

朝鮮總督府觀測所

地震年報

昭和八年

The Seismological Bulletin

of

Weather Bureau of Tyôsen

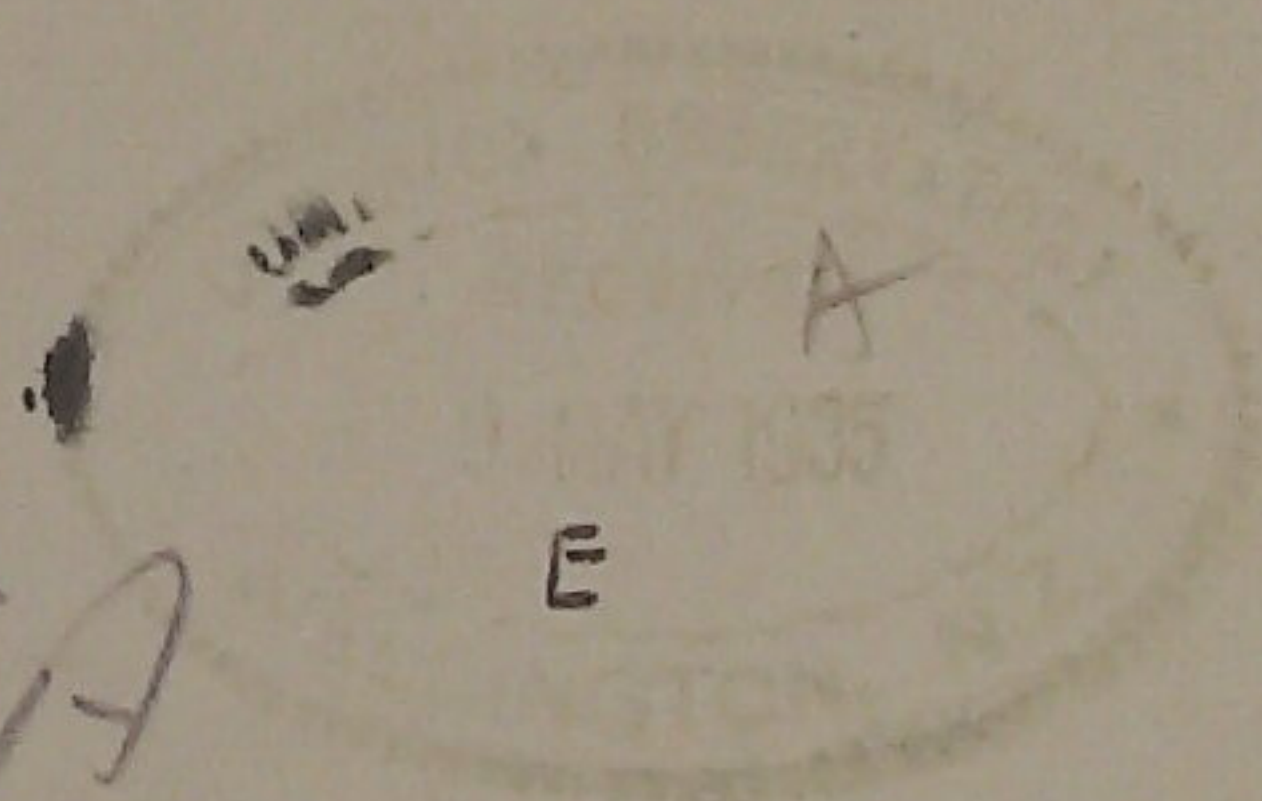
For the Year

1933

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SEISMOLOGICAL OBSERVATORY,

KOREA



Compiled

By

Weather Bureau of Tyôsen

The Government General of Tyôsen

Zinsen, Tyôsen, Nippon.

1935

The Seismological Bulletin
of
Weather Bureau of Tyôsen
For the Year
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By

**Weather Bureau of Tyôsen,
The Government General of Tyôsen,
Zinsen, Tyôsen, Nippon.**

1935

Preface.

Hitherto, the results of the seismological observations made at the meteorological observatories in Tyôsen (Corea), were compiled in "The Annual Report of the Meteorological Observatory of the Government-General of Tyôsen" published by this bureau. But, hereafter, the seismological report will be published once a year quite independent of the other meteorological reports. Now-a-days, in Tyôsen, slight attention is given to the study of earthquake owing to a minority of local shocks. Nevertheless, about 300 years ago, at an active period, frequent strong shocks were experienced all over the peninsula and inflicted severe damage to the buildings and human beings. Therefore, the seismological observation must not be neglected even in the present time of less activity.

Accordingly, in this report, whole the local shocks occurred in the peninsula and its neighbouring seas are described with minute description of their seismometrical elements observed at this bureau and the other local observatories. Moreover, near and distant earthquakes which are observed at the above mentioned observatories, are also compiled in this report with the full description of the nature of them referring the seismological reports published by the Central Meteorological Observatory, Tôkyô, and the other foreign observatories.

All the results of seismological observation made at the local observatories in Tyôsen which are in charge of this bureau are described at the end portion of this report. The present report is compiled by K. Hayata, the seismological expert of this bureau.

S. I. Kunitomi,
Director,
Weather Bureau of Tyôsen.

February 13, 1935.

1. Introduction.

The present publication contains the results of the seismometrical observations made at Weather Bureau of Tyôsen, Zinsen, and the local meteorological observatories in Tyôsen in the year 1933. (The seismic reports of Tyôsen from the year 1915 to 1932 have been included hitherto in the Annual Report of the Meteorological Observatory of the Government General of Tyôsen.)

Symbols and Notations:-

- P Normal first phase (longitudinal waves).
PR_n Longitudinal waves n-times reflected at the earth's surface.
S Normal second phase (transverse waves).
SR_n Transverse waves n-times reflected at the earth's surface.
PS Waves changed from longitudinal to transverse oscillation on reflecting at the earth's surface.
L Long waves at the beginning of the surface waves.
M Largest motion in the surface phase.
C Tail or end portion.
PcP Longitudinal waves reflected at the earth's core.
ScS Transverse waves reflected at the earth's core.
F End of the discernible movement.
i Sudden or distinct commencement of a phase.
e Gradual or indistinct commencement of a phase.
AN N-S component of amplitude.
AE E-W component of amplitude.
AZ Vertical component of amplitude.
+ Displacement to the north, east and upwards.
- Displacement to the south, west and downwards.
J Epicentral distance.
(r) Remarkable earthquake; Major radius of the felt area is greater than 300km.
(m) Moderate earthquake; Major radius is less than 300km. and greater than 200km.
Time:- Time is referred to Greenwich Mean Time.

2. Seismological Stations in Tyôsen.

(1) Weather Bureau of Tyôsen, Zinsen.

Longitude λ ; 126° 38'E Latitude φ ; 37° 29'N

Height above mean sea level; 69.7m.

Geological nature of the ground; Grey Granite-gneiss.

Instruments and constants (approximate):-

M_{kg}; Mass of the pendulum. V; Magnification.

T ; Proper period of the pendulum.

$\frac{r}{T^2}$ mm/sec²; Coefficient of friction.

ϵ ; Damping coefficient.

Instrument	Component	M kg	V	T sec	$\frac{r}{T^2}$ mm/sec ²	ϵ
Wiechert's Seismograph	N-S	200	96	5.3	0.009	5.9
	E-W	200	101	5.3	0.012	7.0
	Z	80	73	4.6	0.016	7.5
Oomori's Portable Seismograph	N-S	12	50	4.0	0.02	
	E-W	12	50	4.0	0.02	
Seismograph of low magnification	N-S	2.3	2	4.0	0.03	2
	E-W	2.3	2	4.0	0.03	2
	Z	1.5	2	4.0	0.03	2
Oomori's Tronometer	N-S	50	150	15	0.05	
	E-W	50	150	15	0.05	

(2) Keizyô Meteorological Observatory.

Longitude λ ; 126° 58'E Latitude φ ; 37° 34'N

Height above mean sea level; 85.5 m.

Geological nature of the ground; Granite.

Instruments and constants (approximate):-

Instrument	Component	M kg	V	T sec	$\frac{r}{T^2}$ mm/sec ²	ϵ
Wiechert's Seismograph	N-S	200	96	4.9	0.02	6.4
	E-W	200	96	5.0	0.02	6.9
Oomori's Portable Seismograph	N-S	12	50	3.5	0.03	
	E-W	12	50	3.5	0.03	

(3) Taikyû Meteorological Observatory.

Longitude λ ; 128° 36'E Latitude φ ; 35° 52'N

Height above mean sea level; 50.5m.

Geological nature of the ground; Shale.

Instruments and constants (approximate):-

Instrument	Component	M kg	V	T sec	$\frac{r}{T^2}$ mm/sec ²	ϵ
Wiechert's Seismograph	N-S	200	70	4.3	0.01	3.4
	E-W	200	80	4.3	0.01	3.2
Oomori's Portable Seismograph	N-S	12	50	4.0	0.02	
	E-W	12	50	4.0	0.02	
Seismograph of low magnification	N-S	2.3	2	4.0	0.03	2
	E-W	2.3	2	4.0	0.03	2
	Z	1.5	2	4.0	0.03	2



(4) Husan Meteorological Observatory.

Longitude λ ; $129^{\circ} 01'E$ Latitude φ ; $35^{\circ} 06'N$

Height above mean sea level; 12.5m.

Geological nature of the ground; Grey Granite-gneiss.

Instrument and constants (approximate):-

Instrument	Component	M kg	V	T sec	$\frac{r}{T^2}$ mm/sec ²	ϵ
Oomori's Seismograph	N-S	16	20	20	0.06	2

(5) Heizyô Meteorological Observatory.

Longitude λ ; $125^{\circ} 45'E$ Latitude φ ; $39^{\circ} 02'N$

Height above mean sea level; 51.0m.

Geological nature of the ground; Lower Daidô System.

Instruments and constants (approximate):-

Instruments	Component	M kg	V	T sec	$\frac{r}{T^2}$ mm/sec ²	ϵ
C. M. O. Portable Seismograph	N-S	17.7	50	6.0	0.015	
	E-W	17.9	50	6.0	0.015	
Seismograph of low magnification	N-S	2.0	2	6.0	0.02	2
	E-W	2.0	2	6.0	0.02	2
	Z	0.2	2	2.0	0.03	2

3. The Earthquakes occurred in Tyôsen in the Year 1933.

The number of the earthquakes occurred in Tyôsen in the year 1933 amounted to 16, and 12 of them were felt by person in the epicentral region. These felt earthquakes were very local ones and many of them were not recorded instrumentally at stations due to the scant net of installation of seismographs in Tyôsen. The number of unfelt earthquakes amounted to 4 and their scales were very small also. These earthquakes are found in the next tables.

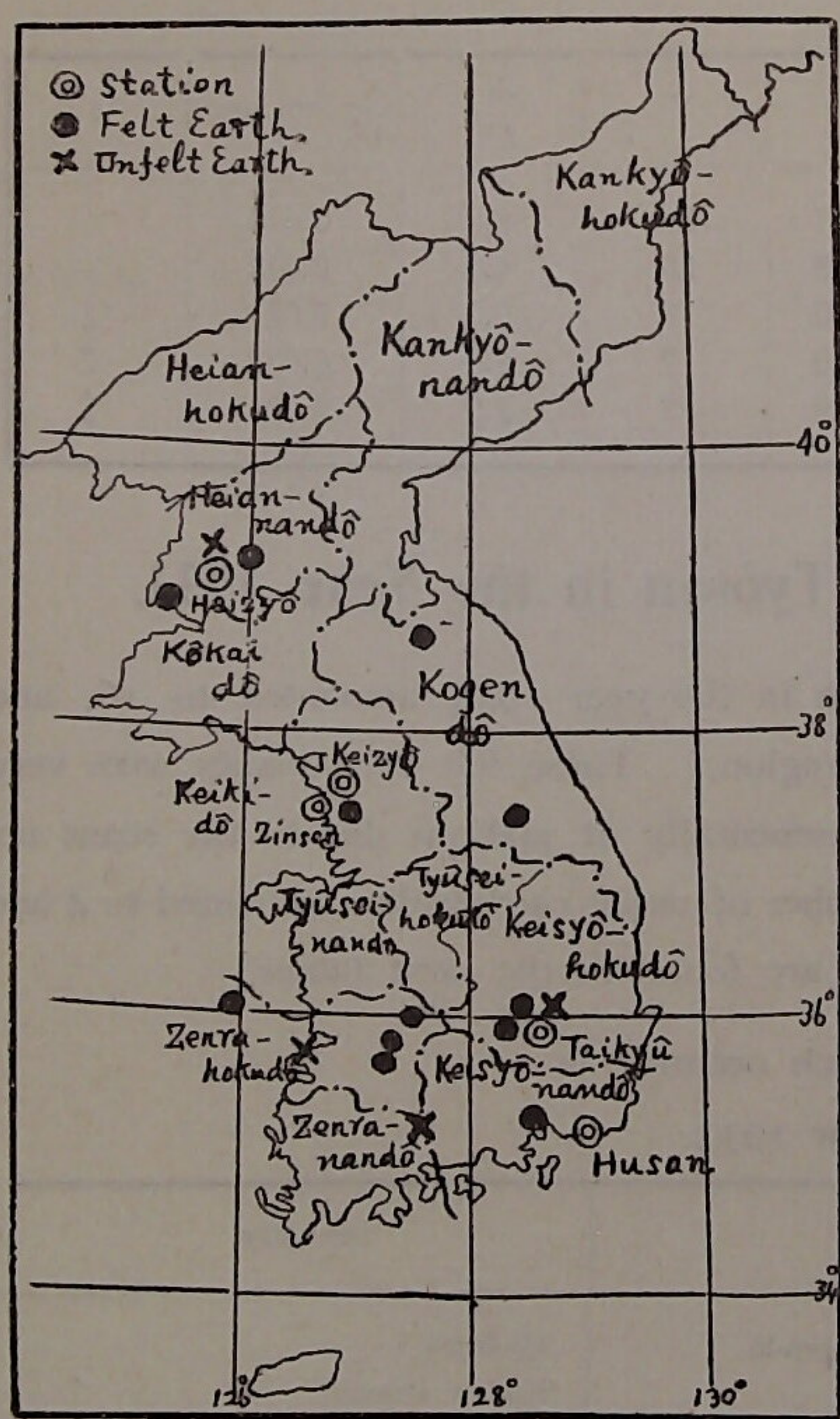
The felt earthquakes which occurred in
Tyôsen in the year 1933.

Date	G. M. T.	Epicentre	Intensity
Jan. 16	^h 11 ^m 27	SW part of Waiyôgun, Kôgendô.	Moderate
Feb. 11	3 07	Heisyôgun, Kôgendô.	Rather strong?
Mar. 7	12 57	Vicinity of Taikyû.	Slight
Mar. 9	3 46	Vicinity of Taikyû.	Slight
May 21	4 37	Mosyugun, Zenrahokudô.	Moderate
May 23	2 31	Seitô, Zenrahokudô.	Slight?
May 24	14 15	Kôryôwan, Heiannandô.	Slight?

Date	G. M. T.	Epicentre	Intensity
July 12	16 ^h 18 ^m	Vicinity of Keizyô.	Slight
Sept. 2	15 29	Vicinity of Masan.	Rather strong
Nov. 20	14 18	Vicinity of Heizyô.	Slight
Dec. 15	20 59	Upper Valley of the River Bankei, Zenrahokudô.	Rather strong
Dec. 20	14 53	Upper valley of the River Bankei.	Rather strong

The unfelt earthquakes which occurred in Tyôsen in the year 1933.

Date	G. M. T.	Epicentre
Mar. 3	1 ^h 19 ^m	Middle valley of the River Sensin.
Apr. 3	1 46	Vicinity of Heizyô?
Aug. 27	23 42	Vicinity of Taikyû.
Nov. 6	7 26	Middle coast of Zenrahokudô.



The map of distribution of the epicentres of earthquakes occurred in Tyôsen in the Year 1933.

4. Summary of the Earthquakes recorded in Tyôsen in the year 1933.

Summary of the readings of observations made at each station in Tyôsen in the year 1933 are tabulated in the following table for each earthquake and the readings made at several stations in Nippon and foreign countries corresponding to each earthquake are added to, which are abstracted from "Kisyô Yôran" (Monthly Report of Geophysics of Central Meteorological Observatory, Tôkyô), Preliminary Bulletin of Central Station of the Jesuit Seismological Association and Bulletins of other foreign stations at hand.

Association and Bulletins of other foreign stations at hand.



No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
					N	E	Z	N	E	Z			
1	Jan. 1	Zinsen	P	8 59 07.9							8 28.9?	7000?	Africa?
		Keizyô	eP	59 08.0							8 26.	6940	
		Taikyû	P?	59 38.3?							7 42.1?	6105?	
		Heizyô	P	59 54.0							8 03.4?	6500?	
		Amboina	P	8 56 10							5 53	4330	
		Batavia	Pz	58 35							8 04	6560	
		Zi-ka-wei	Pz	58 54									
		Medan	P	59 56							9 52	7690	
		Pasadena	iz	9 01 06									
		Florissant	iPz	07 25							5 55	4135	
		Hamburg	ez	07 52									
		Ottawa	eE	14 06									
		St. Louis	e	30									
		2	Jan. 3	Taikyû	P	15 30 11.2							
Keizyô	P			30 14.6	± 50	- 70		16	13		2 10.1?	1220?	
Zinsen	eP			30 16.2									
Heizyô	P			30 18.5									
Morioka				15 27 40.6	NE295	NW375	-192	1.0	1.0	2.8	25.3	188	
Sapporo				27 52.2			-226			4.0	45.0	334	
Tôkyô				28 35.4	±220	±200	± 40	7.8	6.2	4.0	1 09.0	630	
Wazima				28 40.0	± 64	± 56	± 6				1 26.3	793	
Kôbe				29 28.8	- 21	± 22	- 8			6.3	1 47.5	995	
Kôti				29 37.	±150	±150			2.0		2 23.	1350	
Hamada				29 44.6							2 56.3	1703	
Hukuoka				30 14.1	-33	± 21		15.4	14.5		3 15.2	1912	
Zi-ka-wei	ez			15 31 38			14			15	4 00.	2533	
Saint Louis	e			37									
Batavia	eP			37 26							7 27.	5900	
Medan	e			44 06									
Hamburg	e			16 11			21			19			
Württemberg	eL	16 11											
3	Jan. 3	Keizyô	P	22 43 03.0							1 37.6	900	The Nippon Sea, Deep earthquake.
		Zinsen	P	43 06.1							1 40.4	920	
		Pasadena	iPz	22 52 28									
4	Jan. 4	Keizyô	P	1 29 04.8							3 25.2	2020	(r) 270km. SE off Titi-zima, the Bonin Islands. λ=145.°0E, φ=25.°8N. Felt rather strongly at Titi-zima.
		Zinsen	P	29 06.8							3 31.9	2100	
		Heizyô	eP	29 21.9							3 56.6	2400	
		Titi-zima		1 25 22.6	+415	-425	-170	2.1	2.8	2.2	26.4	196	
		Hntizyô-zima		26 48.	+ 55	+ 45				1.7	1 24.	770	
		Tôkyô		27 17.0	±220	±120	± 36	10.4	8.3	3.5	1 54.0	1060	
		Siomisaki		27 20.5	- 5	+1		2.8	2.8		1 53.5	1055	
		Kôti		27 40.									
		Sendai		27 45.8	- 45	+ 89	+ 29	3.0	3.0	1.9	2 00.3	1123	
		Miyazaki		27 53.0	- 6	+ 5	- 4	13.0	12.0	14.2	2 45.8	1597	
		Wazima		27 55.5	± 27	+ 28	± 2	1.9	1.9	1.1	2 17.8	1298	
Hamada		28 04.6							2 34.2	1472			

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
				N	E	Z	N	E	Z				
5	Jan. 4	Naha	h m s 1 28 25.9	± 20	± 15	μ	s 3.9	s 3.8	s	m s 3 48.5	km 2298		
		Taihoku	29 29.0										
		Zi-ka-wei	Pz	1 29 33			- 28			15	3 40	2244	
		Batavia	Pz	33 29							6 54	5200	
		Medan	eP	33 36							7 01	5420	
		Saint Louis	ePE	38 23							10 50	9820	
		Florissant	iP	38 24									
		Ottawa	e	49 25									
		Keizyô	P	4 09 02.0							7 48.	6220	Alaska. J.S. A. gives λ=145°W φ=60.°3N U. S. C. G. S. gives λ=148°W, φ=62°N.
		Zinsen	eP?	09 11.8							7 41.1?	6090?	
		Sitka	iP	4 01 20							4 01	2450	
		Spokane	eP	04 29							5 18	3515	
		Pasadena	ePEZ	06 06							6 01	4245	
		Tucson	eP	06 29							5 54	4120	
		Madison	iP	06 57							6 11	4420	
		Florissant	iPHZ	07 18							6 20	4590	
		Saint Louis	ePH	07 19							6 29	4755	
		Little Rock	iP	07 35							6 27	4720	
		Ottawa	eP	07 36							6 30	4775	
		Buffalo	iP	07 40							6 45	5055	
Pittsburgh	eP	08 00							6 54	5215			
Georgetown	iP	08 11							6 57	5275			
Fordham	eP	08 12											
Woodstock	P	08 25											
Denver	eSN	11 30											
Zi-ka-wei	ez?	21 53			+ 10			14					
Medan	e	23 35											
6	Jan. 7	Taikyû	e	4 09 45.0	+130	+ 92		18	13				
		Keizyô	P	09 51.4	+240	+190		14	13				
		Heizyô	P	09 54.7	+ 35	± 56		15	20				
		Zinsen	e	09 57.	+340	-260	+280	17.6	16.1	13.9			
		Husan	eP	09 57.6									
		Morioka		4 07 11.9	>±630	>±620		2.2	2.1		35.0	260	
		Sapporo		07 27.7			-542			3.5	50.3	373	
		Tôkyô		08 10.0	-450	-560	±600	6.5	5.4	4.3	1 11.	650	
		Wazima		08 12.6	-180	-170	± 34	2.8	3.1	3.1	1 21.6	746	
		Otomari		08 16.0	+625			22.2			2 27.	1400	
		Gihu		08 33.5	+105	-700	+320	4.3	15.0	11.0	1 38.0	900	
		Kôbe		08 53.4	-124	+109	± 48	15.5	16.0	12.3	1 42.5	945	
		Hamada		09 11.4	-327	+404	-271	15.2	14.2	14.1	2 06.2	1182	
		Kôti		09 16.0	±700	±900		17.0	17.0		2 07.	1190	
		Hukuoka		09 47.3	+186	- 80	±100	14.4	12.4	10.8	2 22.8	1348	
		Titi-zima		09 55.3		-110			10		2 11.8	1238	
		Naha		11 07.5	± 34	± 34	± 6	18.0	15.0	15.0	4 00.2	2442	
		Isigaki-zima		11 46.5							4 14.8	2622	
		Taihoku		11 58.	+300	+400	+165	15.0	17.2	16.5			
		Zi-ka-wei	Pz	4 11 10.	- 33	- 70	- 78	12	13	12	3 50	2389	



No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
				N	E	Z	N	E	Z				
		Amboina	P	h m s	μ	μ	μ	s	s	s	m s	km	
		Medan	eP	4 15 11							6 48	5220	
		Batavia	P	15 18							7 56	6420	
		Pasadena	ePz	16 36							9 33	8360	
		Hamburg	ePz	18 15							10 00	8800	
		Württemberg	eP	18 39							10 17	9000	
		Florissant	iPNZ	19 06									
		Little Rock	ePE	19 33							10 40	9600	
7	Jan. 8	Taikyū	P	6 31 56.0									(m) 140km. eastern off the mouth of the River Mabuti.
		Heizyō	eP	32 03.									λ=142.°9E,
		Keizyō	eP	32 03.2							2 30?	1430?	φ=41.°2N.
		Zinsen	eP	32 06.									Felt rather strongly in the epicentral region.
		Morioka		6 29 27.8	+210	+215	±167	1.0	0.9	3.3	24.3	180	
		Sappōro		29 44.7	+208	+348	+125	3.1	2.1	2.1	41.8	310	
		Tōkyō		30 21.7	+140	±141		3.5	3.7		1 22.3	753	
		Wazima		30 30.6	± 35	± 42					1 33.6	860	
		Otomari		30 31.5							1 57.	1090	
		Gihu		30 44.4	+ 35	- 34	- 16	3.1	2.3	2.4	1 43.5	955	
		Oosaka		31 18.1	- 68	- 75	+ 20	3.5	4.6	3.4	1 41.4	934	
		Kōti		31 42.							2 30.	1430	
		Hamada		31 38.8							2 57.8	1718	
		Hukuoka		32 44.1							3 01.0	1760	
		Zi-ka-wei	Pz	6 33 26			+ 11			16	4 40.	2244	
		Pasadena	ePz	39 56									
		Württemberg	eLNE	7 15 —									
8	Jan. 9	Zinsen	P	2 09 32.0							6 14?	4480?	Württemberg gives; λ=71°E, φ=36°9N.
		Keizyō	P	09 33.1									(NE part of Afghanistan.)
		Medan	P	2 08 32							6 37	5030	
		Zi-ka-wei	iPz	09 16			- 7			11			
		Hamburg	iPz	09 37	+ 35	+ 40	+ 15	7	7	7			
		Württemberg	iPZE	09 45.5		-4500	+11700				6 28	5100	
		Batavia	PN	10 46							7 02	5440	
		Amboina	iP	12 10							8 34	7150	
		Pasadena	ePNEZ	15 48									
		Florissant	iz	19 41									
9	Jan. 10	Zinsen	eP?	3 12 47.7							1 35?	870?	NW off Amami-Oosima, Kagosima Prefecture.
		Keizyō	P	13 01.0							1 20	730	
		Zi-ka-wei	ez	3 10 36			± 9			8			
10	Jan. 15	Zinsen	P	18 10 05.6							7 01	5340	New Guinea.
		Keizyō	P	10 26.5							6 44.3	5035	λ=147°E, φ=5°S.
		Florissant	ePE	18 06 09									
		Amboina	iP	06 17							3 23	2050	
		Batavia	P	09 30									
		Zi-ka-wei	ez	10 04			- 5			12			
		Medan	P	10 22							6 16	4700	

No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
					N	E	Z	N	E	Z			
		Pasadena	iP ^{NEZ}	h m s 18 15 21	μ	μ	μ	s	s	s	m s	km	
		Württemberg	eL	19 03 —									
11	Jan. 16	Keizyô	P	11 27 09.8							16.6	124	SW part of Waiyô-gun, Kôgendô Tyô-sen. λ=127°28'E, φ=38°37'N. Felt rather strongly in the epicentral region.
		Zinsen	P	27 13.7							19.7	146	
		Heizyô	P	27 15.1							20.7	153	
		Taikyû	S	28 18.5									
		Husan	eP	28 40.0									
12	Jan. 21	Zinsen	e	16 38 12.6									
		Keizyô	eP?	38 13.3									
		Heizyô	P	38 14.6									
		Württemberg	e	16 44 08									
13	Jan. 21	Hamburg	eN	46 28	+ 13	+ 6	+ 5	12	12	12			
		Zinsen	eP	19 34 01.2		± 70			16		10 50.4?	9820?	The Indian Sea. J. S. A. gives λ=59°E, φ=41°S U. S. C. G. S. ; λ=59°E, φ=37°S Württemberg ; λ=56°E, φ=35.°5S
		Keizyô	eP	34 33.2							10 37.0	9530	
		Heizyô	eP	34 40.1									
		Taikyû	e	41 41.	± 58			16					
		Medan	P	19 29 06							7 39	6130	
		Batavia	P	30 31							7 30	5900	
		Malabar	eP	30 31							7 34	6010	
		Amboina	P	32 33							9 05	7760	
		Manila	iP	33 05							10 07	8930	
		Zi-ka-wei	ez	34 00			+ 39			16	10 29?	9282?	
		Württemberg	ez	34 26	+ 35	+ 23	+ 55	18	18	18		10600	
		Hamburg	ePz	34 40	+ 95	+280	+ 75	18	60	30		11100	
		Fordham	iP'	40 37									
		Ottawa	eP'	40 40								15900	
		Buffalo	iP'	40 47									
		Woodstock	iP'	40 49									
		Florissant	iP'z	41 04									
		Little Rock	eP'E	41 07									
		Saint Louis	iP'EN	41 14									
		Madison	iP'	41 21									
		Pasadena	iP'z	41 21									
		Tucson	eP'	41 30									
		Sitka	iP'	41 37									
		Honolulu	iP'	44 00									
14	Feb. 3	Heizyô	P	22 16 20.4							3 52.7	2350	Northern off the island of Urupp, the Kurile Islands. J. S. A. gives ; λ=151°E, φ=46°N.
		Taikyû	eP	16 25.3							3 52.0	2340	
		Keizyô	P	16 25.4							3 55.3	2375	
		Zinsen	P	16 27.9							3 57.0	2400	
		Zi-ka-wei	Pz	22 17 36			+ 15			20	5 10	3589	
		Batavia	i	22 16									
		Pasadena	iP	22 31							8 48	7370	
		Hamburg	ez	23 30			+ 18			24			
		Madison	iP	23 30							9 37	8340	
		Florissant	iP	23 46							9 57	8730	
		Saint Louis	iP	23 47							9 54	8670	

No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
					N	E	Z	N	E	Z			
		Württemberg	iPz	h m s 22 23 55	μ	u	μ	s	s	s	m s 9 59	km 8800	
		Little Rock	eP	23 58							10 03	8850	
		Cincinnati	iP	24 00							10 03	8850	
		Fordham	eP	24 16							10 20	9190	
		Georgetown	iP	24 17							10 19	9170	
15	Feb. 4	Keizyô	P	6 23 12.2									WNW off Titi-zima, the Bonin Islands.
		Zinsen	P	23 26.6									
		Pasadena	iP	6 29 35									
16	Feb. 9	Taikyû	P	3 59 00.9							1 44.0	960	(r) 200km. SW off the island of Hati- zyô. Depth; 250km. λ=138.°8E, φ=31.°7N. Felt at Hatizyô and eastern part of Kwan- tô district.
		Keizyô	P	59 23.8							2 04.3	1160	
		Zinsen	P	59 25.9							2 04.6	1170	
		Hatizyô-zima		3 57 44.7	-240	±300	- 70		1.7		39.4	292	
		Siomisaki		57 52.0	+ 30	± 44	+ 8	4.2	3.3	1.5	46.3	343	
		Hamamatu		57 55.3	- 31	- 54		3.1	3.1		50.7	376	
		Tôkyô		58 03.	-200	+140	+ 50	6.5	4.5		52.0	386	
		Kôbe		58 04.2	+ 36	- 37	- 13		5.0	4.6	54.7	406	
		Titi-zima		58 19.2	- 65	+ 52	- 41	0.4	1.0	0.6	1 07.7	617	
		Wazima		58 24.1							1 07.5	615	
		Hamada		58 26.5							1 11.3	653	
		Sendai		58 32.0	+ 78	- 29	± 20	0.7	1.5	1.7	1 17.4	703	
		Hukuoka		58 34.3		- 17	- 7	-	3.3	2.9	1 26.1	791	
		Sapporo		59 32.4	- 17	- 25		3.7	3.7		2 03.1	1151	
		Pasadena	iPz	4 08 38									
17	Feb.13	Heizyô	eP	2 54 59.5									The Altai range. Württemberg gives λ=89°E, φ=46°N.
		Keizyô	P	55 07.0							4 57.0	3205	
		Zinsen	eP	55 08.							5 01	3255	
		Taikyû	eL?	3 04 55.7									
		Husan	eL?	05 16.7									
		Zi-ka-wei	iPz	2 55 06			+ 45			9	9 40?	8222	
		Medan	eP	57 16									
		Hamburg	ePz	58 09	+ 60	+100	+ 50	8	11	11			
		Württemberg	P	58 30							7 14	5700	
		Batavia	P	3 01 15									
		Pasadena	i	02 43									
18	Feb.13	Zinsen	e	4 38 34									
19	Feb.13	Keizyô	P	23 10 55.7							3 55.0	2375	Eastern off the cape of Nosyappu, Hok- kaidô district.
		Zinsen	eP	10 58.1							3 52.?	2340?	
20	Feb.19	Taikyû	P	4 29 06.6							2 21.8	1340	WSW off the island of Yonakuni. λ=122.°4E, φ=24.°2N.
		Zinsen	P	29 16.7							2 34.0	1470	
		Keizyô	P	29 18.5							2 43.8	1568	
		Heizyô	P	29 34.7									
		Taihoku	iP	4 26 33.5	+750	-850	+130				17.3	129	

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
				N	E	Z	N	E	Z				
		Zi-ka-wei	ez	h m s	μ	μ	μ	s	s	s	m s	km	
		Medan	i	4 27 38							1 28?	810	
		Batavia		32 30									
		Batavia		32 48									
21	Feb. 19	Zinsen	P	4 29 46.0							2 05.0	1640	
22	Feb. 21	Keizyô	e	18 17 24.4									
23	Feb. 23	Heizyô	eP	8 28 54.1									
		Zinsen	eP	29 13.	-149	± 90	± 48	48	43	25			
		Keizyô	P	29 16.0	± 81	± 57		26.0	22.0		10 49.0	9795	Damage at Iquique, Chile. J. S. A. gives λ=71°W, φ=19.5°S Depth; 100km. U. S. C. G. S. gives λ=69°W, φ=19°S H; 8 ^h 09 ^m 25 ^s
		La paz	iP	8 10 28								410	
		San Juan	iP	16 38							5 47	4000	
		Little Rock	eP _N	19 13							7 58	6400	
		Woodstock	iP	19 23							8 10	6630	
		Georgetown	iP	19 18							8 04	6515	
		Cincinnati	iP	19 27							8 07	6570	
		Fordham	iP	19 31							8 09	6610	
		Saint Louis	eP	19 32							8 16	6740	
		Florissant	iP	19 33							8 19	6800	
		Chicago	iP	19 42							8 26	6940	
		Buffalo	iP	19 46									
		Ann Arbor	iP	19 48							8 30	7015	
		Madison	iP	19 49							8 38	7170	
		Ottawa	iP	20 00							8 43	7270	
		Tucson	iP	20 04							8 38	7170	
		Denver	eP _N	20 19							8 51	7420	
		Pasadena	iP	20 34							9 17	7940	
		Berkeley	eP	21 02							9 48	8550	
		Ukiah	eP	21 14							9 49	8570	
		Spokane	P	21 28							9 58	8750	
		Victoria		22									
		Wûrtemberg	iP	22 53	+100	+160	+175	24	21	21		11000	
		Hamburg	P _Z	23 07	+130	+240	+200	20	20	20		10700	
		Amboina	iP	29 00									
		Batavia	e	29 08									
		Manila	eP'	29 20									
		Medan	P'	29 30									
		Zi-ka-wei		29 20							4 46	3040	
24	Mar. 2	Husan	P	17 34 02.5							2 43.0	1560	(r) Strong earthquake off Sanriku. (230km. off Kamaisi, Iwate Prefecture.)
		Taikyû	P	34 05.9	±9091	±4545		17.8	20.8		2 27.0	1400	
		Keizyô	P	34 16.6							2 31.7	1450	
		Zinsen	iP	34 19.2	±3700	±7800	±7500	11.9	19.6	18.5	2 39.0	1520	
		Heizyô	eP	34 21.5							2 53.1	1670?	λ=144.7°E, φ=39.1°N.
		Miyako		17 31 35							29.	215	Great damage along Sanriku coast due to the tidal wave occurred after the shock.
		Morioka		31 38.9	NW 14600	NE 16500	+10200	2.5	2.6	2.4	35.3	262	
		Sendai		31 44.2	+22700	>+17900	-16650	3.4	3.4	5.0	35.8	266	
		Sapporo		32 04.4	>±20000	>±12750							
		Tôkyô		32 14.	+12700	-8800	-8300	5.0	4.3	3.8	1 00.	540	
		Wazima		32 30.2	±2400	±3000					1 17.8	708	
		Hamamatu		32 49.4	>±4000	>±4000					1 15.0	680	

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
				N	E	Z	N	E	Z			
		Kôbe	17 33 06.3	sw 3000	SE4800	-5200	4.3	4.7	4.3	1 38.5	905	
		Kôti	33 26.7	±17500	±17500	±12500		2.6	2.4	2 01.	1130	
		Hamada	33 36.3							1 51.2	1652	
		Titi-zima	33 46.5	>±1900	>±1400	-3500			9.0	2 19.0	1310	
		Hukuoka	33 56.6	±2000	±2000	>±200	6.6	8.8		2 56.5	1705	
		Dairen	35 06.2	+220			15.5			3 29.	2070	
		Naha	35 39.5	±1350	±1500	±572	5.0	4.4	2.5	3 34.2	2123	
		Taihoku	36 12.5	>±1200	>±1200	±6500	25	25	15	4 23.4	2736	
		Zi-ka-wei	iPz 17 35 34	-903	+2976		15	16		4 00	2533	
		Amboina	iP 39 16							6 50	5260	
		Honolulu	iP 40 18							6 53	5195	
		Medan	iP 40 25							8 35?	7160?	
		Batavia	iP 40 41							8 27	7020	
		Malabar	eP 40 54							8 32?	7100?	
		Victoria	P 41 20									
		Spokane	iP 41 52							9 00	7600	
		Apia	iP 41 54									
		Ukiah	eP 42 00							9 13	7860	
		Berkeley	iP 42 06							9 07	7740	
		Pasadena	iPz 42 31							9 57	8720	
		Denver	eP 43 04							9 01	7620	
		Hamburg	iP 43 05	>3700	>5000	3000	40	40	40			
		Württemberg	eP? 43 09.5							10 48?	9450	
		Madison	iP 43 31							10 19	9170	
		West Bromwich	iP 43 31							10 36	9510	
		Strasbourg	iP 43 32							10 33	9450	
		Saint Louis	eP 43 40							10 44	9680	
		Chicago	iP 43 42							10 38	9555	
		Ann Arbor	iP 43 42							10 36	9510	
		Florissant	iP 43 45							10 47	9750	
		Ottawa	iP 43 48							10 37	9650	
		Denton, Texas	iP 43 49							10 49	9795	
		Buffalo	iP 43 54							10 32	9430	
		Little Rock	iP 43 55							10 53	9880	
		Cincinnati	iP 44 02							10 57	9970	
		Woodstock	eP 44 06							10 49	9795	
		Fordham	iP 44 13							10 45	9705	
		Georgetown	eP 44 13							10 19	10470	
		Tortosa	P 44 15							10 58	9995	
		Halifax	P 44 16							11 14	10350	
		La Paz	iP' 50 08									
25	Mar. 2	Taikyû	P 18 29 26.0									(r) After shock of No. 24.
		Keizyô	P 29 30.4									λ=144°E, φ=39°N.
		Zinsen	P 29 33.1									
26	Mar. 2	Taikyû	P 19 44 48.4									(r) Ditto.
		Zinsen	P 44 49.2									λ=143.2°E, φ=39°4'N.
		Heizyô	P 44 58.2									
		Keizyô	L? 45 02.5									
27	Mar. 2	Taikyû	P 20 45 53.2		+125							(r) Ditto.
		Keizyô	P 46 03.7					12.7		2 49.8	1640	λ=144.6°E, φ=39.3°N.

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
				N	E	Z	N	E	Z			
		Titi-zima	19 33 49.1	-1100	+850	+550	1.5	1.5	2.5	51.0	378	
		Hatizyô-zima	34 28	-244	+225			3.4		1 13	670	
		Tokyô	34 50.9	+270	-210					1 38	900	
		Hamamatu	34 51.0	+ 54	- 72		2.7	3.3		1 21.4	744	
		Kôti	34 52.3	± 80	±110	± 40	8.5	8.5	8.5	1 38	900	
		Kôbe	19 34 53.2	-112	-183	-145	3.9	4.5	3.0			
		Hamada	35 10.2	+ 25	+ 17		2.9	4.1		1 49.3	1013	
		Hukuoka	35 11.2	- 44	- 77	- 93	3.4	3.4	5.6	1 58.1	1101	
		Akita	35 32.8	-455	-325	-130	3.5	3.7	2.8	2 17.2	1292	
		Sapporo	36 08.8	-120	+188			3.9		2 42.0	1550	
		Wazima	36 14.0	± 80	± 81	± 16	3.1	3.0		1 54.2	1062	
		Taihoku	36 15.9	+ 50	-120		5.3	5.3		2 47.4	1614	
		Dairen	36 42.1							3 14.7	1907	
		Palau	36 47.0							8 13.6	1896	
		Zi-ka-wei	iPz 19 36 14			- 30				9 2 56	1622	
		Amboina	iP 38 18									
		Medan	e 40 15							6 04	4490	
		Batavia	iP 40 22							6 15	4650	
		Malabar	iP 40 24							6 19	4760	
		Hamburg	iPz 44 44	9		6	15		16		8400	
		Württemberg	iPz 45 02							9 43	9100	
		Ottawa	e 49 55									
		Little Rock	e 49 56									
		Pasadena	iS 53 54									
54	Mar. 12	Keizyô	eP 5 09 07.8							2 27.2	1400	After shock of No. 24
		Zinsen	eL 12 11									
55	Mar. 17	Keizyô	P 16 01 23.4	- 10	± 19		9.8	13.0		4 54.1	3155	The Aleutian Islands
		Heizyô	eP 01 29.2							4 54.0	3155	λ=166°E, φ=51°N.
		Zinsen	P 01 41.1							5 00.6	3250	J. S. A. gives
		Taikyû	eP? 03 22.7									λ=160°E, φ=56°N.
												(Kamtchatka)
		Sitka	iP 16 02 15							5 28	3675	
		Zi-ka-wei	iPz 02 32			+ 34				6 12	4589	
		Honolulu	eP 04 03							6 22	4630	
		Pasadena	iP 16 05 14							7 58	6410	
		Tucson	eP 05 56							8 30	7015	
		Amboina	i 06 02									
		Saint Louis	eP 06 25							9 05	7700	
		Florissant	iP 06 28							8 59	7570	
		Ottawa	eP 06 30							8 59	7570	
		Buffalo	iP 06 34									
		Hamburg	iP 06 36									
		Cincinnati	iP 06 42			53		20			7800	
		Little Rock	iP 06 42							9 11	7820	
		Medan	i 06 46							9 10	7800	
		Württemberg	iP 07 03.5							9 28	8200	
		Georgetown	eP 07 10							9 25	8100	
56	Mar. 17	Keizyô	eP 19 38 11.0	± 50	± 50		16.0	16.0		4 07.8	2540	Mindanao.
		Taikyû	eP? 38 40.7									λ=128°E, φ=7°N.

No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P-S	Δ	Remarks
					N	E	Z	N	E	Z			
69	Apr.23	Taikyû	eP	h m s 6 09 15	μ	μ	μ	s	s	s	m s	km	Near the island of Kos, Asia Minor. λ=26.°5E, φ=36.°5N. Destructive at the island of Kos and on main land of Asia Minor. H; 5 ^h 57 ^m 18 ^s Depth; 50km.
		Zinsen	eP	09 15.8							9 36.1	8320	
		Keizyô	P	09 18.8							9 32.2	8220	
		Ravensburg	eP	6 01 32							3 21	2050	
		Württemberg	iP	01 43.0							3 22	2100	
		Hamburg	eP	02 13	170	150	80	11	10	10	3 54	2420	
		Ottawa	eP	09 04							9 24	8060	
		Medan	e	09 07									
		Fordham	eP	09 15							9 30	8200	
		Buffalo	iP	09 20							9 40	8390	
		Georgetown	eP	09 25							9 56	8710	
		Cincinnati	iP	09 53							10 58	9995	
		Madison	eP	09 54							10 09	8970	
		Saint Louis	eP	10 03							10 23	9250	
		Manila	iP	10 08							11 59	11450	
		Batavia	e	10 13									
Sitka	iP	10 13							9 54	8670			
Little Rock	ePN	10 29							10 50	9820			
70	Apr.23	Taikyû	P	7 16 38.6							1 42.0	940	(r) After shock of No. 24. λ=143.°6E, φ=39.°7N.
		Keizyô	P	16 48.2	± 55	+ 70		12.0	12.0				
		Zinsen	eP	16 51.3	- 47	- 49	+ 94	11.2	11.2	12.8			
		Heizyô	P	17 00.6									
71	Apr.23	Taikyû	P	8 28 56.5									Ditto. λ=143.°3E, φ=39.°4N.
		Keizyô	eP?	29 08.2							2 22.0	1240	
		Zinsen	eP	29 11.3									
72	Apr.27	Keizyô	eP	2 45 32.8	+ 72	±165		13.0	14.0		7 39.0	6050	Alaska, λ=148.°W, φ=68°N. J. S. A. gives λ=148.°8W, φ=60.°7N. H=2 ^h 36 ^m 18 ^s U. S. C. G. S. gives λ=150°W, φ=61°N. H=2 ^h 36 ^m 18 ^s Strong at Seward and Anchorage, Alaska. Numerous after shocks.
		Zinsen	eP	45 32.9	-173	-126	±382	12.3	12.3	13.8	7 42.6	6120	
		Heizyô	P	45 33.1							7 28.5	5855	
		Taikyû	P	45 38.2							7 43.3	6120	
		Sitka	P	2 38 17									
		Spokane	iP	41 18									
		Saskatoon	P	41 41							4 38	2990	
		Berkeley	eP	41 56							4 52	3125	
		Ukiah	eP	41 58							5 03	3280	
		Pasadena	iP	42 52							5 21	3565	
		Denver	ePE	43 02							5 26	3640	
		Tucson	iP	43 33							6 04	4295	
		Honolulu	iP	43 45							6 07	4350	
		Chicago	iP	44 00							6 16	4520	
		Florissant	iP	44 05							6 24	4665	
		Saint Louis	iP	44 06							6 25	4685	
		Ann Arbor	iP	44 06									
		Ottawa	iP	44 20							6 39	4960	
		Little Rock	iPN	41 23							6 44	5035	
		Woodstock	iP	44 54									
		Georgetown	iP	44 55									
		Fordham	iP	44 58							7 04	5400	
Weston, Mass.	eP	45 05							6 58	5295			
Halifax	P	45 13							7 14	5580			

No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
					N	E	Z	N	E	Z				
		Württemberg	iP	2 47 14	μ ₄₈	μ ₃₉	μ ₇₈	s ₁₇	s ₁₇	s ₁₇	m ₉ s ₀₈	km ₇₈₀₀		
		San Juan	P	47 25										
		Tortosa	iP	47 56							9 42	8430		
		Manila	iP	48 03							9 39	8375		
		Amboina	i	49 01										
		La Paz	iP	49 53										
		Medan	e	50 28										
		Batavia	e	53 33										
73	May 1	Keizyô	P	18 34 19.1							3 44.0	2245	Near the island of Etorohu, the Kurile Islands.	
		Zinsen	eP	34 22.8							3 46.?	2270?		
74	May 1	Keizyô	P?	18 57 13.1									Ditto.	
		Zinsen	eI.?	19 04 31.5										
75	May 1	Zinsen	eP	19 55 22.0							3 27.1	2040	Southern off the island of Etorohu, the Kurile Islands. λ=148.°5E, φ=43.°4N.	
		Keizyô	P	55 23.1							3 48.0	2290		
		Kusiro		19 52 04.8	-380	-260		3.8	2.0		47.1		Felt slightly at Kusiro & Nemuro, rather strongly at Syana.	
		Sapporo		52 41.0	±173	-248	- 96	3.2	3.2	3.6	59.1	439		
		Akita		53 13.4	+ 68	+ 69		2.7	2.7		1 35.9	860		
		Sendai		53 18.0	- 32	+ 41	+ 17	1.4	1.3	1.3	1 38.0	900		
		Tôkyô		53 54.7	- 22	- 26					1 59.0	1110		
		Wazama		53 57.0							2 12.4	1244		
		Oosaka		54 28.5	+ 13	+ 8	+ 6	3.2	3.4	2.4	3 33.6	2116		
		Hamamatu		54 50.9							3 03.4	1784		
		Hamada		54 58.4							3 04.8	1798		
		Titî-zîma		55 26							3 05	1800		
		Hukuoka		55 26.3							3 49.5	2313		
		Pasadena	iP	20 02 12										
		Hamburg	iPz	02 59	13	15	12	17	30	17				
		Württemberg	eP	03 22										
		Saint Louis	eP	03 24							10 07	8930		
		Florissant	ePE	03 26							10 05	8890		
76	May 3	Zinsen	eP	23 34 23.1							4 36	2905	The River Daidaku-sui, Formosa.	
		Keizyô	P	34 27.0							4 30	2825		
77	May 8	Keizyô	eL	11 43 05.0									Mexico. J. S. A. gives λ=101.°2W φ=16.°3N. Depth 100km H=10 ^h 33 ^m 50 ^s	
		Zinsen	eL?	35 03										
		Tucson	iP	10 37 50							3 25	2025		
		Little Rock	iPE	38 03							3 35	2135		
		Pasadena	iP	38 46							4 17	2650		
		Saint Louis	eP	38 48							4 14	2610		
		Denver	ePN	38 49							4 10	2560		
		Florissant	iP	38 51							4 20	2690		
		Chicago	iP	39 17										
		Madison	iP	39 31							4 38	2930		
		Berkeley	eP	39 39							4 53	3140		
		Ann Arbor	eP	39 42							5 12	3420		
		Georgetown	iP	39 54							5 01	3255		
		Buffalo	iP	40 10							5 10	3385		



No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
					N	E	Z	N	E	Z				
		Fordham	iP	h m s 10 40 20	μ	μ	μ	s	s	s	m s 5 23	km 3585		
		San Juan	iP	40 20							5 24	3605		
		Ottawa	eP	40 37							5 31	3790		
		Burlington	iP	40 50							5 25	3620		
		Sitka	iP	42 17							7 01	5340		
		Weston, Mass.	eS	46 30										
		Hamburg	eP	46 37										
		Württemberg	eP	46 45								10000		
		Honolulu	S	50 14										
78	May 12	Keizyô	e	16 21 06.6										
		Zinsen	eL	24 54										
		Württemberg	e	16 53										
79	May 16	Zinsen	eP	1 20 06.9							6 12.7	4460	North Sumatra, Württemberg gives λ=97°E, φ=5°N. H=1 ^h 12 ^m 15 ^s	
		Taikyu	eP	20 12.7							6 10.6	4420		
		Heizyô	eP?	20 26.1							5 57.5	4175?		
		Keizyô	L	34 10.9		+ 64			13.7					
		Medan	iP	1 13 23							39	340		
		Batavia	iP	16 18							3 03	2570		
		Amboina	P	19 03							5 13	3600		
		Hamburg	ePz	24 52										
		Württemberg	eP	24 55							10 23	9250		
		Pasadena	e	31 02										
		Saint Louis	e	35 15										
		Florissant	eN	35 25										
80	May 19	Zinsen	eL	19 08 32									The Atlantic Ocean J. S. A. gives λ=14.°3W, φ=1.°9S H=17 ^h 58 ^m 02 ^s Württemberg gives λ=16.°5W, φ=0.°5N.	
		Keizyô	eL	09 00.4										
		Tortosa	iP	18 06 14							6 43	5015		
		San Juan	P	07 26							7 37	6010		
		Württemberg	eP	07 28.5	52	36	83	16	16	16	7 38	5900		
		Hamburg	ePz	07 58	55	60	11	14	14	14	8 08	6600		
		Saint Louis	eP	08 12							11 57	11400		
		Fordham	eP	09 04							9 07	7740		
		Georgetown	iP	09 04							9 21	8020		
		Ottawa	eP	09 22							9 16	7890		
		Florissant	eP	10 14							9 55	8690		
		Little Rock	ePN	10 20							10 01	8810		
		Pasadena	ez	16 04										
81	May 21	Taikyû	P	4 37 25.1										Felt at Mosyu, Zen- rahokudô, Tyôsen.
82	May 21	Zinsen	eP	11 58 26.9							2 58.6	1730		SSE off the island of Hatizyô.
		Keizyô	P	58 33.3							3 00.4	1790		
83	May 22	Taikyû	eP	20 46 40.0									Iiyûga-nada, Miyaza- ki Prefecture. λ=131 °8E, φ=31.°9N. Felt at southern coast of Kyûsyû district.	
		Keizyô	P	47 39.4										
		Zinsen	eP?	47 48.6										
84	May 23	Taikyû	eP	16 37 52.9							1 12.6	666	Ditto.	

No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
					N	E	Z	N	E	Z			
85	May 23	Keizyô	P	16 38 22.5								λ=131.°7E, φ=31.°4N.	
		Zinsen	eP?	38 24.2					1 23.8	770			
		Heizyô	eL	41 24.0									
		Taikyû	eP	16 53 09.5					1 27	646			
86	June 2	Keizyô	eP	53 35.5							Ditto. λ=131.°4E, φ=31.°2N.		
		Zinsen	e	55 05									
		Heizyô	L	56 44									
		Husan	P	7 39 55.7					1 11.3	650			
87	June 3	Taikyû	P	40 06.8					1 26.8	800	Miyakonozyô, Miyazaki Prefecture. λ=131.°1E, φ=31.°7N. Felt at SE part of Kyûsyû.		
		Keizyô	P	40 37.3	+ 37	+117		4.8	5.2	1 28.0		810	
		Zinsen	P	40 37.3						1 33.8		860	
		Heizyô	P	41 04.3						1 49.0		1010	
		Medan	i	7 46 31									
		Batavia	Pv	46 54						6 34		4960	
		Hamburg	eZ	51 02	14	21	20	15	15	15			
		Württemberg	iPz	51 21								9800	
		Pasaden	eP	51 02									
		Husan	P	17 10 55.9									Neighbourhood of Amami-Oosima, Kagosima Prefecture.
Taikyû	P	11 01.3						1 27.3	800				
Zinsen	eP	11 20.8						1 55	1070				
Keizyô	P	11 25.8						1 43.2	950				
Heizyô	P	11 56.8						2 24.9	1375?				
Medan	i	17 16 35											
Batavia	P	16 57											
Hamburg	ePz	21 32	9	12	10	13	13	13					
Württemberg		21 50							10000				
Pasadena		22 17											
88	June 6	Taikyû	eP	2 33 31.8						3 53.?	2350?	Philippine. Manila gives λ=121°35'E, φ=14°20'N. Felt strongly at Ma- nila.	
		Zinsen	P	33 44.0						4 26.6	2780		
		Keizyô	P	33 45.5						4 23.8	2745		
		Heizyô	P	33 55.5									
		Amboina	iP	2 30.3						2.8	410		
		Batavia	P	33 35						5 22	3760?		
		Medan	P	33 36						4 48	3220		
		Hamburg	ePz	41 27	25	5	10	24-30	24-30	21			
		Württemberg	eP	41 39							10600		
		89	June 7	Zinsen	P	11 51 25.9							4 24.0
Heizyô	P			51 27.7						4 09.8	2560		
Keizyô	P			51 30.6						4 12.6	2600		
Taikyû	P			51 39.0						4 37.5	2925		
Medan	P			11 51 24									
Batavia	eP			52 54									
Hamburg	ePz			57 10		8	11		11	11			
Württemberg	eP			57 21						9 13	7800		
Pasadena	eP			12 05 05									

No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
					N	E	Z	N	E	Z				
90	June 7	Zinsen	P	11 59 03.5	μ	μ	μ	s	s		2 34.0	1470		
		Taikyū	eP	59 58.5										
		Keizyō	eP?	12 00 07.2		- 81				16.0		1 52.?	1042?	
91	June 8	Heizyō	P	18 13 36.3										(r) 180km, ENE off Miyako, Iwate Prefecture, λ=144.°0E, φ=40.°2N. Felt in eastern part of Tōhoku, southern part of Hokkaidō, and a part of Kwantō districts.
		Taikyū	P	13 56.1								2 29.1	1421	
		Keizyō	P	14 04.5		+ 36				16.0		2 38.6	1520	
		Zinsen	eP	14 06.0										
		Urakawa		18 11 20.6	±470	±460		3.1	2.0			27.3	202	
		Miyako		11 22	-600	-540		1.0	1.0			26	193	
		Morioka		11 26.1	NE±430	NW±600	- 83	1.5	1.4	1.5		31.7	235	
		Sendai		11 43.3	-256	-237	-108	3.5	3.3	2.8		44.7	332	
		Tōkyō		12 12	+ 80	- 75		4.8	6.0			1 00.6	546	
		Wazima		12 23.2	+ 45	± 31	± 9					1 16.1	691	
		Hamamatu		12 30	± 20	± 20		4.0	4.0			1 39.0	910	
		Oosaka		12 53.3	+ 28	+ 25	- 6	4.7	5.3	2.8		2 09.5	1215	
		Kōti		13 23										
		Titi-zima		13 47								2 17	1290	
		Hukuoka		13 50.3								2 51.7	1657	
		Taihoku		16 02.7								4 30.3	2830	
		Pasadena	ePz	18 19 30										
		Saint Louis	eP	21 54							12 06	11625		
		Hamburg	iPz	22 44	12	15		7 21-30	21-30	18				
		Württemberg	eP	23 07							10 16	9200		
		Florissant	iPz	23 25							10 35	9490		
92	June 12	Taikyū	eP	21 11 01.9									(r) Kisen-numa, Miyagi Prefecture, λ=141.°7E, φ=38.°8N. Felt in all Tōhoku, Southern part of Hokkaidō, and Small part of Kwantō districts.	
		Heizyō	P	11 10.3										
		Keizyō	P	11 13.8										
		Zinsen	eP	11 17.4										
		Sendai		21 08 40.0	-840	-660	-161	3.7	3.9	1.2		12.2		91
		Akita		08 50.5	-1010	±1180	-760	3.1	3.5	2.1		22.3		165
		Tōkyō		09 20.0	±225	±119		3.8	4.3			57		423
		Sapporo		09 24.8	- 60	+ 73			2.0			56.3		418
		Wazima		09 26.4	± 48	± 34						1 27.0		800
		Hamamatu		09 42.9	+ 33	+ 41		2.0	2.0			1 08.0		620
		Oosaka		10 00.5	- 69	± 58	+ 14	3.9	4.3	3.1		1 36.7		887
		Hamada		10 31.0								1 46.6		986
		Kōti		10 41	± 20				5			2 05.0		1170
		Hukuoka		11 03.9								2 11.9		1239
		Titi-zima		11 17								1 55		1070
				Pasadena	eZ	21 20 00								
		Württemberg	eP	20 42								9400		
93	June 13	Taikyū	P	20 35 39.4							2 31.1	1441	(r) 170km eastern off the mouth of the River Mabuti, Aomori Prefecture. λ=143.°7 φ=40.°7N. Felt in all part of Tōhoku and southern part of Hokkaidō.	
		Heizyō	P	35 51.8										
		Keizyō	P	36 44.0							2 37.8	1510		
		Zinsen	eP	36 47.7							2 36.?	1490?		
		Urakawa		20 34 03.3		±562				2.1		18.8		140

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
				N	E	Z	N	E	Z			
		Morioka	20 34 14.0	NE660	ES700	-320	1.3	1.3	1.5	24.1	179	
		Sapporo	34 19.1	±311	-489	+198	2.8	2.0		37.2	277	
		Akita	34 21.4	-1950	-1900	-1046	2.0	2.4	1.9	37.0	275	
		Tôkyô	35 08	+275	+250	+143	3.3	2.2	3.5	1 25	780	
		Ootomari	35 09.5							1 40.5	925	
		Wazima	35 10.8	± 75	+103	± 18				1 16.2	692	
		Hamamatu	35 43.0	- 58	+ 73		2.6	2.6		1 09.1	631	
		Oosaka	35 47.7	± 83	- 70	- 25	3.8	4.0	2.6	1 49.9	1019	
		Hamada	36 14.9							1 53.8	1058	
		Kôti	36 13							2 17	1290	
		Hukuoka	36 38.0							2 33.4	1464	
		Taihoku	38 52.7							4 22	2720	
		Pasadena	eP 20 45 21							9 47	8530	
		Hamburg	ePz 45 32							9 50	8200	
		Württemberg	eP 45 57							10 08	9100	
		Florissant	ePz 46 22							10 53	9880	
		Saint Louis	eS 56 56									
94	June 13	Zinsen	e 22 51 47									Alaska. J. S. A. gives λ=149°W, φ=16°N.
		Sitka	iP 22 21 59							2 05	1170	
		Saskatoon	P 25.4							4 30	2800	
		Pasadena	iP 26 39							5 28	3675	
		Florissant	ePz 27 46							6 28	4735	
		Saint Louis	eP 27 50							6 07	4350	
		Ottawa	eP 28 08							6 37	4910	
		Buffalo	iP 28 12									
		Fordham	iP 28 40							7 04	5400	
		Georgetown	iP 28 42							7 06	5440	
		Hamburg	ePz 30 29									
		Württemberg	eP 31 04							9 01	7650	
95	June 18	Taikyû	P 21 40 19.6							2 08.5	1205	(r) 100km. eastern off Kinkasan, Miyagi Prefecture.
		Husan	P 40 28							2 07	1190	λ=142.°8E, φ=38.°5N.
		Keizyô	P 40 30.2	+326	-470		13.0	15.0		2 21.0	1330	Felt from Southern part of Hokkaidô to eastern part of Ty- ûbu districts.
		Zinsen	P 40 34.1	±330	±950		13	23		2 19.0	1310	
		Heizyô	P 40 53.0							2 26	1390	
		Sendai	21 37 56.1	-13100	-8620	+10200	3.5	3.4	4.7	13.9	103	
		Morioka	38 06.5	sw12700	SE8300	-8700	2.2	2.2	2.4	23.6	176	
		Akita	38 24.9	+25750	+16900		2.4	2.5		35.6	265	
		Tôkyô	38 30.0	-2500	-200	-2125	3.3	3.3	4.3	43.7	324	
		Wazima	38 40.5	+813	+570	± 82				1 05.6	596	
		Sapporo	38 49.5	±5650	-3000	+760	3.2	2.6		57.0	423	
		Hamamatu	38 59.9	-583	-527		2.8	2.8		1 04.6	586	
		Oosaka	39 15.8	±610	-1000	-256	4.0	4.0	2.3	1 26.3	793	
		Ootamari	39 38.0	- 58	+175		3.9	3.5		1 26.5	795	
		Kôti	39 39.6	±1000	±800		2.6	2.6		1 48	1000	
		Hamada	30 47.6	- 71	+ 47		12.0	11.6		1 46.3	983	
		Titi-zima	40 09							2 00	1120	
		Hukuoka	40 12	-1200	+1300	±1800	17.3	19.5	17.8	2 17	1290	
		Dairen	40 22.0	+ 20			21.0			3 15.4	1914	

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
				N	E	Z	N	E	Z			
96	June 24	Naze	21 ^h 40 ^m 59.3 ^s	+ ^μ 6	+ ^μ 11	+ ^μ 4	15.2 ^s	16.5 ^s	18.2 ^s	2 54.3	1683	
		Taihoku	42 32.6	±850	±400	±230	20.5	16.0	13.6	4 00	2440	
		Palau	43 10.3							5 16.5	3493	
		Amboina	iP 21 46 07							6 17	4720	
		Medan	P _N 46 43								6020	
		Honolulu	iP 47 00							7 37	6010	
		Batavia	iP _Z 47 07							7 39	6110	
		Sitka	iP 47 08							11 32	10775	
		Pasadena	iP 49 24							9 34	8310	
		Ukiah	e 49 00							9 00	7600	
		Hamburg	iP _Z 49 42							9 41	8200	
		Württemberg	iP 50 04.5	127	93	205	17	17	16		9250	
		Saint Louis	iP 50 29							10 45	9705	
		Florissant	iP _Z 50 31							10 44	9680	
		Ottawa	eP 50 34							10 45	9820	
		Buffalo	iP 50 38							10 50	9820	
		Georgetown	iP 50 58									
		Zinsen	eP 22 03 19	-480	±230	+280	16	14	14	7 15	5600	Samatra. Batavia gives λ=104.°2E, φ=5°.0N. Destructive along SW coast of Sumatra. Great number of after shocks accom- panied.
		Heizyô	P 03 27.4							7 39.9	6070	
		Taikyû	eP 03 28.1	±220	±289		11	13		6 55.0	5235	
		Keizyô	eP 03 38.1		-330			14		7 01	5340	
		Husan	e 13 12									
		Soengel Langka	iP 21 55 00									
		Batavia	iP 55 19									
		Malabar	P 55 39									
		Medan	P 57 16									
		Amboina	P 22 00 03							3 51.?	2330?	
		Württemberg	eP 08 20		100	120		21	21	11 50	10500	
Hamburg	eP _Z 08 21	440	230	160	30	24-31	33					
Sitka	iP' 13 07											
Pasadena	iP' 13 59											
Ottawa	eN 14.2											
Buffalo	eP' 14 14											
Saint Louis	eP' 14 19											
Florissant	iP' _Z 14 19							11 51	11250			
Georgetown	eP' 14 24											
Charlottesville	iP' 14 33											
San Juan	eP' 15 10											
97	July 3	Zinsen	eL? 15 26 32									
		Keizyô	eL? 26 47.3									
		Medan	eP 15 13 25							3 22	1910	
		Batavia	e 19 35									
Württemberg	eL 38											
98	July 9	Zinsen	P 34 09									(r) SE off the is- land of Etorohu, the Kurile Islands. λ=149.°5E, φ=43.°0N. Felt slightly at Nemuro.
		Taikyû	P 34 19.9						3 44	2245		
		Keizyô	P 34 21.5		78			17.0	3 18	1940		
		Heizyô	P 34 23.4						3 50	2320		

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
				N	E	Z	N	E	Z			
		Nemuro	h m s 1 30 57.7	μ ±230	μ -120	μ -	s 3.5	s 4.5	s -	m s 39.0	cm 289	
		Sapporo	31 42.8	-161	-215	-66	3.8	3.8	2.9	1 36.3	883	
		Ootomari	31 58.1	-83			2.0			1 32.0	850	
		Akita	32 06							2 32.6	1456	
		Sendai	32 15.9	± 80	± 60		18.2	15.1		1 40.5	1535	
		Hamamatu	32 48							3 00.0	1745	
		Tōkyō	32 54							1 59.?	1110?	
		Wazima	32 57.6	± 8	± 9		18.2	18.2		2 14.8	1268	
		Oosaka	33 48.7	- 9	- 26	+ 8	5.4	6.1	2.7	3 00.3	1750	
		Hamada	33 59.5	- 46	- 52	- 86	16.7	21.6	19.4	3 18.2	1943	
		Titi-zima	34 20.4							3 10.5	1855	
		Hukuoka	34 21.9	± 42	± 31		15.4	17.6		3 35.0	2135	
		Naze	35 14.0							4 13.4	2604	
		Taihoku	36 46									
		Honolulu	e 1 37 27							8 23	6880	
		Sitka	iP 38 34							7 16	5620	
		Batavia	e 39 15									
		Medan	e 40 25									
		Pasadena	ePz 41 02							8 58	7560	
		Hamburg	iPz 1 41 50	13	16		20	17		10 40	9600	
		Württemberg	iP 42 15.5							10 00	8790	
		Florissant	iPz 42 17							10 02	8830	
		Saint Louis	eP 42 12							10 00	8790	
		Ottawa	eP 42 20							10 03	8900	
		Georgetown	eP 42 40							10 42	9640	
99	July 9	Keizyō	P 9 32 18.6		- 44				16.0	3 23.8	2010	SE off the island of Etorohu, the Kurile Islands. J. S. A. gives $\lambda=153.^{\circ}2E$, $\varphi=45.^{\circ}3N$.
		Taikyū	eP 32 21.2							3 41.0	2210	
		Zinsen	P 32 26.4							3 44.7	2260	
		Sitka	eP 9 36 31							6 45	5055	
		Pasadena	eZ 38 55									
		Hamburg	ePz 39 46	11	12	18	18	23	18	10 13	9050	
		Württemberg	eZ 40 11							9 58	8750	
		Florissant	iPz 40 14							10 02	8830	
		Saint Louis	eP 40 18							10 28	9350	
		Georgetown	iP 40 49									
		Honolulu	S 43 46									
100	July 9	Taikyū	P 9 52 34.1							3 46.0	2270	Ditto.
		Keizyō	P 52 34.6									
		Zinsen	P 52 37.7							3 49.8	2320	
101	July 9	Zinsen	eP? 11 25 35							4 16.?	2640?	Ditto.
		Keizyō	eP? 25 37.0							4 00.6	2510	
102	July 9	Keizyō	P 12 34 57.4		-221				16.0	3 56.2	2390	(r) SE off the island of Etorohu, the Kurile Islands. $\lambda=149.^{\circ}0E$, $\varphi=42.^{\circ}5N$. Felt slightly at Kusiro.
		Taikyū	P 34 58.0							3 31	2090	
		Zinsen	P 34 59	-337	±174		20.6	16.3		3 47	2280	
		Heizyō	P 35 05.8							3 54	2360	
		Nemuro	12 31 32.1	-550	-190		5.5	4.2		41.7	309	
		Sapporo	32 19.7	-205	-346	-119	3.2	3.0	41	1 24.7	777	

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
				N	E	Z	N	E	Z			
		Ootomari	h m s 12 32 34.6	μ +275	μ	μ	s 2.6	s	s	m s 2 04.0	km 1160	
		Akita	32 50.5							4 02.8	2468	
		Sendai	32 51.1	-575	-461	±133	16.7	16.3	14.0	1 41.8	938	
		Tōkyō	33 29.1							3 02.4	1774	
		Wazima	33 36.6	± 26	+ 35	± 9	19.1	17.0	17.9	2 24.7	1371	
		Gihu	33 55.7	±250	-330	-260	16.0	16.0	16.5	2 37.0	1500	
		Oosaka	34 17.7	- 33	-202	- 7	9.8	9.8	2.5	3 23.7	2007	
		Kōti	34 32.5							3 22	1990	
		Hamada	34 35.1	+620	-286	-420	27.0	23.2	17.7	3 24.1	2011	
		Titi-zima	34 53.4	+ 70	+150		11	11		3 05.2	1802	
		Hukuoka	34 58.9	+200	±350	±320	21.0	17.0	17.2	3 37.6	2166	
		Naze	35 48.2	± 13	± 14	± 7		19.6	19.3	4 17.7	2661	
		Taihoku	37 09	±310	±360	±170	17.7	18.5	18.5	5 45	3965	
		Sitka	iP 12 39 07							6 48	5105	
		Honolulu	eP 39 24							7 00	5320	
		Amboina	P 39 48							7 10	5580	
		Medan	eP 40 54							8 19	6850	
		Batavia	P 41 12									
		Pasadena	iPz 41 37							8 59	7580	
		Tucson	eP 42 20							9 27	8140	
		Hamburg	iPz 42 27									
		Florissant	ePz 42 51							10 03	8850	
		Saint Louis	iPz 42 51							10 06	8910	
		Württemberg	iP 42 53							10 08	9000	
		Ottawa	eP 43 00							10 04	8870	
		Fordham	eP 43 18									
103	July 9	Zinsen	eP 16 11 19							3 51	2331	Eastern off the cape of Nosyappu, Hokkaidō district.
		Taikyū	eP? 11 23							3 46?	2270?	
		Keizyō	eP? 11 28.0							3 52?	2340?	
		Heizyō	e 19 48									
		Pasadena	eZ 16 18 02									
		Hamburg	ePz 18 53	2	2	6	18	18	18			
		Württemberg	eP 19 18							10 02	8830	
		Saint Louis	eP 19 18							10 02	8830	
104	July 9	Keizyō	eP 17 55 47							4 01	2450	Ditto.
		Zinsen	e 56 06									
		Taikyū	e 59 35									
105	July 9	Keizyō	eP? 22 19 13							4 19.?	2680?	Ditto.
		Zinsen	e 22 24									
		Taikyū	e 22 44									
106	July 10	Taikyū	P 0 24 43.0							2 30.0?	1430?	(r) 250km. eastern off Kamaisi, Iwate Prefecture. λ=144.°8E, φ=38.°9N. Felt from southern part of Hokkaidō to NE part of Kwantō districts.
		Keizyō	eP 24 52							2 36	1490	
		Zinsen	P 25 00							2 38	1510	
		Heizyō	P 25 01.7							2 41.?	1540?	
		Miyako	0 22 18	+ 702	-717		1.0	1.0		16	119	
		Morioka	22 20.9	NE>500	NW>500	±300				0.9	30.4	226

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
				N	E	Z	N	E	Z			
		Sendai	h m s 0 22 23.8	μ -444	μ +283	μ -148	s 2.7	s 2.5	s 2.6	m s 31.3	km 232	
		Akita	22 33.3	-2500	±1000	-378	2.4	2.4	2.4	38.9	289	
		Sapporo	22 48.0	-141	-181		0.9	1.1		52.5	390	
		Tôkyô	22 50.9	-145	±130	± 78	4.6	5.0	4.6	53.2	395	
		Wazima	23 07.7	+141	+156	+ 54	2.7			1 06.5	605	
		Gihu	23 21.5	+ 35	- 30	- 18	4.0	1.4	1.4	1 16.0	690	
		Oosaka	23 39.9	+ 90	+108	+ 19	4.3	4.0	2.2	1 00.9	549	
		Kôti	24 06									
		Hamada	24 10.3							2 21.5	1335	
		Titi-zima	24 25.1							2 00.0	1120	
		Hukuoka	24 34.5							2 52.0	1660	
		Naze	25 22.6									
		Taihoku	26 50							4 58	3215	
		Pasadena	iP 0 33 12							9 32	8240	
		Hamburg	iPz 33 42		4			20				
		Württemberg	eP 34 04.5								9300	
		Florissant	iP 34 19									
107	July 10	Taikyû	P 10 41 05.0									Borneo.
		Zinsen	P 14 20.4									
		Keizyô	P 41 22.9							6 27.6	4729	
		Amboina	iP 10 34 29							1 04	580	
		Pasadena	ePz 47 32									
		Württemberg	e 52									
		Florissant	iPz 54 27							6 52	5180	
		Saint Louis	eP 54 31							9 50	8590	
		Ottawa	e 54 55									
108	July 11	Keizyô	eP 6 02 40									Off the coast of Kuzyûkuri, Tiba Prefecture.
		Zinsen	eL? 06 18									
109	July 11	Taikyû	P 6 52 40.2									ESE off Katuura, Tiba Prefecture.
		Keizyô	P 32 59									
		Zinsen	e 53 00									
110	July 12	Keizyô	P 16 18 32.9							02.1	15.5	Local. Felt slightly at Keizyô.
		Zinsen	P 18 37.1							5.9	43.8	
111	July 13	Taikyû	e 8 00 05.0									(m) 60km, WNW off the island of Okuziri, Hokkaidô district.
		Keizyô	eP 00 08	± 12	± 15		11.0	12.0				λ=138.°7E, φ=42.°4N.
		Zinsen	e 00 14									Felt at SW part of Hokkaidô and North part of Tôhoku districts.
		Sapporo	7 58 08.1	+348	+381		2.5	2.9		21.7	161	
		Akita	58 19.1	-128	-102		3.4	3.4		26.2	195	
		Sendai	58 45.6	+ 42	+ 20	± 14	10.9	7.5	9.9	1 45.4	974	
		Wazima	59 12.9							34.5	256	
		Tôkyô	59 23.2									
		Gihu	59 33.4	+ 16			3.2			1 32.0	850	
		Siomisaki	8 00 02.4									
		Hamada	01 37.3							2 39.5	1525	

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
				N	E	Z	N	E	Z				
		Pasadena	iP	h m s	μ	μ	μ	s	s	s	m s	km	
		Florissant	iPz	09 40							6 29	4755	
		Saint Louis	iPz	09 40							7 54	6330	
		Ottawa	iP	10 04							7 53	6310	
		Fordham	iP	10 31							8 12	6700	
		Georgetown	iP	10 32							8 41	7230	
		Hamburg	iPz	11 37	6	5		18	18		8 37	7150	
		Württemberg	eP	12 03.5							10 02	9000	
		San Juan	eP	12 42							10 28	9350	
118	July 19	Keizyô	e	20 59 01									
		Zinsen	e	21 00 20									
		Taikyû	e	03 41									
119	July 20	Taikyû	P	23 17 08.4									
		Keizyo	P	17 18.4							3 25.6	2026	(r) 280km. eastern off Kinkasan, Miyagi Prefecture.
		Zinsen	P	17 22.1									λ=144.°3E,
		Heizyô	P	17 27.8									φ=38.°5N.
		Morioka		23 14 48.0	NE>500	NW>500	-220	1.2	1.2	1.1	33.7	250	Felt from Southern part of Hokkaidô to Kwantô districts.
		Sendai		14 48.3	+480	+515	-241	1.7	1.6	1.7	34.4	255	
		Akita		15 02.0	+563	-434	+112	1.1	1.7	1.9	42.2	314	
		Sapporo		15 09.9	-133	+187	- 81	1.6	1.6	1.7	51.6	383	
		Tôkyô		15 14.9	+170	+210	± 85	3.8	1.6	3.5	53.5	397	
		Wazima		15 33.6	-102	-150	+ 59				1 06.3	603	
		Gihu		15 45.8	- 52	- 58	+ 13	1.6	1.6	2.2	1 17.2	702	
		Oosaka		16 01.7	+ 92	+140	+ 17	5.0	5.0	1.9	1 53.9	1059	
		Kôti		16 28									
		Hamada		16 35.5							2 27.9	1409	
		Titi-zima		16 44.8							2 00.2	1122	
		Hukuoka		16 59.9							2 55.3	1693	
		Pasadena	iP	23 25 35									
		Ottawa	e	26 49									
		Hamburg	ez	26 07	3			20					
		Württemberg	eP	26 29							10 21	9200	
120	July 22	Zinsen	eP	21 03 34							6 46	5070	Aleutian.
		Taikyû	P	03 38.5							6 50.0	5145	J. S. A gives
		Heizyô	eP	03 39.6							6 33.9	4845	λ=166.°1W,
		Keizyô	e	22 57									φ=51.°9N.
		Sitka	iP	20 59 48							3 01	1760	U. S. C. G. S. gives
		Honolulu	eP	21 01 42							5 18	3515	λ=169°W, φ=52°N.
		Pasadena	ePz	02 46							6 19	4575	
		Tucson	iP	03 40							6 48	5105	
		Florissant	iPz	04 38							7 32	5920	
		Saint Louis	iPE	04 39							7 34	5960	
		Ottawa	eP	05 03							7 56	6400	
		Fordham	iP	05 34							9 12	7840	
		Amboina	P	06 37									
		Hamburg	iPz	06 52	44	63	43	20	20	20			
		Medan	e	06 57									
		Württemberg	iP	07 19							9 58	8600	

No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
					N	E	Z	N	E	Z			
		San Juan	iP	^h ^m ^s 21 07 41	μ	μ	μ	s	s	s	^m ^s 10 21	9210	
		Barcelona	eP	07 59									
		Batavia	e	08.2									
121	July 24	Heizyô	P	8 39 29.3							1 16.2	690	Southern off Vladivostock.
		Keizyô	iP	39 32.7							1 46.8	988	λ=132.°5E,
		Zinsen	P	39 34.3							1 19.6	730	φ=42°N.
		Taikyû	P	39 41.8							1 25.6	790	
122	July 24	Keizyô	e	19 08 13									J. S. A gives λ=174.°5W, φ=15.°2S. (SW to Samoa.)
123	July 28	Taikyû	eP	16 45 00.5							54.5?	405?	(m) 15km. WSW off the city of Wakayama.
		Keizyô	eP?	46 40.1									λ=135.°0E,
		Zinsen	eP?	49 50							1 42?	940?	φ=34.°2N.
		Heizyô	eP?	47 34.8							2 32.4?	1450?	Felt in Kinki, Tyûgoku, Sikoku and Tyûbu districts.
		Wakayama		16 43 30.5	±950	+950	+650	0.9	0.8	0.9	04.3	32	
		Sumoto		43 31.4	-513	-556	-128	1.9	2.6	2.3	04.9	36	
		Kôti		43 48.6	±200	±180	±100	2.9	2.9	2.0	17.8	132	
		Gihu		43 56.7	+235	-225	-110	1.4	1.9	1.5	29.4	218	
		Hamada		44 08.1	- 17	+ 12	+ 13	2.8	3.4	3.1	41.4	307	
		Wazima		44 22.8	+110	- 90	+ 14				55.4	411	
		Hukuoka		44 24.9	- 30	- 23		1.6	2.8		1 01.2	552	
		Tôkyô		44 44.4	± 80	± 65		3.3	2.8		51.2	380	
		Sendai		45 05.4	± 8	± 11		2.3	3.4		1 38.9	909	
124	Aug. 4	Keizyô	e	17 43 13.3									
		Zinsen	eL	47 10									
		Medan	eP	17 43 23							56	510	
		Württemberg	e	53									
125	Aug. 5	Zinsen	eP?	1 00 42									The Solomon Islands.
		Keizyô	eS?	10 08.0									
		Batavia	e	0 52 12									
		Pasadena	iP	0 57 16							10 56		
		Württemberg	ePP	1 05 46								15000	
126	Aug. 11	Heizyô	P	8 59 20.9							4 09.6	2560	North Burma, λ=96°E, φ=30°N.
		Zinsen	eP	59 40.3	+ 90	- 57	- 78	13.0	13.1	12.5	4 50.2	3095	Manila gives λ=97°E, φ=27°N.
		Keizyô	P	59 43.9	± 31	+ 40		10.0	12.0		4 43.6	3009	
		Taikyû	eP	59 53.7							5 05.6	3325	
		Medan	iP	8 58 59									
		Batavia	i	9 00 35									
		Hamburg	ePz	05 07							8 09	7760	
		Württemberg	iP	05 19.5							9 14	7880	
		Pasadena	iZ	13 15									
		Ottawa	eN	14.03									
		La Paz	Pz	14 08									
127	Aug. 14	Zinsen	e	22 21 07.4									
		Keizyô	eP	21 12.2							4 20.8	2702	

No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
					N	E	Z	N	E	Z				
128	Aug.15	Württemberg	eZ?	^h 22 ^m 26 ^s 23	μ	μ	μ	s	s	s	m s	km	(r) 280km, NNE off Titi-zima, the Bon-in Islands, λ=144.°0E, φ=29.°2N. Felt slightly at Titi-zima, Tukuba, Hukusima and Aizu.	
		Hamburg	e	46	3	8		7	7					
		Taikyû	P	3 01 20.3								2 55.0		1690
		Keizyô	P	01 44.1								2 59.?		1730?
		Zinsen	iP	01 48.0								3 12.?		1875?
		Heizyô	iP	02 04.9										
		Titi-zima		2 58 31.1	-140	- 87	- 76	0.4	0.4	0.2		26.1		194
		Tôkyô		59 41.9								1 18		710
		Gihu		3 00 00.5	+ 14	- 17		2.2	1.4			1 36.7		887
		Oosaka		00 05.0	- 26	- 14	+ 11	3.6	3.6	2.3		1 50.5		1025
		Sendai		00 08.7	- 63	-104	- 52	2.5	4.2	1.3		1 40.9		929
		Kôti		00 18										
		Wazima		00 20.2	+ 83	± 40	± 15							
		Hamada		00 40.4								2 13.3		1253
		Hukuoka		00 51.3								2 17.9		1299
		Naze		00 57.1								3 02.3		1773
		Sapporo		01 12.7										
		Akita		01 28.8	± 60	± 60		3.1	3.1			1 58		1100
		Taihoku		02 35.8								3 25.5		2025
Pasadena	iP	3 10 04												
Württemberg	ePPz	14.7									10500			
La Paz	Pz	17 41												
Ottawa	e	22												
129	Aug.18	Keizyô	e	8 22 22										
		Zinsen	e	22 34										
130	Aug.20	Zinsen	eP?	11 50 03.8									SE part of Luzon. Manila gives. λ=124°50'E, φ=13°37'N.	
		Taikyû	P	50 08.3							4 14.0	2610		
		Medan	e	11 50 58										
		Batavia	e	52 04										
		Württemberg	eP	58							12	10700		
		La Paz	ePz	12 05 28		+ 7				24				
		Hamburg	e	09	8	10	13	23	23	16				
Ottawa	e	12												
131	Aug.20	Taikyû	P	12 11 09.3							4 13.0	2600	Ditto.	
132	Aug.22	Taikyû	e	13 21 51.4										
		Württemberg	eL	13 25										
133	Aug.25	Heizyô	P	7 54 57.4							3 38.1	2170	λ=102°E, φ=34°N. Between Prov. of Szechuen and Kansu, China. J. S. A. gives λ=103.°2E, φ=30.°9N. H=7 ^h 50 ^m 36 ^s	
		Zinsen	eP	54 58	-262	+260	+420	6.8	7.4	8.0	3 49	2305		
		Keizyô	P	55 03.8		-344			9.0		3 45.2	2262		
		Taikyû	P	55 16.7	±187	±405		7.5	10.9		3 52.8	2350		
		Manila	iP	7 55 41							4 23	2730		
		Medan	P _N	56 24							4 53.?	3300		
		Bombay	iP	56 45							5 04	3295		

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
				N	E	Z	N	E	Z				
		Florence Nim.	eP	h m s	μ	μ	μ	s	s	s	in s	km	
		Fordham	eP	34 02									
		Ottawa	eP	34.3									
		Amboina	e	34 15									
		Neuchatel	eP	34 18									
		Strasbourg	eP	34 18									
		Florissant	iPz	34 18							11 53	11300	
		Württemberg	eP	34 19	72	57	95	20	20	20		12800	
		Kew	eP	34 23							12 45	12660	
		De Bilt	eP	34 33									
		Batavia	e	34 37									
		Hamburg	ePz	34 42	210	290	120	53	53	17			
		Madison	eP	34 46									
		Pasadena	iP'z	38 31									
		Ann Arbor	ePR ₁	39 00									
		Berkeley	ePR ₁	38 53									
		Bombay	iPR ₁	38 54									
		Victoria	e	39 00									
		Tucson	P'	38 39									
		Sitka	iP''	39 17									
136	Aug.29	Taikyū	P?	12 33 59									
		Sendai		12 31 40.9	±570	-352	-386	1.8	1.8	1.3	10.9	81	
		Tōkyō		32 03.5	±145	-222		0.8	0.8		32	238	
		Akita		32 04.6	-233	-148	-156	2.1	2.1	2.0	32.2	340	
		Wazima		32 27.9	-71	±6					51.4	381	
		Gihu		32 35.1	-59	+30	+17	1.3	1.5	1.8	57.3	425	
		Sapporo		32 53.6							1 16.2	692	
		Oosaka		33 07.0	+117	+196	-24	3.2	0.8	2.4	1 11.1	651	
		Kōti		33 30									
		Hukuoka		33 55.0							2 04.6		
		Hamada		35 00.5							43.7	324	
137	Sept. 2	Husan	P	16 42 53.5							1 52.0	1040	
		Taikyū	P	43 33.1	+57	+42		5.0	5.4		2 01.0	1130	
		Zinsen	P	44 04							2 13	1250	
		Keizyō	iP	44 04.4							2 09.7	1217	
		Heizyō	P	44 21.8							2 25.2	1375	
		Hatizyō-zima		16 42 19.9	±1250	±1250	-255				49.7	369	
		Titi-zima		42 27.1	-1200	-950	+630	0.7	0.7	0.8	57.1	424	
		Siomisaki		42 32.8	-220	+290	-114	3.7	3.8	3.7	58.2	432	
		Tōkyō		42 43.3		-651	-460		2.0	3.8	1 06.7	607	
		Kōbe		42 46.3	+490	-400	-187	6.5	4.8	5.2	1 08.5	625	
		Gihu		42 46.7	-350	-380		3.3	3.6		1 06.7	607	
		Kōti		42 48.4	±60	±50	+30	6.0	6.0	2.8	1 13.9	679	
		Wazima		43 05.2	+91	±101	±11	3.6	4.3	3.0	1 20.9	739	
		Hamada		43 09.2							1 27.5	805	
		Sendai		43 13.6	+384	+482	-174	2.5	2.4	2.4	1 32.2	852	
		Hukuoka		43 15.1	±210	-124		4.8	3.8		1 34.3	863	
		Akita		43 29.8	+489	-244		3.2	3.1		1 49.5	1015	
		Sapporo		44 08.3	-67	+133		4.4	6.8		2 17.2	1292	
		Ootomari		44 33.6		±65			3.2		3 02.0	1170	

(m) 55km. SE off the mouth of the River Abukuma, Miyagi Prefecture.
 $\lambda=141.4^{\circ}E$,
 $\varphi=37.7^{\circ}N$.
 Felt in SE part of Tōhoku and a part of Kwantō districts.

(r) 330km. southern off the island of Hatizyō.
 $\lambda=139.4^{\circ}E$,
 $\varphi=30.3^{\circ}N$.
 Depth about 300km. Felt abnormally at SE part of Kwantō and Tōhoku districts.

No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
					N	E	Z	N	E	Z				
140	Sept.21	Taikyū	eP	^h 3 ^m 16 ^s 12.5	μ	μ	μ	s	s	s	^m 1 ^s 23.0	760	(m) The strong Earthquake of Noto, Isikawa Prefecture. λ=136°58'E, φ=37°04'N. Damage at epicentral region.	
		Zinsen	eP	16 28.							1 50	1020		
		Keizyō	eP	16 28.6		- 70			10.0		1 31.3	843		
		Heizyō	P	16 45.5							1 58.8	1108		
		Wazima		3 14 32.2	+28000	-20250	-3250	1.2	1.2	1.2	4.8	36		
		Nagano		14 44.4	-2780	+2620	-992	9.2	4.1	2.6	15.2	113		
		Gihu		14 53.3	+340	+420	+280	1.9	2.0	2.0	21.5	160		
		Tōkyō		15 12.4	-500	+731	+500	4.8	3.1	3.7	36.0	267		
		Kōbe		15 12.1	+146	-160	-125	6.5	4.0	4.6	38.4	285		
		Sendai		15 18.9	+137	+160	- 60	4.4	2.5	4.4	47.0	349		
		Akita		15 23.0	+140	+128	- 89	3.1	3.5	2.7	52.1	387		
		Kōti		15 36.7	± 30	± 45	± 40	3.0	3.0	3.5				
		Hukuoka		16 08.5	-130	± 75		11.5	13.0		1 15.5	685		
		Sapporo		16 13.5							1 24.0	770		
		Naze		17 05.8							2 35.5	1485		
		Taihoku		22 11										
		Amboina	P	3 22 07										
		Pasadena	iP	26 38										
		Württemberg	eP	26 49										9400
		La Paz	Pz	34 22										
141	Sept.21	Taikyū	P	9 50 51.9									(m) 100km. SE off Miyako, Iwate Prefecture. λ=143.°E, φ=39.°N. Felt in eastern half part of Tōhoku district.	
		Keizyō	eP	51 03.2	+230			14.0						
		Heizyō	P	51 03.9							1 54.4	1064		
		Zinsen	eP	51 07										
		Sendai		9 48 31.8	+381	+272	-124	2.0	2.0	1.5	21.9	163		
		Morioka		48 32.7	NE250	NW318	-207	1.2	1.0	3.4	25.0	186		
		Akita		48 43.6	+477	-402	+467	2.1	2.9	2.8	43.1	320		
		Otomari		48 55.6							2 33	1460		
		Tōkyō		49 01.8	-188	-188	-166	3.1	3.4	2.8	1 06.5	605		
		Sapporo		49 13.1	-122	+193	- 65	3.6	2.9	3.4	53.2	395		
		Wazima		49 17.0	+ 75	+ 36	± 15	3.0	2.7	2.7	1 07.7	617		
		Gihu		49 30.9	± 21	- 33	+ 12	1.6	1.8	2.1	1 03.7	577		
		Kōbe		49 53.6	+ 19	+ 14	+ 14	17.5	16.0		1 25.0	780		
		Hamada		50 20.8							1 22.3	753		
		Kōti		50 24										
		Hukuoka		50 46.9	± 48	- 50		13.5	18.3		2 22.5	1345		
		Pasadena	eP	9 59 46										
Hamburg	ez	10 00 09	5	14		20	17							
Württemberg	ePz	00 29									9800			
Amboina	P	02 40												
La Paz	PE	07 54		+ 9			18							
Ottawa	eE?	11.8												
142	Sept.21	Zinsen	eP?	13 45 03.								110km. ESE off Miyako. λ=143.°E, φ=39.°N.		
		Keizyō	eP	45 12.5						4 12.5	2595	φ=39.°N.		
143	Sept.24	Keizyō	eP	15 27 22.6						6 11.2	4424	The Aleutian Islands. J. S. A. gives λ=174.°W, φ=51.°N.		
		Taikyū	eP	27 24.3						5 44.0	3945	H=15 ^b 19 ^m 50 ^s		
		Zinsen	eP	27 25						6 15	4500	Depth 30to50km.		

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks		
				N	E	Z	N	E	Z					
		Sitka	iP	h m s 15 25 00	μ	μ	μ	s	s	s	m s 4 17	km 2650		
		Honolulu	eP	26 18							5 26	3640		
		Pasadena	eP	27 52							6 36	4885		
		Madison	iP	29 16							7 45	6160		
		Florissant	iPz	29 34							8 00	6440		
		Saint Louis	iP	29 35							7 59	6420		
		Ottawa	eP	29 52							8 18	6780		
		Cincinnati	iP	29 54										
		Buffalo	iP	30 00							8 23	6880		
		Fordham	iP	30 22										
		Georgetown	iP	30 22							8 43	7270		
		Hamburg	iPz	31 17	20	14	25	27	27	27	9 38	8200		
		Württemberg	iPz	31 44.5							9 52	8500		
		Medan	eP	32 06							10 23	9380		
		Batavia	iP	32 17							10 32	9580		
		La Paz	eP'?	39 43		+ 49				24	10 54	9905		
144	Sept.25	Heizyô	P	18 57 38.8							5 12	3420	Württemberg gives λ=85°E, φ=33°N. (Tibet.)	
		Zinsen	eP	57 40.5		-112					11.1	6 28.5		4745?
		Keizyô	eP	57 42		±180					13.2	5 33.7		3769
		Taikyû	eP	19 02 39.6								6 38.6		4945?
		Medan	P	18 59 09										
		Batavia	eP	19 00 15								7 04	5480	
		Hamburg	iPz	00 40	180	210	84	12	11	11			5900	
		Württemberg	iPz	00 54.5	40	73	90	15	15	15	7 59	6500		
		Amboina	eP	01 16							6 29	5930		
		Ottawa	e	08 48										
		La Paz	P'z	10 07									16890	
145	Sept.30	Keizyô	eP	14 28 48.8							6 12.0	4440	New Guinea. Württemberg gives λ=139°E, φ=3.°S. H=14 ^h 20 ^m 50 ^s	
		Amboina	eP	14 23.5							2 53?	1700?		
		Batavia	ePz	27 29										
		Medan	eP	28 42							6 06	4540		
		La Paz	Pz	40 56										
		Württemberg	ePP	41 02										13200
		Florissant	ePz	41 44							9 50	8590		
		Ottawa	eE	43.5										
146	Oct. 2	Zinsen	eP?	15 50 18									The Pacific Ocean. J. S. A. gives λ=80.°W, φ=2.°S. La Paz gives λ=80.°W, φ=2.°S.	
		Keizyô	eP?	50 20										
		Taikyû	eL	52 23.6										
		La Paz	iPz	15 33 51		+113				15	3 40	2200		
		San Juan	iP	34 48										
		Woodstock	iP	37 10							6 45	5055		
		Georgetown	iP	37 07							6 11	4420		
		Saint Louis	ePN	37 12							6 13	4460		
		Florissant	iPz	37 13							6 13	4460		
		Cincinnati	iP	37 13							4 56	3195		
		Fordham	iP	37 28							6 26	4705		
		Tucson	eP	37 36							6 36	4885		
		Buffalo	iP	37 38							6 44	5035		

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
				N	E	Z	N	E	Z				
		Madison	iP	h m s	μ	μ	μ	s	s	s	m s	km	
		Ottawa	iPN	37 58							6 52	5180	
		Pasadena	iP	38 22							7 13	5610	
		Berkeley	iP	38 58							6 45	5055	
		Ukiah	eP	39 08							6 44	5035	
		Saskatoon	eP	39 11							7 58	6400	
		Victoria	iP	40 00									
		Honolulu	iP	41 28							9 51	8610	
		Württemberg	iPz	42 33.5							11 00	10500	
		Hamburg	iPz	42 35									
		Nanking	P	49 06									
		Amboina	e	49 12									
		Batavia	iE	49 37									
		Medan	iP	50 23									
147	Oct. 3	Taikyū	P	18 40 56.0							1 58.0	1100	(m) Central part of Niigata Prefecture. λ=138.°80E, φ=37.°20N. Depth 35km. Felt in Hokuroku, Tyūbu, Kwantō and Tōhoku districts. Small damage at epicentral region.
		Keizyō	iP	41 13.1		± 43				13.0			
		Zinsen	eP	41 16.6		± 33				13.6			
		Heizyō	P	41 25.0							1 56.4	1084	
		Takata		18 39 04.1							8.2	61	
		Niigata		39 05.0	+8720	+4720	-900	5.0	5.0	2.0	10.5	80	
		Wazima		39 18.2	+1300	-1400	-380			1.8	20.1	146	
		Tōkyō		39 22.5	+2000	+2000	-2500				22.8	169	
		Sendai		39 23.8	-668	-513	+268	1.9	2.4	3.4	25.7	191	
		Gihu		39 33.6	+160	-200		3.0	1.9		41.6	309	
		Akita		39 35.1	+428	+257	-170	3.7	2.8	2.3	30.8	229	
		Kōbe		39 53.9	- 85	+120	- 65	5.0	5.0	2.6	55.9	416	
		Sapporo		40 27.8	± 22	+ 40		3.2	3.4		1 11.5	655	
		Kōti		40 31	± 20	± 15	± 15	3	3	3.5	1 03	570	
		Hukuoka		40 45.2	± 45	± 25		9.2	13.2		1 52.9	1049	
		Taihoku		47 12									
		Nanking	P	18 42 55							3 29	2050	
		Pasadena	iP	50 55									
		Württemberg	ePz	51 17									
		La Paz	P	58 40									
148	Oct. 5	Taikyū	eP	13 53 57.3									Württemberg gives λ=56°E, φ=32.°5N. (Persia)
		Keizyō	eP	56 21.5		+ 18				14.0			
		Württemberg	eP	13 37 05							6	4300	
		Hamburg	eP	38 47	50	35		11	11				
		Nanking	e	38 48									
		Medan	e	39.2									
		La Paz	ePz?	47 51									
		Batavia	e	49									
		Ottawa	e	53									
149	Oct. 9	Taikyū	eP	12 09 43.3									Upper valley of the River Dōsi, Kanagawa Prefecture. λ=139.°0E, φ=35.°5N.
150	Oct. 14	Heizyō	P	7 50 28.7							26.4	196	Local.
151	Oct. 21	Taikyū	P	2 47 03.3							2 07.4	1190	SE off the cape of Nozima, Tiba Prefecture.



No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
					N	E	Z	N	E	Z				
152	Oct. 26	Keikyô	eP	^h 2 ^m 47 ^s 21.2	^μ ± 19	^μ - 45	^μ	^s 16.0	^s 14.0	^s			North Chile. La Paz gives λ=69°W, φ=22.°S. J. S. A. gives λ=68.°W; φ=22°S. U. S. C. G. S. gives λ=67°W, φ=22°S.	
		Zinsen	eP	47 23.4										
		Nanking	ePE	2 48 49										
		Württemberg	eL	3 30										
		Zinsen	eP?	0 00 45										
		Keizyô	eP?	02 14										
	Oct. 25	Sucre	iPN	23 29 27							45	410		
		La Paz	iPN	30 01	-265			3			22	775		
		San Juan	iP	35 43							5 53	4105		
		Georgetown	iP	38 21							8 11	6650		
		Fordham	iP	38 31							8 22	6860		
		Florissant	iPz	38 38							8 27	6960		
		Saint Louis	iP	38 38							3 26	6940		
		Buffalo	iP	38 46							8 44	7290		
		Ottawa	ePN	39 00							8 48	7370		
		Tucson	iP	39 05							8 54	7480		
		Pasadena	iP	39 38							9 25	8100		
		Hamburg	ez	41										
		Württemberg	eP	41 31							11 09	11000		
		Sitka	iPR ₁	45 33										
Amboina	i	47 19												
Malabar	P	47 27												
Batavia	iPz	47 36												
Medan	P	47 50												
153	Nov. 2	Zinsen	eP	12 34 44.3							6 25.9	4703	Aleutian. J. S. A. gives λ=168°W, φ=45°N. H=12 ^h 27 ^m 08 ^s	
		Keizyô	eP	34 48.8							6 13.6	4472		
	Sitka	iP	12 32 12							4 17	2650			
	Victoria	eP	33 30							4 27	2780			
	Honolulu	eP	34 35							6 34	4920			
	Pasadena	iP	35 07							6 47	5047			
	Chiufeng	iP	35 30	+ 23	- 24	- 38	21	21	21	7 27	5765			
	Nanking	iPE	35 50							8 00	6440			
	Madison	iP	36 34							7 58				
	Saint Louis	eP	36 51							8 43	7270			
	Florissant	iPz	36 52											
	Buffalo	iP	37 14											
	Fordham	iP	37 42											
	Amboina	i	38 15											
	Hamburg	ez	38 37	22	8	11	24	24	24					
	Batavia	e	39											
	Württemberg	eP	39 04							10 08	8750			
Ottawa	e	45.5												
154	Nov. 5	Keizyô	eP?	20 41 27.2									Mongolia?	
		Zinsen	eS	41 48.5										
		Taikyû	eP	42 15.6										
	Nanking	iP	20 31 37							3 55	2370			
	Chiufeng	P	31 57		+ 8	- 6		8	13	3 52	2338			

No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks	
					N	E	Z	N	E	Z				
159	Nov.22	Keizyô	eP	12 25 18.3							1 10.0	640	J. S. A. gives λ=150°E, φ=3°S The Bismark Is- lands.	
		Heizyô	eP	26 49.8										
		Nanking	ePE	12 23 13								2 18		1264
		Chiufeng	e	27 40										
		Taikyû	P	12 50 50.3								2 30.0		1430
		Zinsen	eP	51 05.6								6 57.0		5275
		Keizyô	eP	51 07.1								6 58.4		530
		Amboina	iPN	12 47 17								4 01		2530
		Batavia	iP	50 07										
		Malabar	P	50 31										
		Nanking	iP	51 07								7 04		5355
		Medan	eP	51 31								8 03?		6500?
		Chiufeng	iP	52 01	19	- 15	38	18	20	18		7 45		6079
		Honolulu	e	52 11								7 43		6120
		Sitka	eP	54 56								10 28		9350
		Victoria	e	55 30										
		Pasadena	iP	55 36										11300
		Hamburg	ePz	13 01.1	18	17	18	25	25	24				
		Württemberg	iP/z	01 23.5	20	10	27	20	20	20		8 50?		14100
		Cincinnati	iP'	01 38										
		Sucre	P'	01 39										
		La Paz	eP'N	01 44										
		Saint Louis	PR _E	01 58										
Florissant	iPR ₂	01 59												
Little Rock	ePR ₁	02 01												
Ottawa	e	03.0												
160	Nov.22	Taikyû	eP	19 01 33.5							1 50.0	1020	Vicinity of Amami- Oosima, Kagosima Prefecture.	
		Zinsen	eP?	03 03										
		Keizyô	eP?	03 11.2										
161	Nov.22	Nanking	e	19 01 30							2 58	1685	Ditto.	
		Chiufeng	P	03 01	- 1	+ 2	- 3	10	10	10	2 57	1677		
161	Nov.22	Taikyû	eP	22 33 44.0							2 08.0	1200	Ditto.	
		Keizyô	eP	34 54.2							1 44.6	966		
		Zinsen	eP?	35 05							1 06.3?	603?		
		Heizyô	eP	36 38.0										
162	Nov.28	Nanking	P	22 34 00				20			7	2 38	1475	Sumatra.
		Chiufeng	P	35 27								3 01	1723	
162	Nov.28	Zinsen	eP	11 19 12.6									Sumatra.	
		Keizyô	eP	39 14.1								2 51.0		1650
		Batavia	e	11 06 05								1 21		750
		Medan	eP	07 10								1 41		940
		Chiufeng	eP	18 09	+ 26	- 13	- 28	13	13	13		7 00		5264
		Nanking	ePN	18 41								7 25		5720
		Württemberg	eP	16 44								5 54		4300
		Hamburg	ePz	16 49	35	85	45	13	19	19		6 00		4400

No.	Date	Station	G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks		
				N	E	Z	N	E	Z					
				h m s	μ	μ	μ	s	s	s	m s	km		
		Pasadena	eZ	11 25										
		Sucre	eP?	29 24										
		Ottawa	eE	33										
		La Paz	LN	12 10 00	+ 22			20						
163	Dec. 2	Zinsen	eP	8 47 12.0							3 16.0	1920	ESE off Daitō, Formosa.	
		Nanking	ePN	8 45 58										
		Chiufeng	eP	47 43							3 55	2366		
		Medan	e	49.1										
164	Dec. 4	Heizyō	iP	19 37 20.1							2 48.0	1620	(r) Eastern off the Sōya Strait (140km. northern off Abasiri, Hokkaidō.) λ=144.°0E, φ=45.°2N. Deep. Abnormally felt in southern part of Hokkaidō and NE part of Tōhoku districts.	
Keizyō	iP	37 21.7							2 43.1	1561				
Taikyū	iP	37 23.5							2 48.1	1621				
Zinsen	iP	37 23.8	- 71	+ 81	+ 32	5.4	5.9	3.2	2 46.9	1609				
Otomari		19 34 34.4	+520	+713		1.9	2.2		35.0	260				
Nemuro		34 54.4	+500	-690					47.6	354				
Sapporo		35 07.5	+3000	-3050	+621	2.7	2.1	3.4	55.6	413				
Akita		35 45.2		±172	+113		3.7	3.2	1 13.8	678				
Sendai		35 57.2	+151	+198	+ 70	4.5	4.5	2.6	1 33.1	860				
Wazima		36 22.8	-360	-418		3.1	3.3		1 54.1	1061				
Tōkyō		36 30.4	-310	+300	±280	4.6	3.4	4.0	2 10.3	1223				
Gihu		36 44.3	-250	+218	- 91	3.4	4.5	2.5	2 14.8	1268				
Kōbe		36 57.9	+196	+ 90	-103	5.7	5.5	5.8	2 25.8	1387				
Hamada		37 13.5	-610	+580	-690	4.8	6.0	4.6	1 29.7	827				
Kōti		37 16.0	± 40	± 50	± 20	4.0	4.5	4.0	2 39	1520				
Hukuoka		37 31.8	-110	± 63		3.8	2.8		2 55.2	1692				
Titi-zima		37 59.3	- 47	- 17		4.5	4.5		3 18.4	1946				
Naze		38 20.0							3 46.3	2273				
Taihoku		39 23							4 50	2320				
Chiufeng	iP	19 38 18							3 36	2150				
Nanking	iP	38 46							4 06	2510				
Amboina	iP	42 17							6 53	5290				
Medan	iP	43 20							6 36	5020				
Batavia	iPz	43 42							7 58	6430				
Saskatoon	iP	44 05							8 10	6670				
Honolulu	i	44 32												
Pasadena	iP	44 38							8 46	7900				
Württemberg	iPz	45 17							9 16	8500				
Madison	iP	45 24							9 25	8100				
Ottawa	iPN	45 38							9 42	8440				
Saint Louis	iPN	45 46							9 43	8450				
Fordham	iP	46 02							9 53	8650				
Georgetown	iP	46 02							9 53	8650				
La Paz	ePz	52 48												
Sucre	P	52 49												
Hamburg	i	53 48												
165	Dec. 12	Taikyū	P	14 19 38.7							6 43.5	5025	Württemberg gives λ=153°E, φ=4°S. (New Britain.)	
Keizyō	eP	19 56.6							6 53.8	5211				
Zinsen	eP	19 56.8							6 54.4	5223				



No.	Date	Station		G. M. T.	Max. Amplitude			Period			Duration of P~S	Δ	Remarks
					N	E	Z	N	E	Z			
		Ambolna	iP	14 17 23	μ	μ	μ	s	s	s	m s	km	
		Batavia	iZ	19 31									
		Nanking		20 00							7 01	5300	
		Medan	eP	20 45									
		Chiufeng	iP	20 50							7 03	6015	
		Pasadena	iP	24 20									
		Hamburg	ePz	30 09	13	13	5	20	23	20			
		Württemberg	iP'N	30 16							10 40?	14300	
		La Paz	eP'E	30 31	+ 9	- 3		22	5			16700	
		Sucre	eP'	30 34								16700	
		Saint Louis	iP'N	30 36									
		Florissant	i	30 52									
166	Dec.15	Taikyû	eP	20 59 14.4									Felt rather strongly at Zensyû, T'yôsen.
167	Dec.20	Taikyû	eP	14 53 34.3									Ditto.
163	Dec.24	Zinsen	eP?	10 54 09.6							6 44.7?	5049?	New Britain?
		Amboina	iP	10 48 15							3 50	2320	
		Nanking	ePz	54 10									
		Chiufeng	eP	55 02							7 20	5742	
		Batavia	P	55 11							3 19?	2000?	
		Medan	e	55 15									
		Pasadena	iPz	59 08									
		Württemberg	iPS	11 16 38								14000	

5. The Seismic Reports of Weather Bureau of Tyôsen in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks
						A _N	A _E	A _Z				
1	Jan. 1	Pz	h	m	s	μ	μ		S 4.9	U 0.7	7000? ^{km}	Africa?
		PcPz?	8	59	07.9							
		SN?		59	29.							
		ScSN?	9	07	36.8							
		ScSE		08	33.0							
		eLE		08	34.7							
		F		17	29.							
			32	50.								
2	Jan. 3	ePE	15	30	16.2						1220?	ENE off Miyako.
		eSE?		32	26.3							
		eLE		33	40.7							
		F	16	00	50.							
3	Jan. 3	PE	22	43	06.1						920	The Nippon Sea. Deep earth.
		SN		44	46.5							
		F		50	30.							
4	Jan. 4	Pz	1	29	06.8						2100	SE off Titi-zima, the Bônin Islands.
		PN		29	07.2							
		iz		29	10.1							
		iN		29	10.2							
		iE		29	10.3							
		PR ₁ E		29	17.4							
		PR ₁ N		29	17.5							
		SN		32	39.1							
		eL		34	58.							
		F				Lost during change of record sheets						
5	Jan. 4	ePz?	4	09	11.8						6090?	Alaska.
		ez		09	18.3							
		eN		09	18.4							
		ePR ₁ Z		11	03.							
		ez		15	07.							
		SN		16	52.9							
		eLz		24	58.							
		ez		30	02.9							
		eH		31	08.							
F		41	50.									
6	Jan. 7	e	4	09	57.							NE off Miyako.
		eLN		12	31.							
		LE		13	17.							
		Lz		13	18.							
		MN		14	19.5	+ 340		17.6				
		ME		14	54.6		- 260	16.1				
		Mz		15	46.3			+ 280	13.9			
		C		21	40.							
		F	5	13	50.							
7	Jan. 8	ePE	6	32	06.						1430?	Off the mouth of the River Mabuti, Ao- mori Prefecture.
		ePz		32	09.7							

5. The Seismic Reports of Weather Bureau of Tyôsen in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks
						AN	AE	Az				
			h	m	s	μ	μ	μ	s	μ	km	
16	Feb. 9	FH	22	28	±							
		PEZ	3	59	25.9					N 0.0	1170	SW off the island of Hatizyô.
		PN		59	26.6					E 0.4		
		Sz	4	01	30.5					D 0.7		
		SE		01	31.3							
		SN		01	33.3							
F		07	30.									
17	Feb. 13	eP	2	55	08.					U+	3255	The Altai range.
		eSN	3	00	09.							
		eLz		03	57.							
		eLN		03	58.							
		C		11	54.							
		F		54	00.							
18	Feb. 13	eE	4	38	34.							
		eN		39	—							
		F		43	±							
19	Feb. 13	ePz	23	10	58.1						2340?	Eastern off the cape of Nosyappu, Hokkaidô district.
		ePE		11	00.2							
		eSE?		14	50.							
		eLE		17	59.							
		F		29	10.							
20	Feb. 19	P	4	29	16.7						1470	WSW off the island of Yonakuni.
		iPR _{1N}		29	22.0					N 1.1		
		iPR _{1Z}		29	22.5					W 1.1		
		eSz		31	51.					U 1.1		
		F		Lost in next quake								
21	Feb. 19	Pz	4	29	46.0						1640	
		PN		29	46.7							
		SE		32	31.							
		SN		32	32.							
		F	5	06	50.							
22	Feb. 23	eP'z	8	29	13.							Chile, Damage at Iquique.
		eP'N		29	15.							
		PR _{1z}		33	27.							
		PR _{1N}		33	29.							
		ePR _{2z} ?		36	24.							
		ePR _{2E} ?		36	35.							
		eN		37	11.							
		eE		38	30.							
		eZ		39	09.							
		eN		39	12.							
		eE		39	55.							
		eZ		40	27.							
		eScPcSPz?		43	26.							
eScPc3PH?		43	27.									

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No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks
						AN	AE	AZ				
			h	m	s	μ	μ	μ	s	μ	km	
		SR _{1N}	8	53	11.							
		SR _{1E}		53	24.							
		eSR _{2Z}		59	12.							
		eSR _{2E}		59	26.							
		eSR _{2N}		59	28.							
		eLH?	9	14	±							
		M _{1N}		16	18.	- 149			48.			
		M _{1E}		16	20.		± 90		43.			
		M _{2E}		28	06.		± 65		33.			
		M _{2N}		29	02.	± 40			30.			
		M _{3E}		35	02.		± 59		25.			
		M _{3N}		35	07.	± 39			30.			
		M _{4E}		41	20.		± 65		26.			
		M _{4Z}		42	28.			± 48	25.			
		M _{4N}		43	02.	± 130			30.			
		F	10	25	±							
23	Mar. 2	iP	17	34	19.2					S 1	1520	Strong earthquake off Sanriku. Great damage along Sanriku coast due to the tidal wave.
		iN		34	27.9					W 12		
		iN		34	35.2					U 9		
		SN		36	58.							
		ME		36	13.9		±7800		19.6			
		MZ		38	41.0			±7500	18.5			
		MN		39	22.6	±3700			11.9			
		C	18	01	10.							
		F	21	51	50.							
24	Mar. 2	P	18	29	33.1							After shock of No.23
		F			Lost in principal quake							
25	Mar. 2	P	19	44	49.2							Ditto.
		F			Lost in principal quake							
26	Mar. 2	P	20	46	06.4							Ditto.
		F			Lost in principal quake							
27	Mar. 2	eL	22	42	16.							Ditto.
		F		49	0.							
28	Mar. 3	P	1	20	26.3							Middle valley of the River Sensin, Zeura-hokudô, Tyôsen.
		S?		20	28.7							
		F		21	13.							
29	Mar. 3	eP	2	24	27.3							Philippine.
		e		24	33.							
		e		25	03.							
		e		28	37.							
		F		35	40.							
30	Mar. 3	P	4	41	05.3							After shock of No.23
		eL		45	01.							

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No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks	
						AN	AE	Az					
			h	m	s	μ	μ	μ	s	μ	km		
44	Mar. 11	F eN F	1	48	±							Ditto.	
45	Mar. 11	P i S iE iN PcS F	19	35	59.1						1430	WNW off Titi-zima, the Bonin Islands.	
				36	03.4								
				38	29.1								
				38	39.1								
				38	42.5								
				46	51.								
			20	07	20.								
46	Mar. 12	eL F	5	12	11.							After shock of No.23	
				26	±								
47	Mar. 17	P PcP S PcS L ScS eF	16	01	41.1						3250	The Aleutian Islands.	
				04	43.1								
				06	41.7								
				07	40.0								
				08	30.9								
				11	13.0								
				50	—								
48	Mar. 17	eS? eL? eF	19	43	17.							Mindanao.	
				46	13.								
			20	20	—								
49	Mar. 18	iP eS e L PcP eF	15	54	17.2				3.0 3.0 3.0	S E D	2 7 4	1465	Southern off the island of Hatizyô.
				56	50.8								
				57	43.5								
				58	27.5								
				59	06.8								
			16	07	—								
50	Mar. 23	ePe? eE eE eE eLN? F	17	42	28.8							Mongolia.	
				43	35.6								
				47	22.6								
				47	57.6								
				48	32.7								
			18	10	00.								
51	Mar. 25	P e S i F	12	52	09.8							533	Neighbourhood of Mt. Aso.
				53	02.2								
				53	21.6								
				53	25.1								
			13	05	00								
52	Mar. 31	ePe? eSn? eLN?	22	04	39.8							2020?	Mongolia ?
				08	05.								
				12	16.								

May be another quake.

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No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks
						AN	AE	AZ				
			h	m	s	μ	μ	μ	s	μ	km	
53	Apr. 1	F	22	27	±							
		ePN?	16	02	04.						920	After shock of No.23
		ePE		02	10.5							
		ePz		02	11.5							
		eSN		03	43.9							
		eSE		04	5.3							
		eN		05	4.							
		eLN		05	31.5							
		eLE		06	11.							
		eLz		06	17.							
		ME		07	30.			± 18		12		
MN		07	1.		± 20			13				
F		29	0.									
54	Apr. 1	PE	22	44	18.1						1600	Ditto.
		SE		47	04.1							
		eL		48	34.							
		F	23	03	±							
55	Apr. 2	eLN?	10	16	37.1							Ditto.
		F		24	±							
56	Apr. 9	PE	2	49	49.3							Ditto.
		LN		52	25.2							
		MN		55	49.0	± 93			10.8			
		Mz		56	35.3			± 51	11.0			
		ME		56	57.2		± 47		12.9			
F	3	38	00.									
57	Apr. 9	ePE?	10	33	17.							Ditto.
		F		50	±							
58	Apr. 19	ePE	2	58	57.8						1550	Ditto.
		eSN	3	01	40.							
		eLN		03	05.							
		F		14	00.							
59	Apr. 19	iP	6	48	00.9						1530	Mouth of the River Daidakusui, Formosa.
		SE		50	40.7							
		LE		51	01.5							
		C		58	57.							
		F	7	53	00.							
60	Apr. 23	ePE	6	09	15.8						8320	Near the island of Kos, Asia Minor.
		ePcPE		09	41.3							
		ePRI		12	0±							
		eSN		18	51.9							
		eScSN		21	06.							
		eLN		34	39.3							
F	7	09	00.									

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No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks
						AN	AE	Az				
			h	m	s	μ	μ	μ	s	μ	km	
61	Apr, 23	ePE	7	16	51.3							After shock of No.23
		ePN		16	53.3							
		eLN		19	13.7							
		Mz		22	59.8			+ 94	12.8			
		MN		23	06.8	- 47			11.2			
		ME		23	07.7		- 49		11.2			
		F	Lost in next quake									
62	Apr. 23	eP	8	29	11.3							Ditto.
		eL?		32	45.9							
		F		45	00.							
63	Apr. 27	ePN	2	45	32.9						6120	Alaska,
		ePz		45	33.4							
		ePE		45	36.3							
		S		53	15.5							
		eL	3	02	18.							
		ME		12	02.0		- 126		12.3			
		Mz		12	12.2			± 382	13.8			
		MN		12	14.1	- 173			12.3			
F	4	17	30.									
64	May 1	eP	18	34	22.8						2270?	Near the island of Etorohu, the Kurile Islands.
		eS?		38	09.							
		eL?		40	59.							
		F		56	00.							
65	May 1	eLN?	19	04	31.5							Ditto.
		F		03	00.							
66	May 1	ePN	19	55	22.0						2040	Southern off the isl- and of Etorohu, the Kurile Islands.
		ePE		55	26.4							
		eNE		57	11.1							
		eS		58	49.1							
		eLN	20	00	28.7							
		F		30	00.							
67	May 3	ePN	23	34	23.1						2905	The River Daidaku- sui, Formosa,
		ePcPNE		37	24.							
		eE		38	20.							
		eSE?		38	59.							
		F		49	20.							
68	May 8	eL?	11	35	03.							Mexico.
		F		12	06	50.						
69	May 12	eL	16	24	54.							
		F		31	30.							
70	May 16	ePE	1	20	06.9						4460	North Sumatra.
		ePN		20	08.9							

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No.	Date	Phase	G, M, T.			Amplitude			Period	First motion	Δ	Remarks
						A _N	A _E	A _Z				
			h	m	s	μ	μ	μ	s	μ	km	
		ePz	1	20	09.7							
		eSN		26	19.6							
		eSE		26	21.1							
		ScS?		30	26.3							
		eL		32	06.9							
		F	2	14	±							
71	May 19	eL	19	08	32.							The Atlantic Ocean.
		F		28	50.							
72	May 21	ePE	11	58	26.9						1730	SSE off the island of Hatizyô.
		eSEN	12	01	25.5							
		eLN		02	54.							
		F		13	50.							
73	May 22	eP?	20	47	48.6							Hyûga-nada, Miyazaki Prefecture.
		F		50	50.							
74	May 23	ePE?	16	38	24.2						770	Ditto.
		eS		39	48.0							
		eL		40	34.0							
		F		50	20.							
75	May 23	e	16	55	05.							Ditto.
		eL		55	49.7							
		F	17	03	40.							
76	June 2	PNZ	7	40	37.3							
		PE		40	37.6							
		Sz		42	11.1							
		SN		42	17.							
		C		45	09.							
		F	8	19	50.							
										N 2.6 W 0.7 U 2.8	860	Miyakonozyô, Miyazaki Prefecture.
77	June 3	ePz	17	11	20.8							
		eE		12	46.1							
		eSE		13	16.							
		eSN		13	23.							
		LE		14	00.							
		C		17	00.							
		F		50	30.							
											1070	Neighbourhood of Amami Oosima, Kagosima Prefecture.
78	June 6	PN	2	33	44.0							
		eSN		38	10.6							
		F		51								
											2780	Philippine.
79	June 7	Pz	11	51	25.9							
		ePE		51	26.3							
		eSz		55	49.9							
		eSN		55	51.							
		eSE		55	53.							
										Down.	2745	Burma.

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No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks
						AN	AE	AZ				
			h	m	s	μ	μ	μ	s	μ	km	
		F	Lost in next quake									
80	June 7	PN	11	59	03.5						1470	
		Pz		59	15.							
		Sz	12	01	37.5							
		SE		01	44.							
		F		22	20.							
81	June 8	ePE	18	14	06.0						1520	ENE off Miyako, Iwate Prefecture.
		eSN		16	44.6							
		eLN		17	48.1							
		F		54	40.							
82	June 12	ePZE	21	11	17.4							Kisen-numa, Miyagi Prefecture.
		eLE?		15	00.							
		F		20	30.							
83	June 13	eP	20	36	47.7						1490?	Eastern off the mouth of the River Mabuti, Aomori Prefecture.
		eSN?		39	24.							
		LN		40	28.							
		F		21	04 40.							
84	June 13	e	22	51	47.							Alaska.
		F		58	50.							
85	June 18	PN	21	40	34.1							
		PE		40	34.5							
		SN		42	53.1							
		LE		44	03.							
		ME		44	10.6							
		MN		45	09.7	± 330	± 950		23			
		C		51	10.				13			
		F		23	42 00.							
86	June 24	ePz	22	03	19.							
		ePE		03	20.							
		ePN		03	21.							
		e		04	05.							
		PR ₁ Z		05	27.0							
		PR ₁ N		05	28.0							
		PR ₁ E		05	30.							
		ePcSN		09	53.							
		SE		10	34.							
		SR ₁		13	57.							
		ME ₁		26	07.4		± 230		14			
		MN ₁		26	12.2	± 290			13			
		ME ₂		28	28.2		± 140		11			
		MN ₂		29	42.2	- 480			16			
		Mz		31	7.1			+ 280	14			
		C		43	30.							

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No.	Date	Phase	G. M. T.	Amplitude			Period	First motion	Δ	Remarks
				A _N	A _E	A _Z				
			h m s	μ	μ	μ	s	μ	km	
	25	F	0 06 40.							
87	July 3	eL? F	15 26 32. 36 20.							
88	July 9	P F	1 34 09. Uncertain							SE off the island of Etorohu, the Kurile Islands.
89	July 9	P eS eL F	9 32 26.4 36 11.1 38 01.2 Lost in next quake						2260	Ditto.
90	July 9	P eS eLN F	9 52 37.7 56 27.5 58 21. 10 50						2320	Ditto.
91	July 9	ePE? eSN? eLE eLN F	11 25 35. 29 51.0 33 16. 33 37. 46 30.						2640	Ditto.
92	July 9	P eN SN SE LE MN ME C F	12 34 59. 38 23. 38 46.1 38 51.2 40 12. 41 02.0 42 22.5 12 48 45. 14 18 40.	- 337	± 174		20.6 16.3		2280	Ditto.
93	July 9	ePE ePN eSE eSN eLN F	16 11 19. 11 24. 15 10. 15 11. 17 13. 38 40.						2331	Eastern off the cape of Nosyappu, Hokkaidô district.
94	July 9	e F	17 56 06. 18 10 30.							Ditto.
95	July 9	e F	22 22 24. 40 40.							Ditto.
96	July 10	P SN eL F	0 25 00. 27 37.6 29 16. Lost during adjusting instrument						1510	Eastern off Kamaisi, Iwate Prefecture.

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No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks	
						AN	AE	Az					
			h	m	s	μ	μ	μ	s	μ	km		
97	July 10	PN L? F	10	41	20.4 47 48. 11 09 40.							Borneo.	
98	July 11	eLN? F	6	06	18. 12 30.							Off the coast of Ku- zyûkuri, Tiba Pref- ecture.	
99	July 11	e eLN F	6	53	00. 56 40. 7 03 40.							ESE off Katuura, Tiba Prefecture.	
100	July 12	PE PN SN SE F	16	18	37.1 18 37.4 18 43.0 18 43.1 19 32.						43.8	Local. Felt slightly at Keizyô.	
101	July 13	eE eN eLN? F	8	00	14. 00 26. 02 21. 22 50.							WNW off the island of Okuziri, Hokkaidô district.	
102	July 14	iP S F	16	05	21.2 06 46.3 13 40.					S 4.0 W 2.7	780	Off Vladivostock.	
103	July 18	eSE F	11	28	44.3 36 40.							Ditto.	
104	July 18	e F	19	10	18. 44 30.							Philippine.	
105	July 19	e F	13	40	27. 57							Alaska.	
106	July 19	PH SE? F	15	07	56.1 14 23.8 38 50.						4735?	Alaska.	
107	July 19	e F	21	00	20. 07 50.								
108	July 20	PE eLN? F	23	17	22.1 22 23. Lost in microseismus								Eastern off Kinka- san, Miyagi Prefec- ture.
109	July 22	ePz ePE eSE eSN eSz	21	03	34. 03 39. 10 20. 10 21. 10 26.						5070	Aleutian.	

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No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks
						AN	AE	Az				
			h	m	s	μ	μ	μ	S	μ	km	
		eSSN	21	13	22.							
		eSSE		13	32.							
		eSSN		15	31.							
		eLz		17	46.							
		F	22	02	30.							
110	July 24	PH	8	39	34.3				1.4	W 2.6	730	Southern off Vladivostock.
		SE		40	53.9							
		F		46	20.							
111	July 23	ePz?	16	46	50.						940?	WSW off Wakayama.
		eSz?		48	32.2							
		F		51	20.							
112	Aug. 4	eLN	17	47	10.							
		F		51	30.							
113	Aug. 5	ePe?	1	00	42.							The Solomon Islands.
		eE		01	2.							
		eN		01	6.							
		eE		01	24.							
		eN		09	31.							
		eLN?		13	21.							
		F		23	00.							
114	Aug. 11	ePe	8	59	40.3						3095	North Burma.
		eSe	9	04	30.5							
		eE		04	39.5							
		eLe		07	57.							
		MN		09	04.0	+ 90			13.0			
		ME		11	3.2		- 57		13.1			
		Mz		11	7.6			- 78	12.5			
		F		33	±							
115	Aug. 14	eE	22	21	07.4							
		F		23	00.							
116	Aug. 15	iP	3	01	48.0					S 2.1	1875?	NNE off Titi-zima, The Bonin Islands.
		S		05	00.?					E 5.8		
		eL?		07	27.					D 6.8		
		F		14	00.							
117	Aug. 18	eE	8	22	34.							
		eE		23	42.							
		F		29	±							
118	Aug. 20	ePe?	11	50	03.8							SE part of Luzon.
		eE		50	50.1							
		eE		52	05.8							
		eE		52	31.0							
		eE		54	41.8							

5. The Seismic Reports of Weather Bureau of Tyôsen in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks	
						AN	AE	Az					
			h	m	s	μ	μ	μ	s	μ	km		
119	Aug. 25	eE	12	01	25.8								
		eE		15	48.0								
		eE		22	07.								
		F		25	00.								
		eP	7	54	58.							2305	Between Prov. of Szechuen and Kansu, China.
		Sz		58	46.								
		SE		58	48.								
		Mz ₁		59	04.2			- 239	7.2				
		MN ₁		59	04.7	+ 132			6.9				
		ME ₁		59	06.5		+ 260		7.4				
		Lz	8	00	39.								
		LE		00	42.								
		MN ₂		01	14.9	- 262			6.8				
		Mz ₂		02	47.4			+ 420	8.0				
CE		15	17.										
FE	9	34	00.										
120	Aug. 28	P _{1z}	22	39	28.3							South Atlantic Ocean.	
		eP _{1E}		39	34.								
		P _{2z}		39	36.5								
		eP _{2E}		39	44.3								
		P _{2z}		39	50.								
		eN		43	22.								
		ez		43	24.3								
		ez		46	34.								
		ez		56	32.								
		ME	23	54	18.2		± 54		18.5				
121	Sept. 2	MN		54	20.5	± 25			18.5				
		Fz	00	52	00.								
121	Sept. 2	P	16	44	04.						1250	Southern off the island of Hatizyô.	
		S		46	17.								
		SR ₁ ?		46	37.								
		SR ₂ ?		46	56.								
		PcS?		55	31.								
		F		Lost in microseismis									
122	Sept. 6	P	22	19	30.2						7740	The Fiji Islands.	
		ePR ₁ ?		21	42.								
		ePR ₂ ?		22	45.								
		eSN		28	37.								
		eSE		28	44.								
		eSR ₁ ?		32	24.								
		eL?		36	42.								
		e		52	16.								
123	Sept. 9	F		57	00.								
		P	5	04	28.8						86)	Neighbourhood of Vladivostock.	
iS	5	06	03.0										

5. The Seismic Reports of Weather Bureau of Tyôsen in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks
						A _N	A _E	A _Z				
			h	m	s	μ	μ	μ	s	μ	km	
124	Sept. 21	F	5	16	00.							
		eP	3	16	28.						1020	The Strong Earthquake of Noto, Isikawa Prefecture.
		eS		18	18.							
		L		19	06.							
F		35	00.									
125	Sept. 21	eP	9	51	07.							SE off Miyako, Iwate Prefecture.
		eL		55	07.							
		F	10	14	00.							
126	Sept. 21	eP?	13	45	03.							ESE off Miyako.
		eL		50	07.							
		F		57	00.							
127	Sept. 24	eP	15	27	25.						4500	Aleutian Islands.
		eS		33	40.							
		F	16	00	00.							
128	Sept. 25	eP	18	57	40.5						4745?	Tibet.
		PcP?	19	02	44.							
		S?		04	09.							
		SR ₁ ?		08	03.							
		SR ₂ ?		09	09.							
		SR ₃ ?		10	13.							
		L?		10	53.							
		ME		12	07.3							
		F		49	00.							
129	Oct. 2	eP?	15	50	18.							The Pacific Ocean.
		F?	17	51	±							
130	Oct. 3	ePE	18	41	16.6						1920	Central part of Niigata Prefecture.
		eLE		44	32.4							
		ME		45	13.4							
		F	19	10	±							
131	Oct. 21	ePE	2	47	23.4						3340	SE off the cape of Nozima, Tiba Prefecture.
		eLN		52	30.4							
		F	3	02	±							
132	Oct. 26	eP?	0	00	45.							North Chile.
		eL?		12	30.							
		F	1	00	±							
133	Nov. 2	ePE	12	34	44.3						4703	Aleutian.
		eSE		41	10.2							
		F		58	±							
134	Nov. 5	eSN	20	41	48.5							Mongolia?
		F		48	±							

5. The Seismic Reports of Weather Bureau of Tyôsen in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks	
						A _N	A _E	A _Z					
135	Nov. 6	eP? eS F	h 7	m 27	s 16.7	μ	μ	μ	s	μ	km	Middle coast of Zenrahokudô, Tyôsen.	
136	Nov. 20	iP _N (ePE)	23	32	39.7	- 1.9	-			S 1.9 E - U 5.8	7704	Baffin Bay.	
		iP _Z		32	39.8			+ 5.8	4.1				
		ePR _{1Z}		35	09.5			± 13	8.6				
		ePR _{2N}		36	54.7								
		ePR _{2Z}		36	56.0								
		iS _N		41	44.9								
		eL _E		53	42.2								
		M _Z	21	0	06	50.4			± 217	15.9			
		M _E			07	08.2		- 350		15.8			
		M _N			11	37.2	± 127			14.1			
F			19	±									
137	Nov. 22	ePE?	12	24	54.0						460?	NW part of Amami-Oosima, Kagosima Prefecture.	
		eSE		25	56.2								
		F		34	±								
138	Nov. 22	ePE	12	51	05.6						5275	The Bismark Islands.	
		eSE		58	02.6								
		F	13	35	±								
139	Nov. 22	ePE?	19	03	03.						427?	Vicinity of Amami-Oosima, Kagosima Prefecture.	
		eSE		04	00.6								
		F		17	±								
140	Nov. 22	ePE?	22	35	05.						603?	Ditto.	
		eSE		36	11.3								
		F	22	57	±								
141	Nov. 28	ePE?	11	19	12.6						7700?	Sumatra.	
		eLE?		41	43.5								
		F	12	14	±								
142	Dec. 2	eP _N	8	47	12.0						1920	ESE off Daitô, Formosa.	
		eSE		50	28.0								
		eL _E		53	14.0								
		F	9	05	±								
143	Dec. 4	iP _N	19	37	23.8	+ 7.4			2.7	N 7.4	1609	Eastern off the Sôya strait.	
		iP _E		37	24.0		+ 9.3		2.7	E 9.3			
		iP _Z		37	23.4			- 9.5	3.2	D 9.5			
		iE _N		38	51.4								
		iZ		38	55.1								
		iS _E		40	10.7								
		iS _N		40	15.0								
		iS _Z		40	13.9								
		M _{1E}		40	22.3			+ 70	3.7				
		M _{2E}		40	54.5			+ 81	5.9				

5. The Seismic Reports of Weather Bureau of Tyôsen in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude			Period	First motion	Δ	Remarks
						AN	AE	Az				
			h	m	s	μ	μ	μ	s	μ	km	
		MN	19	40	54.5	- 71			5.4			
		MZ		40	23.6			+ 32	3.2			
		CN		41	06.9							
		CE		41	07.8							
		Cz		41	06.5							
		F	20	06	±							
144	Dec. 12	ePEN	14	19	56.8						5223	New Britain.
		iSN		26	51.2							
		iSE		26	53.2							
		F		52	±							
145	Dec. 24	eP?	10	54	09.6						5049?	New Britain?
		eS?	11	00	54.3							
		F	13	22	±							

6. The Seismic Reports of Keizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
1	Jan. 1	eP eS F	^h 8 ^m 59 ^s 08.0						6940	Africa?	
2	Jan. 3	P LN MN ME F	15 30 14.6 33 39.4 34 38.6 36 04.9 16 24 ±			± 50				ENE off Miyako.	
							16 13				
3	Jan. 3	PE SN F	22 43 03.0 44 40.6 54 ±						900	The Nippon Sea. Deep earth.	
4	Jan. 4	P i PR ₁ PR ₂ SN iE iE iE eL F	1 29 04.8 29 08.0 29 20.6 29 29.0 32 30.0 32 53.2 33 06.8 33 19.8 34 53.0 2 40 ±						2020	SE off Titi-zima, the Bonin Islands.	
5	Jan. 4	P S F	4 09 02.0 16 50.0 58 ±						6220	Alaska.	
6	Jan. 7	P LN LE MN ME C F	4 09 51.4 12 27.4 13 11.4 15 26.4 15 50.9 21 20. 5 47 00			+ 240				NE off Miyako.	
							14 13				
7	Jan. 8	eP e F	6 32 03.2 36 12. 51 ±							Off the mouth of the River Mabuti, Aomori Prefecture.	
8	Jan. 9	P S F	2 09 33.1 19 03.5 49 ±							NE part of Afghanistan.	
9	Jan. 10	P S F	3 13 01.0 14 30. 29 ±						730	NW off Amami-Oosima, Ka- gosima Prefecture.	
10	Jan. 15	P PR ₁	18 10 26.5 12 17.7						5035	New-Guinea.	

6. The Seismic Reports of Keizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
20	Feb. 21	F	5	0	+						
		e	18	17	24.4						
		F		29	±						
21	Feb. 23	P	8	29	16.0					9795	Chile, Damage at Iquique.
		S		40	05.0						
		L		53	24.0						
		M _{1E}	9	28	26.2		± 54	26.0			
		M _{1N}		35	03.2	± 81		26.0			
		M _{2E}		41	13.1		± 57	22.0			
		M _{2N}		42	18.5	± 76		22.0			
		F	10	14	+						
22	Mar. 2	P	17	34	16.6					1450	Strong earthquake off Sanriku, Great damage along Sanriku coast due to the tidal wave.
		SN		36	48.3						
		CE	18	11	00.3						
		e	20	47	28.5						
		F	21	58	00						
23	Mar. 2	P	18	29	30.4						After shock of No. 22.
		S?		32	35.4						
		F	Lost in principal quake								
24	Mar. 2	I?	19	45	02.5						Ditto.
		F	Lost in principal quake								
25	Mar. 2	P	20	46	03.7						Ditto.
		F	Lost in principal quake								
26	Mar. 2	eL	22	42	18.6						Ditto.
		F		50	±						
27	Mar. 3	P	0	21	21.5					2290	Ditto.
		S		25	09.7						
		F		37	±						
28	Mar. 3	P	1	20	23.0						Middle valley of the River Sensin, Zenra-hokudô, Tyô-sen.
		F		21	10.						
29	Mar. 3	P _N	2	24	34.4					2485	Philippine.
		S _N		28	38.0						
		F		42	±						
30	Mar. 3	P	4	41	02.0					2350	After shock of No. 22
		eL		44	55.2						
		F	5	03	±						
31	Mar. 3	P	9	15	59.0					1570	Ditto.
		PR ₁		16	08.0						
		S		18	43.2						

6. The Seismic Reports of Keizyô Meteorological Observatory in the Year 1933.

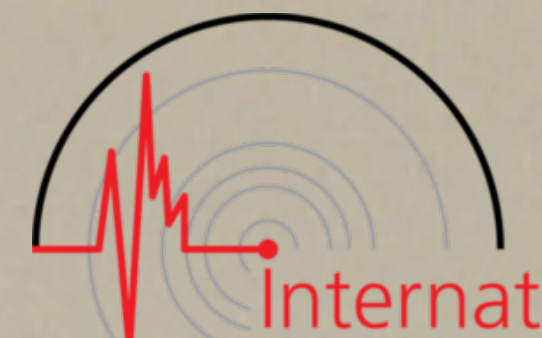
No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
		L	9	19	48.0						
		M _E		21	36.1		- 21	10.0			
		M _N		22	40.8	+ 24		13.0			
		F	Lost in next quake								
32	Mar. 3	P	9	41	49.2					1500	Ditto.
		S		44	26.0						
		L		46	22.0						
		F	Lost in next quake								
33	Mar. 3	P	10	08	00.0					1280	Ditto.
		PR ₁		08	06.2						
		S		10	16.0						
		L		13	4.0						
		F	Lost while changing records.								
34	Mar. 3	P	10	35	27.4					1690	Ditto.
		S		38	22.0						
		L		40	20.0						
		F		52	±						
35	Mar. 3	P	11	59	34.0					1610	Ditto.
		S	12	02	21.2						
		L		04	20.0						
		F		13	±						
36	Mar. 3	P	12	17	06.2					1875	Ditto.
		S		20	18.0						
		L		22	25.0						
		F		36	±						
37	Mar. 3	P	15	05	23.7					1680	Ditto.
		PR ₁		05	31.9						
		S		08	17.9						
		LE		09	23.9						
		F	Lost in next quake.								
38	Mar. 3	P	15	10	24.9					1520	Ditto.
		S		13	03.9						
		L		14	07.9						
		F		34	±						
39	Mar. 3	P	15	54	11.4						
		L		58	47.8						
		F	16	09	±						
40	Mar. 3	P	16	15	04.8					1745	Ditto.
		S		18	05.2						
		L		19	07.8						
		F		31	±						

6. The Seismic Reports of Keizyo Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
			h	m	s	μ	μ	s	μ	km	
41	Mar. 3	P	19	10	32.7					1520	Ditto.
		S		13	11.7						
		L		15	09.7						
		F		27	±						
42	Mar. 8	P	1	38	48.0					1320	Ditto.
		S		41	08.0						
		L		42	10.0						
		F		57	±						
43	Mar. 11	eP	14	25	57.1					1790	Ditto.
		eS		29	01.5						
		L		30	31.1						
		M _{1E}		32	19.2						
		M _N		33	10.2	± 21	± 30	15.0			
		M _{2E}		38	25.2		± 26	13.0			
		F		52	±			14.0			
44	Mar. 11	P	19	35	57.1					1470	WNW off Titi-zima, the Bon-in Islands.
		i		37	01.9						
		e		38	09.1						
		S		38	31.1						
		PcS		46	50.1						
		F	20	19	±						
45	Mar. 12	eP	5	09	07.8					1400	After shock of No. 22.
		eS		11	35.0						
		eL		12	42.0						
		F		29	±						
46	Mar. 17	P	16	01	23.4					3155	The Aleutian Islands.
		S		06	17.6						
		L		08	08.6						
		M _N		17	27.1	- 10		9.8			
		M _E		17	30.3		± 19	13.0			
		F	17	21	±						
47	Mar. 17	eP	19	38	01.1					2540	Mindanao.
		eS		42	18.8						
		L		46	04.8						
		M _N		54	23.5	± 50		16.0			
		M _E		55	52.3		± 50	16.0			
		F	21	03	±						
48	Mar. 18	P	15	54	15.1					1310	Southern off the island of Hat-izyô.
		S		56	34.1			S 3.4			
		L		58	49.9			E 9.8			
		F	16	25	±						
49	Mar. 23	P	17	42	32.6						Mongolia.
		e		43	39.3						

6. The Seismic Reports of Keizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
			h	m	s	μ	μ	s	μ	km	
		e	17	46	11.6	May	be	another	quake		
		L		47	57.0						
		F	18	23	±						
50	Mar. 25	P	12	52	08.8?					507	Neighbourhood of Mt. Aso.
		eSE		53	04.8						
		LN		53	17.1						
		F	13	09	±						
51	Mar. 31	eP	22	04	34.3					2795?	Mongolia?
		iE		04	42.9						
		eS?		09	02.7						
		eL		12	43.7						
		F		27							
52	Apr. 1	P	16	02	06.6						After shock of No. 22.
		L		05	30.4						
		MN		06	58.6	± 8			11.0		
		ME		07	47.0		- 25		12.0		
		F		47	±						
53	Apr. 9	P	2	49	45.3						Ditto.
		LN		52	10.1						
		LE		53	06.3						
		ME		54	41.3		+ 81		15.0		
		MN		55	37.1	+ 76			12.0		
		F	3	49	±						
54	Apr. 9	P	10	33	34.1					1340?	Ditto.
		eS?		35	56.1						
		L		37	25.3						
		F		59	±						
55	Apr. 19	P	2	58	51.8					1570	Ditto.
		S	3	01	35.8						
		LN		03	03.0						
		F		13	±						
56	Apr. 19	iP	6	48	01.8				N 6.8	1585	Mouth of the River Daidakusui, Formosa.
		S		50	46.6				E 2.3		
		L		52	36.8						
		ME		52	48.6		- 61	4.2			
		F	7	44	±						
57	Apr. 23	P	6	09	18.8					8220	Near the island of Kos, Asia Minor.
		PR _I		11	57.6						
		S		18	51.0						
		eLE		34	08.0						
		F	7	12	±						
58	Apr. 23	P	7	16	48.2						After shock of No. 22.



6. The Seismic Reports of Keizyo Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
		L		19	20.2						
		M _E		22	40.2		+ 70	12.0			
		M _N		23	03.2	± 55		12.0			
		F	Lost in next quake								
59	Apr. 23	eP	8	29	08.2?					1240	Ditto.
		S		31	30.2						
		L		33	26.2						
		F		58	±						
60	Apr. 27	eP	2	45	32.8					6050	Alaska
		ePR ₁		47	25.2						
		ePR ₂		48	18.8						
		ePR ₃		49	03.0						
		ePcS?		50	05.6						
		S		53	11.8						
		ScS		55	07.8						
		eSR ₁		57	22.8						
		eL		02	02.7						
		M _E		10	04.6		± 165	14.0			
		M _N		12	25.8	+ 72		13.0			
		F	4	38	±						
61	May 1	P	18	34	19.1					2245	Near the island of Etorohu, the Kurile Islands.
		S		38	03.1						
		L		40	13.1						
		F	Lost in next quake.								
62	May 1	P?	18	57	13.1						Ditto.
		i	19	04	20.1						
		F		29	±						
63	May 1	P	19	55	23.1					2290	Southern off the island of Etorohu, the Kurile Islands.
		S		59	11.1						
		eL	20	00	38.0						
		F		32	±						
64	May 3	P	23	34	27.0					2825	The River Daidakusui, Formosa.
		PcP?		37	05.0						
		S		38	57.0						
		eE		40	57.0						
		eE		43	59.0						
		F		51	±						
65	May 8	eL	11	34	05.0						Mexico.
		F		59	±						
66	May 12	eE	16	21	06.6						
		e?		25	45.6						
		F		38	±						

6. The Seismic Reports of Keizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.	Amplitude		Period	First motion	Δ	Remarks
				AN	AE				
67	May 16	P	^h ^m ^s Lost while changing record			13.7		1790	North Sumatra.
		L	1 34 10.9						
		ME	1 35 59.2	+ 64					
		F	2 20						
68	May 19	eL	19 09 00.4						The Atlantic Ocean.
		F	28 —						
69	May 21	P	11 58 33.3						SSE off the island of Hatizyô.
		S	12 01 33.7						
		L	03 05.7						
		F	21 ±						
70	May 22	P	20 47 39.4						Hyûga-nada, Miyazaki Prefecture.
		F	21 02						
71	May 23	P	16 38 22.5						Ditto.
		L	40 33.5						
		F	Lost in next quake						
72	May 23	eP	16 53 35.5						Ditto.
		L	55 50.5						
		F	17 12 ±						
73	June 2	P	7 40 37.3			4.8 5.2	N 0.9 W 0.4	810	Miyakonozyô, Miyazaki Prefecture.
		SN	42 05.3						
		eL	42 42.3						
		MN	42 58.9	+ 37					
		ME	42 59.4	+ 117					
		C	45 38.						
		F	8 16 ±						
74	June 3	P	17 11 25.8					950	Neighbourhood of Amani-Oosima, Kagosima Prefecture.
		S	13 09.0						
		L	13 57.2						
		F	55 ±						
75	June 6	P	2 33 45.5				N 1.6 E 1.0	2745	Philippine.
		S	38 09.1						
		L	41 08.9						
		F	3 00 ±						
76	June 7	PE	11 51 30.6					2600	Burma.
		eSE	55 43.2						
		F	Lost in next quake.						
77	June 7	ePE?	12 00 07.2			15.0		1042?	
		SE	01 59.2						
		ME	02 08.8	- 81					
		F	33 ±						

6. The Seismic Reports of Keizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
			h	m	s	μ	μ	s	μ	km	
78	June 8	PE LE ME F	18	14	04.5 42.5 16.7 ±		+ 36	16.0			ENE off Miyako, Iwate Prefecture.
79	June 12	P eL F	21	11	13.8 30. ±						Kisen-numa, Miyagi Prefecture.
80	June 13	P eSN LN F	20	36	44.0 21.8 19.0 ±					1510	Eastern off the mouth of the River Mabuti, Aomori Prefecture.
81	June 18	P SN LE LN MN ME C F	21	40	30.2 51.2 34.2 10.2 00.4 01.3 28. Lost while changing record	+ 326	- 470	13.0 15.0	S 1.5 W 7.3	1330	Eastern off Kinkasan, Miyagi Prefecture.
82	June 24	ePE ePCSE SE SR ₁ IE LE	22	03	38.1 36. 39. 35. 43.					5340	Sumatra.
	25	ME F	26	19.2	±		- 330	14.0			
83	July 3	eL? F	15	26	47.3 ±						
84	July 9	PE SE eE LE ME CE FE	1	34	21.5 30.5 10.5 00.0 35.6 56.0 ±		- 78	17.0		1940	SE off the island of Etorohu, the Kurile Islands.
85	July 9	PE SE LE ME FE	9	32	18.6 42.4 00.0 34.7 Lost in next quake		-44	16.0		2010	Ditto.
86	July 9	PE eE FE	9	52	34.6 03.6 ±						Ditto.

6. The Seismic Reports of Keizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
			h	m	s	μ	μ	s	μ	km	
87	July 9	ePE ²	11	25	37.0					2510	Ditto.
		eSE		29	37.6						
		eLE		32	50.6						
		FE	Lost in next quake								
88	July 9	PE	12	34	57.4					2392	Ditto.
		eE		38	22.6						
		SE		38	53.6						
		LE		40	53.0						
		ME		42	24.1		- 221	16.0			
		FE	14	38	±						
89	July 9	ePE ²	16	11	28.0					2340	Eastern off the cape of No-syappu, Hokkaidô district.
		eSE		15	20.0						
		eLE?		17	44.0						
		FE	17	04	±						
90	July 9	ePE?	17	55	47.					2450	Ditto.
		eSE		59	48.						
		eLE	18	02	11.						
		FE		26	±						
91	July 9	eP?	22	19	13.					2680?	Ditto.
		eS		23	32.						
		eL		26	17.						
		F		48	±						
92	July 10	ePE	0	24	52					1490	Eastern off Kamaisi, Iwate Prefecture.
		eSN		27	29.						
		eL		29	13.						
		F		51	±						
93	July 10	PN	10	41	22.9				S 3.	4729	Borneo.
		SE		47	50.5						
		eE		51	03.5						
		F	11	11	±						
94	July 11	ePE	6	02	40.						Off the coast of Kuzyûkuri, Tiba Prefecture.
		eLE		07	05.						
		F		21	±						
95	July 11	PE	6	52	59.?						ESE off Katuura, Tiba Prefecture.
		LE		57	09.						
		F	7	17	±						
96	July 12	P	16	18	32.9					15.5	Local. Felt slightly.
		S		18	35.0						
		M		18	35.2	- 33		0.6			
		F		19	24.0						
97	July 13	ePE	8	00	08.						WNW off the island of Oku-

6. The Seismic Reports of Keizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
		eL	8	02	26.						ziri, Hokkaidô district.
		M _E		03	58.8		± 15	12.0			
		M _N		04	21.0	± 12		11.0			
		F		31	±						
98	July 14	iP	16	05	19.4				S 3	852	Off Vladivostock.
		iS		06	42.6				W 3		
		F		23	±						
99	July 18	eP _E	11	27	10.					780	Ditto.
		eS _E		28	35.						
		eL _E		28	59.						
		F		41	±						
100	July 18	eP _E ?	19	12	19.					3640?	Philippine.
		eS _E ?		17	45.						
		eL _E ?		21	57.						
		F _E		59	±						
101	July 19	eP _E	13	40	24					4795	Alaska.
		eS _E		46	55.						
		eE		49	57.						
		F	14	26	±						
102	July 19	P	15	07	53.7					4720	Alaska.
		eS _E		14	21.						
		eE		14	23.						
		eL _E		21	57.						
		F		58	±						
103	July 19	eE	20	59	01.						
		eE	21	04	21.						
		F		17	±						
104	July 20	P _E	23	17	18.4				N 2.9	2026	Eastern off Kinkasan, Miyagi Prefecture.
		S _E		20	44.0						
		L _E		22	04.0						
		F _E		29	±						
105	July 22	eN	21	22	57.						Aleutian.
		F		45	±						
106	July 24	iP _E	8	39	32.7				W 2.9	988	Southern off Vladivostock.
		S _E		41	19.5						
		L _E		42	12.5						
		F _E		50	±						
107	July 24	eE	19	08	13.						SW to Samoa.
		eE		17	33.						
		eE		23	21.						
		eE		32	17.						

6. The Seismic Reports of Keizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks	
						AN	AE					
			h	m	s	μ	μ	s	μ	km		
108	July 28	FE	19	58	±						WSW off Wakayama.	
		eP?	16	46	40.1							
		in		47	37.1							
		in		48	11.3							
		eN		48	35.6							
		eE		48	44.6							
		F	56	±								
109	Aug. 4	eE	17	43	13.3							
		eLE?		47	32.7							
		FE		55	±							
110	Aug. 5	eS?	1	10	08.0						The Solomon Islands.	
		eL?		15	03.0							
		F		24	±							
111	Aug. 11	P	8	59	43.9					3009	North Burma.	
		S	9	04	27.5							
		L	Lost while changing record									
		MN		10	51.6	± 31		10.0				
		ME		11	18.9		+ 40	12.0				
		C		13	06.9							
		F		44	±							
112	Aug. 14	eP	22	21	12.2					2702		
		eS?		25	33.0							
		eL?		30	18.0							
		F		49	±							
113	Aug. 15	P	3	01	44.1					1730?	NNE off Titi-zima, the Bonin Islands.	
		S		04	43.?			S 2				
		L		07	06.3			E 5				
		F		27	±							
114	Aug. 18	eE	8	22	22.							
		LE?		24	03.							
		FE		33	±							
115	Aug 25	P	7	55	03.8					2262	Between Prov. of Szechuen, and Kausu, China.	
		S		58	49.0							
		ME1		59	14.1		+ 227	6.5				
		L	8	00	55.0							
		ME2		3	20.0		- 344	9.0				
		F	9	55	±							
116	Aug. 28	PE	22	39	33.4					4105	South Atlantic Ocean.	
		eSE		45	26.4							
		eE		58	15.							
		Fe	Lost out of record									

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No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks	
						A _N	A _E					
			h	m	s	μ	μ	s	μ	km		
117	Sept. 2	iPE	16	44	04.4				E	5.0	1217	Southern off the island of Hatzizô.
		eSE		46	14.1							
		ME		46	39.8							
		F	17	16	±							
118	Sept. 6	ePN	22	19	28.8						7740	The Fiji Islands.
		eSN		28	35.8							
		F	23	10	±							
119	Sept. 9	iPN	5	04	27.2						854	Neighbourhood of Vladivostock.
		iSE		05	59.6							
		ME		06	06.6		± 41	2.9				
		MN		06	13.9	+ 47		5.3				
		F	18	±								
120	Sept. 21	ePE	3	16	28.6						843	The Strong Earthquake of Noto, Isikawa Prefecture.
		eSE		17	59.9							
		ME		20	10.7		- 70	10.0				
		F		42	±							
121	Sept. 21	ePE	9	51	03.2							SE off Miyako, Iwate Prefecture.
		eL		54	51.7							
		MN		56	16.1	± 230		14.0				
		F	10	16	±							
122	Sept. 21	ePE	13	45	12.5						2595	ESE off Miyako.
		eSE		49	25.0							
		F	14	00	±							
123	Sept. 24	ePE	15	27	22.6						4424	The Aleutian Islands.
		eSE		33	33.8							
		eLE		36	35.7							
		F	16	35	±							
124	Sept. 25	ePE	18	57	42.						3769	Tibet.
		eSE	19	03	15.7							
		eL		07	44.6							
		ME		12	14.5		± 180	13.2				
		F		30	±							
125	Sept. 30	ePN	14	28	48.8						4440	New Guinea.
		eSE		35	00.8							
		eLE		33	00.8							
		F	15	13	±							
126	Oct. 2	eP?	15	50	20							The Pacific Ocean.
		F	18	13	±							
127	Oct. 3	iPE	18	41	13.1							Central part of Niigata Prefecture.
		eL		43	44.1							
		ME		45	08.5		± 43	13.0				

6. The Seismic Reports of Keizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
128	Oct. 5	F	19	15	±						
		eP	13	56	21.5						Persia.
		eS?		59	17.3						
		eL?	14	02	30.5						
		ME		05	55.6		+ 18	14.0			
		F		42							
129	Oct. 21	eP	2	47	21.2						SE off the cape of Nozima,
		eL		51	46.2						Tiba Prefecture.
		M _N		54	49.4	± 19		16.0			
		ME		54	49.5		- 45	14.0			
		F	3	19	±						
130	Oct. 26	eP?	0	02	14.						North Chile.
		eL?		12	01.						
		F	1	00	±						
131	Nov. 2	eP	12	34	48.8					4472	Aleutian.
		eS		41	02.4						
		L		45	43.8						
		F	13	23	±						
132	Nov. 5	eP?	20	41	27.2						Mongolia?
		F	21	00	±						
133	Nov. 6	eP	7	27	22.2						Middle coast of Zenrahokudô,
		F		37	±						Tyôsen.
134	Nov. 20 21.	P	23	32	42.2					7130	Baffin Bay.
		S		41	18.2						
		L		54	37.0						
		ME	0	05	22.4		+ 25	16.2			
		F	1	21	±						
135	Nov. 22	eP	12	25	18.3					640	NW part of Amami-Oosima,
		S		26	28.3						Kagosima Prefecture.
		F		40	±						
136	Nov. 22	eP	12	51	07.1					5301	The Bismark Islands.
		eS		58	05.5						
		L	13	04	17.3						
137	Nov. 22	eP?	19	03	11.2						Vicinity of Amami-Oosima,
		F		22	±						Kagosima Prefecture.
138	Nov. 22	eP	22	34	54.2					966	Ditto.
		S		36	38.8						
		F	23	05	±						
139	Nov. 28	eP	11	39	14.1					1650	Sumatra.

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No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
140	Dec. 4	eS	11	42	05.1						
		L _N		44	10.9						
		eL _E		44	51.5						
		F	12	15	±						
		iP	19	37	21.7					1561	Eastern off the Soya strait.
141	Dec. 12	S		40	04.8						
		F	20	10	±						
		eP	14	19	56.6					5211	New Britain.
		eS		26	50.4						
		eL		32	10.6						
		F	15	00	±						

7. The Seismic Reports of Taikyû Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
1	Jan. 1	ePN?	h	m	s	μ	μ	s	μ	6105? ^{km} Africa?	
		eSN?	8	59	38.3						
		ScSN?	9	07	20.4						
		eF	08	18.1							
2	Jan. 3	P	15	30	11.2					1420? ENE off Miyako.	
		eSN?	32	40.0							
		LN	33	29.5							
		F	53	20.							
3	Jan. 4	P	}	Lost during the change of record sheets							Alaska.
		S									
		L									
		F							2	09	
4	Jan. 7	e	4	09	45.0					NE off Miyako.	
		L	12	08.							
		M _{1N}	14	03.2	+ 130		18				
		M _{1E}	17	02.0		+ 92	13				
		M _{2N}	17	12.2	- 115		13				
		C	22	35.							
		F	5	06	10.						
5	Jan. 8	P	6	31	56.0					Off the mouth of the River Mabuti, Aomori Prefecture.	
		eLN	34	50.							
		F	49	40.							
6	Jan. 16	S	11	28	18.5					SW part of Waiyôgun, Kôgendô, Tyôsen.	
		F	29	31.7							
7	Jan. 21	eN	19	41	41.					Indian Sea.	
		eN	45	53.							
		eN	47	18.							
		eN	52	43.							
		eN	08	16.							
		M _N	16	31.2	± 58		16				
		F	28	20.							
8	Feb. 3	eP	22	16	25.3					2340 Northern off the island of Urupp, the Kurile Islands.	
		S	20	17.3							
		F	36	±							
9	Feb. 9	PE	3	59	00.9					960 SW off the island of Hatizyô.	
		SE	4	00	44.9						
		F	09	00.							
10	Feb. 13	eLN?	3	04	55.7					The Altai range.	
		eN	07	06.7							
		F	27	—							
11	Feb. 19	P	4	29	06.6				1340	WSW off the island of Yonakuni.	

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No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
			h	m	s	μ	μ	s	μ	km	
		PR ₁	4	29	11.6						
		eN		30	05.6	May be P of another quake					
		SE		31	28.4						
		eN		32	33.6	May be S of another quake					
			Changed paper at 4 ^h 32 ^m 40 ^s								
		F		40	00						
12	Mar. 2	P	17	34	05.9				S 11	1400	Strong earthquake off Sanriku. Great damage along Sanriku coast due to the tidal wave.
		S		36	33.				W 14		
		L		37	28.6						
		C		51	59.0						
		ME		38	37.0		+4545	20.8			
		MN		39	37.0	+9091		17.8			
		F	21	15	10.						
13	Mar. 2	P	18	29	26.0						After shock of No. 12.
		F				Lost in principal quake					
14	Mar. 2	P	19	44	48.4						Ditto.
		F				Lost in principal quake					
15	Mar. 2	P	20	45	53.2					1640	Ditto.
		S		48	43.						
		eL		49	19.0						
		ME		51	40.8		+ 125	12.7			
		F				Lost in principal quake					
16	Mar. 3	P	1	19	08.3					97	Middle valley of the River Sensin, Zenrahokudô, Tyôsen.
		S		19	21.3						
		F		21	12.3						
17	Mar. 3	eL	2	28	29.6						Philippine.
		eF		36	10.						
18	Mar. 3	eP	4	40	42.2						After shock of No. 12
		eF		55	10.						
19	Mar. 3	P	9	15	51.4					1530	Ditto.
		S		18	31.4						
		L		19	28.9						
		F?		41	11.4						
20	Mar. 3	eP	9	41	40.2					1420	Ditto.
		eS		44	18.2						
		eL		45	22.						
		eF	10	05	10.						
21	Mar. 3	eP	10	07	23.9						Ditto.
		eF		20	10.						
22	Mar. 3	P	10	35	12.4						Ditto.

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No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
23	Mar. 3	F	10	47	11.4						
		P	11	59	33.6						Ditto.
		F	12	10	11.2						
24	Mar. 3	P	12	16	54.2						Ditto.
		e		23	37.2	May be another quake					
		F		30	11.2						
25	Mar. 3	eP	15	05	12.7						Ditto.
		ePR ₁		05	23.5						
		F	Lost in next quake.								
26	Mar. 3	eP	15	10	12.9					1450	Ditto.
		ePR ₁		10	25.0						
		eS		12	44.8						
		eL		13	33.8						
		F		27	10.8						
27	Mar. 3	eP	15	53	14.9						Ditto.
		F	16	00	10.8						
28	Mar. 3	eP	16	14	51.0						Ditto.
		F		21	10.8						
29	Mar. 3	eP	18	50	17.7						Ditto.
		F		56	11.5						
30	Mar. 3	eP	19	10	24.5					1500	Ditto.
		eS		13	01.5						
		eL		14	02.5						
		F		19	10.5						
31	Mar. 3	eP	19	53	33.3						Ditto.
		F		58	10.3						
32	Mar. 3	eP	20	23	17.6						Ditto.
		F		28	10.2						
33	Mar. 7	P	12	57	52.2					4	Felt slightly, Local.
		S?		57	52.7						
		F		58	02.8						
34	Mar. 9	P	3	46	17.0					16	Felt slightly, Local.
		S		46	19.2						
		F		46	38.0						
35	Mar. 11	eL	14	28	38.8						After shock of No. 12.
		M _N		33	56.4	- 110		19.7			
		M _E		33	56.5		+ 111	17.5			
		F		53	20.						

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No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks	
						A _N	A _E					
36	Mar. 11	P	h	m	s	μ	μ	s	μ	1329 km	WNW off Titi-zima, the Bonin Islands.	
		S	19	34	13.7				S 9			
		PcS		36	34.8				E 8			
		F	20	00	30.							
37	Mar. 17	eP?	16	03	22.7						The Aleutian Islands.	
		L?		12	55.3							
		F		36	40.							
38	Mar. 17	eP?	19	38	40.7						Mindanao.	
		L		47	02.3?							
		F	20	18	20.							
39	Mar. 18	iP	15	53	50.5					1170	Southern off the island of Ha- tazyô	
		e		54	54.8							
		S		55	55.3							
		F	16	09	40.							
40	Mar. 23	ePE?	17	42	57.0						Mongolia.	
		eN		46	44.	May be another quake						
		e		47	51.2							
		F	18	09	30.							
41	Mar. 25	P	12	51	27.4					332	Neighbourhood of Mt. Aso.	
		S		52	11.9							
		F		59	30.							
42	Apr. 1	P	16	01	56.3						After shock of No. 12	
		L		05	56.0							
		F		19	10.							
43	Apr. 1	P	22	44	06.9						Ditto.	
		F		53	10.							
44	Apr. 9	eP	2	49	27.6	disturbed by microseismus					1480	Ditto.
		S		52	02.6							
		L		53	10.6							
		MN		54	50.9	+ 140		13.2				
		F	3	20	—							
45	Apr. 9	eP	10	33	22.1						Ditto.	
		F		41	—							
46	Apr. 19	P	6	47	51.5				N 2.8	1460	Mouth of the River Daidakusui, Formosa.	
		S		50	24.1				E 7.0			
		L		52	07.0							
		ME		52	31.9							
		F	7	29		— 64		4.5				
47	Apr. 23	eP	6	09	15.						Near the island of Kos, Asia Minor.	
		F	7	00	40.							

7. The Seismic Reports of Taikyû Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
			h	m	s	μ	μ	s	μ	km	
48	Apr. 23	P	7	16	38.6					940	After shock of No. 12.
		S		18	20.6						
		L		20	54.6						
		F	7	48	37.6						
49	Apr. 23	P	8	28	56.5					.	Ditto.
		F		40	40.						
50	Apr. 27	P	2	45	38.2					6120	Alaska.
		S		53	21.5						
		L	3	00	51.7						
		F	4	15	31.0						
51	May 16	eP	1	20	12.7					4420	North Sumatra.
		eSN		26	23.3						
		eSE		26	28.3						
		eSR ₁ ?		29	42.3						
		eL		32	56.7						
		F		57	00						
52	May 21	P	4	37	25.1						Felt at Mosyu, Zenrahokudô, Tyôsen.
		F		37	41.3						
53	May 22	eP	20	46	40.0						Hyûga-nada, Miyazaki Prefecture.
		eF		49	00.0						
54	May 23	eP	16	37	52.9					666	Ditto.
		S		39	05.5						
		L		39	23.9						
		F		49							
55	May 23	eP	16	53	09.5					646	Ditto.
		eL		54	36.						
		F	17	04	±						
56	June 2	P	7	40	06.8				N 3.1	800	Miyakonozyô, Miyazaki Prefecture.
		S		41	33.6				W 1.9		
		F	8	11	50.						
57	June 3	P	17	11	01.3					800	Neighbourhood of Amami-Oosima, Kagosima Prefecture.
		S		12	28.6						
		C		18	00.						
		F		47	20.						
58	June 6	ePN	2	33	31.8					2350?	Philippine.
		eSN?		37	25.						
		eLE		40	14.						
		F		57	40.						
59	June 7	P	11	51	39.0					2925	Burma.
		S		56	16.5						

7. The Seismic Reports of Taikyû Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
		F	Lost in next quake								
60	June 7	eP F	11	59	58.5 40.						
61	June 8	P S eLN F	18	13	56.1 25.2 08. 30.					1421	ENE off Miyako, Iwate Prefecture,
62	June 12	eP F	21	11	01.9 50.						Kisen-numa, Miyagi Prefecture.
63	June 13	P S L F	20	35	39.4 10.5 14. 20.					1441	Eastern off the mouth of the River Mabuti, Aomori Prefecture.
64	June 18	P S LE? C F	21	40	19.6 28.1 17. 08. 00.			6.7 7.2	S 7.8 W 36.0	1205	Eastern off Kinkasan, Miyagi Prefecture.
65	June 24	eP eS eSR ₁ MN ME C F	22	03	28.1 23.1 06. 22.6 28.9 15. 10.	± 220	± 289	11.0 12.9		5235	Sumatra.
	25		0	00							
66	July 9	P SN SE eLN F	1	34	19.9 03.9 10.8 14. 40.					2245	SE off the island of Etorohu, the Kurile Islands.
67	July 9	eP S L F	9	32	21.2 02.2 28.2					2210	Ditto.
			Lost in next quake								
68	July 9	P S L F	9	52	34.1 20.1 42.1 50.					2270	Ditto.
69	July 9	P eN eSE	12	34	58.0 01. 29.					2090	Ditto.

7. The Seismic Reports of Taikyû Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
			h	m	s	μ	μ	s	μ	km	
		SN	12	38	44.						
		L		40	10.0						
		C		49	41.						
		F	13	47	00.						
70	July 9	ePN?	16	11	23.					2270?	Eastern off the cape of Nosyap- ppu, Hokkaidô district.
		ePE?		11	25.						
		eSE?		15	09.						
		eSN?		15	13.						
		F		32	20.						
71	July 9	e	17	59	35						Ditto.
		F	18	08	40.						
72	July 9	e	22	22	44.						Ditto.
		F		33	50.						
73	July 10	P	0	24	43.0				N 0.4	1430?	Eastern off Kamaisi, Iwate Prefecture.
		eS?		27	13.0				E 1.6		
		F		39	40.						
74	July 10	P	10	41	05.0						Borneo.
		L?		47	19.0						
		F		59	05.0						
75	July 11	P	6	52	40.2						ESE off Katuura, Tiba Prefecture.
		eLE?		56	58.						
		F	7	03	40.						
76	July 13	e	8	00	05.0						WNW off the island of Oku- ziri, Hokkaidô district.
		eLE?		02	20.						
		F		21	30.						
77	July 14	P	16	05	30.7			2.1	S 5.5	850	Off Vladivostock.
		S		07	02.7			1.8	W 1.1		
		F		18	50.						
78	July 18	ePN	11	26	45.					712	Ditto.
		S		28	03.6						
		F		41	00.						
79	July 18	eP	19	10	58.3					2922?	Philippine.
		eS?		15	36.						
		eL?		18	44.						
		F		36	10.						
80	July 19	e	13	40	24.						Alaska.
		eE		46	48.						
		eN		46	52.						
		F		49	20.						

7. The Seismic Reports of Taikyû Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A_N	A_E				
			h	m	s	μ	μ	s	μ	km	
81	July 19	eP eSE eSN F	15	07	54.8					4645	Alaska.
				14	18.						
				14	20.						
				19	30.						
82	July 19	e F	21	03	41.						
				09	30.						
83	July 20	P F	23	17	08.4						Eastern off Kinkasan, Miyagi Prefecture.
						overlapped by Microseismus					
84	July 22	P S eSR _{1N} eSR _{1E} eSR ₂ eLE F	21	03	38.5					5145	Aleutian.
				10	28.5						
				13	27.						
				13	28.						
				15	41.						
				17	08.						
				58	50?						
85	July 24	P S F	8	39	41.8				S 6.1 W 2.0	790	Southern off Vladivostock.
				41	07.4						
				47	20.						
86	July 28	ePE eS? F	16	45	00.5					405?	WSW off the city of Wakayama.
				45	55.0						
				55	40.						
87	Aug. 11	ePE eE SN SE L F	8	59	53.7					3325	North Burma.
			9	04	20.1						
				04	58.1						
				04	59.3						
				07	25.4						
				45	25.						
88	Aug. 15	P S F	3	01	20.3					1690	NNE off Titi-zima, the Bonin Islands.
				04	15.3						
				14	35.						
89	Aug. 20	P S L F	11	50	08.3					2610	SE part of Luzon.
				54	22.3						
				56	46.3						
						Lost in next quake					
90	Aug. 20	P S F	12	11	09.3					2600	Ditto.
				15	22.3						
				26	20.						
91	Aug. 22	e eF	13	21	51.4						
				29	50.						
92	Aug. 25	P	7	55	16.7			2.3	S 1.2	2350	Between Prov. of Szechuen and Kansu, China.

7. The Seismic Reports of Taikyû Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
		S	7	59	09.5				W 8.2		
		L	8	01	29.5						
		M _E		05	35.8		± 405	10.9			
		M _N		06	11.4	± 187		7.5			
		C		19	24.9						
		F	9	22	10.						
93	Aug. 27	P	23	42	19.7					28	Local.
		S		42	23.4						
		F		42	45.						
94	Aug. 28	P	22	39	36.1					2110?	South Atlantic Ocean.
		e		40	26.3						
		S?		43	09.4						
		L?		50	18.6						
	29	F	0	50	0.						
95	Aug. 29	P?	12	33	59.						SE off the mouth of the River Abukuma, Miyagi Prefecture.
		eF		39	30.						
96	Sept. 2	P	16	43	33.1					1130	Southern off the island of Hattizyô.
		S		45	34.1						
		M _E		45	57.7		+ 57	5.0			
		M _N		45	58.1	+ 42		5.4			
		C		55	28.1						
		F?	17	16	52.1						
97	Sept. 6	eP	22	19	17.4					7540	The Fiji Islands.
		e		21	18.4						
		S		28	14.4						
		F		55	—						
98	Sept. 9	P	5	04	39.9					965	Neighbourhood of Vladivostock.
		S		06	24.4						
		F		16	54.9						
99	Sept. 21	eP	3	16	12.5					760	The Strong Earthquake of Noto, Isikawa Prefecture.
		S		17	35.5						
		F		31	52.5						
100	Sept. 21	P	9	50	51.0						SE off Miyako, Iwate Prefecture.
		F	10	07	00.9						
101	Sept. 24	eP	15	27	24.3					3945	The Aleutian Islands.
		S		33	08.3						
		F		45							
102	Sept. 25	eP	19	02	39.6					4945	Tibet.
		S		09	18.2						
		L		12	59.1						
		F		49	05.6						

7. The Seismic Reports of Taikyû Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
103	Oct. 2	eL eF	15	52	23.6						The Pacific Ocean.
104	Oct. 3	P S L _E L _N F	18	40	56.0					1100	Central part of Niigata Prefecture.
				42	54.0						
				44	01.7						
				45	19.7						
			19	01	44.7						
105	Oct. 5	eP eS? eL? F	13	53	57.3						Persia.
				57	07.1						
			14	01	16.5						
				19	42.1						
106	Oct. 9	eP F	12	09	43.3						Upper valley of the River Dôsi, Kanagawa Prefecture.
				20							
107	Oct. 21	P S L F	2	47	03.3					1190	SE off the cape of Nozima, Tiba Prefecture.
				49	10.7						
				51	47.9						
			3	08	00.7						
108	Nov. 5	eP F	20	42	15.6						Mongolia?
				47	04.6						
109	Nov. 6	P S F	7	26	06.5					203	Middle coast of Zenrahokudô, Tyôsen.
				26	43.9						
				34	03.9						
110	Nov. 20	P S L	23	32	49.5					7940	Baffin Bay.
				42	06.5						
				53	39.5						
	21	F	0	51	10.5						
111	Nov. 22	eP F	12	25	07.4						NW part of Amami-Oosima, Kagosima Prefecture.
				35							
112	Nov. 22	P S L F	12	50	50.3					1430	The Bismark Islands.
				53	20.3						
				58	17.3						
			13	28	—						
113	Nov. 22	eP S L F	19	01	33.5					1020	Vicinity of Amami-Oosima, Kagosima Prefecture,
				03	23.5						
				05	18.5						
				16							
114	Nov. 22	eP S L F	22	33	44.0					1200	Ditto.
				35	52.0						
				38	36.0						
				59	—						

7. The Seismic Reports of Taikyû Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s		km	
115	Dec. 4	iP	19	37	23.5			3.1	E 4.3	1621	Eastern off the Sôya strait.
		S		40	11.6			3.6	N 6.9		
		i		48	41.9						
		F	20	02	18.						
116	Dec. 12	P	14	19	38.7					5025	New Britain.
		S		26	22.2						
		F		37	48.4						
117	Dec. 15	eP	20	59	14.4						Felt rather strongly at Zensyû, Tyôsen.
		eF		59	25.8						
118	Dec. 20	eP	14	53	34.3						Ditto.
		eF		53	57.5						

8. The Seismic Reports of Husan Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
			h	m	s	μ	μ	s	μ	km	
1	Jan. 7	eP eL? eF	4	09	57.6 36.6 50.						NE off Miyako.
2	Jan. 16	eP eF	11	28	40.0 50.						SW part of Waiyôgun, Kôgen-dô, Tyôsen.
3	Feb. 13	eL? e eF	3	05	16.7 57.7 06.7						The Altai range.
4	Mar. 2	P S F	17	34	02.5 45.5 00.					1560	Strong earthquake off Sanriku. Great damage along Sanriku coast due to the tidal wave.
5	Mar. 3	P S? F	1	19	03.5 18.5 40.					111	Middle valley of the River Sensin, Zenrahokudô, Tyôsen.
6	Mar. 8	eP eS eF	10	28	26.3 13.3 50.3					349	Iyo-nada, Ehime Prefecture.
7	Mar. 11	P e eF	19	35	28.9 11.9 50.9						WNW off Titi-zima, the Bonin Islands.
8	Mar 25	eP S F	12	51	03.7 40.7 07.7					275	Neighbourhood of Mt. Aso.
9	Apr. 19	P F	6	47	41.7 05.8						Mouth of the River Daidakusui, Formosa.
10	June 2	P S F	7	39	55.7 07.0 —					650	Miyakonozyô, Miyazaki Prefecture.
11	June 3	P eL eF	17	10	55.9 20.3 30.						Neighbourhood of Amami-Oosima, Kagosima Prefecture.
12	June 18	P eS eL F	21	40	28. 35. 08. 20.					1190	Eastern off Kinkasan, Miyagi Prefecture.
13	June 24	e e eF	22	13	12. 27. 00.						Sumatra.

S. The Seismic Reports of Husan Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
14	July 18	eP?	7	33	06.5					690	Off Vladivostock,
		S		34	04.5						
		L		34	39.5						
		F		40	00.6						
15	Aug. 25	e	8	00	00.	Time uncertain					Between Prov. of Szechuen and Kansu, China.
		L		05	—						
		F		36	—						
16	Sept. 2	P	16	42	56.5	Time uncertain				1040	Southern off the island of Hatzizyô.
		S		44	48.5						
		F		55	44.5						

9. The Seismic Reports of Heizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
			h	m	s	μ	μ	s	μ	km	
1	Jan. 1	P	8	59	54.0					6500?	Africa ?
		PcPe	9	00	32.7						
		SE?		07	57.4						
		ScSe?		08	59.7						
		eLe?		18	12.						
		F		31	40.						
2	Jan. 3	Pe	15	30	18.5						ENE off Miyako.
		Le		34	09.5						
		F		50	30.						
3	Jan. 4	ePn	1	29	21.9					2400	SE off Titi-zima, the Bonin Islands.
		ePe		29	23.1						
		Sn		33	18.5						
		Se		33	20.8						
		eLe		35	40.4						
		F	2	02	00						
4	Jan. 7	P	4	09	54.7						NE off Miyako.
		eLe		13	08.5						
		ME1		14	22.6		± 56	20			
		ME2		16	09.5		± 25	15			
		MN		16	51.3		+ 35	15			
		F		Lost during the change of record sheets.							
5	Jan. 8	ePe	6	32	03.						Off the mouth of the River Mabuti, Aomori Prefecture.
		ie		32	15.0						
		F		44	30.						
6	Jan. 16	Pe	11	27	15.1					153	SW part of Waiyôgun, Kôge-ndô, Tyôsen. Felt in the epicentral region.
		Se		27	35.8						
		F		28	20.						
7	Jan. 21	P	16	38	14.6						
		F		44	00						
8	Jan. 21	ePe	19	34	40.1						Indian Sea.
		eE		38	37.0						
		eE		44	56.4						
		eE		47	24.9						
		eE		52	43.4						
		ME		18	54.						
		F		45	20.						
9	Feb. 3	Pe	22	16	20.4					2350	Northern off the island of Urupp, the Kurile Islands.
		Se		20	13.1						
		eLe?		23	14.5						
		F		41	—						
10	Feb. 13	ePe	2	54	59.5						The Altai range.
		eLe?	3	03	11.1						

9. The Seismic Reports of Heizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks	
						AN	AE					
			h	m	s	μ	μ	s	μ	km		
11	Feb. 19	F	3	50	—							
		P	4	29	34.7						WSW off the island of Yonakuni.	
		eE		33	07.1							
		LE?		34	13.1							
F		42	30.0									
12	Feb. 23	ePE	8	28	54.1						Chile, Damage at Iquique.	
		eE		33	17.3							
		eE		51	35.9							
		F	10	13	50.0							
13	Mar. 2	eP	17	34	21.5					1670	Strong earth quake off Sanriku, Great damage along Sanriku coast due to the tidal wave.	
		iP		34	24.4							
		SN		37	14.6							
		L		38	47.0							
		MNI		39	40.3							
		MEI		40	03.8							
		MNEZ		41	13.0							
		CN		55	40.0							
		F	Lost in next quake									
14	Mar. 2	P	19	44	58.2						After shock of No. 13	
		F	Lost in principal quake									
15	Mar. 2	P	20	47	08.7					1450	Ditto.	
		S		49	44.1							
		LN		52	06.2							
		F	21	34	20.0							
16	Mar. 3	P	2	24	49.8						Philippine.	
		F		41	20.0							
17	Mar. 3	P	9	16	07.9					1550	After shock of No. 13	
		eS		18	50.2							
		L		20	02.2							
		F	Lost in next quake									
18	Mar. 3	P	9	41	58.1					1665	Ditto.	
		eSE		44	50.6							
		L		46	02.1							
		F	Lost in next quake									
19	Mar. 3	eSE?	10	10	07.0						Ditto.	
		L		11	32.0							
		F		35	20.0							
20	Mar. 8	PE	1	38	55.9						Ditto.	
		eLE		42	41.2							
		F		58	—							

9. The Seismic Reports of Heizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
21	Mar. 11	iP	h	m	s	μ	μ	s	μ	km	WNW off Titi-zima, the Bonin Islands.
			19	36	16.9						
		iS		39	08.4						
		F	20	09	50.0						
22	Mar. 17	eP	16	01	29.2					3155	The Aleutian Islands.
		eS		06	23.2						
		L		11	20.7						
		F		56	40.0						
23	Mar. 17	eP	19	39	30.6			±		3095	Mindanao.
		eS		44	20.6						
		LE?		49	22.6						
		F	20	32	40.0						
24	Mar. 18	iP	15	54	33.9					1185	Southern off the island of Hatizyô.
		eSE?		56	41.4						
		LE		58	24.6						
		F	16	14	30.0						
25	Mar. 23	eP	17	42	14.4						Mongolia.
		eE		43	19.8						
		eE		45	34.6						
		i		47	12.9						
		L		48	33.1						
		F	18	07	30.0						
26	Mar. 25	ePE	12	53	04.0					530	Neighbourhood of Mt. Aso.
		S		54	15.4						
		F	13	01	—						
27	Apr. 1	P	16	02	11.9					1416?	After shock of No. 13.
		eSE?		04	40.5						
		LE?		06	28.5						
		M		07	27.5						
		F		25	40.0						
28	Apr. 3	PN?	1	46	20.4					121?	Local.
		L?		46	36.6						
		F		48	20.0						
29	Apr. 9	PE	2	49	55.4					1320?	After shock of No. 13.
		SE?		52	15.9						
		ME		55	15.9						
		F	3	26	—						
30	Apr. 19	iP	6	48	20.8					1730	Mouth of the River Daidakustui, Formosa.
		iS		51	19.9						
		LN		53	22.3						
		ME		53	30.3						
		C		55	21.7						
		F	7	28	—						

9. The Seismic Reports of Heizyô Meteorological Observatory in the Year 1933.

No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks	
						AN	AE					
			h	m	s	μ	μ	s	μ	km		
31	Apr. 23	P	7	17	00.6						After shock of No. 13	
		LE		21	11.4							
		ME		22	48.0	±	8	14.4				
		F		45	30.0							
32	Apr. 27	P	2	45	33.1					5855	Alaska.	
		S		53	01.6							
		LE	3	01	14.1							
		MN		11	39.1							
		ME		12	05.1	±	25	15.				
		F	4	10								
33	May 16	eP?	1	20	26.1					4175?	North Sumatra.	
		S		26	23.6							
		LE		32	26.2							
		ME		37	34.6							
		F	2	19	30.0							
34	May 23	eLE	16	41	24.0						Hyûga-nada, Miyazaki Prefecture.	
		F		44	10.0							
35	May 23	LE	16	56	44.1						Ditto.	
		F	17	00	47.0							
36	June 2	P	7	41	04.3					1010	Miyakonozyô, Miyazaki Prefecture.	
		S		42	53.3							
		F	8	04	40.							
37	June 3	P	17	11	56.8					1375?	Neighbourhood of Amami-Oosima, Kagosima Prefecture.	
		SE?		14	21.7							
		ME		15	12.7							
		F		35	00.							
38	June 6	P	2	33	55.5						Philippine.	
		F		49	40.							
39	June 7	P	11	51	27.7					2560	Burma.	
		SE		55	37.5							
		e		59	24.1							
		F	12	15	20.							
40	June 8	PE	18	13	36.3						ENE off Miyako, Iwate Prefecture.	
		F		23	30.							
41	June 12	P	21	11	10.3						Kisen-numa, Miyagi Prefecture.	
		F		15	20.							
42	June 13	PE	20	35	51.8						Eastern off the mouth of the River Mabuti, Aomori Prefecture.	
		eL?		40	57.							
		F		45	50.							

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No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
			h	m	s	μ	μ	s	μ	km	
43	June 18	P	21	40	53.0					1390	Eastern off Kinkasan, Miyagi Prefecture.
		SN		43	19.4						
		LE		44	25.4						
		ME		45	40.1						
		F	22	22	—						
44	June 24	P	22	03	27.4					6070	Sumatra.
		S		11	07.3						
		SR ₁		14	31.						
		L		19	28.						
		ME		25	54.4						
		MN		27	50.0						
		F	23	18	—						
45	July 9	P	1	34	23.4					2320	SE off the island of Etorohu, the Kurile Islands.
		S		38	13.4						
		F	2	15	40.0						
46	July 9	P	12	35	05.8					2360	Ditto.
		S		38	59.8						
		LE?		40	49.						
		F	13	34	—						
47	July 9	e	16	19	48.						Eastern off the cape of Nosy-appu, Hokkaidô district.
		F		25	50.						
48	July 10	P	0	25	01.7					1540?	Eastern off Kamaisi, Iwate Prefecture.
		eSN?		27	43.						
		eLE?		29	09.						
		F		53	—						
49	July 14	P	16	05	14.6					725	Off Vladivostock.
		S		06	34.1						
		F		14	—						
50	July 18	eSN?	11	27	34?						Ditto.
		F	12	47	—						
51	July 20	P	23	17	27.8						Eastern off Kinkasan, Miyagi Prefecture.
		F	Lost during the change of record sheets.								
52	July 22	eP	21	03	39.6					4845	Aleutian.
		eSE		10	13.5						
		eSR ₁ E?		13	41.						
		F	22	07	50.						
53	July 24	P	8	39	29.3					690	Southern off Vladivostock.
		SE		40	45.5						
		F		49	20.						
54	July 28	ePE?	16	47	34.8				1450?	WSW off Wakayama.	

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No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						AN	AE				
			h	m	s	μ	μ	s	μ	km	
		eSE?	16	50	07.3						
		F		59	30.						
55	Aug. 11	P	8	59	20.9					2560?	North Burma.
		SE?	9	03	30.5						
		LE		07	44.0						
		F		36	30.0						
56	Aug. 15	iPE	3	02	04.9						NNE off Titi-zima, the Bonin Islands.
		eE		05	27.4						
		F		19	30.0						
57	Aug. 25	P	7	54	57.4					2170	Between Prov. of Szechuen and Kansu, China.
		S		58	35.5						
		L	8	01	17.2						
		MN1		01	51.4						
		ME1		03	18.4						
		MN2		03	38.2						
		ME2		04	47.2						
		CE		11	17.2						
		F	9	11	20.0						
58	Aug. 28	P	22	36	38.2						South At'antic Ocean.
		eE		41	16.3						
		eE		43	03.1						
		F	23	01	10.0						
59	Sept. 2	P	16	44	21.8					1375	Southern off the island of Ha-tizyô.
		S		46	47.0						
		i		55	39.2						
		F	17	04	34.1						
60	Sept. 6	P	22	19	38.5						The Fiji Islands.
		F	23	01	—						
61	Sept. 9	P	5	01	18.3					790	Neighbourhood of Vladivostock.
		S		5	44.7						
		M		5	52.5						
		F		30	—						
62	Sept. 21	P	3	16	45.5					1108	The strong Earthquake of Noto, Isikawa Prefecture.
		S		18	44.3						
		L		19	54.5						
		M		21	16.1						
		F		39	40.0						
63	Sept. 21	P	9	51	03.9					1064	SE off Miyako, Iwate Prefecture.
		S		52	58.3						
		L		55	06.3						
		M		56	58.3						
		F		15	39.3						

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No.	Date	Phase	G. M. T.			Amplitude		Period	First motion	Δ	Remarks
						A _N	A _E				
			h	m	s	μ	μ	s	μ	km	
64	Sept. 25	P	18	57	38.8					3420	Tibet.
		S	19	02	50.8						
		L		07	24.4						
		F		39	36.0						
65	Oct. 3	P _E	18	41	25.0					1084	Central part of Niigata Prefecture.
		eS _E		43	21.4						
		L _E		44	43.6						
		M _E		45	37.0						
		F	19	05	25.0						
66	Oct. 14	P	7	50	28.7					196	Local.
		L		50	55.1						
		F		55	10.1						
67	Nov. 20	iP	14	18	21.8				N 5?	11	Felt slightly at Heizyô.
		iS		18	23.3				W 4		
		M _E		18	23.9		± 7				
		F		19	05.3						
68	Nov. 20 21	iP _N	23	32	30.5					7900	Baffin Bay.
		eS _E		41	45.5						
		iL _E		52	45.5						
		M _E	0	03	42.5		± 20	17.5			
		M _N		07	33.5	- 30		13.5			
F		49	30.0								
69	Nov. 22	eP _E	12	26	49.8						NW part of Amami-Oosima, Kagosima Prefecture.
		F		32	23.0						
70	Nov. 22	eP _E	19	04	50.4						
		F		14	17.0						
71	Nov. 22	eP _E	22	36	38.0						Vicinity of Amami-Oosima Kagosima Prefecture.
		F		48	59.0						
72	Dec. 4	iP	19	37	20.1				N 1.4	1620	Eastern off the Sôya strait.
		iS _E		40	08.1				E 4.		
		M _E		40	12.6						
		F	20	01	38.0						

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