GIFT
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International Seismological Centre

THE

SEISMOLOGICAL BULLETIN

OF THE

TYOSI METEOROLOGICAL OBSERVATORY

TYOSI, JAPAN

No. 1. 1931.

From Jan. to Apr.

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Aug, 1931.

TYOSI, JAPAN.

SEISMIC BULLETIN

TYOSI METEOROLOGICAL OBSERVATORY

$\varphi = 35°44'$ N $\lambda = 140°52'$ E h = 18.2m Lithologic foundation : Loam (Tertiary)

INSTRUMENTAL CONSTANTS

INSTRUMENT	COMPONENT	MASS kg	DAMMPING	T_0	$\frac{r}{T_0^2}$	ε	V
Wiechert	N—S	200	Air	3.9	0.033	4.1	81
	E—W	200	„	6.7	0.008	4.6	92
Wiechert	U—D	80	Magnetic	3.2	0.019	6.9	82
Omori	N—S	14.5	„	20	0.003	2—4	20
Omori	E—W	15.0		20	0.004	2—4	20
Omori	N—S	46.1		18	——		120
Omori	N—S	20		4	0.065		50
	E—W	20		4	0.065		50
C. M. O.	N—S	2.3	Magnetic	2.5	0.001	2	2
	E—W	2.3	„	2.3	0.005	2	2
	U—D	2.3	„	3.0	0.019	2	3
Omori	U—D	6.1		5	——		20

No. 1

No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude A_E μ	A_N μ	A_Z μ	△ km.	Remarks
1	Jan. 1	ePg	3 32 36.1						
		F	3 33 02						
2	Jan. 1	ePg	11 05 57.3					38	
		S	11 06 02.4						
		F	11 06 39						
3	Jan. 1	ePg	14 17 36.3						
		F	14 18 49						
4	Jan. 1	P	16 08 32.3						
		F	16 09 01						
5	Jan. 2	ePg	4 29 44.5						
		F	4 29 51						
6	Jan. 3	ePg	15 20 40.4						
		F	15 21 27						
7	Jan. 5	ePg	17 15 03.5					129	
		eS	17 15 20.9						
		F	17 16 24						
8	Jan. 6	P	5 36 32.5	0·3	+3	−5	−21	38	Felt slightly. Off the coast of Kujukuri-hama.
		S	5 36 37.6	1.3	+115	−82			
		F	5 38 41						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
9	Jan. 6	ePg	7	15	36.1					48	
		S	7	15	42.5						
		F	7	16	26						
10	Jan. 6	ePg	12	24	24.2					544	
		eS	12	25	37.4						
		F	12	28	53						
11	Jan. 6	ePg	12	52	09.2					109	
		S	12	52	23.8						
		F	12	55	00						
12	Jan. 6	ePg	20	19	31.2						
		F	20	20	23						
13	Jan. 7	ePg	20	50	11.9						
		F	20	51	27						
14	Jan. 9	ePg	1	55	32.8						
		F	1	57	04						
15	Jan. 9	P	10	46	40.4					303	
		SEN	10	47	21.2						
		ME	10	47	23.4	0.7	+34				
		eSz	10	47	24.4						
		MN	10	47	24.9	0.7		+31			
		F	10	51	±						
16	Jan. 10	ePg	3	38	59.3						
		F	3	41	36						
17	Jan. 11	ePg	1	09	08.7					417	
		eS	1	10	04.8						
		F	1	11	47						
18	Jan. 11	e	7	07	56.8						
		F	7	08	29						
19	Jan. 11	ePg	11	50	39.5					54	
		S	11	50	46.7						
		F	11	51	32						
20	Jan. 12	ePg	2	53	46.7					851	
		eS	2	55	41.3						
		F	2	56	37						
21	Jan. 12	ePg	3	03	50.3						
		F	3	05	01						
22	Jan. 12	ePg	3	15	17.8					819	

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No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		eS	3 17 08.2						
		F	3 18 46						
23	Jan. 12	eP	3 24 56.6						
		F	3 26 50						
24	Jan. 13	eP	5 39 37.6						
		F	5 41 28						
25	Jan. 13	eP	16 04 55.6						
		F	16 05 43						
26	Jan. 13	eP	21 41 04.9					250	
		eS	21 41 38.7						
		F	21 42 40						
27	Jan. 14	eP	12 44 15.9					567	
		eS	12 45 32.3						
		F	12 47 42						
28	Jan. 14	eP	13 36 05.4						
		F	13 37 09						
29	Jan. 14	eP	21 22 46.8						
		F	21 23 42						
30	Jan. 15	ePE	11 08 36.5					8635	
		eSE	11 18 28.8						
		FN	12 29 ±						
		FE	12 59 ±						
31	Jan. 16	eP	1 00 29.8						
		F	1 00 54						
32	Jan. 16	PE	6 04 56.8					3035	
		eSN	6 09 42.3					3325	
		eSE	6 10 02.7						
		FE	6 30 ±						
33	Jan. 16	ePE	7 56 29.4						
		FE	8 15 ±						
34	Jan. 16	eP	17 26 11.8						
		F	17 26 34						
35	Jan. 17	eP	9 52 39.0						
		FE	10 01 ±						
36	Jan. 17	eP	22 47 32.5						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		F	22	48	03						
37	Jan. 18	eP	14	14	06.3					463	
		eS	14	15	08.7						
		F	14	18	±						
38	Jan. 18	eP	17	12	20.6					218	
		eS	17	12	50.0						
		F	17	14	22						
39	Jan. 20	eP	18	33	36.0					28	
		eS	18	33	39.8						
		F	18	34	27						
40	Jan. 21	eP	0	20	02.1					65	
		eS	0	20	10.8						
		F	0	22	02						
41	Jan. 21	P	18	00	02.2					660	
		eSEN	18	01	31.1					682	
		eSZ	18	01	34.1						
		MN	18	01	35.1	1.0		±26			
		ME	18	01	36.7	1.0	±30				
		F	18	08	±						
42	Jan. 22	eP	3	34	13.5						
		F	3	35	10						
43	Jan. 22	e	8	29	11.7						
		F	8	31	09						
44	Jan. 22	eP	15	19	07.8						
		F	15	19	51						
45	Jan. 23	P	1	59	26.6					167	
		SEN	1	59	49.1						
		ME	2	00	13.3	0.7	−25				
		F	2	09	±						
46	Jan. 23	eP	13	43	41.6						
		F	13	44	21						
47	Jan. 24	eP	20	45	36.9						
		F	20	46	26						
48	Jan. 24	eE	22	53	22.3						
		F	23	10	±						
49	Jan. 24	eP	23	39	46.4					109	
		eP̄	23	39	51.0					126	

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		eS	23	40	01.1						
		eS̄	23	40	07.9						
		ME	23	40	17.2						
		F	23	43	58						
50	Jan. 25	eP	11	03	04.2						
		F	11	03	51						
51	Jan .25	eP	11	13	24.7						
		F	11	14	29						
52	Jan. 25	eP	22	27	04.4						
		F	22	28	30						
53	Jan. 26	eP	10	03	55.6						
		F	10	05	05						
54	Jan. 28	eP	5	22	43.5					4190	
		S	5	28	41.3						
		MN1	5	28	44.8	4.3		±10			
		ME1	5	28	47.1	4.8	±78				
		MN2	5	38	03.0	13.3		±460			
		ME2	5	38	23.2	13.3	±340				
		F	6	25	±						
55	Jan. 29	eP	6	29	31.5					2745	
		S	6	33	55.5						
		ME1	6	34	12.3	15.1	±590				
		MN1	6	34	18.1	9.0		±240			
		MN2	6	38	08.1	25.0		±1750			
		ME2	6	38	27.9	23.6	±1120				
		F	8	42	±						
56	Jan. 30	eP	1	38	10.4						
		F	1	39	05						
57	Jan. 30	P	10	40	35.3					61	
		S	10	40	43.5						
		F	10	42	21						
58	Jan. 31	eP	19	14	22.0					99	
		eS	19	14	35.3						
		F	19	15	24						
59	Feb. 1	P	5	41	28.8					37	
		iS	5	41	33.8	0.7	+38	+11			
		F	5	42	41						
60	Feb. 1	eP	8	58	43.7						
		F	9	00	02						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
61	Feb. 1	eP	10	22	52.4						
		F	10	23	36						
62	Feb. 2	eP	0	26	43.5						
		F	0	27	51						
63	Feb. 3	P	7	59	11.9					8950	
		eS	8	09	19.9						
		L	8	21	28.3	23.8	−360				
		ME	8	31	04.0	21.8	±860				
		MN	8	32	39.4	21.8		±440			
		F	9	35	±						
64	Feb. 4	eP	8	34	02.0					81	
		S	8	34	12.9						
		F	8	35	10						
65	Feb. 4	eP	13	37	36.0						
		F	13	38	38						
66	Feb. 7	P	12	53	20.1					39	
		S	12	53	25.2	0.5	+11	−15			
		F	12	53	57						
67	Feb. 8	eP	21	15	15.0						
		F	21	16	00						
68	Feb. 9	eP	6	07	16.4						
		F	6	07	24						
69	Feb. 9	ePZ	23	45	21.5					200	
		S	23	45	48.4						
		F	23	47	09						
70	Feb. 10	eP	0	55	41.9						
		F	0	56	28						
71	Feb. 10	eP	12	43	34 2						
		F	12	44	45						
72	Feb. 10	e	15	44	21.7						
		F	16	30	±						
73	Feb. 11	P	3	17	09.1					36	Felt slightly.
		S	3	17	13.9	0.5	+6	+4			Off the cape of Inubō.
		F	3	18	04						
74	Feb. 11	eP	6	02	33.2						
		F	6	03	15						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
75	Feb. 11	eP	17	55	06.1					121	
		eS	17	55	22.3						
		F	17	58	31						
76	Feb. 11	?P	18	17	03.0						
		eP	18	18	03.5						
		S	18	18	08.6						
		F	18	20	04						
77	Feb. 12	eP	9	59	08.0						
		F	9	59	57						
78	Feb. 12	eP	20	32	44.5					189	
		eS	20	33	09.9						
		F	20	34	37						
79	Feb. 13	eP	1	22	55.8						
		F	1	24	39						
80	Feb. 13	eP	9	45	10.2						
		F	9	58	±						
81	Feb. 13	eP	10	49	42.4					10815	
		eS	11	01	16.0						
		eL	11	09	13.6						
		ME	11	11	10.0	25.0	±110				
		FE	12	03	±						
82	Feb. 13	eP	23	25	04.8						
		F	23	26	02						
83	Feb. 16	eP	4	52	27.2					67	
		S	4	52	36.2						
		F	4	52	54						
84	Feb. 16	eP	7	42	47.7						
		F	7	43	53						
85	Feb. 16	eP	21	36	25.6						
		F	21	39	32						
86	Feb. 17	P	3	50	11.4					533	
		S	3	51	23.2						
		MN	3	51	54.1	3.5		+82			
		MZ	3	51	54.8	3.9			±57		
		ME	3	52	19.5	3.5	−219				
		FN	4	13	±						
		FE	4	35	±						
87	Feb. 17	eP	16	05	57.8						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		F	16	06	30						
88	Feb. 19	eP	16	50	43.9						
		F	16	52	05						
89	Feb. 20	eP	1	59	44.2					77	
		S	1	59	54.6						
		F	2	01	02						
90	Feb. 20	PEN	14	35	36.7	5.0	−6	+17		759	Felt slightly. Northern part of Japan sea.
		PZ	14	35	36.7	1.2			−17		
		MZ	14	35	41.8	0.7			±33		
		S	14	37	19.0						
		MEN	14	37	25.9	0.7	±250	−100			
		FE	15	34	±						
91	Feb. 20	eP	18	39	57.7					115	
		eS	18	40	13.2						
		F	18	41	13						
92	Feb. 20	P	23	38	32.6						
		F	23	39	01						
93	Feb. 21	P	8	16	09.3					33	
		S	8	16	13.7						
		F	8	17	46						
94	Feb. 23	eP	19	18	43.6						
		F	19	19	14						
95	Feb. 23	eP	20	08	00.9					86	Felt slightly. Northern part of kasima-nada.
		$e\bar{P}N$	20	08	05.5						
		$e\bar{P}E$	20	08	07.7						
		SEN	20	08	12.5						
		MEN	20	08	23.8	0.9	±30	±33			
		F	20	11	24						
96	Feb. 25	eP	0	51	31.9						
		F	0	52	35						
97	Feb. 25	eP	18	19	10.7						
		F	18	19	29						
98	Feb. 26	eP	23	47	12.9					38	
		S	23	47	18.0						
		F	23	47	47						
99	Feb. 27	eP	1	49	03.4					125	
		S	1	49	20.2						
		F	1	50	28						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
100	Feb. 27	S	4	27	30.1						
		F	4	27	50						
101	Feb. 27	eLE	19	49	48 4						
		F	20	18	±						
102	Feb. 28	eP	1	23	08.6					54	
		S	1	23	15.8						
		F	1	23	43						
103	Mar. 1	eP	22	24	52.4						
		F	22	26	08						
104	Mar. 1	eP	23	25	32.1					838	
		eS	23	27	25.0						
		F	23	29	56						
105	Mar. 2	eP	11	29	03.7					6695	
		eS	11	37	27.0						
		F	11	51	±						
106	Mar. 3	P	1	18	00.8					24	
		S	1	18	03.6						
		F	1	18	27						
107	Mar. 4	eP	5	39	30.2					152	Felt slightly. Lower Valley of River Natui.
		$\overline{P}$	5	39	39.4						
		S	5	39	50.6	1.9	−11	+28			
		ME	5	40	01.7	1.1	±28				
		MN	5	40	08.4	1.7		±41			
		F	5	45	02						
108	Mar. 5	eP	10	48	48.4						
		F	10	51	19						
109	Mar. 6	eP	21	25	15.4					264	
		SEN	21	25	50.9						
		F	21	27	52						
110	Mar. 7	eP	1	13	48.7					188	
		e$\overline{P}$	1	13	57.3					195	
		eSN	1	14	13.9					202	
		eSZ	1	14	15.0						
		eSE	1	14	15.9						
		F	1	22	±						
111	Mar. 7	eP	1	54	01.1	1.2	+ 4	+ 2	+ 6	215	
		$\overline{P}$EZ	1	54	07.7	1.5	+10		+22		
		$\overline{P}$Z	1	54	11.5	1.4		−14			
		SN	1	54	30.0	1.1		+35			
		ME	1	54	31.4	0.8	−27				

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude A_E μ	A_N μ	A_Z μ	△ km.	Remarks
		F	2	01	±						
112	Mar. 7	eP	17	55	30.4						
		F	17	56	22						
113	Mar. 8	eLE	11	37	25.4						
		FE	11	49	±						
114	Mar. 8	eP	20	47	50.8						
		F	20	49	19						
115	Mar. 9	eP	12	50	02.1					548	
		P1	12	50	09.5					559	
		$\overline{P}_Z$	12	50	22.9	0.8			−30	585	
		$\overline{P}_N$	12	50	27.6	5.8		−110			
		$\overline{P}_E$	12	50	30.0	2.8	−29				
		S_N	12	51	15.9	0.9		+225			
		S_E	12	51	17.4	1.8	−375				
		S_N	12	51	21.6	3.1			−140		
		M_N	12	51	36.6	1.9		±825			
		M_E	12	51	58.8	1.9	±875				
		M_Z	12	51	59.1	3.1			+204		
		F	14	35	±						
116	Mar. 9	eP	19	27	43.4						
		F	19	29	12						
117	Mar. 9	eP	21	39	41.3						
		F	21	41	41						
118	Mar.10	eP	2	30	00.0					408	
		eS	2	30	55.0						
		F	2	33	43						
119	Mar.10	eP	2	57	14.9					498	
		$\overline{P}_N$	2	57	27.6					551	
		S_E	2	58	22.0						
		S_N	2	58	29.2						
		F	3	05	±						
120	Mar.10	eP	3	41	11.7					98	
		S	3	41	24.9	1.0	+ 4	+ 7			
		F	3	43	26						
121	Mar.11	eP	14	01	13.8					559	
		eS	14	02	29.0						
		F	14	12	±						
122	Mar.11	eP	21	29	42.0					994	
		P	21	29	50.7						
		eS	21	31	56.0						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		F	22	27	±						
123	Mar.12	ePg	4	21	08.0					278	
		eS	4	21	45.4						
		F	4	23	51						
124	Mar.12	P	10	30	11.7					29	
		S	10	30	15.6						
		F	10	30	46						
125	Mar.12	eP	14	06	19.3					100	
		S	14	06	32.8	1.1	+32	+19			
		F	14	08	11						
126	Mar.12	eP	19	43	45.5					1910	
		eL	19	47	00.5						
		F	20	07	±						
127	Mar.12	eP	1	34	46.6					459	
		$\overline{P}$	1	35	01.6					500	
		S	1	35	48.4	2.0		−11			
		$\overline{S}$	1	36	09.0	3.0	+40	−50			
		F	1	41	±						
128	Mar.16	eP	9	21	31.6						
		F	9	22	24						
129	Mar.19	eP	0	10	01.5					50	
		S	0	10	08.2						
		F	0	11	12						
130	Mar.19	eP	1	29	01.8					67	
		S	1	29	10.8						
		F	1	30	16						
131	Mar.19	eP	2	54	59.1					42	
		S	2	55	04.8						
		F	2	56	09						
132	Mar.19	eP	5	21	02.5					411	
		eL	5	21	57.9						
		F	5	41	±						
133	Mar.19	eP	12	07	14.4					286	
		eS	12	07	52.9						
		F	12	09	26						
134	Mar.19	eP	15	30	31.0					2960	
		PPE	15	31	10.9						
		eSE	15	35	11.0						

No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		F	15	50	±						
135	Mar.21	eP	14	13	38.4						
		F	14	14	50						
136	Mar.22	eP	12	34	13.3					132	
		eS	12	34	31.1						
		F	12	35	33						
137	Mar.23	eP	8	30	02.4						
		F	8	30	18						
138	Mar.23	eP	17	28	46.4					68	
		eS	17	28	55.5						
		F	17	30	14						
139	Mar.23	eP	20	24	51.1						
		F	20	26	09						
140	Mar.25	eP	18	44	19.5						
		F	18	45	17						
141	Mar.26	eP	15	30	45.7					148	
		S	15	31	05.6						
		F	15	32	17						
142	Mar.27	eP	3	45	45.4						
		F	3	46	29						
143	Mar.27	P	5	25	37.5					60	
		S	5	25	45.6	0.5		+28			
		F	5	27	42						
144	Mar.28	PZ	21	46	39.1	5.0			+ 2	4530	
		PEN	21	46	43.3	6.0	± 0	−14			
		SEN	21	52	59.8	6.9	− 3	+32			
		ME	21	53	02.7	5.7	+43				
		F	22	25	±						
145	Mar.29	eP	20	15	09 8						
		F	20	15	32						
146	Mar.30	P	2	53	38.0					581	
		S	2	54	56.2						
		MEN	2	55	01.1	1.4	±40	±41			
		F	3	07	±						
147	Apr. 1	P	17	12	00.5					26	
		S	17	12	04.0	0.9		−27			
		F	17	12	52						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
148	Apr. 1	ePg	17	53	24.3						
		F	17	54	33						
149	Apr. 1	P	18	33	43.9					43	
		S	18	33	49.7						
		F	18	34	58						
150	Apr. 3	ePg	8	53	51.9						
		F	8	54	56						
151	Apr. 4	ePg	8	29	12.7						
		F	8	30	59						
152	Apr. 4	P	9	16	43.1					88	
		S	9	16	54.9						
		F	9	17	49						
153	Apr. 5	ePg	3	29	43.8					39	
		eS	3	29	49.0						
		F	3	20	59						
154	Apr. 5	ePg	13	50	02.3						
		F	13	51	10						
155	Apr. 6	ePg	13	06	39.5						
		F	13	09	14						
156	Apr. 6	P	14	40	06.8					132	
		S	14	40	24.6	0.5	+16	−12			
		F	14	43	06						
157	Apr. 7	P	23	42	31.7					62	
		S	23	42	40.0	0.7	+24	−11			
		F	23	44	05						
158	Apr. 8	P	0	26	01.2					57	
		S	0	26	08.8						
		F	0	26	51						
159	Apr. 8	S	16	09	07.3						
		F	16	09	14						
160	Apr. 9	ePg	6	00	11.4						
		F	6	01	30						
161	Apr. 9	P	6	42	19.5					13	
		S	6	42	21.2						
		F	6	42	37						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
162	Apr. 9	eP	21	59	50.4						
		F	22	00	47						
163	Apr. 9	P	23	02	11.9					400	
		S	23	03	05.8						
		F	23	04	34						
164	Apr.10	P	2	53	00.2					36	
		S	2	53	05.0						
		L	2	53	07.2						
		F	2	54	28						
165	Apr.10	P	8	03	19.6					514	
		S	8	04	28.7						
		L	8	04	51.3						
		MEN	8	06	25.5	1.7	±27	±23			
		F	8	14	±						
166	Apr.15	eP	2	16	16.2					109	
		eS	2	16	30.9						
		F	2	17	06						
167	Apr.15	eP	4	57	05.3					70	
		eS	4	57	14.7						
		F	4	58	17						
168	Apr.15	P	7	24	33.7					62	Felt slightly.
		S	7	24	42.0	1.2	+79				East off Katuura.
		F	7	28	06						
169	Apr.15	eP	13	08	51.2					51	
		eS	13	08	58.1						
		F	13	10	03						
170	Apr.17	eS	1	42	04.2						
		F	1	42	30						
171	Apr.18	eP	10	26	59.1					68	
		S	10	27	08.2						
		F	10	30	00						
172	Apr.18	eP	12	18	56.9					75	
		S	12	19	07.0						
		F	12	20	17						
173	Apr.19	P	18	39	00.7					28	Felt slightly.
		S	18	39	04.4	0 4	−18	−42			Mouth of Tone River.
		F	18	39	54						
174	Apr.20	eP	13	51	10.6						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude A_E μ	A_N μ	A_Z μ	△ km.	Remarks
		F	13	51	44						
175	Apr.20	eP	15	52	19.5						
		F	15	52	50						
176	Apr.20	P	19	02	31.1					318	
		S	19	03	13.9						
		F	19	05	28						
177	Apr.21	P	9	03	31.9	3.6	− 4	+ 4	− 7	495	
		S	9	04	38.6	1.5	+15	+76			
		F	9	08	±						
178	Apr.21	e	13	10	41.0					346	
		S	13	11	27.6						
		F	13	13	20						
179	Apr.22	P	12	35	52.5					32	
		S	12	35	56.8	0.4	+22	−35			
		F	12	36	45						
180	Apr.23	eP	14	12	30.6					131	
		eS	14	12	48.2						
		F	14	15	37						
181	Apr.24	P	12	33	56.6					137	
		$\overline{P}$	12	34	04.2						
		S	12	34	15·0						
		M_N	12	34	16.3	0.9		±41			
		M_E	12	34	25.3	0.9	±41				
		F	12	38	±						
182	Apr.25	eP	2	30	23.2					8630	
		eS	2	40	15.2						
		F	3	03	±						
183	Apr.27	eP	15	45	19.3					76	
		S	15	45	29.6						
		F	15	46	28						
184	Apr.28	eP	21	20	46.9					43	
		S	21	20	52.7						
		F	21	21	05						
185	Apr.28	eP	22	49	05.7					96	
		S	22	49	18.6						
		F	22	50	16						
186	Apr.29	eP	3	57	16.6						
		F	3	57	51						

International Seismological Centre

THE

SEISMOLOGICAL BULLETIN

OF THE

TYOSI METEOROLOGICAL OBSERVATORY

TYOSI, JAPAN

No. 2. 1931.

From May to Aug.

TYOSI

Jan. 1932.

TYOSI, JAPAN.

SEISMIC BULLETIN

TYOSI METEOROLOGICAL OBSERVATORY

$\varphi = 35°44'$ N $\lambda = 140°52'$ E h = 18.2m Lithologic foundation : Loam (Tertiary)

INSTRUMENTAL CONSTANTS

INSTRUMENT	COMPONENT	MASS kg	DAMMPING	T_0	$\frac{r}{T_0^2}$	ε	V
Wiechert	N—S	200	Air	4.0	0.010	6.4	74
	E—W	200	„	7.3	0.002	7.8	61
Wiechert	U—D	80	Magnetic	3.2	0.019	6.9	82
Omori	N—S	14.5	„	20	0.003	2—4	20
Omori	E—W	15.0		20	0.004	2—4	20
Omori	N—S	46.1		18	——		120
Omori	N—S	20		4	0.065		50
	E—W	20		4	0.065		50
C. M. O.	N—S	2.3	Magnetic	2.5	0.001	2	2
	E—W	2.3	„	2.3	0.005	2	2
	U—D	2.3	„	3.0	0.019	2	3
Omori	U—D	6.1		5	——		20

No. **16**

No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
187	May 3	eP	17 06 51.6						
		F	17 09 14						
188	May 4	P	23 48 31.5					88	
		S	23 48 43.3						
		F	23 50 26						
189	May 5	eP	22 05 01.7					475	
		eS	22 06 05.6						
		F	22 09 14						
190	May 7	eP	14 00 23.5						
		F	14 02 08						
191	May 8	eP	2 24 24.4					50	
		S	2 24 31.1						
		F	2 25 09						
192	May 8	S	2 25 50.4						
		F	2 26 14						
193	May 8	eP	22 54 38.7						
		F	22 55 11						
194	May 10	eP	16 51 07.0						
		F	16 51 57						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
195	May 12	P	3	27	03.1					160	
		$\overline{P}$	3	27	09.8						
		S	3	27	24.6						
		M_N	3	27	35.7	1.1		+65			
		M_E	3	27	37.7	1.1	+58				
		F	3	35	±						
196	May 12	P	10	41	39.5					2245	
		S	10	45	23.4						
		F	10	49	±						
197	May 15	$_eP$	8	24	10.8					588	
		$_eL$	8	25	30.7						
		F	8	32	±						
198	May 16	$_eP$	3	56	06.0						
		F	3	57	30						
199	May 17	$_eP$	6	48	49.6					385	
		$_eS$	6	49	41.5						
		F	6	51	48						
200	May 17	$_eP$	18	10	43.5						
		F	18	12	26						
201	May 18	P	16	07	20.0					229	
		S	16	07	50.8						
		F	16	08	30						
202	May 18	P	17	32	50.0					37	
		S	17	32	55.0						
		F	17	33	43						
203	May 18	$_eP$	22	00	54.9					31	
		S	22	00	59.1						
		F	22	01	22						
204	May 19	P	12	58	06.5					121	
		S	12	58	22.8						
		F	12	59	29						
205	May 20	P	9	54	31.1					23	
		S	9	54	34.2	0.5	−49	−24			
		M_N	9	54	34.5	0.5		+44			
		F	9	55	48						
206	May 20	$_eL$	12	12	±						
		F	12	45	±						
207	May 20	P	15	13	27.6					16	

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		S	15	13	29.7						
		F	15	13	47						
208	May 21	eP	16	10	43.1						
		F	16	11	09						
209	May 21	eP	18	29	58.9						
		F	18	31	47						
210	May 24	eP	12	21	37.1					111	
		eS	12	21	52.0						
		F	12	22	33						
211	May 24	eP	15	22	11.1					45	
		iS	15	22	17.1						
		F	15	22	41						
212	May 24	P	15	23	40.1					42	
		iS	15	23	45.8	0.3	−33	−30			
		F	15	25	10						
213	May 24	eP	15	26	24.8					41	
		iS	15	26	29.8						
		F	15	26	54						
214	May 24	S	15	31	50.2						
		F	15	32	01						
215	May 24	eP	15	48	59.6					38	
		iS	15	49	04.7						
		F	15	49	58						
216	May 25	P	15	49	34.0					226	
		$\overline{P}$	15	49	42.5						
		eS	15	50	04.4						
		MN	15	50	10.9	1.0	±42				
		ME	15	50	19.1	1.0		±82			
		F	15	55	±						
217	May 25	eP	19	28	07.1					102	
		eS	19	28	20.9						
		F	19	29	33						
218	May 25	eP	21	00	37.3					26	
		S	21	00	42.2						
		F	21	01	10						
219	May 26	eP	18	12	18.4					141	
		eS	18	12	37.4						
		F	18	21	±						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
220	May 27	eP	20	16	44.7						
		F	20	18	12						
221	May 28	P	6	27	30.8					33	
		iS	6	27	35.2	0.4	+72	+11			
		F	6	28	34						
222	May 28	P	12	29	11.3					23	
		iS	12	29	14.4						
		F	12	30	03						
223	May 30	eP	23	28	43.5						
		F	23	29	09						
224	June 1	eP	0	48	41.5						
		F	0	49	38						
225	June 1	eP	21	37	43.4						
		F	21	37	53						
226	June 2	eP	4	18	05.0					430	
		eS	4	19	03.0						
		F	4	20	02						
227	June 2	PE	11	38	44.2	3.1	−31			288	
		PN	11	38	44.2	1.6		− 3			
		PZ	11	38	44·2	2.1			−21		
		S	11	39	23.0	1.2		+145			
		MN	11	39	26.1	1.6		±268			
		ME	11	39	27.6	1.9	±477				
		F	11	57	±						
228	June 6	S	15	07	21.6						
		F	15	07	33						
229	June 6	P	17	32	59.4					56	
		S	17	33	06.9						
		F	17	34	07						
230	June 7	P	1	44	35.6					65	
		S	1	44	44.3						
		F	1	45	50						
231	June 9	eP	7	26	47.6						
		F	7	28	07						
232	June 9	PZ	14	07	56.5	0.6			+ 2	105	Felt rather strongly. Eastern off the mouth of Kuji River.
		P1E	14	08	00.0	4.3	−15				
		P1N	14	08	00.0	0.6		+ 3			
		P2	14	08	01.9	0.6	+ 5	−12			

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		P3	14	08	09.4	0.6	+560	+590			
		MEZ	14	08	11.1	1.2	±1530		±110		
		SN	14	08	14.1	1.2		−840			
		F	14	19	±						
233	June 11	P	15	16	33.3					172	
		S	15	16	56.4	2.5	+121	+89			
		ME	15	17	03.2	2.5	±177				
		MN	15	17	13.3	2.5		±143			
		F	15	29	±						
234	June 11	S	18	40	08.1						
		F	18	40	19						
235	June 11	eP	20	29	54.1					22	
		S	20	29	57.0						
		F	20	30	06						
236	June 12	P	4	41	01.2					56	
		S	4	41	08.7						
		F	4	42	49						
237	June 12	eP	8	37	22.1						
		F	8	37	38						
238	June 12	eP	10	46	45.3					578	
		eS	10	48	03.2						
		F	10	50	38						
239	June 13	eP	17	19	30.7						
		F	17	20	24						
240	June 14	eP	5	18	54.8					58	
		eS	5	19	02.5						
		F	5	19	31						
241	June 14	P	5	57	52.0					46	
		S	5	57	58.2						
		F	5	59	28						
242	June 14	P	7	43	35.5					25	
		iS	7	43	38.9	0.7	−15	−34			
		F	7	44	24						
243	June 14	iP	7	45	30.1	1.4	−118	−114	+266	24	Felt moderately.
		iS	7	45	33.3	1.0	+1080	−1870			NE off the cape Inubo.
		F	7	50	±						
244	June 14	P	11	50	32.2					25	
		iS	11	50	35.6	0.6	+23	+24			

International Seismological Centre

No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		F	11	51	10						
245	June 16	eP	7	48	09.5						
		F	7	49	35						
246	June 17	P	0	33	07.3					154	
		S	0	33	28.1						
		F	0	35	38						
247	June 17	eP	13	11	46.9					150	
		eS	13	12	07.3						
		F	13	13	03						
248	June 17	iPE	21	10	01.1	5.1	−100			141	Felt slighty. Middle Valley of River Sagami.
		iPZ	21	10	02.0	3.3			−30		
		iPN	21	10	02.5	5.1		−39			
		SN	21	10	18.2						
		SE	21	10	20.0						
		MEN	21	10	33.0	2.4	±610	±740			
		MZ	21	10	54.2	3.5			±290		
		CEN	21	12	38.9	3.7	±470	±230			
		F	21	30	±						
249	June 17	eS	21	27	01.8						
		F	21	27	58						
250	June 17	P	22	45	46.8					27	
		S	22	45	50.4						
		F	22	46	00						
251	June 17	eP	22	53	31.0					76	
		eS	22	53	41.2						
		F	22	54	46						
252	June 17	eP	23	59	46.8					78	
		eS	23	59	57.3						
		F	0	01	12						
253	June 18	eP	12	54	11.1						
		F	12	54	48						
254	June 18	eP	17	27	14.6					136	
		S	17	27	32.9						
		F	17	29	10						
255	June 20	eP	15	33	06.0					51	
		S	15	33	12.9						
		F	15	33	55						
256	June 21	eP	5	06	05.4						

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No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude A_E μ	A_N μ	A_Z μ	△ km.	Remarks
		F	5 07 05						
257	June 22	P	3 24 19.7					71	
		S	3 24 29.2						
		F	3 25 26						
258	June 23	eP	13 04 27.8					55	
		S	13 04 35.1						
		F	13 04 55						
259	Juue 23	eP	15 14 40.4					63	
		S	15 14 48.9						
		F	15 15 40						
260	June 23	P	15 15 14.7	3.2	+42	+85	−58	78	Felt rather strongly.
		S_E	15 15 25.2	1.6	+1000			104	E off the coast of Kasi
		S_N	15 15 28.7	1.6		−1900			manada.
		M_{EZ}	15 15 36.5	1.6	±2600		±340		
		F	15 40 ±						
261	June 23	eP	15 28 03.7						
		F	15 28 34						
262	June 23	eP	15 46 02.7						
		F	15 46 27						
263	June 23	eP	16 06 04.7						
		F	16 06 24						
264	June 23	eP	16 20 27.6						
		F	16 21 01						
265	June 23	eP	16 32 55.3						
		F	16 33 09						
266	June 23	eP	19 15 53.1						
		F	19 16 26						
267	Jnne 23	eP	22 41 59.2						
		F	22 42 30						
268	June 24	eP	5 50 30.5						
		F	5 51 02						
269	June 24	eP	6 03 32.3						
		F	6 04 08						
270	June 25	eP	4 14 09.4						
		F	4 15 04						

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No.	Date	Phase	Time 135° E h m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
271	June 25	S	8 28 53.8						
		F	8 29 03						
272	June 25	ePg	9 08 12.7						
		F	9 08 49						
273	June 26	ePg	11 23 34.3						
		F	11 26 12						
274	June 26	ePg	18 31 11.4						
		F	18 31 55						
275	June 27	ePg	3 26 29.7						
		F	3 27 14						
276	June 28	ePg	20 01 43.2						
		F	20 02 15						
277	June 29	ePg	15 19 54.7					130	
		eSg	15 20 12.2						
		F	15 23 10						
278	June 29	ePg	17 24 22.6					430	
		eSg	17 25 20.5						
		F	17 26 17						
279	June 29	P	22 38 23.7					54	
		S	22 38 30.9						
		F	22 39 30						
280	June 30	P	1 09 11.4					97	
		S	1 09 24.4						
		ME	1 09 29.3	0.8	±57				
		F	1 13 ±						
281	Jnne 30	iPZ	1 44 24.3	2.0			−16	381	
		iPEN	1 44 26.8	2.0	−17	− 6			
		iS	1 45 18.2	2.0	−73	+24			
		MEN	1 45 21.9	0.4	±108	±64			
		F	1 52 ±						
282	June 30	ePg	23 19 41.6						
		F	23 21 33						
283	July 1	ePg	9 11 53.9						
		F	9 12 50						
284	July 1	ePg	13 54 45.7						
		F	13 55 09						

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No.	Date	Phase	Time 135° E h m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
285	July 1	P	14 52 27.7					164	
		iS	14 52 49.8						
		F	14 54 47						
286	July 1	P	20 48 00.1					35	
		iS	20 48 04.8	0.6	+ 8	+16			
		F	20 48 43						
287	July 2	ePg	7 47 19.1						
		F	7 48 42						
288	July 2	ePg	8 57 36.5					266	
		eSg	8 58 12.3						
		F	8 59 34						
289	July 2	ePg	12 41 28.3					923	
		eSg	12 43 32.7						
		F	12 45 44						
290	July 2	ePg	12 51 55.4						
		F	12 53 29						
291	July 2	ePg	21 06 59.7						
		F	21 08 45						
292	July 4	ePg	3 31 11.2						
		F	3 31 53						
293	July 4	P	10 20 43.8					39	
		S	10 20 49.1						
		F	10 21 20						
294	July 4	P	20 37 51.1					48	
		S	20 37 57.6						
		F	20 38 28						
295	July 5	S	21 32 04.3						
		F	21 32 44						
296	July 6	P	20 47 29.1	1.2	+ 5	−24	+48	28	Felt moderately.
		S	20 47 32.8	1.2	−105	+42			N off the Cape Inubo.
		MEN	20 47 33.9	1.5	±210	±110			
		F	20 51 ±						
297	July 6	P	20 56 09.5					32	
		S	20 56 13.8						
		F	20 57 31						
298	July 7	ePg	2 30 05.3					58	
		eSg	2 30 13.1						

International Seismological Centre

No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude A^E μ	A^N μ	A^Z μ	△ km.	Remarks
		F	2 31 51						
299	July 8	P	4 58 55.5					34	Felt slightly.
		S	4 59 00.1	0.3	−33	−53			Off the Cape Inubo.
		F	4 59 56						
300	July 8	P	5 46 33.4					114	
		S	5 46 48.8						
		F	5 48 33						
301	July 8	eP	16 11 17.8					23	
		S	16 11 20.9						
		F	16 11 50						
302	July 8	eP	22 46 15.9						
		F	22 48 15						
303	July 8	S	22 57 47.8						
		F	22 57 59						
304	July 10	iP	14 59 06.0	1.1	+31	+16	+47	26	Felt moderately.
		S	14 59 09.5	1.1	−160	−45			Northern part of
		S_1	14 59 11.7	1.1	+310				Kujukuri-hama.
		M_N	14 59 13.7	0.9		±210			
		M_E	14 59 15.2	0.9	±360				
		F	15 03 ±						
305	July 10	iP_E	22 10 35.8	2.8	+156			29	Felt rather strongly.
		iP_{NZ}	22 10 35.8	1.6		+38	+208		Northern part of
		S	22 10 39.7						Kujukuri-hama.
		M_E	22 10 41.8	1.8	±725				
		M_N	22 10 44.9	1.8		±240			
		F	22 19 ±						
306	July 10	eP	22 14 47.7						
		F	22 15 41						
307	July 10	eP	23 14 34.4						
		F	23 15 08						
308	July 10	eP	23 32 14.5						
		F	23 33 01						
309	July 10	eP	23 37 01.9					18	
		S	23 37 04.0						
		F	23 37 54						
310	July 12	eP	12 32 01.6						
		F	12 32 55						

International Seismological Centre

No.	Date	Phase	Time 135° E h m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
311	July 13	ePE	1 52 07.4					3290	
		eS	1 57 11.0						
		F	2 27 ±						
312	July 14	P	21 55 22.9					47	
		S	21 55 29.2						
		F	21 56 20						
313	July 15	eP	7 13 33.6						
		F	7 14 06						
314	July 15	eP	21 00 37.7					110	
		eS	21 00 52.5						
		F	21 02 56						
315	July 16	eP	1 32 21.1					3090	
		eS	1 36 10.8						
		eL	1 39 57.6						
		F	2 10 ±						
316	July 18	eP	20 09 09.8					69	
		S	20 09 19.1						
		F	20 10 32						
317	July 18	P	20 28 55.2					2545	
		eS	20 33 03.8						
		F	21 39 ±						
318	July 19	P	10 30 55.8					135	
		S	10 31 13.9						
		F	10 33 23						
319	July 19	eP	18 44 27.1					720	
		eS	18 45 46.2						
		F	18 51 ±						
320	July 19	P	21 23 53.6					146	
		S	21 24 13.2						
		F	21 29 ±						
321	July 20	eP	8 29 56.4						
		F	8 30 41						
322	July 20	P	9 29 20.0					173	
		S	9 29 43.3						
		F	9 34 ±						
323	July 21	P	12 46 39.8					6750	
		S	12 54 56.3						
		F	13 03 ±						

International Seismological Centre

No.	Date	Phase	Time 135° E h	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
324	July 22	ePg	13	29	30.9						
		F	13	29	59						
325	July 22	P	15	05	42.7					70	Felt slightly.
		S	15	05	52.1	0.8	+70				Kasima-naaa.
		F	15	11	±						
326	July 22	ePg	17	48	14.7						
		F	17	48	36						
327	July 23	ePg	14	44	40.3					80	
		eS	14	44	51.1						
		F	14	45	38						
328	July 23	P	23	28	38.9					4250	
		S	23	34	40.2						
		F	23	43	±						
329	July 24	P	2	01	41.0					86	
		SE	2	01	52.6	2.8	−16			91	
		SN	2	01	53.3	2.1		+22			
		F	2	05	±						
330	July 26	P	10	41	21.0	0.9	+15	− 5	+18	92	
		S	10	41	33.4						
		ME	10	41	34.7	0.6	±75				
		MN	10	41	35.7	0.6		±63			
		F	10	48	±						
331	July 27	ePg	19	54	12.9						
		F	19	56	06						
332	July 28	P	11	05	43.5					45	
		S1	11	05	49.6						
		S2N	11	05	52.6						
		S2E	11	05	53.8						
		ME	11	05	59.0	1.2	±77				
		MN	11	06	12.7	1.2		±44			
		F	11	12	±						
333	July 28	ePg	11	27	31.5					114	
		eS	11	27	46.9						
		F	11	28	56						
334	July 29	ePg	2	26	07.4						
		F	2	27	23						
335	July 30	P	13	38	35.2					24	
		iS	13	38	38.4						
		F	13	38	55						

International Seismological Centre

No.	Date	Phase	Time 135° E h m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
336	July 31	P	4 46 09.9					59	Felt slightly.
		S	4 46 17.9	0.7	−15	−11			Kasimanada
		ME	4 46 18.6	0.9	±165				
		MN	4 46 19.0	0.7		±77			
		F	4 50 ±						
337	Aug. 2	eP	6 50 56.7						
		F	6 51 57						
338	Aug. 2	eP	6 54 12.0						
		F	6 55 20						
339	Aug. 2	P	14 50 53.2					32	
		iS	14 50 57.5						
		F	14 51 26						
340	Aug. 2	eP	17 04 17.3						
		F	17 04 35						
341	Aug. 3	P	7 06 13.7					65	Felt slightly.
		S	7 06 22.5	0.8	−16	−21			Off the coast of
		MEN	7 06 22.8	0.8	±152	±45			Kasimanada.
		F	7 10 ±						
342	Aug. 3	eP	8 33 26.5					1790	
		eS	8 36 30.3						
		F	8 41 ±						
343	Aug. 3	eP	23 46 35.5						
		F	23 47 44						
344	Aug. 5	eP	16 27 44.0						
		F	16 44 ±						
345	Aug. 7	eP	11 19 03.8					4245	
		eS	11 25 04.7						
		eL	11 28 07.5						
		F	12 39 ±						
346	Aug. 9	P	2 01 57.6					478	
		S	2 03 02.0						
		F	2 04 44						
347	Aug. 10	eP	2 59 14.3						
		F	3 00 18						
348	Aug. 10	P	23 34 39.7					238	
		S	23 35 11.7						
		F	23 42 ±						

International Seismological Centre

No.	Date	Phase	Time 135° E h m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
349	Aug. 11	ePP	1 31 26.5						
		F	1 32 20						
350	Aug. 11	ePP	3 41 14.9						
		F	3 42 09						
351	Aug. 11	ePP	6 26 12.9					4555	
		P1	6 26 35.8						
		PMZ	6 26 44.6	3.5			±36		
		PMN	6 26 48.3	3.8		±33			
		PME	6 26 49.8	3.8	±58				
		S	6 32 30.6						
		SMN	6 32 50.4	6.9		±103			
		SME	6 32 51.8	6.9	±263				
		L	6 36 52.3						
		ME1	6 39 37.6	24.0	±10000				
		MN	6 41 09.9	14.0		±2460			
		ME2	6 41 52 2	11.5	±1540				
		MZ	6 43 30.9	13.1			±1560		
		F	8 31 ±						
352	Aug. 11	ePP	12 35 02.0						
		F	12 35 37						
353	Aug. 11	ePP	13 57 06.7					51	
		eS	13 57 13.6						
		F	13 58 07						
354	Aug. 11	ePP	15 02 03.8						
		F	15 03 15						
355	Aug. 15	ePP	8 23 02.9					70	
		eS	8 23 12.3						
		F	8 24 26						
356	Aug. 15	P	21 45 51.8					733	
		S	21 47 30.6						
		F	21 50 ±						
357	Aug. 16	ePP	19 25 15.1					552	
		eS	19 26 29.5						
		F	19 30 ±						
358	Aug. 18	ePP	0 17 30.6						
		F	0 20 16						
359	Aug. 18	P	13 34 05.7					26	
		S	13 34 09.2						
		S1	13 34 11.4						
		F	13 35 33						

International Seismological Centre

No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
360	Aug.18	PEN	14	40	27.9	1.5	+16	+24		68	Felt moderately. Far off the coast of Kasima-nada.
		PZ	14	40	27.9	1.2			−26		
		P1	14	40	34.9						
		S	14	40	37.0	3.0	+226				
		MEN	14	40	39.9	1.2	+780	±400			
		MZ	14	40	46.4	1.0			±104		
		F	14	54	±						
361	Aug.18	eP	18	13	27.9						
		F	18	14	16						
362	Aug.18	eP	18	35	50.5						
		F	18	38	±						
363	Aug.18	P	23	28	33.0					4285	
		eS	23	34	36.2						
		eL	23	41	21.5						
		MZ	23	45	27.5	14.6			±350		
		MEN	23	45	38.7	12.7	±370	±250			
		F	0	10	±						
364	Aug.19	P	8	43	49.2					80	
		S	8	44	00.0						
		F	8	45	35						
365	Aug.20	e_1	9	06	47.8						
		e_2	9	09	33.6						
		F	9	12	±						
366	Aug.20	P	12	43	02.6					35	
		iS	12	43	07.3						
		F	12	44	10						
367	Aug.21	eP	17	10	47.8					500	
		eS	17	11	55.2						
		F	17	14	±						
368	Aug.21	eP	17	33	42.2						
		F	17	35	±						
369	Aug.22	P	22	20	13.6					58	
		S	22	20	21.4						
		F	22	21	31						
370	Aug.22	P	23	44	03.1					105	
		S	23	44	17.4						
		F	23	44	59						
371	Aug.23	P	0	29	01.6						
		F	0	29	40						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
372	Aug.25	eP	6	53	51.7					5620	
		eS	7	01	06.9						
		eL	7	08	20.6						
		F	7	44	±						
373	Aug.25	eP	12	50	00.1					59	
		S	12	50	08.1						
		F	12	52	11						
374	Aug.26	eP	5	40	29.2					101	
		S	5	40	42.8						
		F	5	44	±						
375	Aug.26	eP	13	30	22.1						
		F	13	30	52						
376	Aug.26	eP	17	09	22.6					168	
		eS	17	09	45.2						
		F	17	20	±						
377	Aug.26	eP	20	38	23.3						
		F	20	38	52						
378	Aug.27	P	8	49	34.7					80	
		S	8	49	45.5						
		F	8	52	±						
379	Aug.28	P	0	37	34.6					6710	
		S	0	45	49.1						
		eL	0	59	32.4						
		ME	1	08	44.0	13.5	±105				
		MN	1	09	50.5	13.5		±145			
		F	2	08	±						
380	Aug.28	eP	4	53	37.0						
		F	4	54	20						
381	Aug.28	eP	6	33	03.6						
		F	6	33	47						
382	Aug.31	eP	12	51	49.5					167	
		eS	12	52	12.0						
		F	12	53	32						
383	Aug.31	P	22	17	09.9					37	
		iS	22	17	14.9	0.8	+33	+12			
		F	22	18	01						

International Seismological Centre

EXCHANGE
SEP 23 1932

THE

SEISMOLOGICAL BULLETIN

OF THE

Sofue, Tyosi

TYOSI, METEOROLOGICAL OBSERVATORY

TYOSI, JAPAN

No. 3. 1931.

From Sept. to Dec.

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May 1932.

TYOSI, JAPAN.

SEISMIC BULLETIN

TYOSI METEOROLOGICAL OBSERVATORY

$\varphi = 35°44'$ N $\lambda = 140°52'$ E h = 18.2m Lithologic foundation : Loam (Tertiary)

INSTRUMENTAL CONSTANTS

INSTRUMENT	COMPONENT	MASS kg	DAMMPING	T_0	$\frac{r}{T_0^2}$	ε	V
Wiechert	N—S	200	Air	3.7	0.12	3.6	84
	E—W	200	„	6.7	0.023	6.4	102
Wiechert	U—D	80	Magnetic	3.2	0.034	6.7	82
Omori	N—S	14.5	„	20	0.003	2—4	20
Omori	E—W	15.0		20	0.004	2—4	20
Omori	N—S	46.1		18	——		120
Omori	N—S	20		4	0.065		50
	E—W	20		4	0.065		50
C. M. O.	N—S	2.3	Magnetic	2.5	0.001	2	2
	E—W	2.3	„	2.3	0.005	2	2
	U—D	2.3	„	3.0	0.019	2	3
Omori	U—D	6.1		5	——		20

No. 1

No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude A_E μ	A_N μ	A_Z μ	△ km.	Remarks
384	Sept. 1	P	14 23 06.0					48	
		S	14 23 12.5						
		F	14 24 15						
385	Sept. 1	PEN	14 30 46.2	0.4	+25	+14		36	
		PZ	14 30 46.2	0.7			+ 7		
		PIZ	14 30 46.5	0.7			+31		
		S	14 30 51.0						
		MEN	14 30 56.7	1.2	±123	±69			
		F	14 34 ±						
386	Sept. 1	eP	15 00 31.4						
		F	15 01 26						
387	Sept. 1	P	22 38 12.9					497	
		eS	22 39 19.9						
		F	22 42 08						
388	Sept. 2	eP	0 08 56.7						
		F	0 09 57						
389	Sept. 2	eP	4 10 59.2					141	
		S	4 11 18.2						
		F	4 12 37						
390	Sept. 3	eP	9 17 27.9					19	
		S	9 17 30.5						
		F	9 17 46						

International Seismological Centre

No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
391	Sept. 3	ePP	10 37 27.8						
		F	10 38 01						
392	Sept. 3	S	13 54 28.2						
		F	13 54 37						
393	Sept. 4	ePP	8 22 25.8					103	
		S	8 22 39.7						
		F	8 23 56						
394	Sept. 5	P	13 14 09.9					50	
		S	13 14 16.6						
		S1	13 14 19.7						
		F	13 16 55						
395	Sept. 6	P	8 14 00.1					34	
		S	8 14 04.7						
		F	8 14 36						
396	Sept. 6	ePP	16 10 32.3						
		F	16 11 33						
397	Sept. 7	P	5 35 09.1					82	
		S	5 35 20.1						
		S1	5 35 21.7						
		MEN	5 35 22.8	1.3	±327	±57			
		F	5 38 16						
398	Sept. 8	ePP	14 22 32.3						
		F	14 23 19						
399	Sept. 9	PEN	4 09 16.0	1.9	+ 5	+ 4		106	Felt moderately.
		PZ	4 09 16.0	0.9			+ 4		Kasima-nada.
		P1EN	4 09 16.6	1.9	−47	−43			
		P1Z	4 09 16.9	1.9			+44		
		SEN	4 09 30.2	1.9	+150	+190			
		SZ	4 09 30.2	2.8			−93		
		S1EN	4 09 30.8	1.9	−490	−610			
		S1Z	4 09 30.8	2.8			+250		
		ME	4 09 31.5	1.9	+1450				
		MN	4 09 32.2	1.9		±1020			
		MZ	4 09 32.2	2.6			±270		
		F	4 24 ±						
400	Sept. 9	ePP	4 50 40.2					132	
		S	4 50 58.0						
		F	4 52 23						
401	Sept. 9	ePP	14 35 21.6					52	
		S	14 35 28.6						
		F	14 36 00						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
402	Sept.10	P	5	42	17.6					1785	
		S	5	45	21.0						
		MN	5	45	46.8	3.6		±54			
		MZ	5	45	48.3	5.0			±46		
		ME	5	45	53.3	5.5	±130				
		F	5	59	±						
403	Sept.10	ePg	12	31	02.2					93	
		iS	12	31	14.7						
		F	12	33	03						
404	Sept.11	P	7	04	04.4					91	
		S	7	04	16.6						
		F	7	05	29						
405	Sept.11	ePg	8	07	45.3						
		F	8	08	37						
406	Sept.11	ePg	10	23	29.8					168	
		S	10	23	52.5						
		F	10	25	54						
407	Sept.11	ePg	12	07	50.2					131	
		eS	12	08	07.9						
		F	12	09	24						
408	Sept.11	P	12	20	16.2					99	
		S	12	20	29.5						
		F	12	21	51						
409	Sept.11	ePg	12	22	03.6						
		F	12	22	42						
410	Sept.11	ePg	23	04	54.9						
		F	23	05	29						
411	Sept.12	ePg	8	13	51.7						
		F	8	14	49						
412	Sept.12	ePg	15	43	48.6						
		F	15	44	40						
413	Sept.12	ePg	19	28	31.1						
		F	19	29	27						
414	Sept.13	ePg	12	26	25.7					100	
		S	12	26	39.2						
		F	12	27	39						
415	Sept.13	ePg	12	50	28.5						

International Seismological Centre

No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		F	12	51	15						
416	Sept.13	eP	16	42	28.2						
		F	16	43	29						
417	Sept.14	eP	16	24	38.4						
		F	16	25	55						
418	Sept.14	eP	20	24	24.8						
		F	20	25	15						
419	Sept.16	eP	0	36	38.0						
		F	0	37	09						
420	Sept.16	eP	2	20	35.9						
		F	2	21	11						
421	Sept.16	PEN	21	43	33.2	2.9	−27	− 6		142	Felt slightly.
		PZ	21	43	33.7	2.4			−13		Upper Valley of River
		SEN	21	43	52.3	2.9	−190	+275			Katura.
		SZ	21	43	55.8	2.4			±120		
		ME	21	44	04.5	1.5	±470				
		MN	21	44	09.1	2.9		±430			
		F	22	00	±						
422	Sept.16	eP	22	53	37.8						
		F	22	55	19						
423	Sept.16	eP	23	30	59.8						
		F	23	32	07						
424	Sept.17	eP	3	59	30.1						
		F	4	00	10						
425	Sept.17	P	18	03	23.5						
		F	18	04	11						
426	Sept.18	P	1	40	25.8						
		F	1	41	01						
427	Sept.18	eP	6	11	57.4						
		F	6	12	41						
428	Sept.18	P	15	13	58.1					145	
		S	15	14	17.6	1.3	+47	+22			
		MN	15	14	18.9	1.3		−62			
		ME	15	14	31.3	1.3	±74				
		F	15	18	±						
429	Sept.19	P	4	07	36.3					47	

International Seismological Centre

No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		S	4 07 42.6						
		F	4 09 03						
430	Sept.19	eP	4 25 03.9						
		F	4 25 33						
431	Sept.21	eP	0 14 35.3					129	
		S	0 14 52.7						
		S1	0 15 04.1						
		F	0 17 10						
432	Sept.21	PEZ	11 20 22.3	1.2	−14		−12	121	Felt strongly. Neighbourhood of Mt. Sengen.
		PN	11 20 22.3	2.8		+ 6			
		P1	11 20 24.0						
		P2	11 20 27.5						
		S	11 20 38.5	1.7	−335	+412			
		MN	11 20 50.4	1.5		±3170			
		ME	11 20 55.3	1.5	±1870				
		MZ	11 21 01.4	2.7			±470		
		F	12 25 ±						
433	Sept.21	P	11 36 06.7					115	
		S	11 36 22.2						
		F	11 37 28						
434	Sept.21	eP	11 42 43.7					87	
		S	11 42 55.4						
		F	11 44 25						
435	Sept.21	P	11 46 12.5					106	
		S	11 46 26.8						
		F	11 48 28						
436	Sept.21	P	12 01 59.7						
		F	12 02 24						
437	Sept.21	eP	12 03 41.8					111	
		S	12 03 56.7						
		F	12 04 26						
438	Sept.21	P	12 11 06.7					117	
		S	12 11 22.5						
		F	12 12 48						
439	Sept.21	P	12 25 31.3					109	
		S	12 25 45.9						
		F	12 27 13						
440	Sept.21	eP	12 36 11.3						
		F	12 36 25						

International Seismological Centre

No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
441	Sept.21	P	12	55	17.1					114	
		S	12	55	32.5						
		F	12	57	00						
442	Sept.21	eP	13	16	17.4						
		F	13	17	09						
443	Sept.21	S	14	25	14.0						
		F	14	25	50						
444	Sept.21	P	15	21	52.0					116	
		S	15	22	07.7						
		F	15	24	01						
445	Sept.21	S	15	38	00.5						
		F	15	38	28						
446	Sept.21	P	15	49	26.6					128	
		S	15	49	43.8						
		F	15	51	±						
447	Sept.21	eP	15	51	23.6					48	
		S	15	51	30.0						
		F	15	52	43						
448	Sept.21	eP	16	01	03.5						
		F	16	01	28						
449	Sept.21	eP	16	07	47.5					117	
		S	16	08	03.3						
		F	16	09	28						
450	Sept.21	S	18	03	14.0						
		F	18	03	49						
451	Sept.21	P	18	29	25.4					109	
		S	18	29	40.0						
		F	18	30	59						
452	Sept.21	eP	18	33	09.4					98	
		S	18	33	22.6						
		F	18	34	24						
453	Sept.21	eP	18	48	01.3					98	
		S	18	48	14.5						
		F	18	49	14						
454	Sept.21	P	18	50	49.1					109	
		S	18	51	03.7						
		F	18	52	58						

International Seismological Centre

No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
455	Sept.21	P	19 24 17.5					124	
		S	19 24 34.2						
		F	19 25 50						
456	Sept.21	ePg	19 34 19.4					2940	
		eS	19 38 58.2						
		F	20 13 ±						
457	Sept.21	S	20 58 25.9						
		F	20 58 51						
458	Sept.21	ePg	21 22 55.6						
		F	21 23 24						
459	Sept.21	S	22 28 46.5						
		F	22 29 20						
460	Sept.21	ePg	22 31 01.8					65	
		S	22 31 10.5						
		F	22 31 57						
461	Sept.21	S	22 57 32.0						
		F	22 57 55						
462	Sept.22	S	0 30 02.1						
		F	0 30 28						
463	Sept.22	P	2 51 44.0					124	
		S	2 52 00.9						
		F	2 53 55						
464	Sept.22	ePg	3 07 37.4					103	
		S	3 07 51.3						
		F	3 08 57						
465	Sept.22	S	3 23 53.9						
		F	3 24 40						
466	Sept.22	S	5 38 30.1						
		F	5 39 07						
467	Sept.22	S	6 17 43.1						
		F	6 18 43						
468	Sept.22	P	19 46 47.1					233	
		S	19 47 18.5						
		F	19 47 55						
469	Sept.22	P	22 41 46.2					85	

International Seismological Centre

No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		S	22 41 57.7						
		F	22 41 42						
470	Sept.23	eP	12 48 04.6					107	
		S	12 48 19.0						
		F	12 49 21						
471	Sept.23	P	14 58 12.1					109	
		S	14 58 26.7						
		F	14 59 26						
472	Sept.23	PZ	21 46 31.5					111	
		PEN	21 46 31.9					128	
		SEN	21 46 46.8						
		SZ	21 46 48.7						
		F	21 48 42						
473	Sept.24	eP	0 23 11.1					116	
		S	0 23 26.7						
		F	0 24 09						
474	Sept.24	PZ	1 22 52.7					113	Felt slightly.
		PEN	1 22 53.9					131	Neigh bourhood of
		SEN	1 23 09.2						Mt. Sengen.
		SZ	1 23 10.3						
		MEN	1 23 12.3	0.7	±48	±32			
		F	1 27 ±						
475	Sept.24	eP	2 35 50.4						
		F	2 36 13						
476	Sept.24	P	13 11 32.7					115	
		S	13 11 48.2						
		F	13 13 12						
477	Sept.24	P	13 26 26.2	0.5	+ 5	− 3	+12	82	
		S	13 26 37.4						
		S1E	13 26 40.4	1.7	−84				
		S1N	13 26 43.0	0.8		+56			
		F	13 30 ±						
478	Sept.24	P	19 55 46.6					121	
		P1	19 55 51.8						
		S	19 56 02.8						
		F	19 57 27						
479	Sept.24	P	21 11 39.2					124	
		S	21 11 55.8						
		F	21 14 05						
480	Sept.25	P	3 23 56.9					120	

International Seismological Centre

No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	Amplitude AN μ	Amplitude AZ μ	△ km.	Remarks
		S	3 24 13.0						
		F	3 24 37						
481	Sept.25	P	8 55 59.0					438	
		S	8 56 58.0						
		F	8 57 55						
482	Sept.25	eP	15 09 18.1					6070	
		eS	15 16 58.2						
		eL	15 23 26.9						
		F	16 23 ±						
483	Sept.25	P	22 02 33.7					91	
		S	22 02 46.0						
		F	22 04 27						
484	Sept.26	P	0 10 45.9					106	
		S	0 10 59.7						
		F	0 11 59						
485	Sept.26	eP	3 56 13.1					148	
		S	3 56 33.0						
		F	3 57 52						
486	Sept.26	P	6 03 09.7					113	
		S	6 03 24.9						
		F	6 04 11						
487	Sept.26	P	12 39 49.5					124	
		S	12 40 06.1						
		F	12 41 01						
488	Sept.26	eP	17 02 34.1						
		F	17 03 07						
489	Sept.28	eP	2 08 58.1						
		F	2 09 39						
490	Sept.28	P	4 50 43.3	0.9	+ 8	− 4	+12	55	Felt slightly. Lower Valley of River Kinu.
		S	4 50 50.7						
		ME	4 50 56.4	0.9	±82				
		F	4 54 ±						
491	Sept.28	P	6 19 32.1					45	
		S	6 19 38.1						
		F	6 20 08						
492	Sept.28	P1	13 54 37.8	0.8	+ 5	+ 4	+ 2	114	
		P2	13 54 38.6	1.2	−16	−13	−14		
		S1	13 54 53.2	1.2	+74	+72			

International Seismological Centre

No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		S_2	13	54	54.5	1.2	+200	+185			
		MZ	13	54	57.4	0.7			±36		
		MN	13	55	05.4	1.9		±235			
		F	14	01	±						
493	Sept.28	eS	15	08	00.2						
		F	15	08	26						
494	Sept.28	P	18	26	14.4					136	
		S	18	26	32.7						
		F	18	28	17						
495	Sept.29	eP	8	15	09.7						
		F	8	18	13						
496	Sept.30	S	21	05	58.7						
		F	21	06	14						
497	Sept.30	eP	21	27	36.4					688	
		S	21	29	09.1						
		F	21	30	21						
498	Oct. 1	eP	4	38	25.9						
		F	4	38	37						
499	Oct. 1	P	15	30	18.9					81	
		S	15	30	29.8						
		F	15	31	41						
500	Oct. 2	eP	8	05	50.9						
		F	8	06	16						
501	Oct. 2	S	22	09	44.6						
		F	22	10	31						
502	Oct. 2	P	2	37	06.1	0.5	+ 7	− 1	+ 8	130	Felt slightly. Neighbourhood of Mt. Sengen.
		S_N	2	37	20.9						
		S_1	2	37	23.6	1.1	+97	+155			
		MN	2	37	26.8	1.1		±220			
		ME	2	37	27.6	1.1	±200				
		F	2	46	±						
503	Oct. 3	eP	14	16	18.8					49	
		iS	14	16	25.4						
		F	14	16	44						
504	Oct. 3	eP	14	23	44.1					55	
		iS	14	23	51.4						
		F	14	24	54						

International Seismological Centre

No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
505	Oct. 3	eP	14 44 47.4					54	
		iS	14 44 54.6						
		F	14 45 19						
506	Oct. 4	eP	4 22 11.5					5760	
		S	4 29 35.1						
		SM	4 29 51.1	9.8	±180				
		L	4 35 35.2						
		MN1	4 37 16.9	21.0		±2600			
		ME1	4 37 49.3	22.0	±3850				
		MZ	4 38 52.6	20.0			±2200		
		ME2	4 40 24.7	14.7	±2300				
		MN2	4 40 45.7	14.7		±1150			
		F	9 30 ±						
507	Oct. 5	eP	2 58 33.4						
		F	2 59 47						
508	Oct. 5	eP	6 29 00.2					134	
		S	6 29 18.2						
		F	6 31 05						
509	Oct. 5	eP	19 18 16.5					64	
		S	19 18 25.1						
		F	19 19 19						
510	Oct. 6	eP	5 33 40.1						
		F	5 34 34						
511	Oct. 8	P	13 18 05.6					35	
		iS	13 18 10.3	0.8	+44	+19			
		F	13 19 11						
512	Oct. 8	eP	14 04 13.0					82	
		S	14 04 24.1						
		F	14 04 52						
513	Oct. 9	eS	19 59 26.9						
		F	19 59 52						
514	Oct. 9	eP	20 35 35.9						
		F	20 35 51						
515	Oct. 9	eP	21 34 35.7					154	
		eS	21 34 56.7						
		F	21 35 52						
516	Oct. 10	eP	9 28 54.7					4970	
		eS	9 38 35.3						
		L	9 41 16.1						
		M1	9 42 23.0	26.5	±3300	±2000			

International Seismological Centre

No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		M_{E2}	9	47	00.4	17.5	±1900				
		M_{Z1}	9	50	23.7	22.0			±2000		
		M_{N2}	9	50	49.6	18.5		±1250			
		M_{Z2}	9	53	01.0	18.0			±1900		
		M_{N3}	9	53	31.6	18.0		±1700			
		F	11	55	±						
517	Oct. 11.	eP	9	46	48.1						
		F	9	47	17						
518	Oct. 12	P	13	18	47.3					65	
		iS	13	18	56.0						
		F	13	19	18						
519	Oct. 12	iP	13	41	10.4					32	
		iS	13	41	14.7						
		F	13	41	40						
520	Oct. 12	P	19	51	18.1					117	
		S	19	51	33.9						
		F	19	52	32						
521	Oct. 13	P	10	50	33.6					79	
		iS	10	50	44.2						
		F	10	51	42						
522	Oct. 13	eP	21	14	05.0					125	
		S	21	14	21.8						
		F	21	15	45						
523	Oct. 13	eP	22	54	23.2						
		F	22	55	27						
524	Oct. 14	eP	15	23	15.5						
		F	15	24	01						
525	Oct. 14	eP	15	24	31.8						
		F	15	25	36						
526	Oct. 14	eP	15	31	07.1						
		F	15	32	03						
527	Oct. 16	eP	15	42	32.2					157	
		eS	15	42	53.3						
		F	15	45	±						
528	Oct. 17	P	18	56	59.6					45	
		S	18	57	05.7						
		F	18	57	57						

International Seismological Centre

No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
529	Oct. 18	P	0	36	13.2					818	
		S	0	38	03.5						
		F	0	40	±						
530	Oct. 18	ePg	13	41	10.0						
		F	13	41	41						
531	Oct. 19	ePg	21	09	31.2						
		F	21	10	03						
532	Oct. 21	ePg	16	43	52.1						
		F	16	44	48						
533	Oct. 21	P	18	10	12.0					86	
		iS	18	10	23.6						
		F	18	12	02						
534	Oct. 22	ePg	16	55	00.8						
		F	16	55	37						
535	Oct. 22	P	18	26	03.8					22	
		iS	18	26	06.8						
		F	18	26	20						
536	Oct. 23	P	12	16	39.5					123	
		S	12	16	56.0						
		F	12	18	09						
537	Oct. 24	ePg	8	29	22.8					377	
		S	8	30	13.6						
		F	8	31	58						
538	Oct. 24	S	13	53	42.4						
		F	13	54	15						
539	Oct. 24	ePg	14	39	05.1						
		F	14	39	15						
540	Oct. 25	P	8	04	04.5					50	
		iS	8	04	11.3						
		F	8	05	05						
541	Oct. 25	ePg	18	58	55.6					66	
		S	18	59	04.5						
		F	18	00	10						
542	Oct. 25	P	22	30	37.5					14	
		S	22	30	39.4						
		F	22	30	54						

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No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
543	Oct. 25	P	22 46 04.8					374	
		eS	22 46 55.2						
		L	22 47 07.6						
		F	22 49 ±						
544	Oct. 26	eP	2 50 06.0						
		F	2 50 42						
545	Oct. 27	eP	2 52 31.9						
		F	2 54 02						
546	Oct. 28	eP	7 11 14.5						
		F	7 11 47						
547	Oct. 28	eP	23 54 51.9					50	
		S	23 54 58.6						
		F	23 56 08						
548	Oct. 29	P	17 43 16.0					1885	
		S	17 46 28.7						
		F	17 53 ±						
549	Oct. 30	eP	2 21 04.7					45	
		S	2 21 10.8						
		F	2 21 31						
550	Oct. 30	P	3 53 23.5	0.5	− 2	− 4	+ 7	67	Felt moderately. Kasima-nada.
		P1	3 53 27.7						
		SN1	3 53 30.9	1.1		+50			
		SEN	3 53 32.5	1.1	+550	+285			
		SZ	3 53 32.5	0.6			±40		
		MN	3 53 40.0	1.1		±355			
		F	4 03 ±						
551	Oct. 30	eP	17 44 15.5					2460	
		eS	17 48 17.4						
		F	17 51 ±						
552	Oct. 31	eP	10 05 11.6					70	
		S	10 05 21.0						
		F	10 06 07						
553	Oct. 31	eP	14 08 00.6					136	
		eS	14 08 18.9						
		F	14 15 ±						
554	Oct. 31	eP	19 12 21.8						
		F	19 30 ±						
555	Oct. 31	P	23 17 01.0					135	

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		S	23	17	19.1						
		F	23	20	±						
556	Nov. 1	P	2	29	15.2					67	
		S	2	29	24.2						
		F	2	30	35						
557	Nov. 1	P	10	06	02.3					228	
		S	10	06	33.0						
		F	10	07	35						
558	Nov. 2	eP	3	55	20.3					1470	
		eS	3	57	54.2						
		F	3	20	±						
559	Nov. 2	P	7	10	24.4					51	
		S	7	10	31.3						
		F	7	10	54						
560	Nov. 2	eP	8	18	41.5					71	
		S	8	18	51.1						
		F	8	19	29						
561	Nov. 2	eP	12	49	00.3					28	
		eS	12	49	04.1						
		F	12	49	59						
562	Nov. 2	eP	17	41	25.6					396	
		eS	17	42	19.0						
		F	17	43	50						
563	Nov. 2	P	19	05	00.8					800	
		S	19	06	48.6						
		LN	19	07	44.6	4.6		−100			
		LZ	19	07	44.6	3.4			−42		
		MN	19	08	09.1	4.2		±165			
		ME	19	08	43.0	7.7	±260				
		F	20	05	±						
564	Nov. 2	eP	20	02	43.7					1415	
		eS	20	05	12.0						
		F	20	09	±						
565	Nov. 2	eP	20	51	55.1						
		F	20	53	50						
566	Nov. 2	eP	20	57	34.0					50	
		eS	20	57	40.7						
		F	20	58	27						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
567	Nov. 3	P	3	23	55.1					41	
		S	3	24	00.6						
		F	3	24	48						
568	Nov. 3	P	4	56	01.0					163	
		S	4	56	23.0						
		MN	4	56	42.9	2.7		±33			
		F	5	00	±						
569	Nov. 3	eP	11	40	15.5					2210	
		eS	11	43	56.3						
		F	11	46	±						
570	Nov. 4	P	1	20	55.4					325	
		PIN	1	21	03.3	1.3		−27			
		S	1	21	39.2						
		SIEN	1	21	58.9	1.6		−115			
		SIZ	1	22	03·5						
		ME	1	22	07.8	1.2	±36				
		MZ	1	22	09.4	1.9			±20		
		MN	1	22	11.9	2.4		±135			
		F	1	46	±						
571	Nov. 4	eP	1	26	23.1						
		F	1	29	±						
572	Nov. 4	eP	2	26	53.6					413	
		eS	2	27	49.3						
		F	2	29	±						
573	Nov. 4	eS	10	02	30.9						
		F	10	03	29						
574	Nov. 4	eP	20	35	29.8						
		F	20	36	34						
575	Nov. 5	eP	15	26	03.2					344	
		S	15	26	49.6						
		F	15	28	14						
576	Nov. 5	eL	21	40	±						
		F	21	55	±						
577	Nov. 6	eP	2	17	51.3					89	
		eS	2	18	03.3						
		F	2	19	09						
578	Nov. 6	P	7	21	58.0					37	
		S	7	22	03.0						
		F	7	22	47						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
579	Nov. 7	P	11	22	04.7					60	
		iS	11	22	12.8						
		F	11	24	15						
580	Nov. 7	ePg	21	07	52.1						
		F	21	08	17						
581	Nov. 8	ePg	4	30	31.7						
		F	4	31	12						
582	Nov. 9	P	12	13	53.4					115	
		eS	12	14	08.9						
		eL	12	14	16.6						
		F	12	15	25						
583	Nov. 9	P	21	33	44.1					91	
		S	21	33	56.3						
		F	21	34	41						
584	Nov.10	ePg	10	15	42.0						
		F	10	16	21						
585	Nov.10	ePg	15	14	07.6						
		F	15	15	06						
586	Nov.11	ePg	0	36	00.8					79	
		S	0	36	11.4						
		F	0	36	52						
587	Nov.12	ePg	4	29	04.8						
		F	4	30	01						
588	Nov.12	iS	6	21	16.0						
		F	6	21	42						
589	Nov.12	ePg	8	57	52.0						
		F	8	58	13						
590	Nov.12	P	15	08	53.7	1.3	− 6	+22	+40	63	Felt slightly.
		P1	15	08	57.2						E off Katuura.
		S	15	09	02.2	1.2		−265			
		MN	15	09	05.3	2.4		±295			
		MZ	15	09	06.2	1.2			±90		
		MN	15	09	07.0	2.4	±370				
		F	15	17	±						
591	Nov.12	ePg	15	28	37.3						
		F	15	29	07						
592	Nov.12	ePg	17	35	50.7					36	

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No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		S	17 35 55.5						
		F	17 36 29						
593	Nov.12	P	22 11 26.4					137	
		P_1	22 11 34.4						
		S	22 11 44.8						
		F	22 14 ±						
594	Nov.13	eP	2 35 15.4					62	
		S	2 35 23.7						
		F	2 35 50						
595	Nov.13	eP	2 59 59.1						
		F	3 00 47						
596	Nov.13	P	4 45 02.1					55	
		S	4 45 09.4						
		F	4 46 03						
597	Nov.13	eP	9 35 21.5						
		F	9 35 53						
598	Nov.13	P	16 01 20.8					55	
		S	16 01 28.2						
		F	16 02 28						
599	Nov.13	eP	21 28 41.2					343	
		eS	21 29 27.4						
		F	21 31 ±						
600	Nov.13	eS	22 16 59.5						
		F	22 17 26						
601	Nov.14	eP	2 57 16.3						
		F	2 57 52						
602	Nov.15	P	16 45 30.0					55	
		iS	16 45 37.4						
		F	16 47 01						
603	Nov.16	eP	6 32 30.1					72	
		eS	6 32 39.8						
		F	6 33 15						
604	Nov.16	eP	23 26 28.5						
		F	23 27 00						
605	Nov.18	S	15 04 58.5						
		F	15 05 40						

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No.	Date	Phase	Time 135° E h.	m.	s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
606	Nov.20	ePP	13	19	04.3					512	
		S	13	20	13.2						
		F	13	21	52						
607	Nov.20	P	23	25	32.0					5375	
		S	23	32	34.7						
		eL	23	38	51.9						
		ME	23	40	18.8	23.0	±190				
		F	0	16	±						
608	Nov.22	P	7	58	10.5					27	
		S	7	58	14.1						
		F	7	59	18						
609	Nov.26	P	5	39	56.0					17	
		S	5	39	58.2	0.7	−10	− 9			
		F	5	40	31						
610	Nov.26	P	12	57	44.0					28	
		S	12	57	47.7	0.5	+ 7	+ 7			
		F	12	58	13						
611	Nov.26	P	22	59	13.1	0.6	− 1	− 5	− 6	62	
		S	22	59	21.4	0.9	+19				
		MN	22	59	22.7	0.9		±39			
		F	23	01	49						
612	Nov.26	P	23	50	28.5					67	
		S	23	50	37.5	1.0	−10	+19			
		F	23	51	59						
613	Nov.27	P	2	12	56.2					40	
		eS	2	13	01.6						
		F	2	14	14						
614	Nov.27	P	17	37	54.4	1.0	− 6	−11	+15	30	Felt slightly. Off Cape Inubo.
		S	17	37	58.5						
		Sl	17	37	59.9	0.8	+39	±37			
		F	17	39	47						
615	Nov.28	P	21	33	29.3					63	
		S	21	33	37.8						
		F	21	34	17						
616	Nov.29	P	3	36	37.9					94	
		S	3	36	50.6						
		F	3	37	58						
617	Nov.29	eP	9	00	56.8						
		F	9	01	17						

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No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
618	Nov.30	ePP	14 07 51.5						
		F	14 08 22						
619	Dec. 1	P	1 43 45.0					28	
		S	1 43 48.8						
		St	1 43 50.5						
		F	1 44 33						
620	Dec. 1	ePP	4 52 09.3					27	
		S	4 52 12.9						
		F	4 52 36						
621	Dec. 1	ePP	21 37 12.4						
		F	21 37 33						
622	Dec. 2	P	2 15 41.0					73	
		S	2 15 50.8						
		F	2 16 24						
623	Dec. 2	P	10 06 25.9					81	
		S	10 06 36.8						
		F	10 07 35						
624	Dec. 2	ePP	13 00 47.3					80	
		eS	13 00 58.0						
		F	13 01 57						
625	Dec. 3	P	10 13 30.1					45	
		S	10 13 36.2						
		F	10 14 34						
626	Dec. 3	P	10 20 44.9	0.4			± 7	35	
		S	10 20 49.6	0.5	+19	−15			
		F	10 22 03						
627	Dec. 4	ePP	17 01 20.7						
		F	17 02 08						
628	Dec. 5	P	14 40 04.2					22	
		iS	14 40 07.1						
		F	14 40 20						
629	Dec. 5	ePP	17 08 29.1					215	
		eS	17 08 58.1						
		F	17 10 41						
630	Dec. 6	P	8 39 29.9					282	
		iS	8 40 07.9						
		F	8 41 24						

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No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
631	Dec. 8	P	4 13 04.1					34	
		S	4 13 08.7						
		F	4 13 38						
632	Dec. 8	P	13 47 14.3						
		F	13 47 47						
633	Dec. 8	eP	21 16 44.0					612	
		S	21 18 06.5						
		F	21 19 46						
634	Dec. 10	P	5 20 30.8						
		F	5 21 29						
635	Dec. 11	P	0 57 18.1	0.5	− 4	− 4	− 7	73	
		S	0 57 27.9	0.7		+26			
		F	0 59 21						
636	Dec. 15	P	21 55 16.5					77	
		S	21 55 26.9						
		F	21 56 46						
637	Dec. 16	P	2 15 02.6					91	
		PIZ	2 15 07.5						
		PIE	2 15 09.6						
		PIN	2 15 10.4						
		S	2 15 14.8						
		F	2 17 36						
638	Dec. 16	eP	4 23 19.7					74	
		eS	4 23 29.6						
		F	4 24 15						
639	Dec. 19	P	2 14 02.3	2.0	+ 5		+ 5	50	
		SE	2 14 09.1	2.6	−32				
		SN	2 14 09.1	1.4		+25			
		MN	2 14 14.0	0.6		±47			
		F	2 18 ±						
640	Dec. 20	P	13 36 08.0					50	
		S	13 36 14.7						
		F	13 37 31						
641	Dec. 21	P	7 52 33.8					48	
		S	7 52 40.3						
		F	7 53 05						
642	Dec. 22	eP	5 16 26.9					107	
		S	5 16 41.3						
		F	5 17 39						

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No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	Amplitude AN μ	Amplitude AZ μ	△ km.	Remarks
643	Dec. 22	P	12 53 06.4					59	
		S	12 53 14.4						
		M_N	12 53 16.6	0.6		±31			
		F	12 55 21						
644	Dec. 22	P	17 29 30.8					39	
		iS	17 29 36.1	0.5	+14	− 6			
		M_N	17 29 36.5	0.5		+11			
		F	17 30 17						
645	Dec. 23	eP	21 29 02.1						
		F	21 30 30						
646	Dec. 24	eP	2 26 29.5					44	
		S	2 26 35.4						
		F	2 27 24						
647	Dec. 26	eP	2 36 21.7					112	
		S	2 36 36.8						
		F	2 37 56						
648	Dec. 26	S	13 01 44.0						
		F	13 01 59						
649	Dec. 26	P	14 15 59.0					78	
		S	14 16 09.5						
		F	14 17 35						
650	Dec. 26	P	19 34 45.2					105	
		S	19 34 59.3						
		F	19 36 12						
651	Dec. 28	P	4 08 34.7						
		F	4 08 55						
652	Dec. 28	eP	17 53 05.5					218	
		eS	17 53 34.9						
		F	17 54 39						
653	Dec. 29	eP	19 12 00.5						
		F	19 12 25						
654	Dec. 30	eS	2 47 59.3						
		F	2 48 33						
655	Dec. 30	P	19 53 31.1					30	
		iS	19 53 35.2						
		F	19 54 14						
656	Dec. 30	P	21 24 00.3					25	

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No.	Date	Phase	Time 135° E h. m. s.	Period s.	Amplitude AE μ	AN μ	AZ μ	△ km.	Remarks
		iS	21 24 03.7						
		F	21 24 31						
657	Dec. 31	eP	15 43 14.2						
		F	15 43 40						