

KEW OBSERVATORY

23 JUN 1938

RICHMOND, SURREY



L 31

THE
SEISMOLOGICAL
BULLETIN

OF

THE HUKUOKA METEOROLOGICAL OBSERVATORY

OF

JAPAN

VOL. VII

FROM JANUARY TO DECEMBER, 1937

PUBLISHED BY

THE HUKUOKA METEOROLOGICAL OBSERVATORY

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Constants

Position of Observatory:

Longitude: 130° 25' 4 E
 Latitude: 33° 34' 8 N
 Height from mean sea level: 4.3 m
 Underground: Alluvium.

Seismographs:

| Apparatus | Component | T_0 | $\frac{r}{T_0^2}$ | V |
|--------------------------------------|-----------|-------|-------------------|-----|
| Ōmori's Horizontal Seismograph 15kg. | E—W | 22 | 0.014 | 20 |
| Ōmori's Tromometer 47kg. | N—S | 15 | 0.090 | 120 |

Symbols and Notations

1. Phases of the seismogram.

P = First preliminary tremors (longitudinal).

\bar{P} = Individual, or upper first preliminary tremors.

PR_n = Longitudinal waves n times reflected at the earth's surface.

S = Second preliminary tremors (transverse).

\bar{S} = Individual, or upper second preliminary tremors.

SR_n = Transverse waves n times reflected at the earth's surface.

PS = Waves changed from longitudinal to transverse oscillation, or vice versa, through reflection at the earth's surface.

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

M = Maximum Amplitude in principal phase.

C = Waves of the tail or end portion.

F = End of discernible movements.

2. Nature of the motion.

i = Sudden beginning of the motion.

e = Gradual beginning of the motion.

A = Amplitude of the earth's motion in microns.

A_E = E—W component of A.

A_N = N—S component of A.

Period = Time of one complete oscillation.

3. Distance of epicenter.

Δ = Distance of epicenter; for the near earthquakes calculated by the Ōmori's formula

$\Delta = 7.42t$, and for the distant earthquakes by the Wiechert's, Zoeppritz's and Zeissig's time distance curve.

4. Time used. Greenwich mean civil time is adopted for all determinations.

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|--------|-------|------|----|------|--------|-----------|----------|----------|---|
| | | | G. | M. | T. | | AE | AN | | |
| | | | h | m | s | s | μ | μ | km. | |
| 1 | Jan. 5 | P | 7 | 00 | 32.7 | 0.5 | | | 98 | Near Kumamoto City. |
| | | S | 7 | 00 | 45.9 | | | | | |
| | | MN | 7 | 00 | 48.3 | | | | | |
| | | F | 7 | 04 | 40- | | | | | |
| 2 | Jan. 5 | P | 11 | 11 | 23.3 | | +25 | +10 | 960 | WNW off Titi-zima Is. 139°.6 E, 28°.0 N. Focal depth about 500 km. Felt at Titi-zima and Utunomiya abnormally. |
| | | iS | 11 | 13 | 06.8 | | | | | |
| | | F | 11 | 28 | — | | | | | |
| 3 | Jan. 5 | eP | 21 | 06 | 18.3 | 2.2 | | ± 8 | 258 | Sern part of Hiuga-nada. |
| | | S | 21 | 06 | 53.1 | | | | | |
| | | MN | 21 | 07 | 12.0 | | | | | |
| | | F | 21 | 12 | — | | | | | |
| 4 | Jan. 5 | eP | 21 | 34 | 08.0 | | | | 261 | Ditto |
| | | S | 21 | 34 | 43.2 | | | | | |
| | | F | 21 | 39 | — | | | | | |
| 5 | Jan. 5 | P | 21 | 38 | 47.0 | 14.0 | (-) | (+) -630 | 258 | Ditto. 132°.4 E, 31°.0 N. Felt in the greater part of Kyūsyū and Sikoku and a part of Tyūgoku district. |
| | | S | 21 | 39 | 21.8 | | | | | |
| | | ME | 21 | 41 | 18.8 | | | | | |
| | | MN | 21 | 42 | 08.5 | | | | | |
| | | F | 22 | 28 | — | | | | | |
| 6 | Jan. 5 | eP | 21 | 53 | 18.8 | | | | 278 | After shock of No. 5. |
| | | eS | 21 | 53 | 56.2 | | | | | |
| 7 | Jan. 5 | eP | 21 | 53 | 32.1 | | | | 309 | Ditto |
| | | S | 21 | 54 | 16.8 | | | | | |
| | | F | 22 | 08 | — | | | | | |
| 8 | Jan. 7 | P | 4 | 29 | 58.7 | 2.6 | | | 267 | Ditto |
| | | S | 4 | 30 | 34.7 | | | | | |
| | | MN | 4 | 30 | 53.7 | | | | | |
| | | F | 4 | 41 | — | | | | | |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|---------|-----------------|------|----|------|--------|-----------|-------|----------|---|
| | | | G. | M. | T. | | AE | AN | | |
| | | | h | m | s | s | μ | μ | km. | |
| 9 | Jan. 7 | P | 6 | 14 | 28.0 | 12.7 | | | 1290 | Off the bay of Koizumi, Miyagi Prefecture. 142°.0 E, 38°.8 N. Felt at places in the central and Nern parts of Japan. |
| | | S | 6 | 16 | 44.7 | | | | | |
| | | MN | 6 | 19 | 14.3 | | | | | |
| | | F | 6 | 32 | — | | | | | |
| 10 | Jan. 7 | P | 7 | 05 | 28.9 | | | | 294 | Sern part of Hiuga-nada. |
| | | S | 7 | 06 | 03.5 | | | | | |
| | | F | 7 | 17 | — | | | | | |
| 11 | Jan. 7 | P | 13 | 26 | 20.0 | 21.0 | >5870 | | 2910 | Distant earthquake. |
| | | S | 13 | 30 | 56.5 | | | | | |
| | | MN | 13 | 31 | 26.0 | | | | | |
| | | MN | 13 | 31 | 24.6 | | | | | |
| | | F | 15 | 10 | — | | | | | |
| 12 | Jan. 11 | P | 1 | 31 | 17.6 | 1.1 | | | 268 | Sern part of Hiuga-nada. |
| | | S | 1 | 31 | 53.7 | | | | | |
| | | MN | 1 | 32 | 03.5 | | | | | |
| | | F | 1 | 43 | — | | | | | |
| 13 | Jan. 23 | iP | 8 | 50 | 07.1 | | | | 121 | Near Ōita City. 131°.6 E, 33°.3 N. Focal depth about 100 km. Felt in NEern part of Kyūsyū and a part of Sikoku and Tyūgoku. |
| | | iS | 8 | 50 | 23.4 | | | | | |
| | | F | 8 | 55 | — | | | | | |
| 14 | Jan. 25 | P | 6 | 43 | 22.8 | 23.0 | ±90 | | 5950 | Distant earthquake. |
| | | S | 6 | 50 | 56.1 | | | | | |
| | | SR ₁ | 6 | 54 | 54.2 | | | | | |
| | | SR | 6 | 56 | 30.4 | | | | | |
| | | L | 7 | 00 | 01.5 | | | | | |
| | | ME | 7 | 01 | 00.8 | | | | | |
| | | MN | 7 | 00 | 26.8 | | | | | |
| | | F | 8 | 18 | — | | | | | |
| 15 | Jan. 27 | iP | 7 | 05 | 01.7 | 0.6 | | | 89 | Near Kumamoto City. 130°.8 E, 32°.7 N. Felt in the greater part of Kyūsyū. Strong shock was felt at Kumamoto. |
| | | S | 7 | 05 | 13.7 | | | | | |
| | | MN | 7 | 05 | 15.1 | | | | | |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|---------|-------|------|----|------|--------|-----------|-------|----------|--|
| | | | G. | M. | T. | | AE | AN | | |
| | | | h | m | s | s | μ | μ | km. | |
| 16 | Jan. 27 | P | 11 | 13 | 24.1 | | | | 93 | Near Kumamoto City, Felt at Tateisi and Hainutuka, Hukuoka Prefecture. |
| | | S | 11 | 13 | 36.6 | | | | | |
| | | F | 11 | 15 | 20.— | | | | | |
| 17 | Jan. 27 | P | 19 | 07 | 30.0 | | | | 93 | Near Kumamoto City. |
| | | S | 19 | 07 | 42.5 | | | | | |
| | | F | 19 | 09 | — | | | | | |
| 18 | Jan. 28 | iP | 0 | 44 | 01.4 | | -15 | +17 | 91 | Ditto. Felt over Hukuoka Prefecture. |
| | | S | 0 | 44 | 13.6 | | | | | |
| | | ME | 0 | 44 | 15.3 | 0.7 | +200 | | | |
| | | MN | 0 | 44 | 16.8 | 0.5 | | +142 | | |
| | | F | 0 | 50 | — | | | | | |
| 19 | Jan. 28 | iP | 1 | 54 | 02.3 | | | + 3 | 93 | Near Kumamoto City. Felt at Tatarai, Kamoo and Sinminato, Hukuoka Prefecture. |
| | | S | 1 | 54 | 14.8 | | | | | |
| | | MN | 1 | 54 | 18.3 | 0.5 | | - 7 | | |
| | | F | 1 | 57 | — | | | | | |
| 20 | Jan. 29 | P | 17 | 29 | 34.4 | | | | 2040 | SE off Titi-zima Is. |
| | | S | 17 | 33 | 01.1 | | | | | |
| | | F | 17 | 54 | — | | | | | |
| 21 | Feb. 1 | P | 14 | 43 | 15.6 | | | | 89 | Near Kumamoto City. |
| | | S | 14 | 43 | 27.6 | | | | | |
| | | F | 14 | 45 | 20.— | | | | | |
| 22 | Feb. 8 | iP | 12 | 18 | 44.0 | | + 4 | - 3 | 129 | In the Bungo channel. 132°.0 E, 33°.5 N. Felt at a part of Sikoku, Kyūsyū and Tyūgoku districts. |
| | | iS | 12 | 19 | 01.4 | | +130 | +77 | | |
| | | F | 12 | 24 | — | | | | | |
| 23 | Feb. 11 | P | 3 | 13 | 03.1 | | | | 161 | Near Mt. Kirisima, Kyūsyū. |
| | | S | 3 | 13 | 24.8 | | | | | |
| | | F | 3 | 15 | — | | | | | |
| 24 | Feb. 13 | P | 5 | 12 | 48.0 | | | | 232 | Sern part of Hiuga-nada. |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|---------|-------|------|----|------|--------|-----------|-------|----------|---|
| | | | G. | M. | T. | | AE | AN | | |
| | | | h | m | s | s | μ | μ | km. | |
| | Feb. 13 | S | 5 | 13 | 19.3 | | | | | |
| | | F | 5 | 19 | — | | | | | |
| 25 | Feb. 14 | iP | 1 | 05 | 41.0 | | -20 | +18 | 141 | In the Bungo channel. 132°.1 E, 33°.3 N. Felt at places in Sikoku and Kyūsyū. |
| | | S | 1 | 06 | 00.0 | | | | | |
| | | MN | 1 | 06 | 16.2 | 1.2 | | -43 | | |
| | | F | 1 | 15 | — | | | | | |
| 26 | Feb. 21 | P | 7 | 06 | 49.0 | | (-) | (-) | 2210 | SE off Etorō Is. 150°.0 E, 44°.5 N. Felt in Sern half of Hokkaidō, NEern part of Tōhoku and a part of Kwantō districts. |
| | | S | 7 | 10 | 29.9 | | | | | |
| | | iL | 7 | 11 | 45.0 | | | | | |
| | | ME | 7 | 14 | 33.5 | 22.0 | >6500 | | | |
| | | MN | 7 | 15 | 08.9 | 16.5 | | >750 | | |
| 27 | Feb. 21 | eP | 7 | 30 | 44.— | | | | 2110 | SE off Etorō Is. |
| | | eS | 7 | 34 | 17.— | | | | | |
| | | F | 9 | 10 | — | | | | | |
| 28 | Feb. 23 | P | 0 | 52 | 27.7 | | | | 2090 | Ditto. 149°.5 E, 44°.3 N. Felt at Kusiro slightly. |
| | | S | 0 | 55 | 59.1 | | | | | |
| | | F | 1 | 46 | — | | | | | |
| 29 | Feb. 26 | P | 13 | 54 | 54.5 | | | | 141 | In the Iyo-nada. |
| | | S | 13 | 55 | 13.5 | | | | | |
| | | F | 13 | 56 | 30.— | | | | | |
| 30 | Feb. 27 | P | 14 | 42 | 21.3 | | +5 | -2 | 119 | S off Murotu peninsula Yamaguti Prefecture. 132°.1 E, 33°.7 N. Felt over Tyūgoku and Sikoku and in the greater parts of Kyūsyū and Kinki districts. Strong shock was felt at the epicentral region. |
| | | S | 14 | 42 | 37.3 | | | | | |
| | | ME | 14 | 42 | 42.3 | 1.2 | -830 | | | |
| | | MN | 14 | 42 | 43.3 | 0.9 | | +600 | | |
| | | F | 14 | 57 | — | | | | | |
| 31 | Mar. 9 | P | 6 | 42 | 08.4 | | | | 88 | Near Kumamoto City. Felt at Ginsui and Hukuyosi, Hukuoka Prefecture slightly. |
| | | S | 6 | 42 | 20.3 | | | | | |
| | | F | 6 | 44 | — | | | | | |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|---------|-------|------|----|------|--------|-----------|-------|----------|---|
| | | | G. | M. | T. | | AE | AN | | |
| | | | h | m | s | s | μ | μ | km. | |
| 32 | Mar. 16 | ePN | 15 | 49 | 30.7 | | | | 2060 | Wern part of Bashee channel. |
| | | eSE | 15 | 52 | 59.2 | | | | | |
| | | F | 16 | 15 | — | | | | | |
| 33 | Mar. 24 | P | 18 | 04 | 36.3 | | | | 144 | Near Uwazima City, Ehime Prefecture. |
| | | S | 18 | 04 | 55.7 | | | | | |
| | | F | 18 | 07 | 40.— | | | | | |
| 34 | Apr. 5 | eP | 7 | 03 | 26.9 | | | | 2730 | NW off New Guinea Is. |
| | | eS | 7 | 07 | 50.1 | | | | | |
| | | eL | 7 | 10 | 32.3 | | | | | |
| | | F | 8 | 13 | — | | | | | |
| 35 | Apr. 16 | P | 3 | 12 | 33.3 | | | | 6180 | Neighbourhood of Tonga Is. |
| | | e | 3 | 17 | 02.8 | | | | | |
| | | eS | 3 | 20 | 19.2 | | | | | |
| | | ME | 3 | 21 | 49.2 | 8.4 | -90 | | | |
| | | MN | 3 | 21 | 49.7 | 6.6 | | -50 | | |
| F | 4 | 42 | — | | | | | | | |
| 36 | Apr. 29 | P | 19 | 01 | 35.2 | | | | 2760 | Neighbouring sea of Aleutians. |
| | | eS | 19 | 06 | 00.5 | | | | | |
| | | F | 19 | 46 | — | | | | | |
| 37 | Apr. 29 | P | 20 | 21 | 52.6 | | | | 1230 | Wern part of Japan Sea. 137°.3 E, 45°.7 N. Focal depth about 370 km. Felt in Wern part of Hokkaidō and NEern part of Tōhoku district. |
| | | S | 20 | 24 | 03.5 | | | | | |
| | | F | 20 | 42 | — | | | | | |
| 38 | May 3 | P | 15 | 50 | 56.9 | | | | 134 | In the Hōyo straits. 132°.1 E, 33°.4 N. Felt at places in Sikoku. |
| | | S | 15 | 51 | 14.9 | | | | | |
| | | MN | 15 | 51 | 15.8 | 0.8 | | +27 | | |
| | | F | 16 | 01 | — | | | | | |
| 39 | May 9 | e | 14 | 49 | 22.9 | | | | — | Neighbourhood of Etorō Is. P and S phases could not be distinguished. |
| | | e | 14 | 51 | 01.5 | | | | | |
| | | eL | 14 | 54 | 28.1 | | | | | |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|---------|-----------------|------|----|------|--------|-----------|-------|----------|---|
| | | | G. | M. | T. | | A_E | A_N | | |
| | | | h | m | s | s | μ | μ | km. | |
| | May 9 | F | 15 | 37 | — | | | | | |
| 40 | May 19 | eP | 21 | 18 | 15.7 | | | | 168 | Off the cape of Sata, Ehime Prefecture. |
| | | S | 21 | 18 | 38.4 | | | | | |
| | | F | 21 | 20 | — | | | | | |
| 41 | May 28 | eP | 19 | 59 | 01.3 | | | | 922 | SSE off Titi-zima Is. 142°.5 E, 24°.0 N. Focal depth about 450km. Felt at Titi-zima, Tōkyō, Katuura and Utunomiya abnormally. |
| | | eS | 20 | 01 | 05.5 | | | | | |
| | | i | 20 | 01 | 27.8 | | | | | |
| | | F | 20 | 11 | — | | | | | |
| 42 | June 13 | P | 4 | 34 | 34.8 | | | | 230 | In the Hiuga-nada. |
| | | S | 4 | 35 | 05.8 | | | | | |
| | | M _N | 4 | 35 | 16.0 | 1.4 | | +17 | | |
| | | F | 4 | 39 | 30.— | | | | | |
| 43 | June 16 | S | 5 | 56 | 02.1 | | | | — | Local shock. P phase could not be distinguished. |
| | | F | 5 | 57 | — | | | | | |
| 44 | June 19 | P | 20 | 18 | 27.1 | | | | 229 | Sern part of Hiuga-nada. |
| | | S | 20 | 18 | 58.0 | | | | | |
| | | F | 20 | 22 | — | | | | | |
| 45 | June 23 | S | 2 | 08 | 56.5 | | | | — | Near Mt. Osuzu, Miyazaki Prefecture. P phase could not be distinguished. |
| | | F | 2 | 11 | 30.— | | | | | |
| 46 | June 23 | P | 20 | 42 | 14.6 | | - 3 | + 4 | 223 | Near Mt. Osuzu, Miyazaki Prefecture. 131°.3 E, 31°.6 N. Rather strong shock was felt at Miyazaki. |
| | | S | 20 | 42 | 44.6 | | | | | |
| | | M _E | 20 | 42 | 56.1 | 1.9 | +85 | | | |
| | | M _{N1} | 20 | 42 | 54.8 | 2.1 | | +58 | | |
| | | M _{N2} | 20 | 42 | 59.8 | 2.4 | | -58 | | |
| | | F | 20 | 55 | — | | | | | |
| 47 | June 23 | eP | 21 | 33 | 06.2 | | | | 226 | After shock of No. 46. |
| | | S | 21 | 33 | 36.7 | | | | | |
| | | F | 21 | 38 | — | | | | | |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|---------|-------|------|----|------|--------|----------------|----------------|----------|--|
| | | | G. | M. | T. | | A _E | A _N | | |
| | | | h | m | s | s | μ | μ | km. | |
| 48 | July 3 | P | 13 | 51 | 32.5 | 1.0 | ± 8 | | 202 | Near Aburatu, Miyazaki Prefecture. |
| | | S | 13 | 51 | 59.7 | | | | | |
| | | MN | 13 | 52 | 11.2 | | | | | |
| | | F | 13 | 55 | 30.— | | | | | |
| 49 | July 4 | eP | 6 | 05 | 01.7 | | | | 3570 | Distant earthquake. |
| | | eS | 6 | 10 | 23.0 | | | | | |
| | | F | 7 | 22 | — | | | | | |
| 50 | July 4 | e | 7 | 38 | 33.8 | | | | — | Ditto. All phases could not be distinguished. |
| | | e | 7 | 43 | 13.8 | | | | | |
| | | F | 8 | 22 | — | | | | | |
| 51 | July 9 | P | 4 | 08 | 23.9 | 0.5 | +180 | | 95 | Nern part of Tiziwa bay. Focus is very shallow. Felt in Sern part of Hukuoka Prefecture. Rather strong shock was felt at Nagasaki. |
| | | S | 4 | 08 | 36.7 | | | | | |
| | | ME | 4 | 08 | 41.2 | | | | | |
| | | MN | 4 | 08 | 39.2 | | | | | |
| | | F | 4 | 16 | — | | | | | |
| 52 | July 14 | eP | 22 | 29 | 55.1 | | | | 1860 | ENE off Hatizyō Is. |
| | | eS | 22 | 33 | 06.0 | | | | | |
| | | F | 23 | 13 | — | | | | | |
| 53 | July 16 | eP? | 10 | 19 | 13.9 | | | | — | E off Hatizyō Is. All phases not distinct. |
| | | eS? | 10 | 22 | 55.0 | | | | | |
| | | F | 11 | 09 | — | | | | | |
| 54 | July 22 | eP | 17 | 18 | 58.0 | 19.1 | +60 | | 6750 | Distant earthquake. |
| | | S | 17 | 27 | 14.3 | | | | | |
| | | ME1 | 17 | 42 | 08.6 | | | | | |
| | | ME2 | 17 | 45 | 44.5 | | | | | |
| | | F | 18 | 17 | — | | | | | |
| 55 | July 26 | P | 19 | 59 | 05.6 | 18.7 | +240 | | 903 | E off Kinkwazan, Miyagi Prefecture. 141°.97 E, 38°.23 N. Felt in the central and Nern |
| | | S | 20 | 01 | 07.3 | | | | | |
| | | ME | 20 | 02 | 55.6 | | | | | |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|---------|-------|------|----|------|--------|----------------|----------------|----------|--|
| | | | G. | M. | T. | | A _E | A _N | | |
| | | | h | m | s | s | μ | μ | km. | |
| ✓ | July 26 | MN | 20 | 02 | 09.7 | 24.5 | | +233 | | parts of Japan. Very strong or strong shocks were felt at places in Miyagi, Iwate and Hukushima Prefectures. |
| | | F | 20 | 26 | — | | | | | |
| 56 | July 31 | P | 20 | 38 | 49.4 | | | | 1360 | Inner Mongolia. |
| | | S | 20 | 41 | 13.0 | | | | | |
| | | L | 20 | 42 | 08.0 | | | | | |
| | | iN | 20 | 42 | 25.1 | | | | | |
| | | ME | 20 | 43 | 45.9 | 12.2 | +205 | | | |
| | | MN | 20 | 42 | 56.2 | 15.4 | | -465 | | |
| | | F | 21 | 29 | — | | | | | |
| 57 | Aug. 1 | P | 10 | 43 | 54.2 | | | | 1440 | Ditto |
| | | S | 10 | 46 | 24.9 | | | | | |
| | | L | 10 | 47 | 23.6 | | | | | |
| | | iN | 10 | 47 | 42.0 | | | | | |
| | | ME | 10 | 49 | 00.9 | 12.2 | +130 | | | |
| | | MN | 10 | 48 | 06.0 | 18.5 | | +248 | | |
| | | F | 11 | 22 | — | | | | | |
| 58 | Aug. 9 | P | 13 | 29 | 43.5 | | | -3 | 14 | In the Sawara province, Hukuoka Prefecture. Felt at Magaributi, Hukuoka Prefecture. |
| | | S | 13 | 29 | 45.4 | | | | | |
| | | MN | 13 | 29 | 45.6 | 0.2 | | +23 | | |
| | | F | 13 | 30 | 40.— | | | | | |
| 59 | Aug. 9 | S | 13 | 35 | 27.2 | | | | — | After shock of No. 58. |
| 60 | Aug. 9 | S | 13 | 35 | 46.0 | | | | — | Ditto |
| 61 | Aug. 9 | S | 13 | 35 | 50.4 | | | | — | Ditto |
| 62 | Aug. 11 | P | 1 | 04 | 46.8 | | | | 2270 | Neighbourhood of Celebes Is. |
| | | S | 1 | 08 | 32.5 | | | | | |
| | | F | 1 | 25 | — | | | | | |
| 63 | Aug. 16 | P | 16 | 39 | 46.5 | | | | 584 | Wern part of Takasima province, Siga Prefecture. 135°51' E, 35°23' N. |
| | | S | 16 | 41 | 05.2 | | | | | |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks | | |
|-----|---------|-------|------|----|------|--------|-----------|-------|----------|---|-------|-------|
| | | | G. | M. | T. | | AE | AN | | | | |
| | | | h | m | s | s | μ | μ | km. | | | |
| 64 | Aug. 16 | MN | 16 | 41 | 15.3 | 1.5 | + | 17 | 254 | Felt in the greater part of Kinki district. Focus is very shallow. In the Ariake bay, Kagosima Prefecture. | | |
| | | E | 16 | 48 | — | | | | | | | |
| | Aug. 19 | P | 20 | 32 | 25.7 | 2.7 | \pm | 8 | | | | |
| | | S | 20 | 32 | 59.9 | | | | | | | |
| ME | 20 | 33 | 05.7 | | | | | | | | | |
| F | 20 | 41 | — | | | | | | | | | |
| 65 | Aug. 20 | P | 12 | 03 | 57.3 | 20.2 | (+) (+) | 2330 | 2330 | Neighbourhood of Philippine. | | |
| | | S | 12 | 07 | 48.6 | | | | | | | |
| | | ME 1 | 12 | 10 | 29.4 | | | | | | +2565 | |
| | | ME 2 | 12 | 12 | 47.9 | | | | | | +2010 | |
| | | ME 3 | 12 | 15 | 39.9 | | | | | | +2330 | |
| | | MN | 12 | 08 | 17.3 | | | | | | 11.7 | > 780 |
| | | F | 14 | 00 | — | | | | | | | |
| 66 | Aug. 26 | iP | 18 | 54 | 50.7 | 3.2 | - | 10 | 221 | Sern part of Hiuga-nada. 131.5 E, 31.4 N. Felt in the greater part of Kyūsyū. | | |
| | | S | 18 | 55 | 20.5 | | | | | | | |
| | | ME | 18 | 55 | 32.1 | | | | | | - 360 | |
| | | MN | 18 | 55 | 35.8 | | | | | | 2.9 | - 285 |
| | | F | 19 | 16 | — | | | | | | | |
| 67 | Aug. 29 | P | 7 | 07 | 06.6 | 1.7 | + | 12 | 271 | Sern part of Hiuga-nada. | | |
| | | S | 7 | 07 | 43.1 | | | | | | | |
| | | MN | 7 | 07 | 47.5 | | | | | | | |
| | | F | 7 | 15 | — | | | | | | | |
| 68 | Aug. 31 | P | 14 | 21 | 18.5 | 10.2 | - | 30 | 3240 | Distant earthquake. L phase not distinct. | | |
| | | S | 14 | 26 | 18.7 | | | | | | | |
| | | L? | 14 | 31 | 09.4 | | | | | | | |
| | | ME | 14 | 34 | 31.5 | | | | | | | |
| | | MN | 14 | 33 | 55.1 | | | | | | 12.4 | - 27 |
| | | F | 14 | 54 | — | | | | | | | |
| 69 | Sept. 3 | P | 18 | 55 | 52.6 | 12.4 | - | 27 | 4120 | Neighbouring sea of Aleutians. | | |
| | | S | 19 | 01 | 46.5 | | | | | | | |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|----------|-------|------|----|------|--------|-----------|-------|----------|---|
| | | | G. | M. | T. | | AE | AN | | |
| | | | h | m | s | s | μ | μ | km. | |
| | Sept. 3 | F | 19 | 31 | — | | | | | |
| 70 | Sept. 19 | P | 0 | 52 | 35.1 | | | | 79 | Near Volcano Aso, Kumamoto Prefecture. |
| | | S | 0 | 52 | 45.7 | | | | | |
| | | MN | 0 | 52 | 45.9 | 0.5 | | +30 | | |
| | | F | 0 | 56 | 30.— | | | | | |
| 71 | Sept. 21 | e | 8 | 00 | 05.1 | | | | — | Distant earthquake. All phases could not be distinguished. |
| | | e | 8 | 02 | 15.5 | | | | | |
| | | MN | 8 | 03 | 08.7 | 8.9 | | +17 | | |
| | | F | 8 | 16 | — | | | | | |
| 72 | Sept. 22 | P | 20 | 32 | 53.2 | | | | 15 | In the Sawara province, Hukuoka Prefecture. |
| | | S | 20 | 32 | 55.3 | | | | | |
| | | MN | 20 | 32 | 55.4 | 0.4 | | -17 | | |
| | | F | 20 | 33 | 15.— | | | | | |
| 73 | Sept. 23 | P | 13 | 14 | 18.8 | | | | 4840 | N off Solomon Is. |
| | | S | 13 | 20 | 52.7 | | | | | |
| | | F | 14 | 38 | — | | | | | |
| 74 | Sept. 23 | P | 15 | 44 | 29.1 | | | | 87 | Near Kumamoto City. |
| | | S | 15 | 44 | 40.8 | | | | | |
| | | MN | 15 | 44 | 43.2 | 0.4 | | +13 | | |
| | | F | 15 | 45 | 50.— | | | | | |
| 75 | Sept. 27 | P | 9 | 03 | 27.7 | | | | 5145 | Neighbourhood of Sumatra. |
| | | S | 9 | 10 | 17.7 | | | | | |
| | | F | 9 | 46 | — | | | | | |
| 76 | Oct. 1 | P | 15 | 18 | 40.1 | | | | 151 | Neighbourhood of Naga-sima Is., Kagosima Prefecture. |
| | | S | 15 | 19 | 00.5 | | | | | |
| | | F | 15 | 21 | 10.— | | | | | |
| 77 | Oct. 2 | P | 11 | 27 | 05.0 | | | | 74 | NW off the mouth of River Onga, Hukuoka Prefecture. |
| | | S | 11 | 27 | 14.9 | | | | | |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|---------|-------|------|----|------|--------|-----------|-------|----------|---|
| | | | G. | M. | T. | | AE | AN | | |
| | | | h | m | s | s | μ | μ | km. | |
| | Oct. 2 | MN | 11 | 27 | 20.1 | 0.6 | | - 8 | | |
| | | F | 11 | 31 | 30.- | | | | | |
| 78 | Oct. 3 | P | 20 | 37 | 56.5 | 1.3 | +30 | | 206 | Nern part of Hiuga-nada. |
| | | S | 20 | 38 | 24.2 | | | | | |
| | | ME | 20 | 38 | 35.1 | | | | | |
| | | MN | 20 | 38 | 40.1 | | | | | |
| | | F | 20 | 50 | — | | | | | |
| 79 | Oct. 10 | P | 16 | 36 | 03.3 | 0.5 | | + 6 | 209 | Neighbourhood of Ōsima Is., Yamaguti Prefecture. |
| | | S | 16 | 36 | 31.5 | | | | | |
| | | MN | 16 | 36 | 36.8 | | | | | |
| | | F | 16 | 39 | — | | | | | |
| 80 | Oct. 17 | P | 4 | 49 | 04.8 | 16.1 | +195 | | 1120 | SE off the cape of Inubō, Tiba Prefecture. 141.°0 E, 35.5° N. Felt in the greater part of Central Japan. Strong shok was felt at Tyōsi and Katuura. |
| | | S | 4 | 51 | 04.8 | | | | | |
| | | i | 4 | 51 | 29.4 | | | | | |
| | | ME | 4 | 52 | 44.9 | | | | | |
| | | MN | 4 | 52 | 30.3 | | | | | |
| | | F | 5 | 25 | — | | | | | |
| 81 | Oct. 28 | P | 13 | 12 | 41.2 | | | | 147 | Amakusa Is., Kumamoto Prefecture. |
| | | S | 13 | 13 | 01.0 | | | | | |
| | | F | 13 | 14 | 40.- | | | | | |
| 82 | Nov. 9 | S | 1 | 18 | 31.2 | | | | — | Near Noziri, Miyazaki Prefecture. P phase could not be distinguished. |
| | | F | 1 | 19 | 30.- | | | | | |
| 83 | Nov. 14 | eP | 11 | 06 | 33.1 | | | | 6070 | Plateau of Iran. |
| | | S | 11 | 14 | 07.0 | | | | | |
| | | F | 11 | 47 | — | | | | | |
| 84 | Nov. 22 | eP | 17 | 41 | 03.7 | | | | 745 | Near Mt. Koma-ga-dake, Yamanasi Prefecture. 138°15' E, 35°46' N. Felt in the greater part of Central Japan. |
| | | S | 17 | 42 | 44.1 | | | | | |
| | | F | 17 | 50 | 20.- | | | | | |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|---------|-------|------|----|------|--------|-----------|-------|----------|---|
| | | | G. | M. | T. | | AE | AN | | |
| | | | h | m | s | s | μ | μ | km. | |
| 85 | Nov. 26 | eP | 10 | 47 | 55.2 | | | | 1310 | S off Yonakuni Is., Okinawa Prefecture. 123°1 E, 24°1 N. Felt in the greater part of Formosa. |
| | | eS | 10 | 50 | 14.4 | | | | | |
| | | F | 11 | 14 | 20.— | | | | | |
| 86 | Dec. 6 | P | 4 | 36 | 36.1 | | | | 1480 | ESE off the cape of Inubō, Tiba Prefecture. 142°5 E, 34°8 N. Felt at places in Tiba and Hukusima Prefectures. |
| | | S | 4 | 39 | 11.0 | | | | | |
| | | F | 5 | 10 | — | | | | | |
| 87 | Dec. 8 | P | 8 | 35 | 21.0 | | | | 1440 | NE off Taitō, Formosa. 121°5 E, 22°9 N. Felt over Formosa. Strong shock was felt at Taitō. |
| | | S | 8 | 37 | 51.7 | | | | | |
| | | ME | 8 | 44 | 17.1 | 13.2 | +265 | | | |
| | | MN | 8 | 41 | 18.2 | 17.4 | | -97 | | |
| | | F | 9 | 25 | — | | | | | |
| 88 | Dec. 10 | S? | 13 | 33 | 30.3 | | | | — | ESE off the cape of Inubō, Tiba Prefecture. 142°5 E, 35°0 N. |
| | | L? | 13 | 34 | 08.6 | | | | | |
| | | F | 14 | 03 | — | | | | | |
| 89 | Dec. 13 | P | 18 | 57 | 08.2 | | | | 1625 | SE off Taitō, Formosa. 121°2 E, 22°7 N. Felt over Formosa. Strong shock was felt at Taitō. |
| | | S | 18 | 59 | 56.7 | | | | | |
| | | L | 19 | 01 | 33.4 | | | | | |
| | | ME | 19 | 03 | 58.4 | 13.2 | + 50 | | | |
| | | F | 19 | 32 | — | | | | | |
| 90 | Dec. 14 | eP | 7 | 17 | 08.2 | | | | 142 | In the Amakusa-nada, Kyūsyū. |
| | | S | 7 | 17 | 27.3 | | | | | |
| | | F | 7 | 23 | — | | | | | |
| 91 | Dec. 15 | eP | 14 | 27 | 50.2 | | | | 154 | Near Susa, Yamaguti Prefecture. |
| | | S | 14 | 28 | 10.9 | | | | | |
| | | MN | 14 | 28 | 11.9 | 0.6 | | +18 | | |
| | | F | 14 | 32 | — | | | | | |
| 92 | Dec. 16 | P | 9 | 37 | 50.2 | | | | 1140 | SSE off the cape of Nozima, Tiba Prefecture. 140°1 E, 34°3 N. Felt in the greater part of Kwantō. |
| | | S | 9 | 39 | 52.1 | | | | | |
| | | F | 9 | 54 | — | | | | | |

| No. | Date | Phase | Time | | | Period | Amplitude | | Δ | Epicenter and Remarks |
|-----|---------|----------------|------|----|------|--------|----------------|----------------|----------|---|
| | | | G. | M. | T. | | A _E | A _N | | |
| | | | h | m | s | s | μ | μ | km. | |
| 93 | Dec. 17 | P | 9 | 35 | 25.6 | 14.0 | - 40 | | 1360 | NE off Taitō, Formosa. 121.°4 E, 22.°9 N. Felt over Formosa. Strong shock was felt at Taitō. |
| | | S | 9 | 37 | 49.6 | | | | | |
| | | L | 9 | 39 | 27.5 | | | | | |
| | | M _E | 9 | 41 | 25.5 | | | | | |
| | | F | 10 | 10 | — | | | | | |
| 94 | Dec. 23 | e | 13 | 52 | 35.1 | | | | — | Distant earthquake. All Phases could not be distinguished. |
| | | F | 15 | 27 | — | | | | | |
| 95 | Dec. 24 | P | 12 | 39 | 51.4 | | | | 74 | Near Mt. Kuzyū, Ōita Prefecture. |
| | | S | 12 | 40 | 01.4 | | | | | |
| | | F | 12 | 44 | 20.- | | | | | |
| 96 | Dec. 25 | eP? | 10 | 07 | 15.8 | | | | -- | Distant earthquake. All phases not distinct. |
| | | eS? | 10 | 09 | 22.9 | | | | | |
| | | F | 10 | 19 | — | | | | | |
| 97 | Dec. 25 | iP | 13 | 52 | 39.4 | 1.5 | - 27 | + 9 | 160 | Sern part of Bungo channel. 132.°2 E, 32.°9 N. Felt in the greater part of Kyūsyū and Wern part of Sikoku. |
| | | iS | 13 | 53 | 00.9 | | | | | |
| | | M _E | 13 | 53 | 04.7 | | -230 | | | |
| | | M _N | 13 | 53 | 11.6 | | 1.8 | +181 | | |
| | | F | 14 | 20 | — | | | | | |

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