

OSAKA JAPAN

January 1933

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

$\phi = 34^{\circ} 39' N.$ $\lambda = 135^{\circ} 32' E.$ Gr. $h = 3.4m$ Sub-Soil: Sandy Loam (Oldquaternary)

Instrument: Omori's Seismograph
(Horizontal & Vertical)

Wiechert Seismograph
(Horizontal & Vertical)

	T_0	ϵ	$\frac{r}{T_0^2}$	V		T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	30	-	0.003	20	A_E :	4	3.2	0.003	80
A_N :	30	-	0.003	20	A_N :	4	3.2	0.003	80
A_Z :	15	-	0.004	"20	A_Z :	6	2.0	0.005	80

No.	Date	Phase	G.M.T.			Period s	Amplitude			Δ k.m.	Remarks
			h.	m.	s.		A_E μ	A_N μ	A_Z μ		
1	Jan. 1	P	8	58	21.6	5.3	-20	+26	+3	3155	
		i		58	55.1						
		S	9	03	15.6						
		L		06	12.5						
		ME		07	08.7						
		MN		08	15.0						
		MZ		08	18.4						
F		16	0.0								
2	" 3	P	15	29	23.7	3.8	-63	+75	+17	888	
		i		29	47.8						
		L		31	23.3						
		ME		32	44.3						
		MN		32	34.0						
		MZ		31	50.5						
		F		48	20.0						
3	" 3	P	22	42	36.5	3.8	-9	-12	-4	539	
		L		43	49.1						
		ME		45	16.7						
		MN		45	44.6						
		MZ		45	20.8						
		F		52	40.0						
		4	" 4	P	1						
i				28	13.7						
L				29	40.3						
ME				30	12.2						
MN				29	35.8						
MZ				29	54.2						
F				2	04 30.0						
5	" 4	P	4	08	56.6	3.9	+8	+6	+2	5672	
		i		13	13.6						
		S		16	15.4						
		ME		17	20.8						
		MN		17	04.4						
		MZ		17	20.2						
		F		27	10.0						
6	" 6	P	10	40	23.6	0.3	-18	-6	-4	66	
		L		40	32.5						
		ME		40	34.0						
		MN		40	34.0						
		MZ		40	32.5						
		F		43	30.0						
		7	" 7	P	4						
i				09	15.1						
i				09	35.9						
L				11	07.0						
ME				12	10.5						
MN				12	33.4						
MZ				13	05.0						
F		51	40.0								

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From _____ to _____ 19

OSAKA JAPAN

January 1933

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			△ k.m.	Remarks
			h.	m.	s.		A _E μ	A _N μ	A _Z μ		
8	Jan. 7	P	4	55	31.5	3.3	-11	-14	-4	1593	
		L		58	17.0						
		ME		59	03.2						
		MN		58	56.0						
		MZ		58	50.7						
		F	5	11	40.0						
9	" 7	P	10	42	00.8	0.9	+9	+25	-2	214	
		L		42	29.6						
		ME		42	32.3						
		MN		42	32.5						
		MZ		42	44.6						
		F	46	40.0	0.6						
10	" 8	P	6	31	18.1	4.6	-75	-88	+20	752	
		i		31	57.3						
		L		32	59.5						
		ME		34	23.2						
		MN		33	50.8						
		MZ		34	43.5						
F	41	40.0	3.4								
11	" 9	P	2	10	37.4	3.7	-8	-9	±5	7300	
		L		19	21.9						
		ME		21	23.8						
		MN		20	42.0						
		MZ		20	18.4						
		F	31	50.0	2.8						
12	" 9	P	12	05	34.3	0.2	+6	+6	±1	67	
		L		05	43.3						
		ME		05	44.2						
		MN		05	47.4						
		MZ		05	43.3						
		F	10	20.0	0.2						
13	" 9	P	16	57	44.9	3.4	+6	+5	±2	429	
		L		58	42.7						
		ME		59	06.9						
		MN		59	06.9						
		MZ		59	21.5						
		F	17	02 20.0	1.9						
14	" 10	P	3	10	15.7	4.1	+5	+5		984	
		L		12	28.3						
		ME		14	04.9						
		MN		13	42.9						
		MZ		22	40.0						
		F									
15	" 15	P	16	09	42.5	4.2	-14	-19		4392	
		L		15	52.1						
		ME		16	15.1						
		MN		16	39.3						
		MZ		24	20.0						
		F									
16	" 15	P	23	46	28.7	1.1	-17	-26	+6	164	
		L		46	50.7						
		ME		46	59.8						
		MN		47	24.5						
		MZ		46	50.8						
		F	53	20.0	0.6						
17	" 20	P	17	44	13.5	1.4	-5	-6		68	
		L		44	22.6						
		ME		44	24.5						
		MN		44	28.4						
		MZ		47	50.0						
		F									

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

$\varphi=34^{\circ} 39' N.$ $\lambda=135^{\circ} 32' E.$ Gr. $h=3.4m$ Sub-Soil : Sandy Loam (Oldquaternary)

Instrument : Omori's Seismograph
(Horizontal & Vertical)

Wiechert Seismograph
(Horizontal & Vertical)

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	30	-	0.005	30
A_N :	30	-	0.003	20
A_Z :	15	-	0.004	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	4	3.2	0.003	80
A_N :	4	3.2	0.003	80
A_Z :	6	2.0	0.005	80

No.	Date	Phase	G.M.T.			Period s	Amplitude			Δ k.m.	Remarks
			h.	m.	s.		A_E μ	A_N μ	A_Z μ		
18	Jan. 21	P	19	35	0.3				9934		
		i		40	11.6						
		S		45	55.5						
		L	20	02	13.2						
		F		40	0.0						
19	Feb. 3	P	22	15	43.5				2146		
		i		16	1.8						
		L		19	18.8						
		ME		19	30.2	4.4	-30				
		MN		19	50.5	4.3		-38			
		MM		19	46.6	4.1		-6			
		F		32	0.0						
20	" 6	P	7	18	37.4				507		
		L		19	45.6						
		ME		20	29.3	4.5	+6				
		MN		20	45.5	3.1		-5			
		MZ		20	16.7	2.4		+2			
		F		29	0.0						
21	" 7	P	0	14	14.3				254		
		L		14	48.6						
		ME		15	16.0	1.9	+5				
		MN		15	9.3	2.5		+6			
		MZ		15	17.7	1.7		+1			
		F		19	20.0						
22	" 7	P	1	28	45.7				2421		
		i		29	50.1						
		L		32	44.4						
		F		39	20.0						
23	" 7	P	7	20	40.8				36		
		L		20	45.6						
		ME		20	46.8	0.4	+1				
		MN		20	47.7	0.4		+1			
		F		21	50.0						
24	" 9	P	3	58	1.3				362		
		L		58	50.1						
		ME		58	20.1	4.6	-93				
		MN		59	18.1	4.0		+119			
		MZ		59	28.4			-19			
		F		4 20	40.0						
25	" 9	P	15	41	56.1				812		
		L		43	45.5						
		MN		44	22.0	4.6		+6			
		F		54	30.0						

26	Feb. 13	P	3 04 39.2						1847
		L	07 48.9						
		F	34 0.0						
27	" 13	P	6 52 7.6						689
		L	53 13.5						
		ME	53 46.8	2.8	-98				
		MN	53 35.2	3.0		-103			
		MZ	54 1.2	2.4				-49	
		F	7 03 50.2						
28	" 18	P	8 17 58.6						98
		L	17 59.3						
		L	18 11.8						
		ME	19 1.2	2.0	+125				
		MN	18 13.4	1.0		+300			
		MN	19 0.8	2.2		+163			
		MZ	18 41.0	1.9				-54	
		F	28 0.0						
29	" 20	P	9 52 45.2						613
		L	54 7.9						
		ME	55 10.5	4.0	+38				
		MN	54 57.9	4.5		+31			
		MZ	54 43.6	1.9				-12	
		F	10 04 50.0						
30	" 20	P	11 07 23.8						536
		L	08 36.1						
		ME	08 35.9	2.3	-5				
		MN	08 45.4	2.5		+3			
		F	13 50.0						
31	" 20	P	11 59 47.8						289
		L	12 00 28.8						
		ME	00 41.8	2.1	-3				
		MN	00 54.8	1.7		+2			
		F	03 10.0						
	" 20	P	14 19 11.9						635
		L	20 37.4						
		ME	21 21.6	2.3	+8				
		MN	21 21.6	2.3		+6			
		MZ	21 12.9	2.0				-3	
		F	27 30.0						
	" 21	P	2 54 32.1						495
		L	55 38.7						
		ME	56 15.7	2.4	-8				
		MN	56 11.7	2.6		-9			
		MZ	56 20.7	2.2				-5	
		F	3 04 0.0						
	" 23	P	8 29 9.7						
		S	43 19.7						
		L	9 20 13.4						
		ME	29 15.3	21.4	-95				
		MN	42 5.3	22.1		+25			
		F	10 36 50.0						
	" 27	P	16 15 12.5						173
		L	15 35.8						
		ME	15 36.7	0.6	-25				
		MN	15 37.5	0.6		+13			
		MZ	15 36.4	0.6				+11	
		F	22 20.0						

Felt Slightly at Osaka.

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From 28. Feb. to 2. March, 1933

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T. h. m. s.	Period s	Amplitude			△ k.m.	Remarks
					A _E μ	A _N μ	A _Z μ		
36	Feb. 28	P	8 46 50.8					1621	
		L	49 38.9						
		ME	52 0.1	6.0	-5				
		MN	51 54.0	4.1		+3			
		F	9 00 40.0						
37	Mar. 2	P	8 14 57.7					2394	
		i	16 3.6						
		S	18 54.1						
		ME	20 23.7	5.1	±9				
		MN	20 52.0	4.5		±9			
		F	30 10.0						
38	" 2	P	17 33 2.6					898	Felt slightly at Osaka. N53E
		i	33 8.0						
		i	33 15.5						
		i	33 20.5						
		i	33 36.4						
		L	35 3.6						
		ME	36 19.1	5.4	-16600				
		MN	36 38.6	5.4		-15800			
		MZ	36 29.2	3.0			-1125		
39	" 2	P	18 28 3.1					1020	
		L	30 20.5						
		ME	31 50.5	4.1	-94				
		MN	31 18.4	4.0		±119			
		MZ	31 5.0				-53		
40	" 2	P	18 50 43.7					942	
		L	52 50.6						
		ME	53 28.4	3.7	±31				
		MN	53 10.2	4.1		-38			
41	" 2	P	19 43 42.6					1004	
		L	45 57.2						
		ME	46 18.0	5.0	±69				
		MN	46 34.2	5.6		+119			
		MZ	46 58.8	3.4			-25		
		F	20 10 30.0						
42	" 2	P	20 17 13.3					919	
		L	19 17.1						
		ME	20 51.6	3.9	-6				
		MN	21 1.6	3.6		±4			
		MZ	19 49.0	2.3			±3		
		F	23 0.0						
43	" 2	P	20 44 21.2					941	
		L	46 28.0						
		ME	48 20.4	4.0	+144				
		MN	48 27.6	3.8		-243			
		MZ	48 29.6	3.5			+70		
		F	21 14 0.0						
44	" 2	P	21 50 15.5					898	
		L	52 16.5						
		ME	53 38.3	3.1	±8				
		MN	53 40.2	4.1		±8			
		MZ	52 47.9	2.1			-3		
		F	22 02 10.0						

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From 2. March, to 3. March 19 33

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			Δ k.m.	Remarks
			h.	m.	s.		A_E μ	A_N μ	A_Z μ		
45	Mar. 2	P	22	03	45.5				881		
		L		05	45.9						
		ME		06	35.6	3.6	± 6				
		MN		06	27.0	3.6		± 4			
		MZ		06	5.4	2.2		$+2$			
F		13	10.0								
46	" 2	P	22	36	48.7				972		
		L		38	59.6						
		ME		40	24.9	3.0	-19				
		MN		40	29.3	3.1		-19			
		MZ		39	26.7	2.5		± 3			
F		48	10.0								
47	" 3	P	0	20	21.7				977		
		L		22	33.4						
		ME		24	10.4	4.0	± 8				
		MN		24	13.1	4.2		$+8$			
MZ		22	52.6	2.3		± 4					
48	" 3	P	0	28	20.6				910		
		L		30	24.4						
		ME		32	46.2	3.0	-8				
		MN		32	37.9	2.7		± 8			
		MZ		30	51.0	2.0		± 1			
F		38	10.0								
49	" 3	P	2	14	41.4				37		
		L		14	46.4						
		ME		14	46.6	0.2	-31				
		MZ		14	46.6	0.2		$+56$			
F		15	40.0								
50	" 3	P	2	24	32.0				3414		
		L		29	43.6						
		F		42	10.0						
51	" 3	P	2	28	36.1				42		
		L		28	41.8						
		ME		28	30.9	0.2	-33				
		MN		28	30.9	0.2		$+37$			
		F		30	10.0						
52	" 3	P	2	43	2.9				56		
		L		43	10.4						
		ME		43	10.6	0.2	-31				
		MN		43	10.6	0.2		$+69$			
		F		45	10.0						
53	" 3	P	2	57	25.2				44		
		L		57	31.1						
		ME		57	31.5	0.2	-27				
		MN		57	31.5	0.2		$+71$			
		F		59	10.0						
54	" 3	P	4	39	44.3				821		
		L		41	35.0						
		ME		43	35.5	4.2	± 25				
		MN		42	58.3	4.5		$+30$			
		MZ		42	49.7	3.1		-6			
F		55	50.0								

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From 3. March, to 3. March, 1933

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			△ k.m.	Remarks
			h.	m.	s.		A _E μ	A _N μ	A _Z μ		
55	Mar. 3	P	9	14	40.0				722		
		L		16	17.2						
		ME		17	55.8	3.8	-138				
		MN		17	15.0	3.8		±231			
		MZ		18	26.1	2.8					+45
		F		34	20.0						
56	" 3	P	9	40	39.7				930		
		L		42	45.0						
		ME		43	33.1	3.7	+64				
		MN		43	45.9	3.6		+56			
		MZ		43	36.3	3.4					-22
		F		10	01	10.0					
57	" 3	P	10	06	4.1				1568		
		L		08	47.9						
		ME		09	53.0	3.6	+28				
		MN		10	6.6	3.4		+36			
		MZ		09	23.1	2.6					±6
		F		22	0.0						
58	" 3	P	10	34	3.5				1411		
		L		36	31.6						
		ME		37	54.3	3.5	±25				
		MN		37	53.1	3.5		+24			
		MZ		36	32.2	2.3					±5
		F		45	0.0						
59	" 3	P	11	47	41.4				491		
		L		48	47.5						
		ME		49	34.4	3.2	+31				
		MN		49	30.1	3.2		+38			
		MZ		49	29.7	2.6					-14
		F									
60	" 3	P	11	58	26.8				967		
		L		12	00	37.0					
		ME		01	26.2	3.4	+20				
		MN		01	25.8	3.8		+20			
		MZ		01	21.2	2.5					±6
		F		11	10.0						
61	" 3	P	12	16	5.4				886		
		L		18	4.8						
		ME		19	8.4	3.8	+13				
		MN		19	29.9	3.8		-14			
		MZ		18	51.0	2.3					±6
		F									
62	" 3	P	12	22	55.8				895		
		L		24	51.5						
		ME		27	6.8	3.2	-8				
		MN		26	49.9	3.2		-8			
		MZ		25	29.0	2.5					±4
		F		33	10.0						
63	" 3	P	14	08	49.1				48		
		L		08	55.6						
		ME		08	55.6	0.2	+1				
		MN		08	55.6	0.2		-1			
		F		10	10.0						
		F									

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From 3. March, to 4. March, 1933

64	Mar. 3	P	15 04 11.8					1324
		L	06 32.2					
		ME	07 44.7	3.8	+176			
		MN	07 38.2	3.2		-188		
		MZ	07 59.5	2.6			±8	
65	" 3	P	15 09 24.5					977
		L	11 36.1					
		ME	12 17.5	3.8	-38			
		MN	12 18.5	3.8		+34		
		MZ	12 40.5	2.3			-8	
		F	19 0.0					
66	" 3	P	15 52 57.7					903
		L	54 59.3					
		ME	55 31.2	3.7	-13			
		MN	56 18.3	3.6		+14		
		MZ	56 2.9	2.5			±6	
		F	16 04 10.0					
67	" 3	P	16 13 29.5					981
		L	15 41.8					
		ME	16 72.6	4.0	-13			
		MN	16 29.4	3.2		-8		
		MZ	16 49.9	2.4			-5	
		F	27 0.0					
68	" 3	P	18 49 18.4					997
		L	51 32.8					
		ME	52 16.4	3.8	-11			
		MN	53 16.5	4.7		+8		
		MZ	52 20.4	2.6			±6	
		F	19 01 10.0					
69	" 3	P	19 09 33.4					829
		L	11 25.1					
		ME	12 56.4	4.6	+23			
		MN	12 29.0	4.2		+28		
		MZ	11 50.4	2.4			±7	
		F	21 0.0					
70	" 3	P	19 52 29.3					948
		L	54 37.9					
		ME	55 32.2	3.2	+9			
		MN	54 44.7	2.6		±8		
		MZ	53 4.0	1.8			±4	
		F	20 02 10.0					
71	" 3	P	20 22 36.3					712
		L	24 12.2					
		ME	25 5.3	2.5	+10			
		MN	25 5.1	2.9		+10		
		MZ	25 25.4	2.2			±4	
		F	31 0.0					
72	" 4	P	6 46 37.4					898
		L	48 38.4					
		ME	49 50.0	4.2	+10			
		MN	49 45.2	4.2		-11		
		F	56 30.0					
73	" 4	P	12 42 12.5					585
		L	43 32.0					
		ME	44 3.0	1.7	-4			
		MN	44 20.4	2.1		-4		
		F	50 20.0					

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From 6. March, to 11. March 1933

74	Mar. 6	P	22 45 6.9						75
		i	45 8.6						
		L	45 17.0						
		ME	45 53.9	3.9	-223				
		MN	45 49.1	3.1		+152			
		MZ	45 45.6	2.3			+35		
		F	55 0.0						
75	" 7	P	22 23 12.4						1619
		L	26 0.3						
		ME	26 50.0	2.8	±5				
		MN	26 42.2	3.0		±8			
		F	32 10.0						
76	" 8	P	1 37 36.4						918
		L	39 40.0						
		ME	40 29.0	3.9	+48				
		MN	40 7.1	3.9		+41			
		MZ	40 26.6	3.0			+15		
		F	53 20.0						
77	" 8	P	10 27 57.9						406
		L	28 52.5						
		ME	29 16.0	1.5	-11				
		MN	29 12.7	1.6		-11			
		MZ	30 21.4	1.0			±5		
		F	34 50.0						
78	" 9	P	4 23 32.8						212
		i	23 36.6						
		L	24 1.3						
		ME	24 7.7	0.6	+38				
		MN	24 21.0	0.9		+45			
		F	31 50.0						
79	" 9	P	19 37 18.4						193
		i	37 22.6						
		L	37 41.4						
		ME	37 44.4	0.9	-21				
		MN	37 47.7	1.1		-10			
		MZ	37 44.4	0.7			+4		
		F	43 40.0						
80	" 10	P	7 37 28.3						852
		L	39 23.1						
		ME	40 0.1	3.0	±5				
		MN	39 45.0	3.8		±9			
		F	50 20.0						
81	" 11	P	14 24 47.3						3339
		L	29 54.2						
		ME	32 35.3	12.5	±8				
		MN	32 11.7	12.0		±8			
		MZ	32 6.2	13.1			±6		
		F	44 50.0						
82	" 11	P	19 34 52.0						706
		L	36 27.1						
		ME	36 47.0	3.4	+401				
		MN	36 48.3	3.3		-448			
		MZ	36 47.6	3.1			-233		
		F	20 01 40.0						

No. 119

From 12. March, to 18. March, 1933

83	Mar. 12	P L ME MN MZ F	5 07 09 11 11 10 21	39.2 31.8 51.4 26.1 49.9 10.0	4.0 3.8 2.7	-17	+20	+8	856
84	" 12	P L ME MN MZ F	7 39 40 40 40 44	50.5 27.0 13.1 13.7 13.0 20.0	3.3 1.9 2.0	-11	-9	+6	271
85	" 12	P L L ME MN MZ F	22 25 25 26 26 26 29	13.3 13.7 50.5 20.0 13.3 21.2 30.0	1.9 2.0 1.7	27	+11	+5	329
86	" 13	P L es F	7 16 17 24 33	39.2 37.0 6.7 10.0					
87	" 14	P L F	8 47 47 50	8.5 20.0 40.0					85
88	" 14	P L ME MN MZ F	13 01 03 04 04 03 11	2.0 1.1 20.0 1.7 38.0 30.0	2.9 3.0 1.8	+8	+9	+4	884
89	" 14	P L F	16 09 09 11	40.7 50.5 30.0					73
90	" 15	P L F	5 09 11 16	46.8 1.6 40.0					555
91	" 17	P S L F	16 01 03 10 23	7.5 2.9 1.8 40.0					3176
92	" 17	P S L MN F	19 38 43 47 51 20	30.8 9.9 43.1 15.4 20.0	13.4	+11			2947
93	" 18	P L F	3 25 25 30	22.7 59.4 50.0					272

No. 121

From 1. April, to 6. April, 1933

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

$\varphi = 34^{\circ} 39' N.$ $\lambda = 135^{\circ} 32' E.$ Gr. h = 3.4m Sub-Soil: Sandy Loam (Oldquaternary)

Instrument: Omori's Seismograph
(Horizontal & Vertical)

Wiechert Seismograph
(Horizontal & Vertical)

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	30	-	0.003	20
A_N :	30	-	0.003	20
A_Z :	15	-	0.004	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	4	3.2	0.003	80
A_N :	4	3.2	0.003	80
A_Z :	6	2.0	0.005	80

No.	Date	Phase	G.M.T. h. m. s.	Period s	Amplitude			Δ k.m.	Remarks
					A_E μ	A_N μ	A_Z μ		
104	Apr. 1	P	16 01 46.9					442	
		L	02 46.4						
		ME	04 6.4	4.6	-44				
		MN	04 41.4	5.0		-46			
		MZ	04 9.7	2.6			+12		
		F	18 50.0						
105	" 1	P	22 42 54.9					885	
		L	44 54.1						
		ME	46 18.6	2.4	-19				
		MN	46 30.7	2.6		-21			
		MZ	45 42.2	2.3			+8		
		F	23 02 0.0						
106	" 2	P	9 53 8.0					548	
		i	54 6.0						
		L	54 21.8						
		ME	55 19.0	2.2	-32				
		MN	55 27.7	2.9		+71			
		MZ	55 26.6	2.6			+18		
		F	10 00 40.0						
107	" 2	P	10 12 50.4					725	
		L	14 28.0						
		ME	15 6.8	2.7	-11				
		MN	15 4.5	2.7		+12			
		MZ	15 13.2	2.1			+5		
		F	25 30.0						
108	" 2	P	16 54 28.6					735	
		L	56 7.6						
		ME	57 11.7	2.3	+3				
		MN	57 22.4	3.1		+6			
		F	17 00 40.0						
109	" 3	P	1 55 53.9					213	
		L	56 22.6						
		ME	57 3.8	2.1	+4				
		MN	56 31.2	2.7		-4			
		F	2 01 10.0						
110	" 3	P	8 11 37.6					598	
		L	12 58.1						
		ME	14 26.1	2.7	+6				
		MN	14 14.4	2.5		+6			
		F	20 20.0						
111	" 6	P	15 13 46.5					1014	
		L	16 3.1						
		ME	16 48.6	2.5	+8				
		MN	16 55.3	2.0		-8			
		MZ	16 7.4	2.3			+5		
		F	26 10.0						

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			△ k.m.	Remarks
			h.	m.	s.		A _E μ	A _N μ	A _Z μ		
112	Apr. 7	P	0	56	0.7				228		
		L		56	31.3						
		ME		56	53.9	1.2	±4				
		MN		57	5.1	1.3		±4			
		F		58	50.0						
113	" 9	P	2	48	32.0				764		
		L		50	15.0						
		ME		51	32.1	2.9	-133				
		MN		51	29.9	3.0		+154			
		MZ		51	41.1	2.4		±59			
114	" 9	P	2	59	23.2				982		
		L		3	01	35.3					
		ME		02	18.3	4.5	+21				
		MN		02	20.7	4.3		-25			
		MZ		02	59.7	2.2		-9			
115	" 9	P	10	32	16.7				899		
		L		34	17.8						
		ME		35	27.3	2.9	-36				
		MN		35	28.4	2.9		+46			
		MZ		34	55.3	2.5		-11			
116	" 13	P	3	54	44.1				1987		
		L			58	5.8					
		F		4	08	0.0					
117	" 16	P	19	23	49.2				4040		
		L		29	38.5						
		ME		30	35.1	4.2	±6				
		MN		30	55.1	6.2		±6			
		F		40	0.0						
118	" 19	P	2	57	41.8				521		
		L		58	52.0						
		ME		3	00	47.7	2.4	-19			
		MN		01	15.9	2.4		±8			
		MZ		00	31.8	3.0		±8			
119	" 19	P	6	48	31.8				2269		
		S		52	17.7						
		L		54	18.4						
		ME		56	3.6	4.3	±25				
		MN		55	27.4	4.4		±31			
120	" 21	MZ		55	15.2	4.0		+9	185		
		F		7	21	10.0					
		P		2	36	46.1					
		L			37	11.0					
		ME			37	22.7	1.7	-3			
121	" 21	MN			37	27.4	1.7		-2	419	
		F			40	20.0					
		P		20	41	5.2					
		i			41	15.1					
		L			42	1.6					
121	" 21	ME			42	47.6	2.4	-31	419		
		MN			42	48.3	2.8				+25
		MZ			42	27.0	1.8				-11
		F			51	10.0					

No. 123

From 23. April, to 27. April, 1933

122	"	23	P	6 09 50.4					9430
			L	20 22.4					
			F	32 50.0					
123	"	23	P	7 15 32.8					10723
			L	17 50.8					
			ME	19 7.7	4.7	-95			
			MN	18 44.6	4.9		+150		
			MZ	18 30.6	3.0			+41	
			F	47 50.0					
124	"	23	P	8 28 4.9					862
			L	30 1.0					
			ME	31 42.8	3.6	+16			
			MN	31 48.9	3.6		-20		
			MZ	30 46.6	2.6			+8	
			F	46 50.0					
125	"	23	P	12 22 14.6					776
			L	23 59.1					
			ME	25 25.9	3.0	+6			
			MN	25 43.0	3.9		+5		
			F	33 10.0					
126	"	25	P	1 59 24.6					990
			L	2 01 38.0					
			ME	02 40.3	2.0	+5			
			MN	02 49.0	2.2		-6		
			MZ	01 49.8	1.9			+2	
			F	13 20.0					
127	"	27	P	2 45 20.5					5828
			S	52 47.4					
			L	3 02 4.6					
			ME	12 30.3	14.0	+8			
			MN	13 27.6	14.2		+13		
			F	39 40.0					

No. 124

From 1. May, to 16. May 19 33

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

$\varphi = 34^{\circ} 39' N.$ $\lambda = 135^{\circ} 32' E.$ Gr. $h = 3.4m$ Sub-Soil : Sandy Loam (Oldquaternary)

Instrument : Omori's Seismograph
(Horizontal & Vertical)

Wiechert Seismograph
(Horizontal & Vertical)

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	30	-	0.003	20
A_N :	30	-	0.003	20
A_Z :	15	-	0.004	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	4	3.2	0.003	80
A_N :	4	3.2	0.003	80
A_Z :	6	2.0	0.005	80

No.	Date	Phase	G.M.T.			Period s	Amplitude			Δ k.m.	Remarks
			h.	m.	s.		A_E μ	A_N μ	A_Z μ		
128	May 1	P	18	33	28.1			15 50	2338		
		i		34	0.0						
		L		37	19.9						
		F		49	20.0						
129	1	P	18	57	23.4			16 00	4823		
		i		58	0.1						
		L	19	03	55.9						
		F		13	20.0						
130	1	P	19	54	28.5			16 20	2116		
		i		54	53.8						
		i		56	13.5						
		L		58	2.1						
		ME		59	39.1	3.4	+8				
		MN		59	53.1	3.2		+13			
		MZ		58	32.2	2.4				+6	
		F	20	10	50.0						
131	" 5	P	11	40	37.5			3 50	364		
		L		41	26.5						
		ME		41	49.9	4.0	+6				
		MN		41	37.1	4.0		+ 8			
		F		44	30.0						
132	" 11	P	6	49	36.6			5 00	76		
		i		49	45.9						
		L		49	46.9						
		ME		49	47.4	0.3	+69				
		MN		49	47.0	0.3		-31			
		MZ		49	46.9	0.2				+11	
133	" 15	P	23	49	22.8			5 40	417		
		L		50	18.9						
		ME		50	59.3	2.0	-1				
		MN		50	37.9	2.0		- 2			
		F		55	0.0						
134	" 16	P	1	20	46.3				5516		
		i		21	2.5						
		i		23	46.7						
		S		27	56.7						
		L		37	19.1						
		ME		38	26.5	5.5	-5				
		MN		38	40.4	4.9		- 7			
		F		57	10.0						
135	" 16	P	3	42	24.2				275		
		L		43	1.2						
		i		43	36.8						
		F		47	30.0						

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T. h. m. s.	Period s	Amplitude			△ k.m.	Remarks
					A _E μ	A _N μ	A _Z μ		
136	May 16	P	6 34 49.8					256	
		L	35 24.3						
		F	40 0.0						
137	18	P	0 00 43.9					3214	
		L	05 41.8						
		ME	07 30.6	4.0	± 3				
		MN	07 38.7	4.4		± 6			
		F	16 10.0						
138	" 20	P	4 59 11.5					445	
		L	5 00 11.5						
		ME	00 29.0	4.5	- 4				
		MN	00 35.0	3.6		+ 4			
		F	05 50.0						
139	" 20	P	7 49 42.7					104	
		L	49 56.7						
		ME	49 56.7	0.3	+ 8				
		MN	49 57.5	0.3		+10			
		F	51 30.0						
140	" 20	P	13 54 51.0					73	
		L	55 0.8						
		ME	55 1.0	0.3	+ 5				
		MN	55 0.8	0.3		+ 4			
		F	57 10.0						
141	" 20	P	18 30 16.6					136	
		L	30 34.8						
		ME	30 50.0	1.5	+14				
		MN	30 47.7	1.5		+14			
		MZ	30 34.8	0.4			± 2		
		F	33 50.0						
142	" 21	P	11 56 55.9					785	
		L	58 41.7						
		F	12 14 20.0						
143	" 21	P	21 58 22.0					1020	
		L	22 06 39.4						
		ME	02 9.4	4.0	± 6				
		MN	02 11.0	3.4		- 4			
		F	13 0.0						
144	" 22	P	15 31 0.9					690	
		L	32 33.8						
		ME	33 34.7	3.6	+ 6				
		MN	33 39.1	3.6		- 6			
		F	41 20.0						
145	" 22	P	20 45 42.7					353	
		L	46 30.2						
		ME	46 59.6	1.6	+ 5				
		MN	46 47.0	1.6		+ 5			
		MZ	46 57.8	2.2			± 2		
		F	50 50.0						
146	" 23	P	16 37 43.7					514	
		L	38 52.8						
		ME	40 19.8	3.5	-44				
		MN	40 37.1	3.4		-47			
		MZ	39 31.3	2.8			±25		
		F	52 50.0						

No. 126

From 23. May, to 28. May, 1933

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			Δ k.m.	Remarks
			h.	m.	s.		A_E μ	A_N μ	A_Z μ		
147	May 23	P	16	52	58.6				488		
		L		54	4.4						
		ME		54	54.8	3.6	-26				
		MN		55	21.6	3.6		+33			
		MZ		54	51.6	2.5					+18
		F	17	09	40.0						
148	" 23	P	23	36	57.8				524		
		L		38	8.4						
		F		42	50.0						
149	" 24	P	4	39	38.0				890		
		L		41	38.0						
		ME		43	9.0	3.6	+5				
		MN		43	5.0	3.4		-8			
		MZ		42	10.0	2.3					-2
		F	48	20.0							
150	" 24	P	10	40	11.8				675		
		L		41	42.7						
		ME		42	22.9	2.4	+6				
		MN		42	17.0	2.6		-7			
		F	48	50.0							
151	" 25	P	6	53	30.8				447		
		i		54	13.7						
		L		54	31.0						
		ME		55	52.2	2.5	+4				
		MN		55	14.6	2.9		+3			
		MZ		55	21.7	2.3					+2
F	58	50.0									
152	" 25	P	16	41	10.8				548		
		L		42	24.6						
		F		50	10.0						
153	" 28	P	23	41	5.8				352		
		L		41	53.2						
		i		42	4.2						
		ME		42	35.9	2.6	-5				
		MN		42	51.6	2.9		-8			
		MZ		42	19.8	1.8					-5
F	49	50.0									

No. 127

From 2. June, to 6. June, 1933

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

$\phi = 34^{\circ} 39' N.$ $\lambda = 135^{\circ} 32' E.$ Gr. h=3.4m Sub-Soil: Sandy Loam (Oldquaternary)

Instrument: Omori's Seismograph
(Horizontal & Vertical)

Wiechert Seismograph
(Horizontal & Vertical)

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	30	--	0.003	20
A_N :	30	--	0.003	20
A_Z :	15	--	0.004	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	4	3.2	0.003	80
A_N :	4	3.2	0.003	80
A_Z :	6	2.0	0.005	80

No.	Date	Phase	G.M.T.			Period s	Amplitude			Δ k.m.	Remarks
			h.	m.	s.		A_E μ	A_N μ	A_Z μ		
154	June 2	P	4	43	35.1				655		
		L		45	3.4						
		ME		45	30.9	1.7	- 4				
		MN		45	10.9	1.7		+ 5			
		MZ		45	11.2	1.9				± 1	
		F	54	50.0							
155	" 2	P	7	40	0.6				821		
		I		41	25.0						
		L		41	51.2						
		ME		42	26.4	3.9	+154				
		MN		42	21.6	4.0		+188			
		MZ	41	53.0	3.4			-86			
		F	8	11	50.0						
156	" 3	P	13	33	11.1				335		
		L		33	56.2						
		F		38	50.0						
157	" 3	P	16	55	21.6				480		
		L		56	26.3						
		ME		56	48.7	2.0	± 4				
		MN		56	46.1	2.0		± 7			
		F	17	00	10.0						
158	" 3	P	17	11	14.5				959		
		L		13	23.7						
		ME		14	59.8	4.5	+60				
		MN		14	57.1	4.7		+61			
		MZ		14	39.3	3.7				-11	
		F	46	0.0							
159	" 4	P	13	47	55.2				1620		
		S		50	43.2						
		L		54	3.3						
		ME		54	56.9	4.2	± 5				
		MN		55	15.0	4.1		± 5			
		F	14	03	20.0						
160	" 5	P	1	52	39.4				488		
		L		53	45.2						
		ME		54	27.7	3.2	+17				
		MN		54	17.7	2.8		+25			
		MZ		54	44.2	2.2				- 8	
		F	2	02	40.0						

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			△ k.m.	Remarks
			h.	m.	s.		A _E μ	A _N μ	A _Z μ		
161	June 6	P	2	33	45.8				2466		
		S		37	48.4						
		ME		39	30.7	4.3	- 8				
		MN		40	17.4	4.2		- 8			
		F		49	50.0						
162	" 6	P	4	28	22.2				71		
		L		28	31.7						
		ME		28	34.2	0.3	- 2				
		MN		28	31.7	0.3		- 1			
		F		30	0.0						
163	" 6	P	4	46	48.9				586		
		L		48	8.5						
		ME		50	16.4	3.3	- 9				
		MN		50	8.0	3.9		+12			
		F		01	30.0						
164	" 7	P	11	53	48.6				4218		
		S		59	48.1						
		L		02	51.9						
		ME		05	22.7	5.1	± 9				
		MN		05	21.0	5.6		+ 8			
F		22	20.0								
165	" 7	P	13	24	51.4				55		
		L		24	58.3						
		F		26	20.0						
166	" 8	P	18	12	53.3				961		
		L		15	2.8						
		ME		16	9.5	5.3	+25				
		MN		16	16.1	4.7		+28			
		MZ		16	22.3	2.8		- 6			
F		33	20.0								
167	" 12	P	21	10	0.5				717		
		L		11	37.2						
		ME		12	38.0	4.3	±58				
		MN		12	19.8	3.9		-69			
		Mz		12	22.7	3.1		+14			
F		26	40.0								
168	" 13	P	20	35	47.7				816		
		L		37	37.6						
		ME		39	20.3	4.0	-70				
		MN		38	57.6	3.8		±83			
		MZ		38	11.4	2.6		-25			
F		56	30.0								
169	" 15	P	7	00	52.0				620		
		L		02	15.5						
		F		14	20.0						
170	" 18	P	13	13	10.2				1452		
		L		15	42.5						
		ME		17	5.6	3.8	- 6				
		MN		17	7.2	3.5		± 9			
		F		32	20.0						

No. 129

From to 19

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			Δ. k.m.	Remarks
			h.	m.	s.		A _E μ	A _N μ	A _Z μ		
171	June 13	P	21	39	15.8				640		
		L	40	42.1							
		ME	41	12.0	4.0	-1000					
		MN	41	31.4	4.0		+610				
		MZ	41	55.3	2.3			-256			
		F	22	19	20.0						
172	" 24	P	22	03	32.7						
		S	22	12.3							
		L	19	38.1							
		ME	34	19.9	12.4	-19					
		MN	33	46.2	10.6		+19				
		MZ	32	10.3	11.8			-12			
173	" 28	P	6	23	13.5						
		L	24	12.7							
		ME	25	10.5	2.4	+ 6					
		MN	24	40.4	2.4		+ 6				
		F	31	40.0							
174	" 29	P	13	13	7.0						
		L	13	27.0							
		F	23	30.0							
175	" 30	P	17	26	39.1				134		
		L	20	57.1							
		ME	26	58.6	0.4	+ 5					
		MN	26	59.3	0.4		- 5				
		F	29	40.0							

No. 130

From 6. July, to 9. July, 19 33

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

$\varphi = 34^{\circ} 39' N.$ $\lambda = 135^{\circ} 32' E.$ Gr. h=3.4m Sub-Soil: Sandy Loam (Oldquaternary)

Instrument: Omori's Seismograph
(Horizontal & Vertical)

Wiechert Seismograph
(Horizontal & Vertical)

	T_0	ϵ	$\frac{r}{T_0^2}$	V		T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	30	-	0.003	20	A_E :	4	3.2	0.003	80
A_N :	30	-	0.003	20	A_N :	4	3.2	0.003	80
A_Z :	15	-	0.004	20	A_Z :	6	2.0	0.005	80

No.	Date	Phase	G.M.T. h. m. s.	Period s	Amplitude			Δ k.m.	Remarks
					A_E μ	A_N μ	A_Z μ		
176	July 6	P	2 00 35.1						
		L	01 30.4						
		ME	01 53.7	2.3	+37				
		MN	01 55.6	2.9		+45			
		MZ	02 50.1	2.2			- 5		
		F	08 30.0						
177	" 8	P	7 58 11.6						
		L	59 9.0						
		ME	59 43.6	2.0	- 8				
		MN	59 57.8	2.2		+ 8			
		MZ	59 35.8	2.3			± 6		
		F	8 10 0.0						
178	" 9	P	1 33 29.6						
		S	37 15.9						
		L	40 13.5						
		F	2 06 30.0						
179	" 9	P	9 31 40.1						
		i	34 34.4						
		L	37 23.5						
		F	51 10.0						
180	" 9	P	9 51 45.3						
		i	55 17.5						
		L	57 35.2						
		F	10 15 30.0						
181	" 9	P	11 14 2.2						
		i	14 10.3						
		L	14 11.5						
		ME	14 12.1	0.4	+11				
		MN	14 12.1	0.4		- 8			
		MZ	14 13.7	0.3			± 1		
		F	16 20.0						
182	" 9	P	11 25 27.8						
		S	29 12.9						
		L	31 9.8						
		F	36 30.0						
183	" 9	P	12 34 8.7						
		S	37 21.7						
		i	40 5.6						
		ME	40 35.8	18.0	-22				
		MN	41 9.7	17.1		-25			
		MZ	41 59.3	13.0			± 8		
		F	13 49 30.0						

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			Δ k.m.	Remarks
			h.	m.	s.		A_E μ	A_N μ	A_Z μ		
197	July 12	P	18	54	40.5						
		L		55	45.2						
		ME		56	42.5	2.9	- 8				
		MN		56	32.0	2.9		+ 8			
		F	19	07	20.0						
198	" 13	P	7	59	41.4						
		L	8	01	26.5						
		ME		01	53.8	3.9	- 8				
		MN		01	36.4	3.4		+ 8			
		F	09	50.0	2.3				+ 4		
199	" 14	P	16	05	30.8						
		L		07	26.2						
		ME		08	28.0	3.2	-13				
		MZ		08	19.8	2.4				- 8	
		F	18	00.0	4.0			+20			
200	" 15	P	3	56	23.9						
		L		57	32.9						
		ME		57	55.8	2.2	- 8				
		MN		57	52.5	2.4		+13			
		F	4	05 00.0							
201	" 18	P	11	26	48.0						
		L		28	59.6						
		ME		29	32.4	2.0	-11				
		MN		29	21.8	2.0		+ 9			
		F	18	00.0							
202	" 19	P	17	00	5.7						
		L		00	28.8						
		MN		00	29.0	0.3		+ 3			
		F	02	30.0							
203	" 19	P	19	10	33.6						
		L		15	53.4						
		F		23	00.0						
204	" 19	P	2	28	37.5						
		L		28	46.3						
		ME		28	46.5	0.4	+11				
		MN		28	49.5	0.4		- 7			
		F	31	30.0							
205	" 19	P	13	39	31.9						
		i		41	47.3						
		S		43	45.4						
		L		46	00.4						
		F		53	00.0						
206	" 19	P	15	05	35.6						
		L		12	17.0						
		ME		12	44.2	4.4	- 7				
		MN		12	51.5	5.4		- 7			
		F	20	00.0							

No. 133

From _____ to _____ 19__

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T. h. m. s.	Period s	Amplitude			Δ k.m.	Remarks
					A_E μ	A_N μ	A_Z μ		
207	July 20	P	23 16 4.2						
		L	17 54.5						
		ME	18 30.3	3.6	+56				
		MN	18 25.0	4.1		+81			
		F	27 40.0						
208	" 22	P	21 03 16.1						
		i	05 46.2						
		i	06 46.2						
		S	09 13.9						
		L	13 4.1						
		F	40 20.0						
209	" 24	P	8 39 55.2						
		L	41 34.7						
		ME	42 5.1	3.0	-14				
		MN	42 22.4	3.6		-11			
		MZ	42 9.0	2.4					
		F	47 50.0					± 6	
210	" 25	P	16 43 39.2						
		i	43 39.8						
		L	43 50.4						
		ME	44 7.6	1.3	± 600				
		MN	44 7.6	1.3		± 600			
		MZ	44 17.7	1.8					
		F	58 40.0					+313	
								N-4.4 E-3.8 U-37.5 P-L=11.2 ^s	
211	" 31	P	2 58 10.0						
		L	59 42.3						
		ME	3 00 24.1	3.8	- 6				
		MN	2 59 55.8	3.8			+ 6		
		F	3 04 30.0						
212	" 31	P	9 03 56.3						
		L	04 46.6						
		F	11 20.0						

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

$\varphi = 34^{\circ} 39' N.$ $\lambda = 135^{\circ} 32' E.$ Gr. $h = 3.4m$ Sub-Soil : Sandy Loam (Oldquaternary)

Instrument : Omori's Seismograph
(Horizontal & Vertical)

Wiechert Seismograph
(Horizontal & Vertical)

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	30	-	0.003	20
A_N :	30	-	0.003	20
A_Z :	15	-	0.004	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	4	3.2	0.003	80
A_N :	4	3.2	0.003	80
A_Z :	6	2.0	0.005	80

No.	Date	Phase	G.M.T. h. m. s.	Period s	Amplitude			Δ k.m.	Remarks
					A_E μ	A_N μ	A_Z μ		
213	Aug 7	P	0 44 2.1	2.8	- 6				
		L	46 7.6						
		ME	48 17.0						
		F	53 30.0						
214	" 7	P	4 46 11.1	0.6	- 3				
		L	46 24.0						
		ME	46 43.3						
		MN	46 35.1						
		F	48 0.0						
215	" 11	P	9 01 3.0	5.8	- 8				
		S	07 59.8						
		L	11 42.1						
		ME	12 54.2						
		MN	12 35.5						
		F	27 20.0						
216	" 15	P	3 00 5.0	3.6	-14				W-E 2.5 N-S 2.5 U-D 5.0
		i	00 21.2						
		L	01 55.5						
		ME	02 18.2						
		MN	02 14.0						
		MZ	02 15.3						
		F	19 0.0						
217	" 18	P	8 21 26.4	3.6	-13				
		L	23 25.4						
		ME	24 24.4						
		MN	24 26.0						
		F	31 0.0						
218	" 20	P	11 48 40.3						
		S	51 15.0						
		L	53 43.2						
219	" 20	P	11 08 44.9						
		S	14 0.0						
		F	26 10.0						
220	" 22	P	13 17 17.0						
		S	21 19.8						
		F	27 50.0						
221	" 24	P	0 30 31.2	1.0	- 4				
		L	30 42.2						
		ME	30 42.4						
		MN	30 42.2						
		F	32 0.0						

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			△ k.m.	Remarks
			h.	m.	s.		A _E μ	A _N μ	A _Z μ		
222	Aug 24	P	0	40	189.9					Felt	
		L		40	28.2						
		ME		40	28.2	0.3	-30				
		ME		40	28.2	0.3		-25			
		MZ		40	29.7	0.3			-4		
		F		43	50.0						
223	" 25	P		56	14.6						
		S		00	56.5						
		L		04	59.7						
		ME		05	17.1	5.6	-197				
		MN		06	8.5	5.4		-139			
		MZ		08	23.4	9.9			-18		
		F		59	0.0						
224	" 26	P		32	24.9						
		L		34	42.0						
		ME		35	50.6	3.6	-2				
		MN		35	11.3	4.4			-9		
		F		43	40.0						
225	" 28	P		22	39 28.4						
		S			51 3.6						
		L		23	21 30.1						
		MN			50 11.2	13.4			-5		
		MZ			45 58.2	24.0					
		F			0 26 0.0				-3		
226	" 29	P		12	32 54.6						
		L			34 14.9						
		ME			35 1.3	3.4	-43				
		MN			34 44.0	3.4			-38		
		MZ			35 13.7	2.4					
		F			47 0.0				-26		
227	" 29	P		15	11 9.3						
		L			13 14.0						
		ME			14 8.6	3.4	-3				
		MN			13 14.0	3.4			-6		
		F			28 50.0						

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			△ k.m.	Remarks
			h.	m.	s.		A _E μ	A _N μ	A _Z μ		
228	Aug 29	P	16	27	38.8					Felt	
		L		27	40.3						
		ME		27	45.9	0.6	-23				
		MN		27	40.3	0.4		-38			
		F		33	50.0						
229	" 30	P	16	40	48.0						
		L		41	25.5						
		ME		41	25.9	3.4	-13				
		MN		41	51.5	3.4		-11			
		F		45	20.0						
.....17.9(The End) 1933.....											

No. 137

From 1. Sept., to 14. Sept., 1935

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

$\varphi = 34^{\circ} 39' N.$ $\lambda = 135^{\circ} 32' E.$ Gr. h = 3.4m Sub-Soil : Sandy Loam (Oldquaternary)

Instrument : Orihori's Seismograph
(Horizontal & Vertical)

Wiechert Seismograph
(Horizontal & Vertical)

	T_0	ϵ	$\frac{r}{T_0^2}$	V		T_0	ϵ	$\frac{r}{T_0^2}$	V
A_E :	30	7	0.003	20	A_E :	4	3.2	0.003	80
A_N :	30	7	0.003	20	A_N :	4	3.2	0.003	80
A_Z :	15	-	0.004	20	A_Z :	6	2.0	0.005	80

No.	Date	Phase	G.M.T.			Period s	Amplitude			Δ k.m.	Remarks
			h.	m.	s.		A_E μ	A_N μ	A_Z μ		
230	Sept. 2	P	16	42	44.8				501	N to S 110 W to e 3 U to D 10.0	
		L	43	52.3							
		ME	44	25.3	3.9	+520					
		MN	44	12.8	4.3		+606				
		MZ	44	40.1	3.4			+406			
		F	17	02	50.0						
231	" 6	P	14	06	3.8				30		
		L	06	39.3							
		ME	06	39.3	2.3	- 8					
		MN	06	39.3	2.3		- 6				
		MZ	07	8.7	2.1			± 3			
		F	09	40.0							
232	" 6	P	22	18	50.0				6670		
		S	27	2.0							
		ME	28	8.2	5.5	± 27					
		MN	29	8.4	5.0		+38				
		MZ	28	21.1	4.2			+13			
		F	41	40.0							
233	" 9	P	5	04	47.2				1195		
		L	06	52.8							
		ME	07	49.3	3.4	+19					
		MN	07	47.1	3.1		+16				
		MZ	07	49.6	2.5			-13			
		F	16	21.7							
234	" 9	P	17	13	41.9				10		
		L	13	43.3							
		ME	13	43.3	0.3	+ 1					
		MN	13	43.3	0.2		+ 1				
		F	14	10.0							
235	" 9	P	20	29	0.0				6086		
		i	31	56.0							
		L	36	38.3							
		F	45	20.0							
236	" 12	P	5	07	14.8				1136		
		L	09	16.4							
		ME	10	15.8	2.2	± 6					
		MN	10	9.2	2.6		- 8				
		MZ	09	46.6	2.0			+ 5			
		F	18	0.0							
237	" 14	P	6	28	0.7				414		
		L	28	56.5							
		ME	29	9.8	2.3	- 6					
		MN	29	25.8	1.9		+ 6				
		F	34	0.0							

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			△ k.m. 455	Remarks
			h.	m.	s.		A _E μ	A _N μ	A _Z μ		
238	Sept. 15	P	13	55	1.5						
		L		56	2.7						
		ME		56	19.7	2.2	- 6	- 6			
		MN		56	29.0	1.9			- 5		
		MZ F		56 59	20.3 40.0	2.3					
239	" 15	P	16	21	30.9					1784	
		S		24	36.3						
		L		26	10.5						
		F		31	20.0						
240	" 17	P	4	01	30.9					1139	
		S		03	32.8						
		L		05	34.4						
		F		12	0.0						
241	" 20	P	3	55	19.1					364	
		L		58	8.1						
		ME		58	28.8	3.0	-31	-28			
		MN		58	59.7	4.0			+14		
		MZ F		58 4	39.6 06 40.0	2.3					
242	" 21	P	3	15	10.5					324	N to S 8.8
		i		15	17.9						E to W 6.3
		i		15	46.7						D to U 4.4
		L		15	54.2						
		ME		16	43.3	2.3	±500				
		MN		16	47.8	2.0		±525			
		MZ		16	0.9	2.0			-225		
		F		31	30.0						
243	" 21	P	9	49	49.5					779	
		L		51	34.4						
		ME		53	6.2	4.9	+63	+75			
		MN		52	34.3	4.2			-20		
		MZ F		53 10	3.1 06 20.0	4.2					
244	" 21	P	13	44	20.4					752	
		L		46	1.8						
		ME		47	11.2	3.8	+29	-26			
		MN		47	20.5	3.8			-11		
		MZ F		46 55	59.7 0.0	2.6					
245	" 21	P	19	45	39.9					713	
		L		47	16.0						
		ME		48	7.8	2.3	-26	-20			
		MN		48	12.6	2.1			-14		
		MZ F		48 54	36.5 40.0	2.5					
246	" 24	P	15	26	58.4					3745	
		S		32	30.7						
		L		36	4.4						
		F		45	40.0						
247	" 24	P	16	09	28.1					460	
		L		10	30.0						
		ME		10	34.3	3.9	- 8	- 6			
		MN		10	43.1	3.2					
		F		11	50.0						

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			△ k.m.	Remarks
			h.	m.	s.		A _E μ	A _N μ	A _Z μ		
248	Sept. 25	P	18	59	5.1	9.0	± 8	± 8	3810		
		S	19	04	41.1						
		L	12	41.1							
		ME	16	46.3							
		MN	16	56.3	7.5						
F	33	10.0									
249	" 30	P	14	28	15.4				3843		
		i	31	52.0							
		S	33	53.6							
		L	37	2.9							
		F	53	0.0							
250	Oct. 1	P	2	21	54.1	2.3	+72	+119	106		
		L	22	8.3							
		ME	22	24.8	3.0						
		MN	22	30.1	1.2						
		MZ	22	19.8							
F	31	0.0									
251	" 1	P	14	36	33.1	4.0	-31	-38	568		
		i	37	20.2							
		L	37	49.6							
		ME	37	56.6	3.8						
		MN	38	34.6							
F	49	0.0									
252	" 1	P	19	25	4.7	1.0	± 8	- 8	335		
		L	25	49.8							
		ME	25	50.1	1.0						
		MN	25	52.1							
		F	30	50.0							
253	" 2	P	3	35	3.9	2.2	± 5	- 8	326		
		L	35	47.8							
		ME	36	9.8	2.0						
		MN	36	6.1							
		F	39	50.0							
254	" 2	P	15	50	40.5	17.1		±75	14570		
		S	16	04	30.5						
		MN	58	1.4							
		F	18	08	0.0						
255	" 3	P	18	39	55.0	4.2	+281	+263	482		
		i	40	9.2							
		L	40	59.9							
		ME	41	57.9	4.2						
		MN	41	54.2	2.9						
		MZ	41	13.2							
		F	19	00	30.0						
256	" 9	P	12	07	20.1	2.5	-81	-88	363		
		i	07	31.3							
		L	08	9.0							
		ME	08	19.0	2.6						
		MN	08	33.9	1.9						
		MZ	08	42.2							
		F	18	20.0							

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

$\varphi = 34^{\circ} 39' N.$ $\lambda = 135^{\circ} 32' E.$ Gr. $h = 3.4m$ Sub-Soil : Sandy Loam (Oldquaternary)

Instrument : Omori's Seismograph
(Horizontal & Vertical)

Wiechert Seismograph
(Horizontal & Vertical)

	T_0	ε	$\frac{r}{T_0^2}$	V		T_0	ε	$\frac{r}{T_0^2}$	V
A_E :	30	-	0.003	20	A_E :	4	3.2	0.003	80
A_N :	30	-	0.003	20	A_N :	4	3.2	0.003	80
A_Z :	15	-	0.004	20	A_Z :	6	2.0	0.005	80

No.	Date	Phase	G.M.T.			Period s	Amplitude			Δ k.m.	Remarks
			h.	m.	s.		A_E μ	A_N μ	A_Z μ		
257	Oct. 11	P	13	59	13.4					638	
		i	14	00	28.6						
		L	00	39.4							
		ME	01	36.7	2.8						
		MN	01	22.0	2.5						
F	09	50.0									
258	" 13	P	17	48	35.1					71	
		L	48	44.6							
		ME	48	44.6	0.3						
		MN	48	44.6	0.3						
		F	51	50.0							
259	" 14	P	22	27	26.0					3725	
		S	32	57.0							
		L	36	4.7							
		F	44	50.0							
260	" 19	P	17	32	8.9					358	
		L	32	57.1							
		ME	33	9.3	1.9						
		MN	33	22.4	2.3						
		F	36	0.0							
261	" 21	P	2	45	44.6					650	
		L	47	12.2							
		ME	49	3.7	4.5						
		MN	49	6.6	5.3						
		MZ	48	28.2	3.8						
		F	59	50.0							
262	" 27	P	15	54	38.8					20	
		i	54	40.3							
		L	54	41.6							
		ME	54	41.6	0.3						
		MN	54	41.6	0.3						
		F	55	40.0							
263	Nov. 1	P	8	23	1.6					498	
		S	24	8.7							
		ME	24	21.8	2.4						
		MN	24	42.9	3.8						
		MZ	25	5.5	1.6						
		F	33	30.0							

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			△ k.m.	Remarks
			h.	m.	s.		A _E μ	A _N μ	A _Z μ		
264	Nov. 5	P	3	06	35.0				297		
		S		07	15.0						
		ME		07	59.0	2.3	± 3				
		MN		08	4.1	2.3		± 3			
		F		15	0.0						
265	" 5	P	17	18	9.9				327		
		S		18	53.9						
		ME		19	4.6	2.3	- 8				
		MN		19	22.6	3.2		-13			
		MZ		19	16.0	1.5					
F		22	50.0				± 3				
266	" 7	P	6	45	31.4				992		
		S		45	45.1						
		i		46	27.8						
		ME		47	5.7	4.3	± 8				
		MN		47	5.3	4.7		±11			
F		52	20.0								
267	" 7	P	17	0	19.4				554		
		S		01	34.0						
		ME		02	4.7	2.4	-14				
		MN		02	15.5	2.5		+15			
		F		07	50.0						
268	" 8	P	17	39	13.8				144		
		S		39	33.2						
		ME		39	33.2	0.3	+ 5				
		MN		39	33.5	0.3		- 5			
		F		41	50.0						
269	" 10	P	5	14	9.7				460		
		S		45	11.6						
		F		50	0.0						
270	" 16	P	13	54	50.4				126		
		S		55	7.3						
		ME		55	14.9	0.9	- 9				
		MN		55	18.6	0.9		- 7			
		MZ		55	8.5	0.4					
F		56	30.0				- 1				
271	" 16	P	13	57	54.1				121		
		S		58	10.3						
		ME		58	20.5	1.5	-50				
		MN		58	19.1	1.5		+44			
		MZ		58	35.1	1.0					
F		14	01	40.0				-26			
272	" 16	P	20	33	16.9				240		
		S		33	49.1						
		ME		34	22.9	2.4	-14				
		MN		34	22.5	2.4		-19			
		MZ		34	25.1	1.8					
F		36	30.0				- 5				
273	" 20	P	23	32	49.0				8014		
		S		42	9.7						
		L		54	37.6						
		ME		00	08	24.9	15.8	- 8			
		MN		07	16.9	15.7		-12			
MZ		07	30.4	16.6			- 6				

OSAKA JAPAN

SEISMOLOGICAL BULLETIN of the Osaka Meteorological Observatory

No.	Date	Phase	G.M.T.			Period s	Amplitude			△ k.m.	Remarks
			h.	m.	s.		A _E μ	A _N μ	A _Z μ		
274	Nov. 22	P	12	50	26.3				4844		
		i		52	46.9						
		S		57	0.2						
		L		59	54.0						
		F	13	00	21.3						
		F		08	20.0						
275	" 22	P	19	01	28.5				1018		
		S		03	45.6						
		ME		05	13.1	4.4	-11				
		MN		04	34.2	4.3		+11			
		F		10	40.0						
276	" 22	P	22	33	48.2				855		
		S		35	43.4						
		ME		37	11.9	4.9	+20				
		MN		37	8.1	4.9		+28			
		F		49	10.0						
277	" 27	P	7	51	47.6				387		
		S		52	39.7						
		ME		53	12.3	2.8	+11				
		MN		53	1.4	2.8		+11			
		F		56	30.0						
278	" 27	P	19	16	25.7				1002		
		S		18	14.6						
		S		18	40.7						
		MN		19	16.2	4.0		+25			
		F		27	50.0						
279	Dëc. 1	P	17	46	7.4				502		
		S		47	15.1						
		i		47	25.9						
		ME		48	23.2	3.2	-13				
		F		54	10.0	3.0		-13			
280	" 2	P	8	47	20.0				2360		
		S		51	14.0						
		ME		51	31.3	5.3	+18				
		MN		51	43.4	5.5		+16			
		F		9	02	50.0					
281	" 3	P	2	08	23.4				69		
		i		08	25.7						
		S		08	32.7						
		ME		08	33.5	0.3	+12				
		MN		08	33.5	0.3		-14			
		MZ		08	32.7	0.3					
		ME		08	56.1	3.4	-34	+ 4			
		MN		08	55.9	3.8		-44			
		F		14	50.0						
282	" 3	P	22	35	12.3				61		
		S		35	20.5						
		MN		35	20.5	0.3		-25			
		MZ		35	20.5	0.3					
		MN		36	12.3	3.6		-81			
		F		43	40.0						