Sept Oct copied MK

# MATSUSHIRO SEISMOLOGICAL OBSERVATORY, JAPAN.

## Seismological Bulletin

### for September 1 to October 31, 1957

| Date | Phase | Comp. | Time (GMT) |
|---|---|---|---|
| 1. | P | Z | 12h 58m 48s |
| | eL | N | 13 17 33 |
| | Mag. 4½ - 4 3/4 (Matsushiro) | | |
| | 39 N.,75 E. | | |
| | Western Sinkiang Province, China. | | |
| | H=12 49 55 | | USCGS |
| 1. | iP | Z | 20 31 26.0 |
| | S? | NE | 32 26 |
| | iP:compression | | |
| 1. | P | Z | 21 08 50 |
| 1. | iP | Z | 21 58 13.4 |
| | i | Z | 20.9 |
| | iP:compression | | |
| 1. | P | Z | 23 07 41.3 |
| | dilatation | | |
| 1. | eP | Z | 23 37 29 |
| 2. | P | NEZ | 00 04 32.4 |
| | i | Z | 33.7 |
| | S | NE | 08 19 |
| | S | Z | 24 |
| | L | E | 10 09 |
| | iL | N | 11 04 |
| | i | Z | 12 20 |
| | P:S.E.dilatation | | |
| | Mag. 6¼ (Matsushiro) | | |
| | 18 N.,147½ E. | | |
| | Mariana Is. | | |
| | H=23 59 54 | | USCGS |
| 2. | P | Z | 00 10 54 |
| 2. | eP | Z | 00 17 58 |
| 2. | P | Z | 00 31 55.6 |
| | i | Z | 59 |
| | i | Z | 32 23 |
| | S | Z | 35 39 |
| | 18 N.,147 E. | | |
| | Mariana Is. | | |
| | h:100 km ca. | | |
| | H=00 27 26 | | USCGS |
| 2. | P | Z | 01 45 59 |
| | i | Z | 46 04 |
| 2. | iP | Z | 04 06 39.8 |
| | iS | Z | 42.2 |
| | iP:compression | | |
| 2. | iP | Z | 04 45 01.8 |
| | i | Z | 10.3 |
| | e | Z | 58 |
| | iP:dilatation | | |
| 2. | P | Z | 04 52 29 |
| 2. | iP | Z | 09 57 34.8 |
| | S | N | 10 06 37.8 |
| | i | E | 07 06.8 |
| | Lq | N | 14 37 |
| | Lr | E | 17 24 |
| | L | Z | 18 27 |
| | iP:compression | | |
| | Mag. 6¼ - 6½ (Matsushiro) | | |
| | 15 S.,173½ W. | | Samoa Is. |
| | H=09 46 30 | | USCGS |
| 2. | P | Z | 10 38 23.7 |
| | i | Z | 27.7 |
| | i | Z | 45 |
| | i | Z | 39 19 |
| | P:dilatation | | |
| 2. | eP | Z | 11 37 43 |
| 2. | iP | Z | 14 27 53.7 |
| | S | NE | 34 07.9 |
| | Lq | NE | 37 20 |
| | Lr | N | 39 01 |
| | iP:dilatation | | |
| | Mag. 5 3/4 - 6 (Matsushiro) | | |
| | 51½ N.,168 W. | | Fox Is. |
| | H=14 20 13 | | USCGS |
| 2. | iP | Z | 17 25 06.8 |
| | dilatation | | |
| 2. | iP | Z | 18 08 07.6 |
| | e | N | 12 01 |
| | L | N | 58 |
| | iP:compression | | |
| 2. | P | Z | 18 23 10.6 |
| | e | Z | 26 10 |
| | P:compression | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 2. | P | Z | 18 | 28 | 21.8 |
| | dilatation | | | | |
| 2. | P | Z | 18 | 54 | 35.3 |
| | compression | | | | |
| 2. | P | Z | 19 | 27 | 28.1 |
| | compression | | | | |
| 2. | iP | Z | 21 | 36 | 32.1 |
| | ipP | Z | | 37 | 21.6 |
| | S | N | | 43 | 48 |
| | sS | N | | 45 | 09 |
| | iP:compression | | | | |
| | Mag. 6½ (Matsushiro) | | | | |
| | 37 N.,71 E. Hindu Kush. | | | | |
| | h:200 km ca. | | | | |
| | H=21 27 36 | USCGS | | | |
| 3. | eP | Z | 01 | 53 | 30 |
| 3. | P | Z | 06 | 16 | 18.2 |
| | L | N | | 31 | 19 |
| | P:compression | | | | |
| | 12 S.,167 E. | | | | |
| | Santa Cruz Is. | | | | |
| | H=06 06 42 | USCGS | | | |
| 3. | P | Z | 07 | 57 | 28 |
| | compression | | | | |
| | 53 N.,167 W. Fox Is. | | | | |
| | H=07 49 52 | USCGS | | | |
| 3. | eP | Z | 10 | 16 | 59 |
| 3. | P | Z | 14 | 32 | 00 |
| | eL | E | | 37 | 09 |
| | eL | N | | | 32 |
| | P:dilatation | | | | |
| | Mariana Is. region. | | | | |
| | H=14 28 12 | USCGS | | | |
| 3. | iP | Z | 14 | 40 | 12.1 |
| | S | Z | | | 44.9 |
| | iP:dilatation | | | | |
| 3. | P | Z | 14 | 50 | 43.6 |
| | Fiji Is. region. | | | | |
| | h:600 km ca. | | | | |
| | H=14 39 34 | USCGS | | | |
| 3. | iP | NEZ | 18 | 59 | 21.0 |
| | S | NEZ | 19 | 00 | 14.0 |
| | iP:S,W,dilatation | | | | |
| 4. | iP | Z | 00 | 54 | 57.6 |
| | i | E | | 55 | 01 |
| | S | NE | | | 12.8 |
| | iP:dilatation | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 4. | P | Z | 04 | 32 | 32 |
| | compression | | | | |
| | Fox Is. | | | | |
| | H=04 25 05 | USCGS | | | |
| 4. | eSKS | NE | 04 | 57 | 55 |
| | e | N | 05 | 06 | 01 |
| | eL | N | | 11 | 50 |
| | eL | N | | 25 | 00 |
| | Mag. 6½ (Matsushiro) | | | | |
| | South Indian Ocean. | | | | |
| | about 1000 miles northeast | | | | |
| | of Kerguelen Is. | | | | |
| | H=04 33 51 | USCGS | | | |
| 4. | P | Z | 12 | 34 | 31 |
| | eL? | N | | 46 | 16 |
| 4. | P | Z | 12 | 58 | 24.9 |
| | e | N | 13 | 03 | 09 |
| | e | E | | | 44 |
| | P:compression | | | | |
| 4. | P | Z | 20 | 44 | 15.5 |
| | e | N | | 52 | 08 |
| | e | N | | 58 | 53 |
| 4. | eP | Z | 21 | 10 | 58 |
| | e | N | | 16.2 | |
| 4. | eS? | E | 22 | 20 | 49 |
| | eS? | N | | | 59 |
| 4. | eL? | N | 23 | 01 | 57 |
| 5. | eP | Z | 03 | 22 | 06 |
| | eL? | N | | 48.7 | |
| 5. | P | Z | 04 | 10 | 12.0 |
| | 55½ N.,159 W. | | | | |
| | Alaska Peninsula. | | | | |
| | H=04 01 49 | USCGS | | | |
| 5. | P | Z | 04 | 18 | 07 |
| 5. | P | Z | 07 | 30 | 23 |
| | i | Z | | | 24.3 |
| | eS | N | | 34 | 28 |
| | e | E | | 35 | 03 |
| | eL | E | | 37 | 36 |
| | 53½ N.,160½ E. | | | | |
| | Near east coast of Kamchatka. | | | | |
| | H=07 25 19 | USCGS | | | |
| 5. | eP | Z | 08 | 13 | 05 |
| 5. | eP | Z | 08 | 17 | 20 |
| 5. | eP | Z | 08 | 50 | 52 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 5. | e | E | 09 | 20 | 48 |
| | e | E | | 23 | 23 |
| | e | E | | 39 | 19 |
| 5. | e | E | 10 | 39 | 14 |
| | e | E | | 52 | 50 |
| 5. | P | Z | 11 | 47 | 18 |
| | eL? | N | 12 | 13 | 23 |
| | Southern Iran. | | | | |
| | H=11 36 07 | | USCGS | | |
| 5. | e | E | 18 | 06.7 | |
| 5. | ePKP | Z | 19 | 18 | 25 |
| | e | E | | 35 | 38 |
| | 20 S.,67 W. | | | | |
| | Southern Bolivia. | | | | |
| | h:150 km ca. | | | | |
| | H=18 58 42 | | USCGS | | |
| 5. | e | N | 23 | 20 | 02 |
| 6. | iPKP | Z | 00 | 37 | 39.3 |
| | i | Z | | 38 | 07 |
| | 20 S.,68 W. | | | | |
| | Chile-Bolivia border. | | | | |
| | h:100 km ca. | | | | |
| | H=00 17 55 | | USCGS | | |
| 6. | eP | Z | 01 | 03 | 48 |
| 6. | eP | Z | 01 | 19 | 21 |
| 6. | iP | Z | 05 | 01 | 27.8 |
| | e | Z | | 02 | 15 |
| | PcP | Z | | 04 | 02.3 |
| | S | E | | 06 | 59.5 |
| | L | N | | 08 | 51 |
| | iL | N | | 09 | 31 |
| | iP:dilatation | | | | |
| | Mag. $5\frac{1}{2}$ - 5 3/4 (Matsushiro) | | | | |
| | 51 N.,177 W. Andreanof Is. | | | | |
| | H=04 54 37 | | USCGS | | |
| 6. | e | N | 08 | 34 | 08 |
| 6. | eP | Z | 09 | 14 | 01 |
| 6. | e | E | 11 | 17.7 | |
| 6. | e | E | 11 | 37 | 52 |
| 6. | e | N | 12 | 08 | 35 |
| 6. | e | E | 12 | 30 | 27 |
| 6. | e | E | 14 | 04 | 13 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 6. | P | Z | 14 | 48 | 52.1 |
| 6. | e | E | 15 | 00 | 32 |
| 6. | e | E | 21 | 21 | 02 |
| | e | E | | 32 | 11 |
| | Southern Yugoslavia. | | | | |
| | H=20 22 10 | | USCGS | | |
| 7. | P | Z | 06 | 50 | 28.0 |
| | iS | Z | | | 32.2 |
| 7. | iP1 | Z | 06 | 52 | 55.8 |
| | iP2 | NEZ | | | 56.0 |
| | i | Z | | | 57.3 |
| | iS | NE | | 56 | 25 |
| | i | N | | 57 | 33 |
| | iL | N | | 58 | 24 |
| | iL | E | | | 34 |
| | P1:compression | | | | |
| | iP2:S,W,dilatation | | | | |
| | Mag. $6\frac{1}{4}$ (Matsushiro) | | | | |
| | 50 N.,156 E. | | | | |
| | Northern Kurile Is. | | | | |
| | H=06 48 36 | | USCGS | | |
| 7. | iP | EZ | 10 | 13 | 31.7 |
| | iPP | NEZ | | 14 | 34.9 |
| | iS | NE | | 18 | 55.7 |
| | i | Z | | 19 | 52 |
| | iL | N | | 21 | 14 |
| | iL | E | | | 30 |
| | Lr | Z | | 23 | 46 |
| | Lr | E | | 28 | 27 |
| | iP:W,compression | | | | |
| | Mag. $6\frac{1}{2}$ - 6 3/4 (Matsushiro) | | | | |
| | $51\frac{1}{2}$ N.,$178\frac{1}{2}$ W. Andreanof Is. | | | | |
| | H=10 06 47 | | USCGS | | |
| 7. | iP | NZ | 11 | 29 | 44.9 |
| | iS | N | | 30 | 10.6 |
| | iS | E | | | 11.6 |
| | iP:S,dilatation | | | | |
| 8. | eP | N | 01 | 47 | 02 |
| | e | E | | 49 | 13 |
| 8. | eP | Z | 05 | 44 | 22 |
| | e | N | | 51 | 14 |
| 8. | e | E | 07 | 11 | 15 |
| 8. | P | Z | 07 | 11 | 57.6 |
| 8. | P | Z | 07 | 17 | 33.5 |
| | e | E | | 35 | 55 |
| 8. | P | Z | 08 | 48 | 54.0 |

(cont.)

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| continued | | | | | |
| | eL | N | 08$^h$ | 58$^m$ | 10$^s$ |
| | L | N | 09 | 05 | 15 |
| | 2 S.,141 E. | | | | |
| | Off north coast of New Guinea. | | | | |
| | H=08 41 26 | USCGS | | | |
| 8. | iP | Z | 10 | 27 | 15.4 |
| | eS? | E | | 33 | 10 |
| | eL | N | | 36 | 10 |
| | L | E | | 45 | 36 |
| | iP:dilatation | | | | |
| | Mag. 5¼ - 5½ (Matsushiro) | | | | |
| | 52 N.,171 W. | Fox Is. | | | |
| | H=10 19 48 | USCGS | | | |
| 8. | P | Z | 13 | 26 | 55.3 |
| | ScP | Z | | 32 | 31 |
| | S? | N | | 33 | 21 ca. |
| | L | E | | 37 | 55 |
| | 5 S.,152 E. New Britain. | | | | |
| | h:60 km ca. | | | | |
| | H=13 18 55 | USCGS | | | |
| 8. | iP | Z | 22 | 40 | 18.0 |
| | eS | NE | | | 27 |
| | iP:compression | | | | |
| 8. | e | E | 22 | 58.2 | |
| 8. | P | N | 23 | 06 | 58 |
| | e | E | | 07 | 27 |
| | e | E | | 09 | 35 |
| 9. | eP | E | 00 | 10 | 04 |
| 9. | e | N | 00 | 24 | 44.6 |
| 9. | P | Z | 00 | 26 | 38 |
| | S | NZ | | 37 | 13.1 |
| | ScS | E | | | 33.1 |
| | i | E | | 46 | 45 |
| | iL | N | | 50 | 31 |
| | P:dilatation | | | | |
| | Mag. 6 3/4 (Matsushiro) | | | | |
| | 48 S.,100 E. | | | | |
| | South Indian Ocean. | | | | |
| | H=00 13 30 | USCGS | | | |
| 9. | P | Z | 05 | 01 | 48.3 |
| 9. | iP | Z | 09 | 11 | 27.6 |
| | S | NE | | 20 | 25.1 |
| | Lq | N | | 27 | 56 |
| | Lr | N | | 30 | 44 |
| | iP:dilatation | | | | |
| | Mag. 6½ (Matsushiro) | | | | |
| | 15 S.,176½ W. Fiji Is. region. | | | | |
| | H=09 00 33 | USCGS | | | |

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| 9. | P | Z | 10$^h$ | 49$^m$ | 09$^s$ |
| | e | Z | | | 32 |
| 9. | e | N | 13 | 34 | 04 |
| | eL? | E | | 37 | 01 |
| 9. | P | Z | 15 | 15 | 45.6 |
| | i | Z | | | 47.3 |
| | P:dilatation | | | | |
| 9. | iP | Z | 18 | 46 | 41.0 |
| | e | N | | 50 | 57 |
| | iP:compression | | | | |
| 9. | e | E | 22 | 14 | 54 |
| 10. | e | N | 01 | 32 | 44 |
| 10. | iP | Z | 02 | 50 | 18.2 |
| | S | Z | | 51 | 01.3 |
| | iP:compression | | | | |
| 10. | eP | N | 03 | 03 | 08 |
| | e | N | | 11 | 18 |
| 10. | P | Z | 06 | 20 | 47 |
| | i | Z | | | 56.6 |
| | e | N | | 29 | 00 |
| | L | N | | 31 | 58 |
| | L | N | | 34 | 22 |
| | Mag. 5½ - 5 3/4 (Matsushiro) | | | | |
| | 27 N.,96½ E. | | | | |
| | Indian-Burma border. | | | | |
| | H=06 13 40 | USCGS | | | |
| 10. | P | Z | 07 | 49 | 00.3 |
| | iS | Z | | | 02.6 |
| | P:compression | | | | |
| 10. | P | Z | 07 | 53 | 39.1 |
| | iS | Z | | | 41.5 |
| | P:compression | | | | |
| 10. | P | Z | 08 | 50 | 53.1 |
| | iS | Z | | | 55.4 |
| | P:compression | | | | |
| 10. | e | Z | 15 | 05 | 33 |
| 10. | P | Z | 15 | 34 | 22.8 |
| | e | N | | 36 | 53 |
| | e | E | | 39 | 44 |
| 10. | e | N | 21 | 04 | 56 |
| | eL? | N | | 09 | 30 |
| | eL? | E | | 13 | 26 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 11. | e | E | 04 | 55 | 45 |
| 11. | iP | Z | 13 | 08 | 05.9 |
| | iS | Z | | | 21.1 |
| | iP:dilatation | | | | |
| 11. | iP | Z | 13 | 52 | 02.0 |
| | dilatation | | | | |
| | 19 S.,178 W. Fiji Is. region. | | | | |
| | h:500 km ca. | | | | |
| | H=13 41 44 | | USCGS | | |
| 11. | eP | Z | 14 | 34 | 40 |
| | e | N | | 36 | 41 |
| | S | N | | 40 | 47.3 |
| | Lq | E | | 44 | 12 |
| | L | N | | 46 | 43 |
| | Mag.6 (Matsushiro) | | | | |
| | New Ireland region. | | | | |
| | H=14 26 45 | | USCGS | | |
| 11. | e | N | 15 | 21 | 50 |
| | e | E | | 25 | 36 |
| 11. | iP | Z | 22 | 24 | 48.8 |
| | dilatation | | | | |
| 11. | iP | Z | 23 | 33 | 26.0 |
| | ipP | Z | | | 42.1 |
| | iS | NE | | 42 | 36.8 |
| | eLq | N | | 49 | 36 |
| | eLq | E | | 50 | 10 |
| | eLr | N | | 54 | 26 |
| | eLr | E | | | 48 |
| | iP:compression | | | | |
| | Mag. $6\frac{1}{4}$ - $6\frac{1}{2}$ (Matsushiro) | | | | |
| | 16 S.,172 W. | | | | |
| | Samoa Is. region. | | | | |
| | H=23 22 09 | | USCGS | | |
| 12. | PS? | N | 00 | 56 | 57 |
| | SS | N | 01 | 02 | 44 |
| | Mag. $6\frac{1}{4}$ - $6\frac{1}{2}$ (Matsushiro) | | | | |
| | $17\frac{1}{2}$ N.,85 W. | | | | |
| | About 100 miles north of Honduras. | | | | |
| | H=00 28 02 | | USCGS | | |
| 12. | iP | Z | 01 | 25 | 07.3 |
| | compression | | | | |
| | 21 N.,145 E. Mariana Is. | | | | |
| | H=01 21 06 | | USCGS | | |
| 12. | iP | Z | 08 | 28 | 40.2 |
| | iS | NE | | 29 | 01.2 |
| | iP:dilatation | | | | |
| 12. | iP | Z | 09 | 11 | 58.2 |
| | (cont.) | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| | continued | | | | |
| | i | Z | 09 | 11 | 59.4 |
| | iS | Z | | 12 | 22.4 |
| | iP:dilatation | | | | |
| 12. | P | Z | 12 | 33 | 58.8 |
| 12. | P | Z | 12 | 49 | 08.7 |
| 12. | iP | Z | 17 | 49 | 01.8 |
| | dilatation | | | | |
| 12. | iP | Z | 18 | 14 | 52.6 |
| | compression | | | | |
| 13. | P | Z | 09 | 24 | 20.6 |
| | i | Z | | | 33.2 |
| 13. | P | Z | 13 | 03 | 33.6 |
| | i | Z | | | 50.6 |
| 13. | eP | Z | 20 | 35 | 31 |
| | eL | N | | 46 | 02 |
| 14. | P | Z | 01 | 40 | 57.5 |
| 14. | iP | Z | 02 | 57 | 38.2 |
| | iS | Z | | 58 | 00.6 |
| 14. | P | Z | 03 | 37 | 00.7 |
| | i | NEZ | | 38 | 51.1 |
| 14. | iP | Z | 06 | 21 | 04.7 |
| | compression | | | | |
| | 4 S.,130 E. Ceram Is. | | | | |
| | H=06 13 20 | | USCGS | | |
| 14. | iP | Z | 06 | 32 | 31.2 |
| | iS | Z | | | 42.0 |
| | iP:compression | | | | |
| 14. | iP | Z | 08 | 57 | 28.3 |
| | dilatation | | | | |
| 14. | e | NE | 13 | 09 | 33 |
| 14. | iP | Z | 14 | 04 | 27.8 |
| | i | Z | | | 53.4 |
| | $5\frac{1}{2}$ S.,147 E. | | | | |
| | Near north coast of New Guinea. | | | | |
| | H=13 56 25 | | USCGS | | |
| 14. | e | E | 18 | 07 | 40 ca. |
| 14. | eP | Z | 18 | 16 | 01 |
| 14. | iP | Z | 20 | 36 | 33.4 |
| | compression | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 14. | P | Z | 21 | 32 | 13.4 |
| | eS | N | | 37 | 05 |
| | Samar Is. | | | | |
| | H=21 26 18 | | USCGS | | |
| 14. | iP | Z | 22 | 26 | 41.9 |
| | S? | N | | 27 | 05.9 |
| | iP:compression | | | | |
| 15. | iP | Z | 04 | 31 | 07.5 |
| | pP | Z | | 32 | 11.6 |
| | ScP | Z | | 35 | 48.9 |
| | S | N | | 37 | 31.4 |
| | sS | N | | 39 | 51.8 |
| | iP:dilatation | | | | |
| | Mag. 6 3/4 (Matsushiro) | | | | |
| | 5½ S.,108 E. | | | | |
| | Near north coast of Java. | | | | |
| | h:300 km ca. | | | | |
| | H=04 22 34 | | USCGS | | |
| 15. | iP | Z | 18 | 23 | 51.0 |
| | iS | Z | | 24 | 06.6 |
| | iP:dilatation | | | | |
| 15. | iP | Z | 18 | 29 | 46.3 |
| | compression | | | | |
| 15. | iP | Z | 18 | 50 | 21.8 |
| | S | NE | | 56 | 31 |
| | L | N | | 59 | 39 |
| | iP:dilatation | | | | |
| | Mag. 6 3/4 - 7 (Matsushiro) | | | | |
| | 6 S.,153½ E. Solomon Is. | | | | |
| | h:150 km ca. | | | | |
| | H=18 42 20 | | USCGS | | |
| 15. | P | Z | 19 | 59 | 50.0 |
| 15. | iP | Z | 22 | 14 | 36.7 |
| | S | N | | 20 | 29 |
| | L | N | | 23 | 19 |
| | iP:compression | | | | |
| | 51 N.,174½ W. Andreanof Is. | | | | |
| | H=22 07 21 | | USCGS | | |
| 16. | iP | NEZ | 00 | 08 | 19.6 |
| | i | NE | | | 33.7 |
| | iS | NE | | | 47.7 |
| | iP:S,E,dilatation | | | | |
| | 35 N.,140 E. | | | | |
| | Near south coast of Honshu, Japan. | | | | |
| | H=00 07 33 | | USCGS | | |
| 16. | iP | Z | 09 | 09 | 23.7 |
| | e | N | | 15 | 15 |
| | iP:dilatation | | | | |
| | 54 N.,158½ E. Kamchatka. | | | | |
| | H=09 04 23 | | USCGS | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 16. | P | Z | 09 | 10 | 50.1 |
| 16. | eP | Z | 09 | 26 | 56 |
| | i | Z | | | 58.6 |
| 16. | iP | Z | 09 | 41 | 20.8 |
| | dilatation | | | | |
| 16. | e | N | 11 | 37 | 25 ca. |
| 16. | P | Z | 12 | 55 | 33.3 |
| 16. | P | Z | 13 | 24 | 11.8 |
| | i | Z | | | 42.3 |
| 16. | e | E | 15 | 16 | 55 ca. |
| 16. | iP | NEZ | 15 | 30 | 09.4 |
| | S? | NEZ | | | 49.6 |
| | iP:S,W,compression | | | | |
| 16. | P | Z | 20 | 00 | 04.1 |
| | e | N | | 10 | 17 |
| 16. | iP | Z | 21 | 07 | 55.8 |
| | iS | Z | | 08 | 14.3 |
| 17. | P | Z | 02 | 57 | 23.6 |
| 17. | eL? | NE | 06 | 42 | 36 ca. |
| 17. | iP Z,P | NE | 12 | 07 | 27.7 |
| | iS | NE | | | 56.3 |
| | i | NE | | 08 | 04.7 |
| | iP:compression | | | | |
| | Off east coast of Ibaragi Prefecture,Japan. | | J.M.A. | | |
| 17. | P | Z | 13 | 41 | 19.5 |
| | i | Z | | | 36.1 |
| 17. | P | Z | 14 | 40 | 09.8 |
| | eL | N | 15 | 05 | ca. |
| 17. | P | Z | 15 | 49 | 06.6 |
| | i | Z | | | 24.8 |
| | eL | E | | 54 | ca. |
| 17. | iP | Z | 18 | 46 | 26.5 |
| | i | Z | | 47 | 11.2 |
| | iS | NEZ | | | 47.3 |
| | iP:compression | | | | |
| | 30½ N.,139 E. | | | | |
| | Off south coast of Honshu, Japan. | | | | |
| | H=18 44 02 | | USCGS | | |
| 18. | P | Z | 01 | 04 | 19.0 |
| | i | Z | | | 20.8 |

(cont.)

| Date | Phase | Comp. | Time(GMT) |
|---|---|---|---|
| continued | | | |
| | S | N | 01h 08m 23s.2 |
| | 53 N.,160 E. | | |
| | Near east coast of Kamchatka. | | |
| | H=00 59 20 | | USCGS |
| 18. | eP | Z | 01 13 39 |
| 18. | P | Z | 09 35 56.1 |
| 18. | iP | Z | 18 22 51.1 |
| | eL | N | 32 13 ca. |
| | 52½ N.,168 W. | | Fox Is. |
| | H=18 15 10 | | USCGS |
| 18. | P | Z | 22 42 45.1 |
| 18. | P | Z | 23 09 23.1 |
| 19. | iP | Z | 03 21 50.1 |
| | dilatation | | |
| 19. | P | Z | 13 49 47.9 |
| | eS | N | 55 54 |
| | 52 N.,168 W. | | Fox Is. |
| | H=13 42 06 | | USCGS |
| 19. | eL | N | 14 56 47 ca. |
| 19. | iP | Z | 17 13 00.0 |
| | e | N | 22 58 |
| | eL | N | 33 10 ca. |
| | iP:dilatation | | |
| | Mag. 5¼ (Matsushiro) | | |
| | 19 S.,176 W. | | Tonga Is. |
| | h:200 km ca. | | |
| | H=17 02 02 | | USCGS |
| 20. | iP | Z | 01 46 16.2 |
| | iS | Z | 31.8 |
| | iP:dilatation | | |
| 20. | iP | Z | 05 01 06.5 |
| | dilatation | | |
| 20. | eP | Z | 07 05 39 |
| | i | Z | 42.5 |
| | eS | N | 08 11 |
| 20. | eP? | Z | 08 00 53 |
| | eS? | E | 05 51 |
| | eL | N | 07 52 |
| 20. | P | Z | 08 29 01.7 |
| | eS | N | 31 32 |
| | 46 N.,151½ E. | | Kurile Is. |
| | H=08 25 19 | | USCGS |
| 20. | P | Z | 12 00 53.6 |
| 20. | P | Z | 16h 23m 10s.5 |
| 20. | eP | Z | 17 50 37 |
| | eS | N | 56 33 |
| 20. | P | Z | 18 57 56.7 |
| | e | N | 19 23 24 |
| 20. | eP | Z | 19 59 25 |
| 20. | PKP | Z | 22 16 58.9 |
| 20. | P | Z | 23 14 49.7 |
| | S | NE | 20 47 |
| | eL | E | 23 34 |
| | 52 N.,170½ W. | | Fox Is. |
| | H=23 07 22 | | USCGS |
| 21. | iP | Z | 00 15 30.4 |
| | eS | N | 53 |
| | eS | Z | 54 |
| | iP:compression | | |
| 21. | iP | Z | 06 02 09.3 |
| | S | Z | 30.3 |
| | iP:dilatation | | |
| 21. | P | Z | 06 14 54 |
| | e | Z | 17 14 |
| | e | N | 18 11 |
| | e | E | 40 |
| | L | N | 19 02 |
| | L | E | 16 |
| | L | N | 46 |
| 21. | iP | Z | 07 10 10.7 |
| | S | E | 41 |
| | S | N | 42 |
| | iS | Z | 42.0 |
| | iP:compression | | |
| 21. | eP | Z | 09 51 52 |
| | e | Z | 53 |
| | e | Z | 54 19 |
| | S? | N | 55 19 |
| | L | E | 56 11 |
| | L | N | 56 |
| 21. | eP | Z | 12 15 38 |
| | eS | Z | 16 05 |
| 21. | P | Z | 12 18 10.1 |
| 21. | P | Z | 17 32 34.8 |
| | S | Z | 33 13.7 |
| 21. | P | Z | 20 28 44.1 |
| | | | (cont.) |

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| continued | | | | | |
| | i | Z | 20$^h$ | 28$^m$ | 47$^s$.8 |
| | eS | N | | 38 | 27 |
| | eL | N | | 47 | 23 |
| | eL | NE | | 59 | 28 |
| | 40½ N.,34½ E. | | | | |
| | Northern Turkey. | | | | |
| | H=20 16 53 | | | USCGS | |
| 21. | iP | Z | 20 | 37 | 00.1 |
| | dilatation | | | | |
| 22. | eP | Z | 03 | 00 | 56 |
| | S | Z | | 01 | 23 |
| 22. | iP | Z | 05 | 27 | 03.2 |
| 22. | P | Z | 09 | 46 | 06.5 |
| | e | Z | | | 28 |
| | P:compression | | | | |
| 22. | iP | Z | 11 | 23 | 09.6 |
| | i | Z | | | 13.3 |
| | S | E | | | 42.2 |
| | S | NE | | | 42.8 |
| | i | E | | | 48.0 |
| | iP:compression | | | | |
| 22. | P | Z | 11 | 25 | 21 ca. |
| | S | NE | | | 53 |
| | i | Z | | | 57 ca. |
| 22. | iP | Z | 11 | 33 | 42.1 |
| | S | NE | | 34 | 14.3 |
| | S | E | | | 16.0 |
| | i | Z | | | 45.2 |
| | i | Z | | 35 | 20.4 |
| | iP:compression | | | | |
| 22. | iP | NEZ | 12 | 42 | 10.6 |
| | iS | NE | | | 35.4 |
| | iP:S,W,dilatation | | | | |
| 22. | iP | Z | 13 | 09 | 59.0 |
| | i | Z | | 10 | 02.0 |
| | i | Z | | | 07 ca. |
| | eS? | Z | | | 22 ca. |
| | iP:dilatation | | | | |
| 22. | eP | Z | 14 | 40 | 43 ca. |
| | i | Z | | | 47 ca. |
| 22. | P | Z | 15 | 19 | 11 |
| | i | Z | | | 20.1 |
| | i | Z | | | 31.7 |
| 22. | eP | Z | 23 | 42 | 17 |
| 22. | eP | Z | 23 | 45 | 39 |

(cont.)

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| continued | | | | | |
| | i | Z | 23$^h$ | 45$^m$ | 41$^s$.9 |
| | S | Z | | 46 | 20.5 |
| 23. | iP | Z | 09 | 30 | 44.4 |
| | pP | Z | | | 59.9 |
| | i | Z | | 36 | 09.7 |
| | S | E | | | 58.3 |
| | S | N | | | 58.8 |
| | e | N | | 39 | 17 |
| | L | NE | | 40 | 14 |
| | L | E | | 42 | 49 |
| | L | N | | 43 | 51 |
| | iP:dilatation | | | | |
| | 6 S.,131 E. Banda Sea. | | | | |
| | H=09 22 36 | | | USCGS | |
| 23. | P | Z | 12 | 07 | 01.8 |
| | i | Z | | | 03.1 |
| | S | Z | | | 21.7 |
| 23. | eP | Z | 12 | 29 | 33 |
| 23. | P | Z | 12 | 37 | 12 |
| | i | Z | | | 17.6 |
| 23. | P | Z | 14 | 03 | 37 |
| 23. | iP | Z | 15 | 51 | 30.7 |
| | dilatation | | | | |
| 23. | P | Z | 16 | 18 | 53.9 |
| | i | Z | | 19 | 50.0 |
| 23. | P | Z | 17 | 48 | 17 |
| | i | Z | | | 29.0 |
| | e | NE | | 50 | 14 |
| 23. | P | Z | 18 | 55 | 25 |
| | L | N | 19 | 13 | 12 |
| | 16 S.,173 W. | | | | |
| | Samoa Is. region. | | | | |
| | H=18 44 10 | | | USCGS | |
| 23. | iP | Z | 22 | 01 | 42.4 |
| | e | E | | 02 | 31 |
| | e | Z | | | 35 |
| 24. | e | E | 02 | 13 | 02 |
| | eL | NE | | 17 | 14 |
| 24. | eP | Z | 03 | 03 | 37 ca. |
| | e | Z | | | 59 |
| | e | Z | | 04 | 01 |
| 24. | eP | Z | 07 | 56 | 12 |
| | i | Z | | | 21.4 |
| | e | E | | 57 | 00 |
| | e | N | | | 04 |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| continued | | | | | |
| | e | N | 07 | 57 | 14 |
| | e | E | | | 17 |
| 24. | iP | NEZ | 08 | 27 | 40.4 |
| | iPP | Z | | 29 | 00.9 |
| | PP | NE | | | 02 |
| | iS | N | | 33 | 10.3 |
| | iS | E | | | 11.2 |
| | Lq | N | | 34 | 49 |
| | iLq | E | | | 49.7 |
| | Lq | Z | | 35 | 01 |
| | i | N | | | 51.4 |
| | Lr | N | | 36 | 37 |
| | Lr | E | | | 39 |
| | iLr | Z | | | 45 |
| | L | Z | | 40 | 53 |
| | L | Z | | 43 | 59 |
| | e | Z | 09 | 01 | 36 |
| | iP:N,E,compression. | | | | |
| | Mag. 7¼ (Matsushiro) | | | | |
| | 5½ N.,127 E. | | | | |
| | Near south coast of Mindanao, Philippine Is. | | | | |
| | H=08 21 05 | | USCGS | | |
| 24. | e | NE | 08 | 38 | 10 |
| 24. | e | Z | 08 | 59 | 11 |
| 24. | P | Z | 09 | 17 | 01.8 |
| | i | Z | | | 18.9 |
| | Mindanao aftershock. | | | | |
| | H=09 10 30 | | USCGS | | |
| 24. | eP | Z | 11 | 07 | 53 |
| 24. | e | Z | 13 | 59 | 00 |
| 24. | i | Z | 17 | 11 | 29.6 |
| 24. | P | Z | 17 | 18 | 59 ca. |
| | i | Z | | 19 | 18 ca. |
| | e | N | | 26 | 46 |
| 25. | P | Z | 00 | 33 | 23.0 |
| | S? | N | | 41 | 22.9 |
| 25. | iP | Z | 01 | 13 | 18.8 |
| | i | Z | | | 36.7 |
| | e | Z | | | 44 |
| | iP:compression | | | | |
| 25. | P | Z | 04 | 07 | 54.5 |
| 25. | eP | Z | 06 | 23 | 13 |
| | i | Z | | | 37.9 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 25. | SS | N | 06 | 25 | 29 |
| | eSS? | E | | | 39 |
| | e | N | | 26 | 48 |
| | eL | NE | | 39 | 03 ca. |
| | L | NE | | 54 | 26 |
| | L | N | 07 | 21 | 50 |
| | Mag. 6 - 6¼ (Matsushiro) | | | | |
| | 34 N.,38½ W. | | | | |
| | Near Azores Is. | | | | |
| | H=05 50 56 | | USCGS | | |
| 25. | eP | Z | 07 | 45 | 08 |
| 25. | i | Z | 08 | 19 | 25.2 |
| 25. | P | N | 09 | 52 | 58.3 |
| | S | NE | | 56 | 35.9 |
| | L | N | | 58 | 56 |
| | L | Z | | 59 | 09 |
| 25. | eP | Z | 13 | 59 | 11 ca. |
| | eS? | N | 14 | 06 | 31 |
| | e | N | | 09 | 41 |
| | eL | E | | 11 | 23 |
| | eL | N | | | 54 |
| 25. | eP | Z | 15 | 16 | 06 |
| | e | E | | 23 | 03 |
| | eS | N | | | 19 |
| | eLq | E | | 25 | 23 |
| | eLq | N | | | 26 |
| | eLr | NE | | 28 | 37 |
| | eLr | Z | | | 52 |
| | eL | E | | 36 | 07 |
| 25. | P | Z | 15 | 21 | 02.7 |
| | dilatation | | | | |
| 25. | iP | Z | 16 | 36 | 26.7 |
| | eS | NE | | 43 | 08 |
| | iP:dilatation | | | | |
| 25. | iP | Z | 16 | 43 | 06.4 |
| | i | Z | | 44 | 03.0 |
| | PP | Z | | | 16.9 |
| | i | Z | | 45 | 05.5 |
| | e | Z | | 46 | 11.3 |
| | S | N | | 48 | 26 |
| | eL | E | | 50 | 02 |
| | i | N | | | 37 |
| | i | Z | | | 45 |
| | eLr | N | | 52 | 03 |
| | eLr | Z | | | 26 |
| | L | N | | 55 | 47 |
| | iP:compression | | | | |
| | Mag. 6½ (Matsushiro) | | | | |
| | Mindanao aftershock. | | | | |
| | H=16 36 37 | | USCGS | | |

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| 25. | P? | Z | $16^h$ | $49^m$ | $46^s$ |
| 25. | P | Z | 22 | 18 | 38 |
| | S? | Z | | 20 | 22.4 |
| 25. | eP | Z | 22 | 23 | 29 |
| | i | Z | | | 35.3 |
| | eS | N | | 28 | 13 |
| | L | E | | 30 | 24 |
| | i | N | | | 57 |
| | L | N | | 32 | 50 |
| | L | NE | | 35 | 24 |
| | L | Z | | | 42 |
| | Mag. $6\frac{1}{4}$ (Matsushiro) | | | | |
| | 6 N.,$127\frac{1}{2}$ E. | | | | |
| | Mindanao aftershock. | | | | |
| | H=22 17 00 | | USCGS | | |
| 25. | iP | Z | 23 | 40 | 04.2 |
| | eS | E | | 44 | 57 |
| | eS | N | | | 59 |
| | L | E | | 46 | 57 |
| | L | N | | 47 | 23 |
| | L | N | | 49 | 17 |
| | eL | Z | | | 58 |
| | eL | N | | 52 | 02 |
| | L | E | | | 38 |
| | iP:dilatation | | | | |
| | Mag. 5.9 (Matsushiro) | | | | |
| 26. | iP | Z | 00 | 23 | 15.9 |
| | eS | NZ | | | 43 |
| | iP:dilatation | | | | |
| 26. | P | Z | 00 | 34 | 47.6 |
| 26. | P? | Z | 02 | 38 | 56.1 |
| | eL | N | | 46 | 14 |
| | 5 N.,127 E. | | | | |
| | Mindanao aftershock. | | | | |
| | H=02 32 01 | | USCGS | | |
| 26. | iP | Z | 03 | 36 | 51.7 |
| | dilatation | | | | |
| 26. | iP | Z | 06 | 07 | 24.1 |
| | eS | E | | 14 | 28 |
| | eS | N | | | 41 |
| | e | NE | | 16 | 52 |
| | L | N | | 17 | 58 |
| | L | E | | 18 | 44 |
| | eL | Z | | 19 | 12 |
| | iP:dilatation | | | | |
| 26. | iP | Z | 10 | 14 | 15.7 |
| | i | Z | | | 24.0 |
| | S | E | | 19 | 23 |
| | i | N | | | 36 |

(cont.)

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| continued | | | | | |
| | L | E | $10^h$ | $21^m$ | $15^s$ |
| | L | N | | | 31 |
| | L | N | | 23 | 31 |
| | L | NEZ | | 26 | 25 |
| | iP:dilatation | | | | |
| | Mag. 5 3/4 - 6 (Matsushiro) | | | | |
| | About 150 miles south of | | | | |
| | Mindanao I. | | | | |
| | H=10 07 42 | | USCGS | | |
| 26. | P | Z | 10 | 28 | 05.3 |
| 26. | iP | Z | 12 | 15 | 16.1 |
| | eS | E | | 25 | 21 |
| | iP:dilatation | | | | |
| | $39\frac{1}{2}$ S.,$174\frac{1}{2}$ E. | | | | |
| | North Island,New Zealand. | | | | |
| | h:150 km ca. | | | | |
| | H=12 03 01 | | USCGS | | |
| 26. | P | Z | 14 | 27 | 20.7 |
| | eS | E | | 34 | 16 |
| | eL | NE | | 36 | 45 |
| | eL | Z | | 37 | 51 |
| 26. | P | Z | 18 | 53 | 12.0 |
| | i | Z | | | 15.4 |
| | i | Z | | | 39.2 |
| | PP | N | | 54 | 24.8 |
| | PP | Z | | | 25.8 |
| | PcP | Z | | 56 | 03.0 |
| | S | E | | 58 | 14.8 |
| | L | E | 19 | 00 | 11 |
| | Lr | NEZ | | 02 | 00 |
| | Mag.6 - $6\frac{1}{4}$ (Matsushiro) | | | | |
| | 6 N.,$126\frac{1}{2}$ E. | | | | |
| | Mindanao aftershock. | | | | |
| | H=18 46 41 | | USCGS | | |
| 27. | P | Z | 00 | 30 | 48.6 |
| 27. | eP? | Z | 02 | 48 | 04 |
| | e | Z | | | 08 |
| 27. | iP | Z | 03 | 00 | 46.2 |
| | S | Z | | 01 | 01.8 |
| | i | Z | | | 05.0 |
| | e | E | | | 06 |
| | iP:compression | | | | |
| 27. | iP | Z | 04 | 15 | 51.9 |
| | i | Z | | 16 | 25.4 |
| | PPP | Z | | 17 | 53.4 |
| | iS | E | | 21 | 42.8 |
| | S | N | | | 44.4 |
| | iLq | N | | 24 | 32.9 |
| | iLq | E | | | 37.4 |
| | Lq | Z | | | 48.4 |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| continued | | | | | |
| | Lr | E | 04 | 25 | 44 |
| | Lr | N | | 26 | 01 |
| | L | N | | 31 | 27 |
| | L | Z | | | 36 |
| | iP:dilatation | | | | |
| | Mag. 6 3/4 (Matsushiro) | | | | |
| | 1 S.,127 E. Spice Is. | | | | |
| | H=04 08 23 USCGS | | | | |
| 27. | iP | Z | 04 | 26 | 12.5 |
| | i | Z | | | 56.2 |
| | iP:compression | | | | |
| 27. | P | Z | 05 | 03 | 41.3 |
| | i | Z | | | 47.4 |
| | i | Z | | | 50.9 |
| 27. | i | Z | 05 | 04 | 14.3 |
| 27. | P | Z | 05 | 05 | 57.8 |
| | i | Z | | 06 | 00.9 |
| | PcP? | Z | | 08 | 22.5 |
| | eS? | E | | 11 | 24 |
| | eL | E | | 16 | 32 |
| | 64 N.,178 E. | | | | |
| | Eastern Siberia. | | | | |
| | H=04 58 52 USCGS | | | | |
| 27. | iP | Z | 05 | 41 | 36.0 |
| | i | Z | | 42 | 55.4 |
| | eS? | EZ | | 43 | 28 |
| | i | Z | | | 45.4 |
| | iP:compression | | | | |
| | 43.7 N.,146.7 E. | | | | |
| | Off east of Hokkaido,Japan. | | | | |
| | JMA | | | | |
| 27. | P | Z | 05 | 55 | 54.7 |
| | 53 N.,168 W. Fox Is. | | | | |
| | H=05 48 15 USCGS | | | | |
| 27. | P | Z | 06 | 04 | 16.2 |
| | i | Z | | | 19.0 |
| | e | Z | | 06 | 33 |
| | eS | N | | 10 | 07 |
| | L | NE | | 13 | 04 |
| | Lr | E | | 14 | 02 |
| | i | N | | | 29 |
| | Mag. 6 (Matsushiro) | | | | |
| | 1 S.,127 E. | | | | |
| | Spice Is. aftershock. | | | | |
| | H=05 56 50 USCGS | | | | |
| 27. | P1 | Z | 11 | 24 | 29 |
| | P2 | Z | | | 29.4 |
| | eS | E | | 30 | 41 |
| | eL | N | | 33 | 41 |
| | 52½ N.,169 W. Fox Is. | | | | |
| | H=11 16 52 USCGS | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 27. | eP | Z | 11 | 52 | 57.9 |
| | i | Z | | | 59.9 |
| | e | E | | 59 | 05 |
| | eL? | N | 12 | 02 | 31 |
| 27. | iP | Z | 12 | 44 | 30.7 |
| | i | Z | | | 31.4 |
| | e | NE | | | 52 |
| | e | Z | | 45 | 08 |
| | e | E | | | 11 |
| | iP:compression | | | | |
| | 39.2 N.,142.0 E. | | | | |
| | Off east coast of Iwate Prefecture, Japan. | | | | |
| | h:40 km ca. | | | | |
| | JMA | | | | |
| 27. | P | Z | 14 | 27 | 00.2 |
| | i | Z | | | 05.5 |
| | i | Z | | | 13.6 |
| | i | Z | | | 45.5 |
| | i | Z | | 28 | 05.8 |
| | eS | N | | 31 | 03 |
| | eL | N | | 35 | 35 |
| | 18 N.,121 E. Luzon I. | | | | |
| | H=14 21 43 USCGS | | | | |
| 27. | eP | Z | 15 | 17 | 43 |
| | e | N | | 28 | 59 |
| 27. | iP | NEZ | 18 | 48 | 09.5 |
| | iS | Z | | | 55.7 |
| | iS | NE | | | 56.7 |
| | iP:S,W,dilatation | | | | |
| 28. | iP | NEZ | 00 | 29 | 03.5 |
| | iS | NEZ | | 30 | 13.1 |
| | iScS | E | | 41 | 31.1 |
| | iP:S,W dilatation | | | | |
| | Mag. 6.4 (Matsushiro) | | | | |
| | 30½ N.,137½ E. | | | | |
| | Off south coast of Honshu, Japan. | | | | |
| | h:500 km ca. | | | | |
| | H=00 27 31 USCGS | | | | |
| 28. | P | Z | 03 | 28 | 56.8 |
| | iS | Z | | 29 | 03.8 |
| 28. | eP | Z | 04 | 18 | 57 |
| | eS? | N | | 24 | 52 |
| | L | N | | 27 | 43 |
| | L | E | | 28 | 08 |
| | L | N | | 30 | 25 |
| | Mag. 5 3/4 (Matsushiro) | | | | |
| | 3 S.,135½ E. | | | | |
| | Near north coast of New Guinea. | | | | |
| | H=04 11 23 USCGS | | | | |

| Date | Phase | Comp. | Time(GMT) |
|---|---|---|---|
| 28. | P | Z | $10^h\ 40^m\ 42^s.0$ |
| 28. | iP | Z | 14 30 16.7 |
| | iP | N | 16.9 |
| | iP | E | 17.1 |
| | i | Z | 32 18 |
| | pP | Z | 23 |
| | PP | Z | 33 00 |
| | i | Z | 59 |
| | pPP | Z | 34 34 |
| | iS | N | 38 43 |
| | i | E | 39 32 |
| | sSPorsPS | E | 42 20 |
| | SS | N | 43 26 |
| | isSSorSSS | NE | 46 41 |
| | PKPPKP | Z | 58 13 |
| | iP:dilatation | | |
| | iP:S | | |
| | iP:E | | |
| | Mag. 7½ (Matsushiro) | | |
| | 20½ S.,178 W. Fiji Is. | | |
| | h:650 km ca. | | |
| | H=14 20 00 | | USCGS |
| 28. | iP | Z | 14 54 21.3 |
| | i | Z | 40.1 |
| | iP:dilatation | | |
| | 20½ S.,178½ W. | | |
| | Fiji Is. aftershock. | | |
| | h:600 km ca. | | |
| | H=14 44 02 | | USCGS |
| 28. | e | Z | 16 12 50 |
| 28. | eP | Z | 16 28 44 |
| 28. | e | Z | 20 12 42 |
| 28. | P | Z | 21 07 28 |
| | i | Z | 29.9 |
| | i | Z | 31.1 |
| | i | Z | 08 04.1 |
| | pP | Z | 12.7 |
| | S | N | 10 55.8 |
| | 17½ N.,146 E. Mariana Is. | | |
| | h:200 km ca. | | |
| | H=21 03 18 | | USCGS |
| 28. | P | Z | 22 02 59.3 |
| | i | Z | 03 01.9 |
| | i | Z | 40.7 |
| 28. | eP | Z | 22 07 50 |
| | i | Z | 52.3 |
| | e | Z | 08 31 |
| 29. | eP | Z | 00 46 56 |
| | i | Z | 56.6 |
| | i | Z | 48 02 |

| Date | Phase | Comp. | Time(GMT) |
|---|---|---|---|
| 29. | eSKS? | N | $02^h\ 33^m\ 49^s$ |
| | PS | N | 37 00 |
| | i | N | 42 58 |
| | i | E | 43 02 |
| | PSPS | N | 16 |
| | e | N | 45 44 |
| | e | N | 48 04 |
| | eL | NE | 54 35 |
| | eL | E | 58 56 |
| | eL | N | 03 04 11 |
| | Mag. 6 (Matsushiro) | | |
| | 64½ S.,172½ W. | | |
| | South Pacific Ocean. | | |
| | H=02 08 55 | | USCGS |
| 29. | P | Z | 03 14 10.2 |
| | e | Z | 43 |
| | e | Z | 15 08 |
| | e | N | 04 26 08 |
| 29. | iP | Z | 06 44 42.2 |
| | PP | Z | 46 14.9 |
| | PcP | Z | 52.2 |
| | i | Z | 50 27.0 |
| | eS? | N | 40 |
| | e | N | 51 20 |
| | L | NE | 53 18 |
| | iP:compression | | |
| | 0 .,124 E. Celebes. | | |
| | h:200 km ca. | | |
| | H=06 37 33 | | USCGS |
| 29. | iP | Z | 07 16 19.4 |
| | dilatation | | |
| | 20 S.,178 W. Fiji Is. | | |
| | h:650 km ca. | | |
| | H=07 06 11 | | USCGS |
| 29. | iP | NZ | 08 23 53.7 |
| | iP | E | 54.2 |
| | ipP | Z | 25 50.7 |
| | i | Z | 57.7 |
| | PP | Z | 26 43.7 |
| | iS | NE | 32 32.7 |
| | SP | E | 33 12.1 |
| | i | Z | 35.7 |
| | i | E | 36 04.3 |
| | i | E | 37 03.0 |
| | SS | NE | 21 |
| | sSS | E | 40 41 |
| | SSS | N | 58 |
| | iL | N | 43 33 |
| | L | E | 40 |
| | L | Z | 41 |
| | iPKPPKP | Z | 51 27.7 |
| | iSKPPKP | Z | 54 13 |
| | e | Z | 09 10 32 |
| | i | Z | 13 49 |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| continued | | | | | |
| | iP:S,E,dilatation | | | | |
| | Mag. 7 (Matsushiro) | | | | |
| | 25 S.,178½ E. | | | | |
| | South of Fiji Is. | | | | |
| | h:600 km ca. | | | | |
| | H=08 13 23 | | USCGS | | |
| 29. | P? | Z | 10 | 22 | 15 |
| 29. | e | Z | 13 | 23 | 08 |
| | i | Z | | 24 | 00.3 |
| 29. | iP | Z | 13 | 35 | 41.9 |
| | i | Z | | | 57 |
| | i | Z | | 36 | 17 |
| | i | Z | | | 36 |
| | S | NE | | 39 | 46 |
| | Lq | E | | 40 | 52 |
| | Lq | N | | | 53 |
| | Lr | N | | 42 | 30 |
| | Lr | Z | | | 40 |
| | iP:dilatation | | | | |
| | 53½ N.,160 E. | | | | |
| | Near east coast of Kamchatka. | | | | |
| | H=13 30 42 | | USCGS | | |
| 29. | iP | Z | 13 | 48 | 20 ca. |
| | dilatation | | | | |
| 29. | e | N | 17 | 36 | 43 |
| | e | N | | 37 | 56 |
| 29. | P? | Z | 17 | 41 | 04.9 |
| | PP? | N | | 42 | 30 |
| | S? | N | | 46 | 32 |
| | L | E | | 48 | 23 |
| | L | N | | | 31 |
| | L | Z | | 50 | 42 |
| | L | E | | 51 | 01 |
| | L | N | | | 06 |
| | L | N | | 52 | 38 |
| | L | Z | | | 48 |
| 29. | eP | Z | 21 | 17 | 27 ca. |
| | i | Z | | | 33 ca. |
| 29. | iP | Z | 21 | 41 | 48.5 |
| | iS | NEZ | | 42 | 08.0 |
| | iP:compression | | | | |
| 29. | eP? | Z | 21 | 47 | 45 |
| 30. | P | Z | 02 | 38 | 33.7 |
| 30. | P | Z | 06 | 55 | 57.8 |
| | i | Z | | | 58.5 |
| 30. | P | Z | 07 | 05 | 03.1 |
| | e | Z | | | 58 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 30. | e | N | 08 | 59 | 01 |
| | e | E | | | 36 |
| | e | N | | | 43 |
| 30. | iP | Z | 11 | 04 | 49.3 |
| | i | Z | | 05 | 08.8 |
| | e | N | | 07 | 00 |
| | e | E | | | 08 |
| | L | N | | | 32 |
| | iP:compression | | | | |
| | 29½ N.,140 E. | | | | |
| | South of Honshu, Japan. | | | | |
| | H=11 02 36 | | USCGS | | |
| 30. | eP | Z | 12 | 14 | 08 |
| | ePPP | Z | | 16 | 20 |
| | L | E | | 23 | 15 |
| | 1½ S.,126½ E. | | | | |
| | Spice Is. aftershock. | | | | |
| | H=12 06 43 | | USCGS | | |
| 30. | iP | Z | 12 | 59 | 19.0 |
| | i | Z | | | 21.1 |
| | iP:dilatation | | | | |
| 30. | e | NE | 14 | 59 | 26 ca. |
| 30. | e | NE | 15 | 19 | 36 |
| 30. | iP | Z | 18 | 19 | 52.0 |
| | i | Z | | 21 | 06.8 |
| | iP:compression | | | | |
| 30. | P | Z | 20 | 24 | 36.1 |
| | i | Z | | | 46.0 |
| | eS | NE | | 27 | 01 |
| | Lq | E | | | 33 |
| | Lq | N | | | 35 |
| | Lr | Z | | | 48 |
| | L | N | | 29 | 44 |
| | L | E | | 30 | 04 |
| | Mag. 5 3/4 - 6 (Matsushiro) | | | | |
| | 24½ N.,143 E. Volcano Is. | | | | |
| | H=20 21 30 | | USCGS | | |
| | Additional | | | | |
| 25. | P | Z | 19 | 29 | 41ca. |

October

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 1. | eP | Z | 00 | 36 | 17 |
| | e | E | | 46 | 44 |
| 1. | iP | Z | 14 | 14 | 50.6 |
| | i | Z | | 15 | 33.3 |
| 2. | eP | Z | 01 | 56 | 19 |
| | e | E | 02 | 02 | 39 |
| 2. | iP | Z | 02 | 58 | 02.0 |
| | compression | | | | |
| 2. | P | Z | 11 | 31 | 33 |
| | PP | Z | | 32 | 42.7 |
| | PP | N | | | 43.6 |
| | S | N | | 37 | 08 |
| | L | N | | 44 | 27 |
| | L | N | | 48 | 57 |
| | 5½ N.,127 E. | | | | |
| | Mindanao aftershock. | | | | |
| | H=11 25 02 | USCGS | | | |
| 2. | ePKP | Z | 12 | 47 | 03 |
| | PP | Z | | 49 | 17 |
| | e | N | | | 33 |
| | e | NE | | 59 | 37 |
| | e | N | 13 | 03 | 55 |
| | eSS | NE | | 06 | 27 |
| | e | E | | 08 | 54 |
| | eSSS | E | | 11 | 49 |
| | eL | E | | 29 | 45 |
| | Mag. 6½ (Matsushiro) | | | | |
| | 11 N.,63 W. | | | | |
| | Venezuela foreshock. | | | | |
| | H=12 27 55 | USCGS | | | |
| 2. | iP | Z | 14 | 42 | 27.1 |
| | compression | | | | |
| 2. | P | Z | 21 | 10 | 36 |
| | iS | N | | 20 | 19 |
| | e | N | | 23 | 47 |
| | eSS | N | | 25 | 29 |
| | SSS | N | | 28 | 59 |
| | L | N | | 31 | 14 |
| | Mag. 6¼ (Matsushiro) | | | | |
| | 6½ S.,69½ E. Chagos.Is. | | | | |
| | H=20 58 39 | USCGS | | | |
| 3. | iP | Z | 01 | 36 | 33.4 |
| | e | N | | 39 | - |
| | 43 N.,144 E. | | | | |
| | Hokkaido,Japan. | | | | |
| | H=01 34 35 | USCGS | | | |
| 3. | P | Z | 01 | 49 | 58 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 3. | iP | Z | 05 | 32 | 28.7 |
| | iS | NE | | | 46.4 |
| | iP:dilatation | | | | |
| 3. | iP | Z | 05 | 55 | 41.4 |
| | iS | Z | | | 57.7 |
| 3. | iP | Z | 06 | 05 | 54.6 |
| | ePP | N | | 07 | 36 |
| | iS | N | | 12 | 02.4 |
| | eL | N | | 15 | 01 |
| | eL | E | | | 24 |
| | iP:dilatation | | | | |
| | Mag.6 - 6¼ (Matsushiro) | | | | |
| | 4 S.,134 E. New Guinea. | | | | |
| | H=05 58 12 | USCGS | | | |
| 3. | P | Z | 17 | 39 | 04 |
| | e | N | | 44 | 27 |
| 4. | eP | Z | 01 | 11 | 44 |
| | 21½ S.,178 W. Fiji Is.region. | | | | |
| | h:400 km ca. | | | | |
| | H=01 01 00 | USCGS | | | |
| 4. | P1 | Z | 04 | 50 | 51 |
| | iP2 | Z | | | 54.3 |
| | i | Z | | 51 | 22.6 |
| | e | NE | | 53 | 08 |
| 4. | eP? | Z | 05 | 39 | 36 |
| 4. | iPKP | Z | 05 | 45 | 10.6 |
| | ePP? | N | | 47 | 04 |
| | ePP | Z | | | 15 |
| | PP | Z | | | 20.6 |
| | eSKSP? | N | | 57 | 34 |
| | PS | Z | | 58 | 39.6 |
| | PPS | N | 06 | 00 | 05 |
| | SS | E | | 04 | 31 |
| | SSS | N | | 09 | 35 |
| | L | N | | 18 | 33 |
| | L | E | | | 56 |
| | iPKP:compression | | | | |
| | Mag. 7¼ (Matsushiro) | | | | |
| | 11 N.,63 W. | | | | |
| | Near coast of Venezuela. | | | | |
| | h:60 km ca. | | | | |
| | H=05 26 09 | USCGS | | | |
| 4. | iP | Z | 06 | 33 | 57.6 |
| | i | Z | | 34 | 16.1 |
| | iS? | Z | | | 22.0 |
| | iP:dilatation | | | | |
| 4. | iP | Z | 07 | 27 | 31.1 |
| | dilatation | | | | |

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| 4. | iP1 | Z | 14h | 28m | 06.7s |
| | iP2 | Z | | | 08.8 |
| | iS | NE | | | 40.3 |
| | iP1:dilatation | | | | |
| 4. | e | N | 23 | 29 | 08 |
| 4. | iP | Z | 23 | 42 | 52.3 |
| | S | Z | | 43 | 15.3 |
| | iP:dilatation | | | | |
| 5. | iP | Z | 00 | 02 | 13.8 |
| | PP | EZ | | 03 | 21 |
| | S | NEZ | | 07 | 15 |
| | eL | NE | | 09 | 16 |
| | iP:dilatation | | | | |
| | 53 N.,178 E. Rat Is. | | | | |
| | H=23 55 45 USCGS | | | | |
| 5. | iP | Z | 05 | 19 | 16.0 |
| | S | Z | | | 53.1 |
| | S — (P) | E | | | 54 |
| | i | NZ | | 20 | 10 |
| | i | NZ | | | 39.1 |
| | i | NZ | | | 46.1 |
| | iP:compression | | | | |
| 5. | P | Z | 10 | 46 | 36.7 |
| 5. | iP | Z | 11 | 49 | 23.0 |
| | e | E | 12 | 03 | 00 |
| | e | E | | 20 | 13 |
| | e | N | | | 20 |
| | 34½ N.,26½ E. | | | | |
| | Near Isle of Crete. | | | | |
| | H=11 36 46 USCGS | | | | |
| 5. | iP | Z | 16 | 14 | 21.6 |
| | eS | NE | | 21 | 12 |
| | eL | NE | | 25 | 54 |
| | iP:compression | | | | |
| | 10½ S.,122½ E. | | | | |
| | Timor I. region. | | | | |
| | H=16 05 38 USCGS | | | | |
| 5. | iP | Z | 22 | 50 | 05.4 |
| | eS | N | | 57 | 35 |
| | e | N | | 59 | 45 |
| | eL | N | 23 | 08 | 57 |
| | eL | E | | 09 | 29 |
| | iP:compression | | | | |
| | 38 N.,69½ E. | | | | |
| | Afganistan-Tadzhik border. | | | | |
| | H=22 40 44 USCGS | | | | |
| 5. | iP | Z | 23 | 31 | 24.1 |
| | S | NE | | 32 | 04.6 |
| | S | E | | | 05.8 |

(cont.)

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| continued | | | | | |
| | i | E | 23h | 32m | 14.6s |
| | iP:compression | | | | |
| 6. | iP | Z | 01 | 37 | 02.7 |
| | e | N | | 57 | 40 |
| | iP:compression | | | | |
| 6. | P | Z | 03 | 19 | 21.9 |
| | i | Z | | | 33.5 |
| | i | Z | | 20 | 06.5 |
| | i | Z | | | 19.7 |
| | iS | N | | | 24.3 |
| | iS | E | | | 27.7 |
| | i | N | | | 33.9 |
| | i | E | | | 34.7 |
| 6. | e | E | 09 | 27 | 59 |
| | e | N | | 29 | 29 |
| 6. | eR | Z | 10 | 38 | 37 |
| 6. | iP | Z | 16 | 47 | 54.4 |
| | i | Z | | 48 | 12.3 |
| | iS | Z | | | 43.7 |
| | eS | N | | | 44 |
| | iP:compression | | | | |
| 6. | iP | Z | 21 | 32 | 00 |
| | eS? | N | | 35 | 27 |
| | eL | E | | 37 | 49 |
| | eL | N | | | 59 |
| | 49½ N.,155 E. | | | | |
| | Northern Kurile Is. | | | | |
| | h:60 km ca. | | | | |
| | H=21 27 51 USCGS | | | | |
| 6. | iP | Z | 23 | 34 | 13.4 |
| | eL | E | | 43 | 24 |
| | eL | E | | 45 | 57 |
| | 52 N.,174 W. Andreanof Is. | | | | |
| | H=23 27 00 USCGS | | | | |
| 7. | P | Z | 04 | 05 | 25 |
| | e | E | | 15 | 43 |
| | e | N | | | 50 |
| | eL? | N | | 24 | 52 |
| | 21 S.,174½ W. Tonga Is. | | | | |
| | H=03 53 53 USCGS | | | | |
| 7. | iP | Z | 05 | 18 | 17.0 |
| | eS? | N | | 25 | 06 |
| | eL | N | | 29 | 00 |
| | 53½ N.,165 W. | | | | |
| | Unimak I. region. | | | | |
| | H=05 10 17 USCGS | | | | |
| 7. | iP | Z | 12 | 27 | 41.9 |
| | eS | E | | 31 | 43 |

(cont.)

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| continued | | | | | |
| | eS | N | 12h | 32m | 04s |
| | eL | E | | 34 | 05 |
| 7. | iP | NZ | 13 | 24 | 36.2 |
| | i | Z | | | 46.9 |
| | iS | NEZ | | 28 | 34.1 |
| | L | N | | 30 | 26 |
| | L | E | | | 39 |
| | L | Z | | | 48 |
| | iP:S,compression | | | | |
| | Mag. $6\frac{1}{4}$ - $6\frac{1}{2}$ (Matsushiro) | | | | |
| | 51 N.,159 E. | | | | |
| | Off southeast coast of Kamchatka. | | | | |
| | H=13 19 45 | USCGS | | | |
| 7. | P | Z | 16 | 56 | 20.5 |
| 7. | iP | Z | 16 | 58 | 57.8 |
| | eS | NE | | 07 | 17 |
| | esS | NE | | 11 | 16 |
| | esSSS? | N | | 15 | 06 |
| | iP:dilatation | | | | |
| | 20 S.,179 W. | Fiji Is. | | | |
| | h:650 km ca. | | | | |
| | H=16 48 47 | USCGS | | | |
| 7. | iP | Z | 18 | 43 | 56.2 |
| | i | Z | | 44 | 06.5 |
| | e | N | | 48 | 08 |
| | e | N | | 51 | 04 |
| | iP:compression | | | | |
| 7. | P | Z | 23 | 41 | 08 |
| | e | N | | 42 | 18 |
| | e | N | | 43 | 20 |
| 8. | iP | Z | 05 | 35 | 33 |
| | eS? | N | | 38 | 55 |
| | eL | N | | 41 | 00 |
| | eL | E | | | 02 |
| | 46 N.,153 E. | Kurile Is. | | | |
| | H=05 31 53 | USCGS | | | |
| 8. | iPKP1 | Z | 07 | 13 | 17.9 |
| | iPKP2 | Z | | | 32.2 |
| | isPKP2? | Z | | 14 | 21.7 |
| | e | E | | 43 | 02 |
| | e | NE | | 48 | 14 |
| | $23\frac{1}{2}$ S.,68 W. | | | | |
| | Northern Chile. | | | | |
| | h:150 km ca. | | | | |
| | H=06 53 31 | USCGS | | | |
| 8. | iP | Z | 10 | 48 | 46.1 |
| | iS | Z | | 49 | 10.1 |
| 8. | iP | Z | 23 | 25 | 22.4 |
| | iS | Z | | | 29.8 |

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| 9. | iP | Z | 03h | 10m | 32.8 |
| | S? | Z | | | 46.3 |
| | iP:compression | | | | |
| 9. | iP | Z | 11 | 16 | 24.3 |
| | dilatation | | | | |
| 9. | P | Z | 14 | 18 | 55.4 |
| | compression | | | | |
| 9. | iP | Z | 15 | 39 | 08.6 |
| | iS | NE | | | 20.0 |
| | iP:dilatation | | | | |
| 9. | P | Z | 22 | 58 | 32 |
| | e | Z | 23 | 00 | 21 |
| 10. | P | Z | 01 | 50 | 36 |
| | eS | N | | 56 | 51 |
| | eL | N | | 59 | 41 |
| | $52\frac{1}{2}$ N.,$169\frac{1}{2}$ W. | Fox Is. | | | |
| | H=01 43 00 | USCGS | | | |
| 10. | iP | Z | 02 | 28 | 29.3 |
| | e | E | | 35 | 05 |
| | iP:dilatation | | | | |
| 10. | iP | Z | 03 | 57 | 08.3 |
| | dilatation | | | | |
| | 22 S.,$178\frac{1}{2}$ E. | | | | |
| | South of Fiji Is. | | | | |
| | h:700 km ca. | | | | |
| | H=03 46 59 | USCGS | | | |
| 10. | iP | Z | 05 | 51 | 40.3 |
| | eL | N | 06 | 00 | - |
| | iP:compression | | | | |
| | 52 N.,$174\frac{1}{2}$ W. | Andreanof Is. | | | |
| | H=05 44 32 | USCGS | | | |
| 10. | iP | Z | 07 | 45 | 25.2 |
| | eS? | E | | 51 | 07 |
| | eL | E | | 53 | 48 |
| | eL | N | | 54 | 12 |
| | 52 N.,174 W. | Andreanof Is. | | | |
| | H=07 38 18 | USCGS | | | |
| 10. | e | E | 11 | 13 | 46 |
| 10. | P | Z | 14 | 28 | 35 |
| | eS | E | | 34 | 43 |
| | eS | N | | | 53 |
| | eL | N | | 37 | 16 |
| | eL | E | | | 52 |
| 10. | P | Z | 18 | 55 | 17 |
| | compression | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 10. | iP | Z | 19 | 01 | 53.0 |
| | eS | E | | 07 | 52 |
| | e | N | | 08 | 35 |
| | eL | NE | | 11 | 22 |
| | iP:dilatation | | | | |
| | 54 N.,166 W. Fox Is. | | | | |
| | H=18 53 59 | | USCGS | | |
| 11. | P | Z | 00 | 46 | 04 |
| | i | Z | | | 11. |
| 11. | P | Z | 06 | 42 | 51 |
| | i | Z | | 43 | 06.9 |
| 11. | eP | Z | 07 | 49 | 19 |
| | e | N | | 53 | 22 |
| 11. | iP | Z | 15 | 04 | 16.0 |
| | iS | Z | | | 35.2 |
| 11. | iP | Z | 19 | 16 | 13.9 |
| | e | Z | | | 39 |
| | iP:dilatation | | | | |
| 11. | e | N | 20 | 21 | 49 |
| | e | E | | 22 | 32 |
| 11. | eP | Z | 20 | 48 | 09 |
| 11. | iP | Z | 20 | 48 | 40.8 |
| | i | Z | | 50 | 49 |
| | iP:compression | | | | |
| 11. | P | Z | 21 | 02 | 28 |
| | e | Z | | 03 | 02 |
| 12. | eP | Z | 00 | 14 | 47 |
| 12. | P | Z | 04 | 41 | 50 |
| | i | Z | | | 58.7 |
| 12. | eP | Z | 17 | 06 | 27 |
| | eL? | N | | 35 | 32 |
| 12. | P | Z | 17 | 40 | 34.3 |
| | epP | Z | | | 52 |
| | 14 N.,145 E. Mariana Is. | | | | |
| | h:100 km ca. | | | | |
| | H=17 35 26 | | USCGS | | |
| 12. | iP | NEZ | 19 | 06 | 12.3 |
| | S | NE | | 13 | 24 |
| | i | Z | | 14 | 12 |
| | ScS? | E | | 15 | 59 |
| | i | Z | | 16 | 16 |
| | i | Z | | | 49 |
| | SS | N | | 17 | 50 |
| | L | E | | 19 | 02 |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| continued | | | | | |
| | L | N | 19 | 19 | 52 |
| | iP:N,E,compression | | | | |
| | Mag. 6 (Matsushiro) | | | | |
| | 8 S.,111 E. | | | | |
| | Near south coast of Java. | | | | |
| | H=18 57 02 | | USCGS | | |
| 12. | P | Z | 22 | 10 | 41 |
| | PPP | Z | | 13 | 02 |
| | S | NE | | 16 | 45 |
| | i | N | | 19 | 17 |
| | L | E | | 20 | 12 |
| | L | N | | | 31 |
| 13. | iP | NEZ | 04 | 24 | 14.3 |
| | pP | N | | | 36 |
| | sP | Z | | | 49 |
| | PP | Z | | | 51 |
| | i | N | | 25 | 18 |
| | i | Z | | | 37 |
| | i | N | | 26 | 12 |
| | i | Z | | 27 | 06 |
| | e | N | | | 38 |
| | S | NEZ | | 28 | 22 |
| | i | N | | | 28 |
| | SS? | N | | 29 | 36 |
| | i | N | | 30 | 12 |
| | i | E | | | 24 |
| | i | N | | | 42 |
| | L | E | | | 55 |
| | L | Z | | 31 | 04 |
| | L | N | | | 22 |
| | L | N | | 33 | 32 |
| | L | E | | 34 | 32 |
| | iP:S,W,compression | | | | |
| | Mag. 6½ (Matsushiro) | | | | |
| | 52½ N.,160 E. | | | | |
| | Off southeast coast of Kamchatka. | | | | |
| | H=04 19 17 | | USCGS | | |
| 13. | P | Z | 06 | 05 | 27 |
| 13. | eP | N | 20 | 46 | 38 |
| | PP | NZ | | 50 | 35 |
| | i | Z | | 51 | 49 |
| | S | N | | 57 | 13 |
| | ScS? | E | | 58 | 07 |
| | ScS? | N | | | 09 |
| | i | Z | | | 27 |
| | PS | N | | 59 | 22 |
| | i | N | 21 | 01 | 16 |
| | SS | NE | | 04 | 16 |
| | L | E | | 11 | 40 |
| | L | N | | 14 | 33 |
| | Mag. 6½ - 6 3/4 (Matsushiro) | | | | |
| | 60 S.,151E. Antarctic Ocean, southwest of Macquarie I. | | | | |
| | H=20 33 01 | | USCGS | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 14. | P | Z | 03 | 29 | 08 |
| | eL | E | | 53 | 33 |
| 14. | P | Z | 05 | 20 | 15 |
| 14. | P | Z | 05 | 35 | 21 |
| | i | Z | | | 29 |
| | i | Z | | | 32 |
| | e | E | | 36 | 17 |
| | e | N | | | 45 |
| 14. | P | Z | 08 | 12 | 01 |
| | eL | E | | 20 | 03 |
| 14. | P | Z | 13 | 19 | 59 |
| | e | Z | | 20 | 46 |
| 14. | P | Z | 13 | 34 | 55 |
| | 51½ N.,173 W. Andreanof Is. | | | | |
| | H=13 27 42 USCGS | | | | |
| 14. | iP | Z | 15 | 21 | 24.6 |
| | S | Z | | | 47.3 |
| | iP:dilatation | | | | |
| 14. | eL | N | 23 | 56 | 10 |
| 15. | eL | N | 01 | 32 | 10 |
| 15. | eP | Z | 04 | 04 | 10 |
| 15. | e | N | 05 | 08 | 48 |
| | eL | N | | 19 | 16 |
| 15. | iP | Z | 06 | 07 | 02.9 |
| | e | NE | | 18 | 34 |
| | iP:dilatation | | | | |
| | 30 S.,179 W. Kermadec Is. | | | | |
| | h:150 km ca. | | | | |
| | H=05 55 21 USCGS | | | | |
| 15. | P | Z | 08 | 59 | 55 |
| | i | Z | 09 | 00 | 24 |
| 15. | iP | Z | 12 | 08 | 40.0 |
| | S | Z | | | 47.5 |
| 15. | iP | Z | 15 | 21 | 56.5 |
| | i | Z | | 23 | 15 |
| | iP:compression | | | | |
| 15. | iP | Z | 16 | 50 | 25.3 |
| | iS | Z | | | 46.4 |
| 16. | P | Z | 23 | 09 | 09.7 |
| | i | Z | | | 17.5 |
| | P:dilatation | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 17. | e | N | 01 | 55 | 19 |
| | eL | E | 02 | 02 | 28 |
| | eL | N | | 03 | 15 |
| 17. | iP | Z | 14 | 23 | 23.2 |
| | eS | E | | 24 | 34 |
| | e | N | | | 47 |
| | i | N | | 25 | 02 |
| | iP:compression | | | | |
| 17. | P | Z | 15 | 20 | 47 |
| 17. | P | Z | 21 | 59 | 05 |
| 17 | P | Z | 22 | 33 | 46 |
| 18. | iP | Z | 07 | 52 | 44.5 |
| 18. | eP | Z | 13 | 20 | 23 |
| 18. | eP | Z | 17 | 25 | 41 |
| | e | N | | 30 | 44 |
| 18. | eL | N | 19 | 41 | 01 |
| 19. | P | Z | 01 | 17 | 56 |
| | i | Z | | 18 | 18 |
| 19. | P | Z | 03 | 09 | 53 |
| 19. | P | Z | 03 | 42 | 18 |
| | eS? | E | | 43 | 30 |
| | eL | N | | | 58 |
| 19. | P | Z | 06 | 29 | 25 |
| 19. | iP | NEZ | 13 | 36 | 00.2 |
| | S | NE | | | 19.9 |
| | iP:S,E,dilatation | | | | |
| 19. | P | Z | 15 | 51 | 56 |
| | i | Z | | 52 | 00 |
| 19. | e | N | 15 | 53 | 34 |
| 19. | P | Z | 16 | 49 | 29.9 |
| 19. | P | Z | 17 | 23 | 29 |
| 19. | P | NEZ | 18 | 33 | 16 |
| | i | Z | | | 23.2 |
| | i | Z | | | 28 |
| | i | NE | | | 30 |
| | i | Z | | 34 | 09 |
| | S | N | | 36 | 50 |
| | i | E | | 37 | 09 |
| | i | N | | | 26 |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| continued | | | | | |
| | P:S,W,dilatation | | | | |
| | Mag. 6½ (Matsushiro) | | | | |
| | 23½ N.,122 E. | | | | |
| | Near east coast of Formosa. | | | | |
| | H=18 28 50 | USCGS | | | |
| 19. | iP | NEZ | 21 | 44 | 16.7 |
| | i | NEZ | | | 34 |
| | S | NEZ | | 45 | 59.4 |
| | iP:N,E,dilatation | | | | |
| | Mag. 6½ (Matsushiro) | | | | |
| | 44½ N.,146 E. | | | | |
| | Off northeast coast of Hokkaido,Japan. | | | | |
| | h:150 km ca. | | | | |
| | H=21 41 59 | USCGS | | | |
| 19. | iP | Z | 22 | 23 | 01.0 |
| | compression | | | | |
| 20. | P | Z | 03 | 47 | 28 |
| 20. | P | Z | 07 | 01 | 53 |
| | i | Z | | 02 | 42 |
| 20. | eP | Z | 08 | 03 | 16 |
| | i | Z | | | 24 |
| 20. | ePKP | Z | 12 | 23 | 47 |
| | PP | NE | | 26 | 39 |
| | ePPP | N | | 29 | 30 |
| | e | N | | 33 | 28 |
| | e | E | | 34 | 21 |
| | SS | NE | | 43 | 54 |
| | L | E | | 58 | 34 |
| | L | N | 13 | 00 | ca. |
| | 11½ N.,42 W. Atlantic Ocean. | | | | |
| | H=12 04 22 | USCGS | | | |
| 20. | P | Z | 19 | 10 | 31 |
| | S | Z | | | 57 |
| 21. | eP | Z | 00 | 26 | 45 |
| | eS | E | | 34 | 23 |
| | eL | N | | 40 | 02 |
| | Mag.6 (Matsushiro) | | | | |
| | 11 S.,167 E. Santa Cruz Is. | | | | |
| | h:100 km ca. | | | | |
| | H=00 17 25 | USCGS | | | |
| 21. | eP? | Z | 06 | 22 | 48 |
| 21. | eP | Z | 07 | 33 | 13 |
| 21. | P | Z | 21 | 31 | 39 |
| 22. | eP | Z | 05 | 35 | 06 |
| | e | N | | 37 | 03 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 22. | eP | Z | 07 | 29 | 00 |
| | eS? | NE | | 33 | 28 |
| | e | E | | 34 | 40 |
| | eL | N | | 35 | 22 |
| 22. | eP | Z | 09 | 49 | 20 |
| | eL? | N | 10 | 02 | 52 |
| 22. | iP? | Z | 15 | 13 | 54.4 |
| 22. | iP1 | Z | 20 | 46 | 54.3 |
| | iP2 | NEZ | | | 55.3 |
| | i E, e NZ | | | 48 | 24 |
| | i | Z | | | 34.3 |
| | iS? | E | | | 43 |
| | iS? | Z | | | 48 |
| | i | N | | | 57 |
| | i | N | | 49 | 11 |
| | i | Z | | | 58 |
| | i | E | | 50 | 09 |
| | iP1:dilatation | | | | |
| | iP2:N,E,dilatation | | | | |
| | Mag. 5.8 (Matsushiro) | | | | |
| 23. | eP | Z | 00 | 57 | 01 |
| | e | N | 01 | 00 | 04 |
| | e | Z | | 02 | 24 |
| 23. | e | Z | 03 | 07 | 52 |
| 23. | iP1 | Z | 06 | 04 | 24.9 |
| | iP2 | NEZ | | | 25.6 |
| | iPP | Z | | 05 | 56 |
| | e | Z | | 06 | 29 |
| | S | N | | 10 | 16 |
| | i | EZ | | | 27 |
| | iL | N | | 13 | 31 |
| | eL | E | | | 36 |
| | iL | E | | 15 | 55 |
| | iP1:compression | | | | |
| | iP2:S,W,compression | | | | |
| | Mag. 6½ (Matsushiro) | | | | |
| | 52½ N.,169½ W. Fox Is. | | | | |
| | H=05 56 52 | USCGS | | | |
| 23. | eP | Z | 11 | 42 | 39 |
| | eS? | Z | | 43 | 11 |
| 23. | e | Z | 15 | 11 | 57 |
| | iS | Z | | 12 | 09.2 |
| 23. | eL? | N | 15 | 18 | 12 |
| 23. | iP | Z | 16 | 12 | 00.9 |
| | i | Z | | | 31.8 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 23. | eP? | Z | 18 | 09 | 30 |
| | e | N | | 12 | 26 |
| 23. | eP | Z | 20 | 30 | 47 |
| | e | E | | 34 | 11 |
| | eL | E | | 36 | 18 |
| 23. | iP | Z | 21 | 47 | 16.0 |
| | i | Z | | 48 | 08.2 |
| | iP:dilatation | | | | |
| 23. | iP | Z | 23 | 07 | 51.1 |
| | iS | NEZ | | 08 | 36.9 |
| | iP:dilatation | | | | |
| 24. | ePKP1? | Z | 00 | 11 | 41 |
| | i | Z | | 12 | 05.8 |
| | iPKP2? | Z | | | 36.5 |
| | 32 S.,67 W. | | | | |
| | San Luis Province,Argentina. | | | | |
| | H=23 51 33 | USCGS | | | |
| 24. | iP | Z | 00 | 27 | 36.6 |
| | i | NZ | | | 39.7 |
| | i | Z | | 28 | 13.2 |
| | e | Z | | 34 | 18 |
| | eS | N | | 35 | 43 |
| | eL | N | | 41.6 | |
| | Mag. 6¼ (Matsushiro) | | | | |
| | 14½ S.,167½ E. | | | | |
| | New Hebrides Is. | | | | |
| | H=00 17 37 | USCGS | | | |
| 24. | eP | Z | 00 | 31 | 45 |
| 24. | eP | Z | 02 | 45 | 21 |
| | 40 N.,29½ E. Northern Turkey. | | | | |
| | H=02 33 13 | USCGS | | | |
| 24. | P | Z | 06 | 16 | 56.0 |
| | eS | N | | 20 | 21 |
| | eL | NE | | 21.6 | |
| 24. | iP | Z | 09 | 17 | 52.6 |
| | i | Z | | 18 | 21.7 |
| | PP | Z | | 20 | 37 |
| | iS | NE | | 26 | 23 |
| | e | Z | | | 45 |
| | e | Z | | | 59 |
| | iScS | E | | 27 | 12 |
| | eSSS | E | | 34 | 23 |
| | iP:dilatation | | | | |
| | Mag. 6 3/4 (Matsushiro) | | | | |
| | 20½ S.,179 W. Fiji Is. | | | | |
| | h:550 km ca. | | | | |
| | H=09 07 30 | USCGS | | | |
| 24. | iP | Z | 16 | 57 | 42.9 |
| | dilatation | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 24. | iP | Z | 18 | 50 | 58.3 |
| | e | E | | 53 | 03 |
| | e | N | | | 08 |
| | iP:compression | | | | |
| 24. | iP | Z | 20 | 05 | 13.9 |
| | iS | Z | | | 15.8 |
| | iP:compression | | | | |
| 24. | ePKP | Z | 20 | 27 | 24 |
| | e | Z | | | 43 |
| | e | E | | 36 | 24 |
| | e | N | | 40 | 53 |
| | ePPS | E | | 44 | 59 |
| | eSS? | E | | 52 | 10 |
| | e | E | 21 | 00 | 08 |
| | eL | E | | 19 | 52 |
| | eL | N | | 20 | 27 |
| | eL | N | | 24 | 31 |
| | eL | N | | 41 | 14 |
| | eL | E | | 48 | 26 |
| | Mag. 6 - 6¼ (Matsushiro) | | | | |
| | 29 S.,69 W. | | | | |
| | La Rioja Province,Argentina. | | | | |
| | H=20 07 17 | USCGS | | | |
| 24. | eP | Z | 21 | 57 | 46 |
| | e | E | 22 | 06 | 58 |
| | e | N | | 07 | 22 |
| | eL | N | | 21 | 16 |
| | eL | E | | | 54 |
| | eL | Z | | 26.6 | |
| | eL | E | | 27 | 14 |
| | eL | Z | | 30 | 49 |
| | eL | Z | | 31.6 | |
| | Mag. 6¼ (Matsushiro) | | | | |
| | 25 N.,109½ W. | | | | |
| | Gulf of California. | | | | |
| | H=21 44 28 | USCGS | | | |
| 24. | iP | Z | 23 | 05 | 48.9 |
| | compression | | | | |
| 25. | iP | EZ | 01 | 47 | 39.1 |
| | i | Z | | 48 | 25.8 |
| | iS | NE | | 51 | 34 |
| | eL | N | | 53 | 21 |
| | eL | E | | | 23 |
| | iP:E,compression | | | | |
| | Mag. 5 3/4 (Matsushiro) | | | | |
| | 21½ N.,121½ E. | | | | |
| | Formosa foreshock. | | | | |
| | H=01 42 52 | USCGS | | | |
| 25. | eP | Z | 02 | 31 | 04 |
| | 39 N.,23 E. | | | | |
| | Near east coast of Greece. | | | | |
| | H=02 18 32 | USCGS | | | |

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| 30. | iP | Z | 01h | 55m | 32s.8 |
| | eS | NE | 02 | 05 | 59 |
| | eL | N | | 24 | 46 |
| | eL | E | | 34 | 04 |
| | iP:compression | | | | |
| | Mag. 6¼ (Matsushiro) | | | | |
| | 36 N.,27½ E. | | | | |
| | Dodecanese Is. | | | | |
| | H=01 43 03 | | USCGS | | |
| 30. | iP | Z | 02 | 20 | 56.0 |
| | compression | | | | |
| | 53 N.,167 W. Fox Is. | | | | |
| | H=02 13 08 | | USCGS | | |
| 30. | eP | Z | 07 | 42 | 51 |
| | eSKSoreS | N | | 53 | 08 |
| | eSS | N | | 58 | 32 |
| | eSSS | N | 08 | 03 | 10 |
| | eL | NE | | 11 | 10 |
| | Mag. 6 - 6¼ (Matsushiro) | | | | |
| | 36 N.,27½ E. | | | | |
| | Dodecanese Is. | | | | |
| | H=07 30 20 | | USCGS | | |
| 30. | e | Z | 08 | 06 | 54 |
| 30. | P | Z | 14 | 54 | 07.5 |
| | iS | Z | | | 36.5 |
| 30. | eP | Z | 21 | 17 | 31 |
| | i | Z | | | 42.0 |
| | i | Z | | 18 | 02.0 |
| | eS? | NE | | 23 | 00 |
| | eL | N | | 25 | 00 |
| | eL | E | | | 20 |
| 30. | iP | Z | 21 | 45 | 27.5 |
| | iS | Z | | | 29.4 |
| | iP:dilatation | | | | |
| 31. | iP1 | Z | 02 | 37 | 38.5 |
| | iP2 | NEZ | | | 39.2 |
| | i | NE | | | 47.2 |
| | i | NE | | 38 | 02 |
| | iS | NEZ | | | 07 |
| | iP1:dilatation | | | | |
| | iP2:N,E,dilatation | | | | |
| | Mag. 6 (Matsushiro) | | | | |
| 31. | P | Z | 02 | 59 | 21.2 |
| | 39 N.,123½ W. | | | | |
| | Mendocino County,California. | | | | |
| | H=02 47 45 | | USCGS | | |
| 31. | P | Z | 04 | 32 | 54.6 |
| | (cont.) | | | | |

| Date | Phase | Comp. | Time(GMT) | | |
|---|---|---|---|---|---|
| continued | | | | | |
| | eS | N | 04h | 40m | 02s |
| | e | N | | 43 | 27 |
| | eL | E | | 48 | 30 |
| | P:dilatation | | | | |
| | 8 S.,161 E. | | | | |
| | Solomon Is. region. | | | | |
| | H=04 24 04 | | USCGS | | |
| 31. | iP | Z | 04 | 39 | 44.7 |
| | i | Z | | 40 | 07.6 |
| | iS Z, eS NE | | | | 28.2 |
| | iP:compression | | | | |
| 31. | eP | Z | 07 | 09 | 00 |
| | iS | Z | | | 08.1 |
| 31. | P | Z | 07 | 29 | 37.8 |
| 31. | ePKP | Z | 10 | 26 | 57 |
| | ePP | Z | | 28 | 25 |
| | ePPP | Z | | 31 | 09 |
| | eSKKS? | N | | 35 | 00 |
| | i | Z | | 38 | 08 |
| | ePS? | E | | | 22 |
| | ePS | Z | | 39 | 50 |
| | e | Z | | 40 | 54 |
| | iSS N,eSS Z | | | 45 | 16 |
| | iSS | E | | | 25 |
| | iSSS | NE | | 50 | 24 |
| | eLq | E | | 56.7 | |
| | eLq | N | | 56 | 58 |
| | eLr | E | 11 | 03 | 19 |
| | eL | Z | | 05 | 28 |
| | Mag. 7 - 7¼ (Matsushiro) | | | | |
| | 6½ N.,83 W. | | | | |
| | Off coast of Panama. | | | | |
| | H=10 07 54 | | USCGS | | |
| 31. | eP | Z | 10 | 33 | 47 |
| | e | Z | | 36 | 22 |
| | In previous shock | | | | |
| 31. | P | Z | 15 | 42 | 20 |
| | eSKS | N | | 52 | 53 |
| | eSKS | Z | | | 58 |
| | eS | E | | 53 | 08 |
| | eSSS | N | 16 | 03 | 30 |
| | eLq | E | | 05 | 57 |
| | eL | N | | 09 | 03 |
| | Mag.5 3/4 (Matsushiro) | | | | |
| | 55 S.,148 E. | | | | |
| | South of Tasmania. | | | | |
| | H=15 29 10 | | USCGS | | |
| 31. | eP | Z | 15 | 47 | 49 |
| | eS | Z | | 48 | 31 |

| Date | Phase | Comp. | Time (GMT) | | |
|---|---|---|---|---|---|
| 31. | eSKS | N | $16^h$ | $51^m$ | $31^s$ |
| | e | N | 17 | 01 | 33 |
| | eSS | E | | 02 | 08 |
| | eL | EZ | | 21 | 56 |

Mag. 6 (Matsushiro)
1½ N.,86 W.
Galapagos Is. region.
H=16 24 17 USCGS

| | | | | | |
|---|---|---|---|---|---|
| 31. | e | Z | 18 | 00 | 42 |

Takeshi Honda

Director

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# MATSUSHIRO SEISMOLOGICAL OBSERVATORY, JAPAN.

## Seismological Bulletin

### for November 1 to December 31, 1957

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 1. | iP | Z | 13 | 21 | 35.1 |
| | i | Z | | 22 | 04 |
| | iP:dilatation | | | | |
| 1. | eP | Z | 16 | 26 | 43 ca. |
| | S? | Z | | 27 | 05 |
| 1. | iP | Z | 16 | 58 | 43.1 |
| | S | Z | | 59 | 08.4 |
| | iP:dilatation | | | | |
| 1. | eP | Z | 23 | 11 | 45 |
| 1. | i | Z | 23 | 30 | 19 |
| 2. | P | Z | 01 | 25 | 57.1 |
| | i | Z | | 28 | 01 |
| | P:dilatation | | | | |
| | 52½ N.,169 W. Fox Is. | | | | |
| | H=01 18 18 USCGS | | | | |
| 2. | eP? | Z | 05 | 31 | 32 |
| | S? | Z | | | 53 |
| 2. | P | Z | 16 | 23 | 26 |
| | PPP | Z | | 25 | 03 |
| | S | E | | 28 | 37 |
| | S | N | | | 39 |
| | L | E | | 30 | 22 |
| | L | N | | | 24 |
| | Lr | N | | 32 | 23 |
| | Mag. 5½ (Matsushiro) | | | | |
| | 6 N.,127½ E. | | | | |
| | Off southeast coast of Mindanao. | | | | |
| | H=16 16 53 USCGS | | | | |
| 2. | iP | Z | 18 | 03 | 42.8 |
| | compression | | | | |
| 2. | iP NZ, P E | | 18 | 40 | 11.7 |
| | iPcP | Z | | 41 | 05.4 |
| | S | E | | 47 | 59 |
| | S | NZ | | 48 | 01 |
| | SS | N | | 51 | 56 |
| | L | NE | | 56 | 50 |
| | iP:N,compression | | | | |
| | Mag. 6¼ (Matsushiro) | | | | |
| | 13 S.,166½ E. New Hebrides Is. | | | | |
| | H=18 30 24 USCGS | | | | |
| 2. | eP | Z | 22 | 11 | 37 |
| | e | Z | | | 46 |
| 3. | P | Z | 07 | 35 | 52 |
| | S? | Z | | 36 | 09 |
| 3. | eP | Z | 10 | 32 | 57 |
| | S | N | | 39 | 11 |
| | S | E | | | 31 |
| | L | NE | | 44 | 14 |
| | Mag. 5 3/4 (Matsushiro) | | | | |
| | 6 S.,147 E. Near northeast coast of New Guinea. | | | | |
| | H=10 24 51 USCGS | | | | |
| 3. | eP | Z | 10 | 57 | 48 |
| | i | Z | | | 57 |
| | i | Z | | 58 | 12 |
| 3. | eP | Z | 11 | 22 | 40 |
| | S | N | | 29 | 04 |
| | S | E | | | 07 |
| | L | NE | | 33 | 53 |
| | Mag. 5¼ - 5½ (Matsushiro) | | | | |
| | 6½ S.,147 E. Near northeast coast of New Guinea. | | | | |
| | H=11 14 30 USCGS | | | | |
| 3. | L | NE | 12 | 53 | 35 |
| 3. | eL | N | 19 | 42.7 ca. | |
| 3. | eP | Z | 20 | 15 | 13 |
| | L | N | | 22 | 29 ca. |
| 3. | eP | Z | 22 | 42 | 59 |
| 4. | iP | Z | 02 | 37 | 34.4 |
| | eL? | N | | 48 | 39 |
| | iP:compression | | | | |
| | 52 N.,175½ W. Andreanof Is. | | | | |
| | H=02 30 30 USCGS | | | | |
| 4. | P | Z | 13 | 12 | 14.1 |
| | i | Z | | | 45 |
| | i | Z | | 13 | 57 |
| | P:dilatation | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 4. | eP | Z | 13 | 51 | 24 |
| | e | Z | | 58 | 48 |
| | L | N | 14 | 04 | 11 |
| 4. | P | Z | 20 | 24 | 56 |
| 4. | eP | Z | 23 | 22 | 38 |
| | e | Z | | 23 | 12 |
| 5. | P | Z | 00 | 39 | 43 |
| | eL | NE | | 52.7 | ca. |
| 5. | iP | Z | 03 | 20 | 27.2 |
| | iS | NE | | | 40.2 |
| | iP:dilatation | | | | |
| 5. | iP | Z | 10 | 03 | 21.8 |
| | S | N | | 10 | 22 |
| | S | E | | | 26 |
| | eL | NE | | 17.7 | ca. |
| | iP:compression | | | | |
| | Mag. 6¼ (Matsushiro) | | | | |
| | 13 S.,169 E. | | | | |
| | New Hebrides Is. region. | | | | |
| | h:650 km ca. | | | | |
| | H=09 54 29 | USCGS | | | |
| 5. | P | Z | 19 | 58 | 00 |
| | L | N | 20 | 05 | 50 |
| | Mag. 5 - 5¼(Matsushiro) | | | | |
| | 51 N.,178½ W. Andreanof Is. | | | | |
| | H=19 51 15 | USCGS | | | |
| 5. | iP | Z | 22 | 59 | 57.6 |
| | compression | | | | |
| 6. | iP | Z | 00 | 08 | 50.1 |
| | S? | Z | | 09 | 14 |
| | iP:compression | | | | |
| 6. | P | Z | 03 | 10 | 01 |
| 6. | P | Z | 10 | 31 | 08 |
| | i | Z | | | 21 |
| | S? | Z | | | 30 |
| 6. | iP | NEZ | 12 | 34 | 20.8 |
| | iS | NE | | | 24.4 |
| | iP:N,dilatation | | | | |
| 6. | iP | Z | 13 | 15 | 46.0 |
| | S | Z | | 18 | 07 |
| | L | N | | | 29 |
| | L | E | | 19 | 20 |
| | iP:compression | | | | |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| | continued | | | | |
| | Mag. 5 3/4 (Matsushiro) | | | | |
| | 45 N.,149½ E. Kurile Is. | | | | |
| | H=13 12 53 | USCGS | | | |
| 6. | eP | Z | 13 | 54 | 55 |
| | i | Z | | 55 | 03 |
| | i | Z | | | 44 |
| 6. | P | Z | 14 | 56 | 45 |
| | S? | Z | | 57 | 18.9 |
| 7. | iP | Z | 04 | 21 | 57.1 |
| | dilatation | | | | |
| | 52 N.,179 E. Rat Is. | | | | |
| | h:150 km ca. | | | | |
| | H=04 15 35 | USCGS | | | |
| 7. | eSKS | E | 06 | 47 | 22 |
| | PSPS | NE | | 57 | 27 |
| | L | E | 07 | 08 | 10 |
| | L | N | | | 32 |
| | Mag. 6 (Matsushiro) | | | | |
| | 57½ S.,143½ W. | | | | |
| | South Pacific Ocean. | | | | |
| | H=06 21 56 | USCGS | | | |
| 7. | P | Z | 16 | 53 | 38 |
| | e | E | 17 | 01.7 | ca. |
| 7. | P | Z | 20 | 22 | 47.1 |
| | S? | Z | | 23 | 21.0 |
| | P:dilatation | | | | |
| 7. | iP | Z | 23 | 41 | 51.4 |
| | iS | NEZ | | 42 | 25.7 |
| | iP:dilatation | | | | |
| 8. | iP | Z | 01 | 37 | 56.5 |
| | iS | Z | | 38 | 23 |
| | S | E | | | 24 |
| | iP:compression | | | | |
| 8. | P | Z | 02 | 47 | 56 |
| 8. | eP | Z | 02 | 54 | 36 |
| | eL | E | 03 | 05 | 13 |
| | 5½ S.,155 E. Solomon Is. | | | | |
| | H=02 46 22 | USCGS | | | |
| 8. | P | Z | 04 | 53 | 28.6 |
| | i | Z | | 54 | 11 |
| | P:dilatation | | | | |
| 8. | i | Z | 06 | 25 | 09 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 8. | iP | Z | 09 | 05 | 32.1 |
| | i | Z | | | 54.3 |
| | S | E | | 06 | 55 |
| | L | NE | | 07 | 47 |
| | iP:compression | | | | |
| | Mag. 5 3/4 (Matsushiro) | | | | |
| | 43 N.,144½ E. Near east coast of Hokkaido,Japan. | | | | |
| | H=09 03 34 | | USCGS | | |
| 8. | eP | Z | 18 | 48 | 03 |
| | eS | NE | | 55 | 15 |
| | eL | N | 19 | 00.7 | ca. |
| 8. | iP | Z | 23 | 19 | 44.4 |
| | iS | Z | | 20 | 15.8 |
| | S | NE | | | 17 |
| | iP:compression | | | | |
| 9. | eP | Z | 02 | 06 | 40 |
| | e | Z | | 07 | 13 |
| 9. | eP | Z | 06 | 25 | 04 |
| | 53½ N.,164 W. Unimak I. region. | | | | |
| | H=06 16 59 | | USCGS | | |
| 9. | P | Z | 16 | 23 | 46.4 |
| | iS | Z | | 24 | 19 |
| | S | NE | | | 21 |
| | P:compression | | | | |
| 9. | e | Z | 16 | 27 | 11 |
| | e | Z | | | 46 |
| 9. | P | Z | 21 | 56 | 48 |
| | S | Z | | 57 | 21 |
| 10. | iP Z, P N | | 02 | 44 | 52.3 |
| | i | Z | | 46 | 56 |
| | S | NE | | 51 | 27 |
| | L | NE | | 54 | 53 |
| | Lr | E | | 57 | 11 |
| | iP:N,compression | | | | |
| | Mag. 6¼ - 6½ (Matsushiro) | | | | |
| | 7 S.,155½ E. Solomon Is. | | | | |
| | H=02 36 21 | | USCGS | | |
| 10. | P | Z | 03 | 52 | 19.3 |
| | i | Z | | 53 | 56 |
| | P:dilatation | | | | |
| | 7½ S.,155½ E. Solomon Is. | | | | |
| | H=03 43 49 | | USCGS | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 10. | P | Z | 05 | 39 | 52 |
| | S | N | | 49 | 37 |
| | S | E | | 50 | 07 |
| | 24½ S.,175½ W. Tonga Is. region. | | | | |
| | H=05 28 10 | | USCGS | | |
| 10. | iP | NZ | 05 | 57 | 05.7 |
| | S N,eS E | | 06 | 03 | 04 |
| | S | Z | | | 59 |
| | L | NE | | 06 | 19 |
| | Lr | N | | 08 | 18 |
| | iP:N,dilatation | | | | |
| | Mag. 6¼ - 6½ (Matsushiro) | | | | |
| | 6½ S.,147 E. Near northeast coast of New Guinea. | | | | |
| | H=05 48 57 | | USCGS | | |
| 10. | P | Z | 07 | 57 | 19.1 |
| | iS | Z | | | 52.0 |
| 10. | eP | Z | 08 | 01 | 27 |
| | S | Z | | 02 | 01 |
| 10. | P | Z | 08 | 06 | 13 |
| | S | Z | | | 44.9 |
| 10. | iP | NZ | 08 | 26 | 46.6 |
| | i | E | | | 59 |
| | i | E | | 27 | 16.8 |
| | iS | N | | | 21.5 |
| | iP:S,dilatation | | | | |
| | Mag. 5.9 (Matsushiro) | | | | |
| | 34½ N.,139 E. Near south coast of Honshu,Japan. | | | | |
| | H=08 26 06 | | USCGS | | |
| 10. | e | Z | 08 | 32 | 43 ca. |
| 10. | e | Z | 08 | 36 | 26 |
| | e | Z | | 37 | 01 |
| 10. | e | Z | 08 | 39 | 43 ca. |
| 10. | eP | Z | 08 | 52 | 23 |
| | 7½ S.,156½ E. Solomon Is. | | | | |
| | H=08 42 50 | | USCGS | | |
| 10. | P | Z | 09 | 14 | 50.1 |
| | iS | Z | | 15 | 24 |
| | P:compression | | | | |
| 10. | iP | Z | 09 | 16 | 14.5 |
| | iS | Z | | | 47.2 |
| | iP:dilatation | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 10. | eP | Z | 09 | 27 | 36 |
| 10. | iP | Z | 09 | 38 | 50.3 |
| | S | Z | | | 55.3 |
| | iP:dilatation | | | | |
| 10. | iP 1 | Z | 09 | 41 | 19.8 |
| | iP 2 | NEZ | | | 21.3 |
| | iS | NE | | | 48 |
| | iP 1:compression | | | | |
| | iP 2:N,W,dilatation | | | | |
| | Mag. 5.6 (Matsushiro) aftershock. | | | | |
| 10. | iP | Z | 09 | 46 | 32.4 |
| | iS | Z | | 47 | 06 |
| | iP:dilatation | | | | |
| | Mag. 5.3 (Matsushiro) | | | | |
| | About 100 miles south of Honshu,Japan. | | | | |
| | H=09 40 30 | USCGS | | | |
| 10. | eP | Z | 10 | 01 | 00 |
| 10. | eP | Z | 10 | 23 | 36 |
| | eS | Z | | 24 | 10 |
| 10. | eP | Z | 10 | 26 | 47 |
| | eS | Z | | 27 | 21 |
| 10. | eP | Z | 11 | 33 | 23 |
| | S | Z | | | 56 |
| 10. | eP | Z | 11 | 35 | 19 |
| | S | Z | | | 52 |
| 10. | eP | Z | 11 | 50 | 55 |
| | eS | Z | | 51 | 28 |
| 10. | eP 1 | Z | 12 | 24 | 50 |
| | P 2 | Z | | | 51.2 |
| | S | E | | 26 | 40 |
| | S ? | Z | | | 49 |
| | L | N | | 27 | 10 |
| 10. | eP | Z | 13 | 35 | 40 |
| | S | Z | | 36 | 13 ca. |
| 10. | P | Z | 16 | 26 | 16.1 |
| | S | Z | | | 50 |
| | P:dilatation | | | | |
| 10. | eP | Z | 17 | 44 | 10 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 10. | eP | Z | 18 | 09 | 43 ca. |
| | 2 S.,116 E. Near east coast of Borneo. | | | | |
| | H=18 01 37 | USCGS | | | |
| 10. | eP | Z | 18 | 52 | 15 |
| | eS | Z | | | 45 |
| 10. | iP | NZ | 19 | 20 | 48.6 |
| | P | E | | | 50.3 |
| | S | NE | | 21 | 22.3 |
| | iP:N,E,dilatation | | | | |
| | Mag. 6.6 (Matsushiro) | | | | |
| | 34 N.,139½ E. Near east coast of Honshu,Japan. | | | | |
| | H=19 20 05 | USCGS | | | |
| 10. | iP | Z | 19 | 30 | 58 |
| | i | NE | | 31 | 13 |
| | i | E | | | 48 |
| | i | N | | | 49 |
| 10. | iP | Z | 19 | 37 | 04 |
| 10. | iP | Z | 19 | 39 | 03 |
| 10. | P | Z | 19 | 42 | 14 |
| 10. | P | Z | 19 | 42 | 31 ca. |
| 10. | P | Z | 19 | 46 | 03 ca. |
| 10. | P | Z | 19 | 52 | 11 |
| 10. | P 1 | Z | 19 | 53 | 51.3 |
| | P 2 | NZ | | | 53 |
| | S | NE | | 54 | 24 |
| | P 2:N,compression | | | | |
| | Mag. 5.5 (Matsushiro) aftershock. | | | | |
| 10. | P | Z | 20 | 02 | 07 |
| 10. | eP | Z | 20 | 06 | 09 |
| | eS | Z | | | 47 |
| 10. | P 1 | Z | 20 | 24 | 28.2 |
| | iP2 | Z | | | 29.6 |
| | S | N | | 25 | 02 |
| | iP 2:compression | | | | |
| 10. | P | Z | 20 | 28 | 54 |
| | compression | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 10. | P | Z | 20 | 31 | 13.5 |
| | dilatation | | | | |
| 10. | P | Z | 20 | 46 | 15 |
| | compression | | | | |
| 10. | iP | Z | 21 | 07 | 04.5 |
| | S | Z | | | 37 |
| | iP:compression | | | | |
| 10. | P | Z | 21 | 11 | 48 |
| | S | Z | | 12 | 21 |
| 10. | P | Z | 21 | 49 | 20 |
| 10. | P | Z | 21 | 53 | 16 |
| | S | Z | | | 49 |
| 10. | eP | Z | 21 | 59 | 09 |
| 10. | eP | Z | 22 | 08 | 38 |
| 10. | eP? | Z | 22 | 23 | 11 |
| 10. | P | Z | 22 | 29 | 05 |
| 10. | P | Z | 22 | 41 | 30 |
| | S | Z | | 42 | 01 |
| | P:compression | | | | |
| 10. | P | Z | 23 | 17 | 41 |
| 10. | P | Z | 23 | 24 | 36 |
| | S | Z | | 25 | 09 |
| | P:compression | | | | |
| 10. | iP | Z | 23 | 31 | 01.7 |
| | S | NE | | | 34 |
| | iP:compression | | | | |
| 11. | P | Z | 00 | 10 | 40.2 |
| | i | Z | | | 43 |
| 11. | P | Z | 00 | 12 | 24 |
| | S | Z | | | 58 |
| | P:dilatation | | | | |
| | Mag. 4.5 (Matsushiro) aftershock. | | | | |
| 11. | P | Z | 00 | 21 | 59.5 |
| | S | Z | | 22 | 33 |
| 11. | P | Z | 00 | 23 | 08.1 |
| | S | Z | | | 41 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 11. | eP | Z | 01 | 19 | 20 |
| 11. | eP 1 | Z | 01 | 40 | 30 |
| | P 2 | Z | | | 32 |
| | S | Z | | 41 | 03 |
| | Mag. 4.0 (Matsushiro) aftershock. | | | | |
| 11. | iP | Z | 01 | 56 | 17.6 |
| | i | Z | | | 24.3 |
| | S | E | | | 55 |
| | iP:compression | | | | |
| | Mag. 4.6 (Matsushiro) aftershock. | | | | |
| 11. | P | Z | 02 | 11 | 24.7 |
| | e | Z | | | 46 |
| 11. | P | Z | 03 | 00 | 57.6 |
| | eS | Z | | 01 | 30 |
| 11. | iP | Z | 03 | 02 | 17.5 |
| | S | Z | | | 51 |
| | iP:compression | | | | |
| | Mag. 4.2 (Matsushiro) aftershock. | | | | |
| 11. | P | Z | 03 | 11 | 27.4 |
| | eS | Z | | 12 | 01 |
| 11. | P | Z | 04 | 01 | 52 |
| 11. | eP | Z | 04 | 05 | 45 |
| 11. | e | Z | 04 | 07 | 30 |
| 11. | P | Z | 04 | 40 | 26.8 |
| | iS | Z | | | 59.3 |
| | P:dilatation | | | | |
| 11. | iP | Z | 05 | 00 | 16.3 |
| | S | Z | | | 47 |
| | iP:dilatation | | | | |
| | Mag. 4.3 (Matsushiro) aftershock. | | | | |
| 11. | eP | Z | 05 | 12 | 34 |
| | S | Z | | 13 | 07 |
| 11. | eP | Z | 05 | 21 | 26 |
| 11. | P 1 | Z | 06 | 29 | 36.9 |
| | iP 2 | Z | | | 38.3 |
| | S | Z | | 30 | 09 |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| | continued | | | | |
| | P 1:compression | | | | |
| | P 2:compression | | | | |
| | Mag. 4.6 (Matsushiro) aftershock. | | | | |
| 11. | P | Z | 06 | 32 | 15 |
| | S | Z | | | 48 |
| 11. | eP | Z | 06 | 36 | 11 |
| | eS | Z | | | 44 |
| 11. | eP | Z | 07 | 29 | 48 |
| | eS | Z | | 30 | 19 |
| 11. | P | Z | 11 | 18 | 08 |
| | iS | Z | | | 40.9 |
| 11. | eP | Z | 11 | 26 | 46 |
| | 32.8 N.,132.0 E. Southeast part of Oita Prefecture,Japan. h:20 km ca. H=11 20 24 J.M.A. | | | | |
| 11. | iP | Z | 11 | 30 | 03.6 |
| | S | Z | | | 36 |
| | iP:compression | | | | |
| | Mag. 4.5 (Matsushiro) aftershock. | | | | |
| 11. | P | Z | 15 | 35 | 29 |
| 11. | P | Z | 16 | 08 | 50.3 |
| | eS | Z | | 09 | 24 |
| 11. | eP | Z | 16 | 28 | 08 |
| 11. | eP | Z | 17 | 24 | 18 ca. |
| 11. | eP | Z | 17 | 42 | 20 ca. |
| 11. | eP | Z | 17 | 44 | 39 |
| | eS | Z | | 45 | 14 |
| 11. | eP | Z | 18 | 36 | 26 |
| | i | Z | | | 41.2 |
| 11. | eP | Z | 19 | 34 | 26 |
| | eS | Z | | 35 | 01 |
| 11. | P | Z | 20 | 02 | 34.6 |
| | S | Z | | 03 | 06.7 |
| | Mag. 4.5 (Matsushiro) aftershock. | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 11. | eP | Z | 20 | 18 | 06 ca. |
| 12. | P | Z | 00 | 31 | 38 |
| | 24 S.,177 W. Tonga Is. region. H=00 20 03 USCGS | | | | |
| 12. | eP | Z | 01 | 39 | 51 |
| | e | E | | | 51 ca. |
| | Mag. 5 3/4 (Matsushiro) 6 S.,149½ E. New Britain. H=01 31 40 USCGS | | | | |
| 12. | eP | Z | 04 | 01 | 12 |
| 12. | P | Z | 05 | 54 | 23.0 |
| | dilatation | | | | |
| 12. | P | Z | 09 | 42 | 08 |
| | e | N | | | 50.0 |
| | eL? | N | | | 55.4 |
| | 7½ S.,128½ E. Banda Sea. H=09 33 51 USCGS | | | | |
| 12. | P | Z | 11 | 52 | 59 |
| | iS? | Z | | 53 | 18 |
| 12. | eP | Z | 13 | 43 | 48 |
| | eS | Z | | 44 | 22 |
| 12. | eP | Z | 14 | 01 | 59 |
| | eS | Z | | 02 | 32 |
| 12. | iP | Z | 19 | 23 | 44.1 |
| | e | Z | | 24 | 15 |
| | iP:dilatation | | | | |
| 12. | eP | Z | 20 | 41 | 00 |
| | e | Z | | | 50 |
| 12. | eP | Z | 21 | 28 | 45 |
| | i | Z | | | 51.1 |
| | eS? | Z | | 29 | 17 |
| 13. | eP | Z | 00 | 48 | 12 |
| 13. | P | Z | 01 | 13 | 29 |
| 13. | eP | Z | 02 | 09 | 49 |
| | i | Z | | | 55 |
| | e | Z | | 10 | 22 |
| 13. | P | Z | 03 | 37 | 52 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 13. | eP | Z | 03 | 47 | 51 |
| | eS | Z | | 48 | 22 |
| 13. | eP | Z | 05 | 40 | 08 |
| 13. | iP | Z | 08 | 46 | 05.0 |
| | S | NE | | 47 | 16 |
| | i | Z | | | 33 |
| | iP:dilatation | | | | |
| | Mag. 5 (Matsushiro) | | | | |
| | Near south coast of Hokkaido,Japan. | | | | |
| | H=08 44 36 | | USCGS | | |
| 13. | iP | Z | 08 | 50 | 16.6 |
| | dilatation | | | | |
| 13. | eP | Z | 16 | 18 | 48 |
| 13. | eP | Z | 16 | 20 | 25 |
| | i | Z | | | 27 |
| 13. | P | Z | 17 | 07 | 25.2 |
| 13. | iP | Z | 17 | 34 | 50.3 |
| | P | NE | | | 51 |
| | iS? | N | | 45 | 06 |
| | i | E | | | 34 |
| | i | N | | | 55 |
| | i | N | | 49 | 37 |
| | SS | N | | 50 | 27 |
| | SSS | N | | 53 | 43 |
| | iLq | E | | 56 | 16 |
| | iLq | N | | | 35 |
| | Lr | Z | 18 | 00 | 12 |
| | Lr | E | | | 18 |
| | iLr | N | | | 30 |
| | iP:N,W,compression | | | | |
| | Mag. 7 (Matsushiro) | | | | |
| | 33 S.,179 W. | | | | |
| | Kermadec Is. region. | | | | |
| | H=17 22 41 | | USCGS | | |
| 13. | eP | Z | 23 | 16 | 36 |
| | i | Z | | | 39.7 |
| 14. | eP | Z | 01 | 38 | 58 |
| 14. | P | Z | 01 | 43 | 36 |
| | i | Z | | | 40 |
| | eS? | Z | | 44 | 56 |
| 14. | P | Z | 04 | 26 | 51.2 |
| | dilatation | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 14. | eP | Z | 04 | 41 | 39 |
| | 51 N.,179 W. Andreanof Is. | | | | |
| | H=04 34 41 | | USCGS | | |
| 14. | eP | Z | 04 | 48 | 21 |
| 14. | eP | Z | 05 | 01 | 45 ca. |
| 14. | P | Z | 05 | 27 | 22.2 |
| | compression | | | | |
| | Andreanof Is. | | | | |
| | H=05 20 17 | | USCGS | | |
| 14. | e | Z | 06 | 08 | 34 |
| 14. | P? | Z | 11 | 11 | 35 |
| 14. | iP | Z | 13 | 30 | 10.9 |
| | iS Z,eS E | | | | 51 |
| | i | Z | | | 57 |
| | iP:compression | | | | |
| 14. | P | Z | 17 | 37 | 47.6 |
| | e | Z | | 38 | 16 |
| | P:compression | | | | |
| 14. | P | Z | 21 | 55 | 05 |
| 14. | iP | Z | 23 | 58 | 12.1 |
| | dilatation | | | | |
| 15. | P | Z | 00 | 13 | 47.3 |
| | e | Z | | 14 | 09 |
| 15. | iP | NEZ | 02 | 39 | 30.5 |
| | iS | Z | | | 49.7 |
| | iS | NE | | | 51.1 |
| | iP:S,W,compression | | | | |
| 15. | P | Z | 06 | 14 | 21 |
| | e | N | | 16 | 17 |
| | eS | NE | | 20 | 20 |
| | eL | NE | | 23.2 | |
| | Mag. $5\frac{1}{4}$ - $5\frac{1}{2}$ (Matsushiro) | | | | |
| | 52 N.,$171\frac{1}{2}$ W. Fox Is. | | | | |
| | H=06 06 55 | | USCGS | | |
| 15. | P | N | 07 | 58 | 46 |
| | e | E | | 59 | 38 |
| | e | N | 08 | 02 | 40 |
| | S? | E | | 03 | 23 |
| | e | N | | | 53 |
| | L | E | | 05 | 16 |
| | L | N | | | 33 |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| | continued | | | | |
| | Mag. 6 - 6¼ (Matsushiro) | | | | |
| | 8½ N.,124 E. Mindanao I. | | | | |
| | H=07 52 25 | USCGS | | | |
| 15. | iP | Z | 12 | 02 | 31.6 |
| | i | N | | | 51 |
| | iS | NE | | 03 | 05.2 |
| | iP:dilatation | | | | |
| | Mag. 5 3/4 - 6 (Matsushiro) | | | | |
| | South of Honshu, Japan. | | | | |
| | H=12 01 37 | USCGS | | | |
| 15. | iP | NEZ | 16 | 35 | 07 |
| | iS | NE | | 38 | 50 |
| | iS | Z | | | 53 |
| | i | Z | | 39 | 20 |
| | i | N | | | 21 |
| | i | E | | | 22 |
| | Lq | N | | 39.9 | |
| | Lq | E | | 40.0 | |
| | Lr | Z | | 41 | 08 |
| | Lr | N | | | 49 |
| | Lr | E | | 42 | 23 |
| | iP:S,W,compression | | | | |
| | Mag. 6¼ (Matsushiro) | | | | |
| | 51½ N.,158 E. | | | | |
| | Near east coast of Kamchatka. | | | | |
| | H=16 30 29 | USCGS | | | |
| 16. | P | Z | 01 | 55 | 42 |
| | ePP? | E | | 56 | 50 |
| | iS E,eS N | | 02 | 01 | 13 |
| | L | E | | 03 | 33 |
| | L | N | | | 42 |
| | L | Z | | 05 | 48 |
| | Mag. 5 3/4 (Matsushiro) | | | | |
| | 51½ N.,177 W. Andreanof Is. | | | | |
| | H=01 48 48 | USCGS | | | |
| 16. | P | Z | 05 | 52 | 30 |
| 16. | eP | Z | 12 | 58 | 12 |
| 16. | iP | Z | 12 | 59 | 21.6 |
| | eS | Z | | | 54 |
| | iP:compression | | | | |
| 16. | eP | Z | 14 | 05 | 19 |
| | e | E | | 06 | 32 |
| | e | N | | 07 | 01 |
| 16. | eP | Z | 14 | 53 | 14 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 17. | P | Z | 01 | 06 | 20.3 |
| | iS | Z | | | 29.7 |
| 17. | iP | Z | 01 | 37 | 24.8 |
| | iS | Z | | | 28.2 |
| 17. | P | Z | 04 | 04 | 55.9 |
| | eS | Z | | 05 | 29 |
| 17. | iP 1 | NEZ | 06 | 00 | 52.1 |
| | iP 2 | NEZ | | | 53.7 |
| | iS | NE | | 03 | 20 |
| | iS | Z | | | 25 |
| | iScP | Z | | 08 | 44.0 |
| | iP 1:N,E,dilatation | | | | |
| | iP 2:N,E,dilatation | | | | |
| | Mag. 7¼ (Matsushiro) | | | | |
| | 49 N.,148½ E. Sea of Okhotsk. | | | | |
| | h:350 km ca. | | | | |
| | H=05 57 48 | USCGS | | | |
| 17. | eP | Z | 11 | 52 | 52 |
| | eS? | Z | | 53 | 24 |
| 17. | e | N | 17 | 01 | 15 |
| | e | N | | 20 | 31 |
| | eL? | N | | 27.6 | |
| 17. | eP | NEZ | 17 | 56 | 42 |
| | iS | Z | | 57 | 54 |
| | iS | NE | | | 55 |
| | Mag. 5.8 (Matsushiro) | | | | |
| | 30½ N.,138 E. | | | | |
| | South of Honshu,Japan. | | | | |
| | h:450 km ca. | | | | |
| | H=17 55 04 | USCGS | | | |
| 18. | P | Z | 04 | 12 | 17 |
| | e | Z | | | 52 |
| 18. | P | Z | 10 | 18 | 42 |
| | eS? | E | | 24 | 08 |
| | eS? | N | | | 11 |
| | eL | N | | 25 | 59 |
| | eL | E | | 28 | 04 |
| | Mag. 5 3/4 - 6 (Matsushiro) | | | | |
| | 51½ N.,179½ W. Andreanof Is. | | | | |
| | H=10 12 00 | USCGS | | | |
| 18. | eP | Z | 15 | 00 | 43 |
| | eL | E | | 08 | 20 |
| | eL | N | | | 31 |
| | 51 N.,179½ W. Andreanof Is. | | | | |
| | H=14 53 56 | USCGS | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 18. | iP | Z | 15 | 15 | 31.4 |
| | e | Z | | 17 | 00 |
| | e | Z | | | 21 |
| | iP:dilatation | | | | |
| | 44 N.,148 E. Kurile Is. | | | | |
| | H=15 12 53 | USCGS | | | |
| 18. | eP | Z | 17 | 24 | 24 |
| 18. | eP | Z | 21 | 27 | 06 |
| 19. | eP? | Z | 01 | 47 | 35 |
| | e | Z | | | 40 |
| | i | Z | | | 47 |
| | e | N | | 51.6 | ca. |
| | e | N | | 51.9 | ca. |
| | 27½ N.,129 E. | | | | |
| | Ryukyu Is. | | | | |
| | H=01 44 36 | USCGS | | | |
| 19. | P | Z | 06 | 30 | 10.3 |
| | e | Z | | | 21 |
| 19. | eP | Z | 06 | 41 | 57 |
| 19. | eP | Z | 07 | 52 | 21 |
| 19. | iP | Z | 08 | 30 | 14.3 |
| | i | Z | | | 28 |
| | iS? | Z | | | 48 |
| | e | NE | | | 59 |
| | iP:dilatation | | | | |
| 19. | eP | Z | 11 | 23 | 45 |
| | i | Z | | | 50 |
| | e | E | | 25 | 39 |
| | i | E | | 26 | 21 |
| | 28½ N.,140½ E. Bonin Is. | | | | |
| | H=11 21 39 | USCGS | | | |
| 19. | iP | Z | 16 | 17 | 01.4 |
| | e | Z | | 18 | 18 |
| | iP:dilatation | | | | |
| | 47 N.,152½ E. Kurile Is. | | | | |
| | h:100 km ca. | | | | |
| | H=16 13 29 | USCGS | | | |
| 19. | P | Z | 16 | 23 | 45.8 |
| | e | Z | | | 59 |
| 19. | P | Z | 16 | 31 | 38.7 |
| | i | Z | | | 52 |
| | eS | NEZ | | 32 | 05 |
| 19. | P | Z | 19 | 33 | 06 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 19. | eP | Z | 23 | 16 | 09 |
| | i | Z | | | 11.5 |
| | i | Z | | | 14.8 |
| | S | NEZ | | 17 | 12 |
| | Mag. 5¼ - 5½ (Matsushiro) | | | | |
| | 31½ N.,140 E. Off south coast of Honshu,Japan. | | | | |
| | H=23 14 45 | USCGS | | | |
| 20. | iP | Z | 02 | 28 | 40 |
| | eS | N | | 29 | 14 |
| 20. | P | Z | 02 | 38 | 47 |
| | S? | Z | | 41 | 15 |
| | 23½ N.,143½ E. Volcano Is. | | | | |
| | H=02 35 30 | USCGS | | | |
| 20. | P | Z | 04 | 48 | 41 |
| | i | Z | | | 44.9 |
| 20. | P | Z | 10 | 43 | 47 |
| 20. | P | Z | 12 | 48 | 21.5 |
| | i | Z | | | 22.5 |
| | i | N | | 50 | 45 |
| | e | E | | 54 | 14 ca. |
| | i | N | | 55 | 04 |
| | iLq | E | | 58 | 15 |
| | iLq | N | | | 25 |
| | iLr | Z | 13 | 00 | 54 |
| | iLr | E | | 01 | 17 |
| | Mag. 6 3/4 (Matsushiro) | | | | |
| | 54 N.,165 W. Unimak I. | | | | |
| | H=12 40 23 | USCGS | | | |
| 20. | P | Z | 14 | 09 | 41.0 |
| | i | Z | | | 50.0 |
| | S | E | | 10 | 05 |
| | P:dilatation | | | | |
| 20. | eP | Z | 16 | 18 | 51 |
| 20. | eP | Z | 16 | 32 | 50 |
| | e | Z | | 33 | 11 |
| 20. | eP | Z | 22 | 57 | 46 |
| | i | Z | | | 47.7 |
| | i | Z | | | 55.8 |
| | eS? | NE | | 58 | 09 |
| 20. | iP | Z | 23 | 55 | 37.6 |
| | i | Z | | | 40 |
| | S | Z | | | 49.8 |
| | iP:compression | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 21. | P | Z | 05 | 18 | 58 |
| | e | N | | 26 | 32 |
| | eL? | N | | 28 | 07 |
| | Mag. 5 3/4(Matsushiro) | | | | |
| | ½ S.,127½ E. | | | | |
| | Halmahera I. region. | | | | |
| | H=05 11 33 | | USCGS | | |
| 21. | eP | Z | 11 | 00 | 05 |
| 21. | iP | Z | 12 | 39 | 22.6 |
| | i | Z | | | 31.5 |
| | iP:compression | | | | |
| 21. | P | Z | 13 | 35 | 03.2 |
| | i | Z | | | 50.5 |
| 21. | iP | Z | 15 | 32 | 32.5 |
| | compression | | | | |
| 21. | P | Z | 18 | 04 | 58 |
| | eS? | N | | 11 | 11 |
| | eL | E | | 14 | 45 |
| | 3 S.,130 E. Ceram I. region | | | | |
| | H=17 57 21 | | USCGS | | |
| 22. | iP | Z | 02 | 57 | 30.8 |
| | i | Z | | | 40 |
| | eS? | E | | 58 | 00 |
| | iP:compression | | | | |
| 22. | eP | Z | 03 | 58 | 58 |
| 22. | iP | Z | 08 | 04 | 15.2 |
| | S | N | | | 48 |
| | iP:compression | | | | |
| 22. | P | Z | 12 | 57 | 02 |
| 22. | P | Z | 16 | 16 | 34 |
| | eS | N | | 26 | 03 |
| | L | E | | 33 | 04 |
| | 22½ S.,172 E. | | | | |
| | Loyalty Is. region. | | | | |
| | H=16 05 35 | | USCGS | | |
| 22. | iP | Z | 18 | 04 | 57.0 |
| | i | Z | | | 58.2 |
| | e | NE | | 06 | 24 |
| | S | NE | | | 26.1 |
| | iP:dilatation | | | | |
| 22. | eP | Z | 21 | 58 | 32 |
| | i | Z | | | 44 |
| | L | N | 22 | 06 | 52 |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| | continued | | | | |
| | L | N | 22 | 09 | 53 |
| | 1 S.,127 E. Spice Is. | | | | |
| | H=21 51 04 | | USCGS | | |
| 23. | P | Z | 01 | 01 | 07 |
| | 52 N.,172 E. Aleutian Is. | | | | |
| | H=00 55 00 | | USCGS | | |
| 23. | iP | Z | 01 | 06 | 20.8 |
| | PcPorPPP | Z | | 08 | 22 |
| | S? | Z | | 12 | 09 |
| | Lr | Z | | 18 | 39 |
| | iP:compression | | | | |
| | Mag. 6 - 6¼ (Matsushiro) | | | | |
| | 52½ N.,168 W. Fox Is. | | | | |
| | H=00 58 33 | | USCGS | | |
| 23. | P | Z | 02 | 05 | 02 |
| | i | Z | | | 16 |
| 23. | P | Z | 06 | 19 | 21 |
| | dilatation | | | | |
| 23. | eP | Z | 06 | 44 | 54 |
| 23. | iP | Z | 09 | 00 | 21.1 |
| | dilatation | | | | |
| 23. | L | N | 13 | 36 | 39 |
| 23. | eP | Z | 18 | 47 | 11 |
| | e | N | | 54 | 28 |
| | eL | N | | 55 | 11 |
| 23. | P | Z | 22 | 53 | 18 |
| 23. | P | Z | 23 | 01 | 22 |
| 24. | P | Z | 01 | 32 | 26.4 |
| | compression | | | | |
| | 51 N.,177½ W. Andreanof Is. | | | | |
| | H=01 25 25 | | USCGS | | |
| 24. | P | Z | 04 | 53 | 02 |
| | eS | N | | 59 | 27 |
| | eL | N | 05 | 06 | 15 |
| | Near east coast of New Guinea. | | | | |
| | H=04 44 52 | | USCGS | | |
| 24. | P | Z | 08 | 04 | 53.6 |
| | i | Z | | 05 | 19.4 |
| | P:compression | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 24. | P | Z | 12 | 16 | 22.4 |
| | e | N | | 18 | 00 |
| 24. | iP | Z | 15 | 50 | 21.3 |
| | iS? | Z | | | 41.3 |
| | iP:dilatation | | | | |
| 24. | e | N | 17 | 17 | 21 |
| | eL | E | | 18 | 06 |
| 24. | eP | Z | 18 | 56 | 48 |
| 24. | P | Z | 20 | 19 | 27 |
| | S | E | | | 45 |
| | P:compression | | | | |
| 24. | iP | Z | 22 | 55 | 34.0 |
| | e | Z | | | 52 |
| | iP:dilatation | | | | |
| 25. | P | Z | 00 | 33 | 25 |
| | L | Z | | 43 | 35 |
| | 3 N.,128 E. Halmahera I. | | | | |
| | H=00 26 32 | | USCGS | | |
| 25. | P | Z | 00 | 41 | 56 |
| | e | Z | | 42 | 23 |
| | P:compression | | | | |
| 25. | P | Z | 04 | 29 | 31 |
| | compression | | | | |
| 25. | eP | Z | 04 | 34 | 07 |
| | S? | Z | | | 35 |
| 25. | P | Z | 06 | 21 | 03.7 |
| | S | Z | | | 32 |
| | P:compression | | | | |
| 25. | P | Z | 07 | 07 | 51.4 |
| | S | Z | | 08 | 10.1 |
| 25. | eP | Z | 12 | 56 | 48 |
| 25. | e | N | 13 | 02 | 59 |
| 25. | eP | Z | 18 | 53 | 05 |
| 25. | e | N | 19 | 15 | 00 |
| | e | E | | | 04 |
| 25. | P | Z | 19 | 16 | 56 |
| | e | N | | 18 | 57 |
| | L | N | | 22 | 31 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 25. | eP | Z | 20 | 43 | 21 |
| | L | N | | 59 | 40 |
| | 44½ N.,129½ W. | | | | |
| | Oregon,aftershock. | | | | |
| | H=20 32 25 | | USCGS | | |
| 25. | iP | NEZ | 22 | 43 | 06.9 |
| | iPP? | Z | | 44 | 49 |
| | S | N | | 49 | 33.8 |
| | S | E | | | 36 |
| | L | N | | 52 | 51 |
| | L | E | | 53 | 01 |
| | Lr | N | | 55 | 28 |
| | L | N | | 56 | 57 |
| | L | Z | | 58 | 17 |
| | iP:N,E,compression | | | | |
| | Mag. 6½ - 6 3/4 (Matsushiro) | | | | |
| | 1½ S.,116 E. Near east coast of Borneo. | | | | |
| | H=22 35 00 | | USCGS | | |
| 25. | P | Z | 23 | 24 | 17 |
| 26. | P | Z | 00 | 06 | 35 |
| 26. | P | Z | 03 | 00 | 16.8 |
| | eS | Z | | | 32.0 |
| 26. | P | Z | 04 | 38 | 58 |
| | i | Z | | 39 | 04.5 |
| 26. | iP 1 | Z | 05 | 18 | 08.0 |
| | iP 2 | NEZ | | | 08.7 |
| | i | Z | | | 12.6 |
| | PP | Z | | 19 | 44.7 |
| | i | N | | 23 | 23 |
| | S | E | | 24 | 34 |
| | i | N | | 25 | 34 |
| | L | N | | 30 | 18 |
| | iP 1:compression | | | | |
| | iP 2:N,E,compression | | | | |
| | Mag. 6½ (Matsushiro) | | | | |
| | 2 S.,116 E. Near east coast of Borneo. | | | | |
| | H=05 10 00 | | USCGS | | |
| 26. | P | Z | 07 | 24 | 48 |
| 26. | eL? | E | 09 | 01 | 06 |
| 26. | P | Z | 10 | 53 | 10.3 |
| | dilatation | | | | |
| 26. | iP | Z | 11 | 42 | 41.7 |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| | continued | | | | |
| | PP | E | 11 | 43 | 49 |
| | S | NE | | 48 | 16 |
| | e | E | | | 58 |
| | L | E | | 50 | 37 |
| | L | NZ | | | 48 |
| | iP:compression | | | | |
| | Mag. 6 - 6¼ (Matsushiro) | | | | |
| | 51½ N.,176 W. Andreanof Is. | | | | |
| | H=11 35 44 | | USCGS | | |
| 26. | eP | Z | 12 | 41 | 13 |
| 26. | P | Z | 13 | 54 | 14.1 |
| | compression | | | | |
| 26. | P | Z | 19 | 12 | 07.8 |
| | eS? | N | | 16 | 12 |
| | S | E | | | 22 |
| | L | N | | | 49 |
| | 19 N.,121 E. Near north coast of Luzon I. | | | | |
| | H=19 07 02 | | USCGS | | |
| 26. | P | Z | 19 | 29 | 05 |
| | i | Z | | | 28 |
| 26. | iP | Z | 22 | 13 | 45.7 |
| | compression | | | | |
| 26. | iP | Z | 22 | 19 | 48.3 |
| | i | Z | | | 54.7 |
| | S | E | | 20 | 35 |
| | i | E | | | 52 |
| | iP:compression | | | | |
| 26. | eP | Z | 23 | 26 | 28 |
| 27. | iP | Z | 02 | 43 | 51.2 |
| | S? | Z | | 44 | 36 |
| | iP:dilatation | | | | |
| 27. | P | Z | 03 | 20 | 36 |
| | dilatation | | | | |
| | 39½ N.,22½ E. Near east coast of Greece. | | | | |
| | H=03 08 06 | | USCGS | | |
| 27. | eP | Z | 03 | 27 | 45 |
| | L | N | | 53 | 48 |
| 27. | P | Z | 04 | 21 | 34.5 |
| | i | Z | | | 37 |
| | i | Z | | | 54 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 27. | iP | Z | 05 | 25 | 27.6 |
| | i | E | | | 31 |
| | i | N | | | 48 |
| | S | N | | | 55 |
| | S | EZ | | | 56 |
| | 34.8 N.,136.2 E. Honshu,Japan. | | | | |
| | h:45 km ca. | | J.M.A. | | |
| 27. | P | Z | 08 | 44 | 23.4 |
| | compression | | | | |
| 27. | P | Z | 10 | 32 | 05.1 |
| | compression | | | | |
| 27. | eP | Z | 10 | 37 | 49 |
| 27. | iP | Z | 13 | 58 | 14.1 |
| | S | EZ | | 59 | 11.1 |
| | i | Z | | | 13.6 |
| | iP:dilatation | | | | |
| 27. | PKP 1 | Z | 14 | 16 | 27.3 |
| | PKP 2 | Z | | | 57 |
| | PKP 1:dilatation | | | | |
| | 20 S.,67½ W. Southern Bolivia. | | | | |
| | H=13 56 30 | | USCGS | | |
| 27. | L | NE | 20 | 15 | 38 ca. |
| 27. | L | N | 20 | 45 | 38 ca. |
| 27. | eL | N | 21 | 23 | 03 |
| | L | N | | 32 | 18 |
| 28. | P | Z | 00 | 59 | 28.7 |
| | i | Z | | | 32 |
| 28. | e | N | 02 | 39 | 54 |
| | eL | N | | 50 | 53 |
| 28. | iP | Z | 03 | 26 | 23.8 |
| | compression | | | | |
| 28. | S | E | 05 | 21 | 52 |
| | L | N | | 24 | 01 |
| | 8½ N.,126½ E. Near east coast of Mindanao. | | | | |
| | H=05 09 35 | | USCGS | | |
| 28. | iP | Z | 08 | 56 | 57.4 |
| | i | EZ | | 57 | 11 |
| | S | NEZ | | | 23 |
| | iP:dilatation | | | | |



(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| | continued | | | | |
| | 34.5 N.,139.8 E. | | | | |
| | Off south of Boso Peninsula, | | | | |
| | Japan. J.M.A. | | | | |
| 28. | iP | Z | 16 | 48 | 56.2 |
| | i | Z | | 49 | 04.8 |
| | iP:compression | | | | |
| 28. | P | Z | 21 | 00 | 09 |
| | e | E | | 07 | 34 |
| | S | E | | 08 | 17 |
| | i | N | | | 42 |
| | L | N | | 15 | 10 |
| | Mag. 6¼ (Matsushiro) | | | | |
| | 15 S.,168½ E. | | | | |
| | New Hebrides Is. | | | | |
| | H=20 50 10 USCGS | | | | |
| 29. | P | Z | 16 | 45 | 26 |
| | S | Z | | | 54.9 |
| 29. | P | Z | 17 | 56 | 19 |
| | 48½ S.,124½ E. | | | | |
| | South Indian Ocean. | | | | |
| | H=17 43 38 USCGS | | | | |
| 29. | iPKP | Z | 22 | 39 | 12.8 |
| | iPKP | E | | | 15 |
| | i | E | | 42 | 35 |
| | iPP | Z | | 43 | 07 |
| | i | E | | 51 | 29 |
| | SKSP | N | | 52 | 57 |
| | SS | N | 23 | 02 | 12 |
| | sSS | N | | 03 | 51 |
| | SSS | N | | 08 | 32 |
| | PKP Z:dilatation | | | | |
| | PKP E:E | | | | |
| | Mag.7½ - 7 3/4 (Matsushiro) | | | | |
| | 21 S.,66 W. | | | | |
| | Southern Bolivia. | | | | |
| | h:200 km ca. | | | | |
| | H=22 19 38 USCGS | | | | |
| 30. | eP | Z | 03 | 26 | 24 |
| | e | Z | | | 41 |
| 30. | iP | Z | 12 | 39 | 25.9 |
| | i | Z | | | 59.9 |
| | S | E | | 40 | 37 |
| | i | N | | | 58 |
| 30. | eP | Z | 16 | 36 | 24 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 30. | eP | Z | 17 | 03 | 46 |
| | eS | Z | | 04 | 01 |
| 30. | P | Z | 19 | 50 | 02 |
| | iS | Z | | | 16 |
| 30. | P | Z | 20 | 32 | 13.3 |
| | eS | N | | 35 | 34 |
| | L | N | | 36 | 20 |
| | P:dilatation | | | | |
| | 49 N.,154 E. Kurile Is. | | | | |
| | H=20 28 18 USCGS | | | | |
| 30. | P | Z | 21 | 06 | 56.8 |
| | S | Z | | 07 | 29.9 |
| 30. | P | Z | 21 | 17 | 21.8 |
| | S | Z | | | 36.0 |
| 30. | iP | Z | 21 | 40 | 57.2 |
| | eS | N | | 43 | 47 |
| | L | E | | 44 | 09 |
| | iP:dilatation | | | | |
| | 47 N.,154½ E. Kurile Is. | | | | |
| | H=21 37 11 USCGS | | | | |
| 30. | P | Z | 21 | 57 | 55 |
| | S | EZ | 22 | 00 | 58 |
| | L | N | | 01 | 27 |
| | L | E | | 02 | 01 |
| | Mag. 6 - 6¼ (Matsushiro) | | | | |
| | 47 N.,154 E. Kurile Is. | | | | |
| | H=21 54 10 USCGS | | | | |
| 30. | eP | Z | 22 | 17 | 57 |
| | eS | Z | | 18 | 28 |
| 30. | iP | Z | 23 | 03 | 24.8 |
| | e | Z | | 04 | 58 |
| | iP:compression | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| December | | | | | |
| 1. | P 1 | Z | 01 | 04 | 08.8 |
| | iP2 | Z | | | 10.3 |
| | eS | E | | 07 | 17 |
| | eL | E | | 08 | 51 |
| | iP 2:compression | | | | |
| | Mag. 6 (Matsushiro) | | | | |
| | 47½ N.,153½ E. Kurile Is. | | | | |
| | H=01 00 26 USCGS | | | | |
| 1. | iP | Z | 01 | 12 | 43.8 |
| | eS | E | | 15 | 49 |
| | i | N | | 16 | 11 |
| | eL | E | | 17 | 03 |
| | iP:compression | | | | |
| | Mag. 6 - 6¼ (Matsushiro) | | | | |
| | 47½ N.,154 E. Kurile Is. | | | | |
| | H=01 09 00 USCGS | | | | |
| 1. | eP | Z | 01 | 45 | 49 |
| | 52½ N.,170 W. Fox Is. | | | | |
| | H=01 38 14 USCGS | | | | |
| 1. | P | Z | 02 | 16 | 15 |
| | i | Z | | | 22 |
| | 47½ N.,153½ E. Kurile Is. | | | | |
| | H=02 12 34 USCGS | | | | |
| 1. | eP | Z | 03 | 23 | 03 |
| | i | Z | | | 17 |
| 1. | eP | Z | 05 | 14 | 18 |
| | i | Z | | | 21.2 |
| 1. | P | Z | 09 | 24 | 36.8 |
| 1. | iP | Z | 10 | 03 | 49.0 |
| | i | Z | | | 55.5 |
| | i | Z | | 04 | 16.5 |
| | eS | E | | 07 | 00 |
| | eS | Z | | | 05 |
| | eL | N | | 08 | 47 |
| | eL | E | | | 50 |
| | Mag. 5 3/4 - 6 (Matsushiro) | | | | |
| | 47 N.,154 E. Kurile Is. | | | | |
| | H=10 00 05 USCGS | | | | |
| 1. | iP | Z | 13 | 45 | 26.9 |
| | compression | | | | |
| 1. | eP | Z | 14 | 31 | 58 |
| | e | N | | 45 | 47 |
| | e | N | 15 | 00 | 07 |
| 1. | iP | Z | 16 | 48 | 33.1 |
| | iS | Z | | | 47.8 |
| | iP:dilatation | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 1. | eP | Z | 19 | 13 | 06 |
| | eS | N | | 19 | 22 |
| | eL | N | | 22 | 29 |
| | eL | E | | 24 | 21 |
| | Mag. 5 - 5¼ (Matsushiro) | | | | |
| | 52½ N.,170 W. Fox Is. | | | | |
| | H=19 05 35 USCGS | | | | |
| 1. | eP | Z | 21 | 53 | 41 |
| 2. | iP | Z | 09 | 30 | 12.9 |
| | i | Z | | 31 | 14.9 |
| | iP:dilatation | | | | |
| 2. | P | Z | 11 | 21 | 21.4 |
| | i | Z | | | 39.3 |
| 2. | e | N | 11 | 59 | 46 |
| | eL? | N | 12 | 03 | 10 |
| 2. | iP | Z | 21 | 08 | 03.1 |
| | iS | Z | | | 30.7 |
| | iP:dilatation | | | | |
| 2. | iP 1 | Z | 21 | 41 | 38.6 |
| | iP 2 | Z | | | 40.1 |
| | iS | E | | 42 | 12.3 |
| | iS | N | | | 12.7 |
| | iP 1:dilatation | | | | |
| | iP 2:dilatation | | | | |
| | Mag. 5.2 (Matsushiro) | | | | |
| 2. | iP | Z | 21 | 45 | 30.7 |
| | iS | Z | | 46 | 02.9 |
| 2. | P | Z | 22 | 06 | 42 |
| 3. | P | Z | 00 | 45 | 25 |
| 3. | iP | Z | 01 | 42 | 33.5 |
| | i | Z | | | 39.4 |
| | i | E | | | 41.5 |
| | S | N | | | 55 |
| | i | N | | 43 | 07.5 |
| | i | E | | | 08.1 |
| | iP:dilatation | | | | |
| | Mag. 4.7 (Matsushiro) | | | | |
| 3. | iP | Z | 01 | 52 | 52.9 |
| | eS | N | | 58 | 14 |
| | eL | N | 02 | 00 | 22 |
| | eL | E | | 01 | 09 |
| | iP:compression | | | | |
| | Mag. 5¼ (Matsushiro) | | | | |
| | 51½ N.,178 W. Andreanof Is. | | | | |
| | H=01 46 05 USCGS | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 3. | iP | Z | 08 | 30 | 36.8 |
| | i | Z | | | 40.5 |
| | iS | Z | | | 51.0 |
| | iS | NE | | | 51.2 |
| | iP:dilatation | | | | |
| | Mag. 4.8 (Matsushiro) | | | | |
| 3. | iP | Z | 15 | 24 | 50.9 |
| | e | E | | 38 | 03 |
| | iP:compression | | | | |
| 3. | P | Z | 20 | 20 | 01 |
| | iS? | Z | | | 28.2 |
| 3. | iP | Z | 21 | 53 | 50.2 |
| | eS | N | | 59 | 59 |
| | eS | E | 22 | 00 | 07 |
| | eL | E | | 02 | 55 |
| | iP:dilatation | | | | |
| | Mag. 5½ - 5 3/4(Matsushiro) | | | | |
| | 52 N.,169 W. Fox Is. | | | | |
| | H=21 46 18 USCGS | | | | |
| 3. | iP | Z | 23 | 38 | 03.7 |
| | PcP | Z | | 40 | 39 |
| | iP:compression | | | | |
| | 51 N.,178½ W. Andreanof Is. | | | | |
| | H=23 31 16 USCGS | | | | |
| 4. | iP | Z | 00 | 34 | 25.8 |
| | PcP | Z | | 36 | 39.6 |
| | eS | E | | 40 | 13 |
| | eL | N | | 43 | 04 |
| | eL | E | | | 12 |
| | iP:compression | | | | |
| | 0,125 E. Molucca Passage. | | | | |
| | H=00 27 01 USCGS | | | | |
| 4. | eP 1 | NZ | 03 | 43 | 53 |
| | iP 2 | NEZ | | 44 | 00.0 |
| | i | NEZ | | | 04.0 |
| | i | Z | | | 06.8 |
| | i | NE | | | 15 |
| | PPP | N | | 45 | 15.4 |
| | PPP? | E | | | 24 |
| | iS | NE | | 48 | 48.8 |
| | i | N | | 49 | 01.8 |
| | i | E | | | 21.2 |
| | Lq | E | | 50 | 53 |
| | Lr | E | | 53 | 07 |
| | iP 2:N,W,dilatation | | | | |
| | Mag. 7½ (Matsushiro) | | | | |
| | 45½ N.,99½ E. Outer Mongolia. | | | | |
| | H=03 37 45 USCGS | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 4. | eP | Z | 04 | 50 | 16 |
| | In previous shock. | | | | |
| 4. | eP | Z | 05 | 20 | 30 |
| | In previous large shock. | | | | |
| 4. | eP | Z | 07 | 28 | 56 |
| | Tonga Is. region. | | | | |
| | H=07 17 28 USCGS | | | | |
| 4. | eP | Z | 11 | 25 | 38 |
| | e | N | | 28 | 13 |
| | eS | N | | 30 | 40 |
| | eS | E | | | 46 |
| | eL | N | | 33 | 25 |
| | Mag. 5½ (Matsushiro) | | | | |
| | 45½ N.,100½ E. | | | | |
| | Outer Mongolia,aftershock. | | | | |
| | H=11 19 30 USCGS | | | | |
| 4. | e | N | 12 | 45 | 58 |
| | e | N | | 50 | 41 |
| 4. | P | Z | 13 | 26 | 08 |
| | eS | NE | | 31 | 19 |
| | eL | N | | 33 | 29 |
| | Mag. 5 3/4 - 6 (Matsushiro) | | | | |
| | 45 N.,101½ E. | | | | |
| | Outer Mongolia. | | | | |
| | H=13 20 08 USCGS | | | | |
| 4. | iP | Z | 15 | 37 | 42.1 |
| | i | Z | | 38 | 32.7 |
| | eL? | N | 16 | 02 | 41 |
| 4. | P | Z | 16 | 34 | 53 |
| | e | N | | 51 | 05 |
| 4. | e | N | 17 | 22 | 50 |
| 4. | eP | Z | 17 | 29 | 51 |
| 4. | eP | Z | 17 | 36 | 56 |
| 4. | eL | N | 19 | 00 | 49 |
| 4. | e | N | 20 | 52 | 25 |
| 4. | iP | Z | 21 | 20 | 14.5 |
| | compression | | | | |
| 4. | e | N | 22 | 26 | 09 |
| | eL? | N | | 32 | 10 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 4. | e | N | 23 | 55 | 58 |
| | eL? | N | | 58 | 14 |
| 5. | e | N | 01 | 26 | 36 |
| 5. | iP | Z | 02 | 16 | 23.4 |
| | iS? | Z | | | 26.0 |
| 5. | e | N | 02 | 28 | 04 |
| 5. | iP | Z | 03 | 15 | 46.4 |
| | i | Z | | 16 | 16.9 |
| | e | N | | | 46 |
| | i | Z | | 17 | 04.4 |
| | e | N | | 24 | 58 |
| | iP:compression | | | | |
| 5. | iP | Z | 05 | 25 | 04.3 |
| | S | EZ | | | 24.3 |
| | i | Z | | | 47.8 |
| | iP:compression | | | | |
| | Mag. 4.2 (Matsushiro) | | | | |
| 5. | iP | Z | 07 | 41 | 30.5 |
| | iS | Z | | 42 | 54.9 |
| | eS | N | | | 56 |
| | eS | E | | | 58 |
| | Mag. 5.6 (Matsushiro) | | | | |
| 5. | P | Z | 09 | 21 | 45.2 |
| 5. | P | Z | 10 | 14 | 37 |
| | e | N | | 21 | 08 |
| | eL? | N | | 25 | 18 |
| 5. | eP | Z | 12 | 10 | 09 |
| | e | N | | 12 | 32 |
| 5. | eP | Z | 14 | 15 | 19 |
| | e | N | | 24 | 20 |
| | e | N | | 28 | 36 |
| | e | N | | 31 | 16 |
| 5. | eP | Z | 15 | 14 | 19 |
| | e | N | | 17 | 47 |
| 5. | P | Z | 17 | 43 | 54.3 |
| | compression | | | | |
| 5. | eP | Z | 18 | 15 | 42 |
| | eS? | N | | 21 | 05 |
| | eL? | N | | 23 | 22 |
| | eL | N | | 24 | 41 |
| | Mag. $5\frac{1}{4}$ - $5\frac{1}{2}$ (Matsushiro) | | | | |
| | 45 N.,100 E. Outer Mongolia. | | | | |
| | H=18 09 32 | USCGS | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 5. | e | N | 19 | 54 | 52 |
| | e | N | 20 | 00 | 25 |
| 5. | e | N | 22 | 04 | 56 |
| | e | N | | 13 | 16 |
| 5. | eP | Z | 22 | 21 | 25 |
| | e | N | | 32 | 54 |
| | e | N | | 35 | 26 |
| 5. | e | N | 23 | 23 | 38 |
| | eL | N | | 37 | 14 |
| 6. | eP | Z | 01 | 24 | 26 |
| 6. | P | Z | 02 | 21 | 58 |
| | e | N | | 25 | 10 |
| 6. | P | Z | 02 | 34 | 37 |
| 6. | iP | Z | 03 | 52 | 28.9 |
| | i | Z | | | 33.5 |
| | e | N | | 53 | 10 |
| | S? | Z | | 55 | 13 |
| | eL | E | | | 38 |
| | eL | N | | | 40 |
| | Mag. 5 3/4 - 6 (Matsushiro) | | | | |
| | 45 N.,$150\frac{1}{2}$ E. Kurile Is. | | | | |
| | h:60 km ca. | | | | |
| | H=03 49 33 | USCGS | | | |
| 6. | P | Z | 06 | 10 | 04 |
| | e | N | | 12 | 18 |
| 6. | iP | Z | 08 | 39 | 21.3 |
| | i | Z | | | 30.1 |
| | e | E | | 40 | 18 |
| | eS? | N | | 41 | 08 |
| | eL | NE | | 42 | 12 |
| | $44\frac{1}{2}$ N.,$150\frac{1}{2}$ E. Kurile Is. | | | | |
| | H=08 36 21 | USCGS | | | |
| 6. | e | N | 12 | 56 | 04 |
| | e | E | | | 58 |
| 6. | P | Z | 14 | 26 | 26.8 |
| 6. | iP | Z | 18 | 04 | 01.0 |
| | i | Z | | | 04.0 |
| | i | Z | | | 21.5 |
| 6. | iP | Z | 21 | 24 | 43.8 |
| | dilatation | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 6. | eP | Z | 22 | 58 | 56 |
| | e | E | 23 | 02 | 46 |
| | eS | N | | 03 | 01 |
| | eL | N | | 04 | 03 |
| 7. | iP | Z | 03 | 24 | 17.1 |
| | iPcPoripPZ | | | 25 | 43.1 |
| | S | NE | | 30 | 07 |
| | eSS | E | | 33 | 33 |
| | iP:compression | | | | |
| | iPcPoripP:compression | | | | |
| | Mag. $6\frac{1}{4}$ - $6\frac{1}{2}$ (Matsushiro) | | | | |
| | $6\frac{1}{2}$ S.,$123\frac{1}{2}$ E. Flores Sea. | | | | |
| | h:550 km ca. | | | | |
| | H=03 16 43 USCGS | | | | |
| 7. | eP? | Z | 05 | 32 | 36 |
| | eL | N | | 41 | 09 |
| | eL | E | | | 33 |
| 7. | eP | Z | 10 | 40 | 00 |
| | e | N | | 47 | 45 |
| 7. | e | N | 12 | 58 | 25 |
| 7. | eP | Z | 13 | 13 | 54 |
| | e | N | | 16 | 08 |
| 7. | P | Z | 13 | 26 | 41 |
| | e | N | | 29 | 13 |
| 7. | P? | Z | 14 | 17 | 22 |
| | e | N | | | 45 |
| | eS | E | | 22 | 47 |
| | eL | N | | 23 | 53 |
| | Mag. $5\frac{1}{4}$ - $5\frac{1}{2}$ (Matsushiro) | | | | |
| | $43\frac{1}{2}$ N.,100 E. | | | | |
| | Outer Mongolia. | | | | |
| | H=14 11 15 USCGS | | | | |
| 7. | P | Z | 15 | 53 | 25.9 |
| 7. | eP | Z | 16 | 21 | 05 |
| 7. | e | N | 16 | 53 | 02 |
| | e | N | | 59 | 42 |
| 7. | e | N | 17 | 57 | 06 |
| | e | N | 18 | 02 | 32 |
| 7. | iP | Z | 18 | 25 | 44.2 |
| 7. | eP | Z | 19 | 11 | 26 |
| | i | Z | | 12 | 12 |
| | e | N | | | 40 |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| continued | | | | | |
| | e | E | 19 | 16 | 16 |
| | e | N | | 20 | 58 |
| | e | E | | 21 | 09 |
| 7. | eP? | Z | 19 | 52 | 46 |
| | e | N | 20 | 08 | 12 |
| 7. | P | Z | 20 | 54 | 37 |
| 7. | eP | Z | 22 | 08 | 01 |
| | eS? | N | | 10 | 48 |
| | 45 N.,$150\frac{1}{2}$ E. Kurile Is. | | | | |
| | H=22 05 00 USCGS | | | | |
| 7. | eP | Z | 22 | 29 | 12 |
| 7. | e | NE | 23 | 25 | 46 |
| 8. | eP | Z | 00 | 37 | 40 |
| | e | Z | | 38 | 14 |
| 8. | eP | Z | 01 | 44 | 25 |
| | ePP | E | | 46 | 42 |
| | e | N | | 47 | 23 |
| | e | N | | 51 | 08 |
| | e | N | | | 20 |
| | eS? | N | | | 35 |
| | 13 S.,167 E. | | | | |
| | New Hebrides Is. | | | | |
| | H=01 34 40 USCGS | | | | |
| 8. | eP | Z | 03 | 54 | 26 |
| | e | N | | 59 | 28 |
| 8. | eP | Z | 04 | 18 | 05 |
| | e | N | | 24 | 45 |
| 8. | iP | Z | 04 | 42 | 06.9 |
| | dilatation | | | | |
| 8. | P | Z | 06 | 19 | 06 |
| | eS | N | | 24 | 19 |
| | eL | N | | 27 | 16 |
| | Mag. $5\frac{1}{4}$ (Matsushiro) | | | | |
| | 45 N.,$100\frac{1}{2}$ E. | | | | |
| | Outer Mongolia. | | | | |
| | H=06 13 02 USCGS | | | | |
| 8. | P | Z | 07 | 30 | 45 |
| | S? | Z | | 31 | 04 |
| 8. | iP | Z | 07 | 54 | 52.0 |
| | S? | Z | | 55 | 35.9 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 8. | iP 1 | Z | 09 | 24 | 47.4 |
| | iP 2 | NEZ | | | 47.6 |
| | i | Z | | 25 | 00.1 |
| | i | Z | | | 28.4 |
| | S | NE | | | 35 |
| | S | NE | | | 36 |
| | i | N | | 26 | 03.7 |
| | iP 1:compression | | | | |
| | iP 2:N,W,compression | | | | |
| | Mag. 5 - 5¼ (Matsushiro) | | | | |
| 8. | iP | Z | 09 | 30 | 16.1 |
| | S? | Z | | | 56.4 |
| | eS? | E | | | 57 |
| | i | E | | 31 | 04 |
| | i | Z | | 34 | 46 |
| | iP:compression | | | | |
| | Mag. 5 (Matsushiro) | | | | |
| 8. | P | Z | 09 | 58 | 57 |
| 8. | iP | Z | 10 | 27 | 27.9 |
| | i | Z | | | 58.1 |
| | iP:dilatation | | | | |
| 8. | e | N | 10 | 52 | 16 |
| 8. | iP 1 | Z | 12 | 17 | 31.7 |
| | iP 2 | NEZ | | | 32.5 |
| | i | NEZ | | 18 | 01.5 |
| | iS | N | | | 14.7 |
| | iS | E | | | 15.1 |
| | i | NE | | | 33.3 |
| | i | NE | | | 39.5 |
| | iP 1:dilatation | | | | |
| | iP 2:S,E,dilatation | | | | |
| | Mag. 5.5 (Matsushiro) | | | | |
| 8. | iP | Z | 12 | 29 | 37.7 |
| | dilatation | | | | |
| 8. | iP | NEZ | 14 | 42 | 35.3 |
| | i | Z | | | 46.5 |
| | i | NEZ | | 43 | 07.3 |
| | S | E | | | 23 |
| | i | N | | | 47.3 |
| | iP:N,W,compression | | | | |
| | Mag. 5½ (Matsushiro) | | | | |
| 8. | iP | Z | 14 | 52 | 08.0 |
| | i | Z | | | 48.3 |
| 8. | iP | Z | 15 | 09 | 06.8 |
| | i | Z | | | 56.8 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 8. | P | Z | 15 | 14 | 00 |
| 8. | P | Z | 16 | 18 | 32.4 |
| | e | N | | 26 | 21 |
| 8. | eP | Z | 16 | 29 | 40 |
| 8. | P | Z | 16 | 32 | 17 |
| | e | Z | | 33 | 13 |
| | eS? | N | | 36 | 59 |
| | eLq | N | | 38 | 15 |
| | eLr | NE | | 40 | 21 |
| | Mag. 5 3/4 - 6 (Matsushiro) | | | | |
| | Outer Mongolia. | | | | |
| | H=16 26 33 | | | USCGS | |
| 8. | P | Z | 17 | 03 | 51 |
| | i | Z | | 04 | 05.2 |
| | i | Z | | | 26.2 |
| 8. | P | Z | 17 | 13 | 01 |
| | i | Z | | | 46 |
| | i | Z | | 14 | 09 |
| 8. | P | Z | 17 | 29 | 04 |
| 8. | P | Z | 17 | 36 | 13 |
| 8. | P | Z | 17 | 58 | 21 |
| 8. | P | Z | 20 | 03 | 44 |
| | i | Z | | 04 | 29 |
| 8. | eP | Z | 20 | 07 | 02 |
| | i | Z | | | 11. |
| 8. | eP | Z | 21 | 32 | 22 |
| | eS? | N | | 39 | 50. |
| | eL | N | | 43 | 45 |
| 8. | P | Z | 22 | 57 | 16 |
| | e | N | | 59 | 21 |
| 8. | eP | Z | 23 | 47 | 39 |
| 8. | eP | Z | 23 | 53 | 06 |
| 8. | iP | Z | 23 | 58 | 01.1 |
| | i | Z | | | 11.4 |
| | eS? | N | | 59 | 19 |
| | e | N | 00 | 00 | 05 |
| | iP:compression | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 9. | P | Z | 00 | 45 | 05 |
| | e | N | | 46 | 01 |
| | e | N | | | 37 |
| 9. | P | Z | 00 | 50 | 36 |
| 9. | eP | Z | 01 | 21 | 19 |
| | e | N | | 23 | 09 |
| | e | N | | 26 | 17 |
| | 18 N.,122½ E. Near north coast of Luzon. | | | | |
| | H=01 16 09 | | USCGS | | |
| 9. | eP | Z | 03 | 54 | 39 |
| | i | Z | | | 40 |
| | e | N | | 56 | 12 |
| 9. | eP | Z | 05 | 52 | 54 |
| | i | Z | | 53 | 36 |
| 9. | eP 1 | Z | 06 | 05 | 27 |
| | iP 2 | Z | | | 28.2 |
| | i | Z | | | 46.2 |
| | e | N | | 06 | 44 |
| 9. | P | Z | 08 | 24 | 54 |
| 9. | iP | Z | 11 | 32 | 50.7 |
| 9. | iP | Z | 15 | 59 | 28.5 |
| | eS | N | 16 | 07 | 43 |
| | eL | N | | 15 | 14 |
| | New Hebrides Is. | | | | |
| | H=15 49 34 | | USCGS | | |
| 9. | P | Z | 17 | 31 | 43.3 |
| 9. | P | Z | 18 | 22 | 53.1 |
| 9. | iP | Z | 22 | 17 | 29.3 |
| | eL | N | | 29 | 45 |
| | L | N | | 35 | 46 |
| | Mag. 5 3/4 (Matsushiro) | | | | |
| | 65½ N.,133 W. Yukon. | | | | |
| | H=22 07 43 | | USCGS | | |
| 9. | eP | Z | 23 | 49 | 06 |
| | i | Z | | | 08.8 |
| | e | N | | 51 | 07 |
| 10. | eP | Z | 13 | 22 | 03 |
| 10. | iP | NEZ | 14 | 44 | 21.2 |
| | ePP | N | | 46 | 28 |
| | e | NE | | 49 | 29 |

(cont.)

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| | continued | | | | |
| | iS | NE | 14 | 50 | 58.7 |
| | L | NE | | 54 | 29 |
| | i | NE | | 55 | 29 |
| | iP:N,W,compression | | | | |
| | Mag. 7 (Matsushiro) | | | | |
| | 6 S.,154½ E. Solomon Is. | | | | |
| | H=14 35 37 | | USCGS | | |
| 11. | iP | Z | 02 | 54 | 39.8 |
| | i | Z | | | 41.1 |
| | iS | Z | | | 51.5 |
| | iP:dilatation | | | | |
| 11. | iP | Z | 02 | 59 | 53.5 |
| | i | Z | | | 57.3 |
| | i | Z | 03 | 00 | 02.3 |
| | S | Z | | | 04.1 |
| | iP:compression | | | | |
| 11. | e | Z | 09 | 12 | 32 |
| 11. | eP | Z | 09 | 18 | 34 |
| 11. | P | Z | 10 | 25 | 02.5 |
| | S | Z | | | 13.4 |
| 11. | P | Z | 10 | 26 | 07.1 |
| | i | Z | | | 09.4 |
| | iS | Z | | | 39.1 |
| 11. | iP | NEZ | 14 | 20 | 03.1 |
| | S | E | | | 17.7 |
| | S | N | | | 18.1 |
| | i | E | | | 30.8 |
| | iP:S,E,dilatation | | | | |
| 11. | P | Z | 15 | 02 | 01.1 |
| | e | Z | | | 44 |
| | S? | N | | 03 | 17 |
| | e | N | | 04 | 01 |
| 11. | eP | Z | 15 | 47 | 11 |
| | e | Z | | | 22 |
| 11. | iP | NEZ | 18 | 12 | 50.1 |
| | i | N | | 13 | 12.9 |
| | i | Z | | | 29.9 |
| | i | Z | | | 33.4 |
| | S | NE | | 14 | 06 |
| | i | EZ | | | 10 |
| | i | E | | | 39 |
| | iP:N,W,compression | | | | |
| | Mag. 5.6 (Matsushiro) | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 11. | P | Z | 18 | 42 | 34.1 |
| | i | Z | | | 34.7 |
| 11. | P | Z | 20 | 14 | 15.2 |
| 11. | P | Z | 22 | 01 | 15 |
| | PcP? | Z | | 04 | 09 |
| | S | N | | 06 | 19 |
| | eL | N | | 09 | 27 ca. |
| | 44½ N.,101 E. | | | | |
| | Outer Mongolia. | | | | |
| | H=21 55 10 | | USCGS | | |
| 11. | P | Z | 23 | 11 | 45 |
| 12. | eP | Z | 02 | 14 | 37 |
| 12. | P | Z | 03 | 17 | 12.7 |
| | i | Z | | | 15.8 |
| | e | N | | | 51 |
| | S? | NZ | | | 56 |
| 12. | P | Z | 03 | 51 | 28 |
| 12. | P | Z | 03 | 57 | 09.7 |
| 12. | eP | Z | 06 | 29 | 19 |
| | i | Z | | 30 | 00.0 |
| 12. | e | NE | 08 | 37 | 58 |
| | e | N | | 45 | 13 |
| 12. | e | N | 09 | 05 | 49 |
| | e | E | | | 57 |
| | i | N | | 06 | 38 |
| | e | E | | 31 | 05 |
| 12. | S? | N | 09 | 46 | 21 |
| | S? | E | | | 28 |
| | e | NE | | 47 | 35 |
| | eL | N | | 50 | 13 |
| | eL | E | | | 54 |
| 12. | P | Z | 09 | 56 | 56.2 |
| | e | Z | | 59 | 37 |
| | eS | N | 10 | 05 | 05 |
| | e | N | | 08 | 09 |
| | eL | N | | 12 | 28 |
| | 14½ S.,167½ E. | | | | |
| | New Hebrides Is. | | | | |
| | H=09 47 02 | | USCGS | | |
| 12. | eP | Z | 11 | 21 | 27 |
| | e | Z | | | 58 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 12. | e | Z | 11 | 40 | 52 |
| 12. | eP | Z | 14 | 10 | 09 |
| | e | Z | | | 31 |
| 12. | P | Z | 14 | 33 | 46.7 |
| | i | Z | | 34 | 09.6 |
| | e | N | | 38 | 09 |
| | eL | N | | 42 | 06 |
| 12. | eP | Z | 15 | 40 | 08 |
| | eL? | N | | 54 | 09 |
| 12. | e | N | 16 | 53 | 13 |
| 12. | iP | Z | 18 | 48 | 06.1 |
| | i | Z | | | 17.5 |
| | i | Z | | | 34.9 |
| | i | Z | | | 43.9 |
| | S | NE | | 55 | 56.4 |
| | SS | N | | 59 | 54 |
| | eL | E | 19 | 02 | 05 |
| | eL | NE | | 04 | 43 |
| | iP:compression | | | | |
| | Mag. 6 (Matsushiro) | | | | |
| | 13½ S.,167 E. | | | | |
| | New Hebrides Is. | | | | |
| | H=18 38 19 | | USCGS | | |
| 12. | P | Z | 19 | 01 | 46.1 |
| | S | Z | | | 55.9 |
| 12. | eP? | Z | 20 | 12 | 37 |
| | i | Z | | | 48.6 |
| 12. | P | Z | 21 | 02 | 39.8 |
| | i | Z | | | 53.0 |
| | S | Z | | 03 | 04.4 |
| 12. | P | Z | 22 | 05 | 15.4 |
| 12. | eP | Z | 22 | 20 | 15 |
| | S | Z | | 21 | 05.1 |
| 12. | iP | Z | 23 | 13 | 30.4 |
| | S | Z | | | 50 |
| | iP:compression | | | | |
| 12. | P | Z | 23 | 18 | 58.6 |
| | e | Z | | 19 | 49 |
| 13. | PKP | Z | 01 | 50 | 54.1 |
| | 7 N.,76 W. Colombia. | | | | |
| | h:100 km ca. | | | | |
| | H=01 51 57 | | USCGS | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 25. | eP | Z | 07 | 24 | 47 |
| 25. | iP Z,eP NE | | 13 | 39 | 05.1 |
| | iS | NEZ | | | 36.1 |
| | i | N | | 40 | 13 |
| | iP:dilatation | | | | |
| 25. | iP | NEZ | 13 | 47 | 29.5 |
| | e | Z | | | 51 |
| | eS? | E | | 51 | 48 |
| | e | N | | | 59 |
| | iP:compression | | | | |
| | 55 N.,161 E. Near east coast of Kamchatka. | | | | |
| | H=13 42 12 | USCGS | | | |
| 25. | ePKP | Z | 16 | 45 | 09 |
| | ePP? | N | | 47 | 25 |
| | e | N | | 56 | 25 |
| | eSS | N | 17 | 04 | 40 |
| | eSSS | N | | 10 | 23 |
| | eLq | E | | 21 | 34 |
| | eLq | N | | | 57 |
| | eLr | E | | 27 | 39 |
| | eL | N | | 30 | 37 |
| | eL | Z | | 34 | 40 |
| | eL | N | | 36 | 56 |
| | eL | E | | 38.3 | |
| | Mag. 6¼ (Matsushiro) | | | | |
| | 10½ N.,62½ W. Venezuela. | | | | |
| | H=16 26 01 | USCGS | | | |
| 25. | iP | NEZ | 17 | 12 | 13.0 |
| | e | Z | | | 23 |
| | e | Z | | | 44 |
| | iS | NEZ | | | 55.9 |
| | iP:dilatation | | | | |
| 26. | iP NZ,eP E | | 01 | 08 | 43.0 |
| | e | Z | | 09 | 47 |
| | i | Z | | 10 | 57.7 |
| | eS | N | | 13 | 04 |
| | eL | N | | 16 | 05 |
| | iP:compression | | | | |
| 26. | eP | NZ | 01 | 15 | 02 |
| 26. | eP | NEZ | 06 | 47 | 19 |
| | eS | N | | 51 | 31 |
| | eL | E | | 55 | 28 |
| | eL | N | | | 49 |
| | Near east coast of Kamchatka. | | | | |
| | H=06 42 03 | USCGS | | | |
| 26. | iP | NZ | 09 | 31 | 35.3 |
| | iS | N | | | 56.4 |
| | iP:compression | | | | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 26. | eP | Z | 10 | 10 | 53 |
| | e | Z | | 11 | 15 |
| 26. | P | NZ | 12 | 21 | 21 |
| | eS | N | | 31 | 02 |
| | eSS | N | | 36 | 34 |
| | eSSS? | E | | 40 | 50 |
| | eLq | N | | 42 | 58 |
| | eLr | E | | 46 | 48 |
| | eLr | N | | | 54 |
| | eL | E | | 49 | 58 |
| | P:compression | | | | |
| | Mag. 5 3/4 (Matsushiro) | | | | |
| | 32½ S.,178 W. Kermadec Is. | | | | |
| | H=12 09 11 | USCGS | | | |
| 26. | iP | Z | 12 | 31 | 52.3 |
| | e | Z | | | 57 |
| | 41½ N.,127 W. | | | | |
| | Off coast California. | | | | |
| | H=12 20 35 | USCGS | | | |
| 26. | iP | NEZ | 18 | 14 | 28.5 |
| | i | Z | | | 31.4 |
| | eS? | NEZ | | 16 | 06 |
| | iP:dilatation | | | | |
| 26. | eP | Z | 18 | 49 | 29 |
| | S | Z | | | 40.5 |
| 26. | P | Z | 18 | 53 | 31.7 |
| | i | Z | | 54 | 37.2 |
| | eS | E | | 57 | 48 |
| | iS | N | | | 55 |
| | eL | N | 19 | 00 | 49 |
| | eL | E | | 01 | 40 |
| | P:compression | | | | |
| | Mag 5¼ (Matsushiro) | | | | |
| | 54 N.,162 E. Near east coast of Kamchatka. | | | | |
| | H=18 48 17 | USCGS | | | |
| 26. | eP? | Z | 19 | 04 | 28 |
| | e | Z | | 05 | 26 |
| 26. | eP | Z | 19 | 47 | 51 |
| 26. | e | Z | 23 | 13 | 24 |
| 27. | iP | NEZ | 01 | 28 | 38.8 |
| | eS | NEZ | | 29 | 04 |
| | i | NE | | | 08.0 |
| | iP:dilatation | | | | |
| 27. | eP | Z | 03 | 26 | 31 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 27. | eP | NEZ | 08 | 31 | 08 |
| | i | Z | | | 11.2 |
| 27. | e | Z | 08 | 34 | 05 |
| | i | Z | | | 27.5 |
| 27. | iP | NEZ | 09 | 08 | 31.8 |
| | iS | NE | | 09 | 15.8 |
| | iS | Z | | | 16.7 |
| | iP:dilatation | | | | |
| 27. | iP | NEZ | 13 | 04 | 18.3 |
| | iS | E | | 05 | 18.8 |
| | i | N | | | 40.3 |
| | e | Z | | | 51 |
| | iP:compression | | | | |
| 27. | iP | NEZ | 13 | 54 | 07.3 |
| | eS? | Z | | | 39 |
| | iP:compression | | | | |
| 27. | iP 1 | Z | 15 | 05 | 59.7 |
| | iP 2 | NEZ | | 06 | 01.1 |
| | i | Z | | | 12.4 |
| | e | Z | | | 49 |
| | eS | NE | | 10 | 17 |
| | eL | E | | 12 | 43 |
| | eL | N | | 13 | 03 |
| | iP 1:compression | | | | |
| | iP 2:dilatation | | | | |
| | Mag. 5½ - 5 3/4 (Matsushiro) | | | | |
| | 53½ N.,162 E. | | | | |
| | Off east coast of Kamchatka. | | | | |
| | H=15 00 45 | USCGS | | | |
| 27. | iP | NEZ | 17 | 32 | 04.6 |
| | i | NZ | | | 22.1 |
| | iS? | Z | | | 40.3 |
| | iP:dilatation | | | | |
| 27. | P | Z | 21 | 10 | 47.4 |
| | i | Z | | 11 | 14.1 |
| | P:dilatation | | | | |
| 27. | P | NEZ | 21 | 22 | 43 |
| | dilatation | | | | |
| 27. | e | E | 22 | 14 | 48 |
| | e | N | | 15 | 21 |
| 27. | iP | NZ | 22 | 50 | 55.6 |
| | iS | NEZ | | 51 | 01.2 |
| | iP:dilatation | | | | |
| 27. | P Z,eP NE | | 23 | 16 | 17.3 |
| | iS | NEZ | | | 41.3 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 28. | iP | Z | 01 | 12 | 57.5 |
| | iS | Z | | 13 | 03.0 |
| 28. | eP | Z | 02 | 14 | 58 |
| 28. | iP | Z | 04 | 07 | 21.7 |
| | compression | | | | |
| 28. | eP | Z | 05 | 57 | 23 |
| | iS NE,eS Z | | | | 56 |
| 28. | e | Z | 09 | 18 | 49 |
| 28. | e | Z | 10 | 02 | 44 |
| 28. | PKP | Z | 14 | 56 | 37.4 |
| | i | Z | | | 53.9 |
| | ePP | E | 15 | 00 | 17 |
| | e | N | | | 50 |
| | e | E | | 08 | 09 |
| | e | N | | 09 | 37 |
| | ePSPSoreSS | E | | 21 | 12 |
| | e | N | | 23 | 57 |
| | eSSS | E | | 25 | 53 |
| | e | N | | 35 | 52 |
| | eLq | N | | 40 | 42 |
| | eL | E | | 45 | 04 |
| | eL | N | | | 12 |
| | eLr | E | | 49 | 52 |
| | eLr | N | | 51 | 25 |
| | eLr | Z | | 52 | 40 |
| | eL | N | 16 | 05 | 39 |
| | Mag. 6½ (Matsushiro) | | | | |
| | 18 S.,64½ W. Bolivia. | | | | |
| | H=14 36 40 | USCGS | | | |
| 28. | ePKP | Z | 15 | 49 | 32 |
| 28. | P | Z | 16 | 25 | 21.8 |
| 28. | P | Z | 18 | 26 | 07.5 |
| 28. | eP | Z | 19 | 12 | 39 |
| | eS | E | | 21 | 50 |
| | iS | N | | | 58 |
| | eLq | NE | | 30 | 18 |
| | eLr | NE | | 33 | 48 |
| | Mag. 5 3/4 - 6 (Matsushiro) | | | | |
| | 16 S.,172 W. | | | | |
| | Tonga Is. region. | | | | |
| | H=19 01 22 | USCGS | | | |
| 29. | eP | Z | 04 | 01 | 33 |
| 29. | e | Z | 05 | 28 | 36 |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| 29. | eP | Z | 06 | 27 | 20 |
| 29. | P | Z | 12 | 48 | 57.0 |
| | i | NZ | | 49 | 07.2 |
| | iS? | Z | | | 20.7 |
| 29. | eP | Z | 14 | 17 | 03 |
| | eL | N | | 24 | 26 |
| | 13 N.,144 E. Marianas Is. H=14 11 40 | | | USCGS | |
| 29. | ePKP | Z | 15 | 32 | 09 |
| | i | Z | | | 24 |
| | Coquimbo Province,Chile. H=15 12 08 | | | USCGS | |
| 29. | eP | Z | 16 | 05 | 12 |
| 29. | eP | Z | 21 | 15 | 09 |
| 29. | e | Z | 22 | 03 | 53 |
| 29. | eP | Z | 22 | 58 | 20 |
| 30. | P | NEZ | 02 | 52 | 00.0 |
| | e | Z | | | 09 |
| | iS | N | | | 24.4 |
| 30. | eP | Z | 04 | 13 | 06 |
| 30. | iP | NEZ | 06 | 04 | 47.1 |
| | iS | NE | | | 57.3 |
| | iP:compression | | | | |
| 30. | iP Z,eP NE | | 06 | 28 | 26.9 |
| | i | Z | | | 36.0 |
| | i | E | | | 40.8 |
| | e | Z | | 29 | 07 |
| | e | E | | | 17 |
| | iP:dilatation | | | | |
| 30. | eP | Z | 07 | 35 | 45 |
| 30. | iP | Z | 09 | 15 | 26.1 |
| | compression | | | | |
| 30. | P | Z | 12 | 54 | 00.4 |
| | eL | N | 13 | 03 | 59 |
| | 53½ N.,166 W. Fox Is. H=12 46 04 | | | USCGS | |
| 30. | eP | NEZ | 14 | 03 | 45 |
| | i | Z | | | 58.3 |
| | | | | (cont.) | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| continued | | | | | |
| | i | E | 14 | 03 | 59.4 |
| | eS | NZ | | 07 | 58 |
| | i | E | | 08 | 08 |
| | eL | NE | | 09 | 53 ca. |
| | eL | E | | 15 | 06 |
| | eL | N | | 16 | 12 |
| | Mag. 5½ - 5 3/4 (Matsushiro) Near north coast of Luzon. H=13 58 26 | | | USCGS | |
| 30. | eP | Z | 17 | 48 | 42 |
| | e | Z | | 49 | 02 |
| 30. | P | Z | 18 | 46 | 11.6 |
| | eL | N | | 58 | 23 |
| | 53 N.,164 W. South of Unimak I. H=18 38 00 | | | USCGS | |
| 30. | eP | Z | 22 | 04 | 51 |
| 30. | iP | Z | 22 | 29 | 43.8 |
| | compression | | | | |
| 31. | eP | EZ | 02 | 43 | 05 |
| | i | Z | | | 19.7 |
| | i | E | | | 20.6 |
| | i | N | | | 28.4 |
| 31. | P | NEZ | 04 | 57 | 18 |
| | e | EZ | | | 34 |
| | e | E | | | 51 |
| | e | Z | | | 59 |
| | e | Z | | 58 | 15 |
| | eS | E | | | 20 |
| 31. | P | Z | 11 | 08 | 17.5 |
| 31. | iP Z,eP NE | | 13 | 30 | 59.8 |
| | i | Z | | 31 | 02.6 |
| | i | E | | | 04.0 |
| | i | Z | | | 05 |
| | iS | NEZ | | | 28.0 |
| | iP:compression | | | | |
| 31. | iP Z,eP N | | 14 | 40 | 54.2 |
| | i | Z | | 41 | 04.0 |
| | ePP | N | | 44 | 23 |
| | iSoriSKS | N | | 51 | 14 |
| | eSS | N | | 56 | 49 |
| | iSSS | N | 15 | 00 | 47 |
| | eLr | E | | 07 | 31 |
| | eLr | N | | | 49 ca. |
| | | | | (cont.) | |

| Date | Phase | Comp. | Time(GMT) h | m | s |
|---|---|---|---|---|---|
| continued | | | | | |
| | iP:compression | | | | |
| | Mag. 6½ (Matsushiro) | | | | |
| | 45 S.,165½ E. | | | | |
| | Off coast of South Is. | | | | |
| | New Zealand. | | | | |
| | H=14 28 15 | | USCGS | | |
| 31. | eL | N | 16 | 44 | 41 |
| 31. | eP | Z | 21 | 19 | 44 |
| | i | Z | | | 55.4 |
| | e | Z | | 20 | 09 |
| 31. | SKS | N | 21 | 39 | 38 |
| | PS | N | | 41 | 03 |
| | e | N | | 51 | 01 |
| | eL | N | | 59.1 | |
| | eI | N | 22 | 07 | 31 |
| | 45 S.,96½ E. | | | | |
| | South Indian Ocean. | | | | |
| | H=21 16 03 | | USCGS | | |

Takeshi Honda

Director