朝鮮總督府氣象臺

地震年報

昭和拾參年

The Seismological Bulletin

of

Weather Bureau of Tyōsen

For the Year

1938

Compiled
By
Weather Bureau of Tyōsen
The Government General of Tyōsen
Zinsen, Tyōsen, Nippon.
1940

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Preface.

The present volume is our seismological bulletin for the year 1938. Beside the list of the seismological stations in Tyōsen, and the analysed data of the earthquakes observed in Tyōsen during the year, the bulletin contains a discussion about the earthquakes which occurred off the east coast of Hukusima Prefecture in November and December 1938, and the result of comparison of the seismic activity in ancient times and modern ages.

The present volume has been compiled by Mr. T. Takeisi, the seimological expert of this bureau, to whom our sincere thanks are due.

M. Kawano,

Director,

May 1. 1940 Weather Bureau of Tyōsen.

1. Introduction.

The present publication contains the results of the seismometrical observations made at observatories in Tyōsen in the year 1938.

Notations :-

1. Phase :-

   The symbols of phases are the same as generaly adopted in the world.

2. Period and amplitude.

   Period : duration of one complete oscillation.

   Amplitude : displacement to the north, east and upwards are regarded as positive.

3. Scales of seismic intensity :-

   O : no feeling
   I : slight
   II : moderate
   III : rather strong
   IV : strong
   V : very strong
   VI : disastrous.

4. The classification of felt earthquakes :-

   The felt earthquakes are classified mainly according to the felt area or its radius.

   (R) remarkable earthquake :
   the radius of felt area is greater than 300km.

   (M) moderate : the radius is smaller than 300km but greater than 200km.

   (S) small : the radius is smaller than 200km but greater than 100km.

   (L) local : the radius is smaller than 100km.

5. Geographical coordinates :-

   λ : longitude φ : latitude.

6. Epicentre : epicentre is simply expressed as Ep.

7. Time : time is referred to Greenwich mean time.

2. Seismological stations in Tyōsen.

(1) Weather Bureau of Tyōsen, 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; Mass of the pendulum. V; Static Magnification.

T; Proper period of the pendulum. $\frac{r}{T^2}$; 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	97	5.3	0.012	3.6
	E–W		107	5.4	0.012	3.4
	Z	80	77	5.3	0.018	3.6
Oomori's Portable Seismograph	N–S	12	50	4.0	0.02	
	E–W	12	50	4.0	0.03	
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
Comori's Tromometer	N–S	50	150	15.0	0.05	
	E–W	50	150	15.0	0.05	

(2) Keizyō Meteorological Observatory.

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

Height above mean sea level; 85.5m.

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	99	4.7	0.023	4.8
	E–W		99	4.7	0.015	4.8
Oomori's Portable Seismograph	N–S	12	50	3.5	0.03	
	E–W	12	50	3.5	0.03	

(3) Taikyū 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	90	5.8	0.018	2.9
	E–W		92	5.8	0.017	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° 02′E Latitude φ; 35° 06′N

Height above mean sea level; 70.5m.

Geological nature of the ground; Porphyrite.

Instruments and constants (approximate):–

Instrument	Component	M kg	V	T sec	$\frac{r}{T^2}$ mm/sec^2	ε
Wiechert's Seismograph	N-S E-W	200	88 80	5.2 5.4	0.08 0.03	5.5 4.4

(5) Heizyō Meteorological Observatory.

Longitude λ; 125° 45′E Latitude φ; 39° 02′N

Height above mean sea level; 51.0m.

Geological nature of the ground; Diorite.

Instrument and constants (approximate):—

Instrument	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	0.024	
	E-W	17.9	50	6.0	0.023	
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

(6) Syūhūrei Meteorological Observatory.

Longitude λ; 128° 00′E Latitude φ; 36° 13′N

Height above mean sea level; 210.0m.

Geological nature of the ground; Granite.

Instrument and constants (approximate):—

Instrument	Component	M kg	V	T sec	$\frac{r}{T^2}$ mm/sec^2	ε
C. M. O. Portable Seismograph	N-S E-W	18 18	40 40	4.5 3.8	0.01 0.12	2.9 2.6

3. The Earthquakes which occurred in Tyōsen in the Year 1938.

In this year, 15 earthquakes occurred in Tyōsen and its neighbourhood. Among them, nine were felt by persons in the epicentral regions. Of these nine quakes, three were felt merely by persons, but by no instrument, owing to the scarce distribution of instruments.

The scales of all these quakes were very small, and no damage occurred.

These are shown in the following tables, and their epicentres are illustrated in Fig. 1.

The felt earthquakes in Tyōsen in the year 1938.

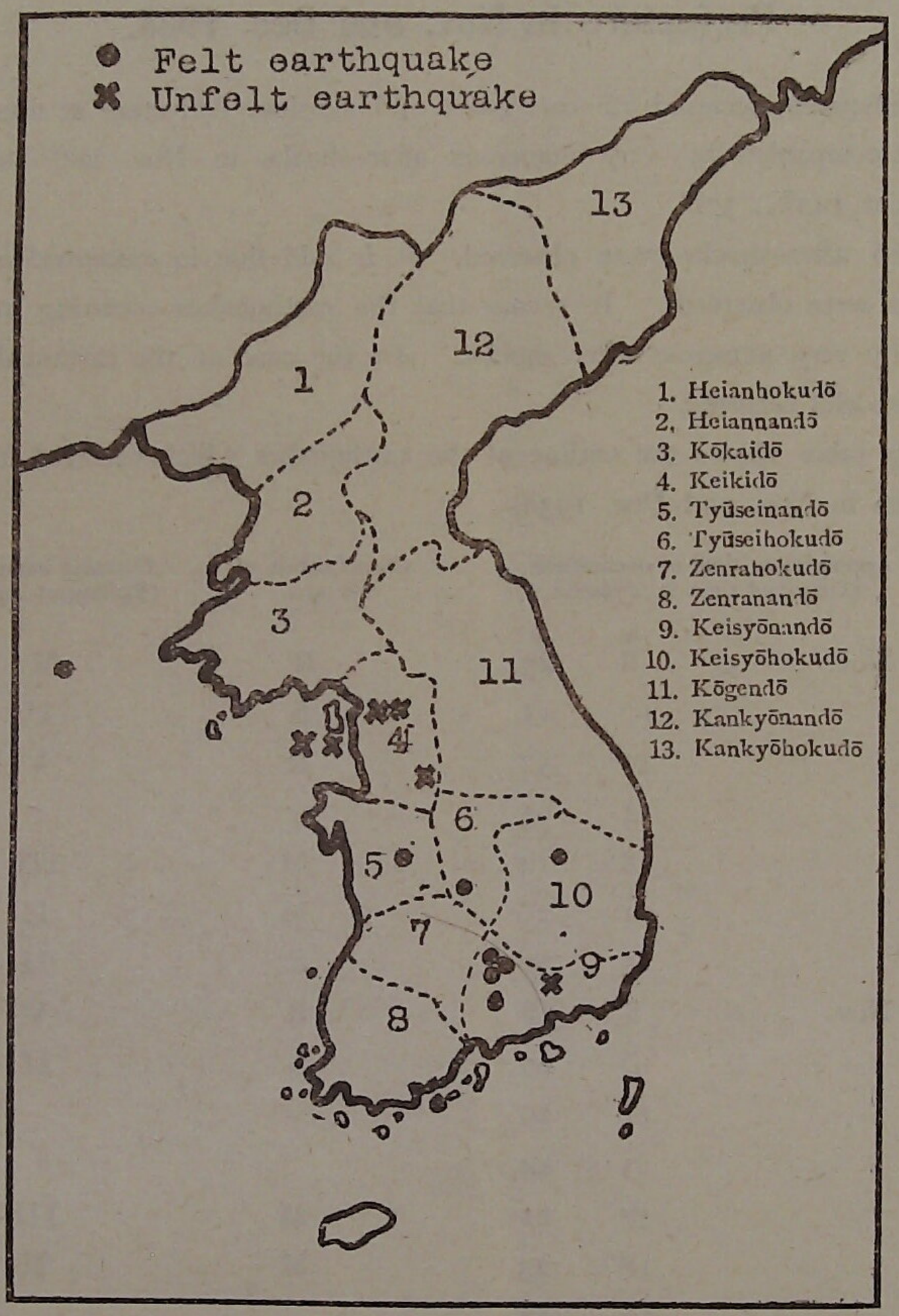
Time (G. M. T.)				Epicentre	Seismic intensity		Earth sound	Remarks
	d	h	m					
Jan.	8	17	50	Near Yokusen Tyūseihokudō	Yokusen	I	no	No instrumental record *
Feb.	4	13	40	Near Kōsyū Tyūseinandō	Kōsyū	II	feeble as thunder	No instrumental record *
Feb.	7	12	20	Kōkōmen Gyokukari Zenranandō	Gyokukari	II	feeble as wagon	No instrumental record *
July	19	23	40	South of Eisyū Keisyōhokudō λ=128.°6E φ= 36.8N	Eisyū	III	feeble, as wagon	
					Antō	II	feeble, as wagon	
July	20	12	2	Near Sansei Keisyōnandō λ=127.°9E φ= 35.4N	Sansei	II	feeble, as thunder	
					Katō	III	feeble, as thunder	
Aug.	6	3	6	Near Kyosyō Keisyōnandō	Kyosyō	II	feeble, as wagon	
Aug.	22	0	46	Near Kyosyō Keisyōnandō λ=127.°9E φ= 35.7N	Taikyū	I	no	Felt also in the districts of Kan'yō, Kyosyō, and Kyōsen.
					Syūhūrei	I	no	
					Zensyū	I	no	
					Sansei	II	no	
					Katō	II	feeble, as thunder	
					Seisyū	II	feeble, as motar car	
					Ninzitu	I?	no	
					Tyōsui	I?	no	
					Nangen	II?	no	
					Riri	I?	no	
					Kōsyū	I?	no	
Nov.	18	7	18	Off Syōsei Island λ=123.6E φ= 38.0N	Mukinpo	II	no	
					Syōsei Isl.	I	feeble, as sea waves	
					Zinsen	I	no	
Dec.	28	22	20	Near Kyosyō Keisyōnandō	Kyosyō	II	feeble, as wagon	

* These three earthquakes are omitted in the chapter 6.

The unfelt earthquakes in Tyōsen in the year 1938.

Time (G. M. T.)				Epicentre
	d	h	m	
Jan.	24	5	57	The mid-stream area of Rakutō River ?
Jan.	28	5	20	The mid-stream area of Kankō River. 19km east of Keizyō.
Feb.	18	5	27	The mid-stream area of Kankō River. Near Tyōkoin.
Nov.	15	7	25	Near Keizyō.
Dec.	11	1	54	44km distant from Zinsen.
Dec.	14	8	36	Near Zinsen. 7km distant from Zinsen.

Fig. 1. Distribution of epicentres in the year 1938.



4. Earthquakes which occurred off east coast of Hukusima Prefecture in Nov. and Dec. 1938.

A severe earthquake occurred off east coast of Hukusima Prefecture at about 8h 45m Nov. 5th, and was accompanied by very numerous after-shocks in Nov. and Dec. All of these epicentres are about 142E., 37N.

In Tyōsen, 66 after-shocks were observed. It is said that in epicentral region, more than 1000 after-shocks were observed. It seems that the earthquakes occurring in this region are usually followed by very numerous after-shocks. In the case of the earthquake of Mar. 1933 too, many after-shocks occurred.

The following table shows the outline of the earthquakes which occurred in this region and observed in Tyōsen in Nov. and Dec. 1938.

Approximate time of occurrence. (Observed time in Tyōsen)				Classification of felt area.	Greatest intensity (Epicentral region)
	d	h	m		
Nov.	5	8	45	R	V
		10	11	S	II
		10	52	R	V
		14	52		
		18	12	M	III
		21	26	M	II
		23	30	S	II
Nov.	6	8	56	R	V
		10	29	S	II
		11	19		
		13	44		
		17	21	M	III
		18	23	M	II
		19	22		
		21	6	M	III
		21	40	R	III
		23	18	M	II
Nov.	7	0	50	M	III
		1	41	R	III
		1	48	S	II
		1	57	M	III
		2	17	S	I
		2	31	S	II
		2	44	S	II
		3	41		

Approximate time of occurrence. (Observed time in Tyōsen)				Classification of felt area.	Greatest intensity (Epicentral region)
	d	h	m		
Nov.	7	4	18	R	III
		19	15		
		19	36	R	III
Nov.	8	11	5	S	II
		11	16		
		13	17	M	II
Nov.	9	9	18	M	III
		16	11	S	III
Nov.	10	6	47		
		22	25	S	II
Nov.	11	2	59		
		8	5		
Nov.	13	22	34	S	I
Nov.	14	2	39	S	I
Nov.	16	11	9	R	III
Nov.	19	5	57	M	
Nov.	22	1	16	R	III
		1	42	S	II
		2	53		
		3	26	S	I
		8	16	S	II
Nov.	23	0	18		
Nov.	25	8	22	R	III
Nov.	26	3	39	S	I
		10	4	S	I
Nov.	29	13	42	M	II
Nov.	30	2	32	R	IV
		15	18	M	
		15	33	S	II
Dec.	3	0	45	S	I
		12	14	R	III
Dec.	4	6	14	M	
Dec.	5	18	56	M	
Dec.	7	13	6	M	
Dec.	9	9	37	S	I
Dec.	12	2	45		
		23	41	M	

Approximate time of occurrence. (Observed time in Tyōsen)				Classification of felt area.	Greatest intensity (Epicentral region)
	d	h	m		
Dec.	13	0	1	M	
		17	28	M	
Dec.	18	21	48	M	I
Dec.	20	14	45	S	I
Dec.	23	1	54	R	III

5. Earthquakes in Tyōsen in ancient times and modern ages.

Dr. Wada studied the distribution of the earthquakes which occurred in Tyōsen in the period 2–1912. (Scientific Memoirs. vol. II 1912)

In this period, the total number of earthquakes amounted to 2292.

In modern ages (1913 – 1938) the total number amounted to 208.

The total number in ancient times is very small for its long period. It seems that, in acient times, very feeble earthquakes were not observed.

Dr. Wada studied the distribution in the following manner.

The area of Tyōsen is divided in meshes of one degree of longitude and latitude as shown in fig 2, and the number of earthquakes in each mesh is studied.

Now, the distribution of earthquakes in modern ages is studied by the same method as above mentioned.

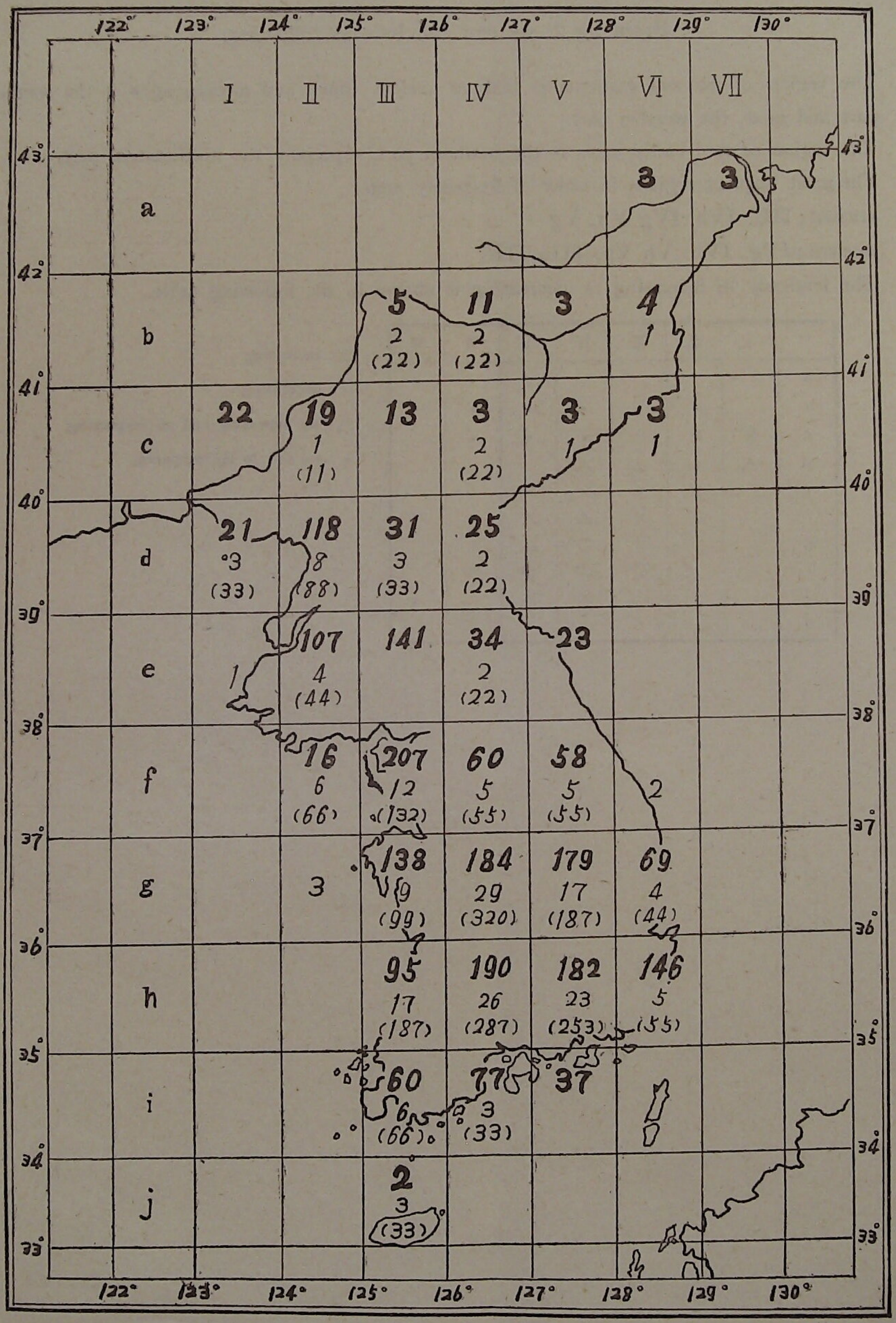
The results are shown in fig 2.

To compare the distribution in ancient times and modern ages, the reduced numbers are adopted.

The total number of ancient times is 2292, and the total number of modern ages is 208.

The ratio of the two is $2292 \div 208 = 11.02$ and the number of modern ages multipled by 11.02 is now called the "reduced number", shown in brackets.

Fig. 2 Distribution of earthquakes in ancient times and modern ages.



thick letters : ancient, 2-1912

thin letters : modern, 1913-1938

in brackets : reduced number = modern $\times \frac{\text{ancient}}{\text{modern}}$

From fig 2. we can conclude as following:

1. The region of frequent earthquakes both in ancient times and modern ages is the southern part and next, the western part.
2. The region of rare earthquakes is the northern part, especially the northeastern part.
3. The most frequent regions in order of frequency are:–
   ancient ; IIIf. IVh. IVg Vh, Vg
   modern ; IVg. IVh. Vh Vg, IIIh IIIf.
4. The tendency of increasing or decreasing is shown in the following table.

	I	II	III	IV	V	VI	VII
a						•	•
b			•	•	•	•	
c	×	×	×	•	•	•	
d	△	×	△	△			
e		×	×	×	×		
		○	×	△	△	•	
g			×	○	△	×	
h			○	○	○	×	
i			△	×	×		
j			•				

○ increasing

× decreasing

△ no increasing and no decreasing.

• too few to be compared.

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
1	Jan. 1	P	23 31 38.7						3 3.3	Ep. to the south of Titizima, Bonin Is.
	Husan	S	34 42.0							
		F	24 16 —							
	Taikyū	P	23 31 44.9						3 8.5	
		S	34 53.4							
		F	24 8 —							
	Keizyō	eP_{NE}	23 32 10.9						3 38.2	
		eS_E	35 49.1							
		eS_N	35 51.4							
		M_E	38 42.6		± 10		18.			
		M_N	39 0.9	— 40			20.			
		F	43 —							
	Zinsen	iP_{EN}	23 32 12.3					to N	3 36.9	
		eS_{EN}	35 49.2					to W		
		eL_E	37 21.6							
		F	24 0 —							
	Heizyō	eP	23 32 44.6						3 30.0	
		eS	36 14.6							
		F	24 16 —							
2	Jan. 2	P	7 54 54.3						0 43.0	(M) Ep. λ=133°22'E φ=34°53'N
	Husan	eS	55 37.3							
		F	59 —							
	Taikyū	P	7 55 9.6						0 59.2	Felt area: Greater part of Tyūgoku, a part of Kinki and Sikoku.
		S	56 8.8							
		F	8 4 —							
	Zinsen	e_N	7 55 15.9							
		F	8 0 —							
	Keizyō	eP_{NE}	7 56 9.8							
		F	8 1 —							
3	Jan. 8	eP	5 52 10.0						0 19.1	(S) Ep. λ=132.°1E φ=33.°7N
	Husan	eS	52 29.1							
		F	55 —							Felt in places of Tyūgōku, Sikoku and Kyūsyū.
4	Jan. 10	P	20 55 52.0						1 35.8	(M) Ep. λ=131.°2E φ=29.°8N
	Husan	S	57 27.8							
		F	21 12 —							
	Taikyū	P	20 56 2.5						1 58.0	Felt in Yaku-sima, Amami-ōsima, greater part of Kyūsyū and a part of Sikoku. Depth=80km.
		S	58 0.5							
		F	21 15 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Zinsen	iP$_{EN}$	20 56 32.1					to S	1 38.9	
		eS$_{EN}$	58 11.0					to E		
		F	21 17 —							
	Heizyō	iP$_N$	20 56 58.5					to S	2 13.2	
		eS	59 11.7							
		M	21 0 38.7							
		F	18 —							
5	Jan. 11	iP	15 13 20.7						1 10.6	(R)
	Husan	S	14 31.3							Ep. λ=135°10'E φ=33°43'N
		M$_N$	15 4.9	+ 547		6.6				Depth about 10km
		M$_E$	15 4.9		+ 160	5.4				Felt in Kinki, Tyūbu, Tyūgoku, Sikoku, and Kyūsyū.
		F	16 3 —							Some damages at Wakayama Prefecture.
	Taikyū	eP	15 13 25.6						1 5.3	
		S	14 30.9							
		M$_N$	15 23.5	+ 702		8.7				
		M$_E$	15 20.0		+ 230	7.4				
		F	46 —							
	Syūhūrei	P	15 13 37.0						1 11.5	
		S	14 48.5							
		M	15 41.2	+ 120	+ 20	3.7				
		F	34 —							
	Zinsen	eP$_Z$	15 13 55.7						1 26.3	
		eP$_{EN}$	13 57.2							
		iS$_E$	15 22.0							
		iS$_N$	15 24.0							
		iS$_Z$	15 26.8							
		iz	15 30.9							
		eL$_N$	15 31.1							
		iz	15 40.8							
		iL$_N$	15 44.0							
		iL$_E$	15 47.5							
		iL$_Z$	15 15 59.2							
		M$_Z$	16 11.1			± 82	6.1			
		M$_E$	16 29.6		— 72		4.9			
		M$_N$	16 32.9	+ 133			4.1			
		F	43 —							
	Heizyō	iP$_{NE}$	15 14 17.9					to S	2 3.9	
		iS$_{NE}$	16 21.8					to E		
		M$_{NE}$	18 14.0							
		F	52 —							
6	Jan. 16	P?	16 3 53.5						1 8.9	(S)
	Taikyū	eS	5 2.4							Ep. λ=132.°6E φ=33.8N
		F	13 —							Felt in places of

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s		m s	
	Husan	eP	16 4 48.1						0 14.9?	Tyūgoku, Sikoku and Kyūsyū.
		eS?	5 3.0							
		F	5 30.							
	Keizyō	eP_{NE}	16 6 20.4							
		F	8 —							
7	Jan. 24 Taikyū	P	5 57 47.5						0 4.8	(L) Near Taikyū.
		S	57 52.3							
		F	58 20.							
8	Jan. 24 Taikyū	eP	10 51 27.6						4 10.2	Ep. by J. S. A. λ=35.°6W φ=60.4S Depth normal. by Strasbourg. λ=37°W φ=58°S
		eS	55 37.8							
		F	12 41 —							
	Husan	eP	10 51 32.2						4 11.0	
		eS	55 43.2							
		F	12 59 —							
	Zinsen	eP_N	10 51 36.7						6 33.2?	
		eS_N?	58 9.9							
		F	12 56 —							
	Keizyō	eP	10 51 43.6						3 50.0	
		eS	55 33.6							
		eL	11 1 50.6							
		e	56 27.7							
		F	12 5 —							
9	Jan. 24 Husan	eP	13 4 22.4						1 1.9	(M) Ep. λ=135.°1E φ= 33.°8N Felt in greater part of Kinki and Sikoku.
		eS	5 24.3							
		F	12 —							
10	Jan. 28 Zinsen	iP_{EN}	5 20 47.4						0 6.4	(L) Ep. Near keizyō
		iS_{EN}	20 53.8							
		F	21 27.							
	Keizyō	P_{NE}	5 20 57.9							
		S_{NE}	21 0.5					N +0.5	0 2.6	
		M_{NE}	21 4.7	+ 3	— 3		0.0	E —1.0		
11	Feb. 1 Syūhūrei	P	19 11 15.7						6 48.3	New Guinea. Ep. by J. S. A. λ=131°E φ= 5.°5S Depth normal by Strasbourg. λ=131.°7E φ= 5°S
		S	18 4.0							
		M_E	28 6.5		± 87		22.5			
		F	20 27 —							
	Taikyū	P	19 11 58.0							
		iS	18 6.5						6 8.5	
		L	24 33.3							
		M_E	26 5.7		— 252		22.5			

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		M_N	19 27 51.7	+ 424			24.6			
		F	Lost in next quake.							
	Keizyō	P_N	19 12 17.1						6 20.4	
		ePs	12 18.0							
		iPP_N	14 5.3							
		iS_{NE}	18 37.5							
		i_{NE}	18 50.0							
		eSS_E	21 55.0							
		SS_N	21 58.0							
		eL_N	22 58.0							
		M_{1N}	27 50.0	+ 2900			25.0			
		M_{2N}	30 2.5	+ 2000			20.0			
		F	21 9 —							
	Zinsen	iP_{NE}	19 12 17.7					N -11.7	6 14.9	
		iPP_E	14 9.5		— 12.0		7.1	E + 1.9		
		iS_N	18 32.6	+ 85.0			19.6			
		iS_E	18 33.1		— 83.0		16.8			
		M_{1E}	18 50.3		— 280		7.2			
		M_{1N}	19 8.6	+ 1120			19 2			
		iQ_E	21 28.3							
		M_{2E}	22 34.5		— 2110		24.4			
		iL_N	24 27.3							
		M_{2N}	27 41.7	± 2240			24.0			
		C_N	40 —							
		$P'P'_{NE}$	58 1.0							
		F	22 41 —							
	Heizyō	iP_N	19 12 35.2					N -6.0 to E	6 18.0	
		S_{NE}	18 53.2							
		L	25 41.2							
		M_{NE}	28 26.2	— 216	— 136		24.			
		M_N	31 26.2	— 116			18.			
		C	40 33.2							
		F	20 53 —							
	Husan	P	19 12 54.7						6 4.0	
		PP	14 33.8							
		S	18 58.7							
		M_E	22 53.3		+ 9100		49.5			
		M_N	28 18.2	— 3720			22.5			
		F	Lost in next quake.							
12	Feb. 1	P	19 57 31.3						6 37.8	May be some phases of preceding quake, or after shock.
	Taikyū	S	20 4 9.1							
		L	9 47.6							
		F	22 30 —							
	Keizyō	e	19 56 20.0							ditto
		F	20 13 —							

6 The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Husan	eP	19 58 22.2						1 33.9?	ditto
		eS?	59 56.1							
		F	22 37 —							
13	Feb. 1	e	22 5 50.0							ditto
	Keizyō	F	14 —							
14	Feb 5	ePz	2 44 41.2						8 58.2?	Colombia, S. America
	Zinsen	ePPz?	45 7.7							Ep. by J. S. A.
		ePPPz?	45 45.5							λ=75.°7W
		ez	47 1.1							φ= 5.°1N
		eS_N?	51 39.4							Depth : 130km
		eL_N?	58 1.5							by U. S. C. G. S.
		F	4 5 —							λ=75.°9W
										φ= 4.°5N
										h=80km
										by Strasbourg.
										λ=76.°0W
	Taikyū	eP	2 45 18.7						4 20.3	φ= 5.°0N
		eS	49 39.0							h=150km.
		F	3 14 —							
15	Feb. 5	P	10 0 5.0						4 7.8	
	Taikyū	iS	4 12.8							
		F	21 —							
	Zinsen	eP_{NE}	10 0 8.9						4 22.6	
		eP_Z	0 14.0							
		eS_N	4 31.5							
		F	16 —							
	Husan	e	10 0 22.5							
		F	36 —							
16	Feb. 7	eP	14 45 2.5						1 30.6	(R)
	Husan	eS	46 33.1							Ep. λ=139°13′E
		F	59 —							φ= 36°15′N
										Depth 100km
										Felt area :
	Taikyü	iP	14 45 6.7					E +11	1 42.0	The whole of Kantō, a part of Tyūbu and Tōhoku.
		eS	46 48.7							
		F	59 —							
	Keizyō	P_{NE}	14 45 25.4						1 56.0	
		S_N	47 21.4							
		F	49 —							
	Zinsen	iP_E	14 45 27.7					to E	1 54.7	
		eS_N	47 22.4							
		F	15 3 —							
	Heizyō	iP_E	14 45 39.5					to W		
		F	56 —							
17	Feb. 8	P	13 16 7.7						3 38.5	(S)

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time G. M. T.	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Husan	eS	13 19 46.2							Ep. λ=122.°0E φ= 24.°4N Felt in northern part of Taiwan, and Isigaki Isl.
		F	30 —							
	Taikyū	iP	13 16 14.7					N + 5	2 29.0	
		eS	18 43.7					E + 2		
		F	32 —							
	Zinsen	iPz	13 16 23.2					to Up	2 48.1	
		iP_{EN}	16 24.0					to E		
		eSz?	19 9.3					to N		
		iS_{NE}	19 11.3							
		eQ_E	20 43.7			3.8				
		F	34 —							
	Keizyō	eP_N	13 16 27.5						4 17.0	
		eS_N	20 44.5							
		F	24 —							
	Heizyō	eP_{NE}?	13 16 44.0						2 57.2	
		S_E	19 41.0							
		F	32 —							
18	Feb. 11 Zinsen	eP_{NE}	7 0 18.0						3 51.7	(S) Ep. λ=145.°8E φ= 41.7N Felt at Kusiro and Hatinohe.
		eS_E?	4 9.7							
		eI_N	6 1.9							
		F	19 —							
19	Feb 11 Husan	e	14 42 39.0							Ep. to the south of Kōsyun, Taiwan.
		F	58 —							
	Zinsen	eP_N	14 44 2.0						3 52.2	
		eS_N?	47 55.8							
		F	15 3 —							
	Keizyō	e	14 44 22.3							
		F	47 —							
20	Feb. 13 Zinsen	eP_N	8 34 39.5						2 32.3?	Ep. to the south of Yonakuni Is.
		eS_E?	37 11.8							
		eQ_E	39 1.9							
		F	55 —							
	Keizyō	eP	8 34 39.7							
		F	43 —							
21	Feb. 14 Keizyō	eP_{NE}	19 22 21.1							Near Dairen.
		F	26 —							
	Husan	eP	19 23 59.7							
		F	28 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s		m s	
22	Feb. 18	iPEN	5 27 32.6						0 13.8	(L)
	Zinsen	iSEN	27 46.4							Near Keizyō.
		F	28 28.							
	Keizyō	PNE	5 27 33.2						0 11.5	
		SNE	27 44.7							
		MNE	27 47.4							
		F	29 —							
23	Feb. 21	eP	14 3 17.9							(L)
	Heizyō	F	12 —							Near Heizyō?
24	Feb. 21	P	?							
	Zinsen	eZ	14 4 4.4							
		eSN	4 22.9							
		eLEN	5 5.5							
		F	9 —							
25	Mar. 1	P	6 1 23.8						0 51.2	Near Miyakonozyō, Miyazaki Prefecture.
	Husan	S	2 15.0							
		F	11 —							
	Heizyō	ePNE	6 4 45.6							
		F	9 —							
26	Mar. 3	i	23 21 33.2							
	Taikyū	F	28 30.							
27	Mar. 8	eP	5 43 3.5						7 1.2	
	Taikyū	eS	5 50 4.7							
		F	6 29 —							
	Zinsen	ePNE	5 43 38.0					to W		
		eLN	6 0 37.1					to S		
		F	25 —							
	Husan	eP	5 43 57.6						6 50.2	
		eS	50 47.8							
		F	6 22 —							
28	Mar. 8	ePE	13 5 22.3							
	Heizyō	F	9 —							
29	Mar. 10	ePNE	15 44 40.6					to N		To the north of Titi zima, Bonin Isl.
		eL	50 38.5					E +1.3		
		F	58 —							
30	Mar. 14	eLNE	1 18 26.6							
	Zinsen	F	26 13.0							
31	Mar. 14	ePNE	5 18 36.2						3 51.0	

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Heizyō	S_E	5 22 27.2							
		F	41 —							
	Zinsen	iP_N	5 18 50.1					to S	3 42.7	
		pP_E	19 9.7		+ 2.0		4.5	E +0.9		
		iS_N	22 32.8	+ 2.3			4.7			
		iS_E	22 32.8		— 7.3		3.8			
		SS_E	23 26.4		— 1.3		4.8			
		iL_N	25 23.8	— 6.4			6.5			
		iL_E	25 23.8		— 7.3		3.8			
		C	31 10.9							
		F	53 —							
	Taikyū	eP	5 18 58.8						4 0.5	
		eS	22 59.3							
		eL	25 30.9							
		F	39 —							
	Husan	P	5 20 9.8						3 54.1	
		S	24 3.9							
		F	52 —							
32	Mar. 18 Keizyō	eP	2 14 7.0							
		F	18 —							
33	Mar. 19 Zinsen	eP_{NE}	9 25 29.8					to S	0 30.3	(L)
		eS_{NE}	26 0.1							
		F	32 3.							
34	Mar. 22 Zinsen	eL_{NE}	15 41 16.8							Canada?
		F	16 28 —							
35	Mar. 23 Husan	e	0 11 47.7							Karenkō, Taiwan?
		F	22 —							
36	Mar. 28 Taikyū	P	13 6 49.8						0 54.9	(S) Ep. λ=130.°2E φ= 31.8N Felt at several places of Kyūsyū.
		S	7 44.7							
		F	20 —							
	Keizyō	eP_E	13 7 24.7						1 22.0	
		S_{NE}	8 46.7							
		M_E	8 56.7		+ 4		1.9			
		F	12 —							
	Zinsen	eS_{NE}?	13 8 45.5							
		eL_{NE}?	8 51.7							
		F	15 —							
37	Mar. 31 Zinsen	eP_{NZ}	22 35 30.4					N +1.0 to E Z +1.4	3 24.4	Philippine.
		ePP_N	35 48.7							
		eS_{EZ}	38 54.8							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S–P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		eSS_{NE}	22 39 16.9							
		eL_E	40 14.1							
		M_N	44 20.5	+ 29			14.8			
		M_E	46 24.3		— 9		11.4			
		F	23 22 —							
38	Apr. 1	eL_N	7 18 10.0							
	Keizyō	F	23 —							
39	Apr. 1	eP	21 35 7.7						3 34.0	Northern part of South China Sea.
	Taikyū	eS	38 41.7							
		F	22 26 —							
	Keizyō	e_{NE}	21 35 25.1							
		F	38 —							
	Zinsen	eP_{NE}	21 35 27.1					N –0.5	3 52.5	
		ePP_N	35 52.3					E –0 5		
		eS_{NE}	39 19.6					Down		
		eL_N	41 6.1							
		M_N	45 36.6	+ 10			12.5			
		M_E	48 16.4		+ 11		11.7			
		F	22 36 —							
40	Apr. 2	eP_{NE}	7 34 19.2					to S	3 20.1	Etrō Isl. Karahuto, Deep focus.
	Zinsen	eS_N	37 39.3					to W		
		eL_N	39 32.9							
		F	53 —							
41	Apr. 3	e	6 37 44.6							
	Husan	F	7 44 —							
42	Apr. 4	P_{NE}	21 16 38.0							Banda Sea.
	Keizyō	F	22 —							
43	Apr. 13	ePE_{NZ}	2 57 22.2					N +2.1	9 56.5	Italy.
	Zinsen	iS_{NE}	3 7 18.7					E -0.9		Ep. by Strasbourg
		eL_{NE}	22 46.2					Z –5.8		λ=15.°0E
		F	42 —							φ=39.°5N
	Taikyū	eS	3 7 38.6							
		F	13 —							
44	Apr. 14	P	Lost in microseisms							South of China.
	Zinsen	eS?	1 29 27.8							
		eL?	32 30.9							
		F	Lost in microseisms							
	Keizyō	eP_{NE}	1 27 37.0							
		eS_N	29 37.7							
		F	35 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N (μ)	Amplitude E (μ)	Amplitude Z (μ)	Period (s)	First Motion (μ)	S–P (m s)	Remarks
45	Apr. 19	iP$_{NEZ}$	11 10 30.0					N +0.6	9 5.6	Turkey.
	Zinsen	ePP$_{E}$	13 26.3					E −0.8		Ep. by J. S. A.
		ePPP$_{NEZ}$	14 48.0					Z −5.8		λ=33.°1E
		eS$_{NE}$	19 35.6							φ=39.°0N
		eSS$_{NE}$	24 5.7							by Strasbourg
		eL$_{NE}$	32 28.8							λ=32.°7E
		M$_{E}$	43 5.8		+ 50		22.2			φ=38.°9N
		M$_{N}$	43 29.3	+ 50			22.7			by U. S. C. G.S.
		F	12 10 —							λ=33.°5E
										φ=39.°5N
	Taikyū	eP?	11 20 27.1							
		F	12 11 —							
	Keizyō	eL$_{N}$	11 34 47.0							
		F	52 —							
46	Apr. 20	eP$_{N}$?	6 38 44.9					to N	9 38.8	
	Zinsen	eS$_{NE}$	48 23.7					Up		
		eL$_{N}$?	7 2 22.2							
		F	27 —							
47	Apr. 23	eP	0 29 43.7						1 40.0	(R)
	Taikyū	S	31 23.7							Ep. λ=131.°0E
		L	33 3.7							φ=28.1N
		F	1 17 —							Felt at Amami-ōsi-ma, Yaku-sima and southern part of Kyūsyū.
	Keizyō	P$_{NE}$	0 30 21.7						1 57.8	
		S$_{NE}$	32 19.5							
		L$_{E}$	33 47.5							
		F	45 —							
	Zinsen	eP$_{NE}$	0 30 23.3					N +1.2	1 55.4	
		eS$_{NE}$	32 18.7					E +0.5		
		eL$_{NE}$	33 11.5							
		M$_{E}$	34 25.7		— 109		15.7			
		M$_{N}$	35 33.2	— 69			12.8			
		F	1 21 —							
	Heizyō	eP$_{NE}$	0 30 49.5						2 23.6	
		eS$_{NE}$	33 13:1							
		M$_{E}$	35 35.1							
		F	55 —							
48	Apr. 25	P	14 47 39.0						2 7.6	(R)
	Taikyū	eS	49 46.6							Ep. λ=141.°8E
		F	15 3 —							φ= 37.°1N
										Felt area;
										Eastern half part of Tōhoku, greater part of Kantō. Southeastern part of Tyūbu.
	Keizyō	eP$_{NE}$	14 47 44.3							
		eL$_{E}$	51 33.3							
		F	55 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Zinsen	ePE	14 48 5.0					to E	2 28.5	
		eSNE	50 33.5					Down		
		eLE	51 22.2							
		F	15 4 —							
49	May 2	eP	14 56 56.8						1 37.0	To the south of Yaku
	Taikyū	S	58 33.8							–sima
		F	15 12 —							
	Zinsen	ePZ	14 57 25.6					to S	2 2.3	
		ePNE	57 26.0					to E		
		eSNE	59 28.3					Z -1.3		
		eSZ	59 30.5							
		eLNE	59 59.5							
		eLZ	15 0 0.1							
		MN	0 4.6	— 5			5.1			
		MZ	0 7.3			+ 4	4.4			
		ME	0 8.7		+ 5		4.6			
		F	11 —							
	Keizyō	PNE	14 59 36.6							
		F	15 4 —							
50	May 2	eP	15 0 25.8							
	Heizyō	F	8 —							
51	May 2	eP	23 52 51.4							Yaku-sima.
	Heizyō	F	59 —							
	Keizyō	ePNE	23 53 18.3							
		F	24 0 —							
	Zinsen	ePENZ?	23 53 32.4					to N	0 45.8	
		eSENZ?	54 14.4					to E		
		eLENZ?	54 28.5					Up.		
		F	24 2 —							
	Taikyū	eP	23 54 25.9							
		F	24 1 —							
52	May 3	e	0 34 43.7							
	Keizyō	F	36 —							
53	May 3	eP	19 20 19.1							To the south east of
	Heizyō	F	25 —							Etorō Isl.
	Keizyō	PNE	19 20 20.2						3 43.4	
		SNE	24 3.6							
		F	30 —							
	Zinsen	iPNEZ	19 20 22.6					N +0.4	3 35.9	

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		eSNE	19 23 58.5					E +0.9		
		iN	24 9.1					Z -2.0		
		eLNE	25 12.2							
		F	35 —							
54	May 5	P	18 34 57.0							
	Taikyū	F	37 —							
55	May 6	PN	6 0 55.4						2 50.2	To the ESE of Miyakozima
	Keizyō	SNE	3 45.6							
		F	10 —							
56	May 7	e	11 37 43.4							
	Keizyō	F	41 —							
57	May 7	e	12 8 12.4							
	Keizyō	F	10 —							
58	May 7	e	14 27 30.4							
	Keizyō	F	30 —							
59	May 8	e	4 31 3.5							
	Keizyō	F	34 —							
60	May 8	e	6 28 21.5							
	Keizyō	F	31 —							
61	May 8	PNE	14 47 48.4							
	Keizyō	F	49 —							
62	May 9	e	2 50 26.6							
	Keizyō	F	57 —							
63	May 9	e	3 14 41.2							
	Keizyō	F	18 —							
64	May 9	PNE	3 49 26.8							
	Keizyō	F	55 —							
65	May 9	e	15 56 0.5							
	Taikyū	F	16 10 —							
	Husan	e	15 56 6.7							
		F	16 8 —							
66	May 10	e	5 55 20.9							
	Keizyō	F	6 15 —							
67	May 11	eLE	15 44 30.3							Mexico?
	Zinsen	F	16 15 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s		m s	
68	May 12	P	15 47 17.0						6 33.8	Ep. by J. S. A. and Strasbourg
	Husan	S	53 50.8							λ=147.°5E
		F	17 5 —							φ= 5.°0S
										by U. S. C. G. S.
	Taikyū	eP	15 47 20.6						6 41.8	λ=147°E
		S	54 2.4							φ= 8°S
		L	57 32.4							
		M_E	59 13.9		+ 645		30.9			
		M_N	16 2 27.7	+ 881			23.6			
		F	52 —							
	Syūhūrei	P	15 47 30.8						7 11.2	
		S	54 42.0							
		F	16 27 —							
	Zinsen	eP_{NEZ}	15 47 38.6					to N	6 59.3	
		i_{NE}	47 57.2					to W		
		i_Z	47 59.3					Up.		
		iPP_{NEZ}	49 47.0							
		eS_{NE}	54 37.9							
		eS_Z	54 41.3							
		$iSSS_{NE}$	58 37.6							
		eL_{NE}	16 1 30.2							
		eL_Z	2 2.5							
		M_N	3 4.2	— 545			28.4			
		M_E	3 18.9		— 509		25.0			
		M_Z	3 38.3			— 375	24.9			
		F	18 49 —							
	Keizyō	P_N	15 47 38.8						6 56.8	
		PP_N	49 25.6							
		S_N	54 35.6							
		L_N	58 3.6							
		M_N	16 3 2.6	+ 60			24.9			
		F	26 —							
	Heizyō	eS_E	15 47 55.8						7 0.0	
		S_E	54 55.8							
		L	59 4.8							
		M_E	16 4 9.8		+ 32		22.0			
		F	37 —							
69	May 14	eP_{NEZ}?	12 9 2.0						4 52.8?	
	Zinsen	eS_{NEZ}	13 54.8							
		eL_{NEZ}	17 33.5							
		M_E	18 56.3		+ 250		12.8			
		M_N	19 26.7	— 131			10.4			
		M_Z	20 12.8			— 13	9.7			
		F	41 —							
	Taikyū	eP?	12 12 47.5						5 34.8?	

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		eS	12 18 22.3							
		F	39 —							
70	May 19	eP	17 15 40.2						6 1.4	Ep. by J. S. A.
	Taikyū	S	21 41.6							λ=118.°9E
		L	24 30.9							φ= 1.°0N
		M_E	28 17.9		— 111		11.4			Depth nearly normal.
		M_N	30 53.2	+ 113			10.1			by U. S. C. G S.
		F	18 32 —							λ=119.°0E
										φ= 0.°5N
	Husan	P	17 15 43.8						5 43.4	by Strasbourg
		?	17 26.3							λ=118.°8E
		S	21 27.2							φ= 0.°0N
		F	18 38 —							
	Keizyō	P_{NE}	17 15 50.0						6 4.8	
		PP_N	17 35.2							
		S_N	21 54.8							
		M_N	22 28.0	— 51			23.1			
		F	18 16 —							
	Zinsen	eP_Z	17 15 56.3					Z +1.3	6 3.8	
		eS_Z	22 0.1							
		eL_Z	24 51.4							
		M_Z	27 50.5			— 238	23.0			
		F	?							
	Heizyō	eP	17 16 12.4						6 3.0	
		iS_{NE}	22 15.4							
		L?	25 24.4							
		M_N	29 15.4							
		M_E	31 0.4							
		F	18 18 —							
71	May 23	P	7 21 2.9						1 56.5	(R)
	Husan	S	22 59.4							Ep. λ=141.°45E
		M_N	25 0.4	+ 982			10.8			φ= 36.°70N
		F	Lost in next quake.							Felt area :
										The whole of Tō-hoku, Kantō, and Tyūbu, a part of Hokkaidō and Kinki.
	Taikyū	P	7 21 3.4						1 57.9	Damages at Hukusima and Ibaragi Prefectures.
		S	23 1.3							
		M_E	25 25.7		+ 1287		12.8			
		M_N	26 1.5	— 728			10.7			
		F	Lost in next quake.							
	Keizyō	eP_{NE}	7 21 13.1						2 20.1	
		$iPP_{E'}$	24.7							
		PP_N	27.6							
		S_{NE}	23 33.2							
		L_{NE}	24 28.1							
		M_N	25 16.1	+ 1080			19.6			

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		M_E	7 25 29.1		— 1920		16.4			
		?	34 44.1							
		F	8 1 —							
	Zinsen	iP_N	7 21 24.9					N ±0.0	2 18.0	
		iPP_Z	28.7					E -20.7		
		$iPPP_E$	33.7					Z +5.3		
		$iPPP_Z$	35.0							
		iS_{NEZ}	23 42.9							
		iL_Z	24 40.4							
		eL_E	51.6							
		eL_N	56.2							
		M_E	25 56.9		+ 2773		15.1			
		M_Z	59.2			± 2750	16.5			
		M_N	26 27.9	± 1236			12.1			
		F	Lost in next quake							
	Heizyō	iP_{NE}	7 21 29.9					to N	2 24.0	
		iS_{NE}	23 53.9					to W		
		L_E	24 47.9							
		M_N	25 53.9	+ 170			12.0			
		M_E	53.9		± 320		18.0			
		F	8 23 —							
72	May 23	P	8 26 12.9						3 27.1	South of Taiwan. Ep. by Strasbourg. λ=119°E φ= 19°N
	Husan	S	29 40.0							
		F	9 13 —							
	Taikyū	P	8 26 20.2						3 32.2	
		S	29 52.4							
		F	9 31 —							
	Keizyō	P_{NE}	8 26 25.6						3 49.3	
		S_{NE}	30 14.9							
		L_N	32 57.1							
		F	58 —							
	Zinsen	eP_{NEZ}	8 26 27.5					to N	3 43.0	
		eS_N	30 9.1					to W		
		eS_{NEZ}	10.5					Up		
		eL_{NEZ}	32 8.6							
		M_E	36 4.8		+ 118		14.6			
		M_Z	39 51.6			— 110	12.8			
		M_N	54.1	+ 95			12.8			
		F	9 5 —							
	Heizyō	eP_{NE}	8 26 32.8							
		L	30 35.8							
		M_E	36 5.8							
		F	9 10 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
73	May 28	P	16 45 27.1						2 47.9	(M)
	Taikyū	S	48 15.0							Ep. λ=144.°3E
		F	17 34 —							φ= 43.6N
										Intensity : Nemuro, III- Kusiro III, Obihiro I.
	Keizyō	P_N	16 45 30.9						2 50.8	Damages near Kussyaro Lake, Hokkaidō.
		S_N	48 21.7							
		L_N	50 31.2							
		M_N	48.7	— 38			15.6			
		F	17 4 —							
	Zinsen	eP_{NE}	16 45 32.9					to N	2 46.0	
		eP_Z	33.2					E +0.9		
		eS_{NE}	48 18.9					Z -0.7		
		eS_Z	22.2							
		eL_Z	49 18.6							
		eL_{NE}	22.6							
		M_N	50 57.2	+ 48			13.8			
		M_E	51 19.0		— 34		13.3			
		M_Z	53 7.0			+ 37	14.6			
		F	17 44 —							
	Heizyō	iP_{NE}	16 45 33.7					to N	2 46.5	
		iS_{NE}	48 20.2					E +4.0		
		L	50 41.2							
		M_E	54 8.2		± 4.0		9.0			
		F	17 24 —							
	Husan	P	16 45 34.3						3 3.7	
		eS	48 38.0							
		F	17 15 —							
74	May 30	eP	14 40 41.8						8 49.7	New Caledonia.
	Husan	eS	49 31.5							Ep. by J. S. A.
		F	15 28 —							λ=169.°4E
										φ= 20.°4S
	Taikyū	eP	14 40 45.6							Depth normal.
		L?	49 41.6							
		F	15 48 —							
	Keizyō	e	14 40 55.0							
		F	54 —							
	Zinsen	iP_{NEZ}	14 40 56.6					N +1.9	9 9.1	
		ePP_Z	42 1.8					E –0.9		
		iS_{NE}	50 5.7					Z +4.0		
		i	57 53.0							
		F	15 55 —							
75	June 5	eP_N	16 33 4.7							(R)
	Keizyō	F	36 —							Ep. λ=140.°28E
										φ= 35.92N

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Taikyū	P	16 33 52.7						1 54.1	Felt area : The whole of Kantō, south-eastern part of Tōhoku and Tyūbu. Depth 65km
		S	35 46.8							
		F	54 —							
	Husan	eP	16 33 57.0						2 0.2	
		S	35 57.2							
		F	45 —							
	Zinsen	eP_E	16 34 20.2						2 15.5	
		eP_Z	21.4							
		eS_Z	36 33.9							
		eS_{NE}	35.7							
		eI_{NE}	38 1.1							
		eL_Z	5.5							
		F	51 —							
76	June 9 Husan	P	19 22 30.8						5 34.2	Ep. by J. S. A. λ=125.°7E φ= 3.1S Depth normal. by U. S. C. G. S. λ=128°E φ= 2°S by Strasbourg. λ=126.°0E φ= 2.8S by Manila. λ=132°E φ= 1°S
		iPP	24 5.2							
		S	28 5.0							
		L	34 24.7							
		F	11 —							
	Taikyū	eP	19 22 39.2						2 35.6	
		ePP?	24 8.8							
		eS	25 14.8							
		eL	31 32.2							
		F	20 49 —							
	Zinsen	eP_Z	19 22 47.5						6 0.0	
		eP_N	50.1							
		eP_E	53.7							
		iPP_Z	24 28.8							
		iPP_N	29.1							
		eS_Z	28 47.5							
		eS_E	55.8							
		eS_N	29 2.0							
		eL_E	34 47.0							
		eL_N	48.3							
		eL_Z	54.8							
		M_E	38 52.3		— 157		14.4			
		M_N	39 43.4	+ 180			19.8			
		F	20 50 —							
	Keizyō	P_{NE}	19 22 54.4						6 0.6	
		PP_N	24 30.0							
		eS_{NE}	23 55.0							
		eL_N	35 52.5							
		M_N	39 46.0							
		F	57 —							
	Heizyō	eP_{NE}	19 23 3.5						6 19.5	

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.) h	m	s	Amplitude N μ	E μ	Z μ	Period s	First Motion μ	S—P m	s	Remarks
		PP_N?	19	23	43.7								
		iS_{NE}		29	23.0								
		M_{NE}		38	33.5								
		F		58	—								
77	June 10	P	9	56	9.3						2	31.7	(R)
	Husan	S		58	41.0								Ep. λ=125.°2E
		M_N	10	2	16.0	+ 520			9.0				φ= 25.3N
		F	11	35	—								Intensity ;
													Miyakozima IV
													Isigakizima II
	Taikyū	P	9	56	19.0						2	0.6	Felt in a part of Okinawazima.
		S		58	19.6								Tunami at Miyako-
		L		59	22.0								zima.
		M_E	10	1	52.3		— 571						
		M_N	10	3	45.9	+ 521							
		F	12	44	—								
	Syūhūrei	P	9	56	31.4						3	21.7	
		S		58	47.6								
		L		59	53.1								
		M_E	10	1	21.0		— 70		7.2				
		F		39	—								
	Zinsen	iP_{NE}	9	56	34.5					N+10.0	2	46.1	
		iP_Z			36.2					to E			
		iPP_{NE}			44.5					Up.			
		iPP_Z			46.7								
		eS_E		59	20.6								
		eS_N			26.1								
		eS_Z			45.7								
		M_E	10	0	56.9		— 2995		15.6				
		eL_Z		1	28.2								
		eL_N			39.7								
		eL_E			42.0								
		M_{Z_1}			50.7			+ 3600	16.0				
		M_{N_1}			59.0	+ 1447			13.8				
		M_{E_1}		3	31.0		+ 470		8.2				
		M_{Z_2}		4	1.6			— 474	8.2				
		M_{N_2}			24.4	— 303			7.2				
		F	12	30	—								
	Keizyō	P_{NE}	9	56	41.3						2	25.2	
		S_{NE}		59	6.5								
		M_E	10	0	50.5		— 2442		13.2				
		M_N		2	3,5	— 1939			14.8				
		e_E		45	36.5								
		F	11	5	—								
	Heizyō	iP_{NE}	9	56	59.6					to N	3	22.2	
		iS_{NE}	10	0	21.8					to W			
		L		1	17.0								

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		M_{NE}	10 1 47.0							
		F	11 28 —							
78	June 10	eP_{EN}?	15 27 37.1							Off Miyakozima.
	Zinsen	F	36 —							
	Keizyō	eP_E	15 27 49.6							
		F	31 —							
79	June 12	eP	2 39 30.1						2 9.0	
	Taikyū	eS	41 39.1							
		F	56 —							
80	June 16	P	2 17 9.0					N -41.0	1 28.4	(R) Ep λ=129.°4E φ= 27.7N Intensity ; Amami-Oosima IV Yakusima, Okinawazima III, Kagosima I
	Husan	S	18 37.4							
		F	3 35 —							
	Taikyū	P	2 17 20.5					N +60.0	1 52.3	
		S	19 12.8					E -4.0		
		M_E	20 18.7		+ 593		11.4			
		M_N	21 35.3	+ 723			12.7			
		F	3 45 —							
	Syūhūrei	P	2 17 25.8						1 59.4	
		S	19 25.2							
		M_N	22 2.7	+ 77			8.5			
		F	59 —							
	Zinsen	iP_Z	2 17 44.4					N +19.2	2 9.0	
		iP_{NE}	45.4					E -5.5		
		iS_Z	19 49.9					Z +12.0		
		iS_N	53.4							
		iS_E	54.8							
		iL_N	21 3.9							
		iL_E	21 6.2							
		M_E	21 36.6		— 921		12.5			
		M_N	22 26.6	— 1100			10.5			
		M_Z	22.9			+ 1625	11.6			
		F	4 24 —							
	Keizyō	eP_{NE}	2 17 46.3						1 59.7	
		S_{NE}	19 46.0							
		M_N	22 22.1	+ 492			8.0			
		M_E	41.3		— 589		10.8			
		F	46 —							
	Heizyō	iP_{NE}	2 18 7.4					N +4.0	3 3.6	
		iS_{NE}	21 11.0					E -10.0		
		M_E	21 53.0							
		M_N	23 20.0							
		F	3 29 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
81	June 16	eP	3 43 38.1							To the SW of Amami-ōsima.
	Husan	?	45 53.5							
		F	51 —							
82	June 16	eP	22 53 37.1							Off the east coast of Karenkō, Taiwan.
	Taikyū	F	23 10 —							
	Zinsen	eP_{NE}	22 53 46.3						4 18.6	
		eS_{NE}	58 4.9							
		eL_{NE}	23 0 16.9							
		F	10 —							
83	June 18	eP	0 45 19.2						2 23.7	(R) Ep. λ=141.°1E φ= 36.5N Felt area. The whole of Kantō. greater part of Tōhoku, South-eastern part of Tyūbu.
	Husan	eS	47 42.9							
		F	54 —							
	Taikyū	iP	0 45 42.8						1 59.1	
		S	47 41.9							
		F	1 11 —							
	Keizyō	P_{NE}	0 45 59.7						2 13.0	
		eS_{NE}	48 12.7							
		F	52 —							
	Zinsen	eP_{E}	9 46 4.0						2 5.3	
		eS_{E}	48 9.3							
		eL_{N}	50 5.7							
		F	1 0 —							
84	June 20	eP	23 57 52.3						5 57.0?	Ep. by Strasbourg λ=77.°3E φ=41.°3N
	Heizyō	S?	24 3 49.3							
		L	24 10 46.3							
		F	43 —							
	Zinsen	eP_{E}	23 57 56.1						11 4.6?	
		eS_{E}?	24 9 0.7							
		i_{E}	11 56.4							
		eL_{E}?	14 19.0							
		F	25 5 —							
	Taikyū	eP	23 58 8.0						6 20.5	
		PP?	24 4 28.5							
		S	12 34.9							
		F	25 17 —							
	Husan	eP	23 58 23.3						14 51.4?	
		S?	24 13 14.7							
		F	24 57 —							
	Keizyō	eP_{N}	23 58 40.8							
		eL_{N}?	24 11 26.8							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	24 22 —							
85	June 21	eP	6 47 18.6						1 20.8	SE far off Taitō, Taiwan.
	Taikyū	eS?	48 39.4							
		F	7 20 —							
	Husan	eP	6 47 20.0							
		L	54 9.0							
		F	7 11 —							
	Zinsen	eP_{NE}	6 47 41.1						3 16.3	
		eS_E	50 57.4							
		eL_E	53 28.9							
		F	7 8 —							
	Heizyō	iP_N	6 47 55.5							
		F	7 2 —							
86	June 23	P	13 5 20.3						8 53.8	Ep. by J. S. A. λ=168.°9E φ= 19.1S Depth normal.
	Husan	S	14 14.1							
		F	29 —							
	Taikyū	eP	13 6 23.6						8 59.5	
		eS	15 23.1							
		eL	25 10.1							
		F	54 —							
	Zinsen	eP_{NE}	13 6 36.9						9 12.9	
		eS_{NE}	15 49.8							
		F	50 —							
	Keizyō	P	13 6 38.1						8 49.0	
		eS_{NE}	15 27.1							
		F	53 —							
87	June 29	eP	14 4 2.4							(R) Ep. λ=141.°15E φ= 36.75N Felt area : Greater parts of Tōhoku and Kantō. Southeastern part of Tyūbu.
	Taikyū	F	15 —							
	Keizyō	eP_{NE}	14 4 10.9						2 15.0	
		eS_N	6 25.9							
		F	15 —							
	Zinsen	eP_E	14 4 28.0						2 4.5?	
		eS_N?	6 32.5							
		F	13 —							
88	July 5	eP_{NE}	2 15 2.2						9 11.4?	Ep. by Apia. λ=169.°4E φ= 21.°7S H=70km
	Keizyō	S_{NE}?	24 13.6							
		F	53 —							
89	July 6	eP	13 3 36.7							(M)

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Taikyū	F	13 12 —							Ep. λ=141.°5E φ= 36.3N
	Zinsen	eP	13 3 45.0						2 48.0	Felt area ; Greater part of Kantō, South-eastern part of Tōhoku.
		eS_N	6 33.0							
		F	18 —							
	Keizyō	P_{NE}	13 3 55.9						2 43.8	
		eS_{NE}	6 39.7							
		M_E	9 30.5				10.8			
		F	16 —							
90	July 7 Taikyū	eP	1 46 53.3						5 27.2	
		PP	50 21.6							
		S	52 20.5							
		F	Lost in next quake.							
91	July 7 Taikyū	P	2 34 9.0						5 24.3	
		S	39 33.3							
		F	3 10 —							
92	July 7 Taikyū	eP	4 46 45.7						5 2.5	
		S	51 48.2							
		F	Lost in next quake.							
93	July 7 Taikyū	eP	5 16 54.3							
		PP	19 28.2							
		F	27 —							
94	July 7 Taikyū	eP	5 36 51.5							
		F	57 —							
95	July 7 Zinsen	eP?	17 32 35.7						3 57.2?	
		eS?	36 32.9							
		F	50 —							
96	July 7 Zinsen	eP?	17 58 32.3						4 6.1?	
		eS?	18 2 38.4							
		F	14 —							
97	July 8 Husan	P	14 1 21.7						2 26.8	(S) Ep. λ=126.°2E φ= 26.3N
		eS	3 48.5							
		F	12 —							Felt at Miyakozima and Okinawazima.
	Taikyū	P	14 1 30.9						1 53.9	
		S?	3 24.8							
		F	25 —							
	Keizyō	P_{NE}	14 1 49.1						2 11.2	
		eS_{NE}	4 0.3							
		F	30 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Zinsen	iP_N	14 1 49.8					N +9.6	2 12.0	
		iP_Z	51.3					to W		
		eS_Z	4 0.6					Down		
		eS_E	1.8							
		F	13 —							
	Heizyō	iP_N	14 3 11.0						2 15.0	
		S_E	5 26.0							
		M	6 23.0							
		F	17 —							
98	July 11	eP	15 57 26.4						1 34.5	Off Amami-oosima.
	Husan	eS	59 0.9							
		F	16 13 —							
	Zinsen	eP_N?	16 0 13.3						1 0.4?	
		eS_E?	1 13.7							
		F	13 —							
99	July 19	P	23 40 48.8						0 11.4	(L)
	Syūhūrei	S	41 0.2							Ep. λ=128.°6E
		F	41 43.							φ= 36.8N
										Near Eisyū,
										Keisyō-hokudō.
	Taikyū	P	23 40 57.3						0 13.4	
		S	41 10.7							
		F	42 18.							
100	July 20	P	12 2 44.4						0 13.2	(L)
	Syūhūrei	S	2 57.6							Ep. λ=127.°9E
		F	3 43.							φ= 35.4N
										Felt at Sansei, Kei-
										syōnandō.
	Taikyū	eP	12 2 47.0						0 13.4	
		iS	3 0.4							
		F	4 20.							
	Husan	eP	12 2 47.8						0 14.1	
		eS	3 1.9							
		F	3 38:							
101	July 23	eP_N	23 8 41.7						6 45.5	New Guinea?
	Zinsen	iP_Z	41.8							
		PP_{NZ}	9 13.0							
		iS_{NE}	15 27.2							
		L?	19 6.6							
		F	26 —							
	Keizyō	P_N	23 8 41.7						6 45.2	
		S_{NE}	15 26.9							
		F	27 —							
102	July 27	P	16 58 13.4						3 12.1	To the NW of

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Husan	eS	17 1 25.5							Miyakozima.
		F	19 41.							
	Taikyū	P	16 58 20.9						3 14.0	
		S	17 1 34.9							
		L	4 38.5							
		F	21 —							
	Keizyō	eP_{NE}	16 58 32.6						4 0.3	
		eS_{NE}	17 2 32.9							
		eL_{NE}?	7 6.6							
		F	32 —							
	Zinsen	eP_N	16 58 33.6						3 57.2	
		eS_E	17 2 30.8							
		eS_Z	2 40.8							
		M_E	43.1		— 16.0		4.9			
		F	31 —							
	Heizyō	iP_N	16 58 54.6						2 54.0	
		iS_E	17 1 48.6							
		L	3 18.6							
		F	23 —							
103	July 28	P_{NE}	8 22 1.1						4 1.1	To the SE of Uruppu Isl.
	Keizyō	S_{NE}	26 2.2							
		F	31 —							
104	July 29	eP	13 14 48.7							(J. S. A.) Ep. λ=100.°5E φ= 4.°2S Depth nearly normal
	Husan	eL	29 53.3							
		F	50 —							
	Zinsen	eP_{NE}	13 14 55.8					to N	5 27.5?	
		eS?	20 23.3					to E		
		F	53 —							
	Taikyū	P	13 14 58.4						10 15.6	
		eS	25 14.0							
		i	29 58.2							
		eL	32 36.2							
		F	50 —							
	Keizyō	P_{NE}	13 14 58.5						8 58.6	
		eS_N	23 57.1							
		eL_N	28 54.1							
		M_N	37 8.1	— 96			17.3			
		M_E	24.9		— 26		16.8			
		F	14 0 —							
105	Aug. 6	e	3 6 20.8							(L) Felt at Kyosyō, Keisyōnandō.
	Husan	F	6 38.							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
106	Aug. 14	P	14 28 11.9							?
	Keizyō	F	47 —							
107	Aug. 16	iP$_E$	4 34 5.7					to N	5 11.2	Ep. by U. S. C. G. S.
	Zinsen	iP$_Z$	9.3					to W		λ=95°E
		ePP$_E$	35 17.8					Down		φ=24°N
		ePP$_Z$	21.1							by Strasbourg.
		eS$_Z$	39 16.9							λ=94.°6E
		eS$_E$	17.0							φ=22.°6N
		eS$_N$	17.2							
		M$_N$	48 4.60	— 365			13.4			
		M$_E$	46.0		— 337		12.4			
		M$_Z$	48.4			+ 266	11.4			
		F	5 28 —							
	Taikyū	P	4 34 24.6						5 12.1	
		S	39 36.7							
		L	45 49.2							
		M$_E$	49 29.2		— 393		13.8			
		M$_N$	29.9	— 384			15.5			
		F	5 28 —							
	Keizyō	P$_{NE}$	4 34 26.0						5 39.6	
		S$_{NE}$	40 5.6							
		L$_{NE}$	45 20.0							
		M$_N$	49 0.0	— 273			14.2			
		M$_E$	49 4.0		— 413		16.1			
		F	5 32 —							
	Heizyō	eP$_{NE}$	4 34 31.5						6 44.4	
		S	41 15.9							
		L	44 48.9							
		M$_E$	48 51.9		— 100		15.0			
		F	5 27 —							
	Syūhūrei	eS	4 39 28.3							
		eL	45 28.3							
		F	5 0 —							
108	Aug. 18	iP$_N$	9 38 29.3						6 1.9	Ep. (by Strasbourg)
	Zinsen	eP$_E$	29.3							λ=104°E
		ePP$_N$	40 20.9							φ= 4°S
		eS$_N$	44 31.2							
		F	10 9 —							
109	Aug. 18	P	19 8 10.8						2 3.4	Near Amamiōsima.
	Husan	eS	10 14.2							
		F	27 —							
	Taikyū	eP	19 8 34.0						1 24.0	
		S	9 58.0							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
		F	h m s 19 35 —	μ	μ	μ	s	μ	m s	
	Keizyō	PNE	19 8 45.9						1 43.7	
		eSNE	10 29.6							
		F	43 —							
	Zinsen	ePZ	19 9 4.6						1 27.2	
		ePE	6.2							
		ePN	6.3							
		eSE	10 31.8							
		eSZ?	40.8							
		F	32 —							
	Heizyō	ePE	19 11 9.5							
		F	21 —							
110	Aug. 20	iPE	8 39 14.7					to S	6 29.8	Ep by Strasbourg.
	Zinsen	iPN	14.8					to E		λ=148°7E
		eSE	45 44.5							φ= 1.°5S
		F	57 —							
111	Aug. 22	P	0 46 44.3						0 13.2	(L)
	Taikyū	L	46 57.5							Ep. λ=127.°9E
		F	51 4.							φ= 35.7N
										Intensity.
	Syūhūrei	P	0 46 45.6						0 13.1	Keisyōnandō-Kyosyō I, Kan'yō I, Kyōsen I, Sansei II, Katō II.
		S	58.7							
		MNE	47 3.9	± 69	± 121		0.1			Zenranandō-Kōsyū I
		F	49 1.							Zenrahokudō-Nangen II, Tyōsui I, Ninzitu I, Seisyū II, Zensyū I. Riri I.
	Husan	P	0 46 46.9						0 14.5	
		iS	47 1.4							Keisyōhokudō-Taikyū I.
		F	49 20.							Tyūseihokudō-Syūhūrei I.
	Keizyō	PE	0 47 6.2						0 34.9	
		PPE	10.9							
		PPN	11.1							
		SE	41.1							
		SN	41.4							
		ME	48.6		+ 45		1.6			
		MN	49.3	— 32						
		F	50 2.							
	Zinsen	ePN	0 47 11.4						0 32.0	
		ePE	11.5							
		ePZ	12.0							
		eSE	43.4							
		eSZ	43.6							
		eSN	44.0							
		F	49 36.							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
112	Aug. 22	eP	21 46 44.9						1 16.6?	Ep. by Strasbourg λ=82°E φ= 7°N
	Taikyū	eS?	48 1.5							
		F	22 19 —							
	Zinsen	eP_{NE}	21 46 22.7						4 8.8	
		eS_{NE}	50 31.5							
		F	22 11 —							
	Husan	eP	21 47 15.6							
		F	22 0 —							
113	Aug. 23	eS?	8 26 59.4							
	Taikyū	eL?	32 35.5							
		F	52 —							
	Zinsen	e_E	8 28 2.0							
		e_N	28 2.1							
		F	39 —							
114	Aug. 25	eP	1 36 45.4							Sumatra, Ep. by Strasbourg. λ=100°E φ= 5°S
	Husan	F	2 20 —							
	Zinsen	iP_{NE}	1 36 49.1					to S	7 4.6	
		iP_Z	36 49.4					Up.		
		eS_{NE}	43 53.7							
		F	2 34 —							
	Taikyū	P	1 36 50.6						7 0.0	
		S	43 50.6							
		eL	54 28.6							
		F	2 23 —							
	Keizyō	P_{NE}	1 36 51.1						7 5.0	
		S_{NE}	43 56.1							
		L_{NE}	55 59.3							
		M_N	2 3 34.3	— 26			15.5			
		F	21 —							
115	Aug. 29	P	15 27 31.2						4 20.0	Ep. by U. S. C. G. S. λ=124°E φ= 12°N
	Husan	S	31 51.2							by Manila λ=124°5′E φ= 12°5′N
		F	Lost in next quake.							
	Taikyū	iP	15 27 36.7						4 27.3	
		iS	32 4.0							
		F	Lost in next quake.							
	Keizyō	P_{NE}	15 27 49.0						4 27.8	
		S_{NE}	32 16.8							
		L_{NE}	35 20.0							
		M_N	32 40.2	— 42			15.0			
		M_E	38 44.0		— 30		18.6			

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
		M_{N_2}	h m s 15 40 33.3	+ μ 39	μ	μ	s 14.5	μ	m s	
		F	Lost in next quake.							
	Zinsen	eP_Z	15 27 51.2						4 33.8	
		eS_Z	32 25.0							
		eS_E	25.1							
		F	16 55 —							
116	Aug. 29	P	16 37 56.6							To the SE of Nakanosima, Kagosima Prefecture.
	Taikyū	F	53 —							
	Zinsen	eP_Z	16 38 34.5						2 5.6	
		eP_E	38 35.2							
		eS_E	40 40.1							
		eS_Z	41.3							
		F	46 —							
	Husan	eP	16 39 3.2						0 56.3	
		eS	59.5							
		F	49 —							
	Keizyō	P_{NE}	16 40 24.7						3 20.3	
		eS_E	43 45.0							
		F	52 —							
117	Aug. 30	P	11 57 19.7						6 13.2	New Guinea. Ep. by Strasbourg. λ=146°E φ= 3°S by Apia. λ=143.°3E φ= 5.°7S
	Husan	eS	12 3 32.9							
		F	48 —							
	Taikyū	eP	11 57 28.6						6 42.0	
		e	59 26.4							
		S	12 3 50.6							
		F	13 10 —							
	Zinsen	iP_N	11 57 43.9					to N	6 29.8	
		iP_Z	44.4					to E		
		iP_E	44.6					Down		
		eS_{NE}	12 4 13.7							
		F	53 —							
118	Aug. 30	P_N	17 16 27.0							
	Keizyō	eL_N	22 48.0							
		F	33 —							
	Zinsen	eP_N	17 16 27.9							
		F	28 —							
119	Aug. 31	eP	17 52 53.0						1 15.0	
	Husan	eS	54 8.0							
		F	18 10 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Taikyū	P	17 52 59.2						1 52.8	
		S	54 52.0							
		F	18 16 —							
	Keizyō	P_N	17 53 3.1						2 13.7	
		S_N	55 16.8							
		F	18 10 —							
	Zinsen	iP_Z	17 53 15.9					N −1.0	1 49.9	
		iP_{EN}	17.1					E +2.7		
		eS_E	55 5.8					Z −1.1		
		eS_Z	6.7							
		F	18 12 —							
120	Sept. 1 Husan	P	2 57 17.7						3 29.4	
		eS	3 0 47.1							
		F	23 —							
	Taikyū	iP	2 57 23.5						4 28.7	
		S	3 1 52.2							
		F	19 —							
	Keizyō	P_N	2 57 36.0						4 19.8	
		eS_N	3 1 55.8							
		L_N	4 15.0							
		F	16 —							
	Zinsen	ePz	2 57 36.3					to S	2 48.9	
		iP_{NE}	36.8							
		eS_N	3 0 25.2							
		eL_{EN}	3 1 41.6							
		F	18 —							
121	Sept. 6 Husan	eP	20 49 58.5						3 31.0	Near Etorō Is. Karahuto.
		eS	53 29.5							
		F	21 14 —							
	Keizyō	eP_N	20 49 58.9						3 41.0	
		eS_N	53 39.9							
		F	21 7 —							
	Zinsen	eP_E	20 50 5.2						3 26.6	
		eS_N	53 31.8							
		eS_E	31.9							
		F	21 10 —							
	Taikyū	eS?	20 54 49.0							
		F	21 6 —							
122	Sept. 7 Husan	P	4 6 28.3						2 40.4	(R) Ep. λ=121.°7E
		S	9 8.7							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		M_N	4 12 36.7	+ 889			17.2			φ=23.9N
		F	5 16 —							Felt area: The whole of Taiwan.
	Taikyū	iP	4 6 36.1					N +24.0	2 33.2	Intensity : Karenkō, Giran, Taityū IV
		S	9 9.3					E +13.0		Many walls in Karenkō were broken.
		L	10 29.7							
		M_E	11 21.7		— 141		6.2			
		M_N	14 15.0	— 442			14.6			
		F	5 14 —							
	Zinsen	iP_{NEZ}	4 6 45.3					to S	2 40.2	
		iS_{EZ}	9 25.5					to W		
		Q_N	11 20.9					Down		
		Q_E	21.0							
		M_E	21.0		— 1375		7.2			
		Q_Z	25.5							
		L_Z	12 50.8							
		M_N	13 41.2	— 1333			8.6			
		M_Z	50.8			+ 1525	11.1			
		F	5 16 —							
	Keizyō	P_{NE}	4 6 47.3						2 44.6	
		S_{NE}	9 31.9							
		L_{NE}	11 12.3							
		M_E	12 15.4		+ 135		6.1			
		M_N	13 57.0	— 58			17.0			
		F	5 15 —							
	Heizyō	iP_{NE}	4 7 1.3					to N	3 3.0	
		iS_{NE}	10 4.3					to E		
		L	11 49.3							
		M_{NE}	12 16.3							
		F	54 —							
123	Sept. 7	eP	13 6 51.4							To the west of Titizima, Bonin Isl.?
	Taikyū	F	22 —							
	Husan	P	13 6 53.6							
		F	24 —							
	Keizyō	P_N	13 7 6.6						2 31.8	
		S_N	9 38.4							
		F	20 —							
	Zinsen	eP_{NE}	13 7 7.5					Up	7 4.9?	
		iP_Z	7 8.0							
		eS_E?	14 12.4							
		F	22 —							
124	Sept. 10	eP	5 21 24.7						1 2.3	(S)
	Taikyū	iS	22 27.0							Ep. λ=132.°4E

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	5 25 —							φ=33.7N Felt at the greater parts of Sikoku and Tyūgoku, and Ooita prefecture.
	Husan	eP?	5 21 29.0						0 27.1?	
		eS	21 56.1							
		F	31 —							
	Keizyō	S?	5 23 22.5?							
		F	33 —							
	Zinsen	P	Covered by microseisms.							
		eS_{NEZ}	5 23 29.1							
		F	27 —							
125	Sept. 11	eP	17 21 59.4							(S)
	Husan	F	32 —							Ep. λ=142.°8E φ= 39.0N
	Taikyū	P	17 22 57.4						4 14.0	Felt at eastern part of Tōhoku.
		eS	27 11.4							
		F	44 —							
	Zinsen	eP_E	17 23 11.7							
		eL_E	27 32.5							
		F	40 —							
	Keizyō	P_N	17 23 17.8?							
		L_N	28 13.3?							
		F	45 —							
126	Sept. 11	eP	19 44 13.9						4 27.7	(S)
	Taikyū	eS	48 41.6							Ep. λ=142.°8E φ= 39.0N
		F	59 —							Felt at eastern part of Tōhoku.
	Zinsen	eP_E	19 44 35.4							After shock of the preceding quake.
		eL_E	49 10.3							
		F	58 —							
	Keizyō	eP_E	19 44 35.4							
		F	55 —							
127	Sept. 14	eP	8 57 10.0						2 16.4	Near Taiko, Sintiku, Taiwan?
	Taikyū	eS	59 26.4							
		F	9 10 —							
	Husan	e	8 57 35.2							
		F	9 5 —							
	Keizyō	P_{NE}	8 57 43.1						2 12.4	
		S_E	59 55.5							
		F	9 59 —							
	Zinsen	eP_N	8 57 46.2						3 14.7?	

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		eSN?	9 1 0.9							
		F	8 —							
	Heizyō	P	8 58 56.8							
		F	9 5 —							
128	Sept. 18	PNE	1 33 40.0						4 20.0	To the north of Etorō Isl.
	Keizyō	SNE	38 0.0							
		F	58 —							
	Zinsen	ePNEZ	1 34 2.0						3 41.2	
		eSE	37 43.2							
		F	45 —							
	Husan	e	1 34 28.0							
		F	42 —							
129	Sept. 20	eP	13 6 3.0						4 33.3	Off Miyakozima.
	Husan	eS	10 36.3							
		F	23 —							
	Zinsen	ePE?	13 9 2.8						5 58.9?	
		eE	10 2.3							
		eSE	15 1.7							
		F	23 —							
	Keizyō	eNE	13 9 46.2							
		F	19 —							
	Taikyū	eP	13 9 46.7						6 0.5	
		eS	15 47.2							
		F	25 —							
130	Sept. 20	eP	15 40 30.5							
	Husan	F	16 7 —							
	Taikyū	eL?	15 44 59.9							
		F	16 13 —							
	Zinsen	eL	15 46 1.6							
		F	16 15 —							
131	Sept. 20	eP	22 17 11.5						2 47.3	
	Taikyū	eS	19 58.8							
		F	29 —							
	Zinsen	ePE?	22 17 27.0						3 32.3?	
		eE	18 57.2							
		eSE	20 59.3							
		F	28 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Keizyō	P_N	22 18 38.8						2 8.0	
		S_N	20 46.8							
		F	28 —							
	Husan	eP	22 19 38.6						1 13.7	
		eS	20 52.3							
		F	33 —							
132	Sept. 21	P	11 39 1.4						2 7.8	Off Oosima.
	Husan	S	41 9.2							
		F	49 —							
	Taikyū	P	11 39 9.2						2 18.0	
		S	41 27.2							
		F	50 —							
	Keizyō	eP_N	11 39 22.0						2 41.2	
		S_N	42 3.4							
		F	55 —							
	Zinsen	eP_{EN}?	11 39 25.9						2 47.2	
		eS_{NE}	42 3.1							
		F	50 —							
	Heizyō	iS_N	11 42 46.6							
		F	49 —							
133	Sept. 21	P	18 54 26.8						2 1.0	(R) Ep. λ=141.°05E φ= 36.35N Felt area : The whole of Kantō, the greater part of Tōhoku and Tyūbu, a part of Hokkaidō and Kinki, A few damages in Mito.
	Husan	S	56 27.8							
		M_N	57 46.7	± 43			6.7			
		F	19 36 —							
	Taikyū	iP	18 54 29.0						2 3.8	
		iS	56 32.8							
		F	19 34 —							
	Zinsen	eP_E	18 54 47.1						2 16.7	
		eS_Z	57 3.8							
		eS_{EN}	5.0							
		F	19 46 —							
	Keizyō	P_{NE}	18 54 51.5						2 9.0	
		S_{NE}	57 0.5							
		M_E	57 6.8		+ 15		4.6			
		M_N	7.8	— 15			4.6			
		F	19 33 —							
	Heizyō	iP_E	18 55 1.1						2 6.0	
		iS_N	57 7.4							
		i	58 46.4							
		F	19 20 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
134	Sept. 27	eP	10 24 0.0						6 51.6	New Britain.
	Husan	eS?	30 51.6							Ep. by Strasbourg
		F	57 —							λ=151°E
										φ= 6°S
	Taikyū	eP?	10 24 13.2							
		F	54 —							
	Keizyō	P_{NE}	10 24 31.4						6 58.8	
		eS_{NE}	31 30.2							
		eI_{NE}	34 56.2							
		F	47 —							
	Zinsen	eP_N	10 24 37.2						7 5.4	
		eP_Z	24 39.1							
		eS_E	31 42.6							
		F	53 —							
135	Oct. 4	eP	8 33 39.4						7 8.5	
	Husan	eS	40 47.8							
		F	54 —							
	Taikyū	eP?	8 33 39.6							
		F	48 —							
	Keizyō	eP	8 33 46.0						7 32.5	
		eS	41 18.5							
		F	48 —							
	Zinsen	eP_N?	8 33 55.5						7 18.5	
		eS_N?	41 14.0							
		F	47 —							
136	Oct. 7	eP	0 58 47.8						4 46.0	
	Taikyū	eS	1 3 33.8							
		F	40 —							
	Zinsen	eP_N?	0 58 49.4						5 43.0	
		eS_E?	1 4 32.4							
		F	21 —							
	Keizyō	P_{NE}	0 58 50.4						5 42.3?	
		S_{NE}?	1 4 32.7							
		F	25 —							
137	Oct. 7	e	16 30 1.3							Sumatra.
	Husan	F	54 —							
	Taikyū	eP	16 31 23.5						6 16.0	
		eS	37 39.5							
		eL	47 23.5							
		F	17 11 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S–P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Zinsen	eP_E	16 31 23.8						6 14.7	
		eS_E	37 38.5							
		L_E?	44 19.4							
		F	17 12 —							
	Keizyō	P_{NE}	16 31 27.8						6 10.6	
		eS_E	37 38.4							
		F	17 13 —							
138	Oct. 10 Husan	P	20 54 35.3						4 55.2	Ep. by J. S. A. λ=125.°0E φ= 1.0N Depth normal. by Strasbourg λ=126.°4E φ= 2.1N
		eS	59 30.5							
		F	21 43 —							
	Syūhūrei	P	20 54 51.7						5 30.0	
		S	21 0 21.7							
		F	18 —							
	Taikyū	P	20 54 52.3						5 14.6	
		iS	21 0 6.9							
		L	3 20.2							
		F	58 —							
	Zinsen	eP_N	20 54 59.0						5 29.7	
		eP_Z	59.2							
		iPP_N	56 26.0							
		eS_N	21 0 28.7							
		eL_{NE}	6 13.1							
		eL_Z	13.2							
		F	22 2 —							
	Keizyō	P_{NE}	20 55 1.6						5 31.8	
		S_{EN}	21 0 33.4							
		L_{NE}	3 40.4							
		M_N	6 25.4	— 259			20.3			
		F	54 —							
	Heizyō	iP_N	20 55 18.8					N +8.0 to W	5 40.5	
		iS_{NE}	21 0 59.3							
		L	5 8.3							
		F	49 —							
139	Oct. 11 Keizyō	P_{NE}	0 13 38.5							
		F	30 —							
140	Oct. 12 Keizyō	P_{NE}	0 37 31.6							(R) Ep. λ=144.°3E φ= 39.8N Felt area : Northern half part of Tōhoku, and Southeastern part of Hokkaidō.
		e_{NE}	45.4							
		S_{NE}	40 19.1							
		L_N	41 5.6							
		L_E	42 5.8							
		M_N	12.9	— 227			16.1			
		M_E	43 42.6		+ 422		27.3			

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S–P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	1 40 —							
	Syūhūrei	P	0 37 32.9						4 5.3	
		S	41 38.2							
		F	1 7 —							
	Husan	P	0 37 35.0						2 29.1	
		eS	40 4.1							
		F	1 19 —							
	Taikyū	P	0 37 35.8						3 22.5	
		S	40 58.3							
		F	1 30 —							
	Zinsen	ePz	0 37 44.9						2 45.1	
		$ePEN$	45.0							
		$eSEN$	40 30.0							
		eLE	41 32.4							
		eLN	32.6							
		MN	43 38.1	+ 82			12.7			
		MZ	44 1.7			+ 121	12.8			
		ME	11.1		— 98		13.4			
		F	1 46 —							
	Heizyō	iPE	0 37 49.5					to S	2 57.9	
		$iSNE$	40 47.4					E +4.0		
		L	43 32.4							
		MN	44 47.4							
		F	1 8 —							
141	Oct. 13	eP	15 29 23.6						2 2.7	(M) Ep. λ=121.°7E φ= 23.9N Felt area: The whole of Taiwan, Bōkotō, and Isigakizima.
	Husan	eS	31 26.3							
		eL?	33 26.5							
		F	54 —							
	Taikyū	P	15 29 37.0						2 36.5	
		S	32 13.5							
		F	52 —							
	Syūhūrei	P	15 29 43.3						2 44.4	
		S	32 27.7							
		F	51 —							
	Zinsen	ePN	15 29 46.3						2 52.7	
		eSE	32 39.0							
		eLN	34 7.3							
		F	52 —							
	Kelzyō	PNE	15 29 48.6						2 44.0	
		eNE	32 32.6							
		SNE	34 30.2							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	16 1 —							
	Heizyō	eP_{NE}	15 30 10.5						2 57.0	
		eS_{NE}	33 7.5							
		L	34 23.1							
		F	55 —							
142	Oct. 17	P_{NE}	15 29 46.6						2 19.0	(R)
	Keizyō	S_{NE}	32 5.6							Ep. λ=140.°0E
		M_N	21.4	— 91			5.1			φ= 44.4N
		F	51 —							Depth=200km.
	Heizyō	iP_{NE}	15 29 48.6					E –4.0	2 17.1	Felt area : Southeastern part of Hokkaidō and northeastern part of Tōhoku.
		iS_{NE}	32 5.7							
		F	48 —							
	Taikyū	iP	15 29 49.3						2 19.6	
		iS	32 8.9							
		F	43 —							
	Zinsen	eP_{EN}	15 29 52.4						2 21.2	
		eP_Z	52.8							
		eS_E	32 13.6							
		eS_N	13.9							
		F	55 —							
143	Oct. 19	eP_{NE}	4 19 16.6						5 8.1	Ep. by Strasbourg
	Heizyō	eS?	24 24.7							λ=90.°5E
		L	28 4.3							φ=49.°7N
		M_{NE}	29 4.3							
		F	58 —							
	Zinsen	eP_E	4 19 29.6						4 56.8	
		eP_N	29.8							
		eS_E	24 26.4							
		eL_{NE}	28 58.4							
		M_N	29 38.1	+ 80			5.3			
		M_E	31 31.7		— 30		8.4			
		F	5 24 —							
	Keizyō	P_{NE}	4 19 31.0						4 45.3	
		eS_{NE}	24 16.3							
		L_N	28 48.1							
		L_E	53.3							
		M_N	29 56.3	+ 36			4.3			
		M_E	31 41.5		+ 89		8.8			
		e_{NE}	32 9.3							
		F	5 13 —							
	Taikyū	P	4 19 49.9		-				4 57.7	
		eS	24 47.6							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	5 20 —							
	Husan	e	4 24 14.3							
		F	5 7 —							
144	Oct. 20	eP	2 27 33.3						5 38.7	Ep. by J. S. A.
	Husan	eS	33 12.0							λ=122.°8E
		F	3 39 —							φ= 9.5S
										Depth 70km
										by U. S. C. G. S
	Taikyū	eP	2 27 37.8						6 38.0	λ=123°E
		eS	34 15.8							φ= 10°S
		F	3 10 —							by Strasbourg
										λ=123.°5E
										φ= 8.°5S
	Zinsen	eP_N	2 27 47.6						6 34.1	
		eP_Z	47.7							
		eS_N	34 21.7							
		L_N	41 47.6							
		L_Z	48.2							
		F	3 44 —							
	Keizyō	P_E	2 27 49.9						6 40.0	
		P_N	48.2							
		i_N	28 27.9							
		S_{NE}	34 28.2							
		L_{NE}	39 31.7							
		F	3 28 —							
	Heizyō	P_{NE}	2 28 2.0							
		F	3 0 —							
145	Oct. 21	iP_{NE}	6 48 0.2					N –10.0	1 16.2	Near Vladivostok.
	Heizyō	iS_{NE}	49 16.4					E –16.0		
		e	7 4 1.4							
		F	13 —							
	Keizyō	iP_E	6 48 4.2					N –10.9	1 25.2	
		iP_N	3.6					E –5.9		
		iS_E	49 29.4							
		iS_N	28.4							
		M_E	32.5		— 42		3.3			
		M_N	33.0	— 28			4.0			
		F	7 12 —							
	Zinsen	iP_Z	6 48 5.6					N –10.0	1 19.9	
		iP_N	6.7					E –7.5		
		iP_E	6.7					Z +13.6		
		iS_E	49 31.1							
		iS_Z	31.2							
		iS_N	31.3							
		M_E	33.3		— 80		4.6			
		M_Z	37.1			+ 22	4.4			

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.) h	m	s	Amplitude N μ	E μ	Z μ	Period s	First Motion	S–P m	s	Remarks
		M_N	6	49	39.5	— 52			3.7				
		F	7	25	—								
	Syūhūrei	P	6	48	13.0						1	31.6	
		S		49	44.6								
		F		52	—								
	Taikyū	iP	6	48	15.4					N +3.3	1	33.2	
		iS		49	48.6					E +2.2			
		M_{NE}			50.6	— 30	— 32		3.7				
		F	7	42	—								
	Husan	P	6	48	23.0					N –3.0	1	33.1	
		S		49	56.1								
		M_N		50	7.0	— 45			6.1				
		F	7	4	—								
146	Oct. 25	eP	21	59	27.0						1	11.4	
	Husan	eS	22	0	38.4								
		F		7	—								
147	Oct. 26	eP	3	38	27.7						3	16.3	
	Husan	eS		41	44.0								
		F		59	—								
	Taikyū	eP	3	38	36.3						3	37.2	
		S		42	13.5								
		F	4	13	—								
	Zinsen	e_N?	3	39	7.8								
		eL?		42	22.4								
		F	4	0	—								
	Keizyō	eS_{NE}	3	42	26.0								
		F		52	—								
148	Oct. 29	P	13	10	53.0						3	9.0	(R) Ep. λ=141.°0E φ= 35.4N Felt area: The greater part of Kantō, south-eastern part of Tyūbu and a part of Tōhoku.
	Taikyū	eS		14	2.0								
		F		22	—								
	Keizyō	P_{NE}	13	11	14.7						2	35.0	
		eS_{NE}		13	49.7								
		L_{NE}		14	58.7								
		F		31	—								
	Zinsen	eP_{EZ}	13	11	18.2						2	40.2?	
		eS_N?		13	58.4								
		eL_E		14	50.3								
		F		41	—								
	Husan	eP	13	11	45.6						1	37.2	

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		S	13 13 22.8							
		M_N	14 2.5	+ 1020			7.6			
		F	30 —							
	Syūhūrei	P	13 12 5.5						3 15.4	
		S	15 20.9							
		F	28 —							
149	Nov. 2	e_{NE}	18 30 7.1							
	Keizyō	F	39 —							
150	Nov. 5	P	8 45 55.0						2 39.2	(R) Ep. λ=141.°65E φ= 37.10N Felt area; The greater part of Tōhoku, Kantō and Tyūbu, a part of Hokkaidō and Kinki. Intensity; Hukusima, Miyagi, Ibaragi Prefectures V. Damages and tunami occurred.
	Taikyū	S	48 34.2							
		L	59.1							
		M_N	49 28.4	± 140			6.1			
		M_E	56.2		+ 6727		25.4			
		F	10 47 —							
	Syūhūrei	P	8 46 0.8						2 23.2	
		S	48 24.0							
		F	9 26 —							
	Husan	iP	8 46 7.9					N -6.0	1 47.1	
		S	47 55.0							
		M_N	49 52.3	+ 2767			14.4			
		F	10 47 —							
	Keizyō	P_{NE}	8 46 10.1						2 20.4	
		PPP_E	16.5							
		M_{1E}	38.1		— 308		5.6			
		M_{1N}	47 8.1	+ 36			5.0			
		eS_E	48 30.5							
		S_N	31.3							
		L_E	49 22.5							
		M_{2N}	49 9.0	+ 606			10.4			
		M_{2E}	50 21.8		+ 4571		20.4			
		F	Lost in next quake.							
	Zinsen	iP_E	8 46 12.9						2 26.7	
		P_Z	16.0							
		iS_E	48 39.6							
		iS_Z	39.9							
		iL_E	49 28.7							
		iL_N	30.0							
		iL_Z	49.2							
		M_Z	50 33.0			— 2060	15.5			
		M_E	51 0.8		— 2310		16.0			
		F	Lost in next quake.							
	Heizyō	iP_{NE}	8 46 24.7					to S	2 45.0	
		S_N	49 9.7					to W		

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		M_E	8 51 15.7							
		F	10 10 —							
151	Nov. 5	ePE	10 11 18.8							(S)Ep. λ=141.°7E φ= 37.1N Intensity; Hukusima, Kakioka II. Onahama, Sendai I.
	Keizyō	P	Lost in next quake.							
152	Nov. 5	P	10 52 51.6						2 34.5	(R) Ep. λ=141.°70E φ= 37.15N Intensity: Hukusima, Miyagi Prefectures, V. Slight Tunami occurred.
	Syūhūrei	S	55 26.1							
		M_E	58 9.4		± 60		20.5			
		F	11 33 —							
	Taikyū	iP	10 52 53.4					N +8.0	2 31.6	
		S	55 25.0					E -12.0		
		I	56 0.6							
		M_N	57 33.0	+ 1620			14.4			
		M_E	58 8.2		— 1266		11.6			
		F	12 55 —							
	Husan	iP	10 52 58.7					N +10.0	1 56.6	
		S	54 55.3							
		M_N	57 16.8	+ 4400			18.2			
		F	12 50 —							
	Keizyō	PE	10 53 3.8					E -2.6	2 18.6	
		ePN	4.9							
		M_E	46.1		— 318		7.8			
		S_E	55 22.4							
		S_N	24.4							
		L_E	56 41.4							
		M_2E	58 25.9		— 427		16.0			
		M_N	11 0 28.1	+ 933			12.2			
		F	13 14 —							
	Zinsen	iPZ	10 53 7.6						2 46.0	
		iPE	7.9							
		iS_N	55 53.6							
		eS_E	53.7							
		S_Z	54.3							
		I_E	56 47.4							
		I_N	49.2							
		I_Z	57 0.5							
		M_N	58 34.5	— 1270			12.7			
		M_Z	39.0			— 4460	16.5			
		M_E	Out of paper.							
		F	13 12 —							
	Heizyō	iP_{NE}	10 53 18.8					to S	2 50.7	
		eS_N	56 9.5					to W		
		L	57 45.5							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S–P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		M_N	10 58 18.5	+ 1100			14.0			
		M_{E_1}	45.5		— 1420		15.0			
		M_{E_2}	11 0 25.5		— 1087		12.0			
		F	12 47 —							
153	Nov. 5	eNE	14 52 23.7							Ep. ditto.
	Keizyō	F	58 —							
154	Nov. 5	eE	18 12 37.9							(M) Ep. λ=141.°6E φ= 37.2N Intensity: Onahama III Hukusima, Utunomiya II Sendai, Kakioka, Morioka I.
	Keizyō	eSE?	13 31.9							
		F	16 —							
155	Nov. 5	PE	21 26 27.0						2 19.8	(M) Ep. λ=142.°3E φ= 37.0N Intensity: Sendai, Kakioka, Utunomiya II, Hukusima, Kumagai, Morioka I.
	Keizyō	eN	28 5.2							
		SN	47.2							
		LE	30 33.2							
		F	42 —							
	Zinsen	ePE	21 26 28.8						2 34.3?	
		eSE?	29 3.1							
		LE	30 46.7							
		F	54 —							
	Husan	eP	21 28 30.1							
		L	31 51.6							
		F	43 —							
156	Nov. 5	ePE?	23 30 5.5						1 53.4	(S) Ep. λ=141.°9E φ= 37.0N Intensity: Onahama, Kakioka II, Hukusima, Sendai, Utunomiya I.
	Zinsen	eSE?	31 58.9							
		eLE?	34 27.3							
		F	51 —							
157	Nov. 6	iP	8 56 30.8						2 2.9	(R) Ep. λ=141.°75E φ= 37.55N Intensity; Hukusima Prefecture V. Slight tunami.
	Husan	S	58 33.7							
		M_N	9 2 58.4	+ 1422			12.1			
		F	11 21 —							
	Taikyū	eP	8 58 33.9						2 51.0	
		S	9 0 48.9							
		M_E	4 22.9		— 78		19.0			
		M_N	4 36.1	— 1044			18.0			
		F	12 40 —							
	Syūhūrei	P	8 56 35.6						2 28.0	
		S	59 3.6							
		M_E	9 1 55.8		± 50		10.3			
		F	10 24 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Keizyō	iP$_E$	8 56 47.8						2 14.8	
		P$_N$	48.0							
		M$_1$E	57 35.7		+ 92		4.6			
		S$_{NE}$	59 2.6							
		L$_{NE}$	9 0 1.7							
		M$_2$E	3 43.7		+ 848		11.0			
		M$_N$	18.2	− 493			10.4			
		F	21 24 —							
	Zinsen	iP$_{EZ}$	28 56 50.7					E −57.0	2 24.6	
		P$_N$	50.7					Z +30.0		
		iS$_N$	59 15.3							
		S$_Z$?	21.8							
		S$_E$?	33.9							
		iL$_N$	9 0 4.2							
		iL$_E$	13.6							
		L$_Z$	21.3							
		M$_N$	3 15.9	+ 832			11.5			
		M$_E$	17.1		− 1290		10.6			
		M$_Z$	19.1			+ 718	11.5			
		F	12 6 —							
	Heizyō	iP$_{NE}$	8 56 58.6					N −4.0	3 17.0	
		iS$_{NE}$	9 0 16.0					E −29.0		
		L	2 19.0							
		M$_E$	3 7.0		− 593		12.0			
		M$_N$	34.0	+ 800			12.0			
		F	11 24 —							
158	Nov. 6 Keizyō	P$_{NE}$?	10 29 18.1						2 9.0	(S) Ep. λ=141.°7E φ= 37.6N Intensity : Sendai II Onahama, Mizusawa I.
		eS$_{NE}$?	31 27.1							
		F	Lost in next quake.							
159	Nov. 6 Keizyō	P$_N$?	11 19 5.7							Off the east coast of Hukusima Prefecture.
		F	Lost in next quake.							
160	Nov. 6 Keizyō	P$_E$	13 44 0.3						2 44.0	ditto
		eS$_{NE}$	46 44.3							
		F	52 —							
	Zinsen	P$_E$	13 44 10.5							
		L$_E$	48 21.0							
		F	58 —							
	Husan	eP	13 45 50.9						2 51.3	
		S	48 42.2							
		F	59 —							
161	Nov. 6 Taikyū	P	17 21 59.0							(M) Ep. λ=141.°8E φ= 37.4N Intensity : Sendai III
		F	42 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Zinsen	ePE	17 22 10.8						2 41.6?	Utunomiya, Mizusawa II, Hukusima, Miyako, Kumagai, Morioka, I.
		eSE?	24 52.4							
		eLE	26 9.8							
		F	48 —							
	Keizyō	PNE	17 22 10.9						2 41.7	
		eSN	24 52.6							
		eLNE	26 0.6							
		F	38 —							
	Husan	eS?	17 24 9.7							
		F	37 —							
162	Nov. 6	PNE	18 23 18.4							(M) Ep. λ=141.°75E φ= 36.9N Intensity : Hukusima II. Sendai, Kakioka, Utunomiya, Kumagai, Miyako, I.
	Keizyō	F	32 —							
	Husan	e	18 25 25.9							
		F	32 —							
163	Nov. 6	P	19 22 46.6							Off the east coast of Hukusima Prefecture.
	Keizyō	L	28 0.6							
		F	34 —							
164	Nov. 6	P	21 6 33.2						2 8.0	(M) Ep. λ=141.°8E φ= 36.9N Intensity : Onahama, III Hukusima Sendai, Utunomiya Mizusawa II, Miyako, Morioka Tōkyō, Kumagai, Hatinohe I.
	Taikyū	eS	8 41.2							
		F	24 —							
	Husan	eP	21 6 35.8						2 48.1	
		eS	9 23.9							
		F	30 —							
	Zinsen	ePE	21 6 51.6						2 30.9	
		eSN	9 22.5							
		eSE	22.8							
		eLE	10 38.4							
		F	30 —							
	Keizyō	PNE	21 6 50.2						2 27.8	
		SNE	9 18.0							
		eLE	11 1.0							
		eLN	12 1.0							
		F	Lost in next quake.							
165	Nov. 6	P	21 40 26.0						2 13.0	(R) Ep. λ=141.°85E φ= 37.15N Intensity : Hukusima, Miyagi, Ibaragi Prefectures III or II slight tunami
	Taikyū	S	42 39.0							
		MN	46 8.0	— 200			13.0			
		ME	47 7.0		+ 54		16.0			
		F	Lost in next quake.							
	Husan	iP	21 41 28.0						1 56.2	
		S	43 24.2							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		M_N	21 45 44.1	+ 3271			18.6			
		F	24 27 —							
	Syūhūrei	P	21 41 34.6						2 26.8	
		S	44 1.4							
		F	22 21 —							
	Zinsen	eP_Z	21 41 45.5						2 31.8	
		P_E	45.6							
		eS_N	44 17.3							
		eS_E	19.1							
		eQ_E	45 55.6							
		iL_Z	46 53.9							
		iL_N	56.9							
		iL_E	58.0							
		M_E	48 11.8		— 873		12.8			
		M_Z	48 18.9			— 384	9.9			
		M_N	24.5	+ 768			10.9			
		F	Lost in next quake.							
	Keizyō	P_N	21 41 52.9						2 17.7	
		S_N	44 10.6							
		L_N	45 22.1							
		F	23 51 —							
	Heizyō	iP_E	21 41 53.5					to W	3 16.0	
		iS_E	45 9.5							
		L	47 23.5							
		M_E	49 24.5		— 450		11.0			
		M_N	55.5	— 500			11.0			
		F	23 15 —							
166	Nov. 6 Taikyū	P	23 18 2.7						2 11.0	(M) Ep. λ=142.°0E φ= 36.9N Intensity: Kakioka II, Onahama, Hukusima, Sendai, Utunomiya Kōhu, Morioka I.
		eS	20 13.7							
		F	40 —							
	Keizyō	eP_E	23 18 16.2						2 20.0	
		eS_N	20 36.2							
		F	Lost in preceding quake.							
	Zinsen	eP_E	23 18 31.3						2 43.9?	
		eS_E?	21 15.2							
		L_E	22 19.7							
		F	24 15 —							
167	Nov. 7 Husan	P	0 50 36.8						1 49.0	(M) Ep. λ=141.°9E φ= 37.1N Intensity ; Onahama III. Hukusima, Utunomiya, Kakioka, Mizusawa, II, Sen-
		S	52 25.8							
		F	1 18 —							
	Taikyū	P	0 50 40.3						2 7.0	
		S	52 47.3							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	1 12 —							dai, Miyako, Morioka, Yokohama I.
	Zinsen	P_E	0 50 54.9						2 56.9	
		P_Z	50 55.0							
		eS_N	53 51.8							
		L_E	54 50.8							
		L_Z	55 8.9							
		F	1 20 —							
	Keizyō	P_{NE}	0 50 52.9						2 33.2	
		e_N	52 13.5							
		S_{NE}	53 26.1							
		L_E	54 51.1							
		L_N	56 7.1							
		F	1 11 —							
	Heizyō	eP_{NE}	0 51 1.5							
		F	1 14 —							
168	Nov. 7	P	1 41 4.2						2 8.0	(R) Ep. λ=141.°9E φ= 37.0N Intensity : Onahama, Kakioka, Sendai, Mizusawa, III.
	Taikyū	eS	43 12.2							
		F	Lost in next quake.							
	Husan	P	1 41 7.4						2 13.1	
		S	43 20.5							
		F	Lost in next quake.							
	Syūhūrei	P	1 41 7.8						2 22.9	
		S	43 30.7							
		F	2 17 —							
	Heizyō	eP_{NE}	1 41 11.0						3 12 0	
		S_E	44 23.0							
		L	45 51.0							
		M_N	46 35.0	+ 60			13.0			
		M_E	47 8.0		± 67		13.5			
		F	Lost in next quake.							
	Keizyō	P_{NE}	1 41 17.2						2 25.6	
		PP_E	21.2							
		PPP_E	27.9							
		S_N	43 42.8							
		L_E	44 34.2							
		L_N	45 10.2							
		M_N	46 28.0	+ 182			13.6			
		M_E	33.2		+ 288		14.6			
		F	Lost in next quake.							
	Zinsen	P_Z	1 41 19.8						2 39.4?	
		iP_E	20.2							
		eS_N?	43 59.2							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		L_E	1 44 53.4							
		L_N	56.3							
		L_Z	1 44 56.6							
		M_N	46 35.4	— 114			12.4			
		M_E	42.2		+ 272		14.3			
		M_Z	45.3			— 340	16.2			
		F	Lost in next quake.							
169	Nov. 7	eP_E?	1 48 32.9						2 36.3	(S) Ep. λ=141.°9E φ= 37.2N Intensity : Onahama, Kakioka, Hukusima II, Uturomiya I.
	Keizyō	eS_E?	51 9.2							
		F	Lost in next quake.							
	Husan	eP	1 49 32.2						1 46.2	
		S	51 18.4							
		F	Lost in next quake.							
170	Nov. 7	P	1 57 2.2						3 3.0	(M) Ep. λ=142.0E φ= 36.9N Intensity : Kakioka III.
	Taikyū	eS	59 5.2							
		F	Lost in next quake.							
	Husan	P	1 57 6.5						2 0.8	Hukusima, Onahama, Sendai, Utunomiya Niigata II. Tōkyō, Hunatu, Kōhu, Misima, Morioka, Miyako, Yokohama I.
		S	59 7.3							
		F	Lost in next quake.							
	Keizyō	P_{NE}	1 57 19.2						2 42.0	
		eS_{NE}	2 0 1.2							
		L_E	1 24.2							
		L_N	2 17.2							
		M_E	3 35.6		+ 83		13.6			
		M_N	5 29.3	+ 50			13.6			
		F	Lost in next quake.							
	Zinsen	eP_Z	1 57 21.8						2 59.6	
		eP_E	57 22.0							
		eS_E	2 0 21.4							
		L_Z	1 37.6							
		L_E	1 40.6							
		F	Lost in next quake.							
	Heizyō	iP_{NE}	1 57 37.4					to S	2 27.6	
		eS	2 0 5.0					to W		
		L	1 35.0							
		F	17 —							
171	Nov. 7	eP_{NE}	2 17 12.2						2 55.0	(S) Ep. λ=142.3E φ= 36.8N Intensity; Onahama, Hukusima, Kakioka, Utunomiya, Mizusawa, I.
	Keizyō	eS_{NE}	20 7.2							
		eL_N	22 31.2							
		F	Lost in next quake.							
	Zinsen	eP_E	2 17 32.4						2 27.9?	
		eS_E?	20 0.3							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S–P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		L_E	2 21 51.8							
		F	Lost in next quake.							
	Taikyū	P	2 17 37.2							
	Husan	eP	2 18 0.1						2 30.5	
		eS	20 30.6							
		F	Lost in next quake.							
172	Nov. 7	iP	2 31 22.9						1 57.2	(S)
	Taikyū	eS?	33 20.1							Ep. λ=142.0E φ= 37.0N
		F	Lost in next quake.							Intensity : Kakioka II.
	Keizyō	P_{NE}	2 31 37.2						2 30.0	Onahama, Hukusima Sendai, Miyako, Mizusawa I.
		e_{NE}	33 9.2							
		eS_N	34 7.2							
		eS_E	27.4							
		eI_N	35 13.2							
		L_E	45.2							
		F	56 —							
	Zinsen	eP_E?	2 31 47.2						2 35.9	
		eS_E	34 23.1							
		L_E	35 52.9							
		F	3 19 —							
	Husan	P?	2 31 4.0						2 2.6	
		eS	33 6.6							
		L	35 6.6							
		F	3 5 —							
173	Nov. 7	iP	2 44 40.6							(S)
	Taikyū	F	3 6 —							Ep. λ=142.°2E φ= 36.8N
	Keizyō	eP_E	2 45 11.2							Intensity : Kakioka II. Onahama, Hukusima, Utunomiya, I.
		F	Lost in next quake.							
174	Nov. 7	iP	3 41 56.1							Off the east coast of Hukusima Prefecture.
	Taikyū	F	55 —							
	Keizyō	P_{NE}	3 42 13.6							
		F	45 —							
	Zinsen	eP_E	3 42 13.9							
		L_E	46 50.0							
		F	55 —							
175	Nov. 7	P_{NE}?	3 47 44.8						0 3.4?	(I.)
	Keizyō	S_{NE}?	48.2							Near Keizyō?
		F	58.							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
176	Nov. 7	iP	4 18 11.9						2 2.0	(R)
	Taikyū	S	20 13.9							Ep. λ=141.°8E
		F	5 3 —							φ= 37.2N
										Intensity :
	Husan	eP	4 18 13.9						2 27.8	Hukusima and
		eS	20 41.7							Ibaragi Prefectures
		F	51 —							III.
	Keizyō	P_{NE}	4 18 27.9						2 38.3	
		S_N	21 6.2							
		L_{NE}	23 11.4							
		M_E	24 10.8		+ 126		14.2			
		F	52 —							
	Zinsen	eP_Z	4 18 29.8						2 45.2?	
		eP_E	32.4							
		eS_E?	21 15.0							
		L_E	23 15.3							
		L_Z	23.8							
		M_Z	52.3							
		M_E	24 9.6							
		F	5 0 —							
	Syūhūrei	P	4 18 31.2						2 26.8	
		S	20 58.0							
		F	46 —							
	Heizyō	eP_{NE}	4 18 33.7						2 53.1	
		eS	21 31.8							
		L	23 55.8							
		F	51 —							
177	Nov. 7	iP	19 15 12.1						2 9.0	Off the east coast of
	Taikyū	eS?	17 21.1							Hukusima Prefecture
		F	33 —							
	Husan	P	19 15 12.9						3 25.6	
		eS	18 38.5							
		F	Lost in next quake.							
	Keizyō	P_{NE}	19 15 25.7						2 44.2	
		eS_N?	18 9.9							
		eL_{NE}	20 29.9							
		F	Lost in next quake.							
	Zinsen	P_E	19 15 30.2						2 58.5	
		eS_E	18 28.7							
		L_E	20 47.3							
		F	Lost in next quake.							
	Heizyō	P	19 15 38.5							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	19 31 —							
178	Nov. 7	eP	19 36 4.1						2 13.3	(R)
	Husan	eS	38 17.4							Ep. λ=141.°8E
		M_N	40 34.9	— 43			7.6			φ= 37.0N
		F	20 23 —							Intensity : Kakioka, Utunomiya III.
	Taikyū	iP	19 36 13.7						2 4.6	
		iS	39 18.3							
		F	20 15 —							
	Syūhūrei	P	19 36 25.7						2 41.8	
		S	39 7.5							
		F	20 3 —							
	Keizyō	iP_{NE}	19 36 32.1						2 23.1	
		iS_N	38 55.2							
		L_E	40 42.4							
		eL_N	7.9							
		M_E	41 3.3		+ 101		15.0			
		M_N	44 13.7	+ 56			10.8			
		F	20 41 —							
	Zinsen	P_E	19 36 32.9						2 36.0	
		eS_E?	39 8.9							
		L_E	40 56.7							
		F	20 31 —							
	Heizyō	eP_{NE}	19 36 45.0						2 51.0	
		iS_E	39 36.0							
		L	41 9.0							
		M_E	42 0.0							
		F	20 28 —							
179	Nov. 8	P_E	11 5 7.8							(S)
	Keizyō	F	13 —							Ep. λ=141.°8E φ= 37.0N Intensity : Sendai, Mizusawa, Utunomiya II, Hukusima, Kakioka I.
180	Nov. 8	P_{NE}	11 16 54.8							
	Keizyō	eS_N	19 12.8						2 18.0	Off the east coast of Hukusima Prefecture.
		L_E	21 24.8							
		F	42 —							
181	Nov. 8	eP_E	13 17 0.4							(M) Ep. λ=142.°1E φ= 37.2N Intensity : Sendai, Kakioka II. Onahama, Hukusima, Miyako, Morioka, Utunomiya I.
	Zinsen	L_E	23 56.4							
		F	37 —							
	Heizyō	eP_{NE}	13 17 6.6							
		F	26 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Husan	e	13 20 26.7							
		F	31 —							
182	Nov. 9	iP	9 18 37.5					E +19.0	2 26.3	(M)
	Taikyū	S	21 3.8							Ep. λ=141.°85E
		M_E	24 13.3		+ 41		12.4			φ= 36.75N
		M_N	40.2	— 53			10.4			Intensity : Sendai III Onahama Hukusima, Morioka, Kumagai. Yokosuka I.
		F	10 42 —							
	Syūhūrei	eP	9 18 41.3						2 21.6	
		eS	21 2.9							
		F	44 —							
	Husan	eP	9 18 42.9						2 16.2	
		eS	20 59.1							
		M_N	23 5.6	+ 600			15.2			
		F	11 4 —							
	Keizyō	P_E	9 18 52.9						2 32.0	
		eS_{NE}	21 24.9							
		eL_N	23 4.6							
		L_E	50.6							
		M_E	24 51.6		+ 83		12.0			
		M_N	28 58.8	— 133			11.4			
		F	10 45 —							
	Zinsen	iP_E	9 18 56.6					to W	3 0.6	
		eP_Z	18 56.7							
		eS_E	21 57.2							
		L_E	23 54.7							
		L_N	55.0							
		L_Z	55.8							
		M_Z	24 46.0			+ 159	13.7			
		M_E	49.3		— 175		15.5			
		M_N	29 56.1	— 196			10.5			
		F	11 4 —							
	Heizyō	iP_E	9 19 7.6					to W	2 50.4	
		iS_{NE}	21 58.0							
		L	24 22.0							
		M_E	25 4.0		— 147		15.0			
		M_N	26 22.0	— 93			12.0			
		F	10 13 —							
183	Nov. 9	eP	16 11 56.5						2 17.0	(S)
	Husan	eS	14 13.5							Ep. λ=141.°9E
		F	31 —							φ= 36.9N
										Intensity : Kakioka III Sendai II,
	Keizyō	P_E	16 11 44.8						2 22.2	Hukusima, Iida, I.
		eS_N	14 7.0							
		L_E	16 23.0							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
		F	h m s 16 23 —	μ	μ	μ	s	μ	m s	
	Zinsen	ePE	16 11 49.4							
		LE	16 0.4							
		F	34 —							
184	Nov. 9	e	19 8 15.3							
	Husan	F	51 —							
185	Nov. 10	PNE?	4 23 27.9						0 2.2?	(L)
	Keizyō	S?	30.1							Near Keizyō?
		F	43.							
186	Nov. 10	ePNE	6 47 12.3							Off the east coast of
	Keizyō	eLNE	51 52.3							Hukusima Prefecture
		F	7 1 —							
	Husan	e	6 51 21.0							
		F	7 1 —							
187	Nov. 10	P	10 49 15.5						2 8.6	
	Husan	S	51 24.1							
		L	52 49.6							
		F	12 0 —							
	Taikyū	P	10 49 20.7						3 0.9	
		S	52 29.7							
		F	11 40 —							
	Syūhūrei	eP	10 49 22.8						2 56.8	
		eS	52 19.6							
		F	11 8 —							
	Keizyō	PNE	10 49 38.6						2 33.8	
		SNE	52 12.4							
		LN	53 46.6							
		LE	54 26.6							
		MN	52.3	— 205			14.2			
		ME1	55 47.0		+ 117		14.2			
		ME2	54.9		+ 117		14.2			
		F	11 38 —							
	Zinsen	ePEN	10 49 45.0						3 34.2?	
		eSN?	52 19.2							
		LN	54 2.6							
		MN	56.4	± 170			14.0			
		ME	56 43.1		— 115		12.0			
		F	11 51 —							
	Heizyō	iPE	10 49 58.8					to W	2 58.1	
		eS	52 56.9							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		L	10 55 41.9							
		M_E	57 5.9							
		F	11 37 —							
188	Nov. 10	iP_E	20 27 48.3					to W	7 30.9	Ep. by J. S. A.
	Heizyō	iS_{NE}	35 19.2							λ=157.°7W
		L	42 52.2							φ= 55.6N
		M_{E1}	51 49.2		— 2222		20.0			Depth normal
		M_{E2}	57 28.2		— 1179		15.0			
		F	22 22 —							
	Keizyō	P_E	20 27 49.2						7 35.2	
		P_N	50.6							
		e_E	29 21.4							
		S_E	35 24.4							
		eS_N	28.6							
		L_{NE}	41 11.4							
		M_{1N}	44 33.6	+ 2080			29.4			
		M_{1E}	47 37.7		— 1214		22.4			
		M_{2E}	50 29.4		+ 842		19.2			
		M_{2N}	53 46.4	— 856			18.6			
		e_E	55 56.4							
		M_{3N}	56 22.1	+ 931			19.2			
		M_{3E}	47.6		— 598		14.0			
		F	Lost in next quake.							
	Zinsen	eP_N	20 27 50.6						7 32.6	
		eP_E	50.7							
		i_E	28 22.4							
		i_N	22.5							
		i_N	29 22 5							
		i_E	27.7							
		eS_{EN}	35 23.2							
		L_{NE}	40 59.6							
		F	Lost in next quake.							
	Taikyū	eP	20 27 53.6						2 35.0	
		S	30 28.6							
		L	35 30.4							
		M_N	50 3.5	— 1098			21.2			
		M_E	51 32.8		+ 676		17.9			
		F	Lost in next quake.							
	Syūhūrei	P	20 27 55.7						2 57.3	
		S	30 53.0							
		F	21 35 —							
	Husan	iP	20 27 56.7					N +3.0	2 40.5	
		eS	30 37.2							
		L	35 31.9							
		M_N	37 2.0	+ 211			7.2			

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	Lost in next quake.							
189	Nov. 10	eP?	22 8 18.7						4 48.2?	
	Husan	eS?	13 6.9							
		F	Lost in next quake.							
190	Nov. 11	P	22 25 7.5						2 20.0	(S) Ep. λ=142.°4E φ= 37.1N Intensity : Kakioka II Sendai, Miyako I
	Husan	S	27 27.5							
		F	24 22 —							
	Taikyū	P	22 25 8.5						2 20.8	
		S	27 29.3							
		F	Lost in next quake.							
	Syūhūrei	eP	22 25 14.8						2 49.8	
		eS	28 4.6							
		F	44 —							
	Keizyō	P_{NE}	22 25 23.7						2 13.8	
		eS_N	27 37.5							
		L_N	28 47.5							
		M_N	29 49.2	+ 141			15.8			
		M_E	30 1.1		— 176		16.4			
		F	24 13 —							
	Zinsen	eP_E	22 25 28.0						2 34.2	
		eS_E	28 2.2							
		L_{EN}	29 2.6							
		F	24 0 —							
	Heizyō	eP_{NE}	22 25 41.9							
		L	30 57.9							
		M_E	32 12.9							
		F	23 22 —							
191	Nov. 11	e	0 23 24.5							
	Husan	F	34 —							
192	Nov. 11	e	1 6 29.6							
	Husan	F	13 —							
	Taikyū	eP	1 6 55.1							
		e	14 15.8							
		F	Lost in next quake.							
	Zinsen	eP_E	1 6 49.9						2 35.3	
		eS_E	9 24.7							
		F	Lost in next quake.							
	Keizyō	P_{NE}	1 6 51.3						7 21.2	
		S_N	14 12.5							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		eL$_{NE}$	1 23 37.7							
		F	48 —							
193	Nov. 11	ePEN	1 14 15.5						2 29.6?	
	Zinsen	eSE?	16 45.1							
		LE	18 54.8							
		F	50 —							
	Husan	eP?	1 14 17.0							
		F	22 —							
194	Nov. 11	eL	1 24 12.4							
	Husan	F	43 —							
195	Nov. 11	eP	2 59 58.5						2 20.0	Off the east coast of Hukusima Prefecture.
	Taikyū	eS?	3 2 —							
	Husan	eP	3 0 18.2						1 46.7	
		eS	2 4.9							
		F	32 —							
	Keizyō	PNE	3 0 23.7						2 32.1	
		eSNE	2 55.8							
		eL$_{NE}$	5 7.8							
		F	26 —							
	Zinsen	PE	3 0 24.5							
		LE	4 59.8							
		F	32 —							
	Heizyō	P	3 0 42.1							
		F	23 —							
196	Nov. 11	P	4 40 49.1							
	Taikyū	F	5 35 —							
	Husan	eP	4 42 52.2							
		eL	45 13.8							
		F	5 1 —							
	Keizyō	L$_{NE}$	4 45 54.0							
		F	51 —							
197	Nov. 11	P	6 49 38.9							Kagawa Prefecture?
	Taikyū	F	7 3 —							
198	Nov. 11	eP	7 11 36.6							
	Taikyū	F	8 7 —							
199	Nov. 11	eP	8 5 56.4						4 20.9?	Off the east coast of Hukusima Prefecture.
	Taikyū	eS?	10 17.3							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	8 22 —							
	Keizyō	ePE	8 6 8.9							
		eLE	11 35.9							
		F	22 —							
200	Nov. 12	ePNE	14 54 55.5						3 54.2	Off Etorō Isl.
	Keizyō	SNE	58 49.7							
		eLNE	15 0 38.5							
		F	15 —							
	Zinsen	ePZ	14 54 59.4						4 1.0	
		ePEN	59.6							
		eSEN	59 0.4							
		LEN	15 2 22.8							
		F	20 —							
	Taikyū	eP?	14 55 7.7							
		F	15 21 —							
	Husan	e	14 58 50.9							
		F	15 10 —							
201	Nov. 13	eE	1 58 21.8							
	Keizyō	F	2 7 —							
202	Nov. 13	LE	5 4 10.7							
	Keizyō	F	27 —							
203	Nov. 13	P	13 17 50.7						2 44.6	(R) Ep. λ=149.°2E φ= 44.7N Depth=100km Felt area : South-eastern part of Hokkaidō, the greater part of Tōhoku, north-eastern part of Kantō
	Taikyū	S	20 35.3							
		L	23 4.1							
		F	49 —							
	Zinsen	ePEZ	13 17 57.0							
		LZ	21 27.5							
		LE	30.1							
		F	53 —							
	Husan	eP	13 17 58.5						1 29.0	
		eS	19 27.5							
		F	42 —							
	Keizyō	eN	13 21 —							
		F	—							
204	Nov: 13	P	22 34 3.4						2 20.4	(S) Ep. λ=141.°5E φ= 37.0N Intensity : Kakioka, Kumagai, Miyako I.
	Taikyū	S	36 23.8							
		L	39 53.2							
		ME	40 44.4		+ 331		11.2			
		MN	42 10.8	+ 163			11.6			

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S–P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	24 30 —							
	Syūhūrei	eP	22 34 14.5						2 40.9	
		eS	36 55.4							
		F	23 8 —							
	Zinsen	eP_E	22 34 31.0						2 32.4	
		eP_Z	32.0							
		S_{EN}	37 3.4							
		eS_Z	4.1							
		L_E	39 2.3							
		L_N	2.5							
		M_E	40 59.9		+ 204		13.2			
		M_Z	41 2.7			— 234	14.3			
		M_N	6.5	± 165			10.1			
		F	24 25 —							
	Husan	eP	22 34 31.8						2 6.3	
		S	36 38.1							
		M_N	40 3.3	+ 415			14.0			
		F	24 5 —							
	Heizyō	iP_E	22 34 36.9					to W	3 39.5	
		eS_E	38 16.4							
		L	40 43.4							
		M_N	41 40.4	— 126			12.0			
		M_E	44 13.4		+ 76		10.0			
		F	24 18 —							
	Keizyō	P_N	22 34 48.0?						2 27.6	
		S_N	37 15.6?							
		L_N	39 12.6?							
		F	23 9 —							
205	Nov. 14 Taikyū	P	2 39 5.0						2 28.4	(S) Ep. λ=141.°6E φ= 37.1N Intensity, Sendai, Kumagai I.
		eS	41 33.4							
		L	44 6.4							
		F	3 4 —							
	Keizyō	P_E	2 39 18.7						2 27.8	
		eS_E	41 46.3							
		L_E	43 20.3							
		M_E	44 52.6		+ 33		14.0			
		F	3 13 —							
	Husan	eP	2 39 19.6						2 2.1	
		eS	41 21.7							
		F	58 —							
	Zinsen	eP_E	2 39 22.7							
		eP_Z	23.9							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		L_N	2 44 24.0							
		L_E	24.3							
		F	3 9 —							
	Heizyō	eP	2 39 33.9						3 21.0	
		S	42 54.9							
		F	3 1 —							
206	Nov. 14	P	12 14 32.8						1 54.1?	New Guinea.
	Husan	S?	16 26.9							
		F	37 —							
	Zinsen	P_Z	12 14 55.3						6 59.8?	
		eS_N?	21 54.9							
		eS_E?	55.1							
		L_{NE}	25 53.8							
		F	48 —							
207	Nov. 15	eP_Z	7 25 51.7						0 4.9	(L)
	Zinsen	eP_{EN}	51.8							Near Keizyō.
		eS_{ENZ}	56.6							
		F	26 30.							
	Keizyō	eP_{NE}	7 25 56.5						0 2.6?	
		eS_{NE}?	59.1							
		F	26 58.							
208	Nov. 15	eP	15 4 49.0							
	Taikyū	F	46 —							
209	Nov. 15	P_E?	15 25 10.0							To the ENE of Hatizyōzima.
	Keizyō	eL_E	30 12.0							
		F	52 —							
	Zinsen	eP_E	15 25 12.4						3 0.0?	
		eP_Z	13.6							
		eS_{EN}?	28 12.4							
		L_N	29 55.0							
		F	45 —							
	Husan	e	15 26 56.8							
		F	45 —							
210	Nov. 15	eP	21 8 51.9						6 37.7	Ep. by Strasbourg
	Taikyū	eS	15 29.6							λ=97°E
		F	55 —							φ= 5°S
	Husan	eP	21 9 6.1						1 57.6?	
		eS?	11 3.7							
		F	47 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Zinsen	ePEN	12 9 9.9						7 4.4	
		ePZ	10.4							
		PPNE	11 6.6							
		PPZ	7.1							
		eSE	16 14.3							
		eLNE	23 53.9							
		F	22 0 —							
	Heizyō	iPN	21 9 15.4					to N	7 18.9	
		eSE	16 34.3							
		L	24 28.3							
		ME	29 49.3							
		F	56 —							
	Keizyō	PE	21 9 17.5						7 0.2	
		eSE	16 17.7							
		LE	30 10.7							
		F	22 49 —							
211	Nov. 16	eP	11 9 52.1						3 18.0	(R) Ep. λ=141.°8E φ=37.35N Intensity : Hukusima, Miyagi, Ibaragi, Totigi Prefectures III.
	Syūhūrei	eS	13 10.1							
		F	31 —							
	Taikyū	iP	11 10 45.4						2 6.6	
		S	12 52.0							
		F	47 —							
	Husan	eP	11 10 46.5						1 53.6	
		S	12 40.1							
		F	33 —							
	Keizyō	PNE	11 10 57.9						2 18.4	
		eSE	13 16.3							
		LE	14 43.1							
		ME	16 46.6		+ 281		11.2			
		F	40 —							
	Heizyō	iPE	11 11 10.4					E –1.4	2 43.2	
		iSN	13 53.6							
		L	16 32.6							
		F	42 —							
	Zinsen	PE	11 11 1.6						2 19.3	
		eSN	13 20.9							
		LN	14 18.7							
		F	49 —							
212	Nov. 17	iPNE	4 3 43.3					to S	7 24.9	Ep. by J. S. A. λ=157.°5W φ= 55.3N Depth 50km by U. S. C. G. S.
	Heizyō	iSNE	11 8.2					to W		
		L	19 57.7							
		ME1	26 36.7		+ 164		19.5			

6. The seismic reports from stations in Tyōsen in the Year 1938.

No	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		M_E	4 29 39.7		— 74		15.0			λ=158°W
		M_N	30 37.7	+ 74			15.0			φ= 57°N
		F	5 13 —							by Strasbourg
										λ=157.°2W
										φ= 54.°9N
	Keizyō	P_E	4 3 47.0						7 27.8	
		S_E	11 14.8							
		eL_E	20 44.8							
		M_E	31 14.0		+ 72		17.6			
		F	5 7 —							
	Zinsen	eP_E	4 3 48.3						7 26.2	
		eP_N	48.4							
		ePP_E	5 51.5							
		ePP_N	51.6							
		eS_E	11 14.5							
		eS_N	14.7							
		L_{NE}	15 51.3							
		F	5 33 —							
	Taikyū	P	4 3 49.5						3 43.2?	
		eS?	7 32.7							
		F	5 39 —							
	Husan	P	4 3 53.8						7 27.8	
		eS	11 21.6							
		F	5 18 —							
213	Nov. 17	eP	4 11 8.3							Yakusima.
	Syūhūrei	F	55 —							
214	Nov. 18	eP_{EZ}	7 18 48.6						0 31.9	(L)
	Zinsen	$\overline{P}_Z$	49.5							Ep. λ=123.°6E
		$\overline{P}_E$	49.6							φ= 38.0N
		S_Z	19 20.5							Intensity :
		S_N	20.6							Mukinpo II
		S_E	22.0							Syōseitō; Zinsen I
		F	22 40.							Heizyō II?
										Keizyō I?
	Heizyō	eP_{NE}	7 18 48.9					N +18.0	0 27.6	
		iS_{NE}	19 16.5					E +4.0		
		M_{NE}	28.8	+ 44	± 21		0.6			
		F	30 —							
	Keizyō	P_{NE}	7 18 53.1?						0 37.7	
		iS_{NE}	19 30.8							
		F	23 53.							
	Syūhūrei	P	7 19 11.2							
		S	59.0							
		M_{NE}	20 4.1	± 50	± 50		0.5		0 47.8	
		F	23 30.							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Taikyū	P	7 19 21.1						0 51.2	
		S	20 12.3							
		M_N	23.8	+ 16			1.3			
		M_E	23.8		± 5		0.9			
		F	26 16.							
	Husạn	eP	7 19 37.6						0 59.0	
		S	20 36.6							
		F	26 35.							
215	Nov. 18	e	14 29 57.5							Kii Channel.
	Husan	F	37 35.							
	Keizyō	e_E	14 30 24.5							
		F	37 —							
	Zinsen	e_{EN}	14 30 34.6							
		F	40 —							
216	Nov. 18	eP_E	18 34 56.1						4 52.3	Off Urupputō, Hokkaidō.
	Keizyō	eS_E	39 48.4							
		F	48 —							
	Zinsen	eP_N	18 35 9.0						4 8.8	
		eP_E	14.3							
		eS_{EN}	39 17.8							
		eL_N	44 6.1							
		eL_E	7.1							
		F	19 6 —							
	Husan	eP	18 35 6.5						4 9.9	
		S	39 16.4							
		F	51 —							
217	Nov. 19	e	2 34 14.4							Taiwan?
	Husan	F	42 —							
	Zinsen	e_E	2 35 23.3							
		eL_E?	37 17.8							
		F	47 —							
	Keizyō	P_{NE}	2 35 26.8						3 12.8	
		eS_E	38 39.6							
		F	41 —							
218	Nov. 19	P_{NE}	5 44 31.6						4 9.7	Off Urupputō, Hokkaidō.
	Keizyō	S_{NE}	48 41.3							
		L_E	53 42.7							
		F	in next quake							
	Husan	eP	5 44 36.5						4 7.1	
		eS	48 43.6							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
		F	h m s in next quake	μ	μ	μ	s	μ	m s	
	Zinsen	ePE	5 44 42.4						4 32.6	
		eSEN	49 15.0							
		eLEN	51 0.8							
		F								
219	Nov. 19	PE	5 57 15.6						2 49.7	(M)
	Keizyō	eSE?	6 0 5.3							Ep. λ=141.°75E
		LE	1 13.3							φ= 37.0N
		F	14 —							Felt area : Southern part of Tōhoku, north-eastern part of Kantō.
	Husan	eP	5 57 44.0						1 57.3	
		eS	59 41.3							
		F	6 17 —							
220	Nov. 21	eP	1 16 45.9							Thibet.
	Husan	L?	22 44.8							
		F	41 —							
	Zinsen	ePEZ	1 17 8.1						4 44.4	
		ePPE	52.7							
		ePPPE	18 8.4							
		ePcPE	19 40.7							
		eSE	21 52.5							
		eSSN	23 51.3							
		LN	26 21.5							
		F	49 —							
	Keizyō	PNE	1 17 11.0						4 59.8	
		SNE	22 10.9							
		LN	27 0.9							
		LE	28 14.9							
		F	47 —							
	Heizyō	eP	1 17 14.9						4 46.2	
		eS	22 1.1							
		L	27 49.1							
		F	56 —							
	Taikyū	eP	1 17 28 1						4 29.1	
		eS	21 57.2							
		L?	29 26.2							
		F	46 —							
221	Nov. 21	eP	7 0 56.1						3 48.5	(M)
	Taikyū	eS	4 44.6							Ep. λ=121.7°E
		F	19 —							φ= 23.9N
										Felt area : The whole of Taiwan.
	Husan	eP	7 2 10.7						1 45.7	Intensity : Isigaki Isl. and
		eS	3 56 4							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S–P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	7 26 —							Karenkō IIII.
	Zinsen	ePN?	7 2 19.6						2 48.0	
		eN	30.1							
		eSN?	5 7.6							
		eLN?	6 44.1							
		F	18 —							
	Keizyō	PNE	7 2 22.5						2 47.8	
		$eSNE$	5 10.3							
		F	in next quake							
222	Nov. 21	PNE	7 6 0.3						5 10.0	
	Keizyō	eSN	11 10.3							
		F	21 —							
223	Nov. 22	iP	1 16 42.0						2 15.9	(R) Ep. λ=141.°8E φ= 37.0N Intensity: Hukusima, Ibaragi, Miyagi Prefectures III
	Taikyū	S	18 57.9							
		L	20 16.5							
		ME	22 22.0		— 259		11.1			
		MN	23 11.9	— 222			13.3			
		F	in next quake							
	Husan	P	1 16 49.0						1 52.8	
		S	18 41.8							
		MN	20 40.5	— 978			16.8			
		F	in next quake							
	Keizyō	PE	1 16 52.4						2 28.0	
		PPE	56.4							
		ME_1	17 9.4		— 37		5.0			
		cE	18 6.2							
		SN	19 20.4							
		LN	52.4							
		LE	20 52.4							
		ME_2	21 0.6		+ 277		14.0			
		ME_3	30.3		+ 388		14.2			
		MN	32.6	+ 365			14.2			
		F	in next quake							
	Shūhūrei	P	1 16 53.5						2 23.5	
		S	19 17.0							
		F	57 —							
	Zinsen	$iPEZ$	1 17 2.4						2 33.6	
		SN	19 36.0							
		SE	36.3							
		LN	20 14.9							
		LE?	49.3							
		MN	21 43.8	— 363			13.2			
		$PcPN$?	23 16.2							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		M_E	1 26 22.2		— 285		135			
		C_N	29							
		F	in next quake							
	Heizyō	iP_E	1 17 13.1						3 6.0	
		eS_N	20 19.1							
		L	21 28.1							
		M_E	27 10.1		+ 89	9.0				
		F	41 —							
224	Nov. 22	eP_E	1 42 42.8							(S)
	Keizyō	F	in next quake							Ep. λ=142.°1E φ= 36.9N
	Husan	eP	1 43 54.3						2 3.0	Intensity : Kakioka II, Onahama, Hukusima, Sendai, I.
		eS	45 57.3							
		F	3 4 —							
225	Nov. 22	P	2 53 49.9						2 35.0	To the east of Hukusima Prefecture.
	Taikyū	eS	56 24.9							
		L	58 52.9							
		F	in next quake							
	Keizyō	P_E	2 54 14.8						2 20.0	
		eS_E	56 34.8							
		L_N	58 54.8							
		F	3 8 —							
	Zinsen	e_E	2 54 19.1							
		F	in next quake							
226	Nov. 22	P	3 26 13.2						2 29.0	(S)
	Taikyū	eS	28 42.2							Ep. λ=142.°1E φ= 37.1N
		L	31 13.2							Intensity : Onahama, Kakioka, Sendai I.
		F	56 —							
	Husan	e	3 29 29.5							
		F	41 —							
	Keizyō	P_E	3 26 32.9						2 33.8	
		S_{NE}	29 6.7							
		L_N	30 2.4							
		L_E	31 1.9							
		F	44 —							
	Zinsen	eP_{EN}	3 26 36.2						2 32.1	
		eS_{EN}	29 8.3							
		eL_N?	30 9.8							
		F	44 —							
227	Nov. 22	eP_E?	8 16 3.0							(S)
	Zinsen	e_E	18 5.3							Ep. λ=142.°0E φ= 36.9N

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		L_E?	8 19 7.0							Intensity : Hukusima II. Onahama, Kakioka, Sendai I.
		F	35 —							
	Taikyū	iP	8 16 7.2							
		F	33 —							
	Keizyō	P_{NE}	8 16 21.2						2 34.2	
		S_E	18 55.4							
		S_N	58.5							
		L_E	21 2.2							
		F	26 —							
	Husan	eP	8 16 39.1						2 18.5	
		eS	18 57.6							
		F	33 —							
228	Nov. 23	iP	0 18 46.3							Off the east coast of Hukusima Prefecture.
	Taikyū	F	31 —							
	Zinsen	e_E	0 21 6.1							
		F	31 —							
	Husan	eP	0 21 25.4						1 27.2	
		eS	22 52.6							
		F	30 —							
229	Nov. 25	eP	8 22 56.0						2 38.0	(R) Ep. λ=141.°9E φ= 37.°0N Intensity : Hukusima, Miyagi, Ibaragi Prefectures III.
	Taikyū	S	25 34.0							
		F	9 1 —							
	Husan	eP	8 23 10.4						2 5.3	
		eS	25 15.7							
		F	39 —							
	Keizyō	P_{NE}	8 23 11.6						2 21.2	
		S_{NE}	25 32.8							
		L_E	26 50.8							
		M_E	28 10.5							
		F	9 11 —							
	Zinsen	eP_N	8 23 18.7						2 19.9	
		eP_Z	23 18.9							
		S_N	25 38.6							
		L_E	26 49.3							
		C_{ZE}	30 40.							
		F	46 —							
	Heizyō	eP_{NE}	8 23 22.2						2 54.0	
		S_N	26 16.2							
		L	27 31.2							
		F	46 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
230	Nov. 26	ePE?	3 39 21.9							(S) Ep. λ=141.°9E
	Keizyō	F	47 —							φ= 37.1N
										Intensity : Sendai, Hukusima, Onahama I.
231	Nov. 26	ePE?	10 4 5.2						1 52.3?	(S) Ep. λ=142.°2E
	Zinsen	ePZ	7.1							φ= 37.6N
		eSE?	5 57.5							Intensity : Hukusima, Sendai, Miyako, Morioka I.
		eLE?	7 14.6							
		F	13 —							
232	Nov. 29	P	13 42 12.9						2 6.0	(M)
	Taikyū	S	44 18.9							Ep. λ=142.°0E
		L	45 46.5							φ= 36.75N
		ME	48 4.7		± 76		11.1			Intensity : Onahama, Kakioka, II. Hukusima, Sendai, Miyako I.
		MN	14.9	+ 71			11.1			
		F	14 45 —							
	Husan	eP	13 42 13.8						2 23.4	
		S	44 37.2							
		F	14 21 —							
	Keizyō	PNE	13 42 28.5						2 22.2	
		PPE	34.5							
		SNE	44 50.7							
		LNE	46 42.7							
		F	14 27 —							
	Zinsen	iPE	13 42 33.5					to W	2 20.7	
		PZ	34.1							
		SEN	44 54.2							
		SZ	13 44 55.2							
		eLN	46 17.2							
		CN	55 30.							
		F	14 26 —							
	Heizyō	ePNE	13 24 45.0						2 51.0	
		eSE	45 36.0							
		L	48 6.0							
		MN	49 3.0	± 23			11.0			
		ME	27.0		— 40		12.0			
		F	14 39 —							
233	Nov. 30	P	2 32 25 2					N +14.0	2 10.2	(R)
	Taikyū	S	34 35.7					E –20.0		Ep. λ=141°8E
		F	4 15 —							φ= 37.0N
										Intensity : Hukusima, Ibaragi Prefectures IV.
	Husan	eP	2 32 26.7						2 3.2	
		S	34 29.9							
		MN	36 59.3	± 220			10.3			
		F	4 2 —							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S–P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Shūhūrei	iP	2 32 36.0						2 19.9	
		S	34 55.9							
		F	59 —							
	Keizyō	P_{NE}	2 32 41.6						2 15.2	
		PP_E	44.8							
		M_{E_1}	56.0		— 64		5.2			
		S_{NE}	34 56.8							
		L_{NE}	35 58.9							
		M_{E_2}	36 8.3		+ 744		21.0			
		M_N	43 19.8	+ 54			9.0			
		F	4 3 —							
	Zinsen	iP_E	2 32 45.8						2 20.7	
		P_Z	45.9							
		S_N	35 6.5							
		S_Z	13.7							
		S_E	14.6							
		L_N	36 0.8							
		L_E	2.6							
		L_Z	6.3							
		C_E	46 50.							
		F	3 50 —							
	Heizyō	iP_{NE}	2 33 54.0					to S	2 45.0	
		S_N	35 39.0					E -3.0		
		L	37 0.0							
		M_E	27.0							
		F	3 46 —							
234	Nov. 30	P	15 18 33.4						2 10.0	(M) Ep. λ=142.°0E φ= 36.9N Felt area : The greater part of Tōhoku, north-eastern part of Kantō.
	Taikyū	eS	20 43.4							
		F	37 —							
	Husan	eP	15 19 1.2						1 59.8	
		eS	21 1.0							
		F	28 —							
	Keizyō	P_{NE}	15 19 1.6						2 34.0	
		eS_N	21 35.6							
		eL_E	23 39.6							
		F	in next quake							
	Zinsen	eP_E	15 19 7.8						2 53.4	
		eP_Z	8.2							
		eS_Z?	22 1.2							
		eS_E?	4.0							
		L_E	23 39.7							
		F	46 —							
235	Nov. 30	P_E	15 33 59.9						2 39.7	(S)

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Station	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Keizyō	eS$_N$	15 36 39.6							Ep. λ=142.°0E φ= 37.0N Intensity : Onahama II, Kakioka, Sendai, Utunomiya, Tukuba I.
		F	41 —							
236	Dec. 1	eP	2 17 28.6						4 11.2	Mariana.
	Husan	eS	21 39.8							
		F	3 12 —							
	Taikyū	eP	2 17 20.2						2 15.0	
		eS	19 35.2							
		F	3 0 —							
	Zinsen	eP$_{EN}$	2 17 57.7						4 58.4	
		eP$_Z$	58.1							
		ePP$_Z$?	18 48.6							
		ePP$_E$?	51.9							
		ePPP$_{EZ}$?	19 45.8							
		eS$_E$	22 56.1							
		eS$_N$?	59.8							
		e$_E$	23 49.3							
		SS$_E$	24 33.4							
		L$_E$	26 36.8							
		M$_E$	27 56.9		—		15.5			
		C$_E$	40 —							
		F	3 22 —							
	Keizyō	eP$_{NE}$	2 18 0.2						5 52.2	
		eS$_{NE}$	23 52.4							
		eL$_E$	26 55.2							
		M$_{N_1}$	28 24.3	— 68			15.8			
		M$_{N_2}$	23.6	+ 48			13.4			
		F	3 24 —							
	Heizyō	eP	2 19 2.6						4 21.0	
		eS	23 23.6							
		L	27 29.6							
		F	3 1 —							
237	Dec. 1	P$_N$	5 11 11.8						2 19.2	
	Keizyō	P$_E$	15.8							
		eS$_{NE}$	13 35.0							
		F	18 —							
238	Dec. 2	iP$_{NE}$	14 0 55.3						0 54.0	
	Keizyō	iS$_N$	1 49.3							
		S$_E$	54.7							
		F	6 —							
239	Dec. 2	e$_E$	15 1 36.0							
	Zinsen	e$_N$	1 36.2							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
		F	h m s 15 4 —	μ	μ	μ	s	μ	m s	
240	Dec. 2	ePE?	22 24 46.2							Near Wakayama?
	Zinsen	eLN?	29 6.0							
		F	50 —							
	Keizyō	eE	22 26 38.2							
		eSNE	28 59.8							
		eLN	30 46.2							
		F	44 —							
	Husan	eP	22 27 21.8							
		L	31 35.1							
		F	49 —							
	Taikyū	eP	22 28 21.4						2 21.7	
		eS	30 43.1							
		F	41 —							
241	Dec. 3	eP	0 45 55.4						2 9.0?	(S) Ep. λ=142.°0E φ= 36.9N Intensity : Miyako, Utunomiya I.
	Taikyū	eS?	48 4.4							
		F	1 4 —							
	Husan	eP	0 45 59.3						2 23.5	
		eS	48 22.8							
		F	1 6 —							
	Keizyō	ePNE	0 46 11.0						3 25.3	
		eSN	49 36.0							
		eL	51 42.0							
		F	1 7 —							
	Zinsen	ePE?	0 46 28.9						2 22.8?	
		eSE	48 51.7							
		eLE	50 56.6							
		eLN	59.0							
		F	1 2 —							
242	Dec. 3	P	12 14 15.0						2 22.1	(R) Ep. λ=141.°9E φ= 36.9N Felt area ; The greater parts of Tōhoku and Kantō, southeastern part of Tyūbu. Intensity : Hukusima, Ibaragi Prefectures III.
	Husan	S	16 37.1							
		F	54 —							
	Taikyū	iP	12 14 16.2						2 16.0	
		S	16 32.2							
		F	13 15 —							
	Shūhūrei	P	12 14 28.5						2 24.5	
		S	16 53.0							
		F	33 —							
	Keizyō	PE	12 14 34.2					N –2.1	2 17.2	

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		eP_N	12 14 36.8							
		e_N	15 37.4							
		S_N	16 51.4							
		L_E	18 16.4							
		L_N	49.4							
		M_N	20 32.4	+ 35			10.8			
		F	51 —							
	Zinsen	P_E	12 14 37.2						2 31.7	
		P_Z	37.3							
		PP_{EZ}	44.5							
		PPP_Z	15 11.4							
		PPP_E	11.6							
		eS_N	17 8.9							
		eS_E	9.6							
		L_N	18 1.6							
		L_Z	4.6							
		L_E	7.6							
		M_E	19 52.2		+ 100		14.6			
		F	13 15 —							
	Heizyō	eP	12 14 47.2						2 54.0	
		eS	17 41.2							
		L	19 8.2							
		M	20 5.2							
		F	40 —							
243	Dec. 4	eP	6 14 24.9						3 29.9	(M)
	Husan	eS	17 54.8							Ep. λ=141.°9E
		F	26 —							φ= 37.1N
										Felt area :
	Taikyū	P	6 14 39.4						2 6.7	The greater part of Tōhoku and north eastern part of Kantō.
		eS	16 46.1							
		F	37 —							
	Keizyō	eP_{NE}	6 14 52.6						2 16.0	
		eS_{NE}	17 8.6							
		eL_E	18 50.6							
		F	24 —							
	Zinsen	eP_E	6 14 59.8							
		eS_N	17 57.3							
		eS_E	18 1.8							
		eL_E	53.9							
		F	25 —							
244	Dec. 5	iP	18 56 28.9						2 9.4?	(M)
	Taikyū	eS?	58 38.3							Ep. λ=141.°7E
		F	19 9 —							φ= 37.2N
										Felt area :
	Keizyō	P_E	18 56 44.6						2 16.4	The greater part of Tōhoku and north-

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	μ	
		eS_N	18 59 1.0							eastern part of Kantō.
		F	19 6 —							
	Zinsen	eP_E	18 56 51.3							
		e_E	59 52.4							
		L_E	19 0 50.0							
		F	15 —							
245	Dec. 6	iP	23 4 11.1					to S	2 9.8	(R)
	Husan	eS	6 20.9							Ep. λ=121.°5E
		L	9 22.9							φ= 22.9N
		M_N	10 41.5	+ 81			7.3			Felt area : The whole of Taiwan and Isigakizima.
		F	24 5 —							
	Taikyū	iP	23 4 17.4						1 51.0	Intensity : Taitō IV. Small damages at Sinkō, Toran, Pinan and Hiyakezima.
		S	6 8.4							
		L	8 11.3							
		F	24 18 —							
	Zinsen	iP_N	23 4 27.5						2 59.7	
		P_E	27.5							
		S_{EN}	7 27.2							
		L_N	8 36.5							
		L_E	38.5							
		M_E	10 35.5		— 83		7.0			
		M_N	11 15.1	± 170			11.7			
		C_N	28 40.							
		F	24 31 —							
	Keizyō	P_E	23 4 31.0					N -4.4	2 57.0	
		iP_N	31.0					E +2.1		
		e_N	5 56.0							
		e_E	6 19.0							
		S_{NE}	7 28.0							
		L_E	9 8.0							
		L_N	29.6							
		M_N	11 33.8	+ 199			11.6			
		M_E	13 13.6		+ 307		15.8			
		F	24 13 —							
	Heizyō	eP	23 4 45.3						3 12.0	
		S	7 57.3							
		L	10 6.3							
		M_E	11 12.3		— 37		7.5			
		M_N	12 9.3	+ 92			9.0			
		F	24 6 —							
246	Dec. 7	e_E	10 21 4.8							
	Zinsen	F	36 —							
247	Dec. 7	P	13 6 55.2						2 8.0	(M)

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Taikyū	S	13 9 3.2							Ep. λ=143.°1E φ=38.°6N
		F	in next quake							Felt area : Eastern part of Tōhoku, and northeastern part of Kantō.
	Husan	eP	13 7 9.1						2 3.3	
		eS	9 12.4							
		L	11 36.8							
		F	in next quake							
	Keizyō	P_E	13 7 20.3						2 23.7	
		S_N	9 44.0							
		L_N	11 18.0							
		F	28 —							
	Heizyō	eP	13 7 28.3						2 42.0	
		S	10 10.3							
		L	11 58.3							
		F	31 —							
	Zinsen	eP_E	13 7 28.7						2 24.2	
		eS_N?	9 52.9							
		eL_N	11 22.7							
		F	in next quake							
248	Dec. 7	P	13 32 39.8						1 52.6?	
	Husan	eS?	34 32.4							
		F	14 6 —							
	Zinsen	eP_E	13 32 46.4							
		F	in next quake							
	Keizyō	P_E	13 32 50.6						2 30.0	
		P_N	52.0							
		S_N	35 22.0							
		F	in next quake							
249	Dec. 7	e	13 38 49.7							
	Taikyū	F	14 12 —							
	Zinsen	e_E	13 39 54.1							
		F	14 12 —							
	Keizyō	P_{NE}	13 40 4.0							
		eL_N	48 18.0							
		F	14 0 —							
250	Dec. 7	eP	15 4 15.9						5 24.2?	(S) Ep. λ=121.°5E φ= 23.0N Intensity : Taitō III Karenkō, Arisan II Takao I.
	Husan	eS?	9 40.1							
		F	30 —							
	Taikyū	P	15 4 25.7						1 48.8	
		S	6 14.5							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	15 34 —							
	Zinsen	ePE_N	15 4 32.7							
		e_E	7 28.3							
		e_E	9 46.7							
		F	35 —							
	Keizyō	P_{NE}	15 4 34.1							
		e_{NE}	7 33.9							
		eS_E	9 36.9							
		eS_N	10 31.9							
		F	24 —							
	Heizyō	eP	15 4 49.0						2 39.9	
		S	7 28.9							
		L	10 28.0							
		F	30 —							
251	Dec. 9	P_{NE}	5 6 25.8							(S)
	Keizyō	F	in next quake							Ep. λ=121.°5E φ= 23.0N Intensity : Taitō III Arisan II. Karenko, Takao, Tainan I.
	Zinsen	ePE_N?	5 8 27.9						2 59.6?	
		eS_E?	11 27.5							
		L_E?	13 28.3							
		F	23 —							
252	Dec. 9	eP_{NE}	5 11 46.1							
	Keizyō	F	23 —							
	Husan	eP	5 12 48.9							
		F	20 —							
253	Dec. 9	P	9 37 57.2						2 10.3?	(S)
	Taikyū	eS?	40 7.5							Ep. λ=142.°0E φ= 36.9N Intensity : Utunomiya, Kakioka I.
		F	52 —							
	Zinsen	eP_E	9 38 11.0							
		eL_E?	42 38.0							
		F	10 0 —							
	Keizyō	P_E	9 38 18.8							
		F	55 —							
	Husan	e	9 41 14.9							
		F	53 —							
254	Dec. 11	P_E	1 54 41.4?						0 5.9	(L)
	Zinsen	S_E	47.3?							Near Zinsen.
		F	56 —?							
255	Dec. 12	P_E	2 45 5.1						1 9.0	Off the east coast of

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
	Keizyō	eSE?	2 46 14.1							Hukusima Prefecture
		F	57 —							
	Zinsen	eE	2 45 20.9							
		LE?	49 52.4							
		F	58 —							
256	Dec. 12	P	23 41 17.5						2 22.8	(M) Ep. λ=141.°9E φ= 36.7N Felt area : Southeastern part of Tōhoku and northeastern part of Kantō.
	Taikyū	eS	43 40.3							
		F	in next quake							
	Keizyō	PE	23 41 33.9						2 16.4	
		SN	43 50.3							
		F	50 —							
	Zinsen	ePE	23 41 39.5							
		eE	43 28.6							
		LE	45 39.9							
		F	57 —							
	Husan	eP	23 43 21.4						1 5.0	
		eS	44 26.4							
		F	51 —							
257	Dec. 13	P	0 1 48.1							(M) Ep. λ=141.°7E φ= 36.6N Felt area : Southeastern part of Tōhoku and northeastern part of Kantō.
	Taikyū	F	33 —							
	Husan	eP	0 2 56.9						1 44.7	
		eS	4 41.6							
		F	14 —							
	Keizyō	PE	0 3 3.8							
		F	13 —							
258	Dec. 13	eP	17 28 18.4						2 7.6	(M) Ep. λ=143.°1E φ= 38.4N Felt in some places of Tōhoku and Kantō.
	Husan	eS	30 26.0							
		F	52 —							
	Taikyū	iP	17 28 22.0						2 13.5	
		S	30 35.5							
		F	49 —							
	Heizyō	iPZ	17 28 30.4					to W	2 51.6	
		S	31 22.0							
		L	32 58.0							
		M	34 16.0							
		F	57 —							
	Keizyō	PNE	17 28 34.1						2 44.2	
		eNE	30 20.3							
		eSN	31 18.3							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		L_N	17 32 42.1							
		M_N	33 41.4	+ 32			12.0			
		M_E	33 52.1		+ 44		15.6			
		F	55 —							
	Zinsen	P_E	17 28 36.8						2 56.5?	
		eS_E?	31 33.3							
		L_E	32 37.8							
		F	18 13 —							
259	Dec. 14	P_Z	8 36 2.2						0 1.0	(L)
	Zinsen	P_{EN}	2.4							Zinsen.
		S_Z	3.2							
		S_{EN}	3.3							
		F	45.							
260	Dec. 16	P	4 38 3.1						2 0.4	Southeast of Inubō-saki?
	Taikyū	S	40 3.5							
		F	59 —							
261	Dec. 16	eS?	16 39 37.2							
	Taikyū	F	in next quake							
262	Dec. 16	eP_Z	17 34 32.6							Ep. by Wellington.
	Zinsen	eP_E	34.0							λ=167°E
		eL_E	45 10.6							φ= 45°S
		F	18 52 —							
	Keizyō	e_{NE}	17 38 9.7							
		L_{NE}	45 26.7							
		F	18 33 —							
	Taikyū	eS?	17 44 42.2							
		F?	19 0 —							
263	Dec. 16	eL_E	19 43 41.6							New Zealand.
	Zinsen	F	21 7 —							
264	Dec. 16	eL_E	23 39 46.8							
	Zinsen	F	24 20 —							
265	Dec. 17	e_E	16 44 23.6							
	Keizyō	eP_N?	49 39.6							
		eP_E?	42.6							
		e_E	50 15.9							
		e_N	19.9							
		M_N	37.3	— 23			5.2			
		F	17 11 —							
	Taikyū	eP	16 46 9.3						2 8.8	
		S	48 18.1							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	17 11 —							
	Heizyō	eP	16 48 41.7						2 21.0?	
		S?	51 2.7							
		F	17 18 —							
	Zinsen	P_N	16 49 29.7						2 11.1	
		P_Z	29.8							
		S_N	51 40.8							
		F	17 3 —							
	Husan	eP	16 49 49.7						1 39.1	
		eS	51 28.8							
		F	17 18 —							
266	Dec. 17	eP	17 34 8.6							
	Heizyō	F	38 —							
	Zinsen	eP_E	17 34 52.8							
		eP_Z	55.6							
		F	35 40.							
	Keizyō	iP_E	17 34 56.8						0 14.0?	
		eP_N	57.6							
		S_{NE}?	35 10.8							
		F	38 —							
	Taikyū	P	17 36 5.9						0 9.9	
		S	15.8							
		F	37 14.							
267	Dec. 18	P	21 48 33.5						3 16.7	(M) Ep. λ=142.°9E φ= 38.3N Intensity : Morioka, Mizusawa, Utunomiya I.
	Taikyū	S?	51 50.2							
		F	22 18 —							
	Keizyō	P_{NE}	21 48 41.2						2 48.2	
		eS_N	51 29.4							
		L_N	52 53.4							
		L_E	53 9.4							
		F	22 10 —							
	Husan	eP	21 48 43.5							
		L	52 55.4							
		F	22 10 —							
	Heizyō	eP	21 49 1.7						2 51.9	
		eS	51 53.6							
		L	53 5.6							
		F	22 20 —							
	Zinsen	eL_N?	21 51 28.0							

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s	μ	m s	
		F	22 7 —							
268	Dec. 19	eP_{NE}	6 56 59.4							
	Keizyō	F	7 5 —							
269	Dec. 19	eP_{EN}	18 27 37.2						3 25.0	(M) Ep. λ=147.°7E φ= 42.5N Felt at southeastern part of Hokkaidō.
	Zinsen	eS_{EN}	31 2.2							
		L_N	32 33.8							
		L_E	35.2							
		F	19 5 —							
	Keizyō	P_{NE}	18 27 42.1						3 14.6	
		S_N	30 56.7							
		F	48 —							
	Husan	eP	18 27 44.0							
		L	31 45.0							
		F	43 —							
	Taikyū	P	18 27 44.2						2 15.2	
		S	29 59.4							
		F	19 4 —							
270	Dec. 20	eP	1 53 44.8						3 10.9	
	Husan	eS	56 55.7							
		F	2 10 —							
271	Dec. 20	e	14 54 9.2							(S) Ep. λ=142.°9E φ= 38.7N Intensity : Kakioka Utunomiya, Hatinohe I.
	Husan	F	15 9 —							
	Keizyō	eP_{NE}	14 54 20.0							
		L_{NE}	59 18.0							
		F	15 13 —							
	Zinsen	eP_E	14 54 46.1						1 53.1	
		eS_{EN}	56 37.2							
		eL_{EN}	57 33.8							
		F	15 10 —							
	Taikyū	P	14 55 8.9							
		F	15 28 —							
272	Dec. 21	eP_E?	12 42 29.9							
	Zinsen	eP_N?	30.8							
		e_E	45 26.9							
		F	13 4 —							
273	Dec. 22	e_E	3 27 21.8							
	Keizyō	F	38 —							
274	Dec. 22	iP_N	16 59 47.4					N –7.0	3 57.2	(S)

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
			h m s	μ	μ	μ	s		m s	
	Husan	eS	17 3 44.6							Ep. λ=122.°6E
		ScS?	8 14.9							φ= 23.8N
		F	23 —							Intensity : Giran, Isigakizima, Arisan II, Sintiku I.
	Zinsen	P_N	17 0 5.5						2 40.3	
		eP_E	5.5							
		iP_Z	7.2							
		eS_E	2 45.8							
		eS_Z	51.0							
		eS_N	52.4							
		L_E	4 20.7							
		L_N	20.8							
		L_Z	22.4							
		F	25 —							
	Keizyō	P_{NE}	17 0 5.9							
		e_E	2 49.3							
		e_N	54.6							
		S_N?	4 1.6							
		S_E?	4.0							
		S_{NE}	25.6							
		M_E	5 18.0		— 14		5.2			
		F	21 —							
	Heizyō	iP_N	17 0 24.5						3 2.4	
		S	3 26.9							
		L	5 11.9							
		M	6 2.9							
		F	34 —							
	Taikyū	P	17 0 56.4						2 33.0	
		S	3 29.4							
		F	18 20 —							
275	Dec. 23	P	1 54 23.4							(R) Ep. λ=141.°9E
	Taikyū	F	2 11 —							φ= 36.9N Felt area : The greater part of Kantō and Tōhoku, and southeastern part of Tyūbu. In Hukusima Prefecture, intensity III
	Keizyō	P_{NE}	1 54 25.6						2 17.1	
		S_{NE}	56 42.7							
		L_E	58 6.4							
		F	2 8 —							
	Zinsen	eP_E	1 54 28.5?							
		L_E	59 34.0?							
		F	2 9 —							
	Husan	eP	1 54 36.5						1 35.5	
		eS	56 12.0							
		F	2 6 —							
276	Dec. 28	eP	7 36 56.2							Near Taikyū. ?

6. The seismic reports from stations in Tyōsen in the Year 1938.

No.	Date and Station	Phase	Time (G. M. T.)	Amplitude N	Amplitude E	Amplitude Z	Period	First Motion	S~P	Remarks
	Taikyū	F	h m s 7 44 —	μ	μ	μ	s	μ	m s	
277	Dec. 28	eP	22 20 36.3						0 4.7	(L)
	Taikyū	S	20 41.0							Near Taikyū.
		F	21 36.							
278	Dec. 29	eP	20 58 6.4						0 56.8	Hyūganada.
	Husan	S	59 3.2							
		F	21 7 —							
	Taikyū	eP	20 58 9.0						1 25.0	
		S	59 34.0							
		F	21 13 —							
	Heizyō	eP	20 59 14.7						2 24.0	
		S	21 1 38.7							
		F	16 —							
	Keizyō	eP_E	21 0 10.8							
		M_E	48.5		+ 57		3.6			
	Zinsen	eP_E?	21 0 37.6							
		eP_N?	38.1							
		F	8 —							

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