

The Seismological Bulletin

of

The Sectional Meteorological Station.

1948-1952

Matsuyama Japan

From *January 1, 1948.* to *December 31, 1948.*

Notations

1. Nature of the motion : —
 i ; Sudden commencement of a phase.
 e ; Gradual or indistinct commencement.
2. Amplitude;—
 N ; N—S component of amplitude.
 E ; E—W component of amplitude.
 Z ; Vertical component of amplitude.
 Displacements of the north, east and upwards
 are regarded as being positive.
3. Scales of seismic intensity ; —
 The intensity of the shock is estimated according
 to the scales 0—VII.

	No Feeling	Slight	Weak	Rather Strong	Strong	Very Strong	Rather Disastrous	Disastrous
Scale	0	I	II	III	III	V	VI	VII

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No.	Date	Phase	Time(G.C.T)			Amplitude micron			Period s.	Scale	Remarks
			h.	m.	s.	N	E	Z			
1	Jan. 5	ep iPZ iSEN MN ME eF	27	37	029 035 262 273 326 384 40 50.		-9 -15-14 +108 -47 +82	0.5 0.5 0.4 0.9 0.4	0	SE Coast of Kyushu. 132°0'E 32°7'N Focal depth 20km	
2	7	iPE iSE ME eF	02	46	002 124 128 48 230		+7 +13 -29	0.8 0.7 0.7	0	NW Coast of Kyushu. 131°8'E 33°6'N Shallow.	
3	12	ep iSEN MEN eF	09	55	232 332 354 56 38.		+8+6 -10-8	0.9 0.6	0	Near Kochi (Shikoku)	
4	21	ep eF	18	29	341 30 04.				0		
5	21	ep eS MN ME eF	19	23	493 24 272 306 307 25 50.		+2 -2	0.8 0.8	0		
6	Feb. 5	ep eS	?		?				0	P~S; 11.1	
7	15	ep eS eF	00	23	334 24 003 41.				0	Near Kumamoto (Kyushu) 130°8'E 32°7'N Focal depth 10km Maximum intensity; Kumamoto-III Radius of intensity 1; about 180km	
8	21	ep eS eF	18	30	183 337 31 220				0		
9	Mar. 1	ip i iS L eF	01	19	398 21 085 25 228 31 214 58 08.				0	Near Molucca Islands. 130°E 0°N	
10	2	ip i eL eF	21	15	223 19 157 25 053 48 0.		-6-4		0	Near Philippin Islands 118°E 20°N.	
11	15	ip eS eF	02	16	414 19 170 20.20		+8		0	offing SW of Hachijo Island 138°E 32°N Focal depth 300km	



No.	Date	Phase	Time(G.C.T)			Amplitude micron			Period s.	Scale	Remarks
			h.	m.	s.	N	E	Z			
12	Mar 17	ep es eF	23	57	363 58 002 59 0.				0	Near Wakayama (Central Japan) 135.3 E 33.6 N Focal depth 10 km	
13	31	ep es eF	03	29	230 421 40 293				0	Near Matsua (West Japan) 133.7 E 35.3 N Focal depth 30 km	
14	Apr 4	ep eF	21	45	108 450				0	Near Hiroshima (West Japan) 132.6 E 34.6 N very shallow	
15	13	ep es eF	02	56	253 413 57 48				0	Near Hiroshima 132.9 E 35.0 N Focal depth 30 km	
16	13	ep es eF	13	07	248 420 08 427				0	Near Tokushima (Shikoku)	
17	17	ip es MN ME MZ eF	16	12	11.7 490 44 21	+63 -213 +242 +6600 -5200 -1600	0.4 0.5	III		Offing Nankaido (Japan) 135.6 E 33.1 N Focal depth 40 km Maximum intensity; Shionomisaki-TV Slight Tsunami; at east of Wakayama Largest earthquake in after shock of Sec. 21 st 1946 (Nankaido earthquake)	
18	21	ep es eF	01	53	188 384 54 25.9				0	Offing SE of Miyazaki (Kyushu) 132.2 E 32.1 N Focal depth 40 km Felt at Miyazaki, Kumamoto,	
19	21	ep es eF	06	21	482 576 22 350				0		
20	21	ep es eF	10	12	211 538 13 382				0		
21	22	ep es eF	04	22	495 23 15.7 24 28				0	Offing SE of Miyazaki (Kyushu) 132.3 E 32.3 N very shallow	
22	28	ep es eF	13	18	419 19 024 470				0	Near Bungo Channel (between Kyushu and Shikoku)	
23	May 1	ep is MN ME eF	13	16	496 17 091 19 20	-15 +50 -58	0.6 0.6 0.6		0	Offing South Coast of Shikoku 133.0 E 32.3 N Focal depth 20 km Radius of intensity I; about 80 km	
24	2	ip is MN ME MZ eF	15	54	291 421 57 07	+5 -21 -9 -44 -35 ±13	0.4 0.5 0.5 0.4 0.4	0		West part of Tokushima (Shikoku) 133.9 E 34.0 N Focal depth 20 km	
25	9	ip es MN ME MZ eF	02	10	365 11 168 40 0.	+4 +1 +4 +650 I > 650 +59	0.4 0.4 0.4 0.4	III		West Coast of Miyazaki (Kyushu) 131.5 E 32.0 N Shallow Maximum intensity; II Radius of intensity I; about 50 km	
26	9	ep es eF	02	18	002 276				0	After shock of No. 25	

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No.	Date	Phase	Time(G.C.T)			Amplitude micron			Period s.	Scale	Remarks
			h.	m.	s.	N	E	Z			
27	May 9	ep es eF	02	29	560 186 17.				0	After Shock of No. 25	
28	9	ep es eF	02	43	187 392 560				0	After Shock of No. 25	
29	9	ep es eF	06	24	055 38.1 27 06.				0	After Shock of No. 25 132°E 31.1N	
30	9	ep es eF	06	59	420 103 403				0	After Shock of No. 25 132°E 31.8N Shallow Felt at Miyazaki, Kumamoto	
31	9	ep es eF	16	07	093 303 08 29.0				0		
32	11	ep es MN ME MZ eF	12	01	000 205 06 0.	-56 -76 +25		12 06 14	0	After Shock of No. 25 132°E 31.9N. Shallow Radius of intensity I; about 170km	
33	12	ep es MN ME MZ eF	00	58	506 599 in next	-25 +78 +63 +33		30 45 41 47	0	Offing east coast of Japan 142.3 E 37.8 N Focal depth 40km Maximum intensity; Sendai-IV Radius of intensity I; about 700k	
34	12	ep es eF	01	24	499 26 114 02 25 0.				0	After Shock of No. 33 142.6 E 37.8 N Maximum Intensity; Miyagi prefecture -III. Radius of intensity I; about 350k	
35	14	ep es MN eF	13	21	125 326 33 0.	-13 -40		61 46	0	After Shock of No. 33. 142.2 E 37.9 N	
36	14	ep es eF	13	37	333 439 32 35.				0	Near Kochi (Shikoku)	
37	22	ep es eF	15	50	056 203 51 29.0				0	West part of Tokushima prefecture (Shikoku)	
38	22	ep es eF	17	46	118 269 47 14.				0		
39	23	ep es eF	04	22	203 ? 29 20.				0	Near Fiji Islands? Deep?	

No.	Date	Phase	Time(G.C.T)			Amplitude micron			Period s.	Scale	Remarks
			h.	m.	s.	N	E	Z			
40	May 23	ep es MN ME eF	09	17	23.2 36.0	-62 +34		4.1 4.5	0	North Coast of Formosa 122°E 25°N	
41	23	ep es eF	11	00	07.7 35.7 08 0.				0	Offing of Shimonisaki (Central Japan) 135.6°E 32.9°N Very Shallow	
42	24	ip is MN ME MZ eF	20	32	08.6 30.6	+3 +4 -19 -13 -39 +31 +13		0.7 0.9 1.6 1.1 0.7	0	Kii Channel (East Side of Shikoku) 135.0°E 33.9°N. Focal depth 20km Radius of intensity I; about 170km.	
43	25	ep es eL eF	07	17	26.0 22 12.6 24 21.2 08 30 0.				0	SW part of China 99°E 29°N Many Persons were Killed at Lihua	
44	25	ep es eF	14	51	19.0 31.5 52 10.				0	Near Takamatsu (Shikoku) 134.1°E 34.2°N Very Shallow	
45	28	ep es eF	13	29	15.1 30.7 32 29.				0	Near Muroto (Shikoku) 134.0°E 33.5°N	
46	31	ep es eF	20	51	47.8 52 25.9 55 45.				0		
47	31	ep es MN ME eF	22	05	03.8 06 01.5 17 30.	-44 +38		4.0 4.0	0	Offing east of Shimonisaki (Central Japan) 136.3°E 33.4°N Very Shallow Felt at Wakayama Radius of intensity I; about 140km.	
48	June 2	ep is MN eF	09	59	48.6 10 00 03.2 02 20.	+10 +6 +20		1.4 1.6	0	Near Mt. Tsurugi (Shikoku) 134.1°E 33.8°N. Focal depth 10km.	
49	4	ep es eF	08	34	26.6 35 32.6 27.				0		
50	8	ep is MN ME eF	05	26	39.4 42.0 27 24.	+13 -35 +25		0.6 0.6 0.6	0	Near Matsuyama (Shikoku)	

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No.	Date	Phase	Time(G.C.T) h. m. s	Amplitude micron			Period s.	Scale	Remarks
				N	E	Z			
51	June 15	ip is MN ME MZ eF	11 45 090 334 12 03 0.	+1	+5	+Z	1.7 Z1 Z1	3	Near Wakayama (Central Japan) 135°5'E 33°8'N very shallow Maximum intensity; Wakayama - 7 Demolished houses; 57 and partially Demolished houses; 199 in west part Wakayama prefecture. Radius of intensity; I; about 450km
52	18	ep es eF	03 16 162 403 18 45					0	
53	20	ip is MN ME eF	16 29 005 112 30 45	+2	+6		0.4 0.4 0.6 0.6	0	West part of Tokushima (Shikoku) 133.7°E 34°N Focal depth; 20km
54	28	ip is MN ME MZ eF	07 14 276 15 238 39 30.	-6	-8	+Z	5.3 Z4 Z1	3	Near Fukui (Central Japan) 136°2'E 36°1'N. Focal depth; 20km Seismic intensity; -VI; within 40km from the epicenter. Radius of intensity I; about 570km Killed; 5331 persons Demolished; 34238 houses Partially demolished; 7316 houses } in the Fukui prefecture
55	28	ep es eF	08 15 001 464 17 10.					0	After shock of No. 54.
56	28	ep es eF	08 21 065 398 23 10.					0	After shock of No. 54.
57	28	ep es eF	08 26 435 27 315 29 10.					0	After shock of No. 54.
58	28	ep es eF	08 41 496 42 356 44 10.					0	After shock of No. 54.
59	28	ep es eF	10 23 471 24 347 26 20.					0	After shock of No. 54.
60	28	ep es eF	12 47 020 444 48 17.					0	After shock of No. 54 Radius of intensity I; about 190km
61	28	ep es eF	13 40 448 41 308 42 48.					0	After shock of No. 54 Radius of intensity I; about 160km
62	28	ep es eF	13 45 437 46 299 49 38.					0	After shock of No. 54.
63	28	ep es eF	17 13 151 14 024 45.					0	After shock of No. 54.

No.	Date	Phase	Time(G.C.T)			Amplitude micron			Period s.	Scale	Remarks
			h.	m.	s.	N	E	Z			
64	June 29	ep ip MN ME eF	10	14	59.0 15.15.1 16.37.	+Z +1 +ZZ -10 736 733		0.7 1.1 0.9 0.9	0	Near Bungo Channel (between Kyushu and Shikoku) ?	
65	29	ep es eF	12	46	54.3 47.29.4 48.14.				0	After shock of No. 54.	
66	29	ep es eF	12	58	00.8 48.7 59.33.0				0	After shock of No. 54.	
67	29	ep es eF	15	13	12.8 55.6 14.58.				0	After shock of No. 54.	
68	July 5	ep es eF	06	22	34.2 41.8 23.25.				0	Near Kochi (Shikoku) 133.5°E 33.8°N	
69	11	ep es eF	15	26	50.8 57.1 27.33.				0	Eta Is. Hiroshima (West Japan) 132.4°E 34.1°N Shallow.	
70	14	ep es eF	19	32	55.3 33.16.8 34.22.				0	Estuary of Kuzuryu river (Fukui Prefecture) 136.0°E 36.2°N Focal depth: 20 km	
71	14	ep es eF	20	58	47.2 59.07.7 21.00.03.				0		
72	16	ep es eF	07	15	29.2 38.5 16.43.				0		
73	31	ep es eF	12	00	48.1 01.41.0 03.40.						
74	Aug. 7	ep es MN ME eF	14	39	54.7 43.03.6 15.25.25.	-34 +38		130 141	0	Near Ogasawara Is 144.0°E 26.0°N	
75	10	ep es eF	23	21	52.7 22.31.4 24.45.				0		
76	10	ep es eF	23	25	06.2 33.6 26.24.				0		
77	17	ep es eF	07	14	43.8 15.13.9 16.35.0				0	Near Tadatsm (Shikoku) 133.7°E 33.8°N	

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No.	Date	Phase	Time(G.C.T)			Amplitude micron			Period s.	Scale	Remarks
			h.	m.	s.	N	E	Z			
78	Aug. 18	ep is MN ME eF	09	10	18.9 30.0 12 50	+3 +8 -21 +25	+3 +4		1.1 1.5 1.5 1.5	0	Upper Yoshino river (Shikoku). 133°7E. 33°8N.
79	29	ep is MN eF	23	30	43.9 31 30.2 40 40.	-10 +26	+6	0.3 0.4		0	Offing east of Tanegashima (Kyushu). 132°2E. 30°2N. Shallow Felt at Kagoshima.
80	Sept. 2	ep es	23	40	48.0 45 18.0					0	Philippin Islands. 125°E. 10°N.
	3	eF	00	30	0.						
81	5	ep is eF	10	02	01.8 03 22.7 09 10.					0	Offing south of Hachijo Is. 139°8E. 29°6N. Deep Focal depth; 300km.
82	5	ip is MN ME MZ eF	20	08	32.5 49.9 11 16.	-1 -36 -44	+1 +24 +46 +20	-2	0.5 0.6 0.4 0.4 0.3	0	Near Hiwasa (Tokushima prefecture). 134°4E. 33°8N. Focal depth; 30km. Maximum intensity; Tokushima—II.
83	8	ep es eL MN ME eF	15	20	51.2 30 30.0 42 55.4 16 30 52.	+3 -4 -11	-3		4.0 6.5 17.0 18.0	0	Near Samoa Islands. 172°0W. 17°S.
84	9	ip es ME MN MZ eF	15	14	05.3 31.5 17 25.	+1 -18 +74 +62	+24		0.3 0.3 0.4 0.3 0.5	0	Near West part of Hyogo prefecture. 134°5E. 35°1N. Very shallow. Radius of intensity I; about 140km.
85	10	ep is eF	09	16	34.3 57.5 17 55.					0	Near south coast of Walsayama. 135°1E. 33°9N. Focal depth; 20km.
86	10	ep is eL MN ME MZ eF	13	53	29.4 56 20.4 58 07.4 14 32 0.	+37 +28 -36		18.0 19.0 15.5		0	Offing east of Nemuro (Hokkaido). 147°5E. 42°8N. Shallow Radius of intensity I; about 670km.
87	11	ep is MN ME MZ eF	08	33	54.8 34 10.3 35 0.	+1 -4 +10	+4		0.3 0.4 0.4 0.4	0	Near Nobeoka (Kyushu).

No.	Date	Phase	Time(G.C.T)			Amplitude			Period s.	Scale	Remarks
			h.	m.	s	N	E	Z			
88	Sept. 16	ep es ef	08	10	41.3				0	Offing SW of Kyushu, 128°0'E. 30°4'N. Shallow.	
89	26	ep es ef	15	43	11.4				0	East part of Kochi (Shikoku). 134°1'E. 33°6'N. Shallow.	
90	Oct. 5	ep es ef	17	35	44.0				0		
91	5	ep es ef	17	59	18.0				0		
92	5	ep es ef	20	30	24.0				0	Iran region. 62°E. 34°N.	
93	14	ip is MN ME ef	15	59	33.1	-35	-20	-20	0.8 0.8 0.8 0.8	0	East coast of Kyushu. 131°9'E. 33°1'N. Shallow.
94	26	ep i es MN ME ef	19	52	58.0					0	Offing SE of Miyazaki (Kyushu). 131°8'E. 31°6'N. Shallow. Maximum intensity; III. Radius of intensity I; about 290km.
95	28	ep es MN ME ef	20	48	21.7					0	Offing NE of Choshi (East of Japan), 141°3'E. 36°2'N. Shallow. Maximum intensity; Utsunomiya-TV. Radius of intensity I; about 400km.
96	Nov. 1	ep es ef	00	09	09.8				0	Bungo Channel (Between Kyushu and Shikoku). 132°4'E. 32°8'N.	
97	7	ep	16	04	00.0				0	Kii peninsula. 135°5'E. 33°9'N.	
98	16	ep es ef	17	53	29.5				0		
99	18	ep es ef	02	46	46.0				0		

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			h.	m.	s.	N	E	Z			
100	Dec. 4	ip	05	52	38.4	+7	+6		I	Iyo-nada, 132°E. 33°5'N. Focal depth; 40km.	
		is			46.9	+29	-22				
		MN				-50		0.3			
		ME					-5.9	0.3			
		MZ					-1.9	0.2			
		eF			53	48.					
101	15	ep	19	14	52.0				0	Offing SE of Ogasawara Is. 146°E 24°N. Focal depth; 200km.	
		es			17	33.6					
		eF			25	30.					
102	17	ep	14	46	34.5				0		
		es				43.5					
		eF			47	35.					
103	17	ep	20	06	58.0				0	Near Oita (Kyushu).	
		es			07	15.0					
		eF				43.					
104	20	ep	11	05	04.3				0	Near Shimizu (Shizuoka). 133°E 33°N. Very shallow.	
		es				18.8					
		eF				45.					