



THE
SEISMOLOGICAL BULLETIN
OF
THE KOTI METEOROLOGICAL OBSERVATORY

KOTI, JAPAN

No. 2

— 1928 —

Library

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Koti, Japan
1929

Constants

Position of Observatory:

$$\varphi = 133^{\circ}32'E$$

$$\lambda = 33^{\circ}33'N$$

$$h = 40.4m$$

Underground ; Serpentine

Constants of Seismographs

| Date | Apparatus | Components | T_0 | ϵ | $\frac{r}{T_0^2} \left(\frac{mm}{sec^2} \right)$ | V |
|-----------------|----------------|------------|-------|------------|---|----|
| From 1928 | Wiechert 200kg | E | 5.0 | 1.5 | — | 80 |
| Jan.1 | " | N | 5.0 | 1.5 | — | 80 |
| | Wiechert 80kg | Z | 4.0 | 1.5 | — | 60 |
| | Omori 16kg | E | 20.0 | 3.5 | 0.02 | 20 |
| | " " | N | 20.0 | 3.5 | 0.02 | 20 |
| | Omori 11.3kg | E | 4.5 | 1 | 0.02 | 50 |
| | " 11.6kg | N | 4.5 | 1 | 0.02 | 50 |
| | Imamura 4.0kg | E | 8.0 | 3.0 | 0.08 | 2 |
| | " 4.1kg | N | 8.0 | 3.0 | " | 2 |
| | " 0.22kg | Z | 2.0 | 3.0 | " | 2 |
| Nov. 20 1928 | Wiechert | E | 4.9 | 4.6 | — | 80 |
| | " | N | 4.9 | 4.5 | — | 90 |
| | " | Z | 4.0 | 3.0 | — | 60 |

SYMBOLS AND NOTATIONS.

1. Phase of the Seismogram

P= First preliminary tremors (Longitudinal)

\bar{P} = Individual or upperfirst preliminary tremors

PP= Longitudinal waves one time reflected at the earth's surface

PPP= " two times " "

S= Second preliminary tremors (Transverse)

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

SS= Transverse waves one time reflected at the earth's surface

L= Long waves at the beginning of the surface phase

Q= Shorter and more regular waves in the surface phase

M= Greatest motion in the surface phase, usually in the group here defined as Q

C= Tail or end portion

F= End of discernible movements

2. Nature of the motion

i= Sudden beginning of the motion

e= Gradual " "

T= Period

A= Amplitude of the earth motion in microns

A_E = E—W components of A

A_N = N—S " " + toward the North, East, or Zenith

A_Z = Vertical " " — toward the South, West, or Nadir

3. Δ = Distance of Epicentre

Calculated by $7.42t$ for the Near Earthquake

$(\Delta < 1,000\text{km}) \quad t = P \sim L$

4. Time

Greenwich mean civil time is adopted for all determinations.

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SEISMOLOGICAL BULLETIN



| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|-----|-----------|----------------------|------------------|----|----------|--------|-----------|-------|-------|-----------------|---------------------------------------|
| | | | | | | | AE | AN | AZ | | |
| | | | h. | m. | s. | s | μ | μ | μ | | |
| 1 | Jan. 1 | eP | 7 | 18 | 49 | | | | | 610 | Lower Course of the River Kinugawa |
| | | eS | 7 | 19 | 39 | | | | | | |
| | | eL | 7 | 20 | 09 | | | | | | |
| | | F | 7 | 25 | \pm | | | | | | |
| 2 | 1 | eP | 18 | 48 | 01 | | | | | | North Tisima Faint record |
| | | iL | 18 | 51 | 18 | | | | | | |
| | | F | 18 | 57 | \pm | | | | | | |
| 3 | 6 | e | 20 | 21 | 21 | | | | | | Distant quake Faint record |
| | | F | 20 | 43 | \pm | | | | | | |
| 4 | 9 | iP _{S.E.D.} | 5 | 52 | 03.5 | | | | | 138 | Kii—strait |
| | | S | 5 | 52 | 22.1 | | | | | | |
| | | F | 5 | 54 | 20 \pm | | | | | | |
| 5 | 10 | e | 3 | 33 | 34 | | | | | | |
| | | F | 8 | 34 | \pm | | | | | | |
| 6 | 16 | eP | 4 | 11 | 00 | | | | | 133 | Hiuga—nada |
| | | eS | 4 | 12 | 18 | | | | | | |
| | | F | 4 | 13 | \pm | | | | | | |
| 7 | 26 | iP _{E.S.D.} | 18 | 52 | 51.9 | | | | | | SSE sea off Bonin Is. |
| | | eL | 18 | 56 | 11.0 | | | | | | |
| | | F | 19 | 27 | \pm | | | | | | |
| 8 | Feb. 3 | eP | 14 | 00 | 09 | | | | | | Aleutian Is. |
| | | iL | 14 | 06 | 09 | | | | | | |
| | | F | 14 | 25 | \pm | | | | | | |
| 9 | 3 | eP | 18 | 51 | 03 | | | | | 757 | S sea off Kinkwa—Zan Faint record |
| | | iL | 18 | 52 | 45 | | | | | | |
| | | F | 19 | 00 | \pm | | | | | | |

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| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ | Remarks |
|-----|--------|-------|------------------|------|------|--------|-----------|-----|-----|-----|--|
| | | | | | | | AF | AN | AZ | | |
| | | | h. | m. | s. | s | μ | μ | μ | km. | |
| 10 | Feb. 6 | e | 4 | 01 | ± | | | | | | Distant quake |
| 11 | 7 | e | 0 | 32 | 23 | | | | | | Ditto |
| | | F | 0 | 49 | ± | | | | | | |
| 12 | 11 | eP | 21 | 11 | 42 | | | | | 627 | Lower course of the R. Kogai, Hidati province |
| | | eS | 21 | 13 | 06 | | | | | | |
| | | MN | 21 | 13 | 43.7 | 4.1 | | -21 | | | |
| | | F | 21 | 17 | ± | | | | | | |
| 13 | 13 | iP | 5 | 39 | 04.4 | | | | | | Distant quake |
| | | eL | 5 | 42 | 38.4 | | | | | | |
| | | F | 5 | 53 | ± | | | | | | |
| 14 | 20 | iP | 3 | 02 | 55.0 | | | | | 133 | Upper course of the R. Takahashi, Okagama pre, Felt at Koti city, but no feeling at this office First motion E ±0 N -9 Z +8 |
| | | iS | 3 | 03 | 14.0 | | | | | | |
| | | ME | 3 | 03 | 15.0 | 1.0 | +120 | | | | |
| | | MN | 3 | 03 | 16.0 | 1.0 | | +71 | +30 | | |
| | | MN | 3 | 03 | 18.0 | 1.0 | +130 | +71 | +31 | | |
| | | F | 3 | 06.5 | | | | | | | |
| 15 | 21 | eP | 6 | 28 | 40 | | | | | 150 | Bungo strait |
| | | iS | 6 | 29 | 01 | | | | | | |
| | | F | 6 | 29 | 28 | | | | | | |
| 16 | 21 | eP | 19 | 58 | 29 | | | | | | Distant quake |
| | | PP | 20 | 00 | 29 | | | | | | |
| | | eS | 20 | 05 | 29 | | | | | | |
| | | eL | 20 | 12 | 27 | | | | | | |
| | | F | 20 | 39 | ± | | | | | | |
| 17 | 22 | iP | 0 | 46 | 54.7 | | | | | 39 | Upper course of the R. Yoshino. Shikoku. Felt the eastern part of this Prefecture |
| | | iS | 0 | 47 | 00.0 | | | | | | |
| | | F | 0 | 47 | 26± | | | | | | |

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| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|-----|------------|----------------------|------------------|-------|-------|--------|-----------|-------|-------|-----------------|----------------------|
| | | | | | | | AE | AN | AZ | | |
| | | | h. | m. | s. | s | μ | μ | μ | | |
| 18 | Feb. 24 | e | 14 | 35 | \pm | | | | | | Distant quake |
| | | F | 15 | \pm | | | | | | | Lost in microseismos |
| 19 | 26 | e | 1 | 41 | \pm | | | | | | Ditto |
| | | F | 1 | 58 | \pm | | | | | | |
| 20 | Mar. 7 | eP | 22 | 49 | 01 | | | | | | Distant quake |
| | | eS | 22 | 53 | 23 | | | | | | South Sea |
| | | L | 22 | 57 | 21 | | | | | | |
| | | F | 23 | 14 | \pm | | | | | | |
| 21 | 9 | eP | 0 | 30 | 18 | | | | | | SE Sea off Tyoshi |
| | | L | 0 | 33 | 06 | | | | | | |
| | | F | 0 | 35 | 24 | | | | | | |
| 22 | 9 | iP _{N.E.U?} | 18 | 15 | 07.6 | | | | | | Distant quake |
| | | iS | 18 | 22 | 49.7 | | | | | | Epicentre South Sea |
| | | L | 18 | 28 | 53.2 | | | | | | |
| | | M1 | 18 | 37 | 53.0 | 19.1 | +38 | -10 | | | |
| | | M2 | 18 | 38 | 48.0 | | | -94 | | | |
| | | M3 | 18 | 43 | 02.6 | | | -50 | | | |
| 23 | 16 | F | 19 | 20.5 | | | | | | | |
| | | iP | 5 | 11 | 53.8 | | | | | | Ditto |
| | | iS | 5 | 20 | 37.7 | | | | | | |
| | | L | 5 | 28 | 58.0 | | | | | | |
| 24 | 22 | F | 5 | 51 | \pm | | | | | | |
| | | e | 4 | 43 | 18 | | | | | | Distant quake |
| | | e | 5 | 13 | 59 | | | | | | |
| | | F | 6 | 06.5 | | | | | | | |

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| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|-----|------------|-------|------------------|----|----------|--------|-------------------------|-------------------------|-------------------------|---|---------|
| | | | | | | | A _E μ | A _N μ | A _Z μ | | |
| | | | h. | m. | s. | s. | | | | | |
| 25 | Mar. 22 | eP | 20 | 16 | 34.6 | | | | 106 | The mouth of the R.Ota, Hiroshima Prefecture | |
| | | iS | 20 | 16 | 49.4 | | | | | | |
| | | F | 20 | 16 | 52 \pm | | | | | | |
| 26 | 23 | eP | 1 | 23 | 17.4 | | | | 447 | Uppercourse of the R. Naka, Musashi province | |
| | | eS | 1 | 24 | 17.7 | | | | | | |
| | | F | 1 | 27 | 35 \pm | | | | | | |
| 27 | 29 | iP | 5 | 7 | 20.5 | | | | 446 | 220km S.W to Hatijo Is. Hypocentre deep E = -8.8 First motion N = +5.0 Z = +13.3 | |
| | | iS | 5 | 8 | 20.5 | | | | | | |
| | | M | 5 | 8 | 27.8 | 8.3 | -2156 | +1781 | | | + 656 |
| | | C | 5 | 20 | 12.4 | 8.4 | -625 | | | | |
| 28 | 31 | e | 1 | 15 | 32 | | | | | Lost in microseismos. | |
| | | F | 1 | 32 | \pm | | | | | | |
| 29 | April 8 | iP | 8 | 54 | 52.1 | | | | 15 | Felt at Kōti. rapid motion Amplitude small Local shock | |
| | | L | 8 | 54 | 54.1 | | | | | | |
| | | F | 8 | 56 | 06 \pm | | | | | | |
| 30 | 11 | eP | 18 | 10 | 50.3 | | | | 176 | off the mouth of the R. Gokase, Miyazaki Pre. | |
| | | S | 18 | 11 | 14.0 | | | | | | |
| | | F | 18 | 13 | 00 \pm | | | | | | |
| 31 | 14 | eP | 9 | 12 | 11 | | | | | Distant quake | |
| | | eS | 9 | 22 | 21 | | | | | | |
| | | L | 9 | 42 | 06 | | | | | | |
| | | F | 10 | 10 | \pm | | | | | | |
| 32 | 16 | eP | 5 | 24 | 13.6 | | | | 36 | Hiuti-nada, Setonaikai First indistinct mixed with pulsation | |
| | | S | 5 | 24 | 18.4 | | | | | | |
| | | F | 5 | 24 | 55 \pm | | | | | | |

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| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|-----|-------------|-----------|------------------|----|----------|--------|----------------|----------------|----------------|---|---------|
| | | | | | | | A_E μ | A_N μ | A_Z μ | | |
| 33 | April 16 | eP | h. | m. | s. | | | | 280 | Uppercourse of theR. Ōyodo, Miyazaki Pre. | |
| | | eS | 13 | 42 | 27 | | | | | | |
| | | F | 13 | 43 | 54 | | | | | | |
| 34 | 18 | eP | 13 | 44 | 54 | | | | | Distant quake | |
| | | S | 19 | 35 | 14 | | | | | | |
| | | eL | 19 | 45 | 26 | | | | | | |
| | | F | 20 | 05 | 46 | | | | | | |
| 35 | 19 | iP | 20 | 43 | \pm | | | | 85 | Off Aki, record faint | |
| | | iS | 23 | 06 | 47.9 | | | | | | |
| | | F | 23 | 06 | 59.4 | | | | | | |
| 36 | 22 | eP | 23 | 07 | 51 \pm | | | | | Epicentre : $\lambda=146^\circ 0E$ $\varphi=43^\circ 2N$ | |
| | | L | 4 | 58 | 25 | | | | | | |
| | | F | 5 | 01 | 07 | | | | | | |
| 37 | 25 | iP | 5 | 14 | 50 | | | | 59 | Middle course of theR. Yoshino, Shikoku | |
| | | \bar{S} | 21 | 58 | 36.7 | | | | | | |
| | | F | 21 | 58 | 44.2 | | | | | | |
| 38 | 30 | eP | 21 | 59 | 54 \pm | | | | 105 | Hyuga-nada | |
| | | eL | 11 | 05 | 34.8 | | | | | | |
| | | F | 11 | 08 | 00.6 | | | | | | |
| 39 | May 8 | e | 11 | 09 | 58 | | | | | Off Miyako (?) | |
| | | S | 4 | 51 | 52 | | | | | | |
| | | F | 4 | 53 | 12 | | | | | | |
| 40 | 8 | e | 4 | 58 | \pm | | | | | Distant quake | |
| | | e | 4 | 58 | 03 | | | | | | |
| | | F | 5 | 00 | 14 | | | | | | |
| 41 | 14 | e | 5 | 03 | \pm | | | | | Distant quake | |
| | | e | 22 | 34 | 25 | | | | | | |
| | | e | 22 | 34 | 25 | | | | | | |

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| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|-----|-----------|---------------------|------------------|----|----------|--------|----------------|----------------|----------------|--|---------|
| | | | | | | | A_E μ | A_N μ | A_Z μ | | |
| | | | h. | m. | s. | s. | | | | | |
| 42 | May 19 | eP | 9 | 33 | 53 | | | | 700 | Kashima-nada | |
| | | S | 9 | 35 | 27 | | | | | | |
| | | F | 9 | 46 | 15 | | | | | | |
| 43 | 20 | iP _{N.E.D} | 16 | 30 | 36.1 | | | | 550 | NE part of Tokyo Bay $\lambda = 140^\circ 1E$ $\varphi = 35^\circ 6N$ Deyth of hypocentre 55km | |
| | | iS | 16 | 31 | 50.0 | | | | | | |
| | | M _N | 16 | 32 | 51.5 | 5.4 | | +60 | | | |
| | | M _E | 16 | 32 | 52.2 | 4.3 | | -60 | | | |
| | | M _Z | 16 | 33 | 07.3 | 4.0 | | | | | -40 |
| | | F | 16 | 42 | 17 \pm | | | | | | |
| 44 | 20 | eP | 19 | 25 | 31 | | | | | After-shock of no.43 30kmE from Toyko. | |
| | | eS | 19 | 26 | 41 | | | | | | |
| | | F | 19 | 28 | \pm | | | | | | |
| 45 | 27 | eP _{W.S} | 9 | 52 | 45 | | | | | 90km NES to Miyako $\lambda = 142.^\circ 8E$ $\varphi = 40.^\circ 2N$ felt slightly Imamura Seismograph. | |
| | | eS | 9 | 54 | 35 | | | | | | |
| | | e \bar{S} | 9 | 55 | 20 | | | | | | |
| | | M ₁ | 9 | 55 | 58 | 25.9 | -240 | +320 | | | +155 |
| | | M _{2Z} | 9 | 55 | 50 | | | | | | -175 |
| F | 10 | 9.5 | | | | | | | | | |
| 46 | 28 | eP | 15 | 38 | 04 | | | | | 90km E to Miyako | |
| | | S | 15 | 40 | 15 | | | | | | |
| | | F | 16 | 02 | 40 | | | | | | |
| 47 | 30 | e | 3 | 38 | 45 | | | | | Kashima-nada faint record | |
| | | F | 3 | 39 | 39 | | | | | | |
| 48 | 31 | e | 7 | 27 | 48 | | | | | NE off Miyako | |
| | | e(S?) | 7 | 30 | 31 | | | | | | |
| | | M | 7 | 31 | 18 | | | | | | |
| | | F | 7 | 45 | \pm | | | | | | |

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| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|-----|-----------|----------------|------------------|----|-------|--------|-----------|-------|-------|---|---------|
| | | | h. | m. | s. | | s. | μ | μ | | |
| 49 | May 31 | e | 8 | 39 | 59 | | | | | NE off Miyako | |
| | | F | 8 | 44 | \pm | | | | | | |
| 50 | 31 | iP | 12 | 34 | 41 | | | | 730 | Kasima-nada 70km N to Tyoshi | |
| | | L | 12 | 36 | 14 | | | | | | |
| | | F | 12 | 40 | \pm | | | | | | |
| 51 | 31 | eP | 13 | 51 | 05 | | | | | Phillipine Is. | |
| | | S | 13 | 52 | 42 | | | | | | |
| | | L | 13 | 54 | 29 | | | | | | |
| | | F | 14 | 16 | \pm | | | | | | |
| 52 | 31 | e | 21 | 00 | 01 | | | | | | |
| | | F | 21 | 02 | \pm | | | | | | |
| 53 | June 1 | eP | 12 | 25 | 41 | | | | | ENE sea off Miyako $\lambda = 143^{\circ}5E$ $\varphi = 39^{\circ}7N$ | |
| | | eL | 12 | 28 | 41 | | | | | | |
| | | F | 12 | 32 | \pm | | | | | | |
| 54 | 1 | eP | 13 | 14 | 43 | | | | | Ditto $\lambda = 143^{\circ}3E$ $\varphi = 39^{\circ}8N$ | |
| | | S | 13 | 15 | 51 | | | | | | |
| | | L | 13 | 17 | 01 | | | | | | |
| | | M _E | 13 | 17 | 51 | 8.4 | +80 | | | | |
| | | M _N | 13 | 17 | 55 | 8.4 | | +84 | | | |
| | | F | 13 | 54 | \pm | | | | | | |
| 55 | 1 | eP | 22 | 09 | 45 | | | | | Ditto | |
| | | eS | 22 | 10 | 51 | | | | | | |
| | | F | 22 | 13 | \pm | | | | | | |
| 56 | 3 | eP | 8 | 32 | 04.9 | | | | 553 | 60km WSW to Shimokoshiki Is., Kagoshima Pre. $\lambda = 129^{\circ}1E, \varphi = 31^{\circ}5N$ | |
| | | \bar{P} | 8 | 32 | 23.3 | | | | | | |
| | | S | 8 | 33 | 07.6 | | | | | | |
| | | \bar{S} | 8 | 33 | 19.4 | | | | | | |

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| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | △ km. | Remarks |
|-----------|-----------|--------------------|------------------|----|------|--------|----------------|----------------|----------------|----------|----------------------|
| | | | | | | | A _E | A _N | A _Z | | |
| continued | | | h. | m. | s. | s. | μ | μ | μ | | |
| | | M _{1Z} | 8 | 33 | 27.1 | 4.5 | | | -138 | | |
| | | M _{1N} | 8 | 33 | 29.5 | 4.8 | | -250 | | | |
| | | M _{1E} | 8 | 33 | 34.9 | 4.8 | +156 | | | | |
| | | M _{2E, N} | 8 | 34 | 28.1 | 7.3 | +175 | -231 | | | |
| | | M _{3N} | 8 | 35 | 42.7 | 6.8 | | -156 | | | |
| | | M _{3E} | 8 | 35 | 49.5 | 5.8 | +156 | | | | |
| | | F | 9 | 02 | ± | | | | | | |
| 57 | Jwue 3 | eP | 9 | 20 | 00 | | | | | 483 | After shock of No.56 |
| | | \bar{P} | 9 | 20 | 06 | | | | | | |
| | | S | 9 | 21 | 02.6 | | | | | | |
| | | \bar{S} | 9 | 21 | 04.8 | | | | | | |
| | | F | 9 | 30 | 41 | | | | | | |
| 58 | 3 | eP | 10 | 05 | 47 | | | | | | Ditto |
| | | L | 10 | 06 | 31 | | | | | | |
| | | F | 10 | 08 | 40 | | | | | | |
| 59 | 5 | eP | 5 | 56 | 30 | | | | | 528 | Ditto |
| | | \bar{S} | 5 | 57 | 41 | | | | | | |
| | | M _N | 5 | 57 | 47 | 2.8 | | +63 | | | |
| | | F | 6 | 10 | 26 | | | | | | |
| 60 | 7 | eP | 6 | 28 | 39 | | | | | 320 | |
| | | S | 6 | 29 | 21 | | | | | | |
| | | F | 6 | 32 | 26 | | | | | | |
| 61 | 8 | eP | 9 | 34 | 25 | | | | | | After shock of No.56 |
| | | S | 9 | 35 | 09 | | | | | | |
| | | F | 9 | 41 | 17 | | | | | | |
| 62 | | e | 4 | 16 | 14 | | | | | | The River Tone. |
| | | F | 4 | 18 | 01 | | | | | | |

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| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|-----|------|--------------------|------------------|------|----------|--------|----------------|----------------|----------------|---|---------|
| | | | h. | m. | s. | | A_E μ | A_N μ | A_Z μ | | |
| 63 | 13 | \bar{P} | 8 | 06 | 46.4 | | | | 123 | Middle course of the R. Hidaka, Wakayama pre. | |
| | | $i\bar{S}$ | 8 | 07 | 03.3 | | | | | | |
| | | F | 8 | 08.5 | | | | | | | |
| 64 | 14 | eP | 0 | 28 | 26 | | | | 281 | SE sea off the cape of Nomayasaki, Kagoshima pre. | |
| | | eS | 0 | 29 | 04 | | | | | | |
| | | F | 0 | 30 | 04 \pm | | | | | | |
| 65 | 15 | iP _{W.N.} | 6 | 17 | 49.4 | | | | | Distant quake | |
| | | S | 6 | 20 | 00.1 | | | | | | |
| | | L | 6 | 22 | 10.9 | | | | | | |
| | | F | 7 | 08 | \pm | | | | | | |
| 66 | 15 | eP | 17 | 21 | 36 | | | | | Ditto | |
| | | S | 17 | 24 | 01 | | | | | | |
| | | L | 17 | 26 | 05 | | | | | | |
| | | F | 17 | 46 | \pm | | | | | | |
| 67 | 17 | eP | 3 | 38 | 30 | | | | | Ditto | |
| | | S | 3 | 48 | 26 | | | | | | |
| | | L | 4 | 06 | 00 | | | | | | |
| | | F | 5 | 12 | 58 | | | | | | |
| 68 | 21 | eP | 10 | 50 | 50 | | | | | Ditto | |
| | | eS | 11 | 00 | 21 | | | | | | |
| | | L | 11 | 09 | 15 | | | | | | |
| | | F | 11 | 38 | \pm | | | | | | |
| 69 | 21 | eP | 16 | 36 | 17 | | | | | Ditto | |
| | | eS | 16 | 44 | 05 | | | | | | |
| | | L | 16 | 55 | 16 | | | | | | |
| | | F | 17 | 23 | \pm | | | | | | |

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| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|-----|-------------|------------|------------------|----|----------|--------|----------------|----------------|----------------|--|---------|
| | | | | | | | A_E μ | A_N μ | A_Z μ | | |
| | | | h. | m. | s. | s. | | | | | |
| 70 | 29 | eP | 22 | 58 | 13 | | | | | Ditto | |
| | | iL | 23 | 7 | 43 | | | | | | |
| | | M | 23 | 8 | 33 | | | | | | |
| | | F | 23 | 50 | \pm | | | | | | |
| 71 | July 7 | $i\bar{P}$ | 8 | 39 | 51.1 | | | | 101 | Kii-strait | |
| | | iS.W.S.U. | 8 | 40 | 04.7 | | | | | Felt at Koti and. it, | |
| | | M | 8 | 40 | 05.4 | 10 | ± 75 | +88 | +75 | Neighbourhood, | |
| | | F | 8 | 45 | 30.0 | | | | | No feeling at this office First motion -13 $E = +3, N = -5$ $Z = +10$ | |
| 72 | 9 | eP | 21 | 32 | 32 | | | | | Distant quake | |
| | | eS | 21 | 39 | 38 | | | | | South sea | |
| | | eL | 21 | 47 | 51 | | | | | | |
| | | F | 22 | 04 | \pm | | | | | | |
| 73 | 11 | eP | 15 | 21 | 21 | | | | | Epicentre unknown | |
| | | eL | 15 | 22 | 36 | | | | | | |
| | | F | 15 | 27 | $21 \pm$ | | | | | | |
| 74 | August 4 | eP | 19 | 01 | 09 | | | | | Distant quake | |
| | | eL | 19 | 28 | 50 | | | | | Mexican earth-quake | |
| | | F | 19 | 58 | \pm | | | | | | |
| 75 | 5 | eP | 14 | 46 | 32 | | | | | Distant quake | |
| | | eL | 14 | 50 | 34 | | | | | South sea | |
| | | F | 15 | 00 | \pm | | | | | | |
| 76 | 12 | eP | 8 | 15 | 13 | | | | | Ditto | |
| | | eS | 8 | 16 | 36 | | | | | | |
| | | eL | 8 | 20 | 15 | | | | | | |
| | | F | 8 | 35 | \pm | | | | | | |

SEISMOLOGICAL BULLETIN

| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ | Remarks |
|-----|------|------------|------------------|----|----------|--------|-----------|-------|-------|----------|--|
| | | | | | | | A_E | A_N | A_Z | | |
| | | | h. | m. | s. | s. | μ | μ | μ | km. | |
| 77 | 16 | e | 3 | 52 | 24 | | | | | | W. sea off Bonin Is. |
| | | F | 3 | 57 | \pm | | | | | | |
| 78 | 22 | eP | 1 | 31 | 13 | | | | | 292 | Lower course of the R. Midori, Kumamoto pre. |
| | | S | 1 | 31 | 53 | | | | | | |
| | | M | 1 | 32 | 02 | 0.9 | +1.3 | -1.3 | | | |
| | | F | 1 | 38 | 48 | | | | | | |
| 79 | 23 | e | 1 | 24 | 41 | | | | | | |
| | | F | 1 | 30 | \pm | | | | | | |
| 80 | 24 | iP | 21 | 53 | 11 | | | | | | Distant quake |
| | | L | 22 | 00 | 54 | | | | | | |
| | | F | 22 | 30 | \pm | | | | | | |
| 81 | 25 | $\bar{i}P$ | 7 | 03 | 21.9 | | | | | 99 | Kii-strait |
| | | $\bar{i}S$ | 7 | 03 | 35.3 | | | | | | |
| | | M_1 | 7 | 03 | 36.4 | | +13 | +13 | | | |
| | | F | 7 | 06 | 00 \pm | | | | | | |
| 82 | 26 | e | 18 | 12 | 47 | | | | | | Kashima-nada |
| | | L | 18 | 15 | 12 | | | | | | |
| | | F | 18 | 25 | \pm | | | | | | |
| 83 | 27 | eP | 17 | 59 | 55 | | | | | | SW sea of Hatijo Is. depth of hypocentre 300km |
| | | S | 18 | 00 | 48 | | | | | | |
| | | F | 18 | 03 | \pm | | | | | | |
| 84 | 31 | eP | 6 | 18 | 07 | | | | | | Distant quaki |
| | | L | 6 | 37 | 06 | | | | | | |
| | | M | 6 | 41 | 16 | | | | | | |
| | | F | 7 | 10 | \pm | | | | | | |

SEISMOLOGICAL BULLETIN



| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude. | | | Δ km. | Remarks |
|-----|------------|-------------|------------------|----|----------|--------|-------------------------|-------------------------|-------------------------|---|---|
| | | | | | | | A _E μ | A _N μ | A _Z μ | | |
| | | | h. | m. | s. | s. | | | | | |
| 85 | Sept. 3 | i \bar{P} | 23 | 28 | 49.6 | | | | 53 | Upper course of the R. Yoshino, Shikoku. | |
| | | i \bar{S} | 23 | 28 | 56.7 | | ± 38 | ± 19 | | | |
| | | F | 23 | 31 | 01 \pm | | | | | | Felt Shikoku, SW part of Sanyodo First motion E = +4, N = +13 Z = -16 |
| 86 | 5 | eP | 16 | 47 | 40 | | | | 66 | Sea of Aki. record faint | |
| | | S | 16 | 47 | 50 | | | | | | |
| | | F | 16 | 48 | 36 | | | | | | |
| 87 | 6 | eP | 6 | 29 | 56 | | | | | E sea off Miyako | |
| | | eS | 6 | 32 | 05 | | | | | | |
| | | L | 6 | 34 | 00 | | | | | | |
| | | F | 7 | 42 | \pm | | | | | | |
| 88 | 13 | eP | 3 | 32 | 57 | | | | | Distant quake | |
| | | eS | 3 | 37 | 08 | | | | | | |
| | | L | 3 | 42 | 13 | | | | | | |
| | | F | 3 | 51 | \pm | | | | | | |
| 89 | 19 | eP | 8 | 17 | 55 | | | | | SSW sea off Hatijo Is. (deep earthquake) record faint | |
| | | L | 8 | 20 | 42 | | | | | | |
| | | F | 8 | 43 | \pm | | | | | | |
| 90 | 22 | eP | 7 | 41 | 06 | | | | | Distant quake South sea | |
| | | S | 7 | 48 | 48 | | | | | | |
| | | L | 7 | 56 | 10 | | | | | | |
| | | F | 8 | 28 | \pm | | | | | | |
| 91 | 23 | eP | 6 | 58 | 07 | | | | | Bay of Koizumi. Miyazaki pre. faint record. | |
| | | L | 6 | 59 | 05 | | | | | | |
| | | F | 7 | 04 | \pm | | | | | | |

SEISMOLOGICAL BULLETIN



| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|-----|-------------|------------|------------------|----|----------|--------|----------------|----------------|----------------|---|--|
| | | | | | | | A_E μ | A_N μ | A_Z μ | | |
| 92 | Sept. 25 | $\bar{i}P$ | h. | m. | s. | 1.6 | +238 | -108 | -133 | 126 | E part of Suho-nada $\lambda = 131^{\circ}9E, \varphi = 35^{\circ}7N$ First motion E = +66, N = +8, Z = +56 Strong shock in the western part of Tyugoku, Shikoku, and the eastern part of Kyusyu. Taiwan (Formosa) |
| | | $\bar{i}S$ | 4 | 59 | 05.2 | | | | | | |
| | | M_1 | 4 | 59 | 24.5 | | | | | | |
| | | M_2 | 4 | 59 | 44.2 | | | | | | |
| 93 | 25 | F | 5 | 00 | \pm | -69 | -113 | | | | |
| | | eP | 8 | 06 | 14 | | | | | | |
| | | S | 8 | 10 | 15 | | | | | | |
| | | L | 8 | 14 | 09 | | | | | | |
| 94 | 26 | F | 8 | 23 | \pm | | | | | | |
| | | eP | 17 | 32 | 16.9 | | | | 63 | Middle course of the R. Itoi, Harima prov. | |
| | | S | 17 | 32 | 25.4 | | | | | | |
| | | F | 17 | 32 | 49 \pm | | | | | | |
| 95 | Oct. 5 | eP | 6 | 59 | 53.4 | | | | | Middle course of the R. Arakawa | |
| | | S | 7 | 01 | 20.1 | | | | | | |
| | | F | 7 | 03 | 20 \pm | | | | | | |
| 96 | 9 | eP | 3 | 24 | 58 | | | | | Distant quake | |
| | | eS | 3 | 40 | 05 | | | | | | |
| | | L | 3 | 59 | 18 | | | | | | |
| | | F | 5 | 11 | \pm | | | | | | |
| 97 | 9 | eP | 22 | 43 | 24.7 | | | | 162 | Upper course of the R. \bar{O} yodo, Miyazaki pre. | |
| | | eS | 22 | 43 | 46.5 | | | | | | |
| | | F | 22 | 46 | 35 \pm | | | | | | |
| 98 | 11 | eP | 19 | 45 | 53.8 | | | | | Distant quake | |
| | | S | 19 | 49 | 39.6 | | | | | | |
| | | L | 19 | 53 | 52.4 | | | | | | |
| | | F | 20 | 06 | 17 \pm | | | | | | |

SEISMOLOGICAL BULLETIN

| No. | Date | Phase | Time G.M.C.T. | | | Period s. | Amplitude | | | Δ km. | Remarks |
|-----|------------|---------------------|------------------|----|----------|--------------|----------------|----------------|----------------|--------------------------------------|----------|
| | | | h. | m. | s. | | A_E μ | A_N μ | A_Z μ | | |
| 99 | Oct. 12 | eP | 12 | 23 | 37.1 | | | | 135 | Kii-strait | |
| | | \bar{iS} | 12 | 23 | 55.3 | | | | | | |
| | | M | 12 | 24 | 00.2 | | +12 | +8 | | | |
| | | F | 12 | 25 | 36 \pm | | | | | | |
| 100 | 13 | eP | 15 | 23 | 38 | | | | | Distant quake | |
| | | L | 15 | 29 | 18 | | | | | | |
| | | F | 15 | 36 | \pm | | | | | | |
| 101 | 15 | eP | 14 | 29 | 48 | | | | | Ditto | |
| | | S | 14 | 37 | 41 | | | | | | |
| | | L | 14 | 47 | 31 | | | | | | |
| | | F | 15 | 11 | \pm | | | | | | |
| 102 | 20 | eP | 12 | 47 | 41.3 | | | | 540 | S. sea off Yakushima Is. | |
| | | S | 12 | 48 | 23.6 | | | | | | |
| | | \bar{S} | 12 | 48 | 54.1 | | | | | | |
| | | L | 12 | 49 | 09.2 | | | | | | |
| | | M ₁ | 12 | 49 | 20.0 | 5.4 | -82 | +74 | | | +50 |
| | | F | 13 | 3 | 37.0 | | | | | | |
| 103 | 21 | \bar{iP} | 13 | 36 | 49.1 | | | | 39 | Neighbourhood of Takamatsu | |
| | | \bar{iS} | 13 | 36 | 54.4 | | ± 7.5 | ± 5.6 | | | ± 70 |
| | | F | 13 | 37 | 21 \pm | | | | | | |
| 104 | 21 | e | 14 | 16 | 45 | | | | | Upper course of the River Yoshino | |
| | | F | 14 | 17 | 05 \pm | | | | | | |
| 105 | 23 | iP _{s.w.u} | 17 | 57 | 58.5 | | | | | Distant quake | |
| | | S | 18 | 02 | 20.7 | | | | | | |
| | | L | 18 | 06 | 49.5 | | | | | | |
| | | F | 18 | 21 | 50 \pm | | | | | | |

SEISMOLOGICAL BULLETIN



| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|----------|-----------|------------|------------------|------|-----------|-----------|----------------|----------------|----------------|---|---|
| | | | | | | | A_E μ | A_N μ | A_Z μ | | |
| 106 | Nov. 5 | eP | h. | m. | s. | | | | 260 | Upper course of the R. Tikugo | |
| | | S | 4 | 41 | 34.2 | | | | | | |
| | | F | 4 | 42 | 04.7 | | | | | | |
| 107 | 6 | eP | 4 | 45 | 53 \pm | | | | | Distant quake South sea | |
| | | eS | 4 | 04 | 18 | | | | | | |
| | | eL | 4 | 13 | 18 | | | | | | |
| | | F | 4 | 21 | 00 | | | | | | |
| 108 | 16 | e | 4 | 42 | \pm | 8.9 | | | | Distant quake AE of Q wave regular form | |
| | | e | 11 | 05 | 50 | | | | | | |
| | | Q | 11 | 08 | 10 | | | | | | |
| | | F | 11 | 08 | 47 | | | | | | |
| 109 | 23 | $\bar{i}P$ | 11 | 31 | 26 | 2.0 | +131 | -111 | +176 | 58 | SSW sea 60km off Koti Felt slightly Koti First motion E = -2.5 N = -22.2 Z = -30.0 |
| | | $\bar{i}S$ | 17 | 48 | 40.6 | | | | | | |
| | | M | 17 | 48 | 48.3 | | | | | | |
| | | F | 17 | 48 | 51.0 | | | | | | |
| 110 | 28 | eP | 17 | 55 | 22 \pm | | | | | Distant quake South sea | |
| | | PP | 10 | 51 | 12 | | | | | | |
| | | S | 10 | 53 | 19 | | | | | | |
| | | SS | 10 | 57 | 41 | | | | | | |
| | | L | 11 | 00 | 45 | | | | | | |
| | | F | 11 | 06 | 56 | | | | | | |
| 111 | 30 | e | 11 | 40 | \pm | 24.0 | | | | Chile, South America | |
| | | e | 4 | 26 | 22 | | | | | | |
| | | e | 4 | 37 | 02 | | | | | | |
| | | e | 4 | 44 | 00 | | | | | | |
| | | L | 5 | 19 | 39 | | | | | | |
| | | M_{E1} | 5 | 26 | 18 | | | | | | |
| | | M_{N1} | 5 | 27 | 00 | | | | | | |
| | | M_{E2} | 5 | 38 | 42 | | | | | | |
| M_{N2} | 5 | 48 | 00 | | | | | | | | |
| F | 5 | 37 | \pm | 18.0 | ± 325 | | | | | | |
| | | | | | 18.0 | | ± 350 | | | | |
| | | | | | 17.2 | ± 120 | | | | | |
| | | | | | 21.5 | | ± 396 | | | | |

SEISMOLOGICAL BULLETIN



| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|-----|-----------|-----------------|---------------|----|-------|--------|----------------|----------------|----------------|----------------------------|---------|
| | | | h. | m. | s. | | A_E μ | A_N μ | A_Z μ | | |
| 112 | Dec. 7 | eP | 9 | 21 | 18 | | | | | Distant quake | |
| | | eS | 9 | 27 | 08 | | | | | | |
| | | L | 9 | 29 | 44 | | | | | | |
| | | F | 9 | 56 | \pm | | | | | | |
| 113 | 9 | eP | 5 | 14 | 06 | | | | | Ditto | |
| | | eS | 5 | 21 | 03 | | | | | | |
| | | L | 5 | 32 | 16 | | | | | | |
| | | F | 5 | 55 | \pm | | | | | | |
| 114 | 12 | eP | 0 | 30 | \pm | | | | | Epicentre unknown | |
| | | L | 0 | 45 | \pm | 16.0 | | | | | |
| | | F | 1 | 30 | \pm | | | | | | |
| 115 | 17 | eP | 6 | 56 | 20 | | | | | | |
| | | S | 6 | 56 | 38 | | | | | | |
| | | F | 6 | 57 | 40 | | | | | | |
| 116 | 18 | iP | 11 | 43 | 02.8 | | | | | Distant quake South sea | |
| | | iPP | 11 | 43 | 52.7 | | | | | | |
| | | eS | 11 | 47 | 48.0 | | | | | | |
| | | L | 11 | 49 | 56.9 | 16.1 | +450 | \pm 365 | \pm 250 | | |
| | | M _{1N} | 11 | 51 | 10.7 | 16.5 | | | | | |
| | | M _{1E} | 11 | 51 | 39.9 | 16.5 | \pm 400 | | | | |
| | | M _{1Z} | 11 | 51 | 47.1 | 15.0 | | | \pm 460 | | |
| | | M _{2N} | 11 | 54 | 10.7 | 17.8 | | -830 | | | |
| | | M _{2E} | 11 | 54 | 10.7 | 17.8 | +540 | | \pm 920 | | |
| | | M _{2Z} | 11 | 54 | 03.7 | 18.2 | | | | | |
| F | 12 | 53 | -- | | | | | | | | |

SEISMOLOGICAL BULLETIN

| No. | Date | Phase | Time G.M.C.T. | | | Period | Amplitude | | | Δ km. | Remarks |
|-----|------------|----------------|------------------|----|-------|--------|----------------|----------------|----------------|---|---------|
| | | | | | | | A_E μ | A_N μ | A_Z μ | | |
| 117 | Dec. 21 | eP | h. | m. | s. | | | | | Upper course of the R. Kikuti, Kumamoto pre. | |
| | | S | 23 | 18 | 13 | | | | | | s. |
| | | F | 23 | 18 | 36 | | | | | | |
| 118 | 28 | eP | 23 | 21 | \pm | 10.6 | ± 50 | | | Distant quake South sea | |
| | | eS | 14 | 25 | 21 | | | | | | |
| | | eL | 14 | 30 | 06 | | | | | | |
| | | M _E | 14 | 31 | 19 | | | | | | |
| | | F | 14 | 33 | 18 | | | | | | |
| 119 | 30 | e | 15 | 00 | \pm | | | | | Sumoto, Awaji Is. faint record | |
| | | F | 5 | 27 | 25 | | | | | | |

ERRATA

(f.b. means "from bottom")

| page | line | for | read |
|------|---------------|---|-----------------------|
| 1 | 1 | 49 | 46 |
| " | 6, 5, 2 f. b. | iL | L? |
| " | 14 | 8 | 3 |
| 3 | 15 | -10 | -106 |
| 8 | 8 | Jwne | June |
| 10 | 6 | iS.W.S.U | iS ⁻ W.S.U |
| " | " | it, | its |
| " | 8 | Nofeelyny | Nofeeling |
| " | 11f.b. | ± | omitt |
| 16 | 7.f.b. | Insert +575 in the M _{1N} line | |
| " | 3.f.b. | displace ±920 to the M _{2Z} line | |



昭和四年九月十九日印刷

(非賣品)

昭和四年九月廿五日發行

高 知 測 候 所

印刷所

高 知 縣