



KONINKLIJK NEDERLANDSCH METEOROLOGISCH INSTITUUT.

No. 108.

SEISMIC RECORDS
AT DE BILT

30.

1942.

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TE VERKRIJGEN BIJ | EN VENTE CHEZ
DE RIJKSUITGEVERIJ TE 'S GRAVENHAGE.
Prijs f 1.00. | Prix f 1.00.



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INTRODUCTION.

The geographic coordinates of the seismic station are: $52^{\circ} 6' N$, $5^{\circ} 11' E$. The instruments are standing 3 m above mean sea-level. The subsoil is sand (diluvial deposits).

The following instruments were continuously working:
 two horizontal and one vertical seismographs with galvanometric recording after GALITZIN.
 one astatic horizontal seismograph after WIECHERT, $M = 200$ kg.
 two horizontal pendulums after BOSCH, $M = 25$ kg.

PREFACE

This thirtieth number of the De Bilt seismic records differs from the preceding ones in language only. The records have been worked out by Dr. J. Veldkamp, director of the section earthmagnetism and seismology.

The Chief Director of the Royal Netherland Meteorological Institute,

Prof. Dr. Ir. F. A. Vening Meinesz

DE BILT, June 1945

THE GALITZIN SEISMOGRAPHS. Below are given: the period of the galvanometer T_1 , the reduced length of pendulum 1, the distance between the mirror of the galvanometer and the recording paper A_1 , and the limits for the natural period of the undamped pendulum T , of the damping constant μ and of the multiplying factor k for the year 1942.

	NS comp.	EW comp.	Z comp.
Period of galvanometer T_1	24,43 sec	24,96 sec	12,0 sec
Reduced length of pendulum 1	123,1 mm	122,6 mm	406 mm
Distance A_1	1380 mm	1380 mm	1380 mm
Period of pendulum T	21,00—22,73 sec	23,20—25,45 sec	12 sec
Damping constant μ	—0,133; 0,137	—0,010; 0,151	0
Multiplying factor k	10,52—10,84	10,03—11,12	178

THE WIECHERT AND BOSCH SEISMOGRAPHS. The mean values of the natural period of the undamped pendulum T , of the damping ratio ϵ and of the static magnification V are for the year 1942:

	T	ϵ	V
WIECHERT (NS comp.)	4,9 sec	4	156
„ (EW comp.)	4,9 sec	4	170
BOSCH (NS comp.)	18,0 sec	4	20
„ (EW comp.)	18,0 sec	4	20

THE MEASURING OF THE RECORDS.

For working out the records the seismographs after Galitzin were used almost exclusively. The velocity of the recording paper is here 30 mm per minute. Only when the earthquake was extraordinarily strong, so that the Galitzin records were not to be entangled, the soot records of the seismographs WIECHERT and BOSCH were used. The velocity of the paper on these seismographs is smaller, viz. 10 mm and 15 mm per minute respectively. When the WIECHERT or BOSCH records were used, this has been mentioned in the column "remarks".

The time is Greenwich mean time, from midnight till midnight counted as 0 till 24 hours. In the column "direction" + means an upward movement of the soil (compression), — means a downward movement (dilatation). Uncertain data have been given in parenthesis. The subjoined symbols were used for the phases.

- P = normal first phase, or first longitudinal tremor.
- pP = wave one time reflected at the earth's surface near the epicenter.
- PP = wave reflected halfway between epicenter and station.
- PPP = P-wave two times reflected at the earth's surface.
- PPPP = P-wave three times reflected.
- S = second phase, arrival of the transversal tremor.
- sS = S-wave reflected at the earth's surface near the epicenter.
- 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 epicenter and station.
- PcP = P-wave reflected at the core boundary.
- ScS = S-wave reflected at the core boundary.
- P' = PkP = PcPcP = wave having penetrated the core.
- S' = SkS = ScPcS = transversal wave, having been longitudinal within the core.
- pP' = P'-wave reflected near the epicenter.
- sS' = S'-wave reflected near the epicenter.
- SsPsP = alternating wave which has penetrated the core.
- L = long waves or surface waves.
- M = maximum of the surface waves.
- L' = surface waves traveling around the major arc.
- M' = maximum of these waves.

i	= sudden beginning of the phase.
c	= gradual beginning of the phase.
F	= end of discernable movement.
H	= time of the shock at point of origin.
h	= depth of the origin.
Δ	= distance of epicenter.

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

The distance of epicenter and the depth of origin have been calculated by means of the curves of Brunner's "focal depth-time-distance chart" and the time tables of Macelwane (1933).

The data given in the column "amplitude" are the maximum amplitudes measured from the media line. Generally the first and largest maximum of the L-waves has been given only. When the oscillations were too small or too irregular the amplitude has been omitted. The amplitudes have been calculated by means of the formula:

$$V = \frac{A_1 k T_b}{\pi l} \cdot \frac{1}{\left\{1 + \left(\frac{T_b}{T}\right)^2\right\}^2}$$

Here A_1 is the distance between galvanometer mirror and recording paper, T_b is the period of the wave, l the reduced length of pendulum, k the multiplying factor, T the own period of the undamped seismograph, and V is the magnification.

For the horizontal components of the Galitzin records the mean values were used: $k = 10,9$ and $T = 24,5$ sec.

For the vertical component of the Galitzin records they were: $k = 175$ and $T = 12,0$ sec.

Only a few publications of other seismological stations were available. These were the stations: Budapest, Bucarest, Collmberg, Uppsala and Zürich.

THE MICROSEISMIC ACTIVITY.

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

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

For measuring the microseismic activity the records of the WIECHERT seismograph were employed. In the table below the amplitudes of the oscillations (measured from the media line) and the corresponding amplitudes of the movement of the soil are given.

Character	Ampl. record	Ampl. soil
○	○— $\frac{1}{4}$ mm	○— $\frac{1}{4}$ μ
1	$\frac{1}{4}$ —1 "	$\frac{1}{4}$ —5 "
2	1—2 "	5—10 "
3	>2 "	>10 "

Character of the microseismic movement.

Date 1942	Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	○, 1, ○	○	2, 1	1, 2	○	○	○	○	○	○	○	1, 2
2	○	○	1	2, 1, 2	○	○	○	○	○, 1, ○	○, 1, ○	○, 2, ○	2, 1
3	○, 1	○, 1	1, 2	2, 1	○	○	○, 1	○, 1	○, 1	○, 1, ○	○, 2, 1	1
4	1, 2	1	2	1	○	○	1, ○	1	1	○	1, 0	1
5	2, 1	1	2, 1	1, 2	○	○	○	1	1	○	○, 1	1, 2
6	1, 0	1, 0	1	2	○, 1	○	○, 1, ○	1, ○	1	○, 1, ○	1	2, 1
7	○, 1, ○	○	1, 0	2, 1	1, ○	○	○	○	1	○, 1	1, 2, 1	1, 2, 1
8	○	○	○	1, 0, 1	○, 1, ○	○, 1, ○	○, 1, ○	○	1	1, 2	1, 0	1
9	○, 1	○, 1, ○	○	1, 2, 1	○	○, 1, ○	○, 1, ○	○	1, ○	2	○, 1, ○	1
10	1, 0	○, 1	○	1, 0	○	○	○, 1	○, 1	○, 1, ○	2, 3, 2	○	1
11	○	1	○	○, 1, ○	○	○	1, 3	1, 2, 1	○	2, 1	○	1, 2
12	○, 1	1, 2, 1	○, 1	○	○	○	3, 2, 1	1	○	1	○, 1, ○	2, 3
13	1	1, 2	1	○	○	○, 1	1, 0, 1	1, 0	○	1	○	3, 2
14	1	2, 1	1	○	○	1, ○	1, ○	○	○	1	○	2, 3, 2
15	1, 2	1, 0	1	○	○	○	○	○	○, 1	1, 2	○, 1	2, 1
16	2, 1	○, 1	1, 0	○	○	○, 1, ○	○, 2, 1	○, 1, ○	1, 2	2	1, 2	1, 2, 1
17	1, 0	1	○, 1	○	○	○, 1, ○	1, ○	○	2	2	2, 1	1, 2, 1
18	○	1, 0	1, 0	○	○	○	○, 1	○	2, 1	2, 1	1, 0	1
19	○, 1	○, 1, ○	○, 1, ○	○	○, 1, ○	○	1, 2, 1	○, 1, ○	1	1	○	1, 0, 1
20	1	○, 1	○	○	○	○	1, ○	○	1	1, 0, 1	○, 1	1
21	1	1, 0	○	○	○	○	○	○	1, 2	1, 2	1	1, 0, 1
22	1, 0	○	○	○	○	○	○, 1	○	2, 1	2, 1	1	1, 0, 1
23	○, 1	○	○	○	○, 1, ○	○	1	○	1, 2, 1	1	1, 2, 1	1
24	1, 2, 1	○	○	○, 1, ○	○, 1, ○	○	1, 3	○	1	1	1, 0	1, 0
25	1, 3	○	○	○, 1, ○	○, 1, ○	○, 1, ○	3, 1	○	1	1	○	○
26	3, 1	○, 1	○, 1, ○	○	○, 1	○, 1, ○	1, ○	○	1, ○	1, 2	○, 1, ○	0
27	1, 2, 1	1	○	○	1	○, 1, ○	○, 3, 1	○	○	2	○, 1	0
28	1, 2	1, 2	○	○, 1, ○	1, ○	○	1, ○	○	○, 1, 2	2, 1, 2	1	0, 3, 2
29	2, 1		○, 1	○, 1, ○	○, 1, ○	○	○	○	2, 1	2, 1	1, 2, 1	2, 3
30	1, 3, 2		1, 0	○	○	○	○	○	1, ○	1, 0	1, 0, 1	3, 2, 1
31	2, 1, 0		○, 1	○	○	○	○	○	○, 1, ○	○, 1, ○	1, 3, 1	

SEISMIC RECORDS AT DE BILT.

i

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Jan. 1 (1)	eL MN F	0 28 0 30 0 33		20	4	
Jan. 5 (2)	e F	23 17 23 20				
Jan. 7 (3)	eL F	9 51 9 54				
Jan. 7 (4)	eL ME F	11 49 11 54 12 20		33	8	
Jan. 8 (5)	eL MN F	13 58 13 59 14 5		15	2	
Jan. 8 (6)	ee eH F	15 35 52 15 36 17 15 38				
Jan. 9 (7)	e F	7 40 7 58				
Jan. 9 (8)	e F	10 21 10 35				
Jan. 18 (9)	cz en F	16 58 17 1 17 15				
Jan. 18 (10)	e F	21 18 21 30				
Jan. 20 (11)	eLN LEZ	7 9 7 16		25 22	6 10	(11) F during measurement of constants.
Jan. 21 (12)	e F	13 0 13 15				
Jan. 23 (13)	eL F	8 12 8 25				
Jan. 23 (14)	eL F	22 23 22 50		20	7	

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Jan. 27 (15)	e(PP)	13 49 28				
	e(S)	13 57 0				
	i(SS)	14 5 18				
	eLH	14 19		60	50	
	MN	14 27		35	60	
	F	16 0				
Jan. 29 (16)	iz	9 43 11	+			
	(iz)	9 43 43				
	eL	10 5 20		30	10	
	eL	10 30				
	F	11 30				
Jan. 30 (17)	eL	12 53				
	MN	12 56				
	F	14 0				
Jan. 31 (18)	e	7 24				
	F	7 35				
Jan. 31 (19)	eL	18 8				
	MN	18 13				
	F	18 55				
Feb. 2 (20)	iP	17 10 29				
	eS	17 14 38				
	eL	17 17		17	10	
	iHZ	17 20 14				
	F	17 30				
Feb. 2 (21)	e	19 0				
	F	19 20				
Feb. 4 (22)	e	17 50				
	F	18 1				
Feb. 4 (23)	e	23 32				
	F	23 39				
Feb. 5 (24)	eP	1 20 38				
	eS	1 24 36				
	eL	1 29				
	F	1 45				
Feb. 7 (25)	e	10 40				
	F	10 47				
Feb. 8 (26)	eLH	21 9		25	5	
	eLZ	21 14		23	4	
	F	21 35				

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Feb. 13 (27)	iz	6 38 47	(—)			
	iz	6 39 6	(—)			
	eL	7 41				
	F	8 30				
Feb. 14 (28)	eN	11 10 30				
	eEZ	11 14 30				
	F	11 20				
Feb. 14 (29)	eLE	13 33 30		35	5	
	M	13 36		29	5	
	F	14 0				
Feb. 16 (30)	iP	18 27 16	—			
	ipP	18 27 29	—			
	iz	18 30 11				
	iz	18 30 40				
	eH	18 31 4				
	eL	19 3				
	F	19 50				
Feb. 17 (31)	eL	5 25				
	F	5 50				
Feb. 18 (32)	e	17 41				
	F	17 50				
Feb. 20 (33)	ez	1 11 52				
	eL	1 42				
	F	2 5				
Feb. 21 (34)	iP	7 20 4	+			
	ipp	7 23 16	+			
	iPPP	7 25 6				
	cS	7 30 16				
	eSS	7 36				
	eLH	7 45 30		30	5	
	eLz	7 50		42	14	
	ME	7 51 30				
	Mz	7 52 30		30	35	
	eL	9 23 20				
	F	9 50				
Feb. 21 (35)	eL	22 23				
	MN	22 25				
	F	22 37				
Feb. 22 (36)	e	10 45				
	F	11 25				

(34) $\Delta = 9100$ km, Japan.
 $h = 60$ km.

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Feb. 23 (37)	e F	3 30				
		3 50				
Feb. 23 (38)	eL F	12 30				
		12 42				
Feb. 25 (39)	e F	21 45				
		21 50				
Feb. 26 (40)	e F	8 2				
		8 10				
Feb. 28 (41)	eL F	5 20				
		5 25				
March 1 (42)	e MEZ F	10 30				
		10 38		20	9	
		11 0				
March 4 (43)	eH eH eL MH F	4 40				(43) Disturbed by microseisms.
		4 46				
		4 51				
		4 53				
		5 0				
March 5 (44)	iP iS iH F	19 59 45	(-)			(44) $\Delta = 8200$ km, deeper than normal.
		20 9 8				
		20 9 42				
		21 15				
March 6 (45)	eL F	21 13				
		21 42				
March 8 (46)	eH eH	4 52 50				(46) F lost in the next earthquake.
		4 55 20				
March 8 (47)	eP e(PcP) iS eSS eSSS eL F	4 56 50				(47) $\Delta = 6700$ km.
		4 57 50				
		5 5 6				
		5 9 0				
		5 11 30				
		5 14				
		6 5				
March 8 (48)	eL F	11 50				
		12 1				
March 9 (49)	e F	10 53				
		11 0				

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
March 11 (50)	e F	11 30				
		11 43				
March 11 (51)	cLH MH Mz F	22 44				
		22 45 30		18	5	
		22 46 30				
		22 53				
March 12 (52)	eH eLZ MEZ F	14 16				
		14 25		17	3	
		14 30				
		14 38				
March 19 (53)	e F	10 26				
		10 36				
March 19 (54)	iH iH eL MH F	12 20 5				
		12 24 33		23	14	
		12 32				
		12 37				
		13 35				
March 20 (55)	iP iS eSS eLE eLNZ Mz c(M') F	1 24 47	+			(55) $\Delta = 8400$ km. Epicenter off the Aleutian islands, according to Zürich.
		1 34 29				
		1 39 20				
		1 54				
		1 57				
		2 3		19	8	
		3 16				
		3 30				
March 20 (56)	e F	5 49				
		5 55				
March 20 (57)	e F	13 15				
		13 36				
March 21 (58)	iP i(pP) iPP iPPP iPPPP iS iPS eSS eSSS eLH MN F	23 33 27	+			(58) $\Delta = 9700$ km, Japan. $h = 100$ km?
		23 33 45	-			
		23 36 52	+			
		23 39 0	(+)			
		23 40 17				
		23 43 51				
		23 44 52	(-)			
		23 48 27				
		23 53 40				
March 22				35	34	

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
March 22 (59)	iP	2 16 54	+			(59) $\Delta = 5200$ km, h = 200 km. Focal region Hindu Kush. (Lahore, according to the newspapers).
	iz	2 17 14	-			
	ipP	2 17 39	-			
	i(PcP)	2 18 0	+			
	iPP	2 18 49	+			
	iPPP	2 19 47	-			
	iEZ	2 20 10				
	iS	2 23 42				
	isS	2 24 38				
	eSS	2 27 30				
	F	3 10				
March 25 (60)	eLH	8 20				
	F	8 40				
March 27 (61)	e	18 59				
	F	19 5				
March 29 (62)	ee	1 57				
	ME	2 0				
	F	2 15				
March 30 (63)	iH	9 21 5				
	eL	9 23				
	F	10 0				
April 8 (64)	iP	15 53 48	+			(64) $\Delta = 10400$ km, Philippine Islands. Felt in the Batan-peninsula, according to newspapers.
	iz	15 54 6	+			
	iPP	15 57 51				
	iS	16 4 57				
	eSS	16 11 30				
	en	16 17				
	eL	16 23				
	eL	16 27				
	MN	16 30				
	ME	16 30				
	F	20 0				
April 8 (65)	eL	20 18				
	MH	20 22				
	F	21 20				
April 9 (66)	eLH	0 46				
	F	1 10				
April 9 (67)	eLH	5 31				
	MH	5 34				
	eLz	5 40				
	F	6 5				

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
April 11 (68)	ee	1 47 30				
	eL	2 4				
	F	2 25				
April 11 (69)	eL	17 5				
	F	17 30				
April 13 (70)	iP	7 56 3	+			(70) $\Delta = 6500$ km, from SW-direction. According to Zürich epicenter in the Atlantic, St. Paul's Rock.
	ePPP	7 59 36	+			
	iS	8 3 56				
	eSSS	8 10 30				
	eL	8 15				
	F	9 5				
April 13 (71)	ee	11 30				
	F	12 0				
April 13 (72)	ee	14 49				
	eL	14 55				
	F	15 10				
April 19 (73)	ee	2 19				
	eL	2 26				
	F	2 52				
April 20 (74)	iP	1 40 12				(74) $\Delta = 2000$ km.
	cS	1 43 45				
	eL	1 46				
	F	1 55				
April 20 (75)	iP	8 53 46	-			(75) $\Delta = 7000$ km, deeper than normal. Epicenter in Yunnan according to Collmberg and Zürich.
	iS	9 2 17				
	ee	9 4 45				
	eE	9 8 5				
	F	9 55				
April 21 (76)	e	4 8				
	F	4 15				
April 23 (77)	eLE	0 1				
	ME	0 6				
	Mz	0 6				
	F	0 30				
April 27 (78)	iP	9 22 5				(78) $\Delta = 2700$ km.
	iS	9 26 25				
	eL	9 28				
	F	9 55				

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
April 27 (79)	eL	14 28				
	Mz	14 32		20	5	
	F	14 45				
April 30 (80)	e	3 5				
	F	3 25				
May 3 (81)	ez	10 20 30				
	F	10 24				
May 5 (82)	eLN	4 3				
	MN	4 4		19	3	
	eLz	4 8				
	Mz	4 9		15	1	
	F	4 20				
May 6 (83)	eLE	23 23				
	MEZ	23 25		24	6	
	F	23 31				
May 8 (84)	iz	8 32 13	+			
	iz	8 32 23	+			
	F	8 34				
May 10 (85)	eL	12 58				
	ME	13 0		25	1	
	F	13 5				
May 11 (86)	e	18 56				
	F	19 20				
May 12 (87)	eLE	0 10				
	ME	0 15		27	2	
	eLz	0 19				
	Mz	0 21		23	2	
	F	0 30				
May 13 (88)	ez	8 54 9				
	eL	9 0				
	ME	9 1 30		18	2	
	F	9 7				
May 13 (89)	eL	10 54				
	F	11 0				
May 13 (90)	eh	21 29				
	Lz	21 39		20	1	
	F	22 0				

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
May 14 (91)	iP	2 26 10	+			(91) $\Delta = 9800$ km, Ecuador. Destructions in Guayaquil.
	iP	2 26 13	+			
	izH	2 29 40				
	iS	2 36 53				
	eL	2 49				
	ME	2 57		31	410	
	F	7 30				
May 14 (92)	iP	8 51 41				(92) After-shock of (91)?
	iS	9 2 10				
	eLE	9 22				
	F	9 50				
May 15 (93)	eP	2 56 33				(93) $\Delta = 2450$ km.
	eS	3 0 25				
	eLE	3 2				
	eLN	3 3		17	5	
	F	3 40				
May 15 (94)	iP	11 3 27				(94) $\Delta = 9800$ km. After-shock of (91).
	eS	11 14 5				
	ePS	11 15 3		25	1	
	cL	11 35				
	F	12 0				
May 15 (95)	eP	12 4 9	+			(95) $\Delta = 9800$ km. After-shock of (91).
	iS	12 14 48				
	iPS	12 15 46				
	eLE	12 36		24	4	
	F	14 30				
May 15 (96)	LN	14 47		25	2	
	Lz	14 53				
	F	14 55				
May 17 (97)	e	13 6				
	F	13 12				
May 17 (98)	iP	15 27 7				(98) $\Delta = 9800$ km.
	iS	15 37 45				
	F	17 0				
May 18 (99)	e	0 42 20				
	eHZ	0 44				
	F	0 47				
May 18 (100)	eLH	18 50				
	F	19 0				

Date 1942	Phase	Time h m s	Direction	Period s	Amplitude μ	Remarks
May 20 (101)	e F	18 34 19 10				
May 21 (102)	iP iz iz eS eL F	3 46 50 3 47 10 3 47 30 (-) 3 50 24 3 53 4 15				(102) $\Delta = 2050$ km, epicenter between Kreta and Greece.
May 22 (103)	e LE ME F	11 6 11 12 11 14 12 30		22	2	
May 22 (104)	en F	20 12 21 36				
May 23 (105)	eLH Mn Lz F	2 45 2 47 2 51 2 57		17	2	
May 23 (106)	czH eh eL Mn F	13 19 45 13 27 0 13 55 14 1 15 5		20	4	
May 23 (107)	cz eh F	20 23 0 20 30 20 50				
May 24 (108)	iP eS cLH eLZ Mh F	3 39 15 3 49 40 4 10 4 22 4 25 5 0		35	5	(108) $\Delta = 9200$ km.
May 24 (109)	eL Mh F	22 4 22 8 30 22 35		18	7	
May 27 (110)	ehz F	4 10 50 4 13		20	10	

Date 1942	Phase	Time h m s	Direction	Period s	Amplitude μ	Remarks
May 27 (111)	eh eh eL MN Mz F	7 16 30 7 22 30 7 56 8 4 8 5 9 15		21	16	(111) Beginning during change of papers.
May 28 (112)	iP iP' iPP iPPP iE i(PS) eSS eSSS eSSSS eL MN F	1 16 1 19 23 (-) 1 20 32 1 23 30 1 27 20 1 29 58 1 35 30 1 39 30 1 44 1 55 1 59 4 0		24	40	(112) $\Delta = 13300$ km.
May 28 (113)	e F	1 5 47 1 5 56				
May 29 (114)	iP iz iS eL F	5 37 3 5 37 15 5 41 11 5 43 6 35				(114) $\Delta = 2700$ km.
May 30 (115)	e F	8 4 8 20				
May 31 (116)	eh F	2 53 20 3 30				
May 31 (117)	eL	5 58				(117) F during change of papers.
May 31 (118)	(iz) eh eL F	13 6 45 13 23 30 13 49 15 0				
May 31 (119)	e F	21 57 22 7				
June 1 (120)	eP eS eL	9 5 26 9 8 55 9 10 50				(120) $\Delta = 2100$ km. Focus in Greece according to Zürich. F lost in the next shock.

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
June 1 (121)	iP	9 21 48	+			(121) $\Delta = 2000$ km, Greece.
	eS	9 25 8				The same focus as (120).
	eLH	9 27				
	eLz	9 29 30				
	F	10 7				
June 1 (122)	e	11 29				
	F	11 35				
June 1 (123)	iP	12 18 8	-			(123) $\Delta = 2150$ km.
	eS	12 21 44				After-shock of (121).
	eL	12 23				
	Mn	12 25		23	2	
	F	12 35				
June 1 (124)	iP	22 14 25	+			(124) $\Delta = 2100$ km.
	eS	22 17 58				After-shock of (121).
	L	22 20 30				
	F	22 30				
June 2 (125)	ez	0 49 20				
	iz	0 51 14				
	eH	0 57 10				
	eh	1 4 35				
	eLE	1 15				
	ME	1 22		25	10	
	F	3 15				
June 3 (126)	eH	5 9				
	eL	5 30				
	F	6 0				
June 3 (127)	ez	16 53 3				
	LH	17 39				
	F	18 5				
June 4 (128)	e	15 32 30				
	F	15 40				
June 6 (129)	ez	11 44 40				
	ez	11 53 40				
	eL	12 19				
	ME	12 24		24	2	
	F	12 50				
June 6 (130)	ez	15 13 55				
	eh	15 30 30				
	eL	15 53				
	ME	15 55		28	5	
	F	16 20				

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
June 7 (131)	eL	11 12				
	MN	11 14		26	2	
	F	11 25				
June 9 (132)	e	11 44				
	F	11 55				
June 10 (133)	iP	1 19 21				(133) $\Delta = 8000$ km.
	eS	1 28 40				
	eL	1 42				
	F	2 25				
June 10 (134)	iPP	10 39 40	+			(134) Δ about 12000 km
	ePPP	10 42 20				
	eLH	11 10				
	MH	11 18		21	30	
	eLz	11 20				
	Mz	11 26		18	20	
	F	13 0				
June 10 (135)	e	15 8				
	F	16 0				
June 11 (136)	e	18 15				
	F	18 30				
June 12 (137)	eH	10 45 10				
	eLH	11 0				
	eLz	11 5		22	10	
	ME	11 7				
	F	12 0				
June 13 (138)	iz	19 34 27	-			
	eL	20 40		18	2	
	ME	20 45				
	F	21 25				
June 14 (139)	ePP	3 28 25				(139) $\Delta = 12000$ km.
	eS'	3 34 41				
	iPS	3 37 38	-			
	eSS	3 43 35				
	eLH	4 0				
	ME	4 3		30	8	
	eLz	4 9				
	Mz	4 14		22	9	
	F	5 40				

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
June 14 (140)	e(P)	14 43 15				(140) $\Delta = 11000$ km?
	e(PP)	14 47 14				
	e(S')	14 54 0				
	cLH	15 20				
	cLz	15 25				
	MH	15 25		20	4	
	Mz	15 34		18	4	
	F	16 10				
June 15 (141)	e	6 7				
	cL	6 10				
	F	6 50				
June 15 (142)	iP _{1'}	14 6 13	—			(142) $\Delta = 17800$ km.
	iP _{2'}	14 6 53	+			
	iPP	14 10 35	—			
	eS'	14 13 5				
	F	14 30				
June 15 (143)	eLN	17 20				
	Lz	17 30				
	F	17 45				
June 16 (144)	iP	4 52 46				
	iS	4 56 57				(144) $\Delta = 2600$ km, Anatolia.
	cL	4 59				
	F	5 45				
June 16 (145)	iP	5 46 57	—			
	iz	5 47 43 (—)				
	iz	5 48 26 (+)				(145) $\Delta = 2100$ km, Balkan-quake.
	eS	5 50 30				
	cL	5 52				
June 16 (146)	iP	7 55 43				
	eS	8 6 25				
	cL	8 25				(146) $\Delta = 9800$ km.
	F	8 50				
June 16 (147)	eH	9 22 25				
	cL	9 25 30				
	F	9 35				
June 16 (148)	iP	21 18 3	—			
	i(pP)	21 18 19	—			(148) $\Delta = 10000$ km.
	e(S')	21 28 32				
	ePS	21 30 13				
	cL	21 47				
	MEZ	21 53				
	F	23 30		21	3	

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
June 17 (149)	ez	16 4 30				
	F	16 7				
June 18 (150)	e	7 52				
	F	7 57				
June 18 (151)	eP	9 45 20				(151) $\Delta = 12500$ km.
	epP	9 45 30				
	iPP	9 49 52	—			
	ipPP	9 50 0	—			
	eS'	9 56 7				
	iPS	9 59 14				
	i(pPS)	9 59 30				
	eSS	10 5 0				
	eSSS	10 9 20				
	eH	10 15				
	cLH	10 22				
	MH	10 26		28	30	
	MN	10 30		18	48	
	F	13 25				
June 19 (152)	eP	19 49 13				(152) $\Delta = 8700$ km.
	eS	19 59 12				
	cL	20 14				
	ME	20 19		32	6	
	Lz	20 25				
	Mz	20 28		23	6	
	F	20 55				
June 20 (153)	e	4 15				
	F	4 20				
June 20 (154)	iP	10 14 39	+			(154) $\Delta = 9100$ km.
	iz	10 14 59	(+)			
	iS	10 24 58				
	iH	10 25 12				
	eSS	10 30 57				
	eSSS	10 35				
	eL	10 43				
	MEZ	10 48		28	5	
	F	11 25				
June 21 (155)	iP	4 43 32	+			
	iS	4 47 31				
	izH	4 48 12				
	F	5 25				
June 21 (156)	cL	21 43				
	F	21 55				

(155) $\Delta = 2500$ km.
 Focus according to Zürich 39°N 28°E, in
 Anatolia.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
June 22 (157)	eL F	20 40 21 0				
June 23 (158)	eL F	3 48 3 58				
June 23 (159)	e F	16 50 16 55				
June 24 (160)	eLH eLz F	9 44 9 46 10 10				
June 24 (161)	iz ezH ezH eh eh eh eh eLH eLz F	11 36 33 11 41 40 11 46 20 11 48 5 11 52 0 11 54 0 11 58 20 12 36 12 42 15 0				
June 27 (162)	iE er F	3 6 6 3 12 10 3 50				
June 28 (163)	eL F	0 57 0 59				
June 28 (164)	eL ME F	16 25 16 26 16 30	22	2		
June 29 (165)	iz iE eL F	6 45 15 7 0 15 7 25 8 30	—			(165) Change of papers 6 ^h 48 ^m —6 ^h 56 ^m .
June 30 (166)	e F	7 13 7 19				
June 30 (167)	eLH MH Lz Mz F	8 13 8 18 8 22 8 27 8 50	25	2		

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
July 1 (168)	e F	23 46 23 49				
July 3 (169)	e eL F	2 2 2 6 15 2 9				
July 3 (170)	iP iS eL MN F	2 59 37 3 7 5 3 19 3 24 4 50	—	20	40	(170) $\Delta = 5900$ km.
July 4 (171)	iP eS eL Me F	2 5 57 2 16 20 2 35 2 40 3 20	20	3		(171) $\Delta = 9200$ km.
July 4 (172)	iz F	6 21 35 7 35				(172) Change of papers 6 ^h 45 ^m —6 ^h 55 ^m .
July 4 (173)	en en eL F	19 17 0 19 21 30 19 37 20 5				
July 5 (174)	e(P) e(S) F	10 42 40 10 53 20 11 30				(174) $\Delta = 10000$ km?
July 5 (175)	eL F	23 50 24 0				
July 7 (176)	iP' ipP' i(PP) eSS esSS F	3 12 48 3 14 40 3 16 27 3 35 0 3 38 0 5 10	—			(176) $\Delta = 17000$ km, h = 450 km.
July 7 (177)	e F	6 5 6 18				
July 7 (178)	iP eS eL F	12 50 32 13 1 0 13 24 14 0				(178) $\Delta = 1000$ km.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
July 8 (179)	eP	7 9 28	+			(179) $\Delta = 10000$ km?
	iz	7 12 50	-			
	iPP	7 13 32	-			
	ePPP	7 16 0				
	e(S')	7 20 8				
	i(PS)	7 22 30				
	eL	7 39				
	ME	7 48		30	65	
	F	10 15				
July 8 (180)	e	20 15				
	F	20 35				
July 8 (181)	eL	21 58				(181) F lost in the next earthquake.
	MN	22 4		15	18	
July 8 (182)	eP	22 43 40				(182) $\Delta = 9500$ km.
	eS	22 54 15				
	eL	23 13				
	ME	23 18		20	4	
	F	24 45				
July 10 (183)	eLN	3 55				
	F	4 12				
July 10 (184)	ez	5 2 45				
	F	5 30				
July 12 (185)	iP	5 18 7	+			(185) $\Delta = 9000$ km.
	ePP	5 21 10				According to Zürich epicenter off the coast
	eS	5 28 15				of Central America.
	iz	5 28 49				
	e(SS)	5 32 40				
	eL	5 47				
	ME	5 49		30	24	
	ME	5 56		19	20	
	Mz	5 56		19	15	
	F	8 5				
July 12 (186)	e	19 50				
	F	19 52				
July 13 (187)	eL	0 59				
	F	1 35				
July 17 (188)	eLz	13 59				
	Mz	14 2				
	F	14 12				

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
July 18 (189)	e	7 11				
	F	7 14				
July 18 (190)	e	17 9 30				
	F	17 15				
July 20 (191)	e	9 53				
	F	9 57				
July 20 (192)	eLE	14 32				
	Lz	14 38				
	F	14 50				
July 20 (193)	e	17 12				
	F	17 25				
July 21 (194)	eLH	9 25				
	ME	9 33		27	2	
	Mz	9 35				
	F	9 50				
July 24 (195)	eN	5 23 20				(195) E-registration is missing.
	eN	5 36				
	LN	5 45				
	F	6 20				
July 25 (196)	iP	6 36 10				(196) $\Delta = 11000$ km.
	iz	6 36 40				Change of papers 6 ^h 47 ^m -7 ^h 01 ^m .
	iPP	6 40 8				
	iz	6 40 40				
	iS'	6 46 36				
	iE	6 47 12				
	eL	7 10				
	F	8 0				
July 26 (197)	e	7 45				
	F	7 52				
July 29 (198)	e	20 14				
	F	20 16				
July 29 (199)	eH	20 40 18				
	eL	20 48				
	F	21 15				
July 29 (200)	iP	23 3 52				(200) $\Delta = 13100$ km.
	iPP	23 8 34				
	iPS	23 18 14				
	eL	23 45				
	F	2 0				

Date 1942	Phase	Time h m s	Direction	Period s	Amplitude μ	Remarks	Date 1942	Phase	Time h m s	Direction	Period s	Amplitude μ	Remarks
Aug. 1 (201)	iz eL	5 7 12 6 12		—	—	(201) F during change of papers.	Aug. 8 (210)	iz eLH Lz F	7 31 55 7 58 8 4 8 50		—	—	
Aug. 1 (202)	iP _{1'} iP _{2'} iPP eS' iPSKS eL	12 54 5 12 55 10 12 59 2 13 1 0 13 9 55	— +	—	—	(202) Δ = 18600 km. Heavy earthquake in South New Zealand. Damages at Wellington. F lost in the next shock.	Aug. 8 (211)	eLH eLz F	14 14 14 16 30 14 30		—	—	
Aug. 1 (203)	ez eL F	14 51 15 40 17 0		—	—	(203) After-shock of (202)?	Aug. 8 (212)	iP eS eSS eLE ME	22 49 1 22 59 0 23 5 23 16 23 18	30	10	(212) Δ = 9000 km.	
Aug. 3 (204)	iz iz iz iz ez F	20 28 37 20 28 45 20 28 57 20 32 29 20 42 10 21 0	— +	—	—		Aug. 9 (213)	e F	5 25 5 37				
Aug. 4 (205)	e F	20 30 20 35		—	—		Aug. 9 (214)	e F	18 44 18 48				
Aug. 6 (206)	iP iPP eE iS	23 49 22 23 52 29 23 58 30 23 59 50	+	—	—	(206) Δ = 9200 km, Central America. Strongly felt in Guatemala.	Aug. 11 (215)	e L F	5 33 30 5 38 30 5 50				
Aug. 7	eSS eL ME Mz ME Mz F	o 5 o 15 o 19 o 19 o 25 o 25 5 0	—	15	650		Aug. 12 (216)	iP eS eL MN Mz F	20 43 19 20 47 14 20 49 20 50 30 20 52 20 21 15	15	6	(216) Δ = 2300 km. Bucarest reports: 38°N 26°, 5E, off the coast of Asia Minor.	
Aug. 7 (207)	e F	6 45 7 10		—	—		Aug. 12 (217)	eLH eLz F	22 4 22 6 22 15				
Aug. 7 (208)	e F	9 53 9 57		—	—		Aug. 13 (218)	iP iz iZH eS' eLH eLz MN Mhz F	17 6 21 17 6 33 17 7 27 17 7 40 17 16 20 17 48 17 53 17 55 18 3 30 19 10	27	2	(218) Δ = 14500 km.	
Aug. 8 (209)	iH eLE ME F	o 42 11 o 57 30 1 1 1 30		33	3								

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks	Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ				h m s		s	μ	
Aug. 13 (219)	e F	21 16 25					Aug. 20 (232)	e F	23 18 35				
Aug. 14 (220)	(iz) eLH F	8 33 3 9 15 35					Aug. 22 (233)	eL MH F	9 42 46 20		28	23	
Aug. 14 (221)	eh eH (eL) MH F	21 14 25 20 30 21 35 5		25	3		Aug. 23 (234)	eL Mz F	5 12 14 22		14	2	
Aug. 15 (222)	e F	7 21 35					Aug. 23 (235)	iP iP iPP iS iS cSS eL ME F	6 46 52 47 16 49 36 56 21 56 43 7 1 0 7 12 18 9 40				(235) $\Delta = 8000$ km, epicenter off the border of East Asia. Zürich reports: Sea of Okhotsk.
Aug. 15 (223)	eL MH F	8 24 26 45		20	2		Aug. 23 (236)	e F	15 51 55				
Aug. 15 (224)	(ePP) eSS eLH eLZ F	15 23 0 39 30 16 0 16 4 17 30				(224) $\Delta = 14000$ km?	Aug. 24 (237)	eLN eLZE F	12 28 33 40				
Aug. 16 (225)	ez ez eZH F	11 40 18 48 55 50 0 12 40					Aug. 24 (238)	eL MH F	18 10 13 40		31	3	
Aug. 16 (226)	eLE ME F	20 47 50 15		27	2		Aug. 24 (239)	iP ePP iS eLH ME F	23 3 54 8 0 15 10 38 46 5 0				(239) Very strong earthquake from Peru, $\Delta = 10600$ km. The towns of Nazca und Puerto Lomas were devastated. M according to the Wiechert seismograph.
Aug. 18 (227)	e F	19 30 35					Aug. 25	F	18 1000				
Aug. 19 (228)	e F	8 49 15					Aug. 25 (240)	eLH MH F	15 37 40 10		28	4	
Aug. 19 (229)	e F	16 24 33					Aug. 25 (241)	eP ee eN eL F	20 29 19 40 10 40 45 21 3 23 20				(241) Δ about 10000 km.
Aug. 19 (230)	e F	17 12 19											
Aug. 19 (231)	e F	19 8 27											

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Aug. 26 (242)	ez	12 22 0				
	ez	12 25 45				
	eL	12 55				
	MN	13 0		25	3	
	F	13 40				
Aug. 26 (243)	e	15 0				
	F	15 30				
Aug. 27 (244)	iP	6 17 44	—			(244) Epicenter in Albania. Destructions in Peskopia.
	eL	6 21 30				
	F	7 45				
Aug. 29 (245)	iz	1 8 58	—			
	F	1 20				
Aug. 29 (246)	ez	1 58				
	F	2 5				
Aug. 29 (247)	eLE	13 3				
	ME	13 5		30	3	
	F	13 30				
Aug. 29 (248)	eLE	22 19				
	ME	22 22		30	3	
	F	22 50				
Aug. 31 (249)	eLH	7 24				
	eLZ	7 27				
	ME	7 28		25	1	
	F	7 40				
Sept. 1 (250)	eP	9 47 15				(250) $\Delta = 2550$ km, Asia Minor?
	iS	9 51 24				
	eL	9 54				
	F	11 0				
Sept. 1 (251)	e	16 44				
	F	16 53				
Sept. 1 (252)	iz	19 10 47				
	eL	19 36				
	F	20 5				
Sept. 1 (253)	e	21 10				
	F	21 30				

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Sept. 2 (254)	ez	3 29 0				
	(eL)	3 50				
	F	4 35				
Sept. 2 (255)	e	7 55				
	F	8 10				
Sept. 3 (256)	iz	8 4 26				
	e	8 20				
	F	8 50				
Sept. 4 (257)	e	3 35				
	F	4 0				
Sept. 4 (258)	e	17 54				
	F	19 0				
Sept. 6 (259)	e	16 45				
	F	17 8				
Sept. 8 (260)	iP	16 20 15				(260) $\Delta = 8900$ km.
	iS	16 30 12				
	eLH	16 50				
	eLz	16 55				
	F	17 20				
Sept. 9 (261)	iP	1 37 5				(261) $\Delta = 8200$ km.
	iS	1 46 34				
	eL	2 0				
	F	3 30				
Sept. 9 (262)	eL	3 54				
	F	4 10				
Sept. 10 (263)	eL	5 39				
	F	6 5				
Sept. 12 (264)	e	6 24				(264) Change of papers 6 ^h 51 ^m till 6 ^h 59 ^m .
	F	7 0				
Sept. 14 (265)	iP'	11 50 37	+			(265) $\Delta = 16500$ km.
	iPP	11 54 13	—			
	ePPP	11 57 20				
	eSS	12 13 10				
	eL	12 40				
	F	13 35				
Sept. 16 (266)	eh	0 28 30				
	F	1 10				

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks	Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
Sept. 17 (267)	e F	21 13 21 22					Sept. 30 (280)	eL F	16 55 17 12				
Sept. 18 (268)	eN F	11 44 20 11 50					Sept. 30 (281)	iH eL F	22 40 4 22 42 30 22 52				
Sept. 19 (269)	e F	7 45 7 55					Oct. 5 (282)	eL MN F	1 57 2 2 2 40	20	3		
Sept. 20 (270)	eL F	18 55 19 10					Oct. 5 (283)	eL F	7 40 7 48				
Sept. 21 (271)	F	7 10				(291) Beginning during change of papers 6h38m till 6h47m.	Oct. 6 (284)	eL F	12 49 14 0				
Sept. 22 (272)	ee er eLE eLz Mz F	1 24 0 1 29 0 1 46 1 50 1 52 3 0	30	5			Oct. 8 (285)	eL F	3 42 4 0				
Sept. 24 (273)	iP eS eH eL F	3 51 45 4 2 23 4 8 4 20 5 20	(—)			(273) $\Delta = 9500$ km.	Oct. 9 (286)	iP iS eLH eLE F	15 57 12 16 6 20 16 19 16 25 17 0				(286) $\Delta = 7500$ km.
Sept. 25 (274)	e F	8 55 9 45					Oct. 12 (287)	eL F	2 5 2 20				
Sept. 26 (275)	eP iS eL Me F	4 12 35 4 22 44 4 38 4 40 6 45	35	20		(275) $\Delta = 9000$ km.	Oct. 14 (288)	eL F	5 5 30 5 15				
Sept. 27 (276)	e F	8 46 9 0					Oct. 14 (289)	e F	19 19 19 25				
Sept. 27 (277)	e F	12 24 12 30					Oct. 18 (290)	e F	6 7 6 35				
Sept. 27 (278)	eL F	14 15 15 40					Oct. 20 (291)	iP ePP iS' iS eSS	23 35 37 23 39 20 23 46 15 23 47 15 23 54				(291) $\Delta = 11000$ km. After newspapers epicenter in California, Long Beach.
Sept. 29 (279)	e F	13 25 13 35					Oct. 21	eL F	0 10 3 0				

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Oct. 21 (292)	iH	16 44 55				
	cL	16 56				
	F	18 0				
Oct. 22 (293)	e	1 57				
	F	2 5				
Oct. 22 (294)	e	2 30				
	M	2 40				
	F	3 0				
Oct. 25 (295)	eL	9 23				
	F	10 5				
Oct. 26 (296)	iP	21 21 8	+			(296) $\Delta = 8800$ km.
	iz	21 21 50	+			
	iz	21 27 10	+			
	iS	21 30 58				
	eSS	21 36 30				
	cLE	21 45		40	35	
	MH	21 53		25	55	
	F	23 0				
Oct. 27 (297)	e	22 57				
	MN	23 0		18	5	
	F	23 10				
Oct. 28 (298)	eL	0 42				
	MN	0 43 30		15	10	
	F	0 55				
Oct. 28 (299)	iP	2 27 30				(299) $\Delta = 2300$ km, Asia Minor?
	eS	2 31 16				
	eL	2 33				
	F	3 5				
Oct. 28 (300)	iP	10 57 16				(300) $\Delta = 9500$ km.
	iS	11 7 50				
	cL	11 24				
	ME	11 30		24	8	
	F	12 0				
Oct. 29 (301)	e	22 24				
	F	22 45				
Oct. 30 (302)	e	23 27				
	F	23 32				

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Oct. 31 (303)	eL	3 13				
	F	3 25				
Nov. 3 (304)	cP	0 19 10				(304) $\Delta = 14500$ km.
	eSS	0 41 35				
	eL	1 7				
	MN	1 8		35	15	
	F	2 30				
Nov. 3 (305)	eL	14 2				
	F	14 30				
Nov. 4 (306)	e	11 13				
	F	11 38				
Nov. 5 (307)	e	3 10				
	F	3 55				
Nov. 5 (308)	iz	11 46 22	+			
	cLH	12 42				
	MN	12 46		25	2	
	F	13 0				
Nov. 5 (309)	e	16 1				
	F	16 7				
Nov. 7 (310)	e	8 30				
	F	8 50				
Nov. 7 (311)	eL	12 41				
	F	13 5				
Nov. 10 (312)	iP	11 55 32	+			
	iPP	11 59 50				
	iS	12 7 12				
	eSS	12 14 30				
	eL	12 31				
	MN	12 42		21	1500	
	F	13 0				
Nov. 11 (313)	e	2 48				
	F	2 57				
Nov. 12 (314)	iP	5 7 51	+			(314) $\Delta = 9000$ km.
	iS	5 18 7				
	eSS	5 23				
	eLN	5 30				
	eLEZ	5 35				
	ME	5 36		35	25	
	F	6 5				

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Nov. 12 (315)	eH	15 50 0				
	eL	16 5				
	F	16 50				
Nov. 14 (316)	eL	6 20				(316) F during change of papers.
	ME	6 26		35	15	
Nov. 14 (317)	e	18 41				
	F	19 5				
Nov. 15 (318)	iP	17 6 2				(318) $\Delta = 2200$ km.
	iS	17 9 50				
	eL	17 11				
Nov. 15 (319)	eL	17 50				
	MN	17 57		27	65	
	F	19 10				
Nov. 16 (320)	e	21 45				
	F	22 0				
Nov. 17 (321)	e	11 30				
	F	12 0				
Nov. 17	eE	23 45 50				
Nov. 18 (322)	eLE	0 7				
	eLz	0 11				
	ME	0 12		20	5	
	Mz	0 14		18	5	
	F	0 45				
Nov. 18 (323)	e	6 53				
	F	6 58				
Nov. 18 (324)	cLH	7 20		20	3	
	cLz	7 20		20	4	
	F	7 30				
Nov. 18 (325)	iE	12 21 11				
	F	13 10				
Nov. 19 (326)	iP	9 4 52	—			(326) $\Delta = 9500$ km.
	eS	9 15 35				
	eLN	9 31				
	eLz	9 34				
	F	11 50				
Nov. 19 (327)	e	18 6				
	F	18 11				

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Nov. 20 (328)	e	4 44				
	F	4 52				
Nov. 21 (329)	eS	14 11 10				(329) Δ about 2500 km. Damages at Balikesri (Turkey), according to newspapers.
	eL	14 12 30				
	MN	14 14		32	15	
	F	14 40				
Nov. 22 (330)	eL	17 21				
	MH	17 38		23	8	
	Mz	17 38		23	10	
	F	18 15				
Nov. 23 (331)	e	15 10				
	F	15 14				
Nov. 24 (332)	e	1 1				
	F	1 12				
Nov. 25 (333)	iP	1 30 37	+			(333) $\Delta = 9500$ km.
	cPP	1 33 55				
	iS	1 41 10				
	eSS	1 46 40				
	eL	1 59				
	ME	2 9		19	5	
	Mz	2 9		19	3	
	F	2 35				
Nov. 26 (334)	iP	14 39 20	(+)			(334) $\Delta = 8500$ km.
	iS	14 49 5				
	eL	15 3				
	ME	15 5		45	85	
	F	16 0				
Nov. 27 (335)	eL	18 47				
	F	18 55				
Nov. 28 (336)	iP	10 48 23	+			(336) $\Delta = 6200$ km, shock from SW-direction, South Atlantic.
	iPP	10 50 38				
	iS	10 56 13				
	eSS	11 0				
	eL	11 2 30				
	F	14 30				
Nov. 30 (337)	iP	1 4 54	(—)	*		(337) $\Delta = 8000$ km.
	ePP	1 7 40				
	eS	1 14 20				
	F	1 55				

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Dec. 2 (338)	eLE	1 42		25	4	
	M	1 47		23	5	
	F	2 20				
Dec. 2 (339)	iP	19 9 29				(339) $\Delta = 2650$ km.
	iS	19 13 45				
	eL	19 15 30				
	MN	19 18		25	15	
	F	19 45				
Dec. 3 (340)	e	2 2 0				
	Lz	2 12				
	F	2 40				
Dec. 4 (341)	eL	16 25				
	F	17 40				
Dec. 5 (342)	iP	14 39 24				(342) $\Delta = 7500$ km.
	iS	14 48 19				
	eL	15 1				
	ME	15 2		35	17	
	F	15 35				
Dec. 9 (343)	eLH	3 19				
	F	3 35				
Dec. 9 (344)	eLH	6 57				
	MH	6 59		19	3	
	F	7 20				
Dec. 9 (345)	eL	22 52				
	F	23 45				
Dec. 11 (346)	iP	2 44 22	—			(346) $\Delta = 2650$ km.
	iS	2 48 37				
	eL	2 50 30				
	F	3 30				
Dec. 13 (347)	eL	20 15				(347) Strong microseisms.
	F	20 30				
Dec. 15 (348)	eL	8 30				(348) Strong microseisms.
	F	8 50				
Dec. 15 (349)	eL	9 50				(349) Strong microseisms.
	F	10 20				
Dec. 15 (350)	e	23 31				
	F	23 38				

SEISMIC RECORDS AT DE BILT.

Date 1942	Phase	Time	Direction	Period	Amplitude	Remarks
		h m s		s	μ	
Dec. 19 (351)	eH	23 34 10				
	eH	23 44 30				
	eL	23 52				
	MH	23 58		27	28	
	F	2 0				
Dec. 20 (352)	iP	14 8 24	(—)			
	iS	14 12 45				
	eL	14 14 30				
	F	18 0				
Dec. 22 (353)	e	5 32 0				
	LH	5 35 0				
	ME	5 36		22	8	
	F	6 15				
Dec. 23 (354)	ee	1 55				
	F	2 3				
Dec. 23 (355)	eL	14 59				
	Lz	15 10				
	F	15 30				
Dec. 26 (356)	(eP)	12 43 44				
	iP	12 43 55	+			
	iS	12 53 30				
	eN	13 4 30				
	eL	13 8 30				
	ME	13 11		25	10	
	F	13 45				
Dec. 27 (357)	eLH	17 23				
	ME	17 28		20	7	
	F	18 10				
Dec. 29 (358)	e	3 48 30				
	F	4 20				
Dec. 31 (359)	iP	12 13 3	(—)			
	ePP	12 15 8				
	iS	12 20 35				
	eSS	12 24 10				
	eH	12 25 30				
	Lz	12 28 30				
	F	13 20				
Dec. 31 (360)	eL	19 36				
	F	20 10				

(358) No sharp beginning to be seen, owing to strong microseismic movement.

(359) $\Delta = 5900$ km.
Shock from W-direction?

(356) $\Delta = 8500$ km.
Earthquake from Columbia, according to newspapers.
Damages in Chinu, province Bolivar.