



THE
SEISMOLOGICAL
BULLETIN

OF

THE HUKUOKA BRANCH OBSERVATORY

OF

THE CENTRAL METEOROLOGICAL OBSERVATORY

HUKUOKA JAPAN

VOL. V. No. 1

FROM JANUARY TO JUNE

1938

By

The Hukuoka Branch Observatory

of

The Central Meteorological Observatory

Hukuoka Japan

September 1938

Locality :

Longitude 130° 22' 43" E
 Latitude 33° 34' 47" N
 Height from sea level 2.5m
 Underground Sandy Loam (Quaternary)

Seismographs and their constants:

Seismograph	Wiechert			Mainka		C. M. O. Mag. I		
	E-W	N-S	U-D	E-W	N-S	E-W	N-S	U-D
Component	E-W	N-S	U-D	E-W	N-S	E-W	N-S	U-D
Mass (kg)	200	200	80	450	450	2	2	1
Damper	Air	Air	Air	Air	Air	Mag.	Mag.	Mag.
T. (sec.)	Jan.	5.1	4.6	4.8	7.6	12.2		
	Mar.	4.9	4.7	4.9	7.8	12.7		
	May	4.9	4.9	4.9				
r/T. ²	Jan.	0.02	0.04	0.04	0.00	0.01		
	Mar.	0.01	0.01	0.02	0.02	0.02		
	May	0.01	0.01	0.04				
v	Jan.	8	4	3				
	Mar.	6	6	4				
	May	6	5	4				
V	Jan.	75	81	81	109	73		
	Mar.	89	76	74	89	67		
	May	86	70	74				

No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	Period	First motion	Remarks.
1	January 1	P eS Me F	23	31 33 35 0	17.3 39.1 41.5 25-	toE26	17.1		SW off Titizima
2	2	eP S Me F	7	54 55 55 8	37.5 13.7 37.0 00	toW9	2.2		SWern part of Atetu district, Okayama Prefecture.
3	8	P S F	5	51 51 53	23.4 40.0 25-				Iyo-nada
4	10	P S Me Mn F	20	55 56 56 56 21	27.1 13.1 26.9 31.4 30-	toW49 toS56	2.2 2.2		toE, toS, toD SE off Yakusima.
5	11	iP eS Me Mz Mn F	15	13 13 14 14 14 46	0.7 57.1 25.3 25.3 26.0 -	toE418 toD325 toN500	2.2 2.5 2.7		toW5 toS toD? Off the Tanabe Bay.
6	11	P S F	17	34 35 38	54.5 53.7 -				ditto
7	16	eP eS F F	16	3 4 6	40.6 3.5 45-				Mouth of R. Sigenobu, Ehime Prefecture
8	19	eP S F	5	13 13 16	28.8 57.7 25-				Sern part of Hyuganada
9	22	eP S F	18	21 21 22	23.9 36.2 25-				The neighbouring of
10	24	P S F	7	27 27 28	16.6 35.9 15-				The vicinity of Nagasima, Kagosima Prefecture
11	24	eP eS? F	10	51 56 12	44.1 10.4 30-				A distant earthquak
12	2	P S F	13	3 4 8	33.3 47.5 30-				The vicinity of Hinomisaki, Wakayama Prefecture



No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	Period second	First motion	Remarks.
13	27	eP eS F	6	8 8 10	35.8 50.8 10-				The vicinity of Utami, Miyazaki Prefecture.
14	29	eP eS F	20	12 12 13	42.5 57.2 30-				Izuhara, Nagasaki Prefecture
15	30	eP oS F	6	16 16 16	24.9 32.6 50-				Hukuoka.
16	31	eP? S F	18	29 29 29	24.5 35.4 50-				Kumamoto-
February									
17	1	eP S L Me Mz Mn F	19	11 17 20 20 24 26	38.5 32.0 16.5 57.8 13.6 28.3	toW1350 toU2600 toN275	57.0 23.0		New guinea.
					To continued thenext earthquake				
18	1	eP F	19 22	57 36	13.3 30-				Ditto
19	2	eP? eS? F	4	34 34 36	15.5 57.1 30-				
20	3	eP eS? F	12 13	57 1 8	41.8 16.2 30-				
21	4	eP eS F	1	26 27 27	41.7 4.4 50-				The North part of Hyuganada
22	4	eP eS F	17	5 5 6	1.8 30.3 30-				Hyuganada.
23	5	eP? F	9 10	57 2	50.1 50-				
24	6	P eS Mn F	14	44 46 47 57	55.3 46.9 44.4 -				A direction of Phylipin, The vicinity of Honzyo, Saitama Prefecture.
25	8	eP S F	8	15 16 16	50.6 1.0 40-				Kumamoto



No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	Period motion	First motion	Remarks
26	8	eP? S F	9	11 11 12	51.1 55.6 4-				Off the Dainao, Formosa.
27	8	P eS F	13	16 19 30	3.2 47.3 -				Nagasaki
28	15	P S F	8	33 33 35	3.0 18.7 30-				The vicinity of Singo Okayama Pref.
29	19	eP S F	23 0	57 58 0	58.8 36.9 37-				
30	21	eP eS F	14	6 7 10	30 25.5 20-				Nagasaki
31	22	eP? eS F	19	49 49 49	12.9 19.6 45-				Nagasaki
32	27	eP wS F	1	33 36 46	23.3 39.8 20-				S off Etrof Is.
33	27	P eS F	22	43 43 45	17.2 39.5 5-				The vicinity of Sugi, Miyazaki Pref,
34	March 1	P S F	6	0 1 12	42.8 11.9 20-			toE? toN toU	
35	4	eP S F	17	9 9 12	29.9 53.9 30-				Sern part of Kumamoto pref.
36	5	eP? eS F	20	43 43 47	1.1 47.8 -				E off Tanegasim
37	7	eP S F	14	19 19 20	15.3 41.2 55-				The Bay of Sibusi,
38	8	eP eS F	5 6	43 49 21	33.0 25.1 40-				Distanse earthq
39	14	ePe eSn F	5	19 23 46	15.9 29.6 45-				Ditto



No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	Period second	First motion	Remarks
40	16	eP eS F	20	40 40 42	1:2 18.5 40 -				S off Osima, Yamaguti Pref. Distant earthquake
41	22	eP? eS? F	15 16	33 42 30	30:0 22.1 -				Near the mouth of R. Sendai,
42	28	P S Me Ma F	13	6 6 6 6 14	0:4 23:8 32:7 33.1 -	toW59 toS43	2.2 2.2		Basi Channel.
43	30	eP eS eL F	22	35 37 40 16	7:1 39.9 46.3 -				
44	^Y April 1 [^]	eP S F	13	41 42 45	21.5 12.3 20-				Tokusima pref.
45	?	eP eS F	21	35 39 35	9:4 54.0 30-				The vicinity of Etroff Is.
46	2	P eS F	7	34 38 57	14.2 0.9 -				Ditto
47	13	P S F	2 3	58 8 41	0:5 11.2 -				Distant earthquake
48	14	P S F	1	23 28 45	4.2 5.3 10-				Ditto
49	15	ePe F	0	7 8	40.7 30-				
50	18	eP eS F	11	10 21 20	56:9 36.0 30-				Distant earthquake
51	20	eP eS F	6	38 47 44	21:1 31.2 30-				Ditto
52	21	eP S F	12	15 16 17	40:2 10.8 -				E off Tanegasima
53	23	iPz iPn Se Me F	0	29 29 30 32 14	15:6 17.7 16:8 28.2 15-	toE82	toD1 toN6 15.2		ESE off Amami- Osima.



International
Seismological
Centre

No.	Date	Phase	G. h	M. m	T. s.	Amplitude micron	Period second	First motion	Remarks
54	25	eP eS F	14	47 50 58	34.3 7.3 -				ENE off Sioyasaki
55	May 2	P S F	14	56 57 7	20.3 45.4 55-				S off yakus S off Etoroto
56	3	P S F	19	20 24 30	24.0 7.0 -				
57	5	P S F	18	33 34 36	33.4 10.2 20-				The near of Mituhama The near of ESE of Miyako
58	6	P F	6	0 8	20.3 50.3				
59	9	S? F	15 16	56 10	22.4 10-				A distant earthquake
60	11	eP eS F	8	6 7 14	42.2 52.2 -				SSE off Amamiosima
61	12	P S eL Mn Me F	15	46 53 56 59 16 18	59.1 44.6 41.8 55.7 38.6 20-	toS105 toE239	24.8 26.0		A distant earthquake
62	13	P F	15	12 57	45.3 30-				A distant earthquake
63	14	eP? F	15	8 36	15.9 30-				ditto
64	15	eP F	13	30 39	11.8 -				E off Amamiosima
65	18	P 1S F	19	48 48 49	23.2 28.7 10-				The Karatu Bay Saga prefecture
66	19	P S Me Mz F	17	15 20 26 26 19	34.6 51.3 7.9 19.1 -	toE119 toD830	23.0 27.4		A distant earthquake
67	23	iPe iPz S Mn Mz Me F	7	20 20 22 24 24 24 24	50.9 51.2 53.1 3.2 9.8 18.5 -	toW116 toN680 toD1300 toW1150		toW11.6 toU5.2	Off Sioyasaki

To contineud the next earthquake



No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	Period second	First motion	Remarks
68	23	P S F	8	28	6:5 12.2 30-				Off Sioyasaki
69	26	eP? F	11	12	21.6 30-				The neighbourhood of the Kussharo lake Hokkaido
70	28	P eS Me F	16	45	30:0 48 53:3 51 18.2 17 39 50-	to W37	18.7		
71	30	iP iS L F	14	40	28.5 49 9.1 56 30.7 15 50 -	to W4, to N3		to W, to N	New Caledonia
72	330	eP eS F	23	33	19:5 37 31.4 56 -				Horomusiro
73	31	eP? F	8	9	19.8 17 -				NNW off Amamiosima
74	31	P S F	8	22	7:1 23 33.6 28 30-				ditto
75	June 3	eP eS F	0	30	35:1 33 14.3 40 -				Kasimanada
76	3	eP? F	17	26	24- 29 29 20-				NE off Tanegasima
77	5	P S Mn F	16	33	16:6 35 24:4 36 11.0 42 -	to S53	3.1		The neighbourhood of Edosaki Ibaragi
78	9	eP eS F	13	6	39:7 7 17.5 8 10-				Off Yakusima
79	9	eP S L Me F	19	22	21.6 27 31.8 30 46:3 30 59.5 20 37 -	to W65	14.9		A distance earthqu
80	10	iPn iPe iPz iSe iSn Mn Me Mz F	9	55	59.9 56 0.0 56 2.5 57 57:9 57 59:1 10 0 9:5 0 33:9 1 45.7 57 -	to N4:0 to E3:7 to U3.9			NNW off Miyakojima
						to N1800	11:1		
						to E2640	11:1		
						to U800	8.4		

No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	Period second	First motion	Remarks
									Off Miyakozima
81	10	eP? eS? F	15	23 26 40	34.2 49.7 -				ditto
82	10	eP? F	19	29 43	30.0 -				Miyakozima
83	12	eP eS F	2	35 38 53	41.3 46.2 -				
84	16	iPn iPz iSe Me Mn Mz F	2	16 16 18 18 19 19 37	46.3 46.8 9.4 42.9 41.6 49.0 -	to W10, to N60 to 043 to E956 to N403 to D875	7.2 4.4 8.6	to W, to N S off Amamiosima	
85	16	P eS F	3	43 44 47	12.1 33.0 20-				SW of Amamiosima
86	16	eP eS F	12	54 55 58	49.7 27.6 -				The mouth of river Hizikawa Ehime
87	17	eP eS F	23	38 38 39	13.3 39.9 30-				Kagosima
88	18	eP eS Mn F	0	45 47 48 53	29.5 34.1 23.5 50-	to N36	2.2		Kasimanada
89	20 21	eP eS F	23 0 1	58 8 55	39.3 33.5 40-				A distance earthquake
90	21	eP eS F	6 7	47 51 8	8.4 29.1 -				SE off Taito
91	23	iP S L F	13	6 14 21 8	7.1 49.4 35.1 40-	to W4, to N2		to W, to N, to U	A distance earthquake
92	29	eP eS F	14	4 6 11	14.6 37.4 20-				SE off Sioyasaki

Errata

No	Error	Right
7	Mouth of R. Sigenobu, Ehime	Mouth of the River Sigenobu, Ehime
9	The neighbouring of	The neighbourhood of Kumamoto City
12	Date 2	Date 21
13	The of Utimi, Miyazaki Prefecture.	The Vicinity of Utimi, Miyazaki Prefecture.
21	The North part of.....	The North part of Hyuganada
37	The ... of Sibusu.	The Bay of Sibusu.
47	Phase D	Phase P
54	...off Sioyasaki	ENE off Sioyasaki
55	S off Yakus	S off Yakusima
56	S off Etorcto	S off Etoroto Is.
68	G. M. T. h. m. s. 8 226 6.5 Remarks Blank	G. M. T. h. m. s. 8 26 6.5 Remarks The Bassi Cannel
80	First motion Blank	First motion to E. to N. to W
86	The mouth of river Hizikawa Ehime	The mouth of the river Hizikawa Ehime

Longitude 130° 22' 45" E
 Latitude 33° 34' 47" N
 Height 2.5 m
 Underground Sandy loam (quaternary)

SEISMOLOGICAL BULLETIN

Instruments OF THE their constants

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VOL 5 NO.2

From JULY TO DECEMBER

1938

Month	Instrument	Direction	Height	Scale	Period	Gain	Temp
August	Wisshart's	E-W	200	5.0	0.01	1:1	73
		N-S	"	4.7	0.03	4:4	79
	Hainke's	E-W	400	18.8	0.05		66
		N-S	"	7.8	0.02		110
November	Wisshart's	E-W	200	5.0	0.02	5:8	76
		N-S	"	4.8	0.03	3:1	76
	Hainke's	E-W	400	18.8	0.05		66
		N-S	"	7.8	0.02		110
December	Wisshart's	E-W	200	5.0	0.02	5:8	76
		N-S	"	4.8	0.03	3:1	76
	Hainke's	E-W	400	18.8	0.05		66
		N-S	"	7.8	0.02		110

Longitude 130° 22' 45" E
 Latitude 33° 34' 47" N
 Height 2.5 m
 Underground Sandy Loam (quaternary)

Instruments and their constants

	Comp.	Mass kg	T	r/t	v	V
August						
Wiechert's	E-W	200	5.0	0.01	1.1	78
"	N-S	"	4.5	0.01	8.1	73
"	U-D	80	4.7	0.03	4.4	79
Mainka's	E-W	450				
"	N-S	"				
November						
Wiechert's	E-W	200	5.1	0.03	6.5	75
"	H-S	"	5.0	0.03	6.5	68
"	U-D	80	5.0	0.03	6.3	90
Mainka's	E-W	450	12.8	0.03		66
"	N-S	"	7.8	0.02		110
December						
Wiechert's	E-W	200	5.0	0.02	5.8	78
"	N-S	"	4.8	0.03	5.1	78
"	U-D	80	4.8	0.04	4.3	90
Mainka's	E-W	450				
"	N-S	"				



No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	T	Remarks
93	July 5	eP? eS? F	1 2 1	14 23	31.1 29.4			Distant earthquake
94	5	eP? F	22 23	18 8	08.6			
95	6	eP? eS? eL? F	1 1 1 2	35 44 53 53	39.5 22.1 58.1			Distant earthquake
96	6	eP eS F	13 13 13	5 6 10	23.1 03.2			Kasima-nada
97	8	eP eS F	13 13 15	49 50 53	23.9 02.0			South off Sima Cape
98	7	eP? F	17 18	32 13	43.9			Distant earthquake
99	8	eP? F	14 14	02 12	04.6			West off Okinawa- Kume is.
100	14	eP F	2 2	43 53	00.1			SE off Amamiosima
101	17	eP eS F	5 5 5	31 21 23	09.8 30.3			Bungo Channel
102	17	eP F	13 13	19 50	57.2			Distant earthquake
103	19	eP eS F	9 9 9	0 2 5	31.5 25.6			NW off Ogasawara is.
104	23	eP eS F	23 23 23	08 14 20	04.6 17.6			Distant earthquake
105	27	P eS F	16 17 17	57 1 24	57.6 02.1			NW off Miyako is.
106	29	P F	3 3	14 55	52.4			Distant earthquake
107	August 3	eP? F	8 8	24 35	48.3			E off Siyoa Capo

No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	Remarks
108	4	oP? F	10 10	52 56	15.1		
109	7	eP eS F	.7 7 7	45 46 48	37.6 14.4		Hyuga-nada
110	9	eP eS F	23 23 23	10 11 15	23.7 02.2		
111	12	P S F	3 3 3	0 1 4	53.4 10.5		Bunga Channel
112	12	P S F	22 22 22	25 25 27	30.1 40.0		near Kumamoto City
113	16	oP iP L ME ME MZ F	4 4 4 4 4 4 5	34 39 46 50 50 50 38	31.4 54.0 27.5 05.1 54.5 05.1	+123 13.2 +150 12.1 +750 35.4	Distant earthquake
114	18	P F	9 10	33 12	20.7		Distant earthquake
115	18	F iL F	19 19 19	7 8 31	52.5 57.9		Neighbourhood of Amami-Osima
116	22	P S F	0 0 9	27 27 29	21.7 53.0		
117	22	e i F	21 21 21	47 51 57	47.5 47.5		
118	25	oP F	1 2	36 30	41.0		Batavia
119	25	P oS F	23 23 23	38 39 40	47.8 04.1		Bopu Bay
120	29	oP L? F	15 15 15	27 31 59	32.4 31.0		South China Sea
121	29	P S F	16 16 16	37 38 45	23.5 37.9		SE off Kagosima- Nakanosima

No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	T	Remarks
122	30	eP L? F	11 12 12	57 8 55	02.7 42.3			Distant earthquake
123	31	e F	17 18	52 11	59.5			Distant earthquake
124	September 1	P F	2 3	57 18	09.3			Distant earthquake
125	4	eS eS F	0 0 0	02 03 06	40.4 04.8			
126	6	e F	19 19	50 56	00.1			
127	7	P S L? MH MF ME F	4 4 4 4 4 4 4	06 09 09 11 12 12 40	19.5 40.6 45.7 51.5 04.0 00.1	-73.4 +565.0 -70.0	4.9 16.6 16.2	Kwarenko Formosa
128	10	P eS F	5 5 5	20 21 20	47.3 04.2			Iyo-nada
129	11	e F	17 17	23 57	02.6			SE Sea off Kamaisi
130	11	e F	19 19	46 51	47.3			"
131	20	eP eS F	19 19 19	56 56 58	42.4 44.6			Hukuoka City
132	21	P S F	11 11 11	38 40 47	44.2 44.7			Neighborhood Ogasswara
133	21	P S MN ME eMZ F	18 18 18 18 18 19	54 56 57 57 57 16	17.3 49.5 13.8 24.5 13.8			Kosima-nada
134	October 5	P eS F	16 16 16	37 37 41	32.2 44.8			

No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	T	Remarks
135	8	P	0	00	04.5			Kumamoto City
		S	0	00	15.5			
		F	0	01				
136	8	eP	8	17	50.4			Oita-Saeki Bay
		P	8	19				
137	10	P	19	54	26.7			Distant earthquake
		S?	19	59	33.3			
		L	20	02	52.1			
		F	20	49				
138	12	eP	0	37	31.9			E off Miyako
		eS	0	41	00.5			
		L	0	41	31.0			
		F	1	28				
139	13	eP	15	29	21.6			Iwafuku Peninsula
		eS	15	31	45.8			
		F	15	54				
140	17	P	15	30	00.9			N part of Nippon Sea
		S	15	32	29.4			
		F	15	43				
141	19	eP	4	28	57.6			
		S	4	31	47.4			
		eL	4	33	10.8			
		F	4	38				
142	20	P	2	27	20.4			Distant earthquake
		eS?	2	33	26.0			
		L?	2	40	16.6			
		F	3	00				
143	21	P	6	18	36.7			
		S	6	20	24.3			
		F	?					
144	29	eP	11	10	03.2			E off Imboe Cape
		eS	11	12	44.7			
		F	?					
145	November 5	P	8	45	45.9			E off Hukusima Pre.
		S	8	47	23.2			
		ME	8	48	37.0	-558		
		MN	8	48	57.8	+758		
		MZ	8	49	27.5	+464		
		F	9	50				
146	5	eP	10	52	46.4			
		S	10	55	06.4			
		MN	10	56	02.8	+577		
		ME	10	56	17.3	-584		
		MZ	10	57	24.8	+6407		
		F	-					

No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	T	Remarks
147	5	e F	21 21	28 37	13.0			E off Hukusima Pro.
148	5	e F	22 22	21 24	23.7			"
149	5	e F	23 23	33 58	10.9			"
150	6	P S MN MZ ME F	8 8 8 8 8 11	56 58 59 59 59 30	21.3 38.0 41.0 44.5 57.1			"
151	6	e I F	13 13 13	43 46 53	35.4 41.1			"
152	6	e F	17 17	21 37	45.7			"
153	6	e I F	18 18 18	24 25 31	55.8 50.2			"
154	6	e I F	19 19 19	24 26 31	51.0 00.4			"
155	6	oP S F	21 21 21	6 9 24	22.3 15.0			E off Hukusima Pro.
156	6	e F	21 21	27 34	35.0			"
157	6	P S MN ME F	21 21 21 21	41 44 44 45	15.5 22.0 35.9 50.4		+501 -585	E off Hukusima Pro.
								to be continued to the next
158	6	e F	23	17	50.0			"
								to be continued to the next
159	7	eP eS F	0 0 1	50 53 09	26.3 23.4			"
160	7	eP eS F	1 1	40 43	50.1 46.2			"
								to be continued to the next

No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	T	Remarks	
161	7	e S F	1 1	50 50	05:0 47.0			E off Hukusima Pre.	
			to be continued to the next						
162	7	eP eS F	1 1	56 59	53:8 30.0			"	
			to be continued to the next						"
163	7	e F	2 2	16 28	44.1			"	
164	7	e I F	2 2	29 34	16:7 18.7			"	
			to be continued to the next						
165	7	e F	2 2	47 52	23.4				
166	7	e F	3 3	41 51	45.0				
167	7	eP eS F	4 4 4	18 20 40	03:7 25.2			E off Hukusima Pre.	
168	7	e F	7 7	31 34	08.2				
169	7	e F	7 8	54 05	26.7				
170	7	e F	12 12	35 39	57.3				
171	7	eP eS F	19 19 19	15 18 32	03:2 20.3			E off Hukusima Pre.	
172	7	eP S L? F	19 19 19 20	36 38 39 09	03:2 54:6 46.9			"	
173	8	e F	11 11	06 12	52.0			"	
174	8	e F	13 13	18 24	33.0			"	
175	9	P eS F	9 9 10	18 21 53	22:7 39.8			"	
176	9	e F	12 12	41 45	41.4			"	



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No.	Date	Phase	G. h	N. h	T. s	Amplitude micron	T	Remarks
177	9	eP	16	11	18.3			E off Hukusima Pre.
		es	16	14	22.1			
		F	16	22				
178	10	e	6	42	30.0			
		F	7	00				
179	10	P	10	42	56.4			
		S	10	32	29.7			
		F	12					
180	10	eP	20	22	05.5			to be continued to the next
		S	20	36	00.9			
		L?	20	41	17.9			
		F						
181	10	eP	22	25	06.0			E off Hukusima Pre.
		es	22	28	19.3			
		F	0	30				
182	8	e	2	59	34.6			"
		S?	3	01	57.5			
		F	3	36				
183	13	eP	13	17	58.0			Etoro Is.
		F	?					
184	13	eP	22	33	46.8			E off Hukusima Pre.
		es	22	36	39.2			
		L?	22	37	54.2			
		F	?					
185	14	eP	2	38	55.1			"
		F	?					
186	16	e	15	24	33.0			
		F	0	39				
187	16	e	2	40	14.5			
		F	2	44				
188	16	eP	11	10	48.2			E off Hukusima Pre.
		S	11	13	16.7			
		F	?					
189	17	e	4	03	50.0			
		F	5	09				
190	19	e	5	59	13.6			E off Hukusima Pre.
		F	15	09				
191	21	e	1	27	50.0			
		F	?					
192	21	e	7	01	50.0			Neighborhood Kwarenko Formosa
		F	?					

No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	T	Remarks
193	22	P	1	16	31.0			E off Hukusima Pre.
		S	1	19	50.2			
		MN	1	19	44.1	-153		
		ME	1	20	10.4	+87		
to be continued to the next								
194	22	e	2	58	29.3			E off Hukusima Pre.
		F	to be continued to the next					
195	22	e	3	25	07.3			"
		F	3	49				
196	22	e	8	18	24.7			"
		F	8	29				
197	23	e	10	18	32.6			"
		F	10	29				
198	23	e	14	04	14.7			"
		F	14	09				
199	25	e	8	25	06.0			"
		F	?					
200	26	e	3	40	36.0			E off Hukusima Pre.
		F	?					
201	27	e	3	04	19.7			"
		F	3	07				
202	28	e	2	34	05.0			"
		F	2	34	58.0			
203	29	P	13	41	59.0			"
		S	13	45	06.0			
		F	14	38				
204	30	P	2	02	15.0			"
		S	2	04	39.7			
		MN	2	05	15.3	-296		
		ME	2	05	39.0	+136		
		MZ	2	06	10.1		-77	
		F	?					
205	30	e	15	18	40.0			E off Hukusima Pre.
		F	15	27				
206	December 1	e	2	18	30.0			Distant earthquake
		F	3	00				
207	2	e	22	28	16.3			"
		F	22	48				
208	3	eP	0	47	38.2			E off Hukusima Pre.
		F	1	02				

No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	T	Remarks
209	3	P	12	14	04.7			E off Hukusima Pre.
		S	12	16	53.5			
		ME	12	17	21.8			
		MN	12	17	10.3			
		MZ	12	17	00.7			
F	12	35						
210	4	e	1	25	04.6			Yamanashi Pre.
		F	1	27				
211	4	eP	6	15	18.9			E off Hukusima Pre.
		eS	6	17	07.4			
		F	6	21				
212	5	eP	18	58	41.3			"
		eS	18	59	08.5			
		F	?					
213	6	eP	23	04	05.0			NE off Daito
		eS	23	06	37.3			
		eL	23	09	05.0			
		F	?					
214	7	e	13	07	15.4			ENE off Kinkazan
		F	22	23				
215	7	e	15	06	11.4			NE off Daito
		F	15	30				
216	9	eP	9	40	22.1			E off Hukusima Pre.
		eS	9	40	43.1			
		F	9	48				
217	11	e	3	25	06.3			
		F	3	27				
218	12	e	2	47	24.4			
		F	2	51				
219	13	eP	0	04	13.7			SE off Siroyasaki?
		F	0	07				
220	13	eP	17	29	01.7			E off Kinkazan
		eS	2	31	45.7			
		F	2	42				
221	16	e	4	41	11.0			
		F	4	45				
222	16	e	17	34	47.7			Distant earthquake
		F	18	09				
223	17	e	16	53	02.8			
		F	16	03				

No.	Date	Phase	G. h	M. m	T. s	Amplitude micron	T	Remarks
224	18	e F	21 22	49 03	24.0			SE off Kinkazan
225	19	e F	18 18	28 57	45.3			E off Nemuro
226	22	e F	17 17	00 27	38.0			E off Karenko
227	23	e F	1 2	54 16	58.5			E off Hukusima Pre.
228	29	eP S F	20 20 21	58 59 10	28.6 01.9			Hyuganeda