

SEISMOLOGICAL BULLETIN

OF THE

AITIKEN METEOROLOGICAL OBSERVATORY

NAGOYA, JAPAN.

VOL. I. No. 3.

1928



NAGOYA

March, 1929.

Geophysics Division,
Dept. of Scientific & Industrial Research,
LIBRARY
SEISMOLOGICAL OBSERVATORY,

NAGOYA JAPAN

SEISMOLOGICAL BULLETIN

of the

Aitiken Meteorological Observatory of Japan

Latitude ; 35° 10' N
Longitude ; 135° 58' E from Greenwich
Altitude ; 51, m above mean sea level
Lithologic foundation ; Schotterd clay (Tertiary)
Time ; Greenwich Mean Time

Instrumental constants;

Wiechert seismograph

(Astatic pendulum with air dumper)

	T_0	ξ	$\frac{r}{T_0^2}$	V
AN	6. ^s 0	12	0.04	64
AE	6. 0	12	0.05	64
Az	3. 7	6	0.01	140

Omori seismograph

(Horizontal pendulum with magnetic dumper)

	T_0	ξ	$\frac{r}{T_0^2}$	V
AN	20. ^s 0	4	0.04	20
AE	20. 0	3	0.02	20
	—	—	—	—

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks		
			G.	M.	T.		AN	AE	AZ				
1	Jan. 1	eP $\overline{P}$ L ME MZ MN ¹ MN ² C F	h	m	s	s	μ	μ	μ	km.	Lower course of the River Kinu, Kwanto districts.		
			7	17	42.2								
			7	17	45.2								
			7	18	19.9								
			7	18	34.6							3.4	
			7	18	35.1							2.1	± 130
			7	18	43.1							2.3	± 187
			7	18	49.9							2.7	+185
			7	19	22.5								+214
2	" 1	P F	18	47	32.0					N. off Tisima Islands.			
			18	56	—								
3	" 3	e F	7	32	09.8					In Tokyo Bay			
			7	34	39.8								

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
4	Jan. 8	e	10	07	35.4					341	S. sea off Tyosi, Tiba prefecture.
		L	10	08	21.3						
		MN	10	08	45.4	2.1	+43				
		F	10	13	30.4						
5	" 9	eP	5	52	12.5					172	Kii Strait.
		L	5	52	35.6						
		MN	5	52	37.7	1.5	± 14				
		ME	5	52	38.8	1.1		± 13			
		F	5	58	—						
6	" 10	iPE	3	32	48.0					163	N. part of Tango province.
		L	3	33	10.0						
		ME	3	33	11.4	1.2		+18			
		MN	3	33	11.4	1.3	+15				
		F	3	37	—						
7	" 16	eP	4	08	51.0					259	Lower course of the River Kinu, Kwanto districts.
		L	4	09	25.9						
		MN	4	09	50.8	2.1	± 29				
		F	4	15	21.5						
8	" 18	e	13	11	40.7						SW. sea off Hatizyo Island.
		F	13	17	—						
9	" 24	eP	21	36	46.4					374	Kasima-nada.
		L	21	37	30.1						
		MN	21	38	02.8	4.5	+29				
		ME	21	38	11.7	3.5		+21			
		F	21	44	—						
10	" 26	e	18	52	34.6						SSE. sea off Bonin Islands.
		F	19	26	—						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
11	Jan. 28	$\overline{P}$	22	20	23.9					45	Felt slightly at Nagoya, lower course of the River Ibi.
		L	22	20	30.2						
		M _E	22	20	30.5	—		—94			
		M _N	22	20	36.0	—	+57				
		F	22	23	—						
12	Feb. 2	eP	22	35	12.2						Lower course of the River Kinu.
		F	22	40	—						
13	" 3	e	13	54	27.6						Aleutian Islands.
		F	14	03	—						
14	" 3	eP	18	50	17.9					384	S. sea off Kinkwa-zan, Miyagi prefecture. Felt strongly in epicentral regions.
		L	18	51	09.7						
		M _{E1}	18	51	27.8	2.4		+70			
		M _{E2}	18	51	55.8	2.1		+82			
		M _N	18	51	46.0	2.6	±70				
		F	19	00	—						
15	" 6	e	3	58	38.0						Very faint record.
		F	4	06	35.7						
16	" 7	ePN	13	23	58.6					173	Course of the River Imidu, Toyama prefecture.
		L	13	24	21.9						
		M _N	13	24	28.4	1.7	+71				
		M _Z	13	24	29.9	1.7			+63		
		M _E	13	24	34.0	3.2		+59			
		F	13	31	—						
17	" 9	eP	10	13	06.6					114	Upper course of the River Zindū, Hida province.
		L	10	13	22.0						
		F	10	15	32.1						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
18	Feb. 11	iP	21	10	56.1	3.2		+376 (scale out)			Lower course of the River Kogai, Hidati province. Needle of N-S. component had run off.
		S	21	11	10.6						
		L	21	11	32.2						
		ME	21	11	51.2						
		MN	21	12	—						
		C	21	13	15.5						
		F	21	30	—						
19	" 15	e	14	00	52.5						Local shock in Kii province.
		F	14	02	—						
20	" 18	e	9	49	37.0						After shock of the Kitatango- Earthquake.
		F	9	51	25.5						
21	" 20	eP	3	03	29.6	2.4	-52	-50		291	About 55km. NW off the City of Okayama. Tyugoku districts.
		L	3	04	08.9						
		MN	3	04	35.1						
		ME	3	04	50.4						
		F	3	08	32.6						
22	" 26	$\overline{P}$	13	36	04.6	—		-24		25	Felt slightly at Nagoya, epicentre upper course of the River Ibi.
		L	13	36	08.0						
		ME	13	36	08.5						
		F	13	37	38.5						
23	Mar. 7	e	15	19	40.3						Far off Ensyu-nada.
		F	15	22	18.0						
24	" 7	e	22	49	17.8					8220	A distant earthquake perhaps in South Sea.
		eS	22	58	49.0						
		F	23	10	—						
25	" 8	e	18	16	27.7						Middle course of the River Mogami.
		F	18	21	—						
26	" 9	e	10	59	54.7						A distant earthquake epicentre unknown.
		F	11	06	—						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
27	Mar. 9	eP	17	44	22.3						E. coast of Kwanto districts.
		F	17	50	—						
28	" 9	eP	18	15	23.5					6610	A distant earthquake, perhaps in South Sea.
		eS	18	23	32.0	20.8		—470			
		ME	18	40	16.0						
		F	20	08	—						
29	" 11	e	12	03	35.8						Upper course of the River Maruyama
		F	12	05	32.4						
30	" 11	e	13	14	03.7						Local shock near Nagoya.
		F	13	15	29.0						
31	" 11	e	13	18	02.0						Upper course of the River Ibi, Gihu prefecture.
		F	13	19	07.2						
32	" 12	P	1	46	51.7					79	Upper course of the River Ibi, Gihu prefecture
		L	1	47	02.4						
		F	1	49	—						
33	" 16	iPE	5	11	49.4						A distant earthquake in South Sea.
		F	6	09	—						
34	" 23	eP	1	22	05.1					273	Upper course of the River Naka. Musasi province.
		S	1	22	29.3						
		L	1	22	41.9						
		MN	1	22	47.5	1.5	+57				
		ME	1	22	51.8	2.5		—47			
		F	1	31	20.6						
35	" 23	eP	18	34	57.5					125	E. sea off Omae-zaki. Siduoka prefecture.
		L	18	35	14.3						
		ME	18	35	17.0	1.3		± 12			
		F	18	39	—						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	AZ		
			h	m	s	s	μ	μ	μ	km.	
36	Mar. 29	iP	5	07	15.8					383	SW. sea off Hatizyo Island. Deep focus.
		$\overline{P}$	5	07	20.2						
		L	5	08	07.4						
		ME	5	08	17.5	3.4		-613			
		MZ	5	08	20.1	2.8			-156		
		F	5	23	—						
37	April 8	e	8	58	33.7					233	Lower course of the River Kogai, Kwantō districts.
		L	8	59	05.1						
		ME	8	59	22.0	2.0		+12			
		MN	8	59	27.0	1.4	± 10				
		F	9	02	—						
38	" 11	e	16	24	03.8					395(?)	S. part of Lake Biwa.
		eL	16	24	58.1						
		F	16	28	—						
39	" 12	eP	16	36	55.0					245	Middle course of the River Kogai.
		L	16	37	27.9						
		ME	16	37	50.3	2.8		-29			
		F	16	43	—						
40	" 12	e	20	37	18.3						Local shock near Gihu.
		F	20	38	03.0						
41	" 22	eP	4	57	51.4					1587	SSE. sea off the Cape of Nossahu, Hokkaido.
		L	5	00	03.9						
		MN	5	00	41.6	3.6	+21				
		F	5	08	—						
42	May 8	e	4	49	36.9					1825	Okhotsk sea. F phase unknown because of the breaking out of No. 43.
		L	4	52	25.9						
		ME	4	52	33.4	3.7		± 28			
		MN	4	52	43.1	3.6	+41				
		F	—	—	—						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
43	May 8	e	—	—	—						Off Miyako, Iwate prefecture
		L	5	00	06.3						
		F	5	06	—						
44	" 14	e	22	34	15.9					1430	A distant earthquake, epicentre unknown.
		eS	22	37	45.6						
		F	0	37	—						
45	" 17	e	11	02	19.9						Ditto.
		F	11	10	48.0						
46	" 17	eP	16	56	37.2					249	S. sea off Bōsō peninsula.
		L	16	57	10.6						
		ME	16	57	44.8	3.1		± 15			
		MN	16	57	50.4	1.8	+28				
		F	17	03	—						
47	" 17	e	19	58	25.9						Tokyo Bay.
		F	20	00	—						
48	" 18	e	0	23	20.7						S. sea off Bōsō peninsula.
		F	0	30	—						
49	" 19	eP	9	33	06.1					341	Kasima-nada.
		$\bar{P}$	9	33	10.0						
		S	9	33	29.0						
		L	9	33	46.7						
		ME	9	34	16.7	1.8		+204			
		MN	9	34	18.7	1.8	± 166				
		Mz	9	37	00.0	1.9			+16		
		F	9	38	20.0						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
50	May 20	iP	16	29	52.7					270	NE. part of Tokyo Bay. Strong shock under Tiba prefecture.
		S	16	30	21.0						
		L	16	30	29.1						
		MN ¹	16	30	54.6	1.7	+145				
		MN ²	16	31	16.4	1.7	+140				
		ME ¹	16	30	25.0	1.7		+175			
		ME ²	16	30	55.9	1.7		+145			
		Mz	16	30	51.8	1.9			-272		
		C	16	33	50.4						
		F	16	40	45.0						
51	" 20	iPN	17	32	48.0					240	After shock of the above earthquake.
		L	17	33	20.3						
		ME	17	33	39.4	4.4		± 31			
		MN	17	33	43.3	2.2	± 39				
		F	17	39	—						
52	" 20	eP	17	59	24.1					216	Ditto.
		L	17	59	53.2						
		F	18	02	35.2						
53	" 20	eP	19	23	27.1					230	Ditto.
		L	19	23	58.1						
		MN	19	24	18.6	1.9	± 100				
		ME	19	28	30.5	1.8		± 87			
		F	19	29	01.1						
54	" 22	e	20	25	00.5					262	Kasima-nada.
		eL	20	25	35.8						
		F	20	30	52.0						
55	" 22	e	20	41	59.8					235	After shock of No. 50
		eL	20	42	31.4						
		F	20	45	—						



No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
							AN	AE	Az		
			G.	M.	T.						
			h	m	s	s	μ	μ	n'	km.	
56	May 24	e	11	33	01.6					246	Ditto
		eL	11	33	34.7						
		F	11	36	48.3						
57	" 27	e	5	42	09.2					269	E. sea off Miyako, Iwate prefecture.
		eL	5	42	45.4						
		ME	5	44	25.6	4.6		± 7			
		MN	5	44	14.0	4.1	+24				
		F	5	50	39.2						
58	" 27	iP	9	52	05.2					1327	E. sea off Miyako, Iwate prefecture. (perhaps in Tuscarora Deep) This was observed at western coast of America.
		$\overline{P}$	9	52	15.5						
		eS	9	52	52.6						
		L	9	53	38.1						
		ME ¹	9	54	13.4	4.3		+736			
		ME ²	9	54	33.8	3.9		+796			
		MN ¹	9	54	15.8	4.5	-844				
		MN ²	9	54	26.9	4.5	-906				
		Mz	9	53	58.7	2.9			+43		
59	" 27	F	11	—	—						
60	" 28	e	10	59	10.8						NE. sea off Miyako.
		F	11	07	—						
61	" 28	e	13	35	49.0						Ditto.
		F	13	41	—						
61	" 28	eP	15	37	19.1					1254	E. sea off Miyako.
		$\overline{P}$	15	37	28.3						
		eS	15	38	02.4						
		L	15	38	40.8						
		ME	15	38	51.9	2.9		+138			
		MN ¹	15	39	02.4	3.8	+188				
		MN ²	15	39	18.5	4.2	+172				
		CN	15	41	25.6						
61	" 28	F	15	50	—						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T		AN	AE	Az		
			h	m	s		μ	μ	μ	km.	
62	May 28	e	15	54	01.1					1335	NE. sea off Miyako.
		L	15	55	35.2						
		ME	15	56	03.2	3.9		-22			
		MN	15	56	14.3	3.0	-15				
		F	16	03	—						
63	" 28	e	19	31	16.5						Ditto.
		F	19	38	—						
64	" 28	e	21	09	54.7					364	Lower course of the River Kinu.
		S	21	10	25.4						
		L	21	10	43.7						
		ME	21	10	50.3	3.8		-48			
		MN	21	10	57.2	3.9	+31				
		F	21	17	—						
65	" 29	e	9	51	34.6						SE. sea off Miyako.
		F	9	57	—						
66	" 30	e	3	36	17.4					325	Kasima-nada.
		eS	3	36	37.1						
		L	3	37	01.2						
		ME	3	37	39.1	2.1		± 26			
		MN	3	37	30.7	3.5	± 16				
		F	3	43	31.0						
67	" 31	e	7	27	33.0					1415	ENE. sea off Miyako.
		S	7	28	29.4						
		L	7	29	19.2						
		ME	7	29	46.4	3.2		+63			
		MN	7	30	23.9	4.0	+39				
		F	7	38	—						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre Distance	Remarks
			G.	M.	T.		A_N	A_E	A_Z		
			h	m	s	s	μ	μ	μ	km.	
68	May 31	e	8	37	32.8					1293	Ditto
		L	8	38	58.9						
		MN	8	39	44.9	4.5	+28				
		F	8	46	—						
69	" 31	e	9	57	51.4						Ditto.
		F	10	03	—						
70	" 31	e	10	04	19.2						E. sea off Miyako.
		F	10	11	—						
71	" 31	e	12	34	02.8					386	Kasima-nada.
		$\bar{P}$	12	34	12.2	3.1		+47			
		S	12	34	35.8						
		L	12	34	54.8						
		ME	12	35	09.5	3.9		-81			
		MN	12	35	11.2	3.1	-81				
		F	12	43	—						
72	" 31	e	13	51	51.8						Phillipine Islands.
		F	13	58	—						
73	" 31	e	21	00	27.5						Faint record.
		F	21	07	—						
74	June 1	e	4	58	23.8					1280	ENE sea off Miyako, Iwate prefecture.
		L	4	59	49.4						
		ME	5	00	26.4	3.0		+16			
		F	5	06	—						
75	" 1	eP	12	25	12.1					1258	Ditto.
		L	12	26	34.4						
		ME ₁	12	26	53.3	4.5		-36			
		ME ₂	12	27	11.9	4.0		-36			
		MN ₁	12	26	52.4	5.5	-47				
		MN ₂	12	27	13.5	5.0	-67				
		F	12	35	—						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T		AN	AE	Az		
			h	m	s	e	μ	μ	μ	km.	
76	June 1	e	12	42	59.9					820	Ditto.
		S	12	44	28.9						
		F	12	50	—						
77	" 1	e	13	04	30.1						Ditto
		F	13	08	—						
78	" 1	eP	13	13	57.5					1280	Felt strongly, along the Pacific coast of Oou districts. Epicentre about 110 km. E. off Miyako.
		S	13	14	46.2						
		L	13	15	23.1						
		ME ₁	13	15	45.9	2.5		+358			
		ME ₂	13	16	01.7	2.4		—283			
		MN ₁	13	15	43.2	3.5	+368				
		MN ₂	13	15	58.2	2.3	—595				
		C	13	18	26.9						
79	" 1	e	13	48	35.9						ENE. sea off Miyako.
		F	13	55	—						
80	" 1	e	13	58	46.0						Faint record.
		F	13	04	—						
81	" 1	eP	15	06	53.8					1270	E. sea off Miyako.
		L	15	08	17.9						
		ME	15	08	34.9	4.0		± 16			
		MN	15	08	42.9	3.4	± 16				
		F	15	14	—						
82	" 1	$\overline{P}$	17	38	00.3					97	Lower course of the River Tenryu, Siduoka prefecture.
		L	17	38	13.3						
		ME	17	38	14.6	—		—31			
		MN	17	38	13.3	—	—42				
		F	17	41	—						

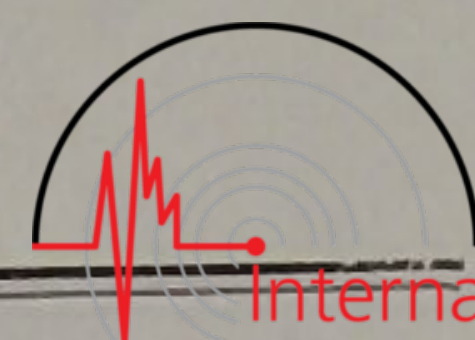


No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
83	June 1	eP	18	23	23.2					1403	E. sea off Miyako.
		S	18	24	27.1						
		L	18	25	07.7						
		ME	18	25	19.7	4.5		+47			
		MN ¹	18	25	19.0	3.6	-50				
		MN ²	18	25	39.7	3.2	-50				
		F	18	33	—						
84	" 1	e	22	08	03.6					1321	Ditto.
		L	22	09	37.0						
		ME	22	10	10.6	4.0		-47			
		MN	22	10	05.7	5.0	-39				
		F	22	17	—						
85	" 2	e	0	04	53.-						Ditto. faint record and all phases lost in micro-seismic motion.
		F	0	08	—						
86	" 2	e	9	11	03.1						Ditto.
		F	9	16	—						
87	" 2	e	17	32	02.9						Ditto.
		F	17	41	—						
88	" 3	iP	8	32	51.5					1481	WSW. sea off Simokosiki Island, Kagosima prefecture. Strong shock at Kagosima. First motion at Nagoya. indicates S57°W.
		L	8	34	48.0						
		ME	8	35	15.4	3.9		±250			
		MN	8	35	21.0	3.8	-484				
		C	8	39	58.9						
		F	8	56	—						
89	" 3	e	9	20	35.4					1638	After shock of No. 88.
		L	9	22	55.7						
		F	9	32	—						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	AZ		
			h	m	s	s	μ	μ	μ	km.	
90	June 5	P	5	57	22.0					1485	Ditto.
		L	5	59	34.4						
		ME	6	00	25.9	4.9		± 50			
		MN	6	00	41.5	3.9	+53				
		F	6	08	—						
91	" 6	eP	17	17	45.5					107	Lower course of the River Tenryu, Siduoka prefecture.
		L	17	17	59.8						
		ME	17	18	28.8	1.8		—15			
		F	17	19	—						
92	" 7	e	6	26	51.1					1394	In the vicinity of Aomori.
		L	6	28	34.3						
		F	6	35	—						
93	" 9	e	14	52	56.4						Bay of Kumihama, Japan Sea coast of Hyogo prefecture.
		F	14	54	—						
94	" 11	eP	4	16	15.5						Near Mt. Odaigahara, Yamato province.
		L	4	16	28.9						
		F	4	20	—						
95	" 11	eP	9	06	49.6					232	Lower course of the River Inuma. Tiba prefecture.
		L	9	07	20.9						
		ME	9	07	40.2	2.6		± 8			
		MN	9	07	43.3	1.7	—26				
		F	9	10	—						
96	" 13	eP	8	06	58.5					186	Middle course of the River Hidaka, Wakayama prefecture.
		L	8	07	23.5						
		ME	8	07	26.5	1.4		± 23			
		MN	8	07	26.7	1.3	—22				
		F	8	11	12.7						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
97	June 14	e	0	29	14.0	2.4		± 16		1198	SE, sea off the cape of Nomagasaki, Kagosima prefecture.
		L	0	30	27.2						
		ME	0	30	34.6						
		F	0	34	—						
98	" 15	eP	6	18	21.2					2574	Perhaps in South Sea.
		L	6	23	04.8						
		F	7	01	—						
99	" 15	e	17	22	06.0					3030	Ditto.
		S	17	26	50.8						
		F	17	47	—						
100	" 17	e	3	38	58.8						A distant earthquake, epicentre unknown.
		F	5	13	—						
101	" 17	e	6	52	14.5						Ditto.
		F	7	08	—						
102	" 17	e	22	43	09.2						Near the Cape of Sioya.
		F	22	45	—						
103	" 17	e	23	31	48.6						S. sea off Siomisaki, Kii province.
		F	23	33	—						
104	" 21	e	16	26	22.4						Ensyu-nada.
		F	16	29	—						
105	July 5	eP	1	37	35.0	2.9	± 16			121	Upper course of the River Masuda, Gihu prefecture.
		S	1	37	44.9						
		L	1	37	51.2						
		MN	1	37	56.3						
		F	1	41	17.-						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	AZ		
			h	m	s	s	μ	μ	μ	km.	
106	July 5	eP	7	52	40.4					274	Tokyo Bay (in the vicinity of Kisaradu)
		S	7	53	17.3						
		F	7	58	20.2						
107	" 7	P	8	40	06.6					184	Kii Strait. Felt slightly at places in the city of Nagoya. Strong shock at E. past of Sikoku.
		iSEN	8	40	31.4						
		eSz	8	40	32.5						
		iLEN	8	40	34.2						
		eLz	8	40	34.9						
		MN	8	40	47.0	3.4	± 204				
		ME	8	40	48.4	—		+173			
		Mz	8	41	00.4	—			—37		
		C	8	45	25.9						
		F	8	48	29.0						
108	" 9	e	8	16	21.3					740	Time uncertain (By Omori's E-W seismometer) Epicentre unknown but its distance from Nagoya may be about 740 km.
		S	8	17	42.4						
		ME	8	18	02.6	12.0		± 65			
		C	8	24	37.3						
		F	8	33	01.3						
109	" 10	eP	14	11	36.0					156	Upper course of the River Huzi, Siduoka prefecture.
		S	14	11	57.0						
		F	14	15	52.0						
110	" 12	ePE	15	18	53.2					566	E. sea off Miyako. (By Omori's Seismometer)
		ePN	15	19	00.2						
		eLE	15	20	09.4						
		eLN	15	20	13.8						
		F	15	24	35.0						
111	" 31	eP	19	30	08.7					657	E. sea off Miyako. Iwate prefecture.
		L	19	31	37.2						
		ME	19	31	57.2	3.0		± 25			
		MN	19	31	56.2	3.0	+47				
		C	19	34	08.2						
		F	19	58	08.2						



No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
112	Aug. 1	eP	2	56	12.9						S. sea off Kuroshiro, Hokkaido.
		F	3	04	08.0						
113	" 2	eP	2	52	15.0					298	NW. sea off Hatizyo Island, (Time uncertain)
		S	2	52	55.1						
		F	2	57	33.0						
114	" 3	eP	7	57	19.8						SE. sea off Miyako.
		F	8	02	18.8						
115	" 5	e	14	47	15.0						South Sea.
		F	14	50	49.4						
116	" 5	eP	15	14	20.0					227	Kumano-nada.
		S	15	14	50.5						
		F	15	19	20.6						
117	" 9	P	13	42	57.1					51	Upper course of the River Suduka, Mie prefecture. Felt slightly at Nagoya.
		S	13	43	04.0	1.0		± 31			
		ME	13	43	06.5	—	± 31				
		MN	13	43	07.9						
		F	13	46	59.0						
118	" 10	e	5	41	18.8						Upper course of the River Arita.
		F	5	42	7.5						
119	" 11	e	6	03	42.7						Faint record.
		F	6	16	02.0						
120	" 11	e	10	58	58.1						Ditto.
		F	11	00	32.0						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
							AN	AE	Az		
			G.	M.	T						
			h	m	s	s	μ	μ	μ	km.	
121	Aug. 14	eP	8	26	46.3					230	In the vicinity of Tiba.
		S	8	27	03.5						
		L	8	27	17.3						
		ME	8	27	37.6	2.0		-31			
		MN	8	27	42.5	2.8	+34				
		F	8	32	37.5						
122	" 16	eP	3	50	59.0					613	W. sea off Bonin Islands.
		L	3	52	21.6						
		F	3	59	49.8						
123	" 16	eP	16	46	10.3					809	E. off the mouth of the River Kuzi, Iwate prefecture.
		L	16	47	59.3						
		F	16	55	25.8						
124	" 17	iP	16	52	05.2	—		-9			Middle part of Tita peninsula. Felt slightly at Tokonabe and Anzyo.
		F	16	52	45.2						
125	" 23	e	1	21	16.5						NE. sea off Bonin Islands.
		F	1	23	16.6						
126	" 23	eP	1	23	45.5					108	
		L	1	24	00.0						
		F	1	27	54.5						
127	" 24	e	21	52	11.7						South Sea.
		F	21	57	53.5						
128	" 25	eP	7	03	54.0					27	Middle part of Kii strait.
		L	7	03	57.6						
		MN	7	03	58.7	—	-23				
		ME	7	04	00.7	—		±23			
		F	7	06	25.6						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
129	Aug. 26	eP	13	30	32.7					200	N. sea off Miyake Island.
		S	13	30	59.6						
		F	13	33	28.0						
130	" 26	eP	18	12	27.9					388	Kasima-nada.
		$\bar{P}$	18	12	33.5						
		S	18	13	20.2						
		ME	18	13	33.5	4.1		± 86			
		MN1	18	13	35.6	3.0	± 109				
		MN2	18	13	40.2	3.0	± 109				
		C	18	18	46.3						
		F	18	21	23.5						
131	" 27	i $\bar{P}$ N	17	59	42.5	—	+15			312	SW. sea off Hatizyo Island. Depth of focus about 300 km.
		i $\bar{P}$ E	17	59	42.8	—		+19			
		i $\bar{P}$ Z	17	59	43.3	—			+ 7		
		L	18	00	24.5						
		ME	18	00	25.1	3.8		± 35			
		MN	18	00	27.6	3.7	± 39				
		C	18	03	12.1						
		F	18	05	53.5						
132	Sept. 1	e	6	18	47.8						A distant earthquake, epicentre unknown.
		F	6	21	24.0						
133	" 1	e	6	41	13.1						Perhaps the rear part of the above earthquake.
		F	6	54	51.5						
134	" 3	e	5	36	54.1						Very faint record.
		F	5	38	50.0						
135	" 4	eP	16	47	54.1	—	+40	+25		32	Local shock, epicentre ESE of Nagoya.
		iSEN	16	47	58.4						
		F	16	50	29.8						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
							AN	AE	Az		
			G.	M.	T						
			h	m	s	s	μ	μ	μ	km.	
136	Sept. 6	eP	6	30	12.3					704	E. sea off Miyako, Iwate prefecture.
		L	6	31	47.1						
		ME	6	32	26.2	3.0		+31			
		MN	6	32	31.9	3.9	± 51				
		C	6	35	16.4						
		F	6	39	49.1						
137	" 11	e	2	57	05.7						A distant earthquake.
		F	3	07	48.5						
138	" 12	eP	2	14	09.6					324	Kasima-nada.
		L	2	14	53.3						
		MN	2	15	13.3	3.2	± 20				
		F	2	18	45.9						
139	" 13	e	3	33	10.6						A distant earthquake occurred in South Sea.
		F	3	43	44.9						
140	" 19	eP	8	17	37.8					891	SSW. sea off Hatizyo Island. Focus is supposed very deep.
		$\overline{P}$	8	17	50.0						
		S	8	18	51.9						
		L	8	19	37.9						
		MN	8	19	42.2	3.0	± 16				
		C	8	22	44.6						
		F	8	33	38.2						
141	" 22	e	6	53	40.3						E. sea off Bōsō peninsula.
		F	6	59	35.5						
142	" 22	eP	7	40	58.9					6180	A distant earthquake occurred in South Sea.
		S	7	48	45.2						
		L	8	12	35.6						
		F	8	55	35.5						
143	" 23	e	2	10	06.2						N. part of Bungo Strait.
		F	2	12	35.2						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
144	Sept. 23	eP	3	52	32.0					243	Kasima-nada.
		L	3	53	04.7						
		F	3	58	35.2						
145	" 23	eP	6	56	01.9					450	Bay of Koidumi, Miyagi prefecture. Strong shock in epicentral regions.
		S	6	57	02.6						
		L	6	57	29.7						
		MN	6	58	37.4	4.6	± 31				
		ME	6	58	49.5	4.6		± 31			
		F	7	07	35.1						
146	" 24	e	10	19	30.5						Probably the pulsatory motion.
		F	10	35	33.5						
147	" 25	e	1	43	56.9						Upper course of the River Kagai.
		F	1	47	32.5						
148	" 25	iP	4	59	47.6	—	+16	+ 8	+ 2	337	E. part of Suho-nada about 60km to NNE of Ooita. Strong shock in western part of Tyugoku, Sikoku and eastern part of Kyusyu.
		iSN	5	00	32.9						
		iSE	5	00	33.2						
		$\bar{S}$	5	00	44.6						
		LN	5	01	14.4						
		Mz	5	01	05.9	3.2			± 10		
		ME	5	01	31.4	3.3		± 63			
		MN	5	01	30.4	3.0	± 85				
		C	5	04	46.8						
		F	5	20	—						
149	" 29	eP	21	19	07.2					321	ESE. sea off the Cape of Sioya,
		L	21	19	50.5						
		MN	21	20	08.6	1.6	± 31				
		ME	21	20	09.5	1.7		± 31			
		F	21	29	26.7						
150	" 30	e	16	04	46.3						Faint record.
		F	16	07	15.6						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
151	Oct. 1	e	12	52	28.7						S. sea off the cape of Otiisi-zaki.
		F	12	57	24.4						
152	" 5	P	6	59	04.9					204	Middle course of the River Arakawa. Strong shock in Middle part of Kwanto districts.
		$\overline{P}$	6	59	07.0						
		S	6	59	32.4						
		ME1	6	59	38.4	2.4		± 188			
		MN	6	59	41.1	—	± 157				
		Mz	6	59	54.5	2.4			+64		
		MN2	7	00	00.9	3.4	—126				
		ME2	7	00	05.2	2.0		± 220			
153	" 12	F	7	13	09.0					158	Upper course of the River Góno-kawa.
		e	12	24	38.7						
		L	12	25	00.0						
154	" 13	F	12	28	09.0					158	Upper course of the River Góno-kawa.
		e	15	23	01.6						
155	" 15	F	15	35	07.2					158	Upper course of the River Góno-kawa.
		e	15	35	07.2						
156	" 15	e	6	40	02.7					158	Upper course of the River Góno-kawa.
		F	6	43	34.7						
157	" 17	e	14	29	17.3					7000	A distant earthquake epicentre unknown.
		S	14	37	45.4						
		L	14	52	19.0						
		F	15	25	04.6						
158	" 17	eP	3	29	29.5					158	Lower course of the River Sakaho, Kanagawa prefecture.
		L	3	29	50.5						
		MN	3	29	57.0	1.6	± 31				
159	" 17	ME	3	31	14.0	2.0		+31		158	Lower course of the River Sakaho, Kanagawa prefecture.
		F	3	37	02.0						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
159	Oct. 20	eP	12	48	33.4					1022	S. sea off Yakusima, Kagosima prefecture. Slight shock at Miyasaki and Kagosima.
		$\bar{P}$	12	48	45.2						
		S	12	49	59.1						
		L	12	50	50.7						
		ME1	12	51	11.2	3.9		± 61			
		ME2	12	51	29.7	4.4		± 61			
		ME3	12	52	12.5	4.5		± 63			
		MN1	12	51	05.8	3.3	± 63				
		MN2	12	51	15.7	3.3	± 63				
		MN3	12	51	51.6	4.3	± 95				
		F	13	05	—						
160	" 21	e	0	11	35.9						Kii Strait.
		F	0	13	57.0						
161	" 23	e	4	30	20.3						NE. sea off Miyako.
		F	4	35	54.9						
162	" 23	e	17	57	02.5						Okhotsk Sea.
		F	18	04	53.3						
163	" 24	e	12	54	28.1						NE. sea off the Cape of Sioya.
		F	12	56	53.1						
164	" 24	e	13	17	53.1					341	Ditto.
		L	13	18	39.1						
		F	13	22	53.1						
165	" 26	e	15	44	—					265	Bay of Atumi, Aiti prefecture. Focus, may be deep.
		L	15	45	—						
		F	15	48	—						
166	Nov. 1	e	16	30	01.4					507	SSE. sea off Hatizyo Island.
		L	16	31	09.6						
		F	16	35	40.7						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
							AN	AE	AZ		
			G.	M.	T.						
			h	m	s	s	μ	μ	μ	km.	
167	Nov. 3	e	11	05	14.1					621	S. sea off Vladivostock. Time of occurrence uncertain by the microseismic motion.
		L	11	06	37.7						
		F	11	11	38.7						
168	" 4	e	2	35	50.2						SE. sea off Bōsō peninsula.
		F	2	40	37.4						
169	" 5	e	4	43	25.5						Upper course of the River Tikugo, Kyusyu.
		F	4	46	36.0						
170	" 5	iPz	7	49	52.8	—			+ 6		Upper course of the River Masuda, Gihu prefecture. P phase Occured very suddenly and its amplitude is comparatively large.
		iPN	7	49	53.2	—		—30			
		iPE	7	49	53.5	—	+26				
		F	7	56	04.0						
171	" 16	eP	7	20	56.6					45	N. off Gihu.
		iS	7	21	03.1						
		MN	7	21	30.1	1.8	±16				
		ME	7	21	31.1	2.2		+16			
		F	7	23	23.3						
172	" 20	e	20	55	10.2						Far E. sea off Miyako.
		F	20	59	18.2						
173	" 23	e	1	38	10.4						Kasima-nada
		F	1	40	15.1						
174	" 23	e	3	17	10.0						Near the city of Mito.
		F	3	20	14.7						
175	" 23	eP	17	49	31.9					268	Far S. sea off Tosa province.
		eS	17	50	08.0						
		F	17	56	54.3						

No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
176	Nov. 28	eP	10	51	32.4					9050	South Sea.
		L	11	1	45.4						
		F	11	39	09.3						
177	Dec. 1	eP	4	26	39.4					21000	A distant earthquake epicentre in Chile.
		eS	4	51	30.7						
		L	5	18	29.-						
		F	6	26	06.-						
178	" 13	eP	20	06	53.9					455	E. sea off Bōsō peninsula.
		iS	20	07	36.1						
		L	20	07	55.2						
		MN1	20	07	58.9	2.3	-156				
		MN2	20	08	20.8	2.3	-141				
		ME1	20	08	04.9	1.2		+101			
		ME2	20	08	08.0	1.7		+94			
		F	20	16	0.0						
179	" 19	eP	11	43	29.7					3510	South Sea. Very faint record in E-W component.
		L	11	50	36.5						
		MN	11	53	30.5	24.0	+33				
		F	12	50	—						
180	" 19	e	15	19	10.1					1830	S. sea off Bonin Islands.
		eS	15	22	18.7						
		F	15	29	—						
181	" 21	eP	1	41	37.8					358	NE. sea off Tyōsi Tiba prefecture.
		L	1	42	26.0						
		MN1	1	42	41.1	3.4	+43				
		ME	1	42	57.7	2.8		-36			
		MN2	1	43	09.1	3.2	+42				
		F	1	49	01.5						
182	" 22	e	15	00	25.8						Very faint record
		F	15	04	02.5						



No.	Date	Phase	Time			Period	Amplitude			Δ Epicentre- Distance	Remarks
			G.	M.	T.		AN	AE	Az		
			h	m	s	s	μ	μ	μ	km.	
183	Dec. 22	e	17	42	06.2					615	ENE. sea off Kinkwa-zan, Miyagi prefecture.
		L	17	43	39.1						
		F	17	47	02.5						
184	" 28	e	13	26	10.7						In the vicinity of the Lake Kasumiga-ura.
		F	13	28	01.3						
185	" 28	e	14	25	33.8						A distant earthquake(South Sea)
		L	14	32	01.3						
		F	15	14	—						