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6 MAY 1968

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Introductory Note

This is given only in the first bulletin every year.

1. Phase.
   Special symbol A for phases is used as follows, APP and ASS represent *pP* and *sS* respectively. Others are popular ones.
2. Nature of the motion.
   I : Sudden commencement of a phase.
   E : Gradual or indistinct commencement of a phase.
3. Amplitude.
   Maximum amplitude is the apparent maximum double amplitude on the record of VI, or S seismographs (cf. page 3 and responce curves), divided by both 2 and the static magnification.
4. Limit of seismometry.
   Excluding Matsushiro, seismogram reading is usually limited to earthquakes whose double trace amplitude is greater than one milimeter on one of WI, W, S, P and VD seismograms from 1965 onward.
   Data obtained by Matsushiro are left out from the statistics of unfelt earthquakes in List 2.
5. Period.
   T : Period, duration of one complete oscillation.
6. JMA seismic intensity scales.
   The intensity of the shock is estimated according to the scales 0–7 as follows.
   0 : No feeling. Shocks to cause human feelings and registered only by a seismograph, but special symbol (X) is used when shocks are felt by some neighbours, but not by observer.
   1 : Slight. Extremely feeble shocks only felt by persons at rest or by those who are observant to an earthquake.
   2 : Weak. Shocks felt by most persons, slight shaking of doors and Japanese latticed sliding doors (*shoji*).
   3 : Rather strong. Slight shaking of houses and buildings, rattling of doors and Japanese latticed sliding doors (*shoji*), swinging of hanging objects like electric lamps, moving of liquids in vessels.
   4 : Strong. Strong shaking of houses and buildings, overturning of unstable objects, spilling of liquids out of vessels.
   5 : Very strong. Cracks in the walls, overturning of gravestones, stone lanterns etc., damage to chimneys and mud-and-plaster warehouses.
   6 : Disastrous. Demolition of houses by less than 30% in total number, landslips in the ground etc.
   7 : Very disastrous. Demolition of houses by more than 30%, intense landslips, large fissures in the ground, faults.
7. The felt earthquakes in Lists 2–5 are classified according to the distances of the furthest meteorological or climatological station of JMA where the shock is felt, as follows :
   Remarkable earthquake (**R**) : Distance of the furthest point where shock is felt, is greater than 300 km.
   Moderate earthquake (**M**) : The distance is shorter than 300 km, but greater than 200 km.
   Earthquake of small felt area (**S**) : The distance is shorter than 200 km, but greater than 100 km.
   Local earthquake (**L**) : The distance is shorter than 100 km.

U means the unfelt earthquake.

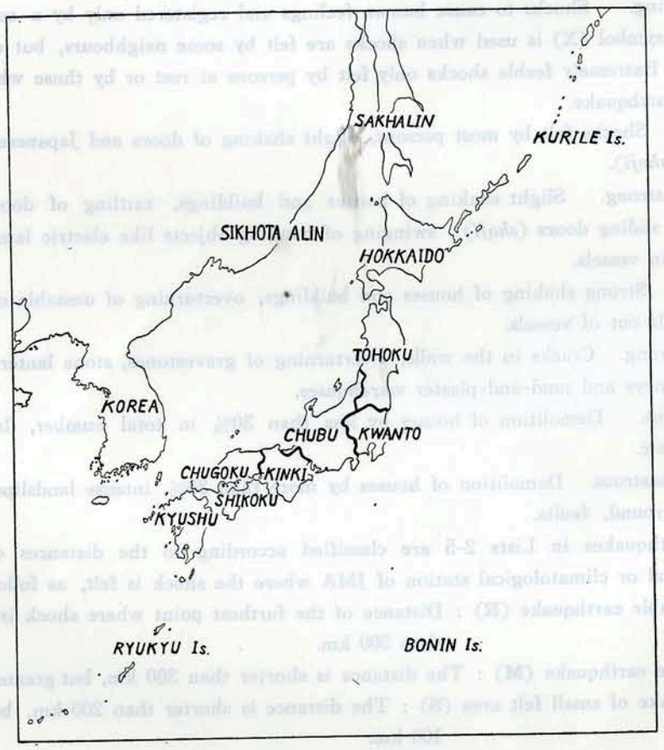
8. In List 3, UK denotes the earthquake whose location is undetermined.
( ) denotes the earthquake recorded or felt at only one station.
9. Earthquake origins in List 4 are the results calculated by the computer HITAC 5020 F. The calculation is made in any case when both P and S arrival times are obtained at four and more stations. Travel time tables of Wadati et al. are employed as standard travel times of P and S for the calculation.
10. In List 5 are given seismological data for major distant earthquakes as well as all earthquakes whose origins and origin times were determined.
11. Magnitudes are determined for earthquakes whose focal depths are shallower than 60 km, by using Tsuboi's formula,

$$M=\frac{1}{2}\log(A_N^2+A_E^2)+1.75\log\Delta-0.85.$$

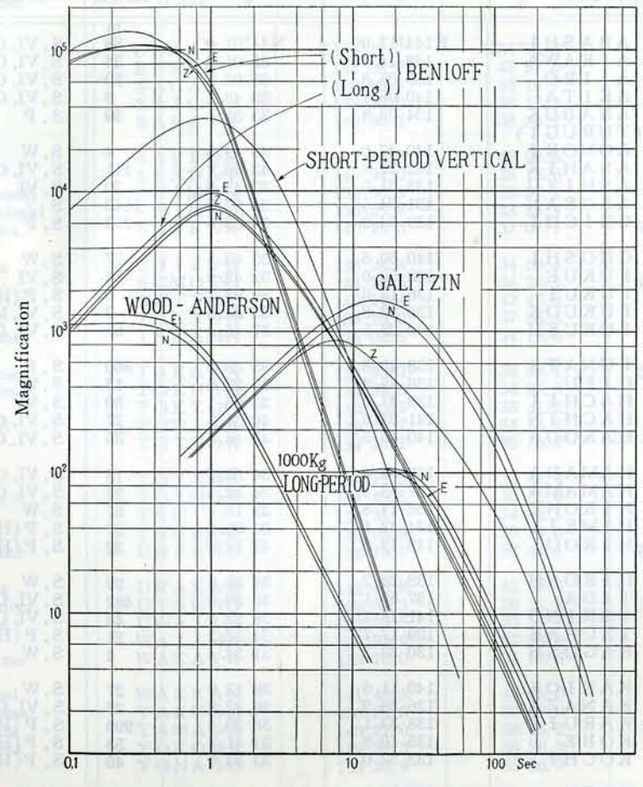
where Δ : distance in km,
A_N, A_E : maximum ground amplitudes, N-and E- components in micron.
And those ground amplitudes are of seismographs with periods of about five seconds. The magnitudes are the averaged values over magnitudes for every $\sqrt{A_N^2+A_E^2}$.

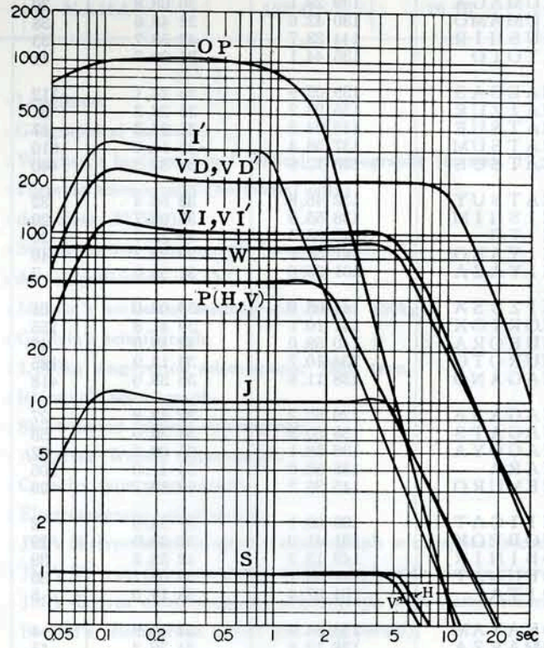
12. Time refers to Japanese Standard Time (JST).
(GMT)=(JST)−9 hours.

Districts adopted in classifying the earthquakes



Standard response curves of seisomgraphs





List 1 JMA stations and their seismographs

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S, VI, O P
Aikawa	AIKAWA	138 14.5	38 01.2	34	S, VI, O P
Ajiro	AJIRO	139 05.8	35 02.6	59	S, VI, O P
Akita	AKITA	140 06.1	39 43.1	9	S, VI, O P
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S, P
Aomori	AOMORI	140 47.0	40 49.0	4	S, W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S, VI, O P
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S, VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S, P
Choshi	CHOSHI	140 50.6	35 43.5	27	S, W
Fukue	FUKUE	128 50.0	32 42.0	26	S, VI
Fukui	FUKUI	136 13.6	36 03.2	9	S, P(H, V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S, VI, M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S, VI, O P
Funatsu	FUNATS	138 45.8	35 29.9	860	S, P
Gifu	GIFU	136 45.9	35 23.9	13	S, W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S, VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S, VI, O P
Hakodate	HAKODA	140 45.5	41 48.8	35	S, VI, O P
Hamada	HAMADA	132 04.4	34 53.6	18	S, VI, O P
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S, VI, O P
Hikone	HIKONE	136 14.8	35 16.4	87	S, W
Himeji	HIMEJI	134 42.1	34 50.2	37	S, P(H, V)
Hiroo	HIROO	143 19.0	42 17.0	32	S, P(H, V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S, W
Iida	IIDA	137 50.1	35 30.6	482	S, VI, O P
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S, VI, O P
Izuhara	IZUHAR	129 17.7	34 12.2	21	S, P(H, V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S, W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S, W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S, VI, O P
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S, P(H, V)
Kobe	KOBE	135 10.8	34 41.3	58	S, P(H, V)
Kochi	KOCHI	133 32.0	33 33.0	40	S, P(H, V)
Kofu	KOFU	138 33.5	35 39.9	272	S, VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S, VI, O P
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S, W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S, VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S, VI, O P
Maebashi	MAEBAS	139 03.9	36 24.1	112	S, W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S, P(H, V)
Matsue	MATSUE	133 04.3	35 27.3	17	S, P(H, V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S, P(H, V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S, L, AW, G, B, V, C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S, W
Mishima	MISHIM	138 55.8	35 06.7	20	S, W
Mito	MITO	140 28.3	36 22.7	30	S, VI, O P
Miyako	MIYAKO	141 58.1	39 38.7	46	S, W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S, VI, O P
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P(H, V)
Morioka	MORIOK	141 10.1	39 41.8	155	S, VI, O P
Muroran	MURORA	140 59.0	42 19.0	43	S, P(H, V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S, VI, O P
Nagano	NAGANO	138 11.8	36 39.6	418	S, W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S, VD, EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S, VI, O P
Nara	NARA	135 50.0	34 41.0	105	S, P(H, V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S, VI, VD, OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S, VI, P(H, V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S, P(H, V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S, P(H, V)
Ofunato	OFUNAT	141 43.1	39 03.7	38	S, VI
Oita	OITA	131 37.4	33 14.0	5	S, W
Okayama	OKAYAM	133 54.9	34 40.9	4	S, VI, O P
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S, W
Onahama	ONAHAM	140 54.4	36 56.7	3	S, VI
Osaka	OSAKA	135 32.3	34 38.9	7	S, VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S, W

Station	Code	λ	φ	Height	Seismographs
				m	
Owase	OWASE	E136°11.7′	N34°04.0′	14	S, VI, O P
Rumoi	RUMOI	141 38.0	43 57.0	22	S, P(H, V)
Saga	SAGA	130 18.3	33 14.7	4	S, P(H, V)
Saigo	SAIGO	133 20.0	36 12.3	26	S, VI, O P
Sakata	SAKATA	139 50.2	38 54.2	2	S, P(H, V)
Sapporo	SAPPOR	141 19.9	43 03.5	17	S, VI, O P
Sendai	SENDAI	140 54.0	38 15.6	38	S, VI, S′
Shimonoseki	SHIMON	130 56.5	33 57.2	46	S, VI, O P
Shionomisaki	SHIONO	135 45.8	33 26.9	74	S, W
Shirakawa	SHIRAK	140 13.5	37 07.1	354	S, P(H, V)
Shizuoka	SHIZUO	138 24.4	34 58.4	14	S, VI
Sumoto	SUMOTO	134 54.5	34 20.1	109	S, VI, O P
Suttsu	SUTTSU	140 14.4	42 47.4	16	S, P(H, V)
Takada	TAKADA	138 15.0	37 06.3	13	S, P(H, V)
Takamatsu	TAKAMA	134 03.5	34 19.0	10	S, W
Takayama	TAKAYA	137 15.3	36 09.1	561	S, P(H, V)
Tokushima	TOKUSH	134 34.6	34 03.9	2	S, P(H, V)
Tokyo	TOKYO	139 45.5	35 41.2	21	S, VI′, VD′, I′, J
Tomisaki	TOMISA	139 49.7	34 55.2	12	S, VI, O P
Tottori	TOTTOR	134 10.7	35 30.7	17	S, P(H, V)
Toyama	TOYAMA	137 12.5	36 42.4	9	S, VI
Toyooka	TOYOOK	134 49.5	35 32.0	4	S, W
Tsu	TSU	136 31.1	34 42.1	3	S, P(H, V)
Tsuruga	TSURUG	136 03.9	35 39.0	1	S, P(H, V)
Unzendake	UNZEND	130 15.2	32 44.1	849	S
Urakawa	URAKAW	142 46.8	42 09.5	34	S, VI, O P
Utsunomiya	UTSUNO	139 52.3	36 32.6	120	S, W
Uwajima	UWAJIM	132 33.5	33 13.5	43	S, P
Wajima	WAJIMA	136 53.9	37 23.4	6	S, VI
Wakayama	WAKAYA	135 10.0	34 13.6	14	S, W, I
Wakkanai	WAKKAN	141 40.5	45 25.0	2	S, VI, O P
Yakushima	YAKUSH	130 29.8	30 27.0	14	S, VI
Yamagata	YAMAGA	140 21.0	38 15.2	151	S, P(H, V)
Yokohama	YOKOHA	139 39.3	35 26.2	38	S, W
Yonago	YONAGO	133 20.6	35 26.0	7	S, P(H, V)
Ishigakijima	ISHIGA	124 10	24 20	6	S, VI
Naha	NAHA	127 41	26 13	11	S, VI

Notations : —

λ	: Longitude.
φ	: Geographical Latitude.
W	: Wiechert's horizontal and vertical seismographs (masses, H ; 200kg, V ; 80kg).
P	: Portable seismograph (horizontal only).
P(H, V)	: do (mass, 22.5kg).
S	: Strong motion seismograph (magnification ; 1).
S′	: do (magnification ; 0.4)
M(H)	: Mainka's horizontal seismograph (mass, 450kg).
G	: Galitzin's seismograph.
L	: 1,000kg long-period seismograph, JMA type.
I	: Ishimoto's seismograph
V	: Short-period vertical seismograph.
AW	: Anderson-Wood's seismograph.
C	: Capacity type seismograph.
EM	: Electromagnetic seismograph.
O P	: JMA 59-type electromagnetic seismograph with optical recorder.
VI	: JMA 59-type electromagnetic seismograph with visible recorder.
VD	: JMA 61-type electromagnetic seismograph with visible recorder.
B	: Benioff's seismograph (short and long period).
J	: Remote recording JMA 63-type seismograph.
VI′, VD′, I′	: Remote recording JMA 63-types of I, VD and VI respectively.

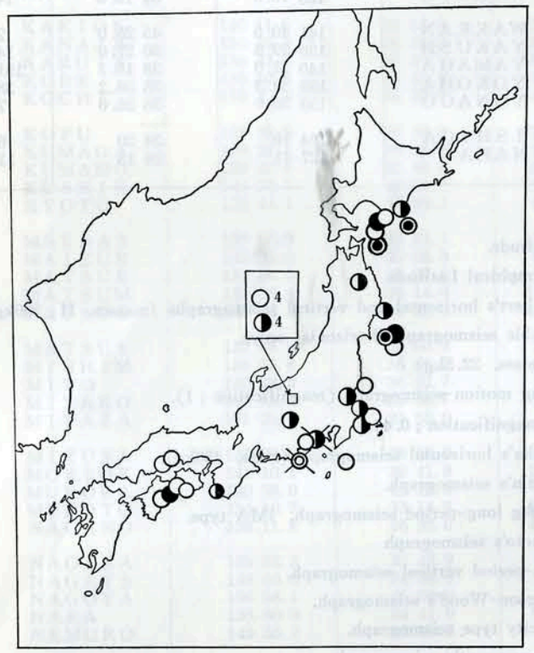
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List 2 Number of earthquakes by districts and classes, January, 1967

District \ Class	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	1	0	1	6	8	16	24
Tohoku	2	0	2	4	8	10	18
Kwanto	0	0	3	23	26	22	48
Chubu	0	1	5	392	398	15	413
Kinki	0	0	0	9	9	10	19
Chugoku•Shikoku	0	0	5	3	8	4	12
Kyushu	0	0	0	3	3	25	28
Near Japan*	0	0	0	0	0	3	3
Foreign region	0	0	0	0	0	8	8
Unknown	0	0	0	0	0	4	4
Total	3	1	16	440	460	117	577

* ; Sakhalin, Kurile Is., Korea, Ryukyu Is., Sikhota Alin.

Epicenters of the major earthquakes



⊙ Remarkable (r) ◎ Moderate (m) ○ Small felt area (s) ◑ Local (l) ● Unfelt (u) × h≧100km.

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Special Event

Earthquake-Swarm near Matsushiro, Northern Chubu.

Daily number of felt shocks observed at Matsushiro Seismological Observatory during this month is as follows:

Date \ Seismic intensity	1	2	3	Total	Date \ Seismic intensity	1	2	3	Total
1	9	0	0	9	16	19	2	0	21
2	9	0	0	9	17	15	0	0	15
3	9	0	0	9	18	17	0	0	17
4	9	1	0	10	19	12	2	0	14
5	11	0	0	11	20	14	0	0	14
6	13	0	0	13	21	12	0	0	12
7	23	1	0	24	22	7	0	0	7
8	13	0	0	13	23	26	0	0	26
9	9	0	0	9	24	11	0	0	11
10	6	2	0	8	25	9	0	0	9
11	17	1	0	18	26	11	0	0	11
12	9	0	1	10	27	11	1	0	12
13	16	0	0	16	28	8	0	0	8
14	15	0	0	15	29	11	0	0	11
15	13	0	0	13	30	12	0	0	12
					31	6	0	0	6
					Total	382	10	1	393

The earthquakes which occurred at 12h 31m and 12h 32m on 16th were accompanied by slight property damage at Matsushiro and its vicinity.

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List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

DATE, TIME D H M	C	LOCATION
1 03 03	S	KOCHI PREF
03 31	U	SANTA CRUZ ISLANDS
05 35	U	(KUSHIR)
07 22	U	SANTA CRUZ ISLANDS
09 07	U	(TAKAMA)
15 26	L	NEAR MATSUSHIRO
16 16	U	UK
16 22	U	(SUMOTO)
21 49	L	NEAR KUSHIRO
2 00 54	U	NEAR NEMURO
04 04	L	NEAR MATSUSHIRO
05 36	S	OKAYAMA PREF
08 18	U	(UWAJIM)
10 34	L	NEAR MATSUSHIRO
11 26	U	(KUSHIR)
20 07	U	KWANTO
3 09 25	L	NEAR ERIMOMISAKI
14 23	U	(NAGASA)
14 52	L	NEAR MATSUSHIRO
14 58	U	(OMAEZA)
4 03 12	L	NEAR MATSUSHIRO
03 16	U	(NAGANO)
07 47	U	(TOKYO)
11 36	U	(KYOTO)
14 00	L	NEAR MATSUSHIRO
21 42	L	(NAGASA)
5 03 01	U	FAR OFF TOKAIDO
09 19	U	MONGOLIA
09 47	U	MONGOLIA
13 35	L	NEAR MATSUSHIRO
17 15	U	(UTSUNO)
20 44	U	(YAKUSH)
20 52	L	(TOKYO-NIIJIMA)
6 00 48	U	E OFF AOMORI PREF
05 37	L	NEAR NEMURO
09 04	R	OFF ERIMOMISAKI
10 07	L	NEAR MATSUSHIRO
19 45	L	NEAR KUMAGAYA
7 02 11	L	NEAR MATSUSHIRO
02 35	U	NEAR YAKUSHIMA
06 28	L	NEAR HAMAMATSU
08 41	U	(HACHIJ)
08 58	L	NEAR MATSUSHIRO
09 08	L	NEAR MATSUSHIRO
14 02	U	(NAHA)
16 21	L	NEAR MATSUSHIRO
18 50	U	(HAKODA)
19 05	U	(NEMURO)
20 50	L	NEAR MATSUSHIRO
21 17	L	(TOKYO-NIIJIMA)
21 22	U	(NEMURO)
8 02 09	U	(MIYAZA)
04 01	L	NEAR MATSUSHIRO
04 57	L	NEAR MATSUSHIRO
05 04	L	NEAR MATSUSHIRO
12 04	L	NEAR MATSUSHIRO
12 40	U	(AIKAWA)
13 23	L	NEAR MATSUSHIRO
21 39	L	(WAKAYA-KIYOKAWA)
9 16 47	L	NEAR MATSUSHIRO
17 54	U	KWANTO
20 15	U	OFF IWATE PREF
10 00 40	U	(MIYAZA)
06 58	S	OFF IBARAKI PREF
09 58	U	YAMANASHI PREF
12 00	L	NEAR MATSUSHIRO
17 30	S	NEAR MATSUSHIRO
21 22	U	(KOCHI)
11 01 04	U	(MIYAZA)
02 34	L	NEAR MATSUSHIRO
02 49	S	KOCHI-TOKUSHIMA BORDER
03 28	L	NEAR MATSUSHIRO
04 43	L	NEAR MATSUSHIRO
07 00	L	NEAR MATSUSHIRO
07 51	U	(YAKUSH)
09 50	L	NEAR WAKAYAMA
10 30	L	TOCHIGI PREF
11 03	L	TOCHIGI PREF
12 46	L	NEAR MATSUSHIRO
13 21	L	(UTSUNO-ASHIO)
16 08	L	NEAR MATSUSHIRO
16 20	L	(WAKAYA)
22 54	L	NEAR MATSUSHIRO
22 54	L	NEAR MATSUSHIRO
12 01 45	L	(UTSUNO-ASHIO)
04 12	L	NEAR MATSUSHIRO
20 25	L	(UTSUNO-ASHIO)
21 24	S	NEAR MATSUSHIRO
23 39	L	NEAR MATSUSHIRO
13 04 29	L	N OF IWATE PREF
07 26	U	(YAKUSH)
09 36	U	UK
09 46	U	KOCHI PREF
10 54	L	NEAR MATSUSHIRO
14 15	L	KII CHANNEL
20 46	L	(UTSUNO-ASHIO)
21 48	L	(NAGANO)
22 02	L	(UWAJIM)
14 00 54	L	NEAR MATSUSHIRO
09 46	L	S OF NAGANO PREF
11 10	S	OFF URAKAWA
11 33	L	NEAR MATSUSHIRO
11 48	L	NEAR KYOTO
12 26	L	(KOBE-SUENO)
15 09 46	U	ARIAKEKAI
10 29	L	NEAR MATSUSHIRO
12 35	L	W OF GUNMA PREF
14 45	U	JAPAN SEA
16 22	U	(YAKUSH)
17 59	U	(YAKUSH)
19 04	U	(YAKUSH)
21 17	S	S OF YAMANASHI PREF
23 49	L	NEAR MATSUSHIRO
16 01 09	U	NEAR WAKAYAMA
02 45	U	(KYOTO)
04 33	U	(YAKUSH)
12 31	S	NEAR MATSUSHIRO
12 32	S	NEAR MATSUSHIRO
12 36	L	NEAR MATSUSHIRO
12 43	U	(NAGANO)
14 05	U	NEAR YOKOHAMA
21 02	L	(MAEBAS-IKAHO)
23 30	L	NEAR MATSUSHIRO
17 05 56	U	(AKITA)
06 38	U	NEAR OSHIMA

C:CLASS

DATE, D	TIME H	M	C	LOCATION
17	07	17	U	(MITO)
	09	02	L	(MAEBAS-TATEBAYASHI)
	09	33	U	NEAR NEMURO
	10	50	U	(YAKUSH)
	11	03	S	OFF CHOSHI
	12	15	L	(HIROSH-TAISHAKU)
	14	11	L	NEAR MATSUSHIRO
	15	14	L	NEAR MATSUSHIRO
	15	44	L	NEAR MATSUSHIRO
	18	33	L	NEAR MATSUSHIRO
	20	53	L	NEAR MATSUSHIRO
	20	59	R	OFF KINKAZAN
	21	26	S	OFF KINKAZAN
	21	34	U	OFF KINKAZAN
	21	43	U	UK
18	00	16	L	NEAR MATSUSHIRO
	01	10	L	(HAKODA-NAMARIKAWA)
	03	49	L	NEAR MATSUSHIRO
	07	15	U	(YAKUSH)
	07	32	L	NEAR MATSUSHIRO
	09	47	L	NEAR MATSUSHIRO
	14	32	L	(HAKODA-NAMARIKAWA)
	14	38	U	EASTERN RUSSIA
	15	22	U	KURILE IS
	17	26	U	(OSAKA)
	17	29	S	OFF URAKAWA
	21	50	U	(MISHIM)
19	00	18	U	(NAHA)
	01	58	L	NEAR MATSUSHIRO
	06	36	L	NEAR MATSUSHIRO
	09	16	L	OFF IBARAKI PREF
	09	41	L	NEAR CHOSHI
	13	00	U	HYUGANADA
	15	27	L	NEAR MATSUSHIRO
	15	27	L	NEAR MATSUSHIRO
	19	41	L	NEAR MATSUSHIRO
	21	47	U	SANTA CRUZ ISLANDS
	22	08	U	(CHOSHI)
20	01	17	U	HUKUSHIMA PREF
	04	45	U	(NEMURO)
	05	50	L	(MAEBAS-MIHARA)
	08	22	L	NEAR MATSUSHIRO
	08	45	U	NEAR SHIONOMISAKI
	11	02	U	MONGOLIA
	17	35	U	(KUSHIR)
	18	12	U	KWANTO
	19	44	S	TOKUSHIMA-KOCHI BORDER
	21	16	L	NEAR MATSUSHIRO
	21	47	U	(YOKOHA)
21	00	17	L	NEAR MATSUSHIRO
	03	05	L	OFF IBARAKI PREF
	04	03	U	(NAGANO)
	04	46	L	OFF IWATE PREF
	07	33	U	(WAKAYA)
	09	33	U	OFF IWATE PREF
	13	29	U	(KAGOSH)
	14	48	U	(YAKUSH)
	15	49	U	OFF URAKAWA
	16	49	L	OFF IWATE PREF
	19	27	U	OFF URAKAWA
	21	40	S	OFF BOSO PEN
	21	45	U	(NAGANO)
	21	53	U	(NAGANO)
	22	48	U	(NAGANO)
22	03	51	U	(KYOTO)
	09	39	U	(NAGANO)
22	11	34	U	(HACHIN)
	22	37	U	(SAGA)
	23	00	L	OFF CHOSHI
23	02	07	L	NEAR MATSUSHIRO
	03	32	L	NEAR MATSUSHIRO
	10	47	L	NEAR MATSUSHIRO
	15	50	L	NEAR MATSUSHIRO
	15	56	S	S OF HIROSHIMA PREF
	16	26	U	NEAR MIYAKEJIMA
	17	08	L	(UTSUNO-ASHIO)
	19	23	L	NEAR MATSUSHIRO
	21	26	L	KUMAMOTO PREF
	22	24	U	(TSURUG)
24	03	14	U	(YAKUSH)
	03	47	L	NEAR MATSUSHIRO
	05	44	L	NEAR MATSUSHIRO
	07	35	U	(NEMURO)
	12	05	R	E OFF AOMORI PREF
	13	49	U	(KUSHIR)
	16	11	L	N OF GUNMA
	17	54	L	NEAR MATSUSHIRO
	18	49	U	(NAGASA)
25	01	52	U	NEAR CHOSHI
	09	42	U	(NAGOYA)
	10	22	L	(WAKAYA)
	10	58	U	UK
	12	07	L	OFF IWATE PREF
	14	36	L	NEAR MATSUSHIRO
	15	02	L	NEAR MATSUSHIRO
	15	50	L	NEAR MATSUSHIRO
	20	00	L	NEAR MATSUSHIRO
26	01	51	U	(WAKAYA)
	05	53	L	NEAR MATSUSHIRO
	05	56	L	NEAR MATSUSHIRO
	06	16	L	NEAR MATSUSHIRO
	18	52	L	(WAKAYA)
	23	07	L	NEAR MATSUSHIRO
27	08	19	U	TOCHIGI PREF
	11	42	L	NEAR MATSUSHIRO
	11	43	U	(OBIHIR)
	14	32	U	(OSHIMA)
	15	01	L	NEAR MATSUSHIRO
	16	57	U	(YAKUSH)
	18	29	L	NEAR MATSUSHIRO
	21	45	L	NEAR MATSUSHIRO
	21	53	U	(URAKAW)
	22	04	U	(YAKUSH)
28	03	01	U	(NAGASA)
	03	27	U	(AKITA)
	03	44	L	NEAR MATSUSHIRO
	04	32	L	E OF SHIZUOKA PREF
	05	43	L	(WAKAYA)
	08	02	L	NEAR MATSUSHIRO
	13	39	L	(NEMURO)
	14	30	U	NEAR MITO
	19	32	L	(UTSUNO-ASHIO)
	22	59	U	MEXICO
29	00	03	U	S OFF KYUSHU
	07	41	U	OFF IBARAKI PREF
	08	37	U	NEAR CHOSHI
	13	52	L	NEAR MATSUSHIRO
	14	09	U	NEAR MATSUSHIRO
	15	10	U	NEAR MATSUSHIRO

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DATE, D	TIME H	M	C	LOCATION
29	15	54	U	(YAKUSH)
	17	26	L	NEAR MATSUSHIRO
30	03	02	L	NEAR MATSUSHIRO
	03	08	L	NEAR MATSUSHIRO
	04	23	L	IBARAKI PREF
	07	09	L	NEAR MATSUSHIRO
	09	25	L	YAMANSHI PREF
	11	10	L	NEAR MATSUSHIRO
	11	45	L	(MAEBAS-MIHARA)
	13	51	L	NEAR MATSUSHIRO
	15	41	U	(HIKONE)
	17	39	L	NEAR MATSUSHIRO
	18	16	L	MIYAZAKI PREF
	19	40	M	OFF SHIZUOKA PREF
	20	40	L	(HIROSH-MITSUGI)
	23	54	U	(NAGANO)
31	01	32	L	NEAR MATSUSHIRO
	05	39	U	(MORIOK)
	16	32	L	NEAR HACHIJOJIMA
	17	09	U	OFF CHOSHI
	20	59	L	NEAR MATSUSHIRO

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST; ALL EVENTS FELT AT THE OBSERVATORY ARE LISTED IN LIST 6.

List 4 EARTHQUAKE ORIGINS

DATE, TIME D	H	M	C	LOCATION	ORIGIN TIME M	S	+/-S	LONG.	+/-	LAT.	+/-	H KM	M
1	03	03	S	KOCHI PREF	03	10.4	0.3	133 19	01	33 30	01	10	4.7
2	05	36	S	OKAYAMA PREF	36	16.3	0.2	133 32	01	34 42	01	10	3.9
3	09	25	L	NEAR ERIMOMISAKI	25	03.2	0.3	143 08	02	42 15	02	60	4.3
4	03	12	L	NEAR MATSUSHIRO	12	06.9	0.2	138 18	01	36 34	01	00	4.2
6	09	04	R	OFF ERIMOMISAKI	04	03.5	0.4	143 29	03	41 48	01	50	5.9
7	20	50	L	NEAR MATSUSHIRO	50	23.6	0.3	138 09	02	36 31	01	10	4.6
10	06	58	S	OFF IBARAKI PREF	58	26.4	0.4	141 00	04	36 54	02	60	4.2
	17	30	S	NEAR MATSUSHIRO	30	20.1	0.2	138 04	01	36 27	01	00	4.9
11	02	49	S	KOCHI-TOKUSHIMA BORDER	49	32.1	0.2	133 48	01	33 52	01	10	4.4
12	21	24	S	NEAR MATSUSHIRO	24	46.3	0.3	138 05	01	36 28	01	10	4.8
13	04	29	L	N OF IWATE PREF	29	47.3	0.2	141 15	01	40 07	00	10	3.8
	09	46	U	KOCHI PREF	46	26.9	0.8	133 22	03	33 31	04	00	3.7
	14	15	L	KII CHANNEL	15	05.6	0.2	135 17	01	33 41	01	40	4.2
14	09	46	L	S OF NAGANO PREF	46	09.9	0.3	138 05	02	35 50	01	20	4.0
	11	10	S	OFF URAKAWA	10	36.2	0.3	142 00	02	41 27	01	40	4.6
15	21	17	S	S OF YAMANASHI PREF	17	42.9	0.5	138 54	02	35 23	02	00	4.4
16	12	31	S	NEAR MATSUSHIRO	31	16.2	0.2	138 08	01	36 26	01	00	4.8
	12	32	S	NEAR MATSUSHIRO	32	06.3	0.2	138 00	01	36 29	01	00	5.2
17	11	03	S	OFF CHOSHI	03	00.3	1.0	141 27	04	35 57	02	00	4.4
	20	59	R	OFF KINKAZAN	59	30.4	0.6	142 05	04	38 15	02	30	6.3
	21	26	S	OFF KINKAZAN	26	19.9	0.3	142 17	02	38 12	01	40	4.8
	21	34	U	OFF KINKAZAN	34	36.6	2.0	142 19	09	38 16	04	10	3.8
18	17	29	S	OFF URAKAWA	29	04.4	0.3	142 37	02	42 04	01	50	4.8
19	01	58	L	NEAR MATSUSHIRO	57	58.1	0.3	138 05	01	36 29	01	10	4.1
	09	16	L	OFF IBARAKI PREF	15	59.5	0.4	140 55	03	36 07	02	40	3.7
20	19	44	S	TOKUSHIMA-KOCHI BORDER	44	51.0	0.5	134 03	03	33 47	02	00	3.6
21	15	49	U	OFF URAKAWA	49	12.7	0.4	142 11	03	41 57	03	40	3.7
	16	49	L	OFF IWATE PREF	48	59.8	0.7	142 14	03	39 05	02	40	3.7
	21	40	S	OFF BOSO PEN	40	30.5	0.4	140 20	02	34 23	01	50	4.4
22	23	00	L	OFF CHOSHI	00	24.0	0.7	140 58	04	35 36	03	60	3.9
23	15	56	S	S OF HIROSHIMA PREF	56	30.6	0.2	133 11	01	34 29	01	10	4.3
24	12	05	R	E OFF AOMORI PREF	05	38.3	0.3	142 08	02	41 26	01	50	5.7
27	18	29	L	NEAR MATSUSHIRO	29	45.7	0.2	138 05	01	36 27	01	00	
28	04	32	L	E OF SHIZUOKA PREF	32	15.6	0.7	139 12	07	35 13	04	00	
30	04	23	L	IBARAKI PREF	23	43.7	0.2	140 28	02	36 36	01	70	
	19	40	M	OFF SHIZUOKA PREF	39	59.3	0.2	138 38	01	34 34	02	200	

C:CLASS

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List 5 DATA OF EARTHQUAKES LISTED IN LIST 4

OT= 1 3 3 10.4 +/- 0.3
KOCHI PREF
LAT= 33 30 +/- 1 LONG= 133 19 +/- 1
H= 10 MAG=4.7 CLASS=S

* : MICRON

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KOCHI	3	IP	03	03	14.0	IS	03	19.7	800	0.0	610	0.0			N	21 E	42 U	24	20.9	05.7
UWAJIM	2	IP	03	03	26.2	IS	03	34.2							S	5 W	30		76.9	08.0
MUROTO	1	IP	03	03	26.7	IS	03	37.0	69	0.4	64	0.4			S	0 5	0 U	0	84.9	10.3
ASHIZU	0	P	03	03	28.7	S	03	39.0	63	0.4	98	0.4	33	0.4					91.2	10.3
TURUGI	0	IP	03	03	31.3	X	03	47.9											82.2	
HIROSH	2	IP	03	03	32.7	IS	03	48.0	54	0.2	58	0.2	39	0.2	S	1 E	1 D	1	125.6	15.3
TAKAMA	X	IP	03	03	32.9	IS	03	47.7	87	1.0	116	0.8	86	0.6	N	2 E	2 U	4	113.6	14.8
TOKUSH	0	EP	03	03	35.0	ES	03	46.7								E	1		132.4	11.7
OKAYAM	2	IP	03	03	35.4	IS	03	53.0	300	0.6	220	0.4	60	0.9	N	5 E	12 U	2	142.2	17.6
SUMOTO	0	IP	03	03	38.6	S	04	03.8	22	0.4	16	0.4	7	0.6		E	U		173.8	25.2
						IX	03	42.5												
OITA	0	EP	03	03	39.2	ES	03	55.8	49	0.1	51	0.1							160.3	16.6
HAMADA	0	EP	03	03	41.3	S	04	02.4	10	0.4	9	0.4	4	0.5					192.3	21.1
NOBEOK	0	EP	03	03	41.9	ES	03	59.6											183.3	17.7
WAKAYA	0	P	03	03	43.3	S	04	01.0	39	0.5	32	0.5							189.1	17.7
SHIONO	0	EP	03	03	44.8	ES	04	08.8	7	1.1	6	1.5	4	1.2					227.4	24.0
SHIMON	0	EP	03	03	45.0	ES	04	12.0	12	2.0	7	2.0	7	2.0		W	U		225.7	27.0
MATSUE	0	EP	03	03	46.0	ES	04	12.5											218.0	26.5
YONAGO	0	EP	03	03	46.8	ES	04	15.2											214.4	28.4
KOBE	0	EP	03	03	50.8	ES	04	15.3											216.6	24.5
TOTTOR	0	EP	03	03	51.7	ES	04	18.7											236.7	27.0
NARA	0	EP	03	03	51.9														266.7	
KYOTO	0	EP	03	03	52.7	ES	04	33.6	6	1.2	5	1.4	2	1.0					278.7	40.9
MIYAZA	0	P	03	03	53.4	S	04	23.4	25	0.8	33	0.7	10	0.6					249.4	30.0
KUMAMO	0	EP	03	03	54.1	S	04	23.2	22	1.0	20	0.8	12	0.7					254.8	29.1
OSAKA	0	X	03	03	55.3	X	04	04.7	23	4.6	27	1.9	13	2.6					241.3	
FUKUOK	0	X	03	03	58.3	S	04	28.0	9	2.5	12	1.1	5	2.0					272.8	
TOYOOK	0	EP	03	04		ES	04	23.4	89	1.2	97	1.2	19	1.0					264.7	
SAIGO	0	P	03	04	01.3	IS	04	34.0	9	0.8	13	1.2	6	0.8	N	0 W	0 U	0	300.0	32.7
SAGA	0	X	03	04	02.2	X	04	17.1								W	6 U	2	281.6	
TSURUG	0	EP	03	04	04.9	EX	04	53.9											347.0	
HIKONE	0	X	03	04	08.0	X	04	53.9	11	2.5	10	0.8	6	1.5					333.5	
KAGOSH	0	X	03	04	09.7	S	04	49.9	14	2.6	11	2.0	3	1.5					336.0	
FUKUI	0	X	03	04	17.7	X	05	03.9											388.7	
MATSUS	0	IP	03	04	27.7											E	U		559.1	
KANAZA	0	X	03	05	04.5	X	05	22.0	5		5								454.4	

OT= 1 3 23 3.9 USCGS
SANTA CRUZ ISLANDS
LAT=-11 48 LONG= 166 30
H= 30 MAG=5.5 CLASS=U

OMAEZA	0	EX	03	31					125		92		34						5934.9	
HIROSH	0	EP	03	32	09.0	EX	40	49.0	22	19.6	31	21.0							6243.1	
HACHIJ	0	EP	03	32	20.0	ES	39	20.0	32	14.0	31	14.5	16	12.0					5715.0	420.0
AJIRO	0	EX	03	32	21.9	EX	45	00.0	27	17.1	31	17.9	16	16.6					5929.0	
TOMISA	0	EX	03	32	23.0				60	15.0	58	16.0	17	5.4					5880.4	
SHIONO	0	EP	03	32	24.9	ES	40	22.0	30	22.4	43	19.0	16	20.5					5968.1	477.1
						EL	44	43.7												
HAMAMA	0	EP	03	32	25	EX	40	10	41		23		30						5970.5	
MITO	0	EX	03	32	26	EL	45	53	20	16.0	35	16.3	25	20.5					5984.9	
TOKYO	0	EP	03	32	27	ES	40	10	33	15	36	16	24	17					5954.8	463.0
OWASE	0	EP	03	32	27.9				18	16.2	17	20.0	19	17.4					5997.5	
YOKOHA	0	EP	03	32	28.9	EX	45	30.4	91	20.0	110	16.7	26	26.0					5937.0	
IIDA	0	EX	03	32	29.0														6036.9	
MUROTO	0	P	03	32	29.5	ES	40	39.0	35	16.4	27	17.0							6044.3	489.5
UTSUNO	0	EX	03	32	29.6	EX	45	46.6	34		68								6029.5	
YAKUSH	0	EX	03	32	30.0				14	20.0	22	17.1	27	21.4					6051.6	
OSHIMA	0	EP	03	32	30	ES	39	49	58	17.7	92	18.1	13	29.7					5888.7	439.0
MISHIM	0	EP	03	32	30.9	ES	40	04.5	45	18.0	55	24.4	17	16.1					5943.8	
KUMAGA	0	EP	03	32	31.4	ES	40	20.0	44	16.0	33	17.4	25	25.4					6016.1	468.6
SUMOTO	0	EP	03	32	32.0	ES	40	32.1	23	20	17	21	29	17			U		6094.3	480.1
						L	46	38												
MATSUS	0	P	03	32	33												U		6111.2	
ASHIZU	0	EX	03	32	33.0				27	19.0	19	20.0	24	17.6					6070.6	
MIYAZA	0	P	03	32	35.0	S	40	31.6	25	19.0	30	20.0	30	20.0					6106.2	476.6
TAKAMA	0	EP	03	32	35.6	ES	40	42.6	47	17.7	32	21.3	32	21.6					6142.3	487.0
						EL	45	53.5												
SENDAI	0	EP	03	32	36	ES	40	27	23	20	28	17	23	22					6142.9	471.0

I : Seismic Intensity

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
SENDAI			03 32 36	EL	46 34							6142.9	
FUKUSH	0	EX	03 32 36.0			23 16.0	25 18.0	25 20.0				6114.6	
NAGOYA	0	EP	03 32 36.0	EX	41 16.0	25 18.8	17 20.8	26 25.0				6052.1	
				EX	47 30.0								
HIKONE	0	EP	03 32 36.7	EX	40 37.1	49 22.3	45 19.6	65 23.8				6101.0	
KAKIOK	0	EP	03 32 37	EX	40 21	23 22.0	38 18.0	36 20.0				5984.5	
CHOSHI	0	EP	03 32 38.9	ES	40 09.4							5905.7	450.5
				EPP	34 41.7								
NAHA	0	EP	03 32 39			28 18	30 17					5938.8	
TAKADA	0	EP	03 32 39.1									6161.0	
ONAHAM	0	P	03 32 39.2			28 18.9	45 16.4	28 17.5			D 5	6017.8	
KUMAMO	0	EP	03 32 40	ES	40 52.7	36 20.9	47 20.9	20 26.1				6224.5	492.7
OFUNAT	0	EP	03 32 40.1	ES	40 36.8	38 19.2	28 17.2	20 20.0				6183.6	476.7
				L	47 52.8								
MAEBAS	0	X	03 32 41.9			41 19.0	35 25.0	35 24.0				6055.6	
AIKAWA	0	IP	03 32 42.7			27	34	18			D 0	6245.5	
OSAKA	0	EP	03 32 43	X	41 32	43 5.0	57 5.5	13 2.6				6085.5	
NOBEOK	0	EP	03 32 43.4	EX	38 53.5							6143.6	
MORIOK	0	EP	03 32 44.2	ES	40 43.6	24 19.6	32 16.8	35 19.7	S 0		D 0	6268.4	479.4
				X	33 11.5								
OKAYAM	0	EP	03 32 44.5	X	40 47.0	30 16.0	28 15.8	40 18.0				6181.8	
WAKAYA	0	EP	03 32 44.6	ES	40 32.2	3 19.0	2 19.0					6070.0	467.6
FUKUE	0	EP	03 32 44.6	EX	36 39.2	26 19.8	10 22.0	15 22.4				6339.2	
NAGASA	0	EP	03 32 44.8	ES	40 54.0						U	6271.7	489.2
TOYOOK	0	X	03 32 44.9	X	40 44.4	47 17.4	29 22.5	30 20.4				6203.4	
GIFU	0	EX	03 32 45	L	46 0	41 21.0	31 21.0	28 25.0				6083.9	
SHIMON	0	EP	03 32 46.0	EX	39 20	15 17.0	13 17.0	15 21.0				6301.9	
				EX	47 35								
KAGOSH	0	EP	03 32 47.8	ES	40 37.1	39 2.7	32 2.3	27 24.4				6136.2	469.3
				EL	46 49.6								
AKITA	0	EP	03 32 47.8	EX	37 00	43 16.4	53 17.6	30 16.6				6317.2	
HACHIN	0	EP	03 32 48	ES	41 06	40 21.6	40 21.4	35 22.4				6333.0	498.0
KANAZA	0	EP	03 32 48.0	ES	40 34	20 2.1	20 1.8	17 1.8				6192.7	466.0
FUKUOK	0	EP	03 32 48.0	ES	41 00	11 21.3	11 20.0	29 20.0				6307.4	492.0
HAMADA	0	EP	03 32 48.5	EX	40 29.0	21 12.5	17 22.5	7 15.3				6309.3	
MIYAKO	0	EX	03 32 51			33 22	49 20	58 20				6229.3	
UWAJIM	0	EP	03 32 54	EX	46 44							6141.2	
SAIGO	0	EX	03 32 56.1	X	41 03.6	19 17.1	21 18.9	13 19.7				6345.6	
				L	47 06								
HAKODA	0	EP	03 32 59.5	ES	41 26.1	26 17.9	23 17.5	29 21.0				6489.1	506.6
OITA	0	EP	03 33 00.5	ES	40 42.0	46	44	6				6200.3	461.5
NIIGAT	0	EX	03 33 01.0			105 13.0	125 18.0	26 3.8				6196.0	
TURUGI	0	EP	03 33 02.6	EL	46 54.4							6100.4	
SAGA	0	EP	03 33 03.8									6285.4	
URAKAW	0	EP	03 33 06.7	ES	41 19.3	60 18.8	32 19.0	31 20.4				6441.9	492.6
KUSHIR	0	IP	03 33 08.2	ES	41 26.2	35 20.0	33 18.6	14 19.9			D 2	6463.7	498.0
NEMURO	0	EP	03 33 09.0	ES	41 15.6	41 18.0	34 14.6	7 20.0				6457.9	486.6
HIROO	0	EX	03 33 10									6433.8	
SAKATA	0	EX	03 33 11.2									6252.2	
ASAHIK	0	EX	03 33 11.3	EX	43 37.0	24 17.4	13 18.0	9 18.6				6615.9	
AOMORI	0	P	03 33 12	L	46 49	31 19.2	42 18.1					6392.3	
SAPPOR	0	EP	03 33 16.0	ES	41 28	28 22	31 18	43 20				6586.3	492.0
				L	49 12								
ABASHI	0	P	03 33 16.7	EX	41 40.0	28 17.6	20 18.0	22 18.6				6571.6	
				X	50 44.6								
WAKKAN	0	EX	03 33 39.2			10 16.2	48 19.0	5 17.0				6803.7	
OBIHIR	0	EX	03 34 28.8									6500.4	
KOBE	0	EX	03 47 04.1			50 16.0						6109.3	
ASOSAN	0	EX	03 50 30									6206.4	
RUMOI	0	EX	03 51 19.5									6661.5	

OT= 1 7 15 14.0 USCGS
SANTA CRUZ ISLANDS
LAT=-11 18 LONG= 164 48
H= 33 CLASS=U

TOMISA	0	EX	07 24 10.2			50 15.2	43 12.3	12 14.3				5747.4	
SHIONO	0	EP	07 24 18.1	ES	32 00.3	15 15.2	11 15.7	3 14.5				5824.4	462.2
				EL	38 58.3								
AJIRO	0	EX	07 24 22.3			21 15.4	15 17.0	5 14.0				5794.6	
HACHIJ	0	EP	07 24 24.4	ES	31 48.0	25 11.0	23 15.0					5578.9	443.6
WAKAYA	0	EX	07 24 25.7	EX	32 12.7	6 16.0	15 16.0					5926.6	
HAMAMA	0	EP	07 24 29	EX	32 10	24	20	15				5832.8	
MISHIM	0	EP	07 24 30.7			37 14.9	21 17.8	9 20.6				5809.2	
HIKONE	0	EP	07 24 31.5	EX	32 28.6	22 18.2	13 18.2	16 17.7				5961.3	
HAMADA	0	EX	07 24 32.0	EX	32 16.1	7 16.3	6 18.6	4 28.4				6161.6	
CHOSHI	0	EP	07 24 32.7	ES	32 07.9							5776.2	455.2
				EX	40 34.9								
OSHIMA	0	EP	07 24 34	ES	31 59	31 16.4	38 15.8	7 13.2				5754.4	445.0

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
IIDA	0	EX	07 24 36.0									5900.7	
MATSUS	0	P	07 24 36									5977.5	
KAKIOK	0	EX	07 24 38			11 16.9	17 16.0	9 14.0				5854.4	
MAEBAS	0	EX	07 24 39.2			20 19.0	21 18.0	13 18.0				5923.4	
YOKOHA	0	EP	07 24 39.4	IX	31 59.3	42 14.0	49 14.0	10 12.0			D	5804.4	
TOKYO	0	EP	07 24 40	ES	32 16	20 12	29 11	8 12				5822.9	456.0
MITO	0	EX	07 24 42.0	EL	38 57.0	11 15.5	22 16.0	11 14.0				5855.6	
YAKUSH	0	EX	07 24 43.0			6 16.1	7 16.2	8 18.8				5893.9	
ONAHAM	0	EP	07 24 43.8			14 13.9	30 11.7	12 12.9				5890.4	
KUMAGA	0	EX	07 24 44.4			25 11.4	22 12.0	14 5.0				5884.2	
OKAYAM	0	EP	07 24 45.0	EX	32 53.0	10 16.2	20 11.2	15 15.9				6036.9	
SUMOTO	0	EP	07 24 47.5	ES	32 23.4	12 15	9 17	8 16				5950.6	455.9
				L	39 23								
MIYAZA	0	P	07 24 48.0	S	32 29.2	14 14.0	9 13.0	8 5.2				5952.4	461.2
NAGOYA	0	EP	07 24 48.0			12 16.0	10 18.0	7 16.0				5913.6	
KYOTO	0	EP	07 24 48.0	ES	32 11.1	12 13.6	8 16.2	10 14.0				5965.2	443.1
OSAKA	0	EP	07 24 48	X	29 22	24 5.1	27 5.1	13 15.5				5943.5	
ASHIZU	0	EX	07 24 48.0			12 15.4	9 15.3	7 17.4				5920.8	
MORIOK	0	EP	07 24 50.0	ES	32 49.0	13 13.4	15 14.4	10 13.6				6145.8	479.0
				IX	25 01.0								
				EX	25 08.7								
				EL	39 30.0								
SENDAI	0	EP	07 24 50.0	ES	32 30	15 14	11 14	8 12				6017.6	460.0
				EL	37 40								
GIFU	0	EP	07 24 50			21 17.0	13 15.6					5945.4	
KANAZA	0	EP	07 24 51.2			12	20	7				6056.0	
UTSUNO	0	EX	07 24 51.4	EX	38 42.6	14	13					5899.2	
TAKAMA	0	EP	07 24 51.5	ES	32 31.4	11 19.2	12 17.1	4 22.0				5997.0	459.9
FUKUSH	0	EX	07 24 52.0			9 12.0	16 14.0	10 16.0				5987.5	
MUROTO	0	EP	07 24 53.5	ES	32 21.2	17 15.0	16 16.0					5897.4	447.7
TOYOOK	0	X	07 24 54.4	X	32 41.2	16 16.4	18 16.4	7 14.3				6061.6	
MIYAKO	0	EX	07 24 55			9 13.8	19 12.8	8 14.1				6108.4	
OFUNAT	0	EP	07 24 55.6	ES	32 38.4	14 15.2	11 14.8	7 16.0				6061.3	462.8
				L	39 32.0								
HIROSH	0	EP	07 24 56	EX	32 42	14 17.3	9 20.2	7 19.5	N	W	U	6095.2	
NIIGAT	0	EX	07 24 57.0			90 11.7	80 14.5	13 4.0				6066.3	
AKITA	0	EP	07 24 58.0			23 15.0	27 14.0	11 6.2				6192.5	
AIKAWA	0	EP	07 24 58.5			12	18	7	S	1	D 1	6114.3	
SHIMON	0	EP	07 24 59	EX	31 50	10 17.0	5 17.0	8 16.0				6150.8	
				EX	39 00								
MIZUSA	0	P	07 24 59.4	S	32 42.4	325 23.0	166 15.0					6092.4	463.0
FUKUOK	0	EP	07 25 00	ES	32 52	5 16.0	4 16.0	8 19.6				6154.9	472.0
KUMAMO	0	EP	07 25 01	ES	32 55.8	13 16.7	11 17.7	5 17.5				6071.1	474.8
OITA	0	EP	07 25 02.0	EX	32 46.6	26	11					6049.1	
SAIGO	0	X	07 25 05.0	EX	33 07.0	8 15.2	14 19.2	6 4.0				6202.2	
				L	40 49								
HAKODA	0	EP	07 25 07.0	ES	33 16.5	11 17.5	15 14.5	8 18.3				6369.0	489.5
AOMORI	0	X	07 25 08	X	33 02	4 15.0	19 14.8	4 16.1				6270.7	
NEMURO	0	EP	07 25 10.5	ES	33 21.0	8 14.4	9 14.0	2 14.0				6350.3	490.5
KUSHIR	0	P	07 25 13.0	ES	33 20.1	11 14.3	13 14.3	6 4.0				6352.9	487.1
URAKAW	0	EP	07 25 13.9	ES	33 41.5	27 13.6	17 12.6	12 11.4				6326.5	507.6
SAPPOR	0	EP	07 25 18.0	ES	33 26	9 15	12 15	11 14				6469.2	488.0
ABASHI	0	EP	07 25 18.4	EX	34 15.4	11 16.0	12 16.4	6 18.4				6462.1	
WAKKAN	0	EX	07 25 49			5 14.8	32 14.6					6690.7	
HACHIN	0	EP	07 25 56			13 12.0	18 12.2	11 16.4				6212.5	

OT= 2 5 36 16.3 +/- 0.2
OKAYAMA PREF
LAT= 34 42 +/- 1 LONG= 133 32 +/- 1
H= 10 MAG=3.9 CLASS=S

OKAYAM	1	IP	05 36 24.5	IS	36 28.9	80 0.4	75 0.5	10 0.4	N	2	W 2 D 10	35.0	04.4
TAKAMA	0	EP	05 36 29.9	IS	36 37.2	20 0.8	20 0.8	10 0.6				64.3	07.3
MATSUE	0	EP	05 36 34.4	S	36 44.7							93.7	10.3
TOTTOR	0	EP	05 36 36.1	ES	36 47.3							107.5	11.2
HIROSH	0	P	05 36 36.2	S	36 49.4	7 0.4	9 0.4	6 0.4	N		E 1 D	107.4	13.2
SUMOTO	0	IP	05 36 39.6	IS	36 55.4	8 0.4	3 0.4	1 0.7			D	132.5	15.8
				IX	36 45.6								
TOYOOK	0	P	05 36 42.1	IS	36 59.5	20 1.2	16 1.2	7 0.6				149.5	17.4
SAIGO	0	P	05 36 44.7	IS	37 04.2	5 0.2	7 0.4	2 0.8	S	0	E 0 D 0	167.9	19.5
TURUGI	0	X	05 36 45.3	S	36 45.9							107.4	
TOKUSH	0	X	05 36	X	36 12.1							119.0	
MATSUS	0	EP	05 37 23	X	38 31							469.9	

OT= 3 9 25 3.2 +/- 0.3
NEAR ERIMOMISAKI
LAT= 42 15 +/- 2 LONG= 143 8 +/- 2
H= 60 MAG=4.3 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HIROO	2	IP	09 25 13.3	S	25 19.6					E 4	U 17	15.6	06.3
URAKAW	1	EP	09 25 14.0	IS	25 22.4	150 0.4	167 0.4	26 0.6				30.9	08.4
OBIHIR	0	EX	09 25 20.4	ES	25 29.2							74.8	
KUSHIR	0	EP	09 25 24.1	S	25 40.6	15 0.2	14 0.2	10 0.3				131.4	16.5
SAPPOR	0	EP	09 25 29.3	S	25 48.4	11 0.4	9 0.4					172.9	19.1
MURORA	0	EP	09 25 29.6	S	25 48.7							177.5	19.1
HAKODA	0	P	09 25 33.7	S	25 55.9	9 0.3	10 1.1	4 0.2			U 1	202.6	22.2
HACHIN	0	EP	09 25 38.4	ES	26 03.0	7 0.0	7 0.0	1 0.8				234.1	24.6
AOMORI	0	X	09 26 10			12 1.9	14 1.7					252.6	
MIZUSA	0	X	09 26 39.8				5 0.7					385.2	
MATSUS	0	P	09 26 43									762.6	

OT= 4 3 12 6.9 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 34 +/- 1 LONG= 138 18 +/- 1
H= 0 MAG=4.2 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	2	IP	03 12 10.9	S	12 12.9							8.8	02.0
NAGANO	2	IP	03 12 12.4	S	12 14.7							13.9	02.3
KARUIZ	0	P	03 12 15.8	S	12 20.0						D	33.8	04.2
MATSUM	0	IP	03 12 17.8	IS	12 23.9				S	W	U 2	46.3	06.1
TAKADA	0	EP	03 12 19.7	S	12 28.1							59.9	08.4
MAEBAS	0	IP	03 12 21.4	ES	12 31.0	25 3.2	16 3.3	22 4.2	N	W	1 D 6	70.9	09.6
KUMAGA	0	EP	03 12 30.0	X	13 08.6	15 3.4	16 4.0	12 4.0				107.9	
UTSUNO	0	P	03 12 32.9	S	12 49.6	7 0.1	8 0.0		N	1 W	3	140.7	16.7
MISHIM	0	EP	03 12 36.3	ES	12 58.3	6 0.7	10 0.9	3 0.3				171.1	22.0
KAKIOK	0	EP	03 12 38	ES	12 58	8 0.8	8 0.6	4 0.6				173.8	20.0
NAGOYA	0	P	03 12 39.0	ES	13 04.6	9 1.2	9 1.2	5 1.2				196.6	25.6
MITO	0	IP	03 12 40.0	S	13 04.4	9 0.5	9 0.6	3 0.7		E 0	U 1	195.7	24.4
GIFU	0	EP	03 12 42	S	13 04.1	9 1.7	16 1.5	3 1.1				189.6	22.1
HAMAMA	0	P	03 12 44.3	ES	13 10	8	7	5 0.2	S	4	U 1	212.6	25.7
OMAEZA	0	X	03 12			8	11					217.9	
HIKONE	0	X	03 13 16.4			8 0.9	8 1.1	3 1.3				234.3	
ONAHAM	0	X	03 13 19.9			7 1.0	9 1.4	2 0.9				236.5	

OT= 5 9 14 40.4 USCGS
MONGOLIA
LAT= 48 6 LONG= 102 48
H= 33 MAG=6.4 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KANAZA	0	EX	09 19 34	EX	25 40	300	300	80				3039.7	
TOKUSH	0	EP	09 19 36.2									3060.2	
IZUHAR	0	EP	09 19 53.9	ES	24 12.0					E	U	2685.4	258.1
				L	27 06.5								
OMAEZA	0	EX	09 20			529	753	214				3282.4	
FUKUE	0	EP	09 20 02.0	S	24 30.4	161 15.7	137 16.1					2771.4	268.4
FUKUOK	0	EP	09 20 03	ES	24 38	250 9.2	180 12.4	190 10.4		E	U 4	2805.9	275.0
				EL	25 40								
SHIMON	0	EP	09 20 04	ES	24 00	302 14.0	250 12.5	140 12.0				2815.9	236.0
FUKUI	0	P	09 20 04.8	L	26 37.2	600 14.2	350 12.3					3041.3	
NAGASA	0	P	09 20 05.9	IS	24 44.0				S	E	2 U 2	2838.5	278.1
HAMADA	0	P	09 20 05.9	ES	23 46.9	250 12.6	270 15.4	114 11.8	N	4 W	4 D 7	2825.3	221.0
UWAJIM	0	EP	09 20 08	Ex	24 46							2981.1	
SAIGO	0	P	09 20 09.9	X	24 35.0	199 14.0	284 13.0	103 12.0	N	1 W	2 D 4	2823.1	
				L	27 26								
KUMAMO	0	EP	09 20 10.6	S	24 54.3	461 7.9	750 13.6	147 10.6				2887.1	283.7
				L	28 08.4								
SAGA	0	IP	09 20 10.9	IL	28 12.7					W 10		2826.4	
HIROSH	0	P	09 20 12.2	S	24 30.2	675 15.1	625 15.2	150 14.3	N	3 W	3 D 9	2888.8	258.0
YONAGO	0	EP	09 20 12.6	EX	26 17.0							2876.6	
MATSUE	0	EP	09 20 14.0	EX	26 50.9							2855.8	
NOBEOK	0	EP	09 20 16.1	EX	25 06.2	600 19.6	600 15.8	100 5.3				2970.2	
OITA	0	P	09 20 16.7	S	25 01.3	2450	3640	196	N	8 W	10 D 8	2916.5	284.6
OKAYAM	0	EP	09 20 17.0	ES	25 03.0	300 13.0	360 13.0	220 12.0				2969.6	286.0
TOTTOR	0	EP	09 20 17.1	EX	26 50.7	500 15.0	500 14.4	150 10.7				2930.5	
MIYAZA	0	P	09 20 19.2	S	25 05.4	217 10.0	249 13.0	220 10.6				3004.7	286.2
TOYOOK	0	P	09 20 19.4	S	25 02.3	332 13.0	336 13.4	139 9.8				2974.7	282.9
WAKKAN	0	P	09 20 21.2	S	25 03.4	1000 12.0	750 12.0					2954.6	282.2
MURORA	0	EP	09 20 22.2	ES	25 04.2	600 14.0	400 14.0					3036.1	282.0
				EL	28 08.2								

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STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MURORA			09 20 22.2	SCS	31 36.2							3036.1	
MUROTO	0	EP	09 20 22.2	EX	27 20.4	345 13.2	366 13.2	110 11.0				3091.5	
SAPPOR	0	EP	09 20 23.0	ES	25 04.0	2000 14.0	800 13.6	300 13.2			U	3027.5	281.0
				L	29 16.4								
SUTTSU	0	EP	09 20 23.1	EX	26 03.9	2100 5.8	1100 5.6	100 7.5				2958.6	
				EL	28 10.5								
YAKUSH	0	EP	09 20 23.2	EX	25 17.0	92 14.6	121 12.8	80 15.2				3061.1	
KAGOSH	0	P	09 20 23.9	ES	25 04.4	310 3.7	267 5.2	81 10.7	S	8		2973.9	280.5
HAKODA	0	EP	09 20 24.0	ES	25 08.0	800 14.5	400 11.4	200 10.0				3043.7	284.0
ASAHIK	0	P	09 20 25.1	IX	29 39.0	156 11.4	183 12.0	61 11.0				3073.2	
KYOTO	0	EP	09 20 27.0	ES	24 45.0	200 13.0	167 13.4	96 11.4				3076.1	258.0
KOCHI	0	EP	09 20 27.1	EX	25 14.5							3024.4	
TAKAMA	0	EP	09 20 27.5	ES	24 56.4	139 11.7	246 12.7	106 12.6				3005.7	268.9
				E	26 40.3								
				EL	27 45.8								
AKITA	0	EX	09 20 28	EX	23 36	384 12.0	277 12.0	128 12.6				3104.3	
SUMOTO	0	P	09 20 28.8	ES	25 08.6	187 12.1	186 14.5	108 14.2	S	4 E	3 U 5	3064.4	279.8
				L	28 23								
				EX	57 14.7								
				EX	59 44.9								
AIKAWA	0	EP	09 20 28.8	IS	24 23.6	277	151	90	N	5 W	5 D 7	3064.5	234.8
WAKAYA	0	EP	09 20 29.2	ES	24 14.6	187 13.5	265 13.5					3090.4	225.4
MATSUS	0	IP	09 20 29.8	S	24 48						D	3154.1	258.2
TURUGI	0	EP	09 20 31.1	E	26 47.8							3041.8	
ASHIZU	0	EP	09 20 31.6	ES	25 10.0	240 15.6	190 16.6					3050.8	278.4
AOMORI	0	EP	09 20 32	EX	25 22		270 16.0	94 17.5				3096.1	
NARA	0	EP	09 20 32.1			400 15.0	300 15.0	100 12.0				3105.8	
HIKONE	0	P	09 20 32.4	S	25 34.6	257 11.4	280 13.3	212 13.1				3095.0	302.2
MORIOK	0	EP	09 20 33.0	ES	25 24.0	104 15.8	71 11.6	93 11.0				3184.9	291.0
				EL	27 54.5								
KARUIZ	0	EP	09 20 33.3	E	26 26.7	500 17.0	400 15.0					3191.9	
IIDA	0	EP	09 20 33.4	E	28 44.0	147 13.6	139 13.0	50 12.0				3193.9	
GIFU	0	EX	09 20 34.8	EX	26 0	310 15.2	240 13.3	85 14.3				3123.9	
HACHIN	0	EP	09 20 35.5	ES	25 25.4	361 13.5	295 13.8					3166.7	289.9
MATSUM	0	EP	09 20 35.7	ES	25 24.7							3155.9	289.0
				EL	28 25.4								
UTSUNO	0	EX	09 20 35.8	EX	28 27.2	289	131	54				3275.6	
OBIHIR	0	X	09 20 36.3									3174.3	
NAGOYA	0	EP	09 20 36.4	ES	25 54.0	167 12.4	175 13.4	116 11.0			D 3	3154.3	317.6
				EX	20 48.8								
				X	23 06.4								
				L	29 54.0								
ABASHI	0	P	09 20 36.6	X	25 32.0	175 17.6	140 20.0	122 15.0				3203.9	
				X	29 32.0								
OWASE	0	P	09 20 36.8	S	25 40.9	146 14.0	148 14.0					3174.7	304.1
TAKAYA	0	P	09 20 37.1	X	28 38.9		2 27.6	3 27.6				3109.5	
URAKAW	0	EP	09 20 37.2	ES	25 25.0	900 14.2	900 13.4	200 12.2				3177.5	287.8
TSU	0	EP	09 20 38.4									3153.6	
SHIONO	0	EP	09 20 38.8	ES	25 20.3	224 12.5	277 13.4	69 12.7				3188.2	281.5
				EL	27 20.9								
				EL	28 02.7								
NAHA	0	EP	09 20 39	ES	26 10	115 11	102 9	95 13				3252.7	331.0
YAMAGA	0	EX	09 20 39	L	30 05	200 14.0	200 12.0					3206.5	
TAKADA	0	EP	09 20 39.5									3121.3	
MIZUSA	0	EP	09 20 39.5	S	25 36.8							3213.8	297.3
SENDAI	0	EP	09 20 40	ES	25 37.5	122 14	121 12	75 12				3246.9	297.5
				EX	23 34.0								
				EL	27 13								
OSAKA	0	EP	09 20 40	X	29 18	275 15.6	325 14.0	185 11.2				3087.2	
HIROO	0	EP	09 20 40.4			1000 15.0	1500 14.0					3211.4	
OFUNAT	0	P	09 20 42.0	ES	25 38.4	108 19.2	77 12.6	82 11.8	S	1 E	1 U 3	3261.3	296.4
				L	29 43.2								
				L	31 19.2								
MISHIM	0	EP	09 20 42.4	ES	26 02.2	256 13.8	279 13.2	70 13.7				3300.0	319.8
HAMAMA	0	EP	09 20 43	E	26 04	198	179	140				3239.8	
KUSHIR	0	IP	09 20 43.0	ES	25 31.0	900 15.5	450 12.4	100 12.4		E	3 U 3	3258.7	288.0
SHIRAK	0	EP	09 20 43.4	ES	25 31.9	600 17.6	700 12.2	300 12.8				3265.8	288.5
AJIRO	0	EX	09 20 43.5	EX	30 09.9	143 13.4	183 14.4	52 12.4				3316.7	
FUKUSH	0	EP	09 20 44.0	ES	25 48	93 12.5	96 11.0	75 12.4				3245.4	304.0
				L	29 09								
FUNATS	0	EP	09 20 47.6	ES	26 30.3							3262.2	342.7
				L	26 46.3								
ONAHAM	0	P	09 20 49.0	ES	25 48.2	140 12.5	158 14.5	94 10.8			D 6	3326.9	299.2
NEMURO	0	EP	09 20 49.0	ES	25 41.8	317 16.4	128 14.0	34 11.2				3330.8	292.8
MITO	0	EP	09 20 50.5	EX	28 25	159 13.4	130 13.4	75 12.4				3330.4	
MIYAKO	U	EP	09 20 52	ES	25 49	116 16	113 19	93 12				3247.3	297.0
TOKYO	0	EP	09 20 52	ES	25 50	257 13.8	186 14.2	53 12.6				3322.6	298.0
MAEBAS	0	EP	09 20 52.3	ES	26 17.6	414 14.0	189 17.0	76 15.0				3225.5	325.3
KUMAGA	0	EP	09 20 56.0	E	27 01.4	275 12.8	212 14.4	70 10.4				3265.4	
CHICHI	0	EP	09 20 56.5	E	28 04.8							3253.2	
KAKIOK	0	EP	09 20 56.9	E	27 50.9	215 14.1	128 15.4					3319.2	
YOKOHA	0	EP	09 21 46.8			430 15.0	387 15.0	103 16.0				3331.3	

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOMISA	0	IX	09 21 46.8			445	14.2	195	13.2	130	11.2				3378.2	
MAIZUR	0	EX	09 22 24.0	ES	22 24.0	800	24.6	500	25.8	200	23.4				3019.7	
HACHIJ	0	X	09 22 40.6	ES	29 03.6	162	13.6	137	14.8	40	14.4				3500.2	
NIIGAT	0	EX	09 24 33.0			350	12.8	300	10.5	220	10.0				3130.9	
ASOSAN	0	EX	09 24 56	EX	28 24	800	3.4	550	7.5	120	6.5				2906.4	
NAGATS	0	P	09 25	S	31 0	1300	18.2	1250	17.0						3328.5	
RUMOI	0	EX	09 25 10.2			1000	15.2	500	12.1						3010.6	
OSHIMA	0	S	09 25 37			387	13.3	435	14.6	54	11.3				3356.1	
HIMEJI	0	X	09 26 35.7												3014.5	
KOBE	0	EX	09 26 53			400	14.0	450	14.0	100	14.0				3058.9	
ISHINO	0	X	09 27												3267.1	
SAKATA	0	EX	09 27 07	EL	29 24	2200	12.4	1400	11.5	200	10.9				3130.5	
CHOSHI	0	ES	09 27 38.0	LR	30 53.8	237	14.0	177	16.4	40	11.6				3399.6	
				EX	33 36.9											
				EX	35 19.7											

OT= 6 9 4 3.5 +/- 0.4
OFF ERIMOMISAKI
LAT= 41 48 +/- 1 LONG= 143 29 +/- 3
H= 50 MAG=5.9 CLASS=R

HIROO	3	IP	09 04 14.9	IS	04 22.0	1000	3.9	1500	4.3	4000	2.9	S164 W 8 D 12			55.4	07.1
URAKAW	2	IP	09 04 17.4	IS	04 27.1	1300	1.0	1700	1.8	900	1.8	S170 E178 D347			70.6	09.7
OBIHIR	2	IP	09 04 23.3	IS	04 39.6	2000	3.2	1800	4.1	1300	3.6	N 4 U 19			126.3	16.3
KUSHIR	2	IP	09 04 28.0	S	04 42.6	800	3.5	700	3.9	250	3.1	S 3 W 3 D 10			150.9	14.6
MURORA	0	P	09 04 34.6	IS	04 58.2	100	3.6	200	2.4	200	3.6	N 4 W 7 U 6			214.8	23.6
HACHIN	2	IP	09 04 35.4	IS	05 00.0	216	3.5	139	3.7	118	3.7	S 1 W 1 U 1			217.0	24.6
HAKODA	1	IP	09 04 36.4	IS	05 02.1	217	4.0	231	3.0	191	4.2	W 22 U 15			226.5	25.7
SAPPOR	1	IP	09 04 37.3	IS	05 02.8	1100	2.9	800	2.9	500	2.5	N 19 W 18 U 30			225.6	25.5
NEMURO	0	P	09 04 38.5	S	05 02.6	167	2.4	149	2.8	84	3.0	S 3 W 4 D 8			242.2	24.1
ASAHIK	0	IP	09 04 39.2	S	05 04.0	400	2.2	500	3.0	300	2.2	N W 1 U 2			237.0	24.8
AOMORI	2	IP	09 04 40.1	IS	05 09.1	800	1.7	600	1.7	200	1.5	S 19 W 51 U 32			251.1	29.0
ABASHI	0	P	09 04 42.1	S	05 09.0	160	2.2			92	3.0				254.8	26.9
SUTTSU	0	EP	09 04 44.7	ES	05 17.3										289.2	32.6
RUMOI	0	IP	09 04 45.6	IS	05 21.0	300	3.4	250	3.4			N 4 W 4 U 6			282.7	35.4
MIYAKO	0	EP	09 04 47	S	05 15.1	73	6.6	72	6.6	65	3.8				271.4	28.1
MORIOK	1	IP	09 04 47.0	IS	05 18.6	70	2.0	91	5.0	87	4.0	S 4 W 4 U 4			304.6	31.6
OFUNAT	0	IP	09 04 50.4	IS	05 23.8	49	4.2	72	4.2	59	3.2	N 1 E 1 D 2			339.0	33.4
				X	05 37.2											
AKITA	0	EP	09 04 52.1	S	05 32.2	233	3.8	238	4.2	113	4.0				367.4	40.1
MIZUSA	0	P	09 04 53.8	X	05 46.3	350	2.4	543	2.8	160	2.0	D 8			356.9	
ISHINO	0	P	09 04 59.9	IS	05 39.6										418.3	39.7
CHICHI	0	X	09 04	X	05 13.5										749.1	
SENDAI	0	EP	09 05 03.8	ES	05 49.2	105	3.0	97	4.0	47	4.0				450.6	45.4
				X	06 00											
WAKKAN	0	P	09 05 04.5	X	06 00.9	111	5.1			55	5.0				427.6	
SAKATA	0	EP	09 05 05.5	X	05 42.6	700	3.1	600	4.3	200	3.1				446.5	
YAMAGA	0	EP	09 05 07.4	ES	05 59.2										476.0	51.8
FUKUSH	0	EP	09 05 10.2	ES	06 05.2	58	1.0	87	5.0	34	3.5				517.6	55.0
SHIRAK	0	EP	09 05 21.6	X	06 17.6										590.5	
ONAHAM	0	EX	09 05 23.2	ES	06 22.0	78	4.4	106	4.4	35	2.5				582.9	
AIKAWA	0	IP	09 05 24.9	IS	06 26.0	25		17		20		S 1 W 1 U 1			613.8	61.1
UTSUNO	0	P	09 05 28.1	ES	06 36.7	90		61		23					661.3	68.6
MITO	0	P	09 05 28.5	X	06 32.6	95	4.0	125	3.3	57	2.5				655.7	
KAKIOK	0	IP	09 05 32.6	IS	06 39.6	46	0.8	62	4.3	55	3.6				680.5	67.0
TAKADA	0	EP	09 05 34.9	ES	06 43.5										688.6	68.6
CHOSHI	0	P	09 05 36.1	X	06 43.4										712.2	
TOKYO	0	EX	09 05 37	X	06 52	87	3.6	93	4.0	70	4.0				751.9	
MAEBAS	0	EP	09 05 38.3	ES	06 57.9	80	5.0	130	5.2	63	4.4				710.5	79.6
KUMAGA	0	EP	09 05 40.0	ES	06 51.0	97	4.0	101	5.2	64	4.6				720.9	71.0
MATSUS	0	IP	09 05 40.0	X	07 37							N D			740.6	
KARUIZ	0	EP	09 05 40.7	ES	07 02.7	100	3.3	100	2.6						741.0	82.0
AJIRO	0	EP	09 05 51.0	X	07 12.4	16	4.2	17	4.6	9	4.0				841.8	
YOKOHA	0	EP	09 05 51.3	IX	07 04.6	131	4.3	127	3.5	50	5.6				780.8	
TOMISA	0	EP	09 05 52.6	X	07 12.6	107	5.2	80	4.0	47	3.0				827.5	
IIDA	0	EP	09 05 55.0	X	07 49.4	22	4.2	25	5.8	13	4.2				853.5	
OSHIMA	0	P	09 05 55.6	X	07 16.1	31	5.1	31	5.1	10	3.0				859.5	
KANAZA	0	EP	09 05 56	X	07 12	26		27		11					829.5	
MISHIM	0	EP	09 05 58.0	ES	07 17.6	33	4.0	45	4.5	26	4.4				841.7	79.6
OMAEZA	0	EX	09 06			61		109		26					922.1	
GIFU	0	EP	09 06 03.2			17	4.7	10	3.2	6	3.1				919.9	
MATSUM	0	X	09 06 04.7	X	07 29.6										779.5	
FUNATS	0	X	09 06 04.7	X	06 43.4										810.9	
NAGOYA	0	EP	09 06 07.2	ES	07 48.0	26	2.4	26	2.4	15	4.0				929.7	100.8
HIKONE	0	EP	09 06 11.3	ES	07 58.3	21	3.6			7	3.6				959.9	107.0
KYOTO	0	IP	09 06 15.8	ES	07 58.8	7	4.0	7	5.0	5	5.0	N 1 E 1 D 1			1011.9	103.0
HAMAMA	0	X	09 06 16	X	08 00	41		50		19					934.2	
TOYOOK	0	P	09 06 18.0	X	08 17.8	9	6.5	5	4.1	5	5.6				1024.6	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NIIGAT	0	EX	09 06 19.0	X	07 03.0	180	4.0	140	4.0	30	3.5				574.6	
OWASE	0	P	09 06 20.0	S	08 15.4	8	5.4	7	6.4	7	5.4				1070.1	115.4
SAIGO	0	IP	09 06 24.7	S	08 16.5	2	1.0	2	1.1	2	1.0	N 1 E 1 D 1			1075.3	111.8
SUMOTO	0	P	09 06 27.4	ES	08 28.0	7	4.8	8	5.0	8	4.8				1118.0	120.6
				IX	06 32.5											
OKAYAM	0	IP	09 06 31.0	X	08 46.0	10	2.4	10	4.0	13	6.0			U	1150.0	
OSAKA	0	X	09 06 38	X	08 38	78	5.2	160	5.3	77	4.2				1054.5	
SHIONO	0	X	09 06 40.3	ES	08 38.9	6	4.6	8	4.0	2	3.6				1149.3	
MUROTO	0	IP	09 06 42.8	X	09 11.0	8	5.0	11	5.1	6	4.8		E	D 0	1254.2	
WAKAYA	0	X	09 06 45.9			11	5.2	8	5.2						1112.3	
TSU	0	X	09 06 47.5												995.4	
SHIMON	0	EP	09 07 04.0	ES	09 30	5	4.0	4	6.0	4	5.0	N	E	D	1403.0	146.0
OITA	0	X	09 07 13.2			19		33		5					1412.7	
NAGASA	0	EP	09 07 20.8	ES	10 20.0							S	W	U	1569.6	179.2
KAGOSH	0	EX	09 07 28.4			13	2.6	9	3.1						1615.9	
HACHIJ	0	X	09 07 44.8	ES	08 01.0	10	3.6	14	3.0	6	3.2			U 1	1018.8	

OT= 7 20 50 23.6 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 31 +/- 1 LONG= 138 9 +/- 2
H= 10 MAG=4.6 CLASS=L

MATSUS	2	P	20 50 25.6	S	50 26.8										5.8	01.2
NAGANO	2	IP	20 50 28.7	S	50 31.5										16.4	02.8
MATSUM	X	IP	20 50 31.3	S	50 35.4	200	2.7	150	2.7	50	2.5	S 5 W 6 U 3			34.2	04.1
KARUIZ	0	IP	20 50 32.9	S	50 37.9	600	3.9	350	2.8	150	3.3			D 6	41.0	05.0
TAKADA	0	P	20 50 36.2	S	50 46.0										65.9	09.8
MAEBAS	0	IP	20 50 38.4	ES	50 48.0	107	3.0	87	3.0	82	3.8		W 3 D 4		83.0	09.6
CHICHI	0	EP	20 50 42.3	S	50 54.2										102.0	11.9
IIDA	0	EP	20 50 43.0	ES	50 58.0	18	2.8	15	1.4	14	3.4	S 2		U 3	115.2	15.0
KUMAGA	0	EP	20 50 45.0	ES	51 08.4	66	3.4	60	4.6	59	3.4				118.2	23.4
FUNATS	0	P	20 50 45.2	S	50 59.2										125.8	14.0
KANAZA	0	EP	20 50 48.0	ES	51 04.0	28		20							134.5	16.0
UTSUNO	0	P	20 50 50.0	S	51 07.7	19		12		12		N 2 W 3			154.2	17.7
GIFU	0	P	20 50 54.7	S	51 15.9	33	1.5	21	2.5	13	1.5				176.1	21.2
MISHIM	0	EP	20 50 54.9	ES	51 12.6	13	3.1	18	4.0	3	3.6				171.0	17.7
NAGOYA	0	P	20 50 55.0	S	51 15.6	30	1.4	35	1.2	13	1.2	N 2 E 2 D 4			184.0	20.6
TOKYO	0	EP	20 50 55	ES	51 18	49	5.1	53	4.2	48	4.0				171.7	23.0
KAKIOK	0	EP	20 50 55.8	S	51 16.8	12	0.8	15	0.8	7	0.7				186.0	21.0
YOKOHA	0	EP	20 50 56.8							17	3.0				181.0	
MITO	0	P	20 50 57.8	IX	51 24.0	11	4.4	12	3.0	9	3.2				208.7	
HAMAMA	0	P	20 50 58.0	S	51 25.6	15		20		8				U 2	204.3	27.6
FUKUI	0	P	20 50 58.5	S	51 21.8										180.2	23.3
OSHIMA	0	EX	20 50 59			7	1.8	6	4.2	5	1.4				224.2	
TSURUG	0	EP	20 50 59.2	S	51 24.5										210.9	25.3
OMAEZA	0	EP	20 50 59.8	ES	51 27.9	33		39		9					212.3	28.1
HIKONE	0	EP	20 51 03.4	S	51 26.9	26	3.9	27	1.1	11	1.7				220.3	23.5
ONAHAM	0	EX	20 51 05.5	ES	51 35.1	15	1.0	14	2.4	6	2.7				250.7	
TOMISA	0	X	20 51 07.2			13	5.6	12	3.1	8	3.0				233.3	
TSU	0	EP	20 51 07.6												249.8	
NIIGAT	0	EX	20 51 08.6	S	51 18.3	28	1.0	22	0.6						174.1	
WAKAYA	0	EX	20 51 11.1	EX	52 10.0	8	2.0	6	2.0						371.4	
NARA	0	EP	20 51 11.6												292.2	
TAKAYA	0	X	20 51 39.1	X	51 50.3										90.0	
TOYOOK	0	X	20 51 56.4			23	1.2	11	1.2						319.2	

OT= 10 6 58 26.4 +/- 0.4
OFF IBARAKI PREF
LAT= 36 54 +/- 2 LONG= 141 0 +/- 4
H= 60 MAG=4.2 CLASS=S

ONAHAM	0	IP	06 58 35.8	IS	58 41.6	114	1.1	114	1.0	34	0.8			D 12	9.7	05.8
MITO	0	IP	06 58 40.9	IS	58 51.2	16	0.5	23	1.0	9	2.5			D 2	74.7	10.3
SHIRAK	X	EP	06 58 41.9	IS	58 51.8									U 6	73.1	09.9
KAKIOK	0	EP	06 58 43.5	S	58 56.8	18	0.7	17	0.8	9	0.8				103.5	13.3
UTSUNO	0	P	06 58 44.0	S	58 57.7	9		13		5					108.1	13.7
FUKUSH	0	IP	06 58 45.1	ES	58 57.2	43	1.0	56	0.8	31	0.7	N 5 W 3 U 6			105.8	12.1
CHOSHI	0	EP	06 58 47.7	S	59 07.6										131.1	19.9
SENDAI	X	IP	06 58 49.6	IS	59 06.0	15	0.8	14	1.0	7	2			U 1	151.2	16.4
OFUNAT	0	EP	06 59 02.0	IS	59 26.9	6	0.0	6	0.0	2	0.2				248.1	24.9
MATSUS	0	IP	06 59 03.9										W	U	252.6	
KUMAGA	0	X	06 59 04.0			5	0.8	5	0.8	3	0.8				167.0	
MIZUSA	0	P	06 59 04.7	S	59 31.4	3	0.3	12	0.1	2	0.8				248.1	26.7
MORIOK	0	P	06 59 09.7	IS	59 42.8	6	0.5	6	0.3	1	0.3				310.8	33.1
				IX	59 10.6											

OT= 10 17 30 20.1 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 27 +/- 1 LONG= 138 4 +/- 1
H= 0 MAG=4.9 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	2	P	17 30 24.7	S	30 26.8										16.0	02.1
MATSUM	2	IP	17 30 25	S	30 29	400	2.9	200	2.6	200	2.6	S 22	W 26	U 7	24.4	04.0
NAGANO	2	IP	17 30 27.2												26.0	
KARUIZ	2	IP	17 30 31.1	S	30 35.9	700	2.7	600	3.0	300	2.4	N 16	W 17	D 40	45.2	04.8
TAKADA	0	P	17 30 35.2	S	30 45.0										74.5	09.8
TAKAYA	0	P	17 30 37.1	S	30 46.5										80.1	09.4
MAEBAS	1	IP	17 30 37.7	EX	30 50.5	292	4.0	183	3.5	185	3.6				89.7	
CHICHI	0	EP	17 30 39.7	ES	30 50.4										104.5	10.7
IIDA	0	IP	17 30 40.6	IS	30 55.4	39	1.6	40	3.6	26	2.8	S 11	W 3	U 10	106.3	14.8
KUMAGA	1	IP	17 30 43.0	IS	30 59.0	149	3.2	154	3.6	98	3.4		E 5	U 17	123.1	16.0
FUNATS	0	P	17 30 44.0	S	30 57.8										122.8	13.8
KANAZA	0	P	17 30 45.4	ES	31 03.4	35		45		25				D 18	127.5	18.0
UTSUNO	0	P	17 30 48.3	S	31 19.8	29		36		11		N 1	W 7	D 4	162.0	31.5
MISHIM	0	EP	17 30 48.9	ES	31 11.1	32	1.5	46	0.6	9	1.3				167.7	22.2
AIKAWA	0	IP	17 30 50.2	IS	31 12.0	14		15		7		N 2	E 0	U 1	174.9	21.8
TOKYO	0	P	17 30 51.5	S	31 13.2	76	3.1	99	4.2	93	3.3				174.4	21.7
AJIRO	0	IP	17 30 51.5	ES	31 13.8	8	1.4	14	1.4	5	1.6			U 0	181.7	22.3
GIFU	0	P	17 30 51.8	S	31 11.1	96	1.5	55	1.7	31	1.6				165.5	19.3
NAGOYA	0	EP	17 30 52.2	IS	31 12.8	77	1.2	101	1.[illegible]	66	1.2	N 0	E 0	D 2	173.7	20.6
KAKIOK	0	IP	17 30 53.0	S	31 12.8	31	0.6	26	0.8	11	1.0				192.4	19.8
FUKUI	0	P	17 30 53.6	S	31 17.1										171.1	23.5
NIIGAT	0	EP	17 30 54.0			80	5.0	170	4.8	35	3.0				184.1	
YOKOHA	0	IP	17 30 54.6	IS	31 19.6	71	1.1	67	1.2	36	2.0			D 9	182.1	25.0
HAMAMA	0	IP	17 30 55.0	ES	31 17	30		39		16				D 2	195.7	22.0
SHIRAK	0	IP	17 30 55.7	ES	31 23.7									U 6	206.4	28.0
TSURUG	0	EP	17 30 56.1	S	31 22.4										201.0	26.3
MITO	0	IP	17 30 56.4	S	31 19.5	35	3.8	32	3.6	19	3.0			U 2	215.8	23.1
OMAEZA	0	EP	17 30 57.0	ES	31 23.8	39		71		21					205.3	26.8
OSHIMA	0	EP	17 30 58.6	IS	31 24.4	19		17	2.0	8	1.8				221.8	25.8
HIKONE	0	P	17 30 59.3	S	31 22.7	74	1.5	49	1.5	32	1.7				209.9	23.4
ONAHAM	0	P	17 31 02.7	ES	31 34.5	44	1.3	42	2.1	14	2.1			D 2	259.6	31.8
TSU	0	IP	17 31 03.1	IS	31 34.1							S		U	239.4	31.0
FUKUSH	0	EX	17 31 03.2			8	1.3	8	1.4	6	3.0				258.5	
TOMISA	0	EP	17 31 03.6			22	4.4	18	3.2	12	2.4				232.8	
CHOSHI	0	EP	17 31 04.1	S	31 35.2										262.6	31.1
KYOTO	0	EP	17 31 04.1	IS	31 40.9	12	1.6	15	1.6	6	4.8				264.4	36.8
SENDAI	0	EP	17 31 08	ES	31 48	8	2.0	6	4	3	4				321.4	40.0
NARA	0	EP	17 31 09.2												281.7	
OWASE	0	P	17 31 10.5	S	31 44.8	7	1.8	5	1.6	6	1.8				314.4	34.3
OSAKA	0	X	17 31 13.8	ES	31 49.8	55	3.8	118	4.5	28	4.2				304.1	
TOYOOK	0	X	17 31 16.5	S	31 52.1	29	1.3	43	1.1	6	1.1				309.7	
SUMOTO	0	EP	17 31 17.7	ES	32 03.0	5	5.0	5	4.4	5	3.8				370.5	45.3
				EX	31 27.2											
WAKAYA	0	X	17 31 24.7	S	32 06.1	18	1.4	14	1.4						360.9	
OKAYAM	0	X	17 31 31.0	X	32 25.5	10	3.8	10	4.0	10	3.9				424.3	
MUROTO	0	P	17 31 36.2	X	32 42.0	5	3.8	7	7.0	4	4.0				502.4	
TAKAMA	0	X	17 31 37.4	X	32 27.6	8	5.5	7	5.1	2	1.0				434.2	
TOKUSH	0	X	17 31												413.2	
AKITA	0	X	17 32 18.2			10	3.4	13	4.4	11	3.8				404.3	
OITA	0	X	17 33 41.3			13		11		6					688.5	

OT= 11 2 49 32.1 +/- 0.2
KOCHI-TOKUSHIMA BORDER
LAT= 33 52 +/- 1 LONG= 133 48 +/- 1
H= 10 MAG=4.4 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TURUGI	0	P	02 49 38.3	S	49 43.6										27.5	05.3
KOCHI	3	IP	02 49 41.4	IS	49 45.5							S 47	W 27	U 18	42.9	04.1
TAKAMA	1	IP	02 49 43.0	IS	49 48.7	54	0.8	54	0.8	40	0.8	N 6	E 4		55.3	05.7
TOKUSH	1	IP	02 49 46.7	IS	49 55.7	120	0.1	95	0.1	38	0.1	S 1	W 1	D 1	75.1	09.0
MUROTO	X	IP	02 49 47.6	IS	49 56.8	43	0.4	118	0.4	27	0.3	N 0		D 1	77.0	09.2
OKAYAM	1	IP	02 49 48.2	IS	49 59.8	85	0.9	100	0.6	20	1.2	N 20	E	U 10	91.0	11.6
SUMOTO	0	IP	02 49 52.5	IS	50 05.4	36	0.4	22	0.5	12	1.2	S	W 1	D	114.7	12.9
WAKAYA	0	P	02 49 56.2	S	50 10.5	59	0.4	42	0.4						132.3	14.3
HIROSH	0	EP	02 49 56.2	IS	50 12.1	15	0.5	13	0.8	14	0.8	S 1	E 2	D 3	137.3	15.9
HIMEJI	0	P	02 49 56.8	S	50 11.3										135.8	14.5
UWAJIM	0	IP	02 49 57.4	IS	50 14.2								E		135.5	16.8
KOBE	0	EP	02 49 59.5	ES	50 17.6										156.3	18.1
ASHIZU	0	EP	02 50 00.5	ES	50 17.5	8	1.1	9	0.8	5	1.2				146.9	17.0
SHIONO	0	EP	02 50 00.8	ES	50 27.2	6	1.7	7	2.0	11	1.3				187.9	26.4
YONAGO	0	P	02 50 02.5	IS	50 23.7							N	W		178.7	21.2
OSAKA	0	P	02 50 02.6	S	50 25.8	35	3.5	39	3.0	17	2.4				182.0	23.2

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STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOTTOR	0	EP	02 50 03.3	ES	50 24.4										185.7	21.1
HAMADA	0	P	02 50 05.1	IS	50 27.5	10	0.9	13	0.9	6	0.8		E 1	D 1	195.4	22.4
MATSUE	0	EP	02 50 05.5	S	50 26.5										188.4	21.0
TOYOOK	0	P	02 50 07.2	ES	50 30.0	91	1.3	90	1.3	11	0.8	N		U	207.4	22.8
KYOTO	0	EP	02 50 08.0	ES	50 34.4	7	1.4	6	1.4	2	1.2				218.5	26.4
OITA	0	EP	02 50 08.2	S	50 35.0	27	1.5	24	1.1						213.9	26.8
NARA	0	EP	02 50 08.6												207.9	
OWASE	0	P	02 50 09.2	S	50 36.4	5	1.4	3	1.0	7	1.4				222.4	27.2
SAIGO	0	EP	02 50 15.5	S	50 46.7	5	1.0	5	1.4	3	1.1	N 0	W 0	U 1	262.8	31.2
SHIMON	0	EP	02 50 17.0	ES	50 47.5	6	1.0	3	1.0	3	1.0				264.4	30.5
HIKONE	0	X	02 50 20.1	ES	50 48.2	14	2.3	16	1.3	4	1.2				273.3	
NAGOYA	0	EP	02 50 21.0	ES	50 57.6	8	2.2	11	2.2	3	1.4				324.5	36.6
TSURUG	0	X	02 50 22.5												286.5	
GIFU	0	X	02 50 26	ES	50 55	8	1.9	5	2.1						320.5	
FUKUOK	0	X	02 50 26.1	S	51 05.5	8	2.6	4	1.3	2	2.0				318.5	
KUMAMO	0	X	02 50 26.9	S	51 01.8	12	1.6	13	1.6	5	0.9				310.5	
FUKUI	0	X	02 50 29.9	S	51 06.7										328.5	
MIYAZA	0	X	02 50 31.0	S	51 05.8	8	1.0	9	1.0	3	1.0				309.8	
SAGA	0	X	02 50 31.2	X	51 16.1							S 6	E 6	D 4	331.7	
HAMAMA	0	X	02 50 37	ES	51 20	8		5	[illegible]	4					373.0	
MATSUS	0	IP	02 50 42.5	ES	51 34								W	U	498.8	51.5
KAGOSH	0	X	02 51 28.5			9	1.8	7	2.0	5	1.4				396.4	

OT= 12 21 24 46.3 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 28 +/- 1 LONG= 138 5 +/- 1
H= 10 MAG=4.8 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	3	P	21 24 49.2	S	24 51.2										13.7	02.0
MATSUM	2	IP	21 24 51.7	IS	24 55.7							S 19	W 22	U 36	26.7	04.0
NAGANO	3	IP	21 24 54.4	IS	24 58.2	900		800		500		N 3	E 0	U 18	23.7	03.8
KARUIZ	1	IP	21 24 55.0	S	24 59.8	550	2.8	400	1.8	250	1.2	N 12	W 26	D 40	44.3	04.8
TAKADA	0	P	21 24 59.9	S	25 09.0							N 4		U 9	72.4	09.1
MAEBAS	1	IP	21 25 01.4	IS	25 12.6	230	4.6	101	4.6	159	3.6	N	W 1	D 6	88.3	11.2
TAKAYA	0	EP	21 25 02.4	S	25 11.4										82.2	09.0
CHICHI	2	P	21 25 04.4	S	25 17.3							N 3	W 3		104.1	12.9
IIDA	0	IP	21 25 05.6	IS	25 19.0	51	1.6	43	1.6	21	3.8	S 6	W 4	U 6	108.5	13.4
KUMAGA	1	IP	21 25 08.6	IS	25 24.2	132	5.0	131	4.0	101	3.8	N 2	W 4	D 5	122.2	15.6
KANAZA	0	P	21 25 09.8	S	25 28.0	91		36		35			E 6	D 12	128.8	18.2
UTSUNO	0	EP	21 25 13.0	S	25 33.1	81	3.8	61	1.2	27	1.4	N 1	W 3	D 3	160.4	20.1
AIKAWA	0	IP	21 25 13.9	ES	25 35.2	11		22		9		N 4	W 0	U 1	172.9	21.3
MISHIM	0	IP	21 25 15.5	ES	25 36.6	39	1.1	49	1.4	13	0.7			D	168.7	21.1
TOKYO	0	IP	21 25 15.8	IS	25 39.2	63	2.5	72	0.8	82	1.8				174.0	23.4
NAGOYA	0	P	21 25 16.2	S	25 40.4	41	1.0	39	1.0	29	1.0	S 3	W 2	U 4	176.1	24.2
GIFU	0	P	21 25 16.7	S	25 37.6	43	1.5	48	1.5	20	1.4				167.9	20.9
AJIRO	0	EP	21 25 16.7	ES	25 40.1	8	0.6	10	0.6	4	0.6				182.5	23.4
NIIGAT	0	IP	21 25 17.4	IS	25 40.9	83	1.8	108	1.8	22	2.0			U 1	181.8	23.5
KAKIOK	0	EP	21 25 17.5	S	25 39.2	58	1.0	38	1.0	16	1.0				191.2	21.7
FUKUI	0	P	21 25 17.7	S	25 45.8										173.0	28.1
TSURUG	0	EP	21 25 17.9	S	25 45.9										203.1	28.0
SHIRAK	0	EP	21 25 18.5	ES	25 46.5										204.3	28.0
FUNATS	0	X	21 25 19.1	S	25 21.6							N 13			123.7	
YOKOHA	0	IP	21 25 19.2	IS	25 43.3	70	1.3	77	3.4	29	2.2	N 2	W 3	D 11	182.1	24.1
HAMAMA	0	P	21 25 19.5	S	25 42.8	56		50		26				U 1	197.7	23.3
MITO	0	IP	21 25 20.6	S	25 44.5	38	3.0	34	1.5	17	2.0			D 1	214.4	23.9
OMAEZA	0	EP	21 25 21.2	ES	25 49.4	70		96		46					207.0	28.2
OSHIMA	0	EP	21 25 21.8	S	25 48.5	15	1.6	18	1.6	8	2.0	S 5	E 2	D 3	222.5	26.7
HIKONE	0	EP	21 25 22.5	ES	25 46.9	35	1.1			14	1.7				212.2	24.4
TOMISA	0	EP	21 25 25.0			21	4.8	20	4.8	13	4.2				233.2	
FUKUSH	0	X	21 25 27.0			9	1.0	8	0.9	3	4.0				256.2	
ONAHAM	0	IP	21 25 28.1	IS	25 59.1	105	1.2	86	1.2	24	3.8			D 8	257.7	31.0
TSU	0	EP	21 25 29.0												241.7	
KYOTO	0	EP	21 25 31.6	ES	25 59.8	8	2.2	8	1.8	3	3.4				266.7	28.2
SENDAI	0	EP	21 25 35	ES	26 15.6	8	3.0	9	2.0	3	1.5				319.1	40.6
NARA	0	EP	21 25 35.1												284.1	
SAKATA	0	X	21 25 39.9												311.5	
OSAKA	0	X	21 25 42.5	S	26 16.9	34	4.4	41	3.6	22	3.0				306.4	
TOYOOK	0	X	21 25 44.0	ES	26 17.9	19	1.3	18	1.1	4	1.2	N			311.7	
MIZUSA	0	P	21 25 49.6	X	26 43.6	8		8		6					399.6	
SUMOTO	0	X	21 25 50.2	ES	26 31.2	5	3.6	3	2.4	2	3.2			U	372.9	
OKAYAM	0	X	21 25 55.0	ES	26 47.3	10	3.2	10	3.6	8	5.4				426.4	
AKITA	0	X	21 26 30			11	3.8	11	4.0	6	3.4				401.9	
OITA	0	X	21 28 04.7			12	4.2	14	4.7						690.7	

OT= 13 4 29 47.3 +/- 0.2
N OF IWATE PREF
LAT= 40 7 +/- 0 LONG= 141 15 +/- 1
H= 10 MAG=3.8 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MORIOK	X	EP	04 29 57.3			IS	30	03.2	9	0.3	10	0.4	5	0.2				47.2	05.9
HACHIN	0	P	04 29 57.7			IS	30	03.6	5	0.4	5	2.2	4	3.1	N	2 E	1 U 1	51.0	05.9
MIYAKO	0	EP	04 30 03			ES	30	12.6	5	2.5	7							80.7	09.6
MIZUSA	0	P	04 30 07.8			S	30	21.8	3	1.2	8	2.4	4	0.8				109.6	14.0
OFUNAT	0	EP	04 30 09.2			ES	30	24.7	8	0.0	5	0.0	2	0.4				123.8	15.5

OT= 13 9 46 26.9 +/- 0.8
KOCHI PREF
LAT= 33 31 +/- 4 LONG= 133 22 +/- 3
H= 0 MAG=3.7 CLASS=U

KOCHI	0	IP	09 46 27.2			IS	46	31.9										15.9	04.7
UWAJIM	0	EP	09 46 43.4			IS	46	52.4										81.9	09.0
MUROTO	0	IP	09 46 45.1			IS	46	55.9	4	0.4	5	0.5			N	0 W	0 D 0	81.1	10.8
TAKAMA	0	EP	09 46 49.9			ES	47	03.3	4	0.6	7	0.6	4	0.6				109.3	13.4
HIROSH	0	EP	09 46 51.4			S	47	05.9	8	0.4	7	0.4	4	0.4				127.3	14.5
OKAYAM	0	IP	09 46 52.5			IS	47	09.5	15	0.6	10	0.5	4	0.7	S	W	D	138.7	17.0
TOKUSH	0	EP	09 46 55.5			IS	47	09.4										127.5	13.9

OT= 13 14 15 5.6 +/- 0.2
KII CHANNEL
LAT= 33 41 +/- 1 LONG= 135 17 +/- 1
H= 40 MAG=4.2 CLASS=L

WAKAYA	0	P	14 15 16.5			S	15	25.3	71	0.1	40	0.1						61.2	08.8
SHIONO	0	IP	14 15 16.5			IS	15	24.3	14	0.2	9	0.4	6				D 4	51.6	07.8
SUMOTO	0	IP	14 15 20.3			IS	15	29.3	20	0.4	10	0.4	3	0.5	S	1 E	1 D 2	80.1	09.0
TOKUSH	0	EP	14 15 20.9			IS	15	28.7										77.9	07.8
OWASE	1	P	14 15 21.3			S	15	32.6	29	0.4	20	0.4	5	0.4				94.4	11.3
KOBE	0	EP	14 15 23.2			ES	15	36.6										111.8	13.4
MUROTO	0	IP	14 15 24.6			IS	15	36.8	17	0.4	26	0.5			S	0 W	0 U 2	113.4	12.2
NARA	0	EP	14 15 26.2			IS	15	39.5	50	0.2								121.9	13.3
KYOTO	0	EP	14 15 28.7			IS	15	43.5	8	0.5	8	0.4	2	0.7				153.0	14.8
OKAYAM	0	IP	14 15 31.0			S	15	55.0	13	0.6	15	0.7	8	0.6		E		167.8	24.0
HIKONE	0	EP	14 15 35.2			ES	15	55.1	8	0.7								197.3	19.9
OSAKA	0	X	14 15 36.0						16	2.1	19	1.9	9	2.0			D 10	109.6	
TSURUG	0	EX	14 15 48.8			S	16	02.2										229.6	
TOYOOK	0	X	14 15 58.1						9	1.2	14	0.4			S	E		209.9	
MATSUS	0	X	14 16 12			S	16	44										413.9	

OT= 14 9 46 9.9 +/- 0.3
S OF NAGANO PREF
LAT= 35 50 +/- 1 LONG= 138 5 +/- 2
H= 20 MAG=4.0 CLASS=L

IIDA	1	IP	09 46 18.4			IS	46	23.6	85	0.2	68	0.2	23	0.2	S	6 W	5 U 23	42.3	05.2
MATSUM	0	EP	09 46 19.6			IS	46	26.8										46.6	07.2
KARUIZ	0	EP	09 46 22.7			ES	46	27.3										70.3	04.6
FUNATS	0	IP	09 46 22.8			IS	46	30.5										71.9	07.7
MATSUS	0	IP	09 46 23.8			S	46	31							S	W	D	79.0	07.2
KUMAGA	0	EP	09 46 31.4			S	46	46.0	8	0.6	10	0.8	2	1.0				122.4	14.6
HAMAMA	0	P	09 46 31.6			S	46	47.2	10		8		4				D 1	129.0	15.6
GIFU	0	EP	09 46 32			S	46	47.4	9	0.4	6	0.4						128.8	15.4
NAGOYA	0	EP	09 46 32.1			S	46	47.2	8	0.4	6	0.4	3	0.2				125.4	15.1
HIKONE	0	X	09 47 02.2						9	0.5	9	0.6	4	0.6				177.7	

OT= 14 11 10 36.2 +/- 0.3
OFF URAKAWA
LAT= 41 27 +/- 1 LONG= 142 0 +/- 2
H= 40 MAG=4.6 CLASS=S

URAKAW	0	EP	11 10 52.9			ES	11	06.8	24	0.6	39	1.6	9	1.6				102.0	13.9
HAKODA	0	IP	11 10 53.6			S	11	07.6	19	0.4	22	3.2	10	2.2	S	E 5	D 9	111.1	14.0
HACHIN	1	P	11 10 55.2			IS	11	08.0	50	0.0	35	0.0	12	1.4	S	W	U 1	110.2	12.8

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HIROO	1	P	11 10 58.5			S	11	13.9										143.3	15.4
OBIHIR	0	P	11 11 05.4			IS	11	26.6										192.0	21.2
SAPPOR	0	EP	11 11 06.4			ES	11	25.6	11	2.2	12	2.0	5	1.0				187.0	19.2
MORIOK	0	EP	11 11 07.5			ES	11	28.7	15	0.5	14	0.6	5	0.8				207.1	21.2
MIYAKO	0	EP	11 11 08			ES	11	25.5	7	0.8	9	2.6						200.5	17.5
AOMORI	0	X	11 11 10.7						41	1.4	59	1.4	24	1.3				124.0	
KUSHIR	0	EP	11 11 10.8			ES	11	37.9	15	1.4	10	0.3	8	3.0				260.7	27.1
ASAHIK	0	EP	11 11 12.4			ES	11	39.5	6	2.0	7	2.0	5	2.8				259.6	27.1
OFUNAT	0	EP	11 11 14.2			ES	11	41.6	7	0.0	4	0.0	4	1.2				266.3	27.4
MIZUSA	0	P	11 11 20.0			S	11	48.0	23	2.0	26	1.7	20	1.2				267.6	28.0
SENDAI	0	EP	11 11 30			ES	12	09.5	8	1.5	9	2	4	1.5				366.5	39.5
FUKUSH	0	EP	11 11 39.0			ES	12	21.0	9	1.0	9	1.0	2	0.9				430.4	42.0
MATSUS	0	P	11 12 01															636.4	
MITO	0	X	11 12 09.5			ES	13	03.6	6	1.6	7	2.0	5	2.4				578.4	
KUMAGA	0	X	11 12 12.4						6	3.2	5	4.2	5	4.0				630.9	
ONAHAM	0	X	11 12 42.1						9	0.8	11	1.1	3	0.5				509.0	

OT= 15 21 17 42.9 +/- 0.5
S OF YAMANASHI PREF
LAT= 35 23 +/- 2 LONG= 138 54 +/- 2
H= 0 MAG=4.4 CLASS=S

FUNATS	2	IP	21 17 47.7			IS	17	52.2										17.8	04.5
MISHIM	X	IP	21 17 53.7			S	17	57.9	69	0.7	79	0.7	26	0.8			D	30.3	04.2
AJIRO	0	IP	21 17 54.2			IS	18	00.4	30	0.3	31	0.3	8	0.3	N	3	D 7	41.7	06.2
YOKOHA	1	IP	21 17 58.0			IS	18	07.5					67	2.0			D 11	68.8	09.5
CHICHI	1	P	21 17 58.1			IS	18	07.8							S			69.5	09.7
OMAEZA	0	EP	21 17 59.3			ES	18	22.1	20		21		12					106.8	22.8
OSHIMA	1	IP	21 17 59.6			IS	18	09.5	69	0.8	48	0.8	28	0.4	N	W 2	D 20	81.6	09.9
TOKYO	1	IP	21 18 00.0			ES	18	09.5										84.7	09.5
TOMISA	0	IP	21 18 02.2			S	18	14.8	17	1.2	26	1.4	14	3.4	S	3 E	3 D 5	99.0	12.6
KUMAGA	1	P	21 18 02.6			S	18	14.0	94	0.6	49	0.8	15	1.0				95.4	11.4
MAEBAS	0	IP	21 18 04.4			IS	18	18.6	14	0.3	14	1.8	9	2.0			D 2	113.9	14.2
IIDA	0	EP	21 18 04.8			IS	18	18.0	27	0.8	19	0.8	13	0.8				97.7	13.2
KARUIZ	0	IP	21 18 06.0			S	18	17.3									D 3	110.7	11.3
MATSUM	0	P	21 18 08.1			IS	18	23.0										126.9	14.9
KAKIOK	1	IP	21 18 09.0			ES	18	24	30	1.0	37	1.0	15	1.0	N	4 E	5 U 4	150.0	15.0
MATSUS	0	IP	21 18 09.6			S	18	25							S	E	D	142.5	15.4
UTSUNO	1	P	21 18 09.7			IS	18	26.4	32	0.3	22	0.5	17	0.9		W 3		156.0	16.7
HAMAMA	0	P	21 18 09.9			S	18	27.6	14		14		8				U 1	130.9	17.7
MITO	0	IP	21 18 12.5			IS	18	33.4	18	0.9	20	1.0	8	1.3			D 0	179.8	20.9
NAGANO	0	IP	21 18 12.7			S	18	31.7	14		10		9				U 2	155.2	19.0
CHOSHI	0	EP	21 18 12.9			S	18	33.6										180.2	20.7
TAKAYA	0	EP	21 18 15.5			S	18	36.3										171.4	20.8
NAGOYA	0	P	21 18 16.4			S	18	39.6	24	0.8	25	1.2	15	1.0			U 2	177.4	23.2
GIFU	0	X	21 18 21.5			S	18	44.5	23	1.3	17	1.1	9	1.1				193.9	
TSU	0	EP	21 18 25.6			IS	18	57.6										230.0	32.0
NARA	0	EP	21 18 30.3															290.3	
TSURUG	0	X	21 18 30.5			S	19	01.1										258.8	
KYOTO	0	IP	21 18 30.5			IS	19	07.0	10	0.8	6	1.0	5	1.6		W 1	D 0	291.1	36.5
HIKONE	0	X	21 18 31.1			ES	18	56.2	36	1.1	30	0.8	8	1.1				241.5	
FUKUSH	0	EX	21 18 32.0						6	1.0	8	1.0	3	0.4				298.7	
ONAHAM	0	X	21 18 46.4						16	1.3	16	0.9	3	0.6				250.2	

OT= 16 12 31 16.2 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 26 +/- 1 LONG= 138 8 +/- 1
H= 0 MAG=4.8 CLASS=S

MATSUS	2	P	12 31 19.9			S	31	21.7										13.4	01.8
NAGANO	2	IP	12 31 22.7			S	31	26.7										25.8	04.0
MATSUM	1	IP	12 31 23.0			IS	31	27.1	60	2.3	50	2.5	50	2.5	S	9 W	8 U 23	25.5	04.1
KARUIZ	1	IP	12 31 26.2			S	31	30.4	300	2.0	300	1.8	150	2.0		W 12	D 11	38.9	04.2
TAKADA	0	EP	12 31 30.7			S	31	40.5										75.2	09.8
MAEBAS	0	IP	12 31 33.2			ES	31	44.8	87	4.5	75	3.4	74	3.6	N	W 2	D 2	83.6	11.6
TAKAYA	0	EP	12 31 33.5			X	32	25.0										84.9	
CHICHI	0	EP	12 31 35.3			S	31	57.5										98.3	22.2
IIDA	0	IP	12 31 36.4			IS	31	50.8	23	3.0	18	3.6	10	1.0	S	6 W	5 U 10	105.9	14.4
KUMAGA	0	EP	12 31 39.2			ES	31	55.6	53	4.0	35	3.2	35	4.0				116.8	16.4
FUNATS	0	P	12 31 39.4			S	31	52.0										118.3	12.6
KANAZA	0	P	12 31 41.4			S	32	00.0	35	0.4	38	0.3	15	0.2	N	2 E	7 D 1	133.6	18.6
UTSUNO	0	EP	12 31 44.3			ES	32	02.7	16	1.4	11	1.7	7	1.0	N	1 W	2	156.2	18.4
AIKAWA	0	EP	12 31 46.0			IS	32	06.4	8	0.1	11	0.2	5	0.5	N	2	U 2	176.3	20.4
GIFU	0	P	12 31 46.9			S	32	07.3	170	1.5	140	1.5	57	1.2				168.6	20.4
NAGOYA	0	P	12 31 47.4			S	32	08.4	29	1.0	38	1.2	20	1.0			U 2	175.7	21.0

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OMAEZA	0	EP	12 31 47.4			118		237		73					203.1	
TOKYO	0	EP	12 31 47.6	ES	32 09.2	28	1.8	19	2.6	13	2.8				168.3	21.6
AJIRO	0	EP	12 31 47.6	X	32 39.2	19	1.4	24	1.4	9	1.2				177.1	
FUKUI	0	P	12 31 48.3	S	32 11.5										176.5	23.2
MISHIM	0	EP	12 31 48.4	X	32 37.2	90	0.7	125	4.4	30	3.0				163.3	
KAKIOK	0	EP	12 31 48.5			66	1.0	69	1.0	25	1.2				186.3	
NIIGAT	0	EP	12 31 48.9	S	32 12.5	125	3.8	170	2.2	35	1.7				183.0	23.6
TSURUG	0	EP	12 31 50.6	S	32 17.6										205.6	27.0
HAMAMA	0	P	12 31 50.6	ES	32 15	16		20		10				D 3	194.9	24.4
YOKOHA	0	IP	12 31 51.5	IS	32 17.7	48	1.9	38	1.4	59	1.6			D 9	176.3	26.2
SHIRAK	0	EP	12 31 51.9	X	32 43.1										201.6	
MITO	0	P	12 31 52.1	EX	32 18.6	69	5.0	74	3.5	37	4.4				209.8	
OSHIMA	0	X	12 31 58.0	IS	32 10.7	45	1.2	45	1.2	16	1.6				217.0	
TSU	0	EP	12 31 59.0	X	33 15.0										241.5	
FUKUSH	0	EX	12 31 59.0			16	1.1	15	1.0	12	4.3				254.7	
KYOTO	0	EP	12 32 03.4	ES	32 32.0	7	1.4	6	1.4	6	1.2				268.2	28.6
TOMISA	0	X	12 32 05.4			59	4.8	49	4.6	24	3.4				227.4	
NARA	0	EP	12 32 06.1			150	2.0	150	1.7	100	1.4				284.8	
OWASE	0	P	12 32 08.8	EX	32 50.9	17	1.8	11	2.0	10	1.8				316.2	
HIKONE	0	X	12 32 19.6			38	1.0	33	2.1	28	1.2				213.5	
SHIONO	0	X	12 32 26.8	ES	33 10.5	22	2.1	19	2.6	7	1.4				395.5	
ONAHAM	0	X	12 32 29.2			73	1.2	66	1.3	29	2.5				254.2	

OT= 16 12 32 6.3 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 29 +/- 1 LONG= 138 0 +/- 1
H= 0 MAG=5.2 CLASS=S

MATSUS	2	P	12 32 11.0	S	32 12.8										19.6	01.8
MATSUM	3	IP	12 32 13.6	IS	32 17.3	700	2.3	850	2.7	500	2.7			W100 U262	26.7	03.7
NAGANO	3	IP	12 32 14.0	IS	32 17.8	2600		1500		1000		N	1 E	0 U 8	26.3	03.8
TAKADA	0	S	12 32 18.5												72.5	
KARUIZ	2	EP	12 32 18.6	ES	32 23.6	1250	2.8	1350	2.0	500	2.0				52.0	05.0
CHICHI	0	EP	12 32 24.0	S	32 36.2	400		300		400					111.5	12.2
MAEBAS	0	EP	12 32 26.2			502	4.3	428	3.6	404	3.2				95.9	
IIDA	1	IP	12 32 27.6	IS	32 41.6	94	1.6	96	3.2	60	1.0	S	36 E	29 U 55	109.0	14.0
FUNATS	0	P	12 32 30.1	S	32 41.4										129.1	11.3
KUMAGA	0	EP	12 32 30.6	ES	32 45.8	230	4.0	262	4.0	181	4.0				129.8	15.2
KANAZA	0	IP	12 32 31.4	S	32 50.0	90		98		60		N	20 E	32 D 54	121.3	18.6
AIKAWA	0	IP	12 32 36.0	IS	32 56.8	20		35		10		N	5	U 8	171.9	20.8
NAGOYA	0	EP	12 32 36.4	S	32 58.0	176	2.8	178	1.8	119	1.2				173.4	21.6
UTSUNO	0	EP	12 32 36.5	ES	32 54.2	111	2.9	70	3.5	34	4.0			D 12	167.8	17.7
TOKYO	0	EP	12 32 38	ES	32 59.6	181	3.2	222	4.2	191	3.2				181.4	21.6
FUKUI	0	P	12 32 39.3	S	33 02.2										166.3	22.9
TSURUG	0	EP	12 32 39.7	S	33 08.2	100		100		50					197.3	28.5
NIIGAT	0	EP	12 32 40.8	IS	33 02.8	158	5.0	300	4.5	70	3.7				183.8	22.0
HAMAMA	0	P	12 32 41.8	ES	33 06	73		96		38					198.5	24.2
YOKOHA	0	X	12 32 44.2	S	33 08.3	220	3.6	142	3.6	98	2.4				189.1	
KYOTO	0	EP	12 32 47.8	IS	33 20.0	32	2.0	37	1.4	13	5.4				261.9	32.2
TOYOOK	0	EP	12 32 51.1	ES	33 30.3	131	1.1	93	1.1	26	1.0				305.2	39.2
CHOSHI	0	ES	12 32 53.6												269.4	
SAKATA	0	X	12 32												313.6	
WAKAYA	0	P	12 33 01.6	S	33 52.4	40	0.9	34	0.9						359.1	50.8
SENDAI	0	X	12 33 03.0	ES	33 41.8	15	3.0	14	2.5	6	4				323.8	
SUMOTO	0	EP	12 33 04.8	ES	33 49.8	13	3.6	11	3.0	10	6.0				368.2	45.0
				EX	33 15.7											
OSAKA	0	X	12 33 05			144	4.8	302	4.2	58	4.0				302.0	
KOBE	0	X	12 33 06												323.9	
HACHIJ	0	EP	12 33 07.5	ES	33 51.7										409.2	44.2
MIZUSA	0	EP	12 33 08.9	X	34 06.4			18	3.1	12	1.8				403.2	
SAKATA	0	X	12 33 09.9	ES	33 39.1										313.6	
HIKONE	0	X	12 33 10.4			205	1.0	141	1.0	80	1.8				207.5	
OFUNAT	0	EP	12 33 12.2	S	34 06.4	5	5.6	5	6.0	5	4.4				434.9	54.2
AKITA	0	X	12 33 17			13	4.2	15	4.0	10	3.8				403.6	
OKAYAM	0	X	12 33 18.0	X	34 09.4	30	5.4	30	0.6	15	4.0				420.6	
TAKAMA	0	X	12 33 22.5	X	34 13.5	81	5.5	80	5.1	90	1.0				431.1	
SAIGO	0	X	12 33 26.0	X	34 13.3	9	2.4	11	2.4	5	2.8	S	3 W	5 U 1	420.0	
SHIONO	0	X	12 33 28.5												393.7	
HAMADA	0	EP	12 33 31.5	ES	34 31.5	8	4.7	4	6.2	4	4.2				564.5	60.0
MUROTO	0	X	12 33 37.7	X	34 40.4	10	9.0	11	7.0	7	5.0	S	1		500.7	
HIROSH	0	X	12 33 42.4	X	34 48.9	11	3.6	5	3.4	4	3.2				557.1	
SHIMON	0	X	12 33 50	X	35 25	9	5.0	5	5.0	5	5.0				700.8	
TURUGI	0	X	12 33												459.9	
ASHIZU	0	X	12 34 13.0	X	35 02.8	8	3.4	6	3.6						619.0	
KUMAMO	0	X	12 34 19	X	35 56.6	13	2.1	8	2.1						782.2	
OITA	0	EX	12 34 20.9	ES	34 56.4	41	4.3	27	3.4						685.2	
FUKUOK	0	X	12 35 41			8	2.8	7	1.8	5	3.0				765.8	
SAGA	0	X	12 35 56.4												789.5	

OT= 17 11 3 0.3 +/- 1.0
OFF CHOSHI
LAT= 35 57 +/- 2 LONG= 141 27 +/- 4
H= 0 MAG=4.4 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHOSHI	2	IP	11 03 13.0	IS	03 21.2	441	0.0	301	0.0	77	0.0	S	2 W	6 U 18	60.2	08.2
MITO	1	IP	11 03 19.8	S	03 33.2	64	0.3	72	0.3	11	0.6			U 1	100.0	13.4
KAKIOK	0	EP	11 03 23	ES	03 36	35	0.8	46	0.8	20	0.8				117.4	13.0
ONAHAM	0	EP	11 03 24.4	ES	03 39.9	32	1.2	27	1.2	9	0.5				120.7	15.5
SHIRAK	0	EP	11 03 28.8	ES	03 51.0										169.8	22.2
UTSUNO	0	P	11 03 29.6	ES	03 47.4	17	1.2	14	1.0	9	1.1				156.5	17.8
TOKYO	0	EP	11 03 29.7	S	03 49.6	19	0.6	18	6.0						155.6	19.9
KUMAGA	0	EX	11 03 34.2			10	0.8	9	1.0	3	0.8				187.3	
YOKOHA	0	EP	11 03 34.4	IX	03 54.7	15	0.4	14	0.4						172.1	
FUKUSH	0	EP	11 03 36.5	S	04 02.6	27	0.9	19	0.9						218.5	26.1
SENDAI	0	EP	11 03 42	ES	04 06.2	6	1.0	5	1.0	4	1.0				260.9	24.2
MATSUS	0	IP	11 03 45.5	ES	04 20								W	U	298.5	34.5

OT= 17 20 59 30.4 +/- 0.6
OFF KINKAZAN
LAT= 38 15 +/- 2 LONG= 142 5 +/- 4
H= 30 MAG=6.3 CLASS=R

ISHINO	3	IP	20 59 42.5	IS	59 51.3	1000	2.9	1600	4.0	1800	1.8	S	14 E460	D412	70.9	08.8
OFUNAT	4	IP	20 59 47.5	IS	59 58.8	1800	4.3	2700	4.9	1100	4.9	S340	E172	D250	95.5	11.3
SENDAI	4	IP	20 59 50.0	IS	00 03.0	3000	2.5	2500	2.5	1400	3.5	S	40 E500	D440	103.6	13.0
MIZUSA	3	IP	20 59 54.0	S	00 07.0							S900	E970	D652	128.2	13.0
MIYAKO	3	IP	20 59 54.8	S	00 12	600	3	950	3	550	5	S100	E 11	D 91	155.2	17.2
YAMAGA	3	IP	20 59 56.0	ES	00 09.0	900	2.9	1100	4.5	500	1.8	S	3 E 64	D 49	151.7	13.0
FUKUSH	3	IP	20 59 56.0	S	00 10.2	800	0.8	2200	0.8	2100	0.8	N	76 E158	D 90	151.5	14.2
ONAHAM	3	IP	20 59 58.4	ES	00 16.9	2200	1.3	2150	1.4	650	1.5	N	21 E 19	D 26	178.2	18.5
MORIOK	3	IP	20 59 59.1	S	00 13.6	1000	0.4	1300	0.4	800	4.8	S128	E 62	D 86	179.1	14.5
NAGANO	0	EP	21 00												386.4	
SHIRAK	3	IP	21 00 02.0	IS	00 26.5	2800	1.6	2700	1.4	1200	1.4	N	12 E 19	D 27	206.5	24.5
SAKATA	3	IP	21 00 04.0	ES	00 26.1	3400	3.6	5000	2.4	2000	2.8			D 68	208.8	22.1
AKITA	2	IP	21 00 07.2	S	00 30.2	1775	3.6	1635	4.2	875	3.0	S	11 E 26	D106	236.7	23.0
MITO	2	IP	21 00 07.5	S	00 35.0	875	1.5	1050	1.4	450	1.4			D 12	252.1	27.5
HACHIN	3	IP	21 00 09.3	IS	00 36.2	400	1.9	500	1.9	400	1.9	N	1 W	U 1	257.1	26.9
UTSUNO	2	IP	21 00 10.5	IS	00 41.4	1000	0.8	600	1.2	500	1.0	N	8 E	7 D 5	272.1	30.9
KAKIOK	3	IP	21 00 10.5	IS	00 41.4	1200	1.0	1000	1.0	500	1.0				279.8	30.9
CHOSHI	1	EP	21 00 14.2	S	00 51.6	439	1.6	560	3.4	277	0.0				301.1	37.4
NIIGAT	2	EP	21 00 14.2	IS	00 45.2	500	4.0	350	5.0	526	2.8				268.6	31.0
AOMORI	2	IP	21 00 16.2	IS	00 48.1	1900	2.3	2000	2.3	700	1.5	N	30 W 14	U 31	306.1	31.9
KUMAGA	2	P	21 00 19.2	S	00 57.4	320	1.0	426	1.2	265	1.0				334.4	38.2
AIKAWA	0	IP	21 00 19.4	IS	00 56.0	257		187		263		N	2 E 13	D 11	337.7	36.6
MAEBAS	2	IP	21 00 20.3	ES	00 57.2	900	6.2	600	8.4	350	5.0	N	1 E	1 D 11	337.0	36.9
TOKYO	2	P	21 00 21.3	S	00 58.8	478	1.4	435	4.2	407	3.2				351.9	37.5
KARUIZ	1	EP	21 00 22.8	S	01 02.9	600	2.0	700	2.2	300	2.0				378.0	40.1
CHICHI	2	EP	21 00 23.1	ES	01 03.4	500		200		300					365.9	40.3
TAKADA	0	P	21 00 25.3	S	01 05.9	550	3.6	400	3.6	200	4.0				361.2	40.6
MATSUS	0	IP	21 00 26.0									N	E	D	392.1	
YOKOHA	2	IP	21 00 26.3	IS	01 07.5	447	3.0	470	3.6	339	3.6			U 9	379.9	41.2
HAKODA	1	IP	21 00 27.4	ES	01 09.2	320	4.1	290	2.0	212	4.5	N	11 W 5	U 7	411.5	41.8
URAKAW	0	EP	21 00 30.8	ES	01 15.7	600	3.2	500	3.2	500	3.2				438.0	44.9
TOMISA	0	EP	21 00 30.8	S	01 18.2	450	1.6	360	3.0	290	3.0				420.9	47.4
FUNATS	X	P	21 00 31.5	S	01 19.7										425.2	48.2
MURORA	0	EP	21 00 32.1	IS	01 22.3							N	W	U	461.2	50.2
HIROO	2	EP	21 00 32.1	X	01 13.1	300	2.9	400	2.9	400	3.7				460.0	
AJIRO	1	IP	21 00 32.2	S	01 17.8	115	1.6	152	1.5	67	2.0			U 1	444.8	45.6
MATSUM	0	EP	21 00 32.6	ES	01 16.6	200	3.7	250	4.3	60	3.7				427.2	44.0
MISHIM	1	IP	21 00 33.0	ES	01 23.0	500	2.1	500	2.0	100	2.2			U 6	447.9	50.0
OSHIMA	0	EP	21 00 33.0	IS	01 21.6	244	2.0	220	6.1	89	1.8			D	456.5	48.6
IIDA	1	IP	21 00 40.4	IS	01 35.6	229	2.0	158	2.8	128	3.0	S	6 W	7 U 11	485.5	55.2
SUTTSU	0	EP	21 00 41.3	ES	01 38.6										527.8	57.3
SAPPOR	0	P	21 00 41.4	S	01 39.4	279	2.8	250	2.6	125	2.4	N	7 W	2 U 6	537.7	58.0
OBIHIR	1	P	21 00 41.9	S	01 41.7	1300	3.1	1000	2.9	700	3.1				527.5	59.8
TAKAYA	0	EP	21 00 42.1	S	01 37.8										487.7	55.7
KUSHIR	1	IP	21 00 43.3	X	01 37.4	198	2.6	209	2.3	170	2.6	N	2 E	1 U 2	560.3	
KANAZA	0	P	21 00 43.8	S	01 39.2	129		133		84		N	10 E	7 D 10	516.9	55.4
HAMAMA	0	P	21 00 46.3	ES	01 46.6	200		268		90				D 1	553.9	60.3
NAGATS	0	X	21 00 47.1	S	01 32.6	100		150		50					498.1	
NAGOYA	0	P	21 00 50.7	S	01 56.0	305	2.4	270	2.4	108	2.0	N	0 E	0 D 1	570.8	65.3
GIFU	0	P	21 00 50.8	S	01 52.7	220	2.1	180	2.1	77	2.1				570.1	61.9
ASAHIK	0	IP	21 00 51.4	S	01 56.4	223	2.0	190	3.2	145	2.2	N		U	613.6	65.0
RUMOI	0	EX	21 00 51.6	ES	01 59.3	300	3.1	300	3.1	200	2.5				634.2	
HACHIJ	0	EP	21 00 52.5	S	01 53.2	68	0.8	59	0.7	20	0.7				607.6	60.7
FUKUI	0	IP	21 00 53.1	S	01 58.0							N	8 E	12 D 10	574.3	64.9
TSURUG	0	EP	21 00 55.8	X	01 03.2	100		150		75		S	4 W	4 U 4	608.5	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HIKONE	0	IP	21 00 57.8	S	02 04.8	237	2.1	186	1.9	95	6.8	S 5	W 9	U 7	616.7	67.0
ABASHI	0	P	21 00 58.1	X	01 53.4	149	2.2	152	2.2	118	2.8				666.5	
TURUGI	0	X	21 00	ES	02 53.1										668.8	
OMAEZA	0	X	21 00	ES	01 44.8	403		385		161					532.9	
NEMURO	0	X	21 00	X	01 50.2	53	1.0	63	1.6	35	1.6	S	W	D	636.7	
TSU	0	IP	21 01 00.5	IS	02 16.5							N	E	D	635.1	76.0
KYOTO	0	IP	21 01 03.2	IS	02 14.4	59	6.4	45	6.8	29	7.4	N 2	E 3	D 2	671.6	71.2
MAIZUR	0	EP	21 01 04.0	ES	02 16.6							S 2	W 2	U 2	671.7	72.6
NARA	0	EP	21 01 04.5	ES	02 18.1	300	1.7	300	1.8	150	1.4				685.5	73.6
OWASE	0	P	21 01 04.9	S	02 25.2	26	6.0	30	6.8	25	6.8				704.0	80.3
TOYOOK	0	P	21 01 08.9	S	02 24.4	156	1.2	96	1.2	48	18.4	S	W 16	U 10	713.6	75.5
OSAKA	0	P	21 01 09.6	S	02 29.6	335	4.8	322	4.4	155	2.6				709.5	80.0
KOBE	0	EP	21 01 12.8	ES	02 36.3	100	5.2	100	5.2	50	5.2				733.7	83.5
WAKAYA	0	P	21 01 12.9	X	02 50.4	52	1.2	42	1.2	20	3.2				764.9	
HIMEJI	0	EP	21 01 15.0	ES	02 32.5										761.3	77.5
SUMOTO	0	P	21 01 15.0	S	02 33.5	59	6.8	41	6.4	34	6.0			D	776.7	78.5
				IX	01 17.4										767.0	80.2
TOTTOR	0	EP	21 01 15.6	ES	02 35.8	50	4.0			50	3.0				796.8	82.4
WAKKAN	0	EP	21 01 16.8	ES	02 39.2	93	4.9	156	5.1	46	2.9				819.1	88.7
TOKUSH	0	EP	21 01 18.7	ES	02 47.4											
SAIGO	0	P	21 01 19.7	S	02 45.6	25	2.6	25	3.4	22	3.6	S 1	W 0	U 1	808.5	85.9
OKAYAM	0	IP	21 01 22.6	IS	02 53.2	70	6.0	50	5.8	70	4.0	N	E	D	831.7	90.6
TAKAMA	0	EP	21 01 23.1	ES	02 49.5	43	8.4	38	9.0	19	15.7				842.1	86.4
YONAGO	0	EP	21 01 25.0	ES	02 55.0										839.3	90.0
MATSUE	0	EP	21 01 29.4	ES	02 58.7										860.9	89.3
MUROTO	0	IP	21 01 31.7	ES	03 09.6	39	7.0	49	7.0				E 0	D 0	904.3	97.9
KOCHI	0	EP	21 01 36.6	ES	03 19.6										930.7	103.0
HAMADA	0	P	21 01 40.0	S	03 25.4	23	1.6	19	14.2	19	13.6		E 1	D 1	969.5	105.4
				IX	04 45.8											
HIROSH	0	EP	21 01 42.0	ES	03 21.8	37	15.8	36	15.8	34	15.8	N 3	E 6	D 7	966.9	99.8
ASHIZU	0	EP	21 01 46.2	ES	03 42.4	24	4.0	19	6.0	14	5.6				1025.5	116.2
UWAJIM	0	EP	21 01 46.6	ES	03 34.6										1025.2	108.0
SHIMON	0	EP	21 01 59	ES	04 00	29	6.0	23	12.0	33	14.0				1109.5	121.0
OITA	0	P	21 01 59.1	S	03 48.1	141	4.9	85	4.8						1096.5	109.0
SHIONO	0	X	21 01	ES	02 32.3	47	3.7	71	3.7	18	1.9				780.3	
FUKUOK	0	EP	21 02 05.0	ES	04 11	23	3.0	16	3.2	34	16.6				1175.1	126.0
				EL	04 24										1193.5	
KUMAMO	0	EP	21 02 08.7	X	04 32.7	40	2.7	23	3.1	26	17.0				1197.6	124.4
MIYAZA	0	EP	21 02 09.0	S	04 13.4	26	7.0	21	7.4	21	6.4				1199.8	
SAGA	0	X	21 02 13.5	X	05 30.5											
NAGASA	0	EP	21 02 16.0	ES	04 34.5										1265.3	138.5
KAGOSH	0	EX	21 02 22.2			42	2.6	48	4.0	5	1.4				1286.0	
FUKUE	0	EP	21 02 26.4	X	05 04.0	19	10.4	9	9.2	12	16.2				1348.9	
YAKUSH	0	P	21 02 28.0			5	8.0	5	7.0	5	6.0				1370.6	
ASOSAN	0	X	21 04 03			50	5.2								1160.9	

OT= 17 21 26 19.9 +/- 0.3
OFF KINKAZAN
LAT= 38 12 +/- 1 LONG= 142 17 +/- 2
H= 40 MAG=4.8 CLASS=S

ISHINO	X	IP	21 26 35.1	IS	26 44.8							N 22	E 20	D 24	89.3	09.7
OFUNAT	2	IP	21 26 37.9	IS	26 49.1	86	0.0	75	0.0	21	0.6	S 17	E 8	D 16	107.6	11.2
SENDAI	1	IP	21 26 40.0	IS	26 52.8	77	0.8	56	0.8	28	2.0	S 2	E 10	D 27	121.3	12.8
MIZUSA	0	P	21 26 43.5	S	26 58.2	55	2.4	70	0.1	38	1.2				144.0	14.7
MIYAKO	1	EP	21 26 45	S	27 01.4	21	0.4	23	1	15	1				162.7	16.4
YAMAGA	X	EP	21 26 46.6												169.4	
FUKUSH	0	EX	21 26 46.6			66	1.0	77	1.0	34	0.7				166.3	
MORIOK	1	IP	21 26 49.5	S	27 10.6	69	0.3	83	0.3	26	0.3	S 10	E 6	D 4	192.2	21.1
SHIRAK	0	EP	21 26 53.3	IS	27 16.1										217.7	22.8
ONAHAM	0	EX	21 26 54.2	ES	27 07.6	38	0.7	46	1.1	19	1.5				184.9	
SAKATA	0	EP	21 26 56.9	S	27 20.9										227.1	24.0
MITO	0	EP	21 26 57.5	S	27 24.4	16	1.0	21	1.0	12	1.7				258.2	26.9
AKITA	0	EX	21 26 58.4			30	2.4	27	2.2	15	2.8				253.3	
HACHIN	0	IP	21 26 59.8	ES	27 26.2	22	0.2	15	0.4	9	1.1			D 1	266.3	26.4
UTSUNO	0	P	21 27 01.2	ES	27 32.7	19	0.9	13	1.4	8	1.3				281.5	31.5
TOKYO	0	EP	21 27 11.0	ES	27 48.2	10	0.4								358.4	37.2
AOMORI	0	X	21 27 12.0			27	0.5	40	0.5	13	0.5				317.9	
KARUIZ	0	EP	21 27 15.2	ES	28 02.6										390.0	47.4
KUMAGA	0	X	21 27 16.8			14	1.0	11	1.2	5	1.2				343.7	
MATSUS	0	P	21 27 17												405.2	
HAKODA	0	EP	21 27 19.3	ES	28 03.5	5	0.8	5	1.6	2	3.4				421.8	44.2
URAKAW	0	EP	21 27 21.2	S	28 07.9	5	3.6	6	3.2	5	3.6				441.6	46.7
IIDA	0	EP	21 27 30.8	ES	28 27.0	6	1.6	3	1.0	3	1.0				496.3	56.2
FUNATS	0	X	21 27 31.4	S	28 15.2										434.0	
KUSHIR	0	EP	21 27 33.7	X	28 27.2	11	0.2	11	0.2	4	0.2				559.9	
MISHIM	0	X	21 27 36.4	ES	28 16.0	9	1.0	8	0.8	2	0.5				455.2	
OBIHIR	0	EX	21 27 37.1												530.1	

OT= 17 21 34 36.6 +/- 2.0
OFF KINKAZAN
LAT= 38 16 +/- 4 LONG= 142 19 +/- 9
H= 10 MAG=3.8 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OFUNAT	0	EP	21 34 55.4	IS	35 05.4	11	0.0	5	0.0	3	0.6				102.5	10.0
SENDAI	0	EP	21 34 58.2	ES	35 12.5	6	0.8	4	0.5	3	0.5				124.0	14.3
MIZUSA	0	P	21 35 02.2	S	35 23.2			6	0.3						140.9	21.0
MORIOK	0	P	21 35 07.7	ES	35 28.5	6	0.4	7	0.4	2	0.8	S 1		D 1	187.3	20.8
MATSUS	0	P	21 35 39												411.1	

OT= 18 14 34 32.6 USCGS
EASTERN RUSSIA
LAT= 56 48 LONG= 120 48
H= 11 MAG=6.1 CLASS=U

OSHIMA	0	P	14 38			21	13	24	15						2824.1	
WAKKAN	0	EP	14 38 40.5	IS	42 00.0	63	3.0	121	9.2	25	3.4				1921.6	199.5
SAPPOR	0	EP	14 38 54.4	ES	42 24.0	78	10	67	14	35	11				2108.7	209.6
ASAHIK	0	EP	14 38 54.5	S	44 33.4	31	3.8	37	4.2	20	4.4				2097.5	338.9
SUTTSU	0	EX	14 38 56.7	EX	44 25.3										2081.1	
OMAEZA	0	EX	14 39			42		38		11					2797.8	
ABASHI	0	P	14 39 01.0	ES	42 41.6	25	10.4			18	4.6				2174.7	220.6
HAKODA	0	EP	14 39 03.0	ES	42 40.0	27	9.3	22	8.4	14	11.4			U	2194.8	217.0
OBIHIR	0	EX	14 39 08.0												2214.2	
NEMURO	0	EP	14 39 09.0	X	43 05.4	20	11.6	20	12.0	8	5.0				2301.4	
KUSHIR	0	IP	14 39 09.2	ES	42 53.6	30	14.0	36	15.0	25	4.2			U 1	2268.9	224.4
URAKAW	0	EP	14 39 10.0	S	42 53.6	62	9.4	63	12.2	38	4.8				2259.7	223.6
HACHIN	0	EP	14 39 15.4	ES	43 06.0	20	13.9	26	11.9	14	11.7				2349.7	230.6
AOMORI	0	EP	14 39 16	ES	42 59.6	25	14.6	39	12.2	14	12.0				2288.7	223.6
MIYAKO	0	EP	14 39 19	ES	43 24	6	4.1	26	12.3						2452.5	245.0
MORIOK	0	EP	14 39 19.6	ES	43 18.0	20	14.0	20	12.0	11	10.6	N	W		2411.7	238.4
				EL	45 53											
AKITA	0	X	14 39 20.8	EX	43 13.4	59	12.0	113	9.8	32	11.2				2363.0	
OFUNAT	0	EP	14 39 28.7	S	43 31.1	23	12.0	24	12.2	9	13.6				2496.6	242.4
				L	46 40.7											
AIKAWA	0	IP	14 39 32.7	EX	43 30.4	31	1.3	38	1.1	20	1.2		W 1	D 1	2453.5	
MIZUSA	0	P	14 39 34.0	S	43 31.5	180	1.7	211	1.2						2463.9	237.5
SAIGO	0	P	14 39 36.2	ES	43 38.4	21	5.5	38	9.9	13	4.0	S 12	E 2	U 15	2475.1	242.2
				L	46 12											
HAMADA	0	IP	14 39 39.0	ES	43 46.1	20	8.5	19	8.0	14	9.5	S 3		U 5	2580.6	247.1
				EX	46 20.5											
CHOSHI	0	EP	14 39 40.0	ES	44 20.2										2784.5	280.2
MATSUS	0	P	14 39 40												2600.9	
TOYOOK	0	P	14 39 40.1	ES	43 41.4	14	13.0	14	13.0	10	07.7				2589.0	241.3
IZUHAR	0	EP	14 39 40.3	ES	43 55.3							N		D	2594.0	255.0
	0			EL	46 02.0											
TAKADA	0	EP	14 39 41.7												2545.4	
UTSUNO	0	EX	14 39 42.0	EX	44 03.0	14	5.0	23	13.9						2664.0	
KANAZA	0	P	14 39 43.0	S	43 46.6	27		40		13		S 7	E 6	U 9	2544.1	243.6
HIROSH	0	EP	14 39 43.6	ES	43 34.9	26	9.0	15	7.2	18	10.0				2646.3	231.3
KAKIOK	0	EP	14 39 44	ES	44 09	9	12.0	14	16.0	5	10.0				2708.1	265.0
TAKAYA	0	EP	14 39 44.1	x	47 13.0										2605.7	
KARUIZ	0	EP	14 39 44.3	ES	44 03.6										2633.8	259.3
NAGOYA	0	EP	14 39 45.0	L	47 21.0	12	8.8	14	11.6	6	10.8				2696.9	
TOKYO	0	EX	14 39 45	EX	44 14	29	6.2	42	11.6	22	4.4				2745.6	
ONAHAM	0	EP	14 39 45.7	ES	44 01.8	36	4.4	24	10.5	17	5.4				2666.5	256.1
MAEBAS	0	EP	14 39 45.7	ES	44 02.7	14	11.5	35	11.5	15	5.2				2647.0	257.0
TAKAMA	0	EP	14 39 45.9	ES	43 58.9	12	9.8	19	10.6	3	11.6				2694.7	253.0
KYOTO	0	EP	14 39 46.1	ES	43 43.4	11	12.4	13	14.0	8	8.6				2672.2	237.3
IIDA	0	EX	14 39 47.0												2691.7	
SHIMON	0	EP	14 39 47	ES	44 00	32	7.0	32	4.0	39	9.0	N	W	D	2654.8	253.0
				EX	47 25											
CHICHI	0	EP	14 39 47.3	E	47 43.6										2688.8	
HIKONE	0	EP	14 39 47.4	ES	44 02.7	22	1.2	13	1.3	14	1.1				2661.6	255.3
FUKUOK	0	EP	14 39 48.0	ES	44 02	32	4.0	35	4.0	40	10.5				2683.0	254.0
OKAYAM	0	EP	14 39 48.0	ES	44 10.0	20	5.0	30	10.0	20	8.0				2652.1	262.0
SUMOTO	0	P	14 39 49.1	S	44 11.2	16	9.4	16	12.4	13	11.4			U	2717.5	262.1
				EX	39 54.6											
				L	47 24											
MITO	0	P	14 39 49.5	ES	44 06.5	28	5.8	28	10.5	30	4.8				2704.7	257.0
GIFU	0	EP	14 39 51	L	47	13	10.8	9	10.8	4	12.2				2666.0	
SHIONO	0	EP	14 39 52.9	ES	44 10.4	11	8.6	16	10.8						2836.2	257.5
				EX	45 49.1											
				EL	47 48.1											
KUMAGA	0	EP	14 39 53.0	ES	44 07.0	24	10.0	41	10.0	31	5.2				2684.9	254.0
OSAKA	0	EP	14 39 53.0	S	43 52.6	45	5.4	64	4.4	17	8.0				2703.9	239.6
FUNATS	0	EP	14 39 53.8	ES	44 12.8										2726.7	259.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S * A/T S	E-W * A/T S	U-D * A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
FUNATS			14 39 53.8	L	47 39.0							2726.7	
SAGA	0	EP	14 39 53.9	X	47 36.3							2717.7	
FUKUE	0	EP	14 39 54.0	ES	44 20.0	107 8.4	63 4.0	87 9.6				2749.1	266.0
NAGASA	0	P	14 39 54.0	ES	44 15.0				N		D	2766.4	261.0
AJIRO	0	EP	14 39 55.0	ES	44 18.8	10 11.3	25 12.9	7 13.2				2785.1	263.8
MISHIM	0	EP	14 39 55.7	ES	44 13.4	19 10.9	38 13.6	9 15.2				2772.0	257.7
KUMAMO	0	P	14 39 56.8	S	44 26.2	105 2.5	72 5.2	42 6.9	S 7	E 4	U 4	2773.1	269.4
MUROTO	0	IP	14 39 57.8	S	44 39.0	19 7.0	38 8.2	13 8.8		E 0	U 0	2811.0	281.2
OWASE	0	P	14 39 58.0			8 9.6	11 14.4	6 10.0				2785.2	
WAKAYA	0	EX	14 39 58.0	EX	44 05.7	13 11.7	22 11.7					2736.6	
OITA	0	P	14 39 58.1	S	44 21.3	168 6.6	103 6.6		N 21	W 8		2747.6	263.2
ASOSAN	0	EX	14 39 59.4			50 6.0						2773.5	
HAMAMA	0	EP	14 40 00	E	44 20	14	15	10				2769.8	
YOKOHA	0	EP	14 40 01.6	EX	47 50	57 10.7	83 13.4	13 3.9			D 5	2766.5	
ASHIZU	0	EP	14 40 02.0	ES	44 33.4	17 7.8	14 7.4	17 7.5				2836.6	271.4
TOMISA	0	X	14 40 05.0			73 12.8	54 11.0	20 11.0				2825.2	
MIYAZA	0	P	14 40 06.4	S	44 48.6	68 7.6	36 7.2	72 6.4				2884.9	282.2
KAGOSH	0	EP	14 40 09.2	ES	44 48.0	154 3.0	135 3.0	10 2.4				2903.7	278.8
				L	48 26.0								
YAKUSH	0	EX	14 40 18.1			18 8.8	21 9.6	20 5.2				3024.3	
NAHA	0	EP	14 41 52			17 5.0	22 4.4	14 10.4				3439.7	
SAKATA	0	EX	14 43 34.2			400 11.3	250 11.6					2430.6	
NIIGAT	0	E	14 44 01.8			66 11.0	35 11.5	11 10.0				2496.1	
RUMOI	0	EX	14 44 07.9									2044.8	
HACHIJ	0	X	14 45 44.8									3008.0	
KOBE	0	EX	14 46 14									2688.7	

OT= 18 17 29 4.4 +/- 0.3
OFF URAKAWA
LAT= 42 4 +/- 1 LONG= 142 37 +/- 2
H= 50 MAG=4.8 CLASS=S

URAKAW	2	IP	17 29 14.5	IS	29 22.2	239 0.4	214 0.4	119 0.6	N 23	W 14	U 117	16.9	07.7
HIROO	2	IP	17 29 17.9	IS	29 26.8				N 15	E 25	U 53	62.7	08.9
OBIHIR	1	IP	17 29 22.4	IS	29 35.8						U 5	107.1	13.4
MURORA	0	IP	17 29 25.5	IS	29 41.5				S	E	D	137.8	16.0
SAPPOR	X	IP	17 29 27.5	IS	29 45.4	89 1.4	57 1.4	46 1.6	S 2	E 7	D 24	152.6	17.9
HAKODA	0	IP	17 29 28.5	IS	29 46.5	72 1.6	42 0.6	17 1.8	N 2	E 5	D 9	156.7	18.0
KUSHIR	0	IP	17 29 30.4	S	29 49.7	35 0.6	34 0.6	15 1.8			U 1	177.8	19.3
ASAHIK	0	IP	17 29 33.1	S	29 55.2	18 1.8	16 1.6	14 0.8	S		D	190.3	22.1
HACHIN	0	EP	17 29 34.4	IS	29 55.2	25 0.6	23 0.3	7 1.6	N	E	D	194.1	20.8
AOMORI	0	IP	17 29 35.0	IS	29 58.0	74 0.9	89 1.6	34 1.3	S 10	W 10	U 5	206.8	23.0
SUTTSU	0	EP	17 29 36.2	ES	30 01.0							211.5	24.8
ABASHI	0	P	17 29 42.8	ES	30 04.8	7 2.6		4 3.2				255.7	22.0
MORIOK	0	P	17 29 45.5	S	30 15.2	19 0.4	24 0.4	5 0.4	N 0	E 0	D 0	290.1	29.7
				IX	30 21.0								
MIYAKO	0	EP	17 29 46.3	ES	30 12.3	6 1.0	5 1.6	4				274.4	26.0
OFUNAT	0	EP	17 29 52.4	ES	30 25.9	5 0.4	7 1.0	4 1.0				342.3	33.5
MIZUSA	0	P	17 29 58.4	S	30 28.9	15 1.7	21 2.0	16 1.2				349.1	30.5
AKITA	0	EX	17 30 02.0	EX	30 31.8	13 3.0	12 3.4	8 2.0				336.0	
SENDAI	0	EX	17 30 04			5 1	7 2	3 1				447.3	
SAKATA	0	X	17 30 13.4									423.0	
FUKUSH	0	EX	17 30 13.6			7 1.3	7 1.0	3 0.6				512.3	
MATSUS	0	P	17 30 39									721.7	
MITO	0	X	17 30	ES	31 35.5	7 1.0	7 2.6	4 3.0				658.0	
ONAHAM	0	X	17 31 27.4			9 0.9	13 1.2	4 1.0				587.3	

OT= 19 1 57 58.1 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 29 +/- 1 LONG= 138 5 +/- 1
H= 10 MAG=4.1 CLASS=L

MATSUS	2	P	01 58 01.5	S	58 03.5							12.8	02.0
NAGANO	2	IP	01 58 03.9	S	58 07.4							22.1	03.5
MATSUM	1	IP	01 58 04.1	IS	58 08.0				S 4	W 4	U 30	28.4	03.9
KARUIZ	0	IP	01 58 07.1	IS	58 12.2				N 3	W 6	D 8	44.9	05.1
TAKADA	0	EP	01 58 11.4	ES	58 21.2							70.6	09.8
IIDA	0	EP	01 58 18.0	ES	58 31.0	8 0.4	4 0.4	8 0.2				110.3	13.0
KUMAGA	0	EP	01 58 20.0	S	58 35.4	10 1.0	10 0.8	4 1.0				122.7	15.4
FUNATS	0	IP	01 58 20.2	IS	58 34.5							125.3	14.3
NAGOYA	0	EP	01 58 28.8	S	58 49.8	8 1.0	10 0.8	4 0.6				177.6	21.0
GIFU	0	EP	01 58 29.0	S	58 48.9	8 1.1	8 1.1					169.2	19.9
TOKYO	0	P	01 58 30.5	S	58 50.5	5	7					174.9	20.0
HAMAMA	0	EP	01 58 31.5	ES	58 56	5	5	3				199.6	24.5
HIKONE	0	EP	01 58 36.3	S	59 00.5	16 1.0	11 1.0	2 0.9				213.3	24.2
OMAEZA	0	X	01 58			7	7					208.9	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S * A/T S	E-W * A/T S	U-D * A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHICHI	0	X	01 59 15.0	X	59 27.0							105.0	
TOYOOK	0	X	01 59 31.1			9	6					312.3	

OT= 19 9 15 59.5 +/- 0.4
OFF IBARAKI PREF
LAT= 36 7 +/- 2 LONG= 140 55 +/- 3
H= 40 MAG=3.7 CLASS=L

CHOSHI	0	IP	09 16 09.8	IS	16 16.4							43.9	06.6
MITO	1	IP	09 16 10.2	IS	16 17.6	23 0.3	25 0.4	9 0.3	S 1	E 3	D 7	49.4	07.4
KAKIOK	0	P	09 16 12.1	IS	16 20.8	11 0.1	15 0.1	4 0.1				66.3	08.7
UTSUNO	0	P	09 16 16.8	IS	16 28.5	7 0.2	9 0.2	4 0.2				105.2	11.7
MATSUS	0	IP	09 16 35.8	S	17 04						D	247.6	28.2

OT= 20 10 57 23.1 USCGS
MONGOLIA
LAT= 48 0 LONG= 102 54
H= 33 MAG=6.1 CLASS=U

NAGOYA	0	EP	11 02 12.8	ES	06 43.2	17 10.8	16 13.0	15 11.4	S 1	E 1	U 1	3144.3	270.4
				X	11 21.2								
IZUHAR	0	EP	11 02 35.4	ES	06 55.9					E	U	2673.9	260.5
				EL	09 50.1								
FUKUE	0	P	11 02 43.6	ES	07 11.8	27 7.3	24 6.3	26 8.3	N 8	W 5	D 12	2759.5	268.2
FUKUOK	0	EP	11 02 47.0	ES	07 16.0	44 4.6	40 4.6	73 9.4	N 2	W 2	D 4	2794.4	269.0
HAMADA	0	P	11 02 47.5	ES	07 21.2	28 9.0	25 8.6	24 10.6	S 1	E 1	U 1	2814.4	273.7
SAIGO	0	P	11 02 47.8	ES	07 02.2	19 3.0	23 8.0	19 8.0	N 0	W 0	D 0	2812.8	254.4
				L	10 56								
NAGASA	0	P	11 02 48.0	S	07 16.0				S 1	E 2	U 1	2826.8	268.0
SHIMON	0	EP	11 02 48.5	EX	07 16	36 9.0	46 10.4	53 9.0	N	W	D	2804.6	
				EX	10 34								
SAGA	0	P	11 02 49.2	I	11 05.0							2814.9	
WAKKAN	0	EX	11 02 50.5	ES	07 45.9	58 4.8	131 9.2	26 5.0				2949.0	
KUMAMO	0	P	11 02 53.4	ES	07 26	58 7.2	32 6.8	35 9.0	N 10	W 10	D 13	2875.6	272.6
HIROSH	0	P	11 02 53.4	ES	07 23.4	29 16.7	29 11.0	29 11.0	N 4	W 4	D 14	2877.8	270.0
AOMORI	0	EX	11 02 56.0			41 15.9	39 10.0	12 9.7				3088.5	
OKAYAM	0	EP	11 02 59.0	ES	09 40.0	30 11.0	30 8.0	30 9.4				2959.0	401.0
SENDAI	0	EX	11 03 00	EX	09 34	18 10	13 11	15 10				3238.4	
				EL	12 30								
AIKAWA	0	EP	11 03	EL	12 03.7	29 1.3	22 1.1	23 1.1				3055.5	
TOYOOK	0	P	11 03 01.0	ES	07 39.3	20 12.6	23 12.2	21 12.6			D	2964.4	278.3
KAGOSH	0	EP	11 03 01.8	ES	07 43.6	67 3.9	60 3.9	20 10.5				2962.1	281.8
				EL	11 23.2								
TAKAMA	0	EP	11 03 02.3	ES	07 41.2	14 11.7	20 11.6					2995.0	278.9
SAPPOR	0	EP	11 03 02.8	ES	07 25.4	62 11	40 13	21 10				3020.8	262.6
				L	11 54								
MIYAZA	0	P	11 03 03.0	S	07 40.0	35 5.4	35 4.0	44 9.4				2993.1	277.0
HAKODA	0	EP	11 03 04.1	ES	07 43.3	52 10.7	36 9.4	14 10.6				3036.5	279.2
KANAZA	0	EP	11 03 05.8	ES	08 10.4	34	52	14				3030.0	304.6
YAKUSH	0	EP	11 03 06.0	EX	07 52.0	12 8.4	12 9.0	8 5.4				3049.1	
SUMOTO	0	P	11 03 06.2	ES	07 38.4	20 10.6	14 9.2	18 10.4		E 1	U 2	3053.9	272.2
				L	11 47								
ASHIZU	0	EP	11 03 06.8	ES	08 04.4	35 8.6	20 5.6	25 5.0				3039.6	297.6
WAKAYA	0	EX	11 03 07.8	EX	07 51.9	23 11.8	16 11.8					3079.8	
OSAKA	0	EP	11 03 08	EX	12 52	65 5.1	72 5.5	25 13				3076.8	
KYOTO	0	IP	11 03 08.8	ES	08 10.0	21 12.0	13 10.3	13 10.9	N 1	W 2	D 3	3065.8	301.2
ASAHIK	0	X	11 03 09	X	11 44.6	23 5.4	27 5.4	18 3.8				3066.9	
MUROTO	0	IP	11 03 09.5	IX	07 56.0	45 10.0	50 12.6	25 11.0		W 0	D 1	3080.6	
FUKUSH	0	EX	11 03 10.3			9 14.0	11 11.5	12 11.3				3236.7	
GIFU	0	EP	11 03 10.7	L	12	15 12.6	14 12.6					3113.9	
MATSUS	0	P	11 03 12									3144.6	
SHIONO	0	EP	11 03 14.2	ES	08 23.6	23 8.9	14 10.6					3177.6	309.4
				EL	12 47.8								
SUTTSU	0	EX	11 03 14.4	EX	11 17.1							2951.6	
HACHIN	0	EP	11 03 15.0	ES	08 04.0	44 13.0	25 14.0	13 12.0				3159.1	289.0
OWASE	0	P	11 03 15.0			13 11.8	10 10.4	15 12.0				3164.3	
HIKONE	0	EP	11 03 15.9	EL	11 56.2	19 11.3	17 12.4	18 11.4				3084.9	
URAKAW	0	EP	11 03 16.2	ES	09 05.0	58 13.0	41 12.8	24 10.8				3170.6	348.8
OBIHIR	0	EX	11 03 17.4									3167.8	
IIDA	0	EP	11 03 17.8	E	12 44.0	13 11.2	11 12.0	8 14.0				3184.1	
ABASHI	0	P	11 03 19.3	X	06 12.2	26 10.4	42 9.6	24 10.4				3197.9	
				X	13 23.6								
HAMAMA	0	EP	11 03 20			20	13	10				3229.8	
NAHA	0	EP	11 03 21			8 9	13 8.8	14 10				3239.9	
KUSHIR	0	IP	11 03 21.6	ES	08 10.0	41 14.0	30 10.4	19 4.8		E 0	U 1	3252.3	288.4

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T * S	E-W *	E-W A/T * S	U-D *	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OFUNAT	0	EP	11 03 22.2	ES	09 43.6		10 10.4		10 10.8		9 10.0				3253.2	381.4
				L	14 05.2											
UTSUNO	0	EX	11 03 23.1	EX	12 23.1		9 14.6		17 11.3						3266.4	
TOKYO	0	EP	11 03 26				30 9.2		31 9.0	15	8.0				3313.2	
KAKIOK	0	P	11 03 26	S	10 13		13 1.2		21 1.2						3310.0	407.0
NEMURO	0	EP	11 03 26.6	EX	08 22.3		35 14.0		13 6.4		13 4.6			U 1	3324.8	
MORIOK	0	EP	11 03 29.5	EX	09 54		13 11.2		12 10.6		15 11.6				3176.9	
				EX	10 32											
				EL	12 20											
ONAHAM	0	EP	11 03 31.1	E	07 43.8		17 10.6		24 13.2		14 10.0				3318.0	
FUNATS	0	EP	11 03 41.9	ES	09 35.1										3252.6	353.2
MAEBAS	0	EX	11 04 00.2				17 12.0		21 8.6		13 7.5				3216.2	
MITO	0	X	11 04 19.0				15 13.0		16 14.0		12 11.4				3321.3	
MISHIM	0	E	11 04 20				19 12.2		19 13.3		11 13.7				3290.3	
KUMAGA	0	EP	11 04 50.0	E	08 42.4		31 10.0		31 8.0		19 5.6				3256.0	
YOKOHA	0	EP	11 06 17.5								11 5.2				3321.8	
MIZUSA	0	EP	11 06 27.8												3205.6	
AKITA	0	EX	11 07 02	EX	12 22		53 11.8		60 9.0		28 11.2				3096.2	
TOMISA	0	EX	11 07 43.0				41 13.2		27 12.4		18 12.6				3368.7	
HACHIJ	0	X	11 08 17.0												3490.2	
KOBE	0	EX	11 10 02												3048.4	
NIIGAT	0	E	11 10 31.8				34 9.6		30 11.5		22 10.3				3122.0	
ASOSAN	0	EX	11 11 15				50 9.2								2894.9	
RUMOI	0	EX	11 11 31.8												3004.3	
SAKATA	0	EX	11 12 16.1												3122.1	
OSHIMA	0	EL	11 12 32				27 13		19 13		7 14				3346.4	
CHOSHI	0	EX	11 12 45.7												3390.3	
OITA	0	X	11 20 57.5	x	25 37.0		151 5.3		182 4.9			N	16	W 14	2905.2	

OT= 20 19 44 51.0 +/- 0.5
TOKUSHIMA-KOCHI BORDER
LAT= 33 47 +/- 2 LONG= 134 3 +/- 3
H= 0 MAG=3.6 CLASS=S

TURUGI	1	EP	19 44												8.7	03.0
KOCHI	0	IP	19 45 03.3	IS	45 08.7										54.4	05.4
TOKUSH	0	EP	19 45 04.4	IS	45 09.6										57.8	05.2
MUROTO	0	IP	19 45 06.0	IS	45 13.0	2	0.0	7	0.0	3	0.0	S	2	W 0	60.5	07.0
TAKAMA	0	IP	19 45 07.2	IS	45 14.3	12	0.4	15	0.4						59.1	07.1
SUMOTO	0	IP	19 45 10.5	IS	45 20.7	10	0.3	9	0.2	4	0.3	N	2	E 1 U 1	100.1	10.2
KOBE	0	EP	19 45 20.0	ES	45 34.1										144.6	14.1
OSAKA	0	X	19 45 40.5			6	2.4	7	1.7						167.3	
MATSUS	0	P	19 46 03												486.6	

OT= 21 15 49 12.7 +/- 0.4
OFF URAKAWA
LAT= 41 57 +/- 3 LONG= 142 11 +/- 3
H= 40 MAG=3.7 CLASS=U

URAKAW	0	IP	15 49 24.3	IS	49 34.1	22	0.8	22	0.6	6	1.2	N	2	E 2 U 7	54.6	09.8
HIROO	0	EP	15 49 28.6	ES	49 40.7										100.8	12.1
HAKODA	0	EP	15 49 31.7	ES	49 47.4	5	1.0	4	0.8	1	0.6			U	119.3	15.7
OBIHIR	0	EP	15 49 34.5	IS	49 51.4										137.5	16.9
HACHIN	0	EP	15 49 39.2	ES	49 57.2	5	0.0	5	0.0	1	0.6				167.6	18.0

OT= 21 16 48 59.8 +/- 0.7
OFF IWATE PREF
LAT= 39 5 +/- 2 LONG= 142 14 +/- 3
H= 40 MAG=3.7 CLASS=L

MIYAKO	0	EP	16 49 08.5	IS	49 20.2	16	0.0	13	0.0						66.4	11.7
OFUNAT	1	IP	16 49 10.0	IS	49 16.2	42	0.0	34	0.2	12	0.4	N	0	E 5 D 7	44.6	06.2
MIZUSA	0	P	16 49 16.7	S	49 26.7			9	1.2	4	1.0				95.3	10.0
MORIOK	0	P	16 49 18.2	ES	49 31.2	8	0.4	10	0.3	2	0.4	S	1	E 1 D 0	114.3	13.0
SENDAI	0	EX	16 49 23	S	49 38.6	3	0.8	5	0.8	2	0.4				147.7	
MATSUS	0	P	16 50 03												453.1	

OT= 21 21 40 30.5 +/- 0.4
OFF BOSO PEN
LAT= 34 23 +/- 1 LONG= 140 20 +/- 2
H= 50 MAG=4.4 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T * S	E-W *	E-W A/T * S	U-D *	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOMISA	0	IP	21 40 44.6	IS	40 54.8	60	0.8	52	0.6	12	1.0	S	1	E 3 D 10	75.4	10.2
OSHIMA	0	IP	21 40 47.5	IS	40 59.0	33	0.2	26	0.2	66		S	1	E 7 D 66	97.1	11.5
AJIRO	1	IP	21 40 51.5	IS	41 06.1	38	0.4	50	0.4	8	0.4	S	3	E 2 D 6	134.8	14.6
YOKOHA	1	IP	21 40 52.3	ES	41 08.6					18	0.4			D 3	132.2	16.3
MISHIM	0	IP	21 40 53.0	S	41 08.2	19	0.8	19	0.7	9	0.5	S		E 1 D 2	151.7	15.2
CHOSHI	0	IP	21 40 54.1	S	41 10.7										155.9	16.6
TOKYO	0	IP	21 40 54.5	IS	41 11.8	76		76		19					153.6	17.3
HACHIJ	0	IP	21 40 55.4	S	41 11.0	16	0.0	18	0.0	6	0.0	S	0	U 1	150.8	15.6
FUNATS	0	IP	21 40 59.4	IS	41 19.0										189.3	19.6
KAKIOK	0	P	21 41 01.5	S	41 20.3	19	0.8	16	0.8	6	0.5				205.4	18.8
KUMAGA	0	EP	21 41 02.6	ES	41 25.4	10	0.8	10	0.8	5	0.8				213.8	22.8
MITO	0	P	21 41 03.7	S	41 29.4	8	1.8	12	1.9	4	1.1				221.6	25.7
UTSUNO	0	P	21 41 05.3	IS	41 30.0	11	0.1	12	0.2	9	0.2				243.6	24.7
KARUIZ	0	EP	21 41 10.6	IS	41 39.3										270.7	28.7
FUKUSH	0	EP	21 41 21.8	ES	42 00.0	6	0.8	6	1.1	2	1.0				374.4	38.2
ONAHAM	0	X	21 41 32.3			8	0.9	9	1.1	2	0.5				288.9	

OT= 22 23 0 24.0 +/- 0.7
OFF CHOSHI
LAT= 35 36 +/- 3 LONG= 140 58 +/- 4
H= 60 MAG=3.9 CLASS=L

CHOSHI	0	IP	23 00 34.5	S	00 41.2										17.8	06.7
KAKIOK	0	P	23 00 40.0	S	00 48.2	19	0.5	18	0.6	8	0.5				98.9	08.2
MITO	0	IP	23 00 41.3	S	00 51.5	6	1.0	8	1.1	3	0.6			D 1	97.2	10.2
TOKYO	0	IP	23 00 43.0	S	00 55.0	16	0.4	12	0.2						109.8	12.0
AJIRO	0	IP	23 00 51.0	ES	01 11.7	7	0.4	7	0.4	2	0.4			U 0	180.9	20.7
MATSUS	0	IP	23 01 02.0	S	01 34									D	269.4	32.0
ONAHAM	0	X	23 01 12.8			5	0.9	8	1.4						149.3	
UTSUNO	0	X	23 01 46.5	EX	01 55.9	9	0.4	7	0.2	5	0.5				144.1	

OT= 23 15 56 30.6 +/- 0.2
S OF HIROSHIMA PREF
LAT= 34 29 +/- 1 LONG= 133 11 +/- 1
H= 10 MAG=4.3 CLASS=S

OKAYAM	0	IP	15 56 43.5	IS	56 51.7	50	0.4	53	0.4	10	0.5	S		W 10 D 3	70.6	08.2
HIROSH	X	IP	15 56 44.2	IS	56 53.1	16	0.5	15	0.5	13	0.5	N	3	E 11 D 10	69.9	08.9
TAKAMA	1	IP	15 56 46.5	IS	56 56.2	30	1.0	38	1.0		0.8	N	2	W 11 D 1	82.5	09.7
KOCHI	1	IP	15 56 49.1	IS	57 01.8							N	3	W 3 D 1	108.4	12.7
YONAGO	X	EP	15 56 50.0	IS	57 01.6										106.4	11.6
HAMADA	0	IP	15 56 50.3	S	57 03.6	18	1.1	10	1.5	5	1.2			E 2 D 1	111.4	13.3
MATSUE	0	EP	15 56 50.7	S	57 02.6										108.2	11.9
TOKUSH	0	EP	15 56 56.1	ES	57 11.8										136.4	15.7
TOTTOR	0	EP	15 56 56.3	S	57 12.8										145.8	16.5
KOBE	0	EX	15 56 57	ES	57 23.4										184.5	
SUMOTO	0	IP	15 56 57.4	S	57 15.9	7	0.7	5	1.0	5	1.4			W 1 D	159.4	18.5
UWAJIM	0	EP	15 56 59.0	ES	57 17.8										151.0	18.8
MUROTO	0	P	15 57 00.0	S	57 19.9	6	0.9	9	1.0	3	1.6				165.0	19.9
TOYOOK	0	P	15 57 02.5	ES	57 25.9	70	1.0	59	1.0	10	1.0			D	189.6	23.4
SAIGO	0	P	15 57 03.3	S	57 26.1	6	0.6	6	0.6	5	0.8	N	0	W 0 U 0	191.4	22.8
SHIMON	0	EP	15 57 06.5	ES	57 31.0	7	2.0	4	1.6	6	1.0	S		W 2 U 2	214.7	24.5
KYOTO	0	EP	15 57 10.0	ES	57 40.0	10	1.6	5	1.2	3	1.2				240.8	30.0
OITA	0	X	15 57 10.5	S	57 30.2	29	0.9	21	0.9						200.1	
OSAKA	0	X	15 57 11.0			11	0.3	11	0.3	7	0.3				216.8	
HIKONE	0	X	15 57 22.7	ES	57 56.6	8	0.9	9	0.9	4	1.1				293.4	
FUKUOK	0	X	15 57 23	ES	57 52.0	7	2.4	2	1.4	2	1.2				277.5	
MIYAZA	0	X	15 57 32.0	S	58 07.4	6	0.6	6	0.6	3	0.4				328.3	
KUMAMO	0	X	15 57 33	X	57 37.5	8	1.4	8	1.4	3	1.0				295.0	
SAGA	0	X	15 57 40.8	S	57 59.9										299.6	
MATSUS	0	X	15 57 51	X	58 56										509.5	

OT= 24 12 5 38.3 +/- 0.3
E OFF AOMORI PREF
LAT= 41 26 +/- 1 LONG= 142 8 +/- 2
H= 50 MAG=5.7 CLASS=R

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STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
URAKAW	1	IP	12	05	55.9	IS	06	09.7	500	3.4	800	3.6	400	3.6	N 1		U 3	96.8	13.8
HAKODA	3	IP	12	05	58.0	S	06	11.0	300	0.9	550	0.9	150	1.8	S 41	E140	D159	122.1	13.0
AOMORI	2	IP	12	05	59.7	ES	06	13.5	700	1.8	900	1.8	400	0.9		E 97	D 28	132.5	13.8
HACHIN	3	IP	12	06	00.0	IS	06	13.1	350	0.0	600	2.0	450	1.3	N 1	E	D 1	113.1	13.1
MURORA	1	IP	12	06	00.0	IS	06	14.2							S 42	E 13	D 35	136.9	14.2
															1	E 2	U 2	136.3	
HIROO	2	IP	12	06	00.8	X	05	17.1	500	3.6	600	3.9	400	3.9	S 19	E 3	D 20	192.3	23.1
SAPPOR	1	IP	12	06	06.5	IS	06	29.6	226	2.4	272	2.2	99	1.6	N 1		D 1	199.1	20.5
MIYAKO	2	P	12	06	07.3	IS	06	27.8	93	2.4	177	3.8	63	5.0			D 9	188.1	21.3
OBIHIR	2	IP	12	06	09.4	IS	06	30.7	900	2.7	1200	2.2	400		S 6	E 6	D 8	217.3	25.0
SUTTSU	0	IP	12	06	09.7	ES	06	34.7											
MORIOK	2	IP	12	06	10.2	S	06	33.3	186	0.4	235	0.4	61	0.3	S 1	W 0	U 0	209.5	23.1
						EX	06	14.4											
						X	07	46.2											
KUSHIR	1	IP	12	06	14.1	S	06	40.6	123	3.0	117	3.8	63	2.6	S 2	W 8	D 17	253.7	26.5
ASAHIK	0	P	12	06	16.6	IS	06	46.0	207	1.8	152	3.2	82	2.4				260.4	29.4
																		282.6	31.5
RUMOI	0	EP	12	06	16.8	IS	06	48.3										265.7	25.5
OFUNAT	1	IP	12	06	17.1	IS	06	42.6	79	3.0	149	3.4	67	1.6	N 4	E 1	D 4	256.6	26.0
AKITA	0	P	12	06	17.8	ES	06	43.8	227	2.6	160	3.8	124	3.4			U 36	269.2	
MIZUSA	1	P	12	06	20.0	X	06	56.8	200	1.0			160	1.0				353.8	33.1
NEMURO	X	P	12	06	25.7	ES	06	58.8	51	3.6	30	2.4	28	2.8		W	D 1		
ABASHI	0	P	12	06	26.8	S	07	01.2	76	4.0	64	3.2	43	3.4				336.7	34.4
ISHINO	0	EX	12	06	27.0	IS	07	02.0										341.5	
SAKATA	0	EP	12	06	27.6	S	07	00.8	400	4.0	350	2.4	150	2.4				342.3	33.2
SENDAI	1	P	12	06	30.4	IS	07	06.4	128	4.0	126	4.2	58	2.8	N 2		D 2	367.8	36.0
YAMAGA	0	EP	12	06	33.8	ES	07	12.7										384.6	38.9
FUKUSH	0	EP	12	06	38.0	ES	07	22.0	103	0.9	98	0.9	27	0.9				432.3	44.0
WAKKAN	0	EP	12	06	40.3	ES	07	23.4	63	3.3	60	3.7						444.2	43.1
SHIRAK	0	EP	12	06	46.8	ES	07	42.8										506.5	56.0
AIKAWA	0	IP	12	06	48.8	IS	07	37.2	14		11		8		S 2	W 2	U 3	504.8	48.4
ONAHAM	0	EP	12	06	49.5	ES	07	43.8	99	0.9	101	1.1	52	2.0				509.4	54.3
UTSUNO	0	EP	12	06	55.4	S	07	58.2	62	2.4	51	3.0	25	3.8				576.7	62.8
MITO	0	IP	12	06	56.2	S	07	57.5	76	2.3	93	3.2	56	2.8			D 0	579.3	61.3
KAKIOK	0	P	12	06	58	X	07	54	79	0.8	64	0.9	23	0.9				601.4	
TAKADA	0	EP	12	06	59.5	S	08	06.2										585.7	66.7
CHOSHI	0	EP	12	07	01.8	ES	08	20.0										643.5	78.2
MAEBAS	0	EP	12	07	04.1	EX	08	08.8	25	6.0	76	5.2	30	2.9				618.6	
MATSUS	0	IP	12	07	04.2	S	08	10							N		D	640.9	65.8
KUMAGA	0	EP	12	07	04.4	ES	08	10.0	72	3.0	112	3.4	37	2.6				633.5	65.6
KARUIZ	0	EP	12	07	08.4	ES	08	17.0										645.0	68.6
CHICHI	0	EP	12	07	10.5	X	08	31.7										659.7	
TOKYO	0	EP	12	07	13.8	S	08	23.6	58	4.8	59	3.4	50	3.4				670.7	69.8
AJIRO	0	EP	12	07	16.9	ES	08	32.9	4		5		1					757.3	76.0
TOMISA	0	EP	12	07	17.0	ES	08	42.2	46	3.0	43	2.8	32	4.0				750.5	85.2
KANAZA	0	EP	12	07	17.6	X	08	18.0	11		13		11					720.8	
OSHIMA	0	EP	12	07	19	ES	08	37.8	30	4.6	19	5.0	10	1.8				778.8	78.8
IIDA	0	EP	12	07	19.4	ES	08	48.4	13	4.0	11	4.8	7	4.6				756.7	89.0
YOKOHA	0	X	12	07	19.4	X	08	41.6	62	3.7	57	2.2	36	4.0				699.8	
NIIGAT	0	X	12	07	28.5				81	1.8	45	2.0						472.1	
NAGOYA	0	EP	12	07	28.8	ES	09	01.2	20	3.2	18	2.4	7	1.8				829.2	92.4
GIFU	0	EP	12	07	29.9				7	1.9	6	2.5						817.2	
MISHIM	0	X	12	07	30.6	ES	08	44.3	32	2.8	53	3.0	9	2.3				755.4	
FUNATS	0	X	12	07	32.3	ES	08	34.0										721.3	
HAMAMA	0	EP	12	07	35	ES	09	03	17		35		8					840.4	88.0
HIKONE	0	EP	12	07	35.0	ES	09	03.3	18	1.1	9	1.4	8	2.8				855.2	88.3
TOYOOK	0	P	12	07	40.6				10	1.2	10	1.2			N	E		913.4	
OSAKA	0	EP	12	07	43.6	ES	09	32.4	59		50		15					949.2	108.8
OWASE	0	P	12	07	47.0	X	09	41.0	4	4.0	5	4.8	3	3.0				970.1	
SAIGO	0	IP	12	07	47.3	ES	09	27.2	4	2.6	5	1.8	3	1.0	N 1	E 1	D 1	958.8	99.9
OMAEZA	0	X	12	07					34		47		14					832.3	
MUROTO	0	P	12	08	07.5	ES	10	05.8	4	6.0	5	4.4						1148.5	118.3
OITA	0	EX	12	08	25.6				10	4.0	8	4.4						1300.1	
NAGASA	0	EP	12	08	43.0	ES	11	25.8										1455.0	162.8
KAGOSH	0	EX	12	09	07.4				10	2.5	7	2.5						1504.8	

OT= 27 18 29 45.7 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 27 +/- 1 LONG= 138 5 +/- 1
H= 0 CLASS=L

MATSUS	2	IP	18	29	49.7	S	29	51.4										14.9	01.7
NAGANO	0	IP	18	29	51.9	S	29	54.6										25.4	02.7
MATSUM	0	IP	18	29	52.2	IS	29	56.1										25.0	03.9
KARUIZ	0	P	18	29	56.1	S	30	01.1										43.7	05.0

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OT= 28 4 32 15.6 +/- 0.7
E OF SHIZUOKA PREF
LAT= 35 13 +/- 4 LONG= 139 12 +/- 7
H=100 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
AJIRO	0	IP	04	32	30.8	S	32	43.0	6	0.4	8	0.4	2	0.4			U 0	21.4	12.2
YOKOHA	0	IP	04	32	31.1	IS	32	43.5	10	0.6	6	0.5					D 7	48.0	12.4
TOKYO	0	IP	04	32	33.5	IS	32	47.0	15		25		32		N 1	E 1	U	72.6	13.5
KUMAGA	0	P	04	32	38.0	S	32	54.6	5	0.8	4	0.8	2	0.2				104.5	16.6
UTSUNO	0	P	04	32	41.9	S	33	00.9	8	0.4	7	0.2						159.5	19.0
MATSUS	0	IP	04	32	47.3	S	32	59							S	E	D	171.8	11.7

OT= 30 4 23 43.7 +/- 0.2
IBARAKI PREF
LAT= 36 36 +/- 1 LONG= 140 28 +/- 2
H= 70 CLASS=L

MITO	2	IP	04	23	55.0	S	24	03.0	183	0.3	141	0.4	79	0.4	N 3	E 9	D 7	24.6	08.0
KAKIOK	1	IP	04	23	56.0	IS	24	04.5	100	0.9	100	0.2	100	0.5			U 10	47.7	08.5
UTSUNO	1	P	04	23	57.3	IS	24	06.2	53	0.2	39	0.3	23	0.3		W 4	U 14	53.6	08.9
SHIRAK	0	IP	04	23	57.5	IS	24	07.7									D 4	61.4	10.2
ONAHAM	0	EX	04	23	58.2	IS	24	06.9	15	0.5	15	1.1	6	0.7				54.8	
KUMAGA	0	EX	04	24	01.4				6	0.4	8	0.8	8	0.4				109.3	
TOKYO	0	IP	04	24	04.6	S	24	19.8	23	0.4	12	0.4			N 2		D 3	119.9	15.2
FUKUSH	0	EP	04	24	05.1	ES	24	20.4	6	0.7	9	1.1	7	0.5				128.4	15.3
YOKOHA	0	EP	04	24	09.5				11	0.4								148.3	
CHOSHI	0	X	04	24	13.9													102.8	
MATSUS	0	IP	04	24	14.5										N	W	U	202.2	

OT= 30 19 39 59.3 +/- 0.2
OFF SHIZUOKA PREF
LAT= 34 34 +/- 2 LONG= 138 38 +/- 1
H=200 CLASS=M

MISHIM	0	IP	19	40	27.9	S	40	49.4	20	0.9	25	1.0	7	1.7			U 18	66.3	21.5
AJIRO	0	IP	19	40	28.2	S	40	50.2	10	0.3	13	0.3	4	0.4	N 1	E 1	U 2	67.8	22.0
OSHIMA	0	IP	19	40	28.4	IS	40	49.6	24	1.0	11	1.0	8				U 8	71.6	21.2
HAMAMA	0	IP	19	40	29.0	S	40	51.8	7		5		6				U 6	84.9	22.8
TOMISA	0	IP	19	40	30.6	S	40	54.0	14	0.6	10	0.8	4	0.4			U 1	116.2	23.4
IIDA	0	EP	19	40	31.4	ES	40	57.2	2	1.0	5	1.8	5	1.2			U 5	127.5	25.8
YOKOHA	0	EP	19	40	33.1	IS	40	57.0	24	0.6	23	0.6						134.2	23.9
NAGOYA	0	P	19	40	33.9	ES	41	00.0	4	2.0	7	2.6	3	1.0	N 0	W 1	U 3	166.0	26.1
TOKYO	0	IP	19	40	34.8	ES	40	59.8	44		35		13					160.9	25.0
KARUIZ	0	IP	19	40	37.2	S	41	06.1									U 2	196.8	28.9
KUMAGA	0	EX	19	40	37.6				5	0.2	4	0.2	3	0.2				188.1	
MATSUS	0	IP	19	40	38.5	S	41	09							N	W	U	222.1	30.5
KAKIOK	0	P	19	40	39.4	S	41	08.0	16	0.5	15	0.7	8	0.5				232.8	28.6
UTSUNO	1	P	19	40	40.4	IS	41	10.6	156	0.3	117	0.3	24	0.2	N 5	E 3	U 7	246.6	30.2
CHOSHI	0	EP	19	40	40.7	S	41	11.0										238.8	30.3
MITO	0	P	19	40	42.6	IS	41	12.4	9	0.4	14	0.4	4	0.4				261.2	29.8
ONAHAM	0	EX	19	40	43.6	IS	41	26.6	16	0.8	18	0.9	6	1.1				334.4	
FUKUSH	0	EP	19	40	57.0	ES	41	38.9	7	1.1	7	0.8	4	0.6				390.7	41.9
FUKUI	0	X	19	41	18.2													274.0	
OSAKA	0	X	19	41	49.4				15	0.4	18	0.3	10	0.2				283.9	

List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE		PHASE AND TIME H M S		M S	INITIAL MOTION
1	IP	03 04 27.7			E U
1	P	03 32 33.			U
1	P	03 46 31.			
1	P	04 02 39.			
1	P	04 47 57.			
1	P	07 24 36.			
1	P	09 30 36.			
1	P	10 13 07.			
1	IP	13 13 35.0			W U
1	IP	16 16 51.0			U
1	P	16 55 24.			
1	IP	17 55 54.6			D
2	EP	05 37 23.	S	38 31.	
2	EP	07 08 20.			
2	IP	07 26 33.1			D
2	EP	16 13 12.			S E D
2	IP	20 07 33.0	S	07 41.0	
2	P	21 53 10.			
2	P	23 01 21.			
3	IP	05 09 31.5			S E D
3	P	09 26 43.			
3	P	14 45 15.			
3	EP	15 02 17.			
3	P	20 14 37.			
4	IP	06 32 55.0			N E U
4	P	09 10 04.0	ES	10 55.	
4	IP	12 46 34.1	IS	46 41.5	E U
4	P	18 41 41.5	S	42 08.	
4	IP	19 13 31.0	S	13 54.	U
4	IP	19 21 34.8			D
5	IP	03 02 07.2			S W D
5	IP	05 34 56.2			U
5	IP	09 20 29.8	S	24 48.	D
5	EP	09 48 07.			
5	P	15 19 02.			
5	P	17 15 14.			
5	IP	19 16 58.5			U
6	P	00 49 03.			
6	P	03 33 15.			
6	IP	09 05 40.0	S	07 37.	N D
6	EP	10 19 09.	ES	20 26.	
6	EP	15 48 58.			
7	P	06 29 08.	S	29 31.	
7	P	09 40 11.5			
7	P	21 17 06.			
7	IP	22 40 08.5			N U
8	P	01 50 31.9			S W U
8	IP	12 41 04.0			U
8	IP	14 08 20.1			U
8	P	14 12 17.			
8	IP	15 48 59.5			N W D
8	IP	17 37 28.9			U
9	IP	17 54 54.0	S	55 17.	N U
9	P	20 16 25.			
10	IP	06 59 03.9			W U
10	IP	10 56 20.6			N D
11	P	02 48 06.			
11	P	02 48 06.	S	48 13.	
11	IP	02 50 42.5			W U
11	IP	02 50 42.5	ES	51 34.	W U
11	IP	10 30 15.4	S	30 27.	S E D
11	IP	11 03 58.2	S	04 10.	S E D
11	IP	15 01 35.9			N W D
11	P	20 32 10.			
11	P	20 40 16.			
11	P	23 05 48.			
12	P	22 47 23.	S	47 39.	
13	IP	09 36 53.0	S	37 12.	N E
13	IP	13 27 29.6	S	28 27.	S E D
13	P	14 16 12.	S	16 44.	
13	P	21 38 13.	S	38 39.	
13	P	22 57 16.			
14	IP	02 27 59.2			U
14	IP	06 59 36.6			U
14	IP	09 46 23.8	S	46 31.	S W D
14	P	11 12 01.			
14	P	11 49 41.	S	50 14.	
14	P	12 45 31.			
14	P	17 35 40.			
14	IP	21 11 01.4			U
14	P	21 50 28.			
14	P	22 38 16.			
15	P	10 35 58.			
15	P	10 37 14.			
15	IP	14 45 38.7	S	46 26.	N W D
15	IP	21 18 09.6	S	18 25.	S E D
16	IP	05 31 58.7			D
16	IP	16 29 53.			
16	IP	16 31 10.7			U
16	P	20 18 14.			
16	P	23 35 50.			
16	P	23 45 44.			
17	P	01 11 45.			
17	P	05 39 18.	S	39 48.	
17	P	05 48 30.			
17	IP	08 55 07.3	S	55 54.	D
17	IP	09 35 04.5			
17	P	10 26 46.5			
17	IP	11 03 45.5	ES	04 20.	W U
17	P	12 31 41.			
17	IP	21 00 26.0			N E D
17	P	21 27 17.			
17	P	21 35 39.			
17	IP	21 43 32.0			U
18	P	04 23 18.			
18	P	13 24 51.			
18	P	14 39 40.			
18	EP	15 24 32.			
18	IP	16 10 03.0	IS	10 07.8	S W D
18	IP	17 25 57.2			W D
18	P	17 30 39.			
18	IP	19 50 32.7			D
18	IP	21 53 04.3			
18	IP	23 40 38.2			D
19	P	00 31 28.			
19	P	04 54 25.			
19	IP	09 16 35.8	S	17 04.	D
19	P	09 30 52.			
19	P	09 41 43.			
19	EP	10 06 10.			
19	IP	19 05 45.0			D
19	IP	21 47 47.0	S	50 53.	D
19	P	23 44 10.			
19	P	23 49 04.			
19	P	23 51 11.			
20	P	01 17 45.			
20	EP	04 46 53.			
20	IP	04 50 28.1			D
20	P	06 01 13.			
20	P	08 46 33.			
20	P	11 03 12.			
20	P	15 09 03.			
20	P	19 46 03.			
20	P	23 29 12.0			D
21	P	01 17 25.			
21	P	01 17 25.			
21	P	01 24 05.			
21	IP	03 05 44.8			D
21	P	03 57 52.	IS	58 17.	
21	IP	04 47 09.0			D

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DATE		PHASE AND TIME H M S		M S	INITIAL MOTION
21	EP	12 20 50.			
21	EP	13 30 58.			
21	P	16 50 03.			
21	EP	23 15 26.			
22	IP	01 41 13.8	IS	41 45.5	S E D
22	P	16 21 22.			
22	IP	19 37 50.5			D
22	EP	21 12 24.			
22	P	21 18 38.			
22	IP	23 01 02.0	S	01 34.	D
22	IP	23 29 54.5			N U
23	P	08 12 53.			
23	P	15 57 51.	S	58 56.	
23	IP	16 27 02.2	S	27 40.	S U
23	P	18 26 46.5			
23	P	20 21 38.			
24	EP	05 39 03.			
24	IP	06 50 56.5			
24	IP	12 07 04.2	S	08 10.	N D
24	IP	13 51 01.2			N D
24	IP	16 11 49.5	S	11 58.5	S D
24	IP	16 48 12.0			D
24	EP	18 48 20.			
24	P	23 51 15.	ES	56 28.	
25	IP	01 53 11.0			D
25	IP	10 59 04.3	ES	06 00.	N W D
25	P	11 00 06.			
25	P	12 08 31.			
26	P	14 02 06.			
26	EP	14 17 50.			
27	IP	08 19 32.8	S	19 55.	E D
27	IP	13 09 18.3			D
27	P	18 08 09.			
28	IP	04 32 47.3	S	32 59.	S E D
28	P	10 44 36.			
28	IP	14 31 09.7	ES	31 32.	U
28	IP	20 57 34.5	S	58 17.	S W U
28	P	23 00 25.5	S	06 23.	S W U
28	P	23 13 26.			
28	P	23 17 07.			
28	P	23 20 25.			
28	IP	23 30 55.3			N D
28	IP	23 37 54.3			
29	IP	00 21 15.0	S	21 25.0	U
29	P	01 38 51.			
29	P	02 27 02.			
29	P	02 34 02.			
29	IP	02 49 29.4			S U
29	IP	04 18 49.8			N W D
29	IP	07 33 06.0			N U
29	IP	07 41 04.5	S	41 33.5	E D
29	P	08 37 44.	ES	38 11.	
29	P	14 09 36.3	ES	10 09.	D
29	IP	15 11 10.7			U
29	EP	17 17 50.			
30	IP	04 24 14.5			N W U
30	IP	10 02 38.2	S	02 54.5	U
30	IP	19 40 38.5	S	41 09.	N W U
31	P	05 15 19.			
31	IP	20 41 56.6			D

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF MATSUSHIRO ARE LEFT OUT FROM THE TABIE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

D	INT	H	M
1	1	11	04
1	1	11	40
1	1	12	16
1	1	15	26
1	1	16	14
1	1	16	14
1	1	16	25
1	1	16	47
1	1	17	48
2	1	00	46
2	1	04	04
2	1	04	29
2	1	04	37
2	1	10	34
2	1	11	24
2	1	13	41
2	1	19	08
2	1	22	37
3	1	01	52
3	1	05	40
3	1	08	04
3	1	10	10
3	1	14	52
3	1	15	04
3	1	17	14
3	1	18	31
3	1	18	57
4	1	02	08
4	1	02	24
4	2	03	12
4	1	06	15
4	1	08	32
4	1	10	28
4	1	14	00
4	1	17	54
4	1	18	13
4	1	23	33
5	1	03	58
5	1	04	55
5	1	06	41
5	1	06	48
5	1	07	18
5	1	10	11
5	1	12	41
5	1	13	11
5	1	13	35
5	1	13	35
5	1	23	35
6	1	00	44
6	1	01	51
6	1	03	09
6	1	04	32
6	1	04	45
6	1	08	19
6	1	09	30
6	1	10	07
6	1	11	20
6	1	15	13
6	1	17	05
6	1	18	08
6	1	23	39
7	1	02	11
7	1	05	31
7	1	05	33
7	1	05	42
7	1	06	28
7	1	07	21
7	1	08	58
7	1	09	08
7	1	09	52
7	1	10	27
7	1	12	42
7	1	13	19
7	1	16	21
7	2	20	50
7	1	20	51
7	1	20	53
7	1	20	55
7	1	20	59
7	1	21	23
7	1	21	35
7	1	22	44
7	1	22	54
7	1	23	35
7	1	23	50
8	1	04	01
8	1	04	57
8	1	04	58
8	1	04	59
8	1	05	04
8	1	06	30
8	1	07	38
8	1	07	53
8	1	12	04
8	1	13	23
8	1	16	15
8	1	18	43
8	1	22	43
9	1	03	46
9	1	04	02
9	1	11	08
9	1	13	42
9	1	15	41
9	1	16	47
9	1	17	01
9	1	18	30
9	1	22	29
10	1	11	30
10	1	11	31
10	2	12	00
10	1	12	13
10	1	17	24
10	2	17	30
10	1	18	44
10	1	22	01
11	1	02	02
11	1	02	34
11	2	02	34
11	1	03	28
11	1	04	42
11	1	04	43
11	1	05	16
11	1	05	16
11	1	07	00
11	1	07	24
11	1	10	57
11	1	12	08
11	1	12	46
11	1	13	08
11	1	15	34
11	1	16	08
11	1	22	54
11	1	22	56
12	1	01	45
12	1	02	07
12	1	04	12
12	1	04	44
12	1	06	24
12	1	18	30
12	1	21	01
12	3	21	24
12	1	21	52
12	1	23	39
13	1	00	10
13	1	01	03
13	1	06	26
13	1	06	30
13	1	06	58
13	1	07	01
13	1	10	42
13	1	10	52
13	1	10	54
13	1	14	55
13	1	17	32
13	1	18	01
13	1	18	45
13	1	21	48
13	1	23	04
13	1	23	47
14	1	00	54
14	1	01	54
14	1	01	57
14	1	02	42
14	1	03	13
14	1	05	30
14	1	06	57
14	1	11	33
14	1	12	30
14	1	12	47
14	1	14	39
14	1	15	40
14	1	18	57
14	1	19	07
14	1	22	12
15	1	00	32
15	1	02	20
15	1	03	35
15	1	05	22
15	1	05	44
15	1	10	29
15	1	10	32
15	1	12	23
15	1	13	06
15	1	16	47
15	1	18	10
15	1	23	49
15	1	23	54
16	1	00	09
16	1	00	39
16	1	03	04
16	1	03	25
16	1	03	48
16	1	09	09
16	1	11	19
16	1	11	42
16	1	11	44
16	2	12	31
16	2	12	32
16	1	12	36
16	1	12	39
16	1	12	43
16	1	14	46
16	1	15	14
16	1	17	55
16	1	18	26
16	1	20	17
16	1	23	30
16	1	23	49
17	1	03	11
17	1	07	22
17	1	09	15
17	1	14	11
17	1	14	12
17	1	14	47
17	1	15	14
17	1	15	44
17	1	16	13
17	1	18	33
17	1	19	20
17	1	19	30
17	1	19	39
17	1	20	53
17	1	23	42
18	1	00	16
18	1	00	33
18	1	01	07
18	1	01	47
18	1	03	49
18	1	05	15
18	1	05	19
18	1	05	25
18	1	07	10
18	1	07	32
18	1	09	47
18	1	11	46
18	1	16	26
18	1	18	37
18	1	22	31
18	1	23	31
18	1	23	54
19	2	01	58
19	1	02	37
19	1	05	49
19	1	06	36
19	1	10	36
19	1	12	04
19	1	13	09
19	1	15	27
19	2	15	27
19	1	15	51
19	1	19	16
19	1	19	41
19	1	20	50
19	1	21	50
20	1	04	14
20	1	05	01
20	1	05	59
20	1	06	59
20	1	08	22
20	1	10	49
20	1	10	53
20	1	11	32
20	1	14	58
20	1	15	56
20	1	17	20
20	1	18	05
20	1	20	59
20	1	21	16
21	1	00	17
21	1	04	13
21	1	04	15
21	1	16	38
21	1	18	34
21	1	18	34
21	1	19	43
21	1	20	37
21	1	21	45
21	1	21	53
21	1	22	48
21	1	22	49
22	1	00	06
22	1	09	39
22	1	13	55
22	1	15	13
22	1	20	10
22	1	22	35
22	1	23	38
23	1	02	07
23	1	02	12
23	1	03	23
23	1	03	32
23	1	04	29
23	1	07	54
23	1	08	42
23	1	09	18
23	1	10	47
23	1	10	54
23	1	12	00
23	1	12	16
23	1	12	48
23	1	13	18
23	1	13	37
23	1	14	21
23	1	15	50
23	1	16	17
23	1	16	17
23	1	17	53
23	1	19	23
23	1	19	29
23	1	20	46
23	1	20	58
23	1	22	05
23	1	23	54
24	1	02	52
24	1	03	47
24	1	05	44
24	1	10	14
24	1	15	08
24	1	17	54
24	1	17	54
24	1	18	01
24	1	20	33
24	1	20	35
24	1	23	19
25	1	08	49
25	1	11	43
25	1	12	06
25	1	14	36
25	1	14	58
25	1	15	02
25	1	15	50
25	1	17	00
25	1	20	00
26	1	03	41
26	1	04	27
26	1	05	53
26	1	05	56
26	1	06	16
26	1	10	51
26	1	17	26
26	1	17	27
26	1	21	37
26	1	23	07
26	1	23	50
27	1	00	49
27	1	05	29
27	1	07	54
27	1	08	06
27	1	08	30
27	1	08	46
27	1	11	42
27	1	14	31
27	1	15	01
27	1	17	53
27	2	18	29
27	1	21	45
28	1	03	44
28	1	05	33
28	1	07	27
28	1	08	02
28	1	09	06
28	1	15	50
28	1	18	30
28	1	18	38
29	1	04	04
29	1	05	01
29	1	07	53
29	1	11	38
29	1	13	52
29	1	17	26
29	1	17	29
29	1	20	00
29	1	20	55
29	1	21	25
29	1	23	09
30	1	02	59
30	1	03	02
30	1	03	08
30	1	03	46
30	1	04	49
30	1	07	09
30	1	08	03
30	1	11	10
30	1	13	51
30	1	15	08
30	1	17	39
30	1	23	50
31	1	01	32
31	1	01	32
31	1	01	42
31	1	03	01
31	1	03	05
31	1	20	59

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6 MAY 1968

地　震　月　報

昭和42年 2 月

THE SEISMOLOGICAL BULLETIN

OF

THE JAPAN METEOROLOGICAL AGENCY

FOR

FEBRUARY 1967

気　象　庁

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List 1 **JMA stations and their seismographs**

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S, VI, O P
Aikawa	AIKAWA	138 14.5	38 01.2	34	S, VI, O P
Ajiro	AJIRO	139 05.8	35 02.6	59	S, VI, O P
Akita	AKITA	140 06.1	39 43.1	9	S, VI, O P
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S, P
Aomori	AOMORI	140 47.0	40 49.0	4	S, W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S, VI, O P
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S, VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S, P
Choshi	CHOSHI	140 50.6	35 43.5	27	S, W
Fukue	FUKUE	128 50.0	32 42.0	26	S, VI
Fukui	FUKUI	136 13.6	36 03.2	9	S, P (H, V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S, VI, M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S, VI, O P
Funatsu	FUNATS	138 45.8	35 29.9	860	S, P
Gifu	GIFU	136 45.9	35 23.9	13	S, W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S, VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S, VI, O P
Hakodate	HAKODA	140 45.5	41 48.8	35	S, VI, O P
Hamada	HAMADA	132 04.4	34 53.6	18	S, VI, O P
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S, VI, O P
Hikone	HIKONE	136 14.8	35 16.4	87	S, W
Himeji	HIMEJI	134 42.1	34 50.2	37	S, P (H, V)
Hiroo	HIROO	143 19.0	42 17.0	32	S, P (H, V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S, W
Iida	IIDA	137 50.1	35 30.6	482	S, VI, O P
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S, VI, O P
Izuhara	IZUHAR	129 17.7	34 12.2	21	S, P (H, V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S, W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S, W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S, VI, O P
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S, P (H, V)
Kobe	KOBE	135 10.8	34 41.3	58	S, P (H, V)
Kochi	KOCHI	133 32.0	33 33.0	40	S, P (H, V)
Kofu	KOFU	138 33.5	35 39.9	272	S, VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S, VI, O P
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S, W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S, VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S, VI, O P
Maebashi	MAEBAS	139 03.9	36 24.1	112	S, W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S, P (H, V)
Matsue	MATSUE	133 04.3	35 27.3	17	S, P (H, V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S, P (H, V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S, L, AW, G, B, V, C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S, W
Mishima	MISHIM	138 55.8	35 06.7	20	S, W
Mito	MITO	140 28.3	36 22.7	30	S, VI, O P
Miyako	MIYAKO	141 58.1	39 38.7	46	S, W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S, VI, O P
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P (H, V)
Morioka	MORIOK	141 10.1	39 41.8	155	S, VI, O P
Muroran	MURORA	140 59.0	42 19.0	43	S, P (H, V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S, VI, O P
Nagano	NAGANO	138 11.8	36 39.6	418	S, W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S, VD, EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S, VI, O P
Nara	NARA	135 50.0	34 41.0	105	S, P (H, V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S, VI, VD, OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S, VI, P(H, V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S, P (H, V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S, P (H, V)
Ofunato	OFUNAT	141 43.1	39 03.7	38	S, VI
Oita	OITA	131 37.4	33 14.0	5	S, W
Okayama	OKAYAM	133 54.9	34 40.9	4	S, VI, O P
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S, W
Onahama	ONAHAM	140 54.4	36 56.7	3	S, VI
Osaka	OSAKA	135 32.3	34 38.9	7	S, VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S, W

Station	Code	λ	φ	Height	Seismographs
				m	
Owase	OWASE	E136°11.7′	N34°04.0′	14	S, VI, O P
Rumoi	RUMOI	141 38.0	43 57.0	22	S, P (H, V)
Saga	SAGA	130 18.3	33 14.7	4	S, P (H, V)
Saigo	SAIGO	133 20.0	36 12.3	26	S, VI, O P
Sakata	SAKATA	139 50.2	38 54.2	2	S, P (H, V)
Sapporo	SAPPOR	141 19.9	43 03.5	17	S, VI, O P
Sendai	SENDAI	140 54.0	38 15.6	38	S, VI, S′
Shimonoseki	SHIMON	130 56.5	33 57.2	46	S, VI, O P
Shionomisaki	SHIONO	135 45.8	33 26.9	74	S, W
Shirakawa	SHIRAK	140 13.5	37 07.1	354	S, P (H, V)
Shizuoka	SHIZUO	138 24.4	34 58.4	14	S, VI
Sumoto	SUMOTO	134 54.5	34 20.1	109	S, VI, O P
Suttsu	SUTTSU	140 14.4	42 47.4	16	S, P (H, V)
Takada	TAKADA	138 15.0	37 06.3	13	S, P (H, V)
Takamatsu	TAKAMA	134 03.5	34 19.0	10	S, W
Takayama	TAKAYA	137 15.3	36 09.1	561	S, P (H, V)
Tokushima	TOKUSH	134 34.6	34 03.9	2	S, P (H, V)
Tokyo	TOKYO	139 45.5	35 41.2	21	S, VI′, VD′, I′, J
Tomisaki	TOMISA	139 49.7	34 55.2	12	S, VI, O P
Tottori	TOTTOR	134 10.7	35 30.7	17	S, P (H, V)
Toyama	TOYAMA	137 12.5	36 42.4	9	S, VI
Toyooka	TOYOOK	134 49.5	35 32.0	4	S, W
Tsu	TSU	136 31.1	34 42.1	3	S, P (H, V)
Tsuruga	TSURUG	136 03.9	35 39.0	1	S, P (H, V)
Unzendake	UNZEND	130 15.2	32 44.1	849	S
Urakawa	URAKAW	142 46.8	42 09.5	34	S, VI, O P
Utsunomiya	UTSUNO	139 52.3	36 32.6	120	S, W
Uwajima	UWAJIM	132 33.5	33 13.5	43	S, P
Wajima	WAJIMA	136 53.9	37 23.4	6	S, VI
Wakayama	WAKAYA	135 10.0	34 13.6	14	S, W, I
Wakkanai	WAKKAN	141 40.5	45 25.0	2	S, VI, O P
Yakushima	YAKUSH	130 29.8	30 27.0	14	S, VI
Yamagata	YAMAGA	140 21.0	38 15.2	151	S, P (H, V)
Yokohama	YOKOHA	139 39.3	35 26.2	38	S, W
Yonago	YONAGO	133 20.6	35 26.0	7	S, P (H, V)
Ishigakijima	ISHIGA	124 10	24 20	6	S, VI
Naha	NAHA	127 41	26 13	11	S, VI

Notations : —

λ	: Longitude.
φ	: Geographical Latitude.
W	: Wiechert's horizontal and vertical seismographs (masses, H ; 200kg, V ; 80kg).
P	: Portable seismograph (horizontal only).
P(H, V)	: do (mass, 22.5kg).
S	: Strong motion seismograph (magnification ; 1).
S′	: do (magnification ; 0.4)
M(H)	: Mainka's horizontal seismograph (mass, 450kg).
G	: Galitzin's seismograph.
L	: 1,000kg long-period seismograph, JMA type.
I	: Ishimoto's seismograph
V	: Short-period vertical seismograph.
AW	: Anderson-Wood's seismograph.
C	: Capacity type seismograph.
E M	: Electromagnetic seismograph.
O P	: JMA 59-type electromagnetic seismograph with optical recorder.
V I	: JMA 59-type electromagnetic seismograph with visible recorder.
V D	: JMA 61-type electromagnetic seismograph with visible recorder.
B	: Benioff's seismograph (short and long period).
J	: Remote recording JMA 63-type seismograph.
VI′, VD′, I′	: Remote recording JMA 63-types of I, VD and VI respectively.

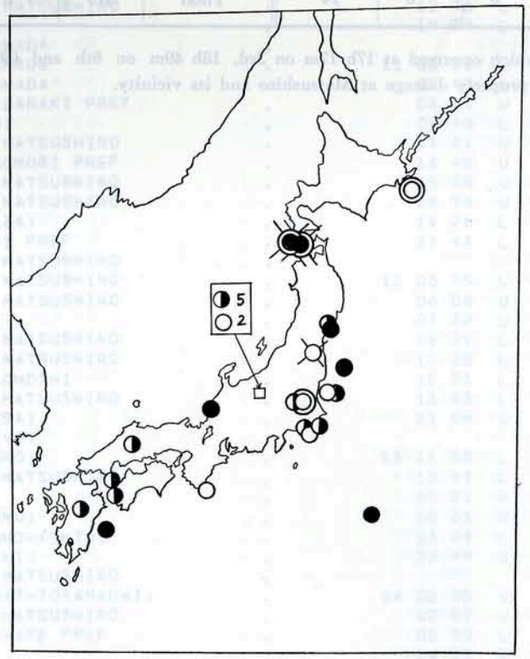
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List 2 Number of earthquakes by districts and classes, February, 1967

District \ Class	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	2	1	0	4	7	17	24
Tohoku	0	0	1	5	6	18	24
Kwanto	0	1	2	12	15	18	33
Chubu	0	0	2	327	329	8	337
Kinki	0	0	1	12	13	7	20
Chugoku·Shikoku	0	0	0	8	8	3	11
Kyushu	0	0	0	4	4	20	24
Near Japan*	0	0	0	1	1	12	13
Foreign region	0	0	0	0	0	4	4
Unknown	0	0	0	1	1	3	4
Total	2	2	6	374	384	110	494

* ; Sakhalin, Kurile Is., Korea, Ryukyu Is., Sikhota Alin.

Epicenters of the major earthquakes



⊙ Remarkable (r) ◎ Moderate (m) ○ Small felt area (s) ◑ Local (l) ● Unfelt (u) × h≧100km.

Special Event

Earthquake-Swarm near Matsushiro, Northern Chubu.

Daily number of shocks felt at Matsushiro Seismological Obervatory during this month is as follows:

Date \ Seismic intensity	1	2	3	Total	Date \ Seismic intensity	1	2	3	Total
1	6	0	0	6	16	12	0	0	12
2	19	1	0	20	17	10	1	0	11
3	15	0	1	16	18	6	0	0	6
4	17	1	0	18	19	10	0	0	10
5	13	0	0	13	20	7	0	0	7
6	11	0	0	11	21	11	1	0	12
7	16	0	0	16	22	9	0	0	9
8	16	2	0	18	23	12	0	0	12
9	9	1	0	10	24	20	0	0	20
10	16	0	0	16	25	7	0	0	7
11	11	0	0	11	26	10	0	0	10
12	8	1	0	9	27	9	0	0	9
13	5	0	0	5	28	4	0	0	4
14	10	0	0	10					
15	14	0	0	14	Total	313	8	1	322

The earthquakes which occurred at 17h 17m on 3rd, 18h 49m on 8th and 09h 21m on 12th were accompanied by slight property damage at Matsushiro and its vicinity.



International Seismological Centre From the ISC collection scanned by SISMOS

List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

DATE,TIME D H M	C	LOCATION	DATE,TIME D H M	C	LOCATION
1 02 44	M	NEAR NEMURO	8 02 26	L	NEAR MATSUSHIRO
04 23	L	(KAGOSH-NAZE)	02 27	L	NEAR MATSUSHIRO
11 00	U	(NAGANO)	02 27	L	NEAR MATSUSHIRO
12 57	L	NEAR MATSUSHIRO	10 55	U	E OFF AOMORI PREF
13 02	U	AICHI PREF	15 58	U	(KUSHIR)
17 32	U	(HACHIN)	17 18	L	NEAR MATSUSHIRO
20 03	L	NEAR UWAJIMA	18 49	S	NEAR MATSUSHIRO
22 25	L	NEAR MATSUSHIRO	19 22	L	NEAR MATSUSHIRO
22 42	L	NEAR MATSUSHIRO	20 25	L	NEAR MATSUSHIRO
			22 59	U	(NAHA)
2 05 01	L	NEAR MATSUSHIRO			
12 57	L	(UTSUNO-ASHIO)	9 00 46	L	NEAR MATSUSHIRO
16 09	L	NEAR MATSUSHIRO	01 06	U	(FUKUOK)
20 02	L	NEAR MATSUSHIRO	06 10	L	NEAR MATSUSHIRO
21 43	L	KAGOSHIMA PREF	07 06	L	NEAR KYOTO
			07 12	U	(YAKUSH)
3 01 06	L	NEAR MATSUSHIRO	08 19	U	N OFF KYUSHU
01 25	R	S OFF HOKKAIDO	09 50	L	NEAR MATSUSHIRO
05 01	L	NEAR MATSUSHIRO	19 45	U	OFF FUKUSHIMA PREF
05 45	S	NEAR SHIONOMISAKI	21 31	U	(KUSHIR)
07 16	L	SETONAIKAI	23 19	U	HOKKAIDO
09 27	L	(WAKAYA)			
16 11	L	NEAR MATSUSHIRO	10 00 17	U	(HAMAMA)
16 52	U	NEAR URAKAWA	00 43	U	COLOMBIA
17 17	S	NEAR MATSUSHIRO	02 27	U	FUKUI PREF
18 33	U	(MATSUM)	03 23	L	(WAKAYA)
18 50	U	(TOKUSH)	05 55	L	(HIROSH-KOZAN)
19 15	L	NEAR MATSUSHIRO	06 00	L	(HIROSH-KOZAN)
22 04	U	(SAPPOR)	06 36	L	NEAR YOKOHAMA
22 32	L	NEAR MATSUSHIRO	10 08	U	OFF FUKUSHIMA
23 29	L	NEAR MATSUSHIRO	12 36	L	NEAR MATSUSHIRO
			19 34	L	NEAR MATSUSHIRO
4 01 23	U	HYUGANADA			
03 02	U	HYUGANADA	11 00 23	L	NEAR MATSUSHIRO
04 06	U	HYUGANADA	02 40	L	NEAR MATSUSHIRO
05 47	S	OFF IBARAKI PREF	03 31	U	(CHOSHI)
05 49	U	(MITO)	05 48	L	NEAR KYOTO
11 58	L	NEAR MATSUSHIRO	11 31	U	OFF IWATE PREF
13 35	U	OFF AOMORI PREF	13 45	U	(MIZUSA)
13 39	L	NEAR MATSUSHIRO	15 38	U	(KAKIOK)
16 27	L	NEAR MATSUSHIRO	18 56	U	(NAGANO)
17 19	U	(MIYAZA)	19 26	L	OFF IWATE PREF
18 27	U	AOMORI PREF	23 43	L	OFF IWATE PREF
20 26	L	NEAR MATSUSHIRO			
22 26	L	NEAR MATSUSHIRO	12 03 55	L	N OF HIROSHIMA PREF
23 58	L	NEAR MATSUSHIRO	06 08	U	NEAR HACHIJOJIMA
			07 32	U	(WAKAYA)
5 00 48	L	NEAR MATSUSHIRO	09 21	L	NEAR MATSUSHIRO
02 15	L	NEAR MATSUSHIRO	10 30	L	(NIIGAT-OJIYA)
05 48	U	NEAR CHOSHI	12 51	L	NEAR MATSUSHIRO
07 00	L	NEAR MATSUSHIRO	13 43	L	NEAR MATSUSHIRO
16 37	U	(MIZUSA)	23 08	U	(SAPPOR)
22 20	U	(WAKAYA)			
23 19	L	(NEMURO)	13 11 05	L	(UTSUNO-ASHIO)
23 49	L	NEAR MATSUSHIRO	13 47	L	(WAKAYA-KIBI)
			20 21	M	IBARAKI PREF
6 02 31	U	(UTSUNO)	20 31	U	KURILE IS
11 48	L	(UTSUNO-ASHIO)	23 09	L	OFF CHIBA PREF
12 21	U	(CHOSHI)	23 49	U	NEAR TOKYO
15 54	L	NEAR MATSUSHIRO			
17 51	L	(NIIGAT-TOKAMACHI)	14 02 05	U	NEAR NEMURO
18 27	L	NEAR MATSUSHIRO	02 07	U	(MIZUSA)
19 36	L	OFF IWATE PREF	02 50	L	(KAGOSH-NAZE)
			04 07	U	(UWAJIM)
7 01 08	L	NEAR MATSUSHIRO	08 27	U	UK
03 53	L	NEAR NEMURO	10 42	U	ANDAMAN IS
11 49	L	NEAR MATSUSHIRO	15 20	L	NEAR MATSUSHIRO
17 33	U	S OFF KYUSHU	23 42	U	(WAKAYA)
17 34	L	NEAR MATSUSHIRO			
			15 03 21	L	NEAR MATSUSHIRO

C:CLASS

DATE, D	TIME H	M	C	LOCATION
15	03	29	L	NEAR MATSUSHIRO
	06	57	U	(URAKAW)
	15	19	L	NEAR MATSUSHIRO
	19	26	S	N OF FUKUSHIMA PREF
	21	00	L	NEAR MATSUSHIRO
16	01	28	U	(KAGOSH)
	01	29	U	PERU-BRAZIL BORDER
	10	38	U	(MIYAZA)
	21	49	L	NEAR MATSUSHIRO
	22	18	L	NEAR HAMADA
17	00	41	U	(WAKAYA)
	01	40	U	OFF IBARAKI PREF
	01	50	U	(MIZUSA)
	02	19	L	NEAR MATSUSHIRO
	03	02	U	(OFUNAT)
	06	13	U	(SAGA)
	10	54	L	NEAR MATSUSHIRO
	16	12	L	KUMAMOTO PREF
	16	26	U	(MIYAZA)
	18	28	L	NEAR MATSUSHIRO
	19	22	L	UK
	22	19	L	(HIROSH-KAKE)
18	00	39	L	(NAGANO)
	01	50	L	MIYAGI PREF
	02	23	L	NEAR MATSUSHIRO
	12	06	U	(NAGANO)
	13	17	U	(MIYAZA)
	17	51	L	CHIBA PREF
	19	01	U	(URAKAW)
	23	36	U	KWANTO
19	00	24	L	NEAR MATSUSHIRO
	02	20	U	(KUSHIR)
	04	49	U	(HIMEJI)
	08	07	U	(HIMEJI)
	11	17	U	UK
	12	47	U	NEAR YAKUSHIMA
	17	40	L	NEAR MATSUSHIRO
20	02	18	L	IBARAKI PREF
	03	27	U	(URAKAW)
	07	21	U	JAVA
	08	35	U	UK
	09	35	R	TSUGARU STR
	09	53	L	(WAKAYA)
	14	26	U	MIYAZAKI PREF
	20	56	U	S OFF KYUSHU
	21	15	U	S OFF KYUSHU
	22	56	L	NEAR MATSUSHIRO
21	00	42	L	(WAKAYA-KIBI)
	01	57	U	OFF FUKUSHIMA PREF
	03	00	U	(WAKAYA)
	05	40	L	W OF IBARAKI PREF
	09	35	L	NEAR MATSUSHIRO
	09	50	L	NEAR MATSUSHIRO
	11	23	L	(HIROSH-SHOBARA)
	13	58	L	NEAR MATSUSHIRO
	14	31	L	NEAR MATSUSHIRO
	16	20	L	NEAR MATSUSHIRO
	19	08	U	OFF IBARAKI PREF
	21	23	L	NEAR MATSUSHIRO
	21	40	L	(CHOSHI-KATSUURA)
	23	09	L	NEAR MATSUSHIRO
22	00	19	L	NEAR MATSUSHIRO
	04	33	U	TOKYO BAY
22	05	43	U	W OF HOKKAIDO
	09	48	L	OFF IBARAKI PREF
	15	01	L	NEAR MATSUSHIRO
	16	31	U	OFF IBARAKI PREF
	17	47	S	CHIBA PREF
	18	53	L	(HIMEJI)
	21	30	U	N OF MIYAGI PREF
23	00	07	L	(KYOTO)
	03	34	U	(KUMAMO)
	04	42	L	(WAKAYA)
	05	14	L	(WAKAYA)
	07	29	L	NEAR MATSUSHIRO
	15	55	L	NEAR MATSUSHIRO
	22	19	L	NEAR MATSUSHIRO
	23	27	U	(NAHA)
24	04	38	L	(NEMURO)
	05	24	L	NEAR MATSUSHIRO
	05	39	L	RYUKYU IS
	06	24	L	NEAR MATSUSHIRO
	10	40	L	NEAR MATSUSHIRO
	14	17	L	NEAR MATSUSHIRO
	18	09	L	NEAR MATSUSHIRO
25	02	12	U	(KUSHIR)
	09	19	U	W OFF HOKKAIDO
	09	22	L	NEAR MATSUSHIRO
	14	21	L	NIIGATA PREF
	20	14	U	(HAKODA)
	20	20	U	W OFF HOKKAIDO
	21	22	U	(MATSUM)
	21	44	U	(YAKUSH)
26	02	12	L	IBARAKI PREF
	06	43	U	HOKKAIDO
	07	40	L	NEAR MATSUSHIRO
	09	44	L	NEAR MATSUSHIRO
	09	57	L	NEAR MATSUSHIRO
	10	25	L	NEAR MATSUSHIRO
	11	51	L	NEAR MATSUSHIRO
	13	39	U	(KAGOSH)
	14	01	U	(NAHA)
	14	04	U	NEAR ONAHAMA
	14	38	U	(ONAHAM)
	15	30	U	(NAHA)
	15	37	U	(NAHA)
	16	52	L	(NEMURO)
	17	34	U	(NAHA)
	17	56	U	(NAHA)
	20	13	U	(ONAHAM)
	21	24	U	(NAHA)
	22	50	U	(NAHA)
27	02	31	L	NEAR MATSUSHIRO
	03	31	U	NEAR MITO
	03	35	L	NEAR MATSUSHIRO
	06	31	L	NEAR MATSUSHIRO
	14	44	L	CHIBA PREF
	14	47	L	NEAR MATSUSHIRO
	15	56	L	(HIMEJI)
	18	36	U	OFF IWATE PREF
	21	41	L	NEAR MATSUSHIRO
	21	47	L	NEAR MATSUSHIRO
	22	02	L	NEAR MATSUSHIRO
28	01	43	U	(MIYAZA)
	05	45	U	(YAKUSH)
	07	58	L	NEAR MATSUSHIRO
	08	49	L	NEAR MORIOKA

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DATE, D	TIME H	M	C	LOCATION
28	13	39	U	(OKAYAM)
	14	00	U	TOCHIGI PREF
	14	28	U	(YOKOHA)
	17	26	L	NEAR MATSUSHIRO
	18	37	U	FAR OFF BOSO PEN
	20	14	U	(MORIOK)

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST. ALL EVENTS FELT AT THE OBSERVATORY ARE LISTED IN LIST 6.

List 4 EARTHQUAKE ORIGINS

DATE, D	TIME H	M	C	LOCATION	ORIGIN TIME M	S	+/-S	LONG.	+/-	LAT.	+/-	H KM	M
1	02	44	M	NEAR NEMURO	43	56.6	0.1	145 28 05		42 48 04		40	5.0
	20	03	L	NEAR UWAJIMA	03	42.1	0.4	132 22 02		33 18 03		40	4.0
3	01	25	R	S OFF HOKKAIDO	24	39.6	0.3	139 59 03		41 31 01		180	
	05	45	S	NEAR SHIONOMISAKI	45	25.9	1.5	135 59 07		33 24 07		60	4.1
	07	16	L	SETONAIKAI	16	42.7	0.3	132 11 02		33 40 01		30	3.9
	17	17	S	NEAR MATSUSHIRO	17	01.5	0.2	138 04 01		36 26 01		00	5.4
4	04	06	U	HYUGANADA	6	08.8	0.7	132 01 03		32 08 02		00	4.3
	05	47	S	OFF IBARAKI PREF	47	36.2	0.5	141 16 03		36 28 01		40	4.2
8	02	26	L	NEAR MATSUSHIRO	26	42.4	0.3	138 05 01		36 26 01		00	4.3
	18	49	S	NEAR MATSUSHIRO	49	36.3	0.2	138 02 01		36 27 01		10	4.8
9	09	50	L	NEAR MATSUSHIRO	50	51.0	0.2	138 14 01		36 35 01		10	4.3
	19	45	U	OFF FUKUSHIMA PREF	44	54.4	1.5	141 50 10		37 10 04		90	
10	02	27	U	FUKUI PREF	27	46.8	0.2	136 16 01		35 45 01		10	3.4
12	03	55	L	N OF HIROSHIMA PREF	55	30.4	0.6	132 57 03		35 01 01		30	3.9
	09	21	L	NEAR MATSUSHIRO	21	29.5	0.2	138 18 01		36 38 01		10	4.5
13	20	21	M	IBARAKI PREF	21	09.1	0.2	139 54 01		36 08 01		50	4.9
	23	09	L	OFF CHIBA PREF	9	17.3	0.7	140 34 04		35 25 03		50	3.8
15	19	26	S	N OF FUKUSHIMA PREF	26	07.0	0.3	140 37 06		37 56 02		120	
17	02	19	L	NEAR MATSUSHIRO	19	17.1	0.3	138 04 02		36 29 01		10	4.4
	16	12	L	KUMAMOTO PREF	12	52.6	0.5	130 51 02		32 48 02		10	3.8
18	01	50	L	MIYAGI PREF	50	04.2	0.2	141 03 01		38 40 00		10	3.9
	17	51	L	CHIBA PREF	50	46.6	0.3	140 04 02		35 20 02		80	
20	09	35	R	TSUGARU STR	35	22.1	0.6	140 15 07		41 26 03		180	
21	05	40	L	W OF IBARAKI PREF	39	57.1	0.3	139 45 02		36 15 03		50	3.6
	14	31	L	NEAR MATSUSHIRO	31	03.8	0.3	138 18 02		36 37 01		00	4.1
22	09	48	L	OFF IBARAKI PREF	48	07.4	1.7	141 06 07		36 39 03		20	3.8
	17	47	S	CHIBA PREF	47	01.0	0.3	140 16 01		35 05 01		40	4.6
	21	30	U	N OF MIYAGI PREF	30	30.6	0.3	141 12 05		38 43 02		90	
28	18	37	U	FAR OFF BOSO PEN	37	11.8	1.9	142 18 08		32 27 06		40	5.5

C:CLASS

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List 5 DATA OF EARTHQUAKES

OT= 1 2 43 56.6 +/- 0.1
NEAR NEMURO
LAT= 42 48 +/- 4 LONG= 145 28 +/- 5
H= 40 MAG=5.0 CLASS=M

* : MICRON

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NEMURO	3	IP	02	44	08.2	S	44	15.0	104	0.3	214	0.4	96	0.4	S 2	W 4	D 10	59.5	06.8
KUSHIR	3	IP	02	44	13.0	IS	44	23.3	850	0.4	900	0.3	400	0.3	S 30	E 56	D167	89.8	10.3
OBIHIR	1	IP	02	44	23.2	S	44	43.7									D 11	184.0	20.5
ABASHI	X	IP	02	44	23.4	S	44	39.8	78	2.2	82	2.2			S 1	W 1		165.7	16.4
HIROO	1	IP	02	44	26.9	IS	44	47.9							N 1	W 2	U 2	185.7	21.0
ASAHIK	0	IP	02	44	37.0	EX	45	15.2	22	1.8	18	2.2	12	1.8		E	D 2	273.3	
SAPPOR	0	P	02	44	44.5	S	45	20.4	24	2.0	34	2.0	14	1.2			D	338.8	35.9
MURORA	0	EP	02	44	48.5	S	45	31.9										372.1	43.4
HAKODA	0	IP	02	44	54.5	S	45	36.7	21	0.7	16	0.9	7	1.4			U 1	403.4	42.2
HACHIN	0	EP	02	44	55.5	IS	45	37.6	9	0.2	9	0.2	4	2.4				414.2	42.1
WAKKAN	0	EP	02	44	56.2	ES	45	40.5	7	2.5	8	4.0	7	2.5				420.4	44.3
AOMORI	0	EP	02	45	01.3	ES	45	49.1	37	2.1	35	1.4	16	1.8				447.2	47.8
MORIOK	0	IP	02	45	05.5	IS	45	53.7	12	0.5	11	0.5	3	0.3	S 1	W 1	U 1	498.5	48.2
						IX	45	10.2											
OFUNAT	0	P	02	45	07.6	S	45	57.8	6	1.0	5	1.2	3	1.0			U 1	521.5	50.2
MIZUSA	0	P	02	45	12.8	S	46	03.0	15	1.0	19	1.3	20	1.0		E 2		546.6	50.2
FUKUSH	0	EX	02	45	35.5				7	1.0	9	1.1	2	0.6				702.5	
KAKIOK	0	EP	02	45	53	X	47	13	7	0.9	4	0.7	2	0.5				858.3	
MATSUS	0	IP	02	45	58.6	S	47	33							S	W	U	932.7	94.4
AKITA	0	X	02	46	12				12	3.4	11	3.8	9	2.4				564.9	
ONAHAM	0	X	02	46	43.7				6	1.0	6	1.2	2	1.1				757.9	

OT= 1 20 3 42.1 +/- 0.4
NEAR UWAJIMA
LAT= 33 18 +/- 3 LONG= 132 22 +/- 2
H= 40 MAG=4.0 CLASS=L

UWAJIM	2	IP	20	03	50.0	IS	03	54.7										19.7	04.7
OITA	0	EP	20	03	55.7	S	04	00.3	20	0.6	22	0.6	7	1.1				69.6	04.6
ASHIZU	0	EP	20	03	57.6	ES	04	07.8	9	0.6	11	0.8	5	0.7				88.7	10.2
KOCHI	0	IP	20	03	59.5	IS	04	12.3										112.0	12.8
OKAYAM	0	X	20	04	26.0	ES	04	37.2	15	0.8	10	0.6	5	0.6				209.6	
MIYAZA	0	X	20	04	35.0				5	0.8	5	0.8	2	0.6				176.9	

OT= 3 1 24 39.6 +/- 0.3
S OFF HOKKAIDO
LAT= 41 31 +/- 1 LONG= 139 59 +/- 3
H=180 CLASS=R

HAKODA	0	IP	01	25	06.2	S	25	27.2	100	1.7	93	1.6	107	2.6		W 45	D111	72.5	21.0
AOMORI	0	IP	01	25	07.0	IS	25	27.9	700	1.9	700	2.3	200	1.8	N 21	W 30	D 34	102.7	20.9
MURORA	0	IP	01	25	08.6	S	25	30.3							S 20	W 24	D 55	121.6	21.7
SUTTSU	0	IP	01	25	10.5	IS	25	32.5							S 8	W 4	D 23	143.0	22.0
HACHIN	1	IP	01	25	13.9	IS	25	36.9			164	2.4	35	3.4	N 3	W 3	D 4	170.1	23.0
SAPPOR	0	IP	01	25	16.2	IS	25	43.6	301	2.4	344	2.4	126	2.4	S 27	W 25	D 67	204.2	27.4
AKITA	0	IP	01	25	17.4	IS	25	45.5	267	3.2	440	2.8	255	2.2	S 27	W 14	U256	200.0	28.1
MORIOK	1	IP	01	25	19.0	IS	25	49.2	93	2.7	105	3.0	41	2.8	S 1	E 0	U 1	225.6	30.2
URAKAW	0	IP	01	25	21.4	IS	25	52.7	132	3.0	239	2.6	72	3.0		W 12	D 44	243.0	31.3
MIYAKO	1	IP	01	25	23.3	IS	25	53.4	95	4.1	100	3.0	38	2.3	N 3		D 8	267.3	30.1
RUMOI	0	IP	01	25	25.2	IS	25	59.4	300	2.2	600	1.6	400	2.4	S 10	E 3	U 10	302.2	34.2
HIROO	1	IP	01	25	25.5	IS	25	59.2								W 2	D 3	289.4	33.7
SAKATA	0	IP	01	25	26.3	ES	26	04.3									U	290.5	38.0
OFUNAT	1	IP	01	25	27.0	IS	26	02.2	100	3.6	112	2.2	37	1.0	S 7	E 3	U 7	310.0	35.2
OBIHIR	0	IP	01	25	28.2	IS	26	03.6							S 4	W 7	D 41	309.5	35.4
ASAHIK	0	IP	01	25	28.3	IS	26	04.0	141	2.6	148	2.0	77	1.8	S 1	W 1	D 4	318.0	35.7
ISHINO	0	EP	01	25	32.4	IS	26	10.4							N 4	W 2	U 1	361.3	38.0
YAMAGA	0	EP	01	25	33.2	ES	26	13.9							S 11	E 5	U 14	363.7	40.7
SENDAI	0	IP	01	25	33.6	IS	26	15.4	110	3.0	125	2.6	30	3.2	S 12	E 2	U 12	370.0	41.8
KUSHIR	1	IP	01	25	36.3	IS	26	17.3	151	0.9	165	0.5	53	0.4	S 3	W 12	D 24	398.7	41.0
FUKUSH	0	P	01	25	38.4	ES	26	22.2	28	1.3	25	1.8	12	3.0	S 11	E 0	U 11	419.6	43.8
AIKAWA	0	IP	01	25	39.4	IS	26	24.8	43		36		51		S 43	W 5	U 50	415.9	45.4
NIIGAT	0	IP	01	25	39.8	S	26	15.6	130	3.8	122	3.6	101	2.2	S 3	W 3	U 37	408.3	35.8
ABASHI	0	P	01	25	44.0	S	26	30.2	94	1.4	52	2.2						448.3	46.2
WAKKAN	0	IP	01	25	45.3	IS	26	32.6	65	4.4	85	3.8	29	1.4				454.5	47.3
SHIRAK	0	EP	01	25	46.8	ES	26	37.7										488.7	50.9
NEMURO	1	IP	01	25	47.2	IS	26	37.0	63	2.5	53	1.0	25	0.9	S 3	W 6	D 13	503.1	49.8

I : Seismic Intensity

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ONAHAM	0	P	01	25	48.2	ES	26	35.6	54	1.2	67	0.5	27	2.9			U 5	513.7	47.4
TAKADA	0	P	01	25	51.1	S	26	42.2										512.1	51.1
UTSUNO	0	EP	01	25	54.3	ES	26	51.4	27	1.8	20	2.5			S 7			551.8	57.1
MITO	0	IP	01	25	54.4	IS	26	50.4	34	2.4	40	3.0	30	3.0			D 0	572.0	56.0
KAKIOK	0	IP	01	25	55.6	S	26	53.0	47	1.3	51	1.5	8	1.5	S 2		U 1	587.0	57.4
NAGANO	0	EP	01	25	57													560.8	
MAEBAS	0	IP	01	25	57.1	ES	26	49.9	18	3.0	23	4.7	20	3.0			U 9	573.4	52.8
MATSUS	0	IP	01	25	57.7	S	26	55							S W		U	573.6	57.3
KARUIZ	0	EP	01	25	59.9	X	26	16.1										587.9	
KUMAGA	0	EP	01	26	00.6	X	26	33.4	19	2.6	25	3.0	19	3.2				598.4	
MATSUM	0	P	01	26	02.8	ES	27	09.5										610.8	66.7
CHOSHI	0	P	01	26	03.1	S	27	11.8										647.2	68.7
KANAZA	0	P	01	26	04.0	X	26	54.0	35		30		25		S 4 W	2 U	10	622.6	
TOKYO	0	EP	01	26	04.6	ES	27	13.6	23	3.4			34	3.6				647.6	69.0
FUNATS	0	EP	01	26	07.3	X	26	23.1										676.4	
IIDA	0	IP	01	26	10.8	IS	27	22.0	10	3.8	8	1.2	7	3.6	S 4 W	3 U	7	692.5	71.2
FUKUI	0	P	01	26	11.6										S 6 W	3 U	6	688.5	
AJIRO	0	X	01	26	12.0	ES	27	25.6	5		5		2					722.7	
YOKOHA	0	EP	01	26	12.1	IS	27	19.8	20	4.4	22	2.4						675.5	67.7
TOMISA	0	P	01	26	13.5				23	3.6	21	3.6	13	3.4			U 26	732.3	
OSHIMA	0	P	01	26	15.4	S	27	28.4	9	0.6	8	0.6	5	1.6				751.6	73.0
GIFU	0	EP	01	26	16.4				15	2.3	8	2.1						734.8	
NAGOYA	0	P	01	26	18.0	ES	27	39.0	21	2.6	28	2.8	8	2.8	S 4 W	2 U	6	752.5	81.0
HAMAMA	0	P	01	26	20.0	ES	27	36	11		11		5				D 2	781.1	76.0
HIKONE	0	EP	01	26	21.0	ES	27	39.5	33	2.6	18	2.4	11	2.5				765.8	78.5
TOYOOK	0	P	01	26	25.0	ES	27	45.1	20	1.2	18	1.1	4	1.5	S W		U	801.7	80.1
KYOTO	0	X	01	26	25.6	ES	27	47.2	7	2.6	6	6.0	3	4.0	S 2 W	2 U	2	811.8	
SAIGO	0	P	01	26	27.5	S	27	50.2	30	3.0	23	2.0	19	3.4	S 1 W	0 D	1	824.6	82.7
OSAKA	0	IP	01	26	30.8	S	27	58.0	31	3.4	49	4.2	23	3.0			U 4	855.9	87.2
SUMOTO	0	P	01	26	35.7	ES	27	58.0	5	3.8	6	3.1	4	4.0	S W		U	913.0	82.3
						EX	26	55.0											
HACHIJ	0	EP	01	26	36.0	ES	28	08.6										934.0	92.6
OKAYAM	0	EP	01	26	39.0	ES	28	16.0	10	3.0	10	4.0	10	3.8				926.1	97.0
TOKUSH	0	EP	01	26	42.6													953.8	
HAMADA	0	EP	01	26	51.8	ES	28	21.3	6	5.6	7	5.5	5	3.4				1009.2	89.5
MUROTO	0	IP	01	26	52.5	X	28	56.0	4	3.0	6	6.0				E	1	1051.1	
						EX	27	42.0											
MUROTO	0	IP	01	26	52.5	EX	27	42.0	4	3.0	6	6.0				E	1	1051.1	
HIROSH	0	EP	01	26	52.6	ES	28	33	4	3.9	7	3.9	2	3.9	S	W	U	1033.7	100.4
MISHIM	0	X	01	26		ES	27	34.6	18	3.2	14	2.5	5	1.8				716.8	
OMAEZA	0	X	01	26					13		20		11					782.8	
OITA	0	EP	01	27	12.3	ES	29	13.0	31	4.5	25	5.1						1179.0	120.7
FUKUOK	0	EP	01	27	14.5	ES	29	15.0	5	2.0	2	4.0	2	4.0				1221.5	120.5
MIYAZA	0	EP	01	27	20.0	ES	29	38.0	4	3.4	7	5.0	5	4.4				1309.5	138.0
NAGASA	0	P	01	27	26.0	X	29	26.0							N	E	D	1325.3	
KAGOSH	0	X	01	30	38.1				13	2.8	8	2.7						1387.3	

OT= 3 5 45 25.9 +/- 1.5
NEAR SHIONOMISAKI
LAT= 33 24 +/- 7 LONG= 135 59 +/- 7
H= 60 MAG=4.1 CLASS=S

OWASE	1	P	05	45	37.0	S	45	42.8	31	0.5	66	0.6	18	0.7				76.5	05.8
SHIONO	1	EP	05	45	37.4	IS	45	43.1	63	0.2	26	0.2	11	0.1				21.1	05.7
SUMOTO	1	IP	05	45	46.6	ES	45	57.0	6	0.2	3	0.4	1	0.3	S	E	D 1	143.7	10.4
TOKUSH	0	EP	05	45	49.3	ES	46	03.6										149.7	14.3
TSU	0	EP	05	45	50.0													152.5	
OSAKA	0	P	05	45	54.0	S	46	11.4	7	4.4	5	1.2						144.4	17.4
HIKONE	0	EP	05	45	57.0	S	46	16.3	10	0.9	10	1.0	3	0.9				209.1	19.3
NAGOYA	0	EP	05	45	57.6	S	46	17.6	5	0.4	7	0.4	3	0.4				215.7	20.0
GIFU	0	EP	05	46	04	ES	46	22	8		8							233.0	18.0
MATSUS	0	EP	05	46	20													403.0	

OT= 3 7 16 42.7 +/- 0.3
SETONAIKAI
LAT= 33 40 +/- 1 LONG= 132 11 +/- 2
H= 30 MAG=3.9 CLASS=L

UWAJIM	0	EP	07	16	54.5	ES	17	03.0										60.1	08.5
OITA	0	P	07	16	56.1	S	17	02.8	19	0.8	21	0.8						70.8	06.7
HIROSH	X	IP	07	16	57.7	IS	17	07.7	7	1.0	11	0.6	7	0.7	N 2		U 1	80.7	10.0
SHIMON	0	P	07	17	01.4	IS	17	15.0	8	0.2	6	0.2	7	0.4			D	119.2	13.6
KOCHI	0	IP	07	17	03.3	IS	17	16.1										125.9	12.8
ASHIZU	0	EP	07	17	03.4	ES	17	17.6	7	0.8	5	0.7	4	0.6				130.9	14.2
OKAYAM	0	EP	07	17	14.0	IS	17	32.0	10	0.8	15	0.9	8	0.8				195.3	18.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MIYAZA	0	P	07	17	15.8	S	17	40.0	4	0.8	6	1.0	3	0.4				206.5	24.2

OT= 3 17 17 1.5 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 26 +/- 1 LONG= 138 4 +/- 1
H= 0 MAG=5.4 CLASS=S

MATSUS	3	IP	17	17	06.2	IS	17	08.7										17.2	02.5
MATSUM	3	IP	17	17	07.9	IS	17	10.7	1500	2.0	1500	2.0	950	2.1	S 13	W 14	U 70	22.7	02.8
NAGANO	3	IP	17	17	08.6	IS	17	12.7	3500		2200		1100		N 1	E 1	U 2	27.7	04.1
KARUIZ	2	IP	17	17	12.8	S	17	18.7	4500	2.2	2200	2.0	1000	1.9	S 8	W 70	D 96	44.7	05.9
TAKADA	0	P	17	17	16.8	S	17	27.7	450	4.0	400	4.0	200	4.0	N 9	E 3	U 19	76.3	10.9
TAKAYA	0	P	17	17	17.3	S	17	32.0										79.3	14.7
MAEBAS	1	IP	17	17	17.6	ES	17	29.9	1350	3.4	550	4.0	700	3.8	N 1	W 6	D 17	89.6	12.3
CHICHI	0	IP	17	17	19.8	ES	17	34.3	800	0.2	500	0.3	300	0.3	N 8	E 10		103.6	14.5
IIDA	1	IP	17	17	21.0	IS	17	34.0	179	2.8	201	4.0	99	4.0	S 30	W 13	U 42	104.5	13.0
KUMAGA	1	IP	17	17	24.6	ES	17	40.4	368	4.2	333	3.4	270	3.2	N 2	W 6	D 20	122.6	15.8
FUNATS	0	P	17	17	24.7	S	17	38.8	300	2.9	350	2.0	50	2.9				121.3	14.1
KANAZA	0	IP	17	17	25.8	S	17	42.0	175		172		141		S 2	E 12	D 32	127.7	16.2
AIKAWA	0	IP	17	17	30.7	IS	17	52.6	37		41				N 10	W 0		176.7	21.9
UTSUNO	0	P	17	17	31.0	S	17	52.7	176	2.5	174	3.3	65	3.6	N 2	W 13	D 6	162.2	21.7
MISHIM	0	IP	17	17	31.3	IS	17	52.4	122	2.2	226	4.3	65	3.5			D	166.1	21.1
GIFU	0	P	17	17	31.4	ES	17	52.4	140	1.5	120	3.0	83	2.8	S 9	W 10	U 10	164.3	21.0
NAGOYA	0	IP	17	17	31.6	S	17	50.8	216	3.2	260	2.8	89	2.0			U 14	172.2	19.2
FUKUI	0	P	17	17	32.6	S	17	55.6										170.6	23.0
AJIRO	0	IP	17	17	32.9	S	17	56.0	54	4.6	67	5.0	28	3.7			D 0	180.1	23.1
TOKYO	1	IP	17	17	33.0	ES	17	55.0	370	4.0	350	4.2	295	3.8			D	173.5	22.0
KAKIOK	0	IP	17	17	33.6	S	17	55.0					52	1.7			U 8	192.2	21.4
NIIGAT	0	IP	17	17	34.5	IS	17	58.5	131	3.4	125	4.5	68	3.0			U 5	185.7	24.0
HAMAMA	0	P	17	17	35.0	S	17	59.0	183		245		70		S 6	W 2	U 6	193.9	24.0
YOKOHA	0	IP	17	17	35.5	IS	18	00.0	428	3.0	331	2.0	205	3.4	N 2	W 4	D 13	181.0	24.5
OMAEZA	0	EP	17	17	35.8	X	18	05.5	228		541		125					203.4	
SHIRAK	0	EP	17	17	37.1	ES	18	03.5										207.1	26.4
MITO	0	IP	17	17	37.6	S	18	02.2	112	5.0	123	4.4	75	3.6		W 2	D 3	215.8	24.6
TSURUG	0	P	17	17	38.3	S	18	02.2										200.2	23.9
OSHIMA	0	P	17	17	39.1	IS	18	05.2	72	2.0	70	4.2	21	2.0				220.2	26.1
HIKONE	0	P	17	17	39.7	S	18	04.4	227	1.1	304	4.1	79	1.7				208.7	24.7
TOMISA	0	P	17	17	40.6	S	18	09.0	131	4.4	140	5.2	63	3.6			U 13	231.5	28.4
FUKUSH	0	P	17	17	42.7	ES	18	17.3	27	4.2	30	4.3	17	4.2	N 2	E 2	U 2	259.6	34.6
ONAHAM	0	IP	17	17	44.7	IS	18	17.7	163	1.6	96	1.9	67	2.0			D 4	260.0	33.0
TSU	0	IP	17	17	44.9	IS	18	10.3							S	E	D	237.9	25.4
YAMAGA	0	EP	17	17	45.2													285.8	
KYOTO	0	IP	17	17	45.4	IS	18	20.0	50	3.6	45	3.8	27	4.8	S 1	W 1	U 1	263.3	34.6
MAIZUR	0	EP	17	17	46.6	ES	18	22.8										264.2	36.2
NARA	0	EP	17	17	47.1	ES	18	22.5										280.5	35.4
SENDAI	0	EP	17	17	48.0	ES	18	30	31	3.0	26	4.0	10	4.0				322.6	42.0
OSAKA	0	EP	17	17	49.5	S	18	26.2	248	4.6	327	4.8	88	4.8				302.9	36.7
OWASE	0	P	17	17	51.0	S	18	25.4	14	3.6	15	4.0	14	2.6				312.9	34.4
TOYOOK	0	X	17	17	55.9	IS	18	31.7	102	1.1	51	1.5	11	4.5	N	W		309.2	
WAKAYA	0	EP	17	17	56.9	S	18	43.0	32	1.9	24	1.9						359.7	46.1
SUMOTO	0	P	17	17	57.7	ES	18	40.5	24	5.2	25	6.6	18	5.4			D	369.4	42.8
						EX	18	05.0											
MIZUSA	0	EP	17	17	58.5	S	18	51.5	32	2.5	34	2.5						403.4	53.0
KOBE	0	X	17	17	59.9													325.4	
CHOSHI	0	X	17	17		X	17	15.3										262.1	
SAKATA	0	X	17	18	00.5	S	18	34.7										315.4	
TOKUSH	0	EP	17	18	00.8	X	19	49.3										412.1	
SHIONO	0	EP	17	18	02.4	ES	18	49.2	26	2.2	30	2.2	17	2.2				392.2	46.8
HACHIJ	0	EP	17	18	03.3	S	18	50.5										401.7	47.2
OFUNAT	0	EP	17	18	05.6	S	18	52.0	9	5.6	10	5.2	9	4.0				434.3	46.4
MORIOK	0	EP	17	18	09.0	ES	19	04.5	7	5.8	5	4.6	5	5.4	N 0	E 0		453.0	55.5
						IX	18	11.8											
OKAYAM	0	X	17	18	10.5	ES	19	00.1	50	4.8	50	5.0	60	4.6				423.5	
SAIGO	0	P	17	18	10.7	X	19	06.9	7	3.0	6	1.4	4	1.8	S 0	W 0	U 1	425.7	
TAKAMA	0	EP	17	18	10.7	ES	19	06.7	33	6.1	30	5.1	6	6.1				433.2	56.0
MUROTO	0	P	17	18	13.7	ES	19	12.0										501.1	58.3
						IX	18	31.6	14	6.2	25	5.4							
TURUGI	0	EP	17	18	14.8	X	19	17.0										461.2	
AKITA	0	X	17	18	16				24	5.2	28	4.0	20	3.6				405.9	
HIROSH	0	EP	17	18	24.7	S	19	34.5	17	5.6	9	4.5	9	6.2				560.4	69.8
HAMADA	0	EP	17	18	26.3	ES	19	31.3	14	6.0	8	4.0	9	3.9				568.7	65.0
ASHIZU	0	X	17	18	37.4	ES	19	48.0	9	3.0	12	6.0	6	6.0				619.9	
SHIMON	0	EP	17	18	45	X	20	13	11	7.0	6	5.4	8	4.4				704.4	
OITA	0	X	17	18	47.4	X	20	24.6	87	4.0	66	5.0	27	4.2				687.6	
FUKUOK	0	X	17	19	08	X	20	34.3	11	2.4	5	2.5	5	6.0				769.2	
AOMORI	0	X	17	19	10.4				8	2.3	10	2.8						540.9	
SAGA	0	X	17	20	49.2													792.6	
MIYAZA	0	X	17	20	50.0				11	4.2	8	5.2	6	4.6				790.4	

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NAGASA	0	X	17 21 00.0												857.1	
KAGOSH	0	X	17 21 01.9			19	3.0	15	2.6	3	2.6				878.1	
OT= 4 4 6 8.8 +/- 0.7 HYUGANADA LAT= 32 8 +/- 2 LONG= 132 1 +/- 3 H= 0 MAG=4.3 CLASS=U																
NOBEOK	0	IP	04 06 21.4	IS	06 30.2							S	3 E	2 D 4	58.9	08.8
MIYAZA	0	IP	04 06 22.0	IS	06 30.8	48	1.0	49	1.0	29	0.8			D 5	60.7	08.8
OITA	0	P	04 06 32.9	S	06 50.8	26	0.6	31	0.6	18	0.9				127.4	17.9
ASHIZU	0	EP	04 06 33.4	ES	06 42.4	6	0.8	4	0.5	3	0.6				114.1	09.0
KAGOSH	0	EP	04 06 36.6	EX	06 58.2	19	2.1	12	1.7	5	1.1				151.7	
OT= 4 5 47 36.2 +/- 0.5 OFF IBARAKI PREF LAT= 36 28 +/- 1 LONG= 141 16 +/- 3 H= 40 MAG=4.2 CLASS=S																
MITO	1	IP	05 47 50.0	IS	47 59.2	44	0.4	57	0.3	19	0.4		E	3 D 3	72.0	09.2
KAKIOK	0	EP	05 47 52.5	S	47 59.4					14	0.5				99.8	06.9
CHOSHI	0	EP	05 47 52.6	S	48 02.0										90.7	09.4
UTSUNO	1	P	05 47 55.5	ES	48 11.9	16	1.5	17	0.4	13	0.4				125.3	16.4
SHIRAK	X	EP	05 47 55.7	ES	48 09.5										117.8	13.8
FUKUSH	0	EP	05 48 01.3	S	48 19.2	41	0.8	29	1.0	14	0.5				159.5	17.9
KUMAGA	0	EP	05 48 01.6	ES	48 22.0	10	1.0	7	1.2	3	0.8				172.7	20.4
TOKYO	0	EP	05 48 01.9	ES	48 20.0	8		11		4					161.2	18.1
SENDAI	0	P	05 48 06.6	S	48 28.0	10		11		5					201.6	21.4
YOKOHA	0	EP	05 48 07.3	IX	48 41.7	6	0.4	6	0.4						184.9	
MATSUS	0	IP	05 48 16.1									N	E	D	274.1	
OT= 8 2 26 42.4 +/- 0.3 NEAR MATSUSHIRO LAT= 36 26 +/- 1 LONG= 138 5 +/- 1 H= 0 MAG=4.3 CLASS=L																
MATSUS	1	P	02 26 46.6	S	26 48.9										16.2	02.3
MATSUM	0	IP	02 26 48.5	S	26 51.8										23.3	03.3
NAGANO	0	IP	02 26 49.7	S	26 53.2										27.1	03.5
KARUIZ	0	IP	02 26 52.8	S	26 57.5										43.3	04.7
TAKADA	0	EP	02 26 57.7												76.0	
IIDA	0	EP	02 27 01.8	X	27 39.4	10	1.6	9	1.0	4	1.2				104.8	
KUMAGA	0	EP	02 27 05.6	X	28 05.0	23	4.8	20	5.4	14	3.4				121.2	
GIFU	0	EP	02 27 12	X	27 49.9	9	1.5	10	1.3	4	1.5				165.3	
NAGOYA	0	EP	02 27 13.2	X	28 10.8	16	1.0	13	1.0	7	1.2	N	1	D 1	173.1	
CHICHI	0	X	02 27 14.2	X	27 41.3										102.3	
KAKIOK	0	EX	02 27 15			7	0.9	6	0.7	2	1.2				190.7	
FUNATS	0	X	02 27 19.4	X	27 44.3										120.5	
UTSUNO	0	EX	02 27 24.5	EX	28 07.4	7	3.0	7	1.4						160.7	
KANAZA	0	X	02 27 25.6	X	27 50.0	7		8		5		N	3 E	4	129.2	
MISHIM	0	X	02 27 25.6	X	28 08.4	8	0.8	10	0.8	2	0.6				165.4	
TOKYO	0	X	02 27 31	X	28 18.0	15	3.5	15	1.9	17	4.0				172.2	
FUKUI	0	X	02 27 37.3												172.1	
YOKOHA	0	X	02 27 39.8	IX	28 19.2	15	2.0	13	1.2	6	2.5				179.8	
MITO	0	X	02 27 45.0	EX	28 23.6	5	3.4	6	3.6	3	1.8				214.3	
HAMAMA	0	X	02 27 52	X	28 16	10		10		5					194.1	
OMAEZA	0	X	02 28 01.8			14		20							203.3	
MAEBAS	0	X	02 28 02.5	X	28 40.9	38	4.0	24	4.1	25	2.8				88.1	
OSAKA	0	EX	02 28 12	X	28 49.2	10	4.0	15	4.8						304.0	
NIIGAT	0	X	02 28 17.3			8	1.3	10	1.0						185.0	
HIKONE	0	X	02 28 20.5			13	1.1	10	1.5	3	1.8				209.9	
ONAHAM	0	X	02 28 25.7			7	1.2	9	1.2	2	0.8				258.6	
TOYOOK	0	X	02 28 49.0			8	1.0	5	1.0						310.6	
OT= 8 18 49 36.3 +/- 0.2 NEAR MATSUSHIRO LAT= 36 27 +/- 1 LONG= 138 2 +/- 1 H= 10 MAG=4.8 CLASS=S																

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NAGANO	3	EP	18 49					700		400					27.5	
MATSUS	2	P	18 49												18.5	
MATSUM	2	IP	18 49 42.0	IS	49 44.8							S	43 W	40 U 244	23.6	02.8
KARUIZ	2	IP	18 49 45.7	S	49 51.0	600	2.4	500	2.0	200	1.0	S	4 W	14 D 88	48.1	05.3
TAKAYA	0	P	18 49 50.4	S	49 58.5										77.3	08.1
TAKADA	0	P	18 49 50.5	S	49 57.5							N	4 E	1 U 13	75.2	07.0
MAEBAS	0	IP	18 49 52.7	ES	50 04.0	174	3.9	110	3.0	191	3.5	N	W	3 D 9	92.7	11.3
CHICHI	1	EP	18 49 54.7	IS	50 07.5										107.1	12.8
IIDA	0	IP	18 49 54.8	IS	50 08.0	57	1.8	36	1.4	31	1.0	S	8 W	6 U 30	105.8	13.2
FUNATS	0	IP	18 49 58.6	IS	50 12.2										124.4	13.6
KUMAGA	1	IP	18 49 59.4	S	50 15.6	92	4.2	83	4.0	65	3.4	N	3 W	3 D 5	126.0	16.2
UTSUNO	0	P	18 50 04.4	S	50 22.5	37	3.5	27	1.0	20	1.0	N	1 W	6 D 2	165.0	18.1
AIKAWA	0	IP	18 50 05.0	IS	50 27.0	12		5		6					175.2	22.0
FUKUI	0	P	18 50 05.5	S	50 29.9										168.2	24.4
MISHIM	0	EP	18 50 05.7	ES	50 26.5	58	0.7	55	0.8	19	1.8				169.1	20.8
NAGOYA	0	IP	18 50 05.8	S	50 25.6	78	0.8	104	1.0	36	1.0		E	1 U 8	172.0	19.8
GIFU	0	P	18 50 06.0	S	50 26.7	44	1.1	40	1.7	25	1.0				163.4	20.7
AJIRO	0	IP	18 50 06.9	S	50 28.5	14	0.6	15	0.6	8	0.8			U 0	183.3	21.6
TOKYO	0	EP	18 50 07.2	ES	50 30.3	70	3.6			57	4.0				177.0	23.1
NIIGAT	0	IP	18 50 08.1	IS	50 31.9	100	1.3	61	1.8	17	0.7			U 5	185.5	23.8
HAMAMA	0	IP	18 50 08.4	S	50 33.2	40		54		25				U 2	195.2	24.8
KAKIOK	0	EP	18 50 08.4	S	50 30.9	64	1.2	40	1.2	13	1.0				195.4	22.5
TSURUG	0	EP	18 50 09.7	S	50 35.4										198.3	25.7
SHIRAK	0	EP	18 50 09.8	ES	50 36.8										209.2	27.0
YOKOHA	0	IP	18 50 10.2	IS	50 32.8	155	1.0	59	1.6	27	2.0				184.5	22.6
MITO	0	IP	18 50 11.4	ES	50 35.5	26	1.4	24	1.6	13	3.6			D 1	218.8	24.1
OMAEZA	0	EP	18 50 12.0	X	51 41.2	53		76							205.5	
HIKONE	0	EP	18 50 12.0	ES	50 38.0	76	0.8	66	1.3	29	1.2				207.5	26.0
OSHIMA	0	EP	18 50 12.4	IS	50 38.6	34	1.0	29	1.0	8	0.4			U 2	223.4	26.2
TOMISA	0	IP	18 50 14.7			26	2.4	27	1.8	19	2.0			U 10	234.9	
TSU	0	IP	18 50 15.5	IS	50 44.5							N		D	237.6	29.0
CHOSHI	0	EP	18 50 17.1	ES	50 43.3										265.5	26.2
FUKUSH	0	EX	18 50 18.4			7	1.3	9	1.2	3	0.9				261.0	
ONAHAM	0	IP	18 50 19.1	ES	50 50.3	46	1.2	48	1.2	14	2.3			U 13	262.5	31.2
KYOTO	0	EP	18 50 19.6	ES	50 49.6	12	1.4	15	1.2	6	1.2				262.0	30.0
NARA	0	EP	18 50 20.8			100	2.0	50	1.9						279.6	
OWASE	0	P	18 50 24.0	S	51 00.0	5	1.2	4	1.2	4	1.2				312.8	36.0
SAKATA	0	EP	18 50 25.9	X	51 16.3										315.3	
SENDAI	0	EP	18 50 26	ES	51 07	7	2.0	7	2.0	2	2				323.7	41.0
OSAKA	0	X	18 50 28.9	S	51 03.5	57	3.9	82	4.9	20	27				301.8	
TOYOOK	0	X	18 50 29.9	ES	51 07.9	52	1.0	32	1.0	10	0.8				306.9	
SUMOTO	0	P	18 50 30.1	ES	51 14.2	5	2.8	5	6.4	3	2.4			U	368.2	44.1
				EX	50 39.8											
AKITA	0	EX	18 50 33			5	2.6	5	2.0						405.6	
KOBE	0	X	18 50 33.9												324.1	
WAKAYA	0	EX	18 50 39.1	EX	51 22.2	13	0.9	14	0.9						358.7	
SHIONO	0	X	18 50 42.2	ES	51 26.8	5	1.3	8	1.7	4	1.0				392.1	
MIZUSA	0	X	18 50 48.3					7	2.3						404.0	
MUROTO	0	EP	18 50 49.5	X	52 03.0	3	5.4	5	5.4						500.2	
TAKAMA	0	X	18 50 50.0	X	51 41.7	7	0.9	5	0.9	1	0.9				431.7	
OITA	0	X	18 51 39.8	X	52 56.8	12	5.0	11	5.0						685.9	
OT= 9 9 50 51.0 +/- 0.2 NEAR MATSUSHIRO LAT= 36 35 +/- 1 LONG= 138 14 +/- 1 H= 10 MAG=4.3 CLASS=L																
MATSUS	2	IP	09 50 54.0												5.5	
NAGANO	3	IP	09 50 55.0	IS	50 57.0	2000		900				N	1 E	1 U 9	9.1	02.0
MATSUM	1	P	09 51 00	S	51 06										44.3	06.0
KARUIZ	0	EP	09 51 00.0	S	51 04.6	150	1.6	100	2.0	100	1.8				39.3	04.6
TAKADA	0	P	09 51 02.0	S	51 09.4										57.9	07.4
MAEBAS	0	IP	09 51 05.6	S	51 15.5	19	1.1	15	2.8	19	3.1		W	3 D 9	77.2	09.9
KUMAGA	0	EP	09 51 12.6	ES	51 25.2	16	4.0	19	4.6	18	4.2				114.1	12.6
IIDA	0	EP	09 51 13.6	IS	51 28.8	11	0.6	8	0.6	5	0.6				124.4	15.2
FUNATS	0	IP	09 51 14.8	IS	51 29.4										129.5	14.6
UTSUNO	0	P	09 51 16.3	S	51 33.2	21	1.2	14	0.9	8	1.2		W	3 D 2	146.7	16.9
AIKAWA	0	IP	09 51 17.1	IS	51 36.6	9		9		1					159.4	19.5
KANAZA	0	P	09 51 17.4	ES	51 35.8	12		10		7		N	2 E	7	141.9	18.4
MISHIM	0	EP	09 51 21.3	ES	51 42.6	13	0.9	16	1.2	6	0.5				175.0	21.3
KAKIOK	0	EP	09 51 21.7	S	51 42.3	16	0.9	12	0.9	3	0.8				180.1	20.6
OMAEZA	0	EP	09 51 23.9			8		7							219.6	
NIIGAT	0	E	09 51 24.0	IS	51 42.0	20	0.5	18	0.5						164.1	
NAGOYA	0	EP	09 51 24.0	S	51 48.4	14	0.8	15	0.8	7	0.8				194.4	24.4
TOKYO	0	EX	09 51 24	X	52 18.0	12	1.6			17	3.4				169.6	
MITO	0	EP	09 51 24.6	S	51 48.5	14	0.6	18	0.6	8	2.0				201.8	23.9
GIFU	0	P	09 51 25.0	S	51 47.0	13	1.7	16	1.7	5	1.0				186.6	22.0

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
YOKOHA	0	X	09	51	27.4	IS	51	48.7	15	0.6	18	0.7				E 5	U 11	180.6	
ONAHAM	0	EX	09	51	34.7	IS	52	01.6	17	0.7	15	1.1	6	2.5				242.0	
TOYOOK	0	X	09	51	52.0	ES	52	29.0	9	0.1	7	0.1						328.6	
HAMAMA	0	X	09	51		ES	51	51	11	0.1	9	0.2	5	0.2			U 1	213.0	
HIKONE	0	X	09	52	00.3				15	0.8	14	0.9	7	1.2				230.7	

OT= 9 19 44 54.4 +/- 1.5
OFF FUKUSHIMA PREF
LAT= 37 10 +/- 4 LONG= 141 50 +/-10
H= 90 CLASS=U

ONAHAM	0	EX	19	45	11.6	ES	45	23.4	31	1.0	23	1.1	5	1.3				86.0	
FUKUSH	0	P	19	45	17.1	S	45	34.2	43	1.0	62	0.8						136.8	17.1
SHIRAK	0	EP	19	45	18.7	ES	45	34.2										143.0	15.5
MITO	0	EP	19	45	19.0	S	45	38.0	8	1.1	13	0.8	4	1.4				149.7	19.0
KAKIOK	0	EP	19	45	24.2	S	45	47.6	14	0.7	10	0.7	5	0.5				179.5	23.4
UTSUNO	0	EP	19	45	27.1	S	45	49.3	13	1.2	7	0.2	5	0.8				188.0	22.2
MIZUSA	0	P	19	45	29.2	S	45	53.2			9	1.1	8	1.0				226.7	24.0
MORIOK	0	EP	19	45	33.7	ES	46	05.6	5	0.4	6	0.6	1	0.8				286.8	31.9
						IX	45	35.5											
KUMAGA	0	EP	19	45	34.0	ES	46	03.4	3	0.8	5	1.0	2	1.2				246.4	29.4
MATSUS	0	IP	19	45	43.1	X	45	59								E	D	330.7	
AKITA	0	X	19	45	50.4				6	1.6	8	3.0						321.0	
TOKYO	0	X	19	45	50.4				8	0.8	4	0.6	2					248.3	
YOKOHA	0	X	19	46	04.1	IX	46	17.4	6	0.4								274.0	

OT= 10 2 27 46.8 +/- 0.2
FUKUI PREF
LAT= 35 45 +/- 1 LONG= 136 16 +/- 1
H= 10 MAG=3.4 CLASS=U

TSURUG	0	EP	02	27	51.7	S	27	54.7										21.4	03.0
FUKUI	0	IP	02	27	54.4	S	27	58.9							N	2	U 16	33.8	04.5
HIKONE	0	P	02	27	57.9	S	28	03.7	8	0.6	9	0.9	10	0.4				52.9	05.8
KANAZA	0	EP	02	28	04.0	ES	28	17.4	5		8							94.8	13.4
KYOTO	0	EP	02	28	05.6	IS	28	15.2	3	0.8	5	0.4	2	0.8				95.1	09.6
MATSUS	0	IP	02	28	19.1	S	28	41								W	D	195.4	21.9

OT= 12 3 55 30.4 +/- 0.6
N OF HIROSHIMA PREF
LAT= 35 1 +/- 1 LONG= 132 57 +/- 3
H= 30 MAG=3.9 CLASS=L

MATSUE	0	P	03	55	40.3	S	55	46.4							N	3 E	2 U 3	49.9	06.1
YONAGO	0	IP	03	55	40.9	IS	55	48.2							N		U	58.5	07.3
OKAYAM	0	IP	03	55	46.7	IS	55	58.1	30	0.6	15	0.6	8	0.8	S	E		95.7	11.4
TAKAMA	0	EP	03	55	51.4	IS	56	06.3	11	1.2	11	0.2	6	0.6				127.8	14.9
SAIGO	0	P	03	55	53.3	ES	56	06.7	3	0.6	5	1.8	3	0.8	S	1 W	0 U 1	136.3	13.4
MATSUS	0	X	03	57	54													504.3	

OT= 12 9 21 29.5 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 38 +/- 1 LONG= 138 18 +/- 1
H= 10 MAG=4.5 CLASS=L

MATSUS	2	P	09	21	32.7	S	21	34.5										13.4	01.8
NAGANO	3	IP	09	21	33.0	ES	21	35.3	800		800		700		S	4 W	6 D 17	9.7	02.3
KARUIZ	X	IP	09	21	37.3	S	21	43.4							S	14 E	6 U 20	39.6	06.1
MATSUM	1	IP	09	21	39.6	IS	21	46.5									U 2	52.2	06.9
TAKADA	0	P	09	21	39.9	S	21	46.3							N	4 E	1 U 11	52.5	06.4
MAEBAS	0	IP	09	21	42.3	S	21	51.8	53	2.6	50	4.6	49	2.6	S	1 E	3 U 8	73.2	09.5
KUMAGA	0	EP	09	21	49.6	ES	22	02.4	32	4.0	50	3.8	36	4.0				111.3	12.8
IIDA	0	IP	09	21	52.2	IS	22	08.0	13	1.4	13	2.0	10	3.4	S	3 W	1 U 3	131.5	15.8
FUNATS	0	IP	09	21	52.8	IS	22	08.7										132.6	15.9
UTSUNO	0	P	09	21	54.0	S	22	11.3	23	1.1	15	1.1	9	1.0			D 7	140.9	17.3
AIKAWA	0	IP	09	21	54.9	IS	22	13.8	10		16				N	4 W	0 U	154.0	18.9
NIIGAT	0	P	09	21	57.2	IS	22	17.8	33	0.6	38	0.8	15	1.0			D 11	156.6	20.6
TOKYO	0	EP	09	21	58.2	ES	22	21	36	3.2	24	3.2	22	3.6				168.2	22.8

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KAKIOK	0	P	09	21	58.8	S	22	19.2	27	0.9	24	0.6	9	1.1				175.5	20.4
MISHIM	0	IP	09	22	00.0				19	0.7	18	0.7	9	0.9			U 4	178.1	
AJIRO	0	X	09	22	00.0	ES	22	24.4	4	10	5	10	2	10				190.5	
YOKOHA	0	IP	09	22	02.2	IS	22	24.4	38	4.0	29	1.0	18	2.1		E 2	D 5	180.4	22.2
MITO	0	IP	09	22	02.3	IS	22	25.6	32	0.6	30	1.0	13	0.6			D 2	196.6	23.3
NAGOYA	0	EP	09	22	04.2	S	22	28.0	22	1.4	28	1.2	20	1.2	N	0 E	0 D 1	202.4	23.8
OMAEZA	0	EP	09	22	04.4				16	0.4	20	0.4	9	0.2				225.3	
FUKUI	0	P	09	22	04.5													196.9	
GIFU	0	P	09	22	05.7	S	22	28.2	33	1.1	19	0.9	10	1.1				194.7	22.5
HAMAMA	0	IP	09	22	06.0	S	22	32.5	23		14		9		N	E 1	D 2	219.8	26.5
FUKUSH	0	EX	09	22	07.3				7	1.1	5	1.0	2	1.1				229.8	
ONAHAM	0	EX	09	22	09.2	ES	22	35.3	14	1.1	19	1.4	6	1.1				235.2	
HIKONE	0	EP	09	22	10.0	S	22	38.5	25	1.1	25	0.9	10	1.3				238.9	28.5
TOMISA	0	EP	09	22	12.4				12	4.2	12	4.8	10	4.8				235.0	
SAKATA	0	EP	09	22	17.1	ES	22	51.9										286.0	34.6
TOYOOK	0	X	09	22	30.0	S	23	07.9	15	1.1	12	1.1						336.1	
OSAKA	0	X	09	22	36	X	23	17.9	20	4.6	27	4.5	9	1.5				333.2	
CHICHI	0	X	09	22	46.4	X	22	59.1										100.0	

OT= 13 20 21 9.1 +/- 0.2
IBARAKI PREF
LAT= 36 8 +/- 1 LONG= 139 54 +/- 1
H= 50 MAG=4.9 CLASS=M

KAKIOK	4	IP	20	21	19.0	S	21	25.6	700	1.0	300	0.7	300	0.7		E 34	U 73	28.5	06.6
KUMAGA	2	IP	20	21	20.4	S	21	29.0	295	0.4	305	0.6	140	0.4	N	3 W	5 U 48	46.4	08.6
MAEBAS	3	IP	20	21	20.6	IS	21	32.3	199	0.6	188	0.8	83	0.9	S	6 E	21 D 87	80.7	11.7
UTSUNO	3	IP	20	21	20.6	IS	21	28.2	1000		1000		200		S	15 E	12 D 67	45.9	07.6
TOKYO	2	IP	20	21	21.5	IS	21	31.1	146	1.1	117	1.0	40	1.7	N	9 E	2 D 16	51.4	09.6
MITO	2	IP	20	21	22.0	S	21	30.6	189	0.5	170	0.4	98	0.4	N	3 E	6 U 46	58.1	08.6
YOKOHA	1	IP	20	21	25.5	IS	21	37.9	376	2.0	342	1.8	36	1.5	S	2 W	3 U 22	80.4	12.4
CHOSHI	1	EP	20	21	25.8	IS	21	36.2	44	0.4	40	0.3	24	0.2	S	4 E	2 U 6	96.4	10.4
SHIRAK	2	IP	20	21	27.6	IS	21	40.9							S	4	D 27	113.1	13.3
KARUIZ	1	EP	20	21	28.2	S	21	42.5	150	1.4	200	1.8	150	1.2				123.3	14.3
FUNATS	1	P	20	21	30.1	S	21	44.1										124.5	14.0
ONAHAM	2	IP	20	21	30.2	IS	21	44.6	202	1.0	272	0.9	74	0.8			U 3	127.4	14.4
TOMISA	0	P	20	21	30.2	ES	21	47.0	98	2.2	65	2.3	45	2.4			D 5	134.7	16.8
AJIRO	1	X	20	21	30.4	S	21	46.7	30	0.4	32	0.4	9	0.4				141.1	
MATSUS	0	IP	20	21	31.7	S	21	51										158.4	19.3
OSHIMA	2	P	20	21	32.4	IS	21	50.0	47	1.0	34	0.6	15	0.4				159.3	17.6
NAGANO	0	IP	20	21	34.6	ES	21	56.3	9		9		13			E 2	D 9	163.6	21.7
MATSUM	0	IP	20	21	35.4	IS	21	54.3								E	D 2	173.7	18.9
MISHIM	0	EP	20	21	35.4	IS	21	49.6	63	1.1	67	0.6	18	0.6				143.4	14.2
TAKADA	0	EP	20	21	35.8	S	21	58.0										182.8	22.2
FUKUSH	1	IP	20	21	37.5	S	21	57.6	90	0.8	113	0.9	35	0.6	S	6 W	3 D 5	187.3	20.1
IIDA	0	IP	20	21	39.6	IS	22	02.0	49	2.0	39	1.4	24	1.0		E 1	D 3	199.0	22.4
YAMAGA	0	P	20	21	43.8	S	22	12.1									D 2	238.6	28.3
AIKAWA	0	IP	20	21	44.7	ES	22	08.0	14		15		17		S	1 E	1 D 2	256.0	23.3
SENDAI	0	P	20	21	45.3	IS	22	12.2	35	1.2	31	1.8	17	1.0			D 1	252.1	26.9
HAMAMA	0	EP	20	21	47.0	S	22	20.2	30		24		11					253.1	33.2
NIIGAT	0	E	20	21	47.6	X	22	13.7	41	0.8	25	0.7						211.1	
ISHINO	0	P	20	21	49.0	IS	22	28.8										283.1	39.8
NAGOYA	0	EP	20	21	51.3	ES	22	21.2	40	1.0	38	1.2	17	1.2		E 1		286.3	29.9
GIFU	0	EP	20	21	53.1				17	1.5	21	1.5	8	1.2				294.9	
SAKATA	0	EP	20	21	53.6													307.4	
KANAZA	0	EP	20	21	54.6	ES	22	27.0	13		12		13					295.4	32.4
HACHIJ	0	EP	20	21	54.8	S	22	31.2										336.4	36.4
FUKUI	0	P	20	21	55.9	S	22	35.3										330.9	39.4
TSURUG	0	EP	20	21	58.3	EX	22	42.1										350.3	
OFUNAT	0	EP	20	21	58.4	ES	22	34.3	4	0.8	6	0.6	4	1.4				362.4	35.9
MIZUSA	0	P	20	21	59.4	S	22	36.6	27	1.8	25	1.2	20	1.2	N	10 E	4 U 8	350.3	37.2
CHICHI	3	X	20	21		IS	21	31.6										75.4	
OMAEZA	0	X	20	21		X	22	27.3	21		25							228.6	
HIKONE	0	X	20	22	03.0	X	22	46.5	33	1.1	31	1.1	12	0.9				344.0	
MORIOK	0	IP	20	22	06.4	S	22	47.6	10	0.4	9	0.4	1	0.4	S	1 W	0 D 1	410.9	41.2
TSU	0	X	20	22	07.4	X	22	49.5										345.7	
NARA	0	EP	20	22	08.5													402.8	
AKITA	0	X	20	22	11.1				13	3.2	11	1.8	7	3.4				398.3	
KYOTO	0	X	20	22	13.8	X	22	59.2	7	1.4	10	1.2	2	1.0				397.4	
TOYOOK	0	X	20	22	26.4				29	1.0	19	1.2						463.6	
OSAKA	0	X	20	22	28	X	23	08.4	46	2.6	28	3.0	14	2.8				429.0	
WAKAYA	0	X	20	23	24.3				10	1.2	6	1.2						480.0	

OT= 13 23 9 17.3 +/- 0.7
OFF CHIBA PREF
LAT= 35 25 +/- 3 LONG= 140 34 +/- 4
H= 50 MAG=3.8 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHOSHI	0	EP	23	09	28.3	IS	09	34.9										42.4	06.6
TOKYO	0	IP	23	09	31.1	IS	09	39.8	19	0.9	8	0.9	5	1.0			U	79.1	08.7
KAKIOK	0	EP	23	09	34.1	S	09	44.2	14	1.1	12	1.0	5	0.8				96.5	10.1
YOKOHA	0	EP	23	09	34.4	IS	09	44.0	25	1.4	25	0.6						82.8	09.6
MITO	0	P	23	09	35.7	ES	09	43.0	7	1.2	7	0.7	4	0.6				107.0	07.3
OSHIMA	0	EP	23	09	38.0				9	0.6	12	0.6	5	0.4				130.4	
KUMAGA	0	EP	23	09	40.0	ES	09	54.0	8	1.2	7	1.2	6	1.2				134.0	14.0
MATSUS	0	IP	23	09	53.2										S		U	246.4	

OT= 14 10 36 4.7 USCGS
ANDAMAN IS
LAT= 13 42 LONG= 96 30
H= 27 MAG=6.8 CLASS=U

																		4043.3	
OMAEZA	0	EX	10	41					41		41		16					4778.8	
NAHA	0	EP	10	42	34	EX	54	34	20	9.0	28	8.0	13	8.8				3530.4	
MISHIM	0	EX	10	42	45				13	15.7	17	11.2	4	7.0				4858.8	
FUKUE	0	EP	10	42	54.4	ES	48	39.4	28	10.8	24	9.4	19	9.0				3893.1	345.0
FUKUOK	0	EP	10	43	05	ES	49	03	28	6.0	15	8.0	30	8.0				4065.0	358.0
NAGASA	0	P	10	43	06.0	S	48	59.0										3982.2	353.0
KUMAMO	0	EP	10	43	13.2				27	9.5	28	9.5	15	10.1				4058.5	
SHIMON	0	EP	10	43	18	EX	49	18	23	9.0	26	8.0	28	8.4				4129.5	
						EX	55	20											
						EX	57	20											
						EX	58	40											
MIYAZA	0	P	10	43	20.0	ES	49	13.0	29	14.0	30	9.2	25	10.6				4083.1	353.0
NOBEOK	0	EX	10	43	25.1													4133.0	
HAMADA	0	EP	10	43	28.0	ES	49	27.3	21	13.6	19	9.0	14	9.8				4267.3	359.3
ASHIZU	0	EX	10	43	30.1	EX	52	34.2	11	8.4	11	9.0	12	9.6				4254.7	
OKAYAM	0	EP	10	43	34.0	EX	47	15.0	15		30	10.7	40	10.0				4412.6	
TAKAMA	0	EP	10	43	34.8	ES	49	55.1	18	10.6	18	9.5	6	9.5				4409.6	380.3
MUROTO	0	IP	10	43	37.0	ES	49	54.0	20	9.6	33	9.0	20	8.4	W	0	D 0	4377.1	377.0
						EL	58	13.0											
SUMOTO	0	EP	10	43	44.0	ES	50	07.0	16	9.1	24	11.7	20	11.3				4483.1	383.0
						L	56	20											
SAIGO	0	EX	10	43	45.0	EL	57	51	22	11.0	23	8.7	18	8.0				4431.6	
HIROSH	0	EX	10	43	47	EX	52	33	19	10.8	21	8.5	18	9.2				4273.9	
OITA	0	EP	10	43	48.2	ES	49	45.2	77	8.6	68	7.0						4155.3	357.0
GIFU	0	EX	10	43	51				14	10.6	14	10.0	7					4683.6	
KANAZA	0	EP	10	43	52.0	ES	59	15.0	22		23		8					4719.9	923.0
SHIONO	0	EP	10	43	52.6	EX	59	30.2										4523.3	
						EX	50	06.1	9	10.8	11	11.8							
HIKONE	0	EP	10	43	53.4	ES	50	27.3	16	11.6	13	9.8						4634.7	393.9
YOKOHA	0	EP	10	43	54.3				44	11.8	31	9.3						4932.7	
TOYOOK	0	EP	10	43	57.8	ES	50	14.5	23		26		7					4525.0	376.7
KYOTO	0	EP	10	43	59.4	ES	50	29.4	14	10.0	13	10.0	10	10.0				4580.7	390.0
NAGOYA	0	EP	10	44					14	11.0	16	10.4	15	9.0				4692.0	
HAMAMA	0	EP	10	44	04	EL	58		16		15		14					4740.0	
OSAKA	0	EP	10	44	04	X	57	20	49	11.0	65	7.3	21	11.6				4549.5	
						X	01	20											
IIDA	0	E	10	44	04.4													4779.1	
MATSUS	0	IP	10	44	07.2										N		D	4849.8	
AJIRO	0	E	10	44	10.5				10		11		7					4870.8	
MITO	0	EX	10	44	16.0				12	7.0	10	10.0	3	11.4				5035.3	
TOKYO	0	EP	10	44	24.0	ES	51	06	26	9.6	29	8.2						4950.2	402.0
SENDAI	0	EP	10	44	24	EX	53	12	13	14	12	12	8	11				5139.1	
						L	00	00											
						L	02	10											
FUKUSH	0	EX	10	44	29.0				10	12.0	8	12.0	11	12.0				5085.2	
KUMAGA	0	EP	10	44	33.0	ES	51	13.4	27	6.6	24	8.6	17	9.8				4934.6	400.4
ONAHAM	0	EX	10	44	33.7	ES	51	20.1	9	13.4	12	13.5	10	14.0				5092.0	
YAKUSH	0	EX	10	44	33.8				17	11.2	28	10.8	24	9.8				3942.1	
AOMORI	0	EX	10	44	35	EX	00	45.0	24	13.6	13	16.5	9	18.2				5230.8	
AKITA	0	EX	10	44	35.0	EX	01	18	35	13.8	33	10.4	12	11.0				5131.6	
MORIOK	0	EP	10	44	35.9	ES	51	35.2	13	14.0	9	13.6	6	12.0				5216.0	419.3
						EL	58	44											
						EL	01	35											
OFUNAT	0	P	10	44	36.8	ES	51	34.0	12	15.6	10	13.4	7	13.0			U 2	5236.2	417.2
HAKODA	0	EP	10	44	38.2	ES	51	47.2	12	12.1	10	13.0	10	12.0				5271.1	429.0
MIYAKO	0	EX	10	44	41	EX	51	49	11	14.3	6	12.4	9	12.7				5278.4	
HACHIN	0	EP	10	44	41.9	ES	51	49.3	15	13.0	8	11.6	10	11.2				5277.2	427.4
SAPPOR	0	EP	10	44	46.0	ES	52	07	11	12	9	13	9	15				5368.9	441.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
URAKAW	0	EP	10	44	52.3	ES	52	09.8	14	11.8	11	11.8	9	11.6				5440.8	437.5
WAKANA	0	EP	10	44	58.7	ES	52	25.7	10	12.5	30	10.5						5501.3	447.0
KUSHIR	0	EP	10	44	59.6	ES	52	22.5	6	11.7	10	12.2	6	5.4				5597.2	442.9
ABASHI	0	EP	10	45	05.4	ES	52	44.6	7	13.0	7	11.0						5630.1	459.2
NEMURO	0	EP	10	45	07.5	ES	52	50.5	6	10.2	4	14.0	3	12.5				5701.6	463.0
KOBE	0	EX	10	48	03				50	12.0								4520.5	
OWASE	0	EP	10	49	32.5				13	11.6	8	8.4	13	9.2				4583.9	
MAEBAS	0	EX	10	49	37.7				26	6.8	15	12.0	9	7.0				4916.8	
WAKAYA	0	EX	10	50	14.1	L	55	47.5	16	8.6	20	9.7						4501.0	
KAGOSH	0	EX	10	51	53.9	EL	56	04.6	69	4.1	67	10.6	19	11.8				3992.2	
OSHIMA	0	EX	10	54	28				11	4.0	11	8.0	3	2.4				4885.7	
TOMISA	0	EX	10	55					46	11.4	25	11.8	12	10.4				4930.2	
ASOSAN	0	EX	10	56	32													4092.8	
CHOSHI	0	EX	10	59	13.2													5045.0	
AIKAWA	0	EL	11	00	34.0				13		20		18					4911.8	
SAKATA	0	EX	11	01	40				200	9.9	150	13.2						5077.2	

OT= 15 19 26 7.0 +/- 0.3
N OF FUKUSHIMA PREF
LAT= 37 56 +/- 2 LONG= 140 37 +/- 6
H=120 CLASS=S

FUKUSH	0	EP	19	26	25.3	S	26	38.1	12	1.0	9	0.8	8	0.2				23.2	12.8
MIZUSA	0	P	19	26	33.6	S	26	49.9			10	0.3						140.6	16.3
OFUNAT	1	EP	19	26	34.8	IS	26	53.8	10	0.0	17	0.0	3	0.0				157.9	19.0
MITO	0	EP	19	26	36.0	IS	26	58.0	6	0.4	9	0.3	2	0.2				173.0	22.0
ONAHAM	0	EX	19	26	46.0	ES	26	48.8	10	0.9	11	1.1	2	0.8				112.6	
MATSUS	0	IP	19	26	46.6										S	W	U	263.8	

OT= 17 2 19 17.1 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 29 +/- 1 LONG= 138 4 +/- 2
H= 10 MAG=4.4 CLASS=L

MATSUS	2	P	02	19	20.4	S	19	22.4										14.1	02.0
NAGANO	2	IP	02	19	22.9	S	19	26.0										22.8	03.1
MATSUM	0	IP	02	19	23.3	S	19	27.1							S	2	W 5 U 3	27.9	03.8
KARUIZ	0	IP	02	19	25.5	S	19	30.9	150	1.4	200	1.6	100	1.6	S		E 4 U 4	46.3	05.4
TAKADA	0	EP	02	19	31.0	ES	19	40.8										70.9	09.8
MAEBAS	0	IP	02	19	33.2	S	19	44.1	52	4.4	22	3.2	34	3.3			D 2	90.0	10.9
CHICHI	0	EP	02	19	36.3	ES	19	49.2										106.3	12.9
IIDA	0	EP	02	19	36.6	ES	19	49.0	10	1.6	9	1.4	6	1.0			U 4	110.0	12.4
FUNATS	0	P	02	19	37.8	IS	19	52.3										126.0	14.5
KUMAGA	0	EP	02	19	40.4	ES	19	56.4	30	5.2	35	4.6	23	3.6				124.1	16.0
AIKAWA	0	IP	02	19	46.0	IS	20	07.1	4		6		2		N	1	U 0	171.2	21.1
UTSUNO	0	P	02	19	46.3	S	20	03.5	18	1.6	14	1.2						161.8	17.2
TOKYO	0	EP	02	19	46.6	ES	20	10.0	14	1.4	19	3.4	25	3.4				176.2	23.4
GIFU	0	P	02	19	47.3	S	20	07.1	9	1.1	16	1.5						168.2	19.8
NAGOYA	0	EP	02	19	47.7	S	20	08.8	15	0.8	13	1.0	7	1.2	S	1	W 1 U 2	176.7	21.1
MISHIM	0	EP	02	19	48.3	ES	20	09.5	11	0.9	18	0.9	5	0.4				171.0	21.2
KAKIOK	0	P	02	19	49.1	S	20	11.5	9	1.2	7	0.9	2	0.9				192.9	22.4
YOKOHA	0	EP	02	19	50.1	IS	20	14.4	24	1.0	24	0.8	7	1.6			D 4	184.4	24.3
HAMAMA	0	P	02	19	50.5	S	20	17.4	11		10		6				U 1	199.3	26.9
MITO	0	EP	02	19	53.3	ES	20	16.8	8	2.7	5	2.1	4	2.3				215.9	23.5
HIKONE	0	P	02	19	53.8	S	20	19.6	15	1.0	11	1.1	5	1.3				212.2	25.8
FUKUI	0	X	02	19	53.9	S	20	13.0										172.1	
OMAEZA	0	EP	02	19	53.9	ES	20	21.2	19		20		9					209.0	27.3
NIIGAT	0	E	02	19	55.6	S	20	13.0	22	0.7	12	1.0						180.8	
KANAZA	0	X	02	19		X	19	40.0	15		15		13					127.2	
TOYOOK	0	X	02	20	14.4	ES	20	50.2	14	1.0	4	1.2						310.9	
ONAHAM	0	EX	02	20	18.3	IS	20	30.8	23	1.6	16	1.2	4	1.5				258.8	
OSAKA	0	X	02	20	50				12	4.0	15	4.5	6	2.4				306.5	

OT= 17 16 12 52.6 +/- 0.5
KUMAMOTO PREF
LAT= 32 48 +/- 2 LONG= 130 51 +/- 2
H= 10 MAG=3.8 CLASS=L

KUMAMO	2	IP	16	12	57.1	IS	12	59.8	138	0.3	124	0.3	160	0.3	N	6	E 6 D 20	13.2	02.7
ASOSAN	1	IP	16	12	57.2	ES	13	01.5										22.8	04.3
NOBEOK	0	EP	16	13	07.5	S	13	15.9										81.7	08.4
FUKUOK	0	IP	16	13	11.0	IS	13	21.5	7	0.4	9	0.3	1	0.8				96.9	10.5
MIYAZA	0	IP	16	13	13.6	S	13	27.0	10	1.0	8	0.6	7	0.3			U 5	111.9	13.4

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OITA	0	EP	16 13 13.7	S	13 24.2	16 1.0	11 0.8					86.7	10.5
SHIMON	0	IP	16 13 14.5	IS	13 29.0	4 0.2	7 0.8	4 0.6	N	E	U	128.2	14.5
KAGOSH	0	X	16 13 46.3			11 1.2	13 2.0	5 1.0				138.8	
OT= 18 1 50 4.2 +/- 0.2													
MIYAGI PREF													
LAT= 38 40 +/- 0 LONG= 141 3 +/- 1													
H= 10 MAG=3.9 CLASS=L													
ISHINO	0	IP	01 50 12.3	IS	50 16.2				N	4 W	10 D 6	34.7	03.9
SENDAI	0	P	01 50 14.0	S	50 20.0	7 0.7	6 0.3	3 0.3			U 1	47.0	06.0
OFUNAT	X	IP	01 50 18.0	IS	50 26.2	42 0.0	15 0.0	12 0.0		E	0 U 0	72.7	08.2
MORIOK	0	IP	01 50 24.9	IS	50 39.2	8 0.6	6 0.4	3 0.4	S	1	D 0	114.8	14.3
MIYAKO	0	EP	01 50 28.3	ES	50 43.6	6 0.0	7 0.0	7 0.0				134.5	15.3
OT= 18 17 50 46.6 +/- 0.3													
CHIBA PREF													
LAT= 35 20 +/- 2 LONG= 140 4 +/- 2													
H= 80 CLASS=L													
YOKOHA	1	IP	17 51 00.0	IS	51 09.2	161 0.8	104 0.6	33 0.4		W	2 U 4	39.1	09.2
TOKYO	0	IP	17 51 01.0	S	51 10.2	55	61	25				48.0	09.2
TOMISA	0	P	17 51 01.8	IS	51 11.4	28 0.6	25 1.0	10 0.8			U 1	50.7	09.6
KAKIOK	0	EP	17 51 02	S	51 15.3		15 0.5	6 0.5				100.3	13.3
CHOSHI	0	EP	17 51 03.7	IS	51 14.6							82.7	10.9
MISHIM	0	EP	17 51 04.0	IS	51 19.5	19 0.7	22 0.8	9 0.4				106.3	15.5
OSHIMA	0	P	17 51 04.7	IS	51 16.7	34 0.4	27 0.4	20 0.2				89.2	12.0
AJIRO	1	IP	17 51 05.4	IS	51 17.4	46 0.3	39 0.3	12 0.3			D 2	94.0	12.0
MITO	0	P	17 51 07.7	S	51 21.0	5 0.5	7 0.4	3 0.6				121.6	13.3
KUMAGA	0	EP	17 51 08.0	ES	51 21.6	8 0.8	18 0.8	6 0.8				109.3	13.6
FUNATS	0	IP	17 51 08.2	IS	51 22.2							119.8	14.0
UTSUNO	0	EP	17 51 09.9	ES	51 23.8	11 0.5	9 0.3	6 0.3				135.7	13.9
MATSUS	0	IP	17 51 19.7						N	S	D	214.4	
OT= 20 9 35 22.1 +/- 0.6													
TSUGARU STR													
LAT= 41 26 +/- 3 LONG= 140 15 +/- 7													
H=180 CLASS=R													
HAKODA	0	IP	09 35 47.7	S	36 06.0	7 0.8	5 1.4	4 1.2	S	0 W	1 D 2	59.8	18.3
HACHIN	0	IP	09 35 54.1	IS	36 16.4	6 0.4	6 0.4	1 0.6	S	E	D	147.3	22.3
SAPPOR	0	IP	09 35 59.0	ES	36 24.6	4 1.6	7 2.4	5 1.0			D 5	201.4	25.6
URAKAW	0	P	09 36 02.1	S	36 32.2	4 0.4	6 0.4	1 0.4			D 1	225.2	30.1
MIZUSA	0	EP	09 36 04.3				3 3.0					266.2	
AOMORI	0	X	09 36 07.4			20 1.1	24 1.3	10 1.1				81.8	
OBIHIR	0	IP	09 36 08.0	S	36 41.8						D 6	295.9	33.8
KUSHIR	X	P	09 36 17.4	S	36 57.2	19 0.4	23 0.3	13 0.2				382.9	39.8
MATSUS	0	IP	09 36 38.5	S	37 37				N	W	D	571.4	58.5
OT= 21 5 39 57.1 +/- 0.3													
W OF IBARAKI PREF													
LAT= 36 15 +/- 3 LONG= 139 45 +/- 2													
H= 50 MAG=3.6 CLASS=L													
UTSUNO	1	EP	05 40 07.0	IS	40 14.8	57 0.1	40 0.1	14 0.1	N	3 W	1 U 9	34.7	07.8
KUMAGA	0	EP	05 40 07.4	ES	40 15.2	13 0.2	27 0.2	10 0.2				34.8	07.8
MITO	0	IP	05 40 09.3	IS	40 19.0	20 0.4	46 0.3	12 0.3	N	0	U 0	66.3	09.7
TOKYO	0	EP	05 40 12.0	ES	40 17.4	7	5					62.7	05.4
MATSUS	0	IP	05 40 19.1									141.9	
ONAHAM	0	EX	05 40 29.0	IS	40 32.3	8 0.7	8 1.2	2 0.7				129.0	
OT= 21 14 31 3.8 +/- 0.3													
NEAR MATSUSHIRO													
LAT= 36 37 +/- 1 LONG= 138 18 +/- 2													
H= 0 MAG=4.1 CLASS=L													
MATSUS	1	P	14 31 07.8	S	31 09.6							12.0	01.8

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STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NAGANO	2	IP	14 31 07.9	S	31 10.1							10.4	02.2
KARUIZ	0	IP	14 31 12.3	S	31 17.2					E	2 U 4	38.1	04.9
TAKADA	0	P	14 31 14.6	S	31 21.4							54.4	06.8
MATSUM	X	IP	14 31 14.9	IS	31 21.8				S	W	U	50.7	06.9
MAEBAS	0	IP	14 31 18.0	S	31 27.1	16 2.6	12 2.3	15 2.5			U 2	72.6	09.1
KUMAGA	0	EP	14 31 25.4	ES	31 39.2	8 0.8	12 3.4	7 3.8				110.4	13.8
IIDA	0	EP	14 31 26.4	ES	31 43.2	4 0.4	4 0.4	3 0.8				129.7	16.8
UTSUNO	0	EP	14 31 29.6	ES	31 47.1	7 1.1	5 0.2					140.9	17.5
KAKIOK	0	P	14 31 33.9	S	31 55.0	9 0.7	6 0.6					175.1	21.1
MISHIM	0	EP	14 31 33.9	ES	31 56.7	6 1.0	6 1.0	3 0.7				176.4	22.8
MITO	0	EP	14 31 37.8	IS	32 00.9	10 0.6	9 0.6	4 0.6				196.3	23.1
TOKYO	0	EP	14 31 38.2	ES	31 59.8	9	8					167.0	21.6
NAGOYA	0	EP	14 31 38.4	S	32 03.2	7 0.6	7 1.0	6 1.0				200.9	24.8
YOKOHA	0	EP	14 31 38.8			11 0.6	8 0.6					179.0	
GIFU	0	X	14 31 42	S	32 01.3		6 1.2	4 1.5				193.4	
HAMAMA	0	EP	14 31 42	ES	32 07.6	7	5	3				218.0	25.6
HIKONE	0	X	14 32 14.4			9 0.9	9 1.1	3 1.0				237.7	
OSAKA	0	X	14 32 44.6				6 4.8					332.0	
NIIGAT	0	X	14 32 52.6			20 4.1	20 4.6					158.2	
OT= 22 9 48 7.4 +/- 1.7													
OFF IBARAKI PREF													
LAT= 36 39 +/- 3 LONG= 141 6 +/- 7													
H= 20 MAG=3.8 CLASS=L													
ONAHAM	0	IP	09 48 15.7	IS	48 21.7	30 1.0	37 1.2	9 0.7			D 6	37.0	06.0
MITO	0	P	09 48 19.6	S	48 29.2	12 0.3	14 0.3	6 0.3				63.8	09.6
KAKIOK	0	EP	09 48 22.5	S	48 35	10 0.6	12 0.4	4 0.5				93.6	12.5
SHIRAK	0	EP	09 48 23.0	IS	48 34.4							93.7	11.4
UTSUNO	0	EP	09 48 29.7	S	48 39.7	14 0.2	13 0.2	5 0.1				110.5	10.0
FUKUSH	0	X	09 48 42.0			8 0.4	9 0.8	4 0.5				134.7	
MATSUS	0	IP	09 48 45.2	S	49 16				S		U	259.0	30.8
OT= 22 17 47 1.0 +/- 0.3													
CHIBA PREF													
LAT= 35 5 +/- 1 LONG= 140 16 +/- 1													
H= 40 MAG=4.6 CLASS=S													
TOMISA	0	IP	17 47 12.0	IS	47 19.8	105 0.6	120 0.6	75 3.4	S	1 W	1 U 5	43.9	07.8
YOKOHA	1	IP	17 47 14.1	IS	47 23.7	175 0.7	150 0.5	66 1.0			U 52	68.1	09.6
TOKYO	0	IP	17 47 15.7	ES	47 23.5	120	53	38	S	3	D 4	81.2	07.8
CHOSHI	0	P	17 47 16.4	IS	47 26.7							88.4	10.3
OSHIMA	2	IP	17 47 16.7	IS	47 26.7	78 0.6	160 3.0	69 0.4	S	2 W	2 U 10	88.6	10.0
AJIRO	0	IP	17 47 18.2	IS	47 30.3	64 0.3	61 0.3	61 1.0	S	0 W	1 U 2	106.8	12.1
MISHIM	0	IP	17 47 20.2	IS	47 33.5	25 0.8	31 0.9	9 0.6			U 3	121.9	13.3
KAKIOK	0	IP	17 47 20.7	S	47 34.3	61 0.9	54 0.7	21 0.7				127.6	13.6
KUMAGA	0	P	17 47 23.6	ES	47 40.4	39 1.2	38 1.6	22 2.2				142.4	16.8
FUNATS	0	IP	17 47 23.8	IS	47 38.8							144.3	15.0
MITO	0	IP	17 47 24.4	S	47 40.0	32 1.6	49 1.0	26 1.6			D 2	144.8	15.6
UTSUNO	1	EP	17 47 25.4	ES	47 44.2	33 1.5	26 1.7	14 2.0				166.2	18.8
CHICHI	0	P	17 47 26.2	S	47 40.5				N			147.3	14.3
OMAEZA	0	EP	17 47 26.5	X	48 17.7	25	13					195.2	
MAEBAS	0	EP	17 47 28.9	ES	47 58.8	19 3.0	19 2.4	13 2.5				182.2	29.9
KARUIZ	0	EP	17 47 32.7	S	47 54.6							208.6	21.9
SHIRAK	0	EP	17 47 33.4	ES	47 56.0							225.8	22.6
HACHIJ	0	EP	17 47 34.4	IS	47 58.8							224.1	24.4
IIDA	0	EP	17 47 35.0	ES	48 01.0	10 1.0	8 0.6	8 1.2				226.1	26.0
MATSUS	0	IP	17 47 36.4	S	48 08				N	W	U	246.2	31.6
MATSUM	0	EP	17 47 37.5	ES	48 04.5							244.2	27.0
HAMAMA	0	EP	17 47 37.6	S	48 03.0	8	7	4				236.1	25.4
ONAHAM	0	EX	17 47 40.8	ES	48 01.0	30 1.1	31 1.2	6 0.8				214.4	
NAGANO	0	IP	17 47 42	ES	48 10	4	4	3				256.0	28.0
FUKUSH	0	EP	17 47 45.7	IS	48 16.1	12 1.5	10 1.6	5 1.2				297.2	30.4
NAGOYA	0	EP	17 47 46.2	S	48 19.6	11 1.0	13 1.0	6 1.2				300.7	33.4
TAKADA	0	X	17 47 48.5	ES	48 12.5							288.6	
GIFU	0	EP	17 47 50.4			6 1.4	6 1.4	4 1.0				320.5	
SENDAI	0	X	17 47 57	ES	48 33.3	7 2	5 3	4 1.5				357.0	
KANAZA	0	X	17 48 04.0	X	48 46.0	6	5	5				365.0	
AKITA	0	EX	17 48 15			5 3.2	6 3.2					514.6	
NIIGAT	0	X	17 48 22.3	X	48 52.2	20 4.6	15 3.8	10 4.0				331.9	
HIKONE	0	X	17 48 36.5			9 1.7	9 0.8	3 0.9				366.7	
OSAKA	0	EX	17 48 40	IX	49 21.9	8 4.2	10 3.2	5 2.4				434.9	
AIKAWA	0	X	17 48 42.4			7	5					372.8	
MIZUSA	0	X	17 48 53.6				5 1.4	4 1.2		E	2	455.9	
TOYOOK	0	X	17 49 16			10 1.3	8 1.3					497.7	

OT= 22 21 30 30.6 +/- 0.3
N OF MIYAGI PREF
LAT= 38 43 +/- 2 LONG= 141 12 +/- 5
H= 90 CLASS=U

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
ISHINO	0	P	21	30	44.7	IS	30	53.4										33.6	08.7
OFUNAT	0	EP	21	30	46.5	IS	30	56.6	13	0.0	14	0.0	3	0.0				59.1	10.1
SENDAI	0	IP	21	30	46.7	IS	30	57.4	10	0.4	5	0.2	5	0.1			U 2	57.0	10.7
MORIOK	0	IP	21	30	50.8	S	31	04.4	7	0.3	5	0.4	2	0.3	N	0 E	0 U 0	108.8	13.6
MIYAKO	0	EP	21	30	54	ES	31	06.6	4	0.0	6	0.0	2	0.0				122.6	12.6
MIZUSA	0	X	21	30	55.2				8	2.2	3	0.8	4	1.2		W 3		46.6	
MATSUS	0	P	21	31	22													358.0	

OT= 28 18 37 11.8 +/- 1.9
FAR OFF BOSO PEN
LAT= 32 27 +/- 6 LONG= 142 18 +/- 8
H= 40 MAG=5.5 CLASS=U

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
HACHIJ	0	P	18	37	46.8	X	38	37.4	168		243		93		N 5	W 4	U 19	246.1	
OMAEZA	0	X	18	37					67		107		74					448.3	
TOMISA	0	EP	18	38	03.2				145	8.3	90	4.1	65	5.3				357.0	
OSHIMA	0	EP	18	38	03.2				43	4.4	57	4.6	20	2.8				373.0	
CHOSHI	0	EP	18	38	05.1	X	39	14.9										387.2	
						EX	46	36.0											
AJIRO	0	EP	18	38	07.4	ES	38	51.1	23	7.2	33	8.0	14	8.0				413.1	43.7
YOKOHA	0	EP	18	38	11.0	ES	38	57.7	79	8.7	126	8.7	46	4.1	S 10		D 5	411.6	46.7
MISHIM	0	EP	18	38	11.8	ES	38	56.1	32	4.0	48	7.7						429.4	44.3
TOKYO	0	EP	18	38	14.1	ES	38	53.7	92	8.0	98	6.2	55	4.0				428.6	39.6
KAKIOK	0	EP	18	38	15				26	3.9	27	6.0	4	9.0				461.9	
MITO	0	P	18	38	15	X	39	27.5	50	5.3	56	4.0	39	3.4				466.9	
HAMAMA	0	E	18	38	20				25		30		25					493.0	
KUMAGA	0	EX	18	38	21.0				64	9.4	79	7.2	51	5.2				489.9	
FUNATS	0	P	18	38	21.7	X	38	39.9										470.0	
ONAHAM	0	EX	18	38	23.1	X	39	08.7	35	8.1	43	11.6	14	9.5				514.6	
IIDA	0	EP	18	38	24.6	ES	39	22.4	13	4.0	13	8.4	12	3.2				534.0	57.8
UTSUNO	0	EX	18	38	24.8	ES	39	13.9	17	2.8	19	5.5	4	5.2				506.0	
SHIRAK	0	EP	18	38	27.9	ES	39	19.5										551.4	51.6
MAEBAS	0	EX	18	38	28.2				47	7.3	51	8.0	26	4.8				529.5	
KARUIZ	0	EP	18	38	28.5	S	39	25.4										552.0	56.9
MATSUS	0	P	18	38	30.7	X	39	52							N	W	U	588.7	
NAGOYA	0	EP	18	38	31.2	X	39	09.2										578.0	
						X	39	51.2	16	3.0	15	2.4	13	11.0	S 2	E 6	D 4		
OWASE	0	P	18	38	31.5				6	8.5	10	7.6	10	8.4				596.1	
MATSUM	0	EP	18	38	31.7	X	39	45.6										578.9	
GIFU	0	EP	18	38	33.7				14	3.2	11	12.8	10	9.8				607.0	
FUKUSH	0	EP	18	38	35.8				21	1.0	14	1.5	8	9.0				611.6	
SHIONO	0	EP	18	38	36.5	X	39	31.9	4	9.3	7	8.6						620.8	
OSAKA	0	EP	18	38	39.9	X	40	12.1	46	4.9	52	4.6	21	3.6				673.2	
HIKONE	0	EP	18	38	40.2	ES	39	53.7	16	3.9	18	9.6	16	8.4				641.4	73.5
SENDAI	0	EP	18	38	40.4	X	39	37.6	15	2.8	13	2.8	9	14				656.8	
KANAZA	0	EP	18	38	41.6	ES	40	10.0	22		27		18					689.4	88.4
KYOTO	0	AP	18	38	42.2	X	40	28.0	8	8.1	13	10.1	12	10.5		E 3	D 2	671.1	
WAKAYA	0	EP	18	38	45.5	X	39	46.1	10	10.9	10	13.3						692.3	
SUMOTO	0	P	18	38	47.5	X	40	22.7	8	9.2	9	8.5	10	10.4				718.3	
						IX	39	05.5											
						L	40	30											
AIKAWA	0	IP	18	38	48.4	X	40	21.7	8		10		8		N 0	W 0	U 0	719.6	
OFUNAT	0	EP	18	38	49.4	X	40	37.5	7	8.8	8	10.4	5	9.0				735.3	
						X	39	58.4											
MUROTO	0	IP	18	38	54.1	EL	41	07.1										764.9	
						EX	40	24.1	8	10.0	9	9.4	9	10.0			D 0		
TOYOOK	0	X	18	38	54.7				9	11.6	15	10.6	11	10.5				770.7	
NAGANO	0	X	18	38	56				2		2		2					599.6	
MIZUSA	0	P	18	38	57.2	X	39	53.2	25	1.6	53	10.0	8	1.6				748.8	
NIIGAT	0	X	18	38					125	6.2	110	7.2	37	3.2				673.9	
AOMORI	0	X	18	38		IS	40	58.4	14	2.0	13	2.5	3	2.5				938.1	
SAKATA	0	X	18	39	06.0				100	7.4	100	7.4						749.7	
ASHIZU	0	EX	18	39	08.0	X	43	19.0	10		6		4					871.5	
AKITA	0	EX	18	39	09	EX	40	24.6	22	9.8	31	7.2	12	4.2				830.2	
HACHIN	0	EP	18	39	12.4	ES	40	39.9	5	13.6	7	12.3	7	10.5				898.6	87.5
SAIGO	0	EX	18	39	14.4	X	40	46.6	5	3.6	10	10.0	9	9.7				923.5	
						EL	42	12											
HIROSH	0	EP	18	39	15	EX	40	58	4	13.5	5	8.0	6	12.5				941.0	
CHICHI	0	X	18	39	17.5													492.0	
HAMADA	0	P	18	39	23.0	ES	41	07.2	6	10.2	6	9.4	8	9.2		E 3	D 1	985.5	104.2
MIYAZA	0	P	18	39	30.0	S	41	15.0	5	10.0	6	12.0	5	10.4				1026.3	105.0
URAKAW	0	EP	18	39	33.3				8	13.0	4	7.0	5	8.4				1078.1	

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STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HAKODA	0	EP	18	39	35.3	EX	41	18.8	5	8.3	7	11.0	6	9.1				1047.9	
SHIMON	0	EP	18	39	36	X	41	39	7	11.2	5	10.0	5	10.0				1071.1	
KAGOSH	0	EP	18	39	39.9				10	3.0	9	2.8						1113.1	
YAKUSH	0	EX	18	39	42.0				3	3.2	5	4.4	5	3.8				1142.5	
OITA	0	EX	18	39	43.8	X	41	30.6	20	8.0								1002.5	
KUSHIR	0	EP	18	39	44.7	ES	41	56.4	5	3.1	5	4.0	4	7.9				1182.8	131.7
NAGASA	0	P	18	39	47.0	X	42	05.0								E 6	D 1	1166.3	

List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE		PHASE AND TIME H M S		M S	INITIAL MOTION
1	IP	02 45 58.6	S	47 33.	S W U
1	P	13 03 09.			
1	P	18 23 58.			
2	IP	00 03 45.6			U
2	P	00 29 08.6			
2	IP	04 43 00.6			N D
2	P	15 45 34.			
2	EP	16 46 37.			
3	IP	01 25 57.7	S	26 55.	S W U
3	P	03 25 54.			
3	EP	05 46 20.			
3	P	10 56 06.			
3	P	13 27 58.	S	28 24.	
3	IP	21 56 08.7			U
3	P	23 50 34.			
4	IP	05 48 16.1			N E D
4	P	18 28 16.			
4	IP	20 19 45.5			U
5	EP	02 51 47.			
5	P	05 48 56.			
5	P	08 36 35.			
6	IP	12 22 16.7			U
6	IP	12 35 10.5			U
6	EP	13 33 18.			
6	P	19 37 35.			
7	IP	00 53 42.7	ES	54 24.	W U
7	IP	02 31 36.1	S	31 53.	S W U
7	IP	02 47 53.1			S D
7	P	17 33 54.			
8	P	00 01 37.			
8	P	04 45 37.			
8	P	10 55 28.	S	55 52.	
8	P	16 25 40.			
8	IP	18 49 40.5			
9	P	00 55 39.			
9	P	02 25 20.			
9	P	04 40 44.			
9	EP	07 07 51.			
9	IP	11 26 10.0			N E U
9	IP	11 47 48.5	S	48 37.	E U
9	EP	12 29 20.	S	29 54.	
9	IP	19 45 43.1	ES	45 59.	E D
9	EP	23 21 03.			
10	EP	00 43 47.			
10	IP	02 28 19.1	S	28 41.	W D
10	IP	06 36 59.6	S	37 15.	S E D
10	IP	14 55 29.5			D
10	EP	20 37 56.			
11	IP	11 32 05.0			S W U
11	IP	11 44 35.5			S U
11	EP	13 45 45.	ES	46 00.	
11	P	14 58 27.			
11	EP	18 33 14.			
11	IP	19 27 43.9			S E U
11	P	23 37 01.			
11	IP	23 44 33.9			D
12	P	03 57 54.			
12	P	06 08 04.4	S	08 10.8	D
12	IP	06 08 49.2	S	09 31.	N D
12	EP	09 22 12.4			
12	IP	23 08 05.6			U
13	IP	03 02 32.7			D
13	P	05 06 17.	S	06 27.	
13	P	20 21 30.2	ES	21 47.0	D
13	IP	20 21 31.7	S	21 51.	
13	EP	20 21 54.8	S	22 31.2	
13	IP	20 33 19.4			N E D
13	P	21 33 43.	S	34 06.	
13	EP	23 09 38.0			
13	IP	23 09 53.2			S U
13	IP	23 50 03.2			U
14	P	02 07 34.			
14	P	08 12 40.			
14	P	08 27 31.			
14	IP	10 44 07.2			N D
14	EX	10 54 28.			
14	EX	10 55			
14	IP	14 11 37.1			S D
15	P	14 43 53.	S	44 34.4	
15	IP	15 05 14.7			U
15	IP	19 26 46.6			S W U
16	IP	01 29 32.6	S	32 18.	U
17	IP	01 40 43.7	S	41 13.	S W U
17	P	09 44 20.			N W U
17	IP	19 22 29.8			S W D
18	P	01 50 58.			
18	P	11 47 26.			
18	IP	15 51 19.2			D
18	P	17 51 01.8	IS	51 11.4	U
18	P	17 51 04.7	IS	51 16.7	
18	IP	17 51 19.7			N S D
18	EP	23 36 28.5	IS	36 40.4	
18	IP	23 36 53.2	S	37 24.0	E D
19	P	00 45 36.	S	46 00.	
19	IP	11 17 36.6	ES	17 55.	D
19	P	12 49 31.			
19	P	14 40 43.	S	41 05.	
19	P	15 37 00.			
19	P	19 44 44.			
19	P	21 32 01.			
20	IP	01 21 55.9			N W
20	IP	02 18 49.0	S	19 15.	E D
20	IP	07 23 31.5	S	30 39.	N E U
20	IP	08 35 42.2	S	41 32.	U
20	IP	09 36 38.5	S	37 37.	N W D
20	IP	17 42 30.2	S	43 15.	
20	P	17 54 28.			
20	IP	21 17 06.2			E D
20	IP	21 54 33.2	S	54 58.5	S E D
21	IP	00 27 38.2			E U
21	P	01 58 18.	S	59 05.	
21	IP	05 40 19.1			N E D
21	IP	07 51 15.9			U
21	IP	12 03 10.4			D
21	EP	18 02 32.			
21	P	18 16 57.			
21	IP	19 08 31.5			W D
21	IP	21 46 42.9			W D
22	IP	03 48 59.4	IS	49 38.5	U
22	EP	04 34 00.	S	34 25.	
22	IP	09 48 45.2	S	49 16.	S U
22	IP	16 31 39.2			D
22	IP	17 47 36.4	S	48 08.	N W U
22	EP	19 08 32.			
22	P	21 31 22.			
22	P	22 40 41.			
22	P	23 18 38.			
22	P	23 54 26.8			
23	IP	03 37 04.6			D
23	P	15 09 59.			
23	IP	23 29 50.6			U
24	IP	04 02 08.5			E U
24	P	05 42 15.			
25	IP	00 27 53.7			S D
25	P	09 20 22.			
25	IP	14 21 37.8			U

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DATE		PHASE AND TIME H M S		M S	INITIAL MOTION
25	P	20 46 01.			
25	P	21 03 38.			
26	P	00 53 42.			
26	EP	02 12 50.			
26	EP	10 07 42.			
26	IP	13 06 11.3			W D
26	EP	14 05 34.			
26	P	15 42 00.			
27	IP	03 31 30.7			
27	EP	13 24 08.			
27	P	14 44 46.			
27	P	18 37 29.			
28	P	14 00 21.			
28	P	18 38 30.7	S	39 52.	N W U
28	IP	20 15 37.9			D
28	IP	21 00 52.5			U

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF MATSUSHIRO ARE LEFT OUT FROM THE TABLE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

D	INT	H	M
1	1	10	50
1	1	12	57
1	1	13	19
1	1	20	27
1	1	22	25
1	1	22	42
2	1	00	31
2	1	00	47
2	1	01	14
2	1	02	12
2	1	02	22
2	1	05	01
2	1	06	15
2	1	06	49
2	1	07	40
2	1	12	35
2	1	14	55
2	2	16	09
2	1	16	09
2	1	16	12
2	1	16	24
2	1	16	26
2	1	17	25
2	1	19	07
2	1	20	02
2	1	23	31
3	1	01	00
3	1	01	06
3	1	01	43
3	1	03	34
3	1	03	53
3	1	05	01
3	1	16	11
3	3	17	17
3	1	17	31
3	1	17	33
3	1	17	42
3	1	19	15
3	1	19	24
3	1	22	32
3	1	23	29
3	1	23	53
4	1	01	00
4	1	05	03
4	1	11	58
4	1	11	58
4	1	11	58
4	1	13	40
4	1	16	27
4	1	16	34
4	1	19	31
4	1	20	26
4	1	20	32
4	1	20	46
4	1	20	54
4	1	20	59
4	1	21	00
4	2	22	26
4	1	23	00
4	1	23	58
5	1	00	48
5	1	02	15
5	1	03	33
5	1	07	00
5	1	10	09
5	1	13	22
5	1	13	37
5	1	16	42
5	1	17	03
5	1	18	13
5	1	20	11
5	1	20	42
5	1	23	49
6	1	03	00
6	1	03	58
6	1	05	59
6	1	12	56
6	1	15	54
6	1	18	11
6	1	18	19
6	1	18	27
6	1	18	28
6	1	19	16
6	1	23	29
7	1	00	34
7	1	01	08
7	1	05	23
7	1	06	09
7	1	10	05
7	1	10	16
7	1	10	31
7	1	11	49
7	1	12	02
7	1	12	54
7	1	14	08
7	1	14	50
7	1	17	34
7	1	18	41
7	1	20	41
7	1	22	56
8	1	00	12
8	1	00	15
8	1	02	26
8	2	02	27
8	1	02	27
8	1	09	13
8	1	12	40
8	1	12	44
8	1	13	03
8	1	13	16
8	1	13	22
8	1	17	18
8	2	18	49
8	1	18	50
8	1	19	22
8	1	19	23
8	1	20	25
8	1	21	35
9	1	00	46
9	1	04	11
9	1	06	10
9	1	09	50
9	2	09	50
9	1	10	23
9	1	10	26
9	1	16	32
9	1	16	35
9	1	22	50
10	1	03	43
10	1	05	11
10	1	06	19
10	1	12	04
10	1	12	36
10	1	13	29
10	1	13	32
10	1	13	34
10	1	15	14
10	1	16	05
10	1	16	05
10	1	17	47
10	1	19	22
10	1	19	34
10	1	21	46
10	1	22	25
11	1	00	23
11	1	02	40
11	1	06	52
11	1	08	34
11	1	09	19
11	1	13	32
11	1	13	55
11	1	19	56
11	1	20	52
11	1	21	53
11	1	23	23
12	1	01	26
12	1	09	13
12	2	09	21
12	1	12	49
12	1	12	51
12	1	13	43
12	1	14	30
12	1	16	19
12	1	21	13
13	1	02	21
13	1	08	00
13	1	09	00
13	1	09	20
13	1	22	18
14	1	01	26
14	1	03	21
14	1	04	16
14	1	06	25
14	1	07	21
14	1	12	19
14	1	15	01
14	1	15	20
14	1	16	31
14	1	17	47
15	1	03	21
15	1	03	29
15	1	04	15
15	1	05	00
15	1	09	39
15	1	10	03
15	1	12	16
15	1	13	54
15	1	15	19
15	1	15	34
15	1	17	08
15	1	18	13
15	1	21	00
15	1	22	06
16	1	00	58
16	1	07	16
16	1	07	16
16	1	07	17
16	1	08	44
16	1	10	06
16	1	10	25
16	1	12	20
16	1	13	00
16	1	13	50
16	1	15	56
16	1	21	49
17	1	00	26
17	1	00	27
17	1	00	34
17	2	02	19
17	1	02	20
17	1	03	56
17	1	05	32
17	1	10	54
17	1	11	31
17	1	17	50
17	1	18	28
18	1	02	23
18	1	03	03
18	1	10	43
18	1	14	44
18	1	19	45
18	1	21	30
19	1	00	24
19	1	01	35
19	1	04	40
19	1	09	57
19	1	10	55
19	1	13	00
19	1	15	14
19	1	17	09
19	1	17	19
19	1	17	40
20	1	00	56
20	1	01	33
20	1	11	01
20	1	11	43
20	1	19	03
20	1	20	06
20	1	22	56
21	1	01	22
21	1	02	34
21	1	05	29
21	1	05	42
21	1	09	35
21	1	09	50
21	2	13	58
21	1	14	31
21	1	16	20
21	1	21	23
21	1	21	28
21	1	23	09
22	1	00	25
22	1	08	11
22	1	12	04
22	1	12	10
22	1	14	07
22	1	15	01
22	1	19	51
22	1	19	52
22	1	23	34
23	1	03	35
23	1	07	29
23	1	15	13
23	1	15	13
23	1	15	21
23	1	15	55
23	1	15	55
23	1	18	10
23	1	19	56
23	1	19	59
23	1	20	09
23	1	22	19
24	1	04	00
24	1	05	24
24	1	05	24
24	1	05	29
24	1	06	24
24	1	07	42
24	1	10	20
24	1	10	40
24	1	13	56
24	1	14	10
24	1	16	13
24	1	18	09
24	1	18	12
24	1	18	20
24	1	18	42
24	1	19	34
24	1	20	32
24	1	22	26
24	1	23	01
24	1	23	34
25	1	08	00
25	1	09	22
25	1	10	45
25	1	17	16
25	1	17	30
25	1	19	34
25	1	20	55
26	1	07	40
26	1	08	35
26	1	09	44
26	1	09	46
26	1	09	54
26	1	09	57
26	1	10	25
26	1	11	51
26	1	12	22
26	1	18	02
27	1	00	05
27	1	02	31
27	1	03	35
27	1	04	35
27	1	06	31
27	1	14	47
27	1	21	41
27	1	21	47
27	1	22	02
28	1	07	58
28	1	16	06
28	1	16	30
28	1	17	26

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15 JUL

地　震　月　報

昭和42年 3 月

THE SEISMOLOGICAL BULLETIN

OF

THE JAPAN METEOROLOGICAL AGENCY

FOR

MARCH 1967

気　象　庁

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Tokyo

1967

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List 1 JMA stations and their seismographs

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S, VI, O P
Aikawa	AIKAWA	138 14.5	38 01.2	34	S, VI, O P
Ajiro	AJIRO	139 05.8	35 02.6	59	S, VI, O P
Akita	AKITA	140 06.1	39 43.1	9	S, VI, O P
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S, P
Aomori	AOMORI	140 47.0	40 49.0	4	S, W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S, VI, O P
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S, VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S, P
Choshi	CHOSHI	140 50.6	35 43.5	27	S, W
Fukue	FUKUE	128 50.0	32 42.0	26	S, VI
Fukui	FUKUI	136 13.6	36 03.2	9	S, P(H, V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S, VI, M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S, VI, O P
Funatsu	FUNATS	138 45.8	35 29.9	860	S, P
Gifu	GIFU	136 45.9	35 23.9	13	S, W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S, VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S, VI, O P
Hakodate	HAKODA	140 45.5	41 48.8	35	S, VI, O P
Hamada	HAMADA	132 04.4	34 53.6	18	S, VI, O P
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S, VI, O P
Hikone	HIKONE	136 14.8	35 16.4	87	S, W
Himeji	HIMEJI	134 42.1	34 50.2	37	S, P(H, V)
Hiroo	HIROO	143 19.0	42 17.0	32	S, P(H, V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S, W
Iida	IIDA	137 50.1	35 30.6	482	S, VI, O P
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S, VI, O P
Izuhara	IZUHAR	129 17.7	34 12.2	21	S, P(H, V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S, W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S, W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S, VI, O P
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S, P(H, V)
Kobe	KOBE	135 10.8	34 41.3	58	S, P(H, V)
Kochi	KOCHI	133 32.0	33 33.0	40	S, P(H, V)
Kofu	KOFU	138 33.5	35 39.9	272	S, VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S, VI, O P
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S, W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S, VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S, VI, O P
Maebashi	MAEBAS	139 03.9	36 24.1	112	S, W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S, P(H, V)
Matsue	MATSUE	133 04.3	35 27.3	17	S, P(H, V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S, P(H, V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S, L, AW, G, B, V, C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S, W
Mishima	MISHIM	138 55.8	35 06.7	20	S, W
Mito	MITO	140 28.3	36 22.7	30	S, VI, O P
Miyako	MIYAKO	141 58.1	39 38.7	46	S, W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S, VI, O P
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P(H, V)
Morioka	MORIOK	141 10.1	39 41.8	155	S, VI, O P
Muroran	MURORA	140 59.0	42 19.0	43	S, P(H, V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S, VI, O P
Nagano	NAGANO	138 11.8	36 39.6	418	S, W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S, VD, EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S, VI, O P
Nara	NARA	135 50.0	34 41.0	105	S, P(H, V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S, VI, VD, OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S, VI, P(H, V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S, P(H, V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S, P(H, V)
Ofunato	OFUNAT	141 43.1	39 03.7	38	S, VI
Oita	OITA	131 37.4	33 14.0	5	S, W
Okayama	OKAYAM	133 54.9	34 40.9	4	S, VI, O P
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S, W
Onahama	ONAHAM	140 54.4	36 56.7	3	S, VI
Osaka	OSAKA	135 32.3	34 38.9	7	S, VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S, W

Station	Code	λ	φ	Height	Seismographs
				m	
Owase	OWASE	E136°11.7′	N34°04.0′	14	S, VI, O P
Rumoi	RUMOI	141 38.0	43 57.0	22	S, P (H, V)
Saga	SAGA	130 18.3	33 14.7	4	S, P (H, V)
Saigo	SAIGO	133 20.0	36 12.3	26	S, VI, O P
Sakata	SAKATA	139 50.2	38 54.2	2	S, P (H, V)
Sapporo	SAPPOR	141 19.9	43 03.5	17	S, VI, O P
Sendai	SENDAI	140 54.0	38 15.6	38	S, VI, S′
Shimonoseki	SHIMON	130 56.5	33 57.2	46	S, VI, O P
Shionomisaki	SHIONO	135 45.8	33 26.9	74	S, W
Shirakawa	SHIRAK	140 13.5	37 07.1	354	S, P (H, V)
Shizuoka	SHIZUO	138 24.4	34 58.4	14	S, VI
Sumoto	SUMOTO	134 54.5	34 20.1	109	S, VI, O P
Suttsu	SUTTSU	140 14.4	42 47.4	16	S, P (H, V)
Takada	TAKADA	138 15.0	37 06.3	13	S, P (H, V)
Takamatsu	TAKAMA	134 03.5	34 19.0	10	S, W
Takayama	TAKAYA	137 15.3	36 09.1	561	S, P (H, V)
Tokushima	TOKUSH	134 34.6	34 03.9	2	S, P (H, V)
Tokyo	TOKYO	139 45.5	35 41.2	21	S, VI′, VD′, I′, J
Tomisaki	TOMISA	139 49.7	34 55.2	12	S, VI, O P
Tottori	TOTTOR	134 10.7	35 30.7	17	S, P (H, V)
Toyama	TOYAMA	137 12.5	36 42.4	9	S, VI
Toyooka	TOYOOK	134 49.5	35 32.0	4	S, W
Tsu	TSU	136 31.1	34 42.1	3	S, P (H, V)
Tsuruga	TSURUG	136 03.9	35 39.0	1	S, P (H, V)
Unzendake	UNZEND	130 15.2	32 44.1	849	S
Urakawa	URAKAW	142 46.8	42 09.5	34	S, VI, O P
Utsunomiya	UTSUNO	139 52.3	36 32.6	120	S, W
Uwajima	UWAJIM	132 33.5	33 13.5	43	S, P
Wajima	WAJIMA	136 53.9	37 23.4	6	S, VI
Wakayama	WAKAYA	135 10.0	34 13.6	14	S, W, I
Wakkanai	WAKKAN	141 40.5	45 25.0	2	S, VI, O P
Yakushima	YAKUSH	130 29.8	30 27.0	14	S, VI
Yamagata	YAMAGA	140 21.0	38 15.2	151	S, P (H, V)
Yokohama	YOKOHA	139 39.3	35 26.2	38	S, W
Yonago	YONAGO	133 20.6	35 26.0	7	S, P (H, V)
Ishigakijima	ISHIGA	124 10	24 20	6	S, VI
Naha	NAHA	127 41	26 13	11	S, VI

Notations : —

λ	: Longitude.
φ	: Geographical Latitude.
W	: Wiechert's horizontal and vertical seismographs (masses, H ; 200kg, V ; 80kg).
P	: Portable seismograph (horizontal only).
P(H, V)	: do (mass, 22.5kg).
S	: Strong motion seismograph (magnification ; 1).
S′	: do (magnification ; 0.4)
M(H)	: Mainka's horizontal seismograph (mass, 450kg).
G	: Galitzin's seismograph.
L	: 1,000kg long-period seismograph, JMA type.
I	: Ishimoto's seismograph
V	: Short-period vertical seismograph.
AW	: Anderson-Wood's seismograph.
C	: Capacity type seismograph.
EM	: Electromagnetic seismograph.
O P	: JMA 59-type electromagnetic seismograph with optical recorder.
VI	: JMA 59-type electromagnetic seismograph with visible recorder.
V D	: JMA 61-type electromagnetic seismograph with visible recorder.
B	: Benioff's seismograph (short and long period).
J	: Remote recording JMA 63-type seismograph.
VI′, VD′, I′	: Remote recording JMA 63-types of I, VD and VI respectively.

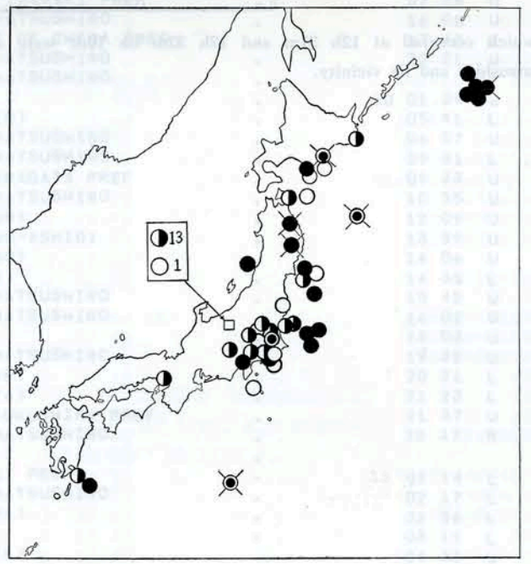
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List 2 Number of earthquakes by districts and classes, February, 1967

District \ Class	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	1	0	2	5	8	26	34
Tohoku	1	0	3	4	8	13	21
Kwanto	1	0	5	12	18	25	43
Chubu	1	0	1	303	305	22	327
Kinki	0	0	0	15	15	10	25
Chugoku•Shikoku	0	0	0	2	2	6	8
Kyushu	0	0	0	6	6	20	26
Near Japan*	1	0	0	1	2	20	22
Foreign region	0	0	0	0	0	2	2
Unknown	0	0	0	0	0	7	7
Total	5	0	11	348	364	151	515

* ; Sakhalin, Kurile Is., Korea, Ryukyu Is., Sikhota Alin.

Epicenters of the major earthquakes



⊙ Remarkable (R) ○ Small felt area (S) ◑ Local (I) ● Unfelt (U) × h≧100km.

Special Event

Earthquake-Swarm near Matsushiro, Northern Chubu.

Daily number of felt shocks observed at Matsushiro Seismological Observatory during this month is as follows:

Date \ Seismic intensity	1	2	3	Total	Date \ Seismic intensity	1	2	3	Total
1	22	2	0	24	16	7	0	0	7
2	18	1	1	20	17	7	0	0	7
3	6	0	0	6	18	5	0	0	5
4	8	0	0	8	19	7	0	0	7
5	6	1	0	7	20	13	1	0	14
6	22	2	0	24	21	4	0	0	4
7	10	0	0	10	22	6	0	0	6
8	10	0	0	10	23	9	0	0	9
9	6	0	0	6	24	3	0	0	3
10	7	0	0	7	25	18	2	0	20
11	15	0	0	15	26	14	0	0	14
12	8	1	0	9	27	11	0	0	11
13	6	1	0	7	28	3	0	0	3
14	13	0	0	13	29	7	0	0	7
15	7	0	0	7	30	6	0	0	6
					Total	284	11	1	296

The earthquakes which occurred at 12h 31m and 12h 32m on 16th were accompanied by slight property damage at Matsushiro and its vicinity.

International Seismological Centre From the ISC collection scanned by SISMOS

List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

DATE, D	TIME H	M	C	LOCATION
1	04	14	L	NEAR MATSUSHIRO
	06	24	U	(NAGANO)
	11	12	U	(SUTTSU)
	13	00	L	NEAR MATSUSHIRO
	13	06	L	NEAR MATSUSHIRO
	14	30	U	(CHOSHI)
	16	27	L	NEAR MATSUSHIRO
	16	32	L	NEAR MATSUSHIRO
	17	46	L	NEAR MATSUSHIRO
	17	55	L	NEAR MATSUSHIRO
	18	12	U	(CHOSHI)
	19	08	U	S OF KWANTO
	20	45	L	(MAEBAS-HANAGEISHI)
	22	13	S	SW OF IBARAKI PREF
	22	54	L	E OFF IBARAKI PREF
	23	40	L	NEAR MATSUSHIRO
2	03	39	S	NEAR MATSUSHIRO
	03	41	U	(KUMAMO)
	03	42	L	NEAR MATSUSHIRO
	03	44	U	(KAGOSH)
	03	45	L	NEAR MATSUSHIRO
	03	46	L	SW OF IBARAKI PREF
	03	59	L	NEAR MATSUSHIRO
	04	34	L	NEAR MATSUSHIRO
	04	42	U	(FUKUOK)
	05	10	L	(MAEBAS-MIHARA)
	06	12	L	NEAR NEMURO
	07	39	L	NEAR MATSUSHIRO
	08	07	L	NEAR MATSUSHIRO
	08	08	L	NEAR MATSUSHIRO
	08	28	U	(YAKUSH)
	10	42	U	(URAKAW)
	12	25	L	E OFF KAGOSHIMA PREF
	12	46	L	E OFF IBARAKI PREF
	16	56	L	NEAR MATSUSHIRO
	17	17	S	MIDDLE OF CHIBA PREF
	22	10	L	NEAR MATSUSHIRO
	22	51	L	NEAR MATSUSHIRO
3	01	44	U	(KUSHIR)
	05	30	L	NEAR MATSUSHIRO
	11	22	L	NEAR MATSUSHIRO
	11	51	U	OFF YAMAGATA PREF
	13	17	L	NEAR MATSUSHIRO
	16	06	U	(YAKUSH)
	16	24	L	(UTSUNO-ASHIO)
	18	22	U	(NAGANO)
	19	05	U	(NAHA)
	20	44	L	NEAR MATSUSHIRO
	20	50	L	NEAR MATSUSHIRO
4	03	19	L	NEAR MATSUSHIRO
	03	48	U	(URAKAW)
	08	51	L	(WAKAYA)
	09	50	S	S OF FUKUSHIMA PREF
	13	54	L	NEAR MATSUSHIRO
	14	13	U	UK
	15	27	L	TOCHIGI PREF
	16	25	L	NEAR MATSUSHIRO
	20	37	U	(OSHIMA)
5	02	24	U	(WAKAYA)
	03	10	U	UK
	05	01	U	AICHI PREF
	07	00	L	NEAR MATSUSHIRO
	16	00	U	(NAGANO)
	21	17	L	(KUMAMO-HAMAMACHI)
	21	20	L	NEAR MATSUSHIRO
	21	45	L	NEAR MATSUSHIRO
6	03	33	L	NEAR MATSUSHIRO
	07	09	L	NEAR MATSUSHIRO
	09	47	L	NEAR MATSUSHIRO
	10	47	L	NEAR MATSUSHIRO
	12	39	U	(NAGANO)
	13	41	R	S OFF HONSHU
	16	10	U	(KOBE)
	17	28	U	MIDDLE OF SETONAIKAI
	21	22	L	NEAR MATSUSHIRO
	21	40	L	NEAR MATSUSHIRO
	23	55	U	(KUSHIR)
7	00	08	L	(WAKAYA)
	04	57	U	(KUSHIR)
	07	57	U	(NAGANO)
	16	08	U	(IZUHAR)
	20	39	S	OFF MIYAGI PREF
	21	52	U	(KUSHIR)
	23	27	U	(KUSHIR)
8	03	38	L	NEAR MATSUSHIRO
	04	07	U	(KUMAMO)
	17	43	L	(WAKAYA)
	21	46	U	(KUSHIR)
9	00	01	U	(WAKAYA)
	01	50	L	NEAR MATSUSHIRO
	02	15	U	(NAGANO)
	03	51	L	NEAR MATSUSHIRO
	04	01	U	(WAKAYA)
	05	41	U	(KUMAGA)
	07	00	U	MIDDLE OF IWATE PREF
	07	23	L	NEAR NEMURO
	07	38	U	(NAGANO)
	16	08	U	(OITA)
	17	42	L	(UTSUNO-ASHIO)
	23	21	U	OFF FUKUSHIMA PREF
10	01	39	U	(NAGANO)
	05	41	L	SW OF IBARAKI PREF
	06	07	U	S OFF HONSHU
	09	31	L	(HIMEJI)
	09	33	U	S OFF HONSHU
	10	55	U	UK
	12	09	U	AICHI-SHIZUOKA BORDER
	13	59	U	(KUSHIR)
	14	06	U	(KUMAMO)
	14	38	L	(KUMAMO)
	15	42	U	E OFF URAKAWA
	16	02	U	E OFF FUKUSHIMA PREF
	18	03	U	(KUSHIR)
	19	32	U	NEAR KOBE
	20	21	L	NEAR MATSUSHIRO
	21	23	L	(KUMAMO-HAMAMACHI)
	21	37	U	OFF FUKUSHIMA
	23	17	R	ENSHUNADA
11	01	14	L	NEAR MATSUSHIRO
	02	17	L	NEAR MATSUSHIRO
	02	56	L	NEAR MATSUSHIRO
	03	11	L	NEAR MATSUSHIRO
	04	33	U	(KOCHI)
	06	27	L	(WAKAYA)
	06	57	U	NEAR ERIMOMISAKI
	06	57	S	E OFF AOMORI PREF
	10	11	U	(KAGOSH)

C : Class

DATE, D	TIME H	M	C	LOCATION
12	06	09	L	NEAR MATSUSHIRO
	10	28	L	NEAR MATSUSHIRO
	11	52	R	SE OF HOKKAIDO
	13	05	L	NEAR MATSUSHIRO
	15	03	L	(NIIGAT-SANJO)
	20	46	U	S OFF HONSHU
	21	50	L	NEAR MATSUSHIRO
13	02	43	L	NEAR MATSUSHIRO
	03	08	L	NEAR MATSUSHIRO
	03	17	U	NEAR TOKYO BAY
	08	31	U	MIDDLE OF CHIBA PREF
	09	50	U	(URAKAW)
	11	09	U	(NAGANO)
	19	08	U	(KOCHI)
14	00	32	U	(KUMAMO)
	03	12	U	IWATE PREF
	05	26	L	(KUMAMO)
	06	26	U	N OF IWATE PREF
	08	02	U	E OFF KWANTO
	08	35	L	(WAKAYA)
	08	55	U	SE OF YAMANASHI PREF
	12	48	L	NEAR MATSUSHIRO
	16	04	U	UK
	16	57	U	(MIYAZA)
	18	18	U	(KOCHI)
	20	04	L	NEAR MATSUSHIRO
	20	25	L	NEAR MATSUSHIRO
	22	39	U	(YAKUSH)
15	01	47	U	MIDDLE OF KWANTO
	02	20	U	(KAGOSH)
	04	59	U	(YONAGO)
	12	37	L	NEAR MATSUSHIRO
	13	17	U	(FUKUOK)
	19	43	L	(NAHA)
16	20	10	L	NEAR NAZE
17	01	29	L	NEAR MATSUSHIRO
	03	02	U	N OF SEA OF JAPAN
	05	20	U	(WAJIMA)
	08	02	L	NEAR MATSUSHIRO
	11	22	S	OFF URAKAWA
	12	14	L	NEAR MATSUSHIRO
	16	09	U	MIDDLE OF IWATE PREF
	16	43	U	E OFF KWANTO
	17	29	L	NEAR MATSUSHIRO
	18	20	L	(SAPPOR-MOSHIRI)
	20	32	U	UK
	22	54	S	ERIMOMISAKI
18	00	38	L	NEAR MATSUSHIRO
	02	21	L	NEAR MATSUSHIRO
	06	52	L	NEAR MATSUSHIRO
	10	01	U	(KUSHIR)
	13	57	U	(NAGANO)
	19	54	U	(KUSHIR)
	23	31	U	NEAR KOZUJIMA
19	02	50	R	SW OF IBARAKI PREF
	04	08	U	IBARAKI PREF
	04	18	L	NEAR MATSUSHIRO
	05	17	U	(UTSUNO)
	06	29	U	(UTSUNO)
	06	44	U	(ASHIZU)
	09	20	L	(WAKAYA)
	10	18	U	UK
	10	21	L	NEAR MATSUSHIRO

DATE, D	TIME H	M	C	LOCATION
19	11	55	U	NEAR YAKUSHIMA
	13	02	U	S OF KURILE IS
	14	59	L	NEAR MATSUSHIRO
	17	20	L	OFF MIYAGI PREF
	18	07	U	(OSHIMA)
	19	31	U	(OWASE)
	20	39	L	NEAR MATSUSHIRO
	22	15	L	S OF NARA PREF
	22	34	U	(WAJIMA)
	23	08	U	(OFUNAT)
20	06	15	U	MIDDLE OF KWANTO
	09	26	U	MIDDLE OF SAITAMA PREF
	09	32	L	NEAR MATSUSHIRO
	13	04	U	(MITO)
	14	15	U	S OF KURILE IS
	18	07	L	SW OF IBARAKI PREF
	18	32	U	E OF HOKKAIDO
	20	11	U	(UTSUNO)
	21	14	L	NEAR MATSUSHIRO
	22	32	U	S OF KURILE IS
	22	40	U	S OF KURILE IS
	22	42	L	NEAR MATSUSHIRO
	22	42	U	S OF KURILE IS
	22	53	U	S OF KURILE IS
	23	45	U	S OF KURILE IS
21	00	05	U	(OMAEZA)
	00	47	U	S OF KURILE IS
	01	14	U	S OF KYUSHU
	02	10	U	(CHOSHI)
	02	13	U	S OF KURILE IS
	06	54	S	SW OF IBARAKI PREF
	07	14	U	NEAR RYUKYU
	09	16	U	(NAHA)
	09	39	U	(UTSUNO)
	10	02	U	IBARAKI PREF
	17	23	L	(WAKAYA-KURISUGAWA)
	17	29	U	NEAR SAGA
	23	02	S	MIDDLE OF CHIBA PREF
22	00	05	L	S OF NAGANO PREF
	03	33	L	(AKITA)
	04	20	U	OFF FUKUSHIMA PREF
	07	07	L	NEAR WAKAYAMA
	07	56	L	NEAR MATSUSHIRO
	15	04	L	(MAIZUR)
	15	19	U	(KUSHIR)
	15	26	L	NE OF AOMORI PREF
	19	45	L	N OF HIROSHIMA PREF
	21	09	L	(WAKAYA-SHIRAHAMA)
	22	15	L	NEAR WAKAYAMA
23	04	49	L	NEAR MATSUSHIRO
	13	07	L	NEAR MATSUSHIRO
	17	09	L	NEAR MATSUSHIRO
	22	43	U	HOKKAIDO
24	00	05	L	NEAR NEMURO
	04	33	L	NEAR MATSUSHIRO
	10	25	U	(URAKAW)
	12	14	U	(KUMAMO)
	13	12	R	OFF SANRIKU
	15	01	L	NEAR MATSUSHIRO
	16	31	U	N OF TOHOKU
	18	06	U	JAVA SEA
	21	58	L	(FUKUI-MIKATA)
	23	41	U	(TSURUG)
25	01	33	L	NEAR MATSUSHIRO

International Seismological Centre From the ISC collection scanned by SISMOS

DATE, D	TIME H	M	C	LOCATION
25	02	57	L	NE OF SAITAMA PREF
	07	34	L	NEAR MATSUSHIRO
	10	46	L	NEAR MATSUSHIRO
	13	06	L	NEAR MATSUSHIRO
26	02	27	L	NEAR MATSUSHIRO
	07	49	U	S OF KURILE IS
	10	31	L	N OF TOKYO BAY
	10	49	L	NEAR MATSUSHIRO
	10	50	U	OFF ERIMOMISAKI
	12	30	L	NEAR MATSUSHIRO
	16	16	L	NEAR MATSUSHIRO
	17	01	U	(NAGANO)
27	06	27	S	NEAR KOZUJIMA
	06	55	L	(HIROSH-SHOHARA)
	09	50	U	SE OFF KAGOSHIMA PREF
	09	53	U	(YAKUSH)
	13	53	L	OFF NIIGATA PREF
	14	37	U	W OF AICHI PREF
	15	48	U	(NAHA)
	18	00	U	NORTHEASTERN CHINA
	19	59	U	(MATSUM)
	20	07	U	(WAKAYA)
	20	21	U	E OFF KWANTO
	20	39	L	SE OF YAMANASHI PREF
	21	42	U	(UTSUNO)
	22	16	U	(KUSHIR)
28	02	44	L	OFF IWATE PREF
	09	01	U	(KUSHIR)
	09	33	U	(KUSHIR)
	17	24	L	NE OF HOKKAIDO
	18	38	U	(TOYOOK)
	19	38	L	NEAR MATSUSHIRO
	22	10	L	E OF YAMANASHI PREF
	23	25	L	NEAR MATSUSHIRO
29	01	02	U	(NAGOYA)
	13	39	U	TOHOKU
	16	46	L	NEAR KOBE
	19	02	U	S OF KURILE IS
	19	58	L	S OF WAKAYAMA PREF
30	00	27	L	NEAR MATSUSHIRO
	02	49	L	NEAR MATSUSHIRO
	04	47	U	(WAJIMA)
	09	57	U	(NAHA)
	10	00	U	(CHOSHI)
	11	16	U	UK
	13	45	U	(KYOTO)
	14	44	L	NEAR MATSUSHIRO
	16	55	U	OFF MIYAGI PREF
31	00	33	U	HOKKAIDO
	02	47	U	NEAR SHIONOMISAKI

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST. ALL EVENTS FELT AT THE OBSERVATORY ARE LISTED IN LIST 6.

List 4 EARTHQUAKE ORIGINS

DATE, TIME D	H	M	C	LOCATION	ORIGIN TIME M	S	+/-S	LONG.	+/-	LAT.	+/-	H KM	M
1	04	14	L	NEAR MATSUSHIRO	14	32.6	0.3	138 21 01		36 36 01		0	4.3
	13	00	L	NEAR MATSUSHIRO	00	40.3	0.3	138 19 01		36 36 01		0	3.8
	22	13	S	SW OF IBARAKI PREF	13	09.3	0.2	139 55 02		36 08 01		50	3.9
	22	54	L	E OFF IBARAKI PREF	53	51.3	0.8	140 51 04		36 30 03		70	
2	03	39	S	NEAR MATSUSHIRO	39	53.9	0.2	138 18 01		36 30 01		0	5.1
	04	34	L	NEAR MATSUSHIRO	34	31.1	0.2	138 19 01		36 29 01		0	4.0
	12	25	L	E OFF KAGOSHIMA PREF	25	26.7	1.2	131 22 06		31 03 03		10	4.9
	12	46	L	E OFF IBARAKI PREF	46	23.3	0.3	141 00 02		36 38 01		40	4.1
	17	17	S	MIDDLE OF CHIBA PREF	17	42.8	0.3	140 07 02		35 32 01		80	
	22	10	L	NEAR MATSUSHIRO	10	36.7	0.2	138 13 01		36 35 01		10	
3	11	51	U	OFF YAMAGATA PREF	51	03.5	0.4	139 11 03		38 48 02		50	3.8
	20	44	L	NEAR MATSUSHIRO	44	50.8	0.1	138 07 01		36 27 00		0	
4	09	50	S	S OF FUKUSHIMA PREF	50	31.6	0.2	140 44 02		37 23 01		90	
6	03	33	L	NEAR MATSUSHIRO	33	41.5	0.4	138 09 03		36 30 01		20	4.0
	10	47	L	NEAR MATSUSHIRO	47	08.2	0.2	138 08 01		36 28 00		0	
	13	41	R	S OFF HONSHU	40	19.7	0.4	137 59 02		30 48 02		480	
	21	22	L	NEAR MATSUSHIRO	22	32.8	0.3	138 11 01		36 27 01		0	3.9
7	20	39	S	OFF MIYAGI PREF	39	35.4	0.8	142 17 04		38 18 02		50	4.5
9	07	00	U	MIDDLE OF IWATE PREF	00	28.4	0.3	141 22 04		39 29 03		120	
10	05	41	L	SW OF IBARAKI PREF	41	36.6	0.2	139 55 01		36 08 01		60	3.5
	09	33	U	S OFF HONSHU	31	19.1	1.6	139 07 06		28 47 07		500	
	15	42	U	E OFF URAKAWA	42	18.3	0.3	142 26 01		42 11 02		80	
	23	17	R	ENSHUNADA	16	25.8	0.1	137 43 01		34 28 02		320	
11	06	57	S	E OFF AOMORI PREF	57	38.3	0.5	142 20 04		41 10 01		60	4.5
12	11	52	R	SE OF HOKKAIDO	52	04.0	0.2	143 15 01		42 36 01		110	
13	08	31	U	MIDDLE OF CHIBA PREF	31	16.6	0.8	140 04 06		35 26 02		80	
14	06	26	U	N OF IWATE PREF	26	08.3	0.2	141 17 02		40 17 01		100	
	08	02	U	E OFF KWANTO	02	30.6	0.9	142 09 04		36 13 03		40	4.5
	08	55	U	SE OF YAMANASHI PREF	55	37.5	0.2	138 59 02		35 26 01		30	3.4
17	11	22	S	OFF URAKAWA	22	38.7	0.2	142 32 02		42 02 02		80	
	16	43	U	E OFF KWANTO	43	29.0	1.0	141 52 04		36 13 02		10	4.5
	22	54	S	ERIMOMISAKI	53	52.2	0.2	143 09 02		42 18 02		60	4.3
19	02	50	R	SW OF IBARAKI PREF	49	48.3	0.2	140 04 01		36 16 01		80	
	10	21	L	NEAR MATSUSHIRO	21	07.8	0.2	138 06 01		36 29 01		10	3.9
	13	02	U	S OF KURILE IS	01	37.7	1.6	151 25 08		44 45 11		60	6.3
	17	20	L	OFF MIYAGI PREF	20	34.3	0.5	141 59 02		38 14 01		40	4.2
20	09	26	U	MIDDLE OF SAITAMA PREF	26	46.2	0.3	139 36 03		36 03 02		50	3.3
	18	07	L	SW OF IBARAKI PREF	07	22.8	0.2	140 00 01		36 26 02		80	
	21	14	L	NEAR MATSUSHIRO	14	29.2	0.3	138 14 02		36 35 01		10	
	22	32	U	S OF KURILE IS	31	33.1	1.7	151 44 08		43 59 11		40	5.7
	22	53	U	S OF KURILE IS	52	07.8	2.4	151 34 12		44 08 12		40	5.8
21	00	47	U	S OF KURILE IS	46	31.2	2.1	151 07 13		44 14 18		60	5.3
	06	54	S	SW OF IBARAKI PREF	54	49.0	0.2	139 50 01		36 09 01		50	5.1
	23	02	S	MIDDLE OF CHIBA PREF	02	07.7	0.3	140 09 02		35 38 02		90	
22	00	05	L	S OF NAGANO PREF	04	58.6	0.1	138 08 01		35 44 01		0	4.0
	04	20	U	OFF FUKUSHIMA PREF	19	46.5	1.1	142 15 05		37 37 03		20	4.1
	15	26	L	NE OF AOMORI PREF	25	57.6	0.3	141 22 04		41 07 02		90	
24	13	12	R	OFF SANRIKU	11	28.7	0.5	144 48 03		40 15 01		110	
25	01	33	L	NEAR MATSUSHIRO	33	26.2	0.3	138 06 01		36 34 01		0	
	02	57	L	NE OF SAITAMA PREF	57	16.9	0.4	139 36 03		36 07 03		70	
	13	06	L	NEAR MATSUSHIRO	06	47.3	0.2	138 08 01		36 27 01		0	4.1
26	07	49	U	S OF KURILE IS	47	54.8	2.2	152 12 12		44 06 11		110	

C:CLASS

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DATE, TIME D	H	M	C	LOCATION	ORIGIN TIME M	S	+/-S	LONG.	+/-	LAT.	+/-	H KM	M
26	10	31	L	N OF TOKYO BAY	30	55.2	0.2	140 01 01		35 45 01		50	4.4
	16	16	L	NEAR MATSUSHIRO	16	05.5	0.1	138 05 00		36 24 00		0	
27	06	27	S	NEAR KOZUJIMA	27	04.9	0.9	139 07 03		34 16 03		0	4.3
	09	50	U	SE OFF KAGOSHIMA PREF	50	17.0	3.4	131 54 17		30 50 08		0	4.7
	20	21	U	E OFF KWANTO	21	35.5	1.2	141 50 06		35 48 03		70	
	20	39	L	SE OF YAMANASHI PREF	39	30.3	0.1	139 00 01		35 30 00		0	4.4
28	17	24	L	NE OF HOKKAIDO	24	03.2	0.4	145 01 03		43 01 02		40	4.0
29	16	46	L	NEAR KOBE	46	03.2	0.3	135 01 01		34 40 01		10	3.2
30	16	55	U	OFF MIYAGI PREF	55	45.9	0.2	141 54 01		38 17 01		40	3.8

List 5 DATA OF EARTHQUAKES

OT= 1 4 14 32.6 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 36 +/- 1 LONG= 138 21 +/- 1
H= 0 MAG=4.3 CLASS=L

* : MICRON

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	2	P	04	14	36.7	S	14	38.3										14.4	01.6
NAGANO	2	IP	04	14	37.0	S	14	39.1										15.2	02.1
KARUIZ	0	IP	04	14	40.6	S	14	45.9	250	1.2	250	1.2	50	1.8	S 2	E	U 2	34.0	05.3
MATSUM	X	IP	04	14	43.0	IS	14	49.7								E	D 2	52.0	06.7
TAKADA	0	P	04	14	43.6	S	14	51.0										56.7	07.4
MAEBAS	0	IP	04	14	46.9	S	14	56.3	34	2.8	34	3.4	47	3.6		W 1	D 2	67.7	09.4
CHICHI	0	EP	04	14	50.8	IS	15	02.3										94.2	11.5
KOFU	0	IP	04	14	52.4	IS	15	04.9	15	0.7	19	0.4	7	1.2	S 1		U 2	105.4	12.5
KUMAGA	0	EP	04	14	54.4	ES	15	11.0	19	5.0	35	4.6	30	4.0				105.6	16.6
TOYAMA	0	EP	04	14	56	ES	15	11	23	3.6	29	3.0						102.7	15.0
IIDA	0	EP	04	14	56.2	ES	15	11.6	8	1.0	11	1.6	6	4.0				129.5	15.4
FUNATS	0	IP	04	14	57.0	IS	15	11.7										127.8	14.7
UTSUNO	0	P	04	14	58.2	S	15	14.8	11	1.0	8	1.0						136.3	16.6
OMAEZA	0	X	04	14					11		15							221.8	
KANAZA	0	P	04	15	02.2	ES	15	17.8	8		10		6	0.4	N 2	E 4	U 3	152.4	15.6
WAJIMA	0	EX	04	15	03.0				18	1.0	2	1.2						156.1	
MISHIM	0	EX	04	15	04				14	3.9	7	1.1						173.2	
SHIZUO	0	X	04	15	06.3	IS	15	26.4										180.5	
MITO	0	IP	04	15	06.8	IS	15	29.8	17	0.6	15	1.1	7	3.4			U 1	191.7	23.0
NAGOYA	0	EP	04	15	07.6	S	15	31.6	14	1.6	13	1.2	7	1.2			U 2	202.2	24.0
GIFU	0	P	04	15	07.7	S	15	30.2	9	1.5	23	1.7	7	1.4				195.4	22.5
YOKOHA	0	IP	04	15	08.6	ES	15	29.9	18	4.0	12	2.0					D 11	174.6	21.3
HAMAMA	0	P	04	15	10.5	S	15	35.7	14	1.6	10	3.6	6	2.0				217.4	25.2
ONAHAM	0	EX	04	15	12.2				9	1.9	14	1.3	4	2.2				231.4	
HIKONE	0	EP	04	15	14.1	S	15	42.2	13	1.2	9	1.1	4	1.4				240.1	28.1
NIIGAT	0	X	04	15	22.1				17	2.0	30	4.3						158.1	
TOKYO	0	X	04	15	23	X	15	43	19	3.6	15	4.8						162.4	
OSAKA	0	X	04	15	36	X	16	44.2	12	4.8	11	3.6						334.2	

OT= 1 13 0 40.3 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 36 +/- 1 LONG= 138 19 +/- 1
H= 0 MAG=3.8 CLASS=L

MATSUS	2	P	13	00	44.0	S	00	45.5										11.9	01.5
NAGANO	2	IP	13	00	44.6	S	00	46.8										12.6	02.2
KARUIZ	0	IP	13	00	49.1	S	00	53.9								E	U 2	35.7	04.8
MATSUM	0	P	13	00	51.0	IS	00	57.6							N	E	D	50.1	06.6
TAKADA	0	P	13	00	51.7	S	00	59.7										56.3	08.0
KUMAGA	0	EX	13	01	01.2				4	3.2	6	4.0	6	3.6				108.2	
KOFU	0	EP	13	01	01.2	ES	01	12.6	8	0.4	10	0.5	4	0.8				106.0	11.4
MITO	0	EP	13	01	13.5	IS	01	38.0	8	0.4	5	0.3	2	0.3				194.6	24.5
HAMAMA	0	EP	13	01	17.6	ES	01	43	5	1.6	4	2.0	2	1.4				216.6	25.4
TOYAMA	0	X	13	02	04	X	02	14	6	1.4	8	2.4	5	3.6				99.8	

OT= 1 22 13 9.3 +/- 0.2
SW OF IBARAKI PREF
LAT= 36 8 +/- 1 LONG= 139 55 +/- 2
H= 50 MAG=3.9 CLASS=S

KAKIOK	0	IP	22	13	18.3	IS	13	24.2	86	1.0	76	0.3	28	0.8			U 1	27.2	05.9
UTSUNO	1	IP	22	13	20.2	IS	13	28.0	135	0.2	196	0.2	35	0.2	N	2 W	1 D 16	46.0	07.8
KUMAGA	1	P	22	13	20.6	S	13	28.6	61	0.2	36	0.2	14	0.2				47.9	08.0
TOKYO	0	IP	22	13	21.1	IS	13	29.9	13		31		6		N	W	D	51.7	08.8
MITO	1	IP	22	13	21.8	IS	13	30.1	28	1.1	26	0.3	12	0.3		E	2 U 2	56.8	08.3
MAEBAS	0	IP	22	13	23.8	S	13	34.6	12	1.0	7	0.7	4	1.0		E	D 4	82.1	10.8
CHICHI	1	EP	22	13	23.9	IS	13	31.5										76.8	07.6
YOKOHA	0	EP	22	13	24.5	IS	13	36.3	44	0.9	17	0.4						80.8	11.8
CHOSHI	0	EP	22	13	25.0	IS	13	36.4										95.1	11.4
AJIRO	0	P	22	13	30.2	IS	13	45.7	5	0.3	7	0.0	2	0.0				141.9	15.5
FUNATS	0	P	22	13	30.8	S	13	44.8										125.8	14.0
KOFU	0	EP	22	13	32.6	ES	13	46.4	8	1.2	9	0.6	3	0.8				133.2	13.8
MATSUS	0	IP	22	13	33.4										S	E	D	159.8	
MISHIM	0	EX	22	13	34				6	0.7	4	0.6	1	0.4				144.3	
ONAHAM	0	EX	22	13	40.5	IS	13	44.4	16	1.2	16	1.2	3	0.8				126.4	

I : Seismic Intensity

International Seismological Centre From the ISC collection scanned by SISMOS

OT= 1 22 53 51.3 +/- 0.8
E OFF IBARAKI PREF
LAT= 36 30 +/- 3 LONG= 140 51 +/- 4
H= 70 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MITO	1	IP	22	54	04.8	IS	54	12.1	72	0.3	126	0.4	68	0.2	N 3	E 6	U 33	36.5	07.3
KAKIOK	0	IP	22	54	06.0	IS	54	13.8	29	0.4	31	0.4	10	0.1	S 7	W 1	U 8	66.0	07.8
CHOSHI	0	IP	22	54	07.9	IS	54	18.4										86.0	10.5
UTSUNO	X	P	22	54	08.6	S	54	18.8	25	0.1	25	0.1	9	0.2				87.8	10.2
TOKYO	0	IP	22	54	14.0	IS	54	28.4	5		2							133.6	14.4
MATSUS	0	P	22	54	25	S	54	47										236.6	22.0

OT= 2 3 39 53.9 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 30 +/- 1 LONG= 138 18 +/- 1
H= 0 MAG=5.1 CLASS=S

MATSUS	3	P	03	39	57.3	S	39	59.0							S			9.2	01.7
NAGANO	3	IP	03	39	59.5	ES	40	02.1							N 4	W 3	U 27	20.0	02.6
KARUIZ	2	IP	03	40	01.6	S	40	06.9	1200	2.4	1500	1.4	700	2.6	S 40	E 80	U 76	28.7	05.3
MATSUM	2	IP	03	40	03.7	IS	40	09.4	400	3.2	300	3.2	150	3.2	N	E	D 5	40.9	05.7
TAKADA	1	P	03	40	08.0	S	40	16.4	500	3.2	500	3.2	250	2.8	N 13	E 5	U 43	67.3	08.4
MAEBAS	0	IP	03	40	08.1	S	40	17.3	466	3.8	399	4.6	446	3.0	N 3	W 7	D 25	69.4	09.2
CHICHI	0	P	03	40	10.7	ES	40	22.3							S	E		90.1	11.6
KOFU	2	IP	03	40	12.6	ES	40	24.8	132	2.0	163	2.0	76	1.2	S 16	E 10	U 24	95.5	12.2
TAKAYA	0	P	03	40	13.1	S	40	29.3										101.5	16.2
KUMAGA	0	EP	03	40	14.0	ES	40	31.0	243	3.8	298	5.2	258	4.0				105.0	17.0
TOYAMA	0	P	03	40	14.4	S	40	28.2	211	4.2	218	4.4	220	4.0	N 1	W 2	U 12	100.3	13.8
IIDA	0	IP	03	40	16.4	IS	40	31.0	80	1.4	63	3.2	45	3.2			U 3	117.6	14.6
FUNATS	0	P	03	40	16.4	S	40	29.7										118.7	13.3
UTSUNO	1	P	03	40	19.4	S	40	35.8	113	1.2	94	3.1			N 8	W 39		140.8	16.4
WAJIMA	0	EP	03	40	21.6	S	40	42.4	180	0.8	150	0.8	4	1.0				159.2	20.8
AIKAWA	0	IP	03	40	21.9	IS	40	42.0	48		80		18		S 1	E	U	168.7	20.1
KANAZA	0	P	03	40	22.4	S	40	38.8	113		100		40		N 20	W 40	D 80	148.0	16.4
KAKIOK	0	IP	03	40	23.4	IS	40	43.7	140	1.0	87	0.6	33	0.9		E 3	U 1	172.5	20.3
TOKYO	0	IP	03	40	23.5	S	40	46.4	165	4.2	226	4.5	169	4.0				159.4	22.9
MISHIM	0	IP	03	40	24.0	IS	40	42.6	96	4.2	127	4.2	35	0.8	S 6	E 2	U 9	164.2	18.6
NIIGAT	0	P	03	40	24.3	IS	40	46.6	220	4.2	210	4.3	115	3.8				170.1	22.3
SHIZUO	0	P	03	40	24.8	S	40	45.8	40	8.0	63	5.0	39	7.0	S 2		U 3	169.6	21.0
AJIRO	0	IP	03	40	25.2	ES	40	47.8	31	4.2	53	4.4	18	4.4	S 1	E 1	U 1	176.9	22.6
SHIRAK	X	EP	03	40	25.3	IS	40	50.3										184.9	25.0
MITO	X	IP	03	40	26.5	S	40	50.5	94	0.6	77	2.3	50	3.6		W 2	D 2	195.1	24.0
YOKOHA	0	IP	03	40	26.5	IS	40	50.8	131	3.8	132	3.1	95	3.8	N 5	W 4	D 33	169.8	24.3
NAGOYA	0	IP	03	40	27.6	ES	40	49.2	89	1.6	96	1.6	43	1.4	N 4	E 3	D 6	190.8	21.6
FUKUI	0	P	03	40	27.9	S	40	48.9										192.7	21.0
GIFU	0	P	03	40	28.6	S	40	50.7	78	1.7	96	1.7			N 2	E 3		184.7	22.1
OMAEZA	0	X	03	40	28.7	ES	40	53.7	145		161		67					210.5	
HAMAMA	0	P	03	40	29.6	S	40	53.6	74	2.0	95	2.0	40	2.0			U 1	205.5	24.0
OSHIMA	0	EP	03	40	30.8	IS	40	55.8	45	1.2	39	2.2	21	1.8	S 4		U 5	216.1	25.0
TOMISA	0	P	03	40	32.5				55	4.0	62	3.0	34	4.0				223.2	
HIKONE	0	EP	03	40	32.9	S	41	03.4	61	1.2	76	1.2	32	1.9				229.9	30.5
ONAHAM	0	IP	03	40	33.2	IS	41	02.0	110	1.2	113	1.2	35	1.5	S 2	W 3	D 10	238.0	28.8
CHOSHI	0	EP	03	40	33.6	ES	41	04.0										244.5	30.4
						EX	46	06.2											
FUKUSH	0	P	03	40	34.8	ES	41	04.1	30	1.3	23	1.0	20	4.5	S 4	W 2	D 2	238.3	29.3
YAMAGA	0	EP	03	40	37.1													266.1	
KYOTO	0	EP	03	40	41.0	ES	41	18.0	13	1.6	12	1.4	7	1.6				284.7	37.0
SENDAI	0	EP	03	40	41.6	ES	41	14.4	28	4.0	15	3	10	7				301.9	32.8
NARA	0	EP	03	40	42.0													300.9	
SAKATA	0	EP	03	40	44.9	ES	41	21.2	50	1.8	50	1.8						299.1	36.3
OWASE	0	P	03	40	45.0	S	41	23.0	6	4.4	6	12.0	6	2.2				330.9	38.0
OSAKA	0	EP	03	40	45.0	S	41	21.3	82	5.5	112	3.8	34	3.1				323.7	36.3
TOYOOK	0	EP	03	40	47.4	ES	41	33.5	50		48		9					331.3	46.1
SUMOTO	0	P	03	40	52.0	ES	41	36.3	8	3.4	7	2.6	5	3.6				390.5	44.3
						EX	41	06.1											
MIZUSA	0	P	03	40	55.4	S	41	42.8	23	3.0	23	2.2	20	1.2				384.2	47.4
OFUNAT	0	P	03	40	57.2	S	41	44.8	7	6.0	5	4.6	7	6.8	N 1		U 1	414.0	47.6
HACHIJ	0	EP	03	40	58.2	ES	41	40.4										400.7	42.2
AKITA	0	EX	03	40	58.3	EX	41	41.6	16	4.2	18	3.8	8	3.0				390.6	
TOKUSH	0	EP	03	40	59.5													433.1	
WAKAYA	0	X	03	41	01.1	S	41	43.4	15	1.2	12	1.2						380.3	
TAKAMA	0	EP	03	41	01.8	X	42	11.4	6	1.1	5	1.1	2	1.2				454.9	
SHIONO	0	X	03	41	06.3	S	41	52.9	13	1.7	12	1.7	7	1.7				410.1	
OKAYAM	0	X	03	41	08.0	S	42	01.0	13	4.0	15	4.0	20	4.2				445.5	
MUROTO	0	EP	03	41	09.0	ES	42	16.8	8	3.2	7	2.8	5	5.0				521.4	67.8
AOMORI	0	X	03	41	17				10	2.4	8	1.5	4	1.8				525.6	
OITA	0	X	03	41	46.6	X	43	22.7	20	4.1	12	4.1						709.5	

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
KUMAMO	0	EP	03 41 47	X	43 45.2	7	2.2	7	1.6	1	1.8				806.6	

OT= 2 4 34 31.1 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 29 +/- 1 LONG= 138 19 +/- 1
H= 0 MAG=4.0 CLASS=L

MATSUS	2	P	04 34 34.7	S	34 35.9										11.5	01.2
NAGANO	2	IP	04 34 37.0	S	34 39.5										22.4	02.5
KARUIZ	0	IP	04 34 38.6	S	34 43.6								U 4		26.4	05.0
MATSUM	X	IP	04 34 40.9	IS	34 46.5							W	U 13		40.7	05.6
MAEBAS	0	IP	04 34 45.2	S	34 54.2	18	0.8	12	3.0	11	3.0	W	D 2		67.7	09.0
CHICHI	0	EP	04 34 49.0	IS	34 59.7										87.8	10.7
KOFU	0	IP	04 34 49.6	ES	35 02.0	9	1.0	9	0.5	5	0.4	S 3 E 1	U 6		93.4	12.4
TOYAMA	0	EP	04 34 53	ES	35 06	7	2.6	7	3.0	8	3.6				102.2	13.0
KUMAGA	0	EP	04 34 53.4	ES	35 05.6	10	3.4	11	3.6	12	3.8				102.9	12.2
IIDA	0	EP	04 34 53.4	ES	35 07.4	7	0.4	8	0.4	3	1.0				116.4	14.0
UTSUNO	0	P	04 34 56.6	S	35 12.8	8	0.2	10	0.5						139.4	16.2
TOKYO	0	EP	04 34 58	S	35 21.3	6	3.2	8	3.6	6	4.0				157.2	23.3
MISHIM	0	EX	04 34 59			6	1.2	6	1.0	3	0.4				161.9	
AIKAWA	0	IP	04 34 59.5	X	35 41.2	4		5		1		N 1 W	0 U 1		170.6	
KANAZA	0	EP	04 34 59.8	X	34 16.0	7		5							149.6	
KAKIOK	0	P	04 35 00	S	35 21	11	1.0	7	1.0	3	0.8				170.7	21.0
MITO	0	IP	04 35 04.2	IS	35 27.6	22	0.4	11	0.4	4	0.3		D 0		193.6	23.4
WAJIMA	0	X	04 35 05.4			17	0.8	18	0.8						161.5	
YOKOHA	0	X	04 35 07.2	IX	35 28.1	6	0.4	6	0.4						167.5	
HAMAMA	0	P	04 35 07.6	S	35 32.2	6	1.6	4	1.6	3	1.4	S 1 W	1 U 1		204.1	24.6
HIKONE	0	EP	04 35 13.7	S	35 40.6	8	1.1	8	1.1						230.1	26.9
NIIGAT	0	X	04 35 24.0			15	2.2	15	1.0	7	2.0				171.2	
ONAHAM	0	X	04 35 39.4			5	0.9	5	1.2	1	0.6				237.0	

OT= 2 12 25 26.7 +/- 1.2
E OFF KAGOSHIMA PREF
LAT= 31 3 +/- 3 LONG= 131 22 +/- 6
H= 10 MAG=4.9 CLASS=L

MIYAZA	1	IP	12 25 43.2	S	25 55.8	95	1.0	123	2.4	75	1.8	N 4			96.2	12.6
KAGOSH	X	P	12 25 44.2	IS	25 57.7			613	1.2	209	1.4	S 1	D 1		96.7	13.5
YAKUSH	0	IP	12 25 46.0	IS	26 02.0	111	0.7	91	0.8	29	0.6	N 1 W	1 U 1		106.6	16.0
NOBEOK	0	EP	12 25 52.8	ES	26 14.7										172.6	21.9
NAGASA	0	EP	12 26 02.9	S	26 30.8							N 1 W	U 1		232.6	27.9
KUMAMO	0	EP	12 26 04	IS	26 24.2	59	1.4	66							204.7	20.2
SAGA	0	P	12 26 09.7	S	26 46.4										263.1	36.7
OITA	0	P	12 26 10.3	S	26 38.4	83	1.9	58	1.3						243.2	28.1
FUKUOK	0	EP	12 26 11.0	ES	26 42.0	6	1.6	6	2.0	5	2.0				295.4	31.0
SHIMON	0	EP	12 26 20	ES	27 00	4	2.2	13	2.2	4	2.2				324.3	40.0
KOCHI	0	X	12 26 39.2	X	27 15.5										344.1	
TAKAMA	0	X	12 26 41.3	X	27 41.6	7	1.2	6	1.0	2	1.0				441.3	
SAIGO	0	EX	12 27 04.1	X	28 17.7	3	1.8	6	1.8	2	1.8				599.9	
MATSUS	0	X	12 27	IX	29 02										877.9	
OSAKA	0	X	12 28 13.3			17	3.1	14	3.9	9	2.4				558.0	

OT= 2 12 46 23.3 +/- 0.3
E OFF IBARAKI PREF
LAT= 36 38 +/- 1 LONG= 141 0 +/- 2
H= 40 MAG=4.1 CLASS=L

ONAHAM	0	IP	12 46 32.4	IS	46 39.2	52	0.7	79	1.0	20	0.4		D 10		35.6	06.8
MITO	1	IP	12 46 34.7	IS	46 42.5	32	0.4	82	0.3	10	0.2		D 2		55.1	07.8
KAKIOK	0	IP	12 46 38.1	IS	46 46.9	26	1.2	28	1.0	12	1.4				84.9	08.8
SHIRAK	0	IP	12 46 38.4	IS	46 49.2								D 8		87.6	10.8
UTSUNO	0	EX	12 46 39.5	S	46 50.5	14	0.5	7	0.5	5	1.0				101.4	
CHOSHI	0	EP	12 46 40.5	IS	46 53.0										101.7	12.5
FUKUSH	0	P	12 46 45.0	ES	46 59.5	28	0.9	23	0.9	8	0.8	S 4 E	3 D 3		133.1	14.5
TOKYO	0	EP	12 46 47	IS	47 04.2	21		7							153.4	17.2
KUMAGA	0	EP	12 46 50.6	ES	47 05.0	9	0.8	6	1.0	3	0.6				154.6	14.4
SENDAI	0	EP	12 46 50.8	S	47 09.6	3	1	5	1	2	1				180.7	18.8
YOKOHA	0	EP	12 46 54.7	ES	47 11.2	6	0.4	9	0.4						179.7	16.5
MATSUS	0	IP	12 46 59.4	S	47 25								E D		250.0	25.6
KOFU	0	EP	12 47 01.9	ES	47 26.1	6	2.0	7	1.3	2	1.0				244.5	24.2

International Seismological Centre From the ISC collection scanned by SISMOS

OT= 2 17 17 42.8 +/- 0.3
MIDDLE OF CHIBA PREF
LAT= 35 32 +/- 1 LONG= 140 7 +/- 2
H= 80 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOKYO	2	IP	17 17 57.1	IS	18 06.0	1350		840		142				D	36.6	08.9
YOKOHA	3	IP	17 17 57.6	IS	18 06.7	1000	0.5	700	0.5	163	0.8	N 3 E	3 D 29		43.2	09.1
KAKIOK	2	IP	17 17 59.0	IS	18 08.6	300	1.2	300	1.4	100	1.0	N 10 E	1 U 31		77.8	09.6
CHOSHI	1	IP	17 18 00.0	S	18 12.1	87	0.4	133	0.4						69.2	12.1
MITO	1	IP	17 18 01.4	IS	18 13.4	170	1.0	127	0.9	34	0.7	N 2	U 13		99.1	12.0
KUMAGA	2	IP	17 18 01.6	S	18 13.6	220	1.2	204	1.6	83	2.6	S 2 E	3 D 12		94.9	12.0
UTSUNO	3	P	17 18 02.0	IS	18 14.6	300	0.1	200	0.1	100	0.2		D 4		114.6	12.6
MISHIM	1	IP	17 18 02.4	IS	18 15.7	70	0.7	70	0.7	31	0.4	N 3 E	7 D 16		117.6	13.3
AJIRO	2	IP	17 18 02.6	IS	18 15.3	280	0.3	273	0.3	62	0.3	N 18 E	13 D 54		107.5	12.7
CHICHI	1	IP	17 18 02.7	IS	18 14.4							S	E 12		106.5	11.7
OSHIMA	3	IP	17 18 02.8	IS	18 15.7	500		300		100		N 6 E	4 D 23		108.9	12.9
TOMISA	1	IP	17 18 03.0	IS	18 10.6	130	2.0	225	0.8	63	1.0	S 2 W	2 U 12		72.9	07.6
FUNATS	3	IP	17 18 03.6	IS	18 17.9										122.8	14.3
MAEBAS	1	IP	17 18 06.0	S	18 20.7	37	0.7	60	1.1	25	2.3	S 1 E	1 U 6		135.2	14.7
KOFU	1	IP	17 18 06.3	IS	18 21.8	137	0.4	185	0.4	157	2.0	N 2 E	12 D 18		141.9	15.5
SHIRAK	X	EP	17 18 09.6	IS	18 28.1										176.1	18.5
SHIZUO	1	IP	17 18 10.1	IS	18 29.6	91	0.4	202	0.4	35	0.4	N 6 E	18 D 27		167.5	19.5
KARUIZ	0	IP	17 18 10.3	S	18 27.6							S 4 E	4 D 10		167.2	17.3
ONAHAM	1	IP	17 18 12.1	ES	18 29.8	74	1.2	69	1.1	15	0.5		U 7		172.0	17.7
MATSUS	0	IP	17 18 13.5	S	18 40							S E	D		204.9	26.5
IIDA	0	IP	17 18 15.0	IS	18 37.8	19	2.2	16	0.6	13	1.4	N 1 E	11 D 13		206.9	22.8
NAGANO	0	P	17 18 15.4	ES	18 38.2	9		8		7					213.3	22.8
MATSUM	0	IP	17 18 15.5	ES	18 37.1							S E	2 D 9		208.9	21.6
HAMAMA	0	EP	17 18 17.7	S	18 43.5	14	1.6	15	2.4	7	1.4				236.5	25.8
TAKADA	0	EP	17 18 19.0	ES	18 43.4										241.8	24.4
FUKUSH	0	EP	17 18 20.1	ES	18 47.0	45	1.0	43	0.8	22	0.7				248.8	26.9
HACHIJ	0	P	17 18 24.4	ES	18 50.4	10	0.4	11	0.4					D 1	271.3	26.0
NAGOYA	0	P	17 18 24.9	S	18 52.8	20	2.0	19	1.2	11	1.2	N 1 E	1 D 2		289.0	27.9
TOYAMA	0	P	17 18 25.2	S	18 50.4	12	3.0	18	2.8	11	2.8			D 3	292.3	25.2
GIFU	0	EP	17 18 27			15	1.5	12	1.7	5	1.0				304.5	
AIKAWA	0	IP	17 18 27.7			6		6		3		S E	D		322.7	
SENDAI	0	EP	17 18 28.0	ES	18 59.5	15	2.0	15	1.6	5	1.2				310.5	31.5
ISHINO	0	P	17 18 30.7	IS	19 03.7									D 1	337.8	33.0
WAJIMA	0	EX	17 18 32.6			18	1.0	15	1.0						354.4	
HIKONE	0	P	17 18 33.5	ES	19 05.5	19	1.1	15	0.9	7	0.9				352.6	32.0
NIIGAT	0	X	17 18 35.2	X	19 01.0	25	2.2	30	2.0	20	2.3			D 3	280.3	
SAKATA	0	EX	17 18 37.5												374.8	
FUKUI	0	X	17 18 38.1												356.3	
OFUNAT	0	EP	17 18 39.6	IS	19 21.1	6	0.2	6	0.4	2	0.8				416.5	41.5
MIZUSA	0	P	17 18 43.2	S	19 21.5	20	2.0	9	1.7				E 4		409.5	38.3
OSAKA	0	P	17 18 43.7	S	19 32.9	12	2.6	12	2.8	10	2.9	N 2 E	2		428.7	49.2
MORIOK	0	EP	17 18 46.6	S	19 34.8	6	0.4	5	0.4	1	0.4				471.3	48.2
TOYOOK		EP	17 18 49.0			16		17							480.2	
AKITA	0	X	17 18 53.0			9	2.6	7	2.2	5	2.2				464.4	
OMAEZA	0	X	17 18			20		20		12					201.9	
KANAZA	0	X	17 18	ES	19 10.2	6		10		5					332.1	
KUSHIR	0	X	17 19	X	21 02.8	5	0.2	3	0.2	2	0.3				904.9	

OT= 2 22 10 36.7 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 35 +/- 1 LONG= 138 13 +/- 1
H= 10 CLASS=L

MATSUS	1	P	22 10 39.3	S	10 40.7										5.0	01.4
NAGANO	2	IP	22 10 40.0	S	10 42.0										8.7	02.0
KARUIZ	0	EP	22 10 45.4	ES	10 50.7										40.4	05.3
MATSUM	0	P	22 10 46.1	IS	10 52.5										43.6	06.4

OT= 3 11 51 3.5 +/- 0.4
OFF YAMAGATA PREF
LAT= 38 48 +/- 2 LONG= 139 11 +/- 3
H= 50 MAG=3.8 CLASS=U

SAKATA	0	EP	11 51 17.3	S	51 21.7										57.9	04.4
AIKAWA	0	IP	11 51 23.3	IS	51 37.4	7		8		3		S			119.4	14.1
AKITA	0	P	11 51 24.6							5	1.2			U	129.1	
FUKUSH	0	EP	11 51 28.6	ES	51 46.6	4	1.0	6	1.0	3	1.0				161.8	18.0
MATSUS	0	EP	11 51 41	S	52 02										265.3	21.0

OT= 3 20 44 50.8 +/- 0.1
NEAR MATSUSHIRO
LAT= 36 27 +/- 0 LONG= 138 7 +/- 1
H= 0 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
MATSUS	1	P	20	44	54.4	S	44	56.1										12.8	01.7
NAGANO	0	IP	20	44	56.9	S	44	59.8										24.4	02.9
MATSUM	X	IP	20	44	57.6	IS	45	01.3							S 2	W 3	U 24	26.3	03.7
KARUIZ	0	P	20	45	00.4	IS	45	06.2								D		40.9	05.8

OT= 4 9 50 31.6 +/- 0.2
S OF FUKUSHIMA PREF
LAT= 37 23 +/- 1 LONG= 140 44 +/- 2
H= 90 CLASS=S

SHIRAK	0	IP	09	50	46.9	IS	50	58.5								D 2		53.8	11.6
FUKUSH	1	IP	09	50	47.0	S	50	58.2	36	0.4	41	0.1			S 5	W 3		47.3	11.2
ONAHAM	0	EP	09	50	47.6	IS	50	57.4	39	0.5	48	0.7	16	0.7				51.0	09.8
SENDAI	X	P	09	50	50.8	S	51	04.0	8	0.0	10	1.0	3	0.0				98.4	13.2
MITO	0	P	09	50	52.4	IS	51	07.4	14	0.5	18	0.5	6	0.5				113.9	15.0
UTSUNO	1	P	09	50	53.9	S	51	09.3	26	0.2	28	0.1	9	0.2	N 1			120.4	15.4
KAKIOK	0	EP	09	50	54.4	IS	51	10.5	41	0.9	24	0.7	10	1.0				136.6	16.1
MATSUS	0	IP	09	51	08.8	S	51	31								E	D	243.6	22.2

OT= 6 3 33 41.5 +/- 0.4
NEAR MATSUSHIRO
LAT= 36 30 +/- 1 LONG= 138 9 +/- 3
H= 20 MAG=4.0 CLASS=L

MATSUS	2	IP	03	33	44.0	S	33	45.0										6.7	01.0
NAGANO	1	IP	03	33	46.6	S	33	49.2										18.2	02.6
MATSUM	X	IP	03	33	49.5	IS	33	53.8								U 8		32.6	04.3
KARUIZ	0	IP	03	33	50.6	IS	33	55.9							N 2	W 2	D 10	40.2	05.3
TAKADA	0	EP	03	33	54.1	S	34	02.5										67.7	08.4
KOFU	0	EP	03	33	58.8	IS	34	10.2	8	0.3	11	0.3	3	0.3				99.7	11.4
WAJIMA	0	X	03	34	18.0				12	0.8	12	0.8						148.9	

OT= 6 10 47 8.2 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 28 +/- 0 LONG= 138 8 +/- 1
H= 0 CLASS=L

MATSUS	1	P	10	47	10.9	S	47	12.3										10.4	01.4
NAGANO	0	IP	10	47	13.6	S	47	16.0										22.2	02.4
MATSUM	0	EP	10	47	15.7	IS	47	19.8										28.6	04.1
KARUIZ	0	P	10	47	17.4	S	47	22.8								D		40.1	05.4

OT= 6 13 40 19.7 +/- 0.4
S OFF HONSHU
LAT= 30 48 +/- 2 LONG= 137 59 +/- 2
H=480 CLASS=R

HACHIJ	0	IP	13	41	28.0	IS	42	21.0	93	0.8	55	0.6	23	1.4	N 5	E 5	U 2	306.9	53.0
SHIONO	0	IP	13	41	31.0	IS	42	29.9	132	3.9	48	4.1	18	1.4	N	W	U 9	360.6	58.9
OWASE	0	IP	13	41	34.0	IS	42	34.4	30	4.0	25	4.0	20	3.9	N 3	W 1	U 10	399.2	60.4
OMAEZA	0	EP	13	41	36.6	S	42	38.0	80		172		35					422.2	61.4
MUROTO	0	P	13	41	36.8	S	42	40.8	40	3.8	41	3.0	20	3.4				450.2	64.0
HAMAMA	0	P	13	41	36.9	S	42	40.5	61	3.4	110	2.6	18	3.0			D 1	433.9	63.6
OSHIMA	0	P	13	41	37.4	S	42	37.9	55	2.0	86	2.4	34	2.6			U 5	458.2	60.5
TOMISA	0	IP	13	41	38.7	IS	42	42.4	79	0.8	62	1.8	33	3.1			D 4	488.2	63.7
AJIRO	0	IP	13	41	39.2	S	42	44.4	25	2.4	26	2.4	8	1.9			D 1	481.8	65.2
WAKAYA	0	P	13	41	39.7	S	42	41.0	38	3.2	35	2.8						462.8	61.3
NARA	0	EP	13	41	40.1				150	2.3	100	2.0	50	1.1				475.2	
SUMOTO	0	IP	13	41	40.6	IS	42	45.3	31	4.1	37	3.1	21	2.8	N 3	W 4	U 10	486.6	64.7
MISHIM	0	EP	13	41	41.0	IS	42	44.4	38	1.3	45	4.0						486.1	63.4
OSAKA	0	IP	13	41	41.5	S	42	46.8	200	3.7	148	3.9	75	2.9			U 20	484.2	65.3
KOBE	0	EP	13	41	41.7													504.7	
NAGOYA	0	IP	13	41	42.0	IS	42	47.6	55	3.4	111	3.2	25	1.2	N 2	E 2	U 8	493.1	65.6
TOKUSH	0	EP	13	41	42.1	IS	42	48.8										483.2	66.7
KYOTO	0	IP	13	41	43.2	IS	42	52.2	30	1.4	17	2.6	13	2.0	N 0	W 1	U 1	512.0	69.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
ASHIZU	0	IP	13	41	43.2	IS	42	50.0	37	3.2	18	2.4	8	3.6		E 2	D 6	516.0	66.8
KOCHI	0	EP	13	41	43.3	ES	42	51.2										518.5	67.9
TURUGI	0	EP	13	41	43.6	E	42	46.3										498.2	
IIDA	0	IP	13	41	44.0	IS	42	50.8	46	1.8	65	3.0	21	1.8	N 9	W 1	U 15	522.4	66.8
HIKONE	0	P	13	41	44.1	S	42	51.2	51	1.7	44	2.0						521.7	67.1
FUNATS	0	EP	13	41	44.5	ES	42	51.4										525.9	66.9
TAKAMA	0	IP	13	41	44.8	IS	42	52.6	23	1.9	35	1.9	26	3.0	N 7	W 8	U 12	536.3	67.8
KOFU	0	IP	13	41	45.2	IS	42	53.1	32	2.8	26	4.0	11	4.0	S 19	E 2	U 7	542.0	67.9
GIFU	0	P	13	41	45.6	S	42	51.1	34	2.1	37	3.1	15	1.8	N 4	E 4	U 3	522.3	65.5
TOKYO	0	P	13	41	46.7	S	42	55.7	104	1.3	47	0.8						566.2	69.0
TSURUG	0	EP	13	41	47.1	S	42	57.6										566.6	70.5
OKAYAM	0	IP	13	41	47.4	IS	42	58.4	50	3.6	50	4.0	35	5.0	N	W	U 10	574.7	71.0
UWAJIM	0	P	13	41	47.5	S	42	54.9								W		578.4	67.4
CHICHI	0	EP	13	41	50.1	S	42	58.7										584.6	68.6
TOYOOK	0	IP	13	41	50.5	S	43	03.1	43		26		18		N 12	W 7	U 7	602.2	72.6
KARUIZ	0	P	13	41	50.9	IS	43	05.1									U	616.5	74.2
CHOSHI	0	EP	13	41	51.0	IS	43	01.4										607.5	70.4
KAKIOK	0	EP	13	41	51	ES	43	04	117	0.8	110	0.9	28	1.0				636.2	73.0
KUMAGA	0	EP	13	41	51.2	ES	43	02.0	29	3.0	21	1.0	28	4.4				606.9	70.8
FUKUI	0	IP	13	41	51.5	S	43	05.3										S 22 E 10 D 40	604.9	73.8
MATSUM	0	EP	13	41	51.7	IS	43	05.3										603.5	73.6
MATSUS	0	IP	13	41	51.8	IS	43	07.3										636.6	75.5
UTSUNO	0	P	13	41	52.1	S	43	07.9	52	2.0	48	1.1	32	0.8	N		U	660.7	75.8
MIYAZA	0	IP	13	41	52.6	S	43	04.6	67	3.2	47	2.6	14	2.4			D 12	635.6	72.0
NOBEOK	0	P	13	41	52.6	S	43	06.8									U 5	628.8	74.2
YAKUSH	0	EX	13	41	53.2	ES	43	18.8	23	4.0	10	3.9	9	4.2		W 1	U 2	718.4	
HIROSH	0	P	13	41	53.4	S	43	10.3	27	3.6	14	3.6	15	3.0	N 3	W 4	U 8	653.3	76.9
OITA	0	P	13	41	53.4	IS	43	08.0	119	5.0	80	3.2	52	3.4	N 8	W 7	U 19	658.2	74.6
MITO	0	P	13	41	54.5	S	43	09.2	71	1.2	82	2.9	34	2.6				660.1	74.7
KANAZA	0	P	13	41	55.2	S	43	07.2	43		65		36		N 3	W 8	U 7	649.1	72.0
NAGANO	0	P	13	41	55.2	ES	43	09.9	4		6		4					650.0	74.7
TOYAMA	0	P	13	41	55.2	S	43	04.2	67	5.0	54	3.6	57	3.8			U 9	658.8	69.0
TAKADA	0	P	13	41	58.0	S	43	15.0										699.6	77.0
MATSUE	0	EP	13	41	58.6	S	43	18.2										689.9	79.6
HAMADA	0	EP	13	41	59.8	ES	43	15.9	34	3.6	25	3.9	18	4.6				715.1	76.1
KUMAMO	0	P	13	42	00.6	IS	43	21.7	64	2.8	49	2.6	14	1.9		W 6	U 4	723.4	81.1
SHIRAK	0	EP	13	42	01.0	IS	43	21.1										730.5	80.1
ONAHAM	0	EP	13	42	01.2	IS	43	20.2	85	0.9	114	1.2	28	1.1				732.9	79.0
SHIMON	0	IP	13	42	02.0	IS	43	25.5	28	4.0	31	3.8	14	3.0	N 3	W 5	U 9	748.7	83.5
SAIGO	0	IP	13	42	02.8	S	43	23.4	14	3.6	12	3.0	12	2.6	S 2	E 1	D 3	738.5	80.6
FUKUOK	0	EP	13	42	04.0	ES	43	30.0	24	4.0	19	3.4	6	2.0				779.8	86.0
AIKAWA	0	IP	13	42	06.1	IS	43	31.2	11		14		10		N 0	W 0	U 0	801.0	85.1
NAGASA	0	P	13	42	06.8	S	43	33.0							N	W	U	796.9	86.2
SAGA	0	IP	13	42	07.2	S	43	31.1							N 12	W 10		773.8	83.9
NIIGAT	0	E	13	42	07.8	IX	43	35.0	80	4.1	53	4.0	40	3.8				794.5	
FUKUSH	0	P	13	42	08.0	IS	43	34.8	102	1.0	86	1.0	29	1.0	N 3	E 2	U 4	804.7	86.8
YAMAGA	0	EP	13	42	13.7	ES	43	42.7										854.5	89.0
SENDAI	0	P	13	42	14.2	IS	43	46.0	40	3.4	40	3.0	16	1.0	N 4	E 2	U 4	869.4	91.8
ISHINO	0	EP	13	42	18.2	IS	43	50.7									U 2	898.6	92.5
SAKATA	0	P	13	42	21.2	ES	43	55.8									D 7	914.5	94.6
KAGOSH	0	X	13	42	23.3	ES	43	18.7	232	2.9	53	2.5	9	2.0				712.9	
MIZUSA	0	P	13	42	24.6	S	44	03.7	45	1.0	43	1.2	38	1.2				967.8	99.1
OFUNAT	0	IP	13	42	25.0	S	44	02.8	18	3.8	13	1.2	8	2.8	N 2	E 0	U 2	977.5	97.8
AKITA	0	EP	13	42	28.4	ES	44	12.4	30	5.0	28	4.8	26	2.6			U	1007.7	104.0
MORIOK	0	IP	13	42	29.8	IS	44	16.5	13	2.8	14	3.6	6	6.0	N 1	E 0	U 1	1028.3	106.7
MIYAKO	0	EP	13	42	31.7	S	44	19.4	6	2.5	25	4.1						1045.6	107.7
YOKOHA	0	X	13	42	35.1	IS	42	50.6	79	0.8	65	0.7	20	0.9		E 3		537.1	
HACHIN	0	IP	13	42	40.1	IS	44	33.0	40	5.0	26	4.2	12	3.0			U 1	1125.1	112.9
AOMORI	0	EP	13	42	41	EX	44	28	49	3.1	38	3.6	17	3.2				1139.4	
HAKODA	0	EP	13	42	50.9	ES	44	55.2	13	4.9	11	3.6	8	3.2	N 3		U 3	1246.8	124.3
MAEBAS	0	X	13	42	52.3	ES	43	04.5	24	5.2	35	4.2	17	3.4				629.1	
URAKAW	0	P	13	43	00.3	S	45	12.4	21	4.2	27	4.2	10	3.8			U 1	1330.8	132.1
SAPPOR	0	P	13	43	04.8	S	45	21.2	14	4.0	14	2.8	9	5.0			U 4	1392.2	136.4
OBIHIR	0	EP	13	43	08.3	S	45	29.7										1422.8	141.4
KUSHIR	0	IP	13	43	13.9	IS	45	36.5	16	1.2	11	3.7	6	2.6			D 7	1466.0	142.6
ASAHIK	0	IP	13	43	14.8	S	45	40.0	7	3.8	6	0.8	6	1.2			D 1	1490.4	145.2
ASOSAN	0	X	13	43	18													692.9	
ABASHI	0	P	13	43	24.4	S	45	57.0	9	1.9	11	1.9	7	1.9				1567.9	152.6
WAKKAN	0	EP	13	43	31.6	S	46	13.2	16	4.6	11	6.0						1653.8	161.6
FUKUE	0	X	13	43	49.3	X	45	38.0	29	3.4	16	5.4			N 22	W 22		891.5	

OT= 6 21 22 32.8 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 27 +/- 1 LONG= 138 11 +/- 1
H= 0 MAG=3.9 CLASS=L

MATSUS	2	P	21	22	35.4	S	22	36.8										10.1	01.4
NAGANO	1	IP	21	22	38.1	S	22	40.5										23.3	02.4
MATSUM	0	IP	21	22	39.7	IS	22	43.7							S 1	W 2	U 16	29.7	04.0

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	N-S	E-W	E-W	U-D	U-D	DELTA KM	S-P S
KARUIZ	0	IP	21 22 41.3	S	22 46.2											D	8	35.2	04.9
MAEBAS	0	EP	21 22 49.0	S	22 59.4	13	4.0	9	3.1	9	4.1							79.2	10.4
KOFU	0	EP	21 22 51.4	IS	23 02.5	5	0.6	6	0.8	2	1.0							93.4	11.1
KUMAGA	0	EP	21 22 54.8	ES	23 11.2	7	4.0	8	4.0	9	4.0							113.0	16.4
TOYAMA	0	EP	21 22 55	ES	23 07	12	3.4	14	3.4	17	3.6							91.8	12.0
WAJIMA	0	X	21 23 08.0			14	1.0	14	1.0									154.9	
NIIGAT	0	X	21 23 27.3			5	0.4	13	1.0									179.4	

OT= 7 20 39 35.4 +/- 0.8
OFF MIYAGI PREF
LAT= 38 18 +/- 2 LONG= 142 17 +/- 4
H= 50 MAG=4.5 CLASS=S

ISHINO	0	IP	20 39 50.8	IS	40 00.6							S	4	E	8	D	6	86.8	09.8
OFUNAT	1	IP	20 39 51.6	IS	40 02.2	28	0.6	24	0.6	8	0.6	S	7	E	3	D	6	97.8	10.6
SENDAI	X	IP	20 39 55.5	IS	40 09.2	25	1.2	19	1.0	15	1.2			E		D	8	121.1	13.7
MIZUSA	0	P	20 39 58.5			15	1.2	25	1.0	12	1.0							136.2	
MIYAKO	0	EP	20 39 59.3	ES	40 13.9	7	0.6	8	1.0									151.8	14.6
FUKUSH	0	EP	20 40 02.1	ES	40 17.2	32	1.0	27	0.9	43	1.7							169.8	15.1
MORIOK	0	IP	20 40 03.6	S	40 23.0	13	0.5	18	0.7	3	3.2	S	2	E	2	D	1	182.7	19.4
				X	40 17.4														
SHIRAK	0	EP	20 40 10.0	ES	40 34.4													223.9	24.4
SAKATA	0	EX	20 40 10.8															223.4	
AKITA	0	EX	20 40 11.4			13	2.0	13	1.4	7	2.0							245.9	
HACHIN	0	IP	20 40 13.5	IS	40 39.2	4	1.0	5	1.5	4	2.0	S		E		D		255.5	25.7
MITO	0	EP	20 40 13.5	IS	40 42.6	12	1.0	10	1.1	6	1.5							266.9	29.1
ONAHAM	0	EX	20 40 13.9	ES	40 28.8	20	1.7	23	1.2	8	1.7							193.3	
UTSUNO	0	EX	20 40 16.7	ES	40 48.3	8	1.0	7	1.2									288.8	
KAKIOK	0	EP	20 40 21	ES	40 49	14	1.0	13	1.0	5	1.0							295.0	28.0
MATSUS	0	P	20 40 33	E	41 31													410.2	
KOFU	0	EP	20 40 39.0	ES	41 26.7	6	1.8	6	1.6	3	1.0							442.0	47.7
MISHIM	0	X	20 40 53			6	2.2	10	1.1									463.5	
AOMORI	0	X	20 40 59.3			17	1.4	15	0.9									307.7	
FUNATS	0	X	20 41 19.3	ES	41 32.6													441.6	

OT= 9 7 0 28.4 +/- 0.3
MIDDLE OF IWATE PREF
LAT= 39 29 +/- 3 LONG= 141 22 +/- 4
H=120 CLASS=U

MORIOK	0	IP	07 00 46.0	IS	00 58.6	6	0.4	3	0.4	1	0.4			W		D	0	29.2	12.6
				EX	00 55.2														
MIYAKO	0	EP	07 00 47	ES	01 02.3	4	0.0	6	0.0									54.7	15.3
OFUNAT	0	IP	07 00 47.1	IS	01 01.2	5	0.0	10	0.0	1	0.8					U	0	55.8	14.1
MIZUSA	0	P	07 00 48.3	S	01 00.2	8	1.1	3	0.8	2	1.1							43.8	11.9

OT= 10 5 41 36.6 +/- 0.2
SW OF IBARAKI PREF
LAT= 36 8 +/- 1 LONG= 139 55 +/- 1
H= 60 MAG=3.5 CLASS=L

KAKIOK	0	IP	05 41 46.1	S	41 52.2	50	0.5	33	0.5	21	0.2					U	5	27.2	06.1
UTSUNO	1	IP	05 41 48.4	IS	41 56.1	39	0.1	48	0.1	11	0.1	S	2			D	9	46.0	07.7
TOKYO	0	EP	05 41 49	ES	41 58	7		4										51.7	09.0
MITO	0	IP	05 41 49.5	IS	41 58.4	14	0.3	34	0.4	12	0.3			W	2	U	2	56.8	08.9
MATSUS	0	IP	05 42 01.2	S	42 19									E		D		159.8	17.8

OT= 10 9 31 19.1 +/- 1.6
S OFF HONSHU
LAT= 28 47 +/- 7 LONG= 139 7 +/- 6
H=500 CLASS=U

OMAEZA	0	EX	09 33					8										650.7	
NAGOYA	0	P	09 33 03.4	S	34 26.4	8	2.6	12	2.8	3	1.6					U	2	735.8	83.0
MIYAZA	0	P	09 33 09.2	S	34 38.4	7	2.0	5	3.4	4	1.4							816.2	89.2
MITO	0	EP	09 33 13.1	S	34 42.4	12	1.4	17	2.3	5	1.0							851.4	89.3
KAKIOK	0	X	09 33 18.9	S	34 37.9	19	1.0	13	1.0	7	0.8							831.8	
KUMAMO	0	EP	09 33 19.1	IS	34 54.7	7	2.0	9	1.6	2	1.9							919.2	95.6
HAMADA	0	EP	09 33 21.6	ES	35 00.0	5	4.0	4	4.0	1	7.6					U	1	949.6	98.4

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	N-S	E-W	E-W	U-D	U-D	DELTA KM	S-P S
OITA	0	EX	09 33 21.9	S	34 48.7	12	3.4	12	3.4	6	2.1							868.3	
FUKUSH	0	EP	09 33 28.3	S	35 08.0	27	1.0	17	1.0									1002.8	99.7
SENDAI	0	EP	09 33 34	ES	35 20	7	2	5	2	2	1							1063.6	106.0
MIZUSA	0	P	09 33 45.8	S	35 40.3	20	1.0	10	1.1	8	1.1							1162.6	114.5
AKITA	0	P	09 33 49.0	ES	35 48.0	11	4.0	12	2.6	5	3.2		W		U	4		1216.0	119.0
YOKOHA	0	EX	09 33 58.2	ES	34 25.0	14	0.7	15	0.5									739.2	
KUMAGA	0	EX	09 33 58.8	ES	34 37.4	7	1.0	5	1.2	4	1.2							816.6	
MATSUS	0	X	09 33	S	34 44								N					863.9	
TOMISA	0	IX	09 34 03.0	IS	34 14.0	12	1.6	7	1.5	5	2.8					U	8	683.5	
OSAKA	0	IX	09 34 14.0	X	34 26	11	2.4	12	5.5	5	2.4							733.0	
HAMAMA	0	X	09 34 15.0			5	3.0	10	3.4	2	20							669.8	
MISHIM	0	X	09 34 15.8			6	2.0	7	2.4	2	0.6							701.6	
TOKYO	0	EX	09 34 18	S	34 29.0	37	0.8	13	0.8									767.4	
UTSUNO	0	EX	09 34 18.9	ES	34 43.3	10	0.7	14	1.1	5	0.6							863.5	
CHOSHI	0	X	09 34 33.0															786.4	
ONAHAM	0	EX	09 34 51.4	ES	34 53.1	18	1.0	21	1.0	5	0.9							920.1	
AOMORI	0	X	09 36 12.3			11	2.0	21	1.6									1343.2	

OT= 10 15 42 18.3 +/- 0.3
E OFF URAKAWA
LAT= 42 11 +/- 2 LONG= 142 26 +/- 1
H= 80 CLASS=U

URAKAW	0	IP	15 42 31.4	S	42 40.2	33	0.4	34	0.4	11	0.4					D	2	28.8	08.8
OBIHIR	0	IP	15 42 38.1	IS	42 51.4											U	2	104.4	13.3
SAPPOR	0	IP	15 42 41.0	IS	42 55.8	6	0.6	7	0.8	3	1.0					U	1	132.7	14.8
KUSHIR	0	EP	15 42 46.7	S	43 06.0	7	0.3	7	0.2	2	0.4							183.7	19.3

OT= 10 23 16 25.8 +/- 0.1
ENSHUNADA
LAT= 34 28 +/- 2 LONG= 137 43 +/- 1
H=320 CLASS=R

OMAEZA	0	EP	23 17 07.5	ES	17 40.8	16		28										48.0	33.3
HAMAMA	0	IP	23 17 08.0	IS	17 39.2	15	2.0	15	2.0	5	2.0					D	2	26.8	31.2
SHIZUO	0	IP	23 17 09.4	IS	17 41.7	13	2.0	13	2.0	4	1.0			E	2	D	3	84.6	32.3
NAGOYA	0	P	23 17 09.6	S	17 42.8	12	1.2	7	1.6	4	1.4	N	1	W	1	U	4	103.4	33.2
IIDA	0	EP	23 17 10.0	IS	17 42.2	10	2.8	8	2.0	3	2.0							116.2	32.2
GIFU	0	EP	23 17 10.6	S	17 44.3	10	1.7	4	1.3	1	1.0							135.0	33.7
AJIRO	0	IP	23 17 11.1	S	17 44.8	8	0.4	9	0.4	3	0.5	S	0	W	0	D	1	141.6	33.7
MISHIM	0	IP	23 17 11.4	IS	17 45.4	19	3.5	19	2.2	6	1.5					D	2	132.1	34.0
OSHIMA	0	P	23 17 11.9	IS	17 45.8	17	1.2	20	1.0	8	0.8	S	4	W	2	D	8	155.8	33.9
KOFU	0	IP	23 17 12.0	IS	17 46.2	29	1.6	32	2.0	10	1.4					U	3	153.5	34.2
TOMISA	0	IP	23 17 14.0	IS	17 49.0	32	0.8	29	0.8	9	0.8	N	13	W	9	D	25	199.9	35.0
TSURUG	0	P	23 17 14.4	S	17 49.5											U		199.8	35.1
OSAKA	0	P	23 17 14.8			7	3.4	10	3.0	10	2.4					U	1	200.9	
YOKOHA	0	EP	23 17 15.0	IS	17 50.5	63	0.6	40	0.5	16	0.6	S	2	E	2	D	3	207.1	35.5
KARUIZ	0	EP	23 17 16.1	IS	17 53.9													221.2	37.8
MATSUS	0	IP	23 17 16.3	S	17 54							N		E		U		234.1	37.7
FUNATS	0	P	23 17 16.3	ES	17 45.0													149.1	28.7
TOKYO	0	P	23 17 16.5	S	17 54.6	45	0.2	20	0.2	7	0.1							230.0	38.1
KUMAGA	0	EP	23 17 17.0	ES	17 54.4	14	1.2	10	1.2	5	1.2							240.3	37.4
MAEBAS	0	IP	23 17 17.3	S	17 54.6	10	1.1	8	1.8	4	1.3					U	2	247.1	37.3
KANAZA	0	P	23 17 18.0	S	17 58.2	7		6		6		N	2	W	1	U	4	250.2	40.2
NAGANO	0	IP	23 17 18.1	ES	17 56.1	4		4		4						U	2	247.2	38.0
TOYAMA	0	P	23 17 18.4	S	17 58.4	12	2.0	10	2.4	5	1.2	N	2			U	6	252.7	40.0
KAKIOK	0	EP	23 17 20.7	S	17 59.6	56	0.7	33	1.0	16	0.5							298.3	38.9
TOYOOK	0	EP	23 17 20.8	IS	18 01.7	11		12										289.8	40.9
CHOSHI	0	EP	23 17 21.4	S	18 05.1													317.3	43.7
UTSUNO	1	EP	23 17 22.2	ES	17 59.9	38	0.7	33	0.5	20	0.7							302.4	37.7
MITO	0	IP	23 17 24.1	IS	18 05.3	22	1.0	24	0.6	9	1.4					D	2	327.9	41.2
WAJIMA	0	EX	23 17 24.4			15	0.8	15	0.8	9	1.0							332.6	
SHIRAK	0	EP	23 17 27.7	ES	18 13.3													371.3	45.6
ONAHAM	0	EX	23 17 30.5	IS	18 17.8	61	1.0	68	1.0	15	0.9							398.6	
FUKUSH	0	P	23 17 33.9	S	18 24.2	46	0.9	28	0.9	10	1.1	N	3	E	2	U	3	441.4	50.3
SENDAI	0	P	23 17 40.4	S	18 35.2	18	2.6	7	1.5	7	2.0							508.5	54.8
SAKATA	0	P	23 17 42.8	ES	18 39.6											U	4	527.4	56.8
HIKONE	0	X	23 17 46.5			13	1.7	9	1.4									161.4	
MIZUSA	0	P	23 17 50.6	S	18 54.3	15	2.2	13	0.8	9	1.2							600.8	63.7
AKITA	0	P	23 17 52.8					5	1.2							U	5	620.0	
OITA	0	X	23 18 34.2			6	3.0	7	3.2									580.0	

OT= 11 6 57 38.3 +/- 0.5
E OFF AOMORI PREF
LAT= 41 10 +/- 1 LONG= 142 20 +/- 4
H= 60 MAG=4.5 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HACHIN	1	IP	06	57	55.7	IS	58	06.8	75	1.1	95	1.0	10	1.2	N 4	E 4	D 3	98.6	11.1
HIROO	0	EP	06	57	57.5	ES	58	21.5										148.6	24.0
AOMORI	0	EP	06	58	00.9	ES	58	16.7	80	0.6	72	0.6	27	0.9				136.1	15.8
URAKAW	0	EP	06	58	01.4	EX	58	14.1	13	0.4	13	0.4	5	0.4				116.3	
HAKODA	1	IP	06	58	01.4	ES	58	17.2	14	1.1	13	1.4	7	2.3	S 2	E 4	D 7	149.9	15.8
MURORA	0	P	06	58	03.4	S	58	21.7									D	170.1	18.3
MIYAKO	0	EP	06	58	04.1	ES	58	22.7	6	0.6	6	0.0	2	0.0				171.8	18.6
MORIOK	0	EP	06	58	07.3	S	58	27.8	17	0.4	15	0.4	3	0.6				190.8	20.5
SAPPOR	0	P	06	58	11.3	ES	58	36.6	7	2.4	7	1.8					U 1	225.9	25.3
OFUNAT	0	IP	06	58	13.8	IS	58	39.0	7	0.0	6	0.2	4	0.6	N 1		D 0	239.5	25.2
MIZUSA	0	X	06	58	20.3	S	58	42.2	20	1.0	20	0.9	20	1.3				247.9	
AKITA	0	EX	06	58	22.6	EX	58	51.8	10	1.8	10	1.8	6	2.2				248.4	
FUKUSH	0	X	06	58	50.5				8	1.0	7	1.1						411.0	
MATSUS	0	P	06	59	03	X	00	20										626.1	
ONAHAM	0	X	06	59	41.8				9	1.1	7	0.9	3	0.4				484.6	

OT= 12 11 52 4.0 +/- 0.2
SE OF HOKKAIDO
LAT= 42 36 +/- 1 LONG= 143 15 +/- 1
H=110 CLASS=R

OBIHIR	3	IP	11	52	22.2	IS	52	34.3	1300	2.6	900	2.4			S 6	E 3	D134	35.6	12.1
HIROO	3	IP	11	52	22.2	IS	52	33.9	1400	3.0	1100	2.0	600	2.0	S 7	E 7	U 32	35.6	11.7
URAKAW	2	IP	11	52	24.7	IS	52	38.5	600	0.4	600	0.4	200	0.4	S 20	W 15	U 56	62.5	13.8
KUSHIR	3	IP	11	52	25.4	IS	52	40.3	550	0.7	500	0.5	150	1.0	S 12	W 35	D102	102.7	14.9
ASAHIK	0	IP	11	52	29.8	IS	52	48.8	196	2.8	54	1.0	38	1.6	S	E	D	148.3	19.0
SAPPOR	X	IP	11	52	31.5	IS	52	51.2	74	2.6	114	2.2	35	1.0	S 5	E 8	D 21	164.9	19.7
ABASHI	0	IP	11	52	34.1	IS	52	54.2	92	1.3	41	0.9						178.4	20.1
MURORA	0	P	11	52	34.9	IS	52	56.2							N 2	E 4	D 7	189.1	21.3
RUMOI	0	EP	11	52	36.4	IS	52	58.0										199.3	21.6
NEMURO	2	IP	11	52	36.7	S	52	59.0	57	0.3	78	0.4	57	0.3	S 4	W 15	D 25	207.1	22.3
HAKODA	0	IP	11	52	38.8	S	53	02.5	70	3.1	86	2.4	43	3.6	N 3	E 6	D 7	223.6	23.7
SUTTSU	0	EP	11	52	42.0	ES	53	12.7										247.6	30.7
HACHIN	2	IP	11	52	45.0	IS	53	13.6	106	2.0	134	2.0	45	3.0	S 2	W 2	U 2	271.7	28.6
AOMORI	0	IP	11	52	45.3	S	53	14.3	164	1.1	194	1.1	75	2.8			U 3	285.3	29.0
MIYAKO	1	IP	11	52	52.5	IS	53	26.9	37	2.1	36	2.1	41	2.2	N 3	W 2		345.4	34.4
WAKKAN	0	EP	11	52	53.2	ES	53	27.8	38	4.6	37	4.5	45	5.3				337.6	34.6
MORIOK	1	IP	11	52	55.7	S	53	32.0	79	0.4	63	0.4	15	0.4	S 2	W 1	U 1	366.7	36.3
OFUNAT	0	IP	11	53	01.0	IS	53	42.8	35	0.2	37	0.2	26	1.6	S 3	W 1	U 3	413.6	41.8
AKITA	0	P	11	53	03.0	S	53	45.8	40	2.6	83	3.0	36	2.4			D 5	415.0	42.8
MIZUSA	0	P	11	53	03.9	X	53	55.0	118	3.0	92	2.8	46	1.2				424.3	
ISHINO	0	P	11	53	09.4	IS	53	56.9							S 1	W 1	U 2	492.1	47.5
SAKATA	0	IP	11	53	13.2	IS	54	05.6	200	2.4	200	2.8					U 4	501.5	52.4
SENDAI	0	P	11	53	13.9	IS	54	06.0	30	2.0	46	2.0	16	2.2	S 3	W 1	U 4	521.5	52.1
YAMAGA	0	EP	11	53	16.5	S	54	11.8										541.7	55.3
FUKUSH	0	EP	11	53	22.0	S	54	19.6	28	1.0	28	0.7	17	0.7				587.4	57.6
SHIRAK	0	EP	11	53	31.1	ES	54	37.5										661.3	66.4
ONAHAM	0	EX	11	53	31.3	IS	54	32.4	28	1.1	25	1.6	16	2.5				659.1	
AIKAWA	0	IP	11	53	32.8	ES	54	37.1	7		6		5		S 1	W 0	U 1	663.0	64.3
NIIGAT	0	X	11	53	36.4	ES	54	33.4	55	3.4	42	2.8	25	3.0				631.3	
MITO	0	IP	11	53	39.5	IS	54	49.0	34	2.4	30	2.3	28	2.3			D 3	730.8	69.5
KAKIOK	0	EP	11	53	40.4	S	54	51.1	37	0.8	19	0.5	8	0.7				754.3	70.7
UTSUNO	0	EP	11	53	40.5	ES	54	49.5	19	1.7	27	1.7	10	1.5				731.9	69.0
TAKADA	0	EP	11	53	43.6	S	54	55.6										744.9	72.0
MATSUS	0	IP	11	53	48.3	S	55	06							N	W	D	800.0	77.7
KUMAGA	0	EP	11	53	48.4	ES	55	05.4	18	3.2	20	3.2	16	3.0				789.8	77.0
MAEBAS	0	EP	11	53	49.1	ES	55	03.1	16	4.6	17	4.7	15	3.4				776.4	74.0
WAJIMA	0	EP	11	53	49.2	ES	55	06.0	18	1.6	15	1.2						792.6	76.8
KARUIZ	0	EP	11	53	50.9	ES	55	11.6										803.7	80.7
TOKYO	0	EP	11	53	53	IS	55	11.2	16	4.6	14	3.8	11	3.2				824.7	78.2
TOYAMA	0	EP	11	53	54	S	55	15.6	10	4.4	12	3.8	11	4.4				834.4	81.6
KOFU	0	EP	11	53	58.6	ES	55	22.6	11	2.0	9	2.0	4	1.3				869.9	84.0
OMAEZA	0	EX	11	54					9		8							989.7	
AJIRO	0	EP	11	54	00.6	S	55	27.8	5	0.4	10	0.4	2	0.5				912.8	87.2
TOMISA	0	EP	11	54	01.6	X	54	27.5	16	2.8	10	3.6	8	2.4				902.7	
IIDA	0	X	11	54	03.4														
OSHIMA	0	P	11	54	05.6	S	55	31.6	12	0.8	14	0.8	5	0.6				932.7	86.0
MISHIM	0	EP	11	54	07.5	S	55	28.2	10	2.6	12	2.1	4	1.0				911.6	80.7
YOKOHA	0	X	11	54	08.3	IX	55	18.1	18	2.9	16	3.0	9	2.5				853.8	
GIFU	0	EP	11	54	10				7	2.5	4	2.1	2	2.4				976.4	
FUNATS	0	X	11	54	12.6	ES	55	21.3										878.5	
NAGOYA	0	EP	11	54	14.4	ES	55	57.0	11	2.4	9	2.8	3	2.6				988.4	102.6

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HIKONE	0	EP	11	54	16.3	ES	55	57.5	11	3.1	4	2.6						1014.2	101.2
OSAKA	0	EP	11	54	27	ES	56	14	13	3.6	22	4.2	6	2.4				1108.0	107.0
						EX	54	43											
CHOSHI	0	X	11	55	03.6													791.0	
HAMAMA	0	X	11	55	15	X	56	10	8	2.4	9	3.2	4	2.0				998.8	
SHIZUO	0	X	11	55	56.4				5	2.8	6	4.4	6	2.6				945.0	
HACHIJ	0	X	11	56	06.7													1097.0	

OT= 13 8 31 16.6 +/- 0.8
MIDDLE OF CHIBA PREF
LAT= 35 26 +/- 2 LONG= 140 4 +/- 6
H= 80 CLASS=U

YOKOHA	0	EP	08	31	28.3	IS	31	40.3	24	0.5	27	0.7	6	0.4				37.4	12.0
TOKYO	0	EP	08	31	31	IS	31	39.6	34		33							39.5	08.6
KAKIOK	0	EP	08	31	32.2	S	31	42.3	11	0.8	9	0.8	4	0.8				89.3	10.1
OSHIMA	0	P	08	31	35.4	IS	31	49.3	14	0.6	13	0.4	8	0.4				97.4	13.9
KUMAGA	0	EP	08	31	36.2	ES	31	50.0	8	1.0	6	1.2	3	0.8				100.3	13.8
AJIRO	0	IP	08	31	36.3	IS	31	48.8	21	0.4	16	0.4	4	0.4			D 3	98.3	12.5
KOFU	0	IP	08	31	40.0	IS	31	55.5	7	0.4	7	0.4	2	0.4			D 1	139.1	15.5
MATSUS	0	IP	08	31	47.4										S		D	207.6	

OT= 14 6 26 8.3 +/- 0.2
N OF IWATE PREF
LAT= 40 17 +/- 1 LONG= 141 17 +/- 2
H=100 CLASS=U

HACHIN	0	IP	06	26	23.8	IS	26	35.1	17	0.5	16	0.7	3	1.6			D	33.8	11.3
MORIOK	0	IP	06	26	26.3	IS	26	39.2	18	0.4	21	0.4	3	0.3	S 1	E 0	U 0	65.9	12.9
MIYAKO	0	EP	06	26	27.9	IS	26	42.0	7	1.7	10	1.7						91.9	14.1
AKITA	0	EX	06	26	29.4	S	26	46.6	8	2.2	26	2.0	6	2.0				118.8	
MIZUSA	0	P	06	26	32.2	S	26	49.4	18	2.2	15	1.0	12	1.5		E 2	U 2	128.3	17.2
OFUNAT	0	IP	06	26	32.8	IS	26	50.8	10	0.4	11	0.2	4	0.4			D 0	140.7	18.0
AOMORI	0	X	06	26	37.4													72.8	
MATSUS	0	IP	06	27	14.8										S		U	494.8	

OT= 14 8 2 30.6 +/- 0.9
E OFF KWANTO
LAT= 36 13 +/- 3 LONG= 142 9 +/- 4
H= 40 MAG=4.5 CLASS=U

ONAHAM	0	IP	08	02	54.3	ES	03	08.2	36	0.9	30	1.1	8	0.6			D 4	137.5	13.9
MITO	0	IP	08	02	54.7	IS	03	11.6								W 2	U 3	151.8	16.9
KAKIOK	0	EP	08	02	56.8	S	03	15.3	31	1.0	21	1.0	10	1.3				175.9	18.5
SHIRAK	0	EP	08	02	59.8	ES	03	20.8										199.0	21.0
UTSUNO	0	P	08	03	01.7	EX	03	33.4	10	1.2	12	1.3	9	0.9				207.6	
TOKYO	0	EP	08	03	05				10	2.5	10	2.0						223.6	
FUKUSH	0	P	08	03	05.3	ES	03	30.0	36	0.9	22	1.0	9	0.7				226.8	24.7
SENDAI	0	EP	08	03	08.6	ES	03	34.4	9	1.3	8	1.0	5	1.0				252.4	25.8
KUMAGA	0	EP	08	03	09.0	ES	03	37.6	7	1.2	7	1.2	7	2.2				248.8	28.6
MAEBAS	0	EP	08	03	11.5	X	04	00.1	5	2.1	7	2.0	4	1.8				277.8	
YOKOHA	0	X	08	03	17.4				8	0.8	12	1.0						241.4	
MATSUS	0	IP	08	03	21.2										S	W	U	355.4	
MIZUSA	0	X	08	03	26.7	ES	03	58.7	15	2.1	8	2.4	6	0.9				335.9	
AKITA	0	X	08	04	05.6						7	3.2						428.2	

OT= 14 8 55 37.5 +/- 0.2
SE OF YAMANASHI PREF
LAT= 35 26 +/- 1 LONG= 138 59 +/- 2
H= 30 MAG=3.4 CLASS=U

FUNATS	0	IP	08	55	43.8	IS	55	48.6										21.2	04.8
MISHIM	0	EP	08	55	45.8	IS	55	53.5	15	0.7	17	0.7	5	0.5				36.0	07.7
AJIRO	0	IP	08	55	46.7	IS	55	53.3	7	0.4	6	0.4	2	0.4			D 0	44.5	06.6
KOFU	0	EP	08	55	47.2	IS	55	53.6	12	0.6	15	0.6	4	0.9				46.3	06.4
KUMAGA	0	EP	08	55	52.0	ES	56	02.4	8	1.0	4	1.2	2	0.6				87.1	10.4
TOKYO	0	EP	08	55	53				13	1.6	7	2.6						75.6	
YOKOHA	0	X	08	55	57.4				18	0.5	19	0.6						61.0	
MATSUS	0	IP	08	56	00.4	IS	56	17.2							S	E	D	141.1	16.8

OT= 17 11 22 38.7 +/- 0.2
OFF URAKAWA
LAT= 42 2 +/- 2 LONG= 142 32 +/- 2
H= 80 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
URAKAW	2	EP	11 22 51.1			IS	22 59.6		212	0.4	279	0.4	48	1.0				24.7	08.5
HIROO	1	IP	11 22 53.9			IS	23 03.8								N 2	E 8	U 9	70.5	09.9
OBIHIR	1	IP	11 22 59.8			IS	23 15.2								N 3		U 19	113.6	15.4
MURORA	0	P	11 23 00.6			S	23 15.4								S	E	D 4	131.9	14.8
SAPPOR	0	IP	11 23 02.8			IS	23 19.6		64	1.0	46	1.0	25	1.0	S 1	E 2	D 6	150.7	16.8
HAKODA	0	IP	11 23 03.1			IS	23 20.4		73	1.0	71	0.5	20	1.7		E 2	D 4	149.3	17.3
KUSHIR	1	IP	11 23 07.6			ES	23 27.5		39	1.4	35	0.5	17	0.3		E 3	U 5	185.6	19.9
ASAHIK	0	IP	11 23 08.3			S	23 31.6		20	1.0	21	0.9	12	1.0			U	193.4	23.3
RUMOI	0	EX	11 23 09.0			ES	23 38.3											225.3	
HACHIN	1	IP	11 23 09.2			IS	23 29.6		23	1.2	23	1.4	13	1.1	S 2	W 2	U 2	187.6	20.4
AOMORI	0	EP	11 23 10.4			ES	23 32.7		70	1.3	62	1.1	28	1.1				199.2	22.3
MIYAKO	0	EP	11 23 15			ES	23 42.6		4	1.0	6	1.0						269.5	27.6
ABASHI	0	P	11 23 18.5			S	23 48.2		5	2.6	7	2.4	4	2.8				262.5	29.7
NEMURO	0	EP	11 23 19.3			ES	23 50.5		3	1.0	5	0.6	3	0.5				288.7	31.2
MORIOK	0	IP	11 23 19.9			IS	23 50.0		19	0.4	19	0.4	3	0.6	S 1	W 0	U 1	283.9	30.1
OFUNAT	0	IP	11 23 25.8			IS	24 00.4		5	0.4	6	0.6	4	0.8	S 0			337.1	34.6
AKITA	0	EX	11 23 26.6			EX	23 50.4		11	2.4	12	1.2	6	1.8				328.8	
MIZUSA	0	P	11 23 31.9			S	24 04.3		25	1.2	25	0.8	16	1.1				343.2	32.4
WAKKAN	0	EP	11 23 33.7			EX	24 29.6				5	2.2						382.3	
SENDAI	0	EP	11 23 38.8			ES	24 23.2		5	1.5	6	1.5	6	0.8				441.5	44.4
SAKATA	0	EX	11 23 39.1															416.0	
FUKUSH	0	X	11 23 57.1						9	1.0	7	1.2	3	1.0				506.4	
MATSUS	0	IP	11 24 13.5												S	W	U	714.9	
ONAHAM	0	X	11 24 20.3						14	1.0	11	1.0	5	0.5				582.0	
NIIGAT	0	X	11 24 50.2						8	3.0	6	2.7						545.9	

OT= 17 16 43 29.0 +/- 1.0
E OFF KWANTO
LAT= 36 13 +/- 2 LONG= 141 52 +/- 4
H= 10 MAG=4.5 CLASS=U

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHOSHI	0	P	16 43 48.7			IS	44 01.7											107.2	13.0
ONAHAM	0	IP	16 43 51.5			IS	44 05.0		58	1.6	40	1.4	13	1.7			U 7	117.9	13.5
MITO	0	IP	16 43 51.6			IS	44 06.6										U 7	126.6	15.0
						IX	44 19.0		28	1.9	31	1.4	13	2.5					
KAKIOK	0	P	16 43 53.9			S	44 07.8		29	0.7	22	0.7	11	0.7				150.4	13.9
UTSUNO	0	EX	16 43 58.4			X	44 33.3		17	2.6	20	2.0	6	2.7				182.7	
SHIRAK	0	EP	16 43 58.8			ES	44 19.2											177.6	20.4
FUKUSH	0	EX	16 44 03.4						22	1.0	28	1.2	6	0.6				211.1	
TOKYO	0	EP	16 44 04			ES	44 29		11	0.8	9	1.4	3	0.8				199.1	25.0
KUMAGA	0	EP	16 44 04.2			ES	44 39.4		7	1.2	7	1.2	6	2.2				223.3	35.2
SENDAI	0	EP	16 44 07.4			ES	44 36.0		9	1.0	8	1.0	5	0.8				242.4	28.6
YOKOHA	0	EP	16 44 09.6						7	0.7	10	0.8						217.7	
MATSUS	0	IP	16 44 17.5													E	D	330.1	
KOFU	0	EP	16 44 19.8			ES	44 50.0		6	0.8	6	0.8	3	0.9				304.7	30.2
MIZUSA	0	P	16 44 24.2			S	45 02.8		10	2.2	7	1.5	6	1.3				330.1	38.6
AKITA	0	EX	16 44 32			EX	45 34.6				5	2.6						418.4	
NIIGAT	0	X	16 44 51.9						10	2.3	10	2.2	5	2.6				313.0	

OT= 17 22 53 52.2 +/- 0.2
ERIMOMISAKI
LAT= 42 18 +/- 2 LONG= 143 9 +/- 2
H= 60 MAG=4.3 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HIROO	3	IP	22 54 02.1			IS	54 08.1								S 15	E 39	U115	13.9	06.0
URAKAW	1	EP	22 54 03.4			IS	54 12.0		249	0.4	204	0.4	38	0.6				34.4	08.6
OBIHIR	0	P	22 54 05.9			IS	54 15.9											69.1	10.0
KUSHIR	X	IP	22 54 13.0			IS	54 28.0		37	0.4	33	0.2	15	0.3	N 1	E 1	U 2	126.9	15.0
SAPPOR	0	IP	22 54 18.3			ES	54 37		5	0.6	7	0.6	4	0.8			U 2	171.2	18.7
HAKODA	0	P	22 54 22.4			S	54 44.7		6	1.1	10	1.4	3	2.4			D 0	205.2	22.3
HACHIN	0	EP	22 54 27.6			IS	54 52.8		7	0.2	5	0.2	1	0.5				239.4	25.2
MIZUSA	0	EP	22 54 48.8			S	55 25.1		8	1.5	4	1.1	2	1.4				390.8	36.3
AOMORI	0	X	22 54 57						11	0.9	11	1.1	6	0.9				257.2	
MATSUS	0	IP	22 55 32.2												N			768.0	

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OT= 19 2 49 48.3 +/- 0.2
SW OF IBARAKI PREF
LAT= 36 16 +/- 1 LONG= 140 4 +/- 1
H= 80 CLASS=R

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
UTSUNO	3	IP	02 50 00.7			IS	50 08.9		1500	0.2	2800	0.2	900	0.2	S 29	E 33	D 7	35.6	08.2
KAKIOK	4	P	02 50 01.9			S	50 09.0		2000	0.9	2300	0.9				E 5	U 61	12.0	07.1
MITO	3	IP	02 50 02.7			S	50 12.0		1150	1.4	1000	1.4	275	1.4	N 3	E 20	U203	38.4	09.3
KUMAGA	3	IP	02 50 04.4			S	50 15.4		2150	0.8	1850	0.4	500	1.0	N 22	E 28	D248	62.7	11.0
MAEBAS	2	IP	02 50 05.0			IS	50 18.6		316	2.1	272	1.9	122	1.3	S 4	E 29	D130	91.2	13.6
TOKYO	3	IP	02 50 06.0			S	50 17.6		1335		700		350		N 63	E 20	D 50	70.3	11.6
SHIRAK	2	IP	02 50 06.5			IS	50 18.2								N 20	E 7	U 83	95.5	11.7
CHICHI	3	IP	02 50 07.2			IS	50 19.2		500		600		500		N 12	E 25		93.8	12.0
CHOSHI	3	IP	02 50 07.8			IS	50 19.4		242		276		103		S 5	E 5	U 5	92.3	11.6
ONAHAM	3	IP	02 50 08.0			IS	50 22.2		2300	1.1	1300	1.0	400	1.0	N 26	E 34	U148	106.4	14.2
YOKOHA	2	IP	02 50 08.3			IS	50 24.6		700		350			0.8	S 10	E 2	U 34	99.3	16.3
KARUIZ	0	IP	02 50 11.1			S	50 25.9		250	1.3	400	1.8	150	1.2			D 6	136.3	14.8
FUNATS	2	IP	02 50 12.2			IS	50 29.9		850	3.0	400	1.4	150	1.4		W180		145.3	17.7
TOMISA	0	IP	02 50 13.5			IS	50 25.1		184	3.0	158	2.7	69	3.8	S 1	E 1	U 3	150.9	11.6
KOFU	3	IP	02 50 13.8			IS	50 31.4		395	0.2	365	0.2	203	0.2	S 5	W 17	U 26	151.5	17.6
AJIRO	2	IP	02 50 14.0			IS	50 32.4		260	0.4	228	0.4	53	0.4	S 6	W 6	U 10	161.6	18.4
MATSUS	0	IP	02 50 14.9			S	50 32								S	E	D	169.4	17.1
FUKUSH	2	IP	02 50 15.2			IS	50 34.4		200	0.9	400	0.9	400	0.9	N 27	E 6	U 15	169.3	19.2
MISHIM	2	IP	02 50 15.5			IS	50 31.1		500	1.0	400	1.0	150	0.9	S 13	W 9	U 32	164.3	15.6
TAKADA	0	P	02 50 16.1			S	50 37.8								S 9	E 9	D 50	187.1	21.7
OSHIMA	2	P	02 50 16.2			IS	50 35.8		200		400		141		S 2	W 2	U 10	178.2	19.6
NAGANO	0	P	02 50 16.4			ES	50 37.9		33		45		25					173.2	21.5
MATSUM	1	EP	02 50 17.7			ES	50 36.8		150		100		100					188.1	19.1
NIIGAT	0	IP	02 50 20.1			S	50 42.0		90	1.5	90	1.2	39	2.7	S 4	E 1	D 20	203.4	21.9
SHIZUO	X	IP	02 50 20.7			IS	50 43.1		360	0.4	360	0.4	110	0.6	S 7	W 10		207.8	22.4
YAMAGA	0	IP	02 50 21.5			ES	50 45.5										U 4	221.9	24.0
OMAEZA	0	EP	02 50 21.5						88		104							249.7	
IIDA	0	IP	02 50 21.8			IS	50 44.6		149	2.0	119	1.0	113	2.8	S 8	W 15	U 18	218.0	22.8
SENDAI	2	IP	02 50 22.6			IS	50 42.0		176	2.2	90	1.2	75	1.2	N 15	E 7	U 16	233.2	19.4
AIKAWA	0	IP	02 50 24.1			ES	50 42.2		30		25		63		S 9	E 11	D 25	253.2	18.1
ISHINO	0	EP	02 50 26.0			IS	50 45.0								N 4	E 1	U 4	263.4	19.0
TAKAYA	0	P	02 50 26.4			S	50 53.1											253.1	26.7
TOYAMA	0	P	02 50 27.7			S	50 53.1		50	2.8	61	2.6	38	2.6	N 2	E 2	D 9	260.7	25.4
HAMAMA	0	IP	02 50 28.2			ES	50 56		91	1.6	80	1.6	39	1.6			U 2	274.0	27.8
NAGOYA	0	P	02 50 31.8			S	51 03.2		170	1.2	150	1.6	68	1.8	S 0	W 1	U 1	305.8	31.4
SAKATA	0	IP	02 50 31.9			S	50 59.2		200	2.4	200	2.4	50	2.6			D 5	293.3	27.3
WAJIMA	0	IX	02 50 32.0			ES	51 00.2		70	1.0	72	1.0	17	1.4			U 16	308.9	
GIFU	0	P	02 50 33.3			ES	51 06		110	1.9	96	1.9	37	1.6				313.4	32.7
KANAZA	0	P	02 50 33.4			S	51 03.8		33		41		4		N 5	W 5	U 3	308.1	30.4
OFUNAT	0	IP	02 50 36.0			IS	51 10.8		14	0.8	21	0.8	13	1.0	N 3		U 3	342.7	34.8
MIZUSA	0	P	02 50 36.6			S	51 11.0		125	2.1	98	1.4	60	1.4		W 2	U 5	331.7	34.4
HACHIJ	0	EP	02 50 37.0			ES	51 11.6		48		50		18					351.9	34.6
FUKUI	0	P	02 50 37.3			S	51 07.6									E 8	D 6	346.3	30.3
TSURUG	0	P	02 50 39.7			ES	51 20.4									W	U	367.3	40.7
HIKONE	0	P	02 50 40.0			S	51 17.7		157	2.1	141	2.4	40	0.9				362.5	37.7
MORIOK	1	IP	02 50 42.2			S	51 22.6		23	0.4	30	0.4	13	4.4	N 1	E 0	U 0	392.8	40.4
AKITA	0	P	02 50 42.8			ES	51 18.6		55	4.6	62	2.6	30	2.6			U 4	383.1	35.8
MIYAKO	0	EP	02 50 43.2			ES	51 27.8											410.5	44.6
						EX	50 55.0		13	2.5	16	2.5	35	3.2					
KYOTO	0	EP	02 50 45.0			IS	51 34.0		30	1.2	29	1.2						416.2	49.0
NARA	0	EP	02 50 46.0						150	2.0	100	1.1	100	1.4				422.3	
OSAKA	0	P	02 50 49.6			S	51 36.0		195	3.7	130	2.4	70	2.4				448.4	46.4
						IX	51 46.6												
KOBE	0	EP	02 50 52.3			X	51 59.1											476.6	
HACHIN	0	IP	02 50 54.2			ES	51 47.3		9	3.9	21	2.4	6	3.9	S 2	W	D 1	489.5	53.1
TOYOOK	0	P	02 50 55.4			ES	51 40.3		110	1.0	83	1.1	16	0.1				480.4	44.9
SHIONO	0	EP	02 50 56.0			ES	51 43.9		13	2.8	14	3.1	3					502.4	47.9
SUMOTO	0	IP	02 50 57.0			ES	51 48.0		15	1.9	11	2.6	7	3.2			U	515.6	51.0
						IX	51 18.5												
						IX	51 28.0												
WAKAYA	0	P	02 50 57.0			S	51 43.1		45	1.2	22	1.2						499.9	46.1
AOMORI	0	EP	02 51 00.2			ES	51 49.3		44	1.9	74	2.6	20	2.3				508.9	49.1
TOKUSH	0	EP	02 51 02.7			ES	51 52.2											556.4	49.5
OKAYAM	0	IP	02 51 05.5			X	52 31.1		15	3.0	12	2.0	15	2.4		W		585.1	
TAKAMA	0	EP	02 51 06.5			X	52 29.5		9	1.3	10	2.3	4	1.4				587.5	
TURUGI	0	EP	02 51 06.5															606.6	
SAIGO	0	P	02 51 08.9			ES	52 11.0		5	2.4	6	1.6	3	1.4	N 0	E 1	D 2	605.1	62.1
HAKODA	0	EP	02 51 10.0			ES	52 18.5		9	3.1	8	3.2	6	4.3				618.6	68.5
MUROTO	0	P	02 51 12.1			ES	52 11.1		6	3.8	18	3.2	4	2.6				634.3	59.0
URAKAW	0	EP	02 51 17.1			S	52 24.8		13	3.6	13	3.6	6	3.2				694.7	67.7
OBIHIR	0	EX	02 51 29.2															786.7	
SAPPOR	0	EP	02 51 32.3						6	2.4	8	3.2	3	2.8				761.8	
OITA	0	P	02 51 42.7			X	52 54.8		20	3.1	17	3.1						842.5	
SHIMON	0	EP	02 51 43			ES	53 17		6	3.0	3	4.0	4	3.0				870.0	94.0
FUKUOK	0	EP	02 51 51			X	53 51		6	2.9	3	3.1	3	2.4				933.2	

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
KUMAMO	0	EP	02 51 51	X	54 15.4	11	2.2	11	2.0	2	2.3				939.8	
MIYAZA	0	X	02 51 51.4			3	1.4	3	1.2	6	1.6				931.1	
KOCHI	0	X	02 51	EX	53 01.6										668.4	
KUSHIR	1	X	02 51	X	52 50.5	12	0.4	11	0.3	4	3.2				852.4	
SAGA	0	X	03 51 56.3	X	54 23.1										953.7	
			OT= 19 10 21 7.8 +/- 0.2													
			NEAR MATSUSHIRO													
			LAT= 36 29 +/- 1 LONG= 138 6 +/- 1													
			H= 10 MAG=3.9 CLASS=L													
NAGANO	1	IP	10 21 12.9	S	21 15.5										21.4	02.6
MATSUM	1	IP	10 21 14.6	ES	21 18.7									U 5	29.0	04.1
KARUIZ	0	IP	10 21 17.2	IS	21 22.9							W	2	D 6	43.5	05.7
TAKADA	0	EP	10 21 21.2	S	21 29.9										70.3	08.7
MAEBAS	0	EP	10 21 24.2	ES	21 35.1	7	4.6	5	2.8	6	4.0				87.0	10.9
KOFU	0	EP	10 21 25.6	IS	21 37.2	8	0.2	9	0.3	3	0.2				99.7	11.6
NAGOYA	0	EP	10 21 39.6	ES	22 00.0	6	0.6	7	0.6	3	1.0				178.4	20.4
HIKONE	0	X	10 21 49.2			9	1.1	6	1.1	3	0.7				214.5	
			OT= 19 13 1 37.7 +/- 1.6													
			S OF KURILE IS													
			LAT= 44 45 +/-11 LONG= 151 25 +/- 8													
			H= 60 MAG=6.3 CLASS=U													
NEMURO	0	P	13 02 43.5	ES	03 38.4	206	3.0	180	3.1	154	3.6	N	E	D 1	493.3	54.9
ABASHI	0	EP	13 02 56.3	S	03 55.2	182	1.7	163	2.1	120	5.2				574.2	58.9
KUSHIR	0	EP	13 02 58.8	ES	04 01.4	211	2.8	183	2.7	231	4.6				597.7	62.6
OBIHIR	0	EP	13 03 12.2	ES	04 22.8										689.6	70.6
HIROO	0	EP	13 03 14.3	ES	04 27.4										709.7	73.1
ASAHIK	0	EP	13 03 16.3	S	04 38.6	123	3.0	154	3.0	54	3.0				730.1	82.3
URAKAW	0	EP	13 03 18.8	S	04 39.8	1600	2.6	1100	2.8	700	2.8				755.7	81.0
WAKKAN	0	EP	13 03 19.8	ES	04 41.0	67	6.0	172	12.5	91	14.9				770.3	81.2
RUMOI	0	EX	13 03 26.0												784.9	
SAPPOR	0	P	13 03 28.0	S	05 04.0	400	2.3	400	2.3	300	3.1	W	4	U 5	831.3	96.0
MURORA	0	EP	13 03 35.7	ES	05 02.2										885.1	86.5
HAKODA	0	P	13 03 39.0	ES	05 13.5	133	4.2	123	3.4	114	3.2			U 0	923.9	94.5
HACHIN	0	EP	13 03 39.5	ES	05 25.8	55	4.3	50	17.8	49	4.7				936.5	106.3
SUTTSU	0	EP	13 03 42.7	ES	05 27.4										925.3	104.7
MIYAKO	0	EP	13 03 46	ES	05 20.1	20	17.6	29	19.0	30	18.3				963.8	94.1
AOMORI	0	EP	13 03 48.4	ES	05 26.4	444	4.5	293	3.8	134	3.4				972.8	98.0
MORIOK	0	P	13 03 50.5	S	05 30.0	35	3.2	34	3.0	25	4.0				1014.3	99.5
				EX	03 54.2											
				EX	04 14.0											
				EL	06 52											
				EL	12 20											
OFUNAT	0	EP	13 03 51.4	IS	05 31.6	24	2.8	21	3.6	29	4.0				1022.0	100.2
MIZUSA	0	P	13 03 58.1	S	05 53.3	385	4.6	220	2.2	130	3.0				1055.4	115.2
FUKUSH	0	X	13 04												1200.0	
OMAEZA	0	EX	13 04			32		28		9					1593.7	
ISHINO	0	P	13 04 01.1	S	05 56.6										1096.2	115.5
AKITA	0	EX	13 04 02.0	EX	06 00.6	138	2.8	98	4.6	92	3.2				1087.2	
SAKATA	0	EP	13 04 07.0	S	06 06.3	300	3.2	250	3.2	150	2.8				1159.1	119.3
SENDAI	0	EP	13 04 07.0	ES	05 56.0	76	3.0	47	3.0	24	1.6				1134.5	109.0
				L	07 30											
YAMAGA	0	EX	13 04 13	ES	06 06.4										1170.7	
SHIRAK	0	EP	13 04 20.2	ES	06 28.7										1265.5	128.5
NIIGAT	0	E	13 04 21.6			57	3.0	40	3.8	15	3.7				1281.8	
AIKAWA	0	IP	13 04 30.6	X	07 39.8	18	1.6	25	1.7	26	1.6	E		D 0	1329.1	
				IL	09 14.0											
KAKIOK	0	P	13 04 35.2	ES	06 41	26	1.0	28	2.3						1339.3	125.8
KUMAGA	0	EP	13 04 40.4	ES	06 57.0	57	3.2	37	3.0	38	3.8				1395.3	136.6
MAEBAS	0	EP	13 04 40.9	S	06 55.7	33	3.0	32	4.0	26	3.8				1394.8	134.8
MATSUS	0	EP	13 04 41												1439.0	
KARUIZ	0	EP	13 04 42.2	S	07 08.8										1432.2	146.6
CHICHI	0	EP	13 04 43.2	ES	07 00.4										1426.5	137.2
TAKADA	0	X	13 04 44.1	S	06 56.1										1393.8	
KANAZA	0	EP	13 04 45.2	ES	07 33.3	15	1.0	23	1.1	6	1.4				1542.2	168.1
TOKYO	0	X	13 04 47	X	06 53	36	2.7	37	3.8	35	3.1				1410.8	
WAJIMA	0	EP	13 04 48.4	ES	07 08.0	37	3.8	50	3.8	20	3.4				1465.4	139.6
				EL	07 42.0											
AJIRO	0	EP	13 04 52.2	ES	07 15.9	9	3.0	10	3.2	5	3.4				1503.9	143.7
KOFU	0	EP	13 04 53.2	ES	07 26.4	20	2.0	24	2.0	12	3.0				1485.3	153.2
TOYAMA	0	EP	13 04 54	ES	07 28	22	4.8	21	4.2	24	4.4				1492.7	154.0
IIDA	0	X	13 04 57.4													
UTSUNO	0	X	13 04	ES	06 42.8	33	1.8	43	2.2						1333.1	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
TOMISA	0	X	13 04			66	3.0	46	3.8	24	2.4				1471.9	
FUNATS	0	X	13 05 00.3	X	07 05.2										1486.2	
MISHIM	0	EP	13 05 04.2	ES	07 24.1	19	26.6	12	17.8	9	2.8				1508.1	139.9
YOKOHA	0	X	13 05 04.3	EX	07 09.3	48	3.4	42	4.0	31	3.1				1437.8	
SHIZUO	0	EX	13 05 04.4			14	6.6	15	15.1	14	4.2				1551.2	
GIFU	0	EP	13 05 07.9	ES	08 02	10	12.0	13	16.0	10	17.0				1620.5	174.1
HIKONE	0	EP	13 05 10.9	ES	08 04.3	18	25.7	18	23.6	11	22.7				1664.0	173.4
NAGOYA	0	EP	13 05 11.2	ES	07 39.2	22	2.4	17	2.4	6	2.2				1625.6	148.0
HAMAMA	0	EP	13 05 15	ES	07 56	28	2.6	25	3.6	8	3.2				1614.9	161.0
KYOTO	0	EP	13 05 17.6	ES	08 16.8	9	18.0	10	14.6	6	13.4				1717.8	179.2
TOYOOK	0	EP	13 05 19.0	S	08 28.0	26	17.0	26	17.0	23	17.0				1740.0	189.0
OSAKA	0	P	13 05 24.8			45	5.0	56	4.5	16	2.8				1758.7	
SAIGO	0	EP	13 05 26.2	ES	08 26.2	11	16.0	13	21.0	13	16.0	N	1	E 1 D 0	1797.2	180.0
				EL	11 11											
KOBE	0	EX	13 05 30.2												1779.2	
SHIONO	0	EP	13 05 30.6	S	08 52.1	13	4.6	19	5.0	4	1.9				1839.9	201.5
				EL	10 43.5											
SUMOTO	0	EP	13 05 30.8	S	08 45.8	15	14	14	14	13	13				1824.4	195.0
				L	11 18											
OKAYAM	0	EP	13 05 34.0	S	09 02.0	20	14.0	20	16.0	30	15.0				1864.7	208.0
TAKAMA	0	EP	13 05 36.3	ES	08 54.2	17	18.8	17	19.2	4	17.9				1882.4	197.9
WAKAYA	0	P	13 05 37.0	S	08 48.0	10		11							1815.9	191.0
TURUGI	0	EP	13 05 41.6												1915.4	
TOKUSH	0	EP	13 05 41.9	ES	08 46.3										1867.2	184.4
HAMADA	0	P	13 05 46.0	S	09 13.9	28	6.8	23	6.0	15	6.0	S	1	U 2	1977.1	207.9
HIROSH	0	EP	13 05 46.1	ES	09 16.7	18	17.9	11	14.0	14	18.0				1989.6	210.6
MUROTO	0	P	13 05 50.3	ES	09 10.0	19	13.0	19	7.0	15	15.0				1957.4	199.7
SHIMON	0	EP	13 06 02	ES	09 38	17	5.0	19	4.6	15	4.4				2123.8	216.0
OITA	0	P	13 06 03.5	S	08 46.9	114	4.9	92	4.9	18	2.9				2129.3	163.4
FUKUOK	0	EP	13 06 09.0	ES	09 53.0	13	4.4	10	5.0	19	4.0			U 5	2190.2	224.0
KUMAMO	0	EP	13 06 15.7	S	10 01.8	45	4.2	26	5.2	8	16.1				2223.9	226.1
MIYAZA	0	P	13 06 16.0	S	10 11.2	22	8.4	33	4.6	17	7.6				2243.8	235.2
SAGA	0	IP	13 06 19.6	S	10 13.8										2219.8	234.2
NAGASA	0	P	13 06 19.8	S	10 16.0							S		W U	2289.2	236.2
FUKUE	0	EP	13 06 30.0	ES	10 28.0	16	5.0	10	8.1	8	6.0				2363.1	238.0
CHOSHI	0	X	13 06 30.6												1344.5	
YAKUSH	0	EP	13 06 31.0	EX	10 39.0	19	8.6	13	7.6	9	7.0				2422.2	
KAGOSH	0	EP	13 06 31.2	ES	10 28.7	35	1.9	47	3.8	15	1.8				2329.3	237.5
ASHIZU	0	EP	13 06 57.1	S	09 36.8	14	5.0	11	4.8	11	5.0				2075.5	159.7
ASOSAN	0	EX	13 10 24												2193.6	
			OT= 19 17 20 34.3 +/- 0.5													
			OFF MIYAGI PREF													
			LAT= 38 14 +/- 1 LONG= 141 59 +/- 2													
			H= 40 MAG=4.2 CLASS=L													
ISHINO	X	EP	17 20 46.6	IS	20 53.6							N	1	E 2 D 6	63.1	07.0
SENDAI	1	IP	17 20 50.3	IS	21 01.2	49	0.8	16	0.5	15	0.2	N	1	E 5 D 5	94.9	10.9
OFUNAT	1	IP	17 20 51.0	IS	21 01.0	41	0.0	54	0.0	14	0.2	S	3	D 2	94.8	10.0
MIZUSA	0	P	17 20 55.5	S	21 07.9	10	1.9	15	0.8	6	0.8			E 3 D 2	124.3	12.4
FUKUSH	0	P	17 20 57.5	ES	21 12.6	18	0.8	20	0.6	4	0.6				142.6	15.1
MIYAKO	0	EP	17 20 58.7	IS	21 13.7	7	0.0	7	0.0	4	0.0				156.7	15.0
MORIOK	0	P	17 21 01.5	IS	21 19.2	12	0.4	15	0.4	5	0.4	S	1	E 0 D 0	177.1	17.7
AKITA	0	EX	17 21 11.1					6	2.0						231.9	
HACHIN	0	EP	17 21 11.5	S	21 41.3	6	0.4	4	0.4	1	0.6				257.5	29.8
MATSUS	0	IP	17 21 28.8											U	383.5	
			OT= 20 9 26 46.2 +/- 0.3													
			MIDDLE OF SAITAMA PREF													
			LAT= 36 3 +/- 2 LONG= 139 36 +/- 3													
			H= 50 MAG=3.3 CLASS=U													
KUMAGA	0	EP	09 26 55.2	ES	27 01.6	6	0.2	5	0.6	4	0.2				22.1	06.4
UTSUNO	0	P	09 26 58.3	S	27 08.2	10	0.1	7	0.2	4	0.5				60.3	09.9
YOKOHA	0	EP	09 26 59.9	IS	27 08.2	18	0.4	11	0.4						68.2	08.3
MATSUS	0	IP	09 27 07.6	S	27 24									D	136.2	16.4
			OT= 20 18 7 22.8 +/- 0.2													
			SW OF IBARAKI PREF													
			LAT= 36 26 +/- 2 LONG= 140 0 +/- 1													
			H= 80 CLASS=L													
UTSUNO	1	P	18 07 35.2	IS	07 43.4	33	0.2	30	0.2	13	0.2			D 6	17.0	08.2

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
KAKIOK	0	P	18 07 35.2	S	07 42.9	19	0.4	30	0.4	8	0.2				28.3	07.7
MITO	0	IP	18 07 36.8	S	07 45.8	7	0.4	13	0.3	4	0.2		E	1 D 1	42.7	09.0
KUMAGA	0	EP	18 07 38.4	S	07 48.8	20	0.4	11	0.2	5	0.2				63.7	10.4
KOFU	0	EP	18 07 48.4	ES	08 05.2	7	0.4	7	0.3	3	0.3				155.3	16.8
MATSUS	0	IP	18 07 49.1	S	08 07									U	160.9	17.9
FUKUSH	0	X	18 08 07.7			7	1.0	6	0.8	2	0.7				152.8	

OT= 20 21 14 29.2 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 35 +/- 1 LONG= 138 14 +/- 2
H= 10 CLASS=L

MATSUS	2	P	21 14 31.3	S	14 32.1										5.5	00.8
NAGANO	2	IP	21 14 32.8	S	14 34.5										9.1	01.7
KARUIZ	0	EP	21 14 37.7	S	14 42.3										39.3	04.6
MATSUM	0	IP	21 14 39.6	IS	14 45.3										44.3	05.7
TAKADA	0	EP	21 14 40.5	S	14 48.1										57.9	07.6

OT= 20 22 31 33.1 +/- 1.7
S OF KURILE IS
LAT= 43 59 +/-08 LONG= 151 44 +/-11
H= 40 MAG=5.7 CLASS=U

NEMURO	0	P	22 32 41.9	ES	33 40.6	30	2.0	30	1.8	18	1.2	S	W	U	501.2	58.7
ABASHI	0	P	22 32 54.5	S	34 07.6	28	1.3	24	2.0						597.5	73.1
KUSHIR	0	EP	22 32 56.6	ES	33 59.0	92	0.7	43	0.7	41	5.1				604.0	62.4
OBIHIR	0	EX	22 33 08.5												698.8	
HIROO	0	EP	22 33 10.2	ES	34 25.9										710.2	75.7
ASAHIK	0	P	22 33 13.5	S	34 42.0	22	2.0	24	2.2	12	2.4				752.5	88.5
URAKAW	0	EP	22 33 16.1	ES	34 39.0	206	1.6	172	1.6	99	1.6				756.6	82.9
RUMOI	0	EX	22 33 19.3												810.3	
WAKKAN	0	EP	22 33 19.8	ES	34 47.2	7	2.8	17	13.6	12	3.3				812.6	87.4
SAPPOR	0	EP	22 33 24.0	ES	35 08	42	2.4	62	2.4	24	4.6				846.9	99.0
MURORA	0	EP	22 33 30.0	ES	35 01.2										893.3	91.2
HAKODA	0	EP	22 33 35.8	S	35 12.6	27	4.8	16	2.6	12	3.4				927.6	96.8
HACHIN	0	EP	22 33 36.9	ES	35 12.5	7	1.7	10	1.9	7	2.3				925.1	95.6
AOMORI	0	EP	22 33 40.5	ES	35 19.5	65	1.5	60	2.0	21	1.4				966.9	99.0
MORIOK	0	P	22 33 48.7	S	35 28.3	5	1.8	7	0.4	4	2.0			U 0	997.4	99.6
				EL	37 50											
OFUNAT	0	EP	22 33 49.0	S	35 31.3	5	1.6	5	1.4	7	1.8				997.8	102.3
MIZUSA	0	P	22 33 51.9	S	35 41.1	33	2.0	38	1.5	28	2.0				1034.3	109.2
AKITA	0	X	22 34 01.7			21	4.0	20	3.2	15	3.6				1074.7	
SENDAI	0	X	22 34 04.0	ES	35 50.1	11	2.0	11	2.0	5	1.8				1108.4	
FUKUSH	0	X	22 34 12.8			11	1.0	6	0.9	2	0.6				1172.6	
UTSUNO	0	EX	22 34 20.2	EX	36 40.5	7	1.7	5	1.2	3	1.5				1301.6	
MITO	0	X	22 34 29.0	ES	36 39.4	9	2.0	8	2.6	6	2.0				1275.8	
KAKIOK	0	X	22 34 34	X	36 57	7	1.0	8	1.0	3	0.8				1305.0	
KUMAGA	0	X	22 34 37.2	X	37 22.0	7	2.2	9	5.0	5	3.4				1363.8	
MATSUS	0	IP	22 34 38.8	EL	40 09									U	1413.8	
YOKOHA	0	X	22 34 59.2			7	3.0	8	2.0						1402.0	
HAMAMA	0	EP	22 35 06	ES	37 44	5	3.6	4	3.0	3	2.0				1583.1	158.0
OSAKA	0	EP	22 35 24	EX	44 46	12	5.0	16	4.2						1733.9	
				X	55 56.0											
OITA	0	P	22 36 01.3	S	40 03.4	10	4.6	11	4.2	6	3.6				2110.3	242.1
SAKATA	0	X	22 36 07.6												1141.6	
MIYAZA	0	EP	22 36 14.0	S	40 29.0	4	4.6	2	5.2	6	2.4				2220.9	255.0
KAGOSH	0	EP	22 36 25.1			13	2.3	9	2.3	3	1.3				2307.5	
ONAHAM	0	X	22 36 45.5			16	1.4	11	1.7	6	2.0				1204.1	

OT= 20 22 52 7.8 +/- 2.4
S OF KURILE IS
LAT= 44 8 +/-12 LONG= 151 34 +/-12
H= 40 MAG=5.8 CLASS=U

ABASHI	0	EP	22 53 27.5	X	54 46.0	29	2.0	28	3.1						583.6	
KUSHIR	0	EP	22 53 29.8	ES	54 34.8	67	1.0	49	0.7	38	4.4				593.5	65.0
HIROO	0	EP	22 53 44.4	ES	55 02.2										701.0	77.8
ASAHIK	0	IP	22 53 46.1	S	55 17.0	21	2.6	18	3.0	9	2.2			U	738.9	90.9
OBIHIR	0	EX	22 53 46.3												687.8	
URAKAW	0	EP	22 53 50.3	ES	55 08.7	165	1.8	128	1.8	72	2.2				747.4	78.4
WAKKAN	0	EP	22 53 51.8	ES	55 19.3	9	3.6	14	5.6	8	3.2				795.6	87.5
NEMURO	0	X	22 53	ES	54 08.6	25	5.0	26	1.8	20	5.2	S	W	U	490.0	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
SAPPOR	0	P	22 54 00.3	ES	55 35.4	35	3.0	40	2.6	26	4.2				834.7	95.1
HAKODA	0	EP	22 54 08.5	ES	55 46.4	24	3.6	16	2.0	12	3.6			U	918.0	97.9
HACHIN	0	EP	22 54 10.7	ES	55 44.9	5	3.6	10	1.8	6	2.8				918.9	94.2
MORIOK	0	P	22 54 21.8	IS	55 59.7	5	0.4	5	0.4	5	2.0			D 0	992.5	97.9
				EL	58 24											
AKITA	0	EX	22 54 31.3	EX	56 22	20	3.6	18	2.6	14	4.0				1068.8	
MIZUSA	0	X	22 54 36.0	S	56 19.0	30	2.0	36	1.8	20	1.0				1030.5	
SENDAI	0	EP	22 54 37.0	X	55 27.0	10	3.0	8	3.0	4	1.5				1105.9	
FUKUSH	0	X	22 54 51.5			11	1.0	7	1.1	2	1.0				1170.4	
AOMORI	0	X	22 54	ES	55 53.1	52	1.3	43	1.3	23	1.4				959.5	
MITO	0	X	22 55 01.7	ES	57 08.6	7	2.2	9	2.7	6	2.2				1275.6	
KUMAGA	0	EP	22 55 09.0	X	57 54.6	7	2.2	6	3.0	5	4.0				1362.8	
MATSUS	0	P	22 55 11												1411.2	
HAMAMA	0	EP	22 55 43	ES	58 26	5	3.4	4	2.6	2	2.0				1582.2	163.0
SAKATA	0	X	22 56 33.0												1137.0	
OITA	0	P	22 56 35.3	S	00 37.3	13	3.7	8	2.9	5	3.3				2106.3	242.0
KAGOSH	0	EP	22 56 55.8	ES	00 54.0	14	2.6	7	2.8	1	1.1				2304.2	238.2
YOKOHA	0	X	22 57 43.6			7	3.0								1402.1	

OT= 21 0 46 31.2 +/- 2.1
S OF KURILE IS
LAT= 44 14 +/-18 LONG= 151 7 +/-13
H= 60 MAG=5.3 CLASS=U

NEMURO	0	P	00 47 32.4	ES	48 21.3	5	1.6	7	1.3	4	2.4	S	W	U	456.4	48.9
ABASHI	0	P	00 47 45.5	S	48 44.9	5	1.6	5	1.6						547.5	59.4
KUSHIR	0	EP	00 47 46.8	ES	48 45.3	25	1.2	14	1.4	9	1.2				560.3	58.5
HIROO	0	EP	00 48 02.7	X	49 39.8										669.2	
OBIHIR	0	EX	00 48 03.2												654.1	
ASAHIK	0	P	00 48 04.9	EX	49 22.0	5	2.8	6	2.4	3	1.6				703.0	
URAKAW	0	EP	00 48 07.8	S	49 23.1	50	1.8	38	2.6	12	1.8				715.5	75.3
SAPPOR	0	EP	00 48 21			8	2.2	12	1.8	3	6.0				799.9	
HAKODA	0	EP	00 48 27.0	ES	49 56.0	5	2.0	5	3.8	3	3.8				885.6	89.0
MIZUSA	0	P	00 48 48.6	ES	50 23.4	20	1.2	20	0.9						1004.9	94.8
MATSUS	0	P	00 49 30.1	E	52 03										1387.0	
AOMORI	0	X	00 50 04.7			17	1.8	13	1.6						929.3	

OT= 21 6 54 49.0 +/- 0.2
SW OF IBARAKI PREF
LAT= 36 9 +/- 1 LONG= 139 50 +/- 1
H= 50 MAG=5.1 CLASS=S

UTSUNO	3	IP	06 54 59.2	IS	55 06.3	1200	0.2	1000	0.3	600	0.6	N	4 W	4 U 46	44.1	07.1
KAKIOK	3	P	06 54 59.5	ES	55 05	700	0.7	400	0.8	300	0.8	N	4 E	10 U113	33.6	05.5
KUMAGA	3	IP	06 55 00.6	S	55 08.6	1100	0.6	2000	0.6	250	0.4	N	8 E	6 D 65	40.3	08.0
TOKYO	2	IP	06 55 01.6	IS	55 11.0	276	0.4	210	0.6					D	52.0	09.4
MITO	2	IP	06 55 02.0	IS	55 11.4	194	0.6	178	0.6	155	0.7	N	8 E	22 U134	62.7	09.4
MAEBAS	3	IP	06 55 02.6	IS	55 11.9	500	1.2	300	0.8	463	3.5	S	11 E	33 D135	74.5	09.3
FUNATS	2	IP	06 55 05.8	IS	55 23.5	200	1.1	200	0.8	50	0.4				120.7	17.7
YOKOHA	2	IP	06 55 06.1	IS	55 18.2	310	0.8	250	0.5	79		S	2 E	4	80.8	12.1
CHOSHI	1	IP	06 55 06.2	IS	55 17.8	70		53				S	4 E	4	102.6	11.6
KARUIZ	0	P	06 55 07.2	S	55 22.0	150	1.4	200	1.0	100	1.4			D	117.1	14.8
SHIRAK	1	IP	06 55 07.7	IS	55 20.6									D 4	113.0	12.9
KOFU	1	IP	06 55 09.4	IS	55 26.0	281	0.2	268	0.2	73	0.8	N	2 E	2 D 5	127.0	16.6
ONAHAM	2	IP	06 55 10.0	IS	55 24.6	243	0.6	236	0.9	90	0.8	N	10 E	6 U 33	130.4	14.6
AJIRO	1	IP	06 55 10.3	IS	55 26.0	79	0.4	80	0.4	19	0.4			D 0	139.7	15.7
TOMISA	0	IP	06 55 10.5	IS	55 27.6	138	3.0	72	2.1	61	2.7	N	1 W	3 D 5	136.4	17.1
MATSUS	0	IP	06 55 11.0	S	55 27							S	E	D	152.1	16.0
MISHIM	0	IP	06 55 11.9	IS	55 27.3	114	0.7	122	0.9	44	0.7			D 2	141.3	15.4
OSHIMA	2	P	06 55 12.9	IS	55 29.9	140	0.5	112	0.5	59	0.3			D 7	159.4	17.0
NAGANO	0	IP	06 55 14.4	ES	55 34.1	26		23		20		S	1 E	1 D 14	157.3	19.7
MATSUM	0	IP	06 55 14.6	S	55 33.5									D 2	167.6	18.9
TAKADA	0	P	06 55 15.0	S	55 30.6										176.8	15.6
FUKUSH	1	IP	06 55 16.8	IS	55 37.4	132	0.9	111	1.4	28	0.9	S	2 W	1 D 2	187.2	20.6
SHIZUO	0	IP	06 55 17.2	IS	55 37.8	81	0.4	55	1.2	31	0.6	S	1 W	2 U 3	183.7	20.6
IIDA	0	IP	06 55 19.0	IS	55 41.6	78	1.8	58	2.0	30	0.6		W	2 U 8	194.0	22.6
NIIGAT	0	IP	06 55 20.1	S	55 45.2	63	2.7	71	2.2	30	3.0				207.3	25.1
YAMAGA	0	P	06 55 23.4	IS	55 51.2									D 1	237.9	27.8
AIKAWA	0	IP	06 55 24.2	X	55 40.4	18		17				S	3 E	4 D	251.1	
TOYAMA	0	EP	06 55 24.3	ES	55 42.1	21	2.6	20	2.0						243.3	17.8
OMAEZA	0	EP	06 55 24.6			59		68		17					226.0	
HAMAMA	0	P	06 55 25.6	S	55 52.1	31	1.4	35	2.4	17	1.6			U 1	249.5	26.5
SENDAI	0	P	06 55 25.6	IS	55 51.6	54	1.8	37	1.2	29	1.8				252.5	26.0
NAGOYA	0	EP	06 55 28.8	ES	55 56.4	48	1.0	44	1.6	35	1.2	S	0 W	0 U 1	281.4	27.6
WAJIMA	0	IP	06 55 30.0	ES	55 56.6	35	1.0	40	1.0	8	1.0			D 5	295.9	26.6
KANAZA	0	P	06 55 30.2	ES	56 06.0	8		15		9				D 2	289.2	35.8

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S S	N-S A/T *	N-S A/T S	E-W *	E-W S	E-W A/T *	E-W A/T S	U-D *	U-D S	U-D A/T *	U-D A/T S	INITIAL MOTION N-S	INITIAL MOTION E-W	INITIAL MOTION U-D	DELTA KM	S-P S
GIFU	0	EP	06 55 30.9	S	56 00.1	36	1.9			34	1.4			16	0.8						289.6	29.2
ISHINO	0	P	06 55 31.4	IS	56 07.8																284.1	36.4
HACHIJ	0	IP	06 55 34.6	ES	56 08.0	18	1.0			19	1.0			8	1.0					D 2	338.1	33.4
FUKUI	0	P	06 55 35.0	X	56 24.0																324.9	
HIKONE	0	P	06 55 37.5	S	56 12.9	64	0.8			29	0.6			10	0.7						338.7	35.4
TSURUG	0	P	06 55 37.7	EX	56 25.1																344.6	
OFUNAT	0	EP	06 55 38.9	IS	56 14.1	6	1.0			7	1.2			7	1.8						363.4	35.2
MIZUSA	0	P	06 55 39.0	S	56 16.0	30	6.2			12	4.1			28	6.2						350.4	37.0
OWASE	0	P	06 55 42.5			5	1.6			5	1.6			3	1.8						404.1	
KYOTO	0	EP	06 55 42.6	ES	56 34.4	15	1.6			13	1.4			6	1.4						392.2	51.8
NARA	0	EP	06 55 43.5																		397.9	
AKITA	0	EX	06 55 44.5	EX	56 29.4	14	2.8			17	3.2			11	2.8						396.7	
MORIOK	0	IP	06 55 46.0	ES	56 24.2	6	0.4			6	0.4			3	1.2			S	0 W 0	D 0	410.7	38.2
OSAKA	0	P	06 55 51.0	S	56 34.0	41	2.4			43	1.9			25	2.0						424.1	43.0
				IX	56 48.3																	
TOYOOK	0	EP	06 55 52.4	X	56 50.5	28	1.1			30	1.2			7	0.7						457.9	
SUMOTO	0	P	06 55 55.3	ES	56 54.6	5	2.1			4	2.8			3	2.0					D	491.2	59.3
TOKUSH	0	EP	06 55 59.3	ES	56 54.4																531.9	55.1
AOMORI	0	EX	06 56 02	EX	57 13	14	2.4			14	4.3										524.6	

OT= 21 23 2 7.7 +/- 0.3
MIDDLE OF CHIBA PREF
LAT= 35 38 +/- 2 LONG= 140 9 +/- 2
H= 90 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S S	N-S A/T *	N-S A/T S	E-W *	E-W S	E-W A/T *	E-W A/T S	U-D *	U-D S	U-D A/T *	U-D A/T S	INITIAL MOTION N-S	INITIAL MOTION E-W	INITIAL MOTION U-D	DELTA KM	S-P S
YOKOHA	0	EP	23 02 22.5	IS	02 31.3	51	0.5			57	0.5			11	0.5						49.9	08.8
TOKYO	X	IP	23 02 23.0	IS	02 32.2	43	0.5			27				10				S		U 9	35.9	09.2
KAKIOK	0	P	23 02 23.7	S	02 31.5	22	0.5			34	0.7			12	0.5						66.5	07.8
CHOSHI	0	EP	23 02 24.2	S	02 36.0																63.6	11.8
MITO	0	IP	23 02 26.5	S	02 37.6	8	0.4			8	0.5			4	0.6			S	0	U 1	87.6	11.1
UTSUNO	0	P	23 02 27.5	S	02 39.6	19	0.1			17	0.2			8	0.5						104.4	12.1
KUMAGA	0	EP	23 02 27.6	ES	02 42.0	5	1.0			6	1.0			3	0.8						89.5	14.4
AJIRO	0	IP	23 02 28.9	IS	02 42.3	29	0.4			25	0.4			9	0.4					U 2	116.0	13.4
OSHIMA	0	P	23 02 29.5	IS	02 42.9	17	0.5			18	0.4			7							119.5	13.4
FUNATS	X	IP	23 02 30.3	IS	02 45.0																126.6	14.7
KOFU	0	EP	23 02 34.0	IS	02 49.2	13	0.3			16	0.3			4	0.3						144.2	15.2
SHIZUO	0	EP	23 02 37.6	S	02 57.4	10	0.6			4	0.6			2	0.6						174.6	19.8
MATSUS	0	IP	23 02 39.5	S	03 00													N	E	D	201.6	20.5

OT= 22 0 4 58.6 +/- 0.1
S OF NAGANO PREF
LAT= 35 44 +/- 1 LONG= 138 8 +/- 1
H= 0 MAG=4.0 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S S	N-S A/T *	N-S A/T S	E-W *	E-W S	E-W A/T *	E-W A/T S	U-D *	U-D S	U-D A/T *	U-D A/T S	INITIAL MOTION N-S	INITIAL MOTION E-W	INITIAL MOTION U-D	DELTA KM	S-P S
IIDA	3	EP	00 05 08.4	ES	05 12.8	97 ?				121				68							36.7	04.4
KOFU	2	IP	00 05 08.4	IS	05 13.8	185	0.2			161	0.2			68	0.2			N	2 W 2	D 7	39.2	05.4
FUNATS	1	IP	00 05 11.9	IS	05 19.7																62.7	07.8
MATSUM	0	EP	00 05 12.1	IS	05 19.5																58.4	07.4
KARUIZ	0	EP	00 05 14.8	IS	05 24.0																77.1	09.2
MATSUS	0	IP	00 05 15.5	S	05 26													N	E	U	89.6	10.5
SHIZUO	0	P	00 05 17.3	S	05 28.5	11	0.4			12	0.4			3	1.6			N	2	D 2	87.9	11.2
NAGANO	0	P	00 05 18.8	S	05 32.1	6				8				8							103.0	13.3
MISHIM	0	EP	00 05 18.8	ES	05 29.4	15	0.8			13	0.7			4	0.4						99.9	10.6
MAEBAS	0	EP	00 05 19.8			7	1.2			5	1.0			6	0.4						112.0	
AJIRO	0	IP	00 05 20.3	ES	05 34.3	5	0.4			5	0.4			2	0.5					D 0	116.3	14.0
NAGOYA	0	P	00 05 21.6	ES	05 37.4	11	0.4			12	0.6			5	0.4			N	0 E 1	D 1	123.1	15.8
HAMAMA	0	P	00 05 21.7	S	05 35.7	12	0.8			10	0.8			5	0.6					D 1	119.7	14.0
GIFU	0	P	00 05 22.3	S	05 38.2	8	0.4			8	0.6										129.5	15.9
KUMAGA	0	EP	00 05 22.4	ES	05 37.6	12	1.4			6	0.8			5	1.6						121.9	15.2
TOKYO	0	P	00 05 25.5	S	05 44.3	8				6											147.1	18.8
YOKOHA	0	EP	00 05 25.6	IS	05 44.9	16	0.6			18	0.5										141.8	19.3
TOYAMA	0	EP	00 05 26.2	ES	05 39.8	9	2.0			10	2.0										136.3	13.6
KANAZA	0	EP	00 05 28.0	ES	05 48.0	7				6											161.2	20.0
UTSUNO	0	P	00 05 30.1	ES	05 51.5	8	1.6			9	1.0										180.6	21.4
FUKUI	0	P	00 05 30.1	S	05 50.3														E 2		175.7	20.2
TSURUG	0	EP	00 05 30.8	S	05 53.2																187.4	22.4
HIKONE	0	EP	00 05 31.6	S	05 52.3	18	1.1			15	0.6			4	0.6						178.6	20.7
WAJIMA	0	EX	00 05 35.0			9	0.8			9	0.8			9	0.6						214.5	
MITO	0	IP	00 05 35.7	S	06 01.8	6	1.4			7	1.0			4	1.6				W 1	D 1	222.5	26.1
OSAKA	0	X	00 05 47.8	S	06 20.2	9	3.0			8	3.2										265.2	
TOYOOK	0	EP	00 05 50.9	ES	06 28.8	10	1.0			10	1.0										300.8	37.9

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OT= 22 4 19 46.5 +/- 1.1
OFF FUKUSHIMA PREF
LAT= 37 37 +/- 3 LONG= 142 15 +/- 5
H= 20 MAG=4.1 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S S	N-S A/T *	N-S A/T S	E-W *	E-W S	E-W A/T *	E-W A/T S	U-D *	U-D S	U-D A/T *	U-D A/T S	INITIAL MOTION N-S	INITIAL MOTION E-W	INITIAL MOTION U-D	DELTA KM	S-P S
SENDAI	0	IP	04 20 09.6	IS	20 24.8	11	0.4			14	0.4			5	0.3					D 2	138.5	15.2
FUKUSH	0	EP	04 20 12.5	ES	20 30.0	11	0.8			9	0.7			3	0.6			N	E 1	D	157.3	17.5
OFUNAT	0	EP	04 20 13.6	ES	20 32.2	4	0.2			5	0.2			1	0.6						167.0	18.6
				IX	20 23.6																	
MIZUSA	0	P	04 20 20.1	S	20 40.9	18	1.3			7	1.1			8	0.6						194.6	20.8
MORIOK	0	P	04 20 24.0	IS	20 54.0	6	0.5			7	0.4			1	1.2						249.3	30.0
MATSUS	0	P	04 20 41	ES	21 32																378.7	51.0

OT= 22 15 25 57.6 +/- 0.3
NE OF AOMORI PREF
LAT= 41 7 +/- 2 LONG= 141 22 +/- 4
H= 90 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S S	N-S A/T *	N-S A/T S	E-W *	E-W S	E-W A/T *	E-W A/T S	U-D *	U-D S	U-D A/T *	U-D A/T S	INITIAL MOTION N-S	INITIAL MOTION E-W	INITIAL MOTION U-D	DELTA KM	S-P S
HACHIN	1	IP	15 26 14.0	IS	26 24.1	17	0.6			10	0.6			3	1.6					D 2	67.1	10.1
HAKODA	0	P	15 26 16.3	IS	26 29.8	7	0.9			5	1.2			2	0.8					U 1	92.6	13.5
MORIOK	0	P	15 26 23.8	IS	26 43.0	8	0.4			8	0.4			1	0.4			S	1 W 1	U 1	158.6	19.2
URAKAW	0	EP	15 26 25.4	S	26 43.9	7	0.4			10	0.4			1	0.4						165.1	18.5
AOMORI	0	X	15 26 25.8			55	1.4			58	1.6			17	1.2						59.3	
OBIHIR	0	EX	15 26 36.9	ES	27 01.0																252.5	
KUSHIR	0	EP	15 26 41.6	ES	27 12.0	8	0.2			6	0.3			2	0.2						325.0	30.4
MATSUS	0	P	15 27 17																		577.4	

OT= 24 13 11 28.7 +/- 0.5
OFF SANRIKU
LAT= 40 15 +/- 1 LONG= 144 48 +/- 3
H=110 CLASS=R

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S S	N-S A/T *	N-S A/T S	E-W *	E-W S	E-W A/T *	E-W A/T S	U-D *	U-D S	U-D A/T *	U-D A/T S	INITIAL MOTION N-S	INITIAL MOTION E-W	INITIAL MOTION U-D	DELTA KM	S-P S
MIYAKO	0	P	13 12 06.1	S	12 29.9	9	1.0			7	1.0							S	1 W 3		251.1	23.8
URAKAW	1	IP	13 12 09.8	S	12 37.9	23	0.4			77	0.4			8	0.6			N	1 W 2	U 3	271.3	28.1
HIROO	0	EP	13 12 09.8	ES	12 34.3																257.8	24.5
HACHIN	0	IP	13 12 10.0	IS	12 37.9	10	0.2			8	0.2							N	1 W 2	U 1	279.8	27.9
OFUNAT	0	IP	13 12 11.7	IS	12 39.9	11	0.8			7	0.4			6	1.4			S	2 W 4	U 4	295.5	28.2
KUSHIR	1	P	13 12 13.0	S	12 43.0	60	0.2			102	0.2			37	0.2						304.9	30.0
MORIOK	0	IP	13 12 15.0	ES	12 46.5	8	0.4			8	0.4			2	0.3			S	1 W 1	U 2	316.3	31.5
OBIHIR	0	EX	13 12 15.5																		324.5	
NEMURO	0	P	13 12 17.3	S	12 52.0	4	0.8			6	0.4			3	0.7			S	W	D	348.1	34.7
AOMORI	0	EX	13 12 17.8			16	1.3			20	1.1			9	1.1						346.1	
MIZUSA	0	P	13 12 17.9	S	12 51.4	17	2.5			17	1.8			8	1.4						338.0	33.5
HAKODA	0	IP	13 12 22.8	ES	12 58.8	8	0.8			10	0.6			5	0.8			N	1 W 3	U 5	381.6	36.0
SENDAI	0	IP	13 12 25.2	S	13 03.6	18	1.0			12	1.0			5	1.2					U 3	402.6	38.4
AKITA	0	EX	13 12 26.6			8	2.0			7	2.0										405.6	
SAPPOR	0	EP	13 12 27.2	ES	13 09.2	12	2.0			7	0.8			5	1.0						425.1	42.0
FUKUSH	0	EP	13 12 34.6	S	13 17.4	11	1.0			13	1.0			4	0.7						465.7	42.8
MITO	0	P	13 12 45.4	S	13 40.1	5	0.8			5	1.4			2	0.5						572.5	54.7
KAKIOK	0	X	13 12 58	S	13 46.3	10	1.0			5	1.0			3	1.0						601.1	
MATSUS	0	IP	13 13 03.7	ES	14 10													S	E	U	707.7	66.3
ONAHAM	0	X	13 13 22.5			8	1.0			10	1.2			4	0.9						499.5	

OT= 25 1 33 26.2 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 34 +/- 1 LONG= 138 6 +/- 1
H= 0 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S S	N-S A/T *	N-S A/T S	E-W *	E-W S	E-W A/T *	E-W A/T S	U-D *	U-D S	U-D A/T *	U-D A/T S	INITIAL MOTION N-S	INITIAL MOTION E-W	INITIAL MOTION U-D	DELTA KM	S-P S
MATSUS	2	P	01 33 29.1	S	33 29.9																10.2	00.8
NAGANO	2	IP	01 33 31.1	S	33 33.0																13.5	01.9
MATSUM	0	IP	01 33 35.8	IS	33 41.0															D	37.6	05.2
KARUIZ	0	EP	01 33 37.3	S	33 42.6																47.7	05.3
TAKADA	0	P	01 33 38.7	S	33 47.7																61.2	09.0
NIIGAT	0	X	01 34 18.8			8	0.4			15	0.4										171.3	

OT= 25 2 57 16.9 +/- 0.4
NE OF SAITAMA PREF
LAT= 36 7 +/- 3 LONG= 139 36 +/- 3
H= 70 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KAKIOK	0	IP	02 57 29.0	IS	57 39.1	38 0.3	49 0.3	15 0.3			U 1	54.9	10.1
KUMAGA	0	P	02 57 30.0	S	57 40.4	15 0.8	13 0.8	11 0.4				19.6	10.4
UTSUNO	1	P	02 57 30.3	IS	57 40.8	70 0.2	57 0.2	38 0.2				53.6	10.5
TOKYO	0	IP	02 57 31.4	ES	57 43.5	57	25	8				50.0	12.1
MITO	0	IP	02 57 32.4	IS	57 44.9	22 0.4	34 0.3	7 0.4		E	0 D 2	83.5	12.5
FUNATS	0	IP	02 57 34.5	IS	57 48.4							102.1	13.9
YOKOHA	0	EP	02 57 36.4	IS	57 46.3	23 0.4	18 0.4					75.6	09.9
AJIRO	0	IP	02 57 36.5	S	57 51.9	12 0.3	16 0.3	4 0.3			D 0	127.5	15.4
KOFU	0	EP	02 57 36.6	IS	57 50.2	13 0.3	23 0.3	7 0.3				106.5	13.6
MATSUS	0	IP	02 57 38.1	S	57 55.1				S	E	D	133.4	17.0
SHIZUO	0	X	02 57 57.5	S	58 02.6	5 0.4	4 0.4	2 0.6				166.7	
ONAHAM	0	X	02 57 57.8			7 0.7	5 0.9	3 1.0				148.8	
OSHIMA	0	X	02 57	IS	57 56.3	13 0.4	8 0.4	8 0.4				151.6	

OT= 25 13 6 47.3 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 27 +/- 1 LONG= 138 8 +/- 1
H= 0 MAG=4.1 CLASS=L

MATSUS	2	P	13 06 51.1	S	06 52.5							11.9	01.4
NAGANO	2	IP	13 06 52.4	S	06 54.5							24.0	02.1
MATSUM	0	IP	13 06 54.4	IS	06 58.4				S	2 W	3 U 21	27.1	04.0
KARUIZ	0	IP	13 06 57.3	IS	07 02.9				N	2 W	4 D 6	39.5	05.6
TAKADA	0	P	13 07 00.7	S	07 11.9							73.4	11.2
MAEBAS	0	EP	13 07 04.3	S	07 14.4	10 4.6	9 3.4	17 3.4				83.7	10.1
TOYAMA	0	EP	13 07 04.4	ES	07 19.6	6 1.0	12 3.0					87.5	15.2
KOFU	0	EP	13 07 06.4	IS	07 17.0	9 0.3	11 0.4	5 4.0				95.1	10.6
IIDA	0	EP	13 07 07.6	ES	07 21.0	7 1.0	6 0.8	4 3.0				107.7	13.4
KUMAGA	0	EP	13 07 10.0	ES	07 25.0	8 3.2	7 3.4	11 3.6				117.3	15.0
FUNATS	0	P	13 07 11.1	IS	07 24.4							119.9	13.3
KANAZA	0	P	13 07 14.4	ES	07 32.2	5	6			E	1 D 3	133.5	17.8
WAJIMA	0	EX	13 07 18.0			18 0.8	20 0.8					151.6	
MISHIM	0	EX	13 07 18			6 0.8	6 0.8	2 0.3				165.0	
SHIZUO	0	EP	13 07 19.0	ES	07 38.6	5 1.0	4 0.6	3 4.0				165.7	19.6
GIFU	0	P	13 07 19.2	S	07 38.4	10 1.1	13 1.5	7 1.0				169.9	19.2
NIIGAT	0	EP	13 07 19.5	S	07 43.4	11 0.8	12 0.5				D 6	181.4	23.9
NAGOYA	0	EP	13 07 20.4	S	07 40.4	15 1.0	14 1.2	7 1.2	S	1 W	1	177.2	20.0
HAMAMA	0	P	13 07 22.7	S	07 48.5	8 1.6	8 2.6	4 1.2			U 1	196.7	25.8
OMAEZA	0	IX	13 07 24			7	7					205.0	
HIKONE	0	P	13 07 27.2	S	07 51.2	18 0.8	9 0.8					214.6	24.0
YOKOHA	0	X	13 07 27.9	IX	07 45.5	9 0.5	12 1.0					177.4	
OSAKA	0	X	13 07 50.6	X	08 23.0	8 4.0	8 4.3					308.7	

OT= 26 7 47 54.8 +/- 2.2
S OF KURILE IS
LAT= 44 6 +/-11 LONG= 152 12 +/-12
H=110 CLASS=U

NEMURO	0	IP	07 49 05.8	ES	49 59.8	18 2.6	19 2.0	15 2.6	S	W	U	539.8	54.0
ABASHI	0	P	07 49 19.2	S	50 18.2	33 5.9	23 1.9	14 1.3				634.3	59.0
KUSHIR	0	EP	07 49 20.0	ES	50 30.6	47 1.6	36 1.4	28 4.4				642.9	70.6
HIROO	0	EP	07 49 34.6	X	51 15.6							749.5	
ASAHIK	0	IP	07 49 37.1	X	51 14.2	22 2.2	27 2.4	11 2.0			U 0	789.6	
URAKAW	0	EP	07 49 40.2	ES	51 00.3	198 2.2	216 2.4	94 2.4				795.9	80.1
WAKKAN	0	EP	07 49 43.0	ES	51 14.6	10 3.8	22 3.2	23 4.0				845.7	91.6
SAPPOR	0	EP	07 49 49.8			43 2.6	57 2.2	23 2.2				885.0	
HAKODA	0	EP	07 49 59.7	ES	51 32.8	30 4.1	18 2.3	8 3.8				966.9	93.1
OMAEZA	0	EX	07 50			7 1.1	7 1.3					1597.5	
HACHIN	0	P	07 50 01.8	ES	51 34.3	9 2.6	7 2.9	6 3.2		E	1 D 1	964.7	92.5
AOMORI	0	EP	07 50 03.0	ES	51 43.0	68 2.3	57 1.8	23 2.3				1006.5	100.0
MORIOK	0	IP	07 50 10.4	S	51 50.0	5 13.8	5 2.6	4 2.4	S	0 W	0 U 0	1036.8	99.6
				X	50 17.2								
				EL	54 02								
OFUNAT	0	EP	07 50 11.6	ES	51 49.4	6 15.6	3 2.2	5 2.4				1036.8	97.8
				L	56 50								
MIZUSA	0	P	07 50 16.9	S	52 01.4	17 6.0	21 3.8	13 2.8				1073.5	104.5
AKITA	0	EX	07 50 18	EX	52 12	29 2.6	21 2.6	15 2.6				1114.2	
SENDAI	0	EP	07 50 25.0	ES	52 18.5	12 2.8	8 2.0	4 2				1147.2	113.5
FUKUSH	0	EP	07 50 34.2	ES	52 34.2	5 1.1	6 1.2	3 3.0				1211.2	120.0
MITO	0	EX	07 50 44.0	EX	52 56.0	9 3.4	10 3.6	5 2.6				1313.5	
KUMAGA	0	X	07 51 01.6	ES	53 18.0	8 9.4	10 11.0	7 4.0				1401.9	
MATSUS	0	IP	07 51 02.6	E	53 33				N		D	1452.6	
ONAHAM	0	X	07 51 02.9			12 2.8	10 1.2	6 9.6				1241.9	
TOKYO	0	X	07 51 08.8	ES	53 18.1	9 9.2	5 4.6	6 4.0				1413.3	
TOMISA	0	X	07 51 09.0			14 11.0	10 5.6	5 10.3				1470.3	
YOKOHA	0	X	07 51 11	EX	59 21	11 11.0	8 12.0					1439.5	

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MAEBAS	0	X	07 51 15.3			7 12.0	4 7.0	4 2.8				1404.1	
KANAZA	0	EP	07 51 16.6	ES	54 00.0	5	5	6				1561.5	163.4
NIIGAT	0	X	07 51 25.8			23 3.5	25 3.0	7 3.3				1300.1	
SAKATA	0	X	07 51 40.7									1181.0	
OSAKA	0	EP	07 51 41.8	S	54 41.2	13 4.8	13 4.2	5 3.4				1772.7	179.4
					51 50.0								
HAMADA	0	IP	07 52 08.8	ES	55 34.2	4 3.4	5 3.6	6 3.9	N	2 E	2 D 2	2002.5	205.4
				EL	56 38.1								
OITA	0	P	07 52 26.7	S	56 07.5	17 3.5	12 4.1	11 4.9				2149.5	220.8
FUKUOK	0	EP	07 52 30.0	ES	56 17	4 3.6	3 3.8	5 3.7	S	3 W	3 U 2	2214.9	227.0
MIYAZA	0	P	07 52 37.0	S	56 33.6	4 2.4	4 4.4	5 4.4				2259.8	236.6
KUMAMO	0	EP	07 52 39.4			5 1.8	6 1.8	3 2.0				2244.9	
NAGASA	0	EP	07 52 40.0								U	2312.1	
KAGOSH	0	EP	07 52 50.0			18 2.8	9 2.1					2346.5	
CHOSHI	0	X	07 53 45.9									1342.1	

OT= 26 10 30 55.2 +/- 0.2
N OF TOKYO BAY
LAT= 35 45 +/- 1 LONG= 140 1 +/- 1
H= 50 MAG=4.4 CLASS=L

TOKYO	1	IP	10 31 03.9	IS	31 10.8	158	61 0.8	20				24.5	06.9
KAKIOK	0	IP	10 31 06.0	S	31 13.5	63 0.3	69 0.2	31 0.1				55.8	07.5
YOKOHA	X	EP	10 31 06.5	IS	31 14.9	91 0.5	71 0.7	17 0.7	S	3	U 5	47.8	08.4
KUMAGA	0	EP	10 31 08.6	S	31 18.8	25 2.4	16 1.4	11 1.2				72.0	10.2
MITO	0	IP	10 31 09.9	S	31 19.5	23	22	12 0.4			U 2	80.9	09.6
CHOSHI	0	EP	10 31 10.0	S	31 21.0							74.8	11.0
UTSUNO	0	P	10 31 10.2	S	31 20.7	24 1.4	19 0.2	11 1.0				89.3	10.5
TOMISA	0	IP	10 31 11.3	IS	31 23.0	18 2.3	13 2.9	8 3.0			D 1	93.6	11.7
CHICHI	0	EP	10 31 11.7	S	31 22.2							88.6	10.5
AJIRO	0	P	10 31 12.9	IS	31 26.2	12 0.3	13 0.3	3 0.3				114.6	13.3
MAEBAS	0	EP	10 31 13.8	S	31 27.3	8 2.1	11 1.8	6 2.2				112.1	13.5
FUNATS	0	P	10 31 16.1	S	31 28.5							116.9	12.4
KOFU	0	EP	10 31 17.2	ES	31 33.2	11 0.4	12 0.7	4 0.9				132.3	16.0
MISHIM	0	EP	10 31 17.8			13 0.7	11 0.7	4 1.5				121.4	
KARUIZ	0	EP	10 31 18.3	S	31 35.5							147.3	17.2
MATSUS	0	IP	10 31 23.2	E	31 40					N	W U	184.7	
OSHIMA	0	X	10 31 27.1			22 1.0	11 0.6	8 0.4				124.1	
FUKUSH	0	EP	10 31 28.4	ES	31 54.0	6 1.0	8 0.8	3 0.6				226.4	25.6
ONAHAM	0	X	10 31 32.2			22 1.0	17 1.1	8 0.6				154.8	
HIKONE	0	X	10 32 03.1	X	32 42.2	7 1.1	2 1.1	2 1.0				346.0	
HACHIJ	0	X	10 32 05.4	EX	32 12.2							294.4	
OSAKA	0	X	10 32 59.0				5 4.0					425.6	

OT= 26 16 16 5.5 +/- 0.1
NEAR MATSUSHIRO
LAT= 36 24 +/- 0 LONG= 138 5 +/- 0
H= 0 CLASS=L

MATSUS	1	P	16 16 10.2	S	16 12.6							19.0	02.4
MATSUM	0	IP	16 16 11.2	IS	16 14.4						U 6	20.0	03.2
NAGANO	0	IP	16 16 12.6	S	16 16.3							30.6	03.7
KARUIZ	0	EP	16 16 15.4	S	16 21.0							42.5	05.6

OT= 27 6 27 4.9 +/- 0.9
NEAR KOZUJIMA
LAT= 34 16 +/- 3 LONG= 139 7 +/- 3
H= 0 MAG=4.3 CLASS=S

AJIRO	0	IP	06 27 22.3	ES	27 32.3	5 0.4	5 0.4	5 0.6	S	1 W	0 D 1	86.2	10.0
MISHIM	0	EP	06 27 23.2	IS	27 35.5	25 0.7	24 0.7					95.3	12.3
TOMISA	0	IP	06 27 24.6	S	27 34.0	27 5.0	25 5.3	10 5.6	N	2	D 1	97.5	09.4
OMAEZA	0	X	06 27 25.3	X	27 37.0	28 0.3	20 0.3	10 0.2				91.0	
SHIZUO	X	IP	06 27 26.0	IS	27 39.1	43 0.4	49 0.4	8 0.4	N	2 W	2 U 2	101.9	13.1
HAMAMA	0	IP	06 27 30.8	S	27 47.5	11 1.4	8 1.2	4 1.4	N	1	U 2	137.0	16.7
YOKOHA	0	EP	06 27 31.5			12 0.8	10 0.7					138.8	
IIDA	0	EP	06 27 33.6	ES	27 58.6	11 1.2	8 1.2	6 1.0				180.9	25.0
HACHIJ	0	EX	06 27 34.0									143.4	
KOFU	0	EP	06 27 34.4	IS	27 55.0	18 1.8	16 1.3	6 0.9				163.2	20.6
TOKYO	0	IP	06 27 35.8	ES	27 56.3	8 5.6		7 3.6				167.9	20.5
KUMAGA	0	EP	06 27 41.0	ES	28 07.4	7 1.6	6 2.0	3 2.2				209.9	26.4
NAGOYA	0	P	06 27 42.0	S	28 07.2	10 0.8	7 0.8	4 1.2	N	1 W	1 U 2	220.5	25.2
GIFU	0	P	06 27 44.9	S	28 11.6	8 0.8	6 1.2	4 0.6				249.0	26.7

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STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
										E		265.1	
MATSUS	0	IP	06 27 49.1	I	28 20							242.7	
MATSUM	0	X	06 27 50.3	ES	28 19.7							285.4	31.1
HIKONE	0	EP	06 27 51.0	ES	28 22.1	9 1.3	8 1.1	3 1.1					
OSHIMA	0	X	06 27			23 1.0	20 0.8	20 0.8			D 11	59.9	
FUNATS	0	X	06 27	S	27 40.7							140.4	
KANAZA	0	X	06 28 04.8	X	28 50.4	6 0.3	10 0.2	5 0.3			U 2	337.9	
FUKUI	0	X	06 28 04.9	S	28 40.8							329.5	
TOYAMA	0	X	06 28 11.6	X	28 18.5	7 2.6	10 3.0					321.3	
NIIGAT	0	X	06 29 04.2			8 3.7	8 4.0					404.2	

OT= 27 9 50 17.0 +/- 3.4
SE OFF KAGOSHIMA PREF
LAT= 30 50 +/- 8 LONG= 131 54 +/-17
H= 0 MAG=4.7 CLASS=U

MIYAZA	0	P	09 50 40.4	S	50 53.6	40 1.0	34 1.0	13 1.6				128.2	13.2
YAKUSH	0	P	09 50 42.7	ES	51 01.6	28 0.7	39 0.6	11 1.2				141.0	18.9
KAGOSH	0	X	09 50 58.5			95 1.3	75 0.8	50 1.5				152.3	
KUMAMO	0	EP	09 51 00	ES	51 32	18 1.8	16 1.6	6 1.0				246.3	32.0
OITA	0	X	09 51 15.2	X	51 49.1	20 1.9	13 1.5	14 1.7				267.3	

OT= 27 20 21 35.5 +/- 1.2
E OFF KWANTO
LAT= 35 48 +/- 3 LONG= 141 50 +/- 6
H= 70 CLASS=U

CHOSHI	0	P	20 21 53.0	S	22 04.9							89.9	11.9
MITO	0	P	20 21 57.7	IS	22 13.4	9 0.6	20 2.9	5 0.7				138.4	15.7
KAKIOK	0	EP	20 22 00			11 1.0	13 1.0	6 1.0				155.4	
TOKYO	0	EX	20 22 07.4			8 1.6	7 2.4					188.1	
FUKUSH	0	EP	20 22 12.9	ES	22 36.4	9 0.9	12 0.9	3 0.5				248.7	23.5
ONAHAM	0	X	20 22 14.5			23 1.2	17 1.1	12 2.4				151.8	
MATSUS	0	IP	20 22 23.9	ES	22 56						U	336.2	32.1

OT= 27 20 39 30.3 +/- 0.1
SE OF YAMANASHI PREF
LAT= 35 30 +/- 1 LONG= 139 0 +/- 0
H= 0 MAG=4.4 CLASS=L

FUNATS	2	IP	20 39 37.4	IS	39 39.8	400 0.3	250 0.3	50 0.3				21.5	02.4
KOFU	2	IP	20 39 40.9	IS	39 46.6	160 0.2	108 0.2	143 1.6	S	2 E 12	D 4	44.0	05.7
MISHIM	2	IP	20 39 42.5	IS	39 47.7	177 0.9	146 0.9	61 0.5	S	4	U 11	43.5	05.2
AJIRO	X	IP	20 39 42.6	IS	39 48.9	40 0.4	58 0.4	17 0.4	N	5 W 1	U 12	51.4	06.3
CHICHI	0	EP	20 39 43.6	IS	39 50.2							55.0	06.6
YOKOHA	1	IP	20 39 44.5	IS	39 54.2	175 0.6	181 1.0	48 1.0	N	2 E 31	D 34	59.9	09.7
TOKYO	1	IP	20 39 46.8	S	39 57.4	141	97					71.7	10.6
SHIZUO	0	IP	20 39 47.4	S	39 57.8	23 0.6	33 0.6	16 1.4	S	5 W 3	U 5	79.5	10.4
KUMAGA	0	P	20 39 47.6	S	39 58.0	50 1.0	41 0.8	16 1.0			U 8	79.7	10.4
OSHIMA	0	IP	20 39 47.7	IS	39 59.6	81 0.6	58 0.6	74 1.2				88.9	11.9
MAEBAS	0	EP	20 39 50.1	IS	40 02.5	24 1.7	27 2.4	11 2.6				100.2	12.4
TOMISA	0	EP	20 39 50.1	IS	40 04.0	27 4.0	20 2.2	15 2.5				99.1	13.9
KARUIZ	0	IP	20 39 50.2	IS	40 02.0				S		D 4	101.6	11.8
IIDA	0	EP	20 39 50.6	IS	40 03.0	17 2.0	10 0.6	10 1.0				105.7	12.4
MATSUM	0	EP	20 39 53.4	ES	40 08.2							124.1	14.8
KAKIOK	0	IP	20 39 54.0	ES	40 10.3	38 1.0	49 1.2	16 1.0	N	1 E 3	D 2	134.9	16.3
MATSUS	0	IP	20 39 54.9	S	40 10				S	E	D	135.5	15.1
UTSUNO	0	P	20 39 55.6	S	40 12.5	49 1.2	36 0.9					140.2	16.9
HAMAMA	0	P	20 39 57.0	IS	40 15.9	25 1.0	11 1.8	8 1.4			U 3	145.8	18.9
NAGANO	0	EP	20 39 58.3	S	40 14.4	17	20	20				147.6	16.1
MITO	0	IP	20 39 58.7	IS	40 18.2	17 1.4	19 1.0	11 1.4			D 1	164.7	19.5
CHOSHI	0	EP	20 39 58.7	S	40 19.6							168.8	20.9
OMAEZA	0	X	20 39	ES	40 10.9	20 0.3	18 0.3					122.6	
NAGOYA	0	EP	20 40 03.0	S	40 26.4	20 1.2	19 1.0	12 1.2		E 1	D 1	188.4	23.4
TAKADA	0	P	20 40 03.6	S	40 27.2							190.4	23.6
GIFU	0	P	20 40 04.8	S	40 29.3	15 1.8	9 1.2	8 1.4				203.2	24.5
TOYAMA	0	EP	20 40 07.0	ES	40 29.5	12 2.2	11 2.4					209.6	22.5
FUKUI	0	P	20 40 09.5	S	40 44.8							258.1	35.3
FUKUSH	0	EX	20 40 15.6			6 1.0	7 1.0	2 1.0				283.0	
KANAZA	0	X	20 40 16.2	ES	40 35.6	9	10	6				241.6	
TSURUG	0	EP	20 40 16.8	S	40 45.1							266.5	28.3
NARA	0	EP	20 40 19.9									302.5	
SENDAI	0	X	20 40 24.0	EX	41 08	5 4	6 4	3				349.9	
WAJIMA	0	X	20 40 26.0			15 1.0	13 1.0					281.9	

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STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ONAHAM	0	EX	20 40 32.0	ES	40 41.6	19 1.2	21 1.2	6 1.4				234.7	
TOYOOK	0	X	20 40 36.2			21 1.2	13 1.0					379.1	
HIKONE	0	X	20 40 42.8			20 0.8	20 0.8	6 1.0				251.4	

OT= 28 17 24 3.2 +/- 0.4
NE OF HOKKAIDO
LAT= 43 1 +/- 2 LONG= 145 1 +/- 3
H= 40 MAG=4.0 CLASS=L

KUSHIR	2	IP	17 24 14.2	IS	24 22.6	119 0.2	140 0.3	71 0.3			U 3	50.9	08.4
NEMURO	X	IP	17 24 14.7	S	24 23.2	24 0.2	18 0.2	15 0.2	N	1 E 4	U 8	57.9	08.5
ABASHI	0	EP	17 24 23.4	S	24 37.8	8 0.6	9 1.0	6 1.1				126.0	14.4
OBIHIR	0	EX	17 24 30.3									146.9	
URAKAW	0	EP	17 24 34.1	S	24 59.0	6 0.4	8 0.4	1 0.4				206.9	24.9

OT= 29 16 46 3.2 +/- 0.3
NEAR KOBE
LAT= 34 40 +/- 1 LONG= 135 1 +/- 1
H= 10 MAG=3.2 CLASS=L

KOBE	0	IP	16 46 07.7	IS	46 10.0						S 2 E 2	U 4	15.2	02.3
SUMOTO	0	P	16 46 11.5	IS	46 15.9	9 0.3	4 0.3	2 0.7				U	38.1	04.4
OSAKA	0	IP	16 46 13.1	IS	46 18.3		6 0.4					D 2	47.9	05.2
				IX	46 19.4									
KYOTO	0	IP	16 46 17.8	IS	46 26.7	4 0.0	5 0.0	2 0.6	N	0 W 1	D 1		76.0	08.9
OKAYAM	0	IP	16 46 22.6	IS	46 34.6	20 0.4	25 0.6	8 0.4	S	W			101.0	12.0

OT= 30 16 55 45.9 +/- 0.2
OFF MIYAGI PREF
LAT= 38 17 +/- 1 LONG= 141 54 +/- 1
H= 40 MAG=3.8 CLASS=U

ISHINO	0	P	16 55 57.3	IS	56 04.3								54.5	07.0
OFUNAT	0	EP	16 56 01.0	IS	56 10.8	9 0.0	8 0.2	4 0.0					87.8	09.8
SENDAI	0	IP	16 56 01.1	S	56 11.2	11 0.8	6 0.6					D 4	87.5	10.1
MIZUSA	0	P	16 56 04.6	ES	56 17.2	15 0.5	20 0.2					D 4	115.5	12.6
MATSUS	0	EP	16 56 40										379.8	

List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE		PHASE AND TIME H M S		M S	INITIAL MOTION	
1	IP	19 08 24.9	ES	08 41.	W U	*
1	IP	22 13 33.4			S E D	*
1	P	22 54 25.	S	54 47.		*
1	P	23 31 26.	S	37 03.		*
						*
2	EP	12 27 20.	I	29 02.		*
2	IP	12 46 59.4	S	47 25.	E D	*
2	IP	17 18 13.5	S	18 40.	S E D	*
						*
3	P	05 52 37.	ES	56 48.		*
3	IP	07 02 16.3	ES	02 51.		*
3	IP	08 08 45.6	S	12 55.	S U	*
3	P	09 06 52.				*
3	EP	11 51 41.	S	52 02.		*
3	P	17 59 59.	ES	05 55.		*
						*
4	IP	09 51 08.8	S	51 31.	E D	*
4	P	14 13 56.	S	17 42.		*
4	IP	15 27 11.1			S E D	*
4	P	22 09 45.	ES	10 55.		*
						*
5	P	00 07 02.	E	09 12.		*
5	P	03 10 29.	S	20 44.		*
5	IP	05 01 24.6	S	01 44.	S E D	*
5	IP	05 22 44.1	S	23 42.	S E D	*
5	EP	07 47 19.				*
5	EP	18 58 42.				*
						*
6	IP	13 41 51.8	IS	43 07.3	N U	*
6	EP	14 18 06.				*
6	P	14 20 02.				*
						*
7	P	05 42 58.				*
7	IP	06 37 19.5			N W U	*
7	E	13 44 44.				*
7	P	17 32 21.				*
7	P	20 40 33.	E	41 31.		*
7	EP	22 55 11.				*
						*
8	IP	01 27 51.2	E	28 25.	N U	*
8	EP	15 12 02.				*
8	P	17 32 33.				*
8	EP	21 05 28.	S	06 20.		*
						*
9	P	06 01 26.				*
9	IP	12 33 40.8	E	36 45.	U	*
9	P	15 01 39.				*
9	P	16 07 57.	S	15 35.		*
9	P	18 28 36.				*
9	P	22 40 44.	E	42 02.		*
9	IP	23 21 43.6	ES	22 18.	E D	*
9	P	23 25 35.	E	26 15.		*
						*
10	P	03 12 04.	E	18 46.		*
10	IP	05 42 01.2	S	42 19.	E D	*
10	IP	06 08 06.8	S	09 18.	U	*
10	P	06 36 30.				*
10	IP	09 33 09.3	S	34 44.	N	*
10	IP	10 55 30.6	S	56 26.	S D	*
10	P	12 09 33.	S	09 53.		*
10	EP	16 02 42.	ES	03 20.		*
10	IP	21 37 17.5	ES	37 54.	D	*
10	IP	23 17 16.3	S	17 54.	N E U	*
						*
11	P	06 59 03.	ES	00 20.		*
11	P	17 42 47.				*
						*
12	EP	02 04 01.				*
12	IP	10 28 25.9			D	*
12	IP	11 53 48.3	S	55 06.	N W D	*
12	P	20 47 37.	S	48 28.		*
						*
13	IP	03 17 23.8	S	17 45.	U	*
13	IP	08 31 47.4			S D	*
13	IP	13 23 24.9			S W U	*
13	IP	23 51 58.0			E U	*
						*
14	IP	01 26 50.8			U	*
14	IP	04 34 56.4			D	*
14	IP	06 27 14.8			S U	*

DATE		PHASE AND TIME H M S		M S	INITIAL MOTION	
14	IP	08 03 21.2			S W U	*
14	IP	08 56 00.4	IS	56 17.2	S E D	*
14	IP	10 30 12.0	S	30 20.	S W	*
14	P	16 05 18.				*
14	P	20 43 31.				*
						*
15	IP	01 47 53.2	S	48 06.	E D	*
15	IP	08 35 01.1			U	*
15	P	17 14 52.	S	15 12.		*
						*
16	P	12 24 37.				*
16	P	21 20 16.				*
						*
17	IP	02 42 07.0			S W D	*
17	P	03 03 24.	S	04 38.		*
17	IP	11 24 13.5			S W U	*
17	IP	16 44 17.5			E D	*
17	IP	20 32 30.1	EL	45 15.	U	*
17	IP	20 35 27.6			W D	*
17	IP	22 55 32.2			N	*
17	IP	23 15 45.6	S	16 22.	U	*
						*
18	EP	06 23 09.				*
18	IP	22 07 14.0	IS	07 50.2	N U	*
18	IP	23 31 35.5	S	32 05.	U	*
						*
19	IP	02 50 14.9	S	50 32.	S E D	*
19	IP	04 08 40.0			E D	*
19	IP	04 23 25.9			S D	*
19	IP	10 18 46.5			N E U	*
19	P	11 56 58.				*
19	EP	13 04 41.				*
19	IP	17 21 28.8			U	*
						*
20	P	00 59 14.				*
20	IP	02 31 47.6			W D	*
20	IP	06 15 51.3			E D	*
20	IP	09 27 07.6	S	27 24.	D	*
20	EP	17 55 48.				*
20	IP	18 07 49.1	S	08 07.	U	*
20	P	18 33 41.				*
20	IP	22 34 38.8	EL	40 09.	U	*
20	P	22 43 58.				*
20	P	22 55 11.				*
20	P	23 47 23.				*
						*
21	P	00 49 30.1				*
21	P	00 49 30.1	E	52 03.		*
21	IP	02 14 42.8			U	*
21	IP	02 14 42.8			U	*
21	IP	04 18 09.7			N E U	*
21	IP	04 18 09.7			N E U	*
21	IP	06 55 11.0	S	55 27.	S E D	*
21	IP	06 55 11.0	S	55 27.	S E D	*
21	P	20 36 21.				*
21	IP	23 02 39.5	S	03 00.	N E D	*
						*
22	IP	00 05 15.5	S	05 26.	N E U	*
22	P	04 20 41.	ES	21 32.		*
22	P	15 27 17.				*
22	IP	22 08 16.0			D	*
						*
23	EP	22 45 06.				*
						*
24	IP	13 13 03.7	ES	14 10.	S E U	*
24	IP	16 06 45.8				*
24	P	16 31 35.	ES	32 10.		*
24	IP	18 08 10.9	S	14 28.	N E U	*
24	IP	20 54 05.2	S	00 25.	N E U	*
						*
25	IP	02 57 38.1	S	57 55.1	S E D	*
25	IP	03 31 38.3	S	33 20.	U	*
25	IP	08 09 53.6			S E D	*
						*
26	IP	07 51 02.6	E	53 33.	N D	*
26	IP	10 31 23.2	E	31 40.	N W U	*
26	P	18 54 39.	E	55 06.		*
						*
27	IP	01 24 16.7	E	25 58.	U	*
27	IP	06 27 49.1	I	28 20.	E	*

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DATE		PHASE AND TIME H M S		M S	INITIAL MOTION	
27	IP	13 53 43.9	S	53 58.	S U	*
27	P	17 44 55.				*
27	P	18 02 24.	S	05 50.		*
27	EP	19 11 47.				*
27	IP	20 22 23.9	ES	22 56.	U	*
27	IP	20 39 54.9	S	40 10.	S E D	*
						*
29	EP	04 37 43.				*
29	IP	05 23 01.6	S	23 05.	N D	*
29	IP	08 51 57.1	S	53 15.	S D	*
						*
30	IP	01 58 26.9			U	*
30	IP	02 19 30.4			S E D	*
30	IP	02 20 56.3	ES	21 26.	U	*
30	IP	07 19 11.9			W D	*
30	IP	11 17 09.2	S	24 29.	N D	*
30	EP	16 56 40.				*
						*
31	P	00 35 24.				*
31	EP	02 47 42.	ES	48 36.		*
31	IP	08 15 42.4	S	24 22.		*
31	P	11 19 47.				*

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF MATSUSHIRO ARE LEFT OUT FROM THE TABLE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

D	INT	H	M
1	1	00	19
1	2	04	14
1	1	04	18
1	1	04	20
1	1	04	23
1	1	06	24
1	1	08	00
1	1	12	02
1	2	13	00
1	1	13	06
1	1	16	27
1	1	16	32
1	1	17	15
1	1	17	26
1	1	17	36
1	1	17	46
1	1	17	55
1	1	18	01
1	1	18	06
1	1	19	27
1	1	21	04
1	1	22	38
1	1	23	40
1	1	23	55
2	1	01	55
2	3	03	39
2	1	03	42
2	1	03	43
2	1	03	44
2	1	03	45
2	1	03	54
2	1	03	59
2	2	04	34
2	1	04	37
2	1	07	11
2	1	07	39
2	1	08	07
2	1	08	09
2	1	13	41
2	1	15	40
2	1	16	56
2	1	17	18
2	1	22	10
2	1	22	51
3	1	05	30
3	1	11	22
3	1	13	19
3	1	20	44
3	1	22	08
3	1	22	50
4	1	03	19
4	1	07	27
4	1	13	54
4	1	16	25
4	1	18	50
4	1	19	28
4	1	19	53
4	1	23	57
5	1	03	24
5	2	07	00
5	1	09	23
5	1	14	55
5	1	15	09
5	1	21	21
5	1	21	45
6	1	01	43
6	1	03	32
6	2	03	33
6	1	03	33
6	1	05	01
6	1	05	56
6	1	07	09
6	1	09	04
6	1	09	39
6	1	09	47
6	1	10	47
6	1	10	51
6	1	10	51
6	1	10	52
6	1	13	23
6	1	16	32
6	1	17	28
6	1	17	45
6	1	17	57
6	1	18	33
6	1	20	21
6	2	21	22
6	1	21	40
6	1	21	40
7	1	05	33
7	1	07	54
7	1	08	14
7	1	14	25
7	1	14	45
7	1	16	53
7	1	19	25
7	1	19	57
7	1	21	18
7	1	22	24
8	1	03	38
8	1	04	54
8	1	05	02
8	1	06	31
8	1	20	01
8	1	20	02
8	1	22	05
8	1	22	28
8	1	23	21
8	1	23	31
9	1	01	50
9	1	02	45
9	1	03	51
9	1	10	07
9	1	12	51
9	1	14	33
10	1	01	36
10	1	03	13
10	1	04	43
10	1	10	02
10	1	15	13
10	1	20	21
10	1	21	27
11	1	01	14
11	1	01	14
11	1	01	15
11	1	01	15
11	1	02	17
11	1	02	56
11	1	03	11
11	1	03	36
11	1	04	08
11	1	06	22
11	1	07	29
11	1	11	07
11	1	13	58
11	1	14	37
11	1	21	10
12	1	03	55
12	1	04	44
12	1	06	09
12	1	09	15
12	1	10	23
12	1	11	29
12	2	13	05
12	1	21	28
12	1	21	50
13	1	02	10
13	1	02	43
13	2	02	57
13	1	03	08
13	1	09	10
13	1	09	56
13	1	16	45
14	1	07	23
14	1	08	48
14	1	08	53
14	1	12	07
14	1	12	48
14	1	14	16
14	1	15	25
14	1	16	05
14	1	16	51
14	1	18	44
14	1	20	04
14	1	20	25
14	1	23	57
15	1	00	13
15	1	05	26
15	1	12	37
15	1	17	20
15	1	21	55
15	1	22	45
15	1	23	34
16	1	06	36
16	1	13	02
16	1	13	26
16	1	14	02
16	1	17	16
16	1	17	42
16	1	21	34
17	1	01	29
17	1	08	02
17	1	12	14
17	1	12	48
17	1	17	29
17	1	17	35
17	1	18	42
18	1	00	38
18	1	02	21
18	1	06	52
18	1	09	53
18	1	21	12
19	1	04	18
19	1	07	15
19	1	07	30
19	1	09	39
19	1	10	21
19	1	14	59
19	1	20	39
20	1	04	19
20	1	06	15
20	1	07	14
20	1	09	32
20	1	09	57
20	1	11	11
20	1	13	02
20	1	13	49
20	1	14	57
20	1	18	23
20	1	18	44
20	2	21	14
20	1	22	28
20	1	22	42
21	1	08	42
21	1	12	04
21	1	17	34
21	1	23	37
22	1	01	21
22	1	07	56
22	1	09	49
22	1	17	27
22	1	21	16
22	1	21	35
23	1	02	34
23	1	04	49
23	1	05	01
23	1	09	18
23	1	10	39
23	1	13	07
23	1	13	07
23	1	17	09
23	1	18	56
24	1	04	33
24	1	11	05
24	1	15	01
25	1	01	25
25	2	01	33
25	1	01	35
25	1	01	53
25	1	05	35
25	1	07	34
25	1	09	29
25	1	10	41
25	1	10	46
25	1	11	35
25	1	12	32
25	1	12	34
25	1	12	51
25	2	13	06
25	1	13	10
25	1	13	20
25	1	18	11
25	1	18	19
25	1	21	30
25	1	22	32
26	1	01	46
26	1	02	27
26	1	03	27
26	1	10	49
26	1	10	56
26	1	10	57
26	1	12	30
26	1	13	03
26	1	14	47
26	1	16	16
26	1	18	08
26	1	20	40
26	1	21	44
26	1	21	59
28	1	03	25
28	1	07	20
28	1	09	48
28	1	11	39
28	1	19	30
28	1	19	38
28	1	20	11
28	1	20	50
28	1	21	47
28	1	23	25
28	1	23	37
29	1	01	54
29	1	07	04
29	1	15	49
30	1	00	27
30	1	02	49
30	1	06	42
30	1	08	51
30	1	12	53
30	1	14	44
30	1	15	36
31	1	01	26
31	1	02	46
31	1	04	31
31	1	14	12
31	1	14	32
31	1	23	22

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1 5 JUL 1968

地　震　月　報

昭和42年 4 月

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OF

THE JAPAN METEOROLOGICAL AGENCY

FOR

APRIL 1967

気　象　庁

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List 1 JMA stations and their seismographs

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S, VI, O P
Aikawa	AIKAWA	138 14.5	38 01.2	34	S, VI, O P
Ajiro	AJIRO	139 05.8	35 02.6	59	S, VI, O P
Akita	AKITA	140 06.1	39 43.1	9	S, VI, O P
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S, P
Aomori	AOMORI	140 47.0	40 49.0	4	S, W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S, VI, O P
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S, VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S, P
Choshi	CHOSHI	140 50.6	35 43.5	27	S, W
Fukue	FUKUE	128 50.0	32 42.0	26	S, VI
Fukui	FUKUI	136 13.6	36 03.2	9	S, P(H, V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S, VI, M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S, VI, O P
Funatsu	FUNATS	138 45.8	35 29.9	860	S, P
Gifu	GIFU	136 45.9	35 23.9	13	S, W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S, VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S, VI, O P
Hakodate	HAKODA	140 45.5	41 48.8	35	S, VI, O P
Hamada	HAMADA	132 04.4	34 53.6	18	S, VI, O P
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S, VI, O P
Hikone	HIKONE	136 14.8	35 16.4	87	S, W
Himeji	HIMEJI	134 42.1	34 50.2	37	S, P(H, V)
Hiroo	HIROO	143 19.0	42 17.0	32	S, P(H, V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S, W
Iida	IIDA	137 50.1	35 30.6	482	S, VI, O P
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S, VI, O P
Izuhara	IZUHAR	129 17.7	34 12.2	21	S, P(H, V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S, W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S, W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S, VI, O P
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S, P(H, V)
Kobe	KOBE	135 10.8	34 41.3	58	S, P(H, V)
Kochi	KOCHI	133 32.0	33 33.0	40	S, P(H, V)
Kofu	KOFU	138 33.5	35 39.9	272	S, VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S, VI, O P
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S, W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S, VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S, VI, O P
Maebashi	MAEBAS	139 03.9	36 24.1	112	S, W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S, P(H, V)
Matsue	MATSUE	133 04.3	35 27.3	17	S, P(H, V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S, P(H, V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S, L, AW, G, B, V, C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S, W
Mishima	MISHIM	138 55.8	35 06.7	20	S, W
Mito	MITO	140 28.3	36 22.7	30	S, VI, O P
Miyako	MIYAKO	141 58.1	39 38.7	46	S, W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S, VI, O P
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P(H, V)
Morioka	MORIOK	141 10.1	39 41.8	155	S, VI, O P
Muroran	MURORA	140 59.0	42 19.0	43	S, P(H, V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S, VI, O P
Nagano	NAGANO	138 11.8	36 39.6	418	S, W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S, VD, EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S, VI, O P
Nara	NARA	135 50.0	34 41.0	105	S, P(H, V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S, VI, VD, OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S, VI, P(H, V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S, P(H, V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S, P(H, V)
Ofunato	OFUNAT	141 43.1.	39 03.7	38	S, VI
Oita	OITA	131 37.4	33 14.0	5	S, W
Okayama	OKAYAM	133 54.9	34 40.9	4	S, VI, O P
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S, W
Onahama	ONAHAM	140 54.4	36 56.7	3	S, VI
Osaka	OSAKA	135 32.3	34 38.9	7	S, VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S, W

Station	Code	λ	φ	Height	Seismographs
				m	
Owase	OWASE	E136°11.7′	N34°04.0′	14	S, VI, OP
Rumoi	RUMOI	141 38.0	43 57.0	22	S, P(H, V)
Saga	SAGA	130 18.3	33 14.7	4	S, P(H, V)
Saigo	SAIGO	133 20.0	36 12.3	26	S, VI, OP
Sakata	SAKATA	139 50.2	38 54.2	2	S, P(H, V)
Sapporo	SAPPOR	141 19.9	43 03.5	17	S, VI, OP
Sendai	SENDAI	140 54.0	38 15.6	38	S, VI, S′
Shimonoseki	SHIMON	130 56.5	33 57.2	46	S, VI, OP
Shionomisaki	SHIONO	135 45.8	33 26.9	74	S, W
Shirakawa	SHIRAK	140 13.5	37 07.1	354	S, P(H, V)
Shizuoka	SHIZUO	138 24.4	34 58.4	14	S, VI
Sumoto	SUMOTO	134 54.5	34 20.1	109	S, VI, OP
Suttsu	SUTTSU	140 14.4	42 47.4	16	S, P(H, V)
Takada	TAKADA	138 15.0	37 06.3	13	S, P(H, V)
Takamatsu	TAKAMA	134 03.5	34 19.0	10	S, W
Takayama	TAKAYA	137 15.3	36 09.1	561	S, P(H, V)
Tokushima	TOKUSH	134 34.6	34 03.9	2	S, P(H, V)
Tokyo	TOKYO	139 45.5	35 41.2	21	S, VI′, VD′, I′, J
Tomisaki	TOMISA	139 49.7	34 55.2	12	S, VI, OP
Tottori	TOTTOR	134 10.7	35 30.7	17	S, P(H, V)
Toyama	TOYAMA	137 12.5	36 42.4	9	S, VI
Toyooka	TOYOOK	134 49.5	35 32.0	4	S, W
Tsu	TSU	136 31.1	34 42.1	3	S, P(H, V)
Tsuruga	TSURUG	136 03.9	35 39.0	1	S, P(H, V)
Unzendake	UNZEND	130 15.2	32 44.1	849	S
Urakawa	URAKAW	142 46.8	42 09.5	34	S, VI, OP
Utsunomiya	UTSUNO	139 52.3	36 32.6	120	S, W
Uwajima	UWAJIM	132 33.5	33 13.5	43	S, P
Wajima	WAJIMA	136 53.9	37 23.4	6	S, VI
Wakayama	WAKAYA	135 10.0	34 13.6	14	S, W, I
Wakkanai	WAKKAN	141 40.5	45 25.0	2	S, VI, OP
Yakushima	YAKUSH	130 29.8	30 27.0	14	S, VI
Yamagata	YAMAGA	140 21.0	38 15.2	151	S, P(H, V)
Yokohama	YOKOHA	139 39.3	35 26.2	38	S, W
Yonago	YONAGO	133 20.6	35 26.0	7	S, P(H, V)
Ishigakijima	ISHIGA	124 10	24 20	6	S, VI
Naha	NAHA	127 41	26 13	11	S, VI

Notations : —

λ	: Longitude.
φ	: Geographical Latitude.
W	: Wiechert's horizontal and vertical seismographs (masses, H ; 200kg, V ; 80kg).
P	: Portable seismograph (horizontal only).
P(H, V)	: do (mass, 22.5kg).
S	: Strong motion seismograph (magnification ; 1).
S′	: do (magnification ; 0.4)
M(H)	: Mainka's horizontal seismograph (mass, 450kg).
G	: Galitzin's seismograph.
L	: 1,000kg long-period seismograph, JMA type.
I	: Ishimoto's seismograph
V	: Short-period vertical seismograph.
AW	: Anderson-Wood's seismograph.
C	: Capacity type seismograph.
EM	: Electromagnetic seismograph.
OP	: JMA 59-type electromagnetic seismograph with optical recorder.
VI	: JMA 59-type electromagnetic seismograph with visible recorder.
VD	: JMA 61-type electromagnetic seismograph with visible recorder.
B	: Benioff's seismograph (short and long period).
J	: Remote recording JMA 63-type seismograph.
VI′, VD′, I′	: Remote recording JMA 63-types of I, VD and VI respectively.

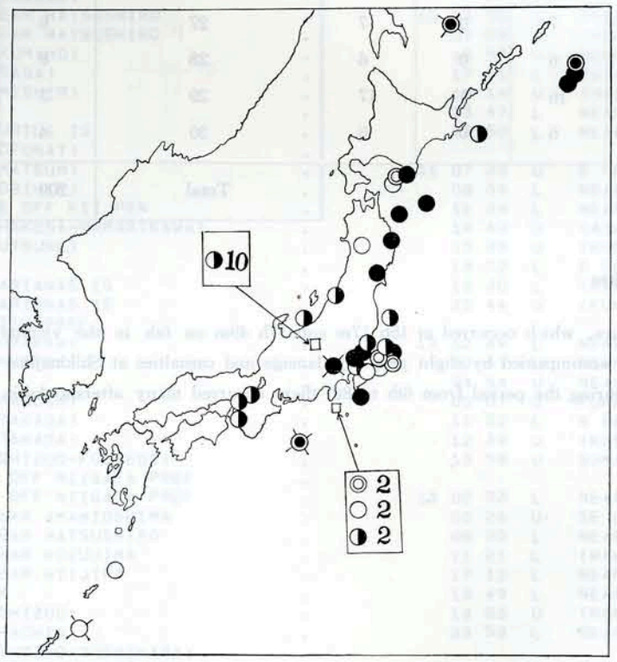
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List 2 Number of earthquakes by districts and classes, April, 1967

District \ Class	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	0	1	1	6	8	23	31
Tohoku	0	0	1	1	2	16	18
Kwanto	0	4	4	21	29	26	55
Chubu	0	0	0	223	223	38	261
Kinki	1	0	0	10	11	4	15
Chugoku·Shikoku	0	0	0	2	2	2	4
Kyushu	0	0	1	1	2	14	16
Near Japan*	2	0	1	1	4	16	20
Foreign region	0	0	0	0	0	4	4
Unknown	0	0	0	0	0	7	7
Total	3	5	8	265	281	150	431

* ; Sakhalin, Kurile Is., Korea, Ryukyu Is., Bonin Is., Sikhota Alin.

Epicenters of the major earthquakes



⊙ Remarkable (R) ◎ Moderate (M) ○ Small felt (S) ◑ Local (L) ● Unfelt (U) × h≧100km

Special Events

Earthquake-Swarm near Matsushiro, Northern Chubu.

Daily number of felt shocks observed at Matsushiro Seismological Observatory during this month is as follows :

Date \ Seismic intensity	1	2	Total	Date \ Seismic intensity	1	2	Total
1	13	0	13	16	7	0	7
2	6	0	6	17	5	1	6
3	13	0	13	18	4	0	4
4	6	0	6	19	8	0	8
5	10	0	10	20	11	0	11
6	7	0	7	21	8	0	8
7	3	0	3	22	13	2	15
8	5	0	5	23	2	0	2
9	3	0	3	24	5	0	5
10	4	0	4	25	7	1	8
11	6	0	6	26	7	0	7
12	7	0	7	27	6	0	6
13	6	0	6	28	8	1	9
14	16	1	17	29	3	0	3
15	6	0	6	30	4	0	4
				Total	209	6	215

Kozujima earthquakes

The earlhquakes, which occurred at 15h 17m and 17h 49m on 6th in the vicinity of Kozujima, near Tokyo, were accompanied by slight property damage and casualties at Shikinejima and Kozujima of Izu Islands. During the period from 6th to 8th there occurred many aftershooks in the vicinity of the islands.

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List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

(J. S. T.)

DATE, TIME D H M	C	LOCATION	C CLASS
1 00 08	L	NEAR MATSUSHIRO	
00 09	L	NEAR MATSUSHIRO	
02 57	U	NEAR MATSUSHIRO	
04 49	L	(WAKAYA)	
06 07	L	NEAR KOZUJIMA	
06 35	L	NEAR MATSUSHIRO	
07 00	L	NEAR MATSUSHIRO	
07 32	L	NEAR KOZUJIMA	
07 38	L	(TOKYO-MIYAKEJIMA)	
10 08	L	NEAR MATSUSHIRO	
14 55	R	KURILE IS	
14 59	U	KURILE IS	
16 05	U	(MIYAZA)	
16 34	L	NEAR NEMURO	
16 49	U	S OFF HOKKAIDO	
19 36	L	NEAR MATSUSHIRO	
21 24	U	KURILE IS	
22 30	L	NEAR MATSUSHIRO	
23 01	U	KURILE IS	
2 02 17	U	KURILE IS	
02 22	U	KURILE IS	
05 54	U	(URAKAW)	
07 15	L	(WAKAYA-KIBI)	
19 17	U	(NAGANO)	
20 12	U	NEAR KUSHIRO	
20 40	U	(AJIRO)	
21 23	L	NEAR MATSUSHIRO	
3 01 28	U	(MIYAZA)	
03 40	U	(NAGANO)	
05 00	L	NEAR MATSUSHIRO	
14 33	L	NEAR MATSUSHIRO	
16 52	U	(KUMAMO)	
18 59	U	(SAGA)	
20 23	U	(MISHIM)	
4 12 55	U	KURILE IS	
14 20	U	(OFUNAT)	
16 55	U	(MATSUM)	
17 10	U	(OBIHIR)	
18 06	R	SE OFF KII PEN	
22 44	L	(HAKODA-NAMARIKAWA)	
23 17	U	(UTSUNO)	
5 11 36	U	MARIANAS IS	
11 51	U	MARIANAS IS	
16 57	U	GIFU PREF	
21 28	U	(URAKAW)	
21 45	U	(KYOTO)	
6 01 20	U	(KAGOSH)	
08 11	U	(TAKADA)	
08 13	U	(TAKADA)	
08 30	L	(SHIZUO-FUJIEDA)	
08 50	L	W OFF NIIGATA PREF	
08 55	U	W OFF NIIGATA PREF	
11 34	S	NEAR AMAMIOSHIMA	
14 52	L	NEAR MATSUSHIRO	
15 17	S	NEAR KOZUJIMA	
15 21	L	NEAR NIIJIMA	
15 28	U	UK	
16 16	U	(SHIZUO)	
16 22	U	(HACHIN)	
17 18	L	(SHIZUO-YOSHIHARA)	
17 30	U	SHIZUOKA PREF	
17 49	M	NEAR KOZUJIMA	
18 06	M	NEAR KOZUJIMA	
18 38	U	(NAGASA)	
19 06	L	(TOKYO-NIIJIMA)	
6 19 14	U	NEAR KOZUJIMA	
19 40	L	NEAR NIIJIMA	
19 57	U	(URAKAW)	
20 37	L	NEAR NIIJIMA	
21 25	U	MARIANAS IS	
7 03 26	U	UK	
04 50	L	(NIIGAT-SANTO)	
06 48	U	(RUMOI)	
07 47	L	NEAR KOZUJIMA	
07 55	U	NEAR KOZUJIMA	
08 09	U	(NAGANO)	
08 29	S	NEAR KOZUJIMA	
08 32	S	OFF CHOSHI	
08 56	U	(SHIZUO)	
09 50	L	NEAR KOZUJIMA	
12 06	U	NEAR KOZUJIMA	
12 22	L	(TOKYO-NIIJIMA)	
17 38	L	NEAR MATSUSHIRO	
8 01 36	L	(NAHA)	
04 40	R	S OF OKHOTSK SEA	
10 13	U	(OFUNAT)	
10 13	U	(URAKAW)	
16 52	U	(NAGANO)	
20 51	U	MIYAZAKI PREF	
9 06 56	U	(NIIGAT)	
09 50	L	NEAR MATSUSHIRO	
14 46	L	NEAR MATSUSHIRO	
10 04 56	U	(KAKIOK)	
09 09	U	(HACHIN)	
13 53	U	NEAR YAKUSHIMA	
17 31	L	(WAKAYA)	
19 14	U	(HACHIN)	
23 47	L	NEAR KOBE	
23 50	L	NEAR MATSUSHIRO	
11 07 30	U	E OFF AOMORI PREF	
08 39	L	NEAR MATSUSHIRO	
11 34	L	NEAR MATSUSHIRO	
14 40	U	(AIKAWA)	
15 35	U	(KUSHIR)	
18 02	L	E COAST OF IBARAKI PREF	
18 30	L	(MAEBAS-TAKASAKI)	
22 44	U	(FUKUSH)	
12 02 39	L	NEAR MATSUSHIRO	
02 41	L	NEAR MATSUSHIRO	
04 54	U	NEAR HACHIJOJIMA	
05 07	U	FUKUOKA PREF	
11 32	L	N OF CHIBA PREF	
12 39	U	(KUSHIR)	
13 58	U	SUMATRA	
13 02 03	L	NEAR MATSUSHIRO	
03 26	U	SE OF GIFU PREF	
08 03	L	NEAR MATSUSHIRO	
11 21	L	(WAKAYA)	
17 12	L	NEAR MATSUSHIRO	
18 49	L	NEAR MATSUSHIRO	
19 03	U	(NAGANO)	
23 58	L	NEAR MATSUSHIRO	
14 02 21	L	NEAR MATSUSHIRO	
04 54	S	RYUKYU IS	
06 39	L	NEAR MATSUSHIRO	
07 06	L	SAGAMI BAY	
08 28	U	(NAGANO)	

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DATE, D	TIME H	M	C	LOCATION
14	08	49	L	NEAR MATSUSHIRO
	08	50	U	KWANTO
	08	58	L	NEAR MATSUSHIRO
	10	20	L	NEAR MATSUSHIRO
	11	00	U	(NAGANO)
	11	37	L	W COAST OF WAKAYAMA PREF
	18	04	L	NEAR MATSUSHIRO
	18	19	L	NEAR MATSUSHIRO
	18	43	L	NEAR MATSUSHIRO
	22	15	U	NW OF CHIBA PREF
	22	26	L	NEAR MATSUSHIRO
15	02	10	U	(MITO)
	02	12	L	NEAR MATSUSHIRO
	02	53	U	(YAKUSH)
	04	05	L	NEAR MATSUSHIRO
	05	40	U	(CHOSHI)
	19	38	U	KWANTO
	23	14	L	NEAR MATSUSHIRO
16	02	20	L	NEAR MATSUSHIRO
	04	19	L	NEAR MATSUSHIRO
	08	04	U	(KUMAMO)
	08	36	M	OFF URAKAWA
	19	11	U	E OFF HOKKAIDO
	23	50	L	SE OFF HOKKAIDO
17	03	12	U	(YONAGO)
	05	25	U	(KUSHIR)
	07	28	L	NEAR MATSUSHIRO
	07	35	L	NEAR MATSUSHIRO
	16	35	L	(NAGANO-MITAKE)
	20	08	U	(NAHA)
	21	01	L	E OFF FUKUSHIMA PREF
	22	50	U	(FUKUI)
	23	39	L	NEAR MATSUSHIRO
18	00	37	L	NEAR OSHIMA
	00	56	U	(WAKAYA)
	04	40	U	(NAHA)
	09	25	U	UK
	15	18	L	(NIIGAT-TOKAMACHI)
	15	57	L	NIIGATA PREF
	18	14	U	(URAKAW)
	18	37	U	TOKYO-YAMANASHI BORDER
	18	40	L	(MAEBAS-TAKASAKI)
	19	04	U	(AIKAWA)
	21	27	L	NEAR NEMURO
	23	33	U	N OF MIYAGI PREF
19	04	03	U	(NAGANO)
	14	30	U	(SAIGO)
	15	38	L	NEAR SUMOTO
	19	25	S	CHIBA PREF
	19	34	U	NEAR WAKKANAI
	19	42	L	NEAR MATSUSHIRO
	19	48	U	(URAKAW)
	22	42	L	(WAKAYA)
	23	52	L	NEAR MATSUSHIRO
20	00	08	L	NEAR MATSUSHIRO
	02	09	L	NEAR MATSUSHIRO
	07	58	U	IWATE PREF
	12	21	L	(HIROSH-SHOBARA)
	14	16	U	(NAGANO)
	15	58	U	(NAGANO)
	17	08	L	NEAR MATSUSHIRO
	18	51	L	NEAR MATSUSHIRO
	19	18	U	NEAR URAKAWA
	21	08	U	(NAGANO)

DATE, D	TIME H	M	C	LOCATION
20	22	02	S	AKITA PREF
	23	39	U	NEAR YAKUSHIMA
	23	40	U	S OF IBARAKI PREF
	23	40	U	(YAKUSH)
21	03	51	U	(YAKUSH)
	03	54	U	NEAR YAKUSHIMA
	03	59	U	NEAR YAKUSHIMA
	09	48	U	(MIYAZA)
	09	58	U	(KUSHIR)
	13	16	L	E OFF HOKKAIDO
	14	26	U	(KUSHIR)
	14	28	U	(KUSHIR)
	17	21	U	UK
	21	53	U	(ONAHAM)
22	02	12	L	NEAR MATSUSHIRO
	05	05	L	(UTSUNO-IKARI)
	05	23	U	(UTSUNO)
	05	24	L	TOCHIGI PREF
	08	38	L	NEAR MATSUSHIRO
	08	38	U	(NAGANO)
	10	04	L	NEAR MATSUSHIRO
	10	40	L	NEAR MATSUSHIRO
	13	26	U	NEAR ONAHAMA
	14	37	L	NEAR MATSUSHIRO
	16	35	L	NEAR MATSUSHIRO
	17	45	U	UK
	17	53	U	(FUKUI)
23	07	19	U	(URAKAW)
	08	15	L	OKAYAMA PREF
	13	11	U	(HACHIN)
	16	19	U	S OFF HOKKAIDO
	18	24	U	OFF URAKAWA
	19	21	L	NEAR MATSUSHIRO
24	00	13	U	(CHOSHI)
	01	04	L	NEAR MATSUSHIRO
	06	36	L	(NAGANO-MITAKE)
	09	25	U	(NAHA)
	10	05	U	(MATSUM)
	23	20	L	NEAR MATSUSHIRO
25	00	14	U	UK
	06	20	U	(SHIONO)
	12	30	U	S OFF CHIBA PREF
	19	24	L	NEAR MATSUSHIRO
	19	38	L	NEAR MATSUSHIRO
	22	14	L	NEAR MATSUSHIRO
	22	44	L	NEAR MATSUSHIRO
	23	34	U	S OFF SHIZUOKA PREF
26	01	06	U	E OFF CHIBA PREF
	01	07	U	E OFF CHIBA PREF
	03	27	U	(MIYAZA)
	11	12	L	NEAR MATSUSHIRO
	12	02	L	(KOBE-AKASHI)
	13	11	L	NEAR MATSUSHIRO
	17	42	L	NEAR MATSUSHIRO
	19	48	U	UK
27	02	21	U	OFF URAKAWA
	02	36	U	(UTSUNO)
	06	50	U	S OFF HOKKAIDO
	13	11	L	NEAR MATSUSHIRO
	14	41	L	N PART OF OSAKA PREF
	15	04	U	E OFF MIYAGI PREF
	16	44	L	NEAR MATSUSHIRO
	22	26	L	NEAR MATSUSHIRO

DATE, D	TIME H	M	C	LOCATION
27	22	45	U	(WAKAYA)
28	04	37	U	KYUSHU
	05	59	S	OFF URAKAWA
	08	54	L	NEAR MATSUSHIRO
	10	55	U	KWANTO
	11	48	L	NEAR MATSUSHIRO
	13	28	L	NEAR MATSUSHIRO
	14	06	L	NEAR MATSUSHIRO
	15	00	U	(AOMORI)
	17	56	L	SE OFF HOKKAIDO
	23	24	L	NEAR MATSUSHIRO
29	00	50	U	(TSURUG)
	05	50	U	E OFF CHOSHI
	09	07	U	(NAGANO)
	09	41	U	(MITO)
	12	19	U	(NAGANO)
	21	53	U	(KOFU)
30	07	02	M	NEAR CHOSHI
	07	12	L	NEAR CHOSHI
	07	21	L	NEAR CHOSHI
	07	26	U	(CHOSHI)
	07	39	L	NEAR CHOSHI
	08	26	L	NEAR MATSUSHIRO
	08	33	U	(NAGANO)
	10	09	M	NEAR CHOSHI
	10	43	U	(CHOSHI)
	10	48	U	(CHOSHI)
	12	24	L	NEAR MATSUSHIRO
	14	24	U	(CHOSHI)
	14	26	U	(KUMAMO)
	16	20	U	(CHOSHI)
	17	59	L	NEAR MATSUSHIRO
	18	34	U	IWATE PREF
	19	05	U	(NIIGAT)
	20	01	L	(KUMAMO)
	23	09	U	(KUMAMO)

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST. ALL EVENTS FELT AT THE OBSERVATORY ARE GIVEN IN LIST 6.

List 4 EARTHQUAKE ORIGINS

(J.S.T.) DATE, TIME D	H	M	C	LOCATION	ORIGIN TIME M	S	+/-S	LONG.	+/-	LAT.	+/-	C H KM	CLASS M
1	00	08	L	NEAR MATSUSHIRO	08	42.1	0.2	138 06 01		36 27 01		00	3.7
	06	07	L	NEAR KOZUJIMA	06	56.2	0.4	139 12 02		34 10 01		10	4.3
	14	55	R	KURILE IS	54	22.0	2.1	151 29 10		44 40 09		10	5.8
	21	24	U	KURILE IS	23	42.7	1.1	150 50 06		44 15 05		00	5.8
	23	01	U	KURILE IS	00	39.9	1.1	151 30 06		44 39 06		40	5.4
4	18	06	R	SE OFF KII PEN	06	01.9	0.2	137 31 02		33 12 02		340	
6	08	50	L	W OFF NIIGATA PREF	50	01.2	0.3	137 52 01		37 27 01		10	4.3
	11	34	S	NEAR AMAMIOSHIMA	34	24.3	0.8	130 18 12		28 59 05		40	5.5
	15	17	S	NEAR KOZUJIMA	17	26.9	0.2	139 09 01		34 13 01		10	5.3
	17	49	M	NEAR KOZUJIMA	49	36.2	0.3	139 10 01		34 19 01		00	5.2
	18	06	M	NEAR KOZUJIMA	06	42.4	0.3	139 11 01		34 17 01		20	4.9
7	08	29	S	NEAR KOZUJIMA	28	49.9	0.3	139 09 01		34 15 01		10	5.2
	08	32	S	OFF CHOSHI	32	06.0	0.8	140 59 04		35 38 02		50	5.3
	09	50	L	NEAR KOZUJIMA	50	41.9	0.6	139 12 01		34 20 02		10	3.7
8	04	40	R	S OF OKHOTSK SEA	39	16.7	0.2	145 54 02		46 46 01		300	
10	23	47	L	NEAR KOBE	47	17.1	0.2	135 01 01		34 33 01		10	3.5
11	07	30	U	E OFF AOMORI PREF	30	42.7	0.8	142 13 05		40 33 02		90	
	18	02	L	E COAST OF IBARAKI PREF	02	07.7	1.0	140 35 06		36 30 07		50	3.8
12	02	39	L	NEAR MATSUSHIRO	39	50.6	0.2	138 05 01		36 26 00		00	3.8
	11	32	L	N OF CHIBA PREF	32	29.9	0.3	140 06 03		35 47 02		70	
	13	58	U	SUMATRA	51	40.2		96 30		5 18		55	6.1
14	04	54	S	RYUKYU IS	53	43.2	1.1	128 52 09		27 05 06		100	
	08	58	L	NEAR MATSUSHIRO	58	10.4	0.3	138 09 01		36 25 01		00	4.0
	11	37	L	W COAST OF WAKAYAMA PREF	37	19.0	0.3	135 07 01		34 05 01		00	3.7
	18	04	L	NEAR MATSUSHIRO	04	53.7	0.2	138 05 01		36 28 01		00	4.2
	18	19	L	NEAR MATSUSHIRO	19	28.0	0.2	138 07 01		36 26 01		00	4.0
	18	43	L	NEAR MATSUSHIRO	43	29.2	0.2	138 05 01		36 28 01		00	4.4
	22	15	U	NW OF CHIBA PREF	14	57.2	0.3	139 51 07		35 48 03		80	
16	08	36	M	OFF URAKAWA	35	50.8	0.2	142 23 02		41 56 01		80	
17	07	28	L	NEAR MATSUSHIRO	28	37.9	0.2	138 07 01		36 29 01		10	4.2
	21	01	L	E OFF FUKUSHIMA PREF	01	07.6	0.4	141 30 02		37 07 01		50	4.0
18	15	57	L	NIIGATA PREF	56	58.0	0.8	139 19 05		38 01 04		20	4.0
	18	37	U	TOKYO-YAMANASHI BORDER	36	53.6	0.4	139 04 06		35 45 09		130	
	23	33	U	N OF MIYAGI PREF	33	02.6	0.2	141 03 02		38 44 01		20	3.4
19	19	25	S	CHIBA PREF	24	53.5	0.8	140 20 04		35 31 03		70	
20	07	58	U	IWATE PREF	57	56.4	0.1	141 53 01		39 45 00		60	3.7
	22	02	S	AKITA PREF	02	08.0	0.2	140 41 01		39 42 01		10	4.7
	23	40	U	S OF IBARAKI PREF	39	54.8	0.4	140 16 03		36 05 02		70	
21	13	16	L	E OFF HOKKAIDO	15	53.2	1.8	146 23 09		43 08 05		30	4.6
22	10	04	L	NEAR MATSUSHIRO	03	57.6	0.2	138 06 01		36 27 01		00	4.0
	16	35	L	NEAR MATSUSHIRO	35	32.2	0.2	138 18 02		36 33 01		10	4.0
23	16	19	U	S OFF HOKKAIDO	19	28.6	1.3	143 33 09		40 58 04		60	4.4
25	12	30	U	S OFF CHIBA PREF	30	07.3	1.3	140 08 06		34 46 05		50	3.6
27	02	21	U	OFF URAKAWA	21	27.3	0.3	142 45 03		41 57 02		80	
	14	41	L	N PART OF OSAKA PREF	41	32.6	0.5	135 31 02		34 51 01		00	3.6
28	05	59	S	OFF URAKAWA	59	33.8	1.2	142 11 04		41 47 07		90	
	23	24	L	NEAR MATSUSHIRO	24	51.7	0.2	138 08 01		36 28 01		10	4.3
30	07	02	M	NEAR CHOSHI	02	07.8	0.5	140 56 03		35 50 01		30	5.1
	07	12	L	NEAR CHOSHI	12	42.2	1.1	140 57 05		35 57 02		00	4.1
	07	39	L	NEAR CHOSHI	39	39.5	1.1	141 01 05		35 50 02		30	4.3
	10	09	M	NEAR CHOSHI	09	33.5	0.5	141 03 03		35 48 01		30	4.9

International Seismological Centre From the ISC collection scanned by SISMOS

List 5 DATA OF EARTHQUAKES

OT= 1 0 8 42.1 +/- 0.2 (J.S.T.)
NEAR MATSUSHIRO
LAT= 36 27 +/- 1 LONG= 138 6 +/- 1
H= 0 MAG=3.7 CLASS=L

I SEISMIC INTENSITY
* MICRON

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	1	P	00	08	45.5	S	08	47.4										13.8	01.9
NAGANO	0	IP	00	08	48.0	S	08	50.7										24.9	02.7
MATSUM	0	IP	00	08	48.2	S	08	52.2									U 15	25.6	04.0
KARUIZ	0	IP	00	08	52.1	S	08	57.3								W	D 8	42.3	05.2
MAEBAS	0	EP	00	08	58.1				8	4.2	4	2.0	9	3.8				86.7	
TOYAMA	0	EX	00	09	02				7	3.2	9	3.8						84.7	
KUMAGA	0	EP	00	09	05.2	ES	09	20.6	9	5.0	11	3.4						120.2	15.4
KANAZA	0	EP	00	09	08.0	ES	09	24.0	6		5		5					130.5	16.0
KOFU	0	X	00	09	11.0				5	1.4	4	1.0	2	0.4				96.4	
WAJIMA	0	X	00	09	17.6				10	0.6	9	1.0						149.5	
OMAEZA	0	X	00	09	30.4				7	0.3	7	0.2						205.1	

OT= 1 6 6 56.2 +/- 0.4
NEAR KOZUJIMA
LAT= 34 10 +/- 1 LONG= 139 12 +/- 2
H= 10 MAG=4.3 CLASS=L

OSHIMA	0	EX	06	07	00.5	IS	07	09.3	41	2.7	27	2.0	15	1.9				68.0	
AJIRO	0	IP	06	07	13.0	ES	07	24.6	7		5		3				U 1	97.7	11.6
MISHIM	0	EP	06	07	14.1	ES	07	27.4	22	1.1	16	1.3	7	1.5				107.7	13.3
TOMISA	0	IP	06	07	14.4				25	2.0	20	2.0	13	2.0	N 1	W 2	U 5	101.5	
OMAEZA	0	EP	06	07	14.6	ES	07	29.4	53		21		12					102.8	14.8
SHIZUO	0	P	06	07	17.4	IS	07	31.0	18	0.6	12	0.4	6	6.4		E 1	D 2	115.3	13.6
HACHIJ	0	EP	06	07	19.4	ES	07	35.0	13		14					E 2		130.1	15.6
YOKOHA	0	IP	06	07	21.9	S	07	41.8	36	1.6	22	0.6					D 8	146.9	19.9
FUNATS	0	P	06	07	22.3	S	07	41.8										153.0	19.5
KOFU	0	EP	06	07	25.8	ES	07	47.8	14	1.4	15	1.4	6	1.4				176.2	22.0
TOKYO	0	IP	06	07	26.3	ES	07	47.0	15	3.6	20	4.0	12	2.6				175.9	20.7
IIDA	0	IP	06	07	29.8	IS	07	51.4	8	1.4	6	1.6	5	1.4			U 2	194.4	21.6
KUMAGA	0	EX	06	07	34.0				7	1.2	8	2.2						220.3	
NAGOYA	0	EP	06	07	34.5	ES	07	58.0	6	1.2	7	1.2	3	1.0				232.5	23.5
MAEBAS	0	P	06	07	35.9				6	2.6	5	1.8	6	4.1			D	248.2	
UTSUNO	0	EX	06	07	36.0	EX	08	06.8	6	1.6	4	1.6						270.9	
GIFU	0	P	06	07	39.0	S	08	05.8	6	1.2	8	1.4	3	1.0				261.3	26.8
KARUIZ	0	EP	06	07	40.0													248.2	
MATSUS	0	P	06	07	40	S	08	12										278.1	32.0
HIKONE	0	EP	06	07	44.0	S	08	14.4	9	1.1	8	1.2						297.0	30.4
OSAKA	0	P	06	07	49.0	ES	08	33	7	4.2	8	3.6						340.8	44.0
KANAZA	0	X	06	07	56.0	ES	08	26.0	6		6		5					351.3	
HAMAMA	0	X	06	07	58.5	X	08	19.7	10	1.2	9	3.0	4	1.6				148.4	
TOYOOK	0	X	06	08	06.9	ES	08	45.4	9	1.0	7	1.0						428.3	

OT= 1 14 54 22.0 +/- 2.1
KURILE IS
LAT= 44 40 +/- 9 LONG= 151 29 +/-10
H= 10 MAG=5.8 CLASS=R

NEMURO	0	EP	14	55	31.0	S	56	27.6	50	4.4	42	4.0	46	5.6			U	495.8	56.6
ABASHI	0	P	14	55	42.5	S	56	58.0	48	2.5	44	2.0	41	2.9				578.7	75.5
KUSHIR	0	EP	14	55	44.3	ES	56	49.8	92	1.7	75	2.4	56	4.3				600.2	65.5
OBIHIR	0	EP	14	55	57.8													692.5	
HIROO	0	EP	14	55	59.4	ES	57	15.8										711.6	76.4
ASAHIK	0	P	14	56	01.9	S	57	28.8	36	2.6	55	2.0	25	3.2	N	W	D 0	734.6	86.9
URAKAW	1	EP	14	56	06.5	S	57	26.8	220	2.2	143	3.8						757.7	80.3
WAKKAN	0	EP	14	56	07.8	X	57	46.5			44	13.2	18	13.7				777.1	
RUMOI	0	EX	14	56	11													789.7	
SAPPOR	0	EP	14	56	15.0	ES	57	50	71	2.6	96	2.4	46	4.0			D	835.1	95.0
MURORA	0	EP	14	56	20.8	ES	57	52.7										888.0	91.9
HAKODA	0	EP	14	56	24.9	ES	58	02.4	32	4.8	23	4.0	15	4.2				926.3	97.5
MIYAKO	0	EP	14	56	33	ES	58	08.3	7	13.2	8	16.9						963.2	95.3
AOMORI	0	EP	14	56	33.1	ES	58	14.1	119	2.0	102	1.8	34	1.3				974.1	101.0
OFUNAT	0	EP	14	56	36.8	X	58	20.2	5	1.4	5	4.0	7	2.4				1021.1	
MORIOK	0	EP	14	56	37.3	S	58	20.2	10	2.7	7	3.0	6	4.0				1014.3	102.9
MIZUSA	0	P	14	56	42.8	ES	58	29.5	125	3.0	55	2.3						1054.9	106.7
SENDAI	0	EP	14	56	52	ES	58	59.5	11	2.0	12	3.0	5	3.0				1133.4	127.5
						EX	58	48											
SAKATA	0	EP	14	56	55.3	ES	59	01.6										1159.1	126.3

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HACHIN	0	X	14	56		X	58	01.4	13	5.7	13	3.2	19	14.0				937.1	
TOYAMA	0	X	14	56					7	4.0	9	4.6						1492.3	
AKITA	0	EX	14	57	02.6	EX	58	22.8	39	4.0	36	4.0	23	3.8				1087.7	
FUKUSH	0	X	14	57	13.2				11	0.9	9	1.1	4	0.5				1198.8	
HAMAMA	0	EX	14	57	15	EX	00	44	9	4.0	6	3.2	3	2.4				1613.2	
MITO	0	EP	14	57	17.0	ES	59	25.4	13	3.4	20	3.6	8	3.2				1308.5	128.4
KAKIOK	0	EX	14	57	18				10	0.8	7	0.8	3	1.0				1337.3	
MATSUS	0	P	14	57	27	S	00	04										1438.1	157.0
KUMAGA	0	EP	14	57	30.0	ES	59	46.0	14	3.0	11	3.0	9	4.0				1393.6	136.0
WAJIMA	0	EX	14	57	30.0	EX	00	06.6	13	2.0	13	3.0	5	2.6				1465.6	
MAEBAS	0	EP	14	57	30.5				6	4.0	8	5.6	9	3.6				1393.4	
KOFU	0	EP	14	57	38.0	X	00	25.4	6	2.0	5	1.8						1483.8	
ONAHAM	0	X	14	57	39.6				18	2.2	12	1.6	9	2.3				1235.8	
TOMISA	0	EP	14	57	39.6				16	4.0	13	4.3	7	4.0				1469.3	
KANAZA	0	EP	14	57	41.8	ES	00	24.4	6		8		6					1541.9	162.6
TOYOOK	0	EP	14	58	04.5	X	01	20.6	9	1.2	7	1.1						1740.0	
SAIGO	0	EP	14	58	09.0	ES	01	15.2	3	16.6	6	4.6	3	2.0	N	0 E	0 D	0 1798.0	186.2
						EL	04	09											
OSAKA	0	EP	14	58	13.2	S	00	55.5	24	5.0	28	4.0	8	2.4				1757.9	162.3
						X	04	46.4											
MUROTO	0	EP	14	58	31.5	S	01	22.5	4	15.0	5	6.0						1956.4	171.0
HAMADA	0	P	14	58	32.4	ES	02	02.4	5	3.8	8	4.6	3	2.4	N	1 E	2 D	2 1977.7	210.0
HIROSH	0	EP	14	58	37	S	02	07.1	3	15.1	5	15.1	3	17.0				1989.8	210.1
SHIMON	0	EX	14	58	48	ES	01	35	4	6.0	5	6.0	4	5.0				2124.2	
OITA	0	P	14	58	51.6	ES	02	34.1	26	3.9	16	3.9	8	2.9				2129.3	222.5
FUKUOK	0	EP	14	58	54.0	ES	02	40	5	4.1	4	4.9	5	4.5	S	1 W	1 U	1 2190.7	226.0
KUMAMO	0	EP	14	58	58.5	ES	02	49.3	10	3.0	6	1.6	3	1.5				2224.0	230.8
NAGASA	0	P	14	59	02.0	IS	03	07.2							S	W	U	2289.5	245.2
MIYAZA	0	EP	14	59	02.0	ES	03	03.0	10	5.0	10	5.0	7	3.0				2243.3	241.0
KAGOSH	0	EP	14	59	11.5	EX	03	00.3	14	2.5	13	1.9	6	2.0				2328.9	
YAKUSH	0	EP	14	59	16.6	EX	03	24.0	4	8.4	4	6.0	5	4.0				2421.5	
UTSUNO	0	X	14	59	28.6	X	59	55.8	8	1.3	6	1.3						1331.3	
CHOSHI	0	X	14	59	31.1													1341.8	
TOKYO	0	X	14	59	48.4				11	2.6	16	4.6	15	3.8				1408.6	
YOKOHA	0	X	14	59	54.8				13	1.9	12	3.6						1435.6	
FUNATS	0	X	15	00	09.0	X	02	19.0										1484.5	

OT= 1 21 23 42.7 +/- 1.1
KURILE IS
LAT= 44 15 +/- 5 LONG= 150 50 +/- 6
H= 0 MAG=5.8 CLASS=U

NEMURO	0	P	21	24	46.2	S	25	41.6	54	4.6	39	3.2	52	5.2				434.6	55.4
ABASHI	0	P	21	24	59.0	S	26	03.2	56	2.2	63	1.6	35	2.6				524.8	64.2
KUSHIR	0	EP	21	25	00.2	ES	26	04.8	85	0.8	69	1.3	61	4.3				538.6	64.6
OBIHIR	0	EP	21	25	11.8													632.2	
HIROO	0	EP	21	25	14.8	ES	26	30.1										648.1	75.3
ASAHIK	0	IP	21	25	17.1	IS	26	44.2	35	1.8	49	2.2	27	2.6		W	1 U	0 680.4	87.1
URAKAW	0	EP	21	25	20.1	S	26	42.8	223	3.2	135	2.0						694.3	82.7
WAKKAN	0	EP	21	25	21.5	X	27	05.0			40	14.3	42	4.0				735.5	
SAPPOR	0	P	21	25	29.8	ES	27	00	77	2.4	112	2.4	48	4.6				777.6	90.2
MURORA	0	EP	21	25	35.6	ES	27	06.3										827.4	90.7
HAKODA	0	P	21	25	39.8	ES	27	13.7	42	4.0	31	3.0	20	3.3	N	0 E	1 D	1 864.1	93.9
RUMOI	0	X	21	25	41													737.2	
HACHIN	0	P	21	25	41.4	ES	27	14.3	14	4.0	14	3.2	13	3.4	N	E	4 D	4 870.5	92.9
AOMORI	0	EP	21	25	45.9	ES	27	27.1	115	2.7	101	1.7	33	1.2				908.8	101.2
MIYAKO	0	EP	21	25	46	ES	27	22.8	5	2.8	7	16.7	5	2.6				894.8	96.8
MORIOK	0	EP	21	25	51.2	ES	27	33.5	9	2.4	7	2.6	10	2.2	N	0 E	0	946.6	102.3
						EX	25	52.6											
						EX	28	30.0											
OFUNAT	0	EP	21	25	52.3	ES	27	35.6	8	1.2	6	2.6	8	2.0				952.3	103.3
						L	35	58											
SAKATA	0	X	21	25		ES	28	04.1										1091.2	
MIZUSA	0	P	21	26	01.2	S	27	46.2	120	2.7	47	2.1						986.5	105.0
AKITA	0	EX	21	26	05.8	EX	27	52.2	39	4.0	34	3.6	25	3.4				1020.9	
SENDAI	0	EP	21	26	07	ES	27	58	14	3.2	15	3.0	6	1.2				1064.4	111.0
FUKUSH	0	EP	21	26	15.0	ES	28	17.0	11	0.9	12	1.0	7	1.5				1129.7	122.0
AIKAWA	0	IP	21	26	29.7				6	1.4	8	1.0	6	1.8	S	0 W	0	1261.4	
MITO	0	P	21	26	30.4	ES	28	39.4	17	3.4	13	4.3	10	3.0				1239.0	129.0
CHOSHI	0	EP	21	26	32.7	EX	28	50.3										1272.5	
KAKIOK	0	EP	21	26	33	S	28	48.6	14	0.8	8	0.8	3	0.8				1267.8	135.6
UTSUNO	0	EP	21	26	35.1	ES	28	54.1	10	2.0	8	2.2	3	2.2				1262.0	139.0
MATSUS	0	IP	21	26	43.8	X	29	25							S	W	U	1369.3	
KUMAGA	0	X	21	26	44.0	ES	29	07.2	13	3.0	14	4.0	12	3.0				1324.3	
TOKYO	0	EP	21	26	44.0	EX	29	10.0	13	3.0	17	5.0	20	3.6				1339.2	
MAEBAS	0	X	21	26	45.0	S	29	06.0	9	3.9	7	3.8	9	3.4			U	1324.2	
WAJIMA	0	EP	21	26	46.0	ES	29	09.6	13	3.0	16	3.0	7	4.0				1398.0	143.6
ONAHAM	0	EX	21	26	50.0	ES	28	24.3	19	2.8	18	2.0	9	2.3				1166.4	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOYAMA	0	EX	21	26	51				9	3.0	10	4.4						1424.0	
TOMISA	0	X	21	26	53.2				14	2.5	17	12.2	9	10.7				1399.9	
KOFU	0	EP	21	26	53.7	X	29	34.6	7	2.0	7	1.7						1414.5	
FUNATS	0	X	21	26	56.1	S	29	19.2										1415.1	
KANAZA	0	EP	21	26	56.8	X	30	37.6	7		6		5					1473.8	
MISHIM	0	EP	21	26	57.1				8	3.3	6	2.9						1436.7	
YOKOHA	0	X	21	26	57.2				14	2.4	13	3.3	9	3.1				1366.1	
OMAEZA	0	EX	21	27					8	1.3	13	1.3						1522.3	
HAMAMA	0	EP	21	27	08				10	3.8	6	3.2	4	1.6				1543.8	
OSAKA	0	EP	21	27	12	S	30	08.7	28	5.1	31	4.7	7	3.0				1689.1	176.7
						IX	27	28.9											
						X	30	55.9											
HIKONE	0	EP	21	27	13.0	ES	30	21.3	8	2.8	6	1.1						1594.5	188.3
TOYOOK	0	P	21	27	20.0	X	30	30.8	7	1.2	9	4.1						1672.0	
SAIGO	0	P	21	27	26.7	ES	30	42.4	4	14.7	5	4.8	3	4.6	N	0 E	1 D	1 1731.5	195.7
						EL	33	22											
SUMOTO	0	EP	21	27	27.1	ES	30	36.8	5	15.0	4	4.4	3	4.2				1755.0	189.7
						L	33	09											
OKAYAM	0	P	21	27	34.0	S	30	56.0	5	3.0	10	4.0	5	3.4				1796.4	202.0
SHIONO	0	IP	21	27	37.6	S	30	55.6	3	3.0	7	3.9	3	1.0	N	4 E	4 D	3 1769.3	198.0
HAMADA	0	EP	21	27	47.1	ES	31	15.8	7	3.5	10	4.1	6	3.3				1910.7	208.7
MUROTO	0	EP	21	27	47.1	S	31	16.1	5	4.2	6	6.0	5	4.0				1887.6	209.0
HIROSH	0	EP	21	27	49.7	S	31	20.7	5	16.4	5	3.9	3	16.9				1922.2	211.0
SHIMON	0	EP	21	28	03	ES	31	46	5	4.0	5	5.0	5	4.0				2057.1	223.0
OITA	0	P	21	28	06.4	S	31	49.9	27	5.2	21	4.9	9	3.6				2061.4	223.5
FUKUOK	0	EP	21	28	09.5	ES	31	56	5	3.9	4	4.0	7	4.3	S	1 W	1 U	2 2123.6	226.5
KUMAMO	0	EP	21	28	13.3	ES	32	10.1	11	4.8	6	2.6	3	1.3				2156.2	236.8
MIYAZA	0	EP	21	28	16.6	ES	32	17.0	7	5.0	9	5.0	10	4.0				2174.8	240.4
NAGASA	0	P	21	28	18.3	S	32	22.2							S	W	U	2222.1	243.9
KAGOSH	0	EP	21	28	25.4				16	1.9	13	2.1						2260.6	
YAKUSH	0	EP	21	28	32.0	ES	32	39.0	7	3.8	4	5.8	7	4.0				2352.7	247.0
NIIGAT	0	X	21	28	39.5				40	5.2	43	3.7	18	3.8				1213.0	

OT= 1 23 0 39.9 +/- 1.1
KURILE IS
LAT= 44 39 +/- 6 LONG= 151 30 +/- 6
H= 40 MAG=5.4 CLASS=U

NEMURO	0	P	23	01	48.3	ES	02	43.6	7	4.4	7	1.2	4	1.2	S	W	1 U	1	496.6	55.3
ABASHI	0	P	23	01	59.1	X	03	18.8	8	2.8	7	1.6	5	3.5					579.8	
KUSHIR	0	EP	23	02	01.6	ES	03	06.6	39	0.7	21	0.8	15	0.9					601.0	65.0
HIROO	0	EP	23	02	15.7	ES	03	32.5											712.3	76.8
ASAHIK	0	IP	23	02	18.9	EX	03	49.2	5	2.0	6	2.0	5	1.4		W	0 U	0	735.8	
URAKAW	0	EP	23	02	23.1	S	03	42.6	41	1.4	25	0.8	14	1.4					758.4	79.5
OBIHIR	0	X	23	02	25.0														693.4	
SAPPOR	0	EP	23	02	31				8	2.4	11	2.4	7	3.0					836.1	
HAKODA	0	EP	23	02	41.0	ES	04	17.8	7	3.8	4	3.6	3	3.6			D	0	927.1	96.8
AOMORI	0	EP	23	02	50	ES	04	32	21	1.4	17	1.1	11	1.2					974.6	102.0
MIZUSA	0	P	23	03	02.6	S	04	54.0	13	1.9	12	1.2							1055.0	111.4
MATSUS	0	IP	23	03	45.3	S	06	15							N	E	U		1438.2	149.7
AKITA	0	X	23	05	13.0						9	3.4							1088.1	

OT= 4 18 6 1.9 +/- 0.2
SE OFF KII PEN
LAT= 33 12 +/- 2 LONG= 137 31 +/- 2
H=340 CLASS=R

OWASE	0	IP	18	06	49.5	IS	07	27.2	16	2.8	10	2.0	20	1.2					155.8	37.7
HAMAMA	0	IP	18	06	50.7	S	07	29.4	22	1.4	64	3.6	8	2.2			U	53	168.3	38.7
SHIONO	0	IP	18	06	50.7	IS	07	28.5	37	2.2	14	1.7	38	2.0	N	1 E	11 D	45	165.5	37.8
NARA	0	IP	18	06	53.0	S	07	32.2									U	28	226.4	39.2
WAKAYA	0	P	18	06	53.2	S	07	34.9	28	0.7	35	0.7							245.7	41.7
SHIZUO	0	IP	18	06	53.4	S	07	32.2	20	1.8	47	3.4	19	3.0	S	2 W	2 D	2	213.1	38.8
NAGOYA	0	IP	18	06	53.7	IS	07	34.6	40	2.8	48	2.6	25	1.0	N	2 W	1 U	17	223.7	40.9
HACHIJ	0	IP	18	06	53.7	ES	07	37.4	11		16		18		N	2	D	5	212.1	43.7
OSAKA	0	IP	18	06	54.6	IS	07	36.6	84	2.4	78	3.0	33	2.8			U	28	243.4	42.0
OSHIMA	0	IP	18	06	54.8	S	07	34.9	31	0.6	22	0.8	26	1.1		E	5 D	21	244.0	40.1
AJIRO	0	IP	18	06	55.0	S	07	36.2	18		26		11				D	1	251.0	41.2
GIFU	0	P	18	06	55.2	S	07	36.3	28	2.2	9	2.0	12	0.5					253.4	41.1
KYOTO	0	IP	18	06	55.2	IS	07	36.6	25	2.0			22	1.0	N	1 W	1 U	15	259.5	41.4
IIDA	0	EP	18	06	55.4	IS	07	37.8	14	2.6	19	3.2	5	1.2			U	1	257.8	42.4
MISHIM	0	IP	18	06	55.6	IS	07	37.1	38	0.8	43	0.8			S	4			248.8	41.5
KOBE	0	P	18	06	55.9	ES	07	39.0									U	19	271.8	43.1
TOMISA	0	IP	18	06	56.0	IS	07	39.0	44	0.7	35	0.7	17	0.8	S	1	D	3	286.2	43.0
SUMOTO	0	IP	18	06	56.1	IS	07	35.2	20	2.0	16	2.6	12	1.0	N	2 W	5 U	14	272.4	39.1
HIKONE	0	P	18	06	56.6	S	07	38.1	87	2.1	35	1.9	17	1.9					257.9	41.5

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KOFU	0	EP	18	06	57.9	ES	07	41.2	18	1.0	22	2.5	9	1.2				289.6	43.3
TOKUSH	0	EP	18	06	58.3	ES	07	42.4										289.0	44.1
YOKOHA	0	IP	18	06	59.4	IS	07	44.4	55	0.4	75	0.6	17	0.4	S 2 W	2 D	12	316.6	45.0
MUROTO	0	IP	18	06	59.5	IS	07	45.4	4	3.8	22	2.6	10	4.0	N 0 E	1		311.1	45.9
MAIZUR	0	EP	18	06	59.8	ES	07	45.1										319.1	45.3
HIMEJI	0	P	18	07	00.4	S	07	45.3							N 4 W	4	U 18	317.0	44.9
FUKUI	0	IP	18	07	00.9	IS	07	47.8									U 5	337.8	46.9
FUNATS	0	P	18	07	01.0	S	07	41.7										279.5	40.7
TOYOOK	0	P	18	07	01.4	S	07	50.1	49	1.4	36	1.2	5	0.9			U 7	358.6	48.7
TOKYO	1	IP	18	07	01.8	IS	07	48.0	115		50		19					344.0	46.2
TAKAMA	0	IP	18	07	02.2	IS	07	49.1	25	1.9	42	2.2	19	1.1	N 1 W	14	U 16	343.4	46.9
MATSUM	0	EP	18	07	02.8	ES	07	50.6										340.1	47.8
MATSUS	0	IP	18	07	03.6	IS	07	51.2									U	375.6	47.6
OKAYAM	0	IP	18	07	03.6	IS	07	52.0	30	2.0	60	2.2	30	2.0	N 7 W	16	U 13	371.2	48.4
KUMAGA	0	EP	18	07	03.6	ES	07	48.8	20	0.8	17	1.0	8	0.6				368.9	45.2
KARUIZ	0	EP	18	07	03.9	IS	07	52.6										360.9	48.7
MAEBAS	0	IP	18	07	04.5	IS	07	51.7	9	2.8	11	3.0	9	3.4			U 2	382.3	47.2
KANAZA	0	P	18	07	04.7	ES	07	47.8	12		12		15				U 6	379.6	43.1
KOCHI	0	IP	18	07	05.2	IS	07	57.0							N 9 W	15	U 11	372.6	51.8
CHICHI	0	EP	18	07	05.4	IS	07	50.1										341.2	44.7
TOYAMA	0	EP	18	07	06	ES	07	56	9	3.2	13	3.6						389.9	50.0
KAKIOK	1	P	18	07	06.5	IS	07	55.9	81	0.8	144	0.8	44	0.4	N 1		U 1	416.0	49.4
CHOSHI	0	P	18	07	07.2	IS	07	58.5										414.4	51.3
UTSUNO	1	P	18	07	07.8	S	07	57.7	94	0.3	125	0.2	46	0.4				429.0	49.9
TAKADA	0	P	18	07	09.3	S	08	02.5										438.2	53.2
MITO	1	IP	18	07	09.4	IS	08	01.0	50	0.4	62	0.4	24	0.7			U 5	444.2	51.6
ASHIZU	0	IP	18	07	10.2	IS	08	03.0	16	2.6	12	3.0	7	2.4	S 2 W	3	D 7	424.0	52.8
HIROSH	0	EP	18	07	12.6	S	08	12.2	11	2.6	33	4.4	3	2.5				487.7	59.6
WAJIMA	0	S	18	07	13.0				42	0.8	30	0.8	18	1.0				468.1	
MATSUE	0	EP	18	07	13.5	S	08	11.2										479.3	57.7
SHIRAK	0	EP	18	07	14.3	IS	08	09.3										499.7	55.0
SAIGO	0	P	18	07	16.2	IS	08	14.4	14	2.0	15	2.6	7	2.2	N 3 W	3	U 5	507.7	58.2
ONAHAM	1	EX	18	07	17.3	IS	08	11.9	124	0.8	126	1.0	40	0.6				517.7	
OITA	0	EP	18	07	18.7	S	08	29.4	58	4.0	68	4.2	32	3.8				549.2	70.7
HAMADA	0	P	18	07	19.0	ES	08	17.4	7	4.0	32	4.4	8	4.2			D 3	536.3	58.4
FUKUSH	0	IP	18	07	20.9	IS	08	21.8	54	0.9	49	0.9	20	0.6			U 1	572.2	60.9
MIYAZA	0	P	18	07	26.0	S	08	30.0	9	2.8	28	2.8	8	2.8				589.1	64.0
SENDAI	0	EP	18	07	27.8	IS	08	33.0	41	3.0	30	3.0	18	2.0				639.2	65.2
SHIMON	0	EP	18	07	28.0	ES	08	32.0	8	3.8	17	4.2	6	3.4				615.8	64.0
KUMAMO	0	EP	18	07	30.6	IS	08	41.1	13	1.6	24	2.0	7	3.7				637.2	70.5
ISHINO	0	P	18	07	31.4	IS	08	39.3										672.9	67.9
SAKATA	0	EP	18	07	33.0	S	08	42.8										666.3	69.8
FUKUOK	0	EP	18	07	33.0	ES	08	44.5	6	3.2	15	2.4	13	2.4				665.0	71.5
SAGA	0	P	18	07	35.6	S	08	47.7										671.9	72.1
MIZUSA	0	EP	18	07	38.9	S	08	52.3	38	1.9	19	2.3	10	1.0				734.1	73.4
MORIOK	0	IP	18	07	43.7	ES	09	02.8	9	0.4	10	0.3	2	4.0	N 1 E	0	U 0	791.4	79.1
OFUNAT	0	X	18	07		IS	08	52.8	9	0.4	14	0.6	4	1.0			D 0	752.0	
URAKAW	0	EP	18	08	16.7	S	10	02.9	4	0.8	6	0.4	1	0.4				1096.6	106.2
KAGOSH	0	X	18	08	34.8				20	2.5	31	2.9	6	1.8				679.2	
KUSHIR	0	EP	18	08	39.0	ES	10	29.4	12	0.3	11	0.3	4	0.4				1240.6	110.4
AKITA	0	X	18	08	58.8				17	3.8	15	3.2	11	3.6				759.3	
ASOSAN	0	X	18	09	37													602.5	

OT= 6 8 50 1.2 +/- 0.3
W OFF NIIGATA PREF
LAT= 37 27 +/- 1 LONG= 137 52 +/- 1
H= 10 MAG=4.3 CLASS=L

TAKADA	1	P	08	50	11.3	S	50	18.1										51.2	06.8
AIKAWA	0	IP	08	50	14.8	IS	50	24.2	15		14		4		N 0 W		U	71.4	09.4
NAGANO	0	EP	08	50	18.9	S	50	30.7	12		19		8					92.4	11.8
WAJIMA	0	IP	08	50	19.2	S	50	30.0	239	0.6	235	0.6	68	0.6			D 6	86.0	10.8
MATSUS	0	IP	08	50	19.7	S	50	33							S E		U	105.6	13.3
TOYAMA	0	EP	08	50	21	S	50	33.6	33	1.2	40	1.2						101.1	12.6
KANAZA	0	EP	08	50	25.2	ES	50	46.2	7		10		6					147.7	21.0
MATSUM	0	EP	08	50	25.6	ES	50	42.8										134.2	17.2
NIIGAT	0	EX	08	50	34.7	IS	50	38.6	40	0.6	40	0.5	5	0.3				116.3	
KUMAGA	0	EP	08	50	35.0	ES	50	59.2	12	1.2	6	1.4	7	1.4				198.2	24.2
UTSUNO	0	EP	08	50	35.3	ES	50	58.9	12	1.1	9	1.1	5	1.0				204.7	23.6
MITO	0	X	08	50	54.9	S	51	14.4	5	1.9	6	1.9	3	1.4				260.8	
ONAHAM	0	X	08	51	04.7				8	1.0	8	1.0	3	0.5				275.6	

OT= 6 11 34 24.3 +/- 0.8
NEAR AMAMIOSHIMA
LAT= 28 59 +/- 5 LONG= 130 18 +/-12
H= 40 MAG=5.5 CLASS=S

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
YAKUSH	0	P	11	34	48.0	ES	35	08.0	215	0.8	242	0.8	78	1.0	S 2 W	1	D 1	163.6	20.0
KAGOSH	0	EP	11	35	04.8	S	35	33.8	95	1.5	77	1.1	47	1.2				288.0	29.0
MIYAZA	0	P	11	35	14.6	ES	35	52.6	36	1.2	43	1.2	17	2.0				342.5	38.0
NAHA	0	EP	11	35	21.0	S	36	08.6	65	3.0	47	2.6	20	2.0				399.2	47.6
NAGASA	0	P	11	35	21.8	S	36	08.0										415.5	46.2
KUMAMO	0	EP	11	35	23.0	S	36	13.3	32	1.6	36	1.6	15	1.2				425.8	50.3
FUKUOK	0	EP	11	35	34.0	ES	36	30.0	4	2.2	6	2.0	4	1.8				509.5	56.0
SHIMON	0	EP	11	35	41	ES	36	40	2	1.6	5	3.2	3	5.0				554.2	59.0
OITA	0	X	11	35	42.0	S	36	31.0	41	2.0	41	2.4	24	1.9				487.6	
SAGA	0	X	11	35	50.6	X	37	01.9										472.3	
ASOSAN	0	X	11	36	06													437.9	
OSAKA	0	X	11	36	30				10	4.5	14	5.3	5	3.0				799.7	
MATSUS	0	P	11	36	48													1117.2	
NAGATS	1	EP	15	17	39.0	IS	17	45.2	850	6.2	1100	7.0	450	3.0				50.8	06.2
OSHIMA	2	IP	15	17	39.8	IS	17	45.5	800	4.9	800	5.5	200	1.9	S 68 W	75	D 77	64.0	05.7
AJIRO	0	IP	15	17	43.4	ES	17	54.3	124	3.0	143	4.5	74	4.0	S 21 W	6	D 19	91.8	10.9
MISHIM	0	IP	15	17	45.2	IS	17	56.2	293	4.3	293	2.6	220	3.2	S 53 E	13	D 49	101.3	11.0
TOMISA	0	IP	15	17	45.4	IS	17	57.2	487	6.0	344	7.0	210	5.6			D 4	99.8	11.8
OMAEZA	0	IP	15	17	45.9	IS	17	57.5	490		337		290		N 29 W	75	U143	96.2	11.6
SHIZUO	1	IP	15	17	47.0	IS	18	00.2	230	7.0	230	0.2	140	8.0	N 20 W	15	U 30	108.1	13.2
FUNATS	0	EP	15	17	51.5	S	18	10.4	300	2.2	200	2.2	70	1.0	S200 E	50		146.5	18.9
HAMAMA	0	IP	15	17	51.7	IS	18	08.8	157	2.6	134	4.0	70	2.4	N 2 W	20	U 40	141.9	17.1
HACHIJ	0	IP	15	17	51.8	IS	18	06.2	73		74		28		N 2 W	1	D 4	137.1	14.4
YOKOHA	0	IP	15	17	52.6	IS	18	12.4	310	4.0	344	2.5	206	4.5	S 6 W	4	D 35	143.0	19.8
KOFU	0	IP	15	17	55.6	ES	18	15.4	206	1.7	263	1.8	74	1.8	S 12 E	5	D 7	169.5	19.8
TOKYO	0	IP	15	17	57.0	X	17	19.5	267	6.4	386	6.2	156	3.6			D 2	172.1	
IIDA	1	IP	15	17	58.4	IS	18	19.4	145	2.2	149	2.4	74	1.6	N 20 W	11	U 20	187.1	21.0
CHICHI	0	EP	15	17	59.7	IS	18	21.4							S 10 E	3		197.0	21.7
CHOSHI	0	EP	15	18	02.2	S	18	31.2										227.8	29.0
KUMAGA	0	IP	15	18	03.0	IS	18	27.4	103	5.6	111	5.2	81	4.4	S 4 E	2	D 12	215.1	24.4
NAGOYA	0	P	15	18	03.2	S	18	28.0	123	2.0	102	2.0	50	1.4			U 8	225.8	24.8
KAKIOK	0	P	15	18	04.0	ES	18	33	54	1.0	54	1.0	15	3.5	S 1 W	1	D 1	242.8	29.0
KARUIZ	0	P	15	18	06.6	S	18	37.9									D	241.7	31.3
GIFU	0	P	15	18	07.5	S	18	34.6	99	1.4	70	1.4	31	1.4	N 11 W	17	U 14	254.5	27.1
MAEBAS	0	IP	15	18	07.7	S	18	32.3	144	6.0	145	5.7	130	4.1	S 2 E		D 7	242.5	24.6
MITO	0	IP	15	18	08.0	ES	18	42.6	76	3.6	68	4.2	43	3.2			D 3	268.2	34.6
OWASE	0	IP	15	18	08.0	S	18	38.0	18	4.0	16	5.8	15	4.0	S W	5	U 6	273.0	30.0
UTSUNO	0	EP	15	18	08.1	ES	18	38.4	56	1.7	42	1.9			S 3 W	4		266.6	30.3
MATSUS	0	IP	15	18	09.6	S	18	39							S		D	271.3	29.4
MATSUM	0	EP	15	18	10.3	ES	18	38.9	200	2.1	200	2.1	50	2.0				249.0	28.6
TAKAYA	0	EP	15	18	10.5	ES	18	43.8										275.4	33.3
HIKONE	0	IP	15	18	11.4	S	18	43.7	111	1.7	88	1.2	22	1.8	N 12 W	12	U 9	290.5	32.3
NARA	0	EP	15	18	13.6	ES	18	49.2	100	1.0								309.0	35.6
NAGANO	0	P	15	18	14.9	ES	18	49.6	35		25		20					284.5	34.7
TSURUG	0	EP	15	18	15.5	S	18	51.5										323.5	36.0
SHIRAK	0	EP	15	18	15.6	ES	18	52.1										336.3	36.5
KYOTO	0	IP	15	18	15.6	ES	18	51.4	37	2.0	25	1.4	14	3.0	N 2 W	8	U 7	325.3	35.8
SHIONO	0	IP	15	18	15.7	ES	18	47.1	18	6.2	14	6.0	3	1.9	E	3	D 3	324.7	31.4
OSAKA	0	IP	15	18	16.8	S	18	52.0	136	5.0	152	5.0	59	2.4			U 15	335.3	35.2
FUKUI	0	P	15	18	16.9	S	19	03.7							N 2 W	4	D 2	335.3	46.8
ONAHAM	0	EX	15	18	17.7	ES	18	52.2	42	1.5	45	4.8	20	1.9				341.9	
TAKADA	0	P	15	18	19.5	S	18	55.1										330.6	35.6
KOBE	0	P	15	18	21.2	ES	18	59.3									U 6	368.4	38.1
MAIZUR	0	EP	15	18	21.5	ES	19	04.2										371.2	42.7
WAKAYA	0	P	15	18	23.2	S	18	58.2	16	1.0	13	1.0						366.9	35.0
FUKUSH	0	EP	15	18	23.5	EX	19	25.2	12	0.8	18	3.8	5	4.5				410.5	
SUMOTO	0	IP	15	18	23.9	S	19	03.0	13	2.8	13	5.8	11	3.8	S	W	1 U 1	390.7	39.1
TOYAMA	0	X	15	18	24	ES	18	57	130	3.2	229	6.6						327.6	
NIIGAT	0	E	15	18	26.2	ES	19	10.2	200	6.5	220	4.4	48	5.0				409.8	
TOYOOK	0	P	15	18	26.8	S	19	24.6	108	1.2	54	1.1	23	3.5			D	421.9	57.8
TOKUSH	0	EP	15	18	29.7	ES	19	16.2										422.0	46.5
WAJIMA	0	X	15	18	32.4	ES	19	20.0	76	1.8	70	2.0	4	3.0				406.6	
TAKAMA	0	IP	15	18	33.0	IS	19	22.9	13	1.3	9	1.3	5	1.9				468.9	49.9
TURUGI	0	EP	15	18	33.4	ES	19	19.0										468.2	45.6
MUROTO	0	IP	15	18	33.8	ES	19	26.1	9	6.0	13	5.8	10	6.0	N 0		U 0	472.9	52.3
AIKAWA	0	IP	15	18	34.2	IS	19	26.0	13		18		10		S			429.8	51.8
OKAYAM	0	IP	15	18	34.5	IS	19	26.5	15	2.0	20	5.0	20	5.6	N	W	3 U 3	483.6	52.0
TOTTOR	0	EP	15	18	35.1	ES	19	36.7										476.6	61.6
SENDAI	0	EP	15	18	35.6	ES	19	20.4	20	2.4	20	3.0	8	7				475.3	44.8
SAIGO	0	EP	15	18	44.8	ES	19	49.8	12	3.6	8	2.0	7	3.2	S 0 E	0	D 1	573.5	65.0
OFUNAT	0	EP	15	18	47.3	ES	19	51.8	5	6.4	8	8.4	6	6.8				584.5	64.5
						X	20	07.6											
MATSUE	0	EP	15	18	48.0	X	20	10.9										572.5	

OT= 6 15 17 26.9 +/- 0.2
NEAR KOZUJIMA
LAT= 34 13 +/- 1 LONG= 139 9 +/- 1
H= 10 MAG=5.3 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MIZUSA	0	EP	15	18	48.9				10	2.0	36	5.0	6	2.2				573.5	
ASHIZU	0	EP	15	18	50.5	X	20	54.0	6	2.4	4	2.6	3	3.6				593.6	
HIROSH	0	P	15	18	53.0	X	20	21.0	7	5.9	6	3.8	5	5.9		W 3	D 1	618.0	
MORIOK	0	IP	15	18	54.3	ES	20	00.0	6	5.4	6	8.0	8	5.6	N 1	E 0	U 0	634.0	65.7
						EL	21	04											
HAMADA	0	IP	15	18	57.8	S	20	02.0	8	7.5	7	5.6	6	6.5		W 2	U 3	653.5	64.2
SAKATA	0	X	15	18														523.6	
HACHIN	0	P	15	19	05.2	X	20	47.3	4	6.0			8	5.0	N		U 2	730.9	
OITA	0	EP	15	19	09.4	X	21	07.5	38	5.9	30	5.9						705.7	
SHIMON	0	EP	15	19	10.0	ES	20	31	6	7.0	7	6.4	7	8.0	N	E	D	757.7	81.0
KUMAMO	0	EP	15	19	15				8	2.5	8	2.5	2	0.9				799.0	
FUKUOK	0	EP	15	19	17.0	ES	20	48.0	9	3.2	4	3.0	4	6.0				813.7	91.0
AKITA	0	X	15	19	20													616.3	
KAGOSH	0	EP	15	19	23.5				9	2.3	12	2.3	3	1.5				855.4	
NAGASA	0	P	15	19	24.9	X	21	17.6										878.0	
YAKUSH	0	P	15	19	30.4				6	0.8	4	1.1	5	1.5				914.7	
HAKODA	0	EX	15	19	31.4	EX	21	26.4	3	4.0	6	6.0	4	6.0				854.8	
AOMORI	0	X	15	19					12	2.6	13	1.7	7	2.9				746.5	

OT= 6 17 49 36.2 +/- 0.3
NEAR KOZUJIMA
LAT= 34 19 +/- 1 LONG= 139 10 +/- 1
H= 0 MAG=5.2 CLASS=M

NAGATS	1	EP	17	49	46.7	IS	49	54.1	600	4.9	800	6.2	400	3.5				43.0	07.4
OSHIMA	3	IP	17	49	48.7	IS	49	55.0	600	5.9	900	6.3	300	2.7	N 56	E 32	U 47	53.0	06.3
AJIRO	1	IP	17	49	51.3	S	50	02.2	114	3.6	97	4.5	88	4.4	S 1	W 0	D 1	80.8	10.9
MISHIM	1	IP	17	49	53.6	IS	50	04.4	209	5.4	223	6.4	143	4.8	S 25		D 19	90.8	10.8
TOMISA	0	IP	17	49	54.2	IS	50	06.8	473	6.0	306	4.3	222	6.6			U 19	90.3	12.6
SHIZUO	1	IP	17	49	56.4	IS	50	08.5	180	6.0	180	0.2	130	5.8	S 11	E 11	D 15	100.8	12.1
OMAEZA	0	EP	17	49	58.3	ES	50	07.6	490		377		288		N 8	W 17	U 36	93.2	09.3
FUNATS	0	EP	17	50	00.3	S	50	18.0	100	1.7	80	1.5			S 75			136.1	17.7
YOKOHA	0	IP	17	50	01.5	IS	50	18.9	316	4.2	272	3.8	232	4.9	N 2	E 1	U 9	132.0	17.4
HAMAMA	0	P	17	50	02.2	S	50	18.4	110	4.0	113	4.4	42	3.8			U 9	139.4	16.2
HACHIJ	0	EP	17	50	03.2	S	50	19.8	73		50		26		N 2			146.5	16.6
KOFU	0	IP	17	50	04.0	ES	50	26.8	118	1.8	103	1.8	115	2.0	S 9	E 2		159.5	22.8
TOKYO	1	P	17	50	05.4	ES	50	26.6	264	6.8	404	6.8	153	3.8			D	161.1	21.2
IIDA	0	IP	17	50	07.0	IS	50	29.2	83	2.0	57	2.6	55	2.2	S 3	E 3	D 5	179.8	22.2
CHICHI	0	EP	17	50	09.3	S	50	30.3										185.9	21.0
KUMAGA	0	P	17	50	12.4	S	50	36.0	96	2.0	133	3.0	68	5.4			D 10	203.9	23.6
KAKIOK	0	P	17	50	12.8	ES	50	38	39	1.0	46	3.1	13	1.0	N 1	E	U	232.0	25.2
NAGOYA	1	IP	17	50	13.2	S	50	38.0	86	1.2	77	1.2	46	1.2	N 4	W 1	U 7	222.2	24.8
KARUIZ	0	P	17	50	15.7	S	50	45.3									D	231.3	29.6
MAEBAS	0	IP	17	50	16.1	S	50	43.1	95	6.5	109	6.5	94	3.6	S 2	E	D 4	231.4	27.0
MITO	0	EP	17	50	16.4	ES	50	51.0	106	4.0	78	4.0	40	4.0				257.6	34.6
UTSUNO	0	EP	17	50	17.2	ES	50	44.2	47	3.3	54	3.3	39	3.0	S 3			255.5	27.0
GIFU	0	P	17	50	17.7	S	50	44.7	57	1.4	43	1.7	23	0.9				250.2	27.0
OWASE	0	P	17	50	18.1	S	50	52.0	15	2.8	10	8.0	10	7.0				275.2	33.9
MATSUS	0	IP	17	50	18.2	S	50	52							S		D	261.3	33.8
MATSUM	0	EP	17	50	18.3	ES	50	48.0	100	2.0	100	2.0	50	2.0				239.7	29.7
TAKAYA	0	EP	17	50	20.1	S	50	54.5										267.7	34.4
NARA	0	EP	17	50	22.3	ES	50	59.1										308.7	36.8
HIKONE	0	P	17	50	23.0	S	50	55.6	66	1.7	59	1.9	16	6.3				287.4	32.6
NAGANO	0	EP	17	50	23.3	ES	50	56.6	13		10		8					274.4	33.3
TSURUG	0	EP	17	50	25.3	ES	51	02.3										319.4	37.0
SHIRAK	0	EP	17	50	25.8	ES	51	10.5										325.2	44.7
KYOTO	0	IP	17	50	25.8	ES	51	01.4	23	7.0	19	5.6	11	5.6	N 1	W 2	U 2	323.8	35.6
SHIONO	0	IP	17	50	26.3	ES	50	58.7	15	7.2	13	6.4	1			E 3	D 1	329.1	32.4
FUKUI	0	P	17	50	26.8	S	51	03.4							S 4	E 4	D 2	329.8	36.6
ONAHAM	0	EX	17	50	27.0	ES	51	02.1	47	3.3	48	3.3	17	2.9				331.4	
OSAKA	0	P	17	50	27.3	S	51	03.7	137	5.2	179	4.9	41	3.2			U 3	335.2	36.4
TAKADA	0	P	17	50	27.7	S	51	07.1										320.2	39.4
KOBE	0	EP	17	50	31.5	ES	51	12.8										368.3	41.3
WAKAYA	0	P	17	50	32.9	S	51	07.7	14	0.7	17	0.7						368.4	34.8
TOYAMA	0	X	17	50	33	ES	51	06	65	5.6	103	4.0						319.1	
KANAZA	0	P	17	50	33.6	S	51	14.2	56		80		35		S 3	E 2	D 1	336.8	40.6
SUMOTO	0	P	17	50	34.0	X	51	11.2	15	7.0	11	7.0	9	8.9		W 1	U 1	391.8	
FUKUSH	0	EP	17	50	34.5	ES	51	16.4	12	4.0	15	4.2	7	3.2				399.4	41.9
TOYOOK	0	P	17	50	38.1	ES	51	23.1	40	1.4	36	1.1	11	5.2				419.4	45.0
TOKUSH	0	EP	17	50	38.2	ES	51	24.9										423.9	46.7
NIIGAT	0	E	17	50	40.0				160	5.3	135	6.8	45	4.5				398.8	
AIKAWA	0	EP	17	50	42.8	X	51	40.8	7		14		10		S 0			419.2	
TAKAMA	0	EP	17	50	43.1	ES	51	33.1	9	7.5	8	7.1	2	0.6				470.0	50.0
OKAYAM	0	IP	17	50	45.0	IS	51	35.0	10	4.0	20	5.8	13	6.2		W	U	483.8	50.0
MUROTO	0	IP	17	50	45.2	S	51	39.0	10	6.2	10	6.6	10	6.2	S 0			476.8	53.8
WAJIMA	0	X	17	50	46.0	ES	51	27.2	29	1.2	36	1.6	18	3.0				397.7	
SENDAI	0	EP	17	50	48	ES	51	43	19	2.4	18	4.0	9	4				464.3	55.0
SAIGO	0	EP	17	50	56.3	ES	52	06.0	9	2.6	6	3.0	6	4.2	S 0	E 0	D 0	570.4	69.7
OFUNAT	0	EP	17	50	56.8	ES	51	58.0	5	6.2	8	6.8	4	6.0				573.7	61.2

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STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
						X	52	11.0											
MIZUSA	0	P	17	50	59.0	S	51	53.7	38	3.1	28	2.2	10	1.7				562.5	54.7
CHOSHI	0	X	17	50		ES	50	36.6										218.6	
MORIOK	0	P	17	51	03.7	S	52	09.3	4	4.6	7	4.4	5	6.0				622.9	65.6
						EX	51	06.3											
						EL	53	16											
HAMADA	0	P	17	51	07.9	X	52	11.8	10	8.4	9	6.0	8	6.4		E 2	D 2	653.5	
HACHIN	0	EP	17	51	15.0	ES	52	45.6	3	7.0	6	8.0	5	7.0				719.8	90.6
SHIMON	0	EP	17	51	21.5	X	52	35.0	9	6.0	7	6.0	7	6.0	N	E	D	759.3	
OITA	0	X	17	51	22.6	X	53	04.7	31	6.1	37	5.9						708.6	
KUMAMO	0	EP	17	51	25				6	2.6	5	2.6	1	1.0				802.3	
SAKATA	0	X	17	51	31.1													512.4	
NAGASA	0	P	17	51	35.8	S	53	20.0										881.2	104.2
AOMORI	0	X	17	51	39				12	3.5	14	4.4	5	2.7				735.3	
AKITA	0	EX	17	51	50	EX	52	39.4	32	3.8	33	4.2	14	3.8				605.1	
FUKUOK	0	X	17	51		ES	53	00.0	5	3.1	3	6.0	4	6.0				815.8	

OT= 6 18 6 42.4 +/- 0.3
NEAR KOZUJIMA
LAT= 34 17 +/- 1 LONG= 139 11 +/- 1
H= 20 MAG=4.9 CLASS=M

OSHIMA	1	IP	18	06	52.4	IS	06	59.2	239	3.6	272	6.2	218	2.2			U 44	56.0	06.8
NAGATS	0	EP	18	06	53.9	ES	06	57.2	300	4.5	450	3.5	250	2.9				46.8	03.3
AJIRO	0	IP	18	06	56.4	S	07	06.2	54	0.6	45	0.5	18	0.8	N 1	E 0	U 1	84.7	09.8
MISHIM	0	IP	18	06	58.5	IS	07	09.6					79	4.3			D 18	94.7	11.1
TOMISA	0	IP	18	06	58.6	IS	07	10.4	143	5.0	100	4.5	74	5.4	N 7		U 27	92.1	11.8
SHIZUO	0	IP	18	07	01.0	IS	07	12.9	90	5.0	100	0.4	71	5.2	S	E	D	104.5	11.9
OMAEZA	0	IP	18	07	01.1	IS	07	13.6	360		179		112		N 3	W 9	U 19	95.9	12.5
YOKOHA	0	EP	18	07	05.5	IS	07	24.0	230	5.7	119	3.8	59	5.1	N 4		U 10	135.0	18.5
HAMAMA	0	P	18	07	05.6	IS	07	22.4	55	0.4	55	1.0	24	2.0			U 7	142.1	16.8
FUNATS	0	P	18	07	06.5	S	07	23.0										140.1	16.5
HACHIJ	0	EP	18	07	06.8	IS	07	24.4	23		24							142.5	17.6
KOFU	0	IP	18	07	09.2	ES	07	27.8	63	2.6	72	1.8	48	2.0	S 3		D 1	163.5	18.6
TOKYO	0	P	18	07	09.5	ES	07	29.7	82	6.6	113	6.4	50	4.0			D	164.1	20.2
IIDA	0	IP	18	07	12.2	IS	07	33.6	35	1.8	36	2.0	26	1.2	S 3	E 3	D 5	183.5	21.4
CHICHI	0	EP	18	07	12.4	S	07	34.4										189.7	22.0
KUMAGA	0	EP	18	07	15.4	S	07	40.0	45	1.2	51	1.4	26	4.8				207.5	24.6
KAKIOK	0	P	18	07	16.5	ES	07	42	21	1.0	25	1.0	6	1.2	N 1	E	D	234.8	25.5
NAGOYA	1	IP	18	07	16.8	IS	07	42.0	69	1.2	68	1.2	31	1.2	N 1	W 1	U 4	225.2	25.2
MAEBAS	0	IP	18	07	20.1	S	07	43.7	39	6.6	25	7.7	39	4.2	S 2	E	D 4	235.2	23.6
KARUIZ	0	EP	18	07	20.3	ES	07	51.8										235.2	31.5
MITO	0	IP	18	07	21.0	S	07	56.4	40	3.8	34	4.4	13	3.4			U 2	260.2	35.4
GIFU	0	P	18	07	21.2	S	07	49.1	48	0.6	39	1.4						253.4	27.9
MATSUS	0	P	18	07	22													265.3	
MATSUM	0	EP	18	07	22.7	S	07	53.8										243.7	31.1
UTSUNO	0	EP	18	07	23.1	ES	07	49.6	25	1.7	15	1.8	4	1.0				258.7	26.5
TAKAYA	0	EP	18	07	25.1	ES	07	57.1										271.6	32.0
HIKONE	0	P	18	07	25.7	S	07	56.7	67	1.3	47	1.1	12	1.0				290.3	31.0
NAGANO	0	EP	18	07	27.2	X	08	08.7	10		8		4					278.4	
SHIRAK	0	EP	18	07	29.0	ES	08	05.3										328.3	36.3
KYOTO	0	EP	18	07	29.4	IS	08	04.8	13	1.8	13	1.4	6	2.4				326.2	35.4
NARA	0	EP	18	07	29.7													310.8	
TAKADA	0	EP	18	07	30.5	S	08	10.3										324.2	39.8
OSAKA	0	P	18	07	31.0	S	08	06.9	48	5.0	48	4.4	21	2.0				337.2	35.9
ONAHAM	0	EX	18	07	33.0				17	0.8	17	1.0	6	2.8				334.0	
TOYAMA	0	X	18	07	37	ES	08	12	24	2.8	42	4.0						323.0	
KANAZA	0	X	18	07	38.0	S	08	15.0	16		30		17		S 2	E 1	U 1	340.6	
SUMOTO	0	IP	18	07	38.2	S	08	18.0	6	2.2	6	2.1	4	1.8	N	W	U 1	393.4	39.8
WAKAYA	0	P	18	07	38.2	S	08	15.5	9	0.7	7	0.7						369.9	37.3
FUKUSH	0	EX	18	07	39.2				5	1.0	8	1.1	3	2.8				402.5	
TOYOOK	0	P	18	07	41.3	ES	08	25.8	48	1.1	18	1.2	6	5.2		W		422.1	44.5
TOKUSH	0	EP	18	07	44.2	ES	08	30.0										425.2	45.8
TAKAMA	0	EP	18	07	47.3	ES	08	34.9	6	1.1	7	1.4	2	0.6				471.6	47.6
MUROTO	0	IP	18	07	48.0	S	08	35.8			5	7.0			N 0		D 0	477.4	47.8
OKAYAM	0	IP	18	07	48.5	IS	08	38.5	7	2.8	10	5.6	8	5.0	N	W	U	485.8	50.0
WAJIMA	0	X	18	07	52.0	ES	08	32.0	20	1.4	28	1.4	10	2.0				401.7	
CHOSHI	0	X	18	07		ES	07	40.2										220.3	
MIZUSA	0	P	18	08	02.5	X	08	50.6	13	1.9	10	2.0						565.6	
OITA	0	X	18	10	05.9	X	12	10.7	10	5.9	12	6.9						709.6	

OT= 7 8 28 49.9 +/- 0.3
NEAR KOZUJIMA
LAT= 34 15 +/- 1 LONG= 139 9 +/- 1
H= 10 MAG=5.2 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NAGATS	1	EP	08	29	00.8	IS	29	06.8	1200	6.6	1450	6.0	650	4.3				47.8	06.0
OSHIMA	2	IP	08	29	01.3	IS	29	08.6	800	5.0	700	6.0	400	2.8	S 54	W 49	D 52	60.5	07.3
AJIRO	0	IP	08	29	05.3	ES	29	15.9	174	4.6	145	4.0	122	4.8	S 3	W 1	D 4	88.1	10.6
MISHIM	0	IP	08	29	07.0	IS	29	16.5	361	5.3	354	6.0	246	4.5	S 46	E 13	D 49	97.7	09.5
OMAEZA	1	IP	08	29	07.7	IS	29	20.7			676				N 21	W 53		94.6	13.0
TOMISA	0	P	08	29	07.8	S	29	19.6	520	7.0	365	8.2	255	6.8			U 10	96.9	11.8
SHIZUO	1	IP	08	29	09.5	IS	29	22.2	360	5.4	290	6.0	250	5.0	N 11	W 9	U 14	105.3	12.7
HAMAMA	0	IP	08	29	14.2	IS	29	31.4	149	4.0	234	4.0	101	2.4	N 9	W 15	U 28	140.5	17.2
YOKOHA	1	IP	08	29	15.2	IS	29	32.8	284	4.0	316	5.5			S 6			139.5	17.6
FUNATS	0	EP	08	29	15.6	S	29	34.3	300	1.7	120	1.7	150	3.8				142.9	18.7
HACHIJ	0	EP	08	29	15.6	S	29	31.0	114		67		36			W	1	140.4	15.4
KOFU	0	IP	08	29	17.4	ES	29	39.2	209	4.4	180	1.8	89	4.4	S 3	E 4	D 2	166.0	21.8
TOKYO	0	P	08	29	18.8	ES	29	39.5	306	6.4	326	7.2	169	3.9			D 6	168.6	20.7
IIDA	1	IP	08	29	20.4	IS	29	42.8	136	2.0	110	2.4	91	2.0	S 16	W 13	U 21	184.3	22.4
CHICHI	0	EP	08	29	20.8	ES	29	44.9										193.3	24.1
CHOSHI	0	EP	08	29	24.0	S	29	52.4										225.1	28.4
KUMAGA	0	P	08	29	25.2	ES	29	49.0	125	6.8	101	4.2	123	4.2			D 7	211.5	23.8
NAGOYA	0	IP	08	29	25.4	S	29	51.2	208	2.6	105	1.2	58	1.6	N 8	W 12	U 14	224.1	25.8
KAKIOK	0	P	08	29	25.8	ES	29	52	42	4.6	62	4.4	22	3.3	S 4	W 3	D 1	239.4	26.2
MAEBAS	0	IP	08	29	28.6	ES	29	53.9	182	5.8	177	7.0	224	4.3	S 2	E 1	D 6	238.8	25.3
KARUIZ	0	P	08	29	29.0	S	30	00.0									D	238.1	31.0
GIFU	0	P	08	29	29.2	S	29	57.8	110	2.0	74	2.0	50	5.0	N 8	W 13	U 10	252.6	28.6
MITO	0	P	08	29	30.4	ES	30	12.0	103	4.9	87	4.2	53	2.5				264.9	41.6
UTSUNO	0	EP	08	29	30.5	ES	30	02.5	50	4.5	56	3.5	13	2.3			D 2	263.0	32.0
OWASE	0	IP	08	29	30.5	S	30	02.4	22	6.0	16	5.2	18	2.8	S	W 6	U 4	273.2	31.9
MATSUS	0	IP	08	29	31.4	S	30	01							S		D	267.8	29.6
MATSUM	0	EP	08	29	31.5	S	30	02.0										245.6	30.5
TAKAYA	0	P	08	29	32.3	S	30	06.8										272.5	34.5
HIKONE	0	P	08	29	35.2	S	30	06.1	91	5.3	79	1.7	35	5.5				288.9	30.9
NAGANO	0	EP	08	29	36.4	ES	30	05.3	27		16		15					281.0	28.9
TOYAMA	0	EP	08	29	37	S	30	17.6	137	3.8	172	5.2						324.5	40.6
TSURUG	0	EP	08	29	37.8	ES	30	13.1										321.7	35.3
KYOTO	0	EP	08	29	37.8	ES	30	16.3	26	2.6	27	1.6	17	5.4	N 2	W 6	U 4	324.2	38.5
SHIRAK	0	EP	08	29	38.1	ES	30	20.3										332.7	42.2
NARA	0	EP	08	29	38.7	ES	30	10.7										308.4	32.0
SHIONO	0	IP	08	29	39.0	ES	30	12.3	25	6.0	16	7.0	3	2.4		E 5	D 3	325.7	33.3
ONAHAM	0	EX	08	29	39.6	ES	30	25.5	52	3.9	63	3.3	20	7.1				338.6	
OSAKA	0	IP	08	29	39.6	S	30	19.6	196	5.4	215	5.2	65	4.0			U 8	334.7	40.0
TAKADA	0	P	08	29	41.0	S	30	23.0										327.0	42.0
FUKUI	0	IP	08	29	41.2	S	30	23.8										333.0	42.6
						EX	33	25.0											
WAKAYA	0	P	08	29	42.3	S	30	19.9	16	0.7	26	0.7						366.8	37.6
KOBE	0	EP	08	29	43.6	ES	30	24.8										367.8	41.2
KANAZA	0	P	08	29	45.8	ES	30	26.8	120		158		39		N 7	E 3	U 1	341.3	41.0
SUMOTO	0	IP	08	29	46.4	S	30	30.2	18	3.8	18	6.7	13	11.9	S	W 1	U 1	390.5	43.8
TOYOOK	0	P	08	29	50.3	ES	30	33.9			66	1.1	16	3.2				420.6	43.6
NIIGAT	0	EP	08	29	51.2	ES	30	27.1	225	5.0	225	5.3	80	4.7				406.1	35.9
AIKAWA	0	IP	08	29	51.9	IS	30	51.8	12		15				S 0		D 0	426.1	59.9
FUKUSH	0	EP	08	29	52.0	ES	30	34.3	16	4.7	21	4.0	9	3.7				406.9	42.3
TOKUSH	0	EP	08	29	52.4	ES	30	39.0										422.1	46.6
SENDAI	0	EP	08	29	55	ES	30	50	16	5	18	4	11	6				471.8	55.0
MUROTO	0	IP	08	29	56.8	ES	30	48.9	13	7.2	15	7.0	14	7.0	N 0	E 1	D 0	473.7	52.1
TOTTOR	0	EP	08	29	57.3	ES	30	57.3										475.4	60.0
OKAYAM	0	IP	08	29	57.5	IS	30	49.1	20	4.5	30	4.2	22	6.0	N	W	U	483.2	51.6
TAKAMA	0	IP	08	29	57.7	IS	30	46.0	14	5.1	13	9.1	4	2.0				468.7	48.3
TURUGI	0	EP	08	29	58.1	ES	30	46.4										468.5	48.3
WAJIMA	0	X	08	29		S	30	44.0	55	3.0	75	3.0	26	4.0				403.3	
SAKATA	0	EX	08	30	01.7													519.9	
SAIGO	0	EP	08	30	07.8	ES	31	11.2	13	5.8	10	4.0	9	4.0	S 0	E 0	D 0	572.0	63.4
OFUNAT	0	EP	08	30	09.4	ES	31	10.5	10	6.6	8	6.0	7	7.6				581.1	61.1
						X	31	31.1											
MIZUSA	0	P	08	30	09.5	S	31	19.5	195	3.4	80	3.0	42	2.1				570.0	70.0
ASHIZU	0	EP	08	30	13.5	EX	31	42.4	6	3.6	4	2.4	4	3.2				594.5	
HIROSH	0	EP	08	30	14.0	EX	31	18	11	9.0	8	8.8	7	9.0		W	1 U	617.8	
MORIOK	0	P	08	30	15.8	ES	31	25.9	7	4.0	9	2.8	9	4.4	N 0		U 0	630.5	70.1
						EX	31	36.2											
MIYAKO	0	EX	08	30	19				6	1.6	12	2.4	7	2.2				649.0	
HAMADA	0	IP	08	30	20.4	X	31	24.2	12	7.9	13	5.5	13	5.2		W	2 U 2	653.0	
SHIMON	0	EP	08	30	33.0	X	31	43.0	10	9.4	8	9.0	10	7.8	N	E	D	757.7	
AKITA	0	X	08	30	33.4				28	4.6	37	4.2	20	4.4				612.6	
MIYAZA	0	P	08	30	35.0				6	2.8	5	3.2	4	2.6				765.6	
OITA	0	X	08	30	35.6	X	32	01.7	49	5.5	45	5.5	13	3.7				706.1	
KUMAMO	0	EP	08	30	38.7				10	3.1	7	1.8	3	5.7				799.6	
FUKUOK	0	EP	08	30	39.0	ES	32	16.0	7	4.6	5	4.2	5	5.0				813.9	97.0
SAGA	0	P	08	30	42.5	X	33	03.5										826.6	
NAGASA	0	EP	08	30	47.0	X	32	48.0								W	U	878.5	
KAGOSH	0	EP	08	30	47.4				11	2.4	13	2.2						856.6	
URAKAW	0	EP	08	30	51.6	ES	32	33.4	12	4.2	12	4.4	8	4.2				933.3	101.8
HAKODA	0	X	08	30	54.9				4	3.2	5	5.4	7	8.8				851.2	
FUKUE	0	EP	08	31	01.0	X	33	07.0	5	6.4								973.4	

International Seismological Centre From the ISC collection scanned by SISMOS

OT= 7 8 32 6.0 +/- 0.8
OFF CHOSHI
LAT= 35 38 +/- 2 LONG= 140 59 +/- 4
H= 50 MAG=5.3 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHOSHI	3	IP	08	32	16.2	IS	32	20.4	3700		3900		900		N 10	E 73	U 30	16.2	04.2
KAKIOK	2	IP	08	32	21.1	S	32	30.4	400	0.8	475	1.0	124	2.0	S 61	E 51	D 48	97.4	09.3
MITO	1	EP	08	32	22.5	S	32	33.2	213	4.4	280	4.0	173	2.6				94.6	10.7
TOKYO	1	P	08	32	24.7	ES	32	36.0										111.0	11.3
UTSUNO	0	P	08	32	27.9	S	32	45.1	233	1.6	123	3.1	83	1.0			D 16	142.4	17.2
TOMISA	0	EP	08	32	28.2													131.5	
YOKOHA	0	EP	08	32	29.6	IS	32	47.7	320		362							122.4	18.1
KUMAGA	0	EP	08	32	30.4	ES	32	50.0	125	3.0	141	2.0	121	4.0				155.1	19.6
ONAHAM	1	EP	08	32	30.6	IS	32	46.7	209	2.1	228	2.4	90	2.0				145.7	16.1
SHIRAK	0	EP	08	32	32.8	IS	32	53.1										178.2	20.3
MAEBAS	0	EP	08	32	33.2				150	4.2	153	2.0	80	2.3				192.8	
CHICHI	0	EP	08	32	34.9	S	32	50.9										176.4	16.0
MISHIM	0	EP	08	32	35													195.3	
FUNATS	0	P	08	32	39.4	S	32	57.9										201.8	18.5
KOFU	0	EP	08	32	40.4	ES	33	02.8	115	1.4	107	1.5	40	2.0				219.6	22.4
KARUIZ	0	EP	08	32	41.0	ES	33	02.2										232.8	21.2
SHIZUO	0	EX	08	32	43.5													245.5	
FUKUSH	0	EP	08	32	43.7	S	33	10.5	84	1.1	97	1.1	33	1.0				239.9	26.8
MATSUS	0	P	08	32	44	S	33	15										269.3	31.0
NAGANO	0	EP	08	32	47.0	X	32	16.1	21		15		15					275.4	
IIDA	0	EP	08	32	47.0	ES	33	10.0	43	3.0	40	2.0	20	3.8				285.6	23.0
YAMAGA	0	EP	08	32	49.6	ES	33	19.8										296.1	30.2
SENDAI	0	EP	08	32	50	ES	33	18.0	103	2.0	89	2.0	58	1.8				291.5	28.0
ISHINO	0	EP	08	32	51.4	IS	33	23.4										311.1	32.0
HACHIJ	0	EX	08	32	52.0													301.5	
AIKAWA	0	IP	08	32	56.8	IS	33	44.8	17		17				N 5	W 9		360.4	48.0
TAKAYA	0	EP	08	32	59.4	X	33	44.8										341.4	
SAKATA	0	IP	08	33	00.6	X	33	52.4									D 4	376.8	
OFUNAT	0	EP	08	33	01.4	IS	33	39.9	11	4.0	16	2.6	11	2.8				386.0	38.5
MORIOK	0	P	08	33	09.3	S	33	54.4	5	0.5	8	4.0	8	5.0	N 1	E 0	U 1	451.2	45.1
TSURUG	0	X	08	33	15.0	ES	34	03.9										445.3	
FUKUI	0	X	08	33	17.7	X	34	07.2										432.1	
MATSUM	0	X	08	33	18.5													279.8	
HACHIN	0	EP	08	33	19.6	IS	34	13.6	7	4.0	10	3.4	11	5.0				545.0	54.0
KYOTO	0	X	08	33	24.4	ES	34	04.0	15	5.0	11	2.6	9	4.8				482.0	
AOMORI	0	EX	08	33	28	EX	34	27	39	3.4	57	2.3						575.6	
TOYOOK	0	X	08	33	36				45	1.3	43	1.5						558.5	
HAKODA	0	EP	08	33	39.9	ES	34	56.5	8	3.6	8	3.8	5	3.2				686.3	76.6
OBIHIR	0	EX	08	33	54.9													831.6	
KUSHIR	0	EP	08	33	59.0	X	35	19.6	7	0.4	6	0.8	3	0.8				866.7	
OSAKA	0	X	08	34	09.0				145	4.8	157	5.4	43	3.0				507.9	
SAPPOR	0	X	08	35	28				4	4.0	8	3.0	4	4.0				824.9	

OT= 7 9 50 41.9 +/- 0.6
NEAR KOZUJIMA
LAT= 34 20 +/- 2 LONG= 139 12 +/- 1
H= 10 MAG=3.7 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OSHIMA	0	P	09	50	51.8	IS	50	58.2	20	0.8	18	1.0	5	0.6				50.2	06.4
OMAEZA	0	EP	09	50	59.9	ES	51	11.1	11		8							95.4	11.2
SHIZUO	0	EP	09	51	01.4	IS	51	12.8	6	0.6	10	0.4	3	5.6				101.6	11.4
YOKOHA	0	X	09	51	23.1				9	0.8	12	0.8						129.2	
MATSUS	0	IP	09	51	23.5	S	51	54							N	E	U	260.6	30.5

OT= 8 4 39 16.7 +/- 0.2
S OF OKHOTSK SEA
LAT= 46 46 +/- 1 LONG= 145 54 +/- 2
H=300 CLASS=R

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NEMURO	0	P	04	40	17.9	S	41	05.7	8	1.2	3	0.8	2	0.5			D 1	383.0	47.8
WAKKAN	0	X	04	40	21.7	X	41	12.4	10	3.0	8	3.4						359.6	
KUSHIR	1	IP	04	40	23.3	S	41	14.7	15	0.3	16	0.3	7	0.5	N 1			437.6	51.4
URAKAW	0	EP	04	40	37.2	S	41	39.0	6	0.6	7	0.4	1	0.6			D 3	569.1	61.8
MIZUSA	0	EP	04	41	17.6	ES	42	49.6	5	2.0	3	2.0	2	1.3				932.7	92.0
MATSUS	0	IP	04	41	55.4	S	44	05									U	1302.9	129.6

OT= 10 23 47 17.1 +/- 0.2
NEAR KOBE
LAT= 34 33 +/- 1 LONG= 135 1 +/- 1
H= 10 MAG=3.5 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KOBE	0	IP	23 47 21.8	IS	47 24.5							S 2	W 2	D 4	21.4	02.7
SUMOTO	0	P	23 47 23.5	S	47 27.0	7	0.2	4	0.3	2	0.8	N		D	25.8	03.5
OSAKA	0	IP	23 47 26.8	S	47 34.0	10	4.7	13	4.0	6	2.4			D 2	49.1	07.2
OKAYAM	0	IP	23 47 36.1	IS	47 48.6	20	0.4	30	0.5	10	0.4	S	W	U	102.1	12.5
TOYOOK	0	EP	23 47 38.4	ES	47 50.1	6	0.7	7	1.0						110.9	11.7
MATSUS	0	EP	23 48 12	X	48 43										363.8	

OT= 11 7 30 42.7 +/- 0.8
E OFF AOMORI PREF
LAT= 40 33 +/- 2 LONG= 142 13 +/- 5
H= 90 CLASS=U

HACHIN	0	IP	07 30 58.9	IS	31 09.3	46	0.0	50	0.0	6	0.0			D 3	58.7	10.4
MIYAKO	0	EP	07 31 03.3	IS	31 17.2	5	0.0	6	0.0						102.7	13.9
MORIOK	0	P	07 31 06.0	IS	31 22.0	13	0.5	8	0.4	2	0.3				130.2	16.0
OFUNAT	0	EP	07 31 10.0	IS	31 30.1	7	0.2	4	0.2	1	0.6				170.7	20.1
AKITA	0	X	07 31 36.0					6	0.6						202.5	

OT= 11 18 2 7.7 +/- 1.0
E COAST OF IBARAKI PREF
LAT= 36 30 +/- 7 LONG= 140 35 +/- 6
H= 50 MAG=3.8 CLASS=L

MITO	1	IP	18 02 17.1	S	02 24.3	101	0.2	116	0.2	69	0.3	N 3	E	U 37	16.8	07.2
KAKIOK	1	IP	18 02 17.5	IS	02 25.1	56	0.2	139	0.2	40	0.3	S 1	W 3	D	45.9	07.6
UTSUNO	1	P	18 02 20.1	IS	02 28.9	44	0.2	31	0.2	9	0.2			D 3	63.9	08.8
ONAHAM	0	EX	18 02 23.6	IS	02 28.0	12	0.6	18	0.4	8	0.4				57.2	
KUMAGA	0	EP	18 02 27.4	ES	02 41.2	5	0.2	6	0.8	2	0.2				114.5	13.8
FUKUSH	0	EX	18 02 31.2			5	0.9	5	1.0	2	0.4				139.8	
MATSUS	0	IP	18 02 38.3	S	02 54							N	E	D	212.7	15.7

OT= 12 2 39 50.6 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 26 +/- 0 LONG= 138 5 +/- 1
H= 0 MAG=3.8 CLASS=L

MATSUS	1	IP	02 39 54.7	S	39 56.0										16.2	01.3
MATSUM	0	IP	02 39 56.5	S	40 00.2									U 12	23.3	03.7
NAGANO	1	IP	02 39 57.3	S	40 00.8										27.1	03.5
KARUIZ	0	IP	02 40 00.8	S	40 06.5									D 4	43.3	05.7
TOYAMA	0	EX	02 40 05			9	3.2	10	3.8						84.0	
IIDA	0	EP	02 40 09.4	ES	40 22.0	4	1.4	6	3.6	2	1.0				104.8	12.6
MAEBAS	0	EP	02 40 09.7	S	40 19.8	12	3.7	8	3.6	12	3.9				88.1	10.1
WAJIMA	0	X	02 40 24.0			15	0.8	12	0.8						149.7	

OT= 12 11 32 29.9 +/- 0.3
N OF CHIBA PREF
LAT= 35 47 +/- 2 LONG= 140 6 +/- 3
H= 70 CLASS=L

KAKIOK	0	IP	11 32 42.5	S	32 50.3	21	0.5	31	1.0	8	0.5			D 5	50.4	07.8
TOKYO	X	IP	11 32 43.1	IS	32 51.1	64	0.3	42	0.4					D 14	32.8	08.0
YOKOHA	0	EP	11 32 45.2	IS	32 55.2	33	0.4	42	0.8						55.7	10.0
KUMAGA	0	EP	11 32 46.0	ES	32 55.6	5	0.8	3	0.8	2	0.6				76.0	09.6
MITO	0	IP	11 32 46.0	IS	32 56.6	8	0.4	8	0.4	4	0.3			D 4	74.0	10.6
UTSUNO	0	P	11 32 46.5	S	32 56.6	13	0.2	12	0.2	7	0.2				87.1	10.1
AJIRO	0	IP	11 32 50.3	IS	33 03.3	27	0.3	28	0.3	4	0.3	N 0	E 0	D 1	122.6	13.0
OSHIMA	0	P	11 32 51.8	IS	33 05.3	18	0.3	11	0.3	11	0.3				131.0	13.5
KOFU	0	EP	11 32 54.0	ES	33 07.4	8	0.4	2	0.4	2	0.3				140.1	13.4
MATSUS	0	IP	11 32 58.5	S	33 22								W	U	189.7	23.5

International Seismological Centre From the ISC collection scanned by SISMOS

OT= 12 13 51 40.2 USCGS
SUMATRA
LAT= 5 18 LONG= 96 30
H= 55 MAG=6.1 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NAHA	0	EP	13 58 57.4	ES	04 27.0	12	4.0	14	6.2	5	8.0				4039.9	329.6
OMAEZA	0	EX	13 59			21	1.2	20	1.2						5371.0	
FUKUE	0	EP	13 59 18.4	ES	05 26.2	12	13.2			12	11.0				4518.4	367.8
KAGOSH	0	EP	13 59 18.8			17	3.0	15	3.1	8	5.5				4584.1	
FUKUOK	0	EP	13 59 26.0	ES	05 57.0	6	10.0	4	11.0	15	12.0				4692.5	391.0
NAGASA	0	EP	13 59 26.0	ES	05 46.0										4599.3	380.0
MIYAZA	0	P	13 59 28.8	S	05 52.6	15	11.4	15	10.8	8	11.0				4674.4	383.8
ASHIZU	0	EX	13 59 30.0	EX	06 14.1	9	10.8	6	10.8	5	11.2				4848.4	
KUMAMO	0	EP	13 59 31			9	20.8	22	10.1	16	10.8				4670.6	
YAKUSH	0	EX	13 59 31.0					10	12.2						4514.1	
SHIMON	0	EP	13 59 42	EX	06 12	11	11.0	10	10.2	11	13.0				4758.8	
HIROSH	0	EP	13 59 46.3	ES	06 17.3	10	16.6	9	12.5	10	13.0				4898.9	391.0
MUROTO	0	P	13 59 52.9	ES	06 27.7	10	10.0	12	5.4	13	5.2				4971.8	394.8
TAKAMA	0	EP	13 59 55.6	ES	06 35.5	13	19.1	8	11.6						5022.6	399.9
HAMADA	0	EP	13 59 56.8	ES	06 19.2	9	10.9	7	13.2	8	9.1				4903.2	382.4
				EX	09 44.2											
				EL	12 05.4											
SUMOTO	0	P	14 00 00.6	S	06 47.6	10	18.8	12	11.2	10	5.4	S	W	D	5090.9	407.0
				PP	01 54.7											
				EL	13 34											
				L	18 46											
SAIGO	0	EP	14 00 01.3	ES	06 48.4	9	11.6	11	11.0	8	11.1	S 0	W 1	D 0	5078.8	407.1
				EL	14 35											
OITA	0	EP	14 00 01.6	ES	06 07.7	23	10.6	28	10.2	19	10.8				4767.7	366.1
WAKAYA	0	P	14 00 04.4	S	06 50.0	14	1.7	9	1.3						5105.4	405.6
SHIONO	0	EP	14 00 05.0	ES	06 49.4	5	4.7	16	4.7	1	1.4				5111.1	404.4
				EL	21 38.5											
TOMISA	0	EX	14 00 05.6			14	6.2	10	4.6	10	3.4				5518.7	
TOYOOK	0	EP	14 00 06.4	ES	06 52.0	13	13.3	8	13.3	8	10.6				5152.4	405.6
YOKOHA	0	EP	14 00 06.7			20	12.7								5530.2	
KYOTO	0	EP	14 00 08.7	ES	07 03.0	7	20.0	5	10.0	5	5.0				5194.1	414.3
OSAKA	0	P	14 00 09.0	S	07 01.0	60	5.0	43	4.8	22	3.2			D 8	5158.4	412.0
HIKONE	0	EP	14 00 15.2	ES	07 09.9	11	18.7	13	5.3						5249.0	414.7
NAGOYA	0	EP	14 00 16.0	S	07 13.6	6	2.4	9	4.2	6	5.0				5300.3	417.6
GIFU	0	X	14 00 17	L	11 0	9	18.5	8	4.3						5296.8	
TOYAMA	0	EP	14 00 19	ES	07 20	15	6.4	14	5.4						5403.5	421.0
HAMAMA	0	EP	14 00 20	ES	07 20	10	16.0	11	4.4	6	5.6				5336.7	420.0
MAEBAS	0	EX	14 00 23.3			10	6.0	9	5.5	10	4.3				5532.3	
SHIZUO	0	P	14 00 24.0	S	07 27.1	11	4.6	13	5.0	11	3.2	S 3	W 2	U 2	5405.7	423.1
MISHIM	0	EP	14 00 24.2	ES	07 29.7	16	4.8	7	6.1	7	4.5				5455.1	425.5
AJIRO	0	EP	14 00 25.5	EX	07 35.2	6	4.2	8	4.5	6	3.2				5465.2	
KOFU	0	EP	14 00 25.6	ES	07 32.2	7	4.2	5	4.4	5	5.0				5453.6	426.6
WAJIMA	0	EP	14 00 26.0	EX	07 30.0	9	8.0	10	8.0	10	8.0				5418.1	
FUNATS	0	P	14 00 27.2	ES	07 35.3										5461.4	428.1
MATSUS	0	P	14 00 28												5472.1	
KANAZA	0	P	14 00 34.0	S	06 46.0	26		25		6		S 12	W 14	D 19	5351.3	372.0
AIKAWA	0	IP	14 00 34.1	IS	07 48.8	10		7		8		S	W	D	5555.6	434.7
MITO	0	EX	14 00 40.5	EX	07 49.0	9	5.6	13	6.0	9	4.5				5643.1	
NIIGAT	0	EX	14 00 41.3			42	11.8	35	11.8	17	5.2				5611.5	
ONAHAM	0	P	14 00 46.3	IS	08 03.6	13	4.4	16	6.0	33	5.2			D 6	5706.2	437.3
KUMAGA	0	EP	14 00 47.0	ES	07 53.6	12	6.0	15	6.6	27	5.8				5544.5	426.6
OSHIMA	0	EP	14 00 47.6	ES	07 33.4	7	4.5	8	4.3	8	2.4				5474.1	405.8
SENDAI	0	P	14 00 48	S	08 13	6	2.8	7	6.5	10	6.0				5772.5	445.0
				L	18 07											
TOKYO	0	EP	14 00 48	ES	08 28	3	5.0	18	4.8						5551.0	460.0
AKITA	0	EP	14 00 49.3	S	08 16.8	15	4.8	21	5.8	25	4.2				5789.3	447.5
SAKATA	0	EP	14 00 50	ES	08 12										5725.1	442.0
FUKUSH	0	EP	14 00 50.5	ES	08 06.0	6	4.0	6	5.2	6	5.0				5713.5	435.5
MORIOK	0	P	14 00 54.7	S	08 26.9	6	15.0	5	4.1	8	6.0			U 0	5868.2	452.2
				X	02 01.9											
				EL	12 00											
OFUNAT	0	P	14 00 55.0	S	08 24.4	6	14.0	5	4.6	5	4.4			U 1	5876.9	449.4
				L	18 30											
MIZUSA	0	P	14 00 56.5			15	2.7	23	4.4	8	2.4	N 2	E 6		5835.9	
MIYAKO	0	EP	14 00 57.3	ES	08 30	4	15.0	5	4.2						5926.1	452.7
AOMORI	0	EP	14 00 57.4	S	08 32.5	13	2.8	18	2.2	11	6.9				5899.9	455.1
HACHIN	0	EP	14 00 59.5	ES	08 30.0	9	6.0	13	7.5	20	6.0			U	5938.9	450.5
HAKODA	0	EP	14 01 00.6	ES	08 30.8	7	6.1	8	4.8	12	7.0				5953.3	450.2
SAPPOR	0	P	14 01 08.0	ES	08 48	14	4.4	13	4.6	9	4.0			U	6063.9	460.0
URAKAW	0	IP	14 01 12.6	IS	09 00.0	18	5.6	29	4.8	16	3.2			U 1	6118.1	467.4
WAKKAN	0	EP	14 01 20.0	S	09 11.6	9	5.8	17	5.8	16	2.0				6222.5	471.6
KUSHIR	0	IP	14 01 21.3	S	09 14.4	6	7.0	22	4.9	11	5.7			U 2	6278.0	473.1
NEMURO	0	EP	14 01 27.5	ES	09 25.0			5	4.8	6	6.0				6382.0	477.5

OT= 14 4 53 43.2 +/- 1.1
RYUKYU IS
LAT= 27 5 +/- 6 LONG= 128 52 +/- 9
H=100 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NAHA	2	IP	04	54	09.0	IS	54	26.0	238	2.0	269	2.0	138	1.8	N 15	E 8	D 72	150.7	17.0
YAKUSH	0	IP	04	54	38.4	S	55	17.0	55	0.8	53	1.0	17	2.0	S 5	W 2	D 3	405.4	38.6
KAGOSH	0	EP	04	54	54.5	ES	55	48.2	49	1.9	48	2.3	30	1.3				523.6	53.7
MIYAZA	0	P	04	55	01.2	S	55	58.4	24	1.0	24	1.0	11	3.0				590.1	57.2
NAGASA	0	EP	04	55	09.5	ES	56	08.0										631.4	58.5
KUMAMO	0	P	04	55	10.6	S	56	14.5	20	1.8	27	1.6	9	1.0	S 1		D 1	658.9	63.9
OITA	0	P	04	55	20.0	S	56	28.8	26	3.0	19	3.0	18	1.5				731.2	68.8
SAGA	0	X	04	55	26.6	S	56	28.4										696.6	
SHIMON	0	EP	04	55	28.5	ES	56	44	3	3.0	5	3.4	3	3.0				786.8	75.5
OSAKA	0	EP	04	55	59.2				10	3.2	10	4.1	5	2.2				1052.7	
NIIGAT	0	EX	04	56	18.0				8	4.2	6	2.3						1532.7	
MATSUS	0	IP	04	56	36.1										S	W	D	1369.5	
WAJIMA	0	EX	04	56	38.6													1369.0	
AKITA	0	EX	04	57	21.2				5	3.2			6	2.6				1744.4	
MIZUSA	0	EP	04	57	24.1				5	2.0	5	2.7						1755.6	

OT= 14 8 58 10.4 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 25 +/- 1 LONG= 138 9 +/- 1
H= 0 MAG=4.0 CLASS=L

MATSUS	1	P	08	58	14.3	S	58	16.1										14.5	01.8
NAGANO	1	IP	08	58	16.8	S	58	19.7										27.3	02.9
MATSUM	1	IP	08	58	17.3	IS	58	21.3							S 2	W 1	U 14	24.9	04.0
KARUIZ	0	IP	08	58	19.4	S	58	25.2								W	D 6	37.0	05.8
CHICHI	0	EP	08	58	26.4	ES	58	43.5										96.1	17.1
TAKADA	0	EP	08	58	26.9	ES	58	35.3										76.9	08.4
MAEBAS	0	EP	08	58	28.0	ES	58	39.7	14	3.2	11	3.2	14	4.2				82.1	11.7
KOFU	0	EP	08	58	28.4	ES	58	41.7	7	0.6	5	2.0	3	1.3				91.1	13.3
KUMAGA	0	EP	08	58	32.8	ES	58	48.6	9	2.8	12	3.2	8	3.2				114.9	15.8
KANAZA	0	EP	08	58	35.6	S	58	53.6	9		6							135.3	18.0
WAJIMA	0	EX	08	58	41.0				14	0.8	15	0.8						155.3	
GIFU	0	EP	08	58	41.3	ES	59	00.5	6	1.4	5	1.6	2	0.6				168.5	19.2
NAGOYA	0	EP	08	58	41.7	S	59	02.8	6	1.0	8	1.0	3	0.8	N 1	E 1	D 1	175.2	21.1
KAKIOK	0	EX	08	58	42				7	0.7	3	0.7	2	0.8				184.6	
MISHIM	0	EX	08	58	43				6	1.2	6	2.1						161.0	
TOKYO	0	EP	08	58	43	ES	59	03	6	1.7	7	1.3	7	3.0				166.1	20.0
HAMAMA	0	P	08	58	45.0	S	59	11.0	5	1.0	5	2.8	4	1.6			U 1	193.4	26.0
YOKOHA	0	X	08	58	46.4	IS	59	09.6	9	1.6	8	0.4						173.9	
HIKONE	0	EP	08	58	48.0	ES	59	15.7	9	0.7	4	0.7	3	1.0				213.6	27.7
NIIGAT	0	X	08	59	06.7				10	1.2	10	0.8						184.0	
ONAHAM	0	X	08	59	25.6				7	1.2	6	1.2						253.2	

OT= 14 11 37 19.0 +/- 0.3
W COAST OF WAKAYAMA PREF
LAT= 34 5 +/- 1 LONG= 135 7 +/- 1
H= 0 MAG=3.7 CLASS=L

WAKAYA	1	P	11	37	23.0	IS	37	24.7	56		81							16.5	01.7
SUMOTO	1	IP	11	37	27.8	IS	37	31.9	16	0.5	12	0.5	5	0.6	S 1	E 1	D 1	33.9	04.1
TOKUSH	0	EP	11	37	31.0	ES	37	37.5										49.9	06.5
KOBE	0	EP	11	37	33.7													67.3	
OSAKA	0	P	11	37	37.4	X	37	44.2	13	3.3	28	3.8	5	2.8				73.7	
NARA	0	EP	11	37	37.5													93.6	
SHIONO	0	EP	11	37	38.0	IS	37	48.9	12	0.4	10	0.2	4	0.2				92.4	10.9
TAKAMA	0	EP	11	37	38.2	ES	37	53.5	6	0.9	6	0.9	4	0.6				100.9	15.3
HIKONE	0	X	11	37	54.4	ES	38	10.5	8	0.6	8	0.5	2	0.7				167.7	
TOYOOK	0	X	11	38	07.6				6	1.0	6	1.2						163.4	

OT= 14 18 4 53.7 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 28 +/- 1 LONG= 138 5 +/- 1
H= 0 MAG=4.2 CLASS=L

MATSUS	1	P	18	04	57.8	S	04	59.6										13.7	01.8
NAGANO	1	IP	18	05	00.2	S	05	04.0										23.7	03.8

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUM	1	EP	18	05	00.7	IS	05	04.9										26.7	04.2
KARUIZ	0	EP	18	05	03.6	S	05	10.1										44.3	06.5
TAKADA	0	EP	18	05	08.0	ES	05	17.6										72.4	09.6
TOYAMA	0	EP	18	05	10	ES	05	22	17	3.2	18	3.6						82.7	12.0
MAEBAS	0	P	18	05	11.1	S	05	23.0	12	2.8	16	2.8	18	3.4			D	88.3	11.9
CHICHI	0	EP	18	05	12.8	ES	05	24.8										104.1	12.0
IIDA	0	EP	18	05	13.8	ES	05	27.6	6	0.8	7	1.4	4	1.2				108.5	13.8
KUMAGA	0	EP	18	05	17.6	ES	05	33.4	18	5.0	22	4.2	13	3.6				122.2	15.8
KANAZA	0	EP	18	05	19.0	ES	05	35.8	16		11		6					128.8	16.8
KOFU	0	X	18	05	21.2													98.7	
UTSUNO	0	EP	18	05	22.9	ES	05	42.3	9	1.7	6	0.7						160.4	19.4
WAJIMA	0	EX	18	05	23.2				15	1.0	17	1.0						147.1	
AIKAWA	0	IP	18	05	23.6	IS	05	44.0	5		8		2		S 1		D 0	172.9	20.4
GIFU	0	EP	18	05	24.5	S	05	45.1	7	1.0	10	1.4	2	0.4				167.9	20.6
SHIZUO	0	EP	18	05	25.0	S	05	46.2	7	0.6	11	0.8	4	1.4				168.2	21.2
TOKYO	0	EX	18	05	25				9	5.0	12	3.8	7	3.2				174.0	
NAGOYA	0	EP	18	05	25.8	ES	05	47.2	6	1.0	7	1.0	5	1.0	N 1	E 1	D 1	176.1	21.4
YOKOHA	0	EP	18	05	27.6	ES	05	53.5	10	0.5	11	0.5						182.1	25.9
MISHIM	0	EP	18	05	28.5	ES	05	44.0	9	0.9	12	1.3						168.7	15.5
HAMAMA	0	P	18	05	28.6	S	05	51.0	8	1.4	7	2.6	4	1.6			D 1	197.7	22.4
OMAEZA	0	EP	18	05	31.1				11	0.3	12	0.4						207.0	
HIKONE	0	X	18	05	35.1	ES	05	56.5	12	1.0	9	1.1	3	1.5				212.2	
ONAHAM	0	X	18	06	06.5				8	0.5	5	1.1						257.7	
NIIGAT	0	X	18	06	15.0				13	3.8	15	4.7	6	1.4				181.8	
TOYOOK	0	X	18	06	26.2				11	1.0	5	1.0						311.7	

OT= 14 18 19 28.0 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 26 +/- 1 LONG= 138 7 +/- 1
H= 0 MAG=4.0 CLASS=L

MATSUS	1	P	18	19	32.1	S	19	34.2										14.3	02.1
MATSUM	X	P	18	19	34.5	IS	19	38.6							S	W	U	24.7	04.1
NAGANO	1	IP	18	19	34.6	S	19	38.1										26.1	03.5
KARUIZ	0	IP	18	19	37.7	S	19	43.2							N	W 4	D 4	40.4	05.5
TAKADA	0	EP	18	19	42.2	ES	19	53.0										75.5	10.8
TOYAMA	0	EP	18	19	45	ES	19	57	13	3.4	12	4.0						86.8	12.0
MAEBAS	0	EP	18	19	45.1	ES	19	54.6	28	4.6	12	3.0	14	3.4				85.1	09.5
CHICHI	0	EP	18	19	47.0	ES	20	00.1										99.6	13.1
KOFU	0	EP	18	19	47.4	ES	19	58.0	7	1.8	6	3.0	3	1.0				94.1	10.6
IIDA	0	EP	18	19	48.0	ES	20	03.4	4	1.0	3	1.0	3	1.0				105.5	15.4
KUMAGA	0	EP	18	19	50.4	ES	20	07.6	13	5.2	15	4.2	11	4.0				118.3	17.2
KANAZA	0	EP	18	19	53.4	ES	20	13.0	10		7							132.1	19.6
UTSUNO	0	EX	18	19	58.4	ES	20	17.3	7	1.5	3	1.8						157.7	
GIFU	0	P	18	19	58.6	S	20	18.1	6	1.4	8	1.2	2	0.9				167.5	19.5
SHIZUO	0	EP	18	19	58.6	S	20	20.9	5	0.6	6	1.0	3	1.2				164.1	22.3
NAGOYA	0	EP	18	20	00.0	S	20	20.0	7	1.0	9	1.0	4	0.8				174.8	20.0
TOKYO	0	EP	18	20	01.0				7	4.6	9	4.1	6	3.0				169.6	
WAJIMA	0	X	18	20	01.2				16	0.8	16	0.8						151.8	
OMAEZA	0	IX	18	20	02				7	0.4	8	0.5						203.2	
HAMAMA	0	P	18	20	02.9	ES	20	28.0	5	1.6	6	2.4	4	1.4	S 2		U 2	194.6	25.1
MISHIM	0	X	18	20	04				5	0.6	6	0.6						164.0	
YOKOHA	0	X	18	20	04.6				8	0.5	6	1.0						177.4	
NIIGAT	0	X	18	20	16.3				9	4.2	15	4.5						183.7	
TOYOOK	0	X	18	20	39.0				8	1.2	4	1.0						313.4	
ONAHAM	0	X	18	20	42.4				5	0.9	6	0.9						255.7	

OT= 14 18 43 29.2 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 28 +/- 1 LONG= 138 5 +/- 1
H= 0 MAG=4.4 CLASS=L

MATSUS	2	P	18	43	34.1	S	43	36.1										13.7	02.0
NAGANO	1	IP	18	43	36.5	S	43	40.0										23.7	03.5
MATSUM	1	IP	18	43	36.5	IS	43	40.0	100	3.4	50	3.4			S 9	W 9	U 67	26.7	03.5
KARUIZ	0	IP	18	43	39.8	S	43	45.4	300	3.0	250	2.3	150	2.0		W 13	D 27	44.3	05.6
TAKADA	0	EP	18	43	44.2	S	43	54.2										72.4	10.0
MAEBAS	0	IP	18	43	45.9	S	43	57.7	78	4.8	46	3.4	64	3.4		W	1 D 4	88.3	11.8
TOYAMA	0	EP	18	43	46	ES	43	57	41	3.4	39	4.0						82.7	11.0
KOFU	0	EP	18	43	48.3	ES	44	02.5	27	1.7	25	4.8	7	3.4				98.7	14.2
CHICHI	0	EP	18	43	48.9	ES	44	02.1										104.1	13.2
IIDA	0	IP	18	43	49.8	IS	44	04.0	16	3.2	16	3.8	9	2.0	S 4	W 2	U 5	108.5	14.2
KUMAGA	0	P	18	43	52.4	ES	44	09.0	48	5.2	62	4.2	38	3.8			U 12	122.2	16.6
FUNATS	0	P	18	43	52.5	S	44	07.0										123.7	14.5
KANAZA	0	EP	18	43	54.8	ES	44	12.2	24		21		10					128.8	17.4

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STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
AIKAWA	0	IP	18 43 58.4	IS	44 19.6	5		10		5		N 1	W 0	U 0	172.9	21.2
UTSUNO	0	EP	18 43 58.4	ES	44 19.3	21	1.5	13	1.8				W 3		160.4	20.9
GIFU	0	P	18 43 59.7	S	44 21.1	20	1.4	19	1.4	7	1.3				167.9	21.4
MISHIM	0	EP	18 43 59.8	ES	44 19.2	16	1.1	19	2.2	3	1.7				168.7	19.4
NAGOYA	0	EP	18 44 00.0	S	44 22.2	15	1.2	23	1.4	11	1.0				176.1	22.2
TOKYO	0	P	18 44 00.5	ES	44 21.5	28	5.8	34	4.0	23	3.1				174.0	21.0
AJIRO	0	P	18 44 01.3	ES	44 22.9	4	1.6	6	1.4	3	1.6				182.5	21.6
NIIGAT	0	EP	18 44 01.8	IS	44 25.6	30	4.0	50	4.3	15	5.0				181.8	23.8
WAJIMA	0	X	18 44 02.0			32	1.0	35	1.0						147.1	
KAKIOK	0	EX	18 44 02			13	0.9	10	0.9	3	0.9				191.2	
FUKUI	0	P	18 44 02.7	S	44 26.2										173.0	23.5
HAMAMA	0	P	18 44 04.7	ES	44 29.8	14	2.0	19	3.0	9	1.6	S 1		U 2	197.7	25.1
OMAEZA	0	EP	18 44 05.0	ES	44 34.6	20		37		16					207.0	29.6
MITO	0	IP	18 44 05.4	S	44 33.1	12	2.4	10	1.6	5	2.6			D 1	214.4	27.7
TSURUG	0	EP	18 44 05.4	ES	44 29.6										203.1	24.2
YOKOHA	0	EP	18 44 05.6	IS	44 29.6	30	1.6	25	1.6	14	1.7			U 9	182.1	24.0
TOMISA	0	EP	18 44 09.0			10	5.0	13	4.0	6	2.0				233.2	
HIKONE	0	X	18 44 10.5			15	1.2	13	1.4	9	1.5				212.2	
OSHIMA	0	X	18 44 12			6	1.0	7	1.0	3	1.8				222.5	
ONAHAM	0	EX	18 44 14.0	ES	44 44.3	17	1.1	19	1.2	8	2.8				257.7	
OSAKA	0	X	18 44 27	X	45 04.4	16	4.8	30	4.8	8	3.0				306.4	
TOYOOK	0	X	18 44 28.4			13	1.0	7	1.1						311.7	

OT= 14 22 14 57.2 +/- 0.3
NW OF CHIBA PREF
LAT= 35 48 +/- 3 LONG= 139 51 +/- 7
H= 80 CLASS=U

TOKYO	0	P	22 15 10.4	S	15 19.7	17		8							15.2	09.3
KAKIOK	0	EP	22 15 11.8	S	15 20.5	10	0.7	13	1.2	7	0.8				57.0	08.7
UTSUNO	0	P	22 15 14.2	ES	15 27.1	8	0.2	8	0.2	4	0.2				82.9	12.9
AJIRO	0	IP	22 15 17.0	IS	15 29.9	7	0.3	8	0.3	2	0.3	S 0	E 0	D 1	108.3	12.9
YOKOHA	0	X	22 15 21.4			12	0.5	16	0.4						44.0	
MATSUS	0	IP	22 15 27.8										E	D	168.9	

OT= 16 8 35 50.8 +/- 0.2
OFF URAKAWA
LAT= 41 56 +/- 1 LONG= 142 23 +/- 2
H= 80 CLASS=M

URAKAW	3	IP	08 36 03.9	IS	36 12.8	900	0.4	1100	0.4	200	0.4	N 99	E 66	U260	41.3	08.9
HIROO	2	IP	08 36 08.0	IS	36 19.5							N 8	E 13	U 24	86.4	11.5
MURORA	0	IP	08 36 11.7	IS	36 25.6							S 3	E 7	D 15	123.4	13.9
HAKODA	X	IP	08 36 13.8	S	36 30.3	172	2.0	92	0.8	54	1.8	N 7	E 16	D 19	135.6	16.5
SAPPOR	1	IP	08 36 15.4	IS	36 32.6	117	2.2	89	2.0	39	1.4	S 9	E 4	D 14	152.0	17.2
OBIHIR	X	IP	08 36 15.8	IS	36 31.7										129.5	15.9
HACHIN	1	IP	08 36 18.5	IS	36 37.7	84	2.2	175	2.4	48	2.4	N 1		D 1	172.2	19.2
AOMORI	0	IP	08 36 19.5	IS	36 40.0	176	2.1	206	2.3	71	1.8		E 6	D 10	182.5	20.5
KUSHIR	X	IP	08 36 20.6	ES	36 43.7	64	0.4	63	0.3	30	2.5		W 2	D 4	202.2	23.1
SUTTSU	0	EP	08 36 21.4	ES	36 42.6										200.6	21.2
ASAHIK	0	IP	08 36 22.5	IS	36 43.0	35	1.8	28	1.8	18	2.0	S 0			204.1	20.5
MIYAKO	0	EP	08 36 26.5	IS	36 52.3	10	1.6	16	1.6	7	1.3				256.5	25.8
RUMOI	0	EX	08 36 26.9	ES	36 51.3										232.3	
MORIOK	0	IP	08 36 31.5	IS	37 00.0	22	0.4	33	0.4	8	1.0	N 0	E 0	D 0	268.7	28.5
NEMURO	0	EP	08 36 32.6	ES	37 04.0	6	2.5	5	1.7	3	2.0				305.1	31.4
ABASHI	0	P	08 36 32.9	ES	36 56.8			12	2.0	11	2.0				278.6	23.9
OFUNAT	0	IP	08 36 36.8	IS	37 11.6	10	0.8	16	1.8	11	1.0	N 1		D 1	323.8	34.8
AKITA	0	EX	08 36 38.3	ES	37 13.6	33	2.8	32	2.8	15	2.4				312.3	
MIZUSA	0	EP	08 36 39.2	S	37 15.3	50	1.0	58	3.1						328.5	36.1
ISHINO	0	X	08 36 44.8	ES	37 26.8										400.3	
SENDAI	0	EP	08 36 50.4	ES	37 32.2	18	3.8	16	2.3	8	0.8				427.0	41.8
SAKATA	0	X	08 36 52.2	ES	37 32.5										399.9	
WAKKAN	0	EX	08 36 53.6	EX	37 29.2	6	3.4	9	3.8	7	2.1				391.3	
UTSUNO	0	EP	08 37 16.2	EX	38 20.8	10	1.6	7	1.5						636.0	
MITO	0	EP	08 37 20.9	X	38 36.5	18	2.0	16	1.4	10	1.6				638.4	
KAKIOK	0	EP	08 37 22	ES	38 24	15	1.3	13	1.3	5	1.3				660.6	62.0
ONAHAM	0	EX	08 37 23.0	X	38 22.1	26	1.2	21	1.3	12	2.2				568.2	
MATSUS	0	IP	08 37 24.4											U	698.8	
KUMAGA	0	X	08 37 33.2	X	38 58.0	10	2.2	12	1.8	7	3.0				692.7	
YOKOHA	0	X	08 37 49.8			7	1.9								759.1	
SHIRAK	0	X	08 37	ES	38 02.9										565.8	
NIIGAT	0	X	08 38 03.1			15	2.2	15	2.7	8	3.0				529.7	
TOKYO	0	X	08 38 41			9	3.0	9	3.2	5	3.6				730.0	
CHOSHI	0	X	08 39 10.1												702.0	

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OT= 17 7 28 37.9 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 29 +/- 1 LONG= 138 7 +/- 1
H= 10 MAG=4.2 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
MATSUS	2	IP	07 28 40.7	S	28 42.9										10.2	02.2
MATSUM	1	IP	07 28 43.5	S	28 47.6							S 1		U 8	29.6	04.1
NAGANO	1	IP	07 28 43.6	S	28 46.9										20.9	03.3
KARUIZ	0	IP	07 28 46.2	S	28 51.6							N 4	W 4	D 10	42.1	05.4
TAKADA	0	EP	07 28 51.0	S	29 00.2										70.0	09.2
MAEBAS	0	IP	07 28 54.0	S	29 04.5	31	4.7	16	2.8	16	3.3			D 2	85.5	10.5
TOYAMA	0	EX	07 28 54			20	2.6	19	2.0						85.0	
KOFU	0	EP	07 28 55.3	ES	29 09.6	12	1.6	8	4.0	5	0.8				99.1	14.3
KUMAGA	0	EP	07 29 00.4	ES	29 16.0	22	5.0	25	4.4	12	3.2				119.8	15.6
KANAZA	0	P	07 29 02.2	ES	29 18.0	14		13		6		N 1	W 2	D 2	131.7	15.8
UTSUNO	0	EP	07 29 04.7	ES	29 24.4	9	1.9	6	1.6						157.3	19.7
WAJIMA	0	EP	07 29 05.0	ES	29 22.0	20	1.2	20	1.0						148.0	17.0
AIKAWA	0	IP	07 29 06.2	IS	29 26.8	4		6				S 0		D 1	170.9	20.6
MISHIM	0	EP	07 29 07.4			8	1.2	11	2.0						169.0	
GIFU	0	P	07 29 07.6	S	29 27.7	8	1.4	10	1.4	3	0.8				171.3	20.1
SHIZUO	0	EP	07 29 07.6	S	29 28.2	5	1.0	7	1.4	5	1.2				169.5	20.6
NAGOYA	0	EP	07 29 07.8	ES	29 28.8	11	0.8	11	1.0	6	1.0	S 1	E 1	U 1	179.3	21.0
NIIGAT	0	P	07 29 09.0	S	29 33.3	13	2.2	18	4.7	4	4.2				178.7	24.3
TOKYO	0	EX	07 29 10			12	2.0	12	2.8						172.3	
FUKUI	0	EX	07 29 10.8												176.4	
FUNATS	0	X	07 29 10.9	S	29 24.0										123.8	
HAMAMA	0	P	07 29 12.0	S	29 36.8	9	1.8	10	2.8	6	1.4			D 3	200.1	24.8
HIKONE	0	EP	07 29 15.3	IS	29 40.0	11	1.1	10	1.1	7	1.5				215.7	24.7
TOYOOK	0	X	07 29 36.2	ES	30 11.0	9	1.2	5	1.0						315.1	
ONAHAM	0	X	07 29 51.3			6	0.9	4	0.8						254.4	

OT= 17 21 1 7.6 +/- 0.4
E OFF FUKUSHIMA PREF
LAT= 37 7 +/- 1 LONG= 141 30 +/- 2
H= 50 MAG=4.0 CLASS=L

ONAHAM	1	IP	21 01 20.0	IS	01 27.3	54	0.4	74	0.8	23	0.6			D 4	56.1	07.3
FUKUSH	0	EP	21 01 26.3	ES	01 38.8	12	1.0	12	0.7	8	0.6				115.2	12.5
SHIRAK	0	EP	21 01 26.8	IS	01 39.4										113.3	12.6
MITO	0	P	21 01 28.4	IS	01 41.4	7	0.4	8	0.3	3	0.4				123.1	13.0
SENDAI	0	EP	21 01 29.9	IS	01 44.0	5	0.5	5	1.2	3	0.5				137.5	14.1
UTSUNO	0	P	21 01 32.2	S	01 49.7	11	0.2	9	0.2	4	0.4				158.4	17.5
KAKIOK	0	EX	21 01 34			11	0.8	10	0.6	5	0.8				152.6	
MATSUS	0	IP	21 01 50.7	S	02 23								E	D	300.5	32.3

OT= 18 15 56 58.0 +/- 0.8
NIIGATA PREF
LAT= 38 1 +/- 4 LONG= 139 19 +/- 5
H= 20 MAG=4.0 CLASS=L

NIIGAT	0	IP	15 57 04.0	IS	57 11.7	33	2.5	33	1.7	22	3.0			D 5	26.1	07.7
AIKAWA	0	IP	15 57 14.1	IS	57 28.0	40		110		8		N 0	W	D	94.4	13.9
SAKATA	0	EP	15 57 16.1	S	57 32.0										108.4	15.9
MIZUSA	0	P	15 57 27.1			8	1.4	3	2.2	2	1.5				201.0	
NAGANO	0	P	15 57 28.0	IS	57 48.6	7		7		3					180.3	20.6
ONAHAM	0	X	15 57 41.7			7	0.7	8	0.9	3	0.4				184.2	
AKITA	0	EX	15 57 47.0	EX	57 54.6	7	0.6	7	0.8						200.8	
WAJIMA	0	X	15 57 51.0			5	0.8	5	0.8						224.3	
FUKUSH	0	X	15 57			5	1.3	7	1.3	2	0.7				105.9	

OT= 18 18 36 53.6 +/- 0.4
TOKYO-YAMANASHI BORDER
LAT= 35 45 +/- 9 LONG= 139 4 +/- 6
H=130 CLASS=U

KOFU	0	IP	18 37 12.6	ES	37 28.3	9	0.4	4	0.4	3	1.2			D 2	46.9	15.7
KUMAGA	0	EP	18 37 14.4	S	37 28.8	3	0.6	7	1.0	2	0.4				52.5	14.4
UTSUNO	0	EX	18 37 16.5	S	37 33.9	10	0.6	14	0.4	4	0.6				114.3	
KAKIOK	0	EP	18 37 18	S	37 35.2	7	0.5	8	0.2	3	0.5				114.8	17.2
MITO	0	P	18 37 20.3	IS	37 41.0	4	0.4	6	0.4	2	0.5				144.5	20.7
YOKOHA	0	X	18 37 36.0			14	0.5	8	0.4						63.6	

OT= 18 23 33 2.6 +/- 0.2
N OF MIYAGI PREF
LAT= 38 44 +/- 1 LONG= 141 3 +/- 2
H= 20 MAG=3.4 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MIZUSA	0	P	23 33 12.0	S	33 16.1	15	2.0	18	1.0	6	1.2				45.0	04.1
SENDAI	0	EP	23 33 13.3	IS	33 20.5	4	0.8	5	0.5	2	0.5				54.1	07.2
OFUNAT	0	EP	23 33 15.6	IS	33 22.2	15	0.0	9	0.0	3	0.2				68.5	06.6
MORIOK	0	IP	23 33 21.0	ES	33 33.7	5	0.4	10	0.4	2	0.3	S	0		107.4	12.7

OT= 19 19 24 53.5 +/- 0.8
CHIBA PREF
LAT= 35 31 +/- 3 LONG= 140 20 +/- 4
H= 70 CLASS=S

TOKYO	0	IP	19 25 08.6	IS	25 18.7	7		5						U	55.3	10.1
KAKIOK	0	EP	19 25 09.2	S	25 19.5	7	1.2	8	1.2	3	0.8				80.3	10.3
YOKOHA	0	EP	19 25 09.6	IS	25 19.1	13	0.6	10	0.4						62.2	09.5
KUMAGA	0	EP	19 25 14.4	ES	25 25.8	6	1.0	3	0.8	3	1.0				110.6	11.4
AJIRO	1	IP	19 25 14.4	IS	25 27.8	11	0.3	11	0.3	9	0.5	N	0 E 0	D	1	124.1	13.4
UTSUNO	0	EP	19 25 14.8	S	25 26.9	7	0.2	7	0.2							121.6	12.1
KOFU	0	EP	19 25 19.0	ES	25 34.6	6	0.4	3	0.4	2	0.4					161.7	15.6
MATSUS	0	IP	19 25 25.5	S	25 49							N		D		222.5	23.5

OT= 20 7 57 56.4 +/- 0.1
IWATE PREF
LAT= 39 45 +/- 0 LONG= 141 53 +/- 1
H= 60 MAG=3.7 CLASS=U

MIYAKO	0	IP	07 58 06.4	S	58 12.8	13	0.0	14	0.0	8	0.0	S	2		13.7	06.4
MORIOK	0	IP	07 58 10.0	IS	58 18.6	10	0.4	11	0.4	8	0.4	N	0 E 1	D 1	61.6	08.6
OFUNAT	0	IP	07 58 11.8	IS	58 21.6	17	0.2	14	0.2	3	0.2	S	1		77.7	09.8
HACHIN	0	P	07 58 13.0	IS	58 23.8	11	0.4	14	0.4	1	0.6	S	E	D	91.3	10.8
MIZUSA	0	X	07 58 24.9			10	1.5	10	0.6	8	1.4				94.1	

OT= 20 22 2 8.0 +/- 0.2
AKITA PREF
LAT= 39 42 +/- 1 LONG= 140 41 +/- 1
H= 10 MAG=4.7 CLASS=S

MORIOK	2	IP	22 02 17.4	IS	02 22.0	176	0.4	69	0.4	47	3.6	N	4 W 58	D 22	41.6	04.6
AKITA	2	IP	22 02 18.8	IS	02 25.2	256	0.6	265	1.0	107	1.6		E 23	D100	49.9	06.4
MIZUSA	2	P	22 02 22.7	S	02 29.9	503	3.3	117	2.0	78	1.0				73.9	07.2
MIYAKO	1	IP	22 02 28.0	S	02 48.0	20	4.9	38	4.3	35	4.4		W 14	D 8	110.4	20.0
OFUNAT	X	IP	22 02 28.6	IS	02 41.9	30	0.2	35	0.2	18	2.8	N	9 W 8	D 7	113.9	13.3
AOMORI	0	EP	22 02 28.8	S	02 45.9	57	2.2	63	2.0	16	1.3				124.3	17.1
HACHIN	0	IP	22 02 29.2	IS	02 43.8	16	5.9	21	4.8	14	2.3	S	1 W 1	D	116.4	14.6
ISHINO	1	IP	22 02 34.3	IS	02 52.3							S	4 E 2	U 4	151.4	18.0
SENDAI	0	EP	22 02 35.5	ES	02 55.2	29	3.0	47	2.0	12	1.0				161.0	19.7
YAMAGA	0	IP	22 02 36.1	ES	02 55.7							S	4 W 1	U 4	163.2	19.6
FUKUSH	0	EP	22 02 44.0			40	1.0	22	1.0	9	3.0				216.5	
HAKODA	0	P	22 02 45.7	ES	03 14.9	6	2.2	8	2.8	4	2.6			D 1	234.8	29.2
AIKAWA	0	IP	22 02 50.8	IS	03 28.0	20		31				N	0		282.3	37.2
NIIGAT	0	EP	22 02 51.0	IS	03 22.2	100	2.1	67	1.5	17	1.4				244.1	31.2
SHIRAK	0	EP	22 02 53.9	ES	03 29.9										289.3	36.0
URAKAW	0	EX	22 03 01.3			5	2.4	6	3.2	2	3.6				325.1	
UTSUNO	0	EP	22 03 04.2	EX	03 47.6	10	1.8	8	1.5	4	1.0				357.1	
MATSUS	0	IP	22 03 07.4	S	04 02							S	W	U	412.5	54.6
MITO	0	EP	22 03 07.4	ES	03 47.3	54	3.0	49	3.4	25	2.7				369.1	39.9
KAKIOK	0	EP	22 03 07.7	ES	03 58.1	17	1.0	15	1.0	7	1.0				387.3	50.4
WAJIMA	0	EP	22 03 08.0			24	1.0	33	1.0						417.8	
TAKADA	0	X	22 03 08.8	S	03 48.8										357.9	
MAEBAS	0	X	22 03 11.2	S	04 01.7	11	2.6	18	3.1	6	4.2				392.6	
KUMAGA	0	EP	22 03 13.0	ES	04 01.8	11	2.6	14	2.6	9	2.4				410.5	48.8
TOKYO	0	P	22 03 15.1	S	04 09.3	11	4.0								453.0	54.2

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OT= 20 23 39 54.8 +/- 0.4
S OF IBARAKI PREF
LAT= 36 5 +/- 2 LONG= 140 16 +/- 3
H= 70 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KAKIOK	0	P	23 40 05.7	S	40 13.5	17		23		7					17.7	07.8
UTSUNO	0	P	23 40 09.5	IS	40 19.2	54	0.2	26	0.1						62.5	09.7
TOKYO	0	P	23 40 09.6	S	40 20.2	13	0.6								63.7	10.6
KUMAGA	0	EP	23 40 10.6	ES	40 21.2	8	0.4	7	0.2	2	0.2				79.7	10.6
MATSUS	0	IP	23 40 22.6	S	40 43							S			191.6	20.4

OT= 21 13 15 53.2 +/- 1.8
E OFF HOKKAIDO
LAT= 43 8 +/- 5 LONG= 146 23 +/- 9
H= 30 MAG=4.6 CLASS=L

NEMURO	1	IP	13 16 06.1	IS	16 14.8	22	0.2	21	0.7	21	0.5	N	5 E 8	D 14	68.3	08.7
KUSHIR	0	EP	13 16 18.0	ES	16 36.6	20	0.4	20	0.3	8	0.6				162.9	18.6
ABASHI	0	IP	13 16 23.8	IS	16 45.0	5	1.4	10	3.4	7	1.0	S	2 E 4	D 6	196.0	21.2
HIROO	0	EP	13 16 34.9	ES	17 06.1										268.4	31.2
OBIHIR	0	X	13 16 38.9												258.8	
URAKAW	0	EP	13 16 42.4	S	17 18.7	14	0.6	24	1.2	8	1.4				314.8	36.3
MIZUSA	0	P	13 17 23.6	S	18 22.2	8	1.7	4	1.0	4	1.3				625.6	58.6
MATSUS	0	P	13 18 05	ES	19 52										1011.9	107.0

OT= 22 10 3 57.6 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 27 +/- 1 LONG= 138 6 +/- 1
H= 0 MAG=4.0 CLASS=L

MATSUS	2	P	10 04 02.3	S	04 04.2										13.8	01.9
MATSUM	0	IP	10 04 04.6	IS	04 08.5							S	W	U 13	25.6	03.9
NAGANO	0	IP	10 04 04.7												24.9	
KARUIZ	0	IP	10 04 08.3	S	04 14.1							N	3 W 6	D 8	42.3	05.8
TAKADA	0	EP	10 04 13.0	S	04 22.0										73.9	09.0
MAEBAS	0	IP	10 04 15.3	S	04 26.3	28	4.7	13	3.0	20	3.8			U 2	86.7	11.0
KOFU	0	IP	10 04 15.7	ES	04 26.8	10	1.6	8	0.7	4	1.0			D 1	96.4	11.1
IIDA	0	EP	10 04 17.8	ES	04 30.4	6	1.0	6	1.4	3	1.4				107.0	12.6
CHICHI	0	EP	10 04 17.8	ES	04 29.7										101.8	11.9
KUMAGA	0	EP	10 04 21.0	ES	04 36.4	18	5.0	22	4.4	11	3.6				120.2	15.4
KANAZA	0	EP	10 04 22.0	ES	04 40.0	10		8							130.5	18.0
WAJIMA	0	EX	10 04 26.0			13	0.8	15	1.0						149.5	
AIKAWA	0	EP	10 04 26.9	IS	04 48.8	4		7						U 0	174.7	21.9
MISHIM	0	EX	10 04 28			8	0.6	9	1.7	2	0.4				166.3	
GIFU	0	P	10 04 28.4	S	04 49.4	7	1.2	8	1.4						167.7	21.0
NAGOYA	0	EP	10 04 29.1	ES	04 52.8	5	0.8	7	1.0	3	0.8			U 1	175.4	23.7
SHIZUO	0	EP	10 04 30.2	ES	04 50.4	5	1.0	5	1.4	3	5.0				166.1	20.2
UTSUNO	0	EX	10 04 30.9	EX	04 46.9	9	1.5	6	1.1						159.1	
HAMAMA	0	P	10 04 33.0	ES	04 55	9	1.8	6	2.4	5	1.8			U 1	196.2	22.0
OMAEZA	0	IX	10 04 34			8		12							205.1	
YOKOHA	0	X	10 04 45	IX	05 05	14	1.2								179.8	
TOKYO	0	X	10 04 51.7			11	1.6	15	1.5						171.8	
TOYAMA	0	X	10 04	ES	04 28	17	3.0	17	3.8						84.7	
HIKONE	0	X	10 05 01.1			7	1.5	7	1.5	3	0.9				212.2	

OT= 22 16 35 32.2 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 33 +/- 1 LONG= 138 18 +/- 2
H= 10 MAG=4.0 CLASS=L

MATSUS	2	P	16 35 35.3	S	35 36.8										8.3	01.5
NAGANO	0	IP	16 35 37.1	S	35 39.5										15.3	02.4
KARUIZ	0	IP	16 35 39.7	S	35 45.1									U 2	32.4	05.4
MATSUM	0	IP	16 35 42.1	IS	35 48.3									D 3	44.9	06.2
TAKADA	0	EP	16 35 44.1	S	35 52.1										61.7	08.0
KOFU	0	IP	16 35 50.2	ES	36 02.6	5	0.6	6	0.3	3	1.0			U 2	100.9	12.4
WAJIMA	0	X	16 36 16.6			10	1.0	10	0.8						155.8	
MITO	0	X	16 36 28.4			11	0.4	7	0.3	2	0.1				195.5	

OT= 23 16 19 28.6 +/- 1.3
S OFF HOKKAIDO
LAT= 40 58 +/- 4 LONG= 143 33 +/- 9
H= 60 MAG=4.4 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
URAKAW	0	EP	16 19 52.4	IS	20 03.4	11 1.2	14 0.6	6 2.2				147.1	11.0
HACHIN	0	EP	16 19 57.1	ES	20 14.0	5 0.2	6 0.2	2 2.9				177.9	16.9
KUSHIR	0	EP	16 20 03.4	ES	20 26.2	10 0.3	8 0.3	5 0.2				234.2	22.8
MORIOK	0	EP	16 20 04.5	S	20 29.7	5 0.3	5 0.3	1 0.5				246.7	25.2
MIZUSA	0	P	16 20 07.4	S	20 38.2	15 1.5	11 1.2	10 1.0				289.8	30.8
OBIHIR	0	X	16 20 08.4									218.7	
AOMORI	0	X	16 20 19			20 1.7	20 1.5					233.8	
MATSUS	0	P	16 20 57.5									675.9	
AKITA	0	X	16 20			6 2.6	6 2.4	4 2.4				324.1	

OT= 25 12 30 7.3 +/- 1.3
S OFF CHIBA PREF
LAT= 34 46 +/- 5 LONG= 140 8 +/- 6
H= 50 MAG=3.6 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOMISA	0	IP	12 30 16.6	IS	30 23.2	23 0.6	12 0.6	8 1.0			D 1	32.7	06.6
YOKOHA	0	EP	12 30 22.1	IS	30 33.9	40 0.4	37 0.4	9 0.6				86.2	11.8
AJIRO	0	EP	12 30 24.3	S	30 36.6	4 0.3	7 0.3	1 0.4				99.6	12.3
OSHIMA	0	X	12 30 31.9			11 0.6	12 0.6	5 0.4				69.1	
KAKIOK	0	EP	12 30 33.3	ES	30 47.1	7 0.8	5 0.7	2 0.7				162.6	13.8
MATSUS	0	IP	12 30 44.5									262.7	

OT= 27 2 21 27.3 +/- 0.3
OFF URAKAWA
LAT= 41 57 +/- 2 LONG= 142 45 +/- 3
H= 80 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
URAKAW	0	IP	02 21 39.2	IS	21 47.0	37 0.4	63 0.4	12 0.4	N 2	W 1	U 5	23.3	07.8
HIROO	0	IP	02 21 42.3	IS	21 51.5				N 2	E 2	U 5	59.7	09.2
OBIHIR	0	IP	02 21 48.6	IS	22 03.6						U 4	114.5	15.0
KUSHIR	0	EP	02 21 53.4	IS	22 16.5	12 0.3	9 0.3	4 0.3				177.1	23.1
HAKODA	0	P	02 21 53.9	S	22 13.0	10 1.0	9 0.6				D	166.0	19.1
SAPPOR	0	IP	02 21 54.0	S	22 12.8	3 0.8	7 1.0	2 1.0			D 1	169.6	18.8
HACHIN	0	IP	02 21 57.0	ES	22 18.0	5 0.2	5 0.2	1 1.6	S	W	U	188.7	21.0
MIZUSA	0	P	02 22 17.6	ES	22 48.9	10 1.9	5 1.0	4 1.0				341.4	31.3

OT= 27 14 41 32.6 +/- 0.5
N PART OF OSAKA PREF
LAT= 34 51 +/- 1 LONG= 135 31 +/- 2
H= 0 MAG=3.6 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KYOTO	1	IP	14 41 38.8	IS	41 41.7	67 0.0	45 0.4	9 0.1	N 1	W 1	D 8	26.8	02.9
OSAKA	X	IP	14 41 39.7	IS	41 44.5	30 0.2	41 0.5	13 0.4			U 10	22.5	04.8
NARA	1	EP	14 41 40.4	IS	41 45.9	100 0.2						34.4	05.5
KOBE	0	EP	14 41 40.5	ES	41 45.6							35.6	05.1
MAIZUR	0	IP	14 41 45.4	IS	41 53.0							70.0	07.6
HIKONE	0	X	14 41 58.3			16 0.9	17 0.6	5 0.5				81.5	
GIFU	0	X	14 42 09.9			9 0.4	4 0.6					129.0	
MATSUS	0	EP	14 42 18	S	42 58.0							307.2	40.0

OT= 28 5 59 33.8 +/- 1.2
OFF URAKAWA
LAT= 41 47 +/- 7 LONG= 142 11 +/- 4
H= 90 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
URAKAW	0	IP	05 59 50.1	IS	00 00.1	47 0.4	73 0.4	9 1.0	N 2	E 2	U 9	64.7	10.0
HIROO	1	P	05 59 55	IS	00 06.8							109.1	11.8
SAPPOR	0	EP	06 00 00	ES	00 16.8	4 1.6	5 1.4	2 1.2				158.0	16.8
OBIHIR	0	P	06 00 01.9	IS	00 17.9							152.5	16.0
KUSHIR	0	EP	06 00 07.0	ES	00 30.9	12 0.3	9 0.3	4 0.2				225.4	23.9
MIZUSA	0	X	06 00 51.2			10 1.5	4 1.3	8 2.2				307.5	
MATSUS	0	X	06 01 10									675.9	

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OT= 28 23 24 51.7 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 28 +/- 1 LONG= 138 8 +/- 1
H= 10 MAG=4.3 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	2	P	23 24 55.2	S	24 57.0							10.4	01.8
NAGANO	2	P	23 24 57.4	S	25 00.7							22.2	03.3
MATSUM	X	IP	23 24 58.0	IS	25 01.7				S	3 W	5 U 23	28.6	03.7
KARUIZ	0	EP	23 25 00.8	S	25 06.7							40.1	05.9
TAKADA	0	P	23 25 04.2	S	25 13.5							71.6	09.3
TOYAMA	0	EP	23 25 08	ES	25 22	35 3.4	32 4.2					86.9	14.0
MAEBAS	0	IP	23 25 08.2	ES	25 19.5	55 3.8	29 3.2	36 3.2			D 2	83.8	11.3
KOFU	0	EP	23 25 08.6	ES	25 20.9	14 3.7	18 4.7	7 3.0				96.8	12.3
CHICHI	0	EP	23 25 09.6	ES	25 22.8							100.2	13.2
IIDA	0	EP	23 25 10.8	IS	25 23.4	9 1.2	11 1.6	6 3.6				109.5	12.6
FUNATS	0	P	23 25 13.1	S	25 29.6							121.5	16.5
KUMAGA	0	P	23 25 14.4	ES	25 30.6	31 3.6	45 4.0	24 4.0			U 4	117.9	16.2
KANAZA	0	EP	23 25 16.0	ES	25 31.3	16	13	7				133.3	15.3
WAJIMA	0	EP	23 25 18.0	ES	25 36.0	25 1.0	33 1.0	6 1.2				150.3	18.0
AIKAWA	0	IP	23 25 20.4	IS	25 41.6	5	8		N	W 0	U 0	172.6	21.2
MISHIM	0	EP	23 25 21.1	ES	25 32.1	9 0.8	13 0.9	2 1.1				166.7	11.0
SHIZUO	0	EP	23 25 22.1	S	25 43.6	6 0.8	6 1.0	6 4.4				167.5	21.5
OMAEZA	0	EP	23 25 22.6	ES	25 55.9	12 0.3	26 0.5					206.8	33.3
GIFU	0	P	23 25 22.7	S	25 42.2	11 1.5	10 2.1	4 1.3				171.1	19.5
NAGOYA	0	EP	23 25 22.8	ES	25 44.2	16 2.6	17 1.2	6 1.2	N	2 E	2 U 2	178.7	21.4
NIIGAT	0	IP	23 25 23.3	IS	25 47.2	18 4.8	31 4.3	9 3.9			D 4	179.7	23.9
TOKYO	0	EP	23 25 24	ES	25 45.8	24 5.4	22 3.8	27 3.6				170.1	21.8
FUKUI	0	P	23 25 24.3	S	25 48.9				S	2 W	2 D 2	177.3	24.6
KAKIOK	0	EP	23 25 24.3	ES	25 46.6	10 0.7	8 1.0	3 0.9				186.7	22.3
YOKOHA	0	EP	23 25 25.2	ES	25 51.3	25 1.6		9 3.1			U 3	178.6	26.1
HAMAMA	0	P	23 25 25.9	ES	25 52	10 1.8	15 3.0	5 1.8			U 1	198.5	26.1
HIKONE	0	P	23 25 27.7	ES	25 54.1	13 1.0	9 1.0	5 1.3				215.7	26.4
MITO	0	EP	23 25 28.5	ES	25 48.1	10 2.4	8 3.5	5 3.0				209.9	19.6
OSAKA	0	EX	23 25 46	X	26 32.9	12 3.3	15 4.3	5 3.0				309.8	
TOYOOK	0	X	23 25 46.8	ES	26 24.5	14 1.2	10 1.2					316.0	
ONAHAM	0	X	23 25 53.6			10 1.2	10 1.1	4 1.6				253.4	

OT= 30 7 2 7.8 +/- 0.5
NEAR CHOSHI
LAT= 35 50 +/- 1 LONG= 140 56 +/- 3
H= 30 MAG=5.1 CLASS=M

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHOSHI	3	IP	07 02 14.0	IS	02 18.0	1050	1250	550	N 32	E 30	D 96	14.5	04.0
MITO	2	IP	07 02 21.4	IS	02 31.0	308 1.9	229 1.8	133 3.3	N 3	W 2	U 26	73.4	09.6
KAKIOK	2	IP	07 02 21.5	S	02 31.2	183 0.6	162 0.7	101 1.0	N 22	W 34	U 20	80.0	09.7
UTSUNO	1	P	07 02 26.8	EX	02 35.0			41 0.6			U 4	124.0	
TOKYO	0	IP	07 02 27.2	S	02 38.8	118 1.0	111 1.8	75 3.0				107.5	11.6
ONAHAM	1	IP	07 02 29.2	ES	02 41.2	123 1.3	168 1.2	78 1.6			D 10	123.4	12.0
YOKOHA	0	IP	07 02 29.7	IS	02 47.9	254 2.0	1.4	66 2.0			D 5	123.8	18.2
KUMAGA	0	P	07 02 31.4	ES	02 52.0	63 1.6	66 1.8	42 2.4			U 2	143.9	20.6
TOMISA	0	IP	07 02 31.9	S	02 47.1	85 3.0	89 2.6	56 2.8			D 1	142.6	15.2
SHIRAK	1	IP	07 02 32.1	ES	02 49.3						U 4	156.1	17.2
CHICHI	0	EP	07 02 34.9	ES	02 52.9							168.0	18.0
MAEBAS	0	IP	07 02 35.1	S	02 55.2	54 2.1	41 1.6	36 2.1			U 4	179.6	20.1
AJIRO	0	EP	07 02 37.1	ES	02 53.8	27 1.6	28 1.4	12 1.4				188.3	16.7
OSHIMA	0	P	07 02 37.4			43 3.0	29 3.0	16 1.5				184.7	
FUNATS	0	P	07 02 38.9	ES	03 05.7							199.9	26.8
MISHIM	0	EP	07 02 39.1	ES	03 01.4	74 2.1	81 2.1	27 1.5				198.6	22.3
KOFU	0	EP	07 02 41.6	ES	03 09.6	57 1.7	50 1.6	22 2.9				215.6	28.0
FUKUSH	1	IP	07 02 41.8	IS	03 07.0	170 1.0	90 1.0	35 0.9	N 17		U 9	217.3	25.2
KARUIZ	0	EP	07 02 42.1	S	03 12.9							221.7	30.8
MATSUS	0	IP	07 02 45.6	S	03 24				N	W	U	257.2	38.4
SHIZUO	0	IP	07 02 47.1	IS	03 15.7	20 2.4	28 2.4	11 3.2	N 1	E 1	D 1	248.5	28.6
SENDAI	0	IP	07 02 47.4	IS	03 15.4	55 2.4	58 2.0	31 2.0	S 3		D 4	269.3	28.0
YAMAGA	0	EP	07 02 48.9									273.5	
ISHINO	0	IP	07 02 49.1	IS	03 20.2	22 2.0	21 2.0	15 1.6	S 2	E	D 1	289.5	31.1
IIDA	0	IP	07 02 51.0	IS	03 30.4	25 1.4	16 3.0	12 3.0		W 1	U 1	282.7	39.4
NAGANO	0	EP	07 02 51.1	S	03 26.8	6	7	5				262.5	35.7
OMAEZA	0	EP	07 02 51.2	X	03 47.4	46	38	26				282.7	
NIIGAT	0	EP	07 02 51.4	S	03 27.9	50 2.9	65 3.2	39 3.1				285.0	36.5
MATSUM	0	EP	07 02 52.2	S	03 28.8							270.5	36.6
TAKADA	0	P	07 02 52.4	S	03 23.2							278.8	30.8
AIKAWA	0	EP	07 02 55.5	ES	03 38.2			7		W 0	U 0	341.1	42.7
OFUNAT	0	P	07 02 58.4	ES	03 36.5	5 1.2	14 2.4	7 1.6	S 1		D 1	364.9	38.1
HAMAMA	0	EP	07 02 59.6	ES	03 36	25 1.8	40 3.0	12 1.8				317.5	36.4
MIZUSA	0	X	07 02	S	03 39.5	98 2.4	41 1.9	26 2.1				366.6	
SAKATA	0	EP	07 03 01.3	ES	03 41.3							354.2	40.0

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOYAMA	0	EP	07 03 02	ES	03 42	18	2.0	27	3.0						348.4	40.0
HACHIJ	0	X	07 03 02.8	ES	03 40.2										320.7	
MIYAKO	0	EP	07 03 05.8	ES	03 52.3	7	2	12	2						432.7	46.5
GIFU	0	EP	07 03 06	S	03 45.6	28	2.0	14	1.8	7	1.5				380.6	39.6
MORIOK	0	IP	07 03 07.7	S	03 48.7	7	2.4	12	2.0	6	2.0			U 1	429.2	41.0
						16	1.0	15	1.2						400.1	
WAJIMA	0	EX	07 03 09.0													
NAGOYA	0	X	07 03 09.0	X	03 53.2	46	2.8	28	2.4	14	1.4				367.2	
KANAZA	0	X	07 03 10.0	ES	03 52.0	20		24		13					393.4	
AKITA	0	EX	07 03 10.6	EX	03 59.0	35	2.4	39	3.2	30	3.2				437.3	
TSURUG	0	EP	07 03 12.4	I	04 19.9										440.7	
															429.3	
HIKONE	0	X	07 03 14.0	ES	04 01.0	26	1.5	17	1.8	11	1.5				523.3	60.0
HACHIN	0	EP	07 03 17.5	ES	04 17.5	4	2.0	11	2.6	7	2.6				481.1	
NARA	0	EP	07 03 19.5												480.6	
KYOTO	0	X	07 03 22.8	ES	04 17.9	7	3.6	5	2.4	4	3.4				553.3	59.0
AOMORI	0	EP	07 03 24.8	IS	04 23.8	53	1.8	36	1.8	11	1.8				554.2	56.5
TOYOOK	0	EP	07 03 26.3	ES	04 22.8	25	1.4	23	1.2	6	1.8				508.2	
OSAKA	0	EX	07 03 31.2	X	04 38.0	56	3.2	45	3.0						573.8	64.5
SUMOTO	0	EP	07 03 31.3	ES	04 35.8	6	3.0	4	2.8	3	4.2				664.0	
HAKODA	0	P	07 03 36.1	X	34 49.9	6	2.2	8	3.0	4	2.8			U 0	720.1	76.5
URAKAW	0	EP	07 03 41.4	S	04 57.9	10	2.2	12	2.0	5	2.4				811.0	
OBIHIR	0	EX	07 03 52.5												847.2	
KUSHIR	0	X	07 03	X	05 17.6	4	2.0	5	2.6	2	2.2				317.5	
HAMAMA	0	X	07 04 10			5	3.6	5	3.6	2	2.0				802.9	
SAPPOR	0	X	07 04 12			5	2.4	7	2.2	2	1.2				889.8	
ASAHIK	0	X	07 04	ES	05 35.0	6	1.1	5	1.0	3	1.0	N	0 E	0 D 0		

OT= 30 7 12 42.2 +/- 1.1
NEAR CHOSHI
LAT= 35 57 +/- 2 LONG= 140 57 +/- 5
H= 0 MAG=4.1 CLASS=L

CHOSHI	2	IP	07 12 50.4	IS	12 55.2	1150		700						D 10	26.8	04.8
MITO	0	IP	07 12 57.5	IS	13 07.4	26	1.1	23	1.4	16	2.0	N 1		U 5	64.1	09.9
KAKIOK	0	IP	07 12 57.6	ES	13 05.9	32	0.7	34	0.7	13	0.5	N 3	W 3	U 2	75.0	08.3
TOKYO	0	IP	07 13 03.5	ES	13 16.3	12	1.4	14	1.2	14	3.8				111.6	12.8
UTSUNO	0	P	07 13 03.5	EX	13 10.3					7	0.8				117.4	
YOKOHA	0	EP	07 13 06.4	ES	13 24.8	23	0.6		0.8	16	0.6				130.3	18.4
KUMAGA	0	EP	07 13 07.4	ES	13 29.4	8	1.0	7	1.2	4	1.8				142.7	22.0
SHIRAK	0	EP	07 13 08.3	ES	13 30.1										145.0	21.8
TOMISA	0	IP	07 13 08.8			14	2.6	14	3.2	7	2.6			D 1	153.0	
ONAHAM	0	X	07 13 14.8			14	1.6	17	1.2	7	0.7				110.5	
KOFU	0	EP	07 13 17.8	ES	13 51.2	8	1.6	7	1.6	4	1.8				218.4	33.4
FUKUSH	0	X	07 13 18.8			12	0.9	12	1.0	4	1.1				204.9	
MATSUS	0	IP	07 13 21.9	X	14 07								W	U	254.9	
SENDAI	0	EP	07 13 24.0	ES	13 52.2	5	1.6	5	1.6	4	1.6				256.4	28.2
MIZUSA	0	P	07 13 38.2	S	14 11.1			4	1.9	2	1.2				353.6	32.9
MISHIM	0	X	07 13			8	1.1	8	2.0	3	1.3				205.4	

OT= 30 7 39 39.5 +/- 1.1
NEAR CHOSHI
LAT= 35 50 +/- 2 LONG= 141 1 +/- 5
H= 30 MAG=4.3 CLASS=L

CHOSHI	2	IP	07 39 46.2	IS	39 50.2	505	0.0	406	0.0			N 30	E 11	D115	19.7	04.0
KAKIOK	0	EP	07 39 53.3	S	40 02.2	36	0.5	48	0.5	17	0.5			U 1	86.4	08.9
MITO	1	IP	07 39 53.5	IS	40 03.0	64	0.5	47	0.6	20	2.7	N 1		U 4	77.9	09.5
TOKYO	0	IP	07 39 59.2	ES	40 11.8	28	1.4	24	0.6	15	2.0				115.0	12.6
UTSUNO	0	P	07 39 59.2	EX	40 06.1					11	0.5				129.9	
YOKOHA	0	EP	07 40 04.2	IS	40 20.0	39	0.7		0.6	16	0.8				130.9	15.8
SHIRAK	0	EP	07 40 04.4	IS	40 21.5										159.2	17.1
TOMISA	0	IP	07 40 04.5			25	3.0	25	2.4	9	1.4			U 1	148.0	
ONAHAM	0	EX	07 40 05.7	ES	40 16.2	24	1.1	35	1.5	11	0.7				123.7	
KUMAGA	0	EP	07 40 06.0	ES	40 25.4	11	1.0	11	0.8	6	1.4				151.2	19.4
MAEBAS	0	IP	07 40 07.5	ES	40 26.0	7	1.3	7	1.0	4	1.6			D 4	186.6	18.5
AJIRO	0	EP	07 40 09.4	ES	40 28.7	5	0.4	7	0.4	2	0.6				195.1	19.3
MISHIM	0	EP	07 40 09.5			13	1.1	13	1.1	5	1.3				205.6	
OSHIMA	0	P	07 40 10.8			6	0.5	6	0.5	3	0.2				190.6	
FUKUSH	0	EP	07 40 14.5	ES	40 38.3	28	1.0	22	0.9	9	0.8				218.8	23.8
KOFU	0	EP	07 40 14.8	ES	40 45.0	9	1.4	12	1.6	5	2.0				223.1	30.2
FUNATS	0	P	07 40 15.5	S	40 43.4										207.3	27.9
MATSUS	0	IP	07 40 17.6	ES	40 52							N	W	U	264.4	34.4
SENDAI	0	EP	07 40 19.6	ES	40 47.3	7	1.6	8	1.2	4	1.2				269.5	27.7
HAMAMA	0	EP	07 40 30			5	1.8	5	2.8	3	1.8				324.5	
MIZUSA	0	P	07 40 34.7	S	41 17.1	22	1.7	5	1.9	6	1.9				366.4	42.4
AKITA	0	EX	07 40 43.2			5	2.8	6	2.8	5	3.0				438.6	

International Seismological Centre From the ISC collection scanned by SISMOS

OT= 30 10 9 33.5 +/- 0.5
NEAR CHOSHI
LAT= 35 48 +/- 1 LONG= 141 3 +/- 3
H= 30 MAG=4.9 CLASS=M

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHOSHI	3	IP	10 09 41.6	IS	09 45.6	1150	0.0	700	0.0			N 66	E 21	D254	20.5	04.0
KAKIOK	1	IP	10 09 47.7	S	09 57.1	105	0.7	128	0.7	48	0.7	N 7	W 16	U 9	90.9	09.4
MITO	1	IP	10 09 48.0	IS	09 57.6	88	0.8	83	2.3	61	2.6	N 2	W 2	U 12	82.6	09.6
TOKYO	0	IP	10 09 53.7	ES	10 07.0	71	1.2	69	1.4	53	2.8			D 3	117.5	13.3
UTSUNO	1	P	10 09 53.7	EX	10 01.4					23	0.8			U 4	134.5	
ONAHAM	0	EP	10 09 55.2	ES	10 10.8	51	0.8	71	1.3	32	1.1				127.7	15.6
YOKOHA	0	IP	10 09 56.5	IS	10 12.2	115	1.6		0.9	33	0.6			D 5	132.6	15.7
KUMAGA	0	EP	10 09 58.0	ES	10 18.2	30	1.6	38	1.2	18	2.4				155.0	20.2
TOMISA	0	IP	10 09 59.0			48	3.2	59	3.0	30	2.5		W 1	U 1	147.8	
SHIRAK	0	IP	10 09 59.2	IS	10 16.8									U 2	163.9	17.6
CHICHI	0	EP	10 10 01.8	ES	10 23.9										178.9	22.1
MAEBAS	0	IP	10 10 01.9	ES	10 20.5	22	2.0	31	2.0	18	2.1		E 1	U 4	190.8	18.6
OSHIMA	0	P	10 10 03.4			23	2.1	20	1.7	5	0.6				190.7	
AJIRO	0	IP	10 10 03.6	ES	10 26.0	9	0.6	10	0.6	6	1.4			U 0	196.2	22.4
MISHIM	0	IP	10 10 05.8	ES	10 28.3	47	2.6	39	2.6	13	1.3			U 2	207.0	22.5
FUKUSH	1	EP	10 10 08.0	ES	10 33.2	55	1.0	49	0.9	24	1.0				223.1	25.2
KOFU	0	EP	10 10 08.6	X	10 45.6	31	2.0	38	1.6	15	2.3				225.9	
KARUIZ	0	EP	10 10 08.7	ES	10 41.4										232.8	32.7
FUNATS	0	P	10 10 09.0	S	10 39.1										209.7	30.1
MATSUS	0	IP	10 10 12.4	ES	10 47							N	W	U	268.4	34.6
SHIZUO	0	IP	10 10 13.6	S	10 43.0	11	3.2	16	2.6	6	3.0	N 1	E 3	D 3	257.0	29.4
SENDAI	0	P	10 10 14.2	ES	10 42.0	21	1.2	18	1.8	10	1.4			D 2	273.3	27.8
ISHINO	0	EP	10 10 16.4	IS	10 49.2	10	1.6	11	1.2	6	1.6	S 1	E	D 2	292.1	32.8
MATSUM	0	EP	10 10 17.5	S	10 56.2										281.6	38.7
IIDA	0	EP	10 10 18.0	X	11 04.6	15	1.6	10	1.4	6	1.6				292.8	
NIIGAT	0	X	10 10 24.0	S	10 55.3	25	2.8	30	3.3	15	3.0				294.2	
TAKADA	0	X	10 10 25.0	S	10 55.4										289.7	
HAMAMA	0	EP	10 10 25.8	ES	11 05	15	3.0	20	2.2	10	2.0				326.0	39.2
SAKATA	0	EP	10 10 27.8	ES	11 13.1										360.7	45.3
MIZUSA	0	P	10 10 27.9	S	11 08.5	55	1.8	16	2.5	10	1.2				370.0	40.6
NAGOYA	0	X	10 10 33.0	ES	11 15.6	17	2.4	14	1.4	8	1.4		E 1		376.9	
KANAZA	0	EP	10 10 34.6	X	11 37.0	9		14		5					404.5	
WAJIMA	0	EX	10 10 35.0			12	1.2	10	1.2						411.1	
AKITA	0	EX	10 10 36.5			13	2.6	15	2.6	12	3.0				442.8	
GIFU	0	X	10 10 38	X	11 29	9	1.4	8	0.8	2	1.2				390.7	
HIKONE	0	X	10 10 46.0	ES	11 33.3	13	1.3	9	1.4	3	1.5				439.4	
AOMORI	0	EP	10 10 50.8			15	1.7	15	1.9	5	1.3				557.3	
OSAKA	0	EX	10 10 58.3	X	12 05.6	20	3.1	19	4.2						517.6	
TOYOOK	0	X	10 11 12.6	X	12 13.8	23	1.2	14	1.2						564.6	
OBIHIR	0	EX	10 11 21.6												812.2	
OITA	0	X	10 14 06.7			6	3.9	6	3.9						910.5	

List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE		PHASE AND TIME (J.S.T.) H M S		M S	INITIAL MOTION	
1	P	05 15 02.				
1	IP	06 06 20.3			N	U
1	P	06 07 40.	S	08 12.		
1	IP	06 14 33.1				
1	IP	07 32 45.9	S	33 15.	S	D
1	P	14 57 27.	S	00 04.		
1	P	16 51 36.	S	54 46.		
1	IP	21 26 43.8	S	29 25.	S W	U
1	IP	23 03 45.3	S	06 15.	N E	U
2	IP	02 19 06.7	ES	20 26.	E	D
2	P	08 29 41.				
2	IP	21 50 01.8	S	50 46.	N	U
3	P	02 48 42.1	S	55 37.		U
3	P	06 24 29.				
3	P	07 25 06.	ES	27 29.		
3	EP	07 52 17.				
3	IP	07 53 35.5			S W	D
3	IP	13 49 33.4				D
3	EP	17 12 23.				
3	IP	17 14 10.7				D
3	IP	20 22 21.3				D
3	P	22 10 04.				
4	P	09 45 50.				
4	P	12 57 35.	S	58 13.		
4	IP	18 07 03.6	IS	07 51.2		U
4	IP	23 17 21.3				U
5	IP	11 38 21.2	S	41 30.		D
5	IP	11 52 04.7	S	52 25.		
5	IP	16 57 42.6	IS	58 10.5	N E	U
6	IP	08 50 19.7	S	50 33.	S E	U
6	P	08 55 14.	S	55 28.		
6	P	11 36 48.				
6	IP	15 18 09.6	S	18 39.	S	D
6	P	15 24 02.				
6	P	15 28 05.				
6	IP	15 32 36.				
6	P	15 55 28.				
6	P	16 12 31.	S	13 06.		
6	P	16 17 05.				
6	P	16 18 07.				
6	EP	16 20 30.				
6	P	16 54 57.	S	55 28.		
6	P	17 26 26.	S	26 58.		
6	IP	17 30 27.5				U
6	P	17 35 42.				
6	P	17 38 24.	ES	38 57.		
6	EP	17 41 45.	S	42 22.		
6	EP	17 46 41.	ES	47 15.		
6	IP	17 50 18.2	S	50 52.	S	D
6	P	17 56 22.				
6	P	18 07 22.				
6	P	18 20 11.	S	20 44.		
6	EP	18 42 25.	S	42 57.		
6	EP	18 46 42.	S	47 15.		
6	IP	18 50 18.7	S	50 57.	N	U
6	P	19 14 39.	S	15 11.		
6	P	19 25 56.	S	26 29.		
6	P	19 40 11.	S	40 43.		
6	P	19 46 00.	S	46 35.		
6	P	20 37 50.	S	38 22.		
6	P	20 55 19.				
6	P	21 09 09.	S	15 38.		
6	IP	21 26 08.4				D
6	I	21 29 25.				
6	P	21 47 31.				
6	P	22 49 55.	S	50 26.		
6	EP	23 30 27.	S	30 59.		
7	EP	02 47 06.	S	47 38.		
7	IP	04 56 07.5	IS	56 12.5	S	U
7	EP	05 59 57.				
7	EP	07 47 15.				
7	P	07 53 41.				
7	P	07 56 18.	S	56 48.		
7	P	08 06 38.	S	07 09.		
7	IP	08 29 31.4	S	30 01.	S	D
7	P	08 32 44.	S	33 15.		
7	EP	08 39 13.				
7	EP	09 04 01.	ES	04 31.		
7	EP	09 06 05.				
7	EP	09 31 26.	ES	3 22.6		
7	IP	09 51 23.5	S	51 54.	N E	U
7	P	10 28 27.	S	29 00.		
7	IP	12 07 18.6	S	07 48.		
7	EP	12 26 09.	ES	26 39.		
7	P	12 33 27.	S	24 00.		
7	IP	13 54 39.1			S	D
7	IP	15 49 26.9				D
7	IP	21 32 37.9				D
8	P	01 39 25.				
8	P	02 52 20.				
8	P	03 45 24.				
8	IP	04 41 55.4	S	44 05.		U
8	IP	14 45 25.7			S	D
9	IP	06 56 51.6			S	U
9	IP	09 12 45.1	S	17 44.		D
9	EP	14 40 09.	S	40 51.		
9	IP	18 05 07.3			E	D
10	IP	02 49 50.5				D
10	IP	06 27 01.3			E	D
10	IP	06 29 20.7	S	30 53.8	S	D
10	EP	14 07 00.				
10	P	14 08 19.	S	15 09.		
10	P	14 19 29.				
10	EP	23 48 12.	S	48 43.		
11	IP	00 11 07.7	S	17 52.		
11	P	05 06 08.				
11	IP	06 16 06.5				D
11	IP	07 57 44.9				D
11	P	14 01 08.				
11	P	14 10 54.				
11	P	14 17 16.				
11	IP	15 33 40.1			S W	D
11	IP	18 02 38.3	S	02 54.	N E	D
11	P	20 00 10.				
11	P	22 44 44.				
12	P	04 55 04.	S	55 44.		
12	IP	11 32 58.5	S	33 22.	W	U
12	P	13 41 49.				
12	P	14 00 28.				
12	P	14 20 04.				
12	P	14 26 26.				
12	P	14 35 19.				
12	IP	14 47 18.6				D
12	IP	20 04 13.6				D
12	IP	22 54 30.3				U
12	P	23 03 20.				
12	P	23 12 55.				
12	P	23 26 38.				
13	P	00 00 18.				
13	P	03 15 20.				
13	EP	04 42 29.				
13	P	06 42 11.				
13	P	07 59 04.				
13	IP	13 24 42.9			W	D
13	P	13 50 43.				
13	P	20 27 11.				
13	IP	22 53 55.1				
13	P	23 38 52.				
14	IP	02 23 44.0				
14	IP	03 44 46.9			N E	D
14	IP	04 56 36.1			S W	D
14	EP	05 13 38.				
14	P	11 38 27.	ES	39 16.		
14	IP	17 35 12.3				D
14	IP	22 15 27.8			E	D
14	EP	23 49 37.				

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DATE		PHASE AND TIME H M S		M S	INITIAL MOTION	
15	IP	19 38 40.9			D	
16	P	01 06 14.				
16	IP	01 51 35.6				
16	IP	08 37 24.4			U	
16	P	16 28 55.				
16	P	19 13 36.				
16	P	23 51 00.				
17	IP	17 42 56.7				
17	P	20 11 25.				
17	IP	20 27 52.6			N	U
17	IP	21 01 50.7	S	02 23.	E	D
17	P	21 44 05.				
18	EP	02 56 10.2			D	
18	EP	04 43 28.				
18	P	09 26 26.				
18	P	09 32 31.				
18	P	15 32 41.				
18	P	23 25 04.				
18	P	23 34 03.				
18	P	23 39 34.				
19	P	09 15 29.				
19	IP	10 43 01.4				
19	P	10 53 43.				
19	P	16 26 55.				
19	P	17 42 45.	S	43 10.		
19	IP	19 25 25.5	S	25 49.	N	D
19	P	19 36 44.				
19	P	19 49 54.				
19	P	20 02 56.				
20	IP	09 09 06.0			N E	U
20	P	19 19 35.				
20	IP	22 03 07.4	S	04 02.	S W	U
20	IP	23 40 22.6	S	40 43.	S	
21	P	03 01 12.				
21	P	13 18 05.	ES	19 52.		
21	IP	17 22 23.0				
21	P	17 54 40.				
22	IP	02 50 03.4				U
22	IP	05 24 16.6				
22	EP	13 26 40.				
22	IP	17 45 25.0	ES	51 50.	N	D
22	IP	21 02 24.1				U
22	P	21 42 44.	S	43 19.		
22	IP	22 16 27.1				
23	IP	04 49 58.7			S	D
23	P	16 20 57.5				
23	P	18 25 30.				
23	P	20 17 32.	S	18 20.		
23	IP	21 56 28.5				
24	P	00 11 37.				
24	P	02 58 00.0	ES	02 23.		
24	P	03 21 42.				
24	P	03 31 51.				
24	IP	18 00 14.4				D
25	IP	00 14 45.5	S	16 20.	N W	D
25	EP	01 33 03.				
25	P	03 30 06.				
25	IP	04 00 19.7				
25	IP	12 30 44.5				
25	P	16 05 20.				
25	P	19 38 02.				
25	EP	19 56 05.				
25	P	21 38 23.				
25	IP	23 34 37.5	IS	35 11.5	W	U
26	P	00 35 55.				
26	IP	01 06 25.5	ES	07 07.		U
26	P	01 08 11.	S	08 50.		
26	IP	01 22 53.9			W	U
26	P	11 21 13.4				
26	IP	19 49 36.5			N E	U
26	EP	22 21 40.				
27	IP	01 06 59.0			S	D
27	IP	01 51 56.5				U
27	IP	02 23 02.5				
27	IP	06 51 08.5				D
27	P	06 57 01.				
27	EP	14 42 18.	S	42 58.0		
27	P	15 05 29.	S	05 48.		
27	P	17 17 05.				
27	IP	18 30 35.5				
27	IP	20 05 11.9				
27	P	21 43 17.				
28	P	01 47 48.				
28	IP	03 45 00.5	S	45 43.5	S E	D
28	P	06 01 10.				
28	P	10 56 01.	S	56 18.		
28	IP	12 10 43.0				D
28	P	16 54 03.				
29	P	05 50 50.	ES	51 27.		
29	EP	09 15 15.				
29	P	09 42 06.	ES	42 33.		
29	IP	13 02 02.5			S W	U
29	EP	13 08 20.				
29	IP	15 29 09.3	S	32 35.	N	U
29	IP	21 32 13.9				U
29	IP	21 53 41.0	S	53 58.1	N W	U
30	P	06 14 15.				
30	IP	07 02 45.6	S	03 24.	N W	U
30	IP	07 13 21.9	S	14 07.	W	U
30	IP	07 21 37.6	S	22 20.		
30	IP	07 40 17.6	ES	40 52.	N W	U
30	P	08 50 22.				
30	P	08 54 49.				
30	IP	10 10 12.4	ES	10 47.	N W	U
30	P	11 13 13.	S	13 38.		
30	EP	16 43 46.				
30	P	18 35 38.	S	36 15.		
30	P	20 20 13.				

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF MATSUSHIRO ARE LEFT OUT FROM THE TABLE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

(J.S.T.)

D	INT	H	M	D	INT	H	M	D	INT	H	M	D	INT	H	M
1	1	00	08	10	1	15	02	19	1	23	52	28	1	11	24
1	1	00	09	10	1	22	54	19	1	23	55	28	1	11	48
1	1	01	19	10	1	23	50	19	1	23	59	28	1	13	28
1	1	03	27									28	1	14	06
1	1	04	07	11	1	01	04	20	1	00	08	28	1	17	55
1	1	06	35	11	1	05	07	20	1	00	09	28	1	18	21
1	1	07	00	11	1	08	39	20	1	02	09	28	2	23	24
1	1	10	08	11	1	08	43	20	1	03	53				
1	1	19	31	11	1	11	09	20	1	09	56	29	1	11	53
1	1	19	36	11	1	11	34	20	1	11	17	29	1	17	48
1	1	19	37					20	1	15	17	29	1	20	51
1	1	21	08	12	1	02	39	20	1	17	08				
1	1	22	30	12	1	02	41	20	1	18	49	30	1	08	26
				12	1	04	18	20	1	18	51	30	1	12	24
2	1	00	46	12	1	04	30	20	1	20	09	30	1	12	53
2	1	04	32	12	1	09	25					30	1	17	59
2	1	14	21	12	1	11	15	21	1	04	08				
2	1	21	23	12	1	18	22	21	1	07	02				
2	1	22	57					21	1	07	03				
2	1	23	40	13	1	02	03	21	1	10	58				
				13	1	07	24	21	1	12	44				
3	1	00	06	13	1	08	03	21	1	14	53				
3	1	03	41	13	1	17	12	21	1	14	55				
3	1	05	00	13	1	18	49	21	1	16	26				
3	1	05	00	13	1	23	58								
3	1	08	20					22	1	01	33				
3	1	10	28	14	1	02	21	22	1	02	12				
3	1	10	49	14	1	06	39	22	1	02	39				
3	1	14	33	14	1	08	49	22	1	03	28				
3	1	16	46	14	1	08	58	22	1	04	27				
3	1	16	54	14	1	08	59	22	1	04	57				
3	1	18	05	14	1	09	10	22	1	08	38				
3	1	22	20	14	1	10	10	22	1	08	38				
3	1	22	52	14	1	10	20	22	1	08	38				
				14	1	14	50	22	2	10	04				
4	1	02	41	14	1	17	44	22	1	10	40				
4	1	07	34	14	1	18	04	22	1	12	11				
4	1	10	02	14	1	18	10	22	1	13	41				
4	1	12	24	14	1	18	19	22	1	14	37				
4	1	18	55	14	1	18	22	22	2	16	35				
4	1	20	04	14	2	18	43								
				14	1	18	52	23	1	19	21				
5	1	07	14	14	1	22	26	23	1	19	34				
5	1	09	33												
5	1	10	26	15	1	02	12	24	1	01	04				
5	1	10	31	15	1	02	13	24	1	03	45				
5	1	10	36	15	1	04	05	24	1	09	41				
5	1	11	24	15	1	19	26	24	1	15	24				
5	1	13	12	15	1	23	14	24	1	23	20				
5	1	20	04	15	1	23	37								
5	1	21	07					25	1	09	54				
5	1	21	33	16	1	02	20	25	1	09	54				
				16	1	03	31	25	1	19	11				
6	1	02	42	16	1	04	01	25	1	19	24				
6	1	06	45	16	1	04	19	25	1	19	41				
6	1	14	52	16	1	08	03	25	1	22	04				
6	1	17	12	16	1	15	29	25	2	22	14				
6	1	19	49	16	1	21	35	25	1	22	44				
6	1	21	38												
6	1	23	06	17	2	07	28	26	1	09	58				
				17	1	07	35	26	1	11	12				
7	1	07	58	17	1	17	06	26	1	12	34				
7	1	17	38	17	1	21	49	26	1	13	11				
7	1	21	22	17	1	23	39	26	1	14	51				
				17	1	23	40	26	1	17	42				
8	1	00	18					26	1	23	52				
8	1	15	43	18	1	02	10								
8	1	21	22	18	1	05	40	27	1	00	44				
8	1	22	43	18	1	08	51	27	1	01	54				
8	1	22	50	18	1	14	52	27	1	04	09				
								27	1	13	11				
9	1	09	50	19	1	00	29	27	1	16	44				
9	1	11	29	19	1	04	24	27	1	22	26				
9	1	14	46	19	1	07	42								
				19	1	17	47	28	1	08	03				
10	1	02	35	19	1	19	42	28	1	08	54				

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31 MAY

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OF

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FOR

MAY 1967

気　象　庁

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Tokyo

1968

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List 1 **JMA stations and their seismographs**

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S, VI, O P
Aikawa	AIKAWA	138 14.5	38 01.2	34	S, VI, O P
Ajiro	AJIRO	139 05.8	35 02.6	59	S, VI, O P
Akita	AKITA	140 06.1	39 43.1	9	S, VI, O P
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S, P
Aomori	AOMORI	140 47.0	40 49.0	4	S, W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S, VI, O P
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S, VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S, P
Choshi	CHOSHI	140 50.6	35 43.5	27	S, W
Fukue	FUKUE	128 50.0	32 42.0	26	S, VI
Fukui	FUKUI	136 13.6	36 03.2	9	S, P (H, V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S, VI, M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S, VI, O P
Funatsu	FUNATS	138 45.8	35 29.9	860	S, P
Gifu	GIFU	136 45.9	35 23.9	13	S, W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S, VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S, VI, O P
Hakodate	HAKODA	140 45.5	41 48.8	35	S, VI, O P
Hamada	HAMADA	132 04.4	34 53.6	18	S, VI, O P
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S, VI, O P
Hikone	HIKONE	136 14.8	35 16.4	87	S, W
Himeji	HIMEJI	134 42.1	34 50.2	37	S, P (H, V)
Hiroo	HIROO	143 19.0	42 17.0	32	S, P (H, V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S, W
Iida	IIDA	137 50.1	35 30.6	482	S, VI, O P
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S, VI, O P
Izuhara	IZUHAR	129 17.7	34 12.2	21	S, P (H, V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S, W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S, W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S, VI, O P
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S, P (H, V)
Kobe	KOBE	135 10.8	34 41.3	58	S, P (H, V)
Kochi	KOCHI	133 32.0	33 33.0	40	S, P (H, V)
Kofu	KOFU	138 33.5	35 39.9	272	S, VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S, VI, O P
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S, W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S, VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S, VI, O P
Maebashi	MAEBAS	139 03.9	36 24.1	112	S, W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S, P (H, V)
Matsue	MATSUE	133 04.3	35 27.3	17	S, P (H, V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S, P (H, V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S, L, AW, G, B, V, C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S, W
Mishima	MISHIM	138 55.8	35 06.7	20	S, W
Mito	MITO	140 28.3	36 22.7	30	S, VI, O P
Miyako	MIYAKO	141 58.1	39 38.7	46	S, W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S, VI, O P
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P (H, V)
Morioka	MORIOK	141 10.1	39 41.8	155	S, VI, O P
Muroran	MURORA	140 59.0	42 19.0	43	S, P (H, V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S, VI, O P
Nagano	NAGANO	138 11.8	36 39.6	418	S, W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S, VD, EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S, VI, O P
Nara	NARA	135 50.0	34 41.0	105	S, P (H, V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S, VI, VD, OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S, VI, P(H, V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S, P(H, V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S, P (H, V)
Ofunato	OFUNAT	141 43.1,	39 03.7	38	S, VI
Oita	OITA	131 37.4	33 14.0	5	S, W
Okayama	OKAYAM	133 54.9	34 40.9	4	S, VI, O P
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S, W
Onahama	ONAHAM	140 54.4	36 56.7	3	S, VI
Osaka	OSAKA	135 32.3	34 38.9	7	S, VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S, W

Station	Code	λ	φ	Height	Seismographs
				m	
Owase	OWASE	E136°11.7′	N34°04.0′	14	S, VI, O P
Rumoi	RUMOI	141 38.0	43 57.0	22	S, P (H, V)
Saga	SAGA	130 18.3	33 14.7	4	S, P (H, V)
Saigo	SAIGO	133 20.0	36 12.3	26	S, VI, O P
Sakata	SAKATA	139 50.2	38 54.2	2	S, P (H, V)
Sapporo	SAPPOR	141 19.9	43 03.5	17	S, VI, O P
Sendai	SENDAI	140 54.0	38 15.6	38	S, VI, S′
Shimonoseki	SHIMON	130 56.5	33 57.2	46	S, VI, O P
Shionomisaki	SHIONO	135 45.8	33 26.9	74	S, W
Shirakawa	SHIRAK	140 13.5	37 07.1	354	S, P (H, V)
Shizuoka	SHIZUO	138 24.4	34 58.4	14	S, VI
Sumoto	SUMOTO	134 54.5	34 20.1	109	S, VI, O P
Suttsu	SUTTSU	140 14.4	42 47.4	16	S, P (H, V)
Takada	TAKADA	138 15.0	37 06.3	13	S, P (H, V)
Takamatsu	TAKAMA	134 03.5	34 19.0	10	S, W
Takayama	TAKAYA	137 15.3	36 09.1	561	S, P (H, V)
Tokushima	TOKUSH	134 34.6	34 03.9	2	S, P (H, V)
Tokyo	TOKYO	139 45.5	35 41.2	21	S, VI′, VD′, I′, J
Tomisaki	TOMISA	139 49.7	34 55.2	12	S, VI, O P
Tottori	TOTTOR	134 10.7	35 30.7	17	S, P (H, V)
Toyama	TOYAMA	137 12.5	36 42.4	9	S, VI
Toyooka	TOYOOK	134 49.5	35 32.0	4	S, W
Tsu	TSU	136 31.1	34 42.1	3	S, P (H, V)
Tsuruga	TSURUG	136 03.9	35 39.0	1	S, P (H, V)
Unzendake	UNZEND	130 15.2	32 44.1	849	S
Urakawa	URAKAW	142 46.8	42 09.5	34	S, VI, O P
Utsunomiya	UTSUNO	139 52.3	36 32.6	120	S, W
Uwajima	UWAJIM	132 33.5	33 13.5	43	S, P
Wajima	WAJIMA	136 53.9	37 23.4	6	S, VI
Wakayama	WAKAYA	135 10.0	34 13.6	14	S, W, I
Wakkanai	WAKKAN	141 40.5	45 25.0	2	S, VI, O P
Yakushima	YAKUSH	130 29.8	30 27.0	14	S, VI
Yamagata	YAMAGA	140 21.0	38 15.2	151	S, P (H, V)
Yokohama	YOKOHA	139 39.3	35 26.2	38	S, W
Yonago	YONAGO	133 20.6	35 26.0	7	S, P (H, V)
Ishigakijima	ISHIGA	124 10	24 20	6	S, VI
Naha	NAHA	127 41	26 13	11	S, VI

Notations : —

λ	: Longitude.
φ	: Geographical Latitude.
W	: Wiechert's horizontal and vertical seismographs (masses, H ; 200kg, V ; 80kg).
P	: Portable seismograph (horizontal only).
P(H, V)	: do (mass, 22.5kg).
S	: Strong motion seismograph (magnification ; 1).
S′	: do (magnification ; 0.4)
M(H)	: Mainka's horizontal seismograph (mass, 450kg).
G	: Galitzin's seismograph.
L	: 1,000kg long-period seismograph, JMA type.
I	: Ishimoto's seismograph
V	: Short-period vertical seismograph.
AW	: Anderson-Wood's seismograph.
C	: Capacity type seismograph.
EM	: Electromagnetic seismograph.
O P	: JMA 59-type electromagnetic seismograph with optical recorder.
VI	: JMA 59-type electromagnetic seismograph with visible recorder.
V D	: JMA 61-type electromagnetic seismograph with visible recorder.
B	: Benioff's seismograph (short and long period).
J	: Remote recording JMA 63-type seismograph.
VI′, VD′, I′	: Remote recording JMA 63-types of I, VD and VI respectively.

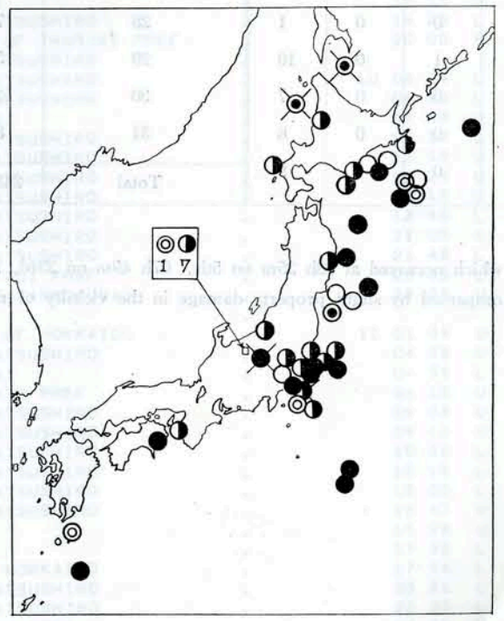
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List 2 Number of earthquakes by districts and classes, May, 1967

District \ Class	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	3	2	3	7	15	26	41
Tohoku	1	0	2	1	4	35	39
Kwanto	0	1	1	20	22	26	48
Chubu	0	1	0	259	260	26	286
Kinki	0	0	0	11	11	7	18
Chugoku·Shikoku	0	0	0	2	2	5	7
Kyushu	0	1	0	8	9	16	25
Near Japan*	0	0	0	0	0	8	8
Foreign region	0	0	0	0	0	3	3
Unknown	0	0	0	0	0	12	12
Total	4	5	6	308	323	164	487

* ; Sakhalin, Kurile Is., Korea, Ryukyu Is., Bonin Is., Sikhota Alin.

Epicenters of the major earthquakes



⊙	◎	○	◑	●	×
Remarkable (R)	Moderate (M)	Small felt area (S)	Local (L)	Unfelt (U)	h≧100km

Special Event

Earthquake-Swarm near Matsushiro, Northern Chubu.

Daily number of felt shocks observed at Matsushiro Seismological Observatory during this month is as follows :

Date \ Seismic intensity	1	2	3	Total	Date \ Seismic intensity	1	2	3	Total
1	7	0	0	7	17	6	0	0	6
2	5	0	0	5	18	5	0	0	5
3	11	0	0	11	19	3	2	0	5
4	4	0	0	4	20	1	0	0	1
5	18	1	1	20	21	5	1	0	6
6	8	0	0	8	22	12	0	0	12
7	20	0	0	20	23	3	1	0	4
8	13	0	0	13	24	6	0	0	6
9	10	0	0	10	25	7	0	0	7
10	11	0	0	11	26	8	0	0	8
11	11	0	0	11	27	4	0	0	4
12	1	0	0	1	28	7	1	0	8
13	9	1	0	10	29	5	1	0	6
14	7	0	0	7	30	13	4	0	17
15	6	0	0	6	31	8	0	0	8
16	9	0	0	9	Total	243	12	1	256

The earthquakes, which occurred at 08h 25m on 5th, 07h 49m on 23rd, and 16h 03m and 21h 27m on 30th, were accompanied by slight property damage in the vicinity of matsusiro.

International Seismological Centre From the ISC collection scanned by SISMOS

List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

(J. S. T.)

DATE,TIME D H M	C	LOCATION	C CLASS
1 01 14	L	NEAR MATSUSHIRO	
01 38	U	(CHOSHI)	
03 49	L	NEAR MATSUSHIRO	
13 51	U	(YAKUSH)	
20 15	L	NEAR MATSUSHIRO	
2 03 40	U	(KUSHIR)	
09 04	L	NEAR MATSUSHIRO	
11 41	U	(MIZUSA)	
15 51	L	(WAKAYA)	
16 36	L	S PART OF IWATE PREF	
23 23	L	NEAR NIIJIMA	
3 02 23	U	E PART OF JAPAN SEA	
02 29	U	(TSURUG)	
05 16	U	E PART OF SHIKOKU	
07 04	L	SE OFF CHIBA PREF	
08 03	U	(MIZUSA)	
08 57	L	NEAR MATSUSHIRO	
19 11	L	NEAR MATSUSHIRO	
19 17	U	(NAHA)	
20 16	L	NEAR MATSUSHIRO	
4 04 28	L	NEAR MATSUSHIRO	
06 25	L	NEAR MATSUSHIRO	
14 27	U	(MATSUY)	
15 00	U	(AOMORI)	
5 00 03	U	TOHOKU	
00 32	U	OFF IBARAKI PREF	
01 02	U	(AKITA)	
03 42	L	NEAR MATSUSHIRO	
05 23	L	S PART OF IBARAKI PREF	
08 25	L	NEAR MATSUSHIRO	
08 25	M	NEAR MATSUSHIRO	
08 28	L	NEAR MATSUSHIRO	
08 32	U	(MATSUM)	
09 28	L	NEAR MATSUSHIRO	
12 14	L	NEAR MATSUSHIRO	
13 11	L	NEAR MATSUSHIRO	
15 10	L	NEAR MATSUSHIRO	
15 16	L	NEAR MATSUSHIRO	
15 24	L	NEAR MATSUSHIRO	
16 21	L	NEAR MATSUSHIRO	
18 54	U	OFF MIYAGI PREF	
20 25	L	(MAEBAS-SANNOKURA)	
6 00 18	L	S PART OF HOKKAIDO	
03 53	L	NEAR MATSUSHIRO	
04 08	U	(MIZUSA)	
11 15	U	OFF IWATE PREF	
12 35	L	NEAR MATSUSHIRO	
12 44	L	NEAR MATSUSHIRO	
14 51	L	NEAR MATSUSHIRO	
14 51	L	NEAR MATSUSHIRO	
20 58	L	NEAR MATSUSHIRO	
21 46	L	NEAR MATSUSHIRO	
22 29	U	TOHOKU	
7 00 53	S	SE OFF HOKKAIDO	
02 07	L	NEAR MATSUSHIRO	
02 09	L	NEAR MATSUSHIRO	
02 53	L	KUMAMOTO PREF	
04 48	L	W OFF HOKKAIDO	
05 22	U	(AOMORI)	
06 06	L	NEAR MATSUSHIRO	
08 11	L	E PART OF HOKKAIDO	
10 59	U	UK	
13 20	L	NEAR MATSUSHIRO	
13 20	L	NEAR MATSUSHIRO	
7 15 35	U	(AKITA)	
16 43	L	NEAR MATSUSHIRO	
17 33	L	NEAR MATSUSHIRO	
20 54	L	E OFF IBARAKI PREF	
8 01 23	U	(NAGANO)	
02 26	U	(NAGANO)	
02 28	L	NEAR MATSUSHIRO	
02 44	U	(NAGANO)	
03 11	L	NEAR MATSUSHIRO	
06 50	R	E OFF FUKUSHIMA PREF	
12 03	U	(WAJIMA)	
12 31	L	AMAMIOSHIMA	
13 19	L	NEAR MATSUSHIRO	
13 23	L	NEAR MATSUSHIRO	
16 54	L	NEAR MATSUSHIRO	
20 02	U	(WAJIMA)	
20 14	L	NEAR MATSUSHIRO	
20 18	L	(MAEBAS-TASHIRO)	
23 35	L	WAKAYAMA PREF	
23 47	U	S OFF KYUSHU	
9 02 30	U	(NAGANO)	
04 24	U	(URAKAW)	
06 49	L	(KUSHIR)	
10 22	L	NEAR MATSUSHIRO	
11 23	L	NEAR MATSUSHIRO	
12 03	U	NAGANO-GUNMA BORDER	
12 47	L	NEAR MATSUSHIRO	
14 49	L	NEAR MATSUSHIRO	
15 15	U	E OFF HOKKAIDO	
16 25	L	NEAR MATSUSHIRO	
20 00	R	W OFF HOKKAIDO	
10 06 14	L	NEAR MATSUSHIRO	
06 20	L	SHIZUOKA PREF	
07 43	U	(KUSHIR)	
09 17	L	(WAKAYA-TANABE)	
12 19	U	FUKUI PREF	
12 29	U	(KUSHIR)	
13 12	L	NIIGATA PREF	
13 40	L	NEAR MATSUSHIRO	
21 05	U	KWANTO	
21 48	L	NEAR MATSUSHIRO	
22 35	L	E COAST OF IBARAKI PREF	
23 39	U	N PART OF KYUSHU	
11 01 39	U	(SHIZUO)	
04 38	U	IBARAKI PREF	
04 59	L	NEAR MATSUSHIRO	
06 13	U	(SUMOTO)	
09 08	U	KWANTO	
09 16	U	(KUSHIR)	
10 26	L	NEAR MATSUSHIRO	
13 19	L	NEAR MATSUSHIRO	
13 33	L	NEAR MATSUSHIRO	
13 47	U	(NAGANO)	
15 28	U	(NAGANO)	
17 32	L	(NARA-KAZAYA)	
17 44	L	NEAR MATSUSHIRO	
23 21	U	(URAKAW)	
23 33	L	NEAR MATSUSHIRO	
23 59	U	UK	
12 00 00	U	(MIZUSA)	
00 19	U	(NIIGAT)	
00 24	U	UK	
01 05	L	NEAR MATSUSHIRO	
01 24	U	E OFF IBARAKI PREF	
09 42	U	(URAKAW)	

DATE, D	TIME H	M	C	LOCATION
12	10	45	L	(WAKAYA)
	16	39	U	(MIYAZA)
	23	25	U	FUKUSHIMA PREF
13	00	01	L	NEAR MATSUSHIRO
	07	22	U	(NAGANO)
	08	15	L	NEAR MATSUSHIRO
	08	19	L	NEAR MATSUSHIRO
	09	22	L	NEAR MATSUSHIRO
	09	55	U	(YAKUSH)
	10	33	U	(NAHA)
	11	50	L	NEAR MATSUSHIRO
	14	22	U	TOKYO BAY
	15	19	U	(KYOTO)
	18	19	U	NEAR CHOSHI
	22	42	U	NEAR MIYAKEJIMA
14	05	44	L	NEAR MATSUSHIRO
	05	50	L	NEAR MATSUSHIRO
	12	36	U	TOKUSHIMA PREF
	19	15	U	UK
	22	27	L	NEAR MATSUSHIRO
	22	49	L	NEAR MATSUSHIRO
15	08	51	U	(NAGANO)
	08	56	L	TOKYO BAY
	09	06	U	UK
	09	13	U	NEAR HACHIJOJIMA
	11	28	U	S OFF HONSHU
	11	36	U	UK
	11	39	U	UK
	12	11	U	UK
	16	28	U	KWANTO
	16	40	L	NEAR AJIRO
16	03	14	L	(ASOSAN)
	05	50	U	(MIZUSA)
	10	54	L	NEAR MATSUSHIRO
	13	06	U	NEAR HACHIJOJIMA
	13	44	L	TOCHIGI-GUNMA BORDER
	14	09	U	KURILE IS
	14	21	M	S OFF CHIBA PREF
	18	53	U	(KUMAMO)
	19	39	L	OFF IBARAKI PREF
	22	22	U	OFF IBARAKI PREF
	22	46	L	NW OF HOKKAIDO
17	04	25	U	NEAR HACHIJOJIMA
	04	37	U	(MIZUSA)
	05	39	L	NEAR MATSUSHIRO
	07	13	U	(KUSHIR)
	09	26	U	EHIME PREF
	10	03	U	(KUSHIR)
	12	57	U	IBARAKI-CHIBA BORDER
	16	36	U	UK
	18	26	U	TOHOKU
	18	34	S	OFF MIYAGI PREF
	18	46	S	OFF MIYAGI PREF
	20	04	U	(WAKKAN)
	22	54	L	NOTO PEN
	23	30	U	(KAGOSH)
	23	41	U	UK
	23	46	L	(HIROSH-FUNO)
18	01	59	U	NEAR OSHIMA
	04	20	U	(KAGOSH)
	04	46	L	NEAR MATSUSHIRO
	05	21	L	NEAR MATSUSHIRO
	06	54	L	NEAR MATSUSHIRO
	08	07	L	NEAR MATSUSHIRO

DATE, D	TIME H	M	C	LOCATION
18	09	44	U	(MIYAZA)
	11	57	L	(WAKAYA-SHIRAHAMA)
	12	06	S	S OFF HOKKAIDO
	13	07	M	SE OFF HOKKAIDO
	13	21	U	(KUSHIR)
	13	39	U	SE OFF HOKKAIDO
	14	56	U	(KUSHIR)
	14	57	U	(KUSHIR)
	16	07	U	(KUSHIR)
	18	47	L	(WAKAYA)
	20	22	M	SE OFF HOKKAIDO
	23	01	S	SE OFF HOKKAIDO
	23	27	U	SE OFF HOKKAIDO
19	01	25	U	(KUSHIR)
	04	47	L	AMAMIOSHIMA
	08	30	U	(TSU)
	08	39	M	TANEGASHIMA
	12	46	L	NEAR MATSUSHIRO
	14	28	L	NEAR MATSUSHIRO
	14	34	L	NEAR MATSUSHIRO
	15	50	L	(NIIGAT-NAKAJO)
	18	06	U	(NAGANO)
	22	44	U	(MIZUSA)
	23	02	U	(RUMOI)
	23	24	U	(MIZUSA)
20	00	40	U	OFF IBARAKI PREF
	00	52	U	OFF IWATE PREF
	02	18	U	(MIZUSA)
	10	24	U	(OFUNAT)
	11	54	U	UK
	19	08	U	(NAGANO)
21	00	47	U	(WAKAYA)
	07	36	L	NEAR MATSUSHIRO
	09	28	U	(WAKAYA)
	12	25	U	(IZUHAR)
	14	37	U	(WAKAYA)
	15	38	U	TOKUSHIMA PREF
	15	39	L	(NARA-FUTSUNO)
	15	51	U	(TAKADA)
	20	58	L	NEAR MATSUSHIRO
	21	58	U	UK
22	03	52	U	SUMATRA
	04	00	U	(TOMISA)
	05	24	L	(UTSUNO-IKARI)
	06	32	L	NEAR MATSUSHIRO
	08	09	U	SE OFF HOKKAIDO
	08	17	U	TOHOKU
	09	02	L	NEAR MATSUSHIRO
	10	02	U	(AKITA)
	11	42	S	S OF SAITAMA PREF
	12	15	U	TOHOKU
	14	25	U	(URAKAW)
	14	54	L	NEAR MATSUSHIRO
	16	30	L	NEAR WAKAYAMA
	16	36	L	(MAEBAS-TASHIRO)
	16	42	L	(MAEBAS-MIHARA)
	17	32	U	(AJIRO)
	23	50	U	(AKITA)
23	01	47	U	(KUSHIR)
	02	04	L	OFF CHOSHI
	06	05	U	E OFF AOMORI PREF
	07	27	L	NEAR MATSUSHIRO
	07	49	L	NEAR MATSUSHIRO
	07	51	L	NEAR MATSUSHIRO
	07	51	U	(MIZUSA)

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DATE, D	TIME H	M	C	LOCATION
23	07	52	U	(NAGANO)
	10	23	U	KURILE IS
	10	53	U	KURILE IS
	10	55	L	(KOCHI)
	13	53	U	(NAGANO)
	16	48	U	(NAGANO)
	18	52	U	TOHOKU
24	00	25	L	NEAR MATSUSHIRO
	00	34	U	(NAGANO)
	01	08	U	(HACHIN)
	03	16	L	NEAR MATSUSHIRO
	06	44	L	(WAKAYA)
	21	38	L	E OFF HOKKAIDO
25	01	04	U	(FUKUSH)
	02	46	U	(KUSHIR)
	04	03	U	OFF IWATE PREF
	05	08	L	KUMAMOTO PREF
	05	10	U	(KUMAMO)
	06	52	L	NEAR MATSUSHIRO
	08	28	L	NEAR MATSUSHIRO
	10	28	U	KWANTO
	15	37	U	NEAR TAKADA
	17	08	U	OFF IBARAKI PREF
	17	11	L	(UTSUNO-ASHIO)
	21	49	U	(OFUNAT)
	22	19	L	NEAR MATSUSHIRO
	23	10	L	(MAEBAS-TASHIRO)
26	03	53	R	N OFF HOKKAIDO
	06	11	U	NEAR HAMAMATSU
	08	19	U	(NEMURO)
	08	49	L	OFF IBARAKI PREF
	19	35	L	NEAR HACHIJOJIMA
	21	30	L	NEAR MATSUSHIRO
	22	34	L	NEAR MATSUSHIRO
27	03	11	L	NEAR MATSUSHIRO
	04	36	U	VOLCANO IS
	09	06	U	KWANTO
	10	50	U	OFF FUKUSHIMA PREF
	13	09	U	SE OFF HOKKAIDO
	13	47	U	(KUMAMO)
	13	54	U	(NAHA)
	15	13	U	(OKAYAM)
	17	13	L	W COAST OF WAKAYAMA PREF
	23	27	U	(FKUSHI)
28	02	27	U	ALEUTIAN IS
	05	11	L	OFF URAKAWA
	12	09	U	OFF CHOSHI
	13	01	L	NEAR YAKUSHIMA
	14	27	L	NEAR MATSUSHIRO
29	01	50	U	(KUMAMO)
	03	17	L	NEAR MATSUSHIRO
	06	03	U	(KAKIOK)
	09	17	U	(CHOSHI)
	11	30	L	NEAR MATSUSHIRO
	14	22	U	(OSAKA)
	14	28	U	(KUMAMO)
	19	07	U	(NAGANO)
	20	21	U	(NAHA)
	20	48	U	(KUSHIR)
30	00	16	U	OFF CHOSHI
	01	53	L	(KUMAMO)
	06	02	R	E OFF HOKKAIDO
	07	02	L	(MAEBAS-NUMATA)
30	09	30	L	NEAR MATSUSHIRO
	13	50	L	NEAR MATSUSHIRO
	16	03	L	NEAR MATSUSHIRO
	16	04	L	NEAR MATSUSHIRO
	16	09	L	NEAR MATSUSHIRO
	17	03	L	NEAR MATSUSHIRO
	17	36	L	NEAR MATSUSHIRO
	18	13	L	NEAR MATSUSHIRO
	20	20	L	NEAR MATSUSHIRO
	21	27	L	NEAR MATSUSHIRO
	22	21	L	NEAR MATSUSHIRO
31	01	10	U	(YAKUSH)
	04	18	L	NEAR MATSUSHIRO
	05	06	L	NEAR MATSUSHIRO
	05	17	L	NEAR MATSUSHIRO
	09	15	L	(WAKAYA)
	18	24	L	IBARAKI PREF

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST. ALL EVENTS FELT AT THE OBSERVATORY ARE GIVEN IN LIST 6.

List 4 EARTHQUAKE ORIGINS

(J. S. T.)

DATE,TIME D	H	M	C	LOCATION	ORIGIN TIME M	S	+/-S	LONG.	+/-	LAT.	+/-	C H KM	CLASS M
2	16	36	L	S PART OF IWATE PREF	35	49.8	0.3	141 32 05		39 22 04		90	
3	07	04	L	SE OFF CHIBA PREF	04	41.9	0.8	140 24 04		34 42 02		50	4.0
5	00	32	U	OFF IBARAKI PREF	32	27.9	2.3	140 44 10		36 00 08		30	3.6
	05	23	L	S PART OF IBARAKI PREF	23	48.4	0.4	140 12 03		35 57 02		70	
	08	25	L	NEAR MATSUSHIRO	25	26.1	0.2	138 06 01		36 27 01		10	
	08	25	M	NEAR MATSUSHIRO	25	33.4	0.4	138 03 02		36 24 01		10	5.2
	18	54	U	OFF MIYAGI PREF	54	11.5	1.1	143 14 05		38 20 03		20	4.5
6	00	18	L	S PART OF HOKKAIDO	17	52.2	0.2	143 09 03		42 15 02		80	
7	00	53	S	SE OFF HOKKAIDO	53	33.1	0.8	144 36 03		42 30 03		10	4.5
	04	48	L	W OFF HOKKAIDO	48	27.4	1.6	139 23 07		42 40 04		00	4.6
	20	54	L	E OFF IBARAKI PREF	54	36.4	0.5	141 07 03		36 06 01		40	3.9
8	06	50	R	E OFF FUKUSHIMA PREF	50	11.5	0.3	141 37 03		37 48 01		90	
	23	47	U	S OFF KYUSHU	47	02.6	2.0	131 20 08		29 25 08		70	
9	11	23	L	NEAR MATSUSHIRO	23	15.9	0.3	138 04 02		36 27 01		10	3.5
	12	03	U	NAGANO-GUNMA BORDER	02	40.3	0.2	138 27 02		36 25 02		180	
	15	15	U	E OFF HOKKAIDO	14	56.5	1.5	148 35 08		43 12 05		00	5.3
	20	00	R	W OFF HOKKAIDO	00	10.5	0.3	140 43 04		44 35 02		260	
10	13	12	L	NIIGATA PREF	12	35.5	0.2	138 48 01		37 17 01		10	3.9
	22	35	L	E COAST OF IBARAKI PREF	35	32.4	0.4	140 35 03		36 29 02		50	3.6
12	01	24	U	E OFF IBARAKI PREF	24	45.6	0.6	141 32 03		35 54 02		50	4.3
13	14	22	U	TOKYO BAY	22	45.1	0.5	139 51 11		35 29 05		80	
14	12	36	U	TOKUSHIMA PREF	36	20.1	0.3	134 13 02		33 43 01		30	3.3
15	08	56	L	TOKYO BAY	55	47.4	0.3	139 50 03		35 25 02		120	
	11	28	U	S OFF HONSHU	27	33.7	1.1	141 45 04		32 33 04		50	5.4
16	13	44	L	TOCHIGI-GUNMA BORDER	44	19.0	0.5	139 36 06		36 15 03		90	
	14	21	M	S OFF CHIBA PREF	21	27.0	0.3	139 59 02		34 53 01		50	4.5
	22	46	L	NW OF HOKKAIDO	46	51.9	1.3	141 46 04		44 00 06		10	3.9
17	04	25	U	NEAR HACHIJOJIMA	24	52.0	1.3	141 33 05		32 16 05		10	4.9
	12	57	U	IBARAKI-CHIBA BORDER	57	43.9	0.5	140 20 02		35 53 02		00	3.5
	18	34	S	OFF MIYAGI PREF	34	41.1	0.5	142 21 03		38 05 01		50	4.8
	18	46	S	OFF MIYAGI PREF	46	13.6	0.9	142 21 04		38 05 02		40	4.2
18	12	06	S	S OFF HOKKAIDO	06	21.9	0.5	143 48 03		42 19 02		50	4.5
	13	07	M	SE OFF HOKKAIDO	06	49.5	0.7	145 11 04		41 45 02		40	5.2
	13	39	U	SE OFF HOKKAIDO	39	04.5	1.0	145 25 05		41 43 03		40	4.7
	20	22	M	SE OFF HOKKAIDO	22	26.2	0.7	145 12 04		41 44 02		40	5.4
	23	01	S	SE OFF HOKKAIDO	00	50.3	1.1	145 14 05		41 47 04		20	5.1
19	08	39	M	TANEGASHIMA	39	14.8	0.4	130 59 03		30 44 02		70	
	14	28	L	NEAR MATSUSHIRO	28	50.6	0.2	138 15 01		36 34 01		10	3.9
20	00	52	U	OFF IWATE PREF	52	12.9	0.5	142 14 03		39 21 01		40	3.7
21	20	58	L	NEAR MATSUSHIRO	58	17.2	0.2	138 06 01		36 26 01		00	4.4
22	03	52	U	SUMATRA	45	11.7		101 30		01 00		173	6.3
	08	09	U	SE OFF HOKKAIDO	09	33.3	0.8	144 03 03		42 21 03		00	4.1
	11	42	S	S OF SAITAMA PREF	42	13.0	0.2	139 29 01		35 51 01		70	
23	06	05	U	E OFF AOMORI PREF	05	10.0	0.9	143 00 04		40 28 03		20	4.4
	07	49	L	NEAR MATSUSHIRO	49	05.3	0.2	138 19 01		36 33 01		00	4.5
24	21	38	L	E OFF HOKKAIDO	37	55.8	0.4	145 35 02		43 01 01		30	4.6
26	03	53	R	N OFF HOKKAIDO	52	17.3	0.7	143 02 07		45 38 06		360	
	08	49	L	OFF IBARAKI PREF	48	52.2	0.8	141 30 04		36 26 02		20	4.5
27	17	13	L	W COAST OF WAKAYAMA PREF	13	09.6	0.2	135 05 01		34 04 01		10	3.5

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DATE,TIME D	H	M	C	LOCATION	ORIGIN TIME M	S	+/-S	LONG.	+/-	LAT.	+/-	H KM	M
28	05	11	L	OFF URAKAWA	11	08.3	0.6	142 36 03		41 55 04		90	
30	06	02	R	E OFF HOKKAIDO	01	45.4	0.6	145 56 04		43 08 02		90	
	16	03	L	NEAR MATSUSHIRO	03	06.9	0.3	138 17 02		36 34 01		10	4.1
	17	03	L	NEAR MATSUSHIRO	03	03.9	0.2	138 14 01		36 34 01		10	3.5

List 5 DATA OF EARTHQUAKES

OT= 2 16 35 49.8 +/- 0.3 (J.S.T.)
S PART OF IWATE PREF
LAT= 39 22 +/- 4 LONG= 141 32 +/- 5
H= 90 CLASS=L

I SEISMIC INTENSITY

* MICRON

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MIYAKO	1	IP	16	36	04.2	IS	36	16.2			20	0.0						48.5	12.0
OFUNAT	X	EP	16	36	04.6	IS	36	16.4	25	0.0	32	0.0	5	0.0				37.4	11.8
MIZUSA	0	P	16	36	04.7	ES	36	13.0	8	1.4	2	0.3				E 1		43.2	08.3
MORIOK	0	P	16	36	05.0	IS	36	17.6	14	0.4	6	0.4	3	0.4			D 0	48.2	12.6

OT= 3 7 4 41.9 +/- 0.8
SE OFF CHIBA PREF
LAT= 34 42 +/- 2 LONG= 140 24 +/- 4
H= 50 MAG=4.0 CLASS=L

TOMISA	0	IP	07	04	54.0	IS	05	01.3	37	0.8	18	0.8	11	2.0		E	D 1	57.7	07.3
OSHIMA	0	EP	07	04	58.7	IS	05	09.8	19	0.6	27	0.4	6	0.6				93.8	11.1
YOKOHA	0	IP	07	05	00.2	IS	05	12.0	59	0.4	57	0.6	10	0.6	S	5 W	3 U 5	106.3	11.8
TOKYO	0	IP	07	05	01.8	IS	05	15.0	10	1.0	7	0.4	9	3.0				123.9	13.2
AJIRO	0	IP	07	05	02.1	S	05	14.5	4	0.5	12	0.5	2	0.5			U 0	125.1	12.4
KAKIOK	0	EP	07	05	07.7	ES	05	23.9	8	0.6	10	0.6	3	0.6				170.9	16.2
MATSUS	0	IP	07	05	22.0										S		D	284.6	

OT= 5 0 32 27.9 +/- 2.3
OFF IBARAKI PREF
LAT= 36 0 +/- 8 LONG= 140 44 +/-10
H= 30 MAG=3.6 CLASS=U

MITO	0	P	00	32	36.8	IS	32	44.0	33	0.4	59	0.3	10	0.4				48.1	07.2
KAKIOK	0	P	00	32	38.3	S	32	46.4	7	0.2	15	0.2	4	0.3				55.0	08.1
UTSUNO	0	P	00	32	46.9	S	32	54.0	7	0.1	6	0.2						98.3	07.1
MATSUS	0	P	00	33	02	S	33	28										234.6	26.0

OT= 5 5 23 48.4 +/- 0.4
S PART OF IBARAKI PREF
LAT= 35 57 +/- 2 LONG= 140 12 +/- 3
H= 70 CLASS=L

KAKIOK	1	IP	05	23	59.8	S	24	06.9	19	0.6	22	1.0	6	0.7		E 3	U 8	31.3	07.1
MITO	0	IP	05	24	02.3	IS	24	11.4	6	0.4	7	0.4	3	0.5			U 2	53.4	09.1
TOKYO	0	IP	05	24	03.5	ES	24	13.0	19	0.8	12	0.7	4	0.3			D 2	49.6	09.5
UTSUNO	1	P	05	24	03.9	IS	24	12.9	56	0.2	29	0.2	12	0.3				72.5	09.0
KUMAGA	0	EP	05	24	04.6	ES	24	15.6	15	0.2	10	0.4	3	0.2				76.6	11.0
AJIRO	0	IP	05	24	11.0	ES	24	27.8	3	0.3	7	0.3	2	0.3			D 0	141.9	16.8
KOFU	0	EP	05	24	12.4	ES	24	28.8	5	0.6	5	0.6	2	0.6				151.7	16.4
MATSUS	0	IP	05	24	17.2										S	E	D	190.5	
YOKOHA	0	X	05	24	17.4				12	0.5	8	0.4						75.3	

OT= 5 8 25 26.1 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 27 +/- 1 LONG= 138 6 +/- 1
H= 10 MAG= . CLASS=L

MATSUS	3	IP	08	25	29.5	S	25	31.6										13.8	02.1
NAGANO	1	P	08	25	31.9													24.9	
MATSUM	0	IP	08	25	32.2												U 5	25.6	
KARUIZ	3	IP	08	25	35.0	S	25	41.0	1500	3.2	900	4.2	500	3.0	N	4 W	3 D 2	42.3	06.0

OT= 5 8 25 33.4 +/- 0.4
NEAR MATSUSHIRO
LAT= 36 24 +/- 1 LONG= 138 3 +/- 2
H= 10 MAG=5.2 CLASS=M

MATSUS	2	P	08	25														20.9	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUM	2	IP	08	25	36.3	IS	25	39.9	700	3.6	550	3.6	300	3.4				18.7	03.6
NAGANO	3	EP	08	25	39.3	ES	25	42.8	1600	0.1	2300	0.4	1000	0.2				31.7	03.5
TAKADA	0	P	08	25	39.6	S	25	49.0	300	2.9	300	2.9	300	2.9				80.2	09.4
MAEBAS	0	EP	08	25	44.0	ES	25	54.8	551	3.7	383	3.5	883	3.4				91.0	10.8
CHICHI	2	EP	08	25	44.4	IS	26	03.1	350	3.6	250	3.6	300	2.8				103.2	18.7
IIDA	1	EP	08	25	45.0	IP	26	06.8	125	1.8	92	4.6	53	1.2				100.6	
KUMAGA	1	EP	08	25	48.0	ES	26	09.4	315	5.0	323	4.8	231	3.6				123.2	21.4
KOFU	1	IP	08	25	49.6	IS	26	01.8	134	2.2	217	3.0	52	0.8	S	1 E	2 U 5	93.5	12.2
KANAZA	0	P	08	25	51.0	S	26	12.0	164	0.2	75	0.2	64	0.3			D 3	126.6	21.0
FUNATS	X	P	08	25	55.6	S	26	10.1	200	1.3	400	1.0	100	0.8		W130		118.9	14.5
AIKAWA	0	IP	08	25	55.6	ES	26	22.8	34	0.1	77	0.1	23	0.4	S	2	D 1	180.6	27.2
NAGOYA	0	EP	08	25	56.8	S	26	22.8	112	0.8	125	1.2	84	1.2	S	1 W	1 U 1	168.3	26.0
GIFU	0	EP	08	25	57.0	ES	26	24.2	110	1.4	180	1.8	70	1.5				160.6	27.2
AJIRO	0	EP	08	25	57.4	ES	26	26.7	36	1.2	41	1.0	16	1.2				177.8	29.3
KAKIOK	0	EP	08	25	58	S	26	27.6	97	0.7	72	1.2	29	1.2				193.3	29.6
NIIGAT	0	EP	08	25	58.2	S	26	16.0	165	6.7	290	5.9	98	5.3			D 2	189.7	17.8
MITO	1	EP	08	26	00.2	ES	26	28.0	120	3.6	67	4.0	48	3.0				217.2	27.8
WAJIMA	0	EP	08	26	00.4	S	26	18.0	186	0.8	268	0.8	45	1.0				150.3	17.6
SHIRAK	0	EP	08	26	01.4	IS	26	34.2										209.9	32.8
MISHIM	0	IP	08	26	01.5	S	26	21.0	103	2.2	145	1.2	35	0.8	S	1	U	163.6	19.5
SHIZUO	0	P	08	26	02.8	S	26	24.4	82	0.8	82	0.8	45	5.0	S	6 E	3 U 4	161.5	21.6
UTSUNO	0	EP	08	26	03.2	S	26	21.8	181	1.5	123	1.1	55	3.4				164.0	18.6
HAMAMA	0	EP	08	26	03.7	S	26	30.3	140	2.0	104	2.4	59	1.4				190.0	26.6
FUKUI	0	P	08	26	03.8	S	26	24.6								E 6		168.3	20.8
TSURUG	0	EP	08	26	04.6	S	26	31.4										197.3	26.8
TOMISA	0	EP	08	26	05.5				85	5.0	69	4.7	30	4.7				229.9	
TOKYO	0	EP	08	26	06.0	ES	26	27.5	311	6.4	183	5.6	295	3.8				173.2	21.5
FUKUSH	0	EX	08	26	06.4	IX	26	15.1	19	0.9	51	1.0	8	3.0				262.9	
YOKOHA	0	IP	08	26	08.2	IS	26	31.5	423	4.4			86	5.2	S	9 W	15 U 35	180.0	23.3
OMAEZA	0	IP	08	26	09.4	IS	26	37.3	167	4.4	254	4.9	121	3.2				199.8	27.9
OSHIMA	0	P	08	26	09.9	S	26	35.0	36	1.0	35	0.8	16	1.2			D 6	218.0	25.1
CHOSHI	0	EP	08	26	10.8	ES	26	41.2										262.5	30.4
HIKONE	0	EP	08	26	11.7	S	26	36.4	149	1.1	130	0.9						205.3	24.7
TSU	0	IP	08	26	12.6	IS	26	43.7										234.0	31.1
ONAHAM	0	IP	08	26	14.3	IS	26	47.4	141	1.6	137	1.3	84	3.6			D 6	262.4	33.1
KYOTO	0	EP	08	26	15.0	ES	26	48.2	21	1.2	22	1.0	10	2.0				260.0	33.2
NARA	0	EP	08	26	16.7				100	1.9	100	1.7	50	1.1				276.8	
MAIZUR	0	EP	08	26	18.2	ES	26	52.0										261.4	33.8
OWASE	0	P	08	26	19.0	S	26	57.4	13	2.0	10	1.9	13	1.4				309.0	38.4
SENDAI	0	EP	08	26	22	ES	26	58	25	2.6	16	2.4	5	2.0				326.1	36.0
						EX	27	08											
OSAKA	0	EP	08	26	22.1	ES	26	56.7	105	4.5	105	4.6	42	2.0				299.4	34.6
SAKATA	0	EP	08	26	25.2	S	26	59.8	150	2.3	150	6.4	0					319.4	34.6
TOYOOK	0	EP	08	26	27.1	ES	27	04.4	58	1.2	62	1.0	19	1.1				306.6	37.3
ISHINO	0	IP	08	26	27.6	ES	27	12.8	10	2.4	15	1.8	6	2.6	N	W	U	365.2	45.2
SUMOTO	0	EP	08	26	28.4	ES	27	19.6	15	4.2	8	5.8	7	4.0				365.9	51.2
						EX	26	39.5											
KOBE	0	EP	08	26	32.0													322.1	
MIZUSA	0	P	08	26	32.2	S	27	26.8	43	1.7	22	2.0	14	1.8				407.1	54.6
WAKAYA	0	EP	08	26	34.8	S	27	19.1	36	01.0	20	01.2						356.1	44.3
SAIGO	0	EP	08	26	35.6	ES	27	25.8	5	3.4	3	1.8	2	1.2	N	0 W	1 U 1	424.1	50.2
HACHIJ	0	EP	08	26	36.2	ES	27	23.6										398.9	47.4
TOKUSH	0	EP	08	26	36.2	ES	26	20.6										408.6	
OFUNAT	0	EP	08	26	37.6	ES	27	29.0	7	5.4	6	5.6	5	2.6				437.9	51.4
SHIONO	0	EP	08	26	40.2	ES	27	24.8	16	2.4	13	2.0	8	1.4				388.3	44.6
MORIOK	0	IP	08	26	42.5	ES	27	38.5	6	5.4	4	5.8	3	5.2			U 0	456.9	56.0
AKITA	0	EX	08	26	43	ES	27	58	15	5.4	19	5.0	9	6.0				409.9	
TAKAMA	0	EP	08	26	44.8	ES	27	35.9	14	5.2	15	5.2	2	0.8				430.0	51.1
MUROTO	0	EP	08	26	45.6	ES	28	03.1	7	5.0	9	6.0	8	5.5				497.5	77.5
OKAYAM	0	IP	08	26	49.0	S	27	39.0	20	4.0	20	4.8	20	4.4	N	W		420.5	50.0
HAMADA	0	EP	08	26	56.4	ES	27	56.6	7	6.2	3	6.2	3	4.2				566.3	60.2
HIROSH	0	EP	08	27	08	EX	28	09	10	8.2	5	8.2	4	1.7				557.6	
MATSUY	0	EP	08	27	11.0	ES	28	16.7	14	5.7	8	6.0	5	7.0				557.8	65.7
SHIMON	0	EP	08	27	15	ES	28	36	13	6.0	4	5.0	4	5.0				701.7	81.0
URAKAW	0	EX	08	27	17.5				5	4.6	3	4.6	3	4.4				758.1	
ASHIZU	0	EP	08	27	28.2	ES	28	54.4	4	4.0	8	7.2	4	7.0				616.4	86.2
KUMAMO	0	EP	08	27	29	ES	29	23	9	2.0	8	1.6	3	4.3				781.7	114.0
NAGASA	0	EP	08	27	32.5	ES	29	06.0										854.1	93.5
OITA	0	EX	08	27	36.9	EX	29	11.1	26	7.0	21	6.3	15	3.3				684.5	
FUKUOK	0	P	08	27	50.0	ES	29	13.0	5	2.4	3	2.0	2	2.0				766.5	83.0

OT= 5 18 54 11.5 +/- 1.1
OFF MIYAGI PREF
LAT= 38 20 +/- 3 LONG= 143 14 +/- 5
H= 20 MAG=4.5 CLASS=U

OFUNAT	0	P	18	54	36.5	IS	54	53.2	4	0.6	5	0.2	3	1.6	N	1 W	1 U 1	154.6	16.7
						IX	54	47.0											

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ISHINO	0	EP	18 54 39.4	ES	54 57.4	7	0.8	7	0.8	9	0.8	N 1 W 1 U 2			168.9	18.0
SENDAI	0	EP	18 54 44.0	ES	55 07	7	0.6	5	0.4	4	0.1				204.3	23.0
MIZUSA	0	P	18 54 44.2	S	55 11.0	30	1.4	12	0.8	6	0.7		E 2		203.0	26.8
MORIOK	0	P	18 54 46.8	ES	55 15.1	10	0.4	7	0.5	1	0.4	N 0 W 0 U 0			234.3	28.3
FUKUSH	0	EX	18 54 51.6			16	0.9	22	1.6	4	0.6				250.4	
MITO	0	EP	18 55 01.4	S	55 34.5	5	2.8	5	3.5	2	2.4				326.9	33.1
AKITA	0	EX	18 55 04	EX	55 32.8	7	2.4	9	2.8						311.7	
KAKIOK	0	X	18 55 11			9	0.7	6	0.8	3	0.5				356.4	
ONAHAM	0	X	18 55 16.8			8	1.2	11	1.2	3	0.5				256.7	
MATSUS	0	IP	18 55 21.5	X	56 29									D	487.2	
AOMORI	0	X	18 55 47.7			8	1.5	10	1.5						346.9	

OT= 6 0 17 52.2 +/- 0.2
S PART OF HOKKAIDO
LAT= 42 15 +/- 2 LONG= 143 9 +/- 3
H= 80 CLASS=L

HIROO	0	IP	00 18 04.9	IS	18 12.1							N 2 W 2 D 7			14.2	07.2
URAKAW	1	IP	00 18 05.4	S	18 14.5	50	0.4	68	0.4	9	0.4			U 1	32.2	09.1
OBIHIR	0	P	00 18 08.6	IS	18 19.5										74.7	10.9
KUSHIR	0	IP	00 18 14.7	S	18 29.6	7	0.2	6	0.2	4	0.2	S 1 W 2 U 1			130.3	14.9
HACHIN	0	IP	00 18 26.8	IS	18 51.7	5	0.4	4	0.3			S W U			234.9	24.9
MIZUSA	0	P	00 18 48.9					1	0.7						385.8	

OT= 7 0 53 33.1 +/- 0.8
SE OFF HOKKAIDO
LAT= 42 30 +/- 3 LONG= 144 36 +/- 3
H= 10 MAG=4.5 CLASS=S

KUSHIR	2	IP	00 53 46.0	IS	53 52.7	170	0.2	179	0.4	135	0.3	N 3 E 2 D 64			55.7	06.7
HIROO	0	P	00 53 53.9	IS	54 05.8										108.4	11.9
OBIHIR	0	P	00 53 54.1	S	54 07.6										122.2	13.5
NEMURO	X	P	00 53 55.0	ES	54 09.2	6	0.2	8	0.2	4	0.4			U	122.3	14.2
URAKAW	0	EP	00 53 59.7	S	54 22.3	19	0.4	33	1.0	7	1.2				154.8	22.6
ABASHI	0	EP	00 54 01.0	S	54 18.6	10	1.4	11	1.4						170.5	17.6
MIZUSA	0	X	00 54 57.5			8	1.7	3	0.7						474.6	
MATSUS	0	P	00 55 26												859.8	

OT= 7 4 48 27.4 +/- 1.6
W OFF HOKKAIDO
LAT= 42 40 +/- 4 LONG= 139 23 +/- 7
H= 0 MAG=4.6 CLASS=L

SUTTSU	0	IP	04 48 42.8	IS	48 51.5							U 8 D 9			71.5	08.7
MURORA	0	P	04 48 51.6	S	49 08.8							N W 3 D 2			137.2	17.2
HAKODA	0	IP	04 48 54.6	ES	49 14.0	36	1.2	42	3.0	24	3.0	N 2 W 2 D 2			147.9	19.4
SAPPOR	0	P	04 48 55.2	ES	49 08.8	34	2.2	35	2.0	17	1.4			U	165.1	13.6
ASAHIK	0	IP	04 49 08.4	ES	49 44.6	18	2.6	9	2.4	8	1.8			U	272.2	36.2
URAKAW	0	EP	04 49 13.2	S	49 49.8	11	2.2	11	2.8	7	5.0				285.3	36.6
HACHIN	0	EP	04 49 15.1	ES	49 43.8	5	2.8	4	1.6	4	2.8				297.4	28.7
WAKKAN	0	P	04 49 19.3			7	2.6	9	3.5					U	356.6	
AKITA	0	EX	04 49 20.4	EX	49 55.2	10	3.4	15	4.0	9	2.4				333.0	
OBIHIR	0	X	04 49 22.6												315.3	
ABASHI	0	EP	04 49 33.8	ES	50 28.6	6	3.0	3	2.8						424.7	54.8
MIZUSA	0	X	04 49 36.3	X	50 36.5	30	1.7	16	2.7	6	1.4				419.2	
MATSUS	0	P	04 50 06	ES	51 32										687.8	86.0
NIIGAT	0	X	04 50 46.7			5	3.0	10	3.0						529.0	

OT= 7 20 54 36.4 +/- 0.5
E OFF IBARAKI PREF
LAT= 36 6 +/- 1 LONG= 141 7 +/- 3
H= 40 MAG=3.9 CLASS=L

CHOSHI	0	IP	20 54 47.0	IS	54 55.2										48.4	08.2
MITO	0	IP	20 54 48.4	IS	54 58.5	55	0.3	29	0.4	8	0.2			U 4	65.7	10.1
KAKIOK	0	P	20 54 51.1	S	55 01.6					10	0.2			U 1	84.3	10.5
UTSUNO	0	EX	20 55 00.4	S	55 09.4	7	0.2	9	0.2	4	0.2				122.3	
ONAHAM	0	X	20 55 03.6			10	0.3	9	0.3	3	0.5				95.6	
FUKUSH	0	EP	20 55 06.0	S	55 27.0	7	0.9			2	0.7				192.5	21.0
MATSUS	0	IP	20 55 15.1												265.6	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MIZUSA	0	X	20 55 44.6	S	55 59.7			2	2.1						336.6	

OT= 8 6 50 11.5 +/- 0.3
E OFF FUKUSHIMA PREF
LAT= 37 48 +/- 1 LONG= 141 37 +/- 3
H= 90 CLASS=R

ISHINO	1	IP	06 50 29.0	IS	50 40.0	47	1.5	57	1.0	15	1.0	S 3 E 1 D 8			74.6	11.0
SENDAI	X	IP	06 50 29.2	IS	50 40.6	21	0.4	15	0.2	15	0.2			D 14	81.0	11.4
FUKUSH	0	IP	06 50 32.1	S	50 43.9	38	0.5			18	0.7	S 4		D 9	100.7	11.8
YAMAGA	0	IP	06 50 33.1	IS	50 47.6							S 1 E 2 D 5			122.1	14.5
ONAHAM	1	IP	06 50 33.4	IS	50 48.2	20	0.5	15	0.9	7	0.8			D 4	113.8	14.8
SHIRAK	0	EP	06 50 36.1	IS	50 52.5										144.5	16.4
OFUNAT	1	IP	06 50 36.3	IS	50 51.4	59	0.0	32	0.0	12	0.8				140.3	15.1
MIZUSA	0	P	06 50 37.3	S	50 55.0	45	2.1	22	1.4	8	2.0				153.9	17.7
MITO	0	P	06 50 41.8	IS	51 02.5	18	1.3	26	0.8	8	1.5				187.7	20.7
MIYAKO	0	EP	06 50 43	ES	51 01.7	5	1.0	5	0.0						207.1	18.7
UTSUNO	0	EP	06 50 43.1	S	51 05.4	12	0.2	9	0.5	5	1.0				208.2	22.3
SAKATA	0	IP	06 50 43.3	S	51 06.2									D 4	198.0	22.9
MORIOK	0	IP	06 50 44.1	IS	51 06.2	20	0.4	11	0.4	5	0.8	S 1 W 0 D 0			214.1	22.1
KAKIOK	0	P	06 50 44.6	S	51 07.6					10	0.7				215.2	23.0
AKITA	0	EX	06 50 48.8	EX	51 15.8	6	2.6	5	2.8						250.4	
KUMAGA	0	EP	06 50 52.8	ES	51 21.6	7	1.6	8	1.2	4	1.6				270.4	28.8
MAEBAS	0	EP	06 50 53.0	IS	51 21.6	8	1.8	14	1.9	4	1.0				274.8	28.6
TOKYO	0	IP	06 50 53.9	IS	51 22.2	28	0.4	10	0.8	7	1.0			D	287.4	28.3
MATSUS	X	IP	06 50 58.9	S	51 24									U	333.5	25.1
KOFU	0	EP	06 51 03.6	ES	51 40.3	6	2.0	7	1.8	2	1.0				361.5	36.7
NIIGAT	0	X	06 51 11.9			23	2.3	16	2.8	10	2.8				226.0	
YOKOHA	0	X	06 51 30.8			16	0.5	20	0.7						315.5	

OT= 8 23 47 2.6 +/- 2.0
S OFF KYUSHU
LAT= 29 25 +/- 8 LONG= 131 20 +/- 8
H= 70 CLASS=U

YAKUSH	0	IP	23 47 25.8	IS	47 41.0	103	0.8	98	0.7	40	0.4	N 7 W 1 U 7			140.1	15.2
KAGOSH	0	EP	23 47 37.1	IS	48 01.5	32	0.9	34	0.6	23	1.3				250.4	24.4
MIYAZA	0	P	23 47 43.0	S	48 09.8	22	0.8	25	0.8	5	0.6			U	277.2	26.8
KUMAMO	0	EP	23 47 57	IS	48 32.2	10	0.8	13	1.0	7	0.9				380.7	35.2
OITA	0	EP	23 48 02.6	ES	48 40.3	11	1.2	10	1.2						423.9	37.7
MATSUS	0	IP	23 49 12.7										E	U	1017.2	

OT= 9 11 23 15.9 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 27 +/- 1 LONG= 138 4 +/- 2
H= 10 MAG=3.5 CLASS=L

MATSUS	1	P	11 23 19.6	S	23 21.5										16.0	01.9
NAGANO	0	EP	11 23 21.9	S	23 24.9										26.0	03.0
MATSUM	0	IP	11 23 21.9	IS	23 25.7									U 6	24.4	03.8
KARUIZ	0	IP	11 23 25.7	S	23 31.7								W 2 D 4		45.2	06.0
KOFU	0	EP	11 23 34.6	ES	23 44.6	5	0.2	6	0.2	1	0.2				97.7	10.0

OT= 9 12 2 40.3 +/- 0.2
NAGANO-GUNMA BORDER
LAT= 36 25 +/- 2 LONG= 138 27 +/- 2
H=180 CLASS=U

KARUIZ	0	IP	12 03 05.6	S	03 23.8								W 4 U 6		12.5	18.2
MAEBAS	0	IP	12 03 06.0	IS	03 24.3	11	1.6	13	1.6	4	1.0			U 2	55.2	18.3
MATSUM	0	EP	12 03 06.5	ES	03 24.0										46.9	17.5
TAKADA	0	P	12 03 07.3	S	03 26.7										78.4	19.4
KOFU	0	IP	12 03 07.3	S	03 26.6	14	0.4	25	0.4	6	1.0			U 3	84.0	19.3
KUMAGA	0	EP	12 03 08.6	S	03 28.6	11	1.2	14	0.8	4	1.2				89.2	20.0
IIDA	0	EX	12 03 09.4												114.9	
TOYAMA	0	EP	12 03 10	ES	03 28	9	2.0	9	1.6						115.7	18.0
FUNATS	0	P	12 03 11.1	S	03 29.8										105.7	18.7
MISHIM	0	EP	12 03 11.1	IS	03 35.9	37	0.9	27	0.9	5	0.8				151.1	24.8
UTSUNO	0	P	12 03 11.5	S	03 32.8	29	0.2	24	0.2	9	0.5				128.2	21.3

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHICHI	0	EP	12 03 11.8	S	03 26.8										73.8	15.0
KAKIOK	0	P	12 03 12.1	S	03 34.2	20	0.8	18	1.2	9	0.5				157.9	22.1
TOKYO	0	EP	12 03 12.5	S	03 36.5	47	0.5	41	0.3	14	1.2				143.1	24.0
AJIRO	0	IP	12 03 13.1	S	03 38.2	6	0.4	6	0.4	3	0.4			D 1	163.2	25.1
SHIZUO	0	P	12 03 13.6	ES	03 37.6	5	1.8	10	2.0	5	2.0				160.2	24.0
KANAZA	0	EP	12 03 14.8	S	03 38.0	7	0.2	6	0.2						162.1	23.2
MITO	0	IP	12 03 15.4	IS	03 39.5	17	1.0	19	0.8	7	1.4			D 2	181.4	24.1
YOKOHA	0	X	12 03 24.6	IS	03 37.6	68	0.4	51	0.4						153.8	
ONAHAM	0	EX	12 03 30.2	ES	03 48.0	11	0.9	17	1.0	3	0.4				227.2	
OSHIMA	0	X	12 03 44.8			11	0.5	11	0.4	3	0.3				201.9	
NAGANO	0	X	12 04 05.8	X	04 24.4	8	0.1	6	0.1	5	0.0				35.3	

OT= 9 15 14 56.5 +/- 1.5
E OFF HOKKAIDO
LAT= 43 12 +/- 5 LONG= 148 35 +/- 8
H= 0 MAG=5.3 CLASS=U

NEMURO	0	EP	15 15 35.4	ES	16 06.6	21	2.5	18	2.0	24	3.3	W 1	U 2		243.8	31.2
KUSHIR	0	P	15 15 48.8	ES	16 30.8	17	2.0	21	3.0	16	3.6				342.0	42.0
ABASHI	0	P	15 15 49.5	ES	16 27.2	21	3.0	18	3.2	12	3.0				358.9	37.7
OBIHIR	0	EX	15 16 00.0												437.9	
URAKAW	0	P	15 16 09.5	S	17 07.8	18	3.8	21	3.0	12	4.8		D 1		489.5	58.3
ASAHIK	0	IP	15 16 10.3	EX	16 18.0	9	3.0	6	2.0	4	2.2	E 1	D 1		506.3	
WAKKAN	0	EP	15 16 20.0			6	3.8	10	3.4	7	3.5				603.7	
SAPPOR	0	P	15 16 20.3			24	2.2	19	2.3	5	3.0		U		590.2	
AKITA	0	EX	15 16 25	EX	18 15.8	8	2.0	9	5.0						806.8	
HAKODA	0	EP	15 16 29.7	X	18 02.8	8	3.0	12	2.8	5	2.2				661.2	
MIZUSA	0	P	15 16 44.3	S	18 03.9	60	2.0	23	1.2	14	1.5				770.9	79.6
AOMORI	0	X	15 16 54.8			24	1.9	25	1.9						698.0	
SENDAI	0	EP	15 16 55.0	ES	18 20	6	2.0	5	2.0	2	0.2				849.3	85.0
FUKUSH	0	EP	15 17 01.8	ES	18 42.2	8	1.0	5	0.9	2	0.8				914.7	100.4
MITO	0	EX	15 17 25.3	EX	19 01.6	5	3.0	6	2.2	3	3.0				1026.8	
MATSUS	0	IP	15 17 31.7	S	19 33								D		1153.9	121.3
OITA	0	EP	15 18 02.6	EX	21 37.3	11	4.1	9	4.1	9	4.2				1845.9	
NIIGAT	0	X	15 18 11.9			10	3.8	10	4.0	5	3.8				997.4	
YOKOHA	0	X	15 18 21			12	3.5								1154.3	
ONAHAM	0	X	15 18 41.0			8	2.1	7	1.6	4	1.6				953.8	
NAGASA	0	P	15 19 16.0	ES	22 45.2										2007.0	209.2
TOKYO	0	X	15 19 24			6	2.9	7	3.4						1127.1	
KAGOSH	0	EX	15 19 25.9	EX	20 21.5	8	2.2	7	2.3	2	1.2				2044.9	

OT= 9 20 0 10.5 +/- 0.3
W OFF HOKKAIDO
LAT= 44 35 +/- 2 LONG= 140 43 +/- 4
H=260 CLASS=R

RUMOI	0	EP	20 00 47.7	EX	01 16.2										101.6	
WAKKAN	0	IP	20 00 48.1	IS	01 17.1	12	1.8	33	3.0	11	2.5		D 2		119.6	29.0
ASAHIK	0	IP	20 00 50.5	IS	01 22.0	12	1.4	5	1.6	4	1.6	S W 1	D 1		160.4	31.5
SAPPOR	0	IP	20 00 52.8	IS	01 24.6	26	2.3	26	2.2	10	2.4		U 5		176.6	31.8
OBIHIR	0	EP	20 00 59.8	S	01 36.5										273.6	36.7
URAKAW	0	EP	20 01 03.0	S	01 43.8	19	0.4	35	0.4	3	0.4				317.1	40.8
HAKODA	0	IP	20 01 03.0	IS	01 42.2	22	1.2	10	1.2	5	0.7	S 3	U 6		307.8	39.2
KUSHIR	0	EP	20 01 06.0	S	01 45.8	30	0.3	25	0.3	13	0.2				345.7	39.8
AOMORI	0	IP	20 01 13.2	IS	02 01.7	37	1.9	39	1.5	13	1.5		U 12		418.5	48.5
HACHIN	X	IP	20 01 16.2	IS	02 05.0	18	0.2	23	0.2	4	0.8	S 1	U 1		455.7	48.8
MORIOK	0	IP	20 01 26.3	S	02 23.8	8	0.4	12	0.4	3	1.1	S 2 E	0 U 1		544.2	57.5
AKITA	0	P	20 01 26.5	EX	02 27.2	12	2.0	8	2.6	9	1.8		U		542.8	
MIZUSA	0	P	20 01 33.0	S	02 35.1	68	2.0	52	0.9	24	2.2	E 2			606.4	62.1
OFUNAT	0	IP	20 01 33.6	IS	02 36.8	8	0.6	9	0.4	3	0.4	S 1	U 1		619.0	63.2
SENDAI	0	IP	20 01 43.8	IS	02 54.4	7	1.6	6	1.4	5	1.0		U 4		702.5	70.6
FUKUSH	0	EX	20 01 49.7			7	0.9	5	1.0	2	0.7				758.5	
KAKIOK	0	EP	20 02 06.3	S	03 37.3	7	1.0	8	1.0	3	0.9				928.5	91.0
MATSUS	0	IP	20 02 08.1									S W	U		918.2	
ONAHAM	0	X	20 02 26.4	ES	03 22.9	9	1.3	10	0.9	4	2.0				848.4	
MIYAKO	0	X	20 02 26.6	X	03 23.5	7	2.0	7	2.0	5	0.0				558.3	

OT= 10 13 12 35.5 +/- 0.2
NIIGATA PREF
LAT= 37 17 +/- 1 LONG= 138 48 +/- 1
H= 10 MAG=3.9 CLASS=L

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TAKADA	0	EP	13 12 46.2	S	12 53.0										52.7	06.8
AIKAWA	0	IP	13 12 53.2	IS	13 05.8	8	0.0	13	0.0			S 0	E 0	D 0	95.4	12.6
KUMAGA	0	EP	13 13 01.2	ES	13 15.6	6	1.2	5	0.8	2	1.0				136.5	14.4
NIIGAT	0	X	13 13 03.4			7	2.2	10	4.5	6	4.0				73.0	
MITO	0	P	13 13 05.8	ES	13 26.8	5	1.8	6	2.0	2	2.5				179.8	21.0
WAJIMA	0	X	13 13 25.8			14	0.6	18	0.6						168.9	
ONAHAM	0	X	13 13 29.5			8	1.0	6	0.7	3	1.5				190.9	
TOKYO	0	X	13 13 32.8			6	0.4	6	0.5						197.0	

OT= 10 22 35 32.4 +/- 0.4
E COAST OF IBARAKI PREF
LAT= 36 29 +/- 2 LONG= 140 35 +/- 3
H= 50 MAG=3.6 CLASS=L

MITO	1	IP	22 35 41.4	IS	35 48.0	66	0.3	133	0.4	70	0.3	S 1	W 2	D 9	15.4	06.6
KAKIOK	2	IP	22 35 43.1	S	35 50.4					29	0.2				44.8	07.3
UTSUNO	1	P	22 35 45.4	S	35 54.5	17	0.2	23	0.2	5	0.2				64.1	09.1
TOKYO	0	IP	22 35 51.5	ES	36 05.3	5	0.4	5	0.3						115.6	13.8
ONAHAM	0	EX	22 35 51.6	IS	35 53.0	15	0.6	13	0.4	4	0.4				58.8	
MATSUS	0	IP	22 36 04.1											D	212.8	

OT= 12 1 24 45.6 +/- 0.6
E OFF IBARAKI PREF
LAT= 35 54 +/- 2 LONG= 141 32 +/- 3
H= 50 MAG=4.3 CLASS=U

CHOSHI	0	IP	01 24 58.9	IS	25 06.8										65.3	07.9
MITO	0	IP	01 25 03.8	S	25 15.5	18	0.4	31	1.6	8	1.4			D 2	109.3	11.7
KAKIOK	0	EP	01 25 06	S	25 20.5	14	0.8	17	0.8	5	0.5				126.2	14.5
SHIRAK	0	EP	01 25 12.5	ES	25 30.5										178.9	18.0
TOKYO	0	EX	01 25 13.0			7	1.0	9	2.4	6	3.2				162.2	
UTSUNO	0	P	01 25 13.7	EX	25 29.8	9	1.2	7	1.4						165.7	
FUKUSH	0	P	01 25 19.9	ES	25 43.7	22	1.0	11	1.0	2	0.9	S 2	E 1	D 1	226.6	23.8
ONAHAM	0	X	01 25 20.8			12	0.8	17	1.2	4	0.9				128.8	
MATSUS	0	P	01 25 30.6												307.2	
YOKOHA	0	X	01 25 31.8			8	0.6	8	0.4						177.6	
MIZUSA	0	X	01 25 45.5	ES	26 21.9	8	1.5	3	2.7	4	1.8				360.5	
NIIGAT	0	X	01 26 15.7			5	2.5	6	2.5						314.0	

OT= 13 14 22 45.1 +/- 0.5
TOKYO BAY
LAT= 35 29 +/- 5 LONG= 139 51 +/-11
H= 80 CLASS=U

TOKYO	0	EP	14 22 57.5	ES	23 05.5	21	0.8	17	0.8	9					23.9	08.0
YOKOHA	0	EP	14 23 00.5	IS	23 06.6	33	0.5	25	0.4	7	0.5				18.4	06.1
AJIRO	0	IP	14 23 02.2	IS	23 15.1	16	0.4	17	0.3	4	0.3			D 1	84.1	12.9
OSHIMA	0	P	14 23 02.9	S	23 15.4	14	0.8	12	0.4	5	0.4				90.9	12.5
MATSUS	0	IP	14 23 13.8									S	W	D	188.7	

OT= 14 12 36 20.1 +/- 0.3
TOKUSHIMA PREF
LAT= 33 43 +/- 1 LONG= 134 13 +/- 2
H= 30 MAG=3.3 CLASS=U

MUROTO	0	P	12 36 30.6	IS	36 37.0	5	0.5	6	0.5	1	0.5				52.0	06.4
TOKUSH	0	EP	12 36 31.0	IS	36 35.0										51.0	04.0
SUMOTO	0	IP	12 36 35.9	IS	36 46.0	6	0.4	5	0.3	2	0.4	S	W	D	93.7	10.1
				EX	36 36.9											
OKAYAM	0	IP	12 36 38.5	IS	36 51.0	18	0.6	15	0.9	5	0.6	S	E	D	110.6	12.5

OT= 15 8 55 47.4 +/- 0.3
TOKYO BAY
LAT= 35 25 +/- 2 LONG= 139 50 +/- 3
H=120 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOKYO	0	EP	08 56 06.2	ES	56 19.5	60	0.4	33	0.4	16	0.4				30.5	13.3
TOMISA	0	IP	08 56 06.5	IS	56 18.8	17	0.6	25	0.7	9	0.8			D 2	55.1	12.3
YOKOHA	1	EP	08 56 07.0	IS	56 19.4	83	0.8	50	0.4						16.3	12.4
AJIRO	1	IP	08 56 07.7	IS	56 21.7	52	0.4	54	0.3	14	0.4			D 3	78.8	14.0
MISHIM	0	EP	08 56 08.2	S	56 23.2	18	0.8	12	0.7	9	0.7				88.9	15.0
KAKIOK	0	EP	08 56 09	S	56 23	19	0.5	26	0.8	6	0.7				96.1	14.0
KUMAGA	0	EP	08 56 10.4	ES	56 26.0	10	0.8	8	0.8	3	1.0				90.6	15.6
UTSUNO	0	P	08 56 10.6	S	56 28.4	16	0.2	11	0.2	6	0.4				125.4	17.8
KOFU	0	IP	08 56 11.8	IS	56 29.4	10	0.4	19	0.4	5	0.4			D 3	118.8	17.6
MITO	0	EP	08 56 12.3	S	56 28.3	7	0.4	6	0.6	2	0.4				121.2	16.0
MATSUS	0	IP	08 56 19.4	S	56 41.6							S	E	D	192.2	22.2

OT= 15 11 27 33.7 +/- 1.1
S OFF HONSHU
LAT= 32 33 +/- 4 LONG= 141 45 +/- 4
H= 50 MAG=5.4 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HACHIJ	0	EP	11 28 01.2	S	28 23.6	111		117		68					193.5	22.4
TOMISA	0	EP	11 28 20.0	X	28 33.4	95	3.0	65	3.0	40	2.5				317.4	
AJIRO	0	IP	11 28 25.0	ES	29 05.0	25	2.2	17	2.2	11	2.6			U 0	369.8	40.0
MISHIM	0	IP	11 28 27.4	S	29 11.6	47	3.1	56	2.2	19	3.2			U 6	385.7	44.2
TOKYO	0	EP	11 28 28	ES	29 08.0	48	3.4	45	3.4	54	4.0				393.2	40.0
FUNATS	0	P	11 28 30.8	X	28 59.3										427.6	
CHOSHI	0	X	11 28 33.3	X	29 16.9										361.9	
				X	29 11.1											
KAKIOK	0	EP	11 28 34	ES	29 15	27	3.0	18	3.7	8	4.5				432.6	41.0
MITO	0	EP	11 28 35.0	ES	29 21.6	61	4.0	55	4.4	24	3.2				440.5	46.6
HAMAMA	0	EP	11 28 35	ES	29 24	18	3.0	20	3.4	10	2.2				443.5	49.0
KOFU	0	EP	11 28 36.2	X	29 43.2	63	2.0	44	2.0	16	1.7				453.8	
KUMAGA	0	EP	11 28 37.6	ES	29 27.0	40	2.0	36	2.8	25	3.8				454.3	49.4
UTSUNO	0	EP	11 28 38.8	ES	29 30.2	25	2.8	18	2.3	7	3.0				475.5	51.4
CHICHI	0	EP	11 28 39.2	ES	29 22.0										453.8	42.8
YOKOHA	0	X	11 28 39.9	IS	29 08.5	69	2.0	56	1.9	26	2.0				374.0	
ONAHAM	0	EP	11 28 41.8	ES	29 30.0	33	3.2	28	2.7	14	2.0				493.5	48.2
IIDA	0	IP	11 28 42.0	ES	29 34.0	18	2.0	11	2.4	13	4.0	N	3 W	3 U 2	488.2	52.0
KARUIZ	0	EP	11 28 45.3	S	29 33.7										512.7	48.4
SHIRAK	0	EP	11 28 45.4	ES	29 38.5										525.5	53.1
MAEBAS	0	IP	11 28 45.9	S	29 40.1	22	2.5	24	3.5	18	4.3			D 2	493.1	54.2
NAGOYA	0	EP	11 28 47.0	ES	29 38.8	26	2.2	18	2.4	7	2.4				528.8	51.8
MATSUS	0	IP	11 28 48.6	S	29 50							N	W	U	548.8	61.4
MATSUM	0	EP	11 28 49.5	S	29 45.7										536.8	56.2
GIFU	0	EP	11 28 50.4			10	2.0	8	1.4						558.3	
FUKUSH	0	EP	11 28 54.0	ES	29 52.0	22	1.0	15	1.0	9	0.6				589.0	58.0
OSAKA	0	EX	11 28 54			28	4.8	24	4.5	10	2.8				621.4	
SENDAI	0	EP	11 28 58.9	S	30 01.8	14	2.0	11	1.8	8	0.8			U 2	638.0	62.9
HIKONE	0	X	11 29 00.6	ES	30 01.2	30	2.0	11	2.4	4	2.8				591.5	
ISHINO	0	P	11 29 01.8	IS	30 03.4	8	1.4	7	2.6	4	2.6		E		652.9	61.6
SUMOTO	0	EP	11 29 02.2	X	29 47.4	4	12	5	14	5	12				665.9	
FUKUI	0	EP	11 29 05.2	S	30 18.1										639.6	72.9
KANAZA	0	X	11 29 06.5	ES	30 14.0	25	0.4	30	0.4	5	0.2	N	2 W	6	644.5	
NIIGAT	0	X	11 29 08.5			35	3.8	50	3.5	20	3.3				643.1	
WAJIMA	0	EX	11 29 12.0	X	30 30.0	11	2.6	13	3.0	6	3.0				695.7	
MIZUSA	0	P	11 29 14.6	S	30 24.3	60	2.1	18	1.8	12	1.5				732.4	69.7
AIKAWA	0	X	11 29 14.6			6	0.3	3	0.4			N	0		685.4	
TSU	0	X	11 29 15.4												540.6	
SAKATA	0	X	11 29 23.4	ES	30 33.9										725.6	
TOYOOK	0	X	11 29 29.7			6	1.2	8	1.0						720.1	
AKITA	0	EX	11 29 35	EX	30 42.4	18	4.0	26	4.2	9	4.2				808.9	
NAGASA	0	EP	11 30 00.0	ES	31 52.0										1114.0	112.0
AOMORI	0	X	11 30 57.5			13	2.1	12	2.3	5	1.8				921.2	

OT= 16 13 44 19.0 +/- 0.5
TOCHIGI-GUNMA BORDER
LAT= 36 15 +/- 3 LONG= 139 36 +/- 6
H= 90 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
UTSUNO	1	P	13 44 33.0	S	44 43.0	25	0.2	19	0.2						41.0	10.0
KAKIOK	0	EP	13 44 33.7	ES	44 44.8	16	0.8	15	1.1	5	0.7				53.4	11.1
KUMAGA	0	P	13 44 34.0	S	44 44.4	8	0.2	14	1.0	2	0.4			D 2	22.5	10.4
MITO	0	IP	13 44 36.8	IS	44 49.4	11	1.0	9	0.5	3	0.4			D 3	79.6	12.6
TOKYO	0	EP	13 44 37	ES	44 49.3	23	0.4	27	0.8	8	0.4				64.3	12.3
AJIRO	0	P	13 44 42.6	ES	44 57.9	7	0.3	9	0.3	2	0.3				141.4	15.3
OSHIMA	0	P	13 44 45.6	X	44 04.1	9	0.2	7	0.2	5	0.2				166.3	
YOKOHA	0	X	13 44 48	IS	44 53	20	0.4	17	0.6						90.4	
ONAHAM	0	EX	13 45 02.0	ES	45 04.1	9	1.0	11	1.1	4	0.5				140.0	

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OT= 16 14 21 27.0 +/- 0.3
S OFF CHIBA PREF
LAT= 34 53 +/- 1 LONG= 139 59 +/- 2
H= 50 MAG=4.5 CLASS=M

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOMISA	2	IP	14 21 36.4	IS	21 42.0	270	0.5	165	1.0	64	0.9	N	2 W	2 U 13	14.7	05.6
OSHIMA	2	IP	14 21 39.8	IS	21 47.0	300	0.6	100		100		S	7 W	7 U121	57.0	07.2
YOKOHA	1	IP	14 21 41	IS	21 50	63	0.6	61	0.5			S	14 E	11 D 55	68.3	09.0
AJIRO	3	IP	14 21 42.2	IS	21 51.3	245	0.4	184	0.4	54	0.4		E	1 D 4	82.9	09.1
MISHIM	2	EP	14 21 43.3	IS	21 54.2	86	0.6	56	0.6	55	0.4				99.4	10.9
TOKYO	1	IP	14 21 44.3	IS	21 55.8	108		155	0.2	46		N		U	91.2	11.5
CHOSHI	1	IP	14 21 46.7	S	22 00.2	23	0.4	19	0.4	9	0.3	N	2 E	2 U 4	121.8	13.5
FUNATS	1	IP	14 21 48.2	IS	22 02.6										130.4	14.4
KAKIOK	0	EP	14 21 50.6	ES	22 08	43	0.8	55	1.0	14	1.0				150.8	17.4
KUMAGA	0	IP	14 21 50.8	ES	22 08.6	18	1.4	20	1.4	13	1.0	S	2 W	1 D 9	150.3	17.8
SHIZUO	0	EP	14 21 51.0	IS	22 07.0	28	0.2	21	0.2	10	0.2				144.4	16.0
KOFU	1	IP	14 21 51.2	IS	22 07.8	34	0.4	34	0.3	9	0.2	S	2 E	1 D 2	155.9	16.6
OMAEZA	0	IX	14 21 52.4			11	2.0	12	2.0						165.0	
UTSUNO	1	P	14 21 53.1	S	22 12.4	35	0.2	29	0.6	19	0.6				184.8	19.3
MITO	0	EP	14 21 54.0	S	22 11.5	22	1.3	24	2.0	13	2.4				171.6	17.5
MAEBAS	0	IP	14 21 54.3	IS	22 15.3	7	1.5	6	2.0	6	1.0			D 2	187.8	21.0
HACHIJ	2	IP	14 21 57.0	IS	22 18.2	23		26		12		N	1	D 2	198.4	21.2
IIDA	0	EP	14 21 59.4	IS	22 23.2	24	1.6	7	1.4	6	1.4				207.6	23.8
KARUIZ	0	EP	14 21 59.7	S	22 22.5										207.2	22.8
MATSUM	0	EP	14 22 02.9	S	22 29.0										236.5	26.1
HAMAMA	0	EP	14 22 03	S	22 20.4	7	1.4	6	1.4	3	1.2				207.7	17.4
MATSUS	0	IP	14 22 03.1	S	22 25							S	E	D	243.9	21.9
TOYAMA	0	E	14 22 10			4	3.2	6	2.4	3	3.0				322.2	
FUKUSH	0	EX	14 22 14.0			7	1.0	6	1.1	2	0.8				321.8	
ONAHAM	0	EX	14 22 19.7	ES	22 28.9	12	1.2	16	1.2	5	0.6				243.4	
SENDAI	0	X	14 22 29	EX	23 10.2	5	1.8	5	1.5	2	0.2				383.5	
MIZUSA	0	P	14 22 35.1			10	1.6	5	1.8	4	2.0				482.5	
NIIGAT	0	X	14 22 42.3			8	2.5	10	3.5						346.0	
OSAKA	0	X	14 23 16			5	3.9	9	5.2						407.6	
TOYOOK	0	X	14 23 43.4			6	1.0	5	1.2						475.5	

OT= 16 22 46 51.9 +/- 1.3
NW OF HOKKAIDO
LAT= 44 0 +/- 6 LONG= 141 46 +/- 4
H= 10 MAG=3.9 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
RUMOI	2	IP	22 46 55.0	IS	47 03.6	35	1.0	25	1.0	40	1.0			D 3	12.1	08.6
ASAHIK	0	IP	22 47 01.8	IS	47 10.4	24	1.2	24	1.2	14	1.0			D	55.1	08.6
SAPPOR	0	IP	22 47 11.5	S	47 27.6	9	1.2	8	1.4			S	E	U 1	110.4	16.1
OBIHIR	0	EX	22 47 21.0												168.2	
ABASHI	0	EP	22 47 25.3	ES	47 52.6	4	1.4	5	4.4	4	6.2				201.9	27.3
URAKAW	0	EP	22 47 27.4	S	47 57.1	6	4.4	6	3.2	6	4.4				220.7	29.7

OT= 17 4 24 52.0 +/- 1.3
NEAR HACHIJOJIMA
LAT= 32 16 +/- 5 LONG= 141 33 +/- 5
H= 10 MAG=4.9 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HACHIJ	0	IP	04 25 23.6	S	25 45.4	26		30		15		S	2 E	3 D 4	189.3	21.8
TOMISA	0	EP	04 25 42.7			22	3.3	24	2.4	16	2.4				334.8	
OSHIMA	0	EX	04 25 45.8			9	1.8	6	1.2	5	1.8				342.3	
MISHIM	0	EP	04 25 49.5	ES	26 36.0	13	3.7	10	2.9	9	2.2				398.1	46.5
YOKOHA	0	EP	04 25 50.4	ES	26 37.0	12	1.2	13	1.0	7	2.0				392.8	46.6
OMAEZA	0	IX	04 25 50.8			9	2.8	9	2.5						404.1	
SHIZUO	0	EX	04 25 53.0			3	4.8	6	3.0	4	4.0				418.4	
FUNATS	0	P	04 25 56.1	X	26 17.6										441.3	
HAMAMA	0	EP	04 25 57	ES	26 50	7	2.6	6	3.8	3	2.4				446.8	53.0
TOKYO	0	X	04 26 00.0	ES	26 42.4	10	5.2	17	4.0	15	4.0				413.6	
KUMAGA	0	EP	04 26 00.6	ES	26 50.0	11	2.4	11	4.0	7	4.6				474.2	49.4
MITO	0	P	04 26 00.7	X	26 37.5	17	4.2	17	4.4	8	2.6				466.6	
KOFU	0	EP	04 26 01.0	ES	26 55.0	11	1.8	10	2.0	5	2.8				467.3	54.0
UTSUNO	0	EP	04 26 02.2	ES	26 54.1	7	2.2	4	2.4						499.0	51.9
IIDA	0	EP	04 26 05.0	ES	27 04.6	5	2.4	4	2.4	3	4.2				497.3	59.6
ONAHAM	0	EX	04 26 10.2			7	1.9	13	2.8	3	2.0				522.2	
MATSUS	0	IP	04 26 11.2	S	27 20							N	W	U	564.5	68.8
FUKUSH	0	EP	04 26 17.4	ES	27 24.0	8	1.0	7	0.8	3	1.0				616.7	66.6
KANAZA	0	EP	04 26 19.0	ES	27 40.0	6	0.3	8	0.4						654.2	81.0
SENDAI	0	EP	04 26 20.5	EX	27 27	5	2.2	5	2.2	2	1.8				667.4	
TOYAMA	0	E	04 26 22			10	4.0	11	5.8	6	3.0				633.4	

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OSAKA	0	X	04 26 30			7	2.8	9	5.2						617.8	
MIZUSA	0	P	04 26 39.3	S	28 00.2	13	1.4	5	2.2						762.6	80.9
NIIGAT	0	X	04 26 43.7			15	4.2	13	3.0	10	3.0				666.0	
CHOSHI	0	X	04 26 44.2												389.0	
AKITA	0	X	04 26 54			5	3.2	7	3.6						836.9	
MAEBAS	0	X	04 27 13.5	EX	28 08.2			7	2.0	4	4.2				512.3	

OT= 17 12 57 43.9 +/- 0.5
IBARAKI-CHIBA BORDER
LAT= 35 53 +/- 2 LONG= 140 20 +/- 2
H= 0 MAG=3.5 CLASS=U

KAKIOK	0	EP	12 57 54	ES	58 01	16	0.5	26	0.5	7	0.5				40.6	07.0
CHOSHI	0	P	12 57 54.4	S	58 03.4										49.3	09.0
TOKYO	0	IP	12 57 56.1	S	58 06.7	16	0.3	16	0.3	7	0.5				56.4	10.6
MITO	0	IP	12 57 57.2	IS	58 06.4	11	0.4	12	0.2	5	0.3			D 2	56.3	09.2
UTSUNO	0	P	12 57 59.8	S	58 10.8	7	0.1	6	0.2						84.5	11.0
YOKOHA	0	EP	12 58 04.7	IS	58 11.6	15	0.6	11	1.2						78.9	06.9
MATSUS	0	IP	12 58 15.4									S	E	U	204.4	

OT= 17 18 34 41.1 +/- 0.5
OFF MIYAGI PREF
LAT= 38 5 +/- 1 LONG= 142 21 +/- 3
H= 50 MAG=4.8 CLASS=S

ISHINO	1	IP	18 34 58.0	IS	35 06.8	35	0.6	32	0.8	33	0.8	S	38	E 22 D 27	99.1	08.8
OFUNAT	2	IP	18 35 00.6	S	35 12.9	73	0.0	37	0.0	10	1.4	S	4	E 2 D 3	121.7	12.3
				IX	35 10.2											
SENDAI	X	IP	18 35 02.0	IS	35 14.8	38	1.0	46	1.0	24	0.4	S	2	E 8 D 22	128.6	12.8
MIZUSA	0	P	18 35 04.9	S	35 23.6	177	1.6	51	0.8	30	1.7			E 4	157.5	18.7
FUKUSH	0	IP	18 35 07.4	ES	35 24.6	68	0.9	60	0.8	23	0.7	N	3	E 7 D 4	168.8	17.2
YAMAGA	0	EP	18 35 07.6												176.3	
MIYAKO	0	EP	18 35 07.7	IS	35 27.3	9	0.6	21	1.0	9	1.1				176.5	19.6
MORIOK	0	IP	18 35 12.0	S	35 35.0	33	0.3	40	0.4	9	2.8	S	1	E 1 D 1	206.4	23.0
SHIRAK	0	EP	18 35 14.7	ES	35 35.9										216.0	21.2
ONAHAM	0	EX	18 35 16.2	ES	35 29.2	43	1.2	36	1.0	16	1.3				179.5	
SAKATA	0	EP	18 35 17.4	ES	35 40.8										237.4	23.4
MITO	0	EP	18 35 18.8	IS	35 46.6	22	1.6	24	1.3	12	1.4				252.1	27.8
AKITA	0	EP	18 35 20.6	EX	35 48.0	24	2.4	33	2.4	17	2.0			U	266.4	
HACHIN	0	IP	18 35 21.7	ES	35 50.7	6	0.4	6	0.4	5	0.8	N	1	U 1	280.3	29.0
UTSUNO	0	P	18 35 21.8	S	35 43.2	24	1.2	17	1.1	10	1.2				278.1	21.4
KAKIOK	0	EP	18 35 22	ES	35 49	47	1.1	34	1.1	9	0.7				280.9	27.0
MAEBAS	0	EP	18 35 32.7	S	36 08.0	6	1.6	6	1.6	4	1.0				346.0	35.3
TOKYO	0	EX	18 35 35.0	ES	36 07.7	10	3.2	8	2.8						352.4	
KUMAGA	0	X	18 35 36.4	ES	36 08.0	11	1.2	10	1.0	5	1.2				340.0	
KARUIZ	0	EP	18 35 36.7	S	36 23.6										388.6	46.9
AOMORI	0	X	18 35 37.4			26	1.4	23	1.6	8	1.6				332.1	
MATSUS	0	IP	18 35 38.3	ES	36 20								E	U	405.1	41.7
KOFU	0	EP	18 35 46.4	ES	36 33.9	14	1.2	11	1.4	4	1.0				431.5	47.5
NIIGAT	0	X	18 35 50.6			15	2.2	20	2.3	8	1.6				290.3	
WAJIMA	0	EX	18 35 53.0			5	2.4	5	2.2						486.5	
MISHIM	0	X	18 35 55			6	0.7	6	0.7	3	0.7				449.7	
KUSHIR	0	EP	18 35 56.1	ES	36 51.6	8	0.3	5	0.3	3	0.2				570.5	55.5
YOKOHA	0	X	18 35 56.9			15	0.8	13	0.7						379.6	
OBIHIR	0	X	18 36 03.3												542.2	
CHOSHI	0	X	18 36 04.0												294.1	
NAGOYA	0	X	18 36 07.5	ES	37 10.8	5	1.0	7	1.2	2	1.0				579.9	
FUNATS	0	X	18 36 20.4	S	36 36.7										429.7	

OT= 17 18 46 13.6 +/- 0.9
OFF MIYAGI PREF
LAT= 38 5 +/- 2 LONG= 142 21 +/- 4
H= 40 MAG=4.2 CLASS=S

OFUNAT	1	IP	18 46 33.0	IS	46 47.8	12	0.0	20	0.0	1	0.6	S	1	D 0	121.7	14.8
				IX	46 42.8											
SENDAI	0	EP	18 46 34.7	IS	46 48.0	10	0.8	5	0.8	2	0.4	S	1	D 3	128.6	13.3
MIZUSA	0	P	18 46 38.8	S	46 54.0	20	1.5	11	0.5	8	1.3				157.5	15.2
FUKUSH	0	EX	18 46 40.4			14	1.1	10	0.8	3	1.0				168.8	
MORIOK	0	IP	18 46 44.7	IS	47 07.4	10	0.3	10	0.4	2	1.2	S	0	E 0 D 0	206.4	22.7
AKITA	0	EX	18 46 56.2					6	2.8						266.4	
MATSUS	0	P	18 47 11	X	54 20										405.1	
ONAHAM	0	X	18 47 15.5			7	0.7	7	1.1	3	1.1				179.5	

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OT= 18 12 6 21.9 +/- 0.5
S OFF HOKKAIDO
LAT= 42 19 +/- 2 LONG= 143 48 +/- 3
H= 50 MAG=4.5 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HIROO	2	IP	12 06 33.9	IS	06 39.9								E 2	D 9	40.0	06.0
OBIHIR	0	IP	12 06 36.4	IS	06 46.6									D 5	82.1	10.2
KUSHIR	1	EP	12 06 36.8	ES	06 47.7	131	0.3	115	0.3	44	0.2				88.2	10.9
URAKAW	1	EP	12 06 37.8	IS	06 52.4	84	0.8	94	0.4	15	0.8				86.0	14.6
NEMURO	0	EP	12 06 49.6	ES	07 10.8	4	0.6	5	0.6	3	0.6				184.4	21.2
ABASHI	0	X	12 06 49.8	ES	07 13.8	9	1.6	4		4	2.4				192.9	
ASAHIK	0	P	12 06 51.0	ES	07 12.0	6	1.2	5	1.6	4	1.4				199.0	21.0
SAPPOR	0	EP	12 06 56	ES	07 16	4	1.0	5	1.4	3	0.8				218.5	20.0
HACHIN	0	EP	12 07 00.7	IS	07 28.3	9	0.3	16	0.2	2	0.6				275.3	27.6
MORIOK	0	IP	12 07 14.4	S	07 49.0	7	0.4	10	0.4	3	0.3				365.6	34.6
MIZUSA	0	P	12 07 22.7	S	08 05.4	8	1.6	8	0.7	4	0.7				419.2	42.7
AOMORI	0	X	12 07 34.5			13	0.9	11	0.7	5	0.9				301.8	
MATSUS	0	IP	12 08 07.3											U	801.7	

OT= 18 13 6 49.5 +/- 0.7
SE OFF HOKKAIDO
LAT= 41 45 +/- 2 LONG= 145 11 +/- 4
H= 40 MAG=5.2 CLASS=M

KUSHIR	2	IP	13 07 12.3	ES	07 29.0	250	0.5	300	2.4	100	2.4	N	10 W	5 U 17	151.1	16.7
HIROO	0	IP	13 07 16.5	IS	07 33.7							N	2 W	2 U 7	165.6	17.2
NEMURO	X	IP	13 07 17.1	S	07 34.8	70	2.6	49	3.6	56	3.0			U	178.5	17.7
OBIHIR	1	IP	13 07 20.0	IS	07 46.3	600	3.9							U 8	207.5	26.3
URAKAW	0	IP	13 07 21.8	IS	07 51.1	400	1.2	200	0.8	300	1.2			U 2	204.4	29.3
ABASHI	0	EP	13 07 29.2	S	07 54.8	48	2.2	59	3.2	37	3.2				262.4	25.6
ASAHIK	0	P	13 07 34.0	S	08 09.6	72	2.4	48	2.0	49	1.5				321.4	35.6
HACHIN	0	EP	13 07 37.0	IS	08 10.4	12	3.0	8	0.3	7	6.0		E	U	335.9	33.4
SAPPOR	0	EP	13 07 38	ES	08 17.6	106	2.0	131	2.2	34	1.6				348.8	39.6
MURORA	0	EP	13 07 38.0	S	08 26.4										353.5	48.4
HAKODA	0	IP	13 07 41.0	ES	08 20.4	38	1.6	31	1.8	15	2.8	S	1 W	4 U 3	367.9	39.4
AOMORI	0	IP	13 07 43.0	ES	08 21.5	101	1.6	84	2.1	32	1.4		W	7 U 5	382.9	38.5
MORIOK	0	P	13 07 47.2	S	08 26.6	9	0.4	12	0.4	6	3.6	S	0 W	0 U 0	408.7	39.4
OFUNAT	0	EP	13 07 49.2	IS	08 29.5	6	2.6	4	0.4	7	2.4				419.0	40.3
SUTTSU	0	EP	13 07 49.7	EX	08 56.3										423.9	
MIZUSA	0	P	13 07 53.1	S	08 38.9	93	2.1	31	1.5	28	1.3				449.9	45.8
AKITA	0	EP	13 07 58.5	EX	08 48.8	15	3.0	18	5.2	11	2.8				484.9	
RUMOI	0	X	13 07												379.4	
WAKKAN	0	EP	13 08 02.4	E	08 52.0	18	3.6	23	4.8	15	3.6				496.2	
SENDAI	0	EP	13 08 03.0	ES	08 56.0	10	2.0	8	1.8	3	2.0				532.7	53.0
SAKATA	0	EP	13 08 08.5	ES	09 12.5										553.4	64.0
MITO	0	EP	13 08 28.0	S	09 36.5	9	3.0	6	3.0	5	2.5				722.1	68.5
FUKUSH	0	X	13 08 29.0			9	1.3	7	1.4	2	0.7				599.3	
MATSUS	0	IP	13 08 39.9	S	10 02									U	835.1	82.1
KUMAGA	0	X	13 08 50.6	ES	09 56.6	5	2.6	5	2.4	5	4.0				799.3	
NIIGAT	0	X	13 09 03.7			15	5.0	17	4.0	10	4.5				675.9	
ONAHAM	0	X	13 09 17.3			8	1.3	12	2.7	5	1.9				648.2	
OSAKA	0	X	13 09 37.9			6	4.0	5	4.4						1154.0	
TOKYO	0	X	13 09 57.3			7	2.4	5	2.4	5	3.0				821.7	

OT= 18 13 39 4.5 +/- 1.0
SE OFF HOKKAIDO
LAT= 41 43 +/- 3 LONG= 145 25 +/- 5
H= 40 MAG=4.7 CLASS=U

KUSHIR	0	IP	13 39 28.4	S	39 48.4	74	0.5	65	0.6	25	0.5			U 5	163.5	20.0
HIROO	0	P	13 39 32.7	S	39 54.2										185.0	21.5
NEMURO	0	IP	13 39 33.2	ES	39 50.6	5	0.4	5	0.4	3	1.2	N	E	U	179.6	17.4
URAKAW	0	EP	13 39 38.0	S	40 06.8	24	1.4	14	0.8	8	1.2				224.1	28.8
OBIHIR	0	EP	13 39 39.0	ES	40 02.5										225.0	23.5
SAPPOR	0	EX	13 39 52			5	2.0	5	2.0	2	1.2				367.9	
MORIOK	0	EP	13 40 03.5	S	40 43.0	6	0.4	5	0.4	2	0.4				423.3	39.5
MIZUSA	0	P	13 40 10.2	S	40 55.6	8	1.9	8	0.5	4	1.0				463.0	45.4
AOMORI	0	X	13 40 15.7			10	1.4	8	1.4						400.9	
MATSUS	0	X	13 40		S 42 25										847.3	

OT= 18 20 22 26.2 +/- 0.7
SE OFF HOKKAIDO
LAT= 41 44 +/- 2 LONG= 145 12 +/- 4
H= 40 MAG=5.4 CLASS=M

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KUSHIR	1	IP	20 22 50.0		S	23 05.0	300	2.8	350	2.0	100	2.1	N 15	W 8	U 37	153.4	15.0
HIROO	1	IP	20 22 52.2		IS	23 13.1							N 2	W 4	U 15	167.6	20.9
NEMURO	X	IP	20 22 55.0		S	23 12.5	90	2.4	64	2.8	62	2.8	N	E	U 1	180.0	17.5
OBIHIR	1	IP	20 22 57.7		IS	23 23.8									U 10	209.7	26.1
URAKAW	1	IP	20 22 57.8		IS	23 27.6	400	1.2	200	0.6	200	1.2		W 26	U 20	206.2	29.8
ABASHI	0	P	20 23 06.3		S	23 32.6	62	2.6	68	3.4	55	3.0				264.5	26.3
ASAHIK	0	IP	20 23 11.9		X	23 32.6	83	2.4	64	2.0	54	1.8	N	W	U	323.7	
HACHIN	0	IP	20 23 14.8		S	23 48.0	14	4.0	7	4.0	7	4.4	S	W 1	U	336.5	33.2
SAPPOR	0	P	20 23 15.3		S	23 54.4	92	2.0	140	2.0	39	1.8			U	350.9	39.1
MURORA	0	P	20 23 16.7		S	24 00.4							N	W 3	U 2	355.2	43.7
					X	23 55.6											
HAKODA	0	IP	20 23 18.6		ES	23 57.6	34	2.0	27	1.8	13	2.6	S 1	W 5	U 4	369.4	39.0
MIYAKO	0	EP	20 23 18.7		ES	23 53.8	5	2.0	6	2.4	3	1.5				358.3	35.1
RUMOI	0	EX	20 23 19.5													381.7	
AOMORI	0	IP	20 23 20.6		ES	23 57.6	99	1.6	69	1.6	38	1.3	S 5	W 11	U 7	383.8	37.0
MORIOK	0	IP	20 23 25.1		ES	24 04.0	11	1.2	7	0.4	8	3.8	S 1	W 1	U 1	408.9	38.9
SUTTSU	0	EP	20 23 25.8		EX	24 38.8										425.8	
OFUNAT	0	IP	20 23 26.5		IS	24 07.4	8	2.0	7	1.2	13	1.4	S 1	W 0	U 1	418.7	40.9
MIZUSA	0	P	20 23 31.2		S	24 16.5	135	2.3	38	1.9	26	1.7				449.8	45.3
AKITA	0	EX	20 23 32.0		EX	24 20	20	2.4	20	5.2	13	3.4				485.3	
ISHINO	0	EP	20 23 35.5		ES	24 25.0	10	1.2	7	1.0	7	1.2				495.3	49.5
WAKKAN	0	EP	20 23 36.0		E	24 34.0	21	3.4	22	5.6	25	3.4				498.5	
SENDAI	0	EP	20 23 40.2		ES	24 34.0	13	1.5	14	1.5	6	2.0			U 1	532.4	53.8
SAKATA	0	EP	20 23 45.7		ES	24 45.9										553.5	60.2
ONAHAM	0	EX	20 23 53.1		IS	24 57.9	28	1.1	25	1.2	10	2.0				647.6	
FUKUSH	0	X	20 23		ES	24 48.4	18	1.0	15	1.0	4	0.9				598.9	
MITO	0	P	20 24 03.5		IS	25 14.3	17	1.6	10	2.0	9	1.5				721.5	70.8
KAKIOK	0	EP	20 24 06		X	25 18	23	1.0	12	1.0	3	1.0				748.8	
KUMAGA	0	EP	20 24 14.4		ES	25 33.4	9	1.6	7	1.2	6	4.2				798.8	79.0
MATSUS	0	IP	20 24 18.3		S	25 40							S	W	U	834.9	81.7
UTSUNO	0	EX	20 24 21.1		ES	25 21.9	9	1.5	9	1.4	2	1.0				737.1	
WAJIMA	0	IP	20 24 22.6		EX	25 50.0	9	2.0	10	2.0				E 5	U 2	860.5	
KOFU	0	X	20 24 30.4		ES	25 53.2	6	1.8	6	1.0	4	1.2				886.8	
NIIGAT	0	X	20 24 49.0				20	5.5	15	4.2	5	4.6				675.9	
OSAKA	0	X	20 25 13.2				6	4.0	7	4.8						1153.9	
TOKYO	0	X	20 25 30				9	2.4	6	2.4	7	4.0				821.0	
YOKOHA	0	X	20 25 44.2				12	1.4	9	1.2						849.2	

OT= 18 23 0 50.3 +/- 1.1
SE OFF HOKKAIDO
LAT= 41 47 +/- 4 LONG= 145 14 +/- 5
H= 20 MAG=5.1 CLASS=S

KUSHIR	2	IP	23 01 14.6		IS	01 29.3	197	0.5	189	0.3	77	2.4	N 8	W 5	U 21	149.6	14.7
HIROO	1	IP	23 01 18.4		IS	01 38.5							N 2	W 4	U 6	168.2	20.1
NEMURO	0	IP	23 01 19.6		S	01 36.8	36	1.6	33	2.8	22	2.8	N	E	U	174.1	17.2
OBIHIR	0	IP	23 01 23.4		IS	01 47.9									U 5	208.4	24.5
URAKAW	0	P	23 01 23.7		S	01 52.6	142	1.6	89	1.0	62	1.2			U 2	207.6	28.9
ABASHI	0	P	23 01 30.9		S	02 02.8	37	2.6	30	2.2	26	1.5				260.0	31.9
ASAHIK	0	IP	23 01 36.4		X	02 13.0	39	2.4	25	1.6	22	1.6				321.7	
SAPPOR	0	EP	23 01 39		ES	02 16	38	2.4	50	2.2	14	2.2				351.0	37.0
HAKODA	0	IP	23 01 43.3		ES	02 22.1	17	1.8	14	1.8	7	2.2	S 1	W 3	U 2	372.0	38.8
AOMORI	0	IP	23 01 45.6		ES	02 23.4	40	1.4	43	1.6	18	1.3		W 5		387.8	37.8
MIZUSA	0	P	23 01 56.6		S	02 41.2	50	2.0	18	1.3	14	1.9				455.5	44.6
AKITA	0	EX	23 02 02.0				9	2.8	11	5.0	6	4.0				490.2	
WAKKAN	0	X	23 02 08.6		E	02 53.4	12	2.8	10	5.8	10	3.4				495.5	
SENDAI	0	EX	23 02 14		ES	02 59.0	5	1.2	7	1.2	2	1.5				538.3	
FUKUSH	0	X	23 02 20.2		ES	03 13.0	6	0.9	6	1.0	2	0.9				604.9	
MITO	0	P	23 02 30.4		X	03 39.3	7	1.5	4	1.4	4	1.4				727.6	
KAKIOK	0	X	23 02 38				9	1.0	5	1.0	1	1.0				754.9	
MATSUS	0	IP	23 02 43.1		X	04 02							S	W	U	840.7	
SAKATA	0	X	23 02 47.1													558.9	
ONAHAM	0	X	23 03 22.5				10	1.1	8	1.2	3	1.9				653.7	

OT= 19 8 39 14.8 +/- 0.4
TANEGASHIMA
LAT= 30 44 +/- 2 LONG= 130 59 +/- 3
H= 70 CLASS=M

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
YAKUSH	4	IP	08 39 29.6		ES	39 35.6	388	0.8	400	0.7	278	0.8	N136	E118	D140	56.2	06.0
KAGOSH	3	P	08 39 33.8		IS	39 44.4	2550	1.0	2250	1.0	1100	1.0	S 10		D 30	101.7	10.6
MIYAZA	1	IP	08 39 38.0		S	39 53.0	335	1.0	335	1.0	150	1.0	S 70	W 42	D144	137.8	15.0
NOBEOK	0	IP	08 39 45.8		ES	40 08.7	50		100		100		S 4		D 5	215.5	22.9
KUMAMO	0	IP	08 39 48.7		IS	40 14.2	253	1.9	384	1.7	108	1.2	S 12	E 3	D 11	231.6	25.5
NAGASA	0	P	08 39 50.4		IS	40 10.0							N 1	W	U 1	243.6	19.6
ASHIZU	0	IP	08 39 55.8		ES	40 27.8	21	1.8	11	2.4	12	2.6	S 2	W 2	U 3	292.3	32.0
OITA	1	IP	08 39 56.1		S	40 29.5	266	1.4	243	1.4	248	2.1	S 8	W 0	D 19	283.6	33.4
FUKUE	0	P	08 39 58.0		S	40 27.0	17	1.6	9	0.6	11	2.4	N 3	W 2	U 10	298.3	29.0
ASOSAN	0	X	08 39 58													237.9	
SAGA	0	IP	08 39 59.7		X	41 25.2							N 20			285.7	
FUKUOK	0	EP	08 40 00.0		IS	40 33.2	30	1.6	26	1.0	27	2.0				320.6	33.2
UWAJIM	0	EP	08 40 00.1		ES	40 37.6										313.7	37.5
SHIMON	0	EP	08 40 04.4		S	40 40	13	1.5	33	2.3	16	1.0	S 2	W	D 3	356.9	35.6
MATSUY	0	EP	08 40 09.3		X	40 56.4	30	1.8	30	3.2	11	2.2				383.6	
MUROTO	0	IP	08 40 10.6		ES	40 50.9	9	2.8	8	3.2	6	3.2	N 1	E 1	U 1	410.8	40.3
KOCHI	0	IP	08 40 11.5		IS	40 53.8										394.1	42.3
HIROSH	0	P	08 40 12.7		S	40 53.9	12	3.6	15	1.9	22	1.9	N 1	E 1	U 2	424.9	41.2
TURUGI	0	EP	08 40 13.9		X	40 35.4										453.2	
HAMADA	0	EP	08 40 18.5		S	41 10.6	12	2.6	17	2.8	8	3.0				472.3	52.1
TAKAMA	0	IP	08 40 20.8		ES	41 11.5	22	3.1	32	3.1	3	0.9				491.0	50.7
TOKUSH	0	EP	08 40 23.7		ES	41 18.6										500.5	54.9
OKAYAM	0	IP	08 40 24.0		IS	41 24.2	30	1.4	30	2.0	20	2.0	N 1	E	U 2	516.7	60.2
SUMOTO	0	IP	08 40 27.2		ES	41 27.3	18	3.2	8	4.6	11	3.2	S 2	W 2	D 3	543.3	60.1
					EX	41 18.3											
YONAGO	0	EP	08 40 28.8		ES	41 29.2										565.6	60.4
MATSUE	0	EP	08 40 31.0		S	41 31.4										558.5	60.4
KOBE	0	EP	08 40 32.8		X	42 03.3										588.9	
OSAKA	0	P	08 40 36.0		X	42 09.7	78	4.0	68	4.2	33	3.0			D 4	608.7	
NAHA	0	P	08 40 36.0		ES	41 39.0	9	2.6	10	2.2	4	4.0				593.8	63.0
TOYOOK	0	P	08 40 40.3		ES	41 50.9	39	1.2	43	1.2						641.5	70.6
KYOTO	0	IP	08 40 41.6		X	42 04.0	6	3.2	5	1.0	3	3.6	S 2	W 3	D 3	649.9	
SAIGO	0	EP	08 40 43.5		S	41 54.0	14	2.0	23	2.0	8	1.8	N 2	E 1	U 1	644.7	70.5
HIKONE	0	P	08 40 48.6		S	42 00.7	22	1.0	18	1.2	5	1.0				703.4	72.1
TSURUG	0	EP	08 40 49.8		X	42 32.7										721.9	
NAGOYA	0	EP	08 40 53.2		X	43 01.2	18	3.2	15	3.2	11	1.6	S 1	W 2	D 2	744.2	
GIFU	0	X	08 40 54.5				9	1.8	14	1.2	11	0.9				747.2	
HAMAMA	0	P	08 40 56.0				7	3.2	5	2.6	6	1.6			D 1	769.8	
FUKUI	0	IP	08 40 56.4										N 8	E 8	U 6	765.0	
KANAZA	0	P	08 41 04.7		ES	42 36.0	13		17				S 1	W 2	D 3	831.2	91.3
TOYAMA	0	EP	08 41 09		ES	42 44	20	3.8	25	4.4	16	3.4				877.8	95.0
MISHIM	0	IP	08 41 10.0				12	0.6	11	0.8	19	1.3	S 1	W 1	D 4	887.0	
KOFU	0	EP	08 41 12.2		X	43 46.8	7	2.8	5	3.2	3	3.0				892.5	
OSHIMA	0	EX	08 41 12.4				13	1.4	17	1.6	13	1.9				903.9	
WAJIMA	0	IP	08 41 15.4		X	43 46.6	22	0.8	23	1.0	8	1.2			D 5	917.6	
MATSUS	0	IP	08 41 15.5		X	43 20							S	W	D	928.6	
TOKYO	0	EX	08 41 24.0				8	4.6	7	3.4	6	4.0				984.3	
KUMAGA	0	EP	08 41 25.0		X	42 30.6	10	4.8	16	4.8	5	4.0				984.3	
YOKOHA	0	EP	08 41 25.5				9	0.8	6	1.2						962.1	
MITO	0	IX	08 41 35.1		X	44 31.9	9	4.4	4	3.0	4	3.5				1079.6	
ONAHAM	0	EX	08 41 47.7				5	1.6	5	2.0	6	2.0				1146.7	
MIZUSA	0	S	08 42 06.4						6	3.0						1312.6	

OT= 19 14 28 50.6 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 34 +/- 1 LONG= 138 15 +/- 1
H= 10 MAG=3.9 CLASS=L

MATSUS	2	P	14 28 53.5		S	28 55.0										4.9	01.5
NAGANO	2	IP	14 28 54.3		S	28 56.7										11.4	02.4
KARUIZ	0	IP	14 28 58.6		S	29 04.6									D 4	36.9	06.0
MATSUM	0	IP	14 29 00.3		IS	29 06.6									U 3	43.6	06.3
TAKADA	0	EP	14 29 02.0		S	29 10.5										59.7	08.5
KOFU	0	EP	14 29 09.8		IS	29 21.2	12	0.3	11	0.3	3	0.3				103.8	11.4
TOYAMA	0	E	14 29 11				6	2.2	7	2.0	3	4.0				94.4	
AIKAWA	0	EP	14 29 16.5		IS	29 36.0	5	0.1	6	0.0			S 0		U 0	161.3	19.5
WAJIMA	0	EX	14 29 18.0				9	0.8	9	0.8						151.1	
MITO	0	X	14 29 46.5				9	0.4	6	0.3	1	0.4				200.2	

OT= 20 0 52 12.9 +/- 0.5
OFF IWATE PREF
LAT= 39 21 +/- 1 LONG= 142 14 +/- 3
H= 40 MAG=3.7 CLASS=U

MIYAKO	0	EP	00 52 22		IS	52 29.7	6	0.0	8	0.0	1	0.0				39.9	07.7

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OFUNAT	0	IP	00	52	24.4	IS	52	31.0	80	0.0	48	0.0	17	0.0				54.8	06.6
MORIOK	0	IP	00	52	29.7	S	52	40.4	8	0.5	12	0.4	2	0.6	S	1 E	2 D	1	99.3	10.7
MIZUSA	0	P	00	52	30.0	S	52	39.8	8	1.5	6	0.9	4	1.7					98.0	09.8
MATSUS	0	P	00	53	18														471.6	

OT= 21 20 58 17.2 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 26 +/- 1 LONG= 138 6 +/- 1
H= 0 MAG=4.4 CLASS=L

MATSUS	2	P	20	58														15.2		
NAGANO	2	IP	20	58	24.4	S	58	27.6										26.6	03.2	
KARUIZ	0	IP	20	58	28.6	IS	58	34.4							N	4 W	10 D	10	41.8	05.8
TAKADA	0	P	20	58	32.3	S	58	41.5											75.7	09.2
MAEBAS	0	IP	20	58	35.1	ES	58	45.9	88	4.7	71	3.3	76	3.7			D	2	86.6	10.8
TOYAMA	0	IP	20	58	35.2	S	58	49.0	46	4.0	45	4.0	69	4.0	S	3 E	3 D	6	85.4	13.8
KOFU	0	IP	20	58	35.9	ES	58	49.3	25	4.2	33	4.0	10	3.8			U	2	94.7	13.4
CHICHI	0	EP	20	58	36.7	S	58	49.8											100.9	13.1
IIDA	0	IP	20	58	37.6	IS	58	51.4	15	3.0	19	3.6	7	3.0	S	4 E	2 U	3	105.2	13.8
FUNATS	0	P	20	58	40.0	S	58	54.5											119.7	14.5
KUMAGA	0	P	20	58	40.6	ES	58	56.6	54	5.0	72	4.4	34	3.8					119.7	16.0
KANAZA	0	P	20	58	42.3	S	58	58.0	31	0.3	25	0.2	4	0.1	N	1 E	3 D	3	130.7	15.7
WAJIMA	0	EP	20	58	44.0	ES	59	03.0	31	0.8	36	1.0	5	1.0					150.8	19.0
AIKAWA	0	IP	20	58	46.6	IS	59	08.6	7	0.0	9	0.0	4	0.2	N	0 W	0 U	0	176.5	22.0
SHIZUO	0	P	20	58	47.7	S	59	09.9	8	2.0	12	1.6	9	4.6					164.3	22.2
UTSUNO	0	EP	20	58	48.5	ES	59	05.8	17	1.4	8	0.9							159.2	17.3
MISHIM	0	EP	20	58	48.5	ES	59	08.2	14	3.3	19	3.0	5	2.6					164.7	19.7
NAGOYA	0	EP	20	58	48.8	S	59	09.6	15	1.0	19	1.0	8	1.0	S	1 W	1 U	2	173.9	20.8
AJIRO	0	P	20	58	48.9	S	59	11.0	5	2.0	7	2.1	1	1.5					178.6	22.1
KAKIOK	0	EP	20	58	49	ES	59	13	10	1.0	6	1.0	3	1.2					189.2	24.0
TOKYO	0	P	20	58	49.7	ES	59	12	48	6.2	38	3.6	28	4.0					170.9	22.3
FUKUI	0	EP	20	58	49.9	S	59	13.7											173.6	23.8
NIIGAT	0	EP	20	58	50.4	IS	59	14.3	33	4.8	60	5.2	16	5.5					184.4	23.9
TSURUG	0	EP	20	58	50.5	S	59	19.5											202.9	29.0
HAMAMA	0	EP	20	58	51.5	ES	59	16	18	1.6	17	3.0	11	1.8					194.4	24.5
YOKOHA	0	IP	20	58	51.6	IS	59	17.5	53	1.6	26	1.4	17	3.0	S	2 E	3 U	4	178.6	25.9
MITO	0	P	20	58	53.6	IS	59	22.3	17	3.5	13	3.4	7	3.6					212.8	28.7
OMAEZA	0	EP	20	58	54.5	ES	59	24.4	26	2.5	40	4.6	12	3.2					203.2	29.9
HIKONE	0	EP	20	58	56.7	S	59	22.9	22	1.0	16	1.0	6	1.5					211.1	26.2
TOMISA	0	P	20	58	57.8				13	2.2	14	4.6	6	2.3					229.4	
ONAHAM	0	EP	20	59	03.2	ES	59	32.8	17	1.8	11	1.5	5	2.8					257.1	29.6
OSAKA	0	EX	20	59	16	X	59	55	19	4.1	40	4.8	10	3.2					305.2	
OSHIMA	0	EX	20	59	22.0	X	03	15.5	6	1.0	7	1.7							218.6	
MIZUSA	0	X	20	59	27.9	ES	00	08.4	10	1.6	3	2.2							401.4	
TOYOOK	0	X	20	59	50.1				17	1.2	9	1.2							312.0	

OT= 22 3 45 11.7 USCGS
SUMATRA
LAT= 1 0 LONG= 101 30
H=173 MAG=6.3 CLASS=U

OITA	0	EX	03	52	05.1				24	3.0	14	4.0						4752.6		
NAHA	0	IP	03	52	09.4				8	4.8	8	3.4	10	2.4				3953.0		
KAGOSH	0	EP	03	52	53.9	EX	53	38.3	53	2.6	33	2.8	18	2.0				4554.4		
NAGASA	0	EP	03	52	58.0	ES	59	05.8							N	E	U	4593.8	367.8	
MIYAZA	0	X	03	52	59.4				8	3.0	8	4.6	13	3.0				4641.4		
KUMAMO	0	IP	03	53					11		13		16		N	6 E	6 U	12	4658.1	
SHIMON	0	P	03	53	09.4	EX	59	30	6	5.0	5	5.0	15	4.0	N	4 E	5 U	12	4760.8	
ASHIZU	0	P	03	53	13.2	X	53	54.1	9	4.4	10	3.2	14	3.4		E	5 D	10	4812.6	40.9
MUROTO	0	P	03	53	20.3	EX	54	02.1	6	4.6	9	2.8	13	4.0					4933.6	
OKAYAM	0	IP	03	53	26.0	IX	54	27.0	10	2.0	15	3.5	20	3.8	N	3 E	6 U	10	5017.6	61.0
SUMOTO	0	IP	03	53	29.2	ES	59	50.5	7	8.8	5	3.6	14	3.0		E	1 U	2	5062.4	381.3
						APP	54	09.5												
						IX	58	32.3												
						SCS	03	03.2												
SHIONO	0	IP	03	53	29.3	ES	00	05.7	5	3.1	7	4.3	10	2.8	N	4 E	4 U	9	5062.6	396.4
SAIGO	0	IP	03	53	31.0	X	54	13.3	6	2.6	5	4.0	9	3.0	N	0 E	0 U	1	5090.7	
						X	55	31.3												
						X	00	11.3												
OSAKA	0	P	03	53	34.2	X	00	18.4	35	4.0	38	5.7	23	2.8			U	12	5129.2	
OWASE	0	IP	03	53	34.5				4	2.4	3	3.0	10	3.6					5136.3	
KYOTO	0	IP	03	53	37.2	ES	00	21.4	5	7.0	4	2.4	7	3.0	N	0 E	1 U	1	5168.6	404.2
NAGOYA	0	P	03	53	43.0				8	2.8	10	2.8	8	3.2	N	2 E	3 U	6	5267.1	
HAMAMA	0	P	03	53	44.5	ES	00	38	7	3.6	9	3.0	8	1.8		E	U	2	5291.1	413.5
OMAEZA	0	EP	03	53	45.6				11	5.3	13	5.3							5320.3	
HACHIJ	0	X	03	53	46.8														5344.3	

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
IIDA	0	E	03	53	48.4													5352.9	
KANAZA	0	P	03	53	48.5	S	59	44.0	10	0.5	18	0.5	5	0.3	N	1 E	6 U	5	5340.2	355.5
SHIZUO	0	IP	03	53	49.5	S	00	55.0	7	3.0	12	4.4	17	3.0	N	4 E	4 U	12	5358.8	425.5
TOYAMA	0	I	03	53	51.2				12	3.2	15	4.6					U	10	5390.3	
MISHIM	0	IP	03	53	51.7	IS	00	48.8	12	2.3	8	2.3	17	2.4	N	7 E	6 U	19	5406.4	417.1
OSHIMA	0	P	03	53	51.7	ES	00	46.9	12	2.6	9	3.0	16	2.2	N	5 E	5 U	11	5417.1	415.2
AJIRO	0	IP	03	53	51.9	E	00	48.7	5	4.8	8	5.0	3	3.0	N	1 E	1 U	2	5414.3	
FUNATS	0	EP	03	53	52.0	ES	00	49.6							N	25 E	75		5419.5	417.6
KOFU	0	IP	03	53	52.5	ES	00	50.2	7	2.6	8	2.4	11	3.6	N	5 E	4 U	10	5415.6	417.7
TOMISA	0	IP	03	53	53.8				12	3.3	12	3.5	8	3.1			U	1	5460.9	
WAJIMA	0	IP	03	53	54.0	EX	00	53.0	7	2.6	8	2.4	17	3.0	N	5 E	6 U	12	5416.8	
MATSUS	0	IP	03	53	54.3										N	E	U		5449.0	
KARUIZ	0	P	03	53	57.0												U		5460.1	
YOKOHA	0	IP	03	53	57.8						10	1.9	9	3.1			U	8	5481.0	
KUMAGA	0	EX	03	53	58.6				10	5.4	9	4.2	9	4.0					5507.3	
TOKYO	0	IP	03	53	58.6	ES	01	00	12	4.4	9	4.0	14	4.6			U		5504.6	421.4
						EX	55	17												
AIKAWA	0	IP	03	54	02.1				4	0.4	5	0.4	9	0.4	N	0 E	0 U	0	5552.8	
MITO	0	IX	03	54	04.6	X	01	09	11	3.6	11	4.1	14	4.0	N	2 E	3 D	10	5601.6	
NIIGAT	0	IP	03	54	06.8	EX	54	53.7	28	4.1	40	4.2	33	3.3			U	25	5601.3	46.9
ONAHAM	0	IP	03	54	09.6	IS	01	20.3	13	2.5	19	4.6	18	1.9	N	7 E	6 U	15	5669.6	430.7
FUKUSH	0	P	03	54	11.6	S	01	24.0	7	3.0	5	4.7	9	4.3	N	4 E	4 U	8	5691.2	432.4
SENDAI	0	IP	03	54	16.4	ES	01	29.4	8	3.2	8	3.2	11	3.2	N	4 E	4 U	8	5754.2	433.0
						X	55	12.8												
ISHINO	0	EP	03	54	18.0	ES	01	37.6	5	3.0	5	3.6	4	4.6					5793.5	439.6
						EX	55	19.0												
MIZUSA	0	EP	03	54	18.7	EX	55	24.8	15	1.2	30	3.2	18	1.9			U	12	5827.9	66.1
AKITA	0	IP	03	54	19.8	ES	01	40	16	9.2	17	4.6	30	2.8	N	3 E	7 U	23	5796.3	440.2
OFUNAT	0	IP	03	54	22.8	S	01	45.4	5	5.6	4	3.6	8	3.0	N	3 E	2 U	7	5864.1	442.6
						X	55	22.4												
MORIOK	0	IP	03	54	23.1	S	01	45.9	4	7.2	4	4.8	8	4.0	N	0 E	0 U	1	5867.6	442.8
MIYAKO	0	EX	03	54	26	EX	01	52	5	5.1	6	5.1	9	2.4					5919.5	
AOMORI	0	EP	03	54	27.7	ES	01	46	16	3.3	16	2.6	8	3.4					5916.8	438.3
HACHIN	0	IP	03	54	28.3	ES	01	56.0	4	6.0	4	5.6	10	4.4	N	E	U	1	5947.1	447.7
HAKODA	0	IP	03	54	30.6	ES	02	02.1	5	5.6	5	3.6	9	3.8	N	3 E	3 U	8	5983.5	451.5
SAPPOR	0	IP	03	54	38.5	S	02	16.5	6	2.0	9	3.4	13	2.6	N	6 E	3 U	10	6106.4	458.0
URAKAW	0	P	03	54	41.4	S	02	22.0	8	4.6	10	4.4	14	3.4			U	2	6139.8	460.6
ASAHIK	0	IP	03	54	46.5	ES	02	30.0	4	2.8	4	3.2	7	2.6	N	E	U		6221.7	463.5
KUSHIR	0	IP	03	54	51.1	S	02	38.2	4	7.8	5	4.3	13	4.6		E	4 U	9	6300.6	467.1
WAKKAN	0	E	03	54	51.4				4	3.5	5	5.4	10	2.6					6292.6	
NEMURO	0	IP	03	54	56.6	S	02	49.0	3	8.0	3	4.5	8	3.6		E	U	1	6402.3	472.4

OT= 22 8 9 33.3 +/- 0.8
SE OFF HOKKAIDO
LAT= 42 21 +/- 3 LONG= 144 3 +/- 3
H= 0 MAG=4.1 CLASS=U

HIROO	0	EP	08	09	47.5	IS	09	57.2										60.9	09.7	
KUSHIR	0	P	08	09	49.2	ES	10	00.0	40	0.3	43	0.3	10	0.3				75.3	10.8	
OBIHIR	0	EP	08	09	51.7	S	10	03.7										92.9	12.0	
URAKAW	0	EP	08	09	53.7	IS	10	09.0	12	0.4	20	0.4						107.0	15.3	
MATSUS	0	X	08	11														817.6		

OT= 22 11 42 13.0 +/- 0.2
S OF SAITAMA PREF
LAT= 35 51 +/- 1 LONG= 139 29 +/- 1
H= 70 CLASS=S

TOKYO	3	IP	11	42	24.9	S	42	33.2	388		297	0.4	160		S	9 W	6 U	28	30.9	08.3
KUMAGA	2	IP	11	42	25.2	S	42	32.8	352	0.6	183	0.8	79	1.2	N	8 W	3 U	36	34.1	07.6
CHICHI	2	IP	11	42	25.3	IS	42	33.1	200	0.8	200	1.2	150	0.8	N	5 W	18		39.5	07.8
YOKOHA	2	IP	11	42	26.3	IS	42	39.5	394	0.8	250	0.6	57	0.5	N	14 E	4 D	55	48.4	13.2
MAEBAS	0	IP	11	42	27.4	IS	42	38.3	69	1.1	89	0.9	48	1.4	S	4 E	5 D	26	71.9	10.9
KAKIOK	1	IP	11	42	28.0	S	42	37.7	74	1.0	68	1.0	29	1.2	N	6 E	5 U	3	76.7	09.7
MISHIM	0	IP	11	42	29.1	IS	42	41.3	47	0.5	69	0.5	17	1.0		E	1 D	3	96.1	12.2
FUNATS	1	IP	11	42	29.4	IS	42	38.1											76.0	08.7
UTSUNO	2	IP	11	42	29.6	IS	42	40.0	500	0.2	400	0.2	100	0.2	S	3 W	6 D	14	84.8	10.4
KOFU	1	IP	11	42	29.6	IS	42	40.2	8	0.4	8	0.4	17	0.4		W	2 U	4	86.1	10.6
AJIRO	1	IP	11	42	29.7	IS	42	41.2	62	0.4	100	0.4	9	0.4	N	5 E	2 D	6	96.1	11.5
TOMISA	0	IP	11	42	31.3	S	42	45.0	43	1.3	25	2.0	19	3.0	N	1 E	1 D	1	107.8	13.7
MITO	0	IP	11	42	32.0	IS	42	44.7	45	1.5	52	1.4	25	1.6	S	1 W	1 U	5	106.5	12.7
OSHIMA	1	IP	11	42	32.7	IS	42	46.1	52	0.6	45	0.6	31	0.4			D	6	121.1	13.4
KARUIZ	X	IP	11	42	33.4	S	42	46.5	100	1.8	100	1.4	50	1.4	S	2 E	14 D	18	100.0	13.1
CHOSHI	0	P	11	42	34.9	S	42	49.9											123.7	15.0
						X	42	46.7												

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	0	IP	11 42 36.0	S	42 52							S	E	D	137.8	16.0
SHIZUO	0	P	11 42 36.2	IS	42 52.8	54	0.4	56	0.4	14	0.8	N 2	E 2	D 2	137.9	16.6
NAGANO	0	EP	11 42 37.8	S	42 58.5	13	0.1	12	0.1	8	0.0				146.4	20.7
SHIRAK	0	IP	11 42 38.1	IS	42 55.5									D 2	155.6	17.4
MATSUM	0	P	11 42 38.3	ES	42 54.0									D	142.9	15.7
IIDA	0	EP	11 42 38.6	IS	42 56.0	15	1.6	19	1.0	9	1.2				153.9	17.4
TAKADA	0	P	11 42 40.5	S	43 02.5										177.8	22.0
OMAEZA	0	EP	11 42 40.6			13	1.3	13	1.7						180.2	
HAMAMA	0	P	11 42 44.5	ES	43 06	9	1.0	8	0.8	5	1.0			D 1	204.1	21.5
ONAHAM	0	X	11 42 46.8	IS	43 00.0	36	1.1	50	1.1	9	0.9				176.2	
TOYAMA	0	IP	11 42 47.8	ES	43 17	14	3.8	14	3.0	9	4.2			D 1	225.4	29.2
FUKUSH	0	P	11 42 48.0	S	43 12.8	17	1.0	19	1.7	6	0.9	S 2	W 1	D 1	229.3	24.8
NAGOYA	0	EP	11 42 51.0	ES	43 19.6	13	0.8	11	0.8	6	1.2				240.4	28.6
AIKAWA	0	IP	11 42 51.1	ES	43 26.2	8	0.1	6	0.0	3	0.4	S 0		D 1	265.0	35.1
WAJIMA	0	EX	11 42 54.4			10	0.8	15	1.0						287.5	
HACHIJ	0	IP	11 42 56.2	IS	43 27.2	18		26				N 2		D 5	306.1	31.0
SENDAI	0	P	11 42 56.4	ES	43 26.5	10	1.6	8	2.0	4	0.8			D 2	295.6	30.1
GIFU	0	X	11 42 57			10	1.2	8	1.0						251.2	
NIIGAT	0	EX	11 42 57.5	ES	43 19.2	13	2.3	20	3.4	10	3.5				231.8	
ISHINO	0	IP	11 43 00.0	X	43 22.0	6	2.0	6	1.8	3	2.0				328.3	
KANAZA	0	X	11 43 01.7	ES	43 24.0	13	0.4	16	0.2	4	0.2		E 3	U 1	266.4	
HIKONE	0	X	11 43 03.1	X	43 38.3	19	1.5	13	1.0	5	0.9				300.3	
MIZUSA	0	EP	11 43 08.6	ES	43 50.6	23	1.7	9	1.5	4	1.2			U 4	392.5	42.0
AKITA	0	EX	11 43 14.2			5	3.0	5	3.0						432.7	
OSAKA	0	EX	11 43 22	X	44 07.6	9	3.0	13	4.2	6	1.8				382.9	
TOYOOK	0	X	11 43 31.7	X	44 21.7	18	1.0	12	1.0						423.4	

OT= 23 6 5 10.0 +/- 0.9
E OFF AOMORI PREF
LAT= 40 28 +/- 3 LONG= 143 0 +/- 4
H= 20 MAG=4.4 CLASS=U

HACHIN	0	EP	06 05 31.3	ES	05 49.1	5	0.4	5	0.4						125.2	17.8
MORIOK	0	P	06 05 38.7	S	06 00.0	7	0.3	5	0.2	1	0.3				178.1	21.3
AOMORI	0	IP	06 05 40.7	ES	06 01.7	27	0.9	26	0.7	11	0.7			U 3	191.5	21.0
MIZUSA	0	EP	06 05 46.4	ES	06 09.3	30	1.6	8	1.0						217.9	22.9
HAKODA	0	EP	06 05 47.8	ES	06 15.3	5	0.7	5	0.8	1	0.7			U	240.4	27.5
KUSHIR	0	EP	06 05 56.8	ES	06 24.8	9	0.3	9	0.3	3	0.2				302.2	28.0
MATSUS	0	IP	06 06 33.2										E	U	603.8	

OT= 23 7 49 5.3 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 33 +/- 1 LONG= 138 19 +/- 1
H= 0 MAG=4.5 CLASS=L

MATSUS	2	P	07 49 09.1	S	49 10.5										9.8	01.4
NAGANO	3	IP	07 49 10.2	IS	49 12.6	1000		1500		600		N 3	W 3	U 24	16.3	02.4
KARUIZ	X	IP	07 49 14.0	S	49 18.8	200	2.0	250	2.2	100	2.0	S	E	U 6	31.4	04.8
MATSUM	1	P	07 49 16.3	IS	49 22.1									U	45.9	05.8
TAKADA	0	P	07 49 18.3	S	49 26.3							N 6	E 2	U 11	61.9	08.0
MAEBAS	1	IP	07 49 19.1	ES	49 29.2	105	2.8	89	2.8	104	3.4	N 1	W 2	D 6	69.0	10.1
TOYAMA	0	IP	07 49 24.2	ES	49 37	47	3.4	55	1.6	50	4.2				100.6	12.8
CHICHI	0	EP	07 49 24.4	ES	49 35.7	100	3.0	150	3.2	100	2.4				92.5	11.3
KOFU	0	IP	07 49 25.0	ES	49 37.3	25	3.2	32	3.4	12	3.4	S 3	E 3	U 6	100.6	12.3
KUMAGA	0	EP	07 49 27.4	ES	49 40.4	46	3.4	58	4.6	43	3.8				105.8	13.0
IIDA	0	IP	07 49 28.0	IS	49 43.4	13	1.8	15	3.0	10	4.0	S 2	W 1	U 2	123.3	15.4
FUNATS	0	IP	07 49 30.0	S	49 46.6										123.4	16.6
UTSUNO	0	EP	07 49 31.0	ES	49 48.6	16	2.0	14	1.0						139.2	17.6
MISHIM	0	EP	07 49 32.8	ES	49 57.8	13	4.3	25	4.3	9	1.1				168.9	25.0
KANAZA	0	P	07 49 32.9	ES	49 50.6	21	0.2	23	0.2	7	0.2	N 1	E 2	D 2	149.4	17.7
WAJIMA	0	EP	07 49 33.0	S	49 53.0	70	0.8	80	0.6	13	0.6				156.9	20.0
AIKAWA	0	IP	07 49 33.0	IS	49 52.2	13	0.2	15	0.0	5	0.2	N 4	W 2	U 3	163.3	19.2
NIIGAT	0	IP	07 49 35.5	IS	49 57.0	33	3.5	53	5.8	25	3.5			U 5	164.4	21.5
KAKIOK	0	EP	07 49 36	ES	49 57	17	1.0	11	1.0	4	1.2				172.0	21.0
TOKYO	0	EP	07 49 37	ES	49 57	57	4.0	38	5.0	62	4.2				161.4	20.0
SHIZUO	0	EP	07 49 38.1	S	50 02.0	7	6.3	9	3.8	6	5.5				175.1	23.9
MITO	0	P	07 49 39.3	S	50 02.5	39	0.4	22	0.7	9	3.0				194.1	23.2
YOKOHA	0	IP	07 49 39.5	S	50 03.0	26	0.9	23	0.9	15	2.4			D 7	172.7	23.5
GIFU	0	P	07 49 40.2	S	50 03.2	33	1.6	34	1.8	13	1.5				189.5	23.0
NAGOYA	0	EP	07 49 40.6	S	50 03.6	24	1.6	22	1.2	16	1.2	N 2	E 2	D 2	196.0	23.0
OMAEZA	0	EP	07 49 40.8			20	3.9	22	4.2						216.1	
HAMAMA	0	P	07 49 41.9	S	50 08.0	23	1.6	21	1.6	11	1.4			U 1	211.2	26.1
TSURUG	0	EP	07 49 42.7	S	50 13.8										226.0	31.1
TOMISA	0	P	07 49 45.3			14	4.3	9	2.5	6	3.0				226.7	
HIKONE	0	EP	07 49 45.7	S	50 14.8	25	1.6	22	1.2	13	1.3				234.4	29.1

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
FUKUSH	0	EP	07 49 46.4	ES	50 15.6	7	0.9	6	1.0	3	3.6				233.8	29.2
ONAHAM	0	X	07 49 51.1	ES	50 20.4	13	1.2	17	1.2	5	2.9				235.4	
KYOTO	0	EP	07 49 54.4	ES	50 31.8	5	1.2	5	1.2	2	5.2				289.1	37.4
TOYOOK	0	X	07 50 05.4	S	50 45.3	15	1.0	9	1.2						334.5	
OSAKA	0	X	07 50 08.0			26	3.8	31	3.8	9	1.9				328.4	

OT= 24 21 37 55.8 +/- 0.4
E OFF HOKKAIDO
LAT= 43 1 +/- 1 LONG= 145 35 +/- 2
H= 30 MAG=4.6 CLASS=L

NEMURO	2	IP	21 38 04.0	IS	38 09.4	124	0.3	183	0.3	69	0.2	S 1	E 2	D 12	34.6	05.4
KUSHIR	2	IP	21 38 13.1	ES	38 22.4	65	0.3	124	0.3	32	0.2		E 3	D 6	97.0	09.3
ABASHI	0	IP	21 38 20.2	IS	38 37.6	6	1.4	6	1.4	9	1.2	S 6	E 7	D 11	153.0	17.4
HIROO	0	EP	21 38 27.5	ES	38 51.2										203.0	23.7
URAKAW	0	EP	21 38 33.3	S	39 08.1	18	1.2	18	1.6	5	1.2				249.1	29.8
MIZUSA	0	EP	21 39 14.3	ES	40 08.3			3	1.0						570.7	54.0
MATSUS	0	P	21 40 00												956.6	

OT= 26 3 52 17.3 +/- 0.7
N OFF HOKKAIDO
LAT= 45 38 +/- 6 LONG= 143 2 +/- 7
H=360 CLASS=R

WAKKAN	0	EP	03 53 04.6	IS	53 36.8	10	1.2	26	3.7						108.9	32.2
ASAHIK	0	P	03 53 09.4	S	53 51.0	16	2.0	17	2.2	5	1.8				213.6	41.6
ABASHI	0	P	03 53 10.0	S	53 51.4	22	2.8	24	4.0	9	4.0				205.1	41.4
OBIHIR	0	P	03 53 16.0	IS	54 02.6										302.0	46.6
KUSHIR	1	EP	03 53 16.2	ES	53 58.8	62	0.3	57	0.3	14	0.3				314.5	42.6
SAPPOR	0	IP	03 53 17.8	S	54 02.6	28	2.4	26	2.6	8	2.4			U 4	316.7	44.8
URAKAW	0	EP	03 53 23.2	ES	54 14.0	36	0.6	36	0.6	9	1.0				386.7	50.8
HAKODA	0	IP	03 53 30.1	S	54 24.0	9	1.6	9	1.8	3	1.4	S 1	W 1	U 3	462.4	53.9
HACHIN	0	EP	03 53 40.1	IS	54 42.4	24	0.4	18	0.4	5	0.6			D	580.7	62.3
AOMORI	0	EP	03 53 40.2	IS	54 42.1	48	2.0	51	1.1	20	0.9				565.5	61.9
MORIOK	0	P	03 53 50.7	S	55 02.0	21	0.4	20	0.5	5	1.6	S 0		U 0	677.0	71.3
MIYAKO	0	EP	03 53 51	S	55 00.2	6	1.7	7	2.1	3	0.0				671.0	69.2
AKITA	0	EP	03 53 55.2	ES	55 07.2	7	2.8	13	3.6	5	2.6				699.6	72.0
OFUNAT	0	EP	03 53 57.8	IS	55 13.5	11	0.6	7	0.2	5	1.0				738.1	75.7
MIZUSA	0	EP	03 53 59.0	IS	55 14.7	55	1.6	32	2.5	16	1.7		E 1		738.8	75.7
SAKATA	0	EX	03 54 04.9	IS	55 28.9										792.7	
ISHINO	0	IP	03 54 06.6	ES	55 27.2	5	1.0	5	1.2	5	0.8	N	E	U	813.4	80.6
SENDAI	0	EP	03 54 09.2	S	55 33.6	10	0.8	13	2.0	5	1.6				837.9	84.4
FUKUSH	0	EP	03 54 16.0	ES	55 47.0	6	1.2	5	0.9	3	0.8				900.4	91.0
MATSUS	0	IP	03 54 36.3	S	56 28							S		U	1087.9	111.7
ONAHAM	0	EX	03 54 42.3	ES	55 57.5	11	0.9	14	1.2	3	1.2				981.2	
NIIGAT	0	X	03 55 44.9			8	3.0	8	2.5	5	3.0				919.3	
MITO	0	X	03 56 14.4			7	2.0	5	1.6	5	2.0				1050.1	
OSAKA	0	X	03 57 28			6	3.8								1375.4	

OT= 26 8 48 52.2 +/- 0.8
OFF IBARAKI PREF
LAT= 36 26 +/- 2 LONG= 141 30 +/- 4
H= 20 MAG=4.5 CLASS=L

ONAHAM	0	IP	08 49 07.8	IS	49 17.7	125	1.2	99	1.2	16	0.7			D 4	77.7	09.9
CHOSHI	0	EP	08 49 09.0	S	49 22.8										98.3	13.8
MITO	0	IP	08 49 09.5	S	49 19.2	47	0.3	39	0.3	14	0.6			D 12	92.4	09.7
KAKIOK	0	P	08 49 12.5	S	49 24.1					14	1.0				119.4	11.6
SHIRAK	0	EP	08 49 14.9	ES	49 29.9										136.8	15.0
UTSUNO	0	P	08 49 17.2	S	49 33.4	28	0.2	9	0.9	10	1.0				146.4	16.2
FUKUSH	0	IP	08 49 21.0	ES	49 35.0	77	0.9	33	0.9	20	0.6	S 2	E 2	U 2	172.8	14.0
TOKYO	0	EP	08 49 22	ES	49 44	22	2.0	11	3.0	10	1.8				177.5	22.0
KUMAGA	0	EP	08 49 23.2	ES	49 46.6	10	1.2	9	1.4	5	3.0				192.6	23.4
SENDAI	0	EP	08 49 25.2	S	49 51.1	16	0.8	12	1.2	6	1.6				209.6	25.9
ISHINO	0	P	08 49 26.3	ES	49 50.2	6	1.2	5	1.0	3	1.0	N	E	U	221.7	23.9
MAEBAS	0	IP	08 49 26.4	ES	49 51.0	8	1.8	8	1.4	6	1.5			D 2	218.4	24.6
YOKOHA	0	EP	08 49 28.5	S	49 50.1	17	0.6	14	1.1					D 3	199.8	21.6
TOMISA	0	EP	08 49 28.7			9	2.0	9	3.1	6	3.0				226.0	
KARUIZ	0	EP	08 49 31.7												264.7	
MISHIM	0	EP	08 49 34			6	0.7	6	0.9						274.7	
MATSUS	0	IP	08 49 35.9	S	50 14							S	W	U	295.1	38.1
KOFU	0	EP	08 49 36.0	ES	50 09.6	9	1.0	9	1.7	3	1.6				278.4	33.6
MIZUSA	0	EP	08 49 40.6	ES	50 21.2	33	1.6	11	1.7	6	1.2				301.4	40.6

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
MORIOK	0	EP	08	49	44.0	ES	50	23.7	5	0.4	7	0.4	1	0.4				363.4	39.7
AKITA	0	EX	08	49	52.0				7	3.2	6	3.2						384.7	
NIIGAT	0	X	08	50	04.3				8	1.8	13	3.3	5	3.0				272.2	
AOMORI	0	X	08	50	56				10	1.4	8	1.4						490.5	

OT= 27 17 13 9.6 +/- 0.2
W COAST OF WAKAYAMA PREF
LAT= 34 4 +/- 1 LONG= 135 5 +/- 1
H= 10 MAG=3.5 CLASS=L

WAKAYA	2	IP	17	13	14.5	IS	13	16.5	94	0.1	102	0.1						19.3	02.0
SUMOTO	0	IP	17	13	17.4	S	13	21.0	21	0.3	11	0.3	5	0.2	S	3	E 1 D 2	33.8	03.6
TOKUSH	0	EP	17	13	18.5	IS	13	24.6										46.8	06.1
KOBE	0	EP	17	13	24.4	ES	13	31.4										69.5	07.0
SHIONO	0	EP	17	13	27.6	IS	13	38.4	12	0.6	9	0.2	7	0.7				93.1	10.8
OWASE	0	P	17	13	28.5	S	13	40.0	3		6		2					102.6	11.5
TAKAMA	0	EP	17	13	28.9	ES	13	41.3	6	1.0	12	1.0	3	0.6				98.4	12.4
OSAKA	0	X	17	13	34.2				9	5.0	13	3.5						76.9	
TOYOOK	0	X	17	13	57.2				11	1.1	16	1.2						164.8	
MATSUS	0	X	17	14	18	S	15	00										394.8	

OT= 28 5 11 8.3 +/- 0.6
OFF URAKAWA
LAT= 41 55 +/- 4 LONG= 142 36 +/- 3
H= 90 CLASS=L

URAKAW	1	IP	05	11	22.7	IS	11	30.7	171	0.4	311	0.4	41	0.4	N	10	W 1 U 36	30.7	08.0
HIROO	1	IP	05	11	26.1	IS	11	36.6							N	2	E 4 U 6	71.9	10.5
MURORA	0	P	05	11	32.4	S	11	47.4							S		E D	140.9	15.0
OBIHIR	1	IP	05	11	32.5	IS	11	47.5									U 2	122.7	15.0
HAKODA	0	IP	05	11	34.5	IS	11	52.1	23	1.4	13	0.6	6	0.8	N	1	E 2 D 4	153.4	17.6
SAPPOR	0	IP	05	11	35.4	IS	11	53.0	25	0.8	16	0.6	10	0.6	S	2	E 1 D 10	164.2	17.6
KUSHIR	0	EP	05	11	36.3	S	11	58.8	19	0.7	23	0.3	7	0.3				189.0	22.5
HACHIN	0	P	05	11	39.6	S	11	59.4	10	0.2	8	0.2			N		D	178.9	19.8
ASAHIK	0	IP	05	11	41.4	EX	12	06.8	7	1.4	5	1.0	4	0.8			U	206.8	
AOMORI	0	EP	05	11	44.2	ES	12	04.1	26	1.2	25	1.8						195.0	19.9
RUMOI	0	EX	05	11	46.2	EX	12	10.7										239.3	
MORIOK	0	P	05	11	52.0	S	12	23.9	5	0.4	7	0.4	1	0.4				274.5	31.9
MIZUSA	0	X	05	12	05.2	X	12	40.3			8	1.3						333.1	
MATSUS	0	EP	05	12	46													707.1	

OT= 30 6 1 45.4 +/- 0.6
E OFF HOKKAIDO
LAT= 43 8 +/- 2 LONG= 145 56 +/- 4
H= 90 CLASS=R

NEMURO	3	IP	06	02	00.4	S	02	09.9	800	0.4	500	0.3	350	0.3	S	3	E 8 D170	35.5	09.5
KUSHIR	3	IP	06	02	07.6	S	02	22.1	750	0.6	600	0.3	350	1.0	S	2	E 41 D 72	126.5	14.5
ABASHI	X	IP	06	02	12.4	IS	02	29.8	207	1.2	309	0.8			N	9	W 14	165.6	17.4
OBIHIR	1	IP	06	02	19.5	IS	02	43.3									D 5	222.3	23.8
HIROO	2	IP	06	02	22.3	IS	02	46.8									D 2	234.3	24.5
URAKAW	0	EP	06	02	26.5	S	02	56.0	74	1.4	90	0.8	31	2.2				280.4	29.5
ASAHIK	0	IP	06	02	27.7	IS	02	58.8	58	2.2	127	2.0	45	2.0	N	1	W 1 U	296.8	31.1
RUMOI	0	IP	06	02	37.4	IS	03	14.6									U 7	359.2	37.2
SAPPOR	0	P	06	02	37.4	ES	03	13.6	40	1.8	59	1.8	24	2.4			U 2	374.8	36.2
MURORA	0	EP	06	02	42.3	IS	03	23.4										415.5	41.1
WAKKAN	0	IP	06	02	42.9	S	03	25.4	23	2.7	26	4.0	18	3.2			U 2	424.2	42.5
HAKODA	0	IP	06	02	45.8	IS	03	30.2	29	1.6	36	1.2	10	1.8		E	0 D 1	450.1	44.4
HACHIN	1	IP	06	02	48.2	IS	03	32.6	73	2.8	68	2.6	20	2.4	S	W	1 U	466.9	44.4
AOMORI	0	EP	06	02	53.0	IS	03	40.0	100	1.1	110	1.4	54	1.1				498.3	47.0
MIYAKO	0	EX	06	02	53	ES	03	42.4	17	3.1	11	1.0						509.9	
MORIOK	1	IP	06	02	58.5	IS	03	52.2	38	0.4	33	0.4	13	0.6	S	0	W 0 U 0	551.6	53.7
OFUNAT	X	EP	06	03	01.4	IS	03	56.0	17	0.8	27	1.0	16	1.8				574.2	54.6
MIZUSA	1	EP	06	03	04.7	IS	04	02.8	215	2.4	141	1.7	104	1.2			D 4	599.7	58.1
AKITA	0	EX	06	03	07.7	ES	04	06.0	31	2.6	31	2.4	17	2.4				617.5	
ISHINO	1	P	06	03	10.5	IS	04	13.0	30	1.0	26	1.0	15	1.0	N		E D	652.6	62.5
SENDAI	1	EP	06	03	16.4	IS	04	22.1	28	3.6	41	1.8	17	2.0				688.1	65.7
YAMAGA	0	EP	06	03	19.7	S	04	28.5										718.3	68.8
FUKUSH	0	EP	06	03	25.2	ES	04	36.3	59	1.0	23	1.0	8	1.0				755.2	71.1
ONAHAM	0	EX	06	03	25.9	IS	04	46.2	36	0.9	45	1.3	17	2.4				809.7	
SHIRAK	0	EP	06	03	31.7	ES	04	52.5										825.9	80.8
MITO	0	IP	06	03	39.9	X	05	02.4	27	2.6	21	1.4	13	1.5			D 1	883.6	
UTSUNO	0	EP	06	03	42.0	ES	05	08.3	15	1.9	17	0.9	9	1.0				896.1	86.3

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
TAKADA	0	EP	06	03	48.9	S	05	18.1										935.7	89.2
KUMAGA	0	EP	06	03	50.0	ES	05	22.0	15	3.0	14	3.0	11	3.0				957.3	92.0
MATSUS	0	IP	06	03	51.9	S	05	28							S	W	U	985.8	96.1
KARUIZ	0	EP	06	03	52.8	ES	05	30.1										983.7	97.3
WAJIMA	0	EX	06	03	54.0	X	05	34.0	8	1.2	10	1.2						997.7	
MAEBAS	0	EP	06	03	54.6	EX	05	25.9	10	4.5	11	3.4	6	1.8				950.6	
TOYAMA	0	EX	06	03	58				6	2.8	5	3.2	5	2.8				1031.2	
TOKYO	0	EX	06	03	58	ES	05	26	28	1.0	11	1.0	9	0.8				982.5	
SAKATA	0	X	06	03		IS	04	27.8										695.1	
AJIRO	0	EP	06	04	00.3	X	05	44.2	3	0.5	5	0.5	1	1.0				1074.5	
TOMISA	0	EP	06	04	02.8				14	3.7	16	3.0	10	2.0				1053.2	
KOFU	0	EP	06	04	02.9	ES	05	39.3	9	1.8	12	1.6	4	1.6				1043.6	96.4
NIIGAT	0	EX	06	04	04.7	IX	04	53.4	30	3.1	30	3.4	13	3.7				822.0	
NAGOYA	0	EP	06	04	15.3	ES	06	10.0	7	2.2	5	2.2	2	2.2				1174.6	114.7
HACHIJ	0	X	06	04	25.6	E	06	18.4										1236.0	
OSAKA	0	EX	06	04	34				7	3.2	7	3.1						1302.0	
FUNATS	0	X	06	04	44.0	ES	05	42.4										1048.3	
HAMAMA	0	X	06	05	06				5	3.0	7	2.2	3	1.0				1174.1	
YOKOHA	0	X	06	05	10.7	S	05	35.1	17	0.7	35	1.0						1011.0	
CHOSHI	0	X	06	05	14.1													931.5	
OMAEZA	0	EX	06	06					7	2.8	7	2.6						1158.8	

OT= 30 16 3 6.9 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 34 +/- 1 LONG= 138 17 +/- 2
H= 10 MAG=4.1 CLASS=L

MATSUS	2	P	16	03	10.0	S	03	11.4										7.4	01.4
NAGANO	3	IP	16	03	11.0	S	03	13.7	600		600		100		S	6	E 8 D 21	12.9	02.7
KARUIZ	X	P	16	03	15.2	S	03	19.8									U	34.8	04.6
MATSUM	1	IP	16	03	16.8	IS	03	23.0									U	45.4	06.2
TAKADA	0	P	16	03	18.3	S	03	26.3										59.8	08.0
MAEBAS	0	IP	16	03	20.2	S	03	29.5	29	2.6	28	2.6	26	3.9			W 1 D 4	72.4	09.3
CHICHI	0	EP	16	03	21.4	ES	03	36.4										96.0	15.0
TOYAMA	0	IP	16	03	26.0	ES	03	41	15	3.6	18	3.8	11	2.4			D 4	97.4	15.0
KOFU	0	IP	16	03	26.0	ES	03	38.4	11	1.0	13	0.3	4	1.0	S	2	E 1 U 4	103.0	12.4
KUMAGA	0	EP	16	03	26.6	ES	03	40.4	16	3.2	21	4.8	14	4.0				109.3	13.8
IIDA	0	EP	16	03	29.4	ES	03	45.0	5	1.2	5	1.4	2	0.6				124.0	15.6
AIKAWA	0	IP	16	03	33.7	ES	03	52.8	5	0.1	8	0.1			N	2	U 3	161.3	19.1
KANAZA	0	P	16	03	34.5	ES	03	50.2	6	0.3	7	0.3			N	2	W 1 U 2	146.4	15.7
NIIGAT	0	IP	16	03	35.6	IS	03	56.5	15	4.3	16	4.2	8	5.0			U 5	163.9	20.9
GIFU	0	EP	16	03	40.2	S	04	02.7	12	1.4	23	2.0	6	1.4				188.5	22.5
YOKOHA	0	EP	16	03	40.3	S	04	03.7	10	0.7	8	0.6						176.1	23.4
MITO	0	P	16	03	40.6	S	04	03.0	15	0.3	11	0.4	3	0.4				197.2	22.4
HAMAMA	0	EP	16	03	44	ES	04	10	9	1.4	8	2.0	5	1.4				212.3	26.0
NAGOYA	0	EP	16	03	44.7	S	04	04.6	11	1.4	12	1.4	5	1.0				195.6	19.9
HIKONE	0	X	16	03	54.4	X	04	23.4	13	0.9	9	1.0						233.1	
TOKYO	0	X	16	03	55				18	3.6	10	6.0	16	4.2				164.9	
ONAHAM	0	X	16	04	10.2				7	1.1	12	1.2	3	1.6				237.9	
OSAKA	0	X	16	04	28.2				10	5.0	9	5.0						327.3	

OT= 30 17 3 3.9 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 34 +/- 1 LONG= 138 14 +/- 1
H= 10 MAG=3.5 CLASS=L

MATSUS	2	P	17	03	06.3	S	03	07.6										3.9	01.3
NAGANO	2	IP	17	03	07.2	S	03	09.2										10.9	02.0
KARUIZ	0	EP	17	03	12.4	S	03	16.9										38.0	04.5
MATSUM	0	EP	17	03	13.4	IS	03	19.3										42.8	05.9
TAKADA	0	EP	17	03	16.2	S	03	22.8										59.7	06.6
KOFU	0	IP	17	03	22.8	ES	03	35.2	5	1.0	5	0.5	2	1.0			U 1	104.2	12.4

List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE		PHASE AND TIME (J.S.T.) H M S			INITIAL MOTION	
1	EP	15 50 22.				
1	P	16 21 34.				
2	IP	08 37 57.4			S D	
2	P	11 38 27.	S	40 06.		
2	P	23 23 52.	S	24 22.	E	
3	P	00 41 54.				
3	P	00 45 15.				
3	EP	02 14 57.				
3	IP	02 17 49.0	ES	24 00.	S D	
3	P	02 23 12.	ES	24 00.		
3	P	03 05 35.				
3	IP	07 05 22.0			S D	
3	IP	18 43 49.8			N D	
4	P	14 10 42.				
4	P	16 02 08.	S	02 18.		
4	EP	17 37 28.				
4	EP	21 35 21.				
5	IP	00 04 00.7			N E D	
5	P	00 33 02.	S	33 28.		
5	P	01 29 57.				
5	IP	05 24 17.2			S E D	
5	IP	18 55 21.5	S	56 29.	D	
5	P	21 45 00.				
5	IP	23 55 23.6			W U	
6	P	00 09 10.	ES	16 24.		
6	P	02 15 06.				
6	P	02 47 19.				
6	IP	06 28 01.6	S	28 23.	S D	
6	IP	11 16 36.7			N W U	
6	IP	13 56 13.6			D	
6	P	22 09 46.				
6	IP	22 30 27.8			N E D	
7	P	00 55 26.				
7	IP	03 40 56.3			U	
7	P	04 50 06.	ES	51 32.		
7	IP	10 47 59.0	S	48 14.	N D	
7	P	15 48 22.				
7	P	16 47 33.				
7	EP	16 53 51.				
7	P	19 24 50.				
7	IP	20 55 15.1				
8	IP	06 50 58.9	S	51 24.	S U	
8	IP	23 49 12.7			E U	
9	P	03 57 02.				
9	EP	08 34 12.				
9	IP	15 17 31.7	S	19 33.	D	
9	IP	20 02 08.1			S W U	
9	IP	21 45 23.8	ES	52 42.	D	
9	P	23 15 46.				
10	P	01 02 46.	ES	07 47.		
10	IP	06 36 30.3			D	
10	IP	12 19 33.5			E D	
10	P	15 00 01.			N D	
10	IP	22 36 04.1			D	
11	EP	02 44 35.				
11	IP	04 38 26.8			U	
11	IP	09 08 26.7			W U	
11	IP	11 28 42.0	IS	28 57.0	N E D	
11	IP	23 59 52.1	S	07 04.	E U	
12	IP	00 24 58.7			U	
12	P	01 25 30.6				
12	IP	05 52 27.4	S	52 48.	N W U	
12	P	14 30 01.				
12	P	23 26 14.	IS	26 31.7		
13	IP	02 06 15.1			U	
13	P	03 10 25.				
13	P	03 17 48.				
13	P	07 25 48.				
13	IP	08 01 42.6			D	
13	P	13 09 57.5				
13	IP	14 23 13.8			S W D	
13	IP	14 27 42.0	S	34 45.	U	
13	P	14 45 16.	S	45 37.		
13	P	18 19 37.				
13	IP	22 30 24.1	S	30 40.	W U	
13	IP	22 43 12.6	S	43 41.	S E D	
14	IP	00 10 51.5			U	
14	IP	01 17 42.1	S	18 16.	N U	
14	P	14 13 45.	S	15 27.		
14	IP	17 58 16.8				
14	P	18 09 48.				
14	IP	21 21 26.8			W D	
14	IP	21 33 12.4			D	
15	IP	08 56 19.4	S	56 41.6	S E D	
15	P	09 07 01.	S	18 17.	S E D	
15	IP	09 14 45.3			S D	
15	IP	11 28 48.6	S	29 50.	N W U	
15	IP	11 37 04.5			W D	
15	P	11 39 50.				
15	EP	11 47 25.	ES	48 03.		
15	P	11 53 26.				
15	IP	12 12 12.3			S D	
15	P	12 57 36.3	ES	58 35.		
15	IP	13 48 35.3	S	48 56.	D	
15	IP	16 28 10.1	S	28 27.6	N E D	
15	IP	16 40 33.6	S	40 59.	S E U	
15	P	17 25 30.				
15	P	17 50 29.	S	51 12.		
15	P	19 46 56.	S	47 37.		
15	IP	20 52 46.1	S	53 28.	D	
15	P	20 55 41.	S	56 30.		
15	IP	21 43 10.1	IS	43 51.6	N U	
16	IP	00 49 12.6	S	50 55.	N U	
16	EP	02 28 05.				
16	IP	07 17 04.4	IS	17 49.0	S D	
16	P	10 15 58.				
16	IP	12 13 13.4			D	
16	IP	12 44 42.6	S	44 59.	E D	
16	P	13 07 10.				
16	IP	14 11 26.7			D	
16	IP	14 22 03.1	S	22 25.	S E D	
16	P	15 26 11.				
16	IP	19 40 22.3	S	40 48.	E D	
16	P	21 48 51.				
16	IP	22 23 17.6	S	23 40.	W U	
17	P	02 42 38.				
17	IP	04 26 11.2	S	27 20.	N W U	
17	IP	07 33 28.8	S	34 16.	D	
17	EP	08 42 30.				
17	IP	12 03 33.0	S	04 48.	S D	
17	IP	12 58 15.4			S E U	
17	P	16 37 00.				
17	P	17 32 14.				
17	P	18 26 32.	S	27 35.		
17	IP	18 35 38.3	ES	36 20.	E U	
17	P	18 47 11.	S	54 20.		
17	P	22 05 50.			S D	
17	IP	22 54 53.3				
17	IP	23 41 47.4			D	
18	IP	01 59 54.7	S	00 20.7	S E D	
18	P	03 00 11.				
18	P	03 03 16.			U	
18	IP	12 08 07.3			U	
18	IP	13 08 39.9	S	10 02.	U	
18	IP	13 40 52.4	S	42 25.		
18	IP	20 24 18.3	S	25 40.	S W U	
18	P	20 53 00.				
18	IP	23 02 43.1	S	04 02.	S W U	
18	IP	23 28 48.2			D	
19	IP	08 41 15.5	S	43 20.	S W D	
19	EP	14 28 00.				

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DATE		PHASE AND TIME H M S			INITIAL MOTION	
20	P	00 53 18.				
20	EP	03 19 00.				
20	P	05 15 09.				
20	P	05 20 30.				
20	IP	05 34 07.3			D	
20	P	11 55 15.	S	58 36.		
20	P	12 23 41.				
20	IP	13 38 46.3	ES	39 07.	U	
20	P	17 56 17.				
20	IP	21 34 47.2	ES	35 19.	S E D	
20	P	22 22 03.				
21	IP	00 12 08.5			N W U	
21	IP	00 12 08.5			N W U	
21	P	05 59 20.				
21	P	05 59 20.				
21	IP	07 27 25.9	ES	28 08.	D	
21	IP	07 27 25.9	ES	28 08.	D	
21	EP	15 39 57.				
21	EP	16 31 03.				
21	IP	20 58 21.8				
21	P	21 25 14.3				
22	IP	01 05 10.1			U	
22	P	01 46 15.				
22	IP	03 53 54.3			N E U	
22	EP	04 24 30.				
22	P	08 11 18.				
22	EP	08 18 02.				
22	IP	11 42 36.0	S	42 52.	S E D	
22	IP	12 16 11.0	IS	16 48.5	D	
22	IP	12 29 06.0			W D	
22	IP	14 02 57.0				
22	IP	17 55 44.9			S U	
22	IP	21 18 25.7			U	
22	P	23 36 11.				
23	P	02 05 31.				
23	IP	06 06 33.2			E U	
23	IP	10 25 13.0	S	27 40.	U	
23	IP	10 55 32.7	S	57 44.	N E D	
23	IP	14 58 21.0	ES	02 34.	U	
23	EP	15 17 25.				
23	P	17 43 43.				
23	IP	18 53 44.5			U	
23	P	22 51 49.				
23	IP	23 12 07.5			U	
23	IP	23 18 39.2			U	
24	P	00 37 10.				
24	IP	04 37 28.8			U	
24	IP	06 01 46.9			S U	
24	P	21 40 00.				
25	P	04 04 38.				
25	IP	07 43 23.9			N E U	
25	IP	10 28 41.0			S E D	
25	P	12 44 46.				
25	IP	15 37 46.9	S	37 52.9	N U	
25	P	15 49 48.				
25	P	17 09 09.	S	09 38.		
25	P	22 41 50.				
26	P	01 05 25.				
26	IP	03 04 11.5			S U	
26	IP	03 54 36.3	S	56 28.	S U	
26	P	06 12 13.	S	12 42.		
26	IP	08 49 35.9	S	50 14.	S W U	
26	EP	13 11 51.				
26	P	19 36 42.	S	37 34.		
27	IP	00 12 08.3			U	
27	P	00 59 18.				
27	IP	04 36 09.9	S	38 00.	N U	
27	EP	05 21 28.				
27	P	06 25 11.				
27	IP	09 07 04.6	S	07 26.		
27	P	10 50 58.				
27	EP	17 14 18.	S	15 00.		
28	IP	02 29 13.1	S	34 16.	S W U	
28	P	04 14 26.	S	21 24.		
28	EP	05 12 46.				
28	EP	10 38 06.	ES	43 04.		
28	IP	12 09 36.6			S U	
28	P	12 54 47.				
28	P	16 21 11.4			N U	
28	IP	20 56 31.3			N E U	
29	P	03 31 55.				
29	IP	13 51 04.2	S	55 28.	N U	
29	P	20 20 39.3			U	
29	P	20 24 16.2			D	
29	P	21 56 16.				
29	IP	23 57 42.2			W D	
30	IP	00 16 56.2	S	17 35.	E D	
30	IP	02 05 14.8			S W D	
30	IP	06 03 51.9	S	05 28.	S W U	
30	P	07 14 41.	S	15 23.		
30	P	16 17 16.				
31	P	01 49 59.5			E U	
31	IP	15 03 15.9			S W U	
31	IP	18 25 11.9			E D	

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF MATSUSHIRO ARE LEFT OUT FROM THE TABLE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

D	INT	(J.S.T.) H	M
1	1	01	14
1	1	03	49
1	1	08	37
1	1	10	08
1	1	15	33
1	1	20	15
1	1	21	50
2	1	01	27
2	1	09	04
2	1	13	18
2	1	15	08
2	1	17	02
3	1	00	08
3	1	01	02
3	1	01	22
3	1	02	06
3	1	04	10
3	1	08	57
3	1	15	34
3	1	19	11
3	1	20	16
3	1	20	46
3	1	21	09
4	1	03	21
4	1	04	28
4	1	06	25
4	1	21	37
5	1	03	42
5	2	08	25
5	3	08	25
5	1	08	27
5	1	08	28
5	1	08	37
5	1	08	37
5	1	09	28
5	1	10	41
5	1	11	52
5	1	12	14
5	1	12	20
5	1	12	31
5	1	12	39
5	1	13	11
5	1	15	10
5	1	15	16
5	1	15	25
5	1	16	21
5	1	17	17
6	1	03	53
6	1	12	35
6	1	12	44
6	1	14	51
6	1	14	51
6	1	20	58
6	1	21	46
6	1	23	28
7	1	02	05
7	1	02	07
7	1	02	09
7	1	03	54
7	1	06	06
7	1	09	57
7	1	12	17
7	1	13	20
7	1	13	20
7	1	15	28
7	1	16	23
7	1	16	43
7	1	16	50
7	1	17	33
7	1	18	20
7	1	18	42
7	1	19	22
7	1	20	32
7	1	20	48
7	1	20	54
8	1	02	28
8	1	02	54
8	1	03	11
8	1	03	11
8	1	05	15
8	1	07	11
8	1	08	57
8	1	13	19
8	1	13	23
8	1	16	54
8	1	18	13
8	1	20	14
8	1	22	30
9	1	02	19
9	1	03	27
9	1	10	22
9	1	11	19
9	1	11	20
9	1	11	23
9	1	12	47
9	1	14	49
9	1	16	25
9	1	23	47
10	1	04	00
10	1	06	12
10	1	06	14
10	1	09	00
10	1	10	54
10	1	13	40
10	1	16	07
10	1	19	44
10	1	21	48
10	1	22	53
10	1	22	54
11	1	00	14
11	1	04	59
11	1	05	22
11	1	10	26
11	1	11	17
11	1	13	19
11	1	13	33
11	1	13	46
11	1	17	44
11	1	18	42
11	1	23	33
12	1	01	05
13	2	00	01
13	1	01	01
13	1	08	15
13	1	08	19
13	1	09	22
13	1	11	50
13	1	12	43
13	1	16	04
13	1	18	36
13	1	19	05
14	1	05	44
14	1	05	50
14	1	16	51
14	1	18	48
14	1	19	31
14	1	22	27
14	1	22	49
15	1	04	41
15	1	08	09
15	1	13	21
15	1	13	54
15	1	16	35
15	1	22	33
16	1	01	03
16	1	01	10
16	1	03	59
16	1	07	34
16	1	10	54
16	1	16	13
16	1	18	15
16	1	18	21
16	1	21	59
17	1	03	29
17	1	05	39
17	1	05	53
17	1	08	49
17	1	15	13
17	1	23	02
18	1	04	46
18	1	05	21
18	1	06	54
18	1	08	07
18	1	22	43
19	2	12	46
19	1	13	59
19	1	14	00
19	2	14	28
19	1	14	34
20	1	19	08
21	1	07	36
21	1	20	04
21	2	20	58
21	1	20	58
21	1	22	08
21	1	22	46
22	1	00	10
22	1	01	20
22	1	02	31
22	1	05	38
22	1	06	32
22	1	06	41
22	1	09	02
22	1	14	54
22	1	16	56
22	1	20	51
22	1	23	13
22	1	23	15
23	1	07	27
23	2	07	49
23	1	07	51
23	1	16	30
24	1	00	25
24	1	02	01
24	1	02	10
24	1	03	16
24	1	03	31
24	1	10	12
25	1	02	24
25	1	05	58
25	1	06	52
25	1	08	28
25	1	14	35
25	1	20	55
25	1	22	19
26	1	00	52
26	1	16	32
26	1	20	25
26	1	21	29
26	1	21	30
26	1	21	32
26	1	21	47
26	1	22	34
27	1	03	11
27	1	03	11
27	1	15	14
27	1	22	40
28	1	03	41
28	1	04	12
28	1	04	44
28	1	06	30
28	2	14	27
28	1	15	27
28	1	19	41
28	1	20	04
29	1	02	00
29	2	03	17
29	1	11	02
29	1	11	30
29	1	15	09
29	1	19	07
30	1	04	29
30	1	07	48
30	1	09	30
30	1	13	50
30	1	14	18
30	2	16	03
30	2	16	04
30	1	16	04
30	1	16	09
30	1	17	01
30	2	17	03
30	1	17	36
30	1	18	13
30	1	20	20
30	2	21	27
30	1	21	43
30	1	22	21
31	1	04	18
31	1	05	06
31	1	05	17
31	1	07	19
31	1	10	57
31	1	10	58
31	1	20	05
31	1	22	13

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International Seismological Centre From the ISC collection scanned by SISMOS

31 MAY 1968

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昭和42年 6 月

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OF

THE JAPAN METEOROLOGICAL AGENCY

FOR

JUNE 1967

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Tokyo

1968

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List 1 **JMA stations and their seismographs**

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S, VI, O P
Aikawa	AIKAWA	138 14.5	38 01.2	34	S, VI, O P
Ajiro	AJIRO	139 05.8	35 02.6	59	S, VI, O P
Akita	AKITA	140 06.1	39 43.1	9	S, VI, O P
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S, P
Aomori	AOMORI	140 47.0	40 49.0	4	S, W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S, VI, O P
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S, VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S, P
Choshi	CHOSHI	140 50.6	35 43.5	27	S, W
Fukue	FUKUE	128 50.0	32 42.0	26	S, VI
Fukui	FUKUI	136 13.6	36 03.2	9	S, P(H, V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S, VI, M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S, VI, O P
Funatsu	FUNATS	138 45.8	35 29.9	860	S, P
Gifu	GIFU	136 45.9	35 23.9	13	S, W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S, VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S, VI, O P
Hakodate	HAKODA	140 45.5	41 48.8	35	S, VI, O P
Hamada	HAMADA	132 04.4	34 53.6	18	S, VI, O P
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S, VI, O P
Hikone	HIKONE	136 14.8	35 16.4	87	S, W
Himeji	HIMEJI	134 42.1	34 50.2	37	S, P(H, V)
Hiroo	HIROO	143 19.0	42 17.0	32	S, P(H, V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S, W
Iida	IIDA	137 50.1	35 30.6	482	S, VI, O P
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S, VI, O P
Izuhara	IZUHAR	129 17.7	34 12.2	21	S, P(H, V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S, W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S, W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S, VI, O P
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S, P(H, V)
Kobe	KOBE	135 10.8	34 41.3	58	S, P(H, V)
Kochi	KOCHI	133 32.0	33 33.0	40	S, P(H, V)
Kofu	KOFU	138 33.5	35 39.9	272	S, VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S, VI, O P
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S, W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S, VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S, VI, O P
Maebashi	MAEBAS	139 03.9	36 24.1	112	S, W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S, P(H, V)
Matsue	MATSUE	133 04.3	35 27.3	17	S, P(H, V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S, P(H, V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S, L, AW, G, B, V, C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S, W
Mishima	MISHIM	138 55.8	35 06.7	20	S, W
Mito	MITO	140 28.3	36 22.7	30	S, VI, O P
Miyako	MIYAKO	141 58.1	39 38.7	46	S, W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S, VI, O P
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P(H, V)
Morioka	MORIOK	141 10.1	39 41.8	155	S, VI, O P
Muroran	MURORA	140 59.0	42 19.0	43	S, P(H, V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S, VI, O P
Nagano	NAGANO	138 11.8	36 39.6	418	S, W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S, VD, EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S, VI, O P
Nara	NARA	135 50.0	34 41.0	105	S, P(H, V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S, VI, VD, OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S, VI, P(H, V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S, P(H, V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S, P(H, V)
Ofunato	OFUNAT	141 43.1.	39 03.7	38	S, VI
Oita	OITA	131 37.4	33 14.0	5	S, W
Okayama	OKAYAM	133 54.9	34 40.9	4	S, VI, O P
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S, W
Onahama	ONAHAM	140 54.4	36 56.7	3	S, VI
Osaka	OSAKA	135 32.3	34 38.9	7	S, VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S, W

Station	Code	λ	φ	Height	Seismographs
				m	
Owase	OWASE	E136°11.7′	N34°04.0′	14	S, VI, O P
Rumoi	RUMOI	141 38.0	43 57.0	22	S, P(H, V)
Saga	SAGA	130 18.3	33 14.7	4	S, P(H, V)
Saigo	SAIGO	133 20.0	36 12.3	26	S, VI, O P
Sakata	SAKATA	139 50.2	38 54.2	2	S, P(H, V)
Sapporo	SAPPOR	141 19.9	43 03.5	17	S, VI, O P
Sendai	SENDAI	140 54.0	38 15.6	38	S, VI, S′
Shimonoseki	SHIMON	130 56.5	33 57.2	46	S, VI, O P
Shionomisaki	SHIONO	135 45.8	33 26.9	74	S, W
Shirakawa	SHIRAK	140 13.5	37 07.1	354	S, P(H, V)
Shizuoka	SHIZUO	138 24.4	34 58.4	14	S, VI
Sumoto	SUMOTO	134 54.5	34 20.1	109	S, VI, O P
Suttsu	SUTTSU	140 14.4	42 47.4	16	S, P(H, V)
Takada	TAKADA	138 15.0	37 06.3	13	S, P(H, V)
Takamatsu	TAKAMA	134 03.5	34 19.0	10	S, W
Takayama	TAKAYA	137 15.3	36 09.1	561	S, P(H, V)
Tokushima	TOKUSH	134 34.6	34 03.9	2	S, P(H, V)
Tokyo	TOKYO	139 45.5	35 41.2	21	S, VI′, VD′, I′, J
Tomisaki	TOMISA	139 49.7	34 55.2	12	S, VI, O P
Tottori	TOTTOR	134 10.7	35 30.7	17	S, P(H, V)
Toyama	TOYAMA	137 12.5	36 42.4	9	S, VI
Toyooka	TOYOOK	134 49.5	35 32.0	4	S, W
Tsu	TSU	136 31.1	34 42.1	3	S, P(H, V)
Tsuruga	TSURUG	136 03.9	35 39.0	1	S, P(H, V)
Unzendake	UNZEND	130 15.2	32 44.1	849	S
Urakawa	URAKAW	142 46.8	42 09.5	34	S, VI, O P
Utsunomiya	UTSUNO	139 52.3	36 32.6	120	S, W
Uwajima	UWAJIM	132 33.5	33 13.5	43	S, P
Wajima	WAJIMA	136 53.9	37 23.4	6	S, VI
Wakayama	WAKAYA	135 10.0	34 13.6	14	S, W, I
Wakkanai	WAKKAN	141 40.5	45 25.0	2	S, VI, O P
Yakushima	YAKUSH	130 29.8	30 27.0	14	S, VI
Yamagata	YAMAGA	140 21.0	38 15.2	151	S, P(H, V)
Yokohama	YOKOHA	139 39.3	35 26.2	38	S, W
Yonago	YONAGO	133 20.6	35 26.0	7	S, P(H, V)
Ishigakijima	ISHIGA	124 10	24 20	6	S, VI
Naha	NAHA	127 41	26 13	11	S, VI

Notations : —

λ	: Longitude.
φ	: Geographical Latitude.
W	: Wiechert's horizontal and vertical seismographs (masses, H ; 200kg, V ; 80kg).
P	: Portable seismograph (horizontal only).
P(H, V)	: do (mass, 22.5kg).
S	: Strong motion seismograph (magnification ; 1).
S′	: do (magnification ; 0.4)
M(H)	: Mainka's horizontal seismograph (mass, 450kg).
G	: Galitzin's seismograph.
L	: 1,000kg long-period seismograph, JMA type.
I	: Ishimoto's seismograph
V	: Short-period vertical seismograph.
AW	: Anderson-Wood's seismograph.
C	: Capacity type seismograph.
EM	: Electromagnetic seismograph.
O P	: JMA 59-type electromagnetic seismograph with optical recorder.
VI	: JMA 59-type electromagnetic seismograph with visible recorder.
V D	: JMA 61-type electromagnetic seismograph with visible recorder.
B	: Benioff's seismograph (short and long period).
J	: Remote recording JMA 63-type seismograph.
VI′, VD′, I′	: Remote recording JMA 63-types of I, VD and VI respectively.

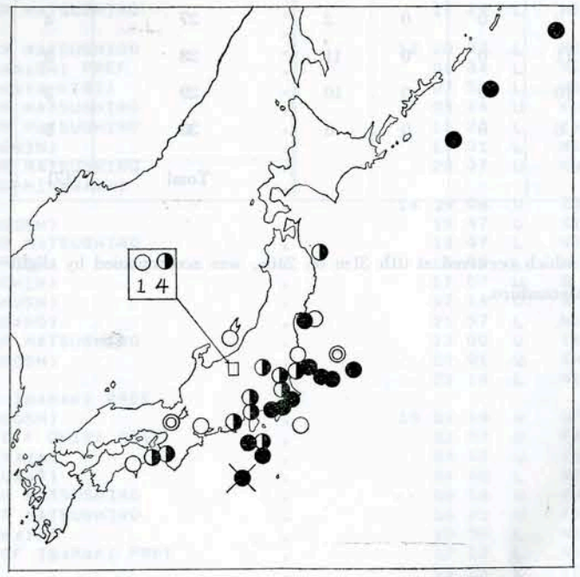
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List 2 Number of earthquakes by districts and classes, June, 1967

District \ Class	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	0	0	0	7	7	17	24
Tohoku	0	2	1	7	10	13	23
Kwanto	0	0	1	15	16	24	40
Chubu	0	0	3	183	186	16	202
Kinki	0	1	0	10	11	5	16
Chugoku·Shikoku	0	0	1	3	4	5	9
Kyushu	0	0	0	6	6	30	36
Near Japan*	0	0	0	0	0	10	10
Foreign region	0	0	0	0	0	3	3
Unknown	0	0	0	0	0	9	9
Total	0	3	6	231	240	132	372

* ; Sakhalin, Kurile Is., Korea, Ryukyu Is., Bonin Is., Sikhota Alin.

Epicenters of the major earthquakes



◎ Moderate (M) ○ Small felt area (S) ◑ Local (L) ● Unfelt (U) × h≧100km

Special Event

Earthquake-Swarm near Matsushiro, Northern Chubu.

Daily number of felt shocks observed at Matsushiro Seismological Observatory during this month is as follows :

Date \ Seismic intensity	1	2	3	Total	Date \ Seismic intensity	1	2	3	Total
1	3	0	0	3	16	10	0	0	10
2	10	1	0	11	17	2	0	0	2
3	2	1	0	3	18	6	0	0	6
4	8	0	0	8	19	4	0	0	4
5	5	0	0	5	20	2	0	0	2
6	8	1	0	9	21	2	0	0	2
7	6	0	0	6	22	3	0	0	3
8	3	0	0	3	23	6	1	0	7
9	7	0	0	7	24	10	1	1	12
10	7	0	0	7	25	5	0	0	5
11	11	0	0	11	26	2	1	0	3
12	2	0	0	2	27	4	0	0	4
13	11	0	0	11	28	3	1	0	4
14	10	0	0	10	29	3	0	0	3
15	8	0	0	8	30	8	1	0	9
					Total	171	8	1	180

The earthquake, which occurred at 01h 31m on 24th, was accompanied by slight property damage in the vicinity of Matsushiro.

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List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

(J.S.T.)

DATE, TIME D H M	C	LOCATION	C CLASS
1 01 00	L	(HIROSH-CHIYODA)	
06 29	U	(KUMAMO)	
07 30	L	NEAR MIYAKEJIMA	
18 16	U	(KUSHIR)	
20 04	U	E OFF HOKKAIDO	
2 01 53	L	NEAR MATSUSHIRO	
02 26	U	UK	
04 37	U	(KUSHIR)	
05 31	L	NEAR MATSUSHIRO	
06 02	L	SHIZUOKA PREF	
07 16	U	OFF IBARAKI PREF	
09 16	L	NEAR MATSUSHIRO	
09 39	L	NEAR MATSUSHIRO	
11 09	L	NEAR MATSUSHIRO	
12 44	L	NEAR MATSUSHIRO	
14 34	U	TOHOKU	
16 06	U	E OFF KWANTO	
20 34	U	UK	
21 04	U	HOKKAIDO	
22 15	L	E OFF IWATE PREF	
22 18	L	NEAR MATSUSHIRO	
23 55	L	CHIBA-IBARAKI BORDER	
3 00 25	U	(KAGOSH)	
01 40	L	WAKAYAMA PREF	
02 07	U	(MITO)	
03 21	L	NEAR MATSUSHIRO	
08 35	L	SHIZUOKA PREF	
10 45	U	UK	
12 19	U	(MUROTO)	
23 34	L	NEAR MATSUSHIRO	
4 03 32	L	NEAR MATSUSHIRO	
07 25	L	YAMANASHI PREF	
08 21	L	(WAKAYA-KIBI)	
10 28	L	NEAR MATSUSHIRO	
11 47	L	NEAR MATSUSHIRO	
12 06	U	(HACHIN)	
18 31	L	NEAR MATSUSHIRO	
22 51	L	(TSU-MIYAGAWA)	
5 04 05	U	(KAGOSH)	
06 49	L	NEAR MATSUSHIRO	
10 01	U	(MORIOK)	
10 33	U	(HACHIN)	
11 52	U	(YAKUSH)	
11 56	U	(NAGANO)	
16 41	L	NEAR MATSUSHIRO	
16 44	U	(KAGOSH)	
6 03 54	U	OFF IBARAKI PREF	
04 33	U	(KAGOSH)	
07 28	S	SE OFF CHIBA PREF	
13 22	U	(MIYAZA)	
15 02	U	(OFUNAT)	
17 11	L	NEAR MATSUSHIRO	
17 28	L	NEAR MATSUSHIRO	
21 00	L	(WAKAYA)	
23 59	L	SW OF IBARAKI PREF	
7 00 14	L	NEAR MATSUMAE, HOKKIDO	
05 07	U	(UTSUNO)	
09 40	L	NEAR MATSUSHIRO	
11 17	L	NEAR MATSUSHIRO	
12 39	L	NEAR MATSUSHIRO	
16 28	L	NEAR MATSUSHIRO	
22 20	U	UK	
23 54	L	NEAR CHOSHI	
23 56	U	(CHOSHI)	
8 05 01	U	HOKKAIDO	
10 35	U	(AKITA)	
16 01	L	(NIIGAT-TOKAMACHI)	
9 01 36	U	(MATSUY)	
03 25	U	(NAHA)	
11 10	U	HOKKAIDO	
14 35	M	OFF FUKUSHIMA PREF	
20 22	L	NE OF HOKKAIDO	
10 04 21	U	N OF KYUSHU	
04 52	L	NEAR MATSUSHIRO	
05 08	U	(ASAHIK)	
09 46	L	NEAR MATSUSHIRO	
12 19	L	NEAR MATSUSHIRO	
12 56	L	NEAR MATSUSHIRO	
15 02	U	(SAPPOR)	
16 38	L	NEAR MATSUSHIRO	
23 40	U	S OFF KYUSHU	
11 00 07	U	(URAKAW)	
00 50	L	NEAR MATSUSHIRO	
12 15	L	NEAR MATSUSHIRO	
16 23	L	NEAR MATSUSHIRO	
16 29	L	NEAR MATSUSHIRO	
20 52	U	HOKKAIDO	
12 01 08	U	TOKYO BAY	
01 19	U	E OFF KWANTO	
08 04	U	(NAGANO)	
17 29	L	NEAR MATSUSHIRO	
13 00 03	L	NEAR NEMURO	
06 34	L	NEAR MATSUSHIRO	
07 53	L	NEAR MATSUSHIRO	
08 24	U	KURILE IS	
11 23	L	(WAKAYA-KIBI)	
17 01	L	NEAR MATSUSHIRO	
20 37	U	KWANTO	
14 09 06	U	TOHOKU	
12 47	U	SIKHOTA ALIN	
13 37	L	NEAR MATSUSHIRO	
16 09	L	NEAR MATSUSHIRO	
17 07	U	S OF KURILE IS	
17 14	U	S OF KURILE IS	
21 57	L	NEAR MATSUSHIRO	
22 00	U	(KAGOSH)	
22 01	U	SHIZUOKA PREF	
22 19	L	NEAR MATSUSHIRO	
15 02 18	U	OFF IBARAKI PREF	
02 57	U	FAR OFF TOKAIDO	
04 12	U	(NAGANO)	
04 40	L	NEAR MATSUSHIRO	
06 16	U	(NAGANO)	
06 21	U	(NAGANO)	
10 50	L	NEAR MATSUSHIRO	
17 12	L	NEAR MATSUSHIRO	
19 13	L	TOCHIGI PREF	
20 33	U	CHIBA PREF	
20 34	U	CHIBA PREF	
16 03 13	U	(KUMAMO)	
03 19	S	E OF FUKUSHIMA PREF	
05 27	U	(KUMAMO)	
07 06	L	IWATE PREF	
07 30	U	(KAKIOK)	
12 37	L	MIE PREF	

DATE, TIME D H M	C	LOCATION
16 13 59	U	(YAKUSH)
15 05	U	NEAR SADOGASHIMA
16 15	L	NEAR MATSUSHIRO
17 00 36	U	(KUMAMO)
01 15	L	NEAR KUMAMOTO
04 19	U	(KUMAMO)
06 27	U	(KUMAMO)
14 18	U	SOUTH SANDWICH IS
20 49	U	(NAGANO)
21 01	U	(SAKATA)
18 03 19	L	KAGAWA PREF
05 13	L	NEAR MATSUSHIRO
06 05	L	NEAR MATSUSHIRO
06 18	L	OFF IBARAKI PREF
08 04	L	NEAR MATSUSHIRO
10 21	L	NEAR MATSUSHIRO
13 55	L	(FUKUSH)
22 24	L	(KUSHIR)
23 14	L	NEAR MATSUSHIRO
19 00 57	U	(KUMAMO)
01 28	U	(KUMAMO)
01 36	L	EHIME PREF
04 21	U	(KUSHIR)
07 30	U	(NAGANO)
08 08	L	NEAR MATSUSHIRO
12 22	L	NEAR MATSUSHIRO
13 10	U	TOHOKU
13 42	L	NEAR MATSUSHIRO
13 55	U	(KUMAMO)
13 58	L	KII CHANNEL
18 06	L	(KAGOSH-NAZE)
18 54	L	NEAR MATSUSHIRO
19 46	U	OFF IBARAKI
21 43	L	NEAR KUMAMOTO
20 00 27	U	(KUMAMO)
02 14	U	UK
04 42	U	(TAKAMA)
10 20	U	NE OF KWANTO
10 21	U	NEAR CHOSHI
15 53	L	TOCHIGI PREF
15 54	L	TOCHIGI PREF
16 46	U	UK
19 16	L	NEAR KOZUJIMA
19 41	U	NEAR KOZUJIMA
20 11	U	(HACHIJ)
21 42	L	(KAGOSH-NAZE)
22 17	U	CHUBU
21 01 48	U	S OFF SHIZUOKA PREF
04 42	S	E PART OF KOCHI PREF
10 14	U	(YAKUSH)
19 15	L	(OSAKA-KAMINOGO)
20 07	U	(NAGOYA)
21 09	M	KYOTO PREF
22 00 10	U	(KYOTO)
00 50	U	UK
00 50	L	OFF IBARAKI PREF
05 14	U	(MISHIM)
08 51	U	(YAKUSH)
18 52	L	NEAR MATSUSHIRO
20 57	U	(YAKUSH)
21 28	L	TOCHIGI PREF
23 00 20	L	NEAR MATSUSHIRO
01 02	U	(MITO)

DATE, TIME D H M	C	LOCATION
23 05 13	S	AICHI PREF
07 54	L	NEAR MATSUSHIRO
10 35	L	NEAR MATSUSHIRO
15 26	U	OFF MIYAGI PREF
15 51	L	(UTSUNO-NIKKO)
22 15	L	NEAR MATSUSHIRO
24 01 31	S	NEAR MATSUSHIRO
01 36	L	NEAR MATSUSHIRO
01 44	L	NEAR MATSUSHIRO
07 47	L	(KUMAMO)
13 22	L	E OFF AOMORI PREF
16 31	L	NEAR MATSUSHIRO
17 17	U	KWANTO
18 28	U	UK
19 14	U	(KUMAMO)
20 23	U	(KUMAMO)
25 00 36	L	SE OFF HOKKAIDO
06 03	U	S OF MARIANA IS
08 05	L	NEAR MATSUSHIRO
09 02	L	(OFUNAT)
09 57	U	UK
14 53	U	(ISHIGA)
16 06	L	IBARAKI PREF
18 28	U	(FUKUOK)
18 41	L	NEAR MATSUSHIRO
19 04	U	(KUMAMO)
19 12	L	NEAR MATSUSHIRO
20 34	U	(URAKAW)
20 54	U	(WAKAYA)
23 27	U	OFF TOKAIDO
23 55	L	NEAR MATSUSHIRO
26 02 44	S	NEAR SADOGASHIMA
06 28	U	S OFF KWANTO
06 32	L	(WAKAYA)
06 48	U	(MUROTO)
07 52	U	(MUROTO)
08 23	U	S OF MARIANA IS
11 19	U	(ISHIGA)
13 55	U	(URAKAW)
20 05	U	HYOGO PREF
22 46	L	NEAR MATSUSHIRO
23 52	L	NEAR MATSUSHIRO
27 00 47	U	(WAKAYA)
04 21	L	(KUSHIR)
04 56	U	(KUSHIR)
05 36	U	(KUSHIR)
07 14	U	(KYOTO)
09 22	L	NEAR MATSUSHIRO
10 14	U	(YAKUSH)
11 32	L	NEAR MATSUSHIRO
14 35	L	E PART OF HOKKAIDO
20 05	L	(OSAKA-TOGO)
28 07 39	L	E OFF AOMORI PREF
07 58	L	NEAR MATSUSHIRO
08 07	U	RYUKYU IS
10 11	U	S PART OF KURILE IS
10 14	U	(MIZUSA)
15 54	U	(MIYAKO)
18 41	L	NEAR MATSUSHIRO
19 29	L	NEAR MATSUSHIRO
29 03 25	U	(MITO)
04 39	S	OFF MIYAGI PREF
04 50	U	(MITO)
08 07	U	(ISHIGA)

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DATE, TIME D H M	C	LOCATION
29 08 45	L	NEAR MATSUSHIRO
09 51	U	HOKKAIDO
10 43	U	CHIBA PREF
21 05	L	(UTSUNO-CHUGUSHI)
22 27	L	(HACHIN)
30 06 50	L	NEAR MATSUSHIRO
07 51	L	NEAR MATSUSHIRO
08 56	U	(OFUNAT)
09 06	U	(KUMAMO)
09 18	L	NEAR TOKYO
10 07	L	(UNZEND)
16 05	U	(FUKUOK)
18 22	U	HOKKAIDO

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST. ALL EVENTS FELT AT THE OBSERVATORY ARE GIVEN IN LIST 6.

List 4 EARTHQUAKE ORIGINS

(J.S.T.)

DATE, TIME D	H	M	C	LOCATION	ORIGIN TIME M	S	+/-S	LONG.	+/-	LAT.	+/-	C H KM	CLASS M
1	20	04	U	E OFF HOKKAIDO	03	52.9	1.6	148 59 09		43 27 08		40	5.3
2	06	02	L	SHIZUOKA PREF	02	16.6	0.2	138 54 01		35 22 01		10	3.4
	07	16	U	OFF IBARAKI PREF	16	27.3	1.4	141 54 07		36 16 03		10	4.8
	09	16	L	NEAR MATSUSHIRO	16	03.2	0.3	138 10 01		36 34 01		00	3.6
	22	15	L	E OFF IWATE PREF	15	22.1	0.8	142 11 04		40 24 02		40	3.9
	23	55	L	CHIBA-IBARAKI BORDER	54	49.9	0.4	140 10 03		35 52 02		80	
3	01	40	L	WAKAYAMA PREF	40	31.8	0.2	135 22 01		33 57 01		60	4.0
	08	35	L	SHIZUOKA PREF	35	11.5	0.2	138 06 01		34 59 01		30	4.3
4	07	25	L	YAMANASHI PREF	25	33.7	0.3	138 58 01		35 33 01		00	3.4
6	03	54	U	OFF IBARAKI PREF	53	55.0	0.8	142 09 03		36 11 03		50	4.4
	07	28	S	SE OFF CHIBA PREF	27	41.1	0.7	140 54 04		34 43 02		20	4.4
	17	11	L	NEAR MATSUSHIRO	11	06.8	0.3	138 15 01		36 34 01		00	4.0
9	14	35	M	OFF FUKUSHIMA PREF	34	34.0	1.0	142 35 05		36 58 02		70	
12	01	08	U	TOKYO BAY	07	54.8	0.3	139 46 02		35 28 02		70	
	01	19	U	E OFF KWANTO	19	14.5	2.0	143 09 09		36 23 06		60	4.6
13	08	24	U	KURILE IS	2	41.9	1.6	154 55 07		46 14 12		40	5.8
15	20	34	U	CHIBA PREF	33	53.3	0.7	140 03 05		35 24 02		50	3.9
16	03	19	S	E OF FUKUSHIMA PREF	19	33.9	0.3	140 57 03		37 01 01		90	
19	13	58	L	KII CHANNEL	57	58.0	0.2	134 46 01		33 53 01		40	4.4
	19	46	U	OFF IBARAKI	46	12.5	0.2	141 23 01		36 36 01		40	3.9
20	19	16	L	NEAR KOZUJIMA	16	05.6	0.6	139 07 04		34 09 03		00	4.1
	19	41	U	NEAR KOZUJIMA	41	26.2	0.7	139 04 02		34 01 02		00	3.7
21	01	48	U	S OFF SHIZUOKA PREF	48	37.3	0.7	138 55 06		34 06 04		00	3.8
	04	42	S	E PART OF KOCHI PREF	42	27.2	0.5	134 01 04		33 44 03		30	4.1
	21	09	M	KYOTO PREF	09	51.2	0.2	135 35 01		35 02 01		10	4.6
22	00	50	L	OFF IBARAKI PREF	50	09.1	0.3	141 00 03		36 46 01		60	4.1
	21	28	L	TOCHIGI PREF	27	56.3	0.3	139 25 01		36 36 01		10	3.9
23	05	13	S	AICHI PREF	13	47.1	0.2	136 50 01		34 55 01		00	4.1
	15	26	U	OFF MIYAGI PREF	25	52.3	0.7	141 20 06		38 07 03		70	
24	01	31	S	NEAR MATSUSHIRO	31	28.1	0.2	138 07 01		36 26 01		00	4.9
25	16	06	L	IBARAKI PREF	06	45.1	0.1	140 03 01		36 22 02		70	
	23	27	U	OFF TOKAIDO	26	48.6	0.8	138 25 05		33 07 05		320	
26	02	44	S	NEAR SADOGASHIMA	44	45.0	0.2	138 04 01		37 41 01		10	4.3
	22	46	L	NEAR MATSUSHIRO	46	07.3	0.3	138 04 01		36 23 01		00	4.2
28	10	11	U	S PART OF KURILE IS	10	12.0	0.9	151 06 08		44 55 16		30	5.0
	18	41	L	NEAR MATSUSHIRO	41	15.6	0.9	138 10 04		36 30 01		00	4.1
29	04	39	S	OFF MIYAGI PREF	39	40.0	1.2	141 48 06		38 11 03		50	3.9
	10	43	U	CHIBA PREF	42	58.1	0.9	140 19 05		35 31 03		70	

International Seismological Centre From the ISC collection scanned by SISMOS

List 5 DATA OF EARTHQUAKES

OT= 1 20 3 52.9 +/- 1.6 (J.S.T.)
E OFF HOKKAIDO
LAT= 43 27 +/- 8 LONG= 148 59 +/- 9
H= 40 MAG=5.3 CLASS=U

I SEISMIC INTENSITY
* MICRON

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NEMURO	0	P	20	04	33.0	S	05	05.2	9	0.5	6	0.6	4	0.6			U	275.6	32.2
ABASHI	0	EP	20	04	47.0	ES	05	28.8	7	2.6	8	2.4	4	2.4				383.9	41.8
KUSHIR	0	X	20	04		ES	05	28.5	29	0.3	22	0.5	7	0.4				376.5	
OBIHIR	0	X	20	05	05.1													472.1	
URAKAW	0	EP	20	05	07.1	S	06	05.6	36	1.2	33	1.6	11	1.4				527.3	58.5
SAPPOR	0	EP	20	05	17.5	ES	06	27	22	2.0	13	1.8	4	2.0				622.8	69.5
HAKODA	0	EP	20	05	26.2	ES	06	40.2	6	3.2	3	2.2						698.5	74.0
MIZUSA	0	X	20	05	53.5	ES	07	08.8	33	1.5	7	0.6						813.2	
MATSUS	0	IP	20	06	30.2										N		D	1196.5	
AOMORI	0	X	20	07	15.2				40	2.3	21	2.1						738.1	

OT= 2 6 2 16.6 +/- 0.2
SHIZUOKA PREF
LAT= 35 22 +/- 1 LONG= 138 54 +/- 1
H= 10 MAG=3.4 CLASS=L

FUNATS	1	IP	06	02	21.9	IS	02	23.8										19.2	01.9
MISHIM	X	IP	06	02	23.4	IS	02	27.7	48	0.6	37	0.6	10	0.4	S	5	U	4	28.4	04.3
AJIRO	0	IP	06	02	24.9	S	02	29.5	5	0.5	5	0.4	1	0.4			U	1	40.1	04.6
KOFU	0	IP	06	02	25.7	IS	02	32.2	13	0.4	12	0.4	3	0.4			D	1	45.3	06.5
YOKOHA	0	EP	06	02	30.1	S	02	41.6	12	0.5	7	0.5							69.0	11.5
TOKYO	0	IP	06	02	32.6	S	02	42.1	7	0.4	6	0.3	6	0.2			U		85.5	09.5
SHIZUO	0	X	06	02	38.5				6	0.4	8	0.4	2	0.6					62.6	
MATSUS	0	IP	06	02	41.1	S	02	57									U		144.2	15.9

OT= 2 7 16 27.3 +/- 1.4
OFF IBARAKI PREF
LAT= 36 16 +/- 3 LONG= 141 54 +/- 7
H= 10 MAG=4.8 CLASS=U

CHOSHI	0	P	07	16	47.9	IS	17	02.6										112.6	14.7
ONAHAM	0	IP	07	16	50.4	IS	17	04.8	69	2.6	38	1.4	18	1.0			D	10	116.4	14.4
MITO	0	IP	07	16	50.7	IS	17	06.0	82	2.5	81	2.3	40	2.5			U	3	128.8	15.3
KAKIOK	0	P	07	16	52.7	S	17	10	54	1.0	38	1.0	22	2.4	W	2	U	1	153.4	17.3
SHIRAK	0	EP	07	16	55.7	ES	17	18.7											177.0	23.0
UTSUNO	0	EP	07	16	58.3	EX	17	22.6	33	1.5	29	3.0							184.5	
OMAEZA	0	EX	07	17					7	2.5	7	2.9							382.1	
TOKYO	0	EP	07	17	02	ES	17	20.2	23	2.4	21	2.4	23	3.6					203.6	18.2
FUKUSH	0	EP	07	17	02.5	S	17	22.0	73	0.8	50	2.6	12	0.7					208.4	19.5
SENDAI	0	EP	07	17	04	ES	17	30	24	1.6	15	1.0	9	1.2					238.3	26.0
KUMAGA	0	EP	07	17	04.4	ES	17	22.6	17	2.8	21	2.0	14	3.0					226.5	18.2
TOMISA	0	EP	07	17	05.4				14	4.6	19	3.0	14	2.4					239.9	
MAEBAS	U	IP	07	17	06.6	ES	17	42.2	18	1.9	19	2.6	14	4.1	N		E	1 D 4	254.9	35.6
ISHINO	0	P	07	17	10.0	ES	17	32.6	6	1.6	5	1.2	5	0.8					245.3	22.6
YOKOHA	0	X	07	17	11.1	S	17	38.0	27	1.0	25	2.0							222.7	
YAMAGA	0	EP	07	17	12.8														259.8	
KARUIZ	0	EP	07	17	13.3	S	17	46.6											300.8	33.3
MISHIM	0	EP	07	17	14.3	ES	17	56.6	8	1.9	11	1.9	5	2.0					297.7	42.3
KOFU	0	EP	07	17	15.8	ES	17	58.9	13	1.6	10	1.6	6	2.1					308.7	38.1
MATSUS	0	P	07	17	17	X	18	14											332.4	
SAKATA	0	EX	07	17	17.9														344.7	
FUNATS	0	X	07	17	18.2	S	17	49.3											295.7	
OSHIMA	0	X	07	17	18.2				6	0.4	2	0.3	2	0.2					283.1	
SHIZUO	0	EP	07	17	19.0	X	18	19.6	4	4.0	8	3.0	4	3.2					347.4	
TAKADA	0	EP	07	17	20.8														339.2	
IIDA	0	EX	07	17	23.4														376.4	
MORIOK	0	EP	07	17	24.2	ES	18	04.6	4	0.4	5	0.5	2	2.4					386.1	40.4
						IX	17	27.0												
MIZUSA	0	X	07	17	24.5	X	18	08.1	45	1.5	22	2.4	12	1.3					325.2	
TOYAMA	0	EX	07	17	29				8	3.8	8	3.8	7	2.8					423.1	
HAMAMA	0	X	07	17	36	X	18	28	5	2.0	8	2.6	4	1.8					416.4	
NAGOYA	0	X	07	17	42.0	ES	18	29.6	7	2.6	8	2.2	3	1.6					462.5	
NIIGAT	0	X	07	17	50.2				20	3.3	18	4.0	15	4.0					312.0	
AKITA	0	EX	07	18	13	EX	18	39.6	12	3.8	14	3.0	6	3.4					414.3	
KANAZA	0	X	07	18	14.0	X	18	46.0	7	0.2	5	0.3							472.0	
OSAKA	0	X	07	18	47.9				9	4.0	12	4.0	5	3.2					604.5	

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
AOMORI	0	X	07 18 57.6			11	2.1	9	2.5						514.3	

OT= 2 9 16 3.2 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 34 +/- 1 LONG= 138 10 +/- 1
H= 0 MAG=3.6 CLASS=L

MATSUS	2	P	09 16 06.8	IS	16 08.0										4.9	01.2
NAGANO	1	IP	09 16 08.6	IS	16 11.3										10.7	02.7
MATSUM	X	EP	09 16 12.6	IS	16 17.4										39.8	04.8
KARUIZ	0	IP	09 16 13.5	S	16 19.1									D 2	42.7	05.6
TAKADA	0	EP	09 16 15.8	S	16 25.2										60.2	09.4
KANAZA	0	EP	09 16 29.6	ES	16 46.8	4	0.2	5	0.2						135.9	17.2
TOYAMA	0	X	09 16			4	0.6	7	1.4	3	1.2				87.1	

OT= 2 22 15 22.1 +/- 0.8
E OFF IWATE PREF
LAT= 40 24 +/- 2 LONG= 142 11 +/- 4
H= 40 MAG=3.9 CLASS=L

HACHIN	2	IP	22 15 33.6	S	15 41.9	26	0.4	20	0.2	7	0.8	N 4 E	5 D	4	57.5	08.3
MIYAKO	0	EP	22 15 37	ES	15 46.0	5	0.0	7	0.0	5	0.0				85.8	09.0
MORIOK	0	IP	22 15 41.1	S	15 54.8	20	0.4	16	0.4	6	0.3	N 0 E	0 D	0	116.6	13.7
AOMORI	0	EP	22 15 42.6	S	15 57.6	19	0.9	17	0.9	8	0.7				127.2	15.0
OFUNAT	0	EP	22 15 47.8	IS	16 03.6	5	0.0	2	0.0	1	0.6				153.8	15.8
MATSUS	0	IP	22 16 37.5	EX	18 09							N	D		551.3	

OT= 2 23 54 49.9 +/- 0.4
CHIBA-IBARAKI BORDER
LAT= 35 52 +/- 2 LONG= 140 10 +/- 3
H= 80 CLASS=L

KAKIOK	1	P	23 55 02.9	S	55 11	26	1.0	34	1.0	16	1.0	N 3	U	3	40.6	08.1
TOKYO	0	P	23 55 04.8	S	55 14.6			14	0.5	6	0.4				42.1	09.8
MITO	0	IP	23 55 05.1	IS	55 15.1	19	0.4	13	0.5	4	0.6		U	2	63.1	10.0
UTSUNO	1	P	23 55 06.3	IS	55 16.6	19	0.2	22	0.3						80.0	10.3
KUMAGA	0	EP	23 55 06.6	S	55 18.4	9	0.4	5	0.8	4	0.2				77.0	11.8
AJIRO	0	IP	23 55 12.4	S	55 26.3	8	0.4	12	0.4	2	0.4		D	1	133.3	13.9
OSHIMA	0	P	23 55 13.4	IS	55 28.4	7	0.6	10	0.4	5	0.3				142.0	15.0
KOFU	0	IP	23 55 14.9	ES	55 31.0	7	0.5	8	0.4	2	0.4	S 1 E	1 D	2	147.1	16.1
YOKOHA	0	X	23 55 17.8			14	0.4	16	0.5						66.5	
MATSUS	0	IP	23 55 20.2									S E	D		191.2	

OT= 3 1 40 31.8 +/- 0.2
WAKAYAMA PREF
LAT= 33 57 +/- 1 LONG= 135 22 +/- 1
H= 60 MAG=4.0 CLASS=L

WAKAYA	1	P	01 40 43.2	IS	40 48.8	34	0.1	85	0.1						35.8	05.6
SHIONO	1	IP	01 40 45.7	IS	40 55.4	77	0.4	56	0.4	21	0.4	N 1 W	D	7	66.7	09.7
SUMOTO	0	P	01 40 46.1	IS	40 54.1	26	0.4	12	0.4	4	0.4	S 1 E	D	1	60.1	08.0
OWASE	0	IP	01 40 47.0	IS	40 57.0	31		15		10		W 7	D	10	77.6	10.0
TOKUSH	1	EP	01 40 47.0	IS	40 57.3	70	0.1	104	0.1	31	0.1	W 1	U	1	74.1	10.3
NARA	0	EP	01 40 48.8	IS	40 59.5										92.0	10.7
KOBE	0	EX	01 40 49.3	ES	40 57.4										83.7	
KYOTO	0	EP	01 40 51.6	IS	41 05.0	10	0.4	12	1.5	2	0.8				122.5	13.4
TAKAMA	0	EP	01 40 51.7	ES	41 05.8	10	1.1	13	1.3	3	0.6				127.3	14.1
MUROTO	0	IP	01 40 53.3	IS	41 09.2	7	0.4	10	0.4			S 1 W	1 U	1	134.9	15.9
OKAYAM	0	IP	01 40 54.8	IS	41 11.3	10	0.6	12	0.5	5	0.7	N	E		156.3	16.5
OSAKA	0	X	01 40 56.2	S	40 57.5	12	1.6	8	1.2	5	1.8				79.0	
HIKONE	0	P	01 40 57.4	S	41 14.5	14	0.8	11	1.4	2	0.6				167.5	17.1
KOCHI	0	EP	01 40 59.4	ES	41 17.5										175.5	18.1
GIFU	0	EP	01 41 03	S	41 25	6	0.6	4	0.8	3	0.5				205.5	22.0
NAGOYA	0	EP	01 41 03.0	S	41 24.0	6	3.0	8	1.0	3	0.8				199.4	21.0
TURUGI	0	X	01 41 05.1												117.9	
TSU	0	X	01 41 07.8												134.8	
TOYOOK	0	X	01 41 18.4	ES	41 20.4	45	1.2	25	1.2	11	0.8	N 5 E	7 D		182.9	
HAMAMA	0	X	01 41 21.7	ES	41 34	5	1.6	5	1.4	2	1.2		U	2	232.5	
OMAEZA	0	X	01 41 21.7			7	2.4								271.9	

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	0	IP	01 41 23.3	EX	42 00										386.3	
FUKUI	0	X	01 41 32.6									N 6	E 4	D 2	246.1	

OT= 3 8 35 11.5 +/- 0.2
SHIZUOKA PREF
LAT= 34 59 +/- 1 LONG= 138 6 +/- 1
H= 30 MAG=4.3 CLASS=L

SHIZUO	3	IP	08 35 18.9	IS	35 24.1	420	0.2	380	0.2	190	0.2	S 37	E 18	U 39	28.0	05.2
HAMAMA	1	IP	08 35 20.6	IS	35 27.6	89	0.2	55	0.2	50	0.2	S 2	W 1	U 32	46.0	07.0
OMAEZA	1	P	08 35 21.5	S	35 29.8	59	0.6	66	0.6	26	0.4	N 4	E	D 12	43.4	08.3
IIDA	0	IP	08 35 23.0	IS	35 31.0	22	0.8	33	0.8	20	1.0	S 3	E 1	D 5	63.2	08.0
MISHIM	1	IP	08 35 23.8	IS	35 34.0	26	0.4	25	0.4	10	0.4			U 5	77.0	10.2
KOFU	1	EP	08 35 26.0	IS	35 37.1	46	1.0	60	0.2	19	0.2				86.3	11.1
AJIRO	2	IP	08 35 26.4	IS	35 37.8	102	0.4	116	0.4	22	0.4			U 2	91.2	11.4
FUNATS	2	IP	08 35 26.5	IS	35 36.0										83.1	09.5
NAGOYA	0	P	08 35 29.2	S	35 43.2	27	0.6	39	0.8	15	1.2	N 1	W 2	U 7	105.1	14.0
OSHIMA	0	P	08 35 31.4	IS	35 45.6	35	0.4	33	0.4	19	0.3			U 6	119.4	14.2
GIFU	0	P	08 35 33.3	S	35 48.8	19	1.0	10	0.4	9	0.5				130.0	15.5
MATSUM	0	EP	08 35 34.5	ES	35 52.5										140.2	18.0
CHICHI	0	EP	08 35 35.0	S	35 52.0										143.0	17.0
TOMISA	0	IP	08 35 36.1	IS	35 56.7	7	0.9	7	0.5	5	2.5			U 1	158.0	20.6
KARUIZ	0	EP	08 35 36.6	S	35 56.0										155.9	19.4
YOKOHA	0	EP	08 35 38.0			14	0.4	13	0.4						150.2	
MATSUS	0	IP	08 35 38.4	ES	36 01							N		U	172.8	22.6
KUMAGA	0	P	08 35 39.6	S	36 01.4	20	1.0	16	0.8	7	0.6			U 3	173.8	21.8
TOKYO	0	P	08 35 39.6	ES	36 01.9	6	1.2	10	1.6	11	3.0				169.6	22.3
HIKONE	0	P	08 35 40.3	S	36 00.2	39	1.0	36	0.9	16	0.9				171.9	19.9
TSURUG	0	EP	08 35 43.8	ES	36 07.2										199.2	23.4
UTSUNO	0	EP	08 35 46.3	EX	36 16.5	8	1.4	7	1.5	4	1.0				236.1	
KYOTO	0	EP	08 35 46.6	ES	36 09.2	6	1.2	5	0.8	2	0.8				215.9	22.6
NARA	0	EP	08 35 47.1	ES	36 12.7										209.9	25.6
KANAZA	0	X	08 35 50.0	X	06 12.0	5	0.2	7	0.2						217.5	
OSAKA	0	EX	08 35 53	X	36 20.8	7	2.6	7	1.6	5	2.3				237.2	
TOYOOK	0	X	08 36 04.5	ES	36 39.7	21	1.2	11	1.2						304.6	
FUKUI	0	X	08 36 08.3	S	36 14.6										207.2	

OT= 4 7 25 33.7 +/- 0.3
YAMANASHI PREF
LAT= 35 33 +/- 1 LONG= 138 58 +/- 1
H= 0 MAG=3.4 CLASS=L

KOFU	0	EP	07 25 43.0	ES	25 48.8	6	0.4	9	0.4	2	0.2				39.1	05.8
MISHIM	0	EP	07 25 45.3	IS	25 51.0	26	0.4	16	0.4	9	0.2				48.7	05.7
AJIRO	0	IP	07 25 47.0	IS	25 54.7	12	0.3	13	0.3	3	0.3			U 0	57.4	07.7
SHIZUO	0	IS	07 25 48.1			8	0.4	11	0.2	4	0.2				81.8	
MATSUS	0	P	07 25 57.5	S	26 15										129.2	17.5

OT= 6 3 53 55.0 +/- 0.8
OFF IBARAKI PREF
LAT= 36 11 +/- 3 LONG= 142 9 +/- 3
H= 50 MAG=4.4 CLASS=U

CHOSHI	0	P	03 54 18.0	S	54 31.8										128.4	13.8
MITO	0	IP	03 54 18.9	S	54 34.3	15	0.8	14	0.9	6	1.1			U 1	152.3	15.4
KAKIOK	0	EP	03 54 22	ES	54 42	16	1.0	12	0.8	9	1.0				176.0	20.0
ONAHAM	0	EX	03 54 22.2	ES	54 31.9	20	0.8	16	0.9	6	0.7				139.7	
UTSUNO	0	P	03 54 26.9	S	54 45.9	7	1.4	5	1.7						208.4	19.0
FUKUSH	0	EP	03 54 29.1	ES	54 54.0	15	0.8	25	3.2	6	0.5				229.6	24.9
SENDAI	0	EP	03 54 32	ES	54 58	8	1.2	5	1.0	3	1.0				255.7	26.0
MATSUS	0	IP	03 54 45.3									N	W	U	355.9	
MIZUSA	0	EP	03 54 48.4			10	1.2	3	0.7						339.4	

OT= 6 7 27 41.1 +/- 0.7
SE OFF CHIBA PREF
LAT= 34 43 +/- 2 LONG= 140 54 +/- 4
H= 20 MAG=4.4 CLASS=S

OSHIMA	0	IX	07 28			28	0.8	23	0.6	11	0.4	N 4	E 4	D 11	139.4	
TOMISA	0	IP	07 28 01.0	IS	28 10.0	15	1.3	15	1.5	8	1.1	N 2	E 1	D 4	100.6	09.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S * A/T S	E-W * A/T S	U-D * A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHOSHI	0	P	07 28 01.7	S	28 14.3							112.0	12.6
YOKOHA	0	EP	07 28 05.1	IS	28 23.1	26 0.6	42 0.6	12 0.6			D 9	138.8	18.0
TOKYO	0	IP	07 28 07.7	ES	28 25	23 0.6	24 0.6	10 0.4				149.5	17.3
AJIRO	0	IP	07 28 08.6	IS	28 24.6	21 0.5	20 0.6	11 0.5	S 3	E 4	D 8	168.8	16.0
KAKIOK	0	EP	07 28 09	S	28 29	21 1.0	18 1.0	9 1.0				179.9	20.0
MISHIM	0	EP	07 28 10.7			13 1.0	15 1.0	7 0.7				185.2	
MITO	0	P	07 28 11.2	ES	28 31.3	12 0.9	9 0.8	4 1.6				188.4	20.1
FUNATS	0	P	07 28 14.1	S	28 36.5							213.2	22.4
HACHIJ	0	EP	07 28 14.2	S	28 38.3	10	9					206.5	24.1
KUMAGA	0	EP	07 28 16.0	ES	28 40.0	11 2.2	15 2.0	6 2.2				209.9	24.0
KOFU	0	EP	07 28 16.8	ES	28 43.6	9 1.4	8 0.8	5 1.4				237.7	26.8
UTSUNO	0	P	07 28 19.4	S	28 40.5	10 0.2	9 0.2	5 1.0				223.3	21.1
MAEBAS	0	EP	07 28 22.0	S	28 45.4	6 2.4	8 2.7	6 2.3				250.2	23.4
MATSUS	0	IP	07 28 27.4	ES	29 01				S	E	D	316.6	33.6
FUKUSH	0	EP	07 28 30.1	ES	29 02.8	3 0.8	13 3.2	2 0.8				339.4	32.7
ONAHAM	0	X	07 28 41.1			9 0.8	7 1.2	2 1.0				247.2	
MIZUSA	0	EP	07 28 49.0			8 1.0	3 2.4					490.5	

OT= 6 17 11 6.8 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 34 +/- 1 LONG= 138 15 +/- 1
H= 0 MAG=4.0 CLASS=L

MATSUS	2	P	17 11 10.6	S	11 11.6							4.9	01.0
NAGANO	2	IP	17 11 11.5	S	11 13.6							11.4	02.1
MATSUM	0	EP	17 11 17.4	IS	11 23.3							43.6	05.9
KARUIZ	0	P	17 11 17.4	S	11 22.4						U	36.9	05.0
TAKADA	0	P	17 11 19.8	S	11 27.8							59.7	08.0
MAEBAS	1	IP	17 11 22.4	S	11 31.7	16 0.1	9 0.1	6 3.2	N	W 1	D 4	75.3	09.3
KOFU	0	IP	17 11 26.7	ES	11 39.4	8 0.9	7 0.4	4 0.3	S 2	E 1	U 4	103.8	12.7
KUMAGA	0	EP	17 11 32.0	ES	11 42.6	6 0.8	10 0.8	3 0.8				112.0	10.6
KANAZA	0	EP	17 11 32.9	S	11 52.5	4 0.4	5 0.3	2 0.2				143.4	19.6
UTSUNO	0	P	17 11 34.4	S	11 51.1	9 0.6	9 0.3	4 0.7				145.2	16.7
WAJIMA	0	EP	17 11 35.4	ES	11 53.0	23 1.0	23 1.0					151.1	17.6
GIFU	0	EP	17 11 41.6	S	12 03.4	5 1.4	8 1.4					186.3	21.8
MITO	0	EP	17 11 42.2	S	12 05.7	12 0.4	11 0.4	3 0.3				200.2	23.5
HAMAMA	0	P	17 11 43.7	S	12 08.7	5 0.8	5 1.8	4 1.4			U 1	211.6	25.0
TOYAMA	0	X	17 11			9 3.4	7 2.2	5 3.6				94.4	
HIKONE	0	X	17 12 16.5			6 1.0	7 1.0					230.8	
ONAHAM	0	X	17 12 21.7			4 0.8	5 1.2					240.9	

OT= 9 14 34 34.0 +/- 1.0
OFF FUKUSHIMA PREF
LAT= 36 58 +/- 2 LONG= 142 35 +/- 5
H= 70 CLASS=M

ISHINO	0	P	14 35 04.2	IS	35 23.0	13 0.2	13 0.2	4 0.2				197.3	18.8
MITO	1	IP	14 35 05.0	IS	35 24.4	55 0.3	42 0.3	16 0.3			D 2	199.7	19.4
SENDAI	X	EX	14 35 05	IS	35 25.8	20 0.2	14 0.2	8 0.2				206.6	
				IX	35 12.0								
FUKUSH	1	EP	14 35 05.5	S	35 26.0	71 0.9	48 0.8	14 0.7				206.3	20.5
KAKIOK	1	EP	14 35 05.9	ES	35 28.5	26 1.0	25 1.0	14 0.6				228.8	22.6
SHIRAK	1	IP	14 35 06.4	IS	35 26.7						D 2	210.4	20.3
OFUNAT	0	IP	14 35 10.0	IS	35 33.3	7 0.2	5 0.0	3 0.6	N 1		U 1	244.6	23.3
MIZUSA	0	EP	14 35 14.0	ES	35 41.0	8 1.1	14 1.2	6 1.2				272.1	27.0
UTSUNO	0	X	14 35 16.0	S	35 33.9	19 0.2	16 0.2	8 0.3				246.5	
MORIOK	0	EP	14 35 20.7	IS	35 52.2	8 0.3	10 0.5	2 0.3		E 0		327.3	31.5
CHOSHI	0	X	14 35 27.1									208.2	
MATSUS	0	IP	14 35 29.0	ES	36 10					E	D	393.5	41.0
KUMAGA	0	X	14 35 33.0	ES	35 46.0	7 1.2	5 1.0	2 0.4				300.4	
AKITA	0	X	14 35 54.4			5 2.0	7 2.4	4 2.0				374.6	
ONAHAM	0	X	14 35 58.5	IS	35 14.1	25 1.4	27 1.3	9 0.3			D 4	149.3	

OT= 12 1 7 54.8 +/- 0.3
TOKYO BAY
LAT= 35 28 +/- 2 LONG= 139 46 +/- 2
H= 70 CLASS=U

TOKYO	0	IP	01 08 06.0	ES	08 13.6	17 0.4	26 0.6	9 0.3				24.2	07.6
YOKOHA	0	EP	01 08 06.3	IS	08 13.7	32 0.4	41 0.5				U 2	10.7	07.4
AJIRO	0	IP	01 08 10.8	IS	08 21.7	12 0.3	18 0.3	5 0.3			D 5	76.9	10.9
OSHIMA	0	P	01 08 11.4	S	08 22.8	18 0.4	12 0.6	6 0.4				85.8	11.4
FUNATS	0	IP	01 08 11.6	IS	08 22.1							91.1	10.5

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S * A/T S	E-W * A/T S	U-D * A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KOFU	0	EP	01 08 15.2	ES	08 28.3	6 0.3	7 0.4	2 0.3				111.7	13.1
MATSUS	0	IP	01 08 22.7	IS	08 44.2					E	D	184.0	21.5

OT= 12 1 19 14.5 +/- 2.0
E OFF KWANTO
LAT= 36 23 +/- 6 LONG= 143 9 +/- 9
H= 60 MAG=4.6 CLASS=U

ONAHAM	0	EX	01 19 48.6	ES	20 07.9	23 1.2	21 1.1	7 2.6				210.0	
MITO	0	IP	01 19 49.7	ES	20 04.7	14 2.4	13 2.4	8 2.4			U 2	240.3	15.0
KAKIOK	0	EP	01 19 51.8	ES	20 18.8	10 0.8	8 0.7	4 0.7				266.0	27.0
FUKUSH	0	EP	01 19 54.7	X	20 13.4	14 0.9	42 1.6	4 0.8				282.5	
SENDAI	0	EP	01 19 56.8	ES	20 20.9	9 1.2	9 1.2	5 1.2			D 2	288.3	24.1
KUMAGA	0	EP	01 20 03.5	ES	20 46.6	5 1.4	6 1.2	2 0.8				339.3	43.1
MIZUSA	0	EP	01 20 07.6	X	21 23.5		4 4.0	6 1.8				353.1	
TOKYO	0	X	01 20 11.6			6 2.8	7 3.2					315.3	
MATSUS	0	IP	01 20 16.0							E	D	443.2	
KOFU	0	EP	01 20 16.4	X	21 08.4	6 1.4	7 1.5	2 1.4				421.4	
AKITA	0	EX	01 20 21.4			4 3.4	5 4.0	3 3.0				456.6	
NIIGAT	0	X	01 20 51.4			8 2.2	9 2.5					401.5	

OT= 13 8 2 41.9 +/- 1.6
KURILE IS
LAT= 46 14 +/-12 LONG= 154 55 +/- 7
H= 40 MAG=5.8 CLASS=U

NEMURO	0	P	08 24 28.8	ES	25 47.4	29 2.4	17 1.6	14 5.8			U	805.5	78.6
ABASHI	0	EP	08 24 39.2	S	26 10.2	29 3.6	22 3.8	13 3.6				871.6	91.0
KUSHIR	0	EP	08 24 42.6	ES	26 14.0	26 2.4	28 3.6	21 4.8				909.6	91.4
ASAHIK	0	IP	08 24 57.2	S	26 49.6	11 3.2	14 2.6	10 2.6			D	1025.3	112.4
WAKKAN	0	EP	08 24 57.7	TS	26 48.7	10 4.6	25 4.1	20 2.8				1032.2	111.0
HIROO	0	EP	08 24 59.7	ES	26 46.1							1024.0	106.4
URAKAW	0	EP	08 25 03.3	S	26 49.7	98 2.2	69 3.2	26 3.2				1069.5	106.4
OBIHIR	0	X	08 25 08.8	X	26 59.5							998.3	
SAPPOR	0	EP	08 25 09	ES	27 11	19 3.0	29 3.4	13 5.0				1132.7	122.0
RUMOI	0	X	08 25 09.0									1075.0	
HAKODA	0	EP	08 25 20.0	ES	27 26.7	12 2.0	11 3.2	8 3.4				1234.9	126.7
HACHIN	0	EP	08 25 23.0	X	27 24.7	6 4.4	5 3.4	5 4.0				1254.8	
AKITA	0	EX	08 25 44	EX	28 05	12 2.6	13 1.8	8 2.6				1405.6	
MIZUSA	0	EP	08 25 44.1	ES	28 01.5	15 3.4	22 3.0	12 1.5				1374.9	137.4
SENDAI	0	EP	08 25 55.6	ES	28 15.2	8 2.0	6 2.0	3 2.0				1453.5	139.6
AOMORI	0	X	08 26 00			25 2.9	39 2.4	10 1.7				1289.1	
MITO	0	EX	08 26 11.5	ES	29 01.2	7 3.5	8 4.0	4 2.6				1626.8	
NIIGAT	0	EX	08 26 20.0			15 6.0	11 4.2	8 4.5				1601.3	
MATSUS	0	P	08 26 26	S	29 30							1758.3	184.0
KUMAGA	0	EP	08 26 27.4	ES	29 44.8	6 3.8	7 3.8	4 3.8				1713.0	197.4
MAEBAS	0	EX	08 26 28.0			9 4.8	10 4.9	4 3.4				1713.3	
WAJIMA	0	EX	08 26 35.0	EX	29 29.0	5 4.4	5 4.4					1784.4	
TOKYO	0	EP	08 26 35.6	S	29 42.0	6 2.8	7 3.0	9 3.8				1726.9	186.4
TOYAMA	0	EX	08 26 38			6 4.2	6 5.2	6 4.0				1812.2	
HAMAMA	0	EP	08 26 50	ES	30 18	5 4.0	5 4.0	3 3.0				1932.5	208.0
OSAKA	0	P	08 27 06.7	X	30 35.9	14 5.2	20 4.4	5 3.4				2078.1	
MUROTO	0	IP	08 27 25.1	ES	31 23.2	5 7.0	4 6.2		N	0 E	0 U 0	2276.6	238.1
MIYAZA	0	EP	08 27 51.6	ES	32 13.0	4 7.0	3 4.6	5 3.8				2563.3	261.4
NAGASA	0	P	08 27 56.0	ES	32 11.0				S	W	U	2608.0	255.0
ONAHAM	0	EX	08 28 40.2			7 1.3	5 0.9	3 2.3				1554.5	

OT= 15 20 33 53.3 +/- 0.7
CHIBA PREF
LAT= 35 24 +/- 2 LONG= 140 3 +/- 5
H= 50 MAG=3.9 CLASS=U

TOKYO	0	P	20 34 03.6	IS	34 11.0	16 0.5		10 0.4				41.2	07.4
AJIRO	0	IP	20 34 09.5	IS	34 21.2	18 0.3	11 0.3	3 0.3	N 1	E 1	D 1	95.4	11.7
OSHIMA	0	P	20 34 09.9	S	34 21.0	20 0.3	13 0.3	16 0.3				93.6	11.1
KUMAGA	0	EP	20 34 10.4	S	34 22.2	11 1.0	4 1.0	2 1.0				102.3	11.8
KOFU	0	EP	20 34 18.0	IS	34 28.0	10 0.3	10 0.4	3 0.3				138.4	10.0

OT= 16 3 19 33.9 +/- 0.3
E OF FUKUSHIMA PREF
LAT= 37 1 +/- 1 LONG= 140 57 +/- 3
H= 90 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ONAHAM	1	IP	03	19	48.2	IS	19	59.0	34	0.4	42	0.3	12	0.4			D 8	8.8	10.8
SHIRAK	X	IP	03	19	50.4	IS	20	02.4									D 6	65.4	12.0
MITO	2	IP	03	19	52.4	IS	20	05.6	66	0.7	72	0.3	25	0.2	S 2 W	1	U 12	82.7	13.2
FUKUSH	1	EP	03	19	53.4	S	20	06.6	29	0.5	45	1.2	10	0.6				92.3	13.2
KAKIOK	1	IP	03	19	53.8	IS	20	08.7	50	0.8	68	0.6	29	0.5			U 8	110.3	14.9
UTSUNO	1	P	03	19	53.9	IS	20	08.0	42	0.1	35	0.2	16	0.2				109.5	14.1
SENDAI	X	EP	03	19	57.2	IS	20	14.1	11	0.2	7	0.1	5	0.1				138.1	16.9
ISHINO	0	IP	03	19	59.5	IS	20	17.6	21	0.2	18	0.2	5	0.2	N 2 E	2	U 2	159.4	18.1
KUMAGA	0	EP	03	20	02.6	ES	20	21.6	7	0.8	8	0.8	2	0.8				170.1	19.0
TOKYO	0	IP	03	20	02.9	S	20	24.0	8	0.6			4					182.4	21.1
YOKOHA	0	EP	03	20	07.1	IX	20	30.8	6	0.5	6	0.5						210.4	
OFUNAT	0	IP	03	20	08.1	X	20	52.8	16	0.0	9	0.0	2	0.4	N 0			236.8	
MIZUSA	0	EP	03	20	10.0	ES	20	36.0			4	1.0						235.5	26.0
MATSUS	0	IP	03	20	10.4	S	20	33								E	D	250.4	22.6
KOFU	0	EP	03	20	13.6	ES	20	40.7	5	0.6	6	1.2	3	1.2				261.8	27.1

OT= 19 13 57 58.0 +/- 0.2
KII CHANNEL
LAT= 33 53 +/- 1 LONG= 134 46 +/- 1
H= 40 MAG=4.4 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOKUSH	3	IP	13	58	05.6	IS	58	10.9	320	0.1	270	0.1	310	0.1	S 6 E	10	D 21	26.7	05.3
SUMOTO	2	IP	13	58	09.3	IS	58	16.4	100	0.4	82	0.6	29	0.4	N 1 E		U 1	51.8	07.1
WAKAYA	2	IP	13	58	09.6	IS	58	16.3	317	0.2	212	0.2						53.0	06.7
TURUGI	1	P	13	58	10.7													62.1	
TAKAMA	1	IP	13	58	13.2	IS	58	22.9	35	0.6	66	0.6	32	0.5	N 1 W	1	U 17	81.1	09.7
MUROTO	0	IP	13	58	13.8	IS	58	24.7	11	1.9	29	1.0	6	0.8	S 1 W	1	U 2	89.1	10.9
KOBE	0	P	13	58	14.1	ES	58	25.4									U 4	97.0	11.3
SHIONO	0	IP	13	58	15.6	IS	58	26.7	19	0.3	13	0.3	13	0.2	S E		U 3	104.2	11.1
OSAKA	0	IP	13	58	16.1	IS	58	29.2	20	1.0	30	2.4	12	1.4			U 3	110.7	13.1
OKAYAM	0	IP	13	58	16.9	IS	58	28.9	80	0.5	70	0.6	20	0.5	N W		U	118.3	12.0
KOCHI	0	IP	13	58	17.5	IS	58	30.8										120.1	13.3
NARA	0	EP	13	58	18.6	ES	58	32.6										132.3	14.0
KYOTO	0	P	13	58	21.4	IS	58	37.8	5	0.8	5	0.0	3	0.6	N 1 E	1	U 2	153.5	16.4
MATSUY	0	EP	13	58	25.8	ES	58	39.9	7	0.8	8	0.9						183.8	14.1
TSU	0	EP	13	58	26.5	IS	58	55.4										185.0	28.9
HIKONE	0	EP	13	58	28.3	S	58	49.8	15	0.6	24	1.0						205.4	21.5
TSURUG	0	EP	13	58	32.5	S	58	55.6										229.1	23.1
NAGOYA	0	EP	13	58	34.5	ES	59	00.8	5	1.0	10	0.6	4	0.2	S 1 W	1	D 1	247.1	26.3
GIFU	0	P	13	58	35.1	S	59	00.4	8	0.6	10	0.4	6	0.4				248.5	25.3
TOYOOK	0	X	13	58	44.3				20	1.0	20	1.2	6	0.9				183.4	
MATSUS	0	IP	13	58	56.0	X	59	21								W	U	429.9	

OT= 19 19 46 12.5 +/- 0.2
OFF IBARAKI
LAT= 36 36 +/- 1 LONG= 141 23 +/- 1
H= 40 MAG=3.9 CLASS=U

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ONAHAM	0	IP	19	46	24.2	IS	46	31.7	30	1.2	21	1.1	5	0.5			D 4	57.2	07.5
MITO	0	IP	19	46	27.6	IS	46	38.0	18	0.4	16	0.6	7	0.2	S	W 2	D 2	85.3	10.4
CHOSHI	0	EP	19	46	30.8	ES	46	43.2										108.5	12.4
KAKIOK	0	P	19	46	31.1	S	46	43.4	11	0.3	8	0.3	6	1.0				114.3	12.3
UTSUNO	0	P	19	46	34.6	EX	46	50.8	7	0.2	6	0.2	3	0.5				135.4	
FUKUSH	0	EP	19	46	36.9	S	46	53.0	14	1.0	16	0.7	5	0.6				151.6	16.1
SENDAI	0	EP	19	46	41.3	ES	47	01.0	5	0.8	5	1.5	4	1				189.1	19.7
MATSUS	0	IP	19	46	53.8	S	47	25								E	D	284.2	31.2

OT= 19 21 43 23.1 +/- 0.2
KUMAMOTO PREF
LAT= 32 47 +/- 1 LONG= 130 36 +/- 1
H= 10 MAG=3.7 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KUMAMO	2	IP	21	43	26.4	IS	43	28.6	147	0.4	191	0.4	141	0.3	S 5 W	3	D121	10.7	02.2
UNZEND	1	IP	21	43	30.0	IS	43	34.3							S 0			32.9	04.3
SAGA	0	IP	21	43	35.1	IS	43	44.0							N 3 W	4	U 4	58.1	08.9
FUKUOK	0	EP	21	43	40.0	IS	43	50.0	7	0.2	6	0.2	1	0.4				90.7	10.0
MIYAZA	0	IP	21	43	45.6	S	44	00.6	10	0.8	11	1.0	4	0.6				123.6	15.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KAGOSH	0	EP	21	43	47.5	ES	44	02.8	13	3.0	9	1.4	6	0.8				134.2	15.3

OT= 20 19 16 5.6 +/- 0.6
NEAR KOZUSHIMA
LAT= 34 9 +/- 3 LONG= 139 7 +/- 4
H= 0 MAG=4.1 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OSHIMA	0	P	19	16	22.1				18	4.0	23	4.8	8	2.0		W 2	D 3	72.0	
MISHIM	0	IP	19	16	25.9	ES	16	50.2	13	4.3	12	6.0	4	2.6	S 3		D 2	108.0	24.3
TOMISA	0	IP	19	16	27.2				16	3.7	18	6.0	6	2.8			U 1	107.5	
SHIZUO	0	P	19	16	27.6	S	16	41.9			6	0.4						112.2	14.3
YOKOHA	0	EP	19	16	29.9	ES	16	54.2	11	0.8	13	1.0						151.0	24.3
HACHIJ	0	EP	19	16	31.0	S	16	46.8	9		9					W 2		131.9	15.8
HAMAMA	0	P	19	16	31.4	S	16	47.5	15	2.0	8	1.4	4	1.8			U 2	142.2	16.1
FUNATS	0	P	19	16	33.7	S	16	55.7										153.0	22.0
KOFU	0	IP	19	16	36.8	ES	16	55.6	11	1.4	12	2.0	4	1.2	S 2 W	2	D 2	175.6	18.8
IIDA	0	EX	19	16	39.2													191.0	
KUMAGA	0	EX	19	16	42.6				5	3.0	3	2.8	3	3.4				222.8	
MATSUS	0	P	19	16	51	S	17	28										277.5	37.0
OMAEZA	0	X	19	16		S	16	36.8	26	4.8	20	2.9	26	0.8				97.1	
OSAKA	0	X	19	17	47.1				6	3.2	6	4.1						333.5	

OT= 20 19 41 26.2 +/- 0.7
NEAR KOZUJIMA
LAT= 34 1 +/- 2 LONG= 139 4 +/- 2
H= 0 MAG=3.7 CLASS=U

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OSHIMA	0	EP	19	41	42.0				6	1.6	6	1.6	5	1.9				87.4	
MISHIM	0	EP	19	41	45.6				6	4.4	6	6.2	2	1.3				122.1	
HAMAMA	0	P	19	41	52.6	S	42	10.0	5	1.2	5	2.6	3	1.4			U 1	145.4	17.4
KOFU	0	EP	19	41	58.0	ES	42	21.6	5	1.2	5	1.8	2	1.2				188.6	23.6
OMAEZA	0	X	19	41		ES	41	59.9	11	1.3	9	1.3						102.0	
MATSUS	0	IP	19	42	12.7	S	42	46							N	W	U	290.4	33.3

OT= 21 1 48 37.3 +/- 0.7
S OFF SHIZUOKA PREF
LAT= 34 6 +/- 4 LONG= 138 55 +/- 6
H= 0 MAG=3.8 CLASS=U

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OSHIMA	0	P	01	48	52.1				11	2.4	10	3.2	5	1.4		E 4		84.8	
OMAEZA	0	EP	01	48	52.5	ES	49	09.8	8	4.6	8	4.4						85.4	17.3
MISHIM	0	EP	01	48	55.3				5	1.7	6	1.3	3	1.8				112.2	
TOMISA	0	IP	01	48	58.0				8	3.2	13	8.0	4	2.2	S 1			123.6	
HAMAMA	0	P	01	49	02.4	S	49	18.9	6	1.2	6	2.8	3	2.0			D 3	128.8	16.5
HACHIJ	0	EP	01	49	03.6	S	49	17.8	8		6							137.1	14.2
KOFU	0	EP	01	49	07.6	ES	49	31.3	7	2.0	8	2.0	3	1.8				176.6	23.7
MATSUS	0	IP	01	49	22.5	S	49	57									U	278.0	34.5

OT= 21 4 42 27.2 +/- 0.5
E PART OF KOCHI PREF
LAT= 33 44 +/- 3 LONG= 134 1 +/- 4
H= 30 MAG=4.1 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TAKAMA	0	EP	04	42	36.4	IS	42	44.3	8	1.2	8	1.2	5	0.6				64.8	07.9
TURUGI	0	IP	04	42	36.5	IS	42	40.2										15.1	03.7
KOCHI	0	IP	04	42	36.6	IS	42	44.1							S 2	E	1	49.2	07.5
TOKUSH	0	EP	04	42	38.3	IS	42	44.0										63.5	05.7
MUROTO	0	IP	04	42	38.3	IS	42	46.1	6	0.6	6	0.6			S 1	W	0 U 1	55.8	07.8
SUMOTO	1	P	04	42	43.6	S	42	54.6	11	0.3	10	0.3	3	0.3	N	E	U	106.0	11.0
OKAYAM	0	IP	04	42	45.0	IS	42	57.4	45	0.5	20	0.5	10	0.6		E	D	105.6	12.4
KOBE	0	EP	04	42	56.1	ES	43	12.1										150.7	16.0
WAKAYA	0	X	04	42	58.7				9	00.3	12	00.3						119.5	
OSAKA	0	X	04	43	12.2				5	0.9	6	1.4						173.1	
TOYOOK	0	X	04	43	22.6				11	1.2	7	1.0						213.1	
MATSUS	0	EP	04	43	35													492.5	

OT= 21 21 9 51.2 +/- 0.2
KYOTO PREF
LAT= 35 2 +/- 1 LONG= 135 35 +/- 1
H= 10 MAG=4.6 CLASS=M

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KYOTO	3	IP	21 09 55.8	IS	09 57.3	189 0.2	209 0.4	164 0.6	N 1	W 6	D 10	14.0	01.5
MAIZUR	1	X	21 10			52 0.0	111 0.0	24 0.0				51.8	
OSAKA	2	IP	21 10 00.8	IS	10 06.0	169 0.7	181 0.6	68 0.6	S 6		U 48	42.9	05.2
NARA	3	IP	21 10 00.8	IS	10 05.6	300 0.2	450 0.2	250 0.2	S 5	E 4	U 42	45.0	04.8
KOBE	1	P	21 10 02.6	IS	10 10.1	150 0.8	100 0.8	100 0.8	N 2	W 2	D 4	53.1	07.5
HIKONE	2	IP	21 10 03.9	IS	10 11.5	260 1.0	128 0.8	55 0.6	S 10	W 14	D 14	66.0	07.6
TSURUG	1	IP	21 10 06.2	S	10 16.1	100 0.1	130 0.1		N 5	E 6	U 6	81.2	09.9
HIMEJI	0	IP	21 10 07.8	IS	10 18.3				N 4	E 15	D 10	83.4	10.5
TOYOOK	X	IP	21 10 08.9	S	10 20.0	185 1.0	114 0.8	51 0.6	S 4	E 6	D 3	89.1	11.1
SUMOTO	X	P	21 10 09.2	IS	10 21.6	35 0.5	33 0.9	10 0.9	S 1	W	U 1	99.1	12.4
				EX	10 10.4								
WAKAYA	1	P	21 10 10.3	IS	10 22.6	119 1.0	88 0.8					97.3	12.3
OWASE	1	IP	21 10 11.5	S	10 26.0	65 0.0	51 0.0	30 0.0	S 2	E 1	U 1	121.0	14.5
TSU	2	IP	21 10 11.9	IS	10 24.4				S	E	D	93.0	12.5
GIFU	0	P	21 10 12.7	S	10 25.7	79	61	26				114.9	13.0
NAGOYA	1	IP	21 10 13.2	S	10 27.6	23 0.2	26 0.2	21 0.2	N 0	W 3	D 14	127.1	14.4
FUKUI	1	P	21 10 15.3	IS	10 29.9							127.3	14.6
TOTTOR	0	EP	21 10 16.2	ES	10 33.3							138.4	17.1
TOKUSH	0	EP	21 10 17.3	ES	10 33.7							141.6	16.4
OKAYAM	0	IP	21 10 18.0	IS	10 37.6	50 0.8	32 1.0	10 1.0	N	E	D	157.4	19.6
TAKAMA	0	EP	21 10 19.0	IS	10 37.8	16 1.2	14 1.2	7 0.7				160.7	18.8
SHIONO	0	EP	21 10 19.1	IS	10 41.4	14 1.5	9 1.5	13 1.4				176.5	22.3
TAKAYA	0	EP	21 10 23.5	IS	10 45.6							195.8	22.1
KANAZA	0	EP	21 10 24.0	IS	10 44.2	39 0.2	47 0.2	17 0.3				193.5	20.2
IIDA	0	EP	21 10 24.4	IS	10 50.8	13 0.6	20 1.2	6 1.2				211.5	26.4
HAMAMA	0	P	21 10 24.4	S	10 48.4	15 1.2	19 1.2	15 0.6	S 1		D 2	198.9	24.0
SHIZUO	0	EP	21 10 30.6	S	11 05.2		7 0.4					257.7	34.6
TOYAMA	0	P	21 10 31.6	S	10 46.2	13 2.4	15 3.0	14 1.8				236.6	14.6
MATSUE	0	EP	21 10 31.6	S	10 58.4							233.3	26.8
MUROTO	0	IP	21 10 33.2	S	11 00.5	12 1.3	10 1.4	4 1.4			U 0	236.6	27.3
SAIGO	0	P	21 10 33.4	S	11 01.0	12 1.2	9 1.4	8 0.6	S 0	E 0	D 0	241.7	27.6
MATSUS	0	IP	21 10 34.4	S	11 09				S	W	D	290.1	34.6
KOFU	0	IP	21 10 34.4	ES	11 10.8	12 0.6	9 0.3	4 1.2			U 1	279.3	36.4
OMAEZA	0	EP	21 10 34.7	ES	11 03.9	12 1.9	13 2.0	9 2.0				245.2	29.2
KOCHI	0	IP	21 10 37.8	IS	11 03.8							250.3	26.0
WAJIMA	0	EP	21 10 38.6	ES	11 11.0	28 1.0	40 1.0	8 1.0				286.9	32.4
KARUIZ	0	EP	21 10 39.3									305.2	
MISHIM	0	EP	21 10 41.0			8 0.6	8 0.6	2 0.7				305.3	
FUNATS	0	P	21 10 41.8	S	11 14.1							293.8	32.3
MATSUY	0	EP	21 10 43.0	ES	11 16.8	9 0.8	10 0.8	3 0.6				289.6	33.8
KUMAGA	0	EP	21 10 47.0	ES	11 36.0	8 1.8	7 1.4	3 1.6				365.9	49.0

International Seismological Centre From the ISC collection scanned by SISMOS

OT= 22 0 50 9.1 +/- 0.3
OFF IBARAKI PREF
LAT= 36 46 +/- 1 LONG= 141 0 +/- 3
H= 60 MAG=4.1 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ONAHAM	2	IP	00 50 19.4	IS	50 25.1	75 0.8	72 1.0	25 0.6			D 8	21.5	05.7
MITO	0	IP	00 50 23.1	IS	50 32.4	30 0.4	48 0.5	10 0.4	S 1	W 2	D 3	64.0	09.3
SHIRAK	0	IP	00 50 24.6	IS	50 34.4					E 2	D 15	79.3	09.8
KAKIOK	1	IP	00 50 26.4	IS	50 37.2	20 0.7	22 0.8	8 1.0	N 1	E 2	D 1	93.5	10.8
UTSUNO	0	P	00 50 27.1	S	50 39.2	12 0.2	13 0.2					103.8	12.1
FUKUSH	0	IP	00 50 29.0	S	50 43.0	38 1.0	35 0.8	9 0.6	S 3	W 3	D 3	119.3	14.0
MATSUS	0	IP	00 50 46.6	S	51 17				S	E	D	250.9	30.4
KOFU	0	EP	00 50 49.7	X	51 24.6	3 1.0	5 1.4	1 0.7				251.2	
OMAEZA	0	X	00 50			6 13.6	7 13.6					348.1	
NIIGAT	0	X	00 51 10.3			8 4.5	8 7.0					214.2	

OT= 22 21 27 56.3 +/- 0.3
TOCHIGI PREF
LAT= 36 36 +/- 1 LONG= 139 25 +/- 1
H= 10 MAG=3.9 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MAEBAS	0	EP	21 28 04.9	IS	28 09.7	17 0.3	8 0.2	8 4.2				38.4	04.8
UTSUNO	1	P	21 28 05.5	IS	28 10.3	20 0.2	28 0.2	10 0.3	N 1	W 1	D 4	41.1	04.8
KUMAGA	0	P	21 28 06.8	S	28 12.6	13 0.4	17 0.6	7 2.8	N 2		D 3	50.4	05.8
KAKIOK	1	P	21 28 10.4	S	28 19.7	21 0.3	20 0.3	14 0.3				80.7	09.3
MITO	1	IP	21 28 15.0	IS	28 26.6	32 0.3	25 0.3	13 0.3		W 1	D 2	97.7	11.6
TOKYO	0	IP	21 28 15.7	IS	28 28.8	9 0.3	8 0.4				U	106.1	13.1
MATSUS	0	IP	21 28 15.9	S	28 30				N	E	D	108.4	14.1
KOFU	0	EP	21 28 20.1	S	28 36.7	6 0.5	8 0.4	2 0.3				129.3	16.6
YOKOHA	0	EP	21 28 20.3	IS	28 35.7	21 0.6	17 1.0				D 3	130.8	15.4
ONAHAM	0	X	21 28 39.2			8 0.8	9 1.0	2 0.6				138.4	

OT= 23 5 13 47.1 +/- 0.2
AICHI PREF
LAT= 34 55 +/- 1 LONG= 136 50 +/- 1
H= 0 MAG=4.1 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NAGOYA	2	IP	05 13 55.5	IS	14 00.0	93 0.6	159 0.8	52 0.4	S 2	W 2	D 14	30.2	04.5
GIFU	0	P	05 13 58.0	S	14 03.6	26	36	16				53.8	05.6
HIKONE	0	IP	05 14 02.1	IS	14 09.9	79 0.8	63 1.0	32 0.6	N 4	W 4	U 9	66.5	07.8
HAMAMA	0	P	05 14 04.5	S	14 15.3	18 0.6	23 1.0	8 1.2			U 1	84.6	10.8
NARA	0	EP	05 14 06.3	ES	14 18.7							95.1	12.4
KYOTO	1	EP	05 14 06.8	ES	14 18.6	13 0.4	13 0.2	5 0.8		E 1	D 1	100.8	11.8
TSURUG	0	EP	05 14 08.2	S	14 19.8							107.2	11.6
OWASE	0	P	05 14 08.5	S	14 21.4	25	24	7 0.1				111.0	12.9
IIDA	0	EP	05 14 08.6	IS	14 22.6	11 1.2	16 1.0	13 1.0				112.4	14.0
OSAKA	0	P	05 14 10.5	S	14 25.3	26 1.6	29 2.0	16 2.6			D 3	122.2	14.8
MAIZUR	0	IP	05 14 14.3	IS	14 30.8							145.4	16.5
FUKUI	0	P	05 14 14.4	S	14 30.1							137.6	15.7
SHIZUO	0	EP	05 14 15.2	S	14 30.7	7 1.0	8 1.0	6 2.2				143.8	15.5
KOBE	0	EP	05 14 15.7	ES	14 36.9							153.4	21.2
KOFU	0	EP	05 14 19.6	ES	14 42.9	11 1.8	7 0.6	4 1.0				177.5	23.3
SHIONO	0	EP	05 14 20.2	ES	14 42.2	6 0.9	7 1.1	5 1.2				190.4	22.0
FUNATS	0	P	05 14 20.7	S	14 43.2							187.2	22.5
KANAZA	0	P	05 14 20.8	ES	14 40.0	6 0.4	7 0.2					181.6	19.2
TOYOOK	0	EP	05 14 23.0	ES	14 44.6	42 0.9	30 1.1	17 0.5				195.7	21.6
MATSUS	0	IP	05 14 23.9	S	14 50				S	W	D	218.7	26.1
TOYAMA	0	P	05 14 25.2	S	14 48.0	13 3.2	10 2.8					201.4	22.8
TOKUSH	0	EP	05 14 26.2									227.7	
KUMAGA	0	X	05 14 36.0	ES	15 07.4	6 2.0	4 1.8	4 3.8				268.6	
YOKOHA	0	X	05 14 43.4	IX	15 12.1	6 1.0	6 0.9					263.4	
OMAEZA	0	X	05 14	ES	14 29.0	13 1.8	23 1.8	8 1.5				131.0	

OT= 23 15 25 52.3 +/- 0.7
OFF MIYAGI PREF
LAT= 38 7 +/- 3 LONG= 141 20 +/- 6
H= 70 CLASS=U

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
SENDAI	0	IP	15	26	04.8	IS	26	10.7	12	0.8	17	0.8	4	0.8			D 4	41.2	05.9
ISHINO	0	P	15	26	04.8	IS	26	12.2	13	0.4	12	0.4	5	0.4	S	3 W 3	D 5	34.3	07.4
FUKUSH	0	EP	15	26	09.4	ES	26	21.4	8	0.4	8	0.4	3	0.3				85.4	12.0
OFUNAT	0	EP	15	26	11.2	IS	26	25.1	7	0.2	6	0.4	1	0.4				110.1	13.9
MIZUSA	0	EP	15	26	11.8	IS	26	26.6	5	0.7	12		4	1.2				114.2	14.8
MORIOK	0	IP	15	26	19.3	IS	26	38.3	4	0.4	7	0.4	2	0.5	S	0	D 0	176.0	19.0
MATSUS	0	IP	15	26	39.6										N	W	D	327.6	

OT= 24 1 31 28.1 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 26 +/- 1 LONG= 138 7 +/- 1
H= 0 MAG=4.9 CLASS=S

MATSUS	3	P	01	31	32.2	S	31	34.6											
MATSUM	2	IP	01	31	34.7	S	31	38.7	250	2.7	250	2.9	400	2.5	S	W	D	14.3	02.4
NAGANO	3	P	01	31	34.9	S	31	38.7	700		1400	0.4	500		S	3 W 3	U 4	24.7	04.0
KARUIZ	1	IP	01	31	37.6	S	31	43.3	600	2.8	500	1.5	300	1.8	S	W 1	D 1	26.1	03.8
TAKADA	0	P	01	31	43.2	S	31	51.8							N	7 W 14	D 20	40.4	05.7
																		75.5	08.6
TAKAYA	0	EP	01	31	44.7	S	32	00.9											
TOYAMA	0	IP	01	31	45.2	S	31	58.8	154	4.0	101	3.8	180	3.8				83.5	16.2
MAEBAS	0	IP	01	31	45.4	ES	31	56.7	443	4.0	197	3.6	226	3.8	S	5 E 5	D 4	86.8	13.6
KOFU	0	IP	01	31	46.4	S	31	58.4	65	5.0	85	4.4	28	3.0			D 2	85.1	11.3
CHICHI	1	EP	01	31	46.8	S	31	59.7	250	3.5	150	2.6	150	2.5	N	2 W 2	D 4	94.1	12.0
																		99.6	12.9
IIDA	1	IP	01	31	48.0	IS	32	03.0	65	3.0	58	5.0	30	1.6	S	15 W 5	U 4	105.5	15.0
FUNATS	1	P	01	31	51.4	IS	32	05.8										119.0	14.4
KUMAGA	0	IP	01	31	52.2	ES	32	08.2	193	5.2	218	4.4	124	4.0	N	2 E 2	U 8	118.3	16.0
KANAZA	0	IP	01	31	52.9	ES	32	08.9	95	0.4	77	0.2	52	0.3	S	1 E 3	D 7	132.1	16.0
WAJIMA	0	IP	01	31	55.0	S	32	16.0	100	1.0	80	1.0	23	1.4	S	1	D 2	151.8	21.0
UTSUNO	0	EP	01	31	56.6	ES	32	17.3	51	3.6	35	3.2	16	4.6			U 1	157.7	20.7
GIFU	0	P	01	31	58.6				47	2.1	61	3.1	25	3.4				167.5	
MISHIM	0	EP	01	31	58.6	ES	32	18.0	44	4.3	56	3.9	12	5.4				164.0	19.4
SHIZUO	0	P	01	31	58.9	S	32	20.2	27	5.4	32	4.6	18	4.6				164.1	21.3
NAGOYA	0	P	01	31	59.2	S	32	22.8	70	1.0	62	0.8	28	1.0	S	2 W 2	U 3	174.8	23.6
TOKYO	0	P	01	31	59.6	ES	32	21.0	110	6.0	88	5.6	146	3.8			U	169.6	21.4
AJIRO	0	IP	01	31	59.7	ES	32	21.3	14	0.4	8	0.4	2	0.5			D 0	177.8	21.6
FUKUI	0	P	01	32	00.1	S	32	24.0										175.0	23.9
KAKIOK	0	EP	01	32	00.2	S	32	21.3	26	0.5	25	0.5	8	0.8				187.8	21.1
NIIGAT	0	IP	01	32	01.2	IS	32	24.2	85	5.1	100	5.5	40	4.9			U 3	183.7	23.0
YOKOHA	0	EP	01	32	01.6	IS	32	27.5	153	4.4	48	1.0	43	3.1		W 4	D 3	177.4	25.9
SHIRAK	0	EP	01	32	02.1	ES	32	26.9										203.0	24.8
HAMAMA	0	P	01	32	02.5	S	32	29.4	51	3.2	70	3.0	31	1.6	N	1 E 1	D 2	194.6	26.9
OMAEZA	0	EP	01	32	04.2	ES	32	34.6	77	4.7	158	4.9	50	2.6				203.2	30.4
TSURUG	0	EP	01	32	04.3	S	32	31.1										204.3	26.8
MITO	0	IP	01	32	04.6	S	32	32.4	47	5.5	32	3.6	16	3.4					
OSHIMA	0	P	01	32	06.6	S	32	32.3	14	1.6	15	2.1	5	1.7			D 1	211.3	27.8
HIKONE	0	EP	01	32	06.8	S	32	31.8	72	1.0	52	1.2	27	1.7				217.8	25.7
TOMISA	0	P	01	32	07.1	IS	32	28.6	37	5.3	43	4.2	17	4.2				212.3	25.0
CHOSHI	0	EP	01	32	09.9													228.4	21.5
																		257.8	
FUKUSH	0	EX	01	32	10.0				8	3.4			4	4.6				255.9	
TSU	0	EP	01	32	10.2													240.6	
ONAHAM	0	IP	01	32	12.0	ES	32	42.8	32	1.6	29	1.6	14	3.6			U 4	255.7	30.8
KYOTO	0	EP	01	32	12.6	ES	32	45.8	14	4.4	11	4.0	5	3.8				267.0	33.2
NARA	0	EP	01	32	17.1													283.7	
OSAKA	0	EP	01	32	17.4	ES	32	52.8	81	4.6	153	4.9	30	3.0				306.3	35.4
SENDAI	0	EX	01	32	18	EX	33	05.6	7	3.0	6	2.0	3	2.0				319.2	
OWASE	0	P	01	32	18.0	S	32	52.6	5	0.5	5	0.4	7	0.5				315.4	34.6
SUMOTO	0	EP	01	32	22.9	ES	33	04.2	9	3.4	9	3.6	5	4.6				372.9	41.3
TOYOOK	0	X	01	32	23.7	ES	32	59	41	1.2	27	1.2	11	1.3				313.4	
AKITA	0	EX	01	32	28.3				9	5.2	9	4.6	3	3.4				404.0	
MIZUSA	0	EP	01	32	29.6	X	33	29.5	10	1.7	8	3.2	10	2.4				400.4	
SHIONO	0	EP	01	32	30.2	ES	33	15.8	9	3.3	9	2.5	5	1.5				394.7	45.6
WAKAYA	0	X	01	32	33.1	S	33	15.8	13	1.0	6	0.8						363.0	
OKAYAM	0	X	01	32	39.5	IS	33	29.5	20	4.2	12	4.0	14	3.8		E		427.5	
MUROTO	0	EP	01	32	42.0	X	33	51.4	7	3.0	8	5.6	6	5.6				504.3	
TAKAMA	0	X	01	32	43.9	X	33	36.4	9	6.8	9	6.4	3	1.1				437.0	
HAMADA	0	EP	01	32	50.7	X	34	13.2	5	5.8	2	3.2	1	3.6				573.0	
HIROSH	0	X	01	33	03.1	X	34	06.9	6	3.6	3	5.5	3	3.9				564.5	
MATSUY	0	X	01	33	07.3	X	34	14.3	9	9.0	6	6.0						564.8	
SHIMON	0	EP	01	33	10	X	34	38	5	5.0	3	3.0	4	3.0				708.6	
KUMAMO	0	EP	01	33	17				6	2.4	5	2.4	1	2.8				788.7	
NAGASA	0	P	01	33	29.6	X	35	28.0										861.1	
OITA	0	X	01	33	34.2	X	34	49.9	24	4.8	19	5.6						691.5	
FUKUOK	0	X	01	34	47.0				5	2.8	1	2.0	1	2.0				773.4	
KAGOSH	0	X	01	35	51.7				9	1.8	6	1.4						881.7	

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OT= 25 16 6 45.1 +/- 0.1
IBARAKI PREF
LAT= 36 22 +/- 2 LONG= 140 3 +/- 1
H= 70 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
KAKIOK	0	EP	16	06	56.3	S	07	03.8	13	1.1	18	1.1						19.7	07.5
UTSUNO	0	P	16	06	56.5	IS	07	04.9	12	0.2	14	0.4	8	0.2				25.6	08.4
MITO	0	IP	16	06	57.5	IS	07	06.6	6	0.4	6	0.2	3	0.3			U 1	37.9	09.1
KUMAGA	0	P	16	06	59.8	S	07	10.4	7	0.8	9	0.8	2	0.8			U 2	64.5	10.6
MATSUS	0	IP	16	07	11											W	U	166.2	
FUKUSH	0	X	16	07	30.9				7	0.8	5	0.7	2	0.6				158.8	

OT= 25 23 26 48.6 +/- 0.8
OFF TOKAIDO
LAT= 33 7 +/- 5 LONG= 138 25 +/- 5
H=320 CLASS=U

HAMAMA	0	P	23	27	36.0	S	28	14.0	6	1.4	10	3.0	4	3.2			U 2	187.8	38.0
NAGOYA	0	IP	23	27	40.2	S	28	21.2	4	2.0	9	3.0	5	1.0		E	0 U 4	263.5	41.0
HIKONE	0	P	23	27	45.1	S	28	28.3	10	1.4	6	1.8						311.7	43.2
TOKYO	0	IP	23	27	45.7	IS	28	30.0	13	0.6	11	0.5	6	0.4				310.4	44.3
MATSUS	0	IP	23	27	50.0	S	28	37							N	W	U	380.0	47.0
TOYOOK	0	P	23	27	51.2				5	1.2	14	1.2						426.0	
UTSUNO	0	EP	23	27	52.1	S	28	41.1	34	0.2	33	0.2						403.0	49.0
MITO	0	P	23	27	53.0	IS	28	42.0	13	0.6	14	0.8	4	0.5				407.7	49.0
KAKIOK	0	EP	23	27	55	S	28	37.8	20	0.8	15	1.3						381.9	42.8
YOKOHA	0	X	23	28	26.8				13	0.6	17	0.5						281.4	
CHOSHI	0	X	23	28	39.0													365.2	
ONAHAM	0	EX	23	28	52.3	IS	28	55.7	13	1.2	15	1.2	4	0.8				481.5	
FUKUSH	0	X	23	29	05.8				6	1.0	4	1.3	2	0.7				547.5	

OT= 26 2 44 45.0 +/- 0.2
NEAR SADOGASHIMA
LAT= 37 41 +/- 1 LONG= 138 4 +/- 1
H= 10 MAG=4.3 CLASS=S

AIKAWA	0	IP	02	44	53.3	IS	44	57.8	167	0.0	105	0.0	34	0.0	N	4 W	1 U 6	40.4	04.5
TAKADA	1	EP	02	44	57.8	S	45	05.8										66.2	08.0
NIIGAT	0	IP	02	45	01.5	IS	45	14.1	85	0.6	50	0.6	10	0.6			D 6	90.3	12.6
WAJIMA	2	IP	02	45	05.0	IS	45	19.6	153	0.8	187	0.6	64	0.4			U 2	108.3	14.6
MATSUS	0	IP	02	45	06.5	S	45	23							S	E	U	127.7	16.5
NAGANO	0	P	02	45	06.6	ES	45	19.8	19	0.1	16	0.0	7	0.0				114.1	13.2
TOYAMA	0	P	02	45	08.4	S	45	24.4	16	0.6	16	1.0	8	2.2				132.5	16.0
KARUIZ	0	EP	02	45	11.8	S	45	28.7										155.2	16.9
MAEBAS	0	EP	02	45	14.6	S	45	33.5	18	1.5	6	1.2	6	2.2				167.7	18.9
KANAZA	0	EP	02	45	15.4	ES	45	27.0	6	0.1	7	0.2	6	0.2				178.3	11.6
UTSUNO	0	EP	02	45	18.2	ES	45	42.6	9	1.3	8	1.7						204.0	24.4
FUKUSH	0	EX	02	45	18.7				9	1.0	7	1.1	2	0.7				212.5	
KUMAGA	0	EP	02	45	21.2	S	45	44.4	16	1.0	9	1.2	5	1.8				207.0	23.2
KOFU	0	EP	02	45	23.0	ES	45	48.8	5	0.9	6	0.6	2	1.0				228.2	25.8
SAKATA	0	X	02	45	25.2	X	46	00.1										205.7	
MITO	0	P	02	45	26.1	IS	45	55.9	7	2.0	5	1.9	4	2.0				258.3	29.8
TOKYO	0	X	02	45	34.1				5	3.2	6	1.8	7	3.4				268.3	

OT= 26 22 46 7.3 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 23 +/- 1 LONG= 138 4 +/- 1
H= 0 MAG=4.2 CLASS=L

MATSUS	2	P	22	46	12.5	S	46	14.2										21.4	01.7
MATSUM	1	IP	22	46	13.2	IS	46	16.6							S	2 W 2	U 21	17.6	03.4
NAGANO	1	IP	22	46	14.2	S	46	18.0										32.8	03.8
KARUIZ	1	IP	22	46	17.3	IS	46	23.0							N	2 W 2	D 10	43.8	05.7
TAKADA	0	EP	22	46	21.7	S	46	32.3										81.7	10.6
TOYAMA	0	P	22	46	24.4	S	46	34.4	15	4.6	18	4.0	19	3.8				84.8	10.0
MAEBAS	0	EP	22	46	24.6	X	46	47.8	27	3.6	23	3.4	34	3.4				89.6	
KOFU	0	IP	22	46	25.4	ES	46	36.8	10	0.3	19	0.3	5	3.0			U 2	91.2	11.4
IIDA	0	EP	22	46	27.0	ES	46	40.0	6	1.4	6	0.6	5	0.6				99.1	13.0
CHICHI	0	EP	22	46	28.0	S	46	40.0										101.1	12.0
FUNATS	0	P	22	46	29.3	S	46	43.5										116.6	14.2
KUMAGA	0	P	22	46	30.2	S	46	45.4	17	1.0	19	2.8	13	3.4			U 3	121.3	15.2
KANAZA	0	P	22	46	32.0	ES	46	46.4	10	0.2	15	0.2	5	0.2			D 5	128.4	14.4

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
UTSUNO	0	EP	22 46 36.0	ES	46 56.0	6	1.0	6	1.6						162.8	20.0
MISHIM	0	EP	22 46 36.3	ES	46 57.4	10	0.8	10	0.7	3	1.0				161.2	21.1
NAGOYA	0	P	22 46 37.6	S	46 59.2	19	0.8	18	0.8	8	0.8	S 1 W	1 U	2	167.7	21.6
SHIZUO	0	P	22 46 37.6	S	47 01.8	8	0.6	6	1.6						159.4	24.2
GIFU	0	P	22 46 38	S	46 56.5	14	1.5	8	0.6	6	1.3				160.5	18.5
KAKIOK	0	EP	22 46 39	ES	47 02	10	1.0	9	0.5	5	0.7				191.7	23.0
TOKYO	0	EP	22 46 39.1	ES	47 01.5	19	3.2	18	3.0						171.0	22.4
HAMAMA	0	P	22 46 41.6	ES	47 05.4	7	1.6	11	2.0	6	1.0		D	3	188.4	23.8
YOKOHA	0	EP	22 46 41.8	IS	47 05.0	30	0.4	15	0.6						177.7	23.2
MITO	0	P	22 46 43.4	ES	47 09.4	6	0.4	4	0.4	2	0.7				215.8	26.0
HIKONE	0	EP	22 46 46.0	S	47 09.3	16	0.8	15	1.0	7	0.9				205.4	23.3
OMAEZA	0	X	22 47 02.3			12	3.3	13	3.1						197.9	
NIIGAT	0	X	22 47 03.5			9	4.2	13	4.1						190.7	
ONAHAM	0	X	22 47 20.9			10	1.3	7	0.9	3	1.6				261.4	
OSAKA	0	X	22 48 50	X	49 58	13	4.3	18	4.8	4	3.6				299.3	

OT= 28 10 10 12.0 +/- 0.9
S PART OF KURILE IS
LAT= 44 55 +/-16 LONG= 151 6 +/- 8
H= 30 MAG=5.0 CLASS=U

NEMURO	0	P	10 11 18.9	S	12 13.7	6	1.8	6	1.4	4	1.2	S	W	U	475.3	54.8
ABASHI	0	X	10 11 28.3	X	12 31.0	7	2.8	5	3.8						551.6	
KUSHIR	0	EP	10 11 32.0	IS	12 36.6	24	1.6	15	1.0	16	1.2				579.7	64.6
OBIHIR	0	EX	10 11 46.6												670.4	
URAKAW	0	EP	10 11 51.3	S	13 12.1	39	3.6	25	2.0	12	3.2				738.7	80.8
SAPPOR	0	EP	10 12 02	ES	13 29	6	2.0	7	2.6	3	5.0				810.1	87.0
MATSUS	0	P	10 13 16											U	1429.4	
MIZUSA	0	X	10 14 21.6					7	1.7	4	1.2				1044.8	

OT= 28 18 41 15.6 +/- 0.9
NEAR MATSUSHIRO
LAT= 36 30 +/- 1 LONG= 138 10 +/- 4
H= 0 MAG=4.1 CLASS=L

MATSUS	2	P	18 41 18.7	S	41 19.5										5.7	00.8
NAGANO	2	IP	18 41 19.6	S	21 6										18.0	
KARUIZ	0	EP	18 41 25.5	S	41 30.1										38.8	04.6
TAKADA	0	EP	18 41 27.0	S	41 36.2										67.5	09.2
KOFU	0	IP	18 41 35.2	ES	41 47.6	6	0.3	7	0.3	2	0.3	S 1 W	2 U	2	99.1	12.4
WAJIMA	0	EX	18 41 47.0			18	0.8	21	0.8						150.0	
MITO	0	EP	18 41 51.0	IS	42 15.5	8	0.4	6	0.3	2	0.3				207.1	24.5
NIIGAT	0	X	18 42 07.0			5	1.0	10	0.6						175.1	

OT= 29 4 39 40.0 +/- 1.2
OFF MIYAGI PREF
LAT= 38 11 +/- 3 LONG= 141 48 +/- 6
H= 50 MAG=3.9 CLASS=S

ISHINO	1	IP	04 39 51.5	IS	39 58.4	34	0.2	20	0.2	7	0.2	S 4 E	2 D	5	51.1	06.9
SENDAI	1	IP	04 39 55.0	IS	40 03.5	24	0.6	27	0.6	11	0.7	S 2 W	2 U	8	79.3	08.5
OFUNAT	0	EP	04 39 56.0	IS	40 09.0	8	0.2	8	0.6	2	1.2				97.8	13.0
FUKUSH	1	P	04 40 00.5	ES	40 13.6	24	0.3	17	0.2	9	0.3	N 3 E	3 D	3	125.7	13.1
MIZUSA	0	EP	04 40 00.8	IS	40 13.7			10	1.0	4	1.6				120.4	12.9
MORIOK	0	P	04 40 07.5	IS	40 21.3	5	0.4	6	0.4	1	0.4	S 0 E	0 D	0	176.7	13.8
MITO	0	EP	04 40 14.2	ES	40 37.2	6	0.4	7	0.4	2	0.4				232.4	23.0
MATSUS	0	P	04 40 32												366.8	

OT= 29 10 42 58.1 +/- 0.9
CHIBA PREF
LAT= 35 31 +/- 3 LONG= 140 19 +/- 5
H= 70 CLASS=U

TOKYO	0	EP	10 43 12.7	IS	43 21.7	12	0.4	10							53.9	09.0
KAKIOK	0	EP	10 43 14.2	S	43 23.9	9	0.8	8	0.8	4	0.5				80.1	09.7
KUMAGA	0	EP	10 43 17.4	ES	43 30.2	7	0.8	4	0.8	2	0.8				109.4	12.8
AJIRO	0	IP	10 43 19.0	IS	43 32.2	7	0.3	8	0.3	1	0.3	S 0 W	1 D	0	122.8	13.2
YOKOHA	0	X	10 43 23.2			17	0.8	25	0.7						60.7	
MATSUS	0	IP	10 43 30.5									N	E	D	221.2	
OSHIMA	0	X	10 43 32.3			10	0.6	10	0.4	5	0.3				119.7	

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List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE		PHASE AND TIME (J.S.T.) H M S		M S	INITIAL MOTION	
1	P	02 07 29.				*
1	P	02 59 04.				*
1	IP	07 30 53.5	S	31 29.	D	*
1	IP	12 44 05.6	ES	50 18.	U	*
1	P	19 21 15.	ES	25 24.		*
1	IP	20 06 30.2			N D	*
2	IP	02 26 18.1	S	27 12.	U	*
2	E	05 56 06.	ES	02 54.		*
2	IP	06 02 41.1	S	02 57.	U	*
2	P	07 17 17.	S	18 14.		*
2	P	07 33 23.	ES	33 59.		*
2	IP	14 34 51.8	ES	35 44.	W U	*
2	IP	16 06 57.0	EX	07 37.	N W U	*
2	IP	19 50 34.8	EX	51 28.	W U	*
2	P	20 10 31.2	EX	11 20.		*
2	IP	20 34 34.2	EX	35 07.	S D	*
2	P	21 06 16.				*
2	IP	22 16 37.5	EX	18 09.	N D	*
2	IP	23 55 20.2			S E D	*
3	IP	01 41 23.3	EX	42 00.		*
3	P	04 38 53.	EX	39 26.		*
3	IP	08 35 38.4	ES	36 01.	N U	*
3	P	10 45 45.	S	46 15.		*
3	EP	18 17 46.	S	24 57.		*
4	IP	00 02 16.2	ES	02 54.	D	*
4	P	07 25 57.5	S	26 15.		*
4	IP	14 31 32.5	ES	35 29.	S W U	*
4	IP	15 28 25.1	ES	32 28.	S W U	*
4	IP	15 39 09.8			S U	*
5	P	09 17 42.	S	18 03.		*
5	P	10 32 46.				*
5	P	20 12 46.	S	15 46.		*
6	IP	01 43 19.5	ES	47 20.	S W U	*
6	IP	03 10 48.5			S U	*
6	IP	03 54 45.3			N W U	*
6	IP	07 28 27.4	ES	29 01.	S E D	*
6	IP	18 39 46.7	EX	46 46.	U	*
6	IP	20 24 47.1			U	*
6	IP	23 59 28.1	IX	59 48.5	U	*
7	P	22 20 57.	S	21 33.		*
7	IP	23 55 28.8			U	*
8	P	03 20 20.	EX	24 03.		*
8	IP	06 34 39.7			U	*
8	IP	10 30 18.8			N D	*
8	P	21 08 28.	EX	16 14.		*
8	IP	22 32 46.6	S	41 22.	U	*
8	EP	22 57 47.				*
9	IP	01 16 01.2	EX	17 21.	U	*
9	EP	08 24 52.				*
9	IP	11 11 41.0	EX	13 17.	N D	*
9	IP	14 35 29.0	ES	36 10.	E D	*
9	IP	23 25 15.1	EX	25 45.	U	*
9	P	23 39 34.	IX	40 05.	D	*
10	P	02 24 39.	EX	25 35.		*
10	IP	04 30 52.7			N U	*
10	IP	06 09 46.8	ES	10 29.	W U	*
10	IP	12 15 27.6	EX	15 48.	D	*
10	EP	14 46 32.				*
10	IP	23 09 02.2	EX	11 08.	S E D	*
10	P	23 17 30.				*
11	P	20 54 01.				*
12	P	00 30 11.				*
12	IP	01 08 22.7	IS	08 44.2	E D	*
12	IP	01 20 16.0			E D	*
12	EP	04 56 22.				*
12	EP	10 00 28.				*
12	IP	23 10 53.7	S	11 09.	N U	*
13	P	06 27 02.				*
13	P	08 26 26.	S	29 30.		*
13	P	12 46 29.				*
13	IP	18 27 14.7	S	27 48.	N D	*
13	IP	20 37 51.5	IS	38 28.2	E D	*
14	IP	00 47 08.4	S	53 18.	N E D	*
14	IP	03 44 23.3	IS	44 36.1	W	*
14	IP	07 35 39.7			D	*
14	IP	12 33 42.0			U	*
14	IP	12 48 25.0			S D	*
14	IP	14 17 22.6			D	*
14	IP	16 09 40.6			N W D	*
14	P	17 09 40.				*
14	P	17 16 44.				*
15	EP	00 39 10.				*
15	P	02 18 52.	S	19 21.		*
15	IP	02 57 42.2	S	58 33.	N W D	*
15	EP	03 54 42.				*
15	IP	20 33 38.1	S	34 07.	S U	*
15	P	21 27 47.			D	*
16	IP	03 20 10.4	S	20 33.	E D	*
16	P	12 37 36.	S	38 04.		*
16	P	14 57 11.				*
16	P	15 05 54.	S	06 12.		*
17	IP	06 23 24.2			D	*
17	IP	08 52 14.7			W D	*
17	P	14 19 49.				*
18	IP	06 18 36.9			D	*
19	IP	05 12 20.5			D	*
19	IP	13 58 56.0	S	59 21.	W U	*
19	IP	19 46 53.8	S	47 25.	E D	*
20	P	02 15 29.	ES	21 29.		*
20	P	09 20 55.				*
20	P	14 33 05.				*
20	IP	14 45 40.0			W D	*
20	P	15 28 35.				*
20	P	16 46 30.				*
20	P	19 16 51.	S	17 28.		*
20	IP	19 42 12.7	S	42 46.	N W U	*
20	EP	19 44 58.				*
20	P	20 49 08.				*
20	P	21 33 36.				*
20	EP	22 18 00.				*
21	IP	01 49 22.5	S	49 57.	U	*
21	P	02 45 27.				*
21	P	03 50 03.				*
21	EP	04 43 35.				*
21	P	14 43 56.			D	*
21	IP	21 10 34.4	S	11 09.	S W D	*
22	IP	00 50 46.6	S	51 17.	S E D	*
22	EP	01 54 36.	E	57 14.		*
22	P	03 13 54.				*
22	P	03 22 07.	E	29 25.		*
22	P	03 33 49.				*
22	IP	04 03 37.9			D	*
22	IP	04 20 58.0			S E D	*
22	P	05 29 20.				*
22	IP	12 33 50.9			W U	*
22	IP	14 18 30.3			S U	*
22	IP	19 14 20.2			N U	*
22	IP	21 28 15.9	S	28 30.	N E D	*
23	IP	00 43 28.9			S W U	*
23	EP	04 15 54.				*
23	IP	05 14 23.9	S	14 50.	S W D	*
23	P	06 42 58.				*
23	IP	13 06 50.9			N E U	*
23	IP	14 12 55.			N U	*
23	IP	15 26 39.6			N W D	*
23	IP	18 49 50.1	S	50 06.	S W U	*
23	EP	21 03 36.				*
23	IP	23 48 50.3			W E D	*

DATE		PHASE AND TIME H M S		M S	INITIAL MOTION	
24	P	07 48 08.				*
24	IP	17 18 09.7			E D	*
24	IP	17 24 24.7			U	*
						*
25	IP	03 26 55.6			U	*
25	P	06 05 40.	S	10 10.	U	*
25	P	06 43 30.				*
25	IP	09 57 57.1			D	*
25	IP	16 07 11.			W U	*
25	P	23 05 33.				*
25	IP	23 27 50.0	S	28 37.	N W U	*
						*
26	IP	02 45 06.5	S	45 23.	S E U	*
26	P	05 00 31.				*
26	IP	06 28 44.7			N W U	*
26	P	08 23 17.1			U	*
26	IP	12 45 38.9				*
26	P	20 06 35.	S	07 13.		*
26	IP	23 12 22.4			D	*
						*
27	P	01 12 08.				*
27	IP	07 42 10.7			N W D	*
27	P	13 50 30.	S	51 09.		*
27	P	14 05 15.				*
27	IP	23 30 30.0			S E D	*
						*
28	P	01 56 55.				*
28	IP	03 58 31.9				*
28	P	05 39 35.				*
28	P	06 00 23.				*
28	P	08 11 08.				*
28	P	09 23 23.				*
28	P	10 13 16.			U	*
28	EP	14 45 07.				*
28	P	23 46 47.			U	*
						*
29	EP	03 37 18.				*
29	P	04 40 32.				*
29	IP	10 43 30.5			N E D	*
29	P	14 00 14.				*
						*
30	P	00 02 53.				*
30	IP	01 44 15.3			U	*
30	P	09 18 36.				*
30	P	18 31 12.				*
30	IP	21 19 15.7			D	*

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF MATSUSHIRO ARE LEFT OUT FROM THE TABLE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

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EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

(J. S. T.)

D	INT	H	M	D	INT	H	M	D	INT	H	M
1	1	03	05	11	1	13	42	22	1	15	54
1	1	13	28	11	1	14	56	22	1	18	52
1	1	18	56	11	1	16	22				
				11	1	16	23	23	1	00	20
2	1	01	49	11	1	16	29	23	1	07	54
2	1	01	53	11	1	21	27	23	1	10	35
2	1	01	53	11	1	23	59	23	1	13	08
2	1	03	46					23	1	21	23
2	1	05	31	12	1	13	30	23	2	22	15
2	2	09	16	12	1	17	29	23	1	23	45
2	1	09	39								
2	1	11	09	13	1	06	00	24	1	00	06
2	1	12	44	13	1	06	34	24	3	01	31
2	1	16	12	13	1	07	53	24	2	01	36
2	1	22	18	13	1	09	03	24	1	01	41
				13	1	13	35	24	1	01	44
3	1	03	20	13	1	15	41	24	1	01	54
3	2	03	21	13	1	16	52	24	1	04	34
3	1	23	34	13	1	17	01	24	1	04	42
				13	1	17	01	24	1	08	35
4	1	03	33	13	1	17	51	24	1	10	30
4	1	09	38	13	1	19	58	24	1	16	31
4	1	09	57					24	1	23	48
4	1	10	28	14	1	03	42				
4	1	11	47	14	1	05	07	25	1	08	05
4	1	11	48	14	1	05	42	25	1	18	34
4	1	11	54	14	1	07	28	25	1	18	41
4	1	18	31	14	1	13	37	25	1	19	12
				14	1	16	09	25	1	23	55
5	1	03	48	14	1	18	30				
5	1	06	49	14	1	21	57	26	2	22	46
5	1	13	01	14	1	22	19	26	1	23	04
5	1	16	41	14	1	23	19	26	1	23	52
5	1	23	26								
				15	1	04	40	27	1	01	32
6	1	03	16	15	1	04	40	27	1	09	22
6	1	06	55	15	1	09	24	27	1	11	32
6	1	07	24	15	1	10	50	27	1	11	45
6	1	07	24	15	1	15	51				
6	1	10	35	15	1	15	55	28	1	07	58
6	1	11	03	15	1	17	12	28	1	16	14
6	1	15	33	15	1	18	38	28	2	18	41
6	2	17	11					28	1	19	29
6	1	17	28	16	1	02	57				
				16	1	09	57	29	1	06	13
7	1	09	40	16	1	14	01	29	1	08	45
7	1	11	17	16	1	16	15	29	1	13	44
7	1	12	39	16	1	16	27				
7	1	14	08	16	1	19	39	30	1	06	50
7	1	16	28	16	1	19	42	30	1	07	51
7	1	16	37	16	1	22	07	30	1	08	17
				16	1	22	43	30	2	17	06
8	1	00	09	16	1	23	06	30	1	18	37
8	1	16	17					30	1	18	39
8	1	21	11	17	1	04	22	30	1	18	48
				17	1	06	23	30	1	19	08
9	1	08	05					30	1	20	49
9	1	08	31	18	1	05	13				
9	1	13	14	18	1	06	05				
9	1	14	51	18	1	08	04				
9	1	20	33	18	1	10	21				
9	1	22	45	18	1	23	14				
9	1	22	54	18	1	23	16				
10	1	04	52	19	1	08	08				
10	1	09	46	19	1	12	22				
10	1	12	19	19	1	13	42				
10	1	12	56	19	1	18	54				
10	1	14	22								
10	1	16	34	20	1	09	21				
10	1	16	38	20	1	17	23				
11	1	00	50	21	1	03	53				
11	1	11	59	21	1	03	54				
11	1	12	15								
11	1	13	27	22	1	01	36				

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28 JUN 1968

地　震　月　報

昭和42年 7 月

THE SEISMOLOGICAL BULLETIN

OF

THE JAPAN METEOROLOGICAL AGENCY

FOR

JULY 1967

気　象　庁

PUBLISHED BY THE JAPAN METEOROLOGICAL AGENCY

Tokyo

1968

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List 1 JMA stations and their seismographs

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S,VI,OP
Aikawa	AIKAWA	138 14.5	38 01.2	34	S,VI,OP
Ajiro	AJIRO	139 05.8	35 02.6	59	S,VI,OP
Akita	AKITA	140 06.1	39 43.1	9	S,VI,OP
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S,P
Aomori	AOMORI	140 47.0	40 49.0	4	S,W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S,VI,OP
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S,VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S,P
Choshi	CHOSHI	140 50.6	35 43.5	27	S,W
Fukue	FUKUE	128 50.0	32 42.0	26	S,VI,
Fukui	FUKUI	136 13.6	36 03.2	9	S,P(H,V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S,VI,M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S,VI,OP
Funatsu	FUNATS	138 45.8	35 29.9	860	S,P
Gifu	GIFU	136 45.9	35 23.9	13	S,W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S,VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S,VI,OP
Hakodate	HAKODA	140 45.5	41 48.8	35	S,VI,OP
Hamada	HAMADA	132 04.4	34 53.6	18	S,VI,OP
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S,VI,OP
Hikone	HIKONE	136 14.8	35 16.4	87	S,W
Himeji	HIMEJI	134 42.1	34 50.2	37	S,P(H,V)
Hiroo	HIROO	143 19.0	42 17.0	32	S,P(H,V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S,W
Iida	IIDA	137 50.1	35 30.6	482	S,VI,OP
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S,VI,OP
Izuhara	IZUHAR	129 17.7	34 12.2	21	S,P(H,V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S,W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S,W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S,VI,OP
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S,P(H,V)
Kobe	KOBE	135 10.8	34 41.3	58	S,P(H,V)
Kochi	KOCHI	133 32.0	33 33.0	40	S,P(H,V)
Kofu	KOFU	138 33.5	35 39.9	272	S,VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S,VI,OP
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S,W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S,VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S,VI,OP
Maebashi	MAEBAS	139 03.9	36 24.1	112	S,W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S,P(H,V)
Matsue	MATSUE	133 04.3	35 27.3	17	S,P(H,V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S,P(H,V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S,L,AW,G,B,V,C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S,W
Mishima	MISHIM	138 55.8	35 06.7	20	S,W
Mito	MITO	140 28.3	36 22.7	30	S,VI,OP
Miyako	MIYAKO	141 58.1	39 38.7	46	S,W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S,VI,OP
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P(H,V)
Morioka	MORIOK	141 10.1	39 41.8	155	S,VI,OP
Muroran	MURORA	140 59.0	42 19.0	43	S,P(H,V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S,VI,OP
Nagano	NAGANO	138 11.8	36 39.6	418	S,W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S,VD,EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S,VI,OP
Nara	NARA	135 50.0	34 41.0	105	S,P(H,V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S,VI,VD,OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S,VI,P(H,V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S,P(H,V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S,P(H,V)
Ofunato	OFUNAT	141 43.1	39 03.7	38	S,VI
Oita	OITA	131 37.4	33 14.0	5	S,W
Okayama	OKAYAM	133 54.9	34 40.9	4	S,VI,OP
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S,W
Onahama	ONAHAM	140 54.4	36 56.7	3	S,VI
Osaka	OSAKA	135 32.3	34 38.9	7	S,VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S,W

Station	Code	λ	φ	Height	Seismographs
				m	
Owase	OWASE	E136°11.7′	N34°04.0′	14	S, VI, OP
Rumoi	RUMOI	141 38.0	43 57.0	22	S, P(H, V)
Saga	SAGA	130 18.3	33 14.7	4	S, P(H, V)
Saigo	SAIGO	133 20.0	36 12.3	26	S, VI, OP
Sakata	SAKATA	139 50.2	38 54.2	2	S, P(H, V)
Sapporo	SAPPOR	141 19.9	43 03.5	17	S, VI, OP
Sendai	SENDAI	140 54.0	38 15.6	38	S, VI, S′
Shimonoseki	SHIMON	130 56.5	33 57.2	46	S, VI, OP
Shionomisaki	SHIONO	135 45.8	33 26.9	74	S, W
Shirakawa	SHIRAK	140 13.5	37 07.1	354	S, P(H, V)
Shizuoka	SHIZUO	138 24.4	34 58.4	14	S, VI
Sumoto	SUMOTO	134 54.5	34 20.1	109	S, VI, OP
Suttsu	SUTTSU	140 14.4	42 47.4	16	S, P(H, V)
Takada	TAKADA	138 15.0	37 06.3	13	S, P(H, V)
Takamatsu	TAKAMA	134 03.5	34 19.0	10	S, W
Takayama	TAKAYA	137 15.3	36 09.1	561	S, P(H, V)
Tokushima	TOKUSH	134 34.6	34 03.9	2	S, P(H, V)
Tokyo	TOKYO	139 45.5	35 41.2	21	S, VI′, VD′, I′, J
Tomisaki	TOMISA	139 49.7	34 55.2	12	S, VI, OP
Tottori	TOTTOR	134 10.7	35 30.7	17	S, P(H, V)
Toyama	TOYAMA	137 12.5	36 42.4	9	S, VI
Toyooka	TOYOOK	134 49.5	35 32.0	4	S, W
Tsu	TSU	136 31.1	34 42.1	3	S, P(H, V)
Tsuruga	TSURUG	136 03.9	35 39·0	1	S, P(H, V)
Unzendake	UNZEND	130 15.2	32 44.1	849	S
Urakawa	URAKAW	142 46.8	42 09.5	34	S, VI, OP
Utsunomiya	UTSUNO	139 52.3	36 32.6	120	S, W
Uwajima	UWAJIM	132 33.5	33 13.5	43	S, P
Wajima	WAJIMA	136 53.9	37 23.4	6	S, VI
Wakayama	WAKAYA	135 10.0	34 13.6	14	S, W, I
Wakkanai	WAKKAN	141 40.5	45 25.0	2	S, VI, OP
Yakushima	YAKUSH	130 29.8	30 27.0	14	S, VI
Yamagata	YAMAGA	140 21.0	38 15.2	151	S, P(H, V)
Yokohama	YOKOHA	139 39.3	35 26.2	38	S, W
Yonago	YONAGO	133 20.9	35 26.0	7	S, P(H, V)
Ishigakijima	ISHIGA	124 10	24 20	6	S, VI
Naha	NAHA	127 41	26 13	11	S, VI

Notations : —

λ	: Longitude.
φ	: Geographical Latitude.
W	: Wiechert's horizontal and vertical seismographs (masses, H ; 200kg, V ; 80kg).
P	: Portable seismograph (horizontal only).
P(H, V)	: do (mass, 22.5kg).
S	: Strong motion seismograph (magnification ; 1).
S′	: do (magnification ; 0.4).
M(H)	: Mainka's horizontal seismograph (mass, 450kg).
G	: Galitzin's seismograph.
L	: 1,000kg long-period seismograph, JMA type.
I	: Ishimoto's seismograph
V	: Short-period vertical seismograph.
AW	: Anderson-Wood's seismograph.
C	: Capacity type seismograph.
EM	: Electromagnetic seismograph.
OP	: JMA 59-type electromagnetic seismograph with optical recorder.
VI	: JMA 59-type electromagnetic seismograph with visible recorder.
VD	: JMA 61-type electromagnetic seismograph with visible recorder.
B	: Benioff's seismograph (short and long period).
J	: Remote recording JMA 63-type seismograph.
VI′, VD′, I′	: Remote recording JMA 63-types of I, VD and VI respectively.

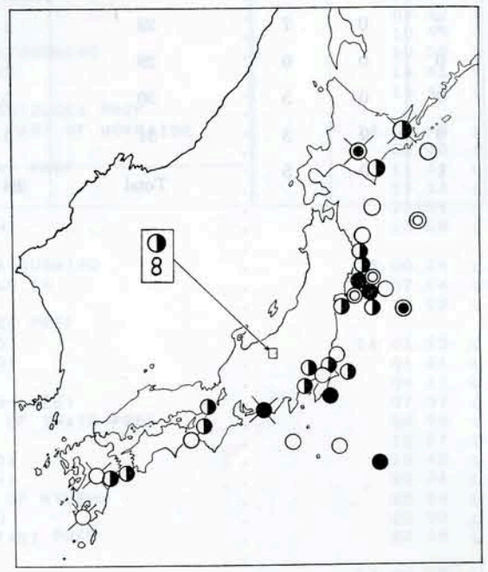
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List 2 Number of earthquakes by districts and classes, July, 1967

District \ Class	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	1	0	2	4	7	11	18
Tohoku	1	3	2	7	13	9	22
Kwanto	0	0	3	12	15	26	41
Chubu	0	0	1	94	95	20	115
Kinki	0	0	1	6	7	3	10
Chugoku·Shikoku	0	0	0	1	1	3	4
Kyushu	0	0	2	11	13	22	35
Near Japan*	0	0	0	5	5	5	10
Foreign region	0	0	0	0	0	8	8
Unknown	0	0	0	0	0	6	6
Total	2	3	11	140	156	113	269

* ; Sakhalin, Kurile Is., Korea, Ryukyu Is., Bonin Is., Sikhota Alin.

Epicenters of the major earthquakes



⊙ Remarkable (R) ◎ Moderate ○ Small felt area ◑ Local ● Unfelt × h≧100km

Special Event

Earthquake-Swarm near Matsushiro, Northern Chubu.

Daily number of felt shocks observed at Matsushiro Seismological Observatory during this month is as follows :

Date \ Seismic intensity	1	2	3	Total	Date \ Seismic intensity	1	2	3	Total
1	2	0	0	2	17	3	0	0	3
2	2	0	0	2	18	7	0	0	7
3	1	0	0	1	19	0	0	0	0
4	1	0	0	1	20	0	0	0	0
5	3	0	0	3	21	5	0	0	5
6	2	0	0	2	22	5	0	0	5
7	0	0	0	0	23	4	0	0	4
8	1	0	0	1	24	6	2	1	9
9	3	0	0	3	25	1	1	0	2
10	7	1	0	8	26	3	1	0	4
11	3	0	0	3	27	5	0	0	5
12	5	2	0	7	28	1	0	0	1
13	0	0	0	0	29	1	0	0	1
14	3	0	0	3	30	0	0	0	0
15	3	0	0	3	31	3	0	0	3
16	4	1	0	5	Total	84	8	1	93



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List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

(J. S. T.)

C CLASS

DATE, TIME D H M	C	LOCATION
1 11 45	L	NEAR MATSUSHIRO
19 05	L	N PART OF OSAKA PREF
19 29	L	(UTSUNO-ASHIO)
21 38	L	NEAR MATSUSHIRO
22 36	U	(AIKAWA)
23 59	S	OFF URAKAWA
2 05 42	U	(UTSUNO)
08 17	U	S OF ALASKA
10 06	S	OFF IBARAKI PREF
11 24	L	(KUSHIR)
12 03	U	UK
12 34	U	(NAGANO)
15 53	U	(ISHIGA)
16 09	U	(MITO)
16 11	U	UK
16 29	U	UK
16 38	U	SE OFF KWANTO
3 01 16	U	SE OFF KWANTO
03 05	U	(CHOSHI)
05 06	U	(KUMAMO)
05 08	U	(KUMAMO)
05 34	S	S PART OF KAGOSHIMA PREF
09 50	L	NEAR MATSUSHIRO
14 09	U	E OFF HOKKAIDO
15 30	L	(UTSUNO-NIKKO)
15 31	U	(MIYAZA)
4 10 13	U	(URAKAW)
10 26	U	NEAR CHOSHI
13 49	U	UK
14 47	U	KWANTO
18 38	L	NEAR MATSUSHIRO
23 37	U	(AIKAWA)
5 02 31	S	S OFF SHIZUOKA PREF
08 42	R	MIDDLE PART OF HOKKAIDO
10 11	U	TOHOKU
14 48	L	MIYAZAKI PREF
18 01	L	RYUKYU IS
6 01 55	U	(YAKUSH)
06 58	U	UK
16 20	L	NEAR MATSUSHIRO
22 48	U	ALEUTIAN IS
7 08 16	S	MIYAZAKI PREF
09 23	U	(UTSUNO)
10 18	U	(NAGANO)
10 24	U	KYUSHU
18 51	L	(KAGOSH-NAZE)
22 36	U	W PART OF IWATE PREF
8 05 03	U	(KUMAMO)
05 53	U	(NAGANO)
06 11	U	N PART OF KYUSHU
06 35	U	SHIKOKU
09 42	M	OFF MIYAGI PREF
9 02 23	U	KINKI
02 29	U	(KUSHIR)
02 30	L	(MEBASH-TASHIRO)
04 04	U	(TSU)
04 18	R	OFF FUKUSHIMA PREF
06 50	L	(KOBE-NAKAMACHI)
07 43	U	(KUSHIR)
08 01	U	SE OFF KWANTO
11 43	L	IBARAKI PREF
12 09	L	E PART OF HOKKAIDO
9 13 06	L	(KUMAMO)
17 53	U	(MIYAZA)
21 41	U	(NAGANO)
10 02 10	L	NEAR MATSUSHIRO
02 32	L	E OFF AOMORI PREF
05 11	L	NEAR MATSUSHIRO
09 20	U	SETONAIKAI
14 51	U	OFF MIYAGI PREF
15 22	L	NEAR MATSUSHIRO
11 03 21	U	(ISHIGA)
04 24	U	UK
09 58	U	(KUMAMO)
10 00	U	(KUMAMO)
10 19	U	(NAGANO)
17 19	U	(NAGANO)
17 37	L	WAKAYAMA PREF
22 55	L	NEAR MATSUSHIRO
12 04 42	U	CHIBA PREF
06 50	U	(NAGANO)
07 02	L	(WAKAYA)
11 54	U	(KOFU)
14 10	L	(KAGOSH-NAZE)
18 12	L	NEAR MATSUSHIRO
18 30	L	NEAR MATSUSHIRO
19 54	L	NEAR MATSUSHIRO
13 00 55	L	OFF MIYAZAKI PREF
01 04	L	KUMAMOTO PREF
09 22	U	(KUMAMO)
10 45	U	(CHOSHI)
10 55	U	(CHOSHI)
14 41	L	(KUMAMO-HAMAMACHI)
16 42	L	(KUMAMO-HAMAMACHI)
14 02 48	L	NEAR CHOSHI
03 33	U	NEAR CHOSHI
11 39	L	NEAR MATSUSHIRO
15 13	L	OFF IWATE PREF
22 54	U	OFF IBARAKI PREF
23 08	L	NEAR MATSUSHIRO
15 00 29	L	SAITAMA PREF
07 04	U	OFF MIYAGI PREF
18 03	L	NEAR MATSUSHIRO
16 01 25	L	NEAR MATSUSHIRO
01 31	L	NEAR MATSUSHIRO
04 17	L	NEAR CHOSHI
07 57	U	(KUMAMO)
08 59	U	NEAR CHOSHI
12 27	U	NEAR SHIZUOKA
18 42	U	(NAGANO)
20 38	L	NEAR MATSUSHIRO
22 39	U	NEW GUINEA
22 59	L	NEAR MATSUSHIRO
23 19	L	NEAR MATSUSHIRO
17 06 12	U	RYUKYU IS
08 04	L	(TOTTOR)
09 53	L	NEAR MATSUSHIRO
11 05	L	S OF KAGOSHIMA PREF
12 17	U	(URAKAW)
15 10	U	(OFUNAT)
17 12	M	OFF IWATE PREF
17 39	L	NEAR MATSUSHIRO
19 47	U	(MUROTO)
21 35	L	OFF MIYAGI PREF

DATE, D	TIME H	M	C	LOCATION
17	21	36	S	OFF MIYAGI PREF
18	02	31	L	OFF IWATE PREF
	02	51	L	(NAHA)
	07	30	L	NEAR MATSUSHIRO
	07	51	L	NEAR MATSUSHIRO
	15	41	L	NEAR MATSUSHIRO
	16	24	L	NEAR MATSUSHIRO
	19	20	U	OFF MIYAGI PREF
	22	00	U	OFF NIIGATA PREF
	23	24	L	IBARAKI PREF
19	01	59	S	OFF IWATE PREF
	03	10	L	N OF CHIBA PREF
	04	14	U	N OF CHIBA PREF
	11	01	L	IWATE PREF
	18	13	U	OFF NIIGATA PREF
	23	34	U	(SAGA)
20	00	41	U	NEW HEBRIDES IS
	02	04	S	NEAR HACHIJOJIMA
	15	58	U	NEAR URAKAWA
	16	04	U	(ISHIGA)
	21	07	U	(SUMOTO)
	22	42	L	(WAKAYA)
21	00	40	U	WEST CAROLINE IS
	02	23	U	TOHOKU
	02	35	L	NEAR MATSUSHIRO
	02	39	L	NEAR MATSUSHIRO
	02	41	L	NEAR MATSUSHIRO
	03	08	U	(NAGANO)
	05	14	U	OFF CHOSHI
	14	45	U	SW OF SHIZUOKA PREF
	15	12	U	(OFUNAT)
	16	39	U	(YAKUSH)
	17	43	U	ENSHUNADA
22	02	08	U	CHILE
	06	43	L	NEAR MATSUSHIRO
	08	04	U	(NIIGAT)
	08	52	L	E OFF KUSHIRO
	11	43	U	(NEMURO)
	13	36	L	KYOTO PREF
	14	57	L	NEAR MATSUSHIRO
	22	06	U	(YAKUSH)
23	00	49	L	OFF MIYAGI PREF
	00	56	L	NEAR MATSUSHIRO
	02	07	U	TURKEY
	11	50	U	(KAGOSH)
	14	06	L	NEAR MATSUSHIRO
	15	20	L	NEAR KUMAMOTO
	16	27	U	S OFF KYUSHU
	18	30	L	NEAR MATSUSHIRO
24	07	06	L	NEAR MATSUSHIRO
	07	08	L	NEAR MATSUSHIRO
	07	16	L	NEAR MATSUSHIRO
	22	33	L	NEAR MATSUSHIRO
	22	34	L	NEAR MATSUSHIRO
	23	25	L	(NAGANO)
25	00	28	U	NEAR HACHIJOJIMA
	05	42	L	(UTSUNO-ASHIO)
	08	15	U	(KUMAMO)
	08	32	L	(ISHIGA)
	08	34	L	(ISHIGA)
	15	51	U	(KUMAMO)
	22	07	L	NEAR MATSUSHIRO
26	00	24	L	SE OF HOKKAIDO
	00	42	U	N OF KUMAMOTO PREF
	01	02	L	NEAR MATSUSHIRO
	01	09	L	NEAR MATSUSHIRO
	03	07	L	NEAR MATSUSHIRO
	03	08	U	(MITO)
	16	42	U	NEAR HACHIJOJIMA
	16	49	L	NEAR MATSUSHIRO
	21	21	U	SEA OF JAPAN
	23	45	U	(HACHIJ)
27	01	54	U	NEAR HACHIJOJIMA
	02	18	U	NEAR HACHIJOJIMA
	02	21	U	NEAR KUSHIRO
	05	52	S	KII CHANNEL
	07	58	L	NEAR MATSUSHIRO
	10	24	L	NEAR NAZE, KYUSHU
	12	34	U	(CHOSHI)
	14	51	U	(NOBEOK)
	15	02	L	NEAR MATSUSHIRO
	15	28	U	(NAGANO)
	18	53	L	NEAR MATSUSHIRO
	19	38	L	NEAR MATSUSHIRO
	22	16	L	NEAR MATSUSHIRO
28	04	25	U	(CHOSHI)
	11	30	L	MIDDLE OF KANAGAWA PREF
	16	55	L	NEAR MATSUSHIRO
	18	44	S	S OFF HANASAKI PEN
	23	08	U	(KUSHIR)
29	07	45	L	RYUKYU IS
	10	31	L	(OFUNAT)
	10	39	U	(YAKUSH)
	11	57	U	NE OF HOKKAIDO
	17	47	M	OFF SANRIKU
	19	43	U	COLOMBIA
	20	27	U	SE OFF HOKKAIDO
30	11	40	U	(NAGANO)
	12	43	U	IWATE PREF
31	05	45	U	NEAR OSHIMA
	10	37	S	S OF IBARAKI PREF
	14	56	L	IBARAKI-CHIBA BORDER

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST. ALL EVENTS FELT AT THE OBSERVATORY ARE GIVEN IN LIST 6.

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List 4 EARTHQUAKE ORIGINS

(J.S.T.)

DATE, D	TIME H	M	C	LOCATION	ORIGIN TIME M	S	+/-S	LONG.	+/-	LAT.	+/-	C H KM	CLASS M
1	19	05	L	N PART OF OSAKA PREF	05	27.3	0.3	135 26	02	34 53	02	20	3.8
	23	59	S	OFF URAKAWA	59	04.8	0.4	143 00	03	41 08	02	10	4.5
2	10	06	S	OFF IBARAKI PREF	06	15.0	0.2	140 45	01	36 25	01	50	4.4
	16	38	U	SE OFF KWANTO	38	09.3	1.9	142 06	08	32 49	06	80	
3	05	34	S	S PART OF KAGOSHIMA PREF	34	41.6	0.9	130 33	06	31 14	04	120	
5	02	31	S	S OFF SHIZUOKA PREF	31	25.8	0.3	138 53	01	33 38	01	10	4.2
	08	42	R	MIDDLE PART OF HOKKAIDO	42	11.7	0.2	142 36	02	43 04	01	170	
	14	48	L	MIYAZAKI PREF	47	51.3	0.1	131 22	01	32 37	01	90	
7	08	16	S	MIYAZAKI PREF	15	58.0	0.2	131 10	02	32 35	02	150	
8	09	42	M	OFF MIYAGI PREF	42	16.2	0.4	141 52	03	38 15	01	50	4.6
9	04	18	R	OFF FUKUSHIMA PREF	18	19.1	0.6	143 54	03	37 43	01	80	
	12	09	L	E PART OF HOKKAIDO	09	08.1	0.3	144 43	04	43 32	02	150	
10	02	10	L	NEAR MATSUSHIRO	10	43.3	0.2	138 10	01	36 31	01	00	4.0
	14	51	U	OFF MIYAGI PREF	51	28.7	0.7	143 00	03	38 30	02	00	4.6
11	17	37	L	WAKAYAMA PREF	37	30.3	0.2	135 13	01	34 14	01	10	3.7
12	04	42	U	CHIBA PREF	42	38.0	1.4	140 12	10	35 47	07	80	
	18	12	L	NEAR MATSUSHIRO	12	16.6	0.2	138 14	01	36 34	01	00	3.6
	19	54	L	NEAR MATSUSHIRO	54	28.2	0.4	138 08	03	36 34	01	10	
13	00	55	L	OFF MIYAZAKI PREF	55	46.4	0.4	132 09	01	32 42	02	00	3.9
14	02	48	L	NEAR CHOSHI	48	44.5	0.8	141 09	04	35 56	02	40	3.8
	15	13	L	OFF IWATE PREF	13	42.3	0.3	142 12	02	39 42	01	30	3.9
15	00	29	L	SAITAMA PREF	29	45.2	0.2	139 36	02	36 01	02	80	
	07	04	U	OFF MIYAGI PREF	03	53.3	0.5	142 00	03	38 34	01	50	3.5
16	22	59	L	NEAR MATSUSHIRO	59	49.2	0.2	138 20	01	36 37	01	10	4.1
	23	19	L	NEAR MATSUSHIRO	19	48.7	0.2	138 18	01	36 36	01	10	
17	17	12	M	OFF IWATE PREF	11	55.3	0.8	142 34	04	38 53	02	10	4.6
	21	35	L	OFF MIYAGI PREF	34	51.9	0.2	142 17	01	38 07	01	40	4.5
	21	36	S	OFF MIYAGI PREF	36	07.6	0.9	142 14	04	38 15	02	30	5.0
18	02	31	L	OFF IWATE PREF	30	53.2	0.3	142 10	02	39 36	01	40	4.0
19	01	59	S	OFF IWATE PREF	59	20.7	0.3	142 29	02	40 09	01	30	4.9
20	02	04	S	NEAR HACHIJOJIMA	04	16.3	1.4	140 41	09	33 25	03	70	
21	00	40	U	WEST CAROLINE IS	36	20.1		134 54		7 42		8	6.5
	14	45	U	SW OF SHIZUOKA PREF	44	50.5	0.4	137 40	03	34 49	06	300	
23	00	49	L	OFF MIYAGI PREF	49	23.5	0.6	141 22	04	38 03	03	90	
	02	07	U	TURKEY	56	53.3		30 48		40 42		4	7.3
24	07	06	L	NEAR MATSUSHIRO	06	00.7	0.3	138 12	02	36 35	01	00	4.4
	22	34	L	NEAR MATSUSHIRO	34	02.5	0.3	138 06	01	36 24	01	00	4.0
26	00	24	L	SE OF HOKKAIDO	24	19.7	0.5	143 23	06	42 30	03	40	4.5
	01	02	L	NEAR MATSUSHIRO	02	27.1	0.2	138 20	01	36 33	01	00	4.2
27	05	52	S	KII CHANNEL	52	01.5	0.3	134 40	02	33 48	02	40	4.5
28	11	30	L	MIDDLE OF KANAGAWA PREF	30	20.4	0.6	139 24	02	35 29	03	00	3.4
	18	44	S	S OFF HANASAKI PEN	44	15.6	0.7	145 46	05	42 53	03	90	
29	17	47	M	OFF SANRIKU	46	35.4	0.6	144 59	04	40 34	02	60	4.6
31	10	37	S	S OF IBARAKI PREF	37	15.0	0.7	140 21	03	36 07	02	00	4.4
	14	56	L	IBARAKI-CHIBA BORDER	55	47.0	0.2	140 12	02	35 50	01	70	

List 5 DATA OF EARTHQUAKES

I SEISMIC INTENSITY
* MICRON

OT= 1 19 5 27.3 +/- 0.3 (J.S.T.)
N PART OF OSAKA PREF
LAT= 34 53 +/- 2 LONG= 135 26 +/- 2
H= 20 MAG=3.8 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KYOTO	1	EP	19 05 33.9	IS	05 37.4	25		34		10		S	2 W	3 D 4	31.0	03.5
OSAKA	1	IP	19 05 34.2	IS	05 38.1	60	0.2	45	0.3	21	0.2			D 5	27.8	03.9
				IX	05 39.5											
KOBE	0	EP	19 05 35.4	ES	05 39.9										31.7	04.5
NARA	2	IP	19 05 36.3	IS	05 42.0							N	2 W	2 D 8	42.8	05.7
SUMOTO	0	P	19 05 41.5	S	05 51.0	6	0.3	3	0.3	2	0.3	S	0 W	0 U 1	77.6	09.5
HIKONE	0	P	19 05 41.7	IS	05 53.0	33	0.5	19	0.4	9	0.7				85.9	11.3
TOYOOK	0	EP	19 05 44.8	S	05 53.7	15	1.1	14	1.2	5	0.6				91.5	08.9
TSU	0	EP	19 05 44.9												101.3	
OWASE	0	P	19 05 46.5	S	06 01.0	10		6		4	0.1				114.4	14.5
OKAYAM	0	IP	19 05 50.5	IS	06 06.9	15	0.8	10	1.0	5	0.8	S	E	U	140.7	16.4
WAKAYA	0	X	19 05 53.1												76.8	
GIFU	0	X	19 06 00.0	S	06 06.4	11	0.4	7	0.2						134.1	
MATSUS	0	EP	19 06 18	S	06 55										311.0	37.0

OT= 1 23 59 4.8 +/- 0.4
OFF URAKAWA
LAT= 41 8 +/- 2 LONG= 143 0 +/- 3
H= 10 MAG=4.5 CLASS=S

URAKAW	0	P	23 59 26.9	IS	59 42.8	25	0.4	49	0.4	9	0.4	S	0	D 1	115.3	15.9
HIROO	1	EP	23 59 27.6	S	59 43.9										130.4	16.3
HACHIN	0	EP	23 59 29.5	S	59 48.3	15	0.2	15	0.2	2	0.4	S	E	D	141.6	18.8
HAKODA	0	IP	23 59 38.0	IS	00 01.3	29	0.6	41	0.9	5	0.8		E 0	D 0	201.9	23.3
AOMORI	0	EP	23 59 38.0	ES	59 58.7	44	1.4	35	0.7	23	1.3				189.9	20.7
OBIHIR	0	EP	23 59 38.4	ES	00 04.1										199.3	25.7
MURORA	0	EP	23 59 39.8	S	00 04.1										213.2	24.3
MORIOK	0	P	23 59 40.3	IS	00 07.0	12	0.4	11	0.4	4	1.2	N	0 W	0 U 0	222.8	26.7
KUSHIR	0	EP	23 59 40.4	S	00 03.6	23	0.2	22	0.3	8	0.2				235.3	23.2
SAPPOR	0	EP	23 59 45	ES	00 13.5	6	0.8	6	1.0						254.5	28.5
MIZUSA	0	EP	23 59 47.9	ES	00 21.4			12	1.7	10	1.3		E 3		273.2	33.5
AKITA	0	EP	23 59 51.6	ES	00 26.0	6	2.8	7	1.8	4	1.4			U	291.9	34.4

OT= 2 10 6 15.0 +/- 0.2
OFF IBARAKI PREF
LAT= 36 25 +/- 1 LONG= 140 45 +/- 1
H= 50 MAG=4.4 CLASS=S

MITO	3	P	10 06 25.0	S	06 31.2	182		180	0.6	157	0.5			D 12	25.3	06.2
KAKIOK	2	IP	10 06 27.0	S	06 34.1	156	1.0			106	0.8		E 12	D 10	54.0	07.1
ONAHAM	2	IP	10 06 27.4	IS	06 35.3	105	1.1	137	1.1	28	0.7			U 4	60.3	07.9
UTSUNO	1	P	10 06 29.6	S	06 39.7	48	0.2	38	0.2	31	1.5	S	1 E	7 D 12	80.0	10.1
CHOSHI	1	IP	10 06 29.6	IS	06 39.6	54	0.4	54	0.8	31	0.4	S	2	U 6	77.2	10.0
SHIRAK	1	IP	10 06 31.3	IS	06 41.6							S	2	D 5	90.9	10.3
TOKYO	0	IP	10 06 35.5	IS	06 49.7	17	0.4	26	0.8	12	1.8			U	120.7	14.2
KUMAGA	0	P	10 06 36.0	S	06 50.6	24	1.2	20	1.4	13	2.0		E 2	D 6	126.2	14.6
CHICHI	0	EP	10 06 38.4	S	06 55.7										157.2	17.3
MAEBAS	0	IP	10 06 38.8	ES	06 55.4	11	1.5	18	2.2	8	1.5		E 1	D 3	151.1	16.6
FUKUSH	0	EP	10 06 39.2	ES	06 55.4	30	1.0	34	0.8	12	0.8				150.7	16.2
KARUIZ	0	EP	10 06 44.5	ES	07 04.8										197.4	20.3
SENDAI	0	EP	10 06 45	ES	07 06.6	8	0	8	1	5	1.8				205.0	21.6
YOKOHA	0	X	10 06 45.1	S	06 58.1	20	0.9	19	0.7						146.9	
TOMISA	0	EP	10 06 46.0			12	2.3	15	3.0	8	3.3				185.8	
KOFU	0	EP	10 06 48.0	ES	07 18.4	21	1.8	19	1.6	4	1.4				214.3	30.4
MISHIM	0	EP	10 06 48.7	ES	07 13.1	13	2.4	12	2.1	4	2.1				219.2	24.4
TAKADA	0	EP	10 06 50.2	S	07 16.0										235.9	25.8
NIIGAT	0	X	10 06 56.3			25	3.0	15	3.2	12	1.3				224.1	
IIDA	0	EP	10 06 56.8	ES	07 29.2	8	1.6	6	1.4	4	2.0				281.5	32.4
OMAEZA	0	EX	10 07			6	2.0	5	2.2						305.6	
FUNATS	0	X	10 07 10.8	X	07 18.9										206.1	
NAGOYA	0	X	10 07 16.4	ES	07 54.4	9	2.4	6	1.6	3	1.6				368.9	
GIFU	0	X	10 07 18.7			8	2.1	4	1.5						376.9	
AKITA	0	X	10 07 26			6	2.4	4	2.0	3	2.6				370.8	

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OT= 2 16 38 9.3 +/- 1.9
SE OFF KWANTO
LAT= 32 49 +/- 6 LONG= 142 6 +/- 8
H= 80 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HACHIJ	0	IP	16 38 41.2	S	39 07.2	64		83		47	...	N	3	U 13	218.3	26.0
TOMISA	0	EP	16 38 52.0	S	39 23.6	48	5.0	55	4.4	26	5.7				313.9	31.6
OSHIMA	0	E	16 38 55			25	2.6	24	3.8	11	2.3				331.6	
MISHIM	0	X	16 38	ES	39 34.0	13	3.1	18	3.1	5	1.8				388.0	
KANAZA	0	X	16 38	X	39 43	13	0.5	15	0.8	5	0.3				648.3	
AJIRO	0	IP	16 39 00.0	ES	39 45.1	9	3.0	9	2.8	4	4.0			U 0	371.5	45.1
CHOSHI	0	X	16 39 04.4	EX	39 30.6										342.6	
TOKYO	0	X	16 39 09.2	ES	39 37.2	30	6.2	26	7.6	35	5.4				384.2	
KAKIOK	0	EP	16 39 09.5			10	2.0	8	1.0	3	1.2				417.2	
KOFU	0	EP	16 39 11.6	EX	39 53.0	13	1.6	13	2.2	7	3.6				454.0	
HAMAMA	0	EP	16 39 12			10	3.4	11	4.0	4	1.8				456.3	
KUMAGA	0	EP	16 39 12.6	ES	39 55.2	23	7.2	22	4.6	16	4.6				445.5	42.6
YOKOHA	0	X	16 39 15	X	41 16.3	47	7.0			14	2.7				367.7	
IIDA	0	EP	16 39 17.6	ES	40 07.6	7	2.0	5	2.0	3	2.4				493.6	50.0
SHIRAK	0	EP	16 39 17.9	ES	40 11.7										506.8	53.8
KARUIZ	0	EP	16 39 20.3	ES	40 04.0										508.5	43.7
MATSUS	0	IP	16 39 23.2											U	545.3	
NAGOYA	0	EP	16 39 24.0	X	39 55.2	8	2.4	7	2.4	3	2.0				540.7	
FUNATS	0	X	16 39 25.1	ES	39 48.7										427.8	
FUKUSH	0	EP	16 39 26.7	ES	40 19.3	11	0.9	7	1.0	4	1.6				567.5	52.6
GIFU	0	EP	16 39 26.9												569.2	
MAEBAS	0	X	16 39 27.0	EX	40 03.2	17	4.9	20	7.2	10	4.0				485.2	
SENDAI	0	EP	16 39 32	ES	40 28.4	11	2.4	9	2.5	4	2.5				613.5	56.4
NIIGAT	0	EX	16 39 35.4			50	4.6	40	5.5	13	4.5				629.1	
AIKAWA	0	IP	16 39 38.9			5	0.6	6	1.1	3	0.8	S	0 W	0 D 0	675.0	
SAKATA	0	EX	16 39 45.7												705.4	
ONAHAM	0	X	16 39 56.0			10	1.6	18	3.6	11	3.4				470.7	
AKITA	0	X	16 40 01.0			14	4.6	11	3.2	8	3.0				786.4	

OT= 3 5 34 41.6 +/- 0.9
S PART OF KAGOSHIMA PREF
LAT= 31 14 +/- 4 LONG= 130 33 +/- 6
H=120 CLASS=S

KAGOSH	0	X	05 34	X	34 56.4	129	1.9	72	1.5	66	1.8	N	4 E	40 U123	37.7	
YAKUSH	0	IP	05 35 03.6	IS	35 22.8	54	0.8	72	0.6	28	1.2		E	2 U 12	87.0	19.2
MIYAZA	X	IP	05 35 07.5	S	35 29.8	218	1.0	303	0.8	60	0.8	N	8 E	U 34	112.5	22.3
NAGASA	0	P	05 35 11.2	IS	35 35.9							N	2 W	1 U 5	176.3	24.7
KUMAMO	1	IP	05 35 11.3	IS	35 37.2	79	1.9	46	1.4	25	0.8	N	12 E	6 U 23	175.4	25.9
NOBEOK	0	P	05 35 11.8	S	35 38.7	100		100				N	2 E	2 U 7	184.0	26.9
FUKUE	0	P	05 35 14.4	S	35 36.4			19	3.6	6	3.4		E	2 D 5	229.6	22.0
SAGA	0	IP	05 35 14.8	S	35 46.2							N	10	U 10	224.2	31.4
OITA	0	P	05 35 18.5	S	35 49.1	67	0.9	60	0.9	35	1.3	N	E	U	243.7	30.6
FUKUOK	0	IP	05 35 20.0	ES	35 52.0	30	2.4	24	2.6	22	2.1	N	1 E	1 U 5	260.6	32.0
SHIMON	0	P	05 35 24.0	S	36 00.0	16	2.6	11	3.0	10	3.0	N	E	U 1	303.7	36.0
ASHIZU	0	P	05 35 24.2	IS	35 58.6	43	1.0	49	1.0	22	0.9			D 1	285.2	34.4
UWAJIM	0	EP	05 35 28	ES	35 56.6										290.7	28.6
MATSUY	0	EP	05 35 33.0	IS	36 12.8	27	0.9	16	0.8	7	0.9				356.8	39.8
KOCHI	0	IP	05 35 33.7	IS	36 15.0							N	4 E	4 U 4	380.3	41.3
MUROTO	0	IP	05 35 36.9	S	36 20.9	5	1.7	20	2.8	5	2.8	N	0 E	0 U 0	408.3	44.0
ASOSAN	0	X	05 35 41												188.9	
TAKAMA	0	EP	05 35 44.4	ES	36 31.7	27	1.2	27	1.0	9	1.2				474.0	47.3
OKAYAM	0	IP	05 35 46.0	IS	36 37.2	72	1.0	68	0.8	12	1.4	N	E	U	495.0	51.2
TOKUSH	0	EP	05 35 50.6	ES	36 37.3										491.0	46.7
SUMOTO	0	P	05 35 51.4	S	36 43.4	6	1.8	5	3.1	3	3.3		W	0 U 0	533.6	52.0
				IX	36 47.1											
TURUGI	0	X	05 35	X	36 05.7										441.7	
TOYOOK	0	EP	05 36 02.5	ES	37 05.2	87	1.1	46	1.1	8	1.1				620.6	62.7
NAGOYA	0	EP	05 36 20.4	S	37 35.2	6	1.0	10	1.0	3	1.2				739.9	74.8
MATSUS	0	P	05 36 38	S	38 06										920.1	88.0
YONAGO	0	X	05 36 45.6												533.2	
OSAKA	0	X	05 36 50.3	X	37 41.4	14	2.8	16	3.5	6	2.6				600.5	
WAKAYA	0	X	05 36 50.9												545.1	
GIFU	0	X	05 37 00	S	37 35.2	9	1.7	9	1.7						739.9	
OMAEZA	0	EX	05 37			6	2.7	7	2.8						807.8	
HIKONE	0	X	05 37 23.9			15	1.1	17	1.0						694.2	
FUKUI	0	X	05 37 46.7												749.9	
IIDA	0	X	05 37 52.0												826.7	

OT= 5 2 31 25.8 +/- 0.3
S OFF SHIZUOKA PREF
LAT= 33 38 +/- 1 LONG= 138 53 +/- 1
H= 10 MAG=4.2 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HACHIJ	1	EP	02	31	45.2	IS	31	57.2	25		52		15					102.8	12.0
OSHIMA	0	P	02	31	49.3	IS	32	04.9	21	0.6	10	0.6	5	0.3				133.2	15.6
OMAEZA	0	P	02	31	49.5	S	32	05.0	10	0.7	11	0.7	7	0.7	S 1	E 1		124.0	15.5
SHIZUO	0	P	02	31	52.1	S	32	10.7	6	0.4	5	0.4	2	0.4				154.9	18.6
HAMAMA	0	P	02	31	52.6	S	32	11.0	5	0.4	4	0.6	3	1.4			D 1	160.1	18.4
TOMISA	0	EP	02	31	53.3	S	32	13.6	15	1.0	11	1.0	5	1.0				167.1	20.3
MISHIM	0	P	02	31	54.7	IS	32	12.4	14	0.9	23	1.1	7	0.5				164.0	17.7
KOFU	0	EP	02	32	03.2	ES	32	29.4	5	0.3	6	0.3	2	1.0				227.3	26.2
MATSUS	0	P	02	32	14.8	S	32	54									D	328.0	39.2
YOKOHA	0	X	02	32	26.6				9	0.5	10	0.6						212.2	

OT= 5 8 42 11.7 +/- 0.2
MIDDLE PART OF HOKKAIDO
LAT= 43 4 +/- 1 LONG= 142 36 +/- 2
H=170 CLASS=R

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OBIHIR	3	IP	08	42	37.1	IS	42	55.4	2400	3.2	1000	3.6	700	2.8			U 18	53.3	18.3
ASAHIK	0	EP	08	42	37.8	IS	42	54.0	324	2.2	215	1.4	119	1.4				80.3	16.2
SAPPOR	2	IP	08	42	39.2	IS	42	57.5	1300	2.0	700	1.6	300	2.0	N 3	W 5	U 20	103.3	18.3
HIROO	3	IP	08	42	39.3	IS	42	57.8	500	4.1	600	4.1			S 2	E 2	U 18	105.0	18.5
RUMOI	0	IP	08	42	40.8	IS	43	01.6	350	2.2	250	2.4	300	1.6	S 13	E 11	D 49	125.5	20.8
URAKAW	3	IP	08	42	40.9	IS	43	02.2	1600	1.6	1400	1.6	900	1.6	S 42	W 12	U 78	102.0	21.3
KUSHIR	3	IP	08	42	42.2	IS	43	04.0	1000	2.0	550	1.0	250	0.6			D 3	146.7	21.8
MURORA	1	IP	08	42	43.3	IS	43	05.3	600	1.2	400	1.2	200	1.2	S 13	W 15	U 40	156.5	22.0
ABASHI	0	P	08	42	44.8	S	43	05.8	159	4.0	116	3.0	44	2.0				172.2	21.0
SUTTSU	0	IP	08	42	47.6	IS	43	11.1	450	3.2	450	3.0	250	2.6	S 2	W 8	U 20	195.1	23.5
HAKODA	2	IP	08	42	48.4	IS	43	14.1	500	1.8	400	1.4	100	0.4	S 34	W 36	U 95	205.8	25.7
NEMURO	1	P	08	42	51.5	S	43	19.3	65	1.4	79	2.4	42	0.8	N	W	D 1	244.5	27.8
WAKKAN	0	IP	08	42	55.6	IS	43	29.0	72	3.6	80	5.0	69	5.0	N 2	W	D 8	271.4	33.4
AOMORI	2	IP	08	42	56.8	IS	43	26.2	800	2.4	1100	2.7	300	2.4	S 30	W 20	U 28	291.8	29.4
HACHIN	3	IP	08	42	56.8	IS	43	28.7	231	2.6	204	2.4	106	2.2	S 3	W 2	U 3	296.1	31.9
MIYAKO	2	P	08	43	06.5	IS	43	45.2	77	2.4	115	2.4			N 4			383.7	38.7
MORIOK	3	IP	08	43	08.6	IS	43	49.0	500	0.4	400	0.5	100	0.4	S 11	W 2	U 8	393.0	40.4
						EX	44	21.6											
AKITA	0	IP	08	43	13.2	IS	43	59.0	180	2.2	206	2.0	188	4.0	S 3	W 2	U 10	426.5	45.8
OFUNAT	2	IP	08	43	14.7	IS	44	00.2	122	0.0	133	0.4	77	0.6	S 10	W 2	U 7	450.9	45.5
MIZUSA	2	IP	08	43	16.1	IS	44	04.8	528	1.6			228	1.8	S 33	W 4	U 4	453.9	48.7
ISHINO	1	IP	08	43	23.0	IS	44	16.0	70	1.0	135	2.4	107	1.4	S 11	W 4	U 11	527.0	53.0
SAKATA	0	IP	08	43	24.0	IS	44	15.0	500	2.7	450	2.5	150	5.3			U 6	517.5	51.0
SENDAI	X	P	08	43	26.8	IS	44	22.0	192	0.6	207	0.6	80	2	S 3	W	U 2	552.8	55.2
YAMAGA	0	P	08	43	28.8	ES	44	26.0	300	0.2					S 2	W 1	U 3	567.3	57.2
FUKUSH	0	P	08	43	35.1	S	44	36.3	119	0.5	104	0.4	48	3.5	S 4	W 2	U 3	616.6	61.2
NIIGAT	0	IP	08	43	40.3	IS	44	46.4	185	3.2	185	2.7	63	4.0			D 2	646.7	66.1
SHIRAK	1	EP	08	43	42.6	IS	44	51.4										690.8	68.8
ONAHAM	1	IP	08	43	45.2	IS	44	52.7	120	1.3	167	1.0	81	1.9			U 4	694.9	67.5
MITO	0	IP	08	43	50.6	IS	45	03.0	107	3.6	95	2.2	62	2.0			U 3	764.6	72.4
UTSUNO	0	EP	08	43	51.4	ES	45	04.8	79	2.4	59	1.5	37	2.2	S 3	W 3	U 4	760.6	73.4
KAKIOK	0	IP	08	43	53.0	S	45	06.7	140	1.1	74	0.8	43	0.7	S 3	E 3	D 4	786.4	73.7
TAKADA	0	P	08	43	53.2	S	45	08.9										758.6	75.7
WAJIMA	0	EP	08	43	57.4	S	45	15.0	56	2.0	87	2.4	24	2.0				795.1	77.6
KUMAGA	0	P	08	43	58.4	S	45	19.4	63	3.2	70	3.4	43	3.2			U 3	816.2	81.0
CHOSHI	0	P	08	43	58.4	S	45	16.5										829.0	78.1
MATSUS	0	IP	08	43	59.0	S	45	20									U	816.3	81.0
MAEBAS	0	X	08	43		S	45	16.5	60	3.4	47	2.0	32	2.2			U 2	799.5	
OMAEZA	0	EX	08	44					36	4.2	39	3.8	10	2.1				1013.4	
KARUIZ	0	EP	08	44	00.6	S	45	22.8										823.3	82.2
CHICHI	0	EP	08	44	01.7	ES	45	20.6										841.5	78.9
TOYAMA	0	P	08	44	03.1	S	45	27.2	20	3.8	29	3.6	36	3.6			U 3	843.0	84.1
TOKYO	0	EP	08	44	03.2	ES	45	24.8	40	4.2	45	5.2	56	4.0				855.2	81.6
FUNATS	0	P	08	44	05.5	X	44	23.5										902.8	
KOFU	0	EP	08	44	07.6	ES	45	37.4	41	1.8	36	2.2	17	3.8				892.2	89.8
YOKOHA	0	EP	08	44	07.7	IS	45	32.9	54	1.8	55	4.5	22	1.7			U 3	884.2	85.2
TOMISA	0	IP	08	44	10.5	X	45	32.6	49	2.6	50	2.8	31	2.2			D 2	935.5	
AJIRO	0	IP	08	44	10.8	ES	45	40.9	10	0.6	12	0.8	5	0.8			U 0	940.7	90.1
MISHIM	0	EP	08	44	12.6	ES	45	42.6	43	3.8	31	3.4	25	1.5				938.2	90.0
IIDA	0	EP	08	44	12.8	IS	45	44.4	16	2.4	16	2.4	9	4.0				933.8	91.6
OSHIMA	0	P	08	44	14.5	IS	45	44.2	43	1.0	34	0.6	16	1.2				963.1	89.7
FUKUI	0	X	08	44	16.0													951.3	
SHIZUO	0	P	08	44	16.5	ES	45	49.8	14	2.4	14	3.6	16	3.8				968.7	93.3
NAGOYA	0	EP	08	44	21.6	ES	46	02.4	29	2.4	21	2.4	9	2.0			U 1	1002.7	100.8
TSURUG	0	EP	08	44	21.8	S	46	02.0										996.9	100.2
GIFU	0	EP	08	44	21.8	S	45	59.4	23	2.0	17	2.0	8	3.1				988.6	97.6
HAMAMA	0	EP	08	44	22	X	45	04	20	3.4	30	3.0	10	2.0				1019.3	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HIKONE	0	P	08	44	26.3	ES	46	05.6	36	2.3	16	1.5	15	2.1				1023.9	99.3
KYOTO	0	EP	08	44	29.2	ES	46	16.0	6	2.0	6	2.6	3	1.6				1072.8	106.8
TOYOOK	0	EP	08	44	30.8	ES	46	17.5	17	1.2	13	1.6						1071.0	106.7
SAIGO	0	IP	08	44	32.7	S	46	23.5	10	3.2	8	3.4	5	2.2	S 1	W 1	U 0	1100.2	110.8
HACHIJ	0	EP	08	44	34.2	S	46	21.4	31		30		16					1133.0	107.2
NARA	0	EP	08	44	35.9													1099.5	
OSAKA	0	IX	08	44	36.0	X	45	23.2	40	3.2	49	4.1	16	3.0				1116.6	
						X	46	26.0											
SUMOTO	0	P	08	44	41.5	ES	46	37.6	6	6.2	4	4.8	4	5.0	S 0	W 0	U 0	1176.6	116.1
OKAYAM	0	IP	08	44	44.2	IS	46	35.2	10	4.0	9	4.2	10	4.0		E	D	1196.2	111.0
MUROTO	0	P	08	44	57.7	S	47	09.0	4	7.0	5	5.0	4	5.0				1314.6	131.3
KANAZA	0	X	08	45	08.6	X	46	36.0	32	0.3	46	0.3	20	0.3				884.8	
OITA	0	X	08	45	22.7	X	47	49.8	16	4.8	15	5.0						1452.3	
FUNATS	0	X	08	45	23.5	S	45	37.1										902.8	
NAGASA	0	EP	08	45	31.0	ES	48	28.0										1600.6	177.0

OT= 5 14 47 51.3 +/- 0.1
MIYAZAKI PREF
LAT= 32 37 +/- 1 LONG= 131 22 +/- 1
H= 90 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NOBEOK	1	P	14	48	05.9	S	48	16.0	150		100		50		N	W 4	D 8	29.9	10.1
ASOSAN	1	IP	14	48	06.2													39.9	
KUMAMO	0	IP	14	48	07.3	IS	48	18.2	51	1.0	42	0.8	38	0.8	N 2	E 1	U 7	65.2	10.9
OITA	2	IP	14	48	08.6	S	48	20.0	89	0.6			40	0.6			D 13	72.5	11.4
MIYAZA	0	IP	14	48	09.2	S	48	21.6	88	0.7	72	0.7	32	0.8	S 11		U 25	77.8	12.4
SAGA	0	IP	14	48	13.3	IS	48	28.1										121.3	14.8
UWAJIM	0	EP	14	48	14.0	IS	48	30.4										130.2	16.4
FUKUOK	0	IP	14	48	16.0	ES	48	34.0	7	0.5	10	1.0	9	1.4			U 3	141.0	18.0
NAGASA	0	P	14	48	16.0	IS	48	31.8								E	D	140.8	15.8
ASHIZU	0	P	14	48	17.3	IS	48	34.7	25	0.4	26	0.6	9	0.4			U 3	155.1	17.4
SHIMON	0	P	14	48	17.4	S	48	35.4	6	1.0	13	1.8	10	1.2	N 1		U	153.4	18.0
MATSUY	0	EP	14	48	21.5	ES	48	43.0	12	0.7	7	0.7	3	0.5				189.0	21.5
KOCHI	0	IP	14	48	25.4	IS	48	48.5										227.1	23.1
YAKUSH	0	EP	14	48	29.0	X	48	53.0	16	0.8	17	0.8	6	0.8				253.9	
MUROTO	0	IP	14	48	29.8	IS	48	57.2			5	0.3			N 1	E 0	U 1	272.0	27.4
OKAYAM	0	IP	14	48	37.6	IS	49	13.6	15	0.8	12	0.6	5	0.8	N	E	D	329.0	36.0
TOYOOK	0	EP	14	48	58.7	ES	49	42.3	11	1.1	7	1.1						454.2	43.6
KAGOSH	0	X	14	48		X	48	19.3	25	1.0	23	1.0	13	1.0				138.8	
MATSUS	0	IP	14	49	32.0										S	W	D	763.2	

OT= 7 8 15 58.0 +/- 0.2
MIYAZAKI PREF
LAT= 32 35 +/- 2 LONG= 131 10 +/- 2
H=150 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KUMAMO	0	IP	08	16	19.0	IS	16	35.3	62	1.4	65	1.6	27	0.8	N 2	W 2	U 21	49.6	16.3
NOBEOK	0	P	08	16	21.5	S	16	36.8	100		50				S 2	E 5	U 2	48.5	15.3
MIYAZA	0	IP	08	16	22.4	S	16	39.0	140	1.0	114	1.0	52	1.0			U 13	77.8	16.6
NAGASA	0	P	08	16	24.0	IS	16	43.8								E	D	122.5	19.8
OITA	0	IP	08	16	24.4	S	16	42.1	92	0.6	81	0.6	30	0.9	N 8	E 15	U 48	83.8	17.7
SAGA	0	IP	08	16	24.7	IS	16	33.2							N 4	W 4	U 6	109.0	08.5
UWAJIM	1	IP	08	16	25.3	IS	16	45.6								E		148.3	20.3
KAGOSH	0	EP	08	16	25.8	X	48	48.9	49	2.6	49	2.2	15	3.2				126.0	
FUKUOK	0	EP	08	16	26.0	IS	16	47.0	32	1.9	20	2.0	10	1.2			U 6	132.7	21.0
SHIMON	0	IP	08	16	28.3	IS	16	50.3	18	0.8	14	1.0	13	0.6	N 7	W 1	U 16	153.3	22.0
ASHIZU	0	IP	08	16	29.9	IS	16	52.6	133	0.8	78	1.0	23	1.2		E 2	D 5	174.1	22.7
FUKUE	0	P	08	16	33.4	S	17	01.8			7	4.2				E 5		219.2	28.4
MATSUY	0	IP	08	16	34.2	IS	16	59.1	53	0.7	57	0.6	12	0.6				205.0	24.9
HIROSH	0	EP	08	16	35.7	S	17	02.4	17	1.2	15	0.7	9	1.0				229.9	26.7
KOCHI	0	IP	08	16	36.4	IS	17	05.5							S 13	W 27	D 20	245.5	29.1
HAMADA	0	P	08	16	39.1	S	17	08.9	6	4.0	3	1.8	2	3.6	N 0			269.5	29.8
MUROTO	0	IP	08	16	41.3	IS	17	13.5	15	0.6	25	0.7	10	2.0	S 0		D 1	291.1	32.2
TAKAMA	0	IP	08	16	46.7	IS	17	21.5	44	0.8	68	0.8	24	0.8				330.4	34.8
OKAYAM	0	IP	08	16	47.8	IS	17	23.8	160	0.8	100	0.6	30	0.8	N	E	U	345.1	36.0
TOKUSH	0	EP	08	16	51.2	IS	17	27.6										357.4	36.4
MATSUE	0	EP	08	16	51.4	S	17	28.4										363.8	37.0
YONAGO	0	EP	08	16	51.4	S	17	30.3										374.5	38.9
SUMOTO	0	P	08	16	54.5	ES	17	30.5	8	0.8	6	0.5	4	1.2				398.2	36.0
						IX	17	35.9											
TOYOOK	0	EP	08	17	06.9	ES	17	51.9	47	1.2	30	1.1	11	0.7				470.0	45.0
HIKONE	0	EP	08	17	16.5	S	18	10.4	11	1.0	10	1.0	4	1.0				556.2	53.9
NAGOYA	0	EP	08	17	24.6	S	18	23.6	6	1.0	8	0.8	3	0.8			U 1	608.0	59.0
OSAKA	0	EX	08	17	39.6	IX	17	51.9	18	3.2	20	4.1	8	1.9				465.7	
MATSUS	0	P	08	17	42	S	19	03										780.5	81.0
GIFU	0	X	08	17	55	S	18	22.3	9	1.4	11	1.6	4	0.7				603.8	

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
FUKUI	0	X	08 18 17.7												603.9	
OT= 8 9 42 16.2 +/- 0.4																
OFF MIYAGI PREF																
LAT= 38 15 +/- 1 LONG= 141 52 +/- 3																
H= 50 MAG=4.6 CLASS=M																
ISHINO	2	IP	09 42 27.6	IS	42 34.4	292	0.2	238	0.2	57	0.2	S 6	E 22	D 32	52.9	06.8
SENDAI	2	IP	09 42 32.0	IS	42 41.8	212	0.2	85	0.2	41	0.2	S 2	E 10	D 45	84.6	09.8
OFUNAT	2	IP	09 42 32.2	IS	42 42.6	45	0.4	54	0.6			S 1			91.0	10.4
MIZUSA	1	EP	09 42 36.1	ES	42 50.1					20	0.8		E 7		117.0	14.0
YAMAGA	0	P	09 42 37.0	ES	42 49.0								E 1	D 3	132.7	12.0
FUKUSH	2	P	09 42 38.0	S	42 52.4	85	0.8	84	0.8	23	0.4	N 5	E 3	D 6	133.9	14.4
MIYAKO	1	EP	09 42 40.5	ES	42 56.2	7	0.0	10	1.6	8	0.0				155.1	15.7
MORIOK	1	IP	09 42 42.2	IS	43 01.0	22	0.4	30	0.4	9	0.3	S 1	E 0	D 1	171.6	18.8
				IX	42 54.4											
ONAHAM	0	EP	09 42 42.5	IS	42 59.8	23	0.9	34	1.0	9	0.5				167.8	17.3
SHIRAK	0	EP	09 42 45.4	ES	43 07.1										191.7	21.7
SAKATA	0	EX	09 42 47.3												191.2	
MITO	0	EP	09 42 52.5	S	43 16.1	14	1.4	15	0.8	6	1.1				241.7	23.6
HACHIN	0	P	09 42 53.0	ES	43 20.8	8	0.2	10	0.2	2	0.5	N		U	254.3	27.8
KAKIOK	0	EP	09 42 57	S	43 22	24	0.8	11	0.8	6	0.8				268.7	25.0
AKITA	0	X	09 42	EX	43 02.8	16	2.0	15	2.8	18	2.0			D	223.5	
MATSUS	0	IP	09 43 09.2	S	43 53							N		D	375.4	43.8
KUMAGA	0	X	09 43 09.6	ES	43 39.4	9	1.2	7	1.0	3	1.2				320.9	
AOMORI	0	X	09 43 12			16	1.8	15	1.3	7	1.1				299.8	
KOFU	0	EP	09 43 16.7	ES	43 56.0	6	1.0	10	1.3	4	1.0				411.1	39.3
NIIGAT	0	X	09 43 19.5			12	2.2	13	2.2						249.8	
MISHIM	0	X	09 43 35			6	0.9	6	0.9						436.0	
TOKYO	0	X	09 43 40			5	2.4	5	1.8						340.9	
YOKOHA	0	X	09 43 46.9	IX	44 05.2	6	0.5	9	0.5						369.2	
OT= 9 4 18 19.1 +/- 0.6																
OFF FUKUSHIMA PREF																
LAT= 37 43 +/- 1 LONG= 143 54 +/- 3																
H= 80 CLASS=R																
ISHINO	1	IP	04 18 54.0	IS	19 17.0	20	0.5	10	0.5	9	0.5	S 4	E 2	D 3	241.0	23.0
OFUNAT	X	IP	04 18 54.2	IS	19 17.5	43	0.0	35	0.4	15	0.6	S 2	E 2	D 2	242.1	23.3
MIYAKO	1	EP	04 18 55	IS	19 23.2	18	1.5	16	2.7						272.1	28.2
SENDAI	1	IP	04 18 58.8	IS	19 24.4	34	0.3	35	0.3	15	0.3	S 1	E	D 8	270.3	25.6
ONAHAM	0	EX	04 18 59.6	IS	19 26.6	31	1.5	40	1.2	10	0.5				278.7	
MIZUSA	1	EP	04 19 00.8	IS	19 29.0	88	2.2			14	1.0		E 2		288.2	28.2
FUKUSH	1	P	04 19 02.8	IS	19 31.2	47	1.0	28	1.0	18	0.6	N 1	E 11	D 8	301.9	28.4
MORIOK	1	IP	04 19 05.0	IS	19 36.4	49	0.4	66	0.4	12	0.2	S 1	E 0	D 0	323.6	31.4
SHIRAK	0	IP	04 19 06.3	IS	19 37.8									D 5	332.0	31.5
MITO	0	P	04 19 07.0	IS	19 38.9	23	0.6	23	1.5	19	2.4				339.1	31.9
CHOSHI	0	EP	04 19 08.5	S	19 40.6										351.2	32.1
HACHIN	1	P	04 19 10.2	IS	19 44.6	17	0.3	18	0.2	5	1.6	N	W	U	373.3	34.4
KAKIOK	0	P	04 19 10.6	S	19 44.2	23	0.5	18	1.2	16	0.5	N	E	D	368.8	33.6
UTSUNO	0	EP	04 19 12.0	ES	19 48.9	17	1.4	14	0.4						380.7	36.9
SAKATA	0	EP	04 19 13.1	IS	19 53.1										378.9	40.0
AKITA	0	P	04 19 14.4	S	19 53.2	26	2.4	16	2.0	9	2.6			D	398.0	38.8
TOKYO	0	EP	04 19 18.8	ES	20 01.0			11	5.0	8	3.0				433.2	42.2
KUMAGA	0	EP	04 19 20.0	ES	20 01.8	11	1.2	10	1.0	5	1.0				438.2	41.8
AOMORI	0	EP	04 19 21	ES	20 01.0	25	1.6	25	1.3	8	1.3				436.7	40.0
CHICHI	0	EP	04 19 22.1	ES	20 07.0										470.3	44.9
NIIGAT	0	X	04 19 24.9			20	4.7	16	3.8	3	2.5				427.4	
TOMISA	0	IP	04 19 25.5											D 1	479.4	
URAKAW	0	IP	04 19 27.0	IS	20 15.4	10	0.4	18	0.4					U 1	502.4	48.4
KARUIZ	0	EP	04 19 28.3	ES	20 15.3										499.7	47.0
MAEBAS	0	X	04 19 28.5	IS	20 13.4	7	0.4	7	1.5	5	1.2			U 3	454.0	
MATSUS	0	IP	04 19 30.7	S	20 22							N	E	D	522.2	51.3
KOFU	0	EP	04 19 33.8	ES	20 23.8	7	0.6	8	1.4	3	1.4				528.7	50.0
KUSHIR	0	EP	04 19 36.1	ES	20 30.9	29	0.3	22	0.3	9	0.2				585.8	54.8
WAJIMA	0	EX	04 19 40.0												619.5	
IIDA	0	EP	04 19 40.4	ES	20 37.6	4	1.8	4	2.0	3	2.0				595.0	57.2
HACHIJ	0	EP	04 19 44.0	S	20 44.0	6		5							633.4	60.0
TOYAMA	0	EP	04 19 45	ES	20 50	6	3.4	6	4.0	4	2.8				604.3	65.0
YOKOHA	0	X	04 19 45.8	S	20 10.3	9	0.7	11	0.5						456.3	
MISHIM	0	X	04 19 51			6	0.6	6	0.6						531.1	
FUNATS	0	X	04 20 06.7	S	20 18.5										521.1	
OSAKA	0	X	04 21 10			6	3.8	7	4.0						825.1	

International Seismological Centre From the ISC collection scanned by SISMOS

OT= 9 12 9 8.1 +/- 0.3
E PART OF HOKKAIDO
LAT= 43 32 +/- 2 LONG= 144 43 +/- 4
H=150 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
NEMURO	X	P	12 09												74.1	
ABASHI	0	IP	12 09 31.0	S	09 47.2	30	1.8	12	1.6	3	1.4				64.1	16.2
KUSHIR	2	IP	12 09 31.3	IS	09 47.3	134	0.4	237	0.5	69	0.3	N 5	W 4	U 44	67.0	16.0
OBIHIR	0	IP	12 09 36.6	IS	09 57.9									D 2	139.3	21.3
HIROO	0	P	12 09 41.7	ES	10 04.4										179.9	22.7
URAKAW	0	EP	12 09 45.4	S	10 12.3	20	0.6	17	0.4	6	0.6				220.0	26.9
SAPPOR	0	IP	12 09 51.4	S	10 23.5	5	2.0	6	2.6	2	1.2			D	279.8	32.1
HAKODA	0	IP	12 10 01.6	IS	10 41.5	3	1.4	5	1.2	3	1.2	N 0	E 0	D 1	376.6	39.9
HACHIN	0	P	12 10 07.2	IS	10 50.0	8	1.0	12	1.0	7	1.0			U	426.0	42.8
MORIOK	0	IP	12 10 18.6	IS	11 10.0	7	0.8	7	0.6	5	0.8	N 0	E 0	D 0	518.6	51.4
AKITA	0	P	12 10 23.7	S	11 23.4	7	2.0	10	1.6	5	1.8		W		572.1	59.7
MIZUSA	0	EP	12 10 26.2	ES	11 23.2	10	1.5	10	1.7	10	1.2				573.3	57.0
FUKUSH	0	EX	12 10 44.0			3	1.0	5	1.0	4	0.7				734.8	
AOMORI	0	X	12 10 54			19	2.0	19	1.1	8	1.1				443.5	
MATSUS	0	IP	12 11 10.8	S	12 46									D	954.2	95.2
OT= 10 2 10 43.3 +/- 0.2																
NEAR MATSUSHIRO																
LAT= 36 31 +/- 1 LONG= 138 10 +/- 1																
H= 0 MAG=4.0 CLASS=L																
NAGANO	2	IP	02 10 47.0	S	10 48.0										16.1	01.0
MATSUS	2	P	02 10 49.1	S	10 51.8										4.4	02.7
MATSUM	1	IP	02 10 51.8	IS	10 56.3							S 3	W 3	U 25	34.9	04.5
KARUIZ	1	IP	02 10 53.4	IS	10 58.9	50	2.8	30	2.0					D 4	39.7	05.5
TAKADA	0	EP	02 10 56.2	S	11 05.1										65.7	08.9
MAEBAS	0	IP	02 10 59.7	IS	11 10.5	15	2.9	11	0.3	5	2.2			D 2	81.5	10.8
OMAEZA	0	X	02 10	X	11 20.3	7	2.9	7	2.6						212.3	
TOYAMA	0	IP	02 11 02.2	ES	11 16	2	0.6	8	3.0	7	3.6			D 4	88.3	13.8
KOFU	0	IP	02 11 02.5	IS	11 14.4	16	0.3	20	0.3	5	0.2	S 1	E 1	U 2	100.8	11.9
IIDA	0	EP	02 11 04.8	ES	11 19.0	5	0.4	5	1.2	6	0.2				115.6	14.2
CHICHI	0	EP	02 11 05.2	S	11 16.7										100.8	11.5
KUMAGA	0	EP	02 11 06.6	ES	11 22.6	8	3.0	11	0.6	7	3.4				116.8	16.0
WAJIMA	0	EX	02 11 08.8			13	0.6	13	0.6						148.8	
KANAZA	0	EP	02 11 09.0	ES	11 26.0	5	0.4	5	0.3	3	0.1			D 3	136.0	17.0
MISHIM	0	EP	02 11 09.3	ES	11 34.3	6	0.5	10	1.0	3	0.4				170.4	25.0
UTSUNO	0	P	02 11 10.6	S	11 29.0	7	0.2	7	0.2	4	0.9				152.7	18.4
NIIGAT	0	IP	02 11 14.4	IS	11 38.5	21	0.3	27	0.6	2	1.6			U 3	173.4	24.1
NAGOYA	0	EP	02 11 15.3	S	11 38.6	6	0.8	10	0.8	3	0.8			U 1	184.9	23.3
TOKYO	0	EP	02 11 16	S	11 36.8	19	4.2	8	4.0	10	3.8				170.4	20.8
YOKOHA	0	EP	02 11 17.7	S	11 42.4	14	1.0	10	0.6						179.9	24.7
HAMAMA	0	P	02 11 18.4	ES	11 45	6	1.2	5	1.2	4	1.4				204.6	26.6
MITO	0	EP	02 11 19.1	S	11 44.6	7	0.4	4	0.5	2	0.5				207.2	25.5
GIFU	0	EP	02 11 19.7	S	11 38.6	6	1.9	9	0.6						177.1	18.9
HIKONE	0	EP	02 11 23.7	S	11 48.0	11	1.0	9	1.0	3	0.8				221.5	24.3
ONAHAM	0	X	02 11 57.9			3	0.9	5	1.2						249.3	
OT= 10 14 51 28.7 +/- 0.7																
OFF MIYAGI PREF																
LAT= 38 30 +/- 2 LONG= 143 0 +/- 3																
H= 0 MAG=4.6 CLASS=U																
OFUNAT	0	IP	14 51 52.4	S	52 09.0	12	1.8	7	1.0	9	2.4	N 1	W 1	U 1	127.6	16.6
				X	52 21.2											
ISHINO	0	EP	14 51 56.0	IS	52 14.4	9	2.0	4	1.4	5	0.8	N 1	W 1	U 1	148.3	18.4
MIYAKO	0	EP	14 51 57.1	ES	52 16.9	11	2.5	7	3.1						155.3	19.8
MIZUSA	0	IP	14 52 00.2	ES	52 22.3	45	2.6	35	1.8	18	1.2		E 3		176.7	22.1
SENDAI	0	EP	14 52 01	EX	52 16	14	2.4	10	0.2	5	2				185.4	
MORIOK	0	IP	14 52 02.3	S	52 28.6	10	0.4	11	0.4	5	1.8			U 0	206.8	26.3
FUKUSH	0	EP	14 52 08.6	ES	52 36.9	14	1.0	11	1.0	4	0.7				236.2	28.3
AOMORI	0	EP	14 52 14			17	1.9	15	1.7	6	1.8				319.9	
AKITA	0	EX	14 52 15.0	EX	52 45.2	22	2.4	16	2.8	9	2.0				284.8	
MITO	0	EP	14 52 19.4	ES	52 55.6	9	2.6	9	3.1	4	1.4				324.8	36.2
SAKATA	0	X	14 52 22.0												278.8	
MATSUS	0	IP	14 52 39.8	S	53 30								E	D	476.1	50.2
ONAHAM	0	EX	14 52 47.2	X	53 07.0	16	1.2	19	1.6	8	1.9				252.6	
NIIGAT	0	X	14 53 07.0			10	3.2	11	2.5	3	3.5				351.9	

OT= 11 17 37 30.3 +/- 0.2
WAKAYAMA PREF
LAT= 34 14 +/- 1 LONG= 135 13 +/- 1
H= 10 MAG=3.7 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A	T	E-W A	T	U-D A	T	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
WAKAYA	2	IP	17	37	33.2	IS	37	35.0	407	0.2	252	0.2						4.7	01.8
SUMOTO	1	IP	17	37	37.3	S	37	42.0	18	0.3	8	0.3	6	0.2	S 1 E	6	D 9	30.5	04.7
						IX	37	39.3											
KOBE	0	IP	17	37	40.6	IS	37	46.8							N 4 W	4	U 6	50.6	06.2
OSAKA	0	IP	17	37	41.0	IS	37	47.8	19	3.4	19	3.2	14	4.2			U 4	54.7	06.8
						IX	37	48.8											
TOKUSH	0	EP	17	37	43.6	IS	37	51.8										61.9	08.2
NARA	0	EP	17	37	44.8	IS	37	54.2										75.5	09.4
SHIONO	0	EP	17	37	50.0	IS	38	00.3	11	0.4	9	0.6	4	0.2				100.7	10.3
TAKAMA	0	IP	17	37	50.1	IS	38	04.6	9	1.0	4	1.0	3	0.4				107.0	14.5
OKAYAM	0	IP	17	37	52.1	IS	38	09.6	15	0.6	20	0.8	5	0.6	S		U	129.5	17.5
TSU	0	EP	17	37	54.8													130.4	
MUROTO	0	IP	17	37	55.2	IS	38	13.3	3	1.0	5	1.0					U 0	145.5	18.1
HIKONE	0	P	17	37	57.5	S	38	13.8	7	1.0	7	1.0	5	0.3				149.0	16.3
TOYOOK	0	EP	17	37	58.2	IS	38	14.5	15	1.0	18	1.1						149.0	16.3
MATSUS	0	X	17	38	34.9	S	39	12									U	373.1	

OT= 12 4 42 38.0 +/- 1.4
CHIBA PREF
LAT= 35 47 +/- 7 LONG= 140 12 +/-10
H= 80 CLASS=U

TOKYO	0	EP	04	42	49.9	ES	43	05.7	7	0.8	8	1.0						41.4	15.8
KAKIOK	0	P	04	42	53.1	IS	43	00.7	7	0.8	13	0.8	4	0.7				49.7	07.6
UTSUNO	0	P	04	42	56.1	S	43	05.6	9	0.2	9	0.3	7	0.7				89.7	09.5
MATSUS	0	IP	04	43	09.2	S	43	28							S	E	D	197.8	18.8

OT= 12 18 12 16.6 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 34 +/- 1 LONG= 138 14 +/- 1
H= 0 MAG=3.6 CLASS=L

MATSUS	2	P	18	12	20.3	S	12	21.2										3.9	00.9
NAGANO	1	IP	18	12	21.3	S	12	23.4										10.9	02.1
KARUIZ	0	EP	18	12	26.8	S	12	31.8										38.0	05.0
MATSUM	0	EP	18	12	27.3	IS	12	32.7										42.8	05.4
TAKADA	0	EP	18	12	29.8	S	12	37.6										59.7	07.8
MAEBAS	0	IP	18	12	32.6	IS	12	42.6	7	1.1	4	1.8	3	1.6			D 2	76.7	10.0
KOFU	0	EP	18	12	37.0	IS	12	49.2	5	0.5	6	0.3	2	0.8				104.2	12.2
WAJIMA	0	EX	18	12	48.0				8	0.8	8	0.8						149.9	

OT= 12 19 54 28.2 +/- 0.4
NEAR MATSUSHIRO
LAT= 36 34 +/- 1 LONG= 138 8 +/- 3
H= 10 CLASS=L

MATSUS	2	P	19	54	29.9	S	54	30.8										7.4	00.9
NAGANO	2	IP	19	54	30.9	S	54	32.9										11.8	02.0
MATSUM	0	EP	19	54	36.6	IS	54	42.2										38.6	05.6
TAKADA	0	EP	19	54	39.8	S	54	47.8										60.6	08.0

OT= 13 0 55 46.4 +/- 0.4
OFF MIYAZAKI PREF
LAT= 32 42 +/- 2 LONG= 132 9 +/- 1
H= 0 MAG=3.9 CLASS=L

NOBEOK	0	P	00	55	58.9	S	56	05.8										45.6	06.9
KAGOSH	0	X	00	55					13	2.2					W 2	U	4	195.6	
UWAJIM	0	EP	00	56	01.3	IS	56	10.4										69.6	09.1
ASHIZU	0	P	00	56	03.4	S	56	13.6	10	0.4	7	0.4	5		E 2	D	5	81.2	10.2
OITA	0	P	00	56	03.5	S	56	14.1	31	0.6	36	0.6						76.9	10.6
KUMAMO	0	IP	00	56	11.2	IS	56	28.6	9	0.6	17	0.8	10	0.8	E 1	U	3	135.4	17.4
MIYAZA	0	X	00	56	13.2				8	0.8	8	0.8	3	0.4				110.3	
SAGA	0	EP	00	56	17.3	IS	56	41.4										182.7	24.1
FUKUOK	0	EP	00	56	18.2	ES	56	40.7	5	1.2	7	1.2	5	1.6				191.8	22.5

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A	T	E-W A	T	U-D A	T	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
KOCHI	0	X	00	56	20.1	IS	56	35.6										159.8	

OT= 14 2 48 44.5 +/- 0.8
NEAR CHOSHI
LAT= 35 56 +/- 2 LONG= 141 9 +/- 4
H= 40 MAG=3.8 CLASS=L

CHOSHI	1	IP	02	48	53.9	IS	49	00.4	50	0.2	28	0.2			S 2	W	2	36.1	06.5
MITO	0	IP	02	48	58.2	S	49	08.0	17	1.1	26	0.3	7	0.3			D 2	78.5	09.8
KAKIOK	0	EP	02	48	59.5	S	49	10.1	10	1.1	8	1.1	5	0.7				92.3	10.6
ONAHAM	0	EX	02	49	11.7	ES	49	14.9	7	0.7	10	0.7	3	0.5				114.3	
FUKUSH	0	EP	02	49	16.6	ES	49	38.8	15	0.9	11	0.9	5	0.6				211.1	22.2
MATSUS	0	IP	02	49	24.4	S	50	00							S		U	272.8	35.6

OT= 14 15 13 42.3 +/- 0.3
OFF IWATE PREF
LAT= 39 42 +/- 1 LONG= 142 12 +/- 2
H= 30 MAG=3.9 CLASS=L

MIYAKO	2	X	15	13	54.2	X	14	05.8										20.8	
OFUNAT	1	EP	15	13	57.2	IS	14	05.2	16	0.0	8	0.2	2	0.6		W	4 U 6	82.1	08.0
MORIOK	X	IP	15	13	57.8	IS	14	08.2	18	0.4	17	0.4	4	0.4	S 0	E	1 D 1	88.5	10.4
HACHIN	0	IP	15	14	00.7	IS	14	11.9	13	0.4	10	0.2	2	0.8			D	108.2	11.2
MIZUSA	0	EP	15	14	01.4	ES	14	13.4	8	0.7	10	0.5	4	0.7				111.3	12.0
MATSUS	0	IP	15	14	50.9													495.5	

OT= 15 0 29 45.2 +/- 0.2
SAITAMA PREF
LAT= 36 1 +/- 2 LONG= 139 36 +/- 2
H= 80 CLASS=L

KUMAGA	0	P	00	29	57.6	S	30	05.4	8	0.8	6	0.4	5	0.4			U 5	24.1	07.8
KAKIOK	0	EP	00	29	59.8	S	30	08.8	13	0.5	14	0.3	5	0.5				58.5	09.0
TOKYO	0	IP	00	30	00.3	S	30	10.3	22	0.8	19	0.5	6	0.6	N 1	W	1 U 11	39.5	10.0
MITO	0	IP	00	30	03.3	IS	30	15.0	7	0.3	9	0.3	3	0.3			U 1	88.1	11.7
YOKOHA	0	EP	00	30	03.8	IX	30	13.6	8	0.6	7	0.6						64.5	
AJIRO	0	IP	00	30	06.0	S	30	19.9	9	0.3	9	0.3	2	0.4	N 0		D 0	117.2	13.9
KOFU	0	EP	00	30	06.8	ES	30	18.6	8	0.5	6	0.5	2	1.8				101.9	11.8
MATSUS	0	IP	00	30	08.8	S	30	24.8							N	W	U	137.8	16.0

OT= 15 7 3 53.3 +/- 0.5
OFF MIYAGI PREF
LAT= 38 34 +/- 1 LONG= 142 0 +/- 3
H= 50 MAG=3.5 CLASS=U

ISHINO	0	P	07	04	06.0	IS	04	14.0	8	0.2	10	0.2	2	0.2				62.8	08.0
OFUNAT	0	EP	07	04	06.0	IS	04	13.2	14	0.0	9	0.4	4	0.2				60.1	07.2
SENDAI	0	EP	07	04	11.0	IS	04	22.7	5	0.8	6	0.8	1	1.0			D 1	101.9	11.7
MORIOK	0	IP	07	04	16.2	IS	04	31.0	3	0.4	5	0.4	1	0.8	S 0	E	0 D 0	144.6	14.8
						EX	04	27.4											

OT= 16 22 59 49.2 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 37 +/- 1 LONG= 138 20 +/- 1
H= 10 MAG=4.1 CLASS=L

MATSUS	2	P	22	59	53.1	S	59	55.1										14.2	02.0
NAGANO	1	IP	22	59	53.4	S	59	55.4										13.1	02.0
KARUIZ	0	P	22	59	57.3	IS	00	03.0									U	36.4	05.7
MATSUM	0	EP	22	59	59.3	S	00	06.2										52.5	06.9
TAKADA	0	P	22	59	59.9	S	00	07.5										54.7	07.6
MAEBAS	0	IP	23	00	01.9	ES	00	11.1	24	3.0	14	2.6	25	2.6			D 2	69.7	09.2
KOFU	0	EP	23	00	08.4	ES	00	23.0	5	3.0	9	4.0	4	1.0				107.5	14.6
KUMAGA	0	EP	23	00	09.0	X	00	39.0	12	3.0			11	4.0				107.8	
TOYAMA	0	IX	23	00	10.2				12	4.0	9	4.0	7	3.6				101.1	
IIDA	0	EX	23	00	12.2													130.7	

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
AIKAWA	0	IP	23	00	15.1	IS	00	34.0	8	0.1	9	0.1			N	W 0	D 0	155.9	18.9
NIIGAT	0	IP	23	00	16.5	ES	00	37.7	10	3.6	15	4.2	5	3.8			U 2	157.0	21.2
KANAZA	0	EP	23	00	17.0	ES	00	32.0	6	0.4	4	0.2	3	0.2				151.0	15.0
WAJIMA	0	EP	23	00	18.0	ES	00	34.6	15	0.8	13	0.8						153.9	16.6
MITO	0	EP	23	00	21.7	S	00	44.7	5	1.3	6	1.0	2	0.8				193.4	23.0
GIFU	0	EP	23	00	24	S	00	47.4	10	1.5	13	1.5						195.6	23.4
NAGOYA	0	P	23	00	24.6	S	00	48.0	5	1.2	5	1.4	4	1.4	S 2		U 2	202.8	23.4
YOKOHA	0	EP	23	00	24.9				10	3.0	7	1.6						177.0	
TOKYO	0	X	23	00	30				13	4.4	3	1.2	6	4.0				164.7	
ONAHAM	0	X	23	00	46.3				4	0.9	5	1.2	1	0.9				232.5	
OSAKA	0	X	23	01	34.6				5	4.0	5	4.0						334.2	

OT= 16 23 19 48.7 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 36 +/- 1 LONG= 138 18 +/- 1
H= 10 MAG= . CLASS=L

NAGANO	1	IP	23	19	52.2	S	19	55.2										11.4	03.0
MATSUS	1	P	23	19	52.4	S	19	54.0										10.7	01.6
KARUIZ	0	P	23	19	56.6	S	20	01.4										36.6	04.8
MATSUM	0	EP	23	19	58.7	S	20	05.6										49.2	06.9

OT= 17 17 11 55.3 +/- 0.8
OFF IWATE PREF
LAT= 38 53 +/- 2 LONG= 142 34 +/- 4
H= 10 MAG=4.6 CLASS=M

OFUNAT	2	IP	17	12	11.1	IS	12	20.1	60	0.4	49	0.2	34	0.8	S 2	E 8	D 7	76.1	09.0
MIYAKO	2	IP	17	12	14.2	S	12	25.0	34	0	29	1	12	0	S 3	E 0	D 4	99.1	10.8
ISHINO	0	IP	17	12	17.0	IS	12	30.0	27	1.4	27	1.4	14	1.0	S	E	D	121.2	13.0
MIZUSA	0	IP	17	12	20.2	ES	12	34.2	145	5.4	73	0.5				E 3		127.2	14.0
MORIOK	1	IP	17	12	21.8	IS	12	38.4	76	0.6	72	0.4	18	0.3	S 2	E 3	D 1	150.7	16.6
SENDAI	0	EP	17	12	23.0	IS	12	40.8	29	1.8	52	3.2	11	1.2			U 1	160.9	17.8
HACHIN	1	IP	17	12	28.3	IS	12	50.7	20	0.4	30	0.4	7	0.8		W	U 1	203.0	22.4
FUKUSH	0	EX	17	12	30.3				33	1.0	23	1.0	8	1.0				221.6	
SAKATA	0	EP	17	12	30.6	S	13	02.7										236.8	32.1
AKITA	0	EX	17	12	31.6	EX	13	00.0	19	1.6	17	1.4	11	1.6				231.9	
UTSUNO	0	EX	17	12	50.5	EX	13	36.1	10	1.8	6	1.4	4	1.3				351.7	
NIIGAT	0	X	17	12	56.2	S	13	31.7	10	1.5	12	2.0	5	2.0				325.5	
KUMAGA	0	EP	17	12	57.8	X	13	58.6	5	1.2	5	1.4	3	2.6				413.9	
ONAHAM	0	X	17	12	58.3				11	0.9	10	1.0	4	0.9				260.0	
KAKIOK	0	X	17	12					9	1.0	8	1.0	4	1.0				361.3	
MATSUS	0	IP	17	13	02.6	S	13	50									D	464.0	47.4
AOMORI	0	X	17	13	05				25	0.9	23	0.7	11	1.0				263.4	
KUSHIR	0	X	17	13	46.9				9	0.2	6	0.4	2	0.2				480.1	

OT= 17 21 34 51.9 +/- 0.2
OFF MIYAGI PREF
LAT= 38 7 +/- 1 LONG= 142 17 +/- 1
H= 40 MAG=4.5 CLASS=L

ISHINO	1	IP	21	35	07.8	IS	35	18.0	13	0.2	14	0.2	5	0.2	S 5	E 7	D 6	92.3	10.2
OFUNAT	0	IP	21	35	10.4	IS	35	19.7	12	0.0	8	0.0	1	0.6	S 1	E 1	D 1	115.9	09.3
SENDAI	0	IP	21	35	12.0	ES	35	25.4	8	1.0	27	2.5	5	0.4			D 5	122.2	13.4
MIZUSA	0	EP	21	35	16.6	ES	35	34.8	25	3.5	12	0.6	4	0.7				150.9	18.2
FUKUSH	0	EP	21	35	17.8	ES	35	34.8	14	1.0	19	1.0	7	0.7				163.9	17.0
MORIOK	0	P	21	35	22.2	ES	35	43.7	13	0.3	12	0.3	2	0.6	S 0	E 0	D 0	200.3	21.5
SHIRAK	0	EP	21	35	24.0	EX	35	46.4										212.8	
AKITA	0	P	21	35	29.7				5	0.8	4	1.8					D	259.6	
UTSUNO	0	EP	21	35	37.1	EX	36	55.1	43	1.6	31	1.2						275.7	
ONAHAM	0	X	21	35	38.4				10	1.0	8	0.8	2	0.6				178.1	
MATSUS	0	P	21	35	50	S	36	40										401.3	50.0
MAEBAS	0	X	21	35	51.3	EX	37	33.5	12	1.6	15	1.6	8	1.2				343.0	
KARUIZ	0	X	21	35	55.8	X	37	10.6										385.3	
KUMAGA	0	X	21	35	56.0	X	37	27.0	20	1.2	20	1.4	8	2.0				337.7	
AIKAWA	0	EP	21	36		X	37	37.0	10	0.3	7	0.2	5	0.3				354.8	
OMAEZA	0	EX	21	36					8	2.4	7	2.2						534.0	
NIIGAT	0	EX	21	36	02.2	X	37	24.7	38	2.2	38	2.7	15	2.9				284.7	
CHOSHI	0	X	21	36	04.9	X	37	26.3										294.7	
AOMORI	0	X	21	36	11	X	37	03	49	1.3	47	1.3	14	0.9				326.4	
YOKOHA	0	X	21	36	26.0	IX	37	44.9	19	0.8	22	1.2	9	2.1				378.7	

OT= 17 21 36 7.6 +/- 0.9
OFF MIYAGI PREF
LAT= 38 15 +/- 2 LONG= 142 14 +/- 4
H= 30 MAG=5.0 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ISHINO	1	IP	21	36	22.6	IS	36	32.0	42	1.0	37	1.0	44	1.0	N 3	E 45	D 41	83.6	09.4
OFUNAT	1	IP	21	36	25.0	IS	36	36.8	33	0.0	33	1.2	19	1.4	S 10	E 4	D 8	100.6	11.8
SENDAI	X	IP	21	36	26.7	IS	36	39.2	60	1.5	109	3.0	35	1.8	N 10	E 10	D 40	116.7	12.5
MIZUSA	0	EP	21	36	31.3				188	4.4	95	1.9	46	1.3				137.0	
YAMAGA	0	EP	21	36	32.1													164.8	
FUKUSH	1	P	21	36	32.4	S	36	48.0	121	0.9	119	0.9	45	1.0	N 8	E 16	D 9	163.8	15.6
MIYAKO	0	EP	21	36	32.6	ES	36	48.8	9	1.8	16	1.8	19	2.1	S 0		D 0	156.6	16.2
ONAHAM	0	EP	21	36	36.1	IS	36	53.5	107	0.9	102	1.1	44	1.6				186.3	17.4
MORIOK	0	EP	21	36	37.0	S	36	56.8	35	0.2	42	0.3	20	0.4	S 6	E 3	D 3	185.2	19.8
MITO	0	EP	21	36	44.0	S	37	09.6	41	1.4	45	1.0	19	0.8				259.8	25.6
SAKATA	0	EP	21	36	44.8	S	37	08.4										221.1	23.6
AKITA	0	EX	21	36	45.0	EX	37	12	57	2.4	52	1.8	40	2.8				246.3	
HACHIN	0	IP	21	36	46.3	S	37	13.3	10	1.2	13	1.0	10	3.2			U 1	259.8	27.0
KAKIOK	0	EP	21	36	48	S	37	14.8	62	0.8	60	0.8	22	0.8				287.9	26.8
TOMISA	0	X	21	36					17	4.0	16	3.0	11	2.8				427.5	
MISHIM	0	X	21	36		ES	38	00.4	15	0.8	18	0.9	4	1.1				456.4	
TAKADA	0	X	21	36		S	37	51.4										373.6	
IIDA	0	X	21	36		ES	38	11.0	11	1.4	6	1.2	3	0.8				496.0	
TOKYO	0	EP	21	37	01	X	38	39	15	1.4	11	1.4	8	2.4				359.9	
MATSUS	0	IP	21	37	05.3	S	37	56										403.8	50.7
HAKODA	0	EP	21	37	07.0	ES	37	58.2	6	1.4	7	1.0	3	2.8				415.2	51.2
KOFU	0	EP	21	37	10.4	ES	37	51.4	20	1.8	19	1.6	8	1.0				435.1	41.0
FUNATS	0	P	21	37	13.5	S	37	54.4										434.6	40.9
WAJIMA	0	Ex	21	37	16.0				10	2.0	10	2.0						479.2	
KUSHIR	0	EX	21	37	22.1	X	38	15.2	7	0.4	8	0.4	3	2.4				556.0	
OBIHIR	0	EP	21	37	25.1	X	38	31.8										525.3	
NAGOYA	0	EP	21	37	25.4	ES	38	34.8	13	2.2	8	2.4	4	1.6				581.6	69.4
HAMAMA	0	EP	21	37	30	ES	38	25	6	2.0	7	2.6	3	1.4				563.5	55.0
HIKONE	0	EP	21	37	37.7	S	38	38.9	6	1.7	6	1.5	3	2.1				628.1	61.2
OSAKA	0	EX	21	37	54	X	39	27.5	7	2.2	9	4.0	4	2.0				720.7	
URAKAW	0	X	21	37	58.8				11	2.6	11	2.6	6	2.6				436.5	
SHIZUO	0	X	21	37		X	37	06.4	6	1.8	6	1.0	4	2.0				499.2	
TOYAMA	0	X	21	37		X	38	22	5	4.8	8	3.6	6	4.4				476.2	

OT= 18 2 30 53.2 +/- 0.3
OFF IWATE PREF
LAT= 39 36 +/- 1 LONG= 142 10 +/- 2
H= 40 MAG=4.0 CLASS=L

MIYAKO	2	EP	02	31	01.1	IS	31	06.1										17.7	05.0
OFUNAT	0	EP	02	31	06.4	IS	31	15.1	41	0.0	18	0.0	8	0.0				71.2	08.7
MORIOK	1	IP	02	31	08.3	S	31	18.0	20	0.6	28	0.4	6	0.3	S 1	E 3	D 2	86.4	09.7
MIZUSA	0	EP	02	31	10.6	ES	31	22.7	38	2.5	15	0.5	10	1.3				103.0	12.1
HACHIN	0	IP	02	31	10.7	IS	31	21.7	10	0.4	6	0.2	3	0.8	S 1	E 1	D 1	116.4	11.0
AOMORI	0	EX	02	31	23				8	0.9	7	0.9						179.2	
SENDAI	0	X	02	31	33.9	EX	31	39.1	2	0.7	7	1.8	1	0.8			U 1	184.9	
MATSUS	0	IP	02	32	00.1	X	33	06										485.8	

OT= 19 1 59 20.7 +/- 0.3
OFF IWATE PREF
LAT= 40 9 +/- 1 LONG= 142 29 +/- 2
H= 30 MAG=4.9 CLASS=S

MIYAKO	1	IP	01	59	33.8	IS	59	42.8	30	0.4	40	1						71.3	09.0
HACHIN	1	IP	01	59	36.6	S	59	47.3	33	0.4	35	0.4	16	3.6	S 3	E 4	D 4	91.5	10.7
MORIOK	1	IP	01	59	41.5	S	59	56.0	58	0.4	48	0.4	20	1.3	N 1	E 3	D 2	123.2	14.5
OFUNAT	X	IP	01	59	43.2	IS	59	58.2	52	0.0	48	1.2	24	0.8	N 2	E 1	D 1	137.5	15.0
AOMORI	0	IP	01	59	46.3	IS	00	02.8	136	1.7	104	1.3	47	1.3	S 7	E 11	D 14	162.0	16.5
MIZUSA	1	IP	01	59	47.6	IS	00	05.9	265	2.5	114	1.2	72	1.4	S 13	W 8		161.8	18.3
AKITA	0	P	01	59	53.1	S	00	18.8	33	2.4	20	2.8	17	2.4	S	E	D 3	209.1	25.7
ISHINO	0	IP	01	59	54.3	IS	00	18.2	16	1.0	18	1.2	13	1.0				216.9	23.9
URAKAW	0	EP	01	59	55.0	ES	00	21.0	15	0.6	15	0.8	6	1.0				224.4	26.0
HAKODA	0	IP	01	59	55.5	IS	00	23.2	11	1.0	18	1.6	8	2.6	S 0	E 0	D 0	234.9	27.7
SENDAI	0	EP	01	59	59	ES	00	24.2	22	1.2	50	1.5	10	1.0				250.4	25.2
SAKATA	0	EP	02	00	01.8	S	00	32.7										266.3	30.9
YAMAGA	0	EP	02	00	02.5	ES	00	32.4										279.8	29.9
FUKUSH	0	EP	02	00	08.2	ES	00	43.8	40	1.1	38	1.0	9	0.6				317.6	35.6
SAPPOR	0	EP	02	00	09	ES	00	48	7	2.0	6	1.6	3	1.2				337.0	39.0
KUSHIR	0	EP	02	00	10.0	IS	00	42.8	16	0.4	16	0.6	5	0.4				352.3	32.8
OBIHIR	0	P	02	00	10.7	S	00	44.3										313.8	33.6

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STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ASAHIK	0	EX	02 00 11.0	S	01 03.6	5	1.2	6	1.8						402.2	
SHIRAK	0	EP	02 00 14.4	ES	01 01.2										389.7	46.8
AIKAWA	0	IP	02 00 21.8			6	0.2	5	0.2	3	0.2	S	0 W	0 U 0	436.5	
MITO	0	EP	02 00 23.8	ES	01 14.4	15	2.3	13	0.9	7	2.0				454.1	50.6
KAKIOK	0	EP	02 00 26	S	01 18.6	16	0.8	14	0.8	5	0.5				478.9	52.6
NIIGAT	0	EX	02 00 26.7	X	01 10.9	20	3.0	18	2.2	6	3.2				387.4	
UTSUNO	0	EX	02 00 29.0	EX	01 14.4	12	1.5	8	1.8						460.5	
TOKYO	0	EP	02 00 32.5	ES	01 32.6	9	3.4	6	2.0						550.3	60.1
KUMAGA	0	EP	02 00 33.0	X	01 42.4	10	1.8	11	1.4	4	1.4				520.7	
ONAHAM	0	EX	02 00 35.9	X	01 06.9	17	0.9	21	1.3	6	1.2				381.4	
MATSUS	0	IP	02 00 36.6	S	01 32							S	W	U	547.9	55.4
KOFU	0	X	02 00 50.4	ES	01 59.0	5	1.4	7	1.4	2	1.4				605.6	
YOKOHA	0	X	02 00 53.9			10	1.4	6	1.2						579.3	

OT= 20 2 4 16.3 +/- 1.4
NEAR HACHIJOJIMA
LAT= 33 25 +/- 3 LONG= 140 41 +/- 9
H= 70 CLASS=S

OSHIMA	0	P	02 04			10	0.8	8	0.4	3	0.4				191.7	
HACHIJ	2	IP	02 04 33.6	IS	04 45.2	51	0.0	63	0.0			S	2 E	6	90.4	11.6
TOMISA	0	P	02 04 42.5											U	184.4	
TOKYO	0	P	02 04 53.8	ES	05 18	9	1.7	7							265.5	24.2
YOKOHA	0	EP	02 04 54.8	S	05 15.0	17	0.8	16	0.7						243.1	20.2
MISHIM	0	X	02 04 59	ES	05 16.8	13	0.7	11	0.7	3	0.7				247.8	
KUMAGA	0	EP	02 05 01.2	ES	05 34.0	6	1.0	5	1.0	2	1.2				325.2	32.8
KOFU	0	EP	02 05 02.0	ES	05 31.6	5	1.0	6	0.9	2	1.0				316.5	29.6
MATSUS	0	IP	02 05 12.6	S	05 55							S		D	413.4	42.4

OT= 21 0 36 20.1 USCGS
WEST CAROLINE IS
LAT= 7 42 LONG= 134 54
H= 8 MAG=6.5 CLASS=U

ISHIGA	0	IP	00 40 51.8			18	0.9	27	0.9	12	0.3	S	3 E	3 D 3	2164.6	
NAHA	0	EP	00 40 53.6	ES	44 45.2	27	4.2	21	7.1	16	6.8	N	E	U	2186.5	231.6
OMAEZA	0	EX	00 41			20	10.5	21	21.8						2995.6	
YAKUSH	0	EP	00 41 27.0	EX	45 42.1	30	6.8	26	7.4	18	4.6				2557.4	
ASHIZU	0	EP	00 41 29.0	EX	46 31.7	9	3.0	8	7.0	14	3.0				2773.9	
MIYAZA	0	EP	00 41 41.6	ES	46 05.0	23	7.0	20	8.0	24	4.0				2702.5	263.4
KUMAMO	0	EP	00 41 49.4	ES	46 32.0	29	4.8	17	2.5	8	3.9				2810.9	282.6
NAGASA	0	P	00 41 50.0	S	46 18.0										2815.2	268.0
FUKUE	0	EP	00 41 51.6	S	46 42.0			14	8.6	16	4.2				2835.3	290.4
HACHIJ	0	X	00 41 51.9												2854.6	
MUROTO	0	EP	00 41 53.2	ES	46 16.2	10	10.0	20	8.2	19	4.2				2827.0	263.0
				EX	43 20.2											
SHIONO	0	EP	00 41 55.0	ES	46 30.4	9	5.2	14	8.3	2	1.2			D 2	2849.6	275.4
				PP	42 01.1											
FUKUOK	0	EP	00 41 56	ES	46 19	9	4.0	5	6.0	11	4.0			U 1	2900.3	263.0
TAKAMA	0	EP	00 41 58.3	ES	46 20.4	5	13.5	8	23.5						2945.8	262.1
MATSUY	0	EP	00 41 58.8	ES	46 36.0	6	4.5	5	10.0	8	4.5				2899.8	277.2
OITA	0	EP	00 41 59.0	S	46 32.8	43	6.1	46	6.3	40	3.1				2844.5	273.8
SHIMON	0	EP	00 42 00	EX	46 15	6	8.0	8	6.0	10	4.2				2932.5	
SAGA	0	P	00 42 00.1												2865.0	
SUMOTO	0	P	00 42 00.8	ES	46 28.8	8	4.0	9	17.0	8	4.2			D 0	2946.5	268.0
				IX	42 08.6											
HIROSH	0	EP	00 42 01.6	EX	46 36	5	5.0	6	12.5						2960.5	
OKAYAM	0	P	00 42 02.0	X	47 36.0	10	4.0	20	8.0	10	6.0				2986.7	
OSAKA	0	EP	00 42 03.3	X	47 19.9	61	4.4	50	4.4	18	3.7				2982.0	
HAMAMA	0	P	00 42 06.0			9	3.8	8	3.6	9	6.0			U 1	3001.9	
HAMADA	0	EP	00 42 06.0	ES	46 37.2	5	6.6	5	6.0	6	3.6				3022.3	271.2
				EL	49 00.0											
NAGOYA	0	P	00 42 08.7			8	2.6	7	2.6	5	6.4			D 1	3045.9	
HIKONE	0	EP	00 42 10.7	ES	47 07.7	8	2.7	11	21.5	7	13.6				3053.7	297.0
IIDA	0	E	00 42 11.6												3091.4	
KOFU	0	EX	00 42 13.0			7	3.6	4	3.4	7	4.6				3116.4	
TOYAMA	0	EP	00 42 15	ES	46 23	6	5.2	11	7.2	10	3.6				3218.1	248.0
GIFU	0	EP	00 42 15			6	13.7	6	7.8						3070.4	
TOMISA	0	EX	00 42 16.0			22	5.6	23	5.0	16	4.8				3053.3	
SAIGO	0	P	00 42 16.1	X	47 17.1	4	9.5	7	7.4	4	3.6	N	0 E	0 U 0	3158.0	
SHIZUO	0	P	00 42 16.4	ES	46 13.1	5	11.0	6	10.1	5	9.0			D 5	3038.5	236.7
YOKOHA	0	EP	00 42 17.4			19	16.5	12	10.2						3106.8	
MATSUS	0	P	00 42 18	S	47 02								E	U	3208.5	284.0
KUMAGA	0	EX	00 42 18.0			15	5.0	18	4.8	20	5.4				3180.3	
KANAZA	0	EP	00 42 20.3	ES	46 40.0	13	0.6	13	0.6	5	0.5				3196.8	259.7
MITO	0	X	00 42 21.2			10	4.6	7	5.0	5	4.5				3223.2	

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STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHOSHI	0	EP	00 42 23.6	X	46 24.6										3159.2	
				L	48 35.0											
MAEBAS	0	EP	00 42 24.2			16	4.7	13	4.0	30	3.8				3203.8	
WAJIMA	0	EX	00 42 25.0	EX	47 20.0	5	8.0	8	10.0						3291.6	
ONAHAM	0	IP	00 42 29.6	ES	47 41.4	9	2.0	7	4.3	7	1.6			D 5	3292.7	311.8
NIIGAT	0	EP	00 42 35.2			30	5.7	30	4.8	12	5.2				3369.2	
FUKUSH	0	EP	00 42 35.5	ES	47 36.0	7	4.6	5	5.0	6	3.0				3373.3	300.5
SENDAI	0	EP	00 42 41.5	ES	47 42	8	2.5	5	2.5	5	3				3435.4	300.5
				EL	50 10											
OSHIMA	0	EX	00 42 46			6	4.8	14	13.0	6					3028.7	
AKITA	0	EP	00 42 51.8			12	4.8	10	6.6	11	3.8				3581.7	
MIZUSA	0	EP	00 42 55.7			15	3.3	9	2.5	8	2.4				3534.4	
OWASE	0	P	00 42 57.0			5	0.6	5	1.0	7	0.6				2919.8	
HACHIN	0	EP	00 43 00.5	ES	48 18.0	3	5.6	4	5.6	5	5.6			U	3692.5	317.5
URAKAW	0	EP	00 43 07.2	ES	48 52.0	6	4.8	8	5.0						3892.8	344.8
AOMORI	0	EX	00 43 08.7			8	2.2	7	2.0						3712.0	
HAKODA	0	EP	00 43 09.4	ES	48 38.0	4	3.0	6	4.6	5	5.0	N	1	U 1	3820.4	328.6
SAPPOR	0	EP	00 43 21	ES	48 52	6	2.4	6	2.6	7	4.0				3965.1	331.0
KUSHIR	0	EP	00 43 25.2	ES	49 05.4	4	5.4	4	6.0	11	3.0				4014.9	340.2
NEMURO	0	IP	00 43 31.1	ES	49 12.2	3	6.4	3	9.2	6	3.6			U	4080.5	341.1
ABASHI	0	X	00 43 34.8			7	5.2	4	3.6	6	4.4				4123.5	
WAKKAN	0	EX	00 43 42.6							6	5.0				4227.6	

OT= 21 14 44 50.5 +/- 0.4
SW OF SHIZUOKA PREF
LAT= 34 49 +/- 6 LONG= 137 40 +/- 3
H=300 CLASS=U

KOFU	0	EP	14 45 32.6	IS	46 05.0	11	1.6	8	1.6	4	1.6				124.2	32.4
HIKONE	0	EP	14 45 34.1	S	46 05.6	11	1.7	4	1.7	3	1.2				139.1	31.5
MATSUS	0	IP	14 45 37.0	S	46 12							S	W	D	197.2	35.0
TOKYO	0	P	14 45 38.0	S	46 15.3	10	0.4	7	0.3						213.3	37.3
KAKIOK	0	EP	14 45 42	S	46 19	9	0.8	10	0.8	5	0.5				277.7	37.0
MITO	0	P	14 45 45.0	ES	46 25.0	8	0.7	5	0.4	2	0.6				307.5	40.0
FUKUSH	0	EP	14 45 56.9	S	46 43.9	10	1.0	6	0.8	4	0.5				412.3	47.0
NAGOYA	0	X	14 46 00.0			6	1.2	6	2.4	2	1.4				74.5	
OSAKA	0	X	14 46 10.9			6	2.8								195.8	

OT= 23 0 49 23.5 +/- 0.6
OFF MIYAGI PREF
LAT= 38 3 +/- 3 LONG= 141 22 +/- 4
H= 90 CLASS=L

ISHINO	0	P	00 49 38.4	IS	49 47.6	15	0.2	12	0.2	5	0.2				42.0	09.2
SENDAI	0	IP	00 49 38.8	IS	49 48.4	15	0.4	12	0.8	7	0.2			D 4	47.1	09.6
FUKUSH	1	EP	00 49 42.0	S	49 54.3	38	0.3	28	0.1	8	0.2				84.9	12.3
YAMAGA	0	EP	00 49 42.2	IS	49 55.8										91.9	13.6
OFUNAT	0	EP	00 49 44.9	IS	49 58.8	7	0.2	5	0.2	1	0.4				116.4	13.9
MIZUSA	0	IP	00 49 50.3	ES	50 02.2			7	0.3				W 1		122.0	11.9
MORIOK	0	P	00 49 52.4	IS	50 14.9	7	0.6	7	0.6	1	0.5	N	0 W	0 U 0	183.6	22.5
ONAHAM	0	X	00 50 01.2			9	0.4	6	0.5	2	0.6				129.2	
MATSUS	0	IP	00 50 10.9	S	50 33							N	W	U	326.4	22.1

OT= 23 1 56 53.3 USCGS
TURKEY
LAT= 40 42 LONG= 30 48
H= 4 MAG=7.3 CLASS=U

NAGOYA	0	EX	02 07 56.1			14	14.0	13	14.6	14	14.0				8729.5	
OMAEZA	0	EX	02 08			36	15.6	38	15.6	19	16.5				8855.7	
SAIGO	0	P	02 08 40.5	X	18 26.4	9	15.5	12	15.0	9	16.4	S	0 E	0 U 0	8405.3	
				EL	27 15											
FUKUE	0	EP	02 08 40.6	ES	16 31.8			13	12.4	9	14.0				8332.2	471.2
SAPPOR	0	EP	02 08 40.8	ES	18 22	18	18	34	15	18	15				8419.2	581.2
SHIMON	0	EP	02 08 41			10	17.0	15	17.0	13	13.0				8396.9	
OITA	0	EP	02 08 42.1	EX	19 43.0	17	15.6	22	18.2						8496.6	
HAMADA	0	EP	02 08 42.2	ES	18 28.4	11	14.4	9	16.6	6	13.0				8410.8	586.2
				EPP	11 34.4											
				EL	31 35.0											
HAKODA	0	EP	02 08 42.5	ES	18 31.4	24	16.4	22	17.4	51	15.6				8478.3	588.9
FUKUOK	0	EP	02 08 43	ES	18 10	6	13.0	6	14.0	15	13.4			U 1	8382.9	567.0
NAGASA	0	EP	02 08 43.0	ES	18 28.0										8406.7	585.0
KUMAMO	0	EP	02 08 45	ES	18 33	16	21.8	21	16.4	11	16.2				8460.8	588.0

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUY	0	EP	02 08 46.7	ES	18 33.2	27 22.5	18 20.0	21 13.5				8535.6	586.5
ASAHIK	0	EX	02 08 47	EL	38	5 12.0	9 13.0	4 13.0				8427.1	
HIROSH	0	EP	02 08 47.7	ES	18 29.7	16 25.8	17 16.2		S	E		8474.0	582.0
				ESS	23 16								
HACHIN	0	EP	02 08 48.0	ES	18 44.3	21 15.0	22 17.0	30 16.0				8622.9	596.3
AIKAWA	0	EP	02 08 49.3	EL	28 46.2	20 01.4	24 01.4	19 01.6				8602.7	
TAKAMA	0	EP	02 08 49.6	ES	18 37.2	13 19.5	13 19.0					8591.2	587.6
URAKAW	0	EP	02 08 49.7	IS	18 43.0	32 16.0	50 14.6	22 20.6				8574.3	593.3
AKITA	0	EP	02 08 50.0	EX	18 46	23 13.4	23 16.0	24 16.0				8595.1	
WAJIMA	0	EP	02 08 50.0	EX	18 38.0	20 15.2	19 16.0	13 15.0				8560.8	
YAKUSH	0	EX	02 08 50.0			10 15.0	11 14.4	9 14.0				8612.3	
AOMORI	0	P	02 08 51	S	18 41	20 13.6	55 17.4	13 17.0				8555.0	590.0
ISHIGA	0	EP	02 08 51.8			7 1.5	8 1.7	1 0.3				8556.9	
ABASHI	0	EP	02 08 52.0	ES	18 36.8	14 12.8	19 14.0					8519.2	584.8
NEMURO	0	P	02 08 52.0	ES	18 51.8	15 16.2	22 18.2	11 15.6				8647.8	599.8
WAKKAN	0	EX	02 08 52.0			6 10.6	11 12.2	13 12.8				8262.1	
TOYOOK	0	EP	02 08 52.3	S	18 41.7	20 18.7	21 15.1	5 18.2				8555.6	589.4
MIYAZA	0	P	02 08 52.4			19 14.4	16 14.6	14 14.0				8576.0	
MORIOK	0	EP	02 08 52.5	ES	18 31.0	12 16.0	13 15.6	14 16.0				8663.8	578.5
				EX	11 56.0								
				EX	18 48.5								
				EL	39 21								
				EL	48 28								
TOYAMA	0	EP	02 08 53	ES	18 42	15 16.6	26 14.8	9 15.0				8631.7	589.0
KUSHIR	0	EP	02 08 53.4	ES	18 42.8	15 21.8	25 22.6	9 20.0				8606.3	589.4
SUMOTO	0	P	02 08 53.4	S	18 40.9	13 14.6	12 14.6	9 15.0		E 0	U 0	8649.0	587.5
				L	40 24								
KYOTO	0	EP	02 08 53.5	ES	18 53.0	9 14.0	11 17.0	6 17.0				8656.6	599.5
KANAZA	0	EP	02 08 54.1	ES	19	20 1.4	31 1.4	13 1.3				8606.0	
MATSUS	0	IP	02 08 54.8	S	18 46						D	8710.7	591.2
UTSUNO	0	EX	02 08 54.9	EX	40 46.4	28 17.0	13 14.5					8819.7	
MUROTO	0	EP	02 08 55.6	EX	12 01.1	22 14.2	17 14.0	17 15.0				8676.9	
				EX	18 52.1								
OSAKA	0	EP	02 08 56.8	X	18 56.4	19 13.3	27 13.0	12 17.4				8669.7	
				X	43 41.0								
NIIGAT	0	P	02 08 57.8			115 14.0	67 11.3	12 4.4				8663.6	
NAHA	0	EP	02 08 58	ES	19 12	9 14.4	12 16.8	13 16.8		E	U	8698.4	614.0
IIDA	0	E	02 08 58.4									8762.4	
ISHINO	0	EX	02 08 59.0	EX	19							8769.1	
GIFU	0	EX	02 08 59			16 14.2	16 15.3					8698.5	
HIKONE	0	EP	02 08 59.6			19 16.3	18 15.2	28 18.3				8672.4	
MIYAKO	0	EX	02 09 01			16 12.6	18 17.4	19 12.6				8717.6	
SENDAI	0	EP	02 09 01	ES	18 54.2	14 14	17 17	10 16				8756.1	593.2
OFUNAT	0	EP	02 09 01.0	S	18 52.8	15 14.6	12 13.4	10 14.8				8746.6	591.8
				L	42 18								
OWASE	0	P	02 09 01.1			10 1.8	11 1.6	14 1.4				8757.7	
MIZUSA	0	EP	02 09 01.2	ES	18 54.1		30 4.2					8704.4	592.9
SHIONO	0	EP	02 09 03.9	ES	19 09.7	17 17.7	18 23.0					8773.3	605.8
				EX	30 01.5								
				ELQ	40 44.1								
FUKUSH	0	EP	02 09 04	ES	18 56	12 14.0	11 14.0	11 14.0				8767.1	592.0
KOFU	0	EX	02 09 04.0	EX	19 02.0	11 14.0	13 17.0	8 18.0				8799.3	
MAEBAS	0	EP	02 09 04.2			18 14.0	26 13.6	11 7.0				8777.6	
MISHIM	0	EP	02 09 04.2	ES	19 11.2	24 16.5	29 16.5	14 15.9				8865.7	607.0
KUMAGA	0	EP	02 09 04.6	ES	19 09.4	18 13.2	20 13.0	18 17.0				8817.9	604.8
HAMAMA	0	EP	02 09 05	ES	19 06	12 14.4	12 14.4	13 14.4				8814.6	601.0
SHIZUO	0	EP	02 09 05.4	S	19 09.0	10 16.4	11 13.2	11 13.2				8841.0	603.6
ONAHAM	0	P	02 09 06.1	X	19 13.6	9 18.0	18 16.0	8 15.6				8856.8	
MITO	0	EP	02 09 07	ES	19 07	17 17.5	16 13.6	13 16.4				8871.7	600.0
AJIRO	0	EP	02 09 08.0	EX	19 15.2	12 16.2	21 16.0	12 17.0				8882.0	
YOKOHA	0	EP	02 09 08			25 13.7	41 16.5	11 13.7				8889.5	
KAKIOK	0	X	02 09 08			10 16.5	13 15.2	10 17.0				8864.7	
TOKYO	0	IP	02 09 08.8	S	19 12.8	16 4.6	18 14.4	12 18.4				8877.5	604.0
SAKATA	0	EX	02 09 10	ES	19 02							8639.6	592.0
TOMISA	0	EX	02 09 12.0			42 14.0	43 15.0	15 14.0				8940.2	
CHOSHI	0	EP	02 09 12.6	X	19 15.7							8945.9	
OSHIMA	0	EX	02 09 28	ES	19 17.0	18 17	21 18.0	7 22.0				8922.1	
FUNATS	0	X	02 09 36.3	EX	19 07.5							8825.5	

OT= 24 7 6 0.7 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 35 +/- 1 LONG= 138 12 +/- 2
H= 0 MAG=4.4 CLASS=L

MATSUS	3	P	07 06									5.0	
NAGANO	2	IP	07 06 08.5	IS	06 11.4							8.5	02.9
MATSUM	1	IP	07 06 11.0	IS	06 15.6				S	W	U 4	42.8	04.6
KARUIZ	0	IP	07 06 12.3	S	06 17.9					W 16	D 30	41.5	05.6
TAKADA	0	P	07 06 15.0	S	06 23.0							58.1	08.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOYAMA	0	P	07 06 21.2	S	06 33.8	29 1.4	38 1.0	12 3.8				89.7	12.6
KOFU	0	IP	07 06 21.3	IS	06 33.3	16 0.4	24 0.4	9 1.0	N	2 W	1 D 4	106.9	12.0
CHICHI	0	IP	07 06 21.4	IS	06 33.4				S	5		102.9	12.0
IIDA	0	IP	07 06 23.8	IS	06 37.6	16 0.6	24 1.8	8 1.4	S	1 W	1 U 4	123.5	13.8
FUNATS	0	P	07 06 23.8	S	06 40.1							130.6	16.3
KUMAGA	0	EP	07 06 25.4	ES	06 40.4	14 2.0	16 1.2	9 3.0				116.8	15.0
KANAZA	0	P	07 06 27.1	S	06 42.9	33 0.2	26 0.2	11 0.3			U 2	138.9	15.8
WAJIMA	0	EP	07 06 28.6	ES	06 46.4	41 0.8	40 0.8					146.4	17.8
MAEBAS	0	X	07 06 29.7			38 0.5	16 1.7					80.1	
AIKAWA	0	EP	07 06 29.9	IS	06 50.4	10 0.0	23 0.0	5 0.0			D	159.5	20.5
UTSUNO	0	P	07 06 30.6	S	06 48.0	14 1.3	11 1.0	4 2.0				149.7	17.4
MISHIM	0	EP	07 06 32.2	ES	06 53.4	13 0.8	16 0.7	4 0.5				176.1	21.2
TOKYO	0	EP	07 06 33	ES	06 53	16 4.2	11 1.1	8 4.3				172.0	20.0
NIIGAT	0	IP	07 06 33.4	IS	06 55.5	58 0.5	90 0.5	4 0.4			U 2	165.5	22.1
GIFU	0	EP	07 06 33.4	S	06 56.0	13 1.4	10 1.0	6 0.9				184.4	22.6
SHIZUO	0	P	07 06 33.9	S	06 55.0	11 0.6	15 1.0					179.6	21.1
KAKIOK	0	EP	07 06 34	S	06 57	9 1.1	10 0.8	4 0.5				183.0	23.0
NAGOYA	0	EP	07 06 34.4	S	06 56.4	18 1.0	15 1.0	9 1.2	N	2 E	2 D 3	192.7	22.0
FUKUI	0	P	07 06 35.0	S	06 58.4							186.7	23.4
YOKOHA	0	EP	07 06 35.5	IS	06 59.6	14 0.6	16 0.8					182.7	24.1
MITO	0	IP	07 06 36.5	IS	07 03.6	16 1.0	12 0.5	3 0.8			U 1	204.8	27.1
HAMAMA	0	EP	07 06 38	S	07 01.4	16 1.0	24 1.2	7 0.6				212.4	23.4
HIKONE	0	P	07 06 42.4	ES	07 07.7	10 0.6	9 1.0	4 1.0				228.4	25.3
OMAEZA	0	IX	07 06 45.0	X	07 17.4	29 3.4	18 3.0	12 2.8				219.6	
ONAHAM	0	EX	07 07 13.3	ES	07 16.3	13 1.6	15 1.2	4 1.3				244.9	

OT= 24 22 34 2.5 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 24 +/- 1 LONG= 138 6 +/- 1
H= 0 MAG=4.0 CLASS=L

MATSUS	2	P	22 34									18.2	
MATSUM	0	IP	22 34 08.7	IS	34 12.4						U 3	20.8	03.7
NAGANO	1	P	22 34 09.6	IS	34 12.9							30.1	03.3
KARUIZ	0	IP	22 34 12.4	S	34 17.4				N	4 W	4 D 12	41.1	05.0
TAKADA	0	EP	22 34 18.3	S	34 27.0							79.4	08.7
KOFU	0	IP	22 34 20.2	IS	34 31.9	7 2.0	8 0.4	4 1.0			D 1	91.4	11.7
MAEBAS	0	EP	22 34 20.3	S	34 30.3	22 4.8	9 2.9	11 3.6				86.6	10.0
TOYAMA	0	P	22 34 20.4	S	34 33.4	17 3.6	19 3.4	9 3.6				86.8	13.0
IIDA	0	EP	22 34 22.0	ES	34 35.8	8 0.8	7 1.2	3 1.2				101.6	13.8
KUMAGA	0	P	22 34 25.4	ES	34 40.4	15 5.2	15 4.0	7 3.6			U 2	118.8	15.0
KANAZA	0	EP	22 34 27.1	S	34 44.0	13 0.2	7 0.2	5 0.3				131.1	16.9
WAJIMA	0	EX	22 34 30.0			11 0.8	10 0.8					153.4	
GIFU	0	P	22 34 32.6	ES	34 54.2	6 1.4	8 1.2					163.9	21.6
UTSUNO	0	EP	22 34 32.8	ES	34 49.6	7 1.3	6 1.0	3 1.0				159.6	16.8
TOKYO	0	EP	22 34 33			18 4.6	5 2.6					169.2	
NAGOYA	0	EP	22 34 33.9	ES	34 55.2	6 1.0	6 1.0	4 1.2	N	1 W	1 U 1	171.0	21.3
NIIGAT	0	EX	22 34 34.6	S	34 58.5	11 1.8	12 0.7					187.7	
HAMAMA	0	EP	22 34 37	ES	35 01	10 2.0	7 2.0	4 1.6				190.7	24.0
HIKONE	0	EP	22 34 42.5	ES	35 05.5	6 1.0	6 1.0	2 1.0				208.9	23.0
OMAEZA	0	X	22 34 43.1	ES	35 09.1	9 2.5	13 2.7	7 2.5				199.6	
ONAHAM	0	X	22 35 15.7			9 1.1	9 1.1	2 0.5				258.0	

OT= 26 0 24 19.7 +/- 0.5
SE OF HOKKAIDO
LAT= 42 30 +/- 3 LONG= 143 23 +/- 6
H= 40 MAG=4.5 CLASS=L

HIROO	2	IP	00 24 28.0	IS	24 34.9				N	4 W	6 D 25	24.7	06.9
OBIHIR	X	IP	00 24 29.4	IS	24 38.8						D 5	48.5	09.4
URAKAW	1	IP	00 24 31.4	IS	24 42.0	232 0.6	239 0.6	100 1.4	S	17 W	15 U 37	62.6	10.6
KUSHIR	1	IP	00 24 36.7	IS	24 49.3	53 0.4	59 0.8	35 0.4		E	2 U 4	98.4	12.6
ASAHIK	0	IP	00 24 44.1	IS	25 04.0	10 1.8	9 1.8	7 1.0			U 2	163.3	19.9
SAPPOR	0	P	00 24 44.5	S	25 05.4	7 0.6	9 0.6	6 1.0			D	179.0	20.9
ABASHI	0	P	00 24 47.4	S	25 09.2	9 2.0	4 1.4	2 1.0				183.7	21.8
HAKODA	0	IP	00 24 50.3	S	25 13.1	13 0.4	18 0.6	6 2.0	S	0 W	0 U 1	230.0	22.8
AOMORI	0	X	00 24	ES	25 25.0	19 0.9	23 0.7	8 1.3				286.1	
HACHIN	0	X	00 24	IS	25 20.1	13 0.4	16 0.4	3 0.8	S	W	U	268.7	
MIZUSA	0	EP	00 25 15.0	ES	25 55.6		5 1.0					419.3	40.6
MORIOK	0	X	00 25	X	25 40.6	13 0.6	14 0.4	2 0.4	S	0 W	0 U 0	362.7	
MATSUS	0	X	00 26									797.2	

OT= 26 1 2 27.1 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 33 +/- 1 LONG= 138 20 +/- 1
H= 0 MAG=4.2 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	2	P	01 02															11.3	
NAGANO	2	IP	01 02	30.8	S	02	33.4											17.3	02.6
KARUIZ	0	IP	01 02	34.3	S	02	39.1	100	2.0	100	2.2			S	8	E 6	U 14	30.4	04.8
MATSUM	1	P	01 02	36.2	IS	02	42.3									E	D	46.9	06.1
TAKADA	0	P	01 02	38.6	S	02	46.6											62.0	08.0
MAEBAS	0	IP	01 02	40.4	IS	02	49.3	21	2.9	21	3.0	32	3.1	S		E 1	U 6	67.6	08.9
CHICHI	0	EP	01 02	43.7	S	02	55.5											91.4	11.8
KOFU	0	IP	01 02	45.3	IS	02	57.6	20	0.6	20	0.4	15	1.0	S	2	E 1	U 5	100.2	12.3
TOYAMA	0	P	01 02	46.6	ES	03	03	17	1.6	8	1.2	14	3.4					102.1	16.4
KUMAGA	0	EP	01 02	46.6	ES	02	59.2	18	4.0	18	3.6	13	3.6					104.5	12.6
IIDA	0	EP	01 02	49.2	ES	03	04.0	8	1.4	8	1.8	3	1.0					123.8	14.8
UTSUNO	0	P	01 02	51.7	X	02	58.0	14	0.3	16	0.1							137.7	
AIKAWA	0	IP	01 02	53.9	IS	03	12.4	10	0.0	8	0.0							163.3	18.5
NIIGAT	0	P	01 02	55.8	IS	03	17.1	14	0.3	22	0.4	11	3.7					163.8	21.3
WAJIMA	0	EP	01 02	56.0	ES	03	14.0	28	1.0	25	0.8							158.1	18.0
KAKIOK	0	EP	01 02	56	S	03	16	17	1.0	11	0.8	8	0.8					170.5	20.0
TOKYO	0	EP	01 02	57	X	02	17	26	4.0	11	4.8	18	3.8					160.2	
MISHIM	0	EP	01 02	57.1	S	03	16.8	11	0.7	12	0.7	4	0.6					168.4	19.7
SHIZUO	0	EP	01 02	59.4	S	03	19.6	7	0.4	6	0.4	4	1.4					175.0	20.2
MITO	0	IP	01 02	59.5	IS	03	22.7	52	0.4	22	0.4	7	0.7				D 1	192.6	23.2
FUNATS	0	X	01 02		S	03	03.7											122.9	
NAGOYA	0	EP	01 03	00.0	S	03	24.0	10	0.8	11	0.8	6	1.0					197.0	24.0
GIFU	0	P	01 03	01.3	S	03	23.8	7	1.4	13	1.4							190.6	22.5
YOKOHA	0	EP	01 03	02.2	S	03	25.2	12	0.6	19	0.8							171.6	23.0
HAMAMA	0	P	01 03	03.3	S	03	28.6	14	1.4	9	1.0	6	1.8				U 1	211.6	25.3
OMAEZA	0	IX	01 03	06				7	1.5	7	2.2							216.2	
HIKONE	0	P	01 03	08.8	ES	03	35.9	13	1.0	8	1.2	5	1.0					235.6	27.1
OSAKA	0	X	01 03	26.0				7	3.6	8	4.0	3	1.8					329.5	
ONAHAM	0	X	01 03	33.9				11	1.1	13	1.2	3	0.6					233.9	

OT= 27 5 52 1.5 +/- 0.3
KII CHANNEL
LAT= 33 48 +/- 2 LONG= 134 40 +/- 2
H= 40 MAG=4.5 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOKUSH	2	IP	05 52	12.5	IS	52	17.6	167	0.1	288	0.1	79	0.1	S	5	W 4	D 19	30.5	05.1
WAKAYA	1	P	05 52	13.0	S	52	20.6	173	0.2	92	0.2	40	0.2	N	38	E 60	U 28	66.1	07.6
SUMOTO	1	IP	05 52	13.5	S	52	21.7	59	0.4	59	0.6	18	0.7	N	11	E 7	U 18	63.4	08.2
MUROTO	1	IP	05 52	15.1	IS	52	24.1	48	0.4	152	0.6	20	0.5	N	1	E 1	D 1	76.1	09.0
TAKAMA	1	IP	05 52	15.1	IS	52	24.2	43	1.0	60	1.2	20	0.6	N	3	W 3	U 6	80.2	09.1
OKAYAM	2	IP	05 52	19.5	IS	52	31.5	160	0.6	190	0.5	35	0.6	N		E	U	119.8	12.0
KOBE	0	EP	05 52	19.7	ES	52	31.0							S	2	W 2	D 4	109.3	11.3
SHIONO	0	IP	05 52	20.2	IS	52	32.8	11	0.6	8	0.6	6	1.2	S	1	E 1	U 6	108.9	12.6
KOCHI	2	IP	05 52	20.2	IS	52	30.2							S	3	W 4	U 4	108.7	10.0
OSAKA	0	IP	05 52	21.7	S	52	36.3	26	3.4	22	1.4	9	3.0					123.7	14.6
OWASE	0	P	05 52	24.0	S	52	40.0	7		6		4						144.3	16.0
TURUGI	1	X	05 52	25.4	X	52	30.2											53.1	
KYOTO	0	EP	05 52	27.0	IS	52	45.0	8	1.6	5	1.6	4	1.8					166.4	18.0
MATSUY	0	EP	05 52	28.8	X	53	48.0	7	0.7	6	0.8							174.7	
TOTTOR	0	P	05 52	30.6	S	52	51.2											195.0	20.6
TOYOOK	0	P	05 52	30.6	ES	52	51.1	25	1.0	29	1.0	8	1.0					193.1	20.5
MAIZUR	0	IP	05 52	31.8	X	52	33.0											196.8	
HIKONE	0	EP	05 52	34.1	IS	52	56.6	15	1.0	15	0.4	5	0.4					218.4	22.5
MATSUE	0	EP	05 52	35.0	S	52	58.8											234.7	23.8
GIFU	0	P	05 52	39.1	S	53	05.1	21	0.2	17	0.2	12	0.2					261.6	26.0
NAGOYA	0	P	05 52	40.4	S	53	06.6	11	0.8	11	0.6	6	0.6	N	1	E 1	U 2	260.0	26.2
TSURUG	0	EP	05 52	41.4	S	53	02.6											241.8	21.2
HAMAMA	0	P	05 52	46.0	ES	53	20	6	1.8	5	1.8	2	1.4				D 1	298.9	34.0
FUKUI	0	X	05 52	55.0	IS	53	12.4											287.7	
OITA	0	X	05 52	55.6				8	2.8	8	2.8							289.5	
OMAEZA	0	X	05 52	56.3						6	1.8							338.7	
MATSUS	0	IP	05 53	00.8	S	53	47										D	443.0	46.2
WAJIMA	0	X	05 53	46.0				7	0.8	8	0.8							446.6	

OT= 28 11 30 20.4 +/- 0.6
MIDDLE OF KANAGAWA PREF
LAT= 35 29 +/- 3 LONG= 139 24 +/- 2
H= 0 MAG=3.4 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
YOKOHA	0	EP	11 30	24.9	IS	30	34.5	119	0.5	79	0.4	17	0.5					23.7	09.6

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOKYO	1	IP	11	30 29.6	IS	30	35.9	31	0.6	49	0.6	8	0.4					39.4	06.3
AJIRO	0	P	11	30 33.2	S	30	41.8	4	0.3	7	0.3	4	0.4					56.1	08.6
KOFU	0	EP	11	30 37.5	IS	30	46.6	5	1.8	5	1.2	1	1.2					78.9	09.1
MATSUS	0	IP	11	30 46.7											N	W	U	158.9	

OT= 28 18 44 15.6 +/- 0.7
S OFF HANASAKI PEN
LAT= 42 53 +/- 3 LONG= 145 46 +/- 5
H= 90 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NEMURO	1	IP	18	44 31.5	IS	44	40.8	66	0.4	45	0.4	31	0.4	S	8	E 1	D 44	51.6	09.3
KUSHIR	1	EP	18	44 36.4	IS	44	49.9	104	0.3	122	0.3							112.5	13.5
ABASHI	0	P	18	44 43.2	S	45	02.2	25	1.0	11	1.0	7	1.0					174.0	19.0
OBIHIR	0	P	18	44 48.6	S	45	10.8											207.9	22.2
HIROO	0	IP	18	44 49.1	IS	45	10.3									W 2		211.9	21.2
URAKAW	0	P	18	44 54.0	IS	45	21.6	16	1.0	24	1.0	10	1.0					258.3	27.6
ASAHIK	0	P	18	44 58.7	ES	45	28.8	5	1.8	5	2.0	3	2.0					292.4	30.1
MORIOK	0	P	18	45 26.0	S	46	15.5	5	0.3	10	0.2	1	0.4	S	0	E 0	D 0	523.0	49.5
MIZUSA	0	X	18	45 52.3	ES	46	25.9			14	1.0							570.3	
AOMORI	0	X	18	45 57				12	1.3	10	1.1	4	1.3					473.2	
MATSUS	0	IP	18	46 19.1												W	D	956.5	

OT= 29 17 46 35.4 +/- 0.6
OFF SANRIKU
LAT= 40 34 +/- 2 LONG= 144 59 +/- 4
H= 60 MAG=4.6 CLASS=M

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
URAKAW	0	IP	17	47 14.6	S	47	41.4	6	0.4	15	0.4			N	1	W 1		255.4	26.8
KUSHIR	1	IP	17	47 14.8	S	47	42.7	35	0.3	37	0.3	18	0.2	N	2		U 7	272.3	27.9
HACHIN	0	EP	17	47 17.2	ES	47	46.0	7	0.4	9	0.4	2	0.8					293.0	28.8
NEMURO	0	IP	17	47 19.0	ES	47	50.1	5	0.4	3	0.5	1	0.3	N			U	310.8	31.1
MORIOK	0	P	17	47 24.0	S	47	57.7	6	0.4	5	0.4	1	0.4			E 0	D 0	339.2	33.7
HAKODA	0	IP	17	47 29.1	S	48	06.3	4	0.5	7	0.5	2	0.7			W 0	U 1	380.5	37.2
AOMORI	0	X	17	48 01				12	1.6	10	0.9	5	1.3					356.1	
MATSUS	0	IP	17	48 13.1														740.3	

OT= 31 10 37 15.0 +/- 0.7
S OF IBARAKI PREF
LAT= 36 7 +/- 2 LONG= 140 21 +/- 3
H= 0 MAG=4.4 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KAKIOK	2	X	10	37 26.7	X	37	34.4	101	0.6	100	0.8	35	0.4					19.0	
MITO	0	IP	10	37 27.2	IS	37	35.3	56	1.0	62	2.6	21	2.7				U 2	31.0	08.1
CHOSHI	0	IP	10	37 28.1	IS	37	37.6											62.2	09.5
						IX	37	33.6											
TOKYO	0	IP	10	37 31.1	IS	37	42.6	5	1.0	5	1.0	13						71.7	11.5
UTSUNO	0	P	10	37 31.2	S	37	41.4	28	0.3	29	0.5	9	0.7					64.2	10.2
KUMAGA	0	P	10	37 32.6	ES	37	46.0	21	1.2	29	1.2	10	0.2	S	1	E 2	D 5	86.9	13.4
YOKOHA	0	EP	10	37 35.1	S	37	48.5	64	0.4	53	0.5	12	0.4					98.2	13.4
CHICHI	0	EP	10	37 35.9	S	37	50.5											115.1	14.6
TOMISA	0	IP	10	37 37.5	S	37	57.2	16	2.4	16	3.0	7	1.4				D	140.9	19.7
MAEBAS	0	IP	10	37 37.7	S	37	54.0	12	0.8	29	1.1	13	1.6	S	1	E 2	D 10	119.7	16.3
ONAHAM	0	EX	10	37 39.2	ES	37	49.5	27	0.9	35	1.4	12	1.1					104.5	
AJIRO	0	IP	10	37 40.9	S	37	59.7	17	0.4	16	0.4	7	0.5				U 0	164.5	18.8
OSHIMA	0	P	10	37 41.6	IS	37	59.8	24	0.4	27	0.3	14	0.3					174.3	18.2
MISHIM	0	EP	10	37 42.8	S	37	58.4	13	0.7	20	0.7	5	0.7					170.2	15.6
KARUIZ	0	EP	10	37 43.6	S	38	04.7											163.5	21.1
FUNATS	0	IP	10	37 43.9	IS	38	04.5											158.9	20.6
KOFU	0	EP	10	37 44.2	ES	38	03.0	28	1.4	25	0.6	11	1.0					169.3	18.8
FUKUSH	0	EP	10	37 47.2	S	38	08.0	13	1.2	12	1.0	6	0.5					182.3	20.8
MATSUS	0	IP	10	37 47.6	S	38	12										D	197.9	24.4
SHIZUO	0	EP	10	37 48.4	IS	38	13.8	9	0.8	12	1.0	4	1.0					217.1	25.4
IIDA	0	EP	10	37 52.0	ES	38	20.0	13	1.2	8	1.0	4	1.0					237.0	28.0
OMAEZA	0	EP	10	37 52.5				6	1.3	6	1.3							256.6	
SENDAI	0	EX	10	38 01	ES	38	21.2	6	3.2	7	5	3	1.6					242.8	
HAMAMA	0	EP	10	38 03	ES	38	30	5	1.8	7	1.8	3	1.8					285.1	27.0
NAGOYA	0	EP	10	38 06.3	ES	38	44.4	6	1.0	7	2.2	3	1.4					323.9	38.1
NIIGAT	0	X	10	38 14.3				10	3.0	9	2.0	5	2.0					230.1	
OSAKA	0	X	10	39 20				13	4.4	7	5.6							466.4	

OT= 31 14 55 47.0 +/- 0.2
IBARAKI-CHIBA BORDER
LAT= 35 50 +/- 1 LONG= 140 12 +/- 2
H= 70 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KAKIOK	1	EP	14	56	00.0	ES	56	08.3	52	0.8	97	0.8	32	0.3				44.2	08.3
TOKYO	0	EP	14	56	01.6	ES	56	12.0	27	0.8	39	0.8						43.2	10.4
MITO	0	IP	14	56	01.7	IS	56	11.3	30	0.9	22	0.5	7	0.7			U 3	65.2	09.6
CHOSHI	0	P	14	56	02.8	S	56	16.4										59.4	13.6
YOKOHA	0	EP	14	56	03.0	IS	56	14.0	25	0.4	31	0.4						66.1	11.0
UTSUNO	1	P	14	56	03.4	IS	56	13.6	28	0.1	37	0.1	12	0.8			D 5	84.5	10.2
KUMAGA	0	P	14	56	03.6	ES	56	14.4	10	0.2	11	0.2	3	1.0			D 3	81.3	10.8
AJIRO	0	IP	14	56	09.1	S	56	24.5	13	0.3	11	0.3	3	0.4			D 1	133.1	15.4
OSHIMA	0	IP	14	56	10.2	IS	56	25.8	10	0.3	9	0.3	7	0.3				140.4	15.6
MATSUS	0	IP	14	56	17.0	ES	56	44									D	195.4	27.0
ONAHAM	0	X	14	56	26.2				5	0.9	6	1.0	2	1.2				138.7	

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List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE		PHASE	H	M	S		M	S	INITIAL MOTION	
1	P		00	16	15.					*
1	P		06	35	29.					*
1	P		15	36	10.	S	37	44.		*
1	P		16	38	07.7	S	45	12.	U	*
1	EP		19	06	18.	S	06	55.		*
2	IP		00	00	35.3	S	02	00.	N E D	*
2	IP		06	30	23.7				D	*
2	IP		08	18	32.5	S	25	16.	S W U	*
2	P		12	04	20.5	S	05	11.	D	*
2	EP		16	12	35.	S	19	40.		*
2	P		16	14	03.					*
2	IP		16	39	23.2				U	*
2	EP		22	25	58.					*
3	IP		01	16	59.4	S	16	56.	U	*
3	P		03	36	22.					*
3	P		05	36	38.	S	38	06.		*
3	EP		07	03	57.	S	06	27.		*
3	P		12	47	37.	S	51	51.		*
3	P		14	11	44.	ES	13	55.		*
4	P		10	27	24.	S	27	52.		*
4	IP		13	50	25.4	ES	51	42.	U	*
4	IP		14	48	13.5				N W U	*
4	EP		23	36	49.	S	37	49.		*
5	P		02	32	14.8	S	32	54.	D	*
5	IP		08	43	59.0	S	45	20.	U	*
5	P		10	12	09.	S	12	56.		*
5	IP		14	49	32.0				S W D	*
5	P		18	04	39.					*
5	IP		18	25	58.0	S	26	15.	S W D	*
5	IP		22	44	59.5	S	46	16.	N U	*
6	EP		06	59	02.	S	59	28.		*
6	IP		14	15	13.2				D	*
6	P		22	50	02.	S	56	10.		*
7	P		08	17	42.	S	19	03.		*
7	P		12	54	44.					*
7	IP		13	39	17.1	S	40	38.	S U	*
7	IP		18	52	28.4				S D	*
7	IP		22	34	29.3				S W D	*
8	IP		04	43	17.6	S	43	34.	W D	*
8	IP		09	43	09.2	S	43	53.	N D	*
8	IP		10	08	38.4				N W U	*
8	IP		15	32	55.5				S D	*
8	IP		16	18	37.9	IS	19	17.4	D	*
8	IP		19	13	04.8				D	*
9	EP		02	24	42.					*
9	IP		04	19	30.7	S	20	22.	N E D	*
9	IP		05	00	16.8	S	00	44.	N D	*
9	IP		08	01	46.1	S	01	25.	U	*
9	P		08	50	55.	S	51	30.		*
9	IP		09	49	16.5	S	49	50.	W U	*
9	EP		12	04	00.					*
9	IP		12	11	10.8	S	12	46.	D	*
9	IP		21	29	55.5	S	30	45.	U	*
9	P		23	25	16.	S	26	44.		*
10	EP		07	19	16.					*
10	IP		08	08	05.3	S	08	28.	W D	*
10	IP		14	52	39.8	S	53	30.	E D	*
10	IP		15	17	14.8				U	*
10	IP		17	58	59.7	S	59	13.	W U	*
10	IP		21	09	21.8	S	13	14.		*
11	P		04	24	39.	S	29	52.		*
11	EP		13	25	20.					*
11	EP		16	27	40.					*
11	IP		17	38	34.9	S	39	12.	U	*
11	IP		23	52	44.9	S	53	38.	U	*
12	P		00	12	41.					*
12	IP		04	43	09.2	S	43	28.	S E D	*
12	IP		13	35	53.5				E U	*
12	P		19	40	12.3					*

DATE		PHASE	H	M	S		M	S	INITIAL MOTION	
13	P		02	32	00.0	S	33	16.		*
13	P		06	21	00.	ES	29	30.		*
13	IP		11	18	50.6	S	19	23.5	U	*
13	IP		16	46	40.6	S	55	25.	D	*
13	IP		19	14	48.1	S	23	16.	D	*
13	IP		23	40	04.4				D	*
14	IP		02	49	24.4	S	50	00.	S U	*
14	EP		05	14	15.					*
14	IP		05	29	43.6	ES	30	47.	S U	*
14	P		08	47	26.	ES	50	40.		*
14	P		11	57	13.5	S	04	47.		*
14	IP		12	39	09.2					*
14	IP		15	14	50.9					*
14	P		18	14	54.					*
14	P		22	55	05.5	S	55	38.		*
15	IP		00	30	08.8	S	30	24.8	N W U	*
15	IP		01	39	58.1	S	40	08.1	N W D	*
15	P		07	44	40.	ES	50	45.		*
15	EP		17	21	20.	S	26	28.		*
15	P		23	46	53.	ES	52	05.		*
16	P		02	14	32.					*
16	P		04	17	40.					*
16	P		09	00	11.2					*
16	IP		12	27	21.9	S	27	38.	S	*
16	P		22	41	41.	S	47	32.		*
17	P		04	43	15.					*
17	P		05	44	48.					*
17	P		06	15	45.					*
17	P		06	25	35.	S	26	21.		*
17	P		11	54	55.					*
17	IP		17	13	02.6	S	13	50.	D	*
17	P		21	35	50.	S	36	40.		*
17	IP		21	37	05.3	S	37	56.		*
17	P		22	19	26.	S	20	01.		*
18	P		02	22	29.2	S	26	25.	D	*
18	IP		02	32	00.1	S	33	06.		*
18	P		02	55	02.					*
18	P		04	04	43.					*
18	IP		19	20	56.	S	22	06.		*
18	IP		22	00	11.8	S	00	23.	N W D	*
18	IP		23	24	58.7				W D	*
19	IP		02	00	36.6	S	01	32.	S W U	*
19	IP		03	11	09.7	S	11	34.	S E D	*
19	P		03	57	46.					*
19	IP		04	14	41.9	S	15	12.	W U	*
19	EP		05	23	36.					*
19	IP		18	14	13.1	S	14	35.4	S W U	*
19	IP		21	51	48.6				D	*
20	IP		02	05	12.6	S	05	55.	S D	*
20	EP		05	53	37.					*
20	IP		14	54	53.6				U	*
20	P		16	00	16.					*
20	P		18	27	49.	S	28	17.		*
20	P		19	26	59.	S	27	43.		*
20	IP		20	48	38.9	S	55	00.	E U	*
20	EP		22	31	15.					*
20	P		23	32	38.3	S	37	50.	U	*
20	EP		23	39	09.					*
21	P		00	42	18.	S	47	02.	E U	*
21	P		00	45	31.					*
21	P		02	24	05.8	ES	25	24.		*
21	IP		05	14	42.3	ES	15	12.	S U	*
21	P		08	23	27.					*
21	P		11	35	28.					*
21	IP		14	45	37.0	S	46	12.	S W D	*
21	IP		16	11	28.1				U	*
21	P		17	10	32.					*
21	P		17	43	06.4	S	43	53.	E D	*
22	P		04	38	27.					*
22	P		08	54	22.					*

DATE	PHASE	H	M	S		M	S	INITIAL MOTION	
22	P	13	10	10.					*
22	EP	13	36	34.					*
22	IP	14	37	51.9					*
22	P	15	05	54.					*
22	P	15	07	02.					*
22	P	23	08	07.					*
									*
23	IP	00	50	10.9	S	50	33.	N W U	*
23	IP	01	04	50.9				U	*
23	IP	02	08	54.8	S	18	46.	D	*
23	P	07	08	59.					*
23	P	12	18	39.					*
23	IP	14	44	21.6	IS	44	25.4	N E U	*
23	P	16	29	20.					*
									*
24	P	01	08	55.	S	09	22.		*
24	P	03	55	26.				U	*
24	IP	16	47	44.9				D	*
24	P	16	52	38.					*
									*
25	P	00	28	57.				S W D	*
25	IP	02	41	01.9				D	*
25	EP	04	22	46.					*
25	IP	09	34	12.6	S	35	06.		*
25	P	16	41	13.					*
									*
26	P	00	26	00.					*
26	P	02	03	00.					*
26	IP	04	51	49.3				D	*
26	P	05	59	40.					*
26	P	12	10	54.					*
26	P	15	35	26.	S	36	18.		*
26	P	16	25	10.					*
26	P	16	43	10.					*
26	P	17	17	54.	S	18	48.		*
26	IP	17	25	38.4	S	35	13.	U	*
26	P	21	21	51.	S	23	12.		*
26	P	23	46	35.					*
									*
27	P	00	08	12.					*
27	P	01	48	01.	S	48	32.		*
27	P	01	55	21.	S	56	17.		*
27	IP	02	19	12.6					*
27	P	02	22	20.					*
27	P	04	03	35.					*
27	IP	04	04	28.6	ES	14	00.	U	*
27	IP	05	53	00.8	S	53	47.	D	*
27	P	06	45	33.	S	45	26.		*
27	P	09	14	10.					*
27	P	09	17	02.					*
27	EL	21	22	19.					*
27	P	23	18	57.	S	19	38.		*
									*
28	EP	00	38	54.					*
28	P	01	42	23.					*
28	P	07	48	49.	S	49	40.		*
28	IP	11	30	46.7				N W U	*
28	P	14	27	09.					*
28	IP	14	44	28.6	S	44	50.	D	*
28	P	15	00	12.				E U	*
28	P	16	05	51.					*
28	P	17	45	32.					*
28	IP	18	46	19.1				W D	*
28	EP	19	00	02.					*
28	EL	19	33	30.					*
28	IP	23	36	08.0				S E D	*
									*
29	P	02	36	33.				D	*
29	IP	02	37	50.4					*
29	P	05	15	36.	S	16	08.		*
29	P	07	09	36.	S	10	16.		*
29	P	07	49	03.	S	52	21.		*
29	IP	08	46	42.5				U	*
29	IP	11	02	04.7	S	02	38.	N E D	*
29	P	11	59	29.					*
29	IP	17	48	13.1					*
29	IP	19	43	13.5				U	*
29	IP	20	29	42.4	ES	31	48.		
29	IP	21	23	08.3					

DATE	PHASE	H	M	S		M	S	INITIAL MOTION
30	P	02	11	32.				
30	P	07	01	51.				
30	P	07	15	10.				
30	P	09	19	10.				
30	P	10	43	02.				
30	P	12	40	52.				
30	EP	17	39	03.				
30	EL	18	21	20.				
30	P	20	02	42.	S	13	52.	
30	EP	21	26	23.				
30	IP	22	43	16.1	S	49	35.	U
31	IP	02	34	45.5				U
31	P	05	28	45.				
31	IP	05	45	32.3				U
31	IP	06	27	55.8				D
31	P	07	03	06.				
31	P	08	06	39.				
31	IP	10	37	47.6	S	38	12.	D
31	IP	14	56	17.0	ES	56	44.	D
31	P	15	56	46.				
31	P	20	43	25.				

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF MATSUSHIRO ARE LEFT OUT FROM THE TABLE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

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EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

D	INT	H (J.S.T.)	M	D	INT	H (J.S.T.)	M
1	1	11	45	22	1	01	43
1	1	21	38	22	1	06	43
				22	1	14	57
2	1	05	45	22	1	15	16
2	1	20	56	22	1	17	06
3	1	09	50	23	1	00	56
				23	1	14	06
4	1	18	38	23	1	18	30
				23	1	18	32
5	1	20	30				
5	1	20	37	24	3	07	06
5	1	23	59	24	2	07	06
				24	1	07	08
6	1	08	52	24	1	07	16
6	1	16	20	24	1	11	02
				24	1	11	43
8	1	23	28	24	1	20	33
				24	1	20	35
9	1	13	58	24	2	22	34
9	1	21	19				
9	1	21	20	25	1	12	58
				25	2	22	07
10	1	00	31				
10	2	02	10	26	2	01	02
10	1	02	19	26	1	01	09
10	1	05	11	26	1	03	07
10	1	05	18	26	1	16	49
10	1	15	22				
10	1	15	33	27	1	07	58
10	1	15	46	27	1	15	02
				27	1	18	53
11	1	08	43	27	1	19	38
11	1	14	52	27	1	22	16
11	1	22	55				
				28	1	16	55
12	2	18	12				
12	1	18	12	29	1	23	01
12	1	18	13				
12	1	18	25	30	1	08	51
12	1	18	30				
12	1	19	42	31	1	11	14
12	2	19	54	31	1	17	53
14	1	07	04				
14	1	11	39				
14	1	23	08				
15	1	00	07				
15	1	11	38				
15	1	18	03				
16	1	01	25				
16	1	01	31				
16	1	20	38				
16	2	22	59				
16	1	23	19				
17	1	09	53				
17	1	17	39				
17	1	23	28				
18	1	07	31				
18	1	07	51				
18	1	15	41				
18	1	16	24				
18	1	18	54				
18	1	19	07				
18	1	22	54				
21	1	02	35				
21	1	02	39				
21	1	02	41				
21	1	16	16				
21	1	17	40				

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28 JUN 1968

地　震　月　報

昭和42年 8 月

THE SEISMOLOGICAL BULLETIN

OF

THE JAPAN METEOROLOGICAL AGENCY

FOR

AUGUST 1967

気　象　庁

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Tokyo

1967

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4. Earthquake origins 7
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List 1 JMA stations and their seismographs

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S, VI, O P
Aikawa	AIKAWA	138 14.5	38 01.2	34	S, VI, O P
Ajiro	AJIRO	139 05.8	35 02.6	59	S, VI, O P
Akita	AKITA	140 06.1	39 43.1	9	S, VI, O P
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S, P
Aomori	AOMORI	140 47.0	40 49.0	4	S, W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S, VI, O P
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S, VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S, P
Choshi	CHOSHI	140 50.6	35 43.5	27	S, W
Fukue	FUKUE	128 50.0	32 42.0	26	S, VI
Fukui	FUKUI	136 13.6	36 03.2	9	S, P (H, V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S, VI, M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S, VI, O P
Funatsu	FUNATS	138 45.8	35 29.9	860	S, P
Gifu	GIFU	136 45.9	35 23.9	13	S, W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S, VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S, VI, O P
Hakodate	HAKODA	140 45.5	41 48.8	35	S, VI, O P
Hamada	HAMADA	132 04.4	34 53.6	18	S, VI, O P
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S, VI, O P
Hikone	HIKONE	136 14.8	35 16.4	87	S, W
Himeji	HIMEJI	134 42.1	34 50.2	37	S, P (H, V)
Hiroo	HIROO	143 19.0	42 17.0	32	S, P (H, V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S, W
Iida	IIDA	137 50.1	35 30.6	482	S, VI, O P
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S, VI, O P
Izuhara	IZUHAR	129 17.7	34 12.2	21	S, P (H, V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S, W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S, W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S, VI, O P
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S, P (H, V)
Kobe	KOBE	135 10.8	34 41.3	58	S, P (H, V)
Kochi	KOCHI	133 32.0	33 33.0	40	S, P(H, V)
Kofu	KOFU	138 33.5	35 39.9	272	S, VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S, VI, O P
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S, W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S, VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S, VI, O P
Maebashi	MAEBAS	139 03.9	36 24.1	112	S, W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S, P (H, V)
Matsue	MATSUE	133 04.3	35 27.3	17	S, P (H, V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S, P (H, V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S, L, AW, G, B, V, C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S, W
Mishima	MISHIM	138 55.8	35 06.7	20	S, W
Mito	MITO	140 28.3	36 22.7	30	S, VI, O P
Miyako	MIYAKO	141 58.1	39 38.7	46	S, W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S, VI, O P
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P (H, V)
Morioka	MORIOK	141 10.1	39 41.8	155	S, VI, O P
Muroran	MURORA	140 59.0	42 19.0	43	S, P (H, V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S, VI, O P
Nagano	NAGANO	138 11.8	36 39.6	418	S, W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S, VD, EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S, VI, O P
Nara	NARA	135 50.0	34 41.0	105	S, P (H, V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S, VI, VD, OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S, VI, P(H, V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S, P (H, V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S, P (H, V)
Ofunato	OFUNAT	141 43.1	39 03.7	38	S, VI
Oita	OITA	131 37.4	33 14.0	5	S, W
Okayama	OKAYAM	133 54.9	34 40.9	4	S, VI, O P
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S, W
Onahama	ONAHAM	140 54.4	36 56.7	3	S, VI
Osaka	OSAKA	135 32.3	34 38.9	7	S, VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S, W

Special Events

Earthquake-Smarm near Matsushiro, Northern Chubu.

Daily number of felt shocks observed at Matsushiro Seismological Observatoy during this month is as follows:

Date \ Seismic intensity	1	2	Total	Date \ Seismic intensity	1	2	Total
1	1	0	1	16	1	1	2
2	2	0	2	17	0	0	0
3	2	0	2	18	2	0	2
4	1	0	1	19	3	0	3
5	6	2	8	20	6	0	6
6	2	0	2	21	3	0	3
7	4	0	4	22	2	0	2
8	2	0	2	23	6	0	6
9	3	0	3	24	3	0	3
10	5	1	6	25	6	0	6
11	2	0	2	26	2	0	2
12	3	1	4	27	2	0	2
13	1	0	1	28	2	0	2
14	5	0	5	29	4	0	4
15	2	0	2	30	1	0	1
				31	6	1	7
				Total	90	6	96

Earthquakes at Ibusuki, Kagoshima Prefecture.

From 5th to 10th of this month, more than 10 shocks were felt at City of Ibususki, Kagoshima Prefecture, Kyushu. Epicenters of the events seem to be located in the proximity of the city.

Numbers of earthquakes recorded by the seismographs at Sakurajima Volcano Observatory (V : 2,000) and Kagoshima Meteorological Observatory (V:80) are as follows :

Date	Time	Station: Sakurajima A	Sakurajima C	Kagoshima
5	04h ~ 08h	34	40	9
	08h ~ 20h	30	39	
5 ~ 6	20h ~ 08h	13	14	
6	08h ~ 20h	5	8	2
6 ~ 7	20h ~ 08h	5	7	
7	08h ~ 20h	0	0	0
7 ~ 8	20h ~ 08h	9	10	
8	08h ~ 20h	1	3	3
8 ~ 9	20h ~ 08h	1	1	
9	08h ~ 20h	2	2	0
9 ~10	20h ~ 08h	1	2	
Total		101	126	14

A : Hakamagoshi C : Yuno

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List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

(J. S. T.)

DATE, TIME D H M	C	LOCATION	C CLASS
1 04 07	L	(UTSUNO-ASHIO)	
23 00	U	E OF HOKKAIDO	
23 19	U	(KUMAMO)	
23 45	U	OFF FUKUSHIMA PREF	
2 02 16	L	(WAKAYA)	
04 33	U	(HACHIN)	
09 01	U	(WAKAYA)	
09 45	R	S OF KURILE IS	
15 32	L	NEAR SHIZUOKA	
17 09	U	(KUMAMO)	
19 43	U	(NEMURO)	
22 36	S	NEAR MITO	
22 59	L	NEAR MATSUSHIRO	
23 59	U	E OFF AOMORI PREF	
3 04 08	U	CHIBA PREF	
05 00	L	NEAR MATSUSHIRO	
07 28	U	(KUMAMO)	
09 24	U	RYUKYU IS	
09 50	L	NEAR MATSUSHIRO	
10 43	L	N OF NIIGATA PREF	
16 14	U	RYUKYU IS	
21 13	S	SW OF IBARAKI PREF	
4 02 00	U	YAMAGATA PREF	
04 15	U	(NAHA)	
10 56	U	(KAGOSH)	
21 49	U	(KAGOSH)	
5 00 35	L	(HIROSH-KAKE)	
01 29	U	N OF KWANTO	
03 04	U	(NAHA)	
04 03	U	(NAGANO)	
04 05	L	(NAGANO)	
04 24	L	NEAR MATSUSHIRO	
04 40	U	KAGOSHIMA PREF	
05 13	U	KAGOSHIMA PREF	
07 03	U	(NAGANO)	
10 34	U	(YAKUSH)	
10 45	U	E OF HOKKAIDO	
12 20	L	NEAR MATSUSHIRO	
13 20	U	KAGOSHIMA PREF	
14 29	U	E OFF HOKKAIDO	
14 43	L	NEAR MATSUSHIRO	
15 30	L	NEAR MATSUSHIRO	
18 48	U	(KAGOSH)	
20 17	U	KAGOSHIMA PREF	
20 42	L	NEAR MATSUSHIRO	
6 04 20	L	NEAR HIROSHIMA	
07 03	U	(MIZUSA)	
10 08	S	SE OF HOKKAIDO	
10 10	L	(KUMAGA-TOCHIMOTO)	
17 42	U	(KAGOSH)	
18 16	U	(YAKUSH)	
21 02	L	NEAR NIIJIMA	
7 00 29	U	(NAGANO)	
01 08	L	NEAR MATSUSHIRO	
07 14	U	(NAGASA)	
09 25	L	NEAR MATSUSHIRO	
15 55	L	NEAR NIIJIMA	
20 51	L	S OF MIE PREF	
8 00 58	L	OFF MIYAGI PREF	
01 41	U	OFF FUKUSHIMA PREF	
02 32	U	(KAGOSH)	
02 35	U	KAGOSHIMA PREF	
08 52	U	(NAHA)	
8 10 17	U	OFF IBARAKI PREF	
15 54	U	(UTSUNO)	
19 45	U	(KUMAMO)	
19 52	U	(SHIONO)	
20 43	U	SE OFF CHIBA PREF	
21 39	L	NEAR MATSUSHIRO	
9 01 06	S	OFF FUKUSHIMA PREF	
01 08	U	(KUSHIR)	
02 17	U	(NAGANO)	
02 46	U	S OFF KYUSHU	
03 27	U	S OFF KYUSHU	
03 32	U	S OFF KYUSHU	
09 22	L	(UTSUNO-ASHIO)	
11 30	U	(NEMURO)	
15 04	L	NEAR MATSUSHIRO	
15 09	L	NEAR MATSUSHIRO	
15 56	U	MIDDLE OF KYUSHU	
17 27	U	UK	
20 12	U	(MIYAZA)	
23 09	L	NEAR MATSUSHIRO	
10 01 51	L	NEAR MATSUSHIRO	
01 55	L	NEAR MATSUSHIRO	
12 40	L	(WAKAYA)	
14 52	U	(KAGOSH)	
17 12	U	(KYOTO)	
17 59	L	NEAR MATSUSHIRO	
20 22	U	S OF KURILE IS	
22 41	L	NEAR MATSUSHIRO	
23 48	L	NEAR MATSUSHIRO	
11 04 51	U	(KAGOSH)	
05 16	L	(MAEBAS-GORYO)	
08 46	U	S OFF KYUSHU	
09 05	U	(YAKUSH)	
12 51	L	N OF HOKKAIDO	
15 49	L	NEAR MATSUSHIRO	
16 47	U	S OFF KYUSHU	
17 04	U	S OF CHUBU	
17 43	U	S OFF KYUSHU	
12 11 16	U	(HACHIN)	
13 30	R	OFF MIYAGI PREF	
14 15	L	NEAR MATSUSHIRO	
15 35	L	NEAR MATSUSHIRO	
17 20	U	IBARAKI PREF	
18 50	U	FIJI IS	
13 00 54	U	(URAKAW)	
09 18	L	N OF TOCHIGI PREF	
13 48	L	N OF IBARAKI PREF	
17 14	U	(NAHA)	
21 07	L	NEAR TAKAYAMA	
14 02 01	L	NEAR MATSUSHIRO	
03 53	U	SAITAMA-GUNMA BORDER	
05 07	R	SW OF FUKUI PREF	
06 13	U	MIDDLE OF TOHOKU	
07 22	U	UK	
08 27	L	NEAR MATSUSHIRO	
11 20	L	(KUMAGA-TOCHIMOTO)	
14 43	L	NEAR MATSUSHIRO	
21 14	U	E OFF AOMORI PREF	
22 50	L	OFF MIYAGI PREF	
15 01 52	U	(URAKAW)	
02 22	U	IBARAKI PREF	
04 14	L	NEAR MATSUSHIRO	
07 03	L	NEAR MATSUSHIRO	

DATE, TIME D	H	M	C	LOCATION
15	11	25	L	(WAKAYA-KIBI)
	17	33	U	(OSHIMA)
	18	09	L	(WAKAYA)
16	05	12	U	UK
	05	54	U	UK
	07	17	L	NEAR MATSUSHIRO
	18	43	U	W OFF KAGOSHIMA PREF
	19	27	U	(KUSHIR)
	23	07	L	(WAKAYA)
17	03	33	S	OFF FUKUSHIMA PREF
	10	26	U	UK
	12	36	L	(NAHA)
	21	24	U	(OFUNAT)
	23	11	U	(AKITA)
	23	32	R	OFF IWATE PREF
18	04	31	L	NEAR KYOTO
	12	34	L	NEAR MATSUSHIRO
	12	36	L	RYUKYU IS
	12	41	U	(YOKOHA)
	15	21	L	NEAR MATSUSHIRO
	15	48	L	(FUKUE)
	17	45	U	OFF IWATE PREF
19	00	23	U	(YAKUSH)
	01	22	U	(KAGOSH)
	04	37	L	NEAR MATSUSHIRO
	09	12	U	(URAKAW)
	09	40	U	(YAKUSH)
	09	52	L	NEAR MATSUSHIRO
	19	55	U	TSUGARU STRAIGHT
	20	39	L	(MAEBASH-SUDAGAI)
	21	14	U	OFF SANRIKU
	21	18	U	(KUSHIR)
	22	15	U	NIIGATA PREF
	22	38	S	IBARAKI PREF
20	00	03	U	(NAGASA)
	00	31	U	PHILIPPINE IS
	00	55	U	(KUSHIR)
	03	36	L	NEAR MATSUSHIRO
	07	52	L	NEAR MATSUSHIRO
	09	48	U	OFF MIYAGI PREF
	10	11	U	OFF NIIGATA PREF
	13	19	U	IWATE PREF
	16	07	U	(CHOSHI)
	18	45	L	NEAR MATSUSHIRO
	21	38	L	NW OF TOCHIGI PREF
21	11	28	U	UK
	15	17	L	NEAR CHOSHI
	15	27	U	E OFF KAGOSHIMA PREF
	15	51	U	(NAGANO)
	16	40	U	SMATRA
	16	50	L	NEAR MATSUSHIRO
	19	07	L	NEAR WAKAYAMA
22	00	21	U	NW OF KWANTO
	02	18	L	SE OF HOKKAIDO
	03	29	U	(NAGANO)
	04	37	L	NEAR MATSUSHIRO
	09	30	L	NW OF TOCHIGI PREF
	13	22	L	(UTSUNO-IKARI)
	20	16	L	(NAGANO)
	22	21	U	UK
23	01	31	U	OFF FUKUSHIMA PREF
	02	17	U	NE OF HOKKAIDO

DATE, TIME D	H	M	C	LOCATION
23	02	33	U	MIDDLE OF KYUSHU
	08	33	U	(HIMEJI)
	12	07	U	(KYOTO)
24	03	49	L	E OFF CHIBA PREF
	05	45	L	NEAR MATSUSHIRO
	07	54	L	(HIROSH-SHOHARA)
	12	21	R	S OFF ETOROFU IS
	15	36	L	YAMANASHI PREF
	22	16	L	(MIYAZA)
	22	22	U	MIDDLE OF CHUBU
	22	51	U	(KAGOSH)
25	02	10	U	(NAGOYA)
	02	20	L	KII CHANNEL
	08	26	L	AICHI-SHIZUOKA BORDER
	09	09	U	(URAKAW)
	09	24	L	NEAR MATSUSHIRO
	18	48	L	NEAR MATSUSHIRO
	21	01	U	(NEMURO)
26	03	47	U	KWANTO
	03	56	U	(KUMAMO)
	09	40	U	CAROLINE IS
	09	58	U	UK
	11	11	U	CAROLINE IS
	12	35	U	UK
	14	28	U	UK
	16	12	U	NEAR OSAKA
27	06	54	U	(KUMAMO)
	11	34	U	(SHIZUO)
	13	40	L	NEAR MATSUSHIRO
	16	01	U	(MIZUSA)
	17	26	L	KII CHANNEL
	23	44	U	NEAR NAGOYA
28	02	34	U	(OFUNAT)
	10	39	L	(SHIZUO-SAKUMA)
	11	33	L	(WAKAYA)
	13	25	L	S OF IBARAKI PREF
	13	57	U	(MUROTO)
29	00	38	U	(YAKUSH)
	02	01	U	(MIYAZA)
	03	43	L	NEAR MATSUSHIRO
	05	36	L	(NAGANO)
	18	09	U	E OFF CHIBA PREF
	23	17	U	(KUMAMO)
30	05	32	L	(KYOTO)
	08	24	U	(WAKAYA)
	09	25	U	(URAKAW)
	10	15	U	OFF MIYAGI PREF
	11	06	S	MIDDLE OF CHIBA PREF
	13	27	U	CHINA
	17	09	S	S OF IBARAKI PREF
	17	54	U	N OF KWANTO
	19	43	U	(KUMAMO)
	22	34	U	S OF KURILE IS
31	04	43	U	(NAGASA)
	05	05	U	UK
	05	32	S	S OFF SHIMA PEN
	12	26	U	NE OF KWANTO
	15	08	L	NEAR MATSUSHIRO
	18	50	L	NEAR MATSUSHIRO
	19	36	L	NEAR MATSUSHIRO
	20	55	L	NEAR KUSHIRO
	23	14	U	(ONAHAM)

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST. ALL EVENTS FELT AT THE OBSERVATORY ARE GIVEN IN LIST 6.

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List 4 EARTHQUAKE ORIGINS

(J. S. T.)

DATE, TIME D	H	M	C	LOCATION	ORIGIN TIME M	S	+/-S	LONG.	+/-	LAT.	+/-	H KM	M
1	23	45	U	OFF FUKUSHIMA PREF	44	35.7	1.0	142 03 05		37 17 02		00	4.1
2	09	45	R	S OF KURILE IS	44	38.6	1.1	146 52 07		44 10 03		130	
	15	32	L	NEAR SHIZUOKA	32	21.9	0.2	138 14 01		34 55 01		20	4.1
	22	36	S	NEAR MITO	36	37.5	0.2	140 31 02		36 32 01		70	
	23	59	U	E OFF AOMORI PREF	59	07.8	0.4	142 27 04		40 58 02		20	4.0
3	10	43	L	N OF NIIGATA PREF	43	27.8	0.4	139 31 01		38 04 02		00	4.0
	21	13	S	SW OF IBARAKI PREF	12	55.0	0.2	139 56 02		36 04 01		50	4.5
5	14	29	U	E OFF HOKKAIDO	29	16.4	1.8	147 48 10		42 43 11		00	4.7
6	10	08	S	SE OF HOKKAIDO	08	17.9	0.3	142 34 02		42 39 02		100	
7	20	51	L	S OF MIE PREF	51	26.5	0.2	136 13 01		34 20 01		30	4.0
8	00	58	L	OFF MIYAGI PREF	58	08.5	0.4	141 37 04		38 30 02		70	
9	01	06	S	OFF FUKUSHIMA PREF	05	57.5	0.3	141 16 02		37 02 01		40	4.7
10	20	22	U	S OF KURILE IS	21	25.6	1.4	150 19 08		44 25 06		40	5.6
11	12	51	L	N OF HOKKAIDO	51	05.2	0.4	142 27 02		44 20 01		00	4.4
12	13	30	R	OFF MIYAGI PREF	30	40.2	0.3	142 03 02		38 17 01		70	
	14	15	L	NEAR MATSUSHIRO	15	23.8	0.1	138 11 01		36 35 00		10	
13	09	18	L	N OF TOCHIGI PREF	18	47.5	0.5	139 45 02		36 55 02		20	3.8
14	03	53	U	SAITAMA-GUNMA BORDER	53	23.4	0.6	139 24 03		36 14 02		60	3.6
	05	07	R	SW OF FUKUI PREF	06	52.2	0.1	135 31 01		35 27 02		360	
16	18	43	U	W OFF KAGOSHIMA PREF	42	59.9	1.5	129 27 07		32 04 02		10	4.1
17	03	33	S	OFF FUKUSHIMA PREF	33	19.6	0.3	141 50 02		37 14 01		50	4.7
	23	32	R	OFF IWATE PREF	31	54.8	0.5	142 43 03		39 17 01		60	5.2
19	19	55	U	TSUGARU STRAIGHT	54	42.5	0.3	141 28 03		41 45 02		130	
	21	14	U	OFF SANRIKU	14	19.1	0.5	143 40 04		40 53 01		50	4.9
	22	38	S	IBARAKI PREF	38	16.5	0.2	140 18 02		36 17 01		100	
20	10	11	U	OFF NIIGATA PREF	11	44.7	0.4	139 10 02		38 24 01		00	4.5
22	02	18	L	SE OF HOKKAIDO	18	30.9	0.3	143 06 02		42 11 02		50	4.3
23	01	31	U	OFF FUKUSHIMA PREF	31	10.1	2.5	141 37 10		37 43 05		00	3.9
24	03	49	L	E OFF CHIBA PREF	49	49.1	0.8	141 16 03		35 34 02		20	4.3
	12	21	R	S OFF ETOROFU IS	21	17.0	1.3	147 40 07		43 16 05		70	
25	02	20	L	KII CHANNEL	19	58.8	0.2	135 00 01		33 49 01		10	4.4
	08	26	L	AICHI-SHIZUOKA BORDER	26	26.0	0.2	137 46 01		35 03 01		00	4.0
26	09	40	U	CAROLINE IS	36	42.1		140 42		12 12		33	6.1
27	17	26	L	KII CHANNEL	26	08.9	0.2	134 59 01		33 49 01		10	4.3
29	18	09	U	E OFF CHIBA PREF	09	23.6	1.6	141 27 07		35 25 05		60	4.2
30	11	06	S	MIDDLE OF CHIBA PREF	06	10.0	0.3	140 11 02		35 33 01		70	
	13	27	U	CHINA	22	01.5		100 18		31 42		3	6.1
	17	09	S	S OF IBARAKI PREF	09	40.1	0.2	140 07 01		36 08 01		80	
	22	34	U	S OF KURILE IS	33	31.0	2.1	151 12 12		44 53 15		70	
31	05	32	S	S OFF SHIMA PEN	32	31.7	0.3	136 34 01		34 02 01		30	4.6

C CLASS

List 5 DATA OF EARTHQUAKES

OT= 1 23 44 35.7 +/- 1.0 (J.S.T.)
OFF FUKUSHIMA PREF
LAT= 37 17 +/- 2 LONG= 142 3 +/- 5
H= 0 MAG=4.1 CLASS=U

* MICRON
I SEISMIC INTENSITY

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ONAHAM	0	EX	23 44 56.8	S	45 09.2	15	0.9	17	1.2	4	0.9				108.3	
SENDAI	0	EP	23 45 03	ES	45 19.4	6	0.0	6	0.0	3	0.1				148.4	16.4
FUKUSH	0	EX	23 45 03.1			19	0.7	12	0.7	7	0.8				148.8	
SHIRAK	0	EP	23 45 04.5	ES	45 25.7										163.0	21.2
MITO	0	IP	23 45 05.9	ES	45 28.3	8	0.3	7	1.6	3	1.0			D 1	172.9	22.4
UTSUNO	0	EP	23 45 12.6	EX	45 34.4	8	0.1	6	0.2						210.6	
MIZUSA	0	EP	23 45 13.4					2	0.7						220.5	
MATSUS	0	IP	23 45 29.9	S	46 15							N	E	D	352.1	45.1

OT= 2 9 44 38.6 +/- 1.1
S OF KURILE IS
LAT= 44 10 +/- 3 LONG= 146 52 +/- 7
H=130 CLASS=R

NEMURO	1	IP	09 45 07.0	IS	45 25.4	46	0.2	33	0.2	25	0.3	S	3 W	3 U 9	139.0	18.4
ABASHI	0	IP	09 45 12.0	S	45 36.0	41	2.0	36	2.8			S	4 W	8	207.6	24.0
KUSHIR	2	IP	09 45 17.5	IS	45 44.5	152	0.2	180	0.2	58	0.3	S	3 W	3 U 7	239.4	27.0
OBIHIR	0	EP	09 45 27.3	ES	46 04.0										325.6	36.7
HIROO	0	IP	09 45 31.4	ES	46 09.5									D 2	356.3	38.1
ASAHIK	0	IP	09 45 31.5	IS	46 11.6	24	1.6	24	1.8	16	1.7	S	E	U	363.3	40.1
URAKAW	1	EP	09 45 36.0	ES	46 18.0	91	0.6	69	0.6	28	1.0				400.3	42.0
WAKKAN	0	EP	09 45 39.2	IS	46 25.0	13	2.0	11	1.0	15	5.7				433.7	45.8
SAPPOR	0	P	09 45 42.8	S	46 30.4	16	2.4	19	2.0	7	2.4			U	463.5	47.6
HAKODA	0	IP	09 45 54.6	ES	46 48.6	15	0.6	17	1.2	5	1.0	N	1 E	1 D 2	562.5	54.0
HACHIN	0	IP	09 45 57.9	IS	46 54.8	23	0.6	25	0.6	12	1.0		E	D	597.7	56.9
AOMORI	0	EP	09 46 01.2	IS	47 01.2	72	0.9	60	1.3	27	0.9				623.2	60.0
MORIOK	0	P	09 46 09.0	S	47 14.6	28	0.5	33	0.4	4	0.4				685.2	65.6
OFUNAT	0	EP	09 46 09.3	IS	47 22.3	7	0.4	7	0.6	3	0.4				710.8	73.0
AKITA	0	X	09 46 17.4	S	47 31.0	12	1.2	12	0.8	5	1.0				747.2	
MIZUSA	0	IP	09 46 18.5	IS	47 27.6			33	0.7	20	1.2		E 2		735.0	69.1
SAKATA	0	EP	09 46 27.7	S	47 48.6										827.7	80.9
FUKUSH	0	EX	09 46 34.4			10	0.9	8	0.8	3	0.6				891.8	
MITO	0	EP	09 46 49.8	S	48 30.8	5	1.0	4	1.1	3	1.3				1020.9	101.0
MATSUS	0	P	09 47 02	S	48 54										1120.6	112.0
ONAHAM	0	EX	09 47 56.1	ES	48 13.8	10	0.8	10	1.0	6	0.8				947.0	

OT= 2 15 32 21.9 +/- 0.2
NEAR SHIZUOKA
LAT= 34 55 +/- 1 LONG= 138 14 +/- 1
H= 20 MAG=4.1 CLASS=L

SHIZUO	3	IP	15 32 27.6	IS	32 31.6	250	0.2	310	0.2	130	0.6	S	5 E	90 U 98	17.0	04.0
OMAEZA	0	IP	15 32 29.1	IS	32 36.8	75	1.5	74	1.8	25	1.5	N	6 E	3 D 15	34.8	07.7
HAMAMA	0	IP	15 32 32.4	IS	32 39.5	33	0.6	28	0.6	12	0.6	N	4 E	2 D 6	52.1	07.1
MISHIM	X	P	15 32 33.7	IS	32 42.6	42	0.4	33	0.4	13	0.4				67.1	08.9
IIDA	0	IP	15 32 34.8	IS	32 44.6	22	0.8	24	0.4	7	0.6	S	3	D 3	75.1	09.8
AJIRO	1	IP	15 32 36.1	IS	32 46.1	66	0.3	44	0.3	13	0.3	S	1 W	1 D 3	80.1	10.0
KOFU	0	EP	15 32 37.4	S	32 50.4			26	0.9	19	0.8				88.1	13.0
OSHIMA	0	IP	15 32 40.4	IS	32 53.5	14	0.8	19	0.9	8	0.3			D 8	106.1	13.1
NAGOYA	0	P	15 32 42.0	IS	32 56.4	21	0.6	10	1.0	10	1.2	S	1 E	4 D 3	118.6	14.4
TOMISA	0	IP	15 32 46.4	IS	33 05.6	9	1.8	8	1.8	4	1.5			U 1	145.7	19.2
GIFU	0	EP	15 32 46.9	S	33 03.1	17	1.1	14	1.1						144.0	16.2
MATSUM	0	EP	15 32 47.2	ES	33 04.9										149.0	17.7
TOKYO	0	EX	15 32 48.6			10	3.4	6	0.4	5	4.6				162.8	
KARUIZ	0	EP	15 32 49.3	S	33 08.5										160.5	19.2
TSU	0	EP	15 32 49.7	S	33 08.0										158.7	18.3
MATSUS	0	IP	15 32 51.0	S	33 13							N	E	U	179.9	22.0
YOKOHA	0	X	15 32 52.0	IS	33 05.3	12	0.6	10	0.5					U 3	141.7	
KUMAGA	0	EP	15 32 53.2	ES	33 14.4	9	1.0	5	1.4	2	1.2				171.8	21.2
HIKONE	0	EP	15 32 53.7	S	33 17.3	31	0.8	31	1.0	17	1.6				185.4	23.6
TSURUG	0	EP	15 32 58.9	S	33 23.7										213.3	24.8
NARA	0	EP	15 32 59.4	ES	33 23.7										221.1	24.3
FUNATS	0	X	15 32	IS	32 48.8										80.6	
TOYAMA	0	EP	15 33 00	ES	33 21	8	1.8	2	2.2	3	1.4				219.1	21.0
KYOTO	0	EP	15 33 00.0	ES	33 26.4	5	1.4	5	0.8	4	0.8				228.3	26.4
FUKUI	0	P	15 33 00.7	S	33 28.2										221.4	27.5

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STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OSAKA	0	X	15 33 06			12	2.4	11	4.8	5	1.8				248.4	
TOYOOK	0	X	15 33 16.9	ES	33 52.6	17	0.8	13	1.2						318.2	

OT= 2 22 36 37.5 +/- 0.2
NEAR MITO
LAT= 36 32 +/- 1 LONG= 140 31 +/- 2
H= 70 CLASS=S

MITO	2	IP	22 36 49.5	S	36 57.0	222	0.3	154		168	0.4	S	2 E	11 U 9	17.7	07.5
UTSUNO	2	IP	22 36 50.5	IS	36 59.4	104	0.2	83	0.2	19	0.2	N	2 W	9 U 18	57.8	08.9
ONAHAM	1	IP	22 36 50.8	IS	37 00.4	31	1.1	36	0.7	15	0.6			D 12	57.4	09.6
SHIRAK	1	IP	22 36 52.5	IS	37 02.4									D 8	69.9	09.9
CHOSHI	0	P	22 36 55.3	ES	37 06.3										94.4	11.0
KUMAGA	0	P	22 36 57.6	ES	37 12.0	9	1.0	10	0.8	5	0.2			U 4	110.3	14.4
TOKYO	0	IP	22 36 58.6	ES	37 10.4	26	0.4	19	0.3	6	0.3				116.3	11.8
FUKUSH	0	EP	22 37 00.3	ES	37 16.0	12	0.5	10	0.2	6	0.4				135.8	15.7
CHICHI	0	IP	22 37 00.3	S	37 16.7								W 5		142.2	16.4
YOKOHA	0	EP	22 37 02.9	EX	37 23.6	15	0.5	13	0.4						144.3	
TOMISA	0	P	22 37 08.3			7	1.6	6	1.3	4	1.2				189.5	
KOFU	0	EP	22 37 08.5	ES	37 35.9			13	1.4	5	0.9				200.9	27.4
MATSUS	0	P	22 37 09.4	S	37 32							N			206.7	22.6
AJIRO	0	P	22 37 09.8	S	37 33.0	8	0.3	7	0.3	2	0.4				209.3	23.2
OSHIMA	0	P	22 37 11.7	IS	37 35.4	8	0.4	9	0.4						221.9	23.7
OFUNAT	0	EP	22 37 20.0	ES	37 50.0	5	0.2	3	0.2	1	0.4				299.9	30.0

OT= 2 23 59 7.8 +/- 0.4
E OFF AOMORI PREF
LAT= 40 58 +/- 2 LONG= 142 27 +/- 4
H= 20 MAG=4.0 CLASS=U

HACHIN	0	IP	23 59 24.9	ES	59 34.4	18	0.4	18	0.4	2	0.6	N	E 1	D	92.2	09.5
URAKAW	0	EP	23 59 30.4	S	59 47.0	5	0.4	7	0.4						135.2	16.6
MORIOK	0	IP	23 59 36.7	IS	59 57.4	10	0.4	14	0.4	3	0.3	N	0 E	0 D 0	178.2	20.7
MIZUSA	0	EP	23 59 45.6	ES	00 10.7			7	0.7						232.5	25.1
NIIGAT	0	IP	10 43 39.8	IS	43 47.5	30	1.2	70	0.8	10	0.5			D 5	44.4	07.7
FUKUSH	0	EP	10 43 46.0	ES	43 56.8	20	0.9	16	1.0	5	0.6				91.0	10.8
AIKAWA	0	IP	10 43 49.0	ES	44 03.2	9	1.2	9	0.6	3	0.4	N	1 E	1 D 1	112.0	14.2
SHIRAK	0	EP	10 43 50.7	S	44 05.2										122.4	14.5
SENDAI	0	EP	10 43 53	ES	44 01	5	1.0	7	0.6	2	2.0				123.1	08.0
ISHINO	0	P	10 43 57.0	ES	44 16.8	6	1.6	6	1.0	2	1.0				161.4	19.8
ONAHAM	0	EX	10 43 58.8	ES	44 20.1	23	1.6	20	1.2	8	1.9				174.9	
UTSUNO	0	X	10 43	X	44 08.0	9	1.4	7	1.1						171.6	
NAGANO	0	EP	10 44	S	44 24.5	6	0.8	4	0.6	3	0.2				195.0	
MATSUS	0	IP	10 44 01.6	S	44 26								E	U	205.5	24.4
MITO	0	EP	10 44 03.3	IS	44 27.8	9	2.2	7	1.5	4	1.2				205.6	24.5
KARUIZ	0	EP	10 44 04.6	S	44 29.5										209.9	24.9
KUMAGA	0	EP	10 44 04.6	ES	44 31.2	7	1.0	3	1.4	2	1.4				213.4	26.6
TAKADA	0	X	10 44 05.6	S	44 14.0										154.6	
AKITA	0	EX	10 44 18	S	44 28.2	8	0.6	10	0.6	3	1.2				190.2	
MIZUSA	0	X	10 44 22.8					5	1.2						184.0	

OT= 3 21 12 55.0 +/- 0.2
SW OF IBARAKI PREF
LAT= 36 4 +/- 1 LONG= 139 56 +/- 2
H= 50 MAG=4.5 CLASS=S

UTSUNO	2	IP	21 13 06.6	IS	13 14.5	300	0.2	300	0.2	100	0.2	S	9 E	4 D 26	53.5	07.9
KUMAGA	2	IP	21 13 06.6	IS	13 15.0	152	0.4	75	0.8	19	0.2	N	2 E	2 D 14	50.2	08.4
TOKYO	1	IP	21 13 06.6	IS	13 14.6	133		116		32					45.2	08.0
MITO	1	IP	21 13 07.6	IS	13 16.4	272	0.4	120	0.3	63	0.3	N	2 E	2 U 14	59.5	08.8
CHICHI	0	EP	21 13 08.2	IS	13 17.4										77.2	09.2
MAEBAS	0	P	21 13 10.2	IS	13 20.9	24	1.0	16	0.5	17	0.8	S	1 E	2 D 11	86.4	10.7
CHOSHI	1	IP	21 13 10.4	IS	13 20.6	74	0.2	61	0.2	35	0.2	S	4 E	3 U 10	90.5	10.2
YOKOHA	1	IP	21 13 11.0	IS	13 23.3	370	0.6	169	0.5					U 5	74.3	12.3

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
SHIRAK	0	P	21	13	14.9	S	13	28.5										119.6	13.6
TOMISA	0	IP	21	13	15.0	IS	13	29.0	34	2.0	25	2.0	15	2.0	N	1 W	3 D	127.5	14.0
FUNATS	1	P	21	13	15.3	IS	13	31.2										123.1	15.9
KARUIZ	0	EP	21	13	15.8	S	13	31.0										127.9	15.2
AJIRO	0	P	21	13	16.0	S	13	30.0	29	0.3	23	0.3	6	0.4				136.5	14.0
KOFU	0	EP	21	13	16.4	ES	13	33.8			29	1.6	8	0.6				131.9	17.4
MISHIM	0	EP	21	13	17.4	S	13	32.5	25	1.0	19	1.1	9	1.3				139.6	15.1
OSHIMA	0	P	21	13	18.1	ES	13	33.4	37	0.5	43	0.6	13	0.5			D 2	153.3	15.3
MATSUS	0	IP	21	13	19.9	S	13	38							S	E	D	163.5	18.1
ONAHAM	0	EX	21	13	22.8	IS	13	29.8	57	1.2	58	1.0	18	1.0				130.8	
TAKADA	0	EP	21	13	24.7	X	13	56.7										189.6	
FUKUSH	0	EP	21	13	25.6	ES	13	45.6	26	1.1	15	1.0	26	2.2				193.6	20.0
IIDA	0	EP	21	13	25.8	IS	13	48.6	11	1.2	9	0.4	4	1.6				199.5	22.8
SHIZUO	0	P	21	13	27.3	S	13	43.5	6	0.8	9	1.8	5	2.2				184.0	16.2
NIIGAT	0	X	21	13	33.3	X	14	05.0	11	2.0	10	2.3	3	3.4				219.1	
SENDAI	0	EP	21	13	34	X	14	13	10	1.2	10	2.0	4	1.0				258.1	
HAMAMA	0	X	21	13	37	ES	14	04	11	2.0	9	2.2	3	2.0				251.0	
HACHIJ	0	EP	21	13	38.2	ES	14	12.4	6		7							329.1	34.2
NAGOYA	0	EP	21	13	39.6	S	14	10.8	10	2.0	10	2.2	5	1.2		W 1	U 1	286.6	31.2
GIFU	0	EP	21	13	40				8	1.6	6	1.4						296.0	
WAJIMA	0	EX	21	13	41.6				5	0.8	5	0.8						308.3	
ISHINO	0	X	21	13	44.0	X	14	17.8	7	1.0	8	1.0	2	1.0				288.5	
MIZUSA	0	EP	21	13	48.2						7	1.2	4	0.6				356.4	
OSAKA	0	X	21	14	12				12	2.4	9	4.9	4	2.3				429.2	

OT= 5 14 29 16.4 +/- 1.8
E OFF HOKKAIDO
LAT= 42 43 +/-11 LONG= 147 48 +/-10
H= 0 MAG=4.7 CLASS=U

NEMURO	0	P	14	29	49.1	ES	30	13.6	15	4.0	18	2.8	12	3.2		W	U	192.8	24.5
KUSHIR	0	EP	14	30	02.0	ES	30	34.0	15	2.4	18	0.3	12	3.0				279.9	32.0
ABASHI	0	P	14	30	05.8	ES	30	49.4	15	2.2	8	2.4						319.6	43.6
OBIHIR	0	X	14	30	28.1													375.1	
SAPPOR	0	EP	14	30	34	ES	31	31	4	2.2	5	2.4	2	4.0				529.7	57.0
AOMORI	0	X	14	30	58.7				7	1.6	7	1.6	5	1.5				620.3	
MATSUS	0	P	14	31	44													1070.6	
MIZUSA	0	X	14	32	09.2						4	1.2	4	1.2				688.0	

OT= 6 10 8 17.9 +/- 0.3
SE OF HOKKAIDO
LAT= 42 39 +/- 2 LONG= 142 34 +/- 2
H=100 CLASS=S

OBIHIR	X	IP	10	08	36.4	IS	08	49.0									U 9	61.4	12.6
URAKAW	1	P	10	08	36.8	S	08	49.8	112	0.8	156	0.4	22	1.0	N	2 E	2 D 4	57.4	13.0
HIROO	0	IP	10	08	37.7	IS	08	49.7							S	2 E	2 U 5	73.9	12.0
SAPPOR	0	IP	10	08	39.0	IS	08	53.6	21	0.6	20	0.6	7	0.6	N	E	2 D 7	110.7	14.6
ASAHIK	0	EP	10	08	41.3	S	08	56.2	10	1.6	10	1.2	6	1.0				125.4	14.9
MURORA	0	EP	10	08	43.1	S	08	58.3										135.4	15.2
KUSHIR	1	IP	10	08	44.3	IS	09	03.0	52	0.2	87	0.2	27	0.2			U 2	153.9	18.7
HAKODA	0	IP	10	08	47.0	IS	09	07.0	20	0.5	16	0.4	7	0.5	S	2 W	2 U 5	175.9	20.0
HACHIN	0	IP	10	08	55.4	IS	09	21.6	15	0.2	20	0.2	2	0.6	N	1 E	1 U 1	251.5	26.2
NEMURO	0	P	10	08	56.3	ES	09	23.0	4	1.0	5	1.2	3	1.4		E	U	257.6	26.7
AOMORI	0	X	10	08		IS	09	23.5	30	0.5	21	0.5	9	0.7				252.0	
MORIOK	0	P	10	09	07.3	S	09	42.0	9	0.4	7	0.4	1	0.4	N	1 E	0 D 0	348.4	34.7
MIZUSA	0	EP	10	09	18.7	ES	09	56.3			8	0.7						408.8	37.6
MATSUS	0	IP	10	09	59.7	S	11	15							S		U	774.7	75.3

OT= 7 20 51 26.5 +/- 0.2
S OF MIE PREF
LAT= 34 20 +/- 1 LONG= 136 13 +/- 1
H= 30 MAG=4.0 CLASS=L

OWASE	1	IP	20	51	33.6	IS	51	39.4	109		56		55		N	1 E	D 1	29.6	05.8
NARA	1	EP	20	51	37.5	IS	51	44.4	100	0.2			50	0.2				52.4	06.9
OSAKA	0	EP	20	51	39.2	IS	51	48.4	30	0.8	23	0.5	8	1.4				71.4	09.2
						IX	51	49.6											
KYOTO	0	P	20	51	41.8	ES	51	49.8	13	0.4	16	0.2	4	0.5	S	1 E	1 D 2	87.2	08.0
HIKONE	0	EP	20	51	43.8	ES	51	55.1	15	0.6	10	0.8	7	0.9				104.3	11.3
SHIONO	0	EP	20	51	44.6	IS	51	57.2	14	0.2	16	0.2	7	0.2				106.7	12.6
TSU	0	X	20	51	45.2													49.3	
NAGOYA	0	EP	20	51	45.9	ES	52	00.0	18	0.4	14	0.6	5	0.4			U 1	115.1	14.1
SUMOTO	0	P	20	51	46.6	S	51	59.0	6	0.2	4	0.3	1	0.2	S	1 W	1 U 1	120.4	12.4

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STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
GIFU	0	P	20	51	48.4	S	52	02.5	31		23		9					128.3	14.1
TSURUG	0	EP	20	51	48.6	ES	52	08.7										146.7	20.1
KOBE	0	X	20	51	55.7													103.0	
MATSUS	0	IP	20	52	09.2	S	52	47								E	U	304.1	37.8
TOYOOK	0	X	20	52	14.3	X	52	32.6	7	1.0	5	1.0						184.6	
FUKUI	0	X	20	52	16.8													190.8	

OT= 8 0 58 8.5 +/- 0.4
OFF MIYAGI PREF
LAT= 38 30 +/- 2 LONG= 141 37 +/- 4
H= 70 CLASS=L

ISHINO	1	P	00	58	20.5	IS	58	27.4	13	0.0	8	0.0	6	0.0				28.6	06.9
OFUNAT	X	EP	00	58	22.6	IS	58	33.2	19	0.0	11	0.0	4	0.4				63.0	10.6
FUKUSH	0	EP	00	58	30.4	S	58	44.9	7	0.5	5	0.5						129.7	14.5
MORIOK	0	IP	00	58	31.0	IS	58	46.0	6	0.4	5	0.5	1	0.4	N	1 W	0 U 0	138.4	15.0
MATSUS	0	P	00	59	01													371.6	

OT= 9 1 5 57.5 +/- 0.3
OFF FUKUSHIMA PREF
LAT= 37 2 +/- 1 LONG= 141 16 +/- 2
H= 40 MAG=4.7 CLASS=S

ONAHAM	3	IP	01	06	06.9	IS	06	12.3	300	0.9	400	1.4	100	0.9		E 4	D 16	33.5	05.4
SHIRAK	2	IP	01	06	13.7	IS	06	24.5								E 11	D 42	93.1	10.8
MITO	1	IP	01	06	15.3	IS	06	26.9	60	0.9	78	0.4	28	0.3	N	0 E	1 D 1	101.6	11.6
UTSUNO	1	P	01	06	19.2	S	06	34.7	64	0.2	63	0.1	16	0.2			D 3	135.7	15.5
SENDAI	1	IP	01	06	20.0	IS	06	35.2	57	0.3	78	2.0	22	1.6	S	2 E	1 D 12	139.9	15.2
ISHINO	X	P	01	06	21.6	IS	06	37.2	16	0.2	14	1.2	4	1.0				154.5	15.6
YAMAGA	0	P	01	06	21.8	IS	06	40.4									D 2	157.7	18.6
CHOSHI	0	P	01	06	22.6	S	06	37.6										150.0	15.0
KUMAGA	0	EP	01	06	27.4	ES	06	47.4	33	1.2	20	1.2	10	1.0				195.0	20.0
CHICHI	0	EP	01	06	28.4	IS	06	53.7										227.3	25.3
MAEBAS	0	P	01	06	29.2	IS	06	52.2	17	0.8	12	0.8	11	1.2			D 2	208.8	23.0
OFUNAT	0	EP	01	06	31.0	IS	06	53.4	12	0.0	9	0.0	4	0.4				228.6	22.4
TOKYO	0	EP	01	06	32.0	S	06	49.8	24	1.6	18		9	1.6				201.7	17.8
KARUIZ	0	EP	01	06	33.9	S	07	02.4										254.5	28.5
SAKATA	0	P	01	06	34.1	ES	07	02.8									D 2	242.6	28.7
MIZUSA	0	EP	01	06	34.6	ES	06	58.2	20	2.4	22	0.7	10	1.4				233.4	23.6
NIIGAT	0	P	01	06	35.3	S	06	59.0	25	3.7	25	3.1	40	3.2			U	218.7	23.7
YOKOHA	0	EP	01	06	36.1	S	06	57.2	27	0.9	19	0.9						228.8	21.1
TAKADA	0	EP	01	06	37.0	ES	07	10.8										268.3	33.8
TOMISA	0	IP	01	06	37.6				17	2.2	19	2.4	9	1.8			U 1	267.9	
MATSUS	0	IP	01	06	37.9	S	07	11							N	E	D	278.4	33.1
KOFU	0	EP	01	06	38.9	ES	07	18.0			30	1.2	10	1.2				286.6	39.1
MORIOK	0	P	01	06	39.3	ES	07	09.0	15	0.4	16	0.4	3	0.4	S	0 E	D 0	295.7	29.7
AJIRO	0	P	01	06	40.0	ES	07	12.2	7	0.3	8	0.3	2	0.4				294.9	32.2
MISHIM	0	EP	01	06	41.3	ES	07	11.6	13	1.0	11	1.0	4	1.3				299.5	30.3
MIYAKO	0	EP	01	06	42	ES	07	08	4	1.0	5	2.0	4	1.0				296.3	26.0
FUNATS	0	P	01	06	42.4	X	07	31.3										282.1	
AKITA	0	X	01	06	45.4	EX	07	28.2	12	2.6	12	2.4	7	2.6				314.9	
IIDA	0	EP	01	06	47.8	ES	07	29.2	11	1.0	8	2.2	6	2.0				351.5	41.4
OSHIMA	0	X	01	06	49.9				10	0.8	6	0.8	5	0.3				304.2	
WAJIMA	0	EX	01	06	51.0				8	0.8	10	1.4						389.7	
TOYAMA	0	EP	01	06	52	ES	07	29	5	1.6	5	2.4	6	3.6				363.6	37.0
HACHIN	0	EP	01	06	52.7	ES	07	35.6	3	0.9	5	1.4	2	2.0				388.2	42.9
AOMORI	0	EP	01	06	58.0	ES	07	45.5	15	1.0	13	1.0	5	1.0				422.1	47.5
FUKUSH	2	X	01	06		S	06	28.4	136	0.9	147	0.9	192	3.5	S	23 E	24 U111	106.6	
NAGOYA	0	EP	01	07	00.0	ES	07	48.4	10	2.4	11	2.6	4	2.4				438.9	48.4
GIFU	0	EP	01	07	03.7				8	1.4	4	1.6						443.4	
OMAEZA	0	X	01	07	05				6	2.2	6	2.2						385.7	
HAMAMA	0	X	01	07	15	ES	07	50	5	2.0	6	2.2	3	2.0				410.9	
OSAKA	0	X	01	08	14				8	3.0	7	2.4	5	2.5				581.0	
KUSHIR	0	X	01	08	38.8				5	0.3	6	0.2	1	0.4				712.0	

OT= 10 20 21 25.6 +/- 1.4
S OF KURILE IS
LAT= 44 25 +/- 6 LONG= 150 19 +/- 8
H= 40 MAG=5.6 CLASS=U

NEMURO	0	EP	20	22	22.1	ES	23	08.0	18	0.9	14	0.8	12	1.7	S	1 W	2 U 4	399.0	45.9
ABASHI	0	P	20	22	31.5	S	23	26.2	24	3.8	14	3.6						484.2	54.7
KUSHIR	0	IP	20	22	35.9	S	23	31.6	62	0.6	71	0.4	16	2.2	S	0 W	2 U 3	503.4	55.7

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OBIHIR	0	EP	20 22 46.8	ES	24 01.8										595.8	75.0
HIROO	0	P	20 22 50.4	ES	23 57.0										614.9	66.6
ASAHIK	0	IP	20 22 53.5	X	24 11.4	9	2.2	12	2.8	6	1.2			D	640.1	
URAKAW	0	EP	20 22 56.1	S	24 06.6	207	2.6	105	2.0	60	2.0				661.0	70.5
WAKKAN	0	EP	20 22 58.7					5	2.6	13	2.6				691.2	
SAPPOR	0	IP	20 23 05.5	S	24 28.2	23	3.0	38	2.6	14	2.4			U 2	739.2	82.7
HAKODA	0	EP	20 23 15.0	ES	24 37.1	17	3.6	12	3.8	10	3.0	S 1	W 1	U 1	829.5	82.1
HACHIN	0	EP	20 23 16.7	IS	24 42.9	6	2.4	5	2.6	5	3.8				841.8	86.2
AOMORI	0	EP	20 23 22.8	EX	24 52.6	53	2.5	33	1.8	14	1.4				877.9	
MORIOK	0	P	20 23 27.3	ES	25 00.8	6	0.4	7	0.4	3	2.6	N 0	E 0		920.3	93.5
OFUNAT	0	EP	20 23 28.6	IS	25 02.4	3	1.4	4	1.4	7	2.0				929.5	93.8
MIZUSA	0	EP	20 23 35.9	X	24 11.5	18	2.0	24	2.4	18	1.7				962.1	
AKITA	0	EX	20 23 38			15	2.8	12	2.8	9	3.2				992.6	
SENDAI	0	EX	20 23 42	EX	25 28	8	2.0	5	2.0	3	2.0				1042.3	
FUKUSH	0	X	20 23 58.5	ES	25 43.8	7	1.0	5	1.0						1108.1	
MITO	0	IP	20 24 06.5	ES	26 09.4	9	2.4	8	2.7	4	3.1				1221.1	122.9
KUMAGA	0	EP	20 24 20.0	ES	26 26.6	5	2.8	6	3.0	4	3.0				1304.6	126.6
MATSUS	0	IP	20 24 20.2	X	25 52							S	W	U	1346.4	
ONAHAM	0	EX	20 25 03.1	ES	25 53.1	7	1.1	9	1.4	4	2.3				1148.0	
OSAKA	0	EX	20 25 06			10	4.9	7	4.8	4	3.1				1665.8	
OITA	0	EX	20 25 46.2	EX	29 16.1	6	3.0	6	3.0						2035.3	
KAGOSH	0	EP	20 26 01.2	EX	26 06.1	7	2.4	7	2.4	3	1.7				2235.6	
TOKYO	0	X	20 26 27.0			8	3.0	4	2.0						1321.3	

OT= 11 12 51 5.2 +/- 0.4
N OF HOKKAIDO
LAT= 44 20 +/- 1 LONG= 142 27 +/- 2
H= 0 MAG=4.4 CLASS=L

ASAHIK	0	P	12 51 18.0	IS	51 27.4	70	1.4	55	1.8	35	1.2	N	W	U	62.9	09.4
RUMOI	0	EP	12 51 21.9	IS	51 33.3										78.0	11.4
WAKKAN	0	EP	12 51 30.1	ES	51 47.8	10	1.4	7	1.2	8	3.0				135.1	17.7
ABASHI	0	P	12 51 31.4	S	51 49.8	26	1.6	29	1.6						150.8	18.4
SAPPOR	0	IP	12 51 34.5	IS	51 55.6	26	1.0	35	2.0	13	1.6			D 0	168.0	21.1
OBIHIR	0	EP	12 51 36.0	S	51 59.3										169.0	23.3
KUSHIR	0	EP	12 51 42.5	IS	52 09.5	22	0.3	20	0.5	7	3.5				217.5	27.0
MATSUS	0	P	12 53 12												937.1	

OT= 12 13 30 40.2 +/- 0.3
OFF MIYAGI PREF
LAT= 38 17 +/- 1 LONG= 142 3 +/- 2
H= 70 CLASS=R

ISHINO	2	IP	13 30 55.0	IS	31 04.4	475	0.8	350	0.8	237	0.8	N 12	E 70	D 98	67.1	09.4
OFUNAT	3	IP	13 30 58.0	IS	31 09.2	320	0.0	301	0.0	165	0.8	N 2	W 1	U 1	91.1	11.2
SENDAI	3	IP	13 30 58.9	IS	31 11.0	900		1000		500		N 0	W	U	100.7	12.1
NAGANO	0	EP	13 31												385.5	
MIZUSA	2	IP	13 31 00.9	ES	31 13.9	878	0.9			644	1.0		W 7	U 19	123.5	13.0
YAMAGA	X	IP	13 31 04.1	S	31 19.4	150	0.1	250	0.1	200	0.2	N 2	W 11	U 25	148.8	15.3
FUKUSH	3	IP	13 31 04.9	IS	31 20.7	300	1.1	800	0.8	600	0.6	S 12	W 13	U 43	150.1	15.8
MIYAKO	3	IP	13 31 05.0	IS	31 21.5							S 3			151.3	16.5
MORIOK	2	IP	13 31 06.7	IS	31 25.8	300	0.4	400	0.4	100	0.5	N 16	W 4	U 8	174.5	19.1
				IX	31 12.0											
ONAHAM	1	IP	13 31 08.5	IS	31 29.2	122	1.6	155	1.8	56	1.4			D 7	179.6	20.7
SAKATA	1	P	13 31 10	IS	31 34	300	2.0	350	2.0	150	1.8			U 25	204.7	24.0
SHIRAK	X	P	13 31 11.4	S	31 32.6										206.4	21.2
AKITA	1	P	13 31 12.9	IX	31 37.2	145	1.4	145	0.8	164	2.6			U	232.1	
HACHIN	2	IP	13 31 16.1	S	31 41.3	93	0.6	71	0.4	19	0.8	N 1	W	U 1	252.9	25.2
MITO	X	IP	13 31 17.0	IS	31 42.5	82	1.9	67	2.0	45	1.5			D 3	253.5	25.5
NIIGAT	0	IP	13 31 19.3	IS	31 48.4	110	2.2	140	3.1	60	1.9		W 7	U 15	266.2	29.1
UTSUNO	0	P	13 31 21.1	ES	31 48.0	69	1.6	50	2.5	27	2.0	N 4	E 4		272.6	26.9
CHOSHI	0	P	13 31 22.4	S	31 54.4										303.5	32.0
AOMORI	0	EP	13 31 23.4	S	31 56.2	116	1.2	105	1.4	37	1.1				301.6	32.8
AIKAWA	0	EP	13 31 26.7	ES	31 52.8	25	1.2			19	2.4	S 4		U 8	335.0	26.1
KUMAGA	0	P	13 31 27.4	ES	31 59.0	50	1.2	58	2.0	17	1.2			U 4	334.9	31.6
MAEBAS	0	EP	13 31 28.0	S	32 02.6	57	1.8	25	1.4	21	1.4	S 2	W 2	U 8	336.9	34.6
TOKYO	0	IP	13 31 29.9	IS	32 06.0	50	4.0	25	3.0	22	3.4				353.2	36.1
TAKADA	0	P	13 31 30.8	S	32 07.5										359.7	36.7
CHICHI	0	EP	13 31 31.0	S	32 07.4										366.3	36.4
KARUIZ	0	EP	13 31 33.3	ES	32 18.1										377.6	44.8
YOKOHA	0	P	13 31 34.3	ES	32 13.0	31	1.1	27	0.8					D 3	381.2	38.7
HAKODA	0	P	13 31 35.0	ES	32 15.5	14	0.8	17	0.7	6	1.2	N		U 0	407.2	40.5
MATSUS	0	IP	13 31 35.5	S	32 08							S	W	U	391.3	32.5
TOMISA	0	EP	13 31 38.5			28	2.2	23	2.8	14	2.0				422.8	
URAKAW	1	P	13 31 38.6	S	32 21.0	28	0.6	46	0.4	7	0.6				434.7	42.4
KOFU	0	EP	13 31 39.2	ES	32 22.4			35	1.6	11	1.2				425.4	43.2

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
FUNATS	0	P	13 31 40.8	S	32 23.0										425.7	42.2
AJIRO	0	P	13 31 41.0	ES	32 24.5	9	0.3	5	0.3	2	0.4				445.9	43.5
HIROO	0	EP	13 31 42.0	S	32 24.2										457.0	42.2
WAJIMA	0	IX	13 31 43.2	X	32 27.0	50	1.0	60	1.0	23	1.2			U 6	464.1	
TOYAMA	0	IP	13 31 43.8	S	32 36.0	13	3.4	12	2.0	13	3.6	S 2	W 2	U 5	462.4	52.2
MISHIM	0	EP	13 31 45.0	S	32 25.1	19	1.9	19	1.9	8	2.2				448.9	40.1
IIDA	0	EP	13 31 46.4	X	32 54.0	8	2.0	10	1.4	7	2.0				485.5	
SHIZUO	0	EP	13 31 48.4	ES	32 37.5	6	1.6	10	2.0	5	2.8				490.9	49.1
KANAZA	0	EP	13 31 49.0	ES	32 46.5	7	4.0	7	2.6	6	1.4			U 5	515.4	57.5
OBIHIR	0	EP	13 31 49.6	ES	32 40.7										524.4	51.1
KUSHIR	1	EP	13 31 51.6	S	32 44.7	91	0.3	182	0.3	30	0.3				557.8	53.1
OMAEZA	0	EP	13 31 53.7			14	2.7	13	2.9						533.7	
GIFU	0	EP	13 31 57.4			10	1.7	9	1.7	4	2.0				569.6	
NAGOYA	0	EP	13 31 58.5	X	33 10.8	23	2.4	17	2.6	8	2.0			U 1	570.6	
ASAHIK	0	EP	13 31 59.8	IX	32 58.2	5	1.0	5	1.0	4	1.2			U	610.0	
HAMAMA	0	EP	13 32 00	ES	33 00	11	2.0	15	2.2	5	1.8				554.4	60.0
NEMURO	0	EP	13 32 01.0	X	33 01.0	14	1.0	11	1.6	5	0.8				634.7	
HIKONE	0	EP	13 32 04.7	X	33 21.2	11	2.7	13	2.1						616.1	
ABASHI	0	P	13 32 05.4			5	1.2	3	1.4						663.7	
TOYOOK	0	EP	13 32 15.1			10	1.0	11	1.2						712.4	
TSU	0	X	13 32 21.5												635.0	
OSHIMA	0	X	13 32 27.0			14	1.8	15	2.6						458.1	
OSAKA	0	X	13 32 31			23	3.2	20	4.3						709.0	

OT= 12 4 15 23.8 +/- 0.1
NEAR MATSUSHIRO
LAT= 36 35 +/- 0 LONG= 138 11 +/- 1
H= 10 CLASS=L

NAGANO	2	IP	14 15 27.0	S	15 29.1										8.6	02.1
MATSUM	0	P	14 15 32.7	IS	15 38.5										42.2	05.8
KARUIZ	0	EP	14 15 32.7	S	15 37.9										42.6	05.2
TAKADA	0	P	14 15 35.2	S	15 43.0										58.2	07.8

OT= 13 9 18 47.5 +/- 0.5
N OF TOCHIGI PREF
LAT= 36 55 +/- 2 LONG= 139 45 +/- 2
H= 20 MAG=3.8 CLASS=L

UTSUNO	0	IP	09 18 56.0	IS	19 00.5	29	0.6	33	0.3	15	1.0	N 2	W 2	D 6	42.5	04.5
MITO	0	IP	09 19 03.5	IS	19 14.5	13	0.3	10	0.4	3	0.4			D 2	87.9	11.0
KUMAGA	0	P	09 19 04.0	S	19 14.6	8	0.2	8	0.8	2	0.2			U 2	91.5	10.6
MATSUS	0	IP	09 19 12.0									N		D	143.9	
TOKYO	0	X	09 19 20.0	S	19 27.9	9		10		2					136.6	
ONAHAM	0	X	09 19 20.6			16	0.4	17	1.3	5	0.6				103.1	
NIIGAT	0	X	09 19 29.4			9	0.3	5	0.5						126.4	
YOKOHA	0	X	09 19 34.3			6	0.5	7	0.6						164.4	

OT= 14 3 53 23.4 +/- 0.6
SAITAMA-GUNMA BORDER
LAT= 36 14 +/- 2 LONG= 139 24 +/- 3
H= 60 MAG=3.6 CLASS=U

TOKYO	0	P	03 53 38.2	S	53 47.6	13		10		5					68.9	09.4
UTSUNO	0	P	03 53 40.3	S	53 53.3	5	0.2	7	0.2						54.8	13.0
YOKOHA	0	EP	03 53 40.5	IS	53 49.9	16	0.5	17	0.6						91.3	09.4
MITO	0	IP	03 53 40.7	IS	53 51.5	5	0.4	4	0.3	2	0.2			U 0	97.6	10.8
AJIRO	0	IP	03 53 45.4	S	53 59.2	8	0.3	4	0.3	1	0.4			D 0	134.8	13.8
MATSUS	0	X	03 53 55.4									N	W	U	112.1	

OT= 14 5 6 52.2 +/- 0.1
SW OF FUKUI PREF
LAT= 35 27 +/- 2 LONG= 135 31 +/- 1
H=360 CLASS=R

TSURUG	0	IP	05 07 39.1	IS	08 15.5	1000	3.9	1150	3.7	250	3.8	S 9	E 8	D 68	54.4	36.4
				SCS	21 05.5											
KYOTO	0	P	05 07 39.5	IS	08 15.0	440	2.4	396	2.8	116	2.6	N 4	E 4	D 93	52.5	35.5
NARA	0	IP	05 07 39.7	IS	08 15.3	2350	2.0	1400	1.9	450	1.7			D 44	89.8	35.6
FUKUI	0	IP	05 07 39.8	IS	08 15.8							S 26	W 04	D 90	92.7	36.0

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HIKONE	0	IP	05	07	39.8	IS	08	16.8	2000	3.3	1200	3.8	238	2.3	N	15 W	44 D	59	69.2	37.0
KOBE	0	IP	05	07	39.9	IS	08	16.5	1300	3.7	800	2.8	600	2.0	N	21 W	14 D	67	89.9	36.6
GIFU	0	IP	05	07	40.2	S	08	13.0	1700	2.5	1700	2.5	270	2.5	N	4 W	40 D	100	113.5	32.8
TOYOOK	0	IP	05	07	40.3	IS	08	17.0	600	2.9	700	3.7	200	3.1			E 40 D	292	63.9	36.7
						SCS	21	07.1												
OSAKA	0	IP	05	07	40.5	S	08	17.7	2400	5.8	2000	4.9	800	3.3				D210	88.9	37.2
TOTTOR	0	IP	05	07	41.0	IS	08	18.6	550	4.2	500	4.2	350	3.1	N	2 E	20 D	87	121.6	37.6
WAKAYA	0	P	05	07	41.1	IS	08	17.3	597	0.7	871	1.2	246	1.5	N	44 E	8 D	61	139.4	36.2
SUMOTO	0	IP	05	07	41.2	IS	08	16.4	344	4.0	359	2.8	220	3.4	N	17		D 55	135.6	35.2
						SCS	21	06.9												
NAGOYA	1	IP	05	07	41.6	IS	08	21.2	2000	3.4	1900	3.2	300	2.4	N	2 W	2 D	38	135.7	39.6
TSU	0	IP	05	07	41.8	S	08	19.8	1200	0.3	1200	0.4	400	0.3				D196	123.4	38.0
OWASE	0	IP	05	07	42.0	IS	08	18.6	390	0.6	275	0.4	200	0.4	S	39 E	10	U110	165.5	36.6
OKAYAM	1	IP	05	07	42.2	IS	08	20.2	650	4.0	460	4.2	370	3.4	N	20 E	46	D130	169.1	38.0
YONAGO	0	IP	05	07	42.6	IS	08	24.9								E	36 D	55	197.3	42.3
TAKAMA	0	IP	05	07	43.2	IS	08	23.0	526	4.4	481	3.3	144	3.4	N	55 E	46	D118	183.2	39.8
KANAZA	1	IP	05	07	43.3	S	08	16.1	289	2.8	406	3.9	231	3.4	S	11 W	33	D134	158.8	32.8
TAKAYA	1	IP	05	07	43.7	IS	08	24.4	70	0.3	3	0.3	96	0.3	S	6 W	8	D 23	175.3	40.7
OMAEZA	0	EP	05	07	45.3	S	08	34.4	636	2.2	318	2.9	329	2.7				U 32	263.3	49.1
SAIGO	0	IP	05	07	45.3	S	08	32.6	128	3.2	161	2.6	228	2.8	N	4 E	13	D 27	214.3	47.3
TOYAMA	0	IP	05	07	45.6	S	08	28.4	346	2.4			349	3.6	S	33 W	15	D 86	206.5	42.8
IIDA	0	IP	05	07	45.6	IS	08	27.0	183	3.2	224	1.8	78	3.2		E	25	U 65	210.4	41.4
TOKUSH	1	IP	05	07	45.8	IS	08	24.3	845	0.3	502	0.2	152	0.3	N	19 E	5	D 31	176.1	38.5
SHIONO	0	IP	05	07	46	IS	08	28	1000	3.3	1000	3.3	400	1.6	S	91		U256	223.1	42.0
HAMAMA	0	IP	05	07	46.0	IS	08	25.7	323	4.0	360	3.4	232	2.0	S	14 E	22	U227	217.4	39.7
MATSUE	0	P	05	07	46.5	S	08	29.6							S	11 E	31	D 75	221.9	43.1
KOCHI	0	IP	05	07	48.2	IS	08	32.6							N	20 E	17	D 28	278.5	44.4
MATSUM	0	EP	05	07	48.3	S	08	33.5	200	3.2	400	3.2	450	3.2					238.7	45.2
MUROTO	0	IP	05	07	48.7	IS	08	29.4	270	4.0	330	5.6	182	4.0				D 1	273.4	40.7
SHIZUO	0	IP	05	07	49.2	IS	08	35.0	150	4.0	170	4.0	130	2.6	S	2 E	64	U127	268.3	45.8
WAJIMA	1	IP	05	07	49.4	IS	08	33.0	355	2.0	382	2.0	200	2.6	S	39 W	20	D 33	248.3	43.6
MATSUS	0	IP	05	07	49.5	S	08	34							S	W		D	271.0	44.5
KOFU	1	IP	05	07	49.6	IS	08	34.8	200	2.0	190	2.2	79	3.8		E	31	U 57	276.7	45.2
NAGANO	0	P	05	07	50.0	S	08	31.5	230	4.5			217	4.0				D 15	276.2	41.5
FUNATS	0	P	05	07	51.2	S	08	38.0	550	3.3	200	2.3	130	1.5		E	55		294.6	46.8
						SCS	21	04.9												
HIROSH	0	IP	05	07	51.5	IS	08	35.8	341	3.9	93	2.8	157	2.8	N	25 E	62	D150	306.1	44.3
KARUIZ	0	P	05	07	51.8	IS	08	37.2	500	4.4	400	4.6	200	3.4				D	291.2	45.4
TAKADA	0	P	05	07	52.0	S	08	40.0	400	2.5	500	2.6	100	2.6	S	2 W	2	D 14	306.6	48.0
HAMADA	0	IP	05	07	52.0	S	08	38.8	116	4.2	62	3.2	110	2.8	N	12 E	50	D 86	319.6	46.8
MATSUY	0	IP	05	07	52.0	IS	08	37.8	493	4.5	225	3.5	140	3.0	N	28 E	49	D 96	307.9	45.8
MISHIM	0	IP	05	07	52.4	IS	08	38.7	523	3.7	377	2.2	142	2.2	S	13 E	56	U148	312.7	46.3
AJIRO	1	IP	05	07	53.4	IS	08	42.2	249	3.2	180	2.2	160	2.2		E	61	U120	328.8	48.8
MAEBAS	1	P	05	07	54.2	S	08	41.9	277	4.1	221	5.4	138	4.6		E	3	U 27	337.1	47.7
CHICHI	0	IP	05	07	54.2	IS	08	41.3	550	1.4	600	2.0	250	1.4	N	15 E	33		328.0	47.1
KUMAGA	2	IP	05	07	55.0	S	08	44.0	231	2.0	219	1.4	156	4.4	N	4 E	3	U 22	358.0	49.0
UWAJIM	1	IP	05	07	56.2	IS	08	45.8	300	5.1	300	5.1	100	3.8	N	10 E	13	D	367.3	49.6
YOKOHA	2	IP	05	07	57	IS	08	45	600	0.9	440	1.2	208	3.2	S	4 W	3	U 63	375.6	48.0
OSHIMA	0	IP	05	07	57.0	IS	08	47.9	31	3.2	25	4.5	18	2.1					360.1	50.9
AIKAWA	0	IP	05	07	57.6	IS	08	47.2	127	3.2	69	2.8	45	4.2	S	14 W	14	D 16	374.8	49.6
TOKYO	2	IP	05	07	58.0	IS	08	47.6	34	2.3	32	1.2	22	2.2				U 11	385.3	49.6
TOMISA	0	IP	05	07	58.0	S	08	48.4	216	1.0	330	1.0	130	1.6	S	E	10	U 50	397.0	50.4
ASHIZU	0	IP	05	07	58.5	IS	08	49.7	269	4.6	239	3.6	148	4.0	S	5 W	2	U 6	380.8	51.2
UTSUNO	2	P	05	07	59.1	S	09	00.8	300	2.0	300	2.0	100	2.0	N	7 E	16	U 21	411.0	61.7
HIMEJI	0	X	05	07		X	07	52.0							N	8 E	10	D 47	100.7	
NIIGAT	0	IP	05	08	01.8	IS	08	55.2	110	2.2	140	3.1	60	1.9	S	4 W	1	D 24	417.4	53.4
OITA	0	IP	05	08	02.4	IS	08	56.2			466	2.3			N	55 E	30		434.3	53.8
MITO	2	IP	05	08	03.4	IS	08	57.6	368	0.8	318	2.5	144	2.6	N	4 E	8	U 30	458.8	54.2
SHIMON	0	IP	05	08	03.4	IS	09	00.0	106	4.0	128	5.6	92	3.0	N	11 E	60	D 85	450.7	56.6
SHIRAK	2	P	05	08	04.8	S	08	56.9	200	1.6	300	1.7	100	1.5					461.6	52.1
HACHIJ	1	IP	05	08	05.4	IS	09	05.4	85		160		203		S	47 E	75	U 96	471.6	60.0
CHOSHI	2	P	05	08	05.7	IS	09	02.9	287	0.6	291	0.6	86	0.4	S	2 E	18	U 32	483.6	57.2
NOBEOK	0	P	05	08	06.3	S	09	04.2	500	4.0	300	3.8	200	3.8	N	4 E	5	D 11	475.7	57.9
ONAHAM	3	IP	05	08	08.9	IS	09	06.8	550	1.3	600	1.0	100	0.6	N	6 E	10	U 58	512.2	57.9
ASOSAN	0	EX	05	08	09	EX	09	11	500	1.5			500	2.2					498.9	
FUKUSH	1	IP	05	08	09.7	IS	09	09.0	116	1.2	135	1.2	50	1.2	S	W	2	D 2	512.0	59.3
FUKUOK	0	IP	05	08	10.0	IS	09	10.0	139	4.4	134	4.0	65	3.6	N	12 E	15	D 42	515.0	60.0
KUMAMO	0	IP	05	08	10.9	IS	09	11.1	354	3.9	223	3.4	73	3.1	N	25 E	39	D 60	531.1	60.2
YAMAGA	0	EP	05	08	11.7	IS	09	12.5											531.4	60.8
SENDAI	1	EP	05	08	12.3	IS	09	16.8	78	1.5	58	1.5	43	1.8					572.2	64.5
						ESCS	21	06												
SAGA	0	IP	05	08	13.0	S	09	16.0							N	20 E	30	D 30	538.0	63.0
SAKATA	0	IP	05	08	13.5	ES	09	15	150	2.2	200	2.2	50	2.2				U 9	542.1	61.5
MIYAZA	0	IP	05	08	13.5	IS	09	16.6	188	5.0	237	5.0	130	4.6	S	2 W	1	U 1	545.1	63.1
IZUHAR	0	IP	05	08	16.3	IS	09	22.8							N	4 E	11	D 16	585.5	66.5
ISHINO	1	EP	05	08	18.4	IS	09	22.0	53	1.4	55	1.2	20	1.4	N	1 E	0	U 0	611.9	63.6
NAGASA	0	IP	05	08	18.4	IS	09	26.0							N	7 E	10	D	602.7	67.6
AKITA	0	IP	05	08	20.8	S	09	30.2	82	3.2	75	2.6	40	3.2				U 11	623.0	69.4
KAGOSH	0	EP	05	08	21.2	IS	09	31.7	401	2.7	421	2.9	119	3.6					630.1	70.5
MIZUSA	0	EP	05	08	23.4	ES	09	30.2			166	3.2	66	2.4					644.0	66.8
OFUNAT	1	P	05	08	25.2	IS	09	34.6	42	0.0	69	0.2	22	1.0	N	1 E	1	U 1	680.3	69.4

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MORIOK	X	IP	05	08	26.2	IS	09	38.0	35	2.3	36	0.4	14	4.6	N	1 E	1 U	1	686.2	71.8
						SCS	21	09.6												
FUKUE	0	P	05	08	28.0	S	09	40.0	99	4.4	40	4.0	64	5.4	N	10 E	16 D	24	687.8	72.0
MIYAKO	0	EP	05	08	29.0	ES	09	42.4	31	2	40	6							735.6	73.4
YAKUSH	0	IP	05	08	29.3	S	09	45.3	58	4.4	54	3.6	32	3.1	S	12 W	6 U	12	726.0	76.0
AOMORI	0	IP	05	08	33.3	IS	09	49.5	80	2.1	85	3.3	26	2.9	N	8 E	14 U	10	753.3	76.2
HACHIN	0	P	05	08	34.2	IS	09	51.7	29	2.6	40	2.4	16	3.2	N	4 E	3 U	7	771.5	77.5
HAKODA	0	IP	05	08	41.8	X	09	54.8	21	4.4	25	4.8	13	4.0	N	6 E	4 U	10	840.6	
TURUGI	0	X	05	08	44.0	X	09	25.7	987		1370								219.9	
SUTTSU	0	EP	05	08	51.2	ES	10	23.0											911.1	91.8
URAKAW	0	P	05	08	55.0	X	10	15.4	84	2.6	110	2.6	88	3.4			U 1		975.2	
SAPPOR	0	IP	05	08	56.2	IS	10	33.8	80	2.6	98	3.4	18	2.0	N	6 E	4 U	13	981.9	97.6
						SCS	21	14.6												
HIROO	0	P	05	08	58.8	S	10	37.6											1015.8	98.8
						X	10	00.2												
RUMOI	0	EP	05	09	04.4														1079.0	
OBIHIR	0	IP	05	09	04.5	IS	10	47.7									U 7		1062.4	103.2
ASAHIK	0	IP	05	09	07.6	IS	10	53.8	24	2.0	23	2.0	10	2.0	N		U 1		1094.5	106.2
KUSHIR	1	IP	05	09	10.3	IS	10	58.4	84	0.2	74	0.2	25	0.8	N	0 E	2 U	4	1132.9	108.1
ABASHI	0	IP	05	09	19.1	S	11	15.6	38	3.0	44	3.2							1210.7	116.5
NEMURO	0	IP	05	09	20.9	IS	11	16.6	28	4.0	27	4.0	10	3.4	N	E	U		1230.2	115.7
WAKKAN	0	IP	05	09	22.4	IS	11	23.3	34	3.4	39	3.6	32	4.2			U 8		1223.0	120.9
						ESCS	21	18.9												
NAHA	0	P	05	09	27.2	IS	11	29.6	35	2.4	21	2.4							1265.4	122.4

OT= 16 18 42 59.9 +/- 1.5
W OFF KAGOSHIMA PREF
LAT= 32 4 +/- 2 LONG= 129 27 +/- 7
H= 10 MAG=4.1 CLASS=U

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NAGASA	0	P	18	43	14.8	IS	43	24.0									D		82.0	09.2
KAGOSH	0	EP	18	43	21.5	S	43	33.2	17	1.8	18	1.6	11	1.6					117.9	11.7
KUMAMO	0	IP	18	43	26.0	ES	43	42.8	8	1.0	9	1.2	6	0.8			U 5		144.3	16.8
SAGA	0	X	18	43	34.0	S	43	45.5											153.3	

OT= 17 3 33 19.6 +/- 0.3
OFF FUKUSHIMA PREF
LAT= 37 14 +/- 1 LONG= 141 50 +/- 2
H= 50 MAG=4.7 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ONAHAM	1	IP	03	33	36.0	IS	33	47.0	65	0.6	83	0.6	56	0.4	N	5 E	14 D	52	88.4	11.0
FUKUSH	2	P	03	33	40.7	IS	33	54.5	132	0.8	136	0.8	43	0.8	S	1 E	2 D	1	133.4	13.8
SENDAI	1	IP	03	33	42.0	IS	33	56.5	50	0.4	26	0.4	14	0.2	N	2 W	2 U	11	140.5	14.5
ISHINO	0	IP	03	33	42.0	IS	33	56.0	23	1.0	6	1.0	7	0.6	N	5 W	2 D	8	140.2	14.0
SHIRAK	X	IP	03	33	42.5	IS	33	57.1									D	13	143.4	14.6
MITO	1	IP	03	33	44.0	IS	34	00.3	117	0.4	183	0.6	50	0.6	S	2 E	1 D	10	154.1	16.3
CHOSHI	0	EP	03	33	48.5	S	34	07.6											189.4	19.1
OFUNAT	0	IP	03	33	50.0	IS	34	10.8	7	0.0	5	0.4	4	0.8	N	4	U	2	203.2	20.8
MIZUSA	0	EP	03	33	52.2	ES	34	17.0	10	0.5	10	0.5	6	1.2					219.6	24.8
UTSUNO	1	P	03	33	52.4	S	34	10.8	53	0.2	27	0.2							190.7	18.4
KUMAGA	0	EP	03	33	55.6	S	34	21.0	14	0.8	15	0.8	5	1.4					249.8	25.4
SAKATA	0	EX	03	33	56.7														255.0	
TOKYO	0	EP	03	33	57.4	ES	34	21.5	13		47		9	0.3					253.2	24.1
CHICHI	0	EP	03	33	59.0	S	34	26.6											282.0	27.6
MORIOK	0	P	03	33	59.2	ES	34	27.8	6	0.3	6	0.4	2	0.5	N	1 W	0 U	1	279.5	28.6
AKITA	0	EX	03	34	03.2				6	2.8	5	2.2	3	2.0					314.5	
MATSUS	0	IP	03	34	06.1	S	34	39							S		D		332.2	32.9
AJIRO	0	P	03	34	06.8	S	34	41.3	13	0.3	7	0.3	2	0.4					345.9	34.5
KOFU	0	EP	03	34	09.0	ES	34	40.4			9	1.2	3	1.0					341.2	31.4
NIIGAT	0	X	03	34	20.3				25	2.0	14	1.8							256.9	
YOKOHA	0	X	03	35	19	X	35	44	12	0.6	12	1.0							279.2	
KUSHIR	0	X	03	35	50.8				8	0.4	8	0.3	1	0.2					674.2	

OT= 17 23 31 54.8 +/- 0.5
OFF IWATE PREF
LAT= 39 17 +/- 1 LONG= 142 43 +/- 3
H= 60 MAG=5.2 CLASS=R

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MIYAKO	3	IP	23	32	12.2	IS	32	23	100	0.4						W	18 D	0	75.9	10.8
OFUNAT	3	IP	23	32	13.2	IS	32	24.0	234	0.0	173	0.0	128	0.0	N	19 E	34 D	71	89.7	10.8
MORIOK	3	IP	23	32	17.0	S	32	30.8	227	0.4	300	0.4	50	0.4	S	6 E	13 D	12	140.9	13.8
						EX	32	21.6												
MIZUSA	1	IP	23	32	17.3	IS	32	31.8	340	0.7	338	1.2	126	2.0		E	5 D	30	137.8	14.5

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ISHINO	2	IP	23 32 20.0	IS	32 35.2	410	0.2	335	0.2	110	0.2	N 3	E 1	D 2	155.3	15.2
HACHIN	3	IP	23 32 20.5	IS	32 37.6	276	2.0	232	2.0	111	2.0	S 3	E 3	D 2	171.4	17.1
SENDAI	1	EP	23 32 24.5	IS	32 43.8	69	2.0	95	1.5	33	1.0			D 1	194.5	19.3
AKITA	0	EP	23 32 26.9	ES	32 50.0	47	3.0	47	2.8	30	5.6				230.0	23.1
YAMAGA	0	EP	23 32 28.8	ES	32 48.2										235.3	19.4
AOMORI	1	EP	23 32 29.1	ES	32 53.1	131	0.9	177	0.9	50	1.1				237.1	24.0
SAKATA	X	P	23 32 31.6	IS	32 53.0	50	1.4	150	2.0	50	2.2			D 4	252.7	21.4
FUKUSH	2	IP	23 32 33.2	S	32 53.4	138	0.8	126	1.0	33	0.9	S 4	W 4	U 4	258.7	20.2
ONAHAM	1	IP	23 32 38.9	IS	33 08.0	45	1.1	67	1.6	15	0.8	S 4	W 2	U 8	304.2	29.1
HAKODA	0	IP	23 32 39.3	ES	33 10.1	18	0.5	23	0.6	7	1.8			U 1	326.3	30.8
URAKAW	0	EP	23 32 40.0	ES	33 14.8	28	0.6	26	0.6	9	3.0				319.3	34.8
SHIRAK	X	P	23 32 40.9	ES	33 11.7										324.6	30.8
HIROO	0	EP	23 32 43.2	IS	33 17.4										337.0	34.2
MITO	0	IP	23 32 47.4	S	33 24.0	37	0.3	42	0.4	11	0.6	N 1		D 1	378.1	36.6
OBIHIR	0	IP	23 32 51.8	S	33 33.5									U 2	406.1	41.7
UTSUNO	1	P	23 32 52.2	IS	33 31.8	43	0.1	28	0.2						393.4	39.6
CHOSHI	0	P	23 32 52.9	IS	33 36.1										428.2	43.2
SAPPOR	0	P	23 32 53.2	ES	33 35	6	2.0	5	2.4	3	1.0			U	435.1	41.8
KUSHIR	1	IP	23 32 54.5	IS	33 37.1	88	0.2	70	0.2	22	0.2	N 1	E 1	U 3	433.9	42.6
NIIGAT	0	X	23 32 56.0	S	33 15.0	45	2.3	35	2.5	15	2.8				353.8	
MAEBAS	0	EP	23 32 56.6	S	33 44.0	10	2.0	9	2.0	5	1.2			U 2	453.3	47.4
KUMAGA	0	P	23 32 57.0	ES	33 42.6	16	1.4	16	1.2	5	1.4			U 2	455.4	45.6
TAKADA	0	P	23 32 57.2	S	33 41.8										459.8	44.6
TOKYO	0	EP	23 32 59.2	ES	33 43.7	21	0.6	33	0.4	9	0.6				477.3	44.5
WAJIMA	0	X	23 32			8	1.4	9	1.4						550.2	
KARUIZ	0	EP	23 33 01.3	X	33 34.9										491.0	
MATSUS	0	IP	23 33 02.1	ES	33 52							S	W	D	499.8	49.9
ASAHIK	0	IP	23 33 02.7	ES	33 52.2	4	1.8	5	1.6	4	1.8	S	W		499.2	49.5
NEMURO	X	EP	23 33 03.7	ES	33 54.1	9	1.6	6	1.6	3	0.4				509.5	50.4
KOFU	0	EP	23 33 08.5	E	34 02.6			9	1.6	4	2.0				544.4	
TOMISA	0	P	23 33 08.7			8	4.4	7	4.0	5	3.0			D	547.9	
AJIRO	0	IP	23 33 10.2	S	34 05.4	11	0.3	7	0.3	2	0.4			U 0	569.7	55.2
MISHIM	0	EP	23 33 11.4	ES	34 04.6	7	0.6	7	0.6						571.9	53.2
YOKOHA	0	X	23 33 12.8	S	33 53.6	15	0.5	17	0.6						505.6	
NAGOYA	0	EP	23 33 26.4	ES	34 35.2	10	2.6	7	2.2	2	1.6				684.6	68.8
HACHIJ	0	X	23 33 30.6	EX	34 38.6										734.5	
FUNATS	0	X	23 33 46.0	S	34 01.9										546.6	
OSAKA	0	EX	23 33 48			7	4.8	6	3.2	3	2.0				819.9	
OSHIMA	0	X	23 34 09.0			11	0.4	9	1.0	7	0.4				582.9	

OT= 19 19 54 42.5 +/- 0.3
TSUGARU STRAIGHT
LAT= 41 45 +/- 2 LONG= 141 28 +/- 3
H=130 CLASS=U

HAKODA	0	IP	19 55 02.7	IS	55 17.5	6	0.6	6	0.8	2	0.8		E 0	D 1	59.3	14.8
URAKAW	0	IP	19 55 07.8	ES	55 26.4	29	1.2	38	0.4	5	0.6	S 2	W 1		118.0	18.6
HACHIN	0	EP	19 55 09.0	IS	55 27.5	12	0.4	14	0.4	1	0.2				136.1	18.5
HIROO	0	P	19 55 11.3	S	55 31.8										164.3	20.5
OBIHIR	0	IP	19 55 15.0	IS	55 37.8									D 3	194.5	22.8
KUSHIR	0	EX	19 55 25.1	IS	55 50.8	19	0.2	16	0.2	5	0.3				277.2	
AOMORI	0	X	19 55 29.0			16	0.5	14	0.9						118.4	
MATSUS	0	P	19 56 08												643.4	

OT= 19 21 14 19.1 +/- 0.5
OFF SANRIKU
LAT= 40 53 +/- 1 LONG= 143 40 +/- 4
H= 50 MAG=4.9 CLASS=U

HIROO	0	P	21 14 43.6	S	15 00.2										158.2	16.6
URAKAW	0	P	21 14 44.1	ES	15 02.8	46	2.6	65	2.6	35	2.4	N 1			159.8	18.7
HACHIN	0	P	21 14 46.8	S	15 00.3	11	0.8	12	0.6	9	3.2	N	W	U	185.3	13.5
MIYAKO	0	EP	21 14 49.7			11	2	6	2	9	3				199.4	
KUSHIR	0	IP	21 14 54.4	IS	15 18.8	25	0.2	20	0.2	10	2.6			U 2	240.4	24.4
OBIHIR	0	EX	21 14 55.1												229.2	
MORIOK	0	IP	21 14 56.2	IS	15 21.8	27	0.4	30	0.4	11	1.0	S 0	W 1	U 1	250.0	25.6
HAKODA	0	EP	21 14 57.3	ES	15 20.2	18	1.2	15	1.0	6	1.4			D	264.4	22.9
AOMORI	0	EP	21 14 57.3	ES	15 16.4	93	1.6	102	1.6						243.3	19.1
OFUNAT	0	IP	21 14 58.0	S	15 24.7	11	2.0	9	1.4	9	1.2	S 2	W 1	U 2	261.9	26.7
ABASHI	0	X	21 14	IS	15 44.0	25	0.2	20	0.2	10	2.6			U 2	351.8	
MIZUSA	0	EP	21 15 02.3	X	15 12.8	55	2.9	60	2.4	40	1.5		E 1		290.7	
ISHINO	0	EP	21 15 07.2	ES	15 46.0	10	1.6	10	2.0	8	2.0	S 1	W 1	U 1	340.0	38.8
SAPPOR	0	IP	21 15 07.5	ES	15 34.6	14	1.5	23	1.2	9	1.0			D 1	309.6	27.1
AKITA	0	EP	21 15 08.1			22	2.8	26	3.8	20	3.0				329.5	
ASAHIK	0	P	21 15 10.1	S	15 38.2	10	1.6	14	2.0	7	1.6	S 1	E		337.9	28.1
SENDAI	0	EP	21 15 11.9	ES	15 50.0	20	2.5	15	2.0	7	1.5			U 1	375.9	38.1

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
SAKATA	0	EX	21 15 12												394.5	
FUKUSH	0	EX	21 15 19.5			12	1.4	14	1.0	4	1.0				442.9	
ONAHAM	0	EX	21 15 26.4			12	1.7	12	0.9	5	1.6				498.4	
NIIGAT	0	EP	21 15 28.3	ES	16 34.0	26	4.0	30	3.8	9	4.0				516.6	65.7
MITO	0	P	21 15 35.5	ES	16 33.6	13	3.0	13	2.4	7	2.9				572.1	58.1
MATSUS	0	IP	21 15 49.8	X	17 18							S	W	U	676.5	
KUMAGA	0	EP	21 15 50.0	X	16 43.0	6	2.2	10	3.4	5	3.8				644.7	
WAJIMA	0	EX	21 15 52			5	1.0								701.7	
TOMISA	0	EP	21 15 59.0			7	2.2	8	2.4	5	2.8				742.7	
FUNATS	0	X	21 16 05.0	X	17 41.0										735.7	
TOKYO	0	X	21 16 07.6			10	3.6			6	3.4				670.5	
YOKOHA	0	X	21 16 11.1	IX	17 12.7			6	1.0						699.1	
OSAKA	0	X	21 16 52					5	3.9	3	2.6				994.9	

OT= 19 22 38 16.5 +/- 0.2
IBARAKI PREF
LAT= 36 17 +/- 1 LONG= 140 18 +/- 2
H=100 CLASS=S

MITO	2	IP	22 38 32.0	IS	38 42.3	177	0.6	141		63	1.0	N 2	E 2	D 7	18.7	10.3
UTSUNO	2	IP	22 38 33.0	IS	38 44.2					72	0.2	S 14	E 26	D 88	48.3	11.2
KUMAGA	0	IP	22 38 35.0	IS	38 49.0	78	0.8	43	0.6	27	0.6	N 2	E 4	D 32	83.6	14.0
CHOSHI	0	IP	22 38 35.6	IS	38 49.2										79.0	13.6
ONAHAM	2	IP	22 38 36.1	IS	38 49.3	95	1.2	115	1.2	45	0.6			D 13	91.3	13.2
SHIRAK	1	IP	22 38 36.5	IS	38 50.2							S 6		D 44	92.9	13.7
TOKYO	0	IP	22 38 37.2	IS	38 51.4	55		55		14					82.4	14.2
CHICHI	1	IP	22 38 37.9	S	38 52.9								E 3		114.3	15.0
MAEBAS	0	P	22 38 38.1	S	38 53.4	14	1.0	17	1.6	8	0.8		E 1	D 6	111.6	15.3
TOMISA	0	IP	22 38 42.8									S	W 1	D 1	157.1	
FUKUSH	1	IP	22 38 43.5	ES	39 02.5	53	0.9	63	1.0	20	0.5	S 13		D 11	164.2	19.0
FUNATS	0	IP	22 38 43.8	IS	39 03.5										163.8	19.7
KARUIZ	0	EP	22 38 44.1	S	39 03.4										157.1	19.3
AJIRO	1	IP	22 38 44.5	IS	39 04.8	47	0.3	29	0.3	11	0.4			D 0	175.5	20.3
YOKOHA	1	X	22 38 44.5	IS	38 57.2	73	0.7	75	0.7	16	0.4		E 3	D 2	110.5	
MISHIM	0	IP	22 38 44.9	IS	39 06.4	18	1.0	30	0.9	8	0.4			D 3	179.6	21.5
KOFU	0	IP	22 38 45.2	ES	39 07.9			36	0.5	8	0.8			D 3	171.4	22.7
MATSUS	0	IP	22 38 47.0	S	39 10							S	E	D	189.7	23.0
OSHIMA	1	P	22 38 47.3	S	39 07.4	63	0.4	62	0.8	25	0.4	S 2		D 5	188.3	20.1
TAKADA	0	P	22 38 49.1	S	39 11.9										204.6	22.8
YAMAGA	0	P	22 38 49.7	S	39 14.1									D 1	218.6	24.4
SENDAI	0	EP	22 38 50.0	ES	39 14.0	15	2.0	22	1.0	7	0.8			D 2	225.7	24.0
SHIZUO	0	P	22 38 51.4	S	39 17.9	11	0.4	16	0.6	5	0.6		E 1	D 1	224.8	26.5
NIIGAT	0	EP	22 38 52.6	IS	39 15.3	30	2.5	35	2.7	15	3.7				211.9	22.7
ISHINO	0	EP	22 38 53.0	ES	39 15.0	6	1.2	6	1.2	4	1.2	S	W	D 1	253.7	22.0
IIDA	0	EP	22 38 53.2	ES	39 18.8	10	2.0	7	1.0	5	1.0				238.5	25.6
AIKAWA	0	IP	22 38 55.0	IS	39 23.8	6	1.2	6	2.2			N	W	U	265.6	28.8
TOYAMA	0	EP	22 38 56	ES	39 29	9	2.2	10	2.4	8	2.0				280.9	33.0
WAJIMA	0	X	22 38			7	1.0	7	1.0						327.3	
OFUNAT	0	IP	22 39 02.0	IS	39 35.6	6	0.4	5	0.4	2	0.6	S 1		D 1	332.7	33.6
SAKATA	0	EP	22 39 02.4	ES	39 33.9										293.6	31.5
MIZUSA	0	IP	22 39 02.8	IS	39 35.9			22	0.5	14	1.3			D 3	324.7	33.1
NAGOYA	0	EP	22 39 03.0	S	39 39.2	10	1.2	6	1.2	3	1.2				325.9	36.2
HACHIJ	0	EP	22 39 06.4	IS	39 42.6	10		13		7					356.0	36.2
MORIOK	0	IP	22 39 09.0	IS	39 48.8	4	0.4	5	0.3	1	2.5	S 0	W 0	D 0	386.4	39.8
AKITA	0	EP	22 39 10.1	ES	39 50.2	7	2.8	7	2.6	3	2.2				381.6	40.1
TOYOOK	0	X	22 39 35.9	X	40 32.6	9	1.1	4	1.1						501.4	
OSAKA	0	X	22 39 53.0					5	2.2	3	2.7				468.6	
KUSHIR	0	X	22 41 15.2			7	0.2	7	0.4	2	0.2				822.0	

OT= 20 10 11 44.7 +/- 0.4
OFF NIIGATA PREF
LAT= 38 24 +/- 1 LONG= 139 10 +/- 2
H= 0 MAG=4.5 CLASS=U

NIIGAT	0	IP	10 11 58.5	IS	12 07.3	205	2.8	190	2.0	90	3.5			D 4	55.3	08.8
SAKATA	0	EP	10 12 01	S	12 13	50	2.0	80	2.4						80.8	12.0
AIKAWA	0	IP	10 12 02.3	IS	12 13.2	40	1.0	47	0.4	10	1.8	N 5	E 7	D 5	91.3	10.9
YAMAGA	0	EP	10 12 04.9	S	12 17.4										104.7	12.5
FUKUSH	0	EP	10 12 09.0	ES	12 26.0	26	1.0	27	1.1	9	5.0				135.2	17.0
TAKADA	0	EP	10 12 11.5	S	12 34.3										164.9	22.8
SENDAI	0	EP	10 12 12.0	ES	12 32.0	36	2.0	25	2.0	20	1		E 1	U 2	152.3	20.0
AKITA	0	EP	10 12 13.7	ES	12 34.8	20	3.2	19	2.0	12	2.4				167.2	21.1
SHIRAK	0	EP	10 12 14.5	S	12 35.2										170.1	20.7
ISHINO	0	P	10 12 17.2	IS	12 40.0	20	2.0	17	1.6	13	2.0	S 1	W 4	D 3	186.6	22.8
MIZUSA	0	EP	10 12 19.0	IS	12 43.9	30	1.9	28	1.4	28	2.2		W 3		189.3	24.9
UTSUNO	0	EX	10 12 20.1	EX	12 45.4	7	2.0	7	3.5	3	1.8				214.9	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	0	IP	10	12	20.4	S	12	46								W	U	223.3	25.6
MORIOK	0	P	10	12	20.9	ES	12	49.4	5	0.4	4	0.4	2	1.2	N	0 E	0 U	0	225.3	28.5
WAJIMA	0	EX	10	12	22				20	0.8	17	1.0							228.8	
OFUNAT	0	EP	10	12	22.4	IS	12	51.6	7	1.2	4	1.0	4	1.0					233.7	29.2
MAEBAS	0	EP	10	12	24.0	ES	12	49.4	7	2.3	11	3.9	5	1.2			U	2	221.9	25.4
ONAHAM	0	EP	10	12	24.6	IS	12	51.0	18	1.1	23	1.2	12	1.5					222.8	26.4
MITO	0	EP	10	12	25.8	ES	12	47.2	18	4.0	11	2.8	7	2.4					252.3	21.4
KUMAGA	0	EP	10	12	30.4	ES	13	03.6	10	2.4	8	3.0	4	4.0					250.8	33.2
TOYAMA	0	X	10	12	35	ES	13	07	5	2.6	5	2.6	5	3.8					255.4	
AOMORI	0	X	10	12	44				9	1.6	11	1.6							302.1	
YOKOHA	0	X	10	12	50.0				6	4.1	6	2.5							331.7	
TOKYO	0	X	10	13	04				11	4.4	5	4.3	8	4.0					305.8	
OSAKA	0	X	10	14	31.0				5	4.1	6	4.0							527.9	

OT= 22 2 18 30.9 +/- 0.3
SE OF HOKKAIDO
LAT= 42 11 +/- 2 LONG= 143 6 +/- 2
H= 50 MAG=4.3 CLASS=L

HIROO	1	IP	02	18	39.0	IS	18	46.7								E	8	21.1	07.7
URAKAW	2	IP	02	18	41.6	IS	18	49.4	104	0.6	279	0.4	177	2.0		W	U	26.6	07.8
OBIHIR	1	P	02	18	45.5	IS	18	55.6										82.5	10.1
KUSHIR	0	IP	02	18	53.2	IS	19	08.7	46	0.8	30	0.6	12	0.8		E	1 U	1	138.2	15.5
SAPPOR	0	IP	02	18	56.6	S	19	15.8	14	0.4	10	0.4	6	0.2			D	1	174.7	19.2
ASAHIK	0	P	02	18	59.5	S	19	19.8	5	1.2	7	1.6	4	0.7	N				186.0	20.3
HAKODA	0	IP	02	19	01.2	ES	19	22	6	0.3	11	0.5	4	2.4		W	U	1	198.3	20.8
HACHIN	0	EP	02	19	04.4	ES	19	29.3	7	0.4	5	0.4							226.5	24.9
ABASHI	0	P	02	19	04.9	S	19	27.8	7	1.2	4	1.4	2	1.2					225.3	22.9
AOMORI	0	X	02	19	35				9	0.7	9	0.7							245.9	
MATSUS	0	P	02	20	10														755.0	

OT= 23 1 31 10.1 +/- 2.5
OFF FUKUSHIMA PREF
LAT= 37 43 +/- 5 LONG= 141 37 +/-10
H= 0 MAG=3.9 CLASS=U

ISHINO	0	P	01	31	26.0	IS	31	34.8	11	1.0	9	0.6	4	1.0					83.3	08.8
SENDAI	0	EP	01	31	28.0	IS	31	38.8	10	0.6	16	1.2	9	1.4					87.2	10.8
FUKUSH	0	P	01	31	30.5	ES	31	44.0	37	0.9	19	0.8	8	1.2	N	0 E	5 D	3	100.7	13.5
MIZUSA	0	EP	01	31	42.4	ES	32	05.1			5	1.8	4	0.8					162.8	22.7
ONAHAM	0	X	01	31	43.0				15	1.1	12	1.1	4	0.6					106.3	
MATSUS	0	P	01	32	00	ES	32	48											329.8	48.0

OT= 24 3 49 49.1 +/- 0.8
E OFF CHIBA PREF
LAT= 35 34 +/- 2 LONG= 141 16 +/- 3
H= 20 MAG=4.3 CLASS=L

CHOSHI	2	IP	03	49	57.8	IS	50	02.8	504	0.3	364	0.3			N	22 W	6 U	50	42.2	05.0
MITO	0	IP	03	50	08.7	IS	50	22.4	33	0.4	22	0.4	11	0.6			D	1	115.1	13.7
TOMISA	0	IP	03	50	11.2				10	2.0	13	2.4	8	2.2			U	1	149.2	
TOKYO	0	EP	03	50	12.6	ES	50	27.0	12	0.6	10	0.4							137.2	14.4
YOKOHA	0	IP	03	50	14.0	IS	50	30.5	26	0.6	23	0.6	9	1.0			D	5	146.9	16.5
UTSUNO	0	P	03	50	15.7	S	50	36.8	14	1.0	11	1.9							166.2	21.1
OSHIMA	0	P	03	50	17.2				6	0.4	8	0.4	3	0.3					193.8	
KUMAGA	0	EP	03	50	20.0	ES	50	40.0	6	3.0	6	1.4	3	2.2					181.7	20.0
ONAHAM	0	X	03	50	22.8	X	50	48.8	16	1.0	20	1.2	5	1.3					156.3	
KOFU	0	EP	03	50	26.9				6	1.0	4	1.6	2	1.0					245.6	
FUKUSH	0	EP	03	50	28.2	ES	51	03.5	10	0.9	12	0.9	5	0.9					253.1	35.3
MATSUS	0	IP	03	50	31.7												U		295.8	
MIZUSA	0	X	03	51	02.0						3	2.8							396.0	

OT= 24 12 21 17.0 +/- 1.3
S OFF ETOROFU IS
LAT= 43 16 +/- 5 LONG= 147 40 +/- 7
H= 70 CLASS=R

NEMURO	1	IP	12	21	43.3	S	22	01.4	91	1.2	37	0.9	30	1.2	N	8 E	7 D	12	169.0	18.1
KUSHIR	0	IP	12	21	56.3	S	22	23.0	47	1.2	50	0.4	20	0.5	N	2 E	3 D	3	268.2	26.7
ABASHI	0	IP	12	21	57.4	S	22	24.8	22	1.4	16	1.6	3	1.6	S	4 E	6 D	2	285.5	27.4

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STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OBIHIR	0	IP	12	22	09.2	ES	22	47.2									D 3	364.0	38.0
HIROO	0	IP	12	22	11.1	ES	22	44.2									D 7	372.4	33.1
URAKAW	0	IP	12	22	16.2	ES	23	00.0	43	1.0	22	1.0	11	2.6	S	E	D	418.8	43.8
ASAHIK	0	P	12	22	17.5				7	1.8	8	1.7	5	1.3				431.6	
SAPPOR	0	P	12	22	27.6	ES	23	19	10	1.8	9	2.2	5	1.2				515.7	51.4
WAKKAN	0	IP	12	22	29.8	EX	23	24.6			4	1.8	10	1.4		E	D 5	534.2	
HAKODA	0	P	12	22	36.5	S	23	33.8	6	1.8	6	1.4	3	2.0		E	D	589.9	57.3
HACHIN	1	EP	12	22	37.0	S	23	33.5	22	0.4	23	0.4	4	1.0			U	593.6	56.5
OFUNAT	0	EP	12	22	48.8	S	23	53.8	7	1.0	7	1.4	9	1.6				683.3	65.0
MORIOK	0	EP	12	22	50.0	S	23	51.2	9	0.4	14	0.6	4	1.6				671.9	61.2
FUKUSH	0	X	12	23	18.0	S	24	34.0	13	1.0	8	1.0	3	0.8				863.0	
SENDAI	0	EX	12	23	25.0	ES	24	18.6	10	4.0	6	2.0	4	1.6				796.8	
MITO	0	EP	12	23	26.5	ES	25	00.6	7	1.6	5	1.6	3	2.4				981.2	94.1
MATSUS	0	IP	12	23	40.0	S	25	28							S	W	U	1099.7	108.0
AOMORI	0	X	12	23	46.3				27	1.6	28	1.1	12	1.1				631.4	
MIZUSA	0	X	12	23	53.0	X	25	00.0	25	1.4	34	1.2	28	1.4				714.5	
AKITA	0	X	12	24	10				8	2.0	8	2.0	5	2.2				744.2	
ONAHAM	0	X	12	24	42.5				10	1.3	8	1.4	5	2.1				907.6	

OT= 25 2 19 58.8 +/- 0.2
KII CHANNEL
LAT= 33 49 +/- 1 LONG= 135 0 +/- 1
H= 10 MAG=4.4 CLASS=L

WAKAYA	0	IP	02	20	08.5	IS	20	13.8	500	0.3	144	0.3						48.0	05.3
TOKUSH	0	EP	02	20	10.3	IS	20	15.4										47.8	05.1
SUMOTO	0	IP	02	20	10.5	S	20	16.7	16	0.2	12	0.3	6	0.6	N	2 E	0 U	2	58.1	06.2
TURUGI	0	P	02	20	14.6	S	20	25.2											83.7	10.6
SHIONO	1	EP	02	20	15	IS	20	25.0	16	0.4	39	0.4							81.7	10.0
KOBE	0	EP	02	20	17.6	ES	20	29.4											98.1	11.8
MUROTO	0	IP	02	20	17.8	IS	20	30.3	23	1.0	17	1.0	6	2.2	N	1 W	0 U	1	99.0	12.5
TAKAMA	0	EP	02	20	18.4	IS	20	30.4	18	1.1	14	1.2	10	0.6					103.1	12.0
OWASE	0	IP	02	20	18.6	IS	20	33.4	19	0.4	10		5	0.4	N	E	1 U	1	113.9	14.8
OSAKA	0	IP	02	20	19.0	IS	20	31.0	33	2.0	27	1.6	15	2.0			U	1	104.7	12.0
OKAYAM	0	IP	02	20	22.0	IS	20	38.0	30	0.6	50	0.5	10	0.6	N	E	U		138.5	16.0
NARA	0	EP	02	20	22.5	S	20	37.0											123.0	14.5
KOCHI	0	IP	02	20	22.8	IS	20	42.2											139.1	19.4
KYOTO	0	EP	02	20	26.0	ES	20	40.8			7	1.4	3	1.4					148.7	14.8
TOYOOK	0	EP	02	20	32.8	ES	20	54.6	23	1.1	20	1.2							191.5	21.8
HIKONE	0	P	02	20	33.7	ES	20	53.5	16	1.3	18	1.2	4	1.5					197.9	19.8
GIFU	0	EP	02	20	39.7				8	1.0	8	1.0							238.7	
IIDA	0	X	02	20	54.0														320.5	
MATSUS	0	X	02	21	10	ES	21	58											420.1	
FUKUI	0	X	02	21	16.0														272.2	
TOYAMA	0	X	02	21	44				4	2.0	6	4.0	3	2.4					378.3	

OT= 25 8 26 26.0 +/- 0.2
AICHI-SHIZUOKA BORDER
LAT= 35 3 +/- 1 LONG= 137 46 +/- 1
H= 0 MAG=4.0 CLASS=L

HAMAMA	0	IP	08	26	35.5	IS	26	40.7	25	0.6	30	0.6	14	0.4	S	2 E	1 U	21	38.1	05.2
IIDA	0	IP	08	26	37.8	IS	26	44.0	29	0.8	17	1.0	13	0.8	N	2	U	5	51.4	06.2
SHIZUO	0	IP	08	26	39.0	S	26	46.2	11	0.4	8	0.4	5	1.4		W	4 D	2	59.0	07.2
OMAEZA	0	EP	08	26	40.9	S	26	49.3	20	0.7	26	0.7							64.2	08.4
NAGOYA	0	IP	08	26	42.0	S	26	51.0	37	0.2	19	0.4	10	0.2	S	1 E	1 D	8	73.9	09.0
GIFU	0	P	08	26	45.0	S	26	57.3	31	0.4	21	0.6	13	0.7					99.0	12.3
FUNATS	0	P	08	26	46.0	S	26	59.5											103.4	13.5
KOFU	0	EP	08	26	48.0	ES	26	57.9	16	0.7	14	0.8	7	1.0					99.1	09.9
AJIRO	0	IP	08	26	48.5	IS	27	02.8	15	0.3	12	0.3	3	0.4	N	0 W	0 D	0	121.3	14.3
MISHIM	0	EP	08	26	48.9	IS	26	59.0	10	0.4	18	0.4	3	0.2					106.3	10.1
MATSUM	0	EP	08	26	51.6	IS	27	07.8											133.7	16.2
HIKONE	0	P	08	26	53.1	IS	27	08.9	49	1.0	32	1.0	14	1.0					140.6	15.8
MATSUS	0	IP	08	26	56.1	S	27	16							N		U		169.9	19.9
TSURUG	0	EP	08	26	56.6	S	27	15.8											168.4	19.2
KUMAGA	0	EP	08	26	58.4	ES	27	24.4	5	0.8	3	0.8	2	1.0					190.5	26.0
KYOTO	0	EP	08	26	59.0	ES	27	22.6			5	0.4	2	0.6					185.4	23.6
NARA	0	EP	08	26	59.2														181.3	
TOYAMA	0	EP	08	27	02	ES	27	24	10	1.8	8	1.4	5	1.6					190.6	22.0
OSAKA	0	EP	08	27	04.8				8	2.6	9	1.3	4	1.3					208.5	
FUKUI	0	X	08	27	14.1														178.5	
TOYOOK	0	X	08	27	17.0	ES	27	44.6	9	1.0	7	1.2							273.3	
KAGOSH	0	X	08	27		X	29	27.2	10	2.5	14	2.7	4	1.2					773.9	
YOKOHA	0	X	08	28	02.9	IX	28	21.5	9	0.5	11	0.4							177.1	

OT= 26 9 36 42.1 USCGS
CAROLINE IS
LAT= 12 12 LONG= 140 42
H= 33 MAG=6.1 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
SAGA	0	EP	09 40 24												2557.5	
NAHA	0	P	09 40 59.0	S	44 40.0	19	7.2	35	8.0	38	8.0	N	W	U	2065.0	221.0
OMAEZA	0	EX	09 41			32	6.7	23	6.4	8	6.9				2492.0	
HACHIJ	0	IX	09 41 19.8												2314.6	
YAKUSH	0	IP	09 41 21.3	EX	45 14.0	27	6.4	13	6.0	14	5.4	N 1	W 1	U 1	2276.0	
MIYAZA	0	EP	09 41 31.2	S	45 32.6	29	7.6	21	9.0	15	5.4				2378.9	241.4
SHIONO	0	EP	09 41 32.9	IS	45 35.2	35	8.0	16	8.0	3	1.4				2404.1	242.3
ASHIZU	0	EP	09 41 33.9	S	45 36.8	26	7.6	6	6.0	14	7.0				2401.5	242.9
MUROTO	0	IP	09 41 34.6	S	45 38.6	30	7.2	21	7.6	21	5.2	N	0 W	0 U 0	2421.7	244.0
				IX	43 08.7											
				EL	48 32.7											
KAGOSH	0	EP	09 41 38.0	IS	45 37.0	40	1.9	32	3.6	14	1.8				2382.3	239.0
OWASE	0	IP	09 41 38.1	S	45 45.0	19	7.7	10	6.4	15	6.6	S 2	E	D 2	2462.4	246.9
TURUGI	0	P	09 41 40.9	S	45 55.7										2487.8	254.8
OSHIMA	0	P	09 41 41.3	ES	45 40.1	15	8.0	20	6.0	5	2.0				2500.4	238.8
TOMISA	0	X	09 41 41.8			35	6.8	28	6.4	12	7.0				2515.9	
AJIRO	0	E	09 41 42.6	E	45 49.8	17	7.7	13	6.5	10	6.1				2533.2	
HAMAMA	0	P	09 41 43.0	ES	45 40	13	7.4	14	5.0	12	5.4			D 1	2509.0	237.0
SUMOTO	0	P	09 41 43.5	S	45 50.0	23	7.8	13	7.0	14	7.4	N	0 W	0 U 0	2518.7	246.5
				EX	41 52.6											
WAKAYA	0	P	09 41 43.6	S	45 49.2	24	8.7	16	8.2						2501.1	245.6
NAGASA	0	EP	09 41 44.0	S	45 54.0							N	W	U	2524.3	250.0
MISHIM	0	EP	09 41 44.3	ES	45 48.8	22	7.7	18	7.4	7	7.5				2541.9	244.5
				EL	46 57.9											
KUMAMO	0	EP	09 41 44.3	ES	45 53.2	30	7.8	16	8.3	5	5.6				2497.5	248.9
TAKAMA	0	EP	09 41 44.4	IS	45 58.7	24	7.3	8	8.2	2					2538.1	254.3
MATSUY	0	EP	09 41 45.6	IS	45 59.5	38	7.0	15	8.3	9	5.3				2525.8	253.9
SHIZUO	0	P	09 41 46.2	S	45 51.6	9	7.2	8	7.2	11	8.0	N 1	W 1	U 4	2530.9	245.4
YOKOHA	0	EP	09 41 46.9	EX	42 01.3	12	9.2	12	12.5	9	5.6				2573.8	
OSAKA	0	P	09 41 47.0	S	45 58.2	102	5.6	58	4.7	20	6.0			D 4	2538.4	251.2
GIFU	0	EX	09 41 47			22	7.2	12	6.6						2597.8	
FUKUE	0	EP	09 41 47.6	S	46 02.0	16	7.4	14	8.4	12	7.6				2570.9	254.4
KYOTO	0	EP	09 41 48.2	ES	45 57.0			7	7.4	6	6.0				2573.8	248.8
OITA	0	P	09 41 48.4	IS	45 58.2	149	7.8	74	6.8	39	4.3	N 4	W 6	U	2503.9	249.8
IIDA	0	E	09 41 48.6												2595.9	
FUKUOK	0	EP	09 41 49.0	ES	45 58.0	11	8.8	4	8.0	7	7.4				2587.6	249.0
HIROSH	0	EP	09 41 49.8	ES	46 05.6	33	8.0	17	7.9	8	6.8				2591.3	255.8
OKAYAM	0	IP	09 41 50.0	ES	46 07.0	20	6.0	18	7.2	20	6.0	S		D	2580.7	257.0
KOFU	0	EP	09 41 50.9	ES	46 03.8	13	8.0	5	7.0	12	5.0				2605.9	252.9
CHOSHI	0	P	09 41 51.0	S	46 03.2										2603.7	252.2
				LX	51 04.0											
SHIMON	0	EP	09 41 51	ES	46 00	24	8.0	8	7.4	20	6.6				2602.6	249.0
TOKYO	0	IP	09 41 52.0	ES	45 40.0	29	5.0	29	6.4	18	6.0				2600.9	228.0
NAGOYA	0	EP	09 41 52.2	ES	46 02.4	17	6.0			9	6.0	S 1	E 1	D 1	2569.2	250.2
KUMAGA	0	P	09 41 55.4	ES	46 10.6	26	7.2	25	7.2	16	6.6			U 2	2653.7	255.2
HAMADA	0	EP	09 41 55.4	ES	46 12.0	12	8.0	8	6.8	8	6.6				2658.1	256.6
MITO	0	IP	09 41 56.2	IS	46 13.4	63	6.7	74	6.3	23	5.4			U 1	2676.2	257.2
TOYOOK	0	P	09 41 56.3	IX	46 09.7	16	14.0	7	7.3	5	7.4	S	E	D	2649.7	
UTSUNO	0	EX	09 41 56.9	EX	46 16.9	9	7.5	16	5.8	6	1.4				2696.1	
MATSUS	0	P	09 41 57.0	S	46 12							S		D	2705.4	255.0
FUNATS	0	X	09 41 57.4	ES	45 54.8										2585.9	
MAEBAS	0	EP	09 41 59.0			20	8.2	17	7.2	11	3.8				2683.7	
TOYAMA	0	P	09 42 02.2	S	46 42.0	17	6.4	25	6.8	15	4.2				2735.0	279.8
ONAHAM	0	EP	09 42 03.1	S	46 28.4	16	9.3	26	7.8	20	8.0				2739.1	265.3
SAIGO	0	P	09 42 03.4	S	46 23.0	10	6.4	6	7.2	10	2.6	N	0 W	0 U 0	2757.7	259.6
TAKADA	0	EP	09 42 04.3												2767.6	
WAJIMA	0	EX	09 42 10	X	46 42	8	7.0	10	7.0	6	7.0				2814.0	
FUKUSH	0	P	09 42 12.5	S	46 42.6	13	6.0	13	8.0	17	6.6	S	3 W	0 D 3	2829.2	270.1
AIKAWA	0	EP	09 42 12.5					7	10.0	5	10.4	N	0 W	0 U 1	2868.7	
NIIGAT	0	IX	09 42 12.5			53	7.7	53	6.6	25	4.3				2850.8	
SENDAI	0	EP	09 42 13.2	S	46 46.7	17	8.0	15	6.4	9	6.0				2885.0	273.5
ISHINO	0	EX	09 42 16.1	EX	47 01.5	13	7.6	8	7.0	16	7.6				2903.9	
OFUNAT	0	EP	09 42 20.1	S	46 56.2	11	7.6	5	8.0	3	7.2				2975.6	276.1
SAKATA	0	EP	09 42 21.8	EX	47 07.8										2957.6	
MORIOK	0	EP	09 42 26.5	ES	47 05.2	5	7.2	7	7.0	5	8.0				3044.8	278.7
AKITA	0	EX	09 42 30	EX	47 28	28	6.0	20	7.0	12	7.4				3047.4	
HACHIN	0	EP	09 42 33.5	ES	47 22.0	6	7.0	5	7.6	8	4.0				3137.4	288.5
AOMORI	0	EX	09 42 38.4			10	8.1	7	9.2						3168.8	
HAKODA	0	EP	09 42 45	ES	47 42	4	9.0	4	8.0	5	7.2				3279.5	297.0
URAKAW	0	EP	09 42 49.5	S	47 40.0	8	8.0	5	10.0	4	7.0				3323.9	290.5
KUSHIR	0	EP	09 42 57.2	ES	47 57.8	4	7.6	6	8.4	3	4.4				3427.5	300.6
KANAZA	0	EX	09 43 00.0	ES	46 33.2	21	7.0	21	7.0	14	6.1				2725.2	

International Seismological Centre From the ISC collection scanned by SISMOS

OT= 27 17 26 8.9 +/- 0.2
KII CHANNEL
LAT= 33 49 +/- 1 LONG= 134 59 +/- 1
H= 10 MAG=4.3 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
WAKAYA	1	P	17 26 19.2	IS	26 22.5	51	0.1	72	0.1						48.5	03.3
SUMOTO	0	P	17 26 19.9	IS	26 26.6	18	0.4	8	0.4	4	0.7	N 1		U 1	57.9	06.7
TOKUSH	1	IP	17 26 20.2	IS	26 25.3	80	0.1	70	0.1	32	0.1	2	1	7	46.6	05.1
TURUGI	0	IP	17 26 24.2	S	26 33.8										82.1	09.6
SHIONO	0	P	17 26 25.0	IS	26 34.6	16	1.0	14	1.0	16	1.0	N	W 1	D 3	83.1	09.6
KOBE	0	EP	17 26 27.6	ES	26 40.6										98.3	13.0
MUROTO	0	IP	17 26 27.8	IS	26 40.3	22	0.8	21	0.9	8	0.5	N 0	E 0	D 1	97.8	12.5
TAKAMA	0	IP	17 26 28.1	IS	26 40.0	30	0.9	33	1.0						101.8	11.9
OSAKA	0	P	17 26 28.2	S	26 40.8	41	2.8	39	1.2	18	1.8				105.4	12.6
OWASE	0	IP	17 26 29.8	IS	26 42.4	13	0.2	8	0.4	6	1.0	N 1	W 1	D 1	115.4	12.6
NARA	0	IP	17 26 31.6	ES	26 47.0									U 2	123.9	15.4
OKAYAM	0	IP	17 26 32.4	IS	26 48.0	90	0.4	100	0.5	20	0.5	N	W	U	137.4	15.6
KYOTO	0	EP	17 26 33.6	ES	26 51.7			6	1.2	3	0.8				149.4	18.1
KOCHI	0	IP	17 26 34.0	IS	26 48.8										137.6	14.8
TOYOOK	0	EP	17 26 44.7	ES	27 05.1	21	1.4	27	1.1						191.3	20.4
NAGOYA	0	X	17 26 52.8	S	27 19.2	8	0.8	9	0.6	2	0.8				235.7	
TSU	0	X	17 26 56.2	X	27 16.2										172.1	
SAIGO	0	X	17 27 01.0	ES	27 36.0	4	1.0	6	1.4	2	0.8	S 0	W 0	U 1	304.7	
OITA	0	X	17 27 08.2	EX	27 42.2	7	2.6	7	2.0						318.6	
MATSUS	0	X	17 27 22	S	28 02										421.1	

OT= 29 18 9 23.6 +/- 1.6
E OFF CHIBA PREF
LAT= 35 25 +/- 5 LONG= 141 27 +/- 7
H= 60 MAG=4.2 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHOSHI	0	IP	18 09 38.8	IS	09 44.0										64.8	05.2
MITO	0	EP	18 09 46.4	ES	09 57.5	14	1.2	12	1.1	4	1.1				138.5	11.1
TOKYO	0	IP	18 09 47.7	S	10 06.1	12	0.6	9	0.6	4	0.8				156.2	18.4
YOKOHA	0	EP	18 09 50.7	IS	10 07.9	31	0.4	25	0.4						163.0	17.2
KUMAGA	0	EP	18 09 55.0	ES	10 13.2	6	0.8	6	0.8	2	1.8				203.5	18.2
AJIRO	0	IP	18 09 55.1	S	10 16.8	8	0.3	5	0.3	2	0.4			D 0	218.1	21.7
MATSUS	0	IP	18 10 07.0										E	D	317.7	
ONAHAM	0	X	18 10 10.1			6	1.1	9	1.2	3	0.5				176.5	

OT= 30 11 6 10.0 +/- 0.3
MIDDLE OF CHIBA PREF
LAT= 35 33 +/- 1 LONG= 140 11 +/- 2
H= 70 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOKYO	2	IP	11 06 23.4	ES	06 32.2	435		418		105		N 2	W 1	U 2	41.3	08.8
YOKOHA	2	IP	11 06 24.3	IS	06 33.2	500	0.6	500	0.4	155	0.4	N 7	E 4	D 36	49.6	08.9
CHOSHI	1	IP	11 06 26.4	S	06 40.4	106	0.6	144	0.4	53	0.4	N 2	E 12	U 20	62.8	14.0
TOMISA	1	IP	11 06 26.8	IS	06 37.6	98	1.0	126	1.0	41	1.0	S 5	W 3	D 3	77.0	10.8
KUMAGA	1	IP	11 06 28.4	S	06 40.4	118	1.2	105	1.4	50	1.4	S 3	E 2	D 9	97.9	12.0
MITO	1	IP	11 06 28.4	IS	06 40.4	90	1.4	104	1.1	39	1.0	N 2		U 8	95.5	12.0
UTSUNO	2	P	11 06 28.9	IS	06 41.7	66	0.2	66	0.2	37	0.4				114.1	12.8
AJIRO	2	IP	11 06 29.0	IS	06 41.6	144	0.4	148	0.4	44	0.4	N 8	E 9	D 27	113.7	12.6
CHICHI	0	IP	11 06 29.1	S	06 42.6	100	1.4	150	1.2	100	2.0	S 3	E 8		111.0	13.5
MISHIM	0	IP	11 06 29.2	IS	06 43.3	71	1.0	69	0.9	22	1.1	N	E 4	D 13	123.9	14.1
OSHIMA	2	IP	11 06 29.7	IS	06 42.1	300		92		75	0.3				114.1	12.4
FUNATS	2	IP	11 06 31.3	IS	06 44.8										128.9	13.5
MAEBAS	0	IP	11 06 32.8	S	06 47.9	29	1.0	32	1.2	24	1.3			D 8	138.2	15.1
KOFU	1	IP	11 06 33.3	IS	06 48.4	53	0.4	51	0.5	14	1.0	S 9	E 6	D 16	147.8	15.1
SHIRAK	0	EP	11 06 36.8	ES	06 51.3										174.0	14.5
SHIZUO	0	IP	11 06 36.9	IS	06 56.4	29	1.0	41	1.0	18	0.6	N 3	E 13	D 17	173.8	19.5
ONAHAM	0	IP	11 06 37.4	IS	06 54.4	40	1.0	56	1.2	17	0.8			D 3	167.9	17.0
KARUIZ	0	IP	11 06 37.6	IS	06 55.9							S	E	D 3	171.3	18.3
OMAEZA	0	EP	11 06 38.8			10	1.6	15	1.6	8	1.6				208.1	
MATSUS	0	IP	11 06 40.6	S	07 04							S	E	D	209.0	23.4
IIDA	0	IP	11 06 42.4	ES	07 08.4	9	1.6	11	1.2	5	1.0		E 7	D 5	213.0	26.0
MATSUM	0	P	11 06 42.5	S	07 05.9										213.8	23.4
TAKADA	0	EP	11 06 43.2	S	07 08.3										244.7	25.1
HAMAMA	0	EP	11 06 46	S	07 09.9	10	2.4	10	2.4	5	1.4				242.8	23.9
FUKUSH	0	EP	11 06 48.2	ES	07 12.0	23	1.1	22	1.0	10	0.7				246.2	23.8
HACHIJ	0	EP	11 06 50.9	ES	07 18.5	10		22		9					273.9	27.6
GIFU	0	EP	11 06 51.6			9	1.5	6	1.1						310.6	
NAGOYA	0	EP	11 06 52.0	S	07 20.0	14	1.2	12	1.2	8	1.2				295.2	28.0
TOYAMA	0	P	11 06 53.4	ES	07 25	8	2.8	11	2.6						296.9	31.6
SENDAI	0	EP	11 06 54.4	ES	07 26.2	13	2.8	12	1.6	5	1.2				307.4	31.8

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S * S	N-S A/T * S	E-W * S	E-W A/T * S	U-D * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KANAZA	0	EP	11 06 54.5	ES	07 26.9	5	1.8	6	2.1	5	2.0				337.1	32.4
ISHINO	0	IP	11 06 56.9	ES	07 30.6	6	1.0	6	1.2	1	1.2	N	0 E	0 D 0	334.2	33.7
HIKONE	0	EP	11 07 01.5	ES	07 36.0	13	1.2	11	1.2						358.8	34.5
TSU	0	EP	11 07 01.7												347.0	
SAKATA	0	EX	11 07 05.7												373.4	
MIZUSA	0	EP	11 07 08.0	ES	07 51.4			11	2.0	6	1.4				406.4	43.4
NIIGAT	0	X	11 07 09.2			25	2.0	27	2.7	15	2.5				280.7	
OSAKA	0	X	11 07 16.8			13	2.9	13	2.7	9	1.8				435.0	
AKITA	0	EX	11 07 17			5	2.6	5	2.6	3	2.2				462.6	
OT= 30 13 22 1.5 CHINA LAT= 31 42 LONG= 100 18 H= 3 MAG=6.1 CLASS=U						USCGS										
OMAEZA	0	EX	13 27			26	13.5	26	11.1	8	11.5				3530.0	
FUKUE	0	P	13 27 20.6	ES	31 47.2	19	7.6	12	7.4	12	4.4		W 2 D	2	2683.5	266.6
NAHA	0	EP	13 27 24	ES	32 03	44	13.0	30	13.0	34	12.0				2727.7	279.0
AIKAWA	0	EX	13 27 28.0			10	11.8	10	13.8	10	12.2			D 2	3513.8	
NAGASA	0	P	13 27 30.0	ES	31 46.0							S	2 W	D 2	2780.1	256.0
KANAZA	0	EX	13 27 30	ES	33 20.0	18	10.0	14	11.2	6	12.0				3374.9	
FUKUOK	0	EP	13 27 32.8	ES	32 00.0	15	8.0	6	6.1	9	9.8		W 1 U	3	2819.3	267.2
KAGOSH	0	EP	13 27 34.6	EX	35 59.7	27	3.5	30	3.5	13	12.6				2859.5	
YAKUSH	0	EP	13 27 35.6	X	32 24.4	18	13.4	18	5.4	16	13.8				2874.6	
SAGA	0	EP	13 27 36.0	ES	32 14.3										2815.2	278.3
SHIMON	0	EP	13 27 36			16	6.0	14	8.8	16	8.2				2868.4	
KUMAMO	0	EP	13 27 37.2	ES	32 18.7	18	8.0	28	9.0	11	9.2				2857.3	281.5
HIROSH	0	EP	13 27 39.4	ES	32 20.8	11	10.0	12	12.0	9	8.4				3003.3	281.4
MIYAZA	0	EP	13 27 41.2	S	32 38.4	25	12.8	27	12.0	18	11.2				2936.0	297.2
OITA	0	EP	13 27 44.3	ES	32 26.0	63	8.1	49	6.9						2937.7	281.7
HAMADA	0	P	13 27 44.6	ES	32 24.8	12	5.3	7	9.9	7	4.8		W 1 D	2	2967.1	280.2
				EX	37 01.0											
SAIGO	0	EP	13 27 52.3	EX	33 03.2	11	5.4	11	10.2	9	5.0	N	0 E	0 U 0	3078.1	
				EX	37 43.1											
				EL	40 05											
ASHIZU	0	EP	13 27 53.5	X	36 50.0	17	13.0	6	10.2	9	14.0				3073.2	
OKAYAM	0	EP	13 27 57.5	ES	32 50.0	15	4.0	20	10.0	35	10.0				3136.6	292.5
TAKAMA	0	EP	13 27 59.5	ES	32 51.5	9	14.2	12	10.0						3152.4	292.0
MATSUY	0	EP	13 28 00.0	ES	32 54.0	13	10.1	7	9.0	7	15.0				3038.9	294.0
TOMISA	0	EX	13 28			21	6.0	18	5.6	11	5.6				3673.6	
MUROTO	0	EP	13 28 01.9	X	29 13.2	16	8.6	39	6.0	15	8.0				3174.3	
				ES	32 44.0											
				EL	37 22.0											
TOYOOK	0	EP	13 28 04.4	ES	32 55.8	16	9.0	10	11.4						3214.1	291.4
SUMOTO	0	P	13 28 05.0	ES	32 53.0	11	12.0	10	7.0	9	12.5		W 0 D	0	3230.3	288.0
				EL	34 42											
HAMAMA	0	EP	13 28 10			13	8.0	9	5.8	9	7.6				3484.2	
OSAKA	0	EX	13 28 10	EX	38 39	54	5.6	57	5.2	16	5.8				3285.2	
KYOTO	0	EP	13 28 12.6	EX	34 11.6	13	10.4	6	11.0	6	10.0				3300.3	
SHIONO	0	EP	13 28 13.6	ES	33 15.6	10	12.0	13	11.2						3318.5	302.0
				EX	38 39.1											
				ELR	42 31.0											
WAKAYA	0	P	13 28 14.5	S	33 19.3	10	10.8	16	6.4	11	9.6				3254.9	304.8
OWASE	0	P	13 28 16.4												3351.0	
NAGOYA	0	EP	13 28 18.0			10	10.8	8	9.0	9	9.2				3411.3	
GIFU	0	EX	13 28 18.7	EL	41	7	8.5	6	8.5						3391.2	
HIKONE	0	EP	13 28 18.9			14	9.7	9	10.0						3345.0	
TOYAMA	0	EP	13 28 23	ES	33 27	11	8.6	23	7.4	10	11.6				3424.4	304.0
IIDA	0	EX	13 28 25.6												3487.2	
MATSUS	0	IP	13 28 27.8	S	33 28									U	3514.5	300.2
TOKYO	0	EP	13 28 30	ES	33 32	31	6.0	32	6.4						3659.6	302.0
SHIZUO	0	P	13 28 30.8	X	39 44.0	5	11.0	9	11.6	12	15.6				3543.8	
MISHIM	0	EP	13 28 32			6	10.0	9	8.7	3	3.3				3590.0	
KOFU	0	EP	13 28 33.0	ES	35 06.2	8	10.8	6	10.0	8	9.0				3551.4	393.2
AJIRO	0	EX	13 28 33.7			9	6.2	7	6.1	7	7.6				3605.8	
NIIGAT	0	EX	13 28 34.8			45	11.0	50	8.0	15	10.0				3585.1	
KUMAGA	0	EP	13 28 35.0	ES	34 32.0	16	9.8	22	6.4	10	11.8				3622.3	357.0
OSHIMA	0	EX	13 28 35.2			11	10	7	12.0	8	2.0				3634.4	
AKITA	0	EX	13 28 39	EX	36 46	15	10.4	16	11.2	12	12.0				3677.5	
MAEBAS	0	EX	13 28 40.9			16	8.3	13	9.6	6	3.7				3591.9	
SENDAI	0	EX	13 28 42	L	41 40	11	11.6	8	13.4	6	12.0				3746.5	
HAKODA	0	EP	13 28 44	EX	35 13	9	12.2	8	5.0	8	13.0			D	3744.1	
MITO	0	EX	13 28 44.7			10	7.0	9	4.2	5	4.4				3718.0	
YOKOHA	0	EP	13 28 45.6			26	12.0	16	6.2						3652.5	
MORIOK	0	EP	13 28 48.5	ES	35 05.6	5	17.0	6	13.0						3768.9	377.1
				EX	30 08.0											
				EL	40 07.0											
SAPPOR	0	EP	13 28 49	ES	35 09	5	5.0	4	5.0	5	4.0				3802.8	380.0
ISHINO	0	EX	13 28 49.5			6	12.0	14	12.0	7	12.0				3781.3	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S * S	N-S A/T * S	E-W * S	E-W A/T * S	U-D * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HACHIN	0	EP	13 28 50	EX	43 08	5	11.2	20	14.0	17	13.2				3801.2	
WAKKAN	0	EP	13 28 56.3					5	10.0						3862.4	
URAKAW	0	X	13 29 00.0			9	12.0	11	12.0	5	12.0				3913.8	
KUSHIR	0	P	13 29 09.3	IS	34 55.0	7	5.2	6	4.2	13	4.8			D 3	4051.2	345.7
ABASHI	0	EP	13 29 10.9	ES	34 52.0	6	3.8	8	11.6						4049.9	341.1
OT= 30 17 9 40.1 +/- 0.2 S OF IBARAKI PREF LAT= 36 8 +/- 1 LONG= 140 7 +/- 1 H= 80 CLASS=S																
MITO	2	IP	17 09 53.5	IS	10 02.5	198	1.6	184	1.6	80	2.0	N	5 E	6 U 80	41.9	09.0
UTSUNO	3	IP	17 09 54.1	IS	10 02.8	600	0.2	1000	0.2	400	0.2	N	4 W	7 U 17	50.9	08.7
KUMAGA	3	IP	17 09 55.8	S	10 06.4	182	0.4	286	0.4	112	0.4	N	3 E	6 D 14	65.9	10.6
TOKYO	1	IP	17 09 56.6	S	10 07.6	105	0.6	208	2.4	45	3.2			D 1	59.3	11.0
CHOSHI	1	P	17 09 57.3	IS	10 11.7	30	0.4	43	0.4	14	0.2	S	6 E	4 U 8	79.7	14.4
CHICHI	2	IP	17 09 58.3	IS	10 10.3	100	1.4	150	1.4	100	1.4		E 11		94.5	12.0
MAEBAS	1	IP	17 09 59.1	IS	10 12.0	51	0.4	53	0.9	53	0.6	S	2 E	6 D 35	99.1	12.9
YOKOHA	X	IP	17 09 59.6	IS	10 12.0	110	0.4	127	0.4	36	0.4	S	3	D 9	87.8	12.4
SHIRAK	1	IP	17 09 59.7	IS	10 12.7									U 5	109.7	13.0
KANAZA	0	X	17 09	X	09 57.0	7	2.1	9	3.6	6	2.7				314.7	
TSURUG	0	X	17 09	X	10 11.8										369.6	
OMAEZA	0	X	17 09	X	10 52.0	16	2.7	26	2.7	8	2.3				242.3	
ONAHAM	X	IP	17 10 01.0	IS	10 13.9	179	1.0	287	1.2	53	0.7	N	7 E	5 U 13	114.5	12.9
FUNATS	1	IP	17 10 01.9	IS	10 21.4										141.1	19.5
TOMISA	0	P	17 10 03.4	IS	10 20.0	34	2.8	67	3.0	30	2.4			U 1	137.1	16.6
KARUIZ	0	EP	17 10 04.3	S	10 20.1										142.5	15.8
AJIRO	2	IP	17 10 04.6	IS	10 21.9	91	0.3	101	0.3	24	0.4	N	2 E	2 D 3	152.2	17.3
KOFU	1	IP	17 10 05.5	ES	10 22.7	58	1.2	72	0.9	20	1.0	N	1 E	8 D 7	149.9	17.2
MISHIM	0	IP	17 10 05.8	IS	10 22.4	47	0.9	56	2.2	18	1.7	N	E	3 D 3	156.2	16.6
OSHIMA	0	P	17 10 06.4	IS	10 23.2	55	0.3	37	1.2	25	0.3				166.3	16.8
MATSUS	0	IP	17 10 07.8	S	10 24							S	E	D	177.1	16.2
FUKUSH	1	P	17 10 10.1	S	10 29.8	113	0.8	105	1.2	48	0.7	S	7 W	1 D 1	182.9	19.7
NAGANO	0	EP	17 10 10.6	ES	10 29.8	12	0.9	15	0.9	5	0.5				181.9	19.2
TAKADA	0	P	17 10 10.6	S	10 33.2									D 4	198.7	22.6
MATSUM	0	EP	17 10 11.4	S	10 31.6										193.1	20.2
SHIZUO	0	IP	17 10 11.4	S	10 33.4	19	0.4	22	0.4	10	1.6		E 3	D 4	201.5	22.0
IIDA	0	IP	17 10 14.2	IS	10 38.0	21	1.2	20	1.0	15	1.2	N	1 E	6 D 7	217.4	23.8
NIIGAT	0	EX	17 10 14.7	ES	10 34.4	45	3.6	35	3.2	20	2.6				218.7	
SENDAI	0	P	17 10 16.3	IS	10 43.7	28	2.2	33	2.0	13	1.4				246.0	27.4
YAMAGA	0	EP	17 10 16.7	S	10 42.7										236.2	26.0
AIKAWA	0	IP	17 10 19.6	IS	10 38.2	10	2.2			5	0.3	S	2	D 6	267.6	18.6
ISHINO	0	IP	17 10 20.0	ES	10 49.4	13	1.2	20	1.2	6	1.2	S	0 E	0 D 0	275.2	29.4
HAMAMA	0	P	17 10 20.2	ES	10 47	18	2.0	19	2.8	9	1.8	S	1	U 1	268.7	26.8
TOYAMA	0	IP	17 10 20.6	S	10 48.4	11	2.2	11	3.8	12	3.6			D 5	268.4	27.8
SAKATA	0	EP	17 10 24.6	S	11 02.9										308.4	38.3
GIFU	0	EP	17 10 24.8	ES	10 58.2	16	1.5	17	1.3						313.8	33.4
NAGOYA	0	EP	17 10 25.2	X	11 04.0	30	2.4	34	2.4	12	2.0		W 1 U	1	304.6	
WAJIMA	0	EP	17 10 26.0	ES	10 54.8			23	0.8	5	1.0				319.3	28.8
HACHIJ	0	EP	17 10 29.0	ES	11 06.0			8							337.6	37.0
OFUNAT	0	EP	17 10 30.0	IS	11 06.2	7	0.8	11	0.6	4	1.0				354.4	36.2
MIZUSA	0	EP	17 10 32.1	ES	11 06.5	23	2.3	24	1.2	18	1.3				344.8	34.4
HIKONE	0	P	17 10 32.4	ES	11 10.7	20	0.9	18	1.1						362.9	38.3
MORIOK	0	IP	17 10 37.2	IS	11 18.8	14	0.6	17	0.5			N	1 E	0 U 0	406.1	41.6
KYOTO	0	EP	17 10 37.6	ES	11 18.8	7	1.4	2	1.4	1	2.2				416.1	41.2
FUKUI	0	X	17 10 40.5	X	11 25.7										350.3	
MIYAKO	0	EP	17 10 41	ES	11 21	6	1	5	3	4	2				422.4	40.0
TSU	0	X	17 10 42.1												363.2	
OSAKA	0	X	17 10 56			31	2.9	27	2.4	13	2.7				447.2	
AKITA	0	X	17 10			11	3.2	9	2.4	6	2.8				397.9	
TOYOOK	0	X	17 11 00.8			17	1.3	12	1.1						483.0	
AOMORI	0	X	17 12 00.6			10	2.1	13	1.8						523.1	
OT= 30 22 33 31.0 +/- 2.1 S OF KURILE IS LAT= 44 53 +/-15 LONG= 151 12 +/-12 H= 70 CLASS=U																
NEMURO	0	IP	22 34 36.0	ES	35 29.2	15	4.2	13	2.8	13	3.6	S	W	U	481.5	53.2
ABASHI	0	EP	22 34 46.0	ES	35 43.0	23	3.6	14	2.2						558.9	57.0
KUSHIR	0	IP	22 34 48.8	IS	35 51.6	40	1.2	40	1.0	16	4.0			U 2	585.9	62.8
OBIHIR	0	EP	22 35 02.9												676.9	
HIROO	0	EP	22 35 05.0	EX	36 15.0										698.9	
ASAHIK	0	IP	22 35 07.8	X	36 37.6	13	2.4	11	2.6				E		714.7	
URAKAW	0	EP	22 35 09.0	ES	36 23.4	207	2.4	113	1.4	62	1.4				744.7	74.4

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
WAKKAN	0	P	22 35 11.7					4	2.4						751.2	
SAPPOR	0	P	22 35 18.6	X	36 57	29	2.4	49	2.4	12	2.4			U	817.1	
HAKODA	0	EP	22 35 29	ES	37 02	14	3.8	15	2.4	9	2.8				912.1	93.0
AOMORI	0	EP	22 35 39.8	X	37 39.5	47	2.3	49	1.5	20	1.6				963.0	
MORIOK	0	EP	22 35 40.7	IS	37 20.7	5	2.4	4	1.4						1007.2	100.0
				IX	35 44.3											
				L	37 53.6											
				EX	38 44.0											
MIZUSA	0	EP	22 35 48.3	IS	37 31.5			25	2.0	20	1.2				1049.2	103.2
AKITA	0	EX	22 35 52.4			18	2.4	11	4.2	7	2.8				1078.9	
SENDAI	0	EP	22 35 56.5	EX	37 50	7	2.0	6	2.2	3	1.0				1129.5	
FUKUSH	0	EP	22 36 04.3	ES	38 05.3	7	1.0	6	1.0	2	3.0				1195.3	121.0
MITO	0	EX	22 36 21.5	X	38 26.0	10	2.4	6	3.0	5	3.0				1307.7	
HACHIN	0	X	22 36 30.0	S	37 03.0	5	1.6	7	2.4	5	2.2		E	D	928.1	
MATSUS	0	P	22 36 33	X	39 20										1433.6	
KUMAGA	0	X	22 36 47.2	ES	38 48.0	5	2.0	5	2.8	3	3.0				1391.5	
OSAKA	0	EX	22 37 18.0			8	5.3	8	5.2	3	4.1				1753.0	
SAKATA	0	X	22 38 00.4												1151.9	
ONAHAM	0	X	22 38 07.3			7	1.3	11	1.3	5	1.9				1234.7	
NAGASA	0	EP	22 38 09.8	ES	42 05.0										2281.3	235.2
KAGOSH	0	EP	22 38 19.4			8	2.0	5	2.4	4	1.3				2322.6	
NIIGAT	0	X	22 38 31.0			15	5.0	17	3.0	3	3.0				1275.3	
YOKOHA	0	X	22 39 00.7			6	3.1	6	2.1						1435.1	

OT= 31 5 32 31.7 +/- 0.3
S OFF SHIMA PEN
LAT= 34 2 +/- 1 LONG= 136 34 +/- 1
H= 30 MAG=4.6 CLASS=S

OWASE	2	IP	05 32 40.3	IS	32 46.2	187		182		56		N	5 W	11 U 16	34.5	05.9
TSU	1	IP	05 32 45.0	IS	32 55.0							S	E		74.2	10.0
SHIONO	0	EP	05 32 48.8	IS	32 59.7	21	1.0	28	2.1	14	1.0			D 3	98.7	10.9
NARA	2	IP	05 32 48.9	IS	32 59.9	200	1.0	200	0.9	200	1.0	S	2 E	2 D 20	98.7	11.0
OSAKA	0	IP	05 32 51.1	IS	33 02.6	120	1.1	130	2.3	94	2.0			D 20	116.6	11.5
HAMAMA	0	IP	05 32 53.2	IS	33 07.6	17	0.8	25	0.6	10	0.4	N	2 W	1 U 3	130.1	14.4
NAGOYA	0	IP	05 32 53.4	S	33 08.0	50	0.8	56	0.6	21	0.6	S	1 W	0 D 5	130.8	14.6
WAKAYA	0	P	05 32 54.3	IS	33 09.3	62	0.3	43	0.4						130.9	15.0
HIKONE	0	IP	05 32 54.7	IS	33 10.1	157	1.1	188	0.9			S	25 E	3	140.6	15.4
GIFU	0	P	05 32 54.9	S	33 10.9	26	1.3	33	1.5	20	0.7				152.5	16.0
KOBE	0	P	05 32 55.3	ES	33 11.5									D 39	146.8	16.2
SUMOTO	0	P	05 32 56.8	ES	33 13.2	23	2.7	12	1.4	9	3.5	S	0 E	0 D 0	156.4	16.4
				EX	33 02.4											
				EX	33 08.0											
OMAEZA	0	EP	05 32 57.2	X	33 06.1	17	3.1	14	2.9	8	0.9				164.2	
TSURUG	0	IP	05 33 00.1	S	33 20.0							S	5 E	2 D 6	185.1	19.9
TOKUSH	0	EP	05 33 01.3	IS	33 16.5										183.7	15.2
IIDA	0	EP	05 33 01.8	X	33 14.6	19	1.2	18	1.2	8	1.0				200.7	
TURUGI	0	EP	05 33 04.3	ES	33 31.3										229.2	27.0
FUKUI	0	P	05 33 04.7	S	33 30.3										226.2	25.6
MUROTO	0	IP	05 33 05.4	S	33 29.2	5	2.2	4	1.8					U 0	238.0	23.8
TAKAYA	0	EP	05 33 06.7	ES	33 32.0										243.2	25.3
TOYOOK	0	P	05 33 07.3			70	1.2	52	1.1	21	0.8	S	E		230.9	
OKAYAM	0	IP	05 33 08.2	ES	33 38.1	20	0.8	10	0.9	10	1.0			D	254.2	29.9
TAKAMA	0	EP	05 33 08.4	ES	33 31.4	24	1.0	32	1.0	9	1.0				233.3	23.0
SHIZUO	0	X	05 33 08.6	S	33 22.5	6	0.6	5	0.4	3	1.0				198.5	
AJIRO	0	IP	05 33 09.7	S	33 35.9	26	0.3	9	0.3	3	0.3			D 0	257.8	26.2
KANAZA	0	EP	05 33 12.1	ES	33 44.7	15	2.4	14	2.0	8	3.1				278.9	32.6
MATSUS	0	IP	05 33 16.1	X	34 18							S	W	D	315.4	
HACHIJ	0	EP	05 33 17.4	ES	33 49.0	12		21							316.4	31.6
TOYAMA	0	EP	05 33 18	ES	33 52	21	1.8	17	1.6	14	1.8				302.2	34.0
KARUIZ	0	EP	05 33 18.9	X	33 36.7										313.2	
KOFU	0	X	05 33 19.0			12	1.6	9	1.4	4	0.6				256.7	
FUNATS	0	X	05 33 21.9	S	33 39.9										258.5	
SAIGO	0	P	05 33 23.5	ES	34 06.8	7	1.6	4	1.2	3	1.0	N	0 W	0 U 0	380.5	43.3
KUMAGA	0	X	05 33 33.0	X	34 12.6	6	1.4	7	1.8	3	1.4				347.8	
WAJIMA	0	X	05 33 34					25	1.0	6	1.0				373.6	
TAKADA	0	X	05 33 39.8	X	34 21.0										373.3	
KUMAMO	0	X	05 34 24.6	X	35 21.8	6	2.4	4	1.8	2	1.0				561.1	

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List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE		PHASE AND TIME (J.S.T.) H M S		M S	INITIAL MOTION	
1	P	01 42 18.	S	43 14.		*
1	IP	02 06 12.5				*
1	P	03 33 34.				*
1	IP	04 04 04.8			S E D	*
1	E	08 35 25.				*
1	P	08 47 34.				*
1	P	08 54 20.				*
1	P	10 33 00.				*
1	IP	12 36 33.4			N E D	*
1	P	14 31 15.				*
1	EP	18 14 26.				*
1	P	23 02 28.				*
1	IP	23 45 29.9	S	46 15.	N E D	*
2	P	08 45 51.				*
2	P	09 47 02.	S	48 54.		*
2	IP	15 32 51.0	S	33 13.	N E U	*
2	EP	15 38 44.				*
2	P	19 52 57.	S	53 30.		*
2	EP	20 17 50.				*
2	P	22 37 09.4	S	37 32.	N	*
2	P	23 17 28.				*
3	P	00 00 33.				*
3	IP	03 26 37.1			D	*
3	IP	04 09 24.1	S	09 57.	N E D	*
3	P	09 19 38.				*
3	IP	10 44 01.6	S	44 26.	E U	*
3	EP	10 50 13.				*
3	IP	11 01 46.7			D	*
3	P	14 05 26.	S	05 51.		*
3	P	15 52 47.6			U	*
3	EP	16 17 08.				*
3	EP	17 58 05.				*
3	IP	21 13 19.9	S	13 38.	S E D	*
3	P	21 59 37.				*
4	P	02 01 29.				*
4	P	04 17 31.				*
4	IP	05 31 47.7			N D	*
4	P	06 45 10.8			S U	*
4	IP	08 24 20.2			S U	*
4	P	16 39 00.				*
5	IP	01 29 29.3			S U	*
5	EP	07 46 03.				*
5	P	10 47 07.				*
5	P	14 31 44.				*
5	P	20 51 15.				*
6	IP	10 09 59.7	S	11 15.	S U	*
6	P	21 03 12.4			U	*
7	EP	02 19 26.				*
7	P	07 53 42.				*
7	P	08 13 43.				*
7	IP	15 57 09.5			N U	*
7	IP	20 23 09.1			D	*
7	IP	20 52 09.2	S	52 47.	E U	*
7	P	22 38 00.				*
8	P	00 59 01.				*
8	IP	01 41 46.8			W U	*
8	P	01 47 30.				*
8	EP	02 19 02.				*
8	IP	10 18 20.0	S	18 54.	S E D	*
8	IP	20 43 41.4	S	44 24.	W U	*
8	P	22 25 44.				*
8	P	23 31 13.				*
9	IP	01 06 37.9	S	07 11.	N E D	*
9	EP	03 29 09.				*
9	EP	05 32 05.	ES	34 20.		*
9	P	16 27 28.				*
9	IP	17 27 58.0	S	34 16.	U	*
9	IP	18 33 36.0			D	*
9	P	19 22 31.	S	22 52.		*
9	IP	19 33 45.5			U	*
9	IP	21 25 41.1			U	*
9	P	22 37 41.				*
10	P	00 24 18.				*
10	IP	18 24 00.4	S	24 22.	N E U	*
10	IP	20 24 20.2	S	25 52.	S W U	*
11	P	06 53 00.				*
11	IP	10 47 47.7			S W D	*
11	P	12 53 12.				*
11	IP	17 04 40.0			S U	*
11	IP	19 10 25.0			U	*
11	EP	21 28 12.				*
12	IP	03 57 59.3	S	00 43.	D	*
12	IP	13 31 35.5	S	32 08.	S W U	*
12	IP	17 21 04.0			E U	*
12	IP	18 51 06.2			D	*
12	IP	19 45 49.0			D	*
12	IP	21 30 22.6	S	31 09.	N U	*
12	P	21 40 47.				*
13	IP	04 53 28.7			N E U	*
13	P	08 03 40.				*
13	IP	09 19 12.0			N D	*
13	IP	21 08 09.5	S	08 23.	S W	*
14	IP	03 53 55.4			N W U	*
14	IP	05 07 49.5	S	08 34.	S W D	*
14	EP	06 14 01.				*
14	P	07 23 06.				*
14	EP	11 40 38.				*
14	P	21 16 08.				*
14	IP	22 21 06.6				*
14	P	22 51 40.				*
15	P	00 17 27.				*
15	IP	02 22 23.0	S	22 45.	D	*
15	P	10 49 31.	S	50 01.		*
15	P	18 28 11.	ES	40 28.		*
16	IP	00 32 27.2	S	32 47.	N W D	*
16	IP	00 38 22.3	ES	40 56.	D	*
16	IP	05 12 22.0	S	12 52.	U	*
16	EP	05 55 18.				*
16	EP	07 32 33.				*
16	IP	17 08 35.1	S	09 21.	D	*
16	IP	17 23 07.5	S	23 32.	S W D	*
16	P	23 14 28.				*
17	IP	03 34 06.1	S	34 39.	S D	*
17	P	04 27 57.				*
17	P	09 11 45.				*
17	P	10 26 58.				*
17	IP	13 52 40.5	S	52 56.	N D	*
17	P	20 52 20.	S	52 38.		*
17	IP	23 33 02.1	ES	33 52.	S W D	*
18	IP	07 50 55.3			D	*
18	P	08 39 50.				*
18	P	12 38 36.	S	41 19.		*
19	IP	14 19 16.5			U	*
19	IP	17 33 20.4			D	*
19	P	19 56 08.				*
19	IP	21 15 49.8	S	17 18.	S W U	*
19	P	22 07 29.				*
19	IP	22 15 25.8	S	15 41.	S U	*
19	IP	22 38 47.0	S	39 10.	S E D	*
20	P	00 33 56.0	ES	38 16.		*
20	IP	00 51 21.0			N W U	*
20	P	09 16 06.				*
20	IP	09 49 00.0	ES	50 00.	U	*
20	IP	10 12 20.4	S	12 46.	W U	*
20	P	11 10 09.				*
20	P	12 42 01.				*
20	IP	15 59 40.8	ES	00 40.	U	*
20	P	16 31 00.				*
21	P	00 23 16.				*
21	P	08 33 39.				*

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF MATSUSHIRO ARE LEFT OUT FROM THE TABLE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

DATE		PHASE AND TIME H	M	S		M	S	INITIAL MOTION		
21	IP	15	17	48.8				N		D
21	IP	16	42	00.	S	49	17.	N	E	U
22	IP	00	21	21.9	IS	21	35.3		E	D
22	P	02	20	10.						
22	IP	09	30	59.2	S	31	14.		E	D
22	P	18	15	42.						
22	P	22	21	53.						
22	P	22	36	59.						
22	P	23	01	37.	ES	02	35.			
23	P	01	32	00.	ES	32	48.			
23	P	15	11	37.						
23	P	17	41	11.						
24	IP	03	50	31.7						U
24	IP	12	23	40.0	S	25	28.	S	W	U
24	IP	15	36	53.7	S	37	09.0	S		D
24	IP	19	42	44.7	S	50	44.			U
24	IP	21	49	49.8	IS	50	07.5			U
24	IP	23	27	15.6				S		D
25	P	02	18	19.	S	21	32.			
25	P	02	21	10.	ES	21	58.			
25	P	04	38	20.						
25	IP	08	26	56.1	S	27	16.	N		U
26	IP	00	02	25.1	S	03	25.			U
26	P	00	09	45.						
26	IP	03	47	42.9	S	48	03.			U
26	EP	08	04	06.	ES	08	24.			
26	P	09	41	57.0	S	46	12.	S		D
26	P	09	58	35.						
26	IP	11	12	23.5				N		U
26	P	12	35	13.						
26	EP	14	30	35.						
26	EP	14	52	06.						
26	EP	19	30	30.						
26	P	23	22	07.	S	22	30.			
27	EP	00	38	07.						
27	EP	03	31	04.						
27	P	06	53	08.						
27	P	17	27	22.	S	28	02.			
27	P	19	54	52.	S	55	15.			
27	IP	23	24	05.4	ES	30	00.	S	W	D
28	IP	10	15	15.0						U
28	IP	14	25	35.6					W	U
29	P	03	58	55.						
29	P	11	09	19.						
29	IP	12	45	49.5	S	46	36.	N	W	D
29	P	16	35	54.	S	42	26.			
29	IP	18	10	07.0					E	D
29	P	19	57	37.	S	03	40.			
29	IP	23	31	12.4	ES	32	12.	N		U
30	P	10	16	01.						
30	IP	11	06	40.6	S	07	04.	S	E	D
30	IP	13	28	27.8	S	33	28.			U
30	P	14	25	36.						
30	IP	17	10	07.8	S	10	24.	S	E	D
30	IP	17	54	23.5	ES	54	40.			D
30	P	20	15	11.						
30	IP	21	07	29.6						D
30	P	22	36	33.	S	39	20.			
31	EP	05	06	38.						
31	IP	05	33	16.1	S	34	18.	S	W	D
31	IP	08	21	42.9				N		D
31	EP	12	26	34.						
31	IP	13	36	49.5	S	37	12.	N		
31	P	19	57	29.						
31	P	20	50	00.						
31	P	22	56	48.						

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EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

D	INT	H	M	.	D	INT	H	M
1	1	00	09	.				
				.	21	1	02	19
2	1	22	59	.	21	1	08	23
2	1	23	11	.	21	1	14	12
				.				
3	1	05	00	.	22	1	04	37
3	1	09	50	.	22	1	22	32
				.				
4	1	03	22	.	23	1	01	35
				.	23	1	02	19
5	2	04	24	.	23	1	02	45
5	1	04	28	.	23	1	06	57
5	2	12	20	.	23	1	19	02
5	1	14	43	.	23	1	23	24
5	1	15	30	.				
5	1	19	25	.	24	1	05	16
5	1	20	18	.	24	1	05	45
5	1	20	42	.	24	1	21	46
				.				
6	1	15	13	.	25	1	06	53
6	1	15	34	.	25	1	09	24
				.	25	1	09	25
7	1	01	08	.	25	1	10	42
7	1	09	25	.	25	1	18	48
7	1	17	29	.	25	1	22	03
7	1	22	35	.				
				.	26	1	07	15
8	1	06	20	.	26	1	15	49
8	1	21	39	.				
				.	27	1	07	43
9	1	15	04	.	27	1	13	40
9	1	15	09	.				
9	1	23	09	.	28	1	02	02
				.	28	1	19	30
10	1	01	51	.				
10	1	01	55	.	29	1	02	38
10	1	08	24	.	29	1	03	43
10	1	17	59	.	29	1	18	17
10	2	22	41	.	29	1	20	00
10	1	23	48	.				
				.	30	1	09	22
11	1	15	49	.				
11	1	20	50	.	31	1	00	40
				.	31	1	00	44
12	2	14	15	.	31	2	15	08
12	1	15	35	.	31	1	18	50
12	1	17	40	.	31	1	19	36
12	1	17	41	.	31	1	19	44
				.	31	1	22	21
13	1	13	55	.				
				.				
14	1	02	01	.				
14	1	08	27	.				
14	1	14	43	.				
14	1	15	01	.				
14	1	15	43	.				
				.				
15	1	04	14	.				
15	1	07	03	.				
				.				
16	2	07	17	.				
16	1	15	02	.				
				.				
18	1	12	34	.				
18	1	15	21	.				
				.				
19	1	04	37	.				
19	1	09	52	.				
19	1	09	52	.				
				.				
20	1	00	17	.				
20	1	03	36	.				
20	1	07	52	.				
20	1	09	25	.				
20	1	18	45	.				
20	1	19	01	.				

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地　震　月　報

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OF

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SEPTEMBER 1967

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Tokyo

1967

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List 1 JMA stations and their seismographs

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S, VI, O P
Aikawa	AIKAWA	138 14.5	38 01.2	34	S, VI, O P
Ajiro	AJIRO	139 05.8	35 02.6	59	S, VI, O P
Akita	AKITA	140 06.1	39 43.1	9	S, VI, O P
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S, P
Aomori	AOMORI	140 47.0	40 49.0	4	S, W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S, VI, O P
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S, VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S, P
Choshi	CHOSHI	140 50.6	35 43.5	27	S, W
Fukue	FUKUE	128 50.0	32 42.0	26	S, VI
Fukui	FUKUI	136 13.6	36 03.2	9	S, P(H, V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S, VI, M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S, VI, O P
Funatsu	FUNATS	138 45.8	35 29.9	860	S, P
Gifu	GIFU	136 45.9	35 23.9	13	S, W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S, VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S, VI, O P
Hakodate	HAKODA	140 45.5	41 48.8	35	S, VI, O P
Hamada	HAMADA	132 04.4	34 53.6	18	S, VI, O P
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S, VI, O P
Hikone	HIKONE	136 14.8	35 16.4	87	S, W
Himeji	HIMEJI	134 42.1	34 50.2	37	S, P(H, V)
Hiroo	HIROO	143 19.0	42 17.0	32	S, P(H, V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S, W
Iida	IIDA	137 50.1	35 30.6	482	S, VI, O P
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S, VI, O P
Izuhara	IZUHAR	129 17.7	34 12.2	21	S, P(H, V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S, W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S, W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S, VI, O P
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S, P(H, V)
Kobe	KOBE	135 10.8	34 41.3	58	S, P(H, V)
Kochi	KOCHI	133 32.0	33 33.0	40	S, P(H, V)
Kofu	KOFU	138 33.5	35 39.9	272	S, VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S, VI, O P
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S, W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S, VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S, VI, O P
Maebashi	MAEBAS	139 03.9	36 24.1	112	S, W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S, P(H, V)
Matsue	MATSUE	133 04.3	35 27.3	17	S, P(H, V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S, P(H, V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S, L, AW,G,B,V,C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S, W
Mishima	MISHIM	138 55.8	35 06.7	20	S, W
Mito	MITO	140 28.3	36 22.7	30	S, VI, O P
Miyako	MIYAKO	141 58.1	39 38.7	46	S, W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S, VI, O P
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P(H, V)
Morioka	MORIOK	141 10.1	39 41.8	155	S, VI, O P
Muroran	MURORA	140 59.0	42 19.0	43	S, P(H, V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S, VI, O P
Nagano	NAGANO	138 11.8	36 39.6	418	S, W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S, VD, EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S, VI, O P
Nara	NARA	135 50.0	34 41.0	105	S, P(H, V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S, VI, VD, OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S, VI, P(H, V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S, P(H, V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S, P(H, V)
Ofunato	OFUNAT	141 43.1	39 03.7	38	S, VI
Oita	OITA	131 37.4	33 14.0	5	S, W
Okayama	OKAYAM	133 54.9	34 40.9	4	S, VI, O P
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S, W
Onahama	ONAHAM	140 54.4	36 56.7	3	S, VI
Osaka	OSAKA	135 32.3	34 38.9	7	S, VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S, W

Station	Code	λ	φ	Height	Seismographs
				m	
Owase	OWASE	E136°11.7′	N34°04.0′	14	S, VI, O P
Rumoi	RUMOI	141 38.0	43 57.0	22	S, P (H, V)
Saga	SAGA	130 18.3	33 14.7	4	S, P (H, V)
Saigo	SAIGO	133 20.0	36 12.3	26	S, VI, O P
Sakata	SAKATA	139 50.2	38 54.2	2	S, P (H, V)
Sapporo	SAPPOR	141 19.9	43 03.5	17	S, VI, O P
Sendai	SENDAI	140 54.0	38 15.6	38	S, VI, S′
Shimonoseki	SHIMON	130 56.5	33 57.2	46	S, VI, O P
Shionomisaki	SHIONO	135 45.8	33 26.9	74	S, W
Shirakawa	SHIRAK	140 13.5	37 07.1	354	S, P (H, V)
Shizuoka	SHIZUO	138 24.4	34 58.4	14	S, VI
Sumoto	SUMOTO	134 54.5	34 20.1	109	S, VI, O P
Suttsu	SUTTSU	140 14.4	42 47.4	16	S, P (H, V)
Takada	TAKADA	138 15.0	37 06.3	13	S, P (H, V)
Takamatsu	TAKAMA	134 03.5	34 19.0	10	S, W
Takayama	TAKAYA	137 15.3	36 09.1	561	S, P (H, V)
Tokushima	TOKUSH	134 34.6	34 03.9	2	S, P (H, V)
Tokyo	TOKYO	139 45.5	35 41.2	21	S, VI′, VD′, I′, J
Tomisaki	TOMISA	139 49.7	34 55.2	12	S, VI, O P
Tottori	TOTTOR	134 10.7	35 30.7	17	S, P (H, V)
Toyama	TOYAMA	137 12.5	36 42.4	9	S, VI
Toyooka	TOYOOK	134 49.5	35 32.0	4	S, W
Tsu	TSU	136 31.1	34 42.1	3	S, P (H, V)
Tsuruga	TSURUG	136 03.9	35 39.0	1	S, P (H, V)
Unzendake	UNZEND	130 15.2	32 44.1	849	S
Urakawa	URAKAW	142 46.8	42 09.5	34	S, VI, O P
Utsunomiya	UTSUNO	139 52.3	36 32.6	120	S, W
Uwajima	UWAJIM	132 33.5	33 13.5	43	S, P
Wajima	WAJIMA	136 53.9	37 23.4	6	S, VI
Wakayama	WAKAYA	135 10.0	34 13.6	14	S, W, I
Wakkanai	WAKKAN	141 40.5	45 25.0	2	S, VI, O P
Yakushima	YAKUSH	130 29.8	30 27.0	14	S, VI
Yamagata	YAMAGA	140 21.0	38 15.2	151	S, P (H, V)
Yokohama	YOKOHA	139 39.3	35 26.2	38	S, W
Yonago	YONAGO	133 20.6	35 26.0	7	S, P (H, V)
Ishigakijima	ISHIGA	124 10	24 20	6	S, VI
Naha	NAHA	127 41	26 13	11	S, VI

Notations : —

λ	: Longitude.
φ	: Geographical Latitude.
W	: Wiechert's horizontal and vertical seismographs (masses, H ; 200kg, V ; 80kg).
P	: Portable seismograph (horizontal only).
P(H, V)	: do (mass, 22.5kg).
S	: Strong motion seismograph (magnification ; 1).
S′	: do (magnification ; 0.4).
M(H)	: Mainka's horizontal seismograph (mass, 450kg).
G	: Galitzin's seismograph.
L	: 1,000kg long-period seismograph, JMA type.
I	: Ishimoto's seismograph.
V	: Short-period vertical seismograph.
AW	: Anderson-Wood's seismograph.
C	: Capacity type seismograph.
EM	: Electromagnetic seismograph.
O P	: JMA 59-type electromagnetic seismograph with optical recorder.
VI	: JMA 59-type electromagnetic seismograph with visible recorder.
V D	: JMA 61-type electromagnetic seismograph with visible recorder.
B	: Benioff's seismograph (short and long period).
J	: Remote recording JMA 63-type seismograph.
VI′, VD′, I′	: Remote recording JMA 63-types of VI, VD and I, respectively.

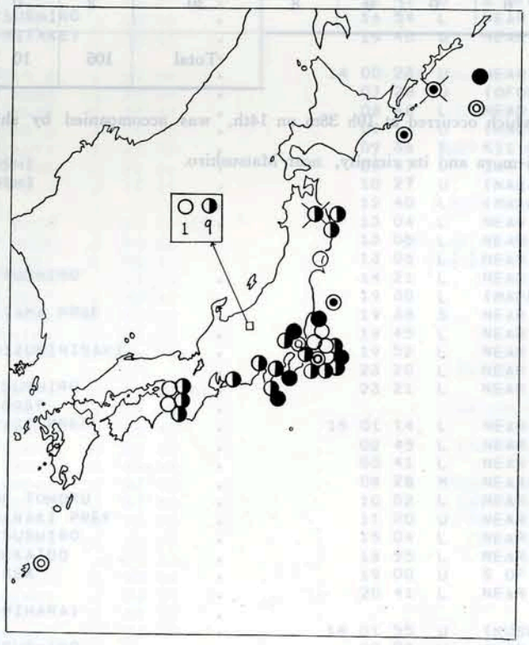
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List 2 Number of earthquakes by districts and classes, September, 1967

District \ Class	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	1	1	0	2	4	15	19
Tohoku	1	0	3	7	11	20	31
Kwanto	0	2	3	27	32	28	60
Chubu	0	0	1	122	123	11	134
Kinki	0	0	2	10	12	12	24
Chugoku•Shikoku	0	0	0	3	3	3	6
Kyushu	0	1	0	5	6	26	32
Near Japan*	1	0	0	0	1	2	3
Foreign region	0	0	0	0	0	5	5
Unknown	0	0	0	0	0	10	10
Total	3	4	9	176	192	132	324

* ; Sakhalin, Kurile Is., Korea, Ryukyu Is., Sikhota Alin.

Epicenters of the major earthquakes



⊙ Remarkable (R) ◎ Noderate (M) ○ Small felt area (S) ◑ Local (L) ● Unfelt (U) × h≧100km.

Special Event

Earthquake-Swarm near Matsushiro, Northern Chubu

Daily number of felt shocks observed at Matsushiro Seismological Observatory during this month is as follows :

Date \ Seismic intensity	1	2	3	4	Total	Date \ Seismic intensity	1	2	3	4	Total
1	10	1	0	0	11	16	5	2	0	0	7
2	1	0	0	0	1	17	4	0	0	0	4
3	3	0	0	0	3	18	2	0	1	0	3
4	1	0	0	0	1	19	3	0	0	0	3
5	2	0	0	0	2	20	5	0	0	0	5
6	1	1	0	0	2	21	0	0	0	0	0
7	4	1	0	0	5	22	3	1	0	0	4
8	1	0	0	0	1	23	7	1	0	0	8
9	5	0	0	0	5	24	6	0	0	0	6
10	3	0	0	0	3	25	4	2	0	0	6
11	2	0	0	0	2	26	3	0	0	0	3
12	3	0	0	0	3	27	4	0	0	0	4
13	2	0	0	0	2	28	1	1	0	0	2
14	11	0	1	1	13	29	0	0	0	0	0
15	8	0	0	0	8	30	2	0	0	0	2
						Total	106	10	2	1	119

The earthquake, which occurred at 19h 38m on 14th, was accompanied by shight property damage and casualties at Sakai-mura and its vicinity, near Matsushiro.

International Seismological Centre From the ISC collection scanned by SISMOS

List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

(J. S. T.)

DATE, TIME D H M	C	LOCATION	CLASS
1 00 09	L	NEAR MATSUSHIRO	
00 11	L	NEAR MATSUSHIRO	
00 29	L	NEAR MATSUSHIRO	
01 40	L	(YOKOHA-DAIBUTSU)	
01 41	S	N OF MIYAGI PREF	
05 40	U	(MIYAZA)	
15 08	S	OFF IBARAKI PREF	
2 03 42	U	(KAGOSH)	
04 46	U	MIDDLE OF TOHOKU	
07 42	R	S OF KURILE	
11 22	U	(CHOSHI)	
13 51	U	NEAR KOZUJIMA	
15 29	U	(KUSHIR)	
17 54	U	KUMAMOTO PREF	
21 47	L	S OF YAMANASHI PREF	
3 02 27	U	S OFF CHOSHI	
02 48	U	(KUMAMO)	
03 27	U	IBARAKI PREF	
13 08	L	NEAR MATSUSHIRO	
13 46	U	W OFF KAGOSHIMA PREF	
14 37	L	NEAR MATSUSHIRO	
17 38	L	NEAR NEMURO	
17 49	U	OFF IWATE PREF	
4 00 48	U	NEAR ONAHAMA	
06 03	S	NEAR CHOSHI	
06 05	U	(CHOSHI)	
06 23	U	NEAR CHOSHI	
06 26	U	OFF COAST OF PERU	
06 44	S	NEAR CHOSHI	
06 47	U	(CHOSHI)	
13 19	L	NEAR MATSUSHIRO	
13 48	L	(NAGANO-MITAKE)	
16 38	U	(CHOSHI)	
16 38	U	(CHOSHI)	
20 26	U	(KUMAMO)	
5 01 01	U	(MIZUSA)	
02 48	U	(CHOSHI)	
02 48	S	NEAR CHOSHI	
03 13	U	NEAR CHOSHI	
15 26	U	(OFUNAT)	
21 55	U	UK	
22 21	U	(URAKAW)	
6 03 15	L	NEAR MATSUSHIRO	
03 41	U	(KUSHIR)	
05 21	L	E OF SAITAMA PREF	
07 10	L	(OFUNAT)	
10 51	U	NEAR ASHIZURIMISAKI	
12 21	U	UK	
14 56	L	NEAR MATSUSHIRO	
15 06	U	IBARAKI PREF	
17 01	S	N OF MIYAGI PREF	
21 55	U	(NEMURO)	
7 01 04	U	(WAKAYA)	
12 14	U	MIDDLE OF TOHOKU	
12 57	U	SW OF IBARAKI PREF	
14 49	L	NEAR MATSUSHIRO	
16 09	U	E OFF HOKKAIDO	
16 18	U	CELEBES SEA	
22 13	U	(KUMAMO)	
22 55	L	(MAEBAS-MIHARA)	
8 02 32	L	NEAR MATSUSHIRO	
09 20	L	(UTSUNO-ASHIO)	
11 24	L	(KAGOSH-OKINOERABU)	
8 13 59	L	N OF IWATE PREF	
19 08	U	MIYAGI PREF	
20 47	L	NEAR AJIRO	
9 03 30	L	NEAR MATSUSHIRO	
07 19	L	(HIROSH-HIWA)	
07 41	U	CAROLINE IS	
10 50	L	OFF IWATE PREF	
11 34	L	(UTSUNO-ASHIO)	
16 44	L	SW OF IBARAKI PREF	
17 08	L	OFF MIYAGI PREF	
17 09	L	S OF IBARAKI PREF	
19 25	U	UK	
20 19	U	BUNGO CHANNEL	
23 48	U	CAROLINE IS	
10 06 15	U	NW OF CHUBU	
06 18	U	(KUSHIR)	
18 53	U	NEAR NEMURO	
11 07 23	U	(YONAGO)	
08 02	U	NEAR TOMISAKI	
11 17	U	(AJIRO)	
20 50	U	(KOBE)	
12 08 33	L	NEAR MATSUSHIRO	
11 44	U	S OF KURILE IS	
12 50	L	OFF IWATE PREF	
14 43	L	NEAR MATSUSHIRO	
13 01 27	L	(WAKAYA)	
02 20	U	(NOBEOK)	
12 41	U	S OFF KYUSHU	
16 54	L	NEAR MATSUSHIRO	
19 40	U	NEAR SAGA	
14 00 23	U	NEAR MIYAKEJIMA	
07 28	U	(OFUNAT)	
08 48	L	NEAR MATSUSHIRO	
09 17	U	(HACHIN)	
09 36	S	KII CHANNEL	
09 47	U	IWATE PREF	
10 27	U	(NAGANO)	
12 40	L	(MAEBAS-KOZU)	
13 04	L	NEAR MATSUSHIRO	
13 05	L	NEAR MATSUSHIRO	
13 06	L	NEAR MATSUSHIRO	
14 21	L	NEAR MATSUSHIRO	
19 30	L	(MAEBAS-SUDAGAI)	
19 38	S	NEAR MATSUSHIRO	
19 45	L	NEAR MATSUSHIRO	
19 52	L	NEAR MATSUSHIRO	
23 20	L	NEAR MATSUSHIRO	
23 21	L	NEAR MATSUSHIRO	
15 01 14	L	NEAR MATSUSHIRO	
02 45	L	NEAR MATSUSHIRO	
03 41	L	NEAR MATSUSHIRO	
09 28	M	NEAR CHOSHI	
10 02	L	NEAR MATSUSHIRO	
11 20	U	NEAR CHOSHI	
15 04	L	NEAR MATSUSHIRO	
18 55	L	NEAR MATSUSHIRO	
19 00	U	S OF FUKUSHIMA PREF	
20 41	L	NEAR MATSUSHIRO	
16 01 55	U	(KUSHIR)	
02 08	U	(NAGANO)	
06 25	U	NEAR NEMURO	
06 39	L	NEAR MATSUSHIRO	

DATE, D	TIME H	M	C	LOCATION
16	09	06	L	NEAR MATSUSHIRO
	10	38	U	(KUMAMO)
	11	15	L	NEAR CHOSHI
	18	39	U	(AJIRO)
	20	13	L	(WAKAYA)
	20	41	L	NEAR MATSUSHIRO
	23	52	L	NEAR MATSUSHIRO
	23	57	L	NEAR MATSUSHIRO
17	00	14	U	(NAGANO)
	01	13	U	S OFF KYUSHU
	07	16	U	(AOMORI)
	08	18	U	(NEMURO)
	18	00	U	(KUSHIR)
	18	11	L	OFF MIYAGI PREF
18	01	27	U	(CHOSHI)
	01	33	L	NEAR MATSUSHIRO
	03	56	U	OFF AKITA PREF
	11	03	U	UK
	16	47	U	UK
	19	30	L	(HIROSH-SERANISHI)
	20	02	L	NEAR MATSUSHIRO
19	00	40	U	UK
	01	02	L	NEAR MATSUSHIRO
	02	49	U	UK
	07	41	L	NEAR CHOSHI
	10	01	U	IWATE PREF
	12	29	R	OFF FUKUSHIMA PREF
	17	09	L	IBARAKI PREF
	18	30	L	NEAR MATSUSHIRO
	18	48	U	(AJIRO)
	19	56	R	E OFF HOKKAIDO
	22	47	L	NEAR NIIJIMA
	23	00	L	(TOKYO-NIIJIMA)
20	00	14	U	(KUSHIR)
	04	30	U	(WAKAYA)
	09	32	M	S PART OF IBARAKI PREF
	12	42	U	(YAMAGA)
	14	58	U	SE OFF HOKKAIDO
	18	52	U	UK
	20	31	U	E OFF AOMORI PREF
21	04	23	U	(UTSUNO)
	04	38	U	OFF IBARAKI PREF
	06	50	U	(KYOTO)
	06	59	L	NE PART OF CHIBA PREF
	09	30	L	(MAEBAS-HANAGESHI)
	13	25	U	E OFF KWANTO
	20	56	U	S OFF KYUSHU
	22	01	U	UK
	22	41	U	(URAKAW)
22	02	30	L	(TOKYO-NIIJIMA)
	02	32	L	NEAR NIIJIMA
	07	18	L	NEAR MATSUSHIRO
	07	27	L	TOTORI PREF
	07	43	L	NEAR MATSUSHIRO
	09	56	U	(YAKUSH)
	10	57	U	OFF IBARAKI PREF
	12	01	L	(TOKYO-NIIJIMA)
	19	18	M	E OFF HOKKAIDO
	21	35	U	E OFF HOKKAIDO
	22	31	S	NEAR WAKAYAMA
23	02	02	U	(KUMAMO)
	02	28	U	(KUMAMO)
	05	11	U	(OSHIMA)
23	05	55	L	NEAR WAKAYAMA
	07	35	U	(UTSUNO)
	07	40	L	E COAST OF IWATE PREF
	13	33	L	NEAR MATSUSHIRO
	14	27	L	(KYOTO)
	19	49	L	NEAR MATSUSHIRO
24	01	22	L	NEAR MATSUSHIRO
	02	43	L	NEAR MATSUSHIRO
	06	40	L	NEAR MATSUSHIRO
	07	06	U	S PART OF NAGANO PREF
	10	58	L	(TOKYO-NIIJIMA)
	16	48	L	NEAR MATSUSHIRO
	22	16	L	NEAR MATSUSHIRO
	22	50	L	(MAEBAS-MIHARA)
25	02	45	L	AICHI PREF
	02	48	L	NEAR MATSUSHIRO
	03	25	U	(NAGA)
	04	28	U	(NAGANO)
	04	53	U	(MIYAZA)
	05	05	L	NEAR MATSUSHIRO
	08	03	L	(MAEBAS-HANAGESHI)
	08	13	L	(MAEBAS-HANAGESHI)
	11	09	L	NEAR MATSUSHIRO
	20	49	U	(YAKUSH)
	20	58	U	(OFUNAT)
	21	29	L	NEAR MATSUSHIRO
	22	44	L	NEAR MATSUSHIRO
26	02	17	U	(NAGANO)
	02	56	U	S PART OF KYUSHU
	04	34	L	(HIROSH-KAKEI)
	08	01	U	IWATE PREF
	10	28	L	NEAR MATSUSHIRO
	15	48	U	OFF ETOROFU IS
	16	42	U	(ONAHAM)
	23	53	L	E OFF CHIBA PREF
27	00	20	U	S PART OF KWANTO
	03	04	L	NEAR MATSUSHIRO
	03	55	U	NEAR CHOSHI
	04	51	L	S PART OF IBARAKI PREF
	07	04	U	(YAKUSH)
	15	19	U	OFF IBARAKI PREF
	21	31	L	E OFF CHIBA PREF
28	03	20	L	NEAR MATSUSHIRO
	06	28	L	NEAR CHOSHI
	09	55	U	(YAKUSH)
	09	57	L	NEAR MATSUSHIRO
	13	05	U	(MIZUSA)
	14	05	U	NEW BRITAIN
	14	25	U	(MIYAZA)
	17	41	U	NEAR NAGOYA
29	02	28	U	(KUMAMO)
	04	41	L	W COAST OF WAKAYAMA PREF
	04	44	U	(WAKAYA)
	04	45	U	(WAKAYA)
	04	46	U	(WAKAYA)
	05	19	U	(WAKAYA)
	08	13	L	W COAST OF WAKAYAMA PREF
	09	25	L	(WAKAYA)
	09	41	L	(WAKAYA)
	11	00	L	(WAKAYA)
	12	09	L	W PART OF HOKKAIDO
	12	19	L	(UNZEND)
	12	56	U	(YAKUSH)
	17	13	U	(NAGANO)

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DATE, D	TIME H	M	C	LOCATION
29	18	13	U	(YAKUSH)
	19	32	L	(UNZEND)
	23	33	U	E OFF CHIBA PREF
30	00	45	U	(WAKAYA)
	01	43	L	NEAR WAKAYAMA
	02	21	U	NEAR WAKAYAMA
	03	24	U	NEAR WAKAYAMA
	03	38	U	NEAR WAKAYAMA
	07	52	L	NEAR UNZENDAKE
	16	57	M	NEAR AMAMI-OSHIMA
	17	53	U	(YAKUSH)

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST. ALL EVENTS FELT AT THE OBSERVATORY ARE GIVEN IN LIST 6.

List 4 EARTHQUAKE ORIGINS

(J. S. T.) DATE, TIME D	H	M	C	LOCATION	ORIGIN TIME M	S	+/-S	LONG.	+/-	LAT.	+/-	H KM	M	C CLASS
1	00	11	L	NEAR MATSUSHIRO	10	57.5	0.2	138 09 01		36 28 01		00		
	01	41	S	N OF MIYAGI PREF	41	23.0	0.2	141 15 01		38 38 01		30	4.6	
	15	08	S	OFF IBARAKI PREF	07	49.2	0.8	141 08 04		36 18 05		40	3.9	
2	07	42	R	S OF KURILE	42	00.0	0.7	147 13 04		44 07 03		150		
	13	51	U	NEAR KOZUJIMA	51	18.1	1.5	139 13 06		34 16 05		10	3.7	
	21	47	L	S OF YAMANASHI PREF	46	58.8	0.1	138 33 01		35 20 01		20	3.9	
4	06	03	S	NEAR CHOSHI	03	48.7	0.4	140 52 02		35 50 01		30	4.3	
	06	44	S	NEAR CHOSHI	44	44.8	0.4	140 52 02		35 52 01		30	4.8	
5	02	48	S	NEAR CHOSHI	48	29.2	1.0	141 16 05		35 27 02		40	4.6	
6	05	21	L	E OF SAITAMA PREF	21	04.2	0.2	139 39 03		36 07 02		90		
	14	56	L	NEAR MATSUSHIRO	56	21.1	0.3	138 07 01		36 26 01		00	3.5	
	17	01	S	N OF MIYAGI PREF	01	24.8	0.1	141 09 01		38 42 01		10	4.8	
7	12	57	U	SW OF IBARAKI PREF	57	32.0	0.1	139 51 01		36 16 01		60	3.0	
8	13	59	L	N OF IWATE PREF	59	18.4	0.2	141 19 02		40 18 01		100		
	20	47	L	NEAR AJIRO	47	52.1	0.2	139 06 02		35 08 01		20	3.5	
11	08	02	U	NEAR TOMISAKI	02	06.5	0.3	139 46 03		34 53 01		90		
12	11	44	U	S OF KURILE IS	43	34.6	1.6	149 34 10		44 26 12		30	5.2	
	12	50	L	OFF IWATE PREF	50	25.5	0.3	142 12 02		40 05 01		50	3.8	
14	09	36	S	KII CHANNEL	36	01.7	0.3	134 49 02		34 02 01		50	4.1	
	13	04	L	NEAR MATSUSHIRO	04	31.7	0.9	138 07 02		36 24 03		00	4.1	
	19	38	S	NEAR MATSUSHIRO	38	32.3	0.1	138 09 01		36 26 01		10	5.1	
15	09	28	M	NEAR CHOSHI	28	36.0	0.5	140 55 02		35 36 01		40	5.6	
16	23	52	L	NEAR MATSUSHIRO	52	34.7	0.2	138 17 01		36 35 01		10	4.0	
	23	57	L	NEAR MATSUSHIRO	57	51.2	0.2	138 16 02		36 36 01		10	4.0	
19	07	41	L	NEAR CHOSHI	41	17.6	0.8	141 10 05		35 45 02		40	3.7	
	12	29	R	OFF FUKUSHIMA PREF	28	54.0	0.4	141 53 02		37 19 01		40	5.0	
	19	56	R	E OFF HOKKAIDO	56	07.6	0.3	145 33 02		42 46 01		90		
	22	47	L	NEAR NIIJIMA	46	49.8	0.8	139 03 02		34 15 03		00	4.3	
20	09	32	M	S PART OF IBARAKI PREF	32	40.6	0.2	140 12 01		35 56 01		80		
21	06	59	L	NE PART OF CHIBA PREF	59	53.2	0.7	140 34 03		35 47 03		00	3.8	
22	07	18	L	NEAR MATSUSHIRO	18	34.4	0.2	138 17 01		36 27 01		10		
	19	18	M	E OFF HOKKAIDO	18	03.3	1.8	149 09 09		43 36 10		40	5.7	
	22	31	S	NEAR WAKAYAMA	31	45.7	0.2	135 07 01		34 13 01		10	3.9	
23	07	40	L	E COAST OF IWATE PREF	40	06.2	0.2	141 56 02		39 47 01		60	3.7	
24	22	16	L	NEAR MATSUSHIRO	16	26.8	0.2	138 18 01		36 28 01		00		
25	02	45	L	AICHI PREF	45	42.5	0.3	137 26 01		34 52 01		00	3.8	
	05	05	L	NEAR MATSUSHIRO	05	20.7	0.2	138 12 01		36 31 01		10		
26	23	53	L	E OFF CHIBA PREF	53	09.3	0.7	141 15 03		35 23 02		40	4.7	
27	15	19	U	OFF IBARAKI PREF	19	16.2	0.4	141 10 03		36 18 01		40	4.1	
	21	31	L	E OFF CHIBA PREF	31	46.0	2.3	141 31 08		35 32 09		10	4.2	
28	03	20	L	NEAR MATSUSHIRO	20	00.8	0.1	138 07 00		36 25 00		00		
	06	28	L	NEAR CHOSHI	28	23.0	0.7	140 51 04		35 37 04		70		
29	04	41	L	W COAST OF WAKAYAMA PREF	41	38.4	0.2	135 13 01		34 10 01		10	4.2	
	08	13	L	W COAST OF WAKAYAMA PREF	13	02.3	0.1	135 10 01		34 11 01		20	3.6	
	23	33	U	E OFF CHIBA PREF	33	24.4	2.0	141 17 09		35 30 07		50	4.1	
30	01	43	L	NEAR WAKAYAMA	43	59.0	1.1	135 08 01		34 13 04		00		
	16	57	M	NEAR AMAMI-OSHIMA	57	14.7	1.6	129 58 13		28 26 06		60	5.6	

International Seismological Centre From the ISC collection scanned by SISMOS

List 5 DATA OF EARTHQUAKES

OT= 1 0 10 57.5 +/- 0.2 (J. S. T.)
NEAR MATSUSHIRO
LAT= 36 28 +/- 1 LONG= 138 9 +/- 1
H= 0 CLASS=L

I SEISMIC INTENSITY
* MICRON

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A	T S	E-W A	T S	U-D A	T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
MATSUS	1	P	00 11 00.3	S	11 01.0										9.5	00.7
NAGANO	0	IP	00 11 02.4	S	11 05.1										21.9	02.7
MATSUM	0	IP	00 11 05.2	IS	11 10.1									U 2	29.4	04.9
KARUIZ	0	P	00 11 06.4	IS	11 12.2									D	38.7	05.8
NIIGAT	0	EX	00 11 50.7	IS	11 51.5	3	0.4	4	0.6						179.0	

OT= 1 1 41 23.0 +/- 0.2
N OF MIYAGI PREF
LAT= 38 38 +/- 1 LONG= 141 15 +/- 1
H= 30 MAG=4.6 CLASS=S

ISHINO	1	IP	01 41 30.0	IS	41 34.4	45	2.4	55	3.0	21	3.0	N 10 W 10	D	0	23.6	04.4
MIZUSA	2	IP	01 41 31.1	ES	41 36.0			183	0.5	70	1.2		D	6	56.4	04.9
SENDAI	X	IP	01 41 33.4	X	14 39.5	54	2.4	27	0.8	20	1.6	N 4 E 1	D	4	51.5	
OFUNAT	1	IP	01 41 34.9	IS	41 42.5	57	0.0	32	0.0	31	0.0	N 1 E 1	U	1	62.6	07.6
YAMAGA	0	EP	01 41 38.3	S	41 48.4										89.2	10.1
MORIOK	2	IP	01 41 41.7	IS	41 54.4	52	0.4	94	0.3	17	0.3	S 2 E 0	D	1	118.3	12.7
SAKATA	0	EP	01 41 44.1	IS	42 00.5										126.4	16.4
FUKUSH	0	EP	01 41 44.3	S	41 59.2	48	1.0	21	1.0	10	0.7				118.6	14.9
MIYAKO	1	EP	01 41 44.6	S	41 59.0	22	1	29	1						128.3	14.4
AKITA	0	EP	01 41 48.0	EX	42 06.0	26	3.6	28	4.0	12	3.2				156.1	
ONAHAM	0	EP	01 41 55.2	ES	42 19.3	55	1.3	37	1.0	12	1.6				189.8	24.1
SHIRAK	0	EP	01 41 55.8	S	42 19.6										190.8	23.8
HACHIN	0	P	01 41 56.0	IS	42 21.7	15	0.4	14	0.4	6	0.8	S		D	211.3	25.7
NIIGAT	0	EP	01 41 57.6	IS	42 23.8	20	2.8	25	3.0	15	4.0				208.4	26.2
AOMORI	0	EP	01 42 03.6	IS	42 30.8	38	1.6	34	1.6	12	1.4				245.7	27.2
MITO	0	EP	01 42 05.4	S	42 36.4	21	2.5	15	1.9	11	1.6				259.5	31.0
UTSUNO	0	EP	01 42 05.9	ES	42 35.1	10	1.3	7	2.5	4	1.6				261.6	29.2
KAKIOK	0	EP	01 42 09	ES	42 43	14	1.1	9	0.8	5	0.5				282.4	34.0
KUMAGA	0	X	01 42 15.6	ES	42 46.0	6	1.6	5	1.4	4	3.6				321.6	
TOKYO	0	X	01 42 37.6			11	2.8	7	4.0						352.9	
YOKOHA	0	X	01 43 05.0	EX	43 15.6	6	2.1	6	2.2						382.0	

OT= 1 15 7 49.2 +/- 0.8
OFF IBARAKI PREF
LAT= 36 18 +/- 5 LONG= 141 8 +/- 4
H= 40 MAG=3.9 CLASS=S

MITO	1	IP	15 08 01.6	IS	08 09.4	30	0.3	32	0.4	26	0.3	S 3 E 2	D	7	60.0	07.8
KAKIOK	0	P	15 08 04.2	IS	08 13.7	12	0.3	17	0.3	10	0.3		D		84.8	09.5
UTSUNO	0	P	15 08 08.3	S	08 20.8	10	0.2	10	0.2	3	0.2				116.4	12.5
MATSUS	0	P	15 08 28	S	08 59										263.6	31.0

OT= 2 7 42 0.0 +/- 0.7
S OF KURILE
LAT= 44 7 +/- 3 LONG= 147 13 +/- 4
H=150 CLASS=R

NEMURO	2	IP	07 42 30.3	IS	42 51.3	131	1.2	107	2.4	54	0.4	S 18 W 20	U	50	157.9	21.0
ABASHI	0	P	07 42 36.7	IS	43 03.8	67	5.0	93	4.0						235.3	27.1
KUSHIR	2	IP	07 42 41.2	IS	43 10.6	195	0.2	234	0.2	74	0.2	S 20 W 22	U	38	260.8	29.4
OBIHIR	0	IP	07 42 52.3	S	43 30.8								U	4	349.3	38.5
HIROO	1	IP	07 42 55.7	IS	43 34.7							W 2	U	8	376.8	39.0
ASAHIK	0	P	07 42 56.7	IS	43 38.4	41	1.3	30	1.2			S E	D		390.8	41.7
URAKAW	0	P	07 43 00.2	ES	43 40.0	66	2.2	66	3.2	25	3.0	N W 1	U	1	421.5	39.8
WAKKAN	0	IP	07 43 03.3	S	43 50.4	29	3.5	20	3.6	32	3.6	E	D	4	461.9	47.1
SAPPOR	0	IP	07 43 09.2	S	43 57.6	42	2.8	46	2.8	14	3.0		D	6	489.6	48.4
HAKODA	0	IP	07 43 19.3	IS	44 18.7	27	1.6	21	1.8	9	1.2		U	1	585.7	59.4
HACHIN	1	IP	07 43 22.0	IS	44 22.2	59	0.6	52	0.4	29	1.6	S W 1	U		615.7	60.2
AOMORI	0	EP	07 43 25.8	ES	44 28.5	83	1.9	78	1.2	31	1.8				643.5	62.7
MIYAKO	0	EP	07 43 28	ES	44 32.7	15	2	19	2.0	10	1.1				660.5	64.7
MORIOK	X	EP	07 43 32.6	ES	44 40.5	48	0.4	36	0.4	12	2.2				701.8	67.9
				IX	44 42.0											
OFUNAT	0	P	07 43 35.5	X	43 46.8	28	1.2	27	1.2	17	1.4	S 1			724.6	

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A	/T	E-W A	/T	U-D A	/T	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
AKITA	0	EP	07	43	40.3	ES	44	58.2	27	2.0	31	1.8	15	2.2				765.8	77.9
MIZUSA	0	EP	07	43	41.0	IS	44	52.9	105	1.0	85	0.7						750.2	71.9
ISHINO	0	P	07	43	45.5	ES	45	03.0	21	0.6	18	0.6	8	0.6	N	0 E	0 D 0	802.8	77.5
SENDAI	0	EP	07	43	49.3	S	45	12.0	25	2.0	25	2.0	13	2.0				838.5	82.7
SAKATA	0	P	07	43	52.2	S	45	16.0									U 2	844.9	83.8
YAMAGA	0	EP	07	43	54.2	S	45	19.7										868.9	85.5
FUKUSH	0	EP	07	43	59.0	ES	45	26.2	41	1.0	25	1.0	11	0.8				905.6	87.2
AIKAWA	0	EP	07	44		IS	45	48.6	6	1.6	6	2.2	3	2.4				1012.6	
SHIRAK	0	EP	07	44	06.1	S	45	42.7										976.0	96.6
NIIGAT	0	EX	07	44	08.0	ES	45	43.4	50	2.3	33	3.1	11	2.3				972.2	
ONAHAM	0	EX	07	44	12.5	IS	45	36.4	30	1.1	34	0.8	19	2.3				958.6	
MITO	0	P	07	44	13.3	S	45	52.5	29	2.5	18	1.5	10	1.6				1032.5	99.2
UTSUNO	0	EP	07	44	15.5	ES	45	58.6	14	1.5	13	2.0	8	1.0				1046.1	103.1
KAKIOK	0	EP	07	44	16	ES	45	54	19	1.1	24	1.1	12	1.1				1059.5	98.0
KUMAGA	0	EP	07	44	24.0	ES	46	10.8	11	1.4	12	2.2	6	1.8				1107.4	106.8
MATSUS	0	IP	07	44	25.9	S	46	16							S		U	1136.3	110.1
TAKADA	0	X	07	44	27.6	S	46	08.2										1086.0	
TOKYO	0	EX	07	44	32	ES	46	18	18	3.4	10	2.8						1131.7	
TOMISA	0	EP	07	44	35.0				9	2.0	8	2.4	6	2.0				1201.4	
KOFU	0	X	07	44	42.4	ES	46	29.4	9	2.2	10	1.8	2	0.4				1194.0	
NAGOYA	0	EP	07	44	49.5	ES	47	02.0	7	2.2	6	2.4	3	1.4				1325.2	132.5
MISHIM	0	X	07	44	53.7	S	46	35.6	6	2.4	12	3.3	3	1.1				1225.7	
MAEBAS	0	X	07	45	03.7				8	2.4	9	2.2	6	2.0				1101.0	
OSAKA	0	EX	07	45	10.6	EX	47	29	8	4.8	10	4.2	3	2.6				1452.3	
CHICHI	0	X	07	45	10.9	X	45	27.5										1137.1	
KANAZA	0	X	07	45	48.4	ES	46	38.0	5		5		4					1228.3	
OITA	0	EP	07	45	52.4	ES	48	51.6	9	4.1	8	5.3						1811.1	179.2
YOKOHA	0	X	07	45	52.8	IX	46	24.0	12	1.1	12	1.4						1160.1	
FUNATS	0	X	07	45	54.0	S	46	33.2										1198.5	
WAJIMA	0	X	07	46	14						21	2.0						1146.2	
TOYAMA	0	X	07	46	22				7	2.4	4	2.4	8	3.0				1181.1	
OMAEZA	0	X	07	46	28.9						6	2.4						1308.8	
OSHIMA	0	X	07	46	36.0						9	1.2	4	0.3				1237.2	
HAMAMA	0	X	07	46	58				4	2.6	6	2.8	3	2.0				1324.5	
HACHIJ	0	X	07	47	09.2	X	47	31.2	7		5							1381.9	

OT= 2 13 51 18.1 +/- 1.5
NEAR KOZUJIMA
LAT= 34 16 +/- 5 LONG= 139 13 +/- 6
H= 10 MAG=3.7 CLASS=U

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A	/T	E-W A	/T	U-D A	/T	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
OSHIMA	0	P	13	51	30.2				13	2.0	11	3.0	7	2.0				56.9	
OMAEZA	0	EP	13	51	33.6				9	4.3	12	2.2						99.5	
TOMISA	0	P	13	51	35.2				7	1.4	7	3.0	4	1.8				91.6	
MISHIM	0	EP	13	51	35.8	ES	51	46.6	7	1.1	7	1.1						97.3	10.8
SHIZUO	0	EP	13	51	38.2	S	51	50.6	6	0.4	6	0.4						108.0	12.4
KOFU	0	EP	13	51	46.5	ES	52	08.5	5	1.8	3	1.6	2	0.5				166.3	22.0
YOKOHA	0	X	13	51	48.1				6	0.5	6	0.5						135.8	
MATSUS	0	P	13	52	01	S	52	34										268.1	33.0

OT= 2 21 46 58.8 +/- 0.1
S OF YAMANASHI PREF
LAT= 35 20 +/- 1 LONG= 138 33 +/- 1
H= 20 MAG=3.9 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A	/T	E-W A	/T	U-D A	/T	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
FUNATS	1	IP	21	47	04.5	IS	47	09.4										26.6	04.9
KOFU	0	IP	21	47	06.5	IS	47	12.0	53	1.0	42	0.4	15	1.3	S	2 E	1 D 8	36.8	05.5
SHIZUO	1	IP	21	47	07.2	IS	47	13.4	43	0.2	45	0.2	23	0.2	N	7 E	1 D 7	42.0	06.2
MISHIM	0	IP	21	47	07.7	IS	47	13.4	72	0.8	54	0.8	17	0.7			D 1	42.4	05.7
AJIRO	0	IP	21	47	09.9	IS	47	17.4	26	0.3	15	0.3	5	0.4		W	0 D 1	59.3	07.5
IIDA	0	EP	21	47	11.4	IS	47	20.2	42	0.4	15	0.6	11	1.2				67.8	08.8
OMAEZA	0	P	21	47	14.9	S	47	26.1	40	0.4	26	0.4	10	0.3				86.6	11.2
OSHIMA	0	P	21	47	16.7	S	47	28.5	10	0.8	9	1.4	7	0.4				98.6	11.8
HAMAMA	0	P	21	47	16.9	S	47	28.8	11	1.0	13	1.1	5	0.6			U 2	102.4	11.9
YOKOHA	0	EP	21	47	18.0	IS	47	34.7	10	0.5	8	0.5						101.0	16.7
KUMAGA	0	EP	21	47	20.6	S	47	35.6	11	1.4	5	1.0	2	3.2				117.7	15.0
MATSUS	0	IP	21	47	21.6	IS	47	38.6							S	E	D	137.2	17.0
TOKYO	0	EP	21	47	23.4	ES	47	36	6	3.2	6	0.6						116.3	12.6
HIKONE	0	EP	21	47	32.5	ES	47	58.1	9	0.7	7	0.9	5	0.8				209.5	25.6
OSAKA	0	X	21	48	11				6	2.8	6	1.5						285.2	

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OT= 4 6 3 48.7 +/- 0.4
NEAR CHOSHI
LAT= 35 50 +/- 1 LONG= 140 52 +/- 2
H= 30 MAG=4.3 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A	/T	E-W A	/T	U-D A	/T	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
CHOSHI	2	IP	06	03	54.8	IS	03	58.6	845	0.4	804	0.4	740	0.5	N 12	E 8	D 14	12.2	03.8
KAKIOK	1	IP	06	04	02.0	IS	04	10.9	77	1.0	82	1.0	27	0.7	N 4	W 5	U 6	75.1	08.9
MITO	1	IP	06	04	02.4	IS	04	11.6	210	0.4	105	0.5	32	0.2			U 2	70.1	09.2
TOKYO	0	EP	06	04	06.5	ES	04	17.0	22	1.8	14	1.2						101.6	10.5
UTSUNO	1	P	06	04	07.9	S	04	21.6	19	0.2	13	0.2	10	0.3				119.5	13.7
ONAHAM	0	EX	06	04	10.8	ES	04	24.4	18	1.2	25	1.0	7	0.8				123.4	
SHIRAK	0	EP	06	04	12.3	S	04	29.5										153.7	17.2
YOKOHA	0	EP	06	04	13.0	S	04	31.3	19	0.5	20	1.0					D 2	118.2	18.3
KUMAGA	0	EP	06	04	15.2	X	04	37.6	8	1.6	10	1.2	3	1.0				138.0	
MAEBAS	0	P	06	04	17.5	ES	04	34.9	6	0.8	4	1.0	3	1.2			D 2	174.0	17.4
MISHIM	0	EP	06	04	19.4				6	2.2	8	2.2	2	1.8				193.1	
FUKUSH	0	EP	06	04	22.0	ES	04	44.3	18	0.9	16	0.9	6	0.7				216.2	22.3
KOFU	0	EP	06	04	23.2	X	05	02.6	8	1.0	7	1.2	2	1.3				209.6	
MATSUS	0	IP	06	04	26.0	X	05	06										251.5	
SENDAI	0	EX	06	04	29				6	1.0	10	2.0	4	1.2	N	W	U	269.3	
MIZUSA	0	X	06	04	53.1						4	1.7	4	1.9				367.0	

OT= 4 6 44 44.8 +/- 0.4
NEAR CHOSHI
LAT= 35 52 +/- 1 LONG= 140 52 +/- 2
H= 30 MAG=4.8 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A	/T	E-W A	/T	U-D A	/T	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
CHOSHI	3	IP	06	44	51.2	IS	44	55.0	1453	0.5			884	0.6	N 20	E 8	D 26	15.9	03.8
KAKIOK	1	IP	06	44	57.4	IS	45	06.5	187	0.8	200	1.0	65	0.5	N 10	W 12	D 8	72.9	09.1
MITO	2	IP	06	44	57.9	IS	45	07.4	290	0.6	217	0.5	54	1.4			U 2	67.0	09.5
OMAEZA	0	X	06	44					18	2.9	15	2.7						279.2	
TOKYO	0	IP	06	45	03.2	ES	45	15.7	74	1.4	68	1.8	24	3.4			D 1	102.2	12.5
UTSUNO	1	P	06	45	03.9	IS	45	17.4	49	1.2	33	0.9	16	1.0				117.0	13.5
ONAHAM	0	IP	06	45	06.4	ES	45	20.0	57	1.2	80	0.9	21	0.8	N 7		U 7	119.7	13.6
KUMAGA	0	EP	06	45	07.2	ES	45	25.0	37	1.8	41	1.2	16	1.0				137.1	17.8
YOKOHA	0	EP	06	45	07.7	IS	45	26.9	68	0.7	72	1.1	41	2.0			U 5	119.6	19.2
SHIRAK	0	P	06	45	08.1	IS	45	25.1										150.3	17.0
TOMISA	0	EP	06	45	08.5				39	2.0	38	2.2	23	2.0				141.1	
MAEBAS	0	P	06	45	11.9	S	45	30.6	24	0.9	24	1.8	14	1.2			U 3	172.7	18.7
OSHIMA	0	P	06	45	12.9	S	45	32.0	25	1.8	15	1.6	8	1.6				182.6	19.1
AJIRO	0	P	06	45	13.5	ES	45	40.2	18	1.8	13	1.6	7	1.4				184.8	26.7
MISHIM	0	P	06	45	16.0	ES	45	41.6	29	2.9	37	2.2	8	2.0				194.6	25.6
FUKUSH	0	EP	06	45	17.5	ES	45	39.4	65	0.9	75	0.9	25	0.8				212.6	21.9
FUNATS	0	P	06	45	17.8	S	45	45.5										194.7	27.7
KARUIZ	0	EP	06	45	17.9	ES	45	41.3										214.9	23.4
KOFU	0	EP	06	45	18.6	X	45	51.6	42	1.8	32	1.3	14	1.6				209.9	
MATSUS	0	IP	06	45	21.8	S	46	00							N	W	U	250.4	38.2
SHIZUO	0	P	06	45	22.8	S	45	55.0	6	2.4	9	2.8						244.3	32.2
SENDAI	0	EP	06	45	24.0	ES	45	53.0	25	2.0	41	2.0	13	1.2				265.6	29.0
ISHINO	0	P	06	45	26.5	ES	45	58.0	5	1.4	7	1.2	4	1.6	S	0 W	0 D 0	286.5	31.5
NIIGAT	0	EX	06	45	26.5	ES	46	02.2	46	3.7	21	3.0	11	3.1				278.5	
IIDA	0	EP	06	45	27.6	X	46	12.0	13	1.6	10	1.6	7	1.4				277.2	
TAKADA	0	EP	06	45	28.3	S	46	05.7										271.7	37.4
HAMAMA	0	P	06	45	35.1	X	46	22.0	15	2.4	14	2.4	6	1.4			U 1	313.4	
HACHIJ	0	EP	06	45	35.4	ES	46	07.2			5							322.2	31.8
TOYAMA	0	EP	06	45	36	ES	46	18	9	2.8	9	2.6	6	3.0				341.5	42.0
MIZUSA	0	EP	06	45	38.9						20	1.9	10	1.5				363.3	
SAKATA	0	EP	06	45	39.4	ES	46	19.8										349.1	40.4
NAGOYA	0	EP	06	45	40.5	X	46	35.8	14	1.4	14	1.0	8	1.4				362.0	
WAJIMA	0	EX	06	45	42				18	1.4	6	1.0						393.0	
AKITA	0	EX	06	45	47.4				11	3.6	11	4.0	7	3.6				432.7	
GIFU	0	X	06	45	48.8				11	2.1	6	1.9	3	1.1				375.0	
KANAZA	0	X	06	45	53.8	X	46	38.6	4		8		4					386.7	
HIKONE	0	X	06	45	55.9	X	46	44.2	16	1.8	9	1.0	7	0.8				423.8	
TOYOOK	0	EP	06	46	04.1	ES	47	03.5	23	1.0	13	1.0						548.3	59.4
OSAKA	0	EX	06	46	08	X	47	26.0	15	4.1	17	4.6	6	2.4				503.2	

OT= 5 2 48 29.2 +/- 1.0
NEAR CHOSHI
LAT= 35 27 +/- 2 LONG= 141 16 +/- 5
H= 40 MAG=4.6 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A	/T	E-W A	/T	U-D A	/T	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
CHOSHI	3	IP	02	48	40.4	IS	48	45.2	123	0.4	149	0.4	111	0.4	S 20	E 10	D 74	49.0	04.8
KAKIOK	0	EP	02	48	48	ES	49	01	43	0.8	52	0.8	29	0.6				130.1	13.0
MITO	0	IP	02	48	50.0	IS	49	05.0	55	1.4	65	2.1	28	2.6			D 2	125.5	15.0

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOMISA	0	EP	02 48 51.7			25 2.4	27 3.2	13 2.2				143.6	
TOKYO	0	IP	02 48 53.4	ES	49 08.5	42 3.0	50 3.2	20 4.2		W 2		139.2	15.1
UTSUNO	0	P	02 48 56.6	S	49 20.1	59 1.3	37 1.9					175.0	23.5
OSHIMA	0	EP	02 48 57.0	S	49 18.3	14 0.6	11 0.8	8 1.9				188.3	21.3
OMAEZA	0	X	02 48			8 3.8	6 3.5					294.0	
MISHIM	0	EP	02 49	S	49	18	19	8				215.8	
AJIRO	0	P	02 49 00.2	ES	49 22.8	5 0.4	4 0.4	3 0.6				202.5	22.6
SHIRAK	0	EP	02 49 00.4	ES	49 22.6							207.4	22.2
KUMAGA	0	EP	02 49 00.4	ES	49 21.8	17 2.4	17 2.8	11 3.8				186.8	21.4
ONAHAM	0	EX	02 49 02.0	ES	49 14.6	43 0.9	65 1.2	11 0.7				169.0	
FUNATS	0	P	02 49 03.7	S	49 22.2							227.2	18.5
MAEBAS	0	EP	02 49 04.0	IS	49 29.4	12 2.0	10 1.8	15 2.1			U 2	225.0	25.4
KOFU	0	EP	02 49 06.2	ES	49 42.2	17 2.0	12 2.0	6 2.0				246.6	36.0
SHIZUO	0	EP	02 49 09.2	ES	49 37.1	3 3.0	8 3.0					265.7	27.9
KARUIZ	0	EP	02 49 09.4	S	49 35.1							264.2	25.7
MATSUS	0	P	02 49 10									301.0	
FUKUSH	0	EP	02 49 11.7	ES	49 35.6	33 0.9	32 1.0	13 0.8				265.5	23.9
SENDAI	0	EP	02 49 14	ES	49 45	12 2.0	10 2.0	4 2				313.5	31.0
IIDA	0	E	02 49 15.2									311.4	
HACHIJ	0	EP	02 49 16.8			5						293.8	
HAMAMA	0	EP	02 49 22	X	50 14	9 2.6	7 2.6	4 3.4			D 1	333.4	
TAKADA	0	X	02 49 22.5									327.3	
NAGOYA	0	EP	02 49 27.6	X	50 26.0	11 2.4	7 1.8	5 1.8				392.1	
TOYAMA	0	X	02 49 39	X	50 23	5 2.6	7 2.8	6 3.8				391.1	
HIKONE	0	X	02 49 40.4	X	50 43.6	9 1.2	4 1.5	4 1.2				456.5	
MIZUSA	0	X	02 49 40.6				10 1.7					408.9	
KANAZA	0	X	02 49 44.4	X	50 31.0	7	10	4				433.7	
GIFU	0	X	02 49 53.2			6 1.9	4 1.7					408.7	
AKITA	0	X	02 50 01.6			7 4.0	7 3.2	4 3.4				484.7	
NIIGAT	0	X	02 50 01.8			15 3.0	20 3.4	7 3.7				337.1	
OSAKA	0	X	02 50 14			19 3.9	15 4.3	7 2.8				529.9	
SAKATA	0	X	02 50 22.8									403.7	

OT= 6 5 21 4.2 +/- 0.2
E OF SAITAMA PREF
LAT= 36 7 +/- 2 LONG= 139 39 +/- 3
H= 90 CLASS=L

KUMAGA	0	P	05 21 18.8	S	21 29.2	7 0.4	15 0.8	2 0.2			U 2	24.1	10.4
UTSUNO	0	EP	05 21 19.1	ES	21 30.2	14 0.2	9 0.2					51.7	11.1
KAKIOK	0	IP	05 21 19.2	ES	21 30	7 0.3	8 0.3	4 0.8				50.5	10.8
TOKYO	0	EP	05 21 21.0	ES	21 32.8	5 0.4	6 0.6					48.9	11.8
AJIRO	0	P	05 21 26.6	S	21 41.8	7 0.3	5 0.3	1 0.4				129.2	15.2
MATSUS	0	IP	05 21 28.1	S	21 45				S	E	D	137.6	16.9

OT= 6 14 56 21.1 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 26 +/- 1 LONG= 138 7 +/- 1
H= 0 MAG=3.5 CLASS=L

MATSUS	2	P	14 56 25.0	S	56 27.0							14.3	02.0
NAGANO	0	P	14 56 27.5	S	56 31.1							26.1	03.6
MATSUM	0	P	14 56 28.0	S	56 31.6							24.7	03.6
KARUIZ	0	IP	14 56 30.6	S	56 36.0					W	D 4	40.4	05.4
TAKADA	0	EP	14 56 36.8	S	56 45.2							75.5	08.4
TOYAMA	0	EP	14 56 38	ES	56 51	6 3.6	7 3.6	4 4.0				86.8	13.0
MAEBAS	0	P	14 56 42.3			6 3.0	3 1.0	5 2.3	N	5	D 2	85.1	
KANAZA	0	EP	14 56 46.4	ES	57 03.6	5	4	4				132.1	17.2

OT= 6 17 1 24.8 +/- 0.1
N OF MIYAGI PREF
LAT= 38 42 +/- 1 LONG= 141 9 +/- 1
H= 10 MAG=4.8 CLASS=S

ISHINO	1	IP	17 01 32.4	IS	01 36.8	153 2.0	145 2.0	71 2.4	N	37 W	30 D 21	33.3	04.4
MIZUSA	1	EP	17 01 34.6	IS	01 39.5	373 3.1	276 2.9	134 1.5				48.1	04.9
SENDAI	1	IP	17 01 35.8	S	01 42.0	143 2.5	85 2.0	50 2.0	N	7 E	4 D 9	53.5	06.2
OFUNAT	2	IP	17 01 37.5	IS	01 45.3	89 3.6	60 2.8	61 3.2	S	1 W	1 D 1	63.6	07.8
YAMAGA	0	P	17 01 40.6	S	01 51.0						U 1	85.6	10.4
MORIOK	2	IP	17 01 44.3	IS	01 57.8	66 0.3	59 0.3	15 0.4	S	13 W	2 D 3	110.7	13.5
FUKUSH	0	EP	17 01 46.4	ES	02 00.8	65 1.0	54 0.9	30 4.7				120.2	14.4
MIYAKO	1	IP	17 01 46.8	S	02 02.4	36 2	48 2	43 4	S	3 W	7 D 3	126.5	15.6
SAKATA	0	EP	17 01 46.9	ES	02 02.1	150 3.0	200 3.6	50 3.0				116.3	15.2

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
AKITA	0	P	17 01 50.0	ES	02 08.1	60 4.4	72 4.0	31 3.2			D 7	144.8	18.1
ONAHAM	0	IP	17 01 57.6	ES	02 21.8	138 0.9	113 1.0	21 1.5			U 2	195.9	24.2
SHIRAK	0	EP	17 01 58.0	S	02 21.9							193.5	23.9
HACHIN	0	P	17 01 59.0	S	02 22.6	20 0.4	30 4.0	13 3.4	N		U	205.2	23.6
OMAEZA	0	X	17 01			7 2.9	6 2.9					524.8	
AOMORI	0	EP	17 02 02.6	IS	02 32.6	72 1.5	58 1.7	20 1.1				237.1	30.0
NIIGAT	0	X	17 02 05.2	IS	02 26.3	61 3.3	70 3.7	25 4.5			U 10	203.4	
AIKAWA	0	EP	17 02 05.5	IS	02 40.0	7 0.6	10 0.2	2 3.2	N	0 E	0 D 0	265.1	34.5
UTSUNO	0	EP	17 02 07.2	ES	02 39.8	36 1.5	25 1.5	15 1.0				264.3	32.6
MITO	0	EP	17 02 07.5	ES	02 38.9	58 2.0	45 2.0	25 2.3				264.5	31.4
KAKIOK	0	EP	17 02 12	ES	02 43	33 0.8	24 1.0	12 0.8				286.7	31.0
MAEBAS	0	EP	17 02 15.7			9 3.2	9 2.6	13 3.3				314.6	
KUMAGA	0	EP	17 02 16.4	ES	02 52.2	16 3.6	16 4.0	9 3.2				323.5	35.8
MATSUS	0	EP	17 02 17	X	03 16							353.5	
HAKODA	0	EP	17 02 18	ES	03 00	6 3.0	7 2.6	5 2.8			U	347.3	42.0
CHOSHI	0	X	17 02 22.2									331.2	
URAKAW	0	EP	17 02 25	ES	03 12	4 3.6	6 2.8	5 2.8				408.2	47.0
TAKADA	0	X	17 02 25.1	ES	02 58.7							310.4	
MISHIM	0	EP	17 02 26.2	X	03 32.0	7 3.0	7 2.4	3 2.1				444.5	
TOKYO	0	X	17 02 26.2	S	03 09.6	30 4.6	23 3.8	21 3.2				356.6	
KOFU	0	EP	17 02 27.7	ES	03 15.4	8 1.4	5 1.2	3 1.6				407.8	47.7
FUNATS	0	P	17 02 30.8	S	03 17.2							413.7	46.4
TOMISA	0	X	17 02 34.4			14 3.4	13 4.0	9 3.0				435.7	
YOKOHA	0	X	17 02 34.6	X	03 17.3	17 2.1	18 1.5					385.7	
TOYAMA	0	X	17 02 36	X	03 23	5 4.2	6 2.8	5 3.8				411.9	
HAMAMA	0	X	17 02 50			6 2.6	9 2.6	3 2.8				538.3	
AJIRO	0	X	17 02 56.7	S	03 22.6	15	13	2				445.1	
WAJIMA	0	X	17 03 34			6 1.6	6 1.2					400.5	
OSAKA	0	X	17 04 10			7 4.0	10 4.2	3 2.6				673.3	

OT= 7 12 57 32.0 +/- 0.1
SW OF IBARAKI PREF
LAT= 36 16 +/- 1 LONG= 139 51 +/- 1
H= 60 MAG=3.0 CLASS=U

KAKIOK	0	IP	12 57 42.5	S	57 49.5	9 0.3	17 0.3	4 0.3		W	2 D 1	31.1	07.0
UTSUNO	0	EP	12 57 42.7	IS	57 50.2	14 0.2	10 0.2	4 0.2				31.1	07.5
KUMAGA	0	EP	12 57 44.0	S	57 51.8	3 0.6	6 0.8	1 0.4				43.9	07.8
MATSUS	0	IP	12 57 55.7	ES	58 11						U	150.3	15.3

OT= 8 13 59 18.4 +/- 0.2
N OF IWATE PREF
LAT= 40 18 +/- 1 LONG= 141 19 +/- 2
H=100 CLASS=L

HACHIN	1	IP	13 59 33.6	IS	59 43.5	50 0.4	91 0.4	9 0.8	N	1 E	1 U 1	30.6	09.9
MORIOK	0	IP	13 59 35.8	IS	59 48.2	26 0.6	26 0.4	4 0.6			U 1	68.2	12.4
				IX	59 47.0								
AOMORI	0	IP	13 59 36.1	ES	59 48.5	57 1.3		18 0.7			U 21	73.0	12.4
MIYAKO	1	IP	13 59 38.2	S	59 51.5	7 0.8	11 1.4	4 1	N	0 W	2 D 0	91.6	13.3
AKITA	0	P	13 59 41.2	IS	59 58.0	18 1.4	12 1.0	4 1.0			U 4	122.2	16.8
MIZUSA	0	EP	13 59 43.0	IS	59 59.5		28 1.5	12 1.5				130.5	16.5
OFUNAT	0	IP	13 59 43.4	IS	00 00.4	7 0.0	6 1.0	3 0.6	N	3	D 3	141.7	17.0
HAKODA	0	IP	13 59 47.0	IS	00 07.7	5 0.4	4 0.7	1 0.8			D 1	174.5	20.7
MATSUS	0	IP	14 00 26.6								D	497.9	

OT= 8 20 47 52.1 +/- 0.2
NEAR AJIRO
LAT= 35 8 +/- 1 LONG= 139 6 +/- 2
H= 20 MAG=3.5 CLASS=L

AJIRO	2	P	20 47 56.8	IS	47 59.1	153 0.3	167 0.3	20 0.3				10.0	02.3
MISHIM	0	IP	20 47 57.7			15 0.9	12 0.9	7 0.4	S	3 W	3 U 7	15.7	
OSHIMA	0	IP	20 48 01.7	IS	48 08.9	17 0.4	11 0.4	14 0.2				48.4	07.2
FUNATS	0	IP	20 48 02.1	IS	48 08.2							50.8	06.1
YOKOHA	0	EP	20 48 03.6			10 0.6	11 0.5					60.7	
TOKYO	0	IP	20 48 07.1	IS	48 18.3	16	15					85.5	11.2
KUMAGA	0	EP	20 48 13.2	S	48 24.6	4 1.0	8 0.8	1 0.6				115.3	11.4
MATSUS	0	IP	20 48 19.1	S	48 39					S E	D	175.4	19.9

International Seismological Centre From the ISC collection scanned by SISMOS

OT= 11 8 2 6.5 +/- 0.3
NEAR TOMISAKI
LAT= 34 53 +/- 1 LONG= 139 46 +/- 3
H= 90 CLASS=U

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OSHIMA	0	P	08	02	21.3	IS	02	31.1	10	0.2	13	0.2	7	0.2				38.0	09.8
AJIRO	0	P	08	02	23.0	S	02	35.0	5	0.3	7	0.3	2	0.4				63.7	12.0
TOKYO	0	IP	08	02	25.0	IS	02	38.4	21	0.4	37	0.4	6	0.6				88.9	13.4
YOKOHA	0	X	08	02	30.6	IS	02	34.0	17	0.4	40	0.5						62.2	
KUMAGA	0	EP	08	02	30.8	ES	02	48.0	5	0.6	5	0.6	2	1.0				144.3	17.2
MATSUS	0	IP	08	02	41.6	S	03	07							S	E	D	231.5	25.4

OT= 12 11 43 34.6 +/- 1.6
S OF KURILE IS
LAT= 44 26 +/-12 LONG= 149 34 +/-10
H= 30 MAG=5.2 CLASS=U

NEMURO	0	P	11	44	23.5	S	44	59.3	8	4.0	7	3.6	5	4.2			U	342.7	35.8
ABASHI	0	EP	11	44	34.5	ES	45	23.0	8	3.2	6	3.2	5	5.0				424.7	48.5
KUSHIR	0	EP	11	44	37	ES	45	29	13	0.8	12	0.8	7	4.2				447.1	52.0
OBIHIR	0	P	11	44	49.7													538.6	
URAKAW	0	IP	11	44	59.0	S	46	10.0	29	1.4	36	1.2	14	1.4			D 3	605.8	71.0
SAPPOR	0	EP	11	45	08				11	2.0	10	2.0	3	1.0				680.5	
HAKODA	0	EP	11	45	17	ES	46	44	6	3.0	4	2.0	5	3.2		E	D	773.3	87.0
MIZUSA	0	EP	11	45	42.9	ES	47	02.7	13	3.7	15	3.6						914.7	79.8
MATSUS	0	IP	11	46	20.5											E	U	1300.1	
AOMORI	0	EX	11	46	47				13	1.8	14	1.6						824.5	

OT= 12 12 50 25.5 +/- 0.3
OFF IWATE PREF
LAT= 40 5 +/- 1 LONG= 142 12 +/- 2
H= 50 MAG=3.8 CLASS=L

MIYAKO	1	EP	12	50	37.6	IS	50	44.7	25	0.4	20	0.0						52.6	07.1
HACHIN	0	IP	12	50	39.6	IS	50	48.8	10	0.3	9	0.3	1	0.3	S	2	E 1 D 2	75.5	09.2
MORIOK	0	IP	12	50	42.8	IS	50	53.2	18	0.3	15	0.3	2	0.3			E 1 D 1	98.1	10.4
OFUNAT	0	EP	12	50	45.3	IS	50	58.4	10	0.0	8	0.0	3	0.4				120.7	13.1
MIZUSA	0	EP	12	50	48.0	ES	51	04.1	8	0.5	15	0.2	4	0.6				139.7	16.1

OT= 14 9 36 1.7 +/- 0.3
KII CHANNEL
LAT= 34 2 +/- 1 LONG= 134 49 +/- 2
H= 50 MAG=4.1 CLASS=S

TOKUSH	2	IP	09	36	11.1	IS	36	16.5	175	0.1	123	0.1	84	0.1	N	1 W	1 U 24	22.4	05.4
WAKAYA	0	IP	09	36	11.3	IS	36	17.0	56	0.1	41	0.1						38.7	05.7
SUMOTO	1	IP	09	36	11.8	IS	36	18.1	48	0.6	68	0.5	15	0.6	S	3	D 9	34.5	06.3
TAKAMA	0	IP	09	36	16.9	IS	36	25.8	13	1.0	24	1.0	17	0.6	N	1 W	9 U 14	76.6	08.9
KOBE	0	P	09	36	17.1	IS	36	26.7							S	6 E	6 D 10	80.0	09.6
OSAKA	0	P	09	36	18.5	S	36	29.6	36	4.7	19	4.2	12	3.6			D 3	95.2	11.1
MUROTO	0	P	09	36	19.6	S	36	31.8	8	0.4	16	0.5						105.3	12.2
SHIONO	1	IP	09	36	19.9	IS	36	31.8	17	0.8	16	0.6	16	1.0			U 5	109.1	11.9
OKAYAM	0	IP	09	36	20.5	IS	36	32.5	30	0.4	50	0.4	50	0.6	N	W	U	109.8	12.0
NARA	0	IP	09	36	21.4	S	36	34.6									D 2	118.1	13.2
OWASE	0	IP	09	36	21.6	IS	36	38.4	19	0.2	12	0.2	20	0.2	S	W	5 D 2	127.3	16.8
TOYOOK	0	EP	09	36	24.8	S	36	47.0	22	1.1	17	0.6	5	0.5				166.7	22.2
TOTTOR	0	EP	09	36	29.6	ES	36	46.4										174.0	16.8
HIKONE	0	EP	09	36	30.8	ES	36	51.7	11	1.4	10	1.5	6	1.0				190.0	20.9
GIFU	0	EP	09	36	37.9	S	37	02.0	12		8							234.0	24.1
TSU	0	X	09	36	44.3													173.1	
MATSUS	0	IP	09	36	59.4	S	37	41									D	415.1	41.6
KOCHI	0	X	09	36		IS	36	32.0										130.3	
NAGOYA	0	X	09	37	00.0	X	37	23.6	6	0.2	8	0.2	3	0.2				233.8	

OT= 14 13 4 31.7 +/- 0.9
NEAR MATSUSHIRO
LAT= 36 24 +/- 3 LONG= 138 7 +/- 2
H= 0 MAG=4.1 CLASS=L

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	3	P	13	04	35.2	S	04	37.2										17.4	02.0
MATSUM	1	IP	13	04	37.5	IS	04	41.7	75	3.3							U 5	21.6	04.2
KARUIZ	X	IP	13	04	40.9	S	04	46.9								W	D 7	39.6	06.0
TAKADA	0	EP	13	04	45.5	ES	04	53.1										79.1	07.6
MAEBAS	0	EP	13	04	49.4				58	4.4	23	4.6	36	3.5				85.1	
KOFU	0	EP	13	04	49.6				14	3.6	15	4.8	5	2.8				90.7	
CHICHI	0	EP	13	04	49.8	ES	05	01.5										97.9	11.7
IIDA	0	EP	13	04	50.8	ES	05	04.8	12	0.4	8	0.6	4	1.0				101.9	14.0
TOYAMA	0	EX	13	04	51				26	3.6	33	3.8	20	3.8				88.1	
KUMAGA	0	EP	13	04	54.2	ES	05	10.2	31	5.2	31	4.0	20	4.1				117.4	16.0
NAGANO	2	X	13	04		S	04	38.9										29.7	
SHIZUO	0	EP	13	05	01.4	S	05	23.0	8	0.4	6	0.6	3	0.6				160.4	21.6
UTSUNO	0	EP	13	05	01.9	EX	05	19.2										158.1	
NAGOYA	0	EP	13	05	03.0	ES	05	24.0	11	0.8	11	0.8	3	0.6				171.9	21.0
WAJIMA	0	EX	13	05	04				15	1.0	18	1.0						154.5	
GIFU	0	EP	13	05	04.0	S	05	22.1	8	1.9	9	1.5						165.0	18.1
KAKIOK	0	EP	13	05	04.6	ES	05	26.9	9	1.0	6	1.0	4	0.8				187.4	22.3
HIKONE	0	X	13	05	37.0				15	1.0	10	1.0	6	0.8				210.1	

OT= 14 19 38 32.3 +/- 0.1
NEAR MATSUSHIRO
LAT= 36 26 +/- 1 LONG= 138 9 +/- 1
H= 10 MAG=5.1 CLASS=S

MATSUS	4	P	19	38	35.9	S	38	37.9										12.8	02.0
NAGANO	4	IP	19	38	38.4	IS	38	41.9	900		2400	4.2	1100		N	11	D 4	25.5	03.5
MATSUM	3	IP	19	38	38.5	IS	38	42.2	500	4.3	500	4.3	500	3.6	S	5 W	2 U 25	26.4	03.7
TAKADA	1	P	19	38	45.3	S	38	52.7	250	3.0	250	3.0	100	3.0	N	13 E	2 U 11	75.1	07.4
KARUIZ	2	X	19	38	46.7	S	38	46.7	1200	3.0	1100	2.3	300	1.6			W 60 D 66	37.5	
TAKAYA	0	EP	19	38	47.1	ES	38	58.8										86.2	11.7
MAEBAS	1	IP	19	38	48.2	IS	38	56.9	399	4.7	358	3.4	343	3.3			W 8 D 18	82.1	08.7
KOFU	0	IP	19	38	48.8	ES	39	08.2	120	5.0	123	5.0	46	4.0	S	12 E	7 U 13	92.8	19.4
TOYAMA	0	IP	19	38	49.2	S	39	01.8	170	3.2	193	3.2	221	4.0	S	6 E	6 D 30	89.6	12.6
CHICHI	2	IP	19	38	49.3	IS	39	01.3	350	4.0	250	4.0	300	2.8	N	5 W	5	97.0	12.0
IIDA	X	IP	19	38	51.8	IS	39	04.4	84	2.0	105	3.2	45	2.4	S	19 W	12 U 19	106.3	12.6
KUMAGA	2	P	19	38	53.4	ES	39	09.4	237	3.6	295	4.2	145	4.2		E	7 U 16	115.4	16.0
FUNATS	0	IP	19	38	54.1	IS	39	08.6										117.5	14.5
KANAZA	0	EP	19	38	56.4	ES	39	13.6	118	0.2	101	0.3						135.1	17.2
WAJIMA	0	EP	19	38	58.0	S	39	17.0	176	0.8	194	1.0	31	0.8				154.0	19.0
UTSUNO	1	IP	19	38	59.1	ES	39	19.1	86	3.9	83	4.8	33	0.8	S	2 W	14 D 11	154.8	20.0
MISHIM	0	P	19	39	00.6	IS	39	21.8	70	4.4	95	4.0	29	2.0				162.7	21.2
AIKAWA	0	EP	19	39	01.0	ES	39	20.0	28	2.0	27	4.0	22	4.6	N	7 E	3 U 4	176.3	19.0
SHIZUO	0	IP	19	39	01.2	S	39	23.6	39	4.6	49	1.6	50	5.0	S	8 E	2 U 7	163.6	22.4
KAKIOK	0	IP	19	39	02.3	IS	39	26.7	57	0.8	38	1.0	15	1.0		W	3 U 2	184.8	24.4
AJIRO	0	P	19	39	02.6	S	39	24.3	39	2.0	47	2.4	19	1.9				176.4	21.7
NAGOYA	1	P	19	39	02.7	S	39	24.6	107	1.0	123	1.2	50	1.2	S	10 W	7 U 10	176.6	21.9
GIFU	0	P	19	39	03.0	S	39	22.6	100	1.7	100	1.4						169.7	19.6
TOKYO	0	P	19	39	03.0	S	39	26.0	345	4.0	240	4.0	168	4.0				167.0	23.0
FUKUI	0	P	19	39	03.1	S	39	24.4							S	4 W	6 D 2	177.9	21.3
YOKOHA	0	IP	19	39	03.2	IS	39	28.9	168	2.1	193	2.1	104	2.3			D 13	175.1	25.7
NIIGAT	0	P	19	39	03.7	IS	39	27.4	210	5.6	317	6.0	80	4.5			D 10	182.4	23.7
HAMAMA	0	P	19	39	04.9	S	39	30.2	93	2.2	140	2.0	64	2.0			U 2	195.2	25.3
MITO	0	EP	19	39	06.0	ES	39	36.0	90	3.0	63	3.7	40	3.2				208.3	30.0
SHIRAK	0	P	19	39	06.8	S	39	32.7										200.2	25.9
TSURUG	0	EP	19	39	06.9	S	39	32.8										207.0	25.9
OSHIMA	0	P	19	39	08.1	S	39	37.8	46	1.0	44	1.6	16	1.6				216.3	29.7
HIKONE	0	P	19	39	08.7	S	39	35.0	164	0.9	123	0.9	63	0.8				214.7	26.3
TOMISA	0	EP	19	39	12.8				72	4.0	68	3.6	37	3.4				226.4	
FUKUSH	0	EX	19	39	13.1				15	3.8	17	3.2	7	5.2				253.5	
ONAHAM	0	EX	19	39	14.3	ES	39	45.6	74	2.2	78	1.5	46	3.6				252.8	
TSU	0	P	19	39	14.6													242.4	
KYOTO	0	EP	19	39	18.0	ES	39	49.6	20	2.0	25	1.4	10	1.6				269.4	31.6
NARA	0	EP	19	39	18.4	ES	39	54.3	100	2.0	100	1.7	50	1.3				285.9	35.9
SENDAI	0	EP	19	39	20.2	EX	39	43.5	18	2.5	11	2.0	6	4.5				316.9	
						EX	40	00											
OWASE	0	P	19	39	22.8	S	40	06.8	16	1.6	12	2.6	10	2.6				317.1	44.0
SAKATA	0	EP	19	39	24.5	ES	39	59.7	50	2.2	100	4.3	0					311.9	35.2
OSAKA	0	EX	19	39	24.7	X	39	54.3	122	4.7	187	3.0	56	3.0				308.6	
ISHINO	0	IP	19	39	25.0	ES	40	08.0	8	3.0	9	2.6	4	2.8	N	E	U	355.9	43.0
TOYOOK	0	X	19	39	27.6	S	40	05.3	121	1.1	65	1.2	19	0.9	S	W		316.3	
SUMOTO	0	EP	19	39	27.9	ES	40	09.2	16	4.2	14	5.8	7	2.8				375.3	41.3
						EX	39	39.0											
KOBE	0	X	19	39	28.3	ES	40	07.7										331.5	
WAKAYA	0	X	19	39	33.9	S	40	16.7	16	1.0	12	1.0	12	2.4				365.3	
OFUNAT	0	EP	19	39	36.4	S	40	26.6	6	5.0	6	3.6	4	3.6				428.8	50.2
SHIONO	0	X	19	39	36.4	ES	40	24.5	19	2.8	17	3.2	10	1.9				396.3	
AKITA	0	X	19	39	39				13	5.0	15	5.0	8	4.8				402.8	
TURUGI	0	EP	19	39	39.0													467.2	
OKAYAM	0	X	19	39	41.5	IS	40	33.5	30	4.2	30	4.0	15	4.0			D	430.2	

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
MUROTO	0	EP	19	39	42.1	EX	40	41.0	12	8.0	10	6.0	7	4.4				506.5	
TAKAMA	0	X	19	39	43.9	X	40	40.6	17	5.8	15	5.4	4	0.6				439.6	
TOKUSH	0	X	19	39	47.0	X	40	34.8										417.9	
SAIGO	0	X	19	39	47.1	ES	40	33.2	6	2.8	4	2.6	4	2.6	S	0 W	1 U	0	433.2	
HAMADA	0	X	19	40	01.9	ES	41	08.7	8	7.2	2	4.0	3	3.5					575.9	
HIROSH	0	X	19	40	01.9	X	41	08.7	11	3.6	5	7.4	6	2.5				567.3	
MATSUY	0	X	19	40	10.5	X	41	16.0	13	7.0	9	6.0	3	2.5				567.4	
SHIMON	0	X	19	40	25	X	41	56	10	6.0	4	4.0	9	3.8				711.4	
OITA	0	EX	19	40	43.2	X	42	03.5	37	4.5	45	5.4						694.2	
FUKUOK	0	X	19	40	49.0	X	42	10.5	9	3.2	4	1.8	5	1.7				776.2	
AJIRO	0	X	19	40	55.0	X	41	10.9	6	0.3	3	0.3	1	0.4				176.4	
SAGA	0	X	19	42	06.0													799.4	
KUMAMO	0	X	19	42	19				12	3.3	11	2.3	3	2.8				791.3	
NAGASA	0	X	19	42	37.8													863.8	

OT= 15 9 28 36.0 +/- 0.5
NEAR CHOSHI
LAT= 35 36 +/- 1 LONG= 140 55 +/- 2
H= 40 MAG=5.6 CLASS=M

						2100		2000		2900									
CHOSHI	3	IP	09 28 47.0			700	0.7	1200	0.9	1600	0.9	N170 E140 U488			15.4				
KAKIOK	3	IP	09 28 52.1	S	29 02.1	338	1.9	255	4.0	223	3.5	S 58 E 45 D 54			95.8	10.0			
MITO	2	IP	09 28 53.5	IS	29 03.0	457	3.2	430	3.6	250	2.6	D 45			95.2	09.5			
TOKYO	2	EP	09 28 54.8	ES	29 08.9	550	1.2	600	1.0	326	3.4	N 12 E 60 D214			105.3	14.1			
YOKOHA	3	IP	09 28 56.4	IS	29 09.7										115.8	13.3			
														D 50	124.5	15.4			
TOMISA	0	IP	09 28 57.0	IS	29 12.4	505	4.8	425	3.8	240	3.0	S 30 E 11 D 19			141.0	18.3			
UTSUNO	1	P	09 28 58.5	S	29 16.8	419	1.7	374	1.7	183	2.0				218.9				
NAGATS	0	EX	09 28 59.8	EX	29 08.2										151.0	17.4			
KUMAGA	1	EP	09 29 00.4	ES	29 17.8	294	2.8	301	2.8	213	4.6				168.1	26.1			
OSHIMA	2	IP	09 29 01.1	S	29 27.2					120	2.0								
															149.2				
ONAHAM	0	EX	09 29 01.8	ES	29 17.2	300	1.5	400	1.2	100	1.0	N 3 E 15 D 16			176.6	18.4			
AJIRO	1	IP	09 29 02.2	ES	29 20.6	119	2.4	116	2.1	90	3.0	S 13 E 40			171.4	19.2			
CHICHI	0	IP	09 29 02.5	IS	29 21.7	250	2.0	300	2.4	400	3.4				179.5	19.8			
SHIRAK	2	P	09 29 03.8	S	29 23.6	100	2.0	150	2.8						195.5	20.2			
FUNATS	2	P	09 29 04.2	S	29 24.4														
															189.1	20.6			
MAEBAS	0	IP	09 29 04.5	IS	29 25.1	197	3.8	263	3.5	192	3.6	S 9 E 16 D 18			188.5	17.3			
MISHIM	0	IP	09 29 04.6	IS	29 21.9	254	1.3	377	2.2	144	1.7	N 8 E 25 D 27			213.7	23.8			
KOFU	1	IP	09 29 07.6	ES	29 31.4	183	1.9	203	1.9	112	3.5	S 5 E 14 D 12			228.5	23.9			
KARUIZ	X	EP	09 29 09.6	S	29 33.5	300	2.0	400	1.8	100	2.0				238.6	27.1			
SHIZUO	1	IP	09 29 11.0	S	29 38.1	110	2.6	120	2.0	99	4.8	N 2 E 13 D 17							
															242.5	26.0			
FUKUSH	1	EP	09 29 12.8	ES	29 38.8	154	1.1	150	1.3	66	1.0				265.2	28.9			
MATSUS	0	IP	09 29 13.1	S	29 42							D			271.6	30.0			
NAGANO	0	EP	09 29 13.6	S	29 43.6	175	3.0	165	2.4	95	2.3				275.0	28.2			
MATSUM	0	EP	09 29 16.5	ES	29 44.7										279.5	32.0			
IIDA	0	IP	09 29 16.6	ES	29 48.6	119	1.4	87	1.8	47	2.0	W 13 D 10							
															291.8	34.4			
TAKADA	0	EP	09 29 18.2	S	29 52.6										298.7				
YAMAGA	0	EP	09 29 19.4	X	30 02.8							D 1			307.2	33.6			
HAMAMA	0	P	09 29 19.5	S	29 53.1	115	3.6	137	3.6	68	3.8				295.2	30.0			
SENDAI	X	P	09 29 20	ES	29 50.0	140	2.0	108	2.0	150	1.8	S 2 W 2 U 3			295.8	30.0			
HACHIJ	0	IP	09 29 22.0	S	29 52.0	86		82		47									
															305.6	33.3			
NIIGAT	0	EP	09 29 22.0	IS	29 55.3	270	4.7	240	3.4	120	5.0				315.3	28.6			
ISHINO	0	P	09 29 24.0	IS	29 52.6	40	2.0	48	3.0	28	4.0	S E D			355.5	40.4			
TOYAMA	0	P	09 29 25.6	ES	30 06	107	1.8	123	4.4	76	3.4				336.2	27.2			
TAKAYA	0	EP	09 29 25.9	ES	29 53.1										359.2	45.5			
AIKAWA	0	EP	09 29 27.1	ES	30 12.6	32	3.8	37	2.2	26	5.8	S 5 E 2 U 2							
												W 1 U 1			361.9	42.3			
NAGOYA	0	EP	09 29 27.3	ES	30 09.6	191	2.2	131	2.0	68	2.0				390.6	40.6			
OFUNAT	0	EP	09 29 30.6	IS	30 11.2	15	3.8	25	3.2						377.2	43.6			
GIFU	0	P	09 29 31.4	ES	30 15	94	2.1	53	2.1	21	2.3				426.6				
FUKUI	0	P	09 29 32.4												412.8				
TSU	0	P	09 29 33.0																
															411.1	48.4			
WAJIMA	0	P	09 29 33.6	ES	30 22.0	50	1.2	53	1.2	30	3.6				392.6	45.0			
MIZUSA	0	EP	09 29 33.7	ES	30 18.7	130	2.6	126	2.4	72	1.7				378.9				
SAKATA	0	X	09 29 35.8	X	30 22.7	400	3.0	500	4.4	150	2.8	D 8			439.4				
TSURUG	0	EP	09 29 36.2												425.5	51.6			
HIKONE	0	P	09 29 36.6	ES	30 28.2	149	1.9	87	2.3	43	1.6								
															458.4	45.2			
MIYAKO	0	EP	09 29 38.6	ES	30 23.8	13	4	19	6	13	4.3				464.0	49.6			
OWASE	0	P	09 29 39.0	S	30 28.6	14	5.6	13	5.4	14	7.2				455.2	44.5			
MORIOK	0	P	09 29 39.9	S	30 24.4	14	4.0	24	4.0	10	5.0	U 0							
				EX	29 44.0										475.6	51.3			
KYOTO	0	P	09 29 40.7	ES	30 32.0	32	1.8	18	5.0	16	3.0	W 1 U 1							
															398.5				
KANAZA	0	X	09 29 41.6	X	30 41.8	99		127							474.1				
NARA	0	EP	09 29 41.8			200	1.8	150	1.8	100	1.7				501.3	59.8			
OSAKA	0	EP	09 29 44.5	S	30 44.3	300	4.0	310	4.9	110	3.5				462.7				
AKITA	0	IX	09 29 44.7	X	30 45.2	100	3.8	85	4.2	76	4.6				529.7	54.8			
SHIONO	0	EP	09 29 47.4	ES	30 42.2	19	5.1	13	4.9	6	2.4								
															549.2	54.1			
HACHIN	0	EP	09 29 50.2	ES	30 44.3	12	3.7	19	3.6	21	4.1				532.3				
KOBE	0	EX	09 29 51												579.1	67.0			
AOMORI	0	EP	09 29 54.2	ES	31 01.2	58	2.5	59	3.3	15	2.8				552.5				
TOYOOK	0	X	09 29 57	ES	30 57.4	116	1.3	58	1.3	23	6.4								

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STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
TOKUSH	0	EP	09	29	59.4	ES	31	08.9										604.1	69.5
WAKAYA	0	X	09	29		X	30	21.5	29	1.2	12	1.5	12	3.5				546.9	
SUMOTO	0	X	09	29		ES	30	52.5	24	5.4	16	3.2	13	5.8				566.1	
TAKAMA	0	EP	09	30	00.3	ES	31	19.0	20	4.9	10	4.7	3	2.3				642.1	78.7
OKAYAM	0	EP	09	30	04.0	ES	31	22.2	30	4.0	30	5.8	35	4.6				645.9	78.2
MUROTO	0	IP	09	30	05.8	ES	31	25.0	11	4.8	14	7.0	13	5.9			U 0	671.7	79.2
HAKODA	0	EP	09	30	08	ES	31	21	14	4.0	21	5.2	14	6.2				689.8	73.0
SAIGO	0	EP	09	30	08.1	ES	31	19.2	12	2.2	11	2.8	14	5.4	N	0 W	1 U 0	687.6	71.1
URAKAW	0	P	09	30	14.2	S	31	28.0	25	4.6	18	2.8	13	4.6				745.7	73.8
HIROSH	0	EP	09	30	21.5	ES	31	50.3	18	5.8	8	4.8	10	4.4				785.9	88.8
MATSUY	0	EP	09	30	24.0	X	32	04.5	12	8.0	8	6.0	6	6.0				770.0	
HAMADA	0	P	09	30	24.8	S	31	51.6	20	4.2	10	4.6	10	4.6	N	0	D 0	808.2	86.8
OBIHIR	0	EP	09	30	26	ES	31	55										836.5	89.0
TURUGI	0	X	09	30	27.3													653.7	
KUSHIR	0	EX	09	30	29	X	31	50.2	12	0.5	16	0.5	5	4.9				872.1	
SAPPOR	0	X	09	30	33	ES	31	58	8	2.4	13	3.4	5	4.4				828.8	
SHIMON	0	EP	09	30	39	ES	32	10	16	6.0	7	4.0	12	5.6				930.5	91.0
MIYAZA	0	P	09	30	43.4	X	32	41.4	7	7.0	6	5.4	4	5.6				968.6	
ABASHI	0	P	09	30	44.0	X	32	15.2	7	3.4	7	3.4	5	4.0				977.7	
OITA	0	X	09	30	44.4	X	32	28.6	61	4.8	52	5.7	17	4.2				893.1	
KUMAMO	0	EP	09	30	46.4	ES	32	34.5	12	2.7	12	1.7	3	2.2				989.4	108.1
SAGA	0	EP	09	30	53.4	X	32	58.2										1009.0	
KAGOSH	0	EP	09	30	57.2	X	33	12.2	21	2.9	14	3.1	5	1.8				1059.5	
ASAHIK	0	X	09	30					8	3.6	7	3.6	2	2.4				915.6	
FUKUOK	0	X	09	30		ES	32	31.0	12	4.4	5	2.1	7	3.8				991.5	
NAGASA	0	EP	09	31	00.0	ES	33	00.0										1066.7	120.0

OT= 16 23 52 34.7 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 35 +/- 1 LONG= 138 17 +/- 1
H= 10 MAG=4.0 CLASS=L

MATSUS	2	P	23	52	37.8	S	52	39.2										8.4	01.4
NAGANO	2	IP	23	52	38.8	S	52	41.1										11.5	02.3
KARUIZ	0	IP	23	52	43.2	S	52	48.6								E	U 2	36.2	05.4
MATSUM	X	EP	23	52	44.9	IS	52	51.1										46.9	06.2
TAKADA	0	P	23	52	46.1	S	52	53.7									U 3	58.0	07.6
MAEBAS	0	P	23	52	49.0	IS	52	57.7	11	2.5	12	3.1	20	3.1			U 3	72.9	08.7
CHICHI	0	EP	23	52	52.5	IS	53	04.3										97.2	11.8
KOFU	0	IP	23	52	53.4	ES	53	07.8	7	0.5	6	0.3	4	1.0	S	2 W 2 U	3	104.8	14.4
KUMAGA	0	EP	23	52	57.6	ES	53	08.6	9	1.0	12	0.6	6	4.6				110.1	11.0
TOYAMA	0	X	23	52		ES	53	09	7	3.2	9	2.4	6	2.8				97.1	
UTSUNO	0	EP	23	53	01.5	ES	53	17.2										142.2	15.7
KAKIOK	0	P	23	53	03	S	53	26	10	0.5	8	0.6	5	0.5				175.7	23.0
WAJIMA	0	EX	23	53	04	ES	53	21.2	11	1.0	13	1.0						152.3	
MITO	0	EP	23	53	08.3	IS	53	31.6	22	0.4	13	0.4	4	0.4				197.4	23.3
GIFU	0	EP	23	53	09	X	54	32.1	6	1.7	11	1.7						189.8	
NAGOYA	0	EP	23	53	09.0	S	53	33.4	6	1.4	6	1.0	3	1.0				197.1	24.4
HAMAMA	0	P	23	53	11.3	ES	53	36	5	1.4	5	1.2	4	1.4			D 1	214.1	24.7
OMAEZA	0	EP	23	53	12.2				7	1.4								219.7	
YOKOHA	0	X	23	53	16.9				9	0.5	8	0.5						177.4	
HIKONE	0	X	23	53	43.2				9	0.9	6	1.4	6	0.9				234.3	

OT= 16 23 57 51.2 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 36 +/- 1 LONG= 138 16 +/- 2
H= 10 MAG=4.0 CLASS=L

MATSUS	2	P	23	57	54.3	S	57	55.7										8.6	01.4
NAGANO	2	IP	23	57	55.2	S	57	57.4										9.1	02.2
KARUIZ	0	EP	23	57	59.7	S	58	05.0										38.5	05.3
MATSUM	0	EP	23	58	01.4	IS	58	07.5										47.5	06.1
TAKADA	0	P	23	58	01.7	S	58	09.5									U 3	56.1	07.8
WAJIMA	0	EX	23	58	22				6	1.2	6	1.2						150.1	
MITO	0	EP	23	58	23.6	IS	58	48.6	8	0.3	4	0.4	2	0.6				199.1	25.0

OT= 19 7 41 17.6 +/- 0.8
NEAR CHOSHI
LAT= 35 45 +/- 2 LONG= 141 10 +/- 5
H= 40 MAG=3.7 CLASS=L

CHOSHI	1	IP	07	41	26.4	IS	41	31.2	92	0.4	114	0.4	40	0.4	N	4 E 2 D 4		29.4	04.8

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MITO	0	IP	07	41	33.5	ES	41	44.5	8	1.3	9	1.1	5	1.2	S 1		D 1	93.7	11.0
KAKIOK	0	EP	07	41	35	ES	41	45	10	1.1	9	1.1	5	0.8				102.7	10.0
MATSUS	0	IP	07	41	58.5	S	42	32									D	280.2	33.5

OT= 19 12 28 54.0 +/- 0.4
OFF FUKUSHIMA PREF
LAT= 37 19 +/- 1 LONG= 141 53 +/- 2
H= 40 MAG=5.0 CLASS=R

																	U 18	96.1	10.7
ONAHAM	2	IP	12	29	10.9	IS	29	21.6	300	1.0	400	1.2	90	0.6					
ISHINO	0	IP	12	29	15.0	IS	29	29.6	61	1.8	41	1.2	18	1.8	S 25	E 10	D 20	133.2	14.6
FUKUSH	2	IP	12	29	15.9	IS	29	29.6	243	1.0	132	0.8	83	0.5	S 8	E 34	D 24	133.7	13.7
SENDAI	1	IP	12	29	16.0	IS	29	29.9	133	1.8	100	0.5	83	1.8	S 15	E 15	D 71	135.9	13.9
SHIRAK	2	IP	12	29	18.1	IS	29	33.0									U 1	148.8	14.9
MITO	1	IP	12	29	20.0	IS	29	36.8	83	2.2	88	1.7	38	2.0	N 2	E 2	D 5	163.4	16.8
YAMAGA	1	P	12	29	20.4	ES	29	39.1									D 3	170.4	18.7
KAKIOK	0	EP	12	29	23	S	29	41	107	0.8	86	1.0	38	1.0				193.0	18.0
OFUNAT	0	IP	12	29	23.2	IS	29	45.6	20	0.6	19	0.8	19	1.0	S 3	E 1	D 4	194.2	22.4
UTSUNO	2	P	12	29	23.6	S	29	45.3			103	0.3						198.5	21.7
CHOSHI	0	P	12	29	26.0	S	29	48.0										199.6	22.0
MIZUSA	0	IP	12	29	26.8	IS	29	50.2	88	2.2	83	2.9	60	1.4		E 3	D 4	212.1	23.4
MIYAKO	1	EP	12	29	30.9	ES	29	56.3	9	2.1	13	2.5	10	4.2				258.5	25.4
KUMAGA	0	EP	12	29	32.0	ES	30	04.2	24	1.2	33	2.2	15	2.6				258.1	32.2
SAKATA	0	EP	12	29	32.2	IS	30	02.6	100	2.6	100	2.8	50	2.6				251.4	30.4
MORIOK	0	IP	12	29	33.4	S	30	02.4	30	0.4	31	0.4	8	3.0	S 1	E 0	D 0	271.4	29.0
						IX	29	35.4									D 2	271.0	26.6
MAEBAS	0	P	12	29	34.5	IS	30	01.1	19	1.0	20	1.6	16	2.4			U	262.7	
TOKYO	0	IP	12	29	34.8	X	00	25	31	3.6	31	2.6	18	4.4				290.4	27.0
CHICHI	0	EP	12	29	36.8	S	30	03.8											
																		308.5	
AKITA	0	EX	12	29	38.5				26	2.2	26	2.2	9	2.2					
NIIGAT	0	X	12	29	39.6	S	30	07.5	98	3.0	80	4.0	33	3.7			D 15	258.5	
AIKAWA	0	EP	12	29	40.0	ES	30	24.0	16	2.8	7	0.2	7	3.4	S 0	E 1	U 1	330.6	44.0
KARUIZ	0	EP	12	29	40.4	ES	30	10.7										316.3	30.3
TOMISA	0	P	12	29	41.5				31	4.4	25	3.8	17	4.4				323.9	
																		288.9	
YOKOHA	0	X	12	29	42.0	ES	30	13.9	32	0.6	45	0.8	17	2.5					
MATSUS	0	IP	12	29	42.7	S	30	24								W	U	338.6	41.3
HACHIN	0	EP	12	29	44.7	ES	30	20.7	10	2.2	10	2.3	9	2.4				357.5	36.0
AJIRO	0	IP	12	29	45.3	ES	30	20.1	8	0.4	8	0.4	4	0.7			D 0	355.5	34.8
KOFU	1	EP	12	29	45.4	ES	30	21.0	28	1.3	38	1.4	12	1.4				349.7	35.6
OSHIMA	0	EP	12	29	46.0	IS	30	22.0	15	0.4	16	2.6	6	2.3				362.3	36.0
MISHIM	0	EP	12	29	48.2	ES	30	26.9	19	2.2	21	2.2	8	1.3				361.0	38.7
AOMORI	0	IP	12	29	51.8	S	30	34.9	47	2.2	42	1.8	11	1.8			U 5	400.0	43.1
TOYAMA	0	EP	12	29	52	ES	30	46	11	2.4	23	2.4	10	3.0				421.4	54.0
TAKADA	0	X	12	29	52.4	S	30	25.0										323.3	
IIDA	0	EP	12	29	53.2	ES	30	37.4	10	2.2	9	1.8	6	2.4				414.6	44.2
SHIZUO	0	EP	12	29	55.0	ES	30	33.4	7	0.6	6	1.8						406.7	38.4
OMAEZA	0	EX	12	30							8	3.2						447.3	
HACHIJ	0	EP	12	30	03.8	ES	30	53.2	6		8							504.9	49.4
FUNATS	0	X	12	30	04.2	X	30	32.2										344.9	
HAKODA	0	P	12	30	05.4	ES	30	57	9	2.6	6	2.0	6	3.6			D	508.5	51.6
HAMAMA	0	X	12	30	07	ES	31	00	7	2.0	9	2.0	5	2.0				473.5	
URAKAW	0	P	12	30	07.7	S	31	10.2	10	3.4	13	3.2	5	3.4			U	543.0	62.5
GIFU	0	EP	12	30	08				6	1.2	6	1.0						506.1	
WAJIMA	0	X	12	30	10				15	1.2	14	1.2						441.6	
KANAZA	0	X	12	30	15.8	ES	30	54.2	6		5							474.0	
NAGOYA	0	X	12	30	16.5	X	31	12.4	17	2.4	10	2.4	5	1.0				502.0	
KUSHIR	0	EX	12	30	22	X	31	26.1	5	0.4	6	0.6						664.0	
OBIHIR	0	P	12	30	25.8	ES	31	38										632.5	72.2
OSAKA	0	EX	12	30	50	X	32	00.5	20	5.0	13	4.4	7	2.0				643.9	
HIKONE	0	X	12	31	28.3				13	2.4	11	1.2	7	0.9				554.5	

OT= 19 19 56 7.6 +/- 0.3
E OFF HOKKAIDO
LAT= 42 46 +/- 1 LONG= 145 33 +/- 2
H= 90 CLASS=R

NEMURO	4	IP	19	56	24.5	IS	56	34.6	1900	0.4	2000	0.4	1000	0.4	S172	W174	D446	62.5	10.1
KUSHIR	4	IP	19	56	26.9	IS	56	40.7	2800	0.8	2800	0.6	800	0.8	S 5	E345	D128	97.3	13.8
ABASHI	2	IP	19	56	34.4	IS	56	53.2	1100	4.0	1500	3.0	1500	3.0	S 43	E 5	D 90	172.7	18.8
OBIHIR	3	IP	19	56	38.0	IS	56	58.6	1800	3.4	2000	1.5	800	2.1	N 4	E 13	D 7	191.1	20.6
HIROO	4	EP	19	56	39.4	ES	56	59.5	700	2	1200	2	500	1				191.2	20.1
URAKAW	3	IP	19	56	44.4	S	57	08.1	900	1.2	700	1.2	700	1.2	S 3	W 5	U 6	237.7	23.7
ASAHIK	0	IP	19	56	48.5	S	57	11.5	900	2.6	900	2.6	500	2.4	S 10	E 13	D 24	281.0	23.0
RUMOI	0	IP	19	56	56.2	IS	57	31.4							S 6	E 8	D 13	343.7	35.2
SAPPOR	X	IP	19	56	56.2	IS	57	28.4	400	2.7	700	2.4	200	1.0	S 2	E 7	D 13	346.0	32.2
MURORA	0	P	19	57	01.0	IS	57	36.0	100	4.0	100	2.4	100	2.4		W 2	U 2	378.5	35.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HAKODA	0	IP	19	57	04.4	S	57	37.1	128	2.2	132	3.8	79	4.0	S 3	W 7	U 7	409.1	32.7
HACHIN	3	IP	19	57	05.6	IS	57	45.6	311	3.3	229	4.4	152	2.9	S 12	W 19	U 21	417.6	40.0
WAKKAN	0	IP	19	57	06.4	S	57	44.1	158	3.8	139	5.0	155	5.2	S 1	E 1	D 9	427.8	37.7
SUTTSU	0	EP	19	57	08	ES	57	47										434.6	39.0
MIYAKO	2	IP	19	57	09.9	IS	57	53.6	230	4.5	177	5.1	287	4.1	S 13	W 11	U 17	458.7	43.7
AOMORI	2	IP	19	57	10.2	IS	57	52.3	700	2.0	600	1.8	200	0.9	S 11	W 15	U 11	451.5	42.1
MORIOK	2	IP	19	57	15.7	S	58	03.6	175	0.3	169	0.3	64	0.3	S 0	W 0	U 1	501.1	47.9
						IX	57	16.5											
						EX	58	48											
OFUNAT	2	IP	19	57	18.6	IS	58	09.4	121	0.8	83	0.8	98	1.0	S 10	W 8	U 11	522.9	50.8
MIZUSA	1	IP	19	57	22.1	IS	58	15.9	373	1.4	735	3.4	344	1.6		W 9	U 8	548.6	53.8
AKITA	0	P	19	57	24.8	S	58	22.4	160	5.0	164	5.4	116	3.8	S 4	W 7	U 19	568.4	57.6
ISHINO	1	IP	19	57	28.0	IS	58	26.0	117	1.0	140	1.0	75	1.0	S 10	W 5	U 5	601.2	58.0
SENDAI	1	EP	19	57	32.2	IS	58	34.0	170	4.0	150	2.0	64	1.0	S 9	W 8	U 8	636.8	61.8
SAKATA	0	P	19	57	34.3	IS	58	38.8	750	2.8	400	2.4	150	3.2			D 6	645.0	64.5
YAMAGA	0	P	19	57	36.4	S	58	41.1	200	1.0	100	1.0	100	1.0	S 3	W 3	U 4	667.2	64.7
FUKUSH	1	P	19	57	40.5	ES	58	51.3	227	0.9	283	5.2	55	1.0	S 5	W 4	U 5	703.9	70.8
ONAHAM	1	IP	19	57	46.7	ES	58	59.1	150	1.1	123	1.0	74	2.0			U 12	758.5	72.4
SHIRAK	1	EP	19	57	48.3	S	59	05.0										774.5	76.7
NIIGAT	0	IP	19	57	50.3	IS	59	06.0	385	5.6	315	5.0	160	6.0	S 8	W 1	U 16	771.4	75.7
AIKAWA	0	EP	19	57	54.0	ES	59	10.8	38	1.6	45	6.8	19	2.6	S 11	W 8	U 11	813.6	76.8
MITO	0	IP	19	57	55.6	IS	59	18.0	90	4.0	100	4.4	57	3.2	S 9	W 7	U 10	832.4	82.4
UTSUNO	1	EP	19	57	56.7	S	59	17.9							S 7	E 1		844.8	81.2
KAKIOK	0	IP	19	57	58.3	S	59	22	172	0.8	138	1.0	56	0.8	S 3	W 5	U 4	859.0	83.7
CHOSHI	0	P	19	58	01.8	S	59	27.2										880.7	85.4
TAKADA	0	P	19	58	03.7	S	59	30.3							S 4	W 4	U 7	885.1	86.6
MAEBAS	0	P	19	58	04.7	IS	59	32.6	103	5.8	95	5.7	62	2.4			U 7	899.3	87.9
KUMAGA	0	P	19	58	06.0	ES	59	35.0	119	5.6	100	6.4	60	6.0			U 5	905.9	89.0
MATSUS	0	IP	19	58	08.8	S	59	40							S		U	934.8	91.2
KARUIZ	X	EP	19	58	08.9	S	59	44.8										932.5	95.9
TOKYO	1	IP	19	58	09.7	IS	59	38.9	165	5.4	120	4.4	50	3.6			U 3	931.2	89.2
NAGANO	0	EP	19	58	10.0	X	00	00.0	90	4.3	80	4.5	32	3.5				925.2	
WAJIMA	0	IP	19	58	11.6	S	59	42.6	55	1.8	70	2.0	17	2.0	S 6		U 9	948.4	91.0
CHICHI	0	EP	19	58	13.0	S	59	39.3										935.5	86.3
TOYAMA	0	P	19	58	15.2	S	59	54.0	42	5.0	46	4.8	26	3.0	S 1	W 2	U 5	980.9	98.8
KOFU	0	EP	19	58	16.0	ES	59	54.0	37	0.8	33	5.8	24	5.4				992.3	98.0
TOMISA	0	EP	19	58	17.6	X	00	18.2	106	7.0	78	4.4	48	5.2				1002.1	
AJIRO	0	EP	19	58	18.6	ES	59	57.8	14	0.5	12	0.5	7	0.5				1023.2	99.2
OSHIMA	0	P	19	58	20.6	X	59	56.2	60	1.2	45	1.2	6	2.0				1037.2	
FUNATS	0	P	19	58	20.8	ES	59	51.0										996.9	90.2
MISHIM	0	P	19	58	21.5	IS	59	59.2	41	2.8	52	4.3	17	4.4		E		1024.7	97.7
IIDA	0	EP	19	58	21.8	X	00	23.8	15	2.2	14	3.0	10	5.0				1044.9	
KANAZA	0	P	19	58	22.4	X	59	52.4	20	0.7	28	0.4			N	7 E	8	1028.7	
YOKOHA	0	X	19	58	22.5	IS	59	45.7	62	0.8	117	1.0	40	6.0				959.7	
SHIZUO	0	EP	19	58	25.2	ES	00	07.3	15	5.4	28	6.2	28	5.0				1063.4	102.1
FUKUI	0	P	19	58	29.2													1094.3	
OMAEZA	0	P	19	58	30.5	X	00	55.0	65	5.4	63	6.4	16	4.8				1107.4	
NAGOYA	0	P	19	58	32.0	ES	00	33.2	27	2.4	20	2.6	15	2.0	S 2	W 1	U 3	1123.6	121.2
GIFU	0	EP	19	58	32.7				14	2.0	13	1.8	8	2.0				1115.4	
HAMAMA	0	EP	19	58	34	ES	00	32	33	4.2	46	4.0	16	5.0				1122.8	118.0
HIKONE	0	EP	19	58	37.4	ES	00	30.9	30	4.3	18	2.0	18	1.1				1156.6	113.5
HACHIJ	0	P	19	58	40.4	X	00	31.8	31		37		16				U 2	1185.5	
KYOTO	0	P	19	58	42.4	S	00	43.6	6	6.0	5	6.0	6	7.4	S 2	W 2	U 3	1209.2	121.2
TOYOOK	0	P	19	58	45.4	S	00	51.2	18	1.1	16	1.1	6	6.2	S	W	U	1224.8	125.8
OWASE	0	P	19	58	47.5	S	01	04.2	8	7.8	8	8.4	8	5.2				1263.2	136.7
OSAKA	0	IP	19	58	47.7	X	01	56.1	97	4.6	81	4.7	23	4.3			U 5	1251.4	
SAIGO	0	P	19	58	50.5	ES	00	55.0	8	4.8	9	3.0	6	3.0	S 1	W 1	U 0	1276.7	124.5
						EL	04	10											
SUMOTO	0	P	19	58	53.8	S	01	04.4	9	7.4	7	6.8	8	8.8			U 0	1315.6	130.6
						EX	59	19.8											
WAKAYA	0	EX	19	58	55.9													1309.1	
SHIONO	0	EP	19	58	58.7	X	01	03.0	11	5.4	8	5.4	2	1.5				1342.0	
OKAYAM	0	EP	19	59	00.4	ES	01	14.4	10	3.8	10	4.0	10	6.0				1350.1	134.0
HAMADA	0	EP	19	59	10.8	ES	01	34.8	5	7.4	5	5.6	5	4.0				1457.5	144.0
MUROTO	0	IP	19	59	11.0	X	01	53.0	13	6.0	14	6.0	10	5.0			U 0	1451.0	
HIROSH	0	EP	19	59	15.7	X	01	59.1	4	7.1	7	9.5	4	5.9				1472.1	
ASHIZU	0	EP	19	59	24.0	X	02	23.2	7	6.0	3	5.0	5	7.0				1566.4	
SHIMON	0	EP	19	59	28	ES	02	00	5	5.0	5	5.0	5	4.0				1604.5	152.0
KUMAMO	0	EP	19	59	37	ES	03	08	7	1.9	7	1.9	3	1.2				1707.0	211.0
OITA	0	EP	19	59	42.1	ES	02	33.6	20	3.9	18	5.0	11	4.3				1613.4	171.5
NAGASA	0	EP	19	59	51.0	S	03	00.0							N	E	D	1770.9	189.0
MIYAZA	0	EP	19	59	51.0	S	02	49.0	15	5.0	8	4.0	8	2.8				1732.0	178.0
KAGOSH	0	EP	19	59	55.8	ES	02	49.4	16	2.2	15	2.4						1815.8	173.6
YAKUSH	0	EP	20	00	08.0	ES	03	24.0	7	7.6	5	5.2	3	5.0				1912.7	196.0
NAHA	0	P	20	01	00.0	ES	05	01.0	8	4.0	18	4.2	9	2.8				2449.6	241.0

OT= 19 22 46 49.8 +/- 0.8
NEAR NIIJIMA
LAT= 34 15 +/- 3 LONG= 139 3 +/- 2
H= 0 MAG=4.3 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OSHIMA	0	P	22	47	02.2	IS	47	14.0	41	4.8	57	4.4	22	1.4				64.3	11.8
OMAEZA	0	EP	22	47	04.7	ES	47	20.1	40	4.2	33	4.2	18	3.1				86.3	15.4
AJIRO	0	P	22	47	06.6	ES	47	22.3	12	2.6	9	2.0	4	1.6				88.1	15.7
MISHIM	0	IP	22	47	07.4	ES	47	20.4	25	2.2	25	2.2	12	2.2			D 4	96.2	13.0
TOMISA	0	P	22	47	09.0				30	6.4	41	6.6	14	6.0				103.0	
SHIZUO	0	EP	22	47	10.0	IS	47	22.6	17	0.4	17	0.6	6	3.2				99.6	12.6
HACHIJ	0	EP	22	47	14.2	X	47	29.6	8		30							144.6	
HAMAMA	0	P	22	47	14.7	EX	47	31	12	3.4	14	3.2	6	2.6			U 2	132.0	
FUNATS	0	EP	22	47	15.7	ES	47	39.3										140.9	23.6
YOKOHA	0	EP	22	47	17.3	ES	47	34.6	12	1.3	17	2.0						142.8	17.3
KOFU	0	EP	22	47	18.6	ES	47	39.2	15	1.6	23	1.8	6	1.0				163.2	20.6
IIDA	0	EP	22	47	21.0	IS	47	42.4	8	1.4	8	2.0	4	0.8				178.5	21.4
NAGOYA	0	EP	22	47	25.5	S	47	51.0	12	1.8	9	1.6	6	1.2	S	1 E	1 U 1	216.0	25.5
KUMAGA	0	EP	22	47	25.8	ES	47	51.4	9	5.0	10	6.2	7	5.0				212.6	25.6
MAEBAS	0	EP	22	47	29.7	ES	47	57.7	10	3.7	8	6.5	5	3.2				238.7	28.0
KARUIZ	0	EP	22	47	30.1	ES	47	58.7										236.2	28.6
GIFU	0	EP	22	47	31.1	S	47	58.1	8	1.7	8	1.4						244.7	27.0
MITO	0	EP	22	47	31.6	ES	48	15.7	9	3.2	5	2.3	4	2.3	S	2 W 2 D 1		269.1	44.1
HIKONE	0	EP	22	47	32.4	ES	48	13.4	9	1.8	9	1.1	7	1.0				280.5	41.0
MATSUS	0	IP	22	47	32.9	S	48	06							N		D	265.1	33.1
OSAKA	0	EX	22	47	37.1				12	5.8	13	4.2	5	2.1				325.6	
TOYAMA	0	X	22	47	45	ES	48	20	10	3.6	11	4.4	8	3.0				319.6	
KANAZA	0	X	22	47	50.8	ES	48	28.0	7		9							335.3	
TOKYO	0	X	22	47					35	4.4	26	5.2	14	4.6				171.8	
TSU	0	X	22	48	39.5													237.8	

OT= 20 9 32 40.6 +/- 0.2
S PART OF IBARAKI PREF
LAT= 35 56 +/- 1 LONG= 140 12 +/- 1
H= 80 CLASS=M

KAKIOK	3	IP	09	32	53.2	IS	33	00.6	800	1.0	2600	1.1	2000	1.0	N101 E 33 U135			33.1	07.4
MITO	2	IP	09	32	55.4	IS	33	03.4	319	1.3	343	1.8	164	1.9	N 25 E 7 U140			55.1	08.0
TOKYO	3	IP	09	32	55.9	IS	33	06.0			219	2.1	180	0.4	S W U 2			48.5	10.1
UTSUNO	3	IP	09	32	56.6	IS	33	06.4	400		600		200		S 3 E 3 D 26			74.2	09.8
CHOSHI	2	IP	09	32	57.4	IS	33	08.2	543	0.7	1363	0.7	506	0.6	S 26 E 54 U108			62.5	10.8
KUMAGA	2	IP	09	32	57.6	S	33	07.6	246	1.2	344	1.0	124	2.4	S 3 E 16 D 73			77.2	10.0
CHICHI	2	IP	09	32	59.1	IS	33	11.0	150	1.9	160	1.3	150	2.0	N 8 E 33			101.1	11.9
YOKOHA	3	IP	09	32	59.3	IS	33	10.5	550	1.3	500	0.8			S 12 E 5			73.9	11.2
MAEBAS	2	IP	09	33	00.9	IS	33	14.8	101	1.0	205	1.6	146	1.7	S 8 E 14 D 74			114.6	13.9
TOMISA	1	IP	09	33	02.1	IS	33	17.0	210	1.4	165	2.2	120	1.5				117.4	14.9
ONAHAM	2	IP	09	33	02.8	IS	33	18.0	215	1.1	235	2.3	127	1.6			U 18	128.9	15.2
SHIRAK	2	IP	09	33	03.6	IS	33	18.0									U 4	131.5	14.4
AJIRO	2	IP	09	33	03.8	IS	33	18.8	222	0.4	170	0.4	40	0.4	N 4 E 4 D 15			140.6	15.0
FUNATS	2	IP	09	33	04.5	IS	33	19.1	150	2.0	100	2.0	50	1.3				138.6	14.6
MISHIM	0	IP	09	33	04.8	IS	33	20.2	121	1.3	140	1.3	57	3.1	N 13 E 13 D 23			146.9	15.4
OSHIMA	2	IP	09	33	04.8	IS	33	20.7	376	2.0	208		88	0.2				149.9	15.9
KARUIZ	X	EP	09	33	05.6	S	33	23.6	200	1.6	100	1.5	100	1.5				155.0	18.0
KOFU	2	IP	09	33	06.0	IS	33	23.0	211	0.4	184	0.8	77	4.0	N 6 E 17 D 55			151.3	17.0
MATSUS	0	IP	09	33	09.5	S	33	30							E D			191.2	20.5
SHIZUO	1	IP	09	33	11.2	IS	33	32.3	45	0.4	67	2.0	35	3.4	N 5 E 13 D 15			194.5	21.1
NAGANO	X	IP	09	33	12.1	S	33	34.6	73	3.8	77	2.5	32	4.0			D 7	197.1	22.5
MATSUM	0	P	09	33	12.7	S	33	34.8							E		D	203.4	22.1
FUKUSH	1	P	09	33	13.2	ES	33	27.8	72	1.2	70	1.2	32	0.5			D 2	203.8	14.6
TAKADA	0	P	09	33	13.8	S	33	33.1							S 1 E 1 D 5			217.7	19.3
IIDA	0	IP	09	33	14.8	IS	33	38.4	60	1.4	53	1.8	48	2.0	N 5 E 21 D 20			219.0	23.6
OMAEZA	0	P	09	33	15.5				65	4.1	89	2.9	28	2.4				233.3	
NIIGAT	0	P	09	33	18.0	IS	33	44.0	110	3.0	100	1.7	70	3.7			D 1	242.0	26.0
YAMAGA	0	EP	09	33	19.7	S	33	47.9										257.8	28.2
HAMAMA	0	P	09	33	20.0	S	33	50.6	5	3.4	4	3.4	5	4.0			U 2	263.0	30.6
SENDAI	X	EP	09	33	20.4	ES	33	48.9	55	2.0	62	2.0	27	1.5	S 4		D 4	265.6	28.5
AIKAWA	0	EP	09	33	22.1	X	34	05.0	23	1.8	24	2.8	8	2.8	S 3 E 3 D 5			289.8	
TOYAMA	0	IP	09	33	22.4	ES	33	48	31	3.0	30	2.8	20	3.8			D 11	282.0	25.6
ISHINO	0	IP	09	33	22.5	IS	33	53.2	35	1.4	29	2.0	14	1.6	S W		D	293.3	30.7
NAGOYA	0	P	09	33	24.8	S	33	59.4	92	2.0	68	2.2	33	1.6	E 2 D 2			305.1	34.6
HACHIJ	0	EP	09	33	27.0	S	33	59.0	32	0.0	50	0.0	17	0.1				316.3	32.0
GIFU	0	P	09	33	27.6	ES	34	05.0	41	1.9	33	1.9						316.5	37.4
WAJIMA	0	IP	09	33	28.6				23	0.8	30	1.2	9	1.6			D 6	336.5	
KANAZA	0	EP	09	33	29.0	ES	33	55.6	19		26							326.4	26.6
SAKATA	0	EP	09	33	30.2	ES	34	03.0	100	2.0	150	2.2	0					331.1	32.8
HIKONE	0	P	09	33	32.6	ES	34	15.7	51	2.7	46	1.6	29	0.9				365.5	43.1
OFUNAT	0	IP	09	33	32.9	IS	34	10.8	8	1.6	14	2.0	8	2.0	S 1		D 1	372.2	37.9

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MIZUSA	0	EP	09	33	33.1	IS	34	10.7	63	2.0	56	1.3	28	1.8				364.6	37.6
TSURUG	0	EP	09	33	33.9	EX	34	16.6										375.0	
FUKUI	0	P	09	33	35.2													358.4	
TSU	0	P	09	33	35.5													361.5	
OWASE	0	P	09	33	37.3	S	34	22.2	5	2.4	4	2.8	4	2.6				420.0	44.9
KYOTO	0	EP	09	33	38.6	ES	34	20.6	14	1.5	8	1.6	5	1.0			U 1	417.8	42.0
MORIOK	0	EP	09	33	39.0	S	34	23.4	15	0.3	16	0.5	6	1.8				426.3	44.4
NARA	0	EP	09	33	39.0													420.5	
MIYAKO	0	EP	09	33	40.9	ES	34	23.8	5	2.0	7	4.2	1	2.1				440.4	42.9
AKITA	0	EX	09	33	43.2				27	4.0	33	3.8	23	2.8				420.2	
WAKAYA	0	P	09	33	46.5	S	34	41.5	17	1.2	14	1.0						496.3	55.0
TOYOOK	0	P	09	33	47.1	X	34	50.8	44	1.0	39	1.0	7	0.9				488.5	
SUMOTO	0	P	09	33	49.8	ES	34	47.5	6	3.4	6	3.2	4	3.0			U 1	513.6	57.7
						EX	34	06.0											
OSAKA	0	X	09	33	50.8	X	34	59.8	140	3.1	80	2.1	58	2.8				447.2	
KOBE	0	X	09	33	51													476.8	
HACHIN	0	EP	09	33	51.3	ES	34	42.4	5	3.3	6	2.1	3	4.2				522.7	51.1
TOKUSH	0	EP	09	33	55.6	X	35	55.4										553.4	
AOMORI	0	P	09	33	58.5	S	34	52.7	25	1.6	45	2.6	12	2.3				544.4	54.2
TURUGI	0	X	09	33														603.5	
MUROTO	0	IP	09	34	04.6	ES	35	17.0	3	3.2	5	2.8	3	3.0	N 0		U 0	627.3	72.4
HAKODA	0	EP	09	34	09	ES	35	18	4	2.6	7	4.4	3	3.0				654.5	69.0
URAKAW	0	EP	09	34	15	ES	35	28	7	1.4	6	1.4	3	2.0				726.1	73.0
KUMAMO	0	EP	09	34	45				7	2.1	3	2.1	2	2.5				938.3	
KAGOSH	0	EX	09	34	52.7						6	1.9						1015.2	
KUSHIR	0	X	09	35	52.0				12	0.4	11	0.3	5	0.2				861.2	
OITA	0	EX	09	35	57.1	X	36	59.4	12	3.8	11	4.0						841.4	

OT= 21 6 59 53.2 +/- 0.7
NE PART OF CHIBA PREF
LAT= 35 47 +/- 3 LONG= 140 34 +/- 3
H= 0 MAG=3.8 CLASS=L

CHOSHI	1	IP	06	59	59.6	S	00	05.2	90	0.6	145	0.8	36	0.6	N 2 E 2 U 10			25.8	05.6
KAKIOK	0	EP	07	00	06	ES	00	16	16	1.1	15	1.1	8	1.0				60.1	10.0
TOKYO	0	P	07	00	08.1	ES	00	19	13	0.7	7	0.7	3	0.6			U	73.9	10.9
UTSUNO	0	EP	07	00	12.8	ES	00	32.0										105.3	19.2
YOKOHA	0	X	07	00	17.9	IS	00	28.2	21	0.5	18	0.7						91.1	
MATSUS	0	IP	07	00	27.8												D	228.1	
FUKUSH	0	EX	07	00	28.1				5	1.0	4	0.7	2	1.0				219.1	

OT= 22 7 18 34.4 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 27 +/- 1 LONG= 138 17 +/- 1
H= 10 CLASS=L

MATSUS	1	P	07	18	37.6	S	18	38.9										11.9	01.3
NAGANO	1	IP	07	18	39.8	S	18	43.0										24.6	03.2
KARUIZ	0	EP	07	18	40.4	S	18	45.5										27.0	05.1
MATSUM	1	IP	07	18	42.8	IS	18	48.3									U 4	36.1	05.5
TAKADA	0	EP	07	18	49.5	S	18	56.9										72.7	07.4
KOFU	0	IP	07	18	51.3	IS	19	02.4	6	0.4	9	0.4	3	0.8		E 1 U 1		90.5	11.1

OT= 22 19 18 3.3 +/- 1.8
E OFF HOKKAIDO
LAT= 43 36 +/-10 LONG= 149 9 +/- 9
H= 40 MAG=5.7 CLASS=M

NEMURO	1	P	19	18	45.3	S	19	11.0	74	4.3	54	4.2	63	4.0		W U		290.0	25.7
ABASHI	0	EP	19	18	56.4	IS	19	49.4	82	4.0	63	3.4	48	5.6				394.4	53.0
KUSHIR	0	EP	19	18	59	IS	19	45.2	61	0.2	70	4.8	53	3.0				392.1	46.2
OMAEZA	0	EX	19	19					12	4.0	13	11.4						1373.3	
OBIHIR	0	P	19	19	12.0	ES	20	10										487.3	58.0
HIROO	0	EP	19	19	13	ES	20	08										498.0	55.0
ASAHIK	0	P	19	19	18.0	S	20	20.2	26	3.6	35	2.0	15	3.2		W U		546.7	62.2
URAKAW	0	P	19	19	20.7	S	20	21.1	143	5.2	145	3.8	82	3.8				544.5	60.4
RUMOI	0	EX	19	19	24													606.4	
WAKKAN	0	P	19	19	26.8				20	4.0	15	4.0	25	6.0			D 9	627.7	
SAPPOR	0	P	19	19	29.5	S	20	48.6	84	3.2	68	3.6	44	2.8			D	636.9	79.1
MURORA	0	EP	19	19	35.4	S	20	48.3							S	W U		681.3	72.9
HAKODA	0	IP	19	19	39.3	ES	20	52	76	3.9	34	3.8	55	3.5		E D		715.4	72.7
HACHIN	0	EP	19	19	41.4	S	20	53.5	21	0.6	18	0.6	13	3.6				717.3	72.1
AOMORI	0	P	19	19	44	ES	21	01.4	96	2.2	63	2.2	29	2.2				756.6	77.4

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MIYAKO	0	X	19 19 50	ES	21 00.6	9	3.1	10	3.3	7	5.1				742.0	
MORIOK	0	P	19 19 51.3	S	21 12.0	31	0.4	27	0.4	8	6.0		W	0 U	793.3	80.7
OFUNAT	0	EP	19 19 53.2	S	21 13.2	15	0.8	12	0.8	10	1.0				800.2	80.0
MIZUSA	0	EP	19 19 57.7	IS	21 22.5	48	1.8	68	1.2	44	1.2				833.7	84.8
AKITA	0	EX	19 20 00.7	EX	21 47.5	34	4.2	33	4.0	21	2.8				867.6	
ISHINO	0	EX	19 20 01.0	X	21 32.0	5	0.6	10	0.6	4	0.6	N	O W	0 D 0	874.6	
YAMAGA	0	EP	19 20 10.2	S	21 47.4										948.9	97.2
SENDAI	0	X	19 20 10.2	S	21 38.8	22	1.8	18	2.4	8	1.2				912.8	
FUKUSH	0	X	19 20 18.1	ES	21 53.2	23	1.0	18	1.0	7	0.7				978.3	
SAKATA	0	EX	19 20 21.7	ES	21 47.1										938.0	
AIKAWA	0	IP	19 20 31.1	IS	22 22.8	6	3.2	6	14.4	4	4.8		W	0	1108.2	111.7
MITO	0	EP	19 20 31.6	IS	22 19.7	10	3.0	23	3.6	10	3.6				1090.7	108.1
KAKIOK	0	EP	19 20 35.9	ES	22 23.0	14	0.8	11	0.8	6	1.0				1119.3	107.1
MATSUS	0	IP	19 20 42.5	S	22 46							N		D	1217.2	123.5
KUMAGA	0	X	19 20 43.2	ES	22 40.4	12	5.8	14	5.4	8	4.6				1174.3	
TOKYO	0	EX	19 20 49	ES	22 41.5	17	3.0	19	4.4						1191.0	
WAJIMA	0	EX	19 20 50	EX	22 46	11	2.4	19	3.2						1244.7	
MAEBAS	0	X	19 21 01.8			11	2.5	12	2.7	5	1.4				1173.3	
TOYAMA	0	X	19 21 02			6	3.6	9	4.2	9	4.2				1271.1	
KOFU	0	X	19 21 02.6	ES	22 58.0	5	1.4	6	1.7						1264.1	
TOYOOK	0	EP	19 21 33.4	ES	24 07.7	6	17.6	6	17.6						1518.9	154.3
HAMAMA	0	X	19 21 38	X	23 54	7	3.6	5	4.0	4	3.0				1393.8	
HAMADA	0	EP	19 21 45.0	EX	24 52.2	6	5.0	5	5.8	4	3.2				1757.4	
OSAKA	0	EX	19 21 49			23	5.4	19	5.6	6	4.0				1536.9	
ONAHAM	0	X	19 22 01.2							8	1.4				1017.7	
MUROTO	0	EP	19 22 01.9	ES	25 00.1	4	15.0	5	15.0	4	15.0				1735.5	178.2
				EL	28 16.1										1903.8	203.0
SHIMON	0	EP	19 22 05	ES	25 28	4	5.4	5	5.0	5	4.0				1908.2	208.2
OITA	0	EP	19 22 05.2	ES	25 33.4	36	4.8	18	5.4						1970.3	209.0
FUKUOK	0	EP	19 22 16.0	ES	25 45.0	5	4.0	2	4.0	5	4.1				2107.7	223.6
KAGOSH	0	EP	19 22 19.0	ES	26 02.6	8	1.7	13	2.4						1126.9	
CHOSHI	0	X	19 22 24.3												2003.0	209.3
KUMAMO	0	EP	19 22 25	ES	25 54.3	5	2.5	6	4.8	3	1.8				2068.8	218.0
NAGASA	0	EP	19 22 25.8	ES	26 03.8										2022.1	203.4
MIYAZA	0	EP	19 22 33.6	S	25 57.0	9	5.2	14	5.0	7	3.4				2200.4	
YAKUSH	0	EP	19 22 38.6	X	26 30.0	5	3.0	5	5.8	5	5.4				1218.2	
YOKOHA	0	X	19 22 48.7	IX	24 25.4	19	4.7								1288.0	
MISHIM	0	X	19 23 01			6	2.6	6	2.6	2	2.2					

OT= 22 22 31 45.7 +/- 0.2
NEAR WAKAYAMA
LAT= 34 13 +/- 1 LONG= 135 7 +/- 1
H= 10 MAG=3.9 CLASS=S

WAKAYA	3	IP	22 31 48.8	IS	31 49.3										4.7	00.5
SUMOTO	1	IP	22 31 52.2	IS	31 55.2	28	0.5	27	0.4	13	2.0	S	6 E	4 D 8	23.2	03.0
KOBE	0	EP	22 31 55.5	ES	32 04.2							N	1 E	3 D 2	52.6	08.7
TOKUSH	0	EP	22 31 57.4	IS	32 05.2										52.6	07.8
NARA	0	EP	22 32 01.9	ES	32 11.7										83.7	09.8
OSAKA	0	EP	22 32 03.1	IX	32 06.8	26	3.7	25	3.5	11	3.5				61.6	
				IX	32 26.8											
TAKAMA	0	EP	22 32 03.3	IS	32 17.7	21	1.0	13	1.0	6	1.2				98.1	14.4
OWASE	0	P	22 32 04.2	S	32 16.8	6	0.4	5	0.4	4	0.4				100.8	12.6
SHIONO	X	EP	22 32 05	IS	32 17.1	10	1.0	13	0.2	10	1.0				104.1	12.1
OKAYAM	0	IP	22 32 07.0	S	32 23.0	20	0.8	20	1.0	10	1.0	S	E	D	121.8	16.0
TOYOOK	0	EP	22 32 09	ES	32 31.0	16	1.2	15	1.2						148.9	22.0
MUROTO	0	P	22 32 10.6	S	32 27.1	5	0.5	4	0.5						138.1	16.5
TSU	0	P	22 32 12.0												139.5	
HIKONE	0	EP	22 32 13.4	ES	32 30.5	11	1.3	9	0.8	2	0.9				156.3	17.1
MATSUS	0	IP	22 32 42.2	S	33 35										381.0	52.8

OT= 23 7 40 6.2 +/- 0.2
E COAST OF IWATE PREF
LAT= 39 47 +/- 1 LONG= 141 56 +/- 2
H= 60 MAG=3.7 CLASS=L

MIYAKO	2	IP	07 40 16.5	IS	40 22.1	39	0			9	0.4				15.6	05.6
MORIOK	0	IP	07 40 20.2	IS	40 29.6	12	0.4	12	0.4	6	0.4				66.3	09.4
OFUNAT	1	IP	07 40 22.0	IS	40 32.8	26	0.0	11	0.4	8	0.4	S	0		82.2	10.8
HACHIN	0	IP	07 40 22.6	IS	40 33.6	10	0.6	20	0.4	3	0.6	S	2	U	89.4	11.0
MIZUSA	0	EP	07 40 24.2	ES	40 36.3	5	0.5	6	0.5	2	0.3				99.7	12.1
MATSUS	0	P	07 41 13												486.0	

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OT= 24 22 16 26.8 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 28 +/- 1 LONG= 138 18 +/- 1
H= 0 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	1	P	22 16 30.4	S	16 31.7										11.4	01.3
NAGANO	1	IP	22 16 32.8	S	16 34.9										23.4	02.1
KARUIZ	0	EP	22 16 33.1	S	16 38.5										26.6	05.4
MATSUM	X	IP	22 16 36.3	IS	16 41.5										38.4	05.2
TAKADA	0	EP	22 16 42.4	S	16 49.2										71.0	06.8
KOFU	0	EP	22 16 44.6	IS	16 55.5	4	0.4	6	0.3	2	0.7				91.9	10.9

OT= 25 2 45 42.5 +/- 0.3
AICHI PREF
LAT= 34 52 +/- 1 LONG= 137 26 +/- 1
H= 0 MAG=3.8 CLASS=L

HAMAMA	0	IP	02 45 50.4	IS	45 55.4	29	0.2	19	0.2	8	0.2			U 3	31.8	05.0
NAGOYA	1	P	02 45 55.6	IS	46 04.2	43	0.2	25	0.2	12	0.2	S	1 E	1 D 1	53.8	08.6
IIDA	0	EP	02 45 59.4	IS	46 10.2	10	0.4	13	0.4	4	0.6				80.2	10.8
OMAEZA	0	X	02 45	ES	46 05.0	11	0.4	9	0.4						77.2	
SHIZUO	0	EP	02 46 00.8	S	46 12.1	8	0.4	5	0.4						89.7	11.3
HIKONE	0	EP	02 46 04.3	S	46 19.8	24	0.6	18	0.5	12	0.8				117.2	15.5
GIFU	0	EP	02 46 04.9	S	46 11.9	8	0.4	10	0.6						84.8	07.0
MATSUS	0	IP	02 46 14.7	S	46 41								N W	U	198.2	26.3
TOYOOK	0	X	02 46 54.8			6	1.0	6	1.0						249.3	

OT= 25 5 5 20.7 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 31 +/- 1 LONG= 138 12 +/- 1
H= 10 CLASS=L

MATSUS	2	P	05 05 22.9	S	05 23.6										2.5	00.7
NAGANO	2	IP	05 05 25.5	S	05 27.8										15.9	02.3
KARUIZ	0	EP	05 05 28.5	S	05 33.8										37.1	05.3
MATSUM	0	EP	05 05 28.7	IS	05 33.5										36.5	04.8
TAKADA	0	EP	05 05 34.1	ES	05 42.7										65.4	08.6
NIIGAT	0	EX	05 06 14.0	IS	06 14.4	10	0.3	17	0.6						172.1	

OT= 26 23 53 9.3 +/- 0.7
E OFF CHIBA PREF
LAT= 35 23 +/- 2 LONG= 141 15 +/- 3
H= 40 MAG=4.7 CLASS=L

CHOSHI	2	IP	23 53 20.1	IS	53 25.1	876	0.6	1151	1.0	524	1.2	S	12 E	10 D 90	52.9	05.0
KAKIOK	0	IP	23 53 29.3	X	53 30.3	58	0.9	55	0.9	40	0.5	S	1 E	2 D 1	134.1	
MITO	0	IP	23 53 30.1	IS	53 46.1	50	1.5	65	2.5	20	2.0			D 3	130.8	16.0
TOKYO	0	IP	23 53 32.4	ES	53 49.7	56	2.6	68	3.4	33	4.0			D 4	139.3	17.3
TOMISA	0	P	23 53 32.9			37	2.6	39	3.2	26	2.8			U 1	139.3	
YOKOHA	0	IP	23 53 34.1	IS	53 52.1	51	1.1	60	0.8	29	2.0		W	8 U 10	145.0	18.0
OSHIMA	0	P	23 53 36.2	S	53 57.8	24	0.4	13	2.0	11	1.9				184.1	21.6
UTSUNO	0	EP	23 53 36.6	EX	53 54.3	41	1.6	23							179.2	
ONAHAM	0	EP	23 53 37.1	X	54 08.8	32	0.9	43	1.2	12	0.8				176.0	
KUMAGA	0	EP	23 53 39.0	ES	53 56.0	20	2.0	25	3.6	17	3.6				188.7	17.0
AJIRO	0	P	23 53 40.1	ES	53 59.1	7	0.3	6	0.3	4	0.4				199.6	19.0
SHIRAK	0	P	23 53 41.0	S	54 03.5										213.4	22.5
CHICHI	0	EP	23 53 41.7	S	54 04.2										207.5	22.5
MISHIM	0	EP	23 53 41.7	S	54 00.6	25	2.2	26	2.3	10	2.0				213.2	18.9
FUNATS	0	P	23 53 42.8	S	54 05.6										226.1	22.8
MAEBAS	0	EP	23 53 43.1			16	2.6	14	2.5	13	1.6				227.3	
KOFU	0	EP	23 53 46.6			17	1.4	17	1.0	7	1.2				246.1	
SHIZUO	0	P	23 53 49.0	ES	54 16.7	8	4.0	10	3.0	8	3.0		W	1 U 2	262.9	27.7
KARUIZ	0	EP	23 53 49.2	ES	54 16.2										265.8	27.0
OMAEZA	0	EP	23 53 49.9			16	3.7	16	3.6						290.3	
FUKUSH	0	EP	23 53 50.0	ES	54 17.1	34	1.0	24	1.0	9	0.9				272.3	27.1
MATSUS	0	IP	23 53 53.0	X	54 38								N E	D	302.8	
IIDA	0	EX	23 53 55.2												310.3	
SENDAI	0	EP	23 53 56.5	ES	54 26.2	12	1.0	15	2.4	6	1.4				320.7	29.7
ISHINO	0	IP	23 53 58.0	ES	54 30.4	6	2.4	6	2.6	3	2.6	N	0 E	0 U 0	337.5	32.4
HACHIJ	0	X	23 53 58.0	EX	54 24.4	7		6		10					286.6	
HAMAMA	0	X	23 54 02	X	54 50	10	2.4	9	2.8	5	3.0				330.3	
NIIGAT	0	X	23 54 04.0	X	54 46.9	42	4.2	22	3.3	10	3.7				342.3	

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
NAGOYA	0	EP	23 54 07.2	ES	54 54.0	13	2.2	9	2.0	4	1.6			U 1	390.2	46.8
MIZUSA	0	EP	23 54 10.1	X	55 38.9	8	2.3	5	2.4						416.3	
WAJIMA	0	EX	23 54 12					6	1.2						449.3	
GIFU	0	X	23 54 13			8	1.9	6	2.1						407.3	
SAKATA	0	X	23 54 17.8												410.3	
AKITA	0	EX	23 54 18.8			12	4.6	11	3.8	8	3.4				491.6	
KANAZA	0	X	23 54 20.6	ES	55 06.4	11		15		6					434.6	
TOYOOK	0	X	23 54 41.7	X	55 52.7	8	1.0	5	1.0						583.7	
OSAKA	0	X	23 54 42.2			26	4.0	20	4.1	8	2.7				527.4	

OT= 27 15 19 16.2 +/- 0.4
OFF IBARAKI PREF
LAT= 36 18 +/- 1 LONG= 141 10 +/- 3
H= 40 MAG=4.1 CLASS=U

MITO	0	IP	15 19 28.1	IS	19 36.7	24	0.5	35	0.6	23	0.3	S 2 E 6 D 26			63.0	08.6
ONAHAM	0	IP	15 19 29.5	IS	19 38.6	33	0.7	54	1.1	22	0.6			D 10	75.2	09.1
CHOSHI	0	EP	15 19 29.5	IS	19 38.1										70.1	08.6
SHIRAK	0	IP	15 19 35.9	S	19 49.2									D 7	123.8	13.3
UTSUNO	0	EP	15 19 38.5	EX	19 57.2										119.3	
TOKYO	0	EP	15 19 38.5			10	2.0	7	1.6						144.1	
KUMAGA	0	EP	15 19 41.0	ES	20 07.8	6	0.8	6	1.0						161.1	26.8
FUKUSH	0	EP	15 19 43.8	ES	20 01.6	22	0.9	60	2.6	9	0.5				172.9	17.8
SENDAI	0	EP	15 19 48.2	ES	20 13.8	9	0.4	10	2.0	4	1.4				218.8	25.6
YOKOHA	0	X	15 19 52.5	IX	20 17.1	11	0.5	7	0.8						166.7	
KOFU	0	EP	15 19 53.0	ES	20 26.5	5	1.8	6	1.6	2	1.4				245.5	33.5
MATSUS	0	IP	15 19 54.2	S	20 21									U	266.6	26.8
KAKIOK	0	X	15 19	S	19 39.8	22	0.8	20	0.8	10	0.8				87.8	
MIZUSA	0	EP	15 20 03.2					4	1.2	4	0.7				314.5	

OT= 27 21 31 46.0 +/- 2.3
E OFF CHIBA PREF
LAT= 35 32 +/- 9 LONG= 141 31 +/- 8
H= 10 MAG=4.2 CLASS=L

CHOSHI	1	IP	21 31 59.6	IS	32 05.0	290	0.4	367	0.8	216	1.0	S 14 E 2 D 40			64.6	05.4
KAKIOK	0	X	21 31	S	32 20.2	22	0.8	26	0.8	12	1.0				142.4	
MITO	0	EP	21 32 08.3	IS	32 24.8	14	1.0	11	1.0	5	1.6				132.9	16.5
TOKYO	0	EP	21 32 12.4	EX	32 29.0	8	2.0	12	2.4	4	1.2				160.2	
YOKOHA	0	EP	21 32 16.6	IX	32 39.6	12	1.4	18	0.5						169.2	
UTSUNO	0	EP	21 32 19.6	EX	32 29.6										186.0	
KUMAGA	0	EP	21 32 22.1	ES	32 47.4	5	1.0	5	1.0						204.2	25.3
FUKUSH	0	EP	21 32 29.0	ES	33 03.4	8	0.9	10	1.0						263.7	34.4
MATSUS	0	IP	21 32 32.6	S	33 08								W	U	318.2	35.4
ONAHAM	0	X	21 32 36.8			8	1.0	14	1.1	3	0.9				165.9	

OT= 28 3 20 0.8 +/- 0.1
NEAR MATSUSHIRO
LAT= 36 25 +/- 0 LONG= 138 7 +/- 0
H= 0 CLASS=L

MATSUS	2	P	03 20 04.6	S	20 06.6										15.8	02.0
MATSUM	0	IP	03 20 07.1	IS	20 10.7									U 9	23.1	03.6
NAGANO	1	IP	03 20 07.4	S	20 11.1										27.9	03.7
KARUIZ	0	EP	03 20 10.4	IS	20 15.8										39.9	05.4

OT= 28 6 28 23.0 +/- 0.7
NEAR CHOSHI
LAT= 35 37 +/- 4 LONG= 140 51 +/- 4
H= 70 CLASS=L

CHOSHI	0	IP	06 28 34.7	IS	28 40.7									U 12	12.0	06.0
MITO	0	EP	06 28 39.7	ES	28 53.3	5	0.7	5	0.7	3	1.0				91.1	13.6
TOKYO	0	P	06 28 41.0	ES	28 53.7	9	1.4	9	3.0	5	2.0				99.1	12.7
YOKOHA	0	X	06 28 50.5	IX	29 00.3	7	0.4	8	0.6						110.2	
KAKIOK	0	X	06 28	S	28 47.2	14	0.8	14	0.8	10	0.8				90.4	
MATSUS	0	IP	06 29 01.0	S	29 29							N	W	U	258.9	28.0

International Seismological Centre From the ISC collection scanned by SISMOS

OT= 29 4 41 38.4 +/- 0.2
W COAST OF WAKAYAMA PREF
LAT= 34 10 +/- 1 LONG= 135 13 +/- 1
H= 10 MAG=4.2 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
WAKAYA	3	IP	04 41 41.3	IS	41 41.7					800	1.4				8.1	00.4
SUMOTO	0	IP	04 41 45.7	ES	41 50.2	30	0.2	29	3.1	28	3.2	S 6 E 7 D 8			34.0	04.5
KOBE	1	P	04 41 50.1	IS	41 56.6									D 4	57.9	06.5
OSAKA	0	EP	04 41 50.7	IS	41 57.3	80	4.7	92	3.7	34	3.6				61.1	06.6
				IX	41 58.6											
TOKUSH	0	EP	04 41 51.1	IS	41 58.6										60.1	07.5
NARA	0	EP	04 41 53.9	IS	42 03.5										80.6	09.6
HIMEJI	0	P	04 41 54.5	S	42 05.3										88.1	10.8
OWASE	0	P	04 41 55.2	S	42 07.0	20	1.4	10	2.8	8	2.8				90.9	11.8
SHIONO	0	EP	04 41 56.8	IS	42 08.0	23	1.5	26	1.2	23	1.5			U	94.4	11.2
KYOTO	0	EP	04 41 57.7	ES	42 11.2	5	1.2	6	1.4	1	0.4				105.1	13.5
TAKAMA	0	EP	04 42 00.0	ES	42 13.8	37	1.0	26	1.2	17	1.3				108.0	13.8
OKAYAM	0	IP	04 42 00.8	IS	42 19.0	30	0.8	35	0.6	15	1.2		E	D	132.6	18.2
MUROTO	0	IP	04 42 02.7	IS	42 21.1	11	1.6	8	1.0				W	O U 1	140.1	18.4
TOYOOK	0	P	04 42 04.1	S	42 22.3	46	1.0	40	1.0	6	0.9	S			156.2	18.2
HIKONE	0	EP	04 42 07.1	S	42 24.8	24	0.9	13	1.1	6	0.8				154.8	17.7
NAGOYA	0	EP	04 42 12.6	S	42 36.0	7	2.2	7	2.6	3	1.2				195.0	23.4
MATSUY	0	EP	04 42 18.4	ES	42 43.7	7	0.7	8	0.7	3	0.7				227.9	25.3
HAMAMA	0	IP	04 42 20.3	S	42 52.4	10	2.2	8	1.6	4	2.2			D 1	238.0	32.1
IIDA	0	EX	04 42 22.4												282.0	
MATSUS	0	EP	04 42 32	ES	43 22										378.3	50.0

OT= 29 8 13 2.3 +/- 0.1
W COAST OF WAKAYAMA PREF
LAT= 34 11 +/- 1 LONG= 135 10 +/- 1
H= 20 MAG=3.6 CLASS=L

WAKAYA	2	IP	08 13 06.2	IS	13 09.6										4.8	03.4
SUMOTO	0	IP	08 13 09.1	S	13 13.4	7	3.2	7	3.2	7	1.4	S 1 E 1 D 2			29.1	04.3
NARA	0	EP	08 13 16.8	S	13 26.5										82.6	09.7
SHIONO	0	EP	08 13 20.0	IS	13 31.5	6	1.7	6	0.4	6	1.2			U	98.4	11.5
OSAKA	0	X	08 13 20.0			23	3.4	16	3.9	11	3.0				61.9	
MATSUS	0	P	08 13 58	ES	14 43										380.2	45.0

OT= 29 23 33 24.4 +/- 2.0
E OFF CHIBA PREF
LAT= 35 30 +/- 7 LONG= 141 17 +/- 9
H= 50 MAG=4.1 CLASS=U

CHOSHI	0	IP	23 33 36.4	IS	33 42.2										47.0	05.8
KAKIOK	0	IP	23 33 43.1	IS	33 54.1	22	1.0	23	1.0	12	0.8	S 3 E 2 D 1			127.6	11.0
MITO	0	P	23 33 44.1	IS	33 58.1	10	1.0	8	0.9	5	1.3				121.9	14.0
TOKYO	0	EP	23 33 45.4	ES	33 58.6	11	1.0	15	4.0	3	0.6				139.7	13.2
OSHIMA	0	P	23 33 49.3			8	0.4	8	0.4	4					191.9	
UTSUNO	0	EP	23 33 50.7	ES	34 08.3										172.2	17.6
YOKOHA	0	EP	23 33 51.0	IS	34 05.6	25	0.5	28	0.4	9	0.5				147.9	14.6
KUMAGA	0	EP	23 33 52.8	ES	34 13.4	4	1.2	5	0.8	2	1.2				185.9	20.6
KOFU	0	EP	23 34 01.0	ES	34 23.2	6	0.4	5	0.4	2	1.4				247.6	22.2
MATSUS	0	IP	23 34 05.5	S	34 43								W	U	300.1	37.5
ONAHAM	0	X	23 34 15.7			7	1.0	8	1.2	3	1.2				163.8	

OT= 30 1 43 59.0 +/- 1.1
NEAR WAKAYAMA
LAT= 34 13 +/- 4 LONG= 135 8 +/- 1
H= 0 CLASS=L

WAKAYA	2	IP	01 43 59.8	IS	44 00.0										3.3	00.2
SUMOTO	0	IP	01 44 04.9	S	44 09.5	12	0.2	7	0.2	2	0.4	S 1 E 1 D 2			24.5	04.6
TOYOOK	0	EP	01 44 26	IS	44 43.2	6	1.2	5	1.0						149.2	17.2
MATSUS	0	EP	01 44 56	S	45 46										379.9	50.0

OT= 30 16 57 14.7 +/- 1.6
NEAR AMAMI-OSHIMA
LAT= 28 26 +/- 6 LONG= 129 58 +/-13
H= 60 MAG=5.6 CLASS=M

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
YAKUSH	2	IP	16 57 46.8	S	58 11.2	373	0.7	394	0.9	276	5.1	S 5	W 2	D 4	229.2	24.4
OMAEZA	0	EX	16 58			10	4.4	16	6.2						1038.8	
KAGOSH	0	EP	16 58 06.7	S	58 41.4	129	1.8	137	2.2						352.4	34.7
MIYAZA	0	P	16 58 12.0	S	58 52.0	117	2.3	140	2.2	86	2.7				410.7	40.0
NAGA	0	X	16 58 17.2	X	58 51.0	70	3.0	58	4.0	62	2.0				332.2	
NOBEOK	0	EP	16 58 19.4	ES	59 10.3										488.4	50.9
KUMAMO	0	EP	16 58 21.2	IS	59 15.6	115	3.0	135	2.7	40	1.4				490.2	54.4
NAGASA	0	EP	16 58 21.7	IS	59 10.0										474.5	48.3
FUKUE	0	EP	16 58 24.0	S	59 13.2	19	9.4			18	10.0				485.1	49.2
SAGA	0	IP	16 58 28.7	S	59 27.1							S 6		D 4	534.2	58.4
ASHIZU	0	EP	16 58 31.9	ES	59 32.8	14	3.4	7	3.0	8	3.4				557.4	60.9
FUKUOK	0	EP	16 58 32.0	ES	59 28.0	17	2.6	15	4.4	17	9.0	N 1		U 2	571.7	56.0
OITA	0	EP	16 58 32.7	X	59 12.1	130	2.1	160	2.5	119	3.0				554.9	
ASOSAN	0	X	16 58 33												503.8	
SHIMON	0	EP	16 58 40.0	ES	59 43.0	10	4.8	23	5.4	17	3.0	N 6	E 2	U 5	618.7	63.0
MUROTO	0	P	16 58 42.5	IX	58 49.5	8	3.2	8	5.2	5	5.0				668.3	
				EX	00 27.0											
MATSUY	0	EP	16 58 44.8	ES	59 44.0	14	2.7	23	5.2	9	2.1				656.3	59.2
UWAJIM	0	X	16 58 45.7	ES	59 44.8										585.9	
HIROSH	0	EP	16 58 50.2	S	00 00.2	8	4.0	12	3.7	8	3.2				697.8	70.0
HAMADA	0	EP	16 58 52.0	ES	00 05.8	8	5.3	14	3.5	6	4.3				743.2	73.8
TAKAMA	0	EP	16 58 57.2	ES	00 25.9	16	2.7	15	2.7	1	0.6				759.1	88.7
TOKUSH	0	EP	16 58 57.4	ES	00 12.2										762.8	74.8
SUMOTO	0	P	16 59 00.0	S	00 20.1	15	3.2	8	4.0	6	3.8	S 0	W 0	D 0	805.0	80.1
				EX	59 05.5											
OKAYAM	0	IP	16 59 01.4	X	00 11.4	20	3.5	20	4.0	15	8.0		E	D	787.2	
OSAKA	0	X	16 59 15.2	X	01 14.0	112	4.4	58	4.0	29	2.9				868.0	
HIKONE	0	EP	16 59 20.8	X	01 42.3	11	1.1	11	2.3	7	1.0				962.6	
TOYOOK	0	X	16 59 21.3	ES	00 48.8	16	1.6	10	1.8	3	2.8				910.7	
NAGOYA	0	EP	16 59 26.4	ES	01 10.0	17	3.0	11	3.2	4	2.8				997.3	103.6
SAIGO	0	X	16 59 26.5	ES	00 56.0	9	3.2	8	3.6	6	3.4	N 1	E 0	U 1	917.7	
HAMAMA	0	P	16 59 29.5	X	01 59	8	3.0	5	3.0	4	2.6			U 1	1011.9	
FUKUI	0	X	16 59 33.3												1029.5	
KANAZA	0	X	16 59 44.4	X	01 51.2	21		19		8					1096.1	
MATSUS	0	P	16 59 47	S	02 00										1185.0	133.0
WAJIMA	0	EX	16 59 47.2	EX	02 34	11	1.0	15	1.2						1184.9	
TOYAMA	0	X	16 59 50	ES	01 52	14	4.4	18	4.2	9	3.4				1140.7	
KOFU	0	X	16 59 50.0	X	02 42.0	5	2.6	3	3.4	2	3.8				1139.3	
NIIGAT	0	X	16 59			18	5.2	15	3.8	6	3.0				1348.0	
GIFU	0	X	16 59			6	1.9	6	1.9						1003.9	
YOKOHA	0	X	17 00 02			6	4.0								1199.3	
KUMAGA	0	X	17 00 02.0	ES	02 05.0	6	4.6	8	5.2	7	5.2				1230.6	
AKITA	0	EX	17 00 36			5	4.8	5	4.8	3	4.8				1559.9	
MIZUSA	0	EX	17 00 43.0			5	2.4	7	2.4	4	1.6				1571.1	
AOMORI	0	EX	17 01 04			14	2.0	8	2.0						1690.9	
NAGOYA		X	17 02 07.2												997.3	

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List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE		PHASE AND TIME (J.S.T.) H M S			INITIAL MOTION				DATE		PHASE AND TIME H M S			INITIAL MOTION		
1	IP	12 38 50.8	S	44 53.			U	*	9	P	17 42 00.	S	45 28.			
1	P	13 13 34.						*	9	P	19 25 38.	ES	35 36.			
1	P	15 08 28.	S	08 59.				*	9	P	23 49 12.	S	53 38.			
								*								
2	P	00 13 37.						*	10	EX	02 19 50.	EL	38 53.			
2	P	04 46 42.						*	10	IP	06 15 47.1			N	W	D
2	IP	07 44 25.9	S	46 16.	S		U	*	10	IP	16 09 03.7	S	09 07.			U
2	P	13 52 01.	S	52 34.				*								
2	P	13 55 58.2	EX	56 32.				*	11	P	02 28 27.	EX	29 48.			
2	P	14 16 03.	S	16 37.				*	11	IP	08 02 41.6	S	03 07.	S	E	D
2	P	14 23 38.	ES	24 11.				*	11	EP	13 47 55.					
2	P	14 48 42.	EX	49 14.				*								
2	P	21 22 18.						*	12	IP	03 57 37.0	S	58 22.			U
2	IP	21 47 21.6	IS	47 38.6	S	E	D	*	12	IP	11 46 20.5				E	U
								*	12	P	19 36 25.					
3	IP	02 28 28.4	ES	29 09.		W	U	*								
3	IP	03 27 45.6				E	D	*	13	P	06 57 49.	EL	12 10.			
3	IP	10 31 21.4	S	37 48.	N		U	*								
3	IP	13 48 04.5	EX	49 42.		E	U	*	14	IP	00 23 38.7	IS	24 19.0			U
3	EP	18 29 24.						*	14	P	03 47 13.					U
3	P	20 25 47.	EX	26 10.				*	14	P	05 17 28.					
3	P	20 39 34.5						*	14	IP	09 36 59.4	S	37 41.			D
								*								
4	EP	00 49 11.	S	49 40.				*	15	EP	05 52 35.					
4	IP	06 04 26.0	S	05 06.	N	W	U	*	15	IP	08 03 54.7					U
4	P	06 23 44.						*	15	IP	09 29 13.1	S	29 42.			D
4	PKP	06 26 38.	ESS	47 54.				*	15	IP	09 42 39.6					U
4	IP	06 45 21.8	S	46 00.	N	W	U	*	15	P	10 02 55.					
4	P	12 21 22.	EX	22 10.				*	15	P	11 21 17.					
4	P	13 03 34.	S	13 06.				*	15	IP	17 06 04.8	S	07 40.	N		U
4	P	15 16 14.	S	16 59.				*	15	P	19 01 02.	S	01 26.	S	E	D
								*	15	IP	19 40 17.2				E	U
5	P	02 49 10.						*	15	P	23 02 42.	S	03 11.			
5	P	03 14 31.						*								
5	P	03 39 01.	EX	40 04.				*	16	P	02 47 33.					
5	IP	04 35 05.6			N	W	U	*	16	P	04 43 20.	S	43 58.			
5	IP	11 56 57.3	IS	57 29.7	N	E	U	*	16	EP	05 19 29.	ES	20 22.			
5	P	12 47 39.	ES	53 50.				*	16	IP	11 15 04.0					D
5	P	14 29 39.						*	16	IP	12 48 20.0					U
5	IP	16 55 44.8	IS	56 01.4			D	*	16	IP	17 38 50.0				W	U
5	EP	18 39 05.						*								
5	P	21 56 27.5	EX	57 36.				*	17	IP	04 21 16.0			N		U
								*	17	P	10 11 29.			N		U
6	EX	02 41 44.						*	17	IP	18 04 57.0					D
6	IP	05 21 28.1	S	21 45.	S	E	D	*	17	P	18 48 26.	S	49 29.			
6	IP	05 57 09.1	S	57 37.	N	E	D	*	17	EP	19 33 56.					
6	IP	10 51 20.8					U	*								
6	P	12 22 46.	EX	26 00.				*	18	EP	03 57 01.	S	57 46.			
6	IP	13 52 46.5					D	*	18	IP	11 03 52.0					D
6	IP	16 38 27.4	EX	45 08.		E	U	*	18	P	16 47 18.					
6	EP	17 02 17.	ES	03 16.				*								
6	EP	18 33 07.						*	19	P	00 21 37.3					U
								*	19	IP	00 41 03.8	S	47 25.			U
7	IP	02 32 13.5				E	U	*	19	IP	02 49 50.0	IS	50 32.6			D
7	P	04 52 03.						*	19	IP	07 41 58.5	S	42 32.			D
7	P	11 12 33.						*	19	IP	12 29 42.7	S	30 24.		W	U
7	EP	12 15 10.						*	19	IP	14 47 07.5	IS	47 33.8			D
7	IP	12 57 55.7	ES	58 11.			U	*	19	IP	19 09 46.7	S	10 10.		W	U
7	IP	16 19 12.6	S	24 28.	N		U	*	19	IP	19 58 08.8	S	59 40.	S		U
7	EP	18 46 10.						*	19	IP	22 47 32.9	S	48 06.	N		D
7	P	20 19 24.						*	19	P	23 01 21.					
7	P	22 57 09.						*								
7	P	23 11 27.						*	20	P	00 49 33.					
7	IP	23 14 48.6	IS	15 15.7	S	E	D	*	20	P	04 10 47.					
								*	20	IP	09 33 09.5	S	33 30.		E	D
8	IP	01 02 19.3					D	*	20	P	18 52 08.	S	02 37.			
8	P	10 27 30.	EX	28 12.				*	20	P	19 43 46.					
8	P	12 44 11.						*	20	P	19 47 44.					
8	IP	14 00 26.6					D	*								
8	IP	18 19 52.4				E	U	*	21	IP	04 38 45.8					U
8	EP	18 36 58.	ES	37 38.				*	21	IP	07 00 27.8					D
8	EP	19 08 36.						*	21	IP	13 25 47.0	S	26 27.			U
8	IP	20 48 19.1	S	48 39.	S	E	D	*	21	IP	22 01 33.5				N	D
								*								
9	IP	04 27 51.9	IS	27 56.2		W	D	*	22	IP	00 49 44.2	S	50 16.			U
9	EP	07 42 54.	S	47 10.				*	22	P	02 32 28.					
9	P	10 51 20.0						*	22	IP	02 33 06.5	S	33 38.			D
9	P	14 37 51.						*	22	IP	10 58 15.5	S	58 45.			U
9	IP	16 44 32.3	S	44 49.		E	D	*	22	IP	19 20 42.5	S	22 46.	N		D
9	P	17 09 22.						*	22	P	20 22 05.					

DATE		PHASE AND TIME(J.S.T.) H M S		M S	INITIAL MOTION
22	IP	22 32 42.2	S	33 35.	
23	EP	07 07 50.			
23	P	07 41 13.			
23	P	11 00 40.			
23	IP	16 07 00.5			N E D
23	P	16 14 58.	EX	23 32.	
23	IP	16 50 04.9			D
23	EP	18 19 06.			
24	IP	07 06 58.9	S	07 13.5	
24	P	10 03 42.			
24	EP	14 39 51.			
24	IP	15 16 45.8			D
24	IP	16 56 31.7			S D
24	IP	19 14 57.7			E D
24	IP	21 00 19.0			D
24	P	21 28 51.	S	30 07.	
25	IP	02 46 14.7	S	46 41.	N W U
25	IP	05 20 02.5	ES	21 42.	N E U
25	P	10 13 43.			
25	P	13 23 22.			
25	P	15 27 34.	S	28 12.	
25	P	18 15 58.			
25	EP	22 09 52.			
26	IP	02 10 36.7			S W D
26	IP	02 49 58.1	S	51 14.	N D
26	P	04 36 16.			
26	IP	04 53 36.7	S	54 15.	E D
26	IP	11 37 43.6	S	38 45.	U
26	IP	15 50 22.0	S	53 05.	U
26	IP	19 26 10.8	S	26 46.	E U
26	EP	20 31 17.			
26	IP	23 53 53.0	S	54 38.	N E D
27	IP	00 20 53.4			U
27	P	01 31 10.	S	41 18.	U
27	IP	02 14 13.0			U
27	IP	03 56 30.0			W U
27	IP	04 51 55.8	S	52 17.	S E D
27	IP	15 19 54.2	S	20 21.	U
27	IP	21 32 32.6	S	33 08.	W U
28	IP	02 12 08.5			U
28	IP	06 29 01.0	S	29 29.	N W U
28	IP	12 07 10.7			U
28	IP	14 05 09.0	S	11 42.	S E D
28	P	17 41 40.	S	41 53.5	
29	P	00 54 02.	S	01 27.	S U
29	IP	04 11 32.5			U
29	EP	04 42 32.	ES	43 22.	
29	P	08 13 58.	ES	14 43.	
29	IP	23 34 05.5	S	34 43.	W U
30	EP	01 44 56.	S	45 46.	
30	P	02 11 07.			
30	P	16 59 47.	S	02 00.	
30	P	17 08 59.			
30	L	22 21 12.			

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF MATSUSHIRO ARE LEFT OUT FROM THE TABLE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

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EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

D	INT	H	M	.	D	INT	H	M
1	2	00	11	.				
1	1	00	11	.	16	1	06	39
1	1	00	11	.	16	1	09	06
1	1	00	14	.	16	1	20	39
1	1	00	19	.	16	1	20	39
1	1	00	24	.	16	1	20	41
1	1	00	29	.	16	2	23	52
1	1	02	07	.	16	2	23	57
1	1	08	18	.				
1	1	10	23	.	17	1	07	07
1	1	19	54	.	17	1	20	14
				.	17	1	22	18
2	1	21	03	.	17	1	22	50
				.				
3	1	12	55	.	18	1	01	33
3	1	13	08	.	18	1	16	41
3	1	14	37	.	18	3	20	02
				.				
4	1	13	19	.	19	1	01	02
				.	19	1	01	46
5	1	04	33	.	19	1	18	30
5	1	13	01	.				
				.	20	1	03	53
6	1	03	15	.	20	1	08	43
6	2	14	56	.	20	1	10	52
				.	20	1	11	07
7	1	07	52	.	20	1	21	35
7	1	08	53	.				
7	2	14	49	.	22	1	07	18
7	1	16	42	.	22	1	07	43
7	1	16	44	.	22	1	08	52
				.	22	2	19	54
8	1	02	32	.				
				.	23	1	03	14
9	1	03	30	.	23	1	13	33
9	1	16	05	.	23	1	14	18
9	1	17	04	.	23	1	14	45
9	1	17	04	.	23	1	14	46
9	1	17	05	.	23	1	18	43
				.	23	2	19	49
10	1	15	58	.	23	1	19	55
10	1	19	22	.				
10	1	23	16	.	24	1	01	22
				.	24	1	02	43
11	1	11	31	.	24	1	06	40
11	1	22	00	.	24	1	16	48
				.	24	1	21	23
12	1	08	33	.	24	1	22	16
12	1	14	09	.				
12	1	14	43	.	25	1	02	48
				.	25	2	05	05
13	1	09	14	.	25	1	11	09
13	1	16	54	.	25	1	11	13
				.	25	1	21	29
14	1	07	37	.	25	2	22	44
14	3	13	04	.				
14	1	13	05	.	26	1	02	47
14	1	13	05	.	26	1	10	28
14	1	13	08	.	26	1	12	12
14	1	14	21	.				
14	4	19	38	.	27	1	03	04
14	1	19	39	.	27	1	03	05
14	1	19	45	.	27	1	03	06
14	1	19	52	.	27	1	12	34
14	1	21	09	.				
14	1	23	20	.	28	2	03	20
14	1	23	21	.	28	1	09	57
				.				
15	1	01	14	.	30	1	20	36
15	1	02	45	.	30	1	23	07
15	1	03	41	.				
15	1	10	35	.				
15	1	15	04	.				
15	1	18	55	.				
15	1	20	38	.				
15	1	20	41	.				

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20 SEP 1968

地　震　月　報

昭和42年10月

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List 1 JMA stations and their seismographs

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S, VI, O P
Aikawa	AIKAWA	138 14.5	38 01.2	34	S, VI, O P
Ajiro	AJIRO	139 05.8	35 02.6	59	S, VI, O P
Akita	AKITA	140 06.1	39 43.1	9	S, VI, O P
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S, P
Aomori	AOMORI	140 47.0	40 49.0	4	S, W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S, VI, O P
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S, VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S, P
Choshi	CHOSHI	140 50.6	35 43.5	27	S, W
Fukue	FUKUE	128 50.0	32 42.0	26	S, VI
Fukui	FUKUI	136 13.6	36 03.2	9	S, P (H, V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S, VI, M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S, VI, O P
Funatsu	FUNATS	138 45.8	35 29.9	860	S, P
Gifu	GIFU	136 45.9	35 23.9	13	S, W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S, VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S, VI, O P
Hakodate	HAKODA	140 45.5	41 48.8	35	S, VI, O P
Hamada	HAMADA	132 04.4	34 53.6	18	S, VI, O P
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S, VI, O P
Hikone	HIKONE	136 14.8	35 16.4	87	S, W
Himeji	HIMEJI	134 42.1	34 50.2	37	S, P (H, V)
Hiroo	HIROO	143 19.0	42 17.0	32	S, P (H, V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S, W
Iida	IIDA	137 50.1	35 30.6	482	S, VI, O P
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S, VI, O P
Izuhara	IZUHAR	129 17.7	34 12.2	21	S, P (H, V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S, W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S, W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S, VI, O P
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S, P (H, V)
Kobe	KOBE	135 10.8	34 41.3	58	S, P (H, V)
Kochi	KOCHI	133 32.0	33 33.0	40	S, P (H, V)
Kofu	KOFU	138 33.5	35 39.9	272	S, VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S, VI, O P
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S, W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S, VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S, VI, O P
Maebashi	MAEBAS	139 03.9	36 24.1	112	S, W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S, P (H, V)
Matsue	MATSUE	133 04.3	35 27.3	17	S, P (H, V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S, P (H, V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S, L, AW, G, B, V, C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S, W
Mishima	MISHIM	138 55.8	35 06.7	20	S, W
Mito	MITO	140 28.3	36 22.7	30	S, VI, O P
Miyako	MIYAKO	141 58.1	39 38.7	46	S, W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S, VI, O P
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P (H, V)
Morioka	MORIOK	141 10.1	39 41.8	155	S, VI, O P
Muroran	MURORA	140 59.0	42 19.0	43	S, P (H, V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S, VI, O P
Nagano	NAGANO	138 11.8	36 39.6	418	S, W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S, VD, EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S, VI, O P
Nara	NARA	135 50.0	34 41.0	105	S, P (H, V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S, VI, VD, OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S, VI, P(H, V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S, P (H, V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S, P (H, V)
Ofunato	OFUNAT	141 43.1	39 03.7	38	S, VI
Oita	OITA	131 37.4	33 14.0	5	S, W
Okayama	OKAYAM	133 54.9	34 40.9	4	S, VI, O P
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S, W
Onahama	ONAHAM	140 54.4	36 56.7	3	S, VI
Osaka	OSAKA	135 32.3	34 38.9	7	S, VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S, W

Station	Code	λ	φ	Height	Seismographs
				m	
Owase	OWASE	E136°11.7′	N34°04.0′	14	S, VI, O P
Rumoi	RUMOI	141 38.0	43 57.0	22	S, P (H, V)
Saga	SAGA	130 18.3	33 14.7	4	S, P (H, V)
Saigo	SAIGO	133 20.0	36 12.3	26	S, VI, O P
Sakata	SAKATA	139 50.2	38 54.2	2	S, P (H, V)
Sapporo	SAPPOR	141 19.9	43 03.5	17	S, VI, O P
Sendai	SENDAI	140 54.0	38 15.6	38	S, VI, S′
Shimonoseki	SHIMON	130 56.5	33 57.2	46	S, VI, O P
Shionomisaki	SHIONO	135 45.8	33 26.9	74	S, W
Shirakawa	SHIRAK	140 13.5	37 07.1	354	S, P (H, V)
Shizuoka	SHIZUO	138 24.4	34 58.4	14	S, VI
Sumoto	SUMOTO	134 54.5	34 20.1	109	S, VI, O P
Suttsu	SUTTSU	140 14.4	42 47.4	16	S, P (H, V)
Takada	TAKADA	138 15.0	37 06.3	13	S, P (H, V)
Takamatsu	TAKAMA	134 03.5	34 19.0	10	S, W
Takayama	TAKAYA	137 15.3	36 09.1	561	S, P (H, V)
Tokushima	TOKUSH	134 34.6	34 03.9	2	S, P (H, V)
Tokyo	TOKYO	139 45.5	35 41.2	21	S, VI′, VD′, I′, J
Tomisaki	TOMISA	139 49.7	34 55.2	12	S, VI, O P
Tottori	TOTTOR	134 10.7	35 30.7	17	S, P (H, V)
Toyama	TOYAMA	137 12.5	36 42.4	9	S, VI
Toyooka	TOYOOK	134 49.5	35 32.0	4	S, W
Tsu	TSU	136 31.1	34 42.1	3	S, P (H, V)
Tsuruga	TSURUG	136 03.9	35 39.0	1	S, P (H, V)
Unzendake	UNZEND	130 15.2	32 44.1	849	S
Urakawa	URAKAW	142 46.8	42 09.5	34	S, VI, O P
Utsunomiya	UTSUNO	139 52.3	36 32.6	120	S, W
Uwajima	UWAJIM	132 33.5	33 13.5	43	S, P
Wajima	WAJIMA	136 53.9	37 23.4	6	S, VI
Wakayama	WAKAYA	135 10.0	34 13.6	14	S, W, I
Wakkanai	WAKKAN	141 40.5	45 25.0	2	S, VI, O P
Yakushima	YAKUSH	130 29.8	30 27.0	14	S, VI
Yamagata	YAMAGA	140 21.0	38 15.2	151	S, P (H, V)
Yokohama	YOKOHA	139 39.3	35 26.2	38	S, W
Yonago	YONAGO	133 20.6	35 26.0	7	S, P (H, V)
Ishigakijima	ISHIGA	124 10	24 20	6	S, VI
Naha	NAHA	127 41	26 13	11	S, VI

Notations : —

λ	: Longitude.
φ	: Geographical Latitude.
W	: Wiechert's horizontal and vertical seismographs (masses, H ; 200kg, V ; 80kg).
P	: Portable seismograph (horizontal only).
P(H, V)	: do (mass, 22.5kg).
S	: Strong motion seismograph (magnification ; 1).
S′	: do (magnification ; 0.4).
M(H)	: Mainka's horizontal seismograph (mass, 450kg).
G	: Galitzin's seismograph.
L	: 1,000kg long-period seismograph, JMA type.
I	: Ishimoto's seismograph.
V	: Short-period vertical seismograph.
AW	: Anderson-Wood's seismograph.
C	: Capacity type seismograph.
EM	: Electromagnetic seismograph.
O P	: JMA 59-type electromagnetic seismograph with optical recorder.
VI	: JMA 59-type electromagnetic seismograph with visible recorder.
V D	: JMA 61-type electromagnetic seismograph with visible recorder.
B	: Benioff's seismograph (short and long period).
J	: Remote recording JMA 63-type seismograph.
VI′, VD′, I′	: Remote recording JMA 63-types of VI, VD and I, respectively.

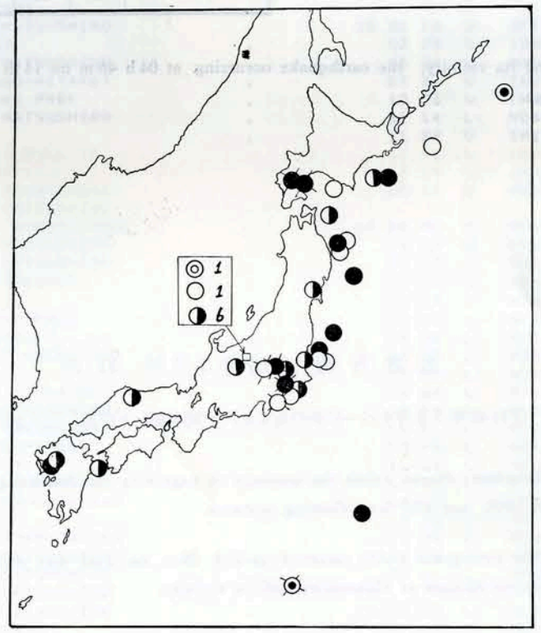
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List 2 Number of earthquakes by districts and classes, October, 1967

District \ Class	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	0	0	2	3	5	18	23
Tohoku	0	0	2	2	4	17	21
Kwanto	0	0	4	9	13	18	31
Chubu	0	1	2	207	210	13	223
Kinki	0	0	0	4	4	9	13
Chugoku•Shikoku	0	0	0	5	5	3	8
Kyushu	0	0	0	10	10	14	24
Near Japan*	2	0	1	1	4	12	16
Foreign region	0	0	0	0	0	7	7
Unknown	0	0	0	0	0	4	4
Total	2	1	11	241	255	115	370

* ; Sakhalin, Kurile Is., Korea, Ryukyu Is., Bonin, Sikhota Alin.

Epicenters of the major earthquakes



⊙ Remarkable (R) ◎ Moderate (M) ○ Small felt area (S) ◑ Local (L) ● Unfelt (U) × h≧100km.

Special Event

Earthquake-Smarm near Matsushiro, Northern Chubu.

Daily number of shocks felt at Matsushiro Seismological Observatory during this month is as follows :

Date \ Seismic intensity	1	2	3	4	5	Total	Date \ Seismic intensity	1	2	3	4	5	Total
1	1	0	0	0	0	1	16	4	0	0	0	0	4
2	3	0	0	0	0	3	17	4	0	0	0	0	4
3	1	0	0	0	0	1	18	4	0	0	0	0	4
4	9	0	1	0	0	10	19	2	0	0	0	0	2
5	5	0	2	0	0	7	20	5	0	0	0	0	5
6	6	0	0	0	0	6	21	2	0	0	0	0	2
7	0	0	0	0	0	0	22	1	0	0	0	0	1
8	1	0	0	0	0	1	23	5	0	0	0	0	5
9	15	1	0	0	0	16	24	0	0	0	0	0	0
10	2	0	0	0	0	2	25	2	0	0	0	0	2
11	3	0	0	0	0	3	26	2	0	0	0	0	2
12	0	1	0	0	0	1	27	5	0	0	0	0	5
13	3	0	0	0	0	3	28	5	0	0	0	0	5
14	79	13	2	0	1	95	29	3	0	0	0	0	3
15	9	1	0	0	0	10	30	1	0	0	0	0	1
							31	2	0	0	0	0	2
							Total	183	16	5	0	1	205

At Matsushiro and its vicinity, the earthquake occurring at 04 h 48 m on 14 th was accompanied by slight property damage.

地 震 月 報 1967年3月号 訂 正

昭和42年3月号4ページ中の英文を，下記のとおり訂正して下さい。

Erratum : Please delete the sentence on page 4 in the Seismological Bulletin for March 1967, and add the following sentence.

The earthquake which occurred at 03 h 39 m on 2 nd was accompanied by slight property damage at Matsushiro and its vicinity.

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List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

J. S. T

DATE, D	TIME H	M	C CLASS	LOCATION
1	01	35	U	(WAKAYA)
	02	25	U	(WAKAYA)
	06	34	L	(KAGOSH-MAKURAZAKI)
	13	06	U	(NAGANO)
	13	09	L	E COAST OF IBARAKI PREF
	13	43	U	YAMAGATA PREF
	19	10	L	S OF FUKUOKA PREF
	21	08	U	(YAKUSH)
	23	06	L	(WAKAYA)
2	04	36	U	(CHOSHI)
	17	47	L	NEAR MATSUSHIRO
	18	43	L	SAITAMA-IBARAKI BORDER
3	00	40	U	RYUKYU IS
	05	53	S	SAGAMI BAY
	06	03	U	(WAKAYA)
	11	09	L	NEAR MATSUSHIRO
	14	12	L	W OF TOTTORI PREF
4	00	34	L	(WAKAYA)
	03	19	L	NEAR MATSUSHIRO
	09	43	U	(NIIGAT)
	10	12	L	NEAR MATSUSHIRO
	12	38	L	NEAR MATSUSHIRO
	20	23	U	(URAKAW)
	21	27	L	MIDDLE OF CHIBA PREF
	21	37	U	OFF IWATE PREF
5	01	42	L	NEAR MATSUSHIRO
	02	29	U	NEW IRELAND
	02	35	U	(KAGOSH)
	07	19	L	NEAR MATSUSHIRO
	07	42	U	(NARA)
	12	55	L	NEAR MATSUSHIRO
	19	28	L	(NAGANO-MITAKE)
	20	05	L	IBARAKI PREF
	21	52	L	NEAR MATSUSHIRO
6	00	56	R	S OF KURILE IS
	01	52	U	(WAKAYA)
	02	02	U	NEAR ERIMOMISAKI
	02	31	L	NEAR MATSUSHIRO
	09	28	U	E OFF AOMORI PREF
	09	40	L	NEAR MATSUSHIRO
	19	00	L	NEAR MATSUSHIRO
	20	10	U	NEAR MURORAN
7	15	37	U	NIIGATA PREF
	17	30	U	(URAKAW)
	19	55	U	SE OFF HOKKAIDO
8	00	30	U	S OFF HOKKAIDO
	02	40	L	(MAEBAS-TASHIRO)
	05	05	L	NEAR YAKUSHIMA
	12	37	L	(KAGOSH-NAZE)
	12	40	U	(HACHIN)
	23	27	U	NEAR YAKUSHIMA
	23	35	L	(HIROSH-SHOBARA)
9	02	11	L	NEAR AMAMIOSHIMA
	02	37	S	NEAR MATSUSHIRO
	02	51	L	NEAR MATSUSHIRO
	04	14	L	NEAR MATSUSHIRO
	06	21	L	NEAR MIYAKEJIMA
	12	02	U	(URAKAW)
	16	44	U	(AOMORI)
	20	08	L	NEAR MATSUSHIRO
	21	43	L	NEAR MATSUSHIRO
	21	44	L	NEAR MATSUSHIRO
9	23	13	U	KAMCHATKA
10	00	12	L	(WAKAYA)
	01	39	U	HYUGANADA
	02	31	U	FIJI IS
	02	59	U	UK
	15	47	S	OFF IBARAKI PREF
	16	36	U	NEAR AKITA
	19	59	L	NEAR MIYAZAKI
	23	59	L	NEAR MATSUSHIRO
11	01	26	U	IBARAKI PREF
	05	47	L	NEAR MATSUSHIRO
	15	13	L	N PART OF MIYAGI PREF
	15	33	U	TOHOKU
12	00	53	U	S OFF HONSHU
	01	26	U	S OFF HONSHU
	03	41	S	S OF KURILE IS
	03	57	U	S PART OF IWATE PREF
	03	58	U	(KUSHIR)
	05	26	U	E PART OF HOKKAIDO
	05	57	L	NEAR MATSUSHIRO
	07	55	L	SE OFF HOKKAIDO
	12	50	U	RYUKYU IS
	13	08	U	NEAR CHOSHI
	15	45	U	FIJI IS
	18	58	U	(MIYAZA)
	21	34	U	(KYOTO)
	21	48	U	(NAHA)
	21	56	U	OKHOTSK SEA
13	01	10	U	OFF URAKAWA
	03	28	U	(SAPPOR)
	03	38	U	BANDA SEA
	07	27	U	(NEMURO)
	10	53	U	(NAHA)
	11	14	L	NEAR MATSUSHIRO
	11	29	U	(MIYAZA)
	11	46	U	(NAGANO)
	13	24	U	(NAHA)
	20	16	U	NEAR TOKUSHIMA
14	04	48	M	NEAR MATSUSHIRO
	04	52	U	KYUSHU
	04	57	L	(SHIZUO-SAKUMA)
	05	09	L	NEAR MATSUSHIRO
	05	27	L	NEAR MATSUSHIRO
	05	41	L	NEAR MATSUSHIRO
	05	54	L	NEAR MATSUSHIRO
	06	03	L	NEAR MATSUSHIRO
	07	45	L	NEAR MATSUSHIRO
	08	02	L	NEAR MATSUSHIRO
	08	28	L	NEAR MATSUSHIRO
	10	21	L	NEAR MATSUSHIRO
	10	46	L	NEAR MATSUSHIRO
	11	06	L	NEAR MATSUSHIRO
	13	18	L	S PART OF IBARAKI PREF
	14	49	U	(CHOSHI)
	15	28	L	NE OF HIROSHIMA PREF
	17	09	L	NEAR MATSUSHIRO
	19	11	U	(KUMAMO)
	20	37	L	NEAR MATSUSHIRO
15	03	37	L	NEAR MATSUSHIRO
	05	42	U	(KYOTO)
	17	44	U	(NEMURO)
	18	00	U	(NAHA)
	23	50	U	(MATSUY)

DATE,TIME D H M	C	LOCATION
16 10 57	U	(SHIZUO)
11 32	U	(SHIZUO)
16 02	U	OFF IBARAKI PREF
20 01	U	E PART OF SAITAMA PREF
22 23	L	NEAR MATSUSHIRO
17 02 27	S	GUNMA PREF
02 53	S	CHIBA PREF
08 32	U	NEAR URAKAWA
11 16	U	(AJIRO)
14 57	L	NEAR MATSUSHIRO
15 18	L	W PART OF NAGANO PREF
17 40	U	(HACHIJ)
18 55	U	NEAR HACHIJOJIMA
23 43	U	KWANTO
18 03 23	L	NEAR MATSUSHIRO
06 10	U	UK
10 21	U	UK
19 30	U	RYUKYU IS
19 05 07	L	NEAR MATSUSHIRO
05 30	U	(URAKAW)
21 53	L	NEAR MATSUSHIRO
20 03 06	U	(MATSUM)
04 22	U	(AKITA)
06 07	L	HIROSHIMA PREF
06 19	L	NEAR MATSUSHIRO
09 31	U	(KUMAMO)
16 07	U	MIDDLE PART OF KWANTO
21 01 52	U	(SHIONO)
15 00	U	OFF IBARAKI PREF
22 05 50	L	(KAGOSH-NAZE)
08 50	U	OFF IBARAKI PREF
15 00	U	(CHOSHI)
19 01	U	OFF IWATE PREF
21 00	U	(KOCHI)
23 03 31	U	(KUSHIR)
08 40	L	RYUKYU IS
10 20	U	NEAR NAGOYA
11 53	S	E OFF HOKKAIDO
17 28	R	S OFF HONSHU
18 54	L	(KAGOSH-OKINOERABU)
19 43	L	NEAR MATSUSHIRO
24 05 43	U	(WAKAYA)
07 27	U	OFF IBARAKI PREF
10 00	U	(NAHA)
15 12	U	(CHOSHI)
25 00 21	U	NEAR KOFU
03 47	U	OFF FUKUSHIMA PREF
10 01	U	E OFF TAIWAN
13 25	U	NEAR ONAHAMA
14 06	S	OFF IBARAKI PREF
16 27	U	FAR OFF SANRIKU
21 35	L	W PART OF NAGANO PREF
26 01 02	L	(NEMURO)
04 00	L	(HIROSH-SHOBARA)
05 11	U	IBARAKI PREF
06 09	U	(NAGANO)
06 14	U	ARIAKE SEA
06 22	U	(YAKUSH)
09 24	U	NEAR TAIWAN
12 59	L	NEAR MATSUSHIRO
26 14 07	L	(MITO)
14 25	U	OFF FUKUSHIMA PREF
16 32	L	(WAKAYA)
21 49	L	SW OFF KYUSHU
21 56	U	(YAKUSH)
27 01 15	U	NEAR MATSUSHIRO
01 16	L	NEAR MATSUSHIRO
05 11	U	(MITO)
13 00	U	NEAR URAKAWA
17 43	U	OFF FUKUSHIMA
18 29	L	NEAR MATSUSHIRO
21 01	L	NEAR MATSUSHIRO
28 05 44	U	(NAHA)
12 38	L	NEAR URAKAWA
13 19	U	SAITAMA-GUNMA BORDER
29 02 21	S	OFF IWATE PREF
07 56	U	(TSURUG)
09 01	U	(MIZUSA)
13 07	L	(IIDA)
17 51	L	NEAR MATSUSHIRO
30 11 39	U	(KUMAMO)
12 03	U	AOMORI PREF
17 29	U	NEAR SAGA
20 44	S	OFF IWATE PREF
23 32	L	(NAGANO)
31 05 48	L	E OFF OITA PREF
09 52	S	NEAR URAKAWA
10 07	U	UK
19 44	L	NEAR KAKIOKA
23 47	L	E OFF AOMORI PREF

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST. ALL EVENTS FELT AT THE OBSERVATORY ARE GIVEN IN LIST 6.

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List 4 EARTHQUAKE ORIGINS

J. S. T DATE,TIME D H M	C	LOCATION	ORIGIN TIME M S +/-S	LONG. +/-	LAT. +/-	H KM	C CLASS M
1 13 09	L	E COAST OF IBARAKI PREF	09 14.7 0.3	140 37 02	36 30 01	90	
19 10	L	S OF FUKUOKA PREF	10 16.4 0.1	130 26 01	33 06 00	20	3.3
2 18 43	L	SAITAMA-IBARAKI BORDER	43 40.2 0.5	139 43 01	36 06 03	40	3.3
3 05 53	S	SAGAMI BAY	53 39.0 0.2	139 17 01	35 06 01	120	
14 12	L	W OF TOTTORI PREF	12 31.5 0.1	133 31 00	35 21 00	10	4.0
4 10 12	L	NEAR MATSUSHIRO	12 22.0 0.2	138 08 01	36 30 01	10	4.1
21 27	L	MIDDLE OF CHIBA PREF	26 57.0 0.7	140 05 05	35 19 02	70	
21 37	U	OFF IWATE PREF	37 13.0 0.5	142 27 03	40 10 01	30	3.9
5 07 19	L	NEAR MATSUSHIRO	19 40.5 0.1	138 06 00	36 26 00	00	
6 00 56	R	S OF KURILE IS	55 05.4 0.8	150 57 04	44 28 05	60	5.2
20 10	U	NEAR MURORAN	10 15.2 0.4	141 07 04	42 19 03	130	
7 19 55	U	SE OFF HOKKAIDO	54 57.6 0.9	144 59 03	42 19 03	00	4.2
9 02 37	S	NEAR MATSUSHIRO	37 07.4 0.3	138 11 02	36 34 01	10	4.1
02 51	L	NEAR MATSUSHIRO	51 49.3 0.3	138 16 02	36 34 01	10	
10 02 31	U	FIJI IS	21 49.5	-179 18	-21 06	654	
15 47	S	OFF IBARAKI PREF	46 58.9 0.3	141 11 02	36 36 01	40	4.9
11 15 13	L	N PART OF MIYAGI PREF	13 49.5 0.2	141 14 02	38 43 01	10	4.5
12 00 53	U	S OFF HONSHU	52 25.3 1.4	142 39 12	31 19 06	40	5.2
03 41	S	S OF KURILE IS	41 18.3 1.4	145 57 06	44 26 04	20	4.7
05 57	L	NEAR MATSUSHIRO	57 55.8 0.5	138 07 02	36 26 01	00	3.8
07 55	L	SE OFF HOKKAIDO	55 09.1 0.3	144 18 02	42 19 02	40	4.4
14 04 48	M	NEAR MATSUSHIRO	48 45.2 0.2	138 12 01	36 32 01	10	5.3
07 45	L	NEAR MATSUSHIRO	45 00.4 0.2	138 11 01	36 32 01	10	3.3
10 46	L	NEAR MATSUSHIRO	46 03.2 0.2	138 09 01	36 28 01	00	3.9
16 02 50	U	UCHIURA BAY	50 28.7 0.4	140 37 04	42 27 02	150	
20 01	U	E PART OF SAITAMA PREF	01 03.0 0.6	139 41 05	35 54 03	100	
17 02 27	S	GUNMA PREF	26 40.5 0.1	138 49 01	36 05 01	140	
02 53	S	CHIBA PREF	53 42.5 0.2	139 54 01	35 26 01	50	4.0
22 08 50	U	OFF IBARAKI PREF	49 50.0 1.8	141 17 10	36 47 04	50	4.0
19 01	U	OFF IWATE PREF	00 47.8 0.8	142 59 04	39 03 02	10	4.3
23 11 53	S	E OFF HOKKAIDO	53 32.5 1.9	147 03 11	43 04 05	60	5.0
17 28	R	S OFF HONSHU	27 07.6 0.4	139 40 02	29 00 02	480	
25 03 47	U	OFF FUKUSHIMA PREF	46 57.1 1.1	141 50 06	37 17 02	50	4.0
10 01	U	E OFF TAIWAN	59 22.6	122 12	24 30	38	6.0
14 06	S	OFF IBARAKI PREF	06 47.0 0.5	141 11 03	36 35 01	40	4.3
21 35	L	W PART OF NAGANO PREF	35 40.1 0.2	137 42 01	36 17 01	00	3.9
26 06 14	U	ARIAKE SEA	14 21.5 0.4	130 18 02	33 01 01	20	3.3
28 13 19	U	SAITAMA-GUNMA BORDER	19 02.8 0.3	139 13 02	36 16 06	100	
29 02 21	S	OFF IWATE PREF	21 26.7 0.4	142 24 02	40 09 01	30	4.5
30 20 44	S	OFF IWATE PREF	43 55.2 0.4	142 21 02	39 53 01	20	4.5
31 05 48	L	E OFF OITA PREF	48 46.6 0.3	132 08 02	32 55 01	00	3.7
09 52	S	NEAR URAKAWA	52 12.3 0.3	142 25 02	42 01 01	50	4.4
23 47	L	E OFF AOMORI PREF	47 34.9 0.2	142 10 02	41 12 01	40	4.2

List 5 DATA OF EARTHQUAKES

OT= 1 13 9 14.7 +/- 0.3 J. S. T
E COAST OF IBARAKI PREF
LAT= 36 30 +/- 1 LONG= 140 37 +/- 2
H= 90 CLASS=L

I: INTENSITY
* MICRON

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MITO	1	IP	13	09	29.1	IS	09	39.0	73	0.7	100	0.6	41	0.7	N 2	E 7	D 12	18.7	09.9
KAKIOK	1	P	13	09	30	IS	09	40.5	93	0.8	198	1.3	46	0.7				48.3	10.5
ONAHAM	0	IP	13	09	30.5	IS	09	42.4	36	0.9	50	1.2	15	0.5			D 8	55.8	11.9
UTSUNO	1	P	13	09	31.2	S	09	43.3	32	0.2	36	0.2			S 1	E 3		66.9	12.1
SHIRAK	0	IP	13	09	32.2	IS	09	45.0									D 4	77.0	12.8
CHOSHI	0	EP	13	09	33.0	IS	09	46.4										88.4	13.4
KUMAGA	0	P	13	09	36.6	ES	09	52.8	15	0.8	15	0.8	4	0.6			D 3	117.3	16.2
TOKYO	0	EP	13	09	38	S	09	55.0	12	0.3	12	0.4						118.9	17.0
FUKUSH	0	EP	13	09	38.5	ES	09	55.4	49	0.9	25	0.9	9	0.8				140.0	16.9
MAEBAS	0	EP	13	09	39.0	ES	09	56.0	5	0.6	7	1.6	3	1.6			U 2	139.5	17.0
AJIRO	0	P	13	09	45.8	S	10	08.2	13	0.3	9	0.3	2	0.3				212.1	22.4
MATSUS	0	IP	13	09	46.9	S	10	09							S	W	U	215.7	22.1
KOFU	0	EP	13	09	49.4	ES	10	10.6	7	0.5	7	0.6	3	0.9				207.2	21.2
YOKOHA	0	X	13	09	50.7	IX	09	58.0	10	0.5	12	0.6						146.4	
OSHIMA	0	X	13	09	55.9	S	10	08.8	13	0.4	11	0.4	6					223.1	
TAKADA	0	X	13	10	14.1													221.6	
MIZUSA	0	X	13	10	17.9	X	10	47.9			6	1.8	4	1.2				295.8	

OT= 1 19 10 16.4 +/- 0.1
S OF FUKUOKA PREF
LAT= 33 6 +/- 0 LONG= 130 26 +/- 1
H= 20 MAG=3.3 CLASS=L

SAGA	0	IP	19	10	21.7	IS	10	24.3							N 8	W 26	U 32	20.0	02.6
KUMAMO	0	IP	19	10	25.1	IS	10	30.2	20	2.6	25	2.1	23	2.5		E 2	D 11	41.3	05.1
UNZEND	1	IP	19	10	25.7	IS	10	30.7										46.8	05.0
FUKUOK	0	IP	19	10	26.7	IS	10	33.1	6	0.3	7	0.2	4	0.2	N 2		U 6	56.4	06.4
NAGASA	0	P	19	10	29.3	S	10	37.8							S	W	U	67.8	08.5

OT= 2 18 43 40.2 +/- 0.5
SAITAMA-IBARAKI BORDER
LAT= 36 6 +/- 3 LONG= 139 43 +/- 1
H= 40 MAG=3.3 CLASS=L

KAKIOK	0	P	18	43	50	S	43	56	7		8							45.3	06.0
UTSUNO	0	EP	18	43	51.0	IS	43	57.9	14	0.2	14	0.2						51.5	06.9
KUMAGA	0	EP	18	43	52.0	IS	43	59.6	5	0.6	7	0.6	1	0.3				30.3	07.6
MITO	0	EP	18	43	53.5	IS	44	02.4	8	0.6	8	0.7	4	0.5				74.6	08.9
MATSUS	0	IP	18	44	03.9	S	44	17								E	D	143.9	13.1

OT= 3 5 53 39.0 +/- 0.2
SAGAMI BAY
LAT= 35 6 +/- 1 LONG= 139 17 +/- 1
H=120 CLASS=S

AJIRO	1	IP	05	53	56.0	IS	54	12.2	98	0.3	72	0.3	19	0.4			U 6	18.1	16.2
OSHIMA	0	P	05	53	56.2	IS	54	09.8	76	0.6	54	0.4						38.5	13.6
MISHIM	0	IP	05	53	57.6	IS	54	10.0	63	0.9	64	1.8			N 13	W 19		32.2	12.4
TOMISA	0	IP	05	53	57.8	IS	54	11.4	39	0.6	29	0.6	12	0.4	N 10	E 2	D 23	53.6	13.6
YOKOHA	1	IP	05	53	58.1	IS	54	11.9	109	0.4	137	0.7	35	0.6	S 2	E 3	U 7	50.4	13.8
OMAEZA	0	EP	05	53	59.3	S	54	19.8	20	2.0	13	1.8						112.3	20.5
SHIZUO	0	EP	05	54	00.0	IS	54	15.8	21	1.4	5	1.4	3	0.6		E 1		81.2	15.8
FUNATS	0	IP	05	54	00.3	IS	54	14.9										64.7	14.6
TOKYO	0	IP	05	54	00.3	IS	54	15.5	112	0.0	111	0.0	15	0.3	N	W	U	77.9	15.2
KOFU	0	IP	05	54	00.5	ES	54	17.4	17	0.6	26	0.5	5	0.9	N 11	W 3	U 14	90.9	16.9
CHICHI	0	IP	05	54	00.7	IS	54	17.2							N 3	W 3		100.6	16.5
KUMAGA	1	IP	05	54	03.2	IS	54	21.2	32	0.6	30	1.0	6	0.6			U 10	116.5	18.0
HAMAMA	0	P	05	54	05.4	S	54	25.5	5	2.0	6	1.6	3	1.4			U 1	149.0	20.1
IIDA	0	EP	05	54	05.6	IS	54	25.2	6	1.0	6	1.6	3	0.8				139.3	19.6
KARUIZ	0	EP	05	54	06.5	X	54	28.6										152.6	
CHOSHI	0	EP	05	54	06.5	ES	54	28.0										157.7	21.5
UTSUNO	1	EP	05	54	07.0	S	54	26.5	91	0.3	77	0.3						169.1	19.5
MITO	0	EP	05	54	09.0	IS	54	30.0	18	1.8	20	1.2	25	1.5				177.9	21.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	0	IP	05	54	09.3	S	54	32										186.8	22.7
NAGOYA	0	EP	05	54	12.3	X	54	50.0	8	2.4	9	2.6	4	2.6				211.1	
SHIRAK	0	EP	05	54	14.6	S	54	41.8										239.4	27.2
GIFU	0	EP	05	54	16.9	S	54	40.9	5	2.1	6	1.4						231.5	24.0
HACHIJ	0	X	05	54	22.2	ES	54	39.0	10									226.4	
FUKUSH	0	EP	05	54	23.0	S	54	57.5	12	0.9	10	1.0						313.5	34.5
ONAHAM	0	EX	05	54	28.8	ES	54	46.4	21	0.9	21	1.0	6	0.7				251.6	
MIZUSA	0	EP	05	54	44.1	ES	55	31.1	4	1.5	3	2.2						476.8	47.0

OT= 3 14 12 31.5 +/- 0.1
W OF TOTTORI PREF
LAT= 35 21 +/- 0 LONG= 133 31 +/- 0
H= 10 MAG=4.0 CLASS=L

YONAGO	1	IP	14	12	36.2	IS	12	38.9										18.3	02.7
MATSUE	0	EP	14	12	40.7	IS	12	45.7										42.1	05.0
TOTTOR	0	P	14	12	44.0	S	12	51.8										62.7	07.8
OKAYAM	0	IP	14	12	47.3	IS	12	57.7	20	0.4	20	0.5	5	0.4	N	W	D	82.6	10.4
SAIGO	0	EP	14	12	49.7	S	13	00.0	15	0.4	8	0.4	5	0.6	N 0	W 0	U 0	96.3	10.3
TAKAMA	0	EP	14	12	52.7	IS	13	07.9	13	0.9	14	1.1	6	0.6				124.8	15.2
MATSUY	0	EP	14	13	04.0	ES	13	24.3	10	0.7	6	0.7	4	0.7				180.6	20.3

OT= 4 10 12 22.0 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 30 +/- 1 LONG= 138 8 +/- 1
H= 10 MAG=4.1 CLASS=L

MATSUS	3	P	10	12	24.8	S	12	25.9										7.9	01.1
NAGANO	1	IP	10	12	27.0	S	12	29.9										18.6	02.9
MATSUM	1	IP	10	12	29.6	IS	12	34.0							S 1		U 7	31.9	04.4
KARUIZ	0	IP	10	12	31.0	IS	12	36.6								W	D 3	41.5	05.6
TAKADA	0	P	10	12	34.9	S	12	43.7										67.9	08.8
MAEBAS	0	P	10	12	37.6	IS	12	48.2	14	1.6	7	1.2	11	3.5			D 2	84.2	10.6
TOYAMA	0	EX	10	12	39				7	2.2	6	2.2	8	4.0				85.9	
KOFU	0	IP	10	12	39.8	S	12	51.8	11	0.4	11	0.4	4	0.8	S 2		U 2	100.2	12.0
IIDA	0	EP	10	12	43.0	ES	12	57.0	6	1.6	4	1.4	3	1.2				113.1	14.0
KUMAGA	0	EP	10	12	44.2	ES	12	59.8	10	1.4	13	1.0	14	1.6				119.0	15.6
FUNATS	0	IP	10	12	46.8	IS	12	59.9										124.8	13.1
UTSUNO	0	EP	10	12	48.6	ES	13	07.2										155.8	18.6
WAJIMA	0	EX	10	12	52				10	1.0	14	1.0						147.8	
KAKIOK	0	EP	10	12	53	ES	13	18										187.2	25.0
MISHIM	0	EP	10	12	53.2	ES	13	12.8	10	0.8	10	1.0	3	0.5				170.0	19.6
NAGOYA	0	EP	10	12	54.4	S	13	15.6	8	0.8	9	0.8	5	1.0				181.7	21.2
OMAEZA	0	EP	10	12	55.1				8	1.2	7	2.4						210.5	
GIFU	0	EP	10	12	55.5	S	13	14.3	10	1.8	10	2.0						173.7	18.8
HAMAMA	0	P	10	12	57.1	S	13	23.2	5	1.2	6	2.0	4	1.4			D 2	202.2	26.1
TOKYO	0	X	10	12	58				27	4.4	12	3.0						172.0	
HIKONE	0	EP	10	13	02.5	S	13	26.3	9	0.9	12	1.0	8	1.3				218.0	23.8
YOKOHA	0	X	10	13	11.7	S	13	20.9	18	0.9	10	0.8						181.0	
OSAKA	0	X	10	13	41.3				8	5.0	9	5.0						312.2	

OT= 4 21 26 57.0 +/- 0.7
MIDDLE OF CHIBA PREF
LAT= 35 19 +/- 2 LONG= 140 5 +/- 5
H= 70 CLASS=L

YOKOHA	0	IP	21	27	10.5	IS	27	19.0	21	0.5	16	0.5						41.1	08.5
TOKYO	0	IP	21	27	10.7	S	27	19.2	88	0.3	50	0.4	8	0.3				50.4	08.5
OSHIMA	1	EP	21	27	14.2	S	27	25.5	14	0.4	14	0.6	9	0.2				89.0	11.3
AJIRO	1	P	21	27	14.9	IS	27	26.1	28	0.3	14	0.3	5	0.3				94.8	11.2
KUMAGA	0	EP	21	27	17.2	ES	27	30.6	10	1.2	5	0.4	1	0.4				111.7	13.4
UTSUNO	0	EP	21	27	19.2	ES	27	33.0										137.8	13.8
KOFU	0	EP	21	27	22.4	IS	27	35.0	6	0.3	5	0.4	2	0.4				143.6	12.6
MATSUS	0	IP	21	27	27.7	S	27	52									U	216.8	24.3

OT= 4 21 37 13.0 +/- 0.5
OFF IWATE PREF
LAT= 40 10 +/- 1 LONG= 142 27 +/- 3
H= 30 MAG=3.9 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
MIYAKO	0	IP	21 37 26.1	IS	37 34.3	7		8		4					71.1	08.2
HACHIN	0	EP	21 37 29.0	IS	37 38.5	11	0.2	15	0.2	2	0.6				88.1	09.5
MORIOK	0	IP	21 37 33.4	S	37 47.3	17	0.3	11	0.4	6	0.4	N	0 E	U D 0	121.4	13.9
OFUNAT	0	EP	21 37 36.4	IS	37 50.6	10	0.2	5	0.2	3	0.4				137.8	14.2
AOMORI	0	EP	21 37 38.0	ES	37 55.8	13	0.6	13	0.8						158.7	17.8
MATSUS	0	IP	21 38 28.7	X	38 37							N	E	D	547.3	

OT= 5 7 19 40.5 +/- 0.1
NEAR MATSUSHIRO
LAT= 36 26 +/- 0 LONG= 138 6 +/- 0
H= 0 CLASS=L

MATSUS	2	P	07 19 44.1	S	19 46.0										15.2	01.9
NAGANO	1	IP	07 19 46.9	S	19 50.6										26.6	03.7
MATSUM	1	EP	07 19 46.9	IS	19 50.4										26.9	03.5
KARUIZ	0	P	07 19 50.2	IS	19 55.8									D	41.8	05.6

OT= 6 0 55 5.4 +/- 0.8
S OF KURILE IS
LAT= 44 28 +/- 5 LONG= 150 57 +/- 4
H= 60 MAG=5.2 CLASS=R

NEMURO	0	EP	00 56 07	EX	56 24	6	0.8	5	0.7	3	1.4				449.1	
ABASHI	0	EP	00 56 18.2	ES	57 14.0	7	4.0	5	4.0	3	6.0				534.9	55.8
KUSHIR	1	EX	00 56 32	S	57 18.8	20	1.2	19	0.6	6	1.4				553.4	
HIROO	0	P	00 56 35.6	EX	57 59.0										664.3	
OBIHIR	0	EX	00 56 36												646.2	
URAKAW	0	P	00 56 41.0	ES	57 55.0	38	1.4	29	1.6	14	1.6	N	E	D	710.5	74.0
SAPPOR	0	P	00 56 49.5	ES	58 16	6	2.0	7	2.0	3	3.4			U	789.9	86.5
AOMORI	0	X	00 57 18.6			12	2.2	10	1.8						926.4	
MIZUSA	0	X	00 57 36.0	ES	58 59.9	4	1.2	5	1.2	6	0.9				1007.2	
MATSUS	0	IP	00 58 05.0	S	00 27							N	E	D	1390.6	142.0

OT= 6 20 10 15.2 +/- 0.4
NEAR MURORAN
LAT= 42 19 +/- 3 LONG= 141 7 +/- 4
H=130 CLASS=U

HAKODA	0	EP	20 10 36	IS	10 49.3	6	1.1	4	1.0	1	0.8				63.3	13.3
SAPPOR	0	IP	20 10 37.2	IS	10 52.6	8	1.4	9	2.2	3	1.0			U 3	84.3	15.4
URAKAW	0	IP	20 10 41.9	S	11 02.4	3	0.4	8	0.2	1	0.2	S	1 W	1 D 1	138.4	20.5
KUSHIR	0	EP	20 10 56	S	11 25.6	12	0.2	14	0.2	3	0.4				278.7	29.6

OT= 7 19 54 57.6 +/- 0.9
SE OFF HOKKAIDO
LAT= 42 19 +/- 3 LONG= 144 59 +/- 3
H= 0 MAG=4.2 CLASS=U

KUSHIR	0	IP	19 55 16.2	IS	55 28.4	75	0.4	75	0.4			N	8 W	2	87.9	12.2
NEMURO	0	IP	19 55 21.0	S	55 36.0	12	0.3	8	0.3	5	0.8	N	1 E	U 1	122.8	15.0
HIROO	0	EP	19 55 25	ES	55 38										137.5	13.0
OBIHIR	0	P	19 55 26.7	S	55 47.2										159.3	20.5
URAKAW	0	P	19 55 28.8			11	2.6	12	1.6	6	2.4				182.7	
ABASHI	0	EP	19 55 30.2	S	55 53.2	7	2.4	5	2.4	2	2.0				197.3	23.0
SAPPOR	0	X	19 55 52			4	2.0	5	2.0	2	1.0				310.4	
MATSUS	0	X	19 56	S	58 30							S		U	866.5	

OT= 9 2 37 7.4 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 34 +/- 1 LONG= 138 11 +/- 2
H= 10 MAG=4.1 CLASS=S

NAGANO	2	EP	02 37 10.0	S	37 12.1										10.4	02.1
MATSUS	2	P	02 37 11.1	S	37 11.9										3.9	00.8
MATSUM	0	IP	02 37 16.6	IS	37 22.8										40.5	06.2
TAKADA	0	P	02 37 20.0	S	37 27.4										60.0	07.4
MAEBAS	0	IP	02 37 22.6	IS	37 33.6	13	0.4	8	0.5	10	1.7			D 7	81.1	11.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
TOYAMA	0	EX	02 37 25			7	3.2	6	3.2	7	3.2				88.6	
KOFU	0	IP	02 37 26.6	IS	37 39.2	18	0.2	23	0.3	7	0.2	S	1 W	2 U 3	105.6	12.6
FUNATS	0	IP	02 37 28.9	IS	37 45.6										129.5	16.7
KUMAGA	0	EP	02 37 30.6	ES	37 43.2	10	0.8	9	4.6	5	3.6				117.5	12.6
UTSUNO	0	EP	02 37 34.6	S	37 51.7	7	0.2	7	0.2						151.1	17.1
KAKIOK	0	P	02 37 38.3	S	37 59.3	10	1.0	6	0.5	4	0.5				184.1	21.0
AJIRO	0	P	02 37 39.1	S	38 01.6	5	0.3	4	0.3	1	0.5				188.1	22.5
MISHIM	0	EP	02 37 39.2	IS	37 59.0	9	0.7	10	0.9	3	0.4				174.9	19.8
OMAEZA	0	EP	02 37 39.5			7	1.8	7	1.3						217.8	
NAGOYA	0	EP	02 37 41.4	S	38 04.0	9	1.0	7	1.0	2	1.0			U 1	190.3	22.6
GIFU	C	X	02 37 44	S	38 03.0	6	1.0	8	1.7						182.1	
YOKOHA	0	X	02 37 44.1	S	38 07.7	10	1.2	10	1.0						182.5	
HAMAMA	0	P	02 37 44.2	ES	38 09	5	1.6	5	1.8	4	1.4			D 1	210.3	24.8
MITO	0	X	02 37	IS	38 06.8	14	0.6	15	0.6	3	0.7				206.1	
HIKONE	0	X	02 38 13.9			7	1.0	7	1.4	4	1.2				226.1	

OT= 9 2 51 49.3 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 34 +/- 1 LONG= 138 13 +/- 2
H= 10 CLASS=L

MATSUS	1	P	02 51 51.4	S	51 52.1										3.2	00.7
NAGANO	1	IP	02 51 52.8	S	51 54.8										10.5	02.0
KARUIZ	0	EP	02 51 57.9	IS	52 03.1										39.2	05.2
MATSUM	0	P	02 51 58.4	IS	52 04.1										42.0	05.7

OT= 10 2 21 49.5 USCGS
FIJI IS
LAT=-21 6 LONG=-179 18
H=654 CLASS=U

HACHIJ	0	IP	02 31 40.2	X	39 45.6	73		110		160		S	11 E	16 D 82	7399.0	
OMAEZA	0	EP	02 31 47.4			51	3.6	49	3.0	103	3.2				7620.3	
OSHIMA	0	P	02 31 47.5							67	2.2				7561.6	
TOMISA	0	X	02 31 47.6			55	2.4	63	3.0	125	3.2				7547.5	
CHOSHI	0	IP	02 31 48.4	X	33 18.8							S	10 E	12 D 36	7555.0	
				IX	33 51.0											
AJIRO	0	IP	02 31 49.1	ES	40 05.6	28	2.2	39	2.3	60	2.5				7602.1	
MISHIM	0	IP	02 31 50.7	IS	40 08.6	38	2.5	63	2.2	90	2.8	S	13 E	24 D 70	7617.9	497.9
				SCS	40 53.0											
YOKOHA	0	IP	02 31 50.8			64	3.9	44	2.9	86	3.9			D 68	7601.0	
TOKYO	0	IP	02 31 52.8	ES	40 20.0	100	4.0	60	3.4	91	4.2	S	9 E	7 D120	7615.6	507.2
KAKIOK	0	EX	02 31 53			25	2.6	20	3.9	71	3.1				7635.8	
MITO	0	IP	02 31 53.2	EX	40 11.7	48	2.2	44	2.2	112	2.5	S	15 E	17 D 70	7631.9	
SHIZUO	0	P	02 31 53.2	X	34 02.2	18	2.8	30	2.4	58	3.2	S	11 E	9 D 40	7638.5	
HAMAMA	0	P	02 31 53.5	EX	34 01	31	3.6	33	4.0	75	2.6			D 1	7659.3	
ONAHAM	0	IP	02 31 54.3	ES	41 03.3	53	1.6	49	1.9	109	2.8	N	13 E	18 D 74	7655.0	549.0
MAEBAS	0	IP	02 31 54.3			48	2.7	34	2.3	64	3.4	S	13 E	6 D 46	7716.5	
FUNATS	0	EP	02 31 54.3	ES	40 11.7							S	175 E	175	7659.9	497.4
KUMAGA	0	IP	02 31 54.4	ES	40 15.4	38	2.8	40	4.4	70	3.4	S	7 E	3 D 53	7676.3	501.0
KOFU	0	IP	02 31 54.8	ES	40 15.8	28	2.4	35	2.0	49	3.0	S	17 E	11 D 33	7686.1	501.0
CHICHI	0	EP	02 31 55.0	EX	34 09.7										7681.5	
SHIONO	0	IP	02 31 55.3	IS	40 16.1	50	3.0	37	3.0	93	3.4	S	25 E	19 D 56	7684.3	500.8
UTSUNO	0	P	02 31 55.8			47	2.4	29	2.1			S	24 E	7	7681.1	
SHIRAK	0	P	02 31 56.0	ES	40 17.1										7708.7	501.1
IIDA	0	IP	02 31 56.6			18	2.0	17	2.4	32	3.6	S	15 E	15 D 32	7717.6	
OWASE	0	IP	02 31 56.8			16	2.0	15	2.0	46	2.0	S	10 E	8 D 23	7705.0	
NAGOYA	0	EP	02 31 57.6	S	41 16.8	33	2.8	36	2.6	33	2.6			D 2	7743.5	559.2
FUKUSH	0	EP	02 31 58.1	ES	40 22.1	25	2.7	19	2.6	55	4.8				7748.6	504.0
ISHINO	0	IP	02 31 58.5	ES	41 03.5	41	2.2	19	2.6	76	2.6	S	0 W	0 D 1	7759.4	545.0
KARUIZ	0	IP	02 31 58.8	EX	34 09.5							S		D 14	7742.1	
MATSUS	0	IP	02 31 59.0	IS	40 24.0							S	E	D	7779.0	505.0
MUROTO	0	IP	02 32 00.1	IS	40 25.4	15	2.2	55	2.4	86	2.5	S	0	D 0	7774.1	505.3
				IX	34 10.1											
NARA	0	EP	02 32 00.3												7777.1	
OFUNAT	0	P	02 32 00.4	S	40 24.0	23	2.2	21	2.2	64	2.2	N	0 W	0 U 1	7791.8	503.6
				PCP	32 18.7											
				X	34 11.4											
				X	34 48.0											
				SCS	41 05.4											
				EX	44 10.0											
				X	59 49.2											
				X	02 18.1											
				X	21 56.8											

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
SENDAI	0	IP	02	32	00.5	ES	40	25.0	43	2.6	49	2.6	72	2.6			D 49	7767.6	504.5
						EX	34	09.4											
						EX	41	03											
																		7797.8	546.0
YAMAGA	0	EP	02	32	00.6	ES	41	06.6											
OSAKA	0	IP	02	32	00.8	ES	40	28.0	122	2.8	125	3.0	107	2.6			D 2	7796.3	507.2
						X	37	20.8											
GIFU	0	IP	02	32	01.1				19	3.0	26	2.7	36	2.6	S 14	E 16	D 34	7775.0	
TSU	0	EP	02	32	01.6													7734.8	
NAGANO	0	P	02	32	01.7	X	32	24.5	6	2.2	5	2.2	6	1.8				7789.7	
HIKONE	0	P	02	32	01.7	ES	40	25.3	57	1.8	58	1.8	85	3.0				7797.6	503.6
WAKAYA	0	P	02	32	02.0	S	40	27.1	30	2.4	24	2.4	62	2.4	S 26	E 16	D 44	7784.4	505.1
KOCHI	0	EP	02	32	02.3	EX	40	29.5							S 3	E 2	D 17	7840.6	
TSURUG	0	P	02	32	02.4													7839.1	
KYOTO	0	IP	02	32	02.6	ES	40	24.1	10	2.8	19	2.4	35	3.4	S 7	E 12	D 27	7809.4	501.5
TAKADA	0	P	02	32	02.7										S 4	E 4	D 21	7823.2	
SUMOTO	0	IP	02	32	02.7	S	40	27.1	23	2.8	29	3.6	65	2.8	S 6	E 16	D 42	7809.7	504.4
						IX	34	11.8											
						IX	41	02.0											
						EX	45	14.1											
						EX	59	50.2											
ASHIZU	0	IP	02	32	02.9	S	40	30.6	20	20.0	21	32.0	72	32.0	S 14	E 7	D 47	7812.6	507.7
YAKUSH	0	IP	02	32	03.0	ES	40	30.1	18	2.2	31	2.4	55	5.4	S 9	E 7	D 40	7824.6	507.1
MIYAKO	0	P	02	32	03.2	EX	41	08	23	4.0	17	3.4			S 17	E 14		7829.0	
TOYAMA	0	IP	02	32	03.6	EX	34	15	44	3.8	41	3.6	76	3.2	S 53	E 20	D 20	7853.3	
KOBE	0	EX	02	32	03.8													7819.7	
TAKAMA	0	IP	02	32	03.9	IS	40	34.1	17	1.0	24	1.0	70	1.1	S 13	E 17	D 50	7864.2	510.2
						EX	41	17.2											
MIZUSA	0	IP	02	32	04.1						114	2.0	134	1.9		E 25		7829.7	
FUKUI	0	IP	02	32	04.1										S 4	E 4	D 14	7861.1	
TOKUSH	0	EP	02	32	04.1													7810.5	
MORIOK	0	IP	02	32	04.6	IS	40	32.0	28	2.8	15	2.4	49	2.4	S 0	E 0	D 0	7876.4	507.4
						X	34	16.0											
MIYAZA	0	P	02	32	04.8	S	40	36.0	28	1.8	39	2.2	77	2.2				7864.1	511.2
NIIGAT	0	IP	02	32	05.1				105	3.0	130	3.0	100	3.0			D 80	7843.0	
KANAZA	0	IP	02	32	05.8	EX	41	15.6	27		27		81		S 6	E 6	D 45	7874.6	
AIKAWA	0	EP	02	32	06.0	IX	34	17.6	32	2.4	19	3.2	68	3.2	S 18	E 15	D 50	7899.3	
						IX	40	37.8											
						EL	44	34.6											
OKAYAM	0	IP	02	32	06.0	ES	40	37.8	40	0.5	35	3.4	120	3.0	S	E	D 2	7901.8	511.8
UWAJIM	0	EP	02	32	06.3	ES	40	35.3										7882.3	509.0
NOBEOK	0	EX	02	32	06.4	EX	40	38.0					100	2.0				7895.1	
SAKATA	0	EP	02	32	06.8	ES	40	38.0	150	2.2	300	2.6	150	2.0				7881.8	511.2
HACHIN	0	EP	02	32	06.9	ES	41	08.1	28	2.6	17	2.4	72	4.4	S 2	E 1	D	7929.1	541.2
TOYOOK	0	IP	02	32	08.0	X	34	19.1	36	1.2	34	1.5	54	3.9	S 11	E 11	D 51	7909.3	
						X	40	37.7											
MATSUY	0	EP	02	32	08.5	IS	40	40.0	21	2.4	21	2.6						7916.5	511.5
AKITA	0	P	02	32	08.6	EX	41	14	52	2.8	59	3.6	159	3.6	S 11	E 20	D114	7936.4	
TOTTOR	0	IP	02	32	08.7	APP	34	20.2	6	1.4	8	2.6	35	2.1	S 6	E 4	D 2	7948.8	
WAJIMA	0	IP	02	32	09.0	ES	41	16	38	1.6	58	1.4	68	3.2	S 20	E 20	D 32	7927.5	
						X	32	30.0											
						X	40	40.6											
ASOSAN	0	EX	02	32	09													7959.4	
NEMURO	0	IP	02	32	09.7	ES	40	45	12	3.2	14	2.5	83	2.6			D 2	7979.1	515.3
OITA	0	IP	02	32	10.4	S	40	42.4	124	2.6	102	2.4			S 14	E 13		7947.4	512.0
HIROSH	0	P	02	32	10.8	S	40	44.8	10	5.8	13	3.7	65	2.7	S 9	E 11	D 53	7976.2	514.0
HIROO	0	EP	02	32	11													7992.6	
YONAGO	0	EP	02	32	11.1	ES	40	46.4										7997.2	515.3
KUSHIR	0	IP	02	32	11.2	S	41	19.4	30	2.4	30	3.4	159	3.4	S 6	E 15	D 2	8002.9	548.2
KUMAMO	0	P	02	32	11.7	ES	40	45.6	41	2.1	53	2.1	62	2.4	S 16	E 13	D 40	7980.1	513.9
AOMORI	0	IP	02	32	11.9	IS	41	15.7	127	1.9	142	2.1	130	3.2	S 39	E 19	D 2	7993.6	543.8
NAGASA	0	IP	02	32	12.3	S	40	50.0							S 6	E 10	D 14	8032.7	
URAKAW	0	IP	02	32	12.7	S	41	20.2	35	2.8	80	2.6	100	2.6	S	E	D 1	8008.0	547.5
HAMADA	0	P	02	32	13.1	ES	40	50.0	10	5.0	8	3.0	35	3.2	S 5	E 6	D 22	8040.5	516.9
SHIMON	0	P	02	32	13.8	EX	34	24	14	2.6			47	2.6	S 11	E	D 38	8047.7	
MATSUE	0	P	02	32	14.3	ES	40	49.4							S 4	E 4	D 2	8016.7	515.1
SAIGO	0	P	02	32	14.6	X	34	25.0	31	3.2	27	3.4	50	3.1	N 1	W 0	U 1	8057.1	
						X	35	05.8											
						EX	40	42.0											
						IX	41	28.0											
						X	59	42.0											
OBIHIR	0	IP	02	32	15.2	ES	41	25							S 4	E 6	D 5	8054.0	549.8
HAKODA	0	IP	02	32	15.5	ES	40	50	38	2.0	36	3.4	88	3.3	S 21	E 20	D 65	8081.0	514.5
FUKUOK	0	EP	02	32	16.0	ES	40	56.0	21	2.0	15	2.4	40	2.0	S 5		D 34	8059.4	517.0
ABASHI	0	P	02	32	17.0	S	41	25.7	36	3.6	35	3.2	74	4.0				8102.0	548.7
MURORA	0	EP	02	32	17	X	41	23										8112.9	
FUKUE	0	P	02	32	17.8	S	40	57.0	10	3.6	15	3.8			S 6	E 8		8105.9	519.2
SAPPOR	0	IP	02	32	19.5	S	41	27.2	49	2.2	55	2.4	93	3.2	S 15	E 14	D 62	8159.8	547.7
ASAHIK	0	P	02	32	22.0	ES	41	08	37	2.4	44	2.0	94	2.6				8170.8	526.0
RUMOI	0	IP	02	32	24.0										S 8		D 20	8222.9	
SUTTSU	0	EX	02	32	26.0													8192.2	
WAKKAN	0	P	02	32	29.4	X	42	14.4	14	3.4	15	3.6	82	3.0			D 4	8350.0	

OT= 10 15 46 58.9 +/- 0.3
OFF IBARAKI PREF
LAT= 36 36 +/- 1 LONG= 141 11 +/- 2
H= 40 MAG=4.9 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ONAHAM	3	IP	15	47	09.6	ES	47	16.6	600	0.8	900	1.0	100	0.8	S 31	E 17	D252	45.6	07.0
MITO	2	IP	15	47	12.5	IS	47	21.0	250	1.0	261	1.0	130	0.7	N 8	E 18	D160	68.3	08.5
KAKIOK	2	IP	15	47	14.3	IS	47	24.3	184	1.0	161	0.8	105	0.8	N 14	E 47	D 29	97.7	10.0
SHIRAK	2	IP	15	47	16.5	IS	47	27.3							S 15	E 13	D 67	103.0	10.8
CHOSHI	1	EP	15	47	16.5	IS	47	27.9	260	0.6	248	0.7	122	0.7				101.8	11.4
UTSUNO	1	P	15	47	16.7	ES	47	29.2	49	0.2	50	0.2			S 3	E 6		117.5	12.5
FUKUSH	1	IP	15	47	22.1	S	47	37.4	140	1.0	127	1.3	65	0.6				142.9	15.3
KUMAGA	1	IP	15	47	24.8	S	47	42.8	31	0.8	42	1.2	20	3.4	S 3	E 4	D 12	169.0	18.0
TOKYO	0	IP	15	47	25.1	IS	47	43.6	90	0.6	59	2.2	22	3.0			D	163.5	18.5
SENDAI	0	IP	15	47	27.4	IS	47	47.0	45	1.5	56	2.0	18	1.6	S 3		D 7	185.9	19.6
MAEBAS	0	IP	15	47	28.0	IS	47	49.6	34	1.4	29	1.5	18	1.2		E 5	D 13	191.0	21.6
CHICHI	0	IP	15	47	28.7	IS	47	48.8							N 3	E 8		200.4	20.1
YAMAGA	0	EP	15	47	28.8	ES	47	52.0										197.7	23.2
ISHINO	0	IP	15	47	29.5	IS	47	51.0	23	1.2	22	1.2	8	1.6	S 0	E 0	D 0	202.8	21.5
YOKOHA	0	EP	15	47	30.1	IS	47	51.5	58	0.6	53	0.8	21	1.6			D 4	188.7	21.4
KARUIZ	0	EP	15	47	33.1	S	47	57.0										237.6	23.9
TOMISA	0	EP	15	47	33.9				38	2.4	46	2.4	28	2.0				223.0	
OSHIMA	0	P	15	47	34.0								11	1.7				261.3	
AJIRO	0	P	15	47	36.1	ES	48	02.4	12	1.4	12	1.4	7	1.5				255.6	26.3
KOFU	0	IP	15	47	36.2	ES	48	09.5	57	2.4	80	1.7	17	3.0			D 2	258.0	33.3
FUNATS	0	P	15	47	36.3	S	48	06.0										249.9	29.7
NIIGAT	0	EP	15	47	36.7	ES	48	06.0	40	4.0	35	3.8	25	3.7			D 5	238.5	29.3
MATSUS	0	P	15	47	37.5	S	48	04										266.3	26.5
OFUNAT	0	EP	15	47	38.6	S	48	08.0	8	0.4	13	1.4	8	1.2				277.2	29.4
TAKADA	0	P	15	47	38.8	ES	48	16.8										267.5	38.0
NAGANO	0	P	15	47	39.0	ES	48	06.5	6	1.0	5	0.6	5	0.8				267.2	27.5
MIZUSA	0	EP	15	47	39.2	IS	48	10.7	23	1.2	34	1.2	26	1.2				281.2	31.5
SAKATA	0	EP	15	47	41.4	X	47	17.4	50	2.0	50	3.6	0					281.8	
MATSUM	0	EP	15	47	41.5	X	48	23.9										290.5	
SHIZUO	0	EP	15	47	43.6	S	48	22.2	11	1.6	10	1.6	5	2.4				309.1	38.6
MORIOK	0	IP	15	47	46.7	IS	48	22.0	15	0.4	20	0.4	4	1.0	S 0		D 0	343.7	35.3
IIDA	0	EP	15	47	46.8	IS	48	23.2	26	1.4	16	2.2	12	1.6			D 3	324.9	36.4
OMAEZA	0	EP	15	47	48.0				27	2.6	21	2.8	11	2.8				348.5	
TOYAMA	0	EP	15	47	49	ES	48	26	9	3.4	10	2.8	8	4.2				355.5	37.0
AKITA	0	EP	15	47	50.2	EX	48	29.6	16	3.8	26	3.8	11	3.4				358.8	
WAJIMA	0	EX	15	47	54				15	0.8	13	1.0						391.3	
KANAZA	0	EP	15	47	56.2	ES	48	39.2	9		7		6	0.3				405.9	43.0
HAMAMA	0	P	15	47	56.5	S	48	35.6	15	2.0	15	2.4	5	2.0			U 1	377.0	39.1
GIFU	0	EP	15	47	56.6	S	48	50.0	14	1.9	10	1.7						420.0	53.4
NAGOYA	0	EP	15	47	58.4	S	48	42.8	21	1.8	25	2.0	10	1.2				412.4	44.4
HACHIJ	0	EP	15	47	58.4	X	18	38.6	5		7							408.4	
HACHIN	0	EP	15	47	59.1	ES	48	49.6	5	0.3	4	2.0	3	1.4				436.7	50.5
HIKONE	0	EP	15	48	04.8	S	49	00.8	25	1.0	18	1.4	10	1.6				469.0	56.0
FUKUI	0	EX	15	48	06.8													449.0	
AOMORI	0	EP	15	48	07	ES	48	57	16	1.3	18	1.3	5	1.1				469.4	50.0
KYOTO	0	EP	15	48	10.0	ES	49	07.6	4	1.4	5	1.0	2	2.2				522.8	57.6
HAKODA	0	P	15	48	17.1	ES	49	24	5	1.3	6	3.2	3	2.8			U	579.9	66.9
URAKAW	0	P	15	48	23.6	S	49	28.8	5	1.2	5	1.4	3	1.6				632.2	65.2
TOYOOK	0	EP	15	48	24.0	ES	49	20.0	18	1.1	10	1.1						585.0	56.0
OSAKA	0	EX	15	48	26	X	49	31.7	34	3.4	17	2.6	16	2.2				555.1	
TSU	0	X	15	48	28.5													471.9	
OBIHIR	0	X	15	48	44													723.1	
KUSHIR	0	X	15	49	46				7	0.2	7	0.2	1	0.2				759.6	

OT= 11 15 13 49.5 +/- 0.2
N PART OF MIYAGI PREF
LAT= 38 43 +/- 1 LONG= 141 14 +/- 2
H= 10 MAG=4.5 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ISHINO	1	IP	15	13	57.2	IS	14	02.0	39	2.0	45	2.4	23	2.4	N 11	W 6	D 6	32.9	04.8
MIZUSA	0	X	15	13		X	14	34.3	110	2.5	247	2.2	60	2.5			D 4	47.1	
SENDAI	0	EP	15	14	01	IS	14	08.4	48	2.3	32	2.3	12	2.3				58.4	07.4
OFUNAT	1	IP	15	14	01.6	IS	14	09.2	32	2.0	21	2.6	33	2.2	N 1	E 1	U 1	56.9	07.6
YAMAGA	0	EP	15	14	06.6	S	14	17.2										92.7	10.6
MORIOK	0	IP	15	14	08.8	S	14	21.2	22	0.4	16	0.3	7	0.3	S 1		D 1	108.9	12.4
MIYAKO	0	EP	15	14	10	S	14	25.6	16	2.5	17	3.3	14	2.5				121.1	15.6
FUKUSH	0	EP	15	14	12.1	ES	14	26.1	22	1.0	28	1.0	12	0.5				125.5	14.0
SAKATA	0	EP	15	14	14.2	ES	14	28										123.1	13.8
AKITA	0	P	15	14	15.2	S	14	34.3	21	3.2	22	3.6	10	3.4			D 3	148.0	19.1
NIIGAT	0	EX	15	14	21.3	S	14	52.7	30	2.2	29	2.0	6	3.0				210.7	
SHIRAK	0	EP	15	14	23.2	S	14	47.7										198.3	24.5
ONAHAM	0	EX	15	14	30.5	ES	14	45.4	42	1.2	42	1.2	11	2.3				198.7	
MITO	0	EP	15	14	34.8	S	15	06.0	22	2.2	22	2.5	9	2.0				268.1	31.2

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KAKIOK	0	EP	15 14 37	ES	15 10	13	0.8	12	0.8	6	0.8				290.7	33.0
KUMAGA	0	EP	15 14 42.0	S	15 20.0	5	2.0	6	1.0	3	3.0				328.8	38.0
MATSUS	0	P	15 14 44	S	15 30										360.1	46.0
TOKYO	0	X	15 14 56			13	3.0	8	3.0	5	2.4				361.0	
AOMORI	0	X	15 14 58			31	1.9	25	1.7	8	1.3				236.3	
YOKOHA	0	X	15 15 40.3	EX	15 44.9	7	1.6								390.1	

OT= 12 0 52 25.3 +/- 1.4
S OFF HONSHU
LAT= 31 19 +/- 6 LONG= 142 39 +/-12
H= 40 MAG=5.2 CLASS=U

HACHIJ	0	EP	00 53 11.4	X	53 51.4	10		14							334.5	
TOMISA	0	EP	00 53 31.8			14	5.0	20	4.4	7	3.4				478.4	
AJIRO	0	EP	00 53 36.6	ES	54 35.9	6	1.2	4	1.2	3	1.0				529.5	59.3
MISHIM	0	EP	00 53 40.5	ES	54 41.0	8	1.1	9	1.7	3	1.1				545.1	60.5
YOKOHA	0	EP	00 53 41.8	IS	54 43.2	12	0.7	18	0.6						535.0	61.4
TOKYO	0	EP	00 53 42.0	ES	54 43.3	25	0.4	14	4.6	9	3.6				553.8	61.3
KAKIOK	0	EP	00 53 44	ES	54 49	9	0.8	11	0.8	5	0.5				590.5	65.0
HAMAMA	0	EP	00 53 45	X	54 30	5	3.8	5	3.6	2	4.4				594.1	
KUMAGA	0	P	00 53 48.0	ES	54 58.8	12	1.6	10	1.6	6	6.0			U 2	615.0	70.8
KOFU	0	EP	00 53 48.4	ES	55 02.0	9	1.6	11	1.4	4	2.8				613.8	73.6
MITO	0	X	00 53 53.0	ES	54 54.5	10	1.7	10	2.0	8	2.8				596.3	
UTSUNO	0	EP	00 53 55.4	ES	55 01.3										634.1	65.9
KARUIZ	0	EP	00 53 56.0	ES	55 11.2										673.7	75.2
MAEBAS	0	EP	00 53 57.3	ES	55 05.2	6	2.0	8	1.6	5	2.0				654.0	67.9
MATSUS	0	IP	00 53 59.4	S	55 16							S	W	D	709.6	76.6
KANAZA	0	EX	00 54			7	0.5	7	0.5	2					802.2	
FUKUSH	0	EP	00 54 04.8	ES	55 19.4	16	0.8	18	0.8	7	0.4				741.5	74.6
OSAKA	0	EX	00 54 05			11	4.0	8	2.8	4	2.9				760.0	
TOYAMA	0	EX	00 54 06			5	4.2	9	6.8	3	6.0				780.5	
SENDAI	0	EP	00 54 09.0	ES	55 30.5	8	0.8	10	4.0	4	1.5				786.5	81.5
WAJIMA	0	EX	00 54 16												856.0	
ONAHAM	0	EX	00 54 23.0	ES	55 02.8	11	1.0	20	1.1	5	1.9				644.5	
AKITA	0	EX	00 54 32	EX	56 12	8	3.4	8	3.4	4	4.0				960.0	
MIZUSA	0	X	00 54 38.1	IS	55 52.3	13	3.5	16	2.7						877.9	
OMAEZA	0	X	00 54 39			10	6.5	9	4.0						551.9	
NIIGAT	0	X	00 54 48.2	S	55 38.4	17	4.5	15	4.2	8	3.5				802.0	
KAGOSH	0	EP	00 54 52.0			8	2.9	7	2.9						1149.2	
KUSHIR	0	EP	00 55 10	X	57 19	4	0.8	6	1.2	2	1.2				1303.2	
AOMORI	0	X	00 56 32			7	3.1	7	2.4						1067.1	

OT= 12 3 41 18.3 +/- 1.4
S OF KURILE IS
LAT= 44 26 +/- 4 LONG= 145 57 +/- 6
H= 20 MAG=4.7 CLASS=S

NEMURO	X	IP	03 41 39.8	S	41 55.2	36	1.4	29	1.8	16	2.4	S		U	126.2	15.4
ABASHI	0	P	03 41 42.0	IS	41 58.0	63	1.8	43	1.4	11	3.2				141.0	16.0
KUSHIR	0	EP	03 41 51	S	42 16.1	33	0.3	22	2.4	9	1.6				204.6	25.1
ASAHIK	0	P	03 42 04.2	X	42 43.6	23	1.8	17	1.8	10	1.4				295.8	
OBIHIR	0	X	03 42 08												277.0	
WAKKAN	0	EX	03 42 10			7	4.2	6	3.6	4	3.2				354.8	
URAKAW	0	P	03 42 14.0	ES	43 01	5	5.0	3	1.0						360.7	47.0
SAPPOR	0	X	03 42 24			4	3.0	8	2.4	3	3.0				402.2	
MATSUS	0	P	03 43 42	X	45 26										1094.1	

OT= 12 5 57 55.8 +/- 0.5
NEAR MATSUSHIRO
LAT= 36 26 +/- 1 LONG= 138 7 +/- 2
H= 0 MAG=3.8 CLASS=L

MATSUS	2	P	05 57 59.0	S	58 00.6										14.3	01.6
MATSUM	0	IP	05 58 01.7	IS	58 05.7								W	2 U 11	24.7	04.0
NAGANO	1	IP	05 58 02.0	S	58 04.7										26.1	02.7
KARUIZ	0	IP	05 58 04.9	S	58 10.7								W	D 2	40.4	05.8
TOYAMA	0	EX	05 58 12			5	2.6	7	4.0	6	3.4				86.8	
MAEBAS	0	EP	05 58 16.1			10	3.5	5	3.2	6	2.8				85.1	
KUMAGA	0	EP	05 58 18.6	ES	58 34.0	5	4.2	9	4.0	3	3.8				118.3	15.4
WAJIMA	0	EP	05 58 22	ES	58 42	8	1.0	10	1.0						151.8	20.0
TOKYO	0	X	05 58 36.8			9	3.0	5	3.6						169.6	

OT= 12 7 55 9.1 +/- 0.3
SE OFF HOKKAIDO
LAT= 42 19 +/- 2 LONG= 144 18 +/- 2
H= 40 MAG=4.4 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KUSHIR	2	IP	07 55 22.8	IS	55 31.0	127	0.4	149	0.6	49	0.2	S	2 W	1 D 2	73.9	08.2
HIROO	1	IP	07 55 23.5	IS	55 32.8									D 3	81.2	09.3
OBIHIR	0	P	07 55 26.9	IS	55 39.2										111.0	12.3
URAKAW	0	EP	07 55 30	S	55 45.1	18	0.6	48	0.4	13	2.4				126.7	15.1
NEMURO	0	EP	07 55 33	ES	55 51	7	0.4	7	0.4	4	0.4				154.0	18.0
ABASHI	0	EP	07 55 37.4	ES	55 58.0										188.9	20.6
ASAHIK	0	P	07 55 43.0	S	56 06.6	8	1.1	5	1.8	7	1.0				225.2	23.6
AOMORI	0	X	07 56 22.5			9	1.3	7	1.3						337.3	
MIZUSA	0	X	07 56 23.4	ES	56 56.2	3	0.5	6	0.5	4	1.3				443.3	
MATSUS	0	IP	07 56 57.0	ES	58 21							S	W	U	828.2	84.0

OT= 14 4 48 45.2 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 32 +/- 1 LONG= 138 12 +/- 1
H= 10 MAG=5.3 CLASS=M

MATSUS	5	IP	04 48 47.1									S	W	D	0.9	
NAGANO	4	IP	04 48 49.6	S	48 51.9	1900	2.1	2400	2.1	3100	3.1	N	16 W	3 U999	14.1	02.3
MATSUM	3	IP	04 48 53.0	IS	48 58.0	650	4.3	700	4.3	350	4.3	S	3 W	3 U 36	38.1	05.0
KARUIZ	2	IP	04 48 53.8	IS	48 59.4	1300	2.9	1800	1.9	400	2.5	N	42 W	24 D 26	38.1	05.6
TAKADA	3	P	04 48 56.5	S	49 06.4	500	2.8	500	2.8	300	2.8	N	20 E	9 U 56	63.6	09.9
MAEBAS	2	IP	04 49 00.2	IS	49 10.9	600		500		500		N	4 W	14 D 42	78.9	10.7
TAKAYA	0	IP	04 49 02.1	IS	49 15.3										94.8	13.2
TOYAMA	0	IP	04 49 02.6	IS	49 16.0	322	4.0	240	3.8	148	1.6	S	18 E	14 D 60	90.8	13.4
CHICHI	2	EP	04 49 02.8	IS	49 14.8	540	3.6	350	3.8	250	3.2				99.4	12.0
KOFU	3	IP	04 49 03.4	IS	49 15.4	169	0.8	187	0.8	93	0.9	S	17 E	11 U 25	101.6	12.0
KUMAGA	1	P	04 49 06.0	ES	49 20.8	221	3.4	290	4.2	197	3.8			D 7	114.7	14.8
IIDA	1	IP	04 49 06.2	IS	49 25.0	124	2.2	106	2.0	51	1.6	S	38 W	18 U 39	118.2	18.8
FUNATS	3	IP	04 49 08.2	IS	49 22.9	200	2.1	300	2.1	50	1.1	S	15		125.5	14.7
KANAZA	0	IP	04 49 10.4	S	49 27.4	218		223		115		S	2 E	14 D 43	138.9	17.0
WAJIMA	0	IP	04 49 11.0	IS	49 29.0	200	0.6	275	0.6	56	0.6			D 4	149.9	18.0
UTSUNO	X	IP	04 49 11.6	S	49 31.9	119	1.4	78	1.7			N	10 E	50	149.7	20.3
AIKAWA	0	IP	04 49 12.2	IS	49 32.6	62	1.4	82	0.6	37	2.2	N	20 W	4 U 48	165.0	20.4
KAKIOK	0	P	04 49 14.7	S	49 38.3	65	1.0	73	1.0	27	1.2	S	4 W	5 D 1	181.9	23.6
NIIGAT	2	IP	04 49 14.8	IS	49 37.4	236	3.8	365	4.4	115	4.7	N	5 E	1 U 62	170.4	22.6
MISHIM	0	IP	04 49 15	IS	49 35	167		184		97		S	4 E	1 U 5	170.9	20.0
SHIZUO	1	IP	04 49 15.1	IS	49 37.3	57	0.4	83	2.0	39	2.0	S	11 E	4 U 8	174.1	22.2
TOKYO	0	IP	04 49 15.2	ES	49 38.3	250	4.6	340	5.2	211	4.8				168.9	23.1
AJIRO	1	IP	04 49 16.2	IS	49 38.7	74	1.4	103	1.4	32	1.6	S	4 E	2 U 5	184.1	22.5
NAGOYA	0	IP	04 49 17.0	IS	49 39.2	215	1.4	166	1.6	78	1.2	S	12 W	10 U 16	188.2	22.2
SHIRAK	0	IP	04 49 17.2	S	49 43.7									D 2	191.9	26.5
FUKUI	0	IP	04 49 17.9	IS	49 39.6							N	6 E	16 D 14	185.1	21.7
YOKOHA	0	IP	04 49 18.2	IS	49 42.5	394	2.2	362	1.9		2.4		E	2 D 9	178.9	24.3
MITO	1	IP	04 49 19.0	IS	49 50.0	93	1.8	60	1.8	35	1.8		E	5 U 8	204.3	31.0
HAMAMA	0	IP	04 49 19.6	S	49 46.6	165	2.0	189	2.4	114	1.4	S	11 W	5 U 17	207.0	27.0
TSURUG	0	EP	04 49 20.2	S	49 48.3	300	1.1	200	1.1						215.8	28.1
OMAEZA	0	EP	04 49 21.4	S	49 49.4	240	2.4	287	2.2	97	1.8			D 7	214.1	28.0
OSHIMA	0	P	04 49 21.8	IS	49 47.8	85	2.1	96	1.9	25	2.0				223.6	26.0
HIKONE	0	P	04 49 22.5	S	49 50.5	257	0.8	223	1.0	128	1.6				225.0	28.0
TOMISA	0	P	04 49 24.0	S	49 51.2	105	3.0	79	2.0	53	2.0			U 3	231.8	27.2
ONAHAM	0	IP	04 49 24.9	IS	49 55.5	84	1.8	78	2.0	62	3.2			D 14	246.0	30.6
FUKUSH	0	EP	04 49 25.5	ES	49 55.7	37	1.5	26	1.2	13	3.0				243.4	30.2
YAMAGA	0	EP	04 49 27.4	ES	50 01.5										269.6	34.1
KYOTO	0	EP	04 49 28.6	IS	50 04.0	40	1.4	35	1.2	12	0.8				279.5	35.4
TSU	0	IP	04 49 29.0	IS	49 56.5										253.9	27.5
NARA	0	EP	04 49 31.0	ES	50 07.2	150	2.0	100	1.5	100	1.0				296.8	36.2
SENDAI	0	EP	04 49 32	ES	50 09.8	41	2.0	32	2.5	8	2.5				306.3	37.8
OSAKA	0	P	04 49 34.0	X	50 21.3	184	4.6	189	4.0	73	2.4				319.2	
SAKATA	0	EP	04 49 35.3	ES	50 12.4	50	1.6	100	2.0	0					300.0	37.1
OWASE	0	P	04 49 35.6	S	50 15.2	41	1.4	20	0.8	21	0.8				328.8	39.6
ISHINO	0	IP	04 49 37.0	ES	50 24.8	10	2.4	11	2.2	5	2.4	S	0 E	0 U 0	345.5	47.8
TOYOOK	0	EP	04 49 39.8	ES	50 19.9	217	1.1	134	1.3	43	0.9				324.0	40.1
WAKAYA	0	P	04 49 40.8	S	50 23.4	43	1.3	41	0.8						376.0	42.6
SUMOTO	0	P	04 49 41.6	ES	50 21.5	17	1.0	20	2.6	9	4.0			U 0	385.6	39.9
				EX	49 49.9											
KOBE	0	X	04 49 44.2	ES	50 23.5										341.6	
OFUNAT	0	EP	04 49 46.4	S	50 36.9	7	5.0	6	2.8	5	2.8				418.0	50.5
MIZUSA	0	EP	04 49 46.7	IS	50 36.9	25	2.4	39	2.2	18	1.8				387.2	50.2
HACHIJ	0	EP	04 49 48.0	IS	50 32.0	20		19							407.4	44.0
TOKUSH	0	EP	04 49 48.0	ES	50 36.1										428.3	48.1
SAIGO	0	EP	04 49 48.5	ES	50 40.2	8	2.4	5	2.0	4	2.4	N	0 E	1 D 0	438.1	51.7
SHIONO	0	EP	04 49 50.4	ES	50 38.6	29	1.9	29	1.7	17	1.2				408.0	48.2
TOTTOR	0	X	04 49 53.5	X	50 38.3	13	1.6	6	1.0	5	1.2				379.7	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
TURUGI	0	EP	04 49 54.0												477.5	
OKAYAM	0	X	04 49 56.0	IS	50 49.5	23	1.6	20	1.4	12	2.0				439.1	
TAKAMA	0	X	04 49 57.1	ES	50 48.7	18	2.2	15	2.1	7	2.3				449.2	
GIFU	0	X	04 49	S	49 37.3	300	1.6	315	1.6	80	1.3	S 9	W 10	U 6	180.6	
AKITA	0	X	04 49			18	2.8	18	4.2	9	3.4				390.8	
MUROTO	0	EP	04 50 01.0	X	51 21.1	12	10.0	19	3.0	8	3.0				517.4	
AOMORI	0	EX	04 50 05			11	2.9	10	2.7	3	2.0				525.9	
MATSUY	0	X	04 50 14.4	X	52 30.2	12	2.0	9	5.4	7	2.1				576.8	
HIROSH	0	X	04 50 17.1	X	51 28.2	16	2.3	8	2.3	14	1.6				575.7	
HAMADA	0	X	04 50 18.8	X	51 25.0	6	7.5	3	6.1	4	2.8				583.2	
SHIMON	0	X	04 50 30	X	52 10	9	2.0	4	2.0	7	2.4				719.5	
OITA	0	X	04 50 35.4	X	52 09.8	30	3.4	32	3.0						703.5	
FUKUOK	0	X	04 50 44	X	52 18	13	2.2	8	2.0	4	1.6				784.5	
KUMAMO	0	X	04 50 49	X	52 34	14	2.1	14	1.9	3	1.0				800.5	
SAGA	0	X	04 51 01.3	X	52 35.9										808.1	
ASHIZU	0	X	04 51 52.2			5	2.0	8	2.4	4	2.2				636.2	

OT= 14 7 45 0.4 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 32 +/- 1 LONG= 138 11 +/- 1
H= 10 MAG=3.3 CLASS=L

MATSUS	2	P	07 45 02.2	S	45 02.9										2.3	00.7
NAGANO	1	IP	07 45 04.7	S	45 07.3										14.1	02.6
MATSUM	0	IP	07 45 08.4	IS	45 13.6									U 8	37.3	05.2
KARUIZ	0	EP	07 45 08.8	IS	45 14.6										39.4	05.8
TAKADA	0	P	07 45 12.8	S	45 21.6										63.7	08.8
MAEBAS	0	EP	07 45 15.7			6	3.0	4	3.0	5	3.0				80.3	

OT= 14 10 46 3.2 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 28 +/- 1 LONG= 138 9 +/- 1
H= 0 MAG=3.9 CLASS=L

MATSUS	3	P	10 46 05.9	S	46 06.7										9.5	00.8
NAGANO	2	IP	10 46 09.7	S	46 11.9										21.9	02.2
MATSUM	1	IP	10 46 12.0	IS	46 17.0							S 3	W 3	U 29	29.4	05.0
KARUIZ	0	EP	10 46 12.6	S	46 17.8										38.7	05.2
MAEBAS	0	IP	10 46 19.3	IS	46 29.8	9	3.1	5	4.1	6	3.2			D 3	82.3	10.5
TOYAMA	0	EP	10 46 21	ES	46 35	7	0.6	8	2.4	6	1.4				88.4	14.0
KOFU	0	IP	10 46 22.0	IS	46 34.2	12	0.4	14	0.4	5	0.3			U 2	96.2	12.2
KUMAGA	0	EP	10 46 26.0	ES	46 43.2	5	1.0	5	1.0	4	2.0				116.4	17.2
KANAZA	0	EP	10 46 27.4	ES	46 44.4	4		6		5					134.8	17.0
FUNATS	0	IP	10 46 28.2	IS	46 41.8										120.8	13.6
WAJIMA	0	EX	10 46 32			10	1.0	15	0.8						151.4	
OMAEZA	0	EP	10 46 33.2			7	1.8	7	1.8						206.8	
NIIGAT	0	EP	10 46 33.5	IS	46 57.0	22	0.3	45	0.6	5	0.4				179.0	23.5
HAMAMA	0	P	10 46 38.7	ES	47 04	5	1.6	5	1.8	3	1.2			U 1	198.8	25.3
YOKOHA	0	X	10 46 47.4	IS	47 00.1	12	0.5	8	0.7						177.4	
HIKONE	0	X	10 46 47.4	S	47 08.4	8	1.2	7	1.0	4	1.5				216.9	

OT= 16 2 50 28.7 +/- 0.4
UCHIURA BAY
LAT= 42 27 +/- 2 LONG= 140 37 +/- 4
H=150 CLASS=U

SAPPOR	0	IP	02 50 52.5	IS	51 09.8	15	2.2	21	2.2	3	1.0			U 2	89.4	17.3
HAKODA	0	IP	02 50 52.6	IS	51 09.6	6	1.4	15	1.8					D 1	71.7	17.0
URAKAW	0	P	02 51 01.0	ES	51 24	5	3.2	9	3.2						181.3	23.0
AOMORI	0	EX	02 51 02			8	1.8	8	1.6						182.0	
HACHIN	0	EP	02 51 05.0	IS	51 31.6	5	0.2	2	0.8	1	1.4	S 1		D	226.9	26.6
OBIHIR	0	IP	02 51 05.3	S	51 32.5									U 3	219.8	27.2
KUSHIR	0	EX	02 51 14	S	51 47.2	14	0.2	15	0.2	3	0.2				315.1	
MATSUS	0	P	02 52 01.5												688.2	
MIZUSA	0	X	02 52 02.1					4	2.4						370.9	

OT= 16 20 1 3.0 +/- 0.6
E PART OF SAITAMA PREF
LAT= 35 54 +/- 3 LONG= 139 41 +/- 5
H=100 CLASS=U

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
UTSUNO	0	EP	20 01 21.1	S	01 34.9										73.7	13.8
AJIRO	0	IP	20 01 23.9	IS	01 40.6	5	0.3	4	0.3	1	0.4	S 0	W 0	D 1	108.9	16.7
KOFU	0	EP	20 01 26.4	IS	01 40.9	6	0.4	8	0.4	2	0.4				105.0	14.5
MATSUS	0	IP	20 01 28.8	S	01 45									D	150.3	16.2
YOKOHA	0	X	20 01 35.2			9	0.4	6	0.4						51.5	

OT= 17 2 26 40.5 +/- 0.1
GUNMA PREF
LAT= 36 5 +/- 1 LONG= 138 49 +/- 1
H=140 CLASS=S

MAEBAS	0	IP	02 27 00.8	IS	27 15.9	46	1.6	59	1.1	12	2.4			D 11	41.8	15.1
KARUIZ	0	EP	02 27 01.0	IS	27 16.1										37.1	15.1
KOFU	1	IP	02 27 01.4	IS	27 17.3	146	0.4	146	0.3	38	0.8	N 3	E 2	D 19	51.9	15.9
CHICHI	0	IP	02 27 01.9	IS	27 16.2							S 5	W 8		26.0	14.3
KUMAGA	0	P	02 27 02.0	IS	27 18.2	42	0.4	71	1.4	11	0.8			D 12	51.6	16.2
MATSUS	0	IP	02 27 02.2	S	27 18.0							S	E	D	74.4	15.8
FUNATS	0	IP	02 27 02.7	IS	27 18.2										65.1	15.5
MATSUM	0	EP	02 27 03.2	S	27 20.4										77.9	17.2
NAGANO	0	P	02 27 04.1	S	27 21.0	9	0.9	6	0.5	5	0.5				84.8	16.9
MISHIM	0	EP	02 27 04.9	IS	27 23.4	67	1.3	58	1.3	16	1.3			D 2	108.3	18.5
TOKYO	0	IP	02 27 05.0	S	27 23.0	61	0.6	62	0.6	19	0.6				95.8	18.0
YOKOHA	0	IP	02 27 05.0			130	0.5	148	0.5	36	0.5				104.4	
UTSUNO	2	EP	02 27 05.1	S	27 22.6	107	0.4	72	0.3			S 1	E 1		107.8	17.5
IIDA	0	IP	02 27 05.6	ES	27 24.0	12	1.2	6	1.2	5	1.4	N 2	E 3	D 5	109.2	18.4
KAKIOK	1	IP	02 27 05.7	IS	27 24.2	94	0.8	100	0.8	38	0.8	S 3	W 3	D 4	124.9	18.5
AJIRO	0	P	02 27 05.8	IS	27 25.0	40	0.3	26	0.4	7	0.4				118.1	19.2
TAKADA	0	P	02 27 06.7	S	27 26.1										124.2	19.4
OMAEZA	0	EP	02 27 07.0	S	27 33.5	39	2.6	20	3.0	9	2.5				173.1	26.5
SHIZUO	0	P	02 27 07.6	S	27 26.1	36	2.0	15	2.6	15	3.0	N 2	E 1	D 3	128.6	18.5
MITO	1	IP	02 27 09.0	IS	27 29.4	54	0.9	94	0.9	22	0.8		W 1	D 5	152.3	20.4
OSHIMA	1	EP	02 27 09.6	IS	27 30.2	34	2.1	24	1.5	19	1.8				155.2	20.6
TOYAMA	0	EP	02 27 10	S	27 32.8	28	1.6	22	2.8	23	1.8				160.0	22.8
TOMISA	0	IP	02 27 10.0	S	27 31.0	30	1.0	28	1.0	20	2.0	S 2	E 2	U 5	158.3	21.0
SHIRAK	0	P	02 27 11.1	IS	27 33.5										170.5	22.4
HAMAMA	0	P	02 27 12.4	S	27 35.5	15	2.0	14	1.0	7	2.0			D 1	182.0	23.1
CHOSHI	0	EP	02 27 12.5	S	27 35.6										187.2	23.1
NAGOYA	0	P	02 27 13.2	S	27 37.2	14	2.8	10	2.4	6	2.0			D 2	196.0	24.0
KANAZA	0	EP	02 27 15.0	ES	27 34.6	14		13		9					201.4	19.6
AIKAWA	0	EP	02 27 16.0	IS	27 42.4	14	2.2	10	0.8	6	3.6	N	W	D 0	220.9	26.4
ONAHAM	0	EP	02 27 17.0	S	27 40.2	56	0.8	55	1.0	16	0.8				210.2	23.2
WAJIMA	0	P	02 27 17.0	IS	27 44.0	25	1.0	35	1.0	7	1.0				224.4	27.0
FUKUI	0	EX	02 27 18.1												233.3	
FUKUSH	0	EP	02 27 18.5	ES	27 46.0	24	1.1	21	1.0	7	0.7				237.3	27.5
TSURUG	0	IP	02 27 20.6	S	27 49.9										253.1	29.3
HIKONE	0	EP	02 27 20.7	S	27 48.8	10	1.0	9	1.2	3	1.2				249.3	28.1
SENDAI	0	EP	02 27 25.5	ES	28 01.0	12	2.0	8	2.3	5	4.0				304.2	35.5
ISHINO	0	P	02 27 29.0	S	28 01.5	7	1.4	5	1.6	1	1.6	N 0	W 0	D 0	340.8	32.5
OSAKA	0	EX	02 27 29.0			11	4.8	11	4.1	6	2.9				337.7	
HACHIJ	0	EP	02 27 31.2	ES	28 07.0			5							342.5	35.8
MIZUSA	0	EP	02 27 40.0	IS	28 21.9	13	2.4	14	1.7	6	1.2				395.4	41.9
NIIGAT	0	X	02 27 42.1			26	3.0	32	1.8						203.8	
AKITA	0	X	02 27 45			9	3.6	7	4.0	5	3.2				418.9	
SAKATA	0	X	02 28 17.1												325.7	

OT= 17 2 53 42.5 +/- 0.2
CHIBA PREF
LAT= 35 26 +/- 1 LONG= 139 54 +/- 1
H= 50 MAG=4.0 CLASS=S

YOKOHA	0	IP	02 53 51.5	IS	53 58.1	105	0.4	78	0.4	27	0.4	N 4	W 5	D 18	22.2	06.6
TOKYO	0	P	02 53 52.0	ES	53 58.0	71	0.3	56	0.4	18	0.2				30.7	06.0
TOMISA	0	IP	02 53 55.3	S	54 04.4	14	0.5	16	0.5	7	0.4			D 1	57.3	09.1
KAKIOK	0	IP	02 53 56.6	S	54 09.7	28	0.6	32	0.2	19	0.6	S 3		D 2	92.4	13.1
AJIRO	0	IP	02 53 57.3	ES	54 08.9	63	0.3	33	0.3	8	0.3	N 4	E 2	D 5	84.9	11.6
OSHIMA	0	P	02 53 57.6	IS	54 09.3	26	0.2	16	0.6	16	0.4				88.4	11.7
MISHIM	0	P	02 53 58.8	IS	54 10.6	13	0.7	10	0.7	3	0.3			D 2	95.2	11.8
KUMAGA	0	P	02 53 59.0	ES	54 10.2	10	0.6	9	0.6	4	0.2			U 3	91.8	11.2
CHOSHI	0	EP	02 53 59.6	IS	54 10.6										91.4	11.0
FUNATS	0	IP	02 54 00.3	IS	54 11.3										103.4	11.0
MITO	0	IP	02 54 00.8	S	54 14.3	15	0.6	15	0.6	5	0.6				116.8	13.5
KOFU	0	IP	02 54 02.4	ES	54 16.2	15	0.4	16	0.3	5	0.3			U 1	124.3	13.8
UTSUNO	0	EP	02 54 03.2	ES	54 18.2	26	0.2	45	0.2						123.5	15.0
SHIZUO	0	P	02 54 06.0	S	54 22.1	6	0.4	11	0.6	2	0.6				145.2	16.1
MATSUS	0	IP	02 54 11.3	S	54 34							S	E	U	195.7	22.7
HACHIJ	0	EP	02 54 20.0	IS	54 46.4	6		9							258.8	26.4

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
ONAHAM	0	X	02 54 30.8			8	0.8	9	0.8	3	0.5				190.6	
			OT= 22 8 49 50.0 +/- 1.8													
			OFF IBARAKI PREF													
			LAT= 36 47 +/- 4 LONG= 141 17 +/-10													
			H= 50 MAG=4.0 CLASS=U													
MITO	0	IP	08 50 05.5	IS	50 17.3	24	0.5	24	0.5	8	0.5		W	2 D	4	85.4	11.8
KAKIOK	0	EP	08 50 09.4	S	50 18.0	10	0.8	13	0.3	8	0.5				115.2	08.6
FUKUSH	0	EP	08 50 10.5	S	50 25.6	4	0.7	6	1.0	2	0.7				129.6	15.1
UTSUNO	0	EP	08 50 14.7	ES	50 25.3	14	0.2	14	0.2						128.9	10.6
MATSUS	0	IP	08 50 29.6	S	50 56.5								W	U	276.2	26.9
			OT= 22 19 0 47.8 +/- 0.8													
			OFF IWATE PREF													
			LAT= 39 3 +/- 2 LONG= 142 59 +/- 4													
			H= 10 MAG=4.3 CLASS=U													
MIYAKO	0	EP	19 01 07.6	IS	01 20.7	10	1.0	8	1.0	7	1.4				109.6	13.1
OFUNAT	0	EP	19 01 08.0	IS	01 21.2	7	2.6	7	2.6	4	0.8				109.5	13.2
ISHINO	0	P	19 01 15.0	S	01 34.4	6	0.4	5	0.2	1	0.2				161.7	19.4
MIZUSA	0	EP	19 01 16.7	IS	01 36.4	18	1.2	23	1.0	10	0.9				160.3	19.7
MORIOK	0	IP	19 01 17.3	ES	01 38.0	19	0.5	23	0.5	2	0.4	N	0 W	0 U	0	172.1	20.7
SENDAI	0	EP	19 01 21.9	ES	01 43.9	12	4.3	5	0.8	2	0.8					201.4	22.0
FUKUSH	0	EX	19 01 32.8			10	0.8	9	1.0	3	0.5					261.9	
AOMORI	0	X	19 01 38			20	1.1	19	0.8	5	1.1					271.7	
AKITA	0	EX	19 01 41.4	EX	02 01	15	2.0	10	2.2	4	2.0					259.1	
MATSUS	0	IP	19 02 01.3													504.4	
			OT= 23 11 53 32.5 +/- 1.9													
			E OFF HOKKAIDO													
			LAT= 43 4 +/- 5 LONG= 147 3 +/-11													
			H= 60 MAG=5.0 CLASS=S													
NEMURO	1	IP	11 53 52.2	IS	54 05.8	77	0.2	67	0.3	48	0.2	N	4 E	7 D	16	122.5	13.6
KUSHIR	0	P	11 54 05.1	S	54 24.1	42	0.6	39	0.2	13	0.6			U	6	216.7	19.0
ABASHI	0	P	11 54 07.8	IS	54 33.0	14	1.0	26	2.2	7	1.6					247.3	25.2
OBIHIR	0	EX	11 54 19													312.7	
URAKAW	0	IP	11 54 26.8	S	55 06.0	12	2.0	13	2.4	7	2.6	N	1 W	2 U		364.6	39.2
SAPPOR	0	EP	11 54 37			6	2.0	6	2.2	2	0.6					465.8	
HACHIN	0	P	11 54 46.1	S	55 37.9	21	0.3	15	0.3	2	0.3			U		538.9	51.8
MORIOK	0	P	11 54 55.6	S	55 55.6	7	0.4	7	0.4	3	0.2			U	0	618.0	60.0
OFUNAT	0	EP	11 55 00.6	IS	55 58.8	6	0.0	4	0.2	3	1.2					631.2	58.2
MIZUSA	0	X	11 55 11.9	IS	56 06.5	8	1.2	12	1.0	8	0.9					661.5	
FUKUSH	0	X	11 55 35.5	ES	56 39.2	7	0.9	6	0.8	2	0.8					811.4	
AOMORI	0	X	11 55 47.3			14	0.9	17	0.9							576.5	
MATSUS	0	P	11 55 50	S	57 33											1047.1	103.0
ONAHAM	0	X	11 56 48.6			4	0.6	5	0.9							858.1	
			OT= 23 17 27 7.6 +/- 0.4													
			S OFF HONSHU													
			LAT= 29 0 +/- 2 LONG= 139 40 +/- 2													
			H=480 CLASS=R													
HACHIJ	0	IP	17 28 26.4	IS	29 26.8	101		128		42		S	8 E	5 U	13	454.7	60.4
OSHIMA	0	EP	17 28 37.1	IS	29 57.0	55	1.7	79	2.6	33	2.0			U	11	639.2	79.9
SHIONO	0	IP	17 28 39.2	IS	29 52.5	28	2.5	24	2.5	11	1.7	N	6 W	4 U	10	617.3	73.3
OMAEZA	0	P	17 28 41.8	S	29 55.8	52	2.4	58	2.6							636.1	74.0
OWASE	0	EP	17 28 41.8	S	29 59.0	21	4.0	19	1.6	18	1.0	N	3 W	2 U	5	651.0	77.2
TOMISA	0	IP	17 28 42.6	IS	29 57.2	60	2.0	78	1.8	59	2.2			U	5	656.3	74.6
AJIRO	0	IP	17 28 43.7	S	29 59.8	33	1.8	33	2.4	10	1.2	N	5 W	5 U	9	672.0	76.1
HAMAMA	0	IP	17 28 43.9	X	29 00.0	40	2.0	60	2.2	28	1.8	N	7 W	3 U	20	658.8	
SHIZUO	0	IP	17 28 44.4	S	30 01.2	9	2.6	16	2.2	11	2.8	N	5 W	2 U	10	672.7	76.8
MISHIM	0	IP	17 28 45.0	IS	30 01.7	46	2.0	64	2.0	18	2.2	N	6 E	U	18	681.0	76.7
MUROTO	0	IP	17 28 46.7	IS	30 06.0	8	4.8	9	6.0	8	2.8	N	1 W	1 U	1	703.6	79.3
YOKOHA	0	EP	17 28 47.4	IS	30 07.6	62	0.5	70	0.6	21	1.9			U	9	713.5	80.2
WAKAYA	0	P	17 28 49.5	S	30 08.1	17	1.5	22	1.5							719.3	
FUNATS	0	EP	17 28 49.8	ES	30 09.2							N	13			725.3	79.4
NARA	0	EP	17 28 50.0													726.7	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
TSU	0	IP	17 28 50.1												698.5	
NAGOYA	0	IP	17 28 50.4	IS	30 12.8	33	2.2	53	3.2	27	1.2	N	10 W	4 U	16	729.1	82.4
SUMOTO	0	IP	17 28 50.8	S	30 13.2	10	3.0	11	3.2	8	2.6	N	3 W	3 U	7	743.4	82.4
IIDA	0	IP	17 28 51.0	IS	30 13.6	11	2.0	8	1.8	5	2.0	N	5 W	3 U	6	741.9	82.6
KOFU	0	IP	17 28 51.0	S	30 12.6	27	1.8	29	1.8	8	1.8	N	9 W	1 U	10	746.1	81.6
TOKYO	0	IP	17 28 51.1	S	30 11.8	48	0.7	59	0.6	24	2.6			U		741.1	80.7
OSAKA	0	IP	17 28 51.2	S	30 15.2	68	3.3	88	3.0	45	2.3			U	17	737.7	84.0
TOKUSH	0	EP	17 28 52.0	ES	30 11.6											740.4	79.6
ASHIZU	0	IP	17 28 52.6	IS	30 15.4	13	2.8	6	2.6	8	2.0	N	3 W	2 U	7	757.2	82.8
KOBE	0	EX	17 28 52.7													759.8	
GIFU	0	IP	17 28 52.9	S	30 17.2	19	2.1	23	2.1	20	2.2	N	10 W	6 U	10	760.0	84.3
HIKONE	0	P	17 28 53.0	S	30 16.0	75	1.2	61	1.2	16	2.2					766.4	83.0
KOCHI	0	IP	17 28 53.0	ES	30 16.0									N	5 W 6 U 4	771.1	83.0
KYOTO	0	IP	17 28 53.1	S	30 16.0	20	2.0	12	1.4	19	1.8	N	1 W	2 U	4	762.6	82.9
CHICHI	0	EP	17 28 53.7	S	30 18.4											777.0	84.7
KUMAGA	0	IP	17 28 54.8	S	30 21.8	44	1.4	31	1.2	28	1.4	N	1 W	1 U	17	792.7	87.0
TAKAMA	0	IP	17 28 54.8	IS	30 21.0	13	3.0	12	3.3	15	2.0	N	6 W	9 U	12	793.3	86.2
KAKIOK	1	P	17 28 55.1	S	30 18.3	141	0.8	77	0.8	32	1.0	N	3 W	2 U	1	803.2	83.2
UWAJIM	0	EP	17 28 57.1	ES	30 22.7							N	W			823.4	85.6
UTSUNO	0	P	17 28 57.2	ES	30 27.1	64	2.5	54	2.5	37	2.0					836.8	89.9
TSURUG	0	IP	17 28 57.4	IS	30 25.0							N	6 W	U	8	811.2	87.6
MAEBAS	0	EP	17 28 57.7	S	30 26.0	32	2.1	25	2.5	13	2.7					822.4	88.3
KARUIZ	0	IP	17 28 57.8	S	30 29.6									E	2 U 2	820.3	91.8
OKAYAM	0	IP	17 28 58.5	IS	30 28.3	23	2.6	12	3.8	6	3.6	N	10 W	10 U	13	831.9	89.8
MATSUM	0	P	17 28 58.8	S	30 28.8											818.5	90.0
MATSUS	0	IP	17 28 59.4	ES	30 28							N	W	U		846.7	88.6
CHOSHI	0	X	17 28	IS	30 15.8											753.6	
MITO	0	X	17 28	IS	30 27.2	90	2.2	84	2.0	53	2.5			U	6	821.4	
FUKUI	0	IX	17 29 00.4	IS	30 21.6											845.8	
MIYAZA	0	P	17 29 01.0	S	30 31.6	31	2.0	12	2.4	7	2.2					854.1	90.6
TOYOOK	0	IP	17 29 01.1	S	30 31.0	32	1.0	16	1.0	8	2.4	N	10 W	7 U	7	856.0	89.9
MATSUY	0	IP	17 29 01.2	IS	30 31.2	18	2.5	7	2.1	4	2.1	N	5 W	7 U	11	845.8	90.0
NAGANO	0	EP	17 29 02.0	ES	30 30.5	6	0.7	8	0.6	6	0.8					860.2	88.5
TOYAMA	0	IP	17 29 03.8	S	30 40.4	21	2.8	18	2.8	13	2.8	N	6	U	7	884.7	96.6
KANAZA	0	IP	17 29 04.0	X	30 22.8	25	4.0	19	3.2	16	3.8			U	14	882.9	
OITA	0	IP	17 29 04.4	IS	30 38.6	43	2.2	43	3.5	16	3.1			U	12	898.5	94.2
TAKADA	0	EP	17 29 04.9													908.2	
ONAHAM	0	IP	17 29 05.0	S	30 36.8	93	1.6	94	0.8	41	0.7	N	8	U	19	888.4	91.8
SHIRAK	0	P	17 29 05.6	S	30 39.1											901.5	93.5
HIROSH	0	IP	17 29 05.6	IS	30 40.2	19	3.2	13	5.8	13	2.2	N	2 W	4 U	10	906.6	94.6
KUMAMO	0	P	17 29 09.7	IS	30 48.3	43	2.5	25	2.7	7	0.8			U	7	953.8	98.6
WAJIMA	0	IP	17 29 11.0	ES	30 46	27	0.8	20	1.2	8	1.4	N	5	U	10	965.2	95.0
HAMADA	0	P	17 29 11.8	S	30 51.0	12	2.2	19	3.8	6	1.6	N	8 W	2 U	6	969.8	99.2
FUKUSH	0	IP	17 29 13.3	S	30 53.3	58	0.9	70	1.0	20	0.8	N	11 E	2 U	11	973.8	100.0
SAIGO	0	IP	17 29 13.5	S	30 55.2	5	1.8	8	3.0	5	2.0	N	1 W	1 U	1	995.0	101.7
SHIMON	0	IP	17 29 13.6	S	30 55.0	8	2.6	19	4.4	8	1.8	N	4 W	4 U	9	993.4	101.4
SAGA	0	IP	17 29 14.8	X	30 47.4							S	6 W	6 U	4	1008.3	
NAGASA	0	P	17 29 16.5	S	30 59.4							N	E			1022.5	102.9
FUKUOK	0	EP	17 29 16.8	ES	31 00.0	12	2.0	13	3.0	4	1.6					1018.5	103.2
YAMAGA	0	P	17 29 19.3	ES	31 03.3							N	2 E	5 U	14	1027.9	104.0
SENDAI	0	IP	17 29 19.7	X	31 17.0	32	2.0	34	2.4	15	4.0	N	11	U	20	1033.0	
ISHINO	0	IP	17 29 22.4	IS	31 10.4	18	1.0	14	1.2	8	2.0	N	9 E	3 U	4	1055.9	108.0
SAKATA	0	IP	17 29 27.1	ES	31 28.9									U	18	1098.2	116.8
OFUNAT	0	IP	17 29 29.6	S	31 28.8	8	1.2	9	0.8	9	5.0	N	5	U	4	1131.6	114.2
				SCS	41 10.8												
MIZUSA	0	IP	17 29 29.6	IS	31 28.9	45	2.1	41	1.5	30	1.2		E	3		1131.7	114.3
MORIOK	0	P	17 29 35.5	ES	31 41.5	6	0.4	11	0.4	4	4.0			U	1	1194.2	126.0
AKITA	0	P	17 29 35.8	EX	31 36	30	5.2	21	2.6	24	2.6			U	16	1189.3	
HACHIN	0	P	17 29 44.6	ES	31 54.8	8	4.0	6	4.0	9	5.6	N	1 E	1 U	1	1289.4	130.2
AOMORI	0	IP	17 29 48.0	ES	31 51.8	30	1.7	26	1.3	13	1.9	S	12 E	10 D	9	1314.5	123.8
HAKODA	0	IP	17 29 58.1	ES	32 18	10	1.2	5	4.4	11	1.4	N	6 E	1 U	9	1424.7	139.9
URAKAW	0	IP	17 30 04.9	S	32 31.0	7	3.2	7	3.0	7	2.2	N	1	U	2	1486.3	146.1
SAPPOR	0	P	17 30 10.8	ES	32 43	8	2.4	6	2.2	5	2.2			U	4	1566.7	152.2
OBIHIR	0	EX	17 30 14													1576.7	
KUSHIR	0	EP	17 30 16	ES	33 06	6	0.6	5	0.4	3	2.2					1607.5	170.0
ASAHIK	0	IP	17 30 20.6	S	33 08.7	6	3.4	5	3.4	4	2.0	S	W	D		1656.3	168.1
KAGOSH	0	X	17 30 34.8			38	3.3	21	2.6	10	1.7					921.2	
YAKUSH	0	X	17 30 35.6			8	3.2	6	5.8	4	7.0					900.9	
			OT= 25 3 46 57.1 +/- 1.1													
			OFF FUKUSHIMA PREF													
			LAT= 37 17 +/- 2 LONG= 141 50 +/- 6													
			H= 50 MAG=4.0 CLASS=U													
FUKUSH	0	EP	03 47 17.8	ES	47 32.3	18	1.1	12	1.0							131.1	14.5
SENDAI	0	IP	03 47 18.6	S	47 32.4	6	0.5	8	0.5	4	0.6			U	4	136.0	13.8
MITO	0	EP	03 47 21.7	IS	47 38.9	5	0.8	4	0.8	3	1.0					157.6	17.2
ONAHAM	0	EX	03 47 22.5	X	47 37.8	11	1.1	20	1.1	4	0.5					90.5	
KAKIOK	0	EP	03 47 25	S	47 44	7	1.0	6	0.5	3	0.8					187.2	19.0

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A	/T *	S	E-W A	/T *	S	U-D A	/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
UTSUNO	0	EP	03	47	27.5	ES	47	47.5													192.9	20.0
MIZUSA	0	EP	03	47	32.1							3	0.7		2	0.9					214.3	
MATSUS	0	IP	03	47	44.5	S	48	24													333.4	39.5
OT= 25 9 59 22.6									USCGS													
E OFF TAIWAN																						
LAT= 24 30					LONG= 122 12																	
H= 38			MAG=6.0 CLASS=U																			
YAKUSH	0	IP	10	01	42.0	S	03	40.0	98	9.0		115	9.4		108	8.0		N 7	E 9	U 9	1050.9	118.0
FUKUE	0	P	10	01	50.4	S	04	21.0	76	5.4		66	9.2		50	8.4		N 10	E 6	U 10	1115.3	150.6
KAGOSH	0	P	10	01	54.7	S	04	01.3	388	2.6		250	4.6		113	3.1					1133.9	126.6
NAGASA	0	IP	10	01	58.6	IS	03	54.0										N 33	E 17	U 11	1178.1	115.4
KUMAMO	0	P	10	02	05.8	S	04	26.1	204	2.8		202	2.6		109	3.0		N 21	E 20	U 12	1239.3	140.3
MIYAZA	0	P	10	02	06.0	S	04	22.0	125	7.0		156	7.4		137	4.6		S 26	W 39	D 41	1221.3	136.0
IZUHAR	0	P	10	02	09.8	ES	04	22.7										N 6	E 2	U 5	1275.6	132.9
FUKUOK	0	EP	10	02	10.7	ES	04	26.0	121	4.4		79	4.8		116	4.8		N 12	E 7	U 22	1281.8	135.3
NOBEOK	0	EP	10	02	11.3	ES	04	30.2	150	7.1		200	9.2								1287.9	138.9
ASOSAN	0	EP	10	02	12.8	EX	04	29.0													1268.7	
OITA	0	IP	10	02	16.2	S	04	49.4	302	4.3		262	7.5		149	5.2		N 16	E 14	U 17	1332.9	153.2
SHIMON	0	EP	10	02	19.0	ES	04	40				950	5.2		1150	5.0		N	E 14	U 17	1347.1	141.0
ASHIZU	0	EP	10	02	20.0	ES	04	39.6	38	8.6		37	8.6		28	9.6					1393.5	139.6
UWAJIM	0	EP	10	02	25.3	ES	04	56.0													1396.4	147.7
KOCHI	0	EP	10	02	28.7	ES	05	16.4													1488.9	167.7
MATSUY	0	EP	10	02	30.7	IS	05	06.5	62	8.5		57	10.6		59	8.4					1457.2	155.8
MUROTO	0	EP	10	02	31.0	ES	04	59.0	33	11.2		56	9.8		35	18.0					1515.5	148.0
SAGA	0	IX	10	02	31.4	EX	04	22.9										N 12	E 10	U 6	1249.1	
HIROSH	0	P	10	02	31.8	ES	05	11.2	45	12.4		68	12.0		48	4.1		N 4	E 5	U 3	1474.5	159.4
HAMADA	0	P	10	02	34.6	S	05	10.0	80	4.6		74	5.2		100	5.0		N 5	E 5	U 8	1494.1	155.4
						EL	06	34.0														
TAKAMA	0	EP	10	02	39.8	ES	05	19.3	40	10.4		49	18.9		22	19.5					1580.6	159.5
TURUGI	0	EP	10	02	44.0																1550.5	
OKAYAM	0	EP	10	02	46.0	S	05	32.0	15	4.8		20	4.6		15	5.2		S	W 3	D 7	1597.3	166.0
SUMOTO	0	EP	10	02	47.1	ES	05	23.2	53	8.0		33	24.0		29	13.0					1642.4	156.1
						EX	03	22.3														
						EX	04	37.4														
						EX	05	49.4														
						L	07	12														
SHIONO	0	EP	10	02	49.9	ES	05	40.2	54	21.7		43	23.5		13	26.6					1649.0	170.3
						EX	06	03.4														
OWASE	0	P	10	02	50.0	ES	06	24.6	25	16.8		18	20.0		30	11.6					1720.4	214.6
TOKUSH	0	EP	10	02	50.3																1599.9	
YONAGO	0	EP	10	02	51.1	ES	05	47.1													1617.1	176.0
SAIGO	0	P	10	02	57.0	S	05	38.9	37	6.1		41	9.6		29	8.4		S 1	W 1	D	1678.6	161.9
						X	03	15.2														
						L	06	03.4														
KOBE	0	EX	10	02	59																1686.3	
AIKAWA	0	EP	10	03		EL	07	29.6	31	17.4		26	10.8		27	5.8					2133.2	
KYOTO	0	EP	10	03	01.5	ES	05	51.0	24	8.6		23	21.0		19	16.0					1748.4	169.5
OSAKA	0	EX	10	03	02.4	X	04	51.0	204	5.4		215	4.6		60	22.4					1709.4	
WAKAYA	0	P	10	03	03.0	S	05	53.0	34	16.9		34	24.0		24	20.4					1653.9	
TOYOOK	0	P	10	03	03.1	ES	05	58.0	50	10.2		15	8.2		37	20.3		S 10	W 11	D 10	1722.0	174.9
GIFU	0	EP	10	03	08				31			25			29						1848.9	
TSU	0	EP	10	03	11.9																1785.1	
HIKONE	0	EP	10	03	12.6	ES	05	56.3	34	8.1					46	22.6					1803.0	163.7
						L	07	23.7														
						EX	10	44.7														
HAMAMA	0	EP	10	03	13				35	6.0		30	4.2		22	10.0					1876.8	
NAGOYA	0	EP	10	03	16.8	ES	06	13.2	23	3.4		27	3.6		27	22.8			W 6	D 8	1848.5	176.4
OMAEZA	0	EP	10	03	19	S	06	19.6	76	7.6		79	14.0		24	14.0			E 6	U	1908.6	180.6
IIDA	0	EX	10	03	20.4																1934.9	
SHIZUO	0	P	10	03	22.1	S	06	53.0	26	9.6		20	6.4		25	7.8					1945.3	210.9
KANAZA	0	P	10	03	23.6	ES	06	52.4	51	7.2		62	5.6		21	8.0		S 11	W 18	D 15	1919.8	208.8
TOYAMA	0	EP	10	03	24	EX	07	37	77	7.0		61	7.8		52	4.6					1969.7	
MISHIM	0	EP	10	03	24.1	ES	06	53.4	38	9.5		38	7.3		41	7.5		N 4	E 13	U 11	1993.9	209.3
WAJIMA	0	P	10	03	27.6	X	03	52.6	30	4.6		48	5.0		40	5.2					1997.8	
						X	05	18														
						X	06	54.6														
						X	07	02														
FUNATS	0	EP	10	03	28.1	ES	07	13.2													2004.0	225.1
AJIRO	0	EP	10	03	28.2	ES	06	46.0	37	7.6		33	6.2		30	6.2					2003.0	197.8
HACHIJ	0	IP	10	03	28.8	S	07	15.6	100			59			52			S 4	W 4	D 16	1958.8	226.8
OSHIMA	0	P	10	03	30.2	ES	07	07.6	87	9.6		57	4.9		30	5.4					2009.3	217.4
KOFU	0	EP	10	03	30.8	ES	07	15.6	27	6.0		20	8.0		24	8.0					1998.7	224.8
MATSUS	0	IP	10	03	30.8	S	07	13										N	E	U	2028.8	222.2
CHICHI	0	EP	10	03	32.6	X	07	23.5													2058.1	
KARUIZ	0	EP	10	03	34.0	ES	07	14.5													2040.7	220.5
TOMISA	0	X	10	03	35.0				105	9.0		68	6.0		110	5.2					2058.8	
YOKOHA	0	EP	10	03	35.8	EX	07	09.5	174	12.2					75	5.2				U 11	2069.0	

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A	/T *	S	E-W A	/T *	S	U-D A	/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
TAKADA	0	EP	10	03	36.6	ES	07	30.6													2069.9	234.0
TOKYO	0	P	10	03	39.2	EX	07	04.8	153	5.6		93	7.4		54	6.0					2091.3	
KUMAGA	0	EP	10	03	40.2	ES	07	16.2	87	8.4		95	6.6		69	4.8					2090.4	216.0
CHOSHI	0	EP	10	03	41.5	ES	07	41.1													2178.1	239.6
						EL	08	07.5														
						LX	09	11.9														
KAKIOK	0	X	10	03	45							17	2.6		20	1.3		13	2.3		2156.7	
MITO	0	EX	10	03	45.0							44	6.9		40	4.4		33	4.8		2186.5	
UTSUNO	0	EP	10	03	47.1							29	31.1		16	18.8					2151.3	
NIIGAT	0	EP	10	03	49.2							140	8.0		153	7.0		70	5.3		2180.7	
ONAHAM	0	EP	10	03	53.6	ES	07	33.6				28	5.3		37	5.1		33	5.4		2252.9	220.0
FUKUSH	0	EX	10	03	55.6							15	4.5		22	16.0					2271.2	
SENDAI	0	EP	10	03	58	ES	07	56.5				30	4.8		23	4.6		34	21.4	D 2	2333.9	238.5
						X	04	13.0														
						EL	10	53														
						X	15	22														
AKITA	0	EX	10	04	02.4	EX	08	24				50	5.2		55	6.6		32	6.2		2377.9	
ISHINO	0	IP	10	04	06.5	S	08	03.0				21	5.0		21	5.0		27	4.6	N 0 E 0 U 0	2373.3	236.5
OFUNAT	0	EP	10	04	10.0	ES	08	28.0				21	7.0		13	4.8		18	4.6		2443.6	258.0
						X	04	42.4														
MIZUSA	0	EP	10	04	10.2	EX	04	40.5							6	5.5		14	3.0		2407.4	
MORIOK	0	EP	10	04	11.4	S	08	41.0				19	5.0		14	9.2		23	5.0		2447.7	269.6
						IX	04	12.3														
						X	04	44.0														
						EL	10	52.0														
						EL	14	42.0														
AOMORI	0	EP	10	04	12.0							37	4.6		39	5.0		22	5.5		2501.0	
MIYAKO	0	EP	10	04	15	ES	08	54.0				20	22.0		18	22.0		21	20.6		2499.0	279.0
HACHIN	0	EP	10	04	16.5	ES	08	44.0				17	8.0		19	9.4		27	17.6	D	2528.6	267.5
HAKODA	0	EP	10	04	21	ES	09	00				31	5.0		25	5.4		25	12.0		2572.9	279.0
SAKATA	0	EX	10	04	21.7							200	10.8		150	11.2					2303.0	
SAPPOR	0	P	10	04	31.5							15	4.8		27	5.6		52	6.2	U 4	2701.7	
URAKAW	0	EP	10	04	35	ES	08	58				31	10.0		24	7.4		33	5.0	N 2 E 2 U 4	2724.5	263.0
ASAHIK	0	P	10	04	42.8	EX	05	37.2				13	5.2		14	4.4		16	4.0	D	2817.4	
OBIHIR	0	EX	10	04	44																2806.5	
KUSHIR	0	P	10	04	51.0	S	09	51.0				12	16.0		13	11.4		11	4.0	D 8	2885.0	300.0
WAKKAN	0	EX	10	04	53.0							14	5.6								2906.4	
ABASHI	0	EP	10	04	56.0	ES	09	55.0				19	7.4		20	6.2		14	6.0		2950.7	299.0
NEMURO	0	EP	10	04	58	ES	09	50				8	8.4		9	11.2		12	5.4		2985.6	292.0
OT= 25 14 6 47.0 +/- 0.5																						
OFF IBARAKI PREF																						
LAT= 36 35 +/- 1					LONG= 141 11 +/- 3																	
H= 40			MAG=4.3 CLASS=S																			
ONAHAM	2	IP	14	06	57.4	IS	07	04.2	223	0.7		186	1.0		39	0.4		S 11	E 13	D 64	47.1	06.8
KAKIOK	2	IP	14	07	04.0	S	07	14.6	41	0.6		42	0.6		25	0.8		N 3	E 9	D 6	97.0	10.6
CHOSHI	1	EP	14	07	05.0	ES	07	12.5	48	0.6		38	0.6		20	0.4					100.0	07.5
SHIRAK	1	IP	14	07	05.3	S	07	16.4												D 14	104.1	11.1
UTSUNO	X	P	14	07	05.8	ES	07	18.7	20	0.3		15	0.3								117.5	12.9
FUKUSH	0	EP	14	07	09.1	ES	07	26.0	27	0.9		30	0.8								144.6	16.9
MISHIM	0	EX	14	07	11	X	08	04.1	6	1.1		6	1.1		4	1.3					260.9	
KUMAGA	0	EP	14	07	12.8	ES	07	31.4	14	0.6		10	0.8		3	1.0					168.5	18.6
TOKYO	0	EP	14	07	13.0	ES	07	31.2	10			10									162.4	18.2
SENDAI	0	P	14	07	15.4	S	07	35.0	9	1.0		8	1.0		4	0.4					187.7	19.6
MATSUS	0	IP	14	07	25.7	ES	07	55											E	D	266.3	29.3
KOFU	0	EP	14	07	27.6	ES	08	01.4	8	1.6		13	1.6		3	1.4					257.3	33.8
MIZUSA	0	EP	14	07	29.1							4	1.0								283.0	
OT= 25 21 35 40.1 +/- 0.2																						
W PART OF NAGANO PREF																						
LAT= 36 17 +/- 1					LONG= 137 42 +/- 1																	
H= 0			MAG=3.9 CLASS=L																			
MATSUM	0	IP	21	35	47.8	IS	35	51.6												N 1 W 5 D 28	25.0	03.8
TAKAYA	0	EP	21	35	49.8	IS	35	55.0													42.6	05.2
MATSUS	0	IP	21	35	51.8	S	35	59											E	D	53.7	07.2
TOYAMA	0	P	21	35	54.0	S	36	02.6	26	3.2		19	2.4		12	3.0				D 4	64.4	08.6
KARUIZ	0	P	21	35	56.0	X	35	07.5												D	76.7	
IIDA	0	EP	21	35	57.4	ES	36	08.0	8	1.2		6	3.0		2	1.2					86.6	10.6
KANAZA	0	EP	21	35	59.9	ES	36	16.0	7	4.0		9	4.0		5	2.8					98.7	16.1
FUKUI	0	EX	21	36	05.8																135.0	
WAJIMA	0	EX	21	36	06				11	0.8		11	0.8								142.1	
NAGOYA	0	EP	21	36	06.6	S	36	25.0	10	2.6		6	0.6		2	1.0		N 1	W 1	U 1	140.6	18.4
MAEBAS	0	EP	21	36	06.8	ES	36	21.7	17	4.0		6	4.0		5	3.9					123.2	14.9
KUMAGA	0	EX	21	36	09.2				13	5.0		10	4.8		7	3.6					152.2	

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STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OMAEZA	0	EP	21 36 11.8			9	4.2	13	4.4						192.1	
HAMAMA	0	P	21 36 12.3	S	36 32.5	7	1.4	15	3.2	4	1.6			U 1	174.7	20.2
SHIZUO	0	EP	21 36 13.4	IS	36 33.1	5	0.4	5	0.6	2	1.0				158.8	19.7

OT= 26 6 14 21.5 +/- 0.4
ARIAKE SEA
LAT= 33 1 +/- 1 LONG= 130 18 +/- 2
H= 20 MAG=3.3 CLASS=U

SAGA	0	EP	06 14 29.4	IS	14 31.4										25.3	02.0
KUMAMO	0	IP	06 14 30.2	S	14 36.3	10	0.3	11	0.2	7	0.2	S 3		D 3	44.7	06.1
NAGASA	0	P	06 14 32.0	S	14 37.7										52.3	05.7
FUKUOK	0	IP	06 14 33.7	IS	14 37.6	7	0.3	9	0.2						62.9	03.9

OT= 28 13 19 2.8 +/- 0.3
SAITAMA-GUNMA BORDER
LAT= 36 16 +/- 6 LONG= 139 13 +/- 2
H=100 CLASS=U

KUMAGA	0	P	13 19 18.4	S	19 28.0	9	0.4	5	0.2	3	0.4			D 3	20.2	09.6
UTSUNO	0	EP	13 19 21.1	S	19 32.7	16	0.2	33	0.2						66.5	11.6
KAKIOK	0	EP	13 19 22	S	19 35	10	0.5	9	0.9	5	0.5				87.9	13.0
MATSUS	0	IP	13 19 22.6	S	19 36									U	95.3	13.4
MITO	0	EP	13 19 24.0	ES	19 39.8	7	0.6	9	0.6	4	0.5				113.4	15.8
KOFU	0	EP	13 19 25.4	ES	19 34.8	7	0.4	8	0.4	2	0.4				89.3	09.4

OT= 29 2 21 26.7 +/- 0.4
OFF IWATE PREF
LAT= 40 9 +/- 1 LONG= 142 24 +/- 2
H= 30 MAG=4.5 CLASS=S

MIYAKO	1	EP	02 21 39.3	S	21 47.3	11	0	18	0						67.1	08.0
HACHIN	X	IP	02 21 41.4	IS	21 51.8	43	0.4	41	0.4	11	0.6	S 7 E 10 D 5			85.2	10.4
MORIOK	1	IP	02 21 46.1	S	22 01.0	53	0.4	38	0.4	12	0.3	N 1 E 2 D 2			116.7	14.9
OFUNAT	0	EP	02 21 49.0	IS	22 03.2	21	0.0	12	1.2	9	0.6				134.3	14.2
AOMORI	0	P	02 21 51.8	S	22 09.2	91	0.7	104	0.7	35	0.7				155.8	17.4
MIZUSA	0	EP	02 21 54.0	IS	22 10.6	35	2.1	42	0.5						156.7	16.6
AKITA	0	X	02 21 59.0			13	3.4	28	4.6	9	2.8				202.2	
ISHINO	0	P	02 22 00.0	S	22 22.2	10	0.2	10	0.6	5	0.6				213.6	22.2
HAKODA	0	IP	02 22 01.0	IS	22 27.6	6	1.0	8	1.0	3	1.4			U 1	230.7	26.6
URAKAW	0	EP	02 22 02.8	S	22 26.6	10	0.6	9	0.4	1	0.6				225.3	23.8
SENDAI	0	EX	02 22 08	EX	22 31	6	0.4	7	0.4	4	0.4				246.6	
SAKATA	0	X	02 22 12.8												260.2	
FUKUSH	0	EX	02 22 16.5			16	1.1	12	0.9	3	0.6				313.7	
OBIHIR	0	X	02 22 20												315.2	
KUSHIR	0	EX	02 22 30	ES	22 49	6	0.4	5	0.4	2	0.4				355.5	
KAKIOK	0	X	02 22 39			9	1.0	5	1.1	3	0.9				475.9	
MATSUS	0	IP	02 22 41.3											D	543.0	

OT= 30 20 43 55.2 +/- 0.4
OFF IWATE PREF
LAT= 39 53 +/- 1 LONG= 142 21 +/- 2
H= 20 MAG=4.5 CLASS=S

MIYAKO	2	IP	20 44 03.8	IS	44 10.4	41	0.0	48	0.0	30	0.0				42.1	06.6
HACHIN	1	IP	20 44 13.0	IS	44 28.2	17	0.4	24	0.3	10	0.8	N 2 W 1 U 1			100.1	10.2
MORIOK	X	IP	20 44 13.9	IS	44 25.0	24	0.4	29	0.6	9	0.4	N 0 E 2 D 1			103.3	11.1
OFUNAT	2	IP	20 44 14.6	IS	44 26.8	66	0.0	41	0.2	30	0.4	N 1		D 1	106.2	12.2
MIZUSA	0	EP	20 44 18.8	ES	44 38.8	33	0.7	29	0.8	12	0.7				133.7	15.0
ISHINO	0	IP	20 44 25.5	IS	44 45.4	16	0.2	23	0.4	6	1.0	N 0 W 0 D 0			185.5	19.9
SENDAI	0	EP	20 44 29.6	S	44 55.5	14	0.8	12	0.6	7	0.4				219.6	25.9
YAMAGA	0	EP	20 44 34.3	IS	45 02.3										250.4	28.0
FUKUSH	0	EP	20 44 38.5	ES	45 11.8	21	1.0	17	1.2	6	0.6				286.8	33.3
AOMORI	0	X	20 44 41.3			24	1.1	22	1.1	9	1.4				168.7	
AKITA	0	X	20 44 50			7	1.6	6	2.2						193.4	
KAKIOK	0	EP	20 45 03			9	1.0	6	1.0	3	0.5				447.3	
KUMAGA	0	EP	20 45 05.8	X	46 15.0	7	1.0	5	1.2	2	1.4				489.6	
MATSUS	0	IP	20 45 09.5	X	46 37							S W U			518.9	
ONAHAM	0	X	20 45 23.9			11	1.0	13	0.9	3	0.5				349.6	

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OT= 31 5 48 46.6 +/- 0.3
E OFF OITA PREF
LAT= 32 55 +/- 1 LONG= 132 3 +/- 2
H= 0 MAG=3.7 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	N-S A/T S	E-W *	E-W A/T S	U-D *	U-D A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OITA	0	EP	05 48 58.5	S	49 05.9	23	0.4	38	0.4						56.1	07.4
NOBEOK	0	P	05 48 59.0	ES	49 08.0									S 2 W 2 U 3	50.5	09.0
UWAJIM	1	IP	05 49 00.2	IS	49 08.1										58.5	07.9
MATSUY	0	EP	05 49 09.1	ES	49 24.8	4	0.6	7	0.6	2	0.7				122.8	15.7
MIYAZA	0	P	05 49 09.4	S	49 26.4	6	0.8	6	0.7	3	0.7				125.4	17.0

OT= 31 9 52 12.3 +/- 0.3
NEAR URAKAWA
LAT= 42 1 +/- 1 LONG= 142 25 +/- 2
H= 50 MAG=4.4 CLASS=S

URAKAW	1	IP	09 52 22.1	IS	52 31.0	117	1.4	162	0.2	29	1.4	N			33.9	08.9
MURORA	0	P	09 52 32.1	IS	52 47.4									S E 2 D 3	123.1	15.3
OBIHIR	0	P	09 52 32.6	IS	52 47.3										120.2	14.7
HAKODA	0	IP	09 52 34.2	IS	52 51.7	31	1.3	19	0.6	7	1.1	N 1 E 2 D 3			139.4	17.5
SAPPOR	1	IP	09 52 34.5	IS	52 51.8	26	0.6	19	0.6	10	0.8			D 2	146.1	17.3
HACHIN	0	EP	09 52 40.3	S	53 00.4	16	0.4	16	0.3	2	0.4				181.7	20.1
KUSHIR	0	EP	09 52 41	ES	52 59	8	0.6	8	0.3	3	0.4				194.6	18.0
AOMORI	0	EP	09 52 41.2	ES	53 01.9	22	1.5	27	1.5	9	1.1				190.8	20.7
ASAHIK	0	P	09 52 41.7	S	53 03.6	6	1.4	5	0.9	4	0.8				194.8	21.9
MORIOK	0	IP	09 52 52.4	ES	53 22.4	5	0.4	8	0.4	1	0.4			U 0	278.3	30.0
MIZUSA	0	EP	09 53 05.1	X	54 38.8	8	1.7	7	1.5	6	1.2				338.1	
OSAKA	0	IX	09 53 07.6	IX	53 08.8	5	0.2	5	0.2	3	0.2				1014.4	
MATSUS	0	P	09 53 50												708.1	
KOBE	0	X	09 53												1029.5	

OT= 31 23 47 34.9 +/- 0.2
E OFF AOMORI PREF
LAT= 41 12 +/- 1 LONG= 142 10 +/- 2
H= 40 MAG=4.2 CLASS=L

HACHIN	1	IP	23 47 51.0	IS	48 02.0	67	0.6	66	0.6	11	0.4			D 1	92.4	11.0
URAKAW	0	IP	23 47 54.4	ES	48 06	3	0.6	5	0.4	1	0.4			U 1	118.1	11.6
AOMORI	0	EP	23 47 54.4	ES	48 11.2	38	0.6	34	0.9	10	0.9				128.9	16.8
HAKODA	0	IP	23 47 56.5	S	48 12.8	4	0.9	7	0.5	2	0.5	E 1 D 1			135.9	16.3
MORIOK	0	IP	23 48 03.7	IS	48 24.5	7	0.4	10	0.4	3	0.2	E 0			187.2	20.8
OFUNAT	0	EP	23 48 10.8	ES	48 35.6	5	0.0	2	0.2	1	0.6				240.5	24.8
MATSUS	0	P	23 48 58												621.0	

List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE		PHASE AND TIME H M S	J. S. T	M S	INITIAL MOTION
1	IP	13 09 46.9	S	10 09.	S W U
1	IP	13 43 56.6	IS	44 21.6	S U
2	EP	04 21 11.			
2	IP	04 37 09.8	S	37 40.	W U
2	P	09 23 06.			
2	IP	18 44 03.9	S	44 17.	E D
3	EP	00 02 50.			
3	L	00 15 00.			
3	EP	00 43 22.			
3	P	03 35 56.	S	45 36.	
3	IP	05 54 09.3	S	54 32.	N W U
3	P	20 27 03.5	S	27 41.	
3	IP	22 30 04.5			D
4	EP	16 32 08.	ES	35 08.	
4	EP	16 48 59.	S	50 15.	
4	IP	19 32 29.4			U
4	IP	21 27 27.7	S	27 52.	U
4	IP	21 38 28.7	S	38 37.	N E D
5	P	02 20 27.	S	21 07.	
5	P	02 29 26.	S	35 48.	
5	IP	06 32 57.1			N U
5	EP	13 15 47.	S	26 00.	
5	IP	17 22 01.6	S	22 32.	E D
5	P	19 00 50.			
5	IP	20 05 55.2			U
6	IP	00 58 05.0	S	00 27.	N E D
6	EP	09 19 47.			
6	P	13 12 06.3			
6	EL	16 52 48.			
7	P	10 34 12.			
7	IP	15 37 47.4	S	37 58.	S W U
7	P	17 32 10.	S	35 40.	
7	P	18 11 03.	S	14 30.	
7	IP	19 43 07.1			N W U
7	IP	19 56 50.3	S	58 30.	S U
7	IP	23 41 54.5	S	45 44.	N D
8	IP	06 43 46.0			U
8	EP	13 02 03.			
8	IP	14 34 10.0	S	39 12.	U
9	IP	02 08 04.5	S	14 56.	N E U
9	IP	03 16 22.0	S	22 16.	U
9	EP	06 13 23.	S	18 32.	
9	IP	06 23 07.0			W
9	P	06 24 00.	S	29 30.	
9	P	11 51 13.	S	52 32.	D
9	P	22 36 04.	S	42 48.	
9	IP	23 15 11.8	S	18 40.	D
10	IP	02 31 59.0	IS	40 24.0	S E D
10	P	02 51 49.			
10	P	02 59 43.			
10	P	03 43 16.			
10	P	10 12 08.	S	15 40.	
10	P	12 10 23.	S	17 28.	U
10	P	14 23 19.	ES	30 26.	
10	IP	15 37 08.5	S	45 40.	U
10	P	15 47 37.5	S	48 04.	
10	S	15 52 56.			
11	IP	01 27 02.5	S	27 21.	W U
11	IP	04 14 25.0			U
11	IP	11 16 54.3	S	17 19.	U
11	P	15 14 44.	S	15 30.	
12	IP	00 53 59.4	S	55 16.	S W D
12	IP	01 26 42.9	S	28 00.	U
12	EP	01 51 43.	ES	53 00.	
12	IP	03 29 06.5	S	30 22.5	
12	P	03 43 42.	ES	45 26.	
12	P	05 28 49.			
12	IP	05 46 36.6			U
12	IP	07 51 20.1	S	51 57.	U
12	IP	07 56 57.0	ES	58 21.	S W U
12	IP	12 19 31.1	S	19 54.8	U
12	P	12 52 58.	S	55 31.	
12	IP	13 08 55.4			U
12	IP	15 45 17.8	ES	53 30.	S E D
12	P	21 57 34.1	S	00 43.	S U
13	IP	03 39 42.5	IS	46 05.5	N E U
13	IP	05 48 46.5			N W
13	P	09 23 56.8	S	25 14.	
13	IP	12 41 39.8	S	41 56.7	
13	P	17 13 30.	ES	14 00.	
13	P	21 47 26.			
14	IP	01 03 15.0			
14	P	13 18 34.4			D
14	P	21 14 43.	ES	16 02.	
15	P	01 18 12.			
15	P	12 34 23.5	ES	38 42.	U
15	EP	17 15 40.			
15	EP	17 19 08.			
16	EP	02 46 11.			
16	P	02 52 01.5			
16	P	08 44 13.			
16	P	16 02 54.5	S	03 25.	
16	IP	20 01 28.8	S	01 45.	D
16	EP	22 37 14.	ES	46 52.	
17	IP	02 04 51.7	ES	10 18.	D
17	IP	02 27 02.2	S	27 18.0	S E D
17	IP	02 54 11.3	S	54 34.	S E U
17	P	05 29 38.			
17	IP	06 13 47.7			D
17	P	08 26 46.	ES	28 15.	
17	P	08 33 48.			
17	P	12 43 12.5	S	44 29.	U
17	P	15 18 52.5	S	19 04.1	
17	IP	18 00 04.9	S	00 24.	N E D
17	IP	18 56 11.3			U
17	IP	22 51 34.0			S D
17	IP	23 19 09.3			S E D
17	IP	23 43 35.4	S	43 49.	E D
18	IP	06 10 35.2			U
18	P	10 02 35.			
18	IP	10 21 57.5	IS	30 20.	U
18	P	19 33 11.			
18	IP	23 42 08.4			U
19	IP	02 01 36.2	S	02 53.	D
19	IP	02 53 30.9	S	54 45.	U
19	P	04 37 06.0			U
19	P	07 18 33.			
19	IP	08 44 47.5			N U
19	EP	15 19 32.			
19	P	15 27 35.	S	28 48.	
20	EP	10 22 30.			
20	IP	16 07 29.5	S	07 53.5	W U
20	IP	23 10 29.3			N U
21	IP	01 06 51.6			S E D
21	IP	01 06 51.6			S E D
21	P	11 55 11.			
21	IP	14 09 21.1			U
21	P	15 00 29.			
22	P	02 07 05.			
22	P	03 51 04.			
22	P	05 07 44.3	ES	11 09.	
22	IP	08 50 29.6	S	50 56.5	W U
22	P	10 11 42.			
22	EP	13 22 20.			
22	P	14 00 23.			
22	IP	19 02 01.3			
23	P	02 25 40.			D
23	P	04 10 07.6	ES	10 27.	

DATE		PHASE AND TIME H M S		M S	INITIAL MOTION
23	P	10 20 48.			
23	P	11 55 50.	S	57 33.	
23	IP	17 28 59.4	ES	30 28.	N W U
23	P	18 45 19.			
23	P	18 57 31.			
23	P	20 03 40.			
23	IP	21 23 46.4			D
24	IP	07 28 17.8	ES	28 56.	W U
24	EP	08 22 22.			
24	P	09 58 23.			
24	P	12 24 57.8			
24	P	15 33 01.			
24	IP	20 00 20.7			U
24	IP	22 40 53.2			N
24	P	23 38 00.	S	38 43.	
25	IP	00 21 22.0	S	21 34.2	U
25	IP	02 26 19.5			U
25	IP	03 47 44.5	S	48 24.	
25	EP	07 03 39.			
25	IP	10 03 30.8	S	07 13.	N E U
25	IP	10 56 37.3	S	57 55.	D
25	IP	11 01 35.7			D
25	P	13 25 44.	IS	26 13.0	
25	IP	14 07 25.7	ES	07 55.	E D
25	IP	16 28 18.6	ES	29 36.	S W U
25	P	17 58 50.			
25	P	18 19 18.			
25	P	18 28 04.			
25	IP	21 35 51.8	S	35 59.	E D
26	P	00 22 27.			
26	IP	05 11 31.0	S	11 55.	E D
26	P	09 26 30.	ES	30 03.	
26	IP	14 25 32.2	S	26 52.	
26	P	17 22 37.			
26	EP	17 56 09.			
26	IP	18 36 32.2			U
26	IP	21 51 08.3			U
27	IP	02 29 23.5			N U
27	P	08 17 38.	ES	20 19.	
27	IP	08 23 07.0			
27	P	17 44 20.	ES	44 55.	
27	P	19 45 34.			
27	EP	21 56 44.			
27	P	22 57 30.			
28	IP	00 35 08.0	S	35 48.	S W D
28	IP	13 19 22.6	S	19 36.	U
28	IP	18 16 59.0			
28	EP	20 36 40.			
28	IP	23 19 11.5			N W D
29	IP	02 22 41.3			D
29	IP	03 39 24.5	S	39 29.5	S W U
29	P	10 41 02.			
29	IP	11 17 49.5			D
29	P	21 57 20.			
30	IP	10 30 15.0	S	30 23.	N D
30	P	11 47 27.			
30	EP	13 56 41.			
30	IP	20 45 09.5	ES	46 37.	S W U
30	P	21 17 02.			
31	IP	06 01 44.8	S	02 02.	U
31	IP	09 32 46.2	S	32 56.	D
31	P	09 53 50.			
31	IP	10 07 00.0			E
31	IP	19 25 34.7			D
31	P	19 44 34.	S	44 55.	
31	IP	22 13 30.8	S	14 00.	
31	P	23 48 58.			

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF MATSUSHIRO ARE LEFT OUT FROM THE TABLE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

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EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

J. S. T

D	INT	H	M	D	INT	H	M	D	INT	H	M	D	INT	H	M
1	1	14	22	14	1	05	01	14	1	18	31	30	1	01	03
				14	1	05	02	14	1	19	15				
2	1	15	28	14	1	05	04	14	2	20	37	31	1	05	23
2	1	17	38	14	1	05	07	14	2	20	37	31	1	13	37
2	1	17	47	14	1	05	08	14	2	21	11				
				14	2	05	09	14	1	22	21				
3	1	11	09	14	2	05	12	14	1	22	48				
				14	1	05	14	14	1	23	04				
4	1	03	19	14	1	05	15	14	1	23	47				
4	3	10	12	14	1	05	18								
4	1	10	15	14	1	05	24	15	1	01	13				
4	1	10	15	14	2	05	27	15	2	03	37				
4	1	10	16	14	1	05	34	15	1	05	55				
4	1	10	31	14	1	05	41	15	1	06	16				
4	1	11	09	14	1	05	46	15	1	11	10				
4	1	12	38	14	1	05	54	15	1	12	48				
4	1	16	20	14	2	05	54	15	1	21	23				
4	1	16	43	14	1	05	55	15	1	21	24				
				14	1	06	01	15	1	23	41				
5	2	01	42	14	1	06	03	15	1	23	47				
5	2	07	19	14	1	06	09								
5	1	09	00	14	1	07	02	16	1	00	29				
5	1	11	56	14	1	07	10	16	1	22	23				
5	1	12	55	14	1	07	12								
5	1	13	52	14	1	07	20	17	1	00	49				
5	1	21	52	14	1	07	21	17	1	14	57				
				14	1	07	28	17	1	17	06				
6	1	02	31	14	1	07	30	17	1	20	42				
6	1	09	40	14	1	07	30								
6	1	12	43	14	1	07	33	18	1	02	52				
6	1	15	52	14	1	07	35	18	1	03	23				
6	1	19	00	14	1	07	38	18	1	16	33				
6	1	19	51	14	2	07	45	18	1	22	40				
				14	1	07	49								
8	1	14	46	14	1	08	02	19	1	05	07				
				14	1	08	06	19	1	21	53				
9	1	01	54	14	1	08	06								
9	1	01	55	14	1	08	07	20	1	00	23				
9	1	02	29	14	1	08	18	20	1	06	19				
9	2	02	37	14	2	08	28	20	1	22	03				
9	1	02	37	14	1	08	39	20	1	22	03				
9	1	02	38	14	1	08	41	20	1	22	20				
9	1	02	47	14	1	08	43								
9	1	02	51	14	1	09	00	21	1	13	08				
9	1	03	15	14	1	09	29	21	1	21	31				
9	1	04	14	14	1	09	34								
9	1	12	56	14	1	09	34	22	1	09	00				
9	1	14	25	14	2	09	38								
9	1	14	36	14	1	09	48	23	1	01	44				
9	1	20	08	14	1	09	50	23	1	12	08				
9	1	21	43	14	1	09	54	23	1	19	43				
9	1	21	44	14	1	10	15	23	1	19	44				
				14	1	10	18	23	1	21	30				
10	1	21	29	14	2	10	21								
10	1	23	59	14	1	10	22	25	1	09	53				
				14	3	10	46	25	1	17	33				
11	1	05	47	14	1	11	06								
11	1	21	57	14	1	11	22	26	1	00	49				
11	1	21	59	14	1	11	34	26	1	12	59				
				14	1	12	24								
12	2	05	57	14	1	13	43	27	1	01	16				
				14	1	14	13	27	1	18	29				
13	1	08	24	14	1	14	26	27	1	21	01				
13	1	11	05	14	1	14	35	27	1	21	13				
13	1	11	14	14	1	14	44	27	1	23	48				
				14	1	15	03								
14	1	02	24	14	1	15	42	28	1	01	45				
14	5	04	48	14	1	15	46	28	1	06	38				
14	1	04	48	14	1	15	50	28	1	06	57				
14	1	04	49	14	1	16	07	28	1	20	18				
14	3	04	50	14	2	16	23	28	1	20	20				
14	1	04	50	14	1	16	24								
14	1	04	51	14	1	16	46	29	1	03	33				
14	1	04	52	14	2	17	09	29	1	17	51				
14	1	04	54	14	1	17	21	29	1	21	39				
14	1	04	56	14	1	17	50								

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地　震　月　報

昭和42年11月

THE SEISMOLOGICAL BULLETIN

OF

THE JAPAN METEOROLOGICAL AGENCY

FOR

NOVEMBER 1967

気　象　庁

PUBLISHED BY THE JAPAN METEOROLOGICAL AGENCY

Tokyo

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List 1 JMA stations and their seismographs

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S, VI, O P
Aikawa	AIKAWA	138 14.5	38 01.2	34	S, VI, O P
Ajiro	AJIRO	139 05.8	35 02.6	59	S, VI, O P
Akita	AKITA	140 06.1	39 43.1	9	S, VI, O P
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S, P
Aomori	AOMORI	140 47.0	40 49.0	4	S, W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S, VI, O P
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S, VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S, P
Choshi	CHOSHI	140 50.6	35 43.5	27	S, W
Fukue	FUKUE	128 50.0	32 42.0	26	S, VI
Fukui	FUKUI	136 13.6	36 03.2	9	S, P(H, V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S, VI, M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S, VI, O P
Funatsu	FUNATS	138 45.8	35 29.9	860	S, P
Gifu	GIFU	136 45.9	35 23.9	13	S, W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S, VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S, VI, O P
Hakodate	HAKODA	140 45.5	41 48.8	35	S, VI, O P
Hamada	HAMADA	132 04.4	34 53.6	18	S, VI, O P
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S, VI, O P
Hikone	HIKONE	136 14.8	35 16.4	87	S, W
Himeji	HIMEJI	134 42.1	34 50.2	37	S, P(H, V)
Hiroo	HIROO	143 19.0	42 17.0	32	S, P(H, V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S, W
Iida	IIDA	137 50.1	35 30.6	482	S, VI, O P
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S, VI, O P
Izuhara	IZUHAR	129 17.7	34 12.2	21	S, P(H, V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S, W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S, W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S, VI, O P
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S, P(H, V)
Kobe	KOBE	135 10.8	34 41.3	58	S, P(H, V)
Kochi	KOCHI	133 32.0	33 33.0	40	S, P(H, V)
Kofu	KOFU	138 33.5	35 39.9	272	S, VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S, VI, O P
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S, W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S, VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S, VI, O P
Maebashi	MAEBAS	139 03.9	36 24.1	112	S, W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S, P(H, V)
Matsue	MATSUE	133 04.3	35 27.3	17	S, P(H, V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S, P(H, V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S, L, AW, G, B, V, C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S, W
Mishima	MISHIM	138 55.8	35 06.7	20	S, W
Mito	MITO	140 28.3	36 22.7	30	S, VI, O P
Miyako	MIYAKO	141 58.1	39 38.7	46	S, W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S, VI, O P
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P(H, V)
Morioka	MORIOK	141 10.1	39 41.8	155	S, VI, O P
Muroran	MURORA	140 59.0	42 19.0	43	S, P(H, V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S, VI, O P
Nagano	NAGANO	138 11.8	36 39.6	418	S, W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S, VD, EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S, VI, O P
Nara	NARA	135 50.0	34 41.0	105	S, P(H, V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S, VI, VD, OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S, VI, P(H, V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S, P(H, V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S, P(H, V)
Ofunato	OFUNAT	141 43.1	39 03.7	38	S, VI
Oita	OITA	131 37.4	33 14.0	5	S, W
Okayama	OKAYAM	133 54.9	34 40.9	4	S, VI, O P
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S, W
Onahama	ONAHAM	140 54.4	36 56.7	3	S, VI
Osaka	OSAKA	135 32.3	34 38.9	7	S, VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S, W

Station	Code	λ	φ	Height	Seismographs
				m	
Owase	OWASE	E136°11.7′	N34°04.0′	14	S, VI, O P
Rumoi	RUMOI	141 38.0	43 57.0	22	S, P (H, V)
Saga	SAGA	130 18.3	33 14.7	4	S, P (H, V)
Saigo	SAIGO	133 20.0	36 12.3	26	S, VI, O P
Sakata	SAKATA	139 50.2	38 54.2	2	S, P (H, V)
Sapporo	SAPPOR	141 19.9	43 03.5	17	S, VI, O P
Sendai	SENDAI	140 54.0	38 15.6	38	S, VI, S′
Shimonoseki	SHIMON	130 56.5	33 57.2	46	S, VI, O P
Shionomisaki	SHIONO	135 45.8	33 26.9	74	S, W
Shirakawa	SHIRAK	140 13.5	37 07.1	354	S, P (H, V)
Shizuoka	SHIZUO	138 24.4	34 58.4	14	S, VI
Sumoto	SUMOTO	134 54.5	34 20.1	109	S, VI, O P
Suttsu	SUTTSU	140 14.4	42 47.4	16	S, P (H, V)
Takada	TAKADA	138 15.0	37 06.3	13	S, P (H, V)
Takamatsu	TAKAMA	134 03.5	34 19.0	10	S, W
Takayama	TAKAYA	137 15.3	36 09.1	561	S, P (H, V)
Tokushima	TOKUSH	134 34.6	34 03.9	2	S, P (H, V)
Tokyo	TOKYO	139 45.5	35 41.2	21	S, VI′, VD′, I′, J
Tomisaki	TOMISA	139 49.7	34 55.2	12	S, VI, O P
Tottori	TOTTOR	134 10.7	35 30.7	17	S, P (H, V)
Toyama	TOYAMA	137 12.5	36 42.4	9	S, VI
Toyooka	TOYOOK	134 49.5	35 32.0	4	S, W
Tsu	TSU	136 31.1	34 42.1	3	S, P (H, V)
Tsuruga	TSURUG	136 03.9	35 39.0	1	S, P (H, V)
Unzendake	UNZEND	130 15.2	32 44.1	849	S
Urakawa	URAKAW	142 46.8	42 09.5	34	S, VI, O P
Utsunomiya	UTSUNO	139 52.3	36 32.6	120	S, W
Uwajima	UWAJIM	132 33.5	33 13.5	43	S, P
Wajima	WAJIMA	136 53.9	37 23.4	6	S, VI
Wakayama	WAKAYA	135 10.0	34 13.6	14	S, W, I
Wakkanai	WAKKAN	141 40.5	45 25.0	2	S, VI, O P
Yakushima	YAKUSH	130 29.8	30 27.0	14	S, VI
Yamagata	YAMAGA	140 21.0	38 15.2	151	S, P (H, V)
Yokohama	YOKOHA	139 39.3	35 26.2	38	S, W
Yonago	YONAGO	133 20.6	35 26.0	7	S, P (H, V)
Ishigakijima	ISHIGA	124 10	24 20	6	S, VI
Naha	NAHA	127 41	26 13	11	S, VI

Notations : —

λ	: Longitude.
φ	: Geographical Latitude.
W	: Wiechert's horizontal and vertical seismographs (masses, H ; 200kg, V ; 80kg).
P	: Portable seismograph (horizontal only).
P(H, V)	: do (mass, 22.5kg).
S	: Strong motion seismograph (magnification ; 1).
S′	: do (magnification ; 0.4).
M(H)	: Mainka's horizontal seismograph (mass, 450kg).
G	: Galitzin's seismograph.
L	: 1,000kg long-period seismograph, JMA type.
I	: Ishimoto's seismograph.
V	: Short-period vertical seismograph.
AW	: Anderson-Wood's seismograph.
C	: Capacity type seismograph.
EM	: Electromagnetic seismograph.
O P	: JMA 59-type electromagnetic seismograph with optical recorder.
VI	: JMA 59-type electromagnetic seismograph with visible recorder.
VD	: JMA 61-type electromagnetic seismograph with visible recorder.
B	: Benioff's seismograph (short and long period).
J	: Remote recording JMA 63-type seismograph.
VI′, VD′, I′	: Remote recording JMA 63-types of VI, VD and I, respectively.

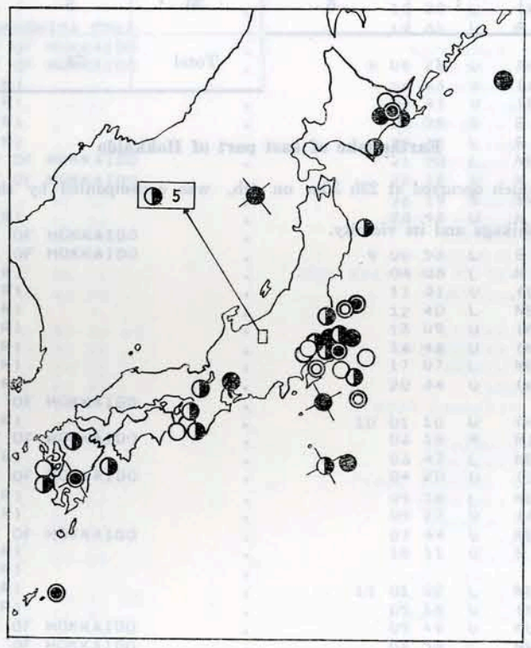
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List 2 Number of earthquakes by districts and classes, November, 1967

District \ Class	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	1	0	2	13	16	51	67
Tohoku	1	1	0	3	5	11	16
Kwanto	1	2	4	8	15	19	34
Chubu	0	0	0	83	83	20	103
Kinki	0	0	2	13	15	9	24
Chugoku•Shikoku	0	0	0	0	0	0	0
Kyushu	2	0	1	13	16	21	37
Near Japan*	0	0	0	0	0	11	11
Foreign region	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	9	9
Total	5	3	9	133	150	151	301

* ; Sakhalin, Kurile Is., Korea, Ryukyu Is., Bonin, Sikhota Alin.

Epicenters of the major earthquakes



⊙ Remarkable (R) ◎ Moderate (M) ○ Small felt area (S) ◑ Local (L) ● Unfelt (U) × h≧100km.

Special Events

Earthquake-Swarm near Matsushiro, Northern Chubu

Daily number of felt shocks observed at Matsushiro Seismological Observatory during this month is as follows :

Date \ Seismic intensity	1	2	Total	Date \ Seismic intensity	1	2	Total
1	6	1	7	16	1	0	1
2	5	0	5	17	0	0	0
3	2	0	2	18	2	0	2
4	1	0	1	19	5	0	5
5	3	0	3	20	0	0	0
6	7	0	7	21	1	0	1
7	4	0	4	22	1	0	1
8	2	0	2	23	2	0	2
9	2	0	2	24	2	1	3
10	2	0	2	25	0	0	0
11	4	0	4	26	2	0	2
12	2	0	2	27	2	0	2
13	2	0	2	28	5	0	5
14	1	0	1	29	2	0	2
15	5	1	6	30	5	0	5
				Total	78	3	81

Earthquake of east part of Hokkaido

The earthquake, which occurred at 23h 30m on 4th, was accompanied by shight property damage and two injured at Teshikaga and its vicinity.

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List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

(J.S.T.)

DATE,TIME D H M	C	LOCATION	C CLASS
1 12 54	L	NEAR MATSUSHIRO	
13 56	L	NEAR MATSUSHIRO	
18 55	U	(OSHIMA)	
20 43	L	NEAR MATSUSHIRO	
21 06	U	(MATSUM)	
21 18	L	S PART OF KAGOSHIMA PREF	
22 07	L	NEAR MATSUSHIRO	
2 01 11	U	KURILE IS	
01 13	U	UK	
01 33	U	UK	
03 55	U	S OFF CHIBA PREF	
04 04	U	UK	
04 17	M	OFF FUKUSHIMA PREF	
05 04	U	OFF FUKUSHIMA PREF	
06 34	L	NEAR MATSUSHIRO	
06 41	L	NEAR WAKAYAMA	
06 56	L	S PART OF HOKKAIDO	
08 46	L	NEAR MATSUSHIRO	
09 08	L	NEAR MATSUSHIRO	
3 11 59	L	NEAR MATSUSHIRO	
13 30	L	NEAR HACHIJOJIMA	
13 53	L	OSHIMA PEN	
16 51	U	(AKITA)	
17 13	U	(AKITA)	
22 39	L	OSHIMA PEN	
4 02 41	U	(NAHA)	
08 09	L	NEAR KYOTO	
09 39	L	AMAMI-OSHIMA	
14 09	U	UK	
14 38	U	(NAHA)	
22 27	R	OFF FUKUSHIMA PREF	
23 30	R	E PART OF HOKKAIDO	
23 40	L	E PART OF HOKKAIDO	
23 41	U	(ASOSAN)	
23 42	U	(KUSHIR)	
23 43	U	(KUSHIR)	
23 45	U	(KUSHIR)	
23 45	S	E PART OF HOKKAIDO	
23 57	L	E PART OF HOKKAIDO	
5 00 05	U	(KUSHIR)	
00 11	U	E PART OF HOKKAIDO	
00 12	U	E PART OF HOKKAIDO	
00 20	U	(KUSHIR)	
00 24	U	(KUSHIR)	
00 27	U	(KUSHIR)	
00 37	U	(KUSHIR)	
00 47	U	(KUSHIR)	
00 49	U	(KUSHIR)	
00 50	U	(KUSHIR)	
00 53	U	E PART OF HOKKAIDO	
00 59	U	(KUSHIR)	
01 01	U	E PART OF HOKKAIDO	
01 02	U	(KUSHIR)	
01 03	S	E PART OF HOKKAIDO	
01 53	U	(KUSHIR)	
01 59	U	(KUSHIR)	
03 49	L	E PART OF HOKKAIDO	
04 50	U	(KUSHIR)	
05 19	U	(KUSHIR)	
05 48	U	(KUSHIR)	
07 35	U	(KUSHIR)	
08 13	U	E PART OF HOKKAIDO	
09 30	U	E PART OF HOKKAIDO	
13 29	U	E PART OF HOKKAIDO	
15 12	U	(KUSHIR)	
19 03	L	NEAR MATSUSHIRO	
5 20 19	U	(YOKOHA)	
20 58	U	NEAR CHOSHI	
21 02	U	NEAR SADOGASHIMA	
21 06	U	(KUMAMO)	
22 32	U	(KUSHIR)	
23 34	U	(NAGASA)	
6 00 51	U	(ABASHI)	
03 02	L	NEAR MATSUSHIRO	
03 14	L	NEAR MATSUSHIRO	
03 21	U	OFF IWATE PREF	
04 19	U	NEAR CHOSHI	
04 38	U	(KUSHIR)	
05 19	L	NEAR MATSUSHIRO	
08 50	U	(KUSHIR)	
09 57	U	FUKUOKA PREF	
10 25	U	(KUSHIR)	
17 19	U	(KUMAMO)	
18 15	U	(MATSUM)	
18 32	U	NEAR NAGOYA	
21 10	L	SE OF FUKUSHIMA PREF	
21 49	L	NEAR MATSUSHIRO	
7 03 16	U	E PART OF HOKKAIDO	
03 28	U	(KUSHIR)	
05 13	U	(MIYAZA)	
09 06	L	FUKUOKA-OITA BORDER	
09 20	L	NEAR MATSUSHIRO	
10 11	L	NEAR MATSUSHIRO	
10 11	U	(MATSUM)	
11 51	U	(KUSHIR)	
16 11	U	(KUSHIR)	
18 29	L	(KAGOSH-MAKURAZAKI)	
19 30	U	E PART OF HOKKAIDO	
8 06 28	U	(HACHIJ)	
06 43	U	(ABASHI)	
08 41	U	(OITA)	
10 56	S	E OFF CHIBA PREF	
12 31	L	E OFF CHIBA PREF	
21 50	L	NEAR MATSUSHIRO	
22 13	U	W OFF AOMORI PREF	
23 19	S	SW PART OF IBARAKI PREF	
23 43	U	N PART OF MIYAGI PREF	
9 00 58	L	E PART OF HOKKAIDO	
04 08	L	N PART OF KYOTO PREF	
11 31	U	(OSAKA)	
12 40	L	NEAR MATSUSHIRO	
13 09	U	(KUSHIR)	
14 48	U	(NAGANO)	
17 07	L	NEAR MATSUSHIRO	
20 34	U	(KUSHIR)	
10 01 10	U	(HIKONE)	
03 19	M	MIDDLE OF CHIBA PREF	
03 47	L	NEAR MATSUSHIRO	
04 20	U	(OMAEZA)	
05 16	L	NEAR MATSUSHIRO	
05 27	U	(AJIRO)	
07 44	U	NEAR CHOSHI	
10 11	U	S PART OF KWANTO	
11 01 02	L	NEAR MATSUSHIRO	
05 18	U	(KUMAMO)	
05 49	U	KURILE IS	
06 58	L	NEAR MATSUSHIRO	
07 24	L	S OFF KYUSHU	
07 28	U	N PART OF MIYAGI PREF	
09 23	U	UK	

DATE,	TIME		C	LOCATION
D	H	M		
11	15	18	L	(FUKUOK-TAKAWA)
	16	13	U	NEAR URAKAWA
	17	10	L	NEAR MATSUSHIRO
	18	22	U	(YAKUSH)
	20	53	U	NEAR MATSUSHIRO
	21	55	L	NEAR MATSUSHIRO
12	04	31	U	(ONAHAM)
	11	28	U	E OFF HOKKAIDO
	16	03	L	NEAR MATSUSHIRO
13	06	18	L	MIYAZAKI PREF
	07	00	U	(UTSUNO)
	15	00	L	(SHIZUO-FUKUROI)
	19	30	L	OFF IBARAKI PREF
	20	17	M	SE OFF KWANTO
	21	49	U	(KUSHIR)
	21	53	L	NEAR MATSUSHIRO
	22	19	L	NEAR MATSUSHIRO
14	11	24	U	NEAR WAKAYAMA PREF
	14	36	U	UK
	17	14	U	(MITO)
	17	47	U	OFF FUKUSHIMA PREF
15	01	45	U	S PART OF KWANTO
	03	44	S	W COAST OF WAKAYAMA PREF
	06	16	L	NEAR HIROO
	08	26	U	W OFF AOMORI PREF
	11	11	L	NEAR MATSUSHIRO
	16	05	U	(AOMORI)
	19	31	L	NEAR MATSUSHIRO
	21	14	L	NEAR MATSUSHIRO
16	00	30	U	(NAHA)
	00	58	U	(YAKUSH)
	02	25	U	NEAR NAHA
	03	31	U	(NAHA)
	03	50	L	S OF NARA PREF
	05	52	S	AMAKUSANADA
	06	19	L	AMAKUSANDA
	06	39	U	(NAGASA)
	07	11	L	NEAR MATSUSHIRO
	09	13	U	(WAKAYA)
	23	08	U	NEAR FUNATSU
17	01	14	U	(NAGANO)
	12	09	U	OFF IBARAKI PREF
	13	42	L	AMAKUSANADA
	13	56	U	AMAKUSANADA
	18	19	L	W COAST OF WAKAYAMA PREF
	18	44	L	IBARAKI PREF
18	03	46	U	NEAR NAGOYA
	17	07	L	NEAR MATSUSHIRO
	19	48	U	NEAR HIKONE
	20	49	U	(NAGASA)
	22	39	L	OFF MIYAZAKI PREF
19	03	43	U	E OFF KWANTO
	05	28	L	(WAKAYA-KIBI)
	05	42	S	SW OF IBARAKI PREF
	07	18	L	E OF HOKKAIDO
	07	31	U	S OFF HONSHU
	07	38	U	(MISHIM)
	07	40	U	(KUSHIR)
	21	07	R	OFF IBARAK PREF
	21	32	L	NEAR MATSUSHIRO
	22	41	L	(KUMAMO-HAMAMACHI)

DATE,	TIME		C	LOCATION
D	H	M		
20	02	10	U	NEAR SAGA
	04	13	L	(WAKAYA-SHIRAHAMA)
	06	24	L	E OF HOKKAIDO
	10	14	U	(YAKUSH)
	19	48	U	NEAR HACHIJOJIMA
	20	07	U	(KUSHIR)
21	01	50	U	N OF HOKKAIDO
	09	25	L	OFF IWATE PREF
	10	01	L	(NIIGAI-MUIKAMACHI)
22	04	04	U	NEAR WAKAYAMA
	10	58	U	N OF KUMAMOTO PREF
	14	52	U	S OF KURILE IS
	15	41	L	OFF IWATE PREF
	16	11	U	(NAGANO)
	22	08	L	(TOKYO-NIIJIMA)
23	08	19	U	(MATSUM)
	10	00	L	NEAR MATSUSHIRO
	13	37	L	E OF HOKKAIDO
	15	36	U	E OF HOKKAIDO
	17	47	U	UK
	20	12	U	(MATSUM)
	21	27	U	(NAGANO)
24	01	05	L	NEAR MATSUSHIRO
	08	10	L	NEAR MATSUSHIRO
	09	43	U	OFF IBARAKI PREF
	12	26	S	OFF CHOSHI
	12	31	U	NEAR HACHIJOJIMA
	17	46	U	KWANTO
	18	08	L	(WAKAYA)
	22	50	L	(CHOSHI)
25	07	37	L	W OF IBARAKI PREF
26	09	03	L	S OF WAKAYAMA PREF
	09	08	R	E OFF AMAMI-OSHIMA
	09	18	U	UK
	09	32	U	(YAKUSH)
	15	57	L	MIDDLE OF HYOGO PREF
	16	09	U	(YAKUSH)
	23	57	U	(WAKAYA)
27	01	46	U	(NAHA)
	02	38	U	(WAKAYA)
	06	06	L	E OF HOKKAIDO
	14	48	L	NEAR MATSUSHIRO
	19	33	U	S OF KWANTO
	22	23	U	(MATSUM)
	22	23	U	NEAR MATSUMOTO
28	01	58	L	(WAKAYA-SHIRAHAMA)
	02	25	L	(KYOTO)
	02	55	L	(KUSHIR-ISHIKAGA)
	06	04	L	OFF IBARAKI PREF
	06	46	L	NEAR NAZE
	09	41	U	MIDDLE OF HOKKAIDO
	11	37	R	SW OF MIYAZAKI PREF
	12	56	L	NEAR MATSUSHIRO
	12	57	U	(MATSUM)
	13	14	U	S OFF KWANTO
	22	52	L	OSAKA-HYOGO BORDER
	22	56	L	NEAR MATSUSHIRO
	23	51	U	NEAR KOBE
29	06	04	U	(NAGASA)
	08	50	U	(KUSHIR)
	16	07	U	(KUSHIR)

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DATE,	TIME		C	LOCATION
D	H	M		
29	16	10	U	S OF KURILE
	16	29	U	(NAGASA)
30	02	17	U	N OF KUMAMOTO PREF
	03	25	S	KII CHANNEL
	08	01	U	(KUSHIR)
	16	36	U	UK
	20	25	L	(WAKAYA)
	22	22	L	NEAR MATSUSHIRO

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST. ALL EVENTS FELT AT THE OBSERVATORY ARE GIVEN IN LIST 6.

List 4 EARTHQUAKE ORIGINS

(J. S. T.) DATE, TIME D H M	C	LOCATION	ORIGIN TIME M S	+/-S	LONG.	+/-	LAT.	+/-	C CLASS H KM	M
1 20 43	L	NEAR MATSUSHIRO	43 21.2	0.3	138 17 01		36 32 01		00	3.9
2 03 55	U	S OFF CHIBA PREF	55 32.5	0.6	140 24 03		34 24 02		100	
04 17	M	OFF FUKUSHIMA PREF	17 21.1	0.2	141 34 01		37 07 01		50	5.0
06 41	L	NEAR WAKAYAMA	40 57.6	0.3	135 18 01		34 20 01		10	3.1
06 56	L	S PART OF HOKKAIDO	56 12.2	0.3	143 07 03		42 19 03		60	4.2
3 13 30	L	NEAR HACHIJOJIMA	30 07.9	1.5	140 18 16		32 26 06		120	
4 08 09	L	NEAR KYOTO	09 50.1	0.2	135 37 01		35 01 01		20	3.4
22 27	R	OFF FUKUSHIMA PREF	26 45.0	0.3	141 54 02		37 17 01		50	5.8
23 30	R	E PART OF HOKKAIDO	30 34.8	0.3	144 16 02		43 29 01		20	6.5
23 45	S	E PART OF HOKKAIDO	45 57.7	0.3	144 10 02		43 30 01		00	5.7
5 01 01	U	E PART OF HOKKAIDO	01 26.6	0.3	144 10 02		43 31 01		00	3.5
01 03	S	E PART OF HOKKAIDO	03 24.7	0.2	144 21 01		43 31 01		00	4.4
6 18 32	U	NEAR NAGOYA	32 42.0	0.2	136 55 01		35 12 02		40	2.9
21 10	L	SE OF FUKUSHIMA PREF	10 05.9	0.3	140 49 03		37 04 01		90	
7 09 06	L	FUKUOKA-OITA BORDER	06 10.3	0.5	130 49 03		33 21 02		10	4.0
10 11	L	NEAR MATSUSHIRO	11 01.5	0.1	138 06 01		36 26 00		00	
8 10 56	S	E OFF CHIBA PREF	56 10.8	0.7	141 10 03		35 27 02		40	5.0
12 31	L	E OFF CHIBA PREF	31 00.2	1.9	141 14 07		35 28 05		30	4.3
22 13	U	W OFF AOMORI PREF	12 08.4	0.4	138 05 04		41 00 02		260	
23 19	S	SW PART OF IBARAKI PREF	19 26.8	0.2	139 58 01		36 07 01		70	
9 00 53	L	E PART OF HOKKAIDO	53 24.4	0.1	144 20 01		43 32 00		00	3.7
10 03 19	M	MIDDLE OF CHIBA PREF	19 33.6	0.3	140 13 02		35 30 01		80	
12 11 28	U	E OFF HOKKAIDO	27 26.9	2.1	149 16 11		43 52 08		30	5.1
13 19 30	L	OFF IBARAKI PREF	30 07.4	0.4	141 15 02		36 36 01		50	4.0
20 17	M	SE OFF KWANTO	17 15.1	1.3	141 48 07		34 24 03		50	4.5
15 03 44	S	W COAST OF WAKAYAMA PREF	44 28.8	0.3	135 06 01		33 51 01		10	4.1
21 14	L	NEAR MATSUSHIRO	14 43.7	0.2	138 18 01		36 31 01		20	3.5
16 05 52	S	AMAKUSANADA	52 01.0	0.5	129 48 02		32 16 02		10	4.4
17 12 09	U	OFF IBARAKI PREF	09 32.6	0.4	141 14 03		36 39 01		60	4.0
13 42	L	AMAKUSANADA	42 31.6	0.5	129 45 02		32 10 02		10	4.1
18 19	L	W COAST OF WAKAYAMA PREF	19 28.0	0.4	135 08 02		33 53 01		10	3.6
18 22 39	L	OFF MIYAZAKI PREF	39 06.0	0.3	132 08 01		32 31 01		00	4.1
19 05 42	S	SW OF IBARAKI PREF	42 37.5	0.0	139 54 02		36 03 01		40	4.3
21 07	R	OFF IBARAK PREF	06 59.2	0.4	141 16 03		36 26 01		50	6.0
20 19 48	U	NEAR HACHIJOJIMA	48 32.7	1.1	141 01 04		32 34 04		00	5.1
21 09 25	L	OFF IWATE PREF	24 51.2	0.6	142 32 03		39 51 01		40	4.3
24 01 05	L	NEAR MATSUSHIRO	05 32.1	0.1	138 06 01		36 28 00		00	3.7
08 10	L	NEAR MATSUSHIRO	10 29.0	1.2	138 05 05		36 26 03		00	
09 43	U	OFF IBARAKI PREF	43 12.0	0.8	141 05 05		36 05 02		40	4.0
12 26	S	OFF CHOSHI	26 25.0	2.6	142 03 01		35 42 07		40	4.5
25 07 37	L	W OF IBARAKI PREF	37 23.3	0.2	140 05 02		36 18 03		70	
26 09 08	R	E OFF AMAMI-OSHIMA	08 08.3	1.3	130 17 11		28 28 05		40	5.6
28 06 04	L	OFF IBARAKI PREF	04 16.7	0.3	140 46 02		36 26 01		50	4.0
11 37	R	SW OF MIYAZAKI PREF	36 54.7	0.2	130 57 01		32 05 01		130	
30 03 25	S	KII CHANNEL	25 29.3	0.2	134 56 01		33 43 01		50	4.5

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List 5 DATA OF EARTHQUAKES

OT= 1 20 43 21.2 +/- 0.3 (J. S. T.)
NEAR MATSUSHIRO
LAT= 36 32 +/- 1 LONG= 138 17 +/- 1
H= 0 MAG=3.9 CLASS=L

I SEISMIC INTENSITY
* MICRON

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	2	P	20 43 23.7									6.7	
NAGANO	3	IP	20 43 25.0	IS	43 27.0						U	16.1	02.0
KARUIZ	0	EP	20 43 30.0	S	43 35.9							32.2	05.9
MATSUM	0	P	20 43 30.6	IS	43 36.4						U	42.5	05.8
TOYAMA	0	EX	20 43 40			7 4.0	9 4.0	5 3.4				98.1	
KOFU	0	IP	20 43 40.5	ES	43 53.0	7 0.9	9 0.8	4 1.0			U 2	99.5	12.5
KUMAGA	0	EP	20 43 42.2	ES	43 55.0	7 3.4	8 3.8	6 3.8				107.8	12.8
WAJIMA	0	EP	20 43 46	ES	44 06	25 0.8	30 0.8					155.7	20.0
MISHIM	0	EP	20 43 52.8	S	44 12.0	9 0.5	9 0.5	2 0.5				168.2	19.2
KANAZA	0	X	20 43 53.6			4 2.8	5 3.0					146.4	
MITO	0	EP	20 43 54.8	IS	44 20.3	9 0.6	5 0.6	3 0.8				196.9	25.5
NAGOYA	0	EP	20 43 54.9	S	44 18.0	5 1.0	6 1.0	3 1.0			D 1	192.7	23.1
GIFU	0	EP	20 43 56	S	44 17.2	8 1.7	8 1.7					186.0	21.2
TOKYO	0	X	20 43 56			10 5.0	9 4.0	5 3.4				162.7	
HAMAMA	0	P	20 43 57.9	ES	44 24	5 1.4	5 1.6	3 1.2			D 1	208.7	26.1
OMAEZA	0	EP	20 43 58.7			6 1.0						214.2	
MAEBAS	0	X	20 44 36.1	X	44 44.2	11 4.1	5 3.5	11 3.0		W 1	D 5	71.6	

OT= 2 3 55 32.5 +/- 0.6
S OFF CHIBA PREF
LAT= 34 24 +/- 2 LONG= 140 24 +/- 3
H=100 CLASS=U

OSHIMA	0	P	03 55 53.3	S	56 07.6	9 0.4	10 0.4	8				101.9	14.3
AJIRO	0	P	03 55 57.3	S	56 15.5	5 0.3	5 0.3	1 0.4				139.0	18.2
TOKYO	0	EP	03 55 59.0	ES	56 17.3	7 0.5	3 0.5					154.1	18.3
MATSUS	0	IP	03 56 16.8	IS	56 47.5				N		U	309.5	30.7

OT= 2 4 17 21.1 +/- 0.2
OFF FUKUSHIMA PREF
LAT= 37 7 +/- 1 LONG= 141 34 +/- 1
H= 50 MAG=5.0 CLASS=M

ONAHAM	3	IP	04 17 33.7	IS	17 41.2	400 0.9	500 1.2	100 1.1	N 10	E 10	D 35	61.7	07.5
FUKUSH	2	IP	04 17 41.0	S	17 52.8	143 0.8	101 0.9	40 0.7	S 37	E 67	D 50	119.9	11.8
SHIRAK	X	IP	04 17 41.0	IS	17 52.8				S 2	E 21	D 69	119.2	11.8
MITO	1	IP	04 17 41.7	IS	17 55.0	88 0.7	160 0.6	63 0.6	N 0	E 0	D 8	127.6	13.3
SENDAI	1	IP	04 17 43.4	IS	17 58.0	75 0.8	110 2.0	40 1.0	S 27	E 10	D 39	139.8	14.6
ISHINO	1	IP	04 17 44.0	IS	17 59.2		40 1.0	20 1.2	S 0	E 0	D 0	147.0	15.2
KAKIOK	2	IP	04 17 44.4	S	18 02.5	264 0.8	286 0.8	103 0.8	N 4	E 6	D 4	157.2	18.1
UTSUNO	2	EP	04 17 45.6	S	18 03.8	75 0.2	76 0.2					163.9	18.2
YAMAGA	0	IP	04 17 46.2	ES	18 00.4				S 1	E 1	D 5	165.6	14.2
CHOSHI	1	EP	04 17 47.0	S	18 06.0	94 0.6	150 1.0	32 0.4				167.5	19.0
OFUNAT	0	IP	04 17 53.0	IS	18 14.6	14 0.4	18 0.6	14 0.4	S 2		D 1	216.3	21.6
KUMAGA	0	P	04 17 54.4	ES	18 16.8	45 0.8	50 1.2	27 1.0			D 4	222.8	22.4
MIZUSA	0	EP	04 17 55.0	ES	18 19.7	50 1.7	57 0.5	42 1.2				227.0	24.7
TOKYO	0	P	04 17 55.0	S	18 19.0	102 1.0	47 1.0	18 2.2				227.0	24.0
MAEBAS	1	P	04 17 55.9	IS	18 21.6	27 1.6	33 1.2	22 3.6			D 5	237.0	25.7
CHICHI	2	EP	04 17 57.6	IS	18 22.9							255.1	25.3
SAKATA	0	EP	04 17 57.9	S	18 18.8						D 11	249.8	20.9
MIYAKO	0	EP	04 18 00	ES	18 30	9 1.0	9 0.6	7 0.6				282.8	30.0
YOKOHA	0	EP	04 18 00.2	IS	18 26.0		58 1.0	16 2.0				253.4	25.8
NIIGAT	0	EP	04 18 01.8	S	18 23.2	50 1.8	50 1.9	27 2.0				239.1	21.4
KARUIZ	0	EP	04 18 01.9	S	18 35.5							282.7	33.6
MORIOK	0	IP	04 18 02.2	S	18 32.2	27 0.4	38 0.4	6 1.8	S 1	E 0	D 1	288.5	30.0
AIKAWA	0	EP	04 18 03.8	X	18 10.8	8 1.4	7 1.2	4 0.8	N	E		310.3	
TAKADA	0	EP	04 18 03.9	ES	18 34.9							294.7	31.0
TOMISA	0	P	04 18 04.5			28 1.8	32 2.2	23 2.0				289.7	
MATSUS	0	IP	04 18 05.0	X	18 48				N	E	D	306.3	
KOFU	0	EP	04 18 05.8	ES	18 40.4	68 1.6	73 1.4	26 1.4				314.2	34.6
NAGANO	0	EP	04 18 06.5	X	18 51.5	23 1.5	18 2.0	15 2.0				304.6	
AKITA	0	EP	04 18 06.8	EX	18 38.8	27 3.8	30 3.8	16 3.8				315.8	
AJIRO	0	P	04 18 07.2	ES	18 40.4	17 0.4	11 0.4	5 0.6				319.9	33.2
OSHIMA	0	P	04 18 07.5	S	18 39.8	24 0.9	15 0.6	8				327.4	32.3
FUNATS	0	P	04 18 07.6	S	18 39.8							309.2	32.2
MISHIM	0	EP	04 18 08.0	S	18 45.9	27 0.7	38 0.6	8 1.0				325.3	37.9
MATSUM	0	EP	04 18 10.0	ES	18 44.0							335.4	34.0

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
SHIZUO	0	EP	04 18 13.6	ES	18 51.0	13 1.4	9 0.6	7 1.0				370.9	37.4
HACHIN	0	EP	04 18 14.0	ES	18 54.2	7 1.5	7 1.4	8 1.6				378.4	40.2
IIDA	0	EP	04 18 15.2	ES	18 57.6	22 1.6	13 2.0	12 2.2				379.5	42.4
WAJIMA	0	EP	04 18 16			22 1.0	20 1.0					415.2	
TOYAMA	0	EP	04 18 16	ES	19 02	14 2.8	11 2.2	10 3.4				391.0	46.0
AOMORI	0	EP	04 18 20.0	S	19 00.0	26 1.7	30 2.1	10 1.3				416.3	40.0
HAMAMA	0	P	04 18 24.5	S	19 10.9	10 1.0	15 1.6	5 1.4	N	1	E 1 D 1	437.7	46.4
HACHIJ	0	EP	04 18 26.0	ES	19 11.8		7					473.9	45.8
GIFU	0	EP	04 18 26.9	S	19 18.3	12 1.3	8 1.5					471.6	51.4
NAGOYA	0	EP	04 18 27.0	S	19 18.4	18 1.2	20 1.2	8 1.2				466.9	51.4
KANAZA	0	X	04 18 32.0	ES	19 16.4	7 3.0	8 4.2	8 3.4				443.2	
HAKODA	0	EP	04 18 33	ES	19 32	8 2.2	6 2.8	4 2.8	N			526.0	59.0
HIKONE	0	EP	04 18 35.9	ES	19 28.1	17 1.2		6 1.0				520.2	52.2
URAKAW	0	P	04 18 38.0	S	19 38.8	7 1.4	7 2.6	3 2.6				569.4	60.8
OSAKA	0	X	04 18 55.4			17 3.2	15 3.1	11 2.6				609.1	
OBIHIR	0	X	04 18 58									659.7	
OMAEZA	0	X	04 18			15 2.3	13 2.7					411.6	

OT= 2 6 40 57.6 +/- 0.3
NEAR WAKAYAMA
LAT= 34 20 +/- 1 LONG= 135 18 +/- 1
H= 10 MAG=3.1 CLASS=L

WAKAYA	1	P	06 41 02.2	IS	41 04.3	51 0.2	44 0.4					17.0	02.1
SUMOTO	0	IP	06 41 06.0	IS	41 10.5	11 0.4	7 0.4	3 0.2	S	E	D 1	36.0	04.5
OSAKA	0	IP	06 41 06.2	IS	41 11.1	9 2.0	17 4.0	9 0.6			U 4	41.2	04.9
				IX	41 12.4							40.9	05.7
KOBE	0	EP	06 41 06.4	ES	41 12.1							62.5	07.8
NARA	0	EP	06 41 09.9	IS	41 17.7							140.5	
TOYOOK	0	X	06 41 28.4	IS	41 35.8	16 1.2	17 1.0		S	W	U	359.9	
MATSUS	0	IP	06 41 50.3										

OT= 2 6 56 12.2 +/- 0.3
S PART OF HOKKAIDO
LAT= 42 19 +/- 3 LONG= 143 7 +/- 3
H= 60 MAG=4.2 CLASS=L

URAKAW	1	IP	06 56 23.2	S	56 30.6	156 0.6	195 0.2	24 0.4	N	E	D 1	32.9	07.4
OBIHIR	0	P	06 56 25.8	IS	56 36.1							67.6	10.3
KUSHIR	0	EP	06 56 33	IS	56 47.8	40 0.2	31 0.2	17 0.2				128.1	14.8
HAKODA	0	IP	06 56 42.4	S	57 04.5	2 0.9	5 1.3	2 2.2		W	U	203.1	22.1
MIZUSA	0	X	06 57 21.4			3 0.7	2 1.2	2 0.6				391.2	
MATSUS	0	P	06 57 52									767.9	

OT= 3 13 30 7.9 +/- 1.5
NEAR HACHIJOJIMA
LAT= 32 26 +/- 6 LONG= 140 18 +/-16
H=120 CLASS=L

HACHIJ	1	IP	13 30 29.4	IS	30 44.0	45	88	20	S	4	E 5 D 16	88.2	14.6
TOMISA	0	P	13 30 50.0	S	31 19.6	9 1.0	12 1.6	5 1.6	S	1	E 1 U 2	279.2	29.6
MISHIM	0	EP	13 30 53.7	ES	31 28.3	6 1.3	6 1.3	1 1.2				322.9	34.6
MATSUS	0	IP	13 31 15.7	S	32 07				S		E D	494.1	51.3
KAKIOK	0	X	13 31 22	ES	31 46	7 1.1	5 1.1	4 0.5				421.3	
YOKOHA	0	X	13 31 31.7			10 0.5	8 0.4					338.3	
FUKUSH	0	X	13 31			6 1.2	5 1.0					590.6	

OT= 4 8 9 50.1 +/- 0.2
NEAR KYOTO
LAT= 35 1 +/- 1 LONG= 135 37 +/- 1
H= 20 MAG=3.4 CLASS=L

KYOTO	2	P	08 09 54.0	IS	09 56.0	45 0.0	97 0.0	14 0.0		W	2 D 20	10.8	02.0
NARA	0	IP	08 09 58.6	IS	10 04.0						U 6	41.9	05.4
OSAKA	0	P	08 09 58.9	S	10 04.3	13 0.7	15 0.6	7 0.5			U 4	41.5	05.4
				X	10 05.2							54.0	07.1
KOBE	0	EP	08 10 01.0	ES	10 08.1							64.1	07.2
HIKONE	0	EP	08 10 02.8	IS	10 10.0	21 0.6		4 0.5				92.6	11.1
TOYOOK	0	P	08 10 06.4	S	10 17.5	16 0.8	11 0.6	7 0.5				118.0	14.2
OWASE	0	P	08 10 10.4	IS	10 24.6	5 0.2	5 0.2	3 0.2					

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STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TSURUG	0	X	08 10 20.3									81.2	
MATSUS	0	P	08 10 36									288.7	

OT= 4 22 26 45.0 +/- 0.3
OFF FUKUSHIMA PREF
LAT= 37 17 +/- 1 LONG= 141 54 +/- 2
H= 50 MAG=5.8 CLASS=R

ONAHAM	3	IP	22 27 01.6	IS	27 11.6	1000 1.0	1300 1.2	300 0.6	N	61	E 87 D143	95.9	10.0
ISHINO	2	IP	22 27 07.0	IS	27 20.0	280 1.6	296 2.0	208 2.2	S	76	E 18 D 50	137.2	13.0
FUKUSH	3	IP	22 27 07.0	IS	27 21.1	490 0.4	357 0.4	265 0.5	S132		E321 D209	136.5	14.1
SENDAI	3	IP	22 27 07.6	IS	27 20.3	900 2	1800 4	700 1	S210		E121 D226	139.7	12.7
SHIRAK	3	IP	22 27 08.6	IS	27 25.2	1700 0.8	1100 1.1	1000 1.2	N	10	E 48 D 89	149.8	16.6
MITO	2	IP	22 27 09.9	IS	27 25.9	264 1.0	290 1.2	260 1.5	N	12	E 10 D 19	162.2	16.0
YAMAGA	2	IP	22 27 12.0	S	27 30.4	500 3.5	400 5.0	350 2.5	S	23	E 29 D 33	173.9	18.4
KAKIOK	2	IP	22 27 13.1	S	27 33.3	580 1.3	328 1.3	152 1.0	N	9	E 13 D 8	191.9	20.2
OFUNAT	3	IP	22 27 14.8	IS	27 34.3	157 1.2	243 1.2	156 1.2	S	11	D 6	198.0	19.5
UTSUNO	2	P	22 27 15.1	S	27 35.3	300	200	100	N	17	E 13 D 11	198.3	20.2
CHOSHI	2	P	22 27 15.4	S	27 37.8	430 0.8	350 1.0	220 0.8				197.1	22.4
MIZUSA	3	IP	22 27 18.3	ES	27 37.3	998 1.2	1283 1.2	750 2.2			E 13	216.0	19.0
MIYAKO	2	EP	22 27 22.5	ES	27 47.6	111 4.4	203 4.0	138 2.9	S	0		262.2	25.1
KUMAGA	1	IP	22 27 23.0	S	27 57.6	207 0.8	237 4.8	167 4.4	N	2	E 2 D 7	257.6	34.6
TOKYO	2	P	22 27 23.5	IS	27 50.8	416 4.8	239 4.4	173 4.0				261.3	27.3
SAKATA	1	IP	22 27 23.6	IS	27 52	1400 4.0	1400 4.4	800 4.0			D 20	255.1	28.4
NIIGAT	0	IP	22 27 24.1	IS	27 49.3	1800 3.3	2500 5.0	800 2.0			D 25	260.9	25.2
MAEBAS	1	P	22 27 24.3	IS	27 50.0	298 6.1	292 5.1	227 4.1		E	5 D 13	271.1	25.7
MORIOK	3	IP	22 27 24.5	ES	27 55.0	213 0.4	213 0.4	203 2.0	S	1	E 0 D 1	275.4	30.5
CHICHI	1	IP	22 27 26.1	IS	27 54.1	150 1.4	200 1.0	115 1.2	N	3	E 5	289.9	28.0
YOKOHA	1	EP	22 27 28.1			295 5.1	208 4.0	114 3.6			U 5	287.3	
AKITA	1	IP	22 27 30.6	S	28 04.8	373 3.6	427 3.6	276 3.8			D 12	312.5	34.2
KARUIZ	X	EP	22 27 30.6	S	28 07.9	400 2.1	400 2.0	200 1.9				316.5	37.3
TAKADA	0	EP	22 27 31.7	ES	28 06.5							324.6	34.8
TOMISA	0	P	22 27 32.5	S	28 11.8	187 4.0	190 4.0	130 3.6			D 4	321.7	39.3
MATSUS	0	IP	22 27 33.4	S	28 11				N		E D	339.1	37.6
KOFU	1	EP	22 27 34.2	ES	28 17.2	160 0.8	158 0.8	122 4.0				349.1	43.0
AJIRO	X	P	22 27 34.8	ES	28 11.9	29 0.8	27 0.8	14 0.8				354.0	37.1
NAGANO	0	EP	22 27 35.0	IS	28 16.0	215 5.5	227 4.4					336.9	41.0
HACHIN	1	EP	22 27 35.8	IS	28 13.3	87 2.8	118 3.2	125 3.0	N		E U	361.3	37.5
OSHIMA	0	P	22 27 35.8	S	28 13.9			46 3.7				360.4	38.1
FUNATS	1	P	22 27 37.6	S	28 10.5	200 1.8	200 1.5	50 1.0				344.0	32.9
MATSUM	X	EP	22 27 38.2	ES	28 18.5							369.0	40.3
MISHIM	0	EP	22 27 38.8	S	28 15.2	136 3.4	171 4.5	48 4.2				359.6	36.4
SHIZUO	0	EP	22 27 41.7	S	28 26.0	68 0.6	60 3.0	39 4.8				405.6	44.3
AOMORI	0	EP	22 27 42	ES	28 23	800 2.3	500 2.0	100 2.3				404.0	41.0
TAKAYA	0	EP	22 27 42.1	S	28 41.7							433.4	59.6
IIDA	0	EP	22 27 43.2	ES	28 32.0	69 2.6	61 2.8	62 3.0				414.2	48.8
TOYAMA	0	EP	22 27 44	ES	28 33	239 6.0	237 4.0	114 4.0				422.4	49.0
WAJIMA	0	EP	22 27 46	ES	28 30	100 1.2	65 1.2	40 2.0				448.3	44.0
KANAZA	0	IP	22 27 52.0	S	28 39.0	108 4.4	106 4.4	49 3.0	S	2	W 8 U 12	474.9	47.0
HAMAMA	0	P	22 27 53.2	IS	28 40.3	58 2.4	84 3.8	31 4.0			U 1	472.5	47.1
HAKODA	1	EP	22 27 54	ES	28 50	112 3.8	120 3.9	91 4.2			U	512.4	56.0
HACHIJ	0	EP	22 27 55.0	IS	28 44.2	23	27	12				502.0	49.2
FUKUI	0	EP	22 27 55.1	S	29 01.3							525.0	66.2
NAGOYA	0	EP	22 27 55.4	S	28 46.0	88 2.4	84 2.8	30 3.0	S	3	W 5 U 3	501.7	50.6
GIFU	0	EP	22 27 57	ES	28 47.0	49 2.2	33 1.5	27 4.0				506.0	50.0
AIKAWA	0	X	22 27 60.0	ES	28 14.8	73 3.0	81 3.6	135 4.4	S	2	E 6 D 6	333.0	
OMAEZA	0	X	22 27	ES	28 34.6	128 4.6	134 4.6	54 4.0				446.0	
MURORA	0	EP	22 28 00.0	S	28 59.0							564.3	59.0
URAKAW	0	P	22 28 00.0	S	28 55.0	155 3.6	191 2.0	95 4.0			U 1	546.5	55.0
HIKONE	0	EP	22 28 01.2	ES	29 01.5	65 2.4		24 6.1				554.5	60.3
TSURUG	0	EP	22 28 02.3	S	29 07.6							553.3	65.3
KYOTO	0	EP	22 28 07.3	ES	29 11.4	22 4.4	13 4.4	11 5.0				609.1	64.1
TSU	0	X	22 28 08.1									563.3	
OWASE	0	P	22 28 10.2	S	29 26.0	13 7.0	15 6.2	11 8.2				627.5	75.8
OBIHIR	0	P	22 28 10.4	X	29 32.7							635.9	
NARA	0	EP	22 28 11.2									618.2	
OSAKA	0	EP	22 28 12	ES	29 20.6	219 5.0	175 4.7	61 4.0				643.7	68.6
KUSHIR	0	EP	22 28 13	X	29 15.4	82 2.6	66 2.0	32 2.6				667.1	
SUTTSU	0	EP	22 28 13	ES	29 18							627.6	65.0
SAPPOR	0	EP	22 28 14	ES	29 22	72 2.4	89 2.4	33 2.6				643.1	68.0
TOYOOK	0	P	22 28 15.0	S	29 27.6	47 1.2	50 1.0	19 5.8	N	1	E 3 D 1	663.7	72.6
WAKAYA	0	P	22 28 16.5	S	29 25.2	12 0.9	15 0.7					696.6	68.7
SHIONO	0	EP	22 28 18.9	ES	29 29.3	18 3.7	27 6.2	2 1.2				701.0	70.4
ASAHIK	0	P	22 28 19.8	S	29 37.2	67 2.2	66 2.4	52 1.6	S		D 0	721.5	77.4
SUMOTO	0	P	22 28 20.1	ES	29 34.6	20 4.8	13 5.8	18 5.2	S	1	W 1 U 2	711.1	74.5
NEMURO	0	EP	22 28 22	X	29 31	23 1.6	24 2.2	12 3.4				740.6	
TOKUSH	0	EP	22 28 25.7									752.6	
KOBE	0	X	22 28 27									670.6	

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
OKAYAM	0	IP	22	28	27.8	ES	29	45.8	10	3.8	11	5.8	15	4.2		W 0 U 0		775.3	78.0
ABASHI	0	P	22	28	28.2	X	29	39.8	89	2.4	73	2.2	32	2.6				774.4	
SAIGO	0	P	22	28	28.5	IS	29	50.6	16	3.8	8	3.2	13	4.0	S 0 W 1 U 1			774.0	82.1
TAKAMA	0	EP	22	28	29.4	X	30	14.2	12	6.7	8	6.7	3	7.0				781.0	
RUMOI	0	X	22	28	30													740.7	
MUROTO	0	IP	22	28	35.5	ES	30	06.0	18	7.0	32	7.8	12	6.0	N 0 E 0 U 0			832.5	90.5
HIROSH	0	EP	22	28	45	EX	30	21.3	11	4.1	6	8.0						913.8	
MATSUY	0	EP	22	28	47.6	X	30	52.1	15	6.5	8	4.8	4	5.0				910.1	
HAMADA	0	IP	22	28	48.6	ES	30	18.8	8	6.0	8	6.1	8	5.1		E 3 D 2		923.2	90.2
ASHIZU	0	EP	22	28	51.9	X	30	22.9	8	5.8	10	5.4	6	5.2				955.3	
WAKKAN	0	X	22	28	53.6				16	3.0	29	6.0	15	2.8			D 1	903.6	
OITA	0	P	22	29	03.1	X	31	06.2	55	5.7	66	5.4						1036.5	
SHIMON	0	EP	22	29	05.0	ES	31	00	14	5.0	7	5.2	10	6.0				1058.3	115.0
MIYAZA	0	P	22	29	12.8	S	31	05.6	7	4.6	8	4.9	3	5.9				1128.8	112.8
FUKUOK	0	EP	22	29	14.0	ES	31	15.0	9	3.4	3	3.0	4	7.0				1122.7	121.0
KUMAMO	0	EP	22	29	14.7	X	31	29.7	13	3.8	9	4.7	2	0.8				1133.8	
NAGASA	0	P	22	29	22.0	X	31	55.0							S W U			1208.0	
FUKUE	0	EP	22	29	33.6				8	6.0	6	5.6	6	5.6				1295.0	
KAGOSH	0	X	22	29	41.9	X	32	06.0	12	3.0	10	2.8	3	0.9				1218.5	
SAGA	0	X	22	30	05.6	X	32	23.2										1144.9	

OT= 4 23 30 34.8 +/- 0.3
E PART OF HOKKAIDO
LAT= 43 29 +/- 1 LONG= 144 16 +/- 2
H= 20 MAG=6.5 CLASS=R

ABASHI	4	IP	23	30	45.8	S	30	51.8	6000	3.2	10500	3.4	3100	3.2	N 7 E 4 U 11			59.3	06.0
KUSHIR	4	IP	23	30	46.6	IS	30	54.5	5000	0.4	5000	5.2	3300	4.8	S277 E 4 U263			57.1	07.9
NEMURO	3	IP	23	30	53.8	IS	31	07.4	1000	5.6	1100	5.6	1100	2.4	N 34 W205 D281			108.3	13.6
OBIHIR	3	IP	23	30	55.1	IS	31	09.0	38100	4.5	38700	5.1	11800	3.6	S 8 W 44 U156			105.5	13.9
HIROO	2		23	31														154.3	
ASAHIK	1	IP	23	31	02.6	S	31	19.6	7800	3.9	4800	4.1	3000	2.8	S 7 E 34 D 79			156.1	17.0
URAKAW	0	IP	23	31	06.1	S	31	27.0	3000	6.4	5000	7.6	2000	6.4	S 3 W 3 U 4			190.9	20.9
RUMOI	0	EP	23	31	09	X	31	45	2400	3.8	1400	4.2						218.5	
SAPPOR	1	IP	23	31	14.0	IS	31	42.6	3900	8.3	2100	4.9	800	4.9		W 8 U 15		242.9	28.6
WAKKAN	1	IP	23	31	19.4	S	31	57.0	2100	7.2	1000	7.2	600	5.8			D 2	297.9	37.6
MURORA	0	P	23	31	20.2	IS	32	00.8	800	10.0	500	9.0	200	5.0	S 3 W 4 U 4			297.9	40.6
SUTTSU	0	EP	23	31	25	EX	32	06.3	650	6.4	650	6.2	250	5.2				336.6	
HAKODA	1	P	23	31	25.8	ES	32	02	254	4.8	279	7.8	179	9.0	S 7 W 10 U 9			342.3	36.2
HACHIN	X	IP	23	31	32.4	S	32	27.6	137	5.6	160	6.0	170	4.6	S 2 W 2 U 2			399.5	55.2
AOMORI	1	IP	23	31	34.8	S	32	22.2	500	2.9	500	3.2	150	2.9	S 34 W 30 U 27			413.1	47.4
MIYAKO	0	P	23	31	39.2	ES	32	35	66	6	98	10	46	7	S 2			467.4	55.8
MORIOK	0	IP	23	31	43.5	ES	32	39.5	44	6.0	118	5.4	93	10.0	S 1 W 1 U 1			493.5	56.0
						EX	37	59.0											
OFUNAT	0	IP	23	31	48.0	S	32	45.8	54	4.8	57	6.4	59	4.6	S 3 W 1 U 3			535.5	57.8
MIZUSA	1	EP	23	31	50.0				813	0.9	385	0.6	110	2.6				549.7	
AKITA	0	IP	23	31	51.8				255	4.6	349	7.8	168	4.6	S 6 U 12			543.4	
ISHINO	0	EP	23	31	57.0	IS	33	10.0	55	4.2	81	4.4	63	4.0	S 0 W 0 U 0			614.6	73.0
SENDAI	0	EP	23	32	01	ES	33	14.0	108	5.8	83	4.8	61	9.6				645.7	73.0
SAKATA	0	P	23	32	02.6	S	33	18.7	1650	4.7	1200	3.8	300	3.6			U 4	629.8	76.1
YAMAGA	0	P	23	32	05.2										S 1 U 2			667.9	
FUKUSH	0	EP	23	32	08.8				45	3.2	57	8.6	48	10.8				712.1	
ONAHAM	0	EP	23	32	16.4	ES	33	52.0	76	3.9	101	6.6	43	10.0				780.2	95.6
NIIGAT	0	EP	23	32	18.0				1800	4.0	900	4.2	180	5.0				759.5	
AIKAWA	0	EP	23	32	21.4	X	34	02.0	41	9.2	103	11.0	42	11.2	S 3 W 3 U 4			791.4	
MITO	0	EP	23	32	25.9	X	34	24.9	116	4.2	133	4.0	65	4.0				852.7	
KAKIOK	0	EP	23	32	28.9	X	33	50.4	46	11.6	55	10.3	41	12.5				877.1	
UTSUNO	0	EP	23	32	29.4	X	34	26.9	56	3.8	44	3.8	25	4.1				856.4	
TAKADA	0	EP	23	32	32.0													873.2	
CHOSHI	0	EP	23	32	33.3	X	34	05.3										910.0	
						IX	34	36.9											
MAEBAS	0	IP	23	32	33.8	X	34	00.2	188	5.1	235	6.4	130	4.3				902.8	
WAJIMA	0	EP	23	32	36	ES	34	18	48	9.6	40	9.0	35	10.0				920.5	102.0
						EL	35	36											
KUMAGA	0	EP	23	32	36.0	X	34	33.8	146	5.6	167	6.0	147	4.8				915.2	
MATSUS	0	IP	23	32	37.5	S	34	18							S W U			928.0	100.5
KARUIZ	0	EP	23	32	38.6	S	34	30.1										931.1	111.5
CHICHI	0	EP	23	32	39.7	X	33	27.4										942.6	
TOKYO	0	EP	23	32	41	ES	34	16	254	5.8	192	4.0	97	6.8				948.1	95.0
YOKOHA	0	EP	23	32	42.4	X	34	49.0	177	6.0	90	4.0	64	4.2				977.1	
TOYAMA	0	P	23	32	42.6	X	34	16	66	11.0	79	8.0	46	4.2			U 5	962.8	
KANAZA	0	EP	23	32	49.2	X	34	25.6	58	10.8	51	10.0	30	2.8				1007.2	
KOFU	0	EP	23	32	50.0	ES	34	40.0	41	4.6	50	6.6	30	4.4				996.4	110.0
AJIRO	0	EP	23	32	50.1	X	35	12.1	29	4.7	35	5.2	18	5.0				1037.3	
IIDA	0	EX	23	32	51.6													1043.1	
TOMISA	0	EP	23	32	52.2	X	35	29.0	160	4.2	155	5.6	115	4.6				1024.6	
SHIZUO	0	EP	23	32	53.2	X	35	11.4	29	6.3	43	5.8	32	4.0				1071.0	
MISHIM	0	EP	23	32	54	ES	34	45	40	4.3	64	4.7	21	6.2				1036.6	111.0
FUKUI	0	EX	23	32	57.1													1073.7	

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
FUNATS	0	X	23	32	58.6	ES	34	46.8										1004.4	
						L	40	14.4											
HAMAMA	0	EP	23	32	59	X	35	24.8	55	5.0	51	5.2	24	12.0				1125.8	
OMAEZA	0	EX	23	32					114	5.6	161	8.4	55	12.2				1115.6	
NAGOYA	0	EP	23	33	00.0				29	3.0	30	3.6	16	11.6				1116.5	
HIKONE	0	EP	23	33	04.7	EX	33	44.0	21	16.0			23	11.8				1142.6	
						E	36	28.6											
GIFU	0	X	23	33	09				21	12.1	13		16	10.0				1104.7	
KYOTO	0	IP	23	33	10.5	X	35	30.6	16	7.0	20	13.0	15	11.2	S 0 W 1 U 1			1193.1	
HACHIJ	0	EP	23	33	11.0	S	35	18.4	22		13		13					1216.6	127.4
TOYOOK	0	P	23	33	12.1	S	35	18.2	45	13.0	43	12.0	18	14.7	S 5 W 6 U 4			1197.8	126.1
OSAKA	0	EP	23	33	15	X	34	09.4	104	5.2	118	5.5	37	14.3				1236.4	
SAIGO	0	EP	23	33	16.7	S	35	29.5	20	11.1	44	11.4	14	10.8	S 0 W 1 U 1			1234.5	132.8
						EL	36	47											
KOBE	0	EX	23	33	18.3													1251.9	
WAKAYA	0	P	23	33	21.7	X	35	55.5	16	11.5	23	10.8						1294.3	
SUMOTO	0	P	23	33	22.4	ES	35	36.5	26	12.6	44	12.4	17	11.2	S 1 W 1 U 1			1298.3	134.1
						L	36	57											
OKAYAM	0	IP	23	33	26.0	S	35	52.4	7	10.4	25	10.0	20	11.0		W U 0		1323.4	146.4
SHIONO	0	EP	23	33	27.2	ES	35	54.5	21	15.3	27	18.6	1	1.5				1336.8	147.3
						EX	38	47.7											
TAKAMA	0	EP	23	33	28.5	ES	35	59.3	18	13.1	30	13.1	6	10.7				1346.8	150.8
MUROTO	0	IP	23	33	38.3	S	36	20.0	30	12.0	45	11.0	16	17.0	N 0 E 0 D 0			1435.7	161.7
HIROSH	0	IP	23	33	40.5	IS	36	22.0	21	13.8	21	13.8			S 1 W 1			1438.5	161.5
HAMADA	0	IP	23	33	40.8	X	36	22.0	16	11.2	17	11.9	10	10.5	N 3 E 4 D 4			1418.2	
						L	37	29.6											
MATSUY	0	EP	23	33	42.9	X	36	42.2	24	12.1	37	12.1	16	13.7				1461.9	
UWAJIM	0	EP	23	33	52													1527.8	
ASHIZU	0	P	23	33	52.4	ES	36	48.7	19	12.4	22	12.6	13	11.8	S W U 2			1546.7	176.3
SHIMON	0	EP	23	33	56.0				20	11.0	18	11.0	12	11.0	S W U			1565.4	
OITA	0	P	23	33	58.6	ES	36	59.6	43	7.9	60	11.8						1582.4	181.0
OWASE	0	X	23	33		ES	35	39.6	22	8.0	16	13.2	15	9.4				1257.4	
FUKUOK	0	EP	23	34	05.0	ES	37	00	12	11.4	7	11.4	11	9.6	S 2 W 2 U 3			1631.3	175.0
KUMAMO	0	EP	23	34	07.8	ES	37	26.5	12	1.9	23	13.8	4	2.3	S 1 W 3 U 1			1673.7	198.7
SAGA	0	P	23	34	09.3	S	37	37.6										1663.1	208.3
MIYAZA	0	P	23	34	11.8	S	37	30.0	18	11.2	33	12.4	13	14.0				1707.5	198.2
FUKUE	0	P	23	34	23.4	X	38	44.0	15	13.6	27	14.0	7	12.0	S 4 W 4 U 7			1801.5	
KAGOSH	0	EP	23	34	24.1	EX	37	01.2	28	2.3	23	2.4	7	1.7				1788.5	

OT= 4 23 45 57.7 +/- 0.3
E PART OF HOKKAIDO
LAT= 43 30 +/- 1 LONG= 144 10 +/- 2
H= 0 MAG=5.7 CLASS=S

OBIHIR	2	X	23	45		X	46	14.9	7600	4.1	8900	4.7	1500	4.7				100.3	
ABASHI	3	P	23	46	10.4	S	46	17.8	2100	3.4	3400	3.6	1200	3.0				58.2	07.4
KUSHIR	3	IP	23	46	12.2	S	46	19.5	700	2.6	1000	4.8	1200	4.0	S120 U101			60.9	07.3
NEMURO	2	IP	23	46	20.6	IS	46	34.2	212	2.8	216	7.4	211	1.6	W 34 D 63			116.6	13.6
ASAHIK	0	IP	23	46	25.0	S	46	45.8	1300	3.0	800	2.4	700	2.0	S 7 E 34 D 51			147.8	20.8
URAKAW	0	IP	23	46	29.6	S	46	56.0	1000	6.4	1000	7.0			S 4 U 3			187.3	26.4
RUMOI	0	EX	23	46	32	IS	47	04.7	600	4.4	300	3.4						210.2	
SAPPOR	0	EP	23	46	36				163	2.6	220	4.8	121	6.0				235.3	
WAKKAN	0	P	23	46	43.7	IS	47	28.2	156	4.0	209	6.2	148	6.6			D 1	291.1	44.5
MURORA	0	EP	23	46	44.3	X	47	06.2										291.3	
HAKODA	0	EP	23	46	50	ES	47	28	80	3.6	43	3.4	34	6.6				336.5	38.0
SUTTSU	0	EP	23	46	53	X	47	45										329.1	
HACHIN	0	P	23	46	56.4	S	47	43.0	20	2.8	32	4.0	31	4.2	S W U			396.3	46.6
AOMORI	0	EP	23	46	58	ES	47	43	130	2.7	81	2.3	41	2.9				408.7	45.0
MIYAKO	0	EP	23	47	06				10	7	9	6	7	10				465.8	
MORIOK	0	IP	23	47	08.5	ES	48	03.0	14	3.0	18	4.4	13	6.0	N 3 E 2 D 2			490.8	54.5
OFUNAT	0	EP	23	47	13.2	IS	48	21.4	13	5.0	11	3.8	9	4.0				533.9	68.2
MIZUSA	0	EP	23	47	17.3				265	6.5	83	4.2	22	1.6				547.4	
SAKATA	0	EP	23	47	27.6	X	48	50.5	200	4.0	150	2.8						626.4	
SENDAI	0	EP	23	47	29				25	3.8	21	4.6	12	4.0				643.7	
MATSUS	0	X	23	47														924.8	
WAJIMA	0	EX	23	48	04													916.1	
KOFU	0	EP	23	48	14.4				8	4.0	9	4.0	6	5.4				993.8	
ONAHAM	0	X	23	48	22.1				15	3.8	22	3.3	10	9.2				778.8	
SAIGO	0	P	23	48	40.2										S 0 W 1 U 0			1229.2	

OT= 5 1 1 26.6 +/- 0.3
E PART OF HOKKAIDO
LAT= 43 31 +/- 1 LONG= 144 10 +/- 2
H= 0 MAG=3.5 CLASS=U

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ABASHI	0	P	01 01 39.2	S	01 46.2	9	1.4	10	2.2	5	2.4				56.4	07.0
KUSHIR	0	IP	01 01 40.8	IS	01 49.4	16	0.2	9	0.2	5	0.6	S 11	E 4	U 10	62.6	08.6
OBIHIR	0	P	01 01 46.1	ES	02 01										101.5	14.9
ASAHIK	0	P	01 01 54.0	ES	02 12	5	1.0	3	1.6	2	1.4	S 0		U 1	147.4	18.0

OT= 5 1 3 24.7 +/- 0.2
E PART OF HOKKAIDO
LAT= 43 31 +/- 1 LONG= 144 21 +/- 1
H= 0 MAG=4.4 CLASS=S

ABASHI	0	P	01 03 36.8	S	03 43.4	91	3.4	62	4.0	24	3.4				55.8	06.6
KUSHIR	2	IP	01 03 38.3	IS	03 47.1	163	0.4	153	0.2	43	0.2	S 33	E 10	U 41	59.9	08.8
NEMURO	X	IP	01 03 44.9	IS	03 58.4	19	1.2	25	0.8	14	1.4		W	D	102.3	13.5
OBIHIR	0	P	01 03 46.2	S	04 03.1										113.2	16.9
ASAHIK	0	IP	01 03 54.4	IS	04 15.2	16	1.6	30	1.6	15	1.8	S 1	W 1	D 1	162.0	20.8
URAKAW	0	P	01 03 58.3	ES	04 21.6	6	1.8	5	3.6	5	4.4				198.1	23.3
SAPPOR	0	EP	01 04 06	ES	04 33	8	2.4	9	1.0	3	3.6				250.2	27.0
WAKKAN	0	X	01 04 19.8			8	2.4	8	2.6						299.9	
MATSUS	0	IP	01 05 29.4											U	934.9	

OT= 6 18 32 42.0 +/- 0.2
NEAR NAGOYA
LAT= 35 12 +/- 2 LONG= 136 55 +/- 1
H= 40 MAG=2.9 CLASS=U

NAGOYA	0	IP	18 32 49.2	IS	32 54.0	13	0.2	18	0.2	5	0.2			U 4	6.1	04.8
GIFU	0	P	18 32 50.6	S	32 55.6	20		10		5					26.0	05.0
HIKONE	0	EP	18 32 53.8	S	33 02.5	14	0.5			6	0.4				61.5	08.7
MATSUS	0	IP	18 33 10.0	IS	33 32.4								W	U	188.8	22.4
AJIRO	0	EP	18 33 12.3	S	33 35.1	6	0.3	3	0.3	1	0.3				199.4	22.8

OT= 6 21 10 5.9 +/- 0.3
SE OF FUKUSHIMA PREF
LAT= 37 4 +/- 1 LONG= 140 49 +/- 3
H= 90 CLASS=L

ONAHAM	0	P	21 10 19.8	IS	10 30.9	12	0.8	17	1.1	6	0.4				15.7	11.1
FUKUSH	0	EP	21 10 23.6	IS	10 36.0	8	0.4	13	0.4	5	0.5				82.3	12.4
MITO	0	IP	21 10 24.0	IS	10 37.5	13	0.5	15	0.5	10	0.4		W	D 10	82.4	13.5
KAKIOK	0	IP	21 10 26.0	ES	10 40.6	9	0.7	11	0.7	6	0.3				108.1	14.6
UTSUNO	0	IP	21 10 26.7	IS	10 40.1	16	0.2	16	0.2						102.2	13.4
MATSUS	0	IP	21 10 41.6	S	11 06									D	240.0	24.4

OT= 7 9 6 10.3 +/- 0.5
FUKUOKA-OITA BORDER
LAT= 33 21 +/- 2 LONG= 130 49 +/- 3
H= 10 MAG=4.0 CLASS=L

FUKUOK	X	IP	09 06 22.4	IS	06 29.8	35	0.2	44	0.2	7	0.4				47.9	07.4
SHIMON	0	IP	09 06 22.6	IS	06 31.0	9	0.2	9	0.2	9	0.2	N 9	W 3	U 12	67.9	08.4
OITA	0	EP	09 06 25.8	ES	06 34.6	22	1.1	15	1.1	12	1.3				76.2	08.8
NAGASA	0	P	09 06 30.4	S	06 44.1										113.0	13.7
MIYAZA	0	P	09 06 38.6	S	07 02.6	9	0.6	13	0.8	4	0.8				168.9	24.0
KUMAMO	0	X	09 06			18		44		29				U 13	60.7	
SAGA	0	X	09 06	S	06 21.6								E 4		49.0	
KAGOSH	0	X	09 07 42.7	X	08 09.3	10	1.7	9	1.7	4	1.5				198.5	

OT= 7 10 11 1.5 +/- 0.1
NEAR MATSUSHIRO
LAT= 36 26 +/- 0 LONG= 138 6 +/- 1
H= 0 CLASS=L

MATSUS	1	P	10 11 05.3	S	11 07.3										15.2	02.0
NAGANO	0	IP	10 11 07.8	S	11 10.5									U 5	26.6	02.7
MATSUM	0	IP	10 11 08.0	IS	11 11.3							S 2	W 1	U 18	28.9	03.3
KARUIZ	0	IP	10 11 11.1	S	11 16.7								W	D 2	41.8	05.6

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OT= 8 10 56 10.8 +/- 0.7
E OFF CHIBA PREF
LAT= 35 27 +/- 2 LONG= 141 10 +/- 3
H= 40 MAG=5.0 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHOSHI	3	IP	10 56 20.7	IS	56 25.7	1600	0.3	1300	0.3	600	0.6	S 38	W 42	U 52	42.3	05.0
MITO	1	IP	10 56 31.8	IS	56 46.0	103	1.4	103	1.1	58	1.1	S 2	E 2	D 3	120.6	14.2
TOMISA	0	P	10 56 33.1			56	2.4	50	2.4	32	3.2	S	W 1	D 1	135.3	
TOKYO	0	IP	10 56 33.4	ES	56 47.0	148	2.0	58	3.0	6	4.0	S 20			130.3	13.6
KAKIOK	2	IP	10 56 33.7	ES	56 47.7	190	0.8	127	0.8	67	1.2	S 3	E 2	D 6	123.5	14.0
YOKOHA	0	IP	10 56 35.2			83	1.1	145	1.4	46	1.5			D	137.2	
UTSUNO	0	EP	10 56 36.6	S	57 02.2	95	1.3	132	1.6	27	1.2				168.6	25.6
ONAHAM	0	EP	10 56 37.0	IS	56 55.2	60	1.2	78	1.0	22	1.2				167.5	18.2
OSHIMA	0	P	10 56 37.4	S	56 54.3	40	0.6	38	0.4	15	1.4				180.0	16.9
KUMAGA	0	EP	10 56 38.0	ES	57 07.6	43	2.0	64	2.4	31	4.0				178.6	29.6
AJIRO	0	IP	10 56 39.5	ES	57 04.0	14	0.4	15	0.4	5	0.4			D 0	193.7	24.5
SHIRAK	0	EP	10 56 41.0	IS	57 01.7										203.5	20.7
CHICHI	0	EP	10 56 41.3	ES	57 03.3										197.9	22.0
MISHIM	0	IP	10 56 42.5	ES	57 01.0	40	0.9	67	1.5	14	1.7	S 3	W 3	U 5	206.9	18.5
MAEBAS	0	EP	10 56 42.8	S	57 05.4	25	2.1	25	1.5	20	2.0				217.0	22.6
FUNATS	0	P	10 56 44.3	S	57 07.1										218.1	22.8
KOFU	0	EP	10 56 45.7	ES	57 21.8	43	1.8	31	1.4	14	1.7				237.6	36.1
SHIZUO	0	P	10 56 48.4	ES	57 15.7	13	1.8	14	2.4	10	3.4		W 2	D 1	256.7	27.3
OMAEZA	0	EP	10 56 50.8	ES	57 20.7	24	2.4	17	2.8						285.3	29.9
FUKUSH	0	EP	10 56 50.9	ES	57 22.9	60	1.0	45	1.0	15	0.7				263.3	32.0
KARUIZ	0	EP	10 56 51.0	S	57 15.7										255.8	24.7
MATSUS	0	IP	10 56 53.4									S	E	D	292.7	
HACHIJ	0	EP	10 56 53.8	S	57 33.6	10		11		8					289.7	39.8
HAMAMA	0	EP	10 56 55	ES	57 40	16	2.4	19	2.0	9	2.0				324.5	45.0
IIDA	0	Ex	10 56 55.4												302.3	
MATSUM	0	EP	10 56 55.6	ES	57 28.9										301.5	33.6
TAKADA	0	EP	10 56 55.7	ES	57 31.7										319.9	36.0
SENDAI	0	EP	10 56 56	ES	57 28	27	1.6	19	1.6	11	1.2				312.7	32.0
ISHINO	0	X	10 57 04.0	S	57 35.0	6	1.2	6	1.2	4	2.0				330.3	
AIKAWA	0	EP	10 57 05.0	ES	57 54.4	8	2.8	8	2.6	2	2.4				386.7	49.4
TOYAMA	0	EP	10 57 07	ES	57 44	15	4.2	18	3.0	10	3.6				382.7	37.0
NAGOYA	0	EP	10 57 08.1	S	57 51.2	18	2.2	17	1.6	11	1.6				383.0	43.1
				X	58 05.2											
NIIGAT	0	X	10 57 09.0	ES	57 36.6	31	4.0	35	4.0	17	3.1				332.0	
MIZUSA	0	EP	10 57 10.8			15	2.2	22	2.4	10	1.3				408.7	
SAKATA	0	EX	10 57 10.8												401.0	
GIFU	0	X	10 57 16.1	X	58 10	9	2.1	12	1.5						399.7	
KANAZA	0	X	10 57 23.2	X	58 08.3	12	3.6	13	3.8	7	2.8				425.1	
KYOTO	0	EP	10 57 24.2	ES	58 19.2	5	1.0	5	1.4	2	1.8				496.7	55.0
FUKUI	0	X	10 57 29.5												451.6	
OSAKA	0	X	10 57 30			29	3.2	28	4.4	12	2.1				520.9	
TOYOOK	0	X	10 57 47.7	X	58 55.4	13	1.4	11	1.1						575.7	
AKITA	0	EX	10 57 48	EX	58 21.8	13	3.2	12	2.6	6	2.6				482.9	
AOMORI	0	X	10 58 31			9	1.8	8	2.2	4	1.8				596.6	

OT= 8 12 31 0.2 +/- 1.9
E OFF CHIBA PREF
LAT= 35 28 +/- 5 LONG= 141 14 +/- 7
H= 30 MAG=4.3 CLASS=L

CHOSHI	1	IP	12 31 10.4	IS	31 15.6	518	0.3	420	0.3	316	0.6	S 34	E 6	D 60	45.5	05.2
MITO	0	EP	12 31 20.0	IS	31 36.0	20	1.2	20	1.0	9	2.6				122.3	16.0
KAKIOK	0	IP	12 31 20.4	ES	31 36.9	30	1.2	31	1.2	19	3.0	S 1	E 2	U 4	126.6	16.5
TOKYO	0	EP	12 31 22.8	ES	31 37.6	19	1.0	14	2.4	5	2.0				135.8	14.8
YOKOHA	0	EP	12 31 23.8			19	1.1	12	0.7						143.3	
KUMAGA	0	EP	12 31 29.8	ES	31 56.8	6	1.2	6	1.2	4	3.0				183.3	27.0
MISHIM	0	EP	12 31 36.5	ES	31 54.9	8	0.9	6	0.9	2	1.9				218.1	18.4
UTSUNO	0	X	12 31 36.6	ES	31 44.5	14	0.8	7	0.6						171.5	
KOFU	0	EP	12 31 38.1	ES	32 12.6	5	1.4	5	0.7	3	1.0				243.4	34.5
FUKUSH	0	EX	12 31 42.4			10	0.9	11	1.0	4	0.7				263.0	
MATSUS	0	IP	12 31 42.7											D	297.5	
ONAHAM	0	EX	12 31 44.0	X	32 01.2	11	1.1	17	1.2	3	0.6				166.6	

OT= 8 22 12 8.4 +/- 0.4
W OFF AOMORI PREF
LAT= 41 0 +/- 2 LONG= 138 5 +/- 4
H=260 CLASS=U

MIZUSA	0	EP	22 13 02.7	ES	13 45.3	8	1.7	5	2.6	2	1.2				332.6	42.6
SAPPOR	0	IP	22 13 04.7	S	13 47.0										353.0	42.3

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
SENDAI	0	EP	22 13 08			ES	13	54	5	2	5	2	1	2				388.6	46.0
URAKAW	0	IP	22 13 10.2			S	13	58.0	7	0.4	13	0.2	5	0.8			D 2	412.3	47.8
OBIHIR	0	IP	22 13 17.4			IS	14	08.6									U 3	476.3	51.2
MATSUS	0	IP	22 13 18.8			S	14	16.0							S	W	U	495.4	57.2
KUSHIR	0	X	22 14 23.0						14	0.2	18	0.2	4	0.4				567.2	

OT= 8 23 19 26.8 +/- 0.2
SW PART OF IBARAKI PREF
LAT= 36 7 +/- 1 LONG= 139 58 +/- 1
H= 70 CLASS=S

KAKIOK	2	IP	23 19 37.5	S	19	44.1					81	0.8	S	7	D	19	24.1	06.6
UTSUNO	2	P	23 19 39.2	IS	19	47.2	200		200		50	0.2	N	1 W	1 U	14	48.5	08.0
KUMAGA	1	P	23 19 40.6	S	19	49.4	159	0.2	104	0.4	28	0.2			D	9	52.5	08.8
MITO	1	IP	23 19 40.8	IS	19	50.0	52	0.5	86	0.5	70	0.5					53.9	09.2
TOKYO	0	P	23 19 41.2	ES	19	51.4	60	0.6	32	0.4	8	0.6					51.4	10.2
CHICHI	1	EP	23 19 42.7	IS	19	52.7											80.9	10.0
MAEBAS	1	IP	23 19 43.6	IS	19	53.1	35	1.2	18	0.8	9	1.2	S	3 W	U	8	87.0	09.5
YOKOHA	0	EP	23 19 43.8				28	0.4	26	0.4					D	5	80.5	
CHOSHI	0	P	23 19 44.1	S	19	55.4											90.3	11.3
SHIRAK	0	EP	23 19 46.7	IS	19	59.4											113.5	12.7
ONAHAM	1	EP	23 19 48.2	IS	20	02.4	26	0.9	26	0.8	7	0.5					124.6	14.2
KARUIZ	0	EP	23 19 49.0	ES	20	03.4											129.6	14.4
FUNATS	0	IP	23 19 49.2	IS	20	04.5											128.6	15.3
AJIRO	X	IP	23 19 49.5	IS	20	05.7	37	0.4	29	0.4	8	0.4			D	1	142.8	16.2
MISHIM	0	IP	23 19 49.7	S	20	05.2	13	0.9	19	0.7	4	0.9			D	2	145.8	15.5
KOFU	0	EP	23 19 50.4	ES	20	07.3	19	1.0	18	0.5	6	0.9					136.6	16.9
OSHIMA	0	P	23 19 51.9	S	20	08.1	19	0.4			12	0.4					159.5	16.2
MATSUM	0	EP	23 19 55.3	ES	20	16.0											179.8	20.7
FUKUSH	0	EP	23 19 55.8	ES	20	16.4	20	0.9	17	0.9	8	0.5					187.5	20.6
SHIZUO	0	EP	23 19 55.8	ES	20	16.6	8	0.8	7	0.6	4	1.0					190.0	20.8
IIDA	0	EP	23 19 58.8	IS	20	21.0	8	1.0	8	1.2	4	1.4					204.0	22.2
MIZUSA	0	EP	23 20 17.7				3	0.5	4	1.9							350.2	
NAGOYA	0	X	23 20 18.3	X	20	47.2	6	1.0	5	2.0	2	1.0					291.3	

OT= 9 0 53 24.4 +/- 0.1
E PART OF HOKKAIDO
LAT= 43 32 +/- 0 LONG= 144 20 +/- 1
H= 0 MAG=3.7 CLASS=L

ABASHI	0	IP	00 53 36.6	S	53	43.6	26	0.2	20	0.2	6	2.8	N	8 E	U	5	53.9	07.0
KUSHIR	1	IP	00 53 38.1	IS	53	46.0	79	0.2	115	0.4	19	0.2	S	13 E	3 U	16	61.9	07.9
NEMURO	0	IP	00 53 44.9	IS	53	58.7	10	0.4	7	0.2	3	0.4		W			104.0	13.8
OBIHIR	0	P	00 53 46.5	S	54	01.1											113.2	14.6
ASAHIK	0	P	00 53 52.5	S	54	14.2	5	1.4	4	1.6	3	1.2			D		160.3	21.7

OT= 10 3 19 33.6 +/- 0.3
MIDDLE OF CHIBA PREF
LAT= 35 30 +/- 1 LONG= 140 13 +/- 2
H= 80 CLASS=M

TOKYO	3	IP	03 19 48.0	S	19	56.8	1315	0.7	1335	1.0	215						46.3	08.8
YOKOHA	3	IP	03 19 48.2	IS	19	57.7	1800	0.8	1100	0.6	261	1.7	S	E 32	D	261	51.5	09.5
CHOSHI	2	IP	03 19 49.0	IS	20	00.6	1398	0.3	1646	0.3	644	0.2	N	36 E	90	U180	62.0	11.6
KAKIOK	3	IP	03 19 50.2	S	20	00.2	800	0.8	800	0.9	500	1.2	N	39 W	3 U	27	81.2	10.0
TOMISA	X	IP	03 19 50.8	IS	20	01.6	500	0.6	700	0.6	200	0.8	N	6 E	7 D	46	73.4	10.8
KUMAGA	2	IP	03 19 53.0	ES	20	04.6	280	1.4	260	1.8	218	2.0	S	3 E	8 D	73	103.9	11.6
MITO	2	IP	03 19 53.0	IS	20	05.1	276	1.3	281	1.5	188	1.4	N	4 E	5 U	18	100.1	12.1
UTSUNO	2	P	03 19 53.4	S	20	06.9	200		200		200		S	10 E	1 D	22	120.2	13.5
AJIRO	3	IP	03 19 53.4	IS	20	06.1	358	0.4	378	0.4	100	0.4	N	5 E	11 D	39	113.8	12.7
OSHIMA	2	IP	03 19 53.8	IS	20	06.0	594	1.0			74	0.6	N	20 E	5 D	47	112.0	12.2
CHICHI	1	IP	03 19 54.1	IS	20	09.2	200	2.0	200	1.6	235	2.4	S	18 E	48		116.2	15.1
FUNATS	2	IP	03 19 55.0	IS	20	10.0	150	1.7	100	1.4	50	1.2					131.8	15.0
MISHIM	X	IP	03 19 55.1	IS	20	08.1	157	0.7	157	0.7	86	0.7	S	38 E	38 U	18	124.7	13.0
MAEBAS	1	IP	03 19 57.0	IS	20	09.3	121	2.3	122	1.7	109	2.0	S	5 E	6 D	38	144.2	12.3
KOFU	2	IP	03 19 58.4	ES	20	15.2	120	0.3	139	0.4	60	0.8	S	26 E	20 D	46	151.4	16.8
SHIRAK	0	EP	03 20 01.1	IS	20	19.9											179.5	18.8
ONAHAM	1	IP	03 20 01.6	ES	20	21.3	227	1.3	173	1.0	78	0.9			D	11	171.9	19.7
SHIZUO	0	IP	03 20 01.8	IS	20	21.3	120	1.4	110	1.0	38	2.6	N	10 E	37 D	48	174.8	19.5
KARUIZ	0	IP	03 20 02.4	S	20	23.2	300	1.7	400	1.4	100	1.0	S	13 E	12 D	38	176.8	20.8
MATSUS	0	IP	03 20 06.0	S	20	28							S	E	D		214.5	22.0
IIDA	0	IP	03 20 07.4	IS	20	31.4	45	1.4	46	1.2	26	1.6		E 25	D	21	216.0	24.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NAGANO	0	EP	03 20 07.8			S	20	32.5	75	1.6	78	3.0						222.8	24.7
MATSUM	0	IP	03 20 07.8			ES	20	30.8							S	E 2	D 17	218.7	23.0
HAMAMA	0	IP	03 20 10.2			S	20	36.4	48	2.0	53	2.0	26	2.0			D 2	243.6	26.2
TAKAYA	0	EP	03 20 10.4			X	20	24.0										277.1	
FUKUSH	1	EP	03 20 11.3			S	20	35.4	86	0.9	107	0.8	58	0.7				251.4	24.1
TAKADA	0	P	03 20 11.3			S	20	27.6									D 7	250.8	16.3
HACHIJ	0	EP	03 20 14.2			IS	20	41.2	50		58		23					268.9	27.0
NIIGAT	0	EX	03 20 14.4						7	1.8	7	2.0	3	2.0				286.9	
NAGOYA	0	IP	03 20 17.2			S	20	54.8	74	2.0	54	1.2	34	1.2	N	1 E	4 D 4	297.6	37.6
TOYAMA	0	P	03 20 17.4			ES	20	55	45	2.6	53	3.0	33	2.6			D 7	302.1	37.6
YAMAGA	0	EP	03 20 18.5			S	20	50.8										305.7	32.3
GIFU	0	EP	03 20 18.5			ES	20	41	47	1.7	33	2.1	13	1.3				313.5	22.5
SENDAI	0	P	03 20 19.0			ES	20	50.4	120	2.0	65	2.0	30	1.6				312.2	31.4
AIKAWA	0	EP	03 20 20.0			X	20	30.2	20	1.6	19	3.2	13	1.4	S	2 E	4 D 1	330.5	
ISHINO	0	EP	03 20 21.5			IS	20	54.0	20	1.2	30	1.2	15	1.6	S	0 E	0 D 1	338.7	32.5
KANAZA	0	P	03 20 22.6			ES	21	01.2	27	2.6	31	2.4	22	3.0			D 10	341.9	38.6
FUKUI	0	P	03 20 24.1			S	21	05.1										365.9	41.0
WAJIMA	0	IP	03 20 25.4						50	1.2	45	1.0	7	1.0			D 7	363.9	
TSURUG	0	EP	03 20 26.7			X	21	17.7										376.6	
TSU	0	X	03 20 29.0															348.5	
SAKATA	0	EP	03 20 29.6			X	21	13.0			100	2.2	50	2.4				379.2	
OWASE	0	IP	03 20 29.7			S	21	12.4	5	2.0	4	2.4	3	2.6	S	2 W	5 U 4	400.8	42.7
OFUNAT	0	IP	03 20 30.6			IS	21	11.7	11	0.4	18	0.8	8	0.8	S	1		417.0	41.1
KYOTO	0	EP	03 20 31.0			IS	21	03.0	17	1.6	12	1.2	5	1.8		E	0 D 1	411.3	32.0
NARA	0	EP	03 20 31.4						100	1.8	50	1.4						409.7	
MIZUSA	0	EP	03 20 33.4						48	1.7	55	1.2	34	1.3				411.3	
OSAKA	0	EP	03 20 34.2			X	21	04.0	122	3.1	52	2.2	47	2.2				436.9	
MORIOK	0	P	03 20 38.2			S	21	24.7	13	0.4	16	0.4	4	1.4	N	E	D 0	473.2	46.5
TOYOOK	0	EP	03 20 39.7						66	1.2	87	1.0	11	1.1				489.4	
MIYAKO	0	EP	03 20 40			ES	21	26	6	0.8	7	3.0						485.3	46.0
SUMOTO	0	P	03 20 42.4			ES	21	40.4	6	3.0	4	2.6	4	4.2	N	E	D 1	501.8	58.0
TOKUSH	0	EP	03 20 47.8															540.0	
HACHIN	0	EP	03 20 49.0			ES	21	45.6	5	2.0	7	3.4	4	1.4				569.4	56.6
AKITA	0	EX	03 20 54.6			EX	21	35.2	29	2.6	34	2.4						468.2	
AOMORI	0	X	03 21 02.9						50	2.1	40	1.9						592.2	
URAKAW	0	IP	03 21 13.5			S	22	30.4	6	1.6	8	0.4	5	4.0	S	1	D 1	771.8	76.9
HAKODA	0	EX	03 21 17			EX	22	25	7	2.6	6	4.2	3	2.8				702.4	
KUSHIR	0	EP	03 21 30			X	22	53.2	11	0.2	11	0.4	5	0.6				904.9	
OITA	0	X	03 21 33.5						12	2.8	8	2.8						828.9	
OBIHIR	0	X	03 21															863.5	

OT= 12 11 27 26.9 +/- 2.1
E OFF HOKKAIDO
LAT= 43 52 +/- 8 LONG= 149 16 +/-11
H= 30 MAG=5.1 CLASS=U

NEMURO	0	IP	11 28 11.5	S	28	49.2	15	0.8	12	0.8	5	1.0	N	E	D	3	303.2	37.7
ABASHI	0	P	11 28 22.6	S	29	09.6			7	2.8	3	3.0					400.5	47.0
KUSHIR	0	EP	11 28 24	IS	29	12.2	26	0.6	16	0.4	9	0.8					406.7	48.2
URAKAW	0	P	11 28 46.3	S	29	50.0	8	1.2	9	0.4	7	1.2					561.8	63.7
HACHIN	0	EP	11 29 04.4	IS	30	23.6	6	1.2	4	1.0	1	1.1					739.0	79.2
MIZUSA	0	EP	11 29 24.1	ES	30	51.5	8	1.2	16	1.0	12	1.2					858.2	87.4
FUKUSH	0	X	11 30 03.1				4	1.0	5	1.0							1004.3	
MATSUS	0	IP	11 30 09.2	S	32	20							S	W	U		1242.5	130.8
AOMORI	0	X	11 30 36.3				14	1.0	14	1.0	4	1.1					776.5	
SENDAI	0	EX	11 31 03.1	ES	31	10.0	4	2.5	5	1.8	2	1.5					938.5	

OT= 13 19 30 7.4 +/- 0.4
OFF IBARAKI PREF
LAT= 36.36 +/- 1 LONG= 141 15 +/- 2
H= 50 MAG=4.0 CLASS=L

ONAHAM	0	IP	19 30 18.5	IS	30	25.8	43	1.0	27	0.8	9	0.6			D	4	49.0	07.3
MITO	1	IP	19 30 21.9	IS	30	31.2	72	0.5	91	0.4				E	4		73.9	09.3
KAKIOK	0	EP	19 30 25	S	30	35.5	13	0.8	13	0.8	8	0.5					103.2	10.5
SHIRAK	0	IP	19 30 25.2	IS	30	37.0									D	6	108.0	11.8
UTSUNO	0	EP	19 30 28.3	ES	30	39.7	12	0.2	7	0.2							123.5	11.4
FUKUSH	0	EP	19 30 30.4	S	30	45.8	57	0.8	27	0.7	10	0.6					145.6	15.4
SENDAI	0	EP	19 30 35.5	IS	30	54.9	7	1.0	5	1.0	2	1.0					186.8	19.4
MATSUS	0	IP	19 30 46.5	S	31	16								E	D		272.3	29.5

OT= 13 20 17 15.1 +/- 1.3
SE OFF KWANTO
LAT= 34 24 +/- 3 LONG= 141 48 +/- 7
H= 50 MAG=4.5 CLASS=M

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
CHOSHI	0	EP	20	17	41.3	S	17	55.5										170.9	14.2
HACHIJ	0	IP	20	17	49.4	IS	18	16.2	9		17				S 1 E	2	D 13	235.5	26.8
KAKIOK	0	EP	20	17	50.9	S	18	17.7	9	0.8	9	0.8	3	1.1				250.2	26.8
AJIRO	1	IP	20	17	51.6	ES	18	20.2	7	0.7	5	0.7	3	0.6			U 1	257.6	28.6
MITO	0	EP	20	17	53.7	ES	18	17.9	10	1.2	8	1.0						250.4	24.2
YOKOHA	0	X	20	17	55.6	IS	18	18.2	20	0.4	18	0.4						227.2	
TOKYO	0	X	20	17	56.0	ES	18	18.0	17	0.8	10	0.6						234.5	
KUMAGA	0	EP	20	18	01.0	ES	18	33.0	6	1.6	5	2.2	2	2.0				292.9	32.0
KOFU	0	EP	20	18	02.0	ES	18	36.8	5	0.7	5	0.5	2	0.9				327.3	34.8
KARUIZ	0	EP	20	18	06.8	S	18	44.4										365.2	37.6
MATSUS	0	IP	20	18	10.2	S	18	55									U	403.0	44.8

OT= 15 3 44 28.8 +/- 0.3
W COAST OF WAKAYAMA PREF
LAT= 33 51 +/- 1 LONG= 135 6 +/- 1
H= 10 MAG=4.1 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
WAKAYA	0	P	03	44	38.0	IS	44	43.0	32	0.1	36	0.1						42.2	05.0
TOKUSH	0	EP	03	44	39.5	IS	44	46.5										53.9	07.0
SUMOTO	0	P	03	44	39.8	IS	44	46.0	21	0.4	12	0.4	4	0.8	N 1 W		U 1	56.6	06.2
SHIONO	X	P	03	44	43.3	IS	44	53.2	19	0.6	18	1.0	10	1.0			D 2	75.9	09.9
KOBE	0	EP	03	44	45.7	S	44	58.6										93.3	12.9
OWASE	0	P	03	44	46.2	IS	44	57.8	31		27		8					104.0	11.6
OSAKA	0	EP	03	44	46.4	ES	45	04.4	25	2.7	30	4.2	12	3.4				97.3	18.0
TAKAMA	0	EP	03	44	48.4	IS	45	01.6	18	1.0	25	1.0	16	0.4				109.2	13.2
MUROTO	0	P	03	44	50.0	S	45	03.3	8	1.0	8	1.0						108.5	13.3
NARA	0	IP	03	44	50.6	IS	45	03.6									U 2	114.4	13.0
OKAYAM	0	IP	03	44	53.7	IS	45	09.7	15	0.4	16	0.6	5	0.4		W	0 D 2	142.9	16.0
TSU	0	IP	03	44	57.7	IS	45	14.7										161.1	17.0
KOCHI	0	X	03	44		X	45	01.9										149.0	
TOYOOK	0	P	03	45	00.8	S	45	24.2	23	1.3	11	1.0	5	0.9	S 3 E	1	D 3	188.8	23.4
HIKONE	0	EP	03	45	01.5	S	45	22.7	23	1.4	19	1.6	6	1.2				189.7	21.2
NAGOYA	0	EP	03	45	08.7	S	45	34.4	8	1.0	6	0.8	3	1.0				225.1	25.7
MATSUS	0	P	03	45	27													411.1	

OT= 15 21 14 43.7 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 31 +/- 1 LONG= 138 18 +/- 1
H= 20 MAG=3.5 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
MATSUS	1	P	21	14	46.7	S	14	48.2										8.6	01.5
NAGANO	1	P	21	14	49.1	S	14	52.4									D 3	18.4	03.3
KARUIZ	0	EP	21	14	50.1	S	14	55.2										29.9	05.1
MATSUM	0	IP	21	14	52.4	IS	14	57.9										42.2	05.5
KOFU	0	EP	21	15	01.6	ES	15	12.0	4	0.6	7	0.6	2	0.8				97.3	10.4

OT= 16 5 52 1.0 +/- 0.5
AMAKUSANADA
LAT= 32 16 +/- 2 LONG= 129 48 +/- 2
H= 10 MAG=4.4 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
NAGASA	1	IP	05	52	09.7	IS	52	16.3							N 20 E	1	U 6	50.1	06.6
UNZEND	2	IP	05	52	12.1	IS	52	18.9	16	0.3	19	0.3	16	0.3	S 0 W	1	U 1	67.1	06.8
KUMAMO	1	EP	05	52	18.9	S	52	33.6	92	1.2	74	1.2						104.5	14.7
FUKUE	0	P	05	52	19.6	S	52	31.6	26	1.0	18	0.8	10	4.8	N 3 W	6	U 7	102.7	12.0
KAGOSH	0	EP	05	52	19.6	ES	52	34.0	441	1.9	216	2.7	140	1.4				104.8	14.4
SAGA	0	P	05	52	20.3	IS	52	37.2										118.3	16.9
MIYAZA	0	P	05	52	25.4	S	52	45.7	45	4.3	30	3.5	25	3.0				158.3	20.3
FUKUOK	0	P	05	52	27.5	IS	52	47.0	21	0.6	14	0.8	11	2.8				155.4	19.5
ASOSAN	0	X	05	52	33													137.5	
YAKUSH	0	EP	05	52	34.5	EX	52	59.5	10	3.3	10	1.8	5	4.0				211.9	
SHIMON	0	EP	05	52	35.4	ES	53	00.0	7	4.0	12	3.0	5	4.6	S		D	215.2	24.6
OITA	0	EP	05	52	36.1	ES	52	58.8	45	5.2	41	4.1	12	2.5				201.6	22.7
ASHIZU	0	EP	05	52	50.0	ES	53	28.8	5	2.0	4	1.5	6	1.5				306.3	38.8
HAMADA	0	EP	05	52	54.1	ES	53	40.8	6	3.8	5	3.6	5	3.8				359.6	46.7
TOYOOK	0	X	05	53	42.4	X	54	48.7	9	1.0								588.8	

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OT= 17 12 9 32.6 +/- 0.4
OFF IBARAKI PREF
LAT= 36 39 +/- 1 LONG= 141 14 +/- 3
H= 60 MAG=4.0 CLASS=U

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
ONAHAM	0	IP	12	09	44.4	IS	09	50.7	39	0.4	49	0.4	11	0.3			U 5	43.8	06.3
MITO	0	IP	12	09	47.6	IS	09	57.6	26	0.5	36	0.5	11	0.4				74.6	10.0
SHIRAK	0	IP	12	09	50.7	IS	10	02.2									D 6	103.8	11.5
KAKIOK	0	EP	12	09	51	ES	10	08	7	1.0	14	0.5	4	0.5				104.1	12.0
UTSUNO	0	EP	12	09	53.0	ES	10	06.1	7	0.2	4	0.2						122.4	13.1
FUKUSH	0	EP	12	09	55.0	S	10	09.8	21	0.8	24	0.8						140.0	14.8
MATSUS	0	IP	12	10	12.8	S	10	42							N	E		270.9	29.2

OT= 17 13 42 31.6 +/- 0.5
AMAKUSANADA
LAT= 32 10 +/- 2 LONG= 129 45 +/- 2
H= 10 MAG=4.1 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
NAGASA	0	P	13	42	42.6	IS	42	50.0								N E	U 1	61.8	07.4
UNZEND	1	IP	13	42	45.6	IS	42	54.5	16	0.3	17	0.3	10	0.2		N 1 W	1 U 0	78.8	08.9
KAGOSH	0	EP	13	42	49.6	ES	43	03.9	101	1.8	71	2.0	60	1.4				100.5	14.3
FUKUE	0	P	13	42	51.4	ES	43	03.2	7	1.6	7	1.0				N 1 W	2 U 3	104.5	11.8
KUMAMO	0	EP	13	42	52.0	ES	43	08.4	21	1.2	42	1.2	15	0.6				115.0	16.4
SAGA	0	EP	13	42	56.3	IS	43	09.6										130.4	13.3
FUKUOK	0	EP	13	43	00.0	ES	43	19.0	7	1.0	6	0.8	5	1.8				167.4	19.0
MIYAZA	0	X	13	43	08.0	S	43	21.0	13	4.8	9	3.2						160.7	
OITA	0	X	13	43	31.3				11	3.1	10	3.7						211.7	

OT= 17 18 19 28.0 +/- 0.4
W COAST OF WAKAYAMA PREF
LAT= 33 53 +/- 1 LONG= 135 8 +/- 2
H= 10 MAG=3.6 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
WAKAYA	0	P	18	19	35.3	S	19	39.0	29	0.1	44	0.1						38.2	03.7
SUMOTO	1	P	18	19	40.0	S	19	45.3	12	0.4	9	0.4	4	0.5		W	U	54.2	05.3
NARA	0	EP	18	19	48.4	ES	20	01.0										109.6	12.6
MUROTO	0	EP	18	19	48.7	S	20	03.9	5	0.3	5	0.8						113.2	15.2
OKAYAM	0	IP	18	19	53.0	IS	20	09.0	5	0.6	5	0.5	3	0.6	N 0		U 0	142.9	16.0
MATSUS	0	X	18	20	37	S	21	22										406.2	

OT= 18 22 39 6.0 +/- 0.3
OFF MIYAZAKI PREF
LAT= 32 31 +/- 1 LONG= 132 8 +/- 1
H= 0 MAG=4.1 CLASS=L

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
NOBEOK	1	P	22	39	16.5	IS	39	28.1							N 1 W	2	U 2	42.9	06.6
UWAJIM	0	P	22	39	23.3	S	39	35.5										88.0	12.2
OITA	0	EP	22	39	23.8	S	39	35.6	29	0.6	33	0.6	15	0.8				92.7	11.8
ASHIZU	0	EP	22	39	24.1	ES	39	34.5	5	1.0	4	1.1	4	1.1				85.8	10.4
MIYAZA	0	P	22	39	24.4	S	39	37.6	20	0.8	23	1.0	7	1.0				94.1	13.2
KUMAMO	0	EP	22	39	32.1	S	39	48.9	11	0.6	11	0.4	7	0.6				137.4	16.8
MATSUY	0	EP	22	39	35.3	ES	39	54.0	9	0.7	6	0.7	2	0.7				158.6	18.7

OT= 19 5 42 37.5 +/- 0.0
SW OF IBARAKI PREF
LAT= 36 3 +/- 1 LONG= 139 54 +/- 2
H= 40 MAG=4.3 CLASS=S

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
KAKIOK	3	IP	05	42	46.6	S	42	52.3	500	0.5	300	0.9	200	0.7	N 14 E	3	U 34	33.2	05.7
UTSUNO	2	IP	05	42	47.2	IS	42	55.4	300		200		93	0.3	S 10 E	6	D 30	55.2	08.2
TOKYO	0	IP	05	42	48.7	IS	42	56.8	100	0.2	67	0.2	5					42.5	08.1
KUMAGA	1	P	05	42	49.0	S	42	57.0	44	0.2	43	0.6	14	0.4			D 24	47.6	08.0
MITO	2	IP	05	42	49.5	IS	42	58.0	191	0.7	173	0.6	120	0.6	N 2 E	3	U 18	63.0	08.5
CHICHI	1	EP	05	42	50.1	S	42	59.3										74.0	09.2
MAEBAS	1	IP	05	42	52.4	S	43	03.8	16	1.6	13	0.7	8	1.8	S 1 E	1	D 6	84.6	11.4
YOKOHA	0	IP	05	42	52.5	IS	43	03.5	76	0.6	73	0.8	16	0.4			U 2	71.6	11.0
CHOSHI	1	IP	05	42	53.3	S	43	03.4	54	0.2	44	0.2	28	0.2	N 2 E	4	U 12	92.5	10.1
SHIRAK	0	EP	05	42	55.2	ES	43	09.7										122.0	14.5
TOMISA	0	P	05	42	56.7				17	2.4	17	2.4	9	2.2			D 2	125.5	

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KOFU	0	IP	05 42 57.8	ES	43 16.8	33	0.5	25	0.5	7	0.6			D 1	128.5	19.0
AJIRO	0	P	05 42 58.0	S	43 12.2	21	0.3	15	0.3	5	0.4				133.3	14.2
KARUIZ	0	EP	05 42 58.0	X	42 19.5										125.4	
OSHIMA	0	P	05 42 58.6	S	43 15.1	27	0.6	18	0.4	15	0.4				150.5	16.5
FUNATS	0	IP	05 42 58.8	IS	43 12.7										119.6	13.9
MISHIM	0	EP	05 42 59.0	ES	43 16.2	14	0.4	14	0.4	5	0.5				136.2	17.2
ONAHAM	2	EP	05 42 59.7	IS	43 13.5	78	0.6	77	0.6	26	0.4				134.1	13.8
MATSUS	0	IP	05 43 02.3	S	43 28							S		D	161.3	25.7
MATSUM	0	EP	05 43 04.9	S	43 31.4										174.7	26.5
NIIGAT	0	EX	05 43 06.7			10	3.8	6	2.0						219.8	
FUKUSH	1	EP	05 43 07.5	S	43 29.5	17	0.8	15	0.7						196.2	22.0
IIDA	0	EP	05 43 07.8	ES	43 32.0	7	1.8	8	1.6	4	1.2				196.0	24.2
SHIZUO	0	EP	05 43 09.0	ES	43 25.2	6	0.4	5	0.8	3	1.6				180.6	16.2
SENDAI	0	EP	05 43 14	ES	43 44.3	10	1.0	10	1.5	3	1.8				260.8	30.3
OMAEZA	0	X	05 43 17.1			6	1.2	7	1.6						221.9	
HAMAMA	0	X	05 43 20	ES	43 43	6	1.4	4	2.0	2	1.4				247.5	
NAGOYA	0	EP	05 43 21.0	ES	43 51.6	6	0.1	6	1.2	3	1.0			U 1	283.1	30.6
MIZUSA	0	EP	05 43 29.9			3	1.3	4	1.5	4	1.1				359.1	
OSAKA	0	X	05 44 37			12	2.6	11	4.3						425.7	

OT= 19 21 6 59.2 +/- 0.4
OFF IBARAK PREF
LAT= 36 26 +/- 1 LONG= 141 13 +/- 3
H= 50 MAG=6.0 CLASS=R

ONAHAM	4	IP	21 07 11.6	IS	07 19.9	3500	1.2	8000	1.5	900	0.8	S320 E120 D450			63.2	08.3
MITO	3	IP	21 07 12.7	IS	07 23.7	2100	0.8	2000	0.9	1450	2.8	S 5 E 78 D116			67.1	11.0
KAKIOK	4	IP	21 07 14.9	S	07 27.7	3400	0.9	3300	0.9	2000	3.2	N 88 E364 D225			94.5	12.8
CHOSHI	3	IP	21 07 15.0	IS	07 24.6			1734	0.6	1160	0.8	N 12 E 2 D 14			85.5	09.6
SHIRAK	3	IP	21 07 18.4	IS	07 30.9	3300	2.3	3100	2.2	1400	2.3	S130 E125 D306			116.7	12.5
UTSUNO	3	IP	21 07 18.9	ES	07 32.3	700	1.4	600	1.6	300	1.1	S 10 E177 D172			121.1	13.4
TOKYO	3	IP	21 07 24.1	IS	07 38.6	375	1.6	900	2.0	186	2.0				155.4	14.5
FUKUSH	3	IP	21 07 25.1	S	07 43.6	1000	0.8	2500	0.9	1700	1.0	S136 E 83 D 66			161.0	18.5
KUMAGA	3	IP	21 07 25.2	ES	07 41.0	700	1.2	800	1.4	350	3.2	N 11 E 36 D136			167.6	15.8
MAEBAS	2	IP	21 07 27.9	S	07 49.0	610	2.2	600	3.2	418	3.7	S 3 E 41 D128			193.0	21.1
CHICHI	2	IP	21 07 28.0	IS	07 48.9	350	1.6	400	1.2	350	1.4	N 13 E 50			198.1	20.9
YOKOHA	2	IP	21 07 29.5	IS	07 49.9	900	1.3	650	0.8	386	2.1	N 5 E 4 D 25			179.1	20.4
SENDAI	3	IP	21 07 30.0	IS	07 51.9	1100	2.3	1500	2.3	400	2.3	S 33 E 6 D 20			204.6	21.9
ISHINO	2	IP	21 07 31.4	IS	07 52.0	150	1.4	160	1.4	68	2.0	S 3 E 1 D 2			221.1	20.6
YAMAGA	1	P	21 07 31.6	IS	07 56.4	350	2.5	300	2.5	200	2.0	S 5 E 2 D 11			216.1	24.8
TOMISA	0	EP	21 07 31.6	S	07 54.0	600	2.2	700	2.4	600	2.4				209.7	22.4
KARUIZ	X	IP	21 07 33.2	S	07 58.0	400	1.6	600	1.8					D 4	239.3	24.8
OSHIMA	1	P	21 07 35.0	IS	08 05.1	248	3.2	187	2.8	144	2.0	S 5 W 5 U 7			249.2	30.1
AJIRO	1	IP	21 07 35.1	ES	08 01.2	138	1.6	142	1.5	70	2.0	N 1 E 0 D 1			246.0	26.1
KOFU	2	IP	21 07 35.8	X	08 29.4	750	1.4	1250	1.4	450	1.4	N 5 E 9 D 9			254.2	
FUNATS	2	P	21 07 35.9	S	08 02.2	700	1.9	800	2.1	350	2.1	N 8 E 20			244.4	26.3
MISHIM	0	IP	21 07 36.6	IS	08 04.7	400	2.2	300	2.2	150	2.4	N 1 E 4 D 4			253.4	28.1
NIIGAT	0	IP	21 07 36.8	IS	08 09.5	390	1.3	390	3.7	265	3.2			10	252.6	32.7
MATSUS	0	IP	21 07 37.5	S	08 08							S E D			269.8	30.5
TAKADA	0	P	21 07 39.6	S	08 09.6	400	2.0	300	2.0	100	2.0	S 5 E 9 D 25			275.1	30.0
NAGANO	1	IP	21 07 40.1	S	08 10.1			235	3.2	180	1.9	S 16 E 25 D 83			271.5	30.0
OFUNAT	1	IP	21 07 40.8	IS	08 10.5	66	1.0	119	1.6	65	2.4	S 0			295.0	29.7
MATSUM	0	P	21 07 41.9	S	08 13.1	200	1.7	150	1.7	150	1.7			D 5	291.9	31.2
MIZUSA	1	EP	21 07 42.4	ES	08 14.8	393	1.2	342	2.4	224	1.8				299.7	32.4
SHIZUO	0	P	21 07 43.4	IS	08 16.2	140	2.0	130	1.2	110	1.2	N 1 E 4 D 5			301.4	32.8
AIKAWA	0	IP	21 07 43.9	X	08 28.8	222	2.4	114	3.8	152	4.6	S 5 E 15 D 17			317.3	
SAKATA	X	IP	21 07 45.7	ES	08 19.9	1000	2.8	950	2.0	500	3.0	S 6 E 4 D 7			299.9	34.2
IIDA	0	IP	21 07 46.4	IS	08 20.8	222	1.2	236	2.0	194	1.8	N 8 E 30 D 25			321.7	34.4
MIYAKO	1	EP	21 07 48	ES	08 23	47	1.4	69	2.0	63	1.8				362.5	35.0
MORIOK	2	IP	21 07 49.4	S	08 26.4	118	0.4	124	0.4	46	0.7	S 0 E 0 D 0			362.2	37.0
TOYAMA	0	IP	21 07 51.1	S	08 26.4	255	4.0	196	3.0	182	3.8	S 15 E 5 D 24			360.0	35.3
AKITA	X	IP	21 07 52.9	S	08 34.1	284	3.2	373	3.2	214	3.2			D 4	377.5	41.2
HAMAMA	0	IP	21 07 53.8	ES	08 34	205	2.6	221	3.0	118	3.0		E 4	D 5	369.9	40.2
WAJIMA	0	IP	21 07 55.0	ES	08 40	180	1.2	150	1.4	73	1.4	S 4 E 11 D 13			399.1	45.0
HACHIJ	0	IP	21 07 55.2	S	08 34.2	57		57		38				U 1	391.9	39.0
NAGOYA	0	P	21 07 56.8	S	08 40.4	310	2.4	218	2.4	115	2.4	N 2 E 2 D 2			408.9	43.6
GIFU	0	P	21 07 56.9	S	08 40.3	210	2.1	180	1.9	95	2.0	N 3 E 5 D 4			417.8	43.4
KANAZA	0	IP	21 07 57.6	ES	08 41.0	134	3.0	114	3.4	90	3.4	N 2 W 3 D 11			409.4	43.4
OMAEZA	0	X	21 07	S	08 30.7	317	3.2	293	3.6	138	3.8				339.7	
HACHIN	1	P	21 08 01.4	ES	08 52.6	56	2.1	68	1.8	40	2.9	S 1		D	455.0	51.2
FUKUI	0	EP	21 08 01.5	ES	08 56.6										450.4	55.1
HIKONE	0	P	21 08 04.5	IS	09 01.0	562	1.5	315	1.9	94	1.4				466.9	56.5
TSURUG	0	EP	21 08 04.7	ES	08 59.5	100	1.1	100	1.0	100	2.9				472.2	54.8
TSU	0	P	21 08 05.0	X	10 17.0										467.1	
AOMORI	0	EP	21 08 05.3	S	09 03.7	334	2.5	277	2.1	109	1.4				488.0	58.4
KYOTO	0	EP	21 08 10.0	S	08 58.8	77	2.0	53	1.6	25	1.6				520.3	48.8
OWASE	0	P	21 08 11.2	S	09 13.8	46	3.0	40	2.0	15	1.6				526.8	62.6
NARA	0	EP	21 08 11.4			350	2.0	250	1.7	150	1.3				525.1	
OSAKA	0	EP	21 08 14.7	ES	09 06.1	324	3.8	345	4.0	174	2.7				551.5	51.4

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOYOOK	0	P	21 08 17.6	S	09 23.4	190	1.0	170	1.2	35	3.5		E 3	D 2	585.1	65.8
KOBE	0	EP	21 08 17.8	EX	09 37.5										580.3	
HAKODA	0	P	21 08 19.4	S	09 21.3	82	3.0	88	2.2	54	3.0			D 1	598.6	61.9
SHIONO	0	EP	21 08 19.4	ES	09 19.9	32	1.8	54	2.7	19	2.4				597.9	60.5
SUMOTO	0	P	21 08 21.7	ES	09 25.8	34	2.8	35	2.6	27	3.4		W	U	618.3	64.1
HIMEJI	0	EP	21 08 21.7	X	09 42.7										615.9	
URAKAW	0	P	21 08 25.0	S	09 30.4	99	1.2	105	1.4	50	1.2			U	649.7	65.4
MURORA	0	EP	21 08 25.3	S	09 31.2										653.5	65.9
TOTTOR	0	EP	21 08 26.1	S	09 39.1										642.7	73.0
TOKUSH	0	EP	21 08 28.9	ES	09 37.2										658.6	68.3
OKAYAM	0	IP	21 08 30.5	ES	09 41.5	25	2.6	15	2.4	20	3.0		W 4	U 2	689.6	71.0
SAIGO	0	P	21 08 33.4	IS	09 49.8	22	2.6	19	2.6	14	1.8	S 0	E 0	D 1	708.1	76.4
TURUGI	0	EP	21 08 34.2												708.8	
SAPPOR	0	EP	21 08 35	ES	09 51	36	2.4	27	1.8	15	1.5				735.6	76.0
YONAGO	0	EP	21 08 35.7	ES	09 55.7										718.7	80.0
OBIHIR	0	P	21 08 37.2	ES	09 53										740.4	75.8
MUROTO	0	IP	21 08 37.6	ES	09 52.1	32	3.0	34	4.8	13	4.2			U 0	733.9	74.5
SUTTSU	0	EP	21 08 38	EX	09 58										710.7	
MATSUE	0	EP	21 08 39.0	ES	10 00.7										742.5	81.7
KUSHIR	0	EP	21 08 40	X	09 53.5	30	0.4	33	0.2	13	1.6				776.0	
KOCHI	0	EP	21 08 41.0	ES	10 04.1										770.4	83.1
TAKAMA	0	X	21 08 41.3	X	10 00.9	38	4.0	23	3.4	13	3.3				691.2	
ASAHIK	0	IP	21 08 45.2	S	10 11.6	34	1.2	35	1.4	42	2.2	S			820.6	86.4
HIROSH	0	P	21 08 49.3	X	09 54.8	13	2.9	10	3.5	18	2.5	N 1	W 1	U 1	829.5	
RUMOI	0	EX	21 08 50	ES	10 14										835.4	
MATSUY	0	EP	21 08 50.3	ES	10 15.1	27	2.5	18	3.1	8	2.7				820.4	84.8
HAMADA	0	EP	21 08 51.2	ES	10 14.8	19	2.7	9	3.1	9	2.7				844.8	83.6
ASHIZU	0	EP	21 08 54.4	ES	10 27.4	11	2.6	9	2.8	6	2.6				857.3	93.0
UWAJIM	0	EP	21 08 54.4												867.7	
FUKUE	0	X	21 08	X	11 19.6	6	3.6			6	2.6				1208.0	
NEMURO	0	X	21 08	X	10 11	8	1.6	8	2.0	5	1.4				851.7	
ABASHI	0	X	21 08	X	10 18.4	13	2.0	16	2.0	8	3.2				881.4	
OITA	0	P	21 09 04.5	X	11 18.0	72	3.1	55	4.9	35	4.4				945.8	
SHIMON	0	EP	21 09 10.0	ES	10 50	15	2.2	8	2.4	10	2.4	S	W	U	974.6	100.0
MIYAZA	0	P	21 09 14.6			10	3.4	7	2.0	8	3.0				1031.2	
KUMAMO	0	EP	21 09 16.2	X	11 50.7	40	2.8	18	2.3	6	2.7				1043.0	
SAGA	0	IP	21 09 20.8	X	12 13.4									N 4 E 18 D 10	1057.8	
NAGASA	0	P	21 09 26.0	ES	11 23.2										1118.7	117.2
FUKUOK	0	X	21 09 26.8	X	11 17.0	32	2.8	10	2.4	7	2.8				1037.6	
KAGOSH	0	X	21 09			28	2.8	27	2.3	4	1.3				1121.6	

OT= 20 19 48 32.7 +/- 1.1
NEAR HACHIJOJIMA
LAT= 32 34 +/- 4 LONG= 141 1 +/- 4
H= 0 MAG=5.1 CLASS=U

HACHIJ	0	EP	19 48 56.0	S	49 15.0	40		49		27					129.4	19.0
OSHIMA	0	IP	19 49 18.3			14	2.1	19	3.8	13	2.0		E 2		286.9	
TOMISA	0	P	19 49 18.4	S	49 51.2	31	2.0	34	2.6	17	2.8				283.2	32.8
AJIRO	0	EP	19 49 22.7	ES	50 01.6	4	0.4	5	0.4	2	0.6				327.1	38.9
TOKYO	0	P	19 49 25.4	S	50 10.8	31	2.6	22	3.4						364.7	45.4
MISHIM	0	EP	19 49 25.6	ES	50 06.5	15	2.3	19	2.3	7	1.8				341.9	40.9
SHIZUO	0	EX	19 49 26.7			5	5.0	6	5.0	5	3.0				360.0	
YOKOHA	0	EP	19 49 26.9	S	50 05.4	28	0.7	46	1.6	16	0.7				342.2	38.5
FUNATS	0	P	19 49 30.9	S	50 13.5										385.9	42.6
MITO	0	EP	19 49 34.8	ES	50 31.0	29	4.0	23	4.0	14	3.4				425.7	56.2
KOFU	0	EP	19 49 35.4	ES	50 22.8	17	2.2	20	2.0	5	2.2				411.6	47.4
KAKIOK	0	EP	19 49 36	ES	50 20	9	1.1	8	1.0	5	0.5				413.4	44.0
KUMAGA	0	EP	19 49 37.2	ES	50 23.4	17	2.2	33	2.0	18	4.4				424.4	46.2
IIDA	0	EP	19 49 38.6	ES	50 31.0	6	1.8	5	2.4	3	2.6				439.0	52.4
MAEBAS	0	EX	19 49 41.1			13	2.1	21	2.0	9	2.5				461.5	
KARUIZ	0	EP	19 49 44.9	S	50 39.1										475.7	54.2
MATSUS	0	IP	19 49 46.7	S	50 42									D	510.2	55.3
UTSUNO	0	X	19 49 48.0	ES	50 28.4	10	2.0	6	1.7						453.7	
FUKUSH	0	EP	19 49 53.8	ES	50 53.6	19	1.0	12	0.8	7	0.7				577.7	59.8
CHOSHI	0	X	19 49 56.4												350.6	
SENDAI	0	EP	19 50 01	ES	51 05.9	9	2.0	9	2.0	4	3				631.6	64.9
MIZUSA	0	EP	19 50 14.2			8	2.2	11	2.5	6	1.4				728.5	
ONAHAM	0	X	19 50 30.9			13	2.0	14	1.0	4	1.9				485.7	
TOYAMA	0	X	19 51 03			13	4.6	20	5.6	8	4.0				576.6	
AKITA	0	X	19 51 44			10	4.2	10	4.6	3	3.4				797.6	

OT= 21 9 24 51.2 +/- 0.6
OFF IWATE PREF
LAT= 39 51 +/- 1 LONG= 142 32 +/- 3
H= 40 MAG=4.3 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S * S	N-S A/T * S	E-W * S	E-W A/T * S	U-D * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
HACHIN	0	IP	09 25 09.4	IS	25 20.8	15	0.4	10	0.4	3	0.5	S 1 E	1 D		114.0	11.4
OFUNAT	0	IP	09 25 09.8	IS	25 22.0	22	0.0	12	0.4	10	0.6	S 3 W	2 U	3	112.2	12.2
MORIOK	0	EP	09 25 10.5	S	25 23.0	35	0.4	21	0.3	5	0.5				118.2	12.5
MIZUSA	0	EP	09 25 15.1	ES	25 31.4	23	1.0	35	0.7	16	1.5				144.3	16.3
AOMORI	0	EP	09 25 20.4	S	25 39.0	16	1.1	21	0.6	5	0.9				183.4	18.6
ISHINO	0	IP	09 25 20.4	IS	25 41.0	5	0.2	6	0.2	3	0.4	S 0 W	0 U	0	190.6	20.6
SENDAI	0	EP	09 25 25.2	ES	25 49.7	9	1.6	6	1.2	4	0.8				226.1	24.5
FUKUSH	0	EX	09 25 34.3			8	1.0	8	1.0	2	0.6				293.2	
AKITA	0	X	09 25 39.8			9	2.2	8	3.2	5	2.0				208.8	
MATSUS	0	P	09 26 05												527.7	

OT= 24 1 5 32.1 +/- 0.1
NEAR MATSUSHIRO
LAT= 36 28 +/- 0 LONG= 138 6 +/- 1
H= 0 MAG=3.7 CLASS=L

MATSUS	1	P	01 05												12.5	
NAGANO	1	EP	01 05												23.1	
KANAZA	0	EX	01 05			7	2.4	4	2.4						130.3	
MATSUM	0	IP	01 05 39.4	IS	05 42.9								U	3	27.3	03.5
KARUIZ	0	EP	01 05 42.3	IS	05 47.6										42.9	05.3
TAKADA	0	EP	01 05 47.2	S	05 56.8										72.1	09.6
MAEBAS	0	EX	01 05 51.1			23	4.9	5	1.9	5	2.2				86.8	
TOYAMA	0	EX	01 05 53			6	2.4	7	2.6	4	3.4				84.1	
KUMAGA	0	EP	01 05 55.4	ES	06 11.2	6	1.2	6	1.2	2	1.0				120.7	15.8

OT= 24 8 10 29.0 +/- 1.2
NEAR MATSUSHIRO
LAT= 36 26 +/- 3 LONG= 138 5 +/- 5
H= 0 CLASS=L

MATSUS	2	P	08 10 32.3	S	10 34.3										16.2	02.0
MATSUM	X	IP	08 10 34.5	IS	10 38.4								U	9	23.3	03.9
NAGANO	1	IP	08 10 34.6	S	10 38.4										27.1	03.8
KARUIZ	0	EP	08 10 38.0	IS	10 43.0										43.3	05.0
KUMAGA	0	EP	08 10 55.8	ES	11 06.4	5	1.0	5	1.0	1	0.6				121.2	10.6

OT= 24 9 43 12.0 +/- 0.8
OFF IBARAKI PREF
LAT= 36 5 +/- 2 LONG= 141 5 +/- 5
H= 40 MAG=4.0 CLASS=U

CHOSHI	0	EP	09 43 22.3	IS	43 30.4										45.3	08.1
KAKIOK	0	EP	09 43 26	ES	43 35	14	1.0	11	1.0						81.7	09.0
MITO	0	EP	09 43 26.0	IX	43 35.9	17	0.6	15	1.0	7	0.8				64.0	
UTSUNO	0	X	09 43 38.5	ES	43 50.4	6	0.2	4	1.1	4	1.0				120.3	
FUKUSH	0	EP	09 43 40.9	S	44 04.7	14	1.0	11	0.8	5	0.6				193.4	23.8
SENDAI	0	EX	09 43 46	ES	44 24.2	5	1.2	5	0.8	2	1.9				242.1	
MATSUS	0	P	09 43 51	S	44 21										263.0	30.0

OT= 24 12 26 25.0 +/- 2.6
OFF CHOSHI
LAT= 35 42 +/- 7 LONG= 142 3 +/- 1
H= 40 MAG=4.5 CLASS=S

CHOSHI	2	IP	12 26 42.0	IS	26 52.8	107	0.6	70	0.6	13	0.4	W 4	U	6	109.2	10.8
MITO	0	EP	12 26 49.2	ES	27 13.0	26	1.2	25	1.4	15	1.9				160.9	23.8
KAKIOK	0	EP	12 26 52	ES	27 11	25	1.0	30	1.0	10	0.8				177.5	19.0
ONAHAM	0	EX	12 26 52.3	ES	27 09.7	22	1.1	23	2.0	7	1.6				172.1	
SHIRAK	0	EP	12 26 58.7	ES	27 21.2										227.0	22.5
TOKYO	0	EP	12 26 58.9	S	27 21.0	26	0.5	30	0.4	4	0.6				207.4	22.1
UTSUNO	0	EP	12 27 00.7	ES	27 25.1	17	1.7	7	1.2						217.4	24.4
KUMAGA	0	EP	12 27 01.8	X	27 41.4	8	1.0	8	1.6	8	3.2				245.5	
YOKOHA	0	X	12 27 04.6	S	27 26.5	24	0.6	13	0.6						219.0	
FUKUSH	0	EP	12 27 05.4	X	27 21.3	22	1.0	12	1.0	5	0.7				268.1	
MISHIM	0	EX	12 27 08			6	2.0	6	2.0	3	2.0				290.7	
TOMISA	0	X	12 27 08.4			14	2.4	16	4.0	10	2.6				219.7	
KOFU	0	EP	12 27 11.4			6	2.4	6	2.6	3	1.5				316.0	
SENDAI	0	EP	12 27 12.0			5	1.6	4	1.4	3	1.4				301.9	
MATSUS	0	IP	12 27 14.8	S	27 51							S E	D		358.1	36.2

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S * S	N-S A/T * S	E-W * S	E-W A/T * S	U-D * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MIZUSA	0	X	12 27 33.1			5	2.2	3	2.5						389.5	

OT= 25 7 37 23.3 +/- 0.2
W OF IBARAKI PREF
LAT= 36 18 +/- 3 LONG= 140 5 +/- 2
H= 70 CLASS=L

KAKIOK	0	P	07 37 33.8	IS	37 42.0	12		17		6					12.5	08.2
UTSUNO	1	EP	07 37 35.3	IS	37 42.8	14	0.3	16	0.2						33.3	07.5
MITO	0	P	07 37 35.6	S	37 45.0	5	0.6	5	0.6	5	0.5				35.9	09.4
KUMAGA	0	P	07 37 38.2	IS	37 48.8	7	0.8	15	0.8	3	0.8		D	2	65.0	10.6
MATSUS	0	IP	07 37 48.6									E	D		170.2	

OT= 26 9 8 8.3 +/- 1.3
E OFF AMAMI-OSHIMA
LAT= 28 28 +/- 5 LONG= 130 17 +/-11
H= 40 MAG=5.6 CLASS=R

YAKUSH	1	EP	09 08 43.1	ES	09 09.0	293	0.9	318	1.1	195	4.4				220.7	25.9
KAGOSH	0	EP	09 08 56.6	ES	09 31.5	312	2.4	235	2.4	79	1.8				345.2	34.9
NAHA	0	P	09 08 58.8	S	09 34.0	95	1.8	113	2.0	90	2.0		U	5	356.7	35.2
MIYAZA	X	P	09 09 04.6	S	09 48.2	93	4.0	125	4.0	70	3.2				397.8	43.6
NAGASA	0	EP	09 09 13.8	S	10 06.0										472.4	52.2
NOBEOK	0	EP	09 09 14.0	ES	10 02.9										475.5	48.9
KUMAMO	0	P	09 09 16.7	IS	10 05.2	73	3.0	108	2.0	25	0.8	S	1		483.0	48.5
SAGA	0	P	09 09 24.0	S	10 27.8										529.5	63.8
ASHIZU	0	EP	09 09 24.7	X	10 49.3	13	2.8	6	2.8	10	3.6				538.8	
FUKUOK	0	EP	09 09 27.0	ES	10 24.0	14	2.6	13	3.0	12	6.0				566.7	57.0
OITA	0	P	09 09 27.1	S	10 20.4	178	3.5	197	3.9	63	2.7	S	W		543.5	53.3
SHIMON	0	EP	09 09 33.0	ES	10 44.0	14	4.8	27	4.4	18	4.4				611.2	71.0
MUROTO	0	EP	09 09 34.6	ES	10 39.1	5	4.0	8	6.0						647.5	64.5
HIROSH	0	EP	09 09 45.2	X	10 43.9	12	3.0	10	4.5	4	2.9				684.7	
TURUGI	0	EX	09 09 46.4												698.5	
TAKAMA	0	EP	09 09 49.7	ES	11 14.4	9	3.0	11	3.1						740.9	84.7
HAMADA	0	EP	09 09 50.9	ES	11 02.3	10	5.7	15	6.8	10	5.9				732.1	71.4
OKAYAM	0	EP	09 09 51.0	S	11 06.0	7	3.2	10	6.0	10	6.2				770.0	75.0
SUMOTO	0	P	09 09 54.8	ES	11 13.7	16	3.1	8	2.8	6	3.0	S	W	D	784.8	78.9
				EX	11 09.0											
OWASE	0	EP	09 09 59.5	ES	11 39.0	10	3.0	9	4.0	6	3.0				837.4	99.5
FUKUE	0	X	09 09	ES	10 11.0	17	7.0	9	4.0	14	8.6				489.2	
MATSUY	0	X	09 09	ES	10 37.6	15	3.3	29	4.1	10	3.4				641.2	
TOKUSH	0	X	09 09	ES	11 01.3										742.7	
TOYOOK	0	EP	09 10 06.2			26	1.2	13	4.4	4	2.7				892.8	
SAIGO	0	EP	09 10 08.3	X	11 57.1	16	4.2	11	3.8	8	4.8	S	0 W	1 0 0	904.4	
				X	12 19.1											
HIKONE	0	EP	09 10 09.6	ES	11 52.6	12	2.9	11	1.9	3	0.9				941.5	103.0
OSAKA	0	EX	09 10 14.8	X	10 46.8	77	4.0	69	4.3	27	3.4				847.1	
ASOSAN	0	X	09 10 16												494.7	
NAGOYA	0	EP	09 10 19.6	X	12 19.6	15	3.2	12	2.8						974.9	
				X	13 05.4											
				X	10 44.4											
OMAEZA	0	EX	09 10 22					16	12.6						1013.8	
WAKAYA	0	X	09 10 24.9	X	11 55.0	9	2.4	7	1.8						789.2	
KANAZA	0	EP	09 10 28.8	X	13 21.1	16	4.4	20	5.0	9	4.4				1076.2	
FUKUI	0	X	09 10 30.6												1009.7	
MATSUS	0	IP	09 10 39.4	S	12 46								U		1163.0	126.6
WAJIMA	0	EP	09 10 40	X	13 48	10	1.2	9	1.2						1165.9	
TOKYO	0	EX	09 10 43			12	3.8	11	3.4						1198.7	
KUMAGA	0	EP	09 10 49.0	X	14 20.0	7	5.4	10	5.6	7	4.1				1206.7	
TOYAMA	0	X	09 10 50	EX	12 30	17	4.2	16	4.4	10	4.4				1120.3	
YOKOHA	0	X	09 10 50.6			9	4.1	11	3.0						1174.1	
MAEBAS	0	X	09 10 52.0			8	4.7	9	3.9	6	3.6				1205.2	
MITO	0	X	09 11 05.8			4	2.5	6	3.3	3	2.5				1297.2	
AOMORI	0	EX	09 11 20			7	2.7	7	2.3	3	2.7				1671.1	
AKITA	0	EX	09 11 30	EX	14 08	7	4.2	8	3.8	4	2.8				1539.6	
MIZUSA	0	EP	09 11 36.3			8	3.1	5	3.2	2	2.4				1549.2	
NIIGAT	0	X	09 13 04.0			15	5.0	26	6.7	10	4.3				1326.8	

OT= 28 6 4 16.7 +/- 0.3
OFF IBARAKI PREF
LAT= 36 26 +/- 1 LONG= 140 46 +/- 2
H= 50 MAG=4.0 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MITO	2	IP	06 04 26.6	IS	04 32.8	151	0.5	248	0.5			N 2	E 4	D	27.2	06.2
KAKIOK	2	IP	06 04 27.8	IS	04 35.0	70	1.1	114	0.5	44	0.5	N 3	E 6	D 5	56.1	07.2
UTSUNO	1	EP	06 04 28.9	S	04 37.5	18	0.2	18	0.2	11	1.0			D 4	81.2	08.6
ONAHAM	0	EP	06 04 29.4	IS	04 37.8	35	0.4	28	1.2	12	0.6				58.1	08.4
CHOSHI	0	EP	06 04 31.3	IS	04 41.1										78.9	09.8
SHIRAK	0	IP	06 04 32.1	IS	04 42.4									D 4	90.1	10.3
TOKYO	0	EP	06 04 37.5	ES	04 52.0	13	0.4	8	0.4						123.1	14.5
KUMAGA	0	P	06 04 38.0	S	04 52.4	7	0.2	8	0.8	3	1.0			D 3	128.1	14.4
FUKUSH	0	EP	06 04 39.6	ES	04 56.6	13	1.2	10	0.9	6	0.7				149.1	17.0
MATSUS	0	IP	06 04 49.6	S	05 05								E	D	229.5	15.4
YOKOHA	0	X	06 04 56.1	IX	05 00.0	8	0.6	10	0.4						149.3	
MIZUSA	0	EP	06 05 04.5					1	1.2	2	0.6				301.4	

OT= 28 11 36 54.7 +/- 0.2
SW OF MIYAZAKI PREF
LAT= 32 5 +/- 1 LONG= 130 57 +/- 1
H=130 CLASS=R

KUMAMO	2	IP	11 37 15.1	IS	37 30.7	2850	1.7	5030	2.3	850	1.5	N162	W 19	U303	83.6	15.6
MIYAZA	4	IP	11 37 15.2	IS	37 29.4	7000	1.2	3100	1.0	1300	2.0	S200	E300	U999	48.7	14.2
KAGOSH	3	IP	11 37 15.6	IS	37 30.9	3650	2.2	4550	2.2	1400	1.6	N250	E 13	D288	67.9	15.3
NOBEOK	3	IP	11 37 16.8	IS	37 32.1	1100	1.8	1100	1.8	1100	1.8	N118	E196	U508	88.5	15.3
ASOSAN	2	EP	11 37 17	ES	37 33	1050	2.2	700	2.0	650	2.0				88.9	16.0
UNZEND	2	IP	11 37 18.8	IS	37 34.6	1300	2.0	2700	2.0	600	2.2	S200	E100	D300	97.5	15.8
NAGASA	0	IP	11 37 20.0	IS	37 37.7	400	3.2	600	2.2	150	2.2	S 55	E 65	D	123.4	17.7
SAGA	0	IP	11 37 23.1	S	37 40.5	1400	3.3	1650	3.9	300	3.1	N 10	W 18	U 14	142.3	17.4
OITA	3	IP	11 37 23.6	ES	37 44.5	735	2.0	665	3.0	455	1.8	N133	E 67		142.3	20.9
FUKUOK	X	IP	11 37 26.0	IS	37 46.0	1100	2.0	1850	2.4	600	2.0	N 22	W 12	U 67	174.3	20.0
UWAJIM	3	IP	11 37 26.4	IS	37 50.5	400	1.5	300		200		N 43	E 43	U	196.9	24.1
YAKUSH	2	IP	11 37 26.5	IS	37 47.7	299	1.1	285	0.9	97	1.3	S 17	W 2	U 16	186.1	21.2
SHIMON	1	IP	11 37 28.2	IS	37 52.0	186	3.2	263	5.0	150	2.2	N106	W 5	U125	207.3	23.8
ASHIZU	2	IP	11 37 28.9	IS	37 52.2	378	1.8	335	1.8		1.8	N 48	E 90	U147	206.6	23.3
FUKUE	0	P	11 37 29.0	S	37 52.6	112	3.4	160	2.2	195	2.0	S 51	E160	D188	210.5	23.6
MATSUY	1	IP	11 37 34.3	IS	38 01.2	401	1.2	202	1.4	212	2.1	N 29	E 32	U 38	259.2	26.9
HIROSH	X	IP	11 37 37.3	IS	38 06.0	177	4.0	115	4.0	280	2.9	N 33	E 17	U 35	288.2	28.7
IZUHAR	0	P	11 37 37.7	S	38 07.3	180	5.2	100	4.7	80		S	E	D	281.2	29.6
KOCHI	3	IP	11 37 39.3	IS	38 07.5	1100	1.1	600	1.1	1000	1.3	N 19	E 40	U 56	291.4	28.2
HAMADA	0	IP	11 37 41.2	S	38 11.0	160	2.5	63	1.6	137	2.4	N 19	E 10	U 20	328.6	29.8
MUROTO	X	IP	11 37 41.8	IS	38 14.6	261	1.6	307	2.0	208	1.6	N 42	E104	U 93	329.1	32.8
TAKAMA	1	IP	11 37 47.9	IS	38 24.7	292	1.2	342	1.2	257	1.3	N 60	E109	U108	381.1	36.8
TURUGI	0	IP	11 37 48.1	S	38 25.0										353.4	36.9
OKAYAM	1	IP	11 37 49.5	IS	38 25.7	190	0.8	185	1.2	90	2.0	N 34	E 37	U 45	398.8	36.2
TOKUSH	2	IP	11 37 52.4	IS	38 32.1							N 48	E104	U 74	403.5	39.7
MATSUE	0	P	11 37 52.8	S	38 36.4							N 4	E 4	U 6	422.3	43.6
YONAGO	0	IP	11 37 53.7	S	38 30.0								E 4	U 5	432.5	36.3
SUMOTO	1	IP	11 37 56.2	IS	38 39.2	102	3.4	113	5.8	73	1.8	N 19	E 46	U 53	445.4	43.0
				EX	38 31.4											
				IX	38 42.0											
				EX	43 20.6											
HIMEJI	0	P	11 37 57.2	S	38 40.9							N 7	E 25	U 26	463.3	43.7
WAKAYA	0	P	11 37 58.7	IS	38 43.7	235	0.8	273	0.8						459.4	45.0
SHIONO	1	IP	11 37 59	IS	38 47	245	2.0	208	2.0	127	1.9	N 5	E 18	U 16	475.5	48.0
				IX	38 08											
KOBE	0	P	11 38 01.0	ES	38 45.4							S 2	E 13	U 37	488.0	44.4
TOTTOR	0	IP	11 38 01.2	IS	38 49.1							N 29	E 20	U 47	483.5	47.9
SAIGO	0	EP	11 38 02.1	S	38 48.4	49	2.4	68	2.0	22	2.6	N 1	E 0	U 1	507.1	46.3
OSAKA	0	IP	11 38 04.7	X	39 31.3	326	4.0	323	3.6	238	1.8			U 48	512.8	
TOYOOK	X	IP	11 38 06.6	S	38 59.0	800	1.2	500	1.2	75	0.8	N 50	E 50	U 20	524.2	52.4
OWASE	0	IP	11 38 06.7	IS	39 01.0	73	1.2	107	1.8	48	1.4	N 6	E 17	U 10	536.6	54.3
NARA	0	IP	11 38 07.0	X	39 16.6							N 3	E 6	U 6	537.9	
KYOTO	0	IP	11 38 08.9	IS	39 02.0	89	1.8	100	1.6	34	1.8	N 10	E 24	U 20	550.1	53.1
HIKONE	0	IP	11 38 14.4	IS	39 12.4	257	1.4	275	1.2	102	1.5	N 23	E 28	U 14	605.0	58.0
TSURUG	0	IP	11 38 17.3	IS	39 18.1									U	616.5	60.8
TSU	0	IP	11 38 17.8	X	40 23.2										593.6	
GIFU	0	P	11 38 21.5	S	39 22.8	190	1.5	340	1.5	51	1.6	N 9	E 14	U 6	651.9	61.3
NAGOYA	0	IP	11 38 21.6	IS	39 27.0	175	2.0	175	2.0	76	1.6	N 5	E 10	U 8	654.3	65.4
FUKUI	0	IP	11 38 22.0	S	39 28.7							S 19	W 28	D 20	656.2	66.7
HAMAMA	0	P	11 38 26.0	ES	39 42	106	2.0	119	1.8	51	2.6			U 1	693.7	76.0
KANAZA	0	P	11 38 30.0	S	39 41.8	79	2.4	65	2.0	56	3.0		E 8	U 10	720.8	71.8
TAKAYA	0	EP	11 38 31.5	S	39 44.7										735.7	73.2
SHIZUO	0	P	11 38 34.3	X	40 01.4	41	2.2	59	2.0	41	3.0	N 1	E 2	U 2	762.7	
TOYAMA	0	P	11 38 35.8	S	39 53.2	85	2.8	70	3.6	62	2.8	N 5	E 3	U 6	770.3	77.4
MISHIM	0	EP	11 38 38.7	X	40 17.1	56	2.2	49	2.2	28	2.2				812.7	
KOFU	0	IP	11 38 40.0	IS	40 05.6	63	1.6	82	1.8	28	2.4	N 1	E 1	U 1	807.7	85.6
FUNATS	0	EP	11 38 40.0	ES	40 04.2										816.1	84.2
MATSUM	0	P	11 38 40.2	S	40 00.0										794.6	79.8
WAJIMA	0	P	11 38 41.0	ES	39 58	50	2.0	45	2.0	23	2.0	S 11			801.5	77.0
AJIRO	0	EP	11 38 41.5	ES	40 02.0	14	2.0	24	2.0	10	1.8				824.0	80.5
MATSUS	0	IP	11 38 42.0	S	40 06							N	E	U	830.3	84.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
OSHIMA	0	P	11 38 44.1	S	40 10.3	29	2.1	19	1.6	18	1.8				837.6	86.2
NAGANO	0	EP	11 38 45.0	X	40 18.5	70	2.5	68	3.0	39	2.8				837.2	
KARUIZ	0	EP	11 38 46.0	S	40 05.1										844.1	79.1
HACHIJ	0	P	11 38 46.0	IS	40 07.2	36		29		16				U 4	836.8	81.2
YOKOHA	0	EP	11 38 47.2	X	40 32.2	63	3.8	72	2.1	33	2.8				887.4	
TAKADA	0	P	11 38 48.4	S	40 19.1										870.3	90.7
CHICHI	0	EP	11 38 48.8	ES	40 09.8										866.3	81.0
TOMISA	0	X	11 38 49.4			26	2.0	33	2.0	19	2.0				882.2	
MAEBAS	0	EP	11 38 50.4	X	39 21.3	49	2.9	59	3.3	27	3.3			U 2	887.1	
KUMAGA	0	P	11 38 53.0	ES	40 26.6	46	4.0	96	4.2	38	3.0			D 10	898.5	93.6
AIKAWA	0	EP	11 38 56.2	ES	40 30.0	6	3.2	7	4.4	5	4.8	S 1	W 1	D 1	935.2	93.8
TOKYO	0	EP	11 38 56.8	ES	40 28	119	2.6	73	4.2	37	3.0				906.7	91.2
NAHA	0	X	11 38	X	39 22.0	17	2.0	16	3.4	13	1.2				721.6	
OMAEZA	0	X	11 38	X	39 56.7	91	1.8	125	2.4	76	2.0				731.1	
MATSUM	0	X	11 38	X	39 44.4	104	2.0	108	2.0	38	2.0	N 3	E 4	U 9	794.6	
UTSUNO	0	EP	11 39 00.0	X	40 49.9	49	2.1	35	1.7	15	1.8				958.0	
KAKIOK	0	EP	11 39 01	ES	40 45	14	1.3	9	1.3	4	1.9				967.7	104.0
NIIGAT	0	IP	11 39 02.1			57	3.8	62	2.9	20	2.5			U 10	981.3	
SHIRAK	0	EP	11 39 05.7	ES	40 52.3										1016.7	106.6
MITO	0	EP	11 39 07.0	ES	40 52.0	28	2.0	34	2.7						997.3	105.0
FUKUSH	0	EP	11 39 14	ES	41 06	12	4.0	12	3.6	8	6.1				1072.8	112.0
ONAHAM	0	EP	11 39 15.8	IS	41 05.0	37	4.4	38	3.9	21	2.7				1060.3	109.2
YAMAGA	0	EP	11 39 16.2	ES	41 09.4										1095.0	113.2
SAKATA	0	EP	11 39 17.3	ES	41 04.0										1104.5	106.7
AKITA	0	EX	11 39 19	EX	41 31	20	4.4	20	5.6	11	4.4				1181.8	
SENDAI	0	P	11 39 23.2	S	41 19.2	27	3.2	29	5.6	8	6.0	N 2		U 2	1134.8	116.0
ISHINO	0	IP	11 39 26.0	ES	41 26.6	11	4.8	15	4.8	8	5.4	N 2	E 3	U 3	1174.3	120.6
MIZUSA	0	EP	11 39 30.9	ES	41 35.3	60	6.6	39	5.8	10	2.3				1207.9	124.4
OFUNAT	0	P	11 39 33.1	S	41 37.6	10	7.0	13	4.6	9	2.4			D 1	1244.1	124.5
MORIOK	0	IP	11 39 35.3	ES	41 40.4	7	6.3	5	6.0	7	6.6	N 0	E 0	U 0	1249.1	125.1
MIYAKO	0	EP	11 39 39.8	ES	41 51	7	4.0	7	4.0						1299.6	131.2
AOMORI	0	EP	11 39 44			17	2.3	14	2.1	9	2.0				1308.1	
HACHIN	0	P	11 39 44.4	ES	41 59.8	6	6.6	4	4.8	6	6.1	N	E	U	1331.8	135.4
HAKODA	0	EP	11 39 51	ES	42 15	5	4.2	4	4.8	6	5.4	N 2	E 2	U 2	1386.7	144.0
SAPPOR	0	EX	11 40 04			6	2.4	8	3.0	9	6.0				1522.0	
URAKAW	0	P	11 40 05.7			5	4.0	3	2.4	4	6.0				1531.6	

OT= 30 3 25 29.3 +/- 0.2
KII CHANNEL
LAT= 33 43 +/- 1 LONG= 134 56 +/- 1
H= 50 MAG=4.5 CLASS=S

WAKAYA	2	IP	03 25 41.2	IS	25 49.2	153	0.2	177	0.2						60.5	08.0
TOKUSH	2	EP	03 25 42.1	IS	25 48.3							N 4	W 4	U 46	50.8	06.2
SUMOTO	1	IP	03 25 43.6	IS	25 50.8	175	0.2	86	0.3	35	0.4	S 21	W 2	D 38	68.6	07.2
SHIONO	1	IP	03 25 44.3	IS	25 54.3	43	0.4	30	0.4	16	0.2	S 1	E 4	U 13	82.6	10.0
TURUGI	0	P	03 25 44.8	S	25 54.3										78.9	09.5
MUROTO	X	IP	03 25 45.9	IS	25 55.8	63	0.4	46	0.5	7	1.8	N 1		D 1	87.3	09.9
KOBE	0	IP	03 25 47.9	IS	26 00.1										110.1	12.2
OWASE	1	IP	03 25 48.8	IS	26 01.2	29		22		12	0.2	N 5	E 1	U 6	123.0	12.4
OSAKA	X	IP	03 25 48.9	IS	26 01.3	47	1.6	45	3.6	20	1.9			D 4	117.4	12.4
				IX	26 02.6											
KOCHI	0	IP	03 25 49.4	IS	26 03.8							S 2	W 4	U 4	131.2	14.4
HIMEJI	0	P	03 25 49.5	S	26 02.5										126.0	13.0
NARA	0	EP	03 25 51.0	IS	26 05.4										135.5	14.4
OKAYAM	1	IP	03 25 51.4	IS	26 05.4	75	0.6	75	0.5	18	0.6	N 0	W 2	U	142.3	14.0
KYOTO	0	IP	03 25 54.2	IS	26 11.2	16	0.0	13	0.0						161.4	17.0
TOYOOK	0	P	03 25 58.9	S	26 21.0	35	1.2	22	1.1	11	0.4	S 2	E	D	202.1	22.1
MATSUY	0	EP	03 25 59.2	ES	26 20.2	7	0.7	6	0.7	2	0.5				199.9	21.0
HIKONE	0	EP	03 25 59.6	S	26 20.9	36	0.6	41	0.6	14	0.5				210.6	21.3
TOTTOR	0	P	03 26 00.8	S	26 23.2										210.8	22.4
TSURUG	0	P	03 26 04.1	IS	26 28.6										238.2	24.5
TSU	0	X	03 26 06.0												182.4	
GIFU	0	P	03 26 06.5	S	26 31.2	14	0.6	10	0.4						251.0	24.7
NAGOYA	0	EP	03 26 06.6	S	26 31.6	13	0.6	21	1.0	7	1.2				246.5	25.0
MATSUE	0	EP	03 26 07.0	S	26 33.1										257.5	26.1
FUKUI	0	EP	03 26 11.7	IS	26 40.0										284.8	28.3
HAMAMA	0	X	03 26 16	ES	26 42	9	1.4	6	1.4	3	1.0				279.6	
OMAEZA	0	X	03 26 21.7			8	2.0	7	1.4						317.9	
MATSUS	0	IP	03 26 28.5	S	27 25							S	W	D	432.4	56.5
KANAZA	0	X	03 26 32			5	1.2	6	2.5						350.6	
TOYAMA	0	X	03 26 34			6	2.6	6	3.2	4	1.4				391.0	
MATSUM	0	X	03 26	X	26 48.4	5	1.6	4	1.2	3	0.6				394.3	
WAJIMA	0	X	03 26			6	1.2	6	1.2						444.7	

List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE		PHASE AND TIME (J.S.T.) H M S		M S	INITIAL MOTION
1	P	04 12 40.	S	12 50.	
1	IP	20 10 02.5			D
2	IP	01 13 06.8	IS	13 54.3	N E D
2	IP	01 34 47.0			S W U
2	IP	02 30 30.6			N D
2	IP	03 56 16.8	IS	56 47.5	N U
2	IP	04 04 35.5	S	14 46.	
2	IP	04 18 05.0	ES	18 48.	N E D
2	IP	05 04 51.6	S	05 12.	S W U
2	IP	06 41 50.3			S W U
2	P	06 57 52.			
2	P	12 52 09.			
2	IP	13 42 50.4			N W D
3	IP	13 31 15.7	S	32 07.	S E D
3	IP	16 42 48.5	S	51 00.	N U
4	P	07 57 29.			
4	P	08 10 36.			
4	P	14 11 25.	S	14 52.	
4	IP	19 27 13.7			U
4	IP	22 27 33.4	S	28 11.	N E D
4	IP	23 32 37.5	S	34 18.	S W U
4	EP	23 41 51.			
4	P	23 47 35.			
4	IP	23 48 02.0			N D
5	P	00 13 53.			
5	IP	01 05 29.4			U
5	EP	01 11 30.			
5	EP	01 45 38.			
5	P	09 00 55.			
5	IP	12 58 20.3	S	59 00.	
5	IP	16 24 43.4			W D
5	IP	17 46 19.3	S	47 35.	S W U
5	P	17 51 41.	S	51 57.	
5	P	20 58 27.			
5	P	20 59 14.			
5	P	21 03 00.			
5	P	22 10 22.	S	11 38.	
6	IP	03 12 53.6	S	14 09.	N D
6	IP	03 22 40.1			S W U
6	IP	04 19 46.0			U
6	IP	08 28 35.6	IS	29 51.5	S W D
6	IP	18 33 10.0	IS	33 32.4	W U
6	IP	21 10 41.6	S	11 06.	D
7	IP	03 47 23.0	S	47 59.4	W U
7	IP	13 00 19.4			D
7	IP	17 08 21.0	ES	09 27.	U
7	P	19 11 10.	S	12 27.	
8	P	03 01 55.			
8	P	03 55 41.	S	56 16.	
8	IP	05 06 24.5			N W U
8	IP	10 56 53.4			S E D
8	P	11 50 29.			
8	IP	12 31 42.7			D
8	IP	14 50 27.5	S	50 56.	N U
8	IP	15 15 07.5			U
8	P	20 07 31.			
8	IP	22 13 18.8	S	14 16.0	S W U
8	IP	23 44 35.5			U
9	IP	02 15 52.6			U
9	P	02 29 00.			
9	IP	04 09 40.2	S	10 16.	U
9	IP	11 26 17.4	S	32 16.	N W D
9	IP	16 55 20.8			N E U
9	IP	22 55 20.6	ES	56 04.	E D
10	IP	01 04 27.0	IS	04 56.5	U
10	IP	03 20 06.0	S	20 28.	S E D
10	EP	05 42 08.	ES	42 40.	
10	IP	05 44 23.3	S	44 47.	S D
10	IP	07 44 42.0			N U
10	IP	10 11 32.5	ES	11 55.	S E U
10	IP	16 36 45.6			S W D
10	IP	22 21 20.3			N W U
11	IP	03 50 19.7			U
11	IP	05 01 24.3			N D
11	IP	05 51 19.5			U
11	IP	09 23 35.5	S	25 11.	S W D
11	P	14 50 34.			
11	IP	21 07 36.8			D
11	IP	21 26 39.0			D
12	IP	00 03 08.0			U
12	P	00 16 52.			
12	P	03 11 43.			
12	P	05 29 55.			
12	IP	05 59 17.1	IS	59 50.7	D
12	IP	11 30 09.2	S	32 20.	S W U
12	P	18 41 25.			
12	IP	19 48 10.0	S	57 28.	D
13	IP	08 21 32.0			N D
13	IP	19 30 46.5	S	31 16.	E D
13	IP	19 59 11.4			N D
13	IP	20 18 10.2	S	18 55.	U
14	IP	01 20 32.0			
14	P	09 12 05.			
14	IP	14 36 16.6	S	42 22.	S U
14	P	17 48 20.			
15	P	01 46 00.			
15	P	03 45 27.			
15	P	05 19 06.	S	19 38.	
15	EP	08 27 44.			
16	P	02 29 05.			
16	IP	06 51 43.0			U
16	P	12 47 50.	S	49 25.	
16	P	23 08 34.			
17	P	01 59 22.			
17	EP	03 47 07.	S	47 28.	
17	IP	12 10 12.8	S	10 42.	N E
17	P	14 31 48.			
17	P	18 20 37.	S	21 22.	
17	EP	18 27 49.			
17	IP	18 44 24.5			W
18	EP	05 11 04.			
18	P	10 12 45.			
18	EP	11 46 19.			
18	IP	14 12 26.5			
18	P	19 49 15.	S	49 38.	
19	IP	03 43 41.0			W U
19	IP	04 00 41.0			
19	IP	05 43 02.3	S	43 28.	S D
19	IP	06 52 18.7			D
19	IP	07 09 00.6			E D
19	EP	07 34 37.			
19	EP	08 53 56.			
19	EP	09 27 34.			
19	P	11 58 31.			
19	IP	21 07 37.5	S	08 08.	S E D
20	P	01 24 17.	S	24 31.	
20	EP	02 40 08.	S	49 08.	
20	IP	17 11 32.1	S	11 48.	U
20	IP	18 15 19.8			U
20	P	19 19 20.			
20	IP	19 49 46.7	S	50 42.	D
20	IP	22 40 30.3			S U
21	EP	00 23 28.			
21	P	01 52 44.			
21	P	09 26 05.			
22	P	02 13 07.			
22	EP	04 05 42.			
22	P	05 09 05.			
22	P	11 53 31.			

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DATE		PHASE AND TIME H M S		M S	INITIAL MOTION
22	EP	13 39 16.	ES	44 52.	
22	P	14 56 23.			
22	IP	15 42 42.5			U
22	P	18 36 35.			
22	P	23 51 56.			
23	IP	00 21 30.0			N E U
23	P	00 30 13.	S	39 06.	
23	IP	07 11 48.8			N E D
23	IP	16 54 13.8	S	54 36.	N E D
23	P	17 47 54.	S	57 50.	
23	P	18 32 45.			
23	P	22 52 17.	S	00 38.	
24	IP	01 35 07.8			U
24	P	09 43 51.	S	44 21.	
24	IP	12 27 14.8	S	27 51.	S E D
24	IP	12 32 30.0	ES	33 10.	D
24	P	14 52 23.			
24	IP	17 46 29.6			W U
24	IP	22 17 54.6	S	18 25.	W U
25	P	03 40 15.			
25	P	03 53 12.			
25	IP	07 37 48.6			E D
25	P	11 45 26.			
26	EP	07 44 47.			
26	EP	09 05 22.			
26	IP	09 10 39.4	S	12 46.	U
26	P	09 19 42.			
26	IP	12 02 48.0	S	09 46.	N E U
26	P	12 07 46.			
26	EP	15 58 34.			
26	P	17 12 21.5			U
26	IP	17 19 55.0	S	27 04.	D
26	IP	20 00 53.0	S	06 54.	N U
26	P	20 36 38.			
26	EP	21 06 40.			
27	P	03 53 41.			
27	P	10 56 16.	S	56 42.	
27	P	13 36 32.			
27	P	14 17 00.	ES	19 44.	
27	P	14 32 58.	ES	37 40.	
27	IP	17 30 10.2	ES	39 40.	
27	IP	18 21 07.0			N E D
27	P	19 15 39.			
27	P	19 34 02.	S	34 28.	
27	P	19 57 16.			
27	IP	22 23 25.0	S	23 39.	W
27	IP	23 54 52.2	S	55 10.	S W D
28	IP	04 49 46.1	ES	51 03.	E D
28	P	05 30 15.			
28	IP	06 04 49.6	S	05 05.	E D
28	IP	06 09 41.1	S	10 53.	U
28	IP	06 48 38.8			D
28	IP	11 38 42.0	S	40 06.	N E U
28	IP	13 14 42.5	S	15 59.	N E U
28	IP	17 38 21.0			U
28	IP	22 56 02.	S	56 06.	
29	EP	03 26 05.	ES	29 34.	
29	P	10 24 42.	S	25 09.	
29	IP	12 54 35.4			D
29	IP	16 25 19.0			N D
30	IP	03 26 28.5	S	27 25.	S W D
30	P	12 13 41.5			
30	IP	12 30 49.8			U
30	IP	13 43 43.0			U
30	IP	16 36 18.4	SKS	46 48.	U

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF MATSUSHIRO ARE LEFT OUT FROM THE TABLE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

(J.S.T.)

D	INT	H	M
1	1	12	54
1	1	13	55
1	1	13	56
1	1	16	39
1	1	20	38
1	2	20	43
1	1	22	07
2	1	01	13
2	1	01	18
2	1	06	34
2	1	08	46
2	1	09	08
3	1	01	41
3	1	11	59
4	1	19	23
5	1	11	31
5	1	19	03
5	1	19	03
6	1	00	47
6	1	02	07
6	1	03	02
6	1	03	14
6	1	05	19
6	1	21	49
6	1	22	30
7	1	01	05
7	1	09	20
7	1	10	11
7	1	10	11
8	1	21	01
8	1	21	50
9	1	12	40
9	1	17	07
10	1	03	47
10	1	05	16
11	1	01	02
11	1	06	58
11	1	17	10
11	1	21	55
12	1	01	59
12	1	16	03
13	1	21	54
13	1	22	20
14	1	23	49
15	1	01	52
15	2	11	11
15	1	14	24
15	1	17	24
15	1	19	31
15	1	21	14
16	1	07	11
18	1	15	14
18	1	17	07
19	1	02	38
19	1	03	00
19	1	11	13
19	1	21	32
19	1	22	08
21	1	03	10
22	1	16	34
23	1	01	35
23	1	10	00
24	1	01	05
24	1	01	51
24	2	08	10
26	1	01	59
26	1	18	23
27	1	11	44
27	1	14	48
28	1	11	10
28	1	12	56
28	1	16	17
28	1	22	31
28	1	22	56
29	1	09	07
29	1	23	49
30	1	05	56
30	1	10	24
30	1	10	46
30	1	22	22
30	1	23	14

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昭和42年12月

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1967

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List 1 JMA stations and their seismographs

Station	Code	λ	φ	Height	Seismographs
				m	
Abashiri	ABASHI	E144°17.0′	N44°01.0′	38	S, VI, O P
Aikawa	AIKAWA	138 14.5	38 01.2	34	S, VI, O P
Ajiro	AJIRO	139 05.8	35 02.6	59	S, VI, O P
Akita	AKITA	140 06.1	39 43.1	9	S, VI, O P
Anabuki(Tsurugisan)	ANABUK (TURUGI)	134 05.8	33 51.1	59	S, P
Aomori	AOMORI	140 47.0	40 49.0	4	S, W
Asahikawa	ASAHIK	142 22.4	43 46.2	111	S, VI, O P
Ashizuri	ASHIZU	133 01.0	32 43.0	30	S, VI
Asosan	ASOSAN	131 04.5	32 52.7	1143	S
Chichibu	CHICHI	139 04.9	35 59.5	218	S, P
Choshi	CHOSHI	140 50.6	35 43.5	27	S, W
Fukue	FUKUE	128 50.0	32 42.0	26	S, VI
Fukui	FUKUI	136 13.6	36 03.2	9	S, P(H, V)
Fukuoka	FUKUOK	130 22.8	33 34.8	2	S, VI, M(H)
Fukushima	FUKUSH	140 28.5	37 45.4	67	S, VI, O P
Funatsu	FUNATS	138 45.8	35 29.9	860	S, P
Gifu	GIFU	136 45.9	35 23.9	13	S, W
Hachijojima	HACHIJ	139 47.3	33 06.1	80	S, VI
Hachinohe	HACHIN	141 31.6	40 31.5	27	S, VI, O P
Hakodate	HAKODA	140 45.5	41 48.8	35	S, VI, O P
Hamada	HAMADA	132 04.4	34 53.6	18	S, VI, O P
Hamamatsu	HAMAMA	137 43.4	34 42.5	32	S, VI, O P
Hikone	HIKONE	136 14.8	35 16.4	87	S, W
Himeji	HIMEJI	134 42.1	34 50.2	37	S, P(H, V)
Hiroo	HIROO	143 19.0	42 17.0	32	S, P(H, V)
Hiroshima	HIROSH	132 26.2	34 21.8	29	S, W
Iida	IIDA	137 50.1	35 30.6	482	S, VI, O P
Ishinomaki	ISHINO	141 18.2	38 25.5	43	S, VI, O P
Izuhara	IZUHAR	129 17.7	34 12.2	21	S, P(H, V)
Kagoshima	KAGOSH	130 33.2	31 34.4	4	S, W
Kakioka	KAKIOK	140 11.6	36 13.9	27	S, W
Kanazawa	KANAZA	136 38.9	36 32.8	27	S, VI, O P
Karuizawa	KARUIZ	138 33.1	36 20.4	999	S, P(H, V)
Kobe	KOBE	135 10.8	34 41.3	58	S, P(H, V)
Kochi	KOCHI	133 32.0	33 33.0	40	S, P(H, V)
Kofu	KOFU	138 33.5	35 39.9	272	S, VI
Kumagaya	KUMAGA	139 23.1	36 08.8	30	S, VI, O P
Kumamoto	KUMAMO	130 42.6	32 48.6	38	S, W
Kushiro	KUSHIR	144 23.7	42 58.7	33	S, VI
Kyoto	KYOTO	135 44.1	35 00.7	41	S, VI, O P
Maebashi	MAEBAS	139 03.9	36 24.1	112	S, W
Maizuru	MAIZUR	135 23.2	35 28.3	31	S, P(H, V)
Matsue	MATSUE	133 04.3	35 27.3	17	S, P(H, V)
Matsumoto	MATSUM	137 58.4	36 14.6	610	S, P(H, V)
Matsushiro	MATSUS	138 12.5	36 32.3	440	S, L, AW, G, B, V, C
Matsuyama	MATSUY	132 46.8	33 50.4	32	S, W
Mishima	MISHIM	138 55.8	35 06.7	20	S, W
Mito	MITO	140 28.3	36 22.7	30	S, VI, O P
Miyako	MIYAKO	141 58.1	39 38.7	46	S, W
Miyazaki	MIYAZA	131 25.6	31 55.0	7	S, VI, O P
Mizusawa	MIZUSA	141 08.0	39 08.0	61	P(H, V)
Morioka	MORIOK	141 10.1	39 41.8	155	S, VI, O P
Muroran	MURORA	140 59.0	42 19.0	43	S, P(H, V)
Murotomisaki	MUROTO	134 10.7	33 14.9	185	S, VI, O P
Nagano	NAGANO	138 11.8	36 39.6	418	S, W
Nagasaki	NAGASA	129 52.2	32 43.9	27	S, VD, EM
Nagatsuro	NAGATS	138 50.8	34 36.0	55	S
Nagoya	NAGOYA	136 58.1	35 09.9	52	S, VI, O P
Nara	NARA	135 50.0	34 41.0	105	S, P(H, V)
Nemuro	NEMURO	145 35.2	43 19.7	26	S, VI, VD, OP
Niigata	NIIGAT	139 03.1	37 54.6	2	S, VI, P(H, V)
Nobeoka	NOBEOK	131 41.0	32 35.0	19	S, P(H, V)
Obihiro	OBIHIR	143 13.3	42 55.2	39	S, P(H, V)
Ofunato	OFUNAT	141 43.1	39 03.7	38	S, VI
Oita	OITA	131 37.4	33 14.0	5	S, W
Okayama	OKAYAM	133 54.9	34 40.9	4	S, VI, O P
Omaezaki	OMAEZA	138 12.8	34 36.2	45	S, W
Onahama	ONAHAM	140 54.4	36 56.7	3	S, VI
Osaka	OSAKA	135 32.3	34 38.9	7	S, VI
Oshima	OSHIMA	139 22.7	34 45.7	191	S, W

Station	Code	λ	φ	Height	Seismographs
				m	
Owase	OWASE	E136°11.7′	N34°04.0′	14	S, VI, O P
Rumoi	RUMOI	141 38.0	43 57.0	22	S, P (H, V)
Saga	SAGA	130 18.3	33 14.7	4	S, P (H, V)
Saigo	SAIGO	133 20.0	36 12.3	26	S, VI, O P
Sakata	SAKATA	139 50.2	38 54.2	2	S, P (H, V)
Sapporo	SAPPOR	141 19.9	43 03.5	17	S, VI, O P
Sendai	SENDAI	140 54.0	38 15.6	38	S, VI, S′
Shimonoseki	SHIMON	130 56.5	33 57.2	46	S, VI, O P
Shionomisaki	SHIONO	135 45.8	33 26.9	74	S, W
Shirakawa	SHIRAK	140 13.5	37 07.1	354	S, P (H, V)
Shizuoka	SHIZUO	138 24.4	34 58.4	14	S, VI
Sumoto	SUMOTO	134 54.5	34 20.1	109	S, VI, O P
Suttsu	SUTTSU	140 14.4	42 47.4	16	S, P (H, V)
Takada	TAKADA	138 15.0	37 06.3	13	S, P (H, V)
Takamatsu	TAKAMA	134 03.5	34 19.0	10	S, W
Takayama	TAKAYA	137 15.3	36 09.1	561	S, P (H, V)
Tokushima	TOKUSH	134 34.6	34 03.9	2	S, P (H, V)
Tokyo	TOKYO	139 45.5	35 41.2	21	S, VI′, VD′, I′, J
Tomisaki	TOMISA	139 49.7	34 55.2	12	S, VI, O P
Tottori	TOTTOR	134 10.7	35 30.7	17	S, P (H, V)
Toyama	TOYAMA	137 12.5	36 42.4	9	S, VI
Toyooka	TOYOOK	134 49.5	35 32.0	4	S, W
Tsu	TSU	136 31.1	34 42.1	3	S, P (H, V)
Tsuruga	TSURUG	136 03.9	35 39.0	1	S, P (H, V)
Unzendake	UNZEND	130 15.2	32 44.1	849	S
Urakawa	URAKAW	142 46.8	42 09.5	34	S, VI, O P
Utsunomiya	UTSUNO	139 52.3	36 32.6	120	S, W
Uwajima	UWAJIM	132 33.5	33 13.5	43	S, P
Wajima	WAJIMA	136 53.9	37 23.4	6	S, VI
Wakayama	WAKAYA	135 10.0	34 13.6	14	S, W, I
Wakkanai	WAKKAN	141 40.5	45 25.0	2	S, VI, O P
Yakushima	YAKUSH	130 29.8	30 27.0	14	S, VI
Yamagata	YAMAGA	140 21.0	38 15.2	151	S, P (H, V)
Yokohama	YOKOHA	139 39.3	35 26.2	38	S, W
Yonago	YONAGO	133 20.6	35 26.0	7	S, P (H, V)
Ishigakijima	ISHIGA	124 10	24 20	6	S, VI
Naha	NAHA	127 41	26 13	11	S, VI

Notations : —

λ	: Longitude.
φ	: Geographical Latitude.
W	: Wiechert's horizontal and vertical seismographs (masses, H ; 200kg, V ; 80kg).
P	: Portable seismograph (horizontal only).
P(H, V)	: do (mass, 22.5kg).
S	: Strong motion seismograph (magnification ; 1).
S′	: do (magnification ; 0.4).
M(H)	: Mainka's horizontal seismograph (mass, 450kg).
G	: Galitzin's seismograph.
L	: 1,000kg long-period seismograph, JMA type.
I	: Ishimoto's seismograph.
V	: Short-period vertical seismograph.
AW	: Anderson-Wood's seismograph.
C	: Capacity type seismograph.
EM	: Electromagnetic seismograph.
O P	: JMA 59-type electromagnetic seismograph with optical recorder.
VI	: JMA 59-type electromagnetic seismograph with visible recorder.
V D	: JMA 61-type electromagnetic seismograph with visible recorder.
B	: Benioff's seismograph (short and long period).
J	: Remote recording JMA 63-type seismograph.
VI′, VD′, I′	: Remote recording JMA 63-types of VI, VD and I, respectively.

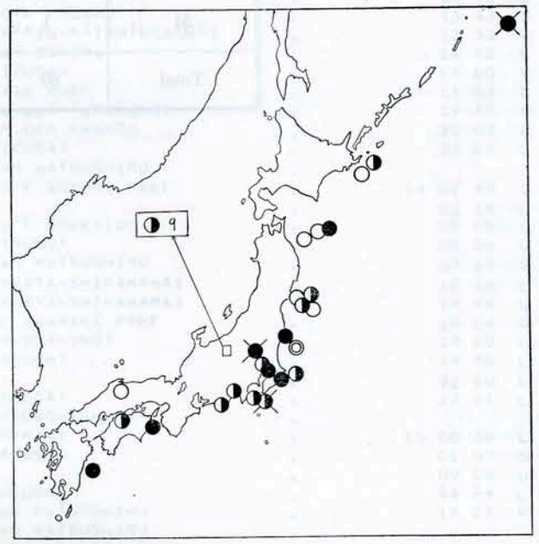
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List 2 Number of earthquakes by districts and classes, December, 1967

District \ Class	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	0	0	1	12	13	25	38
Tohoku	0	0	4	2	6	14	20
Kwanto	0	1	0	12	13	18	31
Chubu	0	0	0	96	96	13	109
Kinki	0	0	0	9	9	6	15
Chugoku•Shikoku	0	0	1	3	4	1	5
Kyushu	0	0	0	1	1	17	18
Near Japan*	0	0	0	0	0	8	8
Foreign region	0	0	0	0	0	4	4
Unknown	0	0	0	0	0	5	5
Total	0	1	6	135	142	111	253

* ; Sakhalin, Kurile Is., Korea, Ryukyu Is., Bonin, Sikhota Alin.

Epicenters of the major earthquakes



◎ Moderate (M) ○ Small felt area (S) ◑ Local (L) ● Unfelt (U) × h≧100km.

Special Event

Earthquake-Swarm near Matsushiro, Northern Chubu.

Daily number of felt shocks observed at Matsushiro Seismological Observatory during this month is as follows :

Date \ Seismic intensity	1	2	Total	Date \ Seismic intensity	1	2	Total
1	2	1	3	16	5	1	6
2	3	0	3	17	4	0	4
3	1	0	1	18	6	0	6
4	2	0	2	19	0	1	1
5	2	0	2	20	0	0	0
6	2	0	2	21	1	0	1
7	1	0	1	22	0	0	0
8	2	0	2	23	1	0	1
9	4	0	4	24	1	1	2
10	5	0	5	25	3	0	3
11	9	1	10	26	2	1	3
12	2	1	3	27	1	2	3
13	6	1	7	28	3	0	3
14	6	0	6	29	0	0	0
15	4	0	4	30	1	0	1
				31	1	0	1
				Total	80	10	90

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List 3 EARTHQUAKES OBSERVED BY SEISMOLOGICAL STATIONS OF JMA

(J. S. T.) C: CLASS

DATE, TIME D H M	C	LOCATION
1 02 15	U	(TOYOOK)
03 42	U	(TOMISA)
13 27	L	NEAR MATSUSHIRO
21 32	S	TOTTORI-HIROSHIMA BORDER
22 59	U	KURILE IS
2 00 15	U	NEAR SAGA
03 42	L	NEAR OSHIMA
11 52	L	NEAR MATSUSHIRO
13 48	U	(KUSHIR)
14 56	L	OFF MIYAGI PREF
3 02 13	L	NEAR MATSUSHIRO
05 09	U	CHINA
08 26	U	(MIYAZA)
14 06	U	MIDDLE OF CHIBA PREF
4 05 14	U	OFF FUKUSHIMA PREF
05 57	U	(SAGA)
07 25	L	(CHOSHI-KAISUDKA)
10 43	L	NEAR WAKAYAMA
12 16	U	(SHIZUO)
17 56	L	NEAR MATSUSHIRO
17 59	L	NEAR MATSUSHIRO
18 15	U	NW OF CHIBA PREF
5 03 44	U	(KAGOSH)
05 17	U	RYUKYU IS
07 29	U	(AOMORI)
13 02	L	NEAR MATSUSHIRO
14 18	L	(UTSUNO-ASHIO)
14 29	U	(NAGANO)
6 03 36	L	(WAKAYA)
07 40	U	S OFF KYUSHU
08 47	L	(WAKKAN-KITAMIESASHI)
08 57	L	NEAR OSHIMA
10 39	U	(MIZUSA)
14 57	U	IWATE PREF
16 20	L	(MAEBAS-TAKASAKI)
17 03	U	FAR OFF KWANTO
17 07	U	(MIZUSA)
21 58	L	NEAR MATSUSHIRO
23 57	S	E OFF AOMORI PREF
7 00 09	U	S OFF HOKKAIDO
06 28	U	(UTSUNO)
07 52	L	NEAR MATSUSHIRO
13 25	L	(WAKAYA-SHIKAHAMA)
13 26	L	(WAKAYA-SHIKAHAMA)
15 46	M	OFF IBARAKI PREF
16 20	L	(HAKODA-ONO)
18 45	U	(YAKUSH)
8 05 24	U	(HAKODA)
06 36	L	(UTSUNO-ASHIO)
13 12	U	(URAKAW)
23 04	U	(YAKUSH)
9 06 47	U	(YAKUSH)
10 42	L	NEAR MATSUSHIRO
10 43	L	NEAR MATSUSHIRO
11 02	L	SW OF NIIGATA PREF
15 49	L	NEAR HAKODATE
19 22	L	(NARA-FUTSUNO)
22 32	L	OFF MIYAGI PREF
22 39	U	GIFU PREF
23 01	L	NEAR MATSUSHIRO
10 04 57	L	(KYOTO)
10 06 49	U	(KUSHIR)
11 23	U	(OFUNAT)
14 02	L	NEAR MATSUSHIRO
14 03	L	NEAR MATSUSHIRO
14 07	U	(HACHIN)
20 38	U	NEAR MATSUSHIRO
11 02 13	L	NEAR MATSUSHIRO
02 47	U	(FUKUSH)
04 20	L	NEAR MATSUSHIRO
05 25	L	NEAR MATSUSHIRO
08 01	U	UK
08 26	U	(WAKKAN)
08 57	L	NEAR MATSUSHIRO
08 57	L	NEAR MATSUSHIRO
09 12	L	NEAR MATSUSHIRO
16 34	L	NEAR MATSUSHIRO
18 04	L	NEAR MATSUSHIRO
20 19	U	S OF TOCHIGI PREF
12 06 17	L	NEAR MATSUSHIRO
06 18	L	(KOFU-UENOHARA)
14 13	L	SHIZUOKA PREF
14 14	L	(KOFU-UENOHARA)
15 23	U	(AJIRO)
15 36	L	NEAR MATSUSHIRO
15 37	L	NEAR MATSUSHIRO
19 12	U	(NAHA)
13 02 11	U	(TAKADA)
05 44	L	NEAR MATSUSHIRO
06 02	L	NEAR MATSUSHIRO
07 46	U	S OF FUKUSHIMA PREF
13 36	L	NEAR MATSUSHIRO
13 43	U	(NAHA)
13 53	U	RYUKYU IS
16 40	L	NEAR MATSUSHIRO
18 00	U	S OFF HOKKAIDO
18 53	L	SW OF IBARAKI PREF
19 40	U	KURILE IS
20 03	U	(MIZUSA)
20 20	L	NEAR MATSUSHIRO
14 02 49	U	S OF KURILE IS
03 18	L	NEAR MATSUSHIRO
05 05	U	(FUNATS)
05 06	L	NEAR MATSUSHIRO
07 27	U	NEAR NEMURO
12 18	L	NEAR MATSUSHIRO
14 48	U	(KUSHIR)
18 04	U	NEAR NEMURO
18 20	L	NEAR MATSUSHIRO
19 40	L	(KUSHIR-TESHIKAGA)
22 30	L	(KUSHIR-TESHIKAGA)
23 31	L	(AJIRO)
15 00 36	L	NEAR AJIRO
01 07	S	E OFF AOMORI PREF
09 08	U	(YAKUSH)
14 14	L	(SHIZUO-SAKUMA)
17 07	U	(CHOSHI)
16 02 48	U	(URAKAW)
14 13	U	(HAKODA)
15 12	L	NEAR MATSUSHIRO
16 00	L	NEAR MATSUSHIRO
17 28	L	NEAR HAKODATE
17 55	U	(MATSUM)
21 52	L	NEAR MATSUSHIRO

DATE, TIME D H M	C	LOCATION
17 00 49	U	(HIKONE)
00 50	U	S OF NAGANO PREF
02 05	U	(KUSHIR)
02 13	L	NEAR MATSUSHIRO
02 24	U	E OFF HOKKAIDO
03 43	U	(CHOSHI)
04 44	L	NEAR CHOSHI
05 02	L	NEAR CHOSHI
05 56	U	KAMCHATKA
05 58	L	(KUSHIR-TESHIKAGA)
07 40	U	NEAR CHOSHI
11 25	U	(HAKODA)
13 56	U	KWANTO
14 02	U	(HAKODA)
15 20	L	NEAR MATSUSHIRO
18 05 45	U	E OFF YAKUSHIMA
05 58	U	E OF HOKKAIDO
06 28	L	E OF HOKKAIDO
08 57	L	NEAR MATSUSHIRO
13 41	L	NEAR MATSUSHIRO
14 51	L	MIDDLE OF SETONAIKAI
21 30	L	NEAR MATSUSHIRO
22 49	L	NEAR MATSUSHIRO
23 10	U	(OSAKA)
23 59	U	E OFF MIYAZAKI PREF
19 00 13	U	(OWASE)
03 12	U	N OF KYUSHU
04 12	S	S OFF HANASAKI PEN
11 19	L	NEAR MATSUSHIRO
14 28	L	E OF HOKKAIDO
20 07 23	U	SE OF HOKKAIDO
08 39	U	(MIYAZA)
14 45	L	E OFF HOKKAIDO
22 48	U	E OF KWANTO
21 11 44	U	CHILE
11 48	L	(KUMAMO-HITOYOSHI)
17 13	U	E OF HOKKAIDO
20 49	U	E OF TOKUSHIMA PREF
22 27	L	(HIROSHIMA-SHOBARA)
22 29	L	(HIROSHIMA-SHOBARA)
22 04 53	U	(NAHA)
08 17	U	(UTSUNO)
12 36	U	N OF KWANTO
13 26	L	NEAR NEMURO
13 59	U	(AKITA)
19 18	L	NEAR TSUKUBASAN
20 11	L	NEAR ASHIO
23 02 17	U	(KUSHIR)
12 26	U	(MATSUM)
12 30	U	(YAKUSH)
23 22	U	(YAKUSH)
24 07 24	L	NEAR MATSUSHIRO
07 26	L	NEAR MATSUSHIRO
11 09	U	NW OF KWANTO
16 18	U	S OF KWANTO
23 30	U	E OFF CHIBA PREF
25 07 23	L	NEAR MATSUSHIRO
08 12	U	UK
10 31	U	NEW IRELAND
15 11	L	NEAR MATSUSHIRO
17 08	U	(AKITA)
20 01	U	UK

DATE, TIME D H M	C	LOCATION
26 04 53	L	(WAKAYA)
06 00	L	NEAR MATSUSHIRO
07 59	U	(URAKAW)
10 06	U	(NEMURO)
20 58	L	NEAR MATSUSHIRO
22 28	U	SE OF HOKKAIDO
27 01 34	U	(KUSHIR)
01 40	L	NEAR MATSUSHIRO
01 41	L	NEAR MATSUSHIRO
18 37	U	UK
28 01 34	U	UK
02 24	L	NEAR MATSUSHIRO
06 48	L	NEAR MATSUSHIRO
14 29	S	OFF MIYAGI PREF
29 04 02	L	NEAR CHOSHI
10 09	U	SE OF HOKKAIDO
15 30	L	NEAR HAMAMATSU
15 39	U	(KUMAMO)
22 00	L	(WAKAYA-KIBI)
30 04 52	U	NEAR ONAHAMA
06 00	U	(NAGANO)
11 28	S	OFF MIYAGI PREF
14 23	U	MIDDLE OF TOHOKU
16 23	U	S OF KWANTO
17 25	U	(SUMOTO)
22 17	U	(KUMAMO)
31 02 54	L	NEAR MATSUSHIRO
03 26	U	(OSAKA)
07 58	U	IBARAKI PREF
19 50	U	(MATSUMO)
19 51	U	(MATSUMO)
21 47	L	(KUSHIR-TESHIKAGA)

THE EARTHQUAKES FELT AT ONLY MATSUSHIRO SEISMOLOGICAL OBSERVATORY ARE NOT INCLUDED IN THE LIST. ALL EVENTS FELT AT THE OBSERVATORY ARE GIVEN IN LIST 6.

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List 4

EARTHQUAKE ORIGINS

(J. S. T.)

C: CLASS

DATE, TIME D H M	C	LOCATION	ORIGIN TIME M S	+/-S	LONG.	+/-	LAT.	+/-	H KM	M
1 13 27	L	NEAR MATSUSHIRO	27 28.7	0.2	138 21 01		36 36 01		10	3.6
21 32	S	TOTTORI-HIROSHIMA BORDER	32 02.6	0.3	133 14 02		35 04 01		10	3.8
22 59	U	KURILE IS	57 11.3	1.9	154 59 14		47 14 18		120	
2 03 42	L	NEAR OSHIMA	42 31.0	1.5	139 26 09		34 42 03		40	3.8
14 56	L	OFF MIYAGI PREF	55 46.6	0.3	142 17 02		38 25 01		40	4.2
3 02 13	L	NEAR MATSUSHIRO	13 11.3	0.3	138 09 01		36 26 01		00	
4 18 15	U	NW OF CHIBA PREF	15 16.4	1.2	139 54 03		35 56 07		50	3.4
6 08 57	L	NEAR OSHIMA	57 20.5	0.9	139 44 07		34 34 06		100	
23 57	S	E OFF AOMORI PREF	56 36.8	0.6	143 00 04		40 55 02		20	4.9
7 15 46	M	OFF IBARAKI PREF	46 30.9	0.5	141 27 03		36 37 01		40	4.7
9 11 02	L	SW OF NIIGATA PREF	02 20.4	0.2	138 05 01		36 52 01		00	4.4
22 32	L	OFF MIYAGI PREF	32 19.4	0.7	142 02 04		38 12 02		50	4.1
11 16 34	L	NEAR MATSUSHIRO	34 24.4	0.3	138 05 01		36 24 01		00	3.7
20 19	U	S OF TOCHIGI PREF	19 16.4	0.3	139 29 02		36 27 04		110	
12 06 17	L	NEAR MATSUSHIRO	17 35.7	0.3	138 07 01		36 24 01		00	3.5
14 13	L	SHIZUOKA PREF	13 42.4	0.3	138 21 01		35 09 01		10	3.8
15 37	L	NEAR MATSUSHIRO	37 28.5	0.1	138 05 01		36 26 00		00	
13 18 00	U	S OFF HOKKAIDO	00 30.0	0.8	143 37 05		40 52 03		30	4.5
18 53	L	SW OF IBARAKI PREF	53 18.2	0.5	139 51 02		36 09 05		50	3.3
20 20	L	NEAR MATSUSHIRO	20 34.5	0.2	138 17 01		36 28 01		00	
14 05 06	L	NEAR MATSUSHIRO	06 44.7	0.1	138 06 00		36 25 00		00	
15 01 07	S	E OFF AOMORI PREF	06 54.0	0.5	142 27 04		40 33 01		40	4.1
16 15 12	L	NEAR MATSUSHIRO	12 33.4	0.2	138 06 01		36 25 01		00	4.1
17 04 44	L	NEAR CHOSHI	44 09.7	0.9	141 14 04		35 35 02		70	
18 14 51	L	MIDDLE OF SETONAIKAI	51 44.8	0.4	133 18 03		34 07 03		60	4.1
23 59	U	E OFF MIYAZAKI PREF	59 00.2	0.5	131 59 02		32 11 01		10	4.0
19 04 12	S	S OFF HANASAKI PEN	12 36.2	0.5	145 43 03		42 50 02		50	4.6
20 14 45	L	E OFF HOKKAIDO	45 32.5	1.5	146 17 08		43 05 04		40	4.5
21 20 49	U	E OF TOKUSHIMA PREF	49 02.7	0.4	134 31 02		33 42 01		20	3.7
24 23 30	U	E OFF CHIBA PREF	29 54.2	0.6	140 34 03		35 30 03		80	
25 10 31	U	NEW IRELAND	23 33.6	0.0	153 42	-	5 18		64	
28 14 29	S	OFF MIYAGI PREF	29 18.7	0.5	141 47 03		38 16 02		50	4.2
29 15 30	L	NEAR HAMAMATSU	29 53.5	0.7	137 45 02		34 36 03		40	3.8
30 04 52	U	NEAR ONAHAMA	52 27.3	0.7	141 04 06		37 01 01		90	
11 28	S	OFF MIYAGI PREF	27 51.6	0.6	142 06 03		38 13 01		50	4.9

List 5 DATA OF EARTHQUAKES

I: SEISMIC INTENSITY
*: MICRON

OT= 1 13 27 28.7 +/- 0.2 (J. S. T.)
NEAR MATSUSHIRO
LAT= 36 36 +/- 1 LONG= 138 21 +/- 1
H= 10 MAG=3.6 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	2	P	13 27 32.6	S	27 34.8							14.4	02.2
NAGANO	1	IP	13 27 33.2	S	27 35.7							15.2	02.5
KARUIZ	0	EP	13 27 36.0	S	27 41.9				S 1	E 2	D 16	34.0	05.9
MATSUM	0	IP	13 27 39.7	IS	27 46.8				W 1	U 4		52.0	07.1
TAKADA	0	EP	13 27 40.2	S	27 47.4						D 2	56.7	07.2
MAEBAS	0	P	13 27 42.1			9 3.0	5 3.0	5 2.4			U 1	67.7	•
KOFU	0	IP	13 27 48.1	ES	28 01.4	5 0.4	6 0.4	3 0.6				105.4	13.3
AIKAWA	0	EP	13 28	IS	28 13.6	4 0.6	7 0.8					157.9	

OT= 1 21 32 2.6 +/- 0.3
TOTTORI-HIROSHIMA BORDER
LAT= 35 4 +/- 1 LONG= 133 14 +/- 2
H= 10 MAG=3.8 CLASS=S

YONAGO	0	IP	21 32 11.1	IS	32 16.4						N 2	41.9	05.3
OKAYAM	0	IP	21 32 16.8	IS	32 27.3	21 0.4	15 0.5	5 0.4	E 3	U 4		75.5	10.5
TAKAMA	0	EP	21 32 24.7	ES	32 37.3	6 1.0	6 1.0		N	W 0	D	112.4	12.6
MATSUY	0	EP	21 32 27.8	ES	32 45.1	7 0.7	6 0.7	2 0.7				142.3	17.3
TOYOOK	0	X	21 33 11.0			9 1.3	7 1.0					153.4	

OT= 1 22 57 11.3 +/- 1.9
KURILE IS
LAT= 47 14 +/-18 LONG= 154 59 +/-14
H=120 CLASS=U

NEMURO	0	P	22 59 02.8	S	00 33.4	21 6.0	21 6.0	16 5.6	S	E	D	855.0	90.6
ABASHI	0	EP	22 59 09.0	ES	00 39.2	55 4.6	39 4.8	28 4.4				907.2	90.2
KUSHIR	0	EP	22 59 16	S	00 54.0	32 0.2	33 0.2	14 1.2				957.3	98.0
WAKKAN	0	EX	22 59 23	S	01 10.6	33 4.6	68 5.4	68 6.0				1043.6	
OBIHIR	0	Ex	22 59 27									1041.7	
ASAHIK	0	IP	22 59 27.6	S	01 11.2	27 4.0	25 3.6	19 4.0	N 1		D 1	1056.9	103.6
URAKAW	0	P	22 59 34.7	S	01 29.0	33 7.6	30 6.0	23 6.0				1118.2	114.3
RUMOI	0	EX	22 59 37									1102.5	
SAPPOR	0	EP	22 59 40	X	01 55	26 5.0	37 4.4	25 5.2				1168.0	
HAKODA	0	EP	22 59 50	X	02 20	16 4.6	12 6.8	8 6.8				1278.9	
HACHIN	0	EP	22 59 54.9	IS	02 06.6	10 2.4	9 2.5	4 3.2				1311.0	128.7
MORIOK	0	IP	23 00 05.9	S	02 25.5	10 0.6	11 0.5	3 3.0	N 0	E 0	D 0	1393.7	139.6
				EL	02 51.0							1340.5	
AOMORI	0	EX	23 00 09.2	ES	02 09.9	32 1.6	23 1.2	8 1.6					
OFUNAT	0	P	23 00 10.0	S	02 30.0	4 1.6	6 1.0	3 1.2	S 0	W 0	U 1	1407.1	140.0
				SCS	12 23.5							1438.0	145.3
MIZUSA	0	EP	23 00 16.3	ES	02 41.6	33 4.0	32 2.6	12 2.4				1482.6	149.8
ISHINO	0	EP	23 00 17.0	IS	02 46.8	5 3.6	5 3.6	4 4.0	N 0	E 0	D 0	1520.3	149.0
SENDAI	0	EP	23 00 24	ES	02 53	16 5	15 4	4 4					
				X	12 13							1461.6	
AKITA	0	X	23 00 26			23 3.6	36 3.8	15 3.4					
SAKATA	0	Ex	23 00 28.7									1538.1	
FUKUSH	0	EP	23 00 33.0	ES	03 31.5	18 2.9	22 3.0	8 2.0				1586.4	178.5
SHIRAK	0	EP	23 00 38.1	ES	03 43.1							1653.2	185.0
ONAHAM	0	Ex	23 00 42.2	ES	03 22.3	16 2.8	20 3.8	5 3.9				1627.1	
MITO	0	IP	23 00 47.3	IS	03 54.8	16 4.0	19 3.6	20 3.6			D 3	1700.1	187.5
KAKIOK	0	EP	23 00 49.8			10 1.0	6 1.0	3 0.8				1728.7	
TAKADA	0	P	23 00 55.0	S	04 03.3							1776.3	188.3
KUMAGA	0	EP	23 00 56.4	ES	04 08.6	24 6.4	20 5.4	20 4.0				1783.5	192.2
MAEBAS	0	EP	23 00 56.8	ES	04 06.2	19 4.1	20 5.1	11 4.1				1781.8	189.4
MATSUS	0	IP	23 00 57.3	S	04 10						U	1823.5	192.7
YOKOHA	0	EP	23 01 03.3	ES	04 27.2	24 3.9	15 3.9					1827.6	203.9
FUNATS	0	P	23 01 05.0	ES	04 19.2							1874.6	194.2
TOKYO	0	EX	23 01 06	EX	04 27	34 4.0	28 4.4	17 4.0				1800.4	
KOFU	0	EP	23 01 07.3	ES	04 28.4	15 3.2	12 4.8	11 3.8				1873.0	201.1
WAJIMA	0	EP	23 01 08	ES	04 06	15 3.6	22 3.6	17 4.0				1841.8	178.0
MISHIM	0	EP	23 01 08.7	ES	04 37.0	10 4.3	25 4.3	4 2.3				1897.4	208.3
AJIRO	0	EP	23 01 09.2	ES	04 19.0	4 2.4	9 2.8	5 2.8				1893.5	189.8
IIDA	0	E	23 01 10.2									1929.7	
SHIZUO	0	EP	23 01 11.7	EX	01 40.6	10 6.0	14 4.4	8 6.4				1940.0	
GIFU	0	EP	23 01 18	S	01 41.8	6 2.1	8 2.2	6 2.2				2004.9	23.8

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NAGOYA	0	EP	23 01 18.0			9 2.4	13 3.4	5 3.0				2011.1	
HAMAMA	0	EP	23 01 18	ES	04 48	11 3.2	11 3.0	9 7.4				2002.9	210.0
OMAEZA	0	EP	23 01 19.3			27 5.6	18 4.4	9 3.6				1982.7	
TOYAMA	0	EP	23 01 20	ES	04 20	19 4.6	24 4.2	18 4.2				1873.6	180.0
KYOTO	0	EP	23 01 25.3	S	05 03.7	11 6.2	11 4.4	5 6.0				2100.7	218.4
SAIGO	0	EP	23 01 29.8	ES	05 06.6	19 5.8	9 5.6	8 6.6	S	0 E	0 D 0	2167.1	216.8
OSAKA	0	EP	23 01 30	X	05 15.8	88 5.2	75 5.9	30 4.4				2142.2	
OWASE	0	EP	23 01 31.0	ES	05 11.0	6 5.4	8 6.0	7 7.2				2149.0	220.0
TOYOOK	0	EP	23 01 33.0	S	04 58.6	13 1.0	12 4.7	5 4.5				2118.3	205.6
				SCS	12 40.3								
SUMOTO	0	EP	23 01 36.0	ES	05 14.2	11 8.0	9 5.4	6 4.8				2207.3	218.2
				SCS	12 43.5								
OKAYAM	0	EP	23 01 39.0	S	05 13.0	9 4.0	11 6.0	10 4.0				2243.6	214.0
SHIONO	0	EP	23 01 40.7	ES	05 23.9	10 9.7	9 6.4	4 1.7				2226.9	223.2
TAKAMA	0	EP	23 01 42.2	ES	05 25.7	8 5.4	10 5.8					2263.0	223.5
				ISCS	11 50.3								
HIKONE	0	Ex	23 01 45.7	Ex	04 54.6	20 6.3	9 5.9	7 1.7				2047.4	
HAMADA	0	EP	23 01 47.1	ES	05 38.8	6 7.2	13 8.0	6 4.8				2349.3	231.7
MUROTO	0	EP	23 01 50.9	ES	05 41.2	14 7.0	12 6.6	11 7.0			U 0	2341.5	230.3
MATSUY	0	EP	23 01 54.5	ES	05 48.5	11 2.7	10 6.1	3 2.8				2383.5	234.0
SHIMON	0	EP	23 02 02	ES	06 01	8 6.0	9 6.0	13 6.6	N	E	D	2496.4	239.0
OITA	0	EP	23 02 02.4	S	06 04.2	27 4.9	27 5.6					2506.9	241.8
ASHIZU	0	EP	23 02 03.2	ES	06 05.1	12 4.8						2458.3	241.9
FUKUOK	0	P	23 02 06.0	S	06 13.0	7 3.2	9 3.6	6 7.0				2562.6	247.0
KAGOSH	0	EP	23 02 13.9	EX	06 37.8	33 3.5	25 3.8					2709.2	
MIYAZA	0	P	23 02 14.7	S	06 24.4	17 6.2	11 4.9	6 3.4				2625.0	249.7
NAGASA	0	EP	23 02 14.8	S	06 27.9							2663.5	253.1
KUMAMO	0	EP	23 02 15	IS	06 17.8	13 2.5	11 2.5	6 1.6				2600.3	242.8
FUKUE	0	P	23 02 50.0	S	05 37.3	18 7.5	4 6.0	6 5.6	S	4 W	3 U 5	2734.3	
YAKUSH	0	Ex	23 02 53.0	ES	06 48.6	7 8.6	7 4.4	3 10.0				2804.9	
AIKAWA	0	IS	23 03 47.2			19 3.2	15 4.4					1707.1	
GIFU	0	EX	23 04 40	EX	05 27	10 4.3	8 2.6	1				2004.9	

OT= 2 3 42 31.0 +/- 1.5
NEAR OSHIMA
LAT= 34 42 +/- 3 LONG= 139 26 +/- 9
H= 40 MAG=3.8 CLASS=L

OSHIMA	X	P	03 42 37.1	IS	42 41.3	42 0.4	36 0.5	16 0.6			U 10	8.5	04.2
AJIRO	X	IP	03 42 40.2	IS	42 46.8	55 0.4	34 0.4	12 0.4	N 3	E 3	D 3	49.0	06.6
YOKOHA	0	EP	03 42 45.8	IS	42 51.7	16 0.4	15 0.4					84.2	05.9
TOKYO	0	EX	03 42 48.4			8 0.4	6 0.4					113.2	
KOFU	0	EP	03 42 53.3	ES	43 05.6	7 0.4	8 0.4	2 0.4				133.4	12.3
MISHIM	0	X	03 42	IS	42 50.6	17 0.4	19 0.4	9 0.2				64.8	
KUMAGA	0	EP	03 43 00.4	ES	43 10.8	3 0.4	5 0.8	1 0.2				160.5	10.4
MATSUS	0	IP	03 43 04.5	S	43 28						U	232.1	23.5

OT= 2 14 55 46.6 +/- 0.3
OFF MIYAGI PREF
LAT= 38 25 +/- 1 LONG= 142 17 +/- 2
H= 40 MAG=4.2 CLASS=L

ISHINO	0	P	14 56 02.0	IS	56 11.0	29 0.2	25 0.2	6 0.2	N 2	E 6	D 10	85.6	09.0
OFUNAT	1	IP	14 56 02.0	IS	56 11.3	23 0.2	15 0.2	7 0.4	S 4	E 2	D 3	86.8	09.3
SENDAI	0	IP	14 56 06.8	S	56 20.2	12 0.4	6 0	5 0			U 3	122.2	13.4
MIZUSA	0	IP	14 56 07.7	ES	56 21.5	8 1.3	17 0.2	6 0.6			D 4	127.7	13.8
MORIOK	0	P	14 56 13.4	ES	56 31.2	12 0.5	11 0.4	2 0.4	S 1	E 0	D 0	171.8	17.8
FUKUSH	0	EP	14 56 13.6	ES	56 33.0	10 0.9	9 1.1	4 0.5				174.7	19.4
HACHIN	0	EP	14 56 22.3	IS	56 47.8	6 0.2	5 0.2					248.0	25.5
MATSUS	0	IP	14 56 45.3	ES	57 40				S		U	416.3	54.7

OT= 3 2 13 11.3 +/- 0.8
NEAR MATSUSHIRO
LAT= 36 26 +/- 1 LONG= 138 9 +/- 1
H= 0 CLASS=L

MATSUS	1	P	02 13 13.9	S	13 19.3							12.8	01.4
MATSUM	0	IP	02 13 18.0	IS	13 22.1						U 7	26.4	04.1
NAGANO	1	P	02 13 18.6	S	13 21.6				N 2	W 1	U 2	25.5	03.0
KARUIZ	0	IP	02 13 20.0	IS	13 25.8						D 4	37.5	05.8

OT= 4 18 15 16.4 +/- 1.2
NW OF CHIBA PREF
LAT= 35 56 +/- 7 LONG= 139 54 +/- 3
H= 50 MAG=3.4 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
KAKIOK	0	EP	18 15 26.8	ES	15 33.0	13	0.4	31	0.2	6	0.2				42.3	06.2
KUMAGA	0	EP	18 15 30.0	S	15 36.8	6	0.2	5	0.2	1	0.2				52.1	06.8
UTSUNO	0	P	18 15 30.3	IS	15 37.7	19	0.2	17	0.2	5	0.2			D 3	68.1	07.4
MATSUS	0	IP	18 15 41.5	ES	15 59									U	166.2	17.5

OT= 6 8 57 20.5 +/- 0.9
NEAR OSHIMA
LAT= 34 34 +/- 6 LONG= 139 44 +/- 7
H=100 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
TOMISA	0	IP	08 57 36.0	IS	57 47.3	18	0.5	12	0.6	7	0.6		W 1	D 1	40.1	11.3
OSHIMA	0	P	08 57 38.3	S	57 46.6	7	0.4	11	0.6	5					39.1	08.3
AJIRO	X	P	08 57 39.3	S	57 51.6	45	0.3	29	0.3	7	0.4				78.7	12.3
YOKOHA	0	X	08 57 46.9	IS	57 56.1	10	0.4	14	0.4						96.8	
MATSUS	0	IP	08 57 57.9	S	58 27							N		D	258.7	29.1
TOKYO	0	X	08 58 01.0			10		11							124.1	

OT= 6 23 56 36.8 +/- 0.6
E OFF AOMORI PREF
LAT= 40 55 +/- 2 LONG= 143 0 +/- 4
H= 20 MAG=4.9 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
URAKAW	0	P	23 57 00.0	S	57 16.8	40	1.2	65	0.8	21	1.6				139.1	16.8
HACHIN	X	EP	23 57 00.0	IS	57 08.8	20	1.3	27	2.6	13	2.8				132.0	08.8
MIYAKO	0	EP	23 57 05	ES	57 24.2	8	2.8	6	1.8						166.2	19.2
AOMORI	0	IP	23 57 07.2	S	57 27.8	91	1.3	85	1.3	39	2.0			U 5	187.2	20.6
MORIOK	0	IP	23 57 10.0	S	57 33.8	25	0.4	20	0.4	14	2.0	S	O W	O U 0	206.4	23.8
				X	57 53.4											
HAKODA	0	IP	23 57 10.4	IS	57 34.1	45	1.2	37	1.6	16	2.3	N	1 W	4 U 4	212.4	23.7
MURORA	0	EP	23 57 11.0	S	57 36.4										229.0	25.4
KUSHIR	0	EP	23 57 13	S	57 37.7	31	0.4	37	0.4	13	0.4				256.6	24.7
OFUNAT	0	IP	23 57 13.3	S	57 40.1	8	1.2	8	1.2	7	1.4	S	1	U 1	233.2	26.8
OBIHIR	0	P	23 57 13.4	S	57 41.7										223.3	28.3
MIZUSA	0	EP	23 57 16.7	IS	57 46.2	48	2.3	63	1.5	36	1.9				254.2	29.5
SAPPOR	0	EP	23 57 18			25	2.2	25	1.8	14	1.6				275.2	
AKITA	0	EX	23 57 21.6	S	57 56.0	28	2.2	23	1.8	19	1.8				280.0	
ISHINO	0	P	23 57 23.0	S	58 02.6	6	1.6	8	1.4	5	1.6				312.6	39.6
ASAHIK	0	P	23 57 24.2	IS	58 06.4	13	1.4	12	2.2	9	1.6				321.2	42.2
SENDAI	0	EP	23 57 27.6	ES	58 03	14	1.8	15	2.0	6	1.4				345.7	35.4
FUKUSH	0	X	23 57 36.1			21	0.5	16	0.5	4	0.5				412.8	
MITO	0	EP	23 57 51.0	ES	58 50.4	8	2.0	9	1.5	5	2.0				549.7	59.4
UTSUNO	0	EX	23 57 51.2	EX	58 52.8	7	1.5	6	1.5	3	1.0				556.0	
SAKATA	0	X	23 57 56.5												350.9	
ABASHI	0	X	23 57	ES	58 03.2	6	2.2	6	2.2	2	2.4				360.2	
KUMAGA	0	EP	23 58 01.2	ES	59 08.7	8	2.0	8	2.0	5	3.0				616.0	67.5
MATSUS	0	IP	23 58 04.7	EX	59 20							S	W	U	639.9	
TOKYO	0	X	23 58 35			10	3.0	9	4.0						646.1	
ONAHAM	0	X	23 58 44.8			12	1.2	13	1.6	4	1.4				476.7	
YOKOHA	0	X	23 59 14.3			7	1.9	6	0.9						675.0	

OT= 7 15 46 30.9 +/- 0.5
OFF IBARAKI PREF
LAT= 36 37 +/- 1 LONG= 141 27 +/- 3
H= 40 MAG=4.7 CLASS=M

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ONAHAM	0	IP	15 46 42.5	IS	46 50.3	147	1.2	104	1.3	36	0.9			D 9	60.7	07.8
MITO	2	IP	15 46 46.5	IS	46 57.0	228	0.5	157	0.5	31	0.4			U 4	91.5	10.5
CHOSHI	0	EP	15 46 48.7	ES	47 04.0										113.0	15.3
KAKIOK	2	IP	15 46 49.9	S	47 01.9	67	0.8	73	1.0	31	0.8			D 1	120.5	12.0
SHIRAK	0	IP	15 46 51.1	IS	47 04.7									D 2	122.6	13.6
UTSUNO	1	P	15 46 53.6	S	47 07.9	43	0.2	32	0.2						141.4	14.3
FUKUSH	0	P	15 46 54.6	S	47 11.8	72	0.8	51	0.5	29	0.4	S	3 E	4 D 4	153.3	17.2
SENDAI	0	EP	15 46 59.9	S	47 20.0	38	1.0	31	1.0	13	2				188.7	20.1
KUMAGA	0	EP	15 47 00.6	ES	47 20.8	27	1.2	28	1.2	9	0.8				192.5	20.2
ISHINO	0	P	15 47 01.5	ES	47 22.4	10	1.2	9	1.0	5	1.2				201.1	20.9
TOKYO	0	EP	15 47 02	X	48 19	27	0.3	16	0.3	7	0.4				184.0	
MAEBAS	0	EP	15 47 03.2	IS	47 25.2	14	0.6	13	0.5	8	0.6				214.9	22.0

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
CHICHI	0	EP	15 47 03.4	IS	47 29.0										223.7	21.6
FUNATS	0	P	15 47 07.0	S	47 47.6										271.9	40.6
TOMISA	0	EP	15 47 07.2			8	2.2	9	2.3	7	2.8				238.6	
KARUIZ	0	EP	15 47 10.1	S	47 32.5										261.5	22.4
YOKOHA	0	X	15 47 11			21	0.6	20	0.5						208.1	
MISHIM	0	EP	15 47 11.1	X	27 44.3	13	1.0	13	1.4	5	1.0				282.2	
MATSUS	0	IP	15 47 12.5	IS	47 38.6							N	E	D	290.2	26.1
KOFU	0	EP	15 47 13.6	ES	47 40.2	16	1.0	22	1.2	9	1.0				280.8	26.6
MIZUSA	0	EP	15 47 14.3	ES	47 47.2	8	1.7	14	2.0	8	1.2				280.7	32.9
MATSUM	0	P	15 47 17.0	S	47 51.1										314.4	34.1
SAKATA	0	EP	15 47 17.3	S	47 51.4										290.9	34.1
IIDA	0	EP	15 47 21.0	ES	48 02.2	8	1.0			5	1.0				348.0	41.2
SHIZUO	0	EP	15 47 23.0	ES	47 59.2	5	0.6	5	2.6	3	1.0				329.9	36.2
OMAEZA	0	X	15 47 29.4			7	2.2	6	2.0						368.5	
NAGOYA	0	EP	15 47 36.0	ES	48 23.6	8	1.0	5	1.0	3	1.0				435.4	47.6
HAMAMA	0	X	15 47 40	ES	48 13	4	1.4	5	2.4	2	1.8				398.2	
TAKADA	0	X	15 47 53.9												290.4	
AOMORI	0	X	15 48 31			10	2.2	10	1.7	4	1.4				469.8	
HIKONE	0	X	15 48 38.0			12	1.0	11	1.1	4	0.9				492.4	

OT= 9 11 2 20.4 +/- 0.2
SW OF NIIGATA PREF
LAT= 36 52 +/- 1 LONG= 138 5 +/- 1
H= 0 MAG=4.4 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
NAGANO	2	IP	11 02 28.2	S	02 32.6							N	2 W	2 D 13	25.1	04.4
MATSUS	1	IP	11 02 29.2	IS	02 34.2										38.1	05.0
KARUIZ	0	P	11 02 34.8	S	02 45.0									D	71.9	10.2
MATSUM	X	IP	11 02 34.9	S	02 43.7							S	W	U 11	69.9	08.8
MAEBAS	0	IP	11 02 40.9	ES	02 56.1	28	3.6	21	3.1	25	3.3			D 3	101.8	12.2
TAKAYA	0	P	11 02 41.7	S	02 57.3										108.6	15.6
WAJIMA	0	EP	11 02 42.6	ES	02 57.6	135	0.8	120	0.8	27	0.8				120.2	15.0
KANAZA	0	EP	11 02 46.0	ES	03 02.0	20									133.0	16.0
AIKAWA	0	EP	11 02 46.2	IS	03 01.2	9	0.8	17	2.0			S			128.8	15.0
CHICHI	0	EP	11 02 46.3	S	03 02.1										132.0	15.8
TOYAMA	0	X	11 02 47	ES	02 47	61	2.8	65	3.2	68	3.0				80.1	
IIDA	0	IP	11 02 48.0	IS	03 07.2	10	1.2	13	1.4	7	1.0	S	5	U 5	152.2	19.2
KOFU	0	EP	11 02 48.6	IS	03 02.3	14	0.7	14	1.2	7	1.3				140.0	13.7
UTSUNO	0	EP	11 02 49.2	ES	03 10.9	14	1.6	14	1.4						163.7	21.7
KUMAGA	0	EP	11 02 49.8	ES	03 10.8	23	4.6	24	4.8	20	4.0				141.3	21.0
FUNATS	0	P	11 02 51.3	S	03 08.1										163.7	16.8
FUKUI	0	X	11 02 51.7												189.3	
KAKIOK	0	EX	11 02 55			7	0.8	11	0.8	2	0.8				201.6	
MISHIM	0	EP	11 02 55.6	S	03 21.5	19	0.7	19	1.0	9	1.5				209.1	25.9
GIFU	0	EP	11 02 57			10	1.5	8	1.5						201.5	
NAGOYA	0	EP	11 02 57.3	ES	03 28.0	18	1.4	16	1.2	6	1.0	S	1 W	1 U 1	213.9	25.7
SHIZUO	0	EP	11 02 57.4	ES	03 24.4	9	1.2	7	1.4	8	5.4				212.0	27.0
HAMAMA	0	EP	11 02 58	S	03 29.8	12	3.6	9	3.0	8	1.2				241.6	31.8
MITO	0	EX	11 02 58.4	ES	03 25.6	13	3.8	10	3.0	10	3.4				220.4	
OMAEZA	0	X	11 02	ES	03 35.0	25	2.4	18	2.3						251.3	
TOKYO	0	EX	11 03 00.5	ES	03 25.0										199.6	
HIKONE	0	EP	11 03 02.8	ES	03 36.3	15	1.0	20	4.0						242.1	33.5
YOKOHA	0	X	11 03 05.6	ES	03 25.6	31	2.0	24	1.9						212.5	
ONAHAM	0	X	11 03 34.4			12	0.9	14	0.9	4	1.0				251.7	

OT= 9 22 32 19.4 +/- 0.7
OFF MIYAGI PREF
LAT= 38 12 +/- 2 LONG= 142 2 +/- 4
H= 50 MAG=4.1 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S *	A/T S	E-W *	A/T S	U-D *	A/T S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
ISHINO	1	IP	22 32 33.0	IS	32 40.0	23	0.2	26	0.2	10	0.2	S	2 E	10 D 10	68.6	07.0
OFUNAT	1	IP	22 32 36.6	IS	32 46.9	19	0.0	13	0.4	6	0.4	S	6	D 2	99.5	10.3
SENDAI	0	IP	22 32 37.0	S	32 47.8	20	0.4	13	2	10	1				99.4	10.8
FUKUSH	0	EP	22 32 42.0	S	32 58.1	13	1.3	13	1.0	5	0.5				145.5	16.1
MIZUSA	0	EP	22 32 42.9	IS	32 55.3	10	1.3	10	1.0	6	1.2				129.9	12.4
MORIOK	0	IP	22 32 47.1	IS	33 05.7	8	0.4	6	0.4	3	0.2	S	0 E	0 D 0	182.3	18.6
KAKIOK	0	EP	22 33 02	ES	33 27	7	0.8	5	0.8	2	0.8				272.7	25.0
ONAHAM	0	X	22 33 09.4			7	1.3	9	0.8	2	0.6				171.2	
MATSUS	0	P	22 33 14	S	34 01										385.7	47.0

OT= 11 16 34 24.4 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 24 +/- 1 LONG= 138 5 +/- 1
H= 0 MAG=3.7 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	2	P	16 34 28.9	S	34 31.0							19.0	02.1
NAGANO	1	IP	16 34 31.4	S	34 35.5							30.6	04.1
KARUIZ	0	IP	16 34 34.6	S	34 39.9						D 3	42.5	05.3
TOYAMA	0	EX	16 34 39			8 2.6	8 3.2	8 3.4				85.4	
MAEBAS	0	X	16 34 42			10 3.6	8 3.6	7 3.6				88.0	
KOFU	0	EP	16 34 42.6	ES	34 54.3	5 0.4	5 0.4	2 1.0				92.1	11.7
IIDA	0	EP	16 34 44.0	ES	34 57.0	4 1.6	3 0.4	2 1.0				101.2	13.0
KUMAGA	0	EP	16 34 48.2	ES	35 03.6	8 1.0	7 4.0	3 0.8				120.3	15.4
NAGOYA	0	EP	16 34 55.5	IS	35 16.0	9 0.6	6 0.6	4 0.6				170.1	20.5
GIFU	0	EP	16 34 58.4	S	35 14.6	6 1.0	5 1.0					162.8	16.2

OT= 11 20 19 16.4 +/- 0.3
S OF TOCHIGI PREF
LAT= 36 27 +/- 4 LONG= 139 29 +/- 2
H=110 CLASS=U

KUMAGA	0	P	20 19 33.8	S	19 47.2	19 1.0	10 0.8	8 0.6				U 8	34.8	13.4
KAKIOK	0	P	20 19 34.2	S	19 48.0	13 0.5	15 1.0	5 0.8	N	E	2 U		68.2	13.8
UTSUNO	0	P	20 19 35.1	S	19 47.7	23 0.7	14 0.8	9 1.2				U 2	36.4	12.6
TOKYO	0	IP	20 19 36.3	ES	19 52.1	10 0.2	7 0.4						88.4	15.8
MITO	0	IP	20 19 36.4	S	19 51.6	8 0.5	8 0.3	4 0.2				U 2	89.0	15.2
SHIRAK	0	EP	20 19 37.5	IS	19 55.4								99.4	17.9
MATSUS	0	IP	20 19 38.5	S	19 56				N	W		U	114.6	17.5
KOFU	0	EP	20 19 38.7	IS	19 54.4	10 0.6	13 0.5	3 0.4					120.5	15.7
AJIRO	0	IP	20 19 40.0	S	19 59.0	11 0.3	16 0.3	2 0.4				U 0	159.9	19.0
FUNATS	0	X	20 19 49.0	IS	19 54.8								123.9	
OSHIMA	0	P	20 19 52.4	S	20 03.1	8 0.4	22 0.4	6 0.4					187.5	10.7
ONAHAM	0	X	20 20 01.2			8 0.9	7 1.0	2 0.5					138.5	

OT= 12 6 17 35.7 +/- 0.3
NEAR MATSUSHIRO
LAT= 36 24 +/- 1 LONG= 138 7 +/- 1
H= 0 MAG=3.5 CLASS=L

MATSUS	2	P	06 17 39.8	S	17 41.8								17.4	02.0
MATSUM	1	IP	06 17 42.3	IS	17 45.8						S 2	W 3 U 51	21.6	03.5
NAGANO	2	IP	06 17 42.4	IS	17 46.0							D	29.7	03.6
KARUIZ	0	P	06 17 45.2	IS	17 51.0								39.6	05.8
KOFU	0	EP	06 17 54.3	ES	18 09.4	5 0.4	6 0.4	2 1.0					90.7	11.1
MAEBAS	0	EX	06 17 54.9			6 3.4	4 1.6	3 2.7					85.1	
IIDA	0	EP	06 17 55.6	ES	18 07.6	7 0.4	6 0.4	2 0.4					101.9	12.0
KUMAGA	0	EP	06 18 00.5	S	18 14.0	6 0.4	7 0.8	3 0.8					117.4	13.5

OT= 12 14 13 42.4 +/- 0.3
SHIZUOKA PREF
LAT= 35 9 +/- 1 LONG= 138 21 +/- 1
H= 10 MAG=3.8 CLASS=L

SHIZUO	1	P	14 13 49.6	S	13 54.6	39 0.4	70 0.6	12 0.4	N	2	W	2 D 2				20.3	05.0
AJIRO	0	IP	14 13 52.7	IS	14 01.6	37 0.4	23 0.4	12 0.4	S	1		U 4				69.1	08.9
MISHIM	0	IP	14 13 53.6	IS	14 00.4	40 0.5	51 0.5	16 0.5				U 3				53.0	06.8
FUNATS	0	IP	14 13 54.1	IS	14 06.9											53.9	12.8
KOFU	0	IP	14 13 54.4	IS	14 02.0	20 1.0	20 0.8	8 0.8				U 1				60.2	07.6
IIDA	0	EP	14 13 54.6	ES	14 01.6	6 1.0	10 1.0	8 1.2								61.5	07.0
HAMAMA	0	P	14 13 57.5	S	14 07.0	16 0.6	14 0.6	5 0.4				U 1				75.3	09.5
OMAEZA	0	IX	14 13 59.4	ES	14 06.0	9 1.2	9 1.2									61.9	
OSHIMA	0	P	14 14 01.5	S	14 15.0	9 0.6	9 0.6	3								103.3	13.5
NAGOYA	0	EP	14 14 04.4	S	14 18.8	11 0.6	12 0.8	5 0.8								125.9	14.4
MATSUM	0	EP	14 14 05.4	ES	14 20.8											126.0	15.4
GIFU	0	EP	14 14 07.9	S	14 24.2	8	8									146.8	16.3
KUMAGA	0	EP	14 14 08.8	S	14 26.0	7 1.2	7 1.0	2 1.4								144.9	17.2
TOKYO	0	EX	14 14 11	IS	14 27.7	9 0.5	11 0.5									141.0	
HIKONE	0	EP	14 14 15.5	S	14 37.8	13 1.0	16 0.9									192.0	22.3

OT= 12 15 37 28.5 +/- 0.1
NEAR MATSUSHIRO
LAT= 36 26 +/- 0 LONG= 138 5 +/- 1
H= 0 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S *	E-W *	U-D *	DELTA KM	S-P S
MATSUS	1	P	15 37 32.5	S	37 34.1							16.2	01.6
MATSUM	0	IP	15 37 34.5	IS	37 38.1				S 1		U 12	28.3	03.6
NAGANO	1	IP	15 37 35.0	S	37 38.9							27.1	03.9
KARUIZ	0	EP	15 37 38.3	S	37 44.2							43.3	05.9
HACHIN	0	IP	18 00 58.6	ES	01 17.8	6 0.6	7 0.2	3 3.0			U	180.8	19.2
KUSHIR	0	EP	18 01 05	ES	01 37	10 0.4	11 0.3	4 0.2				243.3	32.0
URAKAW	0	X	18 01 05			8 2.0	10 2.0	5 2.0				159.6	
AOMORI	0	EP	18 01 06.0			31 1.3	33 0.9	20 1.1				239.0	
MORIOK	0	IP	18 01 07.8	S	01 32.0	8 0.4	9 0.3	3 2.0	S	1 W 1	U 1	245.4	24.2
HAKODA	0	P	18 01 11.0	ES	01 38	8 0.8	12 0.5	3 1.8			U	261.3	27.0
AKITA	0	EX	18 01 13.0			10 2.8	11 2.0	7 1.8				324.9	
MIZUSA	0	EP	18 01 14.5	X	02 00.3	13 1.3	113 1.5					286.4	
OBIHIR	0	X	18 01 23									230.4	
SENDAI	0	EP	18 01 23.2	EX	01 46	6 1.5	6 1.5	4 1.5				371.8	
				EX	02 10.4								
MATSUS	0	IP	18 02 01.2						S	W	U	672.2	

OT= 13 18 53 18.2 +/- 0.5
SW OF IBARAKI PREF
LAT= 36 9 +/- 5 LONG= 139 51 +/- 2
H= 50 MAG=3.3 CLASS=L

KAKIOK	1	IP	18 53 27.6	IS	53 34.1	12 0.3	29 0.3	11 0.2					32.2	06.5
UTSUNO	1	P	18 53 29.1	IS	53 36.1	16 0.2	14 0.2						44.1	07.0
MITO	0	IP	18 53 30.6	IS	53 39.6	7 0.3	12 0.3	7 0.2			U 2		61.3	09.0
KUMAGA	0	EP	18 53 32.0	S	53 36.4	10 0.2	14 0.6	5 0.2					41.8	04.4
MATSUS	0	IP	18 53 41.3	S	53 59					E	D		153.5	17.7

OT= 13 20 20 34.5 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 28 +/- 1 LONG= 138 17 +/- 1
H= 0 CLASS=L

MATSUS	2	P	20 20 37.8	S	20 39.9								10.4	02.1
NAGANO	1	IP	20 20 40.1	S	20 42.5								22.8	02.4
KARUIZ	0	EP	20 20 41.0	ES	20 46.9								27.9	05.9
MATSUM	X	IP	20 20 43.5	IS	20 49.0					W	1 U 12		37.3	05.5

OT= 14 5 6 44.7 +/- 0.1
NEAR MATSUSHIRO
LAT= 36 25 +/- 0 LONG= 138 6 +/- 0
H= 0 CLASS=L

MATSUS	1	P	05 06 48.9	S	06 50.9								16.6	02.0
MATSUM	X	IP	05 06 50.8	IS	06 54.3						U 9		22.3	03.5
NAGANO	1	EP	05 06 51.2	S	06 55.1								28.4	03.9
KARUIZ	0	EP	05 06 54.2	S	06 59.8								41.4	05.6

OT= 15 1 6 54.0 +/- 0.5
E OFF AOMORI PREF
LAT= 40 33 +/- 1 LONG= 142 27 +/- 4
H= 40 MAG=4.1 CLASS=S

HACHIN	1	EP	01 07 08.3	S	07 18.0	30 0.4	25 0.4	5 1.6					78.4	09.7
MIYAKO	0	EP	01 07 11.8	ES	07 23.0	7 0	7 0	4 0					108.6	11.2
MORIOK	X	IP	01 07 17.3	ES	07 33.8	17 0.4	18 0.4	6 0.5	S	1 W	1 U 1		144.6	16.5
OFUNAT	0	EP	01 07 21.6	ES	07 43.0	10 0.2	4 0.2	2 0.4					176.7	21.4
HAKODA	0	IP	01 07 23.3	IS	07 46.5	12 0.4	15 0.5	3 0.5			D		199.6	23.2
URAKAW	0	P	01 07 23.8	S	07 41.6	3 1.2	6 0.6	1 0.6					180.8	17.8
AKITA	0	EX	01 07 24.8			8 2.0	7 1.4	4 2.2					220.4	
MIZUSA	0	EP	01 07 27.3	ES	07 49.8	10 1.2	20 1.0						193.5	22.5
MATSUS	0	P	01 08 14										578.6	

International Seismological Centre From the ISC collection scanned by SISMOS

OT= 16 15 12 33.4 +/- 0.2
NEAR MATSUSHIRO
LAT= 36 25 +/- 1 LONG= 138 6 +/- 1
H= 0 MAG=4.1 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
MATSUS	2	P	15 12 37.9	S	12 39.9					16.6	02.0
MATSUM	X	IP	15 12 39.8	IS	12 43.4				S 2 W 2 U 12	22.3	03.6
NAGANO	2	IP	15 12 40.1	S	12 42.9					28.4	02.8
KARUIZ	0	P	15 12 43.3	IS	12 49.0				U	41.4	05.7
TAKADA	0	EP	15 12 46.8	S	12 55.6					77.5	08.8
										201.4	
OMAEZA	0	IX	15 12 47.2	S	13 37.1	8 2.4	8 2.0			86.6	
MAEBAS	0	EP	15 12 51.1			22 3.9	10 1.9	7 2.1			
KOFU	0	IP	15 12 51.2	ES	13 03.4	8 0.4	9 0.8	4 1.2	S U 2	93.1	12.2
TOYAMA	0	EP	15 12 52	ES	13 04	15 5.4	18 2.8	5 3.0		86.1	12.0
CHICHI	0	EP	15 12 53.0	S	13 03.8					100.1	10.8
										103.4	12.6
IIDA	0	EP	15 12 53.6	ES	13 06.2	16 0.4	13 0.4	6 0.4		119.2	15.0
KUMAGA	0	EP	15 12 57.4	S	13 12.4	15 0.8	16 1.0	6 1.0		210.0	
HIKONE	0	X	15 12	X	12 35.3	18 1.0	12 1.1			165.2	19.9
GIFU	0	EP	15 13 03.2	S	13 23.1	6 1.0	6 1.0			163.1	
MISHIM	0	EX	15 13 04			7 0.7	6 0.7	2 0.3			
										172.5	20.4
NAGOYA	0	EP	15 13 04.4	IS	13 24.8	14 0.8	13 0.8	6 0.8	N 1 W 0 U 2	152.1	
WAJIMA	0	X	15 13 06			23 0.8	18 0.8	5 0.8		192.5	21.6
HAMAMA	0	IP	15 13 08.4	S	13 30.0	7 1.4	6 1.2	4 1.2	U 1	177.5	
YOKOHA	0	X	15 13 13.1	IX	13 29.7	11 0.5	10 0.4			170.0	
TOKYO	0	X	15 13 28			10 2.6	8 4.0				
										311.4	
TOYOOK	0	X	15 14 05.6			8 1.1	6 1.3	1 0.8			

OT= 17 4 44 9.7 +/- 0.9
NEAR CHOSHI
LAT= 35 35 +/- 2 LONG= 141 14 +/- 4
H= 70 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
CHOSHI	1	IP	04 44 23.8	IS	44 30.1	414 0.6	705 0.6	75 0.4	N 30 W 10 U 30	38.6	06.3
KAKIOK	0	IP	04 44 29.2	S	44 38.2	75 1.0	56 1.0	29 1.0	S 10 E 8 D 7	118.2	09.0
MITO	0	IP	04 44 29.6	S	44 43.0	37 1.9	34 0.6	17 1.8	D 3	111.8	13.4
TOKYO	0	IP	04 44 32.2	S	44 39.4	42 0.6	36 1.0	14 1.6		134.0	07.2
YOKOHA	0	IP	04 44 33.5	IS	44 51.6	66 0.7	55 0.5	14 1.3	D 5	144.1	18.1
TOMISA	0	IP	04 44 34.5			18 1.4	20 1.8	11 2.8	D 1	147.5	
UTSUNO	0	P	04 44 35.1	S	44 53.6	34 1.8	23 1.1			162.7	18.5
KUMAGA	0	EP	04 44 38.4	ES	44 56.0	22 0.8	24 1.2	9 1.0		178.2	17.6
OSHIMA	0	P	04 44 39.4			16 0.4	17 0.6	10 0.4		192.0	
SHIRAK	0	EP	04 44 39.8	IS	45 00.7					192.8	20.9
										153.9	
ONAHAM	0	EX	04 44 39.8	ES	44 51.9	19 0.9	24 0.7	8 0.5		203.3	21.1
AJIRO	0	IP	04 44 39.9	ES	45 01.0	15 0.4	13 0.4	3 0.5	D 1	215.8	
MISHIM	0	EP	04 44 41.5			20 0.7	13 0.6	7 1.8		215.5	19.4
MAEBAS	0	EP	04 44 43.0	IS	45 02.4	12 1.2	12 1.2	7 2.0		224.1	21.5
FUNATS	0	P	04 44 43.7	S	45 05.2						
										242.4	23.4
KOFU	0	EP	04 44 45.4	ES	45 08.8	17 0.6	20 0.8	5 1.0		256.0	22.2
KARUIZ	0	EP	04 44 47.4	ES	45 09.6					265.8	26.5
SHIZUO	0	IP	04 44 49.0	IS	45 15.5	7 2.2	7 0.8	4 1.4	E 1 U 3	296.0	
OMAEZA	0	EX	04 44 49			8 1.6	8 2.2			292.3	29.0
MATSUS	0	IP	04 44 51.0	S	45 20				S E D		
										250.5	
FUKUSH	0	X	04 44 53.0	ES	45 18.0	14 0.8	16 0.8	6 0.8		308.2	
IIDA	0	E	04 44 54.6							298.5	29.8
SENDAI	0	EP	04 44 57.0	ES	45 26.8	5 1.0	7 1.0	4 1.0		334.2	34.0
HAMAMA	0	EP	04 45 00	ES	45 34	5 1.6	6 2.8	3 1.6		394.0	
MIZUSA	0	X	04 45 29.2	X	46 32.3	5 2.3	6 2.5				

OT= 18 14 51 44.8 +/- 0.4
MIDDLE OF SETONAIKAI
LAT= 34 7 +/- 3 LONG= 133 18 +/- 3
H= 60 MAG=4.1 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
MATSUY	0	IP	14 51 58.4	IS	52 06.9	38 0.7	33 0.7	14 0.4	S 4 W 5 U 4	57.0	08.5
TAKAMA	1	IP	14 51 59.1	IS	52 08.0	24 0.2	43 0.2	14 0.2	S 1 E 4 U 6	73.3	08.9
OKAYAM	2	IP	14 51 59.9	IS	52 08.7	80 0.4	50 0.4	10 0.5	N 2 E 3 U 0	84.4	08.8
TURUGI	0	EP	14 52 00.6	S	52 10.2					79.2	09.6
HIROSH	X	IP	14 52 01.6	IS	52 12.3	17 0.2	15 0.2	10 0.2	W 2	84.1	10.7
										126.1	17.9
MUROTO	0	EP	14 52 05.1	ES	52 26.0	5 0.2	5 0.2			117.9	13.2
TOKUSH	0	EP	14 52 07.5	IS	52 20.7					120.4	14.0
UWAJIM	0	EP	14 52 07.6	ES	52 21.6					183.7	20.1
OITA	0	EP	14 52 10.2	ES	52 30.3	7 2.0	8 1.4			174.3	20.1
TOTTOR	0	EP	14 52 12.8	ES	52 32.9						
TOYOOK	0	X	14 52 38.7			12 0.7	9 1.0	3 0.7		210.1	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
MATSUS	0	X	14 53 17							520.7	

OT= 18 23 59 0.2 +/- 0.5
E OFF MIYAZAKI PREF
LAT= 32 11 +/- 1 LONG= 131 59 +/- 2
H= 10 MAG=4.0 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
NOBEOK	0	P	23 59 10.9	IS	59 17.7				S 4 E 2 D 6	52.6	06.8
MIYAZA	0	IP	23 59 12.4	S	59 20.8	27 0.6	46 0.6	21 0.6		60.3	08.4
OITA	0	EP	23 59 22.2	S	59 36.8	13 0.6	21 1.4			121.2	14.6
KUMAMO	0	EP	23 59 25	IS	59 40.6	7 0.8	7 1.0	6 0.8		138.3	15.6

OT= 19 4 12 36.2 +/- 0.5
S OFF HANASAKI PEN
LAT= 42 50 +/- 2 LONG= 145 43 +/- 3
H= 50 MAG=4.6 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
NEMURO	2	IP	04 12 48.6	IS	12 57.2	110 0.1	78 0.1	25 0.1	S 1 E D 13	56.0	08.6
KUSHIR	1	IP	04 12 54.2	IS	13 06.3	72 0.5	88 0.4	28 0.3	S 4 E 11 D 24	109.2	12.1
ABASHI	0	P	04 13 02.6	IS	13 20.8	29 1.8	14 1.4	6 1.6		175.4	18.2
OBIHIR	0	IP	04 13 06.7	ES	13 29				U 3	204.1	22.3
HIROO	0	IP	04 13 07.3	IS	13 28.8				D 2	206.4	21.5
URAKAW	0	P	04 13 13.7	S	13 40.6	7 1.0	8 1.2	3 0.8		252.8	26.9
MATSUS	0	EP	04 14 43							949.7	
MIZUSA	0	X	04 14 43.8			3 0.5	8 0.5	4 1.0		563.4	

OT= 20 14 45 32.5 +/- 1.5
E OFF HOKKAIDO
LAT= 43 5 +/- 4 LONG= 146 17 +/- 8
H= 40 MAG=4.5 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
NEMURO	2	IP	14 45 44.9	IS	45 56.1	45 0.2	36 0.2	22 0.2	S 2 E 4 D 32	62.8	08.2
KUSHIR	0	EP	14 45 57	ES	46 12	39 0.2	39 0.2	18 0.2		154.4	15.0
ABASHI	0	IP	14 46 01.6	S	46 21.8	6 2.0	11 2.2	5 0.6	S 1 E 6 D 5	192.1	20.2
HIROO	0	EP	14 46 12	ES	46 46					258.9	31.0
URAKAW	0	P	14 46 18.0	S	46 56.4	21 0.8	15 1.6	5 2.0		305.3	38.4
MORIOK	0	P	14 46 49.6	S	47 46.1	4 0.3	5 0.4	1 0.3	S 0 W 0 D 0	569.5	56.5
MATSUS	0	P	14 47 43							1002.2	
MIZUSA	0	X	14 47 59.8			8 2.2				615.9	

OT= 21 20 49 2.7 +/- 0.4
E OF TOKUSHIMA PREF
LAT= 33 42 +/- 1 LONG= 134 51 +/- 2
H= 20 MAG=3.7 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
MUROTO	0	IP	20 49 14.4	IS	49 20.0	23 0.5	29 0.6	8 0.4	S 2 U 1	59.1	05.6
TAKAMA	0	EP	20 49 17.4	ES	49 26.0	9 0.8	9 0.8	7 0.6		80.4	08.6
SUMOTO	0	P	20 49 18.5	IS	49 28.6	13 0.3	14 0.2	6 0.8	N E U	79.2	10.1
KOCHI	0	IP	20 49 19.8	IS	49 29.5				N 1 E 1 D 1	92.7	09.7
OKAYAM	0	IP	20 49 23.5	IS	49 36.7	7 0.6	10 0.8	5 0.6	N 2 E 0 U 0	122.2	13.2
KOBE	0	X	20 49 42.4							125.5	
TOKUSH	0	X	20 49	X	49 06.0					40.9	
MATSUS	0	X	20 50 14							460.7	

OT= 24 23 29 54.2 +/- 0.6
E OFF CHIBA PREF
LAT= 35 30 +/- 3 LONG= 140 34 +/- 3
H= 80 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
CHOSHI	0	P	23 30 07.8	S	30 16.2					35.4	08.4
KAKIOK	0	EP	23 30 11.3	S	30 22.1	9 1.0	8 0.9	4 0.9		87.9	10.8
TOKYO	0	EP	23 30 12	ES	30 23	12 2.0	11 0.6			76.1	11.0
YOKOHA	0	EP	23 30 12.6	IS	30 24.4	24 0.5	20 0.4			83.0	11.8
MITO	0	IP	23 30 13.0	S	30 27.0	5 0.6	6 1.4	2 0.8	D 1	97.8	14.0
AJIRO	0	IP	23 30 17.2	S	30 32.4	8 0.3	6 0.3	2 0.4	D 0	143.0	15.2
MATSUS	0	IP	23 30 30.0	S	30 56				U	241.7	26.0
OSHIMA	0	X	23 30 30.1			11 0.4	9 0.4	6 0.2		135.8	

OT= 25 10 23 33.6 USCGS
NEW IRELAND
LAT= -5 18 LONG= 153 42
H= 64 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * * S	E-W A/T * * S	U-D A/T * * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
NAHA	0	P	10 31 07.2	S	37 11.2	18 3.7	19 2.8	17 15.0	N W U 8	4472.5	364.0
HACHIJ	0	EX	10 31 07.6	X	37 07.2	14 0.2	13 0.2			4491.8	
TAKADA	0	EP	10 31 17.4							4956.1	
OMAEZA	0	EX	10 31 18			52 16.4	34 14.5	17 19.1		4701.4	
OSHIMA	0	EX	10 31 18			19 1.9	20 1.8	10 2.2		4676.9	
TOMISA	0	EP	10 31 19.6			23 15.4	35 10.0	18 4.0		4678.4	
YAKUSH	0	EP	10 31 20.0	ES	37 38.2	13 4.6	19 4.6	11 6.6		4659.8	378.2
SHIONO	0	EP	10 31 20.1	ES	37 21.6	23 28.3	15 7.1	6 26		4682.0	361.5
				EL	42 0					4728.2	376.5
MISHIM	0	EP	10 31 21.2	ES	37 37.7	13 22.0	19 22.0	16 22.0			
										4725.3	378.0
OWASE	0	P	10 31 22.0	ES	37 40.0	14 22.0	6 6.6	20 24.0		4715.5	
AJIRO	0	EX	10 31 22.0	EX	37 29.0	7 12.0	8 13.0	11 19.0		4732.2	642.4
SHIZUO	0	EP	10 31 22.2	ES	42 04.6	11 13.1	10 12.1	10 18.5		4730.0	
HAMAMA	0	EP	10 31 23			13 24.0	8 14.0	12 20.0			
YOKOHA	0	EP	10 31 23.6	EX	34 34.4	36 15.6	41 14.4	11 3.1	U 5	4737.6	
MUROTO	0	IP	10 31 24.2	EX	33 28.0	12 16.0	11 8.0	10 10.4	U 0	4732.5	
				EX	40 25.5					4736.6	380.2
ASHIZU	0	EP	10 31 25.8	ES	37 46.0	8 8.6	9 8.0	7 5.8		4760.0	
TOKYO	0	P	10 31 26.0			35 5.0	26 4.2	15 4.0		4742.4	383.0
MIYAZA	0	EP	10 31 27.0	S	37 50.0	13 5.0	13 5.0	12 3.0			
										4803.3	
KAKIOK	0	EP	10 31 28.1	X	37 44	10 15.0	13 15.0	5 13.0		4805.8	372.6
SUMOTO	0	P	10 31 28.7	ES	37 41.3	9 25	8 13	12 26	U		
				EX	33 07.0						
				IX	37 52.1						
				L	40 52						
										4807.4	
IIDA	0	EX	10 31 29.0							4819.8	386.0
KUMAGA	0	EP	10 31 29.0	ES	37 55.0	20 7.6	22 4.6	26 5.0		4797.8	
KOFU	0	EP	10 31 29.0			8 2.6	8 18.0	9 18.0			
NAGOYA	0	EP	10 31 29.2			8 2.2	10 2.8	5 3.8	U 2	4804.6	
FUNATS	0	P	10 31 29.8	S	37 46.9					4773.6	377.1
				L	41 49.8						
										4810.0	
OSAKA	0	EP	10 31 29.9	X	38 46.1	50 4.6	45 5.0	20 28.5		4810.2	
MITO	0	X	10 31 30.0			15 9.0	24 9.5	14 4.0		4758.0	
KAGOSH	0	EP	10 31 31.7	EX	37 54.6	49 2.9	30 3.5	14 2.3		4837.9	
KYOTO	0	EP	10 31 32.0	EX	37 51.4	6 22.0	6 18.0	6 24.0		4846.0	
UTSUNO	0	EX	10 31 32.2	EX	41 36.8	10 2.2	19 15.0				
										4841.3	375.1
TAKAMA	0	EP	10 31 33.6	ES	37 48.7	15 31.4	11 31.4	13 31.4		4857.0	386.0
ONAHAM	0	P	10 31 34.3	IS	38 00.3	19 3.8	24 4.5	15 4.4	U 6	4862.2	389.7
KUMAMO	0	P	10 31 34.4	S	38 04.1	16 24.9	26 4.2	14 2.7	U 4	4854.2	
OITA	0	P	10 31 34.7	EX	39 29.8	28 6.1	23 6.2	18 4.9	U	4843.5	381.6
HIKONE	0	EP	10 31 34.9	S	37 56.5	19 22.8	9 34.0	14 24.4			
				EL	42 14.2						
									N W U	4899.3	380.6
MATSUS	0	IP	10 31 35.4	S	37 56				U 3	4883.1	
OKAYAM	0	P	10 31 35.8	X	38 03.0	5 4.0	10 8.0	10 13.0		4854.6	384.0
MATSUY	0	EP	10 31 36.8	ES	38 00.8	13 26.6	17 27.0	16 25.0			
GIFU	0	EP	10 31 37	L	41 0	8 28.0	6	11 21.0		4835.9	
NAGASA	0	P	10 31 37.7	S	38 04.0				N 3 W 2 U 5	4898.5	386.3
										4920.6	
HIROSH	0	EP	10 31 37.7	EX	38 04.9	9 32.2	12 25.4	7 32.3			
				EX	38 09.6						
				ESS	41 29					4927.5	387.7
TOYOOK	0	EP	10 31 39.1	ES	38 06.8						
				EL	41 15.1	19 3.1	10 3.8	17 2.5			
										4956.0	
KANAZA	0	EX	10 31 40.0			13 6.0	18 5.6	15 2.6		4951.6	
TOYAMA	0	EP	10 31 40	EX	38 12	16 5.8	15 6.8	23 4.2		4955.7	
SHIMON	0	EP	10 31 40.6	EX	38 05	7 10.0	5 11.0	8 5.0	U		
				EX	41 36					4856.6	
MAEBAS	0	EP	10 31 41.4			17 12.0	15 17.0	9 3.3			
FUKUOK	0	P	10 31 41.5	ES	38 09	5 6.0	5 4.0	7 5.2	N 2 W U 4	4950.1	387.5
				X	41 36					4954.2	390.6
FUKUE	0	EP	10 31 42.4	ES	38 13.0	8 7.2	8 7.8	7 5.2		4988.2	387.8
HAMADA	0	P	10 31 43.0	ES	38 10.8	9 7.8	9 6.4	8 3.8	N 2 U 4		
				EL	44 17.3						
										4954.6	386.1
FUKUSH	0	EP	10 31 43.5	ES	38 09.6		15 10.0	9 8.0		4995.6	387.5
SENDAI	0	P	10 31 43.5	ES	38 11.0	14 4.4	16 19.0	11 12.0			
				EX	41 26.2						
ISHINO	0	P	10 31 44.6	S	38 18.6	8 4.6	13 5.0	8 4.6	N 2 W 0 U 3	5002.2	394.0
				X	41 54.0						
									U 6	5032.1	396.2
WAJIMA	0	P	10 31 45.8	ES	38 22	18 3.6	15 4.0	10 3.4	S 6 E 10 D 8	4923.4	554.4
SAGA	0	IP	10 31 46.7	ES	41 01.1				N 1 D 1	5050.5	
AIKAWA	0	IP	10 31 47.4			13 22.0	8 17.3	13 17.3		5538.0	463.0
ABASHI	0	EP	10 31 48	ES	39 31	10 20.0	11 10.0	9 6.0		5081.6	401.6
MIZUSA	0	EP	10 31 48.1	ES	38 29.7	188 11.8	100 12.8	14 2.1			
OFUNAT	0	P	10 31 48.4	S	38 27.6	8 12.4	12 12.0	7 4.0	N 2 W 1 U 3	5059.1	399.2
				EX	42 06.6						
				L	45 20.0						
SAIGO	0	EP	10 31 48.8	EX	41 45.8	6 9.6	8 11.6	6 27.4	N 3 W 2 U 2	5056.4	

International Seismological Centre From the ISC collection scanned by SISMOS

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
MIYAKO	0	EP	10 31 51	ES	38 35	7 23.2	11 6.2	10 3.2		5115.0	404.0
MORIOK	0	P	10 31 53.5	ES	38 38.4	6 13.0	11 13.5	7 10.6	N 0 U 0	5140.4	404.9
				EL	42 18						
AKITA	0	EX	10 31 56	EX	38 33	20 4.4	30 4.8	17 4.4		5171.1	
ASAHIK	0	EP	10 31 59							5547.3	
HACHIN	0	EP	10 32 00.0	ES	38 45.0	10 8.0	11 14.0	10 22.0	S D	5219.4	405.0
AOMORI	0	EP	10 32 07.5	ES	38 56.8	19 2.4	17 4.1	11 1.5		5268.8	409.3
SAKATA	0	EX	10 32 09.5							5096.1	
HAKODA	0	EP	10 32 10	ES	39 08	7 2.8	12 5.2	11 24.9	U	5375.1	418.0
URAKAW	0	EP	10 32 12	ES	39 07	16 6.0	10 6.0	13 6.6		5365.7	415.0
KUSHIR	0	EP	10 32 14	S	39 16.7	10 13.2	13 12.2	12 4.6		5423.3	422.7
OBIHIR	0	EX	10 32 15.4							5438.8	
SAPPOR	0	EP	10 32 18	ES	39 20	9 5.0	15 5.2	9 4.4		5493.8	422.0
NEMURO	0	EP	10 32 28	ES	39 17	9 16.2	13 18.4	7 21.2		5442.0	409.0
WAKKAN	0	EX	10 32 36			6 5.0	10 6.8	9 4.8		5738.5	

OT= 28 14 29 18.7 +/- 0.5
OFF MIYAGI PREF
LAT= 38 16 +/- 2 LONG= 141 47 +/- 3
H= 50 MAG=4.2 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
ISHINO	2	IP	14 29 30.0	IS	29 36.0	320 0.1	108 0.0	55 0.0	N 1 W 3 U 9	45.5	06.0
SENDAI	1	IP	14 29 33.2	IS	29 42.5	37 0.6	48 1.6	31 0	S 1 E 4 D 14	77.3	09.3
OFUNAT	1	IP	14 29 34.5	IS	29 44.4	53 0.0	31 0.2	14 0.2	N 3 U 3	88.4	09.9
MIZUSA	0	IP	14 29 37.3	IS	29 49.4	10 1.2	15 0.5	12 0.7	D 2	111.6	12.1
FUKUSH	1	IP	14 29 39.8	IS	29 53.0	26 0.4	34 0.2	7 0.2	N 3 E 3 D 5	128.1	13.2
MIYAKO	0	EP	14 29 42.4	IS	29 59.4	6 0	7 0	2 0		153.8	17.0
MORIOK	0	IP	14 29 43.9	IS	30 01.4	15 0.4	15 0.5	3 0.3	S 0 E 0 D 0	167.4	17.5
AKITA	0	EX	14 29 55.6			8 3.2	8 2.4			217.2	
MITO	0	EP	14 29 56.0	S	30 18.6	5 0.4	6 0.3	3 0.2		239.6	22.6
ONAHAM	0	X	14 29 59.0			11 0.7	9 0.8	5 0.5		165.8	
MATSUS	0	IP	14 30 10.8	X	31 02				N E D	370.0	

OT= 29 15 29 53.5 +/- 0.7
NEAR HAMAMATSU
LAT= 34 36 +/- 3 LONG= 137 45 +/- 2
H= 40 MAG=3.8 CLASS=L

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
HAMAMA	0	IP	15 30 00.5	IS	30 05.2	45 0.4	31 0.4	8 0.4	W 1 D 2	12.3	04.7
OMAEZA	0	EP	15 30 03.2	IS	30 14.0	22 0.4	21 0.4	24 0.4		42.5	10.8
SHIZUO	0	P	15 30 08.0	S	30 17.0	7 0.4	6 0.4	3 0.6	S 2 E 2 U 2	76.0	09.0
NAGOYA	1	IP	15 30 09.8	IS	30 20.2	24 0.4	25 0.2	13 0.2	U U	95.0	10.4
IIDA	0	EP	15 30 10.4	IS	30 20.6	16 0.6	8 0.4	9 0.8		101.2	10.2
KOFU	0	EP	15 30 13.8	ES	30 33.0	7 0.5	6 0.3	2 1.0		139.2	19.2
GIFU	0	EP	15 30 14.0	S	30 26.9	13 0.4	11 0.2			126.2	12.9
HIKONE	0	EP	15 30 19.5	S	30 35.7	30 1.0	15 0.6	5 0.4		156.3	16.2
MATSUS	0	IP	15 30 26.0	S	30 53				N U	219.0	27.0
AJIRO	0	X	15 30 41.7	X	30 58.8	9 0.3	4 0.3	2 0.4	D 1	132.6	
TSURUG	0	X	15 30 44.7							192.7	
FUKUI	0	X	15 30 49.7							212.5	

OT= 30 4 52 27.3 +/- 0.7
NEAR ONAHAMA
LAT= 37 1 +/- 1 LONG= 141 4 +/- 6
H= 90 CLASS=U

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
MITO	0	IP	04 52 45.8	IS	52 59.3	8 0.3	11 0.4	4 0.2	D 1	88.6	13.5
FUKUSH	0	EP	04 52 46.8	ES	53 00.0	8 0.8	10 0.5	3 0.8		97.4	13.2
KAKIOK	0	IP	04 52 48.8	IS	53 04.0	12 0.5	10 0.3	5 0.2		117.0	15.2
MATSUS	0	IP	04 53 07.3	S	53 29				S W D	260.6	21.7
ONAHAM	0	X	04 53 49.6			4 0.4	5 0.5			16.3	

OT= 30 11 27 51.6 +/- 0.6
OFF MIYAGI PREF
LAT= 38 13 +/- 1 LONG= 142 6 +/- 3
H= 50 MAG=4.9 CLASS=S

STATION	I	PHASE	TIME H M S	PHASE	TIME M S	MAXIMUM AMPLITUDE / PERIOD N-S A/T * S	E-W A/T * S	U-D A/T * S	INITIAL MOTION N-S E-W U-D * * *	DELTA KM	S-P S
ISHINO	2	IP	11 28 00.6	IS	28 14.4	180 0.1	135 0.1	72 0.2	N 2 W 11 U 13	73.4	08.4
OFUNAT	2	IP	11 28 03.8	IS	28 20.2	69 0.0	30 0.6	20 0.6	S 0 D 0	99.5	11.4
SENDAI	1	IP	11 28 09.6	IS	28 31.4	275 1.0	208 1.0	80 1.2	N 1 W 4 U 14	105.2	11.8
MIZUSA	0	IP	11 28 14.7	IS	28 42.7	75 0.7	61 2.4	52 0.9	E 4 D 6	132.0	14.0

STATION	I	PHASE	TIME H	M	S	PHASE	TIME M	S	MAXIMUM AMPLITUDE / PERIOD N-S A/T *	S	E-W A/T *	S	U-D A/T *	S	INITIAL MOTION N-S	E-W	U-D	DELTA KM	S-P S
YAMAGA	0	P	11	28	15.2	ES	28	29.2									D 1	153.3	14.0
MIYAKO	0	EP	11	28	15.5	S	28	32.7	12	0.0	13	0.0	10	1.7				159.0	17.2
FUKUSH	X	P													S 4 W	6 U	6	151.6	14.4
MORIOK	0	IP	11	28	16.0	S	28	30.4	102	0.8	149	1.0	54	0.8	S 2 E	1 D	1	183.1	19.0
SHIRAK	0	EP	11	28	19.5	IS	28	38.5	21	0.4	59	0.5	6	0.6				205.5	20.8
			11	28	21.8	IS	28	42.6											
ONAHAM	0	EX	11	28	23.4	ES	28	37.5	44	1.1	40	1.0	16	0.7				176.1	
MITO	0	IP	11	28	27.5	IS	28	53.0	33	1.5	28	1.4	14	1.4			U 1	249.9	25.5
HACHIN	0	EP	11	28	30.0	S	28	56.5	11	1.0	10	0.6	6	2.0				261.0	26.5
AKITA	0	EP	11	28	30.4	ES	28	54.2	28	2.2	26	3.2	13	2.8				240.4	23.8
KAKIOK	0	EP	11	28	31	ES	28	54	49	0.9	27	0.9	14	0.8				277.7	23.0
UTSUNO	0	EP	11	28	31.4	S	29	00.0	30	0.7	20	1.1	12	1.0				270.7	28.6
WAEBAS	0	EP	11	28	39.6	ES	29	13.7	10	1.2	10	1.0	7	1.0				336.0	34.1
KUMAGA	0	EP	11	28	40.0	ES	29	21.6	16	1.0	16	0.8	6	1.4				332.9	41.6
MATSUS	0	IP	11	28	45.9	S	29	30									U	391.7	44.1
AIKAWA	0	X	11	28	46.5	IS	29	24.2	5	1.2	10	0.4	5	2.4				339.0	
KARUIZ	0	EP	11	28	46.9	ES	29	27.2										377.3	40.3
URAKAW	0	EP	11	28	51				5	3.4	5	2.6	3	3.2				441.5	
KOFU	0	EP	11	28	52.0	ES	29	38.2	16	1.0	17	1.2	8	1.2				423.8	46.2
TOKYO	0	EX	11	28	52	IS	29	17.9	17	0.4	16	1.1	7	2.0				349.8	
YOKOHA	0	X	11	28	52.1	S	29	24.8	15	0.7	20	0.7					U	377.7	
MISHIM	0	EP	11	28	53.7	ES	29	40.0	16	2.2	14	0.7	3	0.9				446.0	46.3
AOMORI	0	X	11	28	55				22	1.7	31	1.5	9	1.4				310.1	
FUNATS	0	P	11	28	55.1													428.6	
CHOSHI	0	X	11	28		ES	29	06.6										298.2	
OMAEZA	0	X	11	28					6	3.4	8	3.0						531.1	
TOMISA	0	X	11	29	02.1				17	2.0	15	2.5	10	2.0				418.4	
SHIZUO	0	EP	11	29	03.1	S	29	49.7	5	2.0	5	1.6	3	1.6				488.5	46.6
HAMAMA	0	EP	11	29	11	ES	30	04	5	24	5	26	3	18				552.4	53.0
GIFU	0	X	11	29	17				6	1.9	4	2.2						569.4	
KUSHIR	0	X	11	30	00				7	0.2	6	0.4	3	0.2				563.3	
HIKONE	0	X	11	30	23.0				8	1.3	6	1.7	3	1.1				616.1	

International Seismological Centre From the ISC collection scanned by SISMOS

List 6 SEISMOLOGICAL DATA OBTAINED BY MATSUSHIRO

DATE	PHASE	TIME (J. S. T.) H	M	S		M	S	INITIAL MOTION			
1	IP	00	57	46.5				D			*
1	IP	09	47	08.2	S	48	25.	U			*
1	IP	16	25	10.3	IX	25	21.8	N	U		*
1	EP	17	00	48.							*
1	IP	23	00	57.3	S	04	10.		U		*
2	IP	00	04	09.0	S	04	49.		W	D	*
2	IP	03	43	04.5	S	43	28.		U		*
2	IP	07	36	26.7	IS	36	39.7		E	D	*
2	EP	09	44	27.							*
2	IP	14	56	45.3	ES	57	40.	S	U		*
2	IP	17	20	16.5	IS	20	32.5	S	D		*
2	IP	21	57	12.5					U		*
3	P	02	34	42.							*
3	P	05	10	11.	S	13	40.				*
3	EP	14	04	17.	S	04	45.				*
3	IP	14	07	17.6	S	07	41.	N	U		*
3	EP	20	06	27.							*
4	IP	05	15	18.7	ES	16	07.	N	W	U	*
4	P	10	44	03.							*
4	P	14	58	30.							*
4	IP	18	15	41.5	ES	15	59.		U		*
4	EP	21	04	11.							*
4	IP	21	43	36.5					E	D	*
5	P	04	20	12.							*
5	EP	05	19	55.							*
5	P	07	25	49.							*
5	IP	16	01	45.2					U		*
5	IP	18	12	21.0	ES	18	03.	N	E	U	*
5	EP	20	22	10.							*
6	IP	08	57	57.9	S	58	27.	N		D	*
6	P	12	08	23.							*
6	IP	13	50	13.6					D		*
6	IP	14	13	59.6				S		D	*
6	P	14	49	47.							*
6	P	14	56	58.	S	57	22.				*
6	IP	17	04	31.9	ES	06	15.		U		*
6	IP	18	50	47.2					D		*
6	IP	23	58	04.7	EX	59	20.	S	W	U	*
7	IP	15	47	12.5	IS	47	38.6	N	E	D	*
7	IP	16	32	12.6					W	U	*
7	P	17	36	06.	ES	36	38.				*
7	EP	18	52	10.							*
7	P	18	59	14.							*
8	P	11	09	35.	EX	15	41.				*
8	P	12	00	05.							*
9	IP	11	02	29.2	IS	02	34.2				*
9	IP	13	38	58.7				N	W	U	*
9	IP	18	45	17.8					D		*
9	P	20	00	02.	ES	07	32.				*
9	P	22	33	14.	S	34	01.				*
9	P	22	40	18.	S	40	39.				*
10	P	07	19	15.							*
10	IP	12	23	33.7	EX	24	19.	S		U	*
10	P	21	18	19.	EX	27	40.				*
11	IP	02	47	46.5	ES	48	38.		D		*
11	P	03	50	53.							*
11	IP	04	35	46.6	S	36	47.	N		U	*
11	EP	08	01	24.	S	09	36.				*
11	P	08	08	42.	S	08	56.5				*
11	IP	20	19	38.5	S	19	56.	N	W	U	*
12	P	04	52	18.					U		*
12	EP	07	42	21.							*
12	IP	14	16	08.9	S	16	29.		D		*
13	IP	02	11	14.6	S	11	22.	N	E	D	*
13	IP	07	46	23.2	S	46	46.	N	E	D	*
13	IP	18	02	01.2				S	W	U	*
13	IP	18	53	41.3	S	53	59.		E	D	*
13	IP	19	41	54.3	S	44	54.	S	W	U	*

DATE	PHASE	TIME H	M	S		M	S	INITIAL MOTION		
13	IP	20	02	16.2	ES	05	27.			D
14	P	00	42	25.						
14	P	02	50	34.3	ES	52	44.	S		U
14	IP	04	17	33.6				N		U
14	IP	07	45	15.3						D
14	P	12	40	41.						
14	IP	16	45	46.5	S	46	12.	N		U
15	P	01	08	14.						
15	IP	03	30	26.8				N		D
15	IP	08	23	35.2	S	24	25.			U
15	IP	08	34	26.0						U
16	IP	04	59	03.7				S		D
17	IP	00	50	12.1				N	E	U
17	IP	04	44	51.0	S	45	20.	S	E	D
17	P	05	03	02.	S	03	30.			
17	IP	05	58	34.2	S	02	17.			U
17	IP	07	40	38.0						U
17	P	19	28	12.	S	28	23.			D
17	IP	20	20	39.5	IS	21	07.0	N		D
17	EP	21	01	44.						
18	IP	05	47	48.0						U
18	EP	14	53	17.						
18	P	19	27	14.	ES	31	44.			
18	IP	23	09	42.4	S	14	08.			D
18	P	23	18	52.						
19	P	02	36	19.						
19	EP	04	14	43.						
19	IP	23	47	29.5						U
20	P	10	42	03.						
20	P	14	47	43.						
20	P	20	42	58.						
21	P	02	17	30.						
21	P	02	17	30.						
21	IPKP	11	45	10.8	SKKS	55	40.			U
21	IP	17	10	05.5						D
21	P	20	50	14.						
22	P	01	07	29.	S	11	00.			
22	P	01	16	39.	S	19	04.			
22	P	01	20	50.	S	21	50.			
22	P	02	58	00.	L	18	32.			
22	P	05	00	38.						
22	L	09	05	00.						
22	IP	12	37	01.1	S	37	16.5		E	U
22	IP	17	10	52.5	S	11	00.	N		D
22	IP	20	11	57.2	S	12	09.			U
22	P	21	52	11.						
23	P	08	20	55.	I	31	30.			
23	IP	22	31	13.7	S	37	44.	N		U
24	P	01	08	51.	EL	14	28.			
24	P	01	48	18.						
24	IP	11	09	58.2	S	10	15.6		E	D
24	P	16	19	00.	S	19	21.			
24	P	17	38	31.	S	41	48.			
24	IP	23	30	30.0	S	30	56.			U
25	EPKP	05	22	08.	SKKS	31	50.			
25	IP	06	51	29.0						D
25	IP	08	12	23.5	S	13	38.	N		U
25	IP	10	31	35.4	S	37	56.	N	W	U
25	EPKP	20	01	14.	EX	13	20.			
25	P	21	17	33.						
26	L	02	56	30.						
26	P	09	30	57.						
26	P	18	00	45.	S	06	54.			
26	IP	18	40	29.0	S	49	25.			D
27	IP	09	45	56.0	S	46	20.5			U
27	EP	10	51	33.						

DATE		PHASE AND TIME H M S		M S	INITIAL MOTION
27	P	13 36 35.	S	42 36.	
27	IPKP	18 37 30.1	SKKS	48 20.	U
27	P	23 46 39.	E	52 50.	
					U
28	IP	01 34 19.5	S	43 52.	
28	IP	14 30 10.8	S	31 02.	N E D
28	P	15 37 06.	S	46 02.	
					U
29	IP	04 03 05.0			
29	EP	07 22 30.	S	31 25.	
29	IP	15 30 26.0	S	30 53.	N U
29	IP	21 41 59.0			N D
30	IP	04 53 07.3	S	53 29.	S W D
30	EP	05 41 03.	E	51 08.	
30	IP	07 15 41.9	S	15 52.	S E U
30	IP	07 34 37.4			D
30	P	09 14 04.			
30	IP	11 28 45.9	S	29 30.	U
30	E	14 09 00.	L	13 50.	
30	IP	16 24 19.3	S	24 46.5	U
31	IP	07 53 42.1	S	54 01.	N W U
31	P	11 36 56.			

DATA FOR EARTHQUAKES OCCURRING IN THE VICINITY OF ATSUSHIRO ARE LEFT OUT FROM THE TABLE. THESE ARE GIVEN IN THE FOLLOWING TABLE.

EARTHQUAKES FELT AT MATSUSHIRO SEISMOLOGICAL OBSERVATORY

(J. S. T.)

D	INT	H	M	D	INT	H	M
1	2	13	27				
1	1	21	12	17	1	02	10
1	1	23	33	17	1	14	47
				17	1	15	20
2	1	08	40	17	1	20	42
2	1	11	52				
2	1	11	53	18	1	01	11
				18	1	01	35
3	1	02	13	18	1	08	57
				18	1	13	41
4	1	17	56	18	1	21	30
4	1	17	59	18	1	22	49
5	1	13	02	19	2	11	19
5	1	15	47				
				21	1	17	30
6	1	21	58				
6	1	23	19	23	1	23	10
7	1	07	52	24	1	07	24
				24	2	07	26
8	1	00	55				
8	1	17	30	25	1	06	57
				25	1	07	23
9	1	08	56	25	1	15	11
9	1	10	42				
9	1	10	43	26	1	06	00
9	1	23	01	26	1	12	17
				26	2	20	58
10	1	05	05				
10	1	07	24	27	2	01	40
10	1	14	00	27	2	01	41
10	1	14	02	27	1	23	28
10	1	14	03				
				28	1	02	24
11	1	02	13	28	1	05	34
11	1	04	20	28	1	06	48
11	1	05	25				
11	1	08	57	30	1	14	56
11	1	08	57				
11	1	09	12	31	1	02	54
11	2	16	34				
11	1	18	03				
11	1	18	04				
11	1	19	07				
12	2	06	17				
12	1	15	36				
12	1	15	37				
13	1	05	44				
13	1	06	02				
13	1	06	02				
13	1	13	36				
13	1	16	40				
13	1	16	43				
13	2	20	20				
14	1	01	56				
14	1	03	18				
14	1	05	06				
14	1	05	29				
14	1	12	18				
14	1	18	20				
15	1	00	38				
15	1	11	42				
15	1	13	52				
15	1	18	13				
16	1	07	44				
16	1	08	08				
16	2	15	12				
16	1	16	00				
16	1	21	53				
16	1	23	54				

International Seismological Centre From the ISC collection scanned by SISMOS

International Seismological Centre From the ISC collection scanned by SISMOS

Number of earthquakes by districts and classes, 1967

Class / District	Number of felt earthquakes					Number of unfelt earthquakes	Total
	Remarkable	Moderate	Small felt area	Local	Total		
Hokkaido	10	5	15	72	102	261	363
Tohoku	9	6	23	46	84	197	281
Kwanto	2	11	35	186	234	266	500
Chubu	2	3	15	2394	2414	215	2629
Kinki	1	1	7	121	130	90	220
Chugoku • Shikoku	0	0	7	36	43	35	78
Kyushu	2	2	4	70	78	267	345
Near Japan *	8	0	2	11	21	116	137
Foreign region	0	0	0	0	0	54	54
Unknown	0	0	0	0	0	88	88
Total	34	28	108	2936	3106	1589	4695

* Sakhalin, Kurile Is., Korea, Ryukyu Is., Bonin Is., Sikhota Alin.

Number of felt earthquakes at seismological stations of JMA, 1967

Station	Seismic intensity 1	2	3	4	5	6	7	Total	Station	Seismic intensity 1	2	3	4	5	6	7	Total
Abashiri	0	1	0	1	0	0	0	3	Nagasaki	2	0	0	0	0	0	0	2
Aikawa	1	0	0	0	0	0	0	1	Nagatsuro	3	0	0	0	0	0	0	3
Ajiro	19	7	2	0	0	0	0	28	Nagoya	7	1	1	0	0	0	0	8
Akita	2	2	0	0	0	0	0	4	Nara	2	2	1	1	0	0	0	5
Anabuki (Tsurugisan)	3	0	0	0	0	0	0	3	Nemuro	20	8	4	1	0	0	0	33
Aomori	2	5	0	0	0	0	0	7	Niigata	0	2	0	0	0	0	0	2
Asahikawa	1	0	0	0	0	0	0	1	Nobeoka	3	0	1	0	0	0	0	4
Ashizuri	0	1	0	0	0	0	0	1	Obihiro	9	3	4	0	0	0	0	16
Asosan	2	2	0	0	0	0	0	4	Ofunato	25	8	3	1	0	0	0	37
Chichibu	10	11	2	0	0	0	0	23	Oita	1	1	1	0	0	0	0	3
Choshi	27	12	9	0	0	0	0	48	Okayama	5	3	0	0	0	0	0	8
Fukue	0	0	0	0	0	0	0	0	Omaezaki	2	0	0	0	0	0	0	2
Fukui	1	0	0	0	0	0	0	1	Onahama	16	9	7	1	0	0	0	33
Fukuoka	0	0	0	0	0	0	0	0	Osaka	1	1	0	0	0	0	0	2
Fukushima	22	7	4	0	0	0	0	33	Oshima	7	13	2	0	0	0	0	22
Funatsu	15	9	2	0	0	0	0	26	Owase	5	1	0	0	0	0	0	6
Gifu	0	0	0	0	0	0	0	0	Rumoi	0	0	0	0	0	0	0	1
Hachijojima	3	5	0	0	0	0	0	8	Saga	0	0	0	0	0	0	0	0
Hachinohe	18	5	5	0	0	0	0	30	Saigo	0	1	1	0	0	0	0	4
Hahodate	6	1	1	0	0	0	0	8	Sakata	2	0	0	0	0	0	0	4
Hamada	0	0	0	0	0	0	0	0	Sapporo	5	1	0	0	0	0	0	6
Hamamatsu	1	0	0	0	0	0	0	1	Sendai	16	2	3	1	0	0	0	22
Hikone	0	0	0	0	0	0	0	0	Shimonoseki	1	0	0	0	0	0	0	1
Himeji	3	1	0	0	0	0	0	4	Shionomisaki	7	0	0	0	0	0	0	7
Hiroo	14	9	5	1	0	0	0	29	Shirakawa	10	8	3	0	0	0	0	21
Hiroshima	0	1	0	0	0	0	0	1	Shizuoka	9	0	2	0	0	0	0	11
Iida	10	0	1	0	0	0	0	11	Sumoto	9	0	0	0	0	0	0	10
Ishinomaki	20	7	1	0	0	0	0	28	Suttsu	0	0	0	0	0	0	0	0
Izuhara	0	0	0	0	0	0	0	0	Takada	4	0	1	0	0	0	0	5
Kagoshima	0	0	2	0	0	0	0	2	Takamatsu	7	0	0	0	0	0	0	7
Kakioka	27	19	7	3	0	0	0	56	Takayama	2	4	0	0	0	0	0	2
Kanazawa	1	0	0	0	0	0	0	1	Tokushima	4	4	0	0	0	0	0	9
Karuizawa	7	7	0	0	0	0	0	15	Tokyo	13	8	1	0	0	0	0	26
Kobe	2	0	0	0	0	0	0	2	Tomisaki	1	1	0	0	0	0	0	4
Kochi	2	0	3	0	0	0	0	5	Tottori	1	1	0	0	0	0	0	2
Kofu	16	7	2	0	0	0	0	25	Toyama	0	0	0	0	0	0	0	0
Kumugaya	15	9	4	0	0	0	0	28	Toyooka	0	0	0	0	0	0	0	0
Kumamoto	6	6	0	0	0	0	0	12	Tsu	3	1	0	0	0	0	0	4
Kushiro	29	14	5	2	0	0	0	50	Tsuruga	1	0	0	0	0	0	0	1
Kyoto	5	6	1	0	0	0	0	12	Unzendake	7	3	0	0	0	0	0	10
Maebashi	15	5	2	0	0	0	0	22	Urakawa	16	5	3	0	0	0	0	24
Maizuru	4	0	0	0	0	0	0	4	Utsunomiya	43	14	7	0	0	0	0	64
Matsue	0	0	0	0	0	0	0	0	Uwajima	4	2	1	0	0	0	0	7
Matsumoto	0	0	0	0	0	0	0	0	Wajima	1	1	0	0	0	0	0	2
Matsushiro	26	6	4	1	1	0	0	36	Wakayama	52	13	2	0	0	0	0	67
Matsuyama	1	1	0	0	0	0	0	2	Wakkanai	1	0	0	0	0	0	0	1
Mishima	5	3	3	0	0	0	0	8	Yakushima	3	3	1	0	0	0	0	7
Mito	34	19	3	0	0	0	0	56	Yamagata	2	1	4	0	0	0	0	4
Miyako	21	10	3	0	1	0	0	34	Yokohama	14	6	4	0	0	0	0	24
Miyazaki	4	0	0	0	0	0	0	5	Yonago	1	0	0	0	0	0	0	1
Mizusawa	10	4	1	0	0	0	0	15	Ishigakijima	8	5	1	0	0	0	0	14
Morioka	13	7	4	0	0	0	0	24	Naha	3	5	0	0	0	0	0	8
Muroran	2	0	0	0	0	0	0	2									
Murotomisaki	2	0	0	0	0	0	0	2									
Nagano	191	55	11	2	0	0	0	259									

Errata for "The Seismological Bulletin of The Japan Meteorological Agency", from 1965 to 1966

Year	Month	Page	FOR	READ
1965	May	7	Earthquake Origins Date and Time (J. S. T.) d h m: 19 11 32; C: S; Region: SAITAMA-CHBA BORDER	Earthquake Origions Date and Time (J. S. T.) d h m: 19 11 32; C: S; Region: SAITAMA-CHIBA BORDER
1965	Oct.	5	Number of earthquakes by districts and classes District: Chubu; Number of felt earthquakes: Remarkable 1, Total 1143; Number of unfelt earthquakes: 32 District: Total; Number of felt earthquakes: Remarkable 4, Total 1210; Number of unfelt earthquakes: 142	Number of earthquakes by classes and districts District: Chube; Number of felt earthquakes: Remarkable 0, Total 1142; Number of unfelt earthquakes: 33 District: Total; Number of felt earthquakes: Remarkable 3, Total 1209; Number of unfelt earthquakes: 143
1965	Oct.	6	Date and Time (J. S. T.) d h m: 5 15 35; C: O; Region: —NAGANO—	Date and Time (J. S. T.) d h m: 5 15 35; C: U; Region: —NAGANO—
1965	Dec.	4		The table for the number of earthquakes by districts and classes in 1965 should be deleted.
1965	Dec.	25	Number of earthquakes by districts and classes, 1965 District: Chubu; Number of felt earthquakes: Remarkable 5, Local 7271, Total 7288; Number of unfelt earthquakes: 173; Total: 7461 District: Near Japan*; Number of felt earthquakes: Remarkable 8, Local 54, Total 63; Number of unfelt earthquakes: 476; Total: 539 District: Total; Number of felt earthquakes: Remarkable 38, Local 8013, Total 8124; Number of unfelt earthquakes: 2294; Total: 10478	Number of earthquakes by districts and classes, 1965 District: Chubu; Number of felt earthquakes: Remarkable 4, Local 7271, Total 7287; Number of unfelt earthquakes: 174; Total: 7461 District: Near Japan*; Number of felt earthquakes: Remarkable 8, Local 53, Total 62; Number of unfelt earthquakes: 476; Total: 538 District: Total; Number of felt earthquakes: Remarkable 37, Local 8012, Total 8182; Number of unfelt earthquakes: 2295; Total: 10477
1966	Feb.	5	Number of earthquakes by districts and classes District: Chubu; Number of felt earthquakes: Local 1721, Total 1723; Total: 1748 District: Total; Number of felt earthquakes: Local 1787, Total 1802; Total: 1951	Number of earthquakes by districts and classes District: Chubu; Number of felt earthquakes: Local 1901, Total 1903; Total: 1928 District: Total; Number of felt earthquakes: Local 1967, Total 1982; Total: 2131

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Rear	Month	Page	FOR	READ
1966	April	4	The earthquakes, which occurred at 17h 51m on 5th, 06h 06m on 11th, and 10h 22m, 10h 21m, 10h 22m and 15h 46m on 12th,.....	The earthquakes, which occurred at 17h 51m on 5th, 06h 06m on 11th, and 10h 21m, 10h 22m, 10h 22m and 15h 46m on 17th.....
1966	April	7	Date and Time (J.S.T.) d h m / C / Region 7 18 43 / U / RYUKYU IS	Date and Time (J.S.T.) d h m / C / Region 7 18 43 / R / RYUKYU IS
1966	Aug.	5	Number of earthquakes by districts and classes District \ Class / Number of felt earthquakes: Local, Total / Total Chubu: 5650, 5656, 5673 Total: 5767, 5783, 5904	Number of earthquakes by districts and classes District \ Class / Number of felt earthquakes: Local, Total / Total Chubu: 6148, 6154, 6171 Total: 6265, 6281, 6402
1966	Sept.	4	The earthquakes, which occurred at 03h 07m on 6th.	The earthquakes, which occurred at 03h 37m on 6th, ...
1966	Sept.	5	Number of earthquakes by districts and classes District \ Class / Number of felt earthquakes: Local, Total / Total Chubu: 6183, 6190, 6197 Total: 6210, 6226, 6316	Number of earthquakes by districts and classes District \ Class / Number of felt earthquakes: Local, Total / Total Chubu: 6193, 6200, 6207 Total: 6220, 6236, 6326
1966	Dec.	5	Number of earthquakes by districts and classes District \ Class / Number of unfelt earthquakes / Total Kwanto: 23, 35 Chubu: 16, 503	Number of earthquakes by districts and classes District \ Class / Number of unfelt earthquakes / Total Kwanto: 24, 36 Chubu: 15, 502
1966	Dec.	7	Date and Time (J.S.T.) d h m / C / Region 30 00 43 / U / E PAPT OF NAGANO PREF	Date and Time (J.S.T.) d h m / C / Region 30 00 43 / U / SW PART OF TOCHIGI PREF
1966	Dec.	8	List of Earthquake Origins Date and Time (J.S.T.) d h m / C / Region 30 00 43 / U / E PART OF NAGANO PREF	List of Earthquake Origins Date and Time (J.S.T.) d h m / C / Region 30 00 43 / U / SW PART OF TOCHIGI PREF
1966	Dec.	20	Number of earthquakes by districts and classes, 1966 District \ Class / Number of felt earthquakes: Local, Total / Number of unfelt earthquakes / Total Kwanto: 309, 349, 262, 611 Chubu: 51878, 51926, 266, 52192 Total: 52678, 52871, 1703, 54574	Number of earthquakes by districts and classes, 1966 District \ Class / Number of felt earthquakes: Local, Total / Number of unfelt earthquakes / Total Kwanto: 309, 349, 263, 612 Chubu: 52068, 52116, 265, 52381 Total: 52868, 53061, 1703, 54764
1966	Dec.	20	Errata for List 2, August, 1966 District \ Class / Number of felt earthquakes: Local (for, read), Total (for, read) Total: 5767, 6265, 5783, 6181	Errata for List 2, August, 1966. District \ Class / Number of felt earthquakes: Local (for, read), Total (for, read) Total: 5767, 6265, 5783, 6281

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