

自明治十五年至昭和四年



# 大阪地震累年報

府立大阪測候所刊行

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THE

8225.05C

SEISMOLOGICAL BULLETIN

IN

OSAKA

FROM 1882 TO 1929

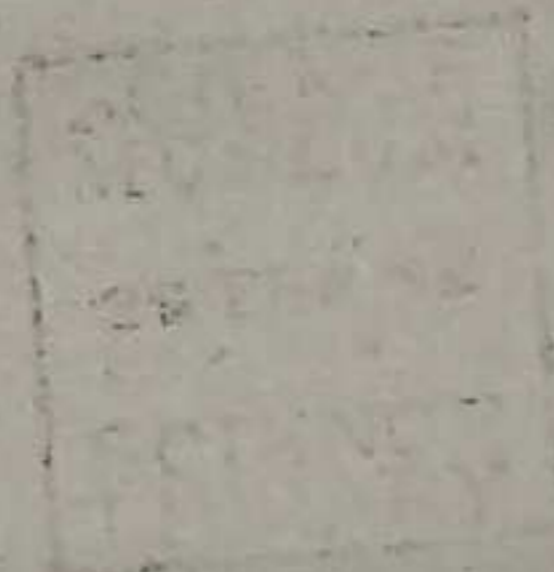
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PUBLISHED BY

THE OSAKA METEOROLOGICAL OBSERVATORY

JAPAN

1931





本編は千八百八十二年より千九百二十八年に至る、四十七年間に於ける大阪測候所地震観測成績を載録したるものにして、附録として巻末に大阪地方に於ける歴史地震の顯著なるものを登載せり。

當所の地震観測は、観測開始當時は器械の設備もなく、専ら人體の感覺にのみ依りたりしが、其後漸次器械を増設して今日に到り、其間又地震計室の改築、移轉等沿革上の記すべきもの少なからず、今其概要を記すれば次の如し。

當所に於ける地震観測の沿革

1. 廳舎を大阪市北區濱通二丁目（北緯三十四度四十二分東經百三十五度三十一分高さ四米半）に新築し、大阪測候所と稱し、明治十五年七月一日より人體感覺に依る地震観測を開始せり。其後グレーミルン普通地震計を据附け、明治二十三年十月一日より観測を開始せり。
1. 地震計室を新設し、大森式東西動地震計、同東西動傾斜計、同強震計、同微動計を増設し、明治三十四年六月一日より観測を開始せり。
1. 明治三十九年七月、大森式簡單微動計を増設し、観測を開始す。
1. 明治四十五年五月より同年九月に至る五ヶ月間は、地震計室改築のため地動計の観測を中止し、他の地震計室に於て簡單微動計、普通地震計の観測を繼續せり。
1. 明治四十年十月、大森式南北動地動計を増設し、観測を開始せり。

The present volume contains the results of the observations for these 47 years from 1882 to 1928 made at the Osaka Meteorological Observatory, and as a supplement the report of the remarkable historical earthquakes occurred in Osaka has been written in the end of this bulletin.

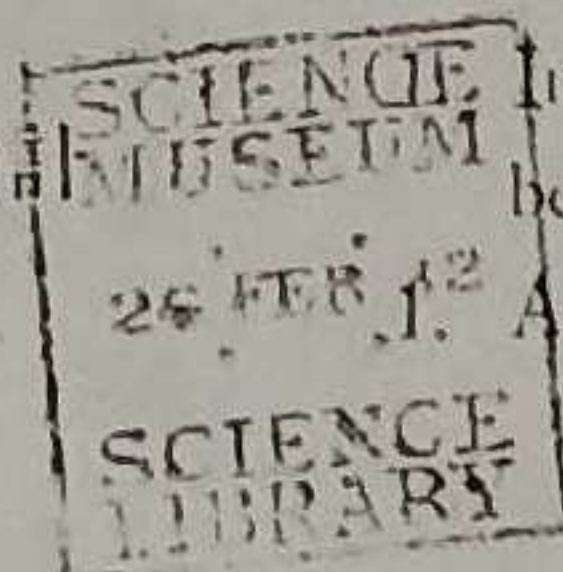
As no seismograph had been provided when the station was opened, the observation was chiefly made by the experience of the human body. But afterwards the instruments have gradually been increased. There are many descriptions on the history of the Observatory, such as the reconstruction of the observatory.

THE SEISMOMETRICAL HISTORY OF THE OBSERVATORY.

1. A station-house was built at 2-chome, Hamadōri, Dōjima, Kitaku, Osaka ( $\phi = 34^{\circ}42'N.$ ,  $\lambda = 135^{\circ}31'E.$ ,  $H = 4.5m.$ ), and named the Osaka Meteorological Observatory. On July 1st 1882 the observation by the experience of the human body was begun. A Grey-Milne ordinary seismograph was set, and on October 1st 1890 the observation was begun.
1. A station-house was established newly, and in it Omori horizontal seismograph, Omori clinometer, Omori strong-motion seismograph, Omori horizontal pendulum-tromometer was set and on June 1st 1901 the observation was begun.
1. In July 1906 the observation was begun by Omori portable seismometer.
1. For five month from May 1907 to September 1907 the observation by the horizontal pendulum-tromometer was discontinued because of the reconstruction of the station-house, and so at the other station the observations by the portable seismometer and the ordinary seismograph were continued.

In October 1907 the observation was begun by Omori horizontal pendulum.

As all the instruments were reduced to



1. 明治四十二年七月三十一日、火災のため地震器械悉皆焼失したるを以て、暫く器械的の観測を缺きしが、同年十月二十一日、大森式南北動地動計を据附け観測を開始せり。

1. 大阪測候所は廳舎を大阪市港區一條通二丁目六番地（北緯三十四度三十九分東經百三十五度二十六分、海拔三米）に新築し、明治四十三年九月一日より普通地震計を据附け観測を開始せり。

1. 大森式東西動地動計、南北動地動計及び上下動微動計を増設し、明治四十三年十一月より観測を始めた。

1. 大森式南北動微動計、同簡單微動計、同強震計を増設し、明治四十四年一月一日より観測を始めた。

1. 大正十五年四月、今村式強震計、大森式傾斜計を増設す。

1. 大阪市東成區勝山通九丁目七十二番地（北緯三十四度三十九分二秒、東經百三十五度三十二分九秒、海拔三米四、砂質壤土（第四期古層））に鐵筋コンクリート二階建、總坪數八十五坪の地震計室を新設し、從來の地動計、強震計（今村式）、上下微動計を此處に移轉し、更にグキハルト水平動地震計を増設し昭和四年四月一日より観測を開始せり。

1. 昭和四年七月、簡單微動計及び強震計を据附け、観測を開始せり。

ashes by the great fire that occurred on 31st July 1909, the observation by the seismograph was not made for some time, but on 21st October 1909 the observation by Omori horizontal pendulum was begun.

1. After that the observation by the ordinary seismometer was begun on 1st September 1910 at the new station-house which has been erected at No. 6, 2-chome, Ichijodori, Minatoku, Osaka ( $\phi = 34^{\circ} 39' N.$ ,  $\lambda = 135^{\circ} 26' E.$ ,  $H = 3m.$ ).

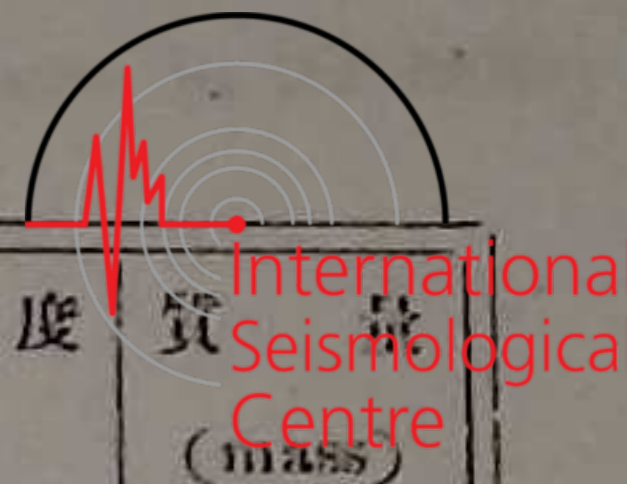
1. In November 1910 the observations by Omori horizontal pendulums and Omori vertical-motion seismograph were begun.

1. On 1st January 1911 the observations by Omori horizontal pendulum, Omori portable seismometer, Omori strong-motion seismograph were begun.

1. In April 1926 Imamura strong-motion seismograph and Omori clinometer were mounted.

1. A new station-house of two storied reinforced concrete measures about 281 square meter has been erected at No. 72, 9-chome, Katsuyamadori, Higashinariku, Osaka ( $\phi = 34^{\circ} 39' 2'' N.$ ,  $\lambda = 135^{\circ} 32' 9'' E.$ ,  $H = 3.4m.$ ), and the pendulums, strong-motion seismograph (Imamura's), vertical-motion seismograph, clinometer, horizontal pendulum, tromometer which had been mounted in the former station have been removed here, and besides Wiechert Horizontal Seismograph and vertical seismograph have newly been mounted. On 1st April 1929 the station was opened.

1. In July 1929 the observations by a portable seismometer and a strong-motion seismograph were begun.



地震計 Instruments		倍率 $V_0$	固有週期 $T_0$	摩擦係数 $\frac{r}{T_0^2}$	制振度 $\epsilon$	質量 (mass) 斤
Omori Horizontal Pendulum tremometer. 大森式地動計	Ncomp.	20 <sup>倍</sup>	30 <sup>秒</sup>	0.003	—	17.000
	Ecomp.	20	30	0.003	—	17.000
Omori Vertical-motion seismograph. 大森式上下微動計	Zcomp.	20	15	0.004	—	4.119
Omori Horizontal Pendulum tremometer. 大森式微動計	Ncomp.	120	15	0.005	—	63.000
Omori Portable seismometer. 大森式簡單微動計	Ncomp.	60	4	0.092	—	12.800
	Ecomp.	60	4	0.092	—	12.800
Omori Strong-motion Seismograph. 大森式強震計	Ncomp.	1	5	0.003	—	1.680
	Ecomp.	1	5	0.003	—	1.680
	Zcomp.	2	5	0.003	—	0.890
Inamura Strong-motion Seismograph. 今村式強震計	Ncomp.	2	8	0.024	2.0	2.000
	Ecomp.	2	8	0.024	2.0	2.050
	Zcomp.	2	3	0.032	4.0	0.380
Omori Clinometer 大森式傾斜計	Ncomp.	15	15	0.003	—	6.200
	Ecomp.	15	15	0.003	—	6.200
Wiecherts Horizontal Seismograph. ヴェーヘルト水平動	Ncomp.	80	4	0.023	3.7	200.000
	Ecomp.	80	4	0.023	3.7	200.000
Wiecherts Vertical Seismograph. ヴェーヘルト上下動	Zcomp.	80	4	0.014	3.5	80.000

時辰儀 二箇の時辰儀を設置し一箇のリレーを挿入して全部の地震計と連結し、三十秒若しくは一分間毎に時刻を印せしむ、而して此等の時辰儀は大正十年以後は船橋無線電信局の報時（英國綠威の正午）を受信し、之と比較して日差を定むることとせり。

時刻 本報告中時刻は英國綠威時を採用し、廿四時制（午前一時を（1）午後一

TIME SERVICE The time service is made every thirty seconds or one minute by a relay from two contact-chronometer. And time comparison is obtained by wire-less telegraphy from the Funabashi Wire-less Station since 1921.

TIME Time in the bulletin is Greenwich Mean Time.



時を(13)とし、其他之に準ず)に依れり。

記 號 本報告中用ひたる記號は次の如し。

Pハ第一前走波 (undae primae)=First preliminary tremor.

Sハ第二前走波 (undae secundae)=Second preliminary tremor.

Lハ主要動ノ長波 (undae longae)=Long waves at the beginning of the surface phase.

Mハ主要動ノ極大動 (undae maximae) =Greatest motion in the surface phase, usually in the group here defined as Q.

表中ゴチツク文字を用ひたるは大阪に於ける有感覺地震なり。

昭和六年三月

府立大阪測候所長

前 田 末 廣

NOTATION The notations in the bulletin are the following.

The earthquakes experienced by the human body are written in black-letter.

S. MAEDA.

Director of the Osaka

Meteorological Observatory.

March 1931.

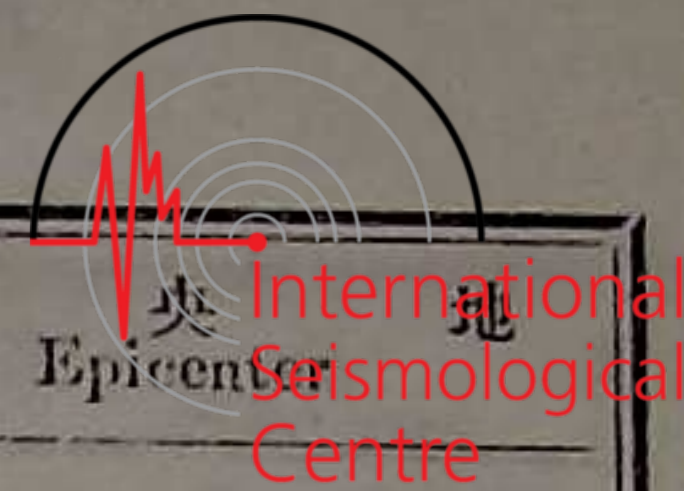
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二 大阪に被害を蒙りたる大地震	The Catastrophic Earthquakes in Osaka District	

# 地 震 表

The Report of the Earthquakes

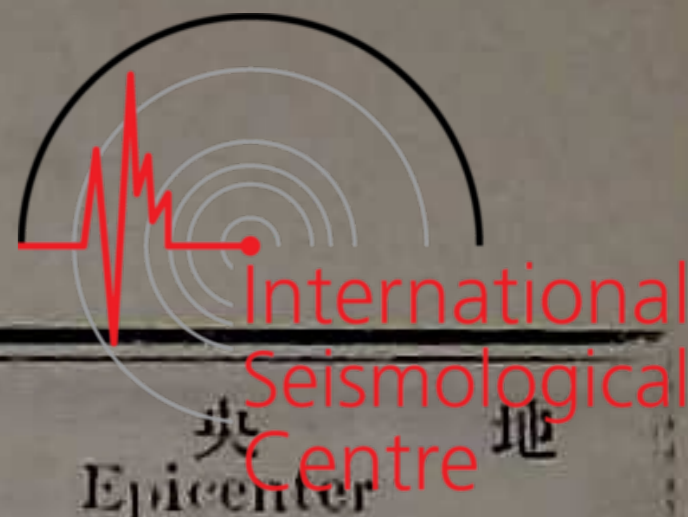


月日 Date	發震時 h. m. s.	震度 Intensity	震央地 Epicenter	月日 Date	發震時 h. m. s.	震度 Intensity	震央地 Epicenter
明治十五年 (1882)				III	18 17 0	I	—
X	2 4 54 0	I	—	明治二十四年 (1891)			
明治十七年 (1884)				五			
II	21 6 43 0	I	—	III	27 22 38 45	V	Nebi district
VI	25 2 0 0	"	—	"	27 23 1 35	"	"
XI	18 — —	"	—	"	28 0 7 20	?	"
明治十八年 (1885)				"	28 0 16 30	?	"
II	6 14 20 0	I	Tanba district	"	28 0 49 25	III	"
III	31 11 28 0	"	—	"	28 0 57 39	?	"
V	24 21 12 30	"	—	"	28 1 11 29	"	"
VIII	19 18 40 0	"	—	"	28 1 26 0	"	"
IX	26 2 44 0	"	—	"	28 1 37 20	III	"
明治十九年 (1886)				"	28 2 28 48	"	"
I	28 5 45 0	I	—	"	28 2 37 35	"	"
II	12 20 23 0	"	—	"	28 2 49 8	?	"
IV	30 23 50 0	"	—	"	28 3 10 45	"	"
明治二十年 (1887)				"	28 3 46 28	"	"
II	2 4 48 0	I	—	"	28 4 38 5	"	"
"	10 4 21 0	"	—	"	28 5 3 25	"	"
"	26 4 50 0	"	—	"	28 5 11 20	"	"
IV	29 13 52 0	"	—	"	28 6 2 45	III	"
VI	15 17 35 0	"	—	"	28 6 25 35	?	"
IX	3 16 30 0	"	—	"	28 6 32 49	"	"
明治二十一年 (1888)				"	28 6 50 55	"	"
IV	10 18 43 0	I	Western part of Tango	"	28 7 5 5	"	"
V	23 12 5 0	"	—	"	28 8 33 2	III	"
VI	11 18 15 0	"	—	"	28 8 40 20	?	"
VII	7 8 25 0	"	—	"	28 9 21 58	"	"
VIII	28 21 31 0	"	—	"	28 10 14 24	"	"
X	21 — —	"	—	"	28 10 22 20	"	"
明治二十二年 (1889)				"	28 10 22 20	"	"
IV	10 21 56 0	I	—	"	28 11 8 30	"	"
"	15 4 20 0	"	—	"	28 12 20 30	III	"
V	12 1 42 0	"	Near Gifu	"	28 12 37 15	?	"
"	24 1 45 0	"	—	"	28 13 31 0	"	"
IX	1 23 27 0	"	—	"	28 14 6 55	"	"
明治二十三年 (1890)				"	28 14 6 55	"	"
				"	28 16 48 30	"	"
				"	28 17 59 0	III	"
				"	29 1 38 10	"	"
				"	29 4 50 0	"	"
				"	29 8 20 15	?	"
				"	29 15 14 35	V	"
				"	29 15 31 55	?	"
				"	29 16 17 15	"	"
				"	29 17 28 0	III	"
				"	29 17 54 30	?	"

時刻 本表ノ時刻ハ觀成時ヲ用ヒタルヲ以テ之ヲ本邦中央標準時トナスニハ九時ノ加フベシ例ヘバ二日ノ二十三時ハ三日ノ八時トナルガ如シ



## 大阪地震累年報

Results of the Seismological Observation in Osaka,  
for the several years in succession.

月 日 Date	發 震 時 h. m. s.	震 度 Intensity	震 央 地 Epicenter	月 日 Date	發 震 時 h. m. s.	震 度 Intensity	震 央 地 Epicenter
X 30	13 31 24	?	Nobi district	明治二十八年 (1895)			
" 30	19 10 10	"	"	I 9	19 40 0	?	—
" 31	10 22 10	III	"	" 11	1 14 12	"	—
XI 1	7 56 50	"	"	" 18	13 49 0	V	Hidati district
" 1	12 18 59	"	"	明治二十九年 (1896)			
" 2	7 58 30	"	"	V 6	21 36 30	?	—
" 6	13 11 40	"	—	" 7	5 38 25	"	—
" 6	16 1 50	"	—	" 13	4 45 30	"	—
" 22	8 25 10	?	—	VII 6	14 39 22	"	—
" 28	16 0 30	"	—	" 19	7 11 10	"	—
XII 2	17 2 20	"	—	VIII 31	8 10 51	"	The frontier of Rikutyu, Ugo
" 4	12 23 35	III	—	X 5	18 36 52	"	—
" 23	20 32 40	"	Sagami bay	明治三十年 (1897)			
" 29	8 20 14	"	—	V 25	1 3 3	?	—
明治二十五年 (1892)				" 27	16 13 36	"	—
I 3	7 22 0	V	Nobi district	VI 7	1 21 7	"	—
" 10	17 59 13	?	—	VII 11	7 43 15	"	—
II 22	7 56 38	"	—	" 22	9 35 2	"	Iwaki-nada
" 28	22 44 55	"	—	VIII 4	2 10 22	"	—
III 29	18 1 0	"	—	" 13	8 42 6	"	—
IX 6	20 40 0	"	Nobi district	IX 2	5 30 45	"	—
明治二十六年 (1893)				X 5	23 49 41	"	—
III 22	17 51 25	?	—	明治三十一年 (1898)			
IV 6	8 15 0	"	—	IV 2	21 40 0	I	Yamanasi Prefecture
" 6	9 24 0	"	—	" 22	1 5 0	0	—
V 14	8 41 0	"	—	V 10	8 14 7	"	—
" 17	20 34 40	"	—	VII 11	9 17 5	"	—
" 25	18 5 0	"	—	" 16	4 53 10	"	—
VI 6	17 3 10	"	—	" 20	9 33 55	"	—
" 14	6 42 0	"	—	" 29	4 45 56	"	—
" 21	12 13 30	"	—	" 29	15 44 45	"	—
" 21	13 54 15	"	—	" 29	22 7 49	"	—
VIII 22	15 18 47	"	—	" 29	23 1 27	"	—
" 22	17 13 7	"	—	VIII 1	5 12 11	"	—
X 22	22 51 55	"	—	X 16	11 34 45	"	—
明治二十七年 (1894)				" 16	12 19 13	"	—
I 10	9 47 0	V	Nobi district	XI 13	2 33 25	I	Nobi district
" 18	6 45 37	?	—	XII 3	15 59 43	0	—
VI 20	5 4 0	"	Musasi district	" 3	16 47 33	I	Eastern part of Higo
IX 17	11 49 30	"	—	" 11	4 47 33	0	—
XI 27	18 43 20	"	—	" 19	0 10 53	"	—

時刻 本表ノ時刻ハ緯度時ヲ用ヒタルヲ以テ之ヲ本邦中央標準時トナスニハ九時ヲ加フベシ例ヘバ二日ノ二十三時ハ三日ノ八時トナルガ如シ

# 大阪地震累年報

Results of the Seismological Observation in Osaka,  
for the several years in succession.



地	發震時				震度 Intensity	震央 Epicenter	地	發震時				震度 Intensity	震央 Epicenter	地	
	月 Date	日	時 h.	分 m.				秒 s.	月 Date	日	時 h.				分 m.
	Ⅱ	27	1	38	30	0	—		Ⅷ	6	8	55	55	0	—
	明治三十二年 (1899)														
	I	21	23	4	38	0	—			"	6	10	11	5	"
	Ⅲ	7	0	56	36	V	Southern part of Yamato			"	6	13	22	32	"
	"	7	6	43	30	0	—			"	6	17	41	16	"
	"	24	4	0	6	"	—			"	7	0	35	12	"
	"	28	19	49	31	"	—			"	7	1	34	52	"
	"	31	14	3	25	"	—			"	9	1	16	17	I
	Ⅳ	5	23	29	32	"	—			"	11	9	15	19	0
	"	12	4	7	12	"	—			"	12	13	54	7	I
	"	15	10	26	5	"	—			"	12	14	56	13	0
	"	24	11	1	20	"	—			"	15	3	56	7	"
	"	24	11	56	12	"	—			"	22	21	14	19	"
	V	21	2	5	3	"	—			"	24	3	30	0	Ⅲ
	Ⅵ	2	3	18	0	"	—			"	28	10	5	5	0
	"	2	6	26	51	"	—			"	29	9	52	13	"
	"	13	5	23	30	"	—			Ⅸ	1	19	54	20	I
	"	23	10	40	29	"	—			"	3	17	5	0	I
	"	26	15	1	55	I	Near Osaka			"	12	3	0	27	I
	Ⅶ	4	18	20	7	I	Off Wakasa bay			"	12	5	49	30	0
	"	9	18	9	1	0	—			"	13	9	1	30	"
	"	16	22	20	40	I	Mt. Rokko			"	16	23	16	28	I
	"	21	22	18	0	0	—			"	25	16	40	40	I
	"	22	14	53	13	"	—			"	30	1	26	0	I
	"	25	6	46	50	"	—			X	4	7	35	15	0
	"	25	10	10	7	"	—			"	5	4	51	47	I
	"	25	16	27	50	"	—			"	6	3	15	16	I
	"	25	18	13	37	"	—			"	10	7	42	34	0
	"	25	18	46	50	"	—			"	10	21	42	59	"
	"	26	1	10	32	"	—			"	11	5	15	0	"
	"	28	10	49	48	I	Mt. Rokko			"	11	12	27	59	"
	"	30	2	8	20	I	"			"	11	14	51	23	"
	"	30	18	4	22	I	"			"	13	9	21	26	I
	"	31	12	12	52	0	—			"	16	5	4	6	I
	Ⅷ	1	4	47	20	I	Mt. Rokko			"	16	22	8	42	0
	"	1	17	8	20	I	"			"	23	10	7	12	I
	"	2	5	15	41	I	"			"	24	0	50	44	0
	"	2	7	2	25	0	—			"	24	1	4	29	"
	"	2	7	39	5	"	—			"	24	1	17	4	"
	"	2	8	28	25	"	—			"	24	1	57	44	"
	"	2	9	2	2	"	—			"	24	2	1	9	"
	"	3	0	16	24	"	—			XI	8	2	34	0	"
	"	4	9	4	42	"	—			"	11	11	42	21	I
	"	6	4	26	27	"	—			"	14	4	41	13	Ⅲ
										"	24	18	45	17	Ⅲ

時刻 本表ノ時刻ハ觀震時ヲ用ヒタルヲ以テ之ヲ本部中央標準時トナスニハ九時ヲ加フベシ例ヘハ二日ノ二十三時ハ三日ノ八時トナリガ如シ

# 大阪地震累年報

Results of the Seismological Observation in Osaka,  
for the several years in succession.



月 Date	日	發 h.	震 P. m.	時 s.	震 度 Intensity	震 央 地 Epicenter	月 Date	日	發 h.	震 P. m.	時 s.	震 度 Intensity	震 央 地 Epicenter
XI	24	18	56	52	III	Near Miyazaki	IX	17	11	44	54	0	—
"	26	22	13	47	0	—	X	4	19	12	24	"	—
"	29	0	40	1	"	—	"	10	10	4	55	I	Near Sanda, Settu
XII	6	14	0	0	I	Mt. Rokko	"	22	4	54	6	0	—
"	13	5	40	16	0	—	XI	5	5	10	22	"	—
"	14	6	24	30	"	—	"	5	7	42	2	"	—
"	15	6	10	54	"	—	"	5	8	20	8	"	—
"	22	18	39	23	I	Mt. Rokko	"	9	17	56	7	"	—
"	27	17	44	2	I	"	"	12	21	33	2	"	—
"	28	23	43	38	0	—	"	14	21	38	12	"	—
"	29	7	22	31	"	—	"	18	19	39	46	"	—
"	29	7	36	10	"	—	"	19	13	59	27	"	—
"	30	23	48	18	"	—	"	27	12	15	47	III	Kyoto city
							"	28	5	59	45	0	—
明治三十三年 (1900)													
I	1	3	50	8	0	—	XII	3	5	1	29	"	—
"	4	4	22	23	"	—	"	5	4	15	58	"	—
"	12	6	4	30	I	Kumano-nada	"	11	3	32	10	"	—
"	12	16	21	31	I	"	"	11	6	31	1	"	—
"	16	15	13	3	0	—	"	12	4	31	15	"	—
"	21	13	46	36	I	Mt. Rokko	"	12	23	29	45	"	—
"	21	22	14	33	I	"	"	12	23	54	53	"	—
"	23	6	3	56	III	Osaka bay	"	13	1	0	33	"	—
II	2	14	11	38	0	—	"	15	2	7	22	"	—
"	22	19	40	21	III	The frontier of Yamato and Yamasiro	"	15	9	31	15	"	—
"	22	22	51	10	I	Mt. Rokko	"	15	11	20	28	"	—
"	26	5	24	12	0	—	"	17	12	55	21	"	—
III	21	15	55	17	III	Fukui prefecture	"	19	1	17	42	"	—
"	29	23	53	3	I	Near Sanda, Settu	"	20	0	58	34	"	—
IV	19	23	50	31	III	Eastern part of Settu	"	24	16	21	51	I	Near Osaka
"	24	23	20	38	I	Mt. Rokko	"	25	1	52	37	0	—
V	4	4	15	7	0	—	"	29	7	42	10	"	—
"	7	6	42	2	0	—	"	30	1	26	13	"	—
"	8	12	6	56	"	—	"	31	7	49	24	"	—
"	9	11	31	42	"	—	"	31	12	4	21	"	—
"	9	16	31	2	"	—	"	31	19	1	23	"	—
"	22	6	37	56	I	Mt. Rokko	明治三十四年 (1901)						
"	31	8	43	46	I	Needani, Mino	I	3	19	36	56	I	Near Osaka
"	31	21	37	31	I	"	"	16	2	10	40	0	—
VI	16	13	57	58	0	—	"	30	4	9	33	III	Osaka bay
VII	7	0	43	37	"	—	II	20	7	49	49	III	Near Sanda, Settu
"	24	16	5	48	I	Owari bay	"	28	21	48	9	0	—
VIII	15	17	33	26	I	Eastern part of Settu, Haruma	III	20	8	13	38	III	Near Sanda, Settu
"	25	18	44	7	0	—	V	8	14	30	17	0	—
IX	3	18	3	57	"	—							

時刻 本表ノ時刻ハ観測時ヲ用ヒタルヲ以テ之ヲ本邦中央標準時トナスニハ九時ヲ加フベシ例ヘバ二月ノ二十三時ハ三月ノ八時トナルガ如シ

# 大阪地震累年報

Results of the Seismological Observation in Osaka,  
for the several years in succession.



月 Date	發震時 P.			第一初期 P-S or P-L		第二初期 S-L		振幅 Ampli- tude $\mu$	振動期 Period s.	距離 $\Delta$ K.M.	震 央 地 Epicenter	
	h.	m.	s.	m.	s.	m.	s.					
明治三十四年 (1901)												
VI	7	0	0	0	55	—	—	35	5.2	408	—	
"	9	4	25	18	0	5	—	10	1.8	—	Near Osaka	
"	13	3	22	0	1	33	1	27	6.4	690	—	
"	15	9	32	0	1	26	1	32	4.5	638	Off the coast of Mutu	
"	22	4	19	25	0	03	—	100	2.7	22	Near Osaka	
"	24	7	2	40	1	32	1	24	5165	683	Off the coast of Amami Osima Island	
"	24	13	39	0	1	03	1	05	325	5.9	943	ditto
"	26	2	26	0	1	50	1	32	190	4.4	816	—
VII	1	9	30	0	—	—	—	—	—	—	Bay of Turuga	
"	11	10	40	10	0	33	0	21	115	2.7	401	Neighbourhood of Mito city
"	13	14	52	0	0	09	—	35	2.2	67	—	
"	18	10	49	0	0	33	0	27	115	3.8	445	Coast of Iwaki
"	29	1	38	0	—	—	—	—	—	—	—	
"	30	17	58	0	1	5	—	25	2.7	482	—	
"	30	22	10	0	0	26	0	23	85	3.8	364	—
"	30	22	29	50	0	41	0	34	60	5.2	557	—
VIII	9	9	23	55	1	16	0	57	525	5.5	564	The town of Haeinoe, Mutu province
"	9	13	14	00	7	48	9	40	3915	16.8	6220	A distant earthquake
"	9	16	23	0	1	21	1	15	25	1.8	601	Northern part of Rikutyu province
"	9	18	36	0	1	09	1	09	340	2.8	1023	The town of Haeinoe, Mutu province
"	9	20	5	0	1	09	0	57	60	1.8	905	Morioka districts of Rikutyu province
"	9	20	55	0	—	—	—	—	—	—	Off the coast of Rikutyu	
"	9	21	16	0	—	—	—	—	—	—	ditto	
"	9	23	24	0	—	—	—	—	—	—	E. Coast of Honsyu	
"	10	10	39	0	2	41	3	00	50	12.4	1540	—
"	11	11	36	30	0	59	0	53	50	2.2	831	Off the coast of Rikutyu
"	16	4	45	0	—	—	—	15	4.6	—	—	
"	20	3	6	50	0	57	0	52	70	5.0	809	—
"	29	12	14	21	0	44	0	36	110	5.0	594	Off the coast of Mutu
IX	4	12	13	5	0	12	—	15	1.5	—	Northern part of Simozuke	
"	5	9	20	25	0	34	—	250	2.1	252	Iyuga-nada	
"	6	1	55	0	—	—	—	—	—	—	—	
"	8	6	9	30	1	21	1	14	50	2.7	601	—
"	8	17	59	25	3	34	2	46	75	2.1	2120	A distant earthquake
"	15	0	53	58	1	12	1	05	110	6.0	534	Off the coast of Rikuzen
"	19	0	30	40	0	06	—	160	1.5	45	Central Part of Tanba province	
"	20	6	20	38	0	1	—	60	1.2	7	Bay of Osaka	
"	20	6	43	30	0	3	—	25	0.9	22	—	
"	24	7	58	55	—	—	—	25	2.9	—	—	
"	30	10	20	48	0	46	0	44	1040	3.8	668	Off the coast of Kuji, Rikutyu province
X	7	20	30	0	—	—	—	—	—	—	—	
"	10	10	26	49	0	53	1	01	125	3.6	846	—
"	11	5	18	50	0	50	0	29	100	5.0	581	—

時刻 本表ノ時刻ハ録成時ヲ用ヒタルヲ以テ之ヲ本邦中央標準時トナスニハ九時ヲ加フベシ例ヘバニ日ノ二十三時ハ三日ノ八時トナルガ如シ

## 大阪地震累年報

Results of the Seismological Observation in Osaka,  
for the several years in succession.

月 Date	發震時 P. s.			第一初期 P-S or P-L		第二初期 S-L		幅 Ampli- tude $\mu$	振動期 Period s.	距離 K.M.	震 央 地 Epicenter
	h.	m.	s.	m.	s.	m.	s.				
X 19	10	3	9	4	32	4	17	150	4.7	2850	A distant earthquake
" 21	17	22	3	—	—	—	—	50	1.2	—	Off the coast of Iwami
IV 2	14	59	0	0	5	—	—	100	0.9	37	Northern part of Settsu
" 4	7	55	20	0	32	0	37	400	3.1	400	Bay of Tokyo
" 4	14	9	41	0	29	0	26	250	2.9	408	—
" 7	17	46	16	0	5	—	—	35	0.8	40	Southern part of Ōmi province
" 8	11	50	0	0	29	0	30	50	2.2	438	Bay of Tokyo
" 8	1	24	0	—	—	—	—	—	—	—	—
" 8	6	4	50	3	21	2	49	100	16.6	1980	—
" 8	9	51	55	3	23	3	37	60	4.6	2000	A distant earthquake
" 8	11	52	5	0	28	0	28	60	2.8	416	—
" 8	13	26	1	0	58	1	00	10	2.2	876	Off the coast of Mutu
" 9	9	59	51	0	28	0	21	60	3.0	389	Near the lake Kasumigaura
" 9	19	54	20	2	13	—	—	—	—	987	—
" 11	10	18	19	0	46	0	46	25	0.8	683	—
" 11	18	49	40	—	—	—	—	—	—	—	—
" 13	8	8	22	1	06	1	02	15	2.6	943	—
" 13	10	17	36	0	56	0	48	25	2.0	772	—
" 14	1	35	12	0	34	0	28	25	1.3	460	—
" 15	1	47	44	—	—	—	—	—	—	—	—
" 15	17	18	0	1	29	—	—	15	—	660	W off the coast of Satsuma
" 18	0	19	39	—	—	—	—	35	18.0	—	—
" 23	6	21	58	0	49	—	—	25	1.0	364	—
" 25	1	52	40	—	—	—	—	65	2.8	—	—
" 26	11	37	0	0	18	0	19	250	4.5	275	The frontier of Sinano and Ettyu
" 27	2	10	54	0	17	0	13	85	0.9	241	Southern part of Ettyu province
" 27	9	53	20	0	49	—	—	15	1.8	—	Off the coast of Rikuzen
VI 14	22	45	14	—	—	—	—	—	—	—	Near Sasayama Tanba province
" 16	16	32	28	0	24	0	19	235	1.4	353	Bay of Tokyo
" 23	1	55	46	0	30	0	30	50	1.4	445	—
" 26	14	9	40	0	53	—	—	65	3.7	393	—
" 30	22	40	47	—	—	—	—	—	—	—	—
" 31	9	10	40	2	41	3	05	325	18.4	1540	—
" 31	15	22	0	1	07	1	07	90	4.5	985	Off the coast of Mutu
明治三十五年 (1902)											
I 1	5	29	48	—	—	—	—	—	—	—	—
" 2	16	35	10	0	32	—	—	15	1.5	—	E coast of Kii, Wakayama prefecture
" 3	21	6	0	0	29	0	26	500	4.8	426	Off the coast of Hidati
" 12	22	29	20	3	18	2	36	35	5.1	1940	—
" 14	0	2	15	0	13	0	17	35	1.0	191	Southern part of Hida
" 17	19	43	16	—	—	—	—	—	—	—	The cape of Siriya, Mutu province
" 24	23	36	13	5	20	4	55	235	16.5	3545	A distant earthquake
" 29	1	14	50	4	35	—	—	—	—	2890	"
" 29	14	25	40	0	48	—	—	150	3.4	—	Off the coast of Hidati

## 時刻

本表ノ時刻ハ緯度時ヲ用ヒタルヲ以テ之ヲ本邦中央標準時トナスニハ九時ヲ加フベシ例ヘハ二日ノ二十三時ハ三日ノ八時トナルガ如シ

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Results of the Seismological Observation in Osaka,  
for the several years in succession.



International  
Seismological  
Centre

月 Date	日	發 h.	震 P. m.	時 s.	第一初期 P-S or P-L m. s.	第二初期 S-L m. s.	振幅 Ampli- tude $\mu$	振動期 Period s.	距離 距離 K.M.	震 地	央 Epicenter
I	30	14	4	35	0 57	0 56	1665	4.0	839	Sannoe-gun, Mutu province	
"	31	1	43	30	0 53	0 50	310	3.6	764	Off the coast of Hidaka, Hokkaido	
II	9	7	47	0	8 41	8 36	85	26.7	7230	A distant earthquake	
"	9	10	17	0	8 55	8 10	60	24.6	7500	"	
"	13	10	0	40	11 25	11 30	—	—	10610	Semakli, Russia	
"	20	1	50	10	0 52	0 51	115	2.3	386	Bay of Tokyo	
"	20	15	41	0	1 07	0 56	100	2.3	913	Off the coast of Mutu	
"	25	15	44	0	2 7	—	15	4.0	942	—	
"	26	16	27	40	2 31	—	3250	—	1440	—	
"	28	8	40	0	—	—	15	1.3	—	Northern part of Ise	
III	1	0	16	30	2 30	2 09	40	4.5	1430	—	
"	1	11	22	52	—	—	15	1.5	—	—	
"	2	0	13	20	0 44	0 40	75	2.4	623	—	
"	6	0	34	42	—	—	—	—	—	Off the west coast of Kii	
"	10	5	36	20	0 20	—	25	2.0	148	—	
"	12	8	46	0	0 50	0 54	100	2.3	772	—	
"	17	2	0	30	1 07	1 05	25	2.4	979	—	
"	20	2	1	20	1 21	1 27	15	5.0	1620	—	
"	22	7	29	50	—	—	60	4.2	—	—	
"	23	9	17	30	0 3	—	415	2.6	22	Central part of Setta	
"	25	5	35	19	0 30	0 30	90	2.2	445	The town of Sahara, Simozuke province	
"	28	14	49	40	2 54	3 00	185	4.4	1680	—	
"	28	16	44	35	2 12	2 02	15	4.2	979	—	
"	31	15	50	35	0 37	0 50	40	3.9	646	—	
IV	2	4	25	30	1 28	—	50	6.5	653	—	
"	2	6	24	50	0 37	—	25	4.1	275	—	
"	2	7	26	30	0 1	—	35	1.6	7	Near Osaka	
"	5	10	25	5	0 42	—	25	2.3	312	Bay of Tokyo	
"	5	17	15	50	0 53	—	25	1.8	393	ditto	
"	5	19	4	0	—	—	15	2.5	—	—	
"	11	23	57	15	4 21	—	65	13.9	2705	A distant earthquake	
"	19	2	38	40	14 15	15 10	85	5.0	12500	Guatemala, Central America	
"	25	3	3	0	1 59	2 05	25	6.5	883	—	
V	2	11	35	15	1 13	1 07	515	5.5	542	Off the coast of Rikutyu	
"	6	14	54	40	0 59	1 04	35	3.9	913	—	
"	8	2	20	0	0 36	0 28	1000	4.4	475	Near sea of Yaku Island	
"	23	20	2	50	0 7	—	40	0.9	52	Southern part of Ise	
"	24	14	30	26	0 09	0 07	60	0.9	119	Northern part of Ise	
"	25	11	31	0	0 20	0 20	65	2.3	297	Eastern part of Kai	
"	25	16	53	0	4 53	—	25	4.6	3140	—	
"	28	9	5	0	1 43	1 43	65	4.0	764	Off the coast of Kusiro	
VI	2	12	27	3	0 6	—	65	1.3	45	Off the west coast of Kii	
"	10	10	26	45	0 16	—	40	0.9	119	—	
"	11	6	23	15	—	—	465	12.1	—	—	
"	13	0	25	40	1 55	1 54	35	3.3	853	Off the south coast of Kusiro	

時刻 本表ノ時刻ハ録成時ヲ用ヒタルヲ以テ之ヲ本邦中央標準時トナスニハ九時ヲ加フベシ例ヘハ二日ノ二十三時ハ三日ノ八時トナルガ如シ

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VI 20	8 50 15	0 51	—	35	1.3	378	The town of Tatebayasi, Kozuke province
" 22	22 43 10	0 23	0 23	135	1.9	341	Near Yokohama, Kanagawa prefecture
" 30	18 1 0	0 31	—	—	—	230	—
VII 1	8 18 0	1 06	1 04	75	5.0	965	Off the coast of Rikutyu
" 6	13 14 0	—	—	25	3.7	—	—
" 8	9 16 15	1 29	1 33	—	—	660	—
" 8	14 8 0	0 53	0 55	35	1.8	801	Off the coast of Mutu
" 10	10 57 20	2 18	—	25	2.4	1023	ditto
" 25	22 51 44	0 59	—	25	2.7	438	Off the coast of Awa
" 26	9 23 40	—	—	—	—	—	—
VIII 2	14 29 44	2 54	2 29	25	7.4	1680	—
" 2	22 48 9	1 46	1 43	115	6.4	787	—
" 3	1 43 40	1 46	1 43	115	6.4	787	—
" 3	16 52 50	1 25	1 36	165	4.6	631	—
" 4	9 52 15	0 50	0 44	665	2.7	698	—
" 7	3 36 46	1 0	—	—	—	445	Bay of Tokyo
" 7	9 21 50	0 59	0 50	35	2.0	809	—
" 7	23 38 10	1 00	—	15	1.8	445	The town of Sahara, Simoosa province
" 16	8 11 30	5 57	5 45	25	6.2	4175	A distant earthquake
" 21	11 21 40	—	—	15	4.7	—	—
" 22	3 9 4	7 12	9 13	4665	10.5	5540	Turkestan, Russia
" 30	7 41 30	—	—	—	—	—	—
" 30	21 56 20	9 31	10 05	100	9.5	8220	Near the Mindanao Islands
IX 5	1 40 58	—	—	—	—	—	—
" 9	8 25 15	—	—	—	—	—	—
" 11	19 5 48	0 33	0 34	100	3.6	497	—
" 13	21 18 30	0 38	—	15	2.4	282	—
" 16	10 59 15	0 40	—	—	—	297	—
" 21	20 46 30	1 11	—	35	1.9	527	Off the Kinkwazan Island Miyagi prefecture
" 22	1 51 22	4 18	—	2250	6.3	2665	The Mariana Islands
" 23	20 37 40	9 36	6 07	15	8.0	8320	A distant earthquake
" 30	8 34 59	0 50	—	15	1.7	371	—
X 6	9 23 32	0 26	0 23	60	2.6	364	—
" 13	4 19 24	1 18	—	65	2.9	579	—
" 15	16 58 31	—	—	—	—	—	—
XI 4	10 51 0	4 21	4 23	25	5.6	2705	A distant earthquake
" 7	6 59 0	1 32	—	—	—	683	Southern part of Hidati
" 9	23 13 0	—	—	—	—	—	—
" 17	0 42 50	2 00	1 34	50	4.8	890	—
" 19	23 42 4	0 45	—	10	1.4	668	Iwaki-nada
" 20	20 37 45	4 10	4 15	35	2.8	2560	A distant earthquake
" 21	7 5 30	1 46	1 51	210	4.9	787	—
XII 6	3 48 0	1 0	—	10	3.6	445	Iwaki-nada
" 8	16 53 30	—	—	—	—	—	Northern part of Simoosa province
" 10	20 8 35	0 55	—	25	3.2	408	Near Yaku Island

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	h.	m.	s.	m.	s.	m.	s.					
Ⅱ 13	17	26	30	3	40	—	—	40	6.1	2200	A distant earthquake	
" 14	4	57	43	0	29	0	28	75	2.4	423	Northern part of Simoosa province	
" 16	5	15	18	23	15	—	—	35	9.4	—	—	
" 22	19	46	50	0	43	0	35	2500	2.1	579	—	
" 23	21	33	25	1	15	0	55	50	2.7	557	—	
" 28	1	57	45	7	0	—	—	—	—	5320	A distant earthquake	
" 31	5	41	10	0	21	0	26	140	3.1	349	The town of Mizukaido, Simoosa province	
明治三十六年 (1903)												
Ⅰ 2	8	28	11	0	25	—	—	50	1.0	186	Iyo-nada	
" 4	5	30	00	4	15	—	—	150	—	2625	A distant earthquake	
" 4	11	5	38	—	—	—	—	—	—	—	Western part of Sikoku	
" 5	22	5	00	0	46	—	—	200	—	341	Western part of Kyusyu	
" 15	7	6	54	—	—	—	—	—	—	—	Kasima-nada	
" 22	12	42	50	1	20	—	—	50	1.3	594	Near Tyosi	
" 30	16	49	50	0	5	—	—	700	1.2	37	SE off the coast of Awa	
Ⅱ 1	9	42	00	4	30	3	10	460	6.7	2825	A distant earthquake	
" 3	12	16	00	0	35	—	—	1615	6.1	260	Far off the coast of Iwaki	
" 5	18	51	41	4	30	3	54	50	4.3	2825	A distant earthquake	
" 6	7	33	35	3	54	3	14	210	7.0	2360	ditto	
" 10	2	57	45	2	33	2	09	335	6.4	1460	ditto	
" 11	16	16	25	2	55	3	10	40	4.7	1690	ditto	
" 11	20	13	20	1	10	—	—	15	6.3	519	—	
" 13	3	46	55	0	55	—	—	—	—	408	Off the coast of Hidati	
" 17	0	38	00	1	45	—	—	—	—	779	—	
" 25	15	26	40	0	45	—	—	15	2.8	334	Iwaki-nada	
" 27	0	52	00	6	59	4	02	100	18.3	5310	A distant earthquake	
" 28	1	55	20	0	45	—	—	15	2.8	334	Off the Kinkwazan Island	
" 28	10	10	55	0	40	—	—	15	2.8	297	Bay of Higo	
Ⅲ 1	0	49	20	0	3	—	—	—	—	22	Near Osaka	
" 12	12	13	50	0	40	—	—	35	2.5	297	In Bungo channel	
" 15	6	00	50	1	10	—	—	140	2.9	519	—	
" 21	10	37	17	0	18	—	—	960	3.8	134	Suō-nada	
" 21	21	13	30	0	25	—	—	10	2.4	186	ditto	
" 25	15	59	20	0	45	—	—	85	3.0	334	Off the coast of Awa	
" 25	23	20	30	0	55	—	—	300	5.0	408	Off the coast of Rikuzen	
" 30	3	29	30	3	48	3	26	15	1.9	2290	A distant earthquake	
" 30	4	54	15	—	—	—	—	—	—	—	ditto	
" 31	1	2	16	0	45	—	—	15	1.4	334	Off the coast of Rikuzen	
Ⅳ 1	14	10	43	1	20	—	—	90	3.3	594	ditto	
" 16	2	50	00	0	49	—	—	40	1.8	364	Frontier of Ibaraki and Tiba prefecture	
" 19	10	49	20	1	5	—	—	25	2.3	482	Off the coast of Kazusa	
" 23	2	23	40	0	34	—	—	15	1.0	252	Miyazaki	
Ⅴ 9	18	14	30	0	50	—	—	35	1.5	371	Iwaki-nada	
" 13	6	43	10	3	20	3	50	165	5.6	1970	A distant earthquake	

時刻 本表ノ時刻ハ観測時ヲ用ヒタルヲ以テ之ヲ本邦中央標準時トナスニハ九時ヲ加フベシ例ヘハ二日ノ二十三時ハ三日ノ八時トナルガ如シ



## 大阪地震累年報

Results of the Seismological Observation in Osaka,  
for the several years in succession.

月 日 Date	發 震 時 h. m. s.	第一初期 P-S or P-L m. s.	第二初期 S-L m. s.	振 幅 Ampli- tude $\mu$	振動期 Period s.	距 離 K.M.	震 央 地 Epicenter
V 15	11 52 50	1 29	1 50	40	4.7	1955	A distant earthquake
" 29	4 39 30	4 00	—	—	—	2440	Formosa
VI 2	13 26 00	—	—	50	2.9	—	Near Hatijo IIs.
" 3	3 28 20	1 03	—	15	1.0	468	Yokohama
" 7	9 07 46	2 20	—	15	4.7	1320	Giran, Formosa
" 25	22 19 00	3 25	—	—	—	2020	A distant earthquake
VII 1	0 10 56	1 00	—	150	2.4	445	Hidati-nada
" 2	21 25 00	—	—	50	2.4	—	A distant earthquake
" 6	4 55 33	0 10	—	1050	0.9	74	Komono, Ise province
" 11	11 33 40	1 45	—	—	—	779	Osima
" 15	2 30 20	1 45	—	25	5.9	779	—
" 16	12 13 20	0 50	—	110	1.8	371	Hyuga-nada
" 17	1 51 50	0 25	—	15	0.9	186	Central part of Kii
" 23	22 36 00	2 14	2 6	50	4.3	994	A distant earthquake
VIII 10	4 40 17	0 30	—	150	4.3	223	Hida province
" 10	4 46 32	0 30	—	65	3.5	223	ditto
" 13	15 59 30	1 30	1 35	40	20.0	668	Off the coast of Nemuro
" 13	16 06 50	—	—	—	—	—	ditto
" 16	3 9 10	3 30	—	50	5.2	2080	A distant earthquake
IX 7	7 21 00	—	—	—	—	—	Near Taito, Formosa
" 18	10 48 30	1 05	—	15	5.2	482	Northern part of Honsyu
" 20	12 13 40	0 57	—	15	0.9	423	Iwaki-nada
" 25	2 9 24	0 50	—	25	1.7	371	Near Tokyo
X 10	16 42 31	1 30	—	360	4.6	668	Near Kyushu
" 22	3 57 52	0 45	—	40	0.9	—	Near Yagi, Nara prefecture
" 27	12 57 23	0 33	—	15	1.9	245	Near Maebasi
IX 10	9 51 59	0 55	—	15	1.9	408	Near Tokyo
" 20	7 19 7	0 44	—	25	1.0	327	Off the Kinkwazan Island
" 24	13 44 20	—	—	25	2.9	—	—
" 26	11 58 45	3 30	—	90	3.5	2080	A distant earthquake
XI 3	8 53 23	1 00	—	125	5.6	445	Near Kyushu
" 5	21 8 33	1 55	—	25	2.8	853	A distant earthquake
" 13	2 21 30	0 56	—	50	2.7	416	Eastern part of Hidati
" 23	1 14 36	9 0	—	40	10.7	7600	A distant earthquake
" 28	3 2 37	0 40	—	50	3.0	297	Owari
明 治 三 十 七 年 (1904)							
I 9	22 53 30	0 10	—	40	—	74	Near Osaka
" 11	1 30 20	0 05	—	—	—	37	ditto
II 24	11 31 29	1 40	—	25	—	742	Off the Kinkwazan Island
" 26	8 50 00	0 45	—	15	—	334	Bay of Tokyo
" 28	1 14 19	—	—	25	—	—	Near Osima
III 1	16 32 00	—	—	25	—	—	A distant earthquake
" 7	18 43 10	1 06	—	125	4.0	490	Hidati-nada
" 14	1 30 43	0 42	—	40	—	312	Near Tokyo

時刻 本表ノ時刻ハ緯度時ヲ用ヒタルヲ以テ之ヲ本邦中央標準時トスニハ九時ヲ加フベシ例ヘバ二日ノ二十三時ハ三日ノ八時トナルガ如シ

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Results of the Seismological Observation in Osaka,  
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月日 Date	發震時 P. h. m. s.	第一初期 P-S or P-L m. s.	第二初期 S-L m. s.	振幅 Ampli- tude $\mu$	振動期 Period s.	距離 距離 K.M.	震央 Epicenter	地
III 16	7 47 50	--	--	--	--	--	Northern part of Honsyn	
" 17	20 32 42	0 16	--	165	1.0	119	Western sea off Kii	
" 18	13 45 21	2 20	--	90	--	1320	South off the coast of Nemuro	
" 27	13 23 00	0 30	--	--	--	--	Near Osaka	
" 28	19 48 25	--	--	--	--	--	Off the Boso peninsula	
" 31	2 24 00	7 27	7 43	35	--	5830	Turkestan	
" 31	6 23 25	--	--	--	--	--	A distant earthquake	
IV 4	10 36 50	9 10	11 15	125	--	7800	Balkan peninsula	
" 5	10 29 35	3 25	2 10	75	--	2020	A distant earthquake	
" 13	5 39 35	1 30	--	25	--	668	Off the coast of Rikuzen	
" 14	1 10 55	0 42	--	35	--	312	Near Tokyo	
" 18	11 4 30	0 45	--	15	--	334	Off the Uraga channel	
" 22	19 53 6	1 35	--	125	2.3	705	Off the south coast of Rikuzen	
" 23	23 10 30	1 15	--	40	--	557	Off the Bay of Rikuzen	
" 24	6 42 50	3 25	--	40	--	2020	Kagi, Formosa	
" 26	0 45 45	1 10	--	135	3.1	519	Near Tokyo	
" 27	18 45 15	2 55	--	40	--	1650	Formosa	
V 1	15 33 10	3 35	3 45	40	--	2135	A distant earthquake	
" 6	20 36 40	1 00	--	60	--	445	Near Tokyo	
" 7	19 25 40	0 58	--	310	4.6	430	Muika-mati, Etigo province	
" 20	8 35 50	0 34	--	85	1.5	252	In the sea of Aki	
" 22	18 30 35	0 06	--	100	0.7	45	Harima-nada	
" 26	20 40 50	1 00	--	--	--	445	Off the Uraga channel	
" 26	22 47 35	--	--	--	--	--	Bay of Tokyo	
VI 5	18 39 28	0 25	--	115	1.5	186	Neighbourhood of the lake Sinjiko, Izumo province	
" 6	2 51 38	0 25	--	300	2.3	186		ditto
" 7	8 19 31	0 59	--	1235	5.2	438	Far off the coast of Iwaki	
" 14	1 39 36	1 20	--	100	--	594	Off the coast of Rikuzen	
" 14	6 45 45	1 00	--	25	--	445	Near Miyazaki, Hyuga province	
" 24	2 9 49	3 51	4 35	25	--	2330	Kamtchatka	
" 25	14 51 4	4 21	3 37	335	15.4	2705	ditto	
" 25	21 6 00	4 19	3 33	835	16.8	2680	ditto	
" 26	10 46 46	4 07	3 4	25	--	3095	ditto	
" 26	19 48 40	4 15	2 58	25	--	2625	ditto	
" 27	0 15 4	4 16	3 19	235	13.7	2640	ditto	
" 30	1 1 35	--	--	--	--	--	ditto	
VII 1	13 33 25	2 30	--	35	--	1430	E off the coast of Nemuro	
" 1	3 19 35	--	--	--	--	--	A distant earthquake	
" 12	10 40 30	0 40	0 38	85	3.1	297	Off the coast of Kazusa	
" 16	1 9 56	0 50	--	85	3.2	371	ditto	
" 16	19 28 46	0 50	--	--	--	371	ditto	
" 19	9 19 35	--	--	25	--	--	ditto	
" 19	14 2 44	1 00	--	35	--	445	ditto	
" 20	3 31 46	0 55	--	35	--	408	ditto	
" 23	0 41 20	--	--	35	--	--	A distant earthquake	

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Results of the Seismological Observation in Osaka,  
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VII	24	10	50	11	—	—	60	—	—	In the sea of Kasima
"	25	1	37	8	0	50	—	—	371	Near Tokyo
VIII	4	6	26	6	1	00	40	—	445	ditto
"	4	12	49	59	1	07	60	1.9	497	Northern part of Simoosa
"	6	20	26	48	1	00	25	—	445	Off the Bay of Rikuzen
"	11	4	6	39	0	50	25	—	371	Near Tokyo
"	15	13	32	18	0	55	—	—	408	Off the Bay of Rikuzen
"	22	13	3	15	2	50	35	—	1640	SE off the coast of Nemuro
"	22	19	48	25	1	00	35	—	445	Near Tokyo
"	24	21	1	32	0	56	3250	12.0	416	S off the Yaku Island
"	27	22	5	18	6	58	140	—	5295	A distant earthquake
"	29	5	39	25	—	—	40	—	—	Kameoka-eyo, Tanba province
"	30	8	6	58	—	—	—	—	—	Near Osaka
"	30	11	59	17	—	—	165	—	—	A distant earthquake
IX	7	4	54	23	3	10	15	—	1850	Taiyu, Formosa
"	8	2	39	45	2	39	60	—	1520	A distant earthquake
"	11	5	52	2	1	55	125	—	853	ditto
"	15	6	40	18	0	44	25	—	327	Near Tokyo
"	21	5	52	1	0	35	85	2.3	260	Iyo-nada
"	26	13	5	57	0	55	25	—	408	Near Kagosima
"	30	16	16	50	0	40	15	—	297	Near Tokyo
X	1	10	20	10	4	10	25	—	2560	A distant earthquake
"	2	21	47	7	1	30	415	—	668	Iwaki-nada
"	3	3	15	27	4	5	35	—	2500	A distant earthquake
"	7	2	11	39	—	—	25	—	—	Kumano-nada
"	8	18	44	15	1	25	40	—	631	Iwaki-nada
"	16	7	36	46	0	50	15	—	371	Off the cape of Kinkwazan
"	21	3	30	34	1	10	—	—	519	Northern part of Honsyu
"	24	15	29	21	0	45	25	—	334	Iwaki-nada
"	26	21	25	45	0	40	—	—	297	Off the coast of Simoosa
"	27	22	9	54	0	40	135	—	297	Far off the coast of Hidati
"	28	15	59	19	0	26	25	—	193	Near Osaka
XI	6	4	20	5	0	30	200	9.6	223	In the strait of Formosa
"	13	0	47	29	—	—	65	—	—	Off Boso peninsula
XII	11	8	52	29	3	50	15	—	2320	A distant earthquake
"	17	0	41	26	1	00	25	—	445	Off the coast of Simoosa
"	17	7	4	46	0	50	50	—	371	Off the coast of Mutu
"	27	22	48	36	1	30	210	—	668	Northern part of Honsyu
明治三十八年 (1905)										
I	2	13	58	57	4	07	10	6.5	2525	Formosa
"	13	13	27	49	0	40	45	5.1	297	—
"	22	2	50	53	0	40	375	19.2	297	—
"	27	12	58	31	1	00	60	5.5	445	—
II	4	18	41	31	0	10	440	1.5	74	Neighbourhood of the lake Biwako

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