

KÔBE JAPAN.

SEISMOLOGICAL BULLETIN

of the Imperial Marine Observatory and the Kobe Meteorological Observatory of Japan.

$\varphi = 34^{\circ} 41' 18''N$ $\lambda = 135^{\circ} 10' 51''E$ $h = 58.3$ m Underground : Diluvial Series.

Instruments : Omori's Seismograph.
(Horizontal Pendulum)

Wiechert Seismograph.
(Horizontal & Vertical)

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Jan.

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	19.6		0.001	20
AN:	20.0		0.001	20

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	6.6	Aperiodic	0.007	100
AN:	6.5	"	0.006	97
AZ:	4.3	6	0.002	96

Feb.

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	19.5		0.001	20
AN:	21.0		0.001	20

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	6.6	Aperiodic	0.005	105
AE:	6.2	"	0.007	95
AZ:	4.2	6	0.005	101

Mar.

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	18.9		0.001	20
AN:	19.6		0.001	20

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	6.2	Aperiodic	0.007	16
AN:	6.2	"	0.005	14
AZ:	4.7	6	0.003	81

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks		
			G.	M.	T.		AE	AN	AZ				
1	Jan.	3	iPE	9	47	22	1.4	+3.0			km. 2350	Southwestern coast of Kamchatka (about $53^{\circ}40'N$, $156^{\circ}40'E$ according to the data from Fordham, Neuchatel, St. Louis, Ottawa, Simizu, Taikyu, Manila, Victoria, Padova and Geor-	
			iPN	9	47	22	1.2		-5.8				
			iPZ	9	47	22	2.1			-6.5			
			iEN	9	47	22		-19	+11				
			iE	9	48	18		+10					
			iN	9	48	14			-9				
			iZ	9	48	13				-6			

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks	
					A _E μ	A _N μ	A _Z μ			
* 2	Jan. 8	iSE	9 51 14		+16			108	getown) Deep focus earthquake. Perceptible. Near Tudi, upper basin of the Yosino River, Sikoku district. Felt in Sikoku and Tyû-goku district.	
		iSN	9 51 15			-10				
		SZ	9 51 14				+6			
		ME	9 53 03	10.8	+27					
		MN	9 52 56	6.5		±19				
		MZ	9 53 03	4.7			-8			
		eF	10 12 ±							
		ePEN	23 07 27	0.8	-0.8	-4.5				
		iPz	23 07 27							-2.2
		iE	23 07 28		-8					
		iN	23 07 27			+8				
		iz	23 07 28	1.0			+5			
		iN	23 07 30			-17				
		iS	23 07 41		+273	-166	+70			
		ME	23 07 53	2.4	+325					
MN	23 07 53	1.8		-256						
MZ	23 07 54	1.7			-140					
eF	23 18 ±									
3	Jan. 12	eLN	13 46 16				4705	Yunnan, China. 25°N 103°E.		
		MN	13 48 54	15.0	±3					
		MZ	13 50 42	10.9		±3				
		ME	13 51 45	13.5					-6	
		eF	14 11 ±							
4	Jan. 15	PE	8 51 13		+0.7		4705	Destructive at Sitamarhi, Maduban, Darbhanga and Monghyr, basin of the Ganges River, Bihar, India.		
		iPNZ	8 51 13			+3.0			+2.8	
		iE	8 51 27	5.7	-95					
		iz	8 51 27	5.6					-82	
		iN	8 52 47	3.5		+35				
		iz	8 52 44							
		iPR1E	8 52 57	4.8	+88					
		iPR2Z	8 53 15	5.2					+110	
		iS	8 57 39		-80	-50				
		iEN	8 57 56	7.0	+95	+120				
iE	8 58 14		-195							
eL(Q)N	9 00 49	67.0								

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A _E μ	A _N μ	A _Z μ		
5	Jan. 20	eL(Q)Z	9 00 43					108	Felt at Tai-yuan, Sui-yuan and slightly destructive in Wooyuan.
		iE	9 01 03		-130				
		iE	9 03 15						
		eL(R)N	9 06 39						
		M1N	9 07 44	15.7		-175			
		M2N	9 08 30	15.8		-160			
		M1E	9 09 40	10.9	-180				
		M1Z	9 09 43	11.0			+63		
		M2E	9 10 59	13.4	-150				
		M2N	9 10 44	13.6		-143			
		M2Z	9 11 36	14.8			-80		
		eE	10 05 30	20.9	+7				
		ez	11 19 08	25.0			±2		
		ez	11 24 36	24.0			±3		
		eN	11 28 16	21.5		±3			
ez	11 32 01	20.5			±3				
eF	12 15 ±								
6	Jan. 20	ME	18 11 15	11.4	-9		4705	North far off to Keelung, Formosa.	
		MN	18 10 51	11.0		±3			
		MZ	18 11 17	11.9					±5
7	Jan. 21	ePE?	22 57 10				4705	Northern part of the Formosa Channel.	
		ePZ?	22 57 03						
		eE	23 00 49						
		eN	23 00 51						
		ez	23 01 09						
		ME	23 03 25	11.4	-4				
		MN	23 03 35	11.4		+6			
MZ	23 07 29	8.6			±2				
eF	23 23 ±								
7	Jan. 21	ez	7 03 38				4705	Northern part of the Formosa Channel.	
		eE	7 04 15						
		ME	7 06 38	10.7	±2	±2			
		eF	7 25 ±						

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A _E μ	A _N μ	A _Z μ		
8	Jan. 22	M _E	8 00 45	11.2	± 2			Ditto.	
		M _N	8 01 01	11.5		+2			
		eM _Z	8 05 02	9.8			± 2		
		eF	8 12 ±						
9	Jan. 23	P _Z	2 02 39				+1.0	72 In the Kii Channel.	
		iP _E	2 02 40		-3.8				
		eP _N	2 02 40						
		iP _N	2 02 40	0.7		-5.5			
		iz	2 02 40				± 5		
		iS _{EN}	2 02 50		+4	-5			
		S _Z	2 02 49				-2		
		M _E	2 02 51	0.7	-16				
		M _N	2 02 50	0.7		-12			
		M _Z	2 02 50	0.4			± 4		
		M _{2E}	2 02 53	0.8	-14				
F	2 05 04								
10	Jan. 28	e _E	19 55 00					Felt in State of Guerrero, Mexico (U.S.C.G.S.)	
		e _N	19 55 06						
		e _E	20 02 09						
		e _N	20 07 11						
		e _Z	20 06 45						
		e _E	20 07 56						
		eL _N	20 13 15						
		eL _Z	20 13 51						
		M _N	20 20 49	16.0	± 1				
		M _Z	20 20 13	17.0		± 1			
eF _N	20 53 ±								
11	Jan. 29	P _{EN}	1 39 49		+2	(-)		439 Western part of Mt. Aso. Felt in northern part of Kyūshyū.	
		P _Z	1 39 47						
		iS _E	1 40 48		-7				
		S _N	1 40 45			-5			
		S _Z	1 40 47				-3		
		M _{1E}	1 40 58	2.0	-28				
		M _N	1 41 06	6.6		-20			
		M _Z	1 41 12	8.9			-13		

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A _E μ	A _N μ	A _Z μ		
		M _{2E}	1 41 18	6.3	-15			1 m.	
		i _N	1 42 13	2.4		-23			
		i _Z	1 42 11	2.8			+15		
		i _E	1 42 58	3.0	-19				
		eF	1 53 ±						
12	Jan. 29	eP _{EN}	12 36 49					ESE off Kinkwazan, Miyagi Prefecture.	
		eP _Z	12 36 51						
		e _E	12 38 23						
		e _N	12 38 15						
		e _Z	12 40 06						
		e _E	12 40 50	8.3					
		e _N	12 40 41						
		e _Z	12 40 55						
eF	12 55 ±								
13	Feb. 1	e _{2E}	15 29 03	2.0	-0.9			South off Hatidyō Isl., Record is deep focus type.	
		i _E	15 30 12	1.9	-5				
		i _N	15 30 10						
		i _Z	15 30 11						
		e _N	15 31 05						
14	Feb. 2	e _Z	15 31 23	2.7				A distant earthquake. Near Geelvink-bay, New Guinea. Faint record.	
		M _E	15 31 58	3.4	± 2				
		eF	15 36 ±						
		L _E	15 21 45						
		eL _N	15 24 31						
		eL _Z	15 24 40						
		M _N	15 28 50	16.5	+4				
		M _Z	15 34 42	18.0		+2			
		eF	15 45 ±						
15	Feb. 3	eP _{2E}	14 43 17					A distant earthquake. East off New Guinea. Faint record.	
		e _Z	14 43 15						
		eL _E	14 51 50						
		M _{1N}	14 55 20	22.7		+6			
		M _Z	14 55 25	24.5			+5		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
16	Feb. 4	M _E	14	56	58	19.5	+5				
		M _{2N}	14	57	37	22.6		-4			
		eF	15	15	±						
		e _N	14	03	50						A distant earthquake.
		eL _E	14	06	36						Northern part of Persia.
		M _E	14	11	01	14.8	±1				Faint record.
		M _N	14	11	28	15.0					
* 17	Feb. 4	M _Z	14	10	51	14.0			±1		
		eF	14	18	±						
		iP	16	09	13		-6.7	+8.1	-11.0	116	Perceptible.
		iS _{EN}	16	09	29		-4.5	+28			Near Okayama City.
		iS _Z	16	09	28				+23		Felt in eastern part of Tyūgoku district.
		M _E	16	09	30		-8.6				
		M _N	16	09	30	0.8		-67			
18	Feb. 4	M _Z	16	09	30	1.0			-46		
		eF	16	16	±						
		eP _N	22	08	58					5295	SE off Banda-neira, Dutch east Indies.
		P _Z	22	08	53						
		eS _E	22	15	31						
		S _N	22	15	51						
		S _Z	22	15	50						
19	Feb. 7	eL _N	22	20	35						
		M _N	22	23	58	21.0		-3			
		eF	22	35	±						
		i _{EN}	22	31	56	0.4					SW off Yaku Isl, Ryūkyū Is.
		i _Z	22	31	56						
		e _E	22	32	10	2.1	+5				
		e _Z	22	32	09	1.5			+2		
20	Feb. 8	M _{2N}	22	33	47	2.9		-2			
		eF	22	38	±						
		P _N	6	02	15					58	Lower basin of the Arita River, Wakayama Prefec-
		F _Z	6	02	14						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
21	Feb. 10	iS _{EN}	6	02	23	0.6		+4				ture.
		S _Z	6	02	25							Felt at Sumoto.
		i _E	6	02	27	0.4						
		i _N	6	02	26	0.4						
		M _E	6	02	28	0.4	+7					
		M _N	6	02	27	0.4		-10				
		M _Z	6	02	27					-3		
		F	6	03	13							
		eP _{EN}	22	03	25						705	East off Siويا Cape, Huku-
		e _{EN}	22	04	39							sima Prefecture. Felt in
22	Feb. 12	i _Z	22	03	41							Kwanto and southern part
		eS _N	22	04	48							of Ōou district.
		S _E	22	05	00							
		S _N	22	05	02							
		S _Z	22	04	59							
		M _{1E}	22	05	05	1.9	+11					
		M _N	22	05	28	2.6		-16				
		M _Z	22	05	10	2.1				-10		
		i _E	22	05	35	2.6	+13					
		M _{2E}	22	06	14		±12					
23	Feb. 12	eF	22	16	±							
		eL _N	11	47	56							A distant earthquake.
		e _Z	11	47	56							Yunnan, China?
		M _E	11	52	25	10.8	±2					
		M _{1N}	11	49	55	11.6		-14				
		M _Z	11	51	08	12.0			+1			
		M _{2N}	11	51	18	10.5		-12				
23	Feb. 12	eF	12	07	±							
		iP _E	21	45	28		+2			370	North off Hatidyō Isl.	
		P _{NZ}	21	45	28			-2	-2		Record is deep focus type.	
		i _E	21	45	38		-10					
		S _N	21	46	18							
		M _N	21	46	19	1.6		+8				
		M _Z	21	46	20							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
24	Feb. 13	iE	21	46	45						
		eF	21	55	±						
		iE	5	43	38						Near Motoyama, Kōti Prefecture.
		ME	5	43	40	1.4	±2				
		MN	5	43	43	0.6		±2			
		eE	5	44	20						
eE	5	45	01								
F	5	45	29								
25	Feb. 13	ME	6	15	04	1.6	-2				Near Motoyama, Kōti Prefecture.
		MN	6	15	08			±1			
		F	6	15	36						
26	Feb. 14	PN	4	04	37					2485 West off Luzon, Philippine. Slight damage some towns on NW coast of Luzon. 17°30'N 119° 25'E. (According to Manila's report).	
		PZ	4	04	35						
		iEN	4	04	41		-50	-38			
		iz	4	04	39				-38		
		PM _E	4	04	48	5.4	+86				
		PM _N	4	04	48	5.2		+106			
		PM _Z	4	04	46	5.8			-89		
		eEN	4	05	14						
		iSEN	4	08	41		+105	+127			
		eSz	4	08	43						
		M _{1E}	4	08	59	6.3	+181				
		M _{1N}	4	08	46	9.4		-322			
		M _{1Z}	4	09	07	8.0			-100		
		M _{2E}	4	13	40	17.2	+52				
		M _{2N}	4	12	47	21.4		-68			
M _{2Z}	4	12	56	22.0			-30				
M _{2E}	4	16	11	13.1	+78						
M _{2Z}	4	16	06	16.3			+35				
ez	4	47	40		(Short	Period	Wave.)				
eF	5	47	±								
27	Feb. 14	eEN	7	39	39					Local shock?	
		ez	7	39	42						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		ME	7	39	48	0.8	+3				
		MN	7	39	47	0.9		+4			
		MZ	7	39	47	0.7			+3		
		F	7	40	10						
28	Feb. 16	eiz	6	41	49					East off Formosa?	
		ez	6	44	32						
		ez	6	45	45	4.2					
		eSN	6	47	59						
		eSz	6	48	06						
		ME	6	49	21	6.7	-2				
29	Feb. 17	MN	6	49	22	8.1		+3			
		MZ	6	48	20	4.3			+1		
		eF	7	11	±						
		eN	3	11	39						In the Kasima-nada, east off Ibaraki Prefecture.
		ePZ	3	11	45						
ePE	3	11	50								
ePN	3	11	54								
SN	3	12	47								
30	Feb. 17	Sz	3	12	52						
		ME	3	14	17	3.1	-4				
		MN	3	13	12	2.4		+8			
		MZ	3	13	10	2.7			±2		
		eF	3	20	±						
		ez	9	17	37					Ditto.	
		ePE	9	17	46						
		iN	9	17	54						
		iz	9	17	55						
		eSN	9	18	43						
Sz	9	18	57								
ME	9	20	23	3.2	±4						
MN	9	19	16	2.4		+6					
MZ	9	19	15	2.8			+3				
eF	9	28	±								

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
31	Feb. 17	ePN	12	07	49					620	In the Kasima-nada, east off Ibaraki Prefecture.
		S	12	08	57						
		M _E	12	10	20	3.1	± 1				
		M _N	12	09	17	1.8		± 2			
		eF	12	12	\pm						
32	Feb. 19	eL _E	10	57	36					14.2	A distant earthquake. SW off Sumatra? By Omori's seismograph.
		M _E	11	01	06						
		eF	11	20	\pm						
33	Feb. 24	P	6	27	02					1500	SSE off Bonin Isl. Felt in Bonin, abnormal felt area in Hukusima Prefecture.
		eN	6	29	09						
		S ₁ Z	6	29	40						
		eL _E	6	29	40	32.8					
		LZ	6	30	55	23.4					
		M _E	6	32	01	18.6	+146				
		M ₁ N	6	31	49	20.8		+139			
		MZ	6	32	02	18.5			-62		
		i _E	6	34	59						
		M ₂ N	6	34	26	13.9		-95			
		eF	8	35	\pm						
34	Feb. 25	eP	16	27	57					12.1	Near Luzon, Philippine.
		eE	16	32	03						
		eN	16	32	05						
		eM _Z	16	43	06						
		eF	16	59	\pm						
35	Feb. 28	P _{EN}	7	48	20					58	Near Hikata, South of Wakayama City.
		P _Z	7	48	19						
		iS _{EN}	7	48	27						
		i _Z	7	48	20						
		M ₁ E	7	48	40		+7				
		M _N	7	48	33			+8			
		M _Z	7	48	30				± 3		
		i _N	7	48	36						
M ₂ E?	7	49	56	1.8	-4						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
36	Feb. 28	M ₂ N	7	49	46	2.2		+3		5275	A distant earthquake. East off New Guinea.
		eF	7	54	\pm						
37	Mar. 1	eP _E	14	29	43					10.0	A distant earthquake. Near New Britain, New Guinea. Faint record.
		eP _N	14	29	42						
		P _Z	14	29	43	3.0			+2		
		eN	14	30	24						
		eN	14	31	41						
		P _{R2} N	14	31	47	3.9		+8			
		eS _E	14	36	39						
		eS _N	14	36	37				+8		
		eS _Z	14	36	36						
		eL _{EN}	14	42	46						
		eL _Z	14	41	55	18.8		+10			
M _E	14	45	50	18.8	+10						
M ₁ N	14	45	40	19.4		-16					
M _Z	14	45	42	21.8			± 7				
M ₂ N	14	51	42	17.3	-10						
eF	15	53	\pm								
38	Mar. 2	M _E	20	05	39					93	Southern part of the Kii Channel.
		M _N	20	05	28	21.6					
		M _Z	20	06	00	16.8					
		eF	20	20	\pm						
39	Mar. 4	eP _N	10	45	15					0.7	Aleutian IIs. P and S phases is not distinct.
		eP _E	10	45	20						
		eN	10	45	21						
		S _{EN}	10	45	27						
		Z	10	45	26						
		M _E	10	45	29	0.7	± 3				
39	Mar. 4	M _N	10	45	28	0.5		± 3			
		eF	10	46	19						
		eL _E	11	31	47						
		eL _N	11	31	45						
		eL _Z	11	32	26						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			g.	m.	s.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
40	Mar. 5	ME	11	13	37	20.0				9190	New Zealand.
		MN	11	35	47	17.1					
		MZ	11	36	09	16.1					
		eF	11	51	±						
		PEN	11	58	46						
		PZ	11	58	44			+3			
		PcPE	11	59	18						
		eE	12	01	05						
		iE	12	01	46						
		eSEN	12	09	06						
		eE	12	10	06						
		eLE	12	22	22						
		eLN	12	22	31						
		eE	12	23	02	26.3	-4				
		eN	12	23	01	29.0		-4			
ME	12	30	50	20.5	+4						
M1N	12	34	14	19.8		-7					
MZ	12	32	14	22.2			+6				
M2N	13	01	19	20.8		+4					
eF	13	32	±								
41	Mar. 9	ePE	9	33	50				62	Near Kyoto City.	
		PZ	9	33	50						
		SEN	9	34	00						
		SZ	9	33	58						
		MEN	9	34	00		-6	+7			
		MZ	9	33	59						
eF	3	35	06								
42	Mar. 10	eMN	15	15	05	10.8				North off Bonin Isl.	
		eMZ	15	14	02	15.2					
		eF	15	25	±						
43	Mar. 11	PE	10	44	37		-2			Epicenter in Nerodeep, SE off Guam Isl. Felt at Guam.	
		iPNZ	10	44	37			+1			+2
		ez	10	45	08						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks			
			g.	m.	s.		A _E	A _N	A _Z					
			h	m	s	s	μ	μ	μ	km.				
44	Mar. 13	ez	10	45	13					2.7	±2	(According to Manala's report).		
		en	10	45	39									
		eM1N	10	46	14									
		eF	10	52	±									
		SEN	0	13	25									
45	Mar. 13	M1E	0	13	27		±5			0.5	±3	Near Sisikui, southern part of Tokushima Prefecture.		
		MN	0	13	27									
		M2E	0	13	32		±5							
		M2N	0	13	34				±4					
		F	0	13	58									
		PE	13	21	24		-2	+2					5580	A distant earthquake. Coral sea, SE off New Guinea?
		iPZ	13	21	24				+4					
		PR1N	13	22	31									
		PR1Z	13	22	29	5.8								
		eSN	13	28	38									
eLEN	13	34	40											
ME	13	36	13	23.5	-2									
M1N	13	35	49	24.6			-3							
M2N	13	39	51	16.0			+5							
MZ	13	40	05	22.3				±2						
eF	13	57	±											
46	Mar. 13	ePEN	16	59	01				125	Near Siomisaki, south end of the Kii Peninsula.				
		ePZ	16	59	00									
		iEN	16	59	06									
		iz	16	59	05									
		SEN	16	59	18									
		M1N	16	59	19	0.5					-8			
		ME	16	59	26	3.1	+6							
47	Mar. 16	M2N	16	59	24			+8	1.3		+2			
		MZ	16	59	29									
		F	17	01	15									
47	Mar. 16	P1N	14	21	22			-4	4380?	Near Solomon IIs.				
		iP1Z	14	21	22						-6	Record is deep focus type.		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	T.	M.		A _E	A _N	A _Z		
			h	m	s		μ	μ	μ	km.	
		ez	14	23	38						
		eS [?] EN	14	27	31						
		eN	14	28	22						
		eF	14	33	±						
48	Mar. 17	iSEN	8	46	11						Near Kyôto City.
		M	8	46	11		±3	±3	±1		
		F	8	46	49						
49	Mar. 17	eE	18	37	30						Off the Kudyûkuri-hama, Tiba Prefecture.
		eME	18	39	44		±2				
		eMN	18	39	28	4.2		±2			
		eF	18	47	±						
50	Mar. 18	iPEN	4	38	02		-5	-3		2575	Southern part of the Okho- tsk Sea.
		iPz	4	38	03				+5		
		PM _E	4	38	06	2.8	+14				Deep focus earthquake.
		PM _N	4	38	06	1.4		+7			
		PM _Z	4	38	07	1.8			-20		
		iN	4	39	26						
		iSEN	4	42	04						
		iSz	4	42	03						
		ePcP [?] EZ	4	42	36						
		M _Z	4	45	55	23.4			±1		
		ScSEN	4	49	15						
		eF	5	03	±						
51	Mar. 20	PEN	2	31	06					111	Upper valley of the Yosino River, Nara Prefecture.
		Pz	2	31	08						
		SEN	2	31	21						
		ME	2	31	21	0.7	-3				
		MN	2	31	21						
		MZ	2	31	22				±1		
		F	2	32	08						
52	Mar. 20	PN	2	46	19					4540	Western part of the Caro- line IIs, Pacific Ocean.
		Pz	2	46	17						

No	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		eEN	2	49	30						
		S _N	2	52	35						
		M _E	2	56	48	12.4	+2				
		M _{1N}	2	56	48	12.9		+2			
		M _{2N}	3	07	07	17.0		±1			
		M _Z	3	07	02	16.0			±1		
		eF	3	25	±						
53	Mar. 21	eP	3	40	40					320	Near Mt. Amagi. Weak shocks were felt in the Izu Peninsula.
		eSE	3	41	23						
		eSN	3	41	25						
		S [?] E	3	41	29						
		M _N	3	41	33	4.0		+23			
		M _Z	3	41	33	2.8			-22		
		M _E	3	41	49	8.0	-32				
		eF	3	54	±						
54	Mar. 24	ePN	12	13	29					5560	A distant earthquarke. Near Solomon IIs. 10°S 161°E (U.S.C.G.S.)
		ePz	12	13	30						
		PEN	12	13	35						
		Pz	12	13	37						
		iEN	12	13	37		+2	-3			
		i	12	13	42		+4	-7			
		iN	12	14	58	3.2		-7			
		iz	12	14	00						
		S _N	12	20	42						
		eSz	12	20	45						
		S [?] z	12	20	53						
		eLN	12	27	11						
		M _E	12	28	48	23.9	±3				
		M _N	12	28	59	22.6		±5			
		M _Z	12	32	05	24.4			±4		
		eF	13	37	±						
55	Mar. 25	iSEN	2	47	33						Near Siomisaki, south end of KûP eninsula.
		Sz	2	47	33						
		MEN	2	47	33	0.6	-2	-4			

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
56	Mar. 26	MZ	2	47	35	0.5			± 1		
		F	2	48	05						
		SE _N	20	11	00						Near Ootu, Siga Prefecture.
		ME _N	20	11	00		± 1	± 1			
		F	20	11	27						
57	Mar. 30	eSE	14	56	02						Northern part of the
		eSN	14	56	04						Hyûga-nada.
		ME	14	56	10	1.7	± 3				Felt in eastern part of
		MN	14	56	08	1.5		+6			Kyûsyû district.
		eF	15	02	\pm						

SUMOTO JAPAN.

SEISMOLOGICAL BULLETIN

A Branch Station of the Kobe Meteorological Observatory of Japan.

$\varphi=34^{\circ} 21'$ $\lambda=134^{\circ} 53'$ $h=109.0$ m. Underground: Cretaceous.

Instrument: Omori's Seismograph.

Wiechert Seismograph.

(Horizontal Pendulum.)

(Horizontal & Vertical)

Jan.

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	17.1	2.1	0.0002	20
A _N :	17.1	1.6	0.0001	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	4.8	Aperiodic	0.002	112
A _N :	4.3	"	0.002	115
A _Z :	4.3	"	0.001	65

Feb.

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	17.3	2.1	0.0002	20
A _N :	17.3	2.2	0.0002	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	4.7	Aperiodic	0.003	119
A _N :	4.4	"	0.002	106
A _Z :	4.2	"	0.002	60

Mar.

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	18.7	3.3	0.0003	20
A _N :	17.3	2.3	0.0003	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	4.8	Aperiodic	0.001	106
A _N :	4.4	"	0.002	108
A _Z :	4.1	"	0.001	66

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
1	Jan. 3	PEN	9	47	24		+1.3	+1.7		2410	Southwestern coast of Kamchatka (about $53^{\circ}40'N$ $156^{\circ}40'E$).
		SE	9	51	21						
		SN	9	51	23						
		ME	9	52	08	9.4	+44				
		MN	9	53	19	7.5		-14			
		eF	10	06	\pm						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
2	Jan. 6	ePEN	1	12	38					44	Basin of the Arita R., Wakayama Prefecture.
		SEN	1	12	44						
		MEN	1	12	44	0.4	± 1	-2			
		F	1	13	13						
*3	Jan. 8	iPEN	23	07	23		+25.0	+9.6		85	Weak shocks were felt in Awaji Isl. Near Tudi, upper basin of the Yosino River, Sikoku district. Felt in Sikoku and Tyû- goku district. An after shock of No. 3.
		iPz	23	07	22				+19.4		
		iSEN	23	07	33						
		iSz	23	07	34						
		ME	23	07	43	1.3	-206				
		MN	23	07	35	2.5		-561			
		MZ	23	07	40	1.5			± 129		
		F	23	21	\pm						
4	Jan. 8	SEN	23	57	44						
		MEN	23	57	45						
		F	23	58	09						
5	Jan. 10	PEN	23	30	38		+1.8	+2.2		283	Off the Sima Peninsula, Mie Prefecture. Deep focus earthquake.
		Pz	23	30	37				-3.2		
		SEN	23	31	16						
		ME	23	31	17	2.0	-1				
		MN	23	31	17	2.4		+3			
6	Jan. 12	ePN	13	44	10					2230	Yunnan, China.
		ePE	13	44	17						
		SE	13	48	03						
		SN	13	47	48						
		iz	13	48	31						
		ME	13	49	07	11.5	-10				
		MN	13	48	48	11.5		+39			
7	Jan. 12	S	17	17	55						Upper valley of the Yosino River, Sikoku district.
		ME	17	17	58		-2				

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	μ	s	μ	μ	km.		
8	Jan. 15	MN	17	17	58	0.4		± 2				Destructive at Sitamarhi, Maduban, Darbhanga and Monghyr. basin of the Ganges River, Bihar, India.
		F	17	18	29							
		P	8	51	11		+1.8	+0.9 ^(?)	+3.2	4440		
		iE	8	53	10							
		iN	8	53	15							
		iz	8	53	12							
		SzZ	8	57	06							
		SE	8	57	26							
		SN	8	57	36							
		LzZ	8	59	41							
		LE	9	04	03							
		LN	9	03	44							
		9	Jan. 16	M ₁ E	9	07	44	18.9	-1200			
M ₁ N	9			07	32	13.3		-747				
M ₁ Z	9			09	15	11.8			-386			
M ₂ E	9			10	35	14.2	-942					
M ₂ N	9			09	29	11.8		+500				
M ₂ Z	9			11	11	12.2			-400			
eF	12			00	\pm							
10	Jan. 16	PEN	12	06	18					30	Local shock.	
		SEN	12	06	22							
		ME	12	06	23	0.8	± 1					
		MN	12	06	22	0.3		-3				
11	Jan. 17	F	12	06	46							
		SEN	12	09	14							
		ME	12	09	14	0.4	± 2					
11	Jan. 17	MN	12	09	15						Near Wakayama City.	
		F	12	09	29			-1				
		SEN	13	25	42							
11	Jan. 17	ME	13	25	42		+1					
		MN	13	25	42			± 1				
11	Jan. 17	F	13	26	04							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			h	m	s		A _E	A _N	A _Z		
			G.	M.	T.	s	μ	μ	μ	km.	
12	Jan. 17	SEN	19	30	34						In the Kii Channel.
		ME	19	30	34		+1				
		MN	19	30	34	0.3		± 2			
		F	19	30	50						
13	Jan. 19	iEN	12	49	24						Northern part of Burma?
		LN	12	50	43						
		eF	13	11	\pm						
14	Jan. 20	eEN	18	05	\pm						Felt at Tai-yuan, Suei-yuan and slightly destructive in Woo-Yuan.
		SE	18	10	42						
		SN	18	10	56						
		SZ	18	10	44						
		ME	18	11	02	12.6	-32				
		MN	18	12	29	10.3		+11			
		MZ	18	11	04	13.1			-43		
15	Jan. 20	eE	22	55	41						North far off to Keelung, Formosa.
		eN	22	55	42						
		eE	23	02	18						
		eN	23	02	33						
		ME	23	04	04	10.9	-17				
		MN	23	04	41	8.8		± 9			
		MZ	23	03	02	11.3			± 15		
16	Jan. 20/21	ePE	23	45	35				8120?	A distant earthquake. Turkey?	
		PN	23	45	40						
		ez	23	46	03						
		eSE	23	55	09						
		eSN	23	54	58						
		eF	0	11	\pm						
17	Jan. 21	eE	6	59	28					Northern part of the Formosa Channel.	
		eN	6	59	30						
		SE	7	05	12						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			h	m	s		A _E	A _N	A _Z		
			G.	M.	T.	s	μ	μ	μ	km.	
18	Jan. 22	SN	7	04	46						Ditto.
		SZ	7	04	24						
		eFEZ	7	19	\pm						
		eFN	7	51	\pm						
		eEN	7	55	50						
19	Jan. 23	LE	7	59	41						In the Kii Channel.
		LZ	7	59	40						
		ME	8	00	30	11.1	± 11				
		MN	8	02	04	10.9		± 7			
		MZ	8	00	34	10.3			± 8		
20	Jan. 23	eF	8	13	\pm						Local shock.
		P	2	02	33		+0.9	-1.7		42	
		S	2	02	38						
		M _{1E}	2	02	38	0.4	+17				
		M _N	2	02	39	0.5		+27			
21	Jan. 27	M _Z	2	02	39					-6	Near Wakayama City.
		M _{2E}	2	02	41	0.5	+12				
		F	2	04	19						
		ePN	4	33	01					23	
		SEN	4	33	04						
22	Jan. 28	ME	4	33	04		± 0.4				Near Hinomisaki, Wakayama Prefecture.
		MN	4	33	04	0.6		+2			
		F	4	33	16						
		ePEN	10	37	59					36	
		SEN	10	38	04						
23	Jan. 28	ME	10	38	05	0.4	-3				Near Wakayama City.
		MN	10	38	05	0.5		-4			
		F	10	38	33						
		ePEN	16	57	16					33	
24	Jan. 28	S	16	57	20						Near Hinomisaki, Wakayama Prefecture.
		ME	16	57	21		+2				
		MN	16	57	21	0.2		-2			

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
23	Jan. 29	F	16	57	37					409	Western foot of Mt. Aso. Felt in northern part of Kyûsyû.
		P _E	1	39	43		-0.9				
		eP _N	1	39	42			?			
		eP _Z	1	39	43				(-)		
		P _N	1	39	44						
		S _{EN}	1	40	37						
		S _Z	1	40	39						
		M _E	1	40	55	2.4	-24				
		M _N	1	40	46	2.2		+37			
		M _Z	1	40	46	2.1			-16		
eF	1	51	±								
24	Jan. 29	eP _E	12	36	56		-0.8			2425	ESE off Kinkwazan, Miyagi Prefecture.
		P _N	12	37	02			-0.9			
		e _Z	12	39	23						
		S _E	12	41	06						
		S _N	12	40	50						
		eF	12	51	±						
25	Feb. 1	eP _E	0	17	20					218	Mouth of the Sagami River, Kanagawa Prefecture. Felt in Kwanto district.
		e _N	0	17	34						
		eS _E	0	17	50						
		S _N	0	17	48						
		M _E	0	18	08	2.1	±0.4				
		M _N	0	17	50	1.7		+1			
		eF	0	21	±						
26	Feb. 1	e _E	15	30	02						South off Hatidyô Isl.
		e _N	15	30	01						
		S _E	15	30	07						
		S _N	15	30	08						
		M _E	15	30	09	1.5	-4				
		M _N	15	30	09	2.0		+2			
		eF	15	34	±						
27	Feb. 1	P	16	37	12				65	In the Kii Channel.	

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		S	16	37	20					+4	
		M _E	16	37	20	0.4					
		M _N	16	37	20	0.5		±14			
		M _Z	16	37	21	0.5			-3		
		F	16	38	27						
28	Feb. 2	e _N	15	18.5							A distant earthquake. Near Geelvink Bay, New Guinea.
		e _E	15	21.5							
		L _N	15	25	59						
		eF	15	38	±						
29	Feb. 3	eP _{EN}	14	41	24					+29	A distant earthquake. East off New Guinea.
		e _Z	14	42	07						
		e _{EN}	14	50	49						
		L _E	14	52	24						
		L _N	14	54	48						
		L _Z	14	54	24						
		M _E	14	56	42	21.4		±55			
M _N	14	56	54	21.4							
M _Z	14	57	01	22.3			±67				
eF	15	20	±								
30	Feb. 4	e _E	13	47	28						A distant earthquake, Northern part of Persia.
		e _N	13	47	42						
		L _N	14	00	39						
		eF	14	38	±						
*31	Feb. 4	iP	16	09	12		-4.2	+2.8	-5.0	112	Perceptible. Near Okayama City. Felt in eastern part of Tyûgoku district.
		iS _{EZ}	16	09	27						
		iS _N	16	09	28						
		M _E	16	09	28	1.1	-55				
		M _N	16	09	29	0.6		±36			
		M _Z	16	09	28	1.5			-22		
32	Feb. 4	eP _E	22	08	49		(+)			5280?	SE off Banda-neira, Dutch east Indies.
		eP _N	22	08	47				-0.9		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
33	Feb. 7	PZ	22	08	47				+1.7			
		SEN	22	14	51							
		eF	22	30	±							
		PEN	22	30	38						487	SW off Yaku Isl, Ryūkyū IIs.
		SEN	22	31	44							
		SZ	22	31	40							
		ME	22	31	50	2.2	-4					
*34	Feb. 8	MN	22	32	07	2.2		-3				
		MZ	22	32	11	2.1			-1			
		eF	22	37	±							
		iP	6	02	08		+1.7	-2.8	-3.3	35	Perceptible.	
		iS	6	02	13						Lower basin of the Arita River, Wakayama Prefecture.	
		ME	6	02	13	0.4	-13					
		M ₁ N	6	02	14	0.5		-19				
35	Feb. 9	MZ	6	02	14	0.3			-5			
		M ₂ N	6	02	16	0.4			-16			
		F	6	06	01							
		ePEN	9	37	±						Western part of the Caroline IIs., Pacific Ocean.	
		eSN	9	43	22							
		LN	9	50	±							
		Lz	9	49	±							
36	Feb. 9	eFz	10	00	±							
		eFEN	10	49	±							
		PEN	20	51	09						36	Near Wakayama City.
		PZ	20	51	08							
		S	20	51	13							
		ME	20	51	14	0.4	+4					
		MN	20	51	13	0.4		-6				
37	Feb. 9	MZ	20	51	13				±1			
		F	20	52	15							
		eE	22	42	42						Near Mt. Asama?	
		SEZ	22	43	11							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
38	Feb. 10	SN	22	43	12							
		F	22	45	±							
		PEZ	22	03	29		+0.4				720	East off Siويا Cape, Fuku-sima Prefecture.
		PN	22	03	32				-0.9?			
		SE	22	05	07							
		SN	22	05	08							
		Sz	22	05	06							
		ME	22	05	31							
		MN	22	05	24							
		MZ	22	05	20							
39	Feb. 12	eF	22	15	±							
		eE	11	43	41							
		eN	11	43	33							
		LN	11	46	45							
		eZ	11	48	01							
		M ₁ N	11	49	42	12.7			+65			
		LE	11	49	49							
		ME	11	51	54	10.9	-30					
		MZ	11	51	58	12.4				-25		
		eF	12	11	±							
40	Feb. 12	PE	21	45	30		+1.7			380	North off Hatidyō Isl..	
		PNZ	21	45	31				+0.9	+3.3		
		S	21	46	22							
		ME	21	46	24	1.7	+3					
		MN	21	46	23	2.4			+7			
		MZ	21	46	37							
		eF	21	51	±							
41	Feb. 13	FEN	5	43	10		+0.4			115	Near Motoyama, Koti Prefecture.	
		SEZ	5	43	26							
		SN	5	43	24							
		ME	5	43	27	0.4	-3					
		MN	5	43	30	0.7			+2			
		MZ	5	43	30	0.9					±1	

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
42	Feb. 13	eF	5	44	±						Ditto.
		eEN	6	14	50						
		SEN	6	14	53						
		ME	6	14	53	0.4	-3				
		MN	6	14	58	0.4		+2			
		F	6	15	45						
43	Feb. 14	eP	4	04	32		+0.4	+0.9	+2.5	2450	West off Luzon, Philippine. Slight damage in Some towns on NW coast of Luzon. 17°30'N 119°25'E. (according to Manila's re- port.)
		P	4	04	33		-2.5	-2.8	-5.0		
		SEN	4	08	30						
		Sz	4	08	40						
		M _{1E}	4	08	51	6.8	-237				
		M _N	4	08	40	5.3		-250			
		M _Z	4	08	55	6.6			-133		
		M _{2E}	4	16	12	16.9	-720				
		eF	5	38	±						
44	Feb. 14	eEN	5	00	15					In the Kii Channel.	
		eSEN	5	00	45						
		Sz	5	00	56						
		eF	5	03	±						
45	Feb. 16	eEN	6	44	±					A distant earthquake. East off Formosa?	
		eF	7	09	±						
46	Feb. 17	ePE	3	11	50					450	In the Kasima-nada, east off Ibaraki Prefecture.
		ePN	3	11	57						
		eZ	3	12	10						
		SEZ	3	12	53						
		SN	3	12	54						
		ME	3	13	20	1.8	-1				
		MN	3	13	20	2.9		-5			
		MZ	3	13	18	2.4			±1		
eF	3	19	±								
47	Feb. 17	ePE	9	17	57				466	Ditto.	

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	μ	
48	Feb. 17	ePN	9	18	02						Ditto.
		eZ	9	18	11						
		SE	9	18	56						
		SN	9	19	08						
		ME	9	19	31	2.8	±2				
		MN	9	19	17	2.8		-3			
		MZ	9	19	21	2.8			-1		
		eF	9	25	±						
		eE	12	09	26						
		eN	12	09	13						
49	Feb. 19	eE	12	00	16						A distant earthquake SW off Sumatra, Indian Ocean?
		eN	12	10	13						
		ME	12	10	32	2.1	+1				
		MN	12	10	26	2.6		-1			
		MZ	12	10	23	2.3			-1		
		eF	12	14	±						
		eEN	10	54	±						
		LN	10	58	37						
		eF	11	42	±						
		50	Feb. 22	eE	1	51	50				
eN	1			51	52						
SE	1			52	27						
SN	1			52	30						
ME	1			52	36	2.4	±1				
MN	1			52	45	2.4		±1			
eF	1	56	±								
51	Feb. 24	iP	6	27	00						SSE off Bonin Isl. Felt in Bonin, abnormal felt area in Hukusima Pre- fecture.
		eSEN	6	29	38		-3.4	+2.8	+1.7	1510	
		LE	6	31	11						
		LN	6	31	15						
		LZ	6	30	50						
		ME	6	31	31	19.1	-1014				
		MN	6	31	38	16.7		-667			
		MZ	6	31	34	20.3			+1067		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
52	Feb. 25	eF _{EN}	8	36	±					2500?	Near Luzon, Philippine.
		eF _Z	8	01	±						
		eP	16	27	53						
		eS _E	16	31	57						
		eS _N	16	32	00						
53	Feb. 28	P _{EN}	4	50	36					32	Local shock.
		S _{EN}	4	50	41						
		M _E	4	50	41	0.4	+1				
		M _N	4	50	41			-2			
		F	4	51	09						
*54	Feb. 28	iP _{EN}	7	48	16		+2.6	-3.8		29	Perceptible. Near Hikata, south of Wakayama City.
		iF _Z	7	48	15				+1.7		
		S _{EN}	7	48	20						
		S _Z	7	48	19						
		M _E	7	48	22	0.5	+17				
		M _N	7	48	21	0.4		-26			
		M _Z	7	48	21	0.6			-18		
		F	7	51	40						
55	Feb. 28	P _{EZ}	14	29	41		-0.9	-2.8	+1.7	5035	A distant earthquake. East off New Guinea.
		eP _N	14	29	42						
		S _E	14	36	26						
		S _N	14	36	25						
		L _E	14	43	19						
		L _N	14	42	39						
		L _Z	14	42	07						
		M _E	14	47	23	15.5	+46				
		M _N	14	46	24	18.8		+221			
		M _Z	14	46	20	18.8			-200		
56	Mar. 1	P	14	03	34				+0.9	40	In the Wakaura Bay, Kii Channel.
		S _{EN}	14	03	39						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
57	Mar. 1	M _E	14	03	40	0.4	±1				A distant earthquake. Near New Britain, east off New Guinea.
		M _N	14	03	41	0.3		+3			
		F	14	04	23						
58	Mar. 1	eP _E	19	49	12						By Omori's seismograph. Pacific coast of Chile. 39°S 73°W. (U.S.C.G.S.)
		eP _N	19	49	04						
		eZ	19	49	±						
		S _N	19	55	51						
		L _N	20	04	44						
59	Mar. 2	L _Z	20	03	48					25	Local shock.
		eF	20	33	±						
		eP _{?N}	22	04	54						
		eF	23	09	±						
		eP _N	0	05	05						
60	Mar. 2	S _{EN}	0	05	08					0.4	±1
		M _E	0	05	09						
		M _N	0	05	09				-1		
		F	0	05	26						
		eP _{EN}	10	45	07						
61	Mar. 2	S _{EN}	10	45	18					0.5	±2
		eS _Z	10	45	17						
		M _E	10	45	23						
		M _N	10	45	20	0.4		+5			
		M _Z	10	45	20				±1		
		F	10	46	22						
62	Mar. 4	eE	12	40	41					1.5	±1
		eN	12	40	45						
		S	12	41	34						
		M _E	12	41	35	1.9		+1			
		M _N	12	41	35						
63	Mar. 4	eF	12	44	±						SSW off Hatidyô Isl.
		eE	11	24	41						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
							AE	AN	Az		
			G.	M.	T.	s	μ	μ	μ	km.	
		eN	11	24	42						
		ez	11	24	51						
		eSN	11	31	48						
		LN	11	34	23						
		LE	11	36	25						
		ME	11	38	00	15.9	± 15				
		MN	11	37	17	16.1		± 8			
		eFz	11	44	\pm						
		eFEN	12	21	\pm						
63	Mar. 5	ePE	11	58	44					9250	New Zealand.
		ePN	11	58	40						
		Pz	11	58	42				$+1.5$		
		eSEN	12	09	05						
		ME	12	36	21	15.0	-15				
		MN	12	33	59	18.8		± 58			
		Mz	12	31	16	19.7			-83		
		eF	13	39	\pm						
64	Mar. 7	ePEN	9	53	16					19	Near Wakayama City.
		SEN	9	53	18						
		ME	9	53	19		-2				
		MN	9	53	19	0.4		-2			
		F	9	53	44						
65	Mar. 8	ePEN	11	31	18					20	Ditto.
		eSEN	11	31	21						
		ME	11	31	21		-1				
		MN	11	31	21	0.3		-3			
		F	11	31	43						
66	Mar. 11	S	10	44	34						Near Nero-deep, felt in Guam, Pacific Ocean.
		ME	10	44	36	1.9	$+2$				
		MN	10	44	37	2.5		-2			
		Mz	10	44	36	2.1			-5		
		eF	10	50	\pm						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
							AE	AN	Az		
			G.	M.	T.	s	μ	μ	μ	km.	
67	Mar. 12	ePEN	12	29	06					24	Near Wakayama City.
		SEN	12	29	10						
		ME	12	29	10		± 1				
		MN	12	29	10	0.3		± 1			
		F	12	29	22						
68	Mar. 12	SEN	16	27	52						In the Kii Channel.
		ME	16	27	53	0.4	-2				
		MN	16	27	53	0.3		$+1$			
		F	16	28	03						
69	Mar. 13	P	0	13	00				$+0.9$	88	Near Sisikui, Southern part of Tokushima Prefecture.
		SEN	0	13	12						
		ME	0	13	14	0.4	-5				
		MN	0	13	15	0.4		-7			
		Mz	0	13	24	0.9			-2		
		F	0	14	18						
70	Mar. 13	ePEN	1	10	17					11	Local shock.
		S	1	10	18						
		F	1	10	24						
71	Mar. 13	SEN	4	37	53						Near Wakayama City.
		ME	4	37	54		± 1				
		MN	4	37	54	0.4		-2			
		F	4	38	07						
72	Mar. 13	ePEN	13	21	15					5085	Coral Sea, SE off New Guinea?
		ePz	13	21	17						
		eSE	13	27	24						
		eSN	13	28	40						
		eF	13	57	\pm						
73	Mar. 13	PEN	16	47	38					30	Near Wakayama City.
		SEN	16	47	42						
		ME	16	47	43		± 1				
		MN	16	47	43	0.4		-3			

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
74	Mar. 13	F	16	48	01					105	Near Siomisaki, south end of the Kii Peninsula.
		P	16	58	58		-0.9	+1.2	+1.5		
		S	16	59	12						
		ME	16	59	13	1.5	+6				
		MN	16	59	13	1.9		-9			
		MZ	16	59	14	1.7			+2		
		F	17	01	11						
75	Mar. 15	eP _{EN}	15	13	55					0.4	Near Wakayama City.
		SE _N	15	13	57						
		ME	15	13	57		± 1				
		MN	15	13	57			-1			
		F	15	14	12						
76	Mar. 16	eP _{EN}	14	21	19					4330	A distant earthquake. Near Solomon IIs.
		iP _Z	14	21	20				-4.5		
		SE	14	27	27						
		SN	14	27	25						
		SZ	14	27	23						
		eF	14	39	\pm						
77	Mar. 16	P _{EN}	18	58	52					0.4	Near Wakayama City.
		S	18	58	57						
		M _{EN}	18	58	58		+2	± 3			
		F	18	59	16						
78	Mar. 17	cP _N	4	33	33					0.4	In the Kii Channel.
		S	4	33	38						
		ME	4	33	38		+4				
		MN	4	33	38	0.3		-7			
		F	4	34	06						
79	Mar. 18	FE	4	38	09		+2.8			2875	Southern part of the Okhotsk Sea.
		PNZ	4	38	06			-3.7	+30		
		eSE	4	42	40						
		eSN	4	42	44						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
80	Mar. 20	eF	4	55	\pm					0.4	81
		eP _N	2	31	13						
		SE _N	2	31	24						
		ME	2	31	24		-2				
		MN	2	31	24	0.5		-3			
		F	2	32	12						
81	Mar. 20	eP _{EN}	2	46	14					0.4	4480
		eP _Z	2	46	13						
		SE _N	2	52	27						
		eF	3	19	\pm						
82	Mar. 20	P	17	19	33					0.4	24
		S	17	19	36						
		ME	17	19	36		+4				
		MN	17	19	37			± 7			
		MZ	17	19	37				± 2		
		F	17	20	19						
83	Mar. 20	eP _N	17	20	35					0.4	18?
		SE _N	17	20	37						
		ME	17	20	37		± 1				
		MN	17	20	37			± 1			
		F	17	20	50						
84	Mar. 21	eP _{EN}	3	40	43					0.4	Near Mt. Amagi. Weak shocks were felt in the Izu Peninsula.
		eP _Z	3	40	42						
		eE	3	41	47						
		eN	3	41	46						
		ME	3	41	48	2.5	± 9				
		MN	3	41	52	2.7		+20			
85	Mar. 23	MZ	3	42	28	3.6			-2		
		eF	3	51	\pm						
		cP _{EN}	12	49	01					0.4	In the Kii Channel.
SE _N	12	49	06								

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
86	Mar. 24	M _{EN}	12	49	07	0.3	-2	±2		5580	A distant earthquake. Near Solomon IIs.
		F	12	49	30						
		P _{EN}	12	13	29		+0.5				
		P _Z	12	13	28						
		eS _E	12	20	45						
		eS _N	12	20	38						
		eS _Z	12	20	46						
		L _{EN}	12	27	09						
		M _E	12	28	36	21.5	-29				
		M _N	12	28	50	21.5		+45			
87	Mar. 25	M _Z	12	32	18	20.6			-67	49	Local shock?
		eF	13	20	±						
		eP _{EN}	3	29	17						
		S _{EN}	3	29	24						
		M _E	3	29	21	0.5	-2				
88	Mar. 29	M _N	3	29	24	0.3		-3		32	In the Kii Channel.
		F	3	29	46						
		eP _{EN}	23	26	24						
		S _{EN}	23	26	28						
		M _E	23	26	29		-2				
89	Mar. 30	M _N	23	26	29	0.3		-2		289	Northern part of the Hyūga-nada. Felt in eastern part of Kyūsyū district.
		F	23	26	58						
		eP _E	14	55	04						
		eP _N	14	55	06						
		eZ	14	55	18						
		S _E	14	55	43						
		S _N	14	55	44						
		S _Z	14	55	47						
89	Mar. 30	M _E	14	55	57	1.7	-3			289	Northern part of the Hyūga-nada. Felt in eastern part of Kyūsyū district.
		M _N	14	55	58	1.9		-3			
		M _Z	14	55	57	2.4			+2		
		eF	15	02	±						

TOYOOKA JAPAN.

SEISMOLOGICAL BULLETIN

A Branch Station of the Kobe Meteorological Observatory of Japan.

$\varphi = 35^{\circ} 32'$ $\lambda = 134^{\circ} 49'$ $h = 32.2$ m. Underground: Tertiary.

Instruments: Omori's Seismograph.
(Horizontal Pendulum)

Wiechert Seismograph.
(Horizontal & Vertical)

Jan.

	T ₀	ε	$\frac{r}{T_0^2}$	V
A _E :	22.5	3.0	0.001	20
A _N :	20.8	3.0	0.001	20

	T ₀	ε	$\frac{r}{T_0^2}$	V
A _E :	5.8	10	0.006	91
A _N :	6.2	10	0.005	87
A _Z :	3.4	3.1	0.003	62

Feb.

	T ₀	ε	$\frac{r}{T_0^2}$	V
A _E :	20.0	3.0	0.001	20
A _N :	20.0	3.0	0.001	20

	T ₀	ε	$\frac{r}{T_0^2}$	V
A _E :	5.6	∞	0.007	96
A _N :	6.0	∞	0.005	104
A _Z :	3.6	3.3	0.003	56

Mar.

	T ₀	ε	$\frac{r}{T_0^2}$	V
A _E :	20.1	3.0	0.001	20
A _N :	20.8	3.0	0.001	20

	T ₀	ε	$\frac{r}{T_0^2}$	V
A _E :	5.6	∞	0.007	81
A _N :	6.2	∞	0.006	100
A _Z :	3.5	3.0	0.003	58

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks			
			G.	M.	T.		A _E	A _N	A _Z					
1	Jan. 3	P _{NZ}	h	m	s	s	μ	μ	μ	km.	Southwestern coast of Kam- chatka (about 53°40'N 156°40'E.) Deep focus earthquake.			
			9	47	17									
			eP _E	9	47							20		
			S _E	9	51							06		
			S _N	9	51							04		
			M _{EN}	9	52							47	-26	+5
			eF	10	00							±		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
*2	Jan. 8	P	23	07	33		-7.7	-21.8	-19.4	226	Perceptible.
		i _Z	23	07	40						Near Tudi, upper basin of the Yosino River, Sikoku district.
		i _N	23	07	49			+58			
		i _Z	23	07	45				-32		
		i _{EN}	23	07	53		+81	+46			Felt in Sikoku and Tyû-goku district.
		S _{EN}	23	08	04						
		M _E	23	08	09	2.9	-464				
		M _{NZ}	23	08	08	1.6		+346	-118		
		eF	23	15	±						
3	Jan. 12	eL _N	13	48	15						A distant earthquake.
		M _N	13	49	02	13.4		-17			Yunnan, China.
		eF	14	58	±						
4	Jan. 15	eF _Z	8	51	18					4380	Destructive at Sitamarhi, Maduban, Darbhanga and Monghyr, basin of the Ganges River Bihar, India.
		eP _{EN}	8	51	20						
		P _{EN}	8	51	24						
		P _Z	8	51	23						
		c _Z	8	57	05						
		S _E	8	57	29						
		S _N	8	57	36						
		L _E	9	00	49						
		L _N	9	00	42						
		e _Z	9	04	49						
		M _E	9	09	01	14.0	+149				
		M _N	9	09	08	13.2		-349			
		M _Z	9	10	24	13.0			+89		
		M _{2E}	9	10	41	13.0	+248				
		M _{2N}	9	10	53	12.4		+322			
		M _{2Z}	9	11	30	13.0			-100		
		M _{3E}	9	10	53	10.4	+167				
		eF	10	13	±						
5	Jan. 20	L _N	18	08	±						Faint record.
		M _N	18	10	52						Felt at Tai-yuan, Suei-yuan and slightly destructive in Wooyuan
		eF	18	22	±						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
6	Jan. 20	eL _{EN}	22	58	±						North far off to Keelung, Formosa.
		eF _N	23	16	±						
7	Jan. 21	eL _N	6	59	±						Northern part of the Formosa Channel.
		eF	7	16	±						
8	Jan. 22	eL _N	7	58	±						Ditto.
		eF	8	16	±						
9	Jan. 23	e _{EN}	2	03	10						In the Kii Channel.
		S _E	2	03	14						
		S _N	2	03	15						
		M _{1E}	2	03	17		+4				
		M _N	2	03	16			±3			
		M _{2E}	2	03	20		+4				
		F	2	03	47						
10	Jan. 29	P	1	39	51					480	Western foot of Mt. Aso. Felt in northern part of Kyûsyû.
		S	1	40	55						
		M _E	1	41	11	2.1	-25				
		M _N	1	41	08	1.7		-31			
		M _Z	1	41	00	1.9			-19		
		eF	1	45	±						
*11	Feb. 4	P	16	09	10		-5.3	-3.8	-7.1	97	Perceptible.
		S	16	09	23						Near Okayama City.
		M _{EN}	16	09	24	1.1	+48	-67			Felt eastern part of Tyû-goku district.
		M _Z	16	09	25	1.1			+36		
		eF	16	14	±						
12	Feb. 10	P	22	03	24					601	East off the Siويا Cape, Hukusima Prefecture.
		eS _E	22	04	45						
		eS _N	22	04	44						Felt in Kwanto and southern part of Ôou district.
		S _Z	22	04	35						
		M _{EN}	22	05	17	1.2	-7	+16			
		M _Z	22	05	13				-11		
		eF	22	11	±						

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km	Remarks
					A _E μ	A _N μ	A _Z μ		
13	Feb. 12	LN	11 48 21					A distant earthquake. Yunnan, China?	
		M _N	11 49 47		-20				
		eF	12 03 ±						
14	Feb. 14	ePz	4 04 40				-28.6	2460 West off Luzon, Philippine. Slight damage some towns on NW coast of Luzon. 17°30'N 119°25'E. (accord- ing to Manila's report.)	
		P _{EN}	4 04 45	-5.3	-16.3				
		Pz	4 04 43						
		i _{EN}	4 04 49						
		iz	4 05 05						
		iz	4 05 18						
		S _{EN}	4 08 47						
		Sz	4 08 56						
		LE	4 10 23						
		LN	4 10 19						
		M _{1Z}	4 15 10	18.5		+19			
		M _E	4 16 30	17.2	+34				
		M _{1N}	4 17 37	14.0		-77			
		M _{2Z}	4 17 35	14.9		+27			
M _{2N}	4 18 21	15.0		+58					
eF	5 12 ±								
15	Feb. 17	eP _N	9 17 55				492	In the Kasima-nada, east off Ibaraki Prefecture.	
		ePz	9 17 50						
		S _N	9 19 01						
		Sz	9 19 03						
		M _N	9 19 17		+7				
		Mz	9 19 15			+4			
eF	9 21 ±								
16	Feb. 19	eLN	10 17 37					A distant earthquake SW off Sumatora, Indian Ocean?	
		eF	10 25 ±						
17	Feb. 24	P _{NZ}	6 27 13				1072	SSE off Bonin Isl.. Felt in Bonin, abnormal felt area in Hukusima Pre- fecture.	
		P _E	6 27 22						
		LE	6 30 23						
		LN	6 30 17						
		eLz	6 30 14						

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A _E μ	A _N μ	A _Z μ		
		M _{1E}	6 32 30	17.6	-97				
		M _N	6 32 54	17.0		+267			
		Mz	6 32 36	17.8			-102		
		M _{2E}	6 34 21		+94				
		eF	7 30 ±						
18	Feb. 28	P	14 29 49				5360	A distant earthquake. East off new Guinea.	
		S _E	14 36 49						
		S _N	14 36 51						
		LN	14 42 54						
		M _E	14 47 14		-70				
		M _{1N}	14 46 24	18.0		-140			
		M _{2N}	14 47 49	17.9		-150			
		Mz	14 47 33			-7			
		M _{3N}	14 52 02	17.5		+80			
		eF	15 10 ±						
19	Mar. 1	eLN	19 55 54					Near New Britain, east of New Guinea.	
		M _N	20 06 49	18.8		-6			
		eF	20 16 ±						
20	Mar. 4	LE	11 31 25					Aleutian IIs. Faint record, By Omori's seismograph.	
		LN	11 31 37						
		M _E	11 36 19	17.5	-8				
		M _N	11 35 17			+14			
		eF	11 55 ±						
21	Mar. 5	e _E	12 07 16					A distant earthquake. New Zealand.	
		S _N	12 09 15						
		LN	12 23 11						
		M _{1N}	12 32 31	18.6		-8			
		M _{2N}	12 39 45	18.6		+8			
eF	13 41 ±								
22	Mar. 8	P	7 07 56				20	Local shock.	
		S _{EN}	7 07 58						
		Sz	7 07 59						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
23	Mar. 9	M	7	07	59		-33	+27	± 10		
		F	7	08	45						
		P _{EN}	9	34	06					6	Ditto?
		S _{EN}	9	34	07						
		M _{EN}	9	34	07		± 5	± 3			
24	Mar. 13	F	9	34	24						
		P _Z	13	21	16					5850	A distant earthquake.
		F _E	13	21	29						Coral Sea, SE off New Guinea?
		P _N	13	21	31						By Omori's seismograph.
		S _E	13	28	59						
		S _N	13	28	56						
		L _E	13	35	25						
		L _N	13	34	48						
		M _E	13	36	41		-16				
		M _{1N}	13	36	30			+26			
		M _{2N}	13	42	02	15.0		-20			
25	Mar. 18	eF	14	43	\pm						
		eP _Z	4	37	57						Southern part of Okhotsk Sea.
		P	4	37	59						
26	Mar. 20	eF	4	50	\pm						
		e _N	2	50	23						Western part of Caroline IIs, Pacific Ocean.
		eL _N	2	56	34						
27	Mar. 21	eF	3	07	\pm						
		eM _N	0	59	07						A distant earthquake.
		eF	1	12	\pm						By Omori's seismograph.
28	Mar. 21	P _{EN}	3	40	46					393	Near Mt. Amagi.
		P _Z	3	40	47						Weak shocks were felt at Izu Peninsula.
		i _{EN}	3	40	55		(+)	(-)			
		Z	3	40	53				(-)		
		S _E	3	41	34						
S _N	3	41	32								

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		i _{S_N}	3	41	39						
		S _Z	3	41	39						
		M _{EN}	3	41	54	1.4	-36	+53			
		M _Z	3	41	43	1.5					-35
		eF	3	48	\pm						
29	Mar. 21	eL _N	5	43	08						A distant earthquake.
		eF	5	50	\pm						By Omori's seismograph.
30	Mar. 24	P _N	12	13	38					5620	A distant earthquake.
		P _Z	13	13	36						Near Solomon IIs.
		P _E	12	13	45						
		S _E	12	21	03						
		S _N	12	21	01						
		eL _N	12	27	32						
		M _{1N}	12	32	56	20.6		+9			
		M _{2N}	12	36	41	15.5		+9			
31	Mar. 30	eF	13	00	\pm						
		P _N	14	55	31					300	Northern part of the Hyûga-nada.
		S _{EN}	14	56	12						
		S _Z	14	56	17						
		M _E	14	56	26		+7				Felt in eastern part of Kyûsyû district.
		M _N	14	56	31			-6			
		M _Z	14	56	24						+3
F	14	57	54								

昭和十年六月廿五日印刷發行

神戸市神戸區中山手通七丁目
神戶測候所

印刷者 松井梅藏
神戸市神戸區花隈町三三二

印刷所 松井印刷所
神戸市神戸區花隈町三三二

SEISMOLOGICAL BULLETIN

OF THE

IMPERIAL MARINE OBSERVATORY

AND

KOBE METEOROLOGICAL OBSERVATORY.

KOBE, JAPAN.

VOL. X No. 2.

From April 1 1934, to June 30 1934.

KOBE
—
June, 1935.

KÔBE JAPAN.

SEISMOLOGICAL BULLETIN

of the Imperial Marine Observatory and the Kobe Meteorological Observatory of Japan.

$\phi=34^{\circ} 41' 18''N$ $\lambda=135^{\circ} 10' 51''E$ $h=58.3$ m Underground : Diluvial Series.

Instruments : Omori's Seismograph.
(Horizontal Pendulum)

Wiechert Seismograph.
(Horizontal & Vertical)

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April

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	18.5		0.001	20
AN:	20.4		0.001	20

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	6.8	Aperiodic	0.005	95
AN:	6.1	"	0.005	98
AZ:	4.7	4	0.003	83

May

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	19.4		0.001 ⁽⁻⁾	20
AN:	21.0		0.001	20

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	6.4	Aperiodic	0.006	117
AE:	6.1	"	0.005	116
AZ:	4.7	5	0.002	83

June

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	19.7		0.001 ⁽⁻⁾	20
AN:	21.7		0.001	20

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	6.5	Aperiodic	0.008	116
AN:	6.6	"	0.006	104
AZ:	4.8	6	0.004	86

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	S.		AE	AN	AZ		
58	April 3	eE	h	m	s	s	μ	μ	μ	km.	Near Inubô Cape, Tiba Prefecture.
		ME	1	12	49						
		MN	1	13	07	3.1	± 5				
		MZ	1	13	00	3.0		± 4			
		eF	1	17	\pm	2.3					
59	April 3	PEN	22	34	09		-2	+2		NW off Bonin Isl..	

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A _E μ	A _N μ	A _Z μ		
60	April 5	FZ	22 34 10				+2		Record is irregular.
		iz	22 35 00						
		iz	22 35 21						
		iE	22 35 33						
		iE	22 35 53						
		M ₁ N	22 39 38	9.1		-5			
		M ₁ Z	22 39 40	8.5					
		ME	22 41 16	9.4	+4				
		eF	23 11 ±						
				iz	8 59 02				
		eE	8 59 28						
		eNZ	3 59 27						
		ME	8 59 56	3.5	+5				
		M ₁ N	8 59 46	3.0		-4			
		M ₁ Z	8 59 07	2.2			±3		
		eF	9 07 ±						
61	April 6	P	19 11 01					860	NE off Sioya Cape. Moderate shocks were felt in Hukusima Prefecture., Felt in Oôu and Kwantô district.
		iE	19 11 21						
		iE	19 11 42						
		iz	19 11 41						
		iSE	19 12 34						
		Sz	19 12 37						
		M ₁ IE	19 12 50	4.5	+74				
		M ₁ N	19 12 58	3.5		-45			
		M ₁ Z	19 12 57	4.0			+32		
		M ₂ E	19 14 08	4.2	+64				
M ₂ N	19 14 08	4.4		-39					
		eF	19 39 ±						
62	April 8	PEN	2 53 50		-1.2	-1.7		44	Near Wakayama City. Time is uncertain.
		Pz	2 53 48				+2.4		
		SEN	2 53 56						
		Sz	2 53 55						
		ME	2 53 57		-4				
		M ₁ N	2 53 58	0.3		±6			

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks		
					A _E μ	A _N μ	A _Z μ				
63	April 8	MZ	2 53 57	0.4			±2				
		F	2 57 31								
		ePEN	3 22 55						54	Near Wakayama City.	
		eFz	3 22 56								
		SEN	3 23 02								
		M ₁ EN	3 23 03	0.4	±3	±3					
		M ₁ Z	3 23 05					±1			
		eF	3 28 ±								
				PE	15 40 05					111	In the Kumano-nada, SE off Kii Peninsula.
				iPN	15 40 05						
		iFz	15 40 07				-1.5				
		eN	15 40 19								
		SEN	15 40 20								
		Sz	15 40 21								
		ME	15 40 21	0.8	-8						
		M ₁ N	15 40 22	0.8		±5					
		M ₁ Z	15 40 23	0.5			±1				
		eF	15 44 ±								
65	April 10	P ₁ N	10 31 18						A distant earthquake. Near Bali Isl., east off Java, Felt in east Java, Bali, and Lombok Isl..		
		eN	10 41 42	9.2							
		eE	10 42 35								
		M ₁ N	11 00 26	12.8							
		eF	11 15 ±								
66	April 11	eN	21 30 30						A distant earthquake. Near New Hebrides IIs.. Very faint record.		
		iE	21 31 57	4.1	-7						
		eF	21 40 ±								
67	April 12	eE	9 29 11						A distant earthquake. Upper valley of the Yang- tze River, China.		
		eLN	9 28 43								
		ME	9 31 10	12.0							
		M ₁ N	9 31 03	11.8		±10					
		eF	9 40 ±								

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
68	April 14	P	17	45	35					36	Northern part of the Harima-nada, Inland Sea.
		S	17	45	39						
		M _E	17	45	41		+3				
		M _N	17	45	40			+3			
		F	17	46	08						
69	April 14	S _N	18	21	14						Ditto.
		M _N	18	21	15			± 1			
		F	18	21	31						
70	April 14	P	18	50	12					36	Ditto. Felt in Akasi City.
		S	18	50	17						
		M _E	18	50	21	0.9	-12				
		M _{NZ}	18	50	18			+10	+6		
		F	18	51	35						
71	April 14	iP _{EN}	20	36	04					33	Northern part of the Harima-nada, Inland Sea.
		P _Z	20	36	03						
		S _{EN}	20	36	09						
		S _Z	20	36	08						
		M _E	20	36	13	0.7	+4				
		M _N	20	36	09			± 4			
		M _Z	20	36	09				+3		
F	20	36	44								
72	April 15	P _E	10	34	22					366	SSE off Nozima Cape, Tiba Prefecture. Felt in Kwantô district.
		P _{NZ}	10	34	23						
		iS _{EN}	10	35	11						
		S _{iz}	10	35	12						
		SM _E	10	35	16	1.8	+40				
		i _N	10	35	16	1.6		+30			
		i _Z	10	35	29	3.0			+37		
		M _E	10	35	54	3.1	+63				
		M _N	10	35	39	3.6		-44			
		M _Z	10	35	39	3.1			-25		
		eF	11	03	\pm						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
73	April 15	P _E	22	21	08					3205	Felt in Mindanao. 6°N 127°E. (according to Manila's report)
		iP _N	22	21	08			+10			
		iP _Z	22	21	06				+8		
		i _N	22	21	30						
		i _Z	22	21	29				+15		
		i _E	22	22	52						
		eS _N	22	26	06						
		e _Z	22	26	29						
		eL _E	22	26	48						
		M _{1E}	22	27	23	29.9	+26				
		eL _N	22	28	11						
		eL _Z	22	28	31						
		M _{1N}	22	29	59	22.0		-46			
M _{1Z}	22	29	54	21.6			+30				
i _E	22	32	13			-29					
M _{2E}	22	35	02	18.8	+23						
M _{2N}	22	33	00	16.5			+31				
eF	23	49	\pm								
74	April 16	eM _N	4	17	24	15.1		± 1			An after shock of previous earthquake.
		eM _Z	4	17	30	16.0			± 1		
		eF	4	36	\pm						
75	April 16	eP	13	44	37						SE off Goarampii south end of Formosa. Record is deep focus type.
		P _{EN}	13	44	38				-7		
		iP _Z	13	44	38				-6		
		e _Z	13	44	54						
		e _E	13	48	07						
e _Z	13	48	06								
eF	13	58	\pm								
76	April 19	eP _Z	2	38	30					351?	SE off Osia Izu province.
		e _E	2	38	35						
		eS _E	2	39	17						
		eM _E	2	39	29						
		eM _N	2	39	32	2.8		± 1			
		eM _Z	2	39	41	2.7			± 1		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
77	April 19	M _{2E}	2	41	27	3.0	± 1				
		eF	2	47	\pm						
		iP _{?EN}	16	15	02.9		+1.5	-5.0		680	South off Hatidyô Isl.
		iP _Z	16	15	02.9				+8.1		Felt in Bonin Isl., abnormal
		iP _{EN}	19	15	03.1		-63	+79			felt area in Kwantô dis-
		eE	16	16	09						trict.
		S _E	16	16	17		+222				Focal depth about 350 km.
		iS _N	16	16	17			+169			
		eS _Z	16	16	11						
		M _{1E}	16	16	18	2.5	-251				
		M _{1N}	16	16	18	3.9		+163			
		M _Z	16	16	19	3.2			-87		
		M _{2E}	16	17	05	4.4	-125				
		M _{2N}	16	17	06	3.7		-117			
eF	16	32	\pm								
78	April 22	P _E	19	10	17					81	Lower basin of the Hidaka
		iP _N	19	10	18						River, Wakayama Prefec-
		iP _Z	19	10	17				+1.3		ture.
		S _E	19	10	28						
		iS _N	18	10	29						
		ez	19	10	28						
		M _E	19	10	32	0.6	+5				
		M _N	19	10	31	0.6		+6			
M _Z	19	10	30				± 2				
eF	19	13	\pm								
79	April 26	eP _N	21	10	08			(-)			A distant earthquake.
		P _Z	21	10	08				-1.0		Near New Hebrides, IIs.
		P _{EN}	21	10	10						
		iE	21	10	26						
		ez	21	13	19	4.6					
		ez	21	15	45						
		eE	21	19	52						
		eS _E	21	19	59	5.4					
eS _N	21	19	54	5.4							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
80	April 26	M _N	21	30	55	15.7		± 1				
		eF	21	39	\pm							
		eP _E	22	48	38						419	South off the Nozima Cape,
		eP _N	22	48	36							Tiba Prefecture.
		eP _Z	22	48	37							
		ez	22	48	39							
		i _N	22	48	48							
		S _E	22	49	35							
		S _N	22	46	47							
		S _Z	22	49	38							
		M _E	22	49	53	3.8	-6					
		M _N	22	49	51	3.3		+3				
		M _Z	22	50	07	2.2				+2		
		eF	22	58	\pm							
81	April 27	eP _N	8	41	47						88	Near Kyôto City.
		S	8	47	59							
		M _E	8	48	00	0.4	± 2					
		M _N	8	48	00	0.4		± 3				
		F	8	48	31							
82	April 27	eP _Z	9	18	51							SE off Miyako, Iwatae Pre-
		eE	9	19	01							fecture.
		e _N	9	19	08							
		eS _N	9	20	57							
		eS _Z	9	20	55							
		M _E	8	21	19	4.6	+2					
		M _N	8	21	22	6.0		+2				
		M _Z	8	21	14	8.6				± 1		
eF	8	32	\pm									
83	April 28	eS _{?E}	2	03	39							Near Fukuoka City.
		M _E	2	03	44	1.6	+1					
		M _N	2	03	55				-1			
		eF	2	07	\pm							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
84	April 30	ez	15	21	56						South off Bonin Isl.
		eN	15	23	17						
		eSz	15	23	07						
		ME	15	24	06	4.4	+4				
		MN	15	24	02	4.3		+3			
		MZ	15	23	41	5.3			±1		
		eF	15	32	±						
85	May 1	ePE	7	13	11		0.0?				A distant earthquake. North Sumatora.
		iPN	7	13	11			+4.3			
		iPz	7	13	10	2.3			+7.2		
		iPE	7	13	13		-4.3				
		iz	7	14	43						
		eN	7	15	04						
		ez	7	15	02						
		iz	7	18	24						
		eN	7	22	33						
		MN	7	37	57	13.1		±1			
		MZ	7	37	52						
		eF	7	49	±						
		86	May 3	ePEN	1	33	31				
ePz	1			33	29						
iPEN	1			33	32						
Pz	1			33	32						
iN	1			34	39						
S [?] E	1			35	32						
S [?] N	1			35	29						
LE	1			35	52						
eLz	1			36	02						
ME	1			36	35	19.0	-8				
M ₁ N	1			36	56	18.5		+5			
MZ	1			37	06	17.9			-6		
M ₂ N	1			38	23	12.0		+7			
eF	2	13	±								
87	May 4	Pz	4	45	30				5980	A distant earthquake.	

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		iPE	4	45	33		+1.6				Alaska. S phase is very sharp.
		PN	4	45	32			+1			
		iPz	4	45	32					-5	
		iPN	4	45	34				-3		
		iN	4	45	44						
		iz	4	45	42	5.0					
		eS	4	53	07						
		iSN	4	53	07	7.5		+14			
		Sz	4	53	06						
		EE	4	53	32						
		EE	4	54	54						
		eLE	5	03	58						
		eLN	5	04	03						
		eLz	5	04	10						
		ME	5	04	43	27.2	+3				
M ₁ N	5	06	04	22.0		-4					
M ₁ Z	5	05	33	24.8				-2			
M ₂ N	5	09	13	21.0		+5					
M ₂ Z	5	09	06	21.6				+3			
iz	5	15	28								
eF	5	39	±								
88	May 5	eN	14	44	21					8690	A distant earthquake. Near New Zealand?
		PE	14	44	25		+0.5				
		PNz	14	44	24				-0.5	-1.3	
		PRE	14	45	27	2.9					
		PRN	14	45	27	3.0					
		eSEN	14	56	16						
		eF	15	05	±						
89	May 9	ePE	16	18	02					2290	Southern part of Okhotsk Sea. By Omori's seismograph.
		ePN	16	18	07						
		ez	16	18	03						
		eSE	16	21	53						
		SN	16	21	50						
		eLE	16	24	18						
		ME	16	26	08	17.3	±5				

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			h	m	s		μ	μ	μ		
90	May 11	M _N	16	26	54	17.0		± 7		Near Bonin Isl.	
		M _Z	16	26	57	16.0			± 1		
		eF	16	38	\pm						
		e _N	0	46	55						
		e _N	0	49	11	3.7					
		e _E	0	50	48						
		M _N	0	51	57	8.6	± 1				
		M _E	0	53	53	7.4					
91	May 11	M _Z	0	53	26				± 1	Near Turuga, Hukui Prefecture.	
		eF	1	09	\pm						
		F _{EN}	18	42	58						
		F _Z	18	42	51						
		e _N	18	43	14						
		e _{SZ}	18	43	13						
		i _{SEN}	18	43	15						
		i _{SZ}	18	43	13		-10				
*92	May 12	M _E	18	43	15					Near Tosima, Northern part of Awadi Province. Felt in southern part of Hyogo Prefecture.	
		M _N	18	43	15	0.5	+6				
		M _Z	18	43	14	0.6		-6			
		F	18	45	09						
		i _P	3	50	52		-2	+1	-7.2		25
		i _Z	3	50	55						
		i _{SE}	3	50	56		-111				
		e _{SN}	2	50	55						
93	May 12	S _Z	3	50	55					Southern part of the Osaka Bay.	
		M _{EN}	3	50	56		+138	-84			
		M _Z	3	50	55	0.6			-39		
		eF	3	57	\pm						
		i _P	4	16	00						28
		S	4	16	03						
		M _{EN}	4	16	04		+43	-31			
		M _Z	4	16	04	0.8			-8		

The end part overlapped by the following earthquake.

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			h	m	s		μ	μ	μ		
94	May 12	M _E	4	18	29		± 2			An after shock of previous earthquake.	
		M _N	4	18	28			± 1			
		F	4	19	38						
95	May 12	e _Z	10	54	57					Faint record. Near Bonin Isl?	
		M _E	11	00	13	8.3	± 1				
		M _N	10	58	29	7.3		± 1			
		eF	11	09	\pm						
96	May 13	i _E	0	16	33					Upper basin of the Gô River, Simane Prefecture.	
		i _N	0	16	36						
		e _Z	0	16	38						
		M _E	0	16	41	0.5	± 3				
		M _N	0	16	41			-1			
		M _Z	0	16	40	0.8			+2		
		eF	0	18	35						
		97	May 13	e _{P_N}	9	10	04				
F _Z	9			10	07						
e _N	9			11	46						
e _Z	9			11	45						
e _S	9			15	49						
e _Z	9			16	06						
e _E	9			17	58						
M _E	9			24	04	22.1	± 1				
M _N	9			20	36	23.4		± 2			
M _Z	9			22	37	26.3			± 1		
eF	9			35	\pm						
98	May 13	P _E	17	07	36					Very faint record. Luzon, Philippine.	
		P _N	17	07	34						
		e _E	17	09	28						
		eF	17	17	\pm						
99	May 13	i _{EN}	23	11	36		-4	-4		NW off Bonin Isl.	
		i _Z	23	11	35				-6		
		M _{?N}	23	12	30	3.8		± 3			
		eF	23	22	\pm						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
100	May 14	eEN	22	21	50					5770	A distant earthquake. Gulf of Alaska. Surface wave is very faint.
		iPE	22	22	01						
		P _N	22	22	02						
		iFz	22	22	00	2.8			+4		
		eSE	22	29	23						
		iSE	22	29	26	5.4		+3			
		Sz	22	29	25						
		Mz	22	43	14	23.4					
		eF	22	50	±						
101	May 19	eE	1	35	08						A distant earthquake. Very faint record.
		iz	1	35	25	2.6			+2		
		eE	1	35	49						
		eN	1	35	47						
		eF	1	48	±						
102	May 19	eN	10	48	18						South off Bonin Isl..
		eN	10	49	05						
		M _E	10	52	31	7.7					
		M _{1N}	10	51	30	8.3					
		M _{2N}	10	55	20	7.5					
		eF	11	09	±						
103	May 20	eE	7	06	02	2.4	±1				SE off Miyako, Iwate Prefecture. Felt in Kwantô, Oôu, and Hokkaidô.
		eN	7	06	17	2.0		±1			
		ez	7	05	59	2.6			±1		
		eF	7	15	±						
104	May 25	eN	6	32	00						Local shock. Very faint record.
		eE	6	32	06	0.9	±1				
		eN	6	32	03	1.0		+2			
		ez	6	32	05	0.8			±1		
		eF	6	32	42						
105	May 25	PE	16	20	55					790	SSE off Hatidyô Isl.. Obscured by Microseismo.
		P _N	16	20	56						
		Pz	16	20	57						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
106	May 28	PMz	16	20	59	1.8			-3		SE off Yutorofu Isl., Kurile IIs..
		S	16	22	21						
		M _E	16	22	26	2.8	+13				
		M _N	16	22	25	3.3		±5			
		Mz	16	22	45	2.9			±3		
		eF	16	26	±						
		ePE	5	36	22						
107	May 30	Fz	5	36	22						In the Kii Channel.
		SEN	5	39	21						
		eSz	5	39	21						
		M _E	5	39	23	2.6	+6				
		M _N	5	39	26	2.5		±1			
		Mz	5	39	24	2.1			±1		
108	May 30	eN	18	50	02						Near Mito City, Ibaraki Prefecture. Moderate shocks were felt in Kwanto district.
		ez	18	49	57						
		SEN	18	50	09						
		eSz	18	50	09						
		M _N	18	50	11			-5			
		Mz	18	50	10	1.1			±3		
108	May 30	F	18	51	40						Near Mito City, Ibaraki Prefecture. Moderate shocks were felt in Kwanto district.
		ePEN	23	05	00						
		eEN	23	05	08						
		iE	23	05	25		-9				
		iz	23	05	24						
		iSEN	23	06	12		-14	+22			
		Sz	23	06	14						
108	May 30	M _{1E}	23	06	47	4.7	-32				Near Mito City, Ibaraki Prefecture. Moderate shocks were felt in Kwanto district.
		M _{1N}	23	06	28	3.5		+19			
		M _{1Z}	23	06	31	4.0			-30		
		M _{2E}	23	07	46	3.1	±56				
		M _{2N}	23	07	39	3.5		+22			
		M _{2Z}	23	07	40	3.3			-25		
eF	23	28	±								

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km	Remarks
					A_E μ	A_N μ	A_Z μ		
109	June 1	ϵ_E	1 36 33					ENE off Miyake Isl, south of Izu Peninsula.	
		ϵ_Z	1 36 42						
		eSEN	1 37 28						
		iZ	1 37 26						
		eSZ	1 37 35						
		ME	1 38 13	2.7	+6				
		MN	1 37 59	3.1		-4			
		MZ	1 38 10	3.1		± 3			
		eF	1 55 \pm						
110	June 2	ϵ_E	21 30 34				416	In the Hyûga-nada. Felt in Kyûsyû district.	
		ϵ_N	21 30 33						
		ϵ_Z	21 30 31						
		ϵ_E	21 30 58						
		eSN	21 31 24						
		eSZ	21 31 30						
		ME	21 31 38	2.1	+9				
		MN	21 31 38	1.6		-9			
		MZ	21 31 46	1.5		-12			
eF	21 52 \pm								
111	June 3	P	7 18 38				450	Near Sawara, Tiba Pref.. Felt in Kwantô district.	
		ϵ_E	7 19 29						
		iSE	7 19 39			-8			
		eSN	7 19 37						
		SZ	7 19 36						
		ME	7 19 46	1.8	-20				
		MN	7 19 53	2.1		+11			
		MZ	7 19 45	3.4		+12			
		eF	7 47 \pm						
112	June 5	ϵ_{EN}	18 47 53	6.0			Near Wakamatu, Hukus'ma Prefecture. Obscured by Microseismo. SE of Otiisi Cape, Hokkaidô.		
		eF	18 54 \pm						
113	June 6	ϵ_E	6 30 30	21.0					
		ϵ_N	6 30 52	18.5					
		ϵ_Z	6 32 29						

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A_E μ	A_N μ	A_Z μ		
114	June 9	ME	6 33 02	16.3	± 2			4365	A distant earthquake. Near New Guinea.
		MZ	6 34 14	13.0			± 1		
		eF	6 42 \pm						
		PE	13 06 28						
		PNZ	13 06 27				+3.3		
		S	13 12 36		+8	+6			
		ϵ_{EN}	13 13 30						
		ϵ_Z	13 13 53						
		iE	13 16 51	9.6		-7			
115	June 13	ϵ_Z	13 17 04				1585	Near Sikotan Isl, southern part of Kurile IIs. Moderate shocks were felt in eastern part of Hokkaidô, felt in NE Japan.	
		ME	13 17 26	14.0	± 2				
		MN	13 19 02	18.9		± 1			
		eF	13 34 \pm						
		PEZ	1 54 04						
		ϵ_N	1 54 01						
		SE	1 56 49		-8				
		SN	1 56 51			+12			
		eSZ	1 56 42						
116	June 13	ME	1 58 35	23.4	-7		Lower basin of the Arita River, Wakayama Prefecture.		
		MN	1 57 35	12.0		+5			
		MZ	1 57 29	5.2				-5	
		iN	1 57 57						
		ScSEN	2 06 29		-3	+6			
		eF	2 51 \pm						
		ϵ_Z	2 18 12						
		iEN	2 18 16						
		ME	2 18 21	0.9	+4				
117	June 13	MN	2 18 20	0.8		± 4	6720	A distant earthquake. Afganistan, 29.°5N 63.°5E (J.S.A.)	
		MiZ	2 18 26						-2
		F	2 19 25						
		ePE	22 20 38						
		iPN	22 20 38						-1.7
		Fz	22 20 38						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		iz	22	20	38	5.3			-7		
		iPE	22	20	40		+3				
		iE	23	20	56	3.6	-5				
		iz	22	20	55	3.8			-14		
		iSE	22	28	55	9.7	-4				
		iSN	22	28	53	11.0		+7			
		Sz	22	28	55						
		eE	22	29	32	8.4	-5				
		eZ	22	29	32				+4		
		MN	22	45	11	22.5		± 1			
		ME	22	49	45	19.4	± 1				
		MZ	22	49	59	17.4			± 2		
		eZ	22	50	13						
		eF	23	27	\pm						
118	June 15	eZ	5	32	38					423	Near Mamada, southern part of Totigi Prefecture.
		ePEN	5	32	46						Moderate shocks were felt in northern part of Kwanto district.
		iN	5	32	55						
		SEN	5	33	43						
		Sz	5	33	39						
		MEN	5	33	48	1.9	-9	+8			
		eF	5	46	\pm						
119	June 17	eZ	9	14	25						Local shock.
		iE	9	14	28	0.2	+6				
		iN	9	14	28	0.3		-6			
		F	9	17	41						
120	June 19	ePN	15	48	37						South off Hatidyô Isl.
		iSEN	15	49	49		+9	-11			Deep focus earthquake.
		SME	15	49	51	2.6	-32				
		ME	15	50	56	3.7	-25				
		MN	15	51	05	2.9		-14			
		eF	16	06	\pm						
121	June 21	PE	23	51	14					79	In the Kii Channel.
		PNZ	23	51	13						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		SE	23	51	24						
		iSNZ	23	51	24						
		MEN	23	51	25	0.5	+5	-10			
		MZ	23	51	30	0.8			± 2		
		F	23	53	39						
122	June 22	eN	18	04	33						Southwest of Manzanillo, Mexico. (J.S.A.)
		eE	18	05	25						
		eN	18	05	16						
		eE	18	05	52	5.1					
		eN	18	06	04	4.3		± 1			
		eF?	18	11	\pm						
123	June 23	eE	5	35	57						A distant earthquake.
		eE	5	38	08	7.3					Tibet, China.
		eN	5	37	36						Very faint record.
		ME	5	40	15	17.7					
		MN	5	39	35	17.4		± 2			
		eZ	5	41	00	13.4					
		eF	6	01	\pm						
124	June 24	ePE	6	19	24						A distant earthquake.
		PN	6	19	21						Northern part of Chile.
		Fz	6	19	19						
		iz	6	19	47				+5		
		eE	6	20	28						
		eN	6	20	32						
		iz	6	20	28						
		iz	6	24	03	5.9			+5		
		eE	6	32	03						
		eN	6	32	55						
		eZ	6	32	52	5.2					
		e(SSS)?	6	43	57	17.4					
		eF	7	08	\pm						
125	June 26	eP	20	35	10						In the Bungo Channel.
		iE	20	35	28		+2				

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
126	June 26	SEN	20	35	38							
		ME	20	35	56	1.1	+4					
		MN	20	36	02	1.1		-4				
		MZ	20	36	01	1.0			± 3			
		eF	20	40	\pm							
		ePE	20	41	00							In the Kasima-nada, east
		eFN	20	41	04							off Ibaraki Prefecture.
		cz	20	41	03							
		eSE	20	41	39							
		eL ₁ E	20	41	54	5.8						
		eLN	20	41	58							
		eLz	20	41	55	5.0						
		ME	20	42	30	2.8	+4					
		MN	20	43	11	3.6		± 2				
MZ	20	42	30	5.0			± 2					
eF	20	54	\pm									
127	June 28	eE	1	04	52	3.2					A distant earthquake.	
		eE	1	05	39						Very faint record.	
		eN	1	05	38						Near Solomon IIs?	
		cz	1	05	36							
		eF	1	12	\pm							
128	June 29	iPEN	8	32	21		+2.6	-7.0		3875	A distant earthquake.	
		PMN	8	32	25	4.1		-7			New Guinea, record is deep	
		iE	8	33	40						focus type. S phase is	
		iE	8	34	03						very sharp. Z component is	
		iN	8	34	14						stopped.	
		iSEN	8	38	01		-64	-50				
		SME	8	38	03	3.7	+109					
		SMN	8	38	03	3.7		-50				
		ME	8	39	43	4.3	+34					
		MN	8	39	43	3.8		+22				
		CE	8	41	55							
eP'FN	9	04	45									
eF	9	08	\pm									

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
129	June 29	ePE	12	41	47						3755	A distant earthquake. New
		PN	12	41	47			+1?				Guinea.
		ePz	12	41	49							Record is deep focus type.
		iN	12	43	26							
		eN	12	44	53	2.5						
		iSEN	12	44	20	2.5	-3	-3				
		iz	12	47	20					+1		
		iN	12	48	32							
		eM ₁ E	12	48	59	3.5	± 1					
		eM ₂ N	12	49	01	3.3		± 1				
		ez	12	51	33							
eF	12	58	\pm									

From No. 90. to No. 209, 1934.

SUMOTO JAPAN.

SEISMOLOGICAL BULLETIN

A Branch Station of the Kobe Meteorological Observatory of Japan.

$\varphi = 34^{\circ} 21'$ $\lambda = 134^{\circ} 53'$ $h = 109$. m. Underground: Cretaceous.

Instrument: Omori's Seismograph.
(Horizontal Pendulum.)

Wiechert Seismograph.
(Horizontal & Vertical)

April

	T_0	ϵ	$\frac{r}{T_0^2}$	V
AE:	19.8	2.6	0.0003	20
AN:	17.6	2.8	0.0003	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
AE:	4.6	Aperiodic	0.003	117
AN:	4.4	"	0.002	118
Az:	4.2	"	0.002	64

May

	T_0	ϵ	$\frac{r}{T_0^2}$	V
AE:	17.8	2.4	0.0002	20
AN:	17.4	1.8	0.0001	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
AE:	4.7	Aperiodic	0.004	115
AN:	4.5	"	0.002	97
Az:	4.2	"	0.002	66

June

	T_0	ϵ	$\frac{r}{T_0^2}$	V
AE:	18.9	1.5	0.0002	20
AN:	19.1	1.9	0.0003	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
AE:	4.7	Aperiodic	0.004	117
AN:	4.5	"	0.003	110
Az:	4.2	"	0.002	65

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A _E μ	A _N μ	A _Z μ		
90	April 2	ePEN	22 04 28	0.6	+1		± 1	41	Near Wakayama City.
		S	22 04 34						
		ME	22 04 36						
		MN	22 04 34						
		F	22 04 56						
91	April 3	ePN	1 12 06						Near Inubô Cape, Tiba

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A _E μ	A _N μ	A _Z μ		
92	April 3	ePE	1 12 23	2.5	± 1	+0.4		962	Prefecture. NW off Bonin Isl.
		eSE	1 13 03						
		eSN	1 13 01						
		ME	1 13 37						
		MN	1 13 14						
		eF	1 17 ±						
		PE	22 34 07						
PNZ	22 34 08								
SN	22 36 12								
eSE	22 36 23								
ME	22 41 02								
MN	22 41 02								
MZ	22 39 19								
eF	23 05 ±								
93	April 3	ePEN	22 54 34	0.4	± 1	-3		39	In the Kii Channel. Lower basin of the Arita River, Wakayama Prefecture.
		SEN	22 54 36						
		ME	22 54 36						
		MN	22 54 36						
		F	22 54 49						
94	April 4	ePEN	7 08 05	0.4	+1	-2		47	Lower basin of the Arita River, Wakayama Prefecture.
		SEN	7 08 10						
		ME	7 08 11						
		MN	7 08 11						
		F	7 08 47						
95	April 5	ePEN	1 47 10	0.4	-2	-3		43	Near Tadono, middle basin of the Arita R., Wakayama Prefecture.
		SEN	1 47 16						
		ME	1 47 16						
		MN	1 47 16						
96	April 5	ePEN	4 38 33		+2			43	Near Tadono, middle basin of the Arita R., Wakayama Prefecture.
		SEN	4 38 39						
		ME	4 38 40						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks				
			G.	T.	M.		A _E	A _N	A _Z						
97	April 5	M _N	h	m	s	0.3	μ	μ	μ	km.	400? Off the Kujūkuri-hama, Tiba Prefecture.				
			4	38	40										
		F	4	38	47										
			eP _E	8	59							07			
		eP _N	8	59	08										
		eS _E	9	00	03										
		eS _N	8	59	59										
		eS _Z	9	00	09										
		M _E	9	00	23							2.7	-1		
		M _N	9	00	20							2.3		± 1	
M _Z	9	00	16	2.4			-1								
eF	9	05	\pm												
98	April 5	eP _N	9	42	26	0.3	+2			17? Local shock.					
		S _{EN}	9	42	28										
		M _E	9	42	28										
		M _N	9	42	29						0.4		-3		
		F	9	42	47										
99	April 5	eP _N	23	17	33	0.3	± 0.4			29 Near Wakayama City.					
		S _{EN}	23	17	37										
		M _E	23	17	38										
		M _N	23	17	38								± 2		
		F	23	17	55										
100	April 6	e _N	0	23	18	1.9	± 1			Near Misumi Peninsula, Kumamoto Prefecture.					
		e _E	0	23	30										
		S _E	0	24	27										
		S _N	0	24	23										
		M _E	0	24	28						2.3		± 1		
		M _N	0	24	27										
		eF	0	28	\pm										
101	April 6	P _{EZ}	19	11	07	695				NE off Siويا Cape. Moderate shocks were felt in Hukusima Prefecture. Felt in Oôu and Kwantô					
		iP _N	19	11	06										
		S _{EZ}	19	12	41										
		S _N	19	12	38										

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks					
			G.	M.	T.		A _E	A _N	A _Z							
102	April 8	P	h	m	s	4.1	μ	μ	μ	km.	district.					
			19	12	48											
			M _{1N}	19	13							04	4.3		-25	
			M _Z	19	12							45	3.8			-11
			M _{2N}	19	13							34	3.9		+22	
			eF	19	32							\pm				
103	April 8	P	2	53	45	0.4	+8			33	Near Wakayama City.					
			S	2	53							49				
			M _E	2	53							50				
			M _N	2	53							51	0.2		-13	
			M _Z	2	53							50			± 2	
			F	2	55							09				
104	April 8	P	3	22	51	0.4	-6			33	Ditto.					
			S	3	22							55				
			M _E	3	22							59				
			M _N	3	22							57	0.4		-8	
			M _Z	3	22							56			± 2	
			F	3	24							03				
105	April 9	P	6	00	22	0.4	-5			126	Near Koti City, Sikoku.					
			e _Z	6	00							26				
			S	6	00							39				
			M _E	6	00							40				
			M _N	6	00							42	0.4		-5	
			M _Z	6	00							40	0.6		± 2	
F	6	01	46													
106	April 9	P	15	40	07	0.6	-14			106	In the Kumano-nada, SE off Kii Peninsula.					
			S _{EN}	15	40							21				
			M _E	15	40							22				
			M _N	15	40							22	0.4		+10	
			F	15	41							18				
			e _N	2	46							40				
106	April 10	F	2	47	01						Local shock.					

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
107	April 10	eN	6	10	38						Ditto.
		F	6	13	±						
108	April 10	PEN	6	55	20					90	Near Motoyama, Koti Prefecture.
		eS	6	55	33						
		ME	6	55	42	1.4	+1				
		MN	6	55	40	0.8		±1			
		F	6	56	38						
109	April 10	ePEN	10	31	17					4830	A distant earthquake. Near Bali Isl, east off Java. Felt in East Java, Bali, and Lombok IIs.
		ePz	10	31	15						
		eSE	10	37	51						
		eSN	10	37	48						
		eF	11	13	±						
110	April 10	SEN	13	14	42					0.4	Near Hasikami, north side of the Mouth of the Arita river, Wakayama Prefecture.
		ME	13	13	43		+2				
		MN	13	14	43			-3			
		F	13	15	13						
111	April 12	eN	9	25	±						A distant earthquake. Upper valley of the Yang-tze River, China.
		eLEN	9	28	20						
		F	9	45	±						
112	April 14	PEN	3	13	17					0.3	Near Wakayama City.
		SEN	3	13	21						
		ME	3	13	21	0.3	±2				
		MN	3	13	22	0.3		-3			
		F	3	13	50						
113	April 14	ePEN	17	45	35					0.3	Northern part of the Harima-nada, Inland Sea.
		SEN	17	45	40						
		ME	17	45	40	0.3	-4				
		MN	17	45	40	0.4		-3			
		F	17	46	21						
114	April 14	SEN	18	21	15						Ditto.

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
		ME	18	21	15	0.4	-2					
		MN	18	21	15	0.3		-1				
		F	18	21	30							
115	April 14	PEN	18	50	13					0.4	32	Ditto. Felt in Akasi City.
		SEN	18	50	17							
		MEN	18	50	18	0.4	-15	-10				
		F	18	51	27							
116	April 14	PEN	20	36	04					0.4	39	Ditto.
		SEN	20	36	10							
		ME	20	36	10	0.4	+3					
		MN	20	36	10	0.3		±3				
		F	20	36	56							
117	April 14	ePEN	21	03	39					0.4	30	Northern part of the Harima-nada, Inland Sea.
		SEN	21	03	43							
		MEN	21	03	43	0.4	-2	-2				
		F	21	04	10							
118	April 15	iPE	10	34	24					3.6	460	SSE off Nozima Cape, Tiba Prefecture. Felt in Kwantô district.
		iPN	10	34	27							
		iPz	10	34	25				-1.5			
		SEZ	10	35	26							
		SN	10	35	30							
		ME	10	35	34	3.6	-19					
		MN	10	35	49	2.9		+15				
Mz	10	35	30	3.4			-9					
		eF	10	49	±							
119	April 15	ePE	22	21	04		+0.4			3.4	3110	Felt, in Mindanao. 6°N 127°E (according to Manila's report.)
		iPNZ	22	21	04			+4.2	+7.8			
		SEZ	22	25	55							
		SN	22	25	56							
		LE	22	26	41							
		LN	22	27	51							
		Lz	22	26	56							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M _E	22	30	30	13.5	-121				
		M _N	22	32	30	11.1		+128			
		M _Z	22	29	46	21.6			+333		
		eF	23	55	±						
120	April 16	eP _{EN}	4	04	39						An after shock of the previous earthquake.
		eF	5	02	±						
121	April 16	P	13	44	31		+0.9	+0.8	+1.6	2030	SE off Goarampii, south end of Formosa.
		eS	13	47	56						
		F	14	17	±						
122	April 17	eP _{EN}	13	50	38					32	Near Wakayama City.
		S	13	50	42						
		M _E	13	50	43		-1				
		M _N	13	50	42	0.4		+2			
		F	13	51	02						
123	April 18	eP _N	11	57	33					287	In the Hyûga-nada, SE off Miyazaki Prefecture.
		e _E	11	57	40						
		e _Z	11	58	06						
		S _E	11	58	15						
		S _N	11	58	12						
		S _Z	11	58	16						
		M _E	11	58	29	2.1	+1				
		M _N	11	58	26	2.1		±3			
		M _Z	11	58	28	2.0			±1.		
		eF	12	01	±						
124	April 19	eP _{EN}	2	38	43						SE of Osima, Izu Province.
		S _{EZ}	2	39	22						
		S _N	2	39	21						
		eF	2	43	±						
125	April 19	iP	16	15	02		-29.9	+16.1	+42.2	530	South off Hatidyô Isl.
		PM _{EN}	16	15	03	3.0	+36	-20			Felt in Bonin Isl., abnormal felt area in Kwantô district.
		PM _Z	16	15	03	1.5			-56		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		iS	16	16	13						Focal depth about 350 km.
		M _E	16	16	17	3.4	+97				
		M _N	16	16	17	4.1		-95			
		M _Z	16	16	16	2.6			+27		
		eF	16	32	±						
126	April 22	P	19	10	12					45	Lower basin of the Hidaka River, Wakayama Prefecture.
		S	19	10	18						
		M _{EZ}	19	10	18	0.4	+10		+2		
		M _N	19	10	19	0.4		-14			
		F	19	11	45						
127	April 24	S _{EN}	10	46	53						Local shock.
		M _{EN}	10	46	53	0.3	-1	+1			
		F	10	47	17						
128	April 25	P _{EN}	5	07	02					1660	South off Bonin Isl.
		eP _Z	5	07	03						
		S _{EN}	5	09	54						
		M _E	5	10	00	2.6	±1				
		M _N	5	10	03	3.0		+1			
		eF	5	15	±						
129	April 26	S _{EN}	4	55	44						Local shock.
		M _N	4	55	44	0.4		±1			
		F	4	56	03						
130	April 26	eP _{EN}	22	48	40					496	South off the Nozima Cape, Tiba Prefecture.
		eP _Z	22	48	38						
		S _E	22	49	46						
		S _N	22	49	48						
		M _E	22	50	03	2.1	+1				
		M _N	22	50	05	2.1		+2			
		M _Z	22	49	52	1.9			±1		
		eF	22	57	±						
131	April 27	eP _{EN}	9	19	14					930?	SE off Miyako, Iwate Pre-

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A _E μ	A _N μ	A _Z μ		
132	April 28	ez	9 20 59					455	Near Hukuoka City.
		eSE	9 21 19						
		SN	9 21 19						
		eF	9 31 ±						
		ePE	2 02 27						
133	April 28	ePN	2 02 24					1.7	Near Wakayama City.
		ez	2 03 24						
		SEN	2 03 27						
		ME	2 03 40	+1					
		MN	2 03 36		+1				
		eF	2 06 ±						
134	April 28	P	17 01 50					0.4	Local shock?
		S	17 01 54						
		ME	17 01 54	±1					
		MN	17 01 56		±2				
135	April 30	MZ	17 01 55	0.4				0.5	26
		F	17 02 42			+1			
		ePEN	12 19 57						
		S	12 20 01						
		ME	12 20 01	-3					
136	April 30	MN	12 20 01			-2		0.5	26
		F	12 20 40						
		eN	15 22 41						
		eEZ	15 22 42						
		eN	15 24 58						
137	May 1	eE	15 25 04					0.5	26
		eF	15 32 ±						

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A _E μ	A _N μ	A _Z μ		
137	May 1	ePN	7 11 35					0.3	Near Hinomisaki, Wakayama Prefecture.
		PN	7 11 42						
		SEN	7 11 45						
		ME	7 11 45	-1					
		MN	7 11 45		±2				
		F	7 12 10						
138	May 1	PEN	7 13 07		+1.7	+1.0		13.1	A distant earthquake. North Sumatora.
		iPz	7 13 08				+45		
		ez	7 14 44						
		eE	7 18 22						
		eN	7 18 27						
		ez	7 18 23						
		eEN	7 22 48						
		eF	8 00 ±						
139	May 3	PE	1 33 29					11.3	848 NNW off Bonin Isl.
		PN	1 33 30						
		Pz	1 33 27						
		SE	1 35 26						
		SN	1 35 23						
		eSz	1 35 20						
		Lz	1 36 21						
		LE	1 38 10						
		LN	1 37 51						
		Mz	1 39 25				±14		
		ME	1 42 53	-5					
140	May 4	MN	1 43 11	10.3		-9		18.8	6030
		eF	2 06 ±						
		PEN	4 45 35	+0.9	+1.0				
		Pz	4 45 34				-3.0		
		SEN	4 53 12						
141	May 4	Sz	4 53 13					18.8	6030
		LEN	5 04 05						
		eLz	5 04 19						
		ME	5 10 52	±29					

No.	Dae	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M _N	5	09	30	22.2		+113			
		M _Z	5	09	26	18.8			± 50		
		eF	5	40	\pm						
141	May 7	eP _{EN}	16	42	27					28	In the Kii Channel.
		S _{EN}	16	42	31						
		M _E	16	42	32		+1				
		M _N	16	42	32	0.3		± 2			
		F	16	42	59						
142	May 9	P	16	18	08					2170	Southern part of Okhotsk Sea.
		S _E	16	21	46						
		S _N	16	21	45						
		eL _N	16	26	36						
		eL _E	16	28	\pm						
		eF	16	39	\pm						
143	May 11	e _{EN}	0	01	41						In the Bungo Channel.
		F	0	02	24						
144	May 11	e _{EN}	18	43	16						Near Turuga, Hukui Prefecture.
		S _{EN}	18	43	21						
		M _E	18	43	22	0.5	± 1				
		M _N	18	43	23	0.5		-2			
		F	18	44	18						
145	May 11	S _{EN}	23	51	43						Basin of the Arita R., Wakayama Prefecture.
		M _E	23	51	45	0.4	+2				
		M _N	23	51	43	0.4		± 1			
		F	23	52	27						
146	May 11	e _{EN}	23	57	14						Local shock.
		F	23	57	34						
*147	May 12	P	3	50	52		+1.7	-3.1	+3.0	25	Perceptible.
		S	3	50	56						Near Tosima, northern part of Awadi Province.
		M _E	3	50	56	0.4	+37				

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M _N	3	50	57	0.5		± 36			Felt in southern part of Hyogo Prefecture.
		M _Z	3	50	57	0.3			-12		
		F	3	53	26						
148	May 12	eP _{EN}	4	02	55					29	Local shock.
		S _{EN}	4	02	58						
		M _E	4	02	59	0.3	± 1				
		M _N	4	02	59			± 2			
		F	4	03	16						
149	May 12	P	4	16	01					21	Southern part of the Osaka Bay.
		S	4	16	03						
		M _{EN}	4	16	04	0.4	+4	+5			
		M _Z	4	16	04	0.5			-1		
		F	4	17	16						
150	May 12	S _{EN}	4	18	16						An after shock of the previous earthquake.
		M _E	4	18	17		-1				
		M _N	4	18	17	0.4		+1			
		F	4	18	44						
151	May 13	e _{EN}	0	16	29						Upper basin of the Gô R., Simane Prefecture.
		S _{EN}	0	16	31						
		M _E	0	16	38	0.7	-1				
		M _N	0	16	34	0.9		-3			
		F	0	17	30						
152	May 13	eP	9	10	01					4460	A distant earthquake. East off New Guinea.
		S _E	9	16	12						
		S _N	9	16	15						
		L _N	9	22	06						
		F	9	33	\pm						
153	May 13	eP _E	17	07	12					2510	Luzon, Philippine.
		eP _N	17	07	17						
		e _Z	17	07	29						
		eS _{EN}	17	11	21						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
154	May 13	eF	17	19	±						
		SE _N	19	59	45		-2	-1			Near Ougo, Middle basin of the Kii R., northern part of Wakayama Pref.
		ME	19	59	45	0.5	-2				
		M _N	19	59	46			+2			
		F	20	00	05						
155	May 13	e _{EN}	23	09	58						NW off Bonin Isl.
		eSE	23	11	33						
		e _{SN}	28	11	32						
		M _{EN}	23	11	34	2.5	±2	+2			
		F	23	17	±						
156	May 14	P	22	22	03		-0.9	-1.0	+1.4	5850	A distant earthquake. Gulf of Alaska.
		SE _N	22	29	31						
		eLE _N	22	37	±						
		eF	22	59	±						
157	May 16	SE _N	0	09	49						Near Wakayama City.
		ME	0	09	50		±0.4				
		M _N	0	09	50	0.2		±1			
		F	0	10	14						
158	May 16	PEN	17	09	26					28	Near Wakayama City.
		SE _N	17	09	30						
		ME	17	09	31	0.5	-2				
		M _N	17	09	31	0.3		-3			
159	May 17	PEN	0	07	41					41	Ditto.
		SE _N	0	07	47						
		M _{EN}	0	07	47	0.3	-1	+2			
		F	0	08	08						
160	May 17	e _N	0	51	05						Local shock?
		e _{EN}	0	51	21						
		F	0	52	19						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
161	May 17	eP _{EN}	5	16	35					42	Near Wakayama City.
		SE _N	5	16	41						
		ME	5	16	41		±1				
		M _N	5	16	41	0.4		-2			
162	May 17	F	5	17	13						Northern part of the Tokyo Bay.
		eP _{EN}	11	54	42					559	
		eSE	11	55	53						
		e _{SN}	11	56	01						
		ME	11	56	17	1.7	±1				
		M _N	11	56	02	1.7		±1			
163	May 17	eF	11	59	±						In the Bungo Channel.
		e _N	13	57	44						
		eSE _N	13	58	18						
164	May 18	eF	14	00	±						Near Nagasaki City.
		eE	11	19	31						
		e _N	11	19	47						
		SE	11	20	05						
		S _N	11	19	58						
		ME	11	20	05	1.7	±0.4				
165	May 19	M _N	11	20	08	1.7		±1			South off Bonin Isl.
		F	11	21	56						
		eP _{EN}	10	46	33					2305	
		eFZ	10	46	32						
166	May 20	eSE	10	50	22						Local shock.
		e _{SN}	10	50	23						
		eF	11	09	±						
		F	15	03	27						
167	May 22	SE _N	15	03	27						Lower basin of the Arita
		ME	15	03	27		+1				
		M _N	15	03	29	0.3		+2			
		F	15	03	57						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
168	May 25	S	23	25	37					613	River, Wakayama Prefecture. SSE off Hatidyô Isl.	
		ME	23	25	37	0.4	+3					
		MNZ	23	25	37	0.5		+4	-1			
		F	23	26	46							
		PE	16	20	53							
		PNZ	16	20	56				+1.5			
		SEN	16	22	17							
169	May 28	ME	16	22	24	3.3	+4				Local shock. SE off Yetorofu Isl., Kurile Is.	
		MN	16	22	20	2.4			-5			
		eF	16	29	±							
		eE	5	39	29		+2					
		eN	5	39	28							
170	May 30	ME	5	39	31	2.9	+1				Local shock.	
		MN	5	39	39	2.3			-2			
		eF	5	43	±							
		SEN	1	02	49							
171	May 30	MEEN	1	02	50	0.4	+1		-3		In the Kii Channel.	
		F	1	03	17							
		SEN	18	50	07							
172	May 30	ME	18	50	08	0.5	+1			527	Near Mito City, Ibaraki Prefecture. Moderate shocks were felt in Kwantô district.	
		MN	18	50	08	0.3			+3			
		F	18	51	03							
		P	23	05	10		+0.4	(+)	(-)			
173	May 31	S	23	06	21						Near Wakayama City.	
		ME	23	06	40	2.6	+23					
		MN	23	06	36	2.9			-30			
		MZ	23	06	37	3.2						-12
		eF	23	19	±							
174	June 1	SEN	17	23	28					409	ENE off Miyake Isl., South off Izu Peninsula.	
		ME	1	36	49							
		PZ	1	36	48				-0.8			
175	June 2	SE	1	37	41						Near Wakayama City.	
		SN	1	37	46							
		SZ	1	37	44							
		ME	1	37	49	2.9	±3					
		MN	1	37	50	2.7			-1			
		MZ	1	37	49	1.9						-2
		eF	1	45	±							
176	June 2	SEN	13	57	28					64	In the Kii Channel.	
		ME	13	57	28		±1					
		MN	13	57	28	0.4			±1			
		F	13	57	54							
177	June 2	PEN	20	50	41						In the Hyûga-nada. Felt in Kyûsyû district.	
		PZ	20	50	40				-0.8			
		S	20	50	49							
		ME	20	50	49	0.4	±3					
		MN	20	50	49	0.5			+4			
		MZ	20	50	51	0.5						+2
178	June 3	F	20	51	50					571	Near Sawara, Tiba Pref.	
		PE	21	30	14							
		PN	21	30	12							
		PZ	21	30	10							
		SE	21	30	56							
		SN	21	31	02							
		SZ	21	31	04							
		ME	21	31	18	1.8			-9			
		MN	21	31	18	1.9						-11
MZ	21	31	18	2.2				+7				
eF	21	44	±									

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
174	June 1	F	17	23	28					409	ENE off Miyake Isl., South off Izu Peninsula.	
		PEN	1	36	49							
		PZ	1	36	48				-0.8			
		SE	1	37	41							
		SN	1	37	46							
		SZ	1	37	44							
		ME	1	37	49	2.9	±3					
175	June 2	MN	1	37	50	2.7			-1		Near Wakayama City.	
		MZ	1	37	49	1.9						-2
		eF	1	45	±							
		SEN	13	57	28							
		ME	13	57	28		±1					
176	June 2	MN	13	57	28	0.4			±1	64	In the Kii Channel.	
		F	13	57	54							
		PEN	20	50	41							
		PZ	20	50	40				-0.8			
177	June 2	S	20	50	49						In the Hyûga-nada. Felt in Kyûsyû district.	
		ME	20	50	49	0.4	±3					
		MN	20	50	49	0.5			+4			
		MZ	20	50	51	0.5						+2
		F	20	51	50							
		PE	21	30	14							
178	June 3	PN	21	30	12					571	Near Sawara, Tiba Pref.	
		PZ	21	30	10							
		SE	21	30	56							
		SN	21	31	02							
		SZ	21	31	04							
		ME	21	31	18	1.8			-9			
		MN	21	31	18	1.9						-11
		MZ	21	31	18	2.2						+7
		eF	21	44	±							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		ePNZ	7	18	30						Felt in Kwantô district.
		eE	7	19	30						
		SN	7	19	45						
		Sz	7	19	48						
		ME	7	20	03	2.4	-3				
		MN	7	19	59	2.8		-5			
		Mz	7	20	01	2.1			-3		
		F	7	29	±						
179	June 5	SEN	0	04	50						Near Tadono; Middle basin of the Arita R., Wakayama Prefecture.
		ME _N	0	04	50		±1	-2			
		F	0	05	10						
180	June 5	eEN	12	38	02						In the Kumano-nada, SE off the Kii Peninsula.
		eZ	12	38	02						Deep focus earthquake.
		ME	12	38	07	1.0	-1				
		MN	12	38	04	0.6		+2			
		Mz	12	38	02	1.0			+1		
		eF	12	39	±						
181	June 5	SEN	14	54	53						Near Koti City, Sikoku.
		ME	14	54	54		±0.4				
		MN	14	54	54	0.4		±1			
		F	14	55	25						
182	June 5	ePN	18	46	39						Near Wakamatu, Hukusima Prefecture.
		ePE	18	46	46						
		SE	18	47	49						
		SN	18	47	44						
		ME	18	48	03	1.8	±1				
		eZ	18	48	04						
		MN	18	48	13	2.6		+1			
		eF	18	52	±						
183	June 6	e	6	29	±						SE off Otiisi Cape, Hokkaidô.
		eLE	6	31	01						
		eLN	6	31	32						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km	
		ME	6	33	28	13.5	±4				
		MN	6	33	47	13.5		±4			
		Mz	6	33	45	15.5			±8		
		eF	7	01	±						
184	June 6	eP _N	13	35	50						Near Wakayama City?
		SE	13	36	01						
		SN	13	36	02						
		ME	13	36	03	0.6	±0.4				
		MN	13	36	03	0.4		-1			
		F	13	36	31						
185	June 6	P	18	48	29				+0.8	373	NNW off Hatidyô Isl.
		SEN	18	49	19						
		ME	18	49	24	1.6	±0.4				
		MN	18	49	21	1.4		±1			
		F	18	51	±						
186	June 7	P	17	05	34		-0.4	+0.9		30	Near Wakayama City.
		S	17	05	38						
		ME	17	05	38	0.4	-3				
		MN	17	05	39	0.4		-3			
		F	17	06	27						
187	June 8	SEN	21	59	15						Local shock.
		ME _N	21	59	16	0.4	-2	+3			
		F	21	59	45						
188	June 9	P	13	06	25		-0.9	+1.4	+3.1	4365	A distant earthquake. New Guinea.
		SE	13	12	31						
		SN	13	12	33						
		Sz	13	12	35						
		SM _E	13	12	39	3.9	-5				
		SM _N	13	12	37	3.9		-11			
		L	13	15	46						
		ME	13	17	14	11.6	-10				
		MN	13	16	06	11.6		+12			

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
189	June 13	MZ	13	19	06	13.1			-14	1570	Near Sikotan Isl, Southern part of Kurile IIs. Moderate shocks were felt in eastern part of Hokkaidô, felt in NE Japan.
		eF	13	33	±						
		FE	1	54	13						
		PN	1	54	12						
		eFz	1	54	14						
		SE	1	56	52						
		SN	1	56	57						
		eSz	1	57	01						
		ME	1	57	44	5.1	-3				
		MN	1	57	04	5.8		-4			
		MZ	1	57	20	4.9			±2		
		ScSEN	2	06	30						
eF	2	27	±								
190	June 13	P	2	18	04		(+)	(-)	48	48	Lower basin of the Arita River, Wakayama Prefecture.
		SE	2	18	10						
		Sz	2	18	11						
		ME	2	18	11	1.1	-3				
		MN	2	18	11	0.4		±2			
		MZ	2	18	11				±1		
191	June 13	ePEN	2	31	09				19	19	Local shock.
		SEN	2	31	12						
		ME	2	31	12		±1				
		MN	2	31	12	0.5		+2			
		F	2	31	39						
192	June 13	PEZ	22	20	35		-0.4		-1.5	6740	A distant earthquake. Afganistan, 29.°5N 63.°5E (J.S.A.)
		PN	22	20	36			-0.4			
		SE	22	28	53						
		SN	22	28	52						
		Sz	22	28	51						
		LE	22	44	21						
		LN	22	44	07						
		MN	22	45	24	21.3			±40		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
193	June 15	ME	22	52	44	15.5	±9			437	Near Mamada, southern part of Totigi Prefecture. Moderate shocks were felt in Northern part of Kwantô district.
		MZ	22	50	19	15.5			±15		
		eF	23	16	±						
		eP	5	32	50						
		S	5	33	49						
		ME	5	34	07	2.1	±3				
		MN	5	34	02	1.4		+3			
194	June 16	MZ	5	34	00	1.7			+2	Near Wakayama City.	
		eF	5	38	±						
		SEN	19	10	33						
		ME	19	10	33	0.4	+1				
		MN	19	10	34	0.4		±2			
195	June 17	F	19	10	49					80	Near the Tanabe Bay, Wakayama Prefecture.
		ePEN	11	14	11						
		SEN	11	14	22						
		ME	11	14	22		+2				
		MN	11	14	22	0.4		-3			
196	June 18	F	11	14	43					7	Local shock.
		PEN	1	23	02						
		SEN	1	23	03						
		ME	1	23	03	0.5	+1				
		MN	1	23	03	0.4		-1			
197	June 19	F	1	23	27					33	Lower basin of the Arita River, Wakayama Pref.
		ePEN	2	06	13						
		S	2	06	18						
198	June 19	ME	2	06	18	0.4	-2	-4		514	South off Hatidyô Isl. Deep focus earthquake.
		F	2	06	47						
		P	15	48	35		-1.7	-0.9	+1.5		
198	June 19	SE	15	49	45					514	South off Hatidyô Isl. Deep focus earthquake.
		SN	15	49	43						
		Sz	15	49	44						
		SE	15	49	45						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M _E	15	49	46	3.8	± 26				
		M _N	15	49	46	2.8		+6			
		M _Z	15	49	47	2.5			+6		
		eF	15	57	\pm						
199	June 21	S _{EN}	23	16	21						Near Wakayama City.
		M _E	23	16	21	0.4	± 0.4				
		M _N	23	16	21	0.3		-2			
		F	23	16	46						
200	June 21	P _{EN}	23	51	06		(+)	(-)		50	In the Kii Channel.
		eP _Z	23	51	07						
		S	23	51	13						
		M _E	23	51	14	0.5	-9				
		M _N	23	51	14	0.4		-18			
		M _Z	23	51	14	0.3			+5		
		F	23	52	31						
201	June 22	eP _{EN}	1	34	29					29	Near Wakayama City.
		S _{EN}	1	34	33						
		M _E	1	34	34	0.3	+2				
		M _N	1	34	34	0.4		-2			
		F	1	35	01						
202	June 22	P _{EN}	17	37	08					33	Near Wakayama City.
		S	17	37	13						
		M _E	17	37	13		± 1				
		M _N	17	37	13	0.3		+3			
		F	17	37	53						
203	June 23	e _{EN}	5	34	03						A distant earthquake. Tibet, China.
		e _N	5	37	17						
		e _{LN}	5	38	40						
		e _{LE}	5	39	51						
		e _Z	5	40	02						
		M _E	5	40	40	14.1	± 4				
		M _N	5	40	27	15.0		± 13			

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M _Z	5	42	10	15.0			± 8		
		eF	5	57	\pm						
204	June 24	eP _E	6	19	05						A distant earthquake. Northern part of Chile.
		eP _N	6	19	11						
		i _{EN}	6	19	18						
		eP _Z	6	19	18						
		e _{EN}	6	24	05						
		e _Z	6	24	04						
		eF	6	57	\pm						
205	June 24	e _N	15	00	22						Local shock.
		S _{EN}	15	00	26						
		M _E	15	00	27		+1				
		M _N	15	00	27	0.4		+2			
		F	15	01	15						
206	June 26	P	20	35	00					207?	In the Bungo Channel.
		e _N	20	35	11						
		S _E	20	35	28						
		S _N	20	35	27						
		S _Z	20	35	29						
		M _E	20	35	28	0.4	-5				
		M _N	20	35	28	0.5		+8			
		M _Z	20	35	50	0.6			± 1		
		F	20	38	33						
207	June 26	eP _E	20	40	50					531	In the Kasima-nada, east off Ibaraki Pref.
		eP _N	20	40	49						
		S _E	20	42	02						
		S _N	20	42	00						
		M _E	20	42	10	2.9	+2				
		M _N	20	42	09	3.1		-2			
		eF	20	50	\pm						
208	June 29	iP _{EN}	8	32	18		+1.9	-2.8		3810	A distant earthquake. New Guinea.
		iF _Z	8	32	17				-8.2		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			g.	m.	t.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		iS	8	37	54						
		ME	8	37	57	3.5	+68				
		M _{1N}	8	37	57	3.7		+52			
		M _Z	8	37	57	3.2			-20		
		M _{2N}	8	38	14	3.5		+26			
		eF	9	02	±						
209	June 29	eEN	12	46	18						Ditto.
		iEZ	12	47	13						
		iN	12	47	11						
		eE	12	47	15	2.4	+2				
		eN	12	47	14	2.9		-1			
		eZ	12	47	14	2.3			±1		
		eF	12	51	±						

TOYOOKA JAPAN.

SEISMOLOGICAL BULLETIN

A Branch Station of the Kobe Meteorological Observatory of Japan.
 $\phi = 35^{\circ} 32'$ $\lambda = 134^{\circ} 49'$ $h = 32.2$ m. Underground: Tertiary.

Instruments: Omori's Seismograph.
 (Horizontal Pendulum)

Wiechert Seismograph.
 (Horizontal & Vertical)

April

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	20.8	3.1	0.001	20
A _N :	20.1	3.0	0.001	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	5.8	Aperiodic	0.006	86
A _N :	6.4	"	0.005	79
A _Z :	3.5	3.1	0.003	61

May

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	21.0	3.0	0.001	20
A _N :	20.5	3.0	0.001	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	6.0	Aperiodic	0.005	89
A _N :	5.9	"	0.006	111
A _Z :	3.6	3.5	0.003	57

June

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	20.8	3.0	0.001	20
A _N :	20.8	3.0	0.001	20

	T_0	ϵ	$\frac{r}{T_0^2}$	V
A _E :	5.8	Aperiodic	0.006	96
A _N :	5.9	"	0.006	94
A _Z :	3.6	4.0	0.003	56

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			g.	m.	t.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
32	April 3	P _E	22	34	21						NW off Bonin Isl.
		P _N	22	34	20						
		P _Z	22	34	19						
		eF	23	03	±						
33	April 6	P _{EN}	19	10	57					464	NE off Sioya Cape. Moderate shocks were felt
		I _Z	19	10	56						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
34	April 10	eSE	19	12	00						in Hukusima Pref. Felt in Oou and Kwanto district.
		SN	19	11	59						
		SZ	19	12	00						
		ME	19	13	23	4.6	-65				
		MN	19	13	14	4.6		+111			
		MZ	19	13	21	4.8			-44		
		eF	19	29	±						
35	April 12	PN	10	31	25						A distant earthquake. Near Bali Isl, East off Java. Felt in East Java, Bali, and Lombok Isl. By Omoris seismograph.
		eN	10	41	18						
		MN	11	00	39	12.6		-25			
		eF	11	25	±						
36	April 14	eLE	9	28	15						A distant earthquake. Upper valley of the Yangtze River, China. By Omori's seismograph.
		LN	9	27	50						
		ME	9	30	00	12.9	+13				
		MN	9	30	02	15.5		+30			
		eF	9	40	±						
37	April 15	PEN	18	50	22					79	Northern part of the Harima-nada, Inland sea. Felt in Akasi City.
		SEN	18	50	32						
		MEN	18	50	33		-3	±3			
		F	18	51	22						
38	April 15	PEN	10	34	30					428	SSE off Nozima Cape, Tiba Prefecture. Felt in Kwantô district.
		PZ	10	34	28						
		SN	10	35	28						
		SZ	10	35	27						
		ME	10	36	04		+20				
		MN	10	35	53			+104			
		MZ	10	35	52	2.8			+23		
eF	10	44	±								
38	April 15	ePE	22	21	13					3295	A distant earthquake. Felt in Mindanao, 6°N 137°E (according to Manila's report).
		PNZ	22	21	14			+3.2	+4.1		
		SEN	22	26	18						
		SZ	22	26	07						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
39	April 19	LN	22	29	16						SE off Osima, Izu Province. Faint record.
		LZ	22	29	07						
		MN	22	29	37	25.0		-51			
		MZ	22	32	03				+13		
		eF	23	27	±						
40	April 19	eFN	2	38	50					386	South off Hatidyô Isl. Felt in Bonin Isl., abnormal felt area in Kwantô district. Focal depth about 350 km.
		SN	2	39	42				+3		
		MN	2	39	47						
		eF	2	42	±						
41	April 24	P	16	15	12		-16.6	+39.3	+42.6	583	Local shock?
		S	16	16	31						
		ME	16	16	36	3.3	-53				
		MN	16	16	37	4.7		+264			
		MZ	16	16	35	3.2			+38		
42	April 26	ePN	16	55	33					49	South off the Nozima Cape, Tiba Prefecture.
		SEN	16	55	40						
		M	16	55	40		-2	+6			
		F	16	56	09						
43	April 27	PE	22	48	50					400?	SE off Miyako, Iwate Prefecture.
		PN	22	48	52						
		PZ	22	48	51						
		SN	22	49	46						
		SZ	22	49	43						
		ME	22	50	01		-2				
		MN	22	49	58			+7			
		MZ	22	50	03				+2		
F	22	53	±								
43	April 27	ePN	9	18	47						SE off Miyako, Iwate Prefecture.
		eMN	9	21	33						
		eF	9	37	±						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
44	April 28	SEN	h	m	s	s	μ	μ	μ	km.	Near Hukuoka City.
		ME	2	03	36		-2				
		MN	2	03	43			-3			
		F	2	04	±						
45	May 3	ePEN	1	33	32	s				km.	NNW off Bonin Isl.
		iz	1	33	42						
		LE	1	36	14						
		LN	1	36	50						
		eLz	1	37	07						
		MN	1	38	28			-5			
46	May 4	ePE	4	45	29	s				km.	A distant earthquake. Alaska.
		PN	4	45	28						
		Pz	4	45	29						
		eSE	4	53	01						
		SN	4	53	00						
		eLN	5	01	26						
		MN	5	07	44		21.0		-8		
47	May 11	PEN	18	42	52	s				km.	Near Turuga, Hukui Prefecture.
		SEN	18	43	06						
		MEN	18	43	06			+7	+11		
		F	18	43	58						
48	May 12	PEN	3	51	06	s				km.	Near Tosima, northern part of Awadi Province. Felt in southern part of Hyôgo Prefecture.
		SEN	3	51	19						
		Sz	3	51	18						
		MEN	3	51	19			±8	-17		
		Mz	3	51	18				±5		
49	May 13	PE	0	16	10	s				km.	Upper basin of the Gô River, Simane Pref.
		SEN	0	16	30						
		ME	0	16	35			-3			

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
		MN	h	m	s	s	μ	μ	μ	km.		
			0	16	37			-4				
50	M y 13	F	0	17	10	s				km.	A distant earthquake. East off New Guinea	
		ePN	9	10	10							
51	May 19	eF	9	50	±	s				km.	Northern part of Tango Province.	
		PEN	7	06	14							
52	May 20	SEN	7	06	18	s				km.	SE off Miyako, Iwate Prefecture. Faint record.	
		MEN	7	06	18			-11	+4			
		F	7	06	52							
		ePE	7	04	31							
53	May 20	ePN	7	04	13	s				km.	Near Mineyama, Tango Province.	
		eF	7	07	±							
		P	15	02	48							
		SEN	15	02	52							
54	May 21	Sz	15	02	51	s				km.	North off Formosa.	
		ME	15	02	52			-70				
		MNZ	15	02	53				±12			±9
		F	15	03	45							
		eLN	4	45	17							
55	May 25	eF	5	00	±	s				km.	SSE of Hatidyô Isl.	
		PEN	16	21	06							
		Pz	16	21	04							
		iz	16	21	06							
		eSE	16	22	38							
56	May 30	SN	16	22	35	s				km.	Near Mito City, Ibaraki Prefecture. Moderate shocks were felt	
		Sz	16	22	43							
		MN	16	22	46				+5			
		eF	16	26	±							
		ePE	23	05	07							
56	May 30	iPEN	23	05	09	s				km.	Moderate shocks were felt	
		Pz	23	05	08				+53			

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A_E μ	A_N μ	A_Z μ		
57	June 1	iE	23 06 05	2.1 4.2	+24	-55	-23	463	in Kwantô district. ENE off Miyake Isl, South off Izu Province.
		SN	23 06 15						
		SZ	23 06 04						
		ME	23 06 42						
		MN	23 06 44						
		MZ	23 06 43						
		eF	23 14 ±						
58	June 2	ePE	1 36 48	1.8	-16	-18	-9	490	In the Hyûga-nada. Felt in Kyûsyu district.
		FN	1 36 53						
		SN	1 37 56						
		MN	1 38 09						
		eF	1 41 ±						
		PE	21 30 25						
		PN	21 30 23						
eFZ	21 30 20								
59	June 3	SEN	21 31 30	-8	-8	-9	507	Near Sawara, Tiba Pre- fecture. Felt in Kwantô district.	
		SZ	21 31 31						
		ME	21 32 02						
		MN	21 31 49						
		MZ	21 31 43						
		eF	21 36 ±						
		PE	7 18 35						
60	June 9	FZ	7 18 32	-8	-8	-9	507	Near Sawara, Tiba Pre- fecture. Felt in Kwantô district.	
		eS?Z	7 19 28						
		SE	7 19 43						
		ME	7 19 45						
		MZ	7 19 56						
		eF	7 22 ±						
61	June 13	PE	13 06 36	14.4	+25	+12	4440	A distant earthquake. New Guinea.	
		SEN	13 12 49						
		eF	13 28 ±						
61	June 13	P	1 53 58	1340				Near Sikotan Isl, southern	

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A_E μ	A_N μ	A_Z μ		
62	June 13	SE	1 56 18	14.4	+25	+12		6690	part of Kurile IIs. Mode- rate shocks were felt in eastern part of Hokkaidô, felt in NE Japan.
		SN	1 56 23						
		SZ	1 56 24						
		eLE	1 57 41						
		ScSEN	2 06 28						
		F	2 13 ±						
		iE	22 30 34						
63	June 15	iz	22 30 32	-6	-5	-5	483	Near Mamada, southern part of Totigi Prefecture. Moderate shocks were felt in northern part of Kwantô district.	
		iE	22 30 52						
		iz	22 30 50						
		SEN	22 38 47						
		eF	23 15 ±						
		PE	5 32 42						
		PN	5 32 40						
64	June 19	FZ	5 32 45	-8	-3	+12	518	South off Hatidyô Isl.	
		SEN	5 34 47						
		eSN	5 34 47						
		ME	5 34 51						
		MN	5 34 49						
		Mz	5 34 54						
		eF	5 37 ±						
65	June 23	P	15 48 45	14.4	+25	+12	4440	A distant earthquake. Tibet, China. By Omori's seismograph.	
		SEN	15 50 04						
		Sz	15 50 02						
65	June 23	ME	15 50 11	14.4	+25	+12	4440	A distant earthquake. Tibet, China. By Omori's seismograph.	
		Mz	15 50 09						
		eF	15 55 ±						
66	June 24	eLN	5 37 40	14.4	+25	+12	4440	A distant earthquake. Tibet, China. By Omori's seismograph.	
		MN	5 42 17						
		eF	5 55 ±						
66	June 24	ePE	6 19 51	14.4	+25	+12	4440	A distant earthquake. Northern part of Chile.	
		eS?E	6 38 33						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			g.	m.	s.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km	
		eL ₂ E	6	45	00						
		eF	7	07	±						
67	June 26	PE	20	35	13					364	In the Bungo Channel.
		FN	20	35	16						
		Fz	20	35	17						
		SE	20	36	02						
		eSN	20	36	00						
		Sz	20	36	00						
		ME	20	36	03		-7				
		MN	20	36	02			-10			
		Mz	20	36	05				-5		
		F	20	37	29						
68	June 26	eE	20	41	38						In the Kasima-nada, east off Ibaraki Prefecture.
		eSN	20	41	57						
		eF	20	44	±						
69	June 29	PE	8	32	27						A distant earthquake.
		PNZ	8	32	26			-3.1	-6.3		New Guinea. Record is deep focus type.
		iz	8	33	57						
		SEN	8	38	06						
		Sz	8	38	04						
		ME	8	38	12	4.0	+92				
		MN	8	38	12			+60			
		Mz	8	38	18				+20		
		eF	8	53	±						

SEISMOLOGICAL BULLETIN

OF THE

IMPERIAL MARINE OBSERVATORY

AND

⌈
KOBE METEOROLOGICAL OBSERVATORY.

KOBE, JAPAN.

VOL. X No. 3.

From July 1 1934, to Sept. 30 1934.

KOBE

—
Oct. 1935.

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KÔBE JAPAN.

SEISMOLOGICAL BULLETIN

of the Imperial Marine Observatory and the Kobe Meteorological Observatory of Japan.

$\varphi = 34^{\circ} 41' 18''N$ $\lambda = 135^{\circ} 10' 51''E$ $h = 58.3$ m Underground : Diluvial Series.

Instruments : Omori's Seismograph.
(Horizontal Pendulum)

Wiechert Seismograph.
(Horizontal & Vertical)

July

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	19.5		0.001	20
AN:	19.8		0.001	20

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	4.7	Aperiodic	0.006	96
AN:	4.5	„	0.008	105
AZ:	3.9	6	0.003	96

Aug.

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	19.6		0.003	20
AN:	20.4		0.001	20

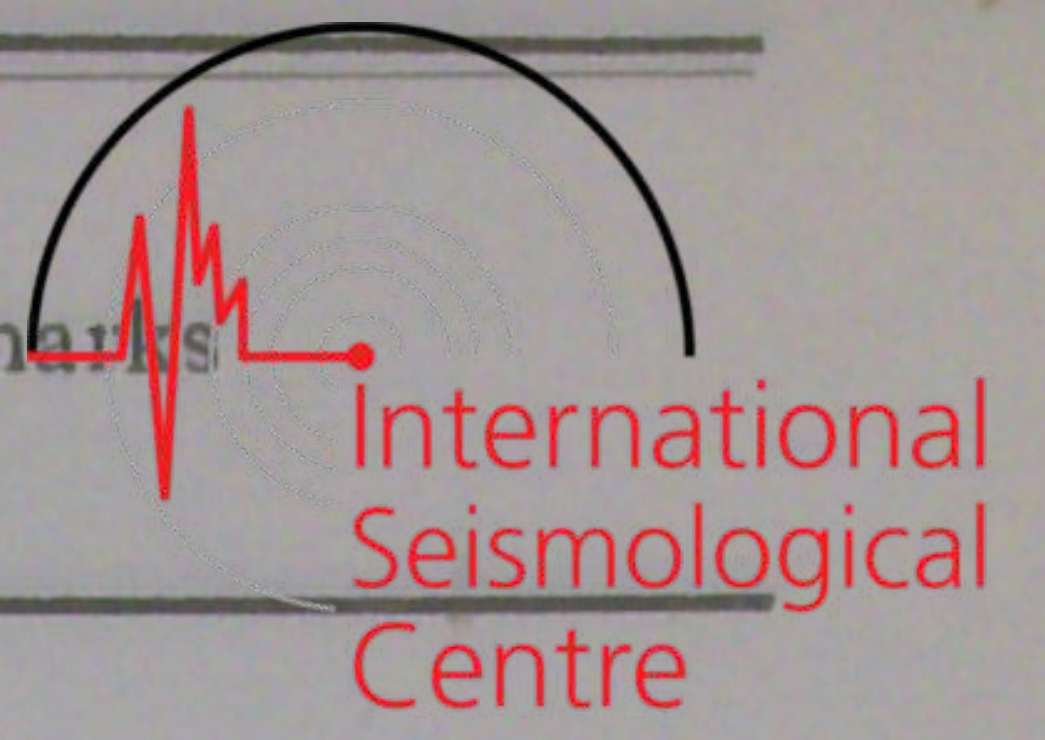
	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	6.8	4	0.004	135
AN:	6.8	6	0.004	131
AZ:	4.0	6	0.003	86

Sept.

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	18.8		0.001	20
AN:	21.5		0.001	20

	T_o	ε	$\frac{r}{T_o^2}$	V
AE:	5.8	5	0.003	114
AN:	6.3	5	0.003	102
AZ:	3.8	5	0.004	96

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		AE	AN	AZ		
			h	m	s		μ	μ	μ		
130	June 30	ez	17	09	09					Off Hatidyo Isl. Faint record.	
		eN	17	10	26						
		eN	17	11	00	4.2?		± 1			
		ez	17	10	55	7.6			± 1		
		eF	17	24	\pm						
131	July 3	S	2	19	42					Near Wakayama City.	



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M _E	2	19	42	0.5	+3				
		M ¹ _N	2	19	42			-2			
		M ² _N	2	19	48			±1			
		F	2	19	35						
132	July 6	eP _E	18	41	18						Mouth off the Mabuti River, Aomori Prefecture.
		eP _N	18	41	27						
		eE _N	18	43	21						
		M _E	18	44	14	3.2	±1				
		M _N	18	44	22	4.6		±1			
		eF	18	52	±						
133	July 6	eP ² _E	23	00	58						Off the coast of Southern Oregon, U. S. A. 41.°5N 124.°9W (J.S.A.) Faint record.
		e _N	23	09	49						
		eM ¹ _N	23	21	42	18.0		±1			
		M ² _N	23	32	37	11.6		±1			
		M _E	23	40	42	16.0	±1				
		eF	0	03	±						
134	July 8	P _{EN}	6	43	24					58	In the Wakaura Bay, Kii channel.
		iP _Z	6	43	23				+2.2		
		i _Z	6	42	26				-6.2		
		iS _{EN}	6	43	32						
		eS _Z	6	43	31						
		M ¹ _E	6	43	33		-15				
		M ¹ _N	6	43	30	0.6		-21			
		M ² _{EN}	6	43	37	0.5	+24	+17			
		M _Z	6	43	39	0.5			+6		
		C ¹ _E	6	44	43	2.8	+5				
		C ¹ _N	6	44	47	2.1		-5			
		C ² _E	6	45	19	3.0	+5				
		eF	6	51	±						
135	July 12	eP _E	9	53	42						East far off Kinkwazan, Miyagi Prefecture. Felt in Pacific coast of NE Japan.
		eP _Z	9	53	41						
		P _N	9	53	57						
		e _Z	9	53	51						



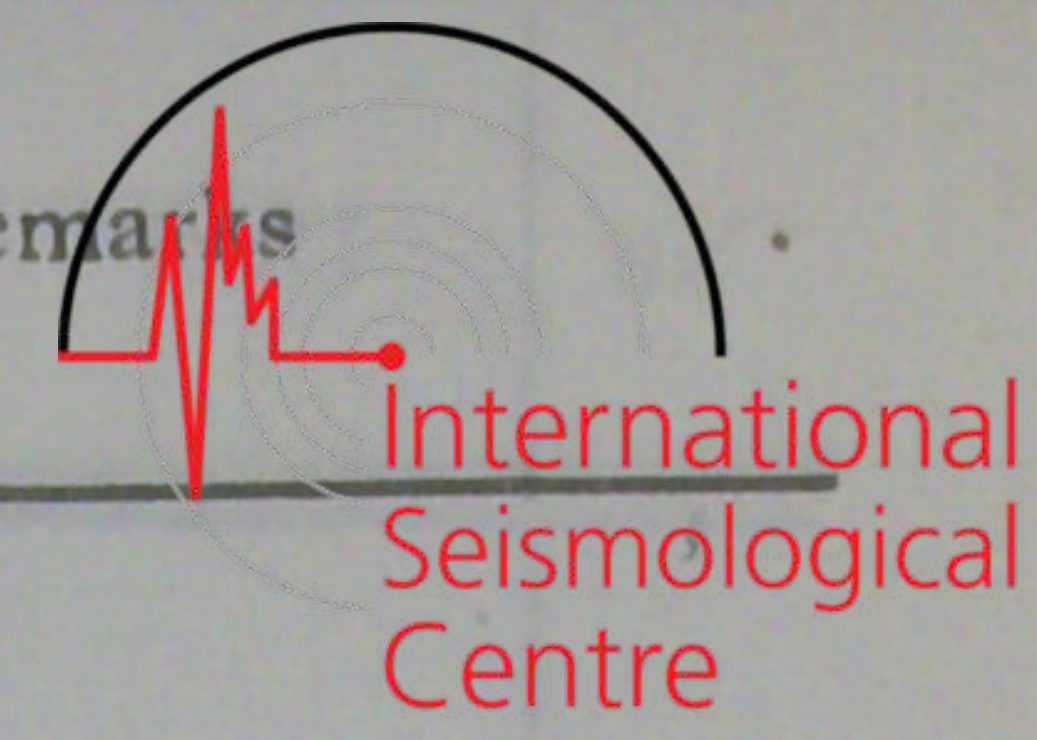
No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		eEN	9	55	28						
		eE	9	55	47						
		eSE	9	56	05						
		eSN	9	59	00						
		M _N	9	57	05	13.-?					
		eM _Z	9	57	17	4.3			±2		
		M _E	9	58	27	9.5	±3				
		eF	10	09	±						
136	July 14	eP _{EN}	10	36	43					39?	In the Wakaura Bay, Kii Channel.
		P _Z	10	36	41						
		eE	10	36	48						
		iS _{EN}	10	36	48						
		S _Z	10	36	46						
		M _{EN}	10	36	48	0.4	-9	-8			
		M _Z	10	36	47	0.3			+3		
		F	10	37	59						
137	July 18	eE	1	55	25						Destructive at David City, Western part of Panama.
		P ¹ _Z	1	55	28				(-)?		
		i _{EN}	1	57	28						
		ez	1	57	12				(+)?		
		iz	1	57	15				+15		
		i _E	1	59	11						
		ez	2	07	57	12.9					
		eE	2	09	01	19.3					
		i _E	2	14	13	23.0	+3				
		eE	2	29	34						
		e _N	2	29	56						
		eM ¹ _E	2	31	38	41.5					
		e _N	2	30	50	55.-					
		ez	2	36	26						
		eL _Z	2	40	17	25.0					
		M ¹ _Z	2	31	21	25.0			-2		
		M ² _E	2	45	46	22.1	-3				
		M ² _Z	2	56	28	22.0			+2		
		M _N	2	56	44	20.6		+4			



No.	Date	Phase	Time ^e			Period	A _E	A _N	A _Z	Δ	Remarks
			G.	M.	T.						
		M ³ _E	2	58	08	23.0	+2				
		M ⁴ _E	3	08	14	17.-	+2				
		e _N	3	12	26	16.8		±1			
		M ⁵ _E	3	56	26	18.-	±1				
		e _F	4	13	±						
138	July 18	eP _E ?	17	18	57	3.3					An after shock of previous earthquake.
		e _Z	17	20	37						
		e _N	18	21	58	21.2		±5			
		e _F	18	52	±						
139	July 18	eP _{EN}	19	49	53		(-)	(+)		6030	Near New Hebrides IIs.
		eP _Z	19	49	50				+2		
		iP _{EN}	19	49	58		+4	-5			
		iP _Z	19	49	57				-11		
		i _Z	19	50	47				+18		
		i _E	19	51	07						
		e _E	19	51	48						
		e _E	19	54	08						
		e _Z	19	53	47						
		eS _E	19	57	30		-10				
		S _N	19	57	30	21.0		+12			
		S _Z	19	57	56				+9		
		SM _E	19	58	22	15.9	+23				
		SM _N	19	58	24	19.0		-22			
		e _Z	19	58	11						
		i _N	19	59	25			+16			SeS Wave?
		i _E	20	01	47		-12				
		i _N	20	03	11			-10			
		L _{QN}	20	04	06			+18			
		eL _Z	20	05	58						
		M ¹ _E	20	05	02	24.2	+40				
		M ¹ _N	20	05	01	23.4		-33			
		eL _{RN}	20	07	28						
		M ² _E	20	09	27	18.2	-95				
		M ² _N	20	09	51	17.1		+68			
		M ¹ _Z	20	09	17	22.5			-48		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
		M ² Z	20	16	54	17.3			+18		
		ez	20	20	59						P'P' Wave?
			The end part overlapped by the following earthquake								
140	July 18	eN	21	39	23						An after shock of previous
		iz	21	39	14						earthquake?
		eE	21	40	16	2.8					
		eN	21	48	05	2.9					
		eE	22	06	55						
		eF	22	30	±						
141	July 19	ez	0	16	16					6310	An after shock of No. 139
		P _{EN}	0	16	19						
		P _Z	0	16	20						
		eE	0	18	26						
		ez	0	18	32	4.6					
		iS [?] E	0	24	13						
		eS [?] N	0	24	08						
		ez	0	24	15						
		eM _E	0	34	11	16.9	±1				
		eM _Z	0	37	12						
		eF	1	03	±						
142	July 19	eP _N	1	34	23					3775	Felt in Ceram and NW
		P _Z	1	34	25				-1.6		New Guinea, according to
		P _N	1	34	26		-1.0				Batavia's report.
		iP _Z	1	34	29	5.2				-6.8	
		i _E	1	34	35						
		i _E	1	35	46						
		P _{R1N}	1	35	46			-7			
		P _{R1Z}	1	35	42				+5		
		P _{R2N}	1	36	05						
		S [?] N	1	39	58	18.7		-5			
		eE	1	42	23						
		i _E	1	42	48	12.7	-7				
		eL _N	1	44	03						
		M _{1N}	1	45	29	22.-		-8			

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M ¹ Z	1	45	13	22.9			-9		
		M _E	1	50	02	18.1	-5				
		M ² N	1	49	33	16.8		-7			
		M ² Z	1	50	03	18.1			+9		
		e _E	2	15	38	10.0	±1				
		e _F	2	40	±						
143	July 19	e _Z	5	55	01						A distant earthquake. Related to No. 139. Faint record.
		e _E	5	56	21						
		e _E	6	04	59	8.5					
		M _E	6	13	42	18.-	±1				
		M _N	6	14	39	15.-		±1			
		e _F	6	21	±						
144	July 19	P _Z	7	46	36					6200	Near New Hebrides IIs.
		eP _E	7	46	45						
		P _N	7	46	43						
		e _Z	7	47	57						
		S _E	7	54	30		-3				
		eS _N	7	54	25			+			
		eS _Z	7	55	17						
		eL _E	8	01	±						
		M _E	8	06	23	13.6	-3				
		M ¹ _N	8	05	46	16.1		+3			
		M ² _N	8	14	44	18.1		±3			
		M _Z	8	16	57	16.2			-2		
		e _F	8	50	±						
145	July 20	i _E	13	41	21						Near Sawara, Tiba Prefecture. Felt in Kwanto district
		e _Z	13	41	23						
		i _N	13	41	42	2.2		±4			
		i _Z	13	41	38	3.2			-4.3		
		i _E	13	42	43	2.9	±3				
		e _F	13	48	±						
146	July 20	eM _E	18	37	17	17.-	±1				Related to No. 139? A distant earthquake.
		eM _N	18	38	22	17.-		±1			





No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		eF	18	43	±						
147	July 20	eL?EN	19	13	±						Ditto.
		M _E	19	15	22	17.-	±2				
		M _N	19	15	23	16.9		±2			
		eF	19	31	±						
148	July 21	eE	4	42	33						Luzon, Philippine.
		eNZ	4	42	32						
		eE	4	42	42						
		eN	4	42	54	3.2		±2			
		ez	4	42	57	3.7			±1		
		eN	4	44	25	3.5					
		ez	4	44	25						
		eF	4	54	±						
149	July 21	eP _E	6	27	45					6515	Near New Hebrides IIs.
		P _N	6	27	44						Related to No. 139.
		P _Z	6	27	43						
		iP _N	6	28	04						
		ez	6	28	01						
		PM _Z	6	28	18	3.2			-8		
		ez	6	29	02						
		i _E	6	29	31						
		eEN	6	35	27						
		iS _N	6	35	49	25.-		-12			
		eS _Z	6	36	22						
		L _E	6	41	20	29.-					
		eL _N	6	41	26	26.-					
		M _{1E}	6	42	31	25.2	+20				
		M _{1Z}	6	44	59	17.2			+6		
		M _{2E}	6	45	14	17.4	+35				
		M _N	6	46	17	15.3		-51			
		M _{2Z}	6	48	02	17.2			+6		
		M _{3Z}	6	58	15	16.7			+8		

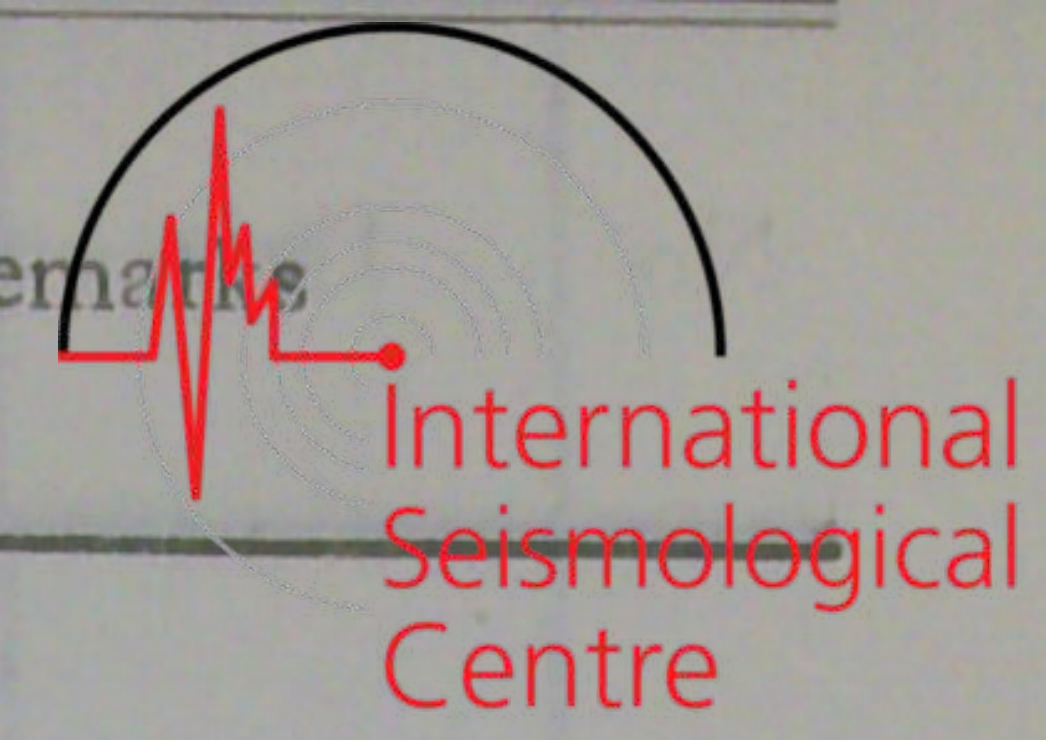
The end part overlapped by the following earthquake



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
150	July 21	eP _N	7	32	01					5865	An after shock of previous earthquake.
		iz	7	32	02						
		eS _E	7	39	32						
		eS _N	7	39	30						
		ez	7	40	17						
		eN _Z	7	40	27						
		M _E	7	50	07	18.5	±4				
		M _N	7	52	06	16.1		±3			
		eF	8	30	±						
151	July 21	eM _E	12	01	00	21.2	±1				An after shock of Panama earthquake? Faint record.
		eM _Z	12	03	20						
		eF	12	13	±						
152	July 22	i _E	0	25	59						Local shock.
		iS _E	0	26	00		-3				
		M _E	0	26	02	0.7	-5				
		M _N	0	26	01			+2			
		e _E	0	26	38	0.7	±1				
		F	0	27	07						
153	July 22	iP _E	20	06	37		+30			6050	Eastern part of Turkestan. (by Kobe, Batavia, Chinfeng and Manila.) Record is deep focus type.
		P _N	20	06	37						
		iP _Z	20	06	36				+1.7		
		ε _N	20	07	41						
		ez	20	07	36						
		e _E	20	07	57						
		c _E	20	08	53	4.4					
		eS _E	20	14	06						
		iS _N	20	14	16	4.1		+3			
		i _E	20	14	32	4.8	-3				
		e _E	20	15	47						
		eF	20	23	±						
		154	July 27	e _E	3	00	52	1.7	±1		
eF	3			03	±						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
155	July 28	eP _E	12	14	51					570	Off the mouth of the Abu-kuma R., Miyagi Prefecture.
		P _N	12	14	51						
		iZ	12	15	18						
		e _E	12	15	47						
		eS _{EN}	12	15	55						
		eZ	12	16	13	2.2			±2		
		M _E	12	16	19	3.5	±2				
		M _N	12	16	22	2.7		±2			
		eZ	12	18	07	3.3					
		eF	12	22	±						
156	July 28	eZ?	21	45	55				+2.3	5525	Near the Alaska Peninsula.
		P _{EN}	21	45	55		-1.5	+1.0?			
		iPZ?	21	45	57	3.9			-5.7		
		e _N	21	46	54						
		e _E	21	47	37	4.5	±2				
		S _E	21	53	06	8.-	-3				
		S _N	21	53	08			(+)			
		e _N	21	53	21						
		eZ	21	54	17						
		eLQ _E	22	00	±						
		M _E	22	11	26	26.-	±1				
		M _N	22	01	27	26.-		±1			
		MZ	22	05	27	22.1			±1		
		eF	22	39	±						
157	July 30	iP _{EN}	6	16	08				(-)	69	Near Kiyokawa, Wakayama Prefecture.
		PZ	6	16	06						
		S _E	6	16	17						
		iS _N	6	16	17				+3		
		eS _Z	6	16	16						
		M _E	6	16	19	0.6	±2				
		M _N	6	16	17				+3		
		F	6	17	14						
158	July 31	iP _N	6	03	54		-1.0			2890	West off Luzon, Philippine. Record is deep focus type.
		iP _E	6	03	52	2.6			+1.2		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
159	Aug. 3	P _Z	6	03	53				(-)		
		e _{EN}	6	04	11	3.6					
		eS [?] _E	6	08	30						
		e _F	6	19	±						
		eP _E	9	38	05					890	East off Kuji, Iwate Pref..
		eP _N	9	38	07						Felt in Oôu and Hokkaido.
		P _Z	9	38	07						
		e _E	9	38	19						
		e _Z	9	38	25						
		eS _E	9	39	50						
		eS _N	9	39	45						
		eS _Z	9	39	44						
		M ¹ _E	9	40	26	2.8	-2				
		M ¹ _N	9	40	38	2.5		+2			
		M ¹ _Z	9	40	27	2.5			±1		
		M ² _E	9	41	32	3.1	±2				
M ² _N	9	42	01	3.0		±1					
M ² _Z	9	41	45	3.4			±1				
e _F	9	49	±								
160	Aug. 3	iP _{EN}	12	25	23		+0.9	+0.4		?	Southern foot of Mt. Tuku-
		iP _Z	12	25	22				-1.3		ba, Ibaraki Prefecture.
		i _E	12	25	33						
		e _N	12	25	33						
		i _Z	12	25	32						
		e _E	12	25	47						
		e _Z	12	25	42						
		i _N	12	26	47						
		M ¹ _E	12	26	44	1.4	-11				
		M _N	12	26	56	2.1		-13			
		M _Z	12	26	49	1.8			-10		
		M ² _E	12	27	59	2.8	+10				
e _F	12	38	±								
161	Aug. 4	eP _E	13	15	47						Near New Guinea.
		eP _N	13	15	41						Very faint record.



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		ePz	13	15	36	5.0					
		eE	13	18	03						
		eE	13	22	05						
		eF	13	40	±						
162	Aug. 7	eP _E	3	49	46					6105	Near New Hebrides IIs.
		P _N	3	49	47						Disturbed by Micraseisms.
		Fz	3	49	45				+1.3		
		i _E	3	50	01						
		e _Z	3	50	00						
		eS _E	3	57	28						
		e _Z	4	04	08	18.-					
		eL _E	4	04	33						
		eL _N	4	04	57						
		eL _Z	4	06	±						
		M ¹ _E	4	10	15	20.9	±4				
		M ¹ _N	4	09	29	16.0		±6			
		M ¹ _Z	4	09	45	22.5			±2		
		M ² _E	4	12	28	19.1	±4				
		M ² _Z	4	12	14	19.5			±2		
		eF	4	28	±						
163	Aug. 7	e _E	21	14	20	11.1	±1				A distant earthquake.
		e _Z	12	14	12	10.4					Mongolia.?
164	Aug. 8	P _E	21	51	27					51	Near Wakayama City.
		eP _N	21	51	27						
		iS _{EN}	21	51	34						
		M _E	21	51	40	0.4	±5				
		M _N	21	51	41	0.4		±5			
		C _E	21	53	05	1.4	-4				
		C _N	21	53	15	2.9		±2			
		eF	21	58	±						
165	Aug. 10	e _N	22	55	13						Near Giran, SE of Taihoku,
		e _E	22	55	37						Formosa.
		M _N	22	55	59	11.5		±1			By Omoris seismograph.

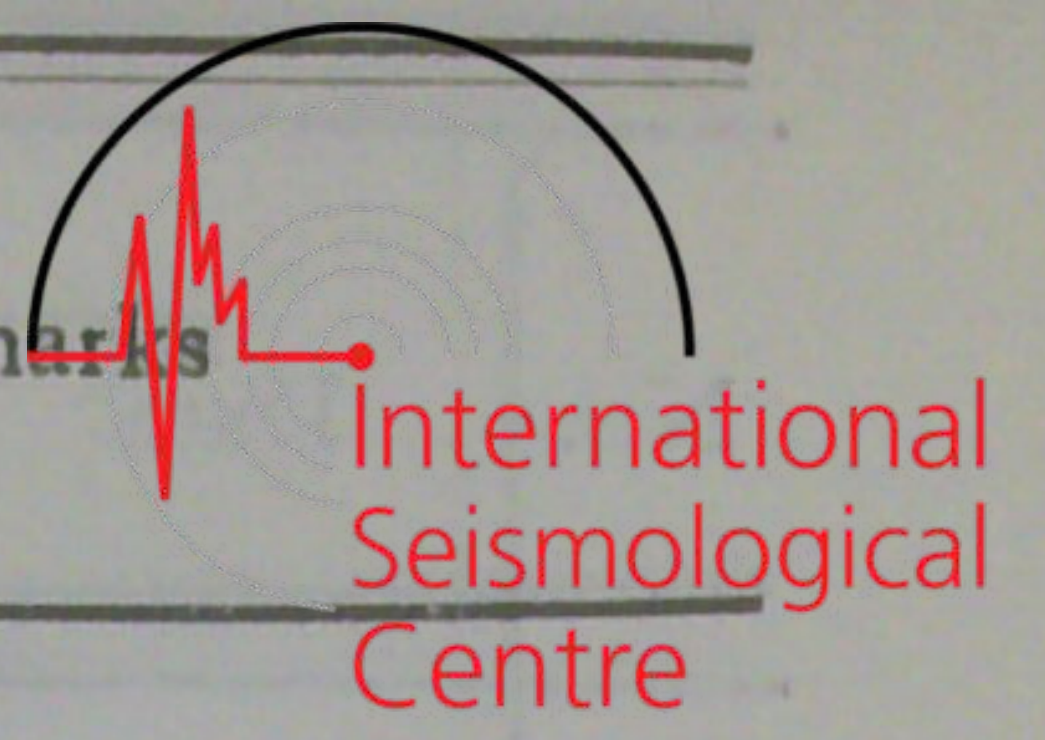




No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	T.	M.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
166	Aug. 11	eF	23	06	±					2270	Near Giran, SE of Taihoku, Formosa. Small damage in northern part of Formosa.
		eP _{EZ}	8	22	00						
		eP _Z	8	22	01						
		e _Z	8	25	29						
		eS _E	8	25	45						
		eS _N	8	25	44						
		eL _E	8	27	22						
		eL _N	8	27	43						
		eL _Z	8	27	31						
		M _E	8	29	35	12.2	+3				
		M _N	8	29	47	13.0		-6			
		M _Z	8	31	25	9.1			+3		
		iScS _E	8	31	21						
		eF	9	01	±						
167	Aug. 11	e _N	12	06	58						Near New Britain IIs, east off New Guinea.
		e _Z	12	07	20						
		e _E	12	08	34						
		e _N	12	08	29						
		eS _N	12	15	43						
		M _E	12	21	55	20.0					
		M _N	12	22	08	19.1		±1			
		M _Z	12	21	48	18.2			±1		
		eF	12	37	±						
168	Aug. 12	M _N	9	37	28			±1			Near Miyazu, Japan Sea coast of Kyoto Prefecture.
		M _Z	9	37	28				±1		
		eF	9	38	±						
169	Aug. ^{12/13}	P _E	23	55	08						Felt in Mindanao, Epicenter 8°20'N 126°50'E, according to Manila's report.
		P _N	23	55	06						
		P _Z	23	55	07						
		iP _{EN}	23	55	15		+22	+5.4			
		iP _Z	23	55	14				+7.0		
		i _N	23	56	02						
		e _Z	23	56	11						



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		SEN	0	00	09						
		eLE	0	00	35	27.5					
		eLN	0	02	05	29.8					
		Lz	0	02	33	26.4					
		ME	0	00	59	27.5	-10				
		M ¹ N	0	02	51	23.8		-11			
		M ¹ Z	0	03	28	24.0			± 4		
		M ₂ N	0	07	10	16.2		-12			
		M ² Z	0	07	14	18.7			-6		
		The end part overlapped by the following earthquake.									
170	Aug. 13	eP	0	20	03						Near Marianne IIs.
		ME	0	28	32	13.5	+3				Confused by Previous earthquake.
		MN	0	28	08	14.0		+3			
		MZ	0	28	25	17.0			± 1		
		eF	1	06	\pm						
171	Aug. 14	eE	9	01	17						A distant earthquake.
		eN	9	01	12						Very faint record, South Pacific Ocean?
		ez	9	01	06						
		eE	9	01	48						
		eN	9	01	26						
		eF	9	07	\pm						
172	Aug. 14	ePE	17	48	45					215	Near Matuyama City, Shikoku district.
		ePN	17	48	42						
		ez	17	48	46						
		eSE	17	49	07						
		eSN	17	49	05						
		ME	17	49	13	1.5	± 2				
		MN	17	49	14	1.5		± 2			
		eF	17	53	\pm						
*173	Aug. 18	PeN	2	39	09		+1.5	-1.2		188	Perceptible.
		iPZ	2	39	08				-1.6		Near Hatiman, Gihu Prefecture. Small damage at the epicentral region. Strong shocks were felt in Tyubu district.
		iPE	2	39	09		-9.6				
		iPN	2	39	10			-3.8			



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		i _{EN}	2	39	15						
		i _Z	2	39	14						* From Omori's Seismograph.
		i _{SEN}	2	39	34						
		i _{SZ}	2	39	33						
		* M _E	2	39	46	13.2	-1300				
		* M _N	2	39	42	6.3		+1500			
		* M _Z	2	39	37	2.6			-2600		
		eF	3	09	±						
174	Aug. 18	P _{EN}	3	47	36					130?	An after shock of 173.
		P _Z	3	47	37						
		i _{SEN}	3	47	54						
		i _{SZ}	3	47	53						
		M _E	3	47	54	1.3	-5				
		M _N	3	47	55	0.7		+6			
		M _Z	3	47	56	1.2			+5		
		eF	3	52	±						
175	Aug. 18	P _{EN}	5	07	04					163	An after shock of 173.
		P _Z	5	07	03						
		i _{SEN}	5	07	26						
		S _Z	5	07	26						
		M _E	5	07	27	1.3	-22				
		M _N	5	07	28	0.8		+15			
		M _Z	5	07	28	1.4			+16		
		C _E	5	07	31	2.5	±3				
		eF	5	17	±						
176	Aug. 18	Γ_N	10	21	49.0			-1.5		295	South off the Izu Peninsula. Record is deep focus type.
		iP _{EN}	10	21	49.3		-12.9	+13.7			
		iP _Z	10	21	48.9				+16.3		
		PM _E	10	21	50	1.3	-13				
		PM _N	10	21	50	0.9		+14			
		PM _Z	10	21	49	1.5			+16		
		i _{SEN}	10	22	29						
		i _{SZ}	10	22	27						
		M _E	10	22	32	2.6	+8				



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	S.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
177	Aug. 19	M _N	10	22	30	2.6		+11		17	Local shock.
		M _Z	10	22	28	1.4			-9		
		i _E	10	24	00						
		C _Z	10	24	24	3.4			± 2		
		e _F	10	30	\pm						
		i _P	11	27	42						
		i _{SEN}	11	27	45						
		i _{SZ}	11	27	44						
178	Aug. 20	M _{EN}	11	27	45	0.4	+12	-9		91	Near Mineyama, northern part of Kyoto Prefecture.
		M _Z	11	27	44				+8		
		e _F	11	30	09						
		P	9	35	13						
		i _{SEN}	9	35	25						
		i _{SZ}	9	35	26						
		M _E	9	35	30	0.8	± 3				
179	Aug. 21	M _N	9	35	28	0.4		-5		372	South off the Izu Peninsula.
		M _Z	9	35	27	0.5			+4		
		F	9	38	\pm						
		P _{EN}	2	55	57						
		P _Z	2	55	58						
		i	2	55	59						
		e _{SEN}	2	56	47						
180	Aug. 21	e _Z	2	56	58					5340	West coast of Sumatora, according to Batavia's report.
		M _E	2	57	08	2.7	+3				
		M _N	2	57	15	2.6		± 2			
		M _Z	2	57	07	2.3			± 2		
		e _F	3	10	\pm						
		P _Z	19	34	58						
		i _{P_E}	19	35	05						
i _{P_N}	19	35	03								
		e _{SE}	19	42	06						
		e _{SN}	19	42	00						
		M _E	19	48	11	17.6	± 1				



No.	Date	Phase	Time			Perido	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km	
181	Aug. 23	M _N	19	47	58	13.6				93	Near Koti City, Sikoku districts.
		M	19	58	53	15.1			±1		
		eF	20	26	±						
		eP _E	7	25	34						
		eP _N	7	25	33						
		S _{EN}	7	25	45						
		M _E	7	25	47	1.2	+2				
M _N	7	25	48	1.4		+2					
eF	7	27	±								
182	Aug. 23	P _E	22	36	06					790	East of Sioya Cape, Huku-sima Prefecture. P phase is not distinct.
		eZ	22	37	23						
		eS _E	22	37	30						
		S _N	22	37	31						
		M _E	22	38	07	3.3	+9				
		M _N	22	38	06	2.7		-5			
		M _Z	22	37	44	2.4			-7		
		i _E	22	41	02						
eF	22	55	±								
183	Aug. 23	eZ	23	57	54						A distant earthquake. South off Fiji IIs.? Still recording.
		eE	23	58	29						
		eN	23	58	32						
		iZ	23	58	32				-3		
		eF	0	03	±						
184	Aug. 26	eP _E	9	21	07					1270?	East off Miyako, Iwate Prefecture. P phase is not distinct.
		eP _Z	9	21	08						
		eP _N	9	21	14						
		iZ	9	21	19						
		i _E	9	21	28						
		eS _E	9	23	22						
		eS _N	9	23	24						
		eS _Z	9	23	28						
		M _E	9	24	08	2.7	+4				
		M _N	9	24	08	3.6		+2			

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		MZ	9	24	16	2.1			± 1		
		eF	9	40	\pm						
185	Aug. 26	eS?EN	11	53	51		-1.4	-2.3			In the Kumano nada. SE
		S?Z	11	53	49				-1.3		off Kii Peninsula.
		eE	11	54	25						
		eZ	11	54	20						
		iE	11	55	02	2.1	± 2				
		iN	11	55	08	2.0		-2			
		eF	12	02	\pm						
186	Aug. 31	ePE	5	14	07					7940	In the Baffin Bay, West
		FN	5	14	08						off Green land.
		iPz	5	14	06				+1.9		
		iN	5	15	11						
		iz	5	15	13	2.8			± 2		
		eS?N	5	23	25						
		eLE	5	45	29						
		eLN	5	45	28						
		M ¹ E	5	46	43	14.5	-2				
		eLz	5	48	23						
		M ² E	5	49	43	14.1	± 1				
		M ¹ N	5	48	58	16.2		± 1			
		MZ	5	48	53	15.6			± 1		
		M ² N	5	52	51	13.4		± 1			
		eF	6	09	\pm						
187	Aug. 31	Pz	15	06	40						Near Pamir, Turkestan.
		ePE	15	06	48						By Kobe, Triest, Manila,
		eN	15	08	07						and Chiuffeng.
		SE	15	14	02						
		SN	15	14	04						
		eLE	15	25	47						
		eLN	15	25	38						
		eLz	15	26	29						
		ME	15	26	50	18.5	+2				
		M ¹ N	15	26	59	16.1		± 2			



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
188	Aug. 31	M ² _N	15	31	57	11.6		± 2		355	In the Suô nada, Inland Sea.
		M _Z	15	30	58	13.7			± 2		
		eF	15	49	\pm						
		eP _N	23	06	28						
		eS _N	23	07	16						
		eZ	23	07	14						
		M _E	23	07	26	1.4	-5				
		M _N	23	07	27	1.0		+5			
189	Sept. 1	M _Z	23	07	22	1.0			+4		Near Motuta Cape, Osima, Hokkaido.
		eF	23	09	\pm						
		i _E	6	59	22						
		M _E	6	59	24	4.7	+10				
		M _N	6	59	28	3.5		+7			
190	Sept. 1	M _Z	6	59	25	2.4			± 1		Southern foot of Mt Tūkuba, Ibaraki Prefecture. Felt in Kwanto district.
		eF	7	14	\pm						
		eP _E	11	18	48						
		P _N	11	18	50						
		P _Z	11	18	49						
		eS _E	11	19	32						
		S _N	11	19	32						
		eS _Z	11	19	33						
		M _E	11	19	58	2.4	+9				
		M _N	11	20	02	2.4		+8			
191	Sept. 8	M _Z	11	19	50	1.5			+7	82	Middle basin of the Hidaka R., Wakayama Prefecture.
		i _E	11	21	27	2.8	-7				
		eF	11	30	\pm						
		P _{EN}	0	16	58						
		iP _Z	0	16	58				-6.2		
		M _E	0	17	10		-18				
		M _N	0	17	10	0.8		+49			
M _Z	0	17	10	0.5			-14				
i _N	0	18	17	2.4		+10					



International
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No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
		iz	0	18	16	1.5			± 2		
		eF	0	25	\pm						
192	Sept. 11	ePZ	8	20	46						Felt in northern part of Celebes Isl.
		ez	8	20	57						
		eN	8	22	11	4.1					
		eM _N	8	23	02	3.9		± 2			
		eM _E	8	23	53	4.2	± 2				
		eF	8	31	\pm						
193	Sept. 11	eN	23	34	29						South off Hatidyo Isl, Record is abnormal.
		iS _{EN}	23	35	00	2.3					
		iz	23	35	00						
		SM _E	23	35	01		+6				
		i _{EN}	23	35	13						
		iz	23	35	13	2.3			± 2		
		M _E	23	35	16	2.3	+3				
		M _N	23	35	16	1.9		+4			
		M _Z	23	35	49	3.6			± 1		
		i _E	23	36	12	1.9					
		eF	23	40	\pm						
194	Sept. 12	eN	14	23	37						Near Iô Zima, northern part of Ryûkyû IIs.
		ez	14	24	45						
		The end part overlapped by the following earthquake.									
195	Sept. 12	eP _{EN}	14	25	51					578?	Ditto.
		ePZ	14	25	44						
		eS _E	14	27	09						
		eS _N	14	26	56						
		eS _Z	14	27	08						
		M _E	14	28	11	8.5	± 4				
		M _N	14	27	54			± 5			
		M _Z	14	28	17	4.1			± 1		
		The end part overlapped by the following earthquake.									
196	Sept. 12	e _E	14	28	55					?	Ditto.



International
Seismological
Centre

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
		eNZ	14	28	56						
		eSEN	14	29	48						
		LE	14	30	35						
		LN	14	30	29						
		ME	14	31	15	12.2	-23				
		MN	14	30	45	10.0		-30			
		M ¹ Z	14	30	36	9.3			-6		
		M ² Z	14	31	08	7.5			-7		
		iN	14	32	43	5.6		-29			
		iz	14	32	44				-6		
		eF	15	04	±						
197	Sept. 12	ePEN	15	37	50					571	Ditto.
		ez	15	37	51						
		eE	15	38	40						
		eN	15	38	39						
		SEN	15	38	57						
		eSZ	15	38	54						
		ME	15	40	03	8.4	-3				
		MN	15	39	47	9.6		+3			
		MZ	15	40	01	6.1			±1		
		eF	15	58	±						
198	Sept. 12	PEN	17	44	13		-1.0	-0.9		616	Ditto.
		PZ	17	44	12				-1		
		iz	17	44	45						
		SEN	17	45	36						
		iz	17	45	43						
		S [?] E	17	45	54						
		eSZ	17	45	49						
		M ¹ Z	17	46	00	4.4			+3		
		M ¹ E	17	46	26	4.3	-15				
		M ¹ N	17	46	50	10.0		+4			
		M ² Z	17	46	59	8.-			+4		
		M ² E	17	48	12	5.8	-12				
		M ² N	17	47	38	4.8		+15			
		eF	18	15	±						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
199	Sept. 12	eSE	22	41	06						Near Iô Zima, northern part of Ryûkyû IIs.
		eSN	22	41	00						
		ME	22	42	16	8.5	± 1				
		MN	22	41	59	8.5		± 1			
		eF	22	55	\pm						
200	Sept. 13	eP?EN	3	06	22					497?	Near Naze Isl, Ryûkyû IIs.
		eP?Z	3	06	53						
		eSN	3	07	23						
		eSE	3	07	55						
		eSN	3	08	00						
		ME	3	09	03	9.-	+5				
		MN	3	08	46	9.-		+4			
		MZ	3	09	00	7.0			± 1		
		eE	3	10	13	4.0	± 5				
		eF	3	26	\pm						
201	Sept. 13	eEN	10	19	36						Near Iô Zima, northern part of Ryûkyu IIs.
		MN	10	20	17	8.3		± 1			
		eF	10	27	\pm						
202	Sept. 13	eP?E	14	20	00						Near Iô Zima, northern part of Ryûkyû IIs.
		eP?N	14	20	15						
		eSN	14	21	15						
		ME	14	22	19	9.-	-10				
		MN	14	22	02	10.-		+6			
		MZ	14	22	18	7.0			-2		
		eF	14	36	\pm						
203	Sept. 13	PEN	14	22	16					164	Near Kabuti, Gihu Prefecture.
		FZ	14	22	17						
		iS	14	22	38						
		iSN	14	22	39						
		ME	14	22	39	0.8	-14				
		MN	14	22	39	0.6		+15			
		MZ	14	22	40	2.3			-10		
		F	14	23	27						



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
204	Sept. 14	eM _E	9	29	05	8.1	± 2				Near Iô Zima, northern part of Ryûkyû IIs.
		eM _N	9	28	44	8.-		± 2			
		eF	9	38	\pm						
205	Sept. 14	M _E	15	15	27	9.5	± 2				Ditto.
		M _N	15	15	04	9.3		± 1			
		M _Z	15	15	31	9.0					
		eF	15	21	\pm						
206	Sept. 15	eS _E	13	11	21						Ditto.
		eS _N	13	11	39						
		ez	13	11	33						
		eE	13	12	40	8.6					
		M _E	13	13	05	4.2	-2				
		M _N	13	13	23	5.8		± 1			
		eM _Z	13	14	06	4.0			± 1		
207	Sept. 16	eP _{EN}	13	16	45	3.6				683?	Near Iô IIs, northern part of Ryûkyû IIs.
		eP _Z	13	16	49						
		ie	13	17	16						
		i _N	13	17	13						
		eE _Z	13	17	57						
		iS _E ?	13	18	11						
		iS _E ?	13	18	24						
		e _N	13	18	24						
		S _Z	13	18	21						
		M _E	13	19	38	12.4	-13				
		M _N	13	19	19	11.5		± 10			
		M _Z	13	19	32	7.9			-5		
208	Sept. 16	eF	13	43	\pm						
		eS _N	19	14	32						Ditto.
		ez	19	14	33						
		M _E	19	15	36	8.6	± 1				
		M _N	19	15	55	4.7		± 1			
eM _Z	19	15	34				± 1				



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
209	Sept. 17	eF	19	26	\pm						
		P	0	31	42					341?	Near Teganuma, Tiba Prefecture.
		eSN	0	32	28						
		eSZ	0	32	29						
		M _E	0	32	41	5.0	± 3				
		M _{NZ}	0	32	39	1.9		± 5	-5		
eF	0	43	\pm								
210	Sept. 17	P	1	28	28					102	Near Mineyama, northern part of Kyoto Prefecture.
		S _{EN}	1	28	41						
		SZ	1	28	40						
		M _E	1	28	44	1.0	+5				
		M _N	1	28	43	1.1		+5			
		M _Z	1	28	42	1.3			+4		
		F	1	29	43						
211	Sept. 23	eP? _{EN}	21	42	48						ENE off Miyako, Iwate Prefecture.
		eF _Z	21	42	55						
		e _E	21	44	23						
		e _Z	21	44	31						
		e _N	21	44	54						
		eS _E	21	45	15						
		eS _N	21	45	10						
		eS _Z	21	45	09						
		M _E	21	46	32	2.9	± 3				
		M _N	21	46	47	2.9		± 2			
		M _Z	21	46	35	2.8			± 1		
		eF	21	54	\pm						
		212	Sept. 24	P _{EN}	4	54	34				
iF _Z	4			54	34				-2		
S _E	4			55	10		-4				
S _{NZ}	4			55	11			+4			
M _E	4			55	24	2.3	+12				
M _N	4			55	25	1.8		+22			
M _Z	4			55	28	2.4			-8		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
213	Sept. 24	eF	5	05	±						
		P _{EN}	17	15	47		-0.8	+1.5		76	Near Hinomisaki, Wakayama Prefecture.
		iP _Z	17	15	45				+2.0		
		S _{EN}	17	15	57						
		S _Z	17	15	55						
		M _E	17	16	00	0.8?	-14				
		M _N	17	15	58	0.5		-9			
		M _Z	17	16	06	0.7			+3		
eF	17	20	±								
214	Sept. 25	e _E	1	54	36						In the Kii Channel.
		i _N	1	54	36						
		S [?] _{EN}	1	54	43						
		M _{EN}	1	54	44	0.5	±3	+4			
		F	1	55	17						
215	Sept. 25	e _N	19	22	12						A distant earthquake.
		e _E	19	23	57						
		e _N	19	24	01						
		e _E	19	25	24	4.1	±2				
		e _N	19	25	47	4.1		±3			
		e _Z	19	24	41	4.1			±1		
		e _N	19	35	±	21.-					
		eF	19	41	±						



SUMOTO JAPAN.

SEISMOLOGICAL BULLETIN

A Branch Station of the Kobe Meteorological Observatory of Japan.
 $\varphi = 34^{\circ} 21'$ $\lambda = 134^{\circ} 53'$ $h = 109.0$ m. Underground: Cretaceous.

Instrument: Omori's Seismograph.
 (Horizontal Pendulum.)

Wiechert Seismograph.
 (Horizontal & Vertical)

July

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	18.6	2	0.0002	20
AN:	17.2	2	0.0003	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	4.9	Aperiodic	0.003	108
AN:	4.6	"	0.003	108
Az:	4.3	"	0.002	61

Aug.

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	18.6	3	0.0003	20
AN:	17.0	3	0.0002	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	5.0	Aperiodic	0.003	105
AN:	4.5	"	0.003	109
Az:	4.3	"	0.002	61

Sept.

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	17.4	2	0.0004	20
AN:	17.2	2	0.0002	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	4.6	Aperiodic	0.004	121
AN:	4.4	"	0.002	114
Az:	4.4	"	0.001	58

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		AE	AN	Az			
210	July 2	ePN	h	m	s	s	μ	μ	μ	km.	Local shock.	
		SEN	16	30	22							
		MN	16	30	23							0.2
		F	16	30	24							
*211	July 3	iP	2	19	29		+1.4	-1.4	-1.6	27	Perceptible. Near Wakayama City.	
		iS	2	19	33							



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M _E	2	19	33	0.4	± 7				
		M _{NZ}	2	19	33	0.3		-14	-5		
		F	2	20	57						
212	July 6	e _E	23	09	49						Off the coast of southern Oregon, U. S. A.
		e _N	23	09	55						41°.5N 124°.9W. (J.S.A.)
		e _{SE}	23	18	48						
		e _{SN}	23	19	13						
		e _{LN}	23	20	54						
		e _Z	23	26	53						
		e _F	23	53	\pm						
*213	July 8	i _P	6	43	20		+5.1	-6.5	-6.6	35	Perceptible.
		i _{SE}	6	43	24						In the Wakaura Bay, Kii Channel.
		i _S	6	43	25						
		M _E	6	43	25	0.5	-57				
		M _N	6	43	25	0.4		-117			
		M _Z	6	43	26	0.6			-26		
		F	6	48	02						
214	July 12	e _{PEZ}	9	53	48					1060	East far off Kinkwazan, Miyagi Prefecture. Felt in Pacific coast of NE Japan.
		e _{PN}	9	53	45						
		e _{SE}	9	55	41						
		e _{SN}	9	55	40						
		e _{LEN}	9	57	05						
		M _N	9	57	26	3.2		-4			
		M _E	9	58	36	8.1	-4				
		M _Z	9	58	44	9.4			-5		
		e _F	10	09	\pm						
215	July 14	e _N	10	36	38						In the Wakaura Bay, Kii Channel.
		S	10	36	40						
		M _E	10	36	40	0.7	+1				
		M _N	10	36	41	0.7		± 1			
		M _Z	10	36	42	0.7			± 1		
		F	10	37	30						



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
216	July 14	P _{EN}	14	32	48					26	Near Wakayama City.
		S	14	32	52						
		M	14	32	52	0.2	-3	+5			
		M _Z	14	32	52				±1		
		F	14	33	36						
217	July 15	eP _N	1	54	28					22	Near Tadono, middle basin of the Arita R., Wakayama Prefecture
		S _{EN}	1	54	31						
		M _E	1	54	32		+1				
		M _N	1	54	32	0.4		±3			
		M _Z	1	54	33	0.8			-1		
		F	1	55	20						
218	July 18	eP _N	1	55	20						Destructive at David City, western part of Panama.
		P _E	1	55	29						
		eP _Z	1	55	33						
		e _E	2	02	23						
		e _N	2	02	38						
		e _N	2	05	34						
		e _E	2	07	27						
		M _N	2	56	39	21.8		±50			
		M _Z	2	57	19	21.3			±33		
		M _E	3	06	47	15.9	-15				
eF	4	24	±								
219	July 18	P _{EN}	19	49	49		(-)	(+)		6140	Near New Hebrides IIs.
		P _Z	19	49	48						
		S _{EN}	19	57	30						
		eS _Z	19	57	38						
		L _E	20	03	39						
		L _N	20	04	29						
		M ¹ _E	20	05	29	21.3	+617				
		M ¹ _N	20	05	18	22.5		-925			
		M ² _E	20	08	06	19.4	+686				
		M ² _N	20	07	16	23.2		-1150			
M ³ _E	20	10	42	21.3	+917						



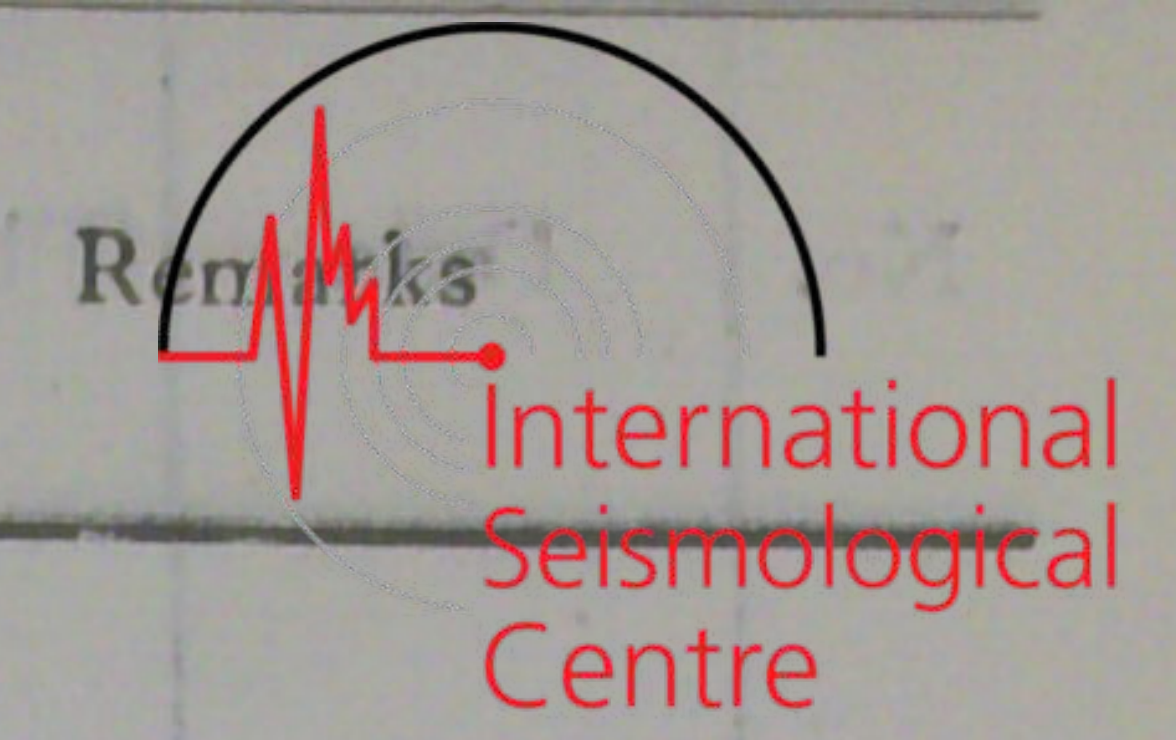
No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km	
		M ³ _N	20	10	44	19.4		-1050			
		M _Z	20	10	26	20.9			-900		
		eF	23	03	±						
220	July 16	F _E	0	16	20		+0.9	+0.9?		6290	An after shock of previous earthquake.
		P _N	0	16	23						
		P _Z	0	16	21				-1.6		
		S _E	0	24	11						
		S _N	0	24	15						
		eF	0	51	±						
221	July 19	P _N	1	34	23		+0.9	-0.5	(-)	3640	Felt in Ceram and NW New-Guinea, according to Batavia's report.
		P _Z	1	34	22						
		eP _E	1	34	30						
		S _E	1	39	50						
		S _N	1	39	54						
		L _N	1	43	32						
		L _Z	1	44	09						
		M _E	1	47	07	11.6	±26				
		M _Z	1	45	06	18.9			±125		
		M _N	1	50	01	16.5		-106			
		eF	2	41	±						
222	July 19	eP _E	7	46	34					6245	Rerated to No. 219.
		eP _N	7	46	36						
		eP _Z	7	46	33						
		S _E	7	54	25						
		S _N	7	54	24						
		M _E	8	05	31	13.6	+14				
		M _N	8	05	04	13.6		+13			
		M _Z	8	14	02	16.9			-25		
		eF _{EN}	8	12	±						
		eF _Z	8	55	±						
223	July 20	eP _{EN}	13	40	40					493	Near Sawara, Tiba Prefecture. Felt in Kwanto district.
		eP _Z	13	40	42						
		S _E	13	41	50						



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
		SN	13	41	45						
		eSz	13	41	47						
		MN	13	41	53	3.1		± 2			
		MZ	13	41	57	2.8			± 1		
		ME	13	42	15	2.9	± 1				
		eF	13	48	\pm						
224	July 20	eE	18	27	08						A Distant earthquake.
		eN	18	27	29						
		L?	18	36	41						
		eF	18	52	\pm						
225	July 20	eE	18	58	07						Ditto.
		eN	18	58	09						
		eZ	18	58	52						
		SE	19	05	49						
		SN	19	05	46						
		eL	19	12	40						
		eF	19	38	\pm						
226	July 21	ePE	4	42	27						Luzon, Philippine.
		ePN	4	42	25						
		ePZ	4	42	29						
		eF	5	08	\pm						
227	July 21	iPz	6	27	41				-2.0	6340	Near New Hebrides IIs.
		iPEN	6	27	44		-1.9	+1.9			
		eE	6	33	04						
		eN	6	33	08						
		SE	6	35	41						
		SN	6	35	46						
		SZ	6	35	39						
		M ¹ E	6	43	13	23.2	-280				
		M ¹ N	6	43	00	23.2		-300			
		M ² E	6	45	42	15.9	+240				
		M ² N	6	45	36	15.9		-211			
		MZ	6	46	32	15.9			± 175		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
		M ² _E	6	49	01	14.5	± 154				
		M ² _N	6	48	54	16.5		-213			
		eF	8	35	\pm						
228	July 21	e _{EN}	10	57	44						An after Shock of Panama earthquake.?
		i _{EN}	11	16	22		+1.9	-1.9			
		eF	12	19	\pm						
229	July 22	P _E	20	06	36					6050	Eastern part of Turkestan.
		P _{NZ}	20	06	35						
		S _E	20	14	15						
		S _N	20	14	14						
		eS _Z	20	14	33						
		F	20	40	\pm						
230	July 23	eP _E	3	06	55						A distant earthquake.?
		eP _N	3	06	59						
		eP _Z	3	07	17						
		F	3	58	\pm						
231	July 24	eP _{EN}	2	41	54					28	Lower basin of the Arita R. Wakayama Prefecture.
		S _{EN}	2	41	58						
		M _E	2	41	59		+1				
		M _N	2	41	58	0.2		-2			
		F	2	42	27						
232	July 26	eP _{EN}	9	21	39						Near Wakayama City.
		S _{EN}	9	21	41						
		M _E	9	21	42	0.7	± 1				
		M _N	9	21	42	0.4		± 1			
		F	9	22	25						
233	July 26	e _{EN}	11	08	58						Off the Sioya Cape. Felt in Pacific coast of eastern part of Kwanto district.
		S _E	11	09	25						
		S _N	11	09	19						
		M _E	11	09	44	3.2	± 1				
		M _N	11	09	36	2.1		± 1			

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
234	July 27	F	11	14	±						
		eP _E	2	59	20					479	In the Hiuga nada, east of Miyazaki Prefecture.
		eP _N	2	59	22						
		eS _E	3	00	29						
		eS _N	3	00	23						
		M _E	3	00	30	2.1	±1				
		M _N	3	00	37	1.9		- 1			
eF	3	04	±								
235	July 27	eP _{EN}	18	07	06					28	Near Yuasa, Wakayama Prefecture.
		S _{EN}	18	07	09		+ 0.9	- 1.9			
		M _E	18	07	09	0.3	+ 1				
		M _N	18	07	10	0.3		- 2			
		F	18	07	36						
236	July 28	e _E	12	15	22						Off the mouth of Abukuma R., Miyagi Prefecture.
		e _N	12	15	24						
		e _Z	12	16	09						
		S _E	12	16	15						
		S _N	12	16	17						
		M _E	12	16	18	2.1	- 1				
		M _N	12	16	22	2.1		+ 1			
		M _Z	12	16	49	2.3			- 1		
eF	12	21	±								
237	July 28	P _E	21	46	02					5560	Near the Alaska Peninsula
		P _N	21	46	00						
		P _Z	21	46	01						
		S _{EN}	21	53	14						
		L _{EN}	21	57	23						
		M _E	20	03	12	23.4	- 38				
		M _N	22	00	57	26.3		+ 38			
		eF	22	46	±						
238	July 29	P _{EN}	13	44	59					33	Near Yuasa, Wakayama Prefecture.
		S	13	45	03						



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M _{EN}	13	45	04	0.4	-2	+5			
		M _Z	13	45	05				±1		
		F	13	45	53						
239	July 30	P _{EN}	6	16	01					45	Near Kiyokawa, Wakayama Prefecture.
		S	6	16	07		+2.8	-4.6	+1.6		
		M _E	6	16	08	0.5	-5				
		M _N	6	16	08	0.4		-10			
		M _Z	6	16	08				+2		
		F	6	17	16						
240	July 30	S _{EN}	6	27	10						Near Isigaki, middle basin of the Arita R., Wakayama Prefecture.
		M _E	6	27	11		±1				
		M _N	6	27	11	0.3		-2			
		F	6	27	52						
241	July 30	e _N	21	18	50						Northern part of Nara Prefecture.
		S _{EN}	21	19	14						
		M _E	21	19	17	0.8	-1				
		M _N	21	19	15	0.9		±1			
		F	21	20	24						
242	July 31	eP _{EN}	6	03	47					2560	West off Luzon, Philippine.
		eP _Z	6	03	48						
		eS _E	6	07	56						
		eS _N	6	07	59						
		eF	6	22	±						
243	July 31	e _E	11	57	47						A distant earthquake.
		e _N	11	57	42						Felt in North Sumatora, according to Batavia's report.
		e _Z	11	57	51						
		eF	12	09	±						
244	Aug. 1	eP _{EN}	3	35	29					38	Near Wakayama City.
		S _{EN}	3	35	34						
		M _E	3	35	34	0.4	-2				
		M _N	3	35	34	0.3		±2			



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
245	Aug. 3	F	3	36	02						
		eP _{EZ}	9	38	20					666	East off Kuji, Iwate Pref. Felt in Oou and Hokkaido.
		eP _N	9	38	23						
		S _E	9	39	52						
		S _N	9	29	51						
		M _N	9	40	39	3.2		-1			
		M _Z	9	40	38	2.8			-1		
		M _E	9	41	26	3.2	+1				
eF	9	46	±								
246	Aug. 3	P	12	25	26					525	Southern foot of Mt Tukuba, Ibaraki Prefecture.
		S _E	12	29	36						
		S _N	12	26	33						
		S _Z	12	26	42						
		M _E	12	27	01	2.6	-8				
		M _N	12	26	54	1.5		+4			
		M _Z	12	26	53	2.4			+3		
		F	12	35	±						
247	Aug. 3	e _N	16	39	59					Near Kunisaki Peninsula, Oita Prefecture.	
		S _{EN}	16	40	01						
		M _E	16	40	02		±1				
		M _N	16	40	02	0.4		±1			
		F	16	40	36						
248	Aug. 3	S _{EN}	23	54	56					Local Shock.	
		M _N	23	54	57	0.3		±1			
		F	23	55	17						
249	Aug. 4	eP _{EN}	13	15	35					4265	Near New Cuinea.
		eP _Z	13	15	33						
		eS _E	13	21	42						
		eS _N	13	21	32						
		eF	13	39	±						
250	Aug. 5	eP _N	12	41	11				22	Naar Wakayama City.	

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		S	12	41	14						
		M _E	12	41	14		+2				
		M _N	12	41	15			-4			
		F	12	41	50						
251	Aug. 6	eP _N	7	34	30					46	In the Wakaura Bay, Kii Channel.
		S	7	34	36						
		M _{EN}	7	34	36	0.4	+3	-5			
		M _Z	7	34	36				+1		
		F	7	35	14						
252	Aug. 7	P _{EN}	3	49	44					6160	Near New Hebrides IIs.
		P _Z	3	49	45						
		S _{EN}	3	57	29						
		S _Z	3	57	30						
		eL _E	4	06	00						
		eL _N	4	05	26						
		M _E	4	10	55	20.0	-33				
		M _N	4	12	25	18.2		± 25			
		M _Z	4	11	00	18.4			± 25		
		eF	4	29	\pm						
253	Aug. 8	eF _{EN}	13	41	17					24	Near Wakayama City.
		S _{EN}	13	41	20						
		M _E	12	41	21		+1				
		M _N	13	41	21	0.4		± 1			
		F	13	41	36						
254	Aug. 8	iP	21	51	21		+1.4	-1.8	-3.3	32	Near Wakayama City.
		iS _{EN}	21	51	25						
		eS _Z	21	51	26						
		M	21	51	26	0.4	+19	± 33	-9		
		F	21	53	46						
255	Aug. 10	S _{EN}	23	17	46						Near Tadono. Middle basin of the Arita River, Wakayama Prefecture.
		M _E	23	17	47		± 1				
		M _N	23	17	47	0.3		± 1			



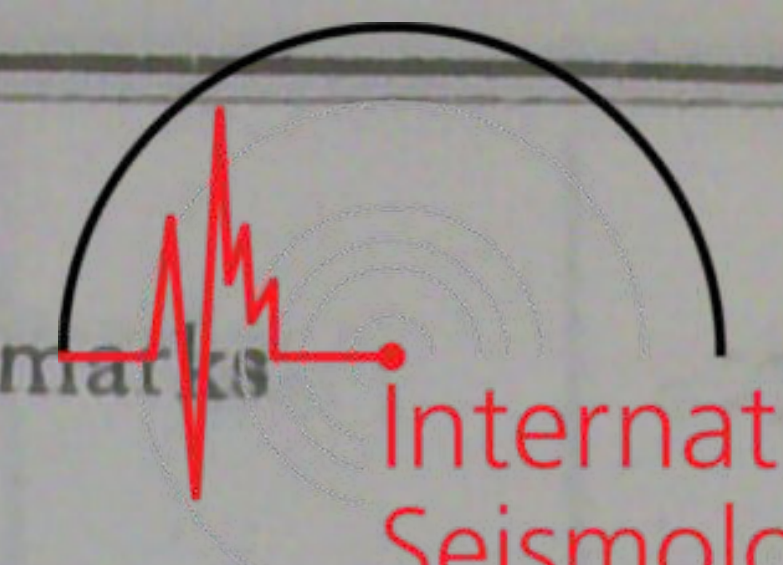
No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
256	Aug. 11	F	23	18	06							
		P _{EN}	8	21	53					2540?	Near Giran, SE off Taihoku, Formosa.	
		P _Z	8	21	52						Small damage in northern part of Formosa.	
		S _{?E}	8	26	05							
		S _{?N}	8	25	57							
		L _E	8	28	21							
		L _N	8	28	56							
		L _Z	8	28	42							
		M _E	8	30	16	10.4	-65					
		M _N	8	29	44	12.7		-62				
M _Z	8	31	20	9.0			±21					
eF	9	10	±									
257	Aug. 11	eP _{EN}	12	05	46					5070	A distant earthquake, East off New Guinea.	
		eP _Z	12	05	45							
		S _E	12	12	30							
		S _N	12	12	33							
		L _N	12	15	17							
		M _N	12	15	42	9.4		±3				
		L _E	12	16	06							
		M _E	12	16	33	8.4	±1					
eF	12	41	±									
258	Aug. 11	P _{EN}	17	55	25					25	Near Wakayama City.	
		S _{EN}	17	55	28							
		M	17	55	29	0.4	-2	+2				
		F	17	55	59							
259	Aug. 11	P	21	17	20					48	Basin of the Arita R., Wakayama Prefecture.	
		S	21	17	26							
		M _E	21	17	27	0.7	-8					
		M _N	21	17	28	0.4		-7				
		M _Z	21	17	30	0.8			+3			
F	21	19	40									
260	Aug. 12	P	1	04	11					33	Near Wakayama City.	



No.	Date	Phase	Time			Periop	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
261	Aug. 12	S	1	04	16							
		M _E	1	04	17	0.4	-5					
		M _N	1	04	16	0.4		-7				
		M _Z	1	04	17				+2			
		F	1	05	11							
		P	23	55	01						3205	Felt in Mindanao, Epicenter 8°20'N. 126°50'E, According to Manila's report.
		S _E	23	55	58							
		S _N	23	55	57							
		S _Z	23	55	59							
		eL _E	0	03	05							
L _N	0	02	08									
L _Z	0	02	09									
M _E	0	07	05	12.8	-22							
M _N	0	08	01	15.9		±56						
M _Z	0	07	04	15.9			±70					
eF	1	05	±									
262	Aug. 13	P _{EN}	0	19	59						Near Marianne IIs.	
		P _Z	0	19	57							
		i _N	0	20	08							
		e _E	0	23	41							
		e _N	0	23	47							
The end part overlapped by the following earthquake.												
263	Aug. 14	eP _E	17	48	34					177	Near Matuyama City, Sikoku district.	
		eP _N	17	48	33							
		eP _Z	17	48	37							
		S _{EN}	17	48	57							
		e _{EN}	17	49	03							
		M _E	17	49	03	0.5	+1					
		M _N	17	49	05	0.7		-3				
		M _Z	17	49	13	1.3			±1			
F	17	50	16									
264	Aug. 18	P	2	39	14		-3.8	-1.3	-1.6?	206	Near Hamtian, Gifu Pref.	



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		SEN	2	39	41						
		SZ	2	39	42						
		M ¹ E	2	39	49	2.5	-259				
		M ¹ N	2	39	48	3.3		+242			
		MZ	2	39	52	2.9			-115		
		M ² E	2	40	05	4.4	-253				
		M ² N	2	40	04	4.4		-202			
		F	3	12	±						
265	Aug. 18	eP _{EZ}	3	47	38					200	An after shock of No. 264.
		eP _N	3	47	37						
		SEN	3	48	04						
		M _E	3	48	10	1.3	+2				
		M _N	3	48	20	1.1		-1			
		F	3	50	±						
266	Aug. 18	P _{EN}	5	07	11					196	Ditto.
		P _Z	5	07	12						
		S _{EZ}	5	07	37						
		S _N	5	07	38						
		M _E	5	07	43	0.9	±4				
		M _N	5	07	42	0.5		±4			
		M _Z	5	07	46	1.7			±1		
		eF	5	11	±						
267	Aug. 18	iP	10	21	50		-67	-0.5	+8.2	302	South off the Izu Peninsula.
		S _E	10	22	30						
		S _Z	10	22	31						
		M _E	10	22	33	3.2	-6				
		M _N	10	22	46	2.5		±2			
		M _Z	10	22	32	2.0			±3		
		eF	10	28	±						
268	Aug. 19	eP _N	11	27	51					26	Near Kobe City.
		S	11	27	54						
		M _E	11	27	55		±1				
		M _N	11	27	55	0.3		-2			



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
269	Aug. 20	F	11	28	34						
		eP _E	8	25	02					198	Near Kure City, Hiroshima Prefecture.
		eP _N	8	25	03						
		S _E	8	25	29						
		S _N	8	25	30						
		M _E	8	25	31		± 1				
		M _N	8	25	31	0.8		+1			
F	8	26	30								
270	Aug. 20	eP _E	9	35	16					147	Near Mineyama, northern part of Kyoto Prefecture.
		eP _N	9	35	13						
		eP _Z	9	35	18						
		S	9	35	35						
		M _E	9	35	37	0.9	± 2				
		M _N	9	35	36	0.3		± 5			
		M _Z	9	35	39	1.1			-1		
eF	9	36	59								
271	Aug. 21	eP _E	2	55	18					338	South off the Izu Peninsula Time is uncertain?
		eP _N	2	55	15						
		eP _Z	2	55	21						
		S	2	56	03						
		M _E	2	56	05	2.8	-1				
		M _N	2	56	05	1.8		+2			
		M _Z	2	56	07	2.3			-1		
		eF	2	59	\pm						
272	Aug. 21	P _{EN}	19	34	59					5320	West coast of Sumatora. according to Batavia's report.
		P _Z	19	34	56						
		S _E	19	41	59						
		S _N	19	42	00						
		eL	19	52	\pm						
		M _E	19	58	49	15.9	± 15				
		M _N	19	57	54	16.1		± 11			
eF	20	12	\pm								



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
273	Aug. 22	i _E	13	00	05						Near Yaku Isl, Ryukyu IIs.
		i _N	13	00	04						
		e _Z	13	00	05						
		M _E	13	00	06	1.5	+1				
		M _N	13	00	20	1.7		±1			
		F	13	01	33						
274	Aug. 23	eP _N	3	17	04						Near Tadono, Middle basin of the Arita R., Wakayama Prefecture.
		S _{EN}	3	17	06						
		M _E	3	17	07		±1				
		M _N	3	17	07	0.3		±1			
		F	3	17	32						
275	Aug. 23	P _{EN}	7	24	15					165	Near Koti City, Sikoku district.
		eP _Z	7	24	18						
		S _{EN}	7	24	37						
		M _{EN}	7	24	41	0.6	±1	±2			
		e _Z	7	24	45						
		M _Z	7	24	45	0.9			+2		
		F	7	27	±						
276	Aug. 23	eP _{EZ}	22	35	52						East off Sioya Cape, Hukusima Prefecture.
		eP _N	22	35	54						
		e _E	22	37	48						
		e _N	22	37	43						
		e _Z	22	38	00						
		e _{EN}	22	39	47						
		e _F	22	50	±						
277	Aug. 23	eP _E	23	58	12						South off Fiji IIs.?
		eP _N	23	58	24						
		P _Z	23	58	31						
		iP _{EN}	23	58	32						
		e _E	0	06	21						
		e _N	0	06	23						
		e _F	0	36	±						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
278	Aug. 24	eP _{EN}	2	52	21					22	Near Wakayama City.
		S _{EN}	2	52	23						
		M _E	2	52	24	0.3	± 1				
		M _N	2	52	24	0.4		-2			
		F	2	52	48						
279	Aug. 25	S _{EN}	11	25	24						Near Tadono, middle basin of the Arita R., Wakayama Prefecture.
		M _E	11	25	24		± 1				
		M _N	11	25	24	0.4		± 1			
		F	11	25	39						
280	Aug. 25	eP _N	22	28	51					26	Near Yahata, Upper Valley of the Arita River, Wakayama Prefecture.
		S _{EN}	22	28	54						
		M _E	22	28	54	0.4	-1				
		M _N	22	28	54	0.5		-2			
		F	22	29	34						
281	Aug. 26	eP _Z	9	21	34					837	East off Miyako, Iwate Prefecture.
		eP _E	9	21	44						
		eP _N	9	21	43						
		S _E	9	23	33						
		S _N	9	23	40						
		M _E	9	24	10	3.0	-1				
		M _N	9	24	10	2.4		-1			
		M _Z	9	24	09	4.3			± 1		
		eF	9	31	\pm						
282	Aug. 26	eP _{EZ}	11	53	17					213	In the Kumano-nada, SE off Kii Peninsula.
		eP _N	11	53	18						
		S _{EN}	11	53	46						
		S _Z	11	53	47						
		M _E	11	53	47	0.4	+5				
		M _N	11	53	47	0.5		+9			
		M _Z	11	53	50	0.4			± 2		
eF	11	55	18								
283	Aug. 27	S _{EN}	3	03	32						Near Wakayama City.





No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M _{EN}	3	03	33		± 1	± 1			
		F	3	03	52						
284	Aug. 27	e _{EN}	16	18	24						In the Aki nada, Inland Sea.
		S _{EN}	16	18	26						
		M _E	16	18	28		+1				
		M _N	16	18	28	0.4		± 1			
		F	16	18	47						
285	Aug. 28	S _{EN}	10	29	59						Local Shock.
		M _E	10	29	59		+1				
		M _N	10	29	59	0.4		-2			
		F	10	30	20						
286	Aug. 31	P _E	5	14	07		+0.4			8020	In the Baffin Bay, West of Green land.
		P _N	5	14	08			-0.9			
		P _Z	5	14	09				+0.8		
		e _{SE}	5	23	29						
		e _{SN}	5	23	27						
		e _{LE}	5	45	04						
		e _{LN}	5	44	05						
		M _E	5	49	57	13.8	± 6				
		M _N	5	51	59	13.6		± 6			
		F	6	16	\pm						
287	Aug. 31	i _P	11	50	09					25	Near Wakayama City.
		i _S	11	50	12						
		M	11	50	13	0.4	-5	-6	-1		
		F	11	51	09						
288	Aug. 31	P	15	06	44		(-)	(+)	(-)	5640	Near Pamir, Turkestan.
		S _E	15	14	02						
		S _N	15	14	00						
		e _{LE}	15	24	55						
		e _{LN}	15	24	39						
		e _{LZ}	15	25	01						
		M _E	15	27	05	14.1	-8				

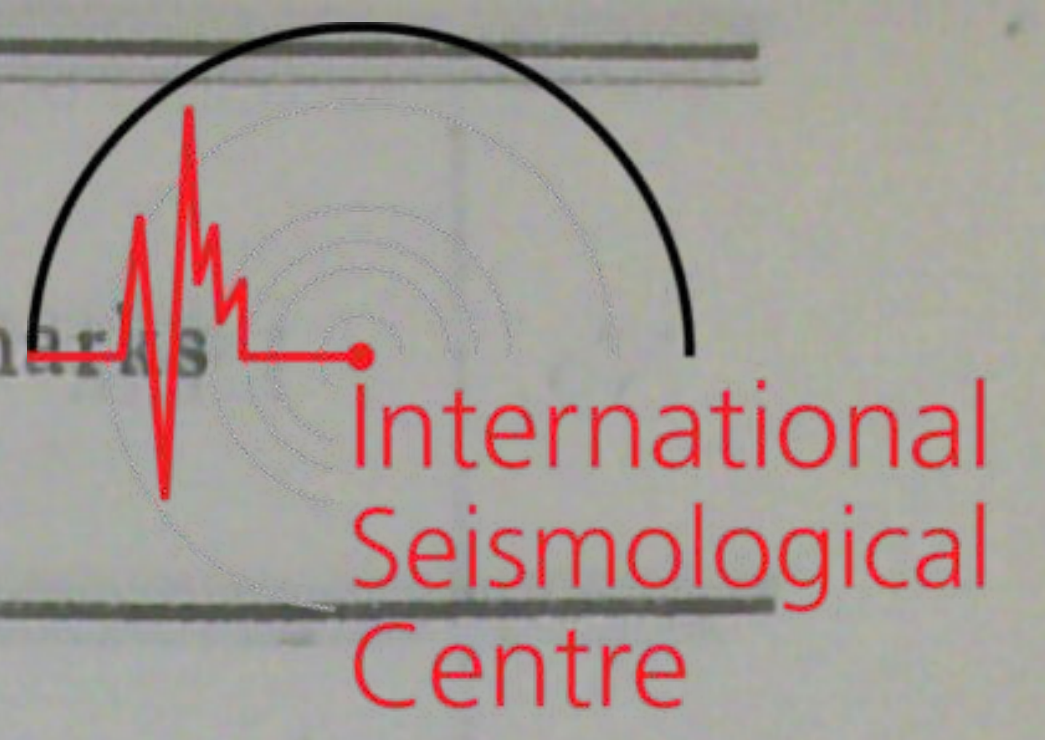


No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
289	Aug. 31	M _N	15	32	28	14.1		±13				
		M _Z	15	32	04	13.6			±7			
		eF	16	04	±							
		F _E	23	06	22				-0.9		308	In the Suo nada, Inland Sea.
		P _N	23	06	23							
		eP _Z	23	06	21							
		S _{EN}	23	07	04							
		eS _Z	23	07	03							
		M _E	23	07	13	1.1	-3					
		M _N	23	07	13	1.3		+6				
290	Sept. 1	M _Z	23	07	12	1.6			+3			
		F	23	10	±							
		P _E	11	18	41						480	Southern foot of Mt. Tukuba, Ibaraki Prefecture.
		P _N	11	18	43							Felt in Kwanto district.
		eP _Z	11	18	47							
		S _E	11	19	49							
		S _N	11	19	47							
		S _Z	11	19	50							
		M _E	11	20	07	2.2	-5					
		M _N	11	19	58	2.2		-7				
291	Sept. 5	M _Z	11	19	58	2.7			-5			
		eF	11	26	±							
		eP _{EN}	21	47	54						71	In the Kii Channel.
		S _E	21	48	03							
		M _E	21	43	03		+2					
		S _N	21	48	04							
292	Sept. 6	M _N	21	48	04	0.4		-3				
		F	21	48	38							
		e _N	15	27	52							Near Hinomisaki, Wakayama Prefecture.
		e _E	15	28	01							
		c _Z	15	28	02							
		e _F	15	30	±							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
*293	Sept. 8	iP	0	16	55		+2.5	-0.9	-6.9	65	Perceptible.
		iS	0	17	04						Middle basin of the Hidaka
		M _{EN}	0	17	05	0.4	-36	-30			R., Wakayama Prefecture.
		M _Z	0	17	05	0.3			+7		
		F	0	20	08						
294	Sept. 11	eP _{EN}	10	35	10					36	Basin of the Arita River,
		S _{EN}	10	35	15						Wakayama Prefecture.
		M _E	10	35	16	0.4	± 1				
		M _N	10	35	16	0.5		± 2			
		F	10	35	57						
295	Sept. 11	P	23	34	07		-0.8			373	South off Hatidyô Isl.
		S _{EN}	23	34	58						
		M _E	23	35	00	2.3	+2				
		M _N	23	35	00	2.4		+2			
		eF	23	38	\pm						
296	Sept. 12	eP _N	2	45	34					29	Local shock.
		S _{EN}	2	45	38						
		M _E	2	45	38		± 0.4				
		M _N	2	45	38	0.4		± 1			
		F	2	45	56						
297	Sept. 12	eP _N	9	42	06					32	In the Kii Channel.
		S _{EN}	9	42	10						
		M _E	9	42	10	0.4	± 1				
		M _N	9	42	10	0.5		-2			
		F	9	42	31						
298	Sept. 12	P _{EN}	14	23	25						Near Iô Zima, northern
		ϵ_Z	14	24	47						part of Ryûkyû IIs.
		ϵ_Z	14	26	57						
		e _N	14	27	03						
		e _E	14	27	05						
		L _E	14	29	22						
		L _N	14	29	20						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A_E	A_N	A_Z			
			h	m	s	s	μ	μ	μ	km.		
299	Sept. 12	LZ	14	29	26							
		ME	14	30	29	7.5	+52					
		MN	14	30	41	6.6		-16				
		MZ	14	30	23	8.3			-11			
		eE	14	35	00							
		eN	14	35	07							
		eF	15	03	\pm							
		ePEN	15	37	36						527	Ditto.
		ez	15	38	38							
		eSN	15	38	40							
300	Sept. 12	eSE	15	38	54							
		ME	15	40	03	5.3	-2					
		MN	15	40	03	4.8		-1				
		eF	15	52	\pm							
		ePE	17	44	05						669	Ditto.
		ePNZ	17	44	07							
		eSEZ	17	45	36							
		eSN	17	45	37							
		LE	17	46	11							
		LN	17	46	34							
301	Sept. 12	ME	17	46	48	5.6	+8					
		MN	17	47	06	5.5		± 6				
		MZ	17	47	25	4.5			± 3			
		eF	18	10	\pm							
		ePE	22	39	43						604	Near Iô Zima, northern part of Ryûkyû IIs,
		ePN	22	39	45							
		SE	22	41	08							
		SN	22	41	04							
		ME	22	41	40	4.3	± 1					
		MN	22	41	13	3.2		+1				
302	Sept. 12	ez	22	41	37							
		eF	22	46	\pm							
		P	22	47	47		+0.8	(+)		39	Near Wakayama City.	

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		S	22	47	53						
		M _E	22	47	54	0.5	± 1				
		M _N	22	47	54	0.4		-2			
		F	22	48	28						
303	Sept. 13	eP _{EN}	3	06	25					673	Near Naze Isl, Ryûkyû IIs.
		ez	3	06	35						
		eS _E	3	07	54						
		eS _{NZ}	3	07	56						
		M _E	3	08	53	4.8	-2				
		M _N	3	08	55	5.6		± 2			
		M _Z	3	09	02	5.6			± 1		
		eF	3	38	\pm						
304	Sept. 13	ez	10	18	48						Near Iô Z'ma, Ryûkyû IIs.
		eE	10	18	57						Confused by m croseismo.
		eN	10	19	13						
		S _E	10	19	31						
		S _N	10	19	27						
		F	10	27	\pm						
305	Sept. 13	ez	14	20	46						Near Iô Zima, Ryûkyû IIs.
		eN	14	20	59						Confused by microseisms.
		eE	14	21	03						
		S _N	14	21	32						
		S _E	14	21	42						
		eE	14	22	39						
		eN	14	22	40						
		eE	14	22	49						
		eF	14	30	\pm						
306	Sept. 13	eE	14	22	39						Near Kabuti, Gihu Prefecture.
		eN	14	22	40						
		S _E	14	22	49						
		eF	14	24	\pm						
307	Sept. 14	eP _N	9	26	24					551	Near Iô Zima, northern part of Ryûkyû IIs.



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
308	Sept. 14	eP _E	9	26	42						
		eS _E	9	27	50						
		eS _N	9	27	45						
		M _N	9	27	59	3.8		± 1			
		eZ	9	27	59						
		M _E	9	29	05	3.9	-1				
		eF	9	36	\pm						
		eE	15	12	51						Ditto.
		eN	15	12	50						
		eS _E	15	14	13						
eS _N	15	14	12								
eZ	15	14	13								
M _E	15	14	26	3.0	± 0.4						
M _N	15	14	24	2.6		± 0.4					
eF	15	27	\pm								
309	Sept. 15	eP?N	0	06	21					42?	Local Shock.
		S _{EN}	0	06	27						
		F	0	06	47						
310	Sept. 15	eEN	13	11	13						Near Iô Zima, northern part of Ryûkyû IIs.
		eZ	13	11	33						
		eS _E	13	12	00						
		eS _N	13	12	09						
		M _E	13	12	14	3.6	± 0.4				
		M _N	13	12	30	4.0		± 1			
		F	13	21	\pm						
311	Sept. 16	eP _N	2	56	53					28	In the Kitan Strait.
		S _{EN}	2	56	57						
		M _E	2	56	57		+1				
		M _N	2	56	57	0.4		-2			
		F	2	57	35						
312	Sept. 16	P	13	16	41		-0.8	-0.9	(-)	653	Near Iô Zima, northern part of Ryûkyû IIs.
		S _{EZ}	13	18	09						



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A_E	A_N	A_Z			
			h	m	s	s	μ	μ	μ	km.		
313	Sept. 16	S_N	13	18	08							
		M^1_E	13	18	52	4.7	-7					
		M^1_N	13	19	06	6.6		+6				
		M_Z	13	19	05	5.6			-3			
		M^2_E	13	20	14	7.5	-5					
		M^2_N	13	20	39	5.6		-5				
		eF	13	38	±							
		eP $_N$	19	13	31					409?	Ditto.	
		eP $_E$	19	13	37							
		eS $_E$	19	14	31							
eS $_N$	19	14	27									
eZ	10	14	26									
M_N	19	14	35	3.4			±0.4					
M_E	19	15	24	4.2	±0.4							
eF	19	25	±									
314	Sept. 17	eP $_E$	0	31	49					398?	Near Teganuma, Tiba Pref.	
		eP $_N$	0	31	50							
		eZ	0	32	10							
		S $_{EN}$	0	32	43							
		S $_Z$	0	32	44							
		M_E	0	33	02	1.9	-1					
		M_N	0	33	07	1.9		±1				
		eF	0	39	±							
315	Sept. 17	P	1	28	35					115	Near Mineyama, northern part of Kyôto Prefecture.	
		S	1	28	50							
		M_E	1	28	51	1.2	+2					
		M_N	1	28	53	1.1		±2				
		F	1	30	29							
316	Sept. 17	eP $_E$	13	41	09					?	Near Iô Zima, northern part of Ryûkyû IIs.	
		eP $_N$	13	41	08							
		S $_E$	13	42	50							
		S $_N$	13	42	44							
		M_E	13	43	34	3.8	-0.4					



International
Seismological
Centre

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		AE	AN	Az		
			h	m	s	s	μ	μ	μ	km.	
		M _N	13	43	14	2.8		± 0.4			
		F	13	60	\pm						
317	Sept. 21	e	21	55	17						Near Hinomisaki, Wakayama Prefecture.
		S	21	55	19						
		M _E	21	55	20	0.4	-3				
		M _N	21	55	20	0.5		+2			
		F	21	55	53						
318	Sept. 23	eP _{EN}	21	42	58					844	ENE off Miyako, Iwate Prefecture.
		S	21	44	52						
		eF	21	52	\pm						
319	Sept. 24	eP	4	54	42					267	Near Hukuti, Yamanashi Prefecture,
		S	4	55	18						
		eF	5	00	\pm						
320	Sept. 24	iP	17	15	40			-0.9		45	Near Hinomisaki, Wakayama Prefecture.
		S	17	15	46						
		M _E	17	15	47	0.6	-18				
		M _N	17	15	47	0.4		-38			
		M _Z	17	15	47	0.7			+7		
		F	17	18	28						
321	Sept. 25	P	1	54	14					60	In the Kii Channel
		S	1	54	23						
		F	1	55	50						
322	Sept. 26	eP	1	01	32					12?	Local Shock.
		eS	1	01	34						
		F	1	01	55						

TOYOOKA JAPAN.

SEISMOLOGICAL BULLETIN

A Branch Station of the Kobe Meteorological Observatory of Japan.
 $\varphi=35^{\circ} 32'$ $\lambda=134^{\circ} 49'$ $h=32.2$ m. Underground: Tertiary.

Instruments: Omori's Seismograph.
 (Horizontal Pendulum)

Wiechert Seismograph.
 (Horizontal & Vertical)

July

	T_0	ε	$\frac{r}{T_0^2}$	V
A_E :	22.5	3	0.001	20
A_N :	20.0	3	0.001	20

	T_0	ε	$\frac{r}{T_0^2}$	V
A_E :	5.8	∞	0.005	91
A_N :	6.0	∞	0.005	80
A_Z :	3.4	4	0.003	53

Aug.

	T_0	ε	$\frac{r}{T_0^2}$	V
A_E :	21.0	3	0.001	20
A_N :	20.8	3	0.001	20

	T_0	ε	$\frac{r}{T_0^2}$	V
A_E :	5.6	10	0.006	98
A_N :	6.1	10	0.005	89
A_Z :	3.7	6	0.003	78

Sept.

	T_0	ε	$\frac{r}{T_0^2}$	V
A_E :	21.0	3	0.001	20
A_N :	21.0	3	0.001	20

	T_0	ε	$\frac{r}{T_0^2}$	V
A_E :	6.1	10	0.005	105
A_N :	5.2	10	0.005	90
A_Z :	3.6	5	0.003	62

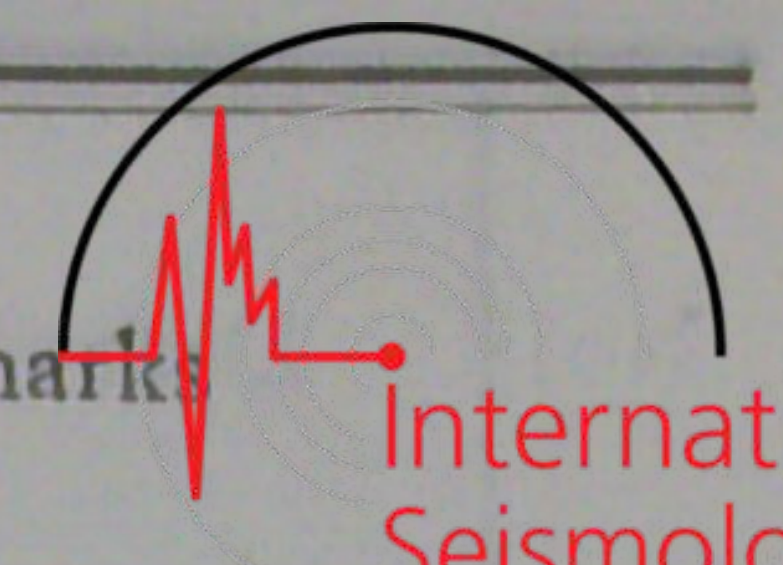
No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
70	July 8	eP _E	6	43	42					141	In the Wakaura Bay, Kii Channel.
		P _N	6	43	40						
		S	6	43	58						
		M _E	6	44	00		+7				
		M _N	6	44	03			-9			
		M _Z	6	44	02				+3		
		F	6	45	55						



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
71	July 12	P _{EN}	9	53	44					801	East far off K n wazan, Miyagi Prefecture. Felt in Pacific caost of NE Japan.
		S _E	9	55	32						
		eS _N	9	55	31						
		L _E	9	56	30						
		L _N	9	56	07						
		eF	10	00	±						
72	July 18	P _{EN}	19	50	04					6105	Near New Hebrides IIs.
		i _{EN}	19	50	53						
		S _{EN}	19	57	46						
		eL _N	20	03	33						
		M ¹ _E	20	08	32	20.3	+176				
		M ¹ _N	20	08	50	17.2		-213			
		M ² _E	20	09	21	20.3	-140				
		M ² _N	20	09	48	19.1		-181			
		M ³ _E	20	10	07	19.9	+130				
		M ³ _N	20	11	58	16.2		-155			
		M ⁴ _N	20	12	33	16.2		+210			
		M ⁵ _N	20	13	53	14.3		-106			
eF	21	18	±								
73	July 19	P _N	1	34	28					?	Felt in Ceram and NW New Guinea, according to Bata- via's report.
		eP _E	1	34	39						
		i _N	1	35	53						
		S _E	1	42	40						
		eS _N	1	40	19						
		L _N	1	44	24						
		M _N	1	46	48	19.6		+18			
		eF	2	11	±						
74	July 19	P _{EN}	7	46	46					6330	Near New Hebrides IIs.
		S _E	7	54	41						
		S _N	7	54	40						
		eF	8	30	±						
75	July 20	P _E	13	40	30					492	Near Sawara, Tiba Prefecture. Felt in Kwanto district.
		eP _N	13	40	33						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
76	July 21	S _{EN}	13	41	36					6570	Near New Hebrides IIs.
		M _E	13	41	45		+2				
		M _N	13	41	44			-10			
		F	13	44	15						
		P _E	6	27	50						
		P _N	6	27	49						
		S _E	6	35	54						
		S _N	6	35	59						
		L _E	6	41	59						
		L _N	6	41	39						
		M _E	6	45	41	16.5	-66				
		M ¹ _N	6	45	59	16.7		-56			
M ² _N	6	47	45	16.1		-53					
M ³ _N	6	49	07	14.5		+65					
eF	7	32	±								
77	July 21	P _E	7	32	14						Ditto.
		P _N	7	32	09						
		eF	8	15	±						
78	Aug. 3	P	12	25	23					521	Southern foot of Mt. Tuku- ba, Ibaraki Prefecture.
		i _E	12	25	44						
		eS _E	12	26	37						
		S _N	12	26	34						
		eS _Z	12	26	34						
		M _E	12	26	52		+8				
		M _N	12	26	50			-12			
		M _Z	12	26	44				+6		
F	12	29	12								
79	Aug. 7	P _E	3	49	57						Near New Hebrides IIs.
		P _N	3	49	55						
		L _E	4	04	54						
		eF	4	25	±						
80	Aug. 11	P _{NZ}	8	21	58				2846?	Near Giran. Small damage in the Northern part of Formosa.	





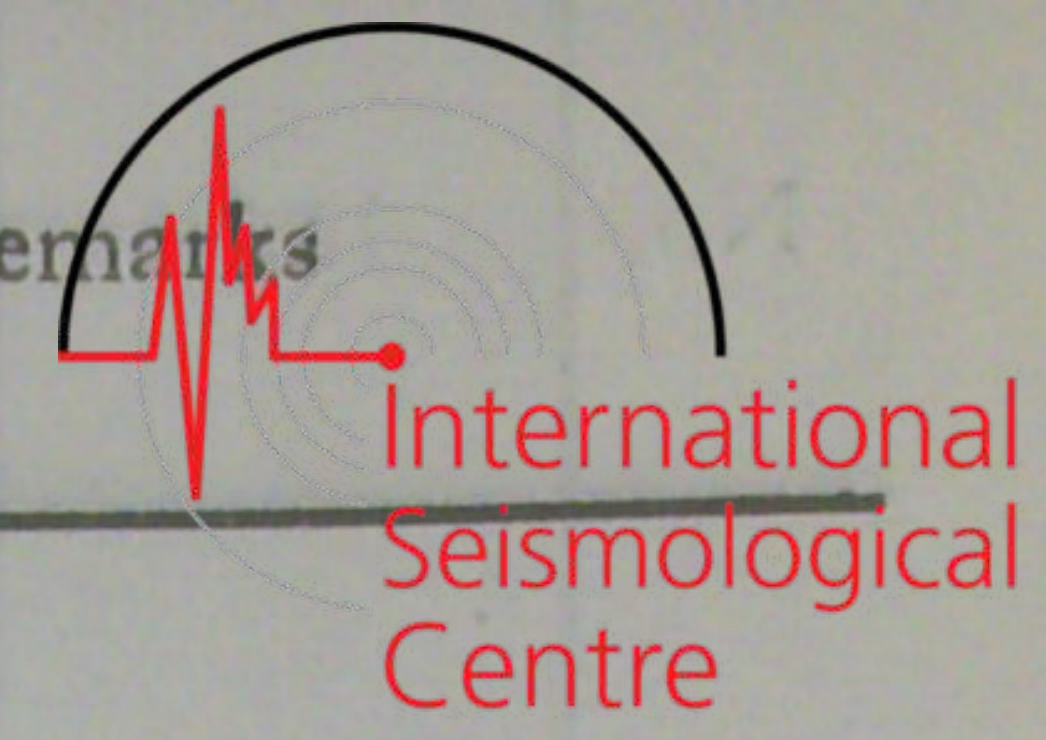
No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
		S _Z	8	27	14							
		L _E	8	28	00							
		L _N	8	27	23							
		M ¹ _E	8	30	45	10.2	+13					
		M ¹ _N	8	30	33	12.2		-12				
		M ¹ _Z	8	30	11				-4			
		M ² _Z	8	30	43				+6			
		M ² _E	8	31	55	10.2	+8					
		M ² _N	8	31	25	9.7		+12				
		M ³ _Z	8	31	55				+5			
		M ³ _E	8	33	02	10.2	+8					
		eF	8	51	±							
81	Aug. 13	eP _E	23	55	19					3270	Felt in Mindanao. Epicenter 8° 20' N. 126° 50' E, according to Manila's report.	
		P _N	23	55	16							
		eP _Z	23	55	13							
		S _{EN}	0	00	18							
		L _N	0	02	47							
		L _Z	0	02	55							
		M _E	0	08	58	20.2	+3					
		M ¹ _N	0	06	45	18.3		-6				
		M _Z	0	06	46	19.0			-5			
		M ² _N	0	10	18	18.3		+5				
		eF	0	37	±							
*82	Aug. 18	P	2	39	08		+8.2	+2.2	-5.3	173		Perceptible. Near Hatiman, Gihu Prefecture. Small damage at the epicentral region. Strong shocks were felt in Tyubu district.
		S _{EN}	2	39	32							
		S _Z	2	39	33							
		M _E	2	30	38	0.5	-366					
		M _N	2	39	34			1100				
		M _Z	2	39	45				1250			
		eF	2	50	±							
83	Aug. 18	P _{EN}	3	47	31					166	An after shock of previous earthquake.	
		P _Z	3	47	29							
		S	3	47	53							
		M _{EZ}	3	47	55		+12		-6			



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			θ	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	k	
84	Aug. 18	M _N	3	47	56			+18		176	An after shock of No. 82.
		F	3	48	58						
		P	5	07	02						
		i _{EZ}	5	07	04						
		S	5	07	26						
		M _{EN}	5	07	30		+11	-17	-5		
		M _Z	5	07	29						
F	5	09	22								
*85	Aug. 20	P	9	34	58					24	Perceptible. Near Mineyama, Northern part of Kyoto Prefecture.
		S	9	35	02						
		M	9	35	02		+23	+16	± 4		
		F	9	35	47						
86	Aug. 23	P _E	22	35	59					584	East off Shioya Cape, Hukusima Prefecture.
		P _{NZ}	22	35	58						
		S _{EN}	22	37	17						
		S _Z	22	37	19						
		M _{EN}	22	37	48		-3	-7			
		F	22	40	59						
87	Aug. 31	eL _{EN}	17	24	08						Near Pamir, Turkestan.
		eF	17	34	\pm						
88	Aug. 31	P	23	06	34					339	In the Suô nada, Inland Sea.
		S	23	07	20						
		M _{EN}	23	07	22	1.4	+8	-13			
		M _Z	23	07	21	1.1			-5		
		F	23	09	03						
89	Sept. 1	eP _E	11	18	47					421	Southern part of Mt. Tu- kuba, Ibaraki Prefecture. Felt in Kwanto district.
		eP _N	11	18	49						
		eP _Z	11	18	45						
		S _E	11	18	45						
		S _N	11	19	44						
		M _E	11	19	55		-7				

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	S.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
		M _N	11	19	57			-11			
		M _Z	11	19	56				+4		
		F	11	21	47						
90	Sept. 8	i _{EN}	0	17	22						Middle basin of the Hidaka R., Wakayama Prefecture.
		e _Z	0	17	24						
		S	0	17	30						
		M	0	17	31		+6	+14			
		F	0	18	22						
91	Sept. 9	P _{EN}	11	53	19					35	Local Shock.
		S _{EN}	11	53	23						
		M _{EN}	11	53	24		± 7	-14			
		F	11	53	33						
92	Sept. 12	eP _{EN}	14	23	49						J Near Iô Zima, northern part of Ryûkyû IIs.
		S _E	14	30	00						
		S _N	14	30	15						
		S _Z	14	30	06						
		M _E	14	31	17		+19	-22			
		M _N	14	31	09				+16		
		M _Z	14	31	07						
		eF	14	47	\pm						
93	Sept. 12	eS _E	15	38	53						Ditto.
		eS _N	15	39	03						
		eF	15	45	\pm						
94	Sept. 12	P _Z	17	44	21					594	Ditto.
		P _E	17	44	34						
		P _N	17	44	37						
		S _E	17	45	47						
		S _N	17	46	02						
		S _Z	17	46	05						
		M _E	17	46	43		+17				
		M _N	17	47	08				-11		
		M _Z	17	46	58				+5		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A_E	A_N	A_Z		
			h	m	s	s	μ	μ	μ	km.	
95	Sept. 13	eF	17	55	\pm						
		eN	3	07	19						Near Naze Isl, Northern part of Ryûkyû IIs.
		SE	3	08	16						
96	Sept. 13	eF	3	13	\pm						
		ePE	14	19	58						Near Iô Zima, northern part of Ryûkyû IIs.
		ePN	14	20	01						
97	Sept. 13	eF	14	31	\pm						
		P	14	12	15					172	Near Kabuti, Gihu Prefecture.
		S	14	22	38						
		ME	14	22	41	0.6	+15				
		MN	14	22	39	0.8		-21			
98	Sept. 16	MZ	14	22	39				-10		
		F	14	23	54						
		eN	13	17	09					537	P phase is not distinct.
		Pz	13	17	08						Near Iô Zima, northern part of Ryûkyû IIs.
		eE	13	17	16						
		SEN	13	18	21						
		eSZ	13	18	30						
		ME	13	19	32		+9				
99	Sept. 17	MN	13	91	34			-13			
		MZ	13	19	33				+6		
		eF	13	29	\pm						
		PE	0	31	40					380?	Near Teganuma, Tiba Prefecture.
		PN	0	31	45						
		SN	0	32	36						
*100	Sept. 17	ME	0	32	48		+3				
		MN	0	32	38			+7			
		F	0	34	29						
		P	1	28	12		-1.9	-3.3	+3.2	2.2	Perceptible.
		S	1	28	15						Near Mineyama, Kyoto Prefecture.
		ME _N	1	28	15		+34	+82			



No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M _Z	1	28	16				+16		
		F	1	29	36						
101	Sept. 20	eP _{EN}	14	17	20					21	Local shock.
		S	14	17	22						Time is uncertain.
		M	14	17	22		-8	-14			
		F	14	17	43						
102	Sept. 24	P _{EN}	4	54	44					334	Near Hukuti, Yamanasi.
		P _Z	4	54	45						Prefecture.
		S _E	4	55	28						
		S _{NZ}	4	55	29						
		M _E	4	55	36	0.8	-8				
		M _N	4	55	45	1.7		-12			
		M _Z	4	55	31				-7		
		F	4	57	30						
103	Sept. 24	P _{EN}	17	16	02					153	Near Hinomisaki, Wakayama
		P _Z	17	16	01						Prefecture.
		S _{EN}	17	16	22						
		eS _Z	17	16	24						
		M _E	17	16	27	0.8	+4				
		M _N	17	16	25	0.8		-6			
		M _Z	17	16	26				-2		
		F	17	17	23						

昭和十一年五月十三日發行

神戸市神戸區中山手通七丁目
神戶測候所

印刷者 神戸市神戸區花隈町三三二
松井梅藏

印刷所 神戸市神戸區花隈町三三二
松井印刷所

SEISMOLOGICAL BULLETIN

OF THE

IMPERIAL MARINE OBSERVATORY

AND

KOBE METEOROLOGICAL OBSERVATORY.

KOBE, JAPAN.

VOL. X No. 4.

From Oct. 1 1934, to Dec. 31 1934.

KOBE

May 1936.

KÔBE JAPAN.

SEISMOLOGICAL BULLETIN

of the Imperial Marine Observatory and the Kobe Meteorological Observatory of Japan.
 $\varphi=34^{\circ} 41' 18''N$ $\lambda=135^{\circ} 10' 51''E$ $h=58.3$ m Underground: Diluvial Series.

Instruments: Omori's Seismograph.
 (Horizontal Pendulum)

Wiechert Seismograph.
 (Horizontal & Vertical)

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Oct.

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	19.1		0.001 ⁽⁻⁾	20
AN:	20.4		0.001	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	6.2	5	0.003	108
AN:	6.2	6	0.003	99
AZ:	4.0	6	0.003	85

Nov.

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	19.8		0.001 ⁽⁻⁾	20
AN:	20.4		0.001	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	6.7	7	0.004	107
AN:	6.6	6	0.004	103
AZ:	4.2	6	0.003	77

Dec.

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	19.7		0.001 ⁽⁻⁾	20
AN:	21.4		0.001	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	6.1	5	0.004	109
AN:	6.4	6	0.003	105
AZ:	3.9	5	0.004	85

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		AE	AN	AZ		
216	Oct. 2	eSE	h	m	s	s	μ	μ	μ	km.	Northern part of Kuzyûkuri hama, Tiba Prefecture.
		eSN	21	06	41						
		eSZ	21	06	43						
		ME	21	06	44						
		MX	21	07	06		+6				
		MZ	21	06	52	4.4		+8			
		eF	21	06	51	2.7			+2		
		eF	21	14	±						

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A_E μ	A_N μ	A_Z μ		
217	Oct. 5	P _{EN}	16 06 01					102	Near Amino, NW of Kyôto Prefecture.
		S _{EN}	16 06 15						
		M _E	16 06 17		± 3				
		M _N	16 06 16			-3			
		M _Z	16 06 18				± 1		
		F	16 07 06						
218	Oct. 5	P _{EN}	20 28 23					1730?	South off Erimo Cape, Hokkaido. 143°4E 41°6N. Felt in Pacific Coast of Oou and Hokkaido.
		i _E	20 28 58		-5				
		i _N	20 29 01			+7			
		e _N	20 30 32						
		iS _E	20 31 22		+18				
		M _E	20 32 27	18.1	+15				
		M _N	20 32 20	16.8		-8			
		eF	20 49 ±						
219	Oct. 10	iP	15 52 39		+5.2	-6.8	-7.1	7190	South off Fiji IIs. deep focus earthquake.
		iP _{EN}	15 52 43		+12.1	-15.0			
		iP _Z	15 52 42	4.4			-18.8		
		PM _E	15 52 47	4.4	+14				
		PM _N	15 52 47	4.6		+22			
		PM _Z	15 52 44	4.6			+22		
		eE	15 53 29						
		e _N	15 54 02						
		e _Z	15 54 36						
		eE _Z	15 55 32						
		i _E	16 01 16						
		eS _Z	16 01 13						
		iS _{EN}	16 01 18		-17	+37			
		iS _Z	16 01 17				-7		
		SM _E	16 01 26	5.6	+65				
		SM _N	16 01 26	4.8		-49			
		SM _Z	16 01 20	2.8			-1.6		
i _E	16 02 09		-34						
i _N	16 02 01			-25					
i _Z	16 02 02	3.7			-20				

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A_E μ	A_N μ	A_Z μ		
		P'P' _N	16 20 20						
		iP'P' _Z	16 20 19						
		P'P'M _Z	16 20 26	3.3			-7		
		eP'P' _E	16 20 59	3.6	± 4				
		eF	16 34 ±						
220	Oct. 15	e _N	8 27 48						A distant earthquake.
		eL _E	8 30 38						
		eL _N	8 30 48						
		M _E	8 31 57	14.2	+2				
		M _N	8 31 28	15.5		+2			
221	Oct. 18	P _N	7 57 47					5880	Near New Hebrides IIs.
		P _Z	7 57 46						
		P _{RE}	7 59 07						
		P _{RN}	7 59 02						
		P _{RZ}	7 59 01						
		S _{EN}	8 05 17						
		eS _Z	8 05 23						
		SM _E	8 06 00	4.9	-2				
		SM _N	8 05 33						
		eL _E	8 11 35						
		eL _N	8 11 47						
		M _E	8 14 42	17.0	± 1				
		M ¹ _N	8 15 49	17.7		± 1			
		M ² _N	8 19 56	18.0					
		M _Z	8 19 50	17.0			± 1		
		eF	8 43 ±						
222	Oct. 18	i _{EN}	22 54 54		+1.2	-2.0			In the Kii Channel.
		i _Z	22 54 53				+0.9		
		M _E	22 54 55	0.3	-8				
		M _N	22 54 55			-6			
		M _Z	22 54 54	0.8			+1		
		eE	22 55 04						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	S.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
223	Oct. 21	i _N	22	55	04	0.7		-3			
		e _Z	22	55	03				-1		
		F	22	56	02						
		eP _E	17	58	00						Marianne IIs.
		eP _Z	17	57	55						
		e _E	17	58	09						
		i _N	17	58	24						
		e _N	17	58	58	4.4		± 3			
		M _E	18	01	15	6.0	+4				
		M _N	18	02	22	4.5		-4			
224	Oct. 21	eM _Z	18	01	30	5.1			-2		
		e _F	18	23	\pm						
		e _N	18	35	23						ESE off Sioya Cape, Huku-
		e _{EN}	18	35	35						sima Prefectures. Felt in
		e _Z	18	35	37						North of Kwanto and South
		e _Z	18	35	48	3.1			± 1		of Oou district.
		eM _E	18	37	46	2.5	-2				
		eM _N	18	37	38	2.7		+1			
225	Oct. 23	e _N	22	28	24	4.5		± 2			ESE off Siroya Cape, NE of
		e _E	22	29	24	3.0	± 3				Aomori Prefecture.
		e _N	22	29	20	3.9		± 3			
		e _F	22	34	\pm						
226	Oct. 26	e _Z	14	51	30					3810	Probable epicenter, Celebes
		i _N	14	51	35						Sea.
		iP _{EN}	14	51	36		+0.9	-6.0			Deep focus earthquake.
		iP _Z	14	51	35				-3.6		
		i _{NZ}	14	51	40				-3.9	-3.2	
		PP?	14	53	12						
		e _N	14	54	27						
		iS _{EN}	14	57	11		-16	-11			
		S _Z	14	57	14						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	S.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
227	Oct. 26	SM _{EN}	14	57	14	4.2	+33	+14				
		SP?	14	57	29							
		i _Z	14	58	26	2.9				+2		
		ScS _E ?	14	58	53	4.2	+11					
		ScS _N ?	14	58	56	4.0		+6				
		e _F	15	07	\pm							
		P _{NZ}	17	12	43				-3.0	-2.1	710	E off Tanegasima, northern
		eP _E	17	12	44		+2.2					part of Ryūkyū IIs.
		i _{NZ}	17	12	44				-8.0	+1.9		Felt in Kyūsyū and Sikoku
		i _{EZ}	17	12	45		-3			-2		district.
228	Oct. 26	P?	17	12	45		+18	+25	+15			
		S _E	17	13	50							
		eS _N	17	13	50							
		S _Z	17	13	49							
		S _E	17	13	58							
		S _Z	17	13	56							
		eL _{EN}	17	14	23							
		M ¹ _E	17	15	02	19.4	+47					
		M ¹ _Z	17	14	57	20.4				+23		
		M ¹ _N	17	15	25	19.4			-73			
229	Oct. 26	M ² _Z	17	15	24					-33		
		M ² _E	17	16	13	13.0	-57					
		M ² _N	17	17	47			+48				
		e _F	17	58	\pm							
228	Oct. 26	e _N	19	30	22	4.1		± 3			Local shock?	
229	Oct. 26	P	20	52	38					497	E off Tanegasima, northern	
		i _N	20	52	54						part of Ryūkyū IIs,	
		e _Z	20	52	54	1.0				-2		
		i _{EN}	20	53	43							
		S _{EN}	20	53	45							
		i _Z	20	53	47							
		M _E	20	53	47	1.0	+2					

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
230	Oct. 29	M _N	20	53	48	0.5		-2			
		M _Z ²	20	53	47	1.0			-2		
		F	20	54	38						
		e _E	17	25	29						
		S _{EN}	17	26	17						
231	Nov. 3	S _{M_N}	17	26	19	4.0		± 2			
		e _E	17	27	53	3.7	± 2				
		e _F	17	37	\pm						
		e _E	3	37	28						
		e _N	3	37	39						
232	Nov. 3	e _E	3	37	47		± 1				
		F	3	38	16						
		P	15	05	25				60		Lower basin of the Arita R., Wakayama Prefecture.
		S _{EN}	15	05	33						
		e _{Sz}	15	04	34						
233	Nov. 4	M _E	15	05	34	0.8	-6				
		M _N	15	05	34	0.7		-6			
		M _Z	15	05	35	1.3			+3		
		M ² _E	15	05	38	0.8	+5				
		M ² _N	15	05	38	0.5			-6		
234	Nov. 4	e _F	15	09	\pm				+3		
		e _Z ²	2	04	39					7390	Near New Hebrides IIs. Record is deep focus type.
		P _Z	2	04	54						
		P _E	2	05	03						
		P _N	2	05	02						
		e _Z	2	11	41						
		S _E	2	13	52						
		e _{S_N}	2	13	59						
234	Nov. 4	e _F	2	23	\pm						
		e _E	3	25	21				4520	South off Fiji IIs.	
		P _Z	3	25	24						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
235	Nov. 5	P _{E_Z}	3	25	27						
		P _N	3	25	28				+3		
		e _E	3	26	18						
		e _N	3	26	19						
		e _{EN_Z}	3	26	31						
		i _{S_E}	3	34	23			+5			
		S _N	3	34	19						
		S _{M_E}	3	34	32	8.1		-9			
		S _{M_N}	3	34	26	8.2			-4		
		i _E	3	35	32						
		i _{E_N}	3	36	04	3.7					
236	Nov. 5	e _{M_{E_N}}	3	50	\pm						
		e _{M_Z}	3	49	04	23.0					
		e _F	3	58	\pm						
		e _E	6	08	26						
		e _N	6	08	21	4.0					
237	Nov. 7	i _E	6	10	01	4.2	± 1				
		i _N	6	10	01	4.4		± 1			
		e _F	6	17	\pm						
		P	23	09	51					4195	In the Aleutian IIs.
		e _N	23	11	46						
237	Nov. 7	S _{EN}	23	15	50						
		e _{Sz}	23	15	46						
		i _E	23	16	09						
		i _N	23	16	05						
		i _N	23	20	20						
		e _{L_N}	23	20	35						
		e _{L_Z}	23	21	00						
		M _N	23	21	00	20.0		+2			
M _Z	23	22	55	23.2			± 1				
237	Nov. 7	M ² _N	23	25	35	16.0		-2			
		e _F	23	43	\pm						
		e _E	11	33	22						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	S.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
238	Nov. 8	eN	11	33	23	2.6		± 5				sima Prefectdre. Masked by microseisms.
		ez	11	33	12	2.0			± 3			
		eN	11	33	55	4.6		± 3				
		eF	11	39	\pm							
		i [?] EZ	3	26	35		-3			-1		Off the Nadati, Niigata Prefecture.
		ez	3	26	50							
		SE	3	27	34							
		SN	3	27	36							
		Sz	3	27	33							
		ME	3	27	57	5.2	+28					
Mz	3	27	49	2.7			+19					
iE	3	28	37									
MN	3	28	39	4.2			-25					
eF	3	38	\pm									
239	Nov. 10	S [?] EN	16	14	57						Local Shock.	
		ME	16	14	59	0.8	+2					
		MN	16	14	59	0.7			-1			
		F	16	15	15							
240	Nov. 11	iP	5	47	28					29	Near Arima, northern foot of Mt. Rokko.	
		SEN	5	47	32							
		Sz	5	47	31							
		ME	5	47	33		± 3					
		MNZ	5	47	32			+3		-4		
F	5	48	02									
241	Nov. 16	ePE	13	50	36						North of Fiji IIs. Faint record.	
		ePN	13	50	56							
		ePz	13	51	01							
		eE	13	51	48							
		ez	13	54	18							
		eSN	13	57	19							
eL [?] E	14	01	40									
eME	14	04	13									

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	T.	M.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
242	Nov. 18	MN	14	05	54	14.0						
		eMz	14	06	07	17.0?						
		eF	14	22	\pm							
		PN	3	30	14				+0.8		6840	Turkestan. 37°N 66°5E (Strasbourg)
		iPz	3	30	13	2.4				+2.2		
		iE	3	30	15				-1.7			
		ePcPEN	3	31	01							
		PcPz	3	31	00							
		iE	3	31	04							
		eE	3	37	18							
		eN	3	37	16							
		eSE	3	38	33							
SN	3	38	35	3.9			± 2					
eE	3	38	52	3.7	± 2							
eSz	3	38	53									
eE	3	39	41							} SeS Wave?		
eN	3	39	39									
eF	3	51	\pm									
243	Nov. 18	iPE	9	24	10				-2.0		Kamchatka.	
		PN	9	24	10				+1.2			
		iPz	9	24	09					+2.0		
		PM _E	9	24	13	1.5	+6					
		iN	9	24	12				+2			
		PM _Z	9	24	13	1.6				+8		
		eE	9	24	34							
		ez	9	24	29							
eS [?] ENZ	9	28	40									
eF	9	35	\pm									
244	Nov. 18	PNZ	22	48	07					8590	A distant earthquake.	
		eN	22	49	55							
		ez	22	49	56							
		eE	22	50	58							
		eN	22	51	03							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
245	Nov. 20	eN	22	53	54						
		iz	22	53	48						
		eS _N	22	57	58						
		eL _N	23	00	32						
		M _N	23	00	37	31.2	± 4				
		M _Z	23	01	37	25.1		± 2			
		eF	23	11	\pm						
246	Nov. 22	iE _N	3	04	45					22?	Local Shock.
		eN	3	04	46						
		e	3	04	49						
		eN	3	04	48						
		eS _Z	3	04	49						
		eL _E	3	04	52						
		M _E	3	04	53	0.7	± 2				
		M _{NZ}	3	04	51	0.8		+3	+1		
		F	3	05	02						
247	Nov. 22	eN _Z	3	44	19						
		eM _E	3	44	24	0.7	± 1				
		M _N	3	44	22	1.0		-2			
		eM _Z	3	44	24	0.8			± 1		
		F	3	44	32						
248	Nov. 24	P	19	19	29						
		eS _{EN}	19	19	31						
		eS _Z	19	19	32						
		M _E	19	19	33	0.5	+2				
		M _N	19	19	32	0.6		-1			
		M _Z	19	19	33				± 1		
		F	19	19	48						
										Near Katada, Siga Prefecture.	
248	Nov. 24	iE	8	22	30						
		iN _Z	8	22	31						
		iS _Z	8	22	31						
		M _{EZ}	8	22	32		-3		± 1		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
249	Nov. 24	M _N	8	22	32	0.5		+3			
		F	8	23	12						
		e _Z	12	47	15						
		eS _E	12	58	26						
		eS _N	12	58	22	6.5		± 1			
		eZ	12	58	50						
		eF	13	08	\pm						
250	Nov. 26	eP _E	12	14	31		+2.0			3095	Strong shocks were felt in near Manila, Philippine.
		iP _N	12	14	31			+4.9			
		P _Z	12	14	31				+1.7		
		i _N	12	14	50						
		iz	12	14	48						
		i _N	12	15	04						
		i _N	12	15	34						
		iE _Z	12	16	17						
		i _N	12	16	15						
		eS _{EN}	12	19	22						
		eZ	12	19	32						
251	Nov. 27	M _N	12	25	38	15.3		± 2			
		eF	12	37	\pm						
		eP _E	5	51	05						
		eP _N	5	51	09						
		P _Z	5	51	06				-1		
252	Nov. 27	iE	5	51	17						
		iz	5	51	15						
		eS _{EN}	5	52	14						
		eS _Z	5	52	17						
		M _E	5	52	40		-10				
		M _N	5	52	28	3.9		+10			
		M _Z	5	52	39	2.4			+8		
		eF	6	05	\pm						
		iP _E	6	20	52		-3.4?			3470	
											Malucca Passage.

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		iP _N	6	20	51			-80			Felt in N Celebes, N Molucca, and Sangi IIs, East Indies.
		iP _Z	6	20	50				-5.8		
		i _E	6	21	59						
		i _N	6	22	14						
		i _E	6	22	50						
		e _Z	6	22	46						
		e _Z	6	23	24						
		e _Z	6	24	05						
		eS _E	6	26	06						
		eS _N	6	26	41						
		eS [?] _Z	6	26	30						
		eL _N	6	30	14						
		M ¹ _N	6	31	00	23.5	± 3				
		M _Z	6	30	49	21.1		± 2			
		i _E _N	6	31	11					} ScS Wave?	
		i _Z	6	31	09						
		e _N	6	32	23						
		e _E	6	34	21						
		M ² _N	6	40	23	18.0					
		e _F	6	51	\pm						
		eP _E _N	6	51	\pm						
253	Nov. 27	eP _Z	15	57	55					393	Middle basin of the Kinu River, Kwantô district.
		eS _E _N	15	58	45						
		eS _Z	15	58	46						
		M _E	15	58	50	1.9	± 6				
		M _N	15	59	06	4.1		+7			
		M _Z	15	58	48	1.6			± 3		
		e _F	16	02	\pm						
254	Nov. 29	P _E	12	56	17					780	NE off Hatidyô Isl.
		P _Z	12	56	15						
		i _E	12	56	29						
		S [?] _E	12	57	42						
		eS [?] _Z	12	57	36						
		M _E	12	58	25	3.1	+4				

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		M _N	12	58	07	2.8		± 4			
		M _Z	12	57	40	2.7			± 3		
		e _F	13	05	\pm						
255	Nov. 30	S _E _N	22	30	31						Felt in Kakogawa, Hyôgo Prefecture.
		M	22	30	32		± 3	± 3	± 3		
		F	22	31	07						
256	Nov. 30	e _P	23	06	55					153?	Near Kôti City, Sikoku district.
		e _P	23	06	57						
		e _P	23	07	00						
		S _E	23	07	16						
		S _N	23	07	15						
		M _E	23	07	19	0.5	+5				
		M _N	23	07	18	0.4		+6			
		M _Z	23	07	20	0.8			± 3		
		F	23	08	02						
257	Dec. 2	S _E	12	07	48						Near Arita River, Wakayama Prefecture.
		iS _N	12	07	48						
		M _E _N	12	07	49	0.5	+3	+3			
		M _Z	12	07	48				± 1		
		F	12	08	22						
258	Dec. 2	S _E	13	08	32						In the Kii Channel.
		eS _N	13	08	31						
		M _E	13	08	35	0.4	± 1				
		F	13	09	05						
259	Dec. 7	P	1	07	11					114	Northeastern part of Biwa Lake, Siga Prefecture.
		i _N	1	07	12			-3.1			
		S _E _Z	1	07	26						
		S _N	1	07	27						
		M _E	1	07	32	1.2	± 6				
		M _N	1	07	29	1.3		± 8			
		M ¹ _Z	1	07	27	0.8			-4		

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
260	Dec. 9	M ² Z	1	07	31	0.8			+4	84	Near Yuasa Bay, Kii Channel.
		eF	1	11	±						
		P	3	16	22						
		i _E	3	16	23		±1				
		i _N	3	16	24	0.4		±2			
		S _{EN}	3	16	33						
		M ¹ _E	3	16	33	0.4	-6				
		M ¹ _N	3	16	34			+5			
		M ² _E	3	16	41		±3				
		M ² _N	3	16	42	0.5		-3			
		M _Z	3	16	46	0.6			±2		
F	3	18	19								
261	Dec. 10	i _P	10	03	23		-1.2	+2.0	+1.8		Celebes Sea.
		i _N	10	04	47						
		i _Z	10	04	47	2.5			±2		
		i _N	10	04	49	3.9			±2		
		e _E	10	06	31						
		e _N	10	06	29	3.3			±2		
e _E	10	08	47	3.2	±2						
eF	10	18	±								
262	Dec. 11	eP ² _N	21	43	40					67?	Southeastern part of Tokushima Prefecture.
		S _E	21	43	49						
		M _E	21	43	52	0.9	-1				
		i	21	43	53	0.5		-1			
		F	21	44	56						
263	Dec. 15	eP _Z	2	05	02					4105	Tibet, China.
		P _E	2	05	06		+3.0				
		iP ² _Z	2	05	06				+5.8		
		i _{EZ}	2	06	39						
		S _{EN}	2	10	55						
		S _{REN}	2	13	42						
		i _E	2	14	03						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
264	Dec. 15	i _N	2	14	00					70	Lower basin of the Hidaka River, Wakayama Prefecture.
		i _Z	2	13	55	10.5					
		i _N	2	16	25						
		L ^Q _N	2	16	59	33.0					
		eL ^{PE}	2	18	31						
		eL ^{PZ}	2	19	05						
		M _E	2	19	38	16.7	-57				
		M _N	2	19	16	18.6		+101			
		M ¹ _Z	2	19	52	20.3			-14		
		M ² _Z	2	23	04	12.0			+21		
		eF	3	22	±						
265	Dec. 15	P _E	19	19	39					7230	SW off Fiji IIs.
		S _{EN}	19	19	48						
		M _E	19	19	49	0.5	-4				
		M _N	19	19	49				-3		
F	19	20	37								
266	Dec. 17	P _{EN}	19	25	03		+3.5	-5.0		4105	Near New Ireland, Melanesia.
		S _E	19	33	43						
		SM _N	19	33	47	4.4			-7		
		eF	19	49	±						
		e _E	19	54	34						
267	Dec. 17	P _N	16	00	19					4105	Near New Ireland, Melanesia.
		P _Z	16	00	14						
		eS?	16	06	12						
		SR ² _E	16	09	21						
		e _Z	16	09	26						
		eM _N	16	15	29	15.0			±1		
		eM _Z	16	17	15	18.0					
eF	16	42	±								
267	Dec. 17	S ² _E	23	06	21					4105	Local Shock.
		M _{EN}	23	06	22	1.4	±2		±1		
		F	23	06	28						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			g.	m.	s.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
268	Dec. 21	P ² EN	2	39	12					300?	Off the Note Peninsula.
		S ² EN	2	39	52	2.0	+4				Very faint record.
		ez	2	39	52						
		eF	2	44	±						
269	Dec. 21	ePEN	6	45	06					60	In the Kii Channel.
		ePz	6	45	05						
		iz	6	45	07						
		SEN	6	45	14						
		M ¹ E	6	45	15	0.7	-4				
		M ² E	6	45	21	0.5	+4				
		M _N	6	45	21	0.6		±3			
		Mz	6	45	19	0.8			±2		
270	Dec. 24	eN	15	42	13						Marianne IIs?
		ez	15	42	17						
		eN	15	43	09	5.0		±1			
		eE	15	45	56	3.9	±1				
		eF	15	52	±						
271	Dec. 25	eP _E	6	31	49						Marianne IIs.
		eP _N	6	31	47						
		Pz	6	31	46						
		eE	6	35	19						
		eN	6	35	46						
		M _N	6	39	28	18.8		±1			
272	Dec. 26	P	22	55	34					81	Mouth off the Yosino R., Tokushima Prefecture.
		S	22	55	45						
		M ¹ E	22	55	46	0.4	+16				
		M ¹ N	22	55	46			-13			
		Mz	22	55	46	0.8			+9		
		M ² E	22	55	48		+23				
		M ² N	22	55	50			-15			

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			g.	m.	s.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
273	Dec. 30	eF	23	00	±						
		eE	8	59	54						Local shock.
		eSE	8	59	46	1.3					
		eSN	8	59	59	1.3					
		eSZ	8	59	58	1.3					
		M _E	9	00	03	0.8	±1				
		M _{NZ}	9	00	02	0.8		±2	±1		
274	Dec. 30	P _E	12	10	34					48	Felt at Sumoto, Awadi Province.
		P _{NZ}	12	10	33			-1			
		SEN	12	10	40						
		M _E	12	10	43	0.4	±3				
		M _N	12	10	43	0.3		+3			
		F	12	11	08						
275	Dec. 31	i _N	19	09	29						Damage in NW of Mexico.
		eN	19	30	12	20.0		+3			
		ez	19	31	00						
		eF	19	47	±						

From No. 323 to No. 389, 1934.

SUMOTO JAPAN.

SEISMOLOGICAL BULLETIN

A Branch Station of the Kobe Meteorological Observatory of Japan.

$\varphi=34^{\circ} 21'$ $\lambda=134^{\circ} 53'$ $h=109.0$ m. Underground: Cretaceous.

Instrument: Omori's Seismograph.
(Horizontal Pendulum.)

Wiechert Seismograph.
(Horizontal & Vertical)

Oct.

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	17.4	2.3	0.0004	20
AN:	17.2	1.9	0.0002	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	4.6	Aperiodic	0.004	121
AN:	4.4	"	0.002	114
Az:	4.4	"	0.001	58

Nov.

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	17.3	2.1	0.0002	20
AN:	17.0	1.7	0.0002	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	4.8	Aperiodic	0.003	111
AN:	4.5	"	0.002	108
Az:	4.3	"	0.002	61

Dec.

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	16.2	3.0	0.0001	20
AN:	17.3	2.1	0.0002	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	4.6	Aperiodic	0.004	118
AN:	4.4	"	0.003	102
Az:	4.3	"	0.001	60

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					AE μ	AN μ	Az μ		
323	Oct. 3	ePEN	1 47 07		± 0.4	+2			Near Siomisaki, south end Kii Peninsula.
		SEN	1 47 12						
		ME _N	1 47 12						
		F	1 47 38						
324	Oct. 3	ePEN	22 58 48					25	In the Kii Channel.
		SEN	22 58 51						

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					AE μ	AN μ	Az μ		
325	Oct. 5	ME	22 58 51		+3				Near Amino, northern part of Kyōto Prefecture.
		ME _N	22 58 52						
		F	22 59 34						
		ePN	16 06 08						
326	Oct. 5	SEN	16 06 25		+2				South of Erimo Cape, Hok- kaido. Felt in the Pacific coast of Oou and Hokkaido.
		ME	16 06 26						
		ME _N	16 06 27						
		F	16 07 18						
		ePE	20 28 00						
		ePN	20 28 03						
327	Oct. 7	ez	20 28 16		-5				Southeastern part of Toku- sima Prefecture.
		SE	20 30 26						
		SN	20 30 30						
		Sz	20 30 36						
		ME	20 32 41						
		ME _N	20 32 16						
		MZ	20 34 01						
		F	20 52 ±						
		P	3 01 27						
		S	3 01 35						
328	Oct. 10	ME	3 01 36		+9				South off Fiji Is.
		ME _{NZ}	3 01 36						
		F	3 02 58						
		iPEZ	15 52 37						
		iPN	15 52 38						
		iSEZ	16 01 18						
329	Oct. 10	iSz	16 01 16		+50				
		ME _E	16 01 24						
		ME _N	16 01 26						
		ME _Z	16 01 23						
		P'PENZ	16 20 21						
		eF	16 42 ±						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
329	Oct. 11	S?	1	05	37						Local shock.
		M _{EN}	1	05	37		-3	-5			
		F	1	05	50						
330	Oct. 13	S	13	11	56						Near Wakayama City.
		M _{EN}	13	11	56		±1	-2			
		F	13	12	07						
331	Oct. 13	S	14	04	18						Lower basin of the Arita River, Wakayama Prefecture.
		M _E	14	04	18		±2				
		M _N	14	04	18	0.4		-3			
		F	14	04	51						
332	Oct. 18	P _E	7	57	45		(+)	-0.9		5810	Near New Heblides IIs.
		P _N	7	57	49						
		S _E	8	05	13						
		S _N	8	05	12						
		M _{P_E}	8	05	33	8.1	+2				
		M _{P_N}	8	05	30	8.4		+2			
		F	8	40	±						
333	Oct. 18	P _{EN}	22	54	30			+0.4		97	In the Kii Channel.
		e _Z	22	54	38						
		S _E	22	54	43						
		S _{NZ}	22	54	44						
		M _E	22	54	44	0.4		-3			
		M _N	22	54	45	0.5		+11			
		F	22	55	56				+3		
334	Oct. 19	e _{EN}	2	47	39						Near Akana, Simane Prefecture.
		S _{EN}	2	47	48						
		M _E	2	47	50	0.4	±0.4				
		M _N	2	40	50	0.6		-1			
		F	2	48	15						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
335	Oct. 20	e _{PEN}	15	00	40						35	Near Siga, Wakayama Prefecture.
		S _{EN}	15	00	44							
		M _E	15	00	45	0.5	-2					
		M _N	15	00	45	0.4			-3			
		F	15	01	17							
336	Oct. 20	S _{EN}	22	25	39							Near Tadono, Wakayama Prefecture.
		M _N	22	25	40	0.3		+2				
		F	22	25	59							
337	Oct. 21	S _{EN}	3	44	35							Local shock.
		M _{EN}	3	44	35		+2	+4				
		F	3	44	52							
338	Oct. 21	P _Z	17	57	47						1860	Marianne IIs.
		P _{EN}	17	57	52							
		e _{SE}	18	01	04							
		e _{SN}	18	01	03							
		M _E	18	06	27	7.5						
		M _N	18	06	18	8.4			±1			
		e _F	18	40	±							
339	Oct. 21	i _E	18	35	23							ESE off Siyoa Cape, Hukusima Prefecture.
		i _N	18	35	27							
		e _F	18	40	±							
340	Oct. 23	e _{P_E}	7	47	42							Near Mt. Aso, Kyûsyû district.
		e _{P_N}	7	47	41							
		S _{EN}	7	47	50							
		S _Z	7	47	51							
		M _E	7	47	53	0.6	±2					
		M _N	7	47	51	0.5			±3			
341	Oct. 23	M _Z	7	48	08	0.9						-1
		F	7	49	53							
341	Oct. 23	e _{PEN}	20	34	48					66	In the Kii Channel.	

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
342	Oct. 25	SEN	20	34	57						
		SZ	20	34	56						
		ME	20	34	57	0.4	+5				
		MN	20	34	58	0.4		+4			
		F	20	36	00						
		S	22	54	36						Local shock.
		MEZ	22	54	38	0.3	-6		-3		
343	Oct. 26	MN	22	54	38	0.2		-5			
		F	22	55	05						
		PE	14	51	32					3755	Probable epicenter, Celebes Sea.
		PN	14	51	31						
		PZ	14	51	30						
		S	14	57	04						
		ME	14	57	08	3.6	+8				
344	Oct. 26	MN	14	57	09	4.0		+6			
		MZ	14	57	08	4.0			-3		
		F	15	06	±						
		iP	17	12	37		-2.9	-1.8	-3.5	462	East off Tanegasima, northern part of Ryûkyû IIs. Felt in Kyûsyû and Sikoku district.
		ez	17	12	52						
		eEN	17	13	00						
		SE	17	13	39						
345	Oct. 26	SN	17	13	38						
		eSz	17	13	40						
		eLE	17	14	40						
		eLN	17	14	44						
		ME	17	15	58	9.5	-29				
		MN	17	14	57	4.0		-28			
		MZ	17	14	58	14.6			-29		
eF	17	59	±								
345	Oct. 26	P	20	52	32				443	Ditto.	
		SEN	20	53	31						
		Sz	20	53	32						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
346	Oct. 27	ME	20	53	35	0.5	-2					
		MN	20	53	34	0.5		+3				
		MZ	20	53	46	0.9			+4			
		eF	20	59	±							
		P	5	11	11						27	Near Wakayama City.
347	Oct. 30	S	5	11	14							
		ME	5	11	14	0.6	+3					
		MN	5	11	15	0.4		-5				
		MZ	5	11	17	0.6			+1			
		F	5	12	05							
348	Nov. 1	ePEN	21	43	17						34	Near the Arita River, Wakayama Prefecture.
		S	21	43	21							
		ME	21	43	22	0.4	-3	-5				
		F	21	44	09							
349	Nov. 3	eS ² EN	10	22	53							
		MN	10	22	55	0.9		+2				
		F	10	23	43							
350	Nov. 3	PEN	3	37	14						80	Mouth off the Kaibu R., Tokushima Prefecture.
		SE	3	37	24							
		SNZ	3	37	25							
		ME	3	37	25	0.5	+2	-2				
		MZ	3	37	25				+1			
350	Nov. 3	F	3	38	04							
		iPEN	15	05	19		+2.3	-2.8	-3.3	37	Lower basin of the Arita River, Wakayama Prefecture.	
		iPZ	15	05	20							
		iSEN	15	05	24							
		Sz	15	05	25							
		M ¹ E	15	05	24	0.8	-14					
		M ¹ N	15	05	25	0.7		-28				
M ² N	15	05	27	0.4		-19						
M ² E	15	05	28	1.0	+15							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
351	Nov. 4	M _Z	15	05	29	0.6			±6	7640	Near New Hebrides IIs.
		F	15	08	06						
		eP _{EZ}	2	04	38						
		eP _N	2	04	37						
		S _E	2	13	39						
		S _N	2	13	40						
		M _E	2	14	01	11.3	±2				
		M _N	2	14	01	12.2		±3			
eF	2	46	±								
352	Nov. 4	P _E	3	25	21					7580	South off Fiji IIs.
		P _N	3	25	20						
		P _Z	3	25	22						
		S _E	3	34	19						
		S _N	3	34	20						
		M _E	3	34	28	8.4	-6				
		M _N	3	34	26	8.4		-5			
		eF	4	06	±						
353	Nov. 5	S _{EN}	16	43	22						In the Iyo nada, Inland Sea.
		M _E	16	43	24		±1				
		M _N	16	43	27	1.2		+1			
		F	16	43	45						
354	Nov. 5	P _{EZ}	23	09	52					4330	In the Aleutian IIs.
		P _N	23	09	50						
		e _N	23	11	27						
		eS _{EN}	23	15	57						
		eL _E	23	19	58						
		eL _N	23	20	14						
		eL _Z	23	23	±						
		eF	23	46	±						
355	Nov. 6	S _{EN}	12	53	04						In the Kii Channel.
		M _E	12	53	04		-1				

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
356	Nov. 7	M _N	12	53	04	0.2			-2		ENE off Siyoa Cape, Fukushima Prefecture.
		F	12	53	45						
		e _N	11	32	34						
		eS _N	11	33	04						
		e _E	11	33	14						
357	Nov. 8	e _Z	11	33	23						Off the Nadati, Niigata Prefecture.
		F	11	36	±						
		eP _E	3	26	52						
		eP _N	3	26	53						
		eP _Z	3	27	00						
358	Nov. 15	S _{EN}	3	27	42						Near Wakayama City.
		eS _Z	3	27	41						
		M _E	3	28	11	3.1	+12				
		M _N	3	27	59	3.6		+13			
		M _Z	3	28	03	3.4			-4		
		eF	3	41	±						
		P _{EN}	22	05	33						
		S	22	05	37						
359	Nov. 16	M _E	22	05	38	0.5	+1				North off Fiji IIs.
		M _N	22	05	38			±2			
		F	22	06	33						
		eP _N	13	50	59						
		eP _Z	13	50	57						
360	Nov. 16	eP _E	13	51	06						Local shock.
		S _E	13	57	09						
		S _N	13	57	04						
		L _{EN}	14	00	38						
		M _E	14	01	28	20.2	+25				
		M _N	14	02	59	13.0		±8			
		eF	14	23	±						
		eP _N	23	11	53						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
361	Nov. 18	SEN	23	11	57	0.4				5440	Turkestan. Epicenter 37°N 66.5E, (Strasbourg)
		ME	23	11	58		±1				
		MN	23	11	58		±1				
		F	23	12	23						
		PE	3	30	14						
		PN	3	30	12						
		Pz	3	30	13						
		eSE	3	37	17						
		eSN	3	37	20						
		eSz	3	37	19						
		eN	3	38	40						
		eE	3	38	57						
		eP	3	45	±						
362	Nov. 18	PE	9	24	16						Kamchatka.
		PN	9	24	14						
		Pz	9	24	13						
		eF	9	40	±						
363	Nov. 18	ePEZ	22	48	07					8590	A distant earthquake.
		ePN	22	48	09						
		SE	22	58	49						
		SN	22	58	06						
		eF	23	18	±						
364	Nov. 21	ePEN	12	11	27	0.5				38	Near Wakayama City.
		SEN	12	11	33		±1				
		ME	12	11	33						
		MN	12	11	33		+1				
		F	12	12	05						
365	Nov. 26	P	12	14	26					2825	Strong shocks were felt at Manila, Philippine.
		eSEN	12	18	55						
		eLE	12	22	12						
		eLN	12	22	31						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
366	Nov. 27	eF	11	40	±					588	Near Kujuakuri hama, Tiba Prefecture.	
		ePE	5	51	07							
		ePN	5	51	03							
		ePz	5	51	10							
		SE	5	52	24							
		SN	5	52	25							
		Sz	5	52	28							
		ME	5	52	57		3.5	±4				
		MN	5	52	54		3.8		-6			
		Mz	5	52	54		4.2					-3
367	Nov. 27	PE	6	20	44		-0.9?			3435	Molucca Passage. Felt in N. Celebes, N. Molucca and Sangi IIs, East Indies.	
		iPN	6	20	43				-4.6			
		iPz	6	20	42							-6.6
		eSE	6	25	55							
		eSN	6	25	57							
		ez	6	26	12							
		eLE	6	28	17							
		eLN	6	28	40							
		iE	6	31	05							
		iN	6	31	04							
368	Nov. 29	eF	6	50	±					450	NE off Hatidyô Isl.	
		PEZ	12	56	18							
		PN	12	56	20							
		eSE	12	57	18							
		eSN	12	57	21							
		ME	12	57	31		2.1	-2				
369	Nov. 30	MN	12	57	54	2.8		±1			A distant earthquake. Mexico?	
		Mz	12	57	26	2.7			±3			
		eF	13	04	±							
		eE	2	44	01							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks	
			G.	M.	T.		A _E	A _N	A _Z			
			h	m	s	s	μ	μ	μ	km.		
370	Nov. 30	eN	2	43	50						Time is uncertain.	
		eF	3	48	±							
		ePN	23	06	50					102		Near Kōti City, Sikoku district.
		ez	23	07	00							
		SEN	23	07	04							
		ME	23	07	04	0.4	+6					
		MN	23	07	05	0.6		±5				
		MZ	23	07	06	0.8			+2			
F	23	07	46									
371	Dec. 2	PEN	12	07	41					60	Near the Arita River, Wakayama Prefecture. Time is uncertain.	
		S	12	07	50							
		ME	12	07	50	0.6	±6					
		MN	12	07	50	0.4		-8				
		MZ	12	07	50				±2			
		F	12	08	33							
372	Dec. 2	P	13	08	18					57	In the Kii Channel. Time is uncertain.	
		S	13	08	25							
		ME	13	08	26	0.5	+10					
		MNZ	13	08	26	0.4		+20	+3			
		F	13	09	35							
373	Dec. 2	SEN	22	50	36		+1.7	+2.0			Basin of the Arita River, Wakayama Prefecture. Time is uncertain.	
		ME _N	22	50	36	0.4	-3	±2				
		F	22	50	54							
374	Dec. 5	ePEN	3	54	52					21?	Near Wakayama City.	
		SEN	3	54	54							
		ME	3	54	54	0.4	+1					
		MN	3	54	55	0.5		±2				
		F	3	55	18							
375	Dec. 7	ePEN	1	07	15					123	Northern part of the Biwa Lake, Siga Prefecture.	
		ez	1	07	27							

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
376	Dec. 7	eSE	1	07	32						North off Amamiosima, Ryūkyū IIs.
		eSN	1	07	31						
		ME	1	07	42	0.9	-1				
		MN	1	07	45	0.7		+2			
		MZ	1	07	48	0.8			-1		
		F	1	09	41						
377	Dec. 9	eN	10	45	43						Near Yuasa Bay, Wakayama Prefecture.
		eSE	10	48	38						
		eSN	10	48	11						
		eF	10	57	±						
378	Dec. 9	PEN	3	16	16					48	Near Yuasa Bay, Wakayama Prefecture.
		S	3	16	22						
		ME	3	16	22	0.4	+15				
		MN	3	16	23	0.5		-14			
		MZ	3	16	22	0.7			±3		
		F	3	18	05						
379	Dec. 10	eEN	5	48	00						Ditto.
		SEN	5	48	03						
		ME	5	48	03	0.3	+2				
		MN	5	48	04	0.4		±2			
		F	5	48	35						
380	Dec. 11	PE	10	03	20				-0.9?		Celebes Sea.
		PNZ	10	03	19				+1.0	+3.3	
		iENZ	10	04	43						
		iE	10	04	46	3.1	+1				
		iN	10	04	45	2.5		-2			
		iz	10	04	45	2.3			-3		
		eE	10	08	40						
		eN	10	08	39						
380	Dec. 11	ePE	21	43	33					59	SE of Tokushima Prefecture.
		ePN	21	43	29						

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A_E μ	A_N μ	A_Z μ		
		ePz	21 43 31						
		S	21 43 39						
		ME	21 43 39	0.6	-5				
		MN	21 43 40	0.4		+8			
		MZ	21 43 40	0.7			-3		
		F	21 45 03						
		381	Dec. 15	PE	2 04 55				4245
		PN	2 04 58						
		Pz	2 04 57						
		SEN	2 10 51						
		Sz	2 11 09						
		LE	2 13 38						
		LN	2 13 29						
		Lz	2 13 36						
		MN	2 19 14	18.8		-717			
		ME	2 23 19	10.9	-143				
		MZ	2 23 22	10.6			-109		
		eF	3 26 ±						
382	Dec. 15	P	19 19 31				43	Lower basin of the Hidaka River, Wakayama Prefecture.	
		S	19 19 37						
		ME	19 19 37	0.6	+7				
		MN	19 19 38	0.5		-9			
		MZ	19 19 38	0.6			+2		
		F	19 20 51						
383	Dec. 15	PE	19 24 59				7190	SW off Fiji Is.	
		PNz	19 25 00						
		S	19 33 39						
		eF	19 46 ±						
384	Dec. 17	P	16 00 00				3775	Near New Ireland, Melanesia.	
		S	16 05 34						
		eF	16 36 ±						
*385	Dec. 21	iP	6 44 59				37	Perceptible.	

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A_E μ	A_N μ	A_Z μ		
		S	6 45 04						In the Kii Channel.
		ME	6 45 04	0.3	+8				
		M ¹ N	6 45 05	0.4		±12			
		Mz	6 45 08				±3		
		M ² N	6 45 08	0.4		±13			
		F	6 46 23						
		386	Dec. 22	ePE	0 41 38				135
		ePN	0 41 37						
		SEN	0 41 56						
		Sz	0 41 55						
		ME	0 42 23	1.1	+2				
		MN	0 42 02	0.9		±1			
		F	0 43 57						
387	Dec. 25	PEZ	6 31 44		+0.9		(+)?	2090	Marianne Is.
		PN	6 31 42			+1.0			
		SEN	6 35 15						
		SN	6 35 14						
		LE	6 38 05						
		LN	6 38 46						
		ME	6 39 49	13.6	±4				
		MN	6 39 05	13.6		±8			
MZ	6 39 08	13.1			-7				
		eF	7 00 ±						
388	Dec. 26	P	22 55 26				40	Off the mouth of the Yosi-no River, Tokushima Prefecture.	
		S	22 55 31						
		MEN	22 55 32	0.5	-5	-14			
		Mz	22 55 35	0.7			+4		
		F	22 57 26						
389	Dec. 30	P	12 10 30				27	Perceptible. Local shock.	
		S	12 10 33						
		MEN	12 10 33	0.4	+4	-13			
		Mz	12 10 33				±2		
		F	12 11 32						

TOYOOKA JAPAN.

SEISMOLOGICAL BULLETIN

A Branch Station of the Kobe Meteorological Observatory of Japan.
 $\varphi = 35^{\circ} 32'$ $\lambda = 134^{\circ} 49'$ $h = 32.2$ m. Underground: Tertiary.

Instruments: Omori's Seismograph.
 (Horizontal Pendulum)

Wiechert Seismograph.
 (Horizontal & Vertical)

Oct.

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	21.0	3.0	0.001	20
AN:	20.8	3.0	0.001	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	5.9	Aperiodic	0.005	95
AN:	5.1	„	0.007	96
AZ:	4.0	7	0.003	67

Nov.

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	21.0	3.0	0.001	20
AN:	20.8	3.0	0.001	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	5.9	Aperiodic	0.005	95
AN:	5.1	„	0.007	96
AZ:	4.0	7	0.003	67

Dec.

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	21.0	3.0	0.001	20
AN:	20.8	3.0	0.001	20

	T_0	ε	$\frac{r}{T_0^2}$	V
AE:	5.8	Aperiodic	0.005	95
AN:	5.9	„	0.007	96
AZ:	3.6	7	0.003	67

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A_E μ	A_N μ	A_Z μ		
104	Oct. 5	P	16 05 45	0.5	-2.1	-3.1	+5.2	30	Near Amino, NW of Kyoto-Prefecture.
		SE _N	16 05 49						
		Sz	16 05 50						
		ME _N	16 05 50						
		F	16 09 29						
105	Oct. 5	PE	20 28 09					South off Erimo Cape,	

No.	Date	Phase	Time G. M. T.	Period s	Amplitude			Δ km.	Remarks
					A_E μ	A_N μ	A_Z μ		
106	Oct. 10	PNz	20 28 08		+7			7250	Hokkaido. Felt in Pacific coast of Oou and Hokkaido.
		Sz	20 31 02						
		eLE	20 30 48						
		eLN	20 31 29						
		ME	20 32 26						
		eF	20 41 ±						
		P	15 52 44						
iz	15 52 47								
SE	16 01 26								
SN	16 01 27								
Sz	16 01 28								
PP'z _N	16 20 20								
iPP'z	16 20 19								
eF	16 31 ±								
107	Oct. 15	eLN	8 30 24				-20	A distant earthquake, By Omori's Seismograph.	
		eMN	8 30 57						
		eFN	8 42 ±						
108	Oct. 21	ePE	17 58 11					Marianne IIs.	
		ePN	17 58 09						
		eSEN	18 01 24						
		eF	18 20 ±						
109	Oct. 26	ePE	14 51 42				3895	Probable epicenter, Celebes Sea. S phases in distinct.	
		PN	14 51 41						
		Pz	14 51 58						
		SE	14 57 21						
		SN	14 57 22						
		Sz	14 57 18						
eF	15 12 ±								
110	Oct. 26	PEz	17 12 52				571	East off Tanegasima, northern part of Ryūkyū IIs. Felt in Kyūshū and Sikoku district.	
		PN	17 12 51						
		SE	17 14 11						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
		SN	17	14	08	5.0	+74	+47	-22		
		Sz	17	14	06						
		LE	17	15	09						
		LN	17	15	11						
		ME	17	16	02						
		MN	17	15	52						
		MZ	17	16	56						
		eF	17	44	±						
111	Nov. 1	PN	7	33	03	±2	±2		27	Near Ikuno, Hyôgo Prefecture.	
SEN	7	33	06								
ME _N	7	33	06								
F	7	33	22								
112	Nov. 8	PE	3	26	48	-16	-27	+8		266	Off the Nadati, Niigata Prefecture.
		PNZ	3	26	47						
		eSE	2	27	22						
		SNZ	3	27	23						
		ME	3	27	53						
		MN	3	27	40						
		MZ	3	27	58						
eF	3	33	±								
113	Nov. 18	PEN	9	24	06						Kamchka. Very faint record.
		Pz	9	24	05						
		eF	9	27	?						
114	Nov. 26	PEN	12	14	38						Strong shocks were felt in near Manila, Philippine. By Omori's Seismograph.
		SN	12	19	53						
		eF	12	33	±						
115	Nov. 27	PE	5	51	09					623	Near Kuzyukuri hama, Tiba Prefecture.
		ePN	5	51	10						
		Pz	5	51	08						
		SE	5	52	32						
		SN	5	52	29						

No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks		
			G.	M.	T.		A _E	A _N	A _Z				
			h	m	s	s	μ	μ	μ	km.			
		Sz	5	52	28		+10	-18	+10				
		ME	5	52	44								
		MN	5	52	33								
		Mz	5	52	41								
		eF	5	55	±								
116	Nov. 27	PE	6	20	59					3500	Molucca Passage. Felt in N. Celebes, N. Molucca and Sangi IIs., East Indies.		
		PNZ	6	20	57								
		SE	6	26	16								
		eSN	6	26	17								
		LE	6	28	43								
eF	6	38	±										
117	Nov. 29	PE	12	56	29						NE off Hatidyô Isl. Masked by microseisms.		
		ePN	12	56	33								
		Pz	12	56	28								
		eF	13	00	±								
118	Dec. 7	PEN	1	07	10		(+)	(-)		116	Northern part of Biwa Lake, Siga Prefecture.		
		Pz	1	07	11								
		S	1	07	26								
		ME	1	07	28							0.4	-21
		MN	1	07	28							0.2	+17
		Mz	1	07	27							1.2	-20
		F	1	08	33								
119	Dec. 15	ePE	2	05	03						Tibet, China.		
		Pz	2	05	01								
		SE	2	13	39								
		SN	2	13	40								
		eLE	2	17	09								
		LN	2	16	06								
		ME	2	19	03							16.8	-92
		MN	2	19	45							16.0	-138
Mz	2	20	47		+40								
eF	2	55	±										

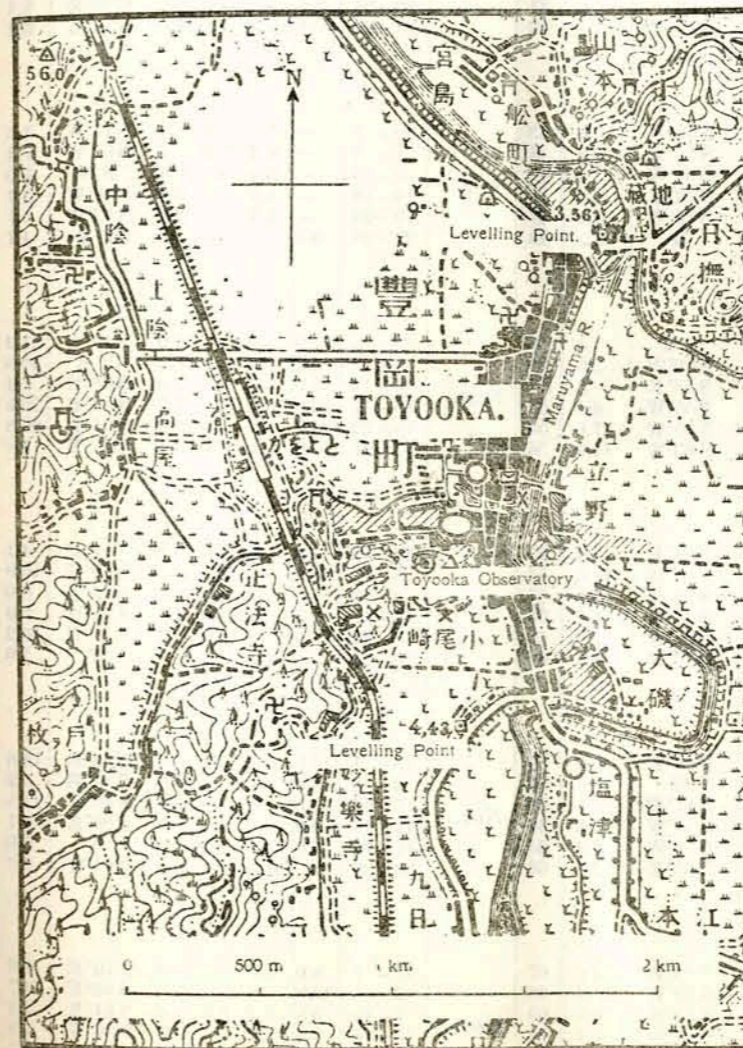
No.	Date	Phase	Time			Period	Amplitude			Δ	Remarks
			G.	M.	T.		A _E	A _N	A _Z		
			h	m	s	s	μ	μ	μ	km.	
120	Dec. 17	ePz	16	00	20						Near New Ireland, Melanesia. Very faint record.
		P _{EN}	16	00	28						
		eF	16	24	±						
121	Dec. 19	P	3	47	47					27	Near Miyazu, Kyōto Prefecture.
		S _{EN}	3	47	51						
		M _{EN}	3	47	51	±4	+12				
		F	3	48	18						
122	Dec. 25	eF _E	6	31	12						Marianne Is.
		eL _E	6	36	00						
		eF _E	6	46	±						
123	Dec. 31	eE	19	08	21						Damage in NW of Mexico.
		eN	19	08	37						
		eF	20	11	±						

TOYOOKA JAPAN.

The Observation of the Tilting of the Earth Crust at the Toyooka Observatory.

On the 23rd May, 1925 there occurred a great earthquake at the northern part of the Tazima province, the epicenter was 13 kilometers north of Toyooka, and on the 7th March, 1927 again a destructive earthquake occurred at the northern part of the Tazima and Tango Provinces and its epicenter was about 22 kilometers east of Toyooka. To investigate the after effects of those earthquakes, the observations of the tilting of the earth surface were made at the Toyooka observatory by the Ishimoto's tiltmeter. The details of the instrument were described by Dr. M. Ishimoto in *Jap. Journ. of Astro. and Geophys.*, Vol 6, Page 83 (1928). The Toyooka

observatory is the branch office of the Kobe Met. Observatory, and is situated at the western part of the hill Zimmu-yama, Toyooka. The instruments were installed in the seismometre house of the observatory, in which the temperature is kept nearly constant. Topographical features of the neighbourhood of Toyooka can be seen in the figure, in which the site of the observatory is indicated by ⊙. The next tables are the results of the observations, which were made by Mr. Hyōzirō Yamazaki, the superintendent of the Toyooka observatory.



TOYOOKA JAPAN.

Tilting of Earth at Toyooka (1934)

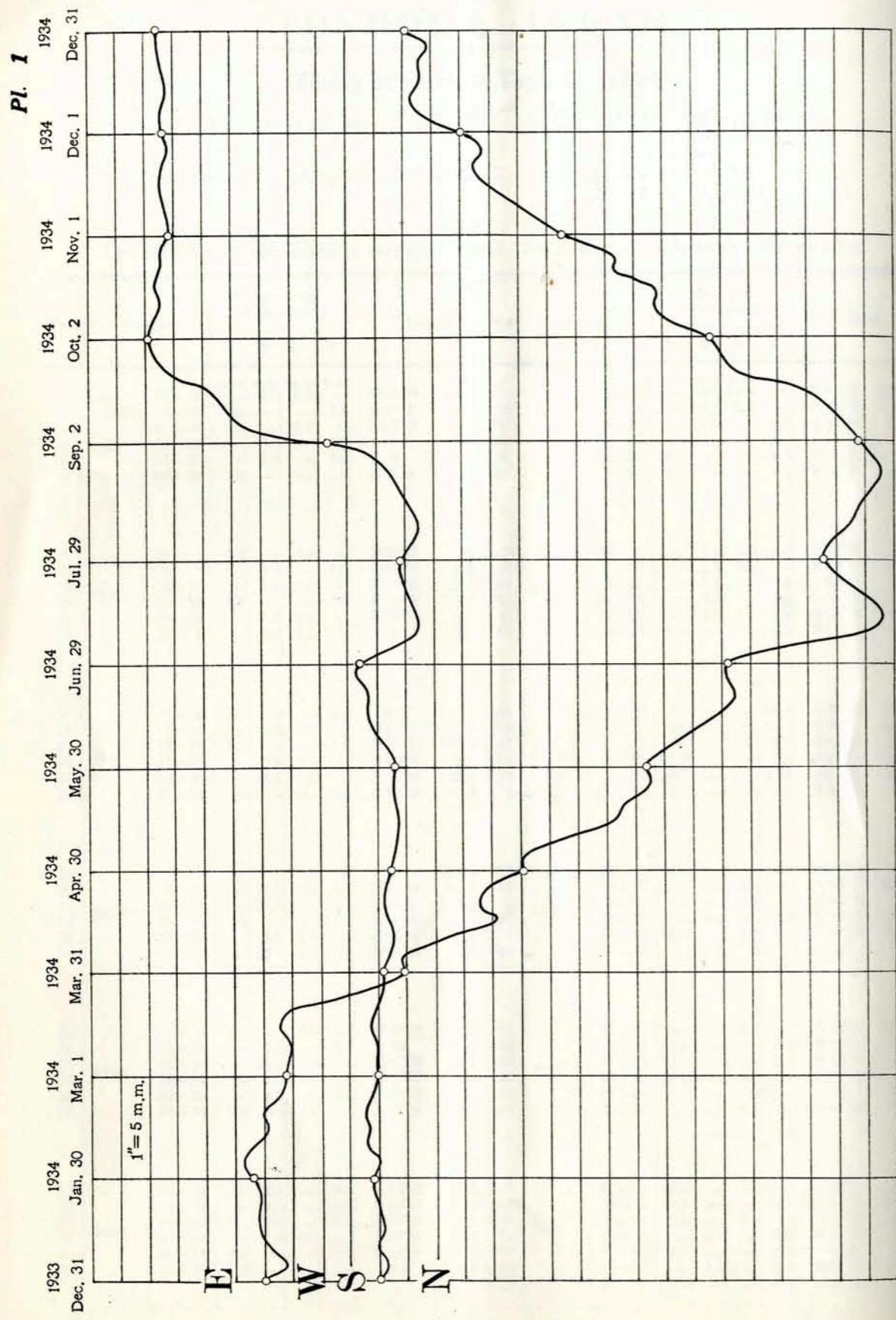
$\phi = 35^{\circ} 32'$ $\lambda = 134^{\circ} 49'$ $h = 32.2\text{m}$. Underground: Diluvial Series.

Constants.

Instruments: Isimoto's Tiltmeter
Component T°
E—W 15.0^s
S—N 16.7^s

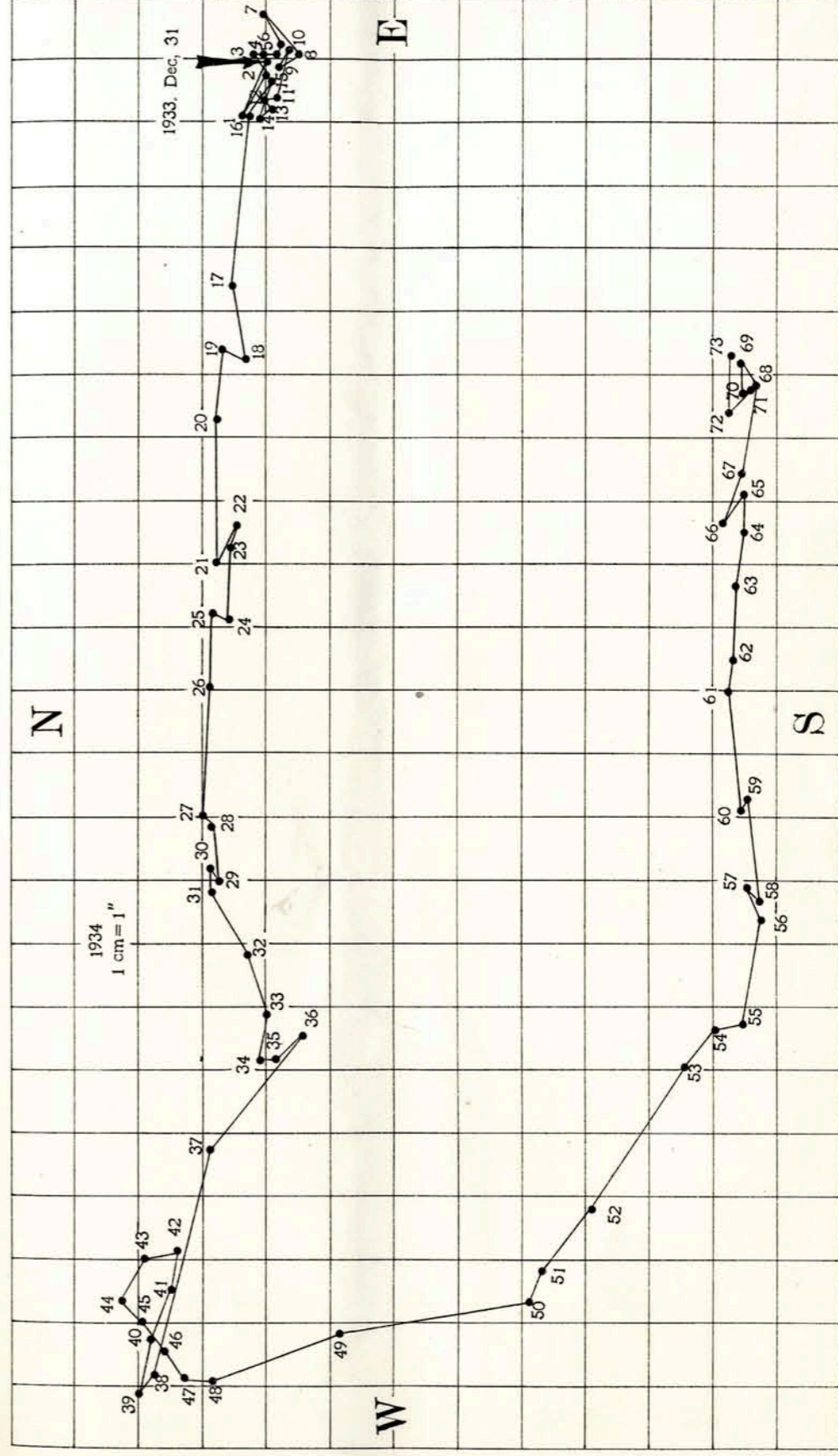
The reading are expressed in millimeters and 10m.m corresponds to the Tilting of 1".

No.	Period	Component (downward)				Tilting	No.	Period	Component (downward)				Tilting		
		E	W	N	S				E	W	N	S			
1	Dec. 31-5	9.5	3.5			N70°W	10.1	37	30-4	18.0	14.0			N53°W	22.9
2	1933 6-10	7.5		3.5		S65°E	8.3	38	5-9	36.0	9.0			N76°W	37.0
3	11-15	3.0	2.0			N56°E	3.6	39	10-14	2.5		2.0		S52°W	3.2
4	Jan. 16-20		0.0	1.0		S	1.0	40	July 15-19	8.0		2.0		S76°E	8.3
5	21-25		0.0	2.0		S	2.0	41	20-24	8.0		2.5		S73°E	8.4
6	26-30	1.5		1.0		S55°E	1.8	42	25-29	6.0		1.5		S76°E	6.2
7	31-4	5.0	3.0			N59°E	5.8	43	Aug. 30-3		1.5	5.0		N17°W	5.3
8	5-9		6.5	5.0		S53°W	8.2	44	4-8		6.5	3.5		N62°W	7.4
9	10-14		3.0	1.5		N63°W	3.4	45	9-13		3.5	3.5		S W	5.0
10	15-19	3.0		1.0		S72°E	3.2	46	14-18		4.5	3.0		S56°W	5.4
11	20-24		8.0	2.0		N76°W	8.2	47	19-23		4.5	3.5		S52°W	5.7
12	25-1		0.0	1.5		N	1.5	48	24-28	0.5		4.0		S7°E	4.1
13	2-6		1.0	1.0		S W	1.4	49	Sept. 29-2	7.0		20.0		S19°E	21.2
14	7-11		2.0	1.5		N52°W	2.5	50	3-7	4.5		30.0		S9°E	30.3
15	12-16	5.5		3.5		S58°E	6.5	51	8-12	5.0		2.0		S68°E	5.4
16	17-21		5.0	3.5		N55°W	6.1	52	13-17	10.0		7.5		S53°E	12.5
17	22-26		26.5	2.0		N85°W	27.0	53	18-22	22.5		14.0		S57°E	26.8
18	27-31		11.5	1.5		S83°W	11.6	54	23-27	6.0		5.0		S50°E	7.8
19	1-5	1.5		3.0		N26°E	3.4	55	Oct. 28-2	1.0		4.0		S14°E	4.1
20	6-10		11.5	1.0		N85°W	11.6	56	3-7	16.5		3.0		N80°E	16.9
21	11-15		23.0	0.5		S89°W	23.0	57	8-12	4.5		2.0		N66°E	5.0
22	16-20	6.5		3.0		S66°E	7.2	58	13-17		2.5	1.5		S59°W	2.9
23	21-25		2.5	1.0		N68°W	2.7	59	18-22	16.0		2.0		N83°E	16.2
24	26-30		12.5	0.5		N88°W	12.5	60	23-27		1.0	0.0		W	1.0
25	1-5	1.0		2.0		N26°E	2.3	61	Nov. 28-1	18.5		2.0		N84°E	18.6
26	6-10		12.5	0.0		W	12.5	62	2-6	5.0		0.5		S84°E	5.2
27	11-15		20.0	1.0		N87°W	20.1	63	7-11	11.5		0.5		S88°E	11.5
28	19-20		1.5	1.0		S57°W	1.8	64	12-16	9.0		1.0		S84°E	9.1
29	21-25		9.0	1.5		S81°W	9.2	65	17-21	6.0		0.0		E	6.0
30	26-30	2.0		1.0		N63°E	2.3	66	22-26		4.5	2.5		N61°W	5.3
31	31-4		4.5	0.5		S84°W	4.6	67	Dec. 27-1	8.0		3.0		S70°E	8.6
32	5-9		9.0	5.5		S59°W	10.6	68	2-6	13.5		1.5		S84°E	13.7
33	10-14		10.5	3.0		S74°W	10.9	69	7-11	3.5		2.5		N61°E	4.3
34	15-19		7.0	0.5		N86°W	7.1	70	12-16		4.5	0.5		S84°W	4.5
35	20-24	0.5		2.5		S11°E	2.6	71	17-21	0.5		0.5		S E	0.7
36	25-29	3.0		3.0		S E	4.8	72	22-26		4.0	3.0		S54°W	5.0
								73	27-31	9.0		0.5		S87°E	9.1



1934

Pl. 2



1934