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1956 APRIL, MAY, JUNE.

April 2d. 4h. 43m. 56s. Epicentre 37°·0N. 141°·2E. Depth 40-50km. Intensity IV at Onahama and Shirakawa; II-III at Kakioka and Utunomiya. Seismo. Bull. of the Japan Met. Agency for April, 1956, Tokyo, 1956, pp. 11, 12, with macroseismic chart p. 11.

April 2d. 10h. 49m. 55s. Epicentre 2°.0N. 96°.8E.

A = -.1183, B = +.9924, C = +.0347; $\delta = +6$; h = +7; D = +.993, E = +.118; G = -.004, H = +.034, K = -.999.

| *** | | 000, 1 | | *** | FI | | 01, H - T | 004, | K 000 | | |
|---|----------|---|---|--------------------------------------|------------------------------|---|--|--|--|-----------------------|---|
| Djakarta Bandung Lembang Colombo Madras | z. E. | $^{\circ}_{12.8}$ $^{\circ}_{13.9}$ $^{\circ}_{17.6}$ $^{\circ}_{19.8}$ | Az. 129 129 129 287 304 | e S e S | 1 1 a 3 21 3 18 2 | O-C. s. - 5 - 3 - 6 + 1 | S. m. s. 5 31 e 5 57 e 5 52 7 31 i 8 13 | O-C. + 1 - 5 + 8 | $\begin{array}{c} \mathbf{m.} & \mathbf{Su} \\ \mathbf{e.8} & 37 \\ \mathbf{e.6} & 38 \\ \hline 4. & 55 \end{array}$ | PcP SSS | L. m. e 7·8 e 7·6 10·1 8·4 |
| Kodaikanal Hyderabad Shillong Bokaro Hong Kong | E. | $20.9 \\ 23.7 \\ 24.0 \\ 24.2 \\ 26.3$ | $\begin{array}{r} 294 \\ 312 \\ 349 \\ 335 \\ 38 \end{array}$ | i 5 i 5 i 5 | 16 13 a 18 | + 5 + 2 - 4 - 1 - 1 | 8 45 i 9 34 i 9 27 i 9 37 e 10 22? | $^{+12}_{+\ 7}_{-\ 5}_{+\ 2}$ | $\begin{array}{ccc} 5 & 13 \\ 5 & 54 \\ 5 & 45 \\ 5 & 27 \\ \end{array}$ | PP PPP PP pP | $10.0 \\ 12.3 \\ 11.2 \\ 11.6$ |
| Chatra Manila Baguio Poona Bombay | E. | $\begin{array}{c} 26 \cdot 4 \\ 26 \cdot 9 \\ 27 \cdot 4 \\ 27 \cdot 9 \\ 28 \cdot 9 \end{array}$ | $340 \\ 61 \\ 57 \\ 308 \\ 307$ | е 6 | 22? 50a 54 | $^{-2}_{\mathrm{PP}}^{2}_{+1}^{0}_{-3}$ | i 10 7 i 10 36 e 10 37 e 10 50 | $-5 \\ + 8 \\ 0 \\ - 3$ | _ 12 27 | = = ss | |
| Taipei Dehra Dun Sian Sining Nanking | | $33.1 \\ 33.4 \\ 34.0 \\ 34.8 \\ 36.4$ | $330 \\ 18 \\ 7 \\ 32$ | e 4 e 6 e 6 i 7 | 41 51 | $-107 \\ -1 \\ +3 \\ -5 \\ +1$ | $\overset{1}{\overset{12}{\overset{12}{\overset{0}{\overset{0}{\overset{0}{\overset{12}{\overset{12}{\overset{0}{\overset{12}{\overset{0}{\overset{12}{\overset{0}{\overset{12}{\overset{0}{\overset{12}{\overset{0}{\overset{12}{\overset{0}{\overset{12}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{$ | $-56 \\ -3 \\ +13 \\ -$ | 7 55 = | P <u>P</u> | 15·4 = |
| Zô-Sè Yinchuan Perth Quetta Paotow | z. | $37.0 \\ 37.4 \\ 38.2 \\ 39.9 \\ 40.3$ | $\begin{array}{r} 36 \\ 12 \\ 153 \\ 318 \\ 16 \end{array}$ | i 7 i 7 e 7 | | $^{+}_{1}^{1}_{1}_{2}^{$ | e 13 8 i 13 30 i 13 39 | $+ \frac{9}{13} $ $- \frac{4}{4}$ | i 16 18 e 9 14 | sss PP | 18 <u>·3</u> |
| Peking Frunse Tashkent Changchun Kyoto | | 41.8 45.3 46.4 48.8 48.8 | $\begin{array}{r} 22\\ 337\\ 331\\ 27\\ 43 \end{array}$ | i 8 e 8 8 | 49 | $ \begin{array}{ccc} $ | i 14 13 i 15 0 i 15 11 15 51 | $^{+}_{-}^{2}_{7\atop -}^{2}_{1}$ | i 18 28 e 10 16 | ScS PP | |
| Ashkabad Semipalatinsk Irkutsk Matusiro Vladivostok | | $50.3 \\ 50.3 \\ 50.5 \\ 51.4 \\ 51.5$ | $\begin{array}{r} 320 \\ 346 \\ 6 \\ 43 \\ 32 \end{array}$ | e 8 9 i 9 | 57 58 1 a 7 a 11 | $ \begin{array}{rrr} $ | i 16 9 16 15 16 38 i 16 33 | $ \begin{array}{r} $ | 20 36 i 16 47 | SS PPS | 25.5 |
| Tananarive Mizusawa Rabaul Goris Melbourne | | 52·7 54·7 55·6 59·1 59·5 | $244 \\ 42 \\ 96 \\ 316 \\ 137$ | 9 e 9 10 e 10 | 15 a 33 31 1 16 | $ \begin{array}{rrr} & 3 \\ & 0 \\ & 9 \\ & 3 \\ & + 9 \end{array} $ | e 17 6? e 17 13 i 9 39 e 18 4 e 18 16 | PPS P 7 | i 9 27 e 17 9 i 11 45 12 19 | S PP PP | |
| Yuzno-Sakhlinsk Uglegorsk Brisbane Sverdlovsk Kurilsk | | $59.9 \\ 60.8 \\ 61.4 \\ 61.9 \\ 62.1$ | $\begin{array}{r} 35 \\ 32 \\ 123 \\ 338 \\ 38 \end{array}$ | i 10 i 10 i 10 10 i 10 | | - 1 + 1 - 1 - 4 - 1 | i 18 24 i 18 36 i 18 41 18 40 e 19 3 | $^{+\ 3}_{+\ 3}_{+\ 1}_{-\ 7}_{+14}$ | i 18 38 i 18 50 | PS PS PP | |
| Riverview Jerusalem Ksara Lwiro Simferopol | | $62 \cdot 2 \\ 65 \cdot 0 \\ 65 \cdot 0 \\ 68 \cdot 2 \\ 69 \cdot 6$ | $130 \\ 304 \\ 307 \\ 267 \\ 318$ | i 10 i 10 i 10 e 11 i 11 | 41 | $^{+}$ $^{-}$ 3 $^{+}$ 1 $^{-}$ 2 $^{-}$ 1 | e 18 54 e 19 35 e 19 29 e 24 56 e 24 38 | + 3 + 9 + 3 SS | i 19 10 e 13 13 13 45 | PS PP | e 30·6 |

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| Magadan Moscow | | ∆ 70.8 71.5 | Az. 26 329 | P. m. s. 11 19 11 21 | O -C. s. - 1 - 3 | S. O-C. m. s. s. e 20 33 - 2 | m. sup | p. L. m. |
|---|----------------|--|---|--|---|--|---|--|
| Pretoria Petropavlovsk Tiksi Bay | z. | $71.7 \\ 71.8 \\ 72.5$ | $\frac{242}{34} \\ 10$ | e 11 22 e 11 25 i 11 26 | $\begin{array}{ccc} - & 4 \\ - & 1 \\ - & 4 \end{array}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 11 55 e 14 5 | PcP = |
| Iasi Bucharest Kimberley Athens Pulkovo | z. | 74·6 74·9 75·3 75·5 76·7 | $319 \\ 316 \\ 240 \\ 309 \\ 332$ | e 11 46 e 11 48 e 11 47 e 11 47k e 11 51 | $^{+}_{+}\overset{3}{\overset{4}{\overset{6}{\overset{6}{\overset{6}{\overset{6}{\overset{6}{\overset{6}{6$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{c} 21 & 54 \\ e & 14 & 29 \\ \hline i & 11 & 54 \\ i & 12 & 3 \end{array}$ | $_{\mathrm{PcP}}^{\mathrm{PS}}$ $_{\mathrm{PcP}}^{-}$ $_{\mathrm{PcP}}^{-}$ |
| Lwow Belgrade Helsinki Warsaw Budapest | | $77.5 \\ 79.0 \\ 79.3 \\ 79.8 \\ 80.3$ | $321 \\ 315 \\ 331 \\ 323 \\ 318$ | $\begin{array}{cccc} \mathbf{i} & 12 & 0 \\ \mathbf{e} & 12 & 35 \mathbf{k} \\ \mathbf{i} & 12 & 6 \\ \mathbf{e} & 12 & 13 \\ \mathbf{e} & 12 & 21 \end{array}$ | $^{+}_{\mathrm{PcP}}^{1}_{-}_{3}^{1}_{\mathrm{PcP}}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 22 23 e 15 13 i 15 15 e 15 25 23 30 | $\begin{array}{cccc} {\rm PS} & - & - & - & - & - & - & - & - & - & $ |
| Taranto Raciborz Messina Reggio Calabria Vienna | | $80.8 \\ 81.9 \\ 81.9 \\ 82.2$ | $\frac{310}{320} \\ \frac{308}{308} \\ \frac{318}{318}$ | e 12 19 i 12 21 k e 12 28 e 12 23 | $-\frac{0}{2} \\ + \frac{5}{1}$ | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | e 32 0 e 22 56 i 12 31 e 32 35 e 23 37 | PS 40.0 PcP — |
| Upsala Kiruna Prague Triest Rome | | $82.9 \\ 83.1 \\ 83.6 \\ 83.8 \\ 84.5$ | $\frac{330}{338}$ $\frac{320}{316}$ $\frac{316}{312}$ | i 12 25 a i 12 27 a e 12 30 a i 12 32 k i 12 36 k | - 2 - 1 0 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 12 36 i 15 42 i 23 57 e 24 17 e 27 50 | PcP — PP — PS — PPS — SS e 41·1 |
| Cheb Copenhagen Florence Jena Skalstugan | | 84·9 85·2 85·5 85·5 | $320 \\ 326 \\ 314 \\ 321 \\ 334$ | e 12 41 e 12 48 e 12 38 e 12 38 i 12 40 a | $\begin{array}{c} + & 3 \\ + & 9 \\ - & 3 \\ - & 3 \\ - & 2 \end{array}$ | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | e 24 9? e 24 11 i 12 52 e 15 58 | PS 44·1 PS e 41·1 PP = |
| Salo Hamburg Stuttgart Karlsruhe Strasbourg | z. | 86.6 87.0 87.5 87.9 | $315 \\ 323 \\ 319 \\ 319 \\ 318$ | e 12 47 e 12 45 e 12 56 e 12 52 | $^{+}_{-} \begin{array}{c} 8 \\ + \\ 3 \\ + \\ - \end{array}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 24 47 e 12 56 e 16 23 | $\frac{\text{PPS}}{\text{PcP}} = \frac{-}{46 \cdot 1}$ $\frac{\text{PP}}{\text{PP}} = \frac{46 \cdot 6}{46 \cdot 6}$ |
| Neuchatel Witteveen Besançon De Bilt Uccle | z. | $88.5 \\ 88.6 \\ 89.2 \\ 89.5 \\ 90.1$ | $317 \\ 323 \\ 317 \\ 322 \\ 321$ | e 12 57 i 13 6 e 12 56 i 13 3k e 13 7 | $^{+\ 1}_{+\ 10} \\ ^{-\ 3}_{+\ 3} \\ ^{+\ 4}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 16 33 e 16 28 e 16 44 | PP e 49·1 PP e 40·1 |
| Tamanrasset Clermont-Ferran Paris Algiers Univ. Kew | z. | $90.5 \\ 91.2 \\ 91.3 \\ 91.9 \\ 93.0$ | $\frac{293}{316}$ $\frac{319}{307}$ $\frac{322}{322}$ | e 13 | $^{+}_{-}\overset{0}{\overset{5}{\overset{2}{2}}}_{2}$ | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | e 16 51 e 30 30? e 16 49 e 16 52 i 17 3 | PP e 48·1 PP e 52·1 |
| Aberdeen Durham Relizane Alicante Granada | | $93.2 \\ 93.3 \\ 94.0 \\ 94.5 \\ 97.1$ | $\frac{327}{325}$ $\frac{306}{308}$ $\frac{308}{308}$ | e 13 20 e 13 25 e 18 11 a | - 1 + 2 | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | PS e 51·1 PP — PP — SS 55·2 |
| Toledo Scoresby Sund Malaga College Resolute | z. | $97.1 \\ 97.5 \\ 97.8 \\ 98.7 \\ 103.2$ | $\begin{array}{r} 310 \\ 343 \\ 307 \\ 23 \\ 3 \end{array}$ | i 26 17 e 13 44 i 17 38 a e 13 57 e 14 1 | PS + 7 PP +15 - 2 | e 30 22 - ? e 24 57 - 2 e 24 41 [- 1] | e 17 37 i 17 45 e 18 13 | PP 48·1 52·7 PP e 61·1 |
| Hungry Horse Shasta Mineral Butte Berkeley | z. z. z. | $\begin{array}{c} 123 \cdot 2 \\ 124 \cdot 5 \\ 125 \cdot 2 \\ 125 \cdot 6 \\ 126 \cdot 4 \end{array}$ | 24 36 36 25 38 | e 18 57 e 19 4 i 19 2 e 19 4 e 19 13 | $\begin{bmatrix} - & 2 \\ + & 3 \end{bmatrix}$ $\begin{bmatrix} - & 1 \\ - & 1 \end{bmatrix}$ $\begin{bmatrix} + & 8 \end{bmatrix}$ | $=\frac{-}{25}$ e 25 $= 17$ $= -21$ | e 20 39 e 21 11 | PP e 52·1 |

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| | | Δ | Az. | m. | P. 8. | O – C. | S. m. s. | O – C. | m. s | upp. | L. |
|--|----|-----------------------------------|--------------------------|------|--|----------------------------|-------------|--------|------------------|--|-------------|
| Bozeman | | 126.5 | $\overset{\circ}{2}_{4}$ | e 19 | 7 | [+ 2] | | | | 200 and 100 an | m. |
| Reno | z. | 126.8 | 35 | e 19 | á | 1 + 31 | | | e 21 8 | PP | e 65·6 |
| | z. | $127 \cdot 1$ | 38 | e 19 | | [+ 1] | | | | - | - |
| Tinemaha | | 129.4 | 36 | e 19 | 100 | [+ 5] | | | e 21 28 | DD | |
| Seven Falls | | $1\overline{29}\cdot\overline{9}$ | 349 | e 19 | The same of the sa | [- 1] | 22 32 | PKS | e 21 28 21 32 | | = |
| Woody | | 129.9 | 38 | i 19 | 12 | [0] | i 22 32 | PKS | i 21 24 | PP | |
| Service of the service of the service of | Z. | 130.0 | 357 | e 19 | 1000 | 10 1 | | I AKIS | 1 21 29 | | |
| Isabella | | 130.1 | 38 | e 19 | 100 | 1 + 21 | | | e 21 18 | PP | |
| Salt Lake City | | 130.1 | 28 | e 19 | 100 | 1 + 21 | e 22 35 | PKS | e 21 25 | | |
| Halifax | | $130 \cdot 4$ | 342 | e 19 | A 100 CO | $[-\tilde{4}]$ | e 38 49 | SS | e 19 44 | | e 70·1 |
| Shawinigan Falls | | 130.8 | 350 | e 19 | 13 | [- 1] | 22 35 | PKS | 21 46 | PP | - 120 MARCH |
| Pasadena | | $131 \cdot 3$ | 39 | i 19 | 22 | 1 + 81 | 1 22 39 | PKS | e 31 47 | PS | 65.8 |
| Riverside | | 131.9 | 39 | e 19 | 2002 | 1 01 | e 22 37 | PKS | e 22 53 | | 00 0 |
| Boulder City | | 132.1 | 35 | e 19 | | 10 1 | e 22 42 | PKS | e 21 46 | | _ |
| Ottawa | | $132 \cdot 4$ | 353 | e 19 | 13 | [-4] | 22 40 | PKS | e 21 40 | | |
| Palomar | | 132.6 | 39 | e 19 | 31 | [+14] | | - | 2=3 | <u>0</u> | |
| Barratt | | 133-2 | 40 | e 19 | 16 | 1 - 21 | _ | | | | |
| Boulder | | 133.6 | 24 | e 19 | 18 | i - 11 | y <u>—</u> | | <u> </u> | | |
| Palisades | | 136.4 | 350 | e 19 | 18 | $\hat{1} - \hat{6}\hat{1}$ | i 22 57 | PKS | i 22 5 | PP | e 68·4 |
| Tucson | | 137.0 | 35 | e 19 | | į oj | e 22 53 | PKS | e 19 37 | 8 | e 68·2 |
| Washington | | 139.0 | 353 | e 19 | 36 | [+ 7] | e 34 56 | PPS | i 11 22 | PP | |
| Fayetteville | | 140.8 | 14 | e 19 | | 1 - 61 | e 19 42 | 2 | e 22 49 | | |
| Chapel Hill | | $142 \cdot 1$ | 355 | e 19 | 38 | 1+ 41 | 0.10 12 | - | e 22 39 | | - |
| Columbia | | 144.2 | 357 | e 19 | 31 | 71 | e 34 50 | PPS | e 23 8 | $\dot{P}\dot{P}$ | e 63·6 |
| Tacubaya | | 153.6 | 36 | e 20 | 6 | [+13] | | 4 4 6 | _ 0 | | - 05 |
| San Juan | | 153.7 | 321 | e 20 | 0 | [+7] | 1 10 11 | 2 | e 23 54 | \mathbf{PP} | |
| Huancayo | | 167.3 | 217 | e 20 | 10 | 1 + 21 | e 34 34 | 2 | e 21 29 | | |
| Bogota | | 168.8 | 306 | i 20 | 25 | 1 + 171 | 1 26 49 | 1-221 | i 35 59 | The state of the s | 10.00 |

April 2d. 16h. 44m. 20s. Epicentre 31°S 179°W. Depth about 200km. New Zealand Seismo. Report, 1956, Seismo. Obs. Bull., E-137, Wellington, 1960, p. 31.

April 3d. 8h. 42m. 32s. Epicentre 42°·2N. 76°·0E. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 37.

April 3d. 15h. 40m. 28s. Epicentre 37°·4N. 138°·3E.
Intensity V at Takada and Nagano; II-III at Macbasi, Wazima, and Matumoto.
Seismo. Bull. of the Japan Met. Agency for April, 1956, Tokyo, 1956, pp. 12-14, with macroseismic chart p. 12.

April 4d. 0h. 23m. 25s. Epicentre 34°.9N. 138°.4E. Depth about 30km. Intensity V at Shizuoka; IV at Omaesaki, Ajiro, Iida, Hunatu, and Hamamatu; II-III at Misima, Kohu, Osima, and Matumoto.

Loc. cit., 3d. 15h., pp. 14-16, with macroseismic chart p. 14.

April 4d. 17h. 14m. 6s. Epicentre 42°·3N. 143°·1E. Depth 60-70km.
Intensity IV at Urakawa, Obihiro, and Tomakomai; II-III at Kusiro, Sapporo, and Muroran.

Loc. cit., April 3d. 15h., pp. 16, 17, with macroseismic chart p. 16.

April 4d. 18h. 23m. 31s. Epicentre 42°·3N. 143°·1E. Depth about 60km. Intensity IV at Urakawa; II-III at Obihiro, Tomakomai, and Muroran. Loc. cit., April 3d. 15h., pp. 17, 18, with macroseismic chart p. 17.

April 5d. 13h. 28m. Epicentre 24°N. 122°·7E. Depth 60km. Intensity II-III at Hwalien. Seismo. Bull. of the Taiwan Weather Bureau for April-June, 1956, Vol. 3, No. 2, Taiwan, China, pp. 7, 8.

April 6d. 3h. 1m. Epicentre 48°·2N. 23°·9E. Loc. cit., 3d. 8h., p. 62.

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April 6d. 7h. 11m. 38s. Epicentre 36°·4N. 70°·7E. Depth of focus 0·030. (as on 1954, August 7d.).

A = +.2667, B = +.7615, C = +.5908; $\delta = +6$; $\hbar = 0$; D = +.944, E = -.331; G = +.195, H = +.558, K = -.807.

| | - | D = + | 944, 1 | | 331; | $a = \pm .1$ | 95, $H = +$ | 999' F | r =807 | 6 | |
|--|--|-------|--|---|---|---|--|---|--|------------------|-----------------------------|
| | Khorog Kulyab Obigarm Garm Stalinabad | | ^° 1·3 1·7 2·4 2·6 2·6 | 34 335 342 354 326 | P. m. s. i 0 34 i 0 37 i 0 44 i 0 46 i 0 47 | O - C. - 1 - 1 - 1 - 1 | S. m. s. i 0 59 e 1 17 1 20 i 1 22 | O-C. s 2 - 2 - 3 - 1 | m. s. s. = | рр. | L. m. |
| | Dzhergetal Murgab Fergana Samarkand Andijan | | $\begin{array}{c} 2 \cdot 9 \\ 3 \cdot 3 \\ 4 \cdot 1 \\ 4 \cdot 4 \\ 4 \cdot 6 \end{array}$ | $\begin{array}{r} 9 \\ 52 \\ 12 \\ 320 \\ 17 \end{array}$ | i 0 49 i 0 54 i 1 3 i 1 5 i 1 8 | - 1 - 1 - 1 - 3 - 3 | e 1 28 e 1 51 i 2 1 | $ \begin{array}{r} - & 1 \\ - & 3 \\ - & 6 \\ - & 4 \end{array} $ | e 1 45 | s <u>P</u> | |
| | Namangan Tashkent Tchimkent Naryn Bairam-Ali | | 4·6 5·0 6·0 6·5 | $^{10}_{348}$ $^{352}_{38}$ 282 | i 1 10 e 1 15 i 1 27 i 1 33 i 1 40 | - 1 - 1 - 1 - 2 | $ \begin{array}{ccccccccccccccccccccccccccccccccc$ | $-\frac{3}{3} - \frac{3}{19}$ | e 1 26 e 1 37 e 2 24 e 3 15 | ? | |
| 200000000000000000000000000000000000000 | Quetta Frunse Rybach'e Almata Przhevalsk | | 6·9 7·2 7·4 8·4 8·5 | $208 \\ 24 \\ 33 \\ 33 \\ 42$ | i 1 40k i 1 42 i 1 45 i 1 59 i 2 0 | $-{0 \atop 2}{1 \atop 0}{0}$ | i 2 58 i 2 45 e 3 2 i 3 35 3 33 | $ \begin{array}{r} 0 \\ -20 \\ -7 \\ +3 \\ -2 \end{array} $ | i 2 23 i 2 53 | ? | |
| | Almata II Dehra Dun Kurmenty Chilisk New Delhi | N. | 8·6 8·9 9·3 9·6 | $^{35}_{132}_{39}_{37}_{143}$ | i 2 1 e 1 59 i 2 3 i 2 10 i 2 10 | $ \begin{array}{rrr} - & 1 \\ - & 3 \\ - & 3 \\ - & 1 \\ - & 5 \end{array} $ | i 3 33 i 3 53 | - 4 - 7 | 2 8 | P <u>P</u> | $\frac{3\cdot 7}{4\cdot 8}$ |
| | Ashkabad Kizyl-Arvat Semipalatinsk Chatra Bombay | | $10.0 \\ 11.7 \\ 15.6 \\ 17.0 \\ 17.5$ | $283 \\ 287 \\ 23 \\ 120 \\ 173$ | i 2 22 i 2 40 i 3 30 i 3 44 i 3 52 | $^{+}_{-}^{2}_{0}$ $^{-}_{+}^{2}$ 1 | $\begin{array}{c} \mathbf{e} \ 4 \ 12 \\ \mathbf{e} \ 3 \ 49 \\ \mathbf{i} \ 6 \ 42 \\ \mathbf{i} \ 7 \ 4 \end{array}$ | $^{+}_{-}^{3}_{\overline{7}}^{3}$ | i 4 21 i 4 46 | $\frac{-}{sP}$ | |
| STATE OF THE PARTY | Poona Makhach-Kala Goris Kirovobad Hyderabad | E. | 18.0 19.0 19.4 19.5 20.1 | $\begin{array}{c} 170 \\ 297 \\ 286 \\ 290 \\ 158 \end{array}$ | i 3 59k e 4 8 i 4 12 i 4 12 i 4 18 | $\begin{array}{ccc} + & 2 \\ + & 1 \\ + & 0 \\ 0 \end{array}$ | i 7 12 i 7 32 i 7 40 e 7 52 i 7 44 | $^{+}_{\stackrel{.}{0}}^{5}_{6} \\ ^{+}_{+17}^{7}_{-2}$ | $\frac{4}{8} \frac{12}{40}$ | $\frac{PP}{PcP}$ | 8·0 — 9·2 |
| To Section | Erevan Yumen Shillong Leninakan Sverdlovsk | | $20.8 \\ 21.0 \\ 21.1 \\ 21.4 \\ 21.5$ | $288 \\ 71 \\ 115 \\ 290 \\ 345$ | i 4 28 4 30 i 4 29 k 4 36 4 33 | + 3 + 3 + 1 + 5 + 1 | $ \begin{array}{r} $ | $+13 \\ +5 \\ +9 \\ +9$ | $\frac{-}{5}_{31}$ | sP PP | |
| 40.00 | Changyeh Sotchi Madras Sining Wuwei | E. | $23.8 \\ 24.7 \\ 24.8 \\ 25.0 \\ 25.5$ | $\begin{array}{r} 75 \\ 296 \\ 157 \\ 80 \\ 77 \end{array}$ | 4 57 i 5 4 i 5 4 5 8 5 12 | $^{+}_{+}$ $^{3}_{+}$ $^{+}_{3}$ $^{+}_{+}$ $^{3}_{3}$ | i 9 12 i 9 11 | + 7 | e 5 38 5 36 | pP pP | 10.8 |
| | Lanchow Kodaikanal Yinchuan Irkutsk Ksara | E. | $26.7 \\ 26.8 \\ 28.2 \\ 28.5 \\ 28.5$ | $ \begin{array}{r} 81 \\ 165 \\ 75 \\ 46 \\ 275 \end{array} $ | e 5 23 e 5 59 5 38 i 5 37 a i 5 38 | $^{+}_{\mathbf{pP}}^{3}_{+}$ $^{+}_{0}^{4}$ $+$ 1 | 9 44 10 5 i 10 16 | $+\frac{-5}{10}$ | $\frac{6}{6}$ 18 $\frac{6}{6}$ 23 $\frac{6}{22}$ | PP pP | 10.7 |
| S. III. | Yalta Simferopol Kyakhta Jerusalem Moscow | | 28·8 28·8 29·2 29·6 29·6 | $298 \\ 299 \\ 50 \\ 272 \\ 321$ | i 5 49 i 5 40 i 5 43a i 5 48k i 5 47 | $\begin{array}{c} + & 0 \\ + & 0 \\ + & 2 \\ + & 1 \end{array}$ | i 10 11 i 10 12 e 10 14 i 10 32 i 10 24 | + 1 - 4 + 8 | e 6 22 i 6 23 e 6 40 i 6 51 | pP pP pP | |
| | | | | | | | | | | | |

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| | | Δ | Az. | P. m. s. | 0 -C. | м. s. | 0 - C. | m. s. | pp. | L. m. |
|---|----|--|--|--|---|---|---|---|-----------------------------------|------------------|
| Kabansk Colombo Paotow Sian | Е. | 29.8 30.5 30.9 31.2 | 47 162 70 82 | i 5 49 a 6 22 6 0 6 3 | $^{+}_{+}^{1}_{28} \\ ^{+}_{+}^{2}_{3}$ | i 10 27 e 10 52 10 54 | $+\frac{14}{5}$ | 6 35 6 41 | $\frac{\mathbf{pP}}{\mathbf{pP}}$ | 16.4 |
| Shenchow Linfen Taiyuan Tatung Iasi Focsani | | 32·8 33·3 33·4 33·5 33·7 | 78 75 70 302 300 | e 6 16 e 6 7 e 6 24 e 6 21 e 6 28 | $ \begin{array}{r} + & 9 \\ + & 3 \\ - & 11 \\ + & 5 \\ + & 1 \\ + & 6 \end{array} $ | i 16 19 e 11 37 | ScS + 9 | | | |
| Bacau Bucharest Pulkovo Campulung Kwanting | | $33.9 \\ 34.5 \\ 34.8 \\ 35.2 \\ 35.2$ | $301 \\ 297 \\ 325 \\ 299 \\ 70$ | e 6 25 i 6 32 i 6 32 e 6 38 e 6 36 | $\begin{array}{cccc} + & 1 \\ + & 3 \\ + & 1 \\ + & 1 \end{array}$ | 11 45 i 11 45 e 11 49 | + 5 - 2 | e 6 39 i 7 18 i 7 16 e 8 5 | pP PP | |
| Peking Lwow Sofia Athens Helsinki | | $35.6 \\ 36.0 \\ 36.6 \\ 37.1 \\ 37.5$ | $\begin{array}{r} 70 \\ 307 \\ 295 \\ 287 \\ 324 \end{array}$ | i 6 40 i 6 42 i 6 48 i 6 50 a i 6 52 | $^{+}_{+} ^{2}_{0} \ _{-} ^{0}_{2}$ | i 12 5 i 12 4 i 12 23 i 12 21? i 12 26 | $^{+\ 8}_{+\ 11} \\ ^{+\ 11}_{+\ 0}$ | i 7 5 i 7 28 i 7 30 i 7 40 i 7 37 | pP pP pP | |
| Timisoara Warsaw Skalnate Pleso Belgrade Szeged | E. | $37.9 \\ 38.1 \\ 38.4 \\ 38.5 \\ 38.6$ | $300 \\ 310 \\ 306 \\ 299 \\ 301$ | i 7 1 a i 7 0 i 7 3 i 7 3 k e 6 53 | $^{+}_{+}^{4}_{1} \\ ^{+}_{-}^{1}_{1}$ | e 12 37 i 12 30 i 12 44 e 12 43 12 44 | + 5 + 5 + 2 + 2 | e 16 1 i 8 32 i 7 50 e 8 34 7 5 | SSS PP pP PP | e 17:4 |
| Krakow Budapest Nanking Raciborz Hong Kong | | 38·7 39·3 39·7 39·8 40·1 | $307 \\ 303 \\ 82 \\ 307 \\ 98$ | i 7 5 7 10 i 7 12 a e 7 15 i 7 17 | $^{+}_{+}^{1}_{0} \\ ^{+}_{+}^{2}_{2}$ | $\begin{array}{cccc} 12 & 44 \\ 12 & 56 \\ 13 & 0 \\ 112 & 44 \\ e & 13 & 1? \end{array}$ | $^{+\ 3}_{+\ 16} \\ ^{-\ 16}_{-\ 3}$ | e 7 53 7 48 7 50 e 7 53 e 16 39? | pP pP pP SS | |
| Upsala Vienna Taranto Changchun Zô-Sè | | $41.0 \\ 41.5 \\ 41.8 \\ 42.0$ | $322 \\ 304 \\ 292 \\ 62 \\ 82$ | i 7 23 a e 7 25 7 32 i 7 31 a | $+ \frac{0}{2} + \frac{3}{0}$ | i 13 18 i 12 45 e 13 20 13 34 | $ \begin{array}{c} & 0 \\ & 5 \\ & - 5 \\ & - 2 \end{array} $ | i 8 35 i 8 52 i 7 58 | SP PP | e 18·6 e 19·4 |
| Kiruna Prague Harbin Triest Copenhagen | | $42.1 \\ 42.2 \\ 42.4 \\ 43.1 \\ 43.3$ | $334 \\ 307 \\ 59 \\ 301 \\ 315$ | i 7 32 a i 7 34 e 7 34 i 7 41 a i 7 43 | $^{+}\begin{array}{c} 0 \\ 2 \\ 0 \\ + 1 \\ + 2 \end{array}$ | i 13 35 i 13 37 i 13 51 i 13 55 | $^{+}_{+}\overset{1}{\overset{2}{\overset{2}{\overset{+}{\overset{3}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{1$ | $\begin{array}{c} {\bf i} \ 8 \ 16 \\ {\bf i} \ 8 \ 20 \\ \hline {\bf e} \ 8 \ 28 \ ? \\ {\bf i} \ 8 \ 29 \end{array}$ | pP pP pP | e 20 <u>·6</u> |
| Messina Reggio Calabria Cheb Jena Skalstugan | z. | $43.3 \\ 43.3 \\ 43.5 \\ 44.0 \\ 44.2$ | $\begin{array}{c} 290 \\ 290 \\ 307 \\ 309 \\ 327 \end{array}$ | i 7 42 a i 7 42 a i 7 43 i 7 47 i 7 48 a | + 1 + 1 0 0 | i 13 53 i 13 54 i 13 58 e 14 2 i 17 28 | $^{+}_{+}\overset{2}{\overset{3}{\overset{+}{3}}}_{+}\overset{4}{\overset{1}{\overset{5}{\text{SS}}}}$ | $\begin{array}{c} {\bf i} \; {\bf 8} \; \; {\bf 30} \\ {\bf e} \; {\bf 9} \; \; {\bf 27} \\ {\bf e} \; {\bf 8} \; \; {\bf 27} \\ {\bf i} \; {\bf 9} \; \; {\bf 24} \end{array}$ | $\frac{\mathbf{pP}}{\mathbf{pP}}$ | |
| Rome Hamburg Bologna Florence Prato | | 44.7 44.8 45.0 45.2 45.3 | 296 312 300 298 299 | i 7 53 a i 7 55 a e 7 57 a i 7 55 a e 7 55 | $^{+}_{+}\stackrel{1}{\overset{2}{\overset{2}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset$ | e 14 9 e 14 12 e 14 12 i 14 25 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 8 42 i 8 28 e 8 37 i 8 44 | pP pP pP | i 27·8 |
| Salo Stuttgart Tiksi Bay Karlsruhe Pavia | | 45.4 45.7 46.0 46.2 46.4 | $301 \\ 306 \\ 22 \\ 306 \\ 301$ | i 7 59 e 8 2 i 8 1 i 8 5 a i 8 7 a | $\begin{array}{cccc} + & 1 \\ + & 2 \\ - & 2 \\ + & 1 \\ + & 1 \end{array}$ | i 14 23 e 14 30 i 14 29 e 14 38 e 19 9 | + 2 + 4 - 1 + 6 SSS | e 8 40 i 8 40 e 8 45 e 8 53 i 8 58 | pP pP pP pP | e 19·1 |
| Zürich Vladivostok Strasbourg Witteveen Basle | z. | 46.4 46.6 46.7 46.8 47.0 | $304 \\ 62 \\ 306 \\ 312 \\ 304$ | e 8 6 i 8 8 i 8 8 i 8 10 a i 8 10 | $\begin{array}{cccc} + & 1 & \\ & 0 & \\ + & 1 & \end{array}$ | e 14 34 e 18 24 i 14 44 e 18 23 | $\frac{-1}{SS}$ | e 9 37 i 10 2 i 8 55 | PP PP pP | = |
| Oropa Neuchatel De Bilt Monaco Tunis | | 47·5 47·5 47·8 47·9 47·9 | $302 \\ 304 \\ 311 \\ 299 \\ 290$ | e 8 9 i 8 14 i 8 18 a i 8 18 e 8 19 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 13 26 i 14 50 e 9 56 i 15 2 | PcS - 5 PP + 6 | e 15 52 i 9 7 i 9 8 e 9 2 | P PP PP | |

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| | | Δ | Az. | P. m. s. | o -c. | S. m. s. | 0 – C. | m. s. | pp. | $_{ m m.}^{ m L.}$ |
|---|----------------|--|--|---|---|---|---|---|---|--------------------|
| Besançon Baguio Uccle | | 48·1 48·4 48·5 | $304 \\ 101 \\ 309$ | i 8 18 i 8 23 a 8 22 a | - 1 + 2 0 | e 10 11 i 15 6 e 15 7 | PP + 2 + 2 | i 9 6 e 9 8 | $\frac{pP}{pP}$ | e 19·4 |
| Manila Paris | | 49·7 50·1 | $\frac{102}{307}$ | i 8 29 e 8 34 | - ž | i 15 22 i 15 30 | + 3 | i 9 22 | p P | = |
| Clermont-Ferrance Aberdeen Kew Durham Kyoto | d E. | 50·4 51·3 51·4 51·9 | $303 \\ 318 \\ 311 \\ 315 \\ 71$ | i 8 37 i 8 42 i 8 43 a 8 44 8 48 | + 1 - 1 0 0 | i 15 34 i 15 44 i 15 44 15 45 17 25 | $\begin{array}{c} + & 3 \\ + & 1 \\ + & 1 \\ 0 \end{array}$ | i 9 28 e 10 39 i 9 31 | PP PP | e 20 <u>·9</u> |
| Uglegorsk Jersey Yuzno-Sakhlinsk Algiers Matusiro | E. Z. | $52.1 \\ 53.0 \\ 53.1 \\ 53.2 \\ 53.2$ | $\begin{array}{r} 52 \\ 308 \\ 55 \\ 292 \\ 68 \end{array}$ | i 8 50 e 9 14 i 8 56 i 8 56 a i 8 56 a | $^{+}_{+18}^{1}_{0}$ $^{-}_{-1}^{1}$ | i 15 58 e 16 4 17 37 e 16 7 i 16 9 | + 4 - 2 - 8 - 2 | 9 58 e 11 0 i 10 53 e 9 40 9 54 | PcP PP PP pP | |
| Djakarta Rathfarnham Cas Magadan Lwiro Alicante | stle | $54 \cdot 2$ $54 \cdot 4$ $54 \cdot 6$ $54 \cdot 7$ $55 \cdot 2$ | $134 \\ 314 \\ 38 \\ 235 \\ 295$ | e 8 38? i 9 5 a i 9 7 i 9 9 i 9 12 | $ \begin{array}{r} -26 \\ -1 \\ 0 \\ +1 \\ 0 \end{array} $ | e 15 47 % i 16 41 e 16 28 i 13 46 i 16 34 | $^{-35}_{+16}$ $^{0}_{ScP}$ $^{-2}$ | i 9 39 9 52 10 6 | pP pP PcP | e 22·4 e 26·3 |
| Lembang Bandung Relizane Akureyri Kurilsk | N. | 55·2 55·3 55·5 57·0 57·0 | $\begin{array}{c} 133 \\ 133 \\ 292 \\ 330 \\ 55 \end{array}$ | i 8 58 a i 9 14 9 26 i 9 24 | $-\frac{14}{0}$ | e 16 15 e 16 26 e 16 42 i 14 20 | $-21 \\ -11 \\ + 2 \\ -2 \\ -8 \\ -2 \\ -2 \\ -2 \\ -2 \\ -2 \\ $ | e 11 8 e 10 1 e 9 32 i 10 16 | $\frac{\mathbf{p}_{\mathbf{P}}^{\mathbf{P}}}{\mathbf{p}_{\mathbf{P}}^{\mathbf{P}}}$ | |
| Scoresby Sund Toledo Tamanrasset Granada Malaga | z. | $57.0 \\ 57.2 \\ 57.3 \\ 58.0 \\ 58.8$ | 336 298 276 295 295 | e 9 24 i 9 27 a i 9 27 a i 9 31 k i 9 33 a | $^{+}_{+}\overset{0}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}$ | e 17 10 i 17 5 e 17 8 i 17 10 i 17 21 | $^{+10}_{+3}$ $^{+5}_{-2}$ $^{-2}$ | e 11 33 i 10 16 i 10 19 10 21 i 10 23 | PP pP PcP PcP | 26.0 |
| Reykjavik Tananarive Petropavlovsk Lisbon Resolute Bay | z. | $59.0 \\ 59.2 \\ 60.8 \\ 61.3 \\ 68.8$ | $329 \\ 206 \\ 44 \\ 299 \\ 356$ | i 9 40 a i 9 42 a e 9 48 i 9 54 a i 10 41 a | $^{+}_{-}^{2}_{0}$ $^{-}_{0}$ | e 18 48 e 19 25 | $-\frac{\overline{P}}{1}$ | i 9 53 i 10 29 i 10 29 i 10 47 e 21 1 | pP pP pP sS | |
| Ivigtut Pretoria College Pietermaritzburg Kimberley | Х. Z. Z. | 70·8 73·7 74·7 75·8 77·8 | $333 \\ 219 \\ 16 \\ 216 \\ 220$ | i 11 11k i 11 16 i 11 24 i 11 34k | $-\frac{0}{1} + \frac{1}{0}$ | i 19 52 e 20 33 e 21 9 | $+\frac{3}{0} + \frac{3}{3}$ | i 21 21 i 12 1 | p <u>P</u> | e 30·6 |
| M'Bour Grahamstown Kerguelen Is. Halifax Seven Falls | z. | $79.7 \\ 80.7 \\ 85.4 \\ 89.4 \\ 90.0$ | $280 \\ 216 \\ 180 \\ 329 \\ 335$ | i 11 39 i 11 51 e 12 19 a i 12 27 a i 12 36 a | $ \begin{array}{rrr} $ | i 21 29 i 23 2 22 47 | $+\frac{3}{-}$ $+\frac{1}{4}$ | i 12 20 e 16 0 16 6 | PP PP | e 30·4 |
| Shawinigan Falls Kirkland Lake Banff Horseshoe Bay Hungry Horse | z. | $91.1 \\ 91.9 \\ 92.6 \\ 93.7 \\ 95.5$ | $ \begin{array}{r} 336 \\ 341 \\ 4 \\ 9 \\ 3 \end{array} $ | i 12 41 a i 12 44 a e 12 49 e 12 54 i 13 1 | $^{+}$ 0 $^{+}$ 2 $^{+}$ 1 | 23 4 = i 23 15 | $-\frac{12}{-}$ [+\frac{2}{2}] | e 13 39 i 13 51 | PP pP | |
| Seattle Palisades Butte Bozeman Corvallis | z. | $95.5 \\ 96.4 \\ 97.9 \\ 98.3 \\ 98.4$ | $33\frac{9}{2}$ 10 | i 13 3 a i 13 13 i 13 14 i 13 15 | $^{+}_{+}$ $^{1}_{2}$ $^{+}_{+}$ $^{1}_{1}$ | i 17 1 e 23 17 i 23 27 e 25 45 | [- 1] [+ 1] SP | e 16 50 e 14 1 e 13 52 e 14 33 | PP pP pP sP | e 40·8 |
| Pittsburgh Washington Morgantown Chicago Brisbane | | $98.9 \\ 99.4 \\ 99.6 \\ 99.7 \\ 100.1$ | $338 \\ 335 \\ 337 \\ 344 \\ 117$ | e 13 15 i 13 20 e 17 28 i 13 21 | $-\frac{3}{4}$ $+ \frac{1}{1}$ \mathbf{PP}_{0} | i 27 31 e 26 39 e 24 28 | PPS SPP - 1 | i 17 19 i 17 18 e 23 33 i 17 32 | PP PP SKS PP | e 40·9 |
| Shasta Riverview Chapel Hill Salt Lake City Reno | z. z. | 102.4 102.5 102.7 103.2 103.8 | $10 \\ 123 \\ 335 \\ 2 \\ 8$ | 13 31 i 16 26 e 17 40 e 13 36 e 13 39 | - 1 PP + 1 + 1 | e 32 20 e 16 41 | ss ? | i 32 45 i 17 53 e 17 34 e 17 35 | PSS PP PP PP | |

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| | | Δ | Az. | P. m. s. | O -C. | S. m. s. | O - C. | m. s. | ipp. | L. m. |
|--------------|----------|---------------|-----|-------------|--------|---|------------------|---------------------------------------|------------------|-------------------|
| Eureka | | 104.2 | ိ5 | i 13 41 | + 1 | i 17 56 | PP | i 37 44 | P'P' | _ |
| Berkeley | Z. | 105.2 | 11 | e 18 13 | PP | 2002 3000 | | | 11.00 | _ |
| Lick | z. | 105.8 | 10 | e 13 48 | + 1 | | | e 17 26 | 3 | - |
| Tinemaha | | 106.4 | 7 | e 13 53 | + 3 | i 24 14 | [+ 8] | i 18 14 | PP | |
| Fayetteville | | 106.5 | 347 | i 13 50k | 0 | e 17 12 | 3 | e 20 25 | PPP | _ |
| Fresno | z. | 106.6 | 9 | e 17 56 | PP | | | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | _ |
| Boulder City | 170,65 | 107.8 | 5 | i 13 57 | P | i 18 27 | PP | e 29 16 | PKKP | _ |
| Isabella | | 107.8 | 8 | e 13 47 | P | i 18 31 | PP | e 29 14 | PKKP | _ |
| Pasadena | | 109.3 | 8 | e 17 20 | [-43] | i 18 43 | PP | i 29 10 | PKKP | - |
| Dalton | | $109 \cdot 4$ | 7 | e 14 3 | P | _ | _ | e 17 19 | 3 | - |
| Riverside | | 109.6 | 7 | e 14 11 | P | i 18 43 | PP | e 29 10 | PKKP | - |
| Palomar | | 110.3 | 7 | e 14 5 | P | i 18 42 | $_{\mathrm{PP}}$ | i 29 8 | PKKP | |
| Barratt | | 110.9 | 7 | e 18 9 | [+3] | i 18 52 | \mathbf{p} | i 29 5 | PKKP | |
| Tucson | 7058-016 | 111.7 | 1 | e 18 10 | [+3] | e 14 15 | P | i 29 3 | PKKP | 94-30-40 |
| Kaimata | N.E. | 120.6 | 122 | e 18 27 | [+2] | | | | _ | _ |
| Cobb River | E. | 121.0 | 120 | e 18 25 | [-1] | - | | | - | - |
| Christehurch | | 121.8 | 123 | e 18 24 | [-3] | e 18 28 | PKP | 19 55 | \mathbf{PP} | \$ =12 |
| Wellington | | $122 \cdot 4$ | 120 | 18 28 | [-1] | | | 277 | | - |
| Tacubaya | | 123.7 | 348 | e 18 45 | [+14] | e 26 53 | SKKS | e 20 23 | PP | - |
| Bogota | | 127.6 | 314 | e 18 41 | [+ 2] | i 22 11 | PKS | i 26 9 | 3 | - |
| Chinchina | | 128.2 | 315 | i 18 40 | [0] | i 21 36 | SKP | i 20 42 | PP | - |
| La Paz | | 138.5 | 287 | i 19 2 | [+3] | ACTION OF THE PROPERTY OF THE | 11-12-12-12-12 | a transfer of the new | - | |
| Huancayo | | 141.0 | 300 | i 19 0 | [-4] | e 22 47 | PKS | i 22 13 | PP | _ |

April 6d. 16h. 27m. 51s. Epicentre 13°S. 167°E. Depth 200km. (U.S.C.G.S.).

Magnitude 6·25.

New Zealand Seismo. Report, 1956, Seismo. Obs. Bull. E-137, Wellington, 1960, p. 31.

April 6d. 23h. 58m. 45s. Epicentre 19°.9N. 109°.3W.

A = -.3110, B = -.8881, C = +.3384; $\delta = -4$; h = +5: D = -.944, E = +.331; G = -.112, H = -.319, K = -.941.

| | | Δ | Az. | P. | o - c. | s. | O - C. | Su | pp. | L. |
|----------------|--------|--------------|-----|--------|--|-------------|-----------------|---------|------------------------|------------------|
| | | • | 0 | m. s. | s. | m. s. | s. | m. s. | | m. |
| Manzanillo | | 4.8 | 99 | - | - | (e 2 15) | - 3 | | - | e 2·2 |
| Tacubaya | | 9.6 | 91 | e 2 24 | + 3 | W-2020 | 200 | | - | e 5.0 |
| Oaxaca | | 12.2 | 101 | e 2 59 | + 1 | e 5 35 | +19 | 3000 TE | _ | - |
| Tucson | | 12.4 | 354 | 13 2 | 4 î | | - | e 3 53 | 3 | e 6 · 0 |
| Barratt | | 14.4 | 334 | i 3 27 | k 0 | | | i 3 34 | PP | |
| Palomar | | 15.0 | 335 | i 3 35 | c 0 | i 4 20 | 3 | i 3 51 | $\mathbf{P}\mathbf{P}$ | |
| Lubbock | | 15-2 | 24 | 3 38 | 0 | | - | - | - | _ |
| Riverside | | 15.8 | 335 | e 3 45 | c 0 | e 4 26 | 3 | i 3 59 | PP | 200 |
| Pasadena | | 16.2 | 333 | i 3 52 | | (e 7 9) | SS | i 4 9 | \mathbf{PP} | e 7·2 |
| Boulder City | | 16.8 | 344 | i 4 0 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | - | - | - | i 10.7 |
| Comitan | | 16.8 | 100 | e 4 6 | + 8 | | - | e 6 33 | 7 | e 9.6 |
| Isabella | | 17.7 | 335 | i 4 10 | | - | | i 4 28 | PP | |
| Woody | | 17.9 | 334 | i 4 13 | c + 1 | _ | - | | - | - |
| Tinemaha | | 18.8 | 337 | i 4 24 | | | | - | _ | |
| Fresno | z. | 19.1 | 334 | i 4 29 | + 2 | | _ | _ | | - |
| Boulder | | 20.4 | . 9 | i 4 40 | - 1 | | 223 | | - | - |
| Eureka | | 20.4 | 345 | i 4 41 | 0 | | | - | | |
| Lick | Z. | 20.5 | 331 | e 4 43 | + 1 | | _ | | _ | _ |
| Fayetteville | 90,530 | 20.9 | 36 | e 4 47 | + 1 | - | | | - | |
| Salt Lake City | | 21.0 | 355 | i 4 46 | - 1 | e 8 53 | +16 | | | e 11·4 |
| Berkeley | | 21.2 | 331 | i 4 49 | 0 | e 8 53 | +12 | | | 1 |
| San Francisco | Z. | $21 \cdot 2$ | 330 | e 4 49 | 0 | | - | _ | - | ***** |
| Reno | Z. | 21.6 | 338 | e 4 54 | 0 | | - | _ | _ | _ |
| Shasta | z. | 23.6 | 335 | e 5 13 | 0 | | 1000 | | - | 10011102-5211032 |
| Rapid City | | 24.7 | 11 | e 5 27 | + 3 | e 10 29 | SS | - | 777 | e 13·2 |
| Bozeman | | 25.8 | 357 | i 5 34 | 0 | | | | | e 14·3 |
| Butte | 5805 | $26 \cdot 2$ | 355 | e 5 37 | - 1 | | | | | e 14.6 |
| Corvallis | Z. | $27 \cdot 2$ | 338 | e 5 47 | 0 | - | - | - | _ | - |
| Hungry Horse | | 28.7 | 354 | i 5 59 | - 2 | - | | _ | - | _ |
| Morgantown | | $32 \cdot 0$ | 46 | e 6 23 | - 7 | - | _ | - | - | - |

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| | | Δ | Az. | P. | o-c. | s. | O - C. | Su | pp. | L. |
|---------------|-------|--------------|-----|---|-------|---------------------------------------|-------------|-------------|----------|--------|
| | | 0 | 0 | m. s | 8. | m. s. | s. | m. s. | | m. |
| Philadelphia | | 35.4 | 48 | 111000000000000000000000000000000000000 | | e 12 17 | -17 | SOURCE AREA | - | e 19·0 |
| Kirkland Lake | e | 36.8 | 33 | e 7 1 | 7 + 6 | | <u> </u> | | - | e 19·2 |
| Palisades | | 36.8 | 47 | e 7 1 | 1 0 | e 12 54 | - 2 | e 15 41 | SS | e 18·4 |
| Ottawa | | 37.6 | 40 | e 7 1 | 9 + 1 | 250 (H) H 1917 | | | 22 TO | |
| Shawinigan Fa | alls | 40.0 | 40 | e 7 3 | 1.0 | | - | - | | - |
| San Juan | | 40.8 | 85 | e 7 4 | 1 - 4 | - | | | <u> </u> | |
| Huancayo | z. | 46.1 | 131 | e 8 2 | | | | ==3 | | |
| College | 57.50 | 51.7 | 340 | i 9 | 7 - 4 | | | - | | - |
| La Paz | | $54 \cdot 3$ | 129 | e 9 3 | 4 + 4 | | | | - | _ |
| Resolute | | 55.4 | 5 | e 9 3 | | e 21 15 | SS | | | e 29·4 |
| Kiruna. | | 85.2 | 17 | i 19 3' | 7 - 2 | 11 - 11 - 11 - 11 - 11 - 11 - 11 - 11 | 26760 | | | |

April 7d. 2h. 4m. 3s. Epicentre 39°·4N. 71°·0E. Bull. of the Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 40.

April 7d. 4h. 43m. Epicentre 22°.8N. 121°.8E. Depth 10km. Intensity IV at Hsinkong. Seismo. Bull. of the Taiwan Weather Bureau for April-June, 1956, Vol. 3, No. 2, Taiwan, China, p. 8.

April 7d. 18h. 1m. 0s. Epicentre 32° 2S. 179° 9E. Depth of focus 0.050.

A = -.8478, B = +.0015, C = -.5303; $\delta = -1$; h = +1; D = +.002, E = +.1.000; G = +.530, H = -.001, K = -.848.

| | | Δ | Az. | Ρ. | O-C. | s. | 0-C. | Su | pp. | L. |
|----------------|----------|--------------|-----|-----------|---------------|---------|---------------|-----------------|---------------|--|
| W 2545-975 5-5 | | 0 | 0 | m. s. | s. | m. s. | s. | m. s. | | m. |
| Auckland | N. | $6 \cdot 3$ | 221 | e 1 34 | - 1 | i 2 57 | + 8 | | - | 4 |
| Tuai | N. | $7 \cdot 0$ | 198 | i 1 43 | 0 | 3 1 | - 3 | - | | _ |
| New Plymouth | E. | 8.3 | 213 | e 2 5 | + 7 | e 3 40 | + 8 | | - | e 4·0 |
| Wellington | F 17.900 | 10.0 | 203 | e 2 18 | 1 | 4 5 | - 4 | e 14 24 | $S_{c}S$ | N/05-2-1-2-20-20-20-20-20-20-20-20-20-20-20-20-2 |
| Cobb River | E. | 10.6 | 211 | e 2 27 | + 1 | i 4 18 | - 4 | <u> </u> | _ | 723 |
| | N.E. | 12.3 | 211 | e 2 47 | + 1 | 4 54 | - 4 | | _ | |
| Christchurch | | 12.7 | 205 | e 2 49 | -2 | 5 3 | - 4 | | | · · |
| Nouméa | | 15.5 | 306 | e 3 21 | - 1 | e 6 0 | - 5 | e 3 40 | PP | · |
| Apia | | 19.8 | 24 | e 4 5 | - 1 | e 7 24 | - 1 | e 9 8 | SSS | |
| Brisbane | | 23.8 | 274 | i 4 44 | 0 | i 8 36 | + 4 | - | *** | 65.52 |
| Riverview | | 24.2 | 258 | i 4 48a | 0 | 8 38 | - 1 | | | |
| Macquarie Is. | 7 | 26.8 | 208 | | | i 9 5 | -15 | - | | |
| Melbourne | -30011 | $29 \cdot 1$ | 249 | i 5 32 | + 1 | - | _ | 100,000 | _ | - |
| Perth | Z. | 53.5 | 252 | i 12 49 | PPP | _ | _ | 1.17 | - | i 24·2 |
| Lembang | 201030 | 71.4 | 274 | i 10 25 a | -19 | - | - | i 11 49 | \mathbf{pP} | 5 |
| Baguio | | 74.6 | 301 | i 15 30 | ? | i 18 48 | 3 | 3 -1 | | _ |
| Kerguelen Is. | | 77.7 | 220 | e 11 59a | \mathbf{PP} | _ | - | e 13 48 | PP | - |
| Matusiro | Z | 78.7 | 327 | 11 22 | - 3 | | | | | - |
| Hong Kong | | 83.0 | 302 | e 16 15 | pPP | e 26 38 | SS | - | - | |
| Zô-Sè | | 84.0 | 313 | i 16 25a | pPP | e 27 1 | 3 | | _ | - |
| Nanking | | 86.1 | 312 | i 16 35 a | pPP | 27 22 | ? | | _ | |
| Barratt | | 88.0 | 49 | i 12 12k | 0 | e 16 55 | \mathbf{PP} | e 13 32 | pP | - |
| Pasadena | | 88.0 | 47 | i 12 12k | 0 | e 14 15 | \mathbf{sP} | e 16 56 | \mathbf{PP} | e 49·2 |
| Berkeley | 7 | 88.1 | 42 | i 12 13 | 0 | | | 37 - S | | |
| Lick | Z. | 88.1 | 43 | i 12 13 | 0 | | - | _ | | - |
| Palomar | | 88.3 | 48 | i 12 14k | 0 | e 14 4 | sP | e 13 35 | pP | |
| Riverside | | 88.4 | 48 | i 12 15k | + 1 | | - | e 16 58 | \mathbf{PP} | - |
| Ukiah | | 88.4 | 41 | e 12 14 | 0 | 30.00 H | | _ | _ | _ |
| Woody | 500 | 88.6 | 46 | i 12 15k | 0 | i 14 16 | \mathbf{sP} | i 13 36 | pP | _ |
| Fresno | z. | 88.8 | 44 | e 12 16 | 0 | | | _ | | |
| Isabella | | 88.8 | 46 | i 12 16k | 0 | e 14 17 | sP | i 13 37 | \mathbf{pP} | - |
| Tinemaha | | 89.9 | 4.5 | i 12 21k | 0 | e 14 17 | sP | e 16 17 | PP | - |
| Shasta | Z. | 90.0 | 40 | i 12 22 | + 1 | | 200115 | 32110 | - | 100 |
| Reno | Z. | 90.6 | 42 | e 12 24 | 0 | 2017 32 | | 25.85 DOM | 14.507-5 | \equiv |
| Boulder City | | 91.3 | 48 | i 12 29 | + 2 | e 21 5 | 3 | e 13 50 | pP | _ |

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| | Δ | Az. | P. | O-C. | "S. | O-C. | | pp. | L. m. |
|---|---|---|--|--|---|------------------------------------|--|---|------------------|
| Tucson Eureka Peking La Plata Sian | $91.6 \\ 92.8 \\ 93.0 \\ 93.9 \\ 93.9$ | $\begin{array}{r} & \circ \\ 52 \\ 44 \\ 316 \\ 136 \\ 308 \end{array}$ | m. s. i 12 30 i 12 34 e 17 8 e 17 15 | $rac{8.}{\mathbf{PP}}$ | m. s. e 14 36 e 14 52 27 37 29 12 | sP sP | m. s. e 26 5 e 13 55 20 18? | PPS pP | e 48·3 |
| Salt Lake City La Paz Hungry Horse Shillong E Colombo E | [4] M. Sell, Sept. Materials | $^{45}_{116} \\ ^{38}_{293} \\ ^{270}$ | e 12 51 e 13 0 e 13 13 e 20 59 | $\frac{+}{-} \frac{1}{2} \frac{1}{8}$ | e 23 10 e 23 23 | $[+\frac{-5}{5}]$ $[+\frac{3}{3}]$ | e 13 51 i 28 6 e 17 11 e 31 23 | $\frac{^{\mathrm{pP}}_{\mathrm{PPS}}}{\mathrm{ss}}$ | 51·5 |
| Madras E Bombay E Kirkland Lake z. Resolute Bay Ottawa | 114.0 | 276 278 49 18 53 | e 22 25 e 22 17 e 18 8 e 18 4k e 18 11 | PPP [0] [-4] [-1] | e 30 54 | PPS — | e 32 45 | <u>?</u> | |
| Quetta z. Shawinigan Falls Seven Falls Lwiro Scoresby Sund z. | $123.9 \\ 125.3 \\ 136.2$ | $287 \\ 53 \\ 52 \\ 224 \\ 11$ | e 18 17k e 18 16k e 18 19k e 21 37 e 18 39 | $[+\ 1] \\ [-\ 1] \\ [0] \\ PP \\ [-\ 8]$ | e 21 46 | PKS | | | |
| Kiruna Reykjavik z. Helsinki Skalstugan Upsala z. | 147·5 147·6 | $347 \\ 17 \\ 337 \\ 350 \\ 342$ | i 18 45 i 18 57 a i 19 1 i 19 2k i 19 7k | $[-7] \\ [-7] \\ [-7] \\ [+1] \\ [+2] \\ [+3]$ | i 21 53 i 21 19 | PKS - | | | |
| Ksara Jerusalem Hamburg z. Rathfarnham C. z. Prague | 149.9 150.1 157.4 158.4 159.1 | $283 \\ 279 \\ 344 \\ 10 \\ 333$ | e 19 11 i 19 10 i 24 26 e 23 52 i 24 31 | [+ 7] [+ 6] PP PP | e 29 23 | SKKS | i 23 31 i 20 42 = | p <u>P′</u> — | 76.0 |
| Jena Z. De Bilt Uccle Karlsruhe Z. Stuttgart | $159.8 \\ 161.1$ | $339 \\ 351 \\ 351 \\ 342 \\ 340$ | e 19 55 e 24 40 e 32 19 e 24 45 e 20 0 | [+39] PP PP [+41] | e 28 14 e 48 0 — e 46 0 | PPP ? SS | e 21 26 e 32 8 e 28 31 e 24 43 | PP' PPP | e 83·0 e 72·0 |
| Strasbourg Triest Paris Taranto Besançon | 162.6 162.8 163.3 163.8 164.3 | $342 \\ 325 \\ 355 \\ 306 \\ 345$ | e 20 10 e 23 45 e 19 21 e 17 37 e 24 55 | PKP ₂ PKS [+ 1] PP | e 31 0 e 44 33 | | i 24 46 e 23 51 | PP PP | |
| Neuchatel Florence Messina E. Rome Clermont-Ferrand | $164 \cdot 3$ $165 \cdot 4$ $165 \cdot 9$ $166 \cdot 1$ $166 \cdot 2$ | $342 \\ 326 \\ 299 \\ 318 \\ 351$ | e 17 32 e 24 55 e 25 10 | | e 26 5 i 24 56 e 24 11 | [+15] PP | i 28 44 e 28 39 e 28 53 | PPP PPP | e 93 <u>·0</u> |
| Tamanrasset Alicante Malaga Granada Algiers Univ. | $169.4 \\ 173.9 \\ 174.2 \\ 174.2 \\ 174.8$ | $209 \\ 37 \\ 29 \\ 331$ | e 19 28 19 18 e 25 37 24 33 e 29 25 | [+ 3] [- 9] PP PP PP | e 21 39 25 39 33 1 26 33 | sP' [-16] SKKS [+38] | e 20 57 28 47 i 29 45 28 39 e 24 7 | pP' PPP PPP PPP | |

April 7d. 18h. 4m. 40s. Epicentre 36°·0S. 177°·0E. Magnitude 5·5. Felt in the Hauraki Gulf area. New Zealand Seismo. Report, 1956, Seismo. Obs. Bull. E-137, Wellington, 1960, p. 32.

April 8d. 0h. 6m. Epicentre 23°·3N. 121°·3E. Intensity II-III at Hsinkong. Seismo. Bull. of Taiwan Weather Bureau for April-June, 1956, Vol. 3, No. 2, Taiwan, China, p. 8.

April 8d. 18h. 28m. 28s. Epicentre 39°.9S. 174°.4E. Depth about 90km.

Magnitude 5.0. Felt in Central North Island and about Cook Strait.

New Zealand Seismo. Report, 1956, Seismo. Obs. Bull. E-137, Wellington, 1960, pp. 32, 33.

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April 8d. 19h. 45m. Epicentre 23°.4N. 121°.6E. Depth 10km. Intensity IV at Hwalien; II-III at Hsinkong. Seismo. Bull. of Taiwan Weather Bureau for April-June, 1956, Vol. 3, No. 2, Taiwan, China, pp. 8, 9.

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April 9d. 2h. 15m. Epicentre 48°·5N. 131°·0E. Loc. cit., 7d. 2h., p. 58.

April 9d. 16h. 58m. 33s. Epicentre 44°·75N. 143°E. Depth about 320km. Intensity II-III at Hatinohe and Kusiro. Seismo. Bull. of the Japan Met. Agency, April, 1956, Tokyo, 1956, pp. 18, 19.

April 10d. 13h. 16m. 5s. Epicentre 2°·8S. 102°·2E. Depth of focus 0·015.

A = -.2111, B = +.9763, C = -.0485; $\delta = +8$; $\hbar = +7$; D = +.977, E = +.211; G = +.010, H = -.047, K = -.999.

| | | Δ | Az. | P. m. s. | O -C. | s. m. s. | 0 -C. | m. s. | pp. | L. |
|---|----------|--|--|--|---|--|---|--|-----------------------------------|----------------------------|
| Djakarta Lembang Bandung Colombo | E. | 5·7 6·7 6·8 24·3 | $126 \\ 127 \\ 127 \\ 294$ | i 1 24 i 1 4 i 1 35 i 5 12 | $-{}^{0}_{+}$ | e 2 30 e 2 49 i 9 20 | + 2 - 6 + 7 | i 8 14 i 15 9 | $\frac{P_{c}P}{S_{c}S}$ | e 3·0 |
| Manila | | $25 \cdot 4$ | 47 | i 5 24 | + 7 | i 9 58 | +26 |) (=== == | | |
| Baguio Madras | | 26·4 26·9 | 306 | i 5 28 i 5 34 | $^{+}_{+} {}^{2}_{3}$ | i 10 1 | $^{+13}_{+5}$ | $\begin{smallmatrix}1&6&&6\\&6&13\end{smallmatrix}$ | $_{\mathbf{PP}}^{\mathbf{PP}}$ | 12.4 |
| Hong Kong Kodaikanal Shillong | E. N. | $27.6 \\ 27.8 \\ 29.9$ | $\frac{24}{298}$ 341 | e 5 40 i 5 31 e 5 52 | $^{+}_{-} \begin{array}{c} 3 \\ 8 \\ - \end{array}$ | i 10 13 10 19 6 59 | $\begin{array}{c} + & 5 \\ + & 8 \\ \mathbf{PPP} \end{array}$ | $\begin{array}{c} \overline{6} & 17 \\ 6 & 44 \end{array}$ | PP PP | $12.6 \\ 12.6$ |
| Hyderabad Bokaro | E. | 30.9 | 312 330 | i 6 8 i 6 12 | $^{+}_{+}^{1}_{5}$ | i 10 57 i 11 6 | $-3 \\ +6$ | $\begin{array}{ccc} 7 & 3 \\ 6 & 50 \end{array}$ | PP | $13 \cdot 4 \\ 13 \cdot 9$ |
| Perth Hwalien | z. | 31·7 32·6 | 158 34 | 6 19 e 6 28 | + 5 + 7 | i 11 24 11 45 | $^{+12}_{+19}$ | 6 51 | pP | 10.0 |
| Poona | z. | 35.1 | 308 | i 6 43 | 0 | | | | | |
| Bombay Sian Nanking Shenchow | | $36.1 \\ 37.4 \\ 38.1 \\ 38.1$ | $308 \\ 9 \\ 23 \\ 349$ | e 6 51 7 7 i 7 10a | + 5 + 2 | i 12 20 i 12 42 i 12 48 | $^{+}_{-}\overset{0}{\overset{2}{3}}$ | i 8 14 7 52 i 7 43 | $_{ m pP}^{ m PP}$ | |
| Zô-Sè | | 38.3 | 27 | e 7 15 i 7 12a | + 2 | 12 53 | $-\frac{1}{1}$ | i 7 45 | pP | |
| Lanchow New Delhi Dehra Dun Wuwei Taiyuan | N. | $38.7 \\ 39.4 \\ 40.2 \\ 40.5 \\ 41.5$ | $324 \\ 327 \\ 0 \\ 12$ | e 7 17 i 7 21 e 7 27 e 7 32 e 7 41 | $^{+}_{+}^{4}_{+}^{2}_{+}^{+}_{5}$ | i 13 6 i 13 20 | - 4 - 2 | 9 33 9 29 | PcP PP | 17·4 18·0 |
| Paotow Tatung Peking Kwanting Quetta | | $43.8 \\ 43.9 \\ 44.5 \\ 44.6 \\ 47.0$ | $\begin{array}{c} 9 \\ 12 \\ 15 \\ 15 \\ 317 \end{array}$ | e 7 59 e 8 0 i 8 2 e 8 5 i 8 22k | $^{+}$ $^{+}$ 5 $^{+}$ $^{+}$ 4 $^{+}$ 2 | i 14 25 i 15 3 | $-\frac{-}{0}$ | i 8 50 | s P | |
| Kyoto Rabaul Changchun Matusiro Frunse | | $49.9 \\ 49.9 \\ 50.8 \\ 51.6 \\ 51.9$ | $\begin{array}{r} 37 \\ 93 \\ 22 \\ 37 \\ 334 \end{array}$ | 8 36 e 8 40 8 51 i 8 55 a i 8 59 | $\begin{array}{c} & 0 \\ - & 2 \\ + & 2 \\ + & 2 \end{array}$ | 15 28 15 53 i 15 58 i 16 10 | $-1 \\ -1 \\ 7 \\ 7 \\ 1$ | 9 23 9 28 1 21 6 | pP pP SSS | i 23·7 |
| Melbourne Vladivostok Tashkent Kerguelen Is. Brisbane | | $52.4 \\ 53.0 \\ 53.2 \\ 53.8 \\ 54.3$ | $^{137}_{\substack{27\\329\\206\\122}}$ | i 9 5 i 9 7 i 9 8 e 9 14 i 9 15 | $\begin{array}{cccc} + & 4 \\ + & 1 \\ + & 1 \\ + & 2 \\ 0 \end{array}$ | e 16 8 i 16 26 e 16 22 i 16 22 | $-{7\atop +}{2\atop -}{4\atop -}{19}$ | e 9 36 i 9 41 e 9 37 e 9 47 | pP pP pP | 25·0 = |
| Bairam-Ali Irkutsk Mizusawa Riverview Tananarive | E. | $54.7 \\ 54.9 \\ 55.0 \\ 55.8$ | $321 \\ 2 \\ 37 \\ 130 \\ 249$ | 9 19 9 22a 9 23 i 9 21a 9 28k | $^{+}_{+} ^{1}_{2} \ ^{+}_{+} ^{1}_{2}$ | 16 48 16 54 16 55 i 16 53 e 17 7 | $\begin{array}{cccc} + & 1 \\ + & 5 \\ + & 5 \\ + & 3 \\ + & 6 \end{array}$ | $\begin{array}{c} e & 9 & 46 \\ e & 9 & 52 \\ \hline & 9 & 56 \\ 10 & 2 \end{array}$ | $\frac{\mathbf{pP}}{\mathbf{pP}}$ | |

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| | | Δ | Az. | P. m. s. | 0 – C. | m. s. | 0 -C. | m. s. | pp. | L. m. |
|--|----------------|---|---|--|--|---|---|---|----------------------------|----------|
| Semipalatinsk Ashkabad Yuzno-Sakhliusk Kurilsk Noum é a | | $56.3 \\ 57.4 \\ 61.0 \\ 62.7 \\ 65.1$ | $343 \\ 319 \\ 31 \\ 35 \\ 113$ | e 9 31 9 37 i 10 3 e 10 15 e 10 15 | $^{+}_{0}^{1}_{0}^{1}_{+}^{1}_{2}^{2}_{-14}$ | i 17 0 e 18 12 i 18 33 | - 8 + 3 + 3 | i 10 3 i 10 9 i 10 38 i 10 49 e 10 51 | pP pP pP pP | |
| Goris Sverdlovsk Macquarie Is. Ksara Kaimata | z. .E. | $66.2 \\ 68.3 \\ 69.0 \\ 72.1 \\ 72.8$ | $316 \\ 337 \\ 148 \\ 307 \\ 134$ | i 10 37 10 50 i 10 55 e 11 12 e 11 20 | $\begin{array}{c} + & 1 \\ + & 1 \\ + & 1 \\ + & 0 \\ + & 4 \end{array}$ | i 19 15 19 30 i 20 18 e 20 32 | $^{+}_{-}\frac{2}{8}$ $^{-}_{+}\frac{4}{2}$ | i 11 11 11 21 i 11 44 | PcP PcP PP | |
| Pietermaritzburg Magadan Petropavlovsk Lwiro Cobb River | у Z. Е. | $72.9 \\ 72.9 \\ 72.9 \\ 73.3 \\ 73.5$ | $240 \\ 24 \\ 32 \\ 268 \\ 132$ | e 11 20 a e 11 17 e 11 24 k 11 20 | $^{+}$ $^{0}_{0}$ $^{+}$ $^{5}_{0}$ | e 20 33 i 20 31 e 20 38 | $+\frac{-2}{0}$ | i 11 53 i 11 52 e 12 37 | pP pP | |
| Christehurch Onerahi New Plymouth Pretoria Auckland | Е. Е. Z. | 73.9 74.2 74.4 74.4 | $134 \\ 126 \\ 130 \\ 244 \\ 127$ | e 11 31 e 11 33 i 11 28 k e 11 31 | $^{+\ 8}_{+\ 9}_{+\ 5}$ | e 20 51 e 19 24 — 20 56 | + 8 + 8 | | | |
| Wellington Tongariro Tiksi Bay Grahamstown Tuai | Z. Z. N. | $75.1 \\ 75.3 \\ 76.3 \\ 76.5 \\ 76.5$ | $132 \\ 130 \\ 8 \\ 236 \\ 129$ | i 11 29 i 11 30 i 11 33 i 11 41 11 42 | $ \begin{array}{rrr} - & 1 \\ - & 1 \\ - & 3 \\ + & 4 \\ + & 5 \end{array} $ | e 21 7 i 21 2 | + 9 - 7 | e 14 54 e 11 46 | PP pP | |
| Simferopol Kimberley Moscow Iasi Bacau | z. | $76.7 \\ 77.6 \\ 78.3 \\ 81.7 \\ 82.0$ | 317 241 329 318 318 | 11 41 i 11 46 a i 11 49 e 12 9 e 12 43 | $^{+}_{+} ^{2}_{3} \ ^{+}_{\mathrm{pP}}$ | $\begin{array}{c} {\bf i} \ 21 & 9 \\ -21 & 29 \\ {\bf e} \ 22 & 3 \\ {\bf e} \ 22 & 9 \end{array}$ | $-\frac{4}{3}$ | e 12 11 i 12 28 12 20 e 12 39 | pP pP pP | |
| Bucharest Athens Campulung Pulkovo Sofia | | $82.1 \\ 82.7 \\ 83.0 \\ 83.4 \\ 83.7$ | $315 \\ 309 \\ 316 \\ 331 \\ 313$ | e 12 13 i 12 12k e 12 47 i 12 17 i 12 19 | $^{+}_{\mathrm{pP}}^{5}_{+}^{1}_{3}$ | i 22 9 e 22 12 e 22 21 i 22 23 i 22 25 | $ \begin{array}{cccc} & 1 & & \\ & - & 4 & \\ & + & 2 & \\ & - & 1 & \\ \end{array} $ | $\begin{array}{c} {\rm i}\ 12\ 43\\ {\rm e}\ 12\ 42\\ \hline {\rm i}\ 12\ 47\\ {\rm i}\ 12\ 49\\ \end{array}$ | pP pP pP | |
| Lwow Timisoara Belgrade Helsinki Szeged | Е. | 84·5 85·7 86·1 86·5 | $\frac{320}{316} \\ \frac{315}{316} \\ \frac{316}{316}$ | i 12 22 e 13 6 e 12 31 a i 12 29 e 13 10 | $^{+\ 2}_{+\ 40} \ ^{+\ 3}_{+\ 4}$ | i 22 28 e 23 41 e 22 41 i 22 53 23 27 | $^{-6}_{+56}$ $^{-8}_{-8}$ $^{+4}_{-6}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $rac{	ext{pP}}{	ext{pP}}$ | |
| Skalnate Pleso Warsaw Krakow Budapest Taranto | | $86.8 \\ 86.8 \\ 87.2 \\ 87.4 \\ 88.0$ | $319 \\ 322 \\ 320 \\ 318 \\ 310$ | e 12 28 e 12 32 e 12 36 e 12 49 13 2 | - 3 + 1 + 3 + 15 pP | e 22 44 e 22 45 e 23 47 e 23 2 22 57 | [+ 1] $[+ 2]$ $[+ 1]$ $[+ 0]$ $[+ 6]$ | e 13 7 e 24 23 e 13 3 e 13 12 28 55 | PS PP PP SS | |
| Raciborz Reggio Calabria Messina Vienna Kiruna | | $88.3 \\ 89.0 \\ 89.1 \\ 89.3 \\ 89.5$ | $\frac{320}{308} \\ \frac{308}{318} \\ \frac{338}{338}$ | e 12 43 e 12 45 e 12 44 e 12 44 i 12 44 | $^{+}_{$ | e 22 57 e 22 58 i 22 56 e 23 0 i 23 19 | [+ 4] $[+ 1]$ $[- 2]$ $[+ 1]$ $[- 2]$ | i 13 14 e 13 19 e 13 19 e 13 20 i 13 17 | pP pP pP pP | |
| Upsala Prague Triest Rome Cheb | | $89.7 \\ 90.7 \\ 90.9 \\ 91.6 \\ 92.0$ | $330 \\ 320 \\ 316 \\ 312 \\ 320$ | i 12 45 i 12 54 i 13 0? i 13 28 e 13 1? | $^{+\ 5}_{+\ 10}^{+\ 10}_{+\ 6}$ | i 23 23 i 23 33 i 23 11 i 23 15 i 23 15 | $\begin{bmatrix} + & 0 \\ + & 1 \\ [+ & 3] \\ [+ & 3] \\ [& 0] \end{bmatrix}$ | i 13 18 i 13 28 i 13 31 i 29 58 e 13 32 | pP pP pP SS pP | |
| Copenhagen Skalstugan Jena Florence Bologna | | $\begin{array}{c} 92.2 \\ 92.5 \\ 92.6 \\ 92.6 \\ 92.6 \end{array}$ | $326 \\ 333 \\ 321 \\ 314 \\ 314$ | e 13 33 i 12 59 a e 13 0 e 13 25 e 13 37 | $\begin{array}{c} \mathbf{pP} \\ + & 1 \\ + & 2 \\ \mathbf{pP} \\ \mathbf{pP} \end{array}$ | i 23 16 e 23 17 e 23 40 e 23 24 | $\begin{bmatrix} & 0 \\ - & 1 \\ - & 9 \\ [+ & 6 \end{bmatrix}$ | e 24 51 i 13 31 e 13 32 i 25 14 e 17 4 | PS pP PS PP | |
| Prato Salo Tunis Hamburg Pavia | | $92.7 \\ 93.2 \\ 93.3 \\ 93.6 \\ 94.1$ | $\frac{314}{315}$ $\frac{306}{323}$ $\frac{315}{315}$ | i 13 37 e 13 37 e 28 13 i 13 38 | pP pP PPS pP | i 23 20 e 23 12 e 23 13 e 23 24 e 23 27 | [+ 1] $[- 9]$ $[- 9]$ $[+ 1]$ | e 24 9 e 25 12 e 25 15 | S PS | |

Continued on next page.

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| | | Δ | Az. | n | P. | O-C | . s. m. s | O -C. | | supp. | L. |
|--|-------|---|--|--|--|---|---|---|---|---------------------------|--------------------------------|
| Stuttgart Zürich Karlsruhe Oropa Strasbourg | z. | $94 \cdot 1 \\ 94 \cdot 5$ | $ \begin{array}{r} 318 \\ \hline 317 \\ \hline 319 \\ \hline 315 \end{array} $ | e 1 e 1 e 1 | $\begin{bmatrix} 3 & 7 \\ 3 & 47 \\ 3 & 41 \\ 4 & 0 \end{bmatrix}$ | | | $\begin{bmatrix} + & 4 \\ + & 1 \end{bmatrix} \\ + & - 2 \end{bmatrix}$ | i 13 42 | P P = | m. |
| Basle Neuchatel Witteveen Besançon De Bilt | z. | 95.95.6 95.6 96.3 96.5 | $\begin{array}{r} 317 \\ 323 \\ 317 \end{array}$ | e 1 e 1 i 1 i 2 | 3 48 3 15 3 52 | $^{\mathrm{pP}}_{+\ 3}^{\mathrm{pP}}_{\mathrm{PS}}$ | e 23 35 e 22 35 e 23 59 i 23 41 | ss : | e 13 45 e 14 5 | | = |
| Uccle Tamanrasset Clermont-Ferrar Paris Algiers Univ. | nd | $97.1 \\ 97.2 \\ 98.4 \\ 98.5 \\ 99.0$ | $\frac{292}{316}$ | | 3 24 5 46 3 29 | PS + 5 + 4 + 3 | i 23 42 e 23 48 e 23 52 e 23 47 e 24 48 | [+ 5] [+ 3] [- 3] | e 31 25 e 13 57 e 39 55 e 14 2 e 19 52 | SS pP | e 37·9 e 38·9 |
| Kew Aberdeen College Jersey Alicante | E. | 100.0 100.1 100.9 101.5 101.7 | $\frac{328}{24}$ | e 13 e 13 e 26 e 26 | $\frac{17}{40}$ | $^{+1}_{\mathrm{PS}}^{1}_{+4}$ | i 23 56 i 23 57 i 17 30 e 24 3 24 3 | [PP] | i 14 8 e 36 55 e 14 13 26 57 | | e 51·9 — e 48·4 |
| Rathfarnham Ca Scoresby Sund Toledo Granada Malaga | astle | $103 \cdot 2$ $103 \cdot 6$ $104 \cdot 3$ $104 \cdot 3$ $105 \cdot 0$ | | e 13 e 18 e 28 27 i 18 | 9 16 16 | $\begin{array}{c} -12 \\ PP \\ PPS \\ PS \\ PP \end{array}$ | e 32 55 i 24 13 i 24 24 24 16 i 27 18 | $\begin{array}{c} \operatorname{SS} \\ [-1] \\ [+7] \\ [-1] \\ \operatorname{PS} \end{array}$ | e 18 33 i 27 48 e 25 2 34 34 i 23 18 | PP PPS SSKS | e 52·9 51·9 55·3 65·7 |
| Resolute Banff Shasta Hungry Horse Ukiah | z. | $107.5 \\ 122.4 \\ 124.9 \\ 125.0 \\ 125.2$ | $\begin{array}{r} 5 \\ 27 \\ 41 \\ 29 \\ 43 \end{array}$ | e 18 e 18 e 18 e 18 | $\frac{44}{47}$ $\frac{46}{46}$ | [+ 3] $[+ 4]$ $[+ 2]$ $[+ 1]$ $[+ 3]$ | e 23 46 — e 32 17 | skkp | e 32 39 i 19 21 | P' | |
| Berkeley Lick Reno Butte Bozeman | z. | 126.4 127.1 127.2 127.3 128.3 | $\frac{44}{40} \\ 30 \\ 29$ | e 18 e 18 i 18 e 18 | 52 53 54 | [+ 3] $[+ 3]$ $[+ 4]$ $[+ 5]$ $[+ 5]$ | e 21 9 | = = PP | = = e 19 29 | | |
| Fresno Tinemaha Eureka Woody Isabella | Z. | $^{128\cdot 7}_{129\cdot 6}_{129\cdot 7}_{129\cdot 9}_{130\cdot 2}$ | $\frac{44}{42}$ $\frac{38}{44}$ | i 18 e 18 i 18 e 18 e 18 | 50 47 57 | [+6] $[-3]$ $[-7]$ $[+2]$ $[+2]$ | i 22 7 i 22 5 i 22 5 i 22 12 | PKS PKS PKS SKP | i 19 35 i 19 29 i 19 34 e 31 32 | pP' pP' pP' SKKP | |
| Pasadena Salt Lake City Riverside Palomar Boulder City | | $131.2 \\ 131.3 \\ 131.8 \\ 132.5 \\ 132.5$ | | e 19 e 19 e 18 e 19 e 18 | $\begin{array}{c} 2 \\ 1 \\ 56 \\ 6 \\ 56 \end{array}$ | [+5] $[+4]$ $[-2]$ $[+7]$ $[-3]$ | i 22 12 i 22 13 i 22 16 i 22 17 i 22 17 | SKP SKP SKP SKP | i 19 37 e 21 23 e 21 23 i 19 42 i 19 41 | pP' PP PP' pP' | |
| Barratt Kirkland Lake Boulder Shawinigan Falls Halifax | z. | 133.0 134.8 135.4 136.2 136.5 | $\begin{array}{r} 46 \\ 2 \\ 30 \\ 355 \\ 345 \end{array}$ | i 19 e 19 e 19 i 19 e 19 | 5 3 0 9k 11 | [+5] $[-1]$ $[-5]$ $[+3]$ $[+4]$ | i 22 19 - 22 23 | SKP | e 19 42 | PP' PP' | |
| Tucson Ottawa Palisades Lubbock Morgantown | | $137.3 \\ 137.6 \\ 141.8 \\ 142.0 \\ 143.3$ | $\begin{array}{r} 43 \\ 358 \\ 355 \\ 34 \\ 3 \end{array}$ | e 19 e 19 e 19 i 19 i 19 | 3 12k 12 18 19 | $\begin{bmatrix} -5 \\ +3 \end{bmatrix}$ $\begin{bmatrix} -5 \\ -5 \end{bmatrix}$ $\begin{bmatrix} +1 \\ 0 \end{bmatrix}$ | i 22 32 e 22 42 i 22 48 | SKP SKP | e 19 48 21 59 e 40 46 | PP' SS | e 67·8 |
| Fayetteville Washington Chapel Hill Columbia La Paz | | 143.6 144.1 147.0 148.8 158.6 | $^{23}_{359}_{2}_{5}$ | The second secon | 19 25 32 31 47 | [-1] $[+4]$ $[+6]$ $[+3]$ $[+5]$ | e 22 34 e 22 49 i 23 21 | PKS PP - PKS | i 19 56 i 20 9 i 20 10 20 42 | pP' pP' pP' | 57·9 |
| San Juan Trinidad Huancayo Galerazamba Bogota Chinchina | | $160.8 \\ 162.1 \\ 165.0 \\ 171.7 \\ 175.9 \\ 177.0$ | 297 189 343 296 | | 47 52 55 1 3 | [+ 3] $[+ 6]$ $[+ 7]$ $[+ 7]$ $[+ 8]$ | e 24 14 e 31 49 i 26 9 i 26 7 i 26 14 | $PP = \frac{33}{33}$ $[-36]$ $[-29]$ | | PP SKKS SKKS | |
| | | | | | | | | | | | |

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April 11d. 1h. 25m. 50s. Epicentre 38°·6N. 69°·7E. Bull. of the Seismo. Stations for the U.S.S.R. April-June, 1956, Moscow, 1957, p. 40.

April 11d. 1h. 45m. 10s. Epicentre 38° 8N. 70° 3E.

A = +.2634, B = +.7356, C = +.6240; $\delta = -14$; h = -1; D = +.941, E = -.337; G = +.210, H = +.588, K = -.781.

| D | | 941, E | | 337; | Section 1 | $\dot{x} = + \cdot 2$ | | ·588, I | $\zeta =781$ | • | |
|--|----------|--|--|-------------------------------------|--|---|---|--|----------------------------|---|-----------------------|
| Garm Obi-garm Dzhergetal Kulyab Stalinabad | | ° 0 · 2 0 · 5 0 · 8 1 · 0 1 · 2 | Az. 351 258 59 206 258 | i 0 i 0 0 0 | 5 13 16 | O-C. - 1* - 1 - 0* + 1 + 2 | $\begin{array}{c} {\bf S.} \\ {\bf m.} & {\bf s.} \\ {\bf e} & {\bf 0} & {\bf 8} \\ {\bf e} & {\bf 0} & {\bf 28} \\ {\bf e} & {\bf 0} & {\bf 42} \\ {\bf i} & {\bf 0} & {\bf 44} \end{array}$ | O - C. ** * 1 g - 0 * + 6 + 3 | m. su | рр. | L. m. |
| Khorog Namangan Tashkent Murgab Samarkand | | $1.7 \\ 2.4 \\ 2.6 \\ 2.8 \\ 2.8$ | $143 \\ 25 \\ 342 \\ 98 \\ 289$ | i 0 e 0 i 0 | 50 51 | + 5 - 2g - 0* | $\begin{array}{c} \mathbf{e} \ 0 \ 58 \\ \mathbf{i} \ 1 \ 18 \\ \mathbf{e} \ 1 \ 24 \\ \hline -1 \ 32 \end{array}$ | + 2g - 1g - 2g - 0g | | | |
| Tchimkent Frunse Bairam-Ali Almata Ili | | $\begin{array}{c} 3 \cdot 5 \\ 5 \cdot 2 \\ 6 \cdot 6 \\ 6 \cdot 7 \\ 7 \cdot 2 \end{array}$ | $351 \\ 37 \\ 262 \\ 46 \\ 42$ | | $\begin{array}{c} 2 \\ 24 \\ 38 \\ 45 \\ 49 \end{array}$ | $ \begin{array}{rrr} & 1 & * \\ & + & 3 \\ & - & 3 \\ & + & 3 \\ & 0 \end{array} $ | i 1 48 i 2 27 2 54 i 3 34 | + 5 - 4 - 7 g | i 1 45 e 2 13 | Pg Pg Pg | |
| Quetta Ashkabad Dehra Dun Kizyl-Arvat New Delhi | N. | $9.0 \\ 9.4 \\ 10.6 \\ 11.0 \\ 11.7$ | $\begin{array}{c} 199 \\ 268 \\ 141 \\ 276 \\ 149 \end{array}$ | e 2 e 2 e 2 | $\frac{20}{32}$ | $^{+}_{\substack{+\ 2\ -\ 18}}^{3}$ | e 3 58 e 4 12 i 4 33 i 4 44 i 5 6 | $\begin{array}{c} + & 0 \\ + & 5 \\ - & 4 \\ - & 3 \\ + & 2 \end{array}$ | <u>-</u> 4 48 | ss = | e 5·4 e 6·3 |
| Semipalatinsk Makhach-Kala Kirovobad Goris Sverdlovsk | | $13.6 \\ 17.8 \\ 18.5 \\ 18.6 \\ 19.1$ | $28 \\ 291 \\ 284 \\ 280 \\ 344$ | e 3 e 4 e 4 | 19 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 5 46 e 7 31 e 7 52 e 8 1 7 55 | $^{-\ 4}_{+\ 8}^{+\ 8}_{+\ 15}^{-\ 2}$ | | = = PP | |
| Bokaro Erevan Bombay Poona Leninakan | z. | $19.9 \\ 20.0 \\ 20.0 \\ 20.4 \\ 20.4$ | $\begin{array}{c} 134 \\ 282 \\ 173 \\ 170 \\ 284 \end{array}$ | i 4 e 4 e 4 e 4 | 41 | $ \begin{array}{c} PP \\ + 1 \\ + 1 \\ + 7 \end{array} $ | i 8 17 e 8 30 e 8 26 | $^{+}_{+}{}^{2}_{13} \\ ^{+}_{-}$ | e = 42 = | = = = | |
| Shillong Sotchi Irkutsk Madras Yalta | z. E. | $22.4 \\ 23.4 \\ 27.1 \\ 27.2 \\ 27.5$ | $^{120}_{292}_{49}_{159}_{294}$ | i 5 e 5 e 6 | 14 | $+{23\atop +}{23\atop -}$ | e 9 5 e 9 47 e 10 50 e 10 49 e 11 31 | $^{+\ 1}_{SS} \\ ^{+26}_{+24} \\ _{SS}$ | e 1 = 51 | sss | |
| Simferopol Moscow Kyakhta Kabansk Helsinki | | $27.5 \\ 27.6 \\ 27.9 \\ 28.4 \\ 35.4$ | $295 \\ 319 \\ 54 \\ 50 \\ 322$ | 5 e 5 e 5 i 7 | | $ \begin{array}{ccc} $ | e 11 16 e 10 26 — | SS - 6 | 12 3 i 8 24 | $\frac{\overline{sss}}{\underline{PP}}$ | |
| Upsala Kiruna Prague Skalstugan Jena | | $38.9 \\ 39.8 \\ 40.6 \\ 42.0 \\ 42.3$ | $320 \\ 333 \\ 305 \\ 325 \\ 306$ | i 7 e 7 i 7 e 7 | 29 35 50 53 57 | $\begin{array}{cccc} - & 0 & \\ - & 1 & \\ + & 7 & \\ - & 1 & \\ 0 & \end{array}$ | $\begin{array}{c} - \\ i & 10 & 9 \\ e & 10 & 25 \end{array}$ | PPP PPP | i 8 59 e 9 34 e 9 37 | PP PP PP | i 16·0 i 16·1 |
| Tiksi Stuttgart Strasbourg Besançon Paris | | 43·8 44·2 45·1 46·6 48·5 | $\begin{array}{r} 23 \\ 304 \\ 304 \\ 302 \\ 305 \end{array}$ | e 15 e 8 i 8 e 8 i 8 | $\begin{array}{c} 2 \\ 12 \\ 20 \\ 32 \\ 46 \end{array}$ | PPS 0 0 0 | e 14 39 | - <u>1</u> | e 10 23 | | e 23·3 — e 30·8 |
| Matusiro Tamanrasset Tananarive Resolute College Hungry Horse | z. z. | 52.6 56.8 61.3 66.4 72.4 93.1 | 70 274 205 356 16 | e 9 e 10 i 10 i 11 e 13 | 16 50 19 a 52 k 29 17 | $ \begin{array}{ccccc} & - & 2 \\ & + & 2 \\ & - & 1 \\ & - & 1 \\ & - & 0 \end{array} $ | | | | | |

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April 11d. 17h. 34m. 15s. Epicentre 35°·5S. 57°·7E.

A = + .4831, B = + .6576, C = - .5781; $\delta = + 2$; h = 0; D = + .806, E = - .592; G = - .342, H = - .466, K = - .816.

| | | Δ | Λz . | | Р. | 0 - C. | s. | о-с. | Sı | ipp. | L. |
|------------------|------|--------------|---------------|---------------------------------|--|---------|---------------|--------|--------------|---------------|-------|
| | | 0 | 0 | \mathbf{m} | s. | s. | m. s. | s. | m. s. | | m. |
| Tananarive | | 17.4 | 340 | i 4 | 6 k | .0 | e 7 24 | + 5 | 4 21 | \mathbf{PP} | e 8·7 |
| Kerguelen Is. | | 18.3 | 144 | e 4 | the state of the s | + 2 | 1000 | | | - | e 7.8 |
| Pietermaritzburg | Z., | 20.5 | 280 | i 4 | 46 | + 4 | - | _ | | - | • • • |
| Grahamstown | Z. | $22 \cdot 5$ | 268 | e 4 | 54 | - 8 | | _ | | | |
| Pretoria | z. | $24 \cdot 0$ | 287 | е 5 | 18 | + 1 | - | _ | | | |
| Kimberley | z. | $25 \cdot 4$ | 277 | е 5 | 7 | -24 | | - | - | 274000 | |
| Lwiro | 1000 | 40.4 | 319 | e 7 | 42 | + 1 | | _ | e 9 3 | PP | |
| Colombo | E. | 48.8 | 36 | 8 | 53 | + 4 | 16 38 | +46 | | | |
| Quetta | | 66.5 | 12 | e 10 | 51 | - 3 | e 19 48 | + 4 | | _ | |
| Jerusalem | | $69 \cdot 2$ | 343 | i 11 | 11 | + 1 | | | _ | _ | _ |
| Shillong | z. | 70.7 | 36 | 11 | 16 | - 4 | Total Control | | - | - | |
| Tamanrasset | Z. | 73-8 | 314 | e 11 | 40 | + 2 | | | e 14 9 | PP | 30.8 |
| Brisbane | | 81.5 | 118 | e 12 | 19 | - 2 | | - | | - | 300 |
| Algiers Univ. | | 86.0 | 322 | e 12 | 43 | 0 | _ | _ | | | |
| Triest | z. | 88.5 | 333 | e 13 | | +13 | | 1 | e 12 4 | 3 | |
| Alicante | | 89.0 | 320 | 13 | 0 | + 2 | 23 30 | [+ 3] | | | |
| Granada | | 89.8 | 318 | 13 | 14 a | +12 | 23 14 | [-18] | 29 59 | SS | 47.8 |
| Stuttgart | | 92.8 | 332 | e 13 | 15 | - 1 | _ | | | W <u>233</u> | 77/_3 |
| Besancen | | 92.8 | 330 | e 13 | 32 | +16 | 1 | - | | - | V=5 |
| Strasbourg | | $93 \cdot 2$ | 331 | e 13 | 23 | + 6 | 2000 | | _ | - | - |
| La Paz | z. | 104.5 | 237 | e 14 | 13 | + 5 | - | - | - | - | |
| College | | 147.9 | 17 | e 19 | 46 | [+2] | | 200 | | | |
| Hungry Horse | | 164.3 | 328 | e 20 | 14 | 1 + 91 | | _ | | | |
| Barratt | | 171.6 | 253 | | 10 | 1 01 | | _ | i 21 30 | PKP. | |
| Palomar | | 171.9 | 257 | The Committee of the Control of | 13 | [+63] | | _ | i 21 55 | PKP. | = |
| Riverside | | 172.5 | 261 | e 20 | 23 | [+12] | | | <u>1262-</u> | | 19.00 |
| China Lake | | 172.9 | 275 | e 20 | 20 | 1 + 91 | - | _ | | - | |
| Isabella | | 173.6 | 273 | e 20 | 33 | 1 + 221 | | | | | |

April 12d. 5h. 5m. 12s. Epicentre 25°·7S. 70°·0W. Depth of focus 0·005.

 $A = + \cdot 3086$, $B = - \cdot 8478$, $C = - \cdot 4313$; $\delta = + 2$; h = + 3; $D = - \cdot 940$, $E = - \cdot 342$; $G = - \cdot 148$, $H = + \cdot 405$, $K = - \cdot 902$.

| | Δ | Az. | I | ٠. | 0 - C. | s. | O - C. | Su | ipp. | L. |
|---|------------------|---------|---|------|------------|---------|---------------|---------|------------------------|--|
| | 0 | 0 | m. | s. | s. | m. s. | s. | m. s. | | m. |
| Antofagasta | $2 \cdot 1$ | 349 | i 0 | 33 | - 1 | i 1 4 | + 5 | - | _ | |
| Santa Lucia N. | A Secret Street, | 184 | e 1 | 50 | - 2 | i 3 20 | + ĭ | i 2 10 | 2 | |
| La Paz | 9.4 | 11 | i 2 | 16 | + 1 | i 3 33 | -27 | i 8 44 | PcP | |
| Buenos Aires | 13.3 | 134 | | 9 | i î | 5 38 | ± 4 | 10 11 | 101 | |
| La Plata | 13.8 | 134 | i 3 | 14? | Ô | 6 63 | +20 | - | | 6.5 |
| Huancayo | 14.5 | 339 | i 3 | 25 a | + 2 | e 6 24 | +21 | i 7 5 | SSS. | i 8·7 |
| Bogota | 30.4 | 352 | i 6 | 9 a | 4 ī | i 11 15 | +12 | i 12 15 | SS | 14.8 |
| Chinchina | 31.0 | 349 | i 6 | 14 a | ñ | 111 10 | 7.44 | 1 12 13 | 20 | 14.8 |
| Galerazamba | 36.6 | 351 | e 7 | 14 | +12 | i 12 49 | +10 | | | the state of the s |
| Trinidad | 37.1 | 14 | e 7 | 7 | + 1 | 1 12 20 | 40,000 | | | 16.8 |
| A. I. | 365, 617, 146 | 4.30 | 0 1 | | T 1 | | - | - | | - |
| Granada | $38 \cdot 4$ | 13 | e 7 | 16 | - 1 | S . | - | e 9 8 | PPP | - |
| St. Vincent | 39.6 | 13 | e 7 | 26 | - 1 | _ | - | | | |
| St. Lucia | 40.5 | 14 | e 7 | 33 | - 1 | - | | | | |
| Dominica | 41.6 | 12 5 | i 7 | 42 | - 1 | | - | i 9 32 | PPP | **** |
| San Juan | 44.0 | 5 | i 7 i 8 | 0 | - 3 | | _ | i 9 44 | PP | |
| Columbia | 60.3 | 349 | e 10 | 4 | 0 | 1-3 | | i 10 19 | $\mathbf{p}\mathbf{P}$ | |
| M'Bour | 65.2 | 58 | 9 | 48? | 3 | - | 2 | | | |
| Fayetteville | 65.6 | 339 | i 10 | 38 a | - 1 | | | e 11 1 | \mathbf{pP} | - |
| Morgantown | 65.7 | 352 | | 56 | +16 | _ | - | 7.7 | | |
| Lubbock | 66.3 | 331 | 100000000000000000000000000000000000000 | 44 | 0 | = | - | - | - | _ |
| Tueson | 69.6 | 324 | i 11 | 5 | + 1 | i 13 41 | \mathbf{PP} | i 11 21 | pP | _ |
| Halifax | 70.2 | 5 | i 11 | 8 k | ñ | | *** | i 11 24 | pP | 1,435 |
| Brébeuf | 71.0 | 357 | îîîî | 11k | _ 9 | | | i 11 27 | \mathbf{pP} | |
| Ottawa | 71.0 | 356 | | 12k | - ĩ | 5-51 | | i 11 29 | pP | <u> </u> |
| Shawinigan Falls | 72.0 | 358 | | 18k | - î | 20 39 | + 5 | i 11 36 | pP | - |

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| | | Δ | Az. | P. m. s. | O -C. | s. m. s. | 0 -C. | m. s. | ıpp. | L. m. |
|---|------------------|--|-----------------------------------|--|--|---|------------------------------|--|-------------------------|------------------|
| Seven Falls Barratt Boulder Palomar Kirkland Lake | z | $72.5 \\ 73.2 \\ 73.2 \\ 73.8 \\ 74.1$ | $359 \\ 320 \\ 332 \\ 320 \\ 353$ | i 11 21k i 11 26k e 11 26 i 11 30 e 11 30k | - 1 0 0 + 1 - 1 | i 11 48 i 11 53 | sP - | e 11 38 i 11 43 i 11 47 i 11 47 | pP pP pP | = |
| Riverside Boulder City Pasadena China Lake Isabella | | 74·5 74·6 75·1 76·0 76·3 | $321 \\ 324 \\ 320 \\ 322 \\ 321$ | i 11 34 i 12 16 i 11 36 i 11 42 i 11 44k | $\begin{array}{c} + & 1 \\ \mathbf{pP} \\ - & 1 \\ 0 \\ 0 \end{array}$ | i 11 56 i 11 59 i 12 4 i 12 6 | sP sP sP | i 11 50 i 12 33 i 11 53 i 11 59 i 12 1 | pP pP pP | = |
| Salt Lake City Tinemaha Eureka Fresno Lick | Z Z | $76.7 \\ 77.2 \\ 77.8 \\ 77.9 \\ 79.3$ | $329 \\ 322 \\ 325 \\ 321 \\ 320$ | i 11 47 i 11 51 i 11 53 e 11 52 i 12 1 | $\begin{array}{c} + & 1 \\ + & 2 \\ + & 1 \\ 0 \\ + & 1 \end{array}$ | e 14 52 i 12 16 i 12 16 — | PP sP sP | e 12 4 i 12 8 i 12 10 | pP pP pP | = |
| Reno Bozeman Butte Grahamstown Kimberley | Z N Z Z | $79.8 \\ 80.3 \\ 81.2 \\ 81.4 \\ 81.9$ | $323 \\ 332 \\ 332 \\ 123 \\ 118$ | e 12 6 e 12 6 i 12 15 i 12 12 12 15 | $^{+}_{+} {\overset{3}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}$ | | | i 12 23 i 12 33 | pP pP | |
| Shasta Hungry Horse Corvallis Lisbon Pretoria | z. z. z. | $82 \cdot 1 \\ 83 \cdot 6 \\ 85 \cdot 2 \\ 85 \cdot 7 \\ 85 \cdot 9$ | $322 \\ 332 \\ 325 \\ 73 \\ 116$ | e 12 13 e 12 23 e 12 52 12 35 ? e 12 34 | $^{-\ 2}_{+\ 21}^{0}_{+\ 2}$ | e 22 40 | + 2 | i 12 39 12 53 | $\frac{P}{P_{cP}}$ | |
| Banff Malaga Tamanrasset Granada Toledo | z. z. | 86·4 87·6 87·6 88·4 89·6 | $333 \\ 47 \\ 63 \\ 47 \\ 45$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $^{+}_{$ | e 23 28 e 16 8 23 30 | + 11 PP + 6 | i 13 9 16 36 | pP PP | |
| Relizane Alicante Algiers Univ. Paris Resolute | z. | $90.4 \\ 91.1 \\ 92.6 \\ 98.3 \\ 101.5$ | $50 \\ 47 \\ 50 \\ 40 \\ 353$ | e 12 58 13 29 e 13 7 i 13 44 e 17 39 | $^{+\ 3}_{+\ 30} \\ ^{+\ 1}_{+\ 12} \\ \mathbf{PP}$ | e 16 46 | sP PP | e 13 44 25 33 e 13 22 e 17 32 e 38 32 | PS PcP PP P'P' | e 50·8 e 38·5 |
| Rome Scoresby Sund Messina Stuttgart Nouméa | E. | $101.5 \\ 101.8 \\ 102.2 \\ 102.2 \\ 107.4$ | $^{49}_{15}_{54}_{42}_{234}$ | e 16 8 e 18 10 e 18 31 e 13 45? | PP PP - 4 | e 24 23 e 24 23 e 26 1 e 26 19 | $[+ 5] + 3] \\ ScS \\ + 13$ | e 27 6 e 14 13 | PS PP | 49·8 = |
| College Kiruna Ksara Quetta Poona | z. z. | 108.0 113.7 116.4 141.9 145.8 | 334 24 63 73 95 | e 18 53 e 29 24 e 19 38 e 19 22 i 19 34 | PS PP [- 2] [+ 3] | | <u> </u> | | | |
| Dehra Dun Matusiro Shillong | z. z. | 151·5 153·6 163·6 | $^{73}_{301}_{87}$ | e 19 49 19 53k i 19 15k | [+ 9] $[+10]$ $[-40]$ | = | = | i 20 30 | PKP ₂ | |

April 12d. 22h. 34m. 46s. Epicentre 37°·3N. 50°·2E.

A = +.5104, B = +.6127, C = +.6034; $\delta = 0$; h = -1; D = +.768, E = -.640; G = +.386, H = +.464, K = -.797.

| | Δ | Az. | Р. | 0 - C. | s. | O-C. | Su | pp. | L. |
|--------------|-----|-----|--------|------------|--------|-----------------|----------|------------|----|
| | 0 | o | m. s. | 8. | m. s. | s. | m. s. | : DOMESTIC | m. |
| Lenkoran | 1.8 | 323 | 0 34 | + 2 | _ | and the same of | 2 | - | |
| Baku | 3.0 | 356 | e 0 53 | + 3 | e 1 32 | + 5 | - | | |
| Goris | 3.7 | 306 | 1 0 | 0 | | | 2 | - | 1 |
| Nakhichevan | 4.2 | 298 | i 1 9 | + 2 | _ | _ | | | |
| Kirovobad | 4.5 | 320 | i 1 13 | + 2 | - | _ | | _ | - |
| Erevan | 5.3 | 304 | e 1 26 | + 4 | | | <u> </u> | _ | _ |
| Makhach-Kala | 6.0 | 341 | i 1 33 | $+\hat{i}$ | | - | | | _ |
| Ashkabad | 6.5 | 82 | 1 36k | - 3 | | | | | _ |
| Gori | 6.6 | 316 | 1 40 | - ĭ | | | | - | - |
| Abastumani | 7.2 | 310 | e 1 52 | + 3 | | | | | _ |

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| | | Δ | Az. | P. m. s. | 0 – C. s. | S. m. s. | O -C. | m. s. | ipp. | $_{ m m.}^{ m L.}$ |
|---|----------------|--|---|---|--|---|--|---|-----------------------|-----------------------|
| Ksara Jerusalem Simferopol Stalinabad Tashkent | | $12 \cdot 2$ $13 \cdot 5$ $14 \cdot 3$ $14 \cdot 7$ $15 \cdot 3$ | $258 \\ 250 \\ 307 \\ 80 \\ 69$ | i 3 17 a e 3 25 e 3 28 | $^{+}_{-}^{3}_{1}$ $^{-}_{-}^{3}$ | i 5 22 i 6 1 e 6 4 e 6 33 e 6 46 | $^{+\ 6}_{+\ 14} \ ^{-\ 2}_{\rm SS} \ { m SS}$ | e 3 32 e 3 38 e 3 40 | PP PP | 6.8 |
| Quetta Iasi Frunse Bucharest Moscow | | 15.6 19.4 19.4 19.5 20.3 | $\frac{112}{308}$ $\frac{66}{299}$ $\frac{339}{339}$ | e 4 30 i 4 30 e 4 34 | $\begin{array}{c} + & 3 \\ 0 \\ 0 \\ + & 3 \\ - & 2 \end{array}$ | i 6 45 e 8 16 i 8 8 e 8 11 e 8 16 | + 8 + 4 + 5 - 7 | $\begin{array}{c} -4 & 45 \\ e & 4 & 50 \\ e & 16 & 8 \\ i & 5 & 9 \end{array}$ | PP PP ScS PP | |
| Sverdlovsk Athens Sofia Lwow Belgrade | | $20.7 \\ 21.0 \\ 21.2 \\ 22.6 \\ 23.6$ | $ \begin{array}{r} 16 \\ 280 \\ 293 \\ 312 \\ 298 \\ \end{array} $ | e 4 46 a i 4 50 i 5 2 | $ \begin{array}{ccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccc} 8 & 24 \\ i & 8 & 41 \\ e & 8 & 3 \\ i & 9 & 6 \\ e & 9 & 40 \\ \end{array}$ | $ \begin{array}{r} -7 \\ +4 \\ -38 \\ -1 \\ +15 \\ \end{array} $ | 4 58 i 5 27 e 5 31 | PP PPP | e 11·9 |
| Dehra Dun Budapest Krakow Semipalatinsk Warsaw | | $24.1 \\ 25.0 \\ 25.1 \\ 25.1 \\ 25.3$ | $\begin{array}{r} 99 \\ 304 \\ 310 \\ 49 \\ 315 \end{array}$ | e 5 27 e 5 28 | $ \begin{array}{r} - & 1 \\ 0 \\ - & 1 \\ 0 \\ - & 2 \end{array} $ | i 9 44 e 9 57 — e 9 55 | $^{+10}_{+8}$ $^{+1}$ | $\begin{array}{c} -6 & 58 \\ 6 & 7 \\ -6 & 1 \end{array}$ | $\frac{S_{c}S}{PP}$ | i 11·3 — e 13·2 |
| Raciborz Bombay Messina Poona Helsinki | z. | $26.2 \\ 27.0 \\ 27.3 \\ 27.9 \\ 27.9$ | 309 127 282 126 333 | e 5 52 i 5 48k e 6 2 | $ \begin{array}{r} -1 \\ +7 \\ -8 \\ -2 \end{array} $ | e 10 25 e 10 29 e 10 40 | $+\frac{3}{2} + \frac{3}{3}$ | e 11 47 | ss = | 13 <u>·6</u> |
| Prague Rome Florence Jena Upsala | | 28·5 29·3 30·1 30·5 30·6 | $308 \\ 291 \\ 295 \\ 309 \\ 328$ | e 6 5 e 6 10 e 6 15 i 6 16 | + 6 - 1 - 3 - 2 - 2 | e 7 17 e 10 57 e 10 57 e 12 46 | PPP - 2 -15 SS | i 6 42 e 11 58 e 7 8 | P <u>P</u> P <u>P</u> | e 19·2 |
| Copenhagen Stuttgart Hamburg Zürich Strasbourg | | $31.3 \\ 31.7 \\ 32.0 \\ 32.0 \\ 32.6$ | $318 \\ 304 \\ 313 \\ 302 \\ 304$ | i 6 17 e 6 25 i 6 30 e 6 28 e 6 33 | $ \begin{array}{rrr} $ | i 11 32 e 14 32 — | *ss* | - - 7 36 | = = PP | e 21·2 e 15·4 |
| Basle Chatra Monaco Neuchatel Witteveen | z. | $32.8 \\ 32.8 \\ 32.8 \\ 33.1 \\ 33.8$ | $302 \\ 98 \\ 295 \\ 301 \\ 311$ | e 6 34 e 6 40 i 6 36 e 6 38 e 6 52 | $ \begin{array}{rrr} & 2 \\ & 3 \\ & - & 1 \\ & - & 2 \\ & + & 6 \end{array} $ | | | e 8 20 e 7 48 | PPP PP | |
| Kiruna Skalstugan Clermont-Ferran Paris Shillong | d z. | $34.8 \\ 34.8 \\ 35.8 \\ 36.1 \\ 37.2$ | 341 331 299 304 96 | i 6 54 i 6 53 e 7 3 e 7 4 i 7 12k | $ \begin{array}{r} 0 \\ 1 \\ 0 \\ - 1 \\ - 3 \end{array} $ | i 14 9 | PcP | i 7 45 i 8 1 e 8 31 | PP PP | e 24·2 |
| Algiers Univ. Kew Durham Alicante Relizane | z. N. | $37.3 \\ 38.0 \\ 38.9 \\ 39.6 \\ 39.6$ | $284 \\ 308 \\ 314 \\ 288 \\ 283$ | $\begin{array}{c} \mathbf{e} \ 7 \ 12 \\ \mathbf{i} \ 7 \ 21 \\ \mathbf{e} \ 7 \ 27 \\ \mathbf{i} \ 7 \ 33 \end{array}$ | $-rac{4}{0} \\ -rac{8}{2}$ | 13 28 e 13 25 | $-\frac{1}{3}$ | e 11 24 | = 3 | e 23·2 |
| Irkutsk Tamanrasset Rathfarnham C. Toledo Granada | z. z. z. | $40.2 \\ 40.9 \\ 41.7 \\ 41.9 \\ 42.3$ | $50 \\ 262 \\ 311 \\ 291 \\ 287$ | 7 40k i 7 46a i 7 52k i 7 53a i 7 52k | $\begin{array}{c} 0 \\ 0 \\ 0 \\ - \\ 1 \\ - \\ 5 \end{array}$ | e 13 59 | + <u>1</u> | e 9 25 e 9 27 | PP PP | |
| Malaga Lwiro Lisbon Scoresby Sund Tananarive | z. | 43·1 44·1 46·1 49·4 56·0 | 286 212 291 335 183 | i 8 1a e 8 11 i 8 28k i 9 0 e 9 50 | $ \begin{array}{r} $ | e 16 6 | + = 6 | e 9 48 e 19 32 e 10 39 | PP SS PP | 27·6 — 25·2 |
| Resolute Pretoria Matusiro Lembang Kimberley | E. Z. | $65.9 \\ 66.1 \\ 67.6 \\ 69.2 \\ 69.9$ | $350 \\ 202 \\ 60 \\ 116 \\ 204$ | e 10 52k e 10 46k e 11 0 i 11 13a | $^{+}_{-}{}^{2}_{1}$ $^{-}_{-}{}^{2}$ | e 18 24 e 20 3 e 21 44 | $-\frac{73}{6}$ | | <u> </u> | 39.5 |

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| 1956 | 185 |
|------|-----|
| | |

| | Δ | Az. | Р. | O-C. | s. | O-C. | Su | pp. | L. |
|------------------|-------|-----|----------|------|-------|------|----------------|------|---------------|
| | 0 | 0 | m. s. | s. | m. s. | s. | m. s. | 2000 | m. |
| College | 77.2 | 8 | i 11 56 | - 1 | _ | _ | $\sim 10^{-1}$ | 7. | |
| Halifax | 78.9 | 318 | i 12 2 a | - 5 | _ | | | | |
| Seven Falls | 80.8 | 324 | e 12 17k | 0 | _ | - | _ | _ | _ |
| Shawinigan Falls | 82.1 | 324 | i 12 24k | 0 | - | - | - | - | - |
| Kirkland Lake z. | 84.1 | 329 | e 12 34 | 0 | | | | - | _ |
| Ottawa | 84.3 | 325 | e 12 38 | + 3 | | - | - | - | or management |
| Banff | 91.0 | 351 | e 13 103 | + 3 | _ | | | | |
| Hungry Horse | 93.5 | 350 | e 13 19 | 0 | - | | _ | _ | - |
| Eureka | 102.5 | 349 | e 14 1 | 4. 1 | | | 2=2 | | 7 |

April 13d. 4h. 38m. 48s. Epicentre 23° 2S. 66° 3W. Depth of focus 0.030.

$$A = +.3698$$
, $B = -.8425$, $C = -.3917$; $\delta = -1$; $h = +4$; $D = -.916$, $E = -.402$; $G = -.157$, $H = +.359$, $K = -.920$.

| | | - ·916, 1 | | 10.000 | | | 57, H = + | 359, 1 | K =920 | F. 1 | |
|---|----------------------|---|---|--------------------------------------|--------------------------------|--|---|--|------------------------|-----------------------------------|-----------------|
| Antofagasta Copiapo La Paz La Plata Huancayo | E | $\begin{array}{c} & & & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & \\ & \\ & & \\ & \\ & \\ & & \\ & \\ & & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\ & \\$ | Az. 263 221 346 150 321 | i (e 2 i 1 | 8 42 63 | O-C. - 3 + 46 + 2 + 2 | S. m. s. i 1 39 i 3 8 i 2 54 5 36? e 5 50 | $\begin{array}{c} { m o-c.} \\ { m s.} \\ { m -9} \\ { m +42} \\ { m -4} \\ { m +2} \\ { m +10} \end{array}$ | m. s. | ърр. — — | L. m. 6·1 |
| Bogota Chinchina Trinidad St. Vincent St. Lucia | | $28.7 \\ 29.5 \\ 34.0 \\ 36.5 \\ 37.4$ | 344 341 8 8 | i 5 e 6 i 6 | 45 27 46 | $\begin{array}{ccc} + & 2 \\ - & 1 \\ + & 3 \\ + & 1 \end{array}$ | i 10 28 | +18 | i = 34 | P = | |
| Fort de Franc Dominica San Juan Tacubaya Columbia | e | $38.1 \\ 38.6 \\ 41.4 \\ 53.2 \\ 58.6$ | $\begin{array}{c} 8 \\ 8 \\ 0 \\ 320 \\ 346 \end{array}$ | i 7 e 9 | ō | $\begin{array}{cccc} + & 2 \\ - & 1 \\ - & 2 \\ + & 3 \\ 0 \end{array}$ | e 12 35 | 0 | e 10 11 | <u>P</u> | |
| Chapel Hill Fayetteville Ottawa Tucson Shawinigan Fa | alls | $60.1 \\ 64.6 \\ 68.8 \\ 69.7 \\ 69.7$ | 348 335 353 321 355 | i 10 e 10 i 10 | 15a 43k 48 | $\begin{array}{cccc} + & 1 & & \\ + & 0 & & \\ + & 1 & & \\ + & 1 & & \\ + & 1 & & \\ \end{array}$ | | | | | |
| Seven Falls Boulder Barratt Palomar Boulder City | | $70 \cdot 2$ $72 \cdot 7$ $73 \cdot 5$ $74 \cdot 1$ $74 \cdot 6$ | $357 \\ 330 \\ 317 \\ 318 \\ 321$ | e 10 i 11 i 11 i 11 i 11 | 51k 6 11 15 19 | $^+ \begin{array}{c} + & 1 \\ + & 1 \\ + & 2 \\ + & 3 \end{array}$ | | | | | |
| Riverside Pasadena China Lake Salt Lake City Isabella | | 74·8 75·4 76·2 76·5 76·6 | $\frac{318}{319} \\ \frac{326}{319}$ | | 19k 22k 26k 30 29k | $\begin{array}{c} + & 2 \\ + & 1 \\ + & 1 \\ + & 3 \\ + & 2 \end{array}$ | | | | | |
| Tinemaha Eureka Lick Bozeman Grahamstown | z. z. | 77·4 77·7 79·6 79·7 79·9 | $320 \\ 323 \\ 318 \\ 330 \\ 122$ | i 11 i 11 i 11 i 11 i 11 | 34 k 36 46 47 46 a | $^{+}$ 2 $^{+}$ 3 $^{+}$ 2 $^{+}$ 1 | | <u></u> | i 14 34 e 14 52 | PP PP | |
| Reno Berkeley Shasta Hungry Horse Malaga | z. z. | $80.0 \\ 80.3 \\ 82.2 \\ 83.1 \\ 83.4$ | $\begin{array}{r} 321 \\ 318 \\ 320 \\ 330 \\ 46 \end{array}$ | e 11 e 11 i 11 i 12 i 12 | 48 49 57 3 10k | $^{+}_{+}$ $^{2}_{0}$ $^{+}_{+}$ $^{1}_{7}$ | e 22 4 | +3 | e 15 23 | <u>=</u> == | |
| Tamanrasset Toledo Relizane Algiers Univ. Lwiro | z. z. | $83.5 \\ 85.4 \\ 86.2 \\ 88.5 \\ 93.8$ | 62 43 49 49 | i 12 i 12 e 12 e 12 e 12 | 7 18 19 30 57 | $^{+}$ $^{+}$ 5 $^{+}$ $^{+}$ 2 $^{+}$ $^{+}$ 4 | e 15 22 | PP | e 13 6 e 12 52 e 16 39 | $\frac{\mathbf{pP}}{\mathbf{pP}}$ | |
| Rome Quetta Poona Lembang Matusiro | E. Z. Z. Z. | $97.4 \\ 137.9 \\ 142.6 \\ 149.5 \\ 155.0$ | $^{48}_{70}_{90}_{168}$ | e 21 e 22 e 19 19 | 50 25 32 38 | PP PP [+14] [+12] | e 23 29 | <u>=</u> | | | |

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April 15d. 12h. 46m. 5s. Epicentre 39°·2N. 71°·9E. Magnitude 4·75. Seismo. Bull. of the Seismo. Stations of the U.S.S.R. April-June, 1956, Moscow, 1957, pp. 42, 43.

April 16d. 1h. 42m. 37s. Epicentre 54°-9N. 161°-8E. Depth of focus 0-010.

U.S.S.R. gives epicentre 54°.7N. 161°.2E. Magnitude 5.5.

A = -.5487, B = +.1804, C = +.8163; $\delta = -4$; h = -7; D = +.312, E = +.950; G = -.775, H = +.255, K = -.578.

| 00000000 | | Δ | Az. | P. | 0 – C. | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | O – C. | Su | pp. | L. |
|---|----------|---|--|--|---|---------------------------------------|----------------------------------|----------------------------|--------------------|--------|
| Klyuchi Petropavlovsk Magadan Kurilsk Uglegorsk | | $1.5 \\ 2.6 \\ 7.6 \\ 13.1 \\ 13.4$ | 339 228 313 228 252 | m. s. i 0 26 i 0 38 e 1 51 e 3 3 e 3 10 | s. - 1 - 3 + 1 + 3 | m. s. 0 47 i 1 8 | s. - 4 | m. s. | | m. |
| Yuzno-Sakhlinsk Unalaska Tiksi Bay Matusiro College | | $14.4 \\ 18.4 \\ 21.9 \\ 24.4 \\ 26.4$ | $244 \\ 80 \\ 332 \\ 231 \\ 48$ | e 3 21 i 4 11 e 4 47 i 5 11k i 5 30 | + 1 + 1 + 1 + 1 | e 8 46 9 23 | + 9 + 3 | e = 22 | PP | 11-2 |
| Resolute Victoria Banff Corvallis Baguio | z. | $41.3 \\ 44.7 \\ 47.1 \\ 47.3 \\ 49.7$ | $^{23}_{66}$ $^{58}_{70}$ 236 | i 7 38k e 8 7 i 8 27 e 8 29 i 8 59 | $^{+}_{+}\overset{1}{\overset{2}{\overset{3}{\overset{+}{15}}}}$ | | | | | e 20·9 |
| Hungry Horse Shasta Mineral Butte Berkeley | z. z. | $\begin{array}{r} 49.7 \\ 50.4 \\ 51.1 \\ 52.0 \\ 52.4 \end{array}$ | 60 73 73 62 76 | 18 45 i 8 51 i 8 56 i 9 2 i 9 6 | $\begin{array}{cccc} + & 1 \\ + & 2 \\ + & 1 \\ + & 1 \\ + & 2 \end{array}$ | | | i 10 6 | PcP | |
| Reno Bozeman Lick Kiruna Fresno | z. z. | $52.6 \\ 53.0 \\ 53.1 \\ 54.3 \\ 54.6$ | $\begin{array}{r} 72 \\ 61 \\ 76 \\ 343 \\ 75 \end{array}$ | e 9 8 i 9 9 i 9 22 i 9 18 i 9 22 | $^{+}_{0}^{2}_{0}\\ _{+}^{0}_{1}$ | | | | | |
| Eureka Scoresby Sund Tinemaha Woody Salt Lake City | z. | 54·8 54·9 55·2 55·9 56·0 | $70 \\ 74 \\ 75 \\ 66$ | i 9 22 e 9 23 i 9 28 i 9 30 a i 9 33 | $\begin{array}{c} & 0 \\ 0 \\ + & 3 \\ 0 \\ + & 2 \end{array}$ | | | i 9 40 | P P | |
| Isabella Pasadena Boulder City Riverside Palomar | | 56·1 57·4 57·9 58·0 58·7 | 75 76 72 75 76 | i 9 21 a i 9 42 a i 9 47 i 9 46 a i 9 51 a | $ \begin{array}{c} -11 \\ + 1 \\ + 3 \\ + 1 \\ + 1 \end{array} $ | | | i 9 32 e 9 58 i 10 7 | PP PP | |
| Barratt Skalstugan Boulder Moscow Upsala | | 59·3 59·5 60·0 60·7 62·1 | $\begin{array}{r} 76\\345\\62\\328\\340\end{array}$ | i 9 55 a e 9 55 i 10 1 e 10 4 i 10 12 | $\begin{array}{cccc} + & 1 & & \\ & 0 & & \\ + & 2 & & \\ + & 1 & & \\ - & 1 & & \end{array}$ | | | e 10 10 e 10 44 | P _c P | |
| Tucson Kirkland Lake Quetta Fayetteville Ottawa | z. z. | $62.9 \\ 65.0 \\ 68.5 \\ 68.6 \\ 68.9$ | $\begin{array}{r} 72 \\ 41 \\ 292 \\ 58 \\ 40 \end{array}$ | i 10 15 e 10 31 e 10 54 i 10 55k i 10 56k | $-\begin{array}{cc} & 3 \\ - & 1 \\ 0 \\ + & 0 \end{array}$ | | | e 11 8 | p <u>P</u> | |
| Shawinigan Falls Seven Falls Hamburg Tiflis Jena | z. z. | $68.9 \\ 69.1 \\ 69.4 \\ 69.8 \\ 71.6$ | $\begin{array}{r} 37 \\ 36 \\ 342 \\ 315 \\ 341 \end{array}$ | e 10 56 a e 10 59 k i 11 3 e 11 13 | $\begin{array}{c} & 0 \\ + & 1 \\ + & 3 \\ + & 1 \end{array}$ | | | e 11 28 | = = P | |

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| | | Δ | Az. | P. | O-C. | s. | O-C. | Su | pp. | L. |
|-------------|------|--------------|-----|--------|---------|-----|------|----------------------|---------------|-----|
| | | 0 | 0 | m. s | 8. | ms. | s. | m. s. | | m. |
| Prague | N. | 71.9 | 338 | i 11 1 | 5 + 1 | | _ | - | | |
| Halifax | 1000 | 73.6 | 32 | | 7a + 3 | - | | - | | - |
| Stuttgart | | 74.2 | 342 | e 11 2 | 8 0 | | | | | |
| Strasbourg | | 74.6 | 342 | e 11 3 | | - | | - | 7 | 100 |
| Paris | | $75 \cdot 2$ | 346 | e 11 3 | 5 + 1 | | - | e 12 13 | pP | - |
| Besancon | | 76.2 | 343 | i 11 4 | 0 + 1 | + | - | e 12 1 | \mathbf{pP} | _ |
| Jerusalem | | 82.3 | 316 | i 12 1 | | | | 11/24/27/10/11_140-0 | • | _ |
| La Paz | N. | 126.0 | 65 | e 19 | 5 + 141 | - | | | | _ |
| Canhametown | ** | 149.1 | 226 | 0 10 9 | | | | | 20,570 | |

April 16d. 10h. 46m. 43s. Epicentre 3°.3S. 101°.8E.

A = -.2042, B = +.9772, C = -.0572; $\delta = -11$; h = +7; D = +.979, E = +.204; G = +.012, H = -.056, K = -.998.

| 5000 | (7) | | 700 | | ं | | | 800000000000000000000000000000000000000 | | | |
|--|----------|---|----------------------------------|--------------------------------------|--|---|--|---|-------------------------------|------------------|--------------------|
| | | ۵ | Az. | m. | -0111 | 0 -C. | s. m. s. | O -C. s. | m. s. | ipp. | $_{ m m.}^{ m L.}$ |
| Djakarta Bandung Lembang Madras Baguio | E, | $\begin{array}{r} 5.8 \\ 6.8 \\ 6.8 \\ 26.9 \\ 27.0 \end{array}$ | $120 \\ 122 \\ 122 \\ 307 \\ 43$ | e 1 i 1 i 5 i 5 | 30 k 49 28 a 48 | $^{+}_{$ | i 2 37 e 3 6 e 2 44 | $-1 \\ +3 \\ -19 \\ -$ | i = 57 | P <u>P</u> | |
| Shillong Quetta Matusiro Brisbane Riverview | z. | $\begin{array}{r} 30 \cdot 2 \\ 47 \cdot 1 \\ 52 \cdot 2 \\ 54 \cdot 4 \\ 55 \cdot 0 \end{array}$ | $342 \\ 318 \\ 37 \\ 122 \\ 130$ | i 6 e 8 i 9 i 9 i 9 | 14 a 37 13 a 28 32 a | $\begin{array}{c} + & 0 \\ + & 2 \\ - & 3 \\ - & 3 \end{array}$ | | | i 11 30 10 24 | PPP PcP | e 21·1 |
| Tananarive Nouméa Jerusalem Kimberley Kiruna | z. | $55.2 \\ 65.3 \\ 72.0 \\ 77.1 \\ 89.7$ | 249 113 305 241 338 | e 10 i 11 e 11 i 13 | $\begin{array}{c} 38 \\ 49 \\ 29 \\ 55 \\ 1 \end{array}$ | $^{+}_{+} \begin{array}{c} 1 \\ 3 \\ + \\ 2 \\ 0 \end{array}$ | | | i 1 1 49 | PcP | |
| Upsala Skalstugan College Scoresby Sund Banff | z. | $89.9 \\ 92.7 \\ 101.5 \\ 103.9 \\ 122.9$ | $330 \\ 333 \\ 24 \\ 343 \\ 27$ | i 13 i 13 e 13 e 18 e 19 | 2 a 15 a 53 25 59 | $\begin{array}{c} 0 \\ 0 \\ -2 \\ PP \\ [+61] \end{array}$ | | | i 16 35 i 18 2 | PP PP | |
| Shasta Hungry Horse Mineral Lick Bozeman | z. z. | $125.5 \\ 125.6 \\ 126.2 \\ 127.2 \\ 128.9$ | $^{41}_{29}_{41}_{44}_{29}$ | e 19 i 19 e 19 e 19 i 19 | 0 3 4 8 10 | $[-3] \\ [-1] \\ [-1] \\ [+1] \\ [0]$ | | | e 20 59 | PP | = |
| Tinemaha Eureka Woody Isabella China Lake | | $130.2 \\ 130.3 \\ 130.5 \\ 130.8 \\ 131.3$ | 42 38 44 44 43 | e 22 i 19 i 19 e 19 e 19 | 54 12 12 13 14 | PKS [- 1] [- 1] [- 1] | i 22 30 i 22 31 e 22 31 e 22 34 | SKP SKP SKP | e 21 22 i 19 27 e 21 32 | PP pPKP PP | |
| Pasadena Salt Lake City Riverside Boulder City Palomar | | 131.8 131.9 132.4 133.1 133.1 | 46 34 45 42 46 | e 19 e 19 e 19 e 19 e 18 | 16 19 17 19 56 | [+ 1] $[+ 3]$ $[+ 0]$ $[+ 1]$ $[-22]$ | i 23 1 e 22 37 e 22 38 i 22 41 e 22 44 | PKS SKP SKP SKP | e 22 2 e 21 42 | PP — PP | |
| Barratt Boulder Tucson Fayetteville Columbia Huancayo | z. | 133.6 136.0 138.0 144.2 149.3 164.5 | $^{46}_{30}_{43}_{22}_{5}$ | e 19 | 21 25 20 35 k 52 8 a | [+ 2] $[+ 2]$ $[- 7]$ $[- 3]$ $[+ 6]$ $[+ 3]$ | i 23 10 i 22 57 | PKS SKP | | | |

April 17d. 7h. 19m. Epicentre 22°·7N. 121°·6E. Depth of focus 20km. Intensity II-III at Hsinkong and Hwalien. Seismo. Bull. of the Taiwan Weather Bureau for April-June, 1956, Vol. 3, No. 2, Taiwan, China, p. 9.

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April 17d. 12h. 16m. 17s. Epicentre 30°·3N. 138°·3E. Depth of focus 0·070. Japan gives epicentre 30°N. 139°E. Depth about 320km. Unfelt.

A = -.6458, B = +.5753, C = +.5020; $\delta = +3$; h = +2; D = +.665, E = +.747; G = -.375, H = +.334, K = -.865.

| $\nu - \tau$ | 000 | , as — T | 1 11 1 | , | | H - T 334 | , A - | 000. | |
|--|----------|---|--|---|---|--|--|--|-----------------|
| | | ۵ | Az. | P. m. s. | O – C. | s. m. s. | 0 -C. | m. s. | npp. |
| Hatidyozima Omaesaki Osima Ajiro Mera | Ε. | 3·0 4·3 | 359 11 8 15 | e 1 18 e 1 21 e 1 55 e 1 23 | $-\frac{2}{1}$ $-\frac{2}{2}$ | e 1 59 i 2 19 e 2 17 e 2 29 e 2 23 | $ \begin{array}{r} -6 \\ -5 \\ -10 \\ -3 \\ -9 \end{array} $ | | |
| Misima Kameyama Nagoya Sumoto Gihu | N. | 4·8 4·8 5·0 5·0 5·2 | $\begin{array}{r} 6 \\ 341 \\ 347 \\ 325 \\ 346 \end{array}$ | e 1 24 e 1 27 e 1 26 | - 1 + 2 0 - | $\begin{array}{c} -2 & 30 \\ e & 2 & 31 \\ i & 2 & 33 \\ e & 2 & 23 \end{array}$ | $ \begin{array}{r} - & 2 \\ - & 4 \\ - & 2 \\ - & 15 \end{array} $ | | |
| Kyoto Hikone Hunatu Koti Yokohama | | $5.2 \\ 5.2 \\ 5.2 \\ 5.2 \\ 5.2$ | $336 \\ 341 \\ 4 \\ 310 \\ 12$ | e 1 27 e 1 25 e 1 29 e 1 45 | $ \begin{array}{r} - & 2 \\ - & 1 \\ - & 3 \\ + & 1 \\ + & 17 \end{array} $ | 2 33 2 37 e 2 30 e 2 37 e 2 31 | $ \begin{array}{cccc} & - & 5 \\ & - & 1 \\ & - & 8 \\ & - & 7 \end{array} $ | | |
| Kohu Takamatu Tokyo Kumagaya Matumoto | E. | 5·3 5·4 5·5 5·9 5·9 | $319 \\ 12 \\ 8 \\ 357$ | e 1 29 e 1 30 e 1 29 e 1 32 | $-\ \ \begin{array}{c} 0 \\ 0 \\ 2 \\ -\ \ \end{array}$ | e 2 41 i 2 41 i 2 35 e 2 45 e 2 47 | $^{+}$ $^{-}$ 1 $^{-}$ 6 $^{-}$ 4 | | |
| Hukui Kakioka Maebasi Matusiro Mito | E. | $6.0 \\ 6.1 \\ 6.2 \\ 6.3$ | $344 \\ 14 \\ 6 \\ 359 \\ 16$ | e 1 33 e 1 36 i 1 35 a | $-\frac{4}{1}$ | e 2 51 e 2 45 e 2 49 e 2 49 | - 1 - 9 - 5 - 7 - 9 | | |
| Nagano Hirosima Toyama Utunomiya Kumamoto | N. Z. | $6 \cdot 4 \\ 6 \cdot 4$ | $359 \\ 310 \\ 352 \\ 11 \\ 293$ | e 1 38 e 1 35 | - <u>1</u> - <u>5</u> | i 2 59 e 3 1 e 2 52 e 2 50 e 3 13 | $^{+}_{1}^{1}_{$ | | |
| Onahama Shirakawa Inawasiro Hukusima Sendai | | 7·0 7·0 7·4 7·6 8·2 | 17 12 11 13 14 | $\begin{array}{c} \mathbf{e} \ 1 \ 46 \\ \mathbf{e} \ 1 \ 50 \\ 1 \ 56 \end{array}$ | - 1 - 3 - 3 | e 3 2 3 1 e 3 11 i 3 15 e 3 30 | $ \begin{array}{r} -9 \\ -10 \\ -7 \\ -7 \\ -7 \\ -4 \end{array} $ | $\frac{-}{e^{\frac{3}{3}}}_{27}^{3}$ | - s |
| Morioka Baguio Shillong Lembang College | z. z. | $9.6 \\ 21.3 \\ 41.1 \\ 47.2 \\ 56.2$ | $\begin{array}{r} 13 \\ 234 \\ 275 \\ 224 \\ 30 \end{array}$ | e 2 14 i 4 16 e 7 3 e 7 44 i 8 55 | $^{+}_{+} ^{0}_{4} \\ ^{-}_{-} ^{6}_{1}$ | i 4 0 i 7 48 | - 1 + 12 - | | |
| Quetta Resolute Skalstugan Shasta Upsala | z. | $60.6 \\ 69.7 \\ 77.2 \\ 77.3 \\ 77.8$ | $^{13}_{338}_{50}_{334}$ | i 9 27 k e 10 21 i 11 6 e 11 9 i 11 9 | $\begin{array}{cccc} + & 2 \\ - & 1 \\ + & 1 \\ + & 3 \\ + & 1 \end{array}$ | e 17 8 | + 4 = = | | |
| Hungry Horse Berkeley Lick Eureka Woody | z. z. | $78.5 \\ 78.7 \\ 79.4 \\ 82.1 \\ 82.2$ | 40 53 53 49 53 | i 11 14 i 11 16 i 11 20 i 11 34 i 11 33 a | $^{+}_{+} \begin{array}{c} 2 \\ + \\ 3 \\ + \\ 2 \end{array}$ | | | - e 16 47 i 16 51 | PPP PPP |
| Isabella China Lake Pasadena Riverside Boulder City | | $82.5 \\ 83.0 \\ 83.5 \\ 84.1 \\ 84.8$ | 53 54 54 51 | i 11 34 e 11 38 i 11 40 i 11 43 e 11 47 | $^{+}_{+} {}^{1}_{3} \ + {}^{2}_{2} \ + {}^{3}_{3}$ | | | e 16 50 e 16 48 e 16 33 e 16 30 | PPP PPP ? |
| Palomar Barratt Rathfarnham C. Fayetteville Huancayo | z. z. | $84.8 \\ 85.3 \\ 91.2 \\ 97.6 \\ 143.9$ | 340 40 | i 11 47 e 11 49 i 12 52a i 14 53 e 14 58 | + 3 + 3 + 38 pP P | | | e 16 22 | <u>?</u> |

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April 17d. 23h. 8m. 11s. Epicentre 38°.9N. 70°.1E. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 43.

April 18d. 7h. Epicentre 37°·7N. 57°·6E. Loc. cit., 17d. 23h., p. 69.

April 18d. 11h. 0m. 22s. Epicentre 51°·8N. 177°·7W. Focus at Base of Superficial Layers. China gives 18d. 11h. 0m. 13s. Epicentre 52°N. 178°W. Magnitude 6·75.

A = -.6205, B = -.0249, C = +.7838; $\delta = -2$; h = -6; D = -.040, E = +.999; G = -.783, H = -.031, K = -.621.

| | | March 11 | N 177 | | | | | | | |
|---|-----------|---|---|---|---|---|--|--|--------------------------|------------------|
| | | ۵. | Λz. | P. m. s. | 0 -C. s. | s. m. s. | 0 -C. s. | m. s. | pp. | L. m. |
| Unalaska College Honolulu Horseshoe Bay Victoria | | $7 \cdot 1 \\ 20 \cdot 2 \\ 34 \cdot 0 \\ 34 \cdot 0 \\ 34 \cdot 3$ | 68 38 146 72 74 | e 6 46 | $^{-6}_{+3} \\ ^{+3}_{+1}$ | i 8 17 | + 3 | | | i 9·5 i 14·7 |
| Matusiro Seattle Corvallis Banff Shasta | z. z. | $34.5 \\ 35.3 \\ 36.2 \\ 37.7 \\ 38.9$ | 261 74 79 66 84 | e 6 59 e 7 22 | - 1 + 2 - 3 + 8 - 1 | e 13 18 = | + 7 7 = | 6 57 — | р <u>Р</u> = | 14·6 = |
| Resolute Mineral Hungry Horse Berkeley Reno | z. | $39.1 \\ 39.6 \\ 39.9 \\ 40.7 \\ 41.2$ | 25 84 69 88 84 | e 7 28 e 7 28 e 7 37 | - 2 - 2 - 4 - 2 - 7 | e 13 22 e 13 24 e 13 56 e 14 4 | $-\frac{1}{11} \\ + \frac{9}{10}$ | e = 11 | PP | e 17:0 |
| Lick Fresno Bozeman Eureka Tinemaha | z. z. | $41.4 \\ 42.9 \\ 43.0 \\ 43.6 \\ 43.7$ | 88 87 71 81 86 | i 7 55 e 7 54 i 8 0 | $ \begin{array}{rrr} & 3 \\ & 2 \\ & 4 \\ & 3 \\ & & 1 \end{array} $ | i 9 5đ | PP | i 8 40 | <u>=</u> | e 19-8 |
| Woody Isabella China Lake Salt Lake City Pasadena | | 44.2 44.5 44.9 45.4 45.6 | 88 87 86 77 89 | i 8 5k i 8 6k e 8 10 e 8 14 i 8 17k | - 3 - 4 - 3 - 3 | i 10 40 — e 14 58 i 15 1 | PPP + 2 + 3 | i 9 53 i 9 53 e 9 50 e 9 52 e 9 57 | PcP PcP PcP PcP | e 18·1 e 18·3 |
| Peking Riverside Boulder City Palomar Barratt | | 46.0 46.2 46.5 47.0 47.6 | 282 88 84 88 89 | e 8 22 e 8 21k i 8 24 e 8 27k e 8 31 | $ \begin{array}{rrr} & 0 \\ & 3 \\ & 2 \\ & 3 \\ & & 3 \end{array} $ | e 14 49 e 15 16 e 15 22 | $^{-15}_{+9}_{+11}$ | i 10 14 e 10 3 e 10 4 | PcP PcP | |
| Zô-Sè Nanking Boulder Lubbock Scoresby Sund | | 48.7 49.5 49.7 56.1 56.8 | $270 \\ 272 \\ 74 \\ 77 \\ 10$ | i 8 42k 8 48k i 8 48 9 39 i 9 42 | $ \begin{array}{cccc} - & 1 \\ - & 1 \\ - & 3 \\ + & 1 \\ - & 1 \end{array} $ | e 15 47 e 15 57 — i 17 35 | $^{+}_{+}\overset{5}{\overset{4}{\overset{4}{-}}}$ | e 13 20 | PPP | <u>-</u> 27·6 |
| Kirkland Lake Fayetteville Hong Kong St. Louis Baguio | z. | 58·2 58·9 59·3 59·4 59·8 | $\begin{array}{c} 51 \\ 70 \\ 268 \\ 65 \\ 258 \end{array}$ | e 9 51 i 9 57 a 10 0 e 9 58 i 10 5 | $ \begin{array}{cccc} & 2 \\ & 1 \\ & & 1 \\ & & 4 \\ & & 1 \end{array} $ | e 17 38 e 18 2 e 18 19 | $-\frac{-}{27}$ $-\frac{5}{4}$ | e 10 10 i 18 8 | pP S | |
| Kiruna Terre Haute Little Rock Manila Cleveland | E. | $59.9 \\ 60.4 \\ 60.9 \\ 61.0 \\ 62.2$ | 352 63 70 256 58 | i 10 4 e 9 18 e 10 10 e 10 1 i 10 19k | $-{}^{1}_{?}^{2}$ $-{}^{11}_{-1}$ | e 18 14 i 17 48 e 17 1 e 19 54 | $\frac{-1}{PS}$ | i 12 17 = | PP | |
| Pennsylvania Skalstugan Palisades | N. | 64·6 64·7 66·4 | 56 355 53 | i 10 35 e 10 20 | - 2 - 28 | e 19 14 e 19 34 | $+\frac{2}{0}$ | e 24 22 | ss | e 31·0 |
| Washington Fordham | z. | 66·4 66·5 | 57 53 | e 11 15 e 11 24 | $_{\mathrm{PcP}}^{\mathrm{PcP}}$ | e 20 7 | PPS | | | e 35·1 |

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| | | Δ | Az. | P. | 0 - C. | s. | O -C. | Su | pp. | L. |
|--|----------|----------------------------|-------------------|--------------------|--------------------------------|--|-----------------------|---------------|------------------|------------------|
| The state of the s | | 00.0 | 0 | m. s. | s. | m. s. | 8. | m. s. | | m. |
| Philadelphia Helsinki | | 66·6 66·9 | $\frac{55}{348}$ | e 10 49 | $-\frac{1}{2}$ | e 20 43 | ScS | - | _ | e 29·6 |
| Chapel Hill | | 67.6 | 60 | e 10 55 | ő | - | _ | | - | |
| Columbia | | 67.9 | 63 | e 10 56 | - 1 | e 19 48 | - 4 | e 21 3 | ScS | e 31·4 |
| Upsala | | 68.0 | 352 | i 10 54 | - 4 | i 19 49 | ± 4 | 12 | | _ |
| Shillong | | 70.6 | 287 | e 11 11 | - 3 | e 20 19 | - 5 | 13 55 | PP | n - c |
| Copenhagen Hamburg | | $72.6 \\ 74.8$ | $\frac{354}{355}$ | i 11 41 | + 2 | i 20 54 e 21 23 | $^{+}_{+}$ $^{7}_{1}$ | (| | 35·6 e 47·6 |
| Rathfarnham C. | Z. | 75.0 | 5 | i 11 41 e 11 38 | + 2 | e 21 23 | T-11 | 8112 | | 0 41 0 |
| Nouméa | 7035 | 75.1 | 195 | e 11 36 | $ \tilde{4}$ | _ |) | e 11 43 | \mathbf{P} | - |
| Warsaw | | 75.2 | 348 | e 11 41 | 0 | e 21 7 | - 9 | e 16 12 | PPP | e 43.6 |
| De Bilt | | 76.5 | 358 | e 11 26 | -22 | e 21 32 | + 1 | e 22 18 | PS | e 35·6 |
| Jena | Z. | 77.4 | 354 | e 11 52 | - 1 | | | e 12 15 | pP | - 20 6 |
| Stuttgart | | 79·6 79·8 | 355 0 | e 12 4 e 12 9 | $^{-1}_{+3}$ | $\begin{array}{ccc} \mathrm{e} \ 22 & 7 \\ \mathrm{e} \ 22 & 12 \end{array}$ | $^{+}_{+}$ $^{3}_{6}$ | e 15 6 | PP | e 39·6 e 38·6 |
| Paris | | 19.0 | U | 0 12 3 | + 0 | e 22 12 | 7 0 | | | 0086939-35 |
| Strasbourg | | $79 \cdot 9$ | 356 | | ++++ | e 27 38 | SS | | | e 39·6 |
| Quetta | 4000 | 80.7 | 308 | e 12 10k | - 1 | i 22 18 | + 3 | i 26 24 | 800 | |
| Bucharest Brisbane | N. | 82.0 | 343 206 | e 12 22 | - 1 | 22 33 | + 4 | 27 31 | 88 | _ |
| Florence | | 84.5 | 354 | e 10 42 | ? | e 21 6 | ? | | | _ |
| Lembang | z. | 86.0 | 254 | e 12 33 | - 5 | 33 | | 7 <u></u> | | |
| Rome | £550 | 86.3 | 352 | - 12 00 | | e 23 11 | 0 | e 28 28 | SS | e 40.6 |
| Bombay | | 86.8 | 297 | e 13 19 | pP | e 23 8 | [+5] | e 24 0 | PS | 200 |
| Taranto | | $87 \cdot 2$ | 349 | | 3 | $22 \ 44$ | [-32] | - | - | e 42.6 |
| San Juan | | 88.4 | 62 | e 12 50 | 0 | - | | | \$ | |
| Riverview | z. | 89.5 | 206 | e 12 58 | + 3 | - | - | - | 5 | 3.777 |
| Messina | | 89.6 | 350 | e 24 45 | $_{\rm PS}$ | e 23 37 | -5 | e 29 34 | SS | e 43·0 |
| Ksara | | 89.8 | 333 | e 16 38 | PP, | e 24 58 | PPS | - | | 49.1 |
| Alicante Granada | | $90 \cdot 2 \\ 91 \cdot 2$ | 5 | 12 53 e 13 11a | $-5 \\ +8$ | $^{-24}$ 2 | + 6 | 25 46 | \overline{PPS} | e 42.6 48.0 |
| CITAHAGA | | (CATA) | | C 10 III | 7 0 | 24 2 | 1. 0 | 20 30 | 1 1 13 | (0.049)/943.0 |
| Malaga | 0/255510 | 91.7 | _5 | e 16 47 | $_{\mathrm{PP}}$ | | - | | | e 48·8 |
| La Paz | | 114.9 | 85 | 19 50 e 19 41 | $_{\mathrm{PP}}^{\mathrm{PP}}$ | | - | | = 3 | |
| Pretoria | de | 147.4 | 313 | e 19 41 | 715.117 | | | | | |

April 18d. 12h. 52m. Epicentre 46°·1N. 27°·4E. Loc. cit. at 13h. below Magnitude 4·75, p. 62.

April 18d. 13h. 32m. 0s. Epicentre 40°·6N. 46°·0E. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 13.

April 19d. 4h. 24m. 13s. Epicentre 39°·2N. 43°·0E. Loc. cit., 18d. 13h., p. 13.

April 19d. 9h. 30m. 40s. Epicentre 37°.7S. 178°.2E. Depth 100km. Magnitude 5.0. Felt at East Cape.
New Zealand Seismo. Report, 1956, Seismo. Obs. Bull E-137, Wellington, 1960, p. 32.

April 19d. 17h. 31m. Epicentre 23°·2N. 120°·5E. Depth of focus 10km.
Intensity II-III at Tainan.
Seismo. Bull. of the Taiwan Weather Bureau for April-June, 1956, Vol. 3, No. 2, Taiwan, China, p. 9.

April 20d. 2h. 45m. Epicentre 23° 9N. 121° 8E. Loc. cit., 19d. 17h., p. 10.

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April 20d. 15h. 15m. 55s. Epicentre 7°.2S. 129°.2E. Depth of focus 0.005. A = -.6271, B = +.7689, C = -.1245; $\delta = -.4$; h = +2; $D = \pm .775$, $E = \pm .632$. $G = \pm .079$, H = -.096, K = -.992.

| D = +.775, $E = +.632$; $G = +.079$, $H =096$, $K =992$. | | | | | | | | | | | | |
|---|----------------|--|---|----------------------------|---------------------------------|---|---|---|---|--|----------|--|
| Bandung Lembang Djakarta Rabaul | | $_{21\cdot 3}^{\circ}_{21\cdot 4}_{22\cdot 2}_{23\cdot 1}$ | Az. 269 270 271 84 | i 4 4 e 4 4 e 4 5 | 8. 12 12 a 19 a | O-C. s. - 1 - 2 - 3 - 2 | S. m. s. e 8 30 e 8 29 e 9 26 8 54 | O -C. s. - 1 - 4 - 8S - 9 | m. s. e 15 50 e 15 49 | pp. ScS ScS | L. m. | |
| Baguio Perth Brisbane Hong Kong Riverview Melbourne | E. | 24·9 27·6 30·3 32·8 33·4 33·7 | 340 205 135 334 146 157 | i 6 1 i 6 | 19 a 14 4 34 k 36 | $^{+}_{-}\frac{1}{3}$ $^{-}_{0}$ | i 9 31 i 10 15 i 10 53 e 11 30 i 11 44 i 11 49 | - 3 - 3 - 8 - 11 - 6 - 5 | e 11 40 e 11 7 e 14 59 | PP SS PP SSS | | |
| Zô-Sè Nouméa Nanking Matusiro Sian | | $38.8 \\ 38.9 \\ 40.2 \\ 44.3 \\ 45.4$ | $349 \\ 117 \\ 346 \\ 10 \\ 336$ | e 7 2 i 7 5 i 8 | 18a 21 51a 3a | $^{-\ 2}_{-\ 2}^{0}_{0}$ | 13 2 i 13 5 i 13 27 i 14 23 | $ \begin{array}{r} -11 \\ -9 \\ -7 \\ -11 \\ -1 \end{array} $ | $\begin{array}{c} 8 & 7 \\ e & 7 & 51 \\ i & 17 & 23 \\ 16 & 46 \\ \end{array}$ | $\overset{?}{\overset{P}{\operatorname{SSS}}}$ | | |
| Taiyuan Peking Vladivostok Changchun Colombo | E. | 47·3 48·5 50·1 50·9 51·1 | $342 \\ 347 \\ 356 \\ 285$ | i 8 3 i 8 4 e 8 5 | 29 36 19 54 | $ \begin{array}{rrr} & 0 \\ & 2 \\ & - & 2 \\ & - & 3 \\ & - & 4 \end{array} $ | i 15 22 i 15 49 e 15 57 | $-\frac{11}{7} \\ -\frac{7}{10}$ | i 9 4 5 = | PP PP | 19-1 | |
| Madras Macquarie Is. Chatra Yuzno-Sakhlinsk Poona | z. z. | $52.6 \\ 52.9 \\ 52.9 \\ 55.2 \\ 60.2$ | $292 \\ 159 \\ 311 \\ 11 \\ 296$ | e 9 1 | 7 11 27 1 | - 2 - 1 - 1 - 3 | e 16 23 | - 7 - 8 | i 10 51 i 11 2 e 10 20 | PP PP PcP | | |
| Bombay Dehra Dun Irkutsk Petropavlovsk Magadan | | $61.2 \\ 61.5 \\ 62.9 \\ 65.1 \\ 68.7$ | $296 \\ 310 \\ 343 \\ 19 \\ 12$ | e 10 1 i 10 2 e 10 3 | 10 13 20 33 58 | $^{+}\begin{array}{c} 0 \\ 1 \\ - \\ 2 \\ - \\ 1 \end{array}$ | e 19 1 i 18 16 i 18 40 e 19 5 i 19 51 | PS - 11 - 5 - 7 - 4 | i 12 29 e 10 54 i 20 42 | $\frac{PP}{ScS}$ | | |
| Quetta Frunse Semipalatinsk Stalinabad Tashkent | z. | $70 \cdot 2 \\ 70 \cdot 2 \\ 71 \cdot 2 \\ 72 \cdot 1 \\ 72 \cdot 9$ | $306 \\ 320 \\ 329 \\ 314 \\ 317$ | i 11 1 | 7 a 12 19 23 | $ \begin{array}{ccc} $ | i 20 4 e 20 15 e 20 25 i 20 35 | $ \begin{array}{r} $ | i 11 23 e 21 35 | $\frac{\mathbf{p}_{\mathbf{P}}^{\mathbf{P}}}{\mathbf{s}_{\mathbf{S}}}$ | | |
| Tiksi Bay Ashkabad Tananarive Unalaska Sverdlovsk | | 78.6 79.5 79.8 81.1 84.5 | $\begin{array}{r} 0 \\ 311 \\ 252 \\ 33 \\ 329 \end{array}$ | i 12 i 12 i 12 | 3 1 2k 8 25 | $ \begin{array}{cccc} & - & 3 & & \\ & - & 0 & & \\ & - & 1 & & \\ & - & 2 & & \\ & - & 2 & & \\ \end{array} $ | i 21 33 i 18 46 — 22 31 | $-\frac{14}{7}$ $-\frac{16}{16}$ | $\begin{array}{r} \mathbf{e} \ 22 \ 33 \\ \hline 12 \ 36 \\ \hline 12 \ 31 \end{array}$ | $\frac{PS}{PCP}$ | | |
| Goris College Ksara Moscow Pretoria | z. | 89·0 93·5 96·6 96·7 96·7 | $\begin{array}{r} 310 \\ 25 \\ 303 \\ 325 \\ 243 \end{array}$ | i 13 e 13 2 i 13 2 | 18 6 21 21 23 k | $ \begin{array}{rrr} - & 1 \\ - & 4 \\ - & 3 \\ - & 3 \\ - & 1 \end{array} $ | e 23 23 e 23 59 e 26 5 24 23 | [+12] -11 PS -14 | e 16 9 e 17 15 e 17 22 | PP PP | | |
| Jerusalem Simferopol Kimberley Astrida Helsinki | 7. . | $97.1 \\ 98.6 \\ 99.0 \\ 99.0 \\ 103.2$ | $301 \\ 314 \\ 240 \\ 266 \\ 330$ | 13 3 i 13 3 e 13 3 | 55 30 34 a 34 | $ \begin{array}{rrr} - & 1 \\ - & 3 \\ - & 1 \\ - & 1 \\ - & 5 \end{array} $ | e 24 3 | 1-11 = | i 17 18 — e 17 38 e 18 7 | PP PP | | |
| Kiruna Bucharest Lwow Warsaw Upsala | z. | 103.6 104.3 105.2 106.7 106.9 | $338 \\ 314 \\ 320 \\ 322 \\ 331$ | e 17 3 | 0 6 6 | $-\frac{4}{2}$ $-\frac{3}{3}$ | e 24 17 e 25 35 i 18 27 | [-11] - 6 PP | e 32 42 e 32 34 i 20 30 i 18 37 | SSP SS PPP | | |
| Corvallis Resolute Skalstugan Shasta Berkeley | z. z. z. | $107.5 \\ 108.0 \\ 108.2 \\ 108.6 \\ 109.0$ | $^{46}_{11}_{335}_{50}_{52}$ | i 14 1 i 14 1 e 14 2 | 2 k 2 k 2 2 2 2 2 2 | PP P P [0] | e 24 25 i 29 30 | [-23] PKKP | e 27 41 e 18 19 e 18 20 | SP PKP PKP | | |

Continued on next page.

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| | | ۵ | Az. | P. m. | o – c. s. s. | S. m. s. | O -C. | m. s. | pp. | L. m. |
|--|----------------|---|---|---|---|--|-----------------------------|---|-------------------------|-----------|
| Mineral Lick Reno Fresno Prague | Z. Z. Z. | 109·3 109·6 110·7 111·1 111·2 | $50 \\ 53 \\ 50 \\ 53 \\ 321$ | e 14 2 e 18 2 e 18 5 | P P P 6 [+ 1] 4 PP 2 PP | | | e 18 21 e 18 28 — e 21 6 | PKP PKP | |
| Woody Isabella Tinemaha Pasadena Jena | | 112.0 112.3 112.3 112.7 112.7 | $\begin{array}{r} 54 \\ 54 \\ 53 \\ 56 \\ 322 \end{array}$ | e 18 2 i 18 3 | 7 [- 1] 7 [- 1] 9 [+ 1] 0k [+ 1] 8 [- 1] | e 29 18 e 29 17 i 29 25 e 19 26 | PKKP PKKP PKKP PP | i 19 11 e 19 12 i 21 51 e 19 9 | PP PP PPP pP' | = |
| Triest Messina Hungry Horse China Lake Eureka | z. | 112.8 112.9 113.0 113.0 113.7 | $\begin{array}{r} 317 \\ 308 \\ 40 \\ 54 \\ 50 \end{array}$ | e 19 1 | $\begin{bmatrix} 9 & [-1] \\ 0 & [0] \end{bmatrix}$ | e 25 10 e 19 18 e 29 18 i 29 14 | [+ 2] PP PKKP PS | i 19 21 e 28 49 e 14 25 e 19 18 i 21 52 | PP PS PP PPP | = |
| Scoresby Sund Barratt Stuttgart Boulder City Karlsruhe | z. | 114·1 114·2 114·9 115·2 115·3 | $350 \\ 58 \\ 321 \\ 54 \\ 321$ | i 18 3 i 18 3 | 2k [0] 1a [-3] | e 29 54 e 29 13 e 31 5 e 29 16 | PPS PKKP | e 35 23 e 19 30 e 19 33 e 19 34 | PP PP PP | 54·1 = |
| Bozeman Strasbourg Salt Lake City Besançon Paris | | 115·7 115·8 116·5 117·4 119·0 | $^{42}_{321}_{48}_{320}_{323}$ | i 18 3 e 18 3 e 18 3 e 18 4 | $egin{array}{cccc} 4 & [-1] \\ 7 & [-0] \\ 6 & [-2] \end{array}$ | e 29 9 e 19 43 e 29 5 e 19 50 i 22 3 | PS PP PS PP SKP | i 21 56 e 18 57 e 19 44 i 18 56 i 20 1 | PPP pP PP pP | |
| Tucson Clermont-Ferran Boulder Rapid City Rathfarnham C. | d E. Z. | 119·1 119·8 121·5 121·5 121·6 | $\begin{array}{r} 57 \\ 319 \\ 47 \\ 42 \\ 330 \end{array}$ | e 18 4 e 18 4 i 18 4 i 18 4 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 28 47 | 7 | e 20 1 e 20 9 e 20 18 | PP PP | |
| Algiers Univ. Tamanrasset Fayetteville Kirkland Lake Ottawa | z. z. | 122.9 123.7 131.1 132.2 136.2 | $309 \\ 292 \\ 48 \\ 26 \\ 25$ | i 19 de 19 de | 7 [- 2] 1 a [+ 1] 4 [- 1] 5 [- 2] 3 k [- 1] | e 32 11 e 22 16 22 29 | PPS SKP PKS | e 20 21 e 20 34 = | PP PP | |
| Shawinigan Falls Seven Falls Buffalo (Larkin) Washington Palisades | | $136.5 \\ 136.7 \\ 136.8 \\ 140.5 \\ 140.5$ | 22 20 30 33 28 | e 19 18 | | e 22 30 e 22 35 e 34 31 | PKS PKS PKS | i 22 46 e 19 23 | - PP pP' | e 73·3 |
| Halifax Columbia Chapel Hill M'Bour Huancayo | z. | $141.1 \\ 141.4 \\ 141.5 \\ 146.0 \\ 149.1$ | $^{14}_{42}_{38}_{285}_{128}$ | i 19 13 e 19 13 e 19 13 i 19 33 i 19 33 | $\begin{bmatrix} 1 & 7 \\ 7 & -7 \\ 7 & -7 \end{bmatrix}$ | i 22 43 e 22 44 — | PKS PKS | i 19 46 | | |
| La Paz San Juan St. Lucia St. Vincent Trinidad | | 150.9 161.4 167.9 168.1 168.9 | 144 52 55 59 71 | i 19 31 i 19 51 i 19 58 i 19 53 e 19 59 | $ \begin{bmatrix} -21 \\ 8k & 01 \\ 7 & -21 \end{bmatrix} $ | $\begin{array}{c} 43 & 15 \\ 24 & 11 \\ = \end{array}$ | SS PP | i 19 47 e 20 37 — | PKP ₂ pP' | e 73·1 |

April 20d. 16h. 37m. 1s. Epicentre 11°-5S. 66°-4E.

$$A = +.3924$$
, $B = +.8982$, $C = -.1981$; $\delta = -2$; $h = +6$; $D = +.916$, $E = -.400$; $G = -.079$, $H = -.182$, $K = -.980$.

| | | Δ | Az. | P. | ì | 0 - 0 | | s | | O-C. | | Su | pp. | L. |
|------------|----|------|-----|-----|-----|-------|-----|-------------------------|----|------|--------|----|---------------|-------|
| | | • | 0 | m. | 8. | S. | | m. | s. | s. | m. | 8. | 150,000 | m. |
| Tananarive | | 19.6 | 246 | e 4 | 33 | + 1 | | e 8 | 29 | +21 | 8 | 41 | SS | e 9·2 |
| Colombo | | 22.7 | 37 | 5 | 6 | + 2 | | THE CO. LEWIS CO. L. L. | 30 | SS | | | | 14.6 |
| Kodaikanal | | 24.3 | 27 | e 5 | 27 | + 7 | | 100 | 45 | + 8 | 6 | 11 | PP | 12.2 |
| Madras | E. | 27.9 | 30 | | 54 | |) | e 10 | | + 5 | 6 | 43 | \mathbf{PP} | 13.5 |
| Doone | 77 | 20.0 | 3.4 | | 0.0 | | N . | a 11 | 00 | • | 11,000 | | | 700 |

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| | | Δ | Az. | m | P. . s. | o – c. | S. m. s. | 0 – C. s. | m. s. | pp. | L. m. |
|---|----------------|--|--|--------------------------------------|------------------------|--|---|-------------------------|--|-----------------------------------|----------|
| | z. z. | 30.9 31.1 37.4 38.7 40.9 | 12 23 281 243 37 | e 6 e 7 i 7 e 7 | 21 | $\begin{array}{cccc} + & 1 & & \\ + & 0 & & \\ + & 2 & & \\ - & 1 & & \end{array}$ | e 11 30 i 11 32 = | + 6 + 4 — | | | e 19·0 |
| Quetta Dehra Dun Shillong Jerusalem Ksara | | $41.5 \\ 43.1 \\ 44.4 \\ 52.4 \\ 53.6$ | $\begin{array}{c} 1 \\ 15 \\ 34 \\ 326 \\ 328 \end{array}$ | e 7 e 8 i 8 i 9 | 15 17k | $\begin{array}{cccc} + & 1 \\ - & 2 \\ + & 1 \\ + & 1 \\ + & 1 \end{array}$ | e 14 10 i 14 31 i 14 56 e 17 6 | + 3 + 1 + 7 PS | e 17 20 9 53 10 11 i 10 28 e 11 31 | SS PP PP PP | 30.0 |
| Bucharest Sofia Iasi Messina Tamanrasset | z. | 66.6 66.8 67.9 68.6 68.7 | $330 \\ 327 \\ 332 \\ 319 \\ 300$ | e 10 i 10 e 11 i 11 i 11 | 55 3 6 a | $^{+}_{-}^{2}_{1} \\ ^{+}_{-}^{1}_{2}$ | e 20 11 | + = 2 | i 11 25 E 11 33 | $\frac{P_{cP}}{P_{cP}}$ | |
| Rome Triest Florence Warsaw Prague | z. | $72.6 \\ 74.0 \\ 74.4 \\ 74.5 \\ 76.3$ | $321 \\ 324 \\ 322 \\ 333 \\ 328$ | e 11 e 11 e 11 i 11 | 49 a 27 43 | $^{+10}_{-15} \\ ^{+1}_{-1}$ | e 14 33 i 14 44 | PP PP | e 12 0 e 12 6 e 12 34 e 11 55 i 12 0 | PcP PcP PcP | |
| Oropa Relizane | z. z. | $76 \cdot 4$ $77 \cdot 4$ $77 \cdot 8$ $78 \cdot 3$ $78 \cdot 3$ | $312 \\ 322 \\ 311 \\ 325 \\ 328$ | e 11 e 12 e 12 e 12 e 12 | 2 3 | $ \begin{array}{rrr} - & 3 \\ + & 5 \\ + & 1 \\ - & 1 \end{array} $ | e 15 28 | - - PP | $\begin{array}{c} { m e} \ 12 & 52 \\ { m e} \ 12 & 8 \\ { m e} \ 12 & 21 \end{array}$ | PcP PcP | |
| Basle Neuchatel Helsinki Strasbourg Riverview | z. . | $78.6 \\ 78.7 \\ 78.7 \\ 79.0 \\ 79.4$ | $\begin{array}{c} 324 \\ 323 \\ 340 \\ 325 \\ 122 \end{array}$ | e 12 e 12 i 12 i 12 i 12 | 5 5 8 | $^{+}_{-} ^{8}_{1} \ ^{+}_{+} ^{1}_{2}$ | | | e 12 22 i 16 56 | PcP PPP | |
| Besançon Clermont-Ferrand Hamburg Upsala Brisbane | z. | $79 \cdot 4 \\ 80 \cdot 4 \\ 80 \cdot 6 \\ 81 \cdot 1 \\ 81 \cdot 8$ | $323 \\ 321 \\ 330 \\ 337 \\ 116$ | i 12 e 12 i 12 i 12 i 12 | $\frac{16}{16}$ | $\begin{array}{cccc} + & 0 & \\ + & 1 & \\ - & 1 & \\ + & 1 & \end{array}$ | | | i 12 39 i 12 24 i 12 29 | $\frac{P_{cP}}{P_{cP}}$ | |
| Malaga Paris Skalstugan Kiruna M'Bour | | $81.9 \\ 82.2 \\ 85.5 \\ 85.7 \\ 86.5$ | $310 \\ 323 \\ 339 \\ 344 \\ 285$ | i 12 i 12 i 12 i 12 i 12 | 25 40 a 40 | $\begin{array}{cccc} + & 1 \\ + & 1 \\ - & 1 \\ - & 2 \\ + & 4 \end{array}$ | e 22 38 | + <u>2</u> | i 12 31 i 12 48 | $\frac{-}{P_{cP}}$ | |
| Huancayo Hungry Horse Bozeman | z. z. | $89.1 \\ 135.4 \\ 143.3 \\ 145.9 \\ 146.0$ | $325 \\ 240 \\ 0 \\ 357 \\ 12$ | i 12 e 19 e 19 i 19 e 19 | 29 38 44 | $\begin{bmatrix} + & 1 \\ + & 7 \\ [+ & 2] \\ [+ & 3] \\ [+ 18] \end{bmatrix}$ | | | i 13 6 e 22 46 e 23 5 | PP PP | |
| Shasta Fayetteville | E. Z. | 146.4 149.9 149.9 150.4 151.2 | $346 \\ 13 \\ 328 \\ 12 \\ 16$ | i 19 e 19 i 19 e 19 e 19 | 45 54 53 k 55 | [+ 3] $[+ 7]$ $[+ 6]$ $[+ 7]$ $[+ 10]$ | | | e 23 11 e 23 27 = | PP PP | |
| Eureka Berkeley 2 Lick 2 | Z. Z. Z. | 151.6 152.1 152.6 153.3 154.3 | $10 \\ 4 \\ 15 \\ 14 \\ 12$ | e 20 e 19 e 20 e 20 e 19 | $53 \\ 2 \\ 3 \\ 57$ | [+10] $[+2]$ $[+11]$ $[+11]$ $[+3]$ | i 20 5 | PKP, | i 23 40 | P <u>P</u> | |
| Woody Boulder City Isabella China Lake Pasadena | | 155.5 155.6 155.6 155.6 157.1 | $^{10}_{\ 2}_{\ 10}$ | e 19 e 19 e 19 e 19 e 20 | 58 | [+ 3] $[+ 4]$ $[+ 3]$ $[+ 20]$ | i 20 25 | PKP: | e 23 56 e 24 0 e 23 58 e 23 59 e 24 8 | PP PP PP PP | |
| Riverside Palomar Barratt | | $157.4 \\ 158.1 \\ 158.8$ | 8 7 7 | e 19 e 24 e 20 | 59 12 36 | $[+ 1] \\ \mathbf{PP} \\ [+37]$ | | | e 24 13 e 24 18 | $\frac{\mathbf{PP}}{\mathbf{PP}}$ | |

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April 21d. 17h. 12h. 30s. Epicentre 17°·5S. 179°E. Depth 600km. New Zealand Seismo. Report, 1956, Seismo. Obs. Bull. E-137, Wellington, 1960, p. 33.

April 22d. 3h. 48m. 17s. Epicentre 30°·2S. 177°·0W. Depth 475km.? Magnitude 6·3. Loc. cit., 21d. 17h., p. 34.

April 22d. 4h. 40m. 54s. Epicentre 5°.8S. 151°.0E.

China gives 22d. 4h. 40m. 54s. Epicentre 5°S. 152°E. Magnitude 6.

A = -.8702, B = +.4824, C = -.1004; $\delta = +4$; $\hbar = +7$; D = +.485, E = -.875; G = +.088, H = -.049, K = -.995.

| 1.7 | | '400, r | .=- | .919; | 2 17 | $G = + \cdot 0$ | 88, H = - | - 049, 1 | $\zeta =995$ | 8 | |
|--|----------------|--|--|--------------------------------------|----------------------------------|--|---|--|--|----------------|------------------|
| Rabaul Brisbane Nouméa Riverview Baguio | z. | $\begin{array}{c} 2 \cdot 0 \\ 21 \cdot 6 \\ 22 \cdot 2 \\ 27 \cdot 9 \\ 37 \cdot 3 \end{array}$ | Az. 36 175 139 180 307 | m. i 0 i 4 i 4 e 5 | 53 59 | O-C. + 3 - 1 - 1 - 1 | S. m. s. i 8 52 i 9 6 i 10 35 i 13 7 | O-C. s. + 3 + 6 - 2 + 3 | m. s. i 5 30 i 6 35 | PP PP | e 10.6 c 14.7 |
| Perth Lembang Matusiro Hong Kong Zô-Sè | z. | 41.9 43.1 43.8 45.6 46.5 | $\begin{array}{c} 227 \\ 266 \\ 345 \\ 309 \\ 324 \end{array}$ | c 8 i 8 i 8 i 8 | 25 4 k 7 26 k 31 a | $-\ _{2}^{2}$ | i 14 21 e 14 32 e 14 33 e 15 63 e 15 17 | $^{+}_{\stackrel{.}{-}}^{8}_{7}^{-}_{0}$ | i 17_16 17_36 | ss ss | i 21.0 21.5 |
| Nanking Peking Honolulu Shillong Bombay | z. E. | 48.6 55.8 56.7 65.3 80.8 | $323 \\ 328 \\ 60 \\ 301 \\ 291$ | i 9 i 9 i 10 e 12 | 40 a 48 45 k | - 1 0 | e 15 46 17 22 e 22 27 | $-{3 \atop -6} \\ -{2 \atop -2}$ | | | |
| College Quetta Corvallis Berkeley Shasta | z. z. z. | $83.5 \\ 87.8 \\ 91.0 \\ 91.0 \\ 91.2$ | $\begin{array}{r} 22 \\ 300 \\ 46 \\ 52 \\ 49 \end{array}$ | i 12 e 12 e 13 e 13 e 13 | 51 8 6 | - 5 - 1 + 1 - 1 - 1 | e 23 21 | [+ <u>2</u>] | e 24 14 | PS = | |
| Lick Mineral Fresno Reno Woody | z. z. z. | $91.4 \\ 91.7 \\ 92.8 \\ 93.0 \\ 93.5$ | 53 50 54 51 55 | e 13 e 13 e 13 e 13 i 13 | 9 15 16 18a | $- \begin{array}{c} 0 \\ 1 \\ - 1 \\ - 1 \\ - 1 \end{array}$ | | | e 16 59 | PP | |
| Isabella Pasadena Tinemaha China Lake Riverside | | $93.8 \\ 93.9 \\ 94.1 \\ 94.5 \\ 94.6$ | 55 56 55 56 | | 20 21 a 23 23 a 24 a | $\begin{array}{c} 0 \\ 0 \\ 1 \\ 0 \\ 0 \end{array}$ | c 24 30 | + 1 | i 25 41 | PS | e 39·1 |
| Palomar Barratt Eureka Boulder City Hungry Horse | | $94.9 \\ 95.0 \\ 96.0 \\ 96.8 \\ 97.6$ | 57 58 51 54 42 | i 13 i 13 i 13 i 13 e 13 | $\frac{26}{28}$ | $\begin{array}{cccc} + & 2 & & & \\ - & 0 & & & \\ - & 2 & & & \\ - & 2 & & & \end{array}$ | | | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | PP PP | |
| Tucson Resolute Kiruna Fayetteville Ksara | | $100.0 \\ 101.8 \\ 109.8 \\ 113.4 \\ 114.0$ | $58 \\ 14 \\ 342 \\ 313 \\ 304$ | e 13 e 13 e 16 i 11 e 19 | 54 a 19 38 a | $-\begin{smallmatrix}0\\2\\2\\\mathbf{PP}\end{smallmatrix}$ | e 24 29 e 28 34 | [7] PS | i 17 50 e 26 48 e 34 39 | PP PS SS | e 45·2 e 51·4 |
| Skalstugan Scoresby Sund Upsala Copenhagen Hamburg | | 115.1 115.3 115.6 120.4 122.8 | 341 357 336 334 334 | e 29 i 18 e 30 | 9 18 | [-4] PS PS $[+1]$ | e 36 12 e 37 12 | SSP SSP | | | 54·1 e 65·1 |
| Ottawa Jena Shawinigan Falls Witteveen Seven Falls | z. z. | $123.5 \\ 123.8 \\ 124.7 \\ 124.8 \\ 125.4$ | $\begin{array}{r} 38 \\ 330 \\ 36 \\ 334 \\ 34 \end{array}$ | i 19 e 19 i 19 i 19 e 19 | 0 a 0 1 k 2 | | | | | _ | |

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| | | Δ | Az. | P. m. s. | o-c. | s. m. s. | O -C. | m. s. | pp. | L. m. |
|--|----------|---|----------------------------------|---|--|--|-------------------|------------------------------|-----------|--------------------------------------|
| De Bilt Stuttgart Palisades Strasbourg Messina | æ. | 126.0 126.4 126.8 127.2 128.4 | $335 \\ 330 \\ 42 \\ 330 \\ 315$ | e 19 4 e 20 58 e 21 12 | [-1] PP PP | e 38 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 | $^{ m l}_{ m PS}$ | e 20 54 e 32 42 | PP PPS | c 59·1 c 66·1 c 60·4 c 60·1 |
| Paris Huancayo La Paz San Juan Tamanrasset | z. z, | 129.5 130.6 135.4 141.7 142.7 | $333 \\ 111 \\ 120 \\ 68 \\ 300$ | i 21 24 e 19 16 e 19 18 e 19 35 e 19 33 | $\begin{array}{c} & \text{PP} \\ [+ \ 3] \\ [- \ 4] \\ [+ \ 2] \\ [- \ 2] \end{array}$ | e 33_14 = = | PPS | e 24 10 e 23 11 e 23 7 | PPP PP | e 69·1 85·1 |
| Dominica Fort de France St. Vincent St. Lucia Trinidad | | 146.8 147.2 147.4 147.5 147.5 | 71 72 75 73 79 | i 19 45 e 19 43 e 19 47 e 19 45 e 19 47 | [+ 3] $[+ 0]$ $[+ 4]$ $[+ 2]$ $[+ 4]$ | | | | | |

April 22d. 17h. 21m. 54s. Epicentre 53°-9N. 161°-5W.

| | | 5612, I 317, E | | ARTIST STATE OF THE STATE OF TH | | $+ \cdot 806$ | | +1; -256, E | h = -7 $5 =592$ | Ç. | |
|--|----------|--|---|--|---|--|--|--|---|-----------------------------|----------------------------|
| | | Δ | Az. | 52.125.25 | s. | O C. s. | s. m. s. | o –c. | m. s. | pp. | L. m. |
| Unalaska College Sitka Petropavlovsk Horseshoe Bay | | $3.0 \\ 13.0 \\ 15.2 \\ 23.5 \\ 24.0$ | 268 27 67 284 85 | i 0 e 3 i 3 e 5 | 49 2 34 11 19 | - 1 - 7 - 1 - 1 + 2 | i 1 20 c 5 18 i 6 24 e 9 23 | - 7 - 17 - 4 0 | e 5 56 e 6 3 | $\frac{\overline{ss}}{PPP}$ | i 6·8 i 7·6 |
| Victoria Seattle Magadan Corvallis Shasta | z. z. | 24·2 25·3 26·3 26·4 29·2 | $\begin{array}{r} 87 \\ 88 \\ 302 \\ 95 \\ 101 \end{array}$ | e 5 e 5 | 19 31 38 40 | $\begin{array}{cccc} & & & 2 & \\ & & & 0 & \\ & & & 1 & \\ & & & 1 & \\ & & & & 0 & \\ & & & & 1 & \end{array}$ | e 9 54 e 9 16 e 10 10 | $^{+19}_{-38} \\ ^{-1} =$ | e 6 11 e 6 16 e 11 26 | PPP PPP SS | e 10-2 |
| Mineral Hungry Horse Berkeley Reno Lick | z. z. | $29.9 \\ 29.9 \\ 31.2 \\ 31.5 \\ 31.9$ | $100 \\ 81 \\ 105 \\ 100 \\ 105$ | e 6 e 6 e 6 | $\begin{array}{c} 7 \\ 9 \\ 19 \\ 23 \\ 27 \end{array}$ | - 5 - 3 - 4 - 3 - 2 | e 11 27 | - <u>-</u> 2 | e 7 35 | PPP | e 12·9 |
| Saskatoon Honolulu Resolute Bozeman Fresno | z. | $32.4 \\ 32.6 \\ 32.9 \\ 33.0 \\ 33.4$ | $\begin{array}{r} 70 \\ 174 \\ 27 \\ 83 \\ 104 \end{array}$ | e 6 e 6 i 6 e 6 | 31 36 a 39 | $-{0\atop 4\atop 2\atop 0\atop -{0\atop 3}}$ | i 11 59 e 11 59 e 11 57 | $+\frac{11}{3} \\ +\frac{3}{0}$ | e 16 36 = e 9 32 | ScS PcP | e 13·3 e 14·9 e 14·0 |
| Eureka Tiksi Bay Tinemaba Uglegorsk Woody | | $33.8 \\ 33.9 \\ 34.1 \\ 34.6 \\ 34.7$ | $\begin{array}{c} 96 \\ 328 \\ 102 \\ 286 \\ 104 \end{array}$ | i 6 i 6 e 6 e 6 i 6 | 42 44 50 52 49 k | $\begin{array}{cccc} - & 4 \\ - & 3 \\ + & 2 \\ - & 1 \\ - & 5 \end{array}$ | e 13 5 e 12 7 i 12 17 e 12 24 | $^{+ 55}_{- 4}_{+ 3}_{+ 2}$ | e = 9 8 30 | PP PPP | |
| Isabella China Lake Salt Lake City Pasadena Boulder City | | $34.9 \\ 35.3 \\ 35.4 \\ 36.2 \\ 36.8$ | $104 \\ 103 \\ 91 \\ 105 \\ 100$ | i 6 e 6 e 7 e 7 | | $ \begin{array}{rrr} $ | $\begin{array}{c} -\\ c & 12 & 26 \\ i & 12 & 36 \\ c & 12 & 45 \end{array}$ | $-\frac{-8}{-11}$ | e 8 31 e 8 19 e 8 15 i 8 50 | PPP PP PPP | e 15·0 e 16·1 |
| Palomar Barratt Rapid City Boulder Tucson | ъ. | 37·5 38·1 38·5 39·7 41·8 | $105 \\ 105 \\ 80 \\ 87 \\ 100$ | e 7 e 7 i 7 e 7 | $^{14}_{19}_{26}_{34}_{50}$ | $ \begin{array}{r} -3 \\ -3 \\ -2 \\ -3 \end{array} $ | e 13 22 e 13 18 e 14 16 | $+\frac{6}{4} + \frac{5}{5}$ | $\begin{array}{c} - \\ e \\ \hline 9 \\ 2 \\ - 4 \end{array}$ | PP PPP | e 17·8 e 18·5 |
| Vladivostok Matusiro Changchun Chicago Kirkland Lake | z. | 43.8 44.4 47.1 48.9 48.9 | $^{284}_{272}_{289}_{73}_{62}$ | i 8 i 8 e 8 e 10 e 8 | 8 12 a 33 47 46 | - 1 - 2 - 2 PP - 4 | i 14 42 i 14 49 e 15 27 e 15 46 | $^{+} {\overset{2}{\overset{0}{0}}} $ | i 10 28 9 55 e 18 34 | PPP PP ScS | 22·7 e 21·8 |

Continued on next page.

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| | | Δ. | Az. | n | | O-C. | m. s. | o – c. | m. s. | app. | L. m. |
|---|----------|---|--|--------------------------------------|--|--|--|--|--|--------------------------------|--------------------------------------|
| Fayetteville Terre Haute Irkutsk Scoresby Sund Ottawa | | $ \begin{array}{r} 48.9 \\ 50.5 \\ 52.4 \\ 52.6 \\ 52.9 \end{array} $ | $\begin{array}{r} 83 \\ 75 \\ 309 \\ 16 \\ 62 \end{array}$ | e i : | 8 16 9 14 a 9 16 | $ \begin{array}{r} -3 \\ -46 \\ -2 \\ -2 \\ -3 \end{array} $ | e 15 51 e 16 41 i 16 47 16 46 | $ \begin{array}{r} -2 \\ -1 \\ +3 \\ -2 \end{array} $ | e 9 46 i 9 30 e 11 29 19 6 | PcP pP PP ScS | 27.1 |
| Buffalo (Larkin) Ivigtut Shawinigan Falls Brebeuf Seven Falls | N. | $53.1 \\ 53.7 \\ 53.7 \\ 54.0 \\ 54.3$ | 66 33 59 60 57 | e s | 22 a | - 5 - 5 + 3 | i 16 59 | -0 | $\begin{array}{r} & - \\ & 20 & 44 \\ & 10 & 35 \\ \hline & 19 & 18 \end{array}$ | SS PcP ScS | 25·5 |
| Peking Guadalajara Pennsylvania Mobile Washington | | 54·8 54·9 54·9 56·3 56·7 | 291 103 67 83 68 | i | 15 | $-\frac{2}{-30} \\ -\frac{3}{2}$ | i 17 15 e 16 45 e 17 12 17 30 e 17 55 | + 1 PS - 4 + 15 | e 31 8 - e 10 19 | PcP | e 31·3 e 25·4 |
| Palisades Philadelphia Chapel Hill Columbia Zô-Sè | | 56.9 57.0 57.7 58.0 58.3 | $\begin{array}{r} 64 \\ 66 \\ 72 \\ 75 \\ 280 \end{array}$ | e 9 e 9 | - 53 54 | $ \begin{array}{r} $ | i 17 40 i 17 42 e 17 47 e 17 47 18 0 | - 2 - 1 - 6 - 10 | e 12 20 i 19 40 | SeS | e 32·0 e 26·4 e 25·4 |
| Tacubaya Kiruna Nanking Halifax Vera Cruz | | $58.3 \\ 58.6 \\ 59.0 \\ 59.6 \\ 60.2$ | $101 \\ 359 \\ 283 \\ 55 \\ 98$ | i 9 10 | and the second second second | $-rac{4}{2} \\ + rac{2}{2} \\ -PP$ | e 17 48 i 18 3 18 12 i 18 17 e 18 27 | $ \begin{array}{c} -13 \\ -1 \\ +2 \\ +2 \\ +2 \end{array} $ | e 12 13 e 25 2 e 26 17 | PP ? | e 30·1 |
| Skalstugan Semipalatinsk Helsinki Pulkovo Upsala | | $62.8 \\ 63.9 \\ 66.2 \\ 66.3 \\ 66.6$ | $321 \\ 356 \\ 354 \\ 0$ | i 10 i 10 i 10 | 49 | - 3 - 2 - 3 - 1 - 2 | e 19 11 e 19 33 e 19 42 i 19 41 | - 1 - 7 - 4 | e 14 51 i 20 48 | PPP ScS | e 40·1 |
| Aberdeen Hong Kong Moscow Baguio Durham | | $68.0 \\ 69.0 \\ 69.6 \\ 69.8 \\ 70.4$ | $12 \\ 279 \\ 349 \\ 270 \\ 12$ | e 11 i 11 e 11 i 11 | | $^{+18}_{-\ 2}_{+\ 3}_{+\ 1}$ | i 20 2 e 20 63 i 20 20 e 20 24 e 20 29 | $ \begin{array}{r} 0 \\ 8 \\ - 1 \\ + 1 \\ - 1 \end{array} $ | e 24 54 e 24 6 e 13 36 | SS PP | e 40·9 |
| Frunse Hamburg | z. z. | 70.7 71.2 72.3 72.7 73.2 | $3\frac{4}{320} \\ 5\\ 8$ | e 11 e 11 i 11 i 11 i 11 | 16 20 a 29 32 30 a | - 4 - 3 0 - 5 | i 20 37 i 20 57 o 20 51 | +_3 +_5 6 | e 11 34 e 11 58 i 11 50 | PcP PcP PcP | 35·1 e 39·7 |
| Kew De Bilt Warsaw Uccle Jena | | 73.8 73.8 74.2 75.0 75.4 | $^{12}_{8}_{358}$ | i 11 i 11 i 11 e 11 e 11 | 37 a 37 a 39 45 46 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 21 11 e 21 13 e 21 15 e 21 23 e 21 24 | $^{+}_{+}$ $^{2}_{+}$ $^{+}_{1}$ $^{0}_{-}$ $^{-}_{3}$ | i 21 48 i 11 51 e 16 12 e 12 15 e 14 46 | ScS PcP PPP PcP PP | e 30·1 e 37·1 e 39·1 e 33·1 |
| Tashkent Jersey Krakow Raciborz Prague | g. | 75.6 75.8 76.4 76.4 76.4 | $\begin{array}{c} 323 \\ 14 \\ 359 \\ 0 \\ 3 \end{array}$ | i 11 e 11 e 11 e 11 i 11 | $\begin{array}{c} 47 \\ 0 \\ 52 \\ 53 \\ 54 \end{array}$ | $ \begin{array}{r} $ | i 21 28 e 21 38 e 21 38 e 20 53 i 21 39 | $-1 \\ 7 \\ 7 \\ 0 \\ +1$ | e 22 8 e 12 22 e 22 13 | $\frac{Ps}{PcP}$ | 40·1 35·1 |
| Lwow Paris Karlsruhe Skalnate Pleso Stuttgart | | 76·5 76·8 77·1 77·3 77·4 | 359 | i 11 i 11 e 11 e 11 e 11 | 53 55 56 a 54 57 a | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 21 41 i 21 45 e 22 26 e 21 47 e 21 48 | + 2 + 3 PS - 1 - 1 | e 14 56 i 12 6 e 12 3 e 23 18 e 22 27 | PP PcP PPS PPS | e 43·1 |
| Strasbourg Stalinabad San Juan Hurbanovo Besançon | | 77·5 78·2 78·5 78·6 78·7 | $\begin{array}{r} 7 \\ 322 \\ 75 \\ 0 \\ 9 \end{array}$ | e 11 e 12 e 12 e 12 e 12 | 58 2 3 11 | - 1 - 1 - 6 - 5 | e 21 54 i 21 58 e 21 56 e 22 11 e 12 10 | + 4 + 1 - 5 + 9 PcP | e 22 36 e 27 6 e 15 14 e 15 2 | PS SS PP PP | e 41·1 e 32·4 |
| Shillong Iasi Neuchatel Budapest Clermont-Ferrand | | 78·9 79·0 79·0 79·0 79·8 | 298 354 8 0 11 | i 12 e 12 e 12 e 12 e 12 | 3 a 6 6 4 20 | - 4 - 1 - 1 - 3 + 8 | $\begin{array}{ccccc} {\bf i} & {\bf 22} & {\bf 1} \\ {\bf e} & {\bf 22} & {\bf 7} \\ & \\ {\bf e} & {\bf 22} & {\bf 15} \\ {\bf e} & {\bf 22} & {\bf 19} \end{array}$ | $- \frac{4}{1} + \frac{9}{5}$ | e 13 45 e 15 23 | - ? PP | e 47·6 36·3 |

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| | | Δ | Az. | P. m. s. | 0 -C. | S. m. s. | O -C. | m. s. | pp. | L. m. |
|---|----------|--|--|---|--|---|---|--|----------------------|----------------------------------|
| Focsani Salo Simferopol Timisoara Triest | E. | 80.5 80.6 80.6 80.7 80.8 | 354 6 349 358 3 | e 12 18 e 12 13 e 12 14 e 12 20 e 12 17 | + 3 - 3 - 2 + 4 | e 22 24 e 23 34 e 22 22 e 22 36 22 20 | + 2 PPS - 1 + 12 - 5 | e 15 26 e 22 57 e 15 29 | PP PS PP | 45•3 |
| Campulung Dehra Dun Belgrade Bucharest Ashkabad | | $81.6 \\ 81.6 \\ 81.8 \\ 82.3$ | $355 \\ 311 \\ 359 \\ 354 \\ 329$ | e 12 28 e 12 21 k e 12 24 i 12 25 | $^{+10}_{+70}$ | e 22 36 i 22 35 e 21 38 i 22 37 22 45 | $^{+}_{+}^{9}_{2} \\ ^{+}_{+}^{2}_{5}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | SS PPS PPP | e 55·7 40·1 |
| Florence Bokaro New Delhi Chinchina Sofia | E. | The second secon | $\begin{array}{r} 5 \\ 302 \\ 311 \\ 90 \\ 356 \end{array}$ | e 12 35 e 12 42 e 12 28 i 12 29 | $^{+}_{+}{}^{9}_{12} \\ -{}^{3}_{-}$ | i 22 51 i 23 4 i 22 48 i 22 52 | $^{+}_{+}^{9}_{13}$ $^{-}_{-}^{4}$ $^{-}_{-}^{1}$ | i 23 47 i 23 19 23 53 | PS PS — | 42·1 |
| Goris Fort de France Rome Toledo Bogota | | $83.9 \\ 84.2 \\ 84.4 \\ 84.6 \\ 84.8$ | $339 \\ 73 \\ 4 \\ 17 \\ 89$ | i 12 33 i 12 35 a i 12 37 a | $-\frac{0}{1}$ | i 23 0 e 22 52 i 23 2 e 23 0 i 23 5 | $^{+}_{-}$ $^{4}_{7}$ $^{+}_{-}$ $^{1}_{0}$ | 15 47 c 24 0 16 4 | PP PS PP | 48·4 41·1 |
| Taranto Quetta Alicante Granada Malaga | | 86.4 86.7 87.3 87.6 | $320 \\ 15 \\ 18 \\ 18$ | e 12 44 a 12 44 13 21 k i 12 52 k | $ \begin{array}{r} $ | e 23 16 i 23 13 e 23 21 24 42 i 23 16 | $ \begin{array}{c} - & 1 \\ - & 8 \\ - & 3 \\ PS \\ [- & 2] \end{array} $ | e 15 56 16 22 1 16 20 | PP PP | e 45·1 e 41·3 49·5 46·5 |
| Messina Athens Algiers Relizane Ksara | z. | $88.2 \\ 88.4 \\ 88.7 \\ 89.4 \\ 91.4$ | $\begin{array}{r} 2\\356\\12\\14\\346\end{array}$ | e 12 54 e 18 20 e 12 54 e 13 11 | $ \begin{array}{c} & 0 \\ & 1 \\ & - & 3 \\ & - & 8 \\ & + & 2 \end{array} $ | e 23 18 e 23 19 e 23 41 e 24 6 | $\begin{bmatrix} - & 4 \\ - & 4 \\ - & 2 \end{bmatrix}$ $- & 1$ | e 16 20 e 24 31 e 16 23 e 16 29 i 16 53 | PP PS PP PP | 51.1 |
| Hyderabad Poona Bombay Madras Riverview | Е. | $93.7 \\ 93.8$ | $304 \\ 308 \\ 310 \\ 301 \\ 218$ | e 13 31 e 13 36 e 17 20 e 13 34 | $^{+17}_{-14} \ ^{+16}_{{ m PP}} \ ^{+2}$ | e 23 53 e 23 52 e 23 59 i 24 55 | [+ 6] $[- 2]$ $[- 4]$ $+ 4$ | 25 46 e 24 36 | PS | e 45.5 |
| Tamanrasset La Paz Astrida Pretoria | z. N. | 102.8 105.1 128.0 151.0 | $\begin{array}{r} 12 \\ 97 \\ 346 \\ 342 \\ 247 \end{array}$ | 18 29 18 40 e 19 8 i 19 34 | PP PP [0] [-15] | e 33 23 e 24 46 — | [- ss - 5] | e 27 24 e 29 30 e 21 5 | PS PP | 57 <u>·1</u> |
| Kimberley | z. | 154.4 | 347 | e 19 53 | [-1] | | 77 | | 0.5 | - |

April 22d. 20h. 50m. 34s. Epicentre 40°-2W. 52°-8E. Magnitude 4. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 14.

April 23d. 3h. 31m. 43s. Epicentre 42°-4N. 144°-9E. Depth of focus 0.005.

Intensity VI at Kusiro; V at Obihiro and Urakawa; IV at Nemuro; II-III at Abashiri, Asahigawa, Tomakomai, Sapporo, Muroran, Hatinohe, and Morioka. Epicentre 42°·4N. 145°·0E. Depth about 60km. Seismo. Bull. of the Japan Met. Agency for April, 1956, Tokyo, 1956, pp. 20-23, with macroseismic chart p. 20. U.S.S.R. gives epicentre 42°·3N. 144°·9E.

A = -.6060, B = +.4259, C = +.6718; $\delta = -6$; h = -3; D = +.575, E = +.818; G = -.550, H = +.386, K = -.741.

| | Δ | Az. | P. | O-C. | s. | O-C. | Supp. | L. |
|----------|-----|-----|---------|------|--------|------|-------|----|
| | 0 | 0 | m. s. | 8. | m. s. | s. | m. s. | m. |
| Kusiro | 0.7 | 332 | i 0 13k | - 2 | i 0 21 | - 6 | | _ |
| Nemuro | 1.1 | 29 | 10 17a | - 3 | e 0 28 | - 8 | | _ |
| Obihiro | 1.3 | 295 | i 0 21k | - 2 | i 0 40 | 0 | | |
| Urakawa | 1.6 | 262 | 10 27 a | 0 | i 0 48 | + 1 | | _ |
| Abashiri | 1.7 | 345 | i 0 27 | - 1 | i 0 40 | -10 | | |

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|------|-----|
| | |

| Asahigawa | | △ 2°·3 | Az. 309 | P. m. s. i 0 37 k | O -C. s. 0 | S. m. s. i 1 6 | O-C. s. + 2 | m. s. | pp. | L. m. |
|--|----------|--|--|---|--|---|--|--|--------------------------------------|----------|
| Tomakomai Sapporo Muroran Hakodate | | $\begin{array}{c} 2 \cdot 4 \\ 2 \cdot 7 \\ 2 \cdot 9 \\ 3 \cdot 1 \end{array}$ | $275 \\ 286 \\ 270 \\ 260$ | i 0 41a i 0 42 i 0 46a i 0 52 | $\begin{array}{c} + & 3 \\ 0 \\ + & 1 \\ + & 4 \end{array}$ | i 1 11 e 1 11 i 1 18 i 1 23 | $\begin{array}{cccc} + & 2 \\ + & 4 \\ - & 3 \\ - & 1 \\ - & 1 \end{array}$ | i | PP | = |
| Hatinohe Mori Aomori Suttsu Miyako | E. | 3·1 3·2 3·4 3·4 3·5 | $\begin{array}{c} 235 \\ 266 \\ 244 \\ 279 \\ 220 \end{array}$ | i 0 47 a i 0 51 a i 0 51 a i 0 51 a | $ \begin{array}{r} - & 1 \\ + & 2 \\ - & 1 \\ - & 1 \\ - & 3 \end{array} $ | i 1 20 1 30 1 31 i 1 29 1 28 | - 4 + 3 - 1 - 3 - 6 | | | |
| Kurilsk Morioka Wakkanai Mizusawa Akita | N. E. | 3·8 3·8 4·3 4·5 | $\begin{array}{r} 36 \\ 227 \\ 324 \\ 222 \\ 235 \end{array}$ | $\begin{array}{cccc} \mathbf{e} & 0 & 55 \\ \mathbf{i} & 0 & 58 \mathbf{a} \\ \mathbf{e} & 1 & 1 \\ \mathbf{i} & 1 & 3 \\ \mathbf{i} & 1 & 7 \end{array}$ | $^{+}_{-}\overset{0}{\overset{0}{\overset{0}{2}}}$ | e 1 38 i 1 44 i 50 e 1 53 | $ \begin{array}{rrr} - & 4 \\ + & 2 \\ - & 4 \\ - & 6 \end{array} $ | e 1 46 | <u>-</u> | |
| Isinomaki Yuzno-Sakhli: Sendai Sakata Yamagata | nsk | $\begin{array}{c} 4.8 \\ 4.8 \\ 5.1 \\ 5.2 \\ 5.4 \end{array}$ | $\begin{array}{c} 216 \\ 342 \\ 218 \\ 229 \\ 221 \end{array}$ | 1 9 i 1 11 i 1 13 a 1 19 e 1 14 | $ \begin{array}{rrr} $ | $\begin{array}{cccc} & 2 & 2 \\ i & 2 & 4 \\ e & 2 & 11 \\ & 2 & 16 \\ i & 2 & 17 \\ \end{array}$ | - 5 - 3 - 3 - 1 - 5 | i 1 22 e 2 5 | PP | |
| Hukusima Inawasiro Onahama Niigata Shirakawa | N.E. | $\begin{array}{c} 5 \cdot 7 \\ 6 \cdot 0 \\ 6 \cdot 2 \\ 6 \cdot 3 \\ 6 \cdot 3 \end{array}$ | $\begin{array}{c} 218 \\ 219 \\ 211 \\ 227 \\ 216 \end{array}$ | 1 21 a i 1 29 a o 1 27 e 1 35 1 31 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccc} 2 & 24 \\ i & 2 & 37 \\ i & 2 & 41 \\ e & 2 & 49 \\ e & 2 & 40 \\ \end{array}$ | $-500 \\ +50 \\ -4$ | i = 51 | 9 | |
| Aikawa Mito Uglegorsk Utunomiya Kakioka | E. | $6.7 \\ 6.9 \\ 7.0 \\ 7.0 \\ 7.1$ | $\begin{array}{c} 232 \\ 211 \\ 345 \\ 215 \\ 212 \end{array}$ | i 1 36 a e 1 37 i 1 41 e 1 39 e 1 41 | - 2 - 4 - 1 - 3 - 3 | $\begin{array}{c} 2 & 47 \\ 2 & 52 \\ 1 & 3 & 0 \\ e & 2 & 56 \\ 3 & 0 \\ \end{array}$ | -7 -7 -1 -5 -4 | i 1 51 e 1 56 | PP PP | |
| Takada Tyosi Maebasi Kumagaya Nagano | E. | $7 \cdot 3$ $7 \cdot 4$ $7 \cdot 5$ $7 \cdot 7$ | $\begin{array}{c} 226 \\ 206 \\ 219 \\ 216 \\ 224 \end{array}$ | i 1 46 c 1 48 i 1 48 a e 1 48 i 1 51 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $ \begin{array}{r} - & 4 \\ - & 3 \\ - & 4 \\ - & 2 \\ \end{array} $ | $ \begin{array}{r} $ | \$\frac{85}{7} | |
| Matusiro Oiwake Titibu Tokyo Wazima | E. | 7·8 7·8 7·8 7·9 | $\begin{array}{c} 224 \\ 221 \\ 217 \\ 212 \\ 233 \end{array}$ | i 1 51 a e 1 52 e 1 54 e 1 55 e 1 55 | $ \begin{array}{ccccc} & 2 & & \\ & - & 1 & & \\ & + & 1 & & \\ & + & 2 & & \\ & & 0 & & \\ \end{array} $ | 3 17 e 3 16 e 3 14 i 3 16 e 3 20 | - 4 - 5 - 7 - 5 - 3 | $\begin{array}{c} - & - & - & - & - & - & - & - & - & - $ | $\frac{\overline{ss}}{\overline{P}}$ | 4·1 |
| Yokohama Matumoto Toyama Hunatu Kohu | N. | $8.0 \\ 8.1 \\ 8.2 \\ 8.3 \\ 8.3$ | $\begin{array}{c} 212 \\ 223 \\ 229 \\ 217 \\ 218 \end{array}$ | e 1 57 e 1 58 e 1 58 e 1 58 e 1 58 | $\begin{array}{cccc} + & 1 \\ + & 1 \\ - & 1 \\ + & 1 \\ - & 2 \end{array}$ | e 3 22 e 3 17 3 10 i 3 29 e 3 31 | $ \begin{array}{r} - & 4 \\ - & 1 & 1 \\ - & 2 & 1 \\ - & 4 & 4 \\ - & 2 & 2 \end{array} $ | i 4 7 7 19 2 30 | ? — ? PPP | |
| Mera Ajiro Kanazawa Misima Takayama | N. | 8·6 8·6 8·6 | $\begin{array}{c} 209 \\ 213 \\ 230 \\ 214 \\ 226 \end{array}$ | $\begin{array}{cccc} e & 2 & 1 \\ e & 2 & 3 \\ e & 2 & 5 \\ e & 1 & 53 \\ 2 & 6 \end{array}$ | $-1 \\ -1 \\ +1 \\ -11 \\ +2$ | $\begin{array}{c} {\rm e} & {4\over 3} & {1\over 43} \\ {\rm e} & {3\over 3} & {36} \end{array}$ | $^{+25}_{+2}$ | e 3 5 e 2 46 | ş | |
| Osima Iida Shizuoka Omaesaki Gihu | | $8.7 \\ 8.8 \\ 9.3 \\ 9.4$ | $\begin{array}{c} 211 \\ 221 \\ 216 \\ 216 \\ 225 \end{array}$ | $\begin{array}{cccc} 0 & 2 & 3 \\ e & 2 & 4 \\ e & 2 & 9 \\ e & 2 & 13 \\ e & 2 & 13 \end{array}$ | $ \begin{array}{r} - & 3 \\ - & 3 \\ + & 1 \\ - & 1 \\ - & 2 \end{array} $ | i 3 33 e 3 57 e 3 47 e 3 54 e 4 29 | $^{-10}_{+11}$ $^{-1}_{-1}$ $^{-1}_{SS}$ | e 4 31 e 4 51 e 2 53 | \$ | |
| Nagoya Ibukisan Tsuruga Vladivostok Hikone | Ε. | 9·5 9·6 9·6 9·8 | $\begin{array}{c} 223 \\ 226 \\ 228 \\ 279 \\ 226 \end{array}$ | e 2 14 e 2 21 e 2 17 i 2 19 2 19 a | $ \begin{array}{rrr} - & 3 \\ + & 3 \\ - & 1 \\ + & 1 \\ - & 2 \end{array} $ | $\begin{array}{c} e & 4 & 4 \\ \hline - & 4 & 4 \\ i & 4 & 11 \\ 4 & 32 \end{array}$ | $^{+}_{-}\frac{1}{88}$ | e 2 37 i 2 31 e 5 32 | PP PP | |
| Kameyama Tu Hatidyozima Kyoto Nara | | $10.0 \\ 10.0 \\ 10.1 \\ 10.3 \\ 10.4$ | $\begin{array}{c} 224 \\ 223 \\ 205 \\ 227 \\ 226 \end{array}$ | $\begin{array}{c} { m e} & { m 2} & { m 21} \\ { m e} & { m 3} & { m 11} \\ \hline { m e} & { m 2} & { m 27} \\ { m e} & { m 2} & { m 29} \end{array}$ | $-{}^{2}_{\stackrel{0}{0}}$ | $\begin{array}{c} \mathbf{e} & 4 & 6 \\ \mathbf{e} & 4 & 4 \\ \mathbf{e} & 3 & 2 \end{array}$ | $-\frac{9}{13} + \frac{24}{9}$ | e 3 17 e 3 29 | 3 | = |

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| 1956 | | | | | 199 | | | | | |
|--|----------|---|--|--|--|---|----------------------------------|-----------------------------------|--|-------------------|
| Osaka Owase Tottori Kobe Sumoto | N. N. | 10.7 | 222 234 228 | e 2 32 e 2 34 e 2 33 | 0-C s. $+1$ -1 -21 | e 4 19 e 4 41 e 4 40 i 4 32 | 5). SARBOS - | e 3 27 e 3 5 e 3 39 e 3 59 | 3. | L. m. 6·3 |
| Yonago Siomisaki Tokusima Takamatu Muroto | | $11.4 \\ 11.6 \\ 11.7 \\ 12.4$ | 222 228 230 | e 4 0 e 2 51 e 2 43 | $-{1\atop -}{1\atop -}{6\atop 3\atop -}$ | $\begin{array}{c} {\rm e} \ 4 & 50 \\ {\rm e} \ 5 & 23 \\ {\rm e} \ 5 & 10 \\ {\rm e} \ 4 & 39 \end{array}$ | $\frac{^{+}_{SSS}^{4}}{^{-34}}$ | i 7 47 | ? | e 5·7 |
| Torisima Hamada Koti Hirosima Matuyama | N. | $12.4 \\ 12.5 \\ 12.5 \\ 12.6 \\ 12.8$ | 237 | e 2 56 e 2 56 | $ \begin{array}{r} - & 3 \\ - & 1 \\ - & 2 \\ - & 2 \\ - & 3 \end{array} $ | e 5 2 e 5 15 e 5 42 e 5 24 e 5 29 | $-11 \\ 888 \\ + 6 \\ + 7$ | e 3 50 e 3 50 | \$ - - | e 6·9 e 6·9 |
| Harbin Simonoseki Ooita Petropavlovsk Asosan | | $13.6 \\ 13.8 \\ 13.9 \\ 14.2 \\ 14.4$ | 291 237 233 36 234 | e 3 13 e 3 21 e 3 19 e 3 20 | $ \begin{array}{r} - & 3 \\ - & 1 \\ + & 6 \\ - & 2 \end{array} $ | e 5 59 e 6 3 | + 11 + 7 | $\frac{-}{3}_{45}$ | PPP | e 7·0 |
| Changchun Hukuoka Saga Kumamoto Miyazaki | | 14·4 14·4 14·6 14·7 14·9 | $282 \\ 237 \\ 236 \\ 234 \\ 230$ | i 3 22 3 20 e 4 10 e 3 23 3 38 | $-{ \begin{tabular}{c} 0 \\ -{ \begin{tabular}{c} 2 \\ +10 \end{tabular}}$ | e 6 15 - 6 37 | + 15 | 3 40 i 4 50 i 5 0 e 6 58 | PP ? SSS | 7·8 8·6 9·8 |
| Kagosima Tomie Magadan Dairen Peking | | $\begin{array}{c} 15.7 \\ 16.0 \\ 17.6 \\ 18.0 \\ 21.7 \end{array}$ | $231 \\ 238 \\ 10 \\ 267 \\ 274$ | e 4 7 e 3 33 i 3 58 e 4 7 i 4 45 a | PPP - 9 - 4 - 0 | $ \begin{array}{r} e & 7 & 23 \\ i & 7 & 18 \\ i & 8 & 51 \end{array} $ | $\frac{888}{+4}$ | i 4 13 | PP | e 8·1 e 9·8 |
| Kwanting Zô-Sè Nanking Tatung Taiyuan | | $\begin{array}{c} 22 \cdot 0 \\ 22 \cdot 0 \\ 23 \cdot 1 \\ 23 \cdot 8 \\ 25 \cdot 0 \end{array}$ | $\begin{array}{c} 274 \\ 247 \\ 252 \\ 275 \\ 270 \end{array}$ | i 4 49 i 4 50 a 5 0 a e 5 11 e 5 23 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 8 58 i 9 16 | $^{+14}_{+13}$ | | | |
| Futzeling Taipei Paotow Shenchow Irkutsk | | $25.3 \\ 25.9 \\ 26.0 \\ 28.1 \\ 28.8$ | $\begin{array}{c} 253 \\ 235 \\ 278 \\ 266 \\ 304 \end{array}$ | e 5 23 i 5 33 5 31 e 5 42 i 5 54 a | + 1 + 5 + 2 - 6 | $\frac{9}{10}$ 55 | + 4 | i 6 10 | _ _ P | |
| Yinchuan Tiksi Bay Lanchow Hong Kong Baguio | | $\begin{array}{r} 29 \cdot 4 \\ 30 \cdot 4 \\ 32 \cdot 2 \\ 32 \cdot 5 \\ 33 \cdot 2 \end{array}$ | $\begin{array}{c} 276 \\ 350 \\ 273 \\ 242 \\ 226 \end{array}$ | e 6 1 i 6 57 e 6 23 i 6 29 a i 6 34 | $^{+}_{\mathrm{PP}}^{2}_{-}^{1}_{+}^{1}_{2}$ | 11 8 e 11 17? i 11 50 | $+\frac{5}{19} + \frac{3}{3}$ | i 7 12 i 6 47 | $\mathbf{p}_{\mathbf{p}}^{\mathbf{-}}$ | |
| College Semipalatinsk Shillong Frunse Sitka | | $43.2 \\ 44.0 \\ 46.3 \\ 50.3 \\ 50.7$ | $35 \\ 304 \\ 266 \\ 296 \\ 44$ | i 7 56 e 8 2 i 8 20 a e 8 52 e 8 54 | $ \begin{array}{cccc} $ | i 14 19 i 13 29 i 15 1 i 16 7 | $^{+}_{-60}^{1}_{-1}$ | i 8 14 | PP PP ScS | e 22·5 |
| Bokaro Honolulu Sverdlovsk Dehra Dun Tashkent | | $51.8 \\ 51.8 \\ 53.0 \\ 53.9 \\ 54.5$ | $269 \\ 95 \\ 317 \\ 280 \\ 296$ | i 9 1 e 9 23 i 9 8 e 9 20 i 9 25 | $^{-\ 2}_{+\ 20} \ ^{-\ 4}_{+\ 2}$ | e 18 57 18 57 i 16 53 e 16 57 | $\frac{S_{c}S}{+} + \frac{5}{1}$ | 11 1 | PP PPP SP SP | e 23·4 24·6 |
| Stalinabad Resolute Djakarta Lembang Horseshoe Bay | z. | 56.2 56.8 59.4 59.6 60.5 | 294 16 225 224 49 | i 9 35 i 9 38 a i 9 59 a e 9 59 e 10 7 | $ \begin{array}{ccccccccccccccccccccccccccccccccc$ | i 17 21 e 17 26 e 18 3 | + 3 + 3 + — | | | e 29·8 |

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| | | Δ | Az. | P. m. s. | o – c. | s. m. s. | O -C. | m. s. | pp. | L. m. |
|--|----------|--|---|--|---|--|---|--|--|--|
| Victoria Hyderabad Quetta Seattle Kiruna | E. Z. | $60.9 \\ 61.1 \\ 61.9 \\ 62.0 \\ 62.5$ | $^{\circ}_{268}^{268}_{286}^{50}_{339}$ | e 10 8 e 10 8 i 10 15a e 11 21 i 10 18a | $ \begin{array}{c} & 0 \\ & 2 \\ & 0 \\ & + 65 \\ & - 1 \end{array} $ | i 18 43 e 18 37 i 18 41 | PS + 5 + 1 | 12 27 i 20 5 i 11 30 | $\operatorname{ScS}_{i}^{-}$ | 30.0 |
| Madras Corvallis Ashkabad Banfil Poona | E, Z. | $62.7 \\ 63.1 \\ 63.4 \\ 63.7 \\ 63.8$ | $263 \\ 53 \\ 298 \\ 44 \\ 272$ | i 10 21 e 10 25 i 10 27 i 9 27 i 10 28 | $^{+}_{+}{}^{1}_{2} \\ ^{+}_{-}{}^{2}_{0}$ | e 18 52 18 58 e 19 6 | $+\frac{10}{7} + \frac{7}{10}$ | $\frac{12}{-}$ 38 | PP = PP | 26·3 — 29·9 |
| Bombay Moscow Pulkovo Shasta Hungry Horse | z. | 64·4 64·6 64·9 65·9 66·1 | $\begin{array}{r} 273 \\ 323 \\ 330 \\ 56 \\ 46 \end{array}$ | i 10 32 i 10 31 i 10 34 e 10 42 i 10 43 | $ \begin{array}{r} 0 \\ 2 \\ - 1 \\ + 1 \\ + 1 \end{array} $ | i 19 22 i 19 5 i 19 10 e 19 27 | $^{+19}_{-0}$ | e 19 30 10 43 e 19 36 i 10 56 | PS PS PP | |
| Kodaikanal Helsinki Mineral Scoresby Sund Nouméa | z. | 66.5 66.6 67.0 67.4 | $ \begin{array}{r} 262 \\ 332 \\ 56 \\ 355 \\ 158 \end{array} $ | e 10 46 i 10 47 e 10 46 i 10 47 e 10 30 | $^{+}_{+}^{1}_{0}^{1}_{-21}$ | e 19 45 i 19 36 i 19 39 | $^{+16}_{+6}$ | $\begin{array}{c} 24 & 13 \\ i & 13 & 4 \\ e & 11 & 4 \end{array}$ | PP PP | e $34 \cdot 3$ $31 \cdot 3$ |
| Berkeley Skalstugan Reno Lick Upsala | z. z. | 67 · 6 67 · 9 68 · 1 68 · 3 69 · 3 | 59 339 56 59 334 | e 10 52 i 10 53 a e 10 57 e 10 58 i 11 2 a | $ \begin{array}{cccc} & 0 \\ & 1 \\ & 2 \\ & + & 2 \\ & 0 \end{array} $ | e 19 48 = i 20 2 | + 6 - 1 | i 11 26 | PcP | |
| Bozeman Fresno Brisbane Goris Eureka | z. | 69·4 69·8 69·9 70·1 70·5 | $^{47}_{59}_{172}_{306}_{54}$ | i 11 4 i 11 0 e 11 8 i 11 10 | + 1 - 5 + 2 + 2 | i 20 8 e 20 18 i 20 18 | $^{+}_{-}\frac{4}{8}$ | e 13 45 | PP PP | e 31·4 |
| Tinemaha Woody Isabella China Lake Salt Lake City | | 70.6 71.1 71.4 71.8 72.1 | 57 59 59 58 51 | e 11 14 i 11 13a e 11 16 i 11 18a e 11 21 | $\begin{array}{cccc} + & 4 & \\ & 0 & \\ + & 1 & \\ + & 2 & \end{array}$ | i 20 30 i 12 3 e 20 38 | $+\frac{12}{?} \\ +\frac{3}{3}$ | i 11 25 i 11 26 i 11 27 i 11 32 e 11 32 | pP pP pP pP | e 34·5 |
| Pasadena Reykjavik Boulder City Simferopol Palomar | z. | 72.5 73.3 73.4 73.4 73.9 | $\begin{array}{r} 60 \\ 354 \\ 56 \\ 316 \\ 60 \\ \end{array}$ | e 11 23 i 11 27 i 11 29 11 26 e 11 32 | $\begin{array}{cccc} + & 1 \\ + & 1 \\ + & 2 \\ - & 1 \\ + & 2 \end{array}$ | i 20 44 — 20 52 | + 4 + 2 | i 11 35 e 13 36 i 11 44 | $\frac{\mathbf{pP}}{\mathbf{pP}}$ | 32·8 — |
| Warsaw Copenhagen Barratt Lwow Rapid City | E. | 74·0 74·3 74·4 74·6 74·6 | $328 \\ 334 \\ 60 \\ 325 \\ 44$ | i 11 32 a c 11 33 i 11 34 i 11 34 | + 2 0 0 0 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $^{+}_{+} \begin{array}{c} {\bf 3} \\ {\bf 3} \\ \hline {\bf +} & {\bf 2} \\ {\bf +} & {\bf 4} \end{array}$ | e 14 8 c 21 24 i 11 47 i 14 8 i 11 47 | PP sS pP PP | e 38·3 36·3 = |
| Iasi Riverview Krakow Ivigtut Boulder | N. | 75.0 76.0 76.1 76.2 76.3 | $321 \\ 175 \\ 327 \\ 6 \\ 48$ | e 11 37 i 11 53 a i 11 43 i 11 45 | $+\frac{1}{+11} + \frac{1}{1}$ | e 21 10 e 21 38 e 21 22 e 21 22 | $^{+}_{+}^{2}_{19} \\ ^{+}_{+}^{2}_{1}$ | e 21 32 i 12 7 i 11 55 | SP PP PcP | e 36·0 |
| Skalnate Pleso Raciborz Hamburg Aberdeen Campulung | N. | 76.7 76.8 76.9 77.6 | $326 \\ 328 \\ 334 \\ 342 \\ 321$ | i 11 45 i 11 49 i 11 48 i 11 54 e 11 54 | $ \begin{array}{rrr} - & 1 \\ + & 3 \\ + & 6 \\ + & 3 \end{array} $ | i 21 29 e 21 33 e 21 34 i 21 38 | $^{+}_{+}\overset{3}{\overset{6}{\overset{6}{\overset{+}{\overset{6}{\overset{+}{\overset{6}{\overset{+}{\overset{-}{\overset{+}{\overset{6}{\overset{+}{\overset{+}{\overset{6}{\overset{+}{\overset{+}{+$ | e 14 29 i 12 5 i 12 13 i 21 58 | $^{\mathrm{PP}}_{\mathrm{PcP}}$ $^{\mathrm{sP}}_{\mathrm{sS}}$ | 40·1 e 35·9 e 36·6 |
| Bucharest Prague Tucson Budapest Hurbanovo | | 77·7 78·2 78·4 78·5 78·5 | $\begin{array}{r} 320 \\ 330 \\ 57 \\ 326 \\ 327 \end{array}$ | e 11 51 i 11 54 i 11 57 i 11 57 i 11 59 | $\begin{array}{c} & 0 \\ 0 \\ + & 2 \\ + & 1 \\ + & 3 \end{array}$ | e 21 42 i 21 47 i 21 51 21 51 i 21 53 | $^{+}_{$ | e 21 54 i 12 5 i 12 9 e 23 51 e 15 1 | ScS pP pP | 37·3 e 41·5 e 33·0 e 42·3 e 41·1 |
| Jena Witteveen Timisoara Cheb De Bilt | z. N. | 78.6 78.6 78.9 79.0 79.6 | $332 \\ 336 \\ 324 \\ 331 \\ 336$ | i 11 57 i 11 56 a e 12 2 i 11 59 i 12 3 a | $\begin{array}{cccc} + & 1 & & \\ & & 0 & \\ + & 4 & \\ & & 0 & \\ + & 1 & & \end{array}$ | e 21 44 e 22 15 e 14 54 e 22 2 | $^{-3}_{^{+25}}^{+25}_{^{+5}}$ | e 14 55 = e 22 31 | PP = sp | e 37·3 |

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| | \triangle Az | Р. | о-с. | s. | о – с. | Q | upp. | L. |
|--|--|--|--|--|--|------------------------------|---------------------------------|------------------|
| Belgrade | 80.0 323 | m. s. | s. + 1 | m. s. e 22 12 | s. +11 | m. s. e 12 40 | generatives C | m. e 46·9 |
| Ksara Sofia | 80·1 307 80·3 320 | i 12 5 a | + 1 | e 22 9 22 2 | $+7 \\ -2$ | i 15 11 i 12 19 | PP | 51.3 |
| Uccle Stuttgart | $ \begin{array}{ccccccccccccccccccccccccccccccccc$ | e 12 8 | -1 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cc} + & \tilde{2} \\ + & 2 \end{array}$ | e 15 17 | $_{ m SP}$ | e 36·3 e 40·3 |
| Karlsruhe Kirkland Lake z. | 81·3 333 81·5 28 | e 12 12a e 12 11a | + 1 - 1 | e 22 17 | + 2 | e 22 59 | $\mathbf{s}\mathbf{P}$ | e 40·3 |
| Rathfarnham Castle Kew | 81·5 343 81·8 339 | i 12 11 a i 12 14 | - î + î | e 22 19 e 22 22 | $^{+}_{+} ^{2}_{2}$ | i 12 22 i 12 29 | pP pP | e 38·3 e 36·3 |
| Strasbourg | 81.9 333 | i 12 14 | 0 | e 22 25 | + 4 | e 12 32 | pΡ | e 38·3 |
| Jerusalem Triest Zürich | $82.0 306 \\ 82.1 328 \\ 82.6 332$ | i 12 17k e 12 16 e 12 19 | $^{+}_{+}$ $^{3}_{0}$ | e 23 46 i 22 24 | $^{\mathrm{PPS}}_{+}$ | e 23 22 | \overline{PS} | $42 \cdot 4$ |
| Basle Lubbock | $82.8 \ 332 \ 82.8 \ 51$ | e 12 20 12 22 | $^{+}_{+}$ $^{2}_{4}$ | e 22 34 | + 4 | | _ | e 50·1 |
| Paris Salo | $83 \cdot 3 336 \\ 83 \cdot 4 330$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $^{+}_{-}$ $^{2}_{1}$ | e 22 56 e 22 44 | ScS ScS | i 12 40 e 24 14 | $_{\mathrm{PPS}}^{\mathrm{pP}}$ | e 42·3 |
| Neuchatel Besançon Athens | 83.5 332 $83.6 333$ $83.8 317$ | i 12 23 i 12 23 i 12 23 a | + 1 0 - 1 | e 22 42 i 12 31 e 22 39 | $^{+}_{\mathrm{PcP}}$ | e 15 28 | PP | = |
| Chicago | 83.8 37 | | Story | e 22 37 | - 3 | e 28 14 | SS | e 39·6 |
| Bologna Oropa Pavia | $84.0 328 \\ 84.3 331 \\ 84.3 330$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\frac{+}{-}\frac{4}{3}$ | e 22 54 e 23 1 | $^{+12}_{+16}$ | e 13 0 | sP | _ |
| Florence | $84.3 330 \\ 84.7 328$ | e 12 27 k i 12 29 a | $\begin{array}{cc} + & 1 \\ + & 1 \end{array}$ | e 23 11 i 22 55 | + 6 | e 13 46 e 23 48 | $\dot{\mathbf{ps}}$ | e 43·0 |
| Karapiro N. Florissant | $84.7 156 \\ 84.9 40$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | pP + 1 | e 22 50 | -1 | i 23 2 | s_{cs} | = |
| Taranto St. Louis | 84·9 323 85·1 40 | 12 30 i 12 31 k | $^{+}_{+}$ $^{1}_{1}$ | e 22 40 | $-11 \\ -3$ | 23 53 | PS | _ |
| Ottawa Seven Falls | 85·4 27 85·4 24 | i 12 31a | - 1 + 3 | 22 55 23 3 | - 1 + 7 | 15 52 i 12 48 | PP pP | |
| Shawinigan Falls Clermont-Ferrand | $85.4 25 \\ 85.8 334$ | i 12 31 a e 12 35 | $-\ \ \ddot{1} \\ +\ \ \ddot{1}$ | 22 58 e 23 16 | $^{+}_{+16}^{2}$ | 15 51 e 16 10 | PP PP | _ |
| Rome Brebeuf | $\begin{array}{ccc} 85.8 & 326 \\ 86.0 & 26 \end{array}$ | i 12 34 a i 12 35 a | 0 | $\begin{array}{cccc} e&23&1\\ e&13&10 \end{array}$ | $^{+}_{ m sP}{}^{1}$ | i 15 56 e 12 48 | $_{ m pP}$ | e 42·6 |
| Monaco Cleveland | $\begin{array}{ccc} 86 \cdot 2 & 331 \\ 86 \cdot 6 & 33 \end{array}$ | i 12 37 i 12 39 a | $^{+}_{+} ^{2}_{2}$ | e 13 21 i 23 10 | + 3 | i 12 56 e 23 36 | $_{ m sS}^{ m pP}$ | |
| Messina Pennsylvania | 87·5 322 88·6 31 | i 12 42k i 12 48 | $+ \frac{0}{1}$ | i 23 16 e 23 28 | $^{+}_{+}^{0}_{5}$ | e 16 7 | $\frac{PP}{-}$ | 41.3 |
| Morgantown Weston | 88·8 33 89·6 26 | i 12 50 i 12 53 | + 2 + 1 | e 23 33 23 38 | + 5 + 3 | | | |
| Halifax Palisades | 89·7 20 89·9 28 | i 12 52 a i 12 54 | + 1 + 1 | e 23 42 | + 4 | e 13 1 | pP | 43.7 |
| Fordham Philadelphia | 90·1 28 90·4 30 | e 12 55 | + 1 | | [+ 9] + 10 | e 23 29 | sks | e 44·4 |
| Washington z. Chapel Hill | 90·5 31 92·4 34 | e 12 57 e 13 7 | $^{+}_{+} ^{1}_{2}$ | | _ | e 16 33 | \mathbf{PP} | _ |
| Columbia Toledo | $93.2 	 37 \ 93.4 	 336$ | e 13 9 i 13 12 | $+\ \tilde{1} + 3$ | e 23 39 e 24 17 | [+ 4] + 8 | e 23 11 16 57 | $_{\mathrm{PP}}^{\mathrm{S}}$ | e 43·8 48·0 |
| Alicante | 93.7 333 | 13 14 | + 3 | 24 20 | + 9 | 17 0 | PP | e 44·4 |
| Algiers Univ. z. Tacubaya Relizane | $\begin{array}{ccc} 93.9 & 330 \\ 94.8 & 58 \\ 95.7 & 332 \end{array}$ | e 13 11 e 13 23 e 13 19 | - 1 + 7 - 1 | e 23 21 [| -18] | e 16 53 e 14 9 e 17 11 | $_{\mathrm{PP}}^{\mathrm{PP}}$ | \equiv |
| Granada Malaga | 95·8 335 96·4 336 | 13 23k 1 13 25 | $+\ \hat{3} + \hat{2}$ | 23 53 [| +4] | e 17 11 17 14 | PP | 44.6 e 45.8 |
| | 05.1 322 | | + 1 | e 28 22 | PPS | e 18 19 | \mathbf{PP} | - |
| Astrida 1 | | e 18 47a e 17 59 [e 27 2 | PP -25] | e 29 2 | | e 19 0 e 19 2 e 34 55 | pPP PP SS | 0.57.9 |
| M'Bour 1 | 21.1 339 | i 20 17 | PP | | $\frac{PS}{}$ | i 20 27 | 9 | e 57·8 |
| Pietermaritzburg z. 1 | | i 19 la [e 19 0k [| + 6] + 4] | | | | | |
| Huancayo z. 1 | $30.3 	 266 \ 33.9 	 61 \ 41.8 	 58$ | i 19 7a [e 19 15 [i 19 4 [| $^{+}_{-20}^{4}$ | e 22 39 1 | PKS +15] | i 23 5 | PKS | 68.4 |
| | | | 201 | 20 11 [| 1101 | 1 20 0 | LED | 00.4 |

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April 23d. 3h. 44m. Epicentre 24°·3N. 121°·7E. Depth of focus 20km. Intensity II-III at Hwalien. Seismo. Bulletin of Taiwan Weather Bureau for April-June, 1956, Vol. 3, No. 2, Taiwan, China, p. 10.

April 23d. 8h. 27m. 50s. Epicentre 49°.5S. 9°.5W.

$$A = +.6431$$
, $B = -.1076$, $C = -.7582$; $\delta = +2$; $h = -5$; $D = -.165$, $E = -.986$; $G = -.748$, $H = +.125$, $K = -.652$.

| | | Δ | Az. | P. m. s. | O –C. | S. m. s. | $o_{s.}^{-c.}$ | m. s. | ipp. | L. m. |
|---|----------|--|---|---|---|--|--------------------------------|-------------------------------|---|------------------|
| Pretoria Tananarive La Paz Astrida Huancayo | z. | 37·5 54·6 57·3 57·4 65·3 | 65 77 283 49 280 | i 7 18; e 9 45; e 9 48; e 9 51; e 10 46 | + 1 | e 19 33 | + 4 | | | 29.2 |
| Tamanrasset Bogota St. Lucia San Juan Relizane | z. | $73 \cdot 2$ $77 \cdot 4$ $77 \cdot 8$ $84 \cdot 1$ $85 \cdot 3$ | $^{14}_{292}_{309}_{307}$ | i 11 361 e 11 58 e 11 58 e 12 14 e 12 37 | $\begin{array}{c} + & 1 \\ - & 3 \\ -20 \\ - & 3 \end{array}$ | i 21_46 e 22_52 | - <u>3</u> - <u>6</u> | i 26 47 c 17 26 | SS PPP | 37·2 e 40·6 |
| Malaga Granada Algiers Univ. Alicante Toledo | z. | 86·0 86·5 86·6 87·8 89·1 | $^{rac{4}{4}}_{10}$ | i 12 441 i 12 462 e 12 45 13 12 12 54 | | e 24 8 | PS = | | | |
| Jerusalem Ksara Riverview Paris Strasbourg | z. | $90.2 \\ 92.2 \\ 95.3 \\ 98.5 \\ 98.8$ | $\begin{array}{r} 37 \\ 37 \\ 164 \\ 7 \\ 11 \end{array}$ | e 13 5 e 13 18 13 51 e 17 35 e 17 43 | $^{+\ 1}_{+\ 5}_{+\ 24}^{+\ 24}_{	ext{PP}}$ | $\begin{array}{c} -& -& -& -& -& -& -& -& -& -& -& -& -& $ | $_{\mathrm{PS}}^{\mathrm{PS}}$ | e 16 50 e 20 11 e 31 52 | $\begin{array}{c} \mathbf{PP} \\ \mathbf{PPP} \\ \mathbf{SS} \end{array}$ | e 50·2 e 47·2 |
| Stuttgart De Bilt Tucson Rapid City Barratt | z. E. | $99.2 \\ 102.0 \\ 120.6 \\ 123.8 \\ 124.7$ | $\begin{array}{r} 12 \\ 9 \\ 285 \\ 300 \\ 282 \end{array}$ | e 17 40 e 18 4 e 18 57 e 20 0 e 19 11 | PP PP [+3] [+60] [+9] | | | e 19_17 | PPP | e 52·2 |
| Palomar Boulder City Salt Lake City China Lake Isabella | | 125.3 125.7 126.8 127.3 127.8 | 282 286 292 284 283 | e 19 8 e 19 5 e 19 8 e 19 10 e 19 12 | [+ 5] $[+ 1]$ $[+ 2]$ $[+ 3]$ $[+ 4]$ | | | | | |
| Woody Tinemaha Eureka Bozeman Hungry Horse College Matusiro | z. | 128.5 128.6 129.2 132.4 153.3 153.3 | 283 285 289 298 299 322 104 | e 19 10 e 19 13 e 19 12 e 19 13 e 19 17 i 19 57 e 20 13 | $[+\ 2]$ $[+\ 3]$ $[+\ 3]$ $[+\ 3]$ $[+\ 5]$ $[+\ 21]$ | | | i 21 14 e 21 38 i 20 16 | PP PP PKP | |

April 24d. 17h. 25m. 37s. Epicentre 36°·6N. 141°·2E. Depth about 40km. Intensity IV at Kakioka; II-III at Onahama, Mito, Shirakawa, Utunomiya, Hukusima, and Tokyo.

Seismo. Bull. of the Japan Met. Agency for April, 1956, Tokyo, 1956, pp. 23, 24, with macroseismic chart p. 23.

April 25d. 8h. 1m. 0s. Epicentre 39°·2N. 22°·2E. Felt in Thessalia (intensity V at Halmyros; IV at Trikkala; III + at Larissa). Seismo. Institute Bull. of the National Observatory for 1956, Athens, 1957, p. 32.

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April 25d. 8h. 29m. 59s. Epicentre 17°.0S. 174°.7E.

A = -.9528, B = +.0881, C = -.2906; $\delta = +4$; h = +5; D = +.092, E = +.996; G = +.289, H = -.027, K = -.957.

| | | | _ | , | | , | | | | |
|--|----------------|--|--|--|---|---|---------------------------------|-----------------------------------|------------------|----------------------------|
| Nouméa Karapiro Tuai New Plymouth Tongariro | N. N. E. | $21.9 \\ 22.0$ | Az. 234 178 175 181 178 | m. s. i 2 22 4 47 e 4 54 e 4 50 | k + 4 + 1 - 3 - 8 | 8. e 4 24 e 8 55 e 9 15 e 9 16 | 0-C. 8. +17 +20 +21 +16 | e 15 39 e 5 12 | app. ScS — PP | e 10·4 |
| Brisbane Cobb River Wellington Kaimata Riverview | E. | $24 \cdot 2$ | 239 184 180 186 227 | i 5 5 e 5 17 e 5 17 e 5 37 i 5 44 | + 2 - 1 - 2 + 5 - 1 | i 9 20 e 9 35 — i 10 24 | $+\frac{13}{1} \\ +\frac{2}{2}$ | (e 10 0 e 6 31 | 8) SS PP | e 10·0 e 12·9 |
| Melbourne Perth Manila Baguio Matusiro | E. Z. | Control of the Contro | 226 243 297 299 328 | e 10 27 i 10 31 10 33 | + 1 | e 12 6 i 17 29 i 19 21 18 51 | $^{+\ 3}_{+12} \ -15$ | e 13 49 e 21 20 — e 14 2 | SS SPPP | i 28·3 — 25·2 |
| Lembang Djakarta Hong Kong Berkeley Lick | Z. N. | 67 · 1 71 · 0 80 · 4 | 270 270 301 46 46 | e 11 24 | PcP | e 20 19 | -36 -1 | | | <u>=</u> |
| Fresno Pasadena Shasta Woody Barratt | z. | $\begin{array}{c} 81.6 \\ 81.8 \\ 81.8 \\ 82.0 \end{array}$ | 48 51 43 49 52 | i 12 34 i 12 20 e 12 22 i 12 21 e 12 24 | $^{+13}_{-1}_{0}\\ _{+1}$ | i 23 25 | PS | i 12 29 e 12 37 | PcP PcP | e 37·0 |
| Isabella Mineral Riverside Palomar China Lake | z. | $\begin{array}{c} 82.0 \\ 82.1 \\ 82.1 \\ 82.2 \\ 82.7 \end{array}$ | 49 44 51 52 49 | i 12 23 e 12 22 i 12 23 i 12 24 i 12 26 | $-{0\atop 2}\atop -{1\atop 0}\atop -{1\atop 1}$ | i 12 42 | ? | i 12 35 i 12 52 i 12 34 | PcP | |
| Tinemaha Reno Corvallis Boulder City Victoria | E. | $82.9 \\ 83.2 \\ 84.8 \\ 85.2$ | 48 45 39 50 36 | i 12 27 e 12 28 12 37 i 12 37 e 12 39 | $\Pr_{\substack{0\\ \text{PcP}\\ 0\\ 0}}^{0}$ | | | | | |
| Eureka College Tucson Salt Lake City Butte | N. | 85·5 86·4 86·4 88·9 90·6 | 47 15 55 47 42 | i 12 40 e 12 44 i 12 45 e 12 57 i 13 8 | $-\begin{array}{c} -1 \\ -1 \\ 0 \\ +3 \end{array}$ | e 23 21 | | i 12 51 E 39 20 | PcP — P'P' | e 35·6 e 43·1 e 42·4 |
| Hungry Horse Banff Shillong Rapid City St. Louis | E. E. | $\begin{array}{c} 90.6 \\ 91.0 \\ 91.0 \\ 96.1 \\ 104.2 \end{array}$ | 39 36 296 46 54 | i 13 4 e 12 6 e 13 8 e 13 31 e 27 36 | $-61 \\ + 1 \\ 0 \\ PS$ | e 24 47 | = = 0 | e 25 31 | = = s | |
| Quetta Palisades Ksara Jena De Bilt | z. | 113.5 117.0 139.5 143.5 144.0 | $296 \\ 52 \\ 302 \\ 342 \\ 349$ | e 19 41 e 29 48 e 19 35 e 19 35? e 19 44 | PP PS [+ 5] [- 2] [+ 7] | e 35 33 e 36 30 e 26 42 e 22 28 e 41 1? | PSS PSS [+4] PP SS | e 39 44 e 22 26 e 23 13 e 23 40 | PP | e 54·9 75·0 e 70·0 |
| Kew Stuttgart Strasbourg Paris Basle | z. | $145.4 \\ 146.2 \\ 146.7 \\ 147.6 \\ 147.7$ | 355 343 344 350 344 | e 19 44 e 19 45 i 19 49 e 19 53 e 20 15 | [+ 4] $[+ 4]$ $[+ 7]$ $[+ 9]$ $[+ 31]$ | e 19 48 e 20 13 26 58 | PKP ₂ [+ 7] | e 20 7 i 20 24 e 23 49 | PKS | e 80·0 e 71·0 e 75·0 |

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| | | Δ | Az. | P | | O-C. | 5 | 3. | 0 - C. | | Su | pp. | L. |
|---------------|------|-------|-----|------|----|----------------------------|-----------|-------|----------|---|-----|---------------|-----------|
| | | | | m. | 8. | 8. | m. | s. | s. | m. | | 747 | m. |
| Besancon | | 148.4 | 345 | | 52 | [+7] | e 28 | 39 | 3 | e 20 | 48 | ş | |
| Neuchatel | | 148-4 | 344 | e 19 | 45 | [01 | 0.0000000 | 3250 | | 500 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | - | <u> </u> | · · |
| Rome | | 150.9 | 332 | e 19 | 55 | [+6] | 30 | 21 | $\{-2\}$ | e 23 | 37 | \mathbf{PP} | |
| Monaco | | 151.2 | 341 | e 19 | 58 | [+ 9] | 17.2 | = | - | 2000 A 1000 | -87 | _ | _ |
| Messina | E. | 152.0 | 323 | e 20 | 1 | [+11] | e 24 | 27 | ? | e 29 | 29 | 9 | 2 |
| Alicante | | 158.3 | 350 | 19 | 58 | [- 1] | 27 | 1 | f - 21 | 23 | 29 | PKS | |
| Algiers Univ. | 7 | 158.9 | 341 | e 20 | 7 | 1 + 71 | 200 | =>[** | | - AT 2 | + | | |
| Malaga | 1550 | 160.3 | 358 | e 19 | 59 | 1 - 21 | - | - | | - | | - | e 85·2 |
| Tamanrasset | Z. | 168.3 | 301 | e 20 | 9 | $\hat{t} + \hat{1}\hat{1}$ | e 21 | 28 | PKP. | e 25 | 14 | PP | accessed. |

April 26d. 7h. 41m. 51s. Epicentre 16°.9S. 174°.6E.

A = -.9531, B = +.0901, C = -.2889; $\delta = -2$; D = +.094, E = +.996: G = +.288, H = -.027, K = -.957. P. S. O-C. O -C. L. Supp. Az. S. m. s. S. m. s. m. s. m. 234 i 4 Nouméa e 3 13 e 5 13.5 79 e 5 14 Apia e 8 2 e 8 34 +1218.8 $9 \cdot 2$ 181 Onerahi Ε. +19+15e 7 17 19.9e 4 51? 180 Auckland N. e 9 ss21.0178 e 4 48 Karapiro N. c 4 55 PPP 175 e 5 22 Tuai 21.9N. SS 22.1 e 9 30 New Plymouth 181 E. 22-2 178 ő Tongariro 22.6 i 5 i 9 24 238 +1Brisbane e 5 19 e 9 184 43 $24 \cdot 2$ Cobb River E. 24.3 5 17 e 9 38 e 10·2 180 Wellington e 5 51 e 5 PP25.7186 24 Kaimata N.E. e 9 59 e 10 45 26.6 183 e 10 20 e 13·3 Christchurch e 10 23 e 6 +127.0227 +20i 9 PcPRiverview e 12 + 225 $33 \cdot 4$ Melbourne E. SS e 25 51 i 28.3 55.0243 Perth Z. 299 i 19 62.7i 10 28 Baguio PS 19 15 328 10 32 19 11 63.3 $25 \cdot 1$ Matusiro 66.1 270 e 10 Lembang z. 70.8 302 2 e 20 97 11 Hong Kong 80.6 Lick Z. + 48 81.6 12 e z. Fresno e 22 e 37·0 81.6 51 i 12 Pasadena 21 81.8 21 Shasta Z. i 17 43 i 12 i 12 29 PcPPPP81.8 21 Woody 82.0 e 14 i 12 + Isabella $82 \cdot 1$ 52 e 12 Barratt $82 \cdot 1$ e 12 23 Mineral Z. $P_{c}P$ i 12 $82 \cdot 1$ 22 Riverside i 12 i 12 30 PcP82.2 i 12 i 14 Palomar e 14 10 82.8 China Lake 0 82.9 e 12 + 1 Reno Z. e 12 59 82.9 e 12 Tinemaha 48 $83 \cdot 2$ e 12 Corvallis 44 +15i 12 84.8 38 + 1 Boulder City 85.2 36 c 12 41 Victoria 85.4 12 44 Seattle Z. 85.5 i 12 40 Eureka 86.4 e 12 College 43 34.7e 14 35 e 15 26 86.4 e 40·1 e 12 46 Tucson e 42·0 89.0 e 12 Salt Lake City 58 e 13 12 90.6 Butte N.

Continued on next page.

+

e 18 20

PPP

39

36

296

e 13

e 13

e 13

90.6

90.9

91.0

Hungry Horse

Shillong

Banff

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> 1956 205

1 amagata

| | | Λ | Az. | 1 | ٥. | O-C. | 8 | ş. | о-с. | | Su | pp. | L. |
|----------------|--------|-------|----------|------------|---------------------------------|---|-----------|--------|--|---------|--------------|------------------|-----------------|
| | | | | m. | 32.0 | s. | m. | s. | S. | m. | 8. | | m. |
| Bozeman | | 91.4 | 42 | e 13 | 11 | | 111011 | | A ROYA | 100000 | | - | _ |
| | 72 | 96.1 | 46 | e 13 | 111/2/04/17 11 | + 2 | - | _ | | e 17 | 21 | \mathbf{PP} | _ |
| Rapid City | E. | | | 6 13 | 3.1 | U | | 35 | SS | 0 1 | - | • • | e 47·1 |
| Resolute | | 106.3 | 16 | *0 | | TYD | | | The second second second second second | ~ 20 | 4.1 | SSS | C 41 T |
| Quetta | | 113.4 | 296 | e 19 | 93 | \mathbf{PP} | e 25 | 57 | [+6] | e 39 | | | - 55.0 |
| Palisades | | 117.0 | 52 | - | - | - | e 29 | 49 | $_{\mathrm{PS}}$ | e 36 | 14 | SS | e 55·2 |
| Ksara | | 139-4 | 302 | e 19 | 38 | [+ 9] | e 23 | 16 | PKS | e 22 | 44 | \mathbf{PP} | |
| Jena | Z. | 143-4 | 342 | e 19 | 36 | 1 01 | e 19 | 46 | 8 | e 22 | 29 | \mathbf{PP} | 10. |
| Sofia | *** | 144.5 | 322 | i 19 | 38 | t ői | i 20 | 17 | 2 | i 20 | 57 | 8 | |
| Karlsruhe | 2000 | 146.1 | 344 | e 19 | | 1+ 41 | 1 40 | 30-0 | 200 | | | 1 | |
| | Z. | | | | The contract of the contract of | C 40 - C. | - 10 | 59 | 9 | e 22 | 9 | 2 | |
| Stuttgart | Z. | 146.1 | 343 | e 19 | 44 | [+3] | e 19 | 53 | | 6 22 | 0 | 6. E 6 | 10000 |
| Strasbourg | | 146.6 | 344 | e 19 | 49 | f + 71 | i 20 | 5 | ? | e 20 | 17 | 3 | - |
| Athens | | 147.0 | 315 | e 19 | 48 a | [+ 5] | - | - | | e 19 | 51 | PKP, | 3-0 |
| Paris | | 147.5 | 350 | i 19 | 54 | 1 + 111 | e 36 | 18 | PPS | e 23 | 33 | PP | e 79.2 |
| Besancon | | 148.3 | | e 19 | O HOUSE CLUSTER OF | 1+11 | | 2 | | i 19 | | PKP ₂ | |
| | | 149.7 | | e 20 | | PKP. | 0 13 | 0.8 | PSS | 77-24.9 | 200 | | |
| Florence | - | 149.1 | 330 | e 20 | 5 | FKF2 | 0.40 | 30.1 | 1 333 | | 70 | 583514 | 54-00 |
| Clermont-Ferra | and | 150.4 | 348 | e 20 | 1 | PKP2 | | ÷ | - | | - | - | 75.2 |
| Rome | P10001 | 150.8 | 332 | e 20 | 0 | PKP_{a} | e 43 | 38 | PSS | e 34 | 36 | ş | _ |
| Messina | | 151.9 | 323 | e 20 | 1 | PKP. | e 33 | 5 | ? | | 49 | 3 | |
| Tamanrasset | Z. | 168.2 | 302 | e 20 | 14 | [+6] | e 21 | 31 | PKP. | | 19 | PP | |
| TOTHORICOSOLI | 22. | AMM A | W. W. W. | - W. W. W. | - A 500 | F-4: 003 | CM (1985) | 195.00 | ************************************** | | 570 | S100 (17) | |

April 26d. 11h. 38m. 34s. Epicentre 35°·8N. 140°·5E. Depth of focus 0·005.

Intensity V at Tyosi, Kashiwa, Tokyo, and Tateno; IV at Kakioka, Mito, Yokohama, Utunomiya, Mera, Kumagaya, Osima, Ajiro, Hunatu, and Kohu; II-III at Titibu, Shirakawa, Maebasi, Misima, Karuisawa, Oiwake, Inawasiro, Shizuoka, and Suwa. Epicentre 35°.75N. 140°.8E. Depth about 30km. Seismo. Bull. of the Japan Met. Agency for April, 1956, Tokyo, 1956, pp. 24-27, with macroseismic chart p. 24.

> A = -.6273, B = +.5171, C = +.5823; $\delta = -3$; h = 0; D = +.636, E = +.772; G = -.449, H = +.370, K = -.813.

| | | Δ | Az. | m. s. | o -c. | s. m. s. | o – c. | m. s. | pp. | L. m. |
|--|------|---|--|---|--|--|---|---------------------------|----------|----------|
| Tyosi Kashiwa Kakioka Mito Tokyo | N. | 0·3 0·4 0·5 0·6 | 108 265 328 358 258 | m. s. 0 0 i 0 10 i 0 10k 0 10k 0 13k | - 4 | 0 5 i 0 19 0 20 0 23 0 24 | -15 -3 -3 -2 -1 | — — 0 19 | <u>=</u> | |
| Yokohama Utunomiya Kumagaya Mera Onahama | N.E. | $\begin{array}{c} 0.8 \\ 0.9 \\ 1.0 \\ 1.2 \end{array}$ | $241 \\ 325 \\ 291 \\ 212 \\ 16$ | i 0 15k i 0 15k i 0 18k i 0 16k e 0 21 | | i 0 31 e 0 34 0 37 0 30 i 0 35 | + 2 + 3 + 4 - 3 - 3 | e 0 20 | P = | |
| Titibu Maebasi Shirakawa Ajiro Hunatu | N.E. | $1.2 \\ 1.3 \\ 1.4 \\ 1.4$ | 261 297 350 237 258 | $\begin{array}{cccc} i & 0 & 20 k \\ i & 0 & 22 k \\ i & 0 & 21 k \\ i & 0 & 22 \\ i & 0 & 23 k \end{array}$ | $ \begin{array}{ccccccccccccccccccccccccccccccccc$ | e 0 42 0 44 i 0 42 i 0 41 0 46 | $\begin{array}{c} + & 4 \\ + & 4 \\ + & 2 \\ - & 2 \\ + & 3 \end{array}$ | | | |
| Misima Osima Kohu Oiwake Inawasiro | | 1 · 4 1 · 4 1 · 6 1 · 7 1 · 8 | $\begin{array}{c} 242 \\ 222 \\ 264 \\ 289 \\ 350 \end{array}$ | $\begin{array}{cccc} 1 & 0 & 22 k \\ e & 0 & 20 \\ i & 0 & 27 \\ & 0 & 26 \\ i & 0 & 30 k \end{array}$ | $ \begin{array}{rrr} $ | e 0 45 i 0 36 i 0 51 0 50 0 52 | $^{+}_{-}$ $^{2}_{7}$ $^{+}_{0}$ $^{0}_{0}$ | i 0 38 i 0 24 i 1 3 | P SS | |
| Hukusima Shizuoka Matusiro Nagano Matumoto | N.E. | $1.9 \\ 1.9 \\ 2.0 \\ 2.1$ | 359 244 292 295 283 | $\begin{array}{cccc} i & 0 & 32 k \\ i & 0 & 31 k \\ i & 0 & 32 k \\ i & 0 & 34 k \\ i & 0 & 35 k \end{array}$ | $\begin{array}{cccc} + & 1 & & & \\ & & 0 & & \\ + & 2 & & \\ + & 1 & & \end{array}$ | $\begin{array}{cccc} \mathbf{e} & 0 & 54 \\ \mathbf{i} & 0 & 58 \\ 0 & 53 \\ \mathbf{e} & 0 & 57 \\ 1 & 5 \end{array}$ | $^{+}_{-}\overset{0}{\overset{4}{\overset{4}{\overset{6}{\overset{6}{\overset{6}{\overset{6}{\overset{6}{6$ | | | |
| Iida Omaesaki Takada Niigata Yamagata | | 2·2 2·2 2·4 2·4 | 263 238 306 332 357 | i 0 35 i 0 35 k 0 39 k 0 44 e 0 39 | + 6 + 6 + 1 | e 1 5 e 1 2 1 9 1 12 1 14 | + 3 + 7 + 5 + 7 | | | |

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| 1956 | | | | | 206 | | | | | |
|--|----------|--|--|--|---|---|--|---------------------------------|---------------|------------|
| Sendai Isinomaki Takayama Aikawa Hatidyozima | | Δ 2·5 2·7 2·8 2·8 | Az. 7 14 278 321 192 | P. m. s. 0 37 e 0 42 e 0 41 0 45 i 0 43 | O-C. s. - 2 - 1 + 1 - 1 | S. m. s. e 1 7 1 13 e 1 26 1 22 1 21 | O-C. - 2 - 1 + 12 + 5 + 4 | m. s. s. c 1 24 | ss = | L. m. |
| Toyama Nagoya Gihu Kanazawa Wazima | E. | 2·8 3·0 3·1 3·2 3·3 | 289 258 263 284 299 | e 0 46 e 0 47 e 0 48 e 0 55 e 0 51 | $^{+}\ _{0}^{0}\ _{0}^{0}$ | $ \begin{array}{c} 1 & 24 \\ e & 1 & 30 \\ e & 1 & 24 \\ \end{array} $ | + 7 + 8 - | e = 49 | = z= | |
| Ibukisan Kameyama Mizusawa Tu Hikone | E. | 3·4 3·4 3·4 3·5 | $264 \\ 255 \\ 8 \\ 253 \\ 262$ | e 0 53 0 53 a 0 49 0 56 0 53 | + 1 + 1 - 3 + 4 - 1 | e 1 36 1 39 1 35 1 48 1 48 | $^{+}_{+}$ $^{7}_{+}$ $^{+}_{16}$ $^{+}_{+}$ 16 | i 1 26 0 54 — | S P = | |
| Hukui Tsuruga Akita Morioka Owase | | 3·5 3·6 3·9 3·9 | $ \begin{array}{r} 276 \\ 269 \\ 356 \\ 8 \\ 245 \end{array} $ | e 0 56 i 0 57 1 1 e 1 0 1 0 | $\begin{array}{cccc} + & 2 \\ + & 2 \\ + & 2 \\ + & 1 \\ + & 1 \end{array}$ | $\begin{array}{c} - \\ 2 & 9 \\ e & 1 & 52 \\ e & 1 & 46 \\ 1 & 58 \end{array}$ | $^{+32}_{+8} \\ ^{+2}_{+14}$ | i | P <u>P</u> | |
| Miyako Kyoto Nara Maizuru Osaka | | $\begin{array}{c} 4 \cdot 0 \\ 4 \cdot 0 \\ 4 \cdot 0 \\ 4 \cdot 1 \\ 4 \cdot 2 \end{array}$ | $\begin{array}{c} 16 \\ 256 \\ 255 \\ 267 \\ 256 \end{array}$ | $\begin{array}{cccc} \mathbf{e} & 0 & 58 \\ & 1 & 2 \\ & 1 & 4 \\ \mathbf{e} & 1 & 6 \\ \mathbf{e} & 1 & 3 \end{array}$ | - 3 + 1 + 3 + 4 | e 1 41 1 46 2 4 e 2 10 e 1 51 | $^{-\ 6}_{-\ 17}^{+\ 17}_{+\ 21}^{-\ 1}$ | e 1 9 e 1 12 | PP — PP | |
| Kobe Siomisaki Toyooka Hatinohe Sumoto | N. | 4.5 4.6 4.8 4.8 | $\begin{array}{c} 257 \\ 240 \\ 268 \\ 10 \\ 254 \end{array}$ | e 1 6 e 1 8 e 1 8 e 1 10 1 12 | $- 1 \\ - 1 \\ - 1 \\ - 2 \\ 0$ | e 2 10 e 2 20 e 2 11 e 2 10 2 32 | $^{+11}_{+18} \\ ^{+9}_{+3} \\ ^{+25}$ | e 1 30 | PPP | |
| Aomori Tottori Himeji Tokusima Torisima | N. | 5·0 5·1 5·2 5·3 | $^{268}_{257}_{252}_{182}$ | e 1 14 e 1 37 e 1 25 1 16 e 1 14 | $^{+21}_{+8} \\ ^{-1}_{-5}$ | e 2 13 e 3 5 e 2 27 2 42 | $^{+\ 1}_{+\ 51}_{+\ 10}_{+\ 25}$ | e 1 52 | <u>?</u> | |
| Takamatu Muroto Yonago Hakodate Koti | | 5·8 5·8 6·0 6·2 | $256 \\ 246 \\ 268 \\ 250$ | e 1 19 e 1 45 e 1 10 e 1 29 e 1 29 | $^{-2}_{+20}_{-15}_{+1}_{-2}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $^{+34}_{+32}_{+23}$ | | | |
| Mori Urakawa Matuyama Hirosima Tomakomai | N. | 6·3 6·6 6·7 6·8 | $255 \\ 260 \\ 7$ | $\begin{array}{c} {\bf 1} & {\bf 42} \\ {\bf e} & {\bf 1} & {\bf 33} \\ {\bf e} & {\bf 1} & {\bf 48} \\ {\bf e} & {\bf 1} & {\bf 37} \\ \end{array}$ | $^{+10}_{-4}$ $^{+10}_{-2}$ | 2 52 e 2 46 e 3 25 e 3 9 e 3 19 | + 8 - 5 - 5 + 13 - 88 | e 1 42 | P <u>P</u> | |
| Simidu Hamada Sapporo Obihiro Kusiro | z. | 6·9 7·0 7·3 7·4 7·8 | $\begin{array}{c} {\bf 246} \\ {\bf 265} \\ {\bf 5} \\ {\bf 16} \\ {\bf 22} \end{array}$ | e 1 59 e 2 16 i 1 45 e 1 48 | $ \begin{array}{r} $ | e 3 32 e 3 15 e 3 56 e 3 9 | $\frac{888}{+47} - 12$ | - - 4 4 | = | |
| Ooita Asahigawa Simonoseki Miyazaki Nemuro | | 7·8 8·1 8·5 8·5 | $\begin{array}{c} 253 \\ 10 \\ 260 \\ 245 \\ 26 \end{array}$ | $\begin{array}{c} e & 2 & 7 \\ e & 1 & 51 \\ \hline 2 & 3 \\ \hline - & \end{array}$ | $^{+rac{14}{6}}_{-rac{0}{4}}$ | e 3 45 e 3 25 e 3 24 | SS - 3 + 5 -14 | i 4 27 e 3 22 | 3 | e 4·1 = |
| Hukuoka Kumamoto Abashiri Saga Unzendake | E. E. | 8·6 8·6 8·7 8·8 9·0 | $\begin{array}{c} 258 \\ 253 \\ 18 \\ 256 \\ 253 \end{array}$ | e 1 33 e 2 0 | $^{+}_{-33}^{2}_{-7}^{1}$ | e 3 55 3 40 e 3 34 e 4 11? | $^{+14}_{-\ 9}$ | - c 2 36 i 4 52 c 4 45 | ? | |

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| 195 6 | 207 |
|--------------|-----|
| | |

| | | ۵ | Az. | P. m. s. | 0 -C. | $_{ m m. \ s.}^{ m S.}$ | O -C. | m. s. | ipp. | L. m. |
|---|----------------|---|--|---|---|-------------------------|---------------|--|-------------------------------------|----------|
| Kagosima Wakkanai Yakusima Tomie Changchun | N. | 9.3 | 246 240 255 309 | e 2 13 | $-\frac{1}{0} + \frac{12}{1}$ | e 3 22 e 4 12 = | + 7 | e 5 0 | ? | |
| Zô-Sè Nanking Peking Peking Baguio Hong Kong | | $16.8 \\ 18.4 \\ 19.6 \\ 26.2 \\ 26.6$ | $\begin{array}{c} 259 \\ 264 \\ 290 \\ 228 \\ 247 \end{array}$ | | $^{+}_{-}_{1}^{1}_{6} \\ ^{+}_{+11}$ | e 11 39 e 10 26? | SSS + 24 | | | |
| Manila Shillong College Dehra Dun Lembang | Z, | $27.4 \\ 42.7 \\ 50.5 \\ 51.8 \\ 52.5$ | $225 \\ 270 \\ 32 \\ 283 \\ 223$ | i 7 49 a i 8 52 e 9 0 | $^{+}_{-}\overset{1}{\overset{3}{\overset{2}{3}}}_{-12}$ | e 14 12 = | + <u>1</u> | 9 34 — | PP | |
| Quetta Poona Resolute Bay Kiruna Riverview | z. z. | 60·7 64·0 67·4 | $288 \\ 272 \\ 14 \\ 339 \\ 171$ | e 10 4 i 10 4 i 10 26k i 10 49k i 11 6 | - 2 - 3 - 3 - 2 - 1 | | | e 35 7 i 11 2 | p P | |
| Helsinki Shasta Skalstugan Mineral Hungry Horse | z. z. | 72.8 | $332 \\ 52 \\ 338 \\ 52 \\ 42$ | i 11 11 e 11 13 i 11 22 e 11 29 i 11 25 | - 1 - 8 - 1 + 4 - 1 | | | i 11 35 e 12 16 | P ? | |
| Scoresby Sund Upsala Butte Bozeman Eureka | z. | 73.7 | 354 334 44 43 50 | i 11 25 i 11 27 e 11 40 e 11 43 i 11 48 | $\begin{array}{cccc} - & 1 \\ - & 2 \\ + & 2 \\ - & 1 \\ - & 1 \end{array}$ | | | i 11 38 i 11 40 — | рР Р | |
| Woody Isabella China Lake Pasadena Salt Lake City | | 77.5 77.8 78.3 78.9 78.9 | 55 54 56 48 | i 11 48 e 11 50 e 11 55 e 12 1 e 12 10 | $ \begin{array}{r} - & 2 \\ - & 2 \\ 0 \\ + & 3 \\ + & 12 \end{array} $ | | | $\begin{array}{c} {\rm i}\ 12\ 27 \\ {\rm e}\ 12\ 28 \\ {\rm e}\ 12\ 27 \\ {\rm e}\ 12\ 27 \\ \end{array}$ | $\frac{\mathrm{sP}}{\mathrm{sP}}$ | |
| Dalton Riverside Boulder City Palomar Barratt | | $79.1 \\ 79.5 \\ 80.0 \\ 80.2 \\ 80.7$ | 56 56 56 56 | e 12 10 e 12 4 e 12 3 i 12 4 i 12 8 | $^{+11}_{+3}$ $^{-1}_{-1}$ 0 | e 12 50 | <u>?</u> = | e 12 22 e 13 2 e 12 44 | $\frac{\mathbf{pP}}{\mathbf{sP}}$ | |
| Hamburg Ksara Rapid City Jena Jerusalem | z. E. z. | $81.2 \\ 81.3 \\ 81.7 \\ 82.6 \\ 82.9$ | $333 \\ 305 \\ 41 \\ 330 \\ 304$ | i 12 11 e 12 9 e 12 19 e 12 16? i 12 20 a | $\begin{array}{c} + & 1 \\ - & 2 \\ + & 6 \\ - & 1 \\ + & 1 \end{array}$ | | | e 12 30 i 12 33 | pP pP | 33.9 |
| Witteveen Boulder Tucson Stuttgart Strasbourg | z. | 83·0 83·3 84·9 85·3 86·0 | $334 \\ 45 \\ 54 \\ 330 \\ 331$ | i 12 19 e 12 22 e 12 29 e 12 30 e 12 33 | $-\begin{array}{c} 1 \\ + \begin{array}{c} 1 \\ 0 \\ - \begin{array}{c} 2 \end{array}$ | | | i 12 33 e 12 48 e 12 48 | pP — pP | |
| Paris Kirkland Lake Rome Fayetteville Tacubaya | z. | $87.8 \\ 88.9 \\ 89.2 \\ 92.2 \\ 101.2$ | $334 \\ 26 \\ 324 \\ 41 \\ 56$ | i 12 43 e 12 48 e 16 39 i 13 4a e 21 28 | PP 0 SKP | | | i 12 57 e 25 59 | P ? | |
| Tamanrasset La Paz | z. | $107.8 \\ 148.1$ | $\begin{array}{c} 317 \\ 60 \end{array}$ | 18 25 19 39 | [+ 6] [+ 4] | | | e 18 43 19 54 | $_{\mathrm{PKP_{2}}}^{\mathrm{PP}}$ | |

April 26d. 14h. 52m. 20s. Epicentre 51°·5N. 143°·5E. Magnitude 5·5. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, pp. 58, 59.

April 28d. 7h. 4m. Epicentre 24°·2N. 121°·6E. Intensity IV at Hwalien. Seismo. Bull. of the Taiwan Weather Bureau for April-June, 1956, Vol. 3, No. 2, Taiwan, China, p. 10.

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1956

April 28d. 14h. 54m. 30s. Epicentre 32°·7S. 178°·3W. Magnitude 6. New Zealand Seismo. Report for 1956, Seismo. Obs. Bull. E-137, Wellington, 1960, p. 35.

April 29d. 6h. 44m. Epicectre 51° 9N. 105° 5E. Loc. cit., 26d. 14h., p. 74.

April 29d. 20h. 11m. 18s. Epicentre 42°·4N. 45°·0E. Loc. cit., 26d. 14h., pp. 14, 15.

April 29d. 21h. 52m. 28s. Epicentre 6°-9S. 52°-5E.

A = +.6044, B = +.7877, C = -.1194; $\delta = +3$; h = +7; D = +.793, E = -.609; G = -.073, H = -.095, K = -.993.

| | | Δ | Az. | 10.000 | ٠ | o –c. | s. | o –c. | | pp. | L. |
|--|----------------|--|--|--------------------------------------|---|---|--------------------------------|--------------------------------|---|----------------|--------------|
| Astrida Lwiro Pretoria Pietermaritzburg Kimberley | Z. Z. Z. | 30.7 | $280 \\ 280 \\ 228 \\ 220 \\ 227$ | m. i 5 i 6 i 6 i 6 | 8. 5 16 18 18 46 | 8. - 3 - 2 + 7 - 1 - 2 | m. s. e 9 42 | * <u>-8</u> | m. s. e 8 32 = | 3 | m. = = |
| Quetta Jerusalem Ksara Kerguelen Is. Shillong | z. | $39.4 \\ 41.8 \\ 43.4 \\ 44.8 \\ 50.0$ | $\begin{array}{r} 20 \\ 338 \\ 340 \\ 164 \\ 48 \end{array}$ | i 7 i 7 e 8 e 7 e 9 | 32 56 a 12 12 3 | $^{-1}_{\begin{array}{l} + & 3 \\ + & 6 \\ - & 6 \\ + & 5 \end{array}}$ | e 13 46 i 14 52? e 14 48 | $+\frac{11}{?} + \frac{13}{-}$ | e 8 57 | PP | |
| Athens Tamanrasset Bucharest Iasi Algiers Univ. | z. z. | $52.0 \\ 54.6 \\ 56.3 \\ 58.2 \\ 63.4$ | $331 \\ 304 \\ 338 \\ 340 \\ 317$ | e 9 e 9 e 9 e 10 | $\begin{array}{c} 13 \\ 32 \\ 49 \\ 59 \\ 32 \end{array}$ | $\begin{array}{c} & 0 \\ 0 \\ + & 4 \\ + & 1 \\ - & 2 \end{array}$ | e = 58 | <u>?</u> | e 11 37 e 10 18 e 10 19 | PP | |
| Raciborz Prague Neuchatel Stuttgart Jena | N. | $67 \cdot 1 \\ 67 \cdot 1$ | $336 \\ 334 \\ 328 \\ 330 \\ 333$ | e 10 e 10 e 10 e 10 | 36 47 57 56 a 59 | $ \begin{bmatrix} - & 2 \\ - & 1 \\ 0 \\ - & 1 \\ - & 1 \end{bmatrix} $ | i 10 56 - e 11 39 | PcP | $\begin{array}{c} & - \\ & 12 & 39 \\ e & 11 & 32 \\ e & 13 & 22 \end{array}$ | PcP PP | |
| Hamburg Helsinki Paris Upsala Kew | z. z. | $70.3 \\ 70.6 \\ 72.0$ | $335 \\ 346 \\ 328 \\ 342 \\ 329$ | i 11 i 11 | 16 k 17 18 28 a 38 | $ \begin{array}{r} 0 \\ 0 \\ 1 \\ 0 \\ 1 \end{array} $ | e 17 2 | ? | e 11 25 e 13 52 i 11 42 | PP PcP | |
| Rathfarnham C. Kiruna Hungry Horse Salt Lake City Shasta | z. z. | 77.7 77.9 137.1 143.5 146.0 | $328 \\ 348 \\ 347 \\ 340 \\ 353$ | i 11 i 12 e 22 e 19 i 20 | 59 a 2 7 39 0 | - 1 + 1 PP [+ 2] [+19] | | | e 12 13 i 12 10 = | PcP PcP | |
| Mineral Berkeley Boulder City Lick China Lake | z. z. | 146.3 148.8 148.8 149.2 149.8 | $352 \\ 352 \\ 340 \\ 351 \\ 344$ | e 19 i 19 i 19 | 46 54 51 55 58 | [+ 5] $[+ 9]$ $[+ 6]$ $[+ 11]$ | | | e 20 11 | - - PKP2 | |
| Isabella Woody Tucson Riverside Pasadena Palomar Barratt | | 150·2 150·4 151·4 151·5 151·9 152·4 | $345 \\ 346 \\ 331 \\ 342 \\ 344 \\ 340$ | i 19 e 19 | 55 56 53 59 0 1 | [+ 7] $[+ 8]$ $[+ 5]$ $[+ 9]$ $[+ 10]$ $[+ 11]$ $[+ 12]$ | | | | | |

April 30d, 12h, 14m, 22s. Epicentre 42°·5N, 44°·9E. Bull, of the Seismo, Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, pp. 15, 16.

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1956

May 1d. 2h. 42m. 12s. Epicentre 4°.8S. 103°.1E. Depth of focus 0.005.

A = -.2259, B = +.9706, C = -.0831; $\delta = 0$; h = +7; D = +.974, E = +.227; G = +.019, H = -.081, K = -.997.

| D = +.974, $E = +.227$; $G = +.019$, $H =081$, $K =997$. | | | | | | | | | | | |
|--|----------------|---|--|--------------------------------------|-------------------------------|--|--|--|--|--|----------|
| Djakarta Lembang Bandung Medan Manila | N. | ^°.0 4.9 5.0 9.4 26.2 | Az. 110 114 115 332 42 | i 1 i 1 e 1 e 2 | 1k 11 a 13 | | | O - C. + 4 + 1 0 | m. s. e 15 21 e 15 18 e 15 22 | ses Ses Ses | L. m. |
| Baguio Hong Kong Perth Shillong Poona | Z. Z. E. | $27.3 \\ 29.0 \\ 29.5 \\ 32.1 \\ 37.0$ | $\begin{array}{r} 39 \\ 22 \\ 158 \\ 341 \\ 310 \end{array}$ | i 5 e 5 e 6 i 7 | 56 - | $-\frac{{0}}{{0}}$ | e 10 39 e 11 0 i 11 24 | $^{+25}_{-6}$ | | | e 14·0 |
| Sian Nanking Zô-Sè Dehra Dun Quetta | | $39.2 \\ 39.6 \\ 39.7 \\ 42.4 \\ 49.1$ | $\begin{array}{c} & 8 \\ 21 \\ 25 \\ 327 \\ 318 \end{array}$ | e 7 e 7 e 7 i 8 | 26 27 50 41 a | $+\frac{3}{-\frac{1}{2}}$ | $\begin{array}{c} e & 13 & 30 \\ & 13 & 27 \\ i & 14 & 4 \\ e & 15 & 42 \end{array}$ | $\begin{array}{c} -\frac{1}{5} \\ + & 1 \\ - & 2 \\ 0 \end{array}$ | $\begin{array}{c} - \\ - \\ 19 & 17 \\ 28 & 5 \\ 20 & 3 \end{array}$ | $\begin{array}{c} \mathbf{P_{c}P} \\ \mathbf{P_{c}P} \\ \mathbf{P_{c}P} \end{array}$ | |
| Melbourne Changchun Brisbane Matusiro Riverview | z. | $50.3 \\ 52.4 \\ 52.6 \\ 52.6 \\ 53.1$ | $^{137}_{20} \\ ^{121}_{36} \\ ^{129}$ | e 8 e 9 i 9 i 9 | 55 7 10 7 a 14 a | $\begin{array}{c} + & 3 \\ - & 1 \\ + & 1 \\ - & 2 \\ + & 1 \end{array}$ | e 16 7 | + 9 - 2 | i 9 7 i 9 25 10 18 | pP PcP | 21.0 |
| Tananarive Nouméa Pietermaritzburg Astrida Jerusalem | z. z. | 55.9 63.6 72.6 73.2 74.0 | $\begin{array}{c} 250 \\ 112 \\ 241 \\ 269 \\ 305 \end{array}$ | i 10 e 11 e 11 i 11 | 37 26 23 26 a 31 | $\begin{array}{c} + & 3 \\ & 0 \\ + & 1 \\ + & 1 \end{array}$ | | | i 9 50 i 11 38 e 11 41 i 11 44 | $\frac{\mathbf{pP}}{\mathbf{pP}}$ | |
| Ksara Kimberley Iasi Bucharest Athens | z. N. | $74.0 \\ 77.5 \\ 83.8 \\ 84.1 \\ 84.6$ | $307 \\ 242 \\ 318 \\ 315 \\ 309$ | i 11 i 11 22 22 e 12 | 32 a 50 a 39 44 8 | + 2 8 8 | $\begin{array}{c} e & 21 & 0 \\$ | + 4 + 1 + 1 | i 11 46 i 12 7 | р <u>Р</u> — | 41.8 |
| Belgrade Helsinki Warsaw Kalossa Kiruna | | $88.2 \\ 88.3 \\ 88.9 \\ 89.4 \\ 91.6$ | $315 \\ 331 \\ 322 \\ 317 \\ 338$ | i 12 i 12 e 12 e 12 i 13 | 46 a 45 48 51 0 a | $\begin{array}{cccc} + & 1 & & \\ - & 1 & & \\ 0 & & 0 & \\ - & 1 & & \end{array}$ | e 23 46 e 23 31 e 23 47 | $+\frac{24}{6}$ | e 13 4 i 13 3 i 13 7 i 16 37 | pP pP pP | |
| Upsala Prague Triest Skalstugan Jena | | $91.8 \\ 92.8 \\ 93.0 \\ 94.6 \\ 94.7$ | $330 \\ 320 \\ 315 \\ 333 \\ 321$ | i 13 i 13 e 13 i 13 e 13 | 1 a 6 7 ? 14 a 14 | - 1 - 1 - 1 - 1 | i 23 27 e 23 55 e 24 8? i 17 5 e 17 1 | $^{[}_{-}^{0}_{\stackrel{9}{_{PP}}}^{0}$ | i 13 18 i 13 27 i 13 30 | $\frac{\mathbf{p}_{\mathbf{p}}^{\mathbf{P}}}{\mathbf{p}_{\mathbf{P}}}$ | |
| Hamburg Stuttgart Besançon Tamanrasset Paris | z. z. | $95.7 \\ 96.2 \\ 98.3 \\ 98.8 \\ 100.6$ | $323 \\ 318 \\ 317 \\ 292 \\ 319$ | i 13 e 13 e 17 e 13 e 13 | $20 \\ 21 \\ 29 \\ 35 \\ 42$ | $-{0\atop { m PP}\atop 1\atop +}{1\atop 0}$ | e 16 57 e 21 26 | PP - ? | $\begin{array}{c} & -1 & -1 & -1 & -1 & -1 & -1 & -1 & -$ | pP PP | e 63·8 |
| College Resolute Horseshoe Bay Victoria Corvallis | z. | 102.4 109.4 120.8 121.2 123.3 | 24 5 33 34 38 | i 17 i 18 e 18 i 18 e 18 | 59 23 k 46 47 51 | PP [0] [+ 1] [+ 1] | | | i 19 3 | рРКР — | e 58·8 |
| Shasta Hungry Horse Mineral Berkeley Lick | z. z. z. | $\substack{125.8 \\ 126.3 \\ 126.5 \\ 127.2 \\ 127.9}$ | 42 30 42 45 45 | e 18 i 18 e 18 i 18 e 19 | 57 56 57 59 0 | [+ 2] $[+ 0]$ $[+ 1]$ $[+ 2]$ $[+ 1]$ | e 22 1 | PKS | i 19 14 | pPKP | |
| Reno Butte Bozeman Tinemaha Eureka | Z. N. | $\substack{128.1 \\ 128.6 \\ 129.6 \\ 130.4 \\ 130.7 }$ | $\frac{42}{31} \\ \frac{31}{44} \\ 40$ | e 19 i 19 i 19 e 19 i 19 | 1 4 3 5 4 | [+ 2] $[+ 4]$ $[+ 1]$ $[+ 2]$ $[+ 0]$ | i 22 23 i 22 24 | PKS | e 19 20 e 19 23 i 19 23 | pPKP | |

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| | Δ | Az. | F | ٠. | 0 -c. | s. | O -C. | S | app. | L. |
|------------------|---|--|---------|-----------------|--------------------|---|----------|--------------------|--|---------------|
| | . 0 | 0 | m. | s. | s. | m. s. | 8. | m. s. | | m. |
| Woody | 130.7 | 46 | e 18 | 46 | [-18] | i 22 24 | SKP | e 21 17 | PP | **** |
| Isabella | 131.0 | 46 | | 3 | 1-11 | 1 22 25 | SKP | i 19 24 | | _ |
| China Lake | 131.5 | 45 | e 19 | 6 | i + ii | i 22 29 | SKP | i 19 27 | pPKP | _ |
| Pasadena | 131.9 | 47 | i 19 | 8 | $[+ \frac{1}{2}]$ | i 22 29 | SKP | | pPKP | ~~~ |
| Salt Lake City | 132.4 | 36 | | 9 | [+ 2] | i 22 32 | SKP | i 19 25 e 19 27 | A STATE OF THE PARTY OF THE PAR | e 62·1 |
| | | - 00 | | 2.00 | f | 1 22 02 | DIL | e 19 27 | pPKP | |
| Riverside | 132.6 | 47 | e 19 | 0 | [-8] | i 22 31 | SKP | e 19 27 | pPKP | |
| Palomar | $133 \cdot 2$ | 48 | e 19 | 4 | 1 - 51 | i 22 34 | SKP | i 19 30 | pPKP | 553 |
| Boulder City | 133.3 | 43 | e 19 | 2 | 1 - 71 | i 22 34 | SKP | 1 10 00 | pr Kr | |
| Barratt | 133.7 | 48 | i 19 | $1\overline{2}$ | 1 + 21 | i 22 36 | SKP | e 21 34 | PP | 77 |
| Rapid City | 134.6 | 27 | | 58 | -131 | i 22 37 | SKP | C 21 34 | 1.1 | |
| | 322(2) | -0.0 | | 00 | 1 101 | | SILL | | - | - |
| Boulder | 136.6 | 32 | e 19 | 4 | [-11] | | | - | | control. |
| Kirkland Lake Z. | 136.7 | 3 | e 19 | 15 | 1 01 | e 22 42 | SKP | e 21 56 | PP | - |
| Tucson | 138.2 | 45 | e 19 | 12 | [- 6] | i 22 50 | SKP | 0 21 00 | | |
| Shawinigan Falls | 138-2 | 356 | | 8 | 1-101 | 22 47 | SKP | 22 5 | PP | |
| Halifax | 138.6 | 346 | | | 1 - 81 | | | | FF | |
| | ***** | | CM (AM) | 1700100 | L | | 9-22-04 | 12000 | - | |
| Brébeuf | 139.4 | 356 | i 19 | 14 | [-6] | | - | e 22 13 | PP | 22.0 |
| Ottawa | 139.5 | 359 | | 16 | 1-41 | 22 51 | SKP | e 22 15 | $\dot{P}\dot{P}$ | |
| Lubbock | 143.2 | 36 | | 26 | i - ii | 100000000000000000000000000000000000000 | | 0 22 10 | * * | 1.00 |
| Palisades | 143.9 | 356 | i 19 | 25 | [-3] | _ | _ | e 22 30 | \overline{PP} | |
| Fayetteville | 145.0 | A STATE OF THE PARTY OF THE PAR | e 19 | | | | | 6 22 30 | 1.1 | _ |
| 1 00000 | | 20 | | OUL | , | | | | | |
| Morgantown | 145.2 | 4 | i 19 | 30 | [0] | | | e 22 59 | PP | |
| Washington | 146.1 | 0 | i 19 | 34 | 1+ 21 | e 19 47 | PKP. | e 22 54 | $\hat{P}\hat{P}$ | 15 |
| Chapel Hill | 149.0 | 3 | e 19 | 38 | 1 + 11 | | | i 19 59 | PKP. | - |
| Columbia | 150.7 | 7 | i 19 | 41 | 1+ 21 | | | 1 10 00 | I KI 2 | 1 |
| Tacubaya | 153.9 | 54 | | 14 | pPKP | e 29 43 | SKKS | e 26 46 | PPP | - |
| | 167000000000000000000000000000000000000 | | | | | V 40 30 | NJAKIKS) | 0 20 40 | LLI | (|
| La Paz | 157.1 | 202 | e 19 | 58 | [+10] | | _ | i 21 8 | pPKP. | 0.000 |
| San Juan | 162.9 | 323 | | 45 | PKP. | and an | | ~ T. | PA AST | |
| Huancayo z. | 163.2 | 185 | i 19 | 59 . | 1+ 41 | - | - | - | - | |

May 2d. 6h. 34m. 21s. Epicentre 28° · 2N. 139° · 8E. Depth of focus 0 · 070.

Unfelt. Depth about 500km. Seismo. Bull. Japan Met. Agency, May, 1956, Tokyo, 1956, pp. 9, 10.

A = -.6741, B = +.5697, C = +.4701; $\delta = -4$; h = +2; D = +.645, E = +.764; G = -.359, H = +.303, K = -.883.

| | | Δ | Az. | P. | 0-C. | s. | 0 - C. | Suj | on: |
|----------------|--------|-------------------|-----|--------|---------------|---|---|--|----------|
| 5585 - 100 Heb | | | 0 | m. s. | 8. | m. s. | s. | m. s. | |
| Torisima | | 2.3 | 12 | i 1 6k | + 1 | i 1 56 | - 1 | 2000 (1000 pt 1000 pt | |
| Owase | N. | 6.6 | 334 | e î 45 | $+$ $\hat{3}$ | e 3 7 | $+ \hat{3}$ | | |
| Mera | N. | 6.7 | 0 | e 2 41 | 3 | | _ | | |
| Ajiro | E. | 6.9 | 356 | e 1 48 | + 2 | e 3 7 | - 2 | | |
| Misima | | 7.0 | 354 | e 1 47 | ō | e 3 9 | $\frac{-2}{-2}$ | | - |
| Kameyama | | 7.2 | 338 | 1 51 | + 2 | 3 19 | + 4 | | |
| Hunatu | | $7 \cdot 3$ | 354 | | 5 | e 3 17 | õ | 22.5 | 735S |
| Nara | | $7 \cdot 3$ | 334 | i 1 54 | + 4 | i 3 21 | 1 4 | _ | 200 |
| Nagoya | E. | $7 \cdot 4$ | 342 | e 1 55 | + 4 | | 4 1 | | |
| Kohu | | $7 \cdot 5$ | 353 | e 1 54 | + 2 | $\begin{array}{c} 3 & 19 \\ e & 3 & 22 \end{array}$ | $\begin{array}{ccc} + & 1 \\ + & 2 \end{array}$ | - | |
| Tokyo | | 7.5 | 0 | e 1 53 | + 1 | e 3 20 | 0 | | |
| Gihu | | 7.6 | 341 | e 1 55 | + 2 | 3 25 | + 3 | | |
| Hikone | | $7 \cdot 7$ | 338 | 1 56 | $+$ $\bar{2}$ | 3 27 | + 3 | - | <u> </u> |
| Ibukisan | E. | $7.7 \\ 7.7$ | 339 | e 1 52 | - 2 | | | | |
| Kyoto | | $7 \cdot 7$ | 334 | e 1 55 | + 1 | e 3 23 | - 1 | | |
| Takamatu | | 7.8 | 323 | e 1 57 | + 2 | i 3 32 | + 6 | - | 5=3 |
| Kakioka | | 8.0 | 2 | 1 57 | Ö | 3 28 | <u> </u> | _ | |
| Kumagaya | | 8.0 | 358 | e 1 57 | 0 | 3 27 | $-\bar{3}$ | | |
| Tukubasan | | 8.0 | 2 | i 1 57 | 0 | \$ <u>333</u> 6754 | - | and the same of th | |
| Maebasi | | 8.2 | 356 | e 2 0 | + 1 | e 3 33 | - 1 | i 3 42 | 3 |
| Matumoto | E. | 8.2 | 350 | e 2 2 | + 3 | i 3 35 | + 1 | _ | _ |
| Matuyama | E. | 8.2 | 315 | e 2 1 | + 2 | e 3 39 | $^{+}_{+}$ $^{1}_{5}$ | | |
| Mito | Z. | 8.2 | 4 | e 2 1 | $+$ $\bar{2}$ | e 3 28 | - 6 | _ | - |
| Oiwake | 116723 | 8·2 8·2 8·3 | 353 | e 2 0 | + 1 | - | | | |
| Utunomiya | | 8 3 | 1 | e 2 0 | 0 | e 3 33 | - 3 | _ | - |

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| | | Δ | Az. | | Ρ. | O -C. | . s. | o –c. | | upp. |
|--|----------------|--|---|--------------------------------------|----------------------------------|--|--|--|---|----------------------|
| Matusiro Nagano Kagosima Onahama Shirakawa | N | 8·4 8·6 8·7 8·8 | 352 352 295 6 | e 2 e 2 | 0 a 4 5 | 8. - 1 0 0 - 5 | e 3 53 e 3 53 e 3 53 3 46 | $ \begin{array}{r} 8. \\ - 2 \\ + 10 \\ + 7 \\ - 2 \end{array} $ | m. s. | |
| Kumamoto Hukuoka Hukusima Saga Yamagata | N. | 9.6 | $303 \\ 306 \\ 304 \\ 3$ | e 2 | 14 | + 4 | e 4 9 e 4 1 i 4 7 e 4 8 | $^{+}_{+}$ $^{8}_{0}$ $^{+}_{-}$ $^{6}_{1}$ | | |
| Sendai Isinomaki Mizusawa Akita Miyako | | $10.1 \\ 10.3 \\ 11.0 \\ 11.5 \\ 11.6$ | 5 7 6 1 9 | 2 | | $-\frac{1}{5}$ | e 4 10 4 15 4 30 4 43 e 4 46 | - 1 + 1 + 5 + 6 | | |
| Morioka Hatinohe Aomori Mori Sapporo | E. | 11.6 12.4 12.6 13.9 14.9 | 6 4 2 5 | - | 47 1 | - 1 + 1 + 1 | e 4 42 e 4 59 e 4 59 e 5 28 e 5 49 | $^{+}$ $^{+}$ 3 $^{+}$ $^{+}$ 3 $^{+}$ 5 | | |
| Obihiro Zô-Sè Nanking Changchun Baguio | E. | 15.0 16.4 18.5 19.5 21.2 | $ \begin{array}{r} 10 \\ 285 \\ 287 \\ 327 \\ 241 \end{array} $ | e 3 e 3 e 3 i 4 | 45 56 | $+ \frac{3}{1}$ $- \frac{1}{0}$ | 6 16 6 53 i 7 13 i 7 39 | + 5 + 5 + 7 + 5 | | |
| Manila Peking Hong Kong Shillong Lembang | Z. Z. | $22.1 \\ 22.8 \\ 23.9 \\ 42.6 \\ 46.6$ | 236 307 262 278 227 | e 4 e 4 i 7 i 7 | 200 200 | $^{+}_{0}^{0}_{0}$ $^{-}_{2}^{0}$ | e 8 11 | + 11 | | |
| College Resolute Horseshoe Bay Victoria Kiruna | | $57 \cdot 4$ $71 \cdot 5$ $73 \cdot 4$ $73 \cdot 6$ $74 \cdot 3$ | $^{29}_{13}_{43}_{44}_{340}$ | i 9 e 10 i 10 i 10 i 10 | 31 a 43 a 45 a | $-\begin{array}{c} - & 2 \\ - & 2 \\ - & 1 \\ - & 1 \end{array}$ | | | e 12 14 e 12 18 | = |
| Corvallis Helsinki Shasta Ukiah Mineral | z. z. | $75.4 \\ 77.2 \\ 77.7 \\ 77.8 \\ 78.4$ | $\begin{array}{r} 47 \\ 332 \\ 50 \\ 52 \\ 50 \end{array}$ | e 10 i 11 e 11 e 11 i 11 | 55 4 8 8 11 | - 1 0 0 0 | | | e 12 56 e 12 57 e 12 59 | pP pP pP |
| Berkeley Hungry Horse Skalstugan Lick Reno | z. z. z. | $79.0 \\ 79.3 \\ 79.6 \\ 79.7 \\ 80.0$ | 53 41 339 53 51 | i 11 i 11 i 11 i 11 e 11 | 15 17 16 18 19 | $\begin{array}{c} + & 0 \\ + & 1 \\ - & 2 \\ - & 0 \\ - & 1 \end{array}$ | e 14 13 | P <u>P</u> | e 13 2 i 13 4 e 13 12 | pP pP pP |
| Upsala Scoresby Sund Fresno Butte Tinemaha | z. z. N. | $80.3 \\ 80.8 \\ 81.3 \\ 81.4 \\ 82.2$ | $334 \\ 354 \\ 53 \\ 42 \\ 52$ | i 11 e 11 i 11 i 11 | 19 21 36 26 31 a | $ \begin{array}{r} $ | | | e 13 17 e 13 7 = = 13 21 | pP pP = |
| Bozeman Woody Eureka Isabella China Lake | | $82.4 \\ 82.5 \\ 82.6 \\ 82.8 \\ 83.3$ | 42 54 49 54 53 | i 11 i 11 i 11 i 11 i 11 | 31 32 a 34 33 a 37 a | $ \begin{array}{cccc} $ | i 14 48 — e 14 56 | PP PP | e 13 21 i 13 22 i 13 22 i 13 23 e 13 27 | pP pP pP |
| Pasadena Riverside Salt Lake City Palomar Boulder City | | $83.7 \\ 84.4 \\ 84.6 \\ 85.1 \\ 85.2$ | 55 54 46 55 52 | i 11 i 11 i 11 i 11 | 38 a 41 a 42 45 a 46 | - 1 - 1 - 0 0 | | = | e 13 27 e 13 31 e 13 33 e 13 33 e 13 31 | pP pP pP pP |
| Barratt Rapid City Boulder Tucson Fayetteville | E. | $85.5 \\ 87.9 \\ 89.1 \\ 90.0 \\ 98.4$ | 55 40 44 53 41 | i 11 i 11 e 12 e 12 e 14 | 48 a 59 5 9 39 | $\begin{array}{c} + & 1 \\ 0 \\ + & 1 \\ 0 \\ \mathbf{PP} \end{array}$ | | | e 13 40 = | р <u>Р</u> = |
| Tamanrasset Huancayo La Paz | z. z. N. | $112.8 \\ 143.5 \\ 151.8$ | $^{314}_{\ 72}$ | e 18 i 18 e 20 | 33 39 a 23 | [-PP ? | | _ | e 21 33 | sPKP |

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May 2d. 12h. 58m. Epicentre 41°·8N. 48°·5E.
Bull, of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 16.

May 2d. 23h. 51m. Epicentre 39°·0N. 101°·5E. Seismo, Bull. of China, Academia Sinica, Peking, for 1956, pp. 12, 13.

May 3d. 17h. 25m. Epicentre 42°·6N. 78°·7E. Magnitude 4. Loc. cit., 2d. 12h., p. 44.

May 4d. 0h. 16m. Epicentre 49°N. 103°E. Loc. cit., 2d. 12h., p. 74.

May 4d. 5h. 49m. Epicentre 37°·0N. 56°·4E. Loc. cit. 2d. 12h., pp. 69, 70.

May 4d. 8h. 35m. Epicentre 24°.2N. 87°.0E. Seismo. Bull. Government of India Meteorological Department for May, 1956, p. 3.

May 4d. 13h. 43m. Epicentre 16°47'N. 99°53'W.
13h. 50m. Epicentre 16°47'N. 99°53'W.
Seismo. Bull. National University of Mexico, Tacubaya, for May, 1956, p. 1.

May 4d. 18h. 45m. Epicentre 14°-5N. 123°-0E. Loc. cit., 2d. 23h., p. 13.

May 5d. 3h. 22m. 36s. Epicentre 15°.7S. 173°.1W. Depth of focus 0.015.

A = -.9562, B = -.1157, C = -.2689; $\delta = +1$; $\hbar = +6$; D = -.120, E = +.993; G = +.267, H = +.032, K = -.963.

| | | Δ | Az. | 224 20 TO 30 20 20 | O-C. | s. | O-C. | | pp. | L. |
|------------------|-------|--------------|-----|---|------------------|---------------|------------------|-----------------------|------------------------------------|---------------|
| A makes | | 0.0 | 0 | m. s. | 8. | m. s. | s. | m. s. | C. P. C. HOR | $\mathbf{m}.$ |
| Apia | | 2.3 | 34 | () () () () () () () () () () | -16 | e 0 43 | P | \$ 5 - 2 - | _ | - |
| Nouméa | 441 | 20.4 | 248 | i 4 31 a | + 2 | e 8 7 | + 2 | i 4 45 | \mathbf{pP} | e 9·4 |
| Onerahi | Е. | 22.9 | 207 | e 4 55 | + 2 | | | | mesae | |
| Karapiro | N. | 24.3 | 202 | e 5 8 | + 1 | - | 211272 | | | _ |
| Tuai | N. | $24 \cdot 6$ | 199 | e 5 9 | - 1 | e 9 34 | +16 | | === | **** |
| Wellington | | 27.6 | 200 | 5 36 | - 1 | i 10 33 | +25 | | Acres : | |
| Cobb River | E. | $28 \cdot 1$ | 203 | e 5 42 | 0 | | - | | | |
| Kaimata | N.E. | $29 \cdot 9$ | 203 | c 6 0 | + 2 | | · · | | | |
| Brisbane | | 33-5 | 244 | i 6 26 | - 3 | | | | | |
| Riverview | | 36.9 | 234 | i 6 52a | - 6 | · — | _ | 01 -1/4 | _ | e 18.0 |
| Melbourne | E. | 43.0 | 231 | | Name of the last | e 14 47 | SS | 1/2 <u>—1</u> 2 | | e 20·4 |
| Macquarie Is. | z. | 44.4 | 203 | e 7 58 | - 1 | 0 17 11 | 0.0 | i 8 17 | nD | 6 20.4 |
| Matusiro | 2000 | 69.4 | 320 | 10 55a | $-\hat{1}$ | e 19 57 | + 6 | e 28 6 | $_{\mathbf{Q}}^{\mathbf{pP}}$ | e 32·0 |
| | | 71.5 | 40 | e 11 8 | - î | e 21 29 | PPS | 0 20 0 | V | 6 32 0 |
| Berkeley Lick | z. | 71.6 | 41 | i 11 9 | Ô | | - | | | = |
| Pasadena | | 72.0 | 46 | i 11 11k | - 1 | e 20 34 | 1.19 | : 11 10 | 9 | - 20 1 |
| Barratt | | 72.3 | 48 | i 11 12k | - i | C 20 34 | +13 | i 11 19 | -T | e 32·1 |
| Fresno | Z. | 72.4 | 42 | i 11 14 | - n | | | e 11 35 | \mathbf{pP} | - |
| Woody | *** | 72.4 | 44 | i 11 14k | ŏ | | | i 11 34 | nD. | 7 <u>7</u> |
| Palomar | | 72.5 | 47 | i 11 14k | ŏ | i 12 17 | $_{\mathrm{sP}}$ | i 11 35 | pP | - |
| | | | | * ** *** | U | 112 11 | SI | 1 11 33 | pP | 7- |
| Riverside | | 72.5 | 46 | i 11 14k | 0 | _ | | i 11 35 | pP | |
| Isabella | | 72.6 | 44 | i 11 15k | 0 | | 1 | i 11 35 | $\hat{\mathbf{p}}\hat{\mathbf{P}}$ | |
| Shasta | Z. | $73 \cdot 2$ | 38 | e 11 18 | - 1 | - | - | | _ | March 1 |
| China Lake | 10000 | 73.3 | 44 | i 11 18k | - 1 | | _ | | - | |
| Mineral | z. | 73.4 | 39 | e 11 19 | - 1 | | **** | _ | | |
| Tinemaha | | 73.6 | 43 | i 11 21k | 0 | - | | i 11 40 | \mathbf{pP} | |
| Reno | z. | 74.0 | 40 | e 11 23 | ŏ | | 75年3月 | 1 11 10 | D.E. | |
| Corvallis | z. | 75.2 | 34 | e 11 30 | ŏ | - | | | | 0-2-2-2-2 |
| Tucson | 755 | 76.3 | 50 | i 11 36 | ŏ | e 12 16 | sP | e 11 58 | pP | e 32·6 |
| Eureka | | 76.4 | 42 | i 11 37 | ŏ | | | | PL | 0.20 |

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| | | Δ | Az. | | ٠ | o –c. | S. | o –c. | | ıpp. | L. |
|--|----------------|--|--|--------------------------------------|--------------------------------|---|--|-----------------------------------|---|--------------------------------------|--------------|
| Seattle Lembang Salt Lake City Hong Kong Hungry Horse | Z. Z. | 77.7 77.9 79.8 80.6 82.5 | $^{32}_{266}_{43}_{296}_{35}$ | i 11 e 11 i 11 e 12 i 12 | 8. 45 a 50 55 4? | + 1 + 5 + 0 + 4 - 1 | e 22 24 2 | + 29 | e 15 33 | PP | m. = = |
| College Bozeman Boulder Rapid City Fayetteville | E. | $82.6 \\ 82.8 \\ 83.8 \\ 87.0 \\ 90.4$ | $\begin{array}{c} 11 \\ 39 \\ 46 \\ 43 \\ 53 \end{array}$ | i 12 i 12 i 12 i 12 i 12 | 8 12 17 31 48 k | - 2 + 1 + 1 - 1 | i 22 22 | + 7 = = | i 12 25 e 15 53 e 13 1 | PP PP | e 36·2 |
| Resolute Bay Kiruna Kimberley Rathfarnham C. Witteveen | z. z. z. | $\begin{array}{c} 101.9 \\ 127.2 \\ 132.6 \\ 141.1 \\ 143.0 \end{array}$ | $\begin{array}{r} 15 \\ 354 \\ 202 \\ 13 \\ 0 \end{array}$ | | 8 59 12 | $[+ 19] \\ [- 1] \\ [- 3] \\ [0]$ | e 24_16 | [+ <u>10]</u> | e 32 42 | ss | e 45·0 |
| Jena Prague Cheb Bratislava Karlsruhe | z. | 144.6 145.2 145.4 146.5 146.8 | $\begin{array}{r} 355 \\ 352 \\ 354 \\ 348 \\ 358 \end{array}$ | e 19 e 19 e 19 i 19 e 19 | 22 25 29 27 29 k | [+1] $[+3]$ $[+6]$ $[+2]$ $[+4]$ | e 21 41 e 22 3 i 23 9 i 19 53 | PP PP PKS sPKP | i 19 42 i 19 46 i 19 44 | pPKP pPKP pPKP pPKP pPKP | |
| Paris Stuttgart Strasbourg Basle Besançon | z. | $146.8 \\ 147.0 \\ 147.2 \\ 148.2 \\ 148.5$ | $\begin{array}{r} 5 \\ 357 \\ 359 \\ 359 \\ 1 \end{array}$ | e 19 e 19 e 19 e 19 | 28 31 46 | [+ 4] $[+ 2]$ $[+ 5]$ $[+ 19]$ $[+ 6]$ | i 19 54 e 19 43 i 19 55 | sPKP sPKP sPKP | e 19 46 | pPKP pPKP pPKP | e 77·4 |
| Sofia Jerusalem Clermont-Ferran Florence Lwiro | d z. | 149.6 149.7 149.8 151.8 152.0 | $336 \\ 307 \\ 5 \\ 353 \\ 232$ | i 20 i 19 e 19 e 19 i 19 | 40 38 a 39 41 45 a | [+ 8] [+ 8] [+ 8] [+ 12] | | | i 22 19 i 19 54 i 20 0 e 21 27 | PP pPKP pPKP | |
| Monaco Algiers Univ. Tamanrasset | z. z. z. | $152.0 \\ 158.7 \\ 172.8$ | $^{359}_{\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $ | e 19 e 19 e 19 | 41 | $[+ 3] \\ [- 1] \\ [+ 5]$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\frac{\mathbf{PP}}{\mathbf{PP}}$ | e 19 51 e 20 24 | pPKP pPKP | = |

May 5d. 7h. 53m. Epicentre 35°.9N. 59°.8E. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 70.

May 5d. 12h. 39m. 16s. Epicentre 28°.5S. 70°.0W. Depth of focus 0.010.

A = +.3010, B = -.8271, C = -.4747; $\delta = +4$; h = +2; D = -.940, E = -.342; G = -.162, H = +.446, K = -.880.

| | | Δ | Az. | P. | O-C. | s. | 0-C. | Su | pp. | L. |
|--------------|-------|-------------|-----|----------|-----------------------|--------------|------|----------------------|---------------|---------|
| | | 0 | 0 | m. s. | S. | m. s. | s. | m. s. | | m. |
| Copiapo | E. | $1 \cdot 2$ | 342 | i 0 21 | - 2 | | 7 | (40) | _ | |
| Antofagasta | 27900 | 4.8 | 355 | e 1 8 | - 3 | e 1 59 | - 7 | i 1 40 | 3 | - |
| Santiago | | 5.0 | 187 | e 1 13 | - 1 | | - 6 | 5555 Telephone | ***** | armed . |
| Santa Lucia | | 5.0 | 187 | i 1 13 | - ī | i 2 5 2 5 | - 6 | i 1 24 | PP | |
| Concepción | | 8.5 | 192 | e 2 18 | $+1\tilde{6}$ | | _ | e 2 43 | 3 | e 4·3 |
| Buenos Aires | | 11.5 | 125 | 2 42 | 0 | 4 59 | +10 | | | |
| La Paz | | 12.0 | 8 | i 2 54 a | + 5 | i 5 4 | + 3 | 13 8 | PP | 6.0 |
| La Plata | | 12.1 | 125 | 2 50 | Ö | 4 56 | - 8 | - 19 <u>-20</u> - 21 | | 5.4 |
| Huancayo | | 17.1 | 342 | e 3 57 | + 3 | e 7 11 | +11 | i 4 16 | pP | e 9·9 |
| St. Lucia | | 43.1 | 13 | e 7 51 | $^{+}_{-}$ $^{3}_{1}$ | 200 (N) N/N | | i 8 10 | pP | |
| San Juan | | 46.7 | 5 | e 8 18 | - 3 | | - | e 8 41 | \mathbf{pP} | |
| M'Bour | | 66.6 | 57 | i 11 10 | pP | _ | | e 11 18 | 3 | _ |
| Fayetteville | | 68.2 | 339 | i 10 50k | - 2 | | - | e 11 14 | pP | |
| Palisades | | 69.2 | 357 | i 10 57 | - 1 | i 19 56 | + 1 | i 20 45 | ScS | e 33·2 |
| Tueson | | 71.8 | 324 | i 11 14 | Ō | e 11 53 | sP | e 11 38 | pP | |

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| | | ٥. | Az. | m | P. . s. | O – C. s. | s. m. s. | O –C. | m. s. | ipp. | L. m. |
|--|----------------------|---|---|--------------------------------------|--------------------------------|---|-------------------------------|--|---|----------------------------------|----------|
| Halifax Ottawa Shawinigan Fal Seven Falls Barratt | ls | 73·0 73·7 74·7 75·2 75·3 | $\begin{array}{r} 5 \\ 356 \\ 358 \\ 359 \\ 321 \end{array}$ | e 11 i 11 i 11 i 11 i 11 | 24 k 31 k 34 k | P - 1 0 0 | i 12 20 | = sP | $\begin{array}{c} - & - \\ c & 11 & 48 \\ i & 11 & 57 \\ e & 11 & 59 \end{array}$ | $rac{\mathbf{pP}}{\mathbf{pP}}$ | |
| Boulder Palomar Riverside Boulder City Kirkland Lake | z. | 75·7 75·9 76·6 76·8 | $333 \\ 321 \\ 321 \\ 324 \\ 353$ | i 11 i 11 i 11 i 11 i 11 | 37 37 k | + 1 - 1 0 - 1 | i 12 17 | sP | i 11 50 i 12 5 e 12 41 e 12 7 | pP pP sP pP | |
| Pasadena China Lake Rapid City Isabella Woody | E. | $77.2 \\ 78.1 \\ 78.4 \\ 78.5 \\ 78.7$ | $\begin{array}{r} 321 \\ 322 \\ 336 \\ 322 \\ 321 \end{array}$ | i 11 e 11 i 11 i 11 i 11 | 45k 49k 51 53k 53k | $-{1\atop -}{1\atop 1\atop 1\atop 0}$ | i 21 29 | + 4 | i 12 9 e 12 6 e 12 33 i 12 20 i 12 20 | pP pP sP pP | |
| Salt Lake City Tinemaha Eureka Fresno Kimberley | 7 Z. | 79·1 79·4 80·0 80·0 80·6 | $329 \\ 323 \\ 326 \\ 322 \\ 118$ | i 11 i 11 i 12 i 11 i 12 | 55 58k 1 59 | $^{+}_{+}^{0}_{1}_{1}\\ ^{-}_{0}$ | e 42 5 | SKP,P' | i 12 23 c 38 49 | P'P' | |
| Lick Reno Berkeley Bozeman Butte | Z. Z. | 81·5 82·1 82·2 82·7 83·6 | $\begin{array}{r} 321 \\ 323 \\ 321 \\ 332 \\ 332 \\ \end{array}$ | i 12 i 12 i 12 i 12 i 12 | 8 12 12 15 18 | $\begin{array}{cccc} + & 0 \\ + & 1 \\ 0 \\ + & 1 \\ - & 1 \end{array}$ | e 22 20 i 22 30 | + 3 - 1 | i 12 45 | pP | e 34·1 |
| Mineral Ukiah Shasta Pretoria Hungry Horse | z. z. z. | $83.6 \\ 83.6 \\ 84.3 \\ 84.7 \\ 86.1$ | $\begin{array}{c} 323 \\ 321 \\ 323 \\ 116 \\ 332 \end{array}$ | | 24 | - 1 0 0 0 | = e 22 46 | | i 12 58 | | = |
| Corvallis Tamanrasset Messina Resolute Bay Rabaul | z. E. | $87.5 \\ 88.8 \\ 103.8 \\ 104.2 \\ 128.1$ | | i 12 i 12 e 22 e 18 | 45 k 29 | $+\frac{0}{1}$ [0] | e 23 11 e 24 19 e 24 22 | $\begin{bmatrix} -\frac{10}{10} \\ -\frac{3}{2} \\ -\frac{2}{1} \end{bmatrix}$ | e 13 11 e 27 6 | PPS | e 54·1 |
| Quetta Lembang Poona Madras Shillong | Z. Z. E. Z. | $142.6 \\ 144.8 \\ 145.5 \\ 148.2 \\ 163.5$ | $\frac{176}{99} \\ 113$ | i 19 c 19 | 19 29 k 29 41 54 | [-3] [+3] [+2] [+10] [+3] | | | e 22 33 e 22 56 — | PP PP — | |

May 5d. 19h. 36m. Epicentre 39°·3N. 21°·5E.
Magnitude 4·75. Poorly recorded to 21°.
Seismo. Institute Bull. National Observatory of Athens, 1956, Athens, 1957, p. 34.

May 5d. 20h. 42m. Epicentre 37° 0N. 28° 25E. Magnitude 5. Recorded up to 24°. Loc. cit., 19h., p. 34.

May 5d. 21h. 37m. Epicentre 42°-6N. 78°-8E. Bull. of the Seismo. Stations of the U.S.S.R. for 1956, April-June, Moscow, 1957, p. 45.

May 5d. 22h. 29m. Epicentre 37°·0N. 28°·25E. Magnitude 5. Poorly recorded to 24°. Loc. cit., 19h., p. 34.

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Strasbourg

76.9

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May 6d. 20h. 57m. 18s. Epicentre 54°-5N. 162°-4W.

A = -.5560, B = -.1764, C = +.8123; $\delta = +8$; $\hbar = -7$; D = -.302, E = +.953; G = -.774, H = -.246, K = -.583. P. O-C. S. O-C. m. s. s. m. i 5.7 Horseshoe Bay Victoria 24.788 e 5 27k 10 +16Seattle 25.8 89 0 5 46 +12(e 10 e 10·1 Corvallis 26.995 6 e 5 51 z., +-Shasta 29.8 e 6 14 101 %. 3 + Hungry Horse 30.3 82 e 6 15 e 9 13 PcPe 7 45 PPP Ukiah 30.4104 e 6 19 + Mineral 30.5 101 e 6 17 Z. Berkeley 31.8 105 c 6 29 e 11 39 + Butte 32.3 84 e 6 46 +13N. e 11 54 + 8 32 i 9 PcPe 13.8 Lick 32.6 105 Z. e 6 35 Resolute 32.627 i 6 35a c 11 42 i 13 SS e 15·1 Fresno 34.0 Z. 104 e 6 47 Eureka 34.4 i 6 51 97 e 12 21 2 i 9 PcPTinemaha 34.7102 e 6 49 e 12 30 6 Woody 35.3 104 i 6 58k e 12 34 i 8 18 PP China Lake 35.9103 e 13 12 +30Salt Lake City 35.991 19 +15 Pasadena 36.8 105 e - 3 e 12 49 i 13 18 ScP-Boulder City $37 \cdot 4$ 100 17 + e 13 Riverside 37.4 105 16 e 13 Palomar 38.2 105 22k1964 Barratt 38.8 105 28 Rapid City 38.980 e 7 32 3 + Boulder 87 40.2e 7 35 5 Tucson 42.4 100 e 7 58 e 19.8 Matusiro 43.9 271 i 8 e 17.9 Chihuahua 47.8 99 e 16 28 +50Kirkland Lake 49.0e 8 53 62z. 3 + Scoresby Sund 52.1 16 i 9 14 i 16 44 6 24.7Ottawa 53-1 62 e 9 21 16 55 4 Shawinigan Falls 53.8 59 e 9 25 a Peking 54.0290 e 9 29 + Brébeuf 54.1 60 e 9 27 $\mathbf{2}$ -Seven Falls $54 \cdot 4$ 57 e 9 29 Palisades 57.1 64 e 9 51 + i 17 43 i 18 10 PS 28.6 Zô-Sè 57.7 279 9 53a -Reykjavik 57.8 Z. 19 _ e 9 53 Kiruna 57.9359 i 9 55 i 10 49 $P_{c}P$ Columbia 58.3 75 e 9 58 e 17 57 e 20 ScS e 28·0 Nanking 58.3 282 57 a 9 Halifax 59.7 55 e 10 4 e 29·7 Sian $62 \cdot 2$ 291 e 10 + Skalstugan 62.2 3 i 10 Upsala 66.0i 10 49a Baguio 69.3269 14 + 3 Copenhagen 70.1 i 11 15 a 33.7Manila 268 70.5 e 11 18 Rathfarnham Castle 70.715 e 11 2 + 2 12 33 Hamburg $72 \cdot 1$ Z. 0 Witteveen 72.6 3 Kew 73.3 ++ 12 e 11 e 36·7 Uccle 74.5 2 44 Jena 74.8 11 Prague 75.7 e 14 PPParis 76.210 i 11 52 e 21 12 i 12 PcPe 42.7 Karlsruhe 76.6 Z., 53 Stuttgart 76.8 54

Continued on next page.

e 27 12

SS

e 12 12

PcP

56 a

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| 1956 | 216 |
|------|-----|
|------|-----|

| | | Δ | Az, | 1 | | o-c. | s. | 0 -C. | Suj | pp. | L. |
|------------------|--------|-------|-----|------|--|--------|---------|--|--------------------|----------------------------------|--------------|
| | | | 0 | m. | s. | s. | m. s. | S. | m. s. | 4-016 | m. |
| Basle | | 78.0 | 7 | e 12 | 2 | 0 | _ | | | _ | |
| Besançon | | 78.1 | 8 | e 12 | 2 | 0 | - | | e 12 58 | ? | _ |
| Shillong | z. | 78.1 | 297 | i 12 | 0 | - 2 | - | - | - | _ | - |
| Iasi | SOUR S | 78.3 | 353 | 12 | 5 | + 2 | - | | | 100 | |
| Neuchatel | | 78.4 | 7 | e 12 | 4 | 0 | - | | - | | |
| San Juan | | 78.8 | 74 | e 12 | 5 | - 1 | 1, | - transition | i 12 21 | $P_{\mathbf{c}}P$ | _ |
| Chatra | Z. | 79.5 | 302 | e 12 | 9 | - 1 | | | | - | |
| Triest | 1777 | 80.1 | 3 | e 12 | 30? | +17 | 24 34? | ? | e 15 52? | PP | _ |
| Belgrade | | 81.0 | 358 | 12 | 16 | - 2 | e 22 47 | +20 | e 15 31 | PP | |
| Bucharest | | 81.2 | 354 | 12 | 23 | + 4 | - | 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 22-11-11 (P.C.) | - | 43.7 |
| Monaco | z. | 81.7 | 7 | e 12 | 22 | 0 | | _ | e 13 39 | ? | 0.00 |
| Florence | | 81.9 | 5 | i 12 | 24 a | + 1 | e 22 49 | +13 | e 12 34 | pP | _ |
| Sofia | | 83.0 | 356 | i 12 | 28 | 0 | | | | | |
| Rome | | 83.8 | 4 | i 12 | 33 a | + 1 | e 22 49 | - 6 | e 30 9 | 3 | e 34.6 |
| Quetta | | 85.6 | 319 | | 40 | - 1 | i 23 15 | $^{-}_{+} {}^{6}_{2}$ | e 23 9 | $\mathbf{s}\mathbf{k}\mathbf{s}$ | |
| Messina | | 87.6 | 2 | e 12 | 50 | - 1 | e 23 30 | - 2 | e 13 40 | 3 | e 39·7 |
| Ksara | | 90.6 | 345 | e 13 | Control of the Contro | + 5 | | | | - | 2500 SEC. 15 |
| Tamanrasset | z. | 102.3 | 11 | 13 | 55 | - 4 | e 24 21 | [-17] | e 17 59 | \mathbf{PP} | |
| Tananarive | 5020 | 137.7 | 315 | e 19 | 29 | [+ 3] | e 23 2 | | e 22 6 | \mathbf{PP} | _ |
| Pretoria | z. | 150.2 | 341 | i 19 | Harris March Control | [+6] | | | | | |
| Pietermartizburg | | 153.4 | 334 | i 22 | 0 | 3 | _ | _ | 3 3 3 3 | - | - |
| Kimberley | | 153.7 | 346 | | 56 a | [+ 3] | _ | _ | - | _ | - |

May 7d. 3h. 54m. Epicentre 45°·7N. 26°·7E. Depth of focus 150km.
Bull. of the Seismo. stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 62.

May 7d. 8h. 17m. 5s. Epicentre 14°-3N. 90°-6W. Depth of focus 0.025.

A = -.0102, B = -.9694, C = +.2454; $\delta = +6$; h = +6; D = -1.000, E = +.010; G = -.003, H = -.245, K = -.969.

| | | Δ | Az. | P. m. s. | 0 - C. s. | m. s. | $o_{s.}^{-c.}$ | m. s. | pp. | $_{ m m.}^{ m L.}$ |
|--|----|---|--|--|--|--|---|--|-----------------------|---------------------|
| San Salvador Comitan Oaxaca Puebla Tacubaya | | 1·4 2·5 6·6 8·7 9·7 | 322 295 304 303 | m. s. e 0 15 i 0 44a e 1 37 e 2 59 i 2 14 | -17 | i 1 13 e 2 54 e 4 13 i 4 2 | $-5 \\ +4 \\ +33 \\ -1$ | | | |
| Guadalajara Mobile Chinchina Bogota Columbia | | 13·7 16·5 17·4 18·9 21·4 | $\begin{array}{r} 299 \\ 7 \\ 121 \\ 119 \\ 22 \end{array}$ | 3 5 i 3 45? i 3 59 i 4 5 i 4 36 | - 2 + 3 + 7 - 3 + 3 | i 7 0 i 7 15 i 7 34 e 8 33 | $ \begin{array}{r} $ | $\begin{array}{r} -\\ i & 12 & 27 \\ i & 7 & 52 \\ i & 5 & 12 \end{array}$ | $_{\mathrm{pP}}^{}$ | e 6·9 — e 9·3 |
| Fayetteville San Juan Chapel Hill Terre Haute Tucson | | $22.0 \\ 23.8 \\ 23.9 \\ 25.2 \\ 25.7$ | $352 \\ 77 \\ 24 \\ 6 \\ 318$ | i 4 39k e 4 54 i 4 58 e 5 25 i 5 14 | $^{-\ 0}_{+\ 15}^{0}$ | e 8 41 = i 12 15 | $+\frac{16}{-}$ PcS | e 7 20 i 8 42 | PP PcP | e 14·0 |
| Pennsylvania Boulder Barratt Huancayo Palisades | z. | $28.6 \\ 28.7 \\ 30.0 \\ 30.2 \\ 30.3$ | $\begin{array}{r} 20 \\ 336 \\ 312 \\ 149 \\ 25 \end{array}$ | i 6 28 e 5 41 e 5 54 e 5 52 i 5 55 | pP 0 + 1 - 3 | e 10 35 i 8 52 i 10 55 | $+\frac{22}{PcP} + \frac{15}{15}$ | e 6 34 e 12 25 | $\frac{-}{ss}$ | e 13·5 |
| Palomar Riverside Rapid City Pasadena Salt Lake City | E. | $30.5 \\ 31.2 \\ 31.6 \\ 31.8 \\ 32.3$ | $313 \\ 314 \\ 342 \\ 313 \\ 329$ | i 5 57k e 6 4 e 6 7 i 6 10k i 6 13 | + 1 | i 8 52 i 8 55 e 11 4 i 8 58 | $\frac{\mathbf{P_{c}P}}{\mathbf{P_{c}P}}$ | i 6 41 e 6 43 e 7 2 i 6 53 e 7 19 | pP pP pP PP | i 12·6 |
| China Lake Isabella Woody Ottawa Tinemaha | | $\begin{array}{r} 32 \cdot 4 \\ 32 \cdot 9 \\ 33 \cdot 2 \\ 33 \cdot 5 \\ 33 \cdot 5 \end{array}$ | $316 \\ 315 \\ 315 \\ 19 \\ 318$ | i 6 14 i 6 18 i 6 20 i 6 23 a i 6 25 | $\begin{array}{c} 0 \\ 0 \\ 1 \\ 0 \\ + \end{array}$ | i 8 58 e 12 37 i 12 38 i 11 43 i 9 3 | $\begin{array}{c} \mathbf{PcP} \\ \mathbf{ScP} \\ \mathbf{ScP} \\ + 13 \\ \mathbf{PcP} \end{array}$ | e 6 53 i 8 59 i 7 0 7 36 e 7 5 | pP PcP pP PP | |

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| | | Δ | Az. | 2000 | ·. | o –c. | s. | o –c. | | app. | L. |
|------------------------------|--------|--------------|------------------|------|------|--|-------------|-------------|--------------------|--|--------------|
| 5 044 00000 9#400 | | | 0 | m. | | s. | m. s. | 8. | m. s. | The state of the s | m. |
| Eureka | | 33.6 | 323 | i 6 | 25 | + 1 | e 12 40 | ScP | i 9 1 | PcP | - Orbital |
| Brébeuf | 0200 | 34 2 | 21 | i 6 | | 0 | - | - | i 7 50 | sP | - |
| Fresno | z. | 34.4 | 316 | 16 | 21 | -10 | | _ | | 7 | 2 |
| Kirkland Lake | z. | 34.9 | 12 | i 6 | 34 a | - 1 | | - | 100 m | | _ |
| Shawinigan Falls | | 35.4 | 21 | i 6 | 40 a | + 1 | 12 8 | + 9 | 7 2 | pP | 7.00 |
| Bozeman | | 35.7 | 335 | e 6 | 43 | + 1 | | _ | _ | | _ |
| Lick | z. | 35.9 | 316 | e 6 | 45 | + 2 | | | | _ | |
| Berkeley | 277 | 36.6 | 316 | e 6 | 51 | $+$ $\tilde{2}$ | e 12 32 | +15 | - | - | - |
| Seven Falls | | 36.6 | 23 | e 6 | 50 | + ī | | 1 10 | - | | _ |
| Butte | N. | 36.7 | $3\overline{34}$ | e 6 | 58 | $+\hat{8}$ | i 9 11 | PcP | i 8 22 | \mathbf{PP} | _ |
| Mineral | ** | 37.5 | 320 | е 6 | 58 | . 1 | 22-20 | - | 400 | - | ::- <u></u> |
| La Paz | Z. | 37.8 | 143 | 7 | 17 | T 18 | 15 13 | SS | 8 31 | PP | - |
| Ukiah | N. | 37.9 | 317 | е 7 | 400 | T 10 | 10 10 | 20 | FOR 11 POST 1 SUCC | P_{cP} | |
| Shasta | z. | 38.2 | 320 | i 7 | 3 | ö | | _ | e 9 15 | 1 CI | |
| Hungry Horse | Zi. | 39.1 | 335 | e 7 | 11 | 100 | i 9 17 | P_{cP} | e 7 37 | pP | |
| riungry morse | | 35 1 | 000 | 6 1 | * 1 | + 1 | 1 3 11 | rer | 61 31 | pr | - |
| Corvallis | z. | 41.0 | 324 | e 7 | 26 | 0 | | - | - | | _ |
| Resolute | 10.000 | 60.4 | 359 | i 9 | 50 a | - 1 | e 17 59 | +10 | e 23 48 | Q | e 25·1 |
| College | | 63.5 | 336 | i 10 | 11 | - 1 | | - | i 10 46 | pP | _ |
| Honolulu | | $64 \cdot 3$ | 287 | e 10 | 38 | +21 | - | - | | | - |
| Scoresby Sund | | 69.5 | 20 | e 10 | 48 | -2 | - | | e 13 18 | \mathbf{PP} | $34 \cdot 9$ |
| Skalstugan | | 82.9 | 26 | e 12 | 5 | + 1 | | | | | _ |
| Kiruna | | 84.5 | 21 | i 12 | 16 | $^{+}_{+}\ ^{1}_{3}$ | 922 | | 200 | | |
| Stuttgart | | 85.7 | 41 | e 12 | 17 | - ĭ | - | Trainer 1 | | - months | - |
| Jena | | 86.5 | 38 | e 12 | 21 | - î | | | e 13 1 | \mathbf{pP} | _ |
| Upsala | | 86.6 | 29 | | 23 | ô | | | ~~~ | | |
| Tamanrasset | z. | 90.0 | 67 | e 12 | 38 | 1 | | 447.55 | e 14 45 | PP | 192042 |
| | z. | 118.8 | 115 | i 18 | 28 | [+3] | | | 6 11 10 | | |
| Lwiro | 20. | 119.0 | 85 | e 18 | 31 | [+ 5] | | | | | |
| Tananarive | | 139.7 | 102 | e 19 | 9 | A 2017 CO. 10 CO | | | e 19 32 | pPKP | - |
| | 9 | 160.7 | 201 | e 19 | | $[+ 4] \\ [- 2]$ | | | 6 19 92 | PLAI | |
| Lemoang | z. | 100 1 | 201 | 0 10 | 04 | 1 - 21 | | | | _ | |

May 7d. 10h. 58m. 19s. Epicentre 45°.5S. 95°.9E.

A = -.0723, B = +.6996, C = -.7109; $\delta = +5$; h = -4; D = +.995, E = +.103; G = +.073, H = -.707, K = -.703.

| | | Δ | Az. | m. s | O-C. | $_{ m m. \ s.}^{ m S.}$ | O - C. | m. s. | ıpp. | L. m. |
|-----------------|-------|----------------|-----|--|-----------------------|--|-----------------------|--|------------------------------|---|
| Kerguelen Is. | | 17.9 | 248 | | | | | | | |
| Perth | | 20.5 | 56 | | (n | i 8 41 | 1 14 | i 6 50 | 9 | i 7.8 |
| Melbourne | | 36.9 | 96 | The state of the s | | 100 000 | +14 | A COST of Contract Co | \mathbf{PP} | i 10·3 |
| Bandung | | 39.8 | 18 | | a + 0 | 1 The Transfer Control (1 Control | + 5 | e 8 37 | | e 17·6 |
| Lembang | | 39.8 | 18 | | | e 13 42 e 13 48 | + 6 | e 16 45 | SSS | e 18·7 |
| Djakarta | | 40.3 | 17 | e 7 4 | + 4 | e 13 58 | + 9 | e 9 22 | \mathbf{PP} | e 19·7 |
| Riverview | | 43.3 | 94 | 100 100 100 100 100 | a - 1 | i 14 36 | + 3 | i 8 10 | $\mathbf{p}\mathbf{\hat{P}}$ | e 19·1 |
| Tananarive | | 47.8 | 287 | e 8 4 | Ô | e 15 46 | $^{+}_{+}$ $^{3}_{8}$ | e 19 23 | SSS | e 22·8 |
| Brisbane | | 48.3 | 88 | 18 36 | - 9 | i 15 42 | _ š | | 200 | |
| Pietermaritzbru | ıg z. | $52 \cdot 9$ | 264 | TT 10 4 TEXT 1 1 TO TEXT 1 | a-29 | | _ | | - | 300000000000000000000000000000000000000 |
| Grahamstown | z. | 53.4 | 257 | i 9 27 | k + 3 | - | - | | | - |
| Colombo | E. | 54.1 | 340 | e 10 20 | | 17 10 | + 5 | | _ | 23.2 |
| Pretoria | Z. | 56.8 | 266 | i 9 59 | | 1000 1000 | | | | 00.4500 |
| Kimberley | Z. | 57.3 | 261 | i 9 50 | | _ | - | | | |
| Kodaikanal | E. | $57.3 \\ 57.9$ | 338 | e 9 56 | | i 18 4 | + 9 | 12 26 | \mathbf{PP} | - |
| Madras | E. | 60.0 | 342 | e 10 10 | - 1 | e 18 24 | + 1 | 10 55 | $P_{\mathbf{c}}P$ | 27.6 |
| Nouméa | | 61.0 | 93 | i 10 21 | a + 3 | e 19 14 | PPS | e 10 50 | PcP | i 30·1 |
| Rabaul | | 63.8 | 68 | e 10 31 | | e 12 23 | PP | i 11 28 | PcP | |
| Manila | | 64.0 | 27 | i 10 44 | - 5 + 6 | i 18 49? | -24 | | 2.31 | - |
| Baguio | | 65.6 | 26 | i 10 34 | -14 | e 19 41 | + 8 | | _ | |
| Poona | | 66.8 | 337 | e 10 58 | + 2 | e 19 58 | +10 | _ | _ | 27.6 |
| Bombay | | 67.5 | 336 | e 10 57 | $^{+}_{-}$ $^{2}_{3}$ | e 20 1 | + 5 | 15 7 | PPP | |
| Hong Kong | | $69 \cdot 5$ | 18 | e 16 41 | | e 20 24? | + 4 | | - | |
| Bokaro | | 69-6 | 350 | e 11 17 | + 4 | i 20 30 | $+\hat{9}$ | 20 45 | PS | |
| Shillong | | 70.8 | 356 | e 11 21 | + 1 | i 20 39 | + 4 | 11 43 | $\tilde{P}cP$ | 33.3 |

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| | | Δ | Az. | P. m. s. | o – c. | s. m. s. | 0 -C. | m. s. | ipp. | L. m. |
|--|----------|---|--|--|--|---|--|---|---|----------------------------|
| Lwiro Dehra Dun Zô-Sè Quetta Nanking | | 72·5 77·2 79·6 79·8 80·0 | $285 \\ 344 \\ 22 \\ 335 \\ 20$ | e 11 29 e 11 51 12 10k e 12 9 e 12 17 | $- \frac{1}{6}$ | i 21 43 e 22 14 22 9 | - <u>4</u> - <u>8</u> | e 17 42 12 6 i 23 4 | $\frac{\mathbf{P_{cP}^{?}}}{\mathbf{PS}}$ | 36.2 |
| Sian Peking Stalinabad Ashkabad Tashkent | | $80.3 \\ 87.1 \\ 87.2 \\ 89.7 \\ 89.7$ | $\begin{array}{r} 11 \\ 15 \\ 339 \\ 331 \\ 340 \end{array}$ | e 12 39 e 12 50 e 12 46 e 12 58 e 13 0 | $^{+ 25}_{+ 1} \\ ^{- 3}_{- 3} \\ ^{- 1}$ | e 23 23 i 23 43 i 23 56 | $\{+\frac{2}{2}\}$ $\{+\frac{3}{4}\}$ | - 16 38 e 23 38 | SKKS | |
| Frunse Matusiro Vladivostok Jerusalem Goris | | $90.0 \\ 90.2 \\ 93.9 \\ 94.6 \\ 95.6$ | $344 \\ 33 \\ 26 \\ 312 \\ 324$ | $\begin{array}{cccc} \mathbf{e} & 12 & 54 \\ & 13 & 1 \\ \mathbf{e} & 13 & 21 \\ \mathbf{e} & 13 & 24 \\ & 13 & 32 \\ \end{array}$ | $ \begin{array}{rrr} $ | i 23 57 23 33 23 59 e 24 10 | $\begin{bmatrix} + & 3 \\ - & 1 \end{bmatrix} \\ [+ & 4 \end{bmatrix} \\ [+ & 6 \end{bmatrix}$ | i 16 43 29 14 e 17 13 e 17 29 e 17 39 | PP SS PP PP | 36.7 |
| Ksara La Plata Semipalatinsk Irkutsk Yuzno-Sakhlinsk | | 95.8 96.5 96.5 97.7 100.8 | $\begin{array}{r} 314 \\ 201 \\ 350 \\ 5 \\ 31 \end{array}$ | e 13 38 17 35 e 17 39 e 13 41 a e 18 5 | $^{+~9}_{\mathrm{PP}}\\^{+~3}_{\mathrm{PP}}$ | e 25 9 24 11 e 24 16 | $[+rac{24}{2}] \ [+rac{1}{1}]$ | e 17 22 19 41 e 20 9 | PPP PPP | 46·7 46·2 |
| Simferopol Tamanrasset Bucharest Sofia Messina | z. | 105.4 106.2 108.8 109.0 110.2 | $320 \\ 286 \\ 315 \\ 312 \\ 304$ | e 18 35 e 18 36 e 23 45 e 19 25 e 19 6 | PP [+10] PP PP | e 33 35 e 26 9 25 2 e 26 47 | SS [- 3] S | e 18 45 28 21 e 28 56 | $_{\mathrm{PS}}^{\mathrm{PP}}$ | 51·7 51·9 |
| Taranto Moscow Magadan Rome M'Bour | | $110.8 \\ 112.2 \\ 113.9 \\ 114.4 \\ 116.1$ | $307 \\ 329 \\ 29 \\ 306 \\ 264$ | e 19 9 e 19 26 e 19 41 e 20 24 e 31 5 | PP PP PP | e 30 9 e 25 15 e 34 6 | PPS — [-[5] | e 32 41 e 29 17 e 35 58 | ss Ps Ss | e 46·9 |
| Florence La Paz Warsaw Algiers Univ. Pulkovo | z. | 116.3 116.6 116.6 116.9 117.8 | $306 \\ 197 \\ 318 \\ 296 \\ 329$ | e 19 28 i 19 47 k e 19 53 | PP PP PP | e 27 32 25 41 e 27 52 e 31 1 e 36 23 | $\mathbf{P_{SS}^{FS}}$ | e 29 45 29 9 e 29 54 e 21 3 | PS PS PS | e 55·7 53·1 e 59·7 |
| Relizane Monaco Tiksi Bay Alicante Jena | z. | 117.8 118.5 119.2 120.1 120.4 | $294 \\ 304 \\ 11 \\ 296 \\ 313$ | e 20 10 e 20 17 e 20 17 e 18 47 e 19 6? | PP PP [-6] [+12] | $\begin{array}{c} - \\ - \\ 25 & 46 \\ e & 22 & 47 \end{array}$ | [- 4] PKS | $\begin{array}{c} - & - & - & - & - & - & - & - & - & - $ | PP PP | e 57 <u>·4</u> |
| Stuttgart Strasbourg Besançon Granada Malaga | | 120.4 121.1 121.3 121.4 121.6 | $310 \\ 309 \\ 307 \\ 293 \\ 292$ | e 19 11 e 20 24 e 20 25 i 23 9 | [+17] PP PP PPP | e 28 21 e 36 53 | ss - [+18] | e 20 23 e 21 15 41 35 30 17 | PP SSS PS | 62·3 63·4 |
| Copenhagen Hamburg Upsala Toledo Paris | | $\substack{122.8\\122.8\\122.8\\123.2\\124.2}$ | $318 \\ 315 \\ 324 \\ 295 \\ 307$ | e 20 46 i 19 6 i 18 59 20 31 e 18 55 | PP [+ 8] [+ 1] PP [- 6] | e 37 24 - i 37 39 | ss = ss | e 37 30 e 21 56 | $\frac{-}{ss}$ | e 66·7 e 67·1 e 59·7 |
| Kiruna Skalstugan Kew Rathfarnham C. Bogota | z. | $126 \cdot 2$ $127 \cdot 0$ $127 \cdot 1$ $131 \cdot 2$ $138 \cdot 3$ | $333 \\ 326 \\ 309 \\ 309 \\ 195$ | i 19 6 i 19 6 i 19 16 a i 22 19 | $\begin{bmatrix} + & 1 \\ 1 & 0 \end{bmatrix} \\ \begin{bmatrix} + & 2 \\ \mathbf{PP} \end{bmatrix}$ | e 28 4 e 37 41? i 23 35 | (+_9) ss PKS | e 22 10 i 34 31 | PP PPS | e 52·7 66·7 |
| Chinchina College Scoresby Sund San Juan Resolute | | 138.9 140.9 141.3 149.1 150.4 | $193 \\ 37 \\ 332 \\ 215 \\ 6$ | i 19 38 e 19 32 e 19 27 e 19 47 e 19 51 | [+ 9] $[- 6]$ $[+ 1]$ $[+ 3]$ | i 22 39 e 22 56 e 41 17 e 26 4 | PKS PKS SS [-50] | i 25 35 e 22 5 e 46 23 e 42 48 | PPP SSS SS | e 56·5 67·7 |
| San Francisco Ukiah Berkeley Lick Tacubaya | z. z. | 150.5 150.6 150.7 150.9 151.1 | 92 88 92 93 149 | e 20 5 e 19 54 e 19 55 i 19 53 e 19 50 | $[+17] \\ [+6] \\ [+7] \\ [+4] \\ [+1]$ | e 26 22 e 26 19 | $[-\frac{33}{36}]$ | e 22 27 | PKS | |

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| | | Δ | Az. | P. | O – C. | _s. | o –c. | | pp. | L. |
|--|----------|---|--|--|--|--|--|---|--|--------------------------------------|
| Pasadena Barratt Shasta Fresno Woody | z. z. | 151.7 151.8 151.8 151.9 152.0 | 102 106 86 95 98 | m. s. e 19 52 e 19 59 e 19 56 e 19 49 e 19 50 | s. [+ 2] [+ 9] [+ 6] [- 1] [0] | m. s. e 23 47 e 26 0 i 26 5 | PP [-56] [-51] | e 22 12 | PKP. | e 70·3 |
| Palomar Riverside Isabella Mineral Corvallis | z. z. | $152 \cdot 1$ $152 \cdot 2$ $152 \cdot 2$ $152 \cdot 2$ $152 \cdot 4$ | 104 103 99 87 78 | e 19 53 e 19 49 e 19 52 e 19 56 e 19 59 | [+2] $[-2]$ $[+1]$ $[+5]$ $[+8]$ | e 27 12 e 26 8 i 26 20 | $[+16] \\ [-48] \\ [-37] \\ -$ | e 20 38 e 31 33 | PKP. | |
| China Lake Tinemaha Victoria Seattle Tucson | | 153.0 153.1 153.2 153.8 155.4 | $\begin{array}{c} 99 \\ 96 \\ 69 \\ 72 \\ 113 \end{array}$ | $\begin{array}{ccc} \mathbf{e} & 19 & 53 \\ \mathbf{e} & 20 & 0 \\ \mathbf{e} & 20 & 1 \\ & 20 & 21 \\ \mathbf{e} & 19 & 58 \end{array}$ | [+ 1] [+ 8] [+ 9] [+ 28] [+ 3] | e 25 54 e 27 8 | $\begin{bmatrix} -63 \\ +10 \end{bmatrix}$ \overrightarrow{PPS} | $\begin{array}{c} - & - & - & - & - & - & - & - & - & - $ | PP PKP ₂ PP | e 71·9 |
| Chihuahua Eureka Salt Lake City Hungry Horse Butte | | $155.8 \\ 155.8 \\ 159.2 \\ 159.4 \\ 160.2$ | 127 93 93 71 78 | $\begin{array}{cccc} & -& -& -& -& -& -& -& -& -& -& -& -& -$ | $\begin{bmatrix} + & 2 \\ + & 4 \\ + & 1 \\ + & 1 \end{bmatrix}$ | e 30 53 i 26 10 e 26 45 i 26 46 e 31 11 | $\{ + 3 \} $ $[-50]$ $[-19]$ $[-18]$ $\{ -2 \}$ | i 20 37 e 20 43 e 20 41 e 45 30 | PKP ₂ PKP ₂ PKP ₂ | e 75·0 e 68·4 |
| Bozeman Boulder Halifax Rapid City Fayetteville | | $161.2 \\ 163.5 \\ 165.5 \\ 166.3 \\ 167.9$ | $^{80}_{102}_{274}_{91}_{137}$ | e 20 6 e 20 6 e 20 6 e 20 8 | [+ 7] [+ 2] [- 1] [0] | e 45 41? | ss = | e 20 50 — e 25 17 | PKP ₂ | e 85·7 |
| Columbia Palisades Philadelphia Washington St. Louis | | 168.3 171.3 171.4 171.6 171.7 | $\begin{array}{c} 192 \\ 242 \\ 233 \\ 221 \\ 144 \end{array}$ | e 20 9 e 20 5 e 19 51 e 20 14 e 25 21 | $[+1] \\ [-5] \\ [-19] \\ [+4] \\ \mathbf{PP}$ | e 31 35 e 32 13 e 46 33 e 32 29 e 46 26 | $\{ egin{array}{l} \{-19\} \\ +3\} \\ \text{SS} \\ \{+18\} \\ \text{SS} \end{array}$ | e 25 7 e 25 53 i 25 22 e 21 43 e 53 1 | PP PP PP PKP ₂ SSS | e 70·0 e 79·4 e 79·3 e 70·9 |
| Florissant Pennsylvania Ottawa | | $171.8 \\ 173.5 \\ 174.1$ | $^{143}_{226}_{268}$ | e 20 14 e 21 48 | [+ 4] PKP ₃ | $\begin{array}{cccc} e & 46 & 27 \\ e & 25 & 34 \\ & & 32 & 7 \end{array}$ | $^{\mathrm{SS}}_{\mathrm{PP}}$ $\{-15\}$ | e 25 26 e 32 23 25 43 | $_{\mathbf{PP}}^{\mathbf{PP}}$ | e 95·2 79·8 |

May 8d. 3h. 8h. Epicentre 19°N. 121°·5E. Seismo. Bull. of Taiwan Weather Bureau for April-June, 1956, Vol. 3, No. 2, Taipei, China, pp. 10, 11.

May 8d. 19h. 50m. 2s. Epicentre 38° 8N. 74° 7E.

A = +.2062, B = +.7537, C = +.6240; $\delta = -4$; h = -1; D = +.965, E = -.264; G = +.165, H = +.602, K = -.781.

| | Δ | Az. | Р. | O-C. | s. | O-C. | Su | pp. | L. |
|-------------|-------------|-----|--------|----------------------------|--------|------|--------|---------|----|
| Courtes to | • | 0 | m. s. | s. | m. s. | s. | m. s. | | m. |
| Murgab | 0.8 | 233 | i 0 16 | - 2 | 100000 | _ | | 3 | |
| Andijan | 2.6 | 317 | i 0 46 | + 2 | i 1 24 | + 3* | | - | - |
| Fergana | $2 \cdot 7$ | 305 | i 0 48 | + 3 | e 1 24 | 0. | - | - | |
| Dzhergetal | 2.8 | 279 | e 0 50 | + 3 | | | - | - | _ |
| Khorog | 2.8 | 242 | i 0 53 | $^{+}_{+} \overset{3}{2}*$ | e 1 32 | 0 e | | _ | _ |
| Naryn | 2.8 | 20 | e 0 47 | 0 | e 1 24 | + 2 | | | _ |
| Namangan | 3.2 | 313 | 0 53 | + 1 | i 1 37 | - 2* | i 1 48 | Sg | |
| Rybach'e | 3.8 | 16 | i 1 2 | + 1 | i 1 56 | - 1* | i 1 13 | P | _ |
| Frunse | 4.0 | 358 | i 1 6 | + 2 | i 2 4 | + 1* | i 1 26 | P_{g} | _ |
| Kulyab | 4.0 | 258 | 1 8 | + 4 | e 2 29 | +17g | | - | - |
| Fabrichnaya | 4.5 | 16 | 1 12 | + 1 | i 2 20 | + 2* | | · · | - |
| Przhevalsk | 4.6 | 36 | i 1 15 | $^{+}_{+}$ $^{1}_{3}$ | | | e 1 23 | P* | - |
| Stalinabad | 4.7 | 268 | e 1 14 | Õ | i 2 41 | + 6g | i 1 26 | P* | |
| Almata II | 4.8 | 24 | e 1 17 | + 2 | i 2 31 | + 5* | | | |
| Tashkent | 4.8 | 302 | i 1 17 | + 2 | e 2 18 | + 6 | - | - | |

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| 1956 | 220 |
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| | |

| | | Δ | Az. | P. m. s. | 0 – C. | S. m. s. | o-c. | m. s. | pp. | L. m. |
|---|----|---|---|--|--|--|-------------------------------|---|------------|------------------------------|
| Kurmenty Tchimkent Samarkand Lahore Dehra Dun | | $5.0 \\ 5.2 \\ 6.1 \\ 7.3 \\ 8.9$ | $32 \\ 313 \\ 280 \\ 182 \\ 161$ | i 1 18 i 1 21 i 1 34 i 1 53 e 2 24 | $^{0}_{0}^{0}_{+3}^{+3}_{+12}$ | $ \begin{array}{r} $ | $+\frac{2}{7}$ $+\frac{9}{9}$ | $\begin{array}{c} e & \overline{2} & 54 \\ e & 1 & 53 \\ \hline & 1 & 5 & 13 \end{array}$ | Se P* | |
| Bairam-Ali Quetta Semipalatinsk Ashkabad Kizyl-Arvat | | $10.0 \\ 10.8 \\ 12.2 \\ 12.9 \\ 14.4$ | $267 \\ 219 \\ 17 \\ 271 \\ 276$ | e 2 32 e 2 37 e 2 11? e 3 25 | $^{+}_{-}{}_{2}^{5}$ $^{-}_{-}{}_{2}^{4}$ | $\begin{array}{c} {\bf e} \ {f 4} \ {f 36} \\ {f e} \ {f 4} \ {f 36} \\ {f i} \ {f 5} \ {f 25} \\ {f e} \ {f 6} \ {f 0} \end{array}$ | - 5 - 6 - 8 - 9 | e 3 28 e 4 32 | <u>;</u> | i 5·6 — e 7·4 e 7·0 |
| Baku Shillong Bombay Poona Sverdlovsk | z. | $19.2 \\ 19.6 \\ 19.9 \\ 20.3 \\ 20.3$ | $282 \\ 127 \\ 185 \\ 182 \\ 337$ | e 4 34 e 4 33 e 4 42 4 34 | $^{+}_{+}^{}^{}_{1}^{}$ $^{+}_{-}^{}$ $^{+}_{6}$ | e 8 10 i 8 23 e 8 30 e 8 32 | $^{+11}_{+15}_{+15}_{+9}$ | 4 57 | P <u>P</u> | e 10·7 e 10·9 |
| Makhach-Kala Kirovobad Goris Tiflis Erevan | | $\begin{array}{c} 21.0 \\ 21.8 \\ 22.0 \\ 23.0 \\ 23.3 \end{array}$ | $290 \\ 284 \\ 281 \\ 287 \\ 283$ | e 4 45 e 4 54 e 4 57 5 7 e 4 14 | $ \begin{array}{r} - & 2 \\ - & 2 \\ - & 1 \\ 0 \\ - & 56 \end{array} $ | i 8 45 e 9 4 | + <u>8</u> + <u>8</u> | e 9 55 | <u>?</u> | e 11·9 |
| Irkutsk Kyakhta Kabansk Madras Moscow | E. | $24.5 \\ 25.2 \\ 25.8 \\ 26.2 \\ 29.8$ | $\begin{array}{r} 47 \\ 52 \\ 49 \\ 168 \\ 317 \end{array}$ | e 5 23 e 5 28 e 5 34 e 6 7 | $^{+}_{-}^{1}_{\stackrel{1}{0}}$ | e 9 52 e 10 6 e 10 20 i 12 17 | +12 +14 +18 Q | | | i 14·1 e 16·2 |
| Simferopol Lwow Helsinki Upsala Kiruna | | $30.6 \\ 37.2 \\ 37.5 \\ 41.1 \\ 41.3$ | $295 \\ 304 \\ 321 \\ 320 \\ 332$ | e 6 26 e 7 14 i 7 16 e 7 45 i 7 47 a | $^{+\ 8}_{-\ 1}_{-\ 2}$ | | | | | |
| Skalstugan Jena Stuttgart Ebingen Strasbourg | | 43.9 45.0 47.0 47.3 47.9 | $325 \\ 307 \\ 304 \\ 304 \\ 305$ | e 8 13 e 8 17 e 8 33 e 8 36 i 8 41 | $^{+}$ $^{-}$ 2 $^{-}$ 1 | | | e = 31 | - - | |
| Matusiro Monaco Paris Tamanrasset Resolute College La Paz | z. | 49.4 49.6 51.2 60.2 66.6 71.4 140.7 | 72 298 306 276 357 18 294 | 1 8 52 1 8 53 1 9 6 1 1 1 22 1 1 1 22 1 1 9 3 1 | $ \begin{bmatrix} - & 1 \\ - & 2 \\ - & 1 \\ - & 1 \end{bmatrix} $ $ \begin{bmatrix} - & 2 \\ - & 2 \\ - & 1 \end{bmatrix} $ | e 24 52 | <u></u> | e 12 14 | PP | e 26·5 |

May 8d. 20h. 50m. 1s. Epicentre 27°.8N. 53°.0E. (as on March 1d.).

A = +.5331, B = +.7075, C = +.4639; $\delta = -4$; h = +3; D = +.799, E = -.602; G = +.279, H = +.370, K = -.886.

| | Λ | Az. | P. | O-C. | s. | O-C. | Su | pp. | L. |
|-------------|--------------|-----|---------|---|------------------------|--------|-------------------------|------------------------|----------|
| | • | 0 | m. s. | s. | m. s. | s. | m. s. | | m. |
| Quetta | 12.4 | 76 | e 3 0 | - 1 | e 5 16 | - 5 | _ | | - |
| Tiflis | 15.5 | 336 | 3 43 | $\begin{array}{cccc} - & 1 \\ + & 1 \\ + & 2 \end{array}$ | 423 112 442 | 250000 | 950 521 0160 | - | |
| Ksara | 15.9 | 296 | i 3 49 | + 2 | i 7 7 | +23 | i 7 29 | SS | _ |
| Jerusalem | 16.0 | 289 | i 3 48 | 0 | e 6 53 | + 7 | | | - |
| Bombay E. | $20 \cdot 2$ | 112 | e 4 41 | + 2 | | - | e 5 21 | \mathbf{PP} | _ |
| Namangan | 20.2 | 44 | 4 41 | + 2 | _ | 7 | | - | |
| Poona | 21.2 | 111 | i 4 51 | $^{+}_{+}$ $^{2}_{2}$ | e 8 33 | - 8 | 1,0 | _ | - |
| Dehra Dun | 22.0 | 77 | e 5 17 | +19 | e 9 8 | +12 | _ | - | _ |
| Frunse | 23.1 | 44 | 5 10 | + 2 | | - | | - | anance (|
| Athens | 26.6 | 300 | e 5 43k | + 1 | | - | e 6 30 | \mathbf{PP} | - |
| Iasi | 27.8 | 321 | 5 53 | 0 | 10 49 | +14 | 6 13 | $\mathbf{p}\mathbf{p}$ | _ |
| Moscow | 30.1 | 342 | 6 13 | 0 | | 170.00 | - V.10 | - | - |
| Pulkovo | 35.6 | 340 | 7 1 | 0 | | _ | _ | 0.00 | _ |
| Prague | 36.8 | 318 | i 7 13 | + 2 | _ | _ | i 8 27 | \mathbf{PP} | |
| Florence z. | 37.0 | 307 | e 7 32 | +19 | - | | - | | - |

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| 1956 | | | | | | 221 | | | | | |
|----------------|---------|--------------|-----|------|----------|--------|----------------------|------------------|---------------|---|----------|
| | | Δ | Az. | m. | >. s. | o – c. | S. m. s. | O - C. | m. s. | pp. | L. m. |
| Helsinki | | 37.6 | 337 | i 7 | 17 | - 1 | | _ | | | - |
| Jena | | 38.8 | 318 | e 7 | 27 | - 1 | 100 | - | e 8 36 | \mathbf{PP} | _ |
| Ebingen | | 39.6 | 313 | e 7 | 35 | 0 | | | | + | - |
| Stuttgart | 28.2 | 39.6 | 314 | e 7 | 34 | ! | ***** | | N | | |
| Monaco | z. | 39.8 | 306 | e 7 | 47 | +11 | - | - | | | _ |
| Upsala | | 40.1 | 333 | i 7 | 38 | - 1 | | | | - | |
| Basle | | 40.4 | 312 | e 7 | 41 | 0 | - | | 0.01 | n n | |
| Strasbourg | | 40.5 | 313 | e 7 | 41 | - 1 | _ | | e 9 31 | PcP | _ |
| Neuchatel | | 40.7 | 311 | e 7 | 43 | - 1 | - | ***** | | | |
| Hamburg | Z. | 40.7 | 321 | 1 7 | 46 k | + 2 | 100 | | | | |
| Besançon | | 41.4 | 311 | e 7 | 48 | - 2 | 1 m | 100 | e 9 32 | PcP | _ |
| Witteveen | Z. | $42 \cdot 3$ | 319 | e 7 | 56 | - 1 | - | School | | 777 | |
| Algiers Univ. | Z. | 42.8 | 295 | e 8 | 1 | 0 | 1 = 12 | _ | e 9 47 | PP | 23.0 |
| Tamanrasset | z. | 43.0 | 274 | e 8 | 4 | + 1 | | - | e 9 45 | PP | 23.0 |
| Paris | | 44.0 | 313 | i 8 | 11 | 0 | | (- (| e 8 39 | (R | |
| Skalstugan | | 44.4 | 335 | i 8 | 14k | 0 | 1. 177.11 | - | 2 | - | _ |
| Kiruna | | 44.6 | 343 | i 8 | 15 | - 1 | _ | | | | - |
| Relizane | | 44.9 | 294 | i 8 | 20 | + 2 | = | | e 9 14 | ¥ | |
| Kew . | Z. | $46 \cdot 2$ | 316 | i 8 | 28 | 0 | W-3 | 377 | _ | | _ |
| Tananarive | | 46.7 | 187 | 8 | 35 k | + 3 | | - | 2000 | | _ |
| Malaga | | 48.8 | 296 | i 8 | 49k | 0 | 77 <u>—74</u> | 7. | e 10 37 | \mathbf{PP} | |
| Rathfarnham C. | Z. | 50.0 | 318 | i 8 | 59 k | + 1 | (S | - | | - | _ |
| Lisbon | Z. | 52.2 | 300 | e 9 | 12 | - 3 | | - | | _ | _ |
| Pretoria | Z. | $58 \cdot 3$ | 206 | i 9 | 58 a | - 1 | | 620 | | | |
| Scoresby Sund | z. | $59 \cdot 1$ | 338 | e 10 | 3 | - 1 | - | · · | | | _ |
| Kimberley | z. | 62.4 | 208 | i 10 | 26 a | - 1 | , | _ | | ======================================= | _ |
| Grahamstown | Charles | 65.8 | 204 | i 10 | 48 | - 1 | _ | | | - | 1.00 |
| Matusiro | Z. | 70.4 | 58 | 11 | 17 | - 1 | - | - | <u> </u> | | . — |
| Resolute | | 75.7 | 352 | e 11 | 48 | - 1 | | | e 36 8 | Q | e 41.5 |
| College | | 86.2 | 9 | i 12 | 45 | + 1 | | - | 0 === | | _ |

May 9d. 2h. 52m. 42s. Epicentre 38°·5N. 141°·25E. Depth of focus 20km. Intensity II-III at Sendai and Miyako. Seismo. Bull. Japan Met. Agency for May, 1956, Tokyo, 1956, p. 11, with chart of seismic intensities.

May 10d. 18h. 11m. 59s. Epicentre 79°.5N. 2°.2E.

A = +.1833, B = +.0070, C = +.9830; $\delta = -6$; h = -14; D = +.038, E = -.999; G = +.982, H = +.038, K = -.183.

| | | Δ | Az. | P. | O-C. | s. | O-C. | Su | pp. | L. |
|----------------|--------|------|-----|----------|------|---------------|------|---------|---------------|----------|
| | | | 0 | m. s. | S. | m. s. | s. | m. s. | | m. |
| Scoresby Sund | Z. | 10.8 | 227 | e 2 38 | - 1 | - | *** | | **** | |
| Kiruna | 9352.4 | 12.7 | 147 | i 3 4 k | - 1 | | - | i 14 46 | ScS | _ |
| Skalstugan | | 16.2 | 164 | i 3 54 | + 4 | | - | _ | - | - |
| Resolute | | 19.7 | 308 | e 4 30 | - 4 | e 8 4 | - 6 | _ | | e 10·4 |
| Upsala | | 20.3 | 157 | i 4 38 | - 2 | - | - | _ | 8 | - |
| Helsinki | | 20.6 | 147 | i 4 43 | 0 | | - | _ | - | _ |
| Hamburg | Z. | 26.2 | 170 | i 5 42 | + 4 | · | - | - | - | _ |
| Jena | z. | 28.8 | 168 | i 6 3 | + 1 | _ | _ | | 2 | |
| Paris | OTE | 30.8 | 180 | i 6 21 | + 1 | - | - | e 8 31 | 3 | |
| Stuttgart | | 30.9 | 171 | e 6 20 | 0 | ***** | - | | _ | _ |
| Bratislava | | 31.9 | 161 | i 6 31 | + 2 | _ | | | 7 | <u> </u> |
| Algiers Univ. | Z. | 42.8 | 179 | 8 1 | 0 | - | - | - | - | _ |
| Hungry Horse | 5530 | 47.3 | 306 | e 8 37 | 0 | _ | - | e 10 36 | \mathbf{PP} | |
| Butte | N. | 49.4 | 304 | i 8 53 | 0 | - | - | - | | |
| Jerusalem | | 49.7 | 142 | i 8 56 | ŏ | | _ | - | _ | - |
| Rapid City | | 49.7 | 294 | e 8 57 | + 1 | - | - | - | _ | _ |
| Boulder | | 54.0 | 295 | e 9 30 | + 2 | | - | | - | |
| Salt Lake City | | 54.4 | 301 | e 9 32 | + 1 | - | _ | | - | - |
| Fayetteville | | 56.0 | 284 | i 9 41 a | - 2 | - | | | _ | |
| Quetta | Z. | 56.0 | 109 | e 9 42k | - 1 | - | - | - | - | |

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| | | Δ | Az. | | P. | 0- | C. | s. | O – C. | | Supp. | L. |
|--------------|-------|--------------|------|------|--------------------|-----------|-----|-------|--------|----|-------|------|
| ~ | | 0 | 0 | m. | . 8. | S. | | m. s. | s. | m. | S. | m. |
| Mineral | Z. | 56.2 | 310 | e 9 | 46 | + | 2 | | _ | | | - T. |
| Tamanrasset | Z. | 56.8 | 176 | i 9 | C 1 (177) 1-20 (1) | - 1 | õ | | - | | | - |
| Berkeley | Z. | 58.8 | 310 | e 10 | | 4 | 9 | | | | | - FE |
| Tinemaha | | 59.0 | 306 | e 10 | 6 | + | 2 | | | - | | |
| Lick | Z. | 59.2 | 310 | e 10 | | $\dot{+}$ | ĩ | - | | | | |
| Boulder City | | FO # | 0.00 | * ** | | ÷. | 220 | | | | | |
| Chine Lake | | 59.5 | 303 | i 10 | | + | 1 | - | - | - | - | |
| China Lake | | 60.1 | 306 | e 10 | 13 | + | 2 | _ | - | - | _ | |
| Isabella | | 60.4 | 306 | i 10 | 15 | s#- | 2 | _ | _ | | - | |
| Woody | | 60.4 | 307 | i 10 | 13 | | 0 | _ | | _ | _ | |
| Matusiro | Z., | 61.6 | 40 | 10 | 19 | - | 3 | | - | _ | | |
| Pasadena | | 61.8 | 306 | i 10 | 25 | + | 2 | | | | | |
| Riverside | | 61.9 | 305 | e 10 | 24 | ST. | ñ | | | | _ | |
| Palomar | | 62.4 | 304 | | | - 2 | Ÿ | - | - | - | _ | |
| Tucson | | | | e 10 | 28 | # | 1 | - | | - | | |
| | 922.0 | 62.6 | 298 | e 10 | 30 | + | 2 | | _ | _ | | - |
| Chatra | z. | $62 \cdot 9$ | 90 | e 10 | 30 | | 0 | - | 200 | - | - | |
| Barratt | | 63.0 | 304 | e 10 | 34 | + | 3 | | | _ | | _ |
| Shillong | Z. | 65.0 | 85 | 1 10 | 49 | | 9 | | | | | |

May 10d. 23h. 4m. Epicentre 4°·5N. 127°·5E. Seismo. Bull. for May, 1956, Government of India Meteorological Department, p. 4.

May 12d. 9h. 44m. 46s. Epicentre 33°.6N. 138°.8E. Depth of focus 0.030.

Unfelt. Epicentre 33°·4N. 138°·9E. Depth 240km. Seismo. Bull. Japan Met. Agency for May, 1956, Tokyo, 1956, pp. 11-13.

A = -.6280, B = +.5498, C = +.5508; $\delta = +4$; h = +1; D = +.659, E = +.752; G = -.414, H = +.363, K = -.835.

| | | Δ | Az. | P. m. s. | O - C. | S. m. s. | 0 - C. | Suj | pp. |
|--|----|---|---|---|---|---|--|--------|-------------|
| Omaesaki Osima Shizuoka Ajiro Misima | | 1·1 1·3 1·4 1·5 | $336 \\ 23 \\ 348 \\ 11 \\ 6$ | i 0 34k i 0 36k i 0 36 0 36 i 0 37k | + 1 + 1 + 1 | m. s. i 1 1 i 1 2 i 1 4 i 1 5 i 1 6 | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | m. s. | |
| Mera Hunatu Kohu Yokohama Iida | | $1.6 \\ 1.9 \\ 2.0 \\ 2.1$ | $\begin{array}{c} 33 \\ 0 \\ 356 \\ 22 \\ 338 \end{array}$ | $\begin{array}{c} 0 & 36 \\ 0 & 41 \\ \mathbf{i} & 0 & 42 \mathbf{k} \\ \mathbf{e} & 0 & 40 \\ \mathbf{i} & 0 & 42 \end{array}$ | - 1 + 1 + 1 - 1 | 1 12 e 1 16 i 1 12 e 1 15 | $ \begin{array}{r} - & 1 \\ + & 2 \\ + & 4 \\ 0 \\ + & 1 \end{array} $ | e = 42 | <u>?</u> |
| Nagoya Owase Tokyo Tu Kameyama | E. | $2 \cdot 2$ $2 \cdot 2$ $2 \cdot 2$ $2 \cdot 3$ | $\begin{array}{c} 317 \\ 283 \\ 21 \\ 302 \\ 304 \end{array}$ | 0 43 0 42 0 43 e 0 44 e 0 44 | $-\begin{array}{c} 0 \\ 1 \\ 0 \\ + \begin{array}{c} 0 \\ 1 \\ 0 \end{array}$ | 1 17 i 1 15 e 1 15 i 1 16 1 19 | $^{+}$ $^{-}$ 1 0 $^{+}$ 2 | | = |
| Gihu Titibu Siomisaki Kumagaya Hikone | | 2·4 2·4 2·5 2·6 2·7 | $318 \\ 6 \\ 268 \\ 11 \\ 310$ | e 0 46 i 0 46 i 0 44 0 47 0 48k | $\begin{array}{c} + & 1 \\ + & 1 \\ - & 2 \\ 0 \\ 0 \end{array}$ | e 1 22 i 1 22 i 1 21 i 1 24 1 28 | $\begin{array}{ccc} + & 3 \\ + & 3 \\ & 0 \\ + & 1 \\ + & 3 \end{array}$ | | = = = |
| Ibukisan Matumoto Nara Oiwake Tyosi | E. | $2.7 \\ 2.7 \\ 2.7 \\ 2.7 \\ 2.7$ | 313 346 295 356 38 | e 0 47 0 50 i 0 51 e 0 47 | - 1 + 2 + 3 - 1 | 1 30 i 1 26 e 1 48 1 25 | $^{+}_{$ | | |
| Maebasi Takayama Kakioka Kyoto Osaka | E. | $2.8 \\ 2.8 \\ 2.9 \\ 2.9 \\ 2.9$ | $\begin{array}{c} -5 \\ 334 \\ 23 \\ 300 \\ 292 \end{array}$ | e 0 49 0 46 0 49 0 50k e 0 50 | $-\begin{array}{c} 0 \\ 3 \\ - \\ 0 \\ 0 \end{array}$ | $\begin{array}{c} 1 & 28 \\ \hline -1 & 27 \\ 1 & 30 \\ e & 1 & 30 \end{array}$ | $\begin{array}{c} + & 1 \\ - & 2 \\ + & 1 \\ + & 1 \end{array}$ | | |
| Matusiro Tsuruga Mito Nagano Utunomiya | N. | $3.0 \\ 3.1 \\ 3.1 \\ 3.1$ | $351 \\ 314 \\ 26 \\ 352 \\ 17$ | i 0 51k i 0 53k e 0 54 0 53k e 0 50 | $^{+}_{+}\overset{0}{\overset{2}{\overset{1}{2}}}_{+}$ | i 1 32 i 1 34 i 1 31 e 1 29 | $^{+}$ 1 $^{+}$ 3 $^{+}$ 2 $^{+}$ 4 | e = 16 | <u>-</u> |

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| | | Δ | Az. | P. m. s. | $o_{s.}$ | s. m. s. | O -C. s. | m. s. | pp. |
|--|----------------|--|---|--|--|--|---|---------|------------|
| Hukui Kobe Sumoto Kanazawa Toyama | | $3 \cdot 2 \\ 3 \cdot 2 \\ 3 \cdot 3 \\ 3 \cdot 4 \\ 3 \cdot 4$ | 321 291 284 330 338 | e 0 55 e 0 51 e 0 54 e 0 56 0 57 | $\begin{array}{cccc} + & 1 & & \\ - & 3 & & \\ - & 1 & & \\ + & 1 & & \end{array}$ | i 1 35 i 1 38 e 1 43 | $+\frac{0}{1} + \frac{4}{4}$ | | |
| Tokusima Shirakawa Onahama Toyooka Takamatu | | $3.5 \\ 3.8 \\ 3.8 \\ 4.0$ | $^{279}_{18} \\ ^{27}_{302} \\ ^{282}$ | $\begin{array}{c} 0 & 59 \\ e & 0 & 58 \\ e & 0 & 59 \\ e & 1 & 0 \\ i & 1 & 2 \end{array}$ | $\begin{array}{cccc} + & 2 \\ - & 2 \\ - & 2 \\ - & 1 \\ - & 1 \end{array}$ | i 1 42 i 1 43 e 1 48 i 1 49 i 1 51 | $^{+}_{-}\overset{1}{\overset{3}{\overset{0}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{1$ | | |
| Inawasiro Wazima Niigata Hukusima Koti | | $\begin{array}{c} 4 \cdot 1 \\ 4 \cdot 1 \\ 4 \cdot 3 \\ 4 \cdot 4 \\ 4 \cdot 4 \end{array}$ | $^{15}_{339} \\ ^{18}_{269}$ | $\begin{array}{cccc} & 1 & 6 \\ e & 1 & 4 \\ e & 1 & 19 \\ e & 1 & 5 \\ e & 1 & 7 \end{array}$ | $^{+}_{0}^{2}\ _{-}^{0}\ _{3}^{-}\ _{1}$ | i 1 52 e 1 55 i 2 0 e 1 57 e 1 53 | - 2 + 1 + 1 - 4 - 8 | i 1 32 | <u>?</u> |
| Yamagata Simidu Matuyama Sendai Isinomaki | N. | $\begin{array}{c} 4.8 \\ 4.9 \\ 5.0 \\ 5.2 \end{array}$ | $\begin{array}{r} 15 \\ 262 \\ 274 \\ 20 \\ 22 \end{array}$ | e 1 13 e 1 15 e 1 14 e 1 24 | $ \begin{array}{r} $ | e 2 8 e 2 11 e 2 14 e 2 9 2 16 | $ \begin{array}{rrr} & 3 \\ & 1 \\ & 0 \\ & 5 \\ & 3 \end{array} $ | e 1 51 | <u>?</u> |
| Hirosima Sakata Hamada Mizusawa Ooita | | 5·3 5·4 5·7 5·8 6·0 | $280 \\ 9 \\ 285 \\ 18 \\ 268$ | e 1 20 - 1 28 e 1 29 | $+ \frac{1}{-} \\ + \frac{2}{1}$ | e 2 22 e 2 24 e 2 32 e 2 31 e 2 30 | $\begin{array}{cccc} + & 1 \\ + & 1 \\ + & 2 \\ - & 1 \\ - & 7 \end{array}$ | | |
| Akita Morioka Miyako Miyako Saga Hatinohe | N. E. | $6.2 \\ 6.4 \\ 6.6 \\ 7.1 \\ 7.3$ | $^{10}_{17}_{22}_{270}_{17}$ | e 1 33 e 1 36 e 1 46 | $+\frac{0}{4}$ | $\begin{array}{c} 2 & 42 \\ 1 & 2 & 41 \\ e & 2 & 45 \\ \hline e & 2 & 59 \end{array}$ | $-{5 \atop -6}$ | | |
| Urakawa Obihiro Kusiro Nemuro College | N. | $9.1 \\ 9.9 \\ 10.4 \\ 11.1 \\ 53.2$ | $19 \\ 19 \\ 24 \\ 27 \\ 31$ | e 2 10 e 3 0 i 8 55 | $+\frac{2}{?} \\ -\frac{2}{2}$ | e 3 41 e 4 7 e 4 26 | $ \begin{array}{r} $ | | |
| Resolute Bay Kiruna Skalstugan Shasta Upsala | z. | $66.5 \\ 69.0 \\ 74.3 \\ 74.9 \\ 75.1$ | $14 \\ 339 \\ 338 \\ 51 \\ 333$ | i 10 24 a i 10 39 a i 11 11 i 11 17 i 11 15 | - 4 - 4 - 3 - 1 - 4 | | | | |
| Scoresby Sund Mineral Hungry Horse Berkeley Lick | z. z. z. | 75·3 75·6 75·8 76·5 77·2 | 51 41 54 | e 11 17 e 11 20 i 11 22 i 11 25 i 11 29 | - 3 - 2 - 1 - 2 - 2 | | | | <u>-</u> |
| Reno Butte Bozeman Tinemaha Eureka | z. | $77.2 \\ 78.0 \\ 79.0 \\ 79.6 \\ 79.7$ | 42 | e 11 30 i 12 3 e 11 39 i 11 42 i 11 43 | $^{-}_{+28}^{1}_{-2}^{1}_{-1}$ | | | | = |
| Woody Isabella China Lake Dalton Riverside | | 80·0 80·2 80·7 81·5 81·9 | 54 54 53 55 | i 11 43 a i 11 44 i 11 49 e 11 56 i 11 54 | $ \begin{array}{r} -3 \\ -3 \\ -3 \\ -2 \\ -2 \end{array} $ | | | i 12 10 | p <u>P</u> |
| Boulder City Barratt Rapid City Tucson | | $82.5 \\ 83.2 \\ 84.3 \\ 87.4$ | 55 40 | 9 12 8 i 12 1 9 12 6 9 12 22 | $^{+}_{-} ^{9}_{1} \ ^{-}_{-} ^{2}_{1} \ ^{-}_{-} ^{1}$ | | | | |

May 12d. 21h. 40m. 29s. Epicentre 43°N. 147°E. Depth of focus 60km. Intensity II-III at Nemuro. Seismo. Bull. Japan Met. Agency for May, 1956, Tokyo, 1956, p. 13, with chart of seismic intensities.

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> 1956 224

> > 42.6

43.8

43.8

45.3

45.9

47.3

47.7

47.7

47.8

48.0

48.1

48.9

49.2

49.3

49.4

49.8

50.2

50.4

50.9

50.9

51.5

Z.

Helsinki

Taranto

Messina

Copenhagen

Upsala

Kiruna

Baguio

Manila

Florence

Hamburg

Stuttgart

Skalstugan

Strasbourg

Neuchatel

Witteveen

Besancon

Vladivostok

Karlsruhe

Jena

Rome

Zô-Sè

328

299

296

326

301

320

337

313

304

317

310

330

311

310

57

308

316

308

96

94

75

57

59

11

21

22

41k

40

40

41

39 a

50k

5?

51 k

52 a

57k

59

e 8

e 10

e 8

i 8

e 8

e 8

e 9

e 9

-10

PP

+

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+13

+

+

-

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SS

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888

e 10 8

e 10 12

i 10 10

i 10 15

e 10 18

e 10 20

e 19

e 10

PP

PP

SS

PcP

PcP

 P_{cP}

PcP

 $P_{c}P$

+

+

57

41

12

32

e 14

i 15

e 15

e 14 57

e 15 42

e 15 45

e 15 57

22

e

e

20 27

9

28.0

27.2

 $23 \cdot 4$

e. 27·0

e 25·4

e 26·4

28.4

May 13d. 7h. 50m. 33s. Epicentre 29°.9N. 70°.0E.

Intensity VIII at the epicentre (29°51'N. 69°50'E.); VII at Fort Munro and at Khhar.

Moid Uddin Ahmad.

Report on the Fort Munro Earthquake of May, 13, 1956, Pakistan Met. Service, Geoph. Obs., Quetta, 1956, pp. 1-5, 4 figures, 1 map.

A = +.2970, B = +.8160, C = +.4960; $\delta = +8$; h = +2; D = +.940, E = -.342;G = +.170, H = +.466, K = -.868. Supp. Ρ. O-C. s. O - C. L. Az. S. 8. 8. m. s. m. m. m. S. i 0 54 i 1 $2 \cdot 7$ 0 43k Quetta 276 65 Lahore $4 \cdot 0$ Acres . P^* 37 i 2 53 1 50 $3 \cdot 0$ 100 $6 \cdot 4$ New Delhi N. i 3 2 18 P_g $3 \cdot 3$ 85 46 Dehra Dun $7 \cdot 0$ i 2 +10 gi 4 54 $8 \cdot 6$ 354Stalinabad e 2 e 2 2 54 PPP -11166 e 4 43 4.511.3Bombay N. i 3 12 PPP 357 43 11.4 Tashkent e 5 10 5 29 3 e 2 + 1 $\mathbf{P}\mathbf{P}$ 11.9 54 162 Poona i 7.2 313 12.6 Ashkabad P i 3 13 14 i 5 32 -1313.4 15 10 Frunse SS -1620 146 e 3 14 6 -1114.6 Hyderabad E. PP6.9e 3 48 i 6 24 6 110 41 15.3 + Bokaro i 6 31 37 97 15.4 Chatra i 8 e 8 PP9.247 19.3 149 + Madras E. PPP 9.3 32 0 i 4 19.8 97 Shillong --8 i 8 PPP 11.328 16 20.8 46 Kodaikanal 159 + 5 5 E. Ŧ 52 8 59 $P_{c}P$ 21.6 302 54 Goris e 8 21.8 18 e 4 56 Semipalatinsk 23.5 + 5 15 307 Tiflis 6 46 10 26 $_{\rm PP}$ 52 349 $27 \cdot 7$ Sverdlovsk 286 47 -11i 16 47 S_{cS} 56 $29 \cdot 2$ e 5 Ksara +62e 12 282 i 6 29.8 11 Jerusalem e 11 SSS i 6 29 39 308 e 14 31.9 Simferopol 46 a SSS 33.7 39 e 15 e 7 527 $_{\rm PP}$ Irkutsk + \mathbf{PP} 12 8 12 328 52 + 34.5 5 Moscow 10 PcP36.9 310 13 1 Iasi SS e 7 19 (15 27)P 305 15.4 37.4 9 Bucharest 28 ++ Peking 38.8 62 e 13 30 e 9 38 PPP e 13 30 30 38.9 294 e 7 + Athens e 16 33 36 i 13 40 SS 39.8 313 Lwow 36 330 Pulkovo 40.00 e 13 48? $40 \cdot 2$ 90 40 Hong Kong 9 53 + e 14 10 74 41.6 + Nanking PPP 316 e 14 25 e 22·4 56 Warsaw $42 \cdot 1$ PP e 9 47

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| | Δ | Az. | P. m. s. | o – c. | S. m. s. | o –c. | m. s. | pp. | L. m. |
|---|--|---------------------------------------|-------------|---------------|--------------------|------------------|-----------------------|---------------|----------|
| De Bilt | 51.8 | 315 | | **** | 01 01 | SSS | | | e 27·4 |
| Tiksi | 52.2 | 20 | 10 20 | PeP | e 21 27 e 16 43 | + 4 | e 11 16 | \mathbf{PP} | 0 21 1 |
| Uccle | 52.4 | 313 | e 9 16 | 1 61 | e 20 19 | SS | 6 11 10 | 1. | e 26·4 |
| Supplied the control of the control | 53.2 | 207 | 9 231 | | 0 20 10 | 1010 | | | 0 20 x |
| Tananarive | The second secon | The California Company of the Company | | | - | | | | - |
| Clermont-Ferrand | 53.6 | 307 | e 9 30 | + 5 | _ | = 1 | 10 10 10 1 | _ | - |
| Paris | 53.7 | 311 | i 9 25 | - 1 | e 10 0 | 3 | i 10 22 | $P_{c}P$ | e 33·4 |
| Kew | 55.2 | 314 | i 9 37 | 0 | _ | _ | - | 100000 | e 29·0 |
| Algiers Univ. Z. | | 296 | e 9 40 | + 2 | _ | _ | * *** | _ | |
| Durham | 55.7 | 318 | 9 49 | + 9 | 17 36 | +10 | | | |
| Aberdeen | 55.8 | 321 | i 30 57 | PKKP | e 21 27 | SS | i 34 17 | 2 | e 26.7 |
| 21 DOLGOCII | 000 | ~ | | | | | | - 5 | |
| Matusiro | 56.4 | 64 | i 9 43k | - 2 | 17 37 | + 1 | 21 12 | SS | e 30·0 |
| Relizane | 57.6 | 296 | e 9 50 | - 4 | e 10 12 | 2 | e 10 46 | $P_{c}P$ | |
| Tamanrasset z. | 57.6 | 279 | e 9 51 | - 3 | e 17 52 | + 1 | e 11 54 | \mathbf{PP} | |
| Alicante | 57.7 | 299 | 9 54 | - 1 | 17 52 | - 1 | 12 6 | PP | e 27.8 |
| Rathfarnham Castle | | 317 | i 9 59 | - 2 | i 18 10 | + 6 | e 13 1 | 3 | e 29·4 |
| Toledo | 60.0 | 301 | 10 9 | - 2 | 18 11 | -12 | e 19 49 | ScS | |
| Magadan | 60.1 | 35 | e 10 11 | õ | 200 Million (| | | ~~~ | - |
| Granada | 60.4 | 298 | e 10 40k | +27 | 18 44 | +16 | 23 32 | 5 | i 34.8 |
| Malaga | 61.1 | 298 | e 10 9 | _ · · · · · · | i 14 41 | PeS | i 12 55 | \dot{PP} | 34.0 |
| Scoresby Sund | 62.8 | 338 | e 10 28 | - 2 | 1 11 11 | 1 65 | 1 12 00 | | 31.4 |
| Scoresby Sand | 02 0 | 000 | 6 10 20 | | 000000 | () (| 2 | 843-102 | 01.2 |
| Pretoria z. | 68.4 | 220 | e 11 3 | - 3 | | - | - | - | 2277 |
| Kimberley z. | 72.6 | 221 | i 11 28k | - 3 | | | | _ | |
| Resolute | 75.2 | 356 | e 11 43 | ⊸ 3 | e 21 27 | + 2 | e 14 35 | PP | e 38·2 |
| M'Bour | 80.4 | 281 | i 12 17 | + 2 | - | | i 12 25 | PcP | |
| College | 81.0 | 15 | i 12 16 | - 2 | e 22 33 | +6 | | | e 40·4 |
| | | | | 1 | | 100 | | | |
| Shawinigan Falls | 96.8 | 335 | e 13 36k | + 2 | - | | - | - | - |
| Kirkland Lake | 97.8 | 340 | e 13 38 | 0 | _ | - | | 33.77 | - |
| Hungry Horse | 102.0 | 3 | e 14 3 | + 6 | e 17 9 | 3 | e 18 2 | PP | |
| Rapid City | 106.1 | 355 | e 17 40 | 3 | | 200 | e 18 40 | \mathbf{PP} | |
| Boulder | 110.2 | | | \mathbf{PP} | | - | | - | |
| Eureka | 110.7 | 5 | e 17 58 | 9 | 9 <u>0</u> 01 | <u> </u> | e 19 5 | \mathbf{PP} | - |
| China Lake | 114.2 | 7 | e 18 12 | [-29] | - | | | 200 (100) | |
| Woody | 114.2 | 8 | e 18 10 | [-31] | = | | | 5-116 | |
| Tueson | 118.2 | 1 | e 18 51 | [+2] | | | e 19 53 | PP | e 68·0 |
| La Paz | 139.5 | 280 | e 19 30 | i õi | | | C 10 00 | 1.1 | e 69·4 |
| Lat Paz | 149.9 | 200 | 0 10 24 | 1 01 | | | 0 99 50 | DD | 000 |

May 13d. 14h. 33m. 59s. Epicentre 85°.3N. 85°.7E.

Huancayo

A = +.0062, B = +.0822, C = +.9966; $\delta = +1$; h = -14; D = +.997, E = -.075; G = +.075, H = +.994, K = -.082.

| | | Λ | Az. | P. | O-C. | s. | O-C. | Su | pp. | L. |
|-------------------|------|------------|--------|---------|--|--|---------------|---------|---------------|--------|
| | | 0 | 0 | m. s | | m. s. | s. | m. s. | | m. |
| Tiksi | | 15.4 | 125 | i 3 3. | 1978 - J. H. H. 1988 - L. L. 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 - 1988 | e 3 47 | \mathbf{PP} | e 3 54 | PPP | 2335 |
| Resolute | | 20.1 | 0 | e 4 3 | | e 8 25 | $\hat{+}$ 6 | e 12 23 | PcS | 11.3 |
| | | 20.8 | 257 | e 4 4 | | 6 0 20 | 1 0 | i 4 53 | \mathbf{PP} | |
| Kiruna | | | | | Later Charles Charles College | | | 1 4 00 | | |
| Scoresby Sund | z. | 21.5 | 299 | e 4 59 | | | - | | - | |
| Skalstugan | | 25.6 | 263 | i 5 40 |) + 8 | | | | | · · |
| College | | 28.3 | 46 | i 5 55 | 5 - 2 | e 10 39 | - 4 | | | e 12·7 |
| Upsala | | 28.9 | 256 | 16 S | | | - | - | - | 7 |
| Moscow | | 31.5 | 234 | e 6 3: | D. 10. T. | | - | | _ | |
| Irkutsk | | 33.5 | 159 | e 6 38 | - 5 | e 14 27 | SSS | e 7 54 | PP | |
| Kabansk | | 33.8 | 157 | e 6 41 | 5 75.0 | | | | | |
| | | 1012223333 | 100000 | 100 0-0 | | | | | | |
| Kyakhta | | 35.4 | 157 | e 6 58 | 3 - 2 | - | | | _ | - |
| Jena | Z., | 38.2 | 260 | e 7 29 | | e 7 48 | ? | e 8 11 | 3 | |
| Uccle | 1000 | 38.9 | 267 | e 8 29 | | | - | | - | - |
| Stuttgart | | 40.5 | 262 | e 7 4: | | - | - | e 7 51 | 8 | |
| Strasbourg | | 40.8 | 263 | e 7 5 | | | 200 | e 8 8 | 8 | |
| Detablotte | | 100 | 7.30 | ~ | | | | | | |
| Paris | | 41.0 | 269 | i 7 56 | +10 | i 8 7 | 3 | e 8 23 | 8 | _ |
| Besançon | | 42.3 | 265 | e 8 7 | +10 | 7 (17 (17 (17 (17 (17 (17 (17 (17 (17 (1 | - | e 9 50 | PcP | _ |
| Simferopol | | 42.4 | 236 | 8 9 | +11 | | _ | | - | |
| Frunse | | 42.7 | 192 | e 8 (| 0 | - | _ | e 9 46 | \mathbf{PP} | |
| Clermont-Ferrance | 1 | 44.0 | 267 | e 8 21 | +10 | _ | | | - | |

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| | | ٨ | ۸ | | | 0 0 | | 0 0 | | | |
|--------------------|----------------|------|----------------------|---|----|---------------|---------|------|----------|---------------|----------------|
| | | Δ | Az. | 0.0000000000000000000000000000000000000 | Ρ. | 0-c. | s. | o-c. | Su | pp. | L. |
| | | 0 | 0 | | 8. | 8. | m. s. | 8. | m. s. | ACCEPTANT . | \mathbf{m} . |
| Tashkent | | 44.4 | 198 | e 8 | 15 | + 1 | - | | e 9 58 | \mathbf{PP} | |
| Baku | | 46.1 | 218 | e 10 | 38 | \mathbf{PP} | e 18 49 | SS | | | |
| Hungry Horse | | 46.3 | 18 | e 8 | 28 | - 1 | | 1222 | | - | |
| Erevan | | 46.6 | 224 | e 8 | 39 | + 7 | _ | - | | | |
| Kirkland Lake | | 46.6 | 347 | e 8 | 38 | + 6 | | *** | - | - | |
| Shawinigan Fal | lls | 48.0 | 340 | e 8 | 41 | _ 9 | - | | | | |
| Rapid City | 70700 | 50.8 | 8 | e 9 | 4 | õ | | | (7.E.) | | |
| Boulder | | 54.8 | 10 | e 9 | 31 | - 3 | | | | _ | |
| Eureka | | 55.1 | 20 | i 9 | | - 3 | | | a 10 40 | n n | - |
| Jerusalem | | 55.5 | 233 | i 9 | | $^{-}_{+}$ 8 | _ | | e 10 40 | P_{cP} | |
| O CL IDSCICLL | | 00.0 | 200 | 1.0 | #1 | - 0 | | - | i 11 50 | \mathbf{PP} | |
| Quetta | z. | 55.6 | 200 | e 9 | 36 | - 4 | | _ | _ | - | * |
| Boulder City | | 58-6 | 20 | e 10 | 8 | + 7 | - | | | | - |
| China Lake | | 58.7 | 22 | e 10 | 1 | - 1 | - | _ | - | _ | - |
| Fayetteville | | 58.8 | 0 | i 9 | 59 | - 3 | | · · | | _ | _ |
| Isabella | | 58.8 | 23 | e 10 | | - 2 | _ | 1 | _ | | |
| Woody | | 58.8 | 23 | i 9 | 59 | - 3 | | | 86-5 | 9 <u>2</u> | 922 |
| Pasadena | | 60.4 | 23 | e 10 | 11 | - 2 | - | | | | |
| Palomar | | 61.2 | 22 | i 10 | 17 | - 2 | | | | _ | |
| Barratt | | 61.9 | $\tilde{2}\tilde{1}$ | e 10 | 21 | - 3 | | | = | 24105 | V |
| Tucson | | 62.4 | 16 | i 10 | 25 | 7.5 | - | | - | - | - |
| Tamanrasset | 17 | 66.6 | 262 | | | | | | | • | 1 |
| r contraint descri | \mathbf{z} . | 00.0 | 202 | e 10 | 35 | -19 | | | e 11 3 | 3 | |

May 13d. 15h. 47m. Epicentre 48°.0N. 23°.9E.
Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 63.

May 14d. 6h. 20m. Epicentre 42°·1N. 77°·5E. Magnitude 4. Loc. cit., 13d. 15h., pp. 46, 47.

May 14d. 23h. 40m. 19s. Epicentre 36° 5N. 141° 2E. Depth about 30km. Intensity II-III at Kakioka, Shirakawa, and Utunomiya. Seismo. Bull. of the Japan Met. Agency for May, 1956, Tokyo, 1956, p. 14, with macroseismic chart.

May 15d. 4h. 47m. 44s. Epicentre 43°·4N. 147°·1E. Depth about 50km. Intensity II-III at Nemuro.

Loc. cit., May 14d., pp. 14, 15.

May 15d. 15h. 47m. 7s. Epicentre 36°·1N. 139°·9E. Depth about 50km. Intensity IV at Kakioka; II-III at Tokyo, Utunomiya, Mito, Kashiwa, and Onahama. Loc. cit., May 14d., pp. 15, 16, with macroseismic chart p. 15.

May 15d. 8h. 13m. 5s. Epicentre 13°.3S. 76°.3W. Depth of focus 0.010.

A = +.2306, B = -.9458, C = -.2285; $\delta = -7$; h = +6; D = -.972, E = -.237; G = -.054, H = +.222, K = -.974.

| | | Δ | Az. | P. | 0-C. | s. | 0 - C. | Su | ipp. | L. |
|--------------|---------|------|-----|--|--|---------|---------|----------------|---------------|-------|
| | | ۰ | • | m. s. | 8. | m. s. | s. | m. s. | | m. |
| Huancayo | 7 | 1.6 | 36 | i 0 30 a | + 2 | | | | | |
| La Paz | - 0.000 | 8.5 | 113 | i 2 1 | - ī | i 3 35 | - 2 | 1 3 55 | SS | 4.5 |
| Bogota | | 17.9 | 7 | î 4 9 | + 5 | i 7 37 | +20 | i 12 13 | Pes | 4 3 |
| Galerazamba | | 24.0 | 2 | i 5 51 | PP' | i 10 23 | | | res | |
| Dominica | | 32.0 | 28 | Colored Colore | | 1 10 20 | SS | i 6 54 | 1 | _ |
| Dominica | | 32.0 | 20 | i 6 18 a | - 1 | _ | | | - | - |
| San Juan | | 33.1 | 18 | e 6 30 | + 1 | - | - | e 8 7 | PPP | - |
| Columbia | | 47.3 | 355 | e 8 25 | - î | _ | _ | | | - |
| Chapel Hill | | 49.1 | 357 | i 8 39 | ñ | | | | 3222 | |
| Fayetteville | | 52.0 | 342 | i 9 1 a | ŏ | | | e 9 18 | nD. | _ |
| Morgantown | | 52.8 | 356 | e 9 6 | - 2 | | | 6 9 10 | \mathbf{pP} | - |
| Morgantown | | 32.0 | 330 | 69 0 | - 2 | _ | - | _ | | - |
| Tucson | | 56.1 | 325 | i 9 32 | 0 | - | - | e 9 51 | \mathbf{pP} | |
| Ottawa | | 58.5 | 0 | i 9 49a | | - | - | ~ <u>~</u> ~ . | | 53.50 |
| Brébeuf | | 58.6 | 2 | i 9 50a | The state of the s | | | | | - |
| Halifax | | 58.8 | 11 | i 9 53 a | | | 1 2 2 2 | 1.00 | 200 | |
| Boulder | | | 334 | The state of the s | T 9 | | _ | - | - | |
| Domiter | | 59.6 | 004 | i 9 56 | U | - | - | The state of | | - |

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1956

| | Δ | Az. | P. m. s. | o-c. | S. m. s. | O - C. | | pp. | L. m. |
|--|---------------------------------------|------------------------|-----------------------------|---|--|-----------------------|--------------------|---------------------|----------|
| Shawinigan Falls Barratt | $59.7 \\ 59.9$ | 321 | i 9 57 a i 9 57 k | | | s. — | m. s. 10 16 | $^{\mathrm{pP}}$ | |
| Palomar Seven Falls Boulder City | $60.4 \\ 60.4 \\ 61.1$ | $\frac{321}{4} \\ 325$ | i 10 2 i 10 2a i 10 7 | + 1 | 18 16 | + 9 | i 10 21 | pP | _ |
| Riverside | 61.2 | 321 | i 10 7 | | - 10 10 | D | e 10 26 | pP | 10/11/20 |
| Kirkland Lake | 61.3 | 357 | e 10 6a | - 2 | e 10 46 | sP | i 10 27 10 25 | $_{ m pP}^{ m pP}$ | = |
| Pasadena Rapid City | $\substack{61 \cdot 8 \\ 62 \cdot 2}$ | $\frac{321}{338}$ | i 10 12 i 10 14 | + 1 | i 18 35 | +10 | i 10 32 e 10 34 | $_{ m pP}$ | e 26·4 |
| China Lake | 62.6 | 323 | i 10 18k | + 2 | | | e 10 37 | pP | - |
| Isabella Salt Lake City | 63·0 63·1 | $\frac{322}{330}$ | i 10 19k i 10 20 | 9 | | | i 10 38 e 11 9 | $_{ m PcP}^{ m pP}$ | |
| Woody | $63 \cdot 2$ | 322 | i 10 21k | + ĭ | | | | | |
| Tinemaha Eureka | $63.8 \\ 64.2$ | $\frac{323}{327}$ | i 10 25 i 10 28 | $\begin{array}{ccc} + & 1 \\ + & 1 \end{array}$ | | | e 10 43 i 10 46 | $_{ m pP}^{ m pP}$ | |
| Fresno z. | and the control of | 322 | i 10 28 | - 1 | | 35000 | | - | - |
| Lick z. Reno z. | 5.4 6.42 6.42 (19. 4a) 1 | $\frac{322}{324}$ | i 10 39 e 10 42 | $\begin{array}{ccc} + & 1 \\ + & 1 \end{array}$ | | | | | |
| Bozeman | 66.6 | 334 | i 10 42 | Ô | | - | i 11 3 | pP | - |
| Berkeley z. | 66-7 | 322 | e 10 43 | 0 | | - | | _ | _ |
| Mineral z. | | 324 | e 10 51 | 0 | | | | _ | - |
| Shasta z. Hungry Horse | 68.6 70.0 | $\frac{324}{334}$ | e 10 54 i 11 4 | 0 | _ | | e 11 22 | pP | 1 |
| Seattle | 73.3 | 330 | i 11 25 | $+$ $\stackrel{+}{2}$ | e 11 41 | $P_{c}P$ | e 11 22 e 11 58 | pP | |
| Victoria | 74.4 | 330 | e 11 30 | $+$ $\tilde{1}$ | | _ | | - | - |
| Granada | 84.6 | 50 | e 12 45k | pP | | | 15 52 | PP | |
| Tamanrasset z. | | 66 | e 12 43 | + 4 | e 23 9 | - 2 | i 13 1 | \mathbf{pP} | 47.9 |
| Resolute Matusiro | 88.6 141.4 | $\frac{355}{313}$ | e 12 42k e 19 22 | [+ 2] | $\begin{array}{cccc} e & 23 & 15 \\ & 22 & 31 \end{array}$ | $_{\mathrm{PP}}^{-4}$ | e 28 58 19 37 | $_{ m pP'}^{ m SS}$ | e 66·0 |
| Quetta z. | AND THE RESERVE OF THE PARTY. | 58 | e 19 21 | 1 + 21 | | 11 | 19 31 | pr | C 00.0 |
| Poona | 150.8 | 76 | e 19 40 | 1 + 51 | - | | e 20 3 | pP' | _ |

May 15d. 18h. 34m. 11s. Epicentre 37°·3N. 20°·9E.

Felt on Zante (intensity V at Zakynthos) and in Elis (IV + at Letrinoe; III + at Lechaena, Gastouni, Amalias, and Pyrgos).
Seismo. Institute Bull. for 1956, Athens, 1957, p. 36.

A = +.7450, B = +.2845, C = +.6034; $\delta = +6$; h = -1; D = +.357, E = -.934; G = +.564, H = +.215, K = -.797.

| | Δ | Az. | P. | O-C. | s. | O-C. | Su | pp. | L. |
|-----------------|--------------|-------------|---------|------------------|--------|-------|------------|---------------------------|---------|
| F001313 | | 0 | m. s. | 8. | m. s. | S. | m. s. | | m. |
| Athens | 2.3 | 72 | i 0 45 | - 1 _g | e 1 17 | + 1. | | 9 | |
| Reggio Calabria | 4.3 | 283 | e 1 3 | - 5° | i 1 51 | - 9° | - | - | |
| Taranto | 4.3 | 319 | 1 8 | ŏ | e 1 53 | - ž | e 2 27 | Se | |
| Messina | 4.4 | 284 | e 1 7 | - š | i 1 54 | - 8 | ĭ 1 19 | P* | |
| Belgrade | 7 ⋅ 6 | $35\hat{7}$ | e 1 54a | – ĭ | e 3 20 | - 3 | e 2 28 | Pg | |
| Rome | 8.0 | 308 | e 2 24 | + 4* | e 3 54 | - 8* | (<u>1</u> | | e 4.8 |
| Bucharest | 8.1 | 27 | 2 4 | + 2 | 4 26 | - 2z | 3 47 | S | |
| Timisoara | 8.5 | 1 | e 2 34? | + 5* | i 4 44 | + 3 = | i 2 42 | $\mathbf{P}_{\mathbf{g}}$ | _ |
| Campulung | 8.6 | 20 | 2 12 | + 3 | | | e 2 56 | $P_{\mathbf{g}}$ | |
| Szeged | 9.0 | 356 | 2 40 | + 2* | 4 6 | + 8 | 2 57 | Pg | 5.4 |
| Kalossa | $9 \cdot 4$ | 352 | 2 36 | +18 | 4 5 | - 2 | 5 5 | S. | 5.4 |
| Focsani | 9.6 | 27 | 2000 | | e 4 37 | -12* | e 4 40 | S. | |
| Kecskemet | 9.7 | 355 | | - | 4 24 | + 9 | 5 26 | S_g | - |
| Florence | 9.8 | 314 | e 2 56 | P* | i 4 58 | + 3* | | - | i 6.5 |
| Prato | 10.0 | 314 | e 2 45 | PPP | e 4 39 | ss | | | - |
| Triest | 10.0 | 330 | e 2 4 | -23 | i 4 15 | - 7 | i 5 23 | Sg | |
| Bologna | 10.2 | 318 | e 3 5 | P* | e 5 1 | - 6* | - | _ | e 6 · 0 |
| Budapest | 10.3 | 353 | e 3 7 | P* | 5 17 | + 7* | e 3 19 | P_g | 7.0 |
| Hurbanovo | 10.8 | 350 | e 4 9 | 3 | 5 33 | s* | i 6 8 | Ŝ, | - |
| Iasi | 11.1 | 24 | 2 42 | - 1 | e 5 13 | SSS | e 2 52 | \overrightarrow{PP} | |

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1956

| | \triangle A | z. P. | O -C. | s. o-c | | L. |
|---|--|--|--|---|--------------------------------------|------------------------------------|
| Bratislava Pavia Skalnate Pleso Monaco z. Ksara | $\begin{array}{ccc} 11.9 & 3 \\ 11.9 & 3 \\ 12.1 & 3 \end{array}$ | o m. s. 47 i 3 2 15 — 58 e 2 50 66 e 2 59 61 e 3 24 | $\begin{array}{c} \mathbf{s.} \\ \mathbf{PP} \\ - & \frac{4}{2} \\ \mathbf{PPP} \end{array}$ | m. s. s. i 6 11 Ss e 5 45 SSS e 5 7 - 2 e 6 0 SSS | e 6 46 ? e 3 13 PPP | m. — i 6·4 |
| Jerusalem Prague Zürich Basle Cheb | $ \begin{array}{cccc} 13.6 & 3 \\ 13.6 & 3 \\ 14.2 & 3 \end{array} $ | 11 i 3 9 42 e 3 17 22 e 3 20 20 e 3 31 37 e 4 20 | $^{+}_{+}\overset{0}{\overset{3}{}}_{7}$ | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 3 39 PPP | - |
| Neuchatel Algiers Univ. z. Stuttgart Karlsruhe Besançon | $14 \cdot 3 	 2 \\ 14 \cdot 3 	 3 \\ 14 \cdot 8 	 3$ | 18 e 2 50 73 e 3 23 27 3 23 26 e 3 38 17 e 3 35 | $ \begin{array}{r} -34 \\ -3 \\ -3 \\ +6 \\ +1 \end{array} $ | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | | e 8·8 e 7·4 |
| Warsaw Jena Clermont-Ferrand Relizane Alicante | 16.5 2 |)8 e 3 49 | $\begin{array}{cccc} + & 1 \\ - & 2 \\ + & 4 \\ - & 2 \end{array}$ | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | e 4 4 PPP e 3 51 PP e 4 15 PPP | e 9·8 e 8·4 e 8·7 |
| Paris Hamburg Uccle De Bilt Witteveen z. | 17.7 	 31 $18.0 	 31$ $18.0 	 32$ $18.5 	 32$ $18.5 	 33$ | 24 e 4 20 28 e 4 19 | $^{+}_{+}\overset{0}{\overset{4}{\overset{7}{}}}_{0}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 4 30 PPP e 4 35 PPP = = | e 9·4 e 10·2 e 8·8 e 10·3 |
| Copenhagen Granada Tamanrasset z. Toledo Malaga | $ \begin{array}{r} 19 \cdot 3 & 34 \\ 19 \cdot 5 & 27 \\ 19 \cdot 6 & 25 \\ 19 \cdot 7 & 28 \\ 20 \cdot 2 & 27 \\ \end{array} $ | 7 i 4 33k 27 e 4 33 5 i 4 32 | $ \begin{array}{rrr} $ | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | i <u>4 47 PP</u> i <u>8 21 SS</u> | 10·4 12·4 10·1 |
| Kew Upsala Helsinki Rathfarnham Castle Skalstugan | 20.7 32 22.7 35 23.1 24.8 31 26.9 35 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $^{+}$ 7 $^{+}$ 1 $^{+}$ 2 $^{-}$ 1 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 5 8 PP i 5 30 PP i 5 55 } | e 12·3 e 15·3 |
| Kiruna Quetta Lwiro Resolute Kimberley z. | | 4 e 10 15 | $ \begin{array}{r} -2 \\ -10 \\ +3 \\ -2 \\ -2 \end{array} $ | | e 7 31 P | e 38·2 |
| San Juan Rapid City Fayetteville Hungry Horse Bozeman | 76.8 28 $84.5 32$ $85.4 31$ $85.8 33$ $86.8 32$ | 3 e 12 39 3 i 12 44k 2 e 12 42 | $^{+}_{+}$ $^{2}_{3}$ $^{+}_{+}$ $^{0}_{6}$ | | | = |

May 15d. 22h. 56m. 53s. Epicentre 37°.4N. 20°.9E.

Felt in Zante (intensity V at Zakyrthos), in Elis (IV at Pyrgos), and in Messinia (III at Kyparissia). Seismo. Institute Bull. for 1956, Athens, 1957, p. 36.

A = +.7440, B = +.2841, C = +.6048; $\delta = +3$; h = -1; D = +.357, E = -.934; G = +.565, H = +.216, K = -.796.

| | | Δ. | Az. | m. s. | o – c. | s. m. s. | O -C. s. | m. s. | р. | L. m. |
|-------------------------------------|----|-------------------|-------------------|---|--|----------------------------|---|----------------------------|----------|----------|
| Athens Reggio Calabria | | 4.2 | $\frac{74}{281}$ | e 0 42 e 1 3 | - 4° | i 1 21 i 1 51 | $\frac{+}{-}\frac{5\pi}{6}$ | | _ | |
| Taranto Messina Sofia | z. | 4·2 4·3 5·6 | 318 282 18 | e 1 7 e 1 6k i 1 25 | - 2 - 2 | e 3 19 i 1 55 i 2 36 | - 5 + 3 | e 1 26 | Pg Pg | |
| Belgrade Rome | | 7·4 7·9 | $\frac{357}{307}$ | e 1 49 a e 2 14 | - 3 - 4* | e 4 6 e 3 34 | + 2 ₈ + 4 | i 2 27 e 4 4 | Pg S* | |
| Bucharest Campulung Timisoara | | 8·0 8·4 8·4 | 28 20 1 | $\begin{array}{cccc} 2 & 3 \\ e & 2 & 29 \\ e & 2 & 31 \end{array}$ | $^{+}_{+} \overset{3}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{$ | e 4 45 e 3 42 | $^{+}_{+}$ $^{1}_{8_{8}}$ $^{-}$ 1 | $\frac{1}{4} \frac{4}{37}$ | Sr. | |

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O-C.

Supp.

m. s.

m.

4.4

5.4

6.5

5.6

 $6 \cdot 1$

 $6 \cdot 3$

6.8

6.6

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| Tunis Szeged Kalossa Focsani Kecskemet | | 8·6 8·9 9·2 9·6 | $269 \\ 356 \\ 352 \\ 28 \\ 355$ | $\begin{array}{c} 2 & 13 \\ 2 & 51 \\ e & 2 & 33 \\ e & 3 & 37 \\ 3 & 12 \\ \end{array}$ | + 17 s + 17 s + 17 s | $\begin{array}{c} \mathbf{e} & 3 & 49 \\ 4 & 49 \\ 4 & 51 \\ \mathbf{-4} & 22 \end{array}$ | $+\frac{1}{5g}$ $-\frac{13g}{10}$ | e 2 27 e 4 22 e 3 44 | P* * * | e |
|--|----|--|-----------------------------------|--|--|--|---|---|------------------|-------------|
| Florence Triest Prato Bologna Budapest | | $9.7 \\ 9.8 \\ 9.9 \\ 10.2 \\ 10.2$ | $314 \\ 329 \\ 314 \\ 317 \\ 353$ | e 2 56 e 2 8 i 2 49? e 2 42 2 29 | $^{+\ 6*}_{-\ 16} \ ^{+\ 24}_{+\ 11} \ ^{-\ 2}$ | $\begin{array}{ccccc} i & 4 & 10 \\ i & 4 & 4 \\ i & 4 & 25 \\ e & 4 & 22 \\ & 4 & 17 \end{array}$ | $ \begin{array}{r} -5 \\ -13 \\ +5 \\ -5 \\ -10 \end{array} $ | $\begin{array}{r} - \\ 5 \\ 9 \\ - \\ 4 \\ 2 \\ 59 \end{array}$ | s* Ss P* | i e |
| Hurbanovo Iasi Bratislava Pavia Skalnate Pleso | | 10·7 11·0 11·1 11·8 11·8 | $350 \\ 24 \\ 347 \\ 315 \\ 358$ | $\begin{array}{c} -2 & 40 \\ 2 & 40 \\ e & 4 & 7 \\ e & 2 & 47 \end{array}$ | $-\frac{2}{3}$ $-\frac{2}{6}$ | 4 39 e 3 26 i 4 55 e 5 42 i 6 11 | 9 + 6 SSS Sg | e 5 31 e 2 54 i 3 50 e 4 39 | Sg. 9 | e e i |
| Monaco Ksara Jerusalem Prague Zürich | z. | $12.1 \\ 12.7 \\ 13.0 \\ 13.5 \\ 13.5$ | $306 \\ 102 \\ 111 \\ 342 \\ 322$ | e 2 57 e 3 14 i 3 7 e 3 17 e 3 29 | $^{+}_{-}\overset{0}{\overset{2}{\overset{2}{2}}}_{2}^{+}$ | e 4 8 i 5 50 i 5 17 i 6 9 e 6 7 | ${\mathbf{ss}}^{2}_{-18}$ | e 3 10 e 3 26 i 6 24 | PP PPP SSS | e i |
| Basle | | 14.1 | 320 | e 3 37 | PP | i 5 7 | 2 | 16 19 | | |

 $7 \cdot 3$ 8.8 Cheb 34 PP16 +1110 22 14.1 337 1 3 13 e 9.0 317 e 3 14.1 30 Neuchatel PPe 7.4 e 6 e 6 e 3 $14 \cdot 2$ 327 Stuttgart e 3 PPe 3 14.3 273 Algiers Univ. e 8·1 PPe 3 SS 47 35 30 14.7 324e 6 + Strasbourg e 5 24 -5433 e 5 316 e 3 14.8 Besançon i 3 PP SS 6 326 e 3 34 a + 14.8Karlsruhe e 8·1 30 88 PPe 6 14.8 Warsaw e 8·1 PP e 3 e 6 35 15.1 35 337 -Jena 15.7308 e 3 47 3 Clermont-Ferrand PPP 3 16.5 270 e 3 57 + Relizane e e 8.6 PP 15 280 i 3 55 - 16.9Alicante e 11·1 32 + 25PP7 316 11 17.6 Paris e e 10.6 PPP39 17.9338 Hamburg e 9·1 e 7 37 17.9324 16 + Uccle e 4 e 10·1 +135418.4 328 + De Bilt i 4 35 PP18.7 276 20 Almeria -9 - 7345 19.2 Copenhagen 12.1 i 4 30k 11 19.5 Granada e 8 e 8 +13e 4 53 \mathbf{PP} i 4 33k 227 19.7 Tamanrasset Z. +1323 e 12 57 285 31 19.7i 4 Toledo 11.9 i 8 i 5 PPP27 i 4 35 a 17 20.2 276 + Malaga e 11·1 e 5 PP e 8 29 20.6 320e 4 49 Kew i 5 PP34 i 9 22.6 356 i 5 Upsala PP i 5 34 i 9 12 $23 \cdot 0$ Helsinki P i 5 18 282 i 5 12k $23 \cdot 7$ Lisbon Z. e 16·1 24.7319 i 5 28 Rathfarnham C. 26.7351 i 5 40 Skalstugan e 16.8 e 6 12 30.5 Kiruna 750 38.6 87 24 Quetta e 7 37 339 Scoresby Sund 40.0 168 40.1 e 7 39a Lwiro e 33·3 60.6 344 e 10 12 Resolute 176 i 10 48k 65.9 Kimberley z. 175 i 11 18a 70.5 Grahamstown \mathbf{z} . 355 e 11 58 77 - 7College 3 84.4 323 e 12 39 Rapid City E. 3 85.4 313 i 12 43 Fayetteville-PP e 16 85.7 332 e 12 41 Hungry Horse 46.8 2 86.346 e 12 43 Matusiro + 3 86.7 328 e 12 50 Bozeman e 13 22 2 328 93.8Eureka

May 16d. 20h. 12m. 34s. Epicentre 35°66N. 141°25E. Depth 40-60km.
Intensity IV at Tyosi: II-III at Kakioka.
Seismo. Bull. of the Japan Met. Agency for May, 1956, Tokyo, 1956, pp. 16, 17, with macroseismic chart p. 16.

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May 16d. 22h. 10m. Epicentre 24°·08. 178°·5E. Depth of focus 600km.
Seismo. Report for 1956, New Zealand Department of Scientific and Industrial Research
No. E-137, Wellington, New Zealand, Wellington, 1960, p. 36.

May 17d. 1h. 0m. 53s. Epicentre 36°·2N. 140°·95E. Depth about 30km. Intensity IV at Kakioka: II-III at Mito, Utunomiya, and Tukubasan. Loc. cit., May 16d., pp. 18, 19, with macroseismic chart p. 18.

May 17d. 6h. 0m. 2s. Epicentre 16°.5S. 73°.4W. Depth of focus 0.005.

A = +.2741, B = -.9193, C = -.2823; $\delta = -6$; h = +5; D = -.958, E = -.286; G = -.081, H = +.271, K = -.959.

| 5-24/6 | | ۵ | Az. | n | P. i. s. | O - C. | | O -C. | | ipp. | L. m. |
|--|----------------|--|--|--------------------------------------|-------------------------------------|--|--|------------------------------------|---|----------------------------------|---------------------------|
| Huancayo La Paz Antofagasta Copiapo Santa Lucia | | $\begin{array}{c} 4.8 \\ 5.0 \\ 7.6 \\ 11.2 \\ 17.0 \end{array}$ | $90 \\ 159 \\ 166$ | ė | 1 14k | $+ \frac{3}{0} \\ - \frac{12}{2} \\ - \frac{2}{3}$ | i 2 14 i 2 23 i 2 58 e 4 25 e 7 14 | $^{+}_{+11}^{7}_{-18}^{-18}_{-19}$ | i 1 22 i 4 25 | PPP | e 9·9 |
| Bogota Buenos Aires La Plata Galerazamba St. Lucia | | $21.0 \\ 22.4 \\ 22.9 \\ 27.2 \\ 32.7$ | $\frac{146}{146}$ | i i | 41 a 5 2 5 43 5 43 5 25 | $\begin{array}{c} + & 1 \\ + & 8 \\ - & 1 \\ + & 3 \\ - & 3 \end{array}$ | i 8 37 i 10 45 | $+\frac{12}{-\frac{2}{33}}$ | i 5 14 | p <u>P</u> | $10.0 \\ 11.1 \\ 14.0 \\$ |
| Fort de France Dominica San Juan Tacubaya Columbia | Š R | $33.3 \\ 33.8 \\ 35.4 \\ 43.8 \\ 50.8$ | $\begin{array}{c} 22 \\ 21 \\ 12 \\ 324 \\ 352 \end{array}$ | e 7 i 8 i 8 i 8 | 33a 48 5 | $^{+31}_{-\ 5}_{-\ 4}_{+\ 4}$ | i 8 12 e 16 8 | PP + 3 | $ \begin{array}{c} $ | $\frac{PP}{PcP}$ | e 20·5 |
| Chapel Hill Fayetteville Morgantown Palisades Tucson | | $52.4 \\ 55.9 \\ 56.2 \\ 57.2 \\ 60.3$ | $354 \\ 340 \\ 354 \\ 0 \\ 324$ | i 9 i 9 i 9 c 9 i 10 | 33 k 34 53 | ${ \begin{array}{c} - & 0 \\ - & 1 \\ - & 2 \\ + & 1 \\ + & 1 \end{array} }$ | e 17 18 i 17 33 e 39 36 | + 4 + 1 P'P' | i 9 49 e 9 40 — e 10 21 | $\frac{\mathbf{pP}}{\mathbf{P}}$ | e 30·6 e 28·3 |
| Halifax Brébeuf Ottawa Shawinigan Fal Seven Falls | ls | $61.5 \\ 61.7 \\ 61.7 \\ 62.8 \\ 63.4$ | $\begin{array}{c} 8 \\ 0 \\ 358 \\ 0 \\ 2 \end{array}$ | i 10 i 10 i 10 i 10 | 12 a 20 a | $-\begin{array}{c} {\bf 2} \\ {\bf 0} \\ {\bf -2} \\ {\bf 1} \\ {\bf 0} \end{array}$ | $\begin{array}{r} e & 18 & 29 \\ \hline 18 & 31 \\ \hline 18 & 39 \end{array}$ | $+ \frac{2}{1} \\ + \frac{1}{12}$ | $\frac{-}{19} \begin{array}{c} -0 \\ 10 38 \\ 10 42 \end{array}$ | PS pP pP | 26.4 |
| Boulder M'Bour Barratt Kirkland Lake Palomar | z. | $63.6 \\ 63.6 \\ 64.1 \\ 64.7 \\ 64.7$ | $\begin{array}{r} 333 \\ 64 \\ 320 \\ 355 \\ 320 \\ \end{array}$ | i 10 i 10 i 10 i 10 i 10 | 25 | $\begin{array}{cccc} & 0 & \\ - & 1 & \\ - & 1 & \\ - & 2 & \\ + & 1 & \end{array}$ | e 39 25 e 39 32 | P'P' | i 10 39 i 10 47 i 10 54 | pP pP pP | |
| Duluth Riverside Pasadena Rapid City China Lake | E. | $65.3 \\ 65.4 \\ 66.0 \\ 66.2 \\ 66.8$ | $\begin{array}{c} 346 \\ 321 \\ 320 \\ 337 \\ 322 \end{array}$ | i 10 i 10 i 10 i 10 i 10 | | $^{+16}_{0}_{+1}$ | e 19 31 e 39 30 e 19 10 e 39 20 i 11 41 | +17 P'P' -13 P'P' | i 10 58 i 11 0 i 11 1 i 11 5 | pP pP pP | <u>-</u> |
| Isabella Salt Lake City Woody Tinemaha Eureka | | $67.2 \\ 67.3 \\ 67.5 \\ 68.0 \\ 68.4$ | $\begin{array}{r} 321 \\ 329 \\ 321 \\ 322 \\ 326 \end{array}$ | i 10 e 10 i 10 i 10 i 10 | 50 a 50 51 a 55 a 58 | $\begin{array}{c} + & 1 \\ 0 \\ 0 \\ + & 1 \\ + & 1 \end{array}$ | e 39 28 i 11 24 e 39 23 e 39 14 e 39 9 | P'P' 8P P'P' P'P' | i 11 9 i 11 10 i 11 15 | pP pP pP | |
| Fresno Lick Reno Bozeman Berkeley | z. z. z. | $68.8 \\ 70.2 \\ 70.6 \\ 70.7 \\ 71.0$ | 333 | | 59 9 12 10 13 | $^{+}_{\stackrel{1}{+}}\overset{0}{\overset{1}{\overset{2}{0}}}$ | | = | e 1 <u>1</u> 23 | p <u>P</u> | |
| Butte Mineral Shasta Hungry Horse Corvallis | z. z. | $71.6 \\ 72.2 \\ 72.9 \\ 74.1 \\ 75.9$ | 332 323 323 333 326 | e 11 i 11 i 11 | 19 19 23 31 43 | $ \begin{array}{ccccccccccccccccccccccccccccccccccc$ | e 14 30 | - - PP | e 11 44 | p P | |

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| | | Δ | Az. | 20.000 | Ρ. | o –c. | s. | OC. | | pp. | L. |
|-------------------|-------|--------------|-----|--------------|------------------|---|-----------------------------|------------------|----------------|---------------|-----------------------|
| | | 0 | D | \mathbf{m} | . s. | s. | m. s. | 8. | m. s. | | m. |
| Seattle | | $77 \cdot 4$ | 328 | i 11 | 53 | + 3 | - | | e 12 10 | pP | _ |
| Victoria | | 78.6 | 329 | i 11 | 57 a | + 1 | _ | - | | | - |
| Horseshoe Bay | | 79-1 | 329 | i 12 | | + 2 | | | - | _ | _ |
| Malaga | | 83.8 | 49 | i 12 | | + 5 | c 22 48 | $+8 \\ +9$ | - | ***** | |
| Granada | | 84.6 | 49 | i 12 | $27 \mathrm{k}$ | - 1 | 22 57 | + 9 | 12 39 | $P_{c}P$ | 43.1 |
| Almeria | | 85.2 | 50 | e 12 | 36 | $\begin{array}{c} + & 5 \\ + & 1 \end{array}$ | - | - | | _ | - |
| Toledo | | 85.4 | 46 | i 12 | 33 k | + 1 | 22 56 | . 0 | 15 47 | PP | _ |
| Tamanrasset | Z. | 86.5 | 65 | i 12 | 38 k | + 1 | e 23 29 | +23 | e 12 51 | pP | - |
| Alicante | | 87.3 | 49 | 12 | 28 | -13 | 22 56 | [-4] | 17 50 | PPP | - |
| Kimberley | z. | 89.1 | 120 | 12 | 47 a | - 2 | | | 1000 S | _ | - |
| Reykjavik | z. | 89.5 | 20 | i 12 | 52 | + 1 + 6 | | | i 13 5 | \mathbf{pP} | • |
| Rathfarnham C. | Z. | $90 \cdot 1$ | 34 | i 13 | 0 | + 6 | e 15 43 | 3 | e 13 14 | \mathbf{pP} | |
| Resolute | 07020 | 92.0 | 354 | e 13 | 2 | - 1 | e 23 47 | -10 | c 16 56 | PP | |
| Clermont-Ferrance | 1 | 92.6 | 43 | o 13 | 6 | 0 | | 120 | e 13 18 | pP | 950 |
| Kew | | 92.6 | 37 | e 13 | | - 1 | | _ | - | - | e 46·0 |
| Paris | | 93.3 | 40 | e 13 | 22 | +13 | _ | | 2: | _ | |
| Pietermaritzburg | Z. | 93.4 | 122 | i 13 | 23 a | +14 | _ | (| | | - |
| Witteveen | Z. | 97.1 | 37 | e 13 | 38 | +12 | | | | | _ |
| College | eren. | 98.4 | 335 | i 13 | 30 | - 2 | K arat | | e 17 9 | \mathbf{PP} | - |
| Jena | | 99.5 | 40 | e 13 | 37 | 0 | | - | e 13 49 | pP | _ |
| Jerusalem | | 114.1 | 62 | e 19 | 26 | \mathbf{PP} | - 11 - 11 - 1-10 | | | | |
| Ksara | | 114.8 | 60 | e 20 | 42 | Š | 29 18 | $_{\mathrm{PS}}$ | | _ | **** |
| Quetta | Z. | 141.3 | 62 | e 19 | 22 | [-1] | w-m | | 1.00000 | | 939 1000 - |
| Matusiro | | 145.7 | 312 | i 19 | 33 a | [+ 2] | | - | e 19 54 | pP' | 67.8 |
| Poona | | 148.7 | 81 | e 19 | 45 | [+9] | 2 | | e 20 0 | 3 | |
| Dehra Dun | | 150.5 | 57 | e 19 | 53 | [+14] | 3 | - | 50 | 5- | · |
| Lembang | Z., | 156.8 | 182 | e 19 | | [-11] | | | c 23 44 | \mathbf{PP} | |
| Shillong | z. | 163.6 | 54 | i 19 | 57 | [+ 2] | - | - | | - | - |

May 17d. 20h. 19m. 32s. Epicentre 36°·7N. 56°·8E. Bull, of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 70.

May 17d. 23h. 0m. 14s. Epicentre 36°·5N. 141°·3E. Depth about 40km. Intensity V at Onahama and Tukubasan; IV at Mito, Kakioka, Shirakawa, Utunomiya, Inawasiro, Hukusima, and Wakamatu; II-III at Kashiwa, Tokyo, and Sendai. Seismo. Bull. of the Japan Met. Agency for May, 1956, Tokyo, 1956, pp. 19, 20, with macroseismic chart, p. 19.

May 18d. 22h. 8m. 28s. Epicentre 39°.0N. 22°.8E.

Felt in Thessalia (intensity V + at Aghia, Halmyros, and Ptelcon; V at Pharsala, Trikala and Karditsa; IV at Sophades and Pyli; IV at Argalasti), in Phtiotis (V + at Hypati; V at Amphissa; IV + at Domokos, Stylis, Ladikon, and Lamia; IV at Livanates and Molos; III at Atalanti), Akamania (V at Karpenision; III + at Agrinion and Astakos), and on Euboca Island (IV at Aedipsos; III at Oreoc).

Area of felt shaking about 70,000 sq. km. Not felt at Haghia Anna, Skiathos, or Elasson. Epicentre 39°·5N. 23°·5E. Seismo. Institute Bull. for 1956, Athens, 1957, p. 37.

A = +.7183, B = +.3020, C = +.6268; $\delta = +4$; h = -1; D = +.388, E = -.922; G = +.578, H = +.242, K = -.779.

| | | Δ | Az. | Р. | O-C. | s. | O-C. | Supp. | L. |
|-----------------|----|-------------|-----|----------|-----------|--------|------------------|-----------|----------------|
| | | 0 | . 0 | m. s. | S. | m. s. | s. | m. s. | m. |
| Athens | | 1.3 | 143 | e 0 26 | 0 π | e 0 46 | + 3 _m | i 0 32 ? | . Normal Miles |
| Sofia | | 3.7 | 7 | 1 5 | - 1* | 1 53 | - 1* | i 1 13 Pg | _ |
| Taranto | | 4.5 | 291 | 1 11 | õ | e 1 43 | 3 | e 2 53 F | _ |
| Reggio Calabria | | 5.6 | 263 | e 1 30 | + 3 | i 2 25 | - 8 | | |
| Messina | | 5.7 | 264 | o 1 27 k | - 1 | i 2 38 | + 3 | i 1 36 P* | - |
| Bucharest | | 6.0 | 24 | 1 36 | + 4 | 2 44 | + 1 | i3 4 S* | - |
| Belgrade | | $6 \cdot 1$ | 344 | e 1 33a | - 1 | e 3 5 | 0. | e 1 46 P* | _ |
| Campulung | | 6.5 | 14 | 1 45 | + 6 | e 3 51 | 3 | 2 23 Pc | |
| Timisoara | E. | 6.8 | 351 | e 2 323 | $+16_{g}$ | e 3 21 | - 5* | e 3 55 Sg | _ |
| Focsani | | 7.5 | 25 | e 2 16 | + 5* | | + | e 2 34 Pg | |

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| | Δ | Az. | P. m. s. | O-C. | S. m. s. | o – c. | m. s. | pp. | L. m. |
|---|---|--|---|--|---|---|--|---|---|
| Szeged Kalossa Kecskemet Rome Budapest | 7·5 8·0 8·2 8·4 8·9 | $346 \\ 341 \\ 345 \\ 294 \\ 344$ | e 2 4 e 2 38 e 2 4 e 2 13 | - 9* + 4 - 6g - 2 + 1 | 3 40 c 4 19 e 4 26 e 3 43 e 4 15 | - 7 * - 5 g - 5 g + 20 | e 2 19 e 2 38 e 3 16 e 5 6 | $\frac{\mathbf{P}_{g}}{\mathbf{S}_{g}}$ | 4.0 |
| Iasi Triest Hurbanovo Florence Bratislava | $ \begin{array}{r} 8 \cdot 9 \\ 9 \cdot 4 \\ 9 \cdot 5 \\ 9 \cdot 9 \\ 10 \cdot 0 \end{array} $ | $\begin{array}{c} 22 \\ 318 \\ 341 \\ 303 \\ 338 \end{array}$ | e 2 14 e 2 48 e 2 37 i 2 25 | $^{+}_{-}^{3}_{4}\ ^{+}_{+}^{2}_{12}\ ^{-}_{-}^{2}$ | e 4 2 5 9 e 4 5 e 4 55 i 4 19 | $^{+}_{-}^{7}_{2^{\mathfrak{g}}}_{-}^{5}_{3^{*}}$ | $\begin{array}{cccc} e & 5 & 6 \\ i & 4 & 2 \\ e & 4 & 52 \\ e & 2 & 51 \\ i & 2 & 58 \end{array}$ | Sg S* P* | 5·4 i 6·4 5·0 |
| Prato Bologna Skalnate Pleso Ksara Pavia | $10.0 \\ 10.2 \\ 10.3 \\ 11.8 \\ 11.8$ | $303 \\ 306 \\ 351 \\ 112 \\ 306$ | e 2 45 e 3 9 e 2 41 e 3 12 e 3 9 | +18 P* + 9 +19 +16 | i 5 7 c 4 44 i 5 37 e 5 38 e 5 10 | $^{+6*}_{\mathrm{SS}}^{-2*}_{-32*}$ | e = 1 e = 5 27 | ? Ss | e $\frac{6 \cdot 2}{6 \cdot 2}$ e $\frac{6 \cdot 2}{6 \cdot 9}$ |
| Jerusalem Prague Warsaw Zürich Basle | $12.5 \\ 12.6 \\ 13.3 \\ 13.3 \\ 14.0$ | $122 \\ 335 \\ 355 \\ 314 \\ 312$ | i 3 6 i 3 5 e 3 24 e 3 17 | $^{+}_{+}\overset{4}{\overset{2}{\overset{2}{2}}}_{2}$ $^{-}_{-}\overset{4}{\overset{5}{\overset{2}{}}}$ | i 5 48 e 5 19 e 5 45 e 6 1 | SS - 7 + 3 - 1 + 2 | i 5 41 e 5 51 | | e 7·1 e 8·5 |
| Neuchatel Jena Karlsruhe Strasbourg Besançon | $14.0 \\ 14.3 \\ 14.4 \\ 14.4 \\ 14.7$ | $310 \\ 330 \\ 319 \\ 316 \\ 309$ | e 3 26 e 3 23 e 3 32 e 3 28 e 3 28 | $\begin{array}{cccc} + & 4 & \\ - & 3 & \\ + & 5 & \\ + & 1 & \\ - & 3 & \end{array}$ | e 5 50 e 6 6 e 6 11 e 7 8 e 6 20 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 3 35 e 3 39 e 3 38 i 3 36 | PP PP PP | e 8·0 e 7·7 |
| Algiers Univ. z. Clermont-Ferrand Hamburg Paris Uccle | $15.7 \\ 16.0 \\ 17.0 \\ 17.5 \\ 17.5$ | 268 301 333 311 318 | e 3 43 e 3 50 e 4 4 i 4 8 e 4 7 | $ \begin{array}{r} - & 1 \\ + & 2 \\ + & 3 \\ + & 1 \\ 0 \end{array} $ | e 6 47 = 4 21 | + 8 PP | $\begin{array}{c} { m e} \ { m 4} & { m 2} \\ { m e} \ { m 4} & { m 39} \\ { m i} \ { m 4} & { m 28} \\ { m e} \ { m 4} & { m 14} \end{array}$ | $\frac{PP}{PP}$ | e 8·3 e 9·5 e 8·5 |
| De Bilt Relizane Alicante Kew Toledo z. | $\begin{array}{c} 17.9 \\ 17.9 \\ 18.2 \\ 20.4 \\ 20.7 \end{array}$ | $323 \\ 266 \\ 275 \\ 315 \\ 281$ | e 4 12 e 4 9 e 4 13 i 4 38 i 4 41 a | - 3 - 3 - 3 | e 7 17 i 7 51 | -13 SS | e 4 20 e 4 51 i 4 46 | PP PPP PP | e 9·0 e 9·3 e 10·5 13·1 |
| Granada Upsala Malaga Malaga Tamanrasset z. Rathfarnham C. z. | $20.8 \\ 21.1 \\ 21.5 \\ 21.8 \\ 24.5$ | $\begin{array}{c} 273 \\ 353 \\ 272 \\ 227 \\ 315 \end{array}$ | i 4 47k i 4 45 e 4 17 e 4 57 i 5 20 | $^{+}_{-} {}^{2}_{35} \\ ^{+}_{-} {}^{1}_{2}$ | 8 50 e 8 44 i 8 51 e 9 5 | $^{+17}_{+5}_{+4}$ | i 4 53 e 5 19 e 5 16 | PPP PP PP | i 11·8 e 10·7 |
| Skalstugan Kiruna Sverdlovsk Quetta z. Namangan | $25.4 \\ 28.9 \\ 30.5 \\ 37.1 \\ 37.2$ | $349 \\ 358 \\ 42 \\ 90 \\ 71$ | i 5 28 i 6 0 6 14 c 7 14 7 15 | - 3 - 3 - 3 0 | | | i 5 45 | ? | e 15·3 |
| Frunse Scoresby Sund Lwiro Chatra z. Shillong z. | $38.8 \\ 39.1 \\ 41.4 \\ 54.4 \\ 58.7$ | $\begin{array}{c} 67 \\ 338 \\ 171 \\ 82 \\ 81 \end{array}$ | $egin{array}{cccc} 7 & 31 \\ e & 7 & 28 \\ e & 7 & 51 \\ e & 9 & 29 \\ i & 10 & 0 \\ \end{array}$ | $^{+}$ 3 $^{+}$ 1 $^{-}$ 2 | | | e 9 36 | PP | 20·5 = |
| Resolute Halifax Seven Falls Shawinigan Falls Kimberley z. | $59.5 \\ 61.7 \\ 64.9 \\ 66.3 \\ 67.4$ | $344 \\ 306 \\ 311 \\ 311 \\ 178$ | e 9 56 i 10 19 a e 10 41 a e 10 50 a i 10 59 | $ \begin{array}{r} -11 \\ -3 \\ -2 \\ -2 \\ 0 \end{array} $ | | | | | 32·2 |
| Ottawa Grahamstown Morgantown College Hong Kong E. | $68.7 \\ 72.0 \\ 74.6 \\ 76.2 \\ 77.4$ | $\begin{array}{c} 312 \\ 177 \\ 309 \\ 356 \\ 72 \end{array}$ | i 11 6a i 11 28 i 11 42 e 11 50 14 32? | $-\ \ \ \ \ \ \ \ \ \ \ \ \ $ | | | | | |
| San Juan Columbia Hungry Horse Fayetteville Bozeman Eureka | 77.8 78.8 85.0 85.3 86.1 93.2 | $\frac{305}{333}$ $\frac{314}{330}$ | e 12 5 e 12 37 e 12 38k e 12 44 e 13 24 | $\begin{array}{cccc} + & 4 \\ - & 1 \\ - & 1 \\ - & 2 \\ + & 7 \end{array}$ | | | e 13 0 | <u>-</u> | |

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May 19d. 1h. 30m. 39s. Epicentre 6°-9S. 155°-7E. (as on 1955, September 8d.).

A = -.9049, B = +.4086, C = -.1194; $\delta = +5$; h = +7; D = +.412, E = +.911; G = +.109, H = -.049, K = -.993.

| | | Δ | Az. | C23 C C C C | o –c. | S. m. s. | 0 – C. | | ipp. | L. |
|--|----------------|--|--|---|--|--|-----------------------------------|--|----------------------------------|--------------------------------------|
| Rabaul Nouméa Brisbane Guam Riverview | | $ \begin{array}{r} 4 \cdot 4 \\ 18 \cdot 5 \\ 20 \cdot 6 \\ 23 \cdot 0 \\ 27 \cdot 1 \end{array} $ | 307 147 187 332 188 | e 1 17 i 4 18a i 4 41 e 5 9 | $-{2}\\ +{2}$ | | + 8 + 3 | m. s. i 1 25 i 4 40 — i 5 59 | Pe PP | i 9·0 |
| Melbourne Apia Karapiro Tuai Cobb River | N. N. | $\begin{array}{r} 32.3 \\ 32.7 \\ 35.8 \\ 37.2 \end{array}$ | 196 105 153 152 158 | i 5 45 a i 6 31 e 6 35 e 7 1 e 7 13 e 7 15 | - 1 - 2 - 1 - 2 - 2 - 1 | e 11 48 | - 3 + 2 = | e 6 40 | pP — | e 13·0 i 15·6 |
| Kaimata Wellington Baguio Perth Matusiro | N.E. | $38.1 \\ 38.2 \\ 41.8 \\ 44.7 \\ 46.2$ | $\begin{array}{c} 161 \\ 156 \\ 304 \\ 231 \\ 340 \end{array}$ | e 7 22 i 7 23 i 7 53 i 8 18 8 26a | $\begin{array}{c} 0 \\ 0 \\ 0 \\ + 2 \\ - 2 \end{array}$ | i 14 9 i 14 59 i 15 8 | - 2 + 5 - 7 | i 9 57 i 9 48 i 8 38 | PPP PP | e 19·4 i 22·0 20·8 |
| Macquarie Is. Bandung Lembang Djakarta Hong Kong | z. | 47·5 47·7 47·7 48·5 49·9 | $\begin{array}{c} 178 \\ 267 \\ 267 \\ 268 \\ 307 \end{array}$ | i 8 37 e 8 36 e 8 38 e 8 45 8 59 | $ \begin{array}{r} - & 1 \\ - & 4 \\ - & 2 \\ - & 1 \\ + & 2 \end{array} $ | e 15 47 e 15 51 e 16 5 e 16 7? | $^{+11}_{+15}_{+17}$ | e 18 29 e 18 28 | | |
| Zô-Sè Nanking Honolulu Changchun Peking | | $50.2 \\ 52.3 \\ 53.3 \\ 57.5 \\ 59.2$ | $\begin{array}{r} 321 \\ 320 \\ 57 \\ 335 \\ 325 \end{array}$ | i 8 59 a 9 16 a e 9 39 e 10 3 | $\begin{array}{c} - & 1 \\ + & 1 \\ + & 16 \\ - & 1 \\ - & 2 \end{array}$ | i 16 6 6 = 6 | - 5 - - | i 16 36 i 17 6 | <u>=</u> | |
| Sian Shillong Madras Kodaikanal College | Z. E. | $60.2 \\ 69.8 \\ 77.6 \\ 79.7 \\ 82.8$ | $316 \\ 300 \\ 285 \\ 281 \\ 21$ | e 10 20 i 11 13 e 12 13 i 12 23 | $^{+\ 8}_{-\ 1}$ | e 21 44 e 22 38 | - <u>7</u> | e 28 36 | = = ss | e 34·7 |
| Dehra Dun Poona Bombay Berkeley Lick | z. E. | $82.9 \\ 84.5 \\ 85.5 \\ 88.0 \\ 88.4$ | $302 \\ 289 \\ 290 \\ 52 \\ 52$ | e 12 26 i 12 35 e 12 41 e 12 53 e 12 56 | $-\begin{array}{ccc} & 2 & \\ - & 1 & \\ 0 & 0 & \\ + & 1 & \end{array}$ | i 23 7 i 23 10 e 23 31 | $-\frac{21}{2} \\ -\frac{5}{5}$ | 1 12 46 16 10 | PcP PP | |
| Shasta Mineral Fresno Reno Woody | z. z. z. | $88.4 \\ 88.9 \\ 89.7 \\ 90.1 \\ 90.3$ | 49 49 53 50 54 | i 13 6 i 12 55 e 13 0 e 13 2 e 13 2 | $^{+11}_{-3}_{-1}_{-2}$ | | | e 16 54 | PP | = |
| Isabella Pasadena Tinemaha China Lake Riverside | | $90.6 \\ 90.6 \\ 91.0 \\ 91.3 \\ 91.3$ | 54 56 53 54 56 | e 13 5 i 13 6 e 13 6 e 13 7 e 13 8 | $\begin{array}{cccc} + & 0 \\ + & 1 \\ - & 1 \\ - & 2 \\ - & 1 \end{array}$ | e 16 50 e 23 43 e 16 56 | PP [+ 7] PP | e 30 9 e 16 46 i 16 55 e 38 42 e 31 24 | PKKP PP PP P'P' | e 41·2 |
| Palomar Barratt Quetta Eureka Boulder City | | $91.6 \\ 91.7 \\ 92.3 \\ 93.1 \\ 93.6$ | 57 58 300 51 54 | e 13 22 e 13 30 e 13 12k i 13 16 e 13 18 | $^{+12}_{+20}_{-1}_{-1}$ | i 24 9 e 30 26 3 e 17 28 | 6 PKKP PP | i 17 1 e 16 59 i 23 42 i 38 39 e 38 26 | PP PP SKS P'P' P'P' | <u>-</u> |
| Hungry Horse Butte Salt Lake City Tucson Bozeman | N. | $95.3 \\ 96.1 \\ 96.3 \\ 96.6 \\ 97.2$ | $\frac{42}{44}$ $\frac{50}{58}$ $\frac{45}{45}$ | e 13 37 e 13 32 e 13 31 e 14 38 e 14 0 | $^{+10}_{+1}_{-1}_{+65}_{+24}$ | e 17 23 e 24 43 e 26 25 e 31 59 | $^{\mathrm{PP}}_{-\ \mathrm{SS}}$ | The second secon | PKKP PKKP PP PP P'P' | e 44·7 e 46·5 e 42·4 e 45·6 |
| Resolute Rapid City Fayetteville Kiruna Mobile | E. | 101.7 102.7 110.3 112.2 116.0 | $^{15}_{47}_{54}_{343}$ | e 14 5 e 18 25 i 29 45 i 18 35 e 19 57 | $\begin{array}{c} + & 9 \\ PP \\ PPS \\ [-2] \\ PP \end{array}$ | e 27 23 e 26 22 | PS - { + 2} | e 18 10 = 28 46 e 30 56 | PP PS PKKP | e 51.0 e 48.7 |

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| | | Δ | Az. | m | P. . s. | 0 -C. | s. m. s. | O – C. | m. s. | app. | L. m. |
|--|---------------|--|--|--------------------------------------|---|---|---|---|--|---|--------------------------|
| Scoresby Sund Grahamstown Skalstugan Upsala Ksara | z. | 116.5 117.3 117.6 118.4 118.5 | 359 228 342 337 305 | e 19 i 18 i 18 i 18 i 20 | 51 47 k 46 47 | PP [- 2] [- 3] PP | e 25 34 = e 36 46 | [- 4] = ss | e 26 53 i 29 6 e 32 6 | | = |
| Jerusalem Kimberley Columbia Ottawa Shawinigan Falls | z. | $\begin{array}{c} 119 \cdot 4 \\ 120 \cdot 9 \\ 121 \cdot 3 \\ 121 \cdot 4 \\ 122 \cdot 7 \end{array}$ | $303 \\ 231 \\ 54 \\ 40 \\ 38$ | i 18 i 18 e 19 e 18 e 19 | 53 a 2 53 | $\begin{bmatrix} 1 & 0 \\ -1 & 1 \end{bmatrix}$ $\begin{bmatrix} +7 \\ -2 \end{bmatrix}$ $\begin{bmatrix} +6 \end{bmatrix}$ | e 30 18 30 29 | PS PS | i 20 28 e 20 34 37 35 | $\begin{array}{c} \mathbf{PP} \\ \mathbf{PP} \\ \mathbf{SS} \\ - \end{array}$ | e 55·3 58·0 |
| Copenhagen Seven Falls Hamburg Huancayo Bratislaya | z, | $\begin{array}{c} 123.3 \\ 123.6 \\ 125.8 \\ 125.9 \\ 126.0 \end{array}$ | $336 \\ 336 \\ 110 \\ 327$ | i 18 e 18 i 19 e 19 i 19 | 50 4 a 4 | $ \begin{bmatrix} -1 \\ -10 \end{bmatrix} $ $ \begin{bmatrix} 0 \\ 0 \end{bmatrix} $ $ \begin{bmatrix} 0 \\ 0 \end{bmatrix} $ | i 32 18 | PPS | e 41 39 — i 21 14 | SSS — PP | 58·4 e 73·4 |
| Lwiro Prague Jena Witteveen De Bilt | E. | $^{126 \cdot 2}_{126 \cdot 2}_{127 \cdot 6}_{127 \cdot 6}_{128 \cdot 8}$ | $\begin{array}{c} 262 \\ 330 \\ 332 \\ 337 \\ 337 \end{array}$ | e 19 i 19 e 19 e 19 | 8 4 8 | [+ 0] $[+ 3]$ $[- 2]$ $[+ 1]$ $[+ 1]$ | i 25 58 e 26 0 | $\begin{bmatrix} -\frac{1}{11} \\ -\frac{12}{12} \end{bmatrix}$ | e 21 12 e 21 16 e 21 11 | PP PP PP | e 59·4 |
| Halifax Triest Karisruhe Taranto Uccle | | $\substack{129.3 \\ 129.8 \\ 130.1 \\ 130.2}$ | $\begin{array}{r} 36 \\ 327 \\ 332 \\ 319 \\ 336 \end{array}$ | e 19 e 21 e 19 e 19 | 8 27 12k 53 13 | $[PP \\ PP \\ 0 \\ PP \\ [+1]$ | e 22 36 | PKS | i 22 31 e 21 33 e 22 32 | PKS PP | e 65·4 e 55·4 |
| Strasbourg La Paz Basle Kew Bologna | | 130.4 130.8 131.2 131.3 131.4 | $332 \\ 119 \\ 332 \\ 340 \\ 326$ | e 19 e 19 e 19 i 19 e 20 | $11 \\ 22 \\ 21 \\ 14 \\ 53?$ | $[- 2] \\ [+ 8] \\ [+ 7] \\ [0]$ | e 26 15 i 22 37 i 22 36 | $\frac{[-6]}{PKS}$ | e 21 29 e 21 49 e 22 1 e 21 29 e 22 55 | PP PP PP PKS | e 60·4 63·4 e 58·4 |
| Rathfarnham C. Florence Neuchatel Prato Pavia | z. | $131.4 \\ 131.8 \\ 131.9 \\ 131.9 \\ 132.1$ | $346 \\ 326 \\ 332 \\ 326 \\ 328$ | i 19 i 19 e 19 e 19 e 19 | 15 13 k 17 16 16 | $[- 0] \\ [- 2] \\ [+ 1] \\ [0] \\ [0]$ | i 22 38 i 22 39 e 22 37 e 22 41 e 22 44 | PKS PKS PKS PKS | i 21 46 e 39 35 e 21 4 | PP SS - | e 68·4 |
| Besançon Rome Messina Paris Monaco | z. | $132 \cdot 2$ $132 \cdot 3$ $132 \cdot 4$ $132 \cdot 5$ $134 \cdot 0$ | $333 \\ 323 \\ 317 \\ 337 \\ 329$ | e 19 e 19 i 19 i 19 e 19 | 17 17 k 15 17 | [+ 1] $[+ 1]$ $[- 2]$ $[0]$ | e 22 25 e 22 41 e 22 43 i 22 43 | PKS PKS PKS | 39 25 i 21 41 e 22 3 | SS PP PP | e 60·4 e 69·4 |
| Clermont-Ferrance San Juan Algiers Univ. Alicante Toledo | d z. z. | $134.6 \\ 137.8 \\ 141.2 \\ 142.0 \\ 142.4$ | $333 \\ 70 \\ 324 \\ 329 \\ 334$ | e 19 e 19 e 19 i 19 | $\begin{array}{c} 22 \\ 27 \\ 27 \\ 32 \\ 29 \end{array}$ | [+1] $[-6]$ $[-6]$ $[-6]$ | e 23 36 26 38 | PKS [-4] | e 21 35 22 39 | PP PP | e 67·3 |
| Relizane Almeria Granada Malaga Tamanrasset M'Bour | z. | $143 \cdot 4$ $144 \cdot 1$ $144 \cdot 4$ $145 \cdot 2$ $147 \cdot 2$ $169 \cdot 6$ | $325 \\ 329 \\ 331 \\ 303 \\ 316$ | e 19 e 19 i 19 e 19 i 20 | 56 35 35 k 35 a 44 | [+20] $[-3]$ $[-3]$ $[-5]$ $[+1]$ $[-0]$ | (e 22 21) 44 27 e 33 52 | PP PS | e 20 34 e 20 28 19 46 i 22 41 e 23 10 i 21 37 | PKP. PKP. PP PP PP PKP. | e 22·4 70·8 74·6 |

May 19d. 6h. 25m. Epicentre 14°26'N. 94°29'W. Seismo. Bull. National University of Mexico, Tacubaya, p. 3.

May 19d. 14h. 14m. Epicentre 27°·5N. 52°·5E. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 94.

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1956

May 19d. 20h. 2m. 17s. Epicentre 41°-6S. 42°-2E.

A = +.5556, B = +.5038, C = -.6614; $\delta = -4$; h = -2; D = +.672, E = -.741; G = -.490, H = -.445, K = -.750.

| D | - 1 | .072, P | - | .741; | y =4 | 90, H = - | · '440, J | r =19(| <i>'</i> • | |
|---|------------------|--|---|---|---|---|--|---|---|--|
| | | Δ. | Az. | P. m. s. | o-c. | $_{ m m.~s.}^{ m S.}$ | 0 - C. | m. s. | app. | I m. |
| Grahamstown Pietermaritzbur Kimberley Hermanus Pretoria | z. g z. z. | 14.9 15.4 19.2 19.5 19.6 | $\frac{299}{318}$ $\frac{307}{284}$ $\frac{319}{319}$ | | $-14 \\ -40 \\ -4 \\ -5 \\ -11$ | | <u>-</u> | e 4 45 | - P | |
| Kerguelen Is. Tananarive Perth Colombo Kodaikanal | z. E. | $20.9 \\ 23.1 \\ 58.1 \\ 59.3 \\ 60.9$ | $121 \\ 13 \\ 106 \\ 45 \\ 40$ | $\begin{array}{cccc} \mathbf{e} & 4 & 35 \\ \mathbf{i} & 5 & 8 \\ \mathbf{i} & 10 & 7 \\ & 10 & 14 \\ \mathbf{e} & 10 & 24 \end{array}$ | $ \begin{array}{r} -11 \\ 0 \\ + 9 \\ + 8 \\ + 7 \end{array} $ | $\begin{array}{c} - & - \\ e & 9 & 37 \\ i & 18 & 26 \\ 18 & 7 \\ i & 18 & 48 \end{array}$ | $^{+21}_{+28}_{-7}_{+14}$ | $\begin{array}{c} \mathbf{e} \ 5 & 5 \\ 5 & 53 \\ \mathbf{i} \ 10 & 59 \\ \hline & 19 & 5 \end{array}$ | $\frac{^{\mathrm{PP}}_{\mathrm{PP}}}{^{\mathrm{PeP}}_{\mathrm{PPS}}}$ | $\begin{array}{c} \mathbf{e} \ \mathbf{9 \cdot 2} \\ \mathbf{e} \ \mathbf{11 \cdot 5} \\ \mathbf{24 \cdot 6} \\ \mathbf{28 \cdot 2} \\ \end{array}$ |
| Madras Bombay Poona Djakarta Bandung | Е. | $64.6 \\ 66.6 \\ 66.6 \\ 67.0 \\ 67.1$ | 42 32 33 77 78 | e 10 25 e 10 58 e 11 0 e 10 48 e 10 57 | $^{-16}_{+\ 4}_{-\ 9}$ | i 19 29 e 19 48 e 19 47 e 19 36 | $^{+\ 8}_{+\ 2}_{-14}$ | i 11 26 11 35 20 6 | PcP PcP PS | |
| Lembang Hyderabad Tamanrasset Jerusalem Melbourne | E. Z. | $67.2 \\ 67.6 \\ 72.6 \\ 73.3 \\ 74.1$ | $78 \\ 38 \\ 325 \\ 354 \\ 127$ | i 10 49k i 11 6a 11 21 i 11 30 e 11 32 | $ \begin{array}{r} - 9 \\ + 5 \\ - 10 \\ - 5 \\ - 8 \end{array} $ | e 19 38 i 20 5 e 20 54 e 21 3 | $ \begin{array}{r} -14 \\ +8 \\ -2 \\ -9 \end{array} $ | e 13 16 11 40 e 11 30 i 15 6 e 21 38 | $\begin{array}{c} \mathrm{PP} \\ \mathrm{PcP} \\ \mathrm{PP} \\ \mathrm{PS} \end{array}$ | e 28·0 31·2 e 30·9 |
| La Plata Buenos Aires Quetta Ksara Bokaro | | $74 \cdot 4$ $75 \cdot 0$ $75 \cdot 0$ $75 \cdot 3$ $76 \cdot 6$ | $^{237}_{237} \\ ^{22}_{354} \\ ^{40}$ | e 11 49 e 11 44 e 11 33 e 11 42 e 12 13 | $^{+}_{-12}^{7}_{-12}^{1}_{-19}$ | i 21 21 e 20 59 i 14 31 e 22 13 | $^{+\ 5}_{\overset{-24}{\mathrm{PP}}}$ | 26 7 e 13 6 i 16 12 e 25 20 | SS PPP SS | 30·9 41·7 |
| New Delhi M'Bour Dehra Dun Chatra Riverview | N. Z. | $77.0 \\ 78.0 \\ 78.9 \\ 79.8 \\ 80.5$ | $31 \\ 302 \\ 31 \\ 40 \\ 127$ | e 12 0 i 12 12 e 12 10 e 12 3 e 12 13a | $^{+ 10}_{+ 10}_{- 9}_{- 2}$ | e 21 49 e 22 21 i 22 52 e 12 32 e 22 22 | $^{+4}_{+26} \\ ^{+26}_{PS} \\ ^{9}_{0}$ | e 17 9 i 12 26 i 27 17 i 15 30 | $\begin{array}{c} \mathbf{PPP} \\ \mathbf{PcP} \\ \mathbf{SS} \\ \mathbf{PP} \end{array}$ | e 37·5 |
| Athens Shillong Concepción Reggio Calabria Messina | | $81.0 \\ 81.1 \\ 81.5 \\ 83.0 \\ 83.1$ | $345 \\ 44 \\ 228 \\ 339 \\ 339$ | e 12 16 a i 12 10 a e 12 35 e 12 38 e 12 31 | $^{-\ \ 8}_{+\ 10} \ _{+\ 2}$ | e 22 25 21 58 e 23 5 i 23 22 | -34 +18 PS | $ \begin{array}{r} $ | PcP PP SS | 35·2 — |
| Santa Lucia Tunis Sofia Algiers Univ. Relizane | z. | $83 \cdot 2 \\ 83 \cdot 4 \\ 85 \cdot 7 \\ 85 \cdot 9 \\ 86 \cdot 0$ | $230 \\ 335 \\ 346 \\ 329 \\ 327$ | e 12 25 e 12 37 e 12 37 e 12 37 e 12 51 | $^{-4}_{+7}^{7}_{-60}^{-60}_{+8}$ | $\begin{array}{c} 23 & 4 \\ e & 22 & 31 \\ 21 & 54 \\ e & 23 & 10 \\ e & 23 & 23 \end{array}$ | $^{+15}_{-20}$ $^{-80}_{-6}$ | e 23 29 e 23 29 e 16 46 e 15 52 e 16 12 | PS PPP PP PP | 37·7 — — |
| Brisbane Bucharest Wellington Rome Belgrade | N. | $86.1 \\ 86.9 \\ 87.0 \\ 87.4 \\ 88.3$ | $124 \\ 348 \\ 146 \\ 338 \\ 345$ | i 12 34 e 12 58 e 12 58 e 13 39 | $-10 \\ +10 \\ +8 \\ +44$ | i 23 13 i 23 42 i 23 15 e 23 43 e 23 57 | $^{-5}_{+16} \ ^{+11}_{+13} \ ^{+18}$ | e 15 53 e 30 14 e 24 1 e 24 7 | $_{\substack{\text{PS}\\\text{PS}\\\text{PS}}}^{-}$ | 41·7 e 39·2 e 35·7 |
| Alicante Granada Malaga Timisoara Iasi | Е. | $88.9 \\ 88.9 \\ 89.0 \\ 89.4$ | $\begin{array}{c} 328 \\ 325 \\ 324 \\ 346 \\ 350 \\ \end{array}$ | $\begin{array}{cccc} 12 & 48 \\ i & 13 & 1 \\ e & 13 & 0 \\ e & 13 & 11 \\ 13 & 4 \end{array}$ | $^{-8}_{+3} \\ ^{+2}_{+13} \\ ^{+4}$ | $\begin{array}{c} 23 & 32 \\ 23 & 51 \\ e & 23 & 23 \\ e & 24 & 16 \\ \end{array}$ | [+ 8] + 7 [- 3] + 31 | 18 15 13 16 e 16 33 | PPP PcP PP | e 41.9 41.1 50.6 46.7 |
| Florence Szeged Kalossa Barcelona Monaco | z. | 89·5 89·7 90·2 90·3 90·6 | $338 \\ 345 \\ 344 \\ 331 \\ 336$ | e 13 29 e 13 41 e 13 27 e 13 3 | $^{+ 29}_{+ 23}_{- 2}$ | i 24 19 e 24 4 e 24 9 e 24 6 | $^{+ 29}_{+ 12}_{+ 13}_{+ 9}$ | e 17 0 e 16 41 e 24 17 | PP PP SKKS | e 42·7 |
| Triest Budapest Manila Pavia Toledo | | 90.6 91.1 91.4 91.4 91.4 | $340 \\ 344 \\ 72 \\ 337 \\ 326$ | e 13 4 e 13 38 e 15 15 e 16 17 e 13 1 | $^{-1}_{+30}^{1}_{PP}^{-8}$ | e 23 54 e 24 3 e 25 40 23 31 | $-\frac{6}{-1}$ PS $[-10]$ | e 16 48 e 18 59 e 17 21 e 16 43 | PP PPP | 42.9 |

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| | Δ | Az. 1 | P. O-C. | s. o-c. m. s. s. | m. s. | pp. L. m. |
|--|--|--|---|--|---|---|
| Hurbanovo Hong Kong Bratislava Baguio | $91.6 \\ 92.0 \\ 92.2 \\ 92.3$ | 344 e 18 62 13 344 e 13 70 i 13 | $\begin{array}{ccc} 5 & & \mathrm{PP} \\ 43? & & ? \\ 6 & - & 7 \\ 31 & + 18 \end{array}$ | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | e 25 7 e 16 47 | PS — PP — |
| Clarmant Farmand | 93.6 | 244 i 13 | | i 24 16 -10 | i 16 51 | PP 44.7 |
| Clermont-Ferrand Besançon Prague Strasbourg Cheb | $93.8 \\ 94.2 \\ 94.5 \\ 94.8 \\ 95.0$ | 334 e 13 336 e 13 342 e 13 338 e 13 341 e 17 | $\begin{array}{cccc} 27 & + & 5 \\ 23 & & 0 \\ 25 & & 0 \end{array}$ | e 24 22 - 6 i 24 15 { 0} e 24 7 [+ 7] e 24 10 [+ 9] | e 26 14 e 17 8 i 17 50 e 17 0 e 26 11 | PPS 42.7 PP — PP e 40.7 PS — |
| Warsaw Jena Paris Sian | 95·3 96·6 96·6 | 347 e 13 341 e 13 335 e 13 50 e 18 | $\begin{array}{ccc} 37 & + & 7 \\ 45 & + & 12 \\ 17 & & ? \end{array}$ | e 24 48 ScS e 24 30? {+ 5} i 24 33 {+ 3} | | PP e 48.7 PP e 50.7 |
| Uccle | 97.8 | 337 e 17 | 7/12/12/0 U-01/1 | | | — e 38·7 |
| Nouméa De Bilt Hamburg Copenhagen Nanking | $98.1 \\ 98.7 \\ 98.8 \\ 100.2 \\ 101.6$ | 129 i 13 338 e 18 341 e 17 343 e 18 58 e 18 | 13 PP 36 PP 19 PP | e 24 43 {- 2} e 27 56 PPS e 24 24 [- 4] | | = e 47·7 e 54·7 s 48·7 |
| Huancayo z. Zô-Sè | $101.7 \\ 102.5$ | 242 e 13 60 e 18 | 0 -56 20 PP | | e 18 2 | PP |
| Durham Upsala Rathfarnham C. z. | $103.1 \\ 103.1 \\ 103.4$ | 336 e 20 348 e 18 332 e 15 | 54 PPP | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 24 34 i 18 35 | sks – |
| Peking | $105.2 \\ 105.4$ | 337 i 21 50 e 19 | 56 PPP 43 ? | i 25 17 {-14} | | PPS e 46·0 |
| Kiruna Bogota Matusiro | $110.3 \\ 112.6 \\ 117.1$ | 351 e 18 255 e 19 64 e 18 | 36 [+ 2] 31 PP 39 [- 8] | e 26 47 ? i 25 46 [+23] 29 35 PS | e 21 21 i 29 38 20 3 | PPP 48.7 PP 57.7 |
| Galerazamba Scoresby Sund | $117.6 \\ 120.9$ | 260 - 339 e 18 | 43 [-11] | i 25 41 [-1] e 37 1 SS | e 20 23 | PP 52.7 56.7 |
| Halifax Palisades Shawinigan Falls | $127.6 \\ 133.0 \\ 134.2$ | 300 e 18 292 e 19 299 e 19 | 59k = [-8] $34 = [+16]$ | i 38 27 SS e 22 44 PKS | e 21 40 22 9 | PP e 54·3 |
| Washington Chapel Hill | $134.4 \\ 134.6$ | 288 e 19 283 e 23 | $\begin{smallmatrix} 37 & [+17] \\ 4 & \mathrm{PS} \end{smallmatrix}$ | e 23 5 PKS e 25 40 [-50] | i 22_10 | PP |
| Columbia Ottawa Pennsylvania | $135.2 \\ 135.8 \\ 135.8$ | 279 e 19 297 e 19 290 e 22 | 16 [- 6] 39 [+16] 19 PP | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 22 4 22 23 e 24 13 | $\begin{array}{ccc} \text{PP} & \text{e } 62 \cdot 7 \\ \text{PP} & 55 \cdot 1 \\ \text{PPP} & \end{array}$ |
| Morgantown Mobile | $136.8 \\ 139.0$ | 287 e 19 271 e 19 | 48 [+19] | | e 22 19 i 22 27 | PP = |
| Kirkland Lake z. Tacubaya Resolute | 139·4 140·5 141·6 | 300 e 19 248 e 20 343 e 19 | $\begin{bmatrix} 22 & [-7] \\ 43 & [-10] \\ 23 & [-10] \end{bmatrix}$ | e 26 22 [- 20] | e 22 33 e 23 56 e 22 45 | PP 62·4 |
| Chicago Fayetteville | $143.0 \\ 145.9$ | 287 e 23 275 i 19 | 22 PKS 33 [- 8] | e 34 58 PPS | o 41 42 | SS e 59·4 |
| Honolulu Rapid City Boulder | $153.4 \\ 154.7 \\ 155.5$ | 134 e 20 287 e 19 277 e 19 | $ \begin{array}{ccc} 5 & [+13] \\ 47 & [-7] \\ 48 & [-7] \end{array} $ | | e 20 15 | PKP. |
| College Tueson | $156.0 \\ 156.6$ | 11 e 19 255 e 19 | $ \begin{bmatrix} 51 & [-5] \\ 50 & [-7] \end{bmatrix} $ | e 24 45 PP i 25 0 ? | $\begin{array}{cccc} {\bf i} \ 20 & 17 \\ {\bf e} \ 24 & 3 \end{array}$ | PKP ₂ e 60·0 PP e 51·8 |
| Bozeman Salt Lake City Barratt | $160.3 \\ 160.5 \\ 161.0$ | 291 e 19 276 e 19 249 i 20 | $ \begin{array}{ccc} 55 & [-6] \\ 59 & [-2] \\ 19 & [+17] \end{array} $ | i 24 50 PP i 24 34 PP | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | PKP ₂ e 62·0 PKP ₂ e 70·7 |
| Boulder City Butte N. | 161·3 161·3 | 260 e 20 292 e 20 | $ \begin{array}{cccc} 0 & [- & 2] \\ 5 & [+ & 3] \end{array} $ | $31 \ 32 \ \{+12\}$ | e 24 35 e 25 2 | PP e 58·1 |
| Palomar Hungry Horse Riverside | $161.5 \\ 162.0 \\ 162.2$ | 250 e 20 300 e 19 251 e 20 | $53 [+6] \\ 1 [-10] \\ -2]$ | e 24 27 PP e 23 30 PKS e 24 39 PP | i 20 49 e 24 47 e 20 53 | PKP ₂ — PP — |

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| | | Λ | Λz. | Ρ. | o-c. | s. | o-c. | Su | pp. | L. |
|------------|----------|-------|-----|--|---------------------|---------|---------------|---------|------------------|---|
| | | 0 | 0 | m. | | m. s. | s. | m. s. | T=704/0- | m. |
| Pasadena | | 162.8 | 250 | | 58 [- 6] | e 24 37 | PP | i 20 56 | PKP, | e 77.2 |
| China Lake | | 163 2 | 256 | | 1 - 61 | e 24 46 | PP | | | *************************************** |
| Eureka | | 163.3 | 270 | | 57 [-7] | i 24 49 | PP | i 20 57 | PKP ₂ | - |
| Isabella | | 163.8 | 255 | A STATE OF THE PARTY OF THE PAR | 59 [-6] | i 24 59 | \mathbf{PP} | i 21 0 | PKP. | |
| Woody | | 164.1 | 254 | | 58 $[-7]$ | i 24 48 | \mathbf{PP} | i 21 0 | PKP_2 | - |
| Tinemaha | | 164.2 | 260 | e 19 | 58 [- 7] | i 26 24 | [-44] | i 25 12 | \mathbf{PP} | - |
| Fresno | Z. | 165.3 | 257 | e 19 | 0 [-66] | | | 4 | | _ |
| Lick | Z. | 166.8 | 256 | e 20 2 | 28 [+21] | _ | _ | | _ | _ |
| Berkeley | 11,55,57 | 167.5 | 258 | e 21 | 14 PKP ₂ | - | | e 28 46 | PPP | |
| Scattle | | 167.5 | 304 | 20 | [+25] | e 31 49 | $\{-1\}$ | e 21 18 | PKP_2 | 93.7 |
| Mineral | z. | 167.7 | 269 | e 20 | 19 [+11] | - | 70.011 0000 | 3 | | - |
| Victoria | 2000000 | 167.8 | 309 | e 21 : | 33 PKP. | 32 19 | $\{+27\}$ | 34 9 | \mathbf{PS} | - |
| Shasta | z. | 168.4 | 270 | A COUNTY OF THE PARTY OF THE PA | 20 PKP ₂ | | | | - | _ |
| Corvallis | z. | 169.0 | 290 | e 21 | 18 PKP ₂ | | - | | 3000 | - |

May 19d. 21h. 49m. Epicentre 16°8'N. 96°58'W. Depth of focus 50km. Loc. cit., 19d. 6h., p. 3.

May 20d. 0h. 50m. Epicentre 16°21'N. 101°55'W. Loc. cit., 19d. 6h., p. 3.

May 20d. 18h. 44m. Epicentre 15.33'N. 97°4'W. Loc. cit., 19d. 6h., p. 4.

May 21d. 0h. 29m. 45s. Epicentre 20°.5S. 69°.1W. Depth of focus 0.010.

$$A = +.3344$$
, $B = -.8757$, $C = -.3481$; $\delta = -15$; $h = +5$; $D = -.934$, $E = -.357$; $G = -.124$, $H = +.325$, $K = -.937$.

| | | Δ | Az. | P. m. s. | O -C. | $_{ m m. \ s.}^{ m S.}$ | 0 – C. s. | m. s. | pp. | L. m. |
|---|----|--|--|---|--|--|---|--|--|----------|
| Antofagasta La Paz Copiapo Huancayo Santa Lucia | z. | $3.4 \\ 4.1 \\ 6.9 \\ 10.3 \\ 13.0$ | $202 \\ 13 \\ 189 \\ 324 \\ 186$ | e 0 50 i 1 7 e 1 48 e 2 28 | - 2 + 5 + 8 + 2 | e 1 17 i 1 45 3 3 i 4 19 e 5 30 | $ \begin{array}{r} -15 \\ -4 \\ +5 \\ -1 \\ +5 \\ +5 \\ \end{array} $ | $ \begin{array}{r} $ | ss ss | |
| Buenos Aires La Plata Bogota San Juan Columbia | | $16.9 \\ 17.4 \\ 25.4 \\ 38.8 \\ 55.4$ | $148 \\ 148 \\ 348 \\ 4 \\ 348$ | e 5 1 4 15 e 5 20 i 7 13 i 9 25 | PP - 4 - 1 | $\begin{array}{c} e & 7 & 12 \\ 7 & 9 \\ e & 9 & 50 \\ \hline e & 16 & 59 \end{array}$ | $+17 \\ + 3 \\ + 13 \\ - 3$ | - i 7 40 i 9 51 | $\frac{-}{\mathbf{pP}}$ | 9.2 |
| Chapel Hill Morgantown Fayetteville Brébeuf Ottawa | | 56·9 60·7 61·1 65·8 65·9 | | e 10 2 i 10 1 i 10 4 a i 10 36 a e 10 35 | PP 2 2 - 2 - 1 - 3 | e 10 46 | s <u>P</u> | i 10 29 e 10 31 i 11 3 i 11 3 | pP pP pP | |
| Tucson Shawinigan Falls Seven Falls Boudler Kirkland Lake | z. | 65·9 66·8 67·3 69·0 69·0 | $\begin{array}{r} 322 \\ 357 \\ 359 \\ 331 \\ 352 \end{array}$ | i 10 37 i 10 41 a i 10 45 a i 10 56 e 10 55 a | $-\begin{array}{ccc} & 1 \\ - & 2 \\ - & 1 \\ - & 1 \\ - & 2 \end{array}$ | | | i 11 4 11 10 11 13 e 11 23 | $rac{\mathbf{pP}}{\mathbf{pP}}$ \mathbf{pP} | |
| Barratt Palomar Boulder City Riverside Rapid City | E. | $69.8 \\ 70.3 \\ 70.9 \\ 71.1 \\ 71.5$ | 318 319 322 319 335 | i 11 2k i 11 5k i 11 9 i 11 11k i 11 11 | $\begin{array}{c} & 0 \\ 0 \\ + & 1 \\ + & 1 \\ - & 1 \end{array}$ | i 11 29 i 11 33 | sP sP | e 11 22 i 11 25 i 11 36 i 11 37 e 11 39 | pP pP pP | |
| Pasadena China Lake Isabella Salt Lake City Woody | | 71.7 72.4 72.8 72.8 73.1 | $319 \\ 320 \\ 320 \\ 327 \\ 320$ | i 11 14k i 11 17k i 11 20k i 11 20 i 11 21k | $\begin{array}{cccc} + & 1 & & & & \\ & & 0 & & & \\ & & 0 & & & \\ - & & 1 & & & \end{array}$ | i 11 38 | $\frac{-}{=}$ | i 11 41 i 11 44 i 11 49 i 11 48 i 11 49 | pP pP pP pP | |

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|------|-----|
| | |

| | | Δ | Az. | 1 | | о – с. | s. | o – c. | Su | pp. | L. |
|--------------|----------------|---------------|-----|------|------|--------|--|---------------|---------------------|------------------------------|-----|
| | | 0 | 0 | m. | 8. | s. | m. s. | s. | m. s. | | m. |
| Tinemaha | | 73.6 | 321 | i 11 | 25 k | + 1 | | - | i 11 53 | \mathbf{pP} | |
| Eureka | | 74.0 | 324 | i 11 | 26 | 1 | i 11 40 | PcP | i 11 53 | $\hat{\mathbf{p}}\mathbf{P}$ | _ |
| Fresno | Z. | 74.4 | 320 | i 11 | 29 | Õ | | 00000000 | | | _ |
| Lick | Z. | 75.9 | 319 | i 11 | 39 | + 1 | | | | | |
| Bozeman | 2000 | $76 \cdot 1$ | 331 | i 11 | 38 | - 1 | _ | + | i 12 5 | \mathbf{pP} | |
| Reno | z. | 76.2 | 322 | e 11 | 40 | + 1 | | _ | | | - |
| Butte | N. | 77-0 | 330 | i 11 | 45 | + 1 | **** | | i 12 12 | pP | - |
| Mineral | Z. | 77.8 | 322 | e 11 | 47 | - 1 | _ | - | | | |
| Hungry Horse | \$5.50 | 79.4 | 331 | i 11 | 57 | 0 | 3.000 | | i 12 26 | \mathbf{pP} | - |
| Corvallis | Z. | 81.5 | 324 | i 12 | 8 | 0 | | _ | | | _ |
| Grahamstown | Z. | 83.5 | 123 | i 12 | 15 | - 3 | 7-0 | Y | V | | - |
| Kimberley | Z. | 83-6 | 118 | i 12 | 15 | - 4 | | S | - | | - |
| Granada | | 84.2 | 47 | 11 | 45k | -37 | 22 36 | - 1 | 2 1 - 2 | 0.25 | |
| Tamanrasset | \mathbf{z} . | 84.5 | 63 | e 12 | 21 | - 2 | 1 | - | e 12 50 | pP | - |
| Relizane | | 86.4 | 50 | e 12 | 32 | - 1 | S | | e 13 3 | pP | - |
| Alicante | | 86.9 | 47 | 12 | 38 | + 3 | 22 56 | [+6] | 23 10 | s | _ |
| Hamburg | Z, | 100.0 | 36 | e 17 | 36 | PP | | 0 | 72 | - | - |
| Upsala | | 105.9 | 32 | e 18 | 19 | [+ 7] | () () (| - | - | 14000 | |
| Quetta | Z. | $139 \cdot 3$ | 67 | e 19 | 19 | 1 + 31 | e 22 3 | \mathbf{PP} | e 19 47 | pP' | 200 |
| Matusiro | Z. | 151.3 | 310 | 19 | 42 | [+61] | 19 51 | PKP_2 | i 20 13 | pP' | 2 |
| Lembang | z. | 152.6 | 173 | e 19 | 45 | [+71] | - | 222 | - | - | _ |

May 22d. 3h. 1m. 5s. Epicentre 15° 3S. 173° 1W.

| A =9581, | B =1159, | C =2622; | $\delta = +14$; | h = +6; |
|----------|-------------|-------------|------------------|---------|
| D =119, | E = + .993; | G = + .260, | H = + .031, | K =965. |

| | į. | ∆ Az. | Section 2011 Till been | O −C. s. | S. m. s. | O – C. s. | m. s. | pp. | $_{\mathbf{m}.}^{\mathbf{L}.}$ |
|--|---------|--|--|--|-----------------|--------------|-------------------------|---------------|--------------------------------|
| Apia | 2 | 0 40 | | | m. s. 0 49 | -13 | | 0 | - |
| Nouméa | 20 | 5 247 | i 4 44a | $^{-}_{+}$ $^{5}_{2}$ | e 8 26 | - 1 | i 5 3 | PP | i 9.5 |
| | | 3 206 | | 0 | - Martinian | - | e 5 59 | PPP | - |
| | N. 24 | | | 0 | | | - | | 7 |
| New Plymouth | E. 26 | 2 203 | e 5 45 | + 7 | | | No. | - | |
| Wellington | | 0 200 | the state of the s | - 3 | | 7,000 | | _ | e 12·8 |
| Cobb River F | | .5 203 | | - 1 | | | - | - | |
| Kaimata N.E | | 2 203 | The state of the s | 0 | 70' E-70' E-11' | 7.5 | | | * |
| Brisbane | | 6 243 | | - 1 | 12 31 | +25 | 0.00 | T . T | - |
| Rabaul | z. 35 | 8 284 | e 6 59 | - 4 | e 8 27 | PP | e 9 31 | $P_{c}P$ | |
| Riverview | 37 | | i 7 11a | - 3 | e 12 57 | - 4 | i 8 40 | PP | e 17·2 |
| Honolulu | | .2 22 | | + 1 | | - | -0.02 00 000 | | |
| Melbourne | 43 | 2 230 | e 8 3 | - 1 | e 14 31 | - 1 | e 17 56 | ScS | e 21·0 |
| | | ·8 203 | | 0 | | | | ~ | 00.0 |
| Perth 2 | z. 66 | 1 242 | 10 50 | - 1 | - | - | i 17 37 | 3 | e 33·6 |
| Matusiro | 69 | 0 320 | i 11 8 | - 1 | i 20 11 | - 3 | 21 14 | ScS | 31.4 |
| Berkeley | | .2 40 | e 11 23 | 0 | e 20 42 | + 2 | | - | |
| | 100 | ·3 41 | e 11 23 | 0 | - | _ | | **** | _ |
| Ukiah | | •4 39 | The second secon | 0 | | _ | _ | _ | |
| Manila | 71 | ·6 291 | e 11 34 | + 9 | | - | _ | _ | |
| Pasadena | 71 | .7 46 | i 11 26 | 0 | i 20 51 | + 6 | i 11 41 | pP | i 32·2 |
| Barratt | 673.673 | .0 48 | | $^{+}_{+}\overset{0}{\overset{2}{}{_{2}}}$ | | 31/A | i 11 49 | pP | |
| | z. 72 | | the state of the s | $^{+}_{+} {}^{2}_{2}$ | - | - | | | - |
| Woody | 72 | AND DESCRIPTION OF THE PROPERTY OF THE PROPERT | | + 2 | - | | i 11 43 | pP | - |
| Palomar | 72 | .2 47 | i 11 29 | 0 | _ | _ | i 11 47 | pP | - |
| Riverside | 72 | ·2 46 | e 11 28 | - 1 | | _ | i 11 45 | \mathbf{pP} | |
| Isabella | 72 | 4 44 | i 11 32 | + 2 | _ | _ | i 11 47 | pP | |
| Baguio | 72 | 6 293 | e 11 42 | -11 | e 20 35 | -21 | | | - |
| | z. 72 | .9 38 | | 0 | | - | | - | - |
| China Lake | 73 | ·1 44 | | - 1 | | _ | _ | - | - |
| Mineral 2 | z. 73 | ·1 39 | e 11 34 | 0 | - | - | | | - |
| Tinemaha | | ·3 43 | e 11 37 | + ž | _ | _ | i 11 56 | pP | 1 |
| Yuzno-Sakhlinsk | 73 | | 11 36 | Õ | - | - | | | _ |
| Reno | | 8 40 | e 11 39 | + 1 | | | | 7 | |
| 3.5 A 19.5 A 2.5 A 2 | | ·8 34 | | +10 | | - | | | - |
| | | | | 100 | | | | | |

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| | | Δ | Az. | P. m. s. | o –c. | s. m. s. | o – c. | m. s. | pp. | L. m. |
|---|----|--|---|---|--|--|---|--|--|----------------------------------|
| Boulder City Tucson Eureka Guadalajara | | 75.0 76.0 76.2 77.3 | 46 51 42 64 | i 11 46 i 11 51 e 11 51 e 11 57 | $\begin{array}{cccc} + & 1 & \\ & 0 & \\ - & 1 & \\ - & 1 & \end{array}$ | i 21 37 i 12 22 | + 73 | e 12 17 i 12 11 i 12 10 e 12 4 | PcP PcP PcP | e 33·6 — e 35·4 |
| Victoria Lembang Horseshoe Bay Chihuahua Zō-Sè Salt Lake City | | 77·3 77·9 78·0 78·1 78·1 79·5 | $\begin{array}{r} 31 \\ 266 \\ 31 \\ 56 \\ 307 \\ 43 \end{array}$ | e 11 58 e 11 55 e 12 13 e 11 58 i 12 21 a e 12 9 | $ \begin{array}{r} - & 6 \\ + & 11 \\ - & 4 \\ + & 19 \\ - & & 1 \end{array} $ | e 21 57 e 21 57 e 22 14 | + 2 + 3 - 3 | e 12 10 | P _c P | e 36·4 e 36·8 |
| Nanking Tacubaya Butte College Hungry Horse | N. | $80.3 \\ 80.5 \\ 81.8 \\ 82.2 \\ 82.2$ | 307 67 38 11 35 | 12 24 e 11 56 e 12 22 i 12 22 e 12 22 | $^{+10}_{-19}$ $^{-2}_{-2}$ | e 22 22 e 22 35 i 22 35 e 15 34 | $-{0\atop 0\atop 0\atop PP}$ | e 15 11 i 23 15 e 23 19 e 38 57 | PP PS PS P'P' | e 38·3 e 35·4 |
| Bozeman Vera Cruz Boulder Peking Rapid City | E. | 82·5 83·1 83·6 85·6 86·7 | $\begin{array}{r} 39 \\ 68 \\ 46 \\ 313 \\ 43 \end{array}$ | i 12 26 i 12 32 e 12 21 i 12 46 | $-\frac{0}{-\frac{1}{20}}$ | i 22 43 e 22 35 e 23 4 e 23 14 | $\begin{bmatrix} + & 1 \\ -13 & \\ -& 1 \\ [+ & 2] \end{bmatrix}$ | e 23 7 = 7 e 12 58 | ScS - | e 37·3 — e 41·2 |
| Fayetteville Mobile Florissant St. Louis Huancayo | z. | $90.2 \\ 93.5 \\ 93.9 \\ 94.0 \\ 94.2$ | 53 59 51 51 104 | i 13 3 i 13 16 e 13 21 e 13 19 e 13 25 | $ \begin{array}{rrr} - & 1 \\ - & 3 \\ - & 2 \\ + & 3 \end{array} $ | e 24 0 23 57 i 23 56 e 24 29 | [+ 4] [+ 1] - 1 | i 17 3 e 24 30 e 13 28 e 17 26 | $\begin{array}{c}\mathbf{PP}\\\mathbf{S}\\\mathbf{PP}\\\mathbf{PP}\end{array}$ | e 43·9 44·4 |
| Duluth Chicago Irkutsk Chinchina La Paz | | $95.0 \\ 96.8 \\ 97.4 \\ 98.5 \\ 99.6$ | $^{43}_{322} \\ ^{87}_{110}$ | i 13 36 i 26 40 i 18 12 | $\begin{array}{c} +10 \\ -1 \\ PS \\ PP \end{array}$ | e 24 20 e 24 5 i 24 19 i 25 35 | $[+19] \\ [-6] \\ -1] \\ +18$ | i 25 19 i 32 24 | | e 45·6 46·9 47·4 |
| Columbia La Plata Cleveland Resolute Kirkland Lake | z. | 100.1 100.9 101.1 101.5 103.2 | $\begin{array}{r} 58 \\ 131 \\ 50 \\ 15 \\ 43 \end{array}$ | e 17 40 23 55 e 13 51 e 13 53 e 14 2 | PP - 2 - 2 - 1 | i 24 30 25 43 e 24 32 e 24 31 | $\begin{bmatrix} + & 3 \\ +15 \\ [- & 3] \end{bmatrix}$ | e 25 24 31 37 i 14 1 e 27 5 | PS PS | e 45.4 48.8 e 44.2 |
| Washington Ottawa Palisades Seven Falls Scoresby Sund | 7 | 104.1 105.9 106.8 109.4 122.0 | 53 47 51 45 11 | e 14 6 27 59 e 18 46 29 29 e 18 55 | $egin{array}{c} -1 \\ PS \\ PP \\ PPS \\ [-2] \end{array}$ | $\begin{array}{cccc} \mathbf{e} & 24 & 4 \\ & 24 & 57 \\ \mathbf{e} & 25 & 0 \\ & 25 & 7 \\ \mathbf{e} & 26 & 20 \\ \end{array}$ | $[+2] \\ [+1] \\ [-3] \\ [+23]$ | e 18 28 28 57 e 28 2 26 5 e 20 39 | PP PPS PS SKKS PP | e 50·4 e 49·7 51·1 55·9 |
| Quetta Kiruna Skalstugan Kimberley Upsala | z. | $\substack{123 \cdot 2 \\ 126 \cdot 7 \\ 131 \cdot 6 \\ 132 \cdot 9 \\ 134 \cdot 8}$ | $\begin{array}{c} 296 \\ 354 \\ 357 \\ 202 \\ 352 \end{array}$ | 19 0 e 19 6 e 19 14 i 19 18a e 19 8 | [+1] $[-1]$ $[-13]$ | e 26 5 e 22 20 i 22 58 | PKS PKS | i 20 57 e 21 5 i 21 59 e 21 50 | PP PP PP | |
| Copenhagen Warsaw Hamburg Witteveen De Bilt | z. | 139.4 141.4 141.7 142.5 143.2 | $\begin{array}{r} 355 \\ 346 \\ 357 \\ 0 \\ 2 \end{array}$ | e 19 31 e 19 37 e 19 40 e 19 33 | [+ 2] $[- 2]$ $[+ 4]$ $[+ 5]$ $[- 3]$ | $\begin{array}{c} 29 & 18 \\ e & 23 & 13 \\ e & 23 & 31 \\ \hline e & 41 & 25 \\ \end{array}$ | PKS PKS SS | e 22 28 e 22 42 e 22 36 e 22 55 | PP PP PP | e 68·9 e 74·9 e 68·9 |
| Kew Iasi Jena Uccle Prague | N. | $143.4 \\ 143.8 \\ 144.2 \\ 144.5 \\ 144.7$ | $336 \\ 355 \\ 352$ | e 28 9 e 19 36 e 19 35 e 19 37 a i 19 38 a | the state of the s | e 23 17 e 41 19 e 23 8 | PKS SS PKS | e 22 57 e 20 2 e 34 9 | PP PS | e 67·9 e 70·9 |
| Focsani Jersey Bratislava Hurbanovo Budapest | E. | $145.2 \\ 145.4 \\ 146.1 \\ 146.2 \\ 146.3$ | $335 \\ 10 \\ 348 \\ 346 \\ 345$ | 19 43 e 20 11 i 19 44 i 19 46 19 46 | [+ 3] $[+ 3]$ $[+ 3]$ $[+ 3]$ $[+ 5]$ | i 19 49 | PKP, | $\begin{array}{c} 19 & 47 \\ \hline i & 22 & 54 \\ e & 20 & 28 \\ 19 & 55 \end{array}$ | PKP ₂ PP PKP ₂ | |
| Campulung Paris Bucharest Strasbourg Szeged | | $146.4 \\ 146.7 \\ 146.8 \\ 147.2$ | $337 \\ 334 \\ 359 \\ 343$ | 19 45 i 19 43 i 19 46 a e 19 43 a 19 44 | | e 30 17 e 23 19 e 30 7 | $\{+\frac{19}{PKS}\}$ | e 20 16 i 23 17 e 42 23 e 23 13 19 47 | PKS SS PP PKP | e 73·9 73·9 e 68·9 |

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| | | Δ | Az. | 1 | 2. | O -C. | s. | O -C. | St | ipp. | L. |
|----------------|----------|---------------|-------------|------|------|--------|---------|--|-------------|------------------|---------------|
| | | 0 | 0 | m. | s. | s. | m. s. | s. | m. s. | RATION OF | m. |
| Basle | | 147.8 | 359 | e 19 | 45 | [+1] | | - | Marine. | | - |
| Ksara | | 147.9 | 310 | i 19 | 44 | 01 | e 26 47 | [-4] | i 23 27 | \mathbf{PP} | |
| Zürich | | 148.0 | 358 | e 19 | | 1+ 31 | | | e 20 4 | 8 | |
| Besancon | | 148.1 | ĭ | e 19 | 45 | [+ 1] | | | i 19 59 | PKP, | |
| Belgrade | Z. | 148.4 | $34\hat{1}$ | ĭ 19 | | 1 + 51 | | | e 19 59 | PKP | |
| Neuchatel | | 148-4 | 0 | e 19 | 49 | [+4] | | _ | | 3222 | - |
| Sofia | | 149.2 | 336 | i 19 | 46 | 1 01 | i 21 19 | 3 | - | | - |
| Triest | | 149.2 | 350 | e 19 | 45 | [-1] | 30 9 | $\{-5\}$ | i 20 1 | PKP, | 73.4 |
| Clermont-Ferra | nd | 149.4 | 5 | e 19 | | 1+ 21 | e 23 31 | PKS | i 20 6 | PKP, | |
| Jerusalem | | 149.4 | 307 | i 19 | | [+3] | | _ | i 19 55 | PKP ₂ | |
| Pavia | | 150.1 | 357 | e 19 | 54 | [+6] | e 21 23 | ? | e 20 13 | PKP ₂ | _ |
| Florence | | 151-3 | 353 | i 19 | 50k | 1 + 11 | e 23 28 | SKP | i 43 57 | PSS. | e 76.9 |
| Monaco | 7. | 151.6 | 359 | e 19 | 51 | [+1] | e 20 24 | 9 | e 23 31 | PP | |
| Rome | 13100.00 | 153.0 | 351 | i 19 | 54 | [+ 2] | e 43 43 | SS | e 23 53 | PP | - |
| Toledo | z. | 153.7 | 19 | e 19 | | [+1] | i 20 14 | PKP_{i} | 23 41 | \mathbf{PP} | 73.6 |
| Messina | | 155.9 | 343 | e 20 | 14 | [+18] | 43 46 | SS | e 24 8 | PP | |
| Alicante | | 156.1 | 14 | 19 | 54 | 1 - 21 | 26 59 | [-2] | | _ | e 74.0 |
| Granada | | $156 \cdot 3$ | 21 | i 20 | 4 a | [+ 8] | 26 39 | [-22] | 24 6 | PP | i 74.0 |
| Malaga | | 156.4 | 23 | i 19 | 59k | 1 + 31 | 30 57 | {+ 4} | i 24 11 | PP | 76.6 |
| Almeria | | 157.0 | 19 | e 19 | | [+1] | | | e 32 57 | ? | e 81·6 |
| Algiers Univ. | z. | 158.3 | 8 | e 20 | 0 | [+ 1] | e 20 34 | PKP. | e 24 17 | PP | 5 |
| Relizane | | 158.8 | 14 | e 19 | 59 | 1 01 | e 20 52 | the state of the s | e 24 24 | PP | |
| Tamanrasset. | 7. | 172.4 | 9 | i 20 | 12 p | i + 1i | e 21 37 | Controlled Controlled Controlled Controlled Control | e 25 31 | PP | 1000 |

May 22d. 13h. 36m. 17s. Epicentre 4°.0S. 152°.6E. Depth of focus 0.080.

A = -.8857, B = +.4591, C = -.0693; $\delta = +4$; h = +7; D = +.460, E = +.888; G = +.061, H = -.032, K = -.998.

| | | Δ | Az. | Р. | o – c. | s. | 0 - C. | | pp. | L. |
|------------------|---------|------|-----|----------|-----------------|------------------|------------------|---------------------|---------------|---------------|
| AMAZYON DE DOGOD | | 0 | 0 | m. s. | 8. | m. s. | 8. | m. s. | | $\mathbf{m}.$ |
| Rabaul | | 0.5 | 240 | i 0 59 | - 6 | | 70.00 | · — | - | |
| Guam | (0.956 | 19.0 | 336 | i 3 46 | - 2 | 4 23 | $_{\mathrm{PP}}$ | - A | 100000G | |
| Nouméa | Z. | 22.6 | 145 | i 4 20k | - 1 | i 7 52 | + 1 | e 7 0 | P | === |
| Brisbane | | 23.4 | 179 | i 4 27 | - 1 | i 8 3 | - 1 | - - | - | _ |
| Riverview | | 29.7 | 182 | i 5 24k | 0 | i 9 45 | + 3 | i 6 51 | \mathbf{pP} | |
| Melbourne | | 34.4 | 191 | i 6 3 | 0 | e 10 57 | + 3 | i 7 34 | pP | i 16.2 |
| Manila | | 36.3 | 301 | i 6 21 | + 2 | i 15 20 | SSS | | _ | _ |
| Onerahi | E. | 37.5 | 150 | e 6 30 | + 1 | e 11 45 | +4 | - | - | - |
| Baguio | | 37.6 | 304 | i 6 30 | 0 | i 11 46 | +4 | i8 4 | \mathbf{pP} | _ |
| Karapiro | N. | 39.8 | 151 | 6 47 | - 1 | e 15 30 | SS | 2000 - 100 M | | - |
| Hsinkong | | 40.6 | 313 | 7 6 | +12 | _ | _ | 1 4111 3 | _ | |
| Taitung | | 40.6 | 312 | e 6 48 | - 6 | 12 25 | - 1 | | _ | |
| Hwalien | | 41.0 | 314 | 7 0 | + 3 | | - | | _ | |
| Cobb River | E. | 41.2 | 157 | e 6 59 | Õ | e 12 36 | + 2 | - | | |
| Ilan | | 41.4 | 315 | e 7 7 | + 7 | - | - | | - | ****** |
| Taipei | | 41.7 | 315 | e 7 8 | + 5 | <u> </u> | - | | _ | <u> </u> |
| Taichung | | 41.8 | 314 | e 7 4 | + 1 | | - | - | - | - |
| Kaimata | N.E. | 41.9 | 159 | e 7 6 | $+$ $\tilde{2}$ | e 12 47 | + 3 | _ | - | - |
| Kyoto | 1516555 | 41.9 | 339 | 7 2a | - 2 | 15 56 | SS | | | _ |
| Wellington | | 42.2 | 155 | 17 6k | - 1 | e 12 45 | - 4 | i 15 43 | ss | |
| Matusiro | | 42.5 | 343 | i 7 7 a | - 2 | i 12 47 | - 6 | i 8 37 | pP | 17.7 |
| Christchurch | | 43.2 | 159 | i 7 14k | - 1 | i 13 4 | + 1 | e 9 4 | pP | 1000 |
| Perth | Z, | 44.3 | 227 | i 7 25 | $+$ $\hat{2}$ | i 13 19 | +1 | 8 50 | pP | ***** |
| Bandung | 3434 | 44.8 | 264 | e 7 21 | - 6 | e 13 19 | - 6 | e 16 27 | 88 | 2000 |
| Lembang | | 44.8 | 264 | i 7 24 a | - 3 | i 13 24 | - 1 | e 16 20 | sS | |
| Djakarta | | 45.6 | 265 | i 7 29a | - 4 | e 13 33 | - 3 | e 8 57 | $P_{c}P$ | 7. |
| Hong Kong | | 45.7 | 306 | 7 35 a | + 1 | e 13 48? | ± 10 | 9 10? | pP | |
| Zô-Sè | | 46.0 | 322 | i 7 39 a | $+\hat{3}$ | 13 49 | + 7 | 9 9 | pP | _ |
| Nanking | | 48.1 | 321 | i 7 52a | 0 | | + 4 | i 9 26 | pP | |
| Kurilsk | | 49.2 | 356 | i 7 59 | - 1 | 14 15 i 14 27 | + 4 + 1 | i 9 35 | pP | |

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| Vladivostok | | ∆ 50°-5 | Az. | m. s. i 8 9 | O - C. s. 1 | S. m. s. i 14 46 | o-C. s. | m. s. e 9 43 | pp. | L. m. |
|--|----------------|---|--|---|---|--|---|---|-----------------------------|---------------------|
| Macquarie Ils. Changchun Honolulu Medan | z. | 50.6 53.5 54.4 54.4 | $175 \\ 336 \\ 60 \\ 277$ | i 9 46 8 31 e 8 38 e 7 41 | $ \begin{array}{c} \mathbf{pP} \\ -1 \\ 0 \\ -57 \end{array} $ | | = | | | |
| Peking Taiyuan Sian Titung Petropavlovsk | | $55.1 \\ 55.7 \\ 56.0 \\ 56.8 \\ 57.1$ | $326 \\ 322 \\ 316 \\ 324 \\ 4$ | i 8 41 a e 8 47 8 50 e 8 56 e 8 55 | $\begin{array}{cccc} - & 2 & & & \\ & 0 & & & \\ + & 1 & & & \\ + & 2 & & & \end{array}$ | e 16 12 | $-\frac{1}{-\frac{1}{2}}$ | 10 18 = e 10 38 | $\stackrel{\mathbf{pP}}{=}$ | |
| Paotow Yinchuan Wuwei Magadan Shillong | | $59.0 \\ 60.1 \\ 62.2 \\ 63.3 \\ 65.7$ | $323 \\ 319 \\ 317 \\ 359 \\ 300$ | e 9 11 e 9 17 9 33 i 9 37 i 9 51 a | $\begin{array}{cccc} + & 1 & & \\ & 0 & & \\ + & 3 & & \\ - & 1 & & \\ - & 2 & & \end{array}$ | 17 31 i 17 58 | $+\frac{-}{2}$ | e 11 19 20 54 | - P SS | |
| Irkutsk Chatra Bokaro Hyderabad Kodaikanal | N. E. | 76:1 | $331 \\ 300 \\ 297 \\ 289 \\ 282$ | i 10 14 a e 10 20 i 10 32 i 10 51 a i 10 55 | $egin{pmatrix} -&1\\ +&1\\ +&10\\ -&2\\ +&2 \end{bmatrix}$ | i 18 43 i 19 9 i 19 51 i 20 2 | $^{+}_{-}{\overset{5}{\overset{16}{\overset{2}{-}}}}_{+}$ | e 11 57 i 12 10 23 23 23 45 13 36 | pP pP SS PP | 31-4 |
| Tiksi Bay Dehra Dun New Delhi Poona College | N. | 77.0 78.7 79.1 80.6 81.2 | $\begin{array}{r} 352 \\ 302 \\ 300 \\ 289 \\ 22 \end{array}$ | i 10 56 e 11 9 i 11 17 i 11 18 | $-{2\atop +}{2\atop -}{0\atop 0\atop 2}$ | i 20 2 i 20 22 i 20 28 i 20 42 i 20 45 | $\begin{array}{cccc} - & 1 \\ + & 2 \\ + & 4 \\ + & 2 \\ - & 1 \end{array}$ | e 11 10 13 51 25 28 i 13 8 i 13 14 | PcP PP SS pP pP | 32·2 — e 32·8 |
| Bombay Semipalatinsk Kerguelen Is. Frunse Stalinabad | | $81.6 \\ 81.9 \\ 82.1 \\ 83.9 \\ 87.6$ | $\begin{array}{c} 290 \\ 322 \\ 221 \\ 314 \\ 309 \end{array}$ | e 11 22 i 11 24 i 11 30 i 11 34 | $^{+}_{\stackrel{0}{0}}^{\overset{0}{0}}$ | i 20 52 i 20 51 i 21 3 i 20 57? | $-\frac{2}{0}$ | e 13 11 i 13 26 | р <u>Р</u> р <u>Р</u> | |
| Tashkent Quetta Berkeley Corvallis Shasta | z. z. | $87.6 \\ 88.6 \\ 88.6 \\ 88.8$ | $312 \\ 300 \\ 52 \\ 45 \\ 49$ | e 11 51 i 11 55 a e 11 58 e 12 0 e 11 50 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 21 29 c 21 35 | [+ 2] [+ 4] — | i 13 42 e 13 47 = | рР Р — | |
| Lick Mineral Fresno Reno Woody | z. z. z. | $89.0 \\ 89.4 \\ 90.4 \\ 90.7 \\ 91.1$ | $53 \\ 50 \\ 53 \\ 51 \\ 54$ | e 12 0 e 12 1 i 12 8 e 12 8 i 12 8k | $^{+}_{+}^{2}_{1}_{+}^{4}_{2}$ | e 29 32 | PKKP | i 14 8 | _ _ P | |
| Isabella Pasadena Tinemaha China Lake Riverside | | $91.4 \\ 91.6 \\ 91.7 \\ 92.2 \\ 92.2$ | 55 56 53 54 56 | i 12 11 i 12 12 i 12 12 e 12 13 i 12 14 | $^{+}_{+} ^{2}_{2} \ ^{+}_{+} ^{2}_{0} \ ^{+}_{+} ^{1}$ | i 28 6 i 21 57 e 21 58 e 15 48 e 22 2 | SS [+ 6] [+ 7] PP [+ 8] | e 14 11 i 14 15 e 14 4 e 14 12 i 14 18 | pP pP pP | |
| Palomar Barratt Eureka Boulder City Hungry Horse | | $92.6 \\ 92.8 \\ 93.6 \\ 94.4 \\ 95.2$ | $\begin{array}{c} 57 \\ 58 \\ 51 \\ 54 \\ 42 \end{array}$ | i 12 17 i 12 20 i 12 19 i 12 24 e 12 28 | $^{+}_{+}^{2}_{0}_{+}^{1}_{2}$ | e 13 58 e 22 19 e 16 23 | [+13] PP | i 14 12 i 14 14 i 14 16 e 14 20 e 14 25 | pP pP pP | |
| Ashkabad Bozeman Tucson Resolute Tananarive | | $95.7 \\ 97.3 \\ 97.7 \\ 99.7 \\ 102.9$ | $308 \\ 45 \\ 58 \\ 14 \\ 250$ | e 12 33 e 12 37 e 12 41 i 12 45k e 17 21k | $^{+}_{+}^{4}_{1}\ ^{+}_{-}^{3}_{2}\ ^{PP}$ | e 23 15 e 16 45 e 22 33 | [+ 7] + 5 PP [0] | e 16 37 e 14 38 e 14 38 e 16 55 e 17 26 | PP pP PP | |
| Goris Moscow Kiruna Pulkovo Fayetteville | | $105.0 \\ 107.1 \\ 108.5 \\ 109.2 \\ 111.0$ | 310 328 343 333 53 | i 13 11 e 13 20 i 13 25 e 13 26 e 18 16 | $\mathbf{P}_{\mathbf{P}}$ $\mathbf{P}_{\mathbf{P}}$ | 23 11 i 23 15 i 23 17 | [+ 6] $[+ 4] $ $[+ 3] $ $[+ 2]$ | e 15 13 i 18 2 e 15 17 | pP pP PP pP | |

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| | | Δ | Az. | m. | P. | o –c. | S. m. s. | o – c. | m. s. | pp. | L. m. |
|--|----------|--|--|--|--------------------------------|--|---|-----------------------------------|---|---|----------|
| Scoresby Sund Skalstugan Ksara Upsala Jerusalem | | $113.5 \\ 113.9 \\ 114.3 \\ 114.5 \\ 115.2$ | $358 \\ 342 \\ 305 \\ 337 \\ 303$ | e 18 i 17 e 13 i 17 i 18 | 30 39 51 39 a | $[+ \frac{PP}{P} 2]$ | i 23 37 e 13 49 i 18 40 i 23 35 | [+5] PP [-1] | e 20 15 i 18 40 e 15 44 i 13 51 i 18 57 | pPP PP PP | |
| Iasi Lwow Kirkland Lake 7 Warsaw Bucharest | z. | 116.1 117.1 117.2 117.5 118.2 | $322 \\ 325 \\ 37 \\ 329 \\ 319$ | e 19 i 19 e 17 e 18 e 19 | 8 45 47 | PP [+ 1] PP | i 23 50 i 23 53 23 56 | $[+\frac{4}{4}]$ $[+\frac{6}{6}]$ | e 21 40 e 28 12 i 19 11 25 21 | PPP PKKP PP SKKS | |
| | Z. Z. | $119.4 \\ 119.8 \\ 120.2 \\ 120.8 \\ 121.1$ | $335 \\ 357 \\ 234 \\ 46 \\ 38$ | i 17 i 17 i 17 i 17 i 17 | 51 53 a 54 | [+ 2] [+ 4] [+ 3] | e 24 3 = 35 25 | [+ 9] = ss | i 19 14 i 20 41 i 19 23 19 31 | $\frac{\mathbf{PP}}{\mathbf{PP}}$ | |
| Bratislava Hamburg Prague Brébeuf Shawinigan Falls | | $\substack{121.8\\121.9\\122.1\\122.3\\122.3}$ | $\begin{array}{r} 326 \\ 335 \\ 330 \\ 37 \\ 36 \end{array}$ | i 17 i 17 i 17 i 17 e 17 | 57 55 56 k | $[+\ 1]$ $[+\ 4]$ $[+\ 2]$ $[+\ 3]$ $[+\ 1]$ | i 24 9 e 24 8 e 23 57 | [+ 7] [+ 6] [- 6] | i 19 36 e 19 26 i 20 3 i 19 36 | PP PP' PP | |
| Chapel Hill Jena Seven Falls Aberdeen Lwiro | | 122.9 122.9 123.0 123.3 123.5 | $ \begin{array}{r} 49 \\ 332 \\ 34 \\ 344 \\ 265 \end{array} $ | i 17 e 17 i 17 | 56 | $[+ \ 2] [+ \ 1] [+ \ 2] [+ \ 3]$ | e 21 21 30 2 e 29 43 | PKS PS PS | e 19 43 19 39 e 35 53 e 19 47 | $\begin{array}{c} \mathbf{PP} \\ \mathbf{PP} \\ \mathbf{SS} \\ \mathbf{PP} \end{array}$ | i 50·5 |
| Witteveen De Bilt Taranto Uccle Strasbourg | 7 | 123.8 124.9 125.8 126.2 126.4 | $336 \\ 336 \\ 319 \\ 336 \\ 332$ | i 17 e 19 e 22 e 18 e 18 | | $egin{bmatrix} [+&2] & & & & & & & & & & & & & & & & & & $ | e 25 53 e 24 16 e 24 13 | SKKS [+ 1] [- 3] | e 19 48 e 19 53 e 42 43 e 20 6 e 20 5 | PP PP PP, pP, | e 59·7 |
| Basle Kew Florence Neuchatel Rathfarnham C. z | z. | $127.2 \\ 127.5 \\ 127.7 \\ 127.8 \\ 127.8$ | $331 \\ 339 \\ 325 \\ 331 \\ 344$ | e 17 e 18 e 20 e 18 i 18 | 58 6 6 5 | $egin{bmatrix} [- & 5] \ [+ & 2] \ \mathbf{pP'} \ [+ & 1] \ [+ & 2] \end{bmatrix}$ | $\begin{array}{c} & - & - & 9 \\ e & 24 & 9 \\ i & 20 & 35 \\ \hline i & 20 & 39 \end{array}$ | $\frac{[-10]}{\text{SKP}}$ | e 20 11 e 19 59 i 32 13 e 20 18 i 20 13 | PP pP' PPS PP' | e 60·7 |
| Messina Reggio Calabria Rome Besançon Halifax | е. | $\substack{128 \cdot 1 \\ 128 \cdot 1 \\ 128 \cdot 1 \\ 128 \cdot 2 \\ 128 \cdot 6}$ | $\begin{array}{r} 317 \\ 317 \\ 322 \\ 332 \\ 33 \end{array}$ | e 19 e 20 e 20 e 18 i 18 | 49 0 19 8 7 a | $^{PP'}_{PP}$ $[+3]$ $[+1]$ | e 29 56 e 41 433 e 20 19 e 36 54 | PS SSS PP SS | e 20 19 e 38 43? e 20 13 e 20 14 | $\frac{PP}{PP'}$ | |
| | 5. 5. | $^{128\cdot 6}_{129\cdot 8}_{130\cdot 6}_{132\cdot 0}$ | $335 \\ 109 \\ 327 \\ 332 \\ 87$ | i 18 e 18 e 18 e 18 i 21 | 13 | [+ 3] $[+ 1]$ $[+ 4]$ $[+ 4]$ PP | i 24 15 i 20 45 e 20 45 e 24 28 | [-7] PP $[+1]$ | i 20 16 e 20 7 e 20 31 i 20 37 | pP' pP' pP' | e 70·7 |
| Galerazamba Bogota La Paz Algiers Univ. z Alicante | ٤. | $\begin{array}{c} 132 \cdot 1 \\ 133 \cdot 5 \\ 134 \cdot 9 \\ 137 \cdot 0 \\ 137 \cdot 9 \end{array}$ | $\begin{array}{r} 79 \\ 87 \\ 118 \\ 323 \\ 328 \end{array}$ | i 21 i 21 i 18 e 18 18 | 6 0 19k 24 17 | $^{\mathrm{PP}}_{\mathrm{PP}} \ [+\ 1] \ [-\ 6]$ | - e 30 46 24 29 | [+13] SP [-12] | i 21 57 20 31 e 21 2 21 13 | pPP pP' PP | e 65·4 |
| Toledo San Juan Almeria Malaga Tamanrasset z | | $138.5 \\ 139.6 \\ 140.0 \\ 141.1 \\ 143.0$ | $\begin{array}{r} 333 \\ 66 \\ 328 \\ 330 \\ 303 \\ \end{array}$ | 18 e 18 e 18 i 18 i 18 | 18 22 18 25 k 32 a | $ \begin{bmatrix} -6 \\ -4 \\ -9 \\ -4 \\ -1 \end{bmatrix} $ | e 22 7 i 21 21 e 29 42 | PKS PP SKKP | e 20 27 i 21 19 i 24 17 e 20 29 | pP' PPP PPP' | 66.2 |
| Fort de France St. Lucia St. Vincent Trinidad Barbados M'Bour | | 145.1 145.4 145.6 147.0 165.4 | 70 71 73 77 72 316 | e 18 e 18 e 18 e 18 e 18 i 20 | 40 40 38 37 49 | [+4] [+3] [+1] [-0] [+10] PKP, | e 29 46 | SKKS | i 21 3 | P _P , | |

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May 23d. 20h. 48m. 31s. Epicentre 15°.48. 178°.8W. Depth of focus 0.060.

 $\Lambda = -.9644$, B = -.0202, C = -.2639; $\delta = +12$; h = +6; D = -.021, E = +1.000; G = +.264, H = +.006, K = -.965.

| | | | 177 | | | .01, 11 | , 000, | LL - 00. | | |
|---|----------------|---|---|--|---|---|---|--|--|--------------------------|
| | | Δ | Az. | P. m. s. | 0 - C. | m. s. | 0 – C. s. | m. s. | ipp. | $_{ m m.}^{ m L.}$ |
| Apia Nouméa Karapiro Tuai Tongariro | z. N. N. | $7.0 \\ 15.6 \\ 23.0 \\ 23.6 \\ 24.2$ | 78 242 192 188 191 | | $ \begin{array}{r} $ | 3 7 e 8 13 e 8 18 e 8 43 | $-\frac{1}{2} \\ +\frac{2}{3} \\ +13$ | 5 42 e 5 47 5 53 | pP pP | |
| New Plymouth Wellington Cobb River Kaimata Brisbane | E. E. | $\begin{array}{c} 24.4 \\ 26.4 \\ 26.6 \\ 28.3 \\ 28.8 \end{array}$ | $\begin{array}{c} 194 \\ 191 \\ 194 \\ 195 \\ 241 \end{array}$ | $\begin{array}{cccc} 4 & 47 \\ \mathbf{i} & 4 & 59 \\ 5 & 2 \\ 5 & 16 \\ \mathbf{i} & 5 & 24 \\ \end{array}$ | $\begin{array}{cccc} + & 2 \\ - & 4 \\ - & 3 \\ - & 3 \end{array}$ | e 8 33 i 8 48 e 9 2 e 9 32 i 9 40 | $ \begin{array}{r} -18 \\ -18 \\ -7 \\ -4 \\ -3 \end{array} $ | e 6 49 i 6 15 e 6 18 e 6 46 | sP pP pP | |
| Christchurch Rabaul Riverview Melbourne Hawaii Vol. Obs | | $29.0 \\ 30.6 \\ 32.7 \\ 39.0 \\ 41.6$ | $\begin{array}{c} 193 \\ 288 \\ 230 \\ 228 \\ 35 \end{array}$ | i 5 20k e 5 37 i 5 57k i 6 50 i 7 9 | - 2 | i 9 39 i 10 9 i 10 43 i 12 18 | $ \begin{array}{r} $ | e 6 37 i 6 57 i 7 19 i 8 15 | pP pP pP | |
| Honolulu Macquaric Ils. Guam Torisima Perth | | 41.7 42.7 46.1 60.2 61.3 | $30 \\ 199 \\ 307 \\ 319 \\ 242$ | i 7 10 a i 7 19 i 7 46 i 9 24 a i 9 39 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 13 7 i 13 13 i 18 45 i 17 21 | $^{+}_{+}{}^{9}_{1} \\ -{}^{8}_{cS}$ | i 8 32 i 8 41 | pP pP — pP | i 20·0 |
| Hatidyosima Mera Osima Ajiro Yokohama | | $62.3 \\ 63.6 \\ 63.8 \\ 64.1 \\ 64.1$ | $321 \\ 323 \\ 322 \\ 322 \\ 323$ | i 9 42 i 9 49 a e 9 49 a e 9 53 | $\begin{array}{ccc} & 0 \\ - & 1 \\ - & 5 \\ - & 1 \end{array}$ | i 17 39 17 44 i 17 53 e 17 59 e 17 58 | $^{+}_{-}\overset{5}{\overset{6}{\overset{0}{0}}}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{c} P\\ pP\\ pP\\ PcS\\ pP\end{array}$ | e 22·0 |
| Misima Tokyo Kakioka Mito Onahama | E. | $64 \cdot 2 \\ 64 \cdot 3 \\ 64 \cdot 3 \\ 64 \cdot 4$ | $322 \\ 323 \\ 324 \\ 324 \\ 325$ | i 9 52 a i 9 53 a i 9 55 a e 9 54 i 9 55 | $ \begin{array}{r} $ | $\begin{array}{cccc} \mathbf{i} \ 17 & 59 \\ \mathbf{i} \ 18 & 0 \\ 17 & 47 \\ \mathbf{e} \ 18 & 2 \\ \mathbf{e} \ 18 & 5 \\ \end{array}$ | $^{+}_{+}^{1}_{2} \\ ^{+}_{+}^{3}_{5}$ | e 11 11 = | PP PP | e 24·3 |
| Tukubasan Shizuoka Hunatu Kumagaya Utunomiya | | 64·4 64·5 64·6 64·7 | $324 \\ 322 \\ 322 \\ 323 \\ 324$ | i 9 53 i 9 55 i 9 56 a i 9 56 a | $\begin{array}{cccc} - & 2 \\ - & 1 \\ - & 2 \\ - & 1 \\ - & 1 \end{array}$ | e 18 41 i 18 3 i 18 5 e 18 7 e 18 2 | $^{+\ 41}_{+\ 3}\\ ^{+\ 3}_{-\ 2}$ | e 12 59 e 11 3 e 22 14 i 11 29 | PP PP SS PP | |
| Kohu Titibu Shirakawa Maebasi Siomisaki | | $64.8 \\ 64.9 \\ 65.1 \\ 65.1$ | $322 \\ 323 \\ 324 \\ 323 \\ 319$ | i 9 57 a i 9 57 i 9 57 i 9 57 a i 9 59 a | $ \begin{array}{rrr} $ | i 18 7 e 18 7 i 18 9 18 12 e 18 10 | $^{+}$ 2 $^{+}$ $^{+}$ 3 $^{+}$ $^{+}$ 2 | e 11 26 i 19 21 10 38 e 10 58 e 10 37 | $rac{\mathbf{pP}}{\mathbf{PcP}}$ | e 20·4 - e 25·6 |
| Hukusima Iida Inawasiro Isinomaki Oiwake | | $65 \cdot 2$ $65 \cdot 3$ $65 \cdot 3$ $65 \cdot 3$ | $325 \\ 322 \\ 325 \\ 326 \\ 323$ | 9 59 i 10 0 i 10 1 a 9 59 i 10 1 | $-\begin{array}{c} - & 1 \\ 0 & 0 \\ - & 2 \\ 0 & 0 \end{array}$ | i 18 11 e 18 12 i 18 14 18 11 18 12 | $\begin{array}{c} + & 1 \\ + & 2 \\ + & 3 \\ + & 1 \end{array}$ | $\frac{-}{38}$ 57 | P' <u>P'</u> | e 31·3 |
| Sendai Tu Nagoya Kameyama Matumoto | | $65.4 \\ 65.5 \\ 65.6 \\ 65.6$ | $\begin{array}{c} 326 \\ 320 \\ 321 \\ 320 \\ 323 \end{array}$ | i 9 57 a e 10 10 i 10 2 a 10 3 a 10 3 | - 5 + 8 0 0 | 18 17 $18 18$ $18 18$ $18 17$ | $\begin{array}{r} -0 \\ + & 4 \\ + & 4 \\ + & 3 \end{array}$ | e 11 28 e 22 27 e 14 32 e 38 42 | SS PPP P'P' | e 25·0 e 26·1 25·3 |
| Matusiro Yamagata Gihu Miyako Magano | | 65.7 65.8 65.8 65.8 | $\begin{array}{r} 323 \\ 326 \\ 321 \\ 328 \\ 323 \end{array}$ | i 10 1 a 10 1 a 10 3 a i 10 3 a | - 3 - 3 - 1 - 1 | i 18 14 18 18 e 18 18 e 18 18 i 18 18 | $egin{smallmatrix} -&2\\ +&2\\ +&1\\ +&1\\ +&1 \end{bmatrix}$ | 11 31 11 30 20 51 i 19 29 | $rac{f pP}{f sS}$ | 27·5 |
| Nara Mizusawa Hikone Ibukisan Osaka | Е. | 65·8 65·9 66·0 66·0 | $\begin{array}{r} 320 \\ 327 \\ 321 \\ 321 \\ 320 \\ \end{array}$ | i 10 4 10 3 i 10 5 e 10 1 i 10 5 a | $ \begin{array}{cccc} & 0 \\ & 2 \\ & 1 \\ & 5 \\ & & 1 \end{array} $ | e 18 21 18 18 i 18 26 i 18 19 e 18 26 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 11 38 e 11 21 | pP pP | |

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| Takayama Wakayama Kyoto Sumoto Tokusima | | $66.0 \\ 66.0 \\ 66.1 \\ 66.2 \\ 66.2$ | $322 \\ 319 \\ 320 \\ 319 \\ 319$ | 0 10 3 0 10 11 10 5 a i 10 6 | s. - 3 + 5 - 1 - 1 - 3 | m. s. 18 29 18 24 i 18 34 i 18 35 | $ \begin{array}{r} $ | i 11 39 | P P | 25·0 |
| Morioka Tsuruga Sakata Toyama Simidu | | $66.3 \\ 66.4 \\ 66.4 \\ 66.5$ | $327 \\ 321 \\ 326 \\ 322 \\ 317$ | i 10 8 | - 1 + 1 + 3 - 1 | e 18 21 i 18 29 e 18 31 18 27 i 18 25 | $^{-}\begin{array}{c} 2 \\ + & 6 \\ + & 7 \\ + & 3 \end{array}$ | i 11 37 i 11 44 e 16 36 12 49 e 19 30 | $\begin{array}{c} \mathbf{pP} \\ \mathbf{pP} \\ \mathbf{PP} \\ \mathbf{PS} \end{array}$ | e 27·8 |
| Kanazawa Koti Aikawa Hatinohe Takamatu | | $66.6 \\ 66.7 \\ 66.7 \\ 66.7$ | $322 \\ 318 \\ 324 \\ 328 \\ 319$ | i 10 9a | $ \begin{array}{rrr} & 3 \\ & 0 \\ & 2 \\ & 1 \\ & 1 \end{array} $ | e 18 26 e 18 28 i 18 31 i 18 29 | $\begin{array}{c} -0 \\ 0 \\ 0 \\ +3 \\ +1 \end{array}$ | e 11 43 e 19 32 e 14 28 i 11 48 | $\begin{array}{c} \mathbf{pP} \\ \mathbf{PS} \\ \mathbf{PPP} \\ \mathbf{pP} \end{array}$ | |
| Yakusima Akita Nemuro Miyazaki Toyooka | | $66.9 \\ 66.9 \\ 67.0 \\ 67.0$ | $313 \\ 326 \\ 332 \\ 315 \\ 320$ | i 10 10 a i 10 10 a i 10 9 a 10 12 a e 10 21 | $\begin{array}{ccc} & 0 \\ - & 1 \\ - & 2 \\ 0 \\ + & 9 \end{array}$ | e 18 31 e 18 34 i 18 31 e 18 33 e 18 32 | $\begin{array}{c} + & 2 \\ + & 4 \\ + & 1 \\ + & 2 \\ + & 1 \end{array}$ | 19 39 1 19 37 11 44 e 11 41 e 11 43 | $\begin{array}{c} ScS \\ ScS \\ pP \\ pP \\ pP \end{array}$ | e 27 <u>·6</u> |
| Uwazima Wazima Kusiro Aomori Matuyama | z. | $67.0 \\ 67.2 \\ 67.3 \\ 67.3$ | 317 323 332 328 318 | 10 11 e 10 10 i 10 12 i 10 12 a i 10 14 | $ \begin{array}{ccc} $ | 18 32 18 33 e 18 35 18 40 e 18 42 | $^{+}_{+}$ $^{1}_{2}$ $^{+}_{+}$ $^{5}_{7}$ | e 19 36 19 37 i 19 39 e 11 43 | ScS ScS PP | e 28·4 |
| Urakawa Kagosima Tottori Baguio Ooita | | $67.4 \\ 67.4 \\ 67.6 \\ 67.6$ | $330 \\ 314 \\ 320 \\ 295 \\ 316$ | e 10 15 i 10 17 a 10 13 a i 10 16 i 10 17 a | $^{+}_{+}$ $^{1}_{3}$ $^{-}_{+}$ $^{1}_{1}$ $^{+}$ 2 | e 18 36 i 18 40 18 42 i 18 36 i 18 42 | $^{+}_{$ | e 22 42 e 13 24 19 43 —, | | 28·6 |
| Obihiro Asosan Hirosima Yonago Hakodate | z. | $67.7 \\ 67.8 \\ 67.8 \\ 67.9 \\ 68.0$ | $331 \\ 316 \\ 318 \\ 319 \\ 328$ | i 10 15 i 10 18 e 10 16 a i 10 18 i 10 18 | $\begin{array}{cccc} - & 1 \\ + & 1 \\ - & 1 \\ + & 1 \\ 0 \end{array}$ | i 18 45 e 18 42 e 18 45 | $+\frac{4}{1} + \frac{1}{2}$ | e 11 49 e 11 47 i 13 9 | pP pP PP | |
| Kumamoto Abashiri Matsue Tomakomai Muroran | | $68.0 \\ 68.1 \\ 68.1 \\ 68.2 \\ 68.3$ | $316 \\ 332 \\ 319 \\ 330 \\ 329$ | i 10 17 a i 10 18 10 24 10 22 e 10 19 | $ \begin{array}{cccc} & 1 & & \\ & 0 & & \\ & 6 & & \\ & + & 3 & \\ & - & 1 & & \\ \end{array} $ | $\begin{array}{c} 18 & 47 \\ 18 & 46 \\ 18 & 51 \\ \hline e & 18 & 49 \\ \end{array}$ | $^{+}_{+}^{4}_{2} \\ ^{+}_{-}^{7}_{3}$ | i 11 52 e 19 45 — | $\overset{\mathbf{pP}}{\overset{\mathbf{ScS}}{=}}$ | |
| Unzendake Hamada Mori Saigo Nagasaki | | $68.4 \\ 68.4 \\ 68.4 \\ 68.5$ | $315 \\ 318 \\ 329 \\ 320 \\ 315$ | e 10 20 10 23 a i 10 20 a 10 21 i 10 19 | $^{+} \begin{array}{c} 0 \\ 3 \\ 0 \\ + 1 \\ - 2 \end{array}$ | $\begin{array}{c} \mathbf{e} \ 18 \ 48 \\ 18 \ 50 \\ 18 \ 47 \\ 18 \ 50 \\ 18 \ 52 \\ \end{array}$ | $^{+}_{$ | e 10 41 e 11 51 e 11 38 e 11 50 | $rac{\mathbf{p}}{\mathbf{p}}$ | |
| Saga Simonoseki Hukuoka Asahigawa Sapporo | | $68.5 \\ 68.6 \\ 68.7 \\ 68.7$ | $316 \\ 317 \\ 316 \\ 331 \\ 330$ | 10 23 i 10 20 a i 10 22 a e 10 23 i 10 21 a | $\begin{array}{cccc} + & 2 \\ - & 1 \\ 0 \\ + & 1 \\ - & 1 \end{array}$ | 18 58 i 18 57 18 50 | $+ \frac{9}{7} \\ - \frac{1}{1}$ | 12 55 e 10 42 i 11 49 | PP PcP pP | |
| Tomie Ituhara Unalaska Hengchun Hsinkong | E, | $69.8 \\ 69.8 \\ 69.9 \\ 69.9$ | $ \begin{array}{r} 314 \\ 316 \\ 8 \\ 301 \\ 302 \\ \end{array} $ | i 10 27 a e 10 27 i 11 23 i 10 30 i 10 28 | $^{+}_{-}^{2}_{1}\ ^{+}_{-}^{1}_{1}$ | $\begin{array}{cccc} \mathbf{i} & 19 & 3 \\ \mathbf{e} & 18 & 57 \\ \mathbf{i} & 21 & 6? \\ 19 & 6 \\ 19 & 5 \end{array}$ | $^{+}_{-}{}^{6}_{7} \\ _{\mathrm{PPS}}^{7} \\ _{+}{}^{1}_{0}$ | e 12 1 | р <u>Р</u> — | e 26·6 |
| Taitung Tawu Hwalien Wakkanai Ilan | | $69.9 \\ 70.0 \\ 70.1 \\ 70.3 \\ 70.4$ | $302 \\ 301 \\ 303 \\ 332 \\ 304$ | 10 32 10 31 10 31 10 37 10 32 | $^{+}_{$ | e 19 11 19 17 19 14 | + 4 + 7 + 3 | e 12 14 | | |
| Yushan Alishan Kaohsiung Taipei Tainan | | 70·4 70·6 70·6 70·7 70·8 | $302 \\ 302 \\ 301 \\ 304 \\ 301$ | 10 34 10 34 10 36 i 10 35 e 10 37 | $\begin{array}{cccc} + & 2 & \\ & 0 & \\ + & 2 & \\ + & 1 & \\ + & 2 & \end{array}$ | $ \begin{array}{ccccccccccccccccccccccccccccccccccc$ | $^{+}_{+}{}^{6}_{3}$ $^{+}_{+}{}^{3}_{1}$ | | | |

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|---|----|---|--|-----------------------------------|---------------------------------|---|---|---|---|---|---------------------------------|
| Hsinchu Petropavlovsk Taichung Yuzno-Sakhlinsk Penghu | | 71.0 71.0 71.0 71.0 71.0 71.6 | $304 \\ 346 \\ 303 \\ 333 \\ 302$ | i 10 3 e 10 3 i 10 3 | 38 34 35 36 36 | $^{+}_{-}_{2}^{2}_{1}$ $^{-}_{0}^{3}$ | $ \begin{array}{c} 19 & 17 \\ 19 & 18 \\ \hline 19 & 11 \end{array} $ | $-\frac{1}{0}$ -13 | i 12 5 | p <u>P</u> = | |
| Bandung Lembang Djakarta Vladivostok Zô-Sè | | $72.4 \\ 72.4 \\ 73.3 \\ 73.7 \\ 73.9$ | $\begin{array}{c} 268 \\ 268 \\ 268 \\ 325 \\ 309 \end{array}$ | i 10 4 i 10 4 i 10 5 | 15 14 18 a 51 | $\begin{array}{cccc} + & 1 & \\ & 0 & \\ - & 1 & \\ - & 1 & \end{array}$ | i 19 36 i 19 34 i 19 42 i 19 49 i 19 55 | + 1 - 1 + 1 | e 22 14 e 12 19 i 22 24 i 12 27 | $rac{	ext{pP}}{	ext{sS}}$ | |
| Branner San Francisco Berkeley Ukiah Lick | Ε, | $74.8 \\ 74.8 \\ 75.0 \\ 75.0 \\ 75.1$ | $44 \\ 43 \\ 43 \\ 42 \\ 44$ | e 10 5 i 10 5 i 10 5 | 66 7 7 a 57 a 88 a | $ \begin{array}{cccc} & 2 \\ & 1 \\ & 2 \\ & & 2 \\ & & 1 \end{array} $ | i 20 2 e 19 59 i 20 2 i 20 8 e 20 5 | | i 12 30 e 12 30 i 12 32 | рР рР рР | e 30·5 |
| Ferndale Arcata Hong Kong Pasadena Fresno | E. | 75·2 75·5 75·6 75·8 76·0 | $^{40}_{298} \\ ^{48}_{45}$ | i 11 | 9 3 a 3 a | $ \begin{array}{cccc} & 1 \\ & 1 \\ & 1 \\ & 0 \\ & & 1 \end{array} $ | i 20 7 i 20 9 i 20 13 i 20 11 i 20 15 | $^{+}$ $^{+}$ $^{+}$ 5 $^{+}$ 1 $^{+}$ 3 | i 12 36? i 12 29 e 38 25 | pP pP P'P' | e 30·8 |
| Nanking Woody Barratt Riverside Isabella | N. | 76·1 76·1 76·2 76·3 76·4 | $309 \\ 46 \\ 50 \\ 49 \\ 47$ | i 11 | 6 a 4 a 4 a 5 a 7 | $\begin{array}{cccc} + & 1 \\ - & 1 \\ - & 2 \\ - & 1 \\ 0 \end{array}$ | 20 19 i 20 15 i 20 18 20 17 | $^{+}_{+}^{5}_{1}_{+}^{1}_{-}$ | i 12 37 i 12 37 i 12 45 i 12 41 | pP pP pP | |
| Palomar Shasta Big Bear Mineral Tinemaha | z. | $76.4 \\ 76.4 \\ 76.8 \\ 76.8 \\ 77.2$ | $\begin{array}{c} 50 \\ 41 \\ 49 \\ 41 \\ 46 \end{array}$ | i 11 i 11 i 11 | 6 a 6 a 7 a 7 | $ \begin{array}{cccc} $ | i 20 17 i 20 13 e 20 20 i 20 28 | $-{0\atop -}{1\atop -}{1\atop 3}$ | i 12 49 e 12 41 i 38 21 i 12 44 | pP pP P'P' | |
| Dairen Reno Futzeling Changchun Corvallis | z. | 77.5 77.5 77.6 77.9 78.1 | $316 \\ 43 \\ 308 \\ 322 \\ 37$ | i 11 1 11 1 i 11 1 | 3 2 a 4 6 a | $\begin{array}{cccc} - & 0 \\ - & 1 \\ + & 1 \\ - & 0 \end{array}$ | $\begin{array}{c} 20 & 36 \\ \mathbf{i} & 20 & 31 \\ -20 & 37 \\ \mathbf{e} & 20 & 36 \end{array}$ | $^{+\ 8}_{+\ 3}$ | e 38 15 - 1 12 50 | $\mathbf{P'} \frac{\overline{\mathbf{P'}}}{\mathbf{P}}$ | |
| Harbin Magadan Boulder City Eureka Alberni | | 78·3 78·7 79·1 80·0 80·1 | $\begin{array}{r} 324 \\ 345 \\ 48 \\ 44 \\ 32 \end{array}$ | i 11 1 i 11 2 | 6 6 0 a 3 a 5 k | $ \begin{array}{rrr} $ | i 20 37 i 20 46 i 21 1 | - 4 + 1 + 7 | i 12 47 i 14 28 i 14 26 | pP PP PP | |
| Tucson Victoria Mazatlan Seattle Sitka | | 80·4 80·4 80·5 80·5 80·7 | 53 34 63 35 22 | i 11 2 e 11 3 i 11 2 | 7 a 6 a 5 a 8 a 7 k | $ \begin{array}{rrr} $ | $\begin{array}{cccc} \mathbf{i} & 21 & 5 \\ \mathbf{i} & 20 & 59 \\ \mathbf{e} & 21 & 5 \\ \mathbf{i} & 21 & 1 \\ \mathbf{i} & 20 & 59 \end{array}$ | $^+ \begin{array}{c} + & 7 \\ + & 1 \\ + & 6 \\ + & 2 \\ - & 3 \end{array}$ | e 13 5 23 46 e 13 17 e 23 53 i 13 4 | $\begin{array}{c} \mathbf{pP} \\ \mathbf{sS} \\ \mathbf{pP} \\ \mathbf{sP} \end{array}$ | e 31·8 e 41·0 — i 42·0 |
| Manzanillo Horseshoe Bay Peking Kwanting Guadalajara | | $80.9 \\ 81.0 \\ 81.7 \\ 82.2 \\ 82.3$ | $\begin{array}{c} 67 \\ 33 \\ 315 \\ 315 \\ 66 \end{array}$ | e 11 3 i 11 3 11 3 | 6 a 1 a 6 a 3 | $\begin{array}{cccc} + & 5 & & & \\ & 0 & & \\ + & 1 & & \\ - & 4 & & \\ + & 3 & & \end{array}$ | i 21 12 13 51 i 21 23 | $+ \frac{8}{8P} + \frac{5}{5}$ | $\begin{array}{r} {\bf i} \ 13 \ 25 \\ \hline 12 \ 53 \\ {\bf e} \ 13 \ 21 \end{array}$ | $\frac{pP}{pP}$ | |
| Chihuahua Taiyuan Linfen College Salt Lake City | | $82.8 \\ 83.2 \\ 83.3 \\ 83.4 \\ 83.4$ | $\begin{array}{r} 58\\312\\310\\13\\45\end{array}$ | 11 4 11 4 111 3 | $\tilde{6}$ | $^{+19}_{+2} \\ ^{+3}_{-6} \\ ^{-1}$ | i 21 47 — i 21 19 i 21 29 | $+\frac{24}{-10}$ | i 13 37 i 13 19 i 13 19 | $\frac{\mathbf{pP}}{\mathbf{pP}}$ | e 40·3 |
| Tatung Yumenkow Sian Butte Tacubaya | N. | 83·7 83·8 84·5 85·3 85·6 | $\frac{309}{308}$ | e 11 40 11 5 111 5 111 5 | 6 1 2 a | $\begin{array}{cccc} + & 1 \\ + & 1 \\ + & 2 \\ - & 1 \\ - & 1 \end{array}$ | i 21 37 i 22 2 | $\begin{bmatrix} + & 2 \\ - & 2 \\ + & 12 \end{bmatrix}$ | i 13 25 i 13 25 | - pP | e 41 <u>·2</u> |
| Bozeman Paotow Puebla Oaxaca Boulder | | 86·1 86·2 86·4 87·1 87·6 | $^{41}_{314}_{69}_{72}_{48}$ | e 12 3 e 12 3 | 6 k 5 4 a 3 | $^{+}_{+}\overset{0}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}$ | i 21 45 e 22 6 e 22 11 | [+ 4] + 9 + 7 | i 13 32 e 22 15 e 13 35 | $\frac{\mathbf{pP}}{\mathbf{pP}}$ | i 39·7 |

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|---|----|---|---|--|--|--|--|--|---|------------------------|
| Yinchuan Vera Cruz Lauchow Rapid City Wuwei | Е. | 88·1 88·3 89·1 90·6 90·6 | $311 \\ 70 \\ 308 \\ 44 \\ 309$ | 12 i 12 2 12 1 i 12 1 | s. s. 7 + 1 3a + 16 3 + 2 7k - 1 9 + 1 | i 22 26 | +11 | i 14 47 i 13 54 | sP pP | e 38·9 |
| Sining Comitan Saskatoon Kerguelen Ils. Changyeh | | $90.8 \\ 91.1 \\ 91.5 \\ 91.6 \\ 92.4$ | $308 \\ 74 \\ 36 \\ 218 \\ 310$ | e 12 3 12 2 e 12 2 | $ \begin{array}{cccc} 1 & +11 \\ 3 & +1 \\ 2 & 0 \end{array} $ | i 22 57 i 22 42 e 24 53 | - 1 | i 25 49 25 38 e 13 56 | sS pP | 38·2 e 33·0 |
| San Salvador Tiksi Concepción Irkutsk Merida | | $93.2 \\ 93.6 \\ 93.8 \\ 94.2 \\ 94.6$ | $77 \\ 345 \\ 130 \\ 323 \\ 70$ | e 11 5 i 12 3 | 0 - 1 | e 22 34 i 16 14 e 25 19 22 28 i 23 20 | PP PS [0] | i 14 4 e 14 8 e 14 7 e 14 19 | pP pP pP | |
| Fayetteville Yumen Shillong Santa Lucia St. Louis | N. | $94.7 \\ 95.4 \\ 95.9 \\ 96.1 \\ 98.4$ | $54 \\ 310 \\ 295 \\ 127 \\ 52$ | 12 4 i 12 4 e 12 5 | $\begin{array}{ccc} 3 & + & 1 \\ 6 & + & 1 \end{array}$ | e 22 36 e 22 39 i 23 41 | [-1] | e 14 21 | $\begin{array}{c} \mathbf{pP} \\ \mathbf{pP} \\ \mathbf{pP} \\ \mathbf{pP} \end{array}$ | |
| Duluth Huancayo Bokaro Chicago Colombo | E. | $98.8 \\ 99.5 \\ 100.9 \\ 101.0 \\ 102.7$ | $^{105}_{292}_{50}_{274}$ | e 13 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 23 15 e 23 4 i 23 4 i 24 4 | $[+23] \\ [+8] \\ [+2] \\ +1 \\ -$ | i 14 39 e 25 11 e 14 40 i 17 39 | $_{\mathrm{pP}}^{\mathrm{pP}}$ | e 41·4 e 43·9 |
| Resolute Madras Chinchina Buenos Aires La Paz | Е. | $103.1 \\ 103.8 \\ 104.0 \\ 104.6 \\ 104.6$ | $^{16}_{280}_{89}_{133}_{112}$ | e 14 54 e 13 28 e 15 56 | 8 P | e 23 10 i 23 17 i 23 18 i 23 19 | $\begin{bmatrix} - & 3 \\ + & 1 \\ + & 1 \end{bmatrix}$ $\begin{bmatrix} + & 1 \\ - & 0 \end{bmatrix}$ | 14 50 i 17 30 i 17 47 17 45 i 14 57 | PP PP PP PP | 43.5 |
| Columbia La Piata Bogota Cleveland Galerazamba | | 104.8 104.9 105.4 105.4 105.7 | 58 133 89 51 83 | 17 33 e 13 34 i 13 23 | The second secon | i 23 22 i 23 22 e 23 23 i 24 47 | $\begin{bmatrix} + & 2 \\ + & 2 \end{bmatrix} \\ - & 0 \\ + & 3 \end{bmatrix}$ | $\begin{array}{cccc} \mathbf{e} & 15 & 6 \\ & 20 & 5 \\ \mathbf{i} & 17 & 58 \\ \mathbf{i} & 15 & 5 \\ \mathbf{i} & 27 & 47 \end{array}$ | $^{\mathrm{pP}}_{\substack{\mathrm{PP}\\\mathrm{pP}\\\mathrm{pP}\\\mathrm{PS}}}$ | e 45·2 55·4 49·5 |
| Kodaikanal Hyderabad Morgantown Pittsburgh Chapel Hill | E. | $106.4 \\ 106.4 \\ 106.5 \\ 106.7$ | $276 \\ 284 \\ 53 \\ 52 \\ 57$ | e 15 6 e 13 25 i 13 36 i 13 36 i 13 29 | P P P | i 23 30 e 20 36 i 23 29 | $[+\frac{6}{3}]$ | e 27 25 i 17 56 i 17 56 i 17 55 i 17 57 | PS PP PP PP | |
| Kirkland Lake Pennsylvania Washington Semipalatinsk Dehra Dun | z. | 107.1 108.1 108.5 108.6 108.8 | $^{44}_{52}$ $^{54}_{318}$ 297 | e 13 36 i 13 37 e 13 37 e 13 55 | P P P | e 25 5 e 23 35 i 27 19 i 23 35 25 55 | $[\begin{smallmatrix}\mathbf{s}\\\mathbf{ps}\\\mathbf{l}-\mathbf{s}^2\end{bmatrix}$ | e 15 5 e 15 15 i 15 17 i 18 12 18 25 | pP pP PP PP | e 47·1 46·5 |
| New Delhi Ottawa Poona Fordham Palisades | | 109·3 109·9 110·9 111·1 | 295 47 284 52 52 | 18 21 e 13 43 i 13 50 e 18 7 i 13 49 | a P P [+22] | i 23 42 i 23 43 i 23 47 i 23 46 i 33 31 | $[+ \ 2] \\ [+ \ 1] \\ [+ \ 1] \\ [- \ 1] \\ \mathrm{SS}$ | i 28 1 15 16 i 15 29 i 18 24 e 15 23 | PS pP PP PP | e 42·2 |
| Palisades Bombay Shawinigan Falls Frunse Seven Falls | | $111.1 \\ 111.9 \\ 112.0 \\ 112.4 \\ 113.3$ | $52 \\ 284 \\ 46 \\ 310 \\ 45$ | i 17 46 e 13 57 e 13 52 i 13 55 e 14 0 | a P P | i 23 48 i 23 49 24 31 i 23 53 i 23 59 | [+ 1] [- 1] SKKS [- 2] [+ 3] | e 18 25 18 36 i 18 35 i 15 37 15 42 | PP PP PP pP | e 46·6 |
| San Juan Tashkent Stalinabad Quetta Quetta | | 115.8 116.4 116.9 118.4 118.4 | $\begin{array}{c} 77 \\ 309 \\ 306 \\ 296 \\ 296 \end{array}$ | i 17 54 e 14 12 e 14 15 e 14 22 e 18 0 | P | i 24 8 e 24 5 i 24 10 e 24 17 e 28 51 | [+ 3] $[- 2]$ $[+ 1]$ $[+ 3]$ $SKSP$ | 19 9 i 15 46 i 19 16 i 15 59 i 19 8 | PP PP PP | e 50·6 |
| Halifax Trinidad Sverdlovsk St. Vincent Fort de France | | 118.6 118.9 119.3 119.6 120.0 | $\begin{array}{r} 47 \\ 86 \\ 327 \\ 83 \\ 82 \end{array}$ | i 19 22 e 18 2 i 14 25 e 18 2 e 18 1 | [+2] P | e 28 22 24 14 i 24 31 | $\begin{bmatrix} -3 \\ -11 \end{bmatrix}$ | i 26 38 19 19 i 19 36 | PP | |

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|---|--|-----------------------------------|---|---|---|--------------------------------------|---|------------------------------|----------|
| St. Lucia Barbados Ivigtut Tananarive Scoresby Sund | 120·0 121·2 122·3 123·0 123·1 | 84 | e 18 3 e 18 13 e 19 40 i 18 11 i 18 7 | [+ 1] [+ 8] pP' [+ 3] [- 1] | e 30 0 e 24 39 i 24 30 | | i 26 0 e 19 58 i 19 42 | SS PP PP | i 55·4 |
| Ashkabad Grahamstown z. Kiruna Kiruna Pietermaritzburg z. | $126 \cdot 1 \\ 126 \cdot 1$ | $306 \\ 206 \\ 351 \\ 351 \\ 212$ | i 17 12 i 18 15 i 14 55 i 18 12 i 18 17 | [+ 2] P [- 2] [+ 1] | 21 53 i 29 39 i 24 39 | PKS SP 0] | i 21 23 i 16 31 i 20 5 | pP' | = |
| Akureyri N Reykjavik Kimberley z. Pulkovo Moscow | 128.8 | $10 \\ 208 \\ 341 \\ 334$ | e 18 22 i 18 21k 18 6 i 18 21 18 23 | $[+4] \\ [+2] \\ [-17] \\ [-2] \\ [0]$ | e 21 41 i 21 45 i 20 40 21 49 | PKS PKS PP PKS | e 20 26 e 20 9 i 18 15 i 20 7 e 15 18 | PP pP PKP pP | = |
| Skaltugan Pretoria z. Helsinki Goris Upsala | $131.4 \\ 132.0 \\ 133.9 \\ 134.0$ | $353 \\ 213 \\ 344 \\ 310 \\ 348$ | i 18 23 e 17 29 e 18 22 18 31 i 18 26 | $ \begin{bmatrix} -1 \\ -55 \\ -55 \\ -3 \\ -3 \\ -3 \\ -3 \end{bmatrix} $ | i 21 10 i 21 16 i 24 55 22 9 i 25 1 | SKP SKP [+ 1] PKS [+ 3] | i 18 11 i 18 28 e 20 46 i 15 33 i 18 16 | PKP PP P | |
| Aberdeen Copenhagen Edinburgh Warsaw Durham | $138.2 \\ 138.9 \\ 139.4 \\ 140.0 \\ 140.7$ | $350 \\ 341 \\ 341 \\ 3$ | i 19 40 e 18 19 21 36 i 18 27 e 18 39 | $\begin{bmatrix} -19 \\ -19 \end{bmatrix}$ $\begin{bmatrix} -13 \\ -13 \end{bmatrix}$ $\begin{bmatrix} -2 \end{bmatrix}$ | i 22 12 i 22 16 25 5 i 22 16 i 22 16 | PKS PKS [- 2] PKS PKS | i 20 42 i 20 26 22 29 e 20 26 i 21 23 | pP' PKS pP' PP | e 66·5 |
| Lwow Hamburg Iasi Rathfarnham Castle Bacau | 141.0 141.3 141.5 141.7 142.2 | $336 \\ 352 \\ 331 \\ 7 \\ 331$ | i 18 33 e 18 34 a e 18 38 i 18 35 k 18 41 | [- 9] [- 8] [- 5] [- 8] [- 4] | 27 55 i 21 41 i 25 4 e 27 54 e 21 44 | SKKS SKP [- 7] SKKS SKP | i 21 38 e 20 23 i 21 43 i 20 28 e 22 31 | PP' pP' pP' PKS | |
| Witteveen z. Focsani Skalnate Pleso De Bilt Jena | $\substack{142.4 \\ 142.7 \\ 142.9 \\ 143.2 \\ 143.6}$ | $355 \\ 330 \\ 339 \\ 356 \\ 349$ | i 18 40 a e 18 44 i 18 33 i 18 42 a i 18 43 | $\begin{bmatrix} -5 \\ -2 \end{bmatrix}$ $\begin{bmatrix} -13 \\ -4 \end{bmatrix}$ $\begin{bmatrix} -4 \end{bmatrix}$ | i 21 45 e 21 55 i 28 7 i 21 47 i 25 10 | SKP PP SKKS SKP [- 4] | e 20 34 i 20 26 i 20 24 i 20 35 | pP' pP' pP' | |
| Ksara Prague Kew Campulung Bucharest | $143.8 \\ 143.8 \\ 144.0 \\ 144.1 \\ 144.2$ | $307 \\ 346 \\ 2 \\ 331 \\ 329$ | i 18 43 i 18 44 i 18 45 a i 18 47 i 18 47k | $\begin{bmatrix} - & 4 \\ - & 3 \end{bmatrix}$ $\begin{bmatrix} - & 3 \\ - & 1 \end{bmatrix}$ $\begin{bmatrix} - & 1 \end{bmatrix}$ | e 16 22 i 25 14 i 22 7 e 21 2 i 28 24 | ${f P}_{f PKS}^{0]} \\ {f SKKS}$ | i 20 28 9 e 20 29 i 20 30 e 20 39 i 20 32 | pP', pP', pP', pP', | <u> </u> |
| Cheb Uccle Budapest Hurbanovo Bratislava | $144.2 \\ 144.6 \\ 144.7 \\ 144.7 \\ 144.8$ | $348 \\ 356 \\ 339 \\ 340 \\ 341$ | i 18 46 i 19 14a i 18 49 i 18 51 i 18 51 | $egin{bmatrix} [- & 2] \ [+ 26] \ [+ & 2] \ [+ & 2] \ [+ & 2] \ \end{bmatrix}$ | i 22 43 e 25 36 e 21 36 e 25 29 i 25 18 | PKS [+21] PP [+14] [+ 2] | i 22 8 e 20 56 20 13 i 20 23 i 22 24 | PP pP, pP, PP | = |
| Vienna Jerusalem Kecskemet Szeged Timisoara | 144.9 145.0 145.0 145.4 145.4 | 342 304 338 337 335 | i 18 50 i 18 51k e 18 48 18 51 e 18 51 | [+1] $[+2]$ $[-1]$ $[+1]$ $[+1]$ | e 25 1 e 22 35 e 28 23 | PP PKS SKKS | i 20 43 i 20 32 20 2 22 0 e 22 31 | pP', pP', PP' | e 61·5 |
| Kalossa Angra do Heroismo Karlsruhe Jersey E. Belgrade | 145.6 145.9 146.0 146.2 146.4 | $338 \\ 42 \\ 352 \\ 4 \\ 335$ | 18 51 i 18 48 i 18 51 a i 18 53 e 18 52k | [+1] $[-3]$ $[+2]$ $[+1]$ | e 24 15 i 22 12 i 28 27 | PP SKKS SKKS | e 20 29 e 21 27 i 20 35 i 22 34 i 20 40 | pP' pP' PKS pP' | e 53·5 |
| Strasbourg Paris Sofia Basle Zürich | 146.5 146.6 146.8 147.5 147.5 | | i 18 51 i 18 52 i 18 55 e 18 53 e 18 54 | $[& 0] \\ [& 0] \\ [+ 3] \\ [& 0] \\ [+ 1] $ | e 40 39 i 25 13 i 25 30 | SS [+ 12] [+ 12] | i 20 33 i 20 35 i 20 41 e 20 38 | pP' pP' pP' | |
| Lwiro Besançon Triest Neuchatel Oropa | 147.6 148.0 148.0 148.1 149.3 | 240 354 343 352 351 | e 18 55 a i 18 52 i 18 51 a i 18 54 i 18 48 | $\begin{bmatrix} + & 2 \\ - & 2 \\ - & 3 \end{bmatrix}$ $\begin{bmatrix} - & 3 \\ 0 \end{bmatrix}$ $\begin{bmatrix} - & 8 \end{bmatrix}$ | 22 21 i 22 23 e 34 6 i 22 23 | SKP SKP SKKS ₂ | i 20 41 i 22 11 i 20 35 e 20 40 i 20 38 | pP' PKS pP' pP' | |

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| | Δ | Az. | Р. | O-C. | s. | O-C. | St | ipp. | L. |
|--------------------|---------------|-----|-----------|----------------------------|--|------------------------------------|--|------------------------|--------|
| | O | | m. s. | s. | m. s. | s. | m. s. | PACATIT. | m. |
| Pavia | 149.6 | 349 | e 18 56a | SALES VESTIN | o 22 34 | PKS | i 20 46 | pP' | |
| Bologna | 149.7 | 346 | e 18 58a | 1+ 21 | e 22 26 | PKS | e 20 46 | pP' | |
| Clermont-Ferrand | 149.7 | 357 | i 18 57 a | 1 + 11 | i 28 54 | SKKS | i 20 45 | pP' | |
| Athens | 150.0 | 323 | e 18 57 a | i ôi | 1 20 01 | SKINS | i 20 46 | pp' | |
| Florence | 150-4 | 345 | i 18 56a | | i 22 31 | PKS | i 20 52 | pP' | |
| Prato | 150-4 | 354 | i 18 57 | 1 01 | i 32 52 | PSKS | | | |
| Monaco | 151.2 | 351 | i 18 59 | [+ 1] | i 22 57 | PP | i 20 50 | pP' | |
| Taranto | 151.4 | 334 | e 19 9 | [+10] | e 43 29 | PSS | e 26 52 | \overrightarrow{PPP} | |
| Rome | 151.8 | 342 | i 18 59a | î o î | e 33 7 | 1 2 | i 20 51 | pP' | - |
| Barcelona | 154.0 | 358 | e 19 9 | [+ 7] | e 29 15 | skks | e 21 16 | pP' | e 50·2 |
| Messina | 154.0 | 334 | e 19 1a | [- 1] | i 27 38 | 2 | i 20 56 | pP' | - |
| Reggio Calabria z. | 154.0 | 333 | e 19 0 | $\hat{I} - \hat{2}\hat{I}$ | e 22 39 | $P\dot{P}$ | e 20 49 | pP' | |
| Cuglieri | 154.5 | 347 | i 19 0 | 1 - 31 | i 22 51 | $\hat{P}\hat{P}$ | i 20 50 | pP' | |
| Lisbon | 155.0 | 19 | 19 9 | [+5] | | PKP. | | $\dot{P}P$ | 72.8 |
| Toledo | 155.2 | 10 | i 19 6a | [+2] | $\begin{array}{cccc} 19 & 35 \\ 1 & 32 & 27 \end{array}$ | 3 . | $\begin{array}{ccc} 23 & 1 \\ \text{i} & 21 & 0 \end{array}$ | pP' | |
| Alicante | 157.1 | 3 | 19 7 | [0] | 25 17 | [-14] | 24 5 | 8 | e 79·3 |
| Tunis | $157 \cdot 2$ | 341 | e 19 7 | 1 01 | e 25 35 | $[+\hat{4}]$ | i 21 5 | pP' | 0 15 5 |
| Granada | 157.9 | 10 | 19 7k | î - 11 | 1 24 48 | 1-441 | 21 19 | pP' | i 79.9 |
| Malaga | 158.2 | 12 | i 19 9a | [+1] | i 23 7 | PKS | i 19 45 | PKP. | 81.2 |
| Almeria | 158.4 | 8 | i 19 8 | į o j | e 25 26 | $\begin{bmatrix} -6 \end{bmatrix}$ | i 20 49 | pP' | e 69·3 |
| Algiers Univ. z. | 158.6 | 356 | i 19 8a | f 01 | i 19 46 | PKP. | e 21 23 | pP' | |
| Relizane | 159.7 | 2 | i 19 11k | i+ ii | e 23 34 | PP 2 | e 20 54 | pP' | |
| M'Bour | 162.4 | 91 | i 19 14 | 1 + 21 | i 25 18 | [-18] | 1 21 0 | pP' | |
| Tamanrasset z. | 171.6 | 332 | i 19 21 a | 1 + 21 | e 20 45 | PKP. | e 22 23 | nP. | _ |

May 24d. 2h. 27m. 28s. Epicentre 26°·2N. 109°·8W.

A = -.3043, B = -.8453, C = +.4391; $\delta = -6$; h = +3; D = -.941, E = +.339; G = -.149, H = -.412, K = -.898.

| 77.00 | | NEWSCHOOL STATE | 711 | (C.T.T. (P.) | | | | - M. M. M. M. M. | • | |
|--|----------------|--|---|---|--|---|--------------------------------|------------------|------------------------------|------------------------------------|
| | | Δ | Az. | $_{ m m.~s.}^{ m P.}$ | O – C. | s. m. s. | O – C. | m. s. | pp. | L. |
| Chihuahua Mazatlan Tucson Manzanillo | | 4·1 4·3 6·1 8·7 | 53 133 352 143 | $\begin{array}{ccc} 1 & 6 \\ 1 & 7 \\ e & 1 & 31 \\ i & 2 & 36 \end{array}$ | $^{+}_{-}^{1}_{3}$ $^{+}_{+}^{2}$ | e = 42 | - <u>3</u> | i 2 0 | Pg | m. 2·1 2·1 i 3·4 e 5·0 |
| Barratt | | 8.8 | 319 | e 2 8 | - 3 | e 4 53 | + $2g$ | | _ | |
| Palomar Riverside Boulder City Pasadena Tacubaya | | $9.4 \\ 10.2 \\ 10.7 \\ 10.8 \\ 11.9$ | $321 \\ 322 \\ 338 \\ 320 \\ 122$ | i 2 20 e 2 30 e 2 38 e 2 37 i 2 54 | $\begin{array}{cccc} + & 2 \\ - & 1 \\ - & 0 \\ - & 0 \end{array}$ | $\frac{-}{3}$ $\frac{3}{5}$ $\frac{40}{23}$ | $-\frac{-}{59} + \frac{-}{14}$ | | | i 5·4 e 5·8 e 4·9 e 6·3 |
| Woody Tinemaha Fresno Eureka Boulder | z. | $12.3 \\ 13.0 \\ 13.6 \\ 14.2 \\ 14.3$ | $323 \\ 329 \\ 324 \\ 340 \\ 14$ | e 2 55 e 3 10 i 3 20 i 3 25 e 3 29 | $ \begin{array}{cccc} & - & 4 \\ & + & 1 \\ & + & 3 \\ & + & 3 \end{array} $ | e <u>5</u> 54 | $-\frac{-}{10}$ | i 3 55 i 4 57 | ? ? | e 6·7 e 7·5 i 7·6 |
| Vera Cruz Salt Lake City Lick Berkeley Reno | z. z. | $14.4 \\ 14.7 \\ 15.0 \\ 15.7 \\ 15.8$ | $\begin{array}{c} 116 \\ 354 \\ 321 \\ 321 \\ 330 \\ \end{array}$ | e 3 34 i 3 38 e 3 43 i 3 47 | $\begin{array}{r} - & - & - & - & - & - & - & - & + & - & -$ | i 6 44 e 6 43 | SS + 27 — | | | e 8·2 e 8·1 — |
| Fayetteville Mineral Shasta Rapid City Merida | z. z. E. | $16.6 \\ 17.2 \\ 17.9 \\ 18.7 \\ 19.2$ | $\begin{array}{r} 50 \\ 328 \\ 327 \\ 15 \\ 101 \end{array}$ | i 3 56 e 4 3 e 4 11 e 4 13 | - 0 - 1 - 9 | e = 22 | - - +23 | e = 53 | = PP | e 8·6 — e 10·0 |
| Bozeman Butte Corvallis Terre Haute Seattle | N. Z. | $19.5 \\ 19.9 \\ 21.4 \\ 23.0 \\ 23.6$ | $357 \\ 354 \\ 333 \\ 49 \\ 339$ | e 4 32 e 4 37 e 4 52 e 4 30 | $^{+}_{+}^{1}_{1}^{1}_{-37}$ | e 8 23 e 8 31 i 10 52 e 9 47 | $+17 \\ +16 \\ -88 \\ +22$ | i 5 8 | PP | e 10·8 e 10·6 e 13·0 |

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| | | Δ | Az. | P. | 0-C. | s. | O-C. | Sug | p. | L. |
|---------------|----|--------------|-----|-----------------------|------------|---------|------|--------|----------|----------|
| | | 0 | 0 | m. s. | S. | m. s. | 8. | m, s. | | m. |
| Chicago | | $24 \cdot 0$ | 44 | _ | 7 <u>2</u> | e 9 36 | +4 | | | e 11.9 |
| Duluth | | 25.0 | 30 | | | e 10 28 | +39 | | - | 0 11 0 |
| Columbia | | 26.1 | 66 | e 5 35 | - 2 | e 10 13 | + 6 | e 5 48 | 8 | e 12·8 |
| Kirkland Lake | Z. | 32.0 | 39 | e 6 45 | +15 | e 17 0 | L | 0 0 10 | <u>.</u> | (e 17·0) |
| Palisades | | 33.1 | 54 | _ | | e 14 4 | ss | e 16 7 | Q | e 17.4 |
| Ottawa | | 33.3 | 46 | - | _ | e 14 2 | SS | | _ | e 17·0 |
| San Juan | | 41.0 | 92 | i 7 48 | + 2 | | 3757 | | _ | · |
| College | | 45.7 | 338 | e 8 22 | $ \bar{2}$ | - | | | - | |
| Resolute | | 49.2 | 5 | 47(<u>00</u> 8)27(7) | | e 19 21 | SS | | | e 26.8 |
| Huancayo | z. | 50.7 | 134 | e 9 5 | + 2 | | | _ | - | 200 |
| Kiruna | | 79.3 | 17 | e 12 5 | - 4 | - | - | | | |
| Skalstugan | | 79.7 | 23 | i 12 12 | $+\hat{1}$ | | | | | |
| Paris | | 84.0 | 38 | e 13 0 | + 26 | · — | | 10 | - | e 42.5 |

May 24d. 6h. 49m. 50s. Epicentre 42°·1N. 142°·6E. Depth of focus 60km. Intensity IV at Urakawa; II-III at Hatinohe. Scismo Bull. Japan Met. Agency for May, 1956, Tokyo, 1956, p. 21, with chart of seismic intensities.

May 24d. 13h. 52m. Epicentre 39°·2N. 44°·2E. Bulletin of the Seismo Stations of the U.S.S.R. April-June, 1956, Moscow, 1957, p. 17.

May 25d. 0h. 50m. Epicentre 1°·0N. 97°·5E. Seismo. Bull. Government of India Meteorological Department, 1956, May, p. 8.

May 25d. 12h. 13m. Epicentre 33°S. 177°W. Magnitude 5·7. N.Z. Seismo. Report for 1956, Observatory Bull. No. E-137, New Zealand Department of Scientific and Industrial Research, Wellington, 1960, p. 38.

May 26d. 8h. 30m. 20s. Epicentre 4°-0S. 126°-2E.

A = -.5892, B = +.8050, C = -.0693; $\delta = -2$; h = +7; D = +.807, E = +.591; G = +.041, H = -.056, K = -.998.

| | | Δ | Az. | | 0 - C. | "S. | O-C. | | pp. | L. |
|---|----------------|--|-----------------------------------|---|--|--|--|---|-----------------|----------------------------|
| Bandung Lembang Manila Djakarta Baguio | | $18.7 \\ 18.7 \\ 19.1 \\ 19.4 \\ 21.0$ | 260 260 344 263 345 | m. s. e 4 22 e 4 20 i 4 29 e 4 31 k i 4 48 | s. - 2 + 2 + 1 + 1 | e 7 50 e 7 47 e 8 45 e 8 45 e 8 45 | + 2 - 1 + 48 + 4 + 8 | m. s. = (e 8 45) | P _{cP} | e 9·7 |
| Rabaul Hengchun Hong Kong Perth Brisbane | z. z. | 25.9 26.4 28.6 29.5 34.7 | 91 349 336 198 135 | e 5 31 e 5 43 6 2 i 7 4 i 6 53 | - 4 + 3 + 2 PP - 1 | i 5 38 10 13 e 10 53? i 11 12 e 12 26? | P + 1 + 5 + 10 + 2 | i 5 48 | <u>=</u> | 14-4 |
| Riverview Melbourne Matusiro Nouméa Shillong | | 37·7 37·8 41·9 43·0 44·4 | 145 155 15 119 313 | e 7 26 e 7 24 7 53 8 16 8 11 | $^{+}_{+}^{7}_{4}$ $^{+}_{-}^{1}_{3}$ $^{-}_{-}^{3}$ | i 13 15 e 13 14 14 2 i 14 28 | $^{+}_{-11}^{5}_{-21}$ | i 8 55 e 7 37 9 42 i 15 6 | PP PP PS | e 19·0 e 15·9 i 17·4 |
| Colombo Chatra Hyderabad Yuzno-Sakhlinsk Bombay | E. Z. E. | 47.5 48.6 51.7 52.8 57.2 | $283 \\ 311 \\ 295 \\ 14 \\ 295$ | e 12 16 9 21 | PPP - 1 PPP + 2 | e 17 44 | | $\begin{array}{c} & -12 \\ i & 9 & 12 \\ i & 16 & 25 \\ e & 22 & 2 \end{array}$ | PS SS | 28·2 = |
| Dehra Dun Irkutsk Frunse Quetta Namangan | | 57·2 59·0 65·9 65·9 66·8 | $310 \\ 344 \\ 321 \\ 305 \\ 318$ | 10 6 10 50 e 10 48 10 58 | $\begin{array}{c} - & - & - & - & 2 \\ - & & 2 & - & 2 \\ + & & 2 & - \end{array}$ | e 17 46 18 11 19 33 e 19 34 | $^{+}_{-}\overset{0}{\overset{1}{\overset{4}{3}}}$ | e 13 4 | PP | |

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| Prothesis | | Δ •-°- | Az. | m. s. | O -C. | S. m. s. | O -C. | m. s. | ipp. | L. m. |
|---|----------|---|---|---|--|--------------------|--|------------------------------|--------------------|----------|
| Tiksi Tananarive College Ksara Jerusalem | z. | $\begin{array}{c} 75.5 \\ 78.0 \\ 91.9 \\ 92.4 \\ 92.9 \end{array}$ | $252 \\ 25 \\ 304 \\ 302$ | e 11 47 e 11 59 i 13 10 e 13 20 e 13 16 | - 1 - 3 - 1 + 6 | 21 24 = | = | e 12 7 e 14 7 i 17 16 | $\frac{P_{cP}}{?}$ | 45.7 |
| Simferopol Kiruna Lwow Upsala Skalstugan | | $94.3 \\ 99.6 \\ 100.9 \\ 102.7 \\ 104.0$ | $315 \\ 338 \\ 320 \\ 331 \\ 335$ | 13 33 e 13 44 e 13 54 e 14 3 i 14 5 | $^{+10}_{-\ 2}_{+\ 3}_{-\ 1}$ | | | i 13 55 i 18 8 | PP | |
| Resolute Bay Messina Florence Hungry Horse Woody | E. | 105.4 108.6 110.6 112.5 112.5 | $\begin{array}{r} 10 \\ 309 \\ 315 \\ 39 \\ 53 \end{array}$ | $\begin{array}{c} e & 27 & 44 \\ e & 27 & 40 \\ \hline e & 18 & 27 \\ e & 19 & 26 \\ \end{array}$ | $\begin{bmatrix} -\frac{11}{2} \end{bmatrix}$ | e 25 21 e 35 18 | $\overset{[+29]}{\overset{\mathbf{P}\mathbf{\overline{ss}}}{=}}$ | e 33 35 = e 19 38 | SS PP | |
| Tinemaha Isabella Pasadena China Lake Eureka | E. | 112.7 112.8 113.4 113.5 113.9 | 51 53 54 53 48 | e 19 42 e 19 32 e 19 36 e 18 32 | PP PP [- 9] | e 29 4 | Ps | - 19 49 e 19 18 | PP | e 51·6 |
| Riverside Butte Barratt Boulder City Salt Lake City | N. | $114.1 \\ 114.2 \\ 114.9 \\ 115.6 \\ 116.5$ | 54 41 56 52 46 | e 19 38 e 19 24 e 19 47 e 18 52 e 18 46 | PP PP PP [+ 8] [0] | | | e 19 54 e 19 50 | PP - | |
| Tamanrasset Rapid City Fayetteville Seven Falls Palisades | z. E. | 119.7 121.1 131.0 134.6 139.0 | $^{294}_{40}_{44}_{16}_{23}$ | 20 7 e 18 56 e 19 17 e 19 34 e 22 49 | $egin{array}{c} \mathbf{PP} \\ [+ 1] \\ [+ 3] \\ [+ 13] \\ \mathbf{PKS} \\ \end{array}$ | e 45 58 | $\frac{-}{\mathrm{sss}}$ | e 20 52 e 34 46 | PP - PPS | e 70·4 |
| Huancayo La Paz San Juan | z. N. | $153.4 \\ 155.2 \\ 161.3$ | 146 | e 19 54 e 21 50 e 20 50 | [+ 2] PKP | | | e 21 40 e 23 54 i 21 0 | $\Pr_{2}^{?}$ | |

May 26d. 18h. 39m. 57s. Epicentre 44°·1N. 11°·9E.

A = +.7055, B = +.1461, C = +.6935; $\delta = +2$; h = -3; D = +.202, E = -.979; G = +.679, H = +.140, K = -.720.

| | Δ | Δz . | Р. | O-C. | s. | O-C. | Sup | p. | L. |
|------------|-------------|--------------|----------------|------------------|------------------|------------------|--------|--|-------|
| | 0 | 0 | m. s. | s. | m. s. | s. | m. s. | 20.000 | m. |
| Florence | 0.6 | 234 | i0 9 | - 3 _g | i 0 16 | - 4 g | | - | |
| Bologna | 0.6 | 316 | e 0 15 | 0 | e 0 25 | - 1 | e 0 20 | SE | |
| Prato | 0.6 | 348 | i0 8 | - 4g | i 0 12 | - 8 _g | | * | |
| Triest | 2.0 | 40 | i 0 31 | ~ 4 | i1 7 | + 1 | i 0 39 | P. | |
| Pavia | $2 \cdot 2$ | 300 | e 0 43 | $-\bar{1}_g$ | 1 9 | 0. | e 0 52 | $\mathbf{P}_{\mathbf{g}}$ | e 1·3 |
| Rome | 2.2 | 168 | i 0 41k | + 1* | 1 12 | - 1 _e | i 0 47 | $\mathbf{P}_{\mathbf{g}}$ | - |
| Monaco | 3.2 | 265 | e 0 53 | + 1 | i 1 23 | - 9 | e 0 58 | P* | - |
| Zürich | 4.0 | 326 | e 1 4 | 0 | e 1 57 | + 5 | e 1 15 | P_g | |
| Neuchatel | 4.5 | 312 | i 1 11 | 0 | e 2 5 | 0 | e 2 24 | Sg | |
| Basle | 4.6 | 320 | e 1 13 | + 1 | e 2 11 | + 4 | - | - | - |
| Besançon | 5.2 | 309 | e 1 19 | - 2 | i 2 23 | + 1 | e 1 43 | \mathbf{p}_{σ} | |
| Vienna | 5.2 | 35 | e 1 21 | 0 | i3 0 | + 8g | i 2 43 | $_{\mathbf{S}^{\sharp}}^{\mathbf{P}_{\mathbf{g}}}$ | · · |
| Strasbourg | 5.3 | 329 | e 1 22 | 0 | i 2 22 | - 3 | i 1 51 | P_g | - |
| Taranto | 5.4 | 130 | 2 26 | S | $(2\ 26)$ | - 2 | | | - |
| Bratislava | 5.4 | 40 | 2 26 i 1 24 | 0 | (2 26) i 2 23 | - 5 | i 1 49 | P_g | _ |
| Karlsruhe | 5.5 | 335 | e 1 23 | - 2 | e 2 25 | - 5 | e 1 43 | P_g | |
| Kalossa | 5.6 | 62 | e 2 13 | 3 | e 2 33 | 0 | e 3 3 | Sg. | |
| Hurbanovo | 5.8 | 47 | - | - | e 2 49 | +11 | i 3 12 | Su | - |
| Cheb | 6.0 | 3 | e 1 34 | + 2 | e 2 45 | + 2 | e 2 9 | Pg | |
| Budapest | 6.1 | 54 | e 1 56 | + 9* | e 2 38 | - 7 | e 3 35 | S. | |

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| | Δ | Az. | P. | o -c. | s. | o-c. | Suj | pp. | L. |
|-------------------|--------------|-----|----------|--|--------|-----------------------|------------|---------------------------|-------|
| | 0 | 0 | m. s. | S. | m. s. | s. | m. s. | | m. |
| Belgrade | $6 \cdot 2$ | 80 | e 2 3 | - 1 _e | e 2 56 | + 8 | e 3 19 | Sg | |
| Prague | $6 \cdot 2$ | 15 | e 1 37 | + 2 | 1 2 45 | $^{+}_{-} {}^{8}_{3}$ | i 1 46 | P* | |
| Szeged | $6 \cdot 2$ | 67 | | | 2 42 | - 6 | e 3 41 | Sg | - |
| Clermont-Ferrand | 6.4 | 288 | e 1 37 | - 1 | | | | | - |
| Messina | 6.5 | 154 | e 1 41 | + 2 | e 3 1 | + 6 | ****** | - | _ |
| Jena | 6.8 | 358 | e 1 41 | - 3 | e 3 0 | - 3 | e 3 48 | Sg | _ |
| Timisoara | 7.0 | 73 | | | e 3 53 | + 2 " | | | - |
| Skalnate Pleso | $7 \cdot 7$ | 46 | | | e 4 15 | + 1, | | | S |
| Paris | 8.0 | 309 | e 2 1 | + 1 | 1 3 33 | , õ, | i 4 32 | SE | |
| Uccle | 8.4 | 325 | e 2 25 | P* | e 3 37 | - ő | e 2 58 | $\mathbf{P}_{\mathbf{g}}$ | e 4·4 |
| Sofia | 8.5 | 96 | e 2 23 | P* | i 4 17 | + 1* | i 4 56 | Sg | _ |
| Bucharest N. | 10.2 | 83 | | | e 4 26 | - ī | e 5 47 | Sg | - |
| Kew | 11.0 | 316 | i 2 50 | + 8 | ~ ~ ~ | | | | e 6.0 |
| Durham | 13.8 | 326 | 4 12 | 3 | | | | - | i 6.9 |
| Rathfarnham C. z. | 15.1 | 314 | i 3 39 a | + 3 | - | - | i 4 12 | 3 | - |
| Upsala | 16.2 | 10 | i 3 54 | + 4 | - | | | | _ |
| Skalstugan | 19.5 | 1 | e 4 37 | $+\hat{6}$ | 352 | - | | | |
| Tamanrasset z. | 21.9 | 196 | e 4 55 | - 2 | e 9 9 | +15 | e 5 19 | $\mathbf{p}\mathbf{p}$ | 13.0 |
| Jerusalem | 22.1 | 116 | i 4 56 | $-\ \begin{array}{ccc} -\ 2 \\ -\ 3 \end{array}$ | - | 1.00 | | _ | • • |
| Kiruna | $24 \cdot 2$ | 8 | e 5 16 | - 3 | | - | - | _ | - |
| Halifax | 52.1 | 299 | i 9 12a | - 2 | | · · | Commission | - | - |
| College | 70.2 | 351 | e 11 18 | $+$ $\tilde{1}$ | | | 22 | | |
| Fayetteville | 75.8 | 307 | i 11 49k | - î | | | - | - | - |
| Hungry Horse | 76.4 | 326 | e 11 53 | Ô | | | | | |
| Eureka | 84 4 | 322 | e 12 36 | ŏ | | | | | |

May 26d. 20h. 21m. 24s. Epicentre 19°·1S. 178°·1W. Depth of focus 0·090.

A = -.9451, B = -.0314, C = -.3252; $\delta = -4$; h = +5; D = -.033, E = +.999; G = +.326, H = +.011, K = -.946.

| | | Δ | Az. | 1 | ٥. | O-C. | s. | O-C. | Su | pp. | L. |
|----------------|---------------|--------------|-----|------------------|-----------------|--------------------------|---------|------|------------------|----------------|--------------------|
| | | 0 | 0 | m. | s. | s. | m. s. | s. | m. s. | | m. |
| Apia | | 8.1 | 50 | 2 | 3 | + 2 | 3 40 | + 3 | 13 42 | ScS | _ |
| Nouméa | | 14.8 | 255 | i 3 | 6 | 0 | 15 39 | + 3 | | - | - |
| Onerahi | E. | 17.8 | 200 | 3 | 39 | + 5 | e 6 47 | +20 | e 14 1 | SeS | |
| Karapiro | N. | 19.5 | 195 | 3 | 52 | + 2 | e 7 4 | + 9 | e 14 1 e 14 2 | ScS | - |
| Tuai | N. | 20.0 | 191 | e 3 | $5\overline{4}$ | - ī | e 7 0 | - 4 | 14 4 | ScS | |
| Tongariro | $\mathbf{z}.$ | 20.7 | 194 | e 4 | 1 | 0 | - | - | e 10 23 | ScP | - |
| New Plymouth | E. | 21.0 | 197 | e 4 | 10 | + 6 | e 7 23 | + 3 | | 10.000 | 5 |
| Wellington | | 22.9 | 194 | e 4 | 18 | - 3 | e 7 48 | - 2 | i 14 13 | ScS | |
| Cobb River | E. | $23 \cdot 2$ | 198 | e 4 | 23 | - 1 | 7 52 | - 3 | e 14 19 | ScS | - |
| Kaimata | N.E. | 24.9 | 199 | e 4 | 38 | - 1 | e 8 19 | - 3 | e 6 2 | \mathbf{pP} | - |
| Christchurch | | 25.5 | 196 | i 4 | 45 | + 1 | e 8 27 | - 4 | e 14 31 | ScS | |
| Brisbane | | $27 \cdot 7$ | 247 | i 5 | 1 | - 2 | i 9 3 | - 2 | | | _ |
| Riverview | | 31.0 | 236 | i 5 | 34 a | + 3 | i 9 55 | - 1 | i 7 11 | pP | |
| Rabaul | | 32.6 | 293 | e 5 | 38 | - 7 | i 10 14 | - 7 | i 8 13 | $\hat{P}_{c}P$ | |
| Melbourne | | $37 \cdot 1$ | 232 | i 6 | 21 | ~ 1 | i 11 23 | -15 | i 8 7 | \mathbf{pP} | 11-1 -2 |
| Macquarie Ils. | | 39.4 | 201 | i 6 | 42 | + 1 | i 11 28 | -34 | i 8 36 | \mathbf{pP} | - |
| Honolulu | | 44.7 | 27 | e 7 | 21 | - 1 | e 13 16 | 0 | i 8 18 | PP | e 16.9 |
| Perth | | $60 \cdot 2$ | 244 | i 9 | 16 | + 3 | i 16 41 | 0 | i 11 17 | \mathbf{pP} | |
| Hatidyozima | | 65.7 | 322 | e 9 | 52 | + 4 | | _ | | _ | - |
| Mera | | 67.0 | 323 | 9 | 53 | - 3 | e 17 58 | - 5 | | _ | _ |
| Osima | | 67.1 | 323 | e 9 | 54 | - 2 | e 17 59 | - 5 | e 19 0 | ScS | |
| Yokohama | | $67 \cdot 4$ | 323 | e 9 | 59 | + 1 | e 18 7 | - 1 | | 200000 | - |
| Misima | | 67.6 | 323 | e 9 | 58 | - 1 | e 18 3 | - 7 | i 19 5 | $S_{c}S$ | - |
| Tokyo | | 67.6 | 324 | i 10 | 2 | $\frac{+}{-}\frac{3}{2}$ | i 18 5 | - 5 | | - | 72-3 |
| Omaesaki | | $67 \cdot 7$ | 322 | e 9 | 58 | - 2 | i 18 9 | - 2 | | | |
| Tukubasan | | 67.8 | 324 | A 100 March 2015 | 57 | - 3 | i 18 4 | - 8 | e 12 44 | \mathbf{PP} | |
| Hunatu | | 68.0 | 323 | e 10 | 4 | $^{+}_{+}$ $^{2}_{5}$ | e 18 9 | - 5 | e 19 8 | ScS | |
| Kumagaya | | $68 \cdot 1$ | 324 | e 10 | 7 | | e 18 11 | - 5 | | - | · |
| Utunomiya | | 68.1 | 324 | e 10 | 4 | $^{+}_{+}$ $^{2}_{2}$ | e 18 14 | - 2 | e 19 9 | $S_{c}S$ | |
| Kohu | | $68 \cdot 2$ | 323 | e 10 | 5 | + 2 | e 18 14 | - 3 | e 19 8 | $S_{c}S$ | - |

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| FTM: A.F | | Δ | Az. | m. | s. | o – c. | s. m. s. | o –c. | m. s. | pp. | L. m. |
|--|----|---|--|------------------------------------|--|---|---|--|--|--------------------|----------|
| Titibu Shirakawa Siomisaki Maebasi Iida | | $68.4 \\ 68.4 \\ 68.5 \\ 68.6$ | $324 \\ 325 \\ 320 \\ 324 \\ 322$ | e 10 e 10 e 10 e 10 | 3 6 4 6 4 | $\begin{array}{c} + & 0 \\ 2 \\ 0 \\ + & 1 \\ - & 1 \end{array}$ | e 18 17 e 18 15 e 18 20 e 18 14 | $-{0 \atop -}{2 \atop 4}$ $-{0 \atop 0}$ | $ \begin{array}{r} $ | ScS ScS | = |
| Hukusima Manila Oiwake Inawasiro Nagoya | E. | $68.7 \\ 68.7 \\ 68.8 \\ 68.8$ | $326 \\ 295 \\ 324 \\ 325 \\ 322$ | e 10 i 10 e 10 e 10 | $\begin{array}{c} 8 \\ 6 \\ 8 \\ 10 \end{array}$ | $^{+}\begin{array}{c} 2 \\ 0 \\ + 2 \\ + 2 \\ + 4 \end{array}$ | e 18 20 i 18 24 e 18 20 18 18 e 18 21 | - 2 + 2 - 6 - 3 | i 19 15 19 18 | ScS | |
| Kameyama Sendai Matumoto Gihu Matusiro | | $68.9 \\ 69.0 \\ 69.1 \\ 69.1$ | $321 \\ 326 \\ 323 \\ 322 \\ 324$ | e 10 i 10 10 e 10 i 10 | 8 7 11 7 4 k | $\begin{array}{ccc} + & 1 & 0 \\ + & 3 & - & 1 \\ - & 4 & \end{array}$ | e 18 23 e 18 20 18 19 i 18 19 | $ \begin{array}{r} $ | e 12 58 e 12 0 — i 10 27 | PP PcP | e 23·0 |
| Yamagata Nagano Nara Hikone Ibukisan | N. | $69.1 \\ 69.2 \\ 69.2 \\ 69.3 \\ 69.3$ | $326 \\ 324 \\ 321 \\ 321 \\ 321$ | e 10 e 10 e 10 | | $+ \frac{1}{0} \\ + \frac{1}{4}$ | e 18 23 e 18 25 e 18 28 18 28 | $ \begin{bmatrix} - & 4 \\ - & 3 \\ 0 \\ - & 1 \end{bmatrix} $ | e 11 59 e 12 50 | pP PP | |
| Osaka Kyoto Miyako Mizusawa Kobe | | 69·3 69·4 69·4 69·5 | $320 \\ 321 \\ 328 \\ 327 \\ 320$ | e 10 10 | 10 8 9 13 | $\begin{array}{c} - & 0 \\ - & 2 \\ - & 1 \\ + & 2 \end{array}$ | e 18 31 18 28 e 18 25 18 28 i 18 28 | + 2 - 2 - 5 - 2 - 4 | e 19 14 | s <u>cs</u> | |
| Sumoto Tokusima Niigata Simidu Koti | | 69·5 69·6 69·8 | $320 \\ 319 \\ 325 \\ 317 \\ 318$ | e 10 | 13 16 12 | $^{+}_{+} \begin{array}{c} 1 \\ 2 \\ + \\ 5 \\ 0 \\ 0 \end{array}$ | 18 28 18 32 e 18 28 e 18 28 | $ \begin{array}{r} $ | | | |
| Morioka Toyama Baguio Sakata Takamatu | | 69.8 69.9 69.9 70.0 | $328 \\ 323 \\ 296 \\ 326 \\ 319$ | i 10 | 14 9 18 | $^{+}_{-}\overset{0}{\overset{4}{\overset{+}{\overset{5}{\overset{+}{\overset{5}{\overset{+}{\overset{+}{\overset{+}{+$ | e 18 32 e 18 31 i 18 36 e 18 33 e 18 32 | $ \begin{array}{rrr} & 3 \\ & 4 \\ & 0 \\ & 3 \\ & 5 \end{array} $ | i 12 47 e 19 25 | $\frac{-}{s_{cS}}$ | |
| Miyazaki Hatinohe Akita Wazima Matuyama | N. | 70·1 70·2 70·4 70·4 70·5 | $\frac{316}{328}$ $\frac{327}{323}$ $\frac{318}{318}$ | i 10 e 10 | 16 16 17 18 17 | $^{+}_{+}$ $^{2}_{+}$ $^{+}_{1}$ $^{2}_{+}$ | e 18 38 e 18 39 18 41 18 42 e 18 39 | $ \begin{array}{r} 0 \\ 0 \\ 1 \\ 0 \\ 4 \end{array} $ | e 19 55 e 19 23 | scs Scs | |
| Nemuro Aomori Kusiro Ooita Urakawa | N. | 70.6 70.8 70.8 70.8 70.9 | $\frac{333}{328}$ $\frac{332}{317}$ $\frac{330}{330}$ | e 10 e 10 | 17 19 22 17 | + 1 + 4 - 1 - 1 | 18 50 e 18 44 e 18 40 e 18 48 | $\begin{array}{r} - & -4 \\ - & 2 \\ - & 6 \\ + & 1 \end{array}$ | e 19 27 — e 16 57 | ScS = 7 | |
| Hirosima Obihiro Saga Tomakomai Mori | z. | 71·0 71·3 71·7 71·7 71·9 | $\frac{318}{331}$ $\frac{316}{330}$ $\frac{329}{329}$ | i 10 10 e 10 | 17 23 23 28 30 | $ \begin{array}{cccc} & - & 2 \\ & + & 2 \\ & - & 1 \\ & + & 4 \\ & + & 5 \end{array} $ | e 18 42 e 18 56 18 59 | $-\frac{6}{0} + \frac{1}{1}$ | | | |
| Sapporo Tomie Hengchun Hsingkong Hwalien | E. | $\begin{array}{c} 72 \cdot 3 \\ 72 \cdot 3 \\ 72 \cdot 4 \\ 72 \cdot 5 \\ 72 \cdot 7 \end{array}$ | 330 315 302 303 304 | e 10 e 10 e 10 | 26 27 28 27 32 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 18 59 e 19 2 18 59 19 3 19 5 | - 4 - 1 - 5 - 2 - 2 | i 19 41 | | |
| Bandung Ilan Lembang Taipei Djakarta | | 72.9 73.0 73.3 73.9 | $\begin{array}{c} 268 \\ 304 \\ 269 \\ 305 \\ 269 \end{array}$ | i 10 | 37 21 k 32 a | $ \begin{array}{r} -8 \\ +6 \\ -10 \\ -1 \\ -3 \end{array} $ | i 19 1 19 13 i 18 59 19 12 i 19 15 | $ \begin{array}{r} -8 \\ +3 \\ -11 \\ -2 \\ -5 \end{array} $ | <u>-</u> | = | |

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| | |

| Yuzno-Sakhlinsk Petropavlovsk Zô-Sè | | ∆ 74.6 74.7 76.8 | Az. 333 346 310 | P. m. s. i 10 38 i 10 44 e 10 47 | O - C. s. - 2 + 4 - 5 | S. m. s. i 19 26 i 19 33 19 45 | O-C. s. - 2 + 4 - 6 | m. s. i 13 38 | рр. РР — | L. m. |
|---|----------|--|--|---|---|--|--|---|-------------------------------|------------------------|
| San Francisco Vladivostok | F. | 77·1 77·1 | $\begin{array}{c} 42 \\ 325 \end{array}$ | e 10 56 i 10 52 | $^{+}_{-}$ $^{2}_{2}$ | i 19 54 | 0 | i 13 9 | $_{\mathbf{pP}}^{\mathbf{-}}$ | = |
| Berkeley Lick Ukiah Pasadena Hong Kong | z. | 77·2 77·3 77·4 77·8 77·9 | $^{42}_{43}_{47}_{299}$ | e 10 53 i 10 54 i 10 55 i 10 57 i 10 57 a | $-\begin{array}{c} 1 \\ - \begin{array}{c} 1 \\ 0 \\ - \end{array}$ | e 19 56 e 14 4 i 20 3 20 4 | PP + 1 + 1 | e 13 7 i 13 7 e 13 9 e 13 4 e 13 11? | pP pP pP | i 31·8 |
| Barratt Fresno Woody Palomar Riverside | | $78.1 \\ 78.2 \\ 78.2 \\ 78.3 \\ 78.3$ | 49 44 46 48 | i 10 59 i 10 59 i 10 58a i 11 0 e 10 59 | $-{0\atop 0}\atop -{0\atop 1}\atop 0$ | i 20 8 i 20 7 e 38 1 e 40 27 i 20 8 | + 3 + 1 P'P' SKP,P' + 1 | e 13 11 i 13 13 i 13 11 i 13 12 i 13 12 | pP pP pP | |
| Isabella Shasta Nanking China Lake Mineral | z. z. | 78·4 78·9 79·0 79·1 79·1 | $^{46}_{310}_{46}$ | i 10 59 i 11 2 e 11 1 i 11 5 i 11 4 | - 1 - 1 - 3 + 1 | i 38 4 20 10 i 38 3 | P'P' -4 P'P' | i 13 14 — i 13 18 | pP — pP | |
| Tinemaha Reno Corvallis Boulder City Changchun | z. | 79·4 79·8 80·7 81·1 81·3 | $^{45}_{42}_{36}_{47}$ | e 11 5 i 11 8 i 11 12 i 11 13 11 14 | - 1 - 1 - 1 | i 20 20 — e 20 38 20 34 | $+ \frac{2}{-} \\ + \frac{3}{3}$ | i 13 17 — i 13 24 | PP PP | = |
| Eureka Tucson Magadan Victoria Seattle | | $82 \cdot 2 \\ 82 \cdot 2 \\ 82 \cdot 4 \\ 83 \cdot 1 \\ 83 \cdot 2$ | 44 52 345 33 34 | i 11 13 i 11 20 i 11 17 i 11 23k e 11 25 | - 7 - 4 - 1 | i 20 38 e 20 50 i 20 42 20 47 i 20 54 | - 8 + 4 - 6 - 8 - 2 | i 13 29 e 29 43 13 37 | PKKP | e 33·4 |
| Sitka Chihuahua Medan Peking Salt Lake City | N. | $83.9 \\ 84.2 \\ 84.8 \\ 84.9 \\ 85.6$ | $\begin{array}{r} 22 \\ 57 \\ 276 \\ 315 \\ 44 \end{array}$ | e 11 22 i 11 41 a e 11 36 e 11 30 k e 11 37 | $^{-6}_{+11}$ $^{+3}_{-3}$ | i 20 58 e 21 10 e 21 1 20 54 i 21 11 | $ \begin{array}{r} - & 4 \\ + & 5 \\ - & 10 \\ - & 18 \\ - & 7 \end{array} $ | e 14 54 13 50 i 13 56 | PP pP = | e 36·2 |
| Tacubaya College Sian Butte Hungry Horse | N. | $86.3 \\ 86.9 \\ 87.3 \\ 87.8 \\ 88.1$ | $\begin{array}{c} 68 \\ 12 \\ 308 \\ 39 \\ 37 \end{array}$ | e 11 45 i 11 38 e 11 49 i 11 47 i 11 46 | $^{+}_{-}$ $^{5}_{4}$ $^{-}_{0}$ 2 | e 21 32 i 21 10 i 21 45 i 21 16 | $\begin{bmatrix} + & 7 \\ - & 2 \end{bmatrix} \\ + & 6 \\ [- & 4 \end{bmatrix}$ | e 14 3 i 13 54 i 14 1 i 14 6 | pP pP pP | e 37·5 |
| Bozeman Vera Cruz Rapid City Saskatoon Fayetteville | Е. | $88.5 \\ 89.0 \\ 92.8 \\ 94.1 \\ 96.3$ | 40 69 44 36 54 | e 11 50 i 12 11 i 12 26 | $+\frac{0}{1}$ | i 21 52 e 22 42 i 16 1 i 22 39 e 22 6 | + 7 PP + 6 [+ 1] | i 14 9 e 22 54 i 14 29 e 14 46 | pP pP | e 36·3 |
| Tiksi Bay Irkutsk Huancayo Shillong Florissant | | 97·4 97·6 97·9 98·1 100·0 | $345 \\ 323 \\ 106 \\ 294 \\ 52$ | i 12 31 12 33a i 12 41 i 12 31a e 16 59 | $^{+}_{+}{}^{0}_{8} \\ ^{-}_{\mathbf{PP}}$ | 22 21 22 9 e 22 18 i 22 8 e 23 30 | [+10] $[-3]$ $[+5]$ $[-6]$ $+7$ | i 16 37 16 29 e 16 46 e 16 15 e 22 23 | PP PP PP SKS | |
| St. Louis La Plata La Paz Bokaro Chicago | | $^{100\cdot 1}_{101\cdot 8}_{102\cdot 6}_{102\cdot 9}_{102\cdot 9}$ | $\begin{array}{c} 53 \\ 133 \\ 112 \\ 291 \\ 50 \end{array}$ | e 16 54 17 56 e 17 4 e 17 20 | PP PP PP | 6 23 32 26 30 i 26 50 i 22 36 i 23 48 | + 8 PS PS [- 1] [+11] | e 22 24 i 33 6 e 19 26 i 22 36 | SKS SSP PPP SKS | 34·3 39·0 e 59·8 |
| Chinchina Columbia Resolute Kodaikanal Cleveland | Е. | $103.4 \\ 106.2 \\ 106.5 \\ 106.8 \\ 107.2$ | $\begin{array}{c} 16 \\ 275 \end{array}$ | i 17 28 e 17 39 e 15 30 e 17 51 | PP PP PP | i 22 44 e 22 52 e 22 52 e 21 58 e 23 0 | [+ 5] $[- 0]$ $[-1]$ $[-56]$ $[+ 4]$ | i 26 57 e 24 26 e 17 44 i 24 38 | PS SP | e 47·0 |

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| | | Δ | Az. | P. m. s. | O – C. | S. m. s. | O - C. | m, s. | pp. | L. m. |
|--|----------|--|--|---|--|---|---|---|--------------------------------------|--------------|
| Hyderabad Chapel Hill Morgantown Pittsburgh Kirkland Lake | E. | $107.9 \\ 108.1 \\ 108.1 \\ 108.2 \\ 109.3$ | 283 58 54 53 45 | e 17 49 e 17 49 e 16 2 e 17 20 | PP PP sP [-2] | i 23 0 i 24 46 | | i 17 58 e 18 2 | PP | |
| Pennsylvania Washington Dehra Dun Philadelphia Semipalatinsk | | 109.8 110.2 111.1 111.8 111.9 | $53 \\ 55 \\ 296 \\ 54 \\ 318$ | i 18 15 e 16 53 e 17 26 | PP [- 1] | e 24 52 e 26 57 i 23 8 i 23 16 e 23 8 | S PS [- 4] [+ 1] [- 7] | e 27 6 e 18 31 24 22 | $\frac{PS}{S}$ | |
| Ottawa Poona Fordham Palisades Bombay | z. | $\begin{array}{c} 112 \cdot 0 \\ 112 \cdot 4 \\ 112 \cdot 9 \\ 112 \cdot 9 \\ 113 \cdot 4 \end{array}$ | $^{48}_{283} \\ ^{53}_{283}$ | e 17 26 i 17 33 e 18 8 e 17 20 e 17 3 | $egin{bmatrix} [-&1] \ [+&5] \ \mathbf{PP} \ [-&9] \ [-&27] \end{bmatrix}$ | 23 17 e 23 19 e 23 21 e 23 23 | $[+ \frac{2}{2}]$ $[+ \frac{0}{2}]$ $[+ \frac{2}{3}]$ | 18 18 e 25 20 i 18 32 i 18 32 | PP S PP PP | e 49-4 |
| Brébeuf Shawinigan Falls Frunse Seven Falls San Juan | 3 | 113·4 114·1 115·3 115·4 116·0 | 48 47 309 46 78 | e 17 32 e 17 29 a e 17 32 e 17 32 i 18 51 | [+ 2] $[- 2]$ $[- 2]$ $[- 2]$ $[PP$ | 23 24 e 23 24 i 23 31 e 23 43 | $\begin{bmatrix} + & 1 \\ - & 4 \\ - & 3 \\ + & 3 \\ + & 1 \end{bmatrix}$ | e 18 32 e 18 31 e 27 58 | PP PP PP sSKS | e 46·3 |
| Trinidad Tashkent Stalinabad St. Lucia Halifax | E. | $118.4 \\ 119.2 \\ 119.6 \\ 119.8 \\ 120.5$ | $\begin{array}{r} 88 \\ 307 \\ 304 \\ 84 \\ 49 \end{array}$ | e 17 40 e 17 42 e 17 41 e 17 43 i 17 43 a | [0] [+ 1] [- 1] [0] | i 23 36 i 23 56 | $[-\frac{6}{6}]$ $[+\frac{10}{10}]$ | e 18 58 e 19 4 i 20 27 | PP PP pPP | |
| Quetta Tananarive Grahamstown Sverdlovsk Pietermaritzburg | z. z. | 120.6 121.4 122.8 122.8 124.3 | $\begin{array}{c} 294 \\ 232 \\ 205 \\ 326 \\ 210 \end{array}$ | i 17 43k e 17 45 i 17 48a e 19 29 i 17 51 | $\begin{bmatrix} - & 1 \\ & 0 \\ 0 & 0 \end{bmatrix}$ $\begin{bmatrix} \mathbf{PP} \\ 0 \end{bmatrix}$ | e 23 46 e 19 36 i 23 49 | $\begin{bmatrix} \mathbf{PP}^{0} \\ \mathbf{PP}^{-5} \end{bmatrix}$ | i 19 18 e 19 28 e 25 24 | PP pPKP SKKS | |
| Scoresby Sund Kimberley Ashkabad Pretoria Kiruna | z. z. | 126.7 127.5 127.8 128.6 129.9 | $10 \\ 206 \\ 304 \\ 211 \\ 351$ | e 17 54 i 18 7 e 17 56 i 17 58 e 17 52 | [-2] $[+10]$ $[-2]$ $[-1]$ $[-10]$ | i 25 56 20 6 i 20 25 | SKKS PP SKP | i 19 57 i 22 58 i 20 8 | pPKP PPP pPKP | |
| Reykjavik Pulkovo Moscow Skalstugan Goris | z. | $132 \cdot 2$ $134 \cdot 6$ $134 \cdot 7$ $135 \cdot 0$ $136 \cdot 8$ | $\begin{array}{r} 14 \\ 340 \\ 332 \\ 353 \\ 308 \end{array}$ | i 20 46 e 18 8 e 18 3 e 18 20 | PP [-3] [-9] [+5] | i 20 39 i 26 41 i 26 44 i 20 46 | SKP SKKS SKKS | e 23 47 i 20 41 i 29 59 | PPP PP PKKP | |
| Upsala Copenhagen Warsaw Durham Lwow | N. | 137·8 142·7 143·7 144·3 144·6 | $348 \\ 350 \\ 340 \\ 4 \\ 335$ | i 18 5 i 18 20 e 18 27 i 18 27 i 18 26 | $[-12] \\ [-7] \\ [-1] \\ [-2] \\ [-3]$ | i 20 54 e 24 35 i 27 41 i 27 42 i 27 44 | SKP [- 2] SKKS SKKS SKKS | i 21 4 i 21 6 i 21 50 i 33 4 i 21 8 | PP SKP PP PPS PP | e 98·6 |
| Iasi Hamburg Rathfarnham C. Bacau Lwiro | z. z. | 145.0 145.1 145.3 145.8 146.1 | $\begin{array}{r} 329 \\ 352 \\ 9 \\ 330 \\ 234 \end{array}$ | e 18 29 i 18 30 i 18 31 k e 18 38 e 18 32 k | $[-1] \\ [-0] \\ [+1] \\ [+7] \\ [-0]$ | e 27 47 i 21 16 e 21 37 | SKKS SKP SKP | e 21 18 i 21 42 i 21 8 e 21 16 e 21 4 | PP PP pPKP pPKP pPKP | |
| Witteveen Ksara Skalnate Pleso De Bilt Jena | z. | 146·2 146·4 146·6 147·0 147·4 | 355 303 338 356 349 | i 18 33 i 18 34 i 18 32 e 18 28 e 18 33 | [+ 1] $[+ 2]$ $[- 0]$ $[- 5]$ | i 22 12 e 25 16 e 32 56 e 28 1 | PP [+33] PS SKKS | i 21 18 i 20 58 i 21 27 e 20 55 e 21 2 | pPKP pPKP pPKP pPKP pPKP | 73 <u>·6</u> |
| Jerusalem Campulung Prague Bucharest Kew | | 147.5 147.6 147.6 147.7 147.7 | $\begin{array}{r} 299 \\ 329 \\ 345 \\ 327 \\ 3 \end{array}$ | i 18 33 e 18 40 e 18 36 e 18 41 e 18 37 | $[-1] \\ [+6] \\ [+2] \\ [+7] \\ [+3]$ | i 28 2 i 28 4 e 22 27 | SKKS SKKS PP | e 21 12 e 21 3 e 21 20 | pPKP pPKP pPKP pPKP pPKP | |

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| 1956 | | | 255 | |
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| | Az. | Ρ. | o-c. | S |

| | | Δ | Az. | P. | ē., | O-C. | S. | o-c. | S | app. | L. |
|-----------------|-----------|---------------|-----|--|------|----------------|-------------|---------------|--|--|---------------|
| | | - | 0 | m. | | 8. | m. s. | 8. | m. s. | | m. |
| Cheb | | 148.0 | 347 | i 18 | 42 | [+ 8] | | - | e 21 7 | pPKP | |
| Budapest | | 148.4 | 338 | | 39 | 1 + 41 | e 27 43 | SKKS | e 21 10 | The second secon | |
| Hurbanovo | | 148.4 | 339 | A CONTRACTOR OF STREET | 45 | [+10] | e 25 14 | [+29] | e 21 12 | pPKP | |
| Uccle | | 148.4 | 357 | | 38 | [+3] | e 24 30 | [-15] | i 21 4 | Charles Annichment Products | - |
| Bratislava | | 148.5 | 340 | | 44 | 1+ 91 | _ | | i 21 7 | pPKP | - |
| Timisoara | | 149.0 | 334 | e 18 | 44 | [+8] | e 28 48 | SKKS | | | |
| Kalossa | | $149 \cdot 3$ | 337 | | 44 | [+ 8] | | | 21 58 | | |
| Karlsruhe | Z. | 149.7 | 352 | | 36 | [-1] | e 22 13 | sPKP | e 21 5 | The second second second second second | |
| Belgrade | | $150 \cdot 1$ | 333 | | 39 | [+ 2] | 21 42 | SKP | 21 13 | | |
| Strasbourg | | $150 \cdot 2$ | 352 | i 18 : | 39 a | [+ 1] | e 28 18 | SKKS | i 21 12 | pPKP | |
| Sofia | | 150.3 | 327 | i 18 | 38 | [0] | i 21 58 | SKP | i 22 25 | | <u> </u> |
| Paris | | 150.4 | 359 | The second secon | 38 | [0] | e 28 19 | SKKS | i 21 5 | | |
| Basle | | 151.3 | 352 | The second secon | 38 | [-1] | | | e 20 6 | N 00/EN0 | - |
| Zürich | | 151.3 | 350 | The second second second second second | 37 | [-2] | | | e 19 29 | | _ |
| Besançon | | 151.8 | 354 | e 18 | 39 | [-1] | e 22 22 | \mathbf{PP} | e 21 13 | pPKP | _ |
| Triest | | 151.8 | 342 | e 18 | 49 | [+ 9] | i 28 13 | sSKS | i 21 13 | pPKP | 100 |
| Neuchatel | | 151.9 | 353 | e 18 | 43 | [+ 3] | 30.00 | 1 m | The state of the s | pPKP | _ |
| Oropa | | 153.1 | 350 | e 18 | 58 | [+16] | | | e 21 26 | pPKP | |
| Athens | | $153 \cdot 3$ | 319 | e 19 | 33a | [+51] | - | - | | | 1 |
| Pavia | | 153.3 | 348 | e 18 | 46 | [+4] | e 28 57 | SKKS | e 21 20 | pPKP | 2 |
| Clermont-Ferrar | nd | 153.4 | 358 | i 18 | 47 | [+5] | e 40 56 | 3 | i 21 16 | pPKP | |
| Bologna | 100,000.1 | 153.5 | 345 | | 50 | [+ 5] [+ 8] | | SKKS | | pPKP | · · · · |
| Florence | | 154.2 | 344 | e 18 | 42a | [-1] | i 22 8 | SKP | i 21 22 | pPKP | e 72.6 |
| Prato | | $154 \cdot 2$ | 345 | | 46 | [+ 3] | e 34 31 | PPS | | | |
| Monaco | | 155.0 | 350 | i 18 | 47 | [+3] | e 28 40 | SKKS | e 21 26 | pPKP | - |
| Taranto | | 155.0 | 332 | e 20 5 | 21 | 3 | e 33 56 | PPS | - | - | · - |
| Rome | | 155.6 | 341 | i 18 | 50a | [+5] | e 25 44 | [+50] | e 21 13 | pPKP | |
| Messina | | 157.6 | 331 | The second secon | 44 | [-4] | e 19 12 | | i 20 51 | pPKP | (|
| Lisbon | Z. | 158.2 | 24 | | 54 | [+6] | <u> </u> | | i 19 30 | PKP. | |
| Toledo | 1000 | 158.7 | | i 18 | | (+2) | | _ | i 19 31 | PKP_2 | er.Au |
| Alicante | | 160.8 | 6 | 18 | 41 | [-10] | 24 46 | [-13] | 27 4 | PPP | e 75·8 |
| Granada | | 161.4 | 14 | | 39 k | PKP, | | SKKS | 23 33 | | 89-9 |
| Malaga | - | 161.6 | 16 | i 18 | 54 k | [+ 2] | | | i 19 44 | PKP_2 | e 92·3 |
| Algiers Univ. | Z. | 162.4 | 357 | | 53 | 1 01 | e 23 35 | PP | e 19 46 | The state of the s | |
| Relizane | | 163.4 | 4 | The state of the s | 56 | [+ 2] | | <u> </u> | e 20 43 | Company of the Compan | _ |
| Tamanrasset | Z., | 175.0 | 318 | i 19 | 2 a | [+1] | e 24 39 | PP | e 20 43 | pPKP | - |

May 26d. 21h. 55m. 8s. Epicentre 33°·0N. 134°·9E. Depth 40km. Intensity II-III at Siomisaki and Wakayama. Seismo. Bull. of the Japan Met. Agency for May, 1956, Tokyo, 1956, p. 22, with macroseismic chart.

May 27d. 3h. 46m. 39s. Epicentre 40°·1N. 142°·1E. Depth about 40km. Intensity V at Hatinohe; IV at Morioka; II-III at Miyako. Loc. cit., 26d. 21h., p. 23, with macroseismic chart.

May 27d. 15h. 39m. 39s. Epicentre 37°·5N. 144°·25E. Depth about 40km. Loc. cit., 26d. 21h., p. 24.

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May 27d. 16h. 56m. 46s. Epicentre 7°·0S. 128°·9E. Depth of focus 0·015 $A = -.6233, B = +.7725, C = -.1211; \delta = -8; \hbar = +7;$

D = +.778, E = +.628; G = +.076, H = -.095, K = -.993

| | D = + | .778, | $\mathbf{E} = +$ | ·628; | $G = + \cdot 0$ | 76, H = - | -·095, I | $\mathbf{K} =993$ | V | |
|---|------------------|---|--|---|---|---|---------------------------------|--|------------------------------------|-----------|
| Bandung Lembang Djakarta Manila Rabaul | | $\begin{array}{c} 21.0 \\ 21.1 \\ 21.9 \\ 22.8 \\ 23.4 \end{array}$ | $ \begin{array}{r} 269 \\ 271 \\ 340 \end{array} $ | m. s. e 4 34 i 4 33 a e 4 41 a i 4 53 | | 8. e 8 19 e 8 18 e 9 38 i 8 45 e 15 38 | + 3 0 SSS | m. s. e 15 40 i 15 38 e 16 50 i 5 23 | ScS ScS PP | L. m. |
| Baguio Perth Brisbane Medan Hong Kong | N. | $24.7 \\ 27.6 \\ 30.6 \\ 31.9 \\ 32.5$ | 204 134 288 | i 5 11 i 6 19 i 6 3 i 6 22 e 7 39 | $^{+}_{+42}^{1}_{-}^{1}_{7}^{7}_{PP}$ | i 9 18 i 11 2 e 11 34 i 16 30 | $^{+54}_{+39}$ | i 5 46 i 6 42 | р <u>Р</u> — | |
| Riverview Melbourne Kagosima Zô-Sè Nouméa | | $33.7 \\ 34.0 \\ 38.4 \\ 38.6 \\ 39.3$ | $157 \\ 2 \\ 349$ | i 6 30k e 6 34 i 7 13 7 14 a e 7 20 | $^{+}_{+}$ $^{1}_{3}$ | i 11 34 e 11 51 i 12 52 12 54 | - 9 + 3 - 4 - 4 | i 7 50 i 7 14 | PP pP — | |
| Nanking Matusiro Peking Shillong Changehun | | $40.0 \\ 44.2 \\ 48.3 \\ 48.4 \\ 50.7$ | $\frac{11}{347}$ | i 7 25k i 7 56k i 8 28k i 8 31a i 8 47 | $-\ \ \frac{2}{2}$ | 13 16 14 12 15 20 i 15 14 i 13 41 | - 3 - 9 + 1 - 6 ScP | $1 & 13 & 14 \\ 1 & 1 & 19 \\ 10 & 19 \\ & 1$ | $\frac{\mathbf{PP}}{\mathbf{ScP}}$ | 18·2 = |
| Chatra Dehra Dun Irkutsk Frunse Quetta | z. | $52.6 \\ 61.2 \\ 62.7 \\ 69.9 \\ 69.9$ | 310 343 320 | $\begin{array}{cccc} \mathbf{e} & 9 & 4 \\ \mathbf{e} & 10 & 4 \\ & 10 & 13 \\ & 10 & 59 \\ \mathbf{i} & 11 & 0 \mathbf{a} \end{array}$ | $\begin{array}{c} + & 1 \\ + & 1 \\ 0 \\ 0 \\ + & 1 \end{array}$ | i 18 5 18 29 19 52 i 19 53 | - 6 - 1 - 5 - 4 | i 9 25 — e 11 57 | р <u>Р</u> — р <u>Р</u> | |
| Namangan Stalinabad Tiksi Tananarive Tiflis | | $70.9 \\ 71.8 \\ 78.5 \\ 79.6 \\ 90.2$ | $314 \\ 0 \\ 252$ | 11 7 11 12 e 11 45 i 11 56k 12 51 | $^{+}$ 2 $^{+}$ 2 $^{+}$ 2 $^{+}$ 4 | 20 4 20 14 i 21 22 e 12 55 | - 5 - 5 - 11 | i 12 16 | <u>=</u> | |
| College Kiruna Resolute Woody Jena | z. | $93.5 \\ 103.4 \\ 107.9 \\ 112.2 \\ 112.5$ | $\begin{array}{r} 25 \\ 338 \\ 11 \\ 54 \\ 322 \end{array}$ | i 12 59 i 13 45 e 19 4 e 19 12? | $\begin{array}{c} -3 \\ -2 \\ \hline PP \\ PP \end{array}$ | i 16 42 e 24 26 | PP [-7] | e 13 35 e 26 11 e 20 0 e 19 44 | $\frac{\mathbf{pP}}{\mathbf{S}}$ | |
| Messina China Lake Hungry Horse Riverside Eureka | E. | 112.6 113.1 113.6 113.8 | $\begin{array}{r} 308 \\ 54 \\ 40 \\ 56 \\ 50 \end{array}$ | e 19 12 i 18 23 e 19 15 i 18 25 | PP [+ 1] PP [+ 1] | e 24 48 — e 14 33 | [-4] = P | e 28 30 e 21 42 e 19 12 i 19 17 | SP PPP PP | |
| Palomar Barratt Bozeman Salt Lake City Tucson | y | 114.1 114.3 115.8 116.6 119.3 | 57 57 42 48 57 | e 19 20 e 19 20 e 18 29 e 18 32 e 18 36 | $\Pr_{egin{smallmatrix} 	ext{PP} \\ 	ext{PP} \\ 	ext{[+ 1]} \\ 	ext{[+ 2]} \end{cases}$ | | | | | |
| Boulder Rapid City Tamanrasset Fayetteville Kirkland Lak | г. z. e z. | $121.6 \\ 121.6 \\ 123.4 \\ 131.2 \\ 132.2$ | $\begin{array}{r} 47 \\ 42 \\ 293 \\ 47 \\ 26 \end{array}$ | e 18 40 e 18 39 e 18 40 i 22 6k e 18 59 | [+ 2] [+ 1] [- 2] SKP [0] | e 21 58 e 20 26 e 22 7 | SKP PP SKP | e 19 40 e 19 30 — | pP' pP' | |
| Seven Falls Halifax M'Bour Huancayo La Paz Chinchina San Juan | z. | 136.6 141.0 145.7 149.4 151.2 155.6 161.6 | 20 14 285 128 144 93 51 | e 19 8 e 19 9 i 17 27 19 38k i 19 50 i 19 40 i 20 32 | [+ 1] [- 6] [+ 9] PKP ₂ [+ 2] PKP ₂ | i 22 23 i 22 36 — | SKP SKP | i 18 29 i 20 8 | PKP, | |

May 27d. 23h. 37m. 54s. Epicentre 37°·7N. 57°·5E. Magnitude 4. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 71.

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May 28d. 8h. 40m. 31s. Epicentre 42°·5N. 78°·9E. Loc. cit., 27d. 23h., p. 47.

May 28d. 9h. 33m. 53s. Epicentre 36°·8N. 70°·7E. Depth of focus 200km. Loc. cit., 27d. 23h., pp. 47, 48.

May 28d. 13h. 23m. 22s. Epicentre 0°.5N. 121°.5E. Depth of focus 0.010.

A = -.5225, B = +.8526, C = +.0087; $\delta = +1$; h = +7; D = +.853, E = +.522; G = -.004, H = +.007, K = -1.000.

| 10 | | 000, 1 | | ozz, | Ci | | | Mary Committee of the C | r. •. | |
|--|----------|---|---|---|--|---|--|--|---|-----------|
| Manila Bandung Lembang Baguio Djakarta | | ∆ 14·0 15·6 15·6 15·8 16·0 | Az. 358 242 242 357 245 | m. s. i 3 9 e 3 34 e 3 34 i 3 40 | $\begin{array}{c} { m O-C.} \\ { m s.} \\ { m -6} \\ { m -2} \\ { m -2} \\ { m +2} \\ { m +4} \end{array}$ | S. m. s. i 5 13 e 6 34 e 6 25 i 6 19 e 6 47 | $\begin{array}{c} 0-C, \\ s. \\ -35 \\ +8 \\ -1 \\ -11 \\ +12 \end{array}$ | e 7 6 | pp. = ss | e 9·2 |
| Hengchun Taitung Tainan Hsinkong Hong Kong | | $21.4 \\ 22.1 \\ 22.4 \\ 22.5 \\ 22.8$ | $358 \\ 359 \\ 357 \\ 0 \\ 342$ | 5 14 e 4 55 e 4 54 | $^{+\ 5}_{+\ 26}$ $^{+\ 4}_{+\ 2}$ | 8 41 = 9 3 | + 13 | i 5 19 | P | |
| Medan Hwalien Taichung Ilan Taipei | N. | $23.0 \\ 23.3 \\ 23.5 \\ 24.1 \\ 24.4$ | $278 \\ 0 \\ 358 \\ 1 \\ 0$ | e 4 49 | $^{+}_{$ | e 9 5 | + 9 | | | |
| Zô-Sè Rabaul Nanking Sian Shillong | | 30·4 31·0 31·5 35·6 37·9 | $\begin{array}{c} 0 \\ 99 \\ 356 \\ 342 \\ 313 \end{array}$ | i 6 10 i 6 15 | $^{0}_{+\ 3}$ | i 11 1 1 i 6 35 i 11 18 i 12 56 | $^{+}_{+}{}^{4}_{\overset{\circ}{1}}^{+}_{3}$ | $\begin{array}{c} 6 & 29 \\ \mathbf{i} & 6 & 28 \\ \mathbf{i} & 6 & 43 \\ \hline 7 & 30 \end{array}$ | $\frac{\mathbf{p}_{\mathbf{p}}}}}}}}}}$ | |
| Matusiro Peking Yinchuan Brisbane Wuwei | | $39.1 \\ 39.6 \\ 40.3 \\ 41.1 \\ 41.1$ | $\begin{array}{r} 22 \\ 354 \\ 342 \\ 135 \\ 337 \end{array}$ | 7 161 7 241 e 7 29 i 7 35 7 37 | | e 13 7 9 | $-\frac{4}{-10}$ | i 7 41 8 1 9 13 | PP PP | 18·3 = |
| Chatra Madras Vladivostok Riverview Hyderabad | z. E. | 42·1 42·8 43·4 44·1 45·5 | 311 289 11 144 294 | e 7 45 i 8 15 i 7 54 i 8 1: e 8 52 | $^{+1}_{\mathbf{pP}}_{0} \\ ^{+1}_{+41}$ | i 14 9 e 14 14 i 14 28 i 14 53 | $\begin{array}{r} - & -3 \\ - & 1 \\ + & 3 \\ + & 8 \end{array}$ | $\begin{array}{r} {\bf i} \ 8 \ 22 \\ {\bf i} \ 8 \ 20 \\ {\bf i} \ 9 \ 49 \\ {\bf 18} \ 55 \end{array}$ | $\begin{array}{c} \mathbf{sP} \\ \mathbf{pP} \\ \mathbf{SSS} \end{array}$ | |
| Nouméa Poona Dehra Dun Bombay Irkutsk | | 49·3 50·0 50·8 51·1 53·6 | 120 294 310 294 347 | e 8 44 i 8 48 e 8 47 9 13k | $^{+}_{-}^{\overset{3}{\overset{2}{\overset{2}{5}}}}$ | e 15 51 e 16 0 e 16 3 16 41 | $\begin{array}{r} - & - & 3 \\ + & 1 \\ - & 1 \\ + & 3 \end{array}$ | 10 39 19 18 e 16 50 9 37 | $_{\mathrm{ss}}^{\mathrm{PP}}$ | |
| Frunse Quetta Semipalatinsk Petropavlovsk Stalinabad | | $59.4 \\ 59.5 \\ 60.8 \\ 60.9 \\ 61.3$ | $322 \\ 305 \\ 331 \\ 25 \\ 315$ | i 9 55 i 9 55k e 10 2 e 10 4 e 10 7 | $\begin{array}{cccc} + & 1 & \\ 0 & \\ - & 2 & \\ - & 1 & \\ - & 1 & \end{array}$ | i 17 59 i 17 58 i 19 9 i 18 19 | $^{+\ 5}_{+\ 3}$ $^{-}_{+\ 1}$ | i 10 21 i 10 20 — | рР Р — | |
| Tashkent Macquarie Ils. Magadan Wellington Tuai | z. N. | $62.1 \\ 62.9 \\ 63.2 \\ 63.6 \\ 64.2$ | 318 156 16 138 134 | e 10 13 i 10 19 i 10 18 e 10 21 e 10 30 | $^{+}_{-}^{0}_{\stackrel{1}{2}}_{\stackrel{2}{+}}^{0}_{3}$ | i 19 14 i 18 42 | PPS 0 = | e 10 37 i 10 44 | р <u>Р</u> | |
| Ashkabad Tiksi Sverdlovsk Tananarive Goris | | $68.7 \\ 71.2 \\ 74.0 \\ 75.0 \\ 78.2$ | $311 \\ 230 \\ 250 \\ 310$ | 10 57 e 11 6 11 26 i 11 30 a e 11 51 | $\begin{array}{cccc} + & 2 \\ - & 4 \\ - & 1 \\ - & 2 \\ + & 1 \end{array}$ | e 20 8 e 20 48 e 12 9 e 21 37 | $^{+\ 6}_{-10} \ _{\mathrm{sP}} \ _{+\ 1}$ | e 11 24 e 11 33 e 11 49 e 11 59 | pP pP pP | |

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| | | Δ | Az. | P. m. s. | o –c. | s. m. s. | o –c. | m, s. | npp. | L. m. |
|---|----------------|---|---|---|---|-------------------------------|-----------------------------|---|----------------------|------------------|
| Ksara Moscow Jerusalem College Kiruna | | 86.0 86.1 86.5 89.9 93.7 | $304 \\ 326 \\ 302 \\ 25 \\ 338$ | i 12 36 e 12 29 i 12 35 i 12 47 i 13 6 | + 5 - 2 + 2 - 2 - 1 | i 23 0 e 22 53 i 16 49 | + 5 - 3 - = | i 13 0 12 55 i 13 3 i 13 32 | pP pP | |
| Upsala Skalstugan Taranto Resolute Jena | | $96.5 \\ 98.0 \\ 100.5 \\ 101.9 \\ 102.0$ | $330 \\ 335 \\ 311 \\ 9 \\ 322$ | i 13 21 i 13 25 e 16 38? e 13 41 e 17 51? | $\begin{array}{c} + & 1 \\ - & 1 \\ - & 3 \\ \mathrm{PP} \end{array}$ | i 17 46 i 17 28 e 24 10 | PP [-3] | i 17 0 i 13 53 e 18 17 e 18 24 | $\frac{PP}{pP}$ | |
| Messina Rome Florence Strasbourg De Bilt | E. | $102 \cdot 2 \\ 103 \cdot 7 \\ 104 \cdot 1 \\ 105 \cdot 1 \\ 105 \cdot 4$ | $309 \\ 313 \\ 316 \\ 321 \\ 325$ | e 18 38? e 18 46 e 18 11 e 18 27 e 18 48 | PP PP pPP | e 21 42 e 28 8 | - PS | e 18 26 e 18 48 | pPP pPP | e 56·6 |
| Uccle Paris Kew Clermont-Ferran Lick | ıd z. | $106.4 \\ 108.3 \\ 108.8 \\ 109.0 \\ 110.8$ | $\begin{array}{r} 324 \\ 322 \\ 326 \\ 319 \\ 50 \end{array}$ | e 18 40 i 19 28 e 19 18 i 18 55 | $\overset{\mathbf{PP}}{\overset{?}{P}}$ | e 27 53 E 27 38 | PS SP — | i 23 58 | <u>?</u> <u>=</u> | e 41·6 e 54·6 |
| Hungry Horse Algiers Univ. Woody Tamanrasset Butte | z. z. N. | 111.8 112.1 113.4 113.6 113.8 | $\begin{array}{r} 36 \\ 310 \\ 50 \\ 295 \\ 38 \end{array}$ | i 18 15 19 33 i 18 28 18 21 e 18 28 | [- 9] PP [+ 1] [- 6] [0] | i 18 53 — e 19 11 | PP PP | e 14 52 e 19 53 e 19 43 | P? PPP | |
| Isabella Eureka China Lake Pasadena Bozeman | | 113·8 114·3 114·4 114·5 114·9 | 50 46 50 52 38 | e 18 39 i 18 30 e 18 31 i 18 29 e 18 58 | $[+11] \\ [+1] \\ [+2] \\ [+28] \\ [+28]$ | i 19 23 | $\stackrel{\mathbf{PP}}{=}$ | e 29 11 e 19 25 e 29 13 | PKKP PP PKKP | |
| Riverside Barratt Salt Lake City Rapid City Tucson | | 115.2 116.1 116.6 120.4 120.9 | 52 53 43 36 51 | e 18 32 e 18 35 e 18 35 e 18 43 e 18 44 | [+2] $[+3]$ $[+2]$ $[+3]$ $[+3]$ | e 20 7 | | e 19_17 e 19_9 | PP pP' | |
| Boulder Kirkland Lake Fayetteville Seven Falls Shawinigan Falls | z. | 121.4 128.1 130.8 131.4 131.5 | 41 18 39 11 13 | e 18 44? e 18 56 i 19 2a e 19 3 | [+2] $[+1]$ $[+2]$ $[+2]$ | $\frac{-}{22}^{15}_{16}$ | SKP | e 19 22 - 19 30 | p P' | |
| Ottawa Morgantown Columbia Huancayo San Juan La Paz | z. z. | 131.8 135.5 139.7 159.8 159.8 161.5 | 16 24 29 125 21 150 | e 21 49 e 19 45 e 19 52 e 20 27 19 52 | PP pP' [+ 5] PKP ₂ [+ 3] | i 22 18 | SKP = | e 23 8 i 22 33 e 22 15 = 24 19 | sSKP pPP PP | |

May 29d. 6h. 29m. 26s. Epicentre 4°·1S. 104°·1E. Depth of focus 0·010.

A = -.2430, B = +.9674, C = -.0710; $\delta = -5$; h = +7; D = +.970, E = +.244; G = +.017, H = -.069, K = -.997.

| | | Δ | Az. | P. | O-C. | s. | o-c. | Su | pp. | L. |
|----------|------|-------------|-----|---------|---------------------|---------|------|--------|-----|--------|
| | | 0 | 0 | m. s. | s. | m. s. | s. | m. s. | | m. |
| Djakarta | | 3.4 | 128 | e 0 52a | 0 | e 1 34 | + 2 | e 1 56 | 3 | |
| Lembang | | $4 \cdot 4$ | 128 | e 1 2 | - 4 | - | _ | /==: | - | - |
| Bandung | | 4.5 | 129 | e 1 4 | - 3 | e 1 55 | - 4 | · — | | |
| Medan | N. | $9 \cdot 4$ | 324 | e 2 41 | +27 | - | | - | | - |
| Manila | 1300 | 25.0 | 42 | e 5 5 | 11 | - | | e 6 25 | ? | _ |
| Baguio | | 26.1 | 38 | i 5 34 | + 8 | | | 7-22 | _ | _ |
| Shillong | z. | 31.8 | 339 | i 6 19a | $+$ $\tilde{2}$ | - | - | - | _ | _ |
| Chatra | 2000 | 34.8 | 333 | e 6 42 | - ī | | - | 1 | | |
| Quetta | | 49.2 | 316 | e 8 37 | $-\hat{\mathbf{a}}$ | - | | e 9 37 | 2 | - |
| Matusiro | | 51.4 | 35 | i 9 2a | + 5 | e 16 41 | +33 | 10 12 | PcP | e 25.9 |

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| | | Δ | Az. | P. m. s. | o –c. | s. m. s. | O -C. | m, s. | ipp. | $_{ m m.}^{ m L.}$ |
|--|----------|---|-----------------------------------|---|--|--|-------------------|--|---|--------------------|
| Brisbane Tananarive Nouméa Jerusalem Ksara | | $52.0 \\ 57.1 \\ 62.9 \\ 74.4 \\ 74.4$ | $122 \\ 250 \\ 113 \\ 304 \\ 307$ | i 9 1 e 9 48 e 10 33 i 11 26 e 11 28 | $\begin{array}{c} & 0 \\ + & 9 \\ + & 15 \end{array}$ | —————————————————————————————————————— | - - - | i 10 18 e 9 56 i 11 38 e 11 44 | $\begin{array}{c} \mathbf{P_{c}P} \\ \mathbf{pP} \\ \mathbf{P_{c}P} \\ \mathbf{pP} \end{array}$ | |
| Kimberley Kiruna Upsala Skalstugan Jena | z. | 78.7 91.4 91.7 94.4 94.8 | $242 \\ 338 \\ 330 \\ 333 \\ 321$ | e 11 51 i 12 55 i 12 56 i 13 9 e 13 9 | | | | $\begin{array}{cccc} \mathbf{i} \ 12 & 0 \\ \mathbf{i} \ 13 & 14 \\ \mathbf{i} \ 13 & 14 \\ \mathbf{i} \ 13 & 27 \\ \mathbf{e} \ 13 & 26 \\ \end{array}$ | PcP pP pP pP | |
| Victoria Shasta Hungry Horse Mineral Lick | z. z. | $^{120\cdot 0}_{124\cdot 6}_{125\cdot 2}_{125\cdot 3}_{126\cdot 7}$ | $\frac{34}{42}$ $\frac{42}{45}$ | e 18 40 e 18 48 i 18 50 i 18 51 i 18 39 | $egin{bmatrix} [& 0] \\ [& 0] \\ [+ 1] \\ [+ 1] \\ [-13] \end{bmatrix}$ | e 22 22 | PKS | e 19 7 | p <u>P'</u> | = |
| Reno Butte Bozeman Tinemaha Eureka | Z. | $\substack{126.9\\127.5\\128.5\\129.2\\129.4}$ | $\frac{42}{32} \\ 31 \\ 44 \\ 40$ | e 18 54 e 18 55 e 18 57 i 18 47 e 18 57 | [+1] $[+1]$ $[+1]$ $[-10]$ $[0]$ | i 22 17 | skp | i 19 15 i 19 17 | pP' | |
| Isabella China Lake Pasadena Salt Lake City Riverside | | $129.7 \\ 130.3 \\ 130.6 \\ 131.2 \\ 131.3$ | 46 45 47 36 47 | i 18 41 i 18 45 i 18 39 e 19 4 i 18 39 | $[-17] \\ [-14] \\ [-21] \\ [+3] \\ [-22]$ | i 22 23 i 22 24 i 22 24 | SKP SKP SKP | i 22 41 i 22 46 e 22 42 e 19 21 i 22 42 | PKS PKS PKS PF' PKS | |
| Palomar Barratt Rapid City Kirkland Lake Tucson | E. Z. | 132.0 132.4 133.5 136.0 136.9 | 48 48 27 4 45 | i 18 41 i 18 38 e 19 0 e 19 10 i 18 56 | $\begin{bmatrix} -21 \\ -25 \end{bmatrix} \\ \begin{bmatrix} -5 \\ 0 \end{bmatrix} \\ \begin{bmatrix} -15 \end{bmatrix}$ | i 22 28 e 22 30 — | SKP SKP | e 22 42 e 22 53 e 19 15 | PKS PKS | = |
| Shawinigan Falls Fayetteville Morgantown Columbia Huancayo | z. | 137.6 144.0 144.4 149.9 164.0 | $357 \\ 26 \\ 5 \\ 8 \\ 182$ | e 19 12 i 19 24 i 19 26 i 19 40 i 19 52 | $[& 0] \\ [& 0] \\ [+ 1] \\ [+ 6] \\ [+ 1]$ | | | e 19 42 i 19 47 i 19 57 | pP' pP' pP' | |

May 30d. 15h. 42m. 1s. Epicentre 22°.6S. 178°.6W. Depth of focus 0.050.

A = -.9239, B = -.0226, C = -.3821; $\delta = +10$; h = +4; D = -.024, E = +1.000; G = +.382, H = +.010, K = -.924.

| | | Δ | Az. | P. m. s. | o -c. | $_{ m m. \ s.}^{ m s.}$ | $o_{s.}^{-c.}$ | m. s. | pp. | L. m. |
|--|------------|--|--|--|---|--|---|-------------------------------|---|----------|
| Apia Nouméa Onerahi Karapiro | E. N. | 10.9 13.9 14.5 16.1 16.6 | $38 \\ 268 \\ 204 \\ 197 \\ 192$ | 2 25 i 3 6 3 10 e 3 27 e 6 20 | - 5 + 1 - 2 - 2 | e 4 17 e 5 46 e 5 51 e 6 18 e 6 28 | $ \begin{array}{r} -11 \\ +13 \\ +6 \\ +2 \\ +2 \end{array} $ | i 3 16 e 3 34 | PP PP | e 6·4 |
| Tuai New Plymouth Wellington | E. | 17.6 19.5 | 199 195 | e 3 48 e 3 59 | $^{+}_{-}\overset{4}{\overset{4}{}}$ | e 7 17 | - 3 | | | |
| Cobb River | E. N.E. | $19.8 \\ 21.6 \\ 22.1$ | $\frac{200}{200}$ | e 4 23 e 4 29 | $-{2\atop 0}\\ +{1\atop 1}$ | e 7 23 e 7 53 e 7 8 | $-{2\atop -3\atop -56}$ | | = | = |
| Brisbane Riverview Melbourne Macquarie Ils. Baguio | z. | $26.2 \\ 28.8 \\ 34.7 \\ 36.1 \\ 71.1$ | $\begin{array}{c} 253 \\ 240 \\ 236 \\ 202 \\ 298 \end{array}$ | i 5 5 i 5 28 a e 6 19 i 6 30 i 10 48 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | i 11 19 i 9 50 e 11 28 | SS - 2 + 5 | i 6 38 e 7 28 | pP P | |
| Matusiro Lembang Zô-Sè Hong Kong Berkeley | z. | 71.6 72.5 78.6 79.2 80.1 | $324 \\ 270 \\ 311 \\ 300 \\ 42$ | i 10 45 a i 10 49 a i 11 29 a i 11 33 k | $- \frac{1}{2} \\ + \frac{1}{0}$ | 19 38 i 19 42 e 20 53 | $^{+}_{-}^{3}_{2}$ | i 12 16 i 12 14 e 12 57 | \mathbf{pP} \mathbf{pP} \mathbf{pP} | |

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| | | Δ | Az | | 0 -C | | o – c. | | upp. | L. |
|---|----------------|---|--|--|---|---|----------------------------------|--|--|--------|
| Lick Pasadena Barratt Nanking Palomar | z. | 80·1 80·5 80·7 80·8 80·9 | $^{\circ}_{49}^{43}_{310}$ | i 11 36 i 11 36 e 11 38 | 3a 0 3k + 1 3k 0 4 2 | e 14 43 e 14 12 21 18 e 14 47 | \overline{PP} | i 12 59 i 12 58 e 12 58 i 13 0 | | m. |
| Riverside Fresno Isabella China Lake Shasta | z. z. | $\frac{81 \cdot 2}{81 \cdot 8}$ | 48 44 46 46 | i 11 38 i 11 39 i 11 43 | k 0 k 0 k + 1 | e 21 23 e 21 25 i 14 54 | - | i 12 59 i 13 1 i 13 5 | $\begin{array}{c} \mathbf{pP} \\ \mathbf{pP} \\ \mathbf{pP} \\ - \end{array}$ | |
| Mineral Tinemaha Reno Changchun Corvallis | z. z. | 82.1 | $^{40}_{45}_{42}_{323}$ | i 11 44 i 11 47 e 11 51 | k + 1 k + 1 0 | | | i 13 11 i 13 18 | pP P | |
| Tucson Eureka Kerguelen Is. Seattle Victoria | | $84.6 \\ 85.0 \\ 86.1 \\ 86.2 \\ 86.2$ | $\begin{array}{r} 52 \\ 44 \\ 218 \\ 34 \\ 33 \end{array}$ | Control of the Contro | | i 15 19 | P <u>P</u> | i 13 19 i 13 23 e 12 19 | $\frac{\mathbf{p}_{\mathbf{P}}^{\mathbf{P}}}{\mathbf{P}_{\mathbf{c}\mathbf{P}}}$ | |
| Horseshoe Bay Peking Salt Lake City Sian College | | $86.8 \\ 87.0 \\ 88.3 \\ 89.1 \\ 90.4$ | $\begin{array}{r} 32 \\ 316 \\ 44 \\ 308 \\ 13 \end{array}$ | i 12 6 e 12 7 i 12 14 i 12 21 | k 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | e 22 19 e 22 12 e 22 41 | + 5 [+ 5] + 7 | i 13 45 i 13 46 | $\frac{-}{pP}$ | |
| Butte Hungry Horse Bozeman Boulder Rapid City | N. | $91.4 \\ 92.3$ | 40 37 40 47 44 | i 12 25 i 12 26 i 12 28 i 12 32 i 12 48 | 0 0 0 0 1 | e 22 24 e 22 23 i 16 9 e 16 42 | $\frac{[+ \ _0^3]}{\mathbf{PP}}$ | i 13 49 e 13 54 e 13 52 e 14 16 | pP pP pP | e 44·5 |
| Fayetteville Grahamstown Kimberley Scoresby Sund Kiruna | z. z. z. | $98.7 \\ 119.5 \\ 124.2 \\ 130.2 \\ 133.2$ | $\begin{array}{r} 55 \\ 204 \\ 205 \\ 10 \\ 350 \end{array}$ | i 13 1 e 18 8 i 18 18 i 18 34 | [0] | e 21 14 i 21 28 | SKP | | | |
| Skalstugan Upsala Lwiro Copenhagen Hamburg | z. z. | 138.4 141.0 143.6 146.0 148.4 | $353 \\ 347 \\ 231 \\ 349 \\ 350$ | e 18 35 i 18 42 i 18 53 i 18 58 e 19 5 | $\begin{bmatrix} -9 \\ -7 \end{bmatrix}$ $\begin{bmatrix} -1 \\ 0 \end{bmatrix}$ $\begin{bmatrix} +4 \end{bmatrix}$ | i 21 46 i 21 51 e 21 55 | SKP SKP SKP | i 19 1 i 19 9 | PKP: | = |
| Jerusalem Rathfarnham C. Witteveen Jena Prague | z. z. | $148.7 \\ 148.8 \\ 150.0 \\ 150.6 \\ 150.7$ | $294 \\ 9 \\ 354 \\ 347 \\ 343$ | i 19 5 i 19 3 e 19 7 e 19 6 i 19 15 | [+ 3] $[+ 1]$ $[+ 3]$ $[+ 1]$ $[+ 10]$ | e 21 30 | <u>-</u> | i 19 50 e 19 11 e 20 39 i 20 34 | PKP ₂ pP' | |
| Uccle Strasbourg Paris Tamanrasset | z. | $151.8 \\ 153.6 \\ 153.8 \\ 176.2$ | $\frac{356}{350} \\ \frac{358}{274}$ | e 19 16 e 19 20 e 19 21 e 19 29 | $[+10] \\ [+11] \\ [+12] \\ [+1]$ | e 21 13 | PKP, | e 22 40 | P'2 | = |

May 31d. 14h. 13m. Epicentre 15°54'N. 98°27'W. Seismological Bulletin of the National University of Mexico for May, 1956, Tacubaya, p. 7.

June 2d. 9h. 32m. Epicentre 17°27'N. 93°26'W. Seismo. Bull. National University of Mexico, Tacubaya, for June, 1956, p. 1.

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1956

Warsaw

Jena

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June 3d. 5h. 19m. 23s. Epicentre 79°-9N. 117°-8W.

A = -.0824, B = -.1562, C = +.9843; $\delta = +3$; h = -14; D = -.885, E = +.466; G = -.459, H = -.871, K = -.176. O-C. Supp. L. m. s. m. Resolute College 226 Scoresby Sund $22 \cdot 9$ 59 e 5 12.2 34 PP Sitka 23.6e 5 204 13 e 5 e 9 31 37 6 $_{\rm PP}$ e 10.8 Tiksi $24 \cdot 3$ e 5 31520 e 9 e 6 $\mathbf{P}\mathbf{P}$ 40 Kiruna 30.6 30i 9 20 P_{cP} e 11 19 Victoria 187 25 i 6 31.6e 16 49 L -- (e 16·8) Hungry Horse 175 31.7i 6 26SS 20 e 12 $_{\rm PP}$ i 13·3 $32 \cdot 3$ 288 Magadan e 6 397 Seattle 32.4 186 e 7 16 e 6 44 +10e 8 29 $_{\rm PP}$ e 13.6 Skalstugan 33.938 i 6 46 174 i 6 Butte $34 \cdot 1$ 48 -28PPe 11 N. 56 e 14.0 Bozeman 34.5 172 i 6 51 e 8 PP-16e 14.4 Kirkland Lake 34.5 134 e 6 49a e 18.7 -Corvallis 35.5 e 7 + 187E. Rapid City 36.4162E. Seven Falls 124 36.8 10k e 12 16 e 18.6 54 126 $37 \cdot 0$ Shawinigan Falls 8 PP11 a 8 PPP 56 277Petropavlovsk 37-1 23 e 16 SS 13 37.8 130 18 a Ottawa 8 PP 39 e 16.9 Brébeuf 38.0 127 19k 35 Upsala 38-1 i 9 44 PcP21 a 13 -1038.4i 16 Aberdeen 52 55 Pulkovo 39.3 + 25 e 7 33 Salt Lake City 39.4 173 33 e 12 37 0 -58e 16.2 Shasta 39.4186 z. ~ 39.7185 Mineral 36 Boulder 40.3165 41 + Reno 40.5182 43 Z. $P_{c}P$ Eureka 35 178 40.6 19 37 e 19·1 Rathfarnham C. 41.5 57 50 a 0 41.741 Copenhagen i 7 53 SS + 21.6 Pennsylvania 42.0 133 i 7 55 PPBerkeley 42.2 185 57 14 5 42.2 144 S Terre Haute e 14 (e 14 7) -10i 21.6 Palisades i 7 129 $42 \cdot 3$ 57 e 14 19 0 32 PPe 9 e 21.6 $\frac{0}{2}$ Lick 42.7 184 i 8 i 8 42.9 Morgantown 136 i 9 37 + PP i 8 Tinemaha 43.0 180 2 Z. 5 a i 9 59 PPPhiladelphia $43 \cdot 2$ 130 e 8 1 e 14 32 0 17.9 e i 8 i 8 43.3 182 Fresno 6 + 43-5 7 a 43 Hamburg e 9 59 PP e 30.6 43.5 Sverdlovsk 8 6 14 36 56 PPi 8 Moscow 43.820 e 14 41 + 1 43.8 46 e 8 Witteveen 10 Z. + Washington 44.0 133 i 8 z. e 15 52 +69177 i 8 11 $44 \cdot 1$ Boulder City e 9 58 $\mathbf{p}\mathbf{p}$ - 44.2 180 i 8 14 a China Lake Z. $_{\mathrm{PP}}$ i 10 6 44.2 e 8 19 Kew 53 + e 14 45 25.6 De Bilt 44.3 e 8 11 48 e 14 49 + 26.6 e Isabella 44.4 181 i 10 i 10 14 a PP z. 0 i 8 Woody 44.4 181 13a e 12 31 PP-Fayetteville i 8 $44 \cdot 9$ 153 16 e 15 5 + 9 e 8 22 Uccle 45.5 49 e 14 59 6 =Yuzno-Sakhlinsk i 8 45.8 290 25 e 15 0 Irkutsk 45.9325 24 e 15 PPe 10 and the last i 8 ScS Pasadena 45.9 180 26 a i 18 32 \mathbf{PP} 0 i 22·3 i 10 46.0 180 i 8 Ríverside Z. 27 a i 10 PPe 13 50 46.034

Continued on next page.

PP

e 10 10

PcS

PP

e 10

46

PS

PPP

e 21.6

e 10 17

8

e

 $46 \cdot 2$

43

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1956

| | | Δ | Az. | P. m. s. | o –c. | s. m. s. | 0 - C. | m. s. | ipp. | L. m. |
|--|----------------|--|---|--|--|--|--|--------------------------------------|-------------------------|--------------------------------------|
| Chapel Hill Palomar Paris Barratt Prague | z. | 47.2 | 136 179 51 179 40 | i 8 33 a i 8 35 i 8 38 a | $ \begin{array}{r} - & 2 \\ + & 1 \\ - & 1 \\ + & 0 \\ + & 1 \end{array} $ | e 15 27 e 10 4 | - 2 PcP | i 10 6 i 10 7 i 10 9 e 11 0 | PP PcP PP | |
| Tucson Strasbourg Stuttgart Columbia Ebingen | | 47.9 48.1 48.3 48.6 | $172 \\ 47 \\ 45 \\ 138 \\ 46$ | e 8 43 e 8 42 i 8 43 | $-\begin{array}{c} - & 1 \\ 0 \\ - & 1 \\ - & 2 \end{array}$ | e 15 41 e 15 46 e 15 47 e 15 41 | $^{+}_{+}^{2}_{\stackrel{4}{5}}_{-}^{5}_{-}$ | e 10 18 e 19 37 e 10 34 | PcP SS PP | e 24·4 e 28·1 e 27·6 e 21·5 |
| Lwow Basle Besançon Semipalatinsk Bratislava | | 48.7 49.1 49.2 49.5 49.6 | $\begin{array}{r} 32 \\ 47 \\ 48 \\ 345 \\ 38 \end{array}$ | e 8 54 i 8 51 e 8 53 | $\begin{array}{ccc} + & 0 \\ + & 3 \\ - & 1 \\ - & 0 \end{array}$ | e 15 51 e 10 41 e 16 73 | + 1 $+ 4$ | e 10 11 e 10 10 i 10 30 | $\frac{P_{cP}}{P_{cP}}$ | = |
| Clermont-Ferrar Vladivostok Changchun Chihuahua Iasi | ad | 50·2 51·3 51·6 51·6 51·6 | $51 \\ 298 \\ 304 \\ 167 \\ 30$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $-{ 2\atop -2\atop -3\atop +3\atop -12}$ | e 16 18 e 16 26 e 17 30 10 53 | $\begin{array}{c} + & 7 \\ \hline 0 \\ \hline PPS \\ PP \end{array}$ | 10 33 | P _c P | = |
| Triest Monaco Florence Simferopol Toledo | | $51.7 \\ 52.8 \\ 53.2 \\ 54.4 \\ 55.0$ | 42 48 45 24 59 | e 9 19 i 9 22 | $ \begin{array}{r} $ | 16 39 ? e 16 57 17 25 | $+\frac{7}{5} \\ +\frac{5}{8}$ | e 17 28 e 11 25 | PPS PP | 33·0 e 26·6 |
| Rome Lisbon Peking Matusiro Alicante | z. | 55·2 55·3 56·6 56·7 57·0 | $\begin{array}{r} 44 \\ 64 \\ 312 \\ 291 \\ 56 \end{array}$ | e 9 37 e 9 37 a e 9 45 9 46 9 49 | $ \begin{array}{r} 0 \\ - & 1 \\ - & 2 \\ - & 2 \\ - & 1 \end{array} $ | e 17 19 e 17 37 e 17 39 17 44 | -1 -1 -1 -1 $+1$ | e 21 15 e 21 33 | ss ss | e 27·6 |
| Frunse Granada Almeria Tiflis Algiers Univ. | z. | $57.2 \\ 57.7 \\ 58.2 \\ 58.2 \\ 59.0$ | 349 60 59 15 54 | i 9 52 i 9 56k e 9 57 i 9 58 e 9 58 | + 1 + 1 - 1 - 6 | e 17 46 17 56 — | + 3 = | i 12 58 10 3 | PP PP | i 30·7 28·9 e 31·8 |
| Tashkent Messina Relizane Goris Tacubaya | E. | $59.0 \\ 59.3 \\ 59.7 \\ 60.5 \\ 61.2$ | $354 \\ 42 \\ 56 \\ 14 \\ 160$ | e 10 0 e 10 45 e 10 8 i 10 14 e 10 26 | $^{-4}_{+39}^{-1}_{0}$ | e 18 1 e 18 35 i 18 33 e 18 31 | $ \begin{array}{r} -9 \\ +21 \\ -4 \\ -7 \end{array} $ | e 13 41 — e 12 29 | PPP — PP | e 39·0 |
| Vera Cruz Stalinabad Ashkabad Nanking Zô-Sè | | $61.6 \\ 61.7 \\ 62.4 \\ 64.0 \\ 64.6$ | $157 \\ 354 \\ 308 \\ 306$ | i 10 22 i 10 29 a e 10 36 e 10 40 | $\begin{array}{c} - \\ 0 \\ + \\ 2 \\ - \\ 1 \end{array}$ | e 22 3 = = e 19 20 | ss | | | |
| Ksara San Juan Dehra Dun Quetta St. Lucia | | 65.5 65.7 69.6 70.1 70.7 | $ \begin{array}{r} 24 \\ 125 \\ 345 \\ 356 \\ 121 \end{array} $ | i 10 48 e 10 45 e 11 15a i 11 17 | $^{+}_{-}\frac{1}{3}$ $^{-}_{-}\frac{1}{3}$ | i 19 36 e 25 9 i 20 29 | + <u>4</u> SS + <u>2</u> | e 24 0 | ss | |
| St. Vincent Barbados Tamanrasset Shillong Bokaro | z. z. N. | $71.5 \\ 71.8 \\ 73.2 \\ 73.5 \\ 75.6$ | $121 \\ 119 \\ 54 \\ 332 \\ 338$ | i 11 24 e 11 29 i 11 34 e 11 36 | $^{+\ \ 0}_{-\ \ 0}$ | e 29 32 | sss | e 14 18 | PP — | |
| Bogota Bombay Poona Hyderabad Madras | z. E. | 78·1 81·2 81·5 82·4 86·7 | $135 \\ 350 \\ 349 \\ 344 \\ 342$ | i 12 3 i 12 20 | + <u>1</u> - <u>1</u> | i 22 36 e 22 33 e 30 39 e 31 58 | PS + 4 SSS SSS | i 27 19 e 28 33 i 29 21 | SSP SSP | |
| Huancayo Pretoria Kimberley | z. z. z. | $94.4 \\ 123.8 \\ 126.4$ | $^{138}_{37}_{42}$ | e 13 22 e 18 30 i 19 5 | $\begin{bmatrix} -1 \\ -30 \end{bmatrix} \\ \begin{bmatrix} 0 \end{bmatrix}$ | | | e 17 4 | PP — | |

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1956

June 3d. 18h. 52m. Epicentre 32°·25S. 176°·0W. Magnitude 5·8. New Zealand Scismo. Report for 1956, Bull. E-137, Department of Scientific and Industrial Research for 1956, Wellington, N.Z., 1960, p. 40.

June 4d. 7h. 9m. 19s. Epicentre 52°·1N. 170°·6W.

A = -.6085, B = -.1007, C = +.7871; $\delta = -6$; h = -6; D = -.163, E = +.987; G = -.776, H = -.128, K = -.617. 0-C. Az. P. S. 0-C. Supp. L. s. $\mathbf{m}.$ 8. m. s. 8. m. s. m. College 17.4 34 20 i 4 i 8-9 Petropavlovsk 18.6 286 i 4 18 e 7 59 SS Sitka 20.962 4 45 i 8 42 e 5 38 PPPi 9.8 Magadan $22 \cdot 7$ 304 i 5 Horseshoe Bay $29 \cdot 7$ 76 PcPVictoria 29.9 78 e 6 15 e 11 13 i 9 14 PcPYuzno-Sakhlinsk 30.3 279 i 6 14 -Seattle 31.079 + e 11 33 PcPi 12·1 Corvallis 31.8 34 + Tiksi 32.632930 i 6 e 11 58 \mathbf{PP} 5 e 7 Shasta 34.5 Z. 90 e 6 54 Mineral 35.290 +11e Mizusawa 35.5 26812 35 + 6 Hungry Horse 35.673 ScP e 13 14 i 9 30 $P_{c}P$ 0 e Berkeley $36 \cdot 3$ 94 e 7 + e 12 45 Reno 36.8 89 Z. e 7 8 Lick 37.0 94 + 14 Resolute Bay $37 \cdot 0$ 25 10 +10e 13 e 8 54 PPe 20.6 Butte 37.6 76 e 7 19 N. + i 9 $P_{c}P$ 36 e 16.2 Saskatoon 38.2 64 i 7 27 i 13 20 Fresno 38.5 93 Z. + Bozeman 38.7 75 e 7 e 13 25 27 0 e 16.5 Matusiro 38.9 267i 7 27 a i 13 25 $\mathbf{P}\mathbf{P}$ =Vladivostok 38.9280 i 7 27 Eureka 39.2 Z. 86 i 7 32 + e 13 25 ScPe 13 41 PcSTinemaha $39 \cdot 3$ 91 Z. 34 + Woody 39.893 36 0 \mathbf{PP} i 8 42 Isabella 40.1 93 1 1 1 i 7 40 +++ i 7 53 China Lake 40.592 43 i 8 e Salt Lake City 41-0 82e 47 e 14 e 17·3 Pasadena 41.395 i 13 59 5 i 17 28 ScSRiverside 41.8 94 z. 54e 14 15 i 8 15 Boulder City 42.1 90 56 + i 8 17 Changchun $42 \cdot 4$ 28554+ Palomar 42.6 94 i 8 z. i 8 22 Barratt $43 \cdot 2$ 95 e 8 Z. i 14 31 0 PP57 Rapid City 72 $44 \cdot 2$ e 8 E. 14 + i 8 23 Tucson $47 \cdot 1$ 91 i 8 35 e 15 27 e 10 51 PPe 19·0 Irkutsk $49 \cdot 2$ 306 8 50 e 16 14 +16PP e 10 43 Peking $50 \cdot 2$ 287 i 8 58 a 16 11 Chihuahua 52.5 90 i 9 -1028.3 Zô-Sè 53.1 275 i 9 18a i 16 49 -Nanking 53.9277 24 a 16 59 -Kirkland Lake 54.5 55 e 9 31a e 17 10 Fayetteville 54.675 i 9 31 a e 17 e 19 18 ScS Florissant 55.1 7035 i 17 16 e 9 49 $\mathbf{p}\mathbf{P}$ St. Louis 55.2 70 38 + i 17 17 PS e 17 39 Scoresby Sund 55.7 12 40 e 17 32 + 6 e 19 32 ScS27.7 Cleveland 58.2 62 i 9 59 a + e 17 57 i 10 11 Sian 58.3 286 e 9 57 e 17 58 -Ottawa 58.6 55 59 a e 9 18 $\frac{12}{12}$ 5 PPe 24.7 Shawinigan Falls $59 \cdot 3$ 53 i 10 7 a + 22 PPBrébeuf 59.654 e 10 Pittsburgh 59.8 62e 10 + i 18 22 10 2 i 20

Continued on next page.

18

9

-11

13 49

PPP

Seven Falls

59.8

51

e 10

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| Kiruna Morgantown Pennsylvania Reykjavik Semipalatinsk | z. | 60·1 60·4 60·7 61·6 | Az. 355 63 60 15 317 | P. m. s. i 10 10 a i 10 13 i 10 16 e 10 25 | O -C. - 1 - 0 + 1 + 3 | 8. m. s. e 18 32 e 18 30 e 20 10 | O-C. + 8 - 2 ScS | e 20 4 | 1pp. | L. m. = |
|--|----|--|---|---|---|--|--|--|---|--------------------------------------|
| Washington Palisades Philadelphia Fordham Tacubaya | z. | $62.5 \\ 62.6 \\ 62.7 \\ 62.8 \\ 63.5$ | 58 59 58 92 | i 10 27 i 10 28 e 10 26 e 10 28 e 10 27 | $ \begin{array}{cccc} & 1 & \\ & 0 & \\ & 3 & \\ & & 2 & \\ & & 7 & \\ \end{array} $ | e 18 45 i 18 56 i 18 57 e 19 0 | - 9 0 + 2 | e 19 57 e 23 1 i 20 19 e 12 29 | $\frac{s_{cS}}{s_{cS}}$ | e 33·4 e 26·5 |
| Sverdlovsk Hong Kong Columbia Baguio Skalstugan | z. | $63.6 \\ 63.7 \\ 63.8 \\ 64.2 \\ 64.7$ | $331 \\ 273 \\ 68 \\ 264 \\ 359$ | 12 56 e 10 35? e 10 34 i 10 40 i 10 42 | PP - 1 - 2 + 1 0 | 20 24 e 19 6 e 19 15 | SeS - 5 - 1 | e 20 25 | scs | e 26·5 |
| Halifax Manila Pulkovo Upsala Frunse | | $65.4 \\ 67.2 \\ 68.2 \\ 70.0$ | $^{49}_{262}$ $^{349}_{356}$ 315 | e 10 57 i 11 3 i 11 14 | = 1 = 1 1 | i 19 26 e 19 26 e 20 21 e 20 1 | - 1 - 4 PS - 3 + 9 | e 15 10 e 21 1 i 11 28 | PPP ScS PcP | |
| Moscow Copenhagen Tashkent Rathfarnham C. Hamburg | z. | $70.1 \\ 72.6 \\ 73.5 \\ 74.2 \\ 74.7$ | $344 \\ 358 \\ 317 \\ 10 \\ 0$ | e 11 14 i 11 31 a i 11 41 i 11 46 | $-{2\atop 0}\atop +{1\atop 3}$ | e 21 8 e 21 4 | $+\frac{12}{2} \\ -\frac{2}{2}$ | e 21 42 e 21 39 | | 35·7 e 43·7 |
| Witteveen Warsaw Stalinabad De Bilt Chatra | z. | 75.5 75.6 76.0 76.2 76.3 | $\begin{array}{r} 2\\353\\316\\3\\296\end{array}$ | e 11 50 e 11 49 i 11 50 e 11 53 i 11 52 | $\begin{array}{c} + & 2 \\ + & 1 \\ - & 1 \\ + & 1 \\ 0 \end{array}$ | e 21 44 e 21 47 | $+\frac{15}{11}$ | e 11 59 | PcP | e 37·7 e 38·7 |
| Kew Nouméa Jena Uccle Lwow | | $76.5 \\ 76.7 \\ 77.4 \\ 77.4 \\ 77.7$ | $\begin{array}{r} 6 \\ 202 \\ 359 \\ 350 \end{array}$ | i 11 54 e 12 11 e 11 58 e 11 58 i 12 0 | $^{+ 16}_{\ 0}_{\ 0}$ | e 21 51 e 21 41 e 14 27 i 22 5 | $+\frac{12}{8} \\ -\frac{8}{13}$ | e 26 44 e 26 17 e 12 9 e 14 57 | $\frac{\mathrm{ss}}{\mathrm{PcP}}$ | e 43·2 |
| Prague Paris Bokaro Stuttgart Strasbourg | | 78·2 79·3 79·4 79·6 79·7 | $357 \\ 5 \\ 295 \\ 0 \\ 1$ | e 21 7 i 12 10 e 11 57 e 12 4 a e 12 12 | $^{+}_{-12}^{1}_{-6}$ | e 22 10 i 22 23 e 22 8 e 22 25 e 22 21 | $^{+13}_{-2} \\ ^{+13}_{+8}$ | e 23 30 i 12 18 e 28 41 e 22 58 | $\frac{_{\mathrm{PcP}}^{\mathrm{PPS}}}{_{\mathrm{PS}}^{\mathrm{SS}}}$ | e 49·5 e 42·7 e 48·6 e 41·7 |
| Bratislava Iasi Ashkabad Basle Besançon | | 79·9 79·9 80·7 80·8 81·0 | 355 348 323 1 | i 12 12 12 13 i 12 16 e 12 19 i 12 19 | $\begin{array}{c} & 0 \\ + & 1 \\ 0 \\ + & 2 \\ + & 1 \end{array}$ | i 22 28 22 27 22 36 e 15 18 | $^{+12}_{+11}_{\mathrm{ScS}}$ | i 12 47 e 12 22 e 12 29 | PcP — PcP | |
| Simferopol Tiflis Clermont-Ferrand Triest Bucharest | | 81·0 81·7 82·4 82·6 82·8 | $342 \\ 334 \\ 4 \\ 357 \\ 348$ | i 12 19 i 12 21 i 12 27 e 12 26 e 22 9 | $^{+}_{-}_{1}^{1}_{2}$ | e 22 35 e 22 38 e 22 47 22 41? 22 51 | $^{+}_{+}$ $^{8}_{+}$ $^{+}_{6}$ $^{6}_{+}$ $^{+}_{6}$ | 22 49 e 22 59 i 23 25 22 30 | SKS SKS SKS | 38-7 |
| Belgrade Goris Quetta San Juan Prato | | $83.0 \\ 83.3 \\ 83.9 \\ 84.3 \\ 84.4$ | $\frac{332}{313} \\ 68$ | e 12 30 i 12 30 e 12 33 a i 12 35 e 12 37 | $^{+}_{0}^{0}_{0}^{0}_{1}$ | e 22 49 i 22 53 i 22 55 e 22 43 | $^{+}_{-}^{2}_{1}$ $^{-}_{18}$ | 1 <u>2</u> 37 | PcP | - - - |
| Florence Monaco Sofia Brisbane Rome | | 84·6 84·8 85·4 86·4 | 212 | i 12 37 i 12 37 e 14 38 e 12 42 e 12 44a | $^{+}_{+}$ $^{1}_{1}$ $^{+}$ $^{2}_{-}$ 1 | e 22 57 e 22 50 e 23 29 | $-\frac{5}{15} + \frac{8}{8}$ | i 24 1 e 23 5 | PS SKS | e 42·7 |

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1956

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| | | Δ | Az. | P. | 0 - C. | s. | O -C. | Su | pp. | L. |
|--|-------|--------------|-----|---|---------------------|---------|-----------------|---------|---------------------------|--------|
| Commence of the Commence of th | | 0 | ٥ | m. s. | s. | m. s. | s. | m. s. | | m. |
| Taranto | | 87.6 | 354 | e 12 59 | + 8 | e 22 29 | 9 | - | - | - |
| Toledo | | 87-7 | 10 | 12 54 | $^{+}_{+} ^{8}_{2}$ | 23 36 | + 3 | | | 58.4 |
| Hyderabad | | 88.6 | 297 | | N <u></u> | e 23 38 | - 4 | - | | e 48.5 |
| Chinchina | | 89.2 | 83 | i 12 57 | - 2 | i 23 45 | - ĝ | | - | 43.7 |
| Athens | | 89.5 | 349 | e 20 44 | 3 | e 23 27 | [-3] | e 29 31 | SS | - |
| Alicante | | 89.6 | 8 | e 12 50 | -11 | 23 36 | [+ 6] | 29 28 | ss | e 42·4 |
| Messina | | 90.0 | 355 | e 13 1 | - 2 | 23 30 | 1 - 31 | 25 23 | $\widetilde{\mathbf{PS}}$ | 41.6 |
| Bogota | | 90.4 | 82 | 500 300 100 100 100 100 100 100 100 100 1 | | i 23 54 | - 4 | | -~ | 46.7 |
| Granada | | 90.4 | 10 | i 13 6a | + 2 | 24 6 | $+ \hat{8}$ | 13 18 | $P_{c}P$ | 41.2 |
| Bombay | | 90.5 | 302 | e 13 3 | - 2 | e 24 3 | $+$ $\check{4}$ | e 21 23 | 3 | |
| Algiers Univ. | z. | 91-4 | 5 | e 13 8 | - 1 | e 23 33 | I - 81 | e 16 49 | $\mathbf{P}\mathbf{P}$ | |
| Riverview | CONT. | 91.8 | 211 | | <u>, 127</u> | e 23 44 | 1+ 11 | e 24 11 | ŝ | e 41.5 |
| Relizane | | $92 \cdot 2$ | 7 | e 13 13 | 0 | e 23 44 | [-2] | 0 21 11 | ~ | 0 11 0 |
| Jerusalem | | 93.5 | 338 | i 13 19k | Ŏ | ~ | , | e 17 2 | \mathbf{PP} | |
| Colombo | E. | 96.4 | 290 | _ | _ | e 24 8 | [-1] | · | _ | e 59·2 |
| Tamanrasset | z. | 105.4 | 4 | 14 16 | + 3 | e 24 55 | [+ 3] | e 18 53 | \mathbf{PP} | - |
| La Paz | | 110.5 | 91 | e 19 13 | \mathbf{PP} | e 22 3 | PKS | _ | | 64.7 |
| Lwiro | | 127.8 | 335 | e 18 9 | [-59] | | | e 23 16 | \mathbf{PP} | |
| Astrida | | 127-9 | 334 | e 19 9 | [+1] | | | | _ | e 82·7 |
| Pretoria | z. | 150.1 | 324 | i 19 48 | į oj | | | - | _ | |
| Pietermaritzburg | z. | 152.7 | 317 | i 19 59 | [+ 8] | - | - | - | | |
| Kimberlev | Z. | 154.0 | 328 | i 19 53 | 01 | | | | | |

June 4d. 12h. 5m. 57s. Epicentre 32° 0S. 178° 2W.

Focus at Base of Superficial Layers.

```
A = -.8492, B = -.0267, C = -.5273; \delta = -10;
               D = -.031, E = +1.000; G = +.528, H = +.016, K = -.850.
                                Az.
                                               O-C.
                                                                  O-C.
                                                                                  Supp.
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                                219
                                                 + 3
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Tuai
                                208
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                                                 -11
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New Plymouth
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 Wellington
                         10.8
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Cobb River
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                                      0
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                         13.3
Kaimata
                                215
                 N.E.
                                      e 3
                                                            5
                                                              13
                                                                    -24
Christehurch
                         13.6
                                210
                                                          e 5
                                                              19
                                                                    -25
                                                                                               e 6.6
Nouméa
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Brisbane
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Riverview
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                               257
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Melbourne
                        30.6
                               249
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Rabaul
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                   z.
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                                                                                24
Lembang
                         73.0
                               273
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Baguio
                        75.9
                               300
                                    e 13
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Matusiro
                               326
                        79.5
                                      12
                                                        e 21 55
                                                                                       SS
                                                                                             e 32.6
                                                                           e
Barratt
                        86.7
                                48
                                          45
                   Z.
                                    e 12
Pasadena
                        86.7
                                 46
                                    e 12
                                                        e 24 12
                                                                    PS
                                                                                               43.6
                                                                                             e
Berkeley
                        86.9
                                 41
                                    e 12 43
                                                        e 23 13
                                                    0
Lick
                        86.9
                   z.
                                     i 12 44
                                                 +
Palomar
                        87.0
                                    i 12 44
                   Z.,
                                                 +
                                                                           i 12 58
                                                                                      pP
Riverside
                   Z.
                        87.1
                                47
                                    e 12 44
                                                                    PP
                                                        e 16 18
                                                    0
                                                                                59
                                                                                      pP
                        87.4
Woody
                   z.
                                44
                                    i 12 43
                                                    2
                                                                           i 12 54
                                                                                      pP
                                                 \rightarrow
Fresno
                        87.6
                                43
                                    i 12 46
                                                    0
                   z.
                                    i 12 46
i 12 49
Isabella
                        87.6
                   Z.
                                45
                                                    0
                                45
China Lake
                        88.2
                   Z.
                                                    0
Tinemaha
                        88.7
                                44
                                    e 12
                                          52
Shasta
                        88.8
                                39
                   Z.
                                    e 12 52
Mineral
                        89.0
```

Continued on next page.

0

40

e 12 53

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| | | Δ. | Az. | P. m. s. | o -c. | s. m. s. | O -C. | m. s. | ipp, | L. m. |
|--|----------|--|-----------------------------------|---|---|---|---------------------------------|--|----------------------------------|---------------------|
| Boulder City Tucson Tacubaya Eureka Huancayo | z. z. | $90.0 \\ 90.2 \\ 91.2 \\ 91.4 \\ 94.3$ | $^{46}_{52}_{68}_{43}$ | i 12 58 e 12 58 e 13 19 i 13 4 e 13 18 | $^{+}_{0}^{0}_{0}^{0}_{0}$ | e 14 26 | <u>?</u> | e 13 1 | p <u>P</u> | |
| Salt Lake City Butte Bozeman Hungry Horse College | N. | $94.8 \\ 97.7 \\ 98.3 \\ 98.4 \\ 99.5$ | 44 40 41 37 13 | e 13 23 e 13 36 e 17 7 e 14 10 i 13 40 | $^{+}_{\substack{+\ 3\ PKP}\ PP}^{3}$ | e 18 5 | = | e 17 31 e 17 30 | PP PP | e 51.8 e 42.2 |
| Rapid City Kimberley Resolute Palisades Shawinigan Falls | E. Z. | $\substack{102.0\\115.7\\118.8\\120.2\\122.6}$ | $202 \\ 202 \\ 18 \\ 58 \\ 52$ | e 13 57 i 18 39 e 18 48 e 19 5 | $\begin{bmatrix} + & 5 \\ [+ & 0] \\ [+ & 3] \end{bmatrix}$ | e 27 56 e 25 42 | [+ 1] | e 18 17 - 36 34 | $\frac{PP}{SS}$ | e 58·0 |
| Quetta Halifax Astrida Lwiro Scoresby Sund | z, | 125.0 128.5 136.5 137.4 139.3 | $286 \\ 56 \\ 223 \\ 222 \\ 12$ | e 18 57 e 18 13 e 19 18 e 19 27 | $\begin{bmatrix} & 0 \\ - & 6 \\ - & 2 \\ - & 2 \end{bmatrix}$ $\begin{bmatrix} + & 3 \end{bmatrix}$ | i 32 36 - 36 e 22 57 | PPS - PKS | $\begin{array}{c} - \\ i \ 33 \ 13 \\ - \\ e \ 32 \ 18 \\ \end{array}$ | $\frac{1}{\text{PP}}$ | e 65·0 — 66·0 |
| Kiruna Reykjavik Skalstugan Upsala Ksara | z. | $142.5 \\ 144.6 \\ 147.7 \\ 150.2 \\ 151.4$ | $348 \\ 18 \\ 351 \\ 344 \\ 283$ | i 19 27 a e 19 49 i 19 41 i 19 45 i 19 44 | $[-3] \\ [+16] \\ [+3] \\ [+3] \\ [0]$ | i 23 17 — e 26 46 | PKS = [0] | i 19 52 i 20 7 e 20 22 | pPKP pPKP PKP: | 77.0 |
| Jerusalem Iasi Hamburg Rathfarnham C. Jena | z. z. | 151.7 155.2 157.7 158.0 159.8 | $278 \\ 315 \\ 347 \\ 13 \\ 342$ | e 19 45 20 18 e 20 19 e 20 46 a e 20 5 | [0] PKP ₂ PKP ₃ pPKP ₄ [+10] | e 24 14 | PKS PP | 23 46 | PP — PKP ₂ | |
| Bratislava Stuttgart Strasbourg Paris Besançon | | $160.1 \\ 162.4 \\ 162.9 \\ 163.2 \\ 164.5$ | $329 \\ 344 \\ 346 \\ 358 \\ 349$ | i 19 55 e 20 9 e 20 18 e 20 0 e 20 13 | $[+ 11] \\ [+ 11] \\ [+ 20] \\ [+ 1] \\ [+ 13]$ | i 20 36 e 28 39 = | PKP ₂ PPP | i 20 16 e 20 46 e 51 21 e 20 29 e 20 56 | PKP PKP SSS PPKP PKP | e 85·0 e 88·0 |
| Taranto Florence Clermont-Ferranc Rome Messina | i E. | $165.0 \\ 166.1 \\ 166.2 \\ 167.0 \\ 167.2$ | $308 \\ 330 \\ 356 \\ 322 \\ 302$ | e 20 13 e 21 6 e 24 29 e 20 35 | [+12] PKP ₂ PP PPKP | e 31 28 e 31 51 | SKKS SKKS SKKS | e 36 37 e 20 57 e 35 51 e 35 35 | | e 87·7 |
| Monaco Tamanrasset Toledo Granada Alicante | z. | $167.5 \\ 170.2 \\ 170.8 \\ 173.2 \\ 173.4$ | $341 \\ 201 \\ 30 \\ 39 \\ 16$ | i 21 10 e 20 7 e 20 3 i 20 38k 20 8 | PKP ₂ [+ 3] [- 1] PPKP [+ 2] | e 25 21 32 20 27 10 | PP SKKS [+ 6] | $\begin{array}{r} - \\ e & 21 & 19 \\ 25 & 12 \\ 25 & 38 \\ 29 & 33 \end{array}$ | PKP ₁ PP PP | 90·2 e 81·4 |
| Algiers Univ. Relizane | z. | $175 \cdot 2 \\ 176 \cdot 2$ | 348 15 | e 20 5 e 20 8 | $\begin{bmatrix} -&1\\ +&2 \end{bmatrix}$ | $\begin{array}{cccc} e & 26 & 8 \\ e & 25 & 38 \end{array}$ | $_{\mathbf{PP}}^{\mathbf{pPP}}$ | e 21 44 e 21 45 | $\frac{PKP_2}{PKP_2}$ | |

June 4d. 18h. 37m. Epicentre 32°·4S. 177°·3W. Magnitude 5·3. Depth of focus 70km. New Zealand Seismo. Report for 1956, Bull. No. E-137, Department of Scientific and Industrial Research, Geophysics Division, Wellington, N.Z., 1960, p. 40.

June 4d. 23h. 47m. Epicentre 38°·8N. 70°·5E. Magnitude 4·5. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, pp. 48, 49.

June 5d. 4h. 26m. Epicentre 42°·8N. 42°·3E. Loc. cit., 4d. 23h., p.17.

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June 5d. 5h. 29m. 46s. Epicentre 7°.98. 111°.6E.

A = -.3647, B = +.9211, C = -.1366; $\delta = +9$; h = +7; D = +.930, E = +.368; G = +.050, H = -.128, K = -.991.

| D - T 330, E - T 300, H - T 030, H - T 20, K - T 331. | | | | | | | | | | | |
|--|----------------|---|--|--------------------------------------|------------------------------|--|---|--------------------------|------------------------------|----------------|----------|
| Bandung | | △ 4·0 4·1 | Az. 284 285 | e 1 i 1 | 6 7 k | O-C. + 2 + 2 | S. m. s. e 1 53 e 1 54 | O-C. s. + 1 - 1 | m. s. e 15 28 | ScS | L. m. |
| Djakarta Bagnio Shillong | | $\begin{array}{c} 5 \cdot 0 \\ 25 \cdot 8 \\ 38 \cdot 4 \end{array}$ | $\frac{290}{20}$ | e 1 i 5 e 6 | | $^{+\ 3}_{+\ 11}_{-\ 59}$ | e 2 17 e 13 16 | $-\frac{1}{4}$ | | = | e 17·9 |
| Rabaul Chatra Brisbane Matusiro Quetta | Z. | $40.5 \\ 41.9 \\ 43.7 \\ 50.8 \\ 57.2$ | $ \begin{array}{r} 87 \\ 326 \\ 122 \\ 28 \\ 314 \end{array} $ | i 7 i 8 i 9 e 9 | 55 6 5 | $\begin{array}{c} + & 1 \\ + & 1 \\ - & 2 \\ + & 1 \\ - & 3 \end{array}$ | - 16 18 e 17 42 | $-\frac{-}{4}$ | i 9 50 i 8 40? i 10 36 | PcP PcP | 22.4 |
| Irkutsk Tananarive Sverdlovsk Astrida Grahamstown | z. | $60.3 \\ 63.0 \\ 76.8 \\ 81.6 \\ 81.6$ | $355 \\ 253 \\ 334 \\ 268 \\ 238$ | 10 10 11 e 12 i 12 | 26k 52 18a | $ \begin{array}{rrr} & 0 \\ & 5 \\ & 3 \\ & 3 \\ & 4 \end{array} $ | | | | | |
| Lwiro Jerusalem Simferopol Moscow Kiruna | | $82.6 \\ 82.7 \\ 86.8 \\ 87.6 \\ 97.7$ | $269 \\ 303 \\ 316 \\ 327 \\ 338$ | e 12 i 12 e 12 i 13 | 47 50 | $ \begin{array}{cccc} & - & 2 \\ & - & 1 \\ & - & 2 \\ & - & 2 \end{array} $ | $\begin{array}{r} - \\ 23 & 21 \\ 23 & 24 \\ \end{array}$ | - 4 [+ 6] | | | |
| Upsala College Tamanrasset Rathfarnham C. Shasta | z. z. z. | 98.8 101.6 107.8 112.8 122.1 | $329 \\ 25 \\ 291 \\ 325 \\ 47$ | i 13 e 13 e 15 i 14 e 18 | 47 18 55 | - 2 - 9 P [+ 1] | | | e 17 46 e 18 56 | PP PP | |
| Mineral . Lick Hungry Horse Reno Butte | Z. Z. N. | 122.8 123.7 124.4 124.4 126.4 | 47 50 35 47 37 | e 18 i 19 i 19 e 19 e 19 | $\frac{1}{2}$ | $[+ 0] \\ [+ 1] \\ [+ 1] \\ [+ 1] \\ [+ 1]$ | | | e 20 56 | PP | |
| Woody Isabella China Lake Pasadena Bozeman | z. z. z. | $126 \cdot 4$ $126 \cdot 7$ $127 \cdot 3$ $127 \cdot 4$ $127 \cdot 5$ | 51 51 53 37 | i 19 e 19 e 19 e 19 | | $[& 0] \\ [+ 1] \\ [+ 1] \\ [0] \\ [+ 2]$ | | | e 21 6 i 21 6 | PP PP | |
| Riverside Palomar Boulder City Salt Lake City Rapid City | z. E. | $\substack{128.1 \\ 128.7 \\ 129.4 \\ 129.5 \\ 133.0}$ | 53 49 43 34 | e 19 i 19 e 19 e 19 e 21 | $9 \\ 11 \\ 12 \\ 13 \\ 40$ | [+ 1] [+ 1] [+ 1] [+ 2] PP | e 22 41 | E PKS | e 21 21 | PP = | |
| Tucson Boulder Kirkland Lake Shawinigan Falls Halifax | z. | $133.8 \\ 134.1 \\ 138.7 \\ 141.3 \\ 143.2$ | $\begin{array}{r} 52 \\ 40 \\ 12 \\ 5 \\ 354 \end{array}$ | e 19 e 19 e 19 i 19 | -310 | $\begin{bmatrix} & 0 \\ - & 5 \\ - & 6 \\ - & 2 \end{bmatrix}$ | e 22 45 e 23 7 — | PKS PKS | i 22 35 | <u>=</u> PP | e 82·2 |
| Fayetteville Palisades Tacubaya Washington Chapel Hill | z. | 143.4 146.7 148.0 148.2 150.5 | $\frac{36}{8}$ $\frac{66}{13}$ $\frac{13}{18}$ | i 19 i 19 i 19 e 19 i 19 | 34 k 44 56 47 53 | $egin{bmatrix} [- & 2] \ [+ & 2] \ [+ & 12] \ [+ & 2] \ [+ & 5] \end{bmatrix}$ | | | e 23 48 | PP | |
| Columbia La Paz Huancayo | N. Z. | $151.6 \\ 155.7 \\ 159.0$ | $^{22}_{181}_{161}$ | e 19 e 20 e 20 | 38 4 1 | $[+12] \\ [+9] \\ [+1]$ | | | i 19 56 | ? | = |

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June 5d. 5h. 59m. 47s. Epicentre 49° 6S. 113° 7W.

A = -.2615, B = -.5958, C = -.7593; $\delta = -10$; h = -5; D = -.916, E = +.402; G = +.305, H = +.695, K = -.651.

| D =916, $E = +.402$; $G = +.305$, $H = +.695$, $K =651$. | | | | | | | | | | | |
|---|------------------|---|--|---|---|---|----------------------------------|--|----------------------------|--------------------------------------|--|
| | 255 | ۵.°- | Az. | P. m. s. | O – C. s. | s. m. s. | O – C. s. | m. s. | pp. | L. m. | |
| Santa Lucia Buenos Aires Huancayo Christehurch | | $42.7 \\ 49.0 \\ 49.1$ | 79 91 54 247 | e 7 16 e 8 11 e 8 50 e 8 54 | $^{+16}_{+11}_{0}_{+3}$ | e 12 52 e 15 47 | $+\frac{16}{8}$ | e 8 49 e 11 17 | PP PPP | e 22·7 e 20·2 | |
| Wellington La Paz Kaimata Karapiro Onerahi | N.E. N. E. | 49·4 50·4 50·6 52·7 | 251 64 248 255 256 | i 8 57 e 9 23 e 9 8 e 9 15 | $^{+ 4}_{+ 22} \ ^{+ 6}_{- 3}$ | e 15 50 i 16 13 | - 6 +16 - | 10 59 — | PP = | e 20·2 21·7 ——— | |
| Bogota Riverview Galerazamba Tacubaya Brisbane | | 63.6 68.1 69.0 69.9 71.6 | 43 243 41 15 249 | i 10 37 i 10 34 i 10 57k e 11 34 i 11 19 | $ \begin{array}{r} + 2 \\ - 4 \\ - 7 \\ + 19 \\ - 6 \end{array} $ | i 19 18 i 19 26 e 19 59 e 20 26 e 20 38 e 20 33 | +10 $+13$ -4 $+12$ $+14$ -11 | e 20 22 e 14 4 | PS PP | 30·2 e 31·3 e 32·2 e 36·4 | |
| Honolulu Tucson Barratt Palomar Riverside | z. z. z. | 80·8 81·6 82·0 82·7 83·3 | $319 \\ 357 \\ 357 \\ 357$ | e 12 19 e 12 24 e 12 23 e 12 30 | $-\frac{2}{4}$ | e 22 36 | +11 | e 13 2 | = | e 35·8 e 35·8 | |
| Pasadena Isabella Woody Boulder City China Lake | z. z. | $83.5 \\ 85.0 \\ 85.1 \\ 85.2 \\ 85.2$ | $\begin{array}{r} 356 \\ 356 \\ 356 \\ 359 \\ 357 \end{array}$ | e 12 30 e 12 37 e 12 38 e 12 38 e 12 38 | - 1 - 1 - 1 - 1 | e 22 58 | + 6 | i 28_35 | <u>ss</u> | i 39.6 — | |
| Fresno Tinemaha Lick Fayetteville Berkeley | Z. Z. Z. | $86.2 \\ 86.4 \\ 86.9 \\ 87.1 \\ 87.5$ | $355 \\ 356 \\ 354 \\ 16 \\ 353$ | e 12 47 e 12 45 i 12 53 i 12 49 a e 12 53 | $^{+}$ 0 $^{+}$ 0 $^{+}$ 0 | e 23 33 | + 2 | | | | |
| Columbia Reno Rabaul Boulder Mineral | z. z. | 88·2 89·0 89·5 89·6 89·9 | $\begin{array}{r} 27 \\ 355 \\ 264 \\ 6 \\ 354 \end{array}$ | e 12 52 e 12 57 e 12 59 e 13 1 e 12 59 | $ \begin{array}{rrr} & 2 \\ & 1 \\ & 1 \\ & 0 \\ & & 3 \end{array} $ | e 23_35 | - <u>3</u> | e 16 31 | PP = = | e 36·8 | |
| St. Louis Shasta Florissant Rapid City Bozeman | z. E. | $90.3 \\ 90.3 \\ 90.4 \\ 93.8 \\ 95.0$ | $^{18}_{353}_{18}_{8}$ | e 13 3 e 13 7 e 13 21 e 13 26 | - 1 + 3 + 1 | e 23 25 e 24 7 | [-10] + 9 - | e 29_53 | <u>ss</u> | | |
| Butte Philadelphia Palisades Hungry Horse Ottawa | N, | 95·3 95·5 96·8 97·6 100·3 | $^{1}_{29}_{29}_{0}$ | e 13 30 e 17 36 e 13 42 e 13 38 e 17 41 | $^{+}_{\mathrm{PP}}^{3}_{0}$ | $\begin{array}{c} - \\ e & 24 & 34 \\ e & 25 & 3 \\ \hline 25 & 34 \end{array}$ | $-\frac{8}{9} + \frac{11}{11}$ | e 31 33 e 17 28 e 17 34 24 35 | SS PP PP SKS | e 46.6 e 41.6 e 46.6 e 40.4 | |
| Seven Falls College Resolute Tamanrasset Matusiro | z. | 103.3 117.2 124.7 125.9 127.8 | $ \begin{array}{r} 28 \\ 344 \\ 6 \\ 97 \\ 284 \end{array} $ | e 19 51 e 19 3 21 14 | PP [-1] PP | e 27 40 e 28 49 | [+ _s 8] | e 29 44 e 37 49 e 20 54 e 38 23 | PS PS SS PP SS | e 42·2 e 53·5 e 63·1 | |
| Granada Relizane Alicante Algiers Univ. Kew | z. | $129.5 \\ 131.3 \\ 132.2 \\ 133.5 \\ 139.0$ | 76 80 77 81 61 | e 21 54 a e 22 47 19 10 e 19 42 | PP PKS [-6] [+23] | 29 54 26 20 e 26 33 e 28 38 | $[-\frac{?}{5}]$ | 38 57 e 21 36 e 22 53 | PP PKS | 66·4 — e 67·2 | |
| Paris Messina Rome Florence Strasbourg | | 139.4 142.4 142.5 142.5 | 66 88 81 77 68 | e 19 30 e 19 33 e 22 48 | [- 5] [- 2] PP | e 28 47 e 26 39 e 28 1 e 41 30 e 29 1 | $\{-30\}\ [-4]$ SS $\{-35\}$ | e 22 45 e 41 25 | SS PP SS | e 68·2 | |

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| | | Λ | Az. | Р. | o – c. | s. | o-c. | Su | pp. | L. |
|--|----|---|--|--|--|---|----------------------------------|---|---|--------|
| | | | 0 | m. s. | s. | m. s. | s. | m. s. | | m. |
| Stuttgart Tiksi | z. | $143.5 \\ 144.6$ | $\begin{array}{c} 69 \\ 331 \end{array}$ | e 19 32 i 19 34 | [-5] | e 23 0 | PKS | $\begin{array}{cccc} e & 20 & 3 \\ e & 22 & 22 \end{array}$ | PKP ₂ | = |
| Taranto Hamburg Jena | z. | $144.7 \\ 145.6 \\ 145.7$ | 86 61 66 | e 19 53 e 19 46 e 19 40 | [+14] [+6] [0] | e 24 13 e 22 58 | $\frac{q}{PP}$ | e 21 13 i 20 2 e 19 55 | PKP ₂ PKP ₃ | = |
| Athens Bratislava Poona Shillong Jerusalem | z. | 147.6 148.1 148.4 148.8 150.8 | $\begin{array}{c} 95 \\ 73 \\ 195 \\ 229 \\ 116 \end{array}$ | e 19 39k e 19 55 i 19 48 e 19 51 i 19 51 | $[-5] \\ [+11] \\ [+3] \\ [+6] \\ [+2]$ | e 3 = 54 | | e 19 44 e 20 16 i 20 5 | PKP ₂ PKP ₂ PKP ₃ | e 72·0 |
| Kiruna Ksara Lwow Irkutsk Simferopol | | 151.0 152.6 153.0 156.1 157.8 | $^{\substack{34\\114\\73\\291\\90}}$ | e 19 53 e 19 34 e 19 24 e 20 4 e 20 4? | $egin{array}{c} [+&4] \ [-17] \ [-28] \ PKP_2 \ [+&6] \end{array}$ | e 24 13 i 23 31 e 22 6 e 24 6 e 23 38 | PP PP PP | e 20 6 e 19 58 e 20 33 e 27 13? e 20 20 | PKP ₂ PKP ₂ PPP PKP ₂ | |
| Goris Tiflis Ashkabad Frunse Tashkent | | 162.6 163.1 167.0 171.2 171.4 | $\begin{array}{c} 118 \\ 110 \\ 151 \\ 224 \\ 195 \end{array}$ | e 19 50 e 20 3 e 20 24 e 20 26 e 19 56 | $\begin{bmatrix} -13 \\ -1 \end{bmatrix} \\ \begin{bmatrix} +17 \\ +16 \end{bmatrix} \\ \begin{bmatrix} -14 \end{bmatrix}$ | e 24 35 e 27 38 e 32 5 e 32 50 | $PP = [+31] = \{-\frac{4}{40}\}$ | e 28 25 e 24 42 i 46 7 e 25 14 e 25 32 | PPP PP SS PP PP | |

June 5d. 19h. 56m. 47s. Epicentre 36°·1N. 139°·7E. Depth of focus 90km.
Intensity V at Utunomiya and Tukubasan; IV at Kaikoa, Tokyo, Titibu, Kumagaya, Mito, and Osima; II-III at Kashiwa, Maebasi, Hunatu, Ajiro, Kohu, and Shirakawa.
Seismo. Bull. Japan Met. Agency for June, 1956, Tokyo, 1956, pp. 9-11, with chart of seismic intensites.

June 6d. 13h. 28m. Epicentre 19°24'N. 99°·12'W. Intensity V (Mercalli) at Tacubaya). Seismo. Bull. of National Observatory of Mexico for June, 1956, Tacubaya, p. 2.

June 7d. 18h. 19m. 15s. Epicentre 31°·75N. 131°·75E. Depth of focus 30km. Intensity IV at Miyazaki; II-III at Ooita and Hitoyosi.

Loc. cit., 5d. 19h., pp. 11, 12, with chart of seismic intensities.

June 8d. 4h. 7m. 27s. Epicentre 35°·2N. 67°·5E.

A = +.3134, B = +.7566, C = +.5739; $\delta = +2$; h = 0; D = +.924, E = -.383; G = +.220, H = +.530, K = -.819.

| | Δ | Az. | P. m. s. | O-C. | s. m. s. | o-c. | m. s. | pp. | $_{\mathbf{m}.}^{\mathbf{L}.}$ |
|-------------|------|-----|-------------|---|--|-----------------------|-----------------------------|---------------------------|--------------------------------|
| Khorog | 4.0 | 54 | i 1 8 | 2019 The | i 2 8 | - 4 _E | A-0.00-0.00-0.00 | | |
| Garm | 4.4 | 30 | î Î 15 | $^{+}_{+}$ $^{4}_{5}$ $^{+}$ 2 | i 2 31 | $+$ $\hat{6}_8$ | - | | |
| Samarkand | 4.5 | 355 | 11 13 | + 2 | | | - | | - |
| Bairam-Ali | 5.0 | 301 | i î î î ŝ | , õ | | | i 1 41 | PP | |
| Dzhergetal | 5.0 | 36 | i 1 31 | + 3* | | | | - | - |
| Fergana | 6.2 | 32 | i 1 37 | + 2 | i 2 47 | - 1 | i 2 7 | $P_{\mathbf{g}}$ | _ |
| Tashkent | 6.3 | 13 | | , i, | i 3 30 | $+$ 2_g | | | |
| Namangan | 6.6 | 28 | i 1 43 | + 2 | | | i 1 59 | \mathbf{PP} | |
| Andijan | 6.7 | 33 | i 1 44 | $\begin{array}{ccc} + & 2 \\ + & 2 \end{array}$ | i3 3 | + 3 | i 3 33 | Sg | _ |
| Tchimkent | 7.3 | 13 | i 1 51 | + 1 | i 3 17 | + 2 | i 2 24 | P_g | 2 |
| Ashkabad | 7.9 | 293 | i 1 57 | - 2 | i 3 31 | + 1 | i 2 19 | P* | |
| Naryn | 9.1 | 45 | e 2 13 | - 1 | i 4 5 | $^{+}_{+}$ $^{1}_{5}$ | i 4 51 | Sg | _ |
| Frunse | 9.4 | 34 | i 2 19 | + 1 | i 4 5 | - 2 | i 3 11 | $\mathbf{P}_{\mathbf{g}}$ | |
| Kizyl-Arvat | 9.8 | 296 | 2 21 | | | - | | | - |
| Rybach'e | 9.8 | 40 | i 2 26 | $\begin{array}{cc} -&3\\ +&2 \end{array}$ | i 5 31 | + 7 c | i 3 23 | 8 | - |
| Dehra Dun | 10.1 | 116 | e 2 28 | - 1 | e 4 18 | - 7 | $\frac{2}{2} \frac{39}{49}$ | \mathbf{PP} | |
| New Delhi | 10.6 | 126 | e 2 35 | - 1 | i 4 36 | - 1 | 2 49 | \mathbf{PP} | _ |
| Almata II | 11.1 | 40 | i 2 43 | 0 | e 4 50 | + 1 | | - | - |
| Ili | 11.4 | 37 | i 2 45 | - 2 | AND STATE OF THE PARTY OF THE P | 3.0 | | | 2 |
| Kurmenty | 11.5 | 44 | e 2 47 | - I | | _ | | - | - |

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| | | Δ | Λz. | P. m. s. | о – с. s. | s. m. s. | o –c. | m. s. | pp. | L. m. |
|--|---------|--|--|--|---|--|---|---|---|-----------------------|
| Chilisk Bombay Goris Poona Semipalatinsk | | 11.9 16.9 17.4 17.6 17.8 | $^{42}_{162}_{291}_{160}$ | i 2 56 e 4 1 e 4 4 i 4 8 i 4 8 | $^{+}_{+} \begin{array}{c} 2 \\ + \\ 2 \\ - \\ 2 \\ - \\ 3 \end{array}$ | $\begin{array}{c} \mathbf{e} \ \overline{7} \ 16 \\ \mathbf{e} \ \overline{7} \ 30 \\ \mathbf{i} \ 6 \ 38 \end{array}$ | $+\frac{7}{-50}$ | $\begin{array}{c} -7 & 38 \\ 7 & 33 \\ 4 & 15 \end{array}$ | SS SS PP | |
| Chatra Tiflis Bokaro Hyderabad Sverdlovsk | N. | $18.8 \\ 18.9 \\ 19.5 \\ 20.2 \\ 22.1$ | $111 \\ 297 \\ 121 \\ 148 \\ 349$ | i 4 24 i 4 26 i 5 27 i 4 41 k 4 58 | $^{+}_{+}^{1}_{2} \\ ^{+}_{+}^{2}_{2} \\ ^{-}_{-}^{1}$ | i 7 55 i 8 6 i 8 26 | $^{+}_{+13}^{5}_{-5}$ | i 8 49 5 29 | P _c P | 9.8 |
| Shillong Madras Ksara Kodaikanal Simferopol | E. | $23 \cdot 1 \\ 24 \cdot 9 \\ 26 \cdot 0 \\ 26 \cdot 5 \\ 27 \cdot 2$ | $\begin{array}{c} 108 \\ 150 \\ 276 \\ 158 \\ 302 \end{array}$ | $ \begin{array}{r} i & 5 & 7 & k \\ i & 5 & 37 & \\ \hline 5 & 47 & \end{array} $ | $-\frac{1}{1}$ | $\begin{array}{cccc} & \mathbf{i} & 9 & 15 \\ \mathbf{e} & 10 & & 1 \\ \mathbf{i} & 10 & & 7 \\ \mathbf{e} & 10 & & 46 \\ \mathbf{e} & 6 & & 41 \end{array}$ | - 1 +14 + 1 SS PP | $ \begin{array}{r} 5 & 31 \\ i & 6 & 11 \\ e & 6 & 58 \end{array} $ | PP PP | e 11·0 e 14·4 |
| Moscow Colombo Irkutsk Iasi Bucharest | Ε. | $29.0 \\ 30.4 \\ 31.2 \\ 32.0 \\ 32.8$ | $324 \\ 155 \\ 44 \\ 304 \\ 299$ | $\begin{array}{c} \mathbf{i} \ 6 & 3 \\ 6 & 22 \ \mathbf{a} \\ 6 & 30 \\ 6 & 39 \end{array}$ | $-1 \\ -1 \\ 0 \\ + 2$ | e 12 56 e 13 40 - 7 39 | SSS PP | e | $\frac{\text{PPP}}{\text{PcP}}$ | e 17·0 — e 14·7 |
| Pulkovo Lwow Athens Warsaw Skalnate Pleso | | $34.4 \\ 34.7 \\ 35.0 \\ 36.9 \\ 37.1$ | $\frac{327}{308}$ $\frac{288}{312}$ $\frac{307}{307}$ | i 6 51 i 6 54 e 6 53 e 7 12 i 7 8 | - 0 - 3 - 6 | e 14 33 i 12 24 e 13 8 e 12 51? | $\frac{\text{SS}_{0}}{+\frac{10}{-10}}$ | e 8 9 i 8 13 e 8 19 e 8 38 i 8 35 | PP PP PP PP | e 21 <u>·6</u> |
| Peking Bratislava Upsala Prague Messina | | 38·5 39·1 40·4 40·9 41·3 | $\begin{array}{c} 68 \\ 305 \\ 323 \\ 308 \\ 290 \\ \end{array}$ | e 7 24 i 7 33 i 7 41 a i 7 47 e 7 49 k | $\begin{array}{cccc} - & 2 \\ + & 2 \\ & 0 \\ + & 1 \\ 0 \end{array}$ | e 13 27 e 16 20 e 14 8 | $-\frac{4}{88} + \frac{4}{4}$ | i 9 3 i 9 12 i 9 23 e 9 31 | PP PP PP | |
| Triest Kiruna Copenhagen Nanking Hong Kong | | 41.5 42.0 42.4 42.4 42.5 | $301 \\ 336 \\ 316 \\ 79 \\ 95$ | e 7 53 i 7 55a e 9 39 e 9 50 e 8 0 | + 3 + 1 PP PP + 1 | i 17 14 e 14 26 — | ss + 6 | i 8 32 i 9 35 e 17 3 | PP SS | e 21·2 21·6 |
| Jena Rome Florence Hamburg Skalstugan | | 42.7 42.9 43.5 43.7 43.8 | $309 \\ 296 \\ 299 \\ 313 \\ 328$ | e 8 1 i 8 1 a i 8 6 a e 8 10 i 8 8 a | $\begin{array}{cccc} + & 1 \\ - & 1 \\ - & 1 \\ + & 2 \\ - & 1 \end{array}$ | e 9 39 e 14 31 i 14 51 — | PP + 4 + 15 | e 9 54 e 9 28 i 9 51 i 9 41 i 9 52 | PPP PP PP PP | e 22 <u>·6</u> |
| Stuttgart Zô-Sè Karlsruhe Strasbourg Oropa | z. | 44.4 44.7 44.8 45.3 45.6 | $\frac{306}{79} \\ 307 \\ 306 \\ 302$ | i 8 13a e 8 17 e 8 18a i 8 23k e 8 47 | $^{-1}_{+1} \\ ^{+1}_{+2} \\ ^{+23}$ | e 18 13 e 15 9 | ************************************** | e 10 10 e 18 45 | $\frac{-}{\mathrm{ss}}$ | e 24·6 |
| Witteveen De Bilt Besançon Tiksi Paris | z. | 45.7 46.6 46.7 48.0 48.8 | $312 \\ 311 \\ 305 \\ 22 \\ 307$ | e 8 25 e 8 27 i 8 31 i 8 42 e 8 49 | $\begin{array}{cccc} + & 1 & \\ - & 5 & \\ - & 1 & \\ - & 1 & \\ \end{array}$ | e 15 52 | _ PS | e 10 23 e 10 22 e 10 36 e 10 13 | PP PP PP PcP | e 23·6 e 25·6 |
| Clermont-Ferran Kew Algiers Univ. Astrida Lwiro | d z. | $\begin{array}{c} 48.9 \\ 50.1 \\ 51.3 \\ 51.6 \\ 52.0 \end{array}$ | $303 \\ 311 \\ 292 \\ 231 \\ 232$ | e 8 50 i 8 59 e 9 4 e 9 9k e 9 11a | $\begin{array}{c} 0 \\ 0 \\ - \\ 1 \\ - \\ 2 \end{array}$ | | = | e 10 11 e 10 22 e 10 23 | $\frac{-}{P_{c}P}$ | e 25·6 |
| Rathfarnham C. Relizane Tamanrasset Granada Matusiro | z. | 53·4 53·5 54·8 56·1 56·1 | $314 \\ 291 \\ 275 \\ 294 \\ 66$ | i 10 59 e 9 22 i 9 32 a i 9 54 k i 9 40 | PcP - 2 - 2 + 11 - 3 | e 14 2 e 17 1 | P _{cS} -13 | e 10 21 i 11 34 e 21 50 | $\frac{\stackrel{\rm PeP}{\rm PP}}{\stackrel{\rm SS}{\rm S}}$ | e 29·0 |

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| | | Δ | Az. | Ρ. | O-C. | s. | O-C. | Su | pp. | L. |
|------------------|--------|---------------|-----|---------|-------|----------------------|----------------|----------------|---------------|--------|
| | | 0 | | m. s. | 8. | m. s. | s. | m. s. | TION OF | m. |
| Scoresby Sund | | 57.1 | 336 | e 9 51 | + 1 | economic (| | | | 31.6 |
| Tananarive | | 57·1 | 203 | 9 48 | - 2 | + | - | 10 33 | PeP | |
| Resolute | | 69.8 | 355 | e 11 10 | - 4 | | = - | 2000 | | e 28·3 |
| College | | 76.5 | 15 | i 11 53 | - 1 | | | 1 12 30 | ? | - |
| Rabaul | Z. | 88.0 | 96 | e 12 53 | 0 | - | - | - | - | 9 |
| Shawinigan Falls | ß | 91.1 | 334 | i 13 9 | k + 1 | | | | | - |
| Kirkland Lake | Z. | 92.1 | 339 | e 13 12 | 0 | | _ | | - | - |
| Hungry Horse | 000011 | 96.8 | 1 | e 13 31 | - 3 | - | | e 17 30 | PP | - |
| Bozeman | | 99.5 | 359 | e 13 47 | + 1 | 12000 | - | 1964 SERT 1965 | | |
| Rapid City | E. | 100.6 | 353 | e 13 51 | 0 | | | ******* | - | _ |
| Tucson | | 112.9 | 358 | e 18 38 | [-1] | (())) | | _ | | - |
| Huancayo | Z. | $139 \cdot 2$ | 295 | e 19 33 | [+4] | | - | | | |

June 8d. 13h. 53m. 8s. Epicentre 29°·8S. 71°·3W. Depth of focus 0·005.

 $A = + \cdot 2787$, $B = - \cdot 8233$, $C = - \cdot 4945$; $\delta = + 3$; h = + 2; $D = - \cdot 947$, $E = - \cdot 320$; $G = - \cdot 158$, $H = + \cdot 468$, $K = - \cdot 869$.

| (##CcT | | 0.11, 10 | | 020, | | 00, 11 - | 2000 | | | |
|------------------|---------------|--|-----|---|--|--|---------------|--|------------------------|--------------------|
| | | Λ | Az. | P. | O-C. | s. | O-C. | Su | pp. | L. |
| | | - | 0 | m. s. | s. | m. s. | s. | m. s. | | m. |
| Copiapo | | 2.6 | 20 | e 0 40 | | i 1 8 | - 4 | | | |
| Santa Lucia | | $\frac{5}{3} \cdot 7$ | 172 | e 0 55 | - i | i 1 37 | | | | |
| Antoforosto | | 6.2 | 118 | 100 mg | + 3 | | $^{-2}_{+18}$ | | V=3 | |
| Antofagasta | | | | 3 | $\begin{array}{c} + & 3 \\ + & 2 \end{array}$ | The second secon | | | | |
| Buenos Aires | | 11.9 | 117 | 2 51 | $^{+}_{-}$ $^{2}_{2}$ | , 5 5 | + 4 | | _ | |
| La Plata | | 12.4 | 118 | i 2 54 | - z | i 5 4 | 9 | (c)=-00 | - | 5.7 |
| La Paz | | 13.6 | 13 | i 3 11 | s 0 | i 5 52 | +11 | i 3 26 | PP | 6.9 |
| Huancayo | | 18.0 | 347 | e 4 9 | + 2 | e 7 32 | + 9 | 10 20 | * * | e 8·8 |
| Bogota | | 34.3 | 355 | i 6 45 | | i 12 1 | - 3 | - | | 15.9 |
| Chinchina | | 34.8 | 352 | i 6 50 | $^{+}_{+}$ $^{3}_{4}$ | 1 12 1 | | | 2500 | 16.9 |
| St. Vincent | | 43.8 | 14 | | $+$ $\frac{3}{3}$ | | | | | 10.0 |
| Se. Villeene | | 100 | 1.2 | e 8 . 4 | 3F- 3 C | | | | 3-7-7-5 | |
| St. Lucia | | 44.7 | 14 | e 8 11 | + 3 | _ | _ | - | | - |
| San Juan | | 48.2 | 7 | e 8 31 | - 5 | - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 | _ | e 10 28 | PP | |
| Tacubaya | | 55.8 | 328 | e 9 52 | +19 | e 17 11 | - 2 | e 13 22 | PPP | |
| Columbia | | 64.1 | 351 | e 10 30 | 0 | | | | | |
| Chapel Hill | | 65.8 | 353 | i 10 43 | + 2 | | _ | | - | |
| Enwetterille | | 69-0 | 340 | i 10 59 | - 2 | | | . 11 10 | D.D | 550.00 |
| Fayetteville | | 69.5 | 353 | i 11 3 | | - | | e 11 18 | PcP | |
| Morgantown | | 70.5 | 358 | i 11 7 | - 1 - 3 | i 20 21 | 1 4 | e 20 52 | \overline{PS} | e 28·9 |
| Palisades | | 72.2 | 326 | | (25) | 1 20 21 | + 4 | The state of the s | | |
| Tueson | | | 100 | i 11 19 | - 1 | - | - | i 11 37 | PcP | e 28·3 |
| Halifax | | 74.4 | 6 | i 11 361 | + 3 | | | | | e 38·9 |
| Ottawa | | 74.9 | 357 | e 11 391 | c + 3 | · | . — | | | |
| Brébeuf | | 75.0 | 358 | 11 34 | - 2 | _ | | ***** | | |
| Barratt | Z. | 75.6 | 322 | i 11 39 | - 1 | | - | i 11 58 | pP | |
| Shawinigan Falls | | 76.0 | 359 | i 11 40) | - 2 | | - | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | - | - |
| Palomar | Z. | 76 2 | 322 | i 11 43 | 0 | | 100 | i 12 2 | pP | 175-1 5 |
| | | 11 (11 (12 (12 (12 (12 (12 (12 (12 (12 (| 542 | | | | | | | |
| Seven Falls | 100000 | 76.6 | 0 | e 11 461 | c + 1 | | | | _ | |
| Riverside | $\mathbf{z}.$ | 76.9 | 322 | i 11 46 | - 1 | | - | i 12 6 | pP | |
| Boulder City | | $77 \cdot 2$ | 325 | i 11 48 | - 1 | - | _ | i 12 6 | pP | |
| Pasadena | | 77.5 | 322 | i 11 50 | 0 | _ | _ | i 12 9 | $\mathbf{p}\mathbf{P}$ | e 37·3 |
| Kirkland Lake | Z. | 78.0 | 354 | e 11 511 | c - 2 | | _ | - | **** | _ |
| China Lake | z. | 78-4 | 323 | i 11 55 | 0 | _ | _ | i 12 14 | \mathbf{pP} | 22.5 |
| Isabella | z. | 78.8 | 322 | i 11 57 | 0 | | | i 12 17 | pP | |
| Woody | Z. | 79.0 | 322 | e 11 58 | - ĭ | | | î 12 19 | $\vec{p}P$ | |
| Rapid City | E. | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 337 | i 11 58 | - î | | - | 1 12 10 | ** | |
| King Ranch | z. | 79.2 | 322 | i 12 1 | + î | | | i 12 19 | pP | |
| ALLING ACCOUNTS | | | × | | | | | | 1 | |
| Salt Lake City | | 79.6 | 330 | e 12 1 | - 1 | | | i 12 38 | sP | 22_5 |
| Tinemaha | z. | 79.7 | 324 | i 12 4 | + 2 | | - | i 12 22 | pP | |
| Grahamstown | Z. | 80.2 | 123 | i 12 211 | to the second se | | _ | - | _ | |
| Fresno | Z. | 80.3 | 322 | e 12 5 | 0 | | | | | |
| Eureka | z. | 80.5 | 326 | i 12 7 | 0 | i 17 45 | PPP | i 12 25 | \mathbf{pP} | 7.77 |
| Kimberley | z. | 81.1 | 118 | i 12 8 | - 2 | | | | | |
| Lick | Z. | 81.7 | 322 | 1 12 14 | $+$ $\tilde{1}$ | | | | | |
| Berkeley | z. | 82.4 | 322 | e 12 16 | T 1 | | - Carrier | | | |
| Reno | Z. | 82.4 | | e 12 17 | _ Y | | 121101 | | | |
| Bozeman | Zi. | 83.3 | 333 | e 12 20 | T 1 | | | - | | |
| Dogeman | | 00.0 | 000 | 0 14 20 | | 100 | | | | 7 |

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| | | Δ | Az. | P. m. s. | O – C. | s. m. s. | O – C. | m. s. | app. | L. m. |
|--|--------|-----------------------|--------------|-------------|--|-------------|--------------------------------|--------------------|---|----------|
| Mineral | Z. | 83.9 | 324 | e 12 23 | - 1 | | | | | |
| Butte | N. | 84.2 | 332 | i 12 26 | Õ | - | | i 12 44 | pP | |
| Shasta | Z. | 84.6 | 324 | e 12 27 | - 1 | - | | | * <u>* </u> | - |
| Pietermaritzburg | Z. | 84.9 | 121 | 12 36 | + 7 | | | | | _ |
| Pretoria | z. | 85.2 | 117 | i 12 31 | 0 | 2.00 | - | | _ | |
| Hungry Horse | | 86.7 | 333 | i 12 37 | - 1 | e 23 22 | +14 | i 12 57 | pP | - |
| Tamanrasset | z. | 90.4 | 64 | e 12 56 | + 1 | e 23 31 | -12 | e 16 26 | PP | |
| Alicante | | 94.7 | 48 | 12 59 | -16 | 23 51 | [+ 8] | 16 51 | PP | e 44.9 |
| Rathfarnham C. | Z. | 100.1 | 34 | i 13 27 | | | | i 13 50 | $\hat{\mathbf{p}}\hat{\mathbf{P}}$ | |
| Kew | F1700 | 102.0 | 37 | e 13 34 | -14 | e 25 2 | -19 | i 14 10 | $\vec{p}P$ | e 51·9 |
| Rome | z. | 105.0 | 50 | _ | - | e 26 55 | +69 | - | | _ |
| Resolute | | 105.4 | 354 | e 16 8 | 3 | e 25 1 | -49 | e 27 27 | PS | e 51·4 |
| Messina | E. | 105.5 | 55 | e 18 53 | pPP | e 24 55 | | | | e 55·0 |
| Kiruna | | $117 \cdot 9$ | 25 | i 19 53 | $_{\rm PP}^{\rm pPP}$ | e 29 30 | SP | | - | 000 |
| Ksara | | $119 \cdot 2$ | 66 | e 20 5 | $\hat{\mathbf{P}}\hat{\mathbf{P}}$ | e 29 50 | $\tilde{\mathbf{s}}\mathbf{P}$ | | | |
| Simferopol | | 120.8 | 53 | e 20 10 | PP | e 30 6 | $\mathbf{s}\mathbf{p}$ | | 1 | _ |
| Rabaul | z. | 126.4 | 238 | e 18 59 | [+3] | | ~ <u>~</u> | | - | _ |
| Ashkabad | onto | 137.8 | 65 | e 19 11 | - 61 | e 36 31 | 8 | | | |
| Magadan | | 138.9 | 329 | e 22 14 | PP" | 0.00 | | | | |
| Lembang | z. | 143.6 | 178 | i 19 271 | | e 23 18 | PKS | | - | |
| Quetta | z. | 144-0 | 79 | e 19 26 | [-2] | | | | | - |
| Tashkent | 0070 | 146.2 | 59 | e 19 5 | [-27] | e 30 59 | SKKS | e 22 38 | \mathbf{PP} | |
| Poona | Z. | 146.4 | 102 | i 19 34 | [+2] | 0 0 0 0 0 0 | DILIK | 0 22 00 | | |
| Frunse | 070000 | 149.8 | 55 | e 19 40 | $i + \tilde{2}i$ | e 33 36 | SKSP | e 30 29 | SKKS | |
| Dehra Dun | | 153.5 | 81 | e 20 4 | pPKP | | - | - | — | |
| Matusiro | | 154.4 | 293 | e 19 43 | [- 1] | 44 6 | PSS | e 48 13 | SSS | |
| Vladivostok | | 157.2 | 312 | e 19 53? | | 44 0 | 100 | 0 10 10 | 200 | |
| Irkutsk | | 157.3 | 8 | 19 49 | The state of the s | | | e 24 1 | PP | |
| Shillong | | 164.5 | 102 | e 19 56 | [0] | e 31 39 | SKKS | e 24 36 | PP | e 79·4 |
| Peking | | 168.1 | 331 | e 19 56 | [- j | | | - 30 | | - |
| Zô-Sè | | 169-1 | 280 | e 20 2 | [+ 3] | <u> </u> | 200 | 20.33 | 4 | |
| Nanking | | 171.0 | 287 | e 20 4 | 1 + 41 | | | (1000) | ***** | - |
| - management of the control of the c | | 100 CONTRACTOR (1997) | 200 (200 PM) | | A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | | 221 24 | |

June 8d. 16h. 24m. Epicentre 15° 54'N. 98° 5'W. Seismo. Bull. National University of Mexico, June, 1956, Tacubaya, pp. 2, 3.

June 8d. 20h. 59m. Epicentre 33°·3S. 179°·0W. Depth of focus 350km. Magnitude 5·7 New Zealand Scismo. Report for 1956, Bull. No. 137, Department of Scientific and Industrial Research, Wellington, N.Z., 1960, p. 41.

June 9d. 10h. 8m. 25s. Epicentre 30°·1S. 71°·5W.

A = +.2750, B = -.8218, C = -.4990; $\delta = -2$; h = +2; D = -.948, E = -.317; G = -.158, H = +.473, K = -.867.

| | | Δ | Az. | Р. | O-C. | s. | O-C. | Su | pp. | L. |
|----------------|----|------|-----|--------|--|---------|-----------------------|---------|-----------------------|-------------|
| | | 0 | 0 | m. s | s. | m. s. | s. | m. s. | 0.000-0101 | m. |
| Copiapo | E. | 2.9 | 21 | e 1 4 | + 6g | i 1 37 | + 1 ₈ | - | | **** |
| Santa Lucia | N. | 3.4 | 168 | e 0 52 | | | | 1 6 | P_{g} | |
| Antofagasta | N. | 6.5 | 9 | e 1 45 | | e 3 12 | - 5* | | | 3.7 |
| Concepción | | 6.8 | 184 | e 1 11 | | i 3 1 | - ž | i 2 16 | Pg | _ |
| Buenos Aires | | 11.9 | 116 | 2 54 | | 5 0 | $-\tilde{9}$ | | - | _ |
| La Plata | | 12.4 | 116 | i 3 1 | 0 | 4 5 10 | 0 | neon. | | C 0 |
| La Paz | | 13.8 | 14 | i 3 25 | . 0 | i 5 12 | - 9 | 1 9 51 | m | 6.0 |
| Huancayo | 9 | 18.3 | 348 | i 4 21 | | i 6 9 | +15 | i 3 51 | \mathbf{PP} | $7 \cdot 3$ |
| Punta Arenas | Z. | 23.1 | | | the state of the s | i 7 58 | +19 | | 0 | - |
| | | | 179 | e 5 10 | | 8 59 | -17 | 7 48 | o g | |
| Bogota | | 34.6 | 356 | i 6 53 | 0 | i 12 29 | + 7 | i 17 12 | S_cS | 17.6 |
| Chinchina | | 35.0 | 353 | i7 0 | + 4 | i 12 39 | +11 | | | 17.6 |
| Galerazamba | | 40.8 | 354 | i 7 56 | | i 14 7 | $+\tilde{1}\tilde{1}$ | i 9 57 | $P_{c}P$ | 17.6 |
| Fort de France | | 45.6 | 14 | i 8 23 | | i 18 34 | SS | i 10 18 | \overrightarrow{PP} | |
| San Juan | | 48.4 | 7 | i 8 43 | | e 15 44 | - 2 | e 10 43 | $\hat{P}\hat{P}$ | e 22·2 |
| Comitan | | 50.2 | 334 | e 8 59 | The second secon | e 16 18 | $+\tilde{7}$ | e 15 11 | . 5 | |
| | | | | | | | | | ±(3 ₹ 60 | |

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| | | Δ | Az. | P. m. s. | 0 – C. | s. m. s. | o – c. | m. s. | pp. | L. m. |
|--|----------------------|--|---|---|--|--|---|---|--|----------------------------|
| Merida Vera Cruz Tacubaya Mobile Columbia | | $53.6 \\ 54.4 \\ 55.9 \\ 62.5 \\ 64.4$ | $339 \\ 331 \\ 328 \\ 344 \\ 351$ | e 9 24 e 9 35 e 9 40 i 10 30k i 10 41a | $\begin{array}{ccc} - & 1 \\ + & 4 \\ - & 2 \end{array}$ | i 16 47 e 17 1 e 17 29 e 18 57 e 19 12 | $ \begin{array}{r} -11 \\ -8 \\ 0 \\ +3 \\ -6 \end{array} $ | $\begin{array}{c} - \\ - \\ 12 \\ 12 \\ 56 \end{array}$ | $\frac{-}{PP}$ | e 26·2 e 26·7 e 26·9 |
| Chapel Hill Chibuahua M'Bour Washington Faytetteville | z. | $66.0 \\ 67.0 \\ 68.6 \\ 68.8 \\ 69.2$ | $\begin{array}{r} 353 \\ 327 \\ 58 \\ 355 \\ 340 \end{array}$ | i 10 48 e 10 54 i 11 12 i 11 5a i 11 8k | Company Compan | e 19 44 e 20 15 i 20 13 e 20 21 | $ \begin{array}{r} -6 \\ +6 \\ +2 \\ +5 \end{array} $ | i 11 41 i 13 44 e 24 45 e 14 3 | $\begin{array}{c} \mathbf{PcP} \\ \mathbf{PP} \\ \mathbf{SS} \\ \mathbf{PP} \end{array}$ | e 33·5 e 34·6 |
| Philadelphia Morgantown St. Louis Fordham Pittsburgh | | 69·7 69·8 70·5 70·6 70·6 | $\begin{array}{r} 357 \\ 353 \\ 344 \\ 358 \\ 353 \end{array}$ | e 11 14 i 11 17 e 11 18 e 11 22 e 11 20? | $\begin{array}{cccc} + & 0 \\ 3 & 0 \\ + & 3 \\ + & 1 \end{array}$ | e 20 23 i 20 30 e 20 34 i 20 38 | $^{+}_{-}\frac{1}{\overset{2}{\overset{+}{}}}$ | (e 25 5) e 13 53 | PP = | e 25·1 |
| Florissant Terre Haute Palisades Pennsylvania Cleveland | | 70·7 70·8 70·8 71·8 | $\begin{array}{r} 344 \\ 347 \\ 358 \\ 355 \\ 352 \\ \end{array}$ | e 11 18 e 11 25 i 11 19 i 11 25 e 11 27k | $\begin{array}{cccc} - & 2 \\ + & 5 \\ - & 1 \\ + & 5 \\ + & 1 \end{array}$ | e 20 30 i 20 37 e 20 40 i 20 47 | $ \begin{array}{cccc} & - & 4 \\ & + & 2 \\ & + & 5 \\ & + & 1 \end{array} $ | e 15 45 e 16 5 e 15 43 i 13 55 e 14 3 | PPP PPP PPP PP | e 35·3 |
| Tucson Halifax Ottawa Barratt Palomar | z. z. | $72.3 \\ 74.7 \\ 75.2 \\ 75.7 \\ 76.3$ | $\begin{array}{r} 326 \\ 6 \\ 357 \\ 322 \\ 322 \end{array}$ | e 11 27 k i 11 42 a e 11 44 e 11 47 e 11 52 | $\begin{array}{cccc} - & 2 \\ - & 1 \\ - & 2 \\ - & 2 \\ 0 \end{array}$ | e 20 53 i 21 17 21 25 i 21 30 | $^{+}_{-}\overset{1}{\overset{2}{\overset{0}{0}}}$ | e 15 9 11 55 i 11 59 i 12 3 | PP PcP pP | e 28·7 e 37·6 |
| Shawinigan Falls Seven Falls Boulder City Pasadena Kirkland Lake | z. | 76.3 76.8 77.3 77.6 78.2 | $359 \\ 325 \\ 322 \\ 354$ | e 11 50k e 11 53 i 11 57a e 11 58 e 12 0a | $ \begin{array}{rrr} $ | 21 41 i 21 52 i 21 53 e 21 59? | $ \begin{array}{rrr} - & 1 \\ + & 4 \\ + & 2 \\ + & 2 \end{array} $ | e 12 4 12 6 i 12 6 i 12 9 | PcP PcP PcP | i 37-3 |
| China Lake Isabella Woody King Ranch Rapid City | Z. Z. Z. E. | $78.6 \\ 78.9 \\ 79.1 \\ 79.3 \\ 79.3$ | $\begin{array}{c} 323 \\ 323 \\ 322 \\ 322 \\ 337 \end{array}$ | e 12 | $ \begin{array}{rrr} $ | _ i 22 10 | + 1 | i 12 14 i 12 18 i 12 18 i 12 20 e 15 46 | pP pP pP PP | e 33·3 |
| Salt Lake City Tinemaha Angra do Heroist Grahamstown Fresno | z. no z. | $79.8 \\ 79.8 \\ 79.9 \\ 80.2 \\ 80.4$ | $330 \\ 324 \\ 34 \\ 123 \\ 323$ | e 12 11 e 12 12 i 12 20 i 12 10k i 12 7 | - 1 - 0 - 8 - 8 | e 22 13 i 22 24 i 22 17 | $-\frac{1}{4}$ | e 12 44 i 12 23 | р <u>Р</u> — | e 36·3 |
| Eureka Kimberley Lick Santa Clara Reno | Z. Z. Z. Z. | 80.6 81.1 81.8 82.0 82.5 | 327 118 322 322 324 | i 12 15 a i 12 13 i 12 22 e 12 29 a e 12 25 | $ \begin{array}{r} - & 1 \\ - & 5 \\ 0 \\ + & 6 \\ - & 1 \end{array} $ | e 30 54 e 22 44 | PKKP - + 7 | e 39_25 | P'P' | |
| Berkeley Bozeman Mineral Butte Shasta | z. N. z. | $82.6 \\ 83.5 \\ 84.0 \\ 84.4 \\ 84.7$ | $322 \\ 333 \\ 324 \\ 333 \\ 324$ | i 12 28 e 12 28k e 12 35 e 12 34a e 13 5 | $^{+}_{-}\overset{2}{\overset{2}{\overset{1}{3}}}_{+}\overset{2}{\overset{2}{\overset{2}{3}}}_{+}$ | e 22 43 e 22 50 i 23 1 | $- \frac{0}{2} \\ - \frac{0}{0}$ | e 12 58 i 13 6 | $ \frac{\overline{P}}{\overline{P}} $ | e 35·7 e 35·6 |
| Pietermaritzburg Pretoria Christchurch Wellington Hungry Horse | Z. Z. | $84.9 \\ 85.2 \\ 86.2 \\ 86.3 \\ 86.8$ | $\begin{array}{c} 121 \\ 117 \\ 221 \\ 224 \\ 333 \end{array}$ | i 12 18k e 12 36 12 30 12 49 i 12 45 a | $ \begin{array}{r} -20 \\ -3 \\ -14 \\ +4 \\ -2 \end{array} $ | i 23 9 e 23 13 | [0] [0] | $\frac{-}{29}$ 19 13 | $\frac{-}{ss}$ | e 39·7 e 40·1 |
| Tongariro Saskatoon Corvallis Scattle Onerahi | z. E. | $87.4 \\ 88.0 \\ 89.8 \\ 89.9$ | $\begin{array}{c} 226 \\ 339 \\ 326 \\ 328 \\ 228 \end{array}$ | e 12 55 i 13 18 e 12 54 e 13 17 e 13 5 | $^{+\ 6}_{+\ 28} \ ^{+\ 1}_{+\ 15} \ ^{+\ 3}$ | e 23 47 | | | | e 45·1 |

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| | | Δ | Αz. | P. m. s. | o – c. | s. m. s. | O -C. | m. s. | pp. | L. |
|--|----|---|---|--|--|--|--|--|---|--------------------------------------|
| Tamanrasset Victoria Granada | z. | $91.0 \\ 92.3$ | $^{\circ}_{328}$ | e 13 4 e 13 6 i 13 14 a | - 2 - 1 + I | e 23 54 i 24 4 | $-\frac{7}{(+6)}$ | e 13 23 16 56 | $\frac{pP}{PP}$ | i 47·0 |
| Almeria Ivigtut | N. | $92.8 \\ 92.9$ | 49 11 | e 13 31 | +15 - | $\begin{array}{cccc} e & 24 & 0 \\ e & 25 & 48 \end{array}$ | $^{\{-2\}}_{PS}$ | i 16 59 | PP | e 48·4 |
| Toledo Relizane Alicante Algiers Univ. Honolulu | z. | $93.6 \\ 94.2 \\ 95.0 \\ 96.4 \\ 97.6$ | $\begin{array}{r} 45 \\ 51 \\ 48 \\ 51 \\ 290 \end{array}$ | e 13 21 e 13 26 e 13 6 e 13 29 e 23 49 | $^{+}_{2}^{2}_{-}^{20}_{$ | e 24 13 e 23 59 e 24 28 e 25 13 | $\{+5\}$ $[-2]$ $\{-0\}$ $+13$ | e 16 59 | $\frac{PP}{SSS}$ | 45·6 e 45·2 e 45·0 |
| Lwiro Astrida Jersey Clermont-Ferran Sitka | ıd | $97.8 \\ 98.4 \\ 100.1 \\ 101.2 \\ 102.0$ | $97 \\ 98 \\ 39 \\ 44 \\ 330$ | e 13 41 e 13 44k e 14 15 e 18 22 | $^{+\ 3}_{+\ 21} \ ^{+21}_{	ext{PP}}$ | e 24 45 e 25 56 e 24 9 | $\begin{bmatrix} +18 \\ +26 \\ [-28] \end{bmatrix}$ | e 17 38 e 17 41 e 27 1 e 24 52 e 25 54 | $^{\mathrm{PP}}_{\substack{\mathrm{PS}\\\mathrm{SKS}}}$ | 49·6 e 42·9 |
| Kew Paris Durham Oropa Melbourne | | 102.4 102.5 103.5 104.1 104.3 | $\begin{array}{r} 37 \\ 41 \\ 34 \\ 45 \\ 209 \end{array}$ | i 14 2 e 13 59 12 10 | $^{+}_{-}^{\overset{3}{\overset{1}{\overset{1}{-}}}}$ | e 25 52 i 24 18 23 7 e 27 52 e 24 36 | $egin{pmatrix} +12 \ -21 \ PS \ [-11] \end{bmatrix}$ | e 18 13 i 18 18 e 43 35? e 27 43 | $\frac{PP}{PP}$ | e 52.6 e 49.6 e 50.6 e 43.8 |
| Aberdeen Pavia Riverview Florence Rome | | 104.6 104.7 104.8 105.3 105.3 | $\begin{array}{r} 32 \\ 46 \\ 216 \\ 48 \\ 50 \\ \end{array}$ | i 18 43 e 18 33 i 14 8a e 14 16 e 18 33 | PP PP - 2 + 4 PP | i 24 50 e 25 9 | [+19] $[-0]$ $[+17]$ $[+21]$ | 27 56 i 18 42 e 18 38 e 27 53 | $\frac{\mathbf{P}\mathbf{P}}{\mathbf{P}\mathbf{P}}$ | e 45.8 e 50.3 e 44.5 |
| Strasbourg De Bilt Resolute Messina Scoresby Sund | | 105.4 105.6 105.6 105.8 106.3 | $\begin{array}{r} 43 \\ 39 \\ 354 \\ 55 \\ 16 \end{array}$ | e 14 16 e 14 17 e 13 42 e 15 50 e 18 42 | + 4 + 4 PP | e 25 7 e 24 47 e 24 40 25 10 e 25 2 | [+15] [-6] [-13] [+16] [+6] | e 18 36 e 17 53 e 14 17 e 18 28 e 26 39 | PP PP PP | e 49·1 e 41·6 50·5 48·6 |
| Stuttgart Triest Jena Cheb Hamburg | | 106.3 107.8 108.7 108.8 108.9 | 43 47 42 43 39 | e 14 18 e 14 11 e 18 18 i 19 1 e 19 1 | $\begin{array}{c} \mathbf{P} \\ \mathbf{P} \\ [-13] \\ \mathbf{PP} \\ \mathbf{PP} \end{array}$ | e 24 55 e 24 31 e 26 18 e 25 14 e 28 28 | $egin{array}{l} [-1] \ [-32] \ \{+22\} \ [+7] \ \mathrm{PS} \end{array}$ | e 18 37 e 18 38 e 18 57 i 26 24 e 19 59 | PP PP S PP | 52·6 e 51·6 e 52·6 |
| Bratislava Copenhagen College Athens Belgrade | | 110.9 111.0 111.3 111.6 111.8 | $\begin{array}{r} 46\\37\\334\\58\\50\end{array}$ | i 19 6 e 19 10 e 19 11 e 19 15 e 19 23 a | PP PP PP PP | e 22 46 25 36 26 44 e 25 1 | $rac{	ext{PKS}}{\{+20\}}$ $\{-18\}$ | e 26 34 e 23 25 e 21 59 | PPP | e 50·6 50·6 — |
| Budapest Skalnate Pleso Skalstugan Warsaw Upsala | | 111.8 113.2 113.8 114.6 115.1 | $\begin{array}{c} 47 \\ 46 \\ 29 \\ 42 \\ 34 \end{array}$ | 19 35 e 19 50 e 14 51 i 19 43 | PP PP PP | $\begin{array}{c} 28 & 44 \\ e & 35 & 35 ? \\ \hline i & 25 & 47 \\ e & 25 & 22 \end{array}$ | PS SS [+17] [-10] | 21 44 e 18 24 e 29 17 | PPP PKP PS | e 57·6 e 49·6 e 57·6 |
| Bucharest Lwow Iasi Perth Kiruna | z. | $115.5 \\ 115.7 \\ 117.2 \\ 117.9 \\ 118.2$ | $^{52}_{46}_{49}_{187}$ | $\begin{array}{c} 19 & 49 \\ \mathbf{i} & 18 & 47 \\ 20 & 0 \\ \mathbf{i} & 20 & 11 \\ \mathbf{e} & 18 & 49 \end{array}$ | PP [+ 3] PP PP [0] | 25 51 i 25 48 i 30 3 e 25 54 | $[+17] \\ [+13] \\ PS \\ [+10]$ | $ \begin{array}{r} $ | $\frac{\mathbf{PP}}{\mathbf{PP}}$ | 52·6 = |
| Ksara Simferopol Pulkovo Moscow Rabaul | | 119.5 121.1 121.3 124.9 126.1 | 53 | e 18 55 a e 18 57 e 18 58 19 4 e 19 12 | [+ 3] $[+ 2]$ $[+ 3]$ $[+ 2]$ $[+ 8]$ | e 22 23 27 36 e 25 46 e 26 10 e 28 5 | PKS {+15} [- 8] [+ 4] {+10} | i 20 13 e 20 21 i 20 28 i 20 52 e 20 19 | PP PP PP PP | |
| Tiflis Goris Tiksi Petropavlovsk Sverdlovsk | | $128 \cdot 2$ $129 \cdot 0$ $136 \cdot 9$ $137 \cdot 1$ $137 \cdot 4$ | $\begin{array}{c} 62 \\ 351 \end{array}$ | e 19 12 e 19 12 i 19 27 e 19 28 19 14 | [+ 3] $[+ 2]$ $[+ 2]$ $[+ 3]$ $[-12]$ | e 38 38 i 26 12 1 e 31 42 e 29 16 { | SS [- 5] PS [+11] | e 21 14 21 17 e 25 31 i 22 14 | PP PP PPP | |

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| | Δ. | Az. | P. m. s. | o –c. | s. m. s. | 0 -C. | m. s. | ipp. | L. m. |
|--|---|---|---|--|--|--|---|--|----------|
| Ashkabad Magadan Bandung Lembang Djakarta | 138.1 139.1 143.2 143.3 143.9 | $\frac{328}{179}$ 6 | 2 19 19 i 19 31 i 19 33 i 19 37k i 19 34k | [-8] $[+2]$ $[-3]$ $[+1]$ $[-3]$ | e 20 2 e 26 37 e 30 25 | $-\frac{?}{-7}$ $\{+41\}$ | i 22 29 i 22 29 e 22 45 i 22 26 e 22 43 | PP PP PP PP | |
| Quetta Colombo E. Kodaikanal E. Bombay Stalinabad | | | 19 34 19 32 19 50 i 19 42 | $[-\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $ | i 26 26 e 29 47 e 26 43 | $ \begin{bmatrix} -20 \\ -3 \\ -5 \end{bmatrix} $ | e 22 56 — e 30 12 | SKKS | 70.6 |
| Poona Tashkent Yuzno-Sakhlinsk Madras E. Semipalatinsk | $146.5 \\ 146.5 \\ 148.7 \\ 148.8 \\ 150.7$ | 60 € | i 19 46 i 19 46 i 19 52 i 19 50 | [+ 4] $[- 3]$ $[+ 1]$ $[+ 7]$ $[+ 2]$ | 26 50 26 35 e 30 25 | $[+1] \\ [-14] \\ +13 $ | i 23 9 e 23 2 i 23 32 19 58 | PP PP PP PKP ₂ | |
| Dehra Dun Matusiro Vladivostok Irkutsk Bokaro | 153.7 154.4 157.2 157.6 158.9 | $\begin{array}{c} 82 & 6 \\ 292 \\ 311 & 5 \\ 7 \\ 102 & 5 \end{array}$ | 20 7 19 52a i 19 59 20 0a i 24 19 | $[+14] \\ [-2] \\ [+2] \\ [+2] \\ [+PP]$ | i 29 19 43 51 e 31 16 i 31 19 | $\frac{88}{\{+16\}}$ | 23 56 $24 6$ $34 42$ | $\frac{PP}{PS}$ | |
| Changchun Manila Baguio Shillong Peking | $160.8 \\ 160.8 \\ 162.5 \\ 164.6 \\ 168.2$ | | | [+ 5] $[+ 3]$ $[+ 7]$ $[- 1]$ $[+ 3]$ | - i 31 54 | $\begin{bmatrix} -\frac{1}{24} \\ 0 \end{bmatrix}$ | $\begin{array}{r} - \\ e & 23 & 12 \\ \hline & 24 & 52 \\ i & 25 & 6 \end{array}$ | $\begin{array}{c} -\mathbf{PKS} \\ \mathbf{PP} \\ \mathbf{PP} \end{array}$ | 75.5 |
| Changyeh Zô-Sè Tatung Hong Kong z. Nanking | $169.0 \\ 169.0 \\ 169.2 \\ 170.7 \\ 170.9$ | 279 e | 20 12 20 10 20 16 20 13? 20 13k | [+ 3] $[+ 1]$ $[+ 7]$ $[+ 3[$ $[+ 3]$ | i 31 56 | $\{-\frac{2}{2}\}$ $\{-\frac{3}{3}\}$ | 25 10 - i 25 23 | PP PP | |
| Sining Yinchuan Shenchow Sian | 171.4 171.4 175.2 175.8 | $^{12}_{344}$ e | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $[+13] \\ [+14] \\ [+14] \\ [+7]$ | | | i 25 48 | = | |

June 9d. 20h. 5m. 6s. Epicentre 35°·6N. 140°·2E. Depth of focus 80km. Intensity IV at Tokyo; II-III at Osima. Seismo. Bull. Japan Met. Agency for 1956, June, Tokyo, 1956, pp. 12, 13, with chart of seismic intensities.

June 9d. 23h. 13m. 51s. Epicentre 35°·1N. 67°·5E.

A = +.3138, B = +.7576, C = +.5724; $\delta = +7$; h = 0; D = +.924, E = -.383; G = +.220, H = +.529, K = -.820.

| | | Δ | Az. | Р. | O-C. | s. | O-C. | Suj | pp. | L. |
|-------------|----|-----------------------------------|-----------------|----------|-----------------------|-------|------|--------|---------------------------|------|
| | | 357 Fr | 0 | m. s. | 8. | m. s. | s. | m. s. | 50,623 | m. |
| Stalinabad | | 3.6 | 17 | i 0 59 | + 1 | - | | _ | - | |
| Khorog | | 4.1 | 54 | i 1 7 | $^{+}_{+}$ $^{1}_{2}$ | - | - | - | - | **** |
| Garm | | 4.5 | 30 | i 1 11 | 0 | - | - | | - | - |
| Bairam-Ali | | 5.0 | 301 | i 1 18 | 0 | - | _ | - | | |
| Dzhergetal | | 5.0 | 35 | 1 21 | + 3 | - | - | _ | - | - |
| Quetta | z. | 5.0 | 185 | i 1 18a | 0 | - | | i 1 34 | $\mathbf{P}_{\mathbf{g}}$ | |
| Fergana | 1 | 6.2 | 32 | i 1 36 a | + 1 | _ | _ | _ | | _ |
| Tashkent | | 6.3 | 12 | e 1 37 | + 1 | | - | _ | _ | - |
| Namangan | | 6.7 | 28 | i 1 43 | + 1 | | - | | - | - |
| Andijan | | 6.8 | 33 | i 1 43 | - 1 | i 3 7 | + 4 | | _ | |
| Tchimkent | | 7.3 | 12 | i 1 50 | 0 | | - | _ | | _ |
| Ashkabad | | 7.9 | 294 | i 1 54 | - 5 | - | - | _ | Section 2 | * · |
| Naryn | | 9.2 | 44 | i 2 13 | - 3 | - | | - | | - |
| Frunse | | 9.5 | 33 | i 2 19 | - 1 | - | _ | - | · | - |
| Kizyl-Arvat | | 9.8 | 297 | i 2 20 | - 4 | _ | _ | | _ | _ |
| | | J. 19 Co. of Phys. 1, 1911 (1911) | F 270 A 250 and | | | | | | | |

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|--|----|---|---|--|---|--|---|--|----------------------------|-----------------------------|
| Rybach'e Dehra Dun New Delhi Almata II Ili | N. | $_{10.5}^{\circ}$ | $\frac{115}{126}$ | P. m. s. i 2 27 e 2 27 i 2 31 a i 2 42 i 2 45 | O - C - 2 - 2 - 3 | i 4 14 i 4 23 | O -C. s\frac{11}{-12} | m. s. St. 2 36 4 36 — | pp. PP | L. m. 4·8 |
| Kurmenty Chilisk Bombay Goris Poona | | 11.5 11.9 16.8 17.4 17.5 | $\frac{42}{162}$ | e 2 46 i 2 53 i 3 59 i 4 3 i 4 5 a | $\begin{array}{cccc} - & 2 \\ - & 1 \\ + & 1 \\ - & 3 \\ - & 2 \end{array}$ | i 7 18 e 7 24 | $+\frac{-}{13} \\ +\frac{3}{3}$ | = 17 | PP | 8·1 — |
| Semipalatinsk Chatra Tiflis Bokaro Hyderabad | | 17.9 18.8 18.9 19.5 20.2 | $\begin{array}{c} 28 \\ 111 \\ 297 \\ 120 \\ 148 \end{array}$ | i 4 7 17 i 4 23 i 4 37 a | $\begin{array}{rrr} - & 5 \\ - & 6 \\ - & 1 \\ + & 6 \\ - & 2 \end{array}$ | i 7 59 i 8 3 i 8 17 i 8 15 | $ \begin{array}{r} $ | | PP | 9-1 |
| Sverdlovsk Shillong Yumen Madras Ksara | Е. | $22 \cdot 2$ $23 \cdot 1$ $23 \cdot 9$ $24 \cdot 9$ $26 \cdot 0$ | $350 \\ 108 \\ 69 \\ 149 \\ 276$ | 4 57 i 5 7 a 5 17 i 5 25 a i 5 37 k | $\begin{array}{cccc} - & 3 \\ - & 1 \\ + & 1 \\ - & 1 \\ + & 1 \end{array}$ | i 9 15 i 10 13 | - 1 - 7 | i 5 35 6 20 | PP PP | 11·0 — |
| Kodaikanal Changyeh Simferopol Sining Wuwei | E. | $26.4 \\ 26.6 \\ 27.2 \\ 27.8 \\ 28.3$ | $\begin{array}{r} 157 \\ 72 \\ 301 \\ 77 \\ 74 \end{array}$ | i 5 40 a e 5 43 i 5 46 5 53 e 5 56 | $\begin{array}{c} & 0 \\ + & 1 \\ - & 1 \\ 0 \\ - & 1 \end{array}$ | 10 22 i 12 13 | $\overset{+10}{\overset{\mathrm{SSS}}{=}}$ | 6 31 i 6 55 | PP PPP | 13·2 = |
| Moscow Colombo Yinchuan Irkutsk Iasi | E. | $29.0 \\ 30.3 \\ 31.1 \\ 31.2 \\ 32.0$ | $324 \\ 155 \\ 72 \\ 45 \\ 304$ | $\begin{array}{cccc} \mathbf{i} & 6 & 2 \\ \mathbf{i} & 6 & 14 \\ \mathbf{e} & 6 & 21 \\ \mathbf{i} & 6 & 22 \\ \mathbf{a} & 6 & 30 \end{array}$ | $\begin{array}{cccc} - & 2 \\ - & 1 \\ - & 1 \\ - & 0 \end{array}$ | $\begin{array}{r} 1 & 1 & 14 \\ 1 & 1 & 29 \\ 11 & 53 \end{array}$ | $-\frac{1}{0} + 11$ | | - - PP | 14·2 i 15·7 |
| Focsani Bacau Bucharest Campulung Paotow | | $\begin{array}{r} 32.1 \\ 32.4 \\ 32.8 \\ 33.6 \\ 33.8 \end{array}$ | $302 \\ 303 \\ 299 \\ 301 \\ 68$ | $\begin{array}{ccc} 6 & 33 \\ 6 & 32 \\ 6 & 39 \\ 6 & 45 \\ 6 & 46 \end{array}$ | $^{+}_{-}\overset{2}{\overset{2}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}$ | 11 58 11 51 11 53 — | $^{+15}_{-1}$ | $\begin{array}{c} 7 & 45 \\ 7 & 31 \\ 7 & 43 \\ e & 8 & 4 \end{array}$ | PP PP PP | $14 \cdot 9$ $15 \cdot 0$ |
| Sian Pulkovo Lwow Shenchow Sofia | | $33.9 \\ 34.4 \\ 34.7 \\ 34.7 \\ 34.8$ | $79 \\ 327 \\ 309 \\ 78 \\ 296$ | 6 35 i 6 50 i 6 55 e 7 0 i 6 55 | $ \begin{array}{r} -12 \\ -1 \\ +1 \\ +6 \\ +1 \end{array} $ | i 11 30 i 12 19 | $-\frac{-49}{6}$ | e 8 4 i 8 23 | PP PP | |
| Athens Linfen Taiyuan Tatung Timisoara | | $35.0 \\ 35.6 \\ 36.1 \\ 36.3 \\ 36.3$ | $288 \\ 75 \\ 72 \\ 68 \\ 301$ | i 6 54 a 6 59 6 59 e 7 11 e 7 9 | $egin{smallmatrix} - & 2 \ - & 2 \ - & 6 \ + & 4 \ + & 2 \ \end{pmatrix}$ | i 12 28 — e 13 5 | $+\frac{0}{17}$ | i 8 24 e 8 37 | PP — PP | i 14·9 — e 20·2 |
| Belgrade Helsinki Warsaw Skalnate Pleso Szeged | | $36.9 \\ 37.0 \\ 37.1 \\ 37.1$ | $300 \\ 326 \\ 312 \\ 302 \\ 307$ | i 7 11k i 7 12 i 7 13 i 7 7 e 7 14 | $ \begin{array}{ccc} $ | i 13 11 i 13 2 i 13 2 i 12 54 e 12 40 | $egin{array}{c} \mathbf{PcS} \\ + & 3 \\ - & 7 \\ - & 21 \end{array}$ | i 8 43 i 8 42 i 8 32 8 44 8 38 | PP PP PP PP | |
| Kecskemet Budapest Hurbanovo Peking Bratislava | | $37.4 \\ 37.8 \\ 38.4 \\ 38.5 \\ 39.2$ | $303 \\ 304 \\ 305 \\ 68 \\ 305$ | 7 13 7 19 1 7 25 1 7 25 a 1 7 31 | - 3 - 1 - 0 - 1 | e 13 9 13 4 i 13 23 i 13 35 | $^{+}_{-}^{4}_{7\atop +}^{3}_{-}$ | $ \begin{array}{r} 8 & 48 \\ 8 & 40 \\ \hline 1 & 8 & 44 \\ \hline 1 & 9 & 6 \end{array} $ | $rac{	ext{PP}}{	ext{PP}}$ | e 21.6 e 22.4 |
| Taranto Vienna Upsala Prague Messina | | $39.6 \\ 39.4 \\ 40.4 \\ 41.3$ | $293 \\ 305 \\ 324 \\ 308 \\ 290$ | i 7 35 i 7 40 a i 7 46 a | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | 12 45 i 13 54 i 13 50 i 14 3 i 14 16 | $^{-53}_{+16}$ $^{+5}_{+12}$ | 9 5 i 9 12 i 9 15 i 9 21 i 9 27 | PP PP PP PP | e 21.6 22.6 — 20.6 |

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| | | Δ | Δz . | P. m. s. | o-c. | m. s. | O – C. | m. s. | pp. | L. m. |
|--|----------|---|--|--|---|---|--|--|-----------------------------------|---|
| Reggio Calabria Triest Kiruna Cheb Copenhagen | | 41·3 41·5 42·1 42·2 42·4 | 290 302 336 308 316 | i 7 47 a i 7 50 i 7 54 a i 7 57 i 7 57 | - 2 - 1 + 1 - 1 | i 14 18 i 14 19 i 14 12 i 14 13 i 14 21 | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | i 9 34 i 9 29 i 9 33 i 9 42 i 9 36 | PP PP PP | 23.2 |
| Hong Kong Nanking Jena Medan Rome | N. | $42.5 \\ 42.5 \\ 42.7 \\ 42.7 \\ 42.9$ | $\begin{array}{c} 95 \\ 79 \\ 310 \\ 130 \\ 296 \end{array}$ | i 7 58 a 7 57 i 8 0 e 7 58 i 8 2 a | $ \begin{array}{r} - & 1 \\ - & 2 \\ 0 & 2 \\ - & 0 \end{array} $ | e 14 4? 14 21 i 14 27 14 39 | $-18 \\ -1 \\ +3 \\ +12$ | | $\frac{PP}{PP}$ | e 21·0 e 21·8 |
| Padova Bologna Florence Prato Hamburg | | 43.0 43.4 43.5 43.6 43.7 | $300 \\ 300 \\ 299 \\ 299 \\ 313$ | i 8 0 i 8 6 a i 8 5 a i 8 6 e 8 9 | $ \begin{array}{rrr} & 3 \\ & 0 \\ & 2 \\ & - & 2 \\ & + & 1 \end{array} $ | 14 40 e 14 42 i 14 50 i 14 49 e 14 45 | $^{+11}_{+7}_{+14}_{+6}$ | $ \begin{array}{c} $ | $\frac{\mathbf{PP}}{\mathbf{PP}}$ | e 21·2 |
| Skalstugan Stuttgart Changchun Zô-Sè Pavia | | 43·8 44·4 44·7 44·7 44·8 | $328 \\ 306 \\ 61 \\ 79 \\ 301$ | i 8 13 a i 8 15 a e 8 18 a | $\begin{array}{cccc} - & 2 \\ - & 1 \\ - & 2 \\ - & 1 \\ + & 1 \end{array}$ | e 14 45 14 46 14 53 e 15 3 | $\begin{array}{r} - & \frac{4}{8} \\ - & \frac{8}{1} \\ + & 8 \end{array}$ | e 10 1 | PP PP - | 25·2 |
| Karlsruhe Zürich Strasbourg Basle Oropa | z. | 44.9 44.9 45.6 45.6 | $\begin{array}{c} 307 \\ 304 \\ 306 \\ 305 \\ 302 \end{array}$ | i 8 18 a e 8 17 i 8 21 a e 8 22 i 8 17 | $ \begin{array}{rrr} & 0 \\ & 1 \\ & 0 \\ & & 2 \\ & & 7 \end{array} $ | e 15 9 e 14 41 e 14 57 e 15 14 e 15 10 | $^{+13}_{-15} \\ ^{-5}_{+8} \\ ^{+4}$ | i 9 54 i 9 57 e 10 7 | PcP PcP PP | 18.4 |
| Witteveen Tunis Neuchatel Cuglieri Monaco | z. | $\begin{array}{r} 45.7 \\ 45.8 \\ 46.1 \\ 46.2 \\ 46.3 \end{array}$ | $312 \\ 290 \\ 304 \\ 295 \\ 300$ | i 8 25 e 8 11 i 8 25 i 8 4 i 8 26 a | $^{+}_{-14}^{1}_{-3}^{1}_{-24}^{-3}$ | e 15 5 e 15 26 i 14 42 e 18 51 | $-\frac{4}{+12}$ -33 SS | e 10 3 e 18 46 i 18 47 i 10 4 | $_{\mathrm{SS}}^{\mathrm{PP}}$ | e 24·2 i 21·9 e 25·8 |
| Besançon De Bilt Taichung Tainan Taipei | | $\begin{array}{r} 46 \cdot 7 \\ 46 \cdot 7 \\ 47 \cdot 0 \\ 47 \cdot 2 \\ 47 \cdot 3 \end{array}$ | $305 \\ 311 \\ 88 \\ 90 \\ 87$ | i 8 30 i 8 32a e 8 36 8 39 i 8 37a | $\begin{array}{cccc} - & 2 & & & & & \\ & & 0 & & & & \\ + & 1 & & & & \\ + & 3 & & & & \\ & & 0 & & & & \end{array}$ | e 15 23 e 15 26 15 23 15 28 15 31 | $\begin{array}{ccc} + & 1 \\ + & 4 \\ - & 3 \\ - & 1 \\ 0 \end{array}$ | i 10 22 i 9 57 | PP PcP | e 21·2 |
| Uccle Alishan Kaohsiung Ilan Hwalien | | $47.4 \\ 47.4 \\ 47.6 \\ 47.9$ | 310 89 90 87 88 | i 8 35 a e 8 39 8 40 8 41 i 8 40 | $\begin{array}{cccc} - & 2 \\ + & 1 \\ + & 2 \\ + & 2 \\ - & 2 \end{array}$ | $\begin{array}{r} 15 & 33 \\ 15 & 38 \\ \hline \\ 15 & 52 \\ 15 & 36 \end{array}$ | $^{+}_{+}\frac{\overset{2}{6}}{\overset{17}{-}}$ | e 10 25 | PP | e 21·8 |
| Taitung Tawu Hengchun Hsinkong Paris | | $48.0 \\ 48.1 \\ 48.1 \\ 48.8$ | $90 \\ 90 \\ 91 \\ 89 \\ 307$ | 8 45 e 8 43 i 8 44 e 8 47 i 8 47 a | $\begin{array}{cccc} + & 2 & & \\ & 0 & & \\ + & 1 & & \\ + & 4 & & \\ - & 2 & & \end{array}$ | 15 47 15 44 15 43 15 47 1 15 54 | $^{+}_{+}$ $^{6}_{+}$ $^{+}_{1}$ $^{5}_{+}$ $^{+}$ 2 | i 10 13 | P _c P | e 23·2 |
| Clermont-Ferranc Vladivostok Ituhara Kew Tomie | n. | 48.9 49.5 50.1 50.2 50.2 | $303 \\ 60 \\ 72 \\ 311 \\ 74$ | i 8 48 a i 8 52 e 9 10 i 8 58 a e 8 58 | $egin{smallmatrix} -&2 \\ -&2 \\ +&11 \\ -&2 \\ -&2 \end{bmatrix}$ | i 15 32 e 15 59 i 16 10 e 16 4 | $-rac{21}{3} \\ -rac{1}{7}$ | i 19 39 e 19 31 i 10 19 e 19 56 | $\frac{\mathrm{ss}}{\mathrm{ss}}$ | e 27·9 e 23·2 e 27·2 |
| Durham Aberdeen Barcelona Baguio Nagasaki | | 50·4 50·5 50·6 50·7 51·1 | $315 \\ 319 \\ 298 \\ 97 \\ 74$ | i 9 0 i 9 2 i 8 59 i 9 2 9 5 a | $ \begin{array}{rrr} & 1 \\ & 0 \\ & 3 \\ & 1 \\ & - & 1 \end{array} $ | i 16 16 i 16 22 16 33 i 16 21 16 20 | $^{+}_{+}{}^{6}_{6} \\ ^{+}_{+}{}^{3}_{-}$ | i 10 56 11 5 | PP PP | $e^{ \begin{array}{r} 26 \cdot 7 \\ 27 \cdot 0 \\ \hline 20 \cdot 3 \end{array}}$ |
| Hukuoka Algiers Univ. Unzendake Astrida Bagneres | E. Z. | 51·2 51·3 51·4 51·6 51·6 | $73 \\ 292 \\ 74 \\ 231 \\ 300$ | e 9 5 e 9 2 i 9 8 a e 9 9 | $ \begin{array}{r} $ | e 16 25 e 16 22 e 16 29 | $-\frac{0}{4}$ $-\frac{2}{2}$ | e 10 20 e 18 55 i 20 45 e 11 29 | $\frac{-}{P_{cP}}$ | 28·1 e 28·1 e 25·2 |

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| Jersey Kumamoto Lwiro Asosan Hamada | Е. | $\begin{array}{c} \triangle \\ 51.7 \\ 51.7 \\ 51.9 \\ 52.0 \\ 52.0 \end{array}$ | 73 | m. s. i 9 11 9 9 a i 9 10 a e 9 15 | O-C. - 2 - 2 + 2 | 8. i 16 10 16 26 e 16 54 e 16 33 | $-{22 \atop -}{6 \atop 6}$ | e 20 42 e 20 28 | PP | L. m. e 20·4 i 21·2 e 28·4 e 28·6 |
|---|-------------|--|--|--|--|--|---|--|---|--|
| Kagosima Manila Ooita Yakusima Hirosima | | $52.0 \\ 52.0 \\ 52.3 \\ 52.4 \\ 52.5$ | 99 72 76 | e 9 12 i 9 13? e 9 31 e 9 9 e 9 12a | $ \begin{array}{r} $ | e 16 59 e 16 49 e 16 40 | $+\frac{23}{9} \\ -\frac{3}{3}$ | e 12 7 e 12 50 e 20 50 e 12 38 | PPP PPP SS PP | e 28·3 e 27·6 |
| Miyazaki Saigo Uvira Yonago Matuyama | z. | $52.6 \\ 52.6 \\ 52.6 \\ 52.8 \\ 52.9$ | | e 9 16 e 9 16 i 9 15 e 9 17 | $ \begin{array}{r} $ | 16 35 e 16 42 i 16 45 e 16 30 e 17 11 | $egin{smallmatrix} -&9 \ -&2 \ +&1 \ -&17 \ +&23 \ \end{array}$ | e 14 26 e 20 43 e 21 17 | SSS | 29·3 30·6 29·1 e 29·2 |
| Alicante Rathfarnham Ca Relizane Simidu Tottori | astle E, | 53·4 53·5 53·5 53·5 | 295 314 292 72 69 | i 9 22 i 9 22 i 9 23a e 9 32 | $ \begin{array}{r} - & 2 \\ - & 2 \\ - & 1 \\ + & 8 \end{array} $ | i 16 50 i 16 58 e 16 42 e 16 54 | $ \begin{array}{r} -5 \\ +3 \\ -15 \\ -3 \\ 3 \\ \end{array} $ | e 11 23 e 11 20 e 10 25 e 21 13 | $\frac{_{\substack{\text{PP}\\\text{PeP}}}^{\text{PP}}}{_{\substack{\text{SS}}}}$ | e 25·6 e 25·6 e 29·9 |
| Koti Toyooka Himeji Muroto Tokusima | | $53.6 \\ 53.9 \\ 54.0 \\ 54.2 \\ 54.3$ | 71 69 70 72 70 | e 9 21 e 9 25 e 9 25 e 9 26 a e 9 27 | $ \begin{array}{rrr} & 4 \\ & 2 \\ & 3 \\ & 3 \\ & 3 \end{array} $ | e 16 52 e 17 5 e 17 25 e 17 3 e 17 5 | $^{-}_{+}^{6}_{3}_{+}_{2}^{+}_{-}^{3}_{-}_{2}$ | e 10 56 e 21 22 i 17 25 e 21 27 | $rac{	ext{PcP}}{	ext{SS}}$ | 29·0 28·2 28·0 |
| Sumoto Kobe Wakayama Hukui Kyoto | | $54.4 \\ 54.5 \\ 54.6 \\ 54.8 \\ 54.8$ | 70 70 70 68 69 | i 9 30 e 9 30 e 9 33 e 9 32 a | $-\frac{1}{2}$ $-\frac{1}{2}$ | i 17 7 e 17 11 e 17 6 e 17 13 | $ \begin{array}{r} $ | e 21 30 e 21 7 e 21 34 | $\frac{ss}{s}$ | 28·3 e 27·4 e 32·8 e 32·8 e 24·2 |
| Osaka Tamanrasset Tsuruga Wazima Nara | z. | $54.8 \\ 54.8 \\ 54.8 \\ 54.8 \\ 55.0$ | 69 275 68 66 69 | e 9 33 i 9 31 a e 9 32 e 9 25 9 34 | $ \begin{array}{rrr} $ | e 17 15 e 17 5 e 17 5 e 17 12 e 18 12 | $^{+}_{-}^{1}_{9}$ $^{-}_{-}^{2}_{2}$ $^{+}_{55}$ | e 11 47 e 11 36 i 13 8 e 21 19 | PP PP SS | $\begin{array}{r} 32 \cdot 4 \\ -27 \cdot 8 \\ e & 27 \cdot 4 \\ 28 \cdot 2 \end{array}$ |
| Hikone Ibukiyama Djakarta Toyama Almeria | E. | $55.1 \\ 55.2 \\ 55.3 \\ 55.3 \\ 55.4$ | $\begin{array}{c} 68 \\ 68 \\ 130 \\ 66 \\ 294 \end{array}$ | 9 33 e 9 27 i 9 30 a 9 36 i 9 36 | $ \begin{array}{r} -3 \\ -10 \\ -8 \\ -2 \\ -2 \end{array} $ | $\begin{array}{c} 17 & 15 \\ e & 17 & 8 \\ e & 17 & 23 \\ e & 17 & 31 \end{array}$ | $-\frac{3}{13} + \frac{2}{9}$ | e 11 45 e 11 26 e 11 50 | $\frac{SS}{PP}$ | 21·1 e 24·2 e 28·8 |
| Gihu Kameyama Siomisaki Owase Suttsu | | 55·4 55·4 55·5 55·5 | 68 69 71 70 59 | 9 37 9 34 e 9 38 9 36 e 9 34 | $ \begin{array}{rrr} - & 1 \\ - & 4 \\ 0 \\ - & 3 \\ - & 5 \end{array} $ | e 17 20 e 17 19 e 17 14 e 17 22 17 20 | $ \begin{array}{cccc} & 2 & & \\ & 3 & & \\ & 8 & & \\ & & 2 & \\ & & 4 & & \\ \end{array} $ | e 21 5 e 19 33 e 21 3 | SS PcS | e 28·6 23·7 e 29·2 27·8 |
| Takayama Toledo Aikawa Nagoya Wakkanai | N. | 55.5 55.6 55.7 55.7 | 67 298 65 68 55 | e 9 36 i 9 36 9 37 9 39 e 9 41 | - 3 - 3 - 1 + 1 | i 17 22 e 17 21 17 25 e 17 32 | $-\frac{2}{4} \\ -\frac{1}{6}$ | 11 43 e 21 59 21 28 | $\frac{\overline{PP}}{\overline{SS}}$ | 26·6 e 28·6 |
| Mori Yuzno-Sakhlinsk Matumoto Takada Matusiro | N. | 55.9 56.0 56.0 56.1 | 59 53 67 66 66 | 9 39 i 9 39 e 9 41 9 44 i 9 40a | - 3 - 3 - 2 + 1 - 3 | i 10 36 i 17 25 17 31 17 27 e 17 31 | PcP - 4 + 1 - 3 - 1 | e 11 28 i 12 59 e 11 45 | PP PPP — PP | e 23·3 e 27·6 e 29·3 |
| Nagano Granada Hakodate Iida Muroran | N. | $56.1 \\ 56.2 \\ 56.2 \\ 56.2 \\ 56.2 \\ 56.2$ | $ \begin{array}{r} 66 \\ 294 \\ 60 \\ 68 \\ 59 \end{array} $ | e 9 41 e 9 44 | 0 | 17 29 i 17 32 e 17 23 e 17 34 e 17 29 | $ \begin{array}{r} -3 \\ -10 \\ +1 \\ -4 \end{array} $ | e 11 57 10 44 — | PcP | e 27·8 i 29·2 e 29·0 |

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| | | Δ | Az. | P. n. s. | O – C. | | 0 – C. | | ipp. | L. |
|---|----------------|--|--|--|---|--|---|---|-----------------------|--|
| Niigata Sapporo Lembang Akita Bandung | | 56·2 56·3 56·4 56·4 | $^{58}_{130}$ | e 9 42 e 9 41a i 9 40a i 9 44 | - 2 - 3 - 5 - 1 - 5 | m. s. 17 23 e 17 17 e 17 25 e 17 33 e 17 33 | 8. -10 -16 - 9 - 3 - 3 | m. s. e 24 20 i 12 55 e 20 55 e 10 31 | PPP SS PcP | e 29·9 i 31·3 e 24·2 i 29·5 e 26·2 |
| Oiwake Aomori Sakata Tomakomai Asahigawa | | 56·5 56·5 56·5 56·6 | 66 61 63 58 | e 9 43 i 9 42 9 53 e 10 2 e 9 46 | $ \begin{array}{r} - & 2 \\ - & 4 \\ + & 7 \\ + & 16 \\ - & 1 \end{array} $ | e 17 41 e 17 31 e 18 2 e 17 52 | $^{+\ 5}_{-\ 6}_{+25}_{+15}$ | e 22 13 e 21 53 = | 88 — | 31·2 e 32·2 e 29·1 29·3 |
| Kohu Akureyri Maebasi Omaesaki Shizuoka | N. | 56.8 56.8 56.8 56.8 | $\begin{array}{r} 67 \\ 330 \\ 66 \\ 68 \\ 68 \end{array}$ | e 9 45 e 9 36 e 9 45 e 9 48 9 56 | $-3 \\ -12 \\ -3 \\ +8$ | e 17 49 e 17 49 e 17 42 17 41 i 17 56 | $^{-1}_{+8}^{+8}_{+15}$ | e 21 32 e 12 11 e 10 49 13 17 | SS PP PcP | e 28·0 e 31·6 e 28·6 e 29·7 28·4 |
| Hunatu Tananarive Titibu Kumagaya Hatinohe | | $56.9 \\ 57.0 \\ 57.0 \\ 57.1 \\ 57.2$ | $\begin{array}{r} 67 \\ 203 \\ 67 \\ 66 \\ 61 \end{array}$ | 9 48 i 9 48k i 9 48 e 9 47 e 9 47 | $ \begin{array}{rrr} $ | e 17 41 e 17 43 e 17 40 e 17 41 | $-\begin{array}{c} 1 \\ 0 \\ - 5 \\ - 5 \end{array}$ | 10 41 = | PcP | 27·8 25·2 —————————————————————————————————— |
| Magadan Misima Morioka Scoresby Sund Hukusima | | 57·2 57·2 57·2 57·2 57·4 | $\begin{array}{r} 37 \\ 68 \\ 62 \\ 336 \\ 64 \end{array}$ | i 9 48 i 9 42 e 9 47 i 9 48 i 9 50 | - 3 - 9 - 4 - 3 | e 17 41 e 17 43 e 17 36 i 18 0 17 45 | $ \begin{array}{r} -5 \\ -3 \\ -10 \\ +14 \\ -4 \end{array} $ | e 21 47 i 10 43 | ss PcP | e 24·7 e 29·5 25·2 24·1 |
| Mizusawa Shirakawa Utunomiya Obihiro Sendai | | 57·4 57·4 57·5 57·5 | $\begin{array}{c} 62 \\ 65 \\ 66 \\ 58 \\ 64 \end{array}$ | 9 50 9 50 i 9 49a i 9 50 i 9 51 | - 3 - 3 - 4 - 3 - 2 | 17 44 e 17 47 e 17 40 e 18 4 e 17 39 | $ \begin{array}{r} - 5 \\ - 2 \\ - 9 \\ + 14 \\ - 11 \end{array} $ | e 11 34 e 13 37 | PP PPP | 31·6 e 30·6 e 26·0 |
| Urakawa Tokyo Yokohama Isinomaki Kakioka | E. | 57·5 57·6 57·6 57·7 57·7 | 59 67 63 66 | e 9 52 i 9 51 a e 9 51 9 53 9 52 | - 1 - 3 - 3 - 2 - 3 | e 17 40 17 47 e 17 15 e 17 49 17 54 | $ \begin{array}{r} -10 \\ -4 \\ -36 \\ -4 \\ +1 \end{array} $ | e 12 16 i 11 51 e 10 55 | PP PP PcP | e 26·7 e 30·2 e 34·3 |
| Osima Tukubasan Vik Miyako Miyako Abashiri | N. | 57·7 57·7 57·8 57·9 | $\begin{array}{r} 68 \\ 66 \\ 328 \\ 62 \\ 57 \end{array}$ | $\begin{array}{c} e & 9 & 52 \\ i & 9 & 51 \\ \hline 9 & 52 \\ 9 & 52 \\ 9 & 52 \end{array}$ | $\begin{array}{cccc} - & 3 \\ - & 4 \\ - & 3 \\ - & 4 \end{array}$ | e 17 45 i 17 50 e 17 51 e 17 45 | - 8 - 3 - 2 - 9 | e 17 7 i 19 19 e 23 9 14 29 | ScS Q PPP | e 30·8 e 31·4 |
| Mera Onahama Kusiro Reykjavik Nemuro | | 58.0 58.3 58.8 59.0 | 68 65 57 329 56 | i 9 54 a e 9 53 e 9 55 i 10 2 a e 9 59 a | - 3 - 4 - 4 - 5 | e 18 9 i 17 54 e 17 55 e 23 45 e 17 59 | $^{+12}_{-3} \\ ^{-6}_{\mathrm{SSS}} \\ ^{-11}$ | e 24 29 e 12 14 e 22 21 | SSS PP SS | i 29·6 e 28·0 e 31·8 e 29·9 |
| Lisbon Petropavlovsk Lomé Resolute Ivigtut | N. | $59.6 \\ 63.4 \\ 67.1 \\ 69.8 \\ 70.8$ | $298 \\ 42 \\ 261 \\ 355 \\ 332$ | e 10 3 i 10 28 i 10 39 i 11 11 a i 11 20 | - 5 - 6 - 18 - 3 | e 18 14 e 18 57 e 20 32 i 20 50 | $-3 \\ -9 \\ + 9 \\ +15$ | 12 19 e 13 47 e 13 59 | PP PP PP | 33·6 e 28·6 |
| Pretoria Pietermaritzburg Kimberley College M'Bour | Z. Z. Z. | $71.1 \\ 73.3 \\ 75.2 \\ 76.6 \\ 77.4$ | $217 \\ 213 \\ 218 \\ 15 \\ 279$ | i 11 19k i 11 32a i 11 43k i 11 51a i 11 57 | - 3 - 3 - 3 - 1 | i 21 29 e 21 57 | - - 11 + 8 | i 14 31 | PP | i 31·3 |
| Grahamstown Unalaska Perth Kerguelen Is. Sitka | z. | $78 \cdot 2$ $79 \cdot 8$ $80 \cdot 7$ $84 \cdot 2$ $86 \cdot 2$ | $214 \\ 29 \\ 140 \\ 178 \\ 12$ | i 12 0 a i 12 9 i 12 17 e 12 22 i 12 43 | $ \begin{array}{r} $ | i 22 23 e 23 9 [| - <u>1</u> | i 15 12 15 28 i 16 3 | PP PP | i 38·0 e 39·6 e 35·3 |
| Rabaul Halifax Seven Falls Shawinigan Falls Kirkland Lake | z. | $88.1 \\ 89.0 \\ 90.0 \\ 91.2 \\ 92.2$ | $\begin{array}{r} 96 \\ 327 \\ 333 \\ 334 \\ 339 \\ \end{array}$ | e 13 1 i 12 58 a i 13 2 e 13 7 a i 13 11 a | $\begin{array}{cccc} + & 7 & \\ - & 0 & \\ - & 1 & \\ - & 2 & \end{array}$ | e 23 27 i 23 33 24 8 24 37 e 23 13 | [+ 6] + 6] + 14 + 32 - 33] | e 16 37 i 16 27 16 37 16 48 e 18 52 | PP PP PP PPP | e 38.6 e 44.2 e 36.4 |

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| | | Δ | Az. | P. m. s. | 0 C. | s. m. s. | 0 - C. | The state of the s | ıpp. | L. |
|--|----------------|---|---|---|--|---|---------------------------------------|--|-------------------------------|----------------------------|
| Brébeuf Saskatoon Ottawa Horseshoe Ba | v | $92.4 \\ 93.0 \\ 93.2 \\ 95.3$ | 356 335 | i 13 14 a i 13 17 | 0 | 16 26 23 58 24 45 | PP [+ 8] | m. s. 19 4 16 59 e 13 43 | PPP | e 37·6 |
| Victoria | • | 96.2 | | i 13 30 a | - 1 | e 24 49 | + 1 | e 17 24 | \overline{PP} | e 32·4 |
| Palisades Fordham Hungry Horse Seattle Philadelphia | • | 96·3 96·4 96·9 97·1 97·7 | 332 | i 13 31 e 13 30 i 13 32 a i 13 36 a e 13 34 | $ \begin{array}{r} - & 1 \\ - & 2 \\ - & 2 \\ + & 1 \\ - & 4 \end{array} $ | i 24 13 e 24 22 25 9 i 24 19 | | i 17 25 e 17 18 i 17 30 17 15 i 17 37 | PP PP PP PP | e 45·2 e 40·2 e 38·5 |
| Pennsylvania Cleveland Pittsburgh Butte Washington | N. Z. | Charles Control of the Con- | 337 | i 13 40 i 13 42a i 17 43 i 13 44a i 13 41a | $\begin{array}{ccc} + & 1 & 0 & \\ & & 1 & \\ - & & 5 & \end{array}$ | i 24 23 e 24 22 i 24 27 i 25 24 i 24 25 | $[+6] \\ [+2] \\ [+5] \\ +10 \\ [+1]$ | i 17 | PP PP PKS PP | e 43·4 e 39·5 |
| Bozeman Morgantown Corvallis Rapid City Brisbane | Z. E. | The state of the state of the state of | 359 335 8 353 115 | e 13 45k i 13 47 e 14 48 i 13 49k i 13 57 | $ \begin{array}{r} $ | e 25 24 i 24 34 e 25 28 i 25 32 | + 7 [+ 8] + 2 + 4 | i 17 48 - e 17 43 | PP | e 42·3 — e 39·5 |
| Melbourne Terre Haute Chapel Hill Florissant | | 102·1 102·2 102·7 103·6 | $128 \\ 340 \\ 333 \\ 342$ | e 13 57 i 17 24 i 14 0 14 4 a | - 1 PP 0 | e 25 44 i 27 14 e 24 46 | $\frac{+ 6}{PS}$ [+ 2] | e 18 25 | PP | e 48·7 |
| St. Louis Riverview | | 103·7 104·0 | 342 | e 14 4k | - 1 | e 24 46 | [+ 1] | e 18 23 | PP | |
| Shasta Mineral Salt Lake City Boulder | z. z. | 104.0 104.4 104.5 104.9 | 122 8 7 0 354 | i 14 57a e 14 34 e 14 8 e 14 8k e 14 11 | $^{-1}_{+28}^{0}_{0}$ | i 26 0 1 i 26 10 | + 6 12 | i 18 26? e 18 8 | PP | e 43·6 |
| Columbia Reno Eureka Berkeley Fayetteville | z. z. | $105.2 \\ 105.4 \\ 105.7 \\ 106.8 \\ 107.1$ | 333 6 3 8 344 | e 14 13a i 14 11 i 14 14a e 14 16 i 14 19k | + 1 P P P | e 25 45 i 33 56 e 26 13 | -19 SKKP - 4 | e 18 21 e 18 33 e 18 43 | PP PKP PP PP | e 46·6 |
| Lick Santa Clara Tinemaha Fresno Boulder City | z. z. | $107.4 \\ 107.4 \\ 108.0 \\ 108.1 \\ 109.2$ | 8 8 5 6 2 | e 14 17 e 18 38 i 14 26 e 14 24 e 14 29 a | P PP P | e 26 32 e 26 42 e 25 46 | | e 28 23 e 18 44 e 18 54 | PS PP PP | e 57·4 |
| China Lake Honolulu Woody Isabella King Ranch | z. z. z. | $109.2 \\ 109.3 \\ 109.4 \\ 109.6$ | 45 6 5 | e 14 30 e 18 51 i 14 27 e 18 25 e 14 29 | P PP [-7] | | SKKP PS SKKP SKKP | e 17 35 e 19 22 i 19 6 i 19 7 e 18 32 | PKP PP PKP | e 52·9 |
| Fort de France Mobile Dalton Pasadena San Juan | z. | $110.5 \\ 110.6 \\ 110.9 \\ 110.9 \\ 110.9$ | 306 338 5 5 313 | e 19 9 e 14 38 e 17 50 e 14 35 e 14 38 | PP P [-45] P | i 28 33 e 28 40 i 33 38 e 24 56 e 25 21 | PS PS SKKP [-20] [+ 5] | e 19 11 e 19 10 e 17 46 e 18 23 | PP PP PKP PKP | 50·4 e 62·8 e 48·5 |
| Palomar Barratt Tucson Chihuahua Macquarie Is. | z. N. | 111.8 112.4 113.0 116.3 118.5 | $\begin{array}{r} 4\\4\\358\\354\\138\end{array}$ | e 14 29 e 14 44 e 14 49 e 18 47 | P P + 1] | i 19 18 i 19 22 e 26 51 e 29 37 e 36 24 | PP PP S PS | e 17 52 e 17 55 e 18 20 19 49 | PKP PKP PKP | e 40·6 |
| Merida Kaimata Galerazamba Cobb River Christchurch | N.E. | $120 \cdot 1$ $122 \cdot 1$ $122 \cdot 3$ $122 \cdot 6$ $123 \cdot 3$ | $335 \\ 122 \\ 315 \\ 120 \\ 123$ | i 20 23 e 19 36 i 20 40 e 18 56 20 37 | PP +391 PP - 21 PP | i 21 42 | $[+\frac{31}{9}]$ $[+\frac{31}{4}]$ | e 30 12 i 30 36 e 30 39 | PS PS | 59·2 e 60·0 |
| Guadalajara Vera Cruz Wellington Tacubaya Manzanillo | | $123.8 \\ 123.8 \\ 124.1 \\ 124.3 \\ 125.6$ | $\frac{341}{120}$ $\frac{345}{345}$ | e 21 37 i 20 39 e 23 21 i 19 6 e 19 9 | PP PP PPP + 5] + 5] | e 31 5 i 30 48 e 26 0 e 26 5 e 29 54 | $[-3] \\ [+1]$ | i 23 21 e 32 15 e 31 4 e 20 43 e 22 18 | PPP PPS PP PP PKS | e 67·8 e 52·2 e 61·5 |
| | | | | Contract to the second | | | | | | |

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| | | Δ | Az. | 1 | ٥. | o-c. | s. | O-C. | St | ipp. | L. |
|--------------|----|---------------|-----|------|-----|--------|-------------------|---------|---------|----------------------|---------|
| 4 - 66 | | 0 | 0 | m. | s. | s. | m. | s. s. | m. s. | | m. |
| Oaxaca | | 126.0 | 341 | e 20 | 53 | PP | e 31 | 3 PS | e 22 21 | PKS | A180616 |
| Bogota | | 126.4 | 310 | i 19 | 5 | [0] | | | i 20 52 | PP | |
| Chinchina | | 127-1 | 311 | i 19 | 7 | [+1] | i 31 | 0 PS | i 21 5 | \overline{PP} | 70.2 |
| La Plata | | 135.8 | 254 | 19 | 15 | [-8] | | 4 PKS | 21 57 | \mathbf{PP} | 58.6 |
| Buenos Aires | | 136.1 | 254 | e 22 | 44 | PKS | - | _ | - | _ | |
| La Paz | | 136-4 | 284 | i 19 | 25 | 1 + 11 | i 26 4 | 4 [+11] | i 22 5 | \mathbf{PP} | 67.2 |
| Huancayo | | $139 \cdot 2$ | 295 | e 19 | 22 | 1- 71 | CONTRACTOR OF THE | 9 PKS | e 22 26 | $\tilde{P}\tilde{P}$ | ~ - |
| Antofagasta | N. | 141.8 | 276 | e 20 | 187 | [+44] | | 5 [-57] | e 23 14 | PKS | e 63·8 |
| Santa Lucia | N. | 145.6 | 261 | e 19 | 43 | 1 + 31 | | 1 - 171 | 41 59 | | 75.9 |

June 10d. 1h. 1m. After-shock of 9d. 23h.
Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, pp. 103, 104. Magnitude 5.

June 10d. 3h. 33m. After-shock of 9d. 23h. Seismo. Bull. Government of India Meteorological Department for June, 1956, p. 6. Also loc. cit., 1h., p. 104. Magnitude 5.

June 10d. 4h. 22m. Epicentre 0°·5N. 123°·5E. Loc. cit., 3h., p. 6.

June 10d. 4h. 33m. 23s. Epicentre 36°.9N. 141°.5E. Depth of focus 40.50km. Intensity II-III at Shirakawa and Kakioka. Seismo. Bull. Japan Met. Agency for June, 1956, Tokyo, 1956, pp. 13, 14, with chart of seismic intensities.

June 11d. 1h. 11m. 22s. Epicentre 34°·2N. 26°·2E.

A = +.7437, B = +.3659, C = +.5595; $\delta = +1$; h = 0; D = +.442, E = -.897; G = +.502, H = +.247, K = -.829.

| | | Δ | Az. | P. | $\mathbf{O} - \mathbf{C}$. | s. | O-C. | | ipp. | L. |
|------------------|--------|-------------|-------------------|--------|-----------------------------|--------|-----------------------|--|------------------------|---------------|
| | | • | 0 | m. s. | s. | m. s. | s. | m. s. | A there is a | $\mathbf{m}.$ |
| Athens | | $4 \cdot 3$ | 332 | e 1 8 | 0 | e 1 52 | - 8 | e 2 17 | S* | - |
| Ksara | | 8.0 | 90 | e 1 58 | - 2 | i 3 28 | - 5 | | 7 | - |
| Sofia | | 8.8 | 346 | 2 14 | + 3 | 3 58 | + 5 | i 3 25 | 8 | |
| Reggio Calabria | | 9.4 | 297 | - | | e 4 8 | + 1 | e 3 55 | 3 | _ |
| Taranto | | 9.5 | 314 | e 2 41 | +21 | e 6 14 | 3 | | - | - |
| Messina | | 9.5 | 298 | i 2 20 | 0 | e 4 3 | - 7 | e 3 50 | 8 | |
| Bucharest | | 10.2 | 359 | 2 34 | + 3 | 4 42 | +15 | 5 47 | Se | |
| Belgrade | | 11.5 | 339 | e 3 2 | +14 | e 6 11 | 3 | e 3 23 | PPP | 7.1 |
| Simferopol | | 12.3 | 27 | e 3 1 | + 2 | - | | _ | | |
| Szeged | | 12.9 | 341 | e 3 3 | $^{+}_{-}$ $^{2}_{4}$ | e 5 7 | -26 | e 3 43 | PPP | _ |
| Iasi | | 13.0 | 4 | 3 18 | + 9 | | - | _ | | 27 <u>222</u> |
| Kishinev | | 13.0 | 8 | 3 10 | + 1 | 5 41 | + 6 | - | - | (1) |
| Rome | | 13.3 | 309 | e 3 44 | PPP | e 6 46 | 3 | 4 | | e 7.5 |
| Sotchi | | 14.0 | 44 | 3 26 | +4 | 6 6 | + 7 | | - | · |
| Triest | | 14.9 | 324 | e 3 38 | + 4 | i 6 37 | +17 | e 5 9 | 3 | |
| Florence | | 15.0 | 314 | e 4 11 | 2 | e 6 50 | SSS | | _ | _ |
| Bratislava | | 15.5 | 333 | e 3 42 | 0 | e 6 57 | SS | | _ | e 8 · 8 |
| Lwow | | 15.7 | 355 | 3 47 | + 3 | i 6 53 | +14 | ** ********************************** | | ~ ~ ~ |
| Tiflis | | 16.4 | 57 | 3 57 | + 4 | 7 7 | $+\tilde{1}\tilde{1}$ | <u></u> 3 | | |
| Prague | | 18.1 | 335 | i 4 13 | - 1 | e 7 19 | -16 | i 7 55 | SS | - |
| Warsaw | | 18.4 | 350 | e 4 21 | + 3 | e 7 59 | SS | e 5 16 | 3 | e 10·6 |
| Ebingen | | 19.0 | 322 | e 4 24 | - 2 | | - | | | |
| Stuttgart | | 19.3 | 324 | e 4 28 | - 1 | e 8 16 | +14 | | | e 10.6 |
| Basle | | 19.3 | 319 | e 4 29 | 0 | e 8 4 | + 2 | | | _ |
| Neuchatel | | 19.4 | 317 | e 4 29 | - 1 | e 8 17 | +13 | - | _ | - |
| Jena | | 19.8 | 332 | e 4 33 | - 2 | e 8 23 | +10 | e 4 48 | \mathbf{PP} | 2 |
| Karlsruhe 2 | Z. | 19.8 | 324 | e 4 34 | - 1 | _ | | e 5 55 | 8 | |
| Besançon | 404 CF | 20.1 | 316 | e 4 36 | - 2 | e 8 45 | +26 | e 4 52 | PP | |
| Clermont-Ferrand | | 21.1 | 310 | e 4 48 | 0 | e 8 47 | | | | 13.1 |
| | Z. | 21.4 | $\frac{310}{243}$ | e 4 53 | + 2 | e 8 51 | $^{+}_{+}$ $^{8}_{6}$ | e 5 17 | $\mathbf{P}\mathbf{P}$ | |

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| | | Δ | Az. | Ρ. | о-с. | s. | o-c. | | pp. | L. |
|--|----------------|--|-------------------------------------|---|---|------------------------------------|-------------------------------------|-----------------------|------------|--------------------------|
| 40450-00-000-00-00-00-00-00-00-00-00-00-00- | 0.000 | 0 | 0 | m. s. | s. | m. s. | s. | m. s. | | m. |
| Hamburg Moscow Paris Uccle Copenhagen | Z. | 22·5 22·9 22·9 23·0 23·5 | $334 \\ 17 \\ 317 \\ 323 \\ 340$ | i 5 1 i 5 6 i 5 6 e 5 10 | - 1 0 + 3 | e 8 32 e 9 12 e 9 26 | $+\frac{1}{?}$ $-\frac{2}{3}$ | i = 20 | P <u>P</u> | e 14·6 e 11·6 13·6 |
| | | | - | | | 00.20 | | | | 10 0 |
| Granada Pulkovo Kew Upsala Skalstugan | | $24 \cdot 4$ $25 \cdot 7$ $25 \cdot 8$ $26 \cdot 3$ $30 \cdot 6$ | $286 \\ 5 \\ 320 \\ 350 \\ 348$ | i 5 19k 5 32 e 5 35 i 5 37 i 6 16a | $\begin{array}{cccc} - & 2 \\ - & 1 \\ + & 1 \\ - & 2 \\ - & 2 \end{array}$ | 9 39 9 57 e 10 14 i 10 13 | $-{4\atop +}{12\atop +}{12\atop -}$ | 6 5 54 6 5 51 — | PP PP | e 14·1 |
| Sverdlovsk Kiruna Quetta Shillong Kimberley | E. Z. Z. | 32·5 33·8 34·5 56·7 62·6 | $35 \\ 356 \\ 85 \\ 80 \\ 181$ | e 6 34 i 6 44 e 6 57 e 9 46 i 10 28 | $\begin{array}{cccc} & 0 & \\ - & 2 & \\ + & 5 & \\ - & 2 & \\ 0 & \end{array}$ | | | i = 30 | PcP | |
| Seven Falls Shawinigan Falls Brébeuf Ottawa Morgantown | 3 | 70·2 71·6 72·7 74·0 79·8 | $314 \\ 314 \\ 314 \\ 314 \\ 311$ | i 11 18k i 11 26k i 11 34 i 11 41k i 12 14a | $^{+}_{+}^{1}_{2}$ $^{+}_{+}^{2}$ | | | | | = |
| Rapid City Hungry Horse Fayetteville Bozeman | E. | 89·5 90·5 90·7 91·6 | $\frac{326}{335}$ $\frac{316}{332}$ | i 13 2 i 13 6 i 13 6 i 13 12 | $^{+}_{+}^{2}_{0}$ | | | | | |

June 11d. 2h. 57m. 13s. Epicentre 35°·1N. 67°·4E.

A = +3151, B = +.7570, C = +.5724; $\delta = -2$; h = 0; D = +.923, E = -.384; G = +.220, H = +.529, K = -.820.

| Stalinabad Khorog Garm Quetta Dzergetal | | ∆ 3.6 4.1 4.5 4.9 5.1 | Az. 17 54 30 185 35 | P. m. s. i 1 1 e 1 7 i 1 9 e 1 17 1 21 | O-C. + 3 + 2 - 2 + 1 | S. s. i 2 9 i 2 7 i 2 25 | O - C. + 3 • + 2 • - 4 • | m. s. i 2 29 i 2 25 i 2 37 | ipp. | ь. ш. = |
|---|----|--|---|--|---|---|-----------------------------------|---|-------------|---------------------|
| Fergana Tashkent Namangan Andijan Tchimkent | | 6·3 6·4 6·7 6·8 7·4 | 32 13 28 33 13 | e 1 37 i 1 37 1 42 i 1 45 i 1 51 | + 1 - 1 0 + 1 | $\begin{array}{c} e & 2 & 50 \\ i & 3 & 37 \\ i & 3 & 7 \\ \hline i & 3 & 22 \end{array}$ | $^{+}_{+}^{0}_{7}$ $^{+}_{+}^{4}$ | $ \begin{array}{c} i & 1 & 51 \\ i & 3 & 21 \\ i & 2 & 31 \end{array} $ | P* S* | |
| Ashkabad Naryn Frunse Rybach'e Dehra Dun | | $ \begin{array}{c} 7 \cdot 8 \\ 9 \cdot 2 \\ 9 \cdot 6 \\ 10 \cdot 0 \\ 10 \cdot 1 \end{array} $ | $294 \\ 44 \\ 33 \\ 40 \\ 115$ | $\begin{array}{cccc} 2 & 1 \\ 2 & 16 \\ 2 & 20 \\ \mathbf{i} & 2 & 26 \\ \mathbf{e} & 2 & 32 \\ \end{array}$ | $^{+}$ 0 $^{-}$ 1 $^{+}$ 3 | $\begin{array}{r} 3 & 33 \\ \hline i & 4 & 4 \\ i & 3 & 17 \\ i & 4 & 41 \end{array}$ | $+\frac{5}{8} + \frac{3}{16}$ | = i 5 37 | = | i 5·9 |
| New Delhi Almata II Kurmenty Chilisk Bombay | N. | $10.5 \\ 11.2 \\ 11.6 \\ 12.0 \\ 16.8$ | $^{\substack{125 \\ 40 \\ 43 \\ 42 \\ 162}$ | i 2 43 e 2 48 i 2 55 e 3 56 | $ \begin{array}{r} $ | i 4 25 = e 7 17 | - <u>10</u> - <u>12</u> | i <u>5</u> 2 | ? = = | i 5·5 — e 8·4 |
| Goris Poona Semipalatinsk Tiflis Hyderabad | | 17.3 17.5 17.9 18.9 20.2 | $^{291}_{159} \\ ^{28}_{297} \\ 148$ | e 4 4 5 e 4 9 e 4 24 e 4 34 | $ \begin{array}{rrr} & 0 \\ & 2 \\ & 3 \\ & 0 \\ & 5 \end{array} $ | i 7 30 i 7 29 e 8 26 | $^{+14}_{+8}$ $^{-5}$ | 8 43 i 4 27 | PcP | e 11·7 |
| Sverdlovsk Shillong Madras Ksara Simferopol | | $\begin{array}{c} 22 \cdot 2 \\ 23 \cdot 1 \\ 24 \cdot 8 \\ 26 \cdot 0 \\ 27 \cdot 2 \end{array}$ | $350 \\ 108 \\ 149 \\ 276 \\ 301$ | 5 1 i 5 6 a e 5 34 e 5 35 e 5 46 | $\begin{array}{cccc} + & 1 \\ - & 2 \\ + & 9 \\ - & 1 \\ - & 1 \end{array}$ | i 9 18 e 9 57 e 10 11 | $+\frac{2}{11} + \frac{5}{5}$ | 5 43 6 24 — | PP PPP | 9·9 12·0 |

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1956

| | | Δ | Az. | Р. | o-c. | s. | o –c. | | pp. | L. |
|------------|-------|--------------|-----|---------|------|----------------------|---------|---------|------------------------|--------|
| | | .0 | 0 | m. s. | 8. | m. s. | s. | m. s. | | m. |
| Moscow | | 29.0 | 325 | 6 3 | - 1 | 13 4 | ? | 6 47 | $\mathbf{p}\mathbf{p}$ | |
| Pulkovo | | 34.4 | 327 | e 6 51 | 0 | e 9 29 | PcP | e 8 32 | PPP | · · |
| Lwow | | 34.7 | 309 | i 6 54 | 0 | - 1 | - | - | | |
| Warsaw | | 37.0 | 312 | e 8 34 | PP | e 17 36 | ScS | e 15 41 | SS | 23.8 |
| Bratislava | | $39 \cdot 1$ | 305 | i 7 32 | + 1 | | | i 9 3 | \mathbf{PP} | |
| Upsala | | 40.4 | 324 | i7 41a | 0 | e 16 34 | SS | i9 6 | \mathbf{PP} | i 18·0 |
| Prague | | 40.9 | 308 | e 7 48 | + 2 | e 17 26 | SSS | i 9 20 | \mathbf{PP} | |
| Messina | E. | 41.3 | 290 | | _ | e 17 8 | SS | _ | | |
| Triest | (SWE) | 41.5 | 302 | e 8 1 | +11 | e 13 10 | -57 | _ | | - |
| Kiruna | | 42.1 | 336 | i 7 54 | - ī | | - | e 9 29 | \mathbf{PP} | e 21·1 |
| Copenhagen | | 42.4 | 316 | | | e 14 25 | + 5 | _ | _ | 24.8 |
| Jena | | 42.7 | 310 | e 7 59 | - 1 | | <u></u> | e 9 38 | \mathbf{PP} | |
| Rome | | 42.9 | 296 | e 8 2 | 0 | e 14 37 | +10 | _ | | e 24·3 |
| Florence | | 43.5 | 299 | i8 4 | - 3 | i 18 21 | SSS | e 10 58 | PPP | |
| Hamburg | | 43.7 | 313 | i 8 33 | ? | | - | e 9 53 | PP | |
| Skalstugan | | 43.8 | 328 | i 8 8 | - 1 | _ | - | i 9 52 | \mathbf{PP} | _ |
| Stuttgart | Z. | 44.4 | 306 | e 8 13a | - î | | - | * *** | *** | _ |
| Tiksi | | 48.2 | 22 | i 8 41 | - 3 | e 15 41 | PS | e 10 7 | $P_{c}P$ | |
| Paris | | 48.8 | 307 | i 8 48 | - 1 | | | | | _ |
| Kew | | $50 \cdot 2$ | 311 | e 8 58 | - 2 | 200 | | | - | e 28·8 |
| Astrida | | 51.5 | 231 | e 9 8a | - 1 | - | - | e 10 13 | $P_{c}P$ | _ |
| Lwiro | | 51.9 | 232 | e 9 10 | - 2 | | - | e 10 6 | PcP | |
| | Z. | 54.8 | 275 | e 9 31 | - 3 | 50 113-2 | | e 9 57 | 2 | - |
| Matusiro | 1000 | $56 \cdot 2$ | 66 | i 9 41a | - 3 | e 19 19 | ScS | | <u></u> | 29.9 |

June 11d. 5h. 57m. Epicentre 40°·4N. 44°·9E. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 18.

A = +.5219, B = -.3236, C = +.7892; $\delta = -7$; h = -6;

D = -.527, E = -.850; G = +.671, H = -.416, K = -.614.

June 11d. 8h. 22m. 6s. Epicentre 52° 3N. 31° 8W.

26.1

26.2

26.7

81

83

75

e 5

e 5

e 5

34

36

39

Stuttgart

Ebingen

Jena

O-C. O-C. Supp. m. s. m. s. m. s. m. i 3 e 3 Ivigtut 321e 6·4 i 3 21 13.0 20 Reykjavík e 6.0 Angra do Heroismo 14.0165 32 6.8 SSS e 5 45 -14e 6 i 6 e 7 15.5 i 3 45a i 3 57 Rathfarnham C. z. 48 +1376 $_{\mathrm{PP}}$ 62 Aberdeen 17.8 i 4 21 e 8.5 6 -38 Durham 18.1 70 13 + 3 18.8 27 i 8 e 8 Scoresby Sund 10 9.4 i 4 +134 2 3 88 19.0 24 21 Jersey e 4 SS 10.3 SS e 8 24 i 9 35 i 8 i 9 80 Kew 19.4 e 4 27 e 8.9 22.0 85 Paris 3 2 i 4 55 e 10.4 Halifax 22.3 263 i 4 59k i 9 Uccle $22 \cdot 4$ 79 9 e 5 \mathbf{P} e 9.9 e 4 59 + 4 e 13 SSS De Bilt 22.576 e 9 (9 + 8 54) e 9.9 $22 \cdot 7$ Toledo 112 i 5 4 k e 9 10.4 23.2 Witteveen 3 73 e 5 12 i 5 19 + Z. 23.6 Clermont-Ferrand 92 14 + e 9 32 e 5 86 24.724 e 5 58 PP Besancon e 5 5 $24 \cdot 9$ 116 i 5 26 a i 9 52 Granada 5 PP 11.6 44 Hamburg 25.0 e 5 21 e 5 33 6 e 6 36 70e 13·3 82 Strasbourg 25.3e 5 30 0 e 9 54 0 e 6 PPe 11·4 Neuchatel 25.4 86 30 e 5 e 12.9 i 5 43 46 Skalstugan 25.4 31 i 5 25.5 81 e 5 30 Karlsruhe Z. 3 Seven Falls 25.5 274 e 5 31 k e 10 e 12.4 Basle 25.6 e 10 85 e 5 38 9 6 20 -13Almeria 25.7115 i 5 (i 10 52) e 9 41 -20SS i 10.9 Alicante 25.8 110 e 12·4 e 5 31 3 59 3

Continued on next page.

 $\mathbf{P}\mathbf{P}$

PP

e 12.7

e 6 17

e 6 21

+10

+

7

e 10 17

e 10 24

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1956

| | | Δ | Az. | P. m. s. | O –C. | s. m. s. | o –c. | m. s. | pp. | L. m. |
|--|----------------|---|--|--|--|---|---|--|---------------------|----------------------------|
| Shawinigan Fal Pavia Brébeuf Upsala Relizane | ls | $27.0 \\ 27.6 \\ 28.0 \\ 28.0 \\ 28.2$ | 274 88 273 55 113 | $\begin{array}{c} e & 5 & 44 \text{ a} \\ e & 10 & 56 \\ i & 5 & 54 \text{ k} \\ i & 5 & 52 \end{array}$ | -,1 | $\begin{array}{c} e & \overline{1} & 41 \\ e & \overline{6} & 1 \\ e & 6 & 45 \end{array}$ | ss PP | i 8 20 e 7 0 | PPP | e 13·8 |
| Algiers Univ. Kiruna Ottawa Florence Triest | z. | $28.9 \\ 29.2 \\ 29.3 \\ 29.6 \\ 30.2$ | 108 38 274 89 84 | e 6 4 e 6 6 a e 6 7 | $^{+15}_{-1}_{0} \\ ^{-2}_{+7}$ | $\begin{array}{c} e & 11 & 27 \\ \hline e & 10 & 58 \\ e & 11 & 10 \\ e & 11 & 24 \\ \end{array}$ | $+34 \\ -1 \\ +6 \\ +11$ | $\begin{array}{l} {\rm e} \ 7 \ 26 \\ {\rm e} \ 11 \ 54 \\ {\rm i} \ 12 \ 38 \\ 9 \ 4 \end{array}$ | PPP SS PcP | e 14·5 |
| Palisades Kirkland Lake Bratislava Rome Warsaw | z. | 30.6 30.7 31.1 31.4 31.8 | 265 282 78 91 69 | e 6 18 | - 1 - 1 PP - 1 | e 11 21 e 11 21 e 12 19 e 11 3 | $+\frac{1}{\frac{7}{3}}$ | e 7 46 | PPP | e 13·5 e 13·7 e 13·9 |
| Budapest Resolute Belgrade Morgantown Taranto | | $32.6 \\ 33.4 \\ 34.7 \\ 35.1 \\ 35.2$ | $\begin{array}{r} 78 \\ 334 \\ 81 \\ 268 \\ 90 \end{array}$ | 13 3 e 6 25 e 6 58 i 6 59 e 11 31 | PcS -17 + 4 + 2 | e 12 4 e 11 54 e 14 31 | $rac{	ext{ScS}}{+rac{1}{30}} = rac{	ext{ScS}}{	ext{SS}}$ | e 15 35 | P. | e 14·5 e 20·1 |
| Messina Chapel Hill Columbia Moscow Tamanrasset | E. | $35.5 \\ 36.9 \\ 39.4 \\ 39.4 \\ 41.0$ | $\begin{array}{r} 94 \\ 263 \\ 262 \\ 57 \\ 122 \end{array}$ | e 7 31 i 7 13 i 7 33 7 30 e 7 45 | $^{+31}_{+10}$ $^{-3}_{-1}$ | e 14 31 i 12 3 e 13 38 e 9 18 | $^{SS}_{-55}$ $^{+3}$ PP | e 10 35 e 9 2 e 9 34 | $\frac{^?}{P_{cP}}$ | e 16·6 19·9 |
| Simferopol San Juan Fayetteville Rapid City Sotchi | Е. | $42.8 \\ 43.2 \\ 46.1 \\ 46.5 \\ 46.9$ | $\begin{array}{r} 73 \\ 232 \\ 275 \\ 290 \\ 71 \end{array}$ | e 7 59 e 8 4 i 8 27k e 8 31 8 31 | $ \begin{array}{rrr} & 2 & \\ & 0 & \\ & 1 & \\ & 0 & \\ & 3 & \\ \end{array} $ | $\frac{14}{-}$ 25 | + <u>1</u> = | e = 41 | <u>?</u> | |
| Sverdlovsk Bozeman Hungry Horse Boulder Ksara | | $\begin{array}{c} 49.8 \\ 50.0 \\ 50.0 \\ 50.2 \\ 50.9 \end{array}$ | $^{46}_{\substack{296\\300\\287\\83}}$ | 8 54 e 8 57 i 8 57 i 9 0 e 9 12 | $ \begin{array}{rrr} $ | e 16 24 | _ _ + 3 | e 10 24 | PcP | |
| Tiflis Salt Lake City Eureka Corvallis Boulder City | z. z. | 51.0 53.6 56.8 57.3 58.5 | $70 \\ 292 \\ 293 \\ 302 \\ 289$ | $\begin{array}{cccc} 9 & 4 \\ e & 9 & 24 \\ i & 9 & 48 \\ e & 9 & 52 \\ i & 10 & 0 \end{array}$ | $-\begin{array}{cc} - & 2 \\ - & 1 \\ 0 & 0 \\ 0 & 0 \end{array}$ | 16 23 i 9 57 | + 1 7 = | i 10 50 i 10 9 | PcP | |
| Tucson Reno Mineral Shasta Tinemaha | Z. Z. Z. | 58.8 58.9 59.3 59.5 59.7 | $284 \\ 296 \\ 297 \\ 298 \\ 292$ | e 10 2 e 10 3 e 10 5 e 10 7 e 10 9 | - 0 0 0 0 | | | i 10 11 = i 10 18 | ? | e 32·0 |
| China Lake Fresno Tacubaya Woody Lick | z. z. z. | 60·2 60·8 61·1 61·1 61·5 | $\begin{array}{c} 291 \\ 293 \\ 264 \\ 292 \\ 295 \end{array}$ | e 10 12 i 10 16 e 10 26 i 10 17 i 10 21 | $^{+}_{-}\overset{0}{\overset{0}{\overset{0}{\overset{0}{\overset{0}{\overset{0}{\overset{0}{$ | | | i 10 21 i 10 26 | ? | |
| Palomar Pasadena Barratt Frunse Namangan | z. | $61.6 \\ 61.8 \\ 62.0 \\ 65.9 \\ 66.0$ | 288 290 288 51 54 | i 10 22 e 10 22 i 10 24 10 49 e 10 50 | $-\begin{array}{c} 0 \\ 1 \\ 0 \\ - \begin{array}{c} 1 \\ 0 \\ 0 \end{array}$ | i 10 31 | ? | i 10 45 i 10 31 i 10 33 | ? | i 25·1 |
| Quetta Huancayo Lwiro Astrida La Paz | z. | 71.7 74.2 74.3 75.1 75.4 | $\begin{array}{c} 64 \\ 224 \\ 115 \\ 115 \\ 216 \end{array}$ | e 11 25 i 11 41 e 11 34 e 11 46 11 54 | $\begin{array}{cccc} - & 1 \\ + & 1 \\ - & 7 \\ + & 7 \end{array}$ | | | e 14 6 e 14 19 e 11 41 e 11 53 | PP PP PcP | |
| Shillong Matusiro Rabaul | z. z. | $88.2 \\ 91.1 \\ 132.0$ | 49 8 355 | e 12 54 e 13 7 i 24 21 | ${\rm \stackrel{0}{-}_{PP}}^{1}$ | _ | = | e 37 7 | Q_ | e 50·5 |

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1956

Shillong

285

June 11d. 9h. 56m. 16s. Epicentre 27°.0S. 70°.4W.

A = +.2993, B = -.8405, C = -.4516; $\delta = -4$; D = -.942, E = -.335; G = -.151, H = +.425, K = -.892. O-C. L. Supp. m. i 0 18 0.4 169 Copiapo $1.59 + 10_{g}$ P. Antofagasta $3 \cdot 3$ 58 e 1 Santa Lucia 182 35 3 i 2 52 i 1 55 6.4e 1 N. - 1 La Paz 10.6 +266.012 21 +445 Buenos Aires 12.8 129 29 -1La Plata 6.713.3 129 38 15 i 5 - 4 Huancayo 15.6 342 e 6 48 +1149 43 +10Bogota 31.6 353 15.730 i 11 45 Chinchina $32 \cdot 2$ 16.7350 35 i 11 53 + 8 San Juan 45.3 i 8 21 6 Tacubaya 11 43 $_{\rm PP}$ 53.9326 +13e 17 20 +18Columbia 61.5350 e 18 41 e 25.6 19 - I Chapel Hill 63.1 352 Washington ScS 65.8 354 e 43.8 e 10 43 e 21 Fayetteville 339 66.6 i 10 53 -Morgantown 66.9352 + 57 i 10 Palisades 357 i 11 e 33.9 $67 \cdot 7$ e Tucson 324 e 34·2 70.4i 11 16 PcPBrébeuf i 11 55 $72 \cdot 2$ 358 29 k Ottawa $72 \cdot 2$ 356 28 a Shawinigan Falls $73 \cdot 2$ 358 36 a + Seven Falls 73.8 0 38kPcP73 - 9Barratt 321 i 11 Z. Palomar 321i 11 53 PcP74.5Boulder City 75.3 324i 12 46 Kirkland Lake 75.3 46 a Z. 353 SS i 21 47 i 26 35 i 32.4 75.8 +16Pasadena 321 i 11 48 -China Lake e 12 76.7322 $P_{c}P$ e 11 53 Z. Rapid City 76.8336i 11 56 + E. i 12 PcP 321 Woody $77 \cdot 3$ 77.5King Ranch 321 z. Salt Lake City 77.6 329 e 11 59 Tinemaha 78.0323e 12 Eureka 78.6326i 12 Fresno 322 78.6 Lick 80.0 e 12 Z. 80.6 324 e 12 Reno z. 81.2 Bozeman 332 e 12 18 e 14 19 81.7 Kimberley 118 i 12 21 Z. i 12 24 i 12 40 Butte 82.1 332 pPMineral 82.2 323 e 12 Z. 82.8 323 Shasta e 12 34 332 e 12 35 84.6 Hungry Horse -Corvallis 325 e 12 45 86.0 z. 2 e 23 44 Tamanrasset 88.5 64 e 12 58 Resolute 102.7 e 27 $_{\rm PS}$ e 30 19 PKKP e 31 15 354 e 41.4 E. 103·2 54 e 34 53 Messina e 55.2 $_{
m PP}$ $117 \cdot 3$ e 18 PPPKsara 52 5] [+ 128.5 Rabaul 240 e 19 2] e 22 56 e 19 33 $\mathbf{P}\mathbf{P}$ 142.6 75 Quetta 146.1 Poona i 19 47 [+6]146.3 176 e 19 41k Lembang 01 SS e 34 25 153.9 e 19 54k 299 e 43 50 e 70.9 Matusiro + 1)

June 11d. 16h. 50m. Epicentre 16° 8'N. 98°19'W. Magnitude 5·3. Seismo. Bull. of National University of Mexico for June, 1956, Tacubaya, p. 4.

e 20

91

164.1

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1956

June 11d. 22h. 55m. Epicentre 52°N. 86°E. Magnitude 4.75.5.
Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 76.
Seismo. Bull. of China, Peking, China, p. 16.

June 12d. 3h. 12m. 26s. Epicentre 24° 8N. 90° 9E.

A = -.0138, B = +.9086, C = +.4174; $\delta = -3$; h = +3; D = +1.000, E = +.015; G = -.006, H = +.417, K = -.909.

| | D - T | 1.000, | $\mathbf{r} = \mathbf{r}$ | .013 | u = - ' | n_0 , $n = -$ | F.411, | K =308 | • | |
|---|-------|--|--|--|---|--|---|--|---|---------------|
| Shillong Chatra Dehra Dun Hyderabad Sining | | $\begin{array}{c} 2 \\ 1 \cdot 2 \\ 3 \cdot 9 \\ 12 \cdot 6 \\ 13 \cdot 7 \\ 15 \cdot 0 \end{array}$ | 302 299 240 | P. m. s. i 0 18k i 1 6 e 3 3 e 3 20 3 29 | O-C. - 6 + 4 + 2 - 6 | S. s. i 2 7 i 5 21 6 0 | $ \begin{array}{c} O - C \\ s \\ - 2 \\ - 5 \\ + 8 \\ - 6 \end{array} $ | m. s. i 0 29 | рр. Р <u>в</u> РР | L. m. = |
| Madras Changyeh Wuwei Poona Sian | E. | $15.5 \\ 16.3 \\ 16.5 \\ 17.0 \\ 18.3$ | 28 35 252 | i 3 40 e 3 57 e 3 57 i 4 0 e 5 20 | $^{-}_{+}\overset{2}{\overset{5}{\overset{5}{}}}_{+}\overset{5}{\overset{1}{\overset{1}{}}}_{+}\overset{1}{\overset{6}{\overset{3}{}}}$ | 6 38 - e 6 59 | + <u>3</u> - <u>11</u> | 3 52 - 4 9 | PP PP | 7·1 7·8 |
| Yinchuan Kodaikanal Hong Kong Quetta Tatung | | $18.9 \\ 19.3 \\ 21.5 \\ 21.9 \\ 24.2$ | 224 92 289 | e 4 23 e 6 54 4 56 4 57 a 5 18 | $-\ _{0}^{1}$ $+\ _{0}^{4}$ $-\ _{1}^{0}$ | e 9 1 e 9 1 | + 14 + 7 | <u>=</u> 9 18 | <u>-</u> Ss | |
| Peking Zô-Sè Baguio Matusiro Ksara | | $26.1 \\ 27.4 \\ 29.0 \\ 42.0 \\ 48.3$ | $^{48}_{70}_{101}\\^{62}_{294}$ | 5 35 e 7 51 8 44 | $-\frac{2}{-\frac{3}{1}}$ | $\begin{array}{c} 10 & 5 \\ e & 10 & 57 \\ 10 & 34 \\ e & 17 & 13 \\ 15 & 40 \\ \end{array}$ | $^{-2}_{+29}^{-20}_{-88}^{-5}$ | | | e 20·4 |
| Jerusalem Kiruna Upsala Tananarive Skalstugan | | 49·0 59·9 60·5 60·6 63·0 | 291 336 326 228 330 | $\begin{array}{cccc} & 8 & 51 \\ \mathbf{i} & 10 & 7 \\ & 10 & 10 \\ & 10 & 18 \\ \mathbf{i} & 10 & 27 \\ \end{array}$ | $^{+}$ $^{-}$ 3 $^{+}$ 3 $^{-}$ 4 | | | $\begin{array}{ccc} & 9 & 2 \\ \mathbf{i} & 10 & 17 \\ & 10 & 21 \\ & 10 & 38 \\ \mathbf{i} & 10 & 38 \end{array}$ | 2 2 2 2 | |
| Jena Hamburg Astrida Lwiro Stuttgart | | $64.5 \\ 65.1 \\ 65.2 \\ 65.9 \\ 66.4$ | $316 \\ 319 \\ 254 \\ 255 \\ 314$ | 10 38 10 56 10 45 10 49 a e 10 50 | $ \begin{array}{r} - & 3 \\ + & 1 \\ 0 \\ - & 1 \\ - & 3 \end{array} $ | | | $\begin{array}{c} 11 & 56 \\ \hline - \\ e & 11 & 13 \\ e & 11 & 17 \\ e & 11 & 11 \\ \end{array}$ | $\begin{array}{c} ?\\ \hline P_cP\\ P_cP\\ P_cP\end{array}$ | |
| Paris Scoresby Sun Tamanrasset Resolute Riverview | | 70·7 74·1 76·8 80·7 81·7 | $ \begin{array}{r} 316 \\ 341 \\ 289 \\ 2 \\ 133 \end{array} $ | $\begin{array}{c} 21 & 18 \\ e & 11 & 48 \\ 11 & 55 \\ 12 & 23 \\ \hline \end{array}$ | PPS + 8 + 7 | $\begin{array}{r} 21 & 30 \\ -12 & 5 \\ 19 & 43 \\ 22 & 42 \end{array}$ | $\frac{S_cS}{P_cP}$ | $\frac{-}{14}$ $\frac{14}{26}$ | PP ? | 33.9 |
| Kimberley Grahamstown Woody Tacubaya | n Z. | $82.9 \\ 84.2 \\ 113.4 \\ 135.0$ | $234 \\ 229 \\ 26 \\ 13$ | i 12 26k e 12 34 e 10 10 | - 2 0 | i 26 23 [| - = | = 27 3 | = | |

June 12d. 8h. 54m. 7s. Epicentre 8°.4S. 109°.4W.

$$A = -.3287$$
, $B = -.9333$, $C = -.1451$; $\delta = +15$; $h = +7$; $D = -.942$, $E = +.335$; $G = +.049$, $H = +.138$, $K = -.989$.

| | Δ | Az. | Р. | O-C. | s. | O-C. | Supp. | | L. | |
|--|------|-----|----------------|------|---------|------|---------------|----|------------------|--|
| etertical de la companya de la comp | 0 | 0 | m. s. | s. | m. s. | В. | m. s. | | m. | |
| Manzanillo | 27.7 | 10 | e 10 0 | 8 | e 10 23 | -10 | e 11 53 | SS | 17 <u>2172</u> 8 | |
| Oaxaca | 28.1 | 26 | e 9 56 | ? | e 10 56 | +16 | | _ | 14.3 | |
| Puebla | 29.4 | 22 | 2-11-2000 days | | e 16 21 | SeS | | | | |
| Tacubaya | 29.4 | 20 | e 6 20 | +13 | e 11 12 | +11 | e 6 44 | PP | e 13.9 | |
| Guadalajara | 29.5 | 12 | e 13 44 | ? | | | (| _ | e 14·1 | |

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1956

| | | Δ | Λz. | P. m. s. | 0 – C. s. | S. m. s. | O -C. | m. s. | pp. | L. m. |
|---|----------------|---|--|--|---|--|---|---|---------------------------------------|--------------------------------------|
| Vera Cruz Mazatlan Huancayo Chinchina Chihuahua | | 30·4 31·5 33·7 36·2 36·9 | 26 5 99 70 5 | e 6 43 i 7 8 e 14 43 | | e 11 38 e 17 29 e 12 8 i 12 58 e 13 34 | $^{+22}_{ScS}$ 0 $^{+11}$ $^{+36}$ | e 13 16 e 8 5 i 15 39 i 16 13 | SSS SSS SSS | e 17·7 e 18·4 18·9 |
| Bogota Antofagasta Tucson La Paz Barratt | E. | 37·5 40·3 40·4 41·1 41·4 | $71 \\ 117 \\ 358 \\ 106 \\ 351$ | e 7 20 e 7 45 i 7 49 e 7 48 | $\begin{array}{c} + & 3 \\ + & 4 \\ + & 2 \\ - & 2 \end{array}$ | i 13 18 e 13 56 e 14 1 i 17 17 i 14 14 | $^{+11}_{+11}_{{\rm SS}}_{+9}$ | i 11 48 e 16 48 i 17 57 | \$\$ \$\$\$ | e 18·2 18·2 |
| Palomar Pasadena Boulder City King Ranch China Lake | z. z. z. | $42.1 \\ 43.1 \\ 44.4 \\ 44.5 \\ 44.6$ | $351 \\ 349 \\ 354 \\ 348 \\ 350$ | i 7 55 e 8 2 e 8 14 e 8 14 e 8 16 | $-{0\atop 2}\atop -{0\atop 0}\atop 1$ | i 14 40 | +10 | i 8 4 e 9 50 | PP — | i 20·4 e 22·1 |
| Isabella Woody Tinemaha Fayetteville Lick | z. z. z. | 44.6 44.7 45.9 46.5 46.9 | $350 \\ 349 \\ 350 \\ 17 \\ 347$ | e 8 16 e 8 16 e 8 25 e 8 31 k e 8 32 | $-\ \ \begin{array}{c} 0 \\ 0 \\ 1 \\ 0 \\ -\ \ 2 \end{array}$ | i 12 53 e 15 22 e 15 28 | + 11 | e = 37 | ? | |
| Berkeley Eureka Boulder Reno Salt Lake City | z. | $47.5 \\ 48.0 \\ 48.3 \\ 48.6 \\ 48.9$ | $346 \\ 353 \\ 4 \\ 349 \\ 358$ | e 8 46 e 8 40 e 8 38 e 8 48 e 8 51 | + 8 - 3 - 7 + 1 + 1 | e 15 44 — e 16 4 | +10 +11 | e 20 6 | <u> </u> | e 21·5 |
| Mineral Columbia St. Louis Florissant San Juan | 7. | 49.8 50.0 50.0 50.1 50.3 | $348 \\ 31 \\ 20 \\ 19 \\ 58$ | e 8 47 i 8 59 e 8 58 e 9 1 e 8 59 | $ \begin{array}{cccc} & 9 \\ & 1 \\ & 0 \\ & + & 2 \\ & - & 1 \end{array} $ | e 16 13 i 16 15 e 16 14 | + 4 + 6 + 4 | e 11 17 e 10 16 | PP PcP | e 21·2 |
| Shasta Terre Haute Chapel Hill Rapid City Bozeman | z. E. | $50.3 \\ 51.8 \\ 52.5 \\ 52.5 \\ 53.8$ | $347 \\ 22 \\ 31 \\ 6 \\ 359$ | e 9 0 i 12 59 i 9 17 e 9 16 e 9 24 | $-{0\atop 0}\atop -{1\atop 2}$ | e 16 51 | + 8 | i 11 57 e 10 0 | PPP PcP | e 27·3 |
| La Plata Butte Corvallis Morgantown Cleveland | N. Z. | $53.9 \\ 54.2 \\ 54.2 \\ 55.0 \\ 55.8$ | $127 \\ 357 \\ 348 \\ 28 \\ 25$ | e 9 31 e 9 31 i 9 35 i 9 42a | $\begin{array}{c} + & 2 \\ + & 2 \\ + & 0 \\ + & 1 \end{array}$ | e 17 13 e 17 13 i 17 32 | - 9 + 7 + 4 | e 19 27 | s _c s | e 23·6 |
| Washington Honolulu Hungry Horse Seattle Philadelphia | | 55.8 56.1 56.6 56.9 57.6 | $\begin{array}{r} 30 \\ 302 \\ 356 \\ 350 \\ 31 \end{array}$ | e 9 44 e 9 49 e 9 45 e 10 2 | $^{+}_{-}\overset{3}{\overset{6}{\overset{}{}}}_{2}^{}_{+}\overset{7}{\overset{}{}}_{8}^{}$ | i 17 42 e 17 43 e 17 53 e 17 56 | $+14 \\ +11 \\ +11 \\ +5$ | i 10 9 | = | e 24·0 e 26·0 e 26·4 e 28·0 |
| Buffalo (Larkin) Fordham Palisades Ottawa Kirkland Lake | z. | $58.9 \\ 59.0 \\ 61.5 \\ 61.9$ | 26 31 31 26 22 | e 9 55 e 9 57 i 10 2 e 10 21 e 10 17 | - 3 - 6 - 2 - 7 | e 18 14 i 18 16 18 53 | $+\frac{6}{6} + 11$ | $\begin{array}{c} - \\ e & 12 & 9 \\ 11 & 0 \\ i & 10 & 21 \end{array}$ | PP PcP | e 28·9 e 31·0 |
| Brébeuf Shawinigan Falls Seven Falls College Resolute | 4 | $62.5 \\ 63.7 \\ 65.0 \\ 78.4 \\ 83.4$ | $^{28}_{27}_{28}_{344}_{4}$ | i 10 28k i 10 35a e 10 44 e 12 0 e 12 28 | $ \begin{array}{r} 0 \\ - 1 \\ 0 \\ - 2 \end{array} $ | e 19 33 e 22 3 e 22 53 | + 7 + 3 + 2 | e 28 6 | $\frac{\mathbf{P_{cP}}}{\mathbf{SS}}$ | e 27·9 e 33·5 e 34·5 |
| Scoresby Sund Granada Alicante Kiruna Matusiro | | $97.0 \\ 107.6 \\ 110.0 \\ 112.0 \\ 112.9$ | $\begin{array}{r} 20 \\ 54 \\ 52 \\ 18 \\ 306 \end{array}$ | e 17 31 19 8 a 18 29 e 29 0 | PP PP [-4] PS | e 24 59 25 8 25 11 e 35 7 e 35 25 | [+ 4 [+ 6] [- 1] SS SS | e 24 19 29 35 — | SKS PPS | 45.9 42.0 e 52.6 e 51.0 |
| Copenhagen Upsala Tamanrasset Ksara Tananarive Dehra Dun Quetta | z. | 114.5 115.2 116.1 139.2 144.6 157.0 158.0 | 32 26 69 46 140 343 8 | e 29 15 e 19 44 20 0 i 24 40 19 39 e 21 1 e 19 52? | PS PP PP ! [+ 1] PKP: [- 6] | e 35 41 | ss | e 29 26 — — e 24 16 | PS | 54·9 — — |

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June 13d. 12h. 7m. 37s. Epicentre 0°·1N. 124°·7E. Depth of focus 0·010.

A = -.5693, B = +.8221, C = +.0017; $\delta = -5$; $\hbar = +7$; D = +.822, E = +.569; G = -.001, H = +.001, K = -1.000.

| | D = + | 822, E | . = + . | 569; G | $= - \cdot 0$ | 01, $H = +$ | ·001, 1 | $\zeta = -1.00$ | 0. | |
|---|----------------------|---|--|--|--|--|---|-----------------------------|--------------------------------|----------------------------|
| | | Δ | Az. | m. s. | O-C. | m. s. | o – c. | m. s. | app. | L. m. |
| Manila Baguio Bandung Lembang Djakarta | | $14.9 \\ 16.8 \\ 18.3 \\ 18.3 \\ 18.8$ | $\frac{346}{248}$ | i 3 49 e 4 15 i 4 6k | $\begin{array}{c} + & 4 \\ - & 1 \\ + & 6 \\ - & 3 \\ - & 6 \end{array}$ | e 8 16 i 7 8 i 7 31 e 7 34 e 7 33 | $^{?}_{+15}$ $^{+5}$ $^{+8}$ $^{-4}$ | e 4 34 e 15 48 e 4 23 | $\frac{-}{\operatorname{ScS}}$ | |
| Hong Kong Rabaul Zô-Sè Nanking Matusiro | | $24 \cdot 4$ $27 \cdot 8$ $31 \cdot 0$ $32 \cdot 3$ $38 \cdot 4$ | $336 \\ 99 \\ 354 \\ 351 \\ 18$ | The state of the s | $^{+}$ 1 $^{-}$ 1 $^{+}$ 3 $^{+}$ 2 | e 5 47 e 10 18 11 5 e 11 31 e 13 1 | sP + 2 - 2 + 4 | i 6 38 - 8 53 | PP PP — PP | e 12·6 e 18·2 |
| Brisbane Taiyuan Peking Shillong Tatung | z. | $38.6 \\ 39.2 \\ 40.5 \\ 40.6 \\ 41.2$ | $137 \\ 345 \\ 350 \\ 311 \\ 347$ | i 7 12 e 7 21 e 7 29 i 7 31 k e 7 39 | $\begin{array}{rrr} - & 3 \\ + & 1 \\ - & 2 \\ - & 1 \\ + & 3 \end{array}$ | e 12 29 i 17 15 | -63 ScS | i 8 45 9 7 i 15 14 | PP PP | |
| Riverview Melbourne Wuwei Chatra Colombo | Z. E. | $\begin{array}{r} 41.9 \\ 42.1 \\ 42.8 \\ 44.8 \\ 45.2 \end{array}$ | $\begin{array}{c} 146 \\ 156 \\ 334 \\ 310 \\ 280 \end{array}$ | i 7 42k i 7 43 e 7 50 e 8 4 e 9 59 | $-{0\atop 1}\atop -{0\atop 2}\atop {\rm PP}$ | i 14 11 e 17 26 e 14 34 | PS ScS - 7 | i 8 7 e 8 23 i 9 48 | PP PP | e 21·8 — — e 22·7 |
| Madras Nouméa Kodaikanal Hyderabad Yuzno-Sakhlin | E. | $\begin{array}{r} 45.9 \\ 46.4 \\ 48.0 \\ 48.6 \\ 49.3 \end{array}$ | $288 \\ 122 \\ 284 \\ 293 \\ 16$ | e 8 14 e 8 18 e 10 51 8 44 | $+\frac{\overset{0}{\overset{0}{0}}}{\overset{1}{3}}$ | i 14 46 e 9 5 e 15 49 i 15 28 | - 5 PS - 1 | e 11 4 e 11 36 | PP PPP | 21·2 = |
| Dehra Dun Bombay Irkutsk Onerahi Kaimata | E. N.E. | $53.5 \\ 54.2 \\ 54.8 \\ 58.3 \\ 59.6$ | $309 \\ 293 \\ 345 \\ 133 \\ 141$ | $\begin{array}{c} 9 & 16 \\ e & 13 & 14 \\ 9 & 24 \\ e & 9 & 47 \\ 9 & 58 \end{array}$ | $^{+}_{?}^{3}$ $^{+}_{2}^{0}$ $^{+}_{2}^{0}$ | i 16 43 e 16 47 — | ‡ 7 1 = | i 18 57 e 19 1 | ScS ScS | |
| Cobb River Karapiro Wellington Macquarie Is. Tuai | E. N. N. Z. | $59.7 \\ 60.1 \\ 61.1 \\ 61.2 \\ 61.6$ | 139 135 139 158 135 | e 9 59 e 9 58 e 10 4 i 10 6 e 10 9 | $\begin{array}{cccc} + & 2 \\ - & 1 \\ - & 2 \\ - & 1 \\ - & 1 \end{array}$ | | | | | e 30·9 |
| Frunse Quetta Namangan Semipalatinsk Sverdlovsk | | $61.8 \\ 62.4 \\ 62.8 \\ 62.8 \\ 76.0$ | $320 \\ 304 \\ 317 \\ 330 \\ 329$ | $\begin{array}{c} 10 & 12 \\ e & 10 & 11 \\ 10 & 16 \\ 10 & 15 \\ 11 & 35 \end{array}$ | $ \begin{array}{r} + 1 \\ - 4 \\ - 2 \\ - 3 \\ - 3 \end{array} $ | e 18 34 18 40 | + 2 + 3 | | = | |
| Tananarive Makhach-Kala Tiflis Sotchi Moscow | | $77.8 \\ 80.6 \\ 82.4 \\ 86.3 \\ 88.3$ | $\begin{array}{c} 251 \\ 314 \\ 312 \\ 314 \\ 326 \end{array}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccc} + & 0 \\ + & 2 \\ - & 1 \\ - & 2 \end{array}$ | e 21 34 22 22 22 54 | $+\frac{3}{-\frac{3}{4}}$ | i 11 53 12 32 — | PcP pP | |
| College Ksara Jorusalem Simferopol Iasi | | 88.9 89.0 89.5 90.4 94.8 | $\begin{array}{r} 25 \\ 304 \\ 302 \\ 315 \\ 317 \end{array}$ | i 12 43 e 12 37 i 12 47 e 12 50 | - 2 - 8 - 0 - 2 | e 23 26 e 23 22 — — 23 42 [| + 4 - 1 + 5] | e 22 49 e 16 19 — | SKS PP | e 37·0 |
| Astrida Kiruna Lwiro Bucharest Sofia | | 94·9 95·3 95·9 96·1 98·3 | 338 | e 13 18? i 13 11 e 13 18 — | $^{+}_{-}^{6}_{3}^{}_{+}^{1}_{}$ | 23 50 [| $\begin{bmatrix} + & 1 \\ + & 6 \\ -54 \end{bmatrix}$ | i 24 20 | <u>s</u> | |
| Warsaw Upsala Kimberley Timisoara Skalstugan | z. E. | 98·3 98·5 98·7 99·3 99·7 | 331 | e 20 35 i 17 31 e 13 28 i 13 36 | PP - 2 + 2 | i 24 40 i 23 57 [e 24 8 [| $-\frac{4}{0}$ $+\frac{8}{1}$ | i 25 51 i 17 28 | P <u>P</u> | e 55·4 |

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|------|-----|
| | |

| | | Δ | Az. | m | P. | O -C. | S. m. s. | O -C. | m. s. | upp. | L. m. |
|--|---------------------|--|---|--------------------------------------|---|--|---|---|---|------------------------|----------------------------|
| Bratislava Resolute Copenhagen Prague Taranto | N. | $101.6 \\ 101.8 \\ 102.3 \\ 102.8 \\ 103.2$ | $319 \\ 319 \\ 328 \\ 322 \\ 312$ | e 13 | 35 - | - <u>9</u> | i 24 17 e 24 17 e 24 23 e 24 16 e 24 8 | [+ 5] $[+ 4]$ $[+ 8]$ $[-1]$ $[-11]$ | i 24 45 e 17 53 e 27 29 e 26 23 | PP PS | 48·4 52·4 |
| Jena Messina Corvallis Scoresby Sund Rome | z. | $104 \cdot 3$ $104 \cdot 9$ $105 \cdot 5$ $106 \cdot 2$ $106 \cdot 3$ | $323 \\ 310 \\ 43 \\ 349 \\ 314$ | e 17 e 27 e 18 e 27 e 22 | $\frac{54}{25}$ | $\begin{array}{c} \mathbf{PS} \\ \mathbf{PP} \\ \mathbf{PS} \\ \mathbf{PKS} \end{array}$ | e 17 54 e 24 29 i 24 39 e 24 39 | PKP [+ 2] [+ 6] [+ 6] | e 18 15 e 32 48 e 25 29 e 26 29 | SKKS | 51.4 |
| Stuttgart Florence Shasta Strasbourg Mineral | z. z. | 107.4 | $322 \\ 316 \\ 47 \\ 322 \\ 47$ | e 18 e 18 e 18 e 18 | $\frac{13}{14}$ $\frac{53}{53}$ | $egin{bmatrix} [& 2] \\ [& 0] \\ [& 0] \\ \mathbf{PP} \\ [+ & 4] \end{bmatrix}$ | e 24 33 e 24 39 e 24 42 | - | e 18 31 e 28 47 e 27 23 | SPP | e 55·4 e 57·4 e 53·4 |
| Lick Besançon Reno Hungry Horse King Ranch | z. z. | 108.6 109.0 109.4 110.2 110.6 | $50 \\ 321 \\ 48 \\ 37 \\ 52$ | i 18 i 18 e 18 e 14 19 | 39 | $[PP \\ + 20] \\ PP \\ PP$ | i 29_33 | PPS | e 19 39 i 29 22 | PKKP | |
| Paris Woody Tinemaha Clermont-Ferranc Isabella | z. z. i z. | 110.6 111.2 111.3 111.4 111.6 | $\begin{array}{r} 323 \\ 51 \\ 50 \\ 320 \\ 51 \end{array}$ | e 18 e 18 e 18 | $^{25}_{42}$ | [+21] $[+3]$ $[+19]$ $[+30]$ | $\begin{array}{c} e & 28 & 16 \\ & - \\ e & 25 & 1 \\ 29 & 35 \end{array}$ | SP [+6] SPP | e 19 5 e 19 6 e 28 27 e 33 28 | PP PP SP PKKS | e 55·4 |
| Butte China Lake Pasadena Eureka Rathfarnham C. | N. Z. Z. | $112.1 \\ 112.2 \\ 112.2 \\ 112.3 \\ 113.1$ | $\begin{array}{r} 39 \\ 51 \\ 53 \\ 47 \\ 330 \end{array}$ | e 19 e 18 i 18 i 18 e 19 | $\frac{43}{27} \\ 25$ | PP [+19] [+3] [+1] PP | $\begin{array}{c} - \\ e & 22 & 1 \\ e & 25 & 13 \\ e & 14 & 37 \\ - & - \end{array}$ | PKS [+15] P | e 29 26 e 19 11 e 19 18 i 19 11 | PKKP PP PP PP | |
| Bozeman Barratt Boulder City Tamanrasset Alicante | z. z. | $\begin{array}{c} 113.2 \\ 113.8 \\ 114.3 \\ 116.7 \\ 116.9 \end{array}$ | $\begin{array}{r} 39 \\ 54 \\ 50 \\ 296 \\ 314 \end{array}$ | e 18 e 18 e 18 e 18 | $\begin{array}{c} 27 \\ 31 \\ 11 \\ 37 \\ 32 \end{array}$ | [+1] $[+4]$ $[-18]$ $[+4]$ $[-1]$ | i 19 19 e 19 23 e 18 30 e 25 25 25 15 | PP PP PKP [+10] [- 1] | e 29 19 e 21 59 e 19 21 e 20 19 | PKKP PPP PP | e 57·1 |
| Tucson Boulder Granada Kirkland Lake Fayetteville | z. | 118.6 119.6 119.6 127.4 129.1 | $53 \\ 42 \\ 314 \\ 21 \\ 41$ | e 18 i 18 29 e 18 i 18 | 39 42 51 54 59k | [+ 2] $[+ 3]$ PS $[+ 1]$ $[+ 2]$ | e 19 57 26 57 e 21 8 | PP SKKS PP | e 29 57 41 3 e 22 14 | $\frac{PS}{SS}$ | 64·1 = |
| Shawinigan Falls Ottawa Buffalo (Larkin) Tacubaya Morgantown | | $131.1 \\ 131.3 \\ 132.4 \\ 132.9 \\ 134.5$ | 16 19 23 63 27 | e 19 e 19 e 19 | 2 5 5 - 57 | [+1] $[+4]$ $[+2]$ $[-10]$ | e 22 21 e 22 38 e 22 34 | SKP SKP SKP | e 22 50 | P <u>P</u> | |
| Halifax Palisades Chapel Hill Columbia Huancayo | z. | 134.9 135.8 138.0 138.4 156.8 | $^{20}_{29}_{33}_{122}$ | e 19 e 19 | 13 17 21 | [+ 2] $[+ 4]$ $[+ 3]$ $[+ 7]$ $[+ 5]$ | e 26 18 i 22 49 e 20 59 | [+10] SKP PKP ₂ | $\begin{array}{c} - \\ e & 21 & 54 \\ i & 22 & 10 \\ e & 22 & 6 \\ e & 20 & 40 \end{array}$ | PP PP PP, | e 63·2 |
| San Juan Chinchina La Paz | | $158.8 \\ 159.1 \\ 159.4$ | $^{30}_{76}$ 143 | i 20 i 19 19 | $\frac{25}{50}$ $\frac{50}{53}$ | pP' [+ 4] [+ 6] | i 20 44 i 30 55 | SKKS | e 24 6 i 20 31 | PP PKP ₂ | 65.8 |

June 14d. 8h. 56m. Epicentre 55°N. 110°E.
Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 75.

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June 14d. 12h. 12m. 19s. Epicentre 45°·2N. 150°·5E.

A = -.6153, B = +.3481, C = +.7072; $\delta = -10$; h = -2; D = +.492, E = +.870; G = -.615, H = +.348, K = -.707.

| 92 | | **** | | 9.0 | 9 | 1.0, 11 - + | 040, | x 101 | | |
|---|----------------|--|--|---|--|---|--|--|---|----------|
| and ARTON CONTROL (A) | | Δ | Az. | m. s. | 0 - C. | s. m. s. | O -C. | m. s. | pp. | L. m. |
| Nemuro Abashiri Kusiro Obihiro Asahigawa | z. | 4·0 4·6 4·9 5·7 6·0 | $\begin{array}{r} 244 \\ 257 \\ 246 \\ 249 \\ 259 \end{array}$ | e 1 29 | $ \begin{array}{r} -1 \\ +3 \\ 0 \\ +1 \\ +2 \end{array} $ | e 1 43 e 2 4 i 2 8 | - 9 - 3 - 7 | e = 17 | s <u>s</u> | |
| Urakawa Sapporo Tomakomai Muroran Mori | | 6 · 4 6 · 9 7 · 0 7 · 4 7 · 8 | $\begin{array}{r} 244 \\ 256 \\ 251 \\ 251 \\ 250 \\ \end{array}$ | e 1 37 e 1 46 e 1 45 e 1 53 e 1 58 | $\begin{array}{cccc} - & 1 \\ + & 1 \\ - & 1 \\ + & 0 \end{array}$ | e 2 44 e 3 2 e 3 10 3 15 | $ \begin{array}{r} -9 \\ -3 \\ -8 \\ -13 \end{array} $ | $\begin{array}{c} e & 1 & 47 \\ e & 3 & 11 \\ \hline & - & \\ e & 2 & 9 \end{array}$ | PP SS — PPP | e 3·1 |
| Hakodate Aomori Miyako Morioka Mizusawa | N. | 7.9 8.3 8.4 8.8 9.2 | $\begin{array}{c} 248 \\ 242 \\ 232 \\ 235 \\ 232 \end{array}$ | e 2 13 e 2 8 e 2 45 e 2 9 3 20 | $^{+14}_{+$ | i 3 25 e 3 25 i 3 36 i 3 46 | $-\frac{15}{18}$ $-\frac{17}{17}$ | | | |
| Akita Sendai Hukusima Onahama Shirakawa | N. | $9.4 \\ 9.9 \\ 10.6 \\ 10.9 \\ 11.2$ | $\begin{array}{c} 238 \\ 229 \\ 229 \\ 225 \\ 227 \end{array}$ | e 2 39 e 2 46 e 2 45 e 3 8 | $+\frac{21}{+21} \\ +\frac{21}{24}$ | 3 55 e 4 2 i 4 17 e 4 26 e 4 32 | $ \begin{array}{r} -12 \\ -18 \\ -20 \\ -18 \\ -20 \\ \end{array} $ | e 3 59 | - | |
| Utunomiya Kakioka Kumagaya Maebasi Tokyo | N. N. | 11.8 11.9 12.3 12.3 12.5 | 227 225 227 228 224 | e 3 13 e 2 58 e 5 1 | $+\frac{20}{4}$ | e 4 47 4 48 e 5 4 e 5 7 e 5 5 | $-19 \\ -21 \\ -14 \\ -11 \\ -18$ | | | |
| Matusiro Kohu College Rabaul Resolute | z. | $\substack{12.6 \\ 13.2 \\ 38.5 \\ 49.2 \\ 52.9}$ | $231 \\ 228 \\ 37 \\ 178 \\ 18$ | i 3 0 a e 3 28 i 7 27 e 8 49 e 9 19 a | $\begin{array}{c} -3 \\ PPP \\ +1 \\ -3 \\ -1 \end{array}$ | e 5 11 e 5 21 — | $-15 \\ -19 \\ -$ | i 3 17 i 7 42 i 9 10 | PP ? | e 29.6 |
| Dehra Dun Corvallis Shasta Hungry Horse Reno | z. z. | $57.3 \\ 58.1 \\ 60.9 \\ 61.2 \\ 63.2$ | $282 \\ 57 \\ 60 \\ 49 \\ 60$ | e 9 58 e 9 58 i 10 17 10 19 e 10 32 | + 6 0 0 0 | | | | | |
| Butte Lick Scoresby Sund Fresno Quetta | N. Z. Z. | $63.4 \\ 63.4 \\ 64.5 \\ 64.9 \\ 65.0$ | $\begin{array}{r} 51 \\ 63 \\ 357 \\ 62 \\ 288 \end{array}$ | i 10 34 e 10 33 e 10 36 e 10 44 e 10 43 | $ \begin{array}{r} 0 \\ - & 1 \\ - & 5 \\ + & 1 \\ - & 1 \end{array} $ | e 19 19 | | | | |
| King Ranch Woody Skalstugan China Lake Salt Lake City | z. z. | $65.8 \\ 66.2 \\ 66.7 \\ 66.9 \\ 67.2$ | $\begin{array}{r} 64 \\ 63 \\ 341 \\ 62 \\ 55 \end{array}$ | e 11 12 i 10 51 a i 10 52 a e 10 46 i 10 58 | PcP - 1 - 3 - 10 0 | i 11 0 | <u>?</u> | i 11 9 - e 11 13 | $\frac{\mathbf{P_{c}P}}{\mathbf{P_{c}P}}$ | |
| Upsala Boulder City Nouméa Barratt Rapid City | z. E. | 68·4 68·5 68·7 69·5 69·7 | 337 60 164 64 48 | i 11 3a i 11 5 e 10 17 e 11 8 i 11 14 | $ \begin{array}{r} $ | | | i 11 16 | PcP | |
| Boulder Brisbane Tucson Copenhagen Iasi | z. | $71 \cdot 4$ $72 \cdot 3$ $73 \cdot 4$ $73 \cdot 5$ $75 \cdot 2$ | $ \begin{array}{r} 52 \\ 178 \\ 61 \\ 337 \\ 324 \end{array} $ | e 11 25 i 11 49 e 11 36 i 12 12 a 11 46 | $^{+1}_{+20}_{0}_{0}_{+36}$ | | = | | | |
| Hamburg Kirkland Lake Witteveen Prague Jena | z. z. | 76·0 77·1 77·6 77·7 77·9 | $337 \\ 32 \\ 338 \\ 333 \\ 335$ | i 11 51 e 11 55 a i 12 0 i 11 59 e 12 0 | $ \begin{array}{r} 0 \\ 2 \\ 0 \\ - 1 \\ - 1 \end{array} $ | | = | i 12 19 e 12 22 | PcP PcP | |

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| | Δ | Az. | P. | o-c. | s. | O-C. | Su | pp. | L. |
|-------------------|--------------|-----|---------------|------|-------|-------|---------|-------------------|----|
| | 0 | 0 | m. s. | s. | m. s. | S. | m. s. | | m. |
| Bratislava | 78.5 | 330 | i 12 4 | 0 | - | | i 12 20 | $P_{c}P$ | |
| Rathfarnham C. z. | 79.9 | 346 | i 12 11a | - 1 | _ | _ | | | |
| Fayetteville | 80.2 | 48 | i 12 13k | 1 | | _ | _ | | - |
| Stuttgart | 80.5 | 335 | e 12 15 | O | - | _ | e 12 32 | $P_{\mathbf{c}}P$ | - |
| Ottawa | 81.0 | 31 | e 12 16a | - 2 | | _ | _ | _ | |
| Shawinigan Falls | 81.0 | 29 | i 12 17 a | - 1 | | 10000 | | | _ |
| Strasbourg | 81.1 | 336 | e 12 20 | + 2 | - | - | e 13 13 | 3 | _ |
| Brébeuf | 81.6 | 30 | i 12 21a | 0 | | _ | i 13 43 | 2 | _ |
| Triest | 81.8 | 331 | AVADA SANARAN | - | 19 41 | 9 | | - | _ |
| Paris | $82 \cdot 3$ | 339 | i 12 25 | 0 | - | - | i 12 42 | $P_{\mathbf{c}}P$ | = |
| Besancon | 82.8 | 336 | i 12 27 | 0 | | - | e 12 58 | 3 | |
| Jerusalem | 83.5 | 309 | i 12 33 | + 2 | - | - | | <u> </u> | - |
| Palisades | 85.4 | 32 | i 12 40 | ō | - | | - | - | |
| Monaco | 85.6 | 334 | e 12 40 | - 1 | _ | | - | _ | |
| Chapel Hill | 87.7 | 38 | i 12 51 | - 1 | - | - | - | - | - |

June 15d. 0h. 23m. Epicentre 36° 0N. 137° 6E. Unfelt. Depth of focus 240-260km. Seismo. Bull. Japan Met. Agency for June, 1956, pp. 15, 16.

June 16d. 1h. 29m. Epicentre 39°·0N. 70°·4E. Magnitude 4. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 49.

June 16d. 5h. 37m. Epicentre 55°N. 110°E. Loc. cit., 1h., p. 75.

June 16d. 6h. 19m. 28s. Epicentre 28°·3N. 131°·2E. Focus at Base of Superficial Layers.

Intensity IV at Nake; II-III at Yakusima and Miyazaki. Epicentre 28°·25N. 131°E. Depth 40-60km.

Seismo. Bull. of the Japan Met. Agency for June, 1956, Tokyo, 1956, pp. 16-18, with macroseismic chart p. 16.

> A = -.5808, B = +.6635, C = +.4716; $\delta = -3$; h = +2; D = +.752, E = +.659; G = -.311, H = +.355, K = -.882.

| Yakusima Kagosima Miyazaki Naha Kumamoto | | ∆ 2·2 3·3 3·6 3·8 4·5 | Az. 344 350 355 | P. m. s. i 0 35 a e 0 55 e 0 55 e 1 6 | O-C. s. 0 0 0 - 5 - 2 | S. m. s. i 1 3 e 1 27 1 37 e 1 35 1 57 | O-C. s. + 2 - 2 - 7 - 3 | m. s. | р. = = | L. m. 3·7 |
|---|----------|--------------------------------------|---|--|--|--|--|--|--------------|----------------------------------|
| Asosan Simidu Tomie Ooita Saga | E. N. | 4·6 4·7 4·8 4·9 5·0 | $359 \\ 18 \\ 335 \\ 4 \\ 351$ | 1 15 e 1 10 e 1 35 e 1 19 i 1 18k | $^{+\ 6}_{+\ 3}$ | e 1 58 e 2 1 i 2 11 i 2 13 | $ \begin{array}{r} - & 4 \\ - & 3 \\ - & 6 \\ + & 1 \\ + & 1 \end{array} $ | e 2 42 i 1 52 | <u>\$</u> | e 2:5 e 4:1 = |
| Hukuoka Koti Simonoseki Muroto Matuyama | z. | 5·6 5·6 5·6 5·7 | $353 \\ 20 \\ 358 \\ 27 \\ 13$ | 1 19 a e 1 22 e 1 32 e 1 18 e 1 24 | $ \begin{array}{c} 0 \\ 1 \\ + 9 \\ - 5 \\ 0 \end{array} $ | i 2 20 e 2 19 e 2 25 i 2 19 e 2 24 | - 8 - 8 - 8 - 6 | $\begin{array}{c} e \ \hline 2 \ 55 \\ \hline - \\ e \ 1 \ 54 \end{array}$ | 3 3 | e 3·5 |
| Hirosima Tokusima Siomisaki Takamatu Hamada | | 6·2 6·4 6·5 6·6 | $^{10}_{26}_{36}_{21}$ | e 1 29 e 1 34 e 1 35 e 1 34 e 1 37 | $ \begin{array}{cccc} & 3 & \\ & 0 & \\ & 1 & \\ & & 2 & \\ & & 0 & \\ \end{array} $ | e 2 34 e 2 42 e 2 33 e 2 43 2 49 | $ \begin{array}{r} -8 \\ -5 \\ -17 \\ -7 \\ -3 \end{array} $ | e 3 11 | = = ss | e 3·9 e 3·6 e 5·1 e 3·8 |
| Sumoto Kobe Owase Osaka Yonago | N. | $6.8 \\ 7.2 \\ 7.2 \\ 7.3 \\ 7.4$ | $\begin{array}{c} 27 \\ 27 \\ 35 \\ 29 \\ 14 \end{array}$ | 1 38 e 1 45 e 1 44 e 1 52 e 2 45 | $ \begin{array}{ccccccccccccccccccccccccccccccccccc$ | e 2 51 e 3 39 e 3 1 e 3 20 | $-64 \\ +32 \\ -64 \\ +10$ | $\begin{array}{c} - \\ - \\ 3 \\ 45 \\ e \\ 4 \\ 46 \end{array}$ | SS 3 | e 4·9 |

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| 1956 | | | | | 292 | | | | | |
|---|----|--|--|--|--|---|----------------------------------|--|-----------------------------------|----------------------------------|
| Nara Tottori Kyoto Toyooka Kameyama | N. | ↑.5 7.5 7.6 7.7 7.8 7.9 | $\frac{29}{22}$ | P. m. s. i 1 50 e 1 52 e 1 52 e 1 54 e 1 56 | O-C. + 1 - 0 + 1 | S. m. s. e 3 19 e 3 20 e 3 22 | O-C. s. + 4 - 1 - 2 - 3 | e 3 15 | ipp. | L. m. e 4·6 e 4·7 |
| Tu Saigo Hikone Torisima Ibukisan | N. | 7·9 8·1 8·2 8·3 | 34 12 30 72 | e 1 56 e 2 43 1 59 e 2 0 i 1 59 | $^{+}_{+45}^{1}_{-10}^{-1}_{0}$ | e 3 46 e 3 26 e 4 9 | $+\frac{16}{6}$ | e 2 12 e 2 6 | PP PP | e 6·2 e 4·2 |
| Nagoya Tsuruga Gihu Omacsaki Hukui | E. | 8·4 8·5 8·7 8·8 | $\frac{34}{28}$ $\frac{32}{42}$ $\frac{42}{28}$ | $\begin{array}{cccc} \mathbf{e} & 1 & 52 \\ 2 & 0 \\ \mathbf{e} & 2 & 4 \\ \mathbf{e} & 2 & 6 \\ \mathbf{e} & 2 & 7 \end{array}$ | $ \begin{array}{r} -10 \\ -2 \\ 0 \\ 0 \\ -1 \end{array} $ | e 3 34 i 3 33 e 3 34 e 4 26 | $-{3\atop -}{4\atop 6}$ | e 5 33 e 2 16 i 4 58 | PP | 4·3 — |
| Shizuoka Iida Taipei Zô-Sè Misima | | 9·0 9·1 9·2 9·5 | $\begin{array}{r} 41 \\ 36 \\ 252 \\ 290 \\ 42 \end{array}$ | e 2 10 e 2 12 e 2 26 i 2 10 a e 2 13 | $ \begin{array}{r} $ | e 4 13 i 3 59 e 4 36 | $\frac{ss}{-} \\ + \frac{2}{32}$ | | | |
| Osima Hunatu Kohu Matumoto Toyama | E. | 9·6 9·6 9·8 9·8 | $\frac{45}{40} \\ 39 \\ 34 \\ 30$ | e 2 16 e 2 24 e 2 18 e 2 22 e 2 32 | $^{-\ 2}_{+\ 5}_{-\ 1}_{0}$ | $\begin{array}{c} {\bf e} \ {f 4} \ {f 25} \\ {f e} \ {f 4} \ {f 29} \end{array}$ | $+\frac{11}{17}$ | | | e 4·8 e 6·5 e 5·5 e 6·6 |
| Mera Matusiro Oiwake Yokohama Nagano | | $9.9 \\ 10.1 \\ 10.1 \\ 10.1 \\ 10.2$ | $\begin{array}{r} 46 \\ 34 \\ 36 \\ 43 \\ 34 \end{array}$ | e 2 28 e 2 24 e 2 22 e 2 30 e 2 35 | $^{+}$ 5 $^{-}$ 2 $^{+}$ 4 $^{+}$ 8 | $\begin{array}{c} - \\ e & 4 & 28 \\ \hline e & 4 & 31 \\ e & 4 & 47 \end{array}$ | $+\frac{9}{12} \\ +25$ | $\begin{array}{c} { m e} \ {4} \ {56} \\ { m i} \ {2} \ {38} \\ { m e} \ {4} \ {44} \end{array}$ | $\frac{\mathbf{PP}}{\mathbf{SS}}$ | i 5·1 e 6·0 e 5·7 |
| Titibu Taichung Tokyo Kumagaya Maebasi | | $10.2 \\ 10.3 \\ 10.3 \\ 10.4 \\ 10.5$ | $^{39}_{249}_{42}_{39}_{37}$ | e 2 31 e 2 54 e 2 33 e 2 31 e 2 31k | $^{+}_{+}^{4}_{5}_{+}^{+}_{5}_{0}$ | $\frac{-}{e}\frac{-}{4}$ | $+\frac{-}{3} + \frac{3}{13}$ | = = e 2 59 | - - - - 3 | e 6·0 e 5·9 |
| Utunomiya Nanking Niigata Shirakawa Onahama | | 11.6 11.6 11.6 11.9 | $^{39}_{292} \\ ^{32}_{38} \\ ^{41}$ | e 2 37 i 2 41 a e 3 1 e 2 48 e 2 52 | $^{-}_{\mathrm{PP}}^{1}_{+}^{2}_{2}$ | i 4 52 e 5 4 e 5 1 | + 1 + 8 + 5 | | | e 7·0 |
| Hukusima Yamagata Sakata Sendai Futzeling | | $12.2 \\ 12.5 \\ 12.8 \\ 12.8 \\ 13.3$ | $\frac{37}{35}$ $\frac{32}{37}$ $\frac{37}{287}$ | e 2 58 e 3 3 e 3 16 e 3 5 e 3 6 | + 4 + 5 PP + 3 - 3 | e 5 55 | +30 | | | e 8·5 |
| Akita Mizusawa Morioka Aomori Baguio | | $13.6 \\ 13.6 \\ 14.0 \\ 14.8 \\ 15.4$ | $\begin{array}{r} 31 \\ 35 \\ 33 \\ 30 \\ 222 \end{array}$ | e 3 21 3 17 e 3 3 e 3 50 i 3 35 | + 8 + 4 -15 PPP - 1 | $ \begin{array}{c} 5 & 50 \\ 5 & 49 \\ 6 & 1 \\ \hline 1 & 6 & 35 \end{array} $ | $^{+}_{+}^{6}_{5}_{+}_{-}_{8}$ | e 3 51 = | <u>?</u> | e 8·5 e 6·7 |
| Mori Changchun Hong Kong Manila Urakawa | | $15.7 \\ 16.2 \\ 16.5 \\ 16.6 \\ 16.7$ | $ \begin{array}{r} 26 \\ 345 \\ 253 \\ 217 \\ 31 \end{array} $ | e 3 46 3 47 e 3 52k i 3 52 e 4 3 | $^{+}_{0}^{6} \\ _{+}^{0} \\ _{10}^{0}$ | e 6 44 e 6 50 e 7 5? i 7 11 e 6 48 | $^{+11}_{+5}_{+13}_{+17}$ | e 4 7 | sss | 11.5 |
| Sapporo Peking Harbin Taiyuan Tatung | | $16.9 \\ 17.1 \\ 17.8 \\ 18.2 \\ 18.9$ | $\begin{array}{c} 26 \\ 317 \\ 349 \\ 306 \\ 313 \end{array}$ | e 4 15 e 3 57 e 4 15 e 4 14 e 4 21 | PP - 1 + 8 + 2 + 1 | e 7 37 = | sss | | | |
| Yumenkow Shenchow Sian Paotow Wuwei | | $18.9 \\ 19.1 \\ 19.9 \\ 21.3 \\ 25.7$ | $298 \\ 295 \\ 293 \\ 311 \\ 299$ | e 4 19 4 14 4 37 e 4 52 e 5 28 | $ \begin{array}{r} - & 1 \\ - & 9 \\ + & 6 \\ + & 6 \\ - & 1 \end{array} $ | = 8 11 = | + 3 | | | |

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| | | Δ | Az. | P. m. s. | O – C. | $_{ m m. \ s.}^{ m S.}$ | o – c. | m. s. | app. | L. m. |
|--|----------------|--|---|---|---|---|---|---|---|----------------------------------|
| Shillong Bokaro Lembang Dehra Dun Hyderabad | | 35·1 40·8 41·7 46·0 49·5 | $275 \\ 274 \\ 217 \\ 286$ | e 6 51 e 7 42 e 7 45k | $-\frac{1}{2} \\ -\frac{2}{46}$ | i 12 18 i 13 46 e 14 3 e 15 2 i 15 53 | - 4 - 2 + 2 - 0 | 13 46 = | Q = = | 16.3 |
| Madras Poona Bombay Quetta Brisbane | Е | . 49·8 53·1 53·9 55·4 59·3 | 263 273 274 289 157 | i 9 17 e 9 32 | $ \begin{array}{r} - 1 \\ + 10 \\ + 10 \\ - 3 \end{array} $ | i 16 0 e 16 43 e 17 2 e 17 15 | $^{+}_{$ | i 9 42 i 10 20 | pP sP | |
| College Riverview Kiruna Resolute Skalstugan | | $61.0 \\ 64.6 \\ 71.5 \\ 73.0 \\ 76.6$ | $^{29}_{162}_{338}_{12}$ | i 10 37 a i 11 17 i 11 26 k | $\begin{array}{cccc} - & 3 \\ + & 1 \\ - & 2 \\ - & 2 \\ - & 2 \end{array}$ | e 18 31 19 17 e 20 34 e 20 56 | $^{+}_{+}^{4}_{5}$ $^{+}_{-}^{0}$ | e 26 10 i 11 28 e 15 58 i 11 59 | $\begin{array}{c} \mathbf{SSS} \\ \mathbf{pP} \\ \mathbf{PPP} \\ \mathbf{pP} \end{array}$ | e 28·9 |
| Upsala Iasi Ksara Warsaw Scoresby Sund | | $76.8 \\ 78.3 \\ 78.9 \\ 79.4 \\ 79.7$ | $332 \\ 317 \\ 302 \\ 324 \\ 351$ | i 11 47 12 7 i 12 2 e 20 8 i 12 4 | - 3 + 9 - 2 | e 21 32 e 22 6 e 22 6 | $-\frac{2}{+10} + \frac{1}{1}$ | i 11 57 e 15 8 i 12 16 | PP PP pP | e 41·5 37·5 |
| Jerusalem Bucharest Copenhagen Timisoara Budapest | | $80.3 \\ 80.5 \\ 81.5 \\ 82.8 \\ 83.0$ | $301 \\ 315 \\ 330 \\ 318 \\ 321$ | i 12 9 12 10 e 12 15 e 12 26 | $_{-\ \ 1}^{0} \\ _{+\ -1}^{0}$ | 22 18 e 22 30 e 22 32? e 28 42 | + 5 + 7 - 5 SS | i 12 22 e 12 38 e 22 35 e 12 36 e 44 32 | $_{\substack{\text{sP}\\\text{sKS}\\\text{pP}\\\text{Q}}}^{\mathbf{pP}}$ | 43·5 41·5 e 52·0 e 45·5 |
| Shasta Belgrade Hamburg Hungry Horse Mineral | z. | $83.8 \\ 83.9 \\ 84.0$ | $\begin{array}{r} 47 \\ 318 \\ 329 \\ 38 \\ 47 \end{array}$ | i 12 24 e 12 28 a i 12 27 i 12 28 e 12 26 | $ \begin{array}{r} $ | e 22 50 e 22 49 | + 3 + 1 | e 12 40 | p <u>P</u> | e 52·9 e 42·5 |
| Jena Lick Reno Witteveen Aberdeen | z. z. z. | 85.6 | $\begin{array}{r} 326 \\ 50 \\ 47 \\ 330 \\ 337 \end{array}$ | e 12 33 i 12 47 e 12 35 e 12 37 e 23 52 | $^{+11}_{-11}$ - 1 | e 15 55 i 23 8 | PP — — — 2 | e 12 42 e 12 48 e 23 37 | pP | e 43·7 |
| Butte De Bilt Triest Bozeman Stuttgart | N. | $86.2 \\ 87.1 \\ 87.1 \\ 87.2 \\ 87.4$ | $\begin{array}{r} 39 \\ 330 \\ 321 \\ 38 \\ 326 \end{array}$ | i 12 40 e 12 42 i 12 45 e 12 43 | $^{+}_{-}_{\stackrel{1}{2}}^{1}$ | e 23 5 e 24 12 e 24 27 e 23 12 | $\begin{bmatrix} -5 \\ \text{SP} \\ \text{PS} \\ -5 \end{bmatrix}$ | i 12 53 e 16 8 e 25 0 i 12 57 e 16 26 | $\begin{array}{c} \mathbf{pP} \\ \mathbf{PP} \\ \mathbf{PPS} \\ \mathbf{pP} \\ \mathbf{PP} \end{array}$ | e 38.6 e 43.5 42.7 |
| King Ranch Eureka Tinemaha Taranto Strasbourg | z. z. | $87.9 \\ 88.0 \\ 88.0 \\ 88.2 \\ 88.3$ | 51 46 48 316 326 | e 12 50 i 12 48 i 12 47 e 21 49 e 12 51a | $^{+}_{0}^{3}_{1}^{0}_{+}^{2}$ | e 23 17 | = = [+ 4] | e 13 1 i 12 59 = e 16 21 | $\frac{\mathbf{pP}}{\mathbf{PP}}$ | 35·5 e 44·5 |
| Woody Uccle Isabella China Lake Florence | z. z. | 88·3 88·4 88·6 89·1 | $\begin{array}{r} 50 \\ 330 \\ 50 \\ 49 \\ 321 \end{array}$ | i 12 49 e 12 49 i 12 49 e 12 54 e 13 2 | $ \begin{array}{c} 0 \\ - \\ - \\ 2 \\ + \\ + \\ 6 \end{array} $ | e 23 17 e 23 51 | [+ 3] + 9 | 16 22 - e 16 35 | PP — PP | e 42·5 e 43·5 |
| Pasadena Kew Rome Messina Paris | | 89·7 89·9 90·1 90·6 90·6 | $\begin{array}{r} 51 \\ 332 \\ 319 \\ 315 \\ 329 \end{array}$ | i 12 53 e 12 56 e 12 59 e 13 2 i 13 0 | $\begin{array}{cccc} - & 3 & & & & \\ - & 1 & & & \\ + & 1 & & & \\ + & 2 & & & \\ 0 & & & & \end{array}$ | i 23 50 e 23 40 e 23 23 e 23 53 i 23 58 | $\begin{array}{c} + & 7 \\ - & 5 \\ [-1] \\ + & 2 \\ + & 7 \end{array}$ | i 29 54 e 24 49 e 16 36 e 23 30 e 23 34 | SS PS PP SKS SKS | i 41·1 e 43·5 = 41·5 |
| Boulder City Rathfarnham C. Clermont-Ferran Rapid City Boulder | z. d E. | $90.8 \\ 90.8 \\ 92.5 \\ 92.5 \\ 94.1$ | $\frac{336}{326} \\ 35$ | e 13 0 i 12 58 e 16 52 i 13 9 e 13 17 | $\begin{array}{ccc} - & 1 & & & \\ - & 3 & & & \\ - & & 3 & & \\ + & & 0 & & \\ + & & 1 & & \end{array}$ | e 25 25 | _ Ps | e 30 32 | ss | |
| Tucson Algiers Univ. Alicante Toledo Tamanrasset | z. z. | 95·7 99·0 99·8 100·4 107·0 | $\frac{320}{323}$ $\frac{327}{327}$ | e 13 24 e 17 40 13 39 e 22 17 e 17 24 | $\Pr_{\frac{9}{2}}^{0}$ | 25 8 e 18 41 | $-\frac{-2}{PP}$ | e 13 36 17 44 e 21 4 | $\frac{pP}{PP}$ | e 47·3 56·5 |
| Palisades Huancayo | z. | $107.2 \\ 150.4$ | 20 | e 19 46 [| + 3] | | + 71 | e 20 40 | 3 | e 60·8 |

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June 16d. 16h. 57m. Epicentre 15°50'N. 92°50'W. Depth of focus 200km. Seismo. Bull. of National University of Mexico, Tacubaya, p. 5.

June 16d. 18h. 12m. Epicentre 32°.0S. 178°.8W. Magnitude 5. N.Z. Seismo. Report for 1956, No. E-137, New Zealand Department of Scientific and Industrial Research, Geophysics Division, Wellington, 1960, p. 42.

June 16d. 18h. 31m. } Epicentre 31°·8S. 178°·4W. Magnitude 5·2-5·5. Loc. cit., 18h. 12m., pp. 42, 43.

June 17d. 3h. 1m. 33s. Epicentre 32°.0S. 179°.5W. Depth of focus 0.020.

A = -.8496, B = -.0074, C = -.5273; $\delta = -8$; h = +1; D = -.009, E = +1.000; G = +.527, H = +.005, K = -.850.

| | | Δ | Az. | | . | o-c. | s. | 0 -C. | Sı | ipp. | L. |
|---|----------------------|--|---|--------------------------------------|----------------------------------|--|---|---|-------------------------------|------------------|--------------|
| Onerahi Auckland Karapiro Tuai Wellington | E. N. N. | 6·8 7·2 7·3 | 232 223 213 201 205 | e 1 1 | 8. 36 39 45 43 18 | *** + 4 + 1 + 2 - 6 | m. s. e 2 50 2 57 e 3 0 3 1 i 4 12 | $ \begin{array}{c} **. \\ + & 7 \\ + & 2 \\ - & 4 \\ - & 6 \\ - & 6 \end{array} $ | m. s. | | m. = = |
| Cobb River Kaimata Nouméa Apia Brisbane | E. N.E. | $11.0 \\ 12.7 \\ 15.8 \\ 19.5 \\ 24.3$ | $212 \\ 212 \\ 304 \\ 23 \\ 274$ | e 2 i 3 e 4 i 5 | 36 55 35 k 14 4 | $^{+}_{-}\overset{2}{\overset{1}{\overset{0}{0}}}_{0}$ | 4 25 5 3 e 6 33 e 7 30 i 9 9 | $egin{array}{c} - & 9 \\ -11 \\ + & 8 \\ -13 \\ + & 1 \end{array}$ | i = 47 | PP | e 7·3 |
| Riverview Melbourne Rabaul Matusiro King Ranch | E. Z. | $24.7 \\ 29.6 \\ 38.4 \\ 78.8 \\ 87.4$ | $\begin{array}{c} 258 \\ 249 \\ 310 \\ 326 \\ 45 \end{array}$ | | 50 4 a 43 | $\begin{array}{cccc} - & 2 \\ - & 2 \\ - & 3 \\ - & 3 \\ + & 1 \end{array}$ | e 10 38 i 7 12 e 21 2 | + 1 + 4 P ? | i 5 51 i 7 18 | P | |
| Pasadena Berkeley Lick Palomar Riverside | z. z. z. | 87·5 87·6 87·8 87·9 | 47 42 42 48 47 | i 12 i 12 i 12 i 12 i 12 | 34 31 30 33 31 | $\begin{array}{cccc} + & 3 & \\ - & 0 & \\ + & 1 & \\ - & 2 & \end{array}$ | | = | | | |
| Woody Fresno Isabella China Lake Tinemaha | z. z. z. z. | 88·3 88·3 89·0 89·4 | 45 44 46 46 44 | i 12 e 12 | 34 34 34 38 40 | 0 0 0 0 | | | i 13 22 e 13 22 e 13 27 | pP pP | |
| Shasta Mineral Boulder City Eureka Hungry Horse | z. z. | $89.5 \\ 89.7 \\ 90.8 \\ 92.4 \\ 99.1$ | 40 40 47 44 38 | e 12 i 12 | 41 40 47 51 13 | $^{+}_{-}{}^{1}_{3}$ | | | i 13 55 | = s <u>P</u> | |
| Dehra Dun Kirkland Lake Resolute Shawinigan Fall Quetta | z. | 115.1 119.0 119.2 123.4 123.9 | $291 \\ 49 \\ 18 \\ 52 \\ 287$ | e 18 e 18 e 18 | 34 28 26 k 37 a 51 a | PP [- 2] [- 4] [- 1] [-48] | i 19 11 | 3 | | | |
| Seven Falls Reykjavik Skalstugan Upsala Jerusalem | | $\substack{124.8 \\ 145.0 \\ 147.6 \\ 149.9 \\ 150.6}$ | $\begin{array}{r} 52 \\ 17 \\ 350 \\ 343 \\ 279 \end{array}$ | i 19 i 19 i 19 | 40 17 21 27 31 | $\begin{bmatrix} - & 1 \\ - & 1 \end{bmatrix}$ $\begin{bmatrix} - & 2 \\ - & 2 \end{bmatrix}$ $\begin{bmatrix} + & 1 \\ + & 4 \end{bmatrix}$ | i 22 41 i 19 34 | SKP PKP | i 20 25 | p P' | |
| Iasi Hamburg Rathfarnham C. Prague Jena | | 154.4 157.4 158.2 159.2 159.4 | $314 \\ 345 \\ 11 \\ 334 \\ 340$ | i 20 | 55 8 42 16 36 | PKP ₂ PKP ₃ [+ 4] PKP ₃ [- 3] | e 21 6 | <u>-</u> | e 20 14 e 20 15 | PKP ₂ | |

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| | | Δ | Az. | I | ٠. | O-C. | s. | O-C. | Su | pp. | L. |
|-------------|----|-------|-----|------|------|--------|---------|----------|---------|-----|-------|
| | | a . | 0 | m. | S. | 8. | m. s. | 5. | m. s. | | m. |
| Bratislava | | 159.6 | 327 | i 19 | 38 | [-1] | - | _ | i 20 17 | pP' | |
| Stuttgart | | 162.0 | 341 | e 19 | 39 | [-3] | - | - | e 20 27 | pP' | |
| Strasbourg | | 162.6 | 344 | e 20 | 32 | pP' | | · marine | | | 0.000 |
| Paris | | 163.2 | 356 | i 20 | 31 | pP' | _ | 400 | e 20 57 | 3 | - |
| Tamanrasset | z. | 169.8 | 207 | e 19 | 48 | [0] | | - | | | |
| Granada | | 173.8 | 32 | e 21 | 14 a | PKP. | e 32 26 | SKKS | e 48 59 | 2 | |
| Relizane | | 176.3 | | e 19 | | 1 + 21 | ~ ~ | ~~~~ | ~ ~~ ~~ | | |

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June 18d. 4h. 13m. Epicentre 33°·25S. 179°·75W. Magnitude 5·4. New Zealand Scismo. Report for 1956, Bull. E-137, Department of Scientific and Industrial Research, Geophysics Division, Wellington, 1960, pp. 43, 44.

June 18d. 22h. 39m. Epicentre 42°·1N. 46°·6E. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 18.

June 19d. 0h. 18m. 56s. Epicentre 5° 9S. 103° 9E.

$$A = -.2390$$
, $B = +.9656$, $C = -.1021$; $\delta = -7$; $h = +7$; $D = +.971$, $E = +.240$; $G = +.025$, $H = -.099$, $K = -.995$.

| | ÷ | | 1.7 | | | 3 11 5 | | 000, 1 | | 1. S | |
|------------------|-----------|--|-------------|--|---|--|-------------|----------|----------------|--------------------|-------------------------|
| | | Δ | Az. | 1 | Ρ. | 0 - C. | s. | O-C. | Sı | ipp. | L. |
| | | | 0 | m. | | s. | m. s. | s. | m. s. | - Arabana | m. |
| Djakarta | | 3.0 | 96 | e 0 | UNDUN | 0 | e 1 20 | _ 7 | e 1 32 | SS | e 1·7 |
| Lembang | Z. | ************************************** | 104 | e i | ő | - ĭ | 0 1 20 | | | 1212 | 61.1 |
| Baguio | 555 | 27.7 | 36 | ĭ 5 | 4 (4.7) | -18 | i 10 56 | +23 | | | |
| Shillong | Z. | [III] [Inches 7.57] | 340 | i 6 | F 1 2 2 1 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 | 444 | i 10 56 | + 23 | | | - |
| Chatra | | | | 100000000000000000000000000000000000000 | | 0 | 1 To 1 | | | | |
| Chatla | Z. | 90.9 | 334 | e 7 | 9 | + 2 | 200 | _ | _ | | _ |
| Melbourne | | 49.0 | 190 | | | | . 10 00 | 00 | | | VALUE NAME AND ADDRESS. |
| | | 4 CT 10 CT 1 | 136 | - 0 | 7.0 | 7.0 | e 19 38 | SS | 2 T 44 | _ | e 24·1 |
| Quetta | | 50.4 | 318 | e 9 | | +12 | e 16 36 | +22 | e 7 46 | 3 | |
| Brisbane | 175520 | 51.3 | 121 | i 9 | | +13 | - | | - | | |
| Riverview | z. | | 129 | i 9 | 52 a | +40 | - | - | · · | - | |
| Matusiro | | 53.1 | 35 | i 9 | 18k | - 3 | e 16 45 | - 6 | e 9 41 | 3 | e 21·2 |
| Namangan | | $55 \cdot 2$ | 331 | 9 | 38 | + 1 | | | | - | |
| Tananarive | | 56.3 | 251 | ğ | 42 | - 3 | | | 923 | | |
| Tiflis | | 71.6 | 317 | ıĭ | 26 | + 1 | 20 44 | -0 | | - | |
| Jerusalem | | 75.2 | 305 | 1 77 | | | 20 44 | 0 | | \$ = \$ | |
| Ksara | | | | 1 11 | 17 | -29 | _ | - | | | 1220 |
| Ksara | | 75.3 | 307 | i 11 | 49 a | + 2 | | 1 | | - | $33 \cdot 1$ |
| Simferopol | | 80.1 | 317 | 19 | 13 | 0 | 22 13 | | 7. See 1877 | | |
| Moscow | | 81.8 | 328 | e 12 | 22 | Ä | 22 13 | - 5 | (I | | |
| Lwow | | 87.9 | 320 | 12 | Charles Control | V. | | | _ | _ | - |
| Kiruna | | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | 53 | ŏ | | _ | | - | - |
| | | 92.9 | 338 | i 13 | 16 | Ö | | _ | _ | • | \equiv |
| Upsala | | $93 \cdot 2$ | 330 | i 13 | 17 | 0 | | | - | - | _ |
| Skalstugan | | 95.9 | 333 | i 13 | 31 | + 1 | 11.000 | 1520000 | P4000031 | 21-25 | Sc-Sc |
| College | | 103.0 | 25 | i 18 | Company of the Company | PP | - | _ | - | - | |
| Hungry Horse | | 126.8 | 31 | Control of the Contro | 15 | and the first transfer of the first transfer | | - | _ | | 5 _8 |
| Dogomor. | | The second secon | 2.300 | e 19 | 6 | [0] | - | _ | - | | |
| Bozeman | or agents | 130.1 | 32 | e 19 | 12 | [0] | | ***** | e 19 28 | 8 | 7000 |
| Tinemaha | Z. | 130.7 | 45 | e 22 | 36 | PKS | - | - | _ | _ | _ |
| Woody | | 130.8 | 47 | i 22 | 36 | PKS | 822 | 70.00 | 71 <u>—</u> 84 | 955 | |
| Eureka | Z. | 131.0 | 41 | i 19 | 15 | Company of the Compan | i 22 57 | DIZE | 0 91 90 | DD | |
| Isabella | | 131.1 | 1775.7786.7 | | | | 1 22 31 | PKS | e 21 26 | \mathbf{PP} | |
| China Lake | z. | | 47 | | 38 | PKS | | _ | - | _ | |
| | z. | 131.7 | 46 | e 22 | | PKS | - | _ | - | - | - |
| Pasadena | | 132.0 | 48 | e 23 | 2 | PKS | 2. (1) | _ | | _ | - |
| Riverside | z. | 132.7 | 48 | e 23 | 4 | PKS | | | | | |
| Tucson | :500 | 138.3 | 46 | e 19 | 52 | | | | | | |
| Shawinigan Falls | 2 | 139.4 | 356 | | 31 | [+25] | | | | | |
| Palisades | 2 | | | e 19 | 100 | [+ 2] | | - | | 95,950,05 | |
| | | 145.0 | 357 | i 19 | 37 | [-2] | _ | - | i 19 53 | | e 77·9 |
| Morgantown | | $146 \cdot 2$ | 5 | i 19 | 42 | [+1] | | - | i 19 58 | PKP ₂ | |
| Chapel Hill | | 150.0 | 5 | i 19 | 53 | f 1 61 | G | V_401011 | : 00 0 | DED | |
| Columbia | | 151.7 | ŏ | | | [+ 6] | | 200 | i 20 8 | PKP ₂ | - |
| Columbia | | TOT.1 | J | e 19 | 57 | [+7] | - | - | e 20 12 | PKP ₂ | (- 111 |

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June 19d. 17h. 6m. 28s. Epicentre 35°·3N. 133°·7E. Depth of focus 20km. Intensity V at Tottori; IV at Yonago and Saigo; II-III at Sakai, Okayama, and Kure. Seismo. Bull. Japan Met. Agency for June, 1956, Tokyo, 1956, pp. 18, 19, with chart of macroseismic intensities.

June 21d. 19h. 40m. Epicentre 5°S. 120°E. Magnitude 5.7. Seismo. Bull. of China for 1956, Peking, China, p. 17.

June 22d. 0h. 47m. Epicentre 38°·5N. 33°·5E. Magnitude 4. Seismo. Institute Bull. for 1956, National Observatory of Athens, 1957, p. 10.

June 22d. 6h. 45m. Epicentre 35°·7N. 56°·6E. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 72.

June 22d. 6h. 44m. Epicentre 35°·7N. 56°·6E. Loc. cit., 18d. 22h., p. 72.

June 23d. 2h. 18m. 1s. Epicentre 56°·3N. 163°·7E.

A = -.5351, B = +.1565, C = +.8302; $\delta = +6$; h = -8; D = +.281, E = +.960; G = -.797, H = +.233, K = -.557.

| 302 | | | | 3세 4층 내 공격되었다 | | |
|-----------------------|--|--|----------------|---|--|---------|
| | \triangle Az. | Ρ. | O-C. | S. $O-C$. | Supp. | L. |
| | | m. s. | s. | m. s. s. | m. s. | m. |
| Klyuchi | 1.6 271 | i 0 30 | 0 | | | |
| | | | . , | 1050 - 1 | : 1 00 ~D | 8 |
| Petropavlovsk | 4.3 224 | i 1 12 | + 4 | i 2 0 0 | i 1 22 sP | - |
| Magadan | 7.6 301 | i 1 56 | + 1 | | i 2 6 P* | 3.77 |
| Kurilsk | 14.9 228 | and the control of th | - 1 | | | - |
| Uglegorsk | 14.9 250 | i 3 36 | + 2 | i 6 27 + 7 | i 3 52 PP | |
| Yuzno-Sakhlinsk | 16.0 243 | i 3 48 | 0 | i 6 46 0 | i 3 58 SP | 0-1-004 |
| Unalaska | 17.1 86 | | - ĭ | e 7 25 +13 | 10 00 01 | |
| Abashiri | 17.4 232 | | | | | 0.1 |
| | The state of the s | e 4 2 | - 4 | e 7 43 + 24 | _ | e 9·1 |
| Nemuro | The state of the s | e 4 1 | - 5 | e 7 46 + 27 | | e 9·3 |
| Wakkanai N. | 17.6 241 | e 4 14 | + 6 | e 7 59 + 36 | e 7 19 S | e 9·5 |
| Kusiro | 18.2 231 | e 4 18 | + 2 | e 8 16 SS | | e 9·6 |
| Asahigawa | 18.5 236 | e 4 20 | $+$ $\bar{1}$ | | | |
| | 18.8 233 | e 4 20 | <u>– ā</u> | | | |
| Obihiro E. Sapporo | 19.5 237 | i 4 25 | ~ | and and | e 5 9 PP | e 10·2 |
| Urakawa | 19.6 232 | e 4 31 | - 6 - 1 | e 7 57 -11 | e 4 41 PP | e 9 · 2 |
| Ciakawa | 10 0 202 | 6 4 31 | | e 7 57 -11 | G 4 41 LL | 6 9 2 |
| Tomakomai | 19.8 235 | e 4 30 | - 5 | e 8 9 - 4 | | e 11.6 |
| Muroran | 20.2 236 | e 4 37 | - 2 | | | |
| Mori | 20.6 236 | 4 42 | - 1 | $8 \ 30 \ + 1$ | e 5 1 PP | 10.3 |
| Hakodate | 20.8 235 | e 4 46 | + 1 | | | |
| Tiksi | 21.2 330 | i 4 50 | + Î | i 8 44 + 3 | i 8 51 PcP | • |
| | anner vet anema | | 5.582 ± | | 1001 | -55000 |
| Hatinohe | 21.4 232 | e 4 44 | - 7 | e 8 39 - 6 | | ***** |
| Aomori | 21.5 234 | e 5 2 | +10 | | | e 11.5 |
| Miyako | 22.0 230 | e 4 56 | - 2 | e 8 55 - 1 | 10 50 Q | 12.4 |
| Morioka | 22.3 231 | e 5 0 | - ī | $\hat{\mathbf{e}} \hat{\mathbf{g}} \hat{0} - \hat{2}$ | | e 10-6 |
| Akita | 22.7 233 | e 5 5 | + î | e 9 14 + 5 | | 11.5 |
| 1 LILIE CO | | | | 0011 | , | 44.0 |
| Mizusawa | 22.8 230 | 5 4 | - 1 | 9 13 + 2 | | |
| Sendai | 23.6 230 | i 5 13a | Ō | e 9 31 + 6 | e 5 40 PP | e 11.7 |
| Yamagata | 23.8 231 | 5 12 | - 3 | e 9 25 - 3 | e 7 1 3 | e 13.5 |
| Hukusima | 24.2 230 | 5 19 | ŏ | $9 \ \tilde{42} + 7$ | | 14.0 |
| Vladivostok | 24.2 250 | e 5 16 | - 3 | 0 12 | | 120 |
| Tadi Vostok | 41 2 200 | 0 0 10 | - 3 | | | |
| College | 24.7 50 | i 5 25 | + 1 | i 9 45 + 1 | i 6 1 PP | e 10.8 |
| Niigata | 24.7 232 | e 5 25 | + 1 | | e 10 36 SS | e 12·0 |
| Onahama | 24.7 228 | i 5 22 | - 2 | 1925-19 | 1000 - 10 | |
| Shirakawa | 24.8 229 | e 5 24 | - 1 | e 9 52 + 6 | e 6 13 PP | |
| Mito | 25.4 228 | e 5 30 | $-\frac{1}{1}$ | | | |
| W.550.55.500 | A01001-000 3.003-003-003 | 57-050 G G G 551 S | 7.7 | | | |

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| | | Δ | Az. | P. | O-C. | | O-C. | | pp. | L. |
|---|----------|--|--|---|--|--|---|---|-----------------|--------------------------------------|
| Utunomiya Kakioka Macbasi Kumagaya Nagano | E. | $25.5 \\ 25.6 \\ 25.9 \\ 26.0 \\ 26.1$ | | m. s. e 5 31 e 5 32 i 5 35 a 5 36 e 5 38 | *** - 1 0 0 0 + 1 | e 10 3 e 9 53 e 10 14 e 9 59 e 10 15 | *** + 6 - 6 + 10 - 7 + 8 | e 5 57 e 6 24 e 6 43 | PP PP | m. 13·9 e 14·9 e 12·8 |
| Matusiro Oiwake Titibu Tokyo Toyama | | 26·2 26·3 26·3 26·5 | $232 \\ 231 \\ 230 \\ 228 \\ 234$ | i 5 36 e 5 37 e 5 39 e 5 39 e 5 38 | $-\begin{array}{c} - & 2 \\ - & 1 \\ 0 \\ 0 \\ - & 3 \end{array}$ | e 10 55 e 10 35 | $-14 \\ +46 \\ +24$ | e 5 55 | PP | 11.8 13.1 |
| Yokohama Matumoto Hunatu Kohu Mera | | $26.5 \\ 26.6 \\ 26.8 \\ 26.8 \\ 26.9$ | 228 232 230 230 227 | e 5 43 e 5 25 e 5 43 e 5 42 5 54 | $^{+}_{-17}^{2}_{-17}^{1}_{-29}$ | e 11 44 10 16 10 21 e 10 16 e 12 31 | SSS + 2 - 3 SSS | <u>-</u> 6 1 | PP = | e 14·1 e 14·0 e 13·8 14·1 |
| Misima Changchun Osima Gihu Omaesaki | N. | $27 \cdot 1 \\ 27 \cdot 2 \\ 27 \cdot 2 \\ 27 \cdot 8 \\ 27 \cdot 8$ | $\begin{array}{c} 229 \\ 259 \\ 228 \\ 233 \\ 230 \end{array}$ | i 5 46 e 5 43 e 5 45 e 5 51 e 5 54 | $\begin{array}{ccc} & 0 \\ - & \frac{4}{2} \\ - & 2 \\ + & 1 \end{array}$ | e 10 27 e 10 28 | + 3 + 3 - | (e 11 51) — — e 6 15 | ss = PP | e 11·8 e 15·2 e 13·3 e 14·2 |
| Nagoya Ibukisan Hikone Kameyama Kyoto | N. | $27.9 \\ 28.0 \\ 28.1 \\ 28.4 \\ 28.6$ | $232 \\ 233 \\ 233 \\ 232 \\ 234$ | e 5 52 e 6 1 5 55 e 6 6 e 5 59 a | $ \begin{array}{rrr} - & 2 \\ + & 6 \\ 0 \\ + & 8 \\ - & 1 \end{array} $ | e 11 17 e 12 32 e 10 55 | +37 SSS + 7 | e 6 38 | PP = | e 14·6 13·5 e 14·1 e 13·5 |
| Toyooka Kobe Takamatu Tokusima Torisima | | $28.6 \\ 29.1 \\ 29.9 \\ 29.9 \\ 30.6$ | $\begin{array}{c} 236 \\ 234 \\ 235 \\ 234 \\ 222 \end{array}$ | e 5 59 e 6 0 e 6 12 e 6 12 e 6 19 | $ \begin{array}{cccc} & 1 & \\ & 4 & \\ & 0 & \\ & & 1 & \\ \end{array} $ | e 10 59 e 10 36 e 10 59 e 11 35 | $^{+\ 3}_{-\ 33}_{-\ 10}_{+\ 15}$ | e 6 48 | PP | e 14·7 e 12·9 e 14·7 15·8 |
| Koti Matuyama Miyazaki Irkutsk Peking | N. | $30.8 \\ 30.9 \\ 33.1 \\ 34.0 \\ 34.8$ | $\begin{array}{c} 235 \\ 236 \\ 236 \\ 289 \\ 263 \end{array}$ | e 6 19 e 6 15 e 6 42 6 45 a 6 50 a | $ \begin{array}{r} - & 1 \\ - & 5 \\ + & 2 \\ - & 3 \\ - & 4 \end{array} $ | e 12 51 e 10 55 — 12 28 | SS - 29 + 3 | $\begin{array}{c} e & 9 & 56 \\ e & 13 & 55 \\ \hline & 8 & 6 \\ \hline & - \end{array}$ | PP | e 14·8 e 15·3 e 17·1 |
| Zô-Sè Nanking Resolute Horseshoe Bay Sian | | $38.8 \\ 39.3 \\ 39.5 \\ 42.7 \\ 43.0$ | $248 \\ 251 \\ 24 \\ 67 \\ 263$ | i 7 24 a e 7 29 i 7 35 a i 8 3 a e 8 6 | $ \begin{array}{r} - & 4 \\ - & 3 \\ + & 1 \\ + & 3 \\ + & 3 \end{array} $ | e 13 38 e 13 39 e 13 44 e 14 27 | $^{+12}_{+5} \\ ^{+7}_{+3}$ | e 9 16 e 17 35 ? | PP SS | e 27·7 |
| Victoria Taipei Seattle Hwalien Honolulu | | $43.2 \\ 43.6 \\ 44.3 \\ 44.5 \\ 44.9$ | $^{68}_{242} \\ ^{68}_{241} \\ 125$ | i 8 5 a e 8 4 e 8 24 e 8 27 | + 1 - 4 + 4 + 9 + 9 | e 14 32 15 17 18 13 e 14 59 | $+\frac{0}{88} \\ + \frac{3}{3}$ | $\begin{array}{c} \mathbf{e} \ 17 \ 58 \\ \mathbf{e} \ 10 \ 3 \\ \mathbf{e} \ 9 \ 59 \end{array}$ | PP PP | e 19·6 e 18·3 e 18·3 |
| Hsingkong Corvallis Hengchun Semipalatinsk Hungry Horse | z. | 45.3 45.8 46.6 47.3 48.0 | $241 \\ 72 \\ 241 \\ 300 \\ 63$ | e 8 22 e 8 27 e 8 32 e 8 35 i 8 43 | $^{+}_{+} \begin{array}{c} 1 \\ 2 \\ 0 \\ - \\ 0 \end{array}$ | e 15 39 e 14 7 | PS ScS | i 10 12 | - - PcP | = |
| Shasta Saskatoon Hong Kong Mineral Butte | z. N. | 48.9 49.0 49.6 49.6 50.4 | 76 55 248 75 64 | i 8 56 i 8 56 e 8 52a e 8 57 e 9 2 | $^{+}_{-}^{1}_{3}$ $^{+}_{+}^{2}$ $^{+}_{1}$ | e 15 47 e 18 52? i 16 14 | $-\frac{8}{8}$ | e 10 17 i 11 7 | PcP PP | e 21·6 |
| Berkelcy Reno Baguio Bozeman Sverdlovsk | z. | $51.0 \\ 51.2 \\ 51.4 \\ 51.4 \\ 51.4$ | $78 \\ 75 \\ 237 \\ 64 \\ 317$ | e 9 9 9 9 9 11 8 1 9 8 12 9 7 | + 3 + 4 - 1 + 3 - 2 | e 16 27 i 16 32 e 16 27 16 39 | + 5 + 4 - 1 PS | e 19 11 11 7 | S _{cS} | e 23·4 |
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|---|----------------------|--|--|---|---|---|--|---|--|----------------------------|
| Lick Manila Eureka Fresno | z. z. | 51·8 52·8 53·2 53·2 | 78 236 72 77 | e 9 13 i 9 20 i 9 22 i 9 26 | + 1 + 1 0 + 4 | i 16 52 i 14 0 | $\overset{+}{\operatorname{scP}}^{5}$ | e 11 30 | PP | = |
| Kiruna Scoresby Sund Tinemaha King Ranch | z. z. | 53·2 53·4 53·8 54·3 | 344 76 78 | i 9 22a i 9 24 i 9 29 e 9 32 | 0 + 3 + 2 | i 16 48 i 17 0 i 17 12 | $\begin{array}{c} - & 4 \\ + & 5 \\ + & 11 \end{array}$ | e 19 14 i 19 15 e 39 50 | ScS P'P' | 26·0 — |
| Woody Isabella | z. z. | $54.5 \\ 54.7$ | 78 77 | e 9 32 i 9 34 | + 1 | | | e 39 27 e 39 31 | P'P' | |
| China Lake Frunse Pasadena Boulder City Rapid City | z. E. | 55·3 56·0 56·4 56·4 | $76 \\ 297 \\ 78 \\ 74 \\ 60$ | e 9 38 i 9 36 i 9 44 i 9 48 i 9 46 | $^{+}_{-}^{2}_{2}$ $^{+}_{+}^{1}_{3}$ $^{+}_{+}$ | i 17 33 i 17 31 e 17 45 i 17 37 | PS + 1 + 9 + 1 | e 39 39 e 11 42 i 21 26 i 11 5 e 10 43 | P'P' PP SS PcP PcP | i 23·8 e 25·3 |
| Riverside Palomar Hayfield Barratt Boulder | z. z. N. z. | 56.6 57.3 57.7 57.9 58.4 | 78 78 77 78 64 | e 9 49 e 9 52 e 9 58 e 9 59 e 10 2 | $\begin{array}{c} + & 2 \\ & 0 \\ + & 3 \\ + & 2 \end{array}$ | e 17 40 i 10 4 i 18 0 | + 2 + 5 | i 10 34 e 39 29 e 39 25 | PP P'P' P'P' | |
| Skalstugan Pulkovo Shillong Tashkent Helsinki | | 58·4 58·5 59·1 59·4 | $346 \\ 335 \\ 270 \\ 299 \\ 338$ | i 9 59 a i 10 1 i 10 2 a i 10 1 e 10 6 | $ \begin{array}{ccc} $ | e 18 13 18 7 i 18 8 e 18 8 e 18 11 | $^{+11}_{+$ | i 39 43 10 55 i 10 52 i 18 26 | P'P' PcP PcP PS | $\frac{-}{30.0}$ |
| Reykjavik Moscow Chatra Rabaul Upsala | z. | $59.8 \\ 60.1 \\ 60.7 \\ 61.0 \\ 61.1$ | $328 \\ 275 \\ 193 \\ 341$ | e 10 16 10 11 i 10 14 e 10 17 a i 10 16 a | $\begin{array}{cccc} + & 7 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1$ | e 18 23 e 18 35 i 18 32 | $-\frac{1}{0}$ | $\begin{array}{c} -12&29\\ i&10&30\\ e&12&38\\ i&13&50 \end{array}$ | PP PP PPP | |
| Tucson Stalinabad Dehra Dun Kirkland Lake Bokaro | z. N. | $61.4 \\ 61.5 \\ 63.0 \\ 63.2 \\ 63.9$ | $74 \\ 298 \\ 285 \\ 42 \\ 274$ | e 10 22 i 10 19 e 10 29 i 10 31 a | $^{+}_{-}_{2}^{2}_{-}_{1}$ | i 18 43 18 46 i 18 57 e 18 23 i 19 12 | $^{+}_{-}^{3}_{\stackrel{4}{-}^{4}_{0}}_{-}^{1}_{0}$ | i 12 34 12 37 12 45 e 39 19 | PP PP PP' | e 25·3 29·7 |
| New Delhi Chicago Copenhagen Aberdeen Florissant | N. | $64.9 \\ 65.3 \\ 66.0 \\ 66.3 \\ 66.5$ | $\begin{array}{r} 284 \\ 51 \\ 343 \\ 352 \\ 55 \end{array}$ | e 10 33 e 10 44 i 10 50 i 10 49 i 10 54 | $ \begin{array}{r} -10 \\ -2 \\ 0 \\ -3 \\ 0 \end{array} $ | i 19 20 e 19 28 i 19 47 i 19 46 19 44 | $ \begin{array}{r} $ | 26 48 e 13 24 e 13 14 e 11 2 | $\begin{array}{c} \mathbf{SSS} \\ \mathbf{PP} \\ \mathbf{PP} \\ \mathbf{pP} \end{array}$ | e 27·0 e 31·5 e 38·0 |
| St. Louis Chihuahua Ashkabad Fayetteville Ottawa | | $66.7 \\ 66.8 \\ 66.9 \\ 66.9 \\ 67.1$ | $55 \\ 73 \\ 304 \\ 59 \\ 41$ | i 10 55k 10 57 i 10 56k i 10 56a | $\begin{array}{c} & 0 \\ + & 1 \\ - & 1 \end{array}$ | e 19 46 e 18 35 e 19 49 19 48 | $-rac{73}{0} \\ -rac{0}{3}$ | 11 19 - e 20 55 11 21 | P _c P S _c S pP | e 31·0 |
| Shawinigan Falls Seven Falls Terre Haute Warsaw Brébeuf | | $67.1 \\ 67.3 \\ 67.3 \\ 67.5 \\ 67.7$ | 39 37 53 336 40 | i 10 57a e 10 58a e 11 9 i 11 1 i 11 1k | ${ \begin{array}{c} -0 \\ -1 \\ +10 \\ +1 \\ 0 \end{array} }$ | 19 49 19 52 i 20 19 e 20 2 | $^{-\ 2}_{+\ 25} \ ^{+\ 6}$ | 13 33 13 34 i 11 23 | PP PP PcP | 30·9 e 32·0 i 30·4 |
| Buffalo (Larkin) Cleveland Hamburg Durham Quetta | z. | $68.1 \\ 68.1 \\ 68.4 \\ 68.6 \\ 69.0$ | $^{45}_{47}_{344}_{351}_{293}$ | i 11 4 a i 11 7 a i 11 6 i 11 7 a i 11 7 a | $^{+}_{-}^{0}_{1}^{0}_{2}$ | e 20 14 i 20 10 i 20 12 | $\begin{array}{c} - \\ + \\ 7 \\ + \\ 2 \end{array}$ | e 24 38 13 43 e 13 36 | SS PP PP | e 36·0 |
| Lwow Pittsburgh Tiflis Witteveen Pennsylvania | z. | $69.1 \\ 69.6 \\ 69.6 \\ 69.6 \\ 70.2$ | $333 \\ 47 \\ 316 \\ 345 \\ 45$ | i 11 9 i 11 10 a 11 13 i 11 20 a? i 11 20 | $-\begin{array}{c} -1\\ -3\\ +7\\ +3\end{array}$ | i 20 17 i 20 17 i 20 22 e 20 24 | $^{+}_{-}^{2}_{4}$ $^{+}_{-}^{1}_{4}$ | e 11 38 | P _c P | |
| Morgantown Rathfarnham C. De Bilt Iasi Simferopol | z. | 70·3 70·4 70·5 70·5 70·6 | $\begin{array}{r} 47 \\ 354 \\ 346 \\ 330 \\ 324 \\ \end{array}$ | i 11 18 i 11 18 a i 11 20 a 11 18 11 19 | $\begin{array}{ccc} + & 1 & \\ & 0 & \\ \div & 2 & \\ & 0 & \\ & 0 & \end{array}$ | i 11 38 i 20 41 e 20 35 | $+\frac{1}{2}$ | i 15 34 i 13 57 e 13 59 11 41 | PPP PP PP | e 31·0 |

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| | | Δ | Az. | m | P. | 0 -C. | S. m. s. | 0 -C. | m. s. | app. | L. m. |
|--|------|--|--|--------------------------------------|---|--|---|--|--|---|--------------------------------------|
| Skalnate Pleso Jena Goris Mazatlan | | 70.6 70.7 70.9 71.0 | $\frac{336}{342}$ $\frac{313}{77}$ | i 1 i 1 | 1 18 1 20 | $- \begin{array}{c} 1 \\ 0 \\ + \end{array}$ | e 20 39 e 20 31 21 28 e 21 41 | + 6 - 3 ScS PPS | e 13 59 e 14 2 11 35 | $_{\mathrm{PP}}^{\mathrm{PP}}$ | e 32·0 e 36·0 |
| Prague Bacan | | $71.0 \\ 71.3$ | 340 330 | i 1 | | . 0 | e 20 35 | - 2 | i 14 8 | PP | 38.2 |
| Cheb Palisades Fordham Halifax | N. | 71·3 71·5 71·7 71·8 | 341 42 42 34 | i 11 | $\begin{array}{c} 30 \\ 24 \\ 25 \end{array}$ | $^{+}_{+}$ $^{2}_{7}$ $^{-}_{0}$ $^{0}_{0}$ | e 20 47 i 20 39 e 20 43 | $^{+}_{-}^{6}_{4}$ | i 14 3 i 15 56 e 15 56 e 28 43 | PP PPP PPP SSS | 35·0 e 34·2 i 45·5 |
| Kew Uccle Focsani Philadelphia Washington | z. | 71.8 71.9 72.0 72.0 72.1 | 350 346 330 44 46 | i 11 e 11 e 11 i 11 | 28 30 26 | $^{+}_{-}\overset{0}{\overset{1}{\overset{2}{2}}}$ | e 20 49 i 20 56 i 20 44 e 21 0 | $^{+}_{+}\frac{3}{8}$ $^{-}_{+}\frac{5}{10}$ | i 11 44 e 11 45 e 15 9 e 14 8 | PcP PcP PPP | e 35·0 e 34·5 e 29·2 |
| Hurbanovo Budapest Campulung Karlsruhe | 5354 | 72·3 72·4 73·0 73·0 | 336 336 331 343 | e 11 11 11 i 11 | 32 31 36 34 a | + 3 + 1 + 3 + 1 | e 21 1 21 3 e 14 24 | $^{+}_{+10}^{9}_{P}$ | e 14 23 11 38 i 11 43 | $\frac{PP}{PcP}$ | e 33·0 36·0 |
| Hyderabad Stuttgart Szeged Bucharest Strasbourg Timisoara | | 73·1 73·3 73·3 73·6 73·6 | 276 343 334 334 334 334 | e 11 i 11 i 11 e 11 | 35 a 31 28 27 a | $ \begin{array}{r} - 1 \\ - 4 \\ - 8 \\ - 10 \\ + 2 \end{array} $ | i 20 58 e 21 4 21 12 21 14 e 21 13 e 21 18 | $ \begin{array}{rrr} & - & 3 \\ & + & 8 \\ & + & 8 \\ & + & 6 \\ & + & 11 \end{array} $ | e 21 38 e 11 43 14 17 21 57 e 14 20 | Ps PP PS PP | e 34·0 e 38·0 e 38·5 e 40·0 |
| Ebingen Chapel Hill Paris Jersey Mobile | | $73.8 \\ 73.9 \\ 74.1 \\ 74.2 \\ 74.2$ | $343 \\ 49 \\ 347 \\ 350 \\ 58$ | i 11 i 11 i 11 e 10 i 11 | 39 40 53 | $^{+}_{0}^{2}_{0}^{0}_{-47}^{0}_{+}^{2}$ | i 14 33 e 21 21 i 21 15 | PP + 7 + 1 | i 14 30 i 12 8 e 16 2 | PP PcP PPP | e 43·0 35·0 |
| Basle Belgrade Columbia Zürich Poona | | $74.6 \\ 74.6 \\ 74.6 \\ 74.6 \\ 74.7$ | $344 \\ 334 \\ 51 \\ 343 \\ 280$ | e 11 e 11 e 11 i 11 | 44 42 | $\begin{array}{cccc} + & 0 \\ + & 1 \\ + & 1 \\ - & 1 \\ - & 1 \end{array}$ | e 22 36 e 21 25 e 21 19 e 21 14 | PS + 7 + 1 - 5 | e 12 33 e 14 29 14 32 | $\frac{\mathbf{P_{cP}^{-P}}}{\mathbf{P_{P}^{-}}}$ | e 42·6 e 30·3 |
| Bombay Besançon Neuchatel Triest Madras | E. | $75.0 \\ 75.1 \\ 75.2 \\ 75.3 \\ 75.7$ | $282 \\ 344 \\ 344 \\ 339 \\ 272$ | e 11 i 11 i 11 e 11 i 11 | 47 47 26 | $\begin{array}{c} - & 1 \\ + & 1 \\ + & 1 \\ - & 2 \\ - & 2 \end{array}$ | e 21 20 e 21 25 e 21 48 i 21 14 e 21 27 | $^{-\ 3}_{+\ 23}^{+\ 1}_{-\ 12}^{-\ 3}$ | e 13 54 e 13 54 11 54 | $\frac{\Pr_{\text{PP}}^{\text{PeP}}}{\Pr_{\text{PcP}}}$ | 37·7 37·4 |
| Sofia Oropa Pavia Bologna Clermont-Ferran | d | 75.8 76.4 76.6 76.9 77.0 | $331 \\ 343 \\ 342 \\ 340 \\ 346$ | i 11 e 11 e 11 e 11 i 11 | 48 53 55 a 56 58 a | $ \begin{array}{rrr} & 2 \\ & 0 \\ & 1 \\ & 0 \\ & + 2 \end{array} $ | i 22 13 e 21 44 e 22 23 e 21 46 e 21 55 | $^{\mathrm{PS}}_{+\ 6}^{+\ 6} \\ ^{\mathrm{PS}}_{+\ 10}$ | e 13 24 e 12 15 e 16 42 e 22 17 i 12 8 | $\begin{array}{c} \mathbf{PP} \\ \mathbf{PcP} \\ \mathbf{PPP} \\ \mathbf{PS} \\ \mathbf{PcP} \end{array}$ | e 41·2 e 36·1 33·0 |
| Djakarta Florence Prato Lembang Bandung | z. | 77.6 77.6 77.8 77.9 | $\begin{array}{c} 238 \\ 340 \\ 340 \\ 238 \\ 237 \end{array}$ | e 11 i 12 e 12 i 11 e 11 | 57 a 9 1 55 a 59 | $ \begin{array}{r} - & 3 \\ + & 9 \\ + & 1 \\ - & 6 \\ - & 2 \end{array} $ | e 21 45 i 22 2 i 21 51 | $-6 \\ +11 \\ 0 \\ -$ | e 14 52 i 15 3 | PP PP | e 42·0 e 37·0 e 39·6 |
| Tacubaya Monaco Nouméa Rome Taranto | | $77.9 \\ 78.3 \\ 78.3 \\ 79.2 \\ 79.5$ | 73 343 177 338 335 | e 12 i 12 e 12 i 12 e 12 | 19 4 4 10 a 29 | $^{+18}_{+1} \\ ^{+1}_{+2} \\ ^{+19}$ | e 21 57 e 15 16 i 22 10 e 22 12 | $^{+\ 3}_{\mathrm{PP}} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$ | e 22 46 i 12 14 i 12 11 e 15 9 e 14 2 | PPS PcP PcP PP | e 46·8 |
| Vera Cruz Ksara Athens Barcelona Cuglieri | | 79.7 79.9 80.1 81.4 81.6 | $\begin{array}{r} 71 \\ 318 \\ 329 \\ 346 \\ 341 \end{array}$ | e 12 i 12 i 12 e 12 | 14 13k 12a 28 | + 3 + 1 - 1 + 8 | e 22 11 i 22 23 e 22 18 e 22 53 | $^{-\ 2}_{+\ 22}$ | i 15 14 i 15 19 e 17 8 e 18 21 | PP PP PPP | 48 <u>·0</u> e 39 <u>·6</u> |
| Merida Messina Reggio Calabria Toledo Brisbane | | 81.6 82.0 82.1 83.6 84.0 | $\begin{array}{c} 65 \\ 335 \\ 335 \\ 351 \\ 190 \end{array}$ | e 12 i 12 e 12 i 12 i 12 | 22 a 22 a 29 33 a 34 | $^{+}_{-}$ $^{1}_{5}$ $^{+}_{+}$ $^{2}_{1}$ | e 23 42 e 22 34 e 22 16 e 23 0 i 22 56 | PPS - 3 - 22 + 7 - 1 | e 15 32 15 45 | PP PP | 38·5 37·0 |

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| Tunis Alicante Lisbon Algiers Univ. | | ∆ 84.6 84.8 85.1 85.8 | Az. 338 348 354 344 | P. m. s. e 12 44 i 12 38 i 12 41 a e 12 42 | O - C. s. + 8 + 1 + 2 | S. e 23 5 i 23 12 23 0 e 23 32 | O-C. 8. + 2 + 7 [- 1] + 17 | e 31 47 e 31 59 e 16 4 | SSS PP | L. m. e 45·0 e 40·4 39·3 |
|---|----------------|--|--|--|--|---|---|--|-----------------|--------------------------------------|
| Granada | z. | 86.2 | 350 | i 12 43k | – ĭ | i 23 21 | + 2 | 12 51 | pP | i 46·7 |
| Almeria Relizane Riverview Karapiro San Juan | N. | 86·5 87·2 90·4 94·4 94·6 | 349 346 190 171 47 | $\begin{array}{c} \mathbf{i} \ 12 \ 46 \\ \mathbf{e} \ 12 \ 50 \\ \mathbf{i} \ 13 \ 7 \mathbf{k} \\ \hline \mathbf{i} \ 13 \ 25 \end{array}$ | $^{+}_{+}^{\stackrel{0}{1}}_{\stackrel{1}{3}}$ | e 23 28 e 24 2 e 24 40 | + 6 + 4 + 7 | i 16 9 e 16 19 i 23 38 | PP PP SKS | e 39·6 e 37·0 |
| Melbourne Perth Wellington Tamanrasset Christchurch | z. N. z. | 95·1 96·9 97·7 99·1 99·8 | $\begin{array}{c} 194 \\ 219 \\ 172 \\ 340 \\ 173 \end{array}$ | e 17 26 i 17 36 e 13 44 | PP PP 0 | e 24 25 i 26 27 e 24 59 e 24 35 25 17 | $ \begin{array}{c} -14 \\ PS \\ -2 \\ [+12] \\ -2 \end{array} $ | e 25 59 e 17 46 e 27 40 | PS PP PPS | e 39·0 e 49·0 e 46·7 |
| Fort de France Chinchina Bogota Astrida Lwiro | | $99.9 \\ 102.2 \\ 103.3 \\ 115.1 \\ 115.2$ | $^{44}_{60}_{308}$ | i 18 19 e 18 43 e 18 45 e 18 46 a | PP PP [+ 2] [+ 3] | e 24 59 i 24 39 i 24 45 | { + 6} [+ 1] [+ 2] | e 19 39 e 21 32 | PPP | 49·0 49·0 |
| Uvira Huancayo Tananarive La Paz Pretoria | z. | $^{116 \cdot 2}_{116 \cdot 9}_{120 \cdot 0}_{124 \cdot 4}_{135 \cdot 8}$ | $308 \\ 70 \\ 281 \\ 66 \\ 295$ | e 18 47 e 18 50 18 55 a 19 16 i 19 26 | [+ 2] [+ 3] [+ 2] [+ 15] [+ 3] | e 26 55 i 26 15 | $\{+\frac{-2}{2}\}$ $[+\frac{11}{2}]$ | e 20 45 e 20 18 20 17 i 20 59 | PP PP PP | 64·5 — |
| Pietermaritzburg Kimberley Grahamstown | Z. | $137.8 \\ 140.0 \\ 142.8$ | $\frac{289}{296}$ | i 19 30 i 19 23 i 19 2k | [+ 3] $[- 7]$ $[-33]$ | | | | | |

June 23d. 3h. 30m. 30s. Epicentre 34°·2N. 136°·8E. Depth of focus 40km.
Intensity IV at Owase, Tu, and Kameyama; II-III at Nagoya, Nara, Osaka, Gihu, and Ueno.
Seismo Bull. Japan Met. Agency for June, 1956, Tokyo, 1956, pp. 20, 21, with chart of intensities.

June 23d. 5h. 46m. Epicentre 41°·6N. 78°·5E.
Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, p. 50.

June 23d. 21h. 17m. Epicentre 34°·5N. 123°·0E. Seismo. Bull. of China for 1956, Peking, China, p. 17.

June 23d. 23h. 19m. Epicentre 21°S. 174°E. New Zealand Seismo. Report for 1956, Bull. No. E-137, Department of Scientific and Industrial Research, Geophysics Division, Wellington, 1960, p. 44.

June 24d. 12h. 54m. 58s. Epicentre 39°.8S. 36°.9E.

A = + .6161, B = + .4631, C = -.6371; $\delta = -6$; h = -2; D = + .601, E = -.799; G = -.509, H = -.383, K = -.771.

| | | Δ | Az. | P. m. s. | o – c. | s. m. s. | O – C. | m. s. | pp. | L. m. |
|------------------|------|--|-----|-----------------------------|--------|-------------|--------|--------|---------------|-------------|
| Grahamstown | 77 | 10.5 | 304 | i 2 23 | -12 | - | | | - | |
| | Z. | and the following the second of the second o | | | | 1 | | ***** | | |
| Pietermaritzburg | Ze. | 11.4 | 330 | i 2 46 | - 1 | | | | | _ |
| Kimberley | Z. | 14.9 | 314 | i 3 33 | 1 | _ | - | | _ | |
| Hermanus | 5550 | 15.1 | 285 | 3 38 | + 2 | i 6 41 | SS | | _ | |
| Pretoria | z. | 15.8 | 330 | $\frac{3}{3} \frac{38}{44}$ | - 1 | - | - | _ | - | _ |
| Tananarive | | 22.7 | 27 | i 5 4k | 0 | e 9 22 | +13 | e 5 44 | PPP | e 11·1 |
| Kerguelen Is. | | 25.3 | 123 | e 5 29 a | - 1 | | | e 5 41 | \mathbf{PP} | - |
| Uvira | | 36.8 | 347 | e 7 19 | + 8 | - | | | | e 19.0 |
| Astrida | | 37.6 | 348 | e 7 17 | - 1 | | _ | e 7 29 | 3 | |
| Lwiro | | 38.1 | 347 | e 7 29 | + 7 | | | | | e 20·0 |

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| | | Δ | Az. | | P. . s. | o –c. | S. m. s. | O -C. | m. s. | ıpp. | L. m. |
|--|----------------|--|--|--------------------------------------|---|--|--|--|--|--|--|
| Bombay Poona Tamanrasset Lembang Jerusalem | Z. Z. | 67·3 67·5 68·8 70·8 71·2 | $37 \\ 38 \\ 329 \\ 83 \\ 358$ | e 10 e 10 e 11 i 11 | 52 58 8 | $- \begin{array}{cc} - & 7 \\ - & 2 \\ 0 \end{array}$ | e 19 53 e 19 50 e 20 6 | - 1 - 6 - 5 | e 39 19 i 11 18 11 36 | P'P' pP PcP | e 34·0 30·8 |
| Ksara M'Bour Quetta Athens Messina | E, | $73 \cdot 2$ $73 \cdot 6$ $75 \cdot 0$ $78 \cdot 3$ $80 \cdot 0$ | $359 \\ 305 \\ 27 \\ 349 \\ 343$ | i 11 i 11 e 11 e 11 | 41 a 36 43 56 | + 6 - 1 - 2 - 7 | e 21 8 i 21 22 e 12 11 22 21 | + 6 - 1 + 4 | i 14 28 i 21 53 i 12 18 | PP ScS PcP | 37·0 — — |
| Tiflis Relizane Algiers Univ. Shillong Sotchi | z. z. | $81.4 \\ 82.3 \\ 82.3 \\ 82.7 \\ 83.0$ | $331 \\ 333 \\ 48 \\ 2$ | e 12 e 12 i 12 12 | 18 24 24 k | $ \begin{array}{rrr} - & 2 \\ - & 7 \\ - & 1 \\ - & 3 \\ + & 5 \end{array} $ | e 22 37 | $-\frac{0}{3}$ | e 12 42 | P _c P | = |
| Rome Simferopol Alicante Granada Florence | | $84 \cdot 3 \\ 84 \cdot 4 \\ 85 \cdot 0 \\ 85 \cdot 1 \\ 86 \cdot 3$ | $342 \\ 358 \\ 331 \\ 329 \\ 342$ | e 12 12 12 12 e 12 | 34 44 41 a | $^{-}_{+}\overset{0}{\overset{6}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{1$ | $\begin{array}{c} e & 23 & 11 \\ & -23 & 18 \\ & 23 & 20 \\ e & 23 & 20 \end{array}$ | $+\frac{11}{11} \\ +\frac{11}{12} \\ 0$ | $\begin{array}{c} & 12 & 44 \\ & 16 & 9 \\ & 28 & 52 \\ & \end{array}$ | $\begin{array}{c} \mathbf{P_{cP}} \\ \mathbf{P_{SS}} \\ - \end{array}$ | 39.3 |
| Namangan Iasi Toledo Pavia Frunse | | $86.4 \\ 87.0 \\ 87.7 \\ 88.2 \\ 89.0$ | $\begin{array}{r} 26 \\ 354 \\ 330 \\ 341 \\ 27 \end{array}$ | 12 12 13 13 | 57 52 1 | $^{+}_{+}$ $^{6}_{0}$ $^{+}_{+}$ $^{6}_{6}$ | e 23 5 e 23 33 e 24 53 23 25 | $\begin{bmatrix} -5 \\ -5 \end{bmatrix}$ $[-8]$ $[-2]$ | | | e 46·2 |
| Bratislava Clermont-Ferran La Paz Besançon Stuttgart | d | $89.3 \\ 90.4 \\ 90.7 \\ 90.9 \\ 91.5$ | $347 \\ 337 \\ 248 \\ 339 \\ 342$ | i 13 e 13 e 13 e 13 | 6 | $ \begin{array}{cccc} $ | $\begin{array}{c} - & - & 6 \\ 2 & 4 & 6 \\ 2 & 4 & 4 & 8 \\ \hline e & 2 & 1 & 1 & 1 \end{array}$ | $\begin{bmatrix} + \frac{-8}{8} \\ + \frac{11}{3} \end{bmatrix}$ | e 16 32 e 16 51 e 16 49 | PP PP PP | $ \begin{array}{r} $ |
| Prague Strasbourg Jena Uccle Moscow | z. E. | $91.6 \\ 91.7 \\ 93.0 \\ 94.6 \\ 95.1$ | $346 \\ 341 \\ 344 \\ 340 \\ 0$ | i 13 e 13 e 13 | | $^{+} \begin{array}{c} 1 \\ 0 \\ - \begin{array}{c} 2 \\ \hline 0 \end{array}$ | i 24 4 e 23 52 e 13 23 e 24 40 | $\begin{bmatrix} -& 5\\ +& 9\\ +& 5\\ -& - \end{bmatrix}$ | i 23 44 e 17 2 e 16 51 | SKS PP PP | e 50·0 e 49·0 |
| Huancayo Shawinigan Falls Columbia Ottawa Morgantown | Z. | $98.8 \\ 129.8 \\ 130.9 \\ 131.4 \\ 132.4$ | $\begin{array}{c} 246 \\ 302 \\ 284 \\ 300 \\ 291 \end{array}$ | i 13 e 19 e 19 i 19 19 | 46 11 14 14 16 | $\begin{bmatrix} + & 3 \\ - & 1 \end{bmatrix}$ $\begin{bmatrix} - & 0 \end{bmatrix}$ $\begin{bmatrix} - & 1 \end{bmatrix}$ | | | | | |
| Kirkland Lake Resolute Fayetteville Rapid City Boulder | z. E. | $135.0 \\ 138.7 \\ 141.6 \\ 150.2 \\ 151.2$ | $302 \\ 342 \\ 280 \\ 291 \\ 283$ | e 19 e 19 i 19 i 19 | $\begin{array}{c} 22 \\ 25 \\ 30 \\ 46 \\ 49 \end{array}$ | [+1] $[-3]$ $[-3]$ $[-2]$ $[0]$ | | | e 19 28 e 22 22 i 19 53 | PP PKP. | e 65·2 |
| Tucson College Bozeman Butte Hayfield | N. N. | 153.0 154.7 155.8 156.9 157.2 | $264 \\ 295 \\ 296 \\ 263$ | e 19 i 19 i 19 e 19 e 20 | | [+2] $[-3]$ $[-2]$ $[-2]$ $[+3]$ | i 20 23 | PKP. | i 23 54 e 20 25 | PP PKP ₂ | |
| Hungry Horse Barratt Riverside Eureka Pasadena | z. z. z. | $157.5 \\ 157.6 \\ 158.7 \\ 159.1 \\ 159.4$ | $302 \\ 260 \\ 262 \\ 278 \\ 262$ | i 19 e 19 i 19 i 20 i 20 | 57 59k 59 1 2k | [-1] $[+1]$ $[+1]$ $[+1]$ $[+2]$ | i 20 33 i 20 37 e 44 38 | PKP ₂ PKP ₃ | e 24 13 e 24 19 e 24 21 e 24 23 | PP PP PP PP | |
| China Lake Isabella Tinemaha King Ranch Lick | z. z. z. | $159.5 \\ 160.1 \\ 160.4 \\ 161.0 \\ 163.1$ | $\begin{array}{c} 267 \\ 266 \\ 270 \\ 264 \\ 269 \end{array}$ | e 20 i 20 e 20 e 20 e 20 | 1 2 k 3 5 k | $[+1] \\ [+1] \\ [+2] \\ [+3] \\ [+2]$ | e 20 41 = | PKP ₂ | e 24 25 i 20 54 e 24 31 e 20 46 | PP PKP ₂ PP PKP ₃ | |

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June 24d. 20h. 58m. 39s. Epicentre 7°.0S. 154°.9E.

A = -.8989, B = +.4211, C = -.1211; $\delta = +1$; h = +7; D = +.424, E = +.906; G = +.109, H = -.051, K = -.993.

| | D = + | 424, E | = + | 900; | $G = + \cdot I$ | 09, H = - | - ·051, £ | r =999 | • | |
|---|----------------------|--|---|--|---|--|--|---|----------------------------|--------------------|
| | | Δ | Az. | P. m. s. | 0 -C. | S. m. s. | 0 -C. | m. s. | pp. | $_{ m m.}^{ m L.}$ |
| Rabaul Nouméa Brisbane Riverview | Z. | 3·8 18·9 20·5 27·0 | 315 145 185 187 | i 1 1 e 4 25 i 4 41 e 5 44 | + 1 - 1 | e 7 58 i 8 36 e 10 20 | + 5 + 9 - 2 | i 1 6 i 4 38 | PP PP | e 12·8 |
| Melbourne | | 32.0 | 195 | e 6 30 | 0 | e 11 44 | + 2 | e 7 17 | PP | e 15.4 |
| Apia Onerahi Karapiro Tongariro Cobb River | E. N. Z. E. | $36.0 \\ 37.1$ | $104 \\ 151 \\ 152 \\ 153 \\ 158$ | e 6 45 e 6 52 e 7 3 e 7 14 e 7 20 | $^{+}$ 3 $^{+}$ 7 $^{-}$ 0 $^{+}$ 3 | | | e 8 9 | PP = = | |
| Wellington Manila Baguio Perth Hwalien | N. Z. | $38.5 \\ 39.9 \\ 41.1 \\ 44.1 \\ 44.7$ | $156 \\ 303 \\ 305 \\ 230 \\ 314$ | i 7 40 i 7 46 i 8 18 e 8 19 | $\begin{array}{ccc} & -& -& -& -& -& -& -& -& -& -& -& -& -$ | e 16 3 i 13 39 i 13 56 e 14 58 14 52 | SS - 4 - 5 + 13 - 2 | i 9 31 | P <u>P</u> | e 21·9 |
| Matusiro Lembang Djakarta Hong Kong Zô-Sè | Е. | $46.0 \\ 46.9 \\ 47.7 \\ 49.4 \\ 49.7$ | $341 \\ 267 \\ 268 \\ 307 \\ 321$ | 8 26 i 8 30 k e 8 39 e 8 52 k e 8 59 | - 1 - 1 - 1 - 1 + 3 | e 14 55 e 15 20 e 15 30 e 16 09 i 16 1 | $ \begin{array}{r} -17 \\ -5 \\ -6 \\ -3 \end{array} $ | - i 9 41 | <u>?</u> | e 18:3 |
| Nanking Peking Sian Shillong Irkutsk | z. | $51.8 \\ 58.8 \\ 59.7 \\ 69.2 \\ 73.0$ | $320 \\ 326 \\ 316 \\ 301 \\ 330$ | $\begin{array}{c} e & 9 & 11 \\ e & 10 & 7 \\ \hline & & & 11 & 4k \\ 11 & 36 \end{array}$ | $-\frac{1}{5}$ $-\frac{6}{3}$ | i 16 32 e 18 2 18 15 | - 1 - 5 - 4 | i 10 0 i 10 31 | | |
| Bokaro Colombo Kerguelen Is, Dehra Dun College | N. E. | $74.0 \\ 76.1 \\ 81.4 \\ 82.2 \\ 83.1$ | $297 \\ 279 \\ 221 \\ 302 \\ 21$ | e 13 21 e 12 18a e 12 29 i 12 24 | - 1 2 + 5 - 5 | i 21 10 e 21 41 i 22 36 e 22 39 | $-\frac{1}{6}$ $-\frac{3}{9}$ | e 28 3 | = = ss | e 34·7 |
| Poona Bombay Berkeley Lick Namangan | z. | $83.8 \\ 84.8 \\ 88.6 \\ 89.0 \\ 89.4$ | $290 \\ 290 \\ 52 \\ 52 \\ 311$ | e 12 31 e 12 55 i 12 58 e 12 59 | $ \begin{array}{r} $ | e 22 50 e 23 3 e 23 18 23 49 | $ \begin{bmatrix} - & 5 \\ - & 2 \\ 1 & 61 \\ \hline 0 $ | | | |
| Victoria Horseshoe Ba King Ranch Seattle Reno | y z. z. | $89.7 \\ 89.9 \\ 90.2 \\ 90.3 \\ 90.8$ | $\frac{41}{40}$ $\frac{55}{42}$ $\frac{50}{50}$ | e 13 1 e 12 59 e 13 3 e 13 1 e 13 5 | $ \begin{array}{rrr} & 0 \\ & 3 \\ & 1 \\ & 3 \\ & & 1 \end{array} $ | e 23 51 | - <u>-</u> 6 | | | e 43·6 |
| Woody Isabella Pasadena Quetta Tinemaha | z. | $91.0 \\ 91.3 \\ 91.3 \\ 91.7 \\ 91.7$ | $54 \\ 56 \\ 300 \\ 53$ | i 13 16 i 13 8 i 13 9 i 13 9k e 13 10 | $^{+}_{-}^{0}_{0}^{0}$ | i 24 8 7 | $+\frac{-}{3}$ | i 18 10 i 16 45 i 23 39 e 23 42 | PPP SKS SKS | e 41-8 |
| China Lake Riverside Palomar Barratt Hayfield | Z. Z. N. | $92.0 \\ 92.0 \\ 92.3 \\ 92.4 \\ 93.4$ | 54 56 57 58 57 | i 13 11 i 13 9 e 13 14 e 13 13 e 13 18 | $-\begin{array}{cc} - & 1 \\ - & 3 \\ + & 1 \\ - & 1 \\ 0 \end{array}$ | e 17 59 e 18 13 | ? | e 16 54 e 16 58 i 14 28 | PP PP | |
| Eureka Hungry Horse Butte Tucson Bozeman | z. x. | 93.7 95.9 96.7 97.3 97.8 | 51 42 44 58 45 | i 13 19 e 13 28 e 13 49 e 13 48 i 13 40 | $-{1\atop -}{1\atop 2\atop +}{1\atop 10\atop 10\atop 10\atop 10\atop 10\atop 10\atop 10\atop 10\atop 10\atop 1$ | e 24 29 e 23 58 e 24 13 | $\begin{bmatrix} + & 2 \\ - & 8 \end{bmatrix}$ $\begin{bmatrix} - & 3 \end{bmatrix}$ | e 25 57 e 17 46 e 17 38 e 17 30 e 26 25 | PS PP PP PP PS | e 46·0 |
| Resolute Rapid City Fayetteville Kiruna St. Louis | Ε. | 102.0 103.4 111.0 112.0 113.7 | 15 46 54 343 51 | e 18 | $\Pr_{\substack{-2\\ \text{PPS}\\ [-2]\\ \text{PP}}}^{2}$ | e 24 33 = e 25 27 | [- 4] - 0] | e 27 9 - e 26 19 | PS = SKKS | e 58·9 e 49·7 |

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| Terre Haute | ∆ 115.7 | Az. | P. m. s. e 25 1 | o-c. s.s | S. m. s. (e 25 1) | | m. s. e 31 31 21 49 | pp. SS PKS | L. m. 71.4 |
|---|--|---|---|--|-------------------------------------|--|---|------------------------------|------------------------------------|
| Ksara Kirkland Lake z. Upsala Kimberley z. | 118.2 | $\frac{305}{38}$ $\frac{337}{231}$ | 20 0 e 18 47 i 18 47 i 18 53 | PP [- 2] [- 2] [0] | 29 57 — | Ps = | = | = | e 61·4 |
| Columbia Bucharest Ottawa Chapel Hill Copenhagen | $121.9 \\ 122.0 \\ 122.0 \\ 123.0 \\ 123.0$ | $\begin{array}{r} 54 \\ 319 \\ 40 \\ 52 \\ 336 \end{array}$ | e 18 57 i 18 55k e 20 55 | [+1] [-2] PP | e 25 55 37 9 25 55 e 37 21 | $\begin{bmatrix} -1 \\ SS \\ -2 \end{bmatrix}$ | e 30 37 27 27 i 22 37 e 40 51 | SKKS PKS PSS | e 59·8 — 62·4 |
| Shawinigan Falls Washington Seven Falls Astrida Uvira | $\begin{array}{c} 123 \cdot 3 \\ 123 \cdot 5 \\ 124 \cdot 1 \\ 124 \cdot 4 \\ 124 \cdot 9 \end{array}$ | $^{38}_{48}_{36}_{262}_{261}$ | e 18 58 e 17 6 30 32 e 19 3k e 19 4 | [-, 1] PS $[+, 2]$ $[+, 2]$ | 25 25 = | [- \frac{-}{21}] | e 20 46 27 36 e 20 50 | SKKS PP | e 61·5 |
| Palisades Fordham Lwiro Hamburg z. Bratislava | $\begin{array}{c} 125.0 \\ 125.1 \\ 125.4 \\ 125.5 \\ 125.6 \end{array}$ | $^{44}_{262}$ $^{335}_{326}$ | e 19 3 e 19 0 e 19 4 i 19 6 i 19 3 | [+1] $[-3]$ $[+1]$ $[+3]$ $[-1]$ | e 26 10 = | [+ 4] = = | e 20 48 e 21 3 | PP PP | e 58·1 e 60·2 — |
| Prague Huancayo z. Jena z. Stuttgart Chinchina | the state of the s | $330 \\ 110 \\ 332 \\ 331 \\ 89$ | i 19 6 e 19 8 e 19 4 e 19 9 i 19 15 | [+ 2] $[+ 3]$ $[- 1]$ $[- 1]$ $[+ 4]$ | e 19 53 e 38 33 | ? - SS | e 22 59 e 22 44 e 21 17 e 22 0 i 22 37 | PKS PKS PP PKS | |
| Halifax Uccle Strasbourg Kew Rathfarnham C. z. | 129.7 129.9 130.1 131.1 131.3 | 35 336 332 340 345 | e 19 12 e 19 4 e 19 12 i 19 10 | [+ 1] $[- 8]$ $[0]$ $[- 4]$ | e 38 36 i 22 38 | PKS | e 21 33 i 22 37 | PP PKS | e 61·4 e 62·8 e 66·4 |
| Florence La Paz Neuchatel Pavia Besançon | $131.4 \\ 131.5 \\ 131.6 \\ 131.7 \\ 131.8$ | $325 \\ 119 \\ 331 \\ 328 \\ 332$ | i 22 37 19 13 e 19 15 e 19 97 e 21 38 | PKS [- 2] [0] [- 6] PP | e 33 9 e 28 24 | PPS 6} | i 22 53 e 21 58 e 22 38 e 22 40 e 22 41 | PKS PKS PKS PKS | |
| Messina E. Rome Paris Clermont-Ferrand San Juan | 131.9 131.9 132.2 134.3 138.5 | $ \begin{array}{r} 316 \\ 322 \\ 336 \\ 332 \\ \hline 70 \\ \end{array} $ | e 22 42 e 22 36 e 19 17 e 22 49 e 19 19 | PKS PKS [+ 1] PKS [- 9] | | | e 23 44 i 22 43 e 23 4 | PKS PKS | e 66·7 e 65·4 e 73·4 64·4 |
| Algiers Univ. z. Relizane Granada Tamanrasset z. | 140.8 142.9 144.1 146.6 | $\frac{323}{324} \\ 331 \\ 301$ | e 19 33 e 19 38 19 47k e 19 42 | [+ 1] $[+ 2]$ $[+ 9]$ $[0]$ | 26 23 e 23 10 | [- 23] | $\begin{array}{c} \mathbf{e} \ \ 22 \ \ 46 \\ - \ \ \mathbf{e} \ \ 19 \ \ 51 \end{array}$ | PP PP PKP ₂ | 79 <u>·4</u> |

June 25d. 10h. 51m. Epicentre 38°·4N. 20°·8E.
Magnitude 4·7. Poorly recorded to 85°.
Intensity IV at Argostoli on Cephalonia.
Seismo. Institute Bull. for 1956, National Observatory of Athens, 1957, p. 40.

June 25d. 12h. 52m. 4s. Epicentre 32° 0N. 60° 4E.

$$A = + \cdot 4200$$
, $B = + \cdot 7387$, $C = + \cdot 5272$; $\delta = + 2$; $h = + 1$; $D = + \cdot 869$, $E = - \cdot 494$; $G = + \cdot 261$, $H = + \cdot 458$, $K = - \cdot 850$.

| | Λ. | Az. | Р. | O-C. | S. | o-c. | supp. | L. |
|-------------|-----|-----|--------|------|--------|------------------|-----------|---------|
| | 9 | 0 | m. s. | s. | m. s. | s. | m. s. | m. |
| Bairam Ali | 5.8 | 14 | 1 30 | + 1 | i 3 15 | $+3_{g}$ | i 1 56 Pg | _ |
| Quetta | 5.9 | 106 | e 1 31 | 0 | i 2 36 | - 4 | i 1 51 Pa | Traine. |
| Ashkabad | 6.2 | 345 | 1 35 | 0 | e 3 32 | + 7 K | | _ |
| Kizyl-Arvat | 7.8 | 336 | e 1 56 | - 2 | e 4 21 | + 3 ₈ | e 2 27 Ps | _ |
| Stalinahad | 9.5 | 44 | i 2 21 | + 1 | i 5 19 | + 5g | i 2 52 Pg | - |

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| Tashkent 11.7 35 e 2 49 - 2 e 5 7? + 3 - e 6.2 Dehra Dun 15.2 92 e 4 6 + 28 8.9 Frunse 15.6 42 e 3 42 - 1 e 6 42 + 5 e 4 4 PP i 7.5 Ksara 20.6 282 i 8 53 SS 14.4 Semipalatinsk 23.6 33 e 5 14 + 1 e 9 34 + 9 Simferopol 24.2 310 e 5 18 - 1 e 9 42 + 7 e 10 38 SS e 11.3 Sverdlovsk 24.8 0 5 27 + 2 e 9 52 + 6 Moscow 28.6 333 e 6 0 0 | | | Δ | Az. | Р. | 0-с. | c c | 0 0 | ~ | | |
|---|--|------|--|--|--|------|-----------|----------------|---------|------|--|
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | | 2.3 | 23.77. | | | S. | O-C. | Su | pp. | L. |
| Dehra Dun 15·2 92 e 4 6 +28 | Thoultont | | | 4.77 | | | | | m. s. | | m. |
| Benra Dun 15·2 92 e 4 6 +28 — — — 8·9 Trunse 15·6 42 e 3 42 — 1 e 6 42 +5 e 4 4 PP 17·5 Ksara 20·6 282 — — 1 8 53 SS — — 14·4 Semipalatinsk 23·6 33 e 5 14 + 1 e 9 34 + 9 — | | | | | | | e 5 7 1 | + 3 | | | e 6.2 |
| Tiflis | | | | | | +28 | - | | | | The second secon |
| Tiffis 15·8 312 20·6 282 3 46 32 + 1 3 53 38 - 3 44 Semipalatinsk 23·6 33 e 5 14 + 1 e 9 34 + 9 | | | | | | - 1 | e 6 42 | + 5 | e 4 4 | PP | |
| Ksara 20.6 282 — 18 53 SS — 14.4 Semipalatinsk 23.6 33 e 5 14 + 1 e 9 34 + 9 — — — — Simferopol 24.2 310 e 5 18 — 1 e 9 42 + 7 e 10 38 SS e 11.3 Sverdlovsk 24.8 0 5 27 + 2 e 9 52 + 6 — — — — Moscow 28.6 333 e 6 0 0 — | | | | | 3 46 | + 1 | | | | | |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | Ksara | | 20.6 | 282 | | | i 8 53 | ss | | _ | 14.4 |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | Semipalatinsk | | 23.6 | 33 | e 5 14 | + 1 | 0 9 34 | + 9 | | | |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | 1 7 | 0 10 38 | 99 | 0.11.9 |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | Gen | | | | Page 10 (1997) | C 10 30 | 1000 | 6 11 3 |
| Bucharest 29.4 305 68.28 $?$ — — — — — Lwow 32.3 314 66.34 + 1 — | | | | 14.000 | (Table 1) | ñ | 0 0 02 | 1 0 | ker: | | |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | Bucharest | | | | | | · | 7 | | | |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | Lwow | | 32.3 | 314 | e 6 34 | 4 1 | | | | | |
| Jena 40.3 313 e 7 41 + 1 — — e 8 20 $\frac{7}{2}$ — Stuttgart 41.6 309 e 7 51 + 0 — | The state of the s | | and the second s | Company of the Compan | | Ď. | 722 | - | ~ 0 7 | DD | _ |
| Stuttgart Kiruna $41.6 \atop 42.7 \atop 339$ $309 \atop 18 \atop 1$ $e7 \atop 51$ $51 \atop 18 \atop 1$ $11 \atop 18 \atop 18 \atop 18 \atop 1$ $11 \atop 18 \atop 18 \atop 18 \atop 1$ $11 \atop 18 \atop 18 \atop 18 \atop 1$ $11 \atop 18 \atop 18 \atop 18 \atop 18 \atop 1$ $11 \atop 18 \atop$ | | | | | (a) (a) (b) (b) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c | 3 7 | | | | PP | 505 |
| Kiruna | | | 41.6 | | | | | | e 8 20 | | |
| Skalstugan Z. $43.5 \ 331 \ e \ 8 \ 5 \ -2 \ -1 \ e \ 20 \ 12 \ 7 \ -2 \ e \ 30.7$ Skalstugan Z. $49.1 \ 274 \ e \ 8 \ 50 \ -1 \ e \ 20 \ 12 \ 7 \ -2 \ e \ 30.7$ | | | | | | | | NEW T | - | | |
| Tamanrasset z. $49.1 	 274 	 e 8.50 	 -1 	 e 20.12 	 7 	 = 8.50 	 -1 	 e 30.7$ Matusiro | ALIA CILITO | | T. 40.1 | 330 | 10 1 | | - | | | | |
| Tamanrasset z. $\frac{49.1}{62.8}$ $\frac{274}{62}$ e $\frac{8}{50}$ - $\frac{1}{-}$ e $\frac{-}{20}$ 12 $\frac{-}{3}$ - $\frac{-}{-}$ e $\frac{30.7}{2}$ | Skalstugan | | 43.5 | 331 | e 8 5 | 2 | · <u></u> | | 0 0 59 | DD | 62040 |
| Matusiro 62.8 62 — e 20 12 7 — e 30.7 | Tamanrasset | Z. | | | | 7 | | | 6 5 52 | 1 | - 17.5 |
| ·얼마 : [[[[[[[[[[[[[[[[[[| | -255 | F 60 YOM THE OWNER | | - 00 | | 0.90 19 | 9 | 3.23 | | a 20.7 |
| | Pretoria | z. | 65.1 | 212 | e 10 41 | _ 1 | | | | | 6 20.1 |
| Decalmin 20 20 20 20 20 20 20 20 20 20 20 20 20 | | 2000 | | | | 9 ** | | | | - | - 20 5 |
| | College | | | 19 | 1 19 16 | | | | | 100 | e 32.5 |

June 25d. 19h. 1m. 48s. Epicentre 36°·2N. 139°·1E. Depth of focus 160km. Intensity IV at Tukubasan; II-III at Kakioka, Mito, and Kumagaya. Seismo. Bull. Japan Met. Agency for June, 1956, Tokyo, 1956, p. 22, with chart of seismic intensities.

June 25d. 22h. 0m. 13s. Epicentre 36°·1N. 139°·8E. Depth of focus 60km.
Intensity IV at Kakioka, Utunomiya, Mito, and Tukubasan; II-III at Kumagaya, Kashiwa, Tokyo, and Titibu.
Loc. cit., 25d. 19h., pp. 22, 23, with chart of seismic intensities.

June 25d. 22h. 40m. Epicentre 38°·4N. 20°·8E., as at 10h. Seismo. Institute Bull. for 1956, National Observatory of Athens, 1957, p. 40.

June 26d. 0h. 0m. 11s. Epicentre 17°-6S. 169°-3E.

A = -.9372, B = +.1771, C = -.3005; $\delta = +1$; h = +5; D = +.185, E = +.983; G = +.295, H = -.056, K = -.954.

| | | Δ | Az. | | Ρ. | O-C. | S. | O-C. | Su | pp. | L. |
|--|-----------|--|-------------|------|--|-----------------------|---------|-------------|-------------------|-----|----|
| 28-250-0000-825m3 | | 0 | 0 | m. | s. | s. | m. s. | s. | m. s. | 555 | m. |
| Nouméa | | 5.4 | 210 | i 1 | 44 a | - 4g | i 3 30 | ? | i 1 55 | 3 | |
| Brisbane | | 18.0 | 234 | i 4 | | + 6 | i 7 37 | + 5 | | 10. | |
| Apia | | 18.6 | 81 | e 4 | 34 | +13 | | | | _ | |
| Rabaul | Z. | 21.4 | 306 | e 5 | and the second s | +13 | - | - | i 5 37 | PPP | |
| Riverview | 3 4 (27%) | 23.0 | 222 | i 5 | | 0 | i 9 11 | - 3 | i 5 57 | PPP | - |
| Lembang | | 61.0 | 272 | e 10 | 18 | 0 | e 18 17 | -18 | | | |
| Matusiro | | 61.4 | 332 | i 10 | | + 6 | e 18 30 | -10^{-10} | | | |
| Berkeley | Z. | 84.6 | 48 | i 12 | 38 | | | -10 | | | _ |
| Lick | Z. | 84.8 | 48 | i 12 | 39 | $^{+}_{+}$ $^{2}_{2}$ | | 335 | | | |
| King Ranch | z. | 85.3 | 51 | i 12 | | $+$ $\tilde{1}$ | _ | = | _ | _ | _ |
| Shasta | z. | 85.8 | 45 | i 12 | 44 | | | | | | |
| Pasadena | *** | 86.0 | 52 | i 12 | 44 | + 2 | 224 | - | | - | - |
| Mineral | Z. | 86.2 | 46 | | 43a | , ů | | | e 16 8 | PP | |
| Isabella | | 86.4 | 2,730,070,0 | e 12 | 45 | + 1 | - | = | _ | _ | - |
| Riverside | Z. | The second state of the se | 51 | i 12 | 47 a | + 2 | | | 20 0 2 | - | _ |
| THYGISIGE | z. | 86.5 | 53 | 1 12 | 46 a | 0 | | | e 16 12 | PP | _ |
| Palomar | Z. | 86.7 | 54 | i 12 | 47 a | 0 | - | - | | 200 | |
| Corvallis | Z. | 87.0 | 41 | e 12 | 50 | + 2 | | - | | | |
| China Lake | Z. | 87.1 | 51 | i 12 | 50 a | + ī | | - | e 16 18 | PP | |
| Reno | Z. | 87-1 | 47 | i 12 | 50 | + î | | | 0 10 10 | 5 | |
| Tinemaha | Z. | 87.1 | 50 | i 12 | 48a | - î | - | | 250 | | |
| and the second of the second o | 7777 | | - Aug. 1927 | | T (2) (2) | | | | | | |

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| | | Δ | Az. | P. | O-C. | s. | O-C. | | pp. | L. |
|--|----------------|---|--|---|--|--------|--------|-------------------------------|------------------|----|
| College Victoria Seattle Boulder City Horseshoe Bay | z. | $88.5 \\ 88.8 \\ 89.1 \\ 89.2 \\ 89.3$ | 17 38 39 52 37 | m. s. i 12 55 e 12 58 i 13 1 i 12 59 i 12 59 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | m. s. | s. | e 16 10 i 13 13 | PP = | |
| Eureka Tucson Hungry Horse Butte Kirkland Lake | z. N. z. | $89.7 \\ 91.0 \\ 94.4 \\ 94.5 \\ 116.6$ | $\frac{48}{56}$ $\frac{41}{43}$ $\frac{43}{44}$ | i 13 2 i 13 8 i 13 22 e 13 23 e 18 41 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | i 16 41 e 16 47 i 17 14 | PP PP - | |
| Grahamstown Ottawa Shawinigan Falls Seven Falls Kiruna | z. | $^{118\cdot 1}_{119\cdot 8}_{121\cdot 7}_{122\cdot 9}_{126\cdot 0}$ | $215 \\ 47 \\ 46 \\ 45 \\ 346$ | i 18 55 e 18 52 i 18 55 i 19 1 | a [-4] a [-3] | i 28 7 | PS | | | |
| Scoresby Sund San Juan Halifax Skalstugan Upsala | z, | 126.7 127.4 128.4 131.4 133.1 | $\begin{array}{r} 5 \\ 80 \\ 47 \\ 346 \\ 341 \end{array}$ | e 19 3 i 19 2 e 19 6 i 19 11 i 19 14 | $\begin{bmatrix} -5 \\ -3 \end{bmatrix}$ $\begin{bmatrix} -4 \end{bmatrix}$ | | | e 21 8 | PP = = | |
| Astrida Uvira Jena Athens Rathfarnham C. | z. | $135.4 \\ 135.5 \\ 142.3 \\ 143.7 \\ 144.2$ | $\begin{array}{c} 247 \\ 246 \\ 337 \\ 311 \\ 356 \end{array}$ | e 22 25 e 22 26 e 19 29 e 19 32 i 19 36 | a PP [-6] [-5] | | | e 20 21 | PKP. | |
| Stuttgart Karlsruhe Kew Ebingen Strasbourg | z. z. | 145.0 145.1 145.2 145.5 145.6 | $337 \\ 338 \\ 349 \\ 337 \\ 338$ | e 19 37 i 19 39 i 19 39 e 19 40 i 19 40 | a [0] [-1] [0] | e 23 7 | | e 20 47 = e 20 3 | PKP ₁ | |
| Basle Paris Clermont-Ferranc Tamanrasset | i z. | $146.6 \\ 147.1 \\ 149.7 \\ 164.0$ | $337 \\ 344 \\ 341 \\ 291$ | e 19 43 i 19 45 e 19 50 e 20 2 | $\begin{bmatrix} + & 2 \\ + & 3 \end{bmatrix}$ | e 22 2 | 3 | i 19 59 e 21 0 | PKP ₂ | |

June 26d. 6h. 27m. Epicentre 39°.5N. 22°.2E. Magnitude 5-5.5. Recorded up to 84°. Intensity VI at Vasiliki; V at Trikkala, Kalabaka, and Mouzaki; IV at Sophodes and Matsouflani; III at Larissa and Halmyros. Seismo. Institute Bull. for 1956, National Observatory of Athens, 1957, pp. 40, 41.

June 26d. 13h. 47m. Epicentre 34°·0S. 179°·7E. Depth of focus 150km. N.Z. Scismo. Report for 1956, Bull. No. E-137, Department of Scientific and Industrial Research, Wellington, New Zealand, 1960, p. 45.

June 27d. 3h. 15m. Epicentre 15°52'N. 95°38'W. Seismo. Observatory Bull. for June, 1956, National University of Mexico, Tacubaya, p. 7.

June 27d. 18h. 57m. Epicentre 23°-2N. 120°-4E. (Taiwan). 22° · 5N. 120° · 0E. (Peking).

Magnitude 4.75 (Peking). Intensity VI at Alishan and Yushan; V at Tainan; IV at Hengehun and Kaohsiung; II-III at Tawu and Ilan. Scismo. Bull. Taiwan Weather Burcau for April-June, 1956, Vol. 3, No. 2, Taiwan, China, p. 14. Seismo. Bull. of China for 1956, Peking, p. 17.

June 27d. 23h. 29m. Epicentre 37°.8N. 27°.1E. Poorly recorded up to 40°. Intensity III at Limin Vatheos on Samos. Loc. cit., 26d. 6h., p. 41.

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June 28d. 17h. 42m. 32s. Epicentre 44°-2N. 18°-8E.

A = + .6809, B = + .2318, C = + .6947; $\delta = -4$; h = -3; D = + .322, E = - .947; G = + .658, H = + .224, K = - .719.

| | 100 | , 1 | | | $\alpha = + o$ | 00, 11 | 223, | K = - 113 | | |
|---|-----|--------------|------------------|--|-----------------------------|--------|----------------------|-----------|--|-------|
| | | Δ | Az | . P. | $\mathbf{O} - \mathbf{C}$. | s. | 0 - C. | St | ipp. | L. |
| THE CONTROL OF THE RESERVE | | 0 | 0 | m. s. | s. | m. s. | | m. s. | reness. | m. |
| Belgrade | | 1.3 | 64 | i 0 26 | k + 1 | i 0 47 | + 3 | i 1 31 | $\mathbf{P}_{\mathbf{z}}$ | - 200 |
| Kalossa | | 2.3 | 4 | e 0 43 | + 1* | e 1 18 | + 2g | | | |
| Timisoara | | 2.3 | 48 | e 0 41 | + 1 | e 1 20 | + 4g | 3 0 4 4 | P | |
| Szeged | | $2 \cdot 3$ | 25 | 0 44 | + 2* | 1 11 | - 1* | 1 3 | S* | |
| Kecskemet | | 2.8 | 13 | 0.53 | + 2* | e 1 25 | + 1* | | 8* | |
| Budapest | | 3.3 | 3 | e 0 54 | - 5* | e 1 39 | - 3* | - | _ | _ |
| Hurbanovo | | 3.6 | 354 | | 3 | e 1 43 | + 1 | i 2 7 | S_{s} | - |
| Sofia | | 3.6 | 114 | | - 1* | e 1 39 | - 3 | 1 9 | $\widetilde{\mathbf{P}}_{\mathbf{z}}^{\mathbf{z}}$ | |
| Triest | | 3.8 | 293 | | + 1 | i 2 6 | 0 α | i 1 11 | $\hat{\mathbf{P}}_{\mathbf{g}}^{\mathbf{r}}$ | |
| Taranto | | 4.0 | 197 | | +10a | e 2 0 | - 3° | | | e 2·2 |
| Bratislava | | 4 · 1 | 344 | i 1 7 | + 2 | i 1 55 | 0 | i 1 33 | P_{g} | |
| Vienna | | $4 \cdot 3$ | 338 | e 1 10 | $+$ $\bar{2}$ | e 2 6 | + 6 | i 1 30 | $\mathbf{P}_{\mathbf{z}}^{\mathbf{z}}$ | |
| Campulung | | 4.6 | 75 | e 1 37 | $+$ $\bar{5}_{E}$ | e 2 36 | + 4 g | | | - |
| Padova | | 5.0 | 275 | e 1 38 | - 2g | i 2 54 | $+ \hat{9}_{g}^{u}$ | | SS | |
| Skalnate Pleso | | 5.0 | 11 | The state of the s | + 3* | e 2 52 | + 7g | | P_g | |
| Bucharest | | 5.2 | 86 | e 1 30 | - 2* | 2 49 | - 3 _g | e 1 54 | Pa | - |
| Rome | | $5 \cdot 2$ | 245 | | | e 2 22 | 0 | i 2 45 | Pg S | |
| Bologna | | 5.4 | 275 | | - 2 _g | e 3 4 | + 6g | | 8* | |
| Florence | | 5.5 | 268 | | 0. | e 3 15 | +13g | | _ | |
| Prato | | 5.6 | 269 | | - 6g | i 2 47 | - 3* | _ | | 2.00 |
| Messina | E. | 6.5 | 203 | e 1 32 | - 7 | e 2 40 | -15 | -0.02 | - | 7-8 |
| Prague | | 6.5 | 334 | | + i | i 2 54 | - 1 | i 2 12 | P_{z} | |
| Reggio Calabria | | 6.6 | 202 | 1 TO | . 3 | e 3 10 | -10* | | 8. | |
| Pavia | | 6.9 | 281 | e 2 20 | + 2g | e 2 58 | - 7 | 3 22 | Sa S* | |
| Athens | | 7.3 | 148 | e 1 44 | - 6° | _ | | | - | - |
| Oropa | | 7.8 | 284 | e 2 21 | + 5* | e 3 15 | -13 | e 3 48 | S* | |
| Zürich | | 7.8 | 297 | e 1 56 | - 2 | | - | | - | |
| Ebingen | | 7.9 | 303 | 1 58 | - ī | e 3 57 | - 1* | c 4 36 | Sg | - |
| Stuttgart | | 8.0 | 308 | e 1 59 | - 1 | e 3 37 | + 4 | i 2 38 | $P_{\mathbf{z}}$ | _ |
| Warsaw | | 8.1 | 10 | | - | e 3 54 | SS | e 4 32 | \hat{S}_g | e 5.5 |
| Monaco | | 8.2 | 270 | e 2 8 | + 5 | i 4 11 | + 4* | e 2 31 | P* | |
| Jena | | 8.3 | 326 | e 2 2 | - 2 | e 3 34 | - 6 | e 2 31 | P* | |
| Basle | | 8.5 | 297 | e 2 6 | - Ī | e 3 59 | +14 | | | |
| Karlsruhe | | 8.6 | 307 | e 2 9k | Õ | e 4 55 | $+11_{g}$ | e 2 53 | P_{π} | i 5·1 |
| Neuchatel | | 8.8 | 292 | e 2 10 | - 1 | e 4 48 | $-3^{\circ}_{\rm g}$ | | _ | *** |
| Strasbourg | | 8.8 | 304 | e 2 10 | - 1 | e 4 18 | - 7* | e 2 38 | P* | e 5·1 |
| Besançon | | 9.4 | 293 | e 2 18 | 0 | e 4 38 | - 5* | e 5 17 | Se | 15.5 |
| Clermont-Ferran | d | 11.2 | 283 | e 3 58? | ? | | | | | **** |
| Uccle | | 11.8 | 309 | e 2 38 | -15 | T | ****** | | - | e 6.5 |
| Algiers Univ. | Z. | 14.1 | 243 | | | e 5 48 | -14 | | | |
| Relizane | | 16.3 | 245 | e 3 59 | + 7 | | - | | | |
| Granada | | 18.4 | 255 | 4 29 a | +11 | 8 2 | +21 | | | 9.9 |
| Skalstugan | | 19.7 | 351 | e 4 33 | - i | | | | | |
| Kiruna | | 23.6 | 2 | i 5 16 a | $+$ $\tilde{3}$ | e 9 37 | +12 | e 12 39 | PcS | |
| Tamanrasset | z. | $24 \cdot 0$ | $21\overline{1}$ | e 4 33 i 5 16 a e 5 16 | - i | | - | e 5 42 | PP | |
| Quetta | Z. | 40.3 | 94 | e 7 39 | - 1 | _ | _ | | | |
| College | | 70.8 | 354 | e 11 17 | $-\frac{1}{3}$ | | 223 | | - | |
| Hungry Horse | | 79.0 | 330 | e 12 5 | - 2 | | | | | - |
| are a control of the Company of the | | - 1000Ca140 | | ALCOHOLD BY AND AND AND ADDRESS OF THE PARTY | | | | | | |

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 $39 \cdot 2$

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June 28d. 22h. 58m. 49s. Epicentre 49°.0N. 129°.4W.

 $\Lambda = -.4180$, B = -.5089, C = +.7525; $\delta = -4$; h = -5; D = -.773, E = +.635; G = -.477, H = -.582, K = -.659. P. O-C. Az. Supp. m. s. s. m. s. 3.0 84 4.0 Horseshoe Bay Victoria 1.0 95 4 Scattle 1.9 104 i 1 18k + 1 +10i 3.0 Corvallis 135 $6 \cdot 1$ Z. i 1 32 2 Sitka 8.8 338 i 3 35 4 i 4.0 $9 \cdot 0$ 1532 13 Arcata E. Ferndale $9 \cdot 2$ 155 E. + Shasta $9 \cdot 7$ 147 + 10.2Hungry Horse 88 28 3 e 4 33 6 i 4.9 Mineral 145 10.3Z. Butte 11.7 98 i 2 46 5 i 4 39 N. i 5.0 -Reno 11.7 141 51 e Berkeley 12.3 153 57 e 5 21 3 0 Ŧ San Francisco $12 \cdot 3$ 154 3 e 12.7 i 3 Branner 153 z. *** 12.8 13 Bozeman 98 e 5.7 12.8 152 Santa Clara z. e 3 + Lick 13.0 152 7. Eurcka 13.5 i 3 130 3 e 4 43 Fresno 14.1 z. 147 13 Saskatoon 14.8 e 3 32 69 e 6 18 e 6 34 SS Salt Lake City 14.9 117 i 3 33 e 5 55 -25e 6.3 King Ranch 15.4 149 e 3 39 Z. e 6 39+ 15.6 Isabella 145 3 Z. 43 China Lake 15.8 142 e 3 z. + Pasadena $17 \cdot 0$ 147 e 4 13 Riverside 17.5 145 z. i 7 26 Palomar 18.2 145 17 + 18-4 Hayfield 141 N. 19 Rapid City 18.6 96 E. 20 52e 10.7 335 College 18.7i 4 23 + i 8 +13i 8.9 Barratt e 4 22 18.9 145 2 i 8 Boulder 19.3 109 i 4 29 0 Tucson 21.8134 54 i 4 e 8 59 - 2 +7e 6 27 e 11.4 Unalaska 23.5 296 i 5 12 0 Chihuahua $27 \cdot 1$ 130e 5 44 e 10 35 +11e 13·9 Fayetteville 28.7i 5 59 104 e 10 56 Resolute 29.518 i 5 59?k e 10 59? 9 e 15.5? Florissant 29.695 e 6 7 a e 11 -St. Louis 29.896 9 k e 6 e 11 15.6 1 5 Chicago 88 29.9 e 6 11 e 6 46 e 11 $_{\mathrm{PP}}$ e 11.8 -Terre Haute $31 \cdot 2$ 92 31 $P_{c}P$ 9 e 6 32a Kirkland Lake $32 \cdot 2$ 72 Z. 0 e 12 16 e 13 26 SS +31Cleveland 34.0 84 i 6 48a i 12 18 + 5 Guadalajara 35.1 134 e 7 15 e 12 39 ± 18 9 e 15 19 Q e 18.9 Honolulu 35.9230 e 8 0 +56e 12 39 3 e 9 27 - P_{cP} e 14.7 Mobile 2a36.0105 e 7 3 i 12 49 + 5 i 8 31 PPi 19.0 -Morgantown 36.0 86 i 8 21 PPOttawa 36.075 5k 0 12 38PP20 17.0 Manzanillo $36 \cdot 1$ 137 39 e 7 +34e 11 40 -65e 8 47 PPP e 16.2 $37 \cdot 3$ Shawinigan Falls 72 e 7 17a + 1 13 +2554 PcPTacubaya 38.2 130 44 +21e 13 24 e 9 PPP e 16.4 + Seven Falls 38.3 70 25 k 13 15 PP e 18.9 53 Washington 85 $38 \cdot 3$ i 7 23 e 13 27 8 i 9 33 PcP e 17.8 Columbia 38.5 95 25 e 12 58 -21e 8 \mathbf{PP} e 16.2 43 Chapel Hill 38.6 90 + i 9 44 PcP82 Philadelphia 39.029 i 13 24 -8 51 $_{\rm PP}$ i 16·1 e

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| Vera Cruz | ∆ 40.0 | Az. | P. m. s. | O – C. | S. m. s. | O – C. | m. s. | pp. L. m. |
|---|--|---|--|---|---|-------------------------------------|--|---|
| Oaxaca Merida Petropaylovsk Halifax | 41.4 42.2 43.7 43.9 | $126 \\ 129 \\ 117 \\ 304 \\ 70$ | $ \begin{array}{r} 7 & 47 \\ \hline 8 & 14 \\ e & 8 & 7 \\ i & 8 & 17? \end{array} $ | $+\frac{9}{18} \\ -\frac{1}{7}$ | e 13 45 e 17 38 e 14 26 e 17 47? | + 1 ScS + 9 ScS | e 9 31 e 9 48 e 9 47? | PcP e 20·8 — e 26·0 — — — PP i 23·5 |
| Ivigtut N. Magadan Seoresby Sund Reykjavik Yuzno-Sakhlinsk | 45.0 45.0 50.0 53.8 55.6 | $^{43}_{315}_{25}_{31}_{304}$ | i 13 59 8 19? i 8 59 i 9 34 e 9 34 | PcP 0 + 1 + 8 - 6 | e 17 17 e 16 11 e 17 24 | + = 1 | e 19 41 | $\frac{-}{\text{e}} \stackrel{\text{e}}{\overset{21 \cdot 2}{-}} = \stackrel{24 \cdot 2}{\overset{29 \cdot 2}{-}}$ |
| Galerazamba San Juan Kiruna Sodankyla Chinchina | $\begin{array}{r} 58.7 \\ 58.8 \\ 61.3 \\ 62.5 \\ 63.1 \end{array}$ | $\frac{13}{10}$ | e 10 2 i 10 18 i 10 27 i 10 30 | $-\begin{array}{c} -0 \\ 2 \\ -1 \\ -2 \end{array}$ | i 18 17 i 18 42 i 19 8 | $+\frac{11}{3} + \frac{3}{6}$ | i 18 41 i 14 10 | PPS 28·2 PPP = = 31·2 |
| Skalstugan Vladivostok Bogota Fort de France Matusiro | $63.7 \\ 63.9 \\ 64.3 \\ 64.7 \\ 64.9$ | 306 115 97 | i 10 35 e 10 34 i 10 40 e 10 39 i 10 41 a | $ \begin{array}{rrr} $ | e 19 19 i 19 7 e 19 21 | $-\frac{10}{3}$ | i 13 9 | PP 31·2 - 26·9 |
| Aberdeen Edinburgh Changchun Kyoto Upsala | $65.5 \\ 66.2 \\ 66.8 \\ 67.4 \\ 68.2$ | $\frac{30}{311}$ $\frac{3}{297}$ | i 10 51 e 10 54 i 11 6 i 11 3 | + 4 - 2 + 7 - 1 | $\begin{array}{c} {\bf i} \ 19 \ 39 \\ {\bf e} \ 18 \ 45 \\ \hline & 20 \ 10 \\ {\bf i} \ 20 \ 7 \end{array}$ | $^{+}_{-55}^{7}_{+15} \\ _{+}^{+3}$ | e 13 26 e 21 55 — | PP e 30·7 |
| Angra do Heroismo Helsinki Irkutsk Pulkovo Kew | $68.9 \\ 69.2 \\ 69.2 \\ 70.3 \\ 70.8$ | $^{13}_{328} \stackrel{6}{\epsilon}_{11}$ | e 11 42 e 11 14 e 11 9 11 16 i 11 24 | $^{+\ 33}_{+\ 4} \ ^{-\ 1}_{+\ 4}$ | e 20 16 e 20 22 28 113 e 20 38 | + 3 + 6 SSS + 3 | e 11 23 e 14 0 | $_{\mathrm{PcP}}^{-} \stackrel{35\cdot 4}{\overset{37\cdot 2}{-}}_{\mathrm{PP}}$ |
| Copenhagen De Bilt Jersey Hamburg Uccle | $70.9 \\ 72.1 \\ 72.1 \\ 72.2 \\ 72.9$ | 28 6 33 24 6 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $^{+}_{+}^{4}_{\overset{?}{2}}$ $^{-}_{0}$ | i 20 44 e 20 56 e 21 21 e 21 1 e 21 0 | + 8 + 6 PS + 10 + 1 | e 11 43 | $\begin{array}{c} - & e & 36 \cdot 2 \\ - & e & 34 \cdot 2 \\ - & e & 38 \cdot 2 \\ - & e & 31 \cdot 2 \end{array}$ |
| Paris Peking Sverdlovsk Jena Moscow | $74 \cdot 1 \\ 74 \cdot 2 \\ 74 \cdot 2 \\ 75 \cdot 0 \\ 75 \cdot 0$ | 313 e 354 | $\begin{array}{c} 11 & 40 \\ 11 & 38 \\ 11 & 35 \\ 11 & 44 \\ 11 & 44 \end{array}$ | $ \begin{array}{rrr} & 0 \\ & 2 \\ & 5 \\ & & 1 \\ & & 1 \end{array} $ | i 21 15 e 21 16 e 21 26 21 59 | $^{+}_{+}\frac{3}{2}$ $^{+}_{ScS}$ | i 11 53 e 11 52 e 14 43 12 3 | PcP e 36·2 PcP e 39·2 PcP e 39·2 |
| Karlsruhe Cheb Strasbourg Warsaw Stuttgart | $76.8 \\ 76.0 \\ 76.0 \\ 76.0 \\ 76.2$ | 28 e 18 e | 11 52 11 57 11 51 a 11 54 11 51 | $^{+}_{+}\overset{2}{\overset{6}{\overset{6}{\overset{6}{\overset{6}{\overset{6}{\overset{7}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{1$ | e 21 42 e 21 41 e 21 41 e 21 42 e 21 36 | $^{+11}_{+7}_{+8}_{+0}$ | e 12 16 e 12 16 e 14 44 e 12 3 e 11 58 | PcP 33.6 PP e 37.7 PcP e 38.2 PcP e 33.2 |
| Prague Besançon Basle Clermont-Ferrand Neuchatel | 76.5 76.6 76.8 76.9 77.1 | 30 e 28 e 32 e | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccc} + & 1 & & & \\ & & 0 & & \\ + & 5 & & \\ + & 7 & & \end{array}$ | i 21 49 e 21 51 e 21 55 | $+ \frac{10}{8} + \frac{8}{9}$ | i 14 59 e 14 53 | $^{	ext{PP}}_{=}\ ^{	ext{37\cdot2}}_{	ext{33\cdot2}}$ |
| Huancayo z. Semipalatinsk Lisbon Zô-Sè Oropa | 77.9 | 341 e 44 e | 12 2 a 12 2 | $^{+}_{+}$ $^{2}_{+}$ $^{+}_{-}$ $^{2}_{6}$ | e 21 48 - e 22 5 e 22 10 | + 1 + 4 + 8 | i 12 17 e 16 8 | FcP 38.7 |
| Skalnate Pleso Bratislava Lwow Nanking Toledo | 78·7 78·9 78·9 79·1 79·2 | 20 e 22 i 17 e 307 e 40 i | Y 22 (22) | + 2 + 1 0 0 | e 22 11 i 22 17 i 22 14 e 22 9 e 22 13 | $^{+\ 8}_{+\ 12} \ ^{+\ 9}_{+\ 5}$ | e 12 53 i 15 2 i 22 50 i 12 19 15 16 | PP e 34·7 PS e 38·2 PS — |

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| | | Δ | Az. | P. | o -c. | s. | 0 -c. | The second secon | pp. | L. |
|--|----|--|---|--|--|--|---|--|---|--------------------------------------|
| Pavia Hurbanovo Budapest Monaco Barcelona | | 79·4 79·5 80·0 80·2 80·3 | 28 22 21 30 35 | m. s. e 12 15 e 12 22 e 12 22 12 15 | $^{+}_{+}^{6}_{+}^{6}_{+}^{+}_{1}^{9}_{-}$ | e 22 14 e 22 24 e 22 21 e 22 25 | $+13 \\ +4 \\ +4 \\ +5$ | e 23 1 e 15 45 12 30 | PS PP PcP | e 36·4 e 39·3 |
| Triest Bologna Florence Szeged Granada | | 80·4 80·7 81·3 81·4 81·6 | 25 27 28 21 41 | 12 14? e 12 48 e 12 24 e 12 23 i 12 28k | $\begin{array}{c} -1 \\ PcP \\ +4 \\ +3 \\ +7 \end{array}$ | i 22 28 e 20 14 i 22 34 i 22 40 | $^{+}_{\substack{+\\+\\\mathbf{PP}\\+}}^{7}$ | e 15 23 e 16 51 i 27 47 e 12 40 12 46 | PP PPP SS PcP PcP | 40·5 — 34·3 |
| Alicante Iasi Timisoara Almeria Belgrade | | $81.9 \\ 82.1 \\ 82.2 \\ 82.4 \\ 82.9$ | $\frac{38}{16}$ $\frac{20}{40}$ $\frac{40}{21}$ | e 12 19 12 28 e 12 37 i 12 24 e 12 28k | $^{-}_{$ | i 22 44 e 22 47 e 16 3 e 22 55 | $^{+8}_{+8}^{+8}_{+9}$ | e 13 27 e 15 29 | PP | e 39·4 e 49·2 e 35·2 e 45·2 |
| Rome Cuglieri Bucharest Relizane Algiers Univ. | z. | $83.4 \\ 83.7 \\ 84.5 \\ 84.6 \\ 84.7$ | 28 31 17 39 36 | e 12 30 e 12 47 e 12 37 e 12 36 | $\begin{array}{r} 0 \\ +11 \\ +1 \\ -1 \end{array}$ | e 22 59 e 22 57 23 8 e 23 8 | $^{+}_{+} { \frac{8}{3} \atop +} { \frac{6}{4} }$ | e 16 1 15 52 e 15 56 | $\frac{\mathbf{PP}}{\mathbf{PP}}$ | e 39·6 e 39·6 41·2 |
| La Paz Rabaul Frunse Taranto Tunis | z. | 84·8 85·6 86·1 86·1 87·3 | $^{\substack{122 \\ 259 \\ 343 \\ 25 \\ 32}$ | i 12 39 e 12 39 e 12 45 e 12 45 | $^{+}_{-}^{2}_{2} \\ ^{+}_{+}^{1}_{1}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{r} + & 2 \\ + & 9 \\ 1 - & 8 \\ + & 8 \end{array}$ | $\begin{array}{c} 15 & 59 \\ i & 17 & 5 \\ e & 25 & 19 \end{array}$ | PP PPS | 38·6 — e 40·2 e 41·2 |
| Messina Hong Kong Baguio Stalinabad Manila | | 87·7 89·3 90·3 91·3 91·5 | $\begin{array}{r} 27 \\ 304 \\ 296 \\ 346 \\ 294 \end{array}$ | e 12 48 e 12 59? e 12 13 e 13 7 e 13 18? | $ \begin{array}{r} $ | e 23 23 e 23 45? e 23 51 i 24 20 | | i 12 55 | р <u>Р</u> — | 42·7 = |
| Goris Ksara Dehra Dun Tamanrasset Quetta | z. | 91·8 96·5 97·3 98·0 99·8 | $\begin{array}{r} 3 \\ 12 \\ 336 \\ 41 \\ 346 \end{array}$ | i 13 12 i 13 42 e 13 49 e 14 2 | $^{+10}_{+10}$ $^{+10}$ $^{+15}$ | i 24 8 e 25 15 i 25 24 e 26 26 e 25 28 | $^{-3}_{+24} \ ^{+26}_{+8} \ ^{+9}$ | e 17 43 e 17 36 e 31 59 | $\frac{\overset{\text{PP}}{\text{PP}}}{\overset{\text{PP}}{\text{SS}}}$ | 46·2 |
| Colombo Lwiro Astrida Tananarive Pretoria | E. | 118.7 129.8 130.4 149.9 150.9 | 326 29 28 6 45 | e 19 29 e 19 21 e 19 56 19 59 | $\begin{bmatrix} +17 \\ +8 \\ +9 \end{bmatrix}$ $\begin{bmatrix} +9 \\ +10 \end{bmatrix}$ | e 36 25 — — | ss | e 48 32 e 21 34 e 21 28 | PP PP | e 60·1 |
| Grahamstown | Z. | 156.2 | 58 | i 20 31 | PKP ₁ | - | - | | - | - |

June 29d. 2h. 18m. 32s. Epicentre 28°-6N. 57°-2E.

 $A = + \cdot 4764$, $B = + \cdot 7392$, $C = + \cdot 4762$; $\delta = + 14$; h = + 2; $D = + \cdot 841$, $E = - \cdot 542$; $G = + \cdot 258$, $H = + \cdot 400$, $K = - \cdot 879$.

| | | Δ | Az. | Р. | O-C. | s. | O-C. | Su | pp. | L. |
|---------------|------|------|-----|----------------------|---|---------|----------|---------|---------------|--------|
| 54-05 - 10 to | | • | 0 | m. s. | s. | m. s. | s. | m. s. | 7,000,000 | m. |
| Quetta | | 8.6 | 77 | e 2 12 | + 3 | i 3 56 | + 8 | | | i 4.8 |
| Tiflis | | 16.6 | 326 | 4 0 | + 4 | - | _ | _ | _ | |
| Namangan | | 17.1 | 40 | 4 4 | + 2 | | | _ | - | |
| Ksara | | 19.0 | 291 | i 4 28 | 100 | i 8 7 | +12 | | _ | |
| Jerusalem | | 19.3 | 285 | i 4 31 | $\begin{array}{ccc} + & 2 \\ + & 2 \end{array}$ | i 8 22 | ± 20 | - | - | |
| Frunse | | 20.0 | 40 | 4 38 | + 1 | 8 26 | SS | | | _ |
| Simferopol | | 24.6 | 318 | 4 38 5 24 5 58 | $+\hat{1}$ | 2173 | 7 | | - | - |
| Sverdlovsk | | 28.3 | 4 | 5 58 | $+$ $\bar{1}$ | | - | 2.00 | _ | 7 |
| Bucharest | | 29.4 | 311 | 3 | | e 12 10 | SS | - | **** | |
| Moscow | | 30.6 | 338 | 6 18 | 0 | _ | _ | | | _ |
| Shillong | z. | 30.9 | 87 | i 6 19a | - 1 | | - | | _ | |
| Warsaw | 1757 | 35.7 | 322 | | | e 15 12 | SS | _ | | e 16·3 |
| Messina | | 35.8 | 296 | e 7 4 | + 1 | e 12 48 | + 7 | e 8 28 | \mathbf{PP} | 0.100 |
| Bratislava | | 36.5 | 314 | i 7 9 | õ | | -1 3.5 | 18 38 | PP | ***** |
| Triest | | 38.1 | 309 | | | e 13 12 | - 4 | e 15 57 | SS | - |

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| | | Δ | Az. | | Ρ. | o –c. | s. | o-c. | Su | pp. | L. |
|--------------------|------|--------------|-----|---------------------------------|------------------|-----------------------|---------|---------------|---------|---------------|-----------------|
| Dame | | 0 - | | | s. | 8. | m. s. | 8. | m. s. | | m. |
| Rome | | 38.5 | 302 | | | 0 | e 13 22 | 0 | e 16 11 | SS | _ |
| Prague Florence | | 38.8 | 316 | | 27 | - 1 | | - | e 8 32 | \mathbf{PP} | |
| Astrida | | 39.6 | 305 | | 57 | +22 | | 2 | i 16 10 | SS | i 17.4 |
| Jena | | 40.7 | 225 | | 45 k | | | - | e 16 38 | SS | - |
| Julia | | 40.7 | 316 | e 7 | 44 | 0 | | | e 9 21 | \mathbf{PP} | - |
| Lwiro | | 41.0 | 226 | e 7 | | + 4 | | - | e 16 41 | ss | |
| Upsala | 200% | 41.2 | 331 | i 7 | 47 | - 1 | - | | | | _ |
| Copenhagen | z. | 41.8 | 323 | i 7 | 53 | 0 | - | - | | - | _ |
| Stuttgart | | 41.8 | 312 | i 7 | 51 | - 2 | | | e 9 39 | \mathbf{p} | |
| Monaco | | $42 \cdot 3$ | 305 | i 7 | 56 a | - 1 | - | | | - | - |
| Hamburg | z. | 42.4 | 320 | i 7 | 59 | + 1 | - | - | · · | | 52.5 |
| Strasbourg | | 42.6 | 312 | e 7 | 59 | 0 | - | | - | _ | |
| Neuchatel | | 43.0 | 309 | e 8 | 2 | - 1 | | - | | | |
| Sodankyla | | 43.0 | 343 | i 8 | 3 | 0 | i 9 47 | \mathbf{PP} | i 10 44 | PPP | |
| Besançon | | 43.6 | 310 | e 8 | 6 | - 2 | _ | | | _ | - |
| Kiruna | | 45.0 | 341 | i 8 | 19 a | 0 | | 102:000 | 7922 | | |
| Skalstugan | | 45.2 | 334 | i 8 | 19 | - ĭ | - | - | | | |
| Clermont-Ferrance | 1 | 45.5 | 307 | e 8 | 237 | Õ | | | | | |
| Algiers Univ. | z. | 45.8 | 295 | e 8 | 24 | - Ĭ | _ | 200 | | | |
| Paris | | $46 \cdot 1$ | 312 | i 8 | 28 | ō | _ | | | - | e 27·2 |
| Tamanrasset | z. | 46.7 | 275 | i 8 | 33 | 4. 1 | e 15 20 | | n 0 45 | D D | |
| Relizane | | 47.9 | 294 | e 8 | 44 | $^{+}_{+}$ $^{1}_{2}$ | 6 13 20 | 2 | e 9 45 | $P_{c}P$ | - |
| Kew | | 48.2 | 315 | e 8 | $\hat{4}\hat{3}$ | - ĩ | | _ | | | 0.05.5 |
| Alicante | | 48.4 | 297 | 8 | 44 | $ \bar{2}$ | 15 48 | +2 | | = | e 25·5 |
| Almeria | | 50.2 | 296 | i 8 | 59 | - ī | | | | | |
| Granada | | 51.0 | 296 | 9 | 20 a | +14 | 16 31 | . 0 | | 7-0707074 | |
| Toledo | | 51.0 | 300 | i 9 | 6 | 0 | 16 18 | + 9 | - | | |
| Lisbon | z. | 55.1 | 299 | î 9 | 37 a | + i | 10 15 | - · | 10.10 | - D | |
| Pretoria | z. | 60.8 | 210 | i 10 | 12 | - 4 | | - | i 9 46 | \mathbf{pP} | - |
| | z. | 68.1 | 207 | î î î | 2 | $ \tilde{2}$ | - | | | | |
| College | | 84.8 | 10 | i 12 | 36 | 1 | | 2232 | | | |
| Shawinigan Falls | | 92.6 | 328 | The second second second second | | - 1 | - | | | | 7= 8 |
| | N. | 128.5 | 271 | e 19 | 6 | [- 3] | | | | | |
| | | 132.9 | 280 | e 19 | | 1 + 31 | | | 0 99 44 | DIES | |

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June 29d. 2h. 21m. 52s. Epicentre 24°·1N. 122°·6E.

A = -.4924, B = +.7699, C = +.4061; $\delta = +12$; h = +4; D = +.842, E = +.539; G = -.219, H = +.342, K = -.914.

| | Δ | Az. | P. | 0-C. | s. | O-C. | Su | pp. | L. |
|------------|-------------------------------|------|-----------------------|------|--------|------------|-------------|----------------|-----------|
| 59369 7447 | 0 | | m. s. | s. | m. s. | s. | m. s. | man of | m. |
| Hwalien | 0.9 | 260 | i 0 18k | - 2 | 0 25 | - 9 | | | |
| Ilan | 1.0 | 309 | i 0 20 | _ ī | 0 32 | - 4 | | | |
| Taipei | 1.3 | 312 | i 0 27 a | + 2 | 0 47 | | - | - | - |
| Hsingkong | $\hat{1} \cdot \hat{5}$ | 228 | i 0 25k | - 46 | | + 3 | | | _ |
| Hsinchu | 1.6 | 294 | | - 3 | 0 40 | - 9 | - | | |
| пошени | 1.0 | 204 | 0 36 | + 6 | 0 56 | + 5 | _ | | - |
| Yusan | 1.6 | 0.17 | a 0 21 | V 9 | 0.45 | - 25 | | | |
| Alishan | | 247 | e 0 31 | + 1 | 0 47 | - 4 | _ | - | - |
| Theishan | 1.8 | 250 | e 0 31 | - 1 | 0 48 | - 8 | | | - |
| Taichung | 1.8 | 271 | i 0 31 a | - 1 | 0 50 | - 6 | _ | | _ |
| Taitung | 1.9 | 224 | 0 32 | - 2 | 0 50 | - 9 | - | | |
| Tawu | $2 \cdot 4$ | 222 | 0 44 | + 3 | 1 8 | - 4 | - | | _ |
| Tainan | 2.5 | 243 | i 0 43 | 0 | 1 10 | | | | |
| Kaohsiung | 2.6 | 235 | 0 49 | | 1 10 | - 4 | | _ | |
| Hengchun | $\frac{2}{2} \cdot 7$ | | | | 1 17 | | | | - |
| Ponchy | 5.0 | 219 | e 0 50 | + 5 | 1 22 | + 3 | | | _ |
| Penghu | $\frac{2 \cdot 9}{7 \cdot 0}$ | 258 | 0 48 | 0 | 1 19 | - 5 | | *** | |
| Zô-Sè | 7.0 | 350 | e 1 45 | - 1 | e 3 4 | - 4 | i 3 14 | 3 | _ |
| Baguio | 7.9 | 194 | i 1 58 | 1 | i 3 19 | -11 | Yes | 7-45 | |
| Hong Kong | 8.0 | 258 | 1 55 a | _ 2 | 10 10 | | | | |
| Nanking | 8.6 | 338 | e 2 6 | _ 3 | 3 43 | | 3.4 | 0. | |
| Dairen | 14.7 | 357 | 1070 H 1980 H 1980 PM | - 3 | 0 40 | _ 3 | 1 4 4 | S* | |
| Shenchow | | | | + 1 | - | - | | | - |
| SHEHOHOW | 15.2 | 317 | e 3 31 | 1 | (MP) | - The same | 1,0 | - | Andrews . |

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| | | Δ | Az. | the second secon | o – C. | . s. m. s. | O-C. | m. s. | upp. | L. m. |
|--|----------------|---|--|--|---|---|-------------------------------|--|------------------|--------------------------------------|
| Sian Kyoto Taiyuan Peking Kwanting | | 15.6 15.7 16.1 16.8 17.1 | $313 \\ 43 \\ 330 \\ 343 \\ 342$ | 4 2 e 3 5 i 4 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | = 8 7 | + 62 | 8 45 = | PcP | |
| Tatung Matusiro Paotow Changchun Yinchuan | | $17.8 \\ 18.3 \\ 19.5 \\ 19.8 \\ 19.9$ | $336 \\ 44 \\ 330 \\ 6 \\ 320$ | e 4 3 e 4 3 | $ \begin{array}{ccccccccccccccccccccccccccccccccc$ | e = 25 | · - | e = 49 | PP | 9.0 |
| Lanchow Sining Wuwei Changyeh Irkutsk | | $20.1 \\ 21.8 \\ 21.9 \\ 23.8 \\ 31.4$ | $311 \\ 310 \\ 314 \\ 314 \\ 338$ | e 4 5 e 4 5 | $\begin{array}{cccc} 6 & & 0 \\ 6 & - & 1 \\ 5 & & 0 \end{array}$ | e 11 45 | +13 | | = | |
| Lembang Dehra Dun Rabaul Quetta Brisbane | z. | $34.1 \\ 39.9 \\ 40.3 \\ 49.5 \\ 59.1$ | $\begin{array}{c} 207 \\ 289 \\ 130 \\ 290 \\ 148 \end{array}$ | e 7 43 e 8 5 | $\begin{array}{cccc} 9 & -28 \\ 3 & +3 \end{array}$ | e 12 9 i 12 54 e 13 59 e 15 45 | $^{-5}_{-49}_{+10}_{-17}$ | | | |
| Tiflis Moscow College Sodankyla Pulkovo | | $65.5 \\ 67.6 \\ 68.2 \\ 70.2 \\ 70.6$ | $306 \\ 322 \\ 27 \\ 336 \\ 328$ | 10 47 10 53 111 13 111 13 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 19 52 e 20 16 e 21 8 | -5 $+12$ PPS | i 11 38 | - PcP | e 31 <u>·8</u> |
| Kiruna Jerusalem Upsala Skalstugan Resolute Bay | | 72.4 75.6 76.6 77.2 78.5 | $337 \\ 299 \\ 330 \\ 334 \\ 10$ | i 11 27 i 11 55 i 11 55 e 11 55 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 20 42 = e 21 46 | $-\frac{11}{-\frac{15}{15}}$ | i 14 1 | PP = | e 43·0 |
| Sofia Bratislava Scoresby Sund Prague Hamburg | | $80.4 \\ 82.0 \\ 82.4 \\ 82.7 \\ 83.3$ | $312 \\ 319 \\ 349 \\ 322 \\ 326$ | i 12 14 i 12 23 e 12 24 i 12 26 e 12 30 | $\begin{array}{cccc} & & 0 \\ & - & 1 \\ & - & 1 \end{array}$ | e 22 38 | - 3 | i 18 26 i 15 28 e 15 38 e 15 27 | PP PP PP | 42·1 e 43·7 |
| Jena Triest Stuttgart Horseshoe Bay Karlsruhe | | $83.8 \\ 85.3 \\ 86.3 \\ 86.4 \\ 86.6$ | $\begin{array}{r} 324 \\ 318 \\ 322 \\ 37 \\ 323 \end{array}$ | e 12 30 e 12 37 e 12 43 i 12 46 e 12 44 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | e 23 4 e 23 8 | [+ 1] [- 1] = | e 15 40 e 16 4 | PP PP | e 45·9 50·1 |
| Aberdeen Strasbourg Florence Uccle Messina | ъ. | $86.7 \\ 87.2 \\ 87.7 \\ 87.7 \\ 87.8$ | $333 \\ 323 \\ 318 \\ 326 \\ 311$ | e 12 48 i 12 50 e 12 49 e 12 50 | $-\frac{2}{3}$ | e 23 38 e 23 19 e 23 15 | $+\frac{14}{-\frac{0}{[-4]}}$ | e 20 13 | = | e 49·5 e 43·1 e 52·3 e 40·1 |
| Rome Besançon Corvallis Paris Clermont-Ferran | z. | $87.9 \\ 88.9 \\ 89.0 \\ 89.9 \\ 91.4$ | $316 \\ 322 \\ 41 \\ 325 \\ 332$ | e 12 51 e 12 56 i 13 6 i 13 2 e 13 8 | + 2 | | | e 16 24 | P <u>P</u> | |
| Shasta Hungry Horse Mineral Butte Lick | z. z. x. | $91.7 \\ 91.8 \\ 92.4 \\ 94.1 \\ 94.1$ | 44 34 44 35 46 | e 13 13 i 13 12 e 13 14 e 13 21 e 13 20 | + 1 0 - 1 | | | | | |
| Bozeman Eureka King Ranch China Lake Tamanrasset | z. z. z. | $95.2 \\ 96.4 \\ 96.5 \\ 97.6 \\ 103.1$ | $\frac{34}{42} \\ 47 \\ 45 \\ 302$ | e 13 28 i 13 33 e 13 34 e 13 39 e 14 2 | + 1 + 2 + 1 | e 24 52 | [+10] | e 18 17 | PP | |
| Trinidad Huancayo La Paz | z. | $145.2 \\ 159.2 \\ 167.4$ | $\begin{array}{c} 7 \\ 58 \\ 55 \end{array}$ | e 19 41 e 20 11 i 20 11 | [+ 1] PKP ₂ [+ 3] | | | i 21 20 | PKP ₂ | |

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June 29d. 4h. 9m. 53s. Epicentre 37°·3N. 139°·4E.

Intensity IV at Wakamatu, Niigata, Utunomiya, Maebasi, Aikawa, Tukubasan, Mito, and Onahama; II-III at Shirakawa, Takada, Hukusima, Kakioka, and Sakata. Epicentre 37°·3N. 139°·3E. Depth of focus 20km. Seismo. Bull. Japan Met. Agency, for June, 1956, Tokyo, 1956, pp. 24-26, with chart of seismic intensities.

A = -.6055, B = +.5190, C = +.6034; $\delta = +8$; h = -1; D = +.651, E = +.759; G = -.459, H = +.392, K = -.797.

| | △ Az. | P. O-C | S. O-C. m. s. s. | m. s. | L. m. |
|---|---|--|---|------------------------------|----------|
| Shirakawa Niigata Utunomiya Hukusima Maebasi | $egin{array}{cccc} 0.6 & 108 \\ 0.7 & 332 \\ 0.8 & 156 \\ 0.9 & 62 \\ 1.0 & 198 \\ \end{array}$ | i 0 15k (1 0 16k - 1 1 0 17k - 1 1 0 21a + 1 1 0 18k - 3 | | | |
| Takada Aikawa Kakioka E. Kumagaya Matusiro | $\begin{array}{ccc} 1.0 & 257 \\ 1.2 & 306 \\ 1.2 & 152 \\ 1.2 & 183 \\ 1.2 & 232 \end{array}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | |
| Mito Nagano Oiwake Onahama Tukubasan E. | $\begin{array}{cccc} 1 \cdot 2 & 139 \\ 1 \cdot 2 & 237 \\ 1 \cdot 2 & 216 \\ 1 \cdot 2 & 107 \\ 1 \cdot 2 & 154 \end{array}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | |
| Yamagata Titibu Sendai Matumoto Sakata | $egin{array}{cccc} 1 \cdot 2 & 37 \\ 1 \cdot 4 & 193 \\ 1 \cdot 5 & 50 \\ 1 \cdot 6 & 228 \\ 1 \cdot 6 & 11 \\ \end{array}$ | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | |
| Tokyo Isinomaki Kohu Hunatu Toyama | $egin{array}{cccc} 1.7 & 172 \\ 1.8 & 53 \\ 1.8 & 203 \\ 1.9 & 197 \\ 1.9 & 252 \\ \hline \end{array}$ | e 0 31 a 0 0 33 a + 1 1 0 32 a 0 1 0 33 a - 1 e 0 35 k + 1 | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | i 0 35 Pg | = |
| Yokohama Tyosi N. Wazima Takayama N. Iida | $\begin{array}{ccc} 1.9 & 175 \\ 2.0 & 144 \\ 2.0 & 272 \\ 2.1 & 237 \\ 2.2 & 216 \end{array}$ | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | i 0 58 - 4 0 59 - 3 | | = |
| Misima Mizusawa Ajiro Akita Kanazawa | $\begin{array}{ccc} 2 \cdot 2 & 191 \\ 2 \cdot 2 & 36 \\ 2 \cdot 3 & 187 \\ 2 \cdot 4 & 12 \\ 2 \cdot 4 & 252 \end{array}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | |
| Mera Shizuoka Osima E. Morioka Hukui | $\begin{array}{ccc} 2.4 & 173 \\ 2.5 & 200 \\ 2.6 & 181 \\ 2.7 & 29 \\ 2.8 & 245 \end{array}$ | $egin{array}{ccccccc} 0 & 40 & - & 1 \\ 0 & 43 & & & 0 \\ e & 0 & 45 & + & 1 \\ e & 0 & 48 & + & 3 \\ e & 0 & 47 & & 0 \\ \end{array}$ | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | e 0 58 | |
| Gihu Nagoya N. Omaesaki Miyako Ibukisan N. | $\begin{array}{ccc} 2 \cdot 9 & 229 \\ 2 \cdot 9 & 224 \\ 2 \cdot 9 & 201 \\ 3 \cdot 0 & 40 \\ 3 \cdot 2 & 233 \end{array}$ | $egin{array}{cccccccccccccccccccccccccccccccccccc$ | 1 28 - 2* e 1 28 - 2* i 1 31 + 1* 1 32 - 1* e 1 38 - 1* | e 1 5 Pg i 0 55 P* i 0 59 P* | |
| Tsuruga E. Hikone Kameyama Tu E. Aomori | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | |

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|------|-----|
| | |

| Hatinohe Kyoto Toyooka Hatidyozima Osaka | | $_{3 \cdot 6}^{\circ}$ $_{3 \cdot 8}^{\circ}$ $_{4 \cdot 1}^{4 \cdot 2}$ $_{4 \cdot 2}^{\circ}$ | 26 234 246 176 231 | m. s. e 1 3 a e 1 5 | O-C. s. - 1* + 4 0 + 5 + 1 | S. e. s. e. 1 48 e. 2 4 e. 1 58 e. 2 10 | O-C. s 3* - 2* + 3 + 1* | m. s. sn | pp. = = = | L. m. |
|--|----------------|---|--|---|--|--|--|-----------------|--------------------|----------|
| Owase Kobe Hakodate Mori Sumoto | Z. | $\begin{array}{c} 4 \cdot 2 \\ 4 \cdot 4 \\ 4 \cdot 6 \\ 4 \cdot 8 \\ 4 \cdot 8 \end{array}$ | $220 \\ 234 \\ 12 \\ 10 \\ 233$ | e 1 18 | + 1. + 2. - 4. - 2. | $\begin{array}{c} 2 & 9 \\ e & 2 & 14 \\ \hline & 2 & 33 \\ e & 2 & 23 \end{array}$ | - 1* - 6* - 3* | i 2 31 | = = Ss | |
| Siomisaki Himeji Muroran Tokusima Takamatu | | $\begin{array}{c} 4 \cdot 9 \\ 5 \cdot 0 \\ 5 \cdot 1 \\ 5 \cdot 1 \\ 5 \cdot 3 \end{array}$ | 219 237 13 232 237 | e 1 23 | + 1* + 5 + 4 + 2 | $\begin{array}{c} e & 2 & 30 \\ i & 2 & 24 \\ \hline e & 1 & 41 \\ e & 2 & 44 \end{array}$ | + 1 * + 6 + 7 * + 3 * | e 1 37 | P _E | = |
| Tomakomai Urakawa Muroto Sapporo Koti | | 5·4 5·5 5·9 6·1 | $27 \\ 228 \\ 14 \\ 234$ | e 1 43 e 1 26 e 1 35 e 1 34 | - 5g + 1 + 4 + 2 | e 2 54 e 2 22 e 3 6 e 2 46 e 3 7 | - 4 8 - 8 + 7 * + 6 + 2 * | e 2 9 e 1 41 | ? P* | |
| Obihiro Hamada Hirosima Kusiro Simidu | N. | 6·3 6·4 6·4 6·8 7·0 | $\begin{array}{r} 26 \\ 250 \\ 245 \\ 32 \\ 232 \\ \end{array}$ | e 1 42 e 1 46 e 1 39 e 1 54 | + 6 + 8 + 1 - 5* | $\begin{array}{c} e & \overline{3} & 7 \\ e & 2 & 59 \\ e & \overline{3} & 18 \end{array}$ | $-\frac{7}{6}$ | | | e 3·6 |
| Nemuro Ooita Asosan Hukuoka Kumamoto | F., | 7·6 7·6 8·2 8·3 8·5 | $\begin{array}{c} 36 \\ 240 \\ 240 \\ 246 \\ 240 \end{array}$ | e 2 40 e 1 59 = 2 17 | + 8 s + 4 + 10 | e 4 3 e 3 38 e 4 17 | - 8 ₈ + 7* | | | |
| Changchun Zô-Sè Nanking Peking Hong Kong | Е. | 12.6 16.3 17.8 18.4 26.4 | $306 \\ 253 \\ 259 \\ 286 \\ 243$ | e 3 6 3 53k e 4 11 e 4 15 | $^{+}_{+}$ $^{3}_{1}$ $^{-}_{-}$ $^{3}_{-}$ | e 7 4 e 7 33 e 7 45 e 9 47? | $\begin{array}{r} - \overline{11} \\ + 5 \\ + 4 \\ - 25 \end{array}$ | | | |
| Shillong Rabaul College Lembang Quetta | z. z. z. | 41.9 43.0 49.7 53.0 59.4 | $^{268}_{161} \\ ^{32}_{221} \\ ^{286}$ | i 7 50 e 7 59 i 8 53 e 9 13 e 10 2 | - 4 - 4 - 3 - 8 - 4 | | | | | |
| Resolute Bay Sodankyla Kiruna Corvallis Skalstugan | z. | 62·7 64·1 65·7 69·5 71·1 | $ \begin{array}{r} 14 \\ 337 \\ 339 \\ 49 \\ 338 \\ \end{array} $ | e 10 25 a i 10 35 i 10 45 k e 11 13 i 11 18 | - 4 - 3 + 1 - 4 | | | | | e 41·2 |
| Upsala Shasta Hungry Horse Mineral Berkeley | z. z. | $72.0 \\ 72.2 \\ 72.6 \\ 72.9 \\ 73.8$ | 333 52 42 52 55 | i 11 24 e 11 28 i 11 30 e 11 31 e 11 35 | - 4 - 1 - 1 - 2 - 3 | | | | = | = |
| Reno Lick Butte Bozeman Fresno | z. x. x. | 74.5 74.6 74.8 75.9 76.1 | 52 55 43 43 54 | e 11 40 i 11 42 i 11 41 i 11 50 i 11 51 | - 2 - 1 - 3 0 | | | - 14 35 | PP | |
| Eureka King Ranch Isabella China Lake Salt Lake City | Z. Z. Z. | 76·9 77·6 78·1 78·6 | 56 55 54 47 | i 11 54 i 11 58 i 11 58 i 12 3a e 12 5 | - 2 + 2 - 2 + 1 | | | | = | |

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| | | Δ | Az. | . 1 | P. | 0- | -С. | s. | 0-с. | Su | pp. | L. |
|-----------------|-------|--------------|------|------|------|--------------------------|-----|-------|-------------|----------------|----------------|----|
| | | D | 0000 | m. | | S | | m. s. | 8. | m. s. | | m. |
| Pasadena | | 78.7 | 56 | i 12 | 7 | + | 1 | 7 | | 7757515 _37583 | | |
| Riverside | Z. | 79.3 | 55 | e 12 | 8 | - | 1 | 2000 | - | | - | - |
| Palomar | Z. | 80.1 | 56 | i 12 | 13 a | | 0 | | _ | 1.00 | _ | |
| Barratt | Z. | 80.6 | 56 | i 12 | 15 n | | 1 | | - | | - | |
| Bratislava | | 80.6 | 325 | i 12 | | _ | 1 | | _ | | **** | |
| Hayfield | N. | 80.6 | 55 | i 12 | 15 | - | 1 | - | _ | _ | _ | _ |
| Jena | Z. | 80.9 | 330 | e 12 | 14 | _ | 3 | - | | | | |
| Rapid City | E. | 81.1 | 40 | e 12 | 18 | | 0 | | - | e 13 16 | ? | |
| Stuttgart | 90000 | 83.6 | 330 | e 12 | 28 | - | 3 | 2 | <u>==7</u> | | | |
| Strasbourg | | $84 \cdot 3$ | 330 | e 12 | 33 | - | 2 | - | - | | | - |
| Tucson | | 84.7 | 53 | i 12 | 36 | S 711 | 1 | | _ | | - | - |
| Paris | | 86.1 | 333 | e 12 | 42 | - | 2 | | | | | |
| Kirkland Lake | Z. | 87.9 | 25 | e 12 | | 100 | 2 | - | 90000 | - | - | _ |
| Fayetteville | | 91.6 | 41 | i 13 | | _ | 1 | | | e 13 28 | $P_{c}P$ | |
| Shawinigan Fall | s | 91.6 | 22 | e 13 | | - | ĩ | | | | | _ |
| Ottawa | | 91.8 | 24 | i 13 | 9 a | 144 | 2 | | | | | |
| Tamanrasset | Z. | 106.1 | 316 | e 18 | 27 | PI | | | _ | | | - |
| Huancayo | Z. | 140.0 | 60 | e 19 | 24 | the second second second | 61 | 33.45 | | - | - | |
| La Paz | | 148.0 | 57 | 19 | 54 | $\hat{l} + 1$ | őí | + | | | 0: | - |

June 29d. 17h. 43m. Epicentre 13°N. 121°E. Seismo. Bull. of China for 1956, Peking, China, p. 18.

June 29d. 22h. 37m. Epicentre 16°23'N. 98°52'W. Seismo. Bull. of National University of Mexico for June, 1956, Tacubaya, p. 7.

June 30d. 1h. 50m. 22s. Epicentre 43°-6N. 29°-0E.

A = +.6354, B = +.3522, C = +.6872; $\delta = +2$; h = -3; D = +.484, E = -.875; G = +.601, H = +.332, K = -.726.

| | | Δ | Az. | P. m. s. | O – C. s. | s. m. s. | 0 - C. | | ipp. | L. |
|--|----|--|--|--|---|--|--|--|--|-----------------------|
| Bucharest Focsani Bacau Campulung Kishinev | | 2·2 2·5 3·3 3·4 | 293 330 335 302 359 | 0 37 0 46 0 55 0 55 0 57 | - 1 + 3 + 2 + 2 + 2 | 1 7 i 1 15 1 47 1 39 | + 1 + 1 - 2 + 4 | m. s. 0 46 1 22 1 6 1 5 | Pr Sr P* | m. |
| Iasi Simferopol Sofia Timisoara Belgrade | Е. | 3·8 4·0 4·2 5·9 6·3 | $346 \\ 68 \\ 260 \\ 294 \\ 284$ | $\begin{array}{cccc} & 1 & 1 \\ i & 1 & 4 \\ e & 1 & 2 \\ e & 1 & 28 \\ e & 1 & 31 a \\ \end{array}$ | $\begin{array}{c} 0 \\ 0 \\ -5 \\ -3 \\ -5 \end{array}$ | e 1 46 i 1 50 1 53 e 2 43 e 2 54 | $ \begin{array}{ccccc} & 1 & & \\ & 2 & & \\ & & 4 & \\ & + & 3 & \\ & + & 4 & & \end{array} $ | $\begin{array}{c} 2 & 1 \\ -1 & 10 \\ e & 1 & 56 \\ e & 2 & 1 \end{array}$ | P* Pg | |
| Szeged Athens Lwow Kecskemet Kalossa | | $6.8 \\ 6.9 \\ 7.1 \\ 7.3 \\ 7.6$ | $\begin{array}{c} 296 \\ 217 \\ 333 \\ 300 \\ 296 \end{array}$ | $\begin{array}{c} 1 & 44 \\ e & 1 & 40 \\ i & 1 & 45 \\ e & 3 & 0 \\ e & 2 & 47 \end{array}$ | - 5 - 3 ? | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $^{+}_{\mathrm{SS}}^{4}_{-}_{6}^{-}_{5}^{6}$ | $\begin{array}{c} 2 & 11 \\ e & 3 & 25 \\ i & 2 & 36 \\ & 3 & 50 \\ & 4 & 4 \end{array}$ | P* SSS Pg Sg | <u>-</u> 4·4 |
| Sotchi Budapest Skalnate Pleso Hurbanovo Taranto | | 7·8 8·0 8·2 8·6 9·2 | $\begin{array}{r} 86 \\ 303 \\ 316 \\ 303 \\ 254 \end{array}$ | $\begin{array}{c} 1 & 55 \\ 2 & 15 \\ 2 & 3 \\ e & 3 & 6 \\ e & 2 & 10 \\ \end{array}$ | - 3 - 5* - 6 | 3 21 3 39 4 38 e 3 51 | - 7 + 6 + 7 + 3 | i 2 34 e 4 58 | Pg Pg Sg | e 4·8 |
| Bratislava Warsaw Triest Ksara Messina | | $9.4 \\ 10.2 \\ 11.0 \\ 11.2 \\ 11.5$ | $303 \\ 331 \\ 286 \\ 149 \\ 247$ | i 2 16 e 3 34 e 2 39 e 2 58 e 2 43 | $-{2\atop -}{3\atop +}{14\atop -}{5\atop -}$ | i 4 4 e 4 25 e 4 45 e 5 10 e 5 3 | $ \begin{array}{r} - & 3 \\ - & 2 \\ - & 2 \\ + & 18 \\ + & 4 \end{array} $ | i 3 20 e 4 33 i 3 33 | $\overset{\mathbf{P_g}}{\overset{\mathbf{SS}}{\overset{\mathbf{P_g}}{=}}}$ | e 6·6 |
| Reggio Calabria Prague Erevan Rome Padova | | $11.5 \\ 11.9 \\ 12.1 \\ 12.2 \\ 12.3$ | $\begin{array}{c} 246 \\ 308 \\ 101 \\ 268 \\ 280 \end{array}$ | e 2 34 i 3 6 i 2 56 e 2 57 | $^{-14}_{+12} \\ ^{-1}_{-1}$ | i 5 13 e 5 6 e 5 33 | $+\frac{4}{10} + 15$ | e 3 42 i 4 39 e 5 52 | ? Q | 7·3 e 6·7 e 6·8 |

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| 1956 | 315 |
|------|-----|
| | |

| | Δ | Az. | P. m. s. | O – C. s. | m. s. | O -C. | m. s. | ipp. | L. m. |
|---|---|---|--|--|---|---------------------------------------|--|---------------|---------------------------|
| Bologna Florence Jerusalem Prato Moscow | $12.7 \\ 12.8 \\ 12.8 \\ 12.9 \\ 13.4$ | $280 \\ 277 \\ 155 \\ 278 \\ 22$ | 70 10 0 10 C L L L L L L L L L L L L L L L L L L | $^{+13}_{-20} \ ^{+17}_{+2} \ ^{-1}$ | | - - - - | e 4 47 i 3 18 i 3 50 | PP PPP | e 7·2 e 6·9 e 6·8 |
| Jena Ebingen Stuttgart Zürich Oropa | 13.9 14.6 14.8 15.1 | $308 \\ 295 \\ 298 \\ 292 \\ 285$ | e 3 17 ? e 3 23 ? e 3 25 e 3 34 e 3 21 | $ \begin{array}{r} - & 4 \\ - & 7 \\ - & 5 \\ + & 2 \\ - & 15 \end{array} $ | e 5 42 e 6 23 e 6 23 e 5 23 | $-15 \\ +10 \\ +5 \\ -62$ | e 3 28 e 3 34 e 3 36 e 4 44 | PP PP - | e 6·8 e 7·6 e 7·2 |
| Basle Strasbourg Monaco Neuchatel Hamburg | $15.5 \\ 15.5 \\ 15.6 \\ 15.8 \\ 16.0$ | $\begin{array}{c} 292 \\ 296 \\ 278 \\ 290 \\ 315 \end{array}$ | e 3 47 i 3 52 i 3 39 e 3 52 e 3 49 | $^{+\ 5}_{+\ 10} \ ^{-\ 4}_{+\ 7} \ ^{7}_{+\ 1}$ | e 6 52 i 6 40 — | +17 +5 = | i | PP = | e 7·7 e 8·4 e 8·6 |
| Copenhagen Pulkovo Besançon Witteveen z. Upsala | $16.1 \\ 16.2 \\ 16.5 \\ 17.4 \\ 17.7$ | $324 \\ 291 \\ 310 \\ 341$ | i 3 49 i 3 50 e 3 56? e 4 4 i 4 2 | $\begin{array}{c} 0 \\ 0 \\ - \\ 2 \\ - \\ 8 \end{array}$ | e 7 8 1 6 44 i 7 7 | $^{+19}_{-7}$ $^{-19}$ | $\frac{-}{65}$ $\frac{5}{4}$ $\frac{25}{11}$ | - ? PP | i 8·9 i 8·4 i 9·2 |
| De Bilt Uccle Clermont-Ferrand Paris Algiers Univ. z. | $18.0 \\ 18.2 \\ 18.5 \\ 19.0 \\ 20.9$ | $306 \\ 302 \\ 286 \\ 295 \\ 260$ | e 4 203 e 4 13 e 4 22 e 4 27 e 4 39 | $^{+}$ 7 $^{+}$ 3 $^{+}$ 1 7 | e 7 38 e 7 33 e 7 44 | + 6 - 4 0 - | | <u>=</u> | e 9·6 e 9·6 |
| Kizyl-Arvat Kew Skalstugan Durham Alicante | $21.0 \\ 21.2 \\ 22.2 \\ 22.7 \\ 22.8$ | $\begin{array}{c} 93 \\ 302 \\ 340 \\ 310 \\ 267 \end{array}$ | i 4 49 e 4 55 e 4 56 e 4 58 5 5 | $\begin{array}{c} + & 2 \\ + & 6 \\ - & 4 \\ - & 6 \end{array}$ | 1 8 50 e 16 59 i 9 2 e 9 11 e 9 12 | $^{+13}_{ScS} + ^{2}_{+2} + ^{1}_{1}$ | e 5 18 | PP — | e 8.6 i 11.6 e 11.2 |
| Ashkabad Relizane Sodankyla Sverdlovsk Kiruna | $\begin{array}{r} 22 \cdot 9 \\ 23 \cdot 1 \\ 23 \cdot 9 \\ 24 \cdot 0 \\ 24 \cdot 7 \end{array}$ | $\begin{array}{r} 94 \\ 260 \\ 358 \\ 45 \\ 352 \\ \end{array}$ | e 5 7 e 5 4 i 5 16 i 5 23 | $\begin{array}{cccc} + & 1 & & \\ - & 4 & & \\ - & 0 & & \\ - & 1 & & \\ - & 1 & & \end{array}$ | i 9 41 e 9 50 | $+\frac{-}{6}$ | e 10 15 | PP SS | i 12·4 e 12·4 |
| Almeria Toledo Rathfarnham C. z. Granada Tamanrasset z. | 25.5 | $\begin{array}{c} 265 \\ 273 \\ 305 \\ 267 \\ 230 \end{array}$ | i 5 23 e 5 24 i 5 32 i 5 42k e 5 57 | $ \begin{array}{ccccccccccccccccccccccccccccccccccc$ | $\begin{array}{c} {\bf i} \ {\bf 6} \ {\bf 6} \\ {\bf e} \ {\bf 9} \ \ {\bf 54} \\ \hline - \ {\bf 10} \ \ {\bf 1} \\ {\bf e} \ {\bf 10} \ \ {\bf 43} \\ \end{array}$ | PP + 8 + 4 - 2 | 6 50 6 57 | PPP | $13 \cdot 9$ $15 \cdot 2$ |
| Quetta z. Scoresby Sund Lwiro Uvira Shawinigan Falls | $32.9 \\ 36.8 \\ 45.6 \\ 46.8 \\ 66.7$ | $101 \\ 334 \\ 180 \\ 180 \\ 313$ | e 6 37 e 7 12 e 8 16 e 8 27 e 11 1 | $ \begin{array}{r} -1 \\ +1 \\ -8 \\ -6 \\ +6 \end{array} $ | | | e 10 45 | PPP | 20 <u>·6</u> |
| College Kimberley z. Hungry Horse Bozeman Fayetteville Eureka z. | $82.8 \\ 84.3 \\ 85.4$ | 358 184 336 333 317 334 | e 11 24 i 11 29 k e 12 26 e 12 37 i 12 44 e 13 20 | $ \begin{array}{r} -3 \\ +1 \\ -1 \\ +2 \\ +4 \\ +11 \end{array} $ | | | | | = |

June 30d. 2h. 19m. 46s. Epicentre 42°.9N. 143°.9E. Depth of focus 90km. Intensity II-III at Kusiro, Obihiro, and Urakawa. Seismo. Bull. Japan Met. Agency for June, 1956, Tokyo, 1956, pp. 26, 27, with chart of seismic intensities.

June 30d. 3h. 8m. Epicentre 39°·4N. 70°·9E. Magnitude 4. Bull. of the Seismo. Stations of the U.S.S.R. for April-June, 1956, Moscow, 1957, pp. 50, 51.

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1956

June 30d. 14h. 16m. 44s. Epicentre 22.88. 68°.0W.

A = +.3457, B = -.8556, C = -.3853; $\delta = +2$; h = +4; D = -.927, E = -.375; G = -.144, H = +.357, K = -.923. Az. O-C. Supp. L. m. s. Antofagasta 249 204 Copiapo La Paz $6 \cdot 3$ 359 i 2 54 3 11 SS $3 \cdot 7$ Santa Lucia 10.8 e 2 40 i 3 32 192 N. -23e 3 25 19 12.8 Huancayo 326+26e 6 10 +40Buenos Aires 146 14.4 e 4 8 PPLa Plata 14.9 146 5 16 -646.5San Juan 41.0 Columbia 57.9 347 i 9 57 e 17 51 10 41 \mathbf{PP} Morgantown 63.1 350 Fayetteville 63.6 336 35 a i 10 i 11 42 i 11 20 $_{\mathrm{sP}}$ pP67.3 Halifax 3 e 10 58? 68.3 Ottawa 354 e 11 Tucson 68.4 322 i 11 Shawinigan Falls $69 \cdot 2$ 356 e 11 Seven Falls 69.7358 e 20 13 Kirkland Lake 71.5 352 Z. e 11 2 Boulder 71.6 331 e 11 34 + Barratt $72 \cdot 1$ 318 i 11 e 13 13 pPHayfield 72.2 320 + Palomar $72 \cdot 7$ 319 Z. e 11 33 i 11 55 $P_{c}P$ e 12 18 pPBoulder City 73.4322 e 11 34 Riverside 73.5 319 Z. i 11 37 Pasadena 74.0319 i 11 40 e 20 16? -55Rapid City 74.0334 i 11 40 E. e 12 21 pPChina Lake 74.8 320Z. 1 i 13 8 PcP $75 \cdot 2$ 320 Isabella Z. Salt Lake City 75.2 327 -Eureka 76.5 324e 12 39 z. pPFresno 76.8 + Z. 320 e 11 56 1 Lick 78.3 319 Z. 0 Bozeman 331 e 12 78.6 e 12 43 pP78.6 Reno 322 e 12 Berkeley 79.0319 e 12 Butte 79.6330 e 12 10 Mineral 80.2 Z. 321 Hungry Horse 82.0 331 i 12 21 i 13 7 $\mathbf{p}\mathbf{P}$ Corvallis 83.9324 e 12 Z. -Tamanrasset $84 \cdot 7$ 63 e 12 27 -10e 22 41 -23e 13 12 pPi 13 17 a Granada 85.1 +3846 e 23 50 PS13 49 PcPToledo 86.3 i 13 24 +39e 23 23 53 S [-6]Victoria 86.6 327 e 12 44 Relizane $87 \cdot 2$ 49 e 13 +1687.8 Alicante 47 - 4 22 58 18 19 [-21]PPPAlgiers Univ. 89.4 z. 49 e 13 37 +3723 College $106 \cdot 2$ P 334 e 14 12 Rabaul 132.4 241e 19 [-9]e 23 28 e 22 10 PP Quetta $139 \cdot 3$ 70 e 22 PP 39 Lembang $150 \cdot 2$ 171 i 19 38k-101

20

[+16]

i 20 59

 PKP_2

309

153.5

Matusiro

June 30d. 15h. 53m. Epicentre 33°N. 104°E. Magnitude 4.25. Seismo, Bull. of China for 1956, Peking, China, p. 18.

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The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained as part of a global earthquake relocation project (Villaseñor et al., 1997) initiated with funding from the US National Science Foundation through grant EAR-9725140 and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of Euroseismos project.

A digital hypocenter file of the ISS (Villaseñor and Engdahl, 2005) can be obtained from the USGS web site: http://earthquake.usgs.gov/scitech/iss/

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Villaseñor, A., and E.R. Engdahl, *A digital hypocenter catalog for the International Seismological Summary,* Seism. Res. Lett., vol. 76, no. 5, pp. 554-559, 2005.

Villaseñor, A., E.A. Bergman, T.M. Boyd, E.R. Engdahl, D.W. Frazier, M.M. Harden, J.L. Orth, R.L. Parkes, and K.M. Shedlock, *Toward a comprehensive catalog of global historical seismicity,* Eos Trans. AGU, vol. 78, no. 50, pp. 581, 583, 588, 1997.