No. 17. 1937.

Geodætisk Institut
Proviantgaarden, Copenhagen, Denmark.

# Bulletin
## of the seismological station

# SCORESBY-SUND

$\varphi = 70°29'$ N. $\lambda = 21°57'$ W. $h = 69$ m.

Lithologic foundation: Gneiss

*No. 17. July—Dec. 1937*

Instruments:

Galitzin-Wilip seismographs.

Constants:

| Component | $l$ | $A_1$ | $T_1$ | | $\mu^2$ | $T$ | $k$ |
|---|---|---|---|---|---|---|---|
| | cm | cm | sec | | | sec | |
| $N$ | 12.0 | 100 | 11.8 | $^1/_7$—$^{12}/_{10}$ | 0.1 | 11.9 | 102 |
| | | | | $^{12}/_{10}$—$^{27}/_{11}$ | 0.0 | 12.5 | 102 |
| | | | | $^{27}/_{11}$—$^{31}/_{12}$ | 0.0 | 11.8 | 50 |
| $E$ | 12.0 | 100 | 11.9 | $^1/_7$—$^{12}/_{10}$ | 0.0 | 12.0 | 101 |
| | | | | $^{12}/_{10}$—$^{27}/_{11}$ | 0.0 | 11.5 | 101 |
| | | | | $^{27}/_{11}$—$^{31}/_{12}$ | 0.0 | 11.7 | 50 |
| $Z$ | 14.9 | 100 | 10.02 | $^1/_7$—$^{26}/_{11}$ | 0.0 | $8^1/_2$ | 105 |
| | | | | $^{26}/_{11}$—$^{31}/_{12}$ | 0.0 | $8^1/_2$ | 60 |

Time-corrections have been determined daily by means of Nauen scientific time-signals and time is known with an accuracy of about $^1/_{10}$ sec.

**Scoresby-Sund.**

| No. | Date | Hour | Forerunners P | Forerunners S | Forerunners | L | Undefined | △ | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | 1937 July | | *m s* | *m s* | *h m s* *m s* | *h m* | *h m* | ° | |
| 1 | 1 | 6 | | | 21.1 25.4 | 35 | | | |
| 2 | 1 | 10 | | | 0 33 | 6 | | | |
| 3* | 1* | 12 | *i* 3 15 | | 7.1 13 49 | | | | West of Sumatra. |
| 4* | 2* | 2 | | | 56 9 57 49 | | | | Coral Sea. |
| 5 | 2 | 21 | | | | 52 | | | Faint. |
| 6 | 3 | 2 | | | 33 | 40 | | | |
| 7 | 3 | 4 | | | | .8 | | | |
| 8 | 3 | 11 | | | | | 48 | | |
| 9 | 3 | 16 | | | | .1 | | | |
| 10* | 4* | 6 | | | 15.8 25 39 | 44 | | | Coral Sea. |
| 11 | 4 | 6 | | | 59 34 | | | | Coral Sea. Superposed on preceding [shock. |
| 12 | 4 | 7 | | | 47 8 | | | | Coral Sea. Superposed on preceding |
| 13 | 4 | 18 | | | | .5 | | | [shock. |
| 14 | 5 | 1 | | | 53.0 | 58 | | | |
| 15 | 6 | 6 | | | | 34 | | | Small. |
| 16 | 6 | 16 | | | | 18 | | | » |
| 17 | 7 | 17 | | | | | 5 | | |
| 18 | 8 | 7 | | | | | 1 | | |
| 19 | 8 | 13 | | | | .5 | | | Preceding movement disturbed. |
| 20 | 8 | 23 | | | | .7 | | | |
| 21 | 9 | 17 | | | 50 44* 51 11 | | | | Peru. *e* 41m39s, not quite certain. |
| 22 | 10 | 21 | | | 8 | .6 | | | Celebes. |
| 23 | 11 | 13 | 51 23 | 61 11 | 53 49 | 1.3 | | 89 | East of Japan. |
| 24 | 11 | 17 | | 39 48 | 44 11 47.4 | 52 | | | West of Mexico. |
| 25 | 12 | 0 | | | 33.7 | .8 | | | Small preceding movement. |
| 26 | 13 | 4 | | | | .0 | | | Faint. |
| 27 | 14 | 4 | | | | 52 | | | |
| 28 | 14 | 22 | 40 7 | 49 53 | 43.0 54.9 | 1.1 | | 77 | The reading of *P* not quite certain. |
| 29 | 15 | 3 | | | | .7 | | | [East of Japan. |
| 30 | 15 | 19 | *i* 12 52 | *i* 20 44 | | | | | *P*—. Sea of Okhotsk. Deep focus. |
| 31 | 16 | 10 | 30 20 | 40 5 | | .9 | | 77 | East of Japan. *P* small, the reading |
| 32 | 16 | 23 | | | | | .7 | | [not quite certain. |
| 33 | 17 | 0 | | | | | 40 | | |
| 34 | 17 | 15 | | | | 33 | | | Small. |
| 35 | 17 | 15 | | | | 37 | | | » |
| 36 | 17 | 19 | | | 2 19 | .3 | | | |
| 37 | 17 | 21 | | | | | 5 | | |
| 38 | 18 | 1 | | | 18 | .4 | | | |
| 39 | 19 | 3 | | | 13.5 23.0 | .8 | | | $e_N$ 30m.2. |
| 40 | 19 | 9 | | | 18.1 | 1.6 | | | No *Z* record; beginning indefinite. |
| 41* | 19* | 19 | 47 21 | 57 11 | 48 4 62.6 | | | 77 | Ecuador. |
| 42 | 20 | 7 | | | | | 16 | | |
| 43 | 21 | 0 | | | | .5 | | | |
| 44 | 21 | 12 | | | | .8 | | | |
| 45 | 21 | 16 | | | | | .7 | | Faint. |
| 46* | 22* | 17 | *i* 17 6 | | *i* 18 39 26.2 | | | | Alaska. |
| 47 | 23 | 0 | | | | | .2 | | Some preceding movement. |

**Scoresby-Sund.**

| No. | Date | Hour | Forerunners P | Forerunners S | Forerunners | Forerunners | L | Undefined | △ | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1937 July | | *m s* | *m s* | *h m s* | *m s* | *h m* | *h m* | ° | |
| 48 | 23 | 7 | | | 25.6 | | 29 | | | |
| 49 | 23 | 21 | | | | | | 2 | | |
| 50 | 24 | 0 | | | | | .2 | | | |
| 51 | 24 | 2 | | | | | | 9 | | |
| 52 | 24 | 6 | | | | | | 58 | | |
| 53 | 24 | 9 | | | 18.5 | | 23 | | | Alaska. |
| 54 | 24 | 16 | | | | | 45 | | | |
| 55 | 24 | 22 | | | | | | 21 | | Faint. |
| 56 | 25 | 11 | | | | | .9 | | | |
| 57 | 25 | 13 | 21 14 | 27 55 | 22.9 | 31.3 | | | 45 | Alaska. |
| 58* | 26* | 3 | *i* 58 1 | 66 46 | *i* 58 25 | | | | 68 | Mexico. Deep focus. |
| 59 | 26 | 8 | | | | | | .8 | | One or two shocks? |
| 60 | 26 | 9 | | | | | .1 | | | One or two shocks? |
| 61* | 26* | 20 | 7 47 | 17 1 | *i* 7 54 | 10.4 | 30 | | 71 | Japan. |
| 62 | 27 | 8 | | | | | 16 | | | |
| 63 | 28 | 9 | | | | | .7 | | | |
| 64 | 28 | 11 | | | | | 5 | | | |
| 65 | 30 | 14 | | | .4 | | 1.1 | | | |
| 66 | 30 | 18 | | | | | 11 | | | |
| 67 | 31 | 11 | | | 11 5 | | .5 | | | |
| 68 | 31 | 20 | 47 2 | 56 19 | 51 22 | 57 2 | 1.2 | | 71 | *P*+. *SS* 61$^{m}$.2. China. No *E* record. |
| | Aug. | | | | | | | | | |
| 69 | 1 | 10 | 52 18 | 61 35 | 62 17 | | 1.3 | | 71 | *P*+. China. No *E* record. |
| 70 | 2 | 10 | | | | | 45 | | | Faint. |
| 71 | 2 | 15 | 55 57 | 64.2 | | | 1.2 | | | *P* and *S* small, uncertain. Kurile Islands. |
| 72 | 3 | 5 | | | | | .2 | | | |
| 73 | 3 | 6 | | | | | | | 55 | |
| | 3 | | | | | | | | | No records 13$^{h}$—19$^{h}$. |
| 74 | 3 | 22 | | | | | .5 | | | |
| 75 | 4 | 4 | | | | | .9 | | | Faint. |
| 76 | 4 | 22 | | | | | 18 | | | |
| 77 | 4 | 23 | 48 30 | 59 34 | 52 19 | 60.8 | 63 | | 92 | *P*—. *SS* 66$^{m}$. Sumatra. |
| 78* | 5* | 15 | | | 3 15 | | .5 | | | |
| 79 | 6 | 9 | | | | | .5 | | | |
| 80 | 7 | 22 | | | | | | 30 | | |
| 81 | 8 | 5 | | | | | .5 | | | |
| 82 | 8 | 10 | | | 35 15 | 35 37 | | | | |
| 83 | 8 | 16 | | | | | .3 | | | |
| 84 | 9 | 14 | 51 52 | | 62 0 | | 1.4 | | | |
| 85 | 10 | 16 | | | | | .6 | | | |
| 86* | 11* | 1 | 9 29 | | 14 8 | 19 12 | | | | Off Java. |
| 87 | 12 | 1 | | | | | 1.0 | | | |
| 88 | 12 | 6 | | | | | 33 | | | |
| 89 | 15 | 4 | 39.9 | 50 22 | 56.3 | | 68 | | | *P* small, uncertain. Luzon. |
| 90 | 15 | 12 | | | | | 17 | | | Recording interrupted 11$^{m}$—17$^{m}$. |
| 91 | 16 | 11 | | | | | .9 | | | |
| 92 | 17 | 13 | | 31 50 | | | .8 | | | Recording interrupted 13$^{m}$—25$^{m}$. |
| 93 | 17 | 20 | | | | | .6 | | | Pacific Ocean. |

**Scoresby-Sund.**

| No. | Date | Hour | Forerunners P | Forerunners S | Forerunners | L | Undefined | △ | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | 1937 Aug. | | *m s* | *m s* | *h m s* *m s* | *h m* | *h m* | ° | |
| 94 | 18 | 9 | | | | 6 | | | |
| 95 | 18 | 15 | | | | .6 | | | |
| 96 | 20 | 2 | | | | 47 | | | |
| 97* | 20* | 6 | | | 57 42* 67 20 | | | | Indian Ocean. |
| 98* | 20* | 12 | *i* 12 25 | | 22 59 23 42 | | | | Luzon. |
| 99 | 21 | 23 | 14 3 | 23 59 | | .7 | | 78 | *P* small, uncertain. East of Japan. |
| 100 | 22 | 3 | | | | .2 | | | |
| 101 | 22 | 11 | | | 42 15 51.0 | | | | Forerunners small, readings uncer- |
| 102 | 23 | 16 | | | 59.9 | .7 | | | [tain. Atlantic Ocean. |
| 103 | 24 | 18 | | | 48.8 | 1.5 | | | |
| 104 | 24 | 20 | | | | 46 | | | |
| 105 | 24 | 23 | | | | | .4 | | |
| 106 | 26 | 19 | | | 15.9 | .5 | | | |
| 107 | 26 | 23 | | | 53.0 | 55 | | | |
| 108 | 31 | 3 | | | | .4 | | | |
| 109 | 31 | 14 | 26 54 | 36 25 | | 52 | | 74 | *P* possibly some seconds earlier. Burma. |
| | Sept. | | | | | | | | |
| 110* | 1* | 8 | | | 57 58 58 11 | 1.6 | | | Northeast of New Zealand. |
| 111 | 1 | 22 | | | | .8 | | | |
| 112* | 3* | 18 | 57 48 | 65 29 | 58 18 58 44 | | | 56 | Aleutian Islands. |
| 113 | 3 | 23 | | | | .1 | | | |
| 114 | 4 | 6 | | | 35.4 | 1.2 | | | |
| 115* | 8* | 0 | | | 1.2 2 44 | .5 | | | South Atlantic. |
| 116 | 9 | 6 | | | | .2 | | | Masked by microseisms. |
| 117* | 15* | 12 | | | 47 41 57.5 | 1.3 | | | Solomon Islands region. |
| 118 | 16 | 0 | 0 8 | 9 10 | 9 30 13.7 | | | 69 | The reading of *P* uncertain. Off |
| 119 | 17 | 9 | | | 52.0 60 3 | 1.5 | | | [Guatemala. |
| 120 | 20 | 7 | 15 7 | 24 18 | | 36 | | 70 | Off Mexico. |
| 121 | 21 | 8 | | | | .5 | | | |
| 122* | 21* | 9 | | | 58 15 64 34 | 1.5 | | | Celebes. |
| 123 | 21 | 21 | | | | .5 | | | |
| 124 | 22 | 3 | | | 35 39 42.0 | 1.0 | | | |
| 125 | 23 | 7 | | | | 37 | | | |
| 126* | 23* | 13 | 21 5 | 33 49 | 24 52 25 52 | 53 | | | Solomon Islands. |
| 127 | 25 | 0 | | | | | 2 | | |
| 128 | 25 | 4 | | | 40 2 | 41 | | | Atlantic Ocean. |
| 129 | 25 | 8 | | | | 10 | | | |
| 130* | 27* | 9 | | | 14 31 20 25 | | | | Java. |
| 131 | 28 | 2 | | | | .8 | | | |
| 132 | 28 | 6 | 32.2 | 41.4 | | .8 | | | Guatemala. |
| 133 | 28 | 18 | | | | .9 | | | |
| | Oct. | | | | | | | | |
| 134 | 1 | 20 | | | | .4 | | | |
| 135 | 2 | 5 | | | | | .8 | | |
| 136 | 5 | 6 | | | | 56 | | | Very strong microseisms. |
| 137 | 6 | 9 | 58 16 | 67 15 | 58 38 68 9 | 21 | | 68 | *P*+. Mexico. Deep focus. |

**Scoresby-Sund.**

| No. | Date | Hour | Forerunners P | Forerunners S | | L | Un-defined | △ | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | 1937 Oct. | | *m s* | *m s* | *h m s* | *h m* | *h m* | ° | |
| 138* | 6* | 17 | | | 24 39 | 34 14 | 60 | | Solomon Islands. |
| 139 | 6 | 22 | | | | | 21 | | |
| 140 | 7 | 8 | | | *i* 11 2 | 14 31 | 1.0 | | |
| 141 | 9 | 18 | | | .7 | | 1.4 | | |
| 142 | 11 | 1 | | | | | 55 | | |
| 143 | 11 | 21 | | | 53.6 | | 1.2 | | |
| 144* | 12* | 21 | | | 15 7 | 16 58 | .6 | | Chile. |
| 145 | 17 | 4 | | | | | 1.4 | | Forerunners masked by microseisms. |
| 146 | 21 | 5 | | | | | 13 | | |
| 147 | 22 | 17 | | | | | .2 | | |
| 148 | 23 | 17 | | | 12 50 | | 1.0 | | |
| 149 | 24 | 11 | *i* 44 33 | 50 48 | 46 17 | 54.3 | 57 | 41 | Alaska. |
| 150 | 25 | 11 | | | | | .9 | | |
| 151 | 25 | 23 | | | | | .9 | | |
| 152* | 29* | 7 | *i* 35 59 | 43 40 | 37 14 | 45 2 | | 58 | |
| 153 | 29 | 20 | | | | | .2 | | |
| | Nov. | | | | | | | | |
| 154 | 7 | 19 | | | | | .7 | | |
| 155 | 10 | 7 | | | | | .7 | | |
| 156 | 13 | 10 | | | 13 | | 1.1 | | |
| 157 | 13 | 19 | | | | | .2 | | |
| 158* | 14* | 11 | *i* 7 39 | *i* 15 20 | *i* 8 56 | 16 40 | | 59 | Afghanistan. |
| 159 | 15 | 0 | | | | | .6 | | |
| 160 | 15 | 21 | | 55 58 | 51.8 | 61.8 | | | No *Z* record. Kashmir. |
| 161 | 21 | 20 | | | | | .8 | | |
| 162 | 23 | 8 | | | | | .1 | | Faint. |
| 163 | 25 | 5 | | | | | .9 | | |
| 164 | 26 | 10 | *i* 57 28 | | | | | | *P*—. Time not certain, no time-marks. |
| 165 | 27 | 20 | | | | | | .2 | No time-marks. |
| 166 | 28 | 5 | | | 42.3 | 56.9 | 1.3 | | |
| 167* | 30* | 0 | 53.8 | | 64 41 | 65.9 | | | West of Sumatra. |
| 168 | 30 | 13 | | 19 19 | 24.2 | | .5 | | Small preceding movement. Abessinia. |
| | Dec. | | | | | | | | |
| 169 | 5 | 6 | | | | | .3 | | |
| 170 | 5 | 16 | | | | | .7 | | Faint. |
| 171 | 6 | 5 | | | | | .3 | | |
| 172 | 6 | 21 | | | | | .7 | | |
| 173 | 6 | 22 | | | | | .3 | | |
| 174 | 7 | 18 | | | | | .5 | | |
| 175 | 8 | 2 | | | | | .9 | | |
| 176* | 8* | 8 | *i* 44 38 | | 47 52 | 54 47 | 1.2 | | Formosa. |
| 177 | 8 | 21 | | | | | .3 | | |
| 178 | 10 | 13 | | | 50.1 | | 1.2 | | |
| 179 | 10 | 18 | | | | | 21 | | |
| 180 | 12 | 8 | | | | | 1.2 | | Small preceding movement. |

**Scoresby-Sund.**

| No. | Date | Hour | Forerunners P | Forerunners S | Forerunners | Forerunners | L | Un-defined | △ | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1937 Dec. | | *m s* | *m s* | *h m s* | *m s* | *h m* | *h m* | ° | |
| 181 | 13 | 19 | 6 23 | 16 38 | 9 43 | 16 58 | .5 | | 82 | *P* not clearly marked. *SS* $22^m.0$. Formosa. |
| 182 | 13 | 23 | | 14 5 | | | 20 | | | Atlantic Ocean. |
| 183 | 14 | 10 | | | | | 14 | | | Small. |
| 184 | 14 | 13 | | | | | 17 | | | » |
| 185 | 14 | 17 | | | | | 25 | | | |
| 186 | 14 | 18 | | | | | 7 | | | Small. |
| 187 | 16 | 17 | | | | | | 50 | | |
| 188 | 17 | 9 | 44 46 | | 55.3 | 60.3 | | | | *P* small, uncertain. Formosa. |
| 189 | 18 | 13 | 27 19 | | | | .6 | | | *P* not clearly marked. Turkestan. |
| 190 | 18 | 21 | | | | | .3 | | | |
| 191 | 20 | 4 | | | | | .6 | | | Faint. |
| 192 | 21 | 15 | | | | | | 36 | | |
| 193 | 22 | 3 | 49.1 | 58 3 | 62.6 | | 70 | | 68 | Off Mexico. |
| 194 | 22 | 8 | | | | | 9 | | | |
| 195* | 23* | 13 | 29 10 | 38.3 | 31 44 | *i* 33 36 | | | 70 | Mexico. |
| 196 | 24 | 0 | | | | | .0 | | | |
| 197 | 24 | 6 | | | 44.4 | 50.3 | 1.0 | | | |
| 198 | 25 | 10 | | | | | .4 | | | |
| 199 | 27 | 0 | | | | | .2 | | | |
| 200 | 28 | 6 | 30 44 | 39 57 | 40 49 | | .8 | | | *P* quite small, uncertain. Atlantic Ocean. |
| 201 | 30 | 11 | | | | | .5 | | | |
| 202 | 30 | 12 | | | 4.9 | | .3 | | | |
| 203* | 31* | 17 | 52 36 | 61.9 | 54 54 | 62 18 | 1.3 | | 72 | Mexico. |

**Scoresby-Sund.**

## NOTES

No. 3. July 1. $12^h$. West of Sumatra; $\triangle$ = ca. 95°. $iP_Z$ $3^m15^s$ (a time-mark missing, therefore possibly an error of about 1 sec. in the reading). *PP* $7^m.1$. *SKS* $13^m49^s$; *SKKS* $14^m31^s$. $PS_E$ $16^m1^s$. *SS* $21^m.2$.

No. 4. July 2. $2^h$. Coral Sea; $\triangle$ = ca. 125°. No *E* record. *P'* $56^m9^s$. *PP* $57^m49^s$. $e_N$ $67^m.4$. $PS_Z$ $67^m.8$; $PPS_N$ $69^m.4$. $e_Z$ $73^m.5$.

No. 10. July 4. $6^h$. Coral Sea; $\triangle$ = ca. 125°. $PP_{N,Z}$ $15^m.8$. $e_Z$ $16^m18^s$. *PS* $25^m39^s$. *SS* $32^m.2$. *SSS* $37^m.1$. $L_Q$ $45^m$; $L_R$ $54^m$.

No. 41. July 19. $19^h$. Ecuador. Depth about 170 km. *iP* $47^m21^s$, dilatation. *pP* $48^m4^s$ much larger than *P*. $e_N$ $49^m27^s$; $e_{N,Z}$ $50^m9^s$. *iS* $57^m11^s$ larger. $i_Z$ $57^m16^s$. $e_Z$ $57^m44^s$. $e_{N,E,Z}$ $58^m.0$. $e_Z$ $58^m55^s$. $e_N$ $61^m.9$. *SS* $62^m.6$. *L* small.

No. 46. July 22. $17^h$. Alaska; $\triangle$ = ca. 40°. *iP* $17^m6^s$ (−2.9, +2.0, +3.3; +2.7, −1.9, −3.8). *iPP* $18^m39^s$, large. (*S*) $22^m59^s$ preceded by increase of movement. *e* $23^m10^s$; *i* $23^m21^s$ very large. $e_E$ $24^m.9$. *SS* $26^m.2$ very large, immediately followed by *L*.

No. 58. July 26. $3^h$. Mexico. Depth about 80 km. $\triangle$ = 68°. *iP* $58^m1^s$ (−0.4, −2.0, −3.0; +0.7, +3.8, +6.0). $P_cP$ or *pP i* $58^m25^s$; strong movement continues for about 1 minute. *ePP* $60^m.9$. $e_E$ $62^m.2$; $i_Z$ $62^m32^s$; $i_Ee_Z$ $62^m45^s$. *eS* $66^m46^s$, *iS* $66^m52^s$ large. $e_Z$ $67^m26^s$, $e_N$ $67^m34^s$, $e_{N,E}$ $67^m.8$, large on *E*.

No. 61. July 26. $20^h$. Japan. *P* $7^m47^s$, small, dilatation; $iP_{N,Z}$ $7^m54^s$, large. *PP* $10^m.4$. $e_N$ $16^m43^s$. $eS_{N,E}$ $17^m1^s$. $e_E$ $17^m27^s$; $e_N$ $18^m.1$. $SS_N$ $21^m.5$. $e_E$ $25^m.3$. $L_R$ $30^m$, rather small.

No. 78. Aug. 5. $15^h$. $\triangle$ = ca. 110°. Focus probably deeper than normal. $e_{N,E}$ $3^m15^s$; $3^m33^s$; $4^m7^s$. *e* $6^m34^s$. $e_N$ $9^m.0$. $e_E$ $12^m.0$. $e_{E,Z}$ $13^m1^s$. $e_N$ $13^m22^s$, rather large. *SS* $20^m.2$. *SSS* $23^m.9$. $L_Q$ $0^h.5$; $L_R$ $0^h.6$.

No. 86. Aug. 11. $1^h$. Off Java; $\triangle$ = ca. 110°. Depth about 600 km. *P* $9^m29^s$, condensation, clearly marked on *Z*. *pP* $11^m.7$ quite small. *PP* $14^m8^s$, $15^s$. *pPP* $16^m15^s$. *PPP* $16^m51^s$. *sPP* $17^m18^s$. *e* $18^m17^s$. *SKS* $19^m12^s$. $e_Z$ $19^m34^s$; $e_{N,E}$ $20^m12^s$, rather large. *pSKS* $22^m.3$. *SP* $22^m.7$ and *PS* $23^m54^s$. *sS* $24^m43^s$. *sSP* $26^m39^s$. *e* $27^m.8$. *SS* $29^m6^s$. *SSS* $32^m57^s$. *L* small.

No. 97. Aug. 20. $6^h$. Indian Ocean; $\triangle$ = ca. 115°. *PP* $57^m42^s$. *PS* $67^m20^s$. $e_{N,E}$ $69^m.1$. *SS* $73^m.7$; *SSS* $77^m.4$.

No. 98. Aug. 20. $12^h$. Luzon; $\triangle$ = ca. 90°. *iP* $12^m25^s$ dilatation. *PP* $15^m46^s$. *SKS* $22^m59^s$, preceded by increase of movement. $e_E$ $23^m42^s$; *e* $24^m.4$, $24^m.7$; $25^m.5$. *SS* $28^m.9$. *e* $36^m.1$; $37^m.7$ large oscillation. *M* large.

No. 110. Sept. 1. $8^h$. Northeast of New Zealand; $\triangle$ = ca. 140°. $PKP_Z$ $57^m58^s$, quite small; $58^m11^s$ rather large. $e_E$ $61^m12^s$, small; $e_{N,E}$ $61^m49^s$ rather large on *N*. *SS* $79^m.4$.

No. 112. Sept. 3. $18^h$. Aleutian Islands. Depth about 160 km. No *E* record. *P*, dilatation, $57^m48^s$; followed by increasing oscillations: $e_Z$ $58^m18^s$, $44^s$. $e_N$ $60^m.6$, $61^m.4$; $e_{N,Z}$ $61^m35^s$. $e_N$ $63^m25^s$. *eS* $65^m29^s$. $e_{N,Z}$ $66^m14^s$. $SS_N$ $71^m18^s$.

No. 115. Sept. 8. $0^h$. South Atlantic; $\triangle$ = ca. 130°. Focus deeper than normal. *PP* $1^m.2$. $e_N$ $2^m44^s$. $e_N$ $5^m49^s$; $7^m35^s$. $e_{N,E}$ $10^m48^s$ *SS* $18^m.1$. $e_{N,E}$ $20^m31^s$, $22^m.2$.

No. 117. Sept. 15. $12^h$. Solomon Islands region; $\triangle$ = ca. 120°. *PP* $47^m41^s$. *PS* $57^m.5$. $e_N$ $59^m.6$. $e_N$ $63^m.6$, $e_E$ $64^m.0$, $e_N$ $64^m45s$.

No. 122. Sept. 21. $9^h$. Celebes; $\triangle$ = ca. 105°. *PP* $58^m15^s$. *SKS* $64^m34^s$, *SKKS* $65^m17^s$; $e_E$ $65^m48^s$. *PS* $67^m.7$. *SS* $72^m.3$; *SSS* $77^m.1$.

No. 126. Sept. 23. $13^h$. Solomon Islands; $\triangle$ = ca. 120°. *P* $21^m5^s$, not very clearly marked. $P'_Z$ $24^m52^s$, small. *PP* $25^m52^s$ large on *N* and *Z*. $e_E$ $27^m32^s$. *PPP* $28^m.3$. $SKS_N$ $31^m35^s$. *SKKS* $32^m45^s$. *S* $33^m49^s$. *PS* $35^m30^s$ large on *N*. *PPS* $37^m.0$. $e_N$ $37^m43^s$ *SS* $42^m.2$. $L_Q$ $53^m$; $L_R$ $60^m$.

No. 130. Sept. 27. $9^h$. Java; $\triangle$ = ca. 115°. *PP* $14^m31^s$. *PPP* $16^m56^s$. *SKS* $20^m25^s$. *e* $22^m.1$. *e* $23^m33^s$. *PS* $23^m50^s$ large. *SS* $30^m.1$.

No. 138. Oct. 6. $17^h$. Solomon Islands; $\triangle$ = ca. 115°. No *E* record. *PP* $24^m39^s$. *SKS* $31^m39^s$. *PS* $34^m14^s$. $e_N$ $36^m35^s$, $38^m.4$. (*SS*) $41^m.6$. *SSS* $45^m.1$. *e* $47^m.5$.

No. 144. Oct. 12. $21^h$. Chile; $\triangle$ = ca. 100°. ($P_Z$) $4^m.6$, quite small. *e* $15^m7^s$; $16^m58^s$; $21^m56^s$.

No. 152. Oct. 29. $7^h$. Felt at Tashkent; $\triangle$ = ca. 58°; *h* = ca. 220 km. *iP* $35^m59^s$, dilatation. *sP* $37^m14^s$. *PPP* $39^m.5$. *S* $43^m40^s$. *sS* $45^m2^s$. *SS* $47^m.2$; *SSS* $49^m.3$.

No. 158. Nov. 14. $11^h$. Afghanistan; *h* = ca. 220 km. Strong record. *iP* $7^m39^s$. $pP_Z$ $8^m31^s$. *isP* $8^m56^s$. *PP* $9^m48^s$. *e* $10^m55^s$. $S_cP_E$ $11^m50^s$; $iP_cS_N$ $12^m15^s$. $e_E$ $13^m54^s$. *iS* $15^m20^s$. $e_E$ $16^m.4$. *i* $S_cS$ or *sS* $16^m40^s$. $e_E$ $18^m.6$. *i* $(SS)_N$ $18^m53^s$; $e_E$ $19^m.2$. *isSS* $20^m50^s$; subsequent movement very large, phases not clearly marked. *L* not large, beginning uncertain.

No. 167. Nov. 30. $0^h$. West of Sumatra; $\triangle$ = ca. 95°. No time-marks on *E*. *P* not clearly marked, about $53^m.8$. *PP* $57^m29^s$. (*SKKS*) $64^m41^s$. *PS* $65^m.9$. *SS* $71^m.0$.

No. 176. Dec. 8. $8^h$. Formosa; $\triangle$ = ca. 85°. *iP* $44^m38^s$, condensation. *PP* $47^m52^s$. (*SKS*) $54^m47^s$. (*S*) $55^m11^s$. *PS* $56^m.2$. *e* $67^m.2$.

No. 195. Dec. 23. $13^h$. Mexico. Large earthquake. The beginning of *P* quite small $29^m10^s$ or $11^s$. $iP_{E,Z}$ $29^m13^s$ (*x*, −4.5, −4.0; *x*, +10.2, +12.3). $e_N$ $29^m28^s$; $e_Z$ $30^m22^s$. $e_E$ $31^m.0$. *PP* $31^m44^s$; *iPPP* $33^m36^s$. $e_N$ $34^m.6$, $e_Z$ $35^m13^s$, $e_Z$ $36^m.4$, $e_E$ $36^m42^s$, $e_N$ $37^m1^s$. *S* $38^m.3$ followed by large, increasing oscillations. *PS* $38^m51^s$ very large. *SS* $43^m.0$.

No. 203. Dec. 31. $17^h$. Mexico. *P* $52^m36^s$, dilatation. (*PP*) $54^m54^s$; *PPP* $57^m0^s$. *S* $61^m.9$, not clearly marked, possibly earlier. $PS_N$ $62^m18^s$. $e_E$ $63^m0^s$. *SS* $66^m.4$; *SSS* $69^m.6$.

BIANCO LUNOS BOGTRYKKERI A/S
KØBENHAVN