

SEISMOLOGICAL BULLETIN

OF THE

AITIKEN METEOROLOGICAL OBSERVATORY

NAGOYA, JAPAN.

VOL. I. No. 5.

1930

NAGOYA

May, 1931.

SEISMOLOGICAL BULLETIN

OF THE

AITIKEN METEOROLOGICAL OBSERVATORY

NAGOYA JAPAN

CONSTANTS

Latitude and longitude of the center of the Seismographic room.

$$\varphi = 35^{\circ}10' \text{ N}$$

$$\lambda = 135^{\circ}58' \text{ E from Greenwich}$$

Altitude, 51.7^m above mean sea level.

Lithologic foundation, Schottered clay (Tertiary)

Time. All determinations are reduced to Greenwich mean civil time.

Constants of the Seismographs

Apparatus	Component	T^0	ξ	$\frac{r}{T^0 2}$	V
Wiechert 200kg	N	6.0	16	0.02	70
	E	6.0	15	0.01	70
" 80kg	Z	4.0	7	0.04	60
Omori 16kg	N	20.0	3	0.02	20
" 16kg	E	20.0	4	0.04	20

January

Seismological Bulletin



Seismo
Centre

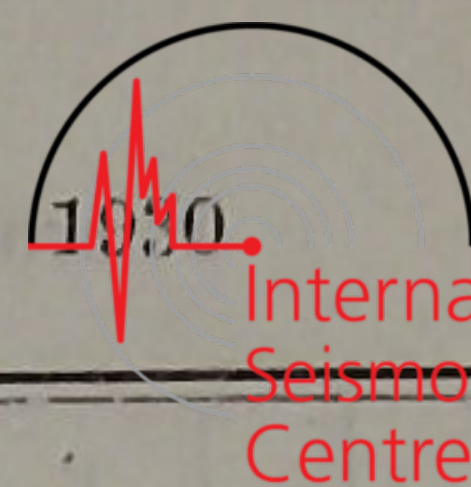
No	Date	P Phase			S Phase			Max. Amplitude				F Time G. M. T.	Δ Epicen- ter Distance	Remarks		
		Time			Time			Comp.	Time		amp. μ				Period	
		G	M.	T.	G	M.	T.		G	M.						T.
1	1	i	1	24 05.8	1	27 35.6	N	1	27 44.6	+65	4.9	1	35 14—	2080	P _E =+1 μ , N _P =-1 μ , Kamtchatka district.	
							E	1	28 18.0	-51	3.6					
2	5	e	18	55 43.4	18	58 07.3	N	18	58 39.6	+22	2.4	10	02 14—	1360	$\psi=147.8^{\circ}\text{E}$, $\lambda=43.1^{\circ}\text{N}$. SE off Kurile Is.	
							E	18	58 54.9	-22	—					
3	5	e	23	07 37.5	23	08 31.6						23	13 14—	402	NE off Sioya C. $\psi=141.4^{\circ}\text{E}$ $\lambda=37.1^{\circ}\text{N}$	
4	10	e	18	15 47.8	18	16 46.1						18	25 26—	432	$\psi=132.0^{\circ}\text{E}$ $\lambda=31.1^{\circ}\text{N}$. Hyuga-nada.	
5	11	e	7	14 38.8								7	19 09—		Coast of Kasima-nada.	
6	11	e	21	22 22.8	21	23 32.6	E	21	23 34.1	-23	3.1			630	NNW off Ogasawara Is.	
							N	21	23 35.2	-16	—					
7	18	e	19	59 47.6	20	00 26.8						20	03 05.1		Epicentre unknown.	
8	19	e	6	50 36.4	15	51 34.5						15	54 36—	431	Upper course of the river Obitu.	
9	21	e	13	11 01.2								13	13 36—		Sea off Kujuukuri hama.	
10	21	e	14	01 58.8								14	06 42—		E off Siriya C.	
11	22	e	22	49 39.5								22	53 49—		SSE off Katuura.	
12	25	e	11	43 22.9	11	44 16.1	E	11	44 29.1	-19		11	49 31—	395	The Kasima-nada. $\psi=141.0^{\circ}\text{E}$, $\lambda=36.3^{\circ}\text{N}$.	
							N	11	44 32.0	-20						
13	26	e	12	24 36.2								12	32 37—		SE off Ogasawara Is.	
14	27	e	10	38 20.1								10	40 34—		Lower course of the river Edo.	
15	28	e	13	10 40.5	13	10 54.2						13	12 11—	102	The Ensyu-nada.	
16	30	e	18	20 55.9								18	24 35—		S off Erimo C.	

February

17	1	e	23	08	26.7	23	09	21.7	E	23	09	48.8	-28	—	23	15	36—	408	The Kasima-nada. $\psi = 141.5^\circ\text{E}$ $\lambda = 36.1^\circ\text{N}$
									N	23	09	37.5	-48	2.5					

February

Aitiken Meteorological Observatory



No.	Date	P			S			Max.				F			Δ K.m	Remarks			
		G.	M.	T.	G.	M.	T.	Comp.	Time			amp. μ	Period	G.			M.	T.	
									G.	M.	T.								
18	2	e	21	00	27.6	21	02	14.1	E	21	03	21.6	± 12	—	21	07	34.0	345	Kasumigaura. $\phi=140.3^{\circ}\text{E}$ $\lambda=36.0^{\circ}\text{N}$
19	5	e	4	00	32.3	e	4	02	11.3						4	04	15—		The Kasima-nada. $\phi=141.1^{\circ}\text{E}$ $\lambda=36.0^{\circ}\text{N}$
20	5	e	13	29	51.2	13	31	24.5	E	13	31	50.2	—14		13	35	47—	860	Near Mt. Kaminari. $\phi=130.8^{\circ}\text{E}$ $\lambda=33.8^{\circ}\text{N}$ Strong felt at the centre.
									N	13	31	47.6	+17	2.8					
21	7	e	2	41	08.4	2	41	29.5							2	44	19—	157	Hukayama in Kyoto pref.
22	7	e	3	34	45.6	3	35	02.8							3	41	07—	128	Ditto
23	11	e	0	12	35.1	0	13	59.3	E ₁	0	13	06.3	+286	2.7	0	24	40—		Sea off mouth of the river Kii. $\phi=135.0^{\circ}\text{E}$ $\lambda=34.2^{\circ}\text{N}$ Slight damages in Wakayama pref.
									N ₁	0	13	06.3	+312	2.7					
									E ₂	0	13	55.3	+283	2.7					
									N ₂	0	14	11.9	+254	2.7					
									Z	0	14	11.9	+87	2.2					
24	13	e	20	24	?	20	24	40.6							20	25	53—		Kwarenko. (Time uncertain)
25	15	e	1	27	10.6										1	31	16—		SE off Hokkaido.
26	20	e	2	29	20.4										2	39	28—		Sea off Siobukizaki. $\phi=139.1^{\circ}\text{E}$ $\lambda=35.0^{\circ}\text{N}$
27	20	e	4	46	41.3	4	47	11.9							4	49	36—	228	Ditto.
28	20	i	23	37	29.7	23	37	52.3	N	23	37	58.5	—79	*				168	P _E =5 μ . P _N =+3 μ . P _Z =+11 μ . Ditto. Strong shock at Ito in Idu.
									E	23	38	16.5	+64	1.3					
									Z	23	38	20.9	+26	1.3					
29	21	e	13	12	40.1										13	15	19—		Ditto.
30	21	e	13	45	10.0										13	47	05—		Ditto.
31	21	e	14	10	26.4										14	11	55—		Ditto.
32	21	e	21	55	33.0	21	55	57.4							21	58	51—	181	Ditto.
33	21	e	23	30	41.4										23	31	34—		Ditto.
34	22	e	0	08	48.7	0	09	12.2							0	12	03—	175	Ditto.
35	22	e	3	50	16.9										3	53	24—		Ditto. (Time uncertain)
36	22	e	5	48	37.1	5	49	00.3							5	54	20—	173	Ditto.
37	22	e	9	22	14.3	9	22	38.9							9	24	19—	183	Ditto.
38	22	e	9	26	02.2										9	27	02—		Ditto.
39	22	e	9	37	07.1										9	38	02—		Ditto.



Cent

No.	Date	P Phase			S Phase			Max. Amplitude				F		Δ Epice- ter Distance	Remarks			
		Time			Time			Comp.	Time		amp. μ	Period	Time					
		G.	M.	T.	G.	M.	T.		G.	M.			T.					
40	22	i	11	22 23.2	11	22	48.0	E	11	23	05.7	-45		11	31	02-	184	$P_E = -7\mu$. $N = -5\mu$. $Z = +5\mu$. Ditto.
								N	11	23	06.9	± 60	2.8					
								Z	11	23	13.6	± 13	1.3					
41	22	e	11	39 52.1										11	41	10-		Mouth of the river Kurobe.
42	22	e	18	20 48.6										18	22	09-		Sea off Siobukisaki.
43	22	e	23	15 46.5										23	16	48-		Ditto.
44	23	e	1	22 21.4										1	25	02-		Ditto.
45	23	e	7	56 05.5										7	58	27-		Sea off Hion misaki C.
46	23	e	10	16 32.2										10	22	17-		S off Otiisi C.
47	23	e	10	37 28.2										10	38	55-		Sea off Siobukisaki.
48	23	e	20	13 23.9										20	14	30-		Ditto.
49	23	e	20	18 50.1										20	24	18-		Ditto.
50	23	e	20	53 45.5										20	56	28-		Ditto.
51	24	e	10	49 21.6										10	52	28.5		NE off Siriya C.
52	24	e	20	57 42.1	20	58	36.0							21	06	40-	400	Near Kii peninsula. (daph of fous)
53	28	e	9	29 30.6										9	31	28.3		Sea off Siobukisaki.
54	28	i	9	31 28.3	9	31	51.3	N	9	31	55.3	± 35		9	37	51-	171	Ditto. $P_E = -7\mu$. $N = -5\mu$. $Z = +5\mu$
								Z	9	32	25.3	± 13						
								E	9	32	31.1	± 40	1.5					
55	28	e	12	11 03.2										12	13	15-		Ditto.

March

56	1	e	13	38	12.7	13	38	37.3						183	Sea off Siobukisaki.
57	1	e	14	52	09.1										Ditto.
58	1	e	14	57	23.6										Ditto.
59	1	e	17	43	18.6	17	43	50.9						240	Near city of Tiba.
60	2	e	3	27	17.8										Sea off Siobukisaki.
61	3	e	12	14	55.0	12	15	18.2	N	12	15	23.0	-32	173	Ditto.
									E	12	15	36.8	± 16		
62	3	e	13	04	48.0	13	05	15.0							Ditto.
63	3	e	13	55	36.8	13	56	00.3						174	Ditto.

March

Aitiken Meteorological Observatory

1930

International
Seismological
Centre

Centre

No.	Date	P			S			Max.				F			Δ K.m.	Remarks			
		G.	M.	T.	G.	M.	T.	Comp.	Time G. M. T.			amp. μ	Period	G.			M.	T.	
64	3	e	18	51	05.7	18	51	27.8	Z	18	51	50.3	± 13		18	54	56.0	164	Ditto.
65	3	i	20	11	34.5	20	11	56.3	Z	20	12	15.3	± 18		20	18	45.0	162	EP = -12 μ . Ditto. Slight over all Kwanto.
									N	20	12	16.3	-63						
									E	20	12	30.3	± 62						
66	4	e	14	49	19.5									14	51	32.8		Ditto.	
67	4	e	15	09	00.5	15	09	29.0						15	12	16.0		Ditto.	
68	5	e	10	37	07.2									10	38	06.0		Valley of the river Arita.	
69	5	e	13	17	07.2									13	19	00.0		Central Japan.	
70	5	e	13	32	01.0									13	33	02.0		Valley of the river Arita.	
71	5	e	16	00	32.5	16	00	55.4						16	02	41.0		Sea off Siobukisaki.	
72	5	e	16	17	57.0									16	19	41.0		Ditto.	
73	5	e	16	53	15.4									16	55	24.0		Ditto.	
74	6	i	3	33	34.1	3	35	06.2	E	3	35	09.2	-48		3	41	09.0	850	EP = -6 μ . NP = -6 μ . zP = +2 μ . $\phi = 141.4^\circ$ E $\lambda = 29.6^\circ$ N NNW off Ogasawara Is.
									N	3	35	09.3	± 53	5.1					
									Z	3	35	18.0	-13	1.9					
75	6	e	15	47	20.8									15	48	39.0		Mt. Asama. (Volcano)	
76	6	e	15	52	33.2									15	53	39.0		Sea off Siobukisaki.	
77	6	e	16	01	20.6									16	02	39.0		Ditto.	
78	7	e	6	14	27.0									6	16	38.0		The Kasima-nada.	
79	7	e	10	54	21.7									10	58	56.0		S off Yakusima.	
80	7	e	20	46	02.2	20	46	24.4						20	48	06.0	165	Sea off Siobukisaki.	
81	7	e	23	37	02.5	23	39	15.6						23	42	26.0	1250	E off Sikotan Is.	
82	8	e	11	53	48.8	11	54	12.2						11	55	58.0	174	Sea off Siobukisaki.	
83	8	e	13	19	29.0									13	20	36.5		Ditto.	
84	8	e	13	47	16.2									13	49	36.0		Ditto.	
85	8	e	16	27	51.4	16	28	14.4						16	29	54.0	171	Ditto.	
86	8		19	40	08.8	19	40	32.3	E	19	40	33.4	+33	1.4	19	45	36.0	175	EP = -12 μ . w = 5 μ . z = +5 μ . Ditto. Strong felt Ito vicinity.
									N	19	40	36.4	+48						
									Z	19	40	53.7	± 19	1.3					

March

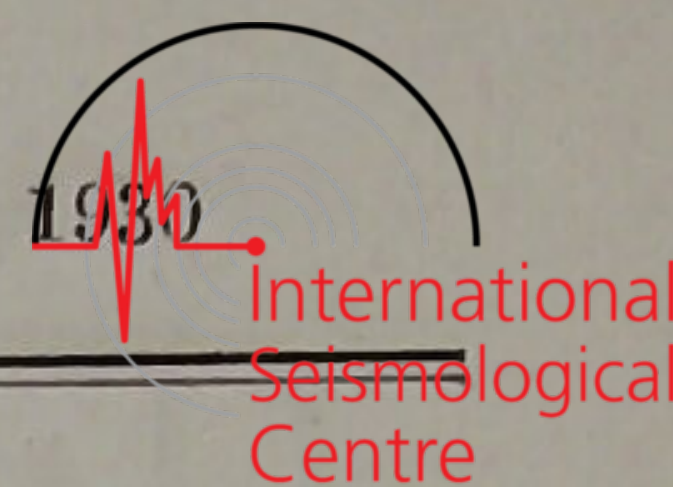
Seismological Bulletin



No.	Date	P Phase			S Phase			Max. Amplitude				F	Δ Epicen- ter Distance	Remarks					
		Time			Time			Comp.	Time		amp. μ				Period				
		G.	M.	T.	G.	M.	T.		G.	M.						T.	G.	M.	T.
87	9	e	0	50	57.7								0	53	35.0		Ditto.		
88	9	e	8	47	48.2								0	50	35.0		Ditto.		
89	9	e	9	18	55.9								9	21	35.0		Ditto.		
90	9	e	9	36	49.4								18	37	35.0		Local shock.		
91	9	e	9	42	31.6	9	44	01.0					9	48	35.0	820	A distant shock.		
92	9	e	10	02	56.7								10	06	31—		Sea off Siobukisaki.		
93	9	e	10	55	03.8	10	55	25.6	Z	10	55	26.7	+32		11	03	35.0	162	Ditto.
									N	10	55	30.2	± 102	2.8					
									E	10	56	02.2	101						
94	9	e	11	14	14.2									11	19	35.0		E off Rikutyu province, $\psi=142.6E$ $\lambda=39.9N$	
95	9	e	20	23	34.4									20	26	34.0		Sea off Siobukisaki.	
96	9	e	21	49	25.5									21	50	27.0		Ditto.	
97	9	e	22	49	14.7									22	51	33.0		Ditto.	
98	10	e	5	54	27.9	5	54	52.6						5	57	33.0	183	Ditto.	
99	10	e	13	46	46.2									13	48	22.0		Ditto.	
100	10	e	15	44	50.0	15	45	14.2						15	47	32.0	180	Ditto.	
101	10	e	16	28	58.1	16	32	41.9	E	16	32	50.9	+58	3.7	16	43	02.0	2245	E off Patience C. (Karahuto)
									N	16	32	57.9	-54	2.4					
									Z	16	32	58.9	± 19	1.4					
102	10	e	17	38	16.2									17	39	33.0		Near Takayama in Gihu pref.	
103	11	e	13	41	27.5									13	44	55.0		Sea off Siobukisaki.	
104	11	e	14	18	20.1									14	23	24.0		Ditto.	
105	11	e	16	41	31.2									16	46	31.0		Valley of the river Kitakami. $\psi=141.3E$ $\lambda=39.2N$	
106	11	e	23	50	28.2									23	52	48.0		Mouth of the river Yoro. (Tiba pref.)	
107	12	e	3	46	55.3	3	47	19.8						3	54	04—	182	Sea off Siobukisaki.	
108	12	e	12	15	03.0									12	19	04.0		Ditto.	
109	12		12	30	12.0									12	31	30.0		Ditto.	
110	12		12	49	52.3									12	49	57.0		Ditto.	
111	12		12	59	52.7									13	00	55.0		Ditto.	

March

Aitiken Meteorological Observatory



No	Date	P			S			Max.				F			Δ K.m.	Remarks		
								Comp.	Time								amp. μ	Period
		G	M.	T.	G.	M.	T.		G.	M.	T.							
112	12	e	13	43	57.0								13	45	58—		Ditto.	
113	12	e	14	26	46.0								14	28	15—		Ditto.	
114	12	e	18	19	52.3								18	21	56—		Ditto.	
115	12	i	19	30	01.1	19	30	22.7	Z	19	30	56.8	-16	—	19	37	21—	160 P:N=-11 μ . Z=+5 μ . Ditto.
								N	19	30	58.1	-52	—	—				
116	12	e	21	34	04.2								21	35	16—		Ditto.	
117	14		5	19	55.5	5	20	20.3	N	5	20	24.5	± 33		5	26	26—	184 Ditto.
								E	5	20	55.9	+29						
118	14	e	6	21	19.2								6	24	43—		E. off Kinkwasan.	
119	14	e	8	14	11.2								8	16	34—		Epicenter unknown.	
120	14		12	05	31.7	12	05	54.7					12	08	25—	171	Sea off Siobukisaki.	
121	14	e	13	18	40.8								13	21	50—		Ditto.	
122	15	i	7	34	18.4	7	34	41.4	E	7	35	11.9	-39	—	7	40	51—	171 P:E=6 μ , N=-5 μ , Z=+5 μ . Ditto.
								N	7	35	11.9	± 35	2.0					
								Z	7	35	04.9	± 16	1.2					
123	15	e	16	08	58.8								16	11	12—		Ditto.	
124	16	e	2	31	04.5								2	32	09—		Ditto.	
125	16	e	5	04	23.0								5	10	51—		Ditto.	
126	16	e	16	32	42.4								16	34	09—		Ditto.	
127	16		17	09	08.8	17	09	32.9					17	11	39—	179	Ditto.	
128	17		17	11	59.5	17	12	22.9					17	16	09—	174	Ditto.	
129	17		17	46	46.6	17	47	13.9					17	50	03—	202	Ditto.	
130	19	i	1	17	13.1	1	17	36.6	Z	1	17	41.0	± 9		1	25	55—	175 P:E=-8 μ , Z=+5 μ . Ditto.
								N	1	17	56.0	± 24	1.2					
								E	1	18	06.2	-29	2.8					
131	20		23	39	25.6	23	39	48.6					23	42	30—	171	Ditto.	
132	21	e	13	48	27.2								13	50	0.10		Ditto.	
133	21	i	14	24	38.4	14	25	04.9	N	14	25	25.5	-48	1.9	14	32	09—	197 P:E=-13 μ N=-6 μ Z=+8 μ . Ditto.
								Z	14	25	28.6	± 16	1.7					
								E	14	25	36.0	-35	—					

March

Seismological Bulletin



No	Date	P Phase			S Phase			Max. Amplitude				F	Δ Epicen- ter Distance	Remarks			
		Time			Time			Comp.	Time		amp.				Period		
		G.	M.	T.	G.	M.	T.		G.	M.						T.	G.
134	22		8	02 57.6	e	8	03 $\pm$							8	09 08—		Ditto.
135	22	i	8	51 06.1		8	51 29.7	N ₁	8	51 33.5	+612	3.1	9	06 28—	176	Ditto.	Strong felt at the centre.
								N ₂	8	51 53.5	+453	3.5					
								E ₁	8	51 53.5	—265	—					
								Z	8	51 54.8	—129	1.1					
								E ₂	8	51 58.3	—341						
136	22		12	05 56.8		12	06 19.4						12	07 35—	168	Ditto.	
137	22		15	25 07.7		15	25 50.5						15	28 08—	318	Valley of the river Omoi.	
138	24	e	4	21 22.8									4	24 04—		Sea off Siobukisaki.	
139	24	e	5	42 21.5									5	44 04—		Ditto.	
140	24	e	6	31 23.6									6	33 04—		Ditto.	
141	24	e	6	49 50.0									6	52 04—		Ditto.	
142	24	e	6	56 27.4									6	58 04—		Ditto.	
143	25	e	13	11 40.7									13	13 38—		Ditto.	
144	25	e	13	22 42.7									13	28 01—		Ditto.	
145	25	e	13	40 40.1									13	42 51—		Ditto.	
146	25	e	17	02 04.0									17	04 17—		Ditto.	
147	25	e	18	16 00.0									18	17 50—		Ditto.	
148	25	e	18	29 36.1									18	31 52—		Ditto.	
149	26	i	5	23 14.7		5	23 37.5	N	5	23 41.5			5	34 12—	169	Ditto.	
								E	5	24 11.9						Strong at Ito.	
								Z	5	24 15.2							
150	26		7	20 13.6									8	00 19—		L:7 ^h 26 ^m 48.0 ^s . A distant shock in South Ocean.	
151	26	e	11	40 15.4									11	45 41—			
152	26	i	16	42 01.6		16	42 25.9	N	16	42 30.9	+146	3.8	16	53 18—	158	PE=+9. N=+5. Z=—3 μ .	
								E	16	43 01.6	± 87					Sea off Siobukisaki.	
								Z	16	43 03.7	+37	1.4					
153	26	e	18	31 14.1									18	34 16—		Ditto.	
154	27	e	2	44 05.7									2	49 14—		The Okhotsk sea.	
155	28	e	17	46 52.0									17	48 22—		Sea off Siobukisaki.	

April

Aitiken Meteorological Observatory

No	Date	P			S			Max.				F	Δ K.m.	Remarks		
		G.	M.	T.	G.	M.	T.	Comp.	Time G. M. T.	amp.	Period					
156	28	e	17	53	34.8							17	55	22—		Near Hikone. (city)
157	28		18	12	04.0	18	12	32.8				18	17	17—	214	Sea off Siobukisaki.
158	28		19	04	51.9	19	05	13.9				19	07	52—	163	Ditto.
159	28	e	20	11	26.4							20	12	52—		Ditto.
160	29		0	56	10.2	0	56	59.7				1	00	41—	368	Far E off Hatijyo Is.
161	29		15	06	51.7	15	07	16.8				15	10	30—	187	Sea off Siobukisaki.
162	29		20	25	06.0	20	25	14.6				20	27	01—	64	W of Hikone.
163	29		20	40	32.3	20	40	55.7				20	43	17—	174	Sea off Siobukisaki.
164	30		5	08	12.2	5	08	50.1				5	14	28—	282	S off Omaye C.
165	30		8	29	18.3							8	30	42—		Sea off Siobukisaki.
166	30		20	10	31.1	20	11	19.9				20	13	16—	364	In the Bungo strait.
167	31		1	01	20.5	1	01	46.5				1	04	31—	193	Sea off Siobukisaki.

April

168	1	3 18 23.6	3 18 47.5					3 22 37—	178	Sea o Siobukisaki.
169	1	i 14 04 58.3	14 05 21.3	N	14 05 26.9	—92		14 12 55—	171	P:E—12 μ , N=+3 μ , Z=+5 μ . Ditto. Strong at Ito.
				Z	14 05 45.2	+19				
				E	14 05 54.7	—32				
170	4	e 5 10 0.01						5 14 28—		The Kasima-nada.
171	4	e 9 33 54.8						9 44 14—		SW off Hatijo Is.
172	5	e 11 30 46.1						11 33 56—		The Okhotsk Sea.
173	5	e 20 21 04.4						20 24 03—		Sea off Tyosi.
174	5	e 22 36 52.5						22 39 10—		Near city of Numadu.
175	6	16 31 52.0	16 32 14.8					16 34 42—	169	Sea off Siobukisaki.
176	6	16 52 53.5						16 54 36—		
177	9	23 47 34.2	23 48 11.5	E	23 48 36.6	+28	—	23 55 12.0	277	$\psi=140.5E$ $\lambda=36.4N$ Near Mito.
				N	23 48 39.2	± 34	36			
178	19	e 23 10 42.1						23 13 06—		Sea off Siobukisaki.
179	19	23 38 04.6	23 38 26.1					23 42 42—	160	Ditto.

April

Seismological Bulletin

No.	Date	P Phase	S Phase	Max. Amplitude				F	Δ Epicen- ter Distance	Remarks
		Time G. M. T.	Time G. M. T.	Comp.	Time G. M. T.	amp. μ	Period	Time G. M. T.		
180	21	e 10 21 52.0						10 32 33—		SE off Otiisi C.
181	23	e 2 41 11.5						2 43 06—		Valley of the river-Ara.
182	23	21 52 —	21 54 —					22 04 25—	1330	L:21 ^h 56 ^m 15.2 ^s SE off Kunasiri Is.
183	28	L 18 52?—						19 ±		A distant shock. South Ocean.

May

184	1	0 58 49.9	0 59 39.6	E	0 59 58.5	—970	—	covered	369	$\psi=140.8$ $\lambda=35.7$. The Kujukuri hama.
					1 00 00.8	+1100	—			
185	1	e 1 16 45.5						1 23 47.5		Ditto.
186	1	z 4 21 19.7	4 22 08.5	Z	4 22 20.7	+45	—	4 28 02.0	362	Ditto.
	1	4 21 19.7	4 22 10.4	E	4 22 15.4	+170	—	4 31 37—	376	Ditto.
				N	4 22 43.9	+198	—			No. 186 (Omori's record)
187	3	e 0 44 16—						0 46 34—		Sea off Siobukisaki.
188	3	e 14 02 43—						14 03 56—		Ditto.
189	4	e 12 56 16.6						12 59 52—		The Kujukuri-hama.
190	4	16 56 56.7	16 57 29.4					17 01 56—	243	Valley of the river-Kogai. (branch of Tone)
191	5	13 53 45.1	13 59 39.2	N	14 08 28.8	±155	13.2	15 03 48—		L:14 ^h 07 ^m 36. ^s 8, Distant. Near the lake of Urumiyah in Persia The casualties ran into 7000.
				Z	14 11 17.3	±35	12.0			
				E	14 11 17.7	—179	11.8			
192	5	19 56 28.8	19 56 52.9					19 59 54.0	179	Sea off Siobukisaki.
193	5	e 22 49 35.6						22 51 10—		Kujukuri-hama.
194	6	e 21 41 37.6								Sea off Siobukisaki.
195	6	22 45 48.7	22 54 59.0					23 48 34—	172	eL:23 ^h 10 ^m 430. ^s A distant shock.
196	6	22 50 06.2	22 50 29.3					22 54 17.5	172	Sea off Siobukisaki.
197	7	20 28 30.3	20 28 53.3					20 32 16—	171	Ditto.
198	7	20 41 44.0	20 42 07.2					20 47 48.0	173	Ditto.
199	7	e 20 47 48—						20 48 24—		Ditto.
200	7	e 21 07 14.0						21 10 11—		Ditto.

May

Aitiken Meteorological Observatory

No.	Date	P			S			Max.				F			Δ K.m'	Remarks		
		G.	M.	T.	G.	M.	T.	Comp.	Time G. M. T.			amp. μ	Period	G.			M.	T.
201	7	e	22	21	22.8									22	23	13—		Ditto.
202	7		22	43	12.2	22	43	35.6						22	46	26—	181	Ditto.
203	8		0	19	30.1	0	19	53.8						0	22	24—	176	Ditto.
204	8		3	51	51.7	3	52	13.5						3	55	05—	172	Ditto.
205	8	e	4	10	02—									4	11	11—		Ditto.
206	8		4	14	42.5	4	15	03.5						4	16	13—	156	Ditto.
207	8	i	4	25	34.5	4	26	02.7						4	31	24—	210	Ditto.
208	8	e	5	39	25.8									5	40	40—		Ditto.
209	8		15	50	41.7	15	51	07.1						Covered			189	P:15 ^h 51 ^m 00.8 ^s Ditto.
210	8		15	54	29.8									15	57	13—		Ditto.
211	8	i	16	04	43.5	16	05	06.5						16	10	36—	171	P:E=—4 μ . Ditto.
212	8	i	19	15	08.2	19	15	35.8						19	18	50—	205	Ditto.
213	8	e	19	26	40.2									19	29	09—		Ditto.
214	8	i	19	49	05.1	19	49	29.1						19	51	29—	178	Ditto.
215	8		19	52	33.1	19	52	56.9						19	54	46—	177	Ditto.
216	9	i	2	53	07.3	2	53	36.1	N E	2 53 53.9 2 54 03.1	+34 +32	1.4	3	01	23—	214	P:E=—13. N=—3. Ditto.	
217	9		3	32	06.1	3	32	28.4						Covered			165	Ditto.
218	9		3	34	03.8	3	34	27.6						3	37	09—	171	Ditto.
219	9		5	30	33.1	5	30	56.9						5	32	17—	177	Ditto.
220	9		7	48	57.7	7	49	19.7						7	51	20—	163	Ditto.
221	9	e	8	18	45.7									8	20	45—		Ditto.
222	9	e	10	28	56.1									10	30	34—		Ditto.
223	9	e	10	42	35.1									10	44	43—		Ditto.
224	9		18	33	17.2	18	33	40.7						18	37	13—	175	Ditto.
225	9		18	49	47.2	18	50	10.8						18	52	09.0	176	Ditto.
226	9	i	19	51	16.5	19	51	37.5	E N	19 51 48.5 19 51 51.8	$\pm$ 9 — 8	1.0 1.0	19	54	33—	156	Ditto.	

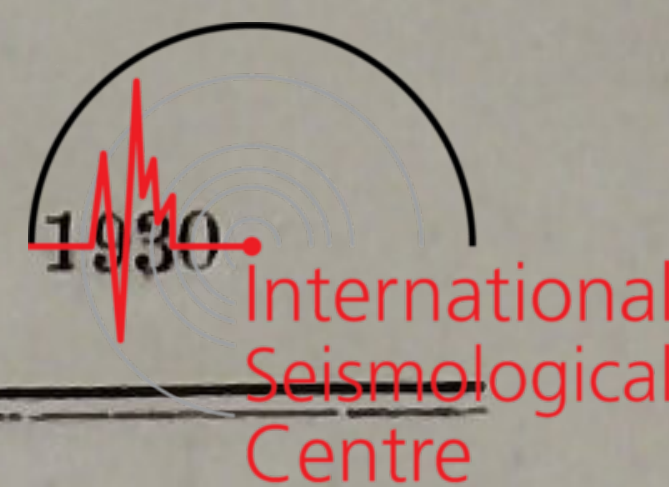
May

Seismological Bulletin

No	Date	P Phase			S Phase			Max. Amplitude				F		Δ Epicen- ter Di-stance	Remarks		
		Time			Time			Comp.	Time		amp. μ	Period	Time				
		G.	M.	T.	G.	M.	T.		G.	M.			T.			G.	M.
227	9	e	23	20 57.6	e	23	21 39.0							23	23 33—		Ditto.
228	10	e	6	54 06.6	e	6	55 22.1							6	59 20—		Ditto.
229	10		11	29 52.6		11	30 16.4							11	33 19—	177	Ditto.
230	10		11	57 22.5		11	57 45.5							11	59 34.7	171	Ditto.
231	10		12	04 32.0		12	04 56.3							Covered		161	SW off Sionomisaki in Kii peninsula.
232	10		12	07 36.6		12	08 00.8							12	23 01—	180	Sea off Siobukisaki.
233	10		13	07 34.0		13	07 58.0							13	10 20—	178	Ditto.
234	10		15	01 45.6		15	02 08.3							15	05 10—	168	Ditto.
235	10	e	17	21 37.3										17	24 20—		Ditto.
236	10		18	23 53.9		18	24 15.7							18	26 29—	162	Ditto.
237	10		18	57 43.5		18	58 09.5							19	00 05—	180	Ditto.
238	11		1	16 27.2		1	16 52.7							1	21 18—	190	Ditto.
239	11	e	15	32 21.2										15	33 17—		Ditto.
240	12	e	0	32 14.5										0	32 20—		Local shock.
241	12	e	7	26 06.3										7	28 29.0		Sea off Siobukisaki.
242	12	i	12	27 16.5		12	27 39.6	Z	12	27 58.5	+37	1.6	12	40 10—	172	P:E=—17. N=+3. Z=+10.	
								N	12	28 03.3	+70	1.6					Ditto.
								E	12	28 12.0	+68	1.8					
243	13		2	22 50.4		2	23 08.6							2	26 02.0	136	Ditto.
244	13	e	3	31 08.2										3	33 14—		Ditto.
245	13	e	3	59 39.2										4	01 39—		Ditto.
246	13		7	06 38.8		7	07 00.0							7	11 18—	158	Ditto.
247	13		19	51 15.9		19	51 38.0							19	56 13—	164	Ditto.
248	13	e	20	03 06.5										20	04 06—		Ditto.
249	13	e	20	43 26.7		20	43 45.9							20	45 23.0	143	Ditto.
250	13		23	46 32.3		23	46 55.5							23	50 13—	173	Ditto.
251	13		23	56 57.7		23	57 20.7	N	23	57 43.1	—32		24	06 24—	171	Ditto.	
								E	23	57 53.3	+25	1.0					

May

Aitiken Meteorological Observatory

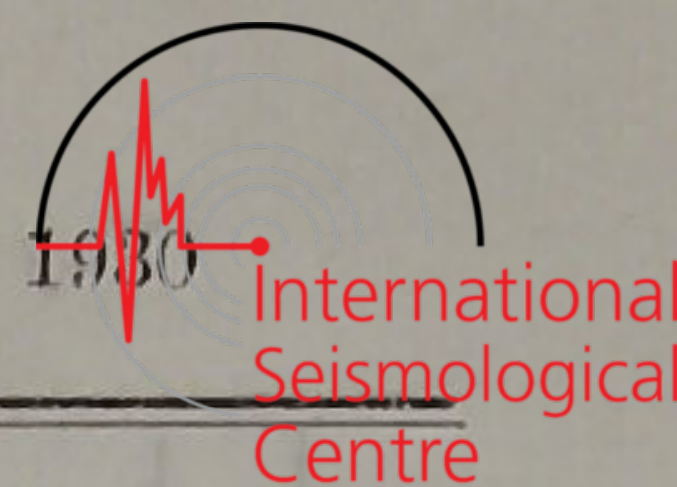


Centre

No.	Date	P			S			Max.				F			Δ K.m	Remarks	
		G.	M.	T.	G.	M.	T.	Comp.	Time G. M. T.		amp. μ	Period	G.	M.			T.
252	14	e	2	27	22.8									2	29	13—	Ditto.
253	14	e	3	03	51.0									3	05	02—	The Kasima-nada.
254	14	e	3	53	16.0									3	55	11—	Sea off Siobukisaki.
255	14	e	4	11	35.7									4	13	22—	Ditto.
256	14		5	53	43.3	5	54	08.1						5	56	09—	184 Ditto.
257	14	e	8	35	51.2	e	8	36	24.8	8 36 24.8	± 28			8	42	35—	E off Sima peninsula.
									8 36 24.8		-24						
258	14	e	13	14	21.8									13	17	08—	Sea off Siobukisaki.
259	14		16	34	08.8	e	16	35	$\pm$	16 35 55.0	± 14	2.1		16	43	07—	Ditto.
									16 36 08.7		± 24						
260	15		6	58	35.2	6	59	01.4						7	07	02—	195 Ditto.
261	15		7	43	53.8	7	44	17.9						7	51	02—	178 Ditto.
262	15	e	10	00	27—									10	02	25—	Ditto.
263	15		10	13	38.3	10	14	03.7						10	18	14—	189 Ditto.
264	15		10	26	23.5	10	26	47.7						10	31	15—	180 Ditto.
265	15		12	49	40.3	12	50	04.0						12	53	58—	176 Ditto.
266	15		14	31	09.9	14	31	31.8						14	34	11—	164 Ditto.
267	15		19	39	56.8	19	40	55.4						19	47	06—	435 The Kujukuri-hama.
268	16		13	35	04.0	13	35	33.0						13	39	28—	215 Sea off Siobukisaki.
269	16	e	13	48	10.7									13	50	13—	Ditto.
270	16	e	19	06	43.1									19	09	49—	Ditto.
271	16		20	06	45.2	20	07	06.8						20	10	19—	161 Ditto.
272	16	i	20	14	39.0	20	15	02.9	N ₁	20 15 06.9	+417	1.3	Covered	178	$\phi = 139.2$ $\lambda = 34.9$ Ditto. P:E=+43. N=-3. Z=-3 μ .		
									Z	20 15 35.4	± 78	—					
									E	20 15 39.7	+277	1.6					
									N ₂	20 15 47.7	-388	1.9					
273	16	e	20	24	47.5								Covered			Ditto.	
274	16		20	31	50.9	20	32	19.3						20	36	05—	211 Ditto.
275	18		6	26	34—	6	27	01—						6	30	36—	200 Ditto.

May

Seismological Bulletin



Centre

No.	Date	P Phase			S Phase			Max. Amplitude				F	Δ Epicen- ter Distance	Remarks					
		Time			Time			Comp.	Time		amp. μ				Period	Time			
		G.	M.	T.	G.	M.	T.		G.	M.						T.	G.	M.	T.
276	19	e	10	33	21.9	10	34	23.2						10	37	57—	550	The Kasima-nada.	
277	19	i	15	07	13.2	15	10	45.2	E	15	10	54.5		15	22	15—	2100	Valley of the river Pinan, Taiwan.	
		P ²	15	07	48.4			N	15	10	57.5								
		P ³	15	08	15.2														
278	20	e	11	21	47.2									11	25	02—		A distant shock.	
279	20	e	22	12	09.2	22	12	34.2						22	19	23—	186	The Kujukuri-hama.	
280	21	e	15	41	05.2									15	44	36—		Valley of the river Kogai.	
281	21		17	37	42.4	17	38	06.0						17	44	54—	176	Sea off Siobukisaki.	
282	22	e	0	10	47.1									0	13	43—		Ditto.	
283	22	e	2	28	32.5									2	30	35—		Ditto.	
284	22	e	5	22	53.6									5	25	36—		Ditto.	
285	23	i	16	38	50.1	16	39	17.2	N ₁	16	39	23.6	—528	3.4	16	56	32—	201	$\psi=139.6^\circ$ $\lambda=34.2^\circ$ N. SE off Osima Is. Strong was felt over Kwanto district.
									Z	16	39	26.2	—176	—					
									N ₂	16	39	44.4	+502	3.6					
									E ₁	16	39	50.5	+512	2.6					
									E ₂	16	40	18.2	+478	2.6					
286	23		20	23	07.5	20	23	32.5						20	25	30—	186	Sea off Siobuki-saki.	
287	23	e	21	35	14.1	21	36	27.9						21	41	31—	680	SE off Kinkwazan.	
288	24		0	19	29.7	0	19	54.8						0	22	19—	193	Sea off Siobuki-saki.	
289	26	e	9	08	26.6									9	15	14—		SE off Boso peninsula.	
290	26	e	10	39	11.3									10	43	37—		Sea off Osima Is.	
291	26	e	18	35	38.1									18	40	32—		Sea off Erimo C.	
292	27	e	12	20	59.0									12	25	7—		E. off Siويا C.	
293	28	e	19	19	04.8									19	22	01—		ENE off Siويا C.	
294	28		19	32	45.0	19	33	26.4						19	38	36—	307	Valley of the river Naka near Mito.	
295	30	e	3	44	00.8									3	48	11—		Mouth of the river Nosiyo.	
296	31	i	17	59	13.8	18	00	04.9	Z	18	00	17.9	—500	1.8	18	18	$\pm$	379	P:E=+6. N=+2. Valley of the river Naka. Strong felt NE of Kwanto.
		$\bar{P}$	17	59	23.0														
	31		17	59	11—	19	00	01—	N	18	00	04—	—1450		18	18	01—		No. 296 Omori's record.
									E	18	00	11—	—1450						

June

Aitiken Meteorological Observatory



Centre

No	Date	P			S			Max.				F			Δ K.m.	Remarks	
		G.	M.	T.	G.	M.	T.	Comp.	Time G. M. T.			amp. μ	Period	G.			M.
297	1	e	9	01 42.0										9	05 47—		NE off Sioya C.
298	1	e	9	19 25.4										9	24 06—		Valley of the river Kitakami.
299	3		18	12 52—		18	15 42—							18	20 39—	1520	The Okhotsck Sea
300	3		19	57 33.6		19	59 03.1							20	04 52—	830	NNW off Ogasawara Is.
301	4	e	1	20 15.4										1	21 50—		Sea off Sioya C.
302	4		9	57 52.0	L	10	03 43.3							10	09 34—		Distant, South Ocean.
303	8	e	15	47 08—										15	52 30—		ENE off Sioya C.
304	11	e	0	57 36.0	e	1	04 09.0							1	35 49—		Near Obihiro.
305	17		3	00 07.6		3	01 02.0	N	3	01 15.4	±14			3	06 38—	404	Sea off Sioya C.
								E	3	01 19.4	—25						
306	18		12	13 05.8		12	14 02.8	N	12	14 29.1	+38	2.8		12	21 59—	423	Ditto. φ=142.0°E. λ=37.0°N
								E	12	14 37.2	+34	2.4					
307	21	e	6	25 42.2										6	27 25—		The Bay of Ise.
308	21	e	9	48 55.1		9	49 43.3							9	53 45—	358	The Hyuganada.
309	21	e	13	07 41.1										13	09 25—		Valley of the river Kinu.
310	23		6	14 48.6		6	15 18.1							6	18 45—	219	Valley of the river Edo.
311	26	e	0	08 25.1										unknown			NW off Osima Is.
312	26	e	0	11 29.2										0	17 16—		Sea off Siobukisaki.
313	27		14	07 07—										14	08 55—		Valley of the river Abukuma.
314	29		0	25 58.0		0	26 33.4							0	31 02—	263	Kasumigaura.
315	30		16	28 07—										16	30 01—		Kujukuri-hama.

July

316	2		8 19 03.7	8 19 25.7					8 23 46—	163	N. part of Tango, after shock
317	2	e	14 57 26.6	14 57 31.4					14 57 49—		Sea off Amami Is.
318	2		21 11 27.0	21 18 33.8	N	21 29 08.0	± 32	14.6	21 46 58—	5450	L:21 ^h 23 ^m 44. ^s 4. Distant shock. Assam district of Indian.
					E	21 31 00.8	± 28	14.4			
319	4		13 38 52.3	13 39 16.5					13 40 55—	180	Valley of the river Hitaka.
320	4		16 34 36.5	16 35 26.2					16 40 48—	369	Near Mito.

July

Seismological Bulletin

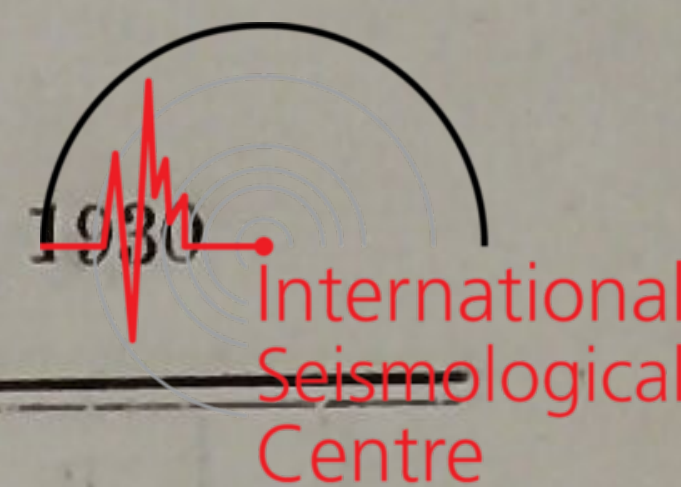
No	Date	P Phase			S Phase			Max. Amplitude				F	Δ Epicen- ter Distance	Remarks
		Time			Time			Comp.	Time	amp.	Period	Time		
		G.	M.	T.	G.	M.	T.		G.	M.	T.	G.	M.	T.
321	5	8	58	09.7	8	58	56.5					9 04 06—	347	NE off Sioya C.
322	5	e	18	04 56.3								18 14 20—		A distant shock.
323	10		11	37 58.2	11	38	21.6					11 43 36—	174	Mt. Omuro, Idu peninsula.
324	10	i	12	34 46.3	12	35	19.1	N	12 35 23.0	+170	1.5	12 46 06—	244	P:E=−3. N=+3 μ ϕ =138.3E λ =34.4N. SE off Omae C.
		P	12	35 00.2				E	12 35 27.6	+90	1.2			
325	10	e	15	49 16—								15 51 50—		NE off Sioya C.
326	13		19	33 38.7	19	44	04.2					19 58 58—		A distant shock.
327	14	e	10	25 16—								10 31 32—		The Kasima-nada.
328	16		16	28 14.7	16	28	28.1					16 31 50—		Kyoto pref.
329	19	e	23	21 33.0								23 28 35—		SE off Kusiro.
330	20	e	5	52 40—								5 56 40—		Sea off Erimo C.
331	22		19	28 46.0	19	30	56.4	E	19 31 23.5	$\pm$ 82	2.2	19 48 42—	1220	L:19 ^h 31 ^m 04. _s 0 ϕ =149.0E λ =44 3N SE off Etrup Is.
								N	19 31 36.6	$\pm$ 70	2.2			
332	30		6	42 10.3	6	42	43.0					6 47 45—	243	N part of Noto province.

August

333	4	e	5	23 03—								5 28 53—		SW off Hatijyo Is.
334	6	e	15	59 12—								16 01 $\pm$		Near Gihu.
335	6	e	21	34 36—								21 37 50—		Mt. Asama. (Volcano)
336	6	e	23	03 24—								23 05 14—		Kasumigaura.
337	10	e	13	11 53.9								13 16 08—		SE of Sima peninsula. Deep focus.
338	15		2	43 40.0	2	44	03.6	E	2 44 04.6	−21		2 48 $\pm$	176	Near Atami in Idu.
								N	2 44 06.6	+31				
339	17		9	29 13.0	9	29	46.8	E	9 29 59.4	+296	1.6	9 43 36—	251	ϕ =139.8E λ =35.3N The Uraga channel.
								Z	9 30 04.6	−108	1.7			
								N	9 30 08.4	−256	1.4			
340	18		19	43 10.8	19	44	03.6	N	19 44 25.3	−42		19 51 34—	392	The Kasima-nada. ϕ =141.5E 36.6N
								E	19 44 36.3	−28				
341	19		12	40 52.5	12	41	18.5	N	12 41 19.1	+42		12 48 11—	193	N off Osima Is.
								E	12 41 28.5	−38				
342	19	e	13	12 27—								13 13 33—		Ditto.

September

Aitiken Meteorological Observatory



No.	Date	P			S			Max.				F	Δ K.m.	Remarks					
		G.	M.	T.	G.	M.	T.	Comp.	Time		amp. μ				Period				
									G.	M.						T.			
343	19	17	43	27.7	17	43	17.5	N	17	43	32.9	+88	2.9	17	53	30—	370	$\psi=140.8N$ $\lambda=35.6E$ The Kujukuri-hama.	
								E	17	43	33.6	-71	1.4						
								Z	17	43	34.3	+24							
344	20	e	20	58 16.6	e	20	02 40.8							20	25	30—	2740	L:20h 04m30.s 0 $\psi=122.2E$ $\lambda=24.5N$	
345	21	e	10	46 07—										10	53	52—		S off Erimo C.	
346	22		1	31 37.2		1	32 35.0							1	36	27—		SSE off Nosyahu C.	
347	23	e	11	04 20.5										11	08	24—		A distant shock.	
348	26	e	12	41 40.5										12	41	16—		Sea off Erimo C.	
349	29	e	20	05 18.0										20	11	—		N off Sikotan Is.	

September

350	4		4	19 18.5		4	20 19.1							4	25	55—	550	E off Kinkwasan
351	7	e	18	22 16—										18	23	38—		Near city of Gihu.
352	8	e	14	15 37.0										14	18	03—		Mouth of the river Naka.
353	10	e	16	06 58—										16	08	38—		Kasumigaura.
354	10		22	24 30.3		22	25 18.6							22	30	51—	358	ESE off Tyosi.
355	11		11	34 11.1		11	34 29.6							11	36	50—	138	Valley of the river Oi.
356	11	e	16	48 20.0										16	51	20—		Sea off Nagaturo.
357	14	e	1	41 33—										1	44	29—		Sea off Kinkwasan.
358	16	e	4	51 30.4										4	53	23—		Valley of the river Oi.
359	16	e	11	27 09.7										11	28	33—		Valley of the river Yahagi.
360	16	e	15	47 13.9										15	48	31—		Valley of the river Kinu.
361	17	e	4	57 37.5										4	59	20—		Near Mito.
362	17		10	55 46.3		10	56 47.8							11	01	13—	560	Sea off Kinkwasan.
363	19	e	1	26 58.7										1	28	14—		Near Inuyama, Aichi pref.
364	19		8	00 52.7		8	01 17.2							8	04	22—	182	The bay of Yuasa.
365	21	e	1	37 25.3										1	40	54—		The Kasima-nada.
366	21	e	9	32 45.5										9	36	28—		E off Hatijo Is.

September

Seismological Bulletin

October

International
Seismological
Centre

Seism. Centre

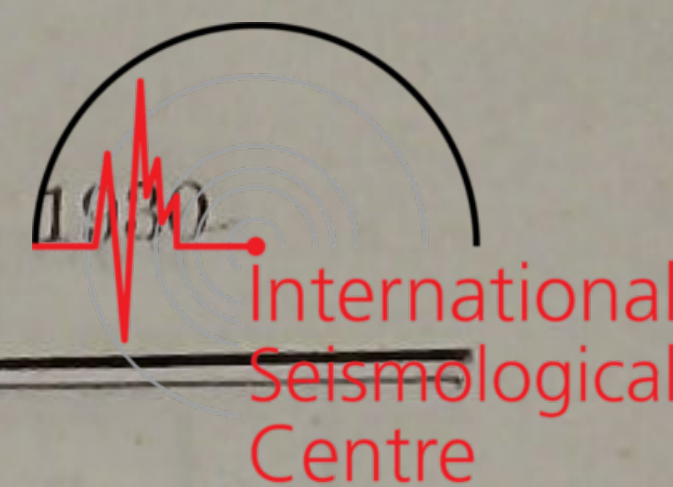
No.	Date	P Phase			S Phase			Max. Amplitude				F	Δ Epicen- ter Distance	Remarks				
		Time			Time			Comp.	Time		amp. μ				Period	Time		
		G.	M.	T.	G.	M.	T.			G.		M.	T.				G.	M.
367	21	e	23	16 40.0				N	23	25	05.0	+360	15.0	23	51	10.0	4735	L:23 ^h 23 ^m 08. ^s A distant shock. Mt. Himaraya. Omori's record.
								E	23	27	22—	—680	12.4					
368	22	e	3	27 19.3										3	29	57—		Valley off the river Sugata.
369	22	e	14	26 29.8										14	34	38—		L?:23 ^h 32 ^m 18. ^s 3. Mt. Himara- ya, A distant ahook.
370	22	e	17	55 14.2										17	57	26.0		Local shock.
371	26		19	56 14.5	19	56	52.6	N	19	56	53.5	+40	1.2	20	05	40.0	283	Mouth off the river Hime.
		P		56 34.0				E	19	57	07.9	+37						
372	28		9	52 23.8	9	53	01.7							9	57	44—	282	$\psi=139.5^{\circ}$ $\lambda=34.6^{\circ}$ N SSE off Osima Is.
373	29	e	4	54 15.5										4	59	42—		The bay of Kagosima.
374	30		5	56 00.7	5	56	50.7							5	59	22—	371	Kasumigaura.
375	30	e	21	28 23.0	e	21	34 35—							22	06	35	4440	eL:21 ^h 38 ^m 59 ^s —. A distant shock South Ocean.

October

376	1		2 46 43.4	2 46 48.0						2 47 46—	34	Local shock
377	1	e	2 58 12.0							3 06 35—		A distant shock. South Ocean
378	2	e	10 03 22.3							10 10 30—		Sea off Erimo C.
379	5	e	12 05 07—							12 07 20—		Valley of the river Kogai.
380	7	e	1 30 08—							1 32 11—		Valley of the river Arita.
381	7	e	4 20 11—							4 22 45—		The Kasimanada.
382	8	e	10 29 08—	10 37 33—						10 58 10—	7000	A distant shock. Near Guam Is.
383	12		8 58 45.6	8 59 39.2						9 03 54—	398	Kasumigaura.
384	12	e	9 41 37.6	e 9 42 23.8						9 43 54—	343	The Kujukurihama.
385	15		21 19 37.6	21 20 18.6						21 22 08—	304	The Kasima-nada.
386	16	i	21 32 35.2	21 33 02.5	ME	21 33 03.7	+404	1.0	Covered		128	P:E=+15. N=—21. Z=+12. $\psi=136.3^{\circ}$ E. $\lambda=36.3^{\circ}$ N. S part of Isikawa pref. Strong shock.
					Mz	21 33 05.8	—173	1.1				
					MN	21 33 07.4	+370	1.0				
387	16		21 36 20.4	21 36 37.9	N	21 37 27.8	3150			21 48 40—	130	Ditto. Strong shock. P,S,F: Weichert.
					E	21 37 27.8	2600					

November

Aitiken Meteorological Observatory



seismo
Centre

No	Date	P			S			Max.				F			Δ K.m	Remarks		
		G.	M.	T.	G.	M.	T.	Comp.	Time G. M. T.			amp. μ	Period	G.			M.	T.
388	18	4	23	24.0	4	23	40.7							4	26	00—	124	Ditto.
389	20	2	08	03.0	2	08	20.1							2	11	05.0	127	Ditto.
390	21	5	26	24.0	5	27	07.2							5	30	27—		The Iyonada.
391	24	20	19	29.4	20	23	15.9	Z	20	19	33.0	+73	3.3	21	24	16—	2280	P:E=+31. N=-43. Z=-17 μ . L:20 ^h 26 ^m 49. ^s 5
391	24	20	19	27.5	20	23	15.0	N	20	29	58.8	-575	1.9	20	40	20—		A distant, Marianne deep.
								E	20	40	20.0	+450	3.1					Omori's Seismograph:
392	25	22	22	38.5	22	23	14.6							22	28	16—	268	Valley of the river Kinu.
393	26	13	45	38.0	13	46	01.4							13	49	34—	174	Valley of the river Arita.
394	28	21	14	42.5	21	18	28.6	E	21	18	29.4			21	39	—	2270	eL:21 ^h 22 ^m 56. ^s 5.
								N	21	18	33.1							A distant, Marianne deep.
395	29	14	27	51.0										14	30	51.0		The Bay of Wakano-ura.
396	31	15	40	35.8	15	41	13.5							15	43	26—	279	SSE off Boso peninsula.

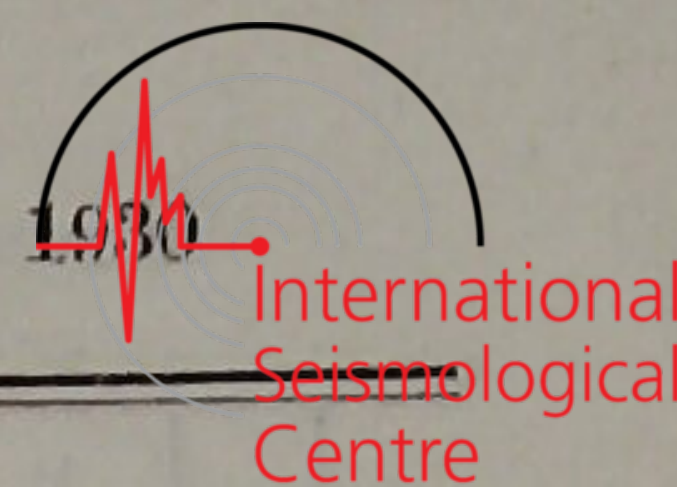
November

397	5	1 40 01.4	1 40 04.4	E	1 40 04.4	-22	1 41 21-	22	Near Inuyama in Aiti pref.
				N	11 40 04.7	+13			
398	8	4 02 29.0	4 02 55.2				4 07 29-	195	The bay of Wakanoura.
399	9	19 15 36.7					19 56 25-		L:19 ^h 24 ^m 35. ^s 6. A distant, South Ocean.
400	10	4 59 01.6	4 59 28.6				5 01 42-	200	Valley of the river Tama.
401	10	13 36 42.3	13 37 30.5				13 43 32-	356	The Kasimanada.
402	10	e 13 51 38-					14 20 30-		eL:14 ^h 00 ^m 15 ^s . A distant, South Ocean.
403	12	8 10 14.5	8 10 28.4				8 12 22-	103	Valley of the river Ooi.
404	13	e 1 52 10-					1 55 14-		Sea off Boso peninsula.
405	15	0 57 00-	1 00 22-				1 04 32-	1990	A distant, South Ocean.
406	15	e 7 55 55-					7 56 49-		N part off Idu. $\phi=139.0$ $\lambda=35.1$
407	15	e 23 26 06.0	23 26 29.0				23 28 ±	171	Ditto.
408	15	23 42 20.1					Covered		Ditto.
409	15	e 23 43 20.9					23 44 41-		Ditto.
410	15	e 23 49 18-					23 51 30-		Ditto.
411	16	e 0 06 52-					0 08 07-		Ditto.

No.	Date	P Phase			S Phase			Max. Amplitude				F Time G. M. T.	Δ Epicen- ter Distance	Remarks		
		Time			Time			Comp.	Time		amp. μ				Period	
		G.	M.	T.	G.	M.	T.		G.	M.						T.
412	16		1	01 56—		1	02 16.0						1	03 25—	148	Ditto.
413	16	e	6	07 47—									6	08 54—		Ditto.
414	17		15	16 42.7		15	17 27.7						15	22 12—	344	Epicenter unknown.
415	18	e	13	01 16—									13	04 41—		N part of Idu.
416	19	e	1	10 19—		1	11 27—						1	15 37—	620	Sea off Ona-hama.
417	20		10	44 49.8		10	45 12.5						10	47 10—	168	N part of Idu.
418	20	e	11	15 17.8		11	15 39.5						11	17 55—	161	Ditto.
419	20	e	11	52 28.3		11	52 47.9						Covered		146	Ditto.
420	20	e	11	53 48.7		11	54 08.8						11	58 55—	149	Ditto.
421	21	e	9	50 30.0		9	50 50.2						9	53 17—	150	Ditto.
422	21		10	17 15.6		10	17 42.2						10	20 28—	198	Ditto.
423	21	e	11	21 19.0									11	22 25—		Ditto.
424	21	e	11	33 04—									11	34 52—		Ditto.
425	21	e	11	48 15.6									Covered			Ditto.
426	21	e	11	49 33.6									11	52 05—		Ditto.
427	21		12	17 55.2		12	18 15.8	E	12	18	17.0	± 40	12	22 52—	153	Ditto.
								N	12	18	17.0	$+73$				
428	21	e	12	24 06.0		12	24 27.2						12	25 52—	158	Epicenter unknown.
429	21	e	12	56 15.8		12	56 38.7						12	59 52—	170	N part of Idu.
430	21	e	20	31 08.1		20	31 29.3						20	34 24—	158	Ditto.
431	22	e	7	38 50—									7	41 50—		The Kasima-nada.
432	24	e	4	39 30.0		4	39 50.0						4	41 46—	148	N part of Idu.
433	24		6	46 13.5		6	46 40.5						6	49 45—	200	Valley off the river Kii.
434	25		6	00 00.3		6	00 23.0						Covered		168	N part of Idu.
435	25	e	6	02 52.0									Unknown			Ditto.
436	25	e	6	19 02—									6	20 42—		Ditto.
437	25	e	6	22 23.2		6	22 41.4						Covered		135	Ditto.

November

Aitiken Meteorological Observatory



No	Date	P			S			Max.				F			Δ K.m.	Remarks				
		G.	M.	T.	G.	M.	T.	Comp.	Time		amp. μ	Period	G.	M.			T.			
									G.	M.								T.		
438	25		6	25	54.0		6	26	16.0						Covered	163	Ditto.			
439	25		6	26	58.0		6	27	20.0	N	6	27	20.0	+47		6	39	41—	163	Ditto.
										E	6	27	21.0	—29	1.0					
440	25	e	6	50	54.0											6	53	40—		Ditto.
441	25	e	6	58	41.0		6	59	03.0							7	00	40—	163	Ditto.
442	25		7	01	57.5		7	02	20.3							7	04	40—	169	Ditto.
443	25	i	7	06	24.0		7	06	45.0	N	7	06	45.0	—142		7	15	11—	156	P:E=—4. N=—3 μ . Ditto.
										E	7	07	10.5	—86						
444	25	e	7	36	04.0											7	38	40—		Ditto.
445	25		7	50	31.8		7	50	57.3	N	7	50	57.3			7	55	40—	190	Ditto.
										E	7	50	58.0							
446	25	e	8	02	14.0											Uncertain				Ditto.
447	25	e	8	47	41—											Covered				Ditto.
448	25	e	8	48	30—											Covered				Ditto.
449	25	e	8	49	46—											Uncertain				Ditto.
450	25		9	34	42.6		9	35	07.6							9	48	40—	186	Ditto.
451	25	e	9	44	55.0		9	45	16.3							9	46	40—	158	Ditto.
452	25	e	10	28	07.0											10	29	02—		Ditto.
453	25	e	11	39	05.0											Uncertain				Ditto.
454	25		11	48	43.0		11	49	19.5							11	50	40—	197	Ditto.
455	25	e	12	13	44.8		12	14	12.7							Covered	207			Ditto.
456	25	e	12	15	30.0		12	15	56.0							12	18	36—	193	Ditto.
457	25		14	23	42.0		14	24	04.4	N	14	24	04.4			14	28	40—	166	Ditto.
										E	14	24	05.4							.
458	25	e	14	39	56.2		14	40	13.6							14	41	40—	129	Ditto.
459	25	e	14	48	55—											Uncertain				Ditto.
460	25	e	16	47	10—											Uncertain				Near Tono, Iwate pref.
461	25	e	18	39	49.2											18	41	40—		N part of Idu.

Seismological
Centre

No.	Date	P Phase			S Phase			Max. Amplitude				F Time G. M. T.	Δ Epicen- ter Distance	Remarks	
		Time			Time			Comp.	Time		amp. μ				Period
		G.	M.	T.	G.	M.	T.		G.	M.					
462	25	i	19	03 17.5	19	03 37.8	Z						150	P:E=-29. N=+6. Z=+13 μ . S: Vertical. Ditto. Horizontal Obstacle.	
462	25		19	03 17.5	19	03 48.8	E	19	04 12.0			Uncertain	180	Omori's record. A violent dis- location shock in Idu. Devasta- ted area over Idu and E part of Sizuoka pref.	
							N	19	04 21.7						
							Z	19	03 49.5						
463	25	z	23	37 50.0	23	38 12.0	Z					23 40 17—	163	Vertical pendulum. After shock of No. 462.	
464	26	e	0	36 27.7	0	36 48.0	Z					0 39 04—		Ditto. Time approximate.	
465	26	e	0	48 26.0			Z					0 50 00—		Ditto.	
466	26	z	1	06 57.4	1	07 20.2	Z					1 11 26—	169	Ditto.	
467	26	e	3	51 39.0			Z					3 52 56—		Ditto.	
468	26	e	4	51 14.0			Z					Covered		Ditto.	
469	26	e	4	52 36.5	4	52 59.5						4 52 59.5	171	Horizontal repaired. Ditto.	
470	26	e	5	24 05.8	5	24 28.0						5 26 04—	165	Ditto.	
471	26	e	5	51 15.8	5	51 38.3						5 53 06—	167	Ditto.	
472	26		8	42 55.0	8	43 19.3						8 48 38—	180	Ditto.	
473	26	e	9	10 06.0								9 12 38—		Ditto.	
474	26	e	12	42 09.6	12	42 32.1						12 47 38—	167	Ditto.	
475	26	e	15	13 37—								15 16 37—		Ditto.	
476	27	e	13	37 36.0								13 39 36—		Ditto.	
477	27	e	14	13 36.0								14 15 36—		Ditto.	
478	28	e	7	23 28.7	e	7 23 50.3						7 26 17—	216	Ditto.	
479	30	e	7	17 18.7	7	17 41.0						7 18 50—	165	Ditto.	
480	30	e	15	18 23.0								15 20 22—		Ditto.	
481	30	e	16	42 02.0								16 43 14—		Ditto.	

December

482	2		20	30	40.7	20	31	01.7						20	32	48—	156	After shock of No. 462.
483	2	e	22	59	11.5	22	59	30.0						22	03	54—	138	Ditto.
484	2	e	23	32	17.5									23	33	40—		Near city of Gihu.

December

Aitiken Meteorological Observatory



No.	Date	P			S			Max.				F			Δ K.m.	Remarks
		G.	M.	T.	G.	M.	T.	Comp.	Time G. M. T.	amp. μ	Period	G.	M.	T.		
485	3	e	3	31 08—								3	34	20—		Sea off Inubo C.
486	3	e	6	00 25—								6	02	±		After shock of No.462
487	3		18	56 30.6	19	02	39.0	N	19 11 31.0	±118	17.5	19	50	19—	4575	L:19 ^h 08 ^m 56. ^s A distant shock.
								E	19 13 42.0	±126	11.6					
488	4		4	17 10.3	4	17	24.7					4	19	51—	107	Near Kyoto.
489	4	e	19	46 02.0								Uncertain				After shock of No 462
490	5		20	32 22.6	20	32	49.8	N	20 32 51.0	+97		20	38	40—	202	$\psi=134.8E, \lambda=34.4N.$ Awaji-sima. (Time approximate)
								E	20 32 52.0	+53						
491	7	e	3	53 47—								3	55	22—		N part of Idu (after shock)
492	7	e	3	59 30.2								Covered				Ditto.
493	7		4	02 19.3	4	02	41.1					4	05	57—	162	Ditto.
494	7	e	4	14 53.3	4	15	15.4					4	16	57—	164	Ditto.
495	7	e	4	36 07—								4	36	53—		Ditto.
496	7	e	4	51 05—								4	51	47—		Ditto.
497	7	e	4	55 33.8								4	56	17—		Ditto.
498	7	e	5	05 53.6								5	06	47—		Ditto.
499	7	e	5	08 19.7								5	09	25—		Ditto.
500	7	e	5	11 38.8								5	12	59—		Ditto.
501	7	e	5	50 45.2	5	51	08.4					5	55	47—	173	Ditto.
502	7	e	6	06 48.6	6	07	33.5					6	10	24—	328	The Kasima-nada.
503	7	e	7	12 57—								7	14	47—		N part of Idu.(after shock)
504	7		13	35 37.0	13	35	54.0					13	40	15—	178	Ditto.
505	7		15	34 41.8	15	35	05.9					15	38	36—	179	Ditto.
506	7		23	44 53.2								23	47	09—		Ditto.
507	8		6	24 29.6	6	27	54.6					6	31	50—	2020	Valley of the river Sobunkei, Taiwan.
508	8		8	05 27.3	8	09	03.9					8	20	50—	2160	Ditto. $\psi=120.5E \lambda=23.4N.$
509	8		23	39 20.2	23	40	09.3					23	44	50—	365	Mouth off the river Kuma.

No.	Date	P Phase			S Phase			Max. Amplitude				F Time G. M. T.	Δ Epicen- ter Distance	Remarks	
		Time			Time			Comp.	Time		amp. μ				Period
		G.	M.	T.	G.	M.	T.		G.	M.					
510	9	e	10	50 37.3	10	50	53.8						10 53 11—	123	N part of Idu. (after shock)
511	9		19	57 36.4	19	57	57.8						19 59 28—	159	Ditto.
512	9		20	32 43.8									Covered		Ditto.
513	9		20	33 29.0	20	33	54.3						20 35 49—	190	Ditto.
514	9		21	22 05.4	21	22	26.3						21 24 58—	155	Ditto.
515	9	e	23	34 31.3									23 35 ±		Ditto.
516	10	e	0	56 17.5									0 57 49—		Kanayama, Gihu pref.
517	10	e	3	29 35.8	3	29	55.4						3 33 09—	146	N part of Idu. (after shock)
518	10		6	51 48.1	6	52	12.7						6 53 45—	183	Ditto.
519	10	e	17	09 14.6									17 10 48—		Ditto.
520	12	e	13	50 07.4									13 53 51—		Ditto.
521	12		14	20 00.0	14	20	19.0						14 22 45—	141	Ditto.
522	12		18	46 24.1	18	46	42.1						18 49 ±	134	Ditto.
523	12	e	19	42 24—									19 43 54—		Ditto.
524	13	i	14	24 52.5	14	27	27.3	E N	14 28 02— 14 28 07—	+64 +83	2.8 2.6		14 33 19—	1480	$\phi=142.3E$ $\lambda=42.3N$. Hokkaido.
525	14		8	47 02.5	8	47	24.5						8 49 03—	163	N part of Idu. (after shock)
526	14		15	24 42.9	15	25	05.1						15 26 02—	165	Ditto.
527	15	e	5	23 01.2	5	23	56.7						5 29 13—	412	Kujukuri-hama.
528	16	e	19	50 21.3	19	50	41.2	E N	19 51 02— 19 51 02—	—54 —63			19 58 14—	148	N part of Idu. (After shock)
529	18		14	22 01.7	14	22	24.8						14 24 57—	172	Yamanasi pref.
530	19	e	2	28 56—									2 30 20—		Near Hamamatu.
531	20		2	46 00.0	2	46	11.3						2 48 19—	84	Valley of the river-Miya, Mie pref.
532	20	i	14	03 20.0	14	04	09.4	N E Z	14 04 19.5 14 04 23.5 14 04 43.4	+377 +267 +106	3.2 2.5 1.7		14 12 37—	367	P:E=+26, N=+3, Z=+17 μ . $\phi=132.9E$. $\lambda=34.8N$. Hirosima pref. Strong shock.
533	20		14	43 57.2	14	44	49.4						14 48 58—	387	Ditto. Slight shock.

Centre

No.	Date	P			S			Max.				F			Δ K.m.	Remarks
		G.	M.	T.	G.	M.	T.	Comp.	Time G. M. T.			amp. μ	Period	G.		
534	20	e	23	27 37.3	23	28 29.7								23 35 $\pm$	389	Ditto.
535	21	e	12	15 21.5	e	12	16 19.7	N	12	16 24.0	—243	2.6	Covered			Ditto. Strong shock. No. 535 & 536 shocks superposed.
							E	12	16 55—	+184	3.4					
536	21	e	12	19 30 $\pm$										12 26 16—		Ditto. P&S: uncertain.
537	21	e	13	10 49—										13 12 32—		Ditto.
538	21	e	13	18 58—										Uncertain		Ditto.
539	21	i	14	55 45.7	Uncertain			E	14	56 09—	—140	2.6	15	06 15—		P:E=—22, N=20. Z=—20 μ , period 3. ^s 0. Taiwan. ψ =120.5E λ =23.4N
							N	14	56 10—	+128	2.6					
540	21	e	16	32 08—										16 35 30—		Hirosima pref. ψ =132.9E λ =34.8N
541	21	e	17	39 15—										17 41 50—		Ditto.
542	22	e	2	24 26.5	2	25 10.5								2 26 51—		Ditto.
543	23	e	10	47 42—										10 49 42—		Ditto.
544	23	e	23	57 19.4	e	23	59 18.8							0 06 12—	1110	ψ =144.0E λ =42.0N. Sea off Erimo C.
545	24		7	12 29.3	7	13 21.4								7 16 50—	387	E off Iwaki province.
546	24	e	23	06 46—										23 08 34—		Sea of Japan.
547	26	e	14	46 46.0										14 46 47.0		Near city of Hikone.
548	29		20	57 56.0	20	58 20.0								21 01 04—	178	Mouth of the river Edo.

Symbols and Notations

I. Phases of the Seismogram.

P = First preliminary tremors (Longitudinal)

$\bar{P}$ = Individual or upperfirst preliminary tremors.

S = Second preliminary tremors (Transverse)

L = Long weves at the beginning of the surface phase.

M = Greatest motion in the surface phase.

F = End of discernible movements.

II. Nature of the motion.

i = Sudden beginning of the motion.

e = Gradual beginning of the motion.

III. Remarkes.

Covered = Covered by following shock.

Is. = Island. C. = Cape. Pref. = Prefecture.