2	1 2	3	2 3
16	2	1	2 3	0 1	0	0 1	1	2 1	2 1	2	3 2 1	3
17	2	1	3	1	0	1 0	1	1	1	2	1	3 2
18	2	1 2	3	1 0	0	0	1 0	1	1 0	2 1	1	2 1
19	2	2 1	3	0	0	0	0 1	1	0 1	1 2	1	1 2
20	2 1	1	3 2	0	0	0 1	1	1	1 2	2	1	2 3
21	1	1	2	0	0	1	1 0	1	2	2 1	1	3
22	1	1 3	2	0	0	1	0	1 0	2	1	1	3
23	1 2	3 1	2 3	0	0	1	0 1	0	2 3	1	1 2	3
24	2	1	3	0	0	1	1 0	0	3 2	1	2	3 2
25	2	1	3 2	0	0	1	0 1	0 1	2 1	1 0	2 3	2 1
26	2	1	2 1	0	0 1	1	1 0	1	1	0 1	3 2	1 2
27	2 3	1 2	1	0	1	1	0	1 0	1 2 3	1	2 1	2
28	3 2	2 3	1 2 1	0 1	1	1 2	0	0	3 2	1	1	2 1
29	2	3 2	1	1	1	2 1	0	0 1	2	1	1	1
30	2		1	1	1	1	0	1	2	1 2 3	1	1
31	2		1		1		0	1		3 3 2		1

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Jan. 2	WIT iPKP	00	40	08							5.1S 153.4E, H: 00 21 10.8, h 55 km, M 5.5. New Ireland region.
Jan. 3	WIT e(P)	04	14	14							72.3N 6.5E, H: 04 09 34.9, h 33 km, M 5.4. Norwegian Sea.
Jan. 4	eL	01	35								52.2N 171.3W, H: 00 57 44.4, h 36 km, M 5.7. Near Islands, Aleutian Islands.
	F	02.5									
Jan. 6	ePS	23	55.0								27.8S 71.1W, H: 23 27 21.2, h 33 km, M 5.8. Near coast of Northern Chile.
	eL	00	14			18		20		6.6	
	F	02.5									
	WIT eP	23	41	29							
Jan. 7	eL	11	48			16		5.2		6.0	33.5N 141.6E, H: 11 12 33.9, h 48 km, M 5.5. Off east coast of Honshu, Japan.
	F	12.5									
Jan. 8	WIT iPKP	03	35	35.0							13.7S 171.5E, H: 03 17 12.6, h 630 km, M 5.2. New Hebrides Islands region.
	i	03	35	51.9							
Jan. 8	eL	20	48								8.2N 38.2W, H: 20 22 15.6, h 33 km, M 5.4. Central Mid-Atlantic Ridge.
	F	21	10								
	WIT eP	20	32	05							
Jan. 8	eL	23	08			18		5.1		6.3	d.b.m. 14.8S 174.8W, H: 21 54 20.8, h 16 km, M 5.5. Samoa Islands region.
	F	24.2									
Jan. 12	WIT iP	04	29	37.0	(+)						13.4N 93.1E, H: 04 17 43.1, h 33 km, M 5.5. Andaman Islands.
Jan. 13	eP	07	16	26							24.1N 122.2E, H: 07 03 39.2, h 8 km, M 5.7. Taiwan region.
	ePP	07	19	50							
	eS	07	27	00							
	eSS	07	33	00							
	eL	07	42			16		42		6.8	
	F	08	30								
	WIT eP	07	16	22							
Jan. 13	eSKS	16	30	50							24.2S 66.9W, H: 16 07 04.2, h 192 km, M 5.7. Salta Province, Argentina.
	eS	16	31.5								
	ePS	16	33	10							
	eL	16	47								
	F	17.5									
	WIT eP	16	20	28							
Jan. 14	WIT iPKP	08	20	11.3	-						22.5S 179.6W, H: 08 01 27.8, h 610 km, M 5.2. South of Fiji Islands.
	ipPKP	08	22	33.3							
Jan. 14	WIT eP	12	52	30.5							52.8N 171.4W, H: 12 40 48.5, h 44 km, M 5.6. Fox Islands, Aleutian Islands.
Jan. 14	ePS	12	54	30							d.b.m. 7.5S 127.9E, H: 12 25 09.7, h 115 km, M 5.9. Banda Sea.
	eSSS	13	04.8								
	eL	13	20			25		15		6.6	
	F	14.0									
	WIT ePKP	12	43	43							
Jan. 14	eL	18	18			18		8.5		6.1	d.b.m. 52.7N 171.2W, H: 17 43 10.0, h 34 km, M 5.5. Fox Islands, Aleutian Islands.
	F	19.5									

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Jan. 15	eL	01	41								d.b.m. 37.9N 13.1E, H: 01.33 02.7, h 33 km, M 5.1. Sicily, Italy.
	F	in next shock									
	WIT eP	01	36	52							
Jan. 15	eP	02	04	43							d.b.m. 37.9N 13.1E, H: 02 01 08.5, h 33 km, M 5.4. Sicily, Italy.
	eS	02	07	47							
	eL	02	08.5			15		36		5.6	
	F	02	30								
	WIT eP	02	04	55							
Jan. 16	eP	16	46	20							d.b.m. 37.9N 13.1E, H: 16 42 44.3, h 14 km, M 5.1. Sicily, Italy.
	eS	16	49	23							
	eL	16	50.2			15		21		5.4	
	F	17	25								
	WIT eP	16	46	35							
Jan. 19	ePKP	06	24	05							9.4S 158.4E, H: 06 04 38.2, h 33 km, M 6.0. Solomon Islands.
	ePKS	06	27	20							
	eL	07	06			20		27		7.0	
	F	09.0									
	WIT iPKP	06	23	52							
	ePP	06	26	15							
Jan. 19	WIT iP	18	26	52.5	+						37.3N 116.2W, H: 18 15 00.0, h 0 km, Underground explosion Southern Nevada, U.S.A.
Jan. 20	eL	17	51			20		3.2		6.1	16.2S 178.1E, H: 16 41 27.1, h 21 km, M 5.6. Fiji Islands.
	F	18	20								
	WIT ePKP	17	01.0								
Jan. 20	WIT iPKP$_1$	21	40	45.4							29.9S 179.5W, H: 21 21 31.6, h 349 km, M 5.8. Kermadec Islands.
	iPKP$_2$	21	41	17.2							
Jan. 21	eP	16	52	11		5	2.8				1.2S 14.0W, H: 16 42 29.2, h 33 km. North of Ascension Island.
	eS	16	59	55							
	ePS	17	04.0								
	eL	17	07			20		46		6.6	
	F	18.5									
	WIT eP	16	52	15							
Jan. 21	WIT iPKP	23	14	14.8	-						5.0S 150.8E, H: 22 55 35.8, h 185 km, M 5.0. New Britain region.
Jan. 21	WIT eP	23	57	32							16.8N 92.3W, H: 23 45 17.1, h 77 km, M 5.4. Chiapas, Mexico.
Jan. 22	WIT eP	10	44	12							38.2N 75.6E, H: 10 35 36.6, h 108 km, M 5.3. Sinkiang Province, China.
Jan. 22	WIT ePKP	18	35	55							9.8S 149.0E, H: 18 16 49.8, h 27 km, M 5.3. East New Guinea.
Jan. 22	WIT eP	20	40	57							33.8N 46.9E, H: 20 34 10.0, h 33 km, M 5.0. Iran.
Jan. 22	WIT iP	21	27	28.0	-						33.7N 46.8E, H: 21 20 38.5, h 10 km, M 5.0. Iran.
Jan. 25	eP	10	00	30							37.8N 13.2E, H: 09 56 48.7, h 33 km, M 5.1. Sicily, Italy.
	eS	10	03.5								
	eL	10	04			14		17.5		5.3	
	F	10	40								
	WIT eP	10	00	33							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Jan. 26	e(PP)	05	05.3								d.b.m. 8°.8S 120.4E, H: 04 45 41.4, h 29 km, M 5.9. Flores Island region.
	ePPP	05	08.5								
	ePPS	05	16.0								
	eSS	05	25.0								
	eL	06.1				32		53		7.2	
	F	07.5									
Jan. 26	eL	13	15			14			2.6	5.6	24.3N 111.5W, H: 12 30 46.3, h 33 km, M 5.3. Baja California.
	F	13	35								
	WIT iP	12	43	18.4	+						
Jan. 27	eL	14	40			20		7.8		6.1	23.2N 121.6E, H: 13 56 23.8, h 53 km, M 5.2. Taiwan.
	F	15	05								
	WIT eP	14	09	10							
Jan. 29	WIT eP	05	08	16							36.3N 70.4E, H: 05 00 10.0, h 225 km, M 5.5. Hindu Kush region.
Jan. 29	iP	10	31	07.8	+	10	17				43.6N 146.7E, H: 10 19 05.6, h 40 km. Kuril Islands.
	iS	10	41	03							
	eSS	10	47								
	eL	10	55			22		210		7.5	
	F	14.0									
	WIT iP	10	31	02.3	+						
Jan. 29	WIT iP	10	54	07.8	-						43.2N 147.2E, H: 10 42 08.6, h 41 km, M 5.2. Kuril Islands.
Jan. 29	WIT eP	11	55	53							43.2N 147.3E, H: 11 43 59.1, h 33 km, M 5.1. Kuril Islands.
Jan. 29	eL	17	20								43.5N 147.2E, H: 16 42 21.3, h 36 km, M 5.7. Kuril Islands.
	F	18.0									
	WIT iP	16	54	49.0	+						
Jan. 30	WIT iP	01	42	15.5	-						43.3N 146.8E, H: 01 30 12.7, h 12 km, M 5.3. Kuril Islands.
Jan. 30	eL	02	25								43.3N 147.7E, H: 01 48 28.6, h 33 km, M 5.1. Kuril Islands.
	F	03	40								
	WIT iP	02	00	30.0							
Jan. 30	WIT eP	02	50	14							43.3N 147.7E, H: 02 38 12.6, h 33 km, M 5.1. Kuril Islands
Jan. 30	eL	03	40								43.1N 147.2E, H: 03 01 44.0, h 28 km, M 5.4. Kuril Islands.
	WIT eP	03	13	46	-						
Jan. 30	WIT eP	03	35	56							43.3N 147.4E, H: 03 23 41.9, h 33 km, M 4.9. Kuril Islands.
Feb. 1	WIT iP	12	59	25.5	-						43.2N 146.9E, H: 12 47 23.4, h 35 km, M 5.5. Kuril Islands.
Feb. 3	eP	05	48.9								16.7N 99.4W, H: 05 36 14.6, h 9 km, M 5.7. Near coast of Guerrero, Mexico.
	ePP	05	52.3								
	eS	05	59	45							
	eL	06	20								
	F	07.0									
Feb. 3	WIT iP	11	42	44.5							43.2N 146.8E, H: 11 30 44.4, h 33 km, M 5.5. Kuril Islands.
Feb. 4	WIT iP	09	22	26.0	-						43.2N 147.2E, H: 09 10 25.3, h 33 km, 5.4. Kuril Islands.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Feb. 4	WIT eP	11	18	24							43.1N 147.0E, H: 11 06 21.0, h 35 km, M 5.3. Kuril Islands.
Feb. 4	eL	11	39			26		29		6.6	43.0N 147.1E, H: 11 oo 50.1, h 33 km. Kuril Islands.
	F	12	30								
	WIT iP	11	12	52.5	(-)						
Feb. 7	WIT eP	22	26	56							36.7N 26.8E H: 22 22 20.0, h 33 km, M 5.0. Dodecanese Islands.
Feb. 8	eS	12	25.5								43.2N 147.2E, H: 12 04 12.8, h 45 km, M 5.0. Kuril Islands.
	eL	12	50								
	F	12	55								
Feb. 9	WIT iP	13	26	22.4	+						45.6N 26.4E, H: 13 22 53.9, h 122 km, M 4.6. Rumania.
Feb. 10	WIT iP	10	11	52.5							46.0N 152.3E, H: 10 00 05.8, h 87 km, M 5.7. Kuril Islands.
Feb. 12	iPKP	06	03	48							5.5S 153.2E, H: 05 44 47.6, h 74 km. New Ireland region.
	iPP	06	05	42							
	ePcPP[1]	06	12	39							
	ePS	06	15	40							
	ePPS	06	17	15							
	eSS	06	23								
	eL	06	40			22		153		7.7	
	F	08.5									
	WIT ePKP	06	03	44							
Feb. 12	WIT ePKP	07	56	17.5							18.4S 173.1W, H: 07 36 37.4, h 26 km, M 4.8. Tonga Islands.
Feb. 12	WIT eP	10	22	50							38.1N 17.8E, H: 21 18 51.9, h 15 km, M 5.3. Southern Italy.
Feb. 19	iP	22	50	05.0	+	6	22				39.4N 25.0E, H: 22 45 41.2, h 7 km. Aegean Sea.
	iS	22	53	32							
	M	22	58							7.2	
	F	03.0									
	WIT eP	22	50	01							
Feb. 20	WIT eP	02	26	23							39.6N 25.4E, H: 02 21 53.0, h 13 km, M 5.0. Aegean Sea.
Feb. 20	WIT iP	02	29	49.0	(+)						12.4N 46.9W, H: 02 19 49.6, h 13 km, M 5.6. North Atlantic Ridge.
Feb. 20	eL	09	46.1								39.3N 24.9E, H: 09 35 49.9, h 33 km, M 4.4. Aegean Sea.
	F	09	51								
Feb. 20	eL	09	51.5			12		9.2		5.1	39.4N 24.9E, H: 09 41 09.6, h 33 km, M 4.7. Aegean Sea.
	F	10	05								
Feb. 20	eL	17	03.5								36.2N 27.5E, H: 16 50 43.3, h 53 km, M 4.9. Dodecanese Islands.
	F	17	10								
Feb. 21	eL	00	32								32.0N 130.8E, H: 23 51 43.0, h 33 km, M 4.9. Kyushu, Japan.
	F	01	00								

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Feb. 21	eL	02	25			22		9.6		6.2	32.0N 130.6E, H: 01 44 50.5,
	F	03	00								h 3 km, M 5.0.
	WIT eP	01	57	26							Kyushu, Japan.
Feb. 21	WIT iPKP	19	47	31.5							30.2S 179.0E, H: 19 27 30.0,
											h 228 km, M 5.0.
											Kermadec Islands.
Feb. 21	eL	21	55								51.4N 176.0W, H: 21 07 56.9,
	F	22	30								h 47 km, M 5.2.
	WIT eP	21	19	42.5							Andreanof Islands, Aleutian Islands.
Feb. 22	WIT ePKP	09	32	33							21.8S 179.7E, H: 09 13 47.8,
											h 566 km, M 4.7.
											South of Fiji Islands.
Feb. 22	eL	11	02								32.0N 130.7E, H: 10 19 07.6,
	F	11	25								h 11 km, M 4.9.
											Kyushu, Japan.
Feb. 25	WIT iP	10	37	11.9	+						45.0N 142.2E, H: 10 25 58.1,
											h 295 km, M 5.1.
											Hokkaido, Japan region.
Feb. 25	eL	15	48			16		2.9		4.5	36.8N 5.6E, H: 15 40 44.8,
	F	16	00								h 20 km, M 4.9.
	WIT eP	15	44	39							Algeria.
Feb. 25	WIT eP	18	20	05.5							51.4N 176.0W, H: 18 08 19.9,
											h 50 km, M 5.3.
											Andreanof Islands, Aleutian Islands.
Feb. 25	WIT iP	20	12	45.0	(-)						37.6N 141.4E, H: 20 00 31.5,
											h 66 km, M 5.5.
											Near coast of Honshu, Japan.
Feb. 26	WIT eP	09	40	28							52.7N 172.6E, H: 09 28 54.1,
											h 56 km, M 5.0.
											Near Islands, Aleutian Islands.
Feb. 26	eP	11	03	04							22.7N 121.5E H: 10 50 16.7,
	ePP	11	06	39							h 24 km.
	eS	11	13	29							Taiwan region.
	eL	11	29			20		150		7.4	
	F	14.0									
	WIT iP	11	02	58.5	-						
Feb. 27	eL	06	07								12.2N 140.7E, H: 05 19 00.5,
	F	06	40								h 19 km, M 5.5.
											Mariana Islands region.
Feb. 27	eL	11	52								12.1N 140.6E, H: 10 54 38.5,
	F	12	10								h 33 km, M 5.4.
	WIT eP	11	08	41							Mariana Islands region.
Feb. 28	eL	12	55								32.9N 137.7E, H: 12 08 01.5,
	F	13	10								h 349 km, M 5.8.
	WIT iP	12	19	58.0	(-)						South of Honshu, Japan.
	ipP	12	21	19							
Feb. 29	WIT ePKP	09	28	17							17.8S 178.6W, H: 09 09 40.4,
											h 544 km, M 4.7.
											Fiji Islands.
Feb. 29	WIT eP	15	57	28							52.8N 157.5E, H: 15 46 18.2,
	epP	15	58	06							h 151 km, M 5.4.
											Kamchatka.
Feb. 29	WIT ePKP	23	55	16							14.6S 167.2E, H: 23 36 08.5,
											h 183 km, M 4.9.
											New Hebrides Islands.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Mar. 2	eL	03	49								49.2N 129.1W, H: 03 14 44.5,
	F	04	05								h 33 km, M 5.1.
											West of Vancouver Island.
Mar. 2	eL	16	51								29.9N 100.2E, H: 16 17 29.0,
	F	17	15								h 24 km, M 5.1.
	WIT eP	16	28	32							Szechwan Province, China.
Mar. 2	eP	22	14	39							6.1S 71.4E, H: 22 02 24.8,
	eS	22	24	45							h 33 km, M 5.6.
	eSS	22	30.0								Chagos Archipelago region.
	eL	22	40								
	F	23.5									
	WIT eP	22	14	37							
Mar. 3	ePP	23	13	29							1.6N 122.6E, H: 22 55 36.8,
	ePPP	23	15	39							h 435 km, M 5.5.
	eS	23	20	17							Northern Celebes.
	ePPS	23	23	53							
	F	24.0									
	WIT ePP	23	13	21							
Mar. 5	WIT eP	00	33	43.0							53.8N 163.3W, H: 00 22 06.9,
											h 2 km, M 4.8.
											Unimak Island region.
Mar. 5	WIT eP	00	42	30.5							53.8N 163.3W, H: 00 30 57.4,
											h 33 km, M 4.9.
											Unimak Island region.
Mar. 5	WIT iPKP	14	56	05.5	-						18.1S 174.7W, H: 14 36 41.5,
	i	14	56	11.7							h 137 km, M 5.1.
											Tonga Islands.
Mar. 5	eL	19.0									d.b.m. 9.6N 126.3E, H: 18 16
	F	20.0									39.6, h 61 km, M 5.5.
											Mindanao, Philippine Islands.
Mar. 5	WIT ePKP	21	40	22							21.8S 170.9E, H: 21 20 49.8,
											h 86 km, M 5.3.
											New Hebrides Islands.
Mar. 7	eP	07	25	50							71.7N 3.1W, H: 07 21 06.5,
	eS	07	29	30							h 26 km, M 4.6.
	eL	07	30.5			22		9.6		5.2	Jan Mayen Island region.
	F	07	50								
Mar. 7	ePP	13	43.3								5.9S 151.1E, H: 13 22 16.6,
	ePS	13	53.3								h 39 km.
	eSS	14	00.8								New Britain region.
	eL	14	25			24		12.4		6.6	
	F	15	50								
Mar. 9	eL	01	27								8.7N 94.0E, H: 00 46 00.9,
	F	01	46								h 33 km, M 5.0.
											Nicobar Islands.
Mar. 10	eL	04	32								52.1N 177.3W, H: 03 49 25.0,
	F	05.3									h 7 km, M 5.4.
											Andreanof Islands, Aleutian Islands.
Mar. 10	eP	07	15	20							BCIS: 39.0N 24.2E, H: 07 10
	eS	07	18	54							57, Aegean Sea.
	eL	07	20			14		22		5.5	
	F	08.0									
	WIT eP	07	15	30							
Mar. 11	ePKP	08	45	54	-						
	epPKP	08	46	37							16.2S 173.9W, H: 08 26 32.8,
	ePP	08	49.7								h 112 km, M 6.0.
	eSS	09	09.0								Tonga Islands.
	F	10.8									
	WIT iPKP	08	45	47.5	-						

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Mar. 13	WIT iPKP	20	44	18.6	(+)						20.5S 178.1W, H: 20 25 32.1, h 520 km, M 5.0. Fiji Islands region.
Mar. 22	eL	21	24								37.4N 142.4E, H: 20 34 45.3, h 18 km, M 5.3. Off east coast of Honshu, Japan.
	F	21	40								
	WIT eP	20	47	(07)							
Mar. 23	eL	17	35			14		21		5.5	39.8N 25.5E, H: 17 25 53.2, h 33 km, M 4.6. Aegean Sea.
	F	17	43								
	WIT eP	17	30	10							
Mar. 24	eL	16	42								32.1N 130.6E, H: 15 58 49.0, h 4 km, Mb 4.9. Kyushu, Japan.
	F	16	55								
Mar. 25	WIT ePKP	03	16	12.5	-						20.0S 168.9E, H: 02 56 37.1, h 21 km, M 5.0. Loyalty Islands.
Mar. 26	WIT ePKP	00	59	24							6.6S 116.1E, H: 00 41 56.9, h 520 km, M 5.9. Bali Sea
Mar. 27	eL	23	34								4.3S 133.3E, H: 22 36 43.3, h 33 km, M 5.5. West New Guinea.
	F	24	10								
Mar. 28	WIT eP	01	20	21							15.1N 92.1W, H: 01 07 37.6, h 111 km, M 5.2. Mexico-Guatemala border region.
Mar. 28	iP	07	44	11	(+)	6	6.0				37.9N 20.9E, H: 07 39 57.1, h 6 km, M 5.4.
	eS	07	47	42							
	eL	07	48.5			12		18		5.4	Ionian Sea.
	F	08	25								
	WIT eP	07	44	08							
Mar. 28	eL	16	46								39.6N 20.4E, H: 16 37 46.8, h 18 km, M 4.8. Greece-Albania border region
	F	16	55								
Apr. 1	iP	00	54	31.8	+	6	6				32.5N 132.2E, H: 00 42 04.2, h 33 km. Shikoku, Japan.
	iS	01	05	04							
	eSS	01	10.5								
	eL	01	21			22		650		8.0	
	F	06.0									
	WIT iP	00	54	25.7	+						
Apr. 1	eP	07	25	45	+						32.3N 132.1E, H: 07 13 17.6, h 32 km, M 5.7. Shikoku, Japan.
	eS	07	36	10							
	eL	07	51			20		54		7.0	
	F	08	55								
	WIT eP	07	25	40.5							
Apr. 1	WIT iP	16	34	42.4	+						26.9N 126.9E, H: 16 22 06.9, h 33 km, M 5.0. Ryukyu Islands.
Apr. 3	WIT iP	16	36	28.3	+						51.7N 174.2E, H: 16 24 45.7, h 38 km, M 5.3. Near Islands, Aleutian Islands.
Apr. 7	WIT eP	04	52	05.5							51.5N 176.5E, H: 04 40 19.3, h 33 km, M 5.3. Rat Islands, Aleutian Islands.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Apr. 7	eS	05	27.5								81.5N 3.9W, H: 05 16 24.9, h 33 km, M 5.3. North of Svalbard.
	eL	05	32								
	F	06.0									
Apr. 8	WIT ePKP	02	33	24.5	+						23.5S 179.8E, H: 02 14 34.0, h 550 km, M 4.7. South of Fiji Islands.
Apr. 9	iP	02	41	18	(+)	4	4.0				33.1N 116.1W, H: 02 28 58.9, h 20 km, M 6.1. Southern California.
	iS	02	51	34							
	e(SS)	02	56.0								
	eL	03	02.5			20		118		7.2	
	F	06.0									
	WIT eP	02	41	17							
Apr. 9	WIT iPKP	11	46	05.7	-						17.8S 178.2W, H: 11 27 39.0, h 650 km, M 5.2. Fiji Islands region
Apr. 10	WIT ePKP	18	51	50							22.6S 171.5E H: 18 32 09.6, h 60 km, M 5.1. Loyalty Islands region.
Apr. 12	WIT iPKP	06	35	37							18.1S 178.1W, H: 06 16 51.9, h 471 km, M 4.2. Fiji Islands region.
Apr. 12	WIT iPKP	16	54	30.8							20.3S 177.9W, H: 16 35 38.3, h 459 km, M 4.6. Fiji Islands region.
Apr. 13	eL	00	43								
	F	01	05								
Apr. 13	WIT eP	01	26	12.5							19.0N 66.9W, H: 01 15 32.3, h 51 km, M 5.1. Puerto Rico region.
Apr. 14	WIT eP	08	49	48							33.4N 141.4E, H: 08 37 12.2, h 44 km, M 5.4. Off east coast of Honshu, Japan.
Apr. 14	eL	13	54								33.4N 141.4E, H: 13 05 08.0, h 41 km, M 5.4. Off east coast of Honshu, Japan.
	F	14	20								
	WIT eP	13	17	44							
Apr. 14	WIT eP	14	36	39.5							6.8N 73.0W, H: 14 24 55.3, h 161 km, M 5.0. Northern Columbia.
Apr. 14	WIT iPKP	15	05	35	-						17.5S 178.8W, H: 14 47 14.9, h 550 km, M 4.6. Fiji Islands region.
Apr. 18	WIT ePKP	04	53	53.5							25.7S 179.5W, H: 04 34 40.6, h 379 km, M 4.7. South of Fiji Islands.
Apr. 19	eL	00	00								
	F	00.9									
Apr. 20	eP	09	49	43	+						38.3N 26.6W, H: 09 44 08.6, h 33 km, M 4.9. Azores Islands.
	eL	09	57.0								
	F	10	10								
Apr. 20	eP	10	23	36	+						38.3N 26.6W, H: 10 18 01.1, h 33 km, M 5.1. Azores Islands.
	eS	10	28	12							
	eL	10	30.5			19		11.0		5.4	
	F	11	15								
	WIT eP	10	23	44							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Apr. 20	eL	13	34			24		5.4		6.3	15.7S 172.6W, H: 12 25 10.1,
	F	14	30								h 30 km, M 5.7.
	WIT ePKP	12	44	39							Samoa Islands region.
Apr. 21	eL	09	15			16		13.0		6.2	38.6N 143.0E, H: 08 34 03.5,
	F	10.5									h 42 km, M 5.3.
	WIT eP	08	46	18	+						Off east coast of Honshu, Japan.
Apr. 23	iP	20	40	12.3	-	4	4.0				58.7N 150.0W, H: 20 29 14.5,
	eS	20	49	12							h 23 km, M 6.3.
	eL	21	01			16		10.0		6.1	Gulf of Alaska.
	F	22.5									
	WIT iP	20	40	09.5	-						
Apr. 24	WIT eP	03	16	12.0	+						5.1S 68.3E, H: 03 04 17.3,
											h 33 km, M 4.9.
											Chagos Archipelago region.
Apr. 24	eP	08	22	25							39.3N 24.9E H: 08 18 02.5,
	eS	08	26	05							h 17 km, M 5.2.
	eL	08	26.8			13		36		5.7	Aegean Sea.
	WIT eP	08	22	21							
Apr. 24	WIT eP	19	43	44							5.0S 68.4E, H: 19 31 49.5,
											h 33 km, M 5.2.
											Chagos Archipelago region
Apr. 25	eL	22	40			18		3.0		6.1	15.2S 173.1W, H: 21 25 36.1,
	F	23	40								h 33 km, M 5.2.
											Tonga Islands.
Apr. 26	ePKP	01	02	03							15.3S 173.1W, H: 00 42 34.9,
	ePP	01	05	18							h 33 km, M 5.3.
	eSS	01	24.1								Tonga Islands.
	eL	02.0				18		3.7		6.2	
	F	03.0									
	WIT ePKP	01	02	04							
Apr. 26	WIT eP	03	05	18.8	(-)						35.1N 50.2E, H: 02 58 22.1,
											h 21 km, M 5.3.
											Iran.
Apr. 26	WIT eP	13	33	27.8							37.4N 141.4E, H: 13 21 13.0,
											h 67 km, M 5.2.
											Near east coast of Honshu, Japan.
Apr. 26	eL	13	39			20		3.6		5.5	0.2S 18.2W, H: 13 15 23.3,
	F	14	10								h 33 km, M 5.2.
	WIT eP	13	25	07							Central Mid-Atlantic Ridge.
Apr. 26	eL	15	39			15		4.5		5.8	37.3N 116.5W, H: 15 00 00.1,
	F	16	05								h 0 km, M 6.3. Nuclear explosion.
	WIT iP	15	11	58.8	+						Southern Nevada, U.S.A.
Apr. 26	iP	18	00	40	+						18.7N 103.3W, H: 17 48 02.3,
	eS	18	11	20							h 65 km, M 5.5.
	e	18	11	36							Near coast of Michoacan,
	eL	18	29			17		10.0		6.2	Mexico.
	F	19	25								
	WIT eP	18	00	42.0							
Apr. 29	eP	17	08	02							39.2N 44.3E, H: 17 01 57.6,
	eS	17	13	05							h 34 km, M 5.3.
	eL	17	15.0			14		5.5		5.3	N.W. Iran-U.S.S.R. border region.
	F	18.0									
	WIT eP	17	07	58.2							

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May 1	eL	00	50								38.4S 71.1W, H: 23 51 17.9,
	F	01	12								h 40 km, Mb 5.9.
											Chile-Argentina border region
May 1	eL	19	55								40.9N 142.5E H: 19 12 53.4,
	F	20	20								h 18 km, Mb 4.9.
											Near east coast of Honshu, Japan
May 2	epP	05	40	41							18.8N 69.6W, H: 05 29 38.2,
	eS	05	49	03							h 82 km Mb 5.8.
	esS	05	49	41							Dominican Republic region.
	eL	06.0									
	F	06	15								
	WIT eP	05	40	25.2							
	ipP	05	40	47							
	esP	05	40	56							
May 2	eL	07	54								36.2N 34.0W, H: 07 40 07.2,
	F	08	04								h 33 km, Mb 4.8.
											Azores Islands region.
May 2	eL	08	12								36.3N 34.1W, H: 07 58 05.0,
	F	08	24								h 33 km, Mb 4.9.
											Azores Islands region
May 2	ePP	23	45	41							6.4S 129.9E, H: 23 26 03.6,
	eL	00	23								h 128 km, Mb 5.5.
	F	00	50								Banda Sea.
	WIT ePKP	23	44	31							
May 3	eP	05	45	20	(-)						25.1N 124.6E, H: 05 32 45.7.
	eS	05	55	39							h 98 km, Mb 5.8.
	eL	06	15			18		2.7		5.7	NE of Taiwan.
	F	06	40								
	WIT iP	05	45	15.5	+						
	epP	05	45	41							
May 7	eP	09	12.3								6.7N 73.0W, H: 09 00 29.0,
	WIT eP	09	12	12.5							h 168 km, Mb 5.7.
											N-Colombia.
May 7	WIT ePKP	12	02	13.1	(-)						19.2S 177.6W, H: 11 43 31.6,
											h 533 km, Mb 4.9.
											Fiji Islands region.
May 8	WIT ePKP	00	34	41.0							17.8S 178.6W, H: 00 16 08.7
											h 589 km, Mb 4.7.
											Fiji Islands.
May 8	eP	12	29	04							43.6N 127.9W, H: 12 17 13.4
	eS	12	38	50							h 33 km, Mb 6.1.
	eSS	12	43.5								Off coast of Oregon.
	eL	12	49			20		25		6.5	
	F	14.1									
	WIT eP	12	29	05.7							
May 8	WIT iP	22	53	26.8	(-)						37.1N 71.9E, H: 22 45 08.3.
											h 160 km Mb 5.1.
											Afghanistan-SSR border region.
May 9	eL	03	35								43.4N 127.0W, H: 03 03 01.8,
	F	04	00								h 33 km, Mb 5.2.
	WIT eP	03	14	59							Off coast of Oregon.
May 9	eL	15	08								34.2N 136.8E, H: 14 22 09.7
	F	15	27								h 18 km Mb 4.9.
											Honshu, Japan
May 10	eL	10	10								24.3N 121.8E, H: 09 23 31.5,
	F	10	30								h 21 km, Mb 4.8.
											Taiwan.
May 10	eL	15	54								24.3N 121.9E, H: 15 09 20.6,
	F	16	13								h 26 km, Mb 4.8.
											Taiwan.
May 10	eL	21	21								24.3N 122.0E, H: 20 33 13.2
	F	21	38								h 20 km, Mb 4.9.
											Taiwan.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
May 10	WIT iPKP	23	08	02.0	(-)						21.2S 176.6W, H: 22 48 36.7, h 203 km, Mb 5.1. Tonga Islands.
May 11	WIT ePKP	15	52	33.0							6.4S 147.3E, H: 15 33 41.2, h 76 km, Mb 5.5. East New Guinea.
May 13	iP	02	52	03.8	+						43.5N 40.3E, H: 02 46 35.7, h 5 km, Mb 5.1. W-Caucasus.
	iS	02	56	43.5							
	eL	03	03								
	F	03	16								
	WIT eP	02	51	55	+						
May 14	iP	14	17	23.6	+	4	20				29.9N 129.4E, H: 14 05 06.0, h 168 km, Mb 5.9. Ryukyu Islands.
	epP	14	18	13							
	iPP	14	20	43							
	ipPP	14	21	36							
	iS	14	27	33							
	esS	14	28	48							
	eSS	14	33.4								
	esSS	14	34.4								
	eL	14	38			15		12.3		6.3	
	F	16									
	WIT iP	14	17	17.4	+						
	ipP	14	18	09.0							
May 15	eL	08	25			17		11.6		6.1	15.9S 25.9E, H: 07 51 17.4, h 33 km, Mb 6.1. Zambia.
	F	08	55								
	WIT eP	08	02	39.5							
May 15	ePKP	15	20.5								
	eL	16.2				21		11.0		6.7	29.8S 179.0W, H: 15 00 29.9, h 33 km, Mb 5.1. Kermadec Islands.
	F	17.5									
May 16	eP	01	01	07							40.8N 143.2E, H: 00 48 55.4, h 7 km, Ms 7.9. Off east coast of Honshu, Japan.
	iS	01	11	29							
	eL	02.0				23		800		8.1	
	F	07.0									
	WIT eP	01	01	05.0							
May 16	WIT iP	01	16	59.5	+						40.7N 143.1E, H: 01 04 54.0, h 33 km, Mb 5.7. Off east coast of Honshu, Japan.
May 16	WIT eP	06	48	54.8							41.1N 143.0E, H: 06 36 51.0, h 35 km, Mb 5.7. Hokkaido, Japan region.
May 16	eP	09	10.3								41.4E 142.7E, H: 08 58 11.1, h 15 km, Mb 5.4. Hokkaido, Japan region.
	eS	09	20.3								
	eL	09.5				18		9.5		6.1	
	F	10.5									
	WIT iP	09	10	16.3	+						
May 16	iP	10	51	09.0	-	8	18				41.5N 142.7E, H: 10 39 01.6, h 33 km. Hokkaido, Japan region.
	ePP	10	54	11							
	iS	11	01	10							
	eL	11.2				22		570		7.9	
	F	16									
	WIT iP	10	51	03.7	-						
May 16	eP	16	26	02	+						39.7N 143.6E, H: 16 13 45.1, h 29 km, Mb 5.6. Off east coast of Honshu, Japan.
	eS	16	36	15							
	eL	16	52			18		29		6.6	
	F	18.6									
	WIT iP	16	25	58.0							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
May 16	WIT eP	17	40	20							41.4N 143.0E, H: 17 28 13.0, h 33 km, Mb 5.2. Hokkaido, Japan region.
May 16	eP	18	55.5								40.7N 142.1E, H: 18 43 21.0, h 59 km, Mb 5.7. Near east coast of Honshu, Japan.
	eL	19	22								
	F	19	39								
	WIT iP	18	55	22.0	+						
May 16	eL	19.9									41.3N 142.4E, H: 19 16 47.2, h 42 km, Mb 5.6, Ms 5.4. Hokkaido, Japan region.
	F	20.4									
	WIT iP	19	28	49.0							
May 16	iP	20	34	22.0	-						41.4N 142.6E, H: 20 22 14.9, h 39 km, Mb 5.6. Hokkaido, Japan region.
	eS	20	44	22							
	eL	21	03			20		14.2		6.3	
	F	22.0									
	WIT eP	20	34	17.0							
May 16	eP	23	17	09	(+)						39.8N 143.1E, H: 23 04 54.7, h 37 km, Mb 5.8. Off east coast of Honshu, Japan.
	ePP	23	20	20							
	ePPP	23	22	08							
	eS	23	27	23							
	eSS	23	32	49							
	eL	23	43			19		153		7.3	
	F	02.5									
	WIT iP	23	17	05.5							
May 17	WIT ePKP	08	17.0								22.7S 173.0E, H: 07 57 18.0, h 91 km, Mb 5.0. Loyalty Islands region.
May 17	eL	11	24			18		9.5		6.1	39.6N 143.4E, H: 10 42 45.9, h 33 km, Mb 5.3. Off east coast of Honshu, Japan.
	F	12.0									
	WIT iP	10	55	08.4	+						
May 17	WIT eP	13	14	38							41.5N 142.8E, H: 13 02 37.3, h 45 km, Mb 5.6. Hokkaido, Japan region.
May 17	F	17.6									No records from 15 32 - 17 09 G.M.T.
May 17	eL	18.9				19		8.7		6.1	39.6N 143.0E, H: 18 17 07.3, h 32 km, Mb 5.2., Ms 5.3. Off east coast of Honshu, Japan.
	F	19.8									
	WIT eP	18	29	27.5							
May 17	eL	23	16								40.6N 143.7E, H: 22 36 14.6, h 33 km, Mb 4.7. Off east coast of Honshu, Japan.
	F	23	46								
May 18	eL	01	49								55.4S 27.7W, H: 01 02 29.2, h 33 km, Mb 5.4., Ms 5.4. South Sandwich Islands region.
	F	02.5									
May 19	eP	04	25	12							35.6N 141.7E, H: 04 12 40.3, h 46 km, Mb 5.1 Near east coast of Honshu, Japan
	eS	04	35	32							
	eL	04	56			18		11.2		6.2	
	F	06									
May 19	eL	06	39								35.6N 141.9E, H: 05 54 08.4, h 25 km, Mb 4.8. Near east coast of Honshu, Japan.
	F	07.2									
May 19	eP	22	29.1								40.9N 143.2E, H: 22 16 44.8, h 18 km, Mb 5.1. Near east coast of Honshu, Japan.
	eS	22	39	03							
	eL	22	58			19		6.2		6.0	
	F	23.7									
	WIT eP	22	28	52							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
May 20	eP	03	28.5								40.0N 144.0E, H: 03 16 19.6,
	eS	03	38.8								h 31 km, Mb 5.5.
	eL	03	57								Off east coast of Honshu,
	F	04	39								Japan.
	WIT iP	03	28	31.0	+						
May 20	WIT eP	07	05	44.0							40.3N 143.7E, H: 06 53 35.2,
											h 33 km, Mb 5.2., Ms 5.0.
											Off east coast of Honshu,
											Japan.
May 20	ePKP	07	33	00							30.9S 178.3W, H: 07 13 03.0,
	ePP	07	37	14							h 22 km, Mb 6.0.
	eL	08	30								Kermadec Islands region.
	F	09	15								
	WIT iPKP$_1$	07	33	00	(+)						
	iPKP$_2$	07	33	32.0	-						
May 20	eP	10	46	04							48.8N 154.7E, H: 10 34 16.8,
	eS	10	55	44							h 40 km, Mb 5.4.
	ePS	10	56	12							Kuril Islands.
	eSS	11	01	08							
	eL	11.1				20	3.2			5.6	
	F	11	50								
May 20	WIT eP	12	05	22.0							51.9N 158.5E, H: 11 53 55.5,
											h 55 km, Mb 5.3.
											Near east coast of Kamchatka.
May 20	ePKP$_1$	20	25	42	+	2	19				30.7S 178.4W, H: 20 05 49.1,
	ePKP$_2$	20	26	21							h 46 km, Ms 7.0.
	ePP	20	29	59							Kermadec Islands region.
	ePPP	20	34	00							
	eSKKS	20	40.3								
	eL	21.4				17	100			7.6	
	F	in next shock									
	WIT ePKP	20	25	42							
May 20	iP	21	21	46							44.8N 150.3E, H: 21 09 44.8,
	other phases in preceeding shock										h 38 km, Mb 5.8.
	F	00	30								Kuril Islands region.
	WIT iP	21	21	41.1	+						
May 21	eP	00	31	38							44.8N 150.2E, H: 00 19 34.8,
	eL	00	57								h 45 km, Mb 5.2., Ms 5.2.
	F	01.6									Kuril Islands region.
	WIT iP	00	31	30.5	+						
May 21	WIT eP	04	07	03.0							38.9N 65.2E, H: 03 59 11.5,
											h 13 km, Mb 5.4.
											Southeastern Uzbek, S.S.R.
May 21	eL	04	51								41.1N 143.5E, H: 04 11 24.7,
	F	05	17								h 33 km, Mb 5.5.
	WIT eP	04	23	30	-						Hokkaido, Japan region.
May 21	eP	08	32	02	+	4	3.0				44.9N 150.2E, H: 08 20 00.9,
	eS	08	42.0								h 33 km, Mb 5.7., Ms 6.2.
	eL	08	51			23		11.0		6.2	Kuril Islands region.
	F	10.5									
	WIT iP	08	31	57							
May 21	eP	11	12	48							44.7N 150.2E, H: 11 00 44.6,
	eL	11	40			19		4.9		5.8	h 33 km, Mb 5.1.
	F	12	16								Kuril Islands region.
	WIT 11	11	12	42							
May 21	WIT eP	11	15	51							45.0N 150.1E, H: 11 03 57.5,
											h 48 km, Mb 4.9.
											Kuril Islands.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
May 21	eL	19	31								44.8N 150.3E, H: 18 47 30.5,
	F	20.0									h 51 km, Mb 5.2.
	WIT eP	18	59	38.5							Kuril Islands region.
May 22	eL	11.4				22	7.2			6.0	41.5N 142.8E, H: 10 51 53.3,
	F	12.1									h 40 km, Mb 5.9. Ms 6.3.
	WIT eP	11	03	54.0	+						Hokkaido, Japan region.
May 22	eP	19	41	36	+	4	2.0				40.2N 142.3E, H: 19 29 25.7,
	eS	19	51.7								h 40 km, Mb 5.3., Ms 5.5.
	eL	20	08			19	15.6			6.4	Near east coast of Honshu,
	F	21.0									Japan.
	WIT eP	19	41	31							
May 22	WIT eP	20	13	09	(+)						44.8N 150.2E, H: 20 01 13.3,
											h 46 km, Mb 5.3., Ms 5.8.
											Kuril Islands region.
May 23	ePKP$_1$	17	44	16							41.7S 171.9E, H: 17 24 15.7,
	ePKP$_2$	17	45	22							h 21 km, Mb 6.1., Ms 7.1.
	ePKS^2	17	47.5								South Island, New Zealand.
	ePP	17	48	58							
	ePPP	17	53	12							
	ePcSPKP	17	56	22							
	ePPS	18	03	14							
	eL	18.6				20	90			7.7	
	F	21.5									
	WIT ePKP$_1$	17	44.3								
	ePKP$_2$	17	45	18							
May 23	WIT ePKP$_2$	19	03	37							30.6S 177.7W, H: 18 43 01.0,
											h 70 km, Mb 5.6.
											Kermadec Islands.
May 24	WIT iPKP	04	49	40.0	+						20.7S 178.9W, H: 04 31 06.0,
											h 681 km, Mb 4.3.
											Fiji Islands.
May 24	eP	14	18	34	+	4	3.0				40.9N 143.0E, H: 14 06 24.2,
	ePP	14	21	38							h 38 km, Mb 5.6., Ms 6.2.
	ePPP	14	23.4								Off east coast of Honshu,
	eS	14	28	39							Japan.
	eL	14	45			18	34			6.7	
	F	17									
	WIT iP	14	18	29	(+)						
May 24	WIT iPKP	16	01	17.7	+						6.8S 118.9E, H: 15 43 54.2,
											h 609 km, Mb 6.0.
											Flores Sea.
May 24	WIT ePKP	21	17	28							41.8S 172.0E, H: 20 57 27.3,
											h 33 km, Mb 5.7., Ms 5.7.
											South Island, New Zealand.
May 24	WIT eP	21	48	45							54.2N 169.3E, H: 21 37 11.2,
											h 5 km, Mb 5.3., Ms 4.7.
											Komandorsky Islands region.
May 25	eP	12	05	11							40.1N 143.1E, H: 11 52 57.4,
	eS	12	15.3								h 37 km, Mb 5.2., Ms 5.3.
	eL	12.5				18	10.6			6.2	Off east coast of Honshu,
	F	13.2									Japan.
	WIT eP	12	05	05.5							
May 26	ePKP	15	02.3								63.3S 170.7E, H: 14 41 52.0,
	eL	16	10								h 9 km, Mb 5.5., Ms 5.9.
	F	16.8									Balleny Islands region.
May 28	WIT ePKP$_2$	09	27	10							30.9S 177.8W, H: 09 06 29.9,
											h 33 km, Mb 5.5., Ms 5.7.
											Kermadec Islands.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
May 28	ePS	13	57.1								2.9S 139.3E, H: 13 27 18.7,
	iPPS	13	58	15							h 65 km, Mb 6.1.
	eSS	14	04	24							Near north coast of West
	eL	14	20			28		340		8.0	New Guinea.
	F	18.0									No records from 13 27 -
	WIT ePKP	13	45	57							13 54 G.M.T.
May 28	eP	22	41	44							52.2N 172.8E, H: 22 29 56.8,
	eS	22	51.4								h 15 km, Mb 5.6., Ms 5.7.
	eL	23	08								Near Islands, Aleutian Islands.
	F	23	46								
	WIT iP	22	41	38.6	+						
May 30	WIT eP	01	18	27							27.8N 54.0E, H: 01 10 30.0,
											h 27 km, Mb 5.2.
											Southern Iran.
May 30	iP	05	35	51	+	2	4.0				44.7N 150.3E, H: 05 23 48.9,
	eS	05	45	52							h 49 km, Mb 5.5., Ms 5.8.
	eL	06.0				18		11.8		6.2	Kuril Islands region.
	F	07.0									
	WIT eP	05	35	44.5							
May 30	eP	17	45.6								35.5N 28.0E, H: 17 40 24.4,
	eS	17	49	45							h 21 km, Mb 5.3, Ms 5.5.
	eL	17	52			12		43		6.0	Eastern Mediterranean Sea.
	F	18.5									
	WIT eP	17	45.6								
May 30	WIT eP	20	00	38							29.7N 51.3E, H: 19 53 06.0,
											h 32 km, Mb 5.2.
											Southern Iran.
May 30	ePKP	20	02	20							31.0S 177.6W, H: 19 42 25.1,
	ePP	20	06.6								h 42 km, Mb 5.5, Ms 6.2.
	eSS	20	26.5								Kermadec Islands
	eL	21.1				18		6.8		6.5	
	F	22.5									
	WIT ePKP	20	02	53.5							
June 1	eP	10	44.0								40.2N 142.3E, H: 10 31 49.3,
	eL	11	13			20		5.0		5.9	h 50 km, Mb 5.4.
	F	11	46								Near east coast of Honshu,
	WIT	10	43	54	+						Japan.
June 2	WIT iPKP	01	29	56.0	+						18.5S 177.7W, H: 01 11 19.4,
											h 559 km, Mb 4.3.
											Fiji Islands region.
June 2	WIT ePKP	08	37	44.5							8.1S 158.6E H: 08 18 36.2,
											h 35 km, Mb 5.6, Ms 5.2.
											Solomon Islands.
June 3	WIT ePKP	09	36	20.0							5.4S 147.0E, H: 09 17 46.2,
											h 190 km, Mb 5.6.
											East New Guinea.
June 3	eL	10	54								35.4N 28.1E, H: 10 41 00.0,
	F	11.0									h 20 km, Mb 4.4.
											Dodecanese Islands.
June 3	WIT eP	14	27	54.5	(-)						45.7N 148.3E H: 14 16 20.0,
											h 160 km, Mb 5.4.
											Kurile Islands.
June 4	eL	18.0									22.5N 121.4E, H: 17 15 09.8,
	F	18	15								h 47 km, Mb 5.2.
	WIT eP	17	27	48.5							Taiwan.
June 5	WIT eP	23	17	15.5							52.2N 174.3E, H: 23 05 36.8,
	i	23	17	27.0	-						h 41 km, Mb 5.0.
											Aleutian Islands.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
June 6	eL	20	30								14.9N 119.9E, H: 19 44 07.9
	F	21									h 80 km, Mb 5.4.
											Luzon, Philippine Islands.
June 6	eL	21.9				22		3.0		5.7	41.3N 142.6E, H: 21 17 14.4,
	F	22.5									h 37 km, Mb 5.3.
	WIT eP	21	29	16	(+)						Hokkaido, Japan region.
June 6	WIT iP	23	03	52.7	(-)						44.5N 148.1E, H: 22 52 00.4,
											h 57 km, Mb 5.1.
											Kurile Islands.
June 7	eP	12	11	44							1.8S 120.1E, H: 11 57 29.4,
	ePKP	12	16	00							h 20 km, Mb 5.9, Ms 6.7.
	ePP	12	16	15							Celebes.
	ePPP	12	18	36							
	ePS	12	25	48							
	ePPS	12	26	38							
	eSS	12	31	22							
	eL	12	46			23		71		7.2	
	F	15.2									
	WIT ePKP	12	16.0								
June 7	WIT ePKP	16	49	06							20.6S 178.6W, H: 16 30 26.0,
											h 607 km, Mb 4.4.
											Fiji Islands.
June 7	eP	21	45.5								2.1S 120.5E, H: 21 30 50.3,
	ePKP	21	49.7								h 23 km, Mb 5.5, Ms 5.9.
	ePP	21	50.1								Celebes.
	eH	21	57.8								
	ePS	21	59.2								
	eSS	22	05								
	eL	22.4				25		10.5		6.4	
	F	23.5									
	WIT ePKP	21	49.7								
June 8	ePKP	00	35.9								8.8S 157.6E, H: 00 16 39.5,
	ePKS	00	39.3								h 33 km, Mb 5.4, Ms 5.7.
	eL	01.4									Solomon Islands.
	F	02.0									
June 8	eL	03	26								40.6N 143.7E H: 02 44 37.3,
	F	04.0									h 33 km, Mb 4.7.
	WIT eP	02	56	44							Off east coast of Honshu,
	e	02	56	54							Japan.
June 8	iP	05	41	49.5	+						43.4N 147.1E, H: 05 29 46.5,
	eS	05	51	45.5							h 43 km, Mb 5.3, Ms 5.3.
	eL	06.1									Kurile Islands.
	F	07.0									
	WIT iP	05	41	44.0	+						
June 8	WIT eP	21	01	00.5	+						26.3N 124.4E, H: 20 48 44.0,
											h 160 km, Mb 5.0.
											Ryukyu Islands.
June 8	eL	21.6									41.5N 142.3E, H: 20 54 45.2,
	F	21.9									h 30 km, Mb 5.2.
	WIT eP	21	06	46.0	+						Hokkaido, Japan region.
	e	21	06	55							
June 8	eL	22.5									28.4N 129.6E, H: 21 42 06.3,
	F	22.7									h 33 km, Mb 5.2.
	WIT eP	21	54	54							Ryukyu Islands.
June 8	eP	23	38.0								48.8S 31.5E, H: 23 24 05.2,
	iPP	23	42	19							h 33 km, Mb 5.6, Ms 6.0.
	ePS	23	51.5								South of Africa.
	eSS	23	57.0								
	eL	00	12			21		22		6.7	
	F	02.1									

Seismic Records at De Bilt

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June 9	WIT eP	01	03.7								39.0N 46.0E, H: 00 56 33.9, h 50 km, Mb 5.0. Iran-USSR border region.
June 9	WIT iPKP	09	36	20.5	(+)						24.1S 178.5E, H: 09 17 31.7, h 580 km, Mb 5.1. South of Fiji Islands.
	ePKP	09	38	33.5							
June 9	eL	14.6									39.9N 144.0E, H: 13 48 14.5, h 67 km, Mb 4.4. Off east coast of Honshu, Japan.
	F	15.6									
June 10	WIT eP	12	52	49.0							56.3N 161.6W, H: 12 41 05.7, h 182 km, Mb 5.6. Alaska Peninsula.
June 12	WIT eP	04	40	18							24.9N 91.9E, H: 04 29 22.6, h 44 km, Mb 5.3. India-East Pakistan border region.
June 12	eL	09	17								35.3N 28.0E, H: 09 05 04.6, h 33 km, Mb 4.6. Dodecanese Islands.
	F	09	26								
June 12	eP	13	54	06	+						39.5N 142.7E, H: 13 41 50.7, h 44 km, Mb 6.0, Ms 7.0. Near east coast of Honshu, Japan.
	iPP	13	57	30							
	iS	14	04	36							
	eL	14.3				20	430			7.8	
	F	18.5									
	WIT iP	13	54	00.(	+						
June 12	eL	19	40								39.6N 143.2E, H: 18 55 46.4, h 30 km, Mb 5.0. Near east coast of Honshu, Japan.
	F	20.0									
June 12	eL	21.1									0.6S 132.8E, H: 20 15 47.8, h 33 km, Mb 5.6, Ms 5.5. West New Guinea.
	F	21.7									
June 12	eP	22	10	00							39.3N 142.8E, H: 21 57 41.3, h 36 km, Mb 5.7, Ms 5.3. Near east coast of Honshu, Japan.
	ePP	22	13	18							
	eS	22	20	10							
	eL	22.6				20	10.6			6.2	
	F	23.5									
	WIT eP	22	09	52.7							
	iPcP	22	10	04.7							
June 13	eL	00	15								13.8N 120.7E, H: 23 26 30.8, h 141 km, Mb 5.0. Mindoro, Philippine Islands.
	F	01.2									
June 13	WIT eP	00	17	13.5							39.5N 143.0E, H: 00 05 00.7, h 24 km, Mb 5.3. Near east coast of Honshu, Japan.
June 13	eP	02	18	02							39.4N 142.8E, H: 02 05 42.8 h 25 km Mb 5.1, Ms 4.9. Near east coast of Honshu, Japan.
	ePP	02	21	09							
	eS	02	28.3								
	eL	02.8									
	F	03.4									
	WIT eP	02	17.9								
June 13	WIT eP	03	30	30							39.4N 142.8E, H: 03 18 17.3, h 47 km, Mb 5.0, Ms 5.0. Near east coast of Honshu, Japan.
June 13	eL	09.6									39.1N 143.2E, H: 08 48 12.8, h 28 km, Mb 4.7. Near east coast of Honshu, Japan.
	F	09.9									

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
June 13	eL	12.8									39.2N 143.0E, H: 11 56 23.4, h 33 km, Mb 5.3. Off east coast of Honshu, Japan.
	F	13.1									
	WIT eP	12	08	36.5							
June 13	eL	21.9				20	6.4			6.0	39.4N 142.9E, H: 21 10 35.4, h 29 km, Mb 5.5, Ms 5.2. Near east coast of Honshu, Japan.
	F	22.6									
	WIT eP	21	22	47.8	(-)						
June 14	eL	04.0									39.4N 142.8E, H: 03 18 17.3, h 38 km, Mb 5.0, Ms 5.0. Near east coast of Honshu, Japan.
	F	04.5									
June 14	WIT eP	12	04	51							39.3N 142.8E, H: 11 52 39.7, h 37 km, Mb 5.4. Near east coast of Honshu, Japan.
June 14	eP	12	29	32							45.2N 153.5E, H: 12 17 27.7, h 41 km, Mb 5.5. Kurile Islands region.
	eL	12.6									
	F	13.4									
	WIT eP	12	29	27							
June 14	eL	14.0									51.7N 159.3E, H: 13 23 38.6, h 33 km, Mb 5.0. Off east coast of Kamchatka.
	F	14.6									
	WIT eP	13	35	10.2							
June 14	eS	22	52.0								0.3S 91.2W, H: 22 27 43.8, h 21 km, Mb 5.2. Galapagos Islands.
	eL	23.2									
	F	23.5									
June 15	WIT eP	02	26	25							37.3N 138.6E, H: 02 14 08.5, h 37 km, Mb 5.0. Near west coast of Honshu, Japan.
June 15	eL	04	15								39.3N 142.8E, H: 03 31 18.3, h 25 km, Mb 5.4. Near east coast of Honshu, Japan.
	F	04.6									
	WIT eP	03	43	30							
June 15	eS	04	44	14							0.4S 91.4W, H: 04 20 02.6, h 33 km, Mb 5.4. Galapagos Islands.
	eSS	04	51	16							
	eL	05.1									
	F	05.4									
June 15	eS	05	34	15							14.4N 92.9W, H: 05 11 17.2, h 25 km, Mb 5.4, Ms 5.2. Near east coast of Chiapas, Mexico.
	eL	05	52								
	F	06.3									
	WIT eP	05	23	50.0							
June 15	WIT iP	06	11	26	+						27.0N 126.5E, H: 05 58 59.0, h 88 km, Mb 5.7. East China Sea.
June 15	eP	07	21.4								5.6N 82.6W, H: 07 08 48.1, h 16 km, Mb 6.0, Ms 6.0. South of Panama.
	eS	07	31	45							
	eH	07	37.5								
	eL	07	48			20	11.8			6.3	
	F	08.7									
	WIT eP	07	21	25.5							
June 15	eP	11	39	06							51.7N 159.4E, H: 11 27 32.9, h 39 km, Mb 5.4. Off east coast of Kamchatka.
	eL	12	15								
	F	12	45								
	WIT iP	11	39	03.4	+						
June 15	eP	13	27	57							0.3S 91.1W, H: 13 14 36.7, h 33 km, Mb 5.2. Galapagos Islands.
	ePP	13	31.8								
	eS	13	38	40							
	eL	13.9									
	F	in next shock									

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
June 15	WIT ePKP	13	53	52							18.3S 167.9E, H: 13 34 14.4, h 34 km, Mb 5.5, Ms 6.0. New Hebrides Islands.
June 15	eP	14	11	58							Probably underground nuclear explosion. Nevada
	eL	14.7									
	F	16.1									
	WIT eP	14	11	58.8	+						
June 15	eP	17	53	38							0.2S 91.4W, H: 17 40 17.4, h 33 km, Mb 5.0, Ms 5.2. Galapagos Islands.
	ePP	17	57.5								
	eS	18	04.5								
	eSS	18	11								
	eL	18.4									
	F	18.7									
June 15	eP	20	05.2								41.9N 142.7E H: 19 53 09.2, h 33 km Mb 5.2. Hokkaido, Japan region.
	eL	20.6									
	F	20.9									
	WIT eP	20	05	08.5	-						
June 15	eP	21	38.4								0.1S 91.4W, H: 21 25 01.4, h 33 km, Mb 5.2. Galapagos Islands.
	ePP	21	42.2								
	eL	21.9									
	F	22.5									
June 16	eP	00	44	30							0.2S 91.3W, H: 00 31 03.2, h 30 km, Mb 5.0. Galapagos Islands.
	ePP	00	48.2								
	eS	00	55.3								
	eL	01	16								
	F	01	37								
June 16	eP	04	00.5								0.2S 91.3W, H: 03 47 08.3, h 33 km, Mb 4.9, Ms 5.2. Galapagos Islands.
	ePP	04	04.4								
	eS	04	11.3								
	eSS	04	18.4								
	eL	04	32								
	F	04	50								
June 16	eP	05	08.6								36.2S, 15.9W, H: 04 55 57.0, h 33 km, Mb 5.1, Ms 6.1. Tristan de Cunha region.
	eS	05	19.5								
	eSS	05	25.6								
	eL	05	33								
	F	06.6									
	WIT eP	05	09	08							
June 16	eP	07	26	38							0.2S 91.2W, H: 07 13 16.7, h 33 km, Mb 4.9, Ms 5.5. Galapagos Islands.
	ePP	07	30.5								
	eS	07	37.4								
	eL	07	56								
	F	09									
June 16	eP	10	25	36							0.3S 91.3W, H: 10 12 14.3, h 33 km, Mb 4.6, Ms 5.2. Galapagos Islands.
	ePP	10	29.5								
	eS	10	36.3								
	eSS	10	43.5								
	eL	10	57								
	F	11.3									
June 16	WIT eP	13	07	12.5	(+)						38.0N 14.9E H: 13 03 23.1, h 33 km, Mb 4.8. Sicily, Italy.
June 16	eP	13	13.5								0.3S 91.7W, H: 12 59 57.6, h 33 km, Mb 4.7. Galapagos Islands.
	eL	13.8									
	F	14.1									
June 16	eP	16	33	40							0.4S 91.4W, H: 16 20 14.9, h 33 km, Mb 4.7. Galapagos Islands.
	eS	16	44.3								
	eSS	16	51.5								
	eL	17	05								
	F	17	26								

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
June 16	eL	20	03			18		3.7		6.0	53.9S 8.7E, H: 19 14 05.0, h 33 km, Mb 5.7 Ms 5.7. Bouvet Island region.
	F	20.9									
June 17	eL	03.0									0.7S 91.8W H: 02 14 49.0, h 33 km, Mb 4.7, Ms 4.6. Galapagos Islands.
	F	03.3									
June 17	eL	05.2									22.4N 121.4E, H: 04 26 31.9, h 39 km Mb 5.1. Taiwan region.
	F	05.6									
	WIT eP	04	39	12							
June 17	eL	08	21								29.1N 129.3E, H: 07 36 12.0, h 33 km, Mb 4.4. Ryukyu Islands.
	F	08	40								
June 17	eP	12	05	08	+	8	3.3				41.0N 143.0E, H: 11 53 00.4, h 48 km, Mb 5.7, Ms 6.1. Hokkaido, Japan region.
	ePP	12	08	13.5							
	eS	12	15	14							
	eL	12	31			18		61		7.0	
	F	14									
	WIT eP	12	05	02.7	+						
June 17	eP	17	08	32							40.1N 143.7E, H: 16 56 13.1, h 6 km, Mb 5.2. Off east coast of Honshu, Japan.
	ePP	17	11.7								
	eS	17	18.7								
	eL	17	41								
	F	18.2									
	WIT eP	17	08	26.3							
June 17	ePP	18	31	42							12.3S 166.7E, H: 18 09 34.1, h 33 km, Mb 5.5, Ms 6.1. Santa Cruz Islands.
	eL	19	16								
	F	in next shock									
June 17	eP	19	09	50							38.7N 143.6E, H: 18 57 27.5, h 17 km, Mb 4.9. Ms 5.8. Off east coast of Honshu, Japan.
	eS	19	20	13							
	eL	19.7				21		16.6		6.4	
	F	21									
	WIT eP	19	09	45							
June 18	eL	03	07								0.2S 91.5W, H: 02 22 45.5, h 33 km, Mb 4.7, Ms 5.6. Galapagos Islands.
	F	03	27								
June 18	eP	05	29	22							45.7N 8.1E, H: 05 27 33.5, h 5 km, Mb 4.7. N-Italy.
	eS	05	30	56							
	eL	05	31.5			10		26		5.0	
	F	05.8									
	WIT iP	05	29	21.5	+						
June 18	WIT iPKP	07	01	03.5	-						21.7S 179.6W, H: 06 42 21.9, h 600 km, Mb 5.0. Fiji Islands region.
June 18	WIT eP	11	20	45.5	-						38.0N 23.5E, H: 11 16 36.8, h 179 km, Mb 4.3. Greece.
June 19	eP	01	50.6								39.5N 142.9E, H: 01 38 17.4, h 33 km, Mb 5.3, Ms 4.9. Near east coast of Honshu, Japan.
	eL	02	22								
	F	03									
	WIT eP	01	50	30							
June 19	WIT eP	05	14	05							50.0N 79.1E, H: 05 05 57.3, h 0 km, Mb 5.5. Eastern Kazakh S.S.R.
	ePP	05	15	43							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
June 19	iP	08	26	32.5	+						5.6S 77.2W, H: 08 13 35.0,
	ePP	08	30	10							h 28 km, Mb 6.4, Ms 6.9.
	eS	08	37	10							N-Peru.
	eL	08	52			22		160		7.5	
	F	12.5									
	WIT iP	08	26	37.5	+						
June 19	ePP	20	18	08							43.9S 75.1W, H: 19 58 01.9
	eL	20	56								h 24 km, Mb 5.7.
	F	21	24								Near coast of Southern Chile.
June 20	eP	02	51	36.5	(+)						5.6S 77.3W, H: 02 38 38.4,
	eS	03	02	27							h 33 km, Mb 5.8, Ms 5.7.
	eL	03	27								N-Peru.
	F	04									
	WIT eP	02	51	41							
June 21	eP	00	39.3								5 7S 77.3W, H: 00 26 07.8,
	eL	01	11								h 22 km, Mb 5.6.
	F	01	34								N-Peru.
	WIT eP	00	39.3								
June 22	eP	01	24	44							40.3N 143.7E, H: 01 12 30.9,
	eS	01	35	00							h 15 km, Mb 5.6, Ms 5.5.
	eL	01	54			22		9.6		6.2	Off east coast of Honshu,
	F	03.3									Japan.
	WIT eP	01	24	42.5	+						
June 22	eL	12	26.0								45.9N 11.3E, H: 12 21 37.7,
	F	12	29								h 35 km, Mb 4.6.
	WIT eP	12	23	(51)							Italy.
June 22	WIT ePKP	21	19	30.5							17.9S 178.1W, H: 21 01 02.5,
											h 650 km, Mb 4.6.
											Fiji Islands.
June 23	eP	09	24	00							29.8N 51.2E, H: 09 16 18.6,
	eL	09	38								h 34 km, Mb 5.2.
	F	10.0									Iran.
	WIT eP	09	23	50.0							DBN: change of papers: 09 28 -
											09 38 G.M.T.
June 23	eS	17	14.4								56.7N 152.4W, H: 16 53 50.2,
	eL	17	30			18		3.4		5.6	h 33 km, Mb 4.9.
	F	18	30								Kodiak Island region.
											No vertical seismograph records.
June 25	eL	00	18								39.6N 143.4E, H: 23 33 18.0,
	F	01									h 16 km, Mb 5.3.
	WIT eP	23	45	33							Near east coast of Honshu,
											Japan.
June 26	eL	02	19								40.1N 124.4W, H: 01 42 19.5,
	F	03									h 10 km, Mb 5.5, Ms 5.4.
	WIT eP	01	54	25	+						Near coast of Northern
											California.
June 26	eP	10	35.9								42.1N 142.7E, H: 10 23 48.2,
	eL	11.1									h 33 km, Mb 5.5, Ms 4.9.
	F	11.8									Hokkaido, Japan region.
	WIT eP	10	35	47.5	(+)						
June 26	WIT ePKP	16	00	05	(+)						22.2S 171.4E, H: 15 40 31.1,
											h 90 km, Mb 5.6.
											Loyalty Islands region.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
June 27	WIT ePKP	02	21	20							20.8S 179.0W, H: 02 02 40.2,
											h 605 km, Mb 4.9.
											Fiji Islands region.
June 30	eL	10.5									13.0N 145.2E, H: 09 35 29.4,
	F	11.1									h 38 km, Mb 5.2, Ms 5.4.
											Mariana Islands.
June 30	WIT ePKP	19	56	52.5							18.6S 177.9W. H: 19 38 19.0,
											h 605 km, Mb 4.2.
											Fiji Islands region.
June 30	eL	21.1									17.9N 105.8W, H: 20 21 27.7,
	F	21.5									h 35 km, Mb 4.8.
											Off coast of Jalisco, Mexico.
July 1	WIT iP	04	07	37.8	-						47.9N 48.0E, H: 04 02 01.7,
											h 33 km, Mb 5.5.
											W-Kazakh, S.S.R.
July 1	iP	10	57	33.7	+	4	1.6				36.0N 139.3E, H: 10 45 11.9,
	ePP	11	00	44							h 67 km, Mb 5.9
	eS	11	07	48							Honshu, Japan.
	eL	11	27			22		7.6		6.1	
	F	12									
	WIT iP	10	57	28.4	+						
July 2	iP	03	57	24.1	-						17.6N 100.3W, H: 03 44 48.9,
	ipP	03	57	46.3							h 41 km, Mb 5.9.
	ePP	04	00	47.5							Guerrero, Mexico.
	eS	04	07	52							
	eSS	04	13.4								
	eL	04	25			26		16.5		6.4	
	F	06.5									
	WIT eP	03	57	27.5							
July 2	WIT ePKP$_2$	04	51	13							29.7S 177.9W, H: 04 30 52.7,
											h 53 km, Mb 5.6.
											Kermadec Islands region.
July 2	WIT ePP	19	00	04							2.7S 138.9E, H: 18 40 10.1,
											h 62 km, Mb 5.7.
											West New Guinea.
July 2	eL	23	00								26.0N 128.6E, H: 22 12 25.0,
	F	23	16								h 30 km, Mb 5.1.
	WIT eP	22	25	11.5							Ryukyu Islands.
July 3	eP	10	00	08							59.4N 30.4W, H: 09 55 27.0,
	eL	10	09								h 33 km, Mb 4.7.
	F	10	16								North Atlantic Ocean.
July 4	WIT iP	07	24	15.5	-						43.9N 147.2E, H: 07 12 24.2,
											h 30 km, Mb 5.0.
											Kuril Islands.
July 4	eP	21	52	19	(-)	6	4.8				37.8N 23.2E, H: 21 47 55.6,
	eS	21	55	55							h 33 km, Mb 5.3.
	eL	21	57.5			12		38		5.7	S-Greece.
	F	22.5									
	WIT eP	21	52	13							
July 5	eP	00	57.6								34.1N 119.7W, H: 00 45 17.2,
	eL	01	30								h 6 km, Mb 5.7.
	F	01	48								S-California.
	WIT eP	00	57	38							
July 5	eP	11	40	32	+	6	4.8				38.5N 142.0E, H: 11 28 12.6,
	ePP	11	43	42							h 43 km, Mb 5.9, Ms 6.3.
	eS	11	50	46							Near east coast of Honshu,
	ePS	11	51	50							Japan.
	eL	12	06			18		58		7.0	
	F	14									
	WIT eP	11	40	25.5							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
July 6	eL	18	28								9.8N 126.4E, H: 17 23 55.8,
	F	18.7									h 24 km, Mb 5.1.
											Mindanao, Philippine Islands.
July 7	ePKP	14	43.4								22.2S 175.1W, H: 14 23 33.6,
	eL	15.9									h 33 km, Mb 5.3.
	F	16.6									Tonga Islands region.
	WIT ePKP	14	43	21							
July 7	eL	17	47								9.8N 126.2E, H: 16 50 31.0,
	F	18	10								h 36 km, Mb 4.8.
											Mindanao, Philippine Islands.
July 7	eL	22	30								9.6N 126.5E, H: 21 34 07.8,
	F	22	40								h 69 km, Mb 5.1.
											Mindanao, Philippine Islands.
July 7	eSP	23	31.0								8.5N 103.3W, H: 23 05 18.2,
	eSS	23	36.5								h 33 km, Mb 5.0, Ms 5.6.
	eL	23	50								Off west coast of Mexico.
	F	24.3									
July 8	eL	00.6									5.8S 77.1W, H: 23 48 08.2,
	F	01.5									h 27 km, Mb 5.5 Ms 5.2.
	WIT eP	00	01.2								N-Peru.
July 8	WIT iPKP	12	28	09.5	(+)						22.2S 179.8W, H: 12 09 28.4,
											h 622 km, Mb 4.9.
											South of Fiji Islands.
July 8	WIT eP	13	22	36.5							38.0N 67.6E, H: 13 14 29.9,
											h 28 km, Mb 5.2.
											Southeastern Uzbek, S.S.R.
July 8	eP	17	23	04							29.7N 51.1E, H: 17 15 28.3,
	F	in next shock									h 44 km, Mb 4.9, Ms 5.1.
											S-Iran.
July 8	iP	17	46	07	+						34.4N 25.2E, H: 17 41 05.8,
	eS	17	50	14							h 33 km, Mb 5.3.
	eL	17	52.5			14		5.8	5.1		Crete.
	F	18	45								
	WIT iP	17	46	05	+						
July 9	eL	08	51								39.5N 142.8E, H: 08 06 08.2,
	F	09	34								h 33 km, Mb 4.4.
											Near east coast of Honshu,
											Japan.
July 10	eL	01	33			18		4.4	6.0		10.5N 138.6E, H: 00 40 45.9,
	F	02	11								h 33 km, Mb 5.1, Ms 5.3.
											West caroline Islands.
July 10	ePP	11	36.0								36.8S 78.5E, H: 11 16 44.6,
	eL	12	15			17		5.0	6.1		h 33 km, Mb 5.7, Ms 6.1.
	F	13									Mid-Indian Rise.
July 10	ePP	20	56.0								40.2N 143.2E, H: 20 40 31.2,
	eS	21	02.7								h 33 km, Mb 5.3.
	eL	21	25			19	5.2		5.9		Off east coast of Honshu,
	F	22									Japan.
	WIT eP	20	52	40	(+)						
July 12	eP	00	57.0								d.b.m. 39.5N 143.2E, H: 00 44
	eS	01	07	04							36.5., h 28 km, Mb 6.0, Ms 5.8.
	eSS	01	12.5								Off east coast of Honshu,
	eL	01	24			22		34	6.7		Japan.
	F	02.5									
	WIT eP	00	56	41	(+)						

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
July 12	eP	04	08.8								d.b.m. 39.5N 143.2E, H: 03 56
	eS	04	19.0								27.5, h 26 km, Mb 5.5, Ms 5.5.
	eL	04	38			22		6.9		6.1	Off east coast of Honshu,
	F	05.5									Japan.
	WIT eP	04	08	41							
July 12	WIT eP	12	16	02	+						49.7N 78.1E, H: 12 07 57.2,
	ePcP	12	17	29.0	(+)						h 0 km, Mb 5.4.
											Eastern Kazakh S.S.R.
July 12	WIT eP	22	12	55							48.1N 154.6E, H: 22 01 08.6,
											h 33 km, Mb 5.0.
											Kurile Islands.
July 13	WIT ePKP	23	36	22.5							18.3S 175.0W, H: 23 17 09.0,
											h 230 km, Mb 4.7.
											Tonga Islands.
July 14	eL	21	38								40.0N 144.2E, H: 20 52 33.0,
	F	22	14								h 42 km, Mb 4.3.
											Off east coast of Honshu,
											Japan.
July 15	WIT iPKP	04	31	00.3	(+)						18.0S 178.6W, H: 04 12 26.3,
											h 595 km, Mb 5.3.
											Fiji Islands region.
July 17	eL	06	21								8.8S 125.0E, H: 05 24 15.6,
	F	07									h 25 km, Mb 5.7, Ms 5.6.
											Timor.
July 18	WIT ePKP	05	24	15	(+)						19.5S 175.9W, H: 05 04 59.8,
											h 235 km, Mb 5.0.
											Tonga Islands.
July 18	eL	12.1									40.2N 143.6E, H: 11 20 59.7,
	F	12.5									h 37 km, Mb 4.5.
											Honshu, Japan.
July 19	eP	05	08	48	(+)						8.7N 93.6E, H: 04 56 27.2,
	ePP	05	12	04							h 33 km, Mb 5.3, Ms 5.5.
	eS	05	19								Nicobar Islands region.
	eL	05	39			19	4.5		5.9		
	F	06.5									
	WIT eP	05	08.7								
July 21	WIT iPKP	01	48	56.5	(+)						21.9S 179.4W, H: 01 30 14.3,
											h 600 km, Mb 4.6.
											South of Fiji Islands.
July 21	eL	02	09								55.2N 113.3E, H: 01 41 19.5,
	F	02.5									h 33 km, Mb 5.1.
											Lake Baikal region.
July 21	eL	06.9									3.2S 150.7E, H: 05 52 10.4,
	F	07.5									h 5 km, Mb 5.3, Ms 5.7.
											New Ireland region.
July 21	eL	18	51								58.1S 148.3E, H: 17 28 17.6,
	F	19.5									h 33 km, Mb 4.9 Ms 5.9.
											West of Macquarie Island.
July 22	ePP	05	27	57							54.6S 1.8E, H: 05 09 15.7,
	eL	06.0									h 33 km, Mb 5.6, Ms 5.5.
	F	06.9									West of Bouvet Island.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
July 22	iPKP	18	18	06.5	+						20.1S 169.0E, H: 17 58 30.3,
	ipPKP	18	18	19	(+)						h 34 km, Mb 5.5, Ms 5.4.
	ePP	18	21	33							New Hebrides Islands.
	eL	19	11								
	F	20.1									
	WIT iPKP	18	18	04.0	+						
	ipPKP	18	18	14.5	+						
July 23	e(P)	18	41.4								18.7N 107.0W, H: 18 28 01.2,
	eS	18	51.8								h 33 km Mb 5.4, Ms 5.9.
	eL	19	09								Off coast of Jalisco, Mexico.
	F	19.8									
July 23	eP	23	14.9								40.3N 143.3E, H: 23 02 35.5,
	eS	23	25	01							h 14 km, Mb 5.2, Ms 5.6.
	eL	23	43			20		8.9		6.1	Off east coast of Honshu,
	F	24.5									Japan.
	WIT eP	23	14	47							
July 24	eL	04.8									18.1N 106.0W, H: 04 06 41.2,
	F	05.4									h 46 km, Mb 5.2, Ms 5.5.
											Off coast of Jalisco, Mexico.
July 25	$iPKP_1$	07	43	00.0	+	6	12.4				30.8S 178.4W, H: 07 23 07.8,
	$iPKP_2$	07	43	36							h 60 km, Mb 6.4.
	ePKS	07	46	42							Kermadec Islands region.
	iPP	07	47	14							
	ePPP	07	50	56							
	ePcPPKP	07	53	19							
	ePPP	07	55	44							
	eSKKS	07	57.5								
	ePPS	08	00	44							
	eL	08.7				24		60		7.5	
	F	in next shock									
	WIT $iPKP_1$	07	42	59.0	+						
	$iPKP_1$	07	43	11							
	$iPKP_2$	07	43	32.0							
	$ipPKP_2$	07	43	46							
July 25	eP	11	02.4								45.7N 146.7E, H: 10 50 31.5,
	ePP	11	05	21							h 16 km, Mb 5.9, Ms 5.5.
	eL	11	30								Kurile Islands.
	F	12.1									
	WIT iP	11	02	29.0	+						
July 25	eL	22	14								40.9N 20.0E, H: 22 05 28.8,
	F	22	23								h 22 km, Mb 4.5.
											Greece-Albania border region.
July 26	eP	06	46	33							14.4N 93.0W, H: 06 33 59.6,
	eS	06	57								h 14 km, Mb 4.9, Ms 5.7.
	eL	07	14								Near coast of Chiapas, Mexico.
	F	08									
July 27	eP	02	51.0								35.4 27.8E, H: 02 45 49.2,
	eS	02	55	07							h 21 km, Mb 5.0, Ms 5.7.
	eL	02	56.5			14	19.4			5.6	Dodecanese Islands.
	F	04									
	WIT eP	02	51.1								
July 27	ePKP	11	11	15	(+)						19.2S 175.7E, H: 10 51 40.1,
	WIT iPKP	11	11	10.0							h 88 km, Mb 5.4.
											South of Fiji Islands.
July 28	ePKP	11	18.2								22.5S 174.7W, H: 10 58 25.7,
	eL	12.5									h 33 km, Mb 5.0, Ms 5.2.
	F	13.2									Tonga Islands region.
	WIT ePKP	11	18	13							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
July 28	eP	21	24	00	(-)	5	1.5				55.4N 166.6E, H: 21 12 38.1,
	eS	21	33	24							h 27 km, Mb 5.4, Ms 5.8.
	eL	21	47								Komandorsky Islands region.
	F	23.2									
	WIT eP	21	23	54							
July 28	WIT eP	21	34	30							55.3N 166.8E, H: 21 23 06.7,
											h 22 km, Mb 5.1.
											Komandorsky Islands region.
July 29	ePKP	11	31	43							22.5S 175.0W, H: 11 11 59.5,
	ePP	11	35.3								h 33 km, Mb 5.6, Ms 6.0.
	eSS	11	54.7								Tonga Islands region.
	eL	12.6				18		4.1		6.2	
	F	in next shock									
	WIT ePKP	11	31	47							
July 29	ePKP	12	39	38							22.4S 174.9W, H: 12 19 46.6,
	F	13.8									h 33 km Mb 5.3.
	WIT ePKP	12	39	35							Tonga Islands region.
July 29	ePP	13	51	20							3.2S 150.6E, H: 13 30 31.9,
	eL	14	32								h 28 km, Mb 5.4, Ms 5.7.
	F	15.1									New Ireland region.
July 29	WIT ePKP	15	39	43							21.5S 174.4W, H: 15 19 57.6,
											h 33 km, Mb 5.0, Ms 5.3.
											Tonga Islands.
July 29	eL	18	20								35.7N 2.4W, H: 18 10 45.0,
	F	18	25								h 26 km, Mb 3.9.
											Off north coast of Moroc.
July 30	e(P)	00	07								0.2S 133.4E, H: 23 52 15.0,
	ePKP	00	10.7								h 12 km, Mb 6.1, Ms 6.0.
	ePP	00	11	43							West New Guinea region.
	ePPP	00	14	15							
	ePS	00	21	15							
	ePKKP	00	21	42							
	eSS	00	27.6								
	eL	00	45			22		19.0		6.7	
	F	03									
	WIT ePP	00	11.5								
July 30	WIT iPKP	03	09	19							20.9S 179.2W, H: 02 50 41.4,
											h 620 km, Mb 4.9.
											Fiji Islands region.
July 30	$ePKP_1$	04	29	40							22.4S 175.0W, H: 04 10 12.1,
	$ePKP_2$	04	29	58							h 33 km, Mb 5.3, Ms 5.7.
	ePP	04	33	35							Tonga Islands region.
	eL	05.6									
	F	06.5									
	WIT ePKP	04	30	00							
July 30	WIT iP	17	46	26.5	(+)						44.1N 148.8E, H: 17 34 29.0,
											h 35 km, Mb 5.2.
											Kurile Islands.
July 30	eP	20	51	52	+	5	2.2				6.9S 80.5W, H: 20 38 42.0,
	ePP	20	55	32							h 37 km, Mb 5.8, Ms 6.4.
	eS	21	03	00							Near coast of Northern Peru.
	ePS	21	04	22							
	eSS	21	08	44							
	eL	21	22			26		14.3		6.4	
	F	23.5									
	WIT iP	20	51	57							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
July 31	eL	02	20								40.3N 144.0E, H: 01 37 24.1, h 33 km. Mb 4.6. Near east coast of Honshu, Japan.
	F	02.9									
July 31	eL	09	32								37.8N 21.4E, H: 09 21 59.5, h 80 km, Mb 4.3. Greece.
	F	09	40								
July 31	eL	19	42								35.5N 28.0E, H: 19 29 26.7, h 27 km, Mb 4.8. Dodecanese Islands region.
	F	19	52								
Aug. 1	WIT iPKP	00	34	02.0	(-)						26.6S 177.5W, H: 00 14 16.0, h 123 km, Mb 5.6. South of Fiji Islands.
Aug. 1	eP	20	32	32							16.5N 122.2E, H: 20 19 21.9, h 36 km, Mb 5.9, Ms 7.3. Luzon, Philippine Islands.
	ePP	20	36	18							
	eS	20	43	18							
	eL	21.1				20	530			8.0	
	F	01									
	WIT eP	20	32	26.5							
Aug. 2	WIT eP	13	38	27							27.5N 60.9E, H: 13 30 23.3, h 62 km, Mb 5.7. Iran.
Aug. 2	iP	14	19	16.5	+	8	29				16.6N 97.7W, H: 14 06 43.9, h 40 km, Mb 6.3, Ms 7.1. Oaxaca, Mexico.
	iPP	14	22	34							
	ePPP	14	24	32							
	eS	14	29	50							
	eSS	14	35	20							
	eL	14.7				19		260		7.6	
	F	19									
	WIT iP	14	19	20.0	+						
Aug. 3	iP	05	07	23	-	8	7.0				25.6N 128.5E, H: 04 54 32.7, h 19 km, Mb 6.4, Ms 6.7. Ryukyu Islands.
	ePP	05	10	52							
	eS	05	17	58							
	eSS	05	24.0								
	eSSS	05	27.5								
	eL	05	38			17		100		7.2	
	F	09									
	WIT iP	05	07	19	-						
Aug. 3	eL	20	07			18	2.0			5.6	16.3N 122.4E, H: 19 19 01.6, h 22 km, Mb 5.2. Luzon, Philippine Islands.
	F	20	46								
Aug. 4	eP	11	55	16	+						6.6N 126.8E, H: 11 41 24.8, h 107 km, Mb 5.7. Mindanao, Philippine Islands.
	ePP	11	59	35							
	eSKS	12	05	27							
	ePS	12	08	50							
	eL	12.5				23		15		6.5	
	F	13.5									
	WIT eP	11	55	08							
Aug. 5	eP	16	29	29							33.3N 132.2E, H: 16 17 04.8, h 41 km, Mb 6.3, Ms 6.1. Shikoku, Japan.
	epP	16	29	39							
	ePP	16	32	41							
	eS	16	39	44							
	ePS	16	40.4								
	eSS	16	45.3								
	eL	16	55			17	60			7.0	
	F	19									
	WIT iP	16	29	23.0	+						
	ipP	16	29	37.0	+						

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Aug. 6	eL	03.9									16.6N 122.4E, H: 03 06 27.8, h 33 km, Mb 5.1. Luzon, Philippine Islands
	F	04.5									
Aug. 6	eL	05.7									15.7N 121.9E, H: 05 53 04.6, h 50 km, Mb 5.2. Luzon, Philippine Islands.
	F	06.1									
Aug. 7	eP	08	12	13	(+)						43.1N 144.6E, H: 08 00 13.4, h 54 km, Mb 5.6. Hokkaido, Japan region.
	eS	08	22.5								
	eL	08	40								
	F	09									
	WIT iP	08	12	08.0	+						
Aug. 8	eP	05	07	40							36.4N 141.4E, H: 04 55 10.0, h 41 km, Mb 5.4. Near east coast of Honshu, Japan.
	eL	05	38								
	F	06.2									
	WIT iP	05	07	32.5	+						
Aug. 9	WIT eP	10	50	02							43.4N 147.1E, H: 10 38 04.0, h 40 km, Mb 5.1. Kuril Islands.
Aug. 9	eL	04.0									22.4S 113.0W, H: 03 08 04.2, h 33 km, Mb 5.4, Ms 5.8. Easter Island region.
	F	05.5									
Aug. 10	iP	02	21	29.6	+	8	10				1.4N 126.2E, H: 02 07 04.3, h 33 km, Mb 6.3, Ms 7.6. Molucca Passage.
	ePP	02	26	02							
	iSKS	02	32	07							
	eS	02	33	32							
	eL	03.0				23		475	8.1		
	F	in next shock									
	WIT eP	02	21	23							
Aug. 10	eP	06	06	06							1.5N 126.2E, H: 05 51 47.9, h 33 km, Mb 6.2, Ms 6.6. Molucca Passage.
	ePKP	06	09.8								
	ePP	06	10.6								
	eSKS	06	16	48							
	eL	06	45			22		34	6.9		
	F	08.5									
Aug. 10	eL	09.2									1.6N 126.2E, H: 08 10 16.3, h 33 km, Mb 5.6. Molucca Passage.
	F	09.6									
Aug. 10	eL	17	27								15.5N 121.6E, H: 16 41 25.4, h 33 km, Mb 5.4, Ms 5.2. Luzon, Philippine Islands.
	F	18.0									
Aug. 11	WIT eP	02	55	13							15.2S 74.0W, H: 02 41 52.9, h 91 km, Mb 5.6. Near coast of Peru.
Aug. 11	eP	12	49	00							52.1N 179.9W, H: 12 37 28.1, h 159 km, Mb 5.5. Andreanof Islands, Aleutian Islands.
	epP	12	49	40							
	eS	12	58	34							
	esS	12	59.8								
	WIT iP	12	48	56	(-)						
Aug. 11	eP	20	15	03							1.6N 126.1E, H: 20 00 43.4, h 33 km, Mb 5.9. Ms 6.0. Molucca Passage.
	eSKS	20	25	42							
	ePS	20	28	44							
	eL	20	57			23		7.5	6.3		
	F	22									
Aug. 13	eSg	16	58	11							d.b.m. BCIS: 50.4N 4.2E, h 16 57 15 Belgium.
	F	17	02								
	WIT ePg	16	58	08.5							
Aug. 13	WIT ePKP	19	54	39.0							15.5S 167.5E, H: 19 35 20.9, h 125 km, Mb 5.2. New Hebrides Islands.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Aug. 14	eL	08	45								15.1N 122.5E, H: 07 56 35.5, h 8 km, Mb 5.4. Philippine Islands region.
	F	in next shock									
Aug. 14	eP	08	51.5								d.b.m. 18.5N 102.8W, H: 08 38 48.4 h 72 km, Mb 5.4. Hichoacan, Mexico.
	eS	09	02.1								
	eL	09.4									
	F	10									
	WIT eP	08	51	28							
Aug. 14	eP	22	28	31							d.b.m. 0.2N 119.8E, H: 22 14 19.4, h 23 km, Mb 6.0, Ms 7.4. N-Celebes.
	iPP	22	32	55.5							
	eSKS	22	39	10							
	eS	22	40	28							
	ePS	22	42.2								
	eSS	22	47.9								
	eL	23.1				24		245		7.8	
	F	03									
	WIT ePP	22	32	39							
Aug. 15	WIT eP	02	34	43.0							35.3N 26.8E, H: 02 29 45.4, h 67 km, Mb 4.8. Crete.
Aug. 15	ePKP	07	10.2								23.8S 177.4W, H: 06 50 38.7, h 188 km, Mb 5.5. South of Fiji Islands.
	WIT $ePKP_1$	07	10	10							
	$iPKP_2$	07	10	19.5							
Aug. 16	eL	11	22								38.5N 143.3E, H: 10 39 16.8, h 22 km, Mb 5.6, Ms 5.3. Off east coast of Honshu, Japan.
	F	12									
Aug. 16	WIT iPKP	11	52	52.5	-						d.b.m. 21.1S 179.3W, H: 11 34 16.4, h 640 km, Mb 5.1. Fiji Islands region.
Aug. 16	WIT eP	18	38	31							16.7N 97.7W, H: 18 25 55.1, h 46 km, Mb 5.4, Ms 5.0. Oaxaca, Mexico.
Aug. 17	ePP	04	19	42							d.b.m. 1.4N 126.3E, H: 04 00 36.3, h 33 km, Mb 5.7, Ms 5.9. Molucca Passage.
	eSKS	04	25	31							
	eL	04	56			20	6.4			6.2	
	F	06									
Aug. 18	eL	07	56								35.3N 135.3E, H: 07 12 19.3, h 33 km, Mb 5.0. Honshu, Japan.
	F	08	18								
Aug. 18	ePKP	18	56	48	-	4	5.0				10.1S 159.9E, H: 18 38 30.6, h 538 km, Mb 6.2. Solomon Islands.
	iZ	18	56	56.5	-						
	ePP	18	59	25							
	ePKS	19	00	22							
	ePPP	19	02	18							
	ePS	19	10.8								
	eL	19.8				32		35		7.1	
	F	21.5									
	WIT ePKP	18	56	33							
	i	18	56	46							
Aug. 19	eS*	00	39	41							46.4N 6.9E, H: 00 36 43.8, h 33 km, Mb 4.3. Switzerland.
	F	00	52								
	WIT eP*	00	38	19							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Aug. 21	ePKP	18	16.7								30.9S 179.1W, H: 17 56 48.0, h 33 km, Mb 5.3, Ms 6.4. Kermadec Islands.
	ePP	18	21	00							
	ePPP	18	24	32							
	eL	19.2				23	24			7.0	
	F	20.6									
	WIT ePKP	18	16.8								
Aug. 22	eP	14	11	44	+						53.0N 171.0E, H: 14 00 06.8, h 33 km, Mb 5.4, Ms 6.0, Near Islands, Aleutian Islands.
	ePcP	14	11	59							
	eS	14	21	22							
	eL	14	37			22	7.6			6.0	
	F	15.5									
	WIT eP	14	11	41							
Aug. 23	iP	22	49	17	-						22.0S 63.5W H: 22 36 51.3, h 537 km, Mb 5.8. Salta Province, Argentina.
	ipP	22	51	14							
	iSKS	22	59	04.5							
	F	23.5									
	WIT iP	22	49	23							
	ipP	22	51	22							
Aug. 23	WIT eP	23	27	22.5							21.8S 63.5W, H: 23 14 52.7, h 541 km, Mb 5.2. Salta Province, Argentina.
Aug. 25	eP	09	19	24							40.1N 143.2E, H: 09 07 31.9 h 33 km, Mb 5.4, Ms 5.5. Off east coast of Honshu, Japan.
	eS	09	29.9								
	eL	09	50			22	6.5			6.0	
	F	10.6									
	WIT iP	09	19	41.3							
Aug. 25	WIT iP	09	25	58.5							40.1N 143.3E, H: 09 13 48.5, h 31 km, Mb 5.2, Ms 5.4. Off east coast of Honshu, Japan.
Aug. 25	WIT ePKP	11	35	21							20.0S 175.3W, H: 11 15 46.3, h 96 km, Mb 5.5. South of Fiji Islands.
Aug. 28	ePKP	12	10	14.5							20.0S 176.3E, H: 11 50 30.4, h 36 km, Mb 5.7, Ms 5.6. South of Fiji Islands.
	eL	13.2									
	F	14									
	WIT ePKP	12	10	08							
Aug. 28	eP	20	55	34							15.6N 122.0E, H: 20 42 16.7, h 15 km, Mb 5.7, Ms 6.1. Philippine Islands region.
	eS	21	06.0								
	ePS	21	07.8								
	eL	21	28			21	29			6.7	
	F	23									
	WIT eP	20	55	28							
Aug. 29	eL	21	56								15.9N 121.7E, H: 21 08 07.9, h 39 km, Mb 5.2. Luzon, Philippine Islands.
	F	22	20								
Aug. 29	WIT eP	22	56	59							Probably underground nuclear explosion. Nevada.
Aug. 30	eL	03.5									40.0N 142.7E, H: 02 44 52.0, h 38 km, Mb 5.0, Ms 4.9. Off east coast of Honshu, Japan.
	F	03.8									
	WIT iP	02	57	00.5	+						
Aug. 30	eP	22	12.1								14.6N 56.3E, H: 22 02 19.8, h 33 km, Mb 5.2. Arabian Sea.
	F	23									

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Aug. 31	iP	10	55	39.0	+	4	5.0				34.0N 59.0E, H: 10 47 37.4,
	iPP	10	57	18							h 13 km, Mb 6.0, Ms 7.3.
	eS	11	02	06							Iran.
	eL	11.1				18		540	7.5		
	F	15									
	WIT iP	10	55	30.2	+						
Aug. 31	WIT ePKP	20	13	31.0	(+)						18.3S 177.7W, H: 19 54 35.0,
	i	20	13	34.0							h 379 km, Mb 5.0.
											Fiji Islands region.
Sep. 1	eP	07	35	21.5	+	6	5.5				34.0N 58.2E, H: 07 27 30.2,
	ePP	07	36	59							h 15 km, Mb 5.9, Ms 6.3.
	eS	07	41	40							Iran.
	eSS	07	44	43							More than 2000 killed.
	eL	07	49			13		58		6.5	
	WIT eP	07	35	12.5							
Sep. 3	WIT iP	05	35	27							42.9N 145.2E, H: 05 23 30.0,
											h 43 km, Mb 5.2.
											Hokkaido, Japan region.
Sep. 3	WIT eP	07	13	48							37.9N 141.7E, H: 07 01 36.5,
											h 79 km, Mb 5.4.
											Near east coast of Honshu,
											Japan.
Sep. 3	iP	08	24	44	-	6	18				41.8N 32.3E, H: 08 19 52.2,
	iS	08	28	43							h 5 km, Mb 5.7, Ms 6.6.
	eL	08	30			18			146	6.3	Turkey.
	F	11.5									25 killed.
	WIT iP	08	24	33							
Sep. 3	WIT iP	14	13	51							41.7N 32.4E, H: 14 09 10.0,
											h 14 km, Mb 4.6.
											Turkey.
Sep. 3	eP	15	47.1								20.6N 62.2W, H: 15 37 00.2,
	eS	15	55.4								h 33 km, Mb 5.5, Ms 5.9.
	eL	16	05			20			3.2	5.5	North Atlantic Ocean.
	F	16.7									
	WIT iP	15	47	14	(-)						
Sep. 3	eP	19	08.4								1.0N 28.2W H: 18 58 08.3,
	F	19	38								h 33 km, Mb 4.7.
											Central Mid. Atlantic Ridge.
Sep. 4	eP	23	32	36	+						34.0N 58.2E, H: 23 24 47.2,
	eL	23	53			14		2.3		5.0	h 15 km, Mb 5.4, Ms 5.2.
	F	24.3									Iran.
	WIT eP	23	32	31							
Sep. 5	ePP	03	03.0								45.1S 80.1W, H: 02 43 02.6,
	eSS	03	20.5								h 33 km, Mb 5.0, Ms 5.3.
	eL	03	42			18			1.7	5.7	Off coast of Southern Chile.
	F	04.2									
Sep. 5	WIT iP	04	14	01	+						49.8N 78.1E, H: 04 05 57.4,
											h 0 km, Mb 5.5.
											Eastern Kazakh SSR.
Sep. 5	eL	18	55								34.0N 26.8E, H: 18 42 17.6,
	F	19	01								h 94 km.
											Crete.
Sep. 6	eL	02	56								34.0N 59.3E, H: 02 27 37.1,
	F	03	04								h 27 km, Mb 4.9, Ms 4.8.
											Iran.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Sep. 6	WIT iP	14	11	59	(-)						37.1N 116.0W, H: 14 00 00.1,
											Mb 5.6.
											Nuclear explosion.
											Southern Nevada.
Sep. 6	eP	19	35	21							31.0N 131.9E, H: 19 22 47.8,
	eS	19	45	45							h 39 km, Mb 5.7, Ms 5.7.
	eL	20	04			26			10.0	6.2	Kyushu, Japan.
	F	20.9									
	WIT iP	19	35	15	-						
Sep. 8	WIT iP	02	13	32.5	+						45.4N 142.7E, H: 02 02 23.6,
											h 326 km, Mb 4.7.
											Hokkaido, Japan region.
Sep. 8	ePP	15	32	46							No vertical records.
	ePS	15	42.5								3.7S 143.0E, H: 15 12 23.8,
	eL	16	11			21		12.9		6.5	h 29 km, Mb 6.0, Ms 6.1.
	WIT iPKP	15	31	14	-						Near north coast of New-
											Guinea.
Sep. 8	WIT eP	20	21	44.5							46.0N 151.4E, H: 20 09 51.2,
											h 31 km, Mb 5.0.
											Kuril Islands.
Sep. 9	eS	00	58	25							No vertical records.
	eL	01	15								8.7S 74.5W, H: 00 35 18.4,
	F	01.6									h 144 km, Mb 5.3.
	WIT eP	00	48.2								Peru-Brazil border region.
Sep. 9	eS	01	00	52							8.7S 74.5W, H: 00 37 43.2,
	eL	01	15								h 120 km, Mb 6.0.
	F	01.6									Peru-Brazil border region.
	WIT iP	00	50	38.5	+						
Sep. 9	WIT eP	02	30	41							66.1N 142.1E, H: 02 20 57.9,
											h 33 km, Mb 5.1.
											Eastern Siberia.
Sep. 9	WIT eP	05	05	39							59.0N 149.2W, H: 04 54 46.0,
	ipP	05	05	46							h 17 km, Mb 5.2.
											Kenai Peninsula, Alaska.
Sep. 10	e(P)	23	26.2								14.3N 92.9W, H: 23 13 47.0,
	eL	23.9									h 72 km, Mb 5.0.
	F	24.5									Near coast of Chiapas, Mexico.
Sep. 11	iPP	18	46	35	+						43.0S 75.2W, H: 18 26 36.8,
	ePPP	18	49	08							h 31 km, Mb 5.7, Ms 5.5.
	ePS	18	56	28							Off coast of Southern Chile.
	eL	19	23								
	F	in next shock									
Sep. 11	eP	19	25	10							33.9N 59.4E, H: 19 17 12.9,
	ePP	19	26.7								h 33 km, Mb 5.2, Ms 5.4.
	eS	19	31.6								Iran.
	eL	19	36			15		23		6.1	
	F	20.6									
	WIT eP	19	25	03.5							
Sep. 12	eL	14	21								39.7N 143.6E, H: 13 36 27.5,
	F	14.8									h 12 km, Mb 5.2.
											Off east coast of Honshu,
											Japan.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Sep. 12	ePKP$_1$	23	02.5								21.6S 179.4W, H: 22 44 06.5,
	iPKP$_2$	23	02	47	-						h 635 km, Mb 5.9.
	epPKP$_2$	23	05	08							Fiji Islands region.
	epPP	23	06	11							
	F	23	30								
	WIT iPKP$_1$	23	02	40.5	+						
	iPKP$_2$	23	02	45	-						
Sep. 13	eL	08	15								15.1N 93.9W, H: 07 30 43.6,
	F	08.6									h 34 km, Mb 5.1, Ms 5.4.
											Near coast of Chiapas, Mexico.
Sep. 13	eL	20	25								
	F	20.6									
Sep. 13	eL	22	05			14		1.6		4.5	57.9N 32.4W, H: 21 54 26.5,
	F	22.4									h 33 km, Mb 4.5.
	WIT e(P)	21	59.4								North Atlantic Ocean.
Sep. 14	ePP	01	42	38							24.5S 80.4E, H: 01 25 19.1,
	F	in next shock									h 33 km, Mb 5.5.
	WIT ePP	01	42	39							South Indian Ocean.
Sep. 14	iP	01	43	42	-						57.9N 32.6W, H: 01 38 44.8,
	eS	01	47	50							h N. Mb 5.3, Ms 4.7.
	eL	01	49			13		6.2		5.1	North Atlantic Ocean.
	F	02.6									
	WIT eP	01	43	41	+						
Sep. 14	eP	13	56	27	(+)	4	3.0				28.4N 53.1E, H: 13 48 31.2,
	ePP	13	58	08							h 33 km, Mb 5.8, Ms 5.6.
	eS	14	02	50							Southern Iran.
	eL	14	10			14		12.9		5.8	
	F	15.6									
	WIT iP	13	56	20	-						
Sep. 14	WIT eP	19	28	11							28.4N 53.2E, H: 19 20 22.7,
											h 44 km, Mb 5.1.
											Southern Iran.
Sep. 15	eP	05	01.0								34.7N 25.1E, H: 04 55 59.5,
	eS	05	05.0								h 33 km, Mb 4.9.
	eL	05	07.0			12		14.8		5.4	Crete.
	F	05.5									
	WIT eP	05	00.9								
Sep. 15	eL	11	33			20		6.4		6.0	40.9N 143.2E, H: 10 50 11.8,
	F	12.1									h 15 km, Mb 5.4, Ms 5.6.
	WIT eP	11	02	19							Off east coast of Honshu,
											Japan.
Sep. 16	ePKP	14	14.5								6.1S 148.7E, H: 13 55 36.1,
	ePP	14	16	26							h 59 km, Mb 5.8.
	ePKS	14	18.0								New Britain region.
	ePPP	14	19	10							
	eSKKS	14	23.6								
	ePPS	14	28.3								
	eSS	14	33.6								
	eL	14.9				22		53		7.2	
	F	17									
	WIT ePKP	14	14	30							
Sep. 16	WIT iPKP	14	30	02	-						17.4S 178.8W, H: 14 11 29.4.
											h 583 km, Mb 5.1.
											Fiji Islands region

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Sep. 16	eL	17	04								6.0S 148.8E, H: 16 00 53.1,
	F	17.7									h 71 km, Mb 5.3.
											New Britain region.
Sep. 17	ePKP	18	09.5								15.0S 175.7W, H: 17 49 47.6,
	eL	19	10								h 17 km, Mb 5.2, Ms 5.6.
	F	20									Tonga Islands
Sep. 18	eS	04	11.0								34.8N 25.1E, H: 04 01 59.4,
	eL	04	13.5								h 35 km, Mb 4.6.
	F	04.4									Crete.
	WIT eP	04	06.9								
Sep. 18	WIT ePKP	12	03	16.5							18.2S 167.1E, H: 11 43 45.6,
											h N. Mb 5.7.
											New Hebrides Islands.
Sep. 19	eP	11	20.6								30.7N 41.9W, H: 11 13 07.4,
	eZ	11	21	10							h 33 km, Mb 4.9, Ms 5.4.
	eS	11	27	04							North Atlantic Ridge.
	eL	11	32.5			22		3.0		5.2	
	F	12.1									
	WIT eP	11	20	53							
	i	11	21	17							
Sep. 19	eP	22	20.6								28.4N 53.2E, H: 22 12 38.2,
	F	23.0									h 34 km, Mb 5.1.
	WIT eP	22	20.4								Southern Iran.
Sep. 20	iP	06	10	52.5	+	8	1.5				10.7N 62.7W, H: 06 00 03.5,
	ipP	06	11	21							h 107 km, Mb 6.2.
	ePPP	06	15	22							Near coast of Venezuela.
	iS	06	19	47							2 killed.
	esS	06	20.5								
	eSS	06	24.3								
	eL	06.5				24		37		6.6	
	F	08.5									
	WIT iP	06	11	00.0	+						
	ipP	06	11	25							
Sep. 20	WIT eP	22	37	48							36.8N 138.1E, H: 22 25 37.1,
											h 59 km, Mb 5.0.
											Honshu, Japan.
Sep. 21	iP	13	18	00	+	8	8.3				d.b.m. 42.2N 142.6E, H: 13 05
	ePP	13	20.9								58.2, h 33 km, Mb 5.9, Ms 6.4.
	eZ	13	24.1								Hokkaido, Japan region.
	eS	13	27	57							
	eL	13.8				25		85		7.1	
	F	16									
	WIT iP	13	17	55.5	+						
Sep. 22	WIT iPKP	08	19	03.5	+						18.1S 178.6W, H: 08 00 32.8,
											h 630 km, Mb 4.8.
											Fiji Islands region.
Sep. 22	eL	10	08								15.7N 121.9E, H: 09 20 26.4,
	F	10.6									h 20 km, Mb 5.3.
											Luzon, Philippine Islands.
Sep. 23	eL	05.8									40.3N 143.5E, H: 05 03 50.0,
	F	06.4									h 30 km, Mb 4.8, Ms 5.2.
											Off east coast of Honshu, Japan.
Sep. 24	eL	04.3									40.3N 143.7E, H: 03 34 48.5,
	F	04.9									h 22 km, Mb 5.1, Ms 5.1.
											Off east coast of Honshu,
											Japan.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Sep. 24	WIT eP	04	25	30	(-)						39.2N 40.2E, H: 04 19 54.5, h 14 km, Mb 5.1. Turkey. 2 killed
Sep. 25	WIT ePKP	00	34	13							18.0S 178.5W, H: 00 15 39.5, h 582 km, Mb 4.7. Fiji Islands region.
Sep. 25	eL	08	30			21		4.8		6.4	46.4S 166.8E, H: 07 02 51.8, h N. Mb 5.5, Ms 6.3. Off west coast of South Island, New Zealand.
	F	09.2									
Sep. 25	eP	10	50	48	(+)						15.6N 92.6W, H: 10 38 38.4, h 138 km, Mb 5.7. Mexico-Guatemala border region. 15 killed.
	epP	10	51.4								
	epPP	10	54	35							
	epPPP	10	56.8								
	iS	11	00	58							
	esS	11	01.9								
	eSS	11	06.5								
	eSSS	11	10.9								
	eL	11	14			22		27		6.6	
	F	12.4									
	WIT iP	10	50	55.5	(+)						
	ipP	10	51	24	+						
Sep. 25	eS	21	03.0								39.2N 40.2E, H: 20 52 15.9, h 47 km, Mb 5.1. Turkey.
	F	21.4									
	WIT eP	20	57	54							
Sep. 26	eL	01	13								33.7N 69.9E, H: 00 46 13.8, h 45 km, Mb 5.2. Afghanistan.
	F	01	24								
Sep. 26	WIT iPKP	02	58	36.0	-						19.3S 177.6W, H: 02 39 56.5, h 560 km, Mb 5.2. Fiji Islands region.
Sep. 26	WIT iPKP	08	59	55.5	-						17.7S 178.5W, H: 08 41 22.0, h 578 km, Mb 5.1. Fiji Islands region.
Sep. 26	iPKP	14	57	00	-						20.9S 177.0W, H: 14 37 46.2, h 251 km, Mb 5.8. Fiji Islands region.
	epPKP	14	58.0								
	F	15.4									
	WIT iPKP	14	57	00.0	-						
Sep. 26	ePKP	18	22	43	+						30.5S 178.2W, H: 18 02 50.1, h 33 km, Mb 5.8, Ms 6.8. Kermadec Islands region.
	iPP	18	27	00							
	ePPP	18	35	39							
	eSKSP	18	37	22							
	eSS	18	47.0								
	eL	19.4				20		32		7.2	
	F	21.5									
	WIT ePKP	18	22.7								
Sep. 27	ePKP	04	17.3								6.8S 129.1E, H: 03 58 55.1, h 127 km, Mb 6.1. Banda Sea.
	epPP	04	18.5								
	iSKS	04	24	00							
	iSKKS	04	25	14							
	ePS	04	27	52							
	ePPS	04	29	04							
	eL	04	56								
	F	05.5									
	WIT ePKP	04	17.5								

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Sep. 27	WIT eP	10	46	16.0							37.8N 72.3E, H: 10 37 55.9, h 119 km, Mb 5.2. Tadzhik S.S.R.
Sep. 27	eL	20	06			22		21		6.7	d.b.m. 3.7S 143.3E, H: 19 06 42.2, h 7 km, Mb 5.9, Ms 6.5. Near North coast of New Guinea.
	F	21.3									
Sep. 28	eL	14.6									d.b.m. 13.2S 76.4W, H: 13 53 35.3, h 70 km, Mb 6.0. Near coast of Peru.
	F	15									
	WIT eP	14	07	17.5							
Sep. 29	WIT iP	03	51	01.5	(+)						49.8N 78.2E, H: 03 42 57.5, Mb 5.8. Eastern Kazakh S.S.R.
Oct. 2	WIT iPKP	13	40	31.1	+						17.6S 178.8W, H: 13 21 56.5, h 560 km, Mb 4.4. Fiji Islands region.
Oct. 3	WIT eP	11	20	24							51.6N 174.1W, H: 11 08 38.9, h 46 km, Mb 5.0. Andreanof Islands, Aleutian Islands.
Oct. 4	ePP	06	23.6								56.2S 27.0W, H: 06 04 31.9, h 63 km, Mb 5.9. South Sandwich Islands region.
	eSKS	06	29.5								
	ePS	06	32	58							
	eSPP	06	33	58							
	eSS	06	39.0								
	eSSS	06	43.0								
	eL	06.9									
	F	07.5									
Oct. 6	WIT eP	07	54	25							10.0N 93.7E, H: 07 42 25.2, h 111 km, Mb 5.1. Andaman Islands region.
Oct. 6	eS	15	15.6								36.9N 26.5E, H: 15 06 44.8, h 40 km, Mb 4.7. Dodecanese Islands.
	eL	15	18.5								
	F	15	27								
	WIT eP	15	11	39.0							
Oct. 6	WIT iP	22	12	15.5	+						38.8N 32.6E, H: 22 07 10.9, h 39 km, Mb 4.8. Turkey.
Oct. 7	eP	19	32	38	-	10	1.7				26.3N 140.6E, H: 19 20 20.3, h 516 km, Mb 6.1. Bonin Islands region.
	ipP	19	34	35							
	ePP	19	36	34							
	ipPP	19	37	57							
	ePPP	19	38	40							
	iS	19	42	26							
	eL	20.1				21		103		7.2	
	F	in next shock									
	WIT iP	19	32	33.0	+						
Oct. 7	eP	21	01.0								42.0N 142.4E, H: 20 49 01.3, h 32 km, Mb 5.7, Ms 6.1. Hokkaido, Japan region.
	eS	21	11	29							
	eL	21	27			26		40		6.8	
	F	22.5									
	WIT iP	21	00	59.5	+						
Oct. 8	WIT eP	01	03	15							35.6N 139.9E, H: 00 50 41.8, h 76 km, Mb 5.3. Near south coast of Honshu, Japan.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Oct. 8	ePKP	08	02.1								39.9S 87.7E, H: 07 43 23.1, h N. Mb 6.0, Ms 5.8. Southeast Indian Rise.
	ePP	08	03.5								
	ePS	08	12.9								
	eSS	08	19.2								
	eL	08	40								
	F	09.5									
Oct. 9	eL	04.9									14.7S 175.5W, H: 03 38 39.9, h 11 km, Mb 5.2, Ms 5.6. Samoa Islands region.
	F	05.5									
Oct. 10	eL	16	10								d.b.m. 6.0S 148.6E, H: 15 05 51.7, h 70 km, Mb 5.1. New Britain region.
	F	16.5									
Oct. 12	WIT iPKP	19	36	19.0	-						20.9S 178.8W, H: 19 17 39.9, h 607 km, Mb 5.7. Fiji Islands region.
Oct. 14	ePKP	03	18.0								31.5S 117.0E, H: 02 58 47.8, h 1 km, Mb 6.0, Ms 6.8. Western Australia.
	ePP	03	20.0								
	ePS	03	30	06							
	eSS	03	37.0								
	eSKKS	03	37.9								
	iPKPPKS	03	39	50							
	eSSS	03	42.3								
	eL	03.9				20		25		6.9	
	F	06.5									
	WIT ePKP	03	17	58	(-)						
	ePP	03	19	56	(-)						
Oct. 14	WIT eP	05	34	49.5							12.6N 95.2E, H: 05 22 44.3, h N. Mb 5.5. Andaman Islands region.
Oct. 14	eL	10.0									38.2N 142.1E, H: 09 11 27.5, h 69 km, Mb 5.0 Near east coast of Honshu, Japan.
	F	10.1									
Oct. 16	eL	08	31			18	6.8			6.0	29.3N 129.4E, H: 07 45 46.8, h 13 km, Mb 5.6, Ms 5.4. Ryukyu Islands.
	F	09.0									
	WIT iP	07	58	19.5	+						
Oct. 19	eL	03	00								37.3N 73.1E, H: 02 33 30.9, h 76 km, Mb 4.9. Tadzhik S.S.R.
	F	03.2									
Oct. 19	eL	07	28								37.3N 73.2E, H: 07 01 33.4, h 51 km, Mb 5.2. Tadzhik S.S.R.
	F	07.6									
Oct. 19	eL	10	18			14	5.4			5.6	37.5N 73.3E, H: 09 52 03.4, h N. Mb 5.4. Tadzhik S.S.R.
	F	10.6									
Oct. 19	eL	15	47								35.3N 23.5E, H: 15 34 54.8, h 19 km, Mb 4.8. Crete.
	F	16.0									
	WIT eP	15	39	46							
Oct. 20	eL	07	49			15	32			6.7	25.0N 122.5E, H: 07 08 17.1, h 15 km, Mb 5.4, Ms 5.7. Taiwan region
	F	08.5									
Oct. 20	eL	13	09								40.3N 144.2E, H: 12 21 47.2, h 15 km, Mb 4.9. Off east coast of Honshu, Japan.
	F	13.8									

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Oct. 21	WIT eP	18	21	29.5							35.2N 23.4E, H: 18 16 41.6, h 5 km, Mb 4.7. Crete.
Oct. 22	WIT ePKP	19	32	04.5							18.3S 177.9W, H: 19 13 31.7, h 612 km, Mb 5.3. Fiji Islands region.
Oct. 23	ePP	21	25.0								3.3S 143.3E, H: 21 04 41.3, h 12 km, Mb 6.1, Ms 6.8. Near north coast of New Guinea
	ePPP	21	28.0								
	eSKS	21	30	50							
	ePS	21	34	52							
	ePPS	21	36.3								
	eSS	21	41.6								
	eSSS	21	45.5								
	eL	22	04			22		168		7.7	
	F	01									
	WIT ePKP	21	23	34							
	ePKKP	21	33	35							
Oct. 24	eL	01	36								7.2N 126.6E, H: 00 42 21.9, h 77 km, Mb 5.4. Mindanao, Philippine Islands.
	F	02.1									
Oct. 24	eL	06	01								45.6S, 34.1E, H: 05 07 53.9, h N. Mb 5.3, Ms 5.5. Prince Edward Islands region.
	F	06.4									
Oct. 24	ePP	16	09	40							5.9N 127.0E, H: 15 51 18.5, h 70 km, Mb 5.4. Philippine Islands region.
	eSKS	16	16.0								
	ePS	16	19.0								
	eL	16	42			28	19.5			6.6	
	F	17.5									
Oct. 24	WIT iP	22	47	29.5	-						49.7N 155.8E, H: 22 35 50.9, h 35 km, Mb 5.5. Kuril Islands.
Oct. 26	WIT iP	16	08	25							42.9N 145.2E, H: 15 56 27.1, h 41 km, Mb 5.1. Hokkaido, Japan region.
Oct. 28	WIT eP	12	58	57.5	+						39.0N 25.9E, H: 12 54 32.8, h N. Mb 4.5. Aegean Sea.
Oct. 28	WIT eP	14	53	14.0							33.4N 140.8E, H: 14 40 41.4, h 61 km, Mb 5.5. South of Honshu, Japan.
Oct. 28	ePKP	23	51	50	(+)						12.5S 166.5E, H: 23 32 29.7, h 60 km, Mb 5.9. Santa Cruz Islands.
	iPP	23	54	38							
	ePKS	23	55	24							
	eSS	24	12	44							
	eL	24.5				24	16.5			6.8	
	F	02.0									
	WIT ePKP	23	51	47							
	ePP	23	54	31							
Oct. 29	WIT eP	04	18	53.0	+						31.2N 141.6E, H: 04 06 04.1, h 17 km, Mb 5.7. South of Honshu, Japan
Oct. 29	WIT iPKP	07	39	51.2	(+)						17.8S 178.8W, H: 07 21 16.7, h 567 km, Mb 5.5. Fiji Islands region.
Oct. 29	iP	22	26	37	(+)						d.b.m. 65.4N 150.1W, H: 22 16 15.6, h 7 km, Mb 6.0, Ms 6.5. Alaska.
	iPP	22	28	48							
	eS	22	35.0								
	eSS	22	39.0								
	eSSS	22	41.8								
	eL	22	43.5			23	47			6.6	
	F	24.5									
	WIT iP	22	26	32.5							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Oct. 30	WIT ePKP$_2$	10	02	03.0	+						31.0S 179.9W, H: 09 42 10.8, h 328 km, Mb 4.9. Kermadæ Islands
Oct. 30	eL	11	51			15		8.1		5.0	d.b.m. 35.1N 3.6W, H: 11 41 56.9, h 34 km, Mb 4.6. Strait of Gibraltar.
	F	11	59								
Oct. 30	eL	17	03								d.b.m. 37.9N 38.6E, H: 16 51 33.5, h 3 km, Mb 4.9. Turkey.
	F	17.4									
	WIT eP	16	57	21							
Oct. 31	eL	03	31			12		14.5		5.4	d.b.m. 36.6N 27.1E, H: 03 22 15.0, h 11 km, Mb 5.1. Dodecanese Islands.
	F	03.7									
	WIT eP	03	27	08							
Oct. 31	WIT eP	09	20	53							1.2N 126.3E, H: 09 06 36.4, h N. Mb 6.1, Ms 6.0. Molucca Passage.
Oct. 31	eL	10	03			20		8.9		6.2	d.b.m. 16.3S 73.3W, H: 09 15 46.9, h 67 km, Mb 5.7. Near coast of Peru.
	F	10.5									
Nov. 3	eS	04	55	46							d.b.m. 42.1N 19.4E, H: 04 49 31.8, h 17 km, Mb 5.0, Ms 5.3. Yugoslavia.
	eL	04	57.0			20		68		5.7	
	F	05.5									
	WIT eP	04	53	00							
Nov. 4	ePKP	09	26.0								d.b.m. 14.2S 172.0E, H: 09 07 38.5, h 585 km, Mb 5.8. New Hebrides Islands region.
	F	10.5									
	WIT iPKP	09	26	02.5							
	ipPKP	09	28	45.0							
Nov. 6	WIT eP	13	46	27							35.2N 32.8E, H: 13 41 04.5, h 54 km, Mb 4.8. Cyprus.
Nov. 7	eL	10	00								40.2N 142.3E, H: 09 19 07.3, h 61 km, Mb 4.9. Near east coast of Honshu, Japan.
	F	in next shock									
Nov. 7	eP	10	08	16							73.4N 54.9E, H: 10 02 05.3, h 0 km, Mb 6.0. Novaya Zemlya. Underground explosion.
	eL	10	18								
	F	10	33								
	WIT iP	10	08	05.5	+						
Nov. 8	eL	16	20								64.7N 17.4W, H: 16 11 15.7, h N, Mb 4.7. Iceland.
	F	16.6									
	WIT eP	16	15	19.0	+						
Nov. 8	WIT iPKP	18	45	56.5	+						19.5S 179.2W, H: 18 27 26.7, h 670 km, Mb 5.2. Fiji Islands region.
Nov. 9	WIT ePKP	13	32	08.0	-						20.1S 178.6W, H: 13 13 31.3, h 615 km, Mb 4.7. Fiji Islands region.
Nov. 9	eScP	13	57.8								23.8N 64.7E, H: 13 43 38.4, h N, Mb 5.2, Ms 5.3. Near coast of West Pakistan.
	eS	14	01								
	eL	14.2									
	F	14.5									
	WIT eP	13	52	49							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Nov. 9	eL	17	32								38.0N 88.5W, H: 17 01 41.1, h 19 km, Mb 5.3. Southern Illinois.
	F	17.8									
	WIT iP	17	12	10							
	i	17	12	17							
Nov. 9	eL	21	24			24		12		6.5	d.b.m. 2.4N 126.8E, H: 20 30 41.9, h N, Mb 5.5, Ms 6.0. Molucca Passage.
	F	22									
Nov. 10	WIT eP	12	55	40.5							34.8N 24.3E, H: 12 50 42.9, h 33 km, Mb 5.0. Crete.
Nov. 10	WIT eP	14	34	33							34.4N 23.9E, H: 14 29 35.1, h N, Mb 4.4. Crete.
Nov. 10	eL	17	50			16		10		6.2	20.0N 121.4E, H: 17 01 59.2, h N, Mb 5.2, Ms 5.5. Philippine Islands region.
	F	18	10								
	WIT eP	17	14.8								
Nov. 11	WIT iP	09	04	55.5	-						57.3N 155.3W, H: 08 53 52.0, h 59 km, Mb 5.3. Alaska Peninsula.
Nov. 11	iP	14	53	14.0	+						40.1N 143.0E, H: 14 41 15.9, h 35 km, Mb 5.5, Ms 5.9. Off east coast of Honshu, Japan.
	eS	15	03.3								
	eL	15	20			18		24		6.5	
	F	16.5									
	WIT iP	14	53	24.0	+						
Nov. 11	eL	23	46								36.7N 27.1E, H: 23 34 21.0, h 23 km, Mb 4.8. Dodecanese Islands.
	F	24									
	WIT eP	23	39	12							
Nov. 12	eL	01	30								27.5N 128.4E, H: 00 44 12.8, h 48 km, Mb 5.8, Ms 5.6. Ryukyu Islands.
	F	01.9									
	WIT iP	00	56	47.5	-						
Nov. 12	eL	03	49								36.6N 27.3E, H: 03 37 35.7, h 17 km, Mb 4.7. Dodecanese Islands.
	F	04									
	WIT eP	03	42	25.2							
Nov. 12	eL	06	21								36.6N 27.3E, H: 06 08 54.3, h 24 km, Mb 4.7. Dodecanese Islands.
	F	06	30								
Nov. 12	eL	09	40								41.2N 143.9E, H: 08 57 27.1, h 17 km, Mb 5.3. Hokkaido, Japan region.
	F	10.1									
Nov. 12	eL	10	39								29.2N 129.4E, H: 09 53 42.2, h 22 km, Mb 5.4, Ms 5.1. Ryukyu Islands.
	F	11									
	WIT eP	10	06	13							
Nov. 13	eL	12	15								58.3N 32.7W, H: 12 03 39.9, h N, Mb 4.6. North Atlantic Ocean.
	F	12.4									
Nov. 13	WIT iPKP	16	08	06.7							20.8S 178,8W, H: 15 49 26.4, h 590 km, Mb 5.2. Fiji Islands region.
Nov. 13	eP	18	54.0								d.b.m. 40.2N 142.5E, H: 18 41 47.9, h 49 km, Mb 5.5, Ms 5.8. Near east coast of Honshu, Japan.
	eL	19.4				24		12		6.2	
	F	20.0									
	WIT eP	18	53	53							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Nov. 14	WIT ePKP	11	54	30.0	+						20.0S 176.0W, H: 11 35 12.0, h 220 km, Mb 5.1. Fiji Islands region.
Nov. 14	eL	12.9									31.6N 131.5E, H: 12 11 50.1, h 6 km, Mb 5.0. Kyushu, Japan.
	F	13.3									
Nov. 14	WIT iPKP	23	28	24.5							21.5S 170.1E, H: 23 08 54.4, h 103 km, Mb 5.4. Loyalty Islands region.
Nov. 15	eL	06	48								d.b.m. BCIS: 37.5N 58.2E, H: 06 25 36. East of Caspian Sea, Iran-U.S.S.R. border.
	F	07.1									
	WIT eP	06	33.0								
Nov. 16	eL	08	56								16.6S 175.9E, H: 07 45 51.7, h 66 km, Mb 5.6. Fiji Islands region.
	F	09.7									
	WIT ePKP	08	05	18.0							
Nov. 17	epP	00	28	17							9.6N 72.6W, H: 00 16 08.6, h 172 km, Mb 5.7. Venezuela.
	eS	00	36	58							
	WIT iP	00	27	34							
	ipP	00	28	22.5							
Nov. 17	eP	07	50	56							1.3S 13.6W, H: 07 41 16.1, h N, Mb 5.3, Ms 5.8. North of Ascension Island.
	eS	07	58.6								
	eL	08.6				20	28			6.2	
	F	09.0									
	WIT eP	07	51.0								
Nov. 20	WIT eP	01	54	43							45.7N 26.8E, H: 01 51 13.9, h 110 km, Mb 4.0. Rumania.
Nov. 21	WIT iPKP	02	56	07							20.9S 174.1W, H: 02 36 21.8, h N, Mb 5.0. Tonga Islands.
Nov. 21	WIT e	12	15	39							
Nov. 22	eP	09	12.6								16.3N 122.3E, H: 08 59 23.1, h 26 km, Mb 5.3, Ms 5.8. Luzon, Philippine Islands.
	eS	09	23.2								
	eL	09	44			20	21			6.5	
	F	10.5									
Nov. 22	WIT iPKP	16	02	59.5	-						23.6S 180.0W, H: 15 44 05.0, h 516 km, Mb 5.3. South of Fiji Islands.
Nov. 24	eL	22.0				20	10			6.2	d.b.m. 40.3N 142.3E, H: 21 20 59.9, h 51 km, Mb 5.9. Near east coast of Honshu, Japan.
	F	22.6									
	WIT iP	21	33	04.0							
Nov. 25	eL	19	28			26	36			6.7	d.b.m. 5.0N 126.9E, H: 18 36 53.0, h 31 km, Mb 5.4, Ms 6.2. Mindanao, Philippine Islands.
	F	20.3									
Nov. 26	WIT iPKP	01	29	07	-						5.3S 152.0E, H: 01 10 12.9, h 68 km, Mb 5.5. New Britain region.
Nov. 26	eL	19	04								55.9N 111.4E, H: 18 31 51.8, h 4 km, Mb 5.1. Lake Baikal region.
	F	19	15								
	WIT eP	18	41	36							

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Nov. 28	iP	10	48	38.0	+	7	7.0				15.4N 94.6W, H: 10 36 07.7, h 33 km, Mb 5.2, Ms 6.4. Near coast of Oaxaca, Mexico.
	iS	10	59	07							
	eL	11	15			20	18			6.5	
	F	12.5									
	WIT eP	10	48	41							
Nov. 28	WIT iPKP	16	49	20.0							6.8S 156.2E, H: 16 30 32.1, h 169 km, Mb 5.7. Solomon Islands.
	epPKP	16	50	02							
Dec. 1	eS	13	39.0								10.6S 74.9W, H: 13 14 50.6, h 5 km, Mb 5.4, Ms 5.6. Peru.
	eL	14	00								
	F	14.4									
	WIT eP	13	28.3								
Dec. 1	WIT ePKP	23	14	44							24.8S 179.6E, H: 22 55 48.2, h 525 km, Mb 4.7. South of Fiji Islands.
Dec. 2	eP	02	44	44							13.9S 23.8E, H: 02 33 41.6, h 7 km, Mb 6.0. Zambia.
	eL	03	08								
	F	03.7									
	WIT iP	02	44	44.5							
Dec. 3	eL	21	03.6								44.6N 18.4E, H: 20 57 31.2, h 7 km, Mb 4.7. Yugoslavia.
	F	21	10								
	WIT eP	21	00	44							
	eL	21	03.7								
Dec. 4	eL	18	56.0								36.4N 27.1E, H: 18 43 28.1, h 49 km, Mb 4.4. Dodecanese Islands.
	F	19.1									
Dec. 4	eL	19	50.0								36.5N 27.1E, H: 19 37 23.5, h 51 km, Mb 4.7. Dodecanese Islands.
	F	19	56								
	WIT eP	19	42	10.0	(+)						
Dec. 4	WIT eP	21	51	44.0							8.4N 58.4E, H: 21 41 32.6, h N, Mb 5.1. Carlsberg Ridge.
Dec. 5	eP	07	57	04	+	5	3.0				36.6N 27.0E, H: 07 52 11.0, h 35 km, Mb 5.5. Dodecanese Islands.
	eS	08	01	06							
	eL	08	03			14	30			5.7	
	F	08.7									
	WIT iP	07	57	00.0	+						
Dec. 5	iP	09	48	26	+	8	12				63.9N 21.7W, H: 09 44 11.0, h 5 km, Mb 5.5. Ms 6.0. Iceland region.
	iS	09	52	02							
	eL	09	53.5			16		100		6.0	
	F	11									
	WIT eP	09	48	26							
	i	09	48	28.0							
Dec. 7	ePP	05	18	22							3.4S 145.9E, H: 04 57 49.0, h 15 km, Mb 5.3, Ms 6.5. Near north coast of New Guinea.
	ePPP	05	21	00							
	ePS	05	28	20							
	eL	05	48			24	50			7.0	
	F	07.5									
Dec. 7	WIT eP	15	52	41.5							51.6N 175.7E, H: 15 40 57.9, h N, Mb 5.3, Ms 5.4. Rat Islands, Aleutian Islands.
Dec. 7	WIT eP	15	58	26							51.6N 175.8E, H: 15 46 45.2, h 59 km, Mb 5.0. Rat Islands, Aleutian Islands.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Dec. 7	WIT ePKP	20	54	14.5							45.0S 80.3W, H: 20 35 21.2, h N, Mb 5.6. Off coast of Southern Peru.
Dec. 7	ePKP	21	55	18							20.7S 169.4E, H: 21 35 44.8, h 61 km, Mb 5.6. New Hebrides Islands.
	WIT iPKP	21	55	16.0							
Dec. 8	WIT iP	09	21	08.8	-						27.4N 128.3E, H: 09 08 34.5, h 54 km, Mb 5.1. Ryukyu Islands.
Dec. 9	eL	01	43.0								39.4N 0.1W, H: 01 36 26.0, h N, Mb 4.5. Spain.
	F	02.0									
	WIT eL	01	44.1								
Dec. 11	eL	12.5									33.6N 134.0E, H: 11 45 30.8, h 32 km, Mb 5.4. Shikoku, Japan.
	F	12.8									
	WIT eP	11	57	53							
Dec. 11	WIT iPKP	21	53	52							23.9S 176.1W, H: 21 34 07.5, h 95 km, Mb 5.4. South of Fiji Islands.
Dec. 11	WIT ePKP	22	50.8								23.7S 176.2W, H: 22 30 53.2, h N, Mb 4.9. South of Fiji Islands.
Dec. 12	WIT eP	05	39	07.0	+						9.7N 125.7E, H: 05 25 37.2, h 113 km, Mb 5.6. Mindanao, Philippine Islands.
Dec. 12	ePKP	07	38.5								16.0S 177.8W, H: 07 19 44.8, h 431 km, Mb 5.5. Fiji Islands region.
	WIT ePKP	07	38	29							
Dec. 14	eSS	10	26.0								d.b.m. 51.5N 175.7E, H: 09 59 02.3, h N, Mb 5.2, Ms 5.8. Rat Islands Aleutian Islands.
	eL	10	50								
	F	11.2									
	WIT eP	10	10	47							
Dec. 15	iP	02	26	07	(+)						d.b.m. 51.6N 175.8E, H: 02 14 17.5, h N, Mb 5.7, Ms 6.2. Rat Islands, Aleutian Islands.
	eS	02	36.0								
	eSS	02	41.0								
	eL	02	46			20		10	6.0		
	F	04									
	WIT iP	02	26	02	(-)						
Dec. 15	eP	02	40.3								d.b.m. 51.7N 175.8E, H: 02 28 32.4, h N, Mb 5.4, Ms 6.1. Rat Islands, Aleutian Islands.
	WIT eP	02	40	16							
Dec. 15	WIT iPKP	09	21	23.5	+						20.6S 178.0W, H: 09 02 31.3, h 470 km, Mb 4.7. Fiji Islands region.
Dec. 17	eP	12	13								d.b.m. 60.2N 152.8W, H: 12 02 15.0, h 86 km, Mb 5.9. Southern Alaska.
	eS	12	21	48							
	eSS	12	26.0								
	eL	12	30			26		18	6.2		
	F	13.4									
	WIT eP	12	12	56							
	i	12	12	57.5							
Dec. 18	WIT eP	05	10	01.9	+						49.7N 78.1E, H: 05 01 57.0, h 0 km, Mb 5.2. Eastern Kazakh S.S.R.

Seismic Records at De Bilt

Date 1968	Phase	G.M. Time h	m	s	First motion	Period s	Amplitude μ Z	NS	EW	Magnitude De Bilt	Remarks Data without indication are from USCGS; d.b.m. means disturbed by microseisms
Dec. 18	WIT iPKP	20	22	45.0	-						19.9S 177.6W, H: 20 03 43.9, h 367 km, Mb 5.5. Fiji Islands region.
	epPKP	20	24	16							
	i	20	25	51							
Dec. 19	eP	05	26	10							d.b.m. 36.1N 70.1E, H: 05 17 51.6, h 151 km, Mb 5.4. Hindu Kush region.
	epP	05	26	48							
	eS	05	33	00							
	F	06.0									
	WIT iP	05	26	07							
	ipP	05	26	42							
Dec. 19	eP	15	27.3								d.b.m. 53.3N 160.1E, H: 15 15 55.7, h N, Mb 5.4, Ms 5.6. Near east coast of Kamchatka.
	eL	15	56								
	F	16.5									
	WIT iP	15	27	19.0	+						
Dec. 19	eP	16	42	00							d.b.m. 37.2N 116.5W, H: 16 30 00.0, h 0 km, Mb 6.3, Ms 5.6. Southern Nevada.
	eL	17	14								
	F	18.0									
	WIT iP	16	41	59.0	+						
Dec. 22	WIT eP	09	17	15.5							36.2N 101.9E, H: 09 06 36.3, h N Mb 5.5. Tsinghai Province, China.
Dec. 22	WIT eP	16	56	04.0	+						56.3N 153.8W, H: 16 44 44.2, h N, Mb 5.3. Kodiak Island region.
Dec. 25	eL	04	38.0								d.b.m. 41.7N 142.8E, H: 03 56 39.2, h 36 km, Mb 5.3, Ms 4.8. Hokkaido, Japan region.
	F	05.0									
	WIT iP	04	08	39.0	(+)						
Dec. 26	eL	12	28.0								35.1N 24.3E, H: 12 17 20.8, h 68 km, Mb 5.0. Crete.
	F	12	36								
	WIT eP	12	22	07							
Dec. 27	e	08	02								
	F	08	09								
Dec. 29	eL	08	05								13.6N 120.5E, H: 07 15 50.5, h N, Mb 5.4. Mindoro, Philippine Islands.
	F	08.6									
Dec. 29	eL	18	19								14.5N 92.4W, H: 17 36 29.9, h 60 km, Mb 5.4. Near coast of Chiapas, Mexico.
	F	18.7									
	WIT iP	17	48	56.0							
Dec. 29	WIT iPKP	20	22	02.5	+						20.2S 177.9W, H: 20 03 19.4, h 550 km, Mb 4.5. Fiji Islands region.
Dec. 30	WIT eP	07	14	22.5							57.6N 151.4W, H: 07 03 11.7, h 34 km, Mb 5.4. Kodiak Island region.
Dec. 30	eP	10	32	28							76.2N 7.5E, H: 10 27 09.7, h 23 km, Mb 5.0, Ms 5.5. Svalbard region.
	eS	10	36	49							
	eL	10	39								
	F	11.1									
	WIT eP	10	32	21							
Dec. 30	eL	22	58								23.2N 121.5E, H: 22 11 34.0, h 2 km, Mb 4.7. Taiwan.
	F	23.2									
	WIT eP	22	24.2								